

Figure 19. Portion of the 1910 Kapaa USGS topographic map depicting historic road and railroad alignment within and in the vicinity of the current investigation



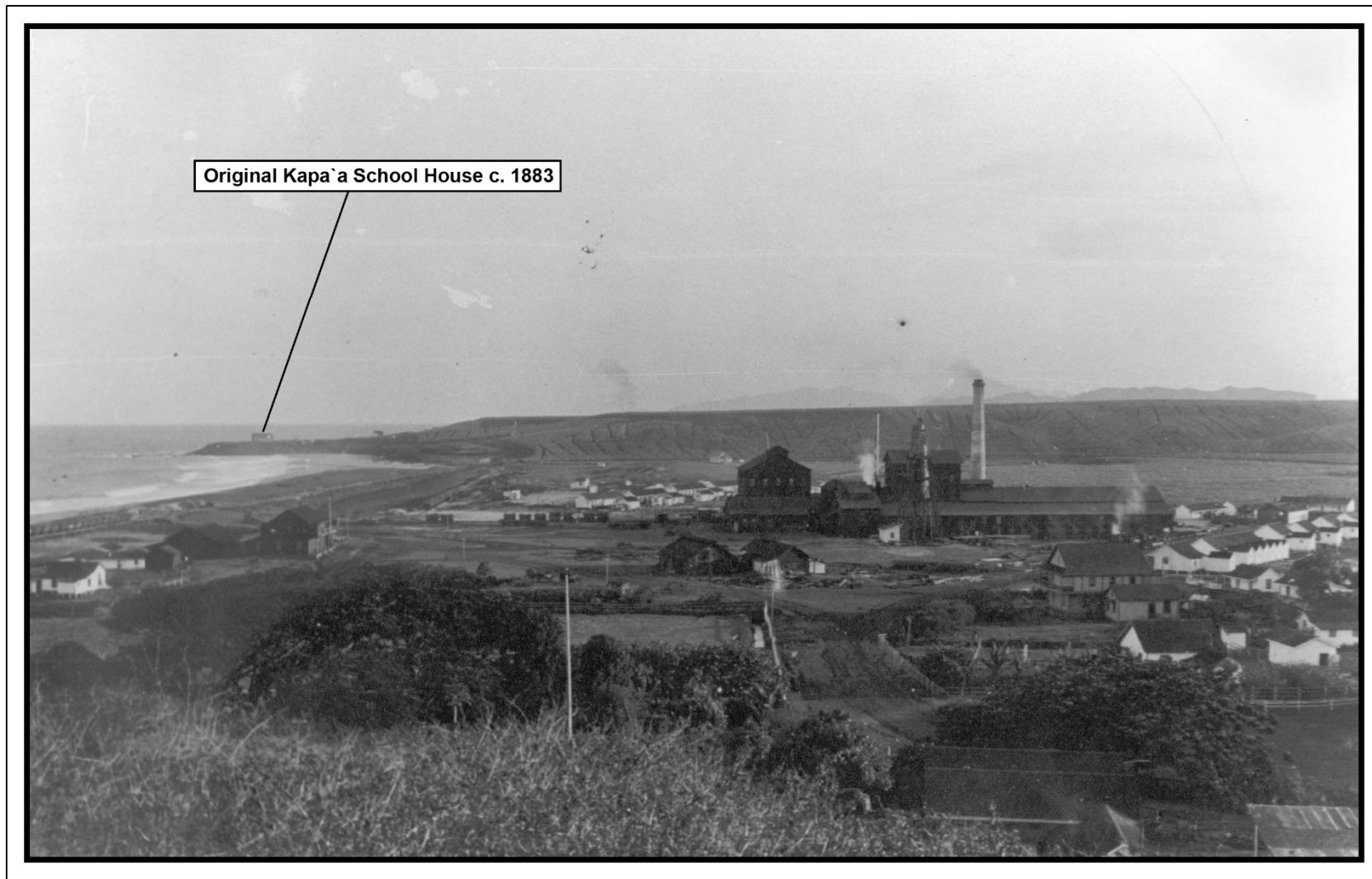


Figure 20. Historic photograph of Keālia Mill and town (courtesy of the Kaua'i Historical Society); view to south. The orientation suggests it was taken from Kealia Road near the existing Keālia Town Tract subdivision near the project area.

1983:10). In 1908, Kapa'a School was moved to its present site directly *mauka* on Mailihune Hill (Figure 21).

As in much of the rest of Hawai'i, the Chinese rice farmers began cultivating the lowlands of Kapa'a with increasing success in the latter half of the 1800s. Several Hawaiian *kuleana* owners leased or sold their parcels *mauka* of the swamp land to Chinese rice cultivators. Other Chinese rice cultivators appealed to the government for swamp lands, first leasing and later buying. As a result of the growing rice and sugar industries, the economic activity displaced the house lot *kuleana* on the *makai* side of the marsh for increasing commercial and residential development (Lai 1985:148–161).

Narrow wagon roads gave way to macadamized roads in the early part of the twentieth century. This new road was called the Kaua'i Belt Road and parts of it are thought to have followed the "Old Government Road" (Cook 1999). In Kapa'a, the present day Kūhiō Highway probably follows the same route as the original Government Road and subsequent Kaua'i Belt Road. The location of the *kuleana* awards in Kapa'a indicates the majority of the house lots were situated along the Government Road. LCA 3243 names a "road" as one of its boundaries.

In Keālia, however, there is evidence that numerous traditional trails led to Anahola with possibly two principal routes, a *makai* route and a *mauka* route. In 1881, Z.S. Spalding, proprietor of the Makee Sugar Plantation, appealed to the Department of the Interior with a formal petition to have the *makai* road (in Keālia) officially closed, stating that the natives were breaking through his fences to take shortcuts between Keālia and Anahola (Hawai'i State Archives, Letter: Z.S. Spalding, 16 May 1881). The exact location of the *makai* road is unknown although it is thought to have been on the plateau lands, somewhat removed from the coastline, in areas fit for sugarcane production. The route of the Old Government Road, also known as the "Mauka road" is described as "crossing the Kealia River above the Rice Plantation and passing over the hill near Mr. Spalding's residence" (Hawai'i State Archives, Letter: Z.S. Spalding, 21 April 1882). When the Kaua'i Belt Road was constructed in the first two decades of the twentieth century, a portion of the old Government Road route was abandoned. The new route crossed the river at the *makai* end of Keālia Stream, paralleled the ocean and the railroad track, and then turned *mauka* passing through Keālia town and went up the hill to meet up with the "Old government Road." The Keālia Bridge built for the Kaua'i Belt Road is thought to date to ca. 1912. A traveler writing about their travels in 1913, mentions the bridge: "In the twinkling of an eye we passed on the steel bridge of Kealia. This new bridge is beautiful" (Akina 1913) (Figure 22).

### 3.3.3 Twentieth Century History of Kapa'a and Keālia (1900-Present)

In the early 1900s, government lands were auctioned off in Kapa'a to help with the burgeoning plantation population. An oral account mentioned that in the 1930s and 1940s, the area north of Moikeha Canal in Kapa'a was mostly settled by Portuguese families (Bushnell et al. 2002). Another oral account mentioned that the Japanese were very prominent in the 1920s and 1930s, largely replacing the Chinese merchants of the turn of the century in the Kapa'a business sector (Bushnell et al. 2002). Several territorial government structures were once situated adjacent to the coastal areas of Kapa'a. The Board of Health, Territory of Hawaii ran a dispensary in Kapa'a starting in 1926. This was located at the *makai* edge of Niu Street near the Kapa'a Beach Park parking lot. A fire station was once located in the area now occupied by the Coral Reef Hotel and

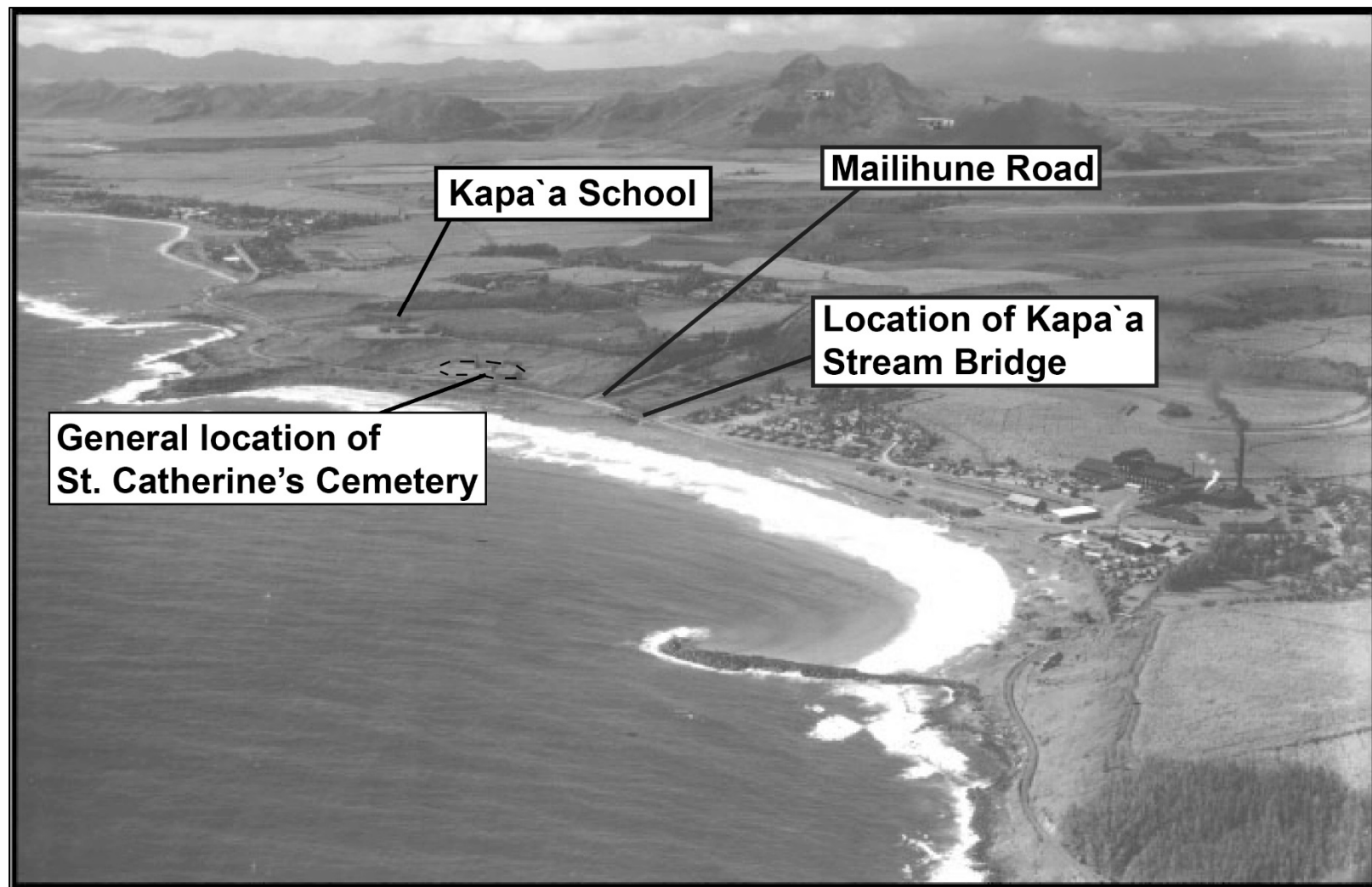


Figure 21. “Aerial View of Kealia, Kauai, Hawaii, Looking Landward” ca. 1933 (Bushnell et. al 2002); note Mailihuna Road is misspelled; view to west-southwest



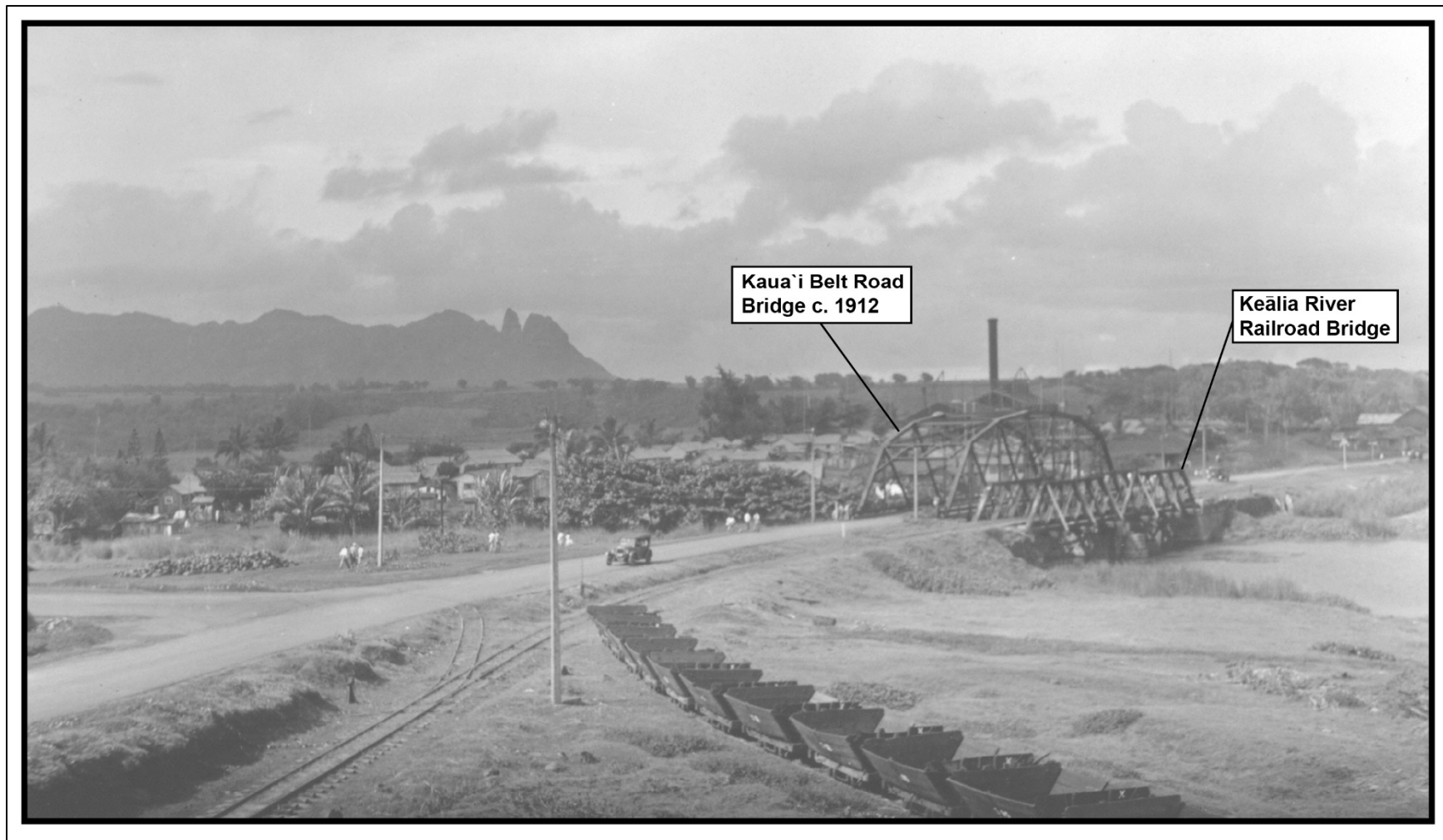


Figure 22. “Kealia in Background, Kealia, Kauai, Hawaii” ca. 1934, photograph by Funk (Bushnell et al. 2002), **view to north-northwest**

a courthouse and jail cell once stood at the location of the present Kapa'a Neighborhood Center. It is not known when these structures were removed or abandoned.

### 3.3.3.1 Ahukini Terminal & Railway Company

The Ahukini Terminal & Railway Company (AT&R) was formed in 1920 to establish a railroad to connect Anahola, Keālia, and Kapa'a to Ahukini Landing and "provide relatively cheap freight rates for the carriage of plantation sugar to a terminal outlet" (Condé and Best 1973:185). The company was responsible for extending the railroad line from Makee Landing, which was no longer in use, to Ahukini Landing, and for constructing the original Waika'ea Railroad Bridge and the Mō'īkeha Makai Railroad Bridge. In an annual report written in December 1921, the line between Ahukini and Keālia was opened by 7 May 1921 stating, "can run trains from Ahukini to Kealia on twenty four hours notice" (Condé and Best 1973:185) (Figure 23, see Figure 19).

In 1934, the Lihue Plantation Company absorbed the AT&R and Makee Sugar Company (Condé and Best 1973:167, Figure 24). The railway and rolling stock formerly owned by Makee Sugar Company became the Makee Division of the Lihue Plantation. At this time, in addition to hauling sugarcane, the railroad was also used to haul plantation freight, including "fertilizer, etc. . . . canned pineapple from Hawaiian Canneries to Ahukini and Nawiliwili, pineapple refuse from Hawaiian Canneries to a dump near Anahola and fuel oil from Ahukini to Hawaiian Canneries Co., Ltd." (Hawaiian Territorial Planning Board 1940:11). Former plantation workers and *kama'āina* growing up in Kapa'a remember when the cannery sent their waste to the pineapple dump, a concrete pier just north of Kumukumu Stream by railroad. The structure is built over the water where the rail cars would dump the pineapple waste. The current carried the waste to Kapa'a, where the waste attracted fish and sharks (Bushnell et al. 2002).

Lihue Plantation was the last plantation in Hawai'i to convert from railroad transport to trucking. "By 1957 the company was salvaging a part of their plantation railroad, which was being supplanted by roads laid out for the most part on or close to the old rail bed" (Condé and Best 1973:167). By 1959, the plantation had completely converted to trucking.

### 3.3.3.2 Hawaiian Canneries Company, Ltd.

In 1913, Hawaiian Canneries Company, Ltd. opened in Kapa'a at the site now occupied by Pono Kai Resort, just north of Waika'ea Canal (Cook 1999:56). A resident of Kapa'a described how the town "came alive" after the cannery opened (Fernandez 2009:48). Following the completion of their plantation contracts, the Japanese plantation workers moved into town and "opened mom and pop grocery stores" (Fernandez 2009:48):

Portuguese opened dairy farms in the hinterland or repair shops in Kapa'a. Former plantation laborers became farmers, raising pineapple and other crops for sale. Service businesses started: the slop-gatherer who came to homes to take the garbage as feed for his pigs, the fish monger selling fish on their street, the cattle rancher who slaughtered cows and provided fresh meat to the market, the traveling wagon man hawking fresh fruits and vegetables. [Fernandez 2009:48]

Kapa'a became "an integrated multi-racial town, containing an extraordinary mix of people living and working together in harmony" all due to the new cannery (Fernandez 2009:48). In 1923, Hawaiian Canneries Company, Ltd. purchased the approximately 8.75 acres of land they were leasing through the Hawaiian Organic Act (Hawai'i Bureau of Conveyances, Grant 8248). At that



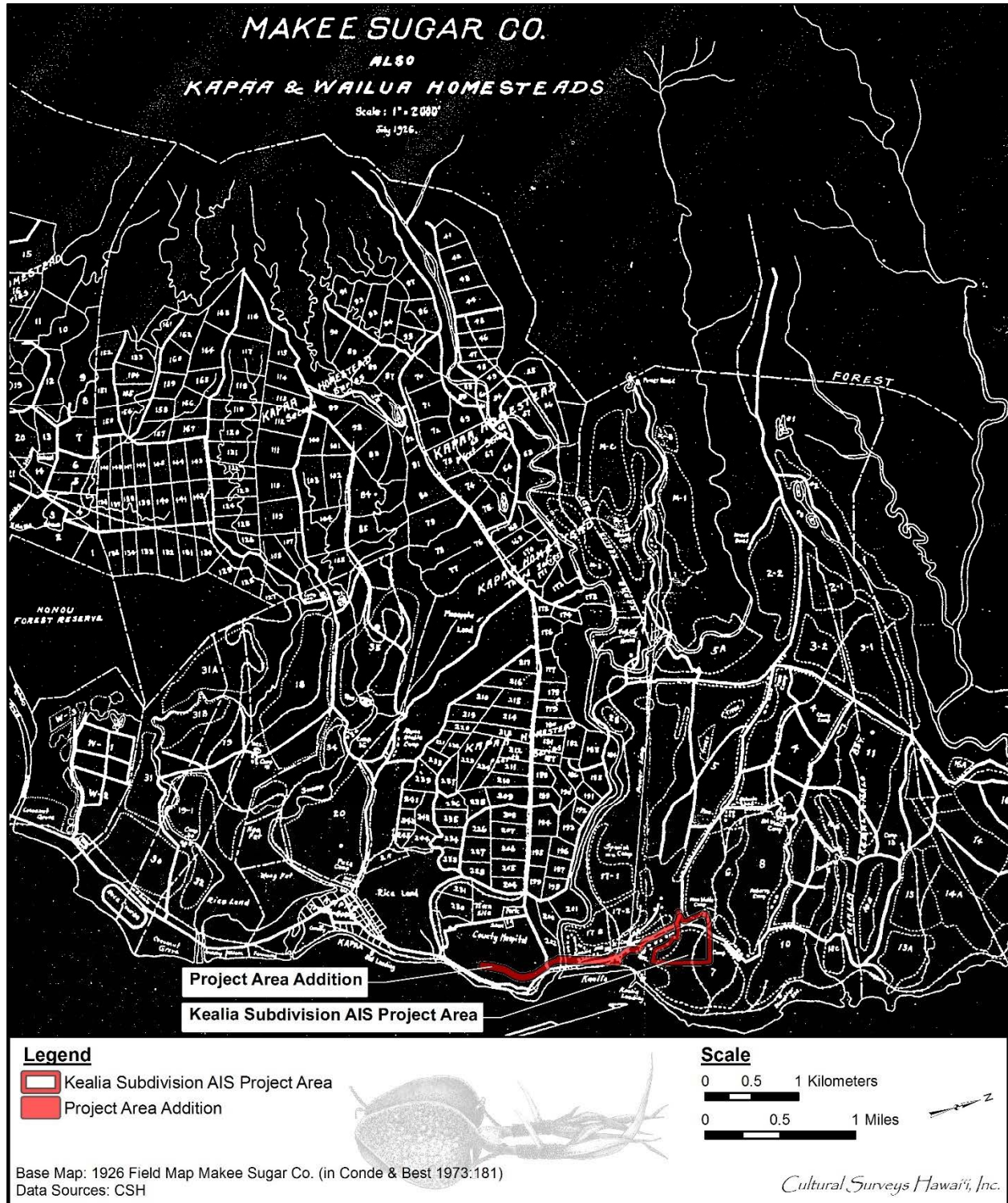


Figure 23. A 1926 field map for Makee Sugar Company (in Condé and Best 1973:181) showing the railroad system within the current investigation and the surrounding area



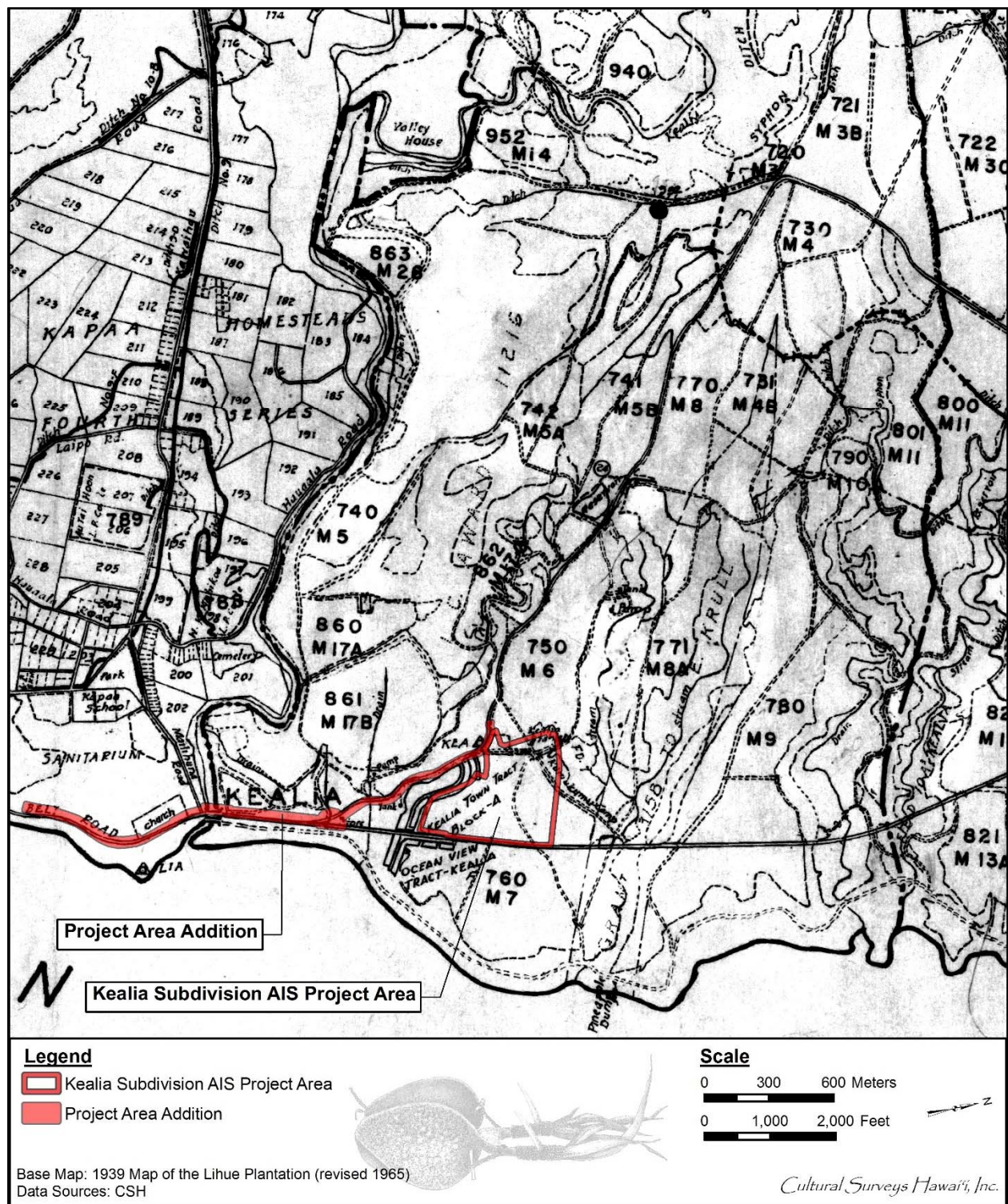


Figure 24. A portion of a 1939 Lihue Plantation field map (revised in 1965) showing “New Kumukumu Camp” in the northwest corner of the Keālia Mauka Homesites project as well as the proposed sewer line project corridor



time the cannery only contained four structures but by 1956, 1.5 million cases of pineapple were being packed. By 1960, 3,400 acres were in pineapple and the cannery employed 250 full-time and 1,000 seasonal workers (*Honolulu Advertiser*, 20 March 1960). In 1962, Hawaiian Canneries went out of business due to competition from canneries in other countries.

Severe floods in Kapa'a in 1940 led to the dredging and construction of the Waika'e and Mō'ikeha Canals sometime in the 1940s (Hawaiian Territorial Planning Board 1940:7). The construction of Waika'e Canal, approximately 275 m (902.2 ft) south of the project area, had been proposed as early as 1923 (Bureau of Land Conveyances, Grant 8248). A 1940 Master Plan for Kapa'a requested that the Territorial Legislature set aside funds for the completion of a drainage canal and for filling *makai* and *mauka* of the canal (Hawaiian Territorial Planning Board 1940:7). In 1955, a report was published on proposed coral dredging for the reef fronting Kapa'a Beach Park (*Garden Island*, 21 September 1955). The coral was to be used for building plantation roads. This dredging was later blamed for accelerated erosion along Kapa'a Beach (*Garden Island*, 30 October 1963). Today, there are several sea walls to check erosion along the Kapa'a Beach Park. Old time residents claim the sandy beach in Kapa'a was once much more extensive than it is now (Bushnell et al. 2002).

Residents of Keālia Town slowly dispersed after the incorporation of Makee Sugar Company into Lihue Plantation in the 1930s. Many of the plantation workers bought property of their own and moved out of plantation camps. The plantation camps that bordered Kūhiō Highway were finally disbanded in the 1980s. In 1997, the entire *ahupua'a* of Keālia was sold off as an effort to downsize Amfac's landholdings and because Keālia is the most distant from the Lihue Plantation sugar mill, it was considered the least profitable (*Honolulu Advertiser*, 7 July 1997). The Lihue Plantation completely folded at the end of the twentieth century. Kapa'a Town suffered after the closing of the Kapa'a Cannery, however, the growing tourist industry helped to ease the economic effects of the cannery's closing.

### 3.3.4 Contemporary Land Use

The current inventory survey includes a portion of Route 56 (Kūhiō Highway) including the intersection of Maillihuna Road and Kapa'a Stream Bridge. The entry to St. Catherine's Cemetery is also located adjacent to the project area on the west or *mauka* boundary. The surrounding area is not significantly developed. The largest establishment near the proposed sewer line site is Kapa'a High School soccer field, track, and baseball diamond, located approximately 300 m to the southeast. To the north and northwest of the current investigation, the land is primarily utilized for agricultural and residential purposes. Contemporary land use within the current investigation is depicted in historic aerial photographs of the Kapa'a Coast and a portion of the 1963 Anahola and Kapa'a USGS 7.5-minute topographic quadrangles map (Figure 25 through Figure 27).

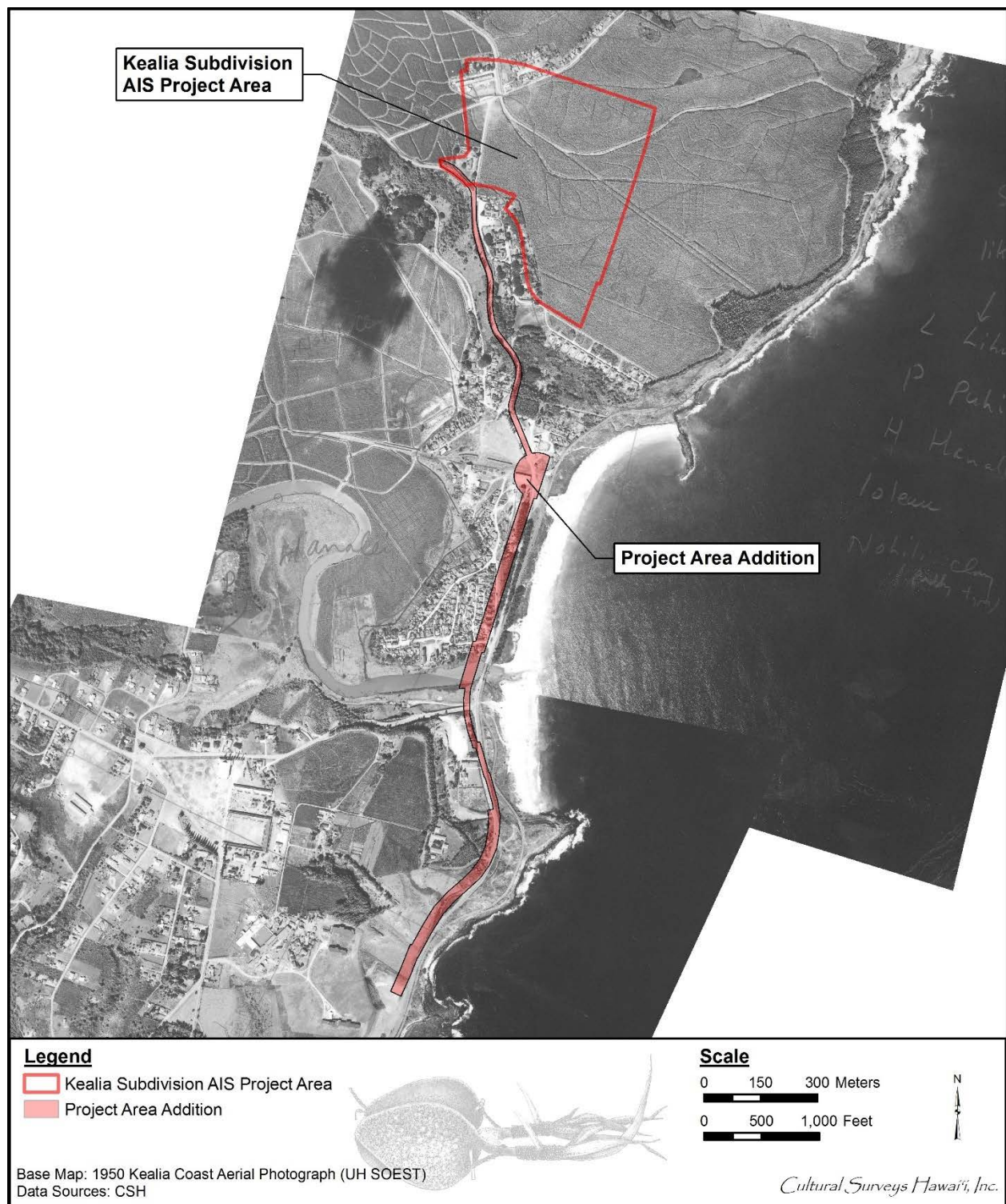


Figure 25. 1950 Kapa'a Coast aerial photograph (UH SOEST) depicting the current investigation surrounded by residential and agricultural land



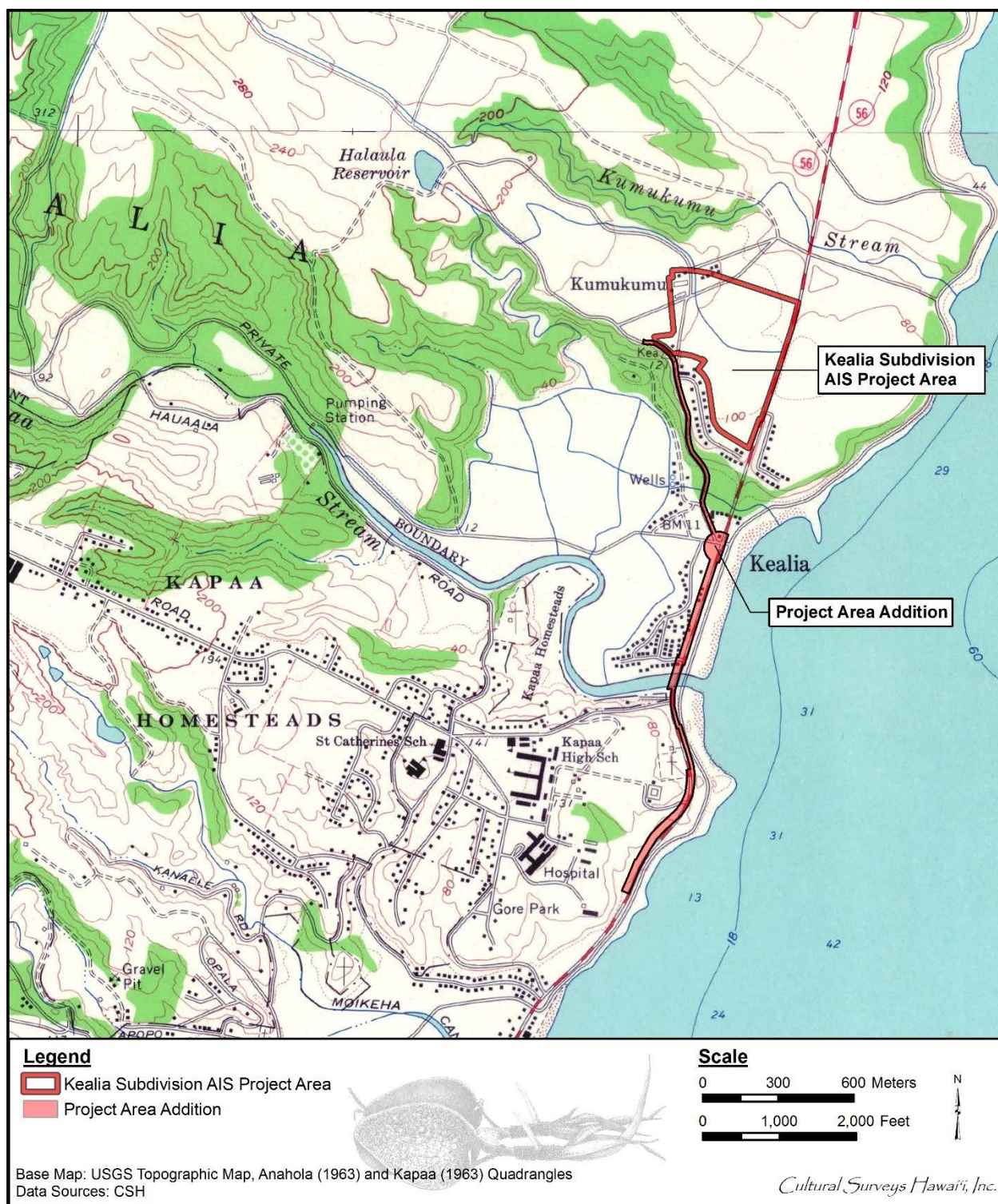


Figure 26. Portion of the 1963 Anahola and Kapaa USGS 7.5-minute topographic quadrangle showing the location of the current investigation and the surrounding area



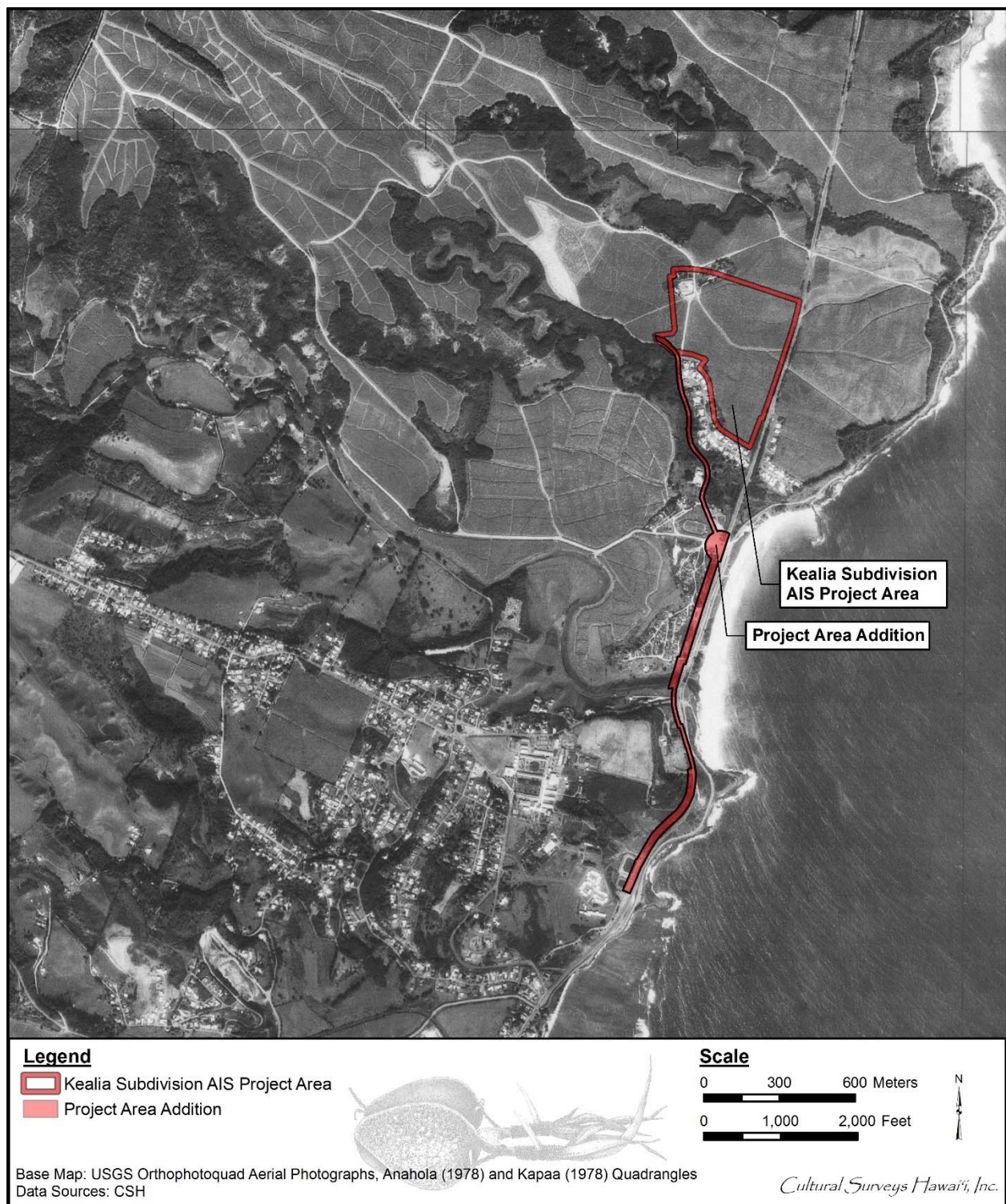


Figure 27. 1978 USGS Anahola and Kapa'a Orthophotoquad aerial photographs and the surrounding area



### 3.4 Previous Archaeological Research

The locations of previous archaeological research conducted within Keālia and Kapa'a Ahupua'a in the vicinity of the project area are shown in Figure 28 and summarized in Table 3. Previously documented historic properties near the Keālia Mauka Homesites project area are shown in Figure 29 and Figure 30 and listed in Table 4. These studies and findings are discussed in the following paragraphs.

#### 3.4.1 Bennett 1931

The first systematic archaeological survey of Kaua'i was conducted by Bennett (1931), in which he discussed the terracing and irrigation ditches located along the Kapa'a Stream. There were no sites recorded by Bennett (1931) near the project area. It should be noted that Bennett's work was conducted after commercial sugarcane cultivation and other historic activities had destroyed or damaged many historic properties. Also, most of the historic properties documented by Bennett were relatively easy to access, conspicuous, and obvious. Bennett discussed the irrigation ditches near Kapa'a Stream as fairly large-sized banked structures with earthen walls. One ditch near Keālia homesteads was observed as being a deep cut (approximately 10 ft deep) into a low ridge to transport water across the ridge. Bennett also discusses the taro terraces within the small valleys in the foothills of Kapa'a (Bennett 1931).

#### 3.4.2 Folk and Hammatt 1991

In 1991, CSH conducted a field inspection, surface collection, and assessment at the Keālia Sand Quarry site (Folk and Hammatt 1991). Human remains were exposed due to the quarrying activities and designated SIHP # 50-30-08-1851. All identified human remains were fragmented and disarticulated. During background research into the area where bones were identified, two LCAs were noted located nearby. It was concluded that the bones were most likely associated with the LCAs. It was also documented that traditional Hawaiian midden and historic artifacts were identified near the burials. The remains were collected and deposited at the Office of Hawaiian Affairs at Līhu'e as specified by the State Historic Preservation Division.

#### 3.4.3 Kikuchi and Remoaldo 1992

In 1992, Kikuchi and Remoaldo (1992) completed Volume I of a survey of the cemeteries of Kaua'i. Two cemeteries are located within Kealia but only one is in the vicinity of the project area. Kikuchi and Remoaldo (1992:3) used the state's inventory of historic property numbering system comprised the number 50 (for the State), followed by the number 30 (for the island of Kaua'i), and the number 08 (the USGS 7.5 Minute Series Kaua'i island topographical map quad number) for their inventory of historic cemeteries, but because the state's inventory data set does not include cemeteries Kikuchi and Remoaldo (1992:3) used the letter B and numbers to signify burial sites. Kikuchi and Remoaldo's (1992) cemetery 50-30 08-B001 is located west of the project area. A portion of St. Catherine's Cemetery, Kikuchi and Remoaldo's (1992:63, Figure 23) cemetery 50-30-08-B002, is located within the southwest portion of the project area.

#### 3.4.4 Jourdane and Collins 1996

In 1996, SHPD staff conducted a field inspection of an inadvertent burial reported at Keālia (Jourdane and Collins 1996). The remains were lying in recently disturbed sand deposits and associated with the previously identified SIHP # -1851.

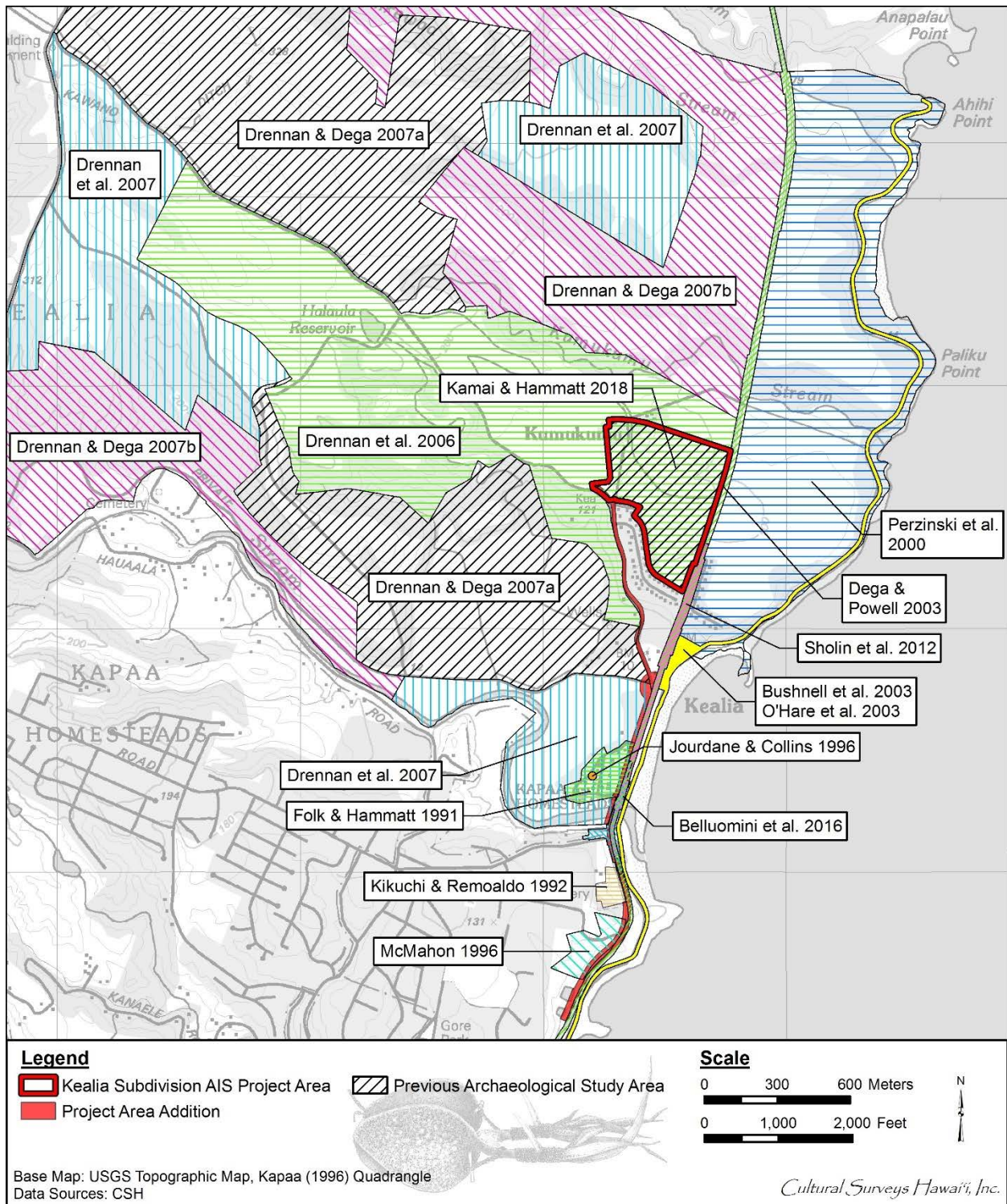


Figure 28. A portion of the 1996 Kapaa USGS 7.5-minute topographic quadrangles showing the location of previous archaeological inventory surveys in and around the project area



Table 3. Previous archaeological studies in and around the project area

Reference	Type of Study	Location	Results (SIHP # 50-30-08 *****)
Bennett 1931	Archaeology of Kaua'i	Island-wide	Discusses terracing and irrigation ditches located along Kapa'a Stream
Folk and Hammatt	Field inspection letter report	Kealia Sand Quarry, Kealia Ahupua'a, TMK: [4] 4-7-003:002 por	Identified disarticulated fragmented human skeletal remains at a sand quarry site; subsequently assigned SIHP # -1851 by SHPD
Kikuchi and Remoaldo 1992 Vol.1	Locate, map and inventory cemeteries, graveyards, and family plots of the post-1800s on Kaua'i	Kaua'i Island	St. Catherine's Cemetery inventoried as 08-B002 but not surveyed; inventory number used signifies Kapaa USGS 7.5-minute topographic map quadrangle (08) and B for cemetery and 002 for second burial area inventoried in USGS quad map 08; no SIHP number assigned to cemeteries by SHPD at this time
Jourdane and Collins 1996	Burial report	Bend of Kapa'a River, TMK: [4] 4-7-003:002 por	Identified additional disarticulated human remains associated with SIHP # -1851
McMahon 1996	Archaeological inventory survey	Multi-Purpose Building for the YMCA, TMK: [4] 4-6-014:026	No historic properties identified within vicinity of project area
Perzinski et al. 1999	Archaeological inventory survey	300-acre Kealia Makai Parcel, TMK: [4] 4-7-004:006	Identified SIHP # -0789 within vicinity of project area including Cane Haul Rd (SIHP # -0789: Feature A), Keālia Landing (SIHP # -0789: Feature B), and a dynamite storage bunker (SIHP # -0789: Feature C)
Bushnell et al. 2003	Archaeological inventory survey	Proposed Kapa'a–Keālia bike path, Kapa'a and Keālia Ahupua'a	Recorded three newly identified cultural resources within vicinity of project area including a buried cultural layer with an associated human burial (SIHP # -2074), Old Kauai Belt Hwy bridge foundation (SIHP # -2075), and a possibly modern petroglyph (SIHP # -2076); recorded a newly identified sub-feature of SIHP # -0789 Feature A, Kapa'a Stream Cane Haul Rd Bridge (SIHP # -0789 Feature A, Sub-Feature 1)

Reference	Type of Study	Location	Results (SIHP # 50-30-08 ****)
Dega and Powell 2003	Archaeological monitoring	Phase I of Kauai Rural Fiber Optic Duct Lines project	Archaeological monitoring along 21.5 miles of Kūhiō Highway; SIHP # 50-30-08-884 confirmed (not the SIHP # -884 from Bushnell et al. 2003) and excavated in two tests units through floor of Manhole 18 (Dega and Powell 2003:73); bulk wood charcoal sample from Layer V, 220-240 cmbs submitted for dating, returned a date of 210±50 BP, and calibrated through OxCal at one sigma, sample dated to AD 1640-1690 (32%) and AD 1730-1810 (60%)
O'Hare et al. 2003	Burial treatment plan	Keālia Ahupua'a, TMK: [4] 4-7-004:001	Burial treatment plan for SIHP # -2074
Drennan et al. 2006	Archaeological inventory survey, Phase I	Portion of 2,008-acre property in Keālia Ahupua'a, TMKs: [4] 4-7-003:002 por. and 004:001 por., part of Keālananai Development project	No historic properties identified within vicinity of project area; although New Kumukumu Camp is in Phase I survey area, site is documented in Phase II report
Drennan and Dega 2007a	Archaeological inventory survey, Phase II	Portion of 2,008-acre property in Keālia Ahupua'a, TMKs: [4] 4-7-003:002 por. and 004:001 por., part of Keālananai Development project	During Phase II, New Kumukumu Camp (SIHP # -7013) cited as a newly identified historic property, along with six other newly identified plantation-era historic properties within vicinity of project area including railroad rails and foundations (SIHP # -7015), sugarcane plantation infrastructure including a metal tank, structural supports, cart tracks, and foundations (SIHP # -7017), irrigation ditches, sluice gates, and a bridge (SIHP # -7018), a bridge, foundations, and irrigation pipes (SIHP # -7019), concrete foundations and a culvert (SIHP # -7020), and sugarcane transport, water diversion and transportation (SIHP # -7021)



Reference	Type of Study	Location	Results (SIHP # 50-30-08 ****)
Drennan and Dega 2007b	Archaeological inventory survey, Phase IV	Portion of 2,008-acre property in Keālia Ahupua'a, TMKs: [4] 4-7-003:002 por. and 004:001 por., part of Keālananai Development project	During Phase IV, <b>37 historic properties newly identified</b> , comprised of 66 features within vicinity of project area; historic properties identified consisted of plantation-era findings and/or historic (SIHP #s -1110 through -1118, and -1120 through -1135 with sub-feature designation when needed); SIHP #s -1119 (terrace and upright) and -1136 (traditional petroglyph) are pre-Contact and/or historic
Drennan et al. 2007	Archaeological inventory survey, Phase III	386 acres in Keālia Ahupua'a, TMKs: [4] 4-7-003:002 por. and 004:001 por., part of Keālananai Development project	Six historic properties identified within vicinity of project area including plantation-era concrete staircase (SIHP # -7034), plantation-era staircase (SIHP # -7035), plantation-era concrete foundation, and brick and mortar structure (SIHP # -7037), human burials, burial pit outline and fire pit (SIHP # -7040), plantation-era red brick and concrete wall/foundation (SIHP # -7041), and Keālia Historic Town Complex (SIHP # -7042)
Sholin et al. 2012	Archaeological monitoring	Keālia Beach Corridor Transmission Line Reconfiguration at Kūhiō Hwy	Archaeological monitoring confirmed two known historic properties, SIHP #2 - 884 (Dega and Powell 2003) and SIHP # -7034; five new site numbers assigned for newly identified historic properties; SIHP # -2161, a near-surface secondary deposit of inadvertently discovered human bone fragments; SIHP # -2162, includes traditional Hawaiian habitation deposit and inadvertently discovered, secondarily deposited human remains; SIHP # -2163, traditional Hawaiian habitation deposit; SIHP # -2165, traditional Hawaiian habitation deposit; SIHP # -2166, traditional Hawaiian habitation deposit; SIHP # -2164 labeled on figure but not mentioned or discussed in report text

Reference	Type of Study	Location	Results (SIHP # 50-30-08 ****)
Belluomini et al. 2016	Archaeological inventory survey	Kapa'a Stream Bridge, TMKs: [4] 4-6-014:024 por., 033 por., 090 por., 092 por. Kūhiō Hwy and Mailihuna Rd ROW; 4-7-003:001 por., and 4-7-008:042 por. Kūhiō Hwy ROW	Historic properties identified included two newly identified historic properties (SIHP # -2278 [Kapa'a Stream Bridge], and SIHP # -2279 [plantation-era water control complex]), as well as two previously documented historic properties (SIHP #s -0789A Sub-Feature 1 [remnant portion of the original Keālia Bridge], and -2075 [historic bridge foundation])
Kamai and Hammatt 2017	Literature review and field inspection	Keālia Mauka Homesites	Five newly identified features of SIHP # -7013 recorded; supplemental AIS requested by SHPD to include further recording of associated features of SHIP # 7013 (New Kumukumu Camp)



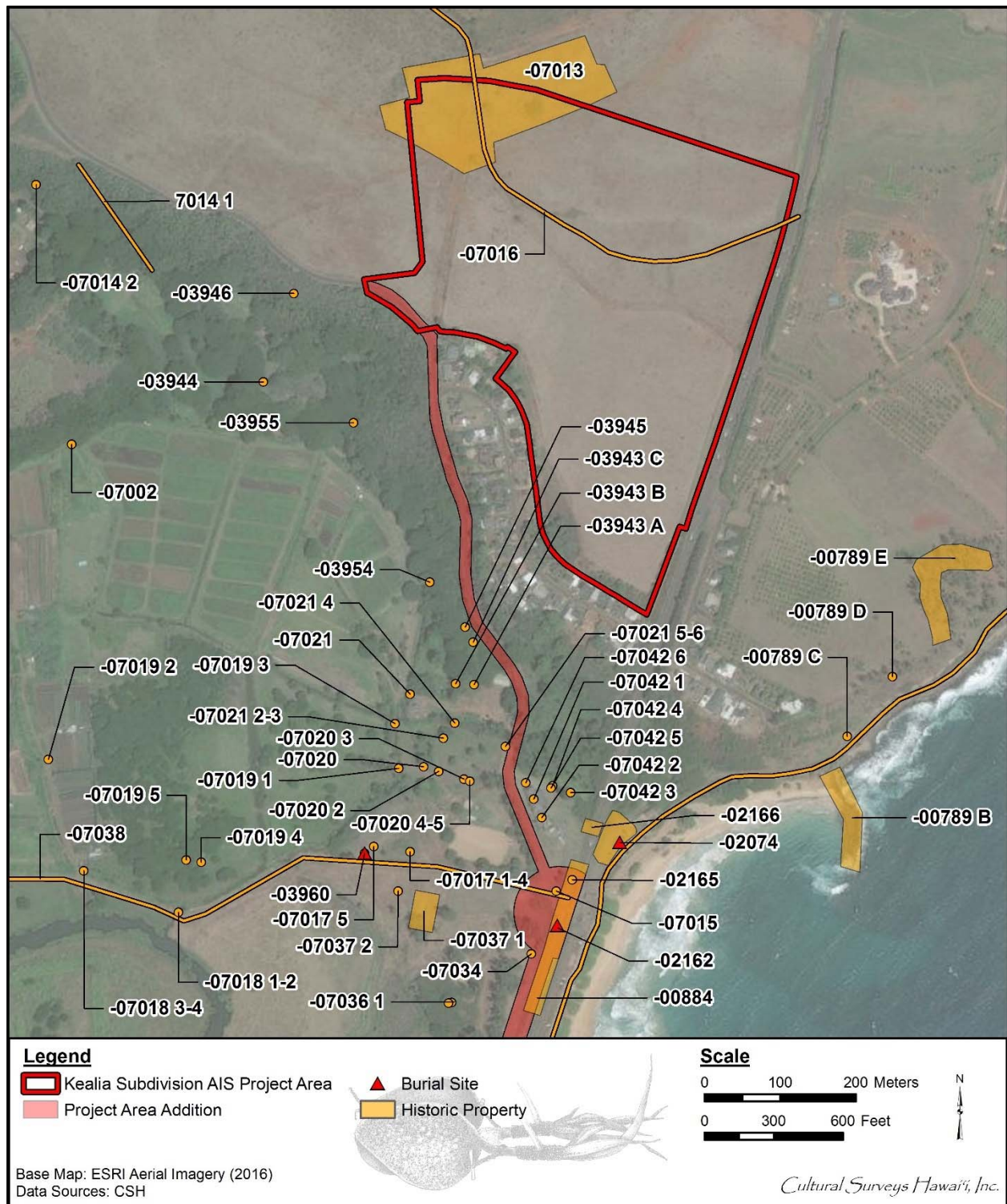


Figure 29. Aerial photograph (2016 Google Earth) showing previously identified archaeological sites in and around the northern and a portion of the central area of the current investigation



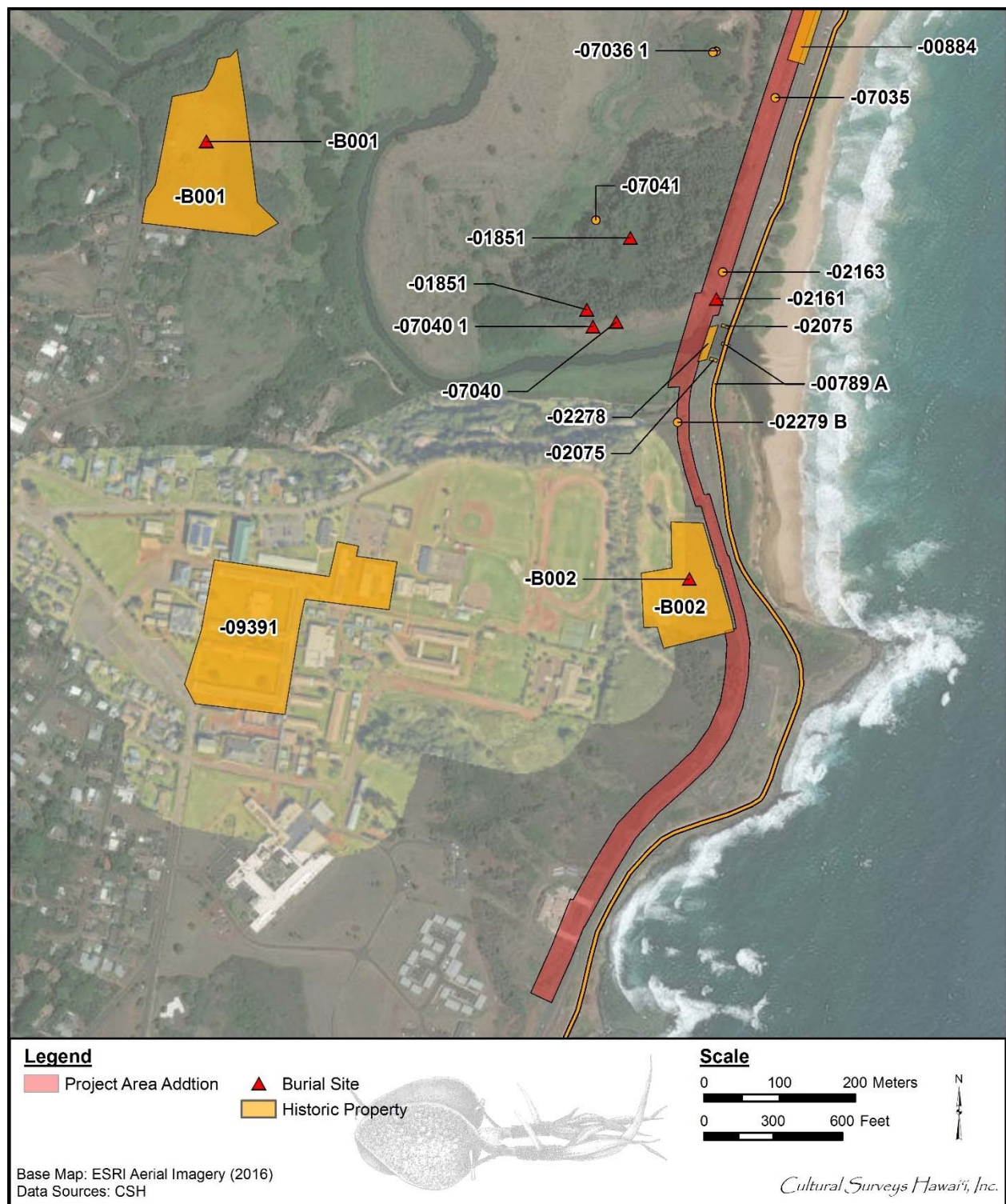


Figure 30. Aerial photograph (2016 Google Earth) showing previously identified archaeological sites in and around the southern and a portion of the central area of the current investigation

Table 4. Previously identified archaeological sites in the vicinity of the project area

SIHP # 50-30-08-	Site Type/Name	Reference
0789A	Cane Haul Road	Perzinski et al. 2000; Bushnell et al. 2003; Belloumini et al. 2016
0789B	Keālia Landing	Perzinski et al. 2000; Bushnell et al. 2003
0789C	Dynamite storage bunker	Perzinski et al. 2000; Bushnell et al. 2003
0789D	Semi-circular terrace	Perzinski et al. 2000
0789E	Plantation-era terraces	Perzinski et al. 2000
884	Pre-Contact human remains	Bushnell et al. 2003; Sholin et al. 2012
884		Dega and Powell 200.
2074	Buried cultural layer and associated human burial	Bushnell et al. 2003; O'Hare et al. 2003
2075	Old Kaua'i Belt Hwy bridge foundation	Bushnell et al. 2003; Belloumini et al. 2016
2161	Cultural deposit with associated human remains	Sholin et al. 2012
2162	Cultural deposit with associated, secondarily deposited human remains; skeletal remains relocated	Sholin et al. 2012
2163	Fire pit	Sholin et al. 2012
2165	Cultural deposit	Sholin et al. 2012
2166	Fire pit	Sholin et al. 2012
2278	Bridge (Kapa'a Stream Bridge)	Belloumini et al. 2016
2279	Water control complex	Belloumini et al. 2016
3943	Historic complex of a remnant concrete staircase, concrete telephone pole, and a concrete foundation with a slab walkway	Drennan et al. 2006
3944	Alignment	Drennan et al. 2006
3945	Alignment	Drennan et al. 2006
3946	Well/Cistern	Drennan et al. 2006
3954	Concrete and basalt boulder bridge	Drennan et al. 2006
3955	Bridge	Drennan et al. 2006
3960	Burial	Drennan and Dega 2007, Phase II
7001	Terrace	Drennan and Dega 2007, Phase II



7002	Wall (cement and basalt cobble)	Drennan and Dega 2007, Phase II
7013	New Kumukumu Camp (defunct)	Drennan and Dega 200, Phase II; Kamai and Hammatt 2018
7014	Cement column pipe supports and concrete columns	Drennan and Dega 2007, Phase II
7015 a.k.a. -7038	Railroad rails and foundation	Drennan and Dega 2007a; Drennan et al. 2007
7016	Railroad complex	Drennan and Dega 2007a
7017	Sugarcane plantation infrastructure including a metal tank, structural supports, cart tracks, and foundations	Drennan and Dega 2007a
7018	Irrigation ditches and sluice gates, and a plantation-era bridge	Drennan and Dega 2007a
7019	Plantation-era bridge, foundations, and irrigation pipes	Drennan and Dega 2007a
7020	Concrete foundations and culvert	Drennan and Dega 2007a
7021	Bridge/transportation infrastructure, a culvert, and steel pipe	Drennan and Dega 2007a
7034	Concrete staircase	Drennan et al. 2007; Sholin et al. 2012
7035	Staircase	Drennan et al. 2007
7036	Plantation-era concrete block and basalt, mortar and brick structure	Drennan et al. 2007
7037	Concrete foundation, and brick and mortar structure	Drennan et al. 2007
7038	Railroad path	Drennan et al. 2007
7040	Human burials, a burial pit outline, and a fire pit	Drennan et al. 2007
7041	Red brick and concrete wall/foundation	Drennan et al. 2007
7042	Keālia historic town complex	Drennan et al. 2007
9391	Kapa'a High School	National and Hawaii Register of Historic Places
<b>Kaua'i Cemetery Site # 50-30-08-</b>	<b>Site Type/Name</b>	<b>Reference</b>
B001	Historic cemetery	Kikuchi and Remoaldo 1992
B002	St. Catherine's Cemetery	Kikuchi and Remoaldo 1992

### 3.4.5 McMahon 1996

Nancy McMahon (1996) conducted an archaeological inventory survey on approximately 9 acres parcel, TMK: [4] 4-6-014:026. The parcel bounds the Kealia Mauka Homesites project area on the west or *mauka* of Kūhiō Highway. The sewer treatment plant is to the south and St. Catherine's Cemetery is to the north. No historic properties were identified (McMahon 1996:9)

### 3.4.6 Bushnell et al. 2003

In 2003, CSH conducted an archaeological inventory survey (AIS) for the Kapa'a–Keālia bike and pedestrian path. In addition to listing SIHP # -884, a pre-Contact human burial, in Table 6 and Table 9, Bushnell et al. (2003:44 and 53) relate that five newly identified sites (SIHP #s -2074 through -2078) and a sub-feature of SIHP # -0789 (Feature A, Sub-Feature 1) were documented. These historic properties are located east or *makai* and outside of the Keālia Mauka Homesites project area. SIHP # -0789 Feature A, Sub-Feature 1 is identified as the *makai* Kapa'a Stream Bridge for the Cane Haul Road and SIHP # -2075 is identified as the highway bridge foundation for the *mauka* Kapa'a Stream Bridge. SIHP # -2074 included a buried cultural layer and associated human burial.

### 3.4.7 Dega, Michael and James Powell 2003

In 2003, Scientific Consultant Services (SCS) completed archaeological monitoring during Phase I of the Kaua'i Rural Fiber-optic Duct Lines project. A portion of the study is located within the current project area extending along the western shoulder of Kūhiō Highway. Within this segment, Dega and Powell (2003:73) report SIHP # -884 was confirmed. It is not stated why they believed this buried cultural layer was SIHP # -884. Based on the Bushnell et al. (2003) study this is not the SIHP # -884 from Bushnell et al. (2003:44 and 53).

### 3.4.8 Bushnell et al. 2003

In 2003, CSH conducted an AIS for the Kapa'a–Keālia bike and pedestrian path. In addition to the listing of SIHP # 50-30-08-884, a pre-Contact human burial, in Table 6 and Table 9 Bushnell et al. (2003:44 and 53) relate that five newly identified sites (SIHP #s -2074 through -2078) and a sub-feature of SIHP # -0789 (Feature A, Sub-Feature 1) were documented (Bushnell et al. 2003). These historic properties are located east or *makai* and outside of the Kealia Mauka Homesites project area. SIHP # -0789 Feature A, Sub-Feature 1 is identified as the *makai* Kapa'a Stream Bridge for the Cane Haul Road and SIHP # -2075 is identified as the highway bridge foundation for the *mauka* Kapa'a Stream Bridge. SIHP # -2074 included a buried cultural layer and associated human burial.

### 3.4.9 Drennan et al. 2006; Drennan and Dega 2007a and 2007b; Drennan et al. 2007

In 2006 and 2007, SCS conducted four phases of an AIS in the Keālia Ahupua'a, Phase I (Drennan et al. 2006), Phase II (Drennan and Dega 2007a), Phase III (Drennan et al. 2007), and Phase IV (Drennan and Dega 2007b). During Phase I, 15 newly identified sites were documented. Nine were associated with the plantation era, one site appeared to be associated with traditional Hawaiian practices (habitation and/or agriculture), and the remaining five are interpreted as traditional Hawaiian agricultural sites that continued to be used during the plantation era (Drennan et al. 2006:29). The newly identified sites were designated as SIHP #s -3943 through -3957. During Phase II, 30 newly identified historic properties comprising 82 features were identified. The newly

identified sites were designated as SIHP #s -3959 and -3960, human burials, and SIHP #s -7000 through SIHP # -7027 (Drennan and Dega 2007a:ii). During Phase III, 19 historic properties were newly identified comprising 93 features. The newly identified sites were designated as SIHP #s -7028 through -7046. SIHP #s -7028 and -7040 contained human burials (Drennan et al. 2007:ii). During Phase IV, 37 historic properties comprising 66 features were newly identified. The newly identified sites were designated as SIHP #s -1100 through -1136. A report summarizing the archaeology conducted in the four phases of the proposed Keālanani project including subsurface testing was written in 2007 (Drennan 2007b). Using the geomorphic model formulated by Dega and Powell in 2003 during the monitoring work, and later refined in 2005 (Dega et al. 2005), Drennan concluded Zone III was the primary zone of historical utilization based on previous archaeological studies and subsurface testing conducted during the four phases of the project. SCS wrote an advance data recovery plan (DRP) in 2007 specifically to recover further samples for SIHP # -3959, a habitation site and surface documentation of headstones for SIHP # -7028, an historic cemetery (Drennan 2007a). SCS also wrote a preservation plan for multiple historic properties: SIHP #s -7027, a railroad bridge; -7028, a historic cemetery; -7043, Spalding Monument; -1120 Feature 2 is a petroglyph of an English name and an image interpreted as a boat; and lastly -1136, a pre-Contact petroglyph (Drennan and Dega 2007c). The current project area is in the Phase I area.

In 2016, CSH conducted an AIS for the Kapa'a Stream Bridge Replacement project. During the AIS, two previously documented historic properties—SIHP #s -0789A Sub-Feature 1, the remnant portions of the original Keālia Stream Bridge Crossing, and -2075, the remnant abutments of the former Kaua'i Belt Road—were confirmed. Two newly identified historic properties were discovered and documented: SIHP #s -2278, the Kapa'a Stream Bridge, and -2279, a water control complex consisting of an earthen ditch (Feature A) and an associated culvert (Feature B) (Belluomini et al. 2016).

#### **3.4.10 Sholin et al 2012**

In 2012, T.S. Dye and Colleagues, Archaeologists, Inc. conducted archaeological monitoring of the Keālia Beach corridor transmission line reconfiguration along Kūhiō Highway. Archaeological monitoring re-identified two known historic properties, SIHP # -884 (appears to be SIHP # -884 from Dega and Powell 2003) and SIHP # -7034 (SIHP # 50-30-08-7034 was removed during the project per Sholin et al 2012:57). The project assigned site numbers to five other newly identified historic properties. SIHP #s -2163, -2165, and -2166 are traditional Hawaiian habitation deposits discovered during the archaeological monitoring; SIHP # -2161 is a near-surface secondary deposit of inadvertently discovered human bone fragments and SIHP # -2162 includes traditional Hawaiian habitation deposits and inadvertently discovered, secondarily deposited human remains (Sholin et al 2012).

#### **3.4.11 Belluomini et al. 2016**

In 2016, CSH conducted an AIS for the Kapa'a Stream Bridge Replacement project. During the AIS, two previously documented historic properties—SIHP #s -789A Sub-Feature 1, the remnant portions of the original Keālia Stream Bridge Crossing, and -2075, the remnant abutments of the former Kaua'i Belt Road—were re-identified. Two newly identified historic properties were discovered and documented: SIHP #s -2278, the Kapa'a Stream Bridge, and -2279, a water control



complex consisting of an earthen ditch (Feature A) and an associated culvert (Feature B) (Belluomini et al. 2016).

### 3.4.12 Kamai and Hammatt 2017

In 2017 CSH conducted a literature review and field inspection of (LRFI) for the Keālia Mauka Homesites project area residential section that includes the southwest corner of the New Kumukumu Camp, SHIP # -7013. Five newly identified features of SIHP # -7013 were recorded (Kamai and Hammatt 2017). Consultation was conducted with SHPD on 2 October 2018; a supplemental AIS was requested, which included further recording of associated features of SHIP # -7013, evaluation of integrity and significance, and mitigation recommendations for the entirety of the project area, including the sewer line project corridor.

## 3.5 Predictive Model for the Proposed Project

Historic records list a number of *heiau* situated in Kapa'a and Keālia indicating the region was at one time much more significant than is portrayed by the *kuleana* records of the late 1840s and early 1850s. The specific locations of most of the *heiau* are unknown today, however, there are a few that carry the same names as *wahi pana* known from maps near the project area. These *heiau* include Kuahiahi (Keahiahi, Kaahiahi) at the rocky headland at the north end of Kapa'a and Kaluluomoikeha in Kapa'a. There are neither LCA *kuleana* nor any of these *wahi pana* within the project area.

Based primarily on the findings of previous archaeological studies in the coastal area of Keālia, it is anticipated that, especially in the sewer line corridor across the valley bottom, pre-Contact and historic cultural layers associated with occupation, habitation, and agriculture will likely be encountered during subsurface excavations for the Keālia Homesites project. Pre-Contact cultural layers with associated burial sites (SIHP #s 50-30-08-884, 50-30-08-2161; 50-30-08-2162) and cultural layers without burial sites (SIHP # 50-30-08-2165; 50-30-08-2163) were documented in the sewer line corridor of the project area. Historic properties including the historic St. Catherine's Cemetery (Kikuchi and Remoaldo [1992] site # 50-30-08-B002), Kapa'a High School (SIHP # 50-30-08-9391), water control features (SIHP #s 50-30-08-2279, 50-30-08-7021) and other remnants of the plantation (SIHP # -7035) are located along the periphery of the project area limits.

The residential home lots section of the project area is likely to be predominantly agricultural soils of the former sugar plantation, except at the northwest corner where the razed former plantation housing named New Kumukumu Camp existed. There is a possibility that subsurface remains such as trash pits will be encountered.

## Section 4 Results of Fieldwork

The inventory field work for the Keālia Mauka Homesites project consisted of a 100% pedestrian survey of the residential section of the project area situated upon the ridge top, and of the sewer line corridor section of the project area which encompasses the historic Keālia Road corridor from the ridge top, proceeding east down the north cliff face of Keālia Valley, intersecting with Kūhiō Highway on the valley floor, then proceeding along Kūhiō Highway south to a point of planned connection to existing County of Kaua'i sewer system in Kapa'a.

No excavations were conducted. as agreed to in consultation with SHPD, no cultural materials or middens were collected during this AIS, and no laboratory work was conducted.

The 29 May 2018 SHPD letter (Log No. 2018.00602; Doc No. 1805GC09) to the Land Use Commission (LUC) about §6E-8 Historic Preservation Review-Docket No. A17-803/Kealia Properties, LLC, Keālia Mauka Homesites Project, Keālia Ahupua'a, Kawaihau District, Island of Kaua'i, TMK: [4] 4-7-004:001 provided two comments, the second being, "(2) SHPD requests an AIS with a subsurface testing component be completed for the current 53.61-acre project area prior to permit issuance." Consultation was conducted with SHPD on 26 September 2018 and 2 October 2018 at the SHPD's Kapolei office on behalf of the project proponent to facilitate the conditions under which this AIS was conducted. During this consultation it was agreed that archaeological monitoring pursuant to an SHPD-accepted monitoring plan is preferable to random testing as part of the AIS. Keālia Road, built in the 1800s, is cut into the north cliff face of Keālia Valley. The remaining sewer line project alignment along the Kūhiō Highway ROW has been sampled extensively during excavations for various buried utility lines, and significant historic properties have been identified. Further disturbance of these deposits by testing is unnecessary. The planned location of the sewer line will make every effort to avoid the previously identified properties and during installation, realignment of the layout will be accomplished as possible should previously unknown properties be encountered during line installation.

The majority of the Keālia Mauka Homesites house lots and park area were former sugarcane fields cultivated for nearly 100 years with a plow zone depth of approximately 1 m, with no known or anticipated historic properties. The exception to the absence of historic properties within the agricultural fields is a former and now razed sugar plantation workers' residential community named New Kumukumu Camp. It is situated at the northwest corner of the Keālia Mauka Homesites. A portion of the Camp is outside the project area and will be preserved as a result. It has been agreed that archaeological monitoring of ground work impacting the portion of New Kumukumu Camp in the Keālia Mauka Homesites project area will provide greater historic data than random excavations during the AIS.

Consultation with the public was not undertaken as a part of the AIS. CSH conducted a separate cultural impact assessment (CIA) including public outreach and interviews; results of the CIA are presented in the *Draft Cultural Impact Assessment for the Proposed Keālia Subdivision and Associated Sewer Line Project Keālia and Kapa'a Ahupua'a, Kawaihau District, Kaua'i TMKs: [4] 4-7-004:001; 4-7-003:002, 006; 4-6-014:026 and 031* (Hammatt 2019).

Archaeological inventory survey field work was conducted in the three areas comprising the project area: the residential lot section, the Keālia Road section connecting the residential lots to

Kūhiō Highway, and the Kūhiō Highway section extending from the Keālia Road junction with Kūhiō Highway to the county sewer system hookup point in Kapa'a.

The survey work in the residential section of the Keālia Mauka Homesites project area recorded and evaluated to AIS level standards of documentation seven features that are contributing elements of the razed New Kumukumu Camp, SIHP # 50-30-08-7013, that was first identified as an historic property during the AIS of Drennan and Dega (2007a). These features were found and described during a literature review and field inspection (Kamai and Hammatt 2017) and were, in consultation with SHPD, one impetus for conducting this AIS. A railroad path, SIHP # 50-30-08-07016 Feature 1 (Drennan and Dega 2007a), previously passed through the project area but was not relocated.

Two newly identified historic properties comprise Keālia Road, SIHP # 50-30-08-2390, extending from the project area down to the valley floor, and an associated large basalt boulder and mortar backslope retaining wall, SIHP # 50-30-08-2391, along a section of the road.

Field work for the AIS includes relocation and further documentation as appropriate of four previously identified surface historic properties in the sewer line section of the Keālia Homesites project area. These four properties are SIHP # 50-30-08-7015, a short remnant of railroad tracks located at the intersection of Keālia Road and Kūhiō Highway (Drennan and Dega 2007) that is a part of the extensive former rail system with various SIHP numbered parts including # 50-30-08-7038, -2078, and -7016; SIHP # 50-30-08-7021 Features 5 and 6, a box culvert for drainage with a large steel pipe alongside, near the *makai* and south end of Keālia Road (Drennan and Dega 2007); SIHP # 50-30-08-2278, the Kapa'a Stream Bridge (soon to be replaced by the Hawai'i Department of Transportation) (Belluomini et al. 2016); and SIHP # 50-30-08-2279, a water control complex consisting of an earthen ditch (Feature A) and the remnant of a culvert (Feature B) (Belluomini et al. 2016). Three other previously identified above ground historic properties were not relocated during this survey; SIHP # 50-30-08-7016, a railroad complex that was deconstructed in 1950s. The path of the railroad was converted to a truck road. SIHP # 50-30-08-07034 was a set of poured concrete steps suggested as likely associated with the historic Keālia Theater of the plantation community that is no longer present (Drennan et al. 2007); the stairs were documented and removed during the KIUC Keālia Beach corridor transmission line reconfiguration project (Sholin et al 2012:45 and 57). SIHP # 50-30-08-7035 documented by Drennan et al. (2007) was not located during the survey for the Keālia Mauka Homesites project.

There are additionally, seven subsurface previously identified historic properties in the Keālia Mauka Homesites project area sewer line section. These were not confirmed in the field during the surface survey, rather their locations and description are derived from the previous studies' reports. The subsurface historic properties identified during previous archaeological studies within the Kealia Mauka Homesites project area sewer line section are SIHP # 50-30-08-884, burial site (Bushell et al. 2003); SIHP # 50-30-08-884, buried A-horizon (Dega and Powell 2003); SIHP # 50-30-08-2161, burial site (Sholin et al. 2012); SIHP # 50-30-08-2162, burial site and cultural midden (Sholin et al. 2012); SIHP # 50-30-08-2163, fire-pit feature (Sholin et al. 2012); SIHP # 50-30-08-2165, traditional Hawaiian cultural deposit (Sholin et al. 2012); and SIHP # 50-30-08-2279 Feature B, water control (Belluomini et al. 2018).

The historic properties and associated features in the Keālia Mauka Homesites project area are summarized in Table 5 and their map locations are shown in Figure 31.



Table 5. Historic properties identified within the project area

SIHP # 50-30-08-	Feature Type	Function	Age	Notes
884	Burial site	Pre-Contact human remains	Pre-Contact	Inadvertent find
884	Cultural layer	Habitation	Pre-Contact	Buried A horizon
2161	Human skeletal remains	Secondary deposition of human bone fragments	unknown	Secondary deposition of bone fragments
2162	Burial site and cultural midden	Human burial and habitation	Pre- or post-Contact	Buried A horizon
2163	Fire pit	Habitation	Pre-Contact	Poor condition
2165	Cultural deposit	Habitation	Pre-Contact	Good
2278	Bridge	Kapa'a Stream crossing	Historic	In use, to be replaced
2279 Fea. A and Fea. B	Complex	Water control	Historic	Roadside ditch and drain
2390	Road	Keālia Rd, vehicular corridor	Historic	In use
2391	Retaining wall	Back slope retention for Keālia Rd	Historic	In use
7013 Fea. 1	Alignment	Transportation	Plantation era	Abandoned
7013 Fea. 2	Concrete block	Indeterminate	Plantation era	Abandoned
7013 Fea. 3A & 3B	Concrete posts	Communication	Plantation era	Abandoned
7013 Fea. 4A and Fea. 4B	Culverts	Water control	Plantation era	Abandoned
7013 Fea. 5	Concrete	Indeterminate	Plantation era	Abandoned
7015 a.k.a. 7038	Train track remnant	Transportation	Plantation era	Remnant
7016	Railroad path	Former sugarcane rail transport	Plantation era	Deconstructed in 1950s, converted to tournohauler road; not relocated
7021	Box culvert/pipe	Transportation/water control	Plantation era	In use
7034	Concrete steps	Stair	Plantation era	Destroyed
7035	Staircase	Habitation	Historic	Not relocated

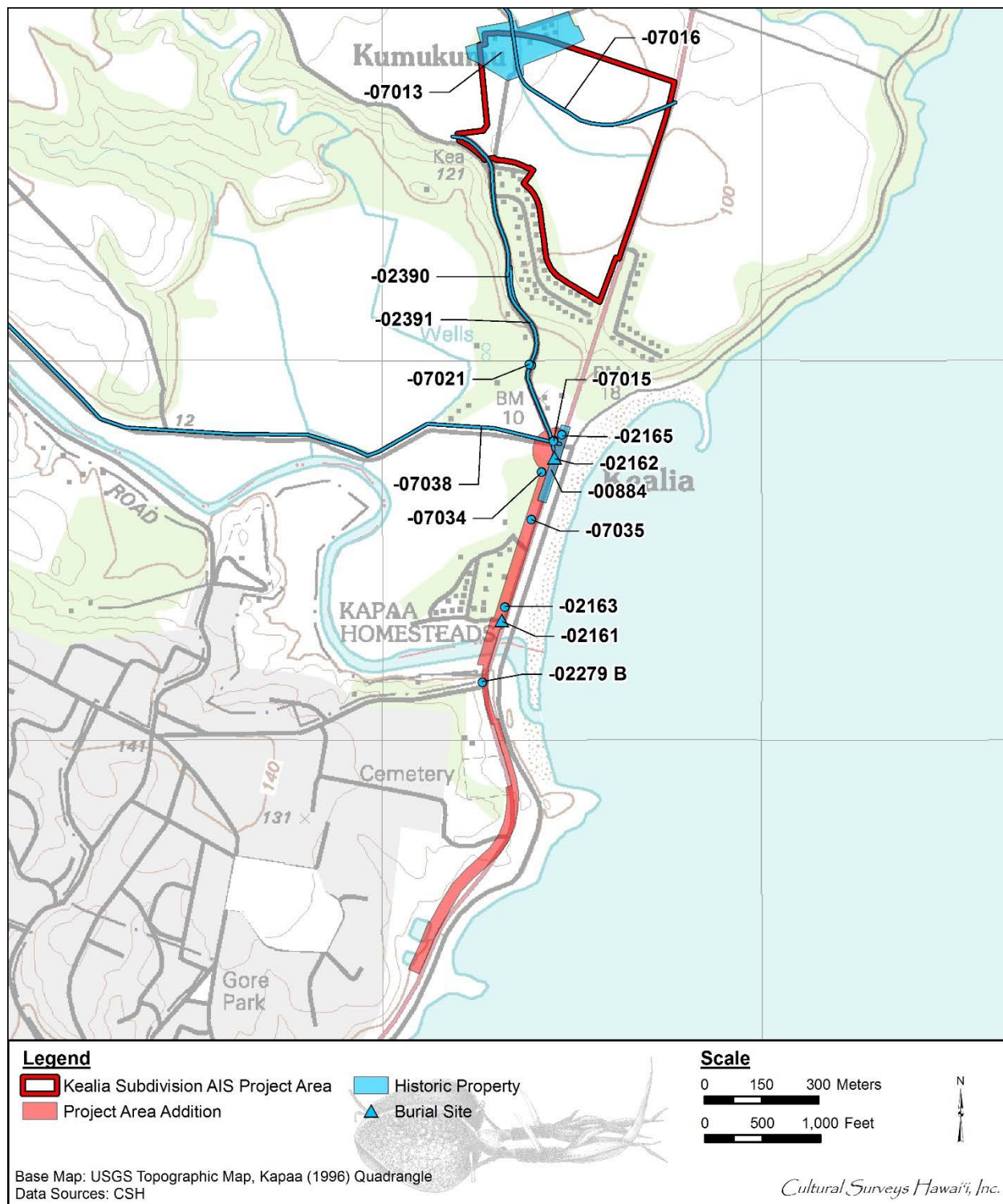


Figure 31. Aerial photograph (2014 Google Earth) showing the location of previously identified historic properties, and the two newly identified historic properties, SIHP # -2390 and SIHP # -2391

## 4.1 SIHP # 50-30-08-884

<b>FORMAL TYPE:</b>	Burial site
<b>FUNCTION:</b>	Human burial
<b>NUMBER OF FEATURES:</b>	0
<b>AGE:</b>	Pre-Contact
<b>CONDITION:</b>	Unknown

While conducting an archaeological inventory survey including surface and subsurface investigations for the Kapa'a to Keālia bike and pedestrian path, a narrow, approximately 4.3-mile corridor, Bushnell et al. (2003) identified SIHP # 50-30-08-884 as "1 set of human remains" located at Kawaihau Road and Kūhiō Highway (Bushnell et al. 2003:44, Table 6). Table 6 notes under the column heading "Site Constraints [recommendations]" that "Consultation and monitoring in vicinity [are] indicated" apparently referencing SHPD as the source of information on the burial site. Bushnell et al. (2003:45, Figure 20) show the location of SIHP # 50-30-08-884 between Mailihuna Street at Kapa'a Stream and St. Catherine's Cemetery. CSH concurs with the recommendation for consultation and archaeological monitoring at the location of SIHP # 50-30-08-884.

The burial site is assigned a pre-Contact age and assessed as significant under Criteria D and E [Criteria d and e is believed to be meant here] and recommends preservation for the burial site (Bushnell et al. 2003:53, Table 9).

## 4.2 SIHP # 50-30-08-884 (Duplicate SIHP Number)

<b>FORMAL TYPE:</b>	Habitation
<b>FUNCTION:</b>	Buried A-horizon
<b>NUMBER OF FEATURES:</b>	0
<b>AGE:</b>	Pre-Contact
<b>CONDITION:</b>	Unknown

Dega and Powell (2003), conducting archaeological monitoring along 21.5 miles of Kūhiō Highway from Lihue to Moloa'a for a fiber optic duct line project, divided the project area into ten segments of which Segment 16 included Keālia. At the north terminus of Segment 16, Dega and Powell (2003) excavated for manhole number 18 and found historic material of the sugar plantation period, the historic materials mixed with traditional Hawaiian cultural materials at depths from 194 to 244 cm below today's ground surface and a layer with traditional Hawaiian cultural materials undisturbed by post-Contact historic activities. For reasons not explained, Dega and Powell (2003:73) designated these traditional and historic layers a part of SIHP # 50-30-08-884. Charcoal bits from the undisturbed portion of the deposit 220-240 cm below surface were submitted for dating purposes. A conventional date of  $210 \pm 50$  B.P was obtained; calibrated with OxCal at one sigma produced corrected potential radiocarbon ages of AD 1640-1690 (32%) and AD 1730-1810 (60%) (Dega and Powell 2003:100, Table 4).

Reassignment of SIHP # 50-30-08-884, from a burial near St. Catherine's Cemetery (Bushnell et al. 2003:45, Figure 20) or a burial located at Kawaihau Road and Kūhiō Highway (Bushnell et



al. 2003:44, Table 6), to a pre-Contact habitation layer disturbed by historic activity in its upper levels has not been resolved yet. Further research is being done at SHPD to resolve the situation. Dega and Powell (2003:103, Table 5) assess their buried A-horizon SIHP # 50-30-08-884 as significant under Criterion D (assume Criterion d is meant) and recommend full-time monitoring for Segment 16 of their study area (rather than by historic property), that is, the Keālia coastal and back beach areas across the valley mouth.

Sholin et al. (2012), conducting an archaeological monitoring project for a Kaua'i Island Utility Cooperative (KIUC) transmission line corridor reconfiguration along Kūhiō Highway across Keālia beach, reports that SIHP # 50-30-08-884 of Dega and Powell (2003) was confirmed (Sholin et al. 2012:13–16) while referencing Bushnell et al. (2003) for information on the historic property (Sholin et al. 2012:13); then showing the location of and describing the content of SIHP # 50-30-08-884 according to Dega and Powell (2003) in Figure 3 and Table 2 (Sholin et al. 2012:14–15); and finally in summarizing the historic properties near Segment D2 (apparently the entire Keālia valley mouth and Kapa'a River) provides the footnote as follows:

An inadvertent burial said to be located near Kawaihau Road and Kūhiō Highway was listed as site 50-30-08-884 by Bushnell et al. [3]. However, the site description and location could not be confirmed with the State Historic Preservation Division (SHPD). (Sholin et al. 2012:16)

The location of SIHP # 50-30-08-884 on the historic property location map (Sholin et al. 2012:14, Figure 3) shows SIHP # 50-30-08-884 located just south of the intersection of Keālia Road and Kūhiō Highway just north of the middle of the valley bottom. This does not concur with the location shown on the Bushnell et al. (2003:45, Figure 20) location map which, in Sholin et al. (2012:14, Figure 3) is labeled SHPD Inadvertent Find. Sholin et al. (2012:15, Table 2) goes on to describe SIHP # 50-30-08-884 as a cultural deposit related to pre-Contact habitation.

Sholin et al. (2012:34) support the Dega and Powell (2003) significance assessment of Criterion D (believe Criterion d is meant) and recommendation of full-time monitoring (for future work in the vicinity) based on their observations during archaeological monitoring for the KIUC transmission line reconfiguration corridor. **CSH concurs with a Criterion d significance assessment and monitoring recommendations.**

### 4.3 SIHP # 50-30-08-2161

<b>FORMAL TYPE:</b>	Secondary deposit, three human bone fragments
<b>FUNCTION:</b>	Human remains, secondary deposition of bone fragments
<b>NUMBER OF FEATURES:</b>	1
<b>AGE:</b>	Traditional Hawaiian age
<b>CONDITION:</b>	Poor, disarticulated fragments of secondary deposition, inadvertent find

Sholin et al. (2012:34) report the inadvertent discovery of SIHP # 50-30-08-2161, “traditional Hawaiian human bone fragments in secondary context, located at the base of a swale.” Three bone fragments consisted of a proximal ulna fragment and two other unidentified bone fragments less than 2 cm long. No evidence of a burial feature was observed. The bone fragments were recovered

and reinterred in accordance with a burial treatment plan (Dye 2012). SIHP # 50-30-08-2161 was assessed as significant under Criterion D and E (believe Criterion d and e is meant) and archaeological monitoring near the historic property was recommended to recover other possible bones or fragments. CSH concurs with this significance assessment and recommendation for monitoring during the Keālia Mauka Homesites project construction.

#### 4.4 SIHP # 50-30-08-2162

<b>FORMAL TYPE:</b>	Burial site
<b>FUNCTION:</b>	Human remains and habitation
<b>NUMBER OF FEATURES:</b>	1
<b>AGE:</b>	Pre or post-Contact
<b>CONDITION:</b>	Poor, fragmented

SIHP # 50-30-08-2162, a concentration including traditional Hawaiian habitation deposits, cultural materials spanning an area of approximately 10 m, and secondarily deposited human remains, was identified during the archaeological monitoring for the KIUC Keālia Beach corridor transmission line reconfiguration project (Sholin et al. 2012:57, Table 16). The human remains included several fragments of one scapula, one trapezium, one left *femur*, one right *fibula*, one *tibia*, and over 30 pieces of unidentified small bone fragments. The bone fragments were recovered and reinterred in accordance with a burial treatment plan (Dye 2012). No burial pit was observed (Sholin et al. 2012:36).

Sholin et al. (2012:57 and Table 16) assessed SIHP # 50-30-08-2162 as significant under Criterion D for the traditional Hawaiian cultural deposit and Criterion E for the inadvertently discovered human remains (assume Criteria d and e are meant). Archaeological monitoring was also recommended during any future excavations near the site. CSH agrees with the significance assessments and monitoring recommendations at SIHP # 50-30-08-2162.

#### 4.5 SIHP # 50-30-08-2163

<b>FORMAL TYPE:</b>	Fire pit
<b>FUNCTION:</b>	habitation
<b>NUMBER OF FEATURES:</b>	1
<b>AGE:</b>	Pre-Contact
<b>CONDITION:</b>	poor

Sholin et al. (2012:38) identified SIHP # 50-30-08-2163 during the archaeological monitoring for the KIUC Kealia Beach transmission line corridor reconfiguration. SIHP # 50-30-08-2163 contained one fire-pit that was sampled; the sample contained traditional Hawaiian artifacts and faunal remains including a basalt flake, thermally altered rock, and wood charcoal, marine invertebrate shell and mammal bone (Sholin et al. 2012:46–55). Wood charcoal was also identified in the fire-pit feature and two samples of *ʻūlei* wood (Beta-323218) and one of *kukui* nutshell (Beta-323220) were sent to Beta-Analytic for radiocarbon dating. The samples appear not to have been conclusive with “calibrated <sup>14</sup>C ages suggest[ing] that the ... fire-pit feature was used late in the traditional Hawaiian period” (Sholin et al. (2012:40).

SIHP # 50-30-08-2163 was assessed as significant under Criterion D (presume Criterion d is meant) and monitoring was recommended for other construction excavations in the vicinity. CSH agrees with the significance assessment and recommendation for archaeological monitoring.

#### 4.6 SIHP # 50-30-08-2165

<b>FORMAL TYPE:</b>	Cultural deposit
<b>FUNCTION:</b>	habitation
<b>NUMBER OF FEATURES:</b>	0
<b>AGE:</b>	Pre-Contact
<b>CONDITION:</b>	Undetermined

Sholin et al. (2012:40) identified SIHP # 50-30-08-2165 during archaeological monitoring of the KIUC Kealia Beach transmission line corridor realignment. No surface remains were present as the surface of the cultural deposit comprising SIHP # 50-30-08-2165 was approximately 185 cm below ground surface and overlain by a layer of fill, buried by a layer of sand. The exposed portion of the deposit was approximately 2 m wide by 30 cm thick in the side wall of the excavated Trench 3. No cultural materials were observed although they are considered likely to be present, and the excavated trench was too deep to safely enter (Sholin et al. 2012:46).

SIHP # 50-30-08-2165 was assessed significant under Criterion D (assume Criterion d meant) and archaeological monitoring was recommended whenever future excavations are planned at SIHP # 50-30-08-2165 (Sholin et al. 2012:41). CSH agrees with the significance assessment and the recommendations for monitoring.

#### 4.7 SIHP # 50-30-08-2278

<b>FORMAL TYPE:</b>	Bridge (Kapa'a Stream Bridge)
<b>FUNCTION:</b>	Transportation
<b>NUMBER OF FEATURES:</b>	1
<b>AGE:</b>	Historic (1953)
<b>CONDITION:</b>	Deteriorated

SIHP # 50-30-08-2278, the Kapa'a Stream Bridge near mile post 10 on Kūhiō Highway (Route 56), was built in 1953 and spans the Kapa'a River. The bridge is identified as a concrete T-beam bridge approximately 46 m (150 ft) long and 12.0 m (39 ft) wide. The State Historic Bridge Inventory Evaluation (MKE Associates LLC/Fung Associates, Inc. 2013:3-6) describes Kapa'a Stream Bridge as a typical post-war bridge built after 1945. The bridge is currently undergoing studies for immediate replacement, and it has been determined, in consultation with the SHPD architecture branch, that the Kapa'a Stream Bridge (SIHP # 50-30-08-2278) is not eligible for listing on the National Register or the Hawai'i Register pursuant to 36 CFR 60.4 and HAR §13-198-8, respectively. The bridge is significant only under HAR §13-275-6 Criterion d (have yielded, or is likely to yield, information important for research on prehistory or history). The SHPD architecture staff indicated the bridge has been adequately documented, and no further architectural recordation is necessary (Belluomini et al. 2018).



## 4.8 SIHP # 50-30-08-2279

<b>FORMAL TYPE:</b>	Complex
<b>FUNCTION:</b>	Water control
<b>NUMBER OF FEATURES:</b>	2
<b>AGE:</b>	1953 or more recent
<b>CONDITION:</b>	Good

Belluomini et al. (2018) identified SIHP # 50-30-08-2279, consisting of an earthen ditch (Feature A) approximately 45.0 m (147.6 ft) long and 2.25 m (7.4 ft) wide with an average depth of 0.4 m (1.3 ft) oriented south to north along the western shoulder of Kūhiō Highway to the edge of the south edge of Mailihuna Road. The Feature A ditch terminates at a drain and culvert (Feature B) at the south and *mauka* corner of Mailihuna Road and Kūhiō Highway intersection within the project area. The culvert opening is constructed of concrete with a fitted drain-grate of steel. It is not clear whether the culvert pipe and outflow is under Mailihuna Road to Kapa'a River or beneath Kūhiō Highway to the sea. The age of SIHP # 50-30-08-2279 is historic, probably contemporaneous with the construction of Kūhiō Highway in 1953 or later during highway improvements.

SIHP # 50-30-08-2279 was assessed as significant under Criterion d and evaluated as not eligible for inclusion in the National or Hawai'i Registers of Historic Places.

## 4.9 SIHP # 50-30-08-7013

<b>FORMAL TYPE:</b>	Plantation Camp, razed
<b>FUNCTION:</b>	Habitation
<b>NUMBER OF FEATURES:</b>	7
<b>AGE:</b>	Historic
<b>CONDITION:</b>	Poor

The historic property New Kumukumu Camp (SIHP # 50-30-08-7013), a former residential camp of the Makee Plantation, is partially within the northwest corner of the Keālia Mauka Homesites project. The New Kumukumu Camp-SHIP # 50-30-08-7013 is geographically situated in the Phase I survey area (Drennan et al. 2006) but is documented in the Phase II report (Drennan and Dega 2007a). The site area was previously identified in the AIS of Drennan and Dega (2007a) and described as follows:

Site -7013 (SCS II-16) is the location of the now defunct "New Kumukumu Plantation Camp." The site is bisected by a plantation dirt road which also was the former path of Site II-19 (Railroad). The site's western half is located on fairly level grassy terrain; its eastern half is located on a slight southwest to northeast (25 °) slope. A pedestrian survey of this area revealed most above-ground features have been mechanically removed since that time. Evidence of former concrete foundations was seen in debris piles that contained concrete, asphalt, and metal remains. Although not observed, archival research indicated that a former well existed at this site. In addition, historic photographs show the architectural style of

the former plantation homes. The exterior dimensions of the site are 260.0 m long by 75.0 m wide and the long axis of the site is oriented northeast-southwest ( $76^{\circ}1250^{\circ}$  MN); the feature is rectangular in shape. The site is in poor condition because of alteration from mechanical processes. [Drennan and Dega 2007a:51]

Although debris of former camp structures is noted, none of those remnant elements of the former camp are described or designated as features in the Drennan and Dega (2007a) AIS.

This AIS of the Keālia Mauka Homesites project documented seven newly identified (in Kamai and Hammatt 2017) in situ elements within the bounds of SIHP # 50-30-08-7013, New Kumukumu camp. They are designated Feature 1, Feature 2, Features 3A and 3B, Features 4A and 4B, and Feature 5 of SIHP # 50-30-08-7013 (Figure 32 and Figure 33). These seven features within the project area are clearly remnants of the plantation-era residential camp, and demonstrate notably the style of construction associated with water control in sugar plantation systems on Kaua'i as well as material composition in construction such as basalt boulders and mortar, a name inscribed on a concrete slab, and the polygonal cross-section of the concrete power/communication cable poles. A portion of a 1950 aerial photo of the Keālia Coast (see Figure 33) shows the "New Kumukumu Camp" overlaid with the feature designations to locate them in relation to the camp before it was razed. The field survey did not confirm SIHP # 50-30-08-07016.

Drennan and Dega (2007:34, Table 4) assessed SIHP # 50-30-08-7013 as significant under Criterion D (we believe Criterion d pursuant to HRS §6E is meant). This reflects its value to our understanding of plantation-era infrastructure. Water control was essential for sugarcane cultivation, as evidenced by the fact that water was transferred from as far away as Hanalei (Wilcox 1996:70) to the fields of the Lihue Plantation. Communication within the plantation was also important. The findings of this AIS concur with the previous historic property significance assessment.

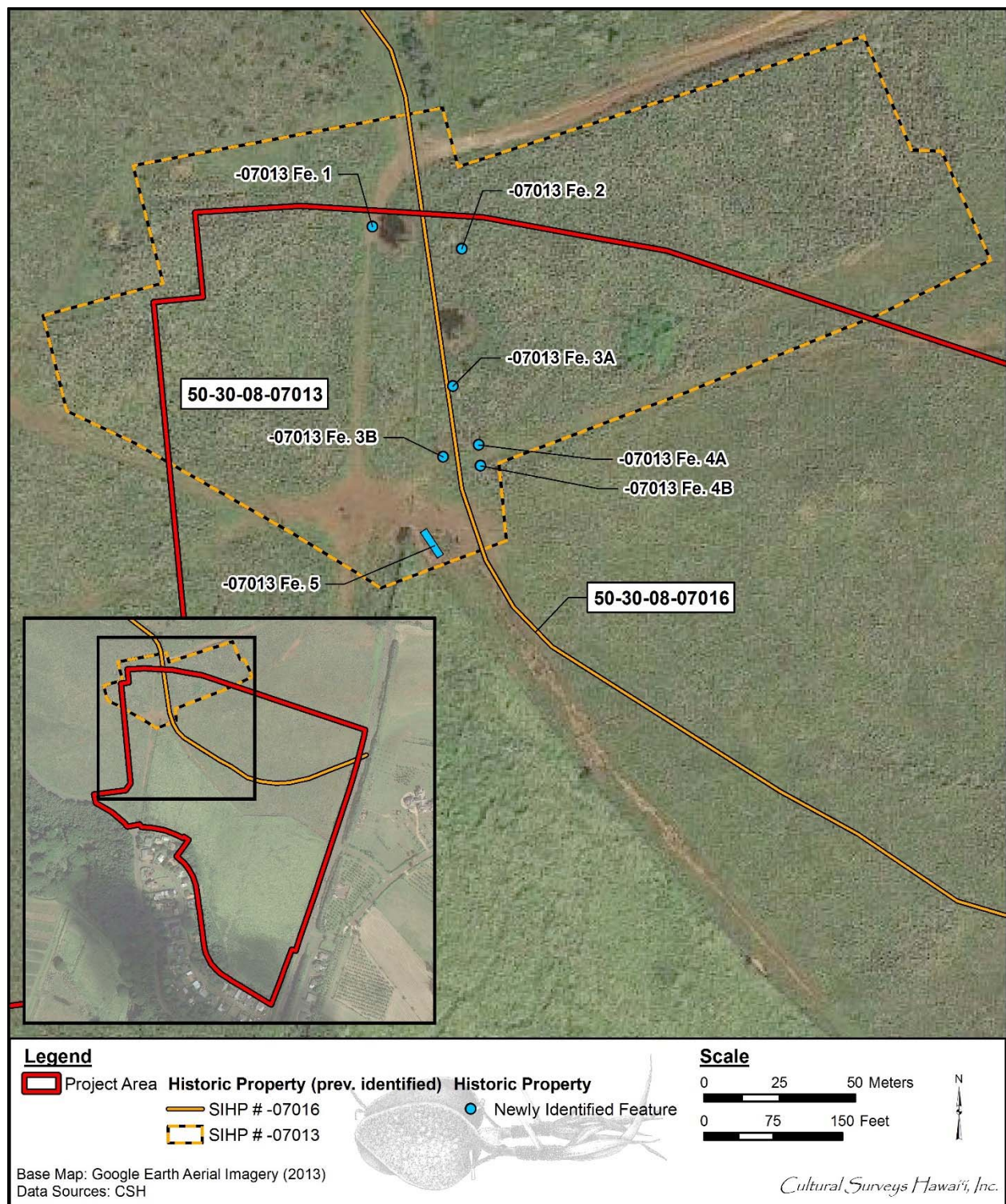


Figure 32. Aerial photograph showing the northwest portion of the proposed project area (Google Earth 2013) with feature designations for SIHP # 50-30-08-7013 (“New Kumukumu Camp”) Feature 1 through Feature 5



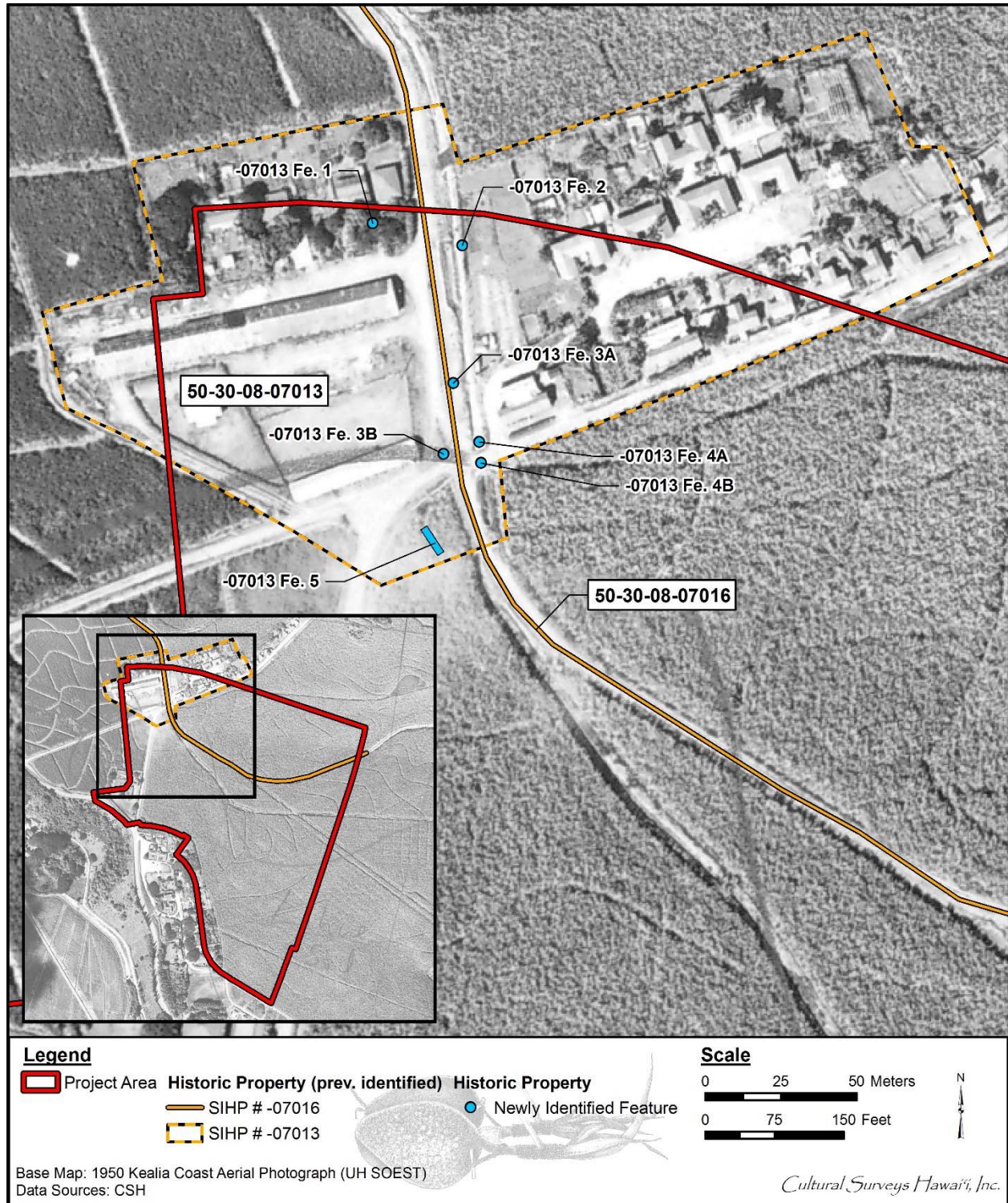


Figure 33. A portion of a 1950 aerial photo of Keālia Coast showing the “New Kumukumu Camp” relative to the project area, and the newly documented Feature 1 through Feature 5 locations within SIHP # 50-30-08-7013

#### 4.9.1 SIHP # 50-30-08-7013 Feature 1

<b>FORMAL TYPE:</b>	Alignment
<b>FUNCTION:</b>	Indeterminate
<b>NUMBER OF FEATURES:</b>	0
<b>AGE:</b>	Plantation
<b>CONDITION:</b>	Remnant

SIHP # 50-30-08-7013 Feature 1 is a remnant alignment of concrete, brick, and metal that measures 2.1 m in length by 0.30 m in width and runs in a rough north/south direction (Figure 34 and Figure 35). The alignment is in extremely poor condition and the function of the historic property could not be determined. It parallels a dirt road currently in use.

SIHP # 50-30-08-7013 Feature 1 retains integrity of materials and possibly location and is assessed as significant under Criterion d (refer to Section 6).

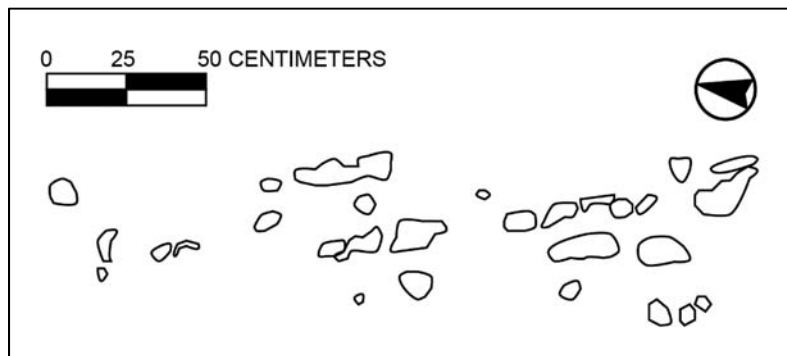


Figure 34. Plan view map of SIHP # 50-30-08-7013 Feature 1



Figure 35. Overall photo of alignment of metal, concrete, and brick (SIHP # 50-30-08-7013 Feature 1), view to east, north is to the left

#### 4.9.2 SIHP # 50-30-08-7013 Feature 2

<b>FORMAL TYPE:</b>	Unknown
<b>FUNCTION:</b>	Indeterminate
<b>NUMBER OF FEATURES:</b>	0
<b>AGE:</b>	Plantation
<b>CONDITION:</b>	Remnant

SIHP # 50-30-08-7013 Feature 2 is a concrete block measuring 1.49 m in length by 0.42 m in width with a thickness of 0.36 m (Figure 36 and Figure 37). The concrete block was observed along a gently sloping area. Due to its present condition and lack of other information including inscriptions or other markings, the formal type and function of this block is unknown.

SIHP # 50-30-08-7013 Feature 2 retains integrity of location and materials and is assessed as significant under Criterion d (refer to Section 6 ).

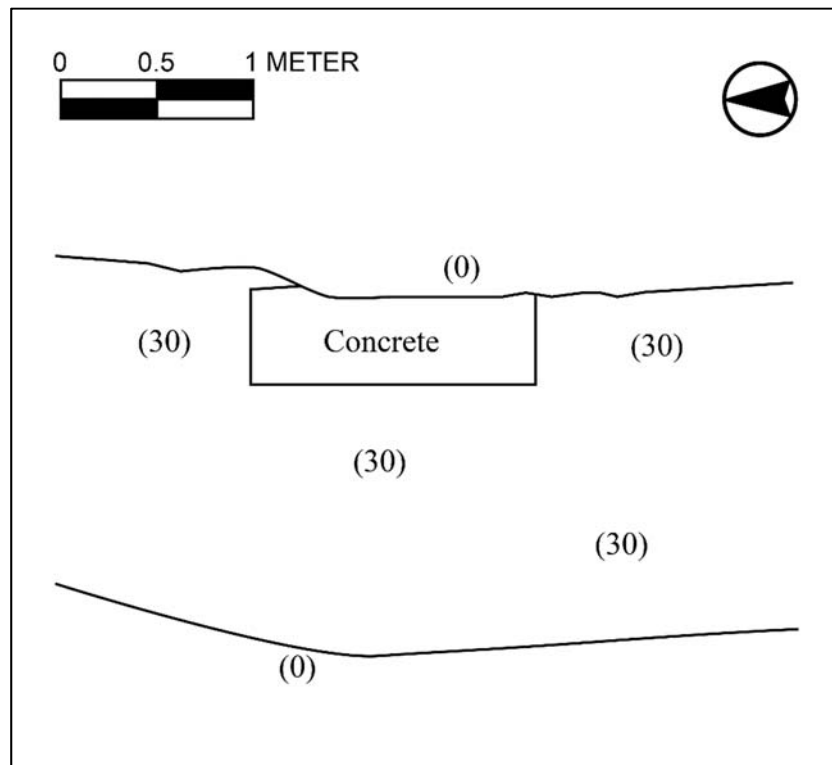


Figure 36. Plan view map of SIHP # 50-30-08-7013 Feature 2





Figure 37. Concrete block (SIHP # 50-30-08-7013 Feature 2) embedded in soil along a gently sloping area. View to the west