

### 3.13 Test Excavation 120A (T-120A)

<b>Ahupua'a:</b>	Honolulu
<b>LCA:</b>	N/A
<b>TMK #:</b>	2-1-026:022
<b>Elevation Above Sea Level:</b>	1.77 m
<b>UTM:</b>	618072.98 mE, 2356232.78 mN
<b>Max Length/Width/Depth:</b>	6.70 m / 0.67m / 1.70 m
<b>Orientation:</b>	140 / 320° TN
<b>Targeted Project Component:</b>	Utility Relocation
<b>USDA Soil Designation:</b>	Fill land (FL)

**Setting:** Test Excavation T-120A (T-120A) was located within the east sidewalk of Halekauwila Street. T-120A was on public property owned by the City and County of Honolulu. T-120A was an additional excavation added to further investigate and delineate the boundaries of the feature concentration found within T-120, approximately 5 m to the northeast (part of SIHP #50-80-14-7428). T-120A also investigated a utility relocation. A storm drain was located 3 m west, a sewer line was 3.8 m east, and a water line was 10 south of T-120A. The excavation surface was level with the surrounding land surface.

**Summary of Background Research and Land Use:** According to the 1847 Metcalf map T-120A was 22 m east of the former shoreline and 11 m north of Honuakaha Street (Punchbowl Street). The area was still largely undeveloped in 1883 (Baldwin Honolulu map) and 1884 (Bishop Honolulu Map), but there were several house lots near T-120A. The 1887 Wall Honolulu map depicts T-120A 18 m east of Halekauwila Street corridor. Monsarrat's 1897 map shows similar street grids, and Newton's 1904 map shows T-120A within Halekauwila Street. The land lot east of T-120A belonged to the Bishop Estates at that time. The 1919 War map indicates that T-120A was located within an undeveloped portion of a city block with several structures in the vicinity. By 1933, there was increased development in the area (1933 U.S. War Department Map). The 1943 U.S. War Department map and 1953 Army Mapping Service map showed similar structures. LCA records for the area indicate that traditional land use was limited to salt making, taro cultivation, and fishpond farming. T-120A was located 3m west of LCA 180, which was comprised of one house lot awarded to Mataio Kekūanā'oa for Lot Kamehameha. LCA 129 (awarded to Kinimaka) was located 53 m southeast of T-120A. A burial (SIHP# 50-80-14-02963) was found 68 m southeast of T-120A, within LCA 129 (Ota and Kam 1982).

There were several historic properties found and historical studies conducted in the vicinity of T-120A. A burial report by Ota and Kam (1982) identified the remains of six individuals (SIHP #50-80-14-2963) during construction, located 50 m southeast of T-120A, on the corner of Halekauwila Street and Punchbowl Street. Archaeological monitoring was conducted for the Kaka'ako Improvement District 1, approximately 83 m southeast of T-120A, which identified one probable pre-Contact burial (SIHP# 50-80-14-4533) with 11 sling stones and other pre-Contact artifacts that were removed to Bernice Pauahi Bishop Museum (Pfeffer, Borthwick, and

Hammatt 1993). Approximately 105 m southeast of T-120A for the Makai Parking Garage on the corner of Punchbowl Street and Halekauwila Street, archaeological monitoring was conducted where one historic property was identified (SIHP # 50-80-14-2963) consisting of seven burials pre-dating 1850 (Clark 1987). Denham and Kennedy (1993) identified a multi-component site consisting of multiple burial finds and ten pre- and post-Contact features (SIHP# 50-80-14-4605) and nine trash pit features (SIHP# 50-80-14-4606) located approximately 78 m northeast of T-120A.

**Documentation Limitations:** T-120A was excavated to the coral shelf at a depth of 1.70 mbs.

**Stratigraphic Summary:** The stratigraphy of T-120A was comprised of several layers of fill and natural sediment. The observed strata included asphalt (Ia), very gravelly sandy loam fill (Ib), gvery ravelly loamy sand fill (Ic), gravelly loamy sand fill (Id), natural, gravelly sandy loam (II), natural sand (III). Stratigraphy generally conformed to the USDA soil survey designation of fill land (FL). Stratum II was a buried A-horizon and was considered a component of SIHP # 50-80-14-7428.

**Artifacts Discussion:** Two traditional Hawaiian artifacts (Acc. # 120A-H-1 to H-2) consisting of volcanic glass debitage were collected from Stratum II. A single historic artifact, a clear glass bottle fragment (Acc. # 120A-A-1) was collected from Stratum II. Based on its color, the fragment was dated to post-1870. The edge is chipped but not worked.

**Features Discussion:** A total of five features (Features 9-13) were found in association with Stratum II and determined to relate to Features found in T-120. All features contained midden and charcoal. A bulk sample was collected for each feature with the exception of the additional screen samples collected from Feature 11 and Feature 12.

SIHP # -7428 Feature 9 originated at 1.18 mbs and terminated at 1.36 mbs. Feature 9 was oval shaped in plan and measured 0.3 m by more than 0.15 m, extending into the northeast side wall of T-120A. Feature 9 is interpreted as a possible pit of indeterminate function.

SIHP # -7428 Feature 10 originated at 1.28 mbs and terminated at 1.37 mbs. Feature 10 was circular in shape and measured 0.25 m in diameter within the center of T-120A. Feature 10 is interpreted as a possible pit of indeterminate function or possible post hole.

SIHP # -7428 Feature 11 originated at 1.3 mbs and terminated at 1.4 mbs. Feature 11 was linear in shape and measured 0.65 m wide and 0.67 in length, extending into both the northeast and southwest side walls of T-120A. Feature 11 is interpreted as a possible pit of indeterminate function.

SIHP # -7428 Feature 12 originated at 1.28 mbs and terminated at 1.32 mbs. Feature 12 was irregular in shape and measured 1.75 m in length by 0.4m wide, extending into the southwest side wall of T-120A. Feature 12 is interpreted as a possible pit of indeterminate function.

SIHP # -7428 Feature 13 originated at 1.28 mbs and terminated at 1.32 mbs. Feature 13 was circular in shape and measured approximately 0.15 m in diameter, slightly extending into the northeast side wall of T-120A. Feature 13 is interpreted as a possible pit of indeterminate function or a possible post hole.

**Terrestrial Faunal Remains Collected During Excavation:** Faunal remains collected individually during excavation from Stratum II of T-120A consisted of multiple species

including: *Equus ferus caballus*, *Bos Taurus*, *Sus scrofa* and unidentified medium mammal. The *Sus scrofa* fragments were butchered with a metal saw blade, indicating an historic origin, not traditional Hawaiian, which is consistent with the presence of introduced species (*Bos taurus* and *Equus ferus caballus*) in the same deposit. Stratum II of this test excavation is associated with the culturally enriched A-horizon of SIHP# 50-80-14-7428.

**Sample Results:** A total of eight bulk sediment samples and three screened midden samples were collected from Stratum Id, Stratum II, Features 9-13, and Stratum III. All the samples were wet-screened.

A general bulk sediment sample was collected from Stratum Id at 1.05-1.15 mbs. The sample contained charcoal (0.7 g), midden (4.0 g), naturally deposited shell (0.4 g), fish remains (0.1 g), and coral gravel (2.0 g). Midden collected included Mytilidae *Brachidontes crebristriatus* (1.5 g), Neritidae (1.5 g), Tellinidae *Tellina palatum* (0.5 g), Isognomidae *Isognomon* sp. (0.3 g), Crustacean (0.1 g), Echinodermata *diadema* sp. and *mathaei* sp. (0.1 g).

A 34-liter screened sample was collected from Stratum II at 1.1-1.8 mbs, containing charcoal (21.8 g), naturally deposited shell (3.3g), roots (1.6 g), coal (4.8 g), kukui nut burned and unburned (0.7 g), slag (1.0 g), medium mammal (> 0.6 g), unidentified fish remains (0.5g), burned fish vertebrae (0.2 g), *Pervagor spilosoma* (0.2 g, Fantail fish fragment), small mammal cf. *Rattus* sp. (0.2 g), *Scaridae* jaw fragment (0.1 g), and midden (93.2 g, see Midden Results tables at the end of the section).

A hand collected midden sample from Stratum II at 1.2 mbs contained various shell midden (17.3 g), light green, olive green and brown glass fragments (58.2g), and pottery fragments (29.8g). Midden collected included Tellinidae *Tellina palatum* (10.3 g), Veneridae (5.8 g), and Cypraeidae *Cypraea caputserpentis* (1.2 g).

A 1-liter general bulk sample was collected from Stratum III at 1.32-1.45 mbs and contained charcoal (0.2g), and various shell midden (35.1 g). Midden collected included large fragments of Conidae *Conus* sp. (32.8 g), and Tellinidae *Tellina palatum* (2.0 g). A second general bulk sample collected from Stratum II at 1.49-1.65 mbs contained charcoal (1.9 g), various shell midden (8.1 g), naturally deposited shell (1.5 g), *kukui* nut shell (5.1 g), a shark tooth (0.1 g), and basalt (3.5 g). The midden collected included Mytilidae *Brachidontes crebristriatus* (2.0 g), Neritidae *Nerita picea* (1.6 g), Tellinidae *Tellina* spp. (1.4 g), Conidae *Conus* sp. (1.3 g), crustacean (1.2 g), and Echinodermata *diadema* sp. and *mathaei* sp. (0.6 g).

A 1-liter screened sample was collected from Feature 9 at 1.18-1.36 mbs. The sample contained charcoal (0.3 g), various shell midden (1.9 g), and naturally deposited shell (0.4g). Midden collected included crustacean (1.0 g), Neritidae *Nerita picea* (0.9 g), Tellinidae *Tellina palatum* (0.7 g), Echinodermata *diadema* sp. and *mathaei* sp. (0.1 g), Mytilidae *Brachidontes crebristriatus* (0.1 g), and Trochidae *Trochus* sp. (0.1 g).

A 3-liter bulk sample was collected from Feature 10 at 1.28-1.37 mbs. The sample contained charcoal (2.9 g), various shell midden (10.5 g), *kukui* nutshell (0.1 g), fish fragments (2.2 g), and coral fragments (12.8 g). The midden collected included burned shell (3.9 g), Neritidae *Nerita picea* (2.4 g), Tellinidae *Tellina* sp. (1.8 g), Mytilidae *Brachidontes crebristriatus* (1.2 g), Echinodermata *diadema* sp. and *mathaei* sp. (0.8 g), Trochidae *Trochus* sp. (0.3 g), and Strombidae *Strombus* sp. (0.1 g).

A 6-liter bulk sample and 9.5-liter screened sample was collected from Feature 11 at 1.3-1.45 mbs. The sample contained charcoal (45.1 g), various shell midden (12.2 g, see Midden Results tables at the end of the section) naturally deposited shell (0.1 g), roots (1.2 g), glass (0.2 g), white ceramic fragment (14.1 g), medium mammal remains (0.3 g), a shark tooth (0.1 g), and basalt water worn cobble (18.8 g).

A 2-liter bulk sample was collected from Feature 12 at 1.28-1.32 mbs. The sample contained charcoal (16.1 g), various shell midden (37.7 g, see Midden Results tables at the end of the section), naturally deposited shell (1.8 g), volcanic glass (0.1 g), and fire cracked rock (17.7 g).

A 1-liter bulk sample was collected from Feature 13 at 1.28-1.32 mbs. The sample contained charcoal (0.1 g) and midden (1.0 g). Midden collected included Neritidae *Nerita picea* (0.8 g), crustacean (0.1 g), and Tellinidae *Tellina palatum* (0.1 g).

A sample of 3.4 g of charcoal from Stratum II (1.10-1.18 mbs) was submitted for wood taxa identification. Results of wood taxa identification included cf. *Psychotria* sp. (*Kōpiko*), cf. *Syzygium* sp. (*'ōhi'a ai*), cf. *Osteomeles anthyllidifolia* (*'Ūlei*), cf. *Metrosideros polymorpha* (*'Ōhi'a lehua*), cf. *Senna* sp. (*Kolomona*), cf. *Artocarpus altilis* (*Ulu*), cf. *Dodonaea viscosa* (*'A'ali'i*), cf. *Rauvolfia sandwicensis* (*Hao*), *Aleurites moluccana* (*Kukui*), cf. *Coprosma* sp. (*Pilo*), *Chamaesyce* sp. (*Akoko*), and *Diospyros sandwicensis* (*Lama*). Most identified species consisted of native or Polynesian introduced species; however, one species (*'ōhi'a ai*) may have been a historic introduction. Charcoal identified as *kukui* nutshell (0.08 g) was submitted for radiocarbon dating analysis, which yielded a calibrated 2-sigma date of AD 1660 to AD 1890 (78.2%) as the most probable. The complete wood taxa identification results and radiocarbon results are presented at the end of the section.

All charcoal (0.3 g) collected from Feature 9 (1.28-1.36 mbs) was submitted for wood taxa identification. Results of wood taxa identification included cf. *Psychotria* sp. (*Kōpiko*), *Hibiscus tiliaceus* (*Hau*), cf. *Coprosma* sp. (*Pilo*). All identified species consisted of endemic species. However, few species may have been historic introductions. Charcoal identified as *pilo* (0.04g) was submitted for radiocarbon dating analysis and yielded a calibrated 2-sigma date of AD 1660 to AD 1890 (77.3%) as the most probable. The complete wood taxa identification results and radiocarbon results are presented at the end of the section.

A 2.9 g sample of charcoal collected from Feature 10 (1.25-1.37 mbs) was submitted for wood taxa identification. Results of wood taxa identification included *Chenopodium oahuense* (*'Āheahea*, *'āweoweo*), cf. *Syzygium* sp. (*'ōhi'a ai*), *Aleurites moluccana* (*Kukui*), *Diospyros sandwicensis* (*Lama*), cf. *Senna* sp. (*Kolomona*), cf. *Psychotria* sp. (*Kōpiko*), cf. *Dodonaea viscosa* (*'A'ali'i*). Most identified species consisted of native or Polynesian introduced species. However, one species (*'ōhi'a ai*) may have been a historic introduction. Charcoal identified as *kukui* nutshell (0.35 g) was submitted for radiocarbon dating analysis and yielded a calibrated 2-sigma date of AD 1660 to AD 1890 (77.3%) as the most probable. The complete wood taxa identification results and radiocarbon results are presented at the end of the section.

All charcoal (13.7 g) collected from Feature 12 (1.28-1.32 mbs) was submitted for wood taxa identification. Results of wood taxa identification included *Chamaesyce* sp. (*Akoko*), cf. *Senna* sp. (*Kolomona*), cf. *Dodonaea viscosa* (*'A'ali'i*), cf. *Metrosideros polymorpha* (*'Ōhi'a lehua*), cf. *Artocarpus altilis* (*Ulu*), cf. *Arecaceae* (*Palm*), and *Poaceae* (*Grass*). Most identified species

consisted of native or Polynesian introduced species. However, one species (*Kolomona*) may have been a historic introduction. Charcoal identified as *Akoko* (3.43 g) was submitted for radiocarbon dating analysis and yielded a calibrated 2-sigma date of AD 1720 to AD 1820 (50.7%) as the most probable. The complete wood taxa identification results and radiocarbon results are presented at the end of the section.

Volcanic glass samples from Feature 12 and Stratum II (1.1-1.18 mbs) were submitted for EDXRF analysis. Specific source information was not available; however the volcanic glass samples clearly did not match sources derived from Hawaii County. One sample from Stratum II contained only coal and the second contained coal and volcanic glass from "Group 2". The sample from Feature 12 was from "Group 2. The samples represent a distinct geochemical group, one of two identified from the 35 City Center AIS EDXRF volcanic glass samples, likely representing different volcanic sources on O'ahu (see EDXRF discussion in Volume V).

Results of sample analysis are indicative of the relatively dense use of the surrounding coastal landscape during the late pre-Contact/early post-Contact time period. The contents of the buried A-horizon, Stratum II and its associated features (Features 9-13) suggest this area may have served as a temporary habitation site and/or for food consumption activities.

**GPR Discussion:** A review of amplitude slice maps indicated no linear features although a concrete surface was encountered during excavation. Reflectivity was relatively uniform throughout the grid and decreases with depth. A transition from higher reflectivity to lower reflectivity was observed at approximately 0.5 mbs.

GPR depth profiles for T-120A identified horizontal banding, commonly associated with stratigraphic layering, throughout the survey area. This banding corresponded to variations of density and chemical composition within fill deposits. The profile also indicated a change in reflectivity occurring around 0.2 mbs. Anomalies were observed in the profile and correspond to the concrete surface and pipe that were encountered. The maximum depth of clean signal return was approximately 0.75 mbs.

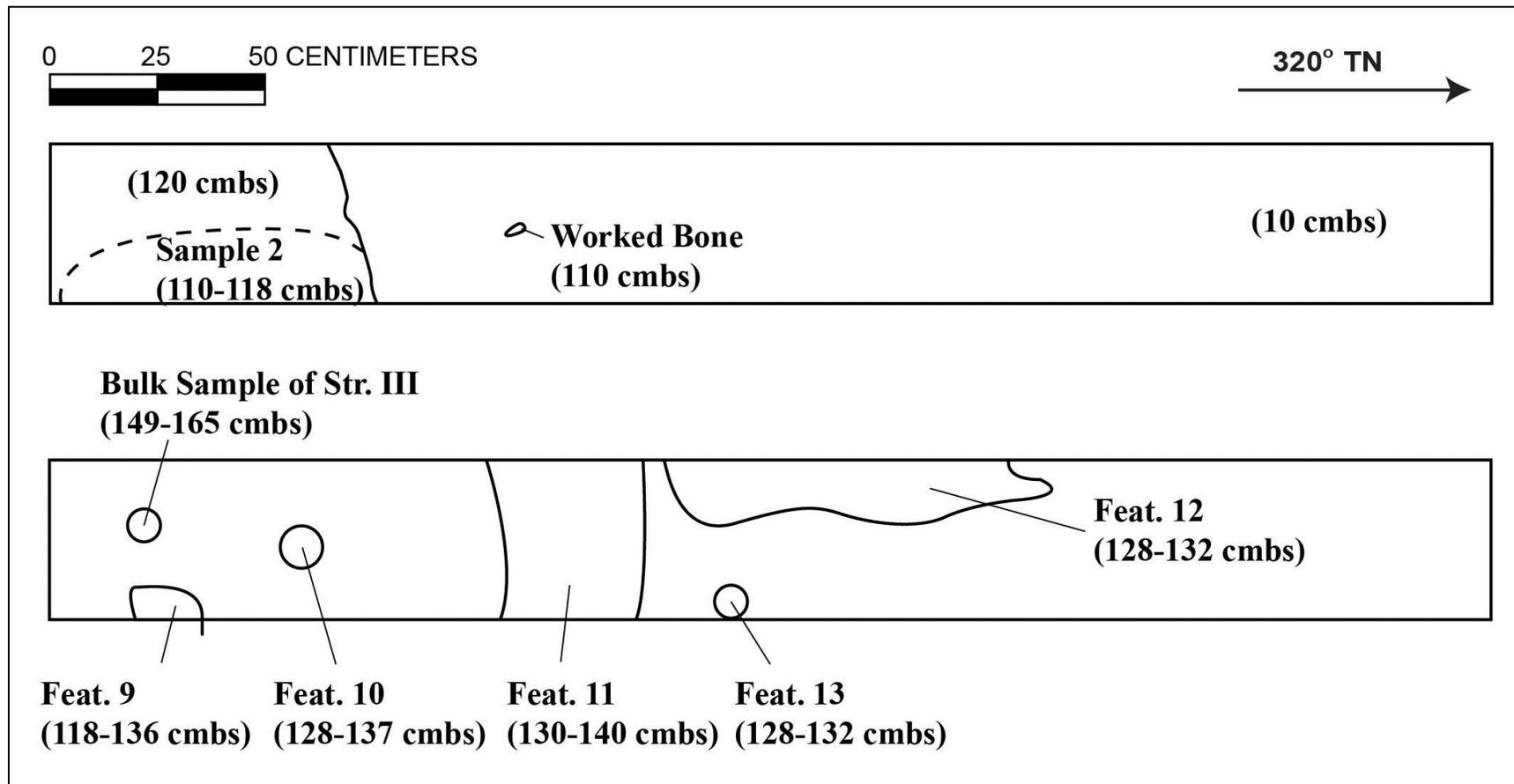
**Summary:** T-120A was excavated to the coral shelf at a depth of 1.70 mbs. The stratigraphy of T-120A was comprised of several layers of fill (Ia-Ic) and natural sediment (II-III). Stratigraphy generally conformed to the USDA soil survey designation of Fill land. Two traditional Hawaiian artifacts (Acc. # 120A-H-1 to H-2) consisting of volcanic glass debitage were collected from Stratum II. A single historic artifact, a clear glass bottle fragment, was collected from Stratum II. A total of five features were found in Stratum II. All features contained midden and charcoal. A bulk sample was collected for each feature with exception of the additional screen samples collected from Features 3 and 4. Within Stratum II, faunal fragments collected and identified consisted of *Bos Taurus*, *Equus ferus caballus*, Osteidhyes (Fish), *Sus scrofa*, and medium mammal. Results of sample analysis are indicative of the relatively dense use of the surrounding coastal landscape during the late pre-Contact/early post-Contact time period. The contents of the buried A-horizon, Stratum II and its associated features (Features 9-13) suggest this area may have served as a temporary habitation site and/or for food consumption activities. Stratum II is a natural buried A-horizon containing five archaeological features, which should be considered a component of SIHP # 50-80-14-7428 (see Volume I for further discussion of all historic properties).



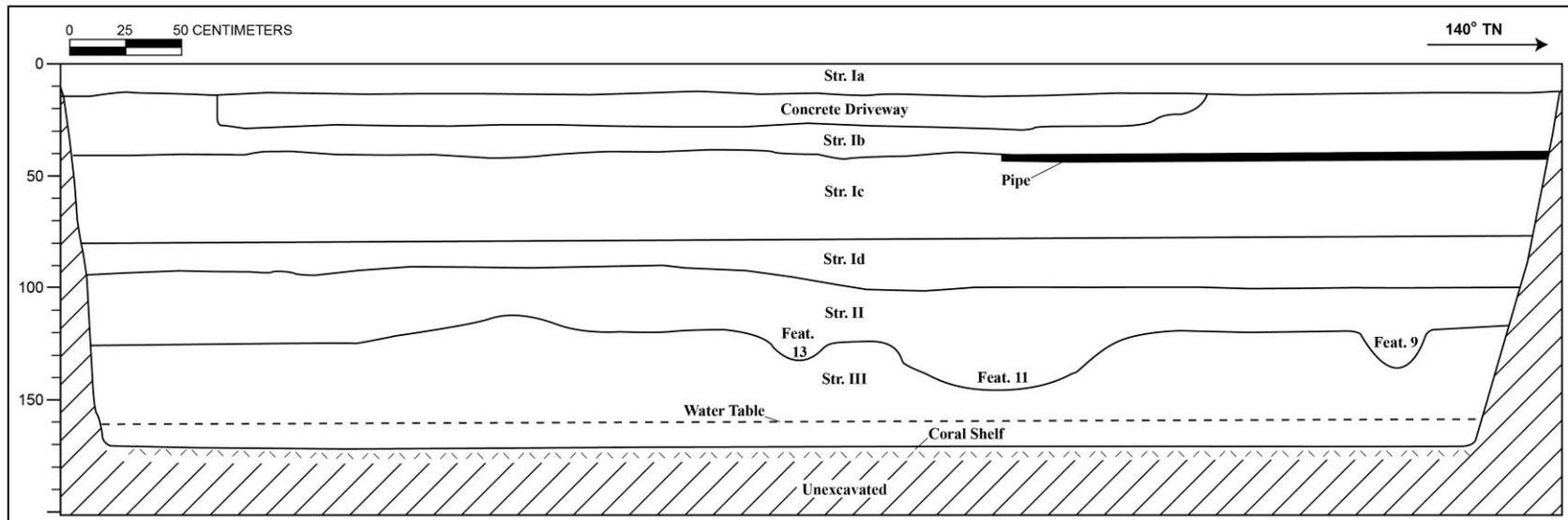
T-120A general location (view to south).



T-120A northeast profile wall (view to east).



T-120A plan view



T-120A northeast wall profile

## T-120A Stratigraphic Description

Stratum	Depth (cmbs)	Description
Ia	0-15	Asphalt; fill
Ib	15-40	Fill; 10 YR 7/4 (very pale brown); very gravelly sandy loam; medium, crumb structure; moist, loose, weak consistency; non-plastic; mixed origin; clear, smooth lower boundary; common, fine roots; coral gravel, large coral cobbles, very gravelly sandy loam
Ic	40-80	Fill; 10 YR 7/4 (very pale brown); very gravelly loamy sand; structureless, single-grain; weak, fine, medium, granular structure; moist, loose, weak consistency; non-plastic; mixed origin; clear, smooth lower boundary; common, fine roots; coral gravel, large coral cobbles, very gravelly loamy sand
Id	80-100	Fill; 10 YR 2/2 (very dark brown); gravelly loamy sand; structureless, single-grain; moist, friable consistency; non-plastic; mixed origin; abrupt, smooth lower boundary; contained faunal, midden, charcoal
II	90-125	Natural; 10 YR 2/2 (very dark brown); gravelly sandy loam; structureless, single-grain; moist, friable consistency; non-plastic; mixed origin; abrupt, smooth lower boundary; common, fine roots; contained bovine, glass, marine mollusk shell, <i>Mytilidae</i> , <i>Neritidae</i> , <i>Tellinidae</i> ; contains five pit features, (features 9-13) and are considered components of SIHP #-7428.
III	125-170	Natural; 10 YR 5/4 (yellowish brown); sand; structureless, single-grain; moist, friable consistency; non-plastic; marine origin; lower boundary not visible
IV	170	Natural; coral shelf

## T-120A Stratum II (1.1-1.18 mbs) screened sample Midden Results

Exc. #	SIHP #	Stratum	Depth (cmbs)	Midden Type	Weight (g)
T-120A	-7428	II	110-118	Neritidae <i>Nerita picea</i>	33.0
				Mytilidae <i>Brachidontes crebristriatus</i>	20.3
				Tellinidae <i>Tellina palatam</i>	9.5
				Tellinidae <i>Tellina</i> spp.	1.4
				Conidae <i>Conus</i> sp.	5.1
				Gastropod/bivalve (burned)	3.0
				Echinodermata <i>diadema</i> sp./ <i>mathaei</i> sp.	3.0
				Crustaceans	1.9
				Cymatiidae <i>Cymatium</i> sp.	1.3
				Turbinidae <i>Turbo sandwicensis</i>	2.8
				Cypraeidae <i>Cypraea caputserpentis</i>	1.2
				Cypraeidae <i>Cypraea</i> spp.	0.7
				Isognomidae <i>Isognomon</i> sp.	0.6
				Strombidae <i>Strombus</i> sp.	1.8
				Cymatiidae <i>Cymatium</i> sp.	0.4
				Naticidae <i>Natica</i> sp.	0.4
				Trochidae <i>Trochus</i> sp.	0.4
				Trochidae	2.7
				Crustaceans (burned)	0.3
				Ostreidae	0.3
				Tellinidae	0.3
				Nassariidae	2.5
				Turbinidae <i>Turbo</i> sp. (burned)	0.2
				Pteriidae <i>Pinctada radiata</i>	0.1

## T-120A Feature 4 (1.28-1.32 mbs) Midden Results

Exc. #	SIHP #	Stratum	Feature	Depth (cmts)	Midden Type	Weight (g)
T-120A	-7428	II	12	128-132	Neritidae <i>Nerita picea</i>	9.8
					Neritidae <i>Nerita picea</i> (burned)	1.1
					Mytilidae <i>Brachidontes crebristriatus</i>	9.5
					cf. Terebridae	7.1
					Echinodermata <i>diadema</i> sp./ <i>mathaei</i> sp.	2.9
					Shell matrix (burned)	2.7
					Tellinidae <i>Tellina palatam</i>	2.6
					Conidae <i>Conus</i> sp.	0.3
					Cypraeidae	0.1
					Crustacean	0.3
					Crustacean (burned)	0.3
					Isognomidae <i>Isognomon</i> sp.	1.0

## T-120A Terrestrial vertebrate material collected individually during excavation

Acc. #	Stratum	Depth(cmbs)	Feature	Family/Class	Species	Element	Description	Modification
120A-F-1	II	110-118	-	Equidae (horse)	<i>Equus ferus caballus</i>	Scapula; Distal portion metacarpus; Mandibular molar	Fragments	None
120A-F-2	II	110-118	-	Bovidae (cow)	<i>Bos taurus</i>	Scapula; Right proximal metatarsal; Rib; Spinous process (pieces mend); Astragalus	Fragments	None
120A-F-3	II	110-118	-	Suidae (pig)	<i>Sus scrofa</i>	Ulna; Distal end metatarsal	Fragments	Ulna butchered (cut with metal blade)
120A-F-4	II	110-118	-	Mammalia	Medium mammal	Irregular bones; Diaphysis sections	Fragments	Burned diaphysis sections

## T-120A Wood Taxa Identification Results

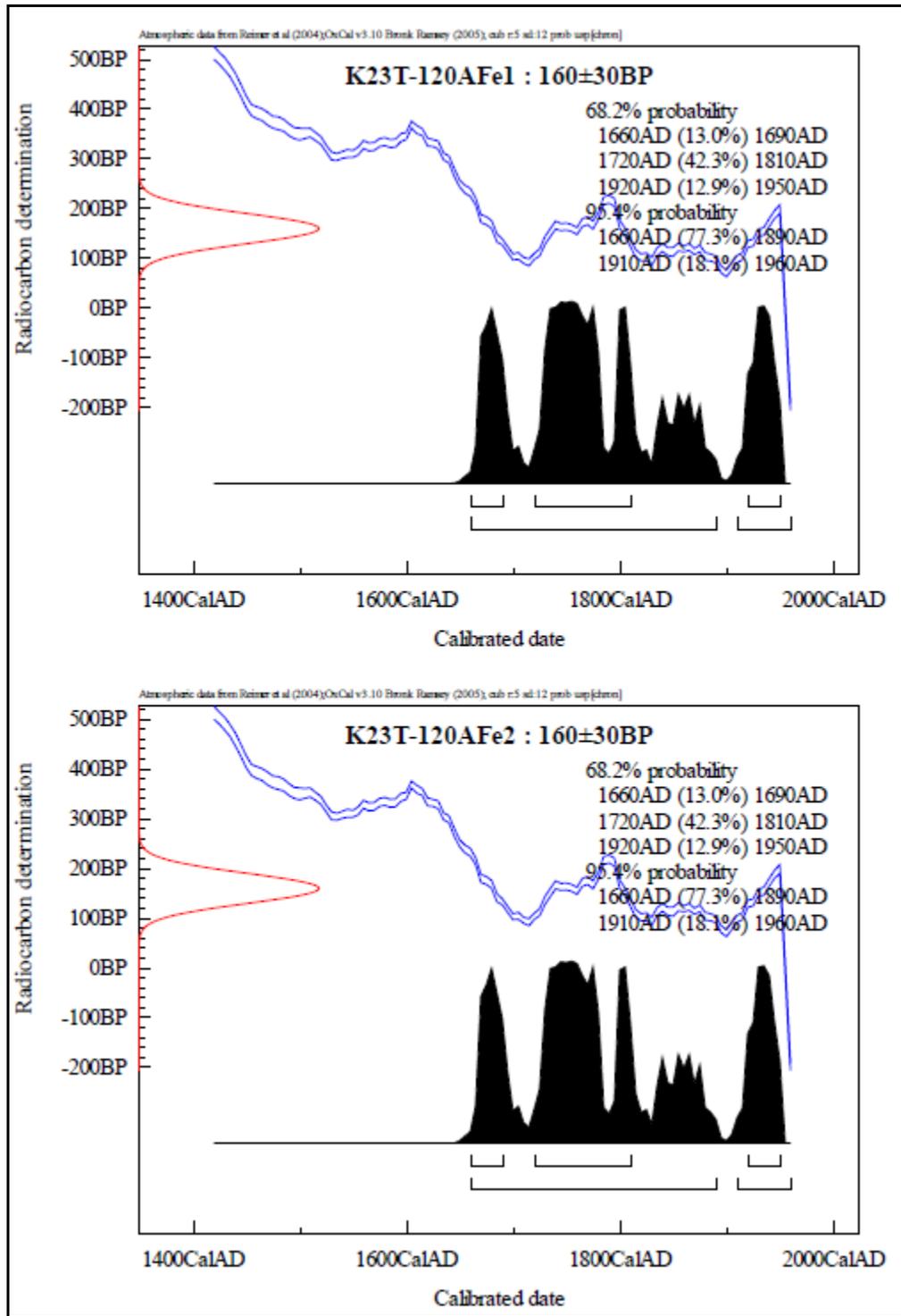
Provenience	WIDL no.	Taxa	Common/Hawaiian name	Origin/Habitat	Part	Count	Weight (g)
T-120A; Halekauwila Street, between Punchbowl and Mililani Streets Sample 6: 110-118 cmbs, Stratum II	1302-25	cf. <i>Psychotria</i> sp.	<i>Kōpiko</i>	Native/Tree	Wood	10	0.83
	1302-26	cf. <i>Syzygium</i> sp.	Mountain apple, roseapple, Java plum, 'ōhi'a ai	Native + Historic Introductions/Tree	Wood	3	0.22
	1302-27	cf. <i>Osteomeles anthyllidifolia</i>	'Ūlei	Native/Shrub	Wood	5	0.53
	1302-28	cf. <i>Metrosideros polymorpha</i>	'Ōhi'a lehua	Native/Tree	Wood	7	0.63
	1302-29	cf. <i>Senna</i> sp.	<i>Kolomona</i>	Native+Historic Introductions/ Shrub-Tree	Wood	6	0.36
	1302-30	cf. <i>Artocarpus altilis</i>	<i>Ulu</i>	Polynesian Introduction/Tree	Wood	3	0.11
	1302-31	cf. <i>Dodonaea viscosa</i>	'A'ali'i	Native/Shrub	Wood	4	0.12
	1302-32	cf. <i>Rauwolfia sandwicensis</i>	<i>Hao</i>	Native/Shrub-Tree	Wood	4	0.16
	1302-33	<i>Aleurites moluccana</i>	<i>Kukui</i>	Polynesian Introduction/Tree	Nutshell	3	0.08
	1302-35	cf. <i>Coprosma</i> sp.	<i>Pilo</i>	Native/Shrub-Tree	Wood	1	0.02
	1302-36	<i>Chamaesyce</i> sp.	<i>Akoko</i>	Native/Shrub	Wood	1	0.04
	1302-37	Unknown 3				1	0.02
	1302-38	<i>Diospyros sandwicensis</i>	<i>Lama</i>	Native/Tree	Wood	1	0.03

## T-120A Wood Taxa Identification Results

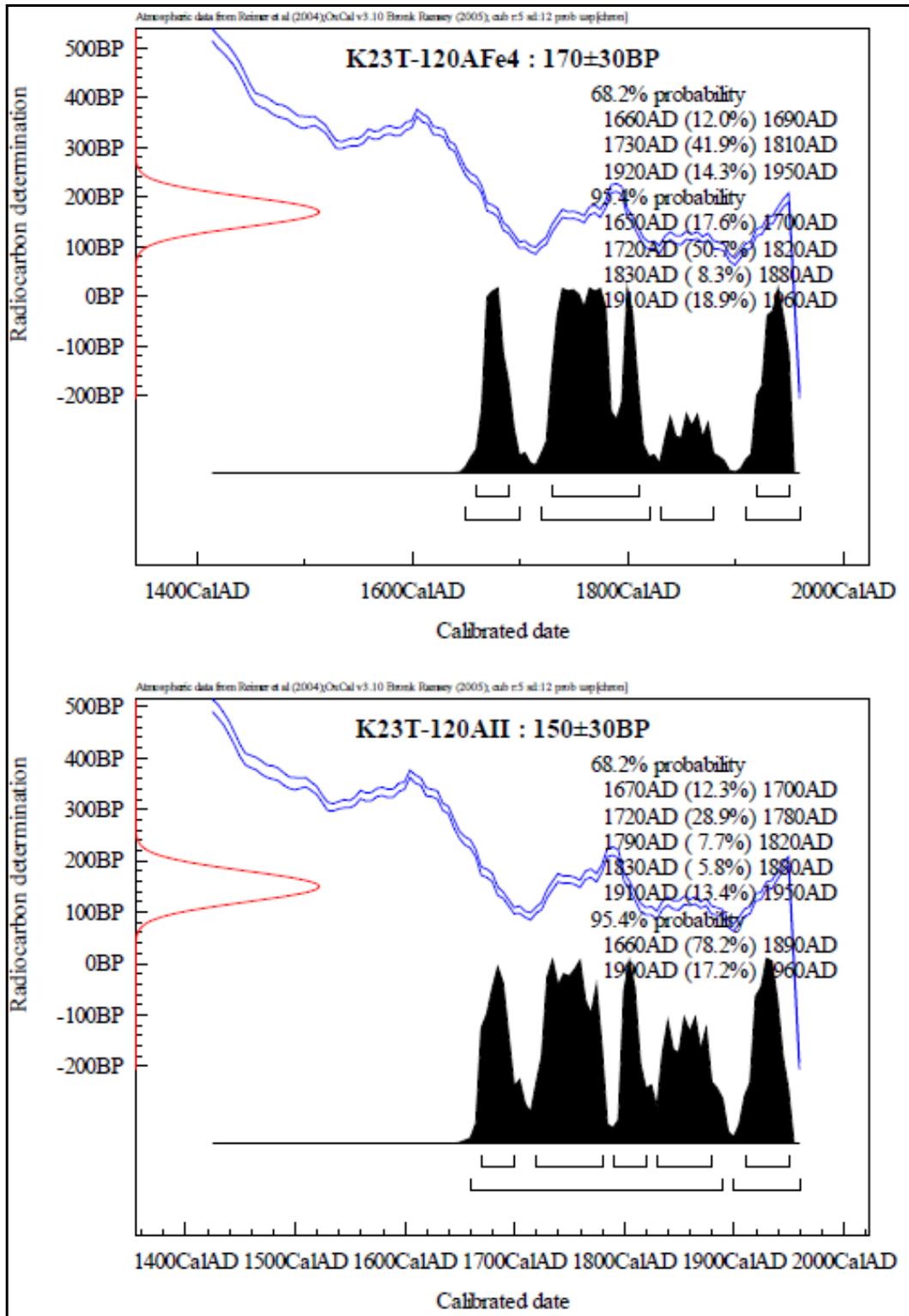
Provenience	WIDL no.	Taxa	Common/Hawaiian name	Origin/Habitat	Part	Count	Weight (g)
T-120A; Halekauwila Street, between Punchbowl and Mililani Streets, Sample 7: Feature 1, 128-136 cmbs, Stratum II	1302-39	cf. <i>Psychotria</i> sp.	<i>Kōpiko</i>	Native/Tree	Wood	1	0.08
	1302-40	Not identified			Bark	2	0.18
	1302-41	<i>Hibiscus tiliaceus</i>	<i>Hau</i>	Native/Shrub-Tree	Wood	2	0.08
	1302-42	cf. <i>Coprosma</i> sp.	<i>Pilo</i>	Native/Shrub-Tree	Wood	1	0.04
T-120A; Halekauwila Street, between Punchbowl and Mililani Streets, Sample 8: Feature 2, 125-137 cmbs, Stratum II	1302-43	<i>Chenopodium oahuense</i>	'Āheahea, 'āweoweo	Native/Shrub	Wood	2	0.49
	1302-44	cf. <i>Syzygium</i> sp.	Mountain apple, roseapple, Java plum, 'ōhi 'a ai	Native + Historic Introductions/Tree	Wood	4	0.78
	1302-45	<i>Aleurites moluccana</i>	<i>Kukui</i>	Polynesian Introduction/Tree	Nutshell	2	0.35
	1302-46	<i>Diospyros sandwicensis</i>	<i>Lama</i>	Native/Tree	Wood	1	0.05
	1302-47	cf. <i>Senna</i> sp.	<i>Kolomona</i>	Native+Historic Introductions/			
	1302-48	cf. <i>Psychotria</i> sp.	<i>Kōpiko</i>	Native/Tree	Wood	1	0.15
	1302-49	cf. <i>Dodonaea viscosa</i>	'A 'ali 'i	Native/Shrub	Wood	2	0.56

## T-120A Wood Taxa Identification Results

Provenience	WIDL no.	Taxa	Common/Hawaiian name	Origin/Habitat	Part	Count	Weight (g)
T-120A; Halekauwila Street, between Punchbowl and Mililani Streets, Sample 9: Feature 4, 128-132 cmbs, Stratum II	1302-50	<i>Chamaesyce</i> sp.	<i>Akoko</i>	Native/Shrub	Wood	10	3.43
	1302-51	cf. <i>Senna</i> sp.	<i>Kolomona</i>	Native+Historic Introductions/ Shrub-Tree	Wood	20	1.09
	1302-52	cf. <i>Dodonaea viscosa</i>	' <i>A 'ali 'i</i>	Native/Shrub	Wood	3	0.20
	1302-53	cf. <i>Metrosideros polymorpha</i>	' <i>Ōhi 'a lehua</i>	Native/Tree	Wood	2	0.46
	1302-54	cf. <i>Artocarpus altilis</i>	<i>Ulu</i>	Polynesian Introduction/Tree	Wood	2	0.37
	1302-55	cf. <i>Arecaceae</i>	Palm		Petiole	5	0.26
	1302-56	cf. <i>Aleurites moluccana</i>	<i>Kukui</i>	Polynesian Introduction/Tree	Wood	6	0.40
	1302-57	cf. <i>Arecaceae</i>	Palm		Wood	1	0.08
	1302-58	Unknown 4			Wood	2	0.19
	1302-59	Not identified			cf. tuber	1	<0.01
	1302-60	<i>Poaceae</i>	Grass		Stolon	1	0.04
	1302-61	Unknown 3			Wood	10	0.39



T-120A Calibrated radiocarbon analysis results for Feature 9 (top) and Feature 10 (bottom)



T-120A Calibrated radiocarbon analysis results for Feature 12 (top) and general Stratum II sample (bottom)

### 3.14 Test Excavation 120B (T-120B)

<b>Ahupua'a:</b>	Honolulu
<b>LCA:</b>	N/A
<b>TMK #:</b>	2-1-027 [Plat]
<b>Elevation Above Sea Level:</b>	1.72 m
<b>UTM:</b>	618097 mE, 2356197.28 mN
<b>Max Length/Width/Depth:</b>	3.66 m / 0.96 m / 1.53 m
<b>Orientation:</b>	142 / 322° TN
<b>Targeted Project Component:</b>	Utility Relocation
<b>USDA Soil Survey Designation:</b>	Fill land (FL)

**Setting:** Test Excavation 120B (T-120B) was located within the east side walk of Halekauwila Street, next to the Department of Labor and Industrial Relations building. T-120B was on public property owned by the City and County of Honolulu. T-120B was an additional excavation added to further delineate the boundaries of the feature concentration found within T-120 and T-120A, approximately 30 m and 40 m (respectively) to the northwest (part of SIHP # 50-80-14-7428). T-120B also investigated a utility relocation. A storm utility was located 3m west and 1.5 m north of T-120B. The surface area surrounding T-120B was level in all directions.

**Summary of Background Research and Land Use:** According to the 1847 Metcalf map, T-120B was 47 m east of the former shoreline within Honuakaha Street (Punchbowl Street). The area was still largely undeveloped in 1883 (Baldwin Honolulu map) and 1884 (Bishop Honolulu map), but there were several house lots near T-120B. The 1887 Wall Honolulu map depicts T-120B 15 m east of Halekauwila Street corridor. Monsarrat's 1897 map shows similar street grids, and Newton's 1904 map shows T-120B just south of the Punchbowl Street and Halekauwila Street. The land lot north of T-120B belonged to the Bishop Estates. The 1919 War map indicates that T-120B was located within an undeveloped portion of a city block with several structures present in the vicinity. By 1933, there was increased development in the area (1933 U.S. War Department Map). The 1943 War map and 1953 Army Mapping Service map show similar structures. LCA records for the area indicate that traditional land use was limited to salt making, taro cultivation, and fishpond farming. T-120B was located 21 m south of LCA 180, which comprised one house lot awarded to Mataio Kekūanā'oa for Lot Kamehameha. LCA 129 (awarded to Kinimaka) was located 18 m east of T-120B. A burial (SIHP# 50-80-14-02963) was found 18 m east of T-120B, within LCA 129 (Ota and Kam 1982).

There were several historic properties found and historical studies conducted in the vicinity of T-120B. A burial report by Ota and Kam (1982) noted the identification of the remains of six individuals (SIHP #50-80-14-2963) during construction, located within 5 m southeast of T-120B, on the corner of Halekauwila Street and Punchbowl Street. Archaeological monitoring was conducted for the Kaka'ako Improvement District 1, approximately 35 m southeast of T-120A, which identified one probable pre-Contact burial (SIHP# 50-80-14-4533) with 11 sling stones and other pre-Contact artifacts that were removed to Bernice Pauahi Bishop Museum (Pfeffer,

Borthwick, and Hammatt 1993). Approximately 55 m southeast of T-120B for the Makai Parking Garage on the corner of Punchbowl Street and Halekauwila Street, archaeological monitoring was conducted where one historic property was identified (SIHP # 50-80-14-2963) consisting of seven burials pre-dating 1850 (Clark 1987). Denham and Kennedy (1993) identified a site consisting of multiple burial finds and ten pre- and post-Contact features (SIHP# 50-80-14-4605) and nine trash pit features (SIHP# 50-80-14-4606) located approximately 78 m northeast of T-120A.

**Documentation Limitations:** T-120B was excavated to the coral shelf at a depth of 1.53 mbs. Utilities at the northwest and southeast ends of the excavation limited the excavation at the ends of T-120B.

**Stratigraphic Summary:** The stratigraphy of T-120B was comprised of several layers fill and natural sediments. The natural surface was observed at 0.84 mbs. The water table was encountered at 1.38 mbs. Observed strata included concrete (Ia), extremely gravelly sandy loam base course (Ib), sandy loam fill (Ic), natural sandy clay loam (II), natural coarse sand (III). Stratigraphy generally conformed to the USDA soil survey designation of fill lands (FL). Stratum II was a natural buried A-horizon and was considered a component of SIHP # 50-80-14-7428.

**Artifacts Discussion:** Three traditional Hawaiian artifacts (Acc. # 120B-H-1 to H-3) were collected from Stratum II. Two basalt flakes, one of which is a primary reduction basalt flake, lacked evidence of use. A piece of volcanic glass debitage was also collected at 1.3 mbs.

A total of 37 fragments consisting of at least 15 historic artifacts (Acc. # 120B-A-1 to A-15) were collected from Stratum Ic-II at 0.65-1.0 mbs. The artifacts included 16 ceramic fragments (from at least eight artifacts), several of which consist of dinnerware with Asian designs and origin. One complete cologne bottle from the post-1870s period (based on color) was collected from the back dirt. Twenty glass bottle fragments (from at least six artifacts) were also collected. These included two black spirits bottles that likely pre-date the 1890s, while a bottle with a two-piece cup mold probably post-dates the 1870s. Artifacts collected from Stratum Ic-II appear to date from post-1870 to 1920s (see artifact analysis table below for further discussion).

**Features Discussion:** No features were observed.

**Terrestrial Faunal Remains Collected During Excavation:** The faunal remains collected individually during excavation from Stratum Ic/II (0.65-1 mbs) consisted of several species: *Bos Taurus*, *Sus scrofa*, *Sus scrofa* (juvenile) and *Canis lupus familiaris*. Three of the bones (*Bos Taurus* Glenoid fossa and tibia; *Canis lupus familiaris* Left Glenoid fossa) showed butchering marks from a metal saw blade indicating an historic origin, not traditional Hawaiian. Stratum II remains were collected in two separate samples: 1-1.1 mbs, which contained *Bos taurus*, *Canis lupus familiaris* and Medium mammal fragments and 1.1-1.3 mbs, where a single *Equus ferus caballus* vertebra fragment was recovered. None of the Stratum II remains showed any indication of cultural modification. Due to the fact that horses (*Equus ferus caballus*) were not introduced in Hawai'i until the early 1800s, the presence of this bone at the base of Stratum II provides an early 19th century terminus post quem for this depositional event. Stratum II of this test excavation is associated with the culturally enriched A-horizon of SIHP# 50-80-14-7428.

**Sample Results:** A total of four bulk sediment samples and four screened samples were collected from T-120B. Three bulk samples were collected from Stratum II and one bulk sample was collected from Stratum III. The four screened samples were collected from Strata Ic-II.

A 10-liter bulk sample was collected from Stratum II at 1.0-1.10 mbs. The sample contained charcoal (3.4 g), naturally deposited shells (6.8 g), roots (1.3 g), glass (22.2 g), olive green glass bottle fragments (72.3 g), metal (3.5 g), *Gallus gallus* humerus (3.9 g), *Canis lupus familiaris* remains (1.2 g), *Rattus* sp. central incisors (0.1 g), *Monacanthidae* *Pervagor spilosoma* (0.1 g, Fantail file fish), and midden (68.2 g, see Midden Results tables at the end of the section).

A 15-liter bulk sample was collected from Stratum II at 1.1-1.2 mbs. The sample contained charcoal (1.4 g), naturally deposited shell (2.0 g), kukui (0.8 g), fire-affected kukui nutshell (3.6 g), roots (0.2 g), bottle glass (2.0 g), green bottle glass (0.3 g), blue and white ceramics (0.2 g), medium mammal remains (0.1 g), medium mammal teeth (0.5 g), fish remains (0.2 g), a shark tooth (0.1 g), small mammal remains (0.1g), *Sus scrofa* incisor root (0.5 g), fire-cracked rock (46.7g), coral gravel (243.3 g), and midden (65.1 g, see Midden Results tables at the end of the section).

A 10-liter bulk sample was collected from Stratum II at 1.3-1.4 mbs. The sample contained charcoal (0.5 g), naturally deposited shells (1.3 g), burned kukui (0.4 g), volcanic glass (0.1 g), fish remains (0.3 g), and midden (48.6 g, see Midden Results at the end of the section).

A 5-liter bulk sediment sample was collected from Stratum III at 1.3-1.4 mbs. The sample contained charcoal (0.2 g), various shell midden (6.7 g), and a shark tooth (0.1g). Midden collected included *Neritidae* *Nerita picea* (0.9 g), *Mytilidae* *Brachidontes crebristriatus* (1.2 g), *Echinodermata* *diadema* sp. and *mathaei* sp. (0.4 g), *Trochidae* *Trochus* sp. (0.2 g), burned shell (2.8 g), and crustacean (1.2 g).

A screened sample was collected from between Stratum Ic/II at 0.65-1.0 mbs. The sample contained naturally deposited shell (0.4g), and midden (80.4 g, see Midden Results tables at the end of the section).

A screened sample was collected from Stratum II at 1.1-1.3 mbs. The sample contained various shell midden (35.5g), glass bottle fragments (46.5g), and a ceramic fragment (1.2g). Midden collected included *Conidae* *Conus* sp. (17.8 g), *Pteriidae* *Pinctada radiata* (8.3 g), large gastropod fragment (3.0 g), *Strombidae* *Strombus maculatus* (3.0 g), *Tellinidae* *Tellina palatum* (2.3 g), *Turbinidae* *Turbo* sp. operculum (0.7 g), and *Neritidae* *Nerita picea* (0.4 g).

An 18.9-liter screened sample was collected from Stratum II at 1.3 mbs. The sample contained 35.3 g of middle species. Midden collected included one large *Cypraeidae* *Cypraea maculifera* fragment (16.8 g), *Conidae* *Conus* sp. (7.9 g), *Tonnidae* *Tonna dolium* (7.2 g), *Pteriidae* *Pinctada radiata* (2.4 g), *Isognomidae* (1.0 g).

A volcanic glass sample (1.3-1.4 mbs) and basalt flake sample (1.1-1.3) from Feature 4, Feature 5, and Feature 7 were submitted for EDXRF analysis. Specific source information was not available; however the volcanic glass samples clearly did not match sources derived from Hawaii County. The samples from Feature 4 and 5 were from "Group 2" and the sample from Feature 7 was from "Group 1". The samples represent two distinct geochemical groups identified from the 35 City Center AIS EDXRF volcanic glass samples, likely representing different volcanic sources on O'ahu (see EDXRF discussion in Volume V).

Results of sample analysis indicated the relatively dense use of the coastal area surrounding T-120B during the late pre-Contact and/or early post-Contact historic time period. Presence of pre-contact cultural materials within a buried A-horizon suggests temporary habitation and food consumption activities. The presence of post-Contact materials indicates historic period impacts over the natural landscape. Stratum II is a natural buried A-horizon which should be considered a component of SIHP # 50-80-14-7428.

**GPR Discussion:** A review of amplitude slice maps indicated no linear features which might indicate the presence of utilities although a concrete slab and utility line were encountered during excavation. Reflectivity was relatively uniform throughout the grid and decreases with depth. A transition from higher reflectivity to lower reflectivity was observed at approximately 0.5 mbs.

GPR depth profiles for T-120B identified horizontal banding, commonly associated with stratigraphic layering, throughout the survey area. This banding corresponded to variations of density and chemical composition within fill deposits. The profile also indicated a change in reflectivity occurring around 0.2 mbs. An anomaly was observed in the profile but not within excavation boundaries. The maximum depth of clean signal return was approximately 0.75 mbs.

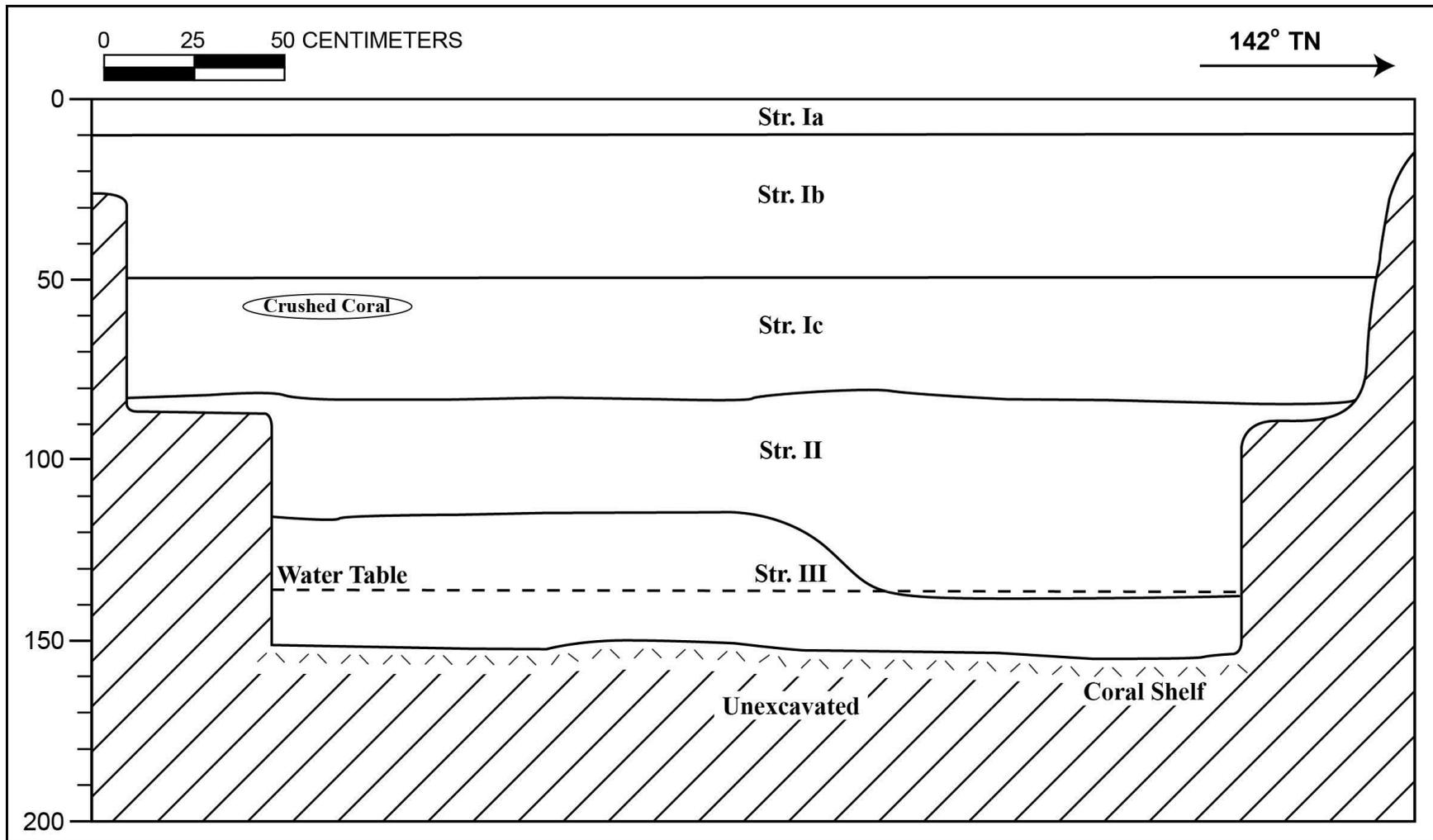
**Summary:** T-120B was excavated to the coral shelf at a depth of 1.53 mbs. The stratigraphy of T-120B was comprised of several layers fill (Ia-Ic) and natural sediments (II-III). Stratigraphy generally conformed to the USDA soil survey designation of Fill land. Multiple traditional Hawaiian artifacts and multiple post-Contact historic artifacts were collected from T-120B. Faunal remains were collected from various strata throughout T-120B. Results of sample analysis indicated the relatively dense use of the coastal area surrounding T-120B during the late pre-Contact and/or early post-Contact historic time period. Stratum II is a natural buried A-horizon which should be considered a component of SIHP # 50-80-14-7428 (see Volume I for further discussion on all historic properties).



T-120B general location (view to southeast).



T-120B northeast profile wall.



T-120B wall profile

## T-120B Stratigraphic Description

Stratum	Depth(cmbs)	Description
Ia	0-10	Concrete sidewalk
Ib	10-50	Fill; 5 YR 3/3 (dark reddish brown); extremely gravelly sandy loam; structureless, single-grain; moist, loose consistency; non-plastic; mixed origin; clear, smooth lower boundary; many fine, medium and coarse roots; base coarse
Ic	50-84	Fill; 10 YR 4/2 (dark grayish brown); sandy loam; structureless, massive; moist, friable consistency; slightly plastic; mixed origin; clear, smooth lower boundary; common fine roots; contained historics, faunal, and crushed coral
II	84-140	Natural; 10 YR 2/2 (very dark brown); sandy clay, loam; structureless, massive; moist, very friable consistency; plastic; mixed origin; abrupt, wavy lower boundary; A-horizon, contained historic ceramic, glass artifacts, faunal bones, waterworn cobbles, burnt shell; appeared to be disturbed reworked natural sediment, sandier and fewer historics as depth increases, considered a component of SIHP # 50-80-14-7428
III	117-153	Natural; 10 YR 6/4 (light yellowish brown); coarse sand; structureless, single-grain; wet, non-sticky consistency; non-plastic; marine origin; lower boundary not visible, on top of coral shelf

T-120B Artifacts Analysis Table

Acc. # 120B- A-	Provenience	Ceramic Vessel Type	Portion	No.	Paste; Decoration	Origin; Age	Comments
1	T-120B, St. Ic-II	Jug?	Body	1	Stoneware		Body fragment with handle
2	T-120B, St. Ic-II	Dinnerware	Body	4	Porcelain	Asian	White; high foot
3	T-120B, St. Ic-II	Dinnerware	Body	2	Stoneware		Yellow
6	T-120B, St. Ic-II	Dinnerware	Rim	1	Stoneware		Yellow; molded flutes
4	T-120B, St. Ic-II	Dinnerware	Body	6	Porcelain; Painted; slip		“Worm” pattern
5	T-120B, St. Ic-II	Dinnerware	Body	1	Porcelain; Transfer-print		Checkered / scaled
7	T-120B, St. Ic-II	Dinnerware	Rim	1	Porcelain; Painted underglaze	Asian	Light blue body; blue paint
	Provenience	Glass Bottle Type	Portion	No.	Color	Origin; Age	Comments
9	T-120B Back Dirt	Bottle, Cologne	Complete	1	Clear	American; 1870s-post	Peck's Silver Medal Cologne, San Francisco, Calif.
10	T-120B, Ic-II	Bottle, Spirits	Base (2); Body (7); Neck-lip (1)	10	Black	pre-1890s	Kick-up
11	T-120B, Ic-II	Bottle, Spirits	Base (2); body (2); lip (1)	5	Black	1890s-1920s	
12	T-120B, Ic-II	Bottle, Beverage	Base	1	Blue, Light	1800-post	
13	T-120B, Ic-II	Bottle, Spirits	Lip	1	Green, Light	1880s-post	
14	T-120B, Ic-II	Bottle, Beverage	Body	1	Olive, Dark		
15	T-120B, Ic-II	Bottle	Body	2	Olive, Dark	1870s-post	



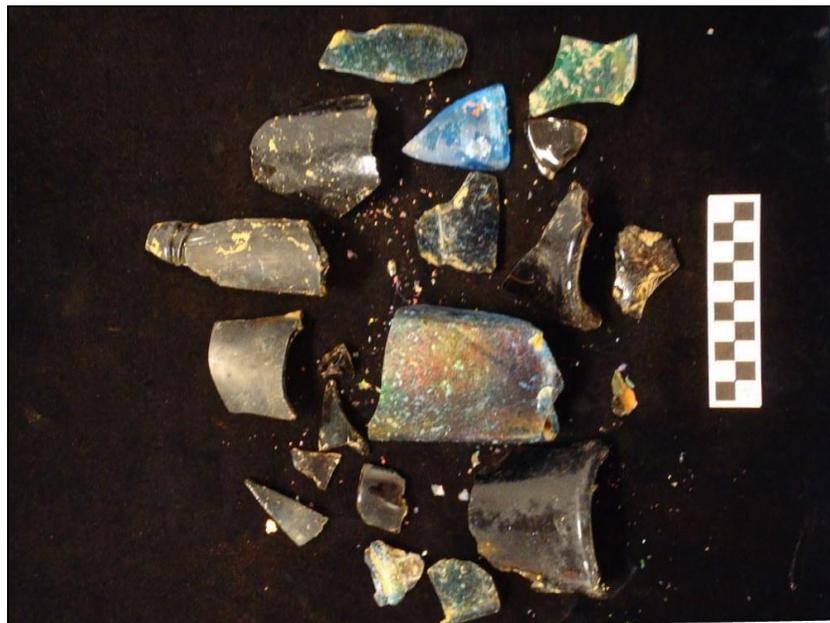
T-120B ceramic fragments (Acc. # 120B-A-1 to A-7) – interior - collected from Strata Ic-II



T-120b ceramic fragments (Acc. # 120B-A-1 to A-7) – exterior - collected from Strata Ic-II



T-120B glass bottle (Acc. # 120B-A-9) from backdirt



T-120b glass bottle fragments (Acc. # 120B-A-10 to 120A-A-15) collected from Strata Ic-II

## T-120B Stratum II (1.0-1.10 mbs) Midden Results

Exc. #	SIHP #	Stratum	Depth (cmbs)	Midden Type	Weight (g)
T-120B	-7428	II	100-110	Neritidae <i>Nerita picea</i>	8.6
				Neritidae <i>Theodoxus neglectus</i>	0.3
				Tellinidae <i>Tellina palatam</i>	16.2
				Mytilidae <i>Brachidontes crebristriatus</i>	3.8
				Shell (burned)	1.3
				Crustacean	0.9
				Crustacean (burned)	0.5
				Isognomidae <i>Isognomon</i> sp.	0.7
				Echinodermata <i>diadema</i> sp./ <i>mathaei</i> sp.	1.1
				Conidae <i>Conus</i> sp.	28.5
				Pteriidae <i>Pinctada radiata</i>	4.6
				Strombidae <i>Strombus</i> sp.	0.8
				Turbinidae <i>Turbo</i> sp. operculum	0.6
				Cypraeidae <i>Cypraea caputserpentis</i>	0.3

## T-120B Stratum II (1.1-1.2 mbs) Midden Results

Exc. #	SIHP #	Stratum	Depth (cmbs)	Midden Type	Weight (g)
T-120B	-7428	II	110-120	Isognomidae <i>Isognomon spp.</i>	11.7
				Neritidae	5.1
				Neritidae <i>Nerita picea</i>	9.8
				Neritidae <i>Nerita picea</i> w/ operculum	2.6
				Mytilidae <i>Brachidontes crebristriatus</i>	6.4
				Tellinidae	2.6
				Tellinidae <i>Tellina palatam</i>	5.3
				Burned shell	2.3
				Strombidae	1.6
				Strombidae <i>Strombus sp.</i>	1.1
				Conidae <i>Conus sp.</i>	2.7
				Echinodermata <i>diadema sp./mathaei sp.</i>	1.4
				Crustacean	0.8
				Trochidae <i>Trochus sp.</i>	1.8
				Pteriidae <i>Pinctada radiata</i>	5.2
				Naticidae <i>Natica gualteriana</i>	1.0
				Cypraeidae <i>Cypraea caputserpentis</i>	0.5
				Isognomidae <i>Isognomon sp.</i>	0.3

## T-120B Stratum II (1.30-1.40 mbs) Midden Results

Exc. #	SIHP #	Stratum	Depth (cmbs)	Midden Type	Weight (g)
T-120B	-7428	II	130-140	Neritidae <i>Nerita picea</i>	18.4
				Tellinidae <i>Tellina palatam</i>	8.8
				Mytilidae <i>Brachidontes crebristriatus</i>	6.6
				Isognomidae <i>Isognomon sp.</i>	4.5
				Naticidae <i>Natica</i>	1.0
				Echinodermata <i>diadema sp./mathaei sp.</i>	0.9
				Strombidae <i>Strombus sp.</i>	0.1
				Trochidae <i>Trochus sp.</i>	0.7
				Burned shell	5.5
				Cymatiidae <i>Cymatium sp.</i>	1.4
				Crustacean	0.7

## T-120B Stratum Ic/II (0.65-1.0 mbs) screened sample Midden Results

Exc. #	SIHP #	Stratum	Depth (cmbs)	Midden Type	Weight (g)
T-120B	-7428	Ic-II	65-100	Conidae <i>Conus</i> spp.	41.6
				Gastropod (large fragment)	16.7
				Tellinidae <i>Tellina palatam</i>	11.9
				Cypraeidae <i>Cypraea moneta</i>	4.5
				Pteriidae <i>Pinctada radiata</i>	2.3
				Echinodermata <i>Heterocentrotus mammillatus</i>	1.1
				Neritidae <i>Theodoxus neglectus</i>	1.0
				Turbinidae <i>Turbo</i> sp., operculum	0.6
				Neritidae <i>Nerita picea</i>	0.4
				Mytilidae <i>Brachidontes crebristriatus</i>	0.3

## T-120 Terrestrial vertebrate material collected individually during excavation

Acc. #	Stratum	Depth(cmbs)	Feature	Family/Class	Species	Element	Description	Modification
120B-F-1	Ic/II	65-100	-	Bovidae (cow)	<i>Bos taurus</i>	Ribs; Distal radius; Calcaneus, Radius (pieces mend); Glenoid fossa; Tibia; Proximal phalanx	Fragments	Glenoid fossa and tibia butchered (cut with metal saw blade)
120B-F-2	Ic/II	65-100	-	Suidae (pig)	<i>Sus scrofa</i>	Mandible with molars; Incisors, Cranial bones; Ribs; Irregular bones	Fragments	None
120B-F-3	Ic/II	65-100	-	Suidae (pig)	<i>Sus scrofa</i> (Juvenile)	Mandible with molars; Vertebrae	Fragments	None
120B-F-4	Ic/II	65-100	-	Canidae (dog)	<i>Canis lupus familiaris</i>	Left Glenoid fossa portion, Ulna; Diaphysis sections	Fragments	Left Glenoid fossa butchered (cut with metal saw blade)
120B-F-5	II	100-110	-	Bovidae (cow)	<i>Bos taurus</i>	Ribs; Diaphysis sections	Fragments	None
120B-F-6	II	100-110	-	Canidae (dog)	<i>Canis lupus familiaris</i>	Femoral epiphysis	Fragment	None
120B-F-7	II	100-110	-	Mammalia	Medium mammal	Irregular bones; Diaphysis section	Fragments	None
120B-F-8	II	110-130	-	Equidae	<i>Equus ferus caballus</i>	Vertebra	Fragment	None

### 3.15 Test Excavation 121 (T-121)

<b>Ahupua'a:</b>	Honolulu
<b>LCA:</b>	N/A
<b>TMK #:</b>	2-01-026 [Plat]
<b>Elevation Above Sea Level:</b>	1.80 m
<b>UTM:</b>	618109.61 mE, 2356183.75 mN
<b>Max Length/Width/Depth:</b>	7.0 m / 0.90 m / 1.68 m
<b>Orientation:</b>	320 / 140° TN
<b>Targeted Project Component:</b>	Utility Relocation
<b>USDA Soil Survey Designation:</b>	Fill land (FL)

**Setting:** Test Excavation 121 (T-121) was located within the northeast sidewalk of the southeast bound lane of Halekauwila Street, next to the Department of Labor and Industrial Relation building. T-121 was located on public property owned by the City and County Honolulu. A storm utility was parallel 1.3 m southwest of T-121. The surface area surrounding the T-121 was level in all directions.

**Summary of Background Research and Land Use:** According to the 1847 Metcalf map, T-121 was 60 m east of the former shoreline and 15 m south of Honuakaha Street (Punchbowl Street). The area was still largely undeveloped in 1883 (Baldwin Honolulu map) and 1884 (Bishop Honolulu Map), and there were several house lots near T-121. The 1887 Wall Honolulu map depicts T-121 20 m east of Halekauwila Street corridor, adjacent to Punchbowl Street. Monsarrat's 1897 map shows similar street grids. Newton's 1904 map shows T-121 just south of Punchbowl Street and Halekauwila Street, and the land lot north of T-121 belonged to the Bishop Estates. The 1919 War map indicates that T-121 was located within an undeveloped portion of a city block with several structures in the vicinity. By 1933, there was increased development in the area (1933 U.S. War Department Map). The 1943 War map and 1953 Army Mapping Service map showed similar structures. LCA records for the area indicate that traditional land use was limited to salt making, taro cultivation, and fishpond farming. T-121 was located 35 m south of LCA 180, which consisted of one house lot awarded to Mataio Kekūānāo'a for Lot Kamehameha. LCA 129 awarded to Kinimaka was located 18 m east of T-121. One burial (SIHP# 50-80-14-02963) was found 18 m southeast of T-121, within LCA 129 (Ota and Kam 1982).

Several historic properties were found and historical studies conducted in the vicinity of T-121. A burial report by Ota and Kam (1982) identified the remains of six individuals (SIHP #50-80-14-2963) during construction within 5 m east of T-121, on the corner of Halekauwila Street and Punchbowl Street where Archaeological monitoring was conducted for the Kaka'ako Improvement District 1, approximately 17 m southeast of T-121, which identified one probable pre-Contact burial (SIHP# 50-80-14-4533) with 11 sling stones and other pre-Contact artifacts that were removed to Bernice Pauahi Bishop Museum (Pfeffer, Borthwick, and Hammatt 1993). Archaeological monitoring was conducted approximately 41 m southeast of T-121 for the Makai

Parking Garage on the corner of Punchbowl Street and Halekauwila Street. One historic property was identified (SIHP # 50-80-14-2963) consisting of seven burials pre-dating 1850 (Clark 1987). Denham and Kennedy (1993) identified a site consisting of multiple burial finds and ten pre- and post-Contact features (SIHP# 50-80-14-4605) and nine trash pit features (SIHP# 50-80-14-4606) located approximately 80 m northeast of T-121.

**Documentation Limitations:** T-121 was excavated to a depth of 1.68 mbs when the water table was encountered at 1.67 mbs. Jaucas sand was observed and hand-excavated. A charcoal sample was taken from the center of excavation. A 0.30m x 0.30m square pot hole was hand-excavated on the *ewa* side of the excavation, where Strata IV and V were observed.

**Stratigraphic Summary:** The stratigraphy of T-121 was comprised of both fill and natural sediments. The natural surface was observed at 0.83 mbs. The observed strata included current concrete sidewalk (Ia), concrete, former sidewalk (Ib), gravelly stony sandy loam fill with historic (Ic), re-worked sand (II), natural jaucas sand (III), natural sandy loam (IV), silty clay (V), natural coarse sand (VI). Stratigraphy generally conformed to the USDA soil survey designation of Fill land (FL).

**Artifacts Discussion:** A total of six artifacts (Acc. # 121-A-1 to A-6) were collected from Stratum Ic at 0.15–0.83 mbs. The artifacts included two European dinnerware fragments; one bears an English crown logo dating from 1872-1905. The two bottle fragments were made in a two piece-cup mold, the dominant form after the 1870s; one bottle has an applied lip finish, used from the 1820s to the 1890s. Building materials lacking datable attributes, including one brick fragment and an electrical ceramic insulator, were also collected. Artifacts collected from Stratum Ic (gravelly stony sandy loam) appear to date from the 1870s to the 1890s.

**Features Discussion:** No archaeological features were observed.

**Terrestrial Faunal Remains Collected During Excavation:** Tibia and metatarsi fragments of unidentified Aves (bird) were collected individually during excavation from Stratum Ib (0.93-1.26 mbs). These remains showed no indications of cultural modification and are not indicative of a particular time period.

**Sample Results:** A total of one bulk sample was collected from Stratum (VI), however, no sample analysis was performed.

**GPR Discussion:** A review of amplitude slice maps indicated a linear features but not within excavation boundaries. Reflectivity was relatively uniform throughout the grid and decreases with depth except for the linear feature. A transition from higher reflectivity to lower reflectivity was observed at approximately 0.5 mbs.

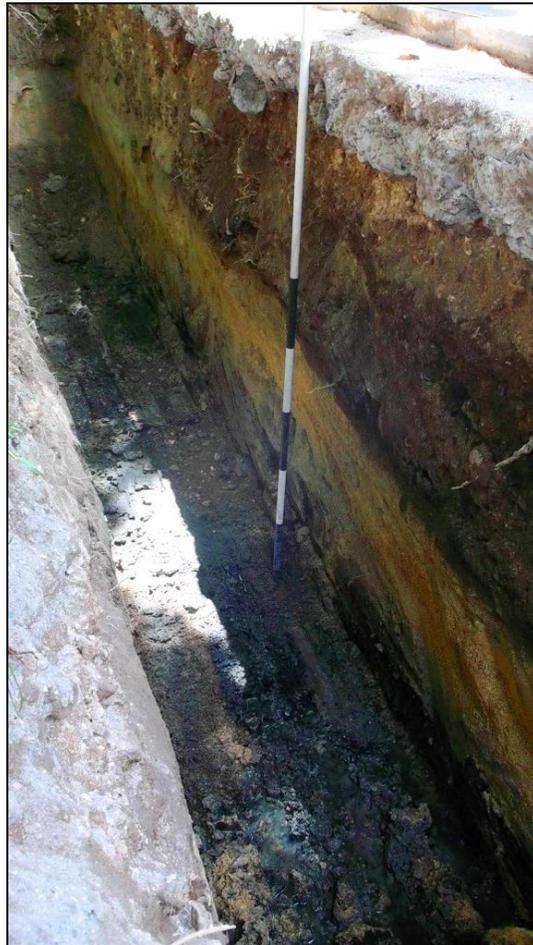
GPR depth profiles for T-121 identified horizontal banding, commonly associated with stratigraphic layering, throughout the survey area. This banding corresponded to variations of density and chemical composition within fill deposits. The profile also indicated a change in reflectivity occurring around 0.2 mbs. An anomaly was observed in the profile and could correspond to the utility encountered during excavation. The maximum depth of clean signal return was approximately 0.9 mbs.

**Summary:** T-121 was excavated to a depth of 1.68 mbs, and the water table was encountered at 1.67 mbs. The stratigraphy of T-121 was comprised of both fill (Ia-Ic) and natural sediments (II-

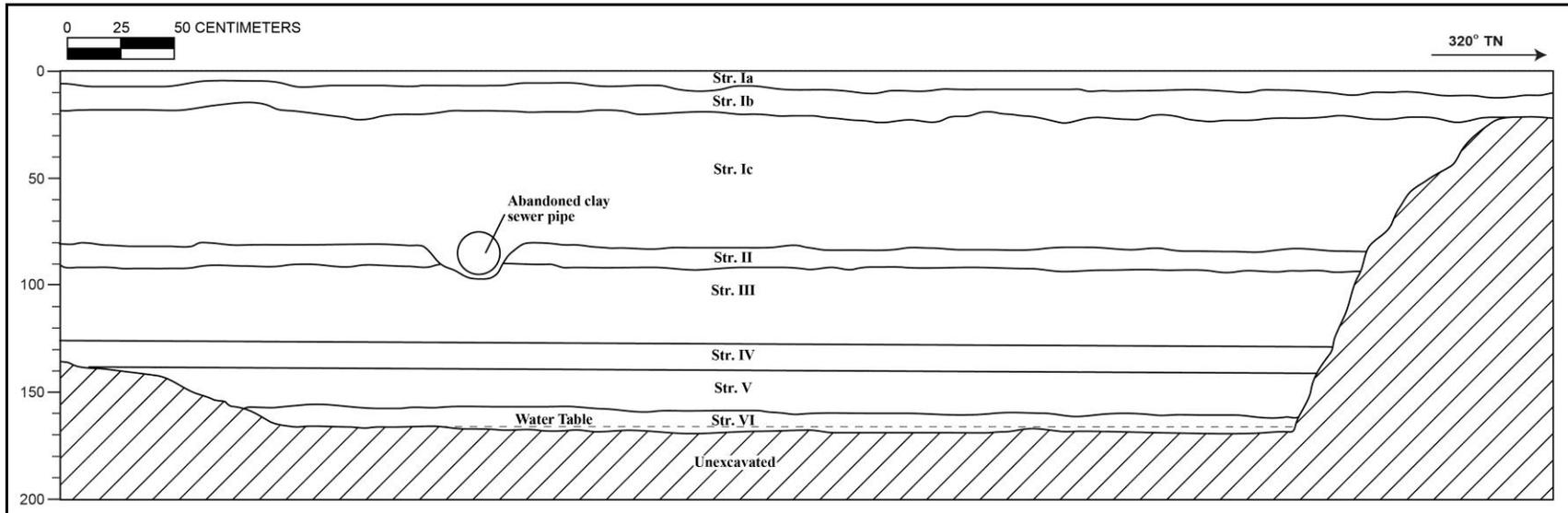
VI). Stratigraphy generally conformed to the USDA soil survey designation of fill land (FL). A total of six historic artifacts were collected within Stratum Ic at 0.15-0.83 mbs. Faunal fragments were positively identified within Stratum III at 0.93-1.26 mbs consisting of *Aves* (bird), tibia and metatarsus fragments. No significant archaeological resources were observed.



T-121 general location (view to south).



T-121 southwest profile wall (view to south)



T-121 southwest wall profile

## T-121 Stratigraphic Description

Stratum	Depth (cmbs)	Description
Ia	0-7	Concrete; modern sidewalk
Ib	7-24	Fill; concrete; structureless, massive; dry, indurated consistency; clear, smooth lower boundary; old sidewalk
Ic	15-83	Fill; 10 YR 4/3 (brown); gravelly stony sandy loam; structureless, single-grain; moist, loose consistency; non-plastic; mixed origin; abrupt, smooth lower boundary; common, fine to coarse roots; contained red brick, electric insulator knob, asphalt pieces, bottles, ceramic, plastic, cane slag, ceramic sewer pipe extends from Ic to IIb; mixed fill
II	83-93	Natural; 2.5 YR 4/3 (olive brown); sand; structureless, single-grain; dry, loose consistency; non-plastic; mixed origin; abrupt lower boundary; few, fine to medium roots; contained ceramic, sewer pipe extended from Ic to III; re-worked remnants of former A-horizon overlaying Jaucas sand
III	93-126	Natural; 2.5 YR 7/4 (pale yellow); sand; structureless, single-grain; dry, loose consistency; non-plastic; marine origin; abrupt, smooth lower boundary; few, fine to medium roots; contained ceramics, faunal remains, inactive sewer pipe that extended from Ic to III; Jaucas sand
IV	126-138	Natural; 10 YR 7/2 to 2.5 YR 6/1 (light gray to gray); sandy loam; weak, fine, platy structure; moist, very friable consistency; non-plastic; marine origin; abrupt, smooth lower boundary; sand grading into a silty clay then back into sand again, overlaying greenish black marine silty clay (IIIb)
V	138-158	Natural; GLEY 1 2.5/10Y (greenish black); silty clay; weak, fine, blocky structure; wet, sticky consistency; very plastic; marine origin; abrupt lower boundary; marine silty clay
VI	158-168	Natural; GLEY 1 6/N (gray); coarse sand; structureless, single-grain; wet, non-sticky consistency; non-plastic; marine origin; lower boundary not visible; coarse sand containing marine shell fragments overlaying coral shelf



T-121 ceramic fragments (Acc. # 121-A-1 to A-2) –exterior, collected from Stratum Ic



T-121 ceramic fragments (Acc. # 121-A-1 to A-2) –interior - collected from Stratum Ic



T-121 glass bottle fragments (Acc. # 121-A-3 to A-4) –collected from Stratum Ic

### 3.16 Test Excavation 122 (T-122)

<b>Ahupua'a:</b>	Honolulu
<b>LCA:</b>	N/A
<b>TMK #:</b>	2-1-030:003
<b>Elevation Above Sea Level:</b>	1.90 m
<b>UTM:</b>	618134.28 mE, 2356136 mN
<b>Max Length/Width/Depth:</b>	3.1 m / 0.9 m / 1.65 m
<b>Orientation:</b>	310 / 130 TN
<b>Targeted Project Component:</b>	Guideway Column
<b>USDA Soil Designation:</b>	Fill lands (FL)

**Setting:** Test Excavation (T-122) was located approximately 25 m southeast of Punchbowl Street and Halekauwila Street intersection, within the southeast bound lane of Halekauwila Street. T-122 was located on property owned by the City and County of Honolulu. The excavation surface was level with the surrounding land surface.

**Summary of Background Research and Land Use:** The 1884 Bishop Honolulu to Kewalo map indicates that T-122 was located approximately 45.0 m northwest of the Transit of Venus Observatory. According to the 1887 Wall Honolulu map, T-122 was located near the edge of a pond near two adjacent ponds. By 1897, the Monsarrat map shows that T-122 was located on a different portion of the pond compared to 1887. The 1919 War map shows that there was massive urban development in the area surrounding T-122. The nearest structure is depicted approximately 22.0 m southeast of T-122. The 1933 War map depicts T-122 within Halekauwila Street.

There were several historic properties encountered and previous archaeological studies conducted in the vicinity of T-122. A burial (SIHP# 50-80-14-2963), reported by Ota and Kam (1982) was located on the corner of the Halekauwila Street and Punchbowl Street intersection. Between 1986 and 1988, CSH conducted archaeological monitoring within the Hawai'i Community Development Authority's Kaka'ako Improvement District 1 (ID-1), which included Halekauwila Street, Ala Moana Boulevard, and the location of T-122 (Pfeffer et al. 1993). A total of 149 burials were documented and disinterred during archaeological monitoring within Kaka'ako Improvement District 1 from four specific burial areas, consisting of two cemeteries and two isolated burials: Queen Street (116 burials assigned SIHP# 50-80-14-4534); South Street (31 burials assigned SIHP# 50-80-14-3712); Halekauwila Street (one burial assigned SIHP# 50-80-14-4532); and Punchbowl Street (one burial assigned SIHP# 50-80-14-4533). The single burial identified on Halekauwila Street was located 150.0 m southeast of T-122. Archaeological monitoring, conducted by the Bishop Museum at the corner of Punchbowl Street and Halekauwila Street, identified one historic property (SIHP # 50-80-14-2963) consisting of seven burials (Clark 1987).

**Documentation Limitations:** T-122 was excavated to a depth of 1.7 mbs and beneath the water table at 1.5 mbs. There were no specific factors that limited documentation of T-122.

**Stratigraphic Summary:** The stratigraphy of T-122 consisted of fill strata overlaying natural sediment to the base of excavation. Observed strata included asphalt (Ia), very cobbly sand fill (Ib), fine sand fill (Ic and Id), medium to coarse sand fill (Ie), fine sand fill (If), sandy clay fill (Ig) overlying natural clay loam (II). The stratigraphy generally conformed to the USDA soil survey designation of Fill land (FL).

**Artifacts Discussion:** A total of two artifacts (Acc. # 122-A-1 to A-2) were collected. One machine-made brick fragment collected from Stratum Ie at 1.28 mbs likely dates from 1918-1978. A complete porcelain teapot with an Asian design was collected from Stratum II at 1.60-1.65 mbs. The artifact from Stratum II likely pre-dates the 1918-1978 Stratum Ie.

**Features Discussion:** No features were observed.

**Terrestrial Faunal Remains Collected During Excavation:** No terrestrial faunal remains were collected individually during excavation.

**Sample Results:** A total of two bulk sediment samples were collected from T-122. All of the bulk sediment samples were wet screened.

A 2-liter bulk sample was collected from Stratum Ig at 1.45-1.50 mbs (2 L) The sample contained wood (0.1g), *Ruppia maritima* seeds (0.1g), and coal or slag (0.1g).

A 3-liter bulk sample was collected from Stratum II at 1.65-1.70 mbs. The sample contained charcoal (0.3 g), naturally-deposited shell (5.0 g), seeds (3.4 g), plant fibers (2.3 g), small pods (0.1 g), porcelain (7.3 g), metal (0.2 g), Aves remains (0.2 g), fish remains (0.1 g), and midden (3.1 g). Midden collected included Neritidae *Nerita picea* operculum (1.8 g), Tellinidae *Tellina palatum* (1.1 g), burned crustacean (0.1 g), and Echinodermata *mathaei* sp. (0.1 g).

The results of the analysis of bulk sediment samples documented the presence of organics within Stratum Ig, and documented the presence of historic artifacts, faunal, and terrestrial and marine shell content within Stratum II. The results of sample analysis support the identification of Stratum II as a component of SIHP# 50-80-14-02963.

**GPR Discussion:** A review of amplitude slice maps indicated a linear feature but not within excavation boundaries. Reflectivity was relatively uniform throughout the grid. A transition from higher reflectivity to lower reflectivity was observed at approximately 0.75 mbs.

GPR depth profiles for T-122 identified horizontal banding, commonly associated with stratigraphic layering, throughout the survey area. This banding corresponded to variations of density and chemical composition within fill deposits. The profile also indicated a change in reflectivity occurring around 0.15 mbs. An anomaly was observed in the profile but not within excavation boundaries. The maximum depth of clean signal return was approximately 1.0 mbs.

**Summary:** T-122 was excavated to a depth of 1.7 mbs and beneath the water table at 1.5 mbs. The stratigraphy of T-122 consisted of fill strata (Ia to Ig) overlaying natural sediment (II) to the base of excavation. The stratigraphy generally conformed to the USDA soil survey designation of Fill land. Two artifacts were collected. One machine-made brick fragment collected from Stratum Ie at 1.28 mbs likely dates from 1918-1978. A complete porcelain teapot with an Asian design was collected from Stratum II at 1.60-1.65 mbs. The artifact from Stratum II likely pre-dates the 1918-1978 Stratum Ie. The results of the analysis of bulk sediment samples documented the presence of organics within Stratum Ig, and documented the presence of historic

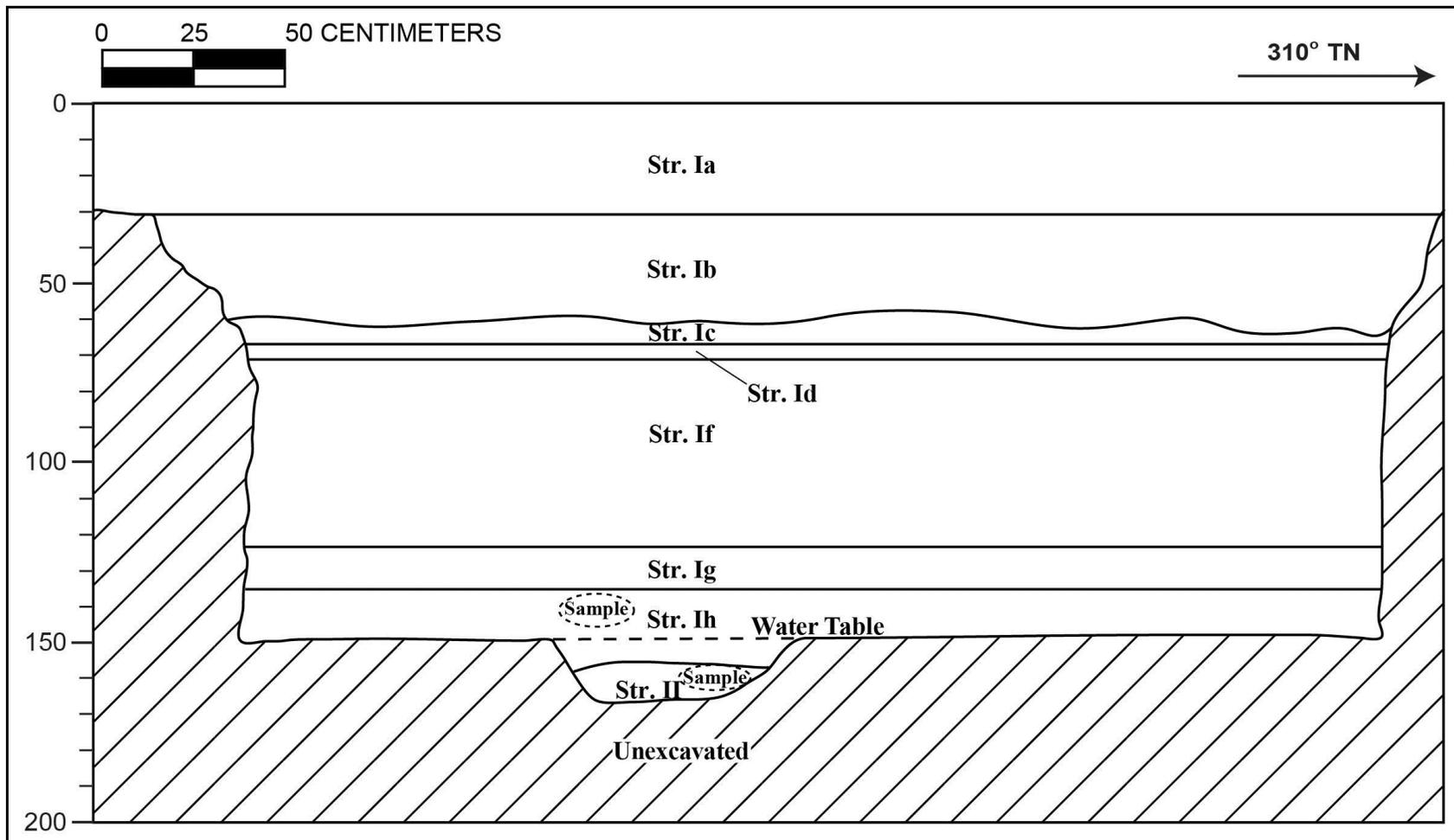
artifacts, faunal, and terrestrial and marine shell content within Stratum II. The natural sediment (Stratum II) within T-122 has been designated as a component of SIHP# 50-80-14-02963, which is described in Volume I.



T-122 general location (view to west)



T-122 southwest profile wall



T-122 northeast profile

## T-122 Stratigraphic Description

Stratum	Depth (cmbs)	Description
Ia	0-30	Asphalt
Ib	30-61	Fill; 10 YR 8/2 (very pale brown); very cobbly sand; structureless, single-grain; dry, loose consistency; non-plastic; marine origin; abrupt, wavy lower boundary; imported fill/ coral cobble 60%
Ic	61-68	Fill; 10 YR 5/2 (grayish brown); fine sand; structureless, single-grain; dry, loose consistency; non-plastic; marine origin; very abrupt, smooth lower boundary; fine sand, imported fill, compact
Id	68-72	Fill; 10 YR 8/2 (very pale brown); fine sand; structureless, single-grain; dry, loose consistency; non-plastic; marine origin; abrupt, smooth boundary; imported fill, fine sand, compact
Ie	72-125	Fill; 10 YR 7/4 (very pale brown); medium to coarse sand; structureless, single-grain; dry, loose consistency; non-plastic; marine origin; very abrupt, smooth lower boundary; coarse grain sand, locally procured beach sand fill
If	125-137	Fill; 10 YR 7/2 (light gray); fine sand; structureless, single-grain; wet, non-sticky consistency; non-plastic; marine origin; very abrupt lower boundary; fine sand used as fill
Ig	136-160	Fill; GLEY 2 8/5BG (light greenish gray); sandy clay; structureless, single-grain; wet, slightly sticky consistency; slightly plastic; marine origin; lower boundary not visible; possible hydraulic fill
II	160-165	Natural; 10 YR 3/1 (very dark gray); clay loam; structureless, single-grain; mixed origin; lower boundary not visible, contained ceramic; wetland possible agricultural with mixed historic debris and organic dating matting



T-122 ceramic tea pot (Acc. # 122-A-1) artifact collected from Stratum II

### 3.17 Test Excavation 122A (T-122A)

<b>Ahupua'a:</b>	Honolulu
<b>LCA:</b>	129-1
<b>TMK #:</b>	2-1-031:010
<b>Elevation Above Sea Level:</b>	1.80 m
<b>UTM:</b>	618141.37 mE, 2356153.65 mN
<b>Max Length/Width/Depth:</b>	3.35 m / 0.90 m / 0.57 m
<b>Orientation:</b>	005 / 185 TN
<b>Targeted Project Component:</b>	Utility Relocation
<b>USDA Soil Designation:</b>	Fill land (FL)

**Setting:** Test Excavation 122A (T-122A) was located approximately 20 m east of Halekauwila Street and Punchbowl Street intersection, and was located within a sidewalk. T-122A was an additional excavation added to further investigate a wetland deposit (part of SIHP# 50-80-14-2963) located in T-122. T-122A also investigated a utility relocation. A sewer line was located 1.1 m south, and a fiber-optic cable was located 2 m north of T-122A. The excavation surface was slightly elevated with the surrounding land surface.

**Summary of Background Research and Land Use:** The 1884 Bishop Honolulu to Kewalo map indicated that T-122A was located approximately 45.0 m northwest of the Transit of Venus Observatory. According to the 1887 Wall Honolulu map, T-122A was located near the edge of a pond near two adjacent ponds. By 1897, the Monsarrat map shows that T-122A was located on a different portion of pond compared to 1887. The 1919 War map shows that there was massive urban development in the area surrounding T-122A. The nearest structure is depicted approximately 22.0 m southeast of T-122. The 1933 War map depicts T-122A within Halekauwila Street.

There were several historic properties and previous archaeological studies in the vicinity of T-122A. A burial (SIHP# 50-80-14-2963), reported by Ota and Kam (1982) was located on the corner of the Halekauwila Street and Punchbowl Street intersection. Between 1986 and 1988, CSH conducted archaeological monitoring within the Hawai'i Community Development Authority's Kaka'ako Improvement District 1 (ID-1), which included Halekauwila Street, Ala Moana Boulevard, and the location of T-122 (Pfeffer et al. 1993). A total of 149 burials were documented and disinterred during archaeological monitoring within Kaka'ako Improvement District 1 from four specific burial areas, consisting of two cemeteries and two isolated burials: Queen Street (116 burials assigned SIHP# 50-80-14-4534); South Street (31 burials assigned SIHP# 50-80-14-3712); Halekauwila Street (1 burial assigned SIHP# 50-80-14-4532); and Punchbowl Street (1 burial assigned SIHP# 50-80-14-4533). The one burial that was identified on Halekauwila Street was located 150.0 m southeast of T-122A. Archaeological monitoring, conducted by the Bishop Museum at the corner of Punchbowl Street and Halekauwila Street, identified one historic property (SIHP # 50-80-14-2963) consisting of seven burials (Clark 1987).

**Documentation Limitations:** T-122A was excavated to a depth of 0.57 mbs. The excavation of T-122A was terminated due to the presence of subsurface utility lines and a cement jacket.

**Stratigraphic Summary:** The stratigraphy of T-122A consisted of fill strata to the base of excavation. Observed strata included cement (Ia) and fine sand (Ib). The stratigraphy conformed to the USDA soil survey designation of Fill land (FL).

**Artifacts Discussion:** No artifacts were observed.

**Features Discussion:** No features were observed.

**Terrestrial Faunal Remains Collected During Excavation:** No terrestrial faunal remains were collected individually during excavation.

**Sample Results:** No sample analysis was conducted.

**GPR Discussion:** A review of amplitude slice maps indicated no linear features although multiple utilities were encountered during excavation. Reflectivity was relatively uniform throughout the grid and decreases with depth. A transition from higher reflectivity to lower reflectivity was observed at approximately 0.75 mbs.

GPR depth profiles for T-122A identified horizontal banding, commonly associated with stratigraphic layering, throughout the survey area. This banding corresponded to variations of density and chemical composition within fill deposits. The profile also indicated a change in reflectivity occurring around 0.15 mbs. An anomaly was observed in the profile and corresponds to the utility pipes spanning through the center of the excavation. The maximum depth of clean signal return was approximately 1.0 mbs.

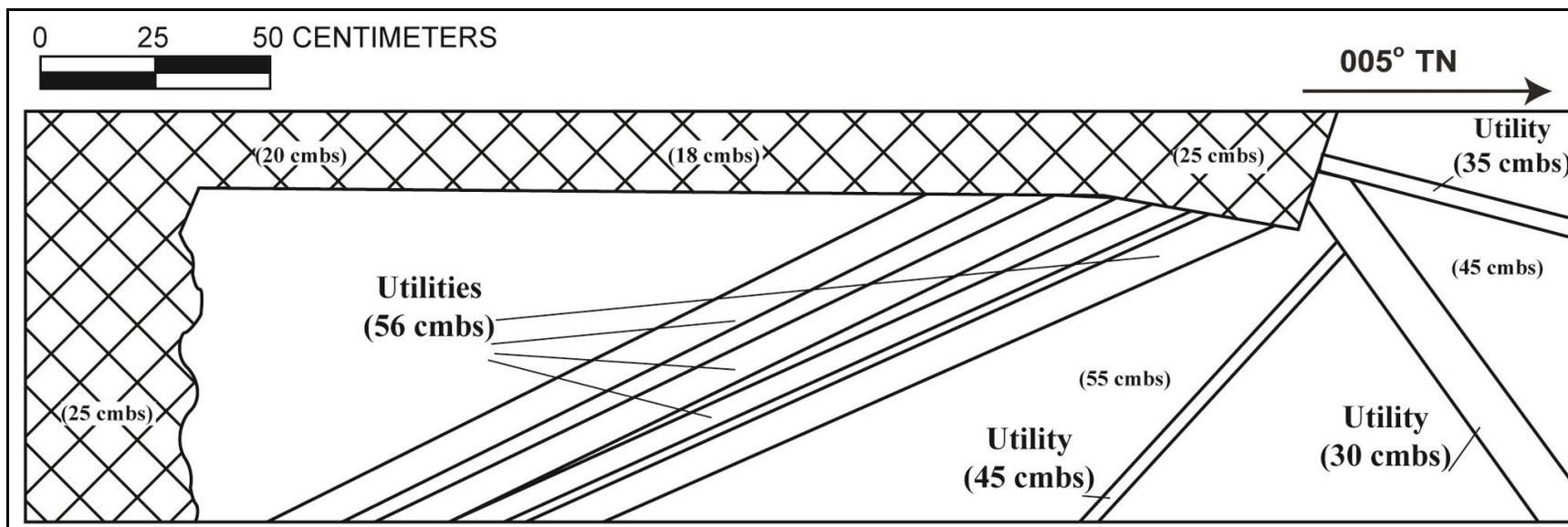
**Summary:** T-122A was excavated to a depth of 0.57 mbs. The stratigraphy of T-122A consisted of fill strata (Ia and Ib) to the base of excavation. The stratigraphy conformed to the USDA soil survey designation of Fill land (FL). No cultural resources were identified within T-122A.



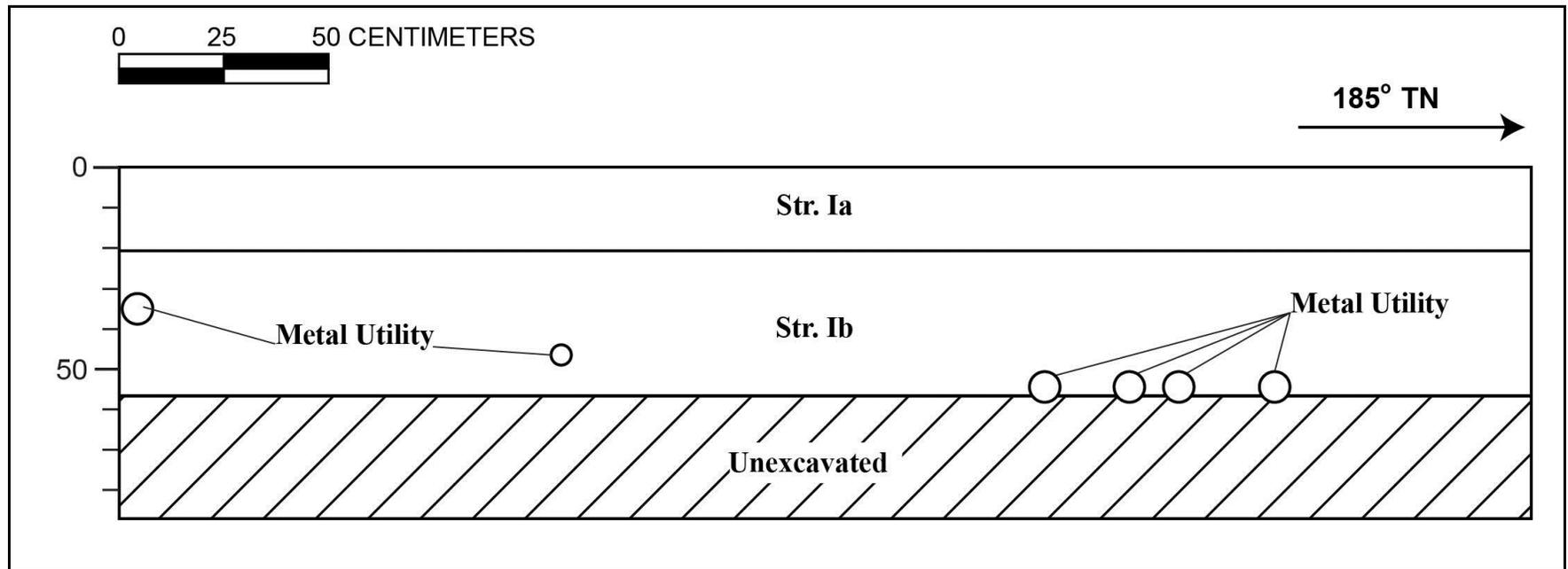
T-122A general location (view to south)



T-122A plan (view to south)



T-122A planview of the excavation floor at Stratum Ib



T-122A west and east profile

## T-122A Stratigraphic Description

<b>Stratum</b>	<b>Depth (cmbs)</b>	<b>Description</b>
Ia	0-20	Fill; Concrete
Ib	20-57	Fill; 10 YR 5/2 (grayish brown); fine sand; structureless, single-grain; dry, loose consistency; non-plastic; marine origin; very abrupt, lower boundary not visible; fine sand, imported fill, compact

### 3.18 Test Excavation 123 (T-123)

<b>Ahupua'a:</b>	Honolulu
<b>LCA:</b>	N/A
<b>TMK #:</b>	2-1-030:003
<b>Elevation:</b>	1.9 m
<b>UTM:</b>	618163 mE, 2356101 mN
<b>Max Length/Width/Depth:</b>	3.70 m / 0.92 m / 1.94 m
<b>Orientation:</b>	140 / 320° TN
<b>Targeted Project Component:</b>	Guideway Column
<b>USDA Soil Designation:</b>	Fill land (FL)

**Setting:** Test Excavation (T-123) was located approximately 70 meters southeast of Punchbowl Street and Halekauwila Street intersection, and was located within the southeast bound lane of Halekauwila Street. T-123 was located approximately 1 m east of a water line, 1 m south of a sewer line, and 1 m south of an electric line. The excavation surface was level with the surrounding land surface.

**Summary of Background Research and Land Use:** The 1884 Bishop Honolulu to Kewalo map indicated that T-123 was located approximately 45.0 m northwest of the Transit of Venus Observatory. According to the 1887 Wall Honolulu map, T-123 was located near the edge of a pond near two adjacent ponds. By 1897, the Monsarrat map shows that T-123 was located on a different portion of pond compared to 1887. The 1919 War map shows that there was massive urban development in the area surrounding T-123. The nearest structure is depicted approximately 25.0 m northwest of T-123. The 1933 War map depicts T-123 within Halekauwila Street.

There were several historic properties and previous archaeological studies in the vicinity of T-123. A burial (SIHP# 50-80-14-2963), reported by Ota and Kam (1982) was located on the corner of the Halekauwila Street and Punchbowl Street intersection. Between 1986 and 1988, CSH conducted archaeological monitoring within the Hawai'i Community Development Authority's Kaka'ako Improvement District 1 (ID-1), which included Halekauwila Street, Ala Moana Boulevard, and the location of T-123 (Pfeffer et al. 1993). A total of 149 burials were documented and disinterred during archaeological monitoring within Kaka'ako Improvement District 1 from four specific burial areas, consisting of two cemeteries and two isolated burials: Queen Street (116 burials assigned SIHP# 50-80-14-4534); South Street (31 burials assigned SIHP# 50-80-14-3712); Halekauwila Street (1 burial assigned SIHP# 50-80-14-4532); and Punchbowl Street (1 burial assigned SIHP# 50-80-14-4533). The one burial that was identified on Halekauwila Street was located 110.0 m southeast of T-123. Archaeological monitoring, conducted by the Bishop Museum at the corner of Punchbowl Street and Halekauwila Street, identified one historic property (SIHP # 50-80-14-2963) consisting of seven burials (Clark 1987).

**Documentation Limitations:** T-123 was excavated to the water table at a depth of 1.92 mbs. There were no specific factors that limited documentation of T-123.

**Stratigraphic Summary:** The stratigraphy of T-123 consisted of fill strata overlaying natural sediment to the water table. Observed strata included asphalt (Ia), extremely gravelly coarse sand fill (Ib), very gravelly fine sand fill (Ic), fine grain sand (Id, Ie), sandy clay (If), natural coarse sandy clay (II), and natural loamy sand (III). The stratigraphy generally conformed to the USDA soil survey designation of Fill land (FL).

**Artifacts Discussion:** A single traditional Hawaiian artifact (Acc. # 123-H-1), a piece of volcanic glass, was collected from Stratum III at 1.80-1.92 mbs. Two (2) historic artifacts (Acc. # 123-A-1 to A-2, see following photograph) were collected. One complete case gin bottle in 17 fragments was collected from Stratum Ie. The asymmetrical bottle may be mouth-blown or made in a dip-mold; exported case gin bottles, especially from the Netherlands, continued to be mouth-blown or made in an early dip-mold into the twentieth century. One ceramic electrical insulator was collected from Stratum II. The artifact collected from Stratum Ie may date to as recently as the early twentieth century, and while the artifact collected from Stratum II lacks datable attributes, it likely pre-dates the Stratum Ie artifact.

**Features Discussion:** No features were observed.

**Terrestrial Faunal Remains Collected During Excavation:** No terrestrial faunal remains were collected individually during excavation.

**Sample Results:** A total of four bulk sediment samples were collected from within T-123. All of the bulk samples sediment samples were wet-screened.

A 1-liter bulk sediment sample was collected from Stratum Id at 0.76-0.84 mbs. The sample contained naturally-deposited miscellaneous shell (2.3 g).

A 2-liter bulk sample was collected from Stratum If at 1.45-1.73 mbs. The sample contained charcoal (0.1 g), naturally-deposited shell (2.1 g), *Ruppia maritima* seeds (0.1 g), glass (0.3 g), and fish faunal (0.1 g).

A 5-liter bulk sample was collected from Stratum II at 1.73-1.80 mbs. The sample contained charcoal (0.2 g), naturally-deposited shell (12.5 g), *Ruppia maritima* seeds (0.2 g), wood (7.3 g), glass bottle (167.5 g), fish faunal (0.1 g), and medium mammal skeletal remains (0.1 g).

A 3-liter bulk sample collected from Stratum III at 1.80-1.92 mbs. The sample contained charcoal (0.7 g), midden (34.7 g), naturally-deposited shell (2.0 g), *Ruppia maritima* seeds (0.1 g), burned kukui (1.0 g), wood (0.2 g), volcanic glass fragment (0.3 g), medium mammal skeletal remains (0.3 g), and fish faunal (0.1 g).

The results of sample analysis indicated that Stratum II and III of T-123 contained possible midden, artifacts, and cultural material, which support the inclusion of the strata (II and III) as components of SIHP# 50-80-14-2963.

**GPR Discussion:** A review of amplitude slice maps indicated no linear features which might indicate the presence of utilities although the end of a utility was encountered during excavation. Reflectivity was relatively uniform throughout the grid and decreases with depth. A transition from higher reflectivity to lower reflectivity was observed at approximately 0.75 mbs.

GPR depth profiles for T-123 identified horizontal banding, commonly associated with stratigraphic layering, throughout the survey area. This banding corresponded to variations of density and chemical composition within fill deposits. The profile also indicated a change in reflectivity occurring around 0.5 mbs. Several anomalies were observed in the profile and one corresponds to the utility observed during excavation. The maximum depth of clean signal return was approximately 1.25 mbs.

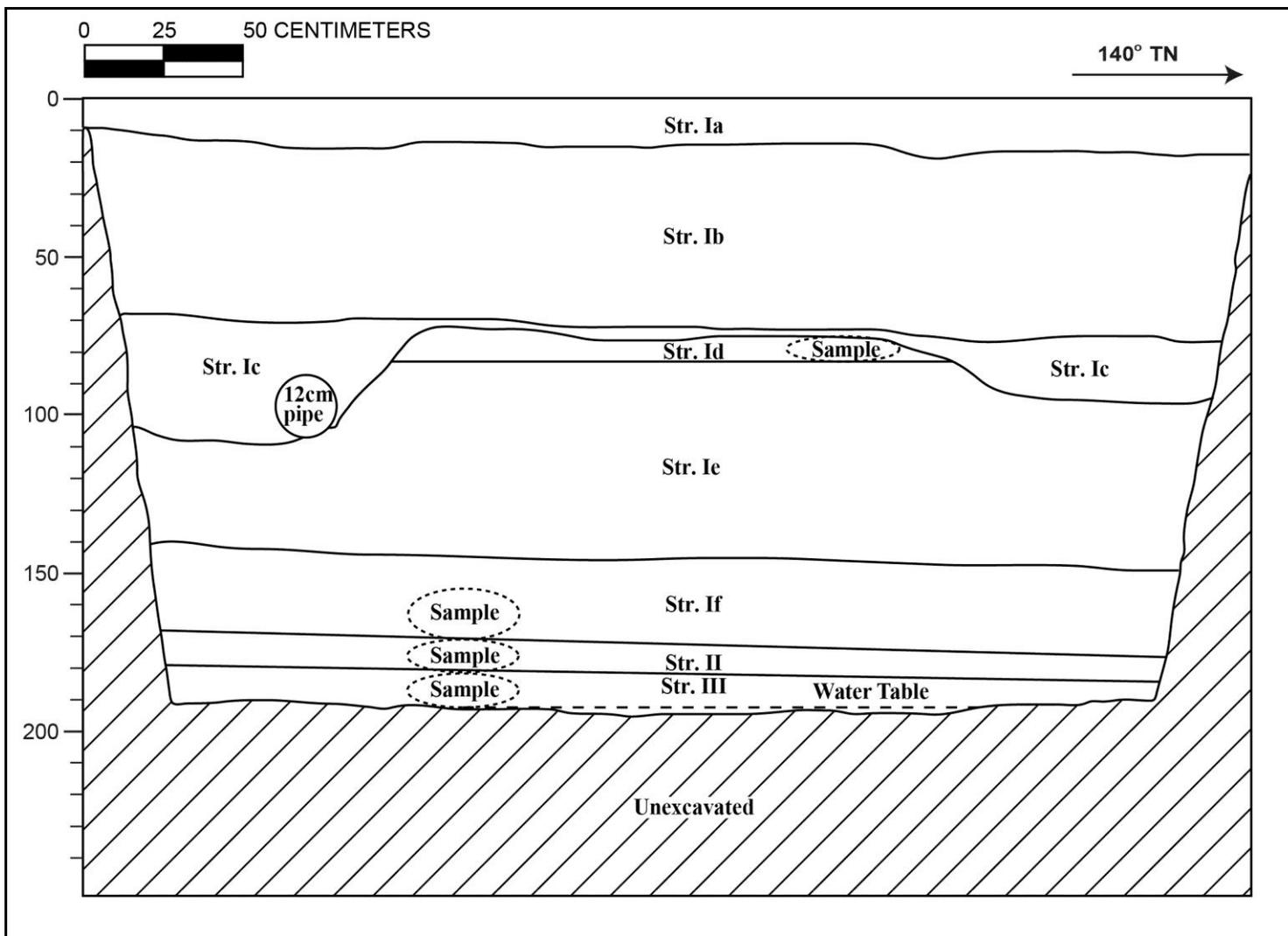
**Summary:** T-123 was excavated to the water table at a depth of 1.92 mbs. The stratigraphy of T-123 consisted of fill strata overlaying natural sediment to the water table. The stratigraphy generally conformed to the USDA soil survey designation of Fill land (FL). The results of sample analysis indicated that Stratum II and III of T-123 contained possible midden, artifacts, and cultural material. The natural sediment (Stratum II and III) within T-123 has been designated as a component of SIHP# 50-80-14-2963, which is described in Volume I.



T-123 general location (view to northeast).



T-123 northeast profile wall (view to north).



T-123 northeast wall profile

## T-123 Stratigraphic Description

<b>Stratum</b>	<b>Depth (cmbs)</b>	<b>Description</b>
Ia	0-15	Fill; asphalt
Ib	15-72	Fill; 10 YR 4/1 (dark gray); extremely gravelly coarse sand; structureless, massive; dry, loose consistency; non-plastic; mixed origin; abrupt, smooth lower boundary; crushed basalt gravel with 90% gravel and 10% sand matrix
Ic	72-110	Fill; 2.5 Y 6/2 (light brownish gray); very gravelly fine sand; structureless, single-grain; moist, loose consistency; non-plastic; mixed origin; clear, irregular lower boundary; contained 0.12 m diameter utility pipe; 40% crushed coral gravel
Id	76-85	Fill; 10 YR 6/2 (light brownish gray); fine grain sand; structureless, single-grain; moist, loose consistency; non-plastic; mixed origin; clear, smooth lower boundary; disturbed sand stratum
Ie	85-145	Fill; 10 YR 8/4 (very pale brown); fine grain sand; structureless, single-grain; moist, loose consistency; non-plastic; marine origin; diffuse, smooth lower boundary; contained bottle glass and ceramic fragments; locally procured sand fill
If	145-173	Fill; GLEY 1 7/5GY (light greenish gray); sandy clay; structureless, massive; moist, firm consistency; plastic; marine origin; abrupt, smooth lower boundary; possible hydraulic fill
II	173-180	Natural; GLEY 1 3/10Y (very dark greenish gray); coarse sandy clay; weak, medium, crumb structure; moist, friable consistency; slightly plastic; mixed origin; clear, smooth lower boundary; common, coarse roots; contains glass bottle; 80% small terrestrial snails, agricultural/wetland sediment
III	180-194	Natural; 2.5Y 3/1 (very dark gray); loamy sand; weak, fine, crumb structure; wet, slightly sticky consistency; non-plastic; mixed origin; lower boundary not visible; gleyed sand at water table and just above coral shelf



T-123 complete case gin bottle (Acc. # 123-A-1) in 17 fragments collected from Stratum Ie

### 3.19 Test Excavation 124 (T-124)

<b>Ahupua'a:</b>	Honolulu
<b>LCA:</b>	N/A
<b>TMK #:</b>	2-1-030 [Plat]
<b>Elevation Above Sea Level:</b>	1.89 m
<b>UTM:</b>	618189.61 mE, 2356070.21 mN
<b>Max Length/Width/Depth:</b>	6.7 m / 0.71 m / 1.75 m
<b>Orientation:</b>	316 / 136° TN
<b>Targeted Project Component:</b>	Utility Relocation
<b>USDA Soil Survey Designation:</b>	Ewa silty clay loam (EmA)

**Setting:** Test Excavation 124 (T-124) was located approximately 110 m southeast of Halekauwila Street and Punchbowl Street intersection and was located within the *makai* southeast bound lane of Halekauwila Street. The property was owned by the City and County of Honolulu. A utility water line was 1.5 m southwest of T-124, and a sewer utility line 2.8 m northeast. The excavation surface was level with the surrounding land surface.

**Summary of Background Research and Land Use:** According to the 1847 Metcalf map, T-124 was located 196.0 m east of the former shoreline and 140.0 m south of Honuakaha Street (Punchbowl Street). The 1883 Baldwin map depicted the location of T-124 as largely undeveloped. The 1887 Wall Honolulu map depicted the location of T-124 approximately 130.0 m south of Punchbowl Street. Monsarrat's 1897 map showed similar street grids. Newton's 1904 map showed T-124 located approximately 150.0 m south of the Punchbowl Street and Halekauwila Street intersection. The 1919 War map indicated that T-124 was located within an undeveloped portion of a city block with several structures present in the vicinity. The 1933 War map indicated increased development in the area. The 1943 War map and 1953 Army Mapping Service map showed similar structures.

LCA records for the area indicated that the traditional land-use was limited to salt-making, taro cultivation, and fishpond harvesting and maintenance. T-124 was located 9 m northwest of Māhele Award 61 awarded to Beneli (Bennett) Nāmākehā, a member of Kamehameha II's Privy Council. One burial (SIHP # 50-80-14-04533) was located within Māhele Award 61, 60 m southeast of T-124. T-124 was 30 m southwest of LCA 677 which was awarded to M. Kekūānao'a.

There were several historic properties and previous archaeological studies in the vicinity of T-124. A burial (SIHP# 50-80-14-2963), reported by Ota and Kam (1982), was located on the corner of the Halekauwila Street and Punchbowl Street intersection. Between 1986 and 1988, CSH conducted archaeological monitoring within the Hawai'i Community Development Authority's Kaka'ako Improvement District 1 (ID-1), which included Halekauwila Street, Ala Moana Boulevard, and the location of T-124 (Pfeffer et al. 1993). A total of 149 burials were documented and disinterred during archaeological monitoring within Kaka'ako Improvement District 1 from four specific burial areas, consisting of two cemeteries and two isolated burials:

Queen Street (116 burials assigned SIHP# 50-80-14-4534); South Street (31 burials assigned SIHP# 50-80-14-3712); Halekauwila Street (1 burial assigned SIHP# 50-80-14-4532); and Punchbowl Street (1 burial assigned SIHP# 50-80-14-4533). The one burial that was identified on Halekauwila Street was located 60.0 m southeast of T-124. Archaeological monitoring, conducted by the Bishop Museum at the corner of Punchbowl Street and Halekauwila Street, indentified one historic property (SIHP # 50-80-14-2963) consisting of seven burials (Clark 1987).

**Documentation Limitations:** T-124 was excavated to the coral shelf at 1.75 mbs and beneath the water table at 1.72 mbs. There were no specific factors that limited documentation of T-124.

**Stratigraphic Summary:** The stratigraphy of T-124 consisted of fill strata overlying natural sediment to the coral shelf. Observed strata included asphalt (Ia), extremely gravelly sandy loam fill (Ib), very gravelly sand (Ic), sandy loam fill (Id), loam fill (Ie), a previously disturbed natural sandy loam (IIa), natural loamy sand (IIb), natural sand (III), natural clay loam (IV), and natural sandy loam to the coral shelf. The stratigraphy generally conformed to the USDA soil survey designation of Fill land (FL).

**Artifacts Discussion:** A total of two traditional Hawaiian artifacts (Acc. # 124-H-1 to H-2) were collected. The artifact from Stratum IIa, Feature 1 at 1.18 to 1.44 mbs, consisted of seven small pieces of volcanic glass debitage. A single piece of volcanic glass debitage was from Stratum IIb, Feature 8 at 1.44-1.62 mbs.

A total of nine (9) historic artifact fragments, consisting of eight (8) artifacts (Acc. # 124-A-1 to A-8, see following table and photographs) were collected from Stratum Id at 0.56-0.67 mbs. The artifacts included one Asian hollowware bowl, two flatware plate fragments, three bottle fragments, one brick fragment, one corroded nail, and one complete pipe. The bottles were mold-blown, made after ca. 1800, but no narrower date range could be determined.

**Features Discussion:** A total of 12 features (Features 1-12) were identified within T-124, extending from the base of either Stratum IIa or IIb. Stratum IIa was considered to be the historically disturbed or modified upper portion of the former land surface (buried A-horizon) within T-124. Stratum IIb was considered to be the in situ pre- and/or early post-Contact lower portion of the former land surface. Both the upper and lower portions of the former land surface within T-124 (IIa and IIb) were designated as components of SIHP# 50-80-14-2963, which was also identified within T-122 and T-123. The twelve features within T-124 have been designated as Features 1-12 of SIHP# -2963.

SIHP# -2963 Feature 1 was interpreted to be a possible post-mold with straight sides and a slightly rounded base. Feature 1 extended from 1.16 mbs to 1.36 mbs. Feature 1 was irregular shaped in plan view and was 0.42 m in length by 0.62 m wide. Feature 1 was only visible in plan view and was not observed or documented within the excavation sidewall.

SIHP# -2963 Feature 2 was a shallow discoloration that was considered to be a pit of indeterminate function. Feature 2 extended from 1.16 mbs to 1.25 mbs. Feature 2 was irregular shaped in plan view and was 0.40 m in length and 0.55 m wide.

SIHP# -2963 Feature 3 was interpreted as a possible post-mold with angled sides and and angled, slightly rounded base. Feature 3 extended from 1.16 mbs to 1.37 mbs through Stratum IIb and

partially within Stratum III. Feature 3 was oval shaped in plan view and was 0.44 m in length by 0.20 m wide and extended into the northeast sidewall.

SIHP# -2963 Feature 4 was a shallow circular discoloration that was considered to be a pit of indeterminate function. Feature 4 extended from 1.40 mbs to 1.45 mbs. Feature 4 was near the southeast end of the excavation and was circular in shape with a 0.15 m diameter. Feature 4 was only visible in plan view and was not observed in the excavation sidewalls.

SIHP# -2963 Feature 5 was a circular discoloration with charcoal and was considered to be a pit of indeterminate function. Feature 5 extended from 1.40 mbs to 1.63 mbs. Feature 5 was near the southeast end of the excavation and was circular in shape with a 0.25 m diameter. Feature 5 was only visible in plan view and was not observed in the excavation sidewalls.

SIHP# -2963 Feature 6 was a deep, oval-shaped and straight sided discoloration that was considered to be a pit or possible post mold. Feature 6 extended from 1.40 mbs to the coral shelf at 1.75 mbs. Feature 6 was oval shaped and was 0.30 m in length by 0.22 m wide. Feature 6 extended into the northeast sidewall.

SIHP# -2963 Feature 7 was a circular discoloration that was considered to be a pit of indeterminate function. Feature 7 extended from 1.44 mbs to 1.50 mbs. Feature 7 was near the northwest end of the excavation and was circular in shape with a 0.12 m diameter. Feature 7 was only visible in plan view and was not observed in the excavation sidewalls.

SIHP# -2963 Feature 8 was a circular discoloration with charcoal and was considered to be a pit of indeterminate function. Feature 8 extended from 1.44 mbs to 1.62 mbs. Feature 8 was near the northwest end of the excavation and was circular in shape with a 0.20 m diameter. Feature 8 was only visible in plan view and was not observed in the excavation sidewalls.

SIHP# -2963 Feature 9 was an oval-shaped discoloration that was considered to be a pit of indeterminate function. Feature 9 extended from 1.44 mbs to 1.50 mbs. Feature 9 was near the northwest end of the excavation and was oval in shape with a 0.20 m diameter. Feature 9 was only visible in plan view and was not observed in the excavation sidewalls.

SIHP# -2963 Feature 10 was a deep, circular-shaped discoloration that was considered to be a pit or possible post mold with straight sides and a flat bottom. Feature 10 from 1.40 mbs to 1.80 mbs at the upper boundary of Stratum V. Feature 10 was near the southeast end of the excavation and was circular in shape, 0.30 m in length by 0.22 m wide. Feature 10 extended into the southwest sidewall.

SIHP# -2963 Feature 11 was a shallow, oval-shaped dark discoloration that was considered to be a pit of indeterminate function. Feature 11 originated within Stratum IIb and extended from 1.23 mbs to 1.32 mbs. Feature 11 was not visible in plan view and was only observed within the southwest sidewall.

SIHP# -2963 Feature 12 was a circular discoloration that had downward-sloping sides and a narrow, rounded base. Feature 12 was considered to be a pit of indeterminate function. Feature 12 extended from 1.40 mbs to 1.53 mbs. Feature 12 was not visible in plan view and was documented in the northeast sidewall.

**Terrestrial Faunal Remains Collected During Excavation:** Faunal remains were collected individually during excavation from Stratum Id (0.56 – 0.67 mbs). The remains consisted of *Bos*

*taurus* fragments and an unidentified medium mammal fragment. All the bones showed butchering marks from a metal blade indicating an historic origin, not traditional Hawaiian, which is consistent with the presence of the introduced species (*Bos taurus*). T-124 was associated with SIHP# 50-80-14-02963, however the faunal remains originated from a non-feature fill layer.

**Sample Results:** A total of five bulk sediment samples were collected from Stratum IIa and Stratum IIb. All the bulk samples were wet-screened.

A 13-liter bulk sample was collected from Feature 1 at 1.18-1.36 mbs. The sample contained charcoal (18.4 g), midden (47.3 g, see the Midden Results table at the end of the section), naturally-deposited marine shell (39.8 g), volcanic glass fragments (0.7 g), basalt fragments (158.1 g), medium mammal remains (2.7 g), unidentified fish remains (2.9 g), a shark tooth (0.1 g), a small mammal cf. *Rattus* sp. (0.3 g), and Monacanthidae *Pervagor spilosoma* remains (0.1 g, Fantail file fish).

A 5-liter bulk sample was collected from Feature 2 at 1.18-1.25 mbs. The sample contained charcoal (2.5 g), midden (13.4 g, see the Midden Results tables at the end of the section), naturally-deposited marine shell (4.4 g), medium mammal remains (1.8 g), small mammal remains (0.1 g), and fish remains (0.3 g).

A 5-liter bulk sample was collected from Feature 5 at 1.40-1.63 mbs. The sample contained charcoal (6.4 g), midden (16.4 g), naturally-deposited marine shell (3.6 g), medium mammal remains (0.1 g), unidentified fish remains (2.2 g), *Chelonia mydas* remains (0.7 g, Green sea turtle), Carangidae *Seriola* cf. *dumerili* remains (0.2 g, Greater Amberjack fish). Midden collected included Neritidae *Theodoxus palatam* (7.2 g), Mytilidae *Brachidontes crebristriatus* (4.6 g), Echinodermata *diadema* sp. and *mathaei* sp. (1.3 g), crustacean (0.1 g), and burned shell (0.7 g).

A 4-liter bulk sample was collected from Feature 8 at 1.44-1.62 mbs. The sample contained charcoal (0.1 g), midden (4.6 g), naturally-deposited marine shell (0.7 g), volcanic glass (0.1 g), *Rattus* sp. remains (0.1 g), and fish remains (0.2 g). Midden collected included Tellinidae *Tellina palatam* (2.2 g), Mytilidae *Brachidontes crebristriatus* (1.6 g), crustacean (0.4 g), Echinodermata (0.3 g), and Neritidae *Theodoxus neglectus* (0.1 g).

A 1-liter bulk sample was collected from Feature 11 at 1.23-1.32 mbs. The sample contained charcoal (6.9 g), midden (1.4 g), naturally-deposited shell (0.5 g), and small mammal remains (0.1 g). Midden collected included burned shell (0.7 g), crustacean (0.3 g), Trochidae (0.3 g), and Echinodermata *mathaei* sp. (0.1 g).

A 2.1 g sample of charcoal from the Feature 1 (1.38-1.44 mbs) was submitted for wood taxa identification and radiocarbon dating. Wood taxa identification results included *Ki* (cf. *Cordyline terminalis*), *Aheahea* (*Chenopodium oahuense*), and *Niu* (*Cocos nucifera*). All of the identified wood taxa were considered to be native or Polynesian-introduced trees or shrubs. Charcoal identified as 'āheahea (0.18 g) was submitted for radiocarbon analysis and yielded a calibrated 2-sigma date of 1810 AD to 1920 AD (67.1%) being the most probable. The complete wood taxa identification results and radiocarbon results are presented at the end of the section.

A 2.5 g sample of charcoal from the Feature 2 (1.18-1.25 mbs) was submitted for wood taxa identification and radiocarbon dating. Wood taxa identification results included *Akoko* (cf.

*Chamaesyce* sp.), *Aheahea* (*Chenopodium oahuense*), *Ilima* (cf. *Sida fallax*). All of the identified wood taxa were considered to be native trees or shrubs. Charcoal identified as *Ilima* (0.05 g) was submitted for radiocarbon analysis and yielded a calibrated 2-sigma date of 1790 AD to 1950 AD (52.5%) being the most probable. The complete wood taxa identification results and radiocarbon results are presented at the end of the section.

A 4.7 g sample of charcoal from the Feature 5 (1.40-1.63 mbs) was submitted for wood taxa identification and radiocarbon dating. Wood taxa identification results included *Lama* (*Diospyros sandwicensis*), *'A'ali'I* (cf. *Dodonaea viscosa*), *'Aheahea*, *aweoweo* (*Chenopodium oahuense*), *Kukui* (cf. *Aleurites moluccana*), and an unidentifiable wood fragment. All of the identified wood taxa were considered to be native or Polynesian-introduced trees or shrubs. Charcoal identified as *'āheahea* (0.10 g) was submitted for radiocarbon analysis and yielded a calibrated 2-sigma date of 1490 AD to 1670 AD (93.1%) being the most probable. The complete wood taxa identification results and radiocarbon results are presented at the end of the section.

A 3.1 g sample of charcoal from the Feature 11 (1.20-1.32 mbs) was submitted for wood taxa identification and radiocarbon dating. Wood taxa identification results included *Lama* (*Diospyros sandwicensis*), and *Ho'awa* (cf. *Pittosporum* sp.). All of the identified wood taxa were considered to be native trees or shrubs. Charcoal identified as *Lama* (0.12 g) was submitted for radiocarbon analysis yielded two and yielded a calibrated 2-sigma date of 1450 AD to 1640 AD (95.4%) being the most probable. The complete wood taxa identification results and radiocarbon results are presented at the end of the section.

Volcanic glass samples from Feature 1 (1.18-1.36 mbs) and Feature 8 (1.44-1.62 mbs) were submitted for EDXRF analysis. Specific source information was not available; however the volcanic glass samples clearly did not match sources derived from Hawaii County. The samples from Feature 1 and 8 were from "Group 2". The samples represent one of two distinct geochemical groups identified from the 35 City Center AIS EDXRF volcanic glass samples, likely representing different volcanic sources on O'ahu (see EDXRF discussion in Volume V).

Results of sample analysis indicated the use of the coastal area surrounding T-124 during the late pre-Contact and/or early post-Contact historic time period. The presence of pre-contact cultural materials within the buried A-horizon suggested temporary habitation and food consumption activities. The cultural materials present support the identification of Stratum IIa and Stratum IIb and associated Features 1, 2, 5, 8, and 11 as culturally-enriched deposits part of SIHP# -2963. Charcoal submitted for wood taxa identification represented either native or Polynesian-introduced taxa. No historically-introduced taxa were identified, suggesting that features may have a pre- and/or early post-Contact depositional origin. However, radiocarbon analysis indicated charcoal samples from Feature 1 and 2 were likely from the post-Contact period (post-1778) and samples from Feature 5 and 11 were from the pre-Contact period. Feature 1 and Feature 2 extended from the base of Stratum IIa, suggesting Stratum IIa was a disturbed or historically-modified upper portion of the former land surface of a post-Contact depositional age. Radiocarbon analysis and wood taxa identification of deeper features (Feature 5 and 11) indicated Stratum IIb was the in situ pre- and/or early post-Contact lower portion of the former land surface.

**GPR Discussion:** A review of amplitude slice maps indicated no linear features which might indicate the presence of utilities. Reflectivity was relatively uniform throughout the grid. A transition from higher reflectivity to lower reflectivity was observed at approximately 0.75 mbs.

GPR depth profiles for T-124 identified horizontal banding, commonly associated with stratigraphic layering, throughout the survey area. This banding corresponded to variations of density and chemical composition within fill deposits. The profile also indicated a change in reflectivity occurring around 0.2 mbs. No utilities were observed in the profile. The maximum depth of clean signal return was approximately 1.0 mbs.

**Summary:** T-124 was excavated to the coral shelf at 1.75 mbs and beneath the water table at 1.72 mbs. The stratigraphy of T-124 consisted of fill strata (Ia to Ie) overlying the former land surface (IIa and IIb) and other natural sediment (III to V) to the coral shelf. The stratigraphy generally conformed to the USDA soil survey designation of Fill land (FL). The bottles collected from Stratum Id were made after ca. 1800, but no narrower date range could be determined. The faunal remains collected from Stratum Id are butchered and believed to be historic food remains mixed within the stratum. A total of 12 features (Feature 1-12) were identified within T-124, extending from the base of either Stratum IIa or IIb. The twelve features within T-124 were designated as Features 1-12 of SIHP# -2963.

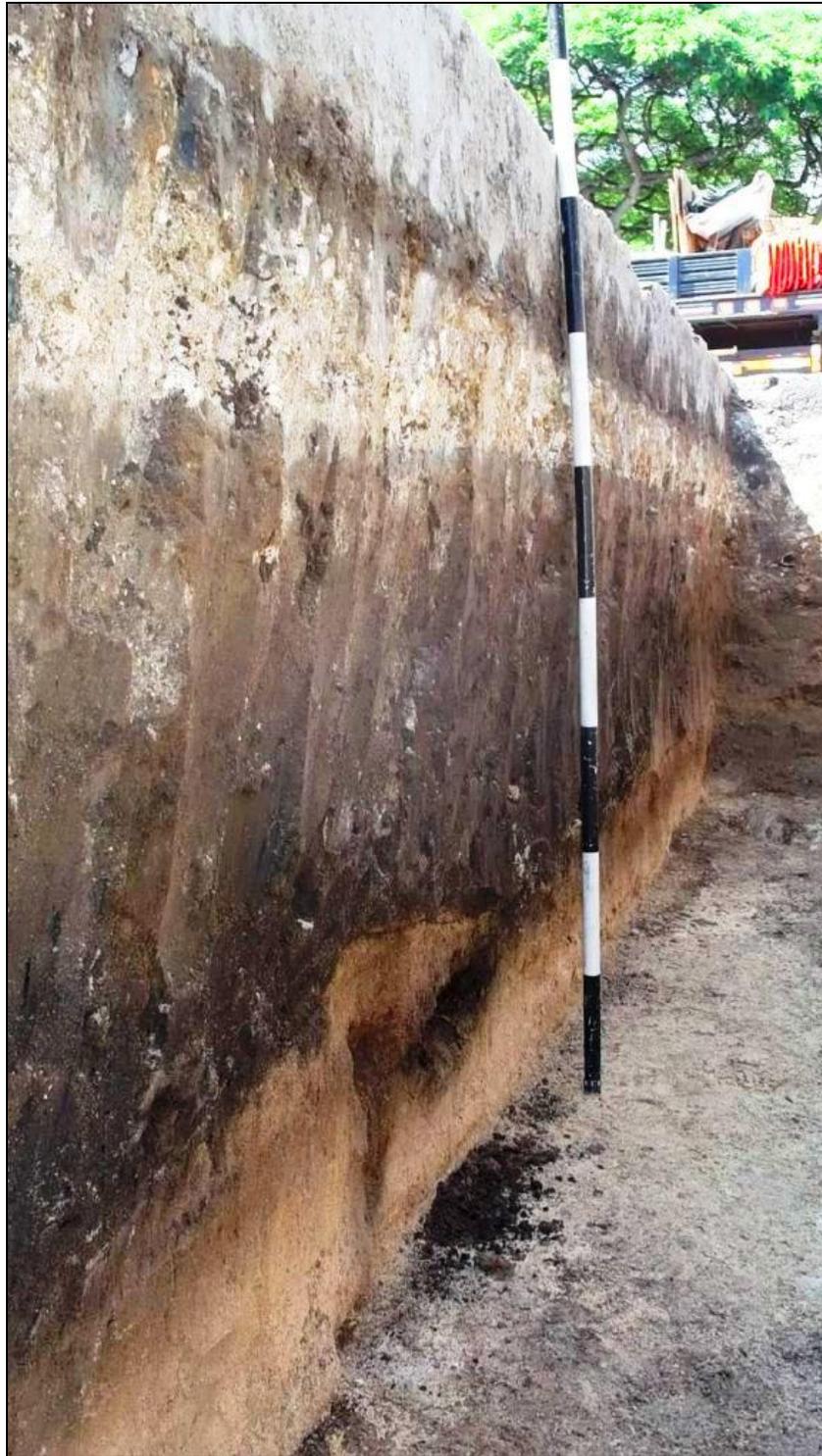
Results of sample analysis indicated the use of the coastal area surrounding T-124 during the late pre-Contact and/or early post-Contact historic time period. The presence of pre-contact cultural materials within the buried A-horizon suggested temporary habitation and food consumption activities. The cultural materials present support the identification of Stratum IIa and Stratum IIb and associated Features 1, 2, 5, 8, and 11 as culturally-enriched deposits part of SIHP# -2963. Charcoal submitted for wood taxa identification represented either native or Polynesian-introduced taxa. No historically-introduced taxa were identified, suggesting that features may have a pre- and/or early post-Contact depositional origin. However, radiocarbon analysis indicated charcoal samples from Feature 1 and 2 were likely from the post-Contact period (post-1778) and samples from Feature 5 and 11 were from the pre-Contact period. Feature 1 and Feature 2 extended from the base of Stratum IIa, suggesting Stratum IIa was a disturbed or historically-modified upper portion of the former land surface of a post-Contact depositional age. Radiocarbon analysis and wood taxa identification of deeper features (Feature 5 and 11) indicated Stratum IIb was the in situ pre- and/or early post-Contact lower portion of the former land surface. The former land surface within T-124 (IIa and IIb) and the twelve associated features (Feature 1-12) were designated as components of SIHP# 50-80-14-2963, also identified within T-122 and T-123. A complete description of SIHP# -2963 is presented in Volume I.



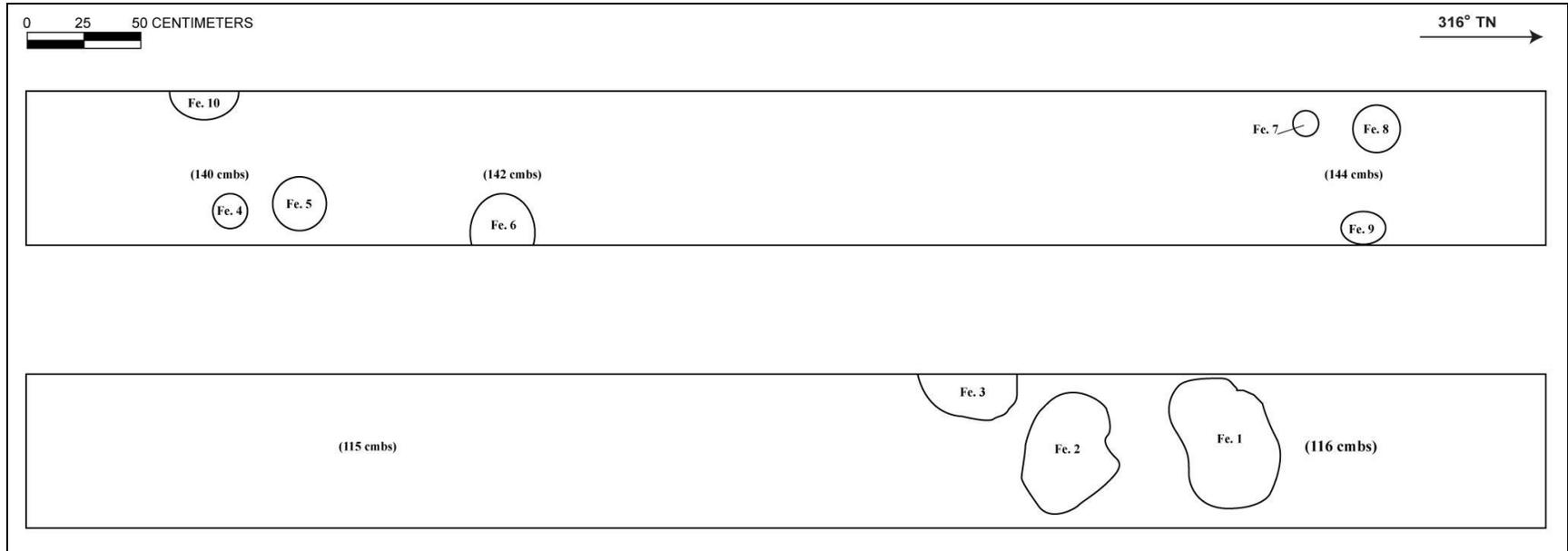
T-124 general location (view to northwest).



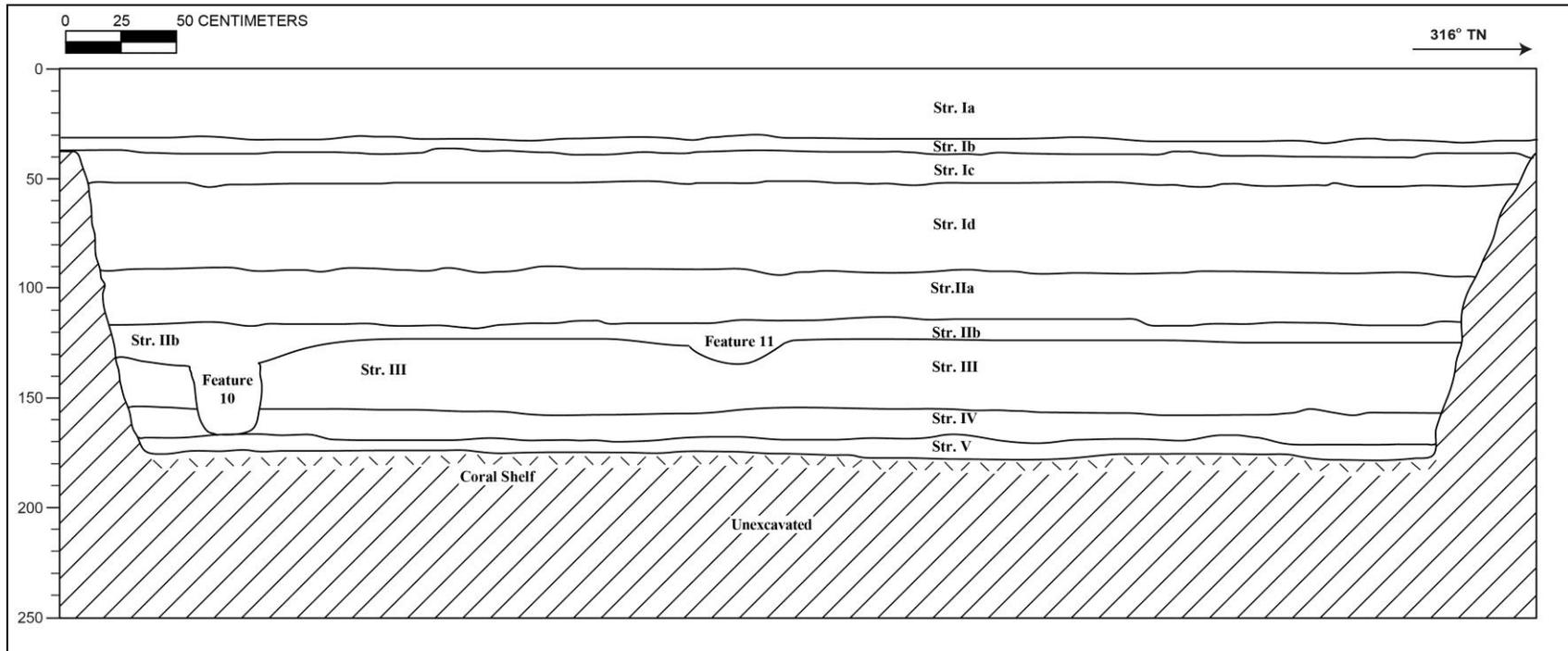
T-124 northeast profile wall (view to north)



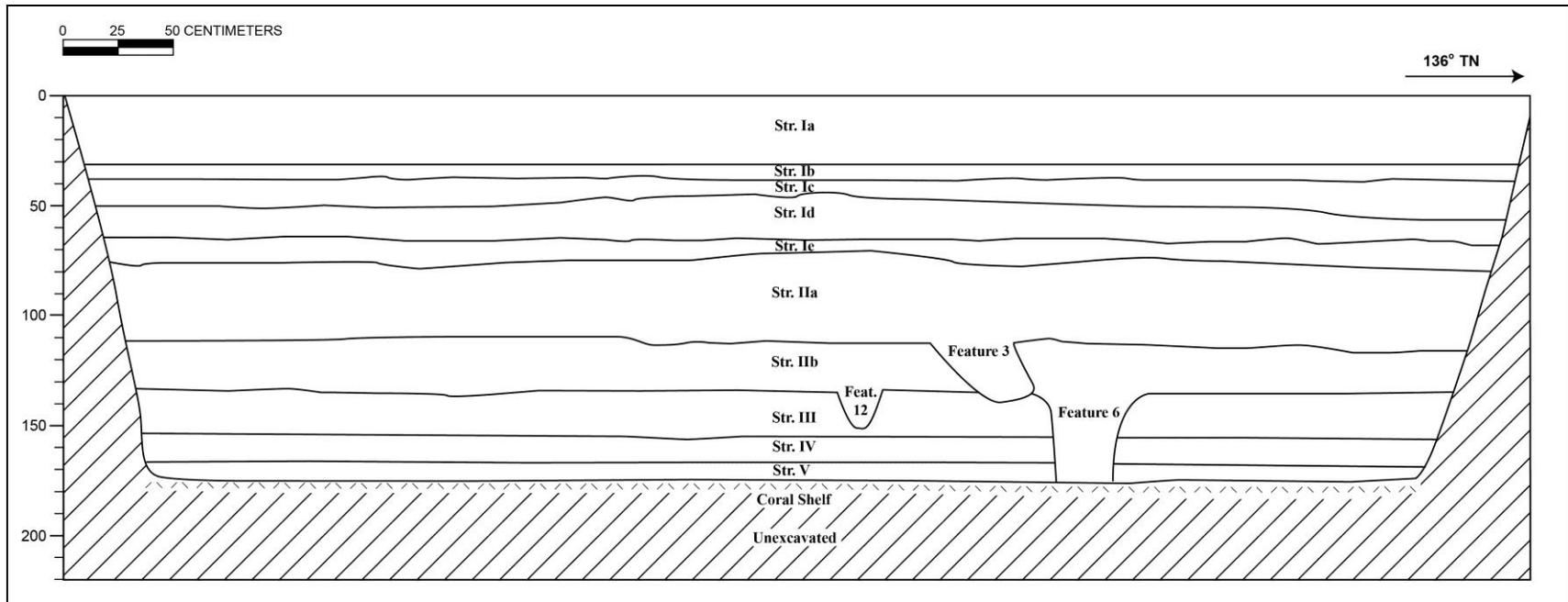
T-124 southwest profile wall (view to west)



T-124 Plan view showing SIHP# -2963 Features 1 through 10



T-124 southwest wall profile showing SIHP# -2963 Features 10 and 11



T-124 northeast wall profile showing SIHP# -2963 Features 3, 6, and 12

## T-124 Stratigraphic Description

Stratum	Depth (cmbs)	Description
Ia	0-32	Asphalt
Ib	32-38	Fill; 2.5 Y 3/1 (very dark gray); extremely gravelly sandy loam; structureless; moist, friable consistency; slightly plastic; terrigenous origin; very abrupt, smooth lower boundary; fill layer underlying road surface containing ~ 70% small basalt gravels
Ic	38-56	Fill; 10 YR 8/3 (very pale brown); very gravelly sand; structureless, single-grain; moist loose consistency; non-plastic; marine origin; abrupt, smooth lower boundary; crushed coral base course
Id	56-67	Fill; 10 YR 4/3 (brown); sandy loam; structureless; moist, very friable consistency; non plastic; mixed origin, clear lower boundary; contained glass bottle fragments, red brick fragments, cut faunal bone, ceramic fragments, nails, wire, marine shell, cane slag, and basalt sheath tile, all concentrated at north end of excavation; fill with historic trash inclusions,
Ie	67-80	Fill; 10 YR 3/3 (dark brown); loam; structureless; moist, friable consistency; slightly plastic; terrigenous origin; clear to diffuse lower boundary; few, very fine to medium roots; fill seen only in NE excavation wall
Ila	80-117	Natural, 10 YR 3/2 (very dark grayish brown); sandy loam; structureless; moist, loose consistency; non-plastic; terrigenous origin; clear lower boundary; contained abundant charcoal, Features 1-3; buried A-horizon; likely the historically-disturbed or modified upper portion of the former land surface
Ilb	117-135	Natural; 10 YR 4/3 (brown); loamy sand; fine structure; moist, loose consistency; non-plastic; mixed origin; clear lower boundary; contained Features 4-12; likely the in situ pre- and/or early post-contact lower portion of the former land surface
III	135-155	Natural; 10 YR 7/4 (very pale brown); sand; structureless, single-grain; moist, loose consistency; non-plastic; marine origin; abrupt lower boundary; Jaucas sand
IV	155-167	Natural; 2.5 YR 8/3 (pale yellow); clay loam; structureless, massive; moist, friable consistency; slightly plastic; marine origin; abrupt lower boundary; many, very fine roots; marine sediment containing abundant very fine roots, organics
V	167-175	Natural; 10 YR 7/4 (very pale brown) with common fine mottles 10 YR 6/6 to 10 YR 5/8 (brownish yellow to yellowish brown); sandy loam, sand; coarse structure; moist, loose consistency; non-plastic; marine origin; lower boundary not visible; marine sediment overlying coral shelf, small marine shells and some clay

## T-124 Artifact Analysis Table

Acc. # 124-A-	Provenience	Ceramic Vessel Type	Portion	No.	Paste; Decoration	Origin; Age	Comments
1	T-124, St. Id	Hollowware - bowl (Asian)	Body to rim	1	Porcelain, painted underglaze	Asian	Sweet Pea motif
2	T-124, St. Id	Flatware - plate	Body to rim	2	Earthenware, Refined (Ironstone),	English	
Acc. # 124-A-	Provenience	Glass Bottle Type	Portion	No.	Color	Origin; Age	Comments
3	T-124, St. Id, Fill	Bottle, Spirits	Neck-Lip	1	Olive		Portion of seam near lip remains
4	T-124, St. Id, Fill	Bottle, Beer	Base	1	Amber		M. J. H. embossed on base
5	T-124, St. Id, Fill	Bottle, Spirits	Base-body	1	Olive		Push-up
Acc. # 124-A-	Provenience	Miscellaneous Type	Portion	No.	Material	Origin; Age	Description
6	T-124, St. Id	Brick	Fragment	1	Brick		Red interior, buff exterior, small fragment
7	T-124, St. Id	Nail	Fragment	1	Metal		Too corroded to see cross-section shape
8	T-124, St. Id	Pipe Stem/Cigarette Holder	Complete	1	Bone		Carved hollow, polished bone with mouthpiece



T-124 ceramic artifact fragments (Acc. # 124-A-1 to A-2) – exterior - from Stratum Id



T-124 ceramic artifact fragments (Acc. # 124-A-1 to A-2) – interior - from Stratum Id



T-124 glass bottle artifact fragments (Acc. # 124-A-3 to A-5) from Stratum Id

## T-124 Feature 1 Midden Results

Exc. #	SIHP #	Stratum	Feature	Depth (cmbs)	Midden Type	Weight (g)
T-124	-2963	Ila	1	118-136	Conidae <i>Conus sp.</i>	8.3
					Mytilidae <i>Brachidontes crebristriatus</i>	12.3
					Shell (burned)	7.6
					Neritidae <i>Nerita picea</i>	5.8
					Tellinidae <i>Tellina palatam</i>	5.6
					Crustacean	3.8
					Strombidae <i>Strombus sp.</i>	0.8
					Echinodermata	0.4
					Echinodermata <i>diadema sp./mathaei sp.</i>	1.6
					Trochidae	1.0
					Strombidae	0.1

## T-124 Feature 2 Midden Results

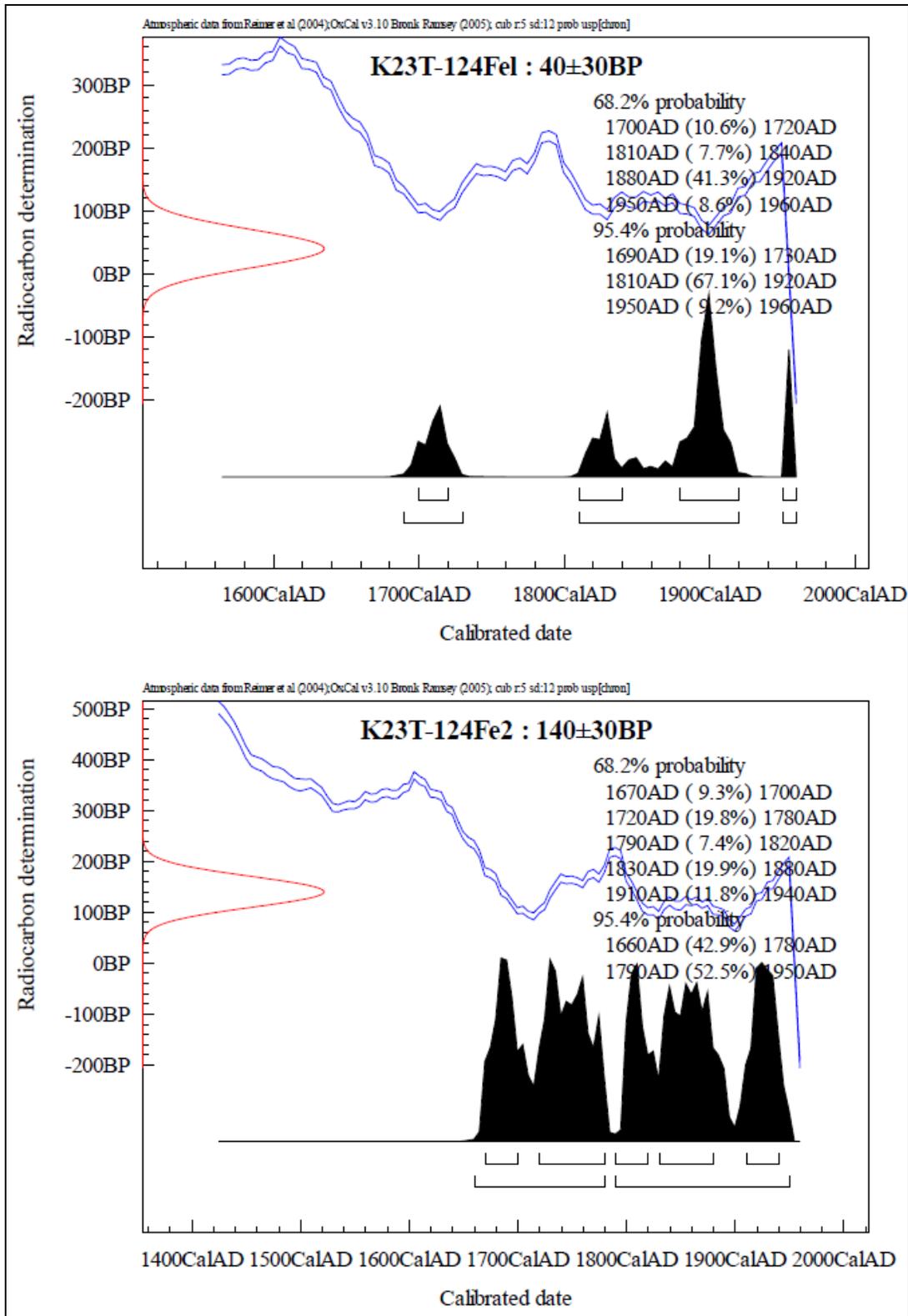
Exc. #	SIHP #	Stratum	Feature	Depth (cmbs)	Midden Type	Weight (g)
T-124	-2963	Ila	2	118-125	Mytilidae <i>Brachidontes crebristriatus</i>	5.5
					Neritidae <i>Nerita picea</i>	2.5
					Crustacean	2.2
					Tellinidae <i>Tellina palatam</i> (juvenile)	1.1
					Shell (burned)	0.6
					Echinodermata <i>diadema sp./mathaei sp.</i>	0.6
					Strombidae	0.4
					Trochidae	0.4
					Isognomidae <i>Isognomon sp.</i>	0.1

## T-124 Wood Taxa Identification

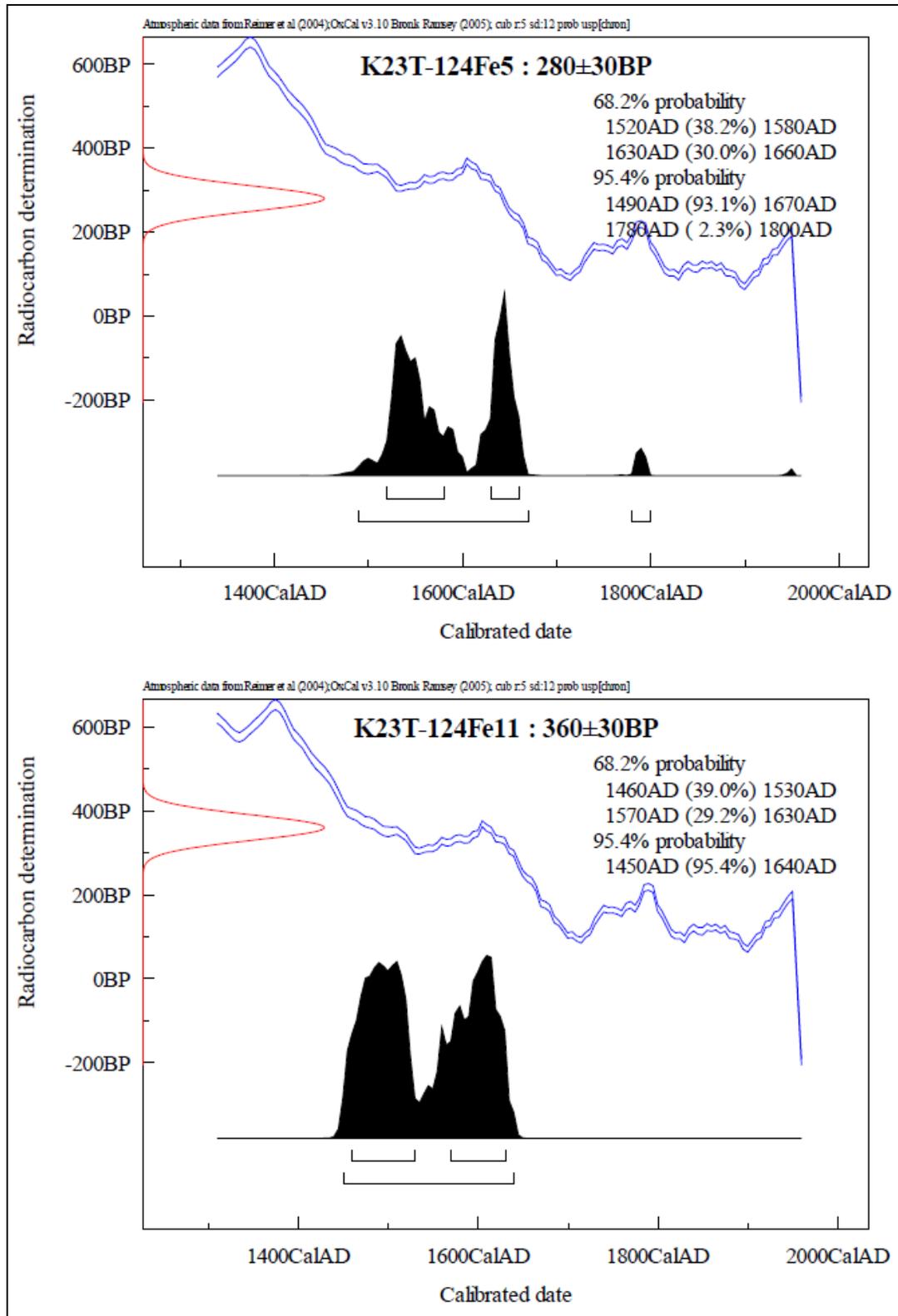
Provenience	WIDL No.	Taxa	Common/ Hawaiian Name	Origin/Habit	Part	Count	Weight g
T-124; Halekauwila Street, between Punchbowl and South Streets, Sample 4 Feature 1, 138-144, Stratum IIa	1228-32			Native/Tree	Wood		
	1228-33	cf. <i>Cordyline terminalis</i>	<i>Kī, ti</i>	Polynesian Introduction/ Tree	Stem	3	0.16
	1228-34	<i>Chenopodium oahuensis</i>	<i>Āheahea, 'āweoweo</i>	Native/Shrub	Wood	6	0.18
	1228-35				Wood		
	1228-36				Wood		
	1228-37	cf. <i>Syzygium sp.</i>	Mountain apple, roseapple, Java plum, <i>'ōhi'a 'ai</i>	Native + Historic Introductions, Tree	Wood		
	1228-38				Wood		
	1228-39	<i>Cocos nucifera</i>	<i>Niu, coconut</i>	Polynesian Introduction/ Tree	Nut shell	1	0.04
	1228-40	Monocot			Stem		
	1228-41	<i>Chamaesyce sp.</i>	<i>Akoko</i>	Native/Shrub	Wood		

Provenience	WIDL No.	Taxa	Common/ Hawaiian Name	Origin/Habit	Part	Count	Weight g
T-124; Halekauwila Street, between Punchbowl and South Streets, Sample 5 Feature 2, 118-125, Stratum Ila	1228-42				Wood		
	1228-43	Monocot			Wood		
	1228-44				Wood		
	1228-45				Wood		
	1228-46	cf. <i>Syzygium</i> sp.	Mountain apple, roseapple, Java plum, 'ōhi'a 'ai	Native + Historic Introductions, Tree	Wood		
	1228-47				Wood		
	1228-48	Not identified			Bark		
	1228-49				Wood		
	1228-50				Wood		
	1228-51	<i>Hibiscus tiliaceus</i>	<i>Hau</i>	Native/Shrub-Tree	Wood		
	1228-52				Cf. tuber		
	1228-53	cf. <i>Chamaesyce</i> sp.	<i>Akoko</i>	Native/Shrub	Wood	2	0.05
	1228-54	<i>Chenopodium oahuensis</i>	<i>Āheahea</i> , <i>āweoweo</i>	Native/Shrub	Wood	1	0.02
	1228-55	cf. <i>Sida fallax</i>	<i>'Ilima</i>	Native/Shrub	Wood	3	0.05
1228-56	<i>Diospyros sandiwickensis</i>	<i>Lama</i>	Native/Tree	Wood			

Provenience	WIDL No.	Taxa	Common/ Hawaiian Name	Origin/Habit	Part	Count	Weight g
T-124; Halekauwila Street, between Punchbowl and South Streets, Feature 5, 140-163 cmbs, Stratum IIb	1223-9	<i>Diospyros sandiwickensis</i>	<i>Lama</i>	Native/Tree	Wood	3	1.64
	1223-10	cf. <i>Dodonaea viscosa</i>	'A'ali'i	Native/Shrub	Wood	3	0.28
	1223-11	<i>Chenopodium oahuensis</i>	Āheahea, 'āweoweo	Native/Shrub	Wood	1	0.10
	1223-12	cf. <i>Aleurites moluccana</i>	<i>Kukui</i>	Polynesian Introduction/ Tree	Wood	1	0.07
	1223-13	Unknown legume	-	-	Wood	1	0.02
T-124; Halekauwila Street, between Punchbowl and South Streets, Feature 11, 120-132, Stratum Iib	1223-6	<i>Diospyros sandiwickensis</i>	<i>Lama</i>	Native/Tree	Wood	1	0.12
	1223-7	cf. <i>Pittosporum sp.</i>	<i>Hō'awa</i>	Native/Tree	Wood	7	2.15
	1223-8	Not identified	-	-	Cf. corm ?	1	0.48



T-124 Radiocarbon Analysis Results for Feature 1 (top) and Feature 2 (bottom)



T-124 Radiocarbon Analysis Results for Feature 5 (top) and Feature 11 (bottom)

### 3.20 Test Excavation 125 (T-125)

<b>Ahupua'a:</b>	Honolulu
<b>LCA:</b>	MA 61
<b>TMK #:</b>	2-1-030 [Plat]
<b>Elevation Above Sea Level:</b>	1.73 m
<b>UTM:</b>	618219.67 mE, 2356034.19 mN
<b>Max Length/Width/Depth:</b>	6.7 m / 0.74 m / 1.02 m
<b>Orientation:</b>	140 / 320° TN
<b>Targeted Project Component:</b>	Utility Relocation
<b>USDA Soil Designation:</b>	Ewa silty clay loam (EmA)

**Setting:** Test Excavation 125 (T-125) was located within the paved roadway of Halekauwila Street on property owned by the City and County of Honolulu. A water line utility and a subsurface electrical utility were located within 1.0 m of the excavation area. The topography of the excavation area was level.

**Summary of Background Research and Land Use:** The 1883 Baldwin map indicates that T-125 was once surrounded by natural landscape and included sand and small ponds overlaying natural marine clay over the coral shelf. The 1884 Bishop Honolulu Kewalo indicates T-125 was in the middle of MA 61, awarded to B. Namakeha, Lele of Ili of Ka'alaea. According to the 1897 Monsarrat Honolulu map, T-125 was still located within a small pond and there is evidence of urban development in the surrounding areas. The 1919, 1933, and 1943 U.S. War Department Fire Control maps and the 1953 Army Mapping Service map indicated further urban development and show that all ponds have been filled in within the vicinity of T-125.

Previous archaeology within the vicinity of T-125 included several archaeological studies. During archaeological monitoring for the Kaka'ako Improvement District 1 project, Pfeffer et al. (1993) documented a cemetery (SIHP # 50-80-14-3712) and a single isolated burial (SIHP # 50-80-14-4533). The cemetery (SIHP # -3712) was encountered at the intersection of South Street and Quinn Lane 75.0 m southeast of T-125. SIHP # -3712 was associated with the historic Honuakaha Smallpox Cemetery and contained 31 sets of human remains. The isolated burial (SIHP # -4533) was observed along Halekauwila Street 10.0 m south of T-125. Avery and Kennedy (1993) observed a historic trash pit and six *in situ* burials (SIHP # -3712) during monitoring of excavations along South Street, 57.0 m southeast of T-125. Pammer, Fong, and Hammatt (in progress; 2011) identified four historic properties 80 m southwest of T-125 during an archaeological inventory survey. The properties included historic building structures (SIHP # 50-80-14-7124), a burnt historic trash layer (SIHP # -7189), salt pan remnants (SIHP # -7190), and a late pre- early post-Contact cultural layer containing one pit feature (SIHP # -7197). Additionally, T-125 was approximately 60 m northwest of a previous archaeological study conducted by Winieski and Hammatt (2001) that documented a remnant of the Light-Gauge Rail (SIHP# -5942).

**Documentation Limitations:** T-125 was excavated to a depth of 1.02 mbs. Excavation at T-125 was halted at 1.02 mbs when the removal of large coral boulders caused the sidewalls to become unstable. Unstable coral boulders and unsafe conditions limited documentation at T-125.

**Stratigraphic Summary:** The stratigraphy of T-125 consisted of fill strata to the base of excavation. Observed strata included asphalt (Ia), gravelly sandy loam base course (Ib), extremely gravelly silt (Ic), gravelly silt loam fill (Id), and extremely gravelly sand fill (Ie). The observed stratigraphy did not conform to the USDA soil survey designation of Ewa silty clay loam (EmA).

**Artifacts Discussion:** A total of 22 artifacts (Acc. # 125-A-1 to A-22, see following table and photographs) were collected from Strata Id and Ie. Stratum Id artifacts consisted of three ceramic fragments, 14 bottle glass fragments, two red brick fragments, window glass, metal and a gold earring. The color of seven of the bottle fragments (from at least two bottles) suggested a date of post-1870. Artifacts collected from Stratum Ie included ceramic fragments, bottle fragments, and metal fragments that lacked datable attributes but were consistent with debris. Artifacts collected from Stratum Id may date from 1800 to late nineteenth century.

**Features Discussion:** No features were observed.

**Terrestrial Faunal Remains Collected During Excavation:** *Bos taurus* skeletal elements were collected individually during excavation from Stratum Id (0.45-0.5 mbs). Some of the bones show evidence of being butchered with a metal blade. This, and the fact that *Bos taurus* is an introduced species indicate that Stratum Id is of historic origin, not traditional Hawaiian.

**Sample Results:** No sample analysis was conducted.

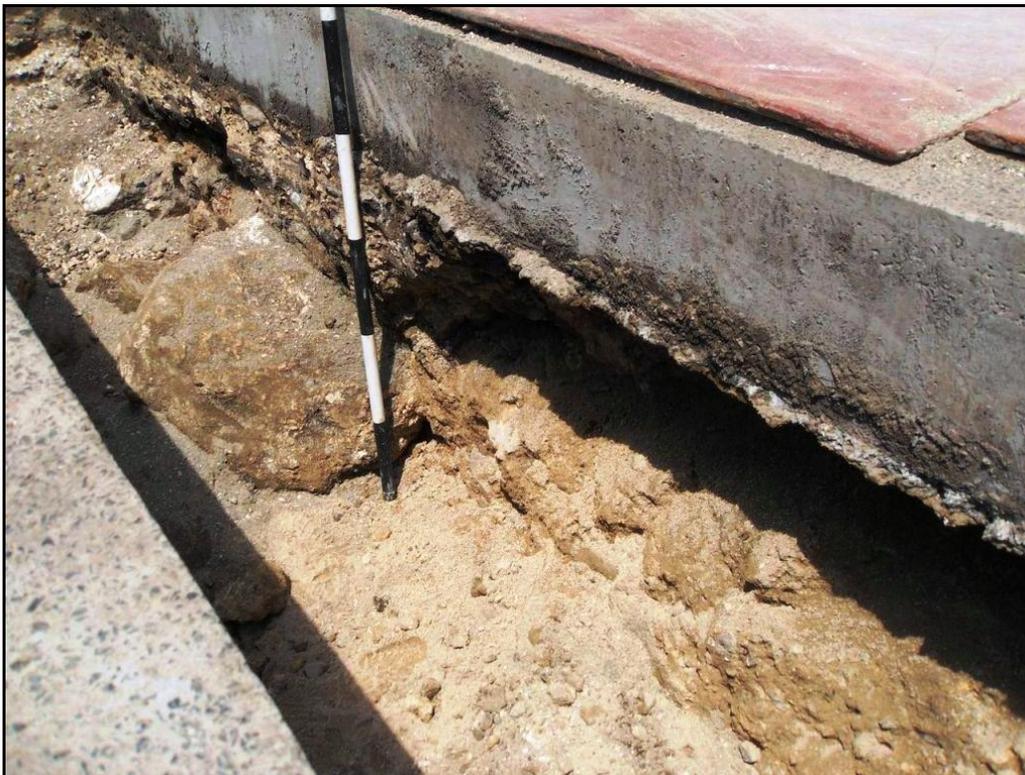
**GPR Discussion:** A review of amplitude slice maps indicated no linear features which might indicate the presence of utilities. Reflectivity was relatively uniform throughout the grid. A transition from higher reflectivity to lower reflectivity was observed at approximately 0.75 mbs.

GPR depth profiles for T-125 identified horizontal banding, commonly associated with stratigraphic layering, throughout the survey area. This banding corresponded to variations of density and chemical composition within fill deposits. The profile also indicated a change in reflectivity occurring around 0.25 mbs. No utilities were observed in the profile. The maximum depth of clean signal return was approximately 1.0 mbs.

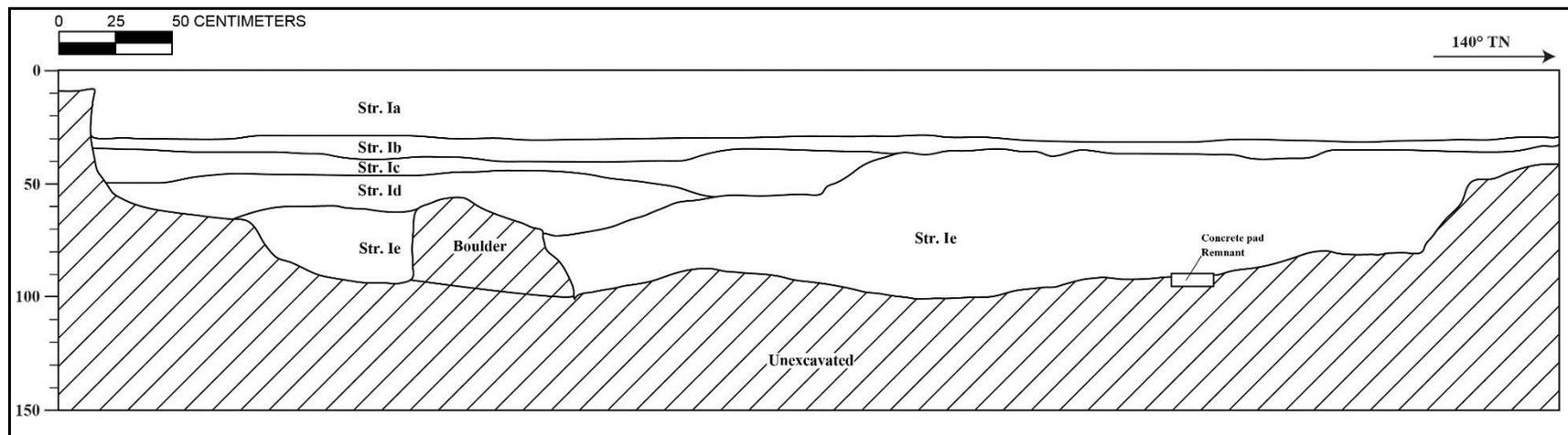
**Summary:** T-125 was excavated to a depth of 1.02 mbs. The stratigraphy of T-125 consisted of fill strata (Ia to Ie) to the base of excavation. The observed stratigraphy did not conform to the USDA soil survey designation of Ewa silty clay loam (EmA). Artifacts collected from Stratum Id may date from 1800 to the late nineteenth century. Faunal remains were considered to be consistent with food remnants and that Stratum Id is of historic origin, not traditional Hawaiian. No natural sediments were observed. No cultural resources were identified within T-125.



T-125 general location (view to east).



T-125 northeast profile wall (view to north).



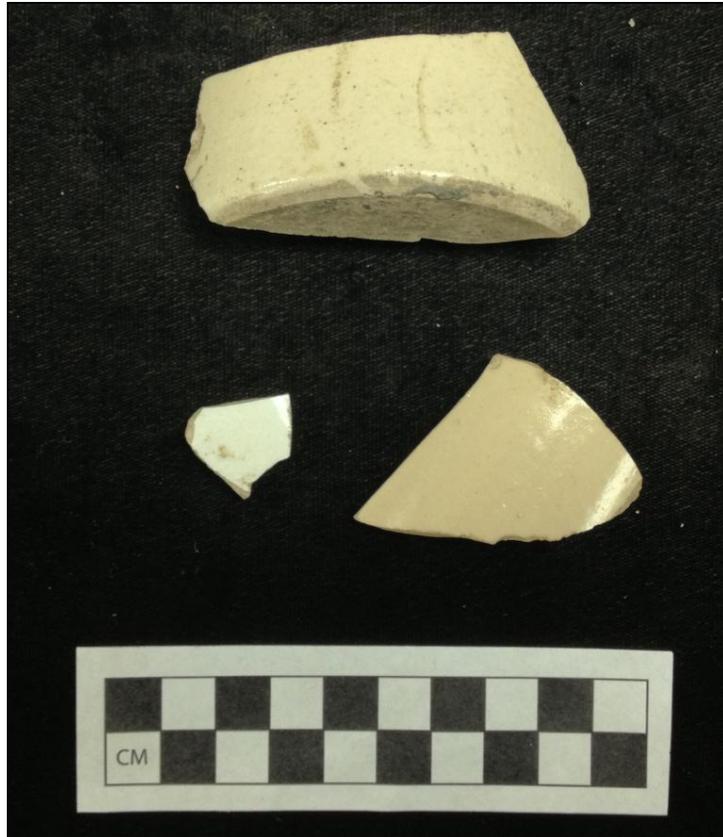
T-125 northeast wall profile

## T-125 Stratigraphic Description

Stratum	Depth (cmbs)	Description
Ia	0-30	Asphalt
Ib	30-40	Fill; 10 YR 3/3 (dark brown); gravelly sandy loam; structureless, single-grain; dry, hard consistency; non-plastic; mixed origin; clear, wavy lower boundary; contained brown bottle glass shards, white glazed ceramic sherds, wire; coral cobbles with base course mixed with historic debris
Ic	35-55	Fill; 10 YR 7/2 (light gray); extremely gravelly silt; structureless, single-grain; dry, hard consistency; non-plastic; marine origin; clear, wavy lower boundary; crushed coral
Id	45-74	Fill; 10 YR 3/1 (very dark gray); gravelly silt loam; structureless, single-grain; weakly coherent consistency; non-plastic; mixed origin; clear, wavy lower boundary; contained historic debris – faunal bone, glass, earring, white ceramic, wire; ~1-2% coral gravel
Ie	30-102	Fill; 10 YR 5/4 (yellowish brown); extremely gravelly sand; structureless, single-grain; dry, loose consistency; non-plastic; mixed origin; lower boundary not visible; contained historic debris, glass, spoon, ceramic, metal, concrete jacket; very unstable, undercutting layers above and collapsing out of sidewall numerous large coral boulders

## T-125 Artifacts Analysis Table

Acc. # 125-A-	Prov.	Ceramic Vessel Type	Portion	No.	Paste; Decor.	Origin; Age	Comments
1	T-125, St. Id	Crock	Base	1	Stoneware		
2	T-125, St. Id	Bottle?	Body	1	Stoneware		
3	T-125, St. Id	Dinnerware	Body	1	Earthenware, Refined		
4	T-125, St. Ie	Hollowware - cup	Base & body	2	Porcelain; Molded		9.0 (D); molded flutes
5	T-125, St. Ie	Dinnerware	Body	1	Earthenware, Refined; Painted underglaze		Fragment is glazed on both sides; unknown green hand painted design
Acc. # 125-A-	Prov.	Glass Bottle Type	Portion	No.	Color	Origin; Age	Comments
6	T-125, St. Id	Bottle	Body	1	Aqua		
7	T-125, St. Id	Bottle	Body	4	Brown		
8	T-125, St. Id	Bottle	Body	1	Clear	1870s- post	
9	T-125, St. Id	Bottle	Base/ body	6	Olive, Dark	1800- post	
10	T-125, St. Id	Bottle	Body	1	Olive, Dark		
11	T-125, St. Id	Bottle	Neck	1	Olive, Dark		
12	T-125, St. Ie	Bottle	Body	1	Aqua		
13	T-125, St. Ie	Bottle	Body	1	Brown		
14	T-125, St. Ie	Bottle	Body	1	Green		
15	T-125, St. Ie	Bottle	Neck	1	Olive, Dark		
Acc. # 125-A-	Prov.	Miscellaneous Type	Portion	No.	Material	Origin; Age	Description
16	T-125, St. Id	Earring, Hoop	Complete	1	Metal-Gold		Geometric pattern incised on surface
17	T-125, St. Id	Window glass	Fragment	1	Glass		
18	T-125 St. Id	Brick	Fragment (2)	2			Red color
19	T-125, St. Id	Unknown	Fragment	1	Metal		tubular, heavy rod
20	T-125, St. Ie	Spoon	Complete	1	Metal		Simple - no decoration
21	T-125, St. Ie	Strap? Hinge?	Fragment	1	Metal		
22	T-125, St. Ie	Wire	Fragment	1	Metal		



T-125 ceramic artifact fragments (ACC. # 125-A-1 to A-3) from Stratum Id



T-125 ceramic fragments (Acc. # 125-A-4 and A-5) from Stratum Ie



T-125 glass bottle fragments (Acc. # 125-A-6 to A-10) from Stratum Id



T-125 gold earring artifact (Acc. # 125-A-16) from Stratum Id

### 3.21 Test Excavation 126 (T-126)

<b>Ahupua'a:</b>	Pauoa
<b>LCA :</b>	MA 61
<b>TMK #:</b>	2-1-030
<b>Elevation:</b>	1.66 m
<b>UTM:</b>	618235 mE, 2356009 mN
<b>Max Length/Width/Depth:</b>	0.65 m / 0.72 m / 1.56 m
<b>Orientation:</b>	316 / 136° TN
<b>Targeted Project Component:</b>	Utility Relocation
<b>USDA Soil Designation:</b>	Ewa silty clay loam (EmA)

**Setting:** Test Excavation 126 (T-126) was located on the sidewalk of Halekauwila Street, approximately 30 m southwest of the South Street intersection. The location of T-126 was offset 0.7 m southwest from its original location to avoid a gas utility line. T-126 was located on property owned by the City and County of Honolulu. Several utilities were located near T-126, including a gas line approximately 1 m to the north, a water utility 4 m to the north, and a sewage utility 8 m to the east. T-126 was level with the surrounding land surface.

**Summary of Background Research and Land Use:** The 1883 Baldwin map indicates that T-126 was once surrounded by natural landscape and included sand and small ponds overlaying natural marine clay above the coral shelf. The 1884 Bishop Honolulu Kewalo map indicates T-126 was located in the middle of MA 61, awarded to B. Namakeha, Lele of Ili of Ka'alaea. According to the 1897 Monsarrat Honolulu map, T-126 was still located within a small pond and there is evidence of urban development in the surrounding areas. The 1919, 1933, and 1943 U.S. War Department Fire Control maps and the 1953 Army Mapping Service map indicated further urban development and show that ponds were filled in within the vicinity of T-126.

Previous archaeology within the vicinity of T-126 included several archaeological studies. During archaeological monitoring for the Kaka'ako Improvement District 1 project, Pfeffer et al. (1993) documented a cemetery (SIHP # 50-80-14-3712) and a single isolated burial (SIHP # 50-80-14-4533). The cemetery (SIHP # -3712) was encountered at the intersection of South Street and Quinn Lane 60.0 m southeast of T-126. SIHP # -3712 was associated with the historic Honuakaha Smallpox Cemetery and contained 31 sets of human remains. The isolated burial (SIHP # -4533) was observed along Halekauwila Street 14.0 m north of T-126. Avery and Kennedy (1993) observed a historic trash pit and six *in situ* burials (SIHP # -3712) during monitoring of excavations along South Street, 42.0 m east of T-126. Pammer, Fong, and Hammatt (in progress; 2011) identified four historic properties 42.0 m south of T-126 during an archaeological inventory survey. The properties included historic building structures (SIHP # 50-80-14-7124), a burnt historic trash layer (SIHP # -7189), salt pan remnants (SIHP # -7190), and a late pre- early post-Contact cultural layer containing one pit feature (SIHP # -7197).

Additionally, T-126 was approximately 21.0 m northwest of a previous archaeological study conducted by Winieski and Hammatt (2001) that documented a remnant of the Light-Gauge Rail (SIHP# -5942).

**Documentation Limitations:** T-126 was excavated to a depth of 1.56 mbs, and beneath the water table at 1.48 mbs. The northwest portion of T-126 was unexcavated as the removal of large coral boulders created unstable side walls and potential collapse of the overlying sidewalk.

**Stratigraphic Summary:** The stratigraphy of T-126 consisted of fill strata overlaying a naturally deposited marine sandy clay loam base. Observed strata included concrete (Ia), loamy coarse grain sand (Ib), very gravelly loam (Ic), and sandy clay loam (II). The stratigraphy did not conform to the USDA soil designation of Ewa silty clay loam (EmA).

**Artifacts Discussion:** A total of twelve artifacts (Acc. # 126-A-1 to A-10, see following table and photographs) were collected from Stratum Ic. Eleven of the artifacts were collected at 0.75 mbs. The artifacts included ceramics, bottles and miscellaneous items. There were three Asian design hollowware bowl fragments, two ceramic fragments from one stoneware bottle, one dinnerware fragment, three glass bottle fragments (from two bottles), one complete brick (red, machine-made), one brick fragment (red, machine-made), and one metal spike fragment. There was one complete ink bottle found at 1.10 mbs, also from Stratum Ic. Two bottles could be dated to 1860-1910. Artifacts collected from Stratum Ic (very gravelly loam fill) indicated that the stratum was probably deposited in the late nineteenth to early twentieth century.

**Features Discussion:** No features were observed during the investigation of T-126.

**Terrestrial Faunal Remains Collected During Excavation:** A complete right tibia, possibly from a *Canis lupus familiaris* (dog) was collected individually during excavation from Stratum Ic at 0.61 mbs. This bone showed no evidence of cultural modification. *Canis lupus familiaris* is a Polynesian introduction common in both pre- and post-Contact contexts; thus this find is inconclusive as to date.

**Sample Results:** One 2.0 liter bulk sediment sample was collected from Stratum II at 1.50 mbs. The sample was wet-screened and contained naturally deposited shells (5.5 g), *Ruppia maritima* seeds (0.1 g), and limestone and basalt gravel. Results of the sample analysis indicated no significant cultural material.

**GPR Discussion:** A review of amplitude slice maps indicated a linear feature but not within the excavation location. Reflectivity was relatively uniform throughout the grid and decreases with depth except for the linear feature. A transition from higher reflectivity to lower reflectivity was observed at approximately 0.5 mbs.

GPR depth profiles for T-126 identified horizontal banding, commonly associated with stratigraphic layering, throughout the survey area. This banding corresponded to variations of density and chemical composition within fill deposits. The profile also indicated a change in reflectivity occurring around 0.15 mbs. A small anomaly was observed in the profile and could correspond to the large piece of concrete that was encountered during excavation. The maximum depth of clean signal return was approximately 0.9 mbs.

**Summary:** T-126 was excavated to a depth of 1.56 mbs, and beneath the water table at 1.48 mbs. The stratigraphy of T-126 consisted of fill strata (Ia-Ic) overlaying a naturally deposited

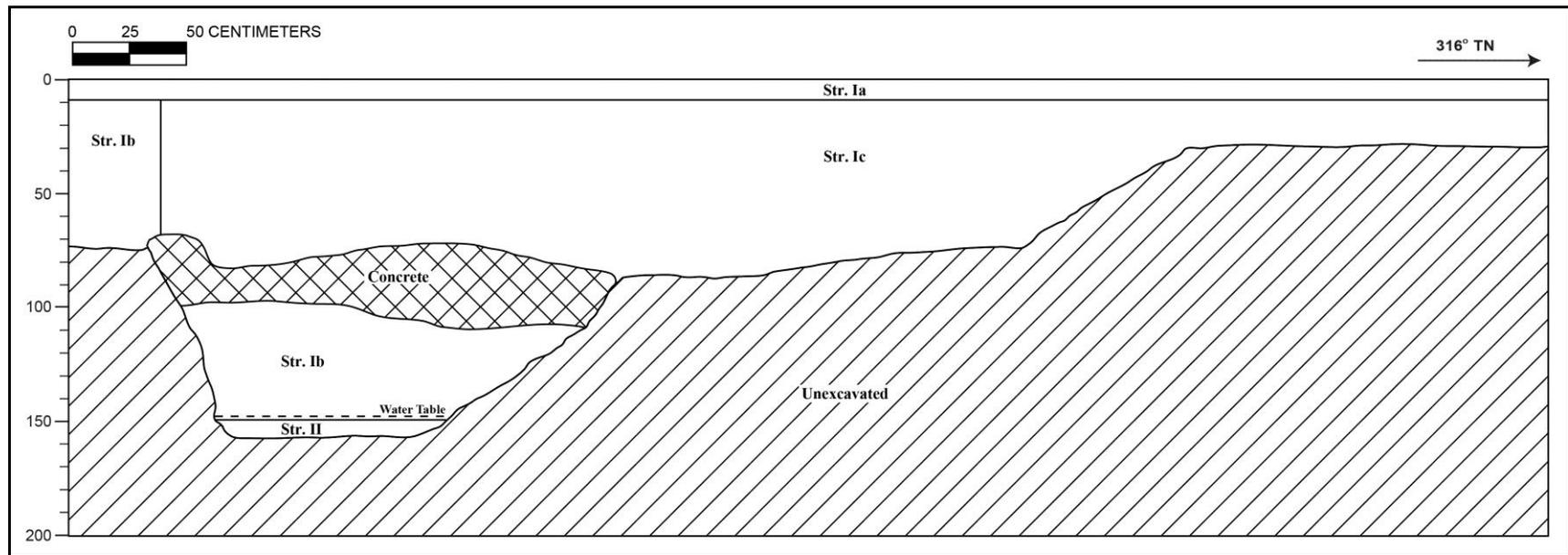
marine sandy clay loam base (II). The stratigraphy did not conform to the USDA soil designation of Ewa silty clay loam (EmA). Artifacts collected from Stratum Ic (very gravelly loam fill) indicated that the stratum was probably deposited in the late nineteenth to early twentieth century. Results of the sample analysis indicated no significant cultural material. No cultural resources were identified.



T-126 general location, view to the north



T-126 view of north wall stratigraphy



T-126 north wall profile

## T-126 stratigraphic description

<b>Stratum</b>	<b>Depth (cmbs)</b>	<b>Description</b>
Ia	0.0-0.11	Concrete sidewalk
Ib	0.11-0.8	Fill; 10YR 4/3 (brown); loamy coarse grain sand; structureless, single-grain; moist, very friable consistency; slightly plastic; terrigenous origin; lower boundary not visible; common, fine roots; alternating layers of loam and cinder, concrete platform at Ib/Ic interface
Ic	0.11-0.85	Fill; 10YR 5/3 (brown); very gravelly loam, structureless, single-grain; moist, very. friable consistency; slightly plastic; mixed origin; abrupt, broken/discontinuous lower boundary; contained glass bottle frags, ceramic frags, red brick, metal chunks, faunal remains; coral gravel to boulders, concrete platform at Ib/Ic interface
II	1.50-1.56	Natural; 2.5YR 5/3 (light olive brown); sandy clay loam; structureless, massive; wet, slight sticky consistency; slightly plastic; marine origin; lower boundary not visible; coarse marine sediment, contained many marine shells

T-126 Artifact Analysis Table

Acc. # 126-A-	Prov.	Ceramic Vessel Type	Portion	No.	Paste; Decor.	Origin; Age	Comments
1	T-126, St. Ic	Hollowware - bowl	Base to body	1	Porcelain, Painted underglaze		Sweet Pea motif, possibly
2	T-126, St. Ic	Hollowware - bowl	Base to body	1	Porcelain, Celadon glaze	Asian	Blue Asian stamp on back; high foot
3	T-126, St. Ic	Hollowware - bowl	Base to rim	1	Porcelain, painted overglaze, gilded	Asian	Four Flowers motif; high foot
4	T-126, St. Ic	Dinnerware	Rim	1	Porcelain, Painted underglaze		Blue band along rim edge
5	T-126, St. Ic	Bottle	Body	2	Stoneware, Slip glaze		
Acc. # 126-A-	Prov.	Glass Bottle Type	Portion	No.	Color	Origin; Age	Comments
6	T-126, St. Ic	Bottle, Ink	Complete	1	Aqua	1880s- 1910s	Carters cone ink
7	T-126, St. Ic	Bottle, Spirits	Base/body	2	Black	Scottish; 1866- 1900	R. Cooper & Co., Portobello Glass Works, Scotland
Acc. # 126-A-	Prov.	Misc. Type	Portion	No.	Material	Origin; Age	Description
8	T-126, St. Ic	Brick	Complete	1		1918- 1978	red color, machine-made,
9	T-126, St. Ic	Brick	Fragment	1		1918- 1978	red color, machine-made.
10	T-126, St. Ic	Spike	Fragment	1	Metal		



T-126 ceramic fragments (Acc. # 126-A-1 to A-5, from left to right) – interior - collected from Stratum Ic



T-126 ceramic fragments (Acc. # 126-A-1 to A-5) – exterior - collected from Stratum Ic



T-126 glass ink bottle collected from Stratum Ic



T-126 glass bottle fragments collected from Stratum Ic

### 3.22 Test Excavation 127 (T-127)

<b>Ahupua'a:</b>	Puaoa
<b>LCA :</b>	MA 61
<b>TMK #:</b>	2-1-031:002
<b>Elevation Above Sea Level:</b>	1.76 m
<b>UTM:</b>	618260.93 mE, 2356006.17 mN
<b>Max Length/Width/Depth:</b>	2.7 m / 1.05 m / 1.76 m
<b>Orientation:</b>	228 / 48° TN
<b>Targeted Project Component:</b>	Guideway Column
<b>USDA Soil Designation:</b>	Ewa silty clay loam (EmA)

**Setting:** Test Excavation 127 (T-127) was located on a landscaped lawn area between an office building and the sidewalk on Halekauwila Street, at the northeast corner of the Halekauwila Street and South Street intersection. T-127 was relocated 1 m south of its original location, on privately owned property. T-127 was situated approximately 2 m east of a sewer line and approximately 9 southeast of a water line.

**Summary of Background Research and Land Use:** The 1883 Baldwin map indicates that T-127 was once surrounded by natural landscape and included sand and small ponds overlaying natural marine clay above the coral shelf. The 1884 Bishop Honolulu Kewalo map indicates that T-127 was located in the middle of MA 61, awarded to B. Namakeha, Lele of Ili of Ka'alaea. According to the 1897 Monsarrat Honolulu map, T-127 was still located was still located within a small pond and there is evidence of urban development in the surrounding areas. The 1919, 1933, and 1943 U.S. War Department Fire Control maps and the 1953 Army Mapping Service map indicated further urban development and show that ponds were filled in within the vicinity of T-127.

Previous archaeology within the vicinity of T-127 included several archaeological studies. During archaeological monitoring for the Kaka'ako Improvement District 1 project, Pfeffer et al. (1993) documented a cemetery (SIHP # 50-80-14-3712) and a single isolated burial (SIHP # 50-80-14-4533). The cemetery (SIHP # -3712) was encountered at the intersection of South Street and Quinn Lane 33.0 m east of T-127. SIHP # -3712 was associated with the historic Honuakaha Smallpox Cemetery and contained 31 sets of human remains. The isolated burial (SIHP # -4533) was observed along Halekauwila Street 35.0 m northwest of T-127. Avery and Kennedy (1993) observed a historic trash pit and six *in situ* burials (SIHP # -3712) during monitoring of excavations along South Street, 21.0 m east of T-127. Pammer, Fong, and Hammatt (in progress; 2011) identified four historic properties 34.0 m south of T-127 during an archaeological inventory survey. The properties included historic building structures (SIHP # 50-80-14-7124), a burnt historic trash layer (SIHP # -7189), salt pan remnants (SIHP # -7190), and a late pre- early post-Contact cultural layer containing one pit feature (SIHP # -7197). Additionally, T-127 was

approximately 7.0 m north of a previous archaeological study conducted by Winieski and Hammatt (2001) that documented a remnant of the Light-Gauge Rail (SIHP# -5942).

**Documentation Limitations:** T-127 was excavated to the coral shelf at a depth of 1.76 mbs. There were no specific factors that limited the documentation of T-127.

**Stratigraphic Summary:** The stratigraphy of T-127 consisted of fill strata overlying natural sediment. Observed strata included silty clay loam topsoil (Ia), gravelly silty sand fill (Ib), loamy sand (Ic), and natural extremely gravelly clay (II). Excavation at T-127 natural sediments at 1.67 mbs with possible diesel contamination. The stratigraphy did not conform to the USDA soil description for this area, identified as Ewa silty clay loam (EmA).

**Artifacts Discussion:** A total of ten artifacts (Acc. #127-A-1 to A-10, see following table and photographs) were collected from Stratum Ic. The artifacts included ceramics, bottles, and miscellaneous finds that consisted primarily of construction materials. The majority of artifacts lacked datable attributes. One black glass bottle can be dated to pre-1890s and a dark olive bottle with a tooled lip can be dated to the 1880s-1920s. Artifacts collected from Stratum Ic may date to the late nineteenth century.

**Features Discussion:** No features were observed.

**Terrestrial Faunal Remains Collected During Excavation:** No terrestrial faunal remains were collected individually during excavation.

**Sample Results:** No sample analysis was conducted.

**GPR Discussion:** A review of amplitude slice maps indicated no linear features although 3 water lines were encountered during excavation. Reflectivity was relatively uniform throughout the grid and decreases with depth. A transition from higher reflectivity to lower reflectivity was observed at approximately 0.25 mbs.

GPR depth profiles for T-127 identified horizontal banding, commonly associated with stratigraphic layering, throughout the survey area. This banding corresponded to variations of density and chemical composition within fill deposits. The profile also indicated a change in reflectivity occurring around 0.2 mbs. No utilities were observed in the profile although 3 water lines were encountered during excavation. The maximum depth of clean signal return was approximately 1.0 mbs.

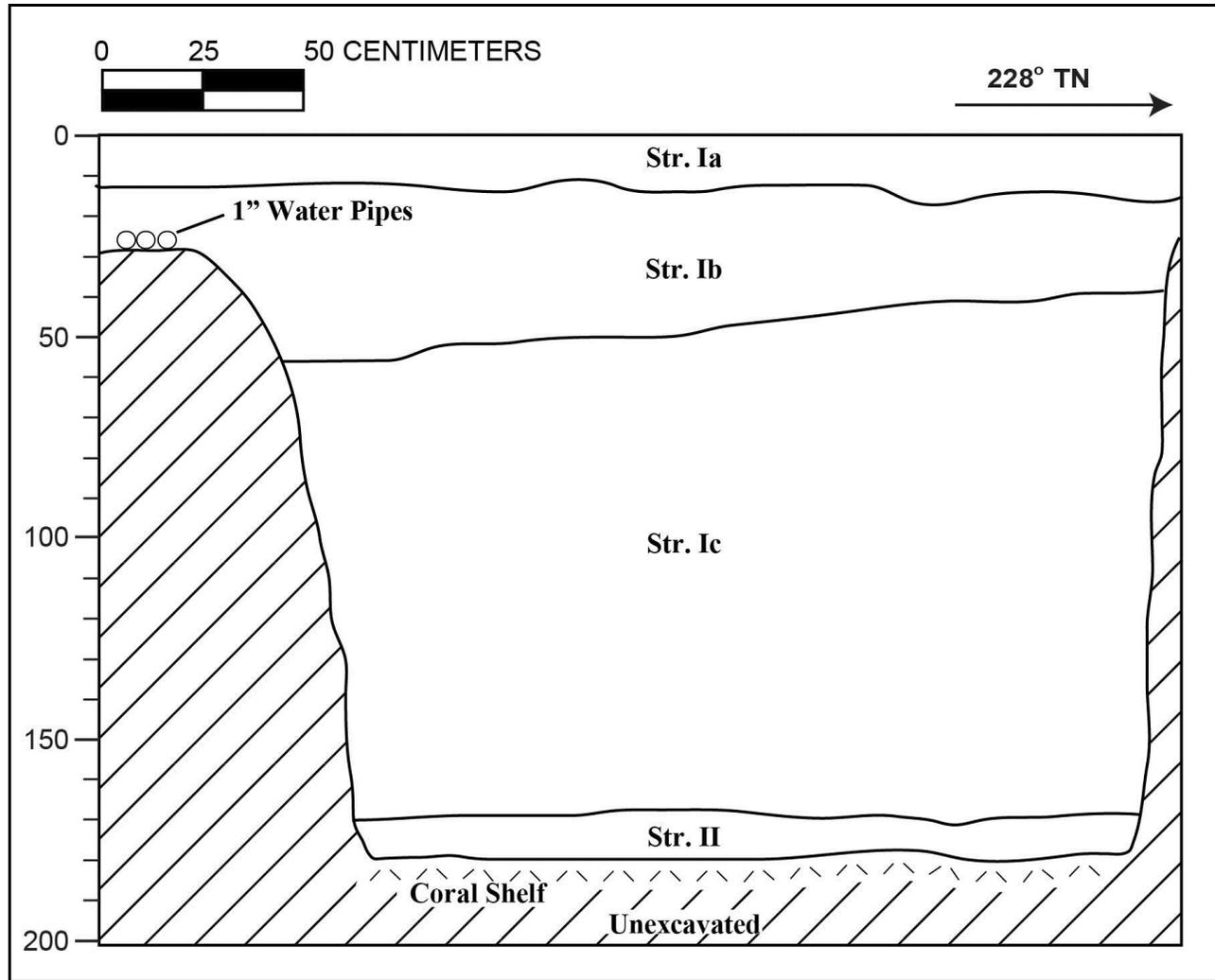
**Summary:** T-127 was excavated to the coral shelf at a depth of 1.76 mbs. The stratigraphy of T-127 consisted of fill strata (Ia-Id) overlying natural sediment (II). The stratigraphy was not consistent with the USDA soil description for this area, identified as of Ewa silty clay (EmA). Artifacts collected from Stratum Ic may date to the late nineteenth century. No cultural resources were identified within T-127.



T-127 general location (view to northwest).



T-127 southeast profile wall (view to south).



T-127 southeast wall profile

## T-127 Stratigraphic Description

Stratum	Depth (cmbs)	Description
Ia	0-15	Fill; 3 YR 3/3 (dark reddish brown); silty clay loam; weak, fine, crumb structure; moist, friable consistency; slightly plastic; terrigenous origin; clear, smooth lower boundary; many, very fine to medium roots; organic topsoil, sod
Ib	15-56	Fill; 2.5 YR 5/2 (grayish brown); gravelly silty sand; weak, fine, crumb structure; dry, weakly coherent consistency; non-plastic; mixed origin; clear, smooth lower boundary; common, very fine to fine roots; gravelly-coral and basalt, 20% fine gravel
Ic	39-167	Fill; 10 YR 2/2 (very dark brown) with common fine mottles 10 YR 2/1 (black); loamy sand; weak, fine, crumb structure; moist, friable consistency; non-plastic; mixed origin; abrupt, smooth lower boundary; few, very coarse roots; contained glass, brick, shovel (blade and part of handle), nails, ceramic, metal; disturbed fill with volcanic cinder
II	167-176	Natural; GLEY 1 5/1 (greenish gray); extremely gravelly clay; structureless, massive; wet, sticky consistency; plastic; mixed origin; lower boundary not visible; natural gleyed clay, heavily contaminated with possible diesel; contained natural coral gravels over coral shelf

T-127 Artifacts Analysis Table

Acc. # 127-A-	Provenience	Ceramic Vessel Type	Portion	No.	Paste; Decoration	Origin; Age	Comments
1	T-127, St. Ic	Bottle	Body	2	Stoneware; Slip glaze		Brown
Acc. # 127-A-	Provenience	Glass Bottle Type	Portion	No.	Color	Origin; Age	Comments
2	T-127, St. Ic	Bottle	Base	1	Black	pre- 1890s	Glass is very thick and heavy,
3	T-127, St. Ic	Bottle	Neck-lip	1	Olive, Dark	1880s- 1920s	
4	T-127, St. Ic	Jar	Base	1	White		Milk glass
Acc. # 127-A-	Provenience	Miscellaneous Type	Portion	No.	Material	Origin; Age	Comments
5	T-127, St. Ic	Pressed Glass	Rim Frag.	1	Glass		Lamp base? Dish?, clear; stem & leaf pattern
6	T-127, St. Ic	Brick	Fragment	1			Red color, machine- made
7	T-127, St. Ic	Spade (Shovel)	Complete	1	Metal		Spade and end hollow metal portion that goes over wooden handle
8	T-127, St. Ic	Nail	Fragment	1	Metal		Corroded, head missing
9	T-127, St. Ic	Brick	Fragment (2)	2			Red color
10	T-127, St. Ic	Strap/Hinge	Fragment	1	Metal		Corroded



T-127 ceramic fragments (Acc. # 127-A-1) collected from Stratum Ic, interior view



T-127 ceramic fragments (Acc. # 127-A-1) collected from Stratum Ic, exterior view



T-127 glass bottle fragments (Acc. # 127-A-2 and A-3) collected from Stratum Ic



T-127 glass fragment (Acc. # 127-A-5) collected from Stratum Ic