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ARCHAEOLOGICAL INVESTIGATIONS
AT LAHAINA COURT HOUSE,
LAHAINA DISTRICT,
ISLAND OF MAUI
(TMK 4-6-01:9)

PRELIMINARY DRAFT

by

Douglas F. Borthwick, B.A.
and
Hallett H. Hammatt, Ph.D.

Prepared for

Mason Architects

CULTURAL SURVEYS HAWAII
May 1999

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ABSTRACT

An archaeological investigation with subsurface backhoe testing was conducted by Cultural Surveys Hawaii at the Lahaina Courthouse grounds. The testing followed monitoring of trenching associated with the renovation of the Courthouse.

Four backhoe trenches and two hand-dug units were excavated and documented in the project area. The trenching revealed a stratigraphic sequence consisting of a basal layer of beach sand over which are well mixed layers, including imported fill material.

The excavations revealed both pre-Contact and post-Contact cultural layers. The cultural deposits have been allotted State Site No. 50-50-03-4754. Site -4754 has been assessed as significant under multiple criteria and is recommended for preservation.

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I. INTRODUCTION

A. Project Background

The project area, in the center of Lahaina Town, is bounded by Hotel, Canal and Wharf Streets and arbitrarily *makai* (SW) of the large banyan tree to 50 feet behind the Courthouse (Figures 1-3). The original impetus for archaeological work at the Courthouse was related to the recently completed renovations. Renovations included some sub-surface infrastructure work which based on the approved SMA permit, was supposed to be preceded by sub-surface archaeological survey work. Based on the survey results, decisions were to be made concerning the need for further archaeological work, such as monitoring. The process was not followed which resulted in monitoring being the original fieldwork at the site.

Subsequent to the monitoring, a program of exploratory trenching was agreed upon by concerned parties. The present report documents both the monitoring activity and the subsequent backhoe testing.

B. Project Area Description

The Lahaina Courthouse (TMK 4-6-01:9) is located in the central portion of Lahaina Town on the west (*makai*) side of a large park bounded by Hotel Street (and the Pioneer Inn) on the north, Front Street on the east, Canal Street on the south and Wharf Street on the west (Figures 1-5). The Courthouse is just west of the largest banyan tree in Hawai'i, said to be the second largest in the world, which was planted in 1878 to mark the 50th anniversary of the beginning of Protestant missionary work at Lahaina. The project area is quite flat and lies at an elevation of approximately 8' above mean sea level. The soil is reported as an `Ewa Silty Clay Loam at 0-3 percent slope (Foote *et al.* 1972:94). The rainfall is less than 15" per year (Armstrong *et al.* 1974:56). There is some lawn and ornamental landscaping but for the most part the ground surface in areas of trenching was bare soil.

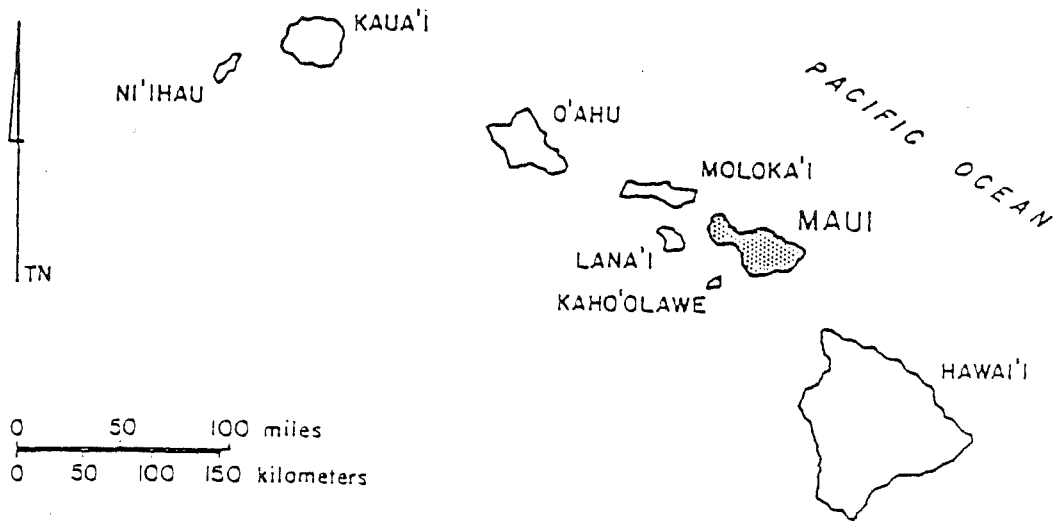


Figure 1 Map of State of Hawai'i

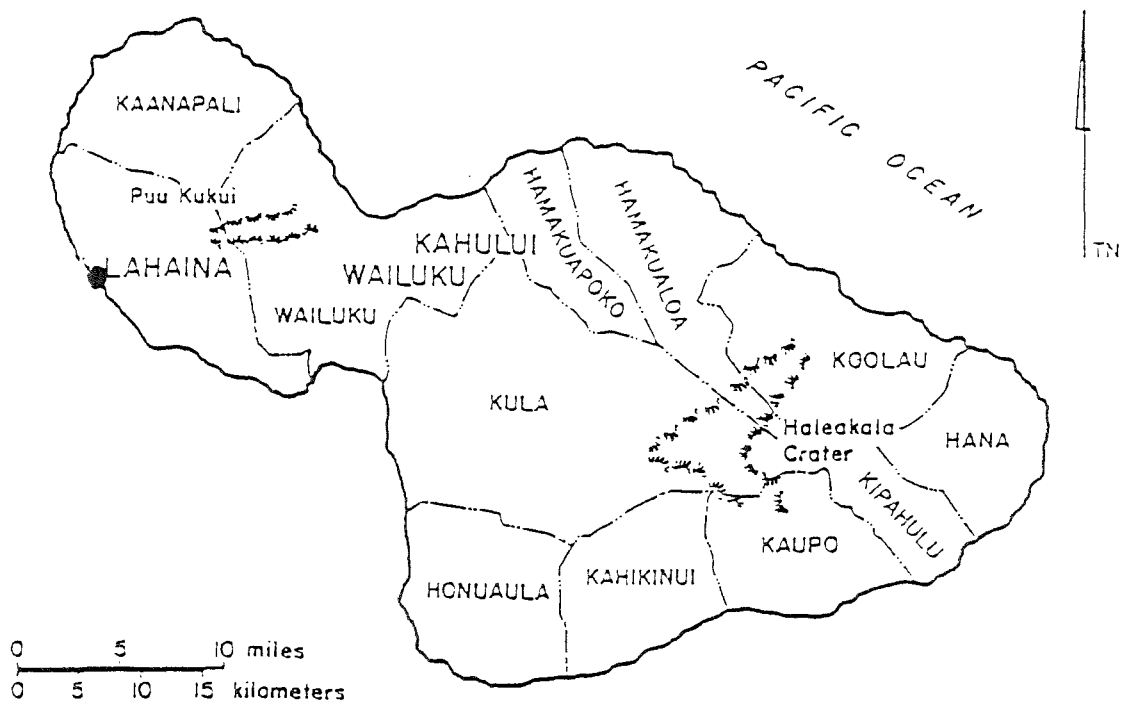
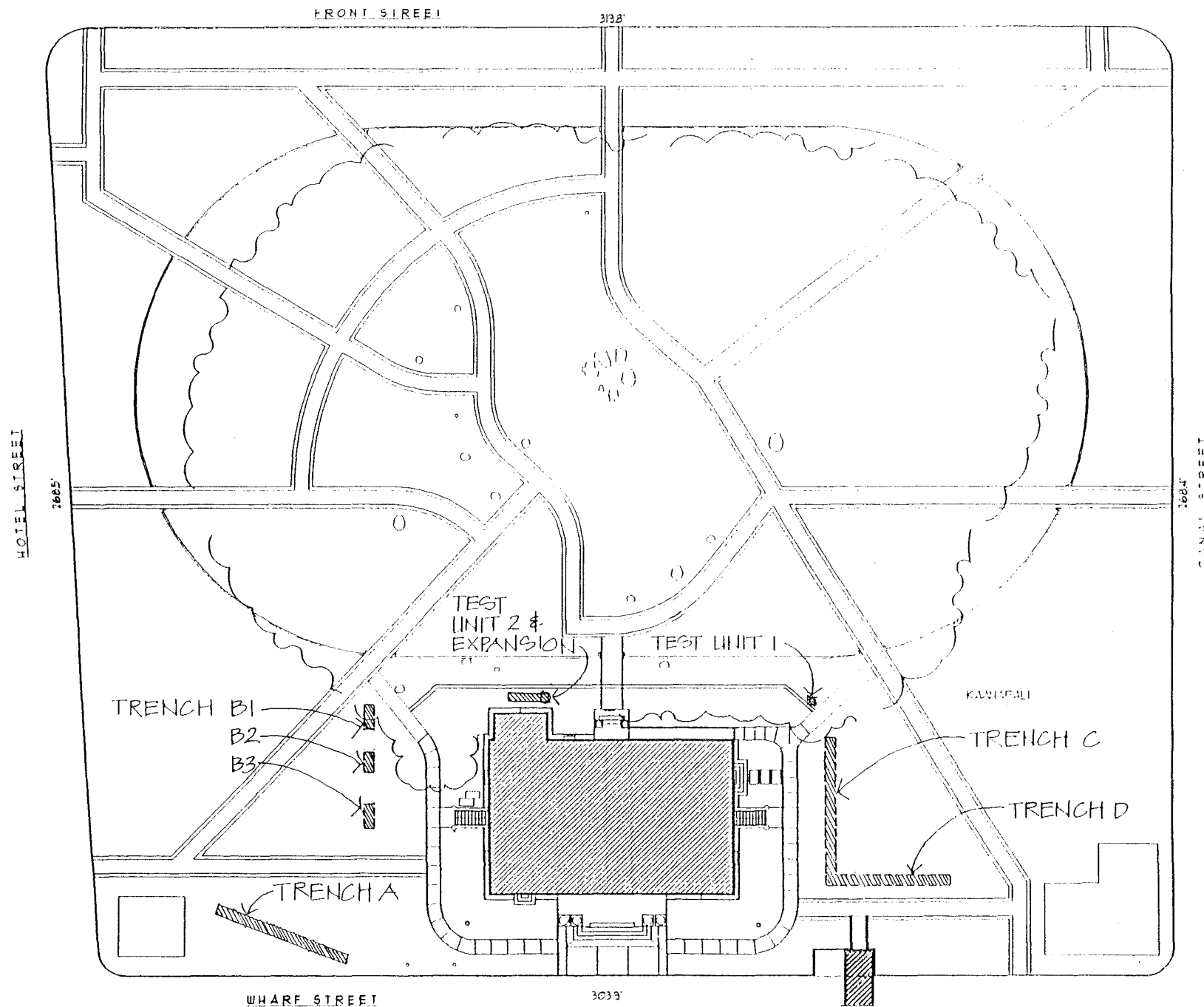


Figure 2 Map of Maui Island showing project area location



ARCHEOLOGICAL SURVEY SITE PLAN

1" = 40'-0"

Figure 4 Lahaina Courthouse Project Area Showing Trench and Test Unit Locations



C. Scope of Work

The scope of work for this particular project was worked out in coordination with State Historic Preservation Division/Department of Land and Natural Resources (SHPD/DLNR), Maui Cultural Resources Commission (MCRC), Maui/Lana`i Islands Burial Council, Mason Architects, and Cultural Surveys Hawaii and is the following:

1. Research on historic and archaeological background, including search of historic maps, written records, Land Commission Award documents. This research will focus on the Courthouse with general background on the *ahupua`a* and district and will emphasize settlement patterns.
2. Subsurface testing will be conducted to determine if all cultural layers in the project area are post-A.D. 1860 fill. The nature of the terrain during human occupation times prior to the filling of the area of the Courthouse construction will also be evaluated through excavation and through archival work.

Specific testing with an archaeologist on site will include:

- 1) four 10-meter long backhoe trenches of 1.5 meter depth
 - a) Two near Wharf Street, parallel to the street - on each side of the Courthouse steps. These will be nearer the street corners than the steps, to give a wide view of the layers in the project area.
 - b) One extending parallel to Hotel Street, halfway or more toward the Courthouse.
 - c) One extending parallel to Canal Street, halfway toward the Courthouse.
- 2) Two one meter units specific to the reported pig remains and the reported boulder and mortar features.
- 3) Any 19th century artifacts should be recovered and reported and any features visible in the trenches will be documented.
4. Preparation of a survey report which will include the following:
 - a. A map of the survey area showing all test trenches;
 - b. Description of all test trench stratigraphy with selected photographs and scale drawings;
 - c. Historical and archaeological background sections summarizing prehistoric and historic land use for the

- Courthouse vicinity.
- d. A summary of findings, their significance in an archaeological and historic context;
 - e. Recommendations based on all information generated. These recommendations will be developed in consultation with the client and the State agencies.

D. Methods

Fieldwork was carried out under the direct supervision of Dr. Hallett Hammatt, Ph.D. Douglas Borthwick, B.A. functioned as field director and the crew consisted of Bran Colin, B.A.; Thomas Devereux, B.A.; David Dilon; Tony Bush; Melody Heidel, B.A.; David Shideler, M.A.; and John Winieski, M.A.

Historic and archaeological background research included: a review of studies and documents at Hamilton Library of the University of Hawai'i, the Hawai'i State Archives, the Hawai'i Public Library, the Archives of the Bishop Museum; the library at SHPD/DLNR, and maps at the Survey Office of DLNR.

Monitoring for subsurface utility work began October 9, 1998 and extended into November. Monitoring consisted of on-site documentation of active trenching and subsequent recordation of trenching activities not directly observed. Documentation included photographs, profiles and field notes. Data generated during the monitoring phase is incorporated into this report.

The subsurface testing phase occurred in January 1999. The testing consisted of four (*i.e.* A-D) backhoe trenches and two hand-dug units (*i.e.* Units 1 and 2; See Figure 4). Backhoe trenches A and B were on the northwestern side of the Courthouse with Trenches C and D on the southeastern side. Unit 1 was located adjacent to the new root barrier, just east of the building and was hand dug to ascertain whether pig remains noted during the monitoring phase represented an articulated pig and the stratigraphic context of the remains. Unit 2 was located directly *mauka* (NE) of the building between the new root barrier and the building itself. Unit 2 was excavated to ascertain the location and context of an observed basalt boulder and mortar concentration (Personal communication, Dee Fredericksen).

Backhoe trenching consisted of laying out trench locations, close observation by at least two archaeologists of the actual digging and the documentation of stratigraphic layers. In the hand-dug units excavation was generally conducted in 10 cm. levels, with excavated material screened through 1/8 and 1/4 inch wire mesh screens.

Backhoe trench and hand-dug unit locations, depths and lengths had been agreed to prior to the fieldwork. However, certain in-field conditions necessitated a few changes. Changes included altering the size and orientation for Trenches A and B and size and excavation methodology for Unit 2. Due to existing subsurface utilities near Trench B a single 10 m.

long trench could not be excavated as planned. Instead, three shorter but aligned segments were completed. Subsurface utilities also necessitated the changing of the orientation of Trench A from parallel to Wharf St. (*i.e.* NW) to a more northerly angle. Unit 2 excavation needed to be expanded beyond the original 1 m² and it was agreed to by concerned parties, that the extension to the NW utilize the backhoe at least for the top 30-40 cm. Unit 1 was excavated essentially as planned.

Documentation of soil strata consisted of scale profile drawings, photographs, and collection of soil samples. The excavations at Units 1 and 2 allowed for recovery of artifacts and midden with good provenience control. Due to the mechanized method of excavation the recovery of midden and artifacts from the backhoe trenches was not as controlled, except for a section of Trench D in which some hand excavation occurred. The basic data for the recovered materials are presented in catalogs for Indigenous Artifacts, Historic Artifacts, Midden, Soil & Charcoal Samples (See Appendices).

The backhoe trenching was, for the most part, conducted under the supervision of Mr. Les Kuloloio of the Maui/Lana`i Islands Burial Council. Additionally, decisions concerning excavations at Unites 1 and 2 and portions of Trench D were agreed upon by Mr. Kuloloio, Ms. Dana Hall, Ms. Dee Fredericksen and Mr. Brian Ramos (SHPD/DLNR).

II. HISTORICAL DOCUMENTATION

The propose of this section is to provide a land use and settlement pattern context for the Courthouse project area through time. The Lahaina area has been the subject of numerous archaeological and historical reports with the core of the town a designated Historic District (SIHP No. 50-50-03-3001). Table 1 lists many of the works conducted in the Lahaina vicinity and includes columns for author(s), date and brief comment on the type of work, and the title of the reports. The following discussion of the Lahaina area settlement pattern is based on these and other documents. as noted.

The Lahaina Town area, to include such *ahupua`a* as Wainee, Puako, and Paunau offered a conducive environment for traditional Hawaiian occupation. Streams and springs generated from the West Maui Mountains allowed for potable water resources close to the shore. The generally calm ocean conditions and beach frontage allowed for easy canoe access. Based on the extensive study at Malu`ulu o Lele Park, formerly Loko o Mokuhinia, fish pond with the interior island of Moku`ulu, the pond itself was a natural feature thousands of years old (Klieger *et al* 1995). The pond and others like it in the vicinity enhanced resource(s) potential of the region.

Initial occupation of the Lahaina area, due to the favorable environment would presumably have been relatively early in the Hawaiian sequence. However, there are relatively few dates generated from archaeological work in the area. North of the project area along Kahoma Stream in the vicinity of Mala Wharf archaeological investigation associated with the Lahaina Cannery project provided evidence of pre-Contact occupation; ca. A.D. 1260-1640 (Haun 1988). South of the project area at Loko o Mokuhinia investigation, including coring samples, provided dates extending back prior to Hawaiian occupation, as noted previously. The coring data offered indirect evidence that "human habitation in the Loko o Mokuhinia area is among the earliest recorded in the Hawaiian Islands" (Klieger *et al*. 1995:329). The indirect evidence included pollen analysis, sedimentary rates, soil analysis and the dating of "organic muck." The only date from wood charcoal associated with a distinct feature yielded multiple calendrical ranges (*i.e.* A.D. 1052-1085, A.D. 1120-1139 and A.D. 1156-1464). However post-Contact or historic era artifacts were recovered within the same provenience and thus indicated mixing of different age materials by "relatively recent" activity (*Op.cit.*: 171-175).

Excavations immediately north of the Moku`ula project area, within an LCA parcel of a high status individual (*i.e.* Pikanele), yielded a radiocarbon date of A.D. 1450-1650 (Major and Klieger 1995:64). The sample dated was organic sediments and based on stratigraphic position, the date was suggested to be evidence of "one or both of the traditional Hawaiian agricultural practices of wetland taro cultivation and fishpond maintenance" (*Op.cit.*: 66).

Inland from the coast, agricultural pursuits would have dominated land use. The streams emptying out of the West Maui Mountains allowed for lo`i within the narrow alluvial valley flats with more expansive dryland agriculture on the gentle slopes between the valleys. Recent archaeological surveys have documented evidence of this intensive agricultural activity from Ukumehame and Launiopoko to the south and Kahoma to the north (Barrera 1989; Robins *et al*. 1994, Graves & Goodfellow 1991).

Table 1: Previous Archaeological Work Listed Chronologically (See Figure 3)

Author(s)	Date and type of work	Title
Walker, Winslow	1931, Inventory Survey	<i>Archaeology of Maui</i>
Fredericksen, Walter M. & Demaris L. Fredericksen	1965, Excavation	<i>Report on the Archaeological Excavation of the "Brick Palace" of King Kamehameha I at Lahaina, Maui, Hawaii</i>
Fredericksen, Walter M. & Demaris L. Fredericksen	1970, unpublished Report	Final Report on the Preparation for Exhibit of King Kamehameha I's "Brick Palace" at Lahaina, Maui, Hawaii
Nickerson, Roy	1978, History	Lahaina: When Kings and Whalers ruled the Sandwich Isles
Hommon, Robert J.	1982, Reconnaissance Survey	<i>An Archaeological Reconnaissance Survey of an Area near Wainē'e Village, West Maui</i>
Spencer, Mason, Architects	1988, Reconnaissance Survey	<i>Historic Site Survey for Lahainaluna Road and Wainee Street Widening Projects</i>
Fredericksen, Walter M., Demaris L. Fredericksen, & Erik M. Fredericksen	1988, Preliminary Inventory Survey	<i>The Aus Site: H.S. #50-03-1797: A Preliminary Archaeological Inventory Survey Report</i>
Fredericksen, Walter M., Demaris L. Fredericksen, & Erik M. Fredericksen	1988, Inventory Survey	<i>Report on the Archaeological Inventory Survey at Historic Site #15, Lahaina, Maui, Hawaii</i>
Haun, A.E.	1988, Subsurface Testing	<i>Subsurface Archaeological Reconnaissance Survey, Lahaina Cannery, Makai and Mauka Parcels, Lahaina, Maui</i>
Fredericksen, Demaris L., Walter M. Fredericksen, & Erik M. Fredericksen	1989, Data Recovery	<i>Archaeological Data Recovery Report on the Aus Site, Lahaina Maui, Hawaii (TMK 4-6-09:21)</i>
Fredericksen, Walter M., Demaris L. Fredericksen, & Erik M. Fredericksen	1989, inventory survey	<i>An Archaeological Inventory Survey of a Parcel of Land Adjacent to Malu-Ulu-O-Lele Park, Lahaina, Maui, Hawaii</i>

Author(s)	Date and type of work	Title
Jensen, Peter M. (PHRI)	1989, inventory survey	<i>Archaeological Inventory Survey, Lahaina Master Planned Project Site, Land of Wahikuli, Lahaina District, Island of Maui</i>
Archaeological Consultants of Hawaii, Joseph Kennedy	1989, Subsurface Testing	<i>Archaeological Report Concerning Subsurface Testing at TMK: 4-6-08:12, Lahaina, Maui</i>
Fredericksen, Walter M. and Demaris L. Fredericksen	1990 Data Recovery	<i>Archaeological Data Recovery Report on the Plantation Inn site, Lahaina, Maui, Hawaii</i>
Graves, D.K. and S. Goodfellow	1991, Inventory Survey	<i>Archaeological Inventory Survey, Launiupoko Golf Course.</i>
Fredericksen, Walter M. & Demaris L. Fredericksen	1993, Inventory Survey	<i>An Archaeological Inventory Survey on a Parcel of Land Located in the Ahupua`a of Paunau, District of Lahaina, Island of Maui (TMK 4-6-09:12)</i>
Robins, J. J., W.H. Folk and H.H. Hammatt	1994, Inventory Survey	<i>Archaeological Inventory Survey of an Approximately 14.7 Mile Proposed Transmission Line from Ma`alaea to Lahaina, Maui, HI.</i>
Heidel, Melody, William Folk & Hallett Hammatt	1995 Inventory Survey	<i>An Archaeological Inventory Survey for Waiola Church, Ahupua`a of Waine`e, Lahaina District, Island of Maui (TMK 4-6-7:16)</i>
Major, Maurice and Paul Christiaan Klieger	1995, History & Excavations	<i>Historical Background and Archaeological Testing at Pikanele's kuleana in Lahaina, Maui.</i>
Klieger, Paul Christiaan, ed., Boyd Dixon, Susan A. Lebo, Heidi Lennstrom, Dennis Gosser, Stephan D. Clark	1995, History & Excavations	<i>Moku`ula: History and Archaeological Excavations at the Private Palace of King Kamehameha III in Lahaina, Maui</i>
Fredericksen, Eric M.	1997, Monitoring	<i>Archaeological Monitoring Report on the Pioneer Inn Swimming Pool Construction Project.</i>

The picture that emerges of the traditional settlement pattern includes a focus of coastal zone permanent habitation, with dryland cultivation and taro *lo`i* extending into the coastal zone but with more extensive cultivation inland and forest resource(s) procurement far inland into the upper regions of the West Maui Mountains.

The coastal zone of the project vicinity became a favored locale for *ali`i* (paramount chiefs). Oral traditions relate the importance of the Lahaina Town area as a place of royal residences. Maui Island *Mō`i* from Pi`ilani to Kahekili have resided in the vicinity of the project area (Kamakau 1992, Klieger *et al* 1995, Fredericksen and Fredericksen 1988, 1993). The occupation by these high-ranking *ali`i* would also have included large numbers of retainers, also *ali`i*, thus creating a core area, inclusive of the present project area, primarily of *ali`i* residences, fishponds and well-tended gardens.

The Kamehameha dynasty continued this pattern of royal residential occupation. Kamehameha I built what has been called the "Brick Palace" ca 1798-1802 and utilized it "when residing on Maui for a year (1802)" (Fredericksen and Fredericksen 1965:3). The Brick Palace was located north of the project and makai of the Library (*Ibid.*). Based on the de Freycinet map of 1819 it would appear as if walled house lots and taro *lo`i* may have been located within the project area. It has also been suggested that during Kamehameha I's stay in Lahaina, ca 1802, that the area was part of the encampment of *ali`i* and warriors that extended from the Brick Palace south to Moku`ula (Major and Klieger 1995:7)

The Brick Palace excavations indicated fill material over sandy deposits. The excavation data suggested that a "mound" was constructed behind a retaining wall, upon which the foundation of the Brick Palace was built. There was also evidence that *ili`ili* stones were possibly utilized to pave the mound or platform. No dates were generated for this particular project and there was no clear indication of an intact pre-Contact cultural layer (Fredericksen and Fredericksen 1965).

Lahaina became the capitol of the Kingdom of Hawaii, ca. 1820 to 1845 with Kamehameha II and III residing at least part time in Lahaina. Kamehameha III had residences at Hale Pi`ula and Moku`ula south of the project area (Fredericksen and Fredericksen 1988, Klieger *et al.* 1995).

It was during this time period that the "old fort" was built, either within or very close to the project area. The fort was constructed ca. 1830-32 under the orders of Queen Ka`ahumanu for protection against the "excesses" of the Whalers (Kamakau 1992).

The fort was reported to have been constructed utilizing quarried square, coral blocks and to have had two interior buildings. The buildings were for housing and storage, including munitions and arms.

Mason Architects, Inc. have provided the following summary of the construction history of the present Courthouse.

By the 1850s, two of the prominent buildings in Lahaina, the old "Palace" and the fort, were deemed unnecessary structures. The legislature of 1852 directed that the site of the fort be used as the place for building "two Gov. Houses ... a Market House and a Custom House;" and that "a part of the stones for said fort shall be used in building said houses" (Peterson 1966:8)

By the end of the 1850s an appropriation was made to build a "Court and Custom House." The 1858 appropriation was for \$7,000 but no contract was arranged that year. The following year the appropriation was reduced to \$6,000, perhaps because the Superintendent of Public Works planned to use timbers from the old "Palace" in Lahaina, as well as some of the stones from the fort. A construction contract for \$2,000 was awarded to George Thomas, with materials to be supplied by the government (Peterson 1966:1).

The building was started in July and finished in December of 1859. The costs totaled \$9,674.43; the overrun, as explained by the Superintendent, was due to the lumber in the old "Palace" being decayed and unusable, the enlargement of the building after the contract was signed and extra costs to enclose the building before the rainy season started (Peterson 1966:2). A historic photo shows the appearance of the building around the turn of the century. It was a simple rectangular shape with a two-story wooden lanai along the seaward side, and a flat roof behind pedimented parapets (See Figure 6).

The building has obviously been greatly changed over the years. The first work on the building was undertaken only five and a half years after it was constructed. The repairs that were needed were mostly due to the faulty roof design and poor carpentry. The roofing installed was a new product, called "Warren's patent New England Roofing." It consisted of a tar-impregnated paper felt, finished off with a gravel topping (Peterson 1966:3). The architect in charge of the repairs noted that heavier felting, a double coat of asphaltic material, new gravel, new gutter strips, and additional outlets for water constituted the repaired roof (Peterson 1966:15). He also had to bolt the lanai to the stone walls, repair roof trusses, and paint or repaint all the woodwork. Additional repairs to the building were necessary after the earthquake that hit Lahaina on February 19, 1871.

The major changes to the building occurred in 1925. A plaque on the building notes the work was undertaken by the County Board of Supervisors, and that they considered the building "restored." The work done in that 1925 project included the following:

- New floor plans at the first and second floors. All current ceiling and wall finished, the stair and all panel doors date from this period.
- Excavation of the basement and installation of a reinforced concrete floor and concrete columns in the basement. The detention cells and stairs to the basement were also installed at this time.
- Installation of new steel columns from the first to the second floor and steel beams at both floor levels to support the floor structures.
- Installation of new floor structures and flooring.
- Installation of a new roof structure and mission tile roofing. This mission tile roofing had been replaced as early as 1959, based on photographs at the

State Archives.

- the *mauka* and *makai* lanai steps, floors, entry columns and roof were installed.
- All windows and transoms date from this period, although most are in the same openings and are the same size as in the original building. The jalousie windows are a later replacement, but many of the transoms and casements from those openings are still in the building and can be reinstalled.

The appearance of the current building is almost entirely determined by the 1925 renovation. The window openings and general massing of the building are the primary legacy of the original construction.

Since 1925 there have been relatively few changes to the building. Some of those have already been mentioned (roofing changes and windows). Also on the exterior a small addition was made to the mauka/Kaanapali corner to create more storage area. A small condenser shed has been attached to that. Within the past two years a wood handicap ramp has been added to the makai lanai, on the Kaanapali side of the building.

The significant interior changes include the removal of the post office boxes and reconstruction of the Kaanapali wall of the first floor hall. This involved a very slightly narrowing of the first floor entry hall, removal of the mesh vent opening at the top of the wall and elimination of the pass-through post office windows. The 1925 plans indicate a rectangular-shaped recess where the post office windows were. A 1966 Historic American Building Survey (HABS) photo indicates a 45 degree angle at the corner of the recess and a hallway width that corresponds to the existing width. This is reinforced by the clear marks from the old wall on the wood floor.

On the second floor some single wall partitions were installed into the rooms on the Kaanapali side of the second floor. These were there at least as early as 1966, when the HABS drawings were done.

Date	Physical History of the Building	Source
1852-55	Planning for custom house & market required demolition of the fort at Lahaina	Peterson 1966:8
5/4/1859	\$6,000 appropriated by Kingdom's Legislature	Peterson 1966:1
5/23/1859	SPW directed prison laborers to take down "Old Palace" and salvage timber	Peterson 1966:1
July 26, 1859	Construction contract to George Thomas, \$,2000: Court & Custom House & Gov. offices	Peterson 1966:12

Date	Physical History of the Building	Source
Dec. 1859	Custom & Court house completed	Peterson 1966:2
May 1865	Repairs made to bldg by Theo. Heuck	Peterson 1966:13
Feb 9, 1871	Earthquake damaged building	Peterson 1966:3
Dec. 1898	New 5-ft lanai along front. New floors were installed, wood support posts replaced and a hipped roof was installed.	Peterson 1966:4
1925	classical-style remodeling by William D'Esmond, apparently with County funding	Peterson 1966:4-5
1931	Single-story addition tot he Kaanapali/mauka corner	
pre-1966	Single wall partitions added at second floor	
c. 1995	Wood ramp added to makai side.	

Figures 6 to 10 provide a photographic series of the Lahaina Courthouse and changes to abutting roadways and landscaping from *ca.* 1900 to 1960. Figure 6 depicts Wharf Street to be a beach road with no retaining wall, just a gradual slope to the water. Figure 7 shows a low retaining wall and large trees within the grounds of the Courthouse. Figure 8 shows paved sidewalks and large trees both on the northern and southern sides of the Courthouse. Figure 9, *ca.* 1930, depicts the Courthouse not long after the major 1925 renovation. Also note the removal of large trees from the southern side of the Courthouse, and the new large ocean retaining wall fronting Wharf Street. Figure 10, *ca.* 1960 shows the addition of the Wharf following the dredging of Lahaina Harbor. Of special interest is the movie set construction on the north side of the Courthouse. The set was constructed for the movie "Devil at 4 o'clock"

The project area either as part of the "Old Fort" grounds or subsequently the Lahaina Courthouse grounds has been associated with government buildings since at least the early 1830s. The surrounding lots have in that time span been subjected to many land use changes. During the mid-1800s *Mahele* period there were residences of important persons and properties related to the increasing market-oriented economy (*e.g.* markets, warehouse, etc.). The high status residences and early commercial property eventually give way to larger more "modern" buildings. The Pioneer Hotel is constructed *ca.* 1900, immediately to the northwest and *kuleana* lots to the southeast including one belonging to W.C. Lunalilo become Kamehameha III School.



Figure 6 Ca 1900 View to East Showing Courthouse, Landscaping and Wharf Street



Figure 7 View to East Showing Low Retaining Wall and Large Trees on Courthouse Grounds

LAHAINA

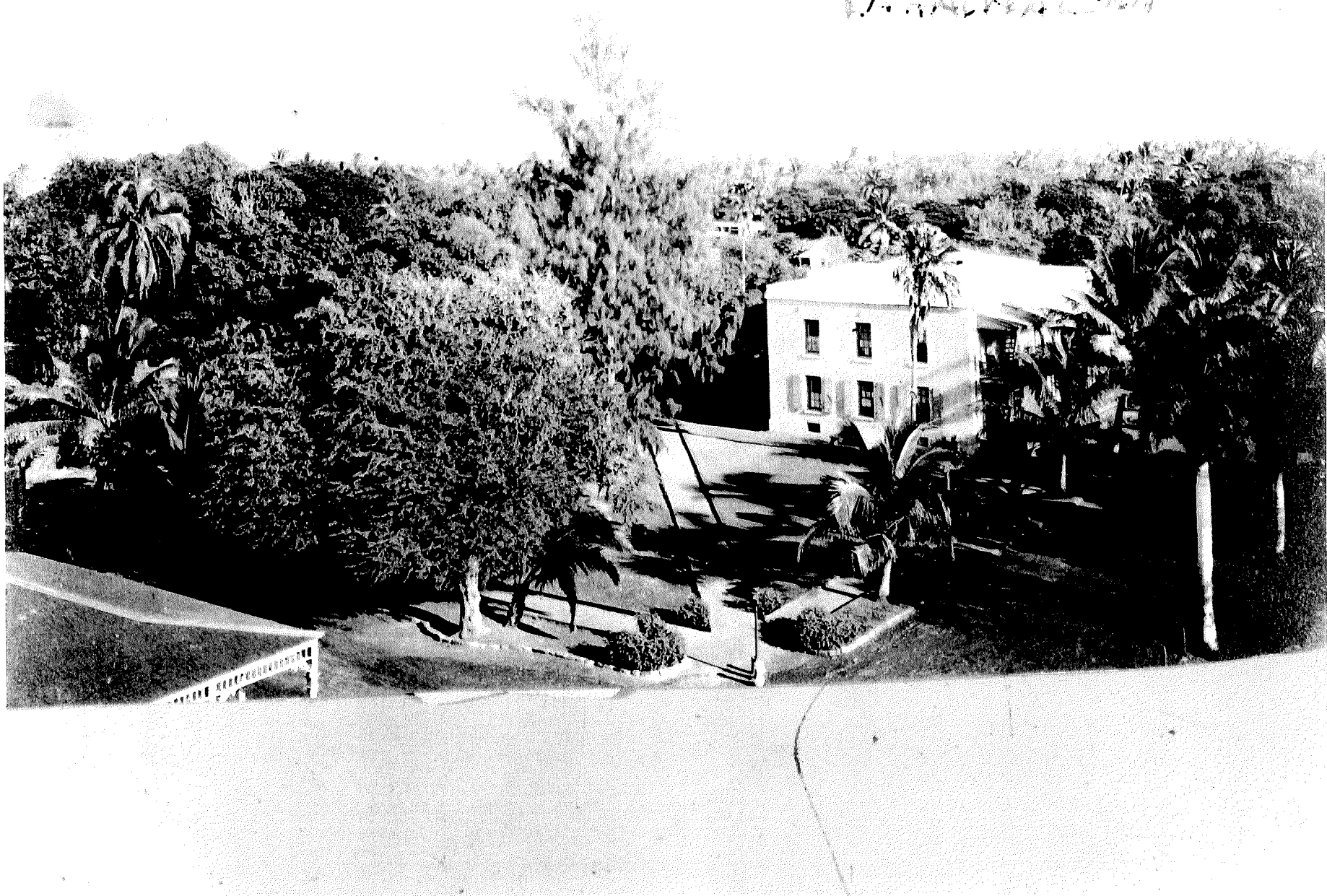


Figure 8 *Ca.* 1900 View to East Showing Courthouse Landscape with Paved Sidewalks, and Large Trees on Both North and South Sides

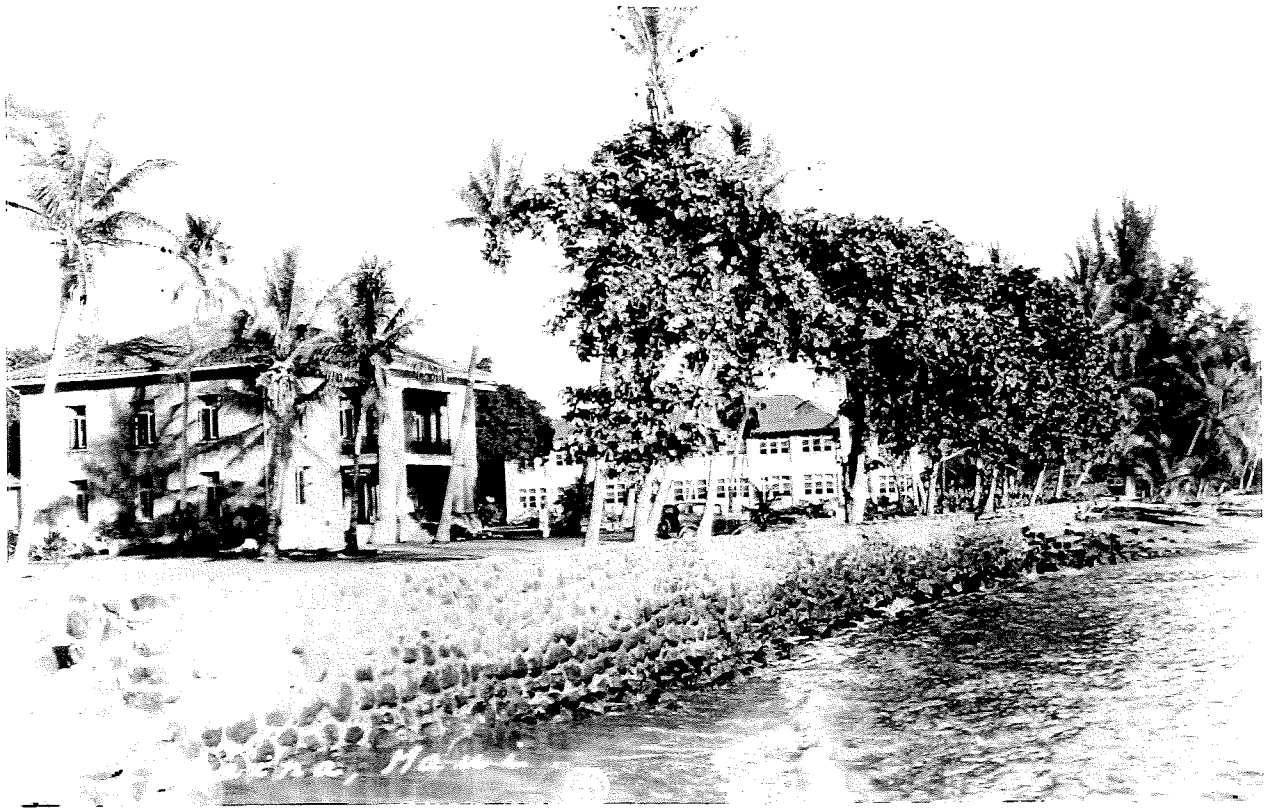


Figure 9 Courthouse after Major 1925 Renovation



Figure 10 Ca. 1960 Landscape View Showing Wharf after dredging of Lahaina Harbor, Note: Movie Set

The landscape of Lahaina is also being changed and ponds, such as Mokuhinia, get filled in (Klieger *et al.* 1995; Kennedy 1989, Major and Klieger 1995). Thus, one of the most notable of Lahaina's attributes in this dry leeward environment - ponds and associated springs - is altered drastically.

Archaeological research in the Lahaina area has documented, in part, these extensive land altering activities. Monitoring related to the construction of a swimming pool at the Pioneer Inn documented different types of fill material (E.M. Fredericksen 1997). The fills included silty clay soil brought in to fill the location of the former pool and an area where cinder fill(s) overlay a stratum of banded sand that extended to the water table at 1.8 mbs. The sand layer was "tentatively" identified as "fill" though an alternative explanation was posited. "The banding in this c. 1 . thick layer suggests that the area contained standing water in post-Contact times, and possibly in pre-Contact times as well. It is somewhat tempting to suggest that this might have been associated with the Royal Taro Patch. However, the absence of any other indicators, such as agricultural features and associated artifacts, make such a connection speculative" (*Op.cit.*:6).

Excavations in a lot located across Front St. from the Courthouse (*i.e.* presently Burger King) revealed a relatively thin clay soil fill over sand fill with water encountered at 1 mbs. The fill was expected, as background research indicated the lot had formerly been the *mauka* extension of the canal or "pa wai". It was unclear when the area was filled with sand or from where the sand was obtained (Kennedy 1989).

Background Summary

Based on previous archaeological and historic research the project area, being within the coastal strip, would have been part of an extensive pre-Contact habitation zone. Though there are relatively few, documented pre-Contact dates, excavations to the north near Kahoma Stream provided evidence for occupation *ca.* A.D. 1260-1640 (Haun 1988). Excavations associated with Mokuhinia Pond provided "indirect" evidence of very early *ca.* A.D. 45-231 occupation, but it was based on pollen content and other environmental characteristics. Excavation just *mauka* of the pond at Waiola Church produced a sequence of dates starting *ca.* A.D. 430-695. However, the most recent date of the sequence, *ca.* A.D. 1410-1665 came from the lowest level (*i.e.* Stratum V) and it was unclear what caused the anomalous results (Heidel *et al.*, 1995). Thus, though there have been extremely early dates suggested by 'indirect" evidence, these early dates have not been directly associated with wither a specific feature or even a distinct cultural layer. In contrast, dates like that from the Mala area (*ca.* 1260-1640) and the A.D. 1450-1650 (Major and Klieger 1993) date from an LCA lot just north of Mokuhinia were from more distinct cultural bearing strata.

Historical documentation indicated that the coastal strip of the core Lahaina area was a favored locale for high status occupation. This pattern continued through the 1800s, as evidenced by Kamehameha I's "Brick Palace" and the extended encampment of his "ali'i and warriors" *ca.* 1802, declaring Lahaina the capitol of the Kingdom, Kamehameha III residence and mid-1800s *Mahele* documents.

Specific to the project area the settlement pattern model suggests: pre-Contact habitation to include high-status residences, with associated gardens possibly *lo`i*; contain evidence of early post-Contact activity related to events such as Kamehameha's early 1800s encampment; construction of the coral block "old Fort" *ca.* 1830; and the Courthouse *ca.* 1860.

The grounds around the Courthouse also included the Governor Mansion near the corner of Front and Hotel Streets. The "canal" just to the south was excavated and filled during the historic era. *Makai* of the Courthouse land altering activities have included breakwater construction, starting as early as the 1840s and construction of Lahaina Harbor. Additionally, the construction and subsequent remodelings of the Courthouse itself included at least two episodes of subsurface excavation. The history of the project area indicates many land altering activities from filling to numerous subsurface excavations similar to that which has been reported elsewhere in the core Lahaina Town vicinity.

III. STRATIGRAPHY

Four Backhoe trenches (A-D) and two hand-dug Units (Units 1 and 2) were excavated during the course of the subsurface investigation. The following documentation includes basic data on trench, orientation and size, average depth below surface, and individual stratum soil descriptions.

Backhoe Trench #A

Trench Location: Northern side of Building 1 Orientation: 10° True North; Length: 9 m. (27 ft.); Width: 1-1.2 m. (3.3-3.9 ft.); Profile: Northeast Face (Figure 11)

<u>Strata</u>	<u>Depth (cmbs)</u>	<u>Description</u>
IA	0-20	10YR 4/3 brown silt loam, very fine medium sub-angular blocky, very abrupt wavy boundary.
IB	20-60	5YR 4/6 yellowish red, silty clay loam; very abrupt smooth boundary
IIA	60-70	10YR 3/3 dark brown sandy loam, well sorted with 5-10% coralline sand, chunks of charcoal, abrupt wavy boundary.
IIB	70-90	dark brown sandy loam with coral chunks, and some water-rounded basalt gravel at base; abrupt wavy boundary.
IIIA	90-110	10YR 6/2 light brownish grey loamy sand; similar to IIIB in Trenches C & D but weakly expressed.
IVA	110-140	10YR 5/2 & 7.5YR 3/3 dark brown sandy loam; with mottling; smooth gradual boundary
IVB	140-165	10YR 3/2 very dark greyish brown, sandy clay loam, wavy gradual boundary
IVC	165-175+	10YR 3/2 very dark greyish brown; sandy clary loam; grades down to coarse sand.
Feature	appears to originate just below coral layer, has numerous basalt ili, many roots, rootlets, mottled.	

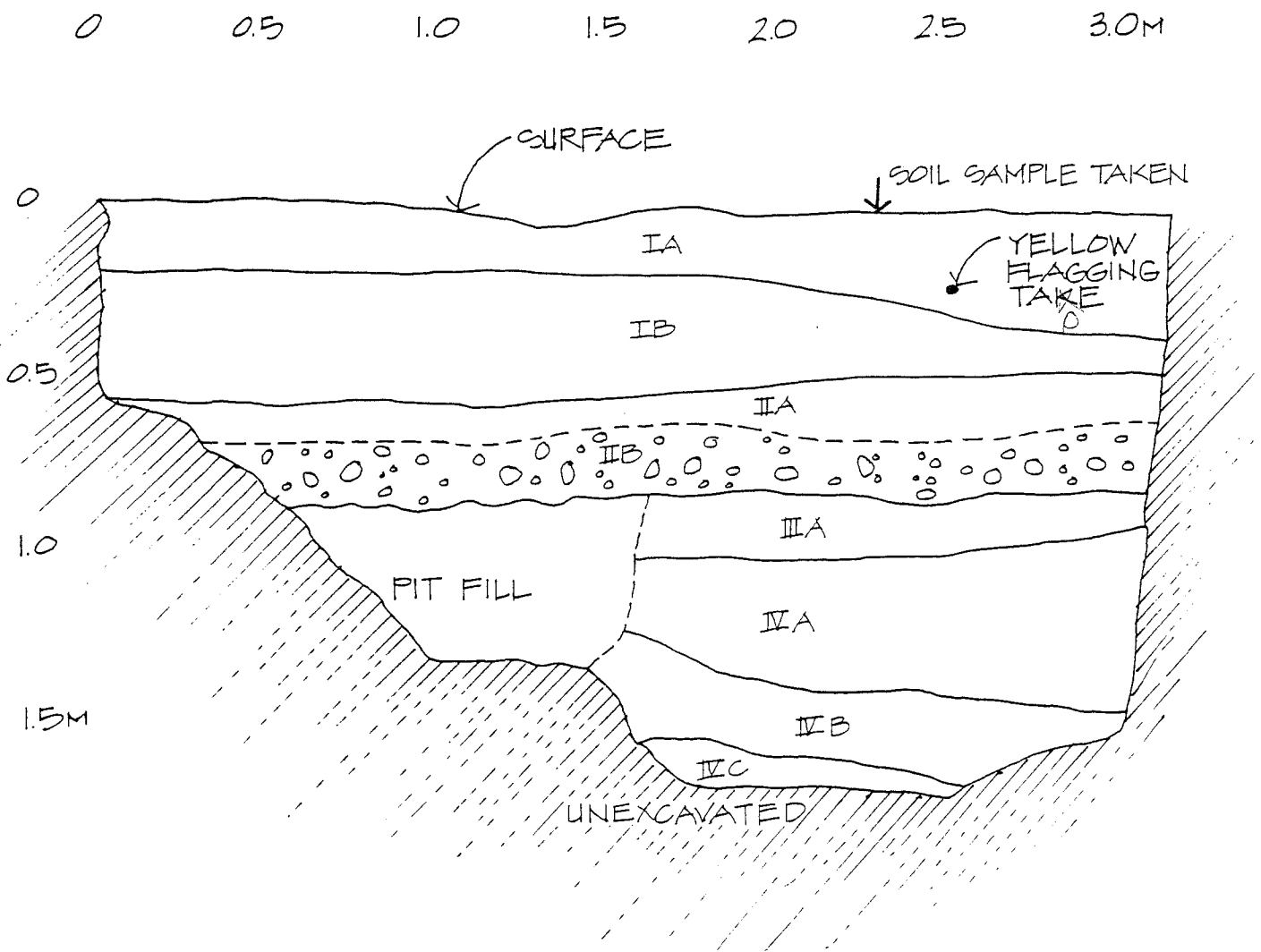


Figure 11 Backhoe Trench A: Profile Northeast Face

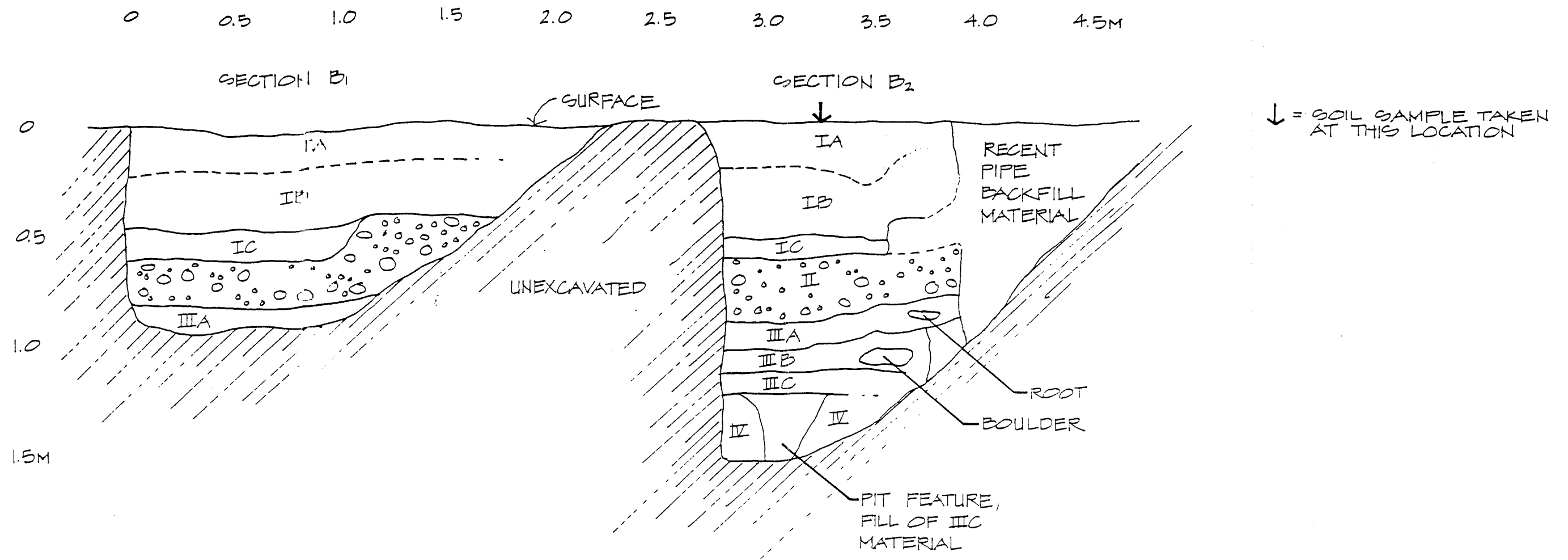


Figure 12 Backhoe Trench B: Profile: East Face

Backhoe Trench #C

Trench Location: southern side of building ; Orientation: 70° True North; Length: 9.7 m. (31.8 ft.); Width: 1-1.6 m. (3.3-5.2 ft.); Depth: 150 cm.; Profile: East Face (Figure 13)

<u>Strata</u>	<u>Depth (cmbs)</u>	<u>Description</u>
Stratum IA	0-20/25	5YR 4/4 reddish brown silty clay loam, mottled with 5/6 yellow red silty clay fill; top is more red, higher clay content, subphase of filling for final top soil becomes sand grains and few or no brick mortar, chunks with red fragments
Stratum IB	20/25-70	10YR 4/3 dark brown clay loam with sand and mortar content includes coral mortar chunks with 1-5% occasional water-rounded pebble; sandy claim 100 m. construction fill.
Stratum II	70-80	10YR 3/4 fine to medium coralline sand, 1-5% water-rounded basalt pebbles, Feature contains fine beach gravel of Str. II layer.
Stratum IIIA	80-120	10YR 5/4 sandy loam, 20-40% coralline sand mixed with terrestrial silt, 5-10% basalt cobbles and boulders; water-rounded, also charcoal chunks present; very abrupt wavy boundary
Stratum IIIB	120-135	10YR 5/3 A-horizon on beach sand, 15-20 cm. thick, observed 2 basalt flakes, no midden; clear wavy boundary
Stratum IV	140-150+	10YR 7/8 yellow beach sand, BOE 150-160 cm.

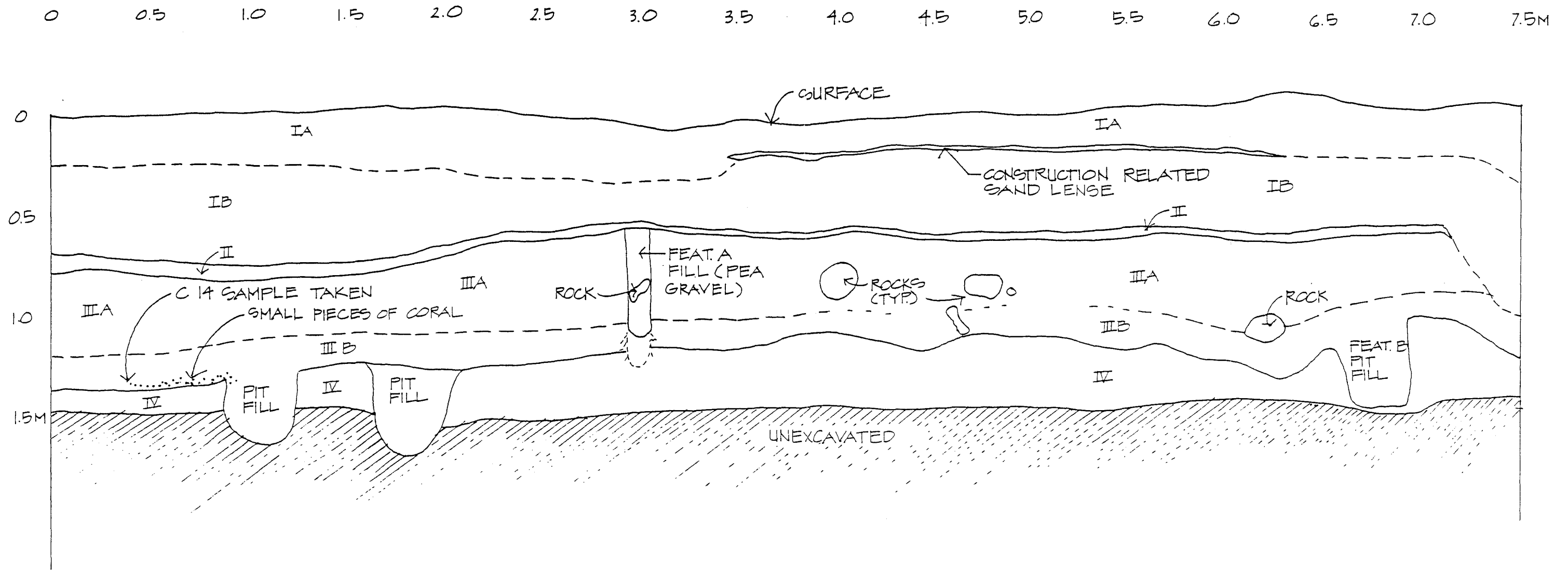


Figure 13 Backhoe Trench C: Profile East Face

Backhoe Trench #D

Trench Location: southern side of building; Orientation: 160° True North; Length: 10.5 m. (34.4 ft.); Width: 1-1.2 m. (3.3-3.9 ft.); Depth: 150 cm.; Profile: Northeast Face (Figure 14)

<u>Strata</u>	<u>Depth (cmbs)</u>	<u>Description</u>
Stratum IA	0-20/25	5YR 3/2 dark reddish brown sandy clay loam; weak medium angular blocky with vertical peds at base; contains 4 small pieces mortar; lower boundary abrupt wavy.
Stratum IB	20/25-70	10YR 4/3 dark brown clay loam with sand and mortar content includes coral chunks.
Stratum II	70-80	10YR 3/4 fine to medium coralline sand; few basalt pebbles.
Stratum IIIA	80-120	10YR 5/4 sandy loam, 20-40% coralline sand mixed with terrestrial silt, 5-10% basalt cobbles and boulders; water-rounded, also charcoal chunks present; very abrupt wavy boundary
Stratum IIIB	120-135	10YR 5/3 A-horizon on beach sand, 15-20 cm. thick, observed 2 basalt flakes, no midden; clear wavy boundary
Stratum IV	140-150+	10YR 7/8 yellow beach sand, BOE 150-160 cm.

Note: For intact dog burial Feature (Figure 15)

Pitfill	35-50	10YR 4/3 brown loamy sand, coral, pebble-sized mortar, abrupt wavy boundary
Pitfill	50-80	10YR 4/3 sandy loam, becomes sand 10YR 5/2 greyish brown, alternating bands of sandy loam & fine to medium fine sand.
Pitfill rocky fill		10YR 5/4 yellowish brown sandy silt loam, contains many water-rounded basalt pebbles to boulder.

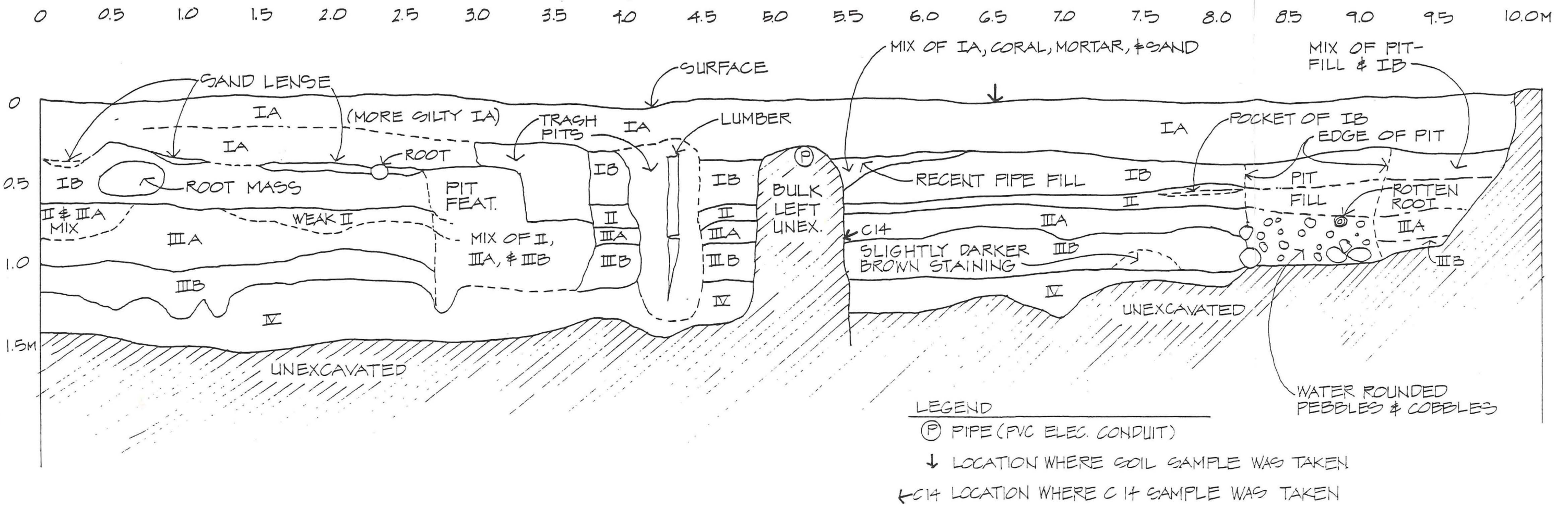


Figure 14 Backhoe Trench D: Profile Northeast Face

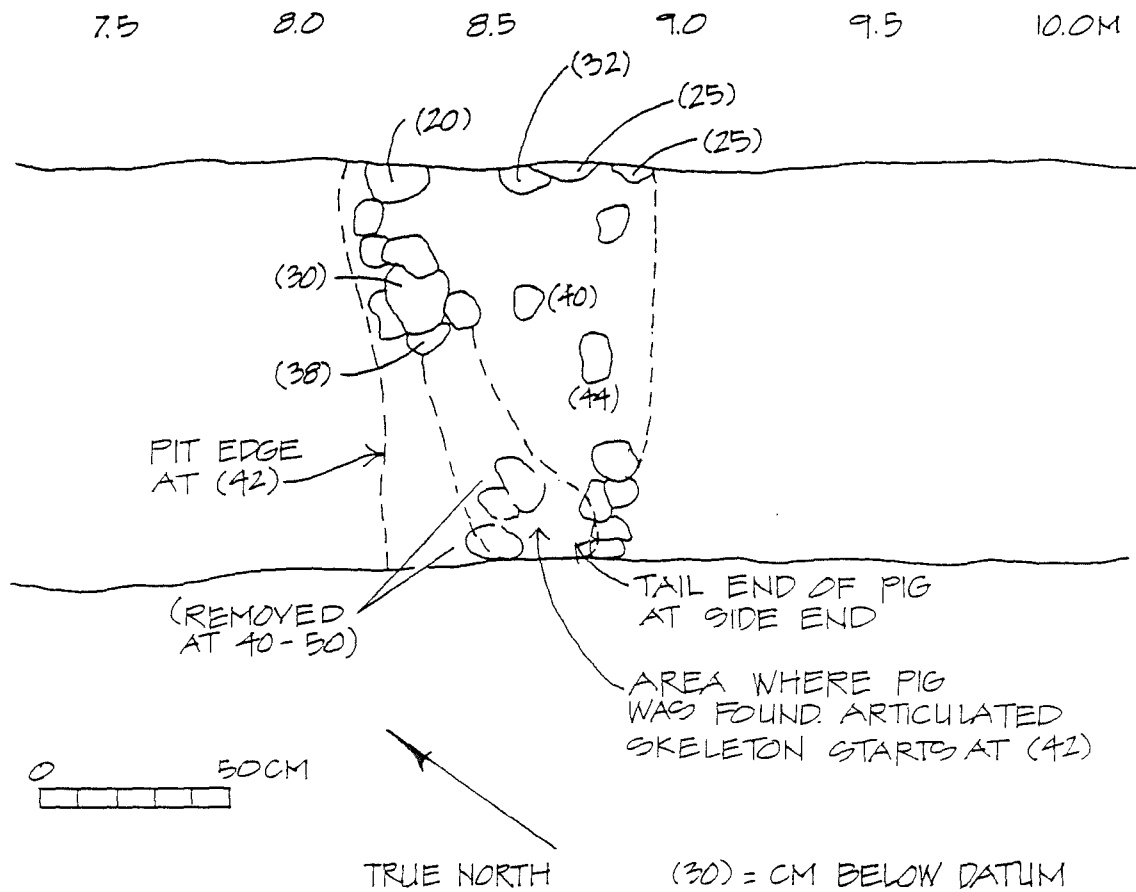


Figure 15 Backhoe Trench D: Plan View of Dog Burial Feature

Hand-dug Unit #1

Unit Location: East of Building; Length: 1 m. (3.3 ft.); Width: 1.25 m. (4 ft.); Depth: 135+ cm.; Profile: West Face (Figures 16 & 17)

<u>Strata</u>	<u>Depth (cmbs)</u>	<u>Description</u>
Stratum IA ₁	0-15	2.5YR 3/4 dark reddish brown clay loam, fill with rubble (gravel) from present construction, weak boundary.
Stratum IA ₂	15-40/45	5YR 3/3 dark reddish brown clay loam with roots & pebbles; sparse charcoal flecking; weak boundary.
Stratum IB	40/45-55	7.5YR 3/3 dark brown loamy sand layer of gravelly basalt pebbles; some mortar rubble (gravel sized); weak boundary.
Upper sand lens mix of coralline sand and dark brown clay loam.		
Stratum II	55-75	10YR 3/4 fine to medium sand with few water-rounded basalt pebbles.
Stratum IIIA	75-125	7.5YR 2.5/2 very dark brown sandy loam, 5-10% basalt pebbles and cobbles, midden observed.
Pit Feature	95-105	IIIA material and 7.5YR 2.5/2 very dark brown sandy loam; water-worn pebbles & cobbles, high midden, charcoal, cow bone, pottery; wavy weak boundary Greyish brown soil; down to 105 cm., coral chunks thinning as level gets deeper; At 105 cm. got ceramic fragment & contacted pig bone; Wavy weak boundary.
Stratum IIIB	75-135	10YR 5/3 brown sand to sandy loam; midden observed.
Stratum IV	135+	10YR 7/8 yellowish sand.

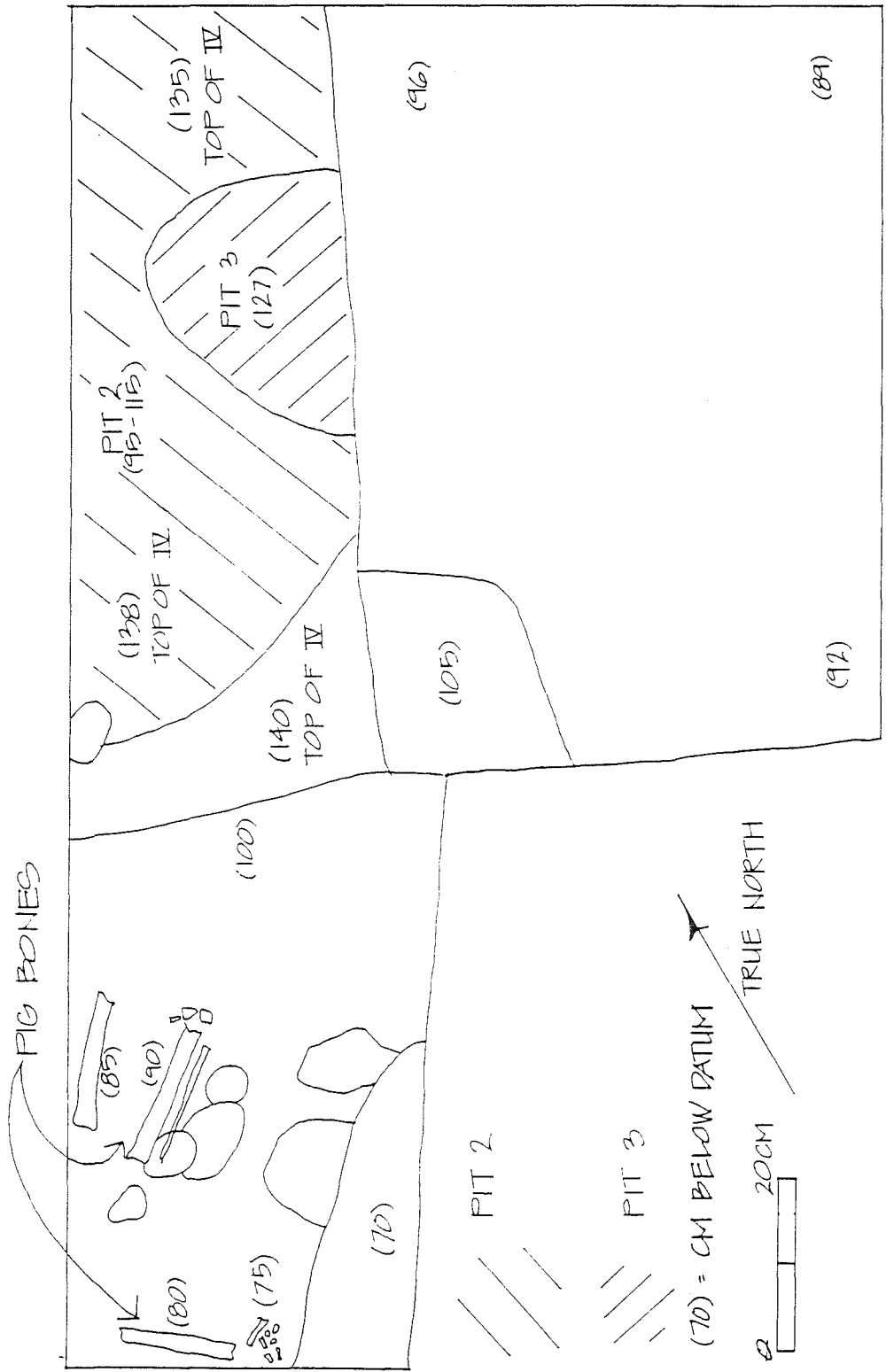


Figure 16 Hand-dug Unit #1: Plan View

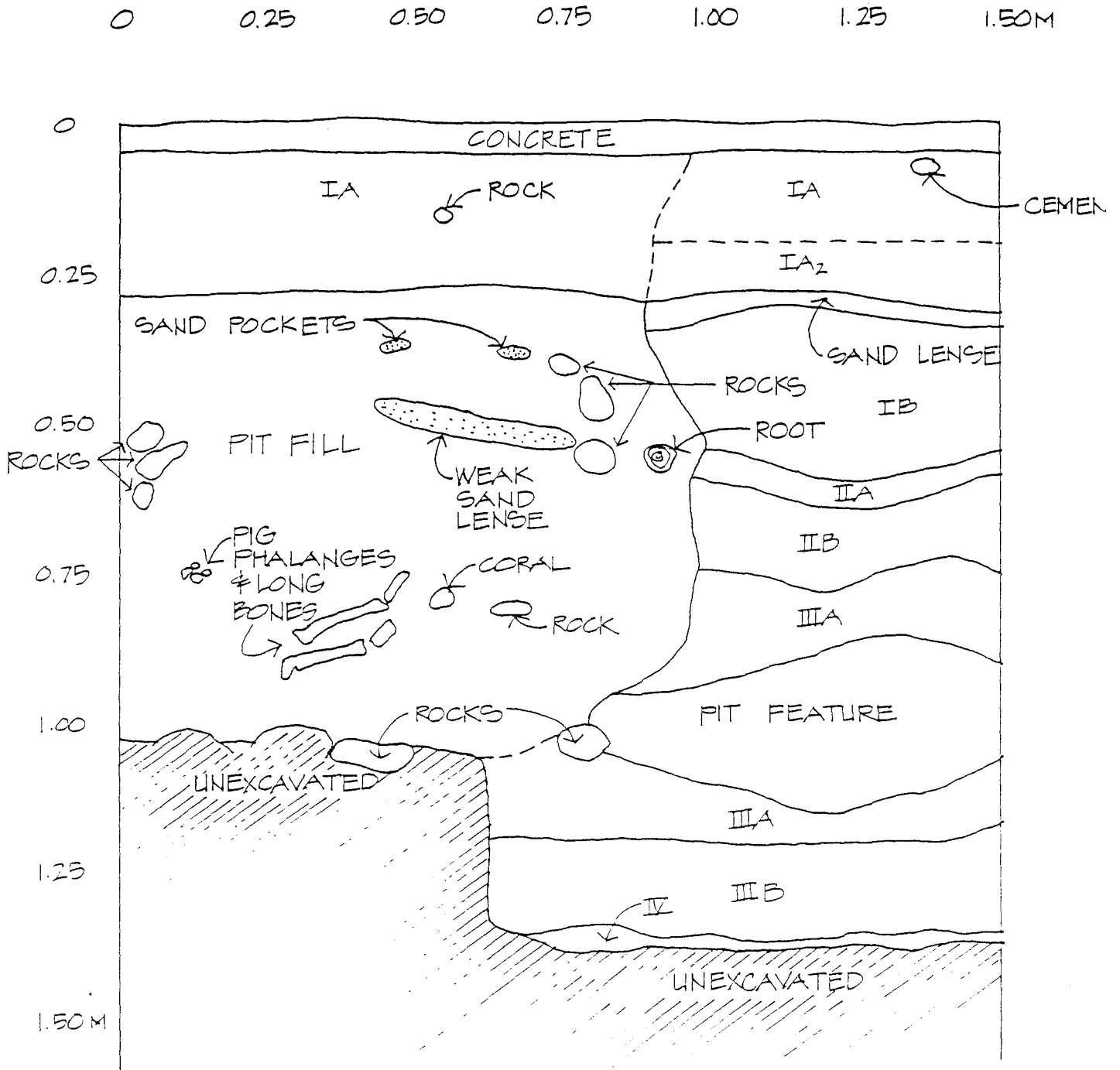


Figure 17 Hand-dug Unit #1: Profile West Face

Hand-dug Unit #2

Unit Location: Northeast of Building; Length: 3 m. (9.8 ft.); Width: 1-1.5 m. (3.3-4.9 ft.);
Depth: cm. 50+; Profile: Southwest Face (Figures 18 & 19)

<u>Strata</u>	<u>Depth (cmbs)</u>	<u>Description</u>
Stratum IA	0-15	2.5YR 3/3 dark reddish brown mottled clay loam, Ili`ili coral, recent historics, roof tile, copper pipe trench fill; abrupt smooth boundary.
Stratum IB	15-17	2.5YR 2.5/2 very dark brown, large pieces of roofing tile, abrupt wavy boundary.
Stratum IC	17-26	5YR 3/2 dark reddish brown clay loam fill, some coral fragments, angular basalt pebbles, mortar pieces; abrupt smooth boundary.
Stratum IIA	26-30	7.5YR 2.5/3 very dark brown coral layer in clay loam matrix. similar to Trench B, abrupt wavy boundary.
Stratum IIB	30-45	10YR 2/2 very dark brown sandy loam, compact, large water-rounded boulders, plentiful `ili`ili, few pieces mortar; abrupt smooth boundary.
Stratum IIC	45-47	10YR 3/4 dark yellowish brown; coarse sand layer w/ 20-30% clay loam matrix; basalt water-rounded boulders; abrupt smooth boundary.
Stratum IID	47-50	5YR 3/3 dark reddish brown clay loam, abrupt wavy boundary.

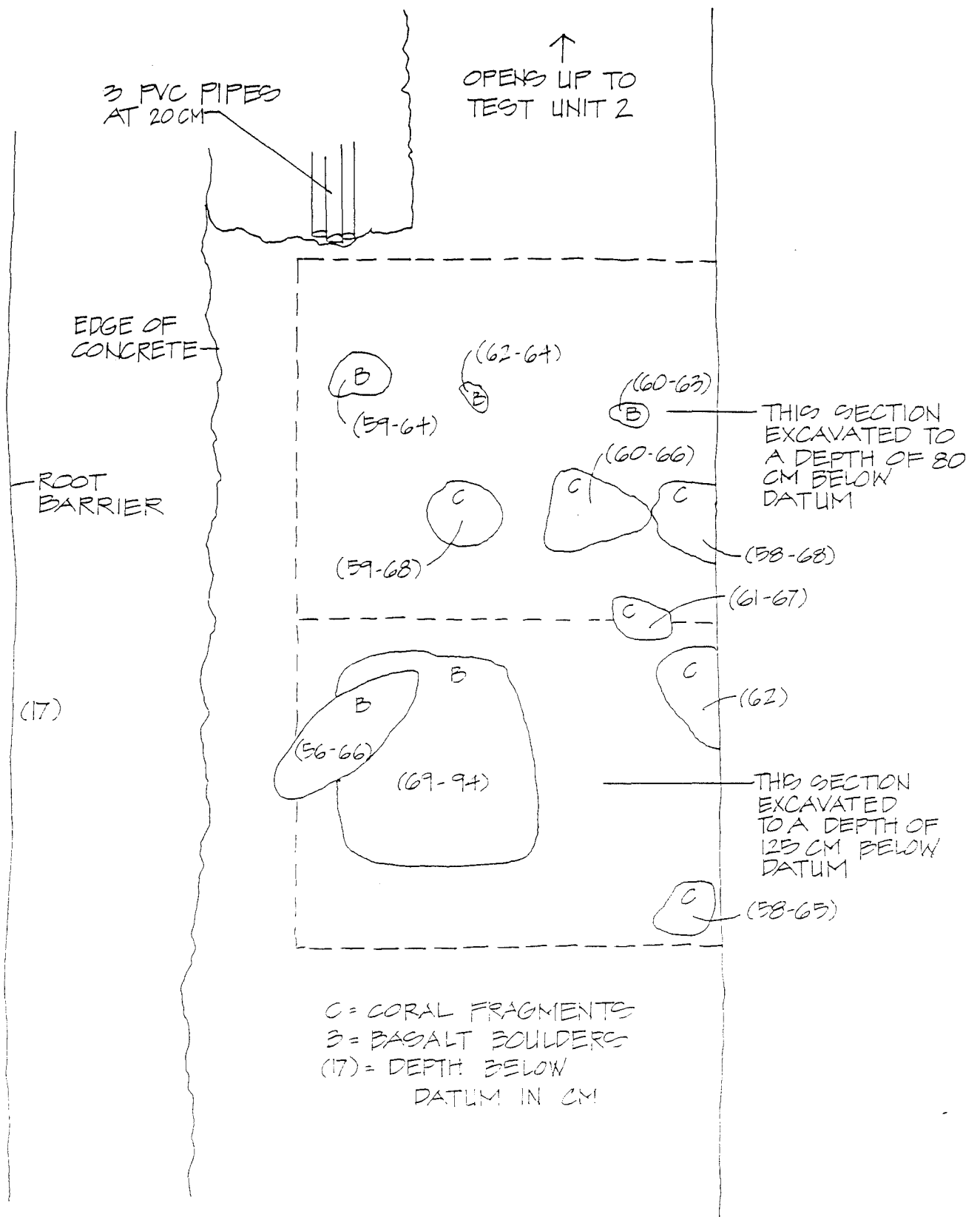


Figure 18 Hand-dug Unit #2; Plan View

The stratigraphic sequences exposed during the excavations includes basal layers of marine sand overlain by terrestrial deposits. The general sequence includes Strata I to IV, though there is a fair amount of variation across the project area on a per stratum basis. The variations are represented by designations, such as Str. IA, IB, IIA, IIB, IIIA, IIIB, etc.

Stratum I deposits, IA and IB are interpreted as the most recent fill and reworked terrestrial deposits including the present landscaping soil layer. Str. I material generally consists of silty clay loam type soils, dark brown to dark reddish brown in color. The differences between Str. IA and IB are usually in terms of color, texture and/or content. Content differences observed included percent of sand, coral, or mortar fragments and obviously modern artifacts (*e.g.*, plastics, aluminum, etc.). The boundaries observed between IA and IB were for the most part abrupt smooth with no evidence of A- or O-Horizon development.

The greatest amount of variation per stratum is in the Str. II designation across the project area. In Trenches A and B and in Unit, Str. II designation included chunky coral fragments in dark greyish to dark reddish brown clay loam to clay soils. In Trenches C and D and Unit 1, Str. II designation refers to a beach sand layer.

In Trench B and Unit 2 below the compact coral and clay loam layering of Str. II was a compact layer of dark greyish brown, sandy loam with a high percentage of *ili`ili*. The *ili`ili* containing-layer, Str. IIB in Unit 1 and IIIA in Trench B, was most evident in these two excavations which are closest to the present Courthouse. *ili`ili* stones were present in Str. II and Str. III throughout the project area but not in the concentrations seen in Trench B or Unit 2. Similarly to Str. I interfaces there was no evidence of A- or O-horizon development in Str. II.

Stratum III was fairly consistent across the project area. In Trenches C, D and Unit 1 Str. IIIA and IIIB were well expressed and easily discernable, less so in Trenches A, B and Unit 2. Str. III (A, B) ranges from sand to loamy sand and evidences, through organic staining, the development of an A/O-horizon. The development of An A-horizon indicates a long-term stable surface on which plants grew leaving an organic stain. In the case of Str. III as observed in Trenches C and D, the term "buried A-horizon" is applicable.

The Str. IV designation refers to the non-cultural bearing basal sand layer. Certain features originating above Str. IV are intrusive into it and it is the parent material for Str. III. There was relatively little variation of Str. IV, when encountered, across the project area.

The sequence of site development suggested by the stratigraphy includes: 1) a stable basal layer of marine beach sand upon which an A-horizon developed and which was the original surface for Hawaiian occupation, represented by Str. III and Str. IV; 2) Str. II and its variations representing historically-introduced fill and reworked terrestrial soils with incorporated building materials, such as coral chunks and fragments and the *ili`ili* concentrations observed in Trench B and Unit 2; and 3) the most recent introduced fill and reworked terrestrial soils designated Str. I (A and B).

IV. MIDDEN & ARTIFACT ANALYSIS

Materials collected throughout the project area consisted of traditional Hawaiian artifacts and midden, historic period artifacts, modern construction related materials, and concentrations of charcoal collected for dating analysis.

The vast majority of indigenous Hawaiian artifacts consisted of basalt and volcanic glass flakes, but also included polished flakes, adz preforms, adz fragments, basalt manuports, a piece of worked bone, and a coral abrader.

Historic period materials included ceramic or stoneware plate, bowl, and bottle fragments, two clay pipe stems, two bakelite buttons, glass opium and medicinal bottles, and one square nail fragment. Materials related to modern construction and other activities within the project area included metal nails, wire, a washer, a bolt, undecomposed wood, glass fragments, concrete, mortar, and plaster fragments, asphalt roofing paper and tar, clay roofing tile and sewerline fragments, plastics, and firecracker paper.

Detailed descriptions of artifacts presented in Tables X and X include provenience, count, measurements, weight, material, and function information. Provenience, speciation, and weights of all midden collected are presented in Table X. Speciation of marine invertebrate materials was performed at the CSH lab. Speciation of vertebrate materials was performed by Dr. Alan Ziegler. Table X consists of provenience and weights for the charcoal samples collected.

The materials were collected from four backhoe trenches (A, B, C, and D), and two hand excavated test units (1 and 2). The materials collected from each location are summarized in what follows, with particular attention given to the stratigraphic layers from which they were retrieved.

Backhoe Trench A

Backhoe Trench A yielded a total of five indigenous artifacts. One basalt water-rounded pebble manuport fragment was collected from Stratum IA at a depth of 0-10 cmbs. At a depth of 90-110 cmbs within Stratum IIIA, two basalt flakes and an adz preform were collected. A basalt fire-cracked manuport fragment was collected from the fill of Feature A, at a depth of 110 cmbs.

This trench yielded a total of three historic period artifacts. Stratum IA yielded one clear glass opium bottle at a depth of 0-25 cmbs. One non-diagnostic fragment of clear glass and one pale blue ironstone saucer fragment originating from Great Britain and dating from 1850-1910 A.D., were located within Stratum IIIA, at a depth of 90-110 cmbs.

No midden was collected.

3.1 gms. of charcoal was recovered from Stratum IIIA at 100 cmbs, and 9.9 gms. from the fill of Feature A at 110 cmbs. The sample from Feature A was submitted for carbon dating analysis and

yielded a date range of 1670-1950 A.D. Based on the mixing of indigenous and historic materials within Feature A, and the date of the charcoal sample, a historic date is suggested for the feature.

Backhoe Trench B

Backhoe Trench B yielded only one indigenous artifact, a fire-cracked basalt flake from Stratum IIIA, at a depth of 100 cmbs. No historic/modern artifacts or charcoal were collected.

A total of 164.2 gms. of midden was collected, 49.6 gms. from Stratum I (0-40 cmbs), and 114.6 gms. from Stratum IIIA (100 cmbs). Midden from Stratum I consisted of 0.9 gms. of medium to large bird, *bos taurus* (23.9 gms.), and unidentified medium to large mammal (24.8 gms.). Stratum II consisted of 4.4 gms. of *conus* sp., 100.1 gms. of *sus scrofa*, and 10.1 gms. of small to large unidentified mammal.

The midden from Backhoe Trench B suggests a food-remains disposal area, of the historical period, rather than a traditional Hawaiian living area. This is indicated by the absence of artifacts, the paucity of shell material, and the absence of fish bone. Additionally, three of the mammal bones (at least one of which was cattle) collected were metal-saw cut.

Backhoe Trench C

No indigenous artifacts were collected in Backhoe Trench C. During monitoring of the backhoe excavation, 22 items were recovered, ranging in depth from 0 to 140 cmbs. These included a clay roofing tile fragment, a clay sewer line pipe fragment, rusted metal fragments, galvanized and iron nails, glass bottles and fragments, a Lincoln penny, fragments of mortar and plaster, and non-decomposed wood fragments, all of which seem related to modern construction activities at the site. A square nail, a clay pipe stem, aqua medicine bottle fragments, and a Bristol stoneware English ale bottle, evidence historic period activity at the site.

A total of 384.4 gms. of midden was recovered from the north end of Backhoe Trench C, within Stratum IA at 25 cmbs. Marine invertebrate consisted solely of *conus* sp. (3.4 gms.). No fish or bird bone was observed or collected. The remaining 381 gms. consisted of introduced mammal species: *Artiodactyl* (89.8 gms.), including *capra hircus/ovis* sp., *bos taurus* (138.6 gms.), and unidentified mammal (152.6 gms.) No charcoal was recovered.

The presence of historically introduced mammal species within the bone material, and the mixing of historical and modern artifactual material, indicate that Backhoe Trench C includes evidence of the continuous historic/modern activity within this portion of the project area.

Backhoe Trench D

Backhoe Trench D yielded a total of 813 indigenous artifacts which included: 781 basalt flakes, 3 basalt adz blade fragments, one basalt adz preform, 3 basalt water-rounded pebble manuports,

one basalt core, one basalt awl, 21 volcanic glass flakes, a piece of cut turtle shell, and one conical coral abrader.

The majority of these artifacts (515) were from Stratum IIIB, at depths ranging from ?? cmbs. The fill material of Feature B yielded 164 of the artifacts. Stratum IIIA yielded a total of 72 basalt flakes. The remaining 62 artifacts were recovered during trench cleanup and from the backdirt pile.

Upon realization that a fairly rich cultural layer had been encountered at the east end of the trench, hand excavation was undertaken. More than 727 of the artifacts, including all the basalt adz fragments and preform, the coral abrader, and the cut turtle shell, were collected from this end of the trench.

A total of 93 historic/modern artifacts (additionally, an indeterminate number of plastic sheeting fragments) were collected along the entire length of Backhoe Trench D, including the east end. These included red brick, metal fragments, nails, plaster, mortar, asphalt roofing paper, stoneware, glass, a medicinal bottle, clay pipe stems, foil, paper, plastic, tape, non-decomposed wood, a bakalite button. These materials were collected from within the fill materials of Feature A and B, from Strata IIIA and IIIB, and from the backdirt pile.

A total of 974.7 gms. of midden was collected from Backhoe Trench D. Marine invertebrate accounted for 680.8 gms. of the collected material, with the vast majority occurring at the east end of the trench within the fill of Feature B, and within Stratum IIIB. Species included gastropods, bivalves, echinoderm, and crustacea, typical of inshore varieties collected for traditional Hawaiian consumption, and consistent with midden assemblages representing sites of permanent habitation. Fish bone occurred exclusively within the eastern end of the trench, and like the marine invertebrate material, was concentrated within Stratum IIIB and Feature B. Present were varieties typically taken inshore (*acanturid*, *carangid*, *labrid*, *priacanthid*, and *scarid*), and varieties taken offshore from water craft (shark and *lutjanid*). There was a paucity of bird bone (1.5 gms.), but medium *procellariid* was present, a typical staple of the traditional Hawaiian diet. Mammal bone comprised 260.9 gms. of the midden collected. The majority (190.5 gms.) was collected from the extreme west end of the trench and included: *canis familiaris* (4.5 gms.), *sus scrofa* (40.3 gms.), medium *artiodactyl* (24.6 gms.), and 125.6 gms. of unidentified mammal (probably some historically introduced *bos taurus*). The remainder of the mammal bone was collected from the east end of the trench, and include: *rattus exulans*, *canis familiaris*, and *sus scrofa*, all of possible Polynesian origin. Additionally, 9.7 gms. of unidentified vertebrate was recovered.

A total of 43.3 gms. of charcoal was collected from Backhoe Trench D. It was recovered almost exclusively from the east end of the trench, with the largest samples extracted from Feature A (6.3 gms.), Feature B (13.1 gms.), and Stratum IIIA (16.9 gms.), and Stratum IIIB (5.1 gms.). A sample from Stratum IIIA was submitted for carbon dating analysis and yielded a date range of 1662-present. A sample submitted from Stratum IIIB yielded date ranges of 1460-1700 (76%

probability), 1720-1820 (21% probability), and 1920-present (3% probability). A sample from Feature B yielded a date range of 1490-1700 (52% probability), 1720-1880 (42% probability), and 1910-present (6% probability).

Strata IIIA and IIIB, and Feature B, contained both historical/modern and traditional Hawaiian materials. Charcoal dates indicate a wide range of possible calendar dates for the deposition of these soils, however, prehistoric burning at the location is indicated. It is apparent that the east end of the trench contains a prehistoric component, suggesting permanent habitation of the site, which has been disturbed and mixed with materials originating from both the historic and modern periods.

Test Unit # 1

A total of 63 indigenous artifacts were collected from Test Unit # 1. These included 57 basalt flakes, two basalt flakes with polish, one basalt water-rounded pebble manuport, two volcanic glass flakes, and one possible bone awl. Stratum II yielded five of the artifacts, Stratum IIIA 12, Stratum IIIB 13, and the fill of Feature A one. The majority of the indigenous artifacts (45) were collected from the fill of Feature B. The depth range from 50 cmbs. (Stratum II) to 135 cmbs (bottom of Stratum IIIB).

A total of 107 historic/modern artifacts were collected from Test Unit #1. Modern materials included: clay roofing tile fragments, rusted metal fragments, nails, a bolt, mortar, plaster, and concrete fragments, roofing tar, window glass, and plastic. Possible historic period artifacts included: ceramic and porcelain rice bowl fragments, glass fragments and an earthenware fragment. It was not possible to determine whether any of the fragmented rusted metal within Feature B was of historic versus modern age, however, it was possible to conclude that much of the metal material above the feature was modern due to its less deteriorated condition and its context with modern materials. The majority of the material, which appears to be related to modern construction activity at the project area, was collected from Strata IA-III A (0-120 cmbs) with Feature B containing the older artifacts. No historic or modern materials were collected from Stratum IIIB.

A total of 223.4 gms. of midden were collected from Test Unit # 1. Marine invertebrate, totaling (108.7 gms.), consisted of inshore gastropods, bivalves, echinoderm and crustacea, typically associated with the traditional Hawaiian diet. Fish bone accounted for 2.6 gms. of the midden, and included *acanturid*, an inshore variety, and a large *carangid*, which may have been taken offshore. A sparse amount of unidentified medium and bird bone (1.3 gms.) was collected. Mammal bone accounted for 108.1 gms. of the midden collected, and included: *sus scrofa* (63 gms.), *canis familiaris* (7.1 gms.), medium *artiodactyl* (2.5 gms.), and unidentified small to large mammal (35.5 gms.). Unidentified vertebrate (2.4 gms.) accounted for the rest of the midden collected.

A total of 63.8 gms. of charcoal was collected from Test Unit # 1. Stratum IIIA yielded 11 gms.

ranging in depth from 80-105 cmbs. Stratum IIIB yielded 15.8 gms. ranging in depth from 120-135 cmbs. The fill of Feature A yielded 0.3 gms. at 80 cmbs. The fill of Feature B yielded 36.7 gms. ranging in depth from 70-133 cmbs. A sample from Stratum IIIB (120-135 cmbs) was submitted for carbon dating analysis, and yielded a date range of 1430-1640 A.D. A sample from the fill of Feature B (127-133 cmbs) was submitted for carbon dating analysis, and yielded a date range of 1420-1660 A.D.

The majority of midden and indigenous artifacts were collected from Stratum IIIB and the fill of Feature B. No historic or modern materials occurred within Stratum IIIB. Modern construction debris was collected from Stratum I to Stratum IIIA. The majority of the possible historic artifacts were concentrated within the upper reaches of Feature B. The position and nature of the various materials within the stratigraphic profile suggests the artifactual and midden deposition within Stratum IIIB represents traditional Hawaiian habitation. Carbon dating analysis strongly indicates that the deposition occurred in pre-Contact times. Feature B may be a historic intrusion in Stratum IIIB, with some mixing occurring. Additionally, modern construction activity, though intruding down as far as Stratum IIIA, does not seem to have heavily impacted Stratum IIIB.

Test Unit # 2

A total of 32 indigenous artifacts were collected from Test Unit # 2. These included 28 basalt flakes, 3 volcanic glass flakes, and 1 volcanic glass nodule. One artifact was collected from Stratum IA, three from Stratum IC, three from Stratum IIA, eight from Stratum IIB, and seventeen from Stratum IIC.

A total of 48 historic/modern artifacts were collected from Test Unit # 2. The majority was comprised of modern construction related rubble, including: clay roofing tile fragments, rusted metal nails, a washer, and fragments, a galvanized nail, intact tie wire, a plastic lid and cup, and mortar fragments. Glass fragments present were not diagnostic. Possible historic period artifacts included a glass marble, a bakelite button, a clay pipe stem fragment and a Chinese porcelain platter dating from the late 19th to the early 20th century. The materials collected were fairly evenly dispersed throughout the stratigraphic profile, from the surface and Stratum IA down to the bottom of Stratum IIB, at a depth of 105 cmbs. Of note, is that the Chinese porcelain plate was collected at the bottom of Stratum IIB from within an `ili `ili concentration, suggesting that the plate and the `ili `ili represent contemporaneous historic activities at this portion of the project area.

A total 110 gms. of midden were collected from Test Unit # 2. The vast majority (94 gms.) was comprised of marine invertebrate species. These included traditionally consumed and locally available gastropods, bivalves, echinoderm, and crustacea. Unidentified fish bone comprised 1.1 gms. of the collected material. Mammal, including *canis familiaris* and small to medium mammal comprised 13.9 gms. One gram of unidentified vertebrate was collected. As included was 0.7 gms. of *kukui* nut endocarp. The midden collected occurred within Stratum IC through Stratum IIC, ranging in depth from 65-125 cmbs. The highest concentration occurred within

Strata IIB and IIC.

A total of 25.9 gms. of charcoal was collected from Test Unit # 2. Stratum I (0-10 cmbs) yielded 0.1 gms. Stratum IC (65-75 cmbs) yielded 0.8 gms. Stratum IIA (75-85 cmbs) yielded 4.9 gms. Stratum IIB (85-105 cmbs) yielded 11.4 gms. Stratum IIC (110-125 cmbs) yielded 8.7 gms.

The distribution of modern construction rubble and historic period artifacts, combined with traditional Hawaiian artifacts and midden, the latter of which were concentrated mostly within lower layers of the stratigraphic profile, suggests that though a cultural layer may be represented, it has been repeatedly disturbed throughout historic and modern times.

V. DATING ANALYSIS

Six charcoal samples were sent to Beta Analytic, Inc. for dating analysis. The results are presented in Table 2 which has columns for Cultural Surveys Hawaii's sample number, Trench or Unit, Feature association, Stratum designations, depth below surface (cmbs) and calibrated age. The calibrated age presented represents the 2 sigma 95% probability range.

Table 2: Radiocarbon Dating Results

CSH#	Trench/Unit	Feature	Stratum	Depth (cmbs)	Calibrated Age
C-6	Unit 1	A	Feature fill	127-133	AD 1420-1660
C-8	Unit 1	-	IIIB	120-135	AD 1430-1640
C-15	Trench A	A	Feature fill	110	AD 1655-1950
C-20	Trench D	-	IIIB	110-120	AD 1460-1700 1720-1820 1920-
C-22	Trench D	Intact dog burial	Feature fill	110-112	AD 1490-1700 1720-1880 1910-
C-28	Trench D	-	IIIA	95	AD 1669-1950

Based on the excavation results samples were chosen to best ascertain the age of what was perceived as a pre-Contact cultural layer, Stratum IIIB. Additional samples were chosen to test specific features. In all cases the samples were chosen based on vertical provenience and weight.

The results of the analysis indicate that Stratum IIIB does represent a traditional Hawaiian occupation layer, dating at least to *ca* A.D. 1420 to A.D. 1660. Two of the six samples (C-6 and C-8) from hand-dug unit I, dated within this range. Sample C-6 was from a pit feature appearing to originate in Str. IIIA, above Str. IIIB, but which is intrusive through Str. IIIB. Sample C-8 from Str. IIIB, was from essentially the same depth below surface as C-6 but not from any distinct feature within Str. IIIB. Thus, though there is the possibility of mixing between the feature and Str. IIIB the date range provides clear evidence of pre-Contact occupation at the Lahaina Court House project area.

Two of the remaining samples, C-15 and C-28, have ranges of 1660 to 1950. Sample C-15 was recovered from a feature which contained a mottled sandy matrix with *ili`ili* and sparse shell midden. The feature appeared to be truncated or cut off by overlying Stratum, *i.e.* Str. IIB. Sample C-28 was recovered from Str. IIIA in Trench D. Though the wide age makes interpretation tenuous, the dates are indicative of a continuum of use after *ca.* A.D. 1420 - 1660 date range documented for Str. IIIB.

The analysis of the two remaining samples; C-20 and C-28, each provided multiple calendric ranges. Sample C-20 was collected from Str. IIIB within Trench D. The date ranges include A.D. 1460-1700, 1720-1820, and 1920- . Of the three ranges, the A.D. 1460 to 1700 has the highest probability, 76% within the 2 sigma confidence level. Sample C-22 was collected from the intact dog burial feature at the southeastern end of Trench D.

The dog burial feature appeared to originate at the base of Str. IA/IB and extended through underlying strata including Str. IIIB. The feature contained numerous water-rounded basalt cobbles to small boulders and indigenous artifacts and midden. The date ranges include A.D. 1490-1700, A.D. 1720-1880, and A.D. 1910- . There was no feature-specific charcoal concentration and collection of the sample was from screened material. The feature is intrusive through the pre-Contact cultural layer, IIIB, and the resulting date ranges could be the product of mixing.

The radiocarbon analysis has provided good evidence that Str. IIIB represents a pre-Contact cultural layer dating to *ca* A.D. 1420 to 1660. Samples from Strata above IIIB had either multiple calendric ranges or long-time ranges of *ca*. 1650-1950. Although more difficult to interpret, the dates are indicative of a sequence of occupation starting at least as early as A.D. 1420 and continuing into the present.

VI. SUMMARY

The excavations at the Lahaina Courthouse project area included construction related trenches (e.g., sewer and waterline) and trenching specific to subsurface archaeological investigations. The primary concern related to the construction excavations was the possibility of inadvertently disturbed human burials; none were encountered during any phase of work. The primary objective of the subsequent archaeological excavations was to characterize the nature of the project area's stratigraphic sequence. We believe that the data generated allowed for the characterization and culminated in the designation of a new State site number - #50-50-03-4754 - for the subsurface cultural deposits at the Lahaina Courthouse project area.

Background historic and archaeological research indicated that the project area was located within a zone of permanent coastal habitation during the pre-Contact era. The environment of the project vicinity was conducive to traditional Hawaiian occupation and it became a favored locale of *ali`i*, both prior to and after the arrival of foreigners. Kamehameha I ordered the "Brick Palace" built ca. A.D. 1800. It is also at this time that the encampment of associated *ali`i* and warriors extended from the Brick Palace southwards to Mokuhinia Pond (Kamakau 1992), Klieger *et al.* 1995, Major and Klieger 1995). Lahaina became the capitol of the Kingdom in the early 1800s. In the early 1830s a coral block fort was built either in part or very close to the present project area. The fort was torn down and its quarried coral blocks utilized in the construction of the prison and present Courthouse, ca. 1860. The Courthouse grounds eventually included a Governor's mansion near the corner of Front and Hotel Streets and the large banyan tree planted ca. 1875. The Courthouse and the surrounding areas were significantly altered throughout the early- to mid-1900s. The building itself underwent a major renovation in 1925. The canal of Canal Street, which was probably dug out to help drain adjacent properties in the mid 1800s was backfilled at least in part with beach sand (Kennedy 1989). The beach fronting the Courthouse was eventually turned into the present-day harbor through a series of different construction episodes. The photographic documentation also reveals extensive changes to the landscaping of the Courthouse grounds. The background research provides ample evidence of the numerous and extensive land-altering activities that have occurred within and immediately adjacent to the present project area.

The subsurface testing has revealed an indigenous Hawaiian occupation layer dating to ca A.D. 1420-1660 with subsequent historic-era layers superimposed on top. The cultural layers have been allotted State Site #50-50-03-4754.

The indigenous cultural layer was more distinct, thicker and contained more observable midden and artifacts on the southern side of the building. The layer designated Str. IIIB was most evident in Trenches C, D and Unit 1. Stratum IIIB in the three excavations consisted of dark brown organically-stained sand layer containing indigenous artifacts and midden, approximately 1m. to 1.2 m. below the present ground surface. Directly overlying Str. IIIB is Str. IIIA, also predominantly marine sand in content but containing some terrestrial sediments and basalt boulders to cobbles. Stratum IIIA is suggested to represent late prehistoric to early historic occupation.

North of the building, Trenches A and B did not contain the same well-defined cultural layer. Stratigraphically, the layer was present but was definitely not as well defined. The reasons for the difference are not clear but appear to be related to environmental factors, such as proximity to the former shoreline, in the case of Trench A and also differing degrees of historic disturbance.

Superimposed on Stratum III (A and B) is Stratum II, which varies in terms of soil type and other observable characteristics across the project area. South of the building Str. II is represented by a sand lens or layer in Trenches C, D and Unit 1. In Trenches A and B, north of the building, as well as Unit 2, just *mauka* of the building, Stratum II is represented by compact clay loam soil matrix within which are numerous coral chunks. In Trench B and Unit 2 this clay loam/coral layer sits on top of a compact gravelly layer with a high percentage of *ili`ili* pebbles. These two excavations, Trench B and Unit 2, are closest to the building and the compact clay coral and *ili`ili* layers probably are directly associated with the ground preparation needed to construct the Courthouse. The presence of the *ili`ili* is particularly interesting, though the pebbles are naturally present in varying percentages throughout Stratum IIIA and IIIB, they are not in the concentration, nor the degree of compactness observed in Trench B and Unit 2. In excavations related to the "Brick Palace" an *ili`ili* concentration was also noted and was suggested that it represented paving. It may be that the compacted layer with the *ili`ili* in it is evidence of building material from the "Old Fort" being incorporated into the foundation work of the Courthouse, but at this point it is only speculation.

Stratum IA and IB represents historic to modern landscaping soil layers. They contain a mix of modern material such as plastics, aluminum and glass and also material such as building plaster and rusted metal fragments.

Pit features were present in all of the excavations. The features included modern subsurface utility trenches, abandoned older pipe trenches, trash pits with a mix of modern (e.g., plastic sheeting) and older historic artifacts (e.g., square nails), refuse pits with a mix of traditional Hawaiian midden remains and an intact dog burial within a pit containing predominantly water-rounded basalt cobbles to small boulders.

The largest pit features were observed in Trench D on the southern side of the Courthouse. The large trash pit in which lumber was observed extends from Str. IA to Str. IV, the sterile basal sand layer. Observed with the lumber was at least one square nail, plentiful mortar, concrete and wire mesh. The majority of the artifacts appeared to be related to the 1925 renovation of the Courthouse. However, plastic sheeting material was present. The sheeting, at least in part, encapsulated the trash pit. Based on the presence of the plastic sheeting a later date than 1925 appears likely, although the material present may be a mix of courthouse renovation debris.

The intact dog burial at the southeast end of Trench D was also intrusive through layers IIIA and IIIB, appearing to originate below IA. The pit consisted of upper layers of clay loam to loamy sand over a water-rounded basalt stone fill with a sandy matrix. The pit contained both historic and indigenous artifacts. The historic-era artifacts include a range

VII. SIGNIFICANCE AND RECOMMENDATIONS

A. Significance

Site 50-50-03-4754 refers to the subsurface cultural deposit within the Lahaina Courthouse project area. The site is considered significant under Criteria A, C and D of the State and National Register of Historic Places Criteria of Significance.

The site includes both pre-and post-Contact cultural layers starting as early as A.D. 1420. The layers contain evidence of pre-Contact Lahaina occupation and early historic to modern activity. The site is demonstrative of the broad patterns of indigenous and post-western contact activity within the core of the Lahaina Historic District (*i.e.* Criterion A).

The site is also a good example (*i.e.* Criterion C) of buried cultural layers that still contain undisturbed strata related to both the pre-and post-Contact eras. The site also contains evidence of the critical time period of early acculturation after western contact at a location (*i.e.* Lahaina) that has well documented early historic accounts which could allow for excellent research potential.

Site -4754 has already yielded significant information, including pre-Contact dates and evidence of post-Contact construction activities of a significant historic structure. The subsurface deposits are also significant for their pre-historical and historical archaeological research potential (*i.e.* Criterion D).

B. Recommendations

Site 50-50-03-4754 is recommended for preservation. The site contains significant cultural deposits, which, based on review of previous research, is relatively rare in the core Lahaina area, due mainly to historic and modern land activities. Based on stratigraphic documentation, it does appear that the top 30 to 50 cm. is modern top soil and does not contain (in areas tested) significant features or artifactual materials. This suggests that necessary subsurface work that stays above the 30 to 50 cm. level could be accommodated. Excavations that would go below this level should be subjected to necessary State and County review processes.

of material from fragments of glass and rusted metal to a 4-hole machine made button. The indigenous material included basalt and volcanic glass flakes, a coral abrader and 3 adz fragments. A charcoal sample from a hand-excavated portion of the feature, but collected from the screened material, yielded multiple calendric numbers of A.D. 1490-1700, A.D. 1720-1880, and A.D. 1910-. The feature is intrusive through Strata IIIA and IIIB, and incorporation of charcoal from these layers into feature fill probably accounts for the multiple calendric ranges. The feature is a purposeful interment of a young articulated dog (per. comm. Dr. Zeigler), not a pig as first thought. Based on the absence of charcoal concentrations it does not appear that the feature represents an *imu* (underground oven), though the rocky fill is suggestive of that function. It appears more probable therefore that the interment represents a ceremonial function.

Test Units 1 and 2 were excavated specifically to ascertain whether the pig remains noted in Unit 1 were an articulated, and to expose and document a reported boulder and mortar feature at Unit 2 vicinity. Unit 1 excavation did indicate that the pig was articulated. The feature also contained other midden components (*e.g.*, shell) and a mix of historic and indigenous artifacts, with a preponderance of historic. Unit 1 excavation also revealed a second pit feature which was stratigraphically lower and intrusive into Strata IIIA and IIIB. A charcoal sample collected from this second feature yielded a date range of A.D. 1420 to 1660, however, there were historic-era artifacts also recovered from the feature, although at a higher level than the bottom the feature where the charcoal sample was collected. Again, this is suggestive of mixing of pre-and post-Contact strata.

Test Unit 2 excavations did not reveal the boulder and mortar features reported (per com. Dee Fredericksen). The original 1 m² unit was expanded, utilizing both backhoe and hand digging methods. The unit did display interesting stratigraphy, including the compact gravelly *'ili`ili* discussed earlier.

The excavations at the Lahaina Courthouse exposed significant cultural and historic-era deposits. The data generated can be used to provide significance assessments and recommendations for future treatment.

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APPENDIX A: CATALOGS

Midden Catalog

Soil Samples Catalog

Indigenous Artifacts Catalog

Historic Artifact Catalog

MIDDEN CATALOG

Project: Lahaina Courthouse Renovation

Trench	Test Unit #1	Test Unit #1	Test Unit #1	Test Unit #1	Test Unit #1	Test Unit #1
Location	SE Quad		W half	SW expansion		
Feature			Feature A	Feature A	Feature B	Feature B
Depth (cm.)	80bs	85-90bs	80-90bs	80bs	70/90-80/100	90-115bs
Stratum	IIIA	IIIA	fill	fill	fill	fill
Class Gastropoda						
Cellana sp.						0.7
Conus sp.	8.2					16
Cymatium sp.						
Cypraea caputserpentis			4.9			0.8
Cypraea maculifera						
Cypraea sp.						
Littorina sp.						1.1
Nerita granosa						
Nerita picea			0.5			3.3
Theodoxus cariosus						
Strombus maculata						
Thaididae sp.						0.3
Trochus intextus						
Turbo sandvicensis			1.8	0.1		
Brachidontes crebristriatus						
Isognomon sp.				0.5		
Periglypta reticulata						
Tellina sp.						
Misc./Unidentified shell						41.8
Total shell midden	8.2	0	7.2	0.6	0	64
Echinoderm			0.2			2
Crustacea						
Total marine invertebrate	8.2	0	7.4	0.6	0	66
Class shark, ray, eel						
Shark						
Class fish						
Acanthurid						0.3
Carangid						
Labrid						
Lutjanid						
Priacanthid						
Scarid						
Unidentified fish					0.3	1
Total fish	0	0	0	0	0.3	1.3
Total marine midden	8.2	0	7.4	0.6	0.3	67.3
Class Aves						
Medium procellariid						
Medium bird						0.4
Medium or large bird						
Large bird						
Total bird	0	0	0	0	0	0.4
Class Mammalia						
Rattus exulans						
Canis familiaris						7.1
Capra hircus/Ovis sp.						
Bos taurus						
Sus scrofa		32.9	9.5	15.7	2.2	1.8
Sus scrofa or medium artiodactyl						

MIDDEN CATALOG

Medium artiodactyl						2.5
Small to medium &/or medium mammal	1.8		4.3	0.2	0.8	18.1
Medium mammal						4.3
Medium or large mammal						3.4
Large mammal						
Total mammal	1.8	32.9	13.8	15.9	3	37.2
Total terrestrial midden	1.8	32.9	13.8	15.9	3	37.6
Small &/or medium vertebrate		0.9				
Medium vertebrate						
Total unidentified vertebrate	0	0.9	0	0	0	0
Kukui endocarps				0.3		
Total midden	10	33.8	21.2	16.8	3.3	104.9

MIDDEN CATALOG

Project: Lahaina Courthouse Renovation

Trench	Test Unit #1	Test Unit #1	Test Unit #1	Test Unit #2	Test Unit #2	Test Unit #2
Location						
Feature	Feature B					
Depth (cm.)	127-133bs	115-120bs	120-135bs	65-75bs	85-95	95-105bs
Stratum	fill	IIIA	IIIB	IC	IIB	IIB
Class Gastropoda						
Cellana sp.		0.2				0.1
Conus sp.						1.1
Cymatium sp.						
Cypraea caputserpentis		2.5				
Cypraea maculifera		2.4				
Cypraea sp.						
Littorina sp.						2.1
Nerita granosa						
Nerita picea			0.3			
Theodoxus cariosus						
Strombus maculata						
Thaididae sp.						
Trochus intextus						0.6
Turbo sandvicensis		2.5	3.9			2.2
Brachidontes crebristriatus						
Isognomon sp.			1.3	1.9		
Periglypta reticulata				13.7		
Tellina sp.						
Misc./Unidentified shell		1.8	4.7			3.4
Total shell midden	0	9.4	10.2	15.6	0	9.5
Echinoderm		0.3	0.1			0.7
Crustacea		0.1	6.4			
Total marine invertebrate	0	9.8	16.7	15.6	0	10.2
Class shark, ray, eel						
Shark						
Class fish						
Acanthurid						
Carangid	0.7					
Labrid						
Lutjanid						
Priacanthid						
Scarid						
Unidentified fish			0.3	0.6	0.5	
Total fish	0.7	0	0.3	0.6	0.5	0
Total marine midden	0.7	9.8	17	16.2	0.5	10.2
Class Aves						
Medium procellariid						
Medium bird						
Medium or large bird						
Large bird			0.9			
Total bird	0	0	0.9	0	0	0
Class Mammalia						
Rattus exulans						
Canis familiaris					1.1	
Capra hircus/Ovis sp.						
Bos taurus						
Sus scrofa			0.9			
Sus scrofa or medium artiodactyl						

MIDDEN CATALOG

Medium artiodactyl						
Small to medium &/or medium mammal			2.6			
Medium mammal				3.4		
Medium or large mammal						
Large mammal						
Total mammal	0	0	3.5	3.4	1.1	0
Total terrestrial midden	0	0	4.4	3.4	1.1	0
Small &/or medium vertebrate	0.2		1.3		0.6	
Medium vertebrate				0.4		
Total unidentified vertebrate	0.2	0	1.3	0.4	0.6	0
Kukui endocarps				0.7		
Total midden	0.9	9.8	22.7	20.7	2.2	10.2

MIDDEN CATALOG

Project: Lahaina Courthouse Renovation

Trench	Test Unit #2	Test Unit #2	Test Unit #2	Backhoe Tr. B2	Backhoe Tr. B2	Backhoe Tr. C
Location		SE quad			E end	N end
Feature						
Depth (cm.)	100-105bs	105bs	110-120/125bs	0-40bs	100bs	25bs
Stratum	IIB	IIB	IIC	I	IIIA	IA
Class Gastropoda						
Cellana sp.			0.4			
Conus sp.					4.4	
Cymatium sp.						
Cypraea caputserpentis						3.4
Cypraea maculifera						
Cypraea sp.						
Littorina sp.	2.8		1.5			
Nerita granosa			1.4			
Nerita picea	1.3		0.7			
Theodoxus cariosus						
Strombus maculata						
Thaididae sp.						
Trochus intextus						
Turbo sandvicensis	8.8		17.9			
Brachidontes crebristriatus						
Isognomon sp.			0.1			
Periglypta reticulata						
Tellina sp.						
Misc./Unidentified shell	18.6		10.3			
Total shell midden	31.5	0	32.3	0	4.4	3.4
Echinoderm	0.4		4			
Crustacea						
Total marine invertebrate	31.9	0	36.3	0	4.4	3.4
Class shark, ray, eel						
Shark						
Class fish						
Acanthurid						
Carangid						
Labrid						
Lutjanid						
Priacanthid						
Scarid						
Unidentified fish						
Total fish	0	0	0	0	0	0
Total marine midden	31.9	0	36.3	0	4.4	3.4
Class Aves						
Medium procellariid						
Medium bird						
Medium or large bird				0.9		
Large bird						
Total bird	0	0	0	0.9	0	0
Class Mammalia						
Rattus exulans						
Canis familiaris		9.4				
Capra hircus/Ovis sp.						48
Bos taurus				23.9		138.6
Sus scrofa					100.1	
Sus scrofa or medium artiodactyl						

MIDDEN CATALOG

Medium artiodactyl						41.8
Small to medium &/or medium mammal					2.7	
Medium mammal						
Medium or large mammal				15.9	7.4	15.1
Large mammal				8.9		137.5
Total mammal	0	9.4	0	48.7	110.2	381
Total terrestrial midden	0	9.4	0	49.6	110.2	381
Small &/or medium vertebrate						
Medium vertebrate						
Total unidentified vertebrate	0	0	0	0	0	0
Kukui endocarps						
Total midden	31.9	9.4	36.3	49.6	114.6	384.4

MIDDEN CATALOG

Project: Lahaina Courthouse Renovation

Trench	Backhoe Tr. D	Backhoe Tr. D	Backhoe Tr. D	Backhoe Tr. D	Backhoe Tr. D	Backhoe Tr. D
Location	W end	1 m E		near wood	6.5m E	7.4-7.6 m E
Feature				near Feature A		
Depth (cm.)		80	80-100	BOE	BOE	40-83bd
Stratum		IV	shovel test	cleanup	cleanup	IIB-IIIB
Class Gastropoda						
Cellana sp.						0.5
Conus sp.						
Cymatium sp.						
Cypraea caputserpentis						0.4
Cypraea maculifera						
Cypraea sp.						
Littorina sp.						
Nerita granosa						
Nerita picea						3.2
Theodoxus cariosus						
Strombus maculata						0.8
Thaididae sp.						
Trochus intextus						0.3
Turbo sandvicensis				8.2		14.8
Brachidontes crebristriatus						
Isognomon sp.						0.4
Periglypta reticulata						0.2
Tellina sp.						
Misc./Unidentified shell						20
Total shell midden	0	0	0	8.2	0	40.6
Echinoderm						1.3
Crustacea						0.3
Total marine invertebrate	0	0	0	8.2	0	42.2
Class shark, ray, eel						
Shark						
Class fish						
Acanthurid						0.1
Carangid						0.1
Labrid						
Lutjanid						
Priacanthid						
Scarid						
Unidentified fish			2.2		0.7	5.2
Total fish	0	0	2.2	0	0.7	5.4
Total marine midden	0	0	2.2	8.2	0.7	47.6
Class Aves						
Medium procellariid					0.6	
Medium bird						0.3
Medium or large bird						
Large bird						
Total bird	0	0	0	0	0.6	0.3
Class Mammalia						
Rattus exulans						
Canis familiaris		4.5	0.4			
Capra hircus/Ovis sp.						
Bos taurus						
Sus scrofa	40.3					
Sus scrofa or medium artiodactyl						

MIDDEN CATALOG

Medium artiodactyl	24.6			5.7		
Small to medium &/or medium mammal						
Medium mammal						
Medium or large mammal						
Large mammal	125.6					
Total mammal	190.5	4.5	0.4	5.7	0	0
Total terrestrial midden	190.5	4.5	0.4	5.7	0.6	0.3
Small &/or medium vertebrate			0.7			1.9
Medium vertebrate						
Total unidentified vertebrate	0	0	0.7	0	0	1.9
Kukui endocarps						
Total midden	190.5	4.5	3.3	13.9	1.3	49.8

MIDDEN CATALOG

Project: Lahaina Courthouse Renovation

Trench	Backhoe Tr. D	Backhoe Tr. D	Backhoe Tr. D	Backhoe Tr. D	Backhoe Tr. D	Backhoe Tr. D
Location	7.5-8.0 m E	7.5-8.0 m E	7.8-8.3 m E	7.8-8.3 m E	7.8-8.3 m E	8.0-8.6 m E
Feature						
Depth (cm.)	25-30	30-40bd	15-25bd	25-35bd	35-41bd	BOE
Stratum	IIIB/Top	IIIB/Bottom	IIIB	IIB	IIIB	cleanup
Class Gastropoda						
Cellana sp.		1.2		19.8	0.5	
Conus sp.		1.8			4	
Cymatium sp.		0.8		0.8	0.2	
Cypraea caputserpentis				11.2		
Cypraea maculifera						
Cypraea sp.					1.3	
Littorina sp.					0.2	
Nerita granosa						
Nerita picea		4.8		10.1	7.2	
Theodoxus cariosus					0.5	
Strombus maculata		0.7			4.1	
Thaididae sp.						
Trochus intextus		0.4		1.5	1.6	
Turbo sandvicensis		26.9		39.4	38.2	
Brachidontes crebristriatus						
Isognomon sp.		0.2		1	0.6	
Periglypta reticulata		0.8		1.1	0.3	
Tellina sp.				0.8		
Misc./Unidentified shell		56.2		87.1	42.9	
Total shell midden	0	93.8	0	172.8	101.6	0
Echinoderm		0.9		10.4	9.1	
Crustacea		0.3		17.7	0.4	
Total marine invertebrate	0	95	0	200.9	111.1	0
Class shark, ray, eel						
Shark	0.2					
Class fish						
Acanthurid	0.2					
Carangid	0.1					
Labrid	0.2					
Lutjanid						
Priacanthid						
Scarid	0.2					
Unidentified fish	1.9					
Total fish	2.8	0	0	0	0	0
Total marine midden	2.8	95	0	200.9	111.1	0
Class Aves						
Medium procellariid						
Medium bird	0.3					
Medium or large bird	0.1					
Large bird						
Total bird	0.4	0	0	0	0	0
Class Mammalia						
Rattus exulans	0.1					
Canis familiaris	0.3					2.1
Capra hircus/Ovis sp.						
Bos taurus						
Sus scrofa	0.4					
Sus scrofa or medium artiodactyl	0.6					

MIDDEN CATALOG

Medium artiodactyl						
Small to medium &/or medium mammal	1.9					
Medium mammal						
Medium or large mammal						
Large mammal						
Total mammal	3.3	0	0	0	0	2.1
Total terrestrial midden	3.7	0	0	0	0	2.1
Small &/or medium vertebrate	2.7					
Medium vertebrate						
Total unidentified vertebrate	2.7	0	0	0	0	0
Kukui endocarps						
Total midden	9.2	95	0	200.9	111.1	2.1

MIDDEN CATALOG

Project: Lahaina Courthouse Renovation

Trench	Backhoe Tr. D	Backhoe Tr. D	Backhoe Tr. D	Backhoe Tr. D	Backhoe Tr. D	Backhoe Tr. D
Location	8.2-8.4 m E	8.2-9.3 m E	8.2-9.3 m E	9.3-10 m E	8.5-10.3 m E	near wood
Feature	Feature B	Feature B	Feature B	Feature B		near Feature A
Depth (cm.)	25-35bd	40-42bd	42-?bd	25/30-30/40bs	BOE	BOE
Stratum	fill	fill	fill	IIIA	cleanup	cleanup
Class Gastropoda						
Cellana sp.	0.7	7.4	1.3	3.5		
Conus sp.		27.9	1.3	0.4		
Cymatium sp.						
Cypraea caputserpentis	1.1	1.4	0.2			
Cypraea maculifera		1.4				
Cypraea sp.				1.8		
Littorina sp.		1				
Nerita granosa						
Nerita picea	1	6.5	4.8	5		
Theodoxus cariosus						
Strombus maculata	0.5		0.3			
Thaididae sp.	0.3					
Trochus intextus			1.1	0.8		
Turbo sandvicensis	1.9	29.5	14.7	13.3		8.2
Brachidontes crebristriatus		0.1				
Isognomon sp.	0.2	0.2		0.2		
Periglypta reticulata	0.4	1.1	0.5	1.3		
Tellina sp.				0.8		
Misc./Unidentified shell	7.4	28	20.8	11.8		
Total shell midden	13.5	104.5	45	38.9	0	8.2
Echinoderm	0.7	7.8	2.3	1.9		
Crustacea	0.6					
Total marine invertebrate	14.8	112.3	47.3	40.8	0	8.2
Class shark, ray, eel						
Shark						
Class fish						
Acanthurid						
Carangid	0.1					
Labrid						
Lutjanid					3.2	1.1
Priacanthid	0.2					
Scarid						
Unidentified fish	0.3					3.7
Total fish	0.6	0	0	0	3.2	4.8
Total marine midden	15.4	112.3	47.3	40.8	3.2	13
Class Aves						
Medium procellariid						
Medium bird	0.2					
Medium or large bird						
Large bird						
Total bird	0.2	0	0	0	0	0
Class Mammalia						
Rattus exulans						
Canis familiaris						3.3
Capra hircus/Ovis sp.						
Bos taurus						
Sus scrofa						12.5
Sus scrofa or medium artiodactyl						

MIDDEN CATALOG

Medium artiodactyl						
Small to medium &/or medium mammal	1.7				2.3	20.8
Medium mammal	6.5					
Medium or large mammal						
Large mammal						
Total mammal	8.2	0	0	0	2.3	36.6
Total terrestrial midden	8.4	0	0	0	2.3	36.6
Small &/or medium vertebrate	1					
Medium vertebrate						1.4
Total unidentified vertebrate	1	0	0	0	0	1.4
Kukui endocarps		0.5		1.2		
Total midden	24.8	112.8	47.3	42	5.5	51

MIDDEN CATALOG

Project: Lahaina Courthouse Renovation

Trench	Backhoe Tr. D	
Location		
Feature		
Depth (cm.)	90-110bs	
Stratum	backdirt	
Class Gastropoda		
Cellana sp.		36.3
Conus sp.		65.1
Cymatium sp.		1.8
Cypraea caputserpentis		25.9
Cypraea maculifera		3.8
Cypraea sp.		3.1
Littorina sp.		8.7
Nerita granosa		1.4
Nerita picea		48.7
Theodoxus cariosus		0.5
Strombus maculata		6.4
Thaididae sp.		0.6
Trochus intextus		6.3
Turbo sandvicensis		232.3
Brachidontes crebristriatus		0.1
Isognomon sp.		6.6
Periglypta reticulata		19.4
Tellina sp.		1.6
Misc./Unidentified shell		354.8
Total shell midden	0	823.4
Echinoderm		42.1
Crustacea		25.8
Total marine invertebrate	0	891.3
Class shark, ray, eel		
Shark		0.2
Class fish		
Acanthurid		0.6
Carangid		1
Labrid		0.2
Lutjanid		4.3
Priacanthid		0.2
Scarid		0.2
Unidentified fish	0.4	17.1
Total fish	0.4	23.8
Total marine midden	0.4	915.1
Class Aves		
Medium procellariid		0.6
Medium bird		1.2
Medium or large bird		1
Large bird		0.9
Total bird	0	3.7
Class Mammalia		
Rattus exulans		0.1
Canis familiaris	0.6	28.8
Capra hircus/Ovis sp.		48
Bos taurus		162.5
Sus scrofa		216.3
Sus scrofa or medium artiodactyl		0.6

MIDDEN CATALOG

Medium artiodactyl		74.6
Small to medium &/or medium mammal	1.3	58.5
Medium mammal	5.4	19.6
Medium or large mammal		41.8
Large mammal		272
Total mammal	7.3	922.8
Total terrestrial midden	7.3	926.5
Small &/or medium vertebrate	2	11.3
Medium vertebrate		1.8
Total unidentified vertebrate	2	13.1
Kukui endocarps		2.7
Total midden	9.7	1857.4

SOIL SAMPLES CATALOG

Project: Lahaina Courthouse Restoration Survey

Acc #	Trench	Location/ Feature	Stratum	Depth (cm.)	Weight (gms.)	Description
S-1	A		IA	15ad	405	10YR 4/3 brown, silt loam, very fine to medium sub-angular blocky, very abrupt wavy
S-2	A		IB	0bd	447	5YR 4/2 yellowish-red, silty clay loam, very abrupt smooth
S-3	A		IIA	25bd	497	5YR 4/2 yellowish-red, silty clay loam, very abrupt smooth
S-4	A		IIB	35bd	426	10YR 3/3 dark brown, sandy loam, well sorted w/ 5-10% coralline sand, chunks of charcoal, abrupt wavy
S-5	A		IIIA	65-70bd	565	Same as IIA with coral chunks and some water-rounded gravel at base, abrupt wavy
S-6	A		IVA	80-90bd	881	10YR 5/3 brown, "A" horizon on beach sand with weakly expressed 10YR 6/2 light brownish grey loamy sand, very abrupt wavy boundary
S-7	A		IVB	110-115bd	1155	10YR 5/2 grayish brown sand mottled with 7.5YR 3/3 dark brown sandy loam
S-8	A		IVC	125bd	1504	10YR 3/2 very dark greyish brown, sandy clay loam, graded fine to medium
S-9	B2		IA	15bd	314	10YR 3/2 very dark greyish brown, sandy clay loam, coarse
S-10	B2		IB	35bd	367	2.5YR dark reddish brown, clay loam, fine-medium blocky, minimal coralline sand, few mortar chunks, very abrupt wavy boundary
S-11	B2		IC	55bd	337	10YR 3/3 dusky red, clay loam, well-sorted massive, higher % clay than IA, few mortar flecks, very abrupt smooth boundary
S-12	B2		II	70-75bd	366	10YR 3/2 very dark greyish brown, loamy sand, small peds, few mortar flecks, marine shell, abrupt wavy
S-13	B2		IIIA	95bd	463	10YR 3/2 very dark greyish brown, sandy loam with 10-20% coralline sand, sparse charcoal flecking
S-14	B2		IIIB	105bd	490	10YR 4/2 dark greyish brown, loamy sand, 20-40% coralline sand, very abrupt wavy boundary
S-15	B2		IIIC	120bd	410	2.5YR 3/3 dark reddish brown, clay loam, 20-40% basalt pebbles to boulders, very abrupt smooth boundary
S-16	C		IA-IB	0-71 cmbs	764	10YR 3/2 very dark greyish brown, sandy loam, charcoal flecking, very abrupt wavy, features extend into St. IV
S-17	C		II	71-78bs	779	5YR 4/4 clay loam
						10YR 3/4 dark yellowish brown, fine to medium coralline beach sand, >1% water-rounded pebbles

SOIL SAMPLES CATALOG

Project: Lahaina Courthouse Restoration Survey

Acc #	Trench	Location/ Feature	Stratum	Depth (cm.)	Weight (gms.)	Description
S-18	C		IIIA-IIIB	78-130bs	1004	IIIA = 10YR 5/4 yellowish brown, sandy loam, 20-40% coralline sand mixed w/ terrestrial silt, 5-10% basalt water-rounded cobbles & boulders, some charcoal chunks
						IIIB = 10YR 5/3 pre- 1925 fill layer, "A" horizon on beach sand, few basalt flakes, 5cm thick abrupt wavy boundary
S-19	C		IV	130-148bs	887	10YR 7/8 yellow beach sand
S-20	C	Feature C, W wall	fill	80bs	338	Red & black crushed cinders, contained galvanized wire nails and plaster
S-21	D		IA	50-55+ad	271	5YR 3/2 dark reddish brown, weak, medium peds, angular blocky, abrupt wavy boundary
S-22	D		IB	15-20ad	295	5YR 3/3 dark reddish brown, clay loam, small to medium peds, subangular blocky
S-23	D		II	0-5ad	177	5YR 4/3 reddish brown, fine sandy clay loam
S-24	D		IIIA	10-15bd	384	IIIA = 10YR 5/4 yellowish brown, sandy loam, 20-40% coralline sand mixed w/ terrestrial silt, 5-10% basalt water-rounded cobbles & boulders, some charcoal chunks
S-25	D		IIIB	35-60bd	481	IIIB = 10YR 5/3 pre- 1925 fill layer, "A" horizon on beach sand, few basalt flakes, 5cm thick abrupt wavy boundary
S-26	D		IV	60bd	411	10YR 7/8 yellow beach sand

INDIGENOUS ARTIFACT CATALOG

Project: Lahaina Courthouse Renovation

Acc #	Trench/ Location	Feature	Stratum	Depth (cm.)	# pieces	Length (cm.)	Width (cm.)	Thickness (cm.)	Weight (gms.)	Material	Function	Comments
1	A	Feature A	fill	110bs	1	8.7	7	5.7	237	Basalt	manuport	fire cracked fragment
2	A		IIIA	90-110bs	2	5.5/7.8	3.2/4.8	1.3/1.2	78.6	Basalt	flakes	
3	A		IIIA	90-110bs	1	5.8	1.7	1.8	35.9	Basalt	adz	preform
4	A2		IA	0-10 bs	1	7.2	6.9	2.5	183	Basalt	manuport	water-rounded pebble fragment
5	Test Unit # 1		II	50-60 bs	1	7.6	6.8	4	331	Basalt	manuport	water-rounded cobble
6	Test Unit # 1		II	50-60 bs	1	4.4	2.5	1.2	12.7	Basalt	flake	polished facet
7	Test Unit #1		II	55-65bs	3	1.9/4.6	0.8/1.8	0.5/1.3	22.1	Basalt	flakes	
8	Test Unit #1		IIIA	80-90bs	2	1.8/2.4	1.2/1.9	0.4/0.6	3.6	Basalt	flakes	
9	Test Unit #1	Feature A	fill	80 bs	1	3.8	2.8	0.6	7.4	Basalt	flake	
10	Test Unit #1	Feature B	fill	70/80-80/100 bs	9	1.1/3.6	0.4/2.1	0.2/0.7	14.3	Basalt	flakes	
11	Test Unit #1	Feature B	fill	90-115bs	1	1.2	1	0.2	0.3	Basalt	flake	polished, one facet
12	Test Unit #1	Feature B	fill	90-115bs	18	1.8/4.9	0.7/2.4	0.1/1.2	46.6	Basalt	flakes	
13	Test Unit #1	Feature B	fill	90-115bs	2	1.1/1.2	0.5/1.0	0.3/0.2	0.5	V-glass	flakes	
14	Test Unit #1	Feature B	fill	90-115bs	14	1.7/3.6	1.0/2.7	0.2/0.4	28.2	Basalt	flakes	
15	Test Unit #1	Feature B	fill	127-133bs	1	4.5	2.9	0.7	11.4	Basalt	flake	
16	Test Unit #1	Below Feature B	IIIA	115-120bs	1	6.1	1.2	0.6	4	Bone	worked	pointed, poss. awl
17	Test Unit #1	Below Feature B	IIIA	115-120bs	9	1.7/3.5	0.7/2.6	0.2/0.3	25.4	Basalt	flakes	
18	Test Unit #1		IIIB	120-135	13	1.0/3.5	0.8/0.6	0.2/0.5	14/3	Basalt	flakes	
19	Test Unit #2		IA	0-10	1	2.4	2.2	0.3	2.6	Basalt	flake	
20	Test Unit #2		IC	65-75bs	3	2.7/4.7	2.1/2.1	0.6/1.1	25.4	Basalt	flakes	
21	Test Unit #2		IIA	75-85bs	2	2.1/2.7	1.5/1.1	0.2/0.3	2.7	Basalt	flakes	
22	Test Unit #2		IIA	75-85bs	1	1.1	0.6	0.6	0.5	Basalt	flake	
23	Test Unit #2		IIB	85-95 bs	2	1.2/1.1	0.6/1.0	0.1/0.5	0.8	Basalt	flakes	
24	Test Unit #2		IIB	85-95 bs	1	1.1	0.7	0.2	0.1	V-glass	flake	
25	Test Unit #2		IIB	95-105bs	2	1.0/1.5	0.4/1.1	0.1/0.2	0.7	Basalt	flakes	
26	Test Unit #2		IIB	95-105bs	1	0.4	0.3	0.1	0.1	V-glass	flake	
27	Test Unit #2		IIB	100-105bs	1	0.7	0.4	0.1	0.1	V-glass	flake	
28	Test Unit #2		IIB	100-105bs	1	2	1.4	0.3	1.2	Basalt	flake	
29	Test Unit #2		IIC	110-120/125bs	16	0.6/2.8	0.5/1.7	0.1/0.7	11.7	Basalt	flakes	
30	Test Unit #2		IIC	110-120/125bs	1	0.5	0.3	0.3	0.2	V-glass	nodule	

INDIGENOUS ARTIFACT CATALOG

Project: Lahaina Courthouse Renovation

Acc #	Trench/ Location	Feature	Stratum	Depth (cm.)	# pieces	Length (cm.)	Width (cm.)	Thickness (cm.)	Weight (gms.)	Material	Function	Comments
31	B2		IIIA	100 bs	1	6.6	5.6	1.2	61.7	Basalt	flake	fire-cracked
32	D/monitoring	Shovel test	IIIB	80-100bs	11	0.8/2.6	0.6/2.2	0.1/0.3	3.6	Basalt	flakes	
33	D/monitoring	Shovel test	IIIB	80-100bs	2	2.5/5.7	1.9/3.5	1.2/2.4	76.9	Basalt	manuports	water-rounded pebbles
34	D/monitoring		IIIB	100bs	1	6.2	4.8	3.8	258.8	Basalt	adz	blade
35	D/monitoring		IIIB	100bs	1	11.2	4.4	3.7	295.8	Basalt	adz	preform
36	D/monitoring		IIIB	90-100 bs	7	0.6/3.5	0.4/2.4	0.1/1.1	10.3	Basalt	flakes	
37	D/monitoring		IIIB	90-100 bs	1	5.2	3.7	1	20	Bone	cut/worked	turtle shell
38	D/monitoring		IIIB	90-100 bs	1	2.7	2.2	0.7	9.5	Basalt	manuport	water-rounded pebble
39	D/monitoring		IIIB	90-100bs	8	1.5/3.8	1.1/2.3	0.2/1.0	21.2	Basalt	flakes	
40	D/monitoring		IIIB	90-110bs	16	1.1/3.6	0.9/2.6	0.2/0.4	33.1	Basalt	flakes	
41	D/monitoring		IIIB	90-110bs	1	4.2	3.1	2.5	53.7	Basalt	core	
42	D/monitoring		backdirt		1	4.1	2	1.1	6.5	Basalt	adz	blade fragment
43	D/monitoring		backdirt		1	9.1	3.6	1.9	81.7	Basalt	awl	
44	D/monitoring		backdirt		35	0.9/7.2	0.4/3.5	0.2/1.5	288	Basalt	flakes	
45	D 6.5 m E		clean up	BOE	2	1.8/5.9	1.0/2.3	0.2/0.4	39.2	Basalt	flakes	
46	D 7.4-7.6 m E	Feature B	fill	40-83bd	57	0.3/3.1	0.2/2.1	0.1/0.5	9.6	Basalt	flakes	
47	D 8.3 m E	Feature B	fill	15 bd	1	5.3	2.8	2.6	30.9	Coral	abrader	conical
48	D 8.2-8.4	Feature B	fill	25-35 bd	24	0.5/1.5	0.3/1.1	0.1/0.2	4.2	Basalt	flakes	
49	D 8.2-9.3m E	Feature B	fill	40-42bd	45	0.5/3.2	0.4/1.6	0.1/0.8	25.8	Basalt	flakes	
50	D 8.2-9.3m E	Feature B	fill	40-42bd	8	0.4/1.3	0.3/0.8	0.2/0.5	2.1	V-glass	flakes	
51	D 8.2-9.3m E	Feature B	fill	42/?bd	29	0.4/2.3	0.3/1.7	0.1/0.6	11.3	Basalt	flakes	
52	D 7.5-8.0 m E		IIIB top	25-30bd	89	0.4/2.8	0.3/1.4	0.1/0.5	30.6	Basalt	flakes	
53	D 7.5-8.0m E		IIIB bottom	30-40bd	14	0.5/2.8	0.4/2.1	0.1/0.3	3.7	Basalt	flakes	
54	D 7.5-8.0m E		IIIB bottom	30-40bd	8	0.3/0.7	0.2/0.5	0.1/0.2	0.2	V-glass	flakes	
55	D 7.8-8.3m E		IIIB	15-25bd	1	1.7	1.4	0.3	1.2	Basalt	flake	
56	D 7.8-8.3m E		IIIB	15-25bd	4	0.5/0.7	0.4/0.4	0.1/0.2	0.2	V-glass	flakes	
57	D 7.8-8.3m E		IIIB	15-25bd	153	0.4/3.2	0.3/1.9	0.1/0.7	31.8	Basalt	flakes	
58	D 7.8-8.3m E		IIB	25-35bd	1	0.6	0.4	0.2	0.1	V-glass	flake	
59	D 7.8-8.3m E		IIB	25-35bd	183	0.4/3.7	0.4/2.2	0.1/0.5	48.2	Basalt	flakes	
60	D 7.8-8.3m E		IIIB	35-41bd	12	0.5/2.7	0.4/2.0	0.1/0.5	2.9	Basalt	flakes	

INDIGENOUS ARTIFACT CATALOG

Project: Lahaina Courthouse Renovation

Acc #	Trench/ Location	Feature	Stratum	Depth (cm.)	# pieces	Length (cm.)	Width (cm.)	Thickness (cm.)	Weight (gms.)	Material	Function	Comments
61	D 7.9 m E		IIIB	25 bd	1	4.1	2.4	1.9	13.1	Basalt	adz	blade fragment
62	D 8.0-8.6 m E		cleanup	BOE	1	4.1	2.4	1.4	14.3	Basalt	flake	
63	D 8.5-10.3 m E		cleanup	BOE	12	2.1/5.4	1.2/2.8	0.2/0.9	55.5	Basalt	flakes	
64	D 9.3-10m E		IIIA	25/30-30/40bd	72	0.4/6.2	0.3/3.3	0.1/0.8	59.6	Basalt	flakes	
65	D E end		cleanup	25-40 bd	5	1.9/4.1	0.9/2.8	0.1/0.4	13.3	Basalt	flakes	
66	D E end	near Feature A	cleanup		5	1.6/4.6	1.1/2.5	0.4/0.7	23.4	Basalt	flakes	

HISTORIC ARTIFACT CATALOG

Project: Lahaina Courthouse Renovation

Acc #	Trench/ Location	Feature	Stratum	Depth (cm.)	# pieces	Length (cm.)	Width (cm.)	Thickness (cm.)	Weight (gms.)	Material	Function	Comments
1												
2	LAHA1			surface	1	4.8	3.3	0.6	16.9	Glass	bottle	brown fragment
3	LAHA1			surface	1	4.5	2.2	0.5	7	Ceramic	yellow ware	fragment
4	A	monitoring	IA	0-25bs	1	6	1.4	1.1	17.2	Glass	opium bottle	clear
5	A	monitoring	IIIA	90-110bs	1	1.9	1.1	0.1	0.7	Glass	fragment	clear
6	A	monitoring	IIIA	90-110bs	1	4	3.6	0.5	12.4	Ironstone	saucer	fragment, pale blue, English, 1850-1910
7	Test Unit #1	LAHA1		cleanup	1	3.3	1.7	0.4	2.2	Ceramic	white ware	ivory coated plate fragment, late 19th/early 20th cen.
8	Test Unit #1	LAHA1		cleanup	1	7.4	1.5	1.2	10.1	Metal	nail	rusted
9	Test Unit #1	LAHA1		cleanup	1	5.0/8.2	4.8/5.2	1.2/1.2	179.7	Clay	roofing tile	fragment
10	Test Unit #1		IA	0-10bs	22	1.8/10.1	1.5/4.5	0.8/1.2	763	Clay	roofing tile	fragments
11	Test Unit #1		IA	10-20bs	4	2.4/10.5	1.7/8.1	1.2/1.2	237.9	Clay	roofing tile	fragments
12	Test Unit #1		IB	30-40bs	1	9.1	5.7	2.6	104.4	Concrete	fragment	
13	Test Unit #1		IB	30-40 bs	3	6.7/8.8	6.2/8.6	1.1/1.1	261.3	Clay	roofing tile	fragments
14	Test Unit #1		IB	30-40/bs	13	3.7/11.4	2.2/8.4	1.2/1.2	706	Clay	roofing tile	fragments
15	Test Unit #1		IB	30-40/bs	1	2.9	2.3	0.6	6.1	Mortar	fragment	
16	Test Unit #1		IB	30-40/bs	1	6.6	2	1.5	21.1	Metal	bolt	rusted
17	Test Unit #1		IB	30-40/bs	1	5.4	3.7	2.4	26.5	Roofing tar	fragment	
18	Test Unit #1		IB	30-40/bs	2	1.0/1.1	0.4/0.9	0.2/0.3	0.4	Roofing tar	fragments	
19	Test Unit #1		IB	40-50bs	1	10.7	2.5	1.1	38.8	Metal	bolt	rusted
20	Test Unit #1		IB	40-50bs	1	15.2	2.6	2.4	35.3	Wood	fragment	not decomposed
21	Test Unit #1		IB	40-50bs	1	10.8	5.4	2.6	140.7	Metal	chunk	rusted
22	Test Unit #1		IB	40-50bs	5	4.9/11.0	3.3/7.0	1.2/1.2	344	Clay	roofing tile	fragments
23	Test Unit #1		II	55-65bs	2	2.4/3.4	1.5/2.4	0.2/1.0	9.3	Mortar	fragments	
24	Test Unit #1		II	55-65bs	3	0.7/1.8	0.5/1.3	0.6/1.0	4.8	Roofing tar	fragments	
25	Test Unit #1		II	55-65bs	1	3.3	2.5	0.3	2	Metal	fragment	rusted
26	Test Unit #1		II	50-60bs	1	3.4	1.9	0.2	3.4	Glass	fragment	brown
27	Test Unit #1		II	50-60bs	1	3.9	0.9	0.2	1.6	Glass	fragment	clear, flat
28	Test Unit #1		II	50-60bs	1	5.2	0.5	0.5	3	Metal	nail	rusted
29	Test Unit #1		II	50-60bs	1	2.8	1.5	0.2	2.2	Glass	fragment	brown
30	Test Unit #1		II	50-60bs	1	3.5	2.3	0.1	0.9	Plaster	fragment	

HISTORIC ARTIFACT CATALOG

Project: Lahaina Courthouse Renovation

Acc #	Trench/ Location	Feature	Stratum	Depth (cm.)	# pieces	Length (cm.)	Width (cm.)	Thickness (cm.)	Weight (gms.)	Material	Function	Comments
31	Test Unit #1		IIA	60-70bs	1	2.3	1.8	0.5	2.6	Ceramic	rice bowl	Japanese, blue-gray w/ blue design
32	Test Unit #1		IIA	60-70bs	8	3.6/8.6	2.3/7.1	1.2/1.2	368	Clay	roofing tile	fragments
33	Test Unit #1		IIIA	70-80bs	7	4.2/10.0	1.1/5.3	1.2/1.2	238.8	Clay	roofing tile	fragments
34	Test Unit #1		IIIA	70-80bs	1	2.1	1.7	0.2	1.7	Plastic	fragment	white
35	Test Unit #1		IIIA	115-120bs	2	1.1/2.7	0.7/1.3	0.1/0.2	1	Glass	fragments	brown
36	Test Unit #1		IIIA	115-120bs	1	3.7	2.3	0.3	1	Metal	fragment	rusted
37	Test Unit #1	Feature B	fill	90-115bs	2	1.8/1.7	1.0/1.2	0.6/0.6	2.5	Ceramic	rice bowl	fragments, blue-green w/ blue design
38	Test Unit #1	Feature B	fill	90-115bs	2	2.5/4.1	0.6/0.9	0.6/0.8	6.6	Metal	nails	fragments, rusted
39	Test Unit #1	Feature B	fill	90-115bs	8	1.4/2.8	0.9/2.1	0.1/0.3	8.7	Metal	fragments	rusted
40	Test Unit #1	Feature B	fill	90-115bs	1	1.4	1.2	0.4	0.9	Earthenware	fragment	annular band, white, black, & brown
41	Test Unit #1	Feature B	fill	90-115bs	1	1.2	0.5	0.3	0.3	Porcelain	rice bowl	fragment, Japanese, blue & white, late 19th/early 20th cen.
42	Test Unit #1	Feature B	fill	90-115bs	1	2.8	0.7	0.2	0.7	Glass	fragment	brown
43	Test Unit #1	Feature B	fill	90-115bs	1	1	0.4	0.2	0.2	Glass	fragment	clear
44	Test Unit #1	Feature B	fill	90-115bs	1	1.1	0.9	0.1	0.2	Glass	fragment	amber
45	Test Unit #1	Feature B	fill	90-115bs	1	3.8	2.5	0.2	5.3	Metal	fragment	rusted
46	Test Unit #2		IA	0-10bs	6	3.4/6.4	2.5/2.4	1.2/1.2	156.7	Clay	roofing tile	fragments
47	Test Unit #2		IA	0-10bs	1	11.5	2.6	1.6	24.3	Plastic	lid	green fragment
48	Test Unit #2		IA	0-10bs	1	3.6	3.6	0.3	16.5	Metal	washer	rusted
49	Test Unit #2		IA	0-10bs	1	5.9	0.6	0.6	3	Metal	nail	galvanized 8 penny
50	Test Unit #2		IA	0-10bs	1	6.4	3.3	0.1	1.2	Plastic	cup	fragment, opaque
51	Test Unit #2		IA	10-20bs	1	4.6	1.6	0.2	3.1	Glass	fragment	clear, flat
52	Test Unit #2		IA	10-20bs	9	3.3/7.1	2.0/5.7	1.2/1.2	237.8	Clay	roofing tile	fragments
53	Test Unit #2		IA	10-20bs	1	50	0.2	0.2	6.1	Metal	tie wire	rusted, not brittle
54	Test Unit #2		IA	20-30bs	1	10.8	10.7	1.2	164.3	Clay	roofing tile	fragment
55	Test Unit #2		IA	20-30bs	1	1.3	1.3	1.3	5	Glass	marble	
56	Test Unit #2		IA	20-30bs	1	4.6	4.6	2.6	8.7	Plastic	cap	blue
57	Test Unit #2		IB	30-40bs	1	01/01	02/02	0.8	2	Bakelite	button	light brown
58	Test Unit #2		IB	30-40bs	1	3.1	0.6	0.6	1.9	Clay	pipe stem	fragment
59	Test Unit #2		IC	65-75bs	4	1.7/3.3	1.4/1.8	0.2/0.3	5.8	Glass	fragments	1 clear, 1 green, 2 brown

HISTORIC ARTIFACT CATALOG

Project: Lahaina Courthouse Renovation

Acc #	Trench/ Location	Feature	Stratum	Depth (cm.)	# pieces	Length (cm.)	Width (cm.)	Thickness (cm.)	Weight (gms.)	Material	Function	Comments
60	Test Unit #2		IC	65-75bs	1	4.5	3	1.8	14.1	Metal	fragment	rusted
61	Test Unit #2		IC	65-75bs	1	1.8	1.5	0.3	1.1	Mortar	fragment	
62	Test unit #2		IIA	75-85 bs	1	6.9	3.6	1.5	41.8	Mortar	fragment	
63	Test unit #2		IIA	75-85 bs	1	3	0.6	0.4	3.3	Metal	spike	tip fragment
64	Test unit #2		IIB	85-95bs	3	0.9/2.4	0.9/1.9	0.5/1.1	6.9	Mortar	fragments	
65	Test Unit #2		IIB	95-105bs	4	0.9/1.1	0.6/0.7	0.1/0.2	1.1	Metal	fragments	rusted
66	Test Unit #2		IIB	90-105bs	1	0.4	0.3	0.2	0.1	Glass	fragment	green
67	Test Unit #2B	SE quad w/ 'ili'ili	IIB	105bs	1	3.9	2.2	0.3	4.9	Porcelain	platter	fragment, Chinese, blue-grey w/ blue crysanthemum pattern, late 19th/early 20th cen.
68	Test Unit #2		IIC	110-120/125bs	1	1.4	0.7	0.4	0.5	Clay	roofing tile	fragment, red orange
69	Test Unit #2		IIC	110-120/125bs	2	1.6/2.0	0.5/1.0	0.4/0.7	1.1	Metal	fragments	rusted
70	Test Unit #2		IIC	110-120/125bs	2	1.0/1.5	0.9/1.1	0.5/0.4	0.9	Metal	fragments	rusted
71	C/North end	monitoring	IA	25bs	1	4.7	0.3	0.3	3.8	Metal	nail	galvanized fragment
72	C/North end	monitoring	IA	25bs	1	2	1	0.7	1.9	Mortar	fragment	
73	C/North end	monitoring	IA	25bs	1	6.1	3.5	0.2	11	Glass	fragment	brown, beer
74	C/North end	monitoring	IA	25bs	1	7.1	3.1	1	23	Mortar	fragment	
75	C/North end	monitoring	IA	25bs	1	5.3	1.6	0.9	3.3	Wood	fragment	not decomposed
76	C	monitoring	IA-IV	0-140bs	1	10.9	5.8	1.4	111.2	Clay	sewer pipe	fragment
77	C	monitoring	IA-IV	0-140bs	1	11.2	8.2	3.3	164.7	Plaster	fragment	cloth impressions one side
78	C	monitoring	IA-IV	0-140bs	1	4.7	4	0.5	9.7	Glass	fragment	brown, beer
79	C	monitoring	IA-IV	0-140bs	1	4.9	3.2	0.6	31.1	Glass	bottle	square base fragment, brown, "Worsterchire" style
80	C	monitoring	IA-IV	0-140bs	2	3.8/6.3	2.2/3.3	0.4/0.6	61	Glass	bottle	fragments
81	C	monitoring	IA-IV	0-140bs	1	3.9	0.7	0.7	2.7	Clay	pipe stem	white fragment
82	C	monitoring	IA-IV	0-140bs	1	1.2	0.5	0.2	0.1	Mortar	fragment	
83	C	monitoring	IA-IV	0-140bs	1	4	2.4	0.7	8.9	Stoneware	bottle	English ale, Bristol glaze
84	C	monitoring	IA-IV	0-140bs	3	4.5/4.0	1.7/3.0	0.2/0.2	18.2	Glass	bottle	aqua medicinal fragments, w/ neck
85	C	monitoring	IA-IV	0-140bs	1	6.5	0.6	0.6	4.8	Metal	nail	rusted
86	C	monitoring	IA-IV	0-140bs	1	7.3	0.7	0.7	8.5	Metal	square nail	rusted

HISTORIC ARTIFACT CATALOG

Project: Lahaina Courthouse Renovation

Acc #	Trench/ Location	Feature	Stratum	Depth (cm.)	# pieces	Length (cm.)	Width (cm.)	Thickness (cm.)	Weight (gms.)	Material	Function	Comments
87	C	monitoring	IA-IV	0-140bs	2	3.4/5.0	2.4/4.8	0.4/0.5	16.7	Glass	fragments	clear
88	C	monitoring	IA-IV	0-140bs	1	1.9	1.9	0.2	1.3	Metal	penny	modern, Lincoln
89	D West end	monitoring	IIIA	75-110bs	1	6.2	5.2	3.1	38.5	Brick	fragment	red
90	D	monitoring	IIIA	80bs	1	12.5	8	0.1	35.1	Metal	sheet	fragment
91	D	monitoring	IIIB	90-100bs	1	1.2	0.8	0.1	0.1	Paper	firecracker	fragment
92	D	monitoring	IIIB	90-110bs	1	1.5	0.8	0.2	0.5	Glass	fragment	green
93	D	monitoring	IIIB	90-100bs	1	3.2	3.2	1.3	21.2	Metal	fragment	rusted
94	D	monitoring		backdirt	1	3.7	2.5	1.9	9.9	Plaster	fragment	
95	D	monitoring		backdirt	1	4.9	2.7	0.9	10.2	Stoneware	fragment	English ale, Bristol glaze
96	D	monitoring		backdirt	2	4.1/5.5	0.6/1.0	0.5/0.8	6.3	Metal	nails	one whole, one fragment
97	D	monitoring		backdirt	1	2.2	0.6	0.6	1.3	Clay	pipe stem	fragment
98	D	monitoring		backdirt	2	2.5/2.4	0.9/1.5	0.4/0.2	2	Glass	fragments	olive green
99	D 4.2 m E	Feature A	fill	35-5ad	Indet.	—	—	—	0.2	Plastic	sheeting	fragments
100	D 4.2 m E	Feature A	fill	35-5ad	1	1.4	1.4	0.1	0.1	Metal	aluminum foil	fragment
101	D 4.2 m E	Feature A	fill	35-5ad	1	1.7	1.6	0.1	0.1	Tape	fragment	black electrical
102	D 4.2 m E	Feature A	fill	35-5ad	11	1.4/3.1	1.1/2.0	0.3/1.5	21.6	Mortar	fragments	
103	D 4.2 m E	Feature A	fill	35-5ad	1	5.4	0.9	0.7	5.2	Metal	nail	fragment
104	D	Feature A, E end	cleanup	BOE	1	1.7	1.2	0.4	1.4	Asphalt	roofing paper	fragment
105	D	Feature A	cleanup	BOE	1	3	2.2	2.2	9.4	Concrete	fragment	
106	D	Feature A	cleanup	BOE	2	3.2/4.9	0.3/0.8	0.3/0.8	3.9	Metal	nails	rusted fragments
107	D	Feature A	cleanup	BOE	5	0.3/0.3	0.3/0.3	0.3/0.3	25.1	Metal	nails	galvanized
108	D	Feature A	cleanup	BOE	1	2.3	1.1	0.3	1	Metal	fragment	rusted
109	D	Feature A	cleanup	BOE	1	3.4	3.2	0.3	6.9	Glass	fragment	brown bottle
110	D	Feature A	cleanup	BOE	1	3.6	2.1	0.1	0.6	Plastic	fragment	
111	D 7.5-8.0 m E		IIIB top	25-30bd	2	0.8/0.9	0.5/0.6	0.1/0.1	0.1	Paper	firecracker	fragments
112	D 7.5-8.0 m E		IIIB top	25-30bd	1	3.3	2.1	1.1	4.3	Mortar	fragment	
113	D 7.8-8.3m		IIIB	15-25bd	1	0.9	0.7	0.1	0.2	Metal	fragment	rusted
114	D 7.8-8.3m		IIIB	35-41bd	1	1.4	0.7	0.2	0.7	Metal	fragment	rusted
115	D 8.2-8.9m E	Feature B	fill	25-35 bd	3	0.6/1.7	0.3/0.6	0.2/0.5	0.9	Metal	nails	rusted fragments
116	D 8.2-9.3m E	Feature B	fill	40-42bd	1	1.5	0.8	0.2	0.3	Bakalite	button	fragment, white, 4-holed machined

HISTORIC ARTIFACT CATALOG

Project: Lahaina Courthouse Renovation

Acc #	Trench/ Location	Feature	Stratum	Depth (cm.)	# pieces	Length (cm.)	Width (cm.)	Thickness (cm.)	Weight (gms.)	Material	Function	Comments
117	D 8.2-9.3m E	Feature B	fill	40-42bd	1	1.2	0.4	0.3	0.3	Glass	fragment	brown
118	D 8.2-9.3m E	Feature B	fill	40-42bd	2	2.5/3.9	1.1/0.8	0.7/0.7	8.4	Metal	nails	rusted fragments
119	D 8.2-9.3m E	Feature B	fill	40-42bd	26	0.3/2.7	0.3/2.2	0.2/0.3	31.6	Metal	fragments	rusted
120	D 9.3-10m E		IIIA	25/30-30/40bd	1	2.9	1	0.2	0.4	Glass	fragment	clear window
121	D East end		cleanup	25-40bd	1	1.9	1.4	0.6	3.6	Mortar	fragment	
122	D East end		cleanup	25-40bd	1	2.8	0.5	0.5	1.1	Clay	pipe stem	white fragment
123	D East end		cleanup	BOE	1	2	1.1	0.4	1.3	Glass	bottle	aqua medicinal fragment
124	D East end		cleanup	BOE	1	1.5	0.8	0.2	0.4	Glass	fragment	brown
125	D	Feature A	fill	40-130bs	1	12.3	5.4	2.7	49.5	Wood	lumber	fragment w/ galvanized nail
126	D	Feature A	fill	40-130bs	7	6.5/15	2.6/2.6	0.5/2.4	80.1	Wood	lumber	fragments, not decomposed
127	D	Feature A	fill	40-130bs	1	7.9	1.2	0.5	13.6	Metal	nail	rusted
128	D	Feature A	fill	40-130bs	1	8.9	0.6	0.6	10.9	Metal	nail	galvanized
129	D	Feature A	fill	40-130bs	1	6.9	1.2	0.9	7.2	Metal	nail	rusted
130	D	Feature A	fill	40-130bs	1	9.5	1.7	0.1	0.7	Tape	electrical	black

APPENDIX B: PHOTO APPENDIX