

Section 4 Historic Artifacts

4.1 Methodology

The artifacts were divided into three categories: glass bottles, ceramic vessels, and miscellaneous artifacts. A total of 1,283 historic artifact/artifact fragments was collected, consisting of 380 ceramic vessel/ceramic vessel fragments, 477 glass bottle/bottle fragments, and 426 miscellaneous items. In the Test Excavation Volumes of this report (Volumes IVa to IVb), a summary of this information is presented by tables related to test excavation, with accompanying photographs. The test excavation tables have less information than the tables in the following section, and in a slightly different form (i.e. some information in the different columns are summarized, merged, or moved). In this section of the report, a complete description of the historic artifacts is presented in table format, with information on artifact attributes and measurements. Historic artifacts have an accession number, starting with the test excavation number, followed by A (for historic artifacts) and a number. Some ceramic vessels, glass bottles, or other items may consist of several fragments. All fragments from the same vessel/bottle are assigned the same accession number, thus the total number of “artifacts,” or fragments is usually greater than the total of accession numbers. Accession numbers are used consecutively for all historic artifacts within the three categories for one test excavation, with the result that the “first” bottle or miscellaneous artifact in the following tables may not start with Acc. # 1. The text preceding the tables indicates how the recorded attributes or descriptions were used to determine the age, ethnic origin, and function of the artifact. The text also includes the reference sources used to identify: the glass makers, potteries, or other companies that manufactured the items; the bottlers or companies who bought the glass, ceramics, or metal items and filled them with their product or modified them for sale to the public; and, any specific information concerning the relationship of these companies to Hawai'i and to the Kalihi to Kālia area of the Honolulu District.

Ceramic (dinnerware) vessels and glass have specific attributes that can be analyzed to identify types, decorations, motifs, and manufacturing dates. The attributes are type, paste, paste color, glaze, background color, decoration, design motif, and rim motif. Similar fragments and portions are compared and are used to determine the minimum number of vessels, as some fragments may be from the same vessel. Accession numbers were assigned to each possible vessel. A dash within a table cell indicates that the attribute was not applicable to that specific item or that a fragment was too incomplete to determine a specific attribute. For instance, under design motif, if the information is “None,” the fragment was large enough to determine that there was no design. If the information area has a dash and no verbiage it indicates that, although there was no design on one fragment, there might have been a design on the complete vessel, but the fragment was too small to definitely determine.

Glass bottles have specific attributes that are analyzed to identify the manufacturing technique, the manufacturing date, and the probable contents of the bottle. The attributes recorded are lip type, lip finish, color, dimensions, base shape, the type of mold seams (if any), and any embossing or other type of label on the bottle. The portion (including complete bottles) of each bottle fragment was recorded in order to determine a minimum number of bottles for each provenience (e.g., two small amber body fragments and two aqua bottle bases could be

portions of a maximum of six bottles or may be from just three bottles (one amber and two aqua). Again, accession numbers are presented for each possible vessel; thus, an accession number may represent more than one fragment. A dash in a cell indicates that a fragment did not include the attribute and could not be determined. For instance, the fragment was a bottle base only, so the lip finish could not be recorded.

Miscellaneous artifacts, including non-bottle glass fragments (such as insulators and window glass), non-dinnerware ceramics (such as flowerpots and tiles), and metal items are not generally analyzed by a wide variety of specific attributes; instead they are briefly described in tables presented in the following section.

Some abbreviations used in the following tables include Acc. # (Accession Number), Prov. (Provenience), frag. (fragments), pc. (piece), No./no. (number), Bkg (Background), Decor. (Decoration), int. (interior), ext. (exterior), H or Ht. (Height), W (Width), D or Di. (Diameter), and T (Thickness). All artifact measurements were recorded in centimeters (cm), except bricks, which were measured in inches (in.).

4.2 Glass Bottles

There have been a number of attempts to standardize the description of glass bottle attributes, but each analytical system uses a variety of descriptive terms and date ranges for specific attributes. In the last few years, the Bureau of Land Management and the Society for Historic Archaeology have maintained and continually updated a site called “Historic Glass Bottle Identification & Information Website.” All descriptive terms for glass bottles and all date ranges for manufacturing techniques were taken from this source, unless otherwise noted (referenced as BLM/SHA 2013). As the website is continually updated, page numbers or URL addresses for specific terms/dates are not given in this section, as these pages change frequently, but general chapter headings are provided, which allow researchers to find the general area of the information used. A researcher can also access the glossary page, which has links to specific pages where bottle attributes and their dates are discussed in greater detail.

The glass bottle website generally deals with attributes for American and Canadian made utilitarian bottles (common bottles for low-cost items). The website notes that date ranges for specific manufacturing improvements may be different for bottles made in other parts of the world. As noted on the website (BLM/SHA 2013_FAQs, page 5), new bottle manufacturing techniques, especially from 1890 to 1920, were introduced or adopted more quickly in North America. Along similar lines, older, more labor-intensive methods were abandoned more quickly in North America than in other parts of the world. These facts mean that a manufacturing technique no longer used for North-American-made bottles could still be present in Europe or Asia twenty or thirty years later.

The country in which the bottles were made cannot be determined for the majority of the fragments, or even for most complete bottles. The manufacturing date ranges for the bottles are presented in the following tables with the assumption that the bottles are American/Canadian made. This assumption is not a far-reaching one, as the non-American glass manufacturers who did export business into North America had to compete with the North-American companies, and thus were some of the European/Asian companies that also quickly adapted new methods.

The European/Asian glass companies that lagged behind in new technological methods, but still exported their bottles to North America, tended to be the companies dealing in specialty, high-cost goods such as wine, champagne, gin, and sake. This appears to be especially true for countries who exported the square-tapered bottles called “case gins,” which were still free-blown by European manufacturers into the 1920s (BLM/SHA 2013_Bottle Typing/Diagnostic Shapes). This difference in age ranges between North American and European glass manufacturers is of special interest to the current project, as the only bottles with pontil marks (associated with mouth-blown bottles) are found specifically on case gin bottles (Figure 30). A mouth-blown case gin bottle of American manufacture would most likely predate 1860, meaning that the pontilled bottles recovered during the present project would be the oldest glass bottles in the artifact collection. However, these bottles are thought to be European imports, and thus may actually date as late as the 1920s.



Figure 30. Case gin bottle base with pontil mark on right (Acc. # 227A-A-5)

4.2.1 Manufacturing Techniques

There are three major technological divisions in the manufacture of glass bottles. From antiquity, bottles have been free-blown (mouth-blown using a blowpipe and no formal mold). In the United States and Canada, free-blown utilitarian bottles generally predate 1860. Free-blown utilitarian bottles can be characterized by an asymmetrical body, a crude lip (top), and a pontil mark on the base. The bottles were blown with a blowpipe and then held steady on a pontil rod so that the glassmaker could finish the lip by hand. This finishing process left a mark or groove, called a pontil, on the base of the bottle. Depending on the type of rod tip used, the pontil mark can be a deep indentation, a scar of rough glass fragments, or a deposit of iron. All of these marks tend to be rough to the touch. Near the end of the free-blown-glass era, a snap case or sabot was used to hold the bottle. This new technique did not leave any rough marks on the base. Therefore, although almost all pontil-marked bottles are free-blown (with some specific

exceptions), there are also free-blown bottles without a pontil. As noted above, only two case gin bottles from the historic artifact collection had pontil marks and can be definitely identified as free-blown bottles (BLM/SHA 2013_Body & Seams). The majority of the bottles from the HHCTCP collection postdate this free-blown glass period. Instead, they are either mouth-blown in a mold (mold-blown) or they are machine-blown.

For all these methods, the glassmaker uses a blowpipe to the mouth, even during the second major manufacturing period, the North American mold-blown period, from ca. 1800 to 1920. During this period, the common method calls on the artisan to blow the base of the bottle into dip molds, during the early years. Later in the era, the artisan would blow the base into more elaborate two- or three-piece (or more) molds, with different sections for base, body, and shoulder/neck. A column in each of the glass bottle tables holds data regarding the type of mold seams on each bottle (See BLM/SHA 2013_Body and Seams). If there is a dash in that column, it means that the fragment was too small (or not a distinguishable enough portion) to determine the type of mold seam. In some cases with larger fragments or whole bottles, no seams are present. A free-blown bottle does not have a seam, but a specific type of mold-blown bottle may also not have a seam. Between 1880 and ca. 1920, bottles were made in a turn-mold in which a bottle was twirled within a special mold to eliminate the mold lines. This twirling action usually produced horizontal striations on the bottle, a characteristic used to identify turn-mold bottles. Mold-blown bottles from the HHCTCP collection, where the type of mold could be identified, were made in a 2-piece cup mold (post 1870s), a 2-piece post-mold (post-1840s), a 3-piece mold (post-1815), or a turn mold (1880–1920).

The lip of the mouth-blown bottle was still finished by hand by the glass worker, which means the mold seams on these bottle end somewhere on the below the lip of the bottle. The type of lip (general shape) is recorded as an attribute, but most lip types do not have a narrow date range. However, the lip finish, the method in which the lip was completed, did change within the mold-blown period. The first lips were made by the application of new glass to the mouth of the bottle and manipulated with a finishing tool; these are called “applied lips,” which are found on bottles dating from the 1820s to the 1890s. These lips are often crude-looking and asymmetrical, with a slight ledge or line inside the bottle bore and drips of glass below the lip. A later finish is the “tooled lip.” No additional glass was added, and the bottle was reheated and manipulated with an improved finishing tool. These lips are symmetrical and do not have drips or a ledge inside the bore. This type of finish was used from the 1880s to the end of the mold blown period, ca. 1920 (for American/Canadian bottles) (BLM/SHA 2013_Finishes and Closures).

Bottles began to be blown in semi-automatic machines as early as 1898. In 1903, Michael Owens invented a fully automatic machine to blow the bottles from the base to the lip. These bottles, called ABM bottles for the Automatic Bottle Machine Owens invented, have two side mold seams running vertically from the base to the neck, up to and over the lip (referred to as an ABM lip). Wide-mouthed jars with an ABM lip postdate 1903, and narrow-mouth bottles with an ABM lip postdate 1907 (BLM/SHA 2013_Glassmaking & Glassmakers).

4.2.2 Colors

The colors of the bottle/bottle fragments found in this study were also recorded. During the mold-blown and machine-blown periods, a variety of colors were used. Typically color is not a precise indicator of date of manufacture. Many early bottles, especially those used for alcoholic

beverages (spirits) were made of a dark green/olive colored glass. In some cases, the green glass is so dark it looks almost black. True black bottles tend to date to the free-blown and mold-blown periods before 1890. True clear or colorless glass was made after 1820, but it was relatively uncommon until 1870. Clear glass with an amethyst tint, due to the addition of manganese, dates from 1880–1920 (BLM/SHA_Colors).

4.2.3 Labels

Information on the contents of the bottle, the brand name of the product contained within it, and the name of the glass bottle manufacturer can often be found on the bottle. The information could be on paper labels but could also be worked into the bottle itself. Embossing or raised letters formed in the bottle molds were used on bottles as early as 1809 in America, but this practice was fairly uncommon until 1865. Paper labels were generally used after 1850, but the paper labels on bottles generally do not survive in most types of refuse deposits. “Applied Color Labels” (ACL), which fused pigments directly onto the bottle were invented in 1933. This process was much less expensive than embossing, and on common bottles, such as for beers and sodas, ACL labels generally replaced the older embossed labels in the 1930s and 1940s. All embossed or ACL lettering on the bottles is repeated in the Comments section of the following report, with a slash (/) representing a line division. For instance, the embossed letters on the bottle in Figure 31 would be recorded as 64 / D270 / 45.

Many bottles can be dated by the brand information after research on the specific company that produced the product. There are several authors used for this research for the current report, such as Richard Fike (1987) for medicine bottles, Betty Zumwalt (1980) for condiment bottles, Rex Elliott and Steven Gould (1988) for embossed Hawaiian mold-blown bottles, and Jim Millar (1988) for machine-made Hawaiian soda bottles. Millar’s book is unpaginated, although the photographs of bottles are numbered sequentially for each island. Citations for Millar’s book include the island and photograph number (e.g. Millar 1988_Oahu 132). The internet is also a great resource for company information, especially the more reliable sites, such as the companies’ own websites.

Bottles can also be dated based on company histories of the glass manufacturer. Several glass companies marked bottles with their names or initials or with a logo, usually found on the heel or base of the bottle. Some companies even provided the year a bottle was made. One of the largest companies, the Owens-Illinois Glass Company marked the heel or base with their logo (the letter I inside an O inside of a diamond), with numbers on the left for the number of the plant, numbers below for the mold, and numbers on the right for the date. (See variation in Figure 31). From 1930 to ca. 1946, only single digits were used by this company. Therefore, bottles with the single-digit numerals 0 to 6 to the right of the icon indicate a date in the 1930s or 1940s (i.e., the digit 3 means the bottle was made in 1933 or 1943). A single digit 7, 8, or 9 means the bottle was made in 1937, 1938, or 1939. A double digit indicates the date after 1947. Bottle researcher, Bill Lockhart (2004a:25), states that, in the 1940s, a period was added after the single numeral to indicate a 1940s date. But this period mark is often difficult to see. In 1940, the Owens-Illinois company began to emboss the base of bottles with numerous dots, a process called stippling. In the same year, they also invented a new type of durable glass, called Duraglas, a term also often embossed on their bottles. Thus, if a bottle has a single digit and has stippling or the word Duraglas, then it is a 1940s bottle not a 1930s bottle (BLM/SHA_Glossary).



Figure 31. Owens-Illinois Glass Co. mark on stippled base, indicating a manufacturing date of 1945 (Acc. # 064-A-14)

The most comprehensive reference text for glass manufacturer marks is Julian Toulouse's (1971) *Bottle Makers and Their Marks*. Over the years, many bottle researchers have noted errors or missing information in this book. The Bottle Research Group, headed by Bill Lockhart, has printed a series of articles in the journal *Bottles and Extras*, the official publication of the Federation of Historical Bottle Collectors, correcting and expanding on Toulouse's work. These articles, called "The Dating Game," are reprinted in a section of the BLM/SHA site (2013_Glassmaking & Glassmakers). David Whitten (2013) used the information from books and from the internet to create an easily navigable list of glass marks on his internet site. Whitten's 2013 work is often used in this report as a reference for glass maker's marks, but, as noted, the information may have originated in an earlier work.

Other information on bottles, mandated at different times by federal law, can also be used for dating. During prohibition, bottles had to have the words "Federal Law Prohibits Sale or Reuse of this Bottle." The Pure Food and Drug Act of 1906 required the ingredients to be noted on bottles (or in the packaging), which led to the end of some of the more fraudulent and dangerous patent medicines. The Pure Food and Drug Act Amendment of 1913 required bottles to contain volume information. "No Deposit No Return" is embossed on bottles after 1940. These and other kinds of label information were used to narrow date ranges on bottles of the early twentieth century.

4.2.4 Deposition Lag

Although the manufacturing date of a bottle can often be determined, the date of its shipment to Hawai'i, the date of its purchase by a customer, and the date the item was thrown away and becomes part of a refuse or fill layer may be years after the bottle was made. For utilitarian bottles, T. Stell Newman (1970:71) has suggested a lag period of 10 years between manufacture and discard. Lockhart (2010:18) has suggested that for popular brands of soda bottles, the deposition lag may be as low as five years. The deposition lag for historic artifacts in Hawai'i may be longer, as mainland manufacturer's often sent older, stored goods to Hawai'i, and Hawai'i retailers likely kept inventory items for a longer duration before they were sold than would have been the case typically on the mainland.

4.3 Ceramic Vessels

Ceramic Vessels were analyzed for basic descriptions such as shape, paste, color, and designs. Shapes are designated as flatware (e.g., plates, shallow saucers, etc/) or hollowware (e.g., bowls, cups, etc.). When the fragment was too small to determine the general shape, the item is listed as Dinnerware. The Florida Museum of Natural History (2013) maintains an internet site with a visual guide to the analysis of historic ceramics. The website was used as the basis for attribute descriptions for paste, paste color, background color, glaze, decoration, design motif, and rim motif. Their ceramic identification site divides paste type into "earthenwares," "stonewares," and "porcelains." Other researchers, such as Riley et al. (1995:104) and Lebo (1997:G-13) have used a fourth term for certain types of Chinese and Japanese wares, "porcellaneous stonewares." Some researchers prefer the term "semi-porcelain" (e.g. University of Montana 2013) for these ceramics, and others reject the term porcellaneous stoneware and continue to use the term porcelain (Ross 2012a:14-15). The Florida Museum of Natural History (2013) guide, used for this project, still illustrates these wares as "porcelain," the term used in this report.

4.3.1 European and American Earthenwares and Stonewares

The most detailed archaeological report on the analysis of historic ceramics found in Hawaiian archaeological sites is Dr. Susan Lebo's (1997) report on the Harbor Court property in downtown Honolulu. In this report, Lebo provides not only an analysis of the ceramic artifacts found, but provides an appendix on general ceramic analysis for European eighteenth-century to twentieth-century wares, including a detailed discussion on wares and their dates. Much of this information is not pertinent to the current HHCTCP ceramic collection, as the majority of the material from the HHCTCP artifact collection seems to be limited to the late nineteenth century to the early twentieth century (based on bottle dates). Thus, early European/American wares, such as creamwares and pearlwares, were not observed in the HHCTCP ceramic collection. Most of the Western wares in the HHCTCP assemblage are refined earthenwares, many of a type called "ironstone," made from 1840 to the present (Lebo 1997:3). This type of earthenware was notably strong, often purchased by restaurants and hotels.

The identification of European and American ceramic vessels is based mainly on maker's marks, usually found on the base of dishes. The date ranges for these marks can be identified by reference sources such as Godden's (1964) *Encyclopaedia of British Pottery and Porcelain* and Lehner's (1988) *Encyclopedia of U.S. Marks on Pottery, Porcelain, and Clay*. There is also an excellent internet site on English Staffordshire potteries and their marks (Stoke-on-Trent 2013),

which gives company histories, maker's marks, and types of wares for a large number of English pottery companies.

European/American stonewares include large washbasins or chamberpots and stoneware bottles. Several stoneware bottles have a two-tone tan/cream Bristol glaze. These bottles usually date from around 1835 to 1900. Early bottles were made in Great Britain, but later ones were made in America also, and are designated in the tables as Anglo/American (Florida Museum of Natural History 2013).

4.3.2 Asian Wares

In a study of historic ceramic artifacts from an Asian community in Walnut Grove, California, the archaeologists were allowed to compare ceramics from Chinese and Japanese house lots from the 1880s to 1915 period. They (Costello and Maniery 1988:16) found that each community preferred to use wares from their own homelands, and thus they were easily able to separate most of the types of ceramics used by each group.

The Chinese wares were usually cobalt blue hand-painted underglaze vessels or overglaze polychrome wares. These are called "tz'u" wares or "Kitchen Ch'ing" wares, which were generally made from 1644 to 1911 (Lister and Lister 1989:48). The ceramics were made with a variety of motifs, listed by Lebo (1997:14–15) in her report on the Honolulu Harbor Court ceramics. The patterns on these wares include those called Allah, Double Happiness, Four Seasons (or Four Flowers), Fu, Kakiemon, Om, Peach and Fungus, Shanghai Ware (Sweet Pea), Snail, Three Circles and Dragonfly (Bamboo), and Winter Green (Celadon). The University of Montana (2013) maintains a site with numerous photographs of these different motifs. Several of these motifs were identified in the HHCTCP artifact collection, especially "Four Flowers" "Sweet Pea" and "Bamboo" (Figure 32 to Figure 34).

The Japanese ceramics were transfer-print porcelains (Figure 35) of the Meiji Period (1868–1912), usually the type called "Dashed Lines" as dashed lines outline major design elements made with patterned dots (Costello and Maniery 1988:25). These transfer-print patterns were made with paper stencils, a decoration-making method used until the end of the eighteenth century and then revived in the 1870s. This type of decoration technique went out of style in Japan in approximately 1920 (Ross 2012a:7, 5).

There were also some types of ceramics common to both Chinese and Japanese. For instance, vessels made with a celadon glaze (also called "wintergreen") were made by both nations (Figure 36). Early studies of ceramics at American historic sites indicate that the Chinese celadon vessels are a pale bluish green with blue painted characters on the dish bottom, while Japanese celadon wares are a brighter, glossier green, often painted with polychrome enamels, but more research is needed for this topic (Ross 2012a:19)

Honolulu was unlike Walnut Grove, California, in that there were no distinct Chinese city blocks versus Japanese city blocks. In addition, Goodwin and Allen (2005:260) have suggested that Hawaiians also bought and used these inexpensive Chinese and Japanese wares. For this reason, the origin of these wares is listed as only "Asian" in the attribute tables, as they cannot be used to exactly determine the ethnicity of the area's occupants. There is also some controversy over the identification of some wares in mainland Western sites; namely many of the painted



Figure 32. Ceramics, fragments of an Asian painted overglaze plate with a “Four Flowers” motif (Acc. # 104-A-1)



Figure 33. Ceramics, bowl on lower left has Asian painted underglaze “Sweet Pea” motif (Acc. # 116-A-3)



Figure 34. Ceramics, Asian rice bowl with painted underglaze “Bamboo” motif (Acc. # 202A-A-1)



Figure 35. Japanese Transfer-print “Dashed Line” ceramics (Acc. # 132-A-10 to A-12)



Figure 36. Celadon ceramic rice bowl, probably Chinese (Acc. # 053-A-1)



Figure 37. "Made in Japan" mark on ceramic fragment (Acc. # 082-A-1)

wares initially identified as Chinese are now thought to be of Japanese origin (Stenger 1993, cited in Kennedy et al. 1994:136).

No exact dates for the importation of these wares to Hawai'i is known at this time. As noted above, some of the Japanese stenciled wares appear to date from the 1870s to the 1920s. Lister and Lister (1989:48) note that the Double Happiness motif (Sweet Pea) is usually found on California Chinese community sites dating before 1880, note that the Three Circles and Dragonfly motif (Bamboo) are found in the early part of the 1860-1900 period, and the Four Seasons and celadon dishes are usually found in the later part of the 1860-1900 period. However, Lister and Lister (1989:53) caution that Chinese ceramic styles are “notably long-lived” and that some styles, especially the Four Seasons and celadon types may have exported to American into the mid-twentieth century.

Two Asian bowl fragments in the HHCTCP artifact collection have a “Made in Japan” mark on the base (Figure 37). In 1891, the United States passed the McKinley Tariff, which stated that all imported goods had to be stamped with the country of origin. Pottery from Japan and China after this date is often stamped “Japan” (or “Nippon,”) or “China”, but there were also unmarked pieces. After 1921, “Nippon” was no longer used for Japanese goods, and most wares were stamped “Japan” or “Made in Japan,” while Chinese exports were stamped “Made in China.” However, some unmarked pieces slipped through customs, and some exceptions were made for some types of wares. Therefore, lack of a “Made in” stamp is not definite proof that the vessels pre-dates 1921, and a “Made in Japan” mark is sometimes found in archaeological contexts before 1921. However, the extremely small number of vessels with a “Made in Japan” stamp likely indicates that most of the Chinese and Japanese ceramics were purchased in the pre-1920s period. This assumption accords well with the bottle dates for the collection, which generally indicate a 1870s to 1920s manufacturing date range.

4.3.3 Deposition Lag

Unlike bottles, ceramics are not thrown away once the contents are used. Instead, they are kept and reused, sometimes even handed down through generations within a family. This tradition is particularly true of the European/American wares, which were moderately to fairly expensive in the late-nineteenth and early-twentieth centuries. However, this may not pertain as equally to the Asian wares, which were inexpensive, mass-produced items that were easily broken. Most of the European wares in the HHCTCP collection date as early as the mid-nineteenth century, but they may have been deposited in fill layers years or decades later. The Asian wares, which seem to date to ca. 1870s–1920, similar to the age ranges of most of the bottles, may have been used only a few years before breakage and discard.

4.4 Miscellaneous Artifacts

The origin and manufacturing date of the majority of the miscellaneous artifacts could not be determined. For example, tobacco pipe stems were recovered during excavations. However, none of the pipes were marked with the country of origin. Dating tobacco pipe stem bores is considered to be unreliable after 1780 (Pfeiffer 2006:33).

Several artifact types (i.e., nails, bricks, and shoes) have, however, been standardized, or the artifacts are components of a historic entity (i.e., OR&L railroad, Honolulu streetcars). A discussion of the criteria used to determine manufacture dates of each standardized artifact type

or historic entities is presented, followed by a discussion of the difficulties associated with dating and determining origin of specific artifacts. These discussions are followed by summaries of the artifacts whose manufacture date cannot be determined.

4.4.1 Footwear

IMACS ([Intermountain Antiquities Computer System] 1992) summarized the following dating methods for shoes. Pre-1812 wooden pegs were used to attach the upper portion of a shoe to the sole. Square nails replaced wooden pegs post-1812. Shoes with any type of metal fastener post date 1829, and athletic-style, laced fabric shoes with rubber soles were first manufactured in the 1850s. Shoes with all rubber heels date to 1895. A shoe lacking nail holes indicated that it was glued and dated to post-1926, and conversely, shoes with many holes indicated a pre-1926 manufacturing date (IMACS 1992).

4.4.2 Toothbrushes

Parts of four toothbrushes were found in the HHCTCP historic artifact collection (Acc. # 139-A-1, 148A-A-8, 168B-A-4, and 202A-A-7). Toothbrushes were used to clean the teeth in China as early as the fifteenth century, but the common form of the toothbrush used today was invented in England in 1780 (Mattick 1993:162). The four toothbrushes, three handles, and one head fragment were all made of bone, the most common material for brush handles up to the end of the nineteenth century. Celluloid brushes began to be made as early as 1869, and celluloid, along with other synthetic materials, almost completely replaced bone as the handle/head material by the 1940s. Mattick (1993:182) has attempted a preliminary analysis of developmental changes in toothbrushes from the 1700s to the 1950s. Two attributes which provide some definite date ranges are the number of holes/number of rows and the presence of a hole in the handle end. Before ca. 1890, brushes tended to have 4 to 5 rows of holes, with about 21 holes per row. From 1890-1910, brushes had 3 to 4 rows, with an average of 17 holes per row, and after 1910, a brush had 3 to four rows, with an average of 10 holes per row. A toothbrush head from T-202A had four rows of holes with 19 holes per row, indicating that it was probably made before 1910. Two of the three brush handles had a single hole in the end of the handle. Toothbrush makers drilled a hole at the end of the handle, starting in 1884, to encourage people to hang up their brushes to dry thoroughly, to prevent the growth of bacteria (Mattick 1993:165). Thus the little information that we have suggests the HHCTCP toothbrushes date from the 1880s to the 1940s.

There is also a question of which ethnic group was using these brushes. One of the toothbrush handles has three circles etched on one side. The three circle motif (probably a mark for good luck) has also been found on a toothbrush from a late nineteenth-century Chinatown site in Santa Fe, California (Douglas 2006:6). In the Market Street Chinatown Archaeological Project, San Jose, Calif. (Stanford Archaeological Center 2003), American/European toothbrushes had holes in the head that did not go all the way through (called trepanning), while Asian toothbrushes had holes that did go all the way through the bone head so that bristles could be removed and replaced (Stanford Archaeological Center 2003). One of the toothbrushes in the artifact collection has the trepanned form, suggesting that it was American/European. However, Ross (2012b:43) has shown that Overseas Japanese communities not only bought exported toothbrushes from the larger makers, such as France and Japan, but also bought locally made (American) toothbrushes, so this is not necessarily an indicator that the user was non-Asian.

4.4.3 Marbles

Marbles have been manufactured since early times from a variety of materials including stone, clay, limestone, agate, porcelain, and most recently glass. In Hawai'i, children traditionally used the indigenous *Caesalpinia bonduc* seed as a marble; in Ni'ihau the plant is known as "kinikini" which means marbles (Wichman and St. John 1990:93). Before 1850, the majority of limestone and ceramic marbles were produced and exported by Germany. Beginning in the mid-nineteenth century, Germans also produced glass marbles for export to the United States. Britain was the only other country producing glass marbles, but apparently only for domestic use. By 1880 German-made marbles supplied to the United States also included porcelain, stone, and clay. In the 1880s, several small companies in the United States began manufacturing clay marbles, called "commies" because they were so common, and handmade glass marbles. In the early twentieth century, the production of machine-made American glass marbles began. By 1920, they had generally replaced the manufacture of hand-made glass marbles. American-made marbles dominated the domestic market from 1920 until the 1950s, when Japan introduced cat's eye marbles, producing millions of marbles each year. Imports from Japan directly led to the closure of most American marble manufacturers (Carskadden and Gartley 1990; Webb 1994).

Designating a manufacture date as well as a manufacture location for a single marble is very difficult since both handmade glass and clay machine-made marbles continue to be produced today. Glass marbles may also be Codd bottle stoppers that were removed by breaking the bottle. Codd bottles were patented in 1870 (Elliot and Gould 1988:20–21), and were used by Hawaiian soda companies from approximately 1868 to 1918 (Munsey 2010a).

4.4.4 Nails

IMACS (1992) also summarized nails based on several criteria. Nail head details and profile or thickness variations aid in distinguishing the difference between nail types. Handmade wrought nails are the earliest nails made in America, generally dating to pre-1800. Wrought nail shanks are rectangular-shaped with a variable thickness that tapers to a point. The nail is topped with a round or rectangular head that may be lettered. Machine-cut nails date from as early as ca. 1790 to as recently as the mid-1920s. These types of nails generally date from 1835 to 1890, although some are still made today (Middle Tennessee State University 2002). Such nails can be readily distinguished from wrought nails by the consistent thickness of their shafts. Machine cut nail heads are rectangle or square shaped. One machine-headed cut nail was pried from one section of the privy wood.

Wire nails are the most recently produced nails, manufactured in America from ca. 1850 to the present. They have round heads with consistently shaped shanks and exhibit little change over time. Thus, distinguishing early wire nails from modern wire nails is very difficult (IMACS 1992).

4.4.5 Rail Spikes

The majority of rail spikes collected are believed to be from OR&L Co. (Oahu Railway and Land Company), particularly in East Kapālama and Iwilei. Rail spikes and a portion of track found in Kaka'ako Makai and Kewalo are more likely from Honolulu Rapid Transit & Land Company, Ltd. streetcar tracks. The OR&L Co. was constructed in 1889 and abandoned for the

most part by 1947 (Chiddix and Simpson 2004). Tracks extended west from the King Street depot to Pearl Harbor and Waianae to points north including Schofield Barracks and Kahuku. Construction of Honolulu Rapid Transit system tracks began in 1898, and, by 1933, all of the tracks were removed (Simpson and Brizdle 2000:43, 124). The system extended along King Street from Fort Shafter to Koko Head Avenue in Kaimukī with lines extending *mauka* on Nu‘uanu Avenue and into Mānoa Valley. The Waikīkī branch extended *makai* along McCully to Waikīkī Road, today’s Kalākaua Avenue, to the base of Diamond Head.

4.4.6 Bricks

Brick sizes have been standardized by the National Brick Manufacturers Association of the United States [NBMA (Meide 1994)]. In 1884, common bricks measured 8 1/4 x 4 x 2 inches. By 1889, another standard was used: 8 3/8 x 4 x 2 inches. In 1918, standards for the three different types of bricks, common bricks, face bricks, and paving bricks, were set. However, a 1922 American brickyard survey reported that “78 different sizes...and various other discrepancies abounded” (Meide 1994:13). Size differences also were prevalent in comparisons of different parts of the United States. The criteria used to determine age for all the American machine made bricks are based on Meide’s (1994:25) compilation of NBMA brick sizes as well as other standard sizes presented in his Table 4. Many of the machine made bricks were fragments, and thus did not conform to NBMA sizes. In addition to the machine-made bricks, two bricks appeared to have been made in a mold. The bricks may have been made in Hawai‘i, but the mold method of brick making spans from the late 1600s to the present (Meide 1994:8) so their manufacture date is uncertain.

4.5 Artifact Analysis for Kalihi West (Test Excavations 1–20)

One test excavation of the twenty text excavations in West Kalihi contained one historic artifact.

4.5.1 Ceramic Vessels

No ceramic vessels were collected from West Kalihi.

4.5.2 Glass Bottles

One glass bottle (Acc. # 018-A-1) was collected from West Kalihi, a soda bottle from T-018, St. IIa. It was a complete, light green, round glass soda bottle (18.5 cm high, and 5.6 cm in diameter) made in an Automatic Bottle Machine (post-1907). Embossed on the shoulder are the words “Liberty” and “6 OZ. NET CONTENTS.” On the base are the letters “LBW” noting that the bottle was filled at Liberty Bottling Works of Wahiawā on O‘ahu. Although research was conducted for this soda works, little information on the company could be found. Only one siphon (bar) bottle with the name “Liberty Bottling Works” etched into the glass is shown in Elliott and Gould’s book on early Hawaiian bottles (1988:170). They date this bottle to the mid-1920s. No soda bottles for this company are shown. The Liberty Bottling Works most likely originated in the 1920s but did not have embossed soda bottles in this period. Bottles dating from the 1940s to 1950s for Liberty Bottle Works are shown in Millar’s book on Hawaiian machine-made soda bottles. The bottle is similar to one bottle dated to 1946 in Millar’s book (Millar 1988:Oahu 123) Later 1940s to 1950s bottles have ACL lettering rather than embossed labels; thus, the bottle in T-018 likely dates from the 1930s to the mid-1940s.

4.5.3 Miscellaneous Historic Artifacts

No miscellaneous historic artifacts were collected from West Kalihi.

4.5.4 Summary of Artifact Assemblage from West Kalihi

Only one historic artifact was collected from West Kalihi, Test Excavations T-001 to T-020A. One glass soda bottle from T-018, St. IIA/II was collected. The glass bottle was made for the Liberty Bottling Works of Wahiawā, dating from the 1930s to the mid-1940s. The bottle was likely deposited as part of domestic refuse.

4.6 Artifact Analysis for Kalihi East (Test Excavations 21–47)

Historic artifacts were recovered from three of the 27 test excavations in East Kalihi, T-031, T-034, and T-037. Four historic artifacts were recovered.

4.6.1 Ceramic Vessels

No ceramic vessels fragments were recovered from East Kalihi.

4.6.2 Glass Bottles

No glass bottles were recovered from West Kapālama.

1.2.2 Miscellaneous Historic Artifacts

Three miscellaneous artifacts were collected from Zone II, two unglazed ceramic flower pot/planter fragments from T-034 (Acc. # 034-A-1) and T-037 (Acc. # 037-A-1), and a metal rouge compact (Acc. # 031-A-1) made for the Helena Rubenstein cosmetic company from T-031. Helena Rubenstein began selling her face cream, called Crème Valaze, as early as 1902 in Australia. Not long after, she opened a beauty salon and began to market a variety of cosmetic products all over the world (Biography.com 2013). The Valaze trademark with a picture of two women was first used in 1914 (U.S. Patent Office 1947_Trademark 430, 232). A rouge/blush compact with the “Valaze” name was patented in 1926; however, this compact was made and sold into the 1940s.

4.6.3 Summary of Artifact Assemblage from East Kalihi

Historic artifacts were collected from two of the 27 test excavations in East Kalihi. One cosmetic compact, dating to the 1920s–1940s, was collected from T-031, and two flower pot/planter fragments were collected from T-034 and T-037.

Table 5. West Kalihi, T-031, Miscellaneous Artifacts

Acc. #031-A-	Provenience	Type	Material	Portion	No.	Measurements	Description
1	T-031, St. Ic	Cosmetic compact	Metal	Complete	1	4.0 (D) x 1.0 (H) cm.	Engraved; two women facing each other on front; "VALAZE" engraved on back; "HR" on one side; "HELENA RUBENSTEIN" on side

Table 6. West Kalihi, T-034, Miscellaneous Artifacts

Acc. # 034-A-	Provenience	Type	Material	Portion	No.	Measurements	Description
1	T-034, St. Ib	Flower pot/planter	Ceramic	Base to rim	1		Base to rim fragment, unglazed

Table 7. West Kalihi, T-037, Miscellaneous Artifacts

Acc. # 037-A-	Provenience	Type	Material	Portion	No.	Measurements	Description
1	T-037, St. Ib	Flower pot/planter	Ceramic	Body	1		Body fragment, unglazed
2	T-037, St. Ib	Flower pot/planter	Ceramic	Body	1		Body fragment, unglazed

4.7 Artifact Analysis for Kapālama West (Test Excavations 48–53)

One historic artifact in four fragments was recovered from one of the six test excavations, T-053, in West Kapālama.

4.7.1 Ceramic Vessels

Four small fragments of a porcelain bowl (Acc. # 053-A-1) were recovered from T-053, Stratum II in the West Kapālama section. The fragments are of one vessel, a typical Asian rice bowl shape, glazed with a celadon (wintergreen) glaze, with a blue characters marking on the base. Costello and Maniery (1988:34), in their study of a late nineteenth or early twentieth century (ca. 1880s–1915) Asian artifact collection from Walnut Grove, California, found these types of bowls in the Chinese section of town, although they believed they could also be Japanese. The characters could be the name of a pottery, the potter's name, or a saying. The base was not stamped "China," "Japan," or "Made in Japan/China." Country of origin marks were placed on exported goods to American after 1921, suggesting this artifact was made and/or exported before from an Asian country before 1921.

4.7.2 Glass Bottles

No glass bottles were recovered from West Kapālama.

4.7.3 Miscellaneous Historic Artifacts

No miscellaneous artifacts were recovered from West Kapālama.

4.7.4 Summary of Artifact Assemblage from West Kapālama

Only one artifact was recovered from West Kapālama, a fragmented Asian rice bowl, possibly dating before 1921.

4.8 Artifact Analysis for East Kapālama (Test Excavations 054–084)

Historic artifacts were recovered from eight of the 31 test excavations in East Kapālama, T-060, T-061, T-064, T-065, T-066, T-067, T-073, and T-082. A total of 199 fragments were recovered, consisting of 30 ceramic fragments, 65 glass bottle fragments, and 24 miscellaneous fragments. One glass bottle was recovered from Stratum IIb of T-60, and two bottle/bottle fragments were recovered from Statum II in T-67. Both of these strata are considered part of the historic property, designated SIHP # 50-80-14-7426, a subsurface wetland deposit. Two of the bottles are dated to the ca. 1930s; they may be intrusive and represent disturbance of this area in the early to mid-twentieth century.

4.8.1 Ceramic Vessels

T-064

One earthenware item and one porcelain hollowware (bowl) were collected from T-064. The earthenware item is a reddish-brown teardrop-shaped hollow item with a hole in one side. The function of this ceramic item is unknown, although it is similar in shape to items called broken “decorations” found in the Chinese neighborhood artifact collection from Walnut Grove, California (Costello and Maniery1988:49). The porcelain bowl was made by the American company Buffalo Pottery of New York. This company used the stamped “Buffalo China” mark, found on the base of the bowl, from 1904 to 1914 (Lehner 1988:64).

T-066

Twelve ceramic fragments from a minimum of nine ceramic vessels were recovered from T-066. These include two hollowware vessels with Asian motifs on the vessel and/or with a raised foot, a hollowware American/European hollowware bowl with a partial Anglo-American company name on the base, a chamberpot, three flatware vessels, and two dinnerware vessels. The letters “DESE” on the ceramic fragment could not be matched to any British or American company marks in reference books.

T-067

Fragments of two Asian-style utensils, possible a spoon, and a slotted spoon, and a porcelain dinnerware fragment with a painted Asian design, were recovered from T-067.

T-082

Seven ceramic fragments from a minimum of three vessels were collected from T-082. Two of these had an Asian decoration and/or form; one has “Minida” stamped on the base; no information on this base mark could be found, but the markings also include “Made in Japan,” which was placed on Japanese export items sent to America after 1921 (Coxsackie Antique Center 2013).

Table 8. East Kapālama, T-064, Ceramics

Acc. # 064-A-	Prov.	Type	Portion	No.	Paste	Paste Color	Glaze	Color (Bkg)	Decor-ation	Design Motif	Rim Motif	Comments
1	T-064, St. Ie	Unknown	Complete	1	Earthenware, Refined	Reddish-Brown	Slip glaze	Red-Brown	Molded	Floral	–	Molded separate piece shaped like a horn with a hole; unknown function
2	T-064, St. Ie	Hollow-ware - bowl (American ; 1909-1914)	Base to rim	1	Porcelain	White	Lead trans-parent	White	Painted under-glaze	Floral	Banded	Red roses, yellow daisies, green leaves, brown stems; one exterior green band; on base in script “Buffalo China;” mark used from 1909–1914 (Lehner 1988:64)

Table 9. East Kapālama, T-066, Ceramics

Acc. # 066-A-	Prov.	Type	Portion	No.	Paste	Paste Color	Glaze	Color (Bkg)	Decor-ation	Design Motif	Rim Motif	Comments
1	T-066, St. Ic	Chamber pot or wash basin	Body (2); base (1)	3	Stoneware	White	Lead trans-parent	White	None	None	–	“TH” in circle stamped in blue on base
2	T-066, St. Ic	Flatware (American / European)	Rim	1	Porcelain	Cream	Lead trans-parent	Off-white	–	–	Banded	Two green bands
3	T-066, St. Ic	Hollowware bowl (American/ European)	Body to rim	1	Earthenware, Refined	Tan	Lead trans-parent	Off-white	None	None	Banded	Brown band near rim; stamped underside of base has green letters “DESE.../W...”
4	T-066, St. Ic	Flatware	Body	1	Porcelain	White	Lead trans-parent	White	None	None	–	

Acc. #	Prov.	Type	Portion	No.	Paste	Paste Color	Glaze	Color (Bkg)	Decor-ation	Design Motif	Rim Motif	Comments
5	T-066, St. Ic	Hollowware bowl (Asian)	Base	1	Porcelain	White	Lead transpa- rent	White	–	–	–	High foot; Asian style
6	T-066, St. Ic	Dinnerware	Rim	1	Earthenware, Refined	Cream	Lead opaque	Yel- low	Molded	None	None	Wavy shape on one side
7	T-066, St. Ic	Hollowware (Asian)	Body	2	Porcelain	White	Lead trans- parent	White	Painted under- glaze	Floral	–	Asian design, blue flowers
8	T-066, St. Ic	Dinnerware	Rim	1	Porcelain	White	Lead trans- parent	White	Painted under- glaze	–	Shell- edged	Blue rim on interior
9	T-066, St. Ic	Flatware	Rim	1	Porcelain	Grey	Lead trans- parent	Blue- green	Painted under- glaze	Floral	–	Three detailed green leaves, part of a pink flower, dash pattern

Table 10. East Kapālama, T-067, Ceramics

Acc. #	Prov.	Type	Portion	No.	Paste	Paste Color	Glaze	Color (Bkg)	Decor-ation	Design Motif	Rim Motif	Comments
1	T-067, St. Ib	Slotted spoon (Asian)	Body	1	Earthen- ware, Refined	Off- white	Lead trans- parent	Off- white	None	None	–	Off-white earthenware serving utensil (spoon?); 2 prongs broken off
2	T-067, St. Ib	Dinner- ware (Asian)	Base to body	1	Porcelain	Buff	Lead trans- parent	White	Painted under- glaze	Floral?	–	Blue flowers?
3	T-067, St. Ib	Serving Utensil (Asian)	Body	1	Porcelain	White	Lead trans- parent	White	Painted under- glaze	Floral?	–	Asian-style soup spoon; blue flowers

Table 11. East Kapālama, T-082, Ceramics

Acc. # 082-A-	Prov.	Type	Portion	No.	Paste	Paste Color	Glaze	Color (Bkg)	Decor - ation	Design Motif	Rim Motif	Comments
1	T-082, St. Id	Hollowware - cup (Japanese post 1921)	Base to body	2	Porcelain	White	Lead trans- parent	Blue, light	Painted under- glaze	Floral?	–	Stamped on base blue circle with “Made in Japan Porcelain/Trade- mark Minida”; post-1921 (Coxsackie Antique Center 2013)
2	T-082, St. Id	Flatware	Rim	1	Earthenware, Refined	Off- white	Lead trans- parent	Bluish white	Painted under- glaze	–	Shell- edged	Blue shell-edge on interior rim
3	T-082, St. Id	Dinnerware	Rim	1	Porcelain	White	Lead trans- parent	White	Sponge d	–	Geo- metric/ shell- edged	Small square fragment with blue shell-edge rim
4	T-082, St. Id	Dinnerware	Body to rim	1	Earthenware, Refined	Off- white	Lead trans- parent	Off- white	None	None	None	Thin
5	T-082, St. Id	Hollowware	Base	1	Earthenware, Refined	Buff	Lead trans- parent	White	–	–	–	
6	T-082, St. Id	Dinnerware	Body	1	Earthenware, Refined	Off- white	Lead trans- parent	White	–	–	–	

4.8.2 Glass Bottles

T-060

One complete medicine bottle, for a drug store in Manila, Philippines, was recovered from T-060 Stratum II. The drug store was open in the 1930s, but may have opened earlier (Galvez 2011:4).

T-061

One milk bottle is labeled New Fair Dairy, Kapahulu. Similar bottles also have the wording "Property of K. Yamashita." K. Yamashita is recorded as a dairy farmer as early as 1911 (Hawaii. Board of Health 1911:149; also mentioned in Hawaii. Board of Health 1928:56), and the New Fair Dairy is listed in a 1940 Hawaiian directory (Polk-Husted 1940:471). A second milk bottle is from the Honolulu Dairymen's Association, which was organized by several dairies on O'ahu in 1897. In 1959, this became Meadow Gold Dairies (Sigall 2004:224). This milk bottle was made by the Owens-Illinois Glass Co. in 1936 or 1946.

T-064

The T-064 collection consists of 62 glass fragments of a minimum of 12 bottles: four beverage (spirits, soda, mineral water, etc.) bottles, three beer bottles, one probable condiments bottle, two medicine bottles, and two cosmetic bottles. Seven bottles have date codes on the bottle bases, five for bottles made by the Owens-Illinois Glass Co., and two by the Anchor-Hocking Glass Co. The dates are 1936 or 1946, 1941, 1944, 1945 (5 bottles) and 1946.

The three amber bottles were made in 1945 or 1946. They have stippled Duraglas bases, typical for beer bottles manufactured in and after 1940. The green soda bottle is a Seven-Up bottle manufactured in 1945 and bottled at the Sunrise Soda Works in Kalihi-Pālāma (Oahu Picture 235 B in Millar 1988). The building for this works still stands in the Iwilei section of Kapālāma, and has a date of 1825 painted on the front (see Google Earth 2008), presumably the foundation date of the company.

There are two medicine bottles. One is embossed H. Clay Glover Co., who was mainly known for introducing veterinary medicines (worming medicine for dogs, etc.), but in 1937 his company branched out into human hair products (Lockhart 2004b:36-37). The bottle from T-061 is dated to 1945, so it is probably for a shampoo or other hair product for humans. There is no brand information for the second medicine bottle. The dates for a clear glass cosmetic jar (brand – "Seventeen") and a white milk glass jar are unknown.

The remaining bottles/bottle fragments cannot be dated to a narrow date range. Two clear bottles are similar to those in shape advertised as "pill/tablet" bottles in early twentieth century glass manufacturer's catalogs and one striated clear bottle is similar to those called "pickle and preserve ware" (Illinois Glass Co. 1906). It is possible that all of the bottles, from domestic refuse, in this test excavation date to the 1940s, and were discarded within a narrow time frame.

T-065

One soda Coca-Cola bottle base fragment was recovered from East Kapālāma T-065. This is the iconic "hobbleskirt" bottle design first used by the Coca-Cola company in 1915 (Lockhart

and Porter 2010:47). Although date codes are often found on the heels of Coke bottles, no embossed numbers are on the heel fragment from T-065.

T-066

Twenty-three (23) glass fragments from a minimum of 8 bottles were recovered from T-066. Most of these cannot be assigned a narrow manufacturing date range, as the small fragments do not contain enough information. There are 12 clear bottles/bottle fragments, which were manufactured after the 1870s, ten narrow-neck bottle fragments, which were manufactured in an Automatic Bottle Machine (ABM), which post-date 1907. A few of the bottles have some embossing that indicates the glass manufacturer of the brand. One clear bottle base is embossed with the letter G in a square, the mark used by the Glenshaw Glass Co., beginning in 1932. One blue cobalt medicine jar is embossed "VICKS". One bottle has the "Federal Law Prohibits" warning, used on bottles from 1935-1974. One clear soda bottle has an ACL label with the words "Delicious" and "DELAWARE." Delaware Punch was a brand invented in 1913 (Wikipedia 2013a_Delaware Punch); this brand was bottled by the Nesbitt Bottling Co. in Hawai'i. This company is now owned by the Coca-Cola Co., so the bottle probably was filled at one of the Coca-Cola bottling plants on O'ahu, possibly the former plant in the Kaka'ako area. The ACL labeling dates this bottle to post-1933. One light green bottle has an Owens-Illinois date code for 1948 on a stippled base, a process usually used for beer bottles. One hobbleskirt Coca-Cola bottle body fragment was recovered; it can be dated to post-1915 based on the bottle shape. One light green jar has a design patent number of 9248, probably for the shape of the jar. This patent number was awarded in 1876. One milk glass jar was used by the Woodbury Soap Co., established in Albany, New York in 1870 (Wikipedia 2012).

T-067

Eleven glass fragments from eleven bottles were collected from T-067, nine from Stratum Ib and two from Stratum II. These consist of one amber bottle, probably a Clorox bottle, one clear Bireley's soda bottle, one clear bottle (possibly for ketchup), three clear medicine bottles (two marked Neutra Glas), one clear jar, and two milk glass jars. In Stratum II, there was a soda bottle for Mission Beverages, and a clear jar for "Seventeen," probably a type cosmetic or skin care product. Neutra-glas was a special type of glass resistant to chemical attack, which was manufactured first in 1942 for medicine bottles (Myers 2000:23). Bireley's was an orange drink introduced in 1930. In Hawai'i it was bottled by the Jardine Price Company (USASODA 2012). The embossed examples in Millar's (1988:Oahu 320) Hawaiian soda bottle book are dated to the 1940s. The bottle in T-067 had an Owens-Illinois Glass Co. date mark of 1936 or 1946. There was a second soda bottle in Stratum II, for Mission Beverages, bottled by the Hawaiian Soda Works; they began to use ACL labels in 1933 and continued marketing this brand in Hawai'i into the 1950s, as shown by photographs in Millar's (1988: Oahu 150-152) soda book

T-082

Fifteen fragments of six bottles were recovered from T-082, Stratum Id. The fragments of five bottles are all small without dating information. One fragment is a blob-top finish, used on mold blown bottles from the 1840s-1920s. The one milk glass jar, from Pond's cold cream, was made in an Automatic Bottle Machine (ABM), and thus dates post-1903.

Table 12. East Kapālama, T-060, Glass Bottles

Acc. # 060-A-	Prov.	Type	Portion	No.	Lip Type	Lip Finish	Color	Ht. (cm)	Di. (cm)	Base Shape	Mold	Age	Comments
1	T-060, St. Iib	Bottle, Medicine	Complete	1	Patent	ABM	Clear	14.5	5.0 x 3.2	Rectan- gular	2 pc. cup	1930s ca.	Embossed on shoulder: "FINE-OXINA / LABORATORIO SANTOS OCAMPO MANILA" in circle with hand and flame; Dr. Santos Ocampo had a drugstore in Manila in the 1930s (Galvez 2011:4)

Table 13. East Kapālama, T-061, Glass Bottles

Acc. # 061-A-	Prov.	Type	Portion	No.	Lip Type	Lip Finish	Color	Ht. (cm)	Di. (cm)	Base Shape	Mold	Age	Comments
1	T-061, St. Ie	Bottle, Milk	Complete	1	Capseat	--	Clear	17.0	7.0	Round	2 pc. cup	1940s and earlie r	"1 pint, New Fair Dairy LTD. 467 Kapahulu Road, phone 7473" - embossed on body horizontally; "NFD" on base (Wilson 1921:158)
2	T-061, St. Ig	Bottle, Milk	Complete	1	Capseat	--	Clear	24.0	9.0	Round	2 pc. cup	1936/ 1946	"PROPERTY OF / HONOLULU / DAIRYMENS / ASSOCIATION"; on heel "ONE QUART" embossed horizontally on body: on base "HD/28 [I- O] 6

Table 14. East Kapālama, T-064, Glass Bottles

Acc. #	Prov.	Type	Portion	No.	Lip Type	Lip Finish	Color	Ht. (cm)	Di. (cm)	Base Shape	Mold	Age	Comments
064-A-3	T-064, St. Ie	Bottle, Soda	Base-body	1	--	--	Green, Light	--	5.7	Round	2 pc. cup	1945	Seven-up bottle; "4285-C / 23 I-O 45 / 11 / Duraglas (script) embossed on base. White ACL on body horizontally - "...NTS 7 FL. OZsODA WATER WORKS CO / .ONOLULU, T.H.";
4	T-064, St. Ie	Bottle, Cosmetic	Body	1	--	--	White	5.5	--	Oval	--		Milk glass
5	T-064, St. Ie	Bottle, Beer	Complete	1	Crown	ABM	Amber	7.5	5.9	Round	2 pc. cup	1945	"NOT TO BE REFILLED - NO DEPOSIT NO RETURN - embossed on neck: ; "8565 / S AH 45 / 10" - embossed on stippled base; Anchor Hocking
6	T-064, St. Ie	Bottle, Beer	Complete	1	Crown	ABM	Amber	7.5	5.9	Round	2 pc. cup	1946	"NOT TO BE REFILLED - NO DEPOSIT NO RETURN" - embossed on neck; "Duraglas (script) / 4 I-O 6. / 14" - embossed on stippled base
7	T-064, St. Ie	Bottle, Beer	Base	1	--	--	Amber	--	6.3	Round	2 pc. cup	1945	"4565-A / 5 (H superimposed over an anchor) / 45" - embossed on stippled base; Anchor-Hocking Glass Co. (Whitten 2013)
8	T-064, St. Ie	Bottle, Beverage	Base	1	--	--	Clear	--	6.7	--	--	1944	"7429 AH / O 44" Hazel-Atlas; embossed on stippled base

Acc. # 064-A-	Prov.	Type	Portion	No.	Lip Type	Lip Finish	Color	Ht. (cm)	Di. (cm)	Base Shape	Mold	Age	Comments
9	T-064, St. Ie	Bottle, Medicine	Complete	1	Ext. thread	ABM	Brown	13.2	4.4 x 2.8	Rectangular	2 pc. cup	1945	"H. CLAY GLOVER CO. INC. / NEW YORK, N.Y."; - Embossed vertically on both body sides; "4 I-O 5/ 4 /" embossed on base
10	T-064, St. Ie	Bottle, Medicine	Complete	1	Ext. thread	ABM	Clear	11.5	3.5	Square	2 pc. cup	1941	"7205-E / 20 I-O 1 / 1" - embossed on base (
11	T-064, St. Ie	Bottle, Medicine	Complete	1	Ext. thread	ABM	Clear	9.0	0.6	Round	2 pc. cup	1870s -post	"2543" - embossed on base
12	T-064, St. Ie	Bottle, Condi-ment	Complete	1	Ext. thread	ABM	Clear	12.2	4.6 x 3.8	Oval	2 pc. cup	1907-post	Ribbed on body-lower /; embossed on base "3"
13	T-064, St. Ie	Jar, Cosmetic	Complete	1	Ext. thread	ABM	Clear	6.8	4.2 x 2.8	Oval	2 pc. cup	1903-post	"Seventeen (script)" - embossed on base
14	T-064, St. Ie	Bottle, Beverage	Complete	1	Packer	ABM	Clear	25.7	8.0	Round	2 pc. cup	1945	"Federal Law Forbids Sale or Re-use of This Bottle" - embossed on shoulder horizontally; "4.5 Quart (3 times: - on heel; "O-I icon / 64/ D270 / 45" - on stippled base

Table 15. East Kapālama, T-065, Glass Bottles

Acc. # 065-A-	Prov.	Type	Portion	No.	Lip Type	Lip Finish	Color	Ht. (cm)	Di. (cm)	Base Shape	Mold	Age	Comments
1	T-065 (spoil)	Bottle, Beverage	Base-body	1	--	--	Aqua	4.8+	5.8	Round	2 pc. cup	Post 1915	Hobble skirt Coca Cola; dimple mark at base (Lockhart and Porter 2010:47)

Table 16. East Kapālama, T-066, Glass Bottles

Acc. # 066-A-	Prov.	Type	Portion	No.	Lip Type	Lip Finish	Color	Ht. (cm)	Di. (cm)	Base Shape	Mold	Age	Comments
10	T-066, St. Ic	Bottle, Medicine	Complete	1	Ext. thread	ABM	Blue, Cobalt	6.0	4.0	Round	2 pc. cup	post 1920	“VICKS”, “(image of three V’s)”, “VAPORUB” - embossed on base; wide mouth jar (Vicks 2013)
11	T-066, St. Ic	Bottle	Complete	1	Ext. thread	ABM	Green, Light	6.5	3.0 x 2.5	Diamon d	2 pc. cup	1907- post	“DE S PAT” “9248”; small mouth
12	T-066, St. Ic	Bottle, Cosmetic	Complete	1	Ext. thread	ABM	White	6.5	7.5 x 6.0	Oval	2 pc. cup	1900- 1950s	Milk glass; elaborate design on two sides of bottle; “WOODBURY” embossed on base; wide mouth; milk glass (Wikipedia 2012)
13	T-066, St. Ic	Bottle	Body	2	--	--	Amber	--	--	--	--		
14	T-066, St. Ic	Bottle	Body	1	--	--	Aqua	--	--	--	--	1860s -post	Fragments embossed “6”; possibly a base fragment
15	T-066, St. Ic	Bottle	Body	1	--	--	Blue, Cobalt	--	--	--	--		
16	T-066, St. Ic	Bottle, Beverage	Base	1	--	--	Clear	--	8.0	Round	--	1932- post	“498 / G [in square] / 16” - embossed on base
17	T-066, St. Ic	Bottle, Beverage	Body	1	--	--	Clear	--	--	--	--	1933- 1955	“Delic...”, “DELAWARE”, “...PUNCH” - white ACL lettering on body (Lockhart 2011:88)
18	T-066, St. Ic	Bottle	Body	2	--	--	Clear	--	--	--	--	1870s -post	Fused (heat-altered) fragments
19	T-066, St. Ic	Bottle	Body	1	--	--	Clear	--	--	--	--	1870s -post	
20	T-066, St. Ic	Vial, Medicine	Body	1	--	--	Clear	--	--	--	--	1870s -post	
21	T-066, St. Ic	Bottle, Beverage	Lip	1	Crown	ABM	Clear	--	--	--	2 pc.	1907- post	

Acc. #	Prov.	Type	Portion	No.	Lip Type	Lip Finish	Color	Ht. (cm)	Di. (cm)	Base Shape	Mold	Age	Comments
22	T-066, St. Ic	Bottle, Beverage	Neck-lip	1	Crown	ABM	Clear	--	--	--	2 pc.	1907-post	Letters on fragment "NOT"
23	T-066, St. Ic	Bottle	Neck-lip	1	Ext. thread	ABM	Clear	--	--	--	2 pc.	1907-post	Narrow-mouth
24	T-066, St. Ic	Bottle	Neck-lip	1	Ext. thread	ABM	Clear	--	--	--	2 pc.	1907-post	Narrow-mouth
25	T-066, St. Ic	Bottle, Beverage	Neck-lip	1	Crown	ABM	Clear	--	--	--	2 pc.	1907-post	
26	T-066, St. Ic	Bottle	Complete	1	Ext. thread	ABM	Clear	14.5	6.0 x 4.0	Diamond	2 pc. cup	1903-post	Bottle has round diamond shape, simple designs on both sides of bottle; wide mouth; embossed on base "28 1405"
27	T-066, St. Ic	Bottle, Beverage	Complete	1	Brandy	ABM	Clear	26.0	8.0	Round	2 pc. cup	1930s 1940s	"FEDERAL LAW FORBIDS SALE" - "OR REUSE OF THIS BOTTLE" embossed vertically on body; "45 QUART 26 4/5 QUART" embossed on heel; "18 / 45 / 0 / ?" (maybe 0-8) embossed on base (BLM/SHA 2013)
28	T-066, St. Ic	Bottle	Base-body	1	--	--	Green, Light	--	4.5 x 2.5	Oval	--	1948	Embossed on stippled base "4 O-I 8."
29	T-066, St. Ic	Bottle, Coke	Body	1	--	--	Green, Light	--	--	--	--	1915-post	Hobble skirt Coca Cola; dimple mark at base (Lockhart and Porter 2010:47)
30	T-066, St. Ic	Bottle, Beverage	Neck-lip	1	Crown	ABM	Green, Light	--	--	--	2 pc.	1907-post	

Table 17. East Kapālama, T-067, Glass Bottles

Acc. # 067-A-	Prov.	Type	Portion	No.	Lip Type	Lip Finish	Color	Ht. (cm)	Di. (cm)	Base Shape	Mold	Age	Comments
4	T-067, St. Ib	Bottle, Soda	Complete	1	Crown	ABM	Clear	17.5	5.3	Round	2 pc. cup	1934/ 1944	"Bireley's" embossed horizontally on body; "CONTENTS 6 3/4" "TRADE MARK REC" " on shoulder; "23 O-I 4" on base; Owens-Ill Glass Co. mfg. mark
5	T-067, St. Ib	Bottle, Medicine	Complete	1	Ext. thread	ABM	Clear	7.3	2.9 x 1.7	Rectang ular	2 pc. cup	1938- 1969	Graduated bottle; embossed on base: "2 A [in circle] 44. USA"; mark used by Armstrong Cork Co.
6	T-067, St. Ib	Bottle, Medicine	Complete	1	Patent	ABM	Clear	5.5	3.0	Round	2 pc. cup	1942- post	"NEUTRA GLAS" "N – 51A" "U.S.A." "4", melted neck (Myers 2000)
7	T-067, St. Ib	Bottle, Medicine	Complete	1	Patent	ABM	Clear	5.5	3.0	Round	2 pc. cup	1942- post	embossed on base: "NEUTRA GLAS" "N – 51A" "U.S.A." "21" (Myers 2000)
8	T-067, St. Ib	Bottle, Cleaner	Neck-lip	1	Ext. thread	ABM	Amber	--	--	--	2 pc.	1940- 1962	Half gallon neck and handle; possibly Clorox bottle (Clorox 2013)
9	T-067, St. Ib	Bottle, Food	Base	1	--	--	Clear	--	6.0	Round	--	1936/ 1946	Owens – Illinois Glass Co fluted glass jar, "4067 – EP" embossed on body; "20 I-O 6" embossed on base;
10	T-067, St. Ib	Bottle, Cosmetic	Complete	1	Ext. thread	ABM	White	3.0	4.2	Round	2 pc. cup	1903- post	Wide mouth cosmetic jar; milk glass
11	T-067, St. Ib	Bottle, Cosmetic	Complete	1	Ext. thread	ABM	White	4.0	5.0	Round	2 pc. cup	1903- post	Wide mouth cosmetic jar; milk glass
12	T-067, St. Ib	Jar, Food /cosmetics	Complete	1	Ext. thread	ABM	Clear	9.0	6.5	Round	2 pc. cup	1943	Embossed on stippled base "25 O-I 3"; on Owens – Illinois Glass Co. mfg.

Acc. #	Prov.	Type	Portion	No.	Lip Type	Lip Finish	Color	Ht. (cm)	Di. (cm)	Base Shape	Mold	Age	Comments
067-A-13	T-067, St. II	Bottle, Soda	Body	1	--	--	Clear	--	--	--	--	1933-1950s	"GE...urally Good...sion....." - White ACL on body; for Mission Beverages – Hawaiian Soda Works (Millar 1988; Oahu 150-152)
14	T-067, St. II	Jar, Cosmetic	Complete	1	Ext. thread	ABM	Clear	6.8	4.3	Round	2 pc. cup	1903-post	Wide mouth jar; "Seventeen" - embossed on base; fluted designs around bottle

Table 18. East Kapālama, T-082, Glass Bottles

Acc. #	Prov.	Type	Portion	No.	Lip Type	Lip Finish	Color	Ht. (cm)	Di. (cm)	Base Shape	Mold	Age	Comments
082-A-7	T-082, St. Id	Bottle, Beverage	Lip	1	Blob	--	Aqua	--	--	--	--	1840s-1920s	
8	T-082, St. Id	Bottle	Body	3	--	--	Aqua	--	--	--	--		
9	T-082, St. Id	Bottle	Body/neck	2	--	--	Clear	--	--	--	2 pc.	1870s-post	
10	T-082, St. Id	Bottle	Body	2	--	--	Green	--	--	--	--		
11	T-082, St. Id	Bottle	Body	1	--	--	Olive	--	--	--	--		
12	T-082, St. Id	Jar, Cosmetic	Body	6	Ext. thread	ABM	White	--	--	Square	--	1903-post	Milk glass; "PONDS" in circle embossed vertically on body; Pond's cold creams invented in 1846 (Fike 1987:120)

4.8.3 Miscellaneous Historic Artifacts

Miscellaneous artifacts were collected from four of the 31 East Kapālama test excavations. Four metal, three ceramic, and one composite fragments/artifacts were collected from T-064, including a metal rouge compact made for the Helena Rubenstein cosmetic company that is similar to another one recovered in T-031, dating from the 1920s to 1940s. Two ceramic electrical insulators were also collected from T-064: one is impressed "PYREX G. E. CO. U.S.A." dating from 1915 to present; and a cleat marked "UNIVERSAL" that dates from 1919 to present (R=Infinity 2013).

Five metal, two ceramic, and one unknown material fragments/artifacts were collected from T-067, including a bullet cartridge, and household items such as an animal statuette leg, metal cup, fork, screw and spoon.

One milled wood plank fragment was the only miscellaneous artifact collected from T-073.

Four metal fragments, three bricks, and one composite fragment were collected from T-082. The widths and thickness of two of the machine-made bricks are NBMA (National Brick Manufacturers Association of the United States) standard sizes manufactured from 1918 to 1978; the sizing changed in 1978 (Meide 1994:25). A rail spike was also collected from T-082. Tracks for the OR&L Co. were constructed in 1889 and abandoned for the most part by 1947 (Chiddix and Simpson 2004). Two rusty pieces of metal, a block of coal-like material, and an electrical insulator were also collected.

Table 19. East Kapālama, T-064, Miscellaneous Historic Artifacts

Acc. # 064-A-	Prov.	Type	Material	Portion	No.	Measurements	Description
15	T-064, St Ic	Ammunition - Cartridge	Metal	Complete	1	0.4 (D) cm.	Rim fire?; very corroded
16	T-064, St Ic	Cosmetic Compact	Metal	Complete	1	8.0 (L) x 7.5 (W) x 1.0 (T) cm.	Cosmetic compact case; similar to Helena Rubenstein compact in T-031
17	T-064, St Ic	Insulator, Electrical	Ceramic (Porcelain)	Fragment	1	2.5 (D) cm.	Impressed on top in recessed panel "COPY"
18	T-064, St Ic	Machine part - rod	Metal	Fragment	1	10.35 (L) cm.	Machine part; glass fused onto rod
19	T-064, St Ic	Spoon, Serving	Metal	Complete	1	9.0 (L) x 2.0 (W) cm.	Simple - no decoration
20	T-064, St Ic	Insulator	Ceramic (Porcelain)	Fragment	1	2.5+ (L) cm.	Round; fused glass & metal mass; part of porcelain impressed "PYREX G. E. CO. U.S.A." (Pyrex patented in 1915)
21	T-064, St Ic	Insulator	Composite	Fragment	1	3.3 (H) x 2.8 (D) cm.	Porcelain and metal
22	T-064, St Ic	Insulator Cleat	Ceramic (Porcelain)	Fragment	1	5.8 (H) x 2.0 (W) x 1.7 (T) cm.	Impressed writing "UNIVERSAL" (mark used by Universal Clay Products Co., Sandusky, OH, from 1919 to the present (R-Infinity 2013))

Table 20. East Kapālama, T-067, Miscellaneous Historic Artifacts

Acc. # 067-A-	Prov.	Type	Material	Portion	No.	Measurements	Description
15	T-067, St. Ib	Cup	Metal	Complete	1	10.0 (L) x 6.0 (W) cm.	Plain metal cup, rusted and very bent
16	T-067, St. Ib	Unknown	Metal	Fragment			
17	T-067, St. Ib	Ceramic item	Ceramic	Fragment	1	--	Possible architectural or electrical ceramic stoneware fragment; not a vessel
18	T-067, St. Ib	Animal Statuette	Ceramic	Fragment	1	--	Leg of small animal statuette, possibly cat, dog, or elephant statuette; earthenware

Acc. #	Prov.	Type	Material	Portion	No.	Measurements	Description
067-A-19	T-067, St. Ib	Statue?	Glass	Fragment			Looks like a hand
20	T-067, St. Ib	Fork	Metal	Complete	1	20.0 (L) x 2.0 (W) cm.	Plain dinner fork with 4 tines. Metal extremely rusted and warped
21	T-067, St. Ib	Spoon	Metal	Complete	1	11.0 (L) x 2.3 (W) cm.	Small, plain baby spoon. Metal rusted and warped
22	T-067, St. Ib	Cylindrical Object	Unknown	Fragment	1	6.0 (L) x 1.0 (W) cm.	Solid cylindrical; object; Black, light-weight material, clean edges
23	T-067, St. Ib	Screw	Metal	Complete	1	5.0 (L) x 1.0 (W) cm.	Hollow metal screw
24	T-067, St. Ib	Bullet Cartridge	Metal	Complete	1	6.0 (L) x 1.0 (W) cm.	Bullet cartridge; rusted, hollow opening at bottom that's bent in

Table 21. East Kapālama, T-073, Miscellaneous Historic Artifacts

Acc. #	Prov.	Type	Material	Portion	No.	Measurements	Description
073-A-1	T-073, backhoe	Milled plank	Wood	Fragment	1	50.0+ (L) x 5.0 (W) x 3.0 (T) cm.	

Table 22. East Kapālama, T-082, Miscellaneous Historic Artifacts

Acc. #	Prov.	Type	Material	Portion	No.	Measurements	Description
082-A-13	T-082, St. Id	Brick	--	Fragment	2	N/A	Red color
14	T-082, St. Id	Brick	--	Fragment	1	3 1/2+ x 3 3/4 x 2 1/2 in.	Red color, machine-made. Age: 1918 to 1978 (Meide 1994:25).
15	T-082, St. Id	Brick	--	Fragment	1	3+ x 3 3/4 x 2 1/2 in.	Red color, machine-made. Age: 1918 to 1978 (Meide 1994:25).
16	T-082, St. Id	Insulator	Ceramic	Half	1	4.6 (D) cm.	White glaze porcelain

Acc. # 082-A-	Prov.	Type	Material	Portion	No.	Measurements	Description
17	T-082, St. Id	Possible Pipe Fitting	Metal	Fragment	1	10.0 (L) x 1.5 (W) x 0.7 (T) cm.	Metal semi circle piece, possible pipe fitting
18	T-082, St. Id	Rail Spike	Metal	Complete	1	18.0 (L) x 1.2 (W) cm.	Rail spike, bent into serpentine shape. Age: 1889-1947 (Chiddix and Simpson 2004)
19	T-082, St. Id	Unknown	Composite	Fragment	1	9.0 (L) x 5.5 (W) x 5.5 (T) cm.	Block of coal-like material
20	T-082, St. Id	Wire	Metal	Fragment	1	21.5 (L) cm.	Rusty metal wire
21	T-082, St. Ig	Barbed Wire	Metal	Fragment	2	20.0 (L) cm.	Two twisted wires; too corroded to see ties

4.8.4 Summary of Artifact Assemblage from East Kapālama

The ceramic vessels from East Kapālama are a mixture of Anglo/American and Asian hollowware and flatware. There are two vessels with a narrow date range, an Asian bowl stamped “Made in Japan” on the base, dating the vessel to post 1921, and a mark for an American china company on a bowl, dated to 1909-1914.

The glass bottles with a narrow date range from East Kapālama are from the post 1930s-era; one bottle is dated to 1948. There are no early bottles; the ones with some evidence for manufacture have the characteristics of machine-made bottles (post-1903), and all of the bottles may date from the early to mid-twentieth century. Two of the bottles were distributed from Honolulu District bottling plants near the East Kapālama area.

The miscellaneous items are also generally twentieth century artifacts, with insulator items post-dating to 1915/1919, and a brick dating from 1918-1978. A railroad spike, likely from the OR&L Co. train tracks, may date to the use of the tracks (1889-1947) or post-1947, when many tracks were torn up and removed.

In summary, the historic artifacts from East Kapālama with datable attributes were made in the twentieth century, probably from 1907 to the 1940s. The material is varied and likely represents domestic refuse, although items like the rail spike may be related to transportation systems, such as the railroad of O‘ahu.

4.9 Artifact Analysis for Iwilei (Test Excavations 85 to 95)

Historic artifacts were collected from five of the 11 test excavations, T-086, T-087, T-089, T-090, and T-094, for Iwilei. A total of 41 historic artifact fragments were collected, including 5 ceramic vessel fragments, 20 glass bottle/bottle fragments, and 16 miscellaneous items.

4.9.1 Ceramic Vessels

T-086

Two ceramic fragments of two vessels were recovered from T-086, Stratum I_h. The porcelain fragment is an Asian rice bowl, with a large flower design in pink and blue. The earthenware item is a rim fragment of a flatware item, with painted orange and blue flowers.

T-087

Three ceramic fragments of three vessels, one earthenware and one porcelain, were recovered from T-087. One has an appliqué design of dots and white fleur-de-lis, suggesting a European origin. The other is a typical Asian shape/decorated shallow bowl with a Made in Japan stamp on the base, which post-dates the vessel to 1921 or later, when the country of origin had to be placed on all ceramics exported to America. One ceramic hollow piece may be part of a spout for a teapot.

Table 23. Iwilei, T-086, Ceramics

Acc. # 086-A-	Prov.	Type	Portion	No.	Paste	Paste Color	Glaze	Color (Bkg)	Decor-ation	Design Motif	Rim Motif	Comments
1	T-086, St. Ih	Hollowware - bowl (Asian)	Base to rim	1	Porcelain	Off-white	Lead transparent	Bluish white	Incised, painted over-glaze	Floral	None	Red chrysanthemums with blue leaves; diamond stamped on base; high foot
2	T-086, St. Ih	Flatware	Rim	1	Earthenware, Refined	White	Lead transparent	Off-white	Painted under-glaze	Floral	None	Red & blue flowers, green leaves

Table 24. Iwilei, T-087, Ceramics

Acc. # 087-A-	Prov.	Type	Portion	No.	Paste	Paste Color	Glaze	Color (Bkg)	Decor-ation	Design Motif	Rim Motif	Comments
1	T-087, St. Id	Hollowware	Body	1	Porcelain	White	Lead transparent	White	None	None	--	Spout from teapot? Separate piece
2	T-087, St. Ie	Hollowware (Asian; post-1921)	Base to body	1	Porcelain	Off-white	Lead transparent	Bluish white	Painted under-glaze	Floral	--	Asian; painted on base "...pan / ...Minida [Drawing] "Japan" used post 1921 (Coxsackie Antique Center 2013)
3	T-087, St. Ie	Dinnerware (European)	Body	1	Earthenware, Refined	Buff	Lead opaque	Off-white	Appliquéd painted over-glaze	Geometric & floral	--	Fleur-de-lis design motif

4.9.2 Glass Bottles

T-086

Nine complete bottles were collected from Strata Ie and Ih of T-086 Iwilei. These consist of two food jars (one for “Best Foods”), two cosmetic milk glass Ponds Cream jars, one medicine bottle, one spirits bottle, and three bottles of unknown function. All bottles were made in an Automatic Bottle Machine and post-date 1903 for jars and 1907 for narrow-neck bottles. Four bottles have a narrow date range based on glass manufacturer’s marks and date codes. The liquor bottle (spirits) has a code for Thatcher’s Mfg. Co. for 1940. A small bottle, possibly a tablet/pill bottle, has an Owens Glass Co. mark used from 1911 to 1929. The Best Foods jar has a mark used by the Pacific Coast Glass Co. from 1925-1930. Amber bottle, probably a beer bottle, has an Owens-Illinois Glass Co. date code for 1935 or 1945. There are no differences in the type or date ranges between the two fill layers, Strata Ie and Ig. Stratum Ie has a bottle dated to 1940 and Stratum Ig has a bottle dated to 1935/1945. The bottles likely result from domestic use and may all date to the 1930s to 1940s.

T-087

Seven bottle/bottle fragments from seven bottles were collected from Strata Id and Ie of T-087 Iwilei. These consist of a cosmetic jar, five medicine bottles, and one soda bottle. The medicine bottles were manufactured for “Sloan’s Liniment”, for the drug company of “Wyeth & Brother, Philadelphia” and for “Colgate and Co.” These embossed medicine bottles date from the mid-nineteenth century into the twentieth century; however, one must pre-date the 1890s as it has an applied lip finish, and one must post-date 1907 as it has an ABM lip finish. Elliott and Gould (1988:120-121) date the “Sunrise Soda Works, Honolulu” soda bottle to 1910-1913. The soda works was located on North King Street in Kapālama. The heel of this bottle is also marked with letters of the Illinois Pacific Glass Co., who used the mark from 1902 to ca. 1925. The bottles in this test excavation seem to date to an earlier time period to those in T-086, as several bottles in this test excavation cluster around the turn-of-the-century.

T-089

One beer and two soda bottles were collected from Stratum Ij of T-089 Iwilei. The beer bottle can be dated by the glass manufacturing mark for the American Bottle Co., used from 1905-1917. Two bottles are similar to illustrations in Elliott & Gould’s book on early Hawaiian soda bottles. They date the “Arctic Soda Works, Honolulu” bottle to 1910-1913 and the “Hawaiian Soda Works, Honolulu” bottle to 1900-1905. Both of these companies had bottling plants in downtown Honolulu (Elliott 1971:24, 28). The bottles from T-089 are similar in age to those in T-086, but much earlier than the dated bottles in T-086.

Table 25. Iwilei, T-086, Glass Bottles

Acc. # 086-A-	Prov.	Type	Portion	No. frag	Lip Type	Lip Finish	Color	Ht. (cm)	Di. (cm)	Base Shape	Mold	Age	Comments
3	T-086, St. Ie	Bottle, Spirits	Complete	1	Ext. thread	ABM	Clear	25.0	8.0	Round	2 pc. cup	1940	"Federal Law Forbids sale or Re-use of this Bottle" - embossed on body; "4/5 Quart: on heel; "D2/ 40 46" - on base (BLM/SHA 2013); date code of Thatcher Glass Mfg. Co. for liquor bottles
4	T-086, St. Ie	Jar, Food	Complete	1	Ext. thread	ABM	Clear	14.0	8.0	Oval	2 pc. cup	1903-post	"3" - embossed on base
5	T-086, St. Ie	Jar, Cosmetic	Complete	1	Ext. thread	ABM	White	6.5	6.0	Oval	2 pc. cup	1907-post	"Pond's / 10-3" embossed on base (Fike 1987:120, Munsey 2010b:15a); milk glass
6	T-086, St. Ie	Jar, Cosmetic	Complete	1	Ext. thread	ABM	White	5.5	5.5	Oval	2 pc. cup	1907-post	"Pond's / 7" - embossed on base (Fike 1987:120, Munsey 2010b:15a); milk glass
7	T-086, St. Ih	Bottle, Medicine	Complete	1	Patent	ABM	Clear	6.8	2.5 x 2.5	Rectangular	2 pc. key	1907-post	"1 - B" - embossed on base
8	T-086, St. Ih	Bottle	Complete	1	Ext. thread	ABM	Clear	9.0	3.0	Round	2 pc. cup	1911-1929	"6 O [in square] 8 109" - embossed on base; mfg. mark for Owens Glass Co.
9	T-086, St. Ih	Jar, Food	Complete	1	Ext. thread	ABM	Clear	20.5	6.5	Round	2 pc. cup	1925-1930	"BEST / FOODS / REGISTERED" - embossed on base; bottom: "(image) 21" ; P/C in square on heel; twist top (Whitten 2013); Pacific Coast Glass Works

Acc. #	Prov.	Type	Portion	No. frag	Lip Type	Lip Finish	Color	Ht. (cm)	Di. (cm)	Base Shape	Mold	Age	Comments
10	T-086, St. Ih	Bottle	Complete	1	Ext. thread	ABM	Amber	13.0	5.0	Round	2 pc. cup	1935/1945	Embossed on base: "O-I/ 7 2 / 5"(image) / 2/ 5" - embossed on base
11	T-086, St. Ih	Bottle	Complete	1	Ext. thread	ABM	Amber	13.0	5.0	Round	2 pc. key	1907-post	Metal top

Table 26. Iwilei, T-087, Glass Bottles

Acc. #	Prov.	Type	Portion	No. frag	Lip Type	Lip Finish	Color	Ht. (cm)	Di. (cm)	Base Shape	Mold	Age	Comments
4	T-087, St. Id	Bottle, Medicine	Complete	1	English ring	Tooled	Clear	12.0	4.5	Rectangular	2 pc. cup	1870s-1920s	"SLOAN'S / Liniment" - embossed vertically on body side; "Made in U.S.A. / Illinois" - embossed horizontally on heel (BLM/SHA 2013, Wikipedia 2013b)
5	T-087, St. Ie	Bottle, Medicine	Complete (almost)	1	Patent	Tooled	Clear	10.0	3.5	Round	2 pc. cup	1870s-post	
6	T-087, St. Ie	Jar, Cosmetic	Body	1	Ext. thread	--	White	2.5	6.0	Round	--	1850s-post	milk glass jar
7	T-087, St. Ie	Bottle, Soda	Complete (almost)	1	Crown	Tooled	Lt. Green	22.0	5.3	Round	2 pc. cup	1910-1913	"SUNRISE SODA WATER WORKS / Honolulu" - embossed on body; :S" on base: "I P G Co 13" embossed on heel (Elliot and Gould 1988:120-121)

Acc. #	Prov.	Type	Portion	No. frag	Lip Type	Lip Finish	Color	Ht. (cm)	Di. (cm)	Base Shape	Mold	Age	Comments
087-A-8	T-087, St. Ie	Bottle, Medicine	Base-shoulder	1	--	--	Clear	17.2 5+	8.3	Oval	2 pc. cup	1860-post	WYETH & BRO PHILADA" - embossed on body; "2262" - embossed on base (Griffenhagen, & Bogard 1999:85)
9	T-087, St. Ie	Bottle, Medicine	Complete	1	Patent	Tooled	Clear	12.3	4.8	Rectangular	2 pc. cup	1870s-post	"A-96 H.M.M. Co"- embossed on base
10	T-087, St. Ie	Bottle, Medicine	Complete (almost)	1	Patent	Tooled	Clear	11.0	4.8	Rectangular	2 pc. cup	1870s-1928	"Colgate & Co. New York" - embossing on base; logo Embossed on body" C C Co" in a circle (Colgate 2013)

Table 27. Iwilei, T-089, Glass Bottles

Acc. #	Prov.	Type	Portion	No. frag	Lip Type	Lip Finish	Color	Ht. (cm)	Di. (cm)	Base Shape	Mold	Age	Comments
089-A-1	T-089, St. Ij	Bottle, Soda	Base-body	1	--	--	Aqua	13.0 +	6.0	Round	2 pc. cup	1910-1913	"ARCTIC (in arch) / SODA/ WORKS / HONOLULU / T.H. "; "A.S.W." on base; Bottle is not sold: - embossed horizontally on body (Elliot and Gould 1988:78)
2	T-089, St. Ij	Bottle, Soda	Complete	1	Blob	Applied	Aqua	19.5	5.0	Round	2 pc. cup	1900-1905	"HAWAIIAN / SODA / WORKS / HONOLULU/ H.I." - embossed horiz. on body; "H" on base; Hutchinson closure (Elliot and Gould 1988:98)
3	T-089, St. Ij	Bottle, beer	Base/neck	2	Crown	ABM	Aqua	9.0+	8.0	Round	2 pc. cup	1905-1917	"A. B. / Co. / E 3" - embossed on base, for American Bottle Co.

4.9.3 Miscellaneous Historic Artifacts

Miscellaneous artifacts were collected from five of Iwilei test excavations.

One composite and one metal fragment/artifact was collected from T-086, including a light bulb and a rail spike similar to the one collected from T-082, dating from 1889 to 1947.

Two bricks, one metal, and one rubber fragments/artifacts were collected from T-087. One of the brick fragments is yellow with coral inclusions; it is not possible to determine whether this brick fragment was hand or machine-made. The second brick fragment is fired clay with a flat side and a convex side. A corroded wire nail fragment, and a complete rubber tubular item were also collected from T-087. Wire nails date ca. 1850 to the present (IMACS 1992).

A rail spike similar to the one collected from T-082 and T-086, dating from 1889 to 1947, was also collected from T-089. Two more rail spikes were collected from T-090.

A machine-made red brick fragment was collected from T-094.

Table 28. Iwilei, T-086, Miscellaneous Historic Artifacts

Acc. #	Prov.	Type	Material	Portion	No.	Measurements	Description
086-A-12	T-086, St. Ie	Light bulb	Composite	Fragment	1	6.5 (H) x 2.0 (W) cm.	Yellow oval glass with wires attached
13	T-086, St. Ib	Spike, Rail	Metal	Complete	1	15.0 (L) x 2.0 (D) cm.	P-shaped head, square cross-section, end bi-tapered. Age: 1889 to 1947 (Chiddix and Simpson 2004)

Table 29. Iwilei, T-087, Miscellaneous Historic Artifacts

Acc. #	Prov.	Type	Material	Portion	No.	Measurements	Description
087-A-11	T-087, St. Id	Brick	--	Fragment	1	N/A	Yellow color, coral inclusions
12	T-087, St. Ie	Brick	Fired Clay	Fragment	1	--	One-side flat, one-side convex
13	T-087, St. Ie	Nail, Wire	Metal	Fragment	1	4.1 (L) cm.	Head missing, corroded. Age: ca. 1850 to the present (IMACS 1992)
14	T-087, St. Ie	Tubular item	Rubber	Complete	1	5.5 (L) x 0.3 (D) cm.	Solid tubular, flat ends

Table 30. Iwilei, T-089, Miscellaneous Historic Artifacts

Acc. #	Prov.	Type	Material	Portion	No.	Measurements	Description
089-A-4	T-089, St. Ij	Spike, Rail	Metal	Complete	1	14.5 (L) x 1.7 (D) cm.	P-shaped head, square cross-section, end bi-tapered. Age: 1889 to 1947 (Chiddix and Simpson 2004)

Table 31. Iwilei, T-090, Miscellaneous Historic Artifacts

Acc. # 090-A-	Prov.	Type	Material	Portion	No.	Measurements	Description
1	T-090, St. If	Spike, Rail	Metal	Complete	1	15.0 (L) x 2.0 (D) cm.	P-shaped head, square cross-section, end bi-tapered. Age: 1889 to 1947 (Chiddix and Simpson 2004)
2	T-090, St. If	Spike, Rail	Metal	Complete	1	15.0 (L) x 2.0 (D) cm.	P-shaped head, square cross-section, end bi-tapered. Age: 1889 to 1947 (Chiddix and Simpson 2004)

Table 32. Iwilei, T-094, Miscellaneous Historic Artifacts

Acc. # 094-A-	Prov.	Type	Material	Portion	No.	Measurements	Description
1	T-094, St. Id	Bricks	--	Fragment	7	N/A	Red color, machine-made

4.9.4 Summary of Artifact Assemblage from Iwilei

Five test excavations in Iwilei contained historic artifacts. Four metal rail spikes were recovered from four of the five test excavations. These may be associated with the Honolulu streetcar tracks built in the 1890s and torn up in 1933 or more likely the O. R. & L railroad, which terminated in the Iwilei area. The bottles and ceramics in T-086 seem to be different from the material form T-087 and T-089. In T-086, the bottles are all made in an Automatic Bottle Machine, post-1903, and many bottles can be dated to the 1920s-1940s. One ceramic fragment can also be dated to post-1921. In T-087 and T-089, the majority of the bottles are not machine-blown, they were mouth-blown in molds and date to the 1890s-1920s age range. The two machine-made bottles also probably date to the first two decades of the twentieth century. The ceramics were a mixture of European and Asian wares. The bottles (with known origin) were all made in the United States; some of the bottles were filled with soda at several Honolulu District soda works. All of the historic artifacts (except the railroad spikes) were likely the result of domestic refuse.

4.10 Artifact Analysis for Downtown Waterfront (Test Excavations 96 to 115)

Historic Artifacts were collected from 12 of the 22 Test Excavations in Downtown Waterfront, T-096, T-097, T-098, T-099, T-100, T-101, T-104, T-104A, T-108, T-112, T-114, and T-115. A total of 155 historic artifact fragments were collected, including 55 ceramic vessel fragments, 49 glass bottle/bottle fragments, and 51 miscellaneous items. Portions of six trenches are part of a culturally enriched layer with historic artifacts, designated as the historic property SIHP # 50-80-14-7427: T-96 Feature 3; T-97 Feature 5 and Feature 7; T-97 Feature 7; T-99 Feature 10; T-100 Feature 12 and 15; and, T-101 Feature 15. Historic artifacts from these strata generally date from the late nineteenth to early twentieth century.

4.10.1 Ceramics

T-096

Six ceramic fragments from four vessels were collected from T-096, Stratum II, Feature 3, SIHP # 40-80-14-7427. They consist of an Asian porcelain rice bowl, a white earthenware fragment, a yellow earthenware fragment, and a porcelain fragment from a vessel with an Asian decoration.

T-097

Four ceramic fragments from four vessels were collected from T-097, Strata Ic and Id. They consist of three porcelain hollowware vessels with Asian forms//decorations and an earthenware rim fragment. One Asian rice bowl has a blue character stamped on the base. This suggests that it was exported to the U.S. before 1921, when the McKinley Tariff act dictated that all Japanese exports had to be stamped "Made in Japan."

T-100

One ceramic fragment of a flatware (saucer/plate) with a transfer print scenic decoration was collected from T-100, Stratum If. Although the fragment has an Asian design, it is not necessarily Asian in origin, as Asian scenes were also used on early European wares.

T-101

Three ceramic fragments of three vessels were collected from T-101, Stratum Ie/II, Feature 15, SIHP # 40-80-14-7427. They consist of a cup with an Asian transfer print design and an Asian character on the base, a rim fragment with a different transfer print design, and an earthenware rim fragment with a large painted floral design on the exterior and a band on the interior. The Asian character may indicate that the cup was exported to the U.S. before 1921.

T-104

Forty-one ceramic fragments of a minimum of six vessels were recovered from T-104, Strata If, Ig, and Ij. From Stratum If, twenty fragments are part of one large Asian bowl, and seven fragments were from celadon/wintergreen rice bowl with an Asian character on the base. The remaining fragments may be part of four vessels, one porcelain vessel with a wide base (like a child's bowl) and a blue transfer print design, a white earthenware vessel with wide bands of color, a white earthenware vessel with narrow brown bands, and a slip glaze earthenware

fragment. In Stratum Ig, a slip glaze stoneware bottle, a beige earthenware crock/jar fragment, a yellow crock fragment, and a porcelain fragment with a black floral transfer print were recovered.

T-108

Five ceramic fragments from a minimum of four vessels were collected from T-108, Stratum Id. They consist of a white porcelain bowl, a yellow earthenware bowl/crock with an incised/banded rim, a bluish white refined earthenware rim fragment with a blue shell-edge interior, and a white earthenware saucer/small plate fragment.

T-112

Four fragments of a minimum of two vessels were collected T-112, Stratum Ib. All four are white porcelain with a painted blue decoration, but there are two different rim fragments. One rim has a fleur-de-lis design, possibly indicating a European or American origin.

T-115

One complete stoneware bottle with a tan/cream Bristol-type two-tone glaze was collected from T-115, Stratum Id. These bottles usually date from around 1835 to 1900. Early bottles were made in Great Britain, but later ones were made in America, also.

Table 33. Honolulu Waterfront, T-096, Ceramics

Acc. # 096-A-	Prov.	Type	Portion	No.	Paste	Paste Color	Glaze	Color (Bkg)	Décor-ation	Design Motif	Rim Motif	Comments
1	T-096, St. Ii, Fea. 3, SIHP - 7427	Hollowware - bowl (Asian)	Base to Body	1	Porcelain	Buff	Lead transparent	Yellow	--	--	--	Shallow bowl with high foot
2	T-096, St. Ii, Fea. 3, SIHP - 7427	Dinnerware	Body	2	Earthenware	Tan	Lead transparent	White	--	--	--	
3	T-096, St. Ii, Fea. 3, SIHP - 7427	Dinnerware	Body	1	Earthenware	Tan	Lead opaque	Yellow	--	--	--	
4	T-096, St. Ii, Fea. 3, SIHP - 7427	Dinnerware (Asian)	Body	2	Porcelain	Buff	Lead transparent	Bluish white	Painted under-glaze	Floral	--	Asian design

Table 34. Honolulu Waterfront, T-097, Ceramics

Acc. # 097-A-	Prov.	Type	Portion	No.	Paste	Paste Color	Glaze	Color (Bkg)	Decora-tion	Design Motif	Rim Motif	Comments
1	T-097, St. Ic	Hollowware - cup (Asian)	Body	1	Porcelain	White	Lead transparent	White	Painted under-glaze	Floral	--	blue flowers
2	T-097, St. Id	Hollowware - bowl (Asian)	Base	1	Porcelain	White	Lead opaque	Cela-don green	--	--	--	Asian blue character stamped on base

Acc. #	Prov.	Type	Portion	No.	Paste	Paste Color	Glaze	Color (Bkg)	Decor-ation	Design Motif	Rim Motif	Comments
097-A-3	T-097, St. Id	Hollowware - bowl (Asian)	Base to body	1	Porcelain	White	Lead transparent	White	Painted under-glaze	Swirls	--	Blue swirls at base; high foot
4	T-097, St. Id	Flatware	Rim	1	Earthenware, Refined	White	Lead transparent	White	--	--	None	

Table 35. Honolulu Waterfront, T-100, Ceramics

Acc. #	Prov.	Type	Portion	No.	Paste	Paste Color	Glaze	Color (Bkg)	Decor-ation	Design Motif	Rim Motif	Comments
100-A-1	T-100, St. If	Flatware - (Asian)	Base to body	1	Porcelain	White	Lead transparent	Bluish white	Transfer-print	Scenic	--	Pagodas and fern-like trees; blue

Table 36. Honolulu Waterfront, T-101, Ceramics

Acc. #	Prov.	Type	Portion	No.	Paste	Paste Color	Glaze	Color (Bkg)	Decor-ation	Design Motif	Rim Motif	Comments
101-A-1	T-101, St. Ie/II, Fea. 15, SIHP - 7427	Hollowware - cup (Asian)	Base to rim	1	Porcelain	Off-white	Lead transparent	Bluish white	Transfer print	Scenic	Banded	Asian design, birds & waves on exterior; waves on interior; double blue bands on rim; Asian character on base
2	T-101, St. Ie/II, Fea. 15, SIHP - 7427	Dinnerware	Rim	1	Earthenware	Off-white	Lead transparent	Off-white	Painted underglaze	Floral	Banded	Large floral; red flowers, yellow & green "leaves" on exterior; red band on interior rim

Acc. #	Prov.	Type	Portion	No.	Paste	Paste Color	Glaze	Color (Bkg)	Decor-ation	Design Motif	Rim Motif	Comments
3	T-101, St. Ie/II, Fea. 15, SIHP - 7427	Dinnerware	Rim	1	Earthenware, Refined	Off-white	Lead transparent	White	Transfer-print	Geometric	Scalloped-edged	blue lines & dots

Table 37. Honolulu Waterfront, T-104, Ceramics

Acc. #	Prov.	Type	Portion	No.	Paste	Paste Color	Glaze	Color (Bkg)	Decor-ation	Design Motif	Rim Motif	Comments
1	T-104, St. If	Hollowware - bowl (Asian)	Base & body	20	Porcelain	Off-white	Lead transparent	White	Painted overglaze, incised, inlaid & gilded	Floral	--	Four Flowers; Asian shallow bowl; decoration on interior and exterior
2	T-104, St. If	Hollowware	Base to body	1	Earthenware	Buff	Slip glaze	Brown	None	--	--	
3	T-104, St. If	Flatware (Asian)	Base to body	1	Porcelain	White	Lead transparent	White	Transfer-print	Floral	--	blue garland; Asian design; 10.0 (D)
4	T-104, St. If	Hollowware - bowl (Asian)	Base to rim	7	Porcelain	Off-white	Lead opaque	Ce-ladon	None	None	--	Asian characters on base
5	T-104, St. If	Dinnerware	Body	1	Porcelain	White	Lead transparent	White	Painted underglaze	Banded	--	Black, white, green bands
6	T-104, St. If	Dinnerware	Body	1	Porcelain	Off-white	Lead transparent	Blue-green	Painted underglaze	Floral?	--	
7	T-104, St. If	Dinnerware	Body	1	Porcelain	White	Lead transparent	White	Painted underglaze	Banded ?	--	Blue band
8	T-104, St. If	Dinnerware	Base	1	Earthenware, Refined	Off-white	Lead transparent	White	Sponge, painted underglaze	Floral?	--	Blue flowers?

Acc. # 104-A-	Prov.	Type	Portion	No.	Paste	Paste Color	Glaze	Color (Bkg)	Decor-ation	Design Motif	Rim Motif	Comments
9	T-104, St. If	Dinnerware	Body	1	Earthen-ware, Refined	Buff	Lead transparent	White	Painted underglaze	--	--	Thick brown bands on exterior
10	T-104, St. If	Dinnerware	Body	1	Earthen-ware, Refined	Buff	Lead transparent	White	Painted underglaze	--	--	
11	T-104, St. If	Dinnerware	Rim	1	Porcelain	White	Lead transparent	White	Painted underglaze	--	Banded	Very thin, flow blue bands
12	T-104, St. Ig	Crock	Base to body	1	Earthen-ware	Off-white	Lead opaque	Beige	Molded, painted underglaze	Band, orange & white	--	
13	T-104, St. Ig	Bottle	Base to body	1	Stone-ware	Cream	Slip glaze	Brown	None	--	--	Coiling noted on interior of cup
14	T-104, St. Ig	Flatware	Body to rim	1	Porcelain	White	Lead transparent	White	Transfer-print	Floral	Floral	Large & small black flowers, including along rim interior
15	T-104, St. Ij	Crock	Body	1	Stone-ware	Yellow	Slip glaze	Yellow	Banded	--	--	White band on exterior side

Table 38. Honolulu Waterfront, T-108, Ceramics

Acc. # 108-A-	Prov.	Type	Portion	No.	Paste	Paste Color	Glaze	Color (Bkg)	Decor-ation	Design Motif	Rim Motif	Comments
1	T-108, St. Id	Flatware - saucer, probably	Base to body	1	Earthenware, Refined	White	Lead transparent	White	None	None	--	
2	T-108, St. Id	Hollowware - bowl	Base to rim	1	Porcelain	White	Lead transparent	White	None	None	--	
3	T-108, St. Id	Dinnerware	Body	1	Porcelain	White	Lead transparent	White	None	None	--	

Acc. #	Prov.	Type	Portion	No.	Paste	Paste Color	Glaze	Color (Bkg)	Decor-ation	Design Motif	Rim Motif	Comments
108-A-4	T-108, St. Id	Hollowware - bowl	Base to body	1	Earthenware, Refined	Buff	Lead opaque	Yellow	None	None	Incised, banded	Shallow bowl
5	T-108, St. Id	Dinnerware	Body to rim	1	Earthenware, Refined	White	Lead transparent	Bluish white	None	None	Molded, shell-edged	blue (interior)

Table 39. Honolulu Waterfront, T-112, Ceramics

Acc. #	Prov.	Type	Portion	No.	Paste	Paste Color	Glaze	Color (Bkg)	Decor-ation	Design Motif	Rim Motif	Comments
112-A-1	T-112, St. Ib	Flatware	Base	1	Earthenware, Refined	Off-white	Lead transparent	Bluish white	Painted under-glaze	Floral	--	flow blue daisies
2	T-112, St. Ib	Dinnerware (European/American)	Rim	1	Porcelain	Off-white	Lead transparent	Bluish white	Transfer-print	Floral	Molded, shell-edged	Fleur-de-lis along rim
3	T-112, St. Ib	Dinnerware	Body to rim	1	Earthenware, Refined	Off-white	Lead transparent	Bluish white	Transfer-print	Floral	None	Small flowers
4	T-112, St. Ib	Flatware	Rim	1	Earthenware, Refined	Off-white	Lead transparent	Bluish white	--	--	None	

Table 40. Honolulu Waterfront, T-115, Ceramics

Acc. #	Prov.	Type	Portion	No.	Paste	Paste Color	Glaze	Color (Bkg)	Decor-ation	Design Motif	Rim Motif	Comments
115-A-1	T-115, St. Id	Bottle (English, 1835-1900)	Complete	1	Stoneware	Unknown	Slip glaze	Tan, cream	None	None	--	Bristol-type glaze; bottom unglazed

4.10.2 Bottles

T-096

Eighteen small bottle fragments from a minimum of four bottles were recovered from T-096, Stratum Ii, Feature 3, SIHP # 50-80-14-7427. Two bottles were a dark olive green, usually used on nineteenth century spirits bottles, but these bottles continued to be made into the twentieth century. Two clear bottle fragments can be dated to the post 1870 period based on the color.

T-097

Five bottle fragments from a minimum of three bottles were collected from T-097, Stratum Ic and one complete glass jar was collected from Stratum Id. One clear bottle has a PRIOF lip finish, a crown-type lip with an added ledge to make it easier to remove the metal cap. It was used during the 1920s and 1930s, but was gradually replaced by the competing regular crown lip, seen on most bottles today (BLM/SHA 2013). One base fragment has the logo and embossed letters for the cleaner, "CLOROX." The style of the letters is similar to bottles made in the 1940s (Clorox 2013).

T-100

One complete dark olive, spirits bottle was collected from T-100, Stratum II, Feature 16, SIHP # 50-80-14-7427. It has an applied lip, and thus dates from around 1820 to 1890.

T-101

Eight bottle fragments from eight bottles were recovered from T-101, one aqua bottle body fragment from Stratum Ic, and 7 bottle/bottle fragments from Stratum Ie/II, Feature 15, SIHP # 50-80-14-7427. The bottles from Stratum Ie/If consist of four green/olive spirits bottles, dating from the 1860s to the 1920s, based on the type of mold (turn mold), two brown beer bottles, and one bottle of unknown function. One beer bottle was manufactured by the Wisconsin Glass Co., and has a mark embossed on the base which they used from 1885-1900. The second beer bottle was made by the Frederick Heitz Glass Works, St. Louis, Mo., which operated from 1883-1896. This mark was attributed to this company by David Whitten (2013), who corrected an earlier attribution of the mark to an English glassmaker by Toulouse (1978:201). The dated bottles from this test excavation are all mold-blown bottles, made from ca. 1860 to the 1920s. All of the bottles are probably liquor bottles, possibly from the 1880s-1890s period.

T-104

A total of 35 glass bottle/bottle fragments from a minimum of 13 bottles was recovered from T-104, 8 bottles from Stratum If, 4 bottles from Stratum Ig, and one bottle from Stratum Ij. In Stratum If, one aqua bottle (8 fragments) is a soda bottle from the Crystal Soda Works, Honolulu. Elliott and Gould (1988:82-83) dated this style from the 1880s to 1890s. A clear bottle body fragment can be dated to post 1870 based on the color, and green lip fragment can be dated to 1820-1890, as it is an applied lip finish. In Stratum Ig, there are least four spirits bottles, all of a dark olive color, typical of pre-twentieth bottles. Four bottle fragments of the same aqua color were found in Stratum Ij. One base fragment has a mark like an open pontil, which indicates a mouth-blown bottle, but one body fragment has embossed letter, found on mold-blown bottles. Either there are two different bottles represented here, or the bottle was blown in an early dip mold with a removable plate for the embossing on the body. Although the sample for this test

excavation is small, there does seem to be some difference in the date ranges and types of bottles for the three strata. The oldest stratum Ij has a possible mouth-blown or early dip-mold blown bottle, which could date to the mid-eighteenth century or earlier. The middle Stratum Ig has several dark olive spirit bottles with a kick-up base, common from the early to late nineteenth century. The bottles in the top, youngest stratum, has spirits and soda bottles common to the late nineteenth century.

T-112

Seven glass fragments from a minimum of three bottles were collected from T-112, Stratum Ib. At least two of the bottles are the typical dark olive bottles with push-up/kick-up bases made in a turn mold, manufactured from 1860 to the 1920s. Two of the lips, probably part of the same bottles have an applied finish, indicating a date of 1820-1890.

T-114

Five glass fragments from a minimum of two bottles were collected from T-114, Stratum Ic. Three fragments of black glass (pre-1890s), probably from the same bottle were found. The black glass lip fragment had an applied finish, which dates from 1820-1890. The clear bottle fragment dates to post-1870s.

T-115

Five glass fragments from a minimum of four bottles were collected from T-115, Stratum Id. One black glass fragment dates to the pre-1890s and a dark olive base fragment for a spirits bottle with a push-up base, made in a turn mold, can be dated to 1860-1920s.

Table 41. Honolulu Waterfront, T-096, Glass Bottles

Acc. # 096-A-	Prov.	Type	Portion	No. frag	Lip Type	Lip Finish	Color	Height (cm)	Diam. (cm)	Base Shape	Mold	Age	Comments
5	T-096, St. Ii, Fea. 3, SIHP-7427	Bottle	Base	1	--	--	Amber	--	--	--	--	1800-post	
6	T-096, St. Ii, Fea. 3, SIHP-7427	Bottle	Body	2	--	--	Clear	--	--	--	--	1870s-post	
7	T-096, St. Ii, Fea. 3, SIHP-7427	Bottle	Body	3	--	--	Olive, Dark	--	--	--	--		
8	T-096, St. Ii, Fea. 3, SIHP-7427	Bottle	Body	11	--	--	Olive, Dark	--	--	--	--		

Table 42. Honolulu Waterfront, T-097, Glass Bottles

Acc. # 097-A-	Prov.	Type	Portion	No. frag	Lip Type	Lip Finish	Color	Height (cm)	Diam. (cm)	Base Shape	Mold	Age	Comments
5	T-097, St. Ic	Bottle, Cleaner	Base	1	--	--	Amber	--	--	Round	--	1940s	"REG /CLOROX / PAT" on-body (Clorox 2013)
6	T-097, St. Ic	Bottle	Base	1	--	--	Aqua	--	--	Square / rectangular	--	ca. 1865-post	Embossed on base - a diamond; on heel "1500"
7	T-097, St. Ic	Bottle	Neck-lip	1	Priof	ABM	Aqua	--	--	--	--	1920s-1930s	"REGISTERED PATENTED 'PRIOF'" (BLM/SHA 2013)
8	T-097, St. Ic	Bottle	Base	1	--	--	Clear	--	--	--	--	1870s-post	
9	T-097, St. Ic	Bottle	Lip	1	Patent	ABM	Clear	--	--	--	--	1907-post	

Acc. #	Prov.	Type	Portion	No. frag	Lip Type	Lip Finish	Color	Height (cm)	Diam. (cm)	Base Shape	Mold	Age	Comments
10	T-097, St. Id	Jar	Complete	1	Ext. Thread	ABM	Clear	7.0	4.4	Round	2 pc-cup	1903-post	

Table 43. Honolulu Waterfront, T-100, Glass Bottles

Acc. #	Prov.	Type	Portion	No. frag	Lip Type	Lip Finish	Color	Height (cm)	Diam. (cm)	Base Shape	Mold	Age	Comments
2	T-100, Fea. 16, SIHP - 7427	Bottle, Spirits	Complete	1	Double ring	Applied	Olive, Dark	23.5	6.0	Round	2 pc.	1820 – 1890	Base: kick-up

Table 44. Honolulu Waterfront, T-101, Glass Bottles

Acc. #	Prov.	Type	Portion	No. frag	Lip Type	Lip Finish	Color	Height (cm)	Diam. (cm)	Base Shape	Mold	Age	Comments
4	T-101, St. Ic	Bottle	Body	1	--	--	Aqua	--	--	--	--		Asian character, or I or T embosseing
5	T-101, Fea. 15 SIHP - 7427	Bottle, Beer	Base-neck	1	--	--	Brown	20.0+	6.5	Round	--	1885-1900	"WIS G CO / 13/ MILW." - embossed on base (Lockhart et al. 2013:2, Whitten 2013)
6	T-101, Fea. 15 SIHP - 7427	Bottle, Beer	Base-body	1	--	--	Brown	13.0+	7.5	Round	--	1883-1896	"FHGW 8" - embossed on base; for Frederick Heitz Glass Works, St. Louis, Mo. (1883-1896) (Whitten 2013)
7	T-101, Fea. 15 SIHP - 7427	Bottle, Spirits	Complete	1	Ring	--	Green	24.0	6.5	Round	Turn	1860-1920s	Base: push up

Acc. # 101-A-	Prov.	Type	Portion	No. frag	Lip Type	Lip Finish	Color	Height (cm)	Diam. (cm)	Base Shape	Mold	Age	Comments
8	T-101, Fea. 15 SIHP - 7427	Bottle, Spirits	Base- neck	1	--	--	Green, Light	23.0+	6.0	Round	Turn	1860- 1920s	Base: push up
9	T-101, Fea. 15 SIHP - 7427	Bottle, Spirits	Complete	1	Double ring	Applied	Olive, Dark	22.0	6.0	Round	Turn	1860- 1920s	Base: kick-up
10	T-101, Fea. 15 SIHP - 7427	Bottle	Base- body	1	--	--	Olive, Dark	8.5+	2.5	Round	--	1800- post	
11	T-101, Fea. 15 SIHP - 7427	Bottle, Spirits	Complete	1	Double ring	Applied	Olive, Dark	24.0	6.0	Round	Turn	1860- 1920s	Base: kick up

Table 45. Honolulu Waterfront, T-104, Glass Bottles

Acc. # 104-A-	Prov.	Type	Portion	No. frag	Lip Type	Lip Finish	Color	Height (cm)	Diam. (cm)	Base Shape	Mold	Age	Comments
16	T-104, St. If	Bottle	Body	3	--	--	Amber	--	--	--	--		
17	T-104, St. If	Bottle	Body	1	--	--	Amber	--	--	Round	--		
18	T-104, St. If	Bottle, Soda	Base- shoulder	4	Blob	Applied	Aqua	16.5	6.0	Round	2 pc. cup	1880s- 1890s	"TRADE MARK J.A.P." – embossed on base, "CRY – SOD – HO – " Crystal Soda Works, Honolulu HI; (Elliot and Gould 1988:82-83)

Acc. # 104-A-	Prov.	Type	Portion	No. frag	Lip Type	Lip Finish	Color	Height (cm)	Diam. (cm)	Base Shape	Mold	Age	Comments
19	T-104, St. If	Bottle, Soda	Body	3	--	--	Aqua	--	--	Round	--	Possible 1880s-1910s	“ – NOL – “ [HONOLULU] embossed – possible frags. of Crystal Soda Works
20	T-104, St. If	Bottle, Soda	Lip	1	Blob	Applied	Aqua	--	--	Round	--	Possible 1880s	Possible Crystal Soda Works
21	T-104, St. If	Bottle	Body	1	--	--	Aqua	--	--	--	--		
22	T-104, St. If	Bottle	Body	1	--	--	Blue, Cobalt	--	--	--	--		
23	T-104, St. If	Bottle	Body	1	--	--	Clear	--	--	--	--	1870s-post	
24	T-104, St. If	Bottle, Beverage	Lip	1	Brandy	Applied	Green, Light	--	--	Round?	2 pc.	1820 – 1890	
25	T-104, St. If	Bottle	Body	2	--	--	Green, Light	--	--	--	--		
26	T-104, St. If	Bottle, Spirits	Body	3	--	--	Olive, Dark	--	--	Round?	--		
27	T-104, St. If	Bottle	Body	2	--	--	Olive, Dark	--	--	--	--		
28	T-104, St. Ig	Bottle, Spirits	Base	1	--	--	Olive, Dark	--	8.0	Round	No seams	pre-1890s	Kick-up base
29	T-104, St. Ig	Bottle, Spirits	Base	1	--	--	Olive, Dark	--	--	Round	No seams	pre-1890s	Kick-up base
30	T-104, St. Ig	Bottle, Spirits	Base	1	--	--	Olive, Dark	--	7.0	Round	No seams	pre-1890s	Push-up base
31	T-104, St. Ig	Bottle, Spirits	Base	1	--	--	Olive	--	2.8	Round	--	1800-post	Push-up base
32	T-104, St. Ig	Bottle	Body	1	--	--	Olive, Dark	--	--	--	--		
33	T-104, St. Ig	Bottle	Neck	1	--	--	Olive, Dark	--	--	--	--		
34	T-104, St. Ig	Bottle	Neck	2	--	--	Olive, Dark	--	--	--	--		

Acc. #	Prov.	Type	Portion	No. frag	Lip Type	Lip Finish	Color	Height (cm)	Diam. (cm)	Base Shape	Mold	Age	Comments
104-A-35	T-104, St. Ij	Bottle	Base (3); body (1)	4	--	--	Aqua	--	4.0	Round	--	1810-post	Looks like open pontil on base; but bottle has embossing on body "...nk"

Table 46. Honolulu Waterfront, T-112, Glass Bottles

Acc. #	Prov.	Type	Portion	No. frag	Lip Type	Lip Finish	Color	Height (cm)	Diam. (cm)	Base Shape	Mold	Age	Comments
5	T-112, St. Ib	Bottle	Body	1	--	--	Brown	--	--	--	--		
6	T-112, St. Ib	Bottle	Body	1	--	--	Olive	--	--	--	--		
7	T-112, St. Ib	Bottle, Spirits	Base-body	1	--	--	Olive, Dark	--	6.7	Round	Turn	1860-1920s	Kick-up
8	T-112, St. Ib	Bottle, Spirits	Base-body	1	--	--	Olive, Dark	--	6.7	Round	Turn	1860-1920s	Kick-up
9	T-112, St. Ib	Bottle, Beverage	Neck-lip	1	Laid-on-ring	--	Olive, Dark	--	--	--	--		
10	T-112, St. Ib	Bottle	Neck-lip	1	Brandy	Applied	Olive, Dark	--	--	--	--	1820 – 1890	
11	T-112, St. Ib	Bottle, Beer	Neck-lip	1	Brandy	Applied	Olive, Dark	--	--	--	--	1820 – 1890	

Table 47. Honolulu Waterfront, T-114, Glass Bottles

Acc. #	Prov.	Type	Portion	No. frag	Lip Type	Lip Finish	Color	Height (cm)	Diam. (cm)	Base Shape	Mold	Age	Comments
1	T-114, St. Ic	Bottle, Beverage	Neck-lip	1	Brandy	Applied	Black	--	--	--	--	1820 – 1890	
2	T-114, St. Ic	Bottle	Body	1	--	--	Black	--	--	--	--	pre-1890s	

Acc. # 114-A-	Prov.	Type	Portion	No. frag	Lip Type	Lip Finish	Color	Height (cm)	Diam. (cm)	Base Shape	Mold	Age	Comments
3	T-114, St. Ic	Bottle, Beverage	Body	1	--	--	Black	--	--	--	--		
4	T-114, St. Ic	Bottle	Body	2	--	--	Clear	--	--	--	--	1870s-post	

Table 48. Honolulu Waterfront, T-115, Glass Bottles

Acc. # 115-A-	Prov.	Type	Portion	No. frag	Lip Type	Lip Finish	Color	Height (cm)	Diam. (cm)	Base Shape	Mold	Age	Comments
2	T-115, St. Id	Bottle, Beer	Body	1	--	--	Amber	--	--	--	--		
3	T-115, St. Id	Bottle, Beverage	Body	1	--	--	Black	--	--	--	--	pre-1890s	
4	T-115, St. Id	Bottle	Body	2	--	--	Green, Light	--	--	--	--		
5	T-115, St. Id	Bottle, Spirits	Base-body	1	--	--	Olive, Dark	5.0+	8.0	Round	Turn	1860-1920s	Push-up base

4.10.3 Miscellaneous Historic Artifacts

Miscellaneous artifacts were collected from 11 of the Honolulu Waterfront test excavations. Eight brick, four metal, one porcelain, one wood, one slag, one composite, and one possible slate fragments/artifacts were collected from T-096. Based on width and thickness, the manufacture dates of the bricks may range from 1807 to 1860 with one standard sized fragment with a manufacture date between 1886 and 1918 (Meide 1994:25). Also collected were personal effects, including a porcelain pipe stem and wood button; building materials, including a cut nail (ca. 1790 to 1920 [IMACS 1992]), wire nails (ca. 1850 to the present [IMACS 1992]), slag, and slate; and a composite mass of metal and leather.

One each of composite, stoneware, glass, plant seed, leather, and brick fragments/artifacts were collected from T-097. Collected artifacts consist of building materials including, a standard sized brick fragment that dates from 1918 to 1978 (Meide 1994:25), an electrical insulator cleat, and a basalt/mortar/concrete mass. A leather strap or harness, *Caesalpinia bonduc* (Hawaiian pearl; sometimes used by children as marbles or strung in *lei*), and an amethyst color glass fragment with manganese addition that dates from 1820 to 1930s (BLM/SHA 2013) were also collected.

A single red brick fragment was collected from T-098. One composite concrete slab fragment consisting of basalt, mortar and concrete was collected from T-099.

Three metal, two composite, one stoneware, and one glass fragments/artifacts were collected from T-100. Fragments collected include four type items, and building materials consisting of a composite concrete drainage pipe, a composite concrete slab, and a very corroded metal handle.

Two brick, one composite, one bone, and one glass fragments/artifacts were collected from T-101. The original thickness of one of the bricks is intact, indicating it is a standard size. However, the same thickness was used to manufacture standard bricks from 1886 to 1918 and for standard face bricks from 1918 to 1978 (Meide 1994:25).

A total of 23 fragments/artifacts consisting of building materials including eight brick, five stone, five metal, two slag, one kaolin, one crystalline, and one slate fragments/artifacts were collected from T-104. Brick measurements do not conform with standard brick sizes (Meide 1994:25) so no possible manufacture dates are available.

The four other test excavations all contained construction material fragments, including one machine-made brick fragment from T-104A; one machine-made brick fragment and a corroded metal fragment from T-108; one composite fragment of mortar from T-112; and two metal, one tile, one plastic, and one glass fragments/artifacts from T-114.

Table 49. Honolulu Waterfront, T-096, Miscellaneous Historic Artifacts

Acc. # 096-A-	Provenience	Type	Material	Portion	No.	Measurements	Description
9	T-096 St. Id	Brick	--	Fragment	2	--	Red color
10	T-096 St. Id	Brick	--	Fragment	2	--	Yellow color
11	T-096 St. Id	Brick	--	Fragment	1	6 3/4+ x 4 x 2 1/2 in.	Red color, machine-made. Age: 1829-1834 or ca. 1900 (Meide 1994:25)
12	T-096 St. Id	Brick	--	Fragment	1	4+ x 4 x 2 1/4 in.	Yellow color, circular impression on one long side Age: 1886 to 1918 (Meide 1994:25)
13	T-096 St. Id	Brick	--	Fragment	1	2 3/4+ x 4 1/4 x 2 1/2 in.	Tan-yellow color, machine made. Age: 1807-1860 (Meide 1994:25)
14	T-096 St. Id	Brick	--	Fragment	1	2 3/4+ x 4 1/4 x 2 1/2 in.	Tan-yellow color, machine made. Age: 1807-1860 (Meide 1994:25)
15	T-096 St. Id	Metal	Metal	Fragment	1	--	Possible Iron Ore or Hematite
16	T-096, St. Id	Nail	Metal	Complete	1	20.0 (L) x 1.5 (D) cm.	Large nail, but not tapered at end like a spike
17	T-096, St. Id	Nail	Metal	Fragment	3	6.2+ (L) cm.	Square profile; possibly cut nails. Age: ca. 1790 to 1920 (IMACS 1992)
18	T-096, St. Id	Pipe Stem	Porcelain	Fragment	1	1.7 (D) cm.	Painted near bore "TITA..."
19	T-096, St. Ii, Fea. 3, SIHP # -7427	Button	Wood	Complete	1	2.0 (D) cm.	4-hole, recessed panel, convex-concave, polished
20	T-096, St. Ii, Fea. 3, SIHP # -7427	Slag	Slag	Fragment	2	8.0 (L) x 5.0 (W) cm.	Chunk of slag with small piece broken off
21	T-096, St. Ii, Fea. 3, SIHP # -7427	Slate?	Slate?	Fragment	1	3.0 (L) x 0.5 (W) cm.	
22	T-096, St. Ii, Fea. 3, SIHP # -7427	Unknown	Composite	Fragment	1	--	Mass of metal and leather
23	T-096, St. Ii, Fea. 3, SIHP # -7427	Unknown	Metal	Fragment	1	14.0 (L) x 3.0 (W) cm.	Rusted object
24	T-096, St. Id	Brick	--	Fragment	1	N/A	Yellow color, coral inclusions
25	T-096, St. Id	Brick	--	Fragment	1	3+ x 3 1/2 x 2 1/4 in.	Red color, machine-made

Table 50. Honolulu Waterfront, T-097, Miscellaneous Historic Artifacts

Acc. # 097-A-	Provenience	Type	Material	Portion	No.	Measurements	Description
11	T-097, Ie/If, Fea. 7, SIHP # -7427	Building material	Composite	Fragment	1	13.5+ (L) cm.	Basalt / mortar/ concrete mass
12	T-097, St. Ic	Insulator Cleat	Stoneware	Fragment	1	9.5 (L) x 1.5 (D) cm.	Rectangular cleat, unglazed
13	T-097, St. Ic	Pressed Glass	Glass	Fragment	1	--	Amethyst color; manganese addition used from 1820-1930s; fluted pattern
14	T-097, St. Ic	Seed, Burr	Plant Seed	Complete	1	2.0 (D) cm.	<i>Caesalpinia bonduc</i> ; Hawaiian pearl; sometimes used by children as marbles; sometimes strung in lei
15	T-097, St. Ic	Strap - Harness?	Leather	Fragment	4	10.0+ (L) x 2.0 (W) x 0.2 (T) cm.	Seams sewn; metal on one end
16	T-097, St. Id, Fea. 5, SIHP # -7427,	Brick		Fragment	1	7+ x 3 3/4 x 2 1/2 in.	Red color, machine-made. Age: 1918-1978 (Meide 1994:25)

Table 51. Honolulu Waterfront, T-098, Miscellaneous Historic Artifacts

Acc. # 098-A-	Provenience	Type	Material	Portion	No.	Measurements	Description
1	T-098, St. If	Brick		Fragment	1	N/A	Red color

Table 52. Honolulu Waterfront, T-099, Miscellaneous Historic Artifacts

Acc. # 099-A-	Provenience	Type	Material	Portion	No.	Measurements	Description
1	T-099, St. Id/Ie, Fea. 10, SIHP # -7427	Concrete Slab	Composite	Fragment	1	17.2+ (L) cm.	Basalt / mortar/ concrete slab

Table 53. Honolulu Waterfront, T-100, Miscellaneous Historic Artifacts

Acc. # 100-A-	Provenience	Type	Material	Portion	No.	Measurements	Description
3	T-100, St. Ic, Fea. 12 SIHP # -7427	Concrete Pipe	Composite	Fragment	1	22.5 (L) x 19.3 (D) x 9.0 (T) cm.	Drainage pipe

Acc. # 100-A-	Provenience	Type	Material	Portion	No.	Measurements	Description
4	T-100, St. Ic, Fea. 12, SIHP # -7427	Unknown	Stoneware	Fragment	1	--	Buff color; brown slip; architectural; not from a vessel
5	T-100, St. Ic, Fea. 12, SIHP # -7427	Concrete Slab	Composite	Fragment	1	13.2+ (L) cm.	Basalt / mortar/ concrete slab
6	T-100, St. II, Fea. 16, SIHP # -7427	Handle	Metal	Fragment	1	4.5 (L) x 0.5 (W) cm.	Very corroded
7	T-100, St. II, Fea. 16, SIHP # -7427	Unknown	Glass	Fragment	1	--	Heat-modified, warped
8	T-100, St. II, Fea. 16, SIHP # -7427	Unknown	Metal	Fragment	1	--	Flat metal, mesh-like pattern
9	T-100, St. II, Fea. 16, SIHP # -7427	Unknown	Metal	Fragment	1	--	Unidentifiable metal mass

Table 54. Honolulu Waterfront, T-101, Miscellaneous Historic Artifacts

Acc. # 101-A-	Provenience	Type	Material	Portion	No.	Measurements	Description
12	T-101, St. Ib	Brick	--	Fragment	1	N/A x N/A x 2 1/4 in.	Red color, machine-made. Age: 1886-1978 (Meide 1994:25)
13	T-101, St. Ib	Insulator	Composite	Complete	1	--	White porcelain and metal
14	T-101, St. Ie/If, Fea. 15, SIHP # -7427	Bead?	Bone	Fragment	1	2.4+ (L) x 0.4 (D) cm.	Tubular bead; offset machine-drilled hole
15	T-101, St. Ie/If, Fea. 15, SIHP # -7427	Brick	--	Fragment	2	--	Red color
16	T-101, St. Ie/If, Fea. 15, SIHP # -7427	Strap	Metal	Fragment	1	17.6 (L) x 1.0 (W) cm.	
17	T-101, St. Ie/If, Fea. 15, SIHP # -7427	Window glass	Glass	Fragment	1	--	

Table 55. Honolulu Waterfront, T-104, Miscellaneous Historic Artifacts

Acc. # 104-A-	Provenience	Type	Material	Portion	No.	Measurements	Description
36	T-104, cmbs, St. Ig	Pipe Stem	Kaolin	Fragment	1	3.1 (L) x 0.8 (D) cm.	Two incised bands horizontally around tube; many vertical lines from the bands to the end; bore 0.2 (D)
37	T-104, cmbs, St. Ig	Stone	Stone	Fragment	1	6.4 (L) x 4.2 (W) x 2.0 (T) cm.	Large smooth limestone cobble with quartz inclusions; imported?
38	T-104, cmbs, St. Ij	Basalt	Stone	Complete	1	10 1/2 x 4 x 3 cm.	Grey color, cut/dressed basalt, rectangular
39	T-104, St. Id	Brick	--	Fragment	1	4+ x 3 1/4 x 2 in.	Red color, machine-made
40	T-104, St. Id	Brick	--	Fragment	1	2+ x 3 1/2 x 2 1/4 in.	Red color, machine-made
41	T-104, St. Id	Brick	--	Fragment	2	5 1/2+ x 3 1/2 x 2 in.	Red color, machine-made
42	T-104, St. Id	Brick	--	Fragment	1	2+ x 3 x 2	Red color, machine-made
43	T-104, St. If	Basalt	Stone	Fragment	5	--	Grey color, cut/dressed basalt
44	T-104, St. If	Basalt	Stone	Fragment	1	--	Grey color, cut/dressed basalt
45	T-104, St. If	Basalt	Stone	Fragment	1	--	Basalt stone
46	T-104, St. If	Brick	--	Fragment	1	--	Red color
47	T-104, St. If	Brick	--	Fragment	1	3+ x 4 1/4 x 2 1/2 in.	Yellow color, machine-made
48	T-104, St. If	Brick	--	Fragment	1	N/A x N/A x 2 1/2 in.	Red color, machine-made
49	T-104, St. If	Brick	--	Fragment	1	N/A x N/A x 2 1/4 in.	Grey color
50	T-104, St. If	Metal	Metal	Fragment	1	--	
51	T-104, St. If	Metal frag	Metal	Fragment	1	1.1 (L) x 1.1 (W) x 0.3 (T) cm.	Small, rusty metal piece
52	T-104, St. If	Metal frag	Metal	Fragment	1	15.5 (L) x 2.0-4.0 (W) x 0.1-2.0 (T) cm.	Conglomerate with shell and stone on one end
53	T-104, St. If	Metal frag	Metal	Fragment	1	3.0 (L) x 1.0 (W) x 1.0 (T) cm.	Rusty
54	T-104, St. If	Nail	Metal	Complete	1	2.9 (L) x 0.3-1.0 (W) x 0.3 (T) cm.	Round head. Age: ca. 1850 to the present (IMACS 1992)
55	T-104, St. If	Possible Slag	Slag	Fragment	1	2.7 (L) x ~0.5 (W) x ~0.5 (T) cm.	Small brittle piece

Acc. # 104-A-	Provenience	Type	Material	Portion	No.	Measurements	Description
56	T-104, St. If	Rock	Crystalline - rock	Fragment	1	3.0 (L) x 2.5 (W) x 1.0 (T) cm.	Rock with crystalline structure and metallic luster. Fairly hard and light; probably NOT volcanic glass
57	T-104, St. If	Slag	Slag	Fragment	1	--	Factory slag
58	T-104, St. If	Slate	Slate	Fragment	1	--	Slate

Table 56. Honolulu Waterfront, T-104A, Miscellaneous Historic Artifacts

Acc. # 104A-A-	Provenience	Type	Material	Portion	No.	Measurements	Description
1	T-104A, St. Id	Brick	--	Fragment	1	N/A x N/A x 2 in.	Red color, machine-made

Table 57. Honolulu Waterfront, T-108, Miscellaneous Historic Artifacts

Acc. # 108-A-	Provenience	Type	Material	Portion	No.	Measurements	Description
6	T-108, St. Id	Brick	--	Fragment	1	5 1/2+ x N/A x 2 in.	Red color, machine-made
7	T-108, St. Id	Corroded Metal	Metal	Fragment	1	--	

Table 58. Honolulu Waterfront, T-112, Miscellaneous Historic Artifacts

Acc. # 112-A-	Provenience	Type	Material	Portion	No.	Measurements	Description
12	T-112, St. Ib	Mortar	Composite	Fragment	1	--	Whitish/brown

Table 59. Honolulu Waterfront, T-114, Miscellaneous Historic Artifacts

Acc. # 114-A-	Provenience	Type	Material	Portion	No..	Measurements	Description
5	T-114, St. Ic	Can	Metal	Fragment	1	--	Aluminum, red ACL at top "Little Old ..."
6	T-114, St. Ic	Nail, wire	Metal	Complete	1	4.2 (L) cm.	Corroded. Age: ca. 1850 to the present (IMACS 1992)
7	T-114, St. Ic	Tile	Tile	Fragment	1	--	Grayish white, glazed on one side
8	T-114, St. Ic	Unknown	Plastic	Fragment	1	--	Red, flat, with cloth at one end
9	T-114, St. Ic	Window glass	Glass	Fragment	1	--	

4.10.4 Summary of Artifact Assemblage from Honolulu Waterfront

Twenty trenches in the Honolulu Waterfront area had historic artifacts. In seventeen of these trenches the artifacts consist of bottles and ceramics that generally date to the 1870s-1920s period. One test excavation (T-114) may have one fill layer slightly older, as one bottle has a pontil mark (pre-1850). One trench (T-097) on the west end of the Waterfront area has bottles that date only to the early-to mid twentieth century (1920s-1940s). The trench at the extreme west end (T-096) does not have any dated bottles. T-097 (and perhaps T-096) are more similar to the Iwilei test excavations than the other 18 test excavations along the Honolulu waterfront, probably reflecting the later development of that area. The ceramics consist of both late nineteenth century European and Asian wares. The bottles are dominated by spirists (beer, ale, whiskey, etc.) bottles. It is probable that some of the historic artifacts reflect commercial use (hotel and bars), rather than domestic refuse. The miscellaneous material is dominated by construction material dating to the nineteenth and twentieth centuries.

4.11 Artifact Analysis for Kaka‘ako West (Test Excavations 116- 161)

Historic Artifacts were recovered from 31 of the 53 test excavations in Kaka‘ako West, T-116, T-117, T-118, T-119A, T-120B, T-121, T-122, T-124, T-125, T-126, T-128, T-130, T-131, T-132, T-133, T-134, T-136, T-137, T-138, T-139, T-140, T-141, T-142, T-143, T-145A, T-148A, T-149, T-150, T-151, T-152 and T -153. A total of 640 historic artifact fragments were collected, including 210 ceramic vessel fragments, 253 glass bottle/bottle fragments, and 177 miscellaneous items.

One small glass fragment was recovered from T-120A, Feature 11, part of a culturally enriched stratum, designated SIHP # 50-80-14-7428. The artifact is probably intrusive to this stratum. Historic artifacts were collected from a wetland sediment, designated SIHP # 50-80-14-2963, an Asian-style ceramic teapot from T-122, Stratum II, and a ceramic insulator from T-123, Stratum II. Historic artifacts were recovered from SIHP # 50-80-14-7428, an historic burnt trash layer, from T-130 Stratum Ii, T-132, Stratum Ie, T-134, Stratum If, T-138, Stratum II, and T-140, Stratum Ih. The artifacts from this site generally date from the late nineteenth to early twentieth century. Historic artifacts from a cultural stratum, designated SIHP # 50-80-14-5820 were collected from T-141, Stratum Id, T-142, Fea.7, and T-151, Fea. 23.

4.11.1 Ceramics

T-116

Six fragments from six vessels were collected from T-116, Stratum Ij. These consisted of two Asian porcelains, one with a Sweet Pea motif, two Western ironstone fragments, and two Anglo/American Bristol glaze bottles made from 1835-1900.

T-117

Thirty-seven (37) ceramic fragments from seven vessels were collected from from T-117, Stratum Ic. Twenty of the fragments are from one large porcelain bowl or wash basin. The other vessels consist of a stoneware crock, an Asian bowl, three porcelain vessels and a stoneware vessel.

T-118

One ceramic earthenware fragment was recovered from T-118, Stratum Ib.

T-119A

Four fragments from three vessels, All Asian porcelain were collected from T-119A, Strata Id and Iia. One Asian vessel possibly has a Sweet Pea motif.

T-120B

Sixteen (16) fragments from eight vessels were collected from T-120B, Stratum Ic-II, including one stoneware jug, two stoneware vessels, two Asian porcelain wares, one painted porcelain, and one transfer-print porcelain.

T-121

Three ceramic fragments from two vessels were recovered from T-121, Stratum Ic, one cut sponge ware, and one English ironstone plate dated to 1872-1905.

T-122

One fragment of an Asian teapot from T-122, Stratum II, SIHP # 50-80-14-2963 was collected. The teapot has a picture of a man and a woman in kimonos.

T-124

Three fragments of two vessels were collected from T-124, Stratum Id, one English ironstone plate, and one with an Asian bowl with a Sweet Pea motif.

T-125

Six fragments from five vessels from T-125, Stratum Id and Ie, including a stoneware crock, a possible stoneware bottle, two earthenware vessels and one porcelain cup.

T-126

Six fragments from five vessels were collected from T-126, from Stratum Ic. Three porcelains had Asian design, including the Sweet Pea and Four Flowers motif. The other two vessels are a painted porcelain and a stoneware bottle.

T-128

Two ceramic fragments from two vessels were collected from T-128, Stratum Ia. The two vessels were a Western ironstone, and an Asian bowl with a Bamboo motif.

T-130

Fifteen fragments from eleven vessels from T-130, Stratum Ii, four Asian porcelains, three Western ironstones (one dated to 1862-1891), a ewer with the molded wheat pattern, two painted porcelains, one stoneware crock and one sake bottle.

T-131

Three fragments from three vessels were collected from T-131, Stratum Id, one British cut-sponge earthenware, one Asian Four Flowers porcelain, and one Dashed-line transfer-print porcelain with a Three Friends motif.

T-132

Twenty-five ceramic fragment from 21 vessels were collected from T-132, Stratum Id and Ie. These consisted of three Asian Celadon glaze bowls, three Asian painted porcelain wares, five Asian transferprints, one Asian stoneware spouted jar, five earthenware vessels, three porcelain vessels and one stoneware crock.

T-134

Eleven fragments from ten vessels were collected from T-134, Strata Ib, Ie, and If, five Asian porcelains, one Asian stoneware bottle, one Asian sake bottle, two stoneware crocks, one painted porcelain, and one earthenware vessel. The Asian vessels have a dashed-line transfer-print with a three friends motif, Four Flowers and Four Flowers overglaze painting.

T-137

One fragment from one porcelain vessel was recovered from T-137, Stratum Ib.

T-138

Six fragments from five vessels from T-138, Stratum II, three Asian shouldered jars, one Asian liquor warmer with a Sweet Pea motif, and one Anglo/American Bristol-glaze stoneware bottle.

T-140

Five fragments from five vessels were collected from T-140, Stratum I_h, one Anglo/American stoneware jar, two Asian dashed line transfer prints, one painted porcelain with a Sweet Pea motif, and one transfer-print porcelain.

T-141

Eight fragments from seven vessels were collected from T-141, Feature 5, two painted overglaze porcelains, one with a Four Flowers motif, one Asian transferprint porcelain, one stoneware vessel, two porcelain vessels,, and one refined earthenware vessel.

T-142

Nine fragments from four vessels were collected form T-142, Stratum II_a, one stoneware bottle, two earthenware vessels, and one porcelain vessel with a blue transfer-print decoration.

T-143

Thirty-eight (38) fragments from 28 vessels, consisting of one Asian soy dish, four Asian painted porcelains, three Asian porcelain transferprint, two Asian porcelain dashed line transferprints, three white porcelains, one stoneware, four earthenware vessels with a slip glaze, three painted porcelain, four painted earthenwares, one English earthenware dated 1870-1890, and two ironstone vessels dating 1873-1891.

T-148A

Three fragments from two vessels were collected from T-148A, Stratum I_b, one porcelain dinnerware, and one porcelain cup.

T-152

One porcelain dinnerware fragment from T-152, Stratum I_g.

Table 60. West Kaka'ako, T-116, Ceramics

Acc. # 116-A-	Prov.	Type	Portion	No.	Paste	Paste Color	Glaze	Color (Bkg)	Decor-ation	Design Motif	Rim Motif	Comments
1	T-116, St. Ij	Hollowware - bowl	Body to rim	1	Earthenware, Refined (Ironstone)	Off-white	Lead transparent	White	None	None	None	9.8 (D)
2	T-116, St. Ij	Dinnerware (Asian)	Base to body	1	Earthenware, Refined (Ironstone)	Off-white	Lead transparent	White	None	None	--	High foot
3	T-116, St. Ij	Hollowware (Asian)	Base to body	1	Porcelain	Off-white	Lead transparent	Blue-gray	Painted under-glaze	Swirls	--	High foot, Sweet Pea motif
4	T-116, St. Ij	Flatware - plate	Base to rim	1	Earthenware, Refined (Ironstone)	Off-white	Lead transparent	White	None	None	None	
5	T-116, St. Ij	Bottle (English)	Complete	1	Stoneware	Buff	Slip glaze	Tan, cream	None	None	--	Neck and rim are tan glazed, rest of bottle glazed cream, 7cm (D) x 20cm (H)
6	T-116, St. Ij	Bottle (English, 1835-1900)	Complete	1	Stoneware	Buff	Slip glaze	Tan, cream	None	None	--	Bristol glaze; Neck and rim are tan glazed, rest of bottle glazed cream, 7cm (D) x 19.5cm (H)

Table 61. West Kaka'ako, T-117, Ceramics

Acc. # 117-A-	Prov.	Type	Portion	No.	Paste	Paste Color	Glaze	Color (Bkg)	Decor-ation	Design Motif	Rim Motif	Comments
1	T-117, St. Ic	Crock	Base	1	Stoneware	Gray	Salt glaze	Brown	None	None	--	Base unglazed
2	T-117, St. Ic	Dinnerware	Body	1	Porcelain	White	Lead transparent	White	--	--	--	
3	T-117, St. Ic	Dinnerware	Body	1	Stoneware	Buff	Slip glaze	Brown	None	None	--	
4	T-117, St. Ic	Hollowware - bowl (Asian)	Base to rim	2	Porcelain	Grey	Lead opaque	Cela- don green	Painted over- glaze	Banded	Molded	High foot; 10.0 (D); blue bands on exterior
5	T-117, St. Ic	Hollowware - bowl or wash basin	Body & rim	27	Porcelain	White	Lead transparent	White	--	--	None	
6	T-117, St. Ic	Flatware	Body to rim	4	Porcelain	Buff	Lead transparent	White	None	None	None	
7	T-117, St. Ic	Dinnerware	Rim	1	Porcelain	Off- white	Lead transparent	Cela- don green	None	None	None	

Table 62. West Kaka'ako, T-118, Ceramics

Acc. # 118-A-	Prov.	Type	Portion	No.	Paste	Paste Color	Glaze	Color (Bkg)	Decor-ation	Design Motif	Rim Motif	Comments
1	T-118, St. Ib	Flatware - plate	Base to rim	1	Earthenware, Refined	White	Lead transparent	White	None	None	None	

Table 63. West Kaka'ako, T-119A, Ceramics

Acc. # 119A- A-	Prov.	Type	Portion	No.	Paste	Paste Color	Glaze	Color (Bkg)	Decor- ation	Design Motif	Rim Motif	Comments
1	T-119A, St. Id	Dinnerware (Asian)	Body & rim	2	Porcelain	White	Lead transparent	White	Painted under-glaze	Floral?	Banded	Asian design, possible blue bamboo; Two blue bands (int.)
2	T-119A, St. Id	Dinnerware (Asian)	Body	1	Porcelain	White	Lead transparent	Bluish white	Painted under-glaze	Floral	--	Sweet Pea motif
3	T-119A, St. IIa	Hollowware (Asian)	Body	1	Porcelain	White	Lead transparent	White	Painted under-glaze	Floral?	--	Asian style blue floral exterior design

Table 64. West Kaka'ako, T-120B, Ceramics

Acc. # 120B- A-	Prov.	Type	Portion	No.	Paste	Paste Color	Glaze	Color (Bkg)	Decor- ation	Design Motif	Rim Motif	Comments
1	T-120B, St. Ic-II	Jug?	Body	1	Stoneware	Tan	Slip glaze	Red-Brown	None	None	--	Body fragment with handle; jug-molded flutes on handle
2	T-120B, St. Ic-II	Dinnerware (Asian)	Body	4	Porcelain	White	Lead transparent	White	None	None	--	high foot
3	T-120B, St. Ic-II	Dinnerware	Body	2	Stoneware	Yellow	Lead transparent	Yellow	None	None	--	
4	T-120B, St. Ic-II	Dinnerware	Body	6	Porcelain	White	Lead transparent	White	Painted under-glaze	Swirls	--	Worm pattern; blue, white, black; 4 brown bands atfoot

Acc. # 120B- A-	Prov.	Type	Portion	No.	Paste	Paste Color	Glaze	Color (Bkg)	Decor-ation	Design Motif	Rim Motif	Comments
5	T-120B, St. Ic-II	Dinnerware	Body	1	Porcelain	Off-white	Lead transparent	White	Transfer-print	Scenic	--	Checkered / scaled background; house? On interior side
6	T-120B, St. Ic-II	Dinnerware	Rim	1	Stoneware	Yellow	Lead transparent	Yellow	--	--	Molded	Molded flutes
7	T-120B, St. Ic-II	Dinnerware (Asian)	Rim	1	Porcelain	Off-white	Lead transparent	Blue, light	Painted under-glaze	Floral	Molded, shell-edged	Blue paint; Asian design

Table 65. West Kaka'ako, T-121, Ceramics

Acc. # 121- A-	Prov.	Type	Portion	No.	Paste	Paste Color	Glaze	Color (Bkg)	Decor-ation	Design Motif	Rim Motif	Comments
1	T-121, St. Ic	Dinnerware (European)	Rim	2	Stoneware	White	Lead transparent	White	Sponge, painted under-glaze	Floral	Banded	Red flowers, green fleur-de-lis; One blue band (ext. & int.)
2	T-121, St. Ic	Flatware - plate (English, 1872-1905)	Base to rim	1	Earthenware, Refined (Ironstone)	White	Lead transparent	White	None	None	Banded	Thick blue bands, red band (int.); base with black "M / Porcelaine" crown logo. Moore Bros. trademark c. 1872-1905 (Stoke-on-Trent 2013)

Table 66. West Kaka'ako, T-122, Ceramics

Acc. # 122-A-	Prov.	Type	Portion	No.	Paste	Paste Color	Glaze	Color (Bkg)	Decor-ation	Design Motif	Rim Motif	Comments
1	T-122, St. II SIHP - 2963	Tea pot (Asian)	Complete	1	Porcelain	White	Lead transparent	White	Painted over-glaze	Scenic	None	Asian man and women in kimonos; gold, brown paint

Table 67. West Kaka'ako, T-124, Ceramics

Acc. # 124-A-	Prov.	Type	Portion	No.	Paste	Paste Color	Glaze	Color (Bkg)	Decor-ation	Design Motif	Rim Motif	Comments
1	T-124, St. Id	Hollowware - bowl (Asian)	Body to rim	1	Porcelain	White	Lead transparent	Bluish white	Painted under-glaze	Swirls	Banded	Sweet Pea motif
2	T-124, St. Id	Flatware - plate	Body to rim	2	Earthenware, Refined (Ironstone)	White	Lead transparent	White	None	None	None	

Table 68. West Kaka'ako, T-125, Ceramics

Acc. # 125-A-	Prov.	Type	Portion	No.	Paste	Paste Color	Glaze	Color (Bkg)	Decor-ation	Design Motif	Rim Motif	Comments
1	T-125, St. Id	Crock	Base	1	Stoneware	Cream	Salt glaze	Off-white	--	--	--	
3	T-125, St. Id	Dinnerware	Body	1	Earthenware, Refined	White	Lead transparent	White	--	--	--	
2	T-125, St. Id	Bottle?	Body	1	Stoneware	Cream	Slip glaze	Tan	None	None	--	
4	T-125, St. Ie	Hollowware - cup	Base & body	2	Porcelain	White	Lead transparent	White	Molded	None	--	9.0 (D); molded flutes

Acc. # 125-A-	Prov.	Type	Portion	No.	Paste	Paste Color	Glaze	Color (Bkg)	Decoration	Design Motif	Rim Motif	Comments
5	T-125, St. Ie	Dinnerware	Body	1	Earthenware, Refined	Buff	Lead transparent	White	Painted underglaze	Floral?	--	Fragment is glazed on both sides; unknown green hand painted design

Table 69. West Kaka'ako, T-126, Ceramics

Acc. # 126-A-	Prov.	Type	Portion	No.	Paste	Paste Color	Glaze	Color (Bkg)	Decor-ation	Design Motif	Rim Motif	Comments
1	T-126, St. Ic,	Hollowware - bowl	Base to body	1	Porcelain	White	Lead transparent	Bluish white	Painted under-glaze	Banded	--	Sweet Pea motif? Blue band (int.) near bottom
2	T-126, St. Ic,	Hollowware - bowl (Asian)	Base to body	1	Porcelain	Off-white	Lead transparent	Celadon green	None	None	--	Blue stamp on back; Asian calligraphy; high foot
3	T-126, St. Ic,	Hollowware - bowl (Asian)	Base to rim	1	Porcelain	White	Lead transparent	White	Painted over-glaze, gilded	Floral	Gilt edge	Four Flowers motif; high foot
4	T-126, St. Ic,	Dinnerware	Rim	1	Porcelain	White	Lead transparent	White	Painted under-glaze	--	Banded	Blue band
5	T-126, St. Ic,	Bottle	Body	2	Stoneware	Buff	Slip glaze	Beige	None	--	--	

Table 70. West Kaka'ako, T-127, Ceramics

Acc. # 127-A-	Prov.	Type	Portion	No.	Paste	Paste Color	Glaze	Color (Bkg)	Decoration	Design Motif	Rim Motif	Comments
1	T-127, St. Ic	Bottle	Body	2	Stoneware	Tan	Slip glaze	Brown	None	None	--	

Table 71. West Kaka'ako, T-128, Ceramics

Acc. # 128-A-	Prov.	Type	Portion	No.	Paste	Paste Color	Glaze	Color (Bkg)	Decoration	Design Motif	Rim Motif	Comments
1	T-128, St. Ia	Dinner-ware	Rim	1	Earthenware, Refined (Ironstone)	Off-white	Lead transparent	Off-white	Painted underglaze	Floral	Banded	"Green leaf only on fragment (int.); two exterior red bands on rim
2	T-128, St. Ia	Hollow-ware - bowl (Asian)	Base to body	1	Porcelain	Gray	Lead transparent	Bluish white	Painted underglaze	Floral	--	Bamboo motif (ext.); high foot

Table 72. West Kaka'ako, T-130, Ceramics

Acc. # 130-A-	Prov.	Type	Portion	No.	Paste	Paste Color	Glaze	Color (Bkg)	Decoration	Design Motif	Rim Motif	Comments
1	T-130, St. Ii	Flatware - plate	Body	1	Earthenware, Refined (Ironstone)	White	Lead transparent	White	Transfer-print	Floral	--	Brown flowers & leaves
2	T-130, St. Ii	Dinnerware	Body	1	Earthenware, Refined (Ironstone)	White	Lead transparent	White	Painted underglaze	Floral	--	Blue flowers; green leaves
3	T-130, St. Ii	Flatware-saucer	Base to rim	1	Porcelain	White	Lead transparent	White	Painted overglaze	Floral	None	Black flowers; 13.0 (D)

Acc. #	Prov.	Type	Portion	No.	Paste	Paste Color	Glaze	Color (Bkg)	Decoration	Design Motif	Rim Motif	Comments
4	T-130, St. Ii	Hollowware - bowl (Asian)	Base to rim	1	Porcelain	White	Lead transparent	Green, light	Appliqué; painted overglaze	Floral	Gilt edge	Dark Green flowers; base: blue Asian character
5	T-130, St. Ii	Dinnerware	Body to rim	1	Porcelain	White	Lead transparent	White	Painted underglaze; slip	Banded	Banded	Wide green band between two brown bands
6	T-130, St. Ii	Crock	Body to rim	1	Stoneware	White	Lead transparent	White	None	None	None	
7	T-130, St. Ii	Hollowware - cup	Complete	1	Earthenware, Refined	Off-white	Lead transparent	White	Painted underglaze	Floral	None	917 (D); 6.5 (H); small green flowers (sprig); handle broken off
8	T-130, St. Ii	Sake Bottle (Asian)	Base-body	1	Stoneware	White	Lead transparent	White	None	None	--	High gloss
9	T-130, St. Ii	Dinnerware (Asian)	Base	1	Porcelain	White	Lead transparent	Bluish white	--	--	--	Base: Asian characters
10	T-130, St. Ii	Ewer	Body (4); rim (1)	5	Porcelain	White	Lead transparent	White	Molded	Floral	None	Wheat pattern; flowers and leaves
11	T-130, St. Ii	Flatware - plate (English)	Base to rim	1	Earthenware, Refined (Ironstone)	Off-white	Lead transparent	White	None	None	Molded	Rim: Ribbon; Base; Green stamp: " [Royal Seal / STONE CHINA / E & C CHALLINOR / FENTON"; E. & C. Challinor; 1862-1891; FENTON (Stoke-on-Trent 2013)

Table 73. West Kaka'ako, T-131, Ceramics

Acc. # 131-A-	Prov.	Type	Portion	No.	Paste	Paste Color	Glaze	Color (Bkg)	Decor.	Design Motif	Rim Motif	Comments
1	T-131, St. Id	Hollowware - bowl (Asian)	Base to rim	1	Porcelain	White	Lead trans- parent	Bluish white	Transfer -print	Floral/ geo- metric	Scal- loped	Three Friends pattern – pine, plum & bamboo, on interior; blue rim exterior; band; medium-sized foot; Asian; 14,8 (D) x 4.2 (H)
2	T-131, St. Id	Hollowware shallow saucer	Body to rim	1	Porcelain	White	Lead trans- parent	Bluish white	Painted over- glaze	Floral	Gilt edge	Four Flowers design; Asian; Black & green flowers; 3.0 (H)
3	T-131, St. Id	Flatware - plate	Rim	1	Earthenware, Refined	Cream	Lead trans- parent	Off- white	Cut Sponge under- glaze	Floral/ geo- metric	Banded	Red flowers; interior rim has green geometric pattern; Scottish Sponge style

Table 74. West Kaka'ako, T-132, Ceramics

Acc. # 132-A-	Prov.	Type	Portion	No.	Paste	Paste Color	Glaze	Color (Bkg)	Décor.	Design Motif	Rim Motif	Comments
1	T-132, St. Id	Hollowware - bowl	Base	1	Porcelain	White	Lead trans- parent	White	None	--	--	No foot
2	T-132, St. Id	Dinnerware	Body	1	Porcelain	Cream	Lead trans- parent	Bluish white	Painted under- glaze	Floral	--	Blue lines and flowers
3	T-132, St. Id	Dinnerware	Body	1	Earthenware, Coarse	Cream	Lead trans- parent	Tan	None	None	--	
4	T-132, St. Id	Dinnerware	Rim	1	Earthenware	Redd- ish brown	Lead trans- parent	Brown, dark	--	None	--	

Acc. # 132-A-	Prov.	Type	Portion	No.	Paste	Paste Color	Glaze	Color (Bkg)	Décor.	Design Motif	Rim Motif	Comments
5	T-132, St. Ie	Hollowware - bowl (Asian)	Base to rim	1	Porcelain	White	Lead transparent	Off-white	Painted under-glaze	Scenic	None	Two Asian people in Kimonos?; blue interior; 6.6 (D) x 2.5 (H)
5	T-132, St. Ie	Hollowware - bowl (Asian)	Base	1	Porcelain	White	Lead transparent	Blue-green	--	--	--	Base: Asian character - hand painted, under glaze
6	T-132, St. Ie	Flatware - plate/ saucer	Body to rim	1	Earthenware, Refined	Off-white	Lead transparent	White	Sponge, painted under-glaze	Floral	Banded	blue band near bowl bottom
7	T-132, St. Ie	Hollowware - bowl	Body to rim	1	Porcelain	Buff	Lead transparent	Brown	None	Trailed	None	Indentation in rim for cover?
6	T-132, St. Ie	Hollowware - bowl (Asian)	Base	2	Porcelain	White	Lead transparent	Celadon green	None	None	--	Base: Asian character - hand painted, under glaze; 7.3 (D) x 4.0 (H)
7	T-132, St. Ie	Hollowware - cup (Asian)	Base	1	Porcelain	White	Lead opaque	Red-Brown	Incised, painted under-glaze	Floral	--	Incised pattern; base: Asian pattern stamp
8	T-132, St. Ie	Dinnerware	Body to rim	1	Earthenware	Buff	Lead transparent	White	Sponge under-glaze	Floral	Banded	Red flowers, blue & green leaves; Stamped/ printed under glaze
9	T-132, St. Ie	Hollowware - bowl (Asian)	Base to rim	1	Porcelain	White	Lead opaque	Celadon green	None	None	None	Asian character stamped on bottom on both sides; 12.5 (D) x 5.6 (H)
10	T-132, St. Ie	Hollowware - bowl (Asian)	Base to body	1	Porcelain	White	Lead transparent	White	Transfer print	Floral/ geometric	--	Dashed line-Asian wave pattern; white leaf designs. Pendant pattern on rim; 10.5 (D) x 3.9 (H)

Acc. # 132-A-	Prov.	Type	Portion	No.	Paste	Paste Color	Glaze	Color (Bkg)	Décor.	Design Motif	Rim Motif	Comments
11	T-132, St. Ie	Hollowware - bowl (Asian)	Base to body	1	Porcelain	White	Lead transparent	Bluish white	Transfer-print	Floral	Geometric	Dashed line; 7.3 (D); print on exterior side; geometric rim band on interior side
12	T-132, St. Ie	Hollowware - bowl (Asian)	Base to body	1	Porcelain	White	Lead transparent	White	Transfer print	Floral/geometric	--	Dashed line-Asian wave pattern
13	T-132, St. Ie	Jar, Spouted (Asian)	Body	1	Stoneware	Buff	Lead transparent	Yellow	Impressed	Dots	--	Spout broken
14	T-132, St. Ie	Flatware - saucer	Body to rim	1	Porcelain	White	Lead transparent	Off-white	Transfer-print, molded	Floral	None	Molded flutes around interior center of dish; dark green flowers
15	T-132, St. Ie	Hollowware	Base to body	1	Porcelain	White	Lead transparent	Blue-gray	Painted over-glaze	Floral	--	Four Flowers; interior base has painted floral design, another (possibly floral) design on exterior
16	T-132, St. Ie	Hollowware - cup (Asian)	Body	2	Porcelain	White	Lead opaque	Celadon green	None	None	--	7.3 (D) x 3.5 (H); green color on interior only
17	T-132, St. Ie	Hollowware - bowl (Asian)	Base to body	1	Porcelain	White	Lead opaque	Red-Brown	Incised, painted under-glaze	Floral?	--	Asian style; 5.1 (D) x 4.0 (H); red character on base

Acc. #	Prov.	Type	Portion	No.	Paste	Paste Color	Glaze	Color (Bkg)	Décor.	Design Motif	Rim Motif	Comments
18	T-132, St. Ie	Hollowware - cup (Asian)	Base to rim	1	Porcelain	White	Lead transparent	Bluish white	Transfer-print	Floral/geometric	Geometric	Dashed lines 6.5 (D) x 5.8 (H); high foot; Asian; piece exterior has alternating panels of floral and geometric designs; Interior rim 1 with geometric pendant pattern.; Asian character on base
19	T-132, St. Ie	Crock	Rim	1	Stoneware	Yellow	Salt glaze	Yellow	--	--	Molded banded	
20	T-132, St. Ie	Hollowware - bowl (Asian)	Base to rim	1	Porcelain	White	Lead opaque	Celadon green	None	None	None	Asian character stamped on bottom on both sides; 12.5 (D) x 5.6 (H); not the same vessel as above
21	T-132, St. Ie	Hollowware - bowl (Asian)	Body to rim	1	Porcelain	White	Lead transparent	White	Transfer-print	Scenic	Geometric	Dashed line -Exterior has panels of blue designs with floral dashes, geometric and scenic garden patterns. Rim interior has blue abstract pendant patterns.

Table 75. West Kaka'ako, T-134, Ceramics

Acc. # 134-A-	Prov.	Type	Portion	No.	Paste	Paste Color	Glaze	Color (Bkg)	Décor.	Design Motif	Rim Motif	Comments
1	T-134, St. If	Crock	Rim	1	Stoneware	Tan	Slip glaze	Brown	--	--	None	
2	T-134, St. Ib	Hollowware - bowl	Base to body	1	Porcelain	Off-white	Lead transparent	Celadon	Painted under-glaze	Floral	--	Green Floral design on bowl bottom; 1 blue band (int.) near bottom
3	T-134, St. Ie	Hollowware - bowl (Asian)	Base to rim	1	Porcelain	White	Lead transparent	White	Transfer-print	Floral	Banded	Dashed line; Three friends motif; Chrysanthemum with yellow star; One exterior gold band; large Asian bowl
4	T-134, St. Ie	Dinnerware	Base to body	1	Porcelain	White	Lead transparent	White	Painted over-glaze	Floral	--	Probably Four Flowers motif; Garland of green leaves; red chrysanthemum in center
5	T-134, St. Ib	Hollowware - bowl (Asian)	Base to rim	1	Porcelain	Off-white	Lead transparent	White	Painted over-glaze	Floral	Gilt edge	Four Flowers motif; yellow & brown flowers on exterior; high foot; large Asian bowl; 17.5 (D) x 7.5 (H)
6	T-134, St. Ie	Flatware	Base	2	Porcelain	White	Lead transparent	White	Painted over-glaze	Floral	--	Small blue & red flowers, red stems; flatware; very thin
7	T-134, St. Ie	Hollowware - cup (Asian)	Base to rim	1	Porcelain	Off-white	Lead transparent	Bluish white	Transfer-print	Geometric	Geometric	Dashed line - 7.1 (D) x 6.4 (H); wave geometric pattern; One interior green geometric design on cup and interior rim

Acc. #	Prov.	Type	Portion	No.	Paste	Paste Color	Glaze	Color (Bkg)	Décor.	Design Motif	Rim Motif	Comments
134-A-8	T-134, St. Ie	Flatware - plate	Base to rim	1	Stoneware	Off-white	Lead transparent	White	None	None	None	
9	T-134, St. Ie	Bottle	Base to neck	1	Stoneware	Tan	Lead transparent	Tan	None	None	--	Stoneware; bottom unglazed
10	T-134, St. Ie	Crock	Base	1	Stoneware	Tan	None	'--	'--	'--	'--	Unglazed

Table 76. West Kaka'ako, T-137, Ceramics

Acc. #	Prov.	Type	Portion	No.	Paste	Paste Color	Glaze	Color (Bkg)	Décor.	Design Motif	Rim Motif	Comments
137-A-1	T-137, St. Ib	Hollowware	Body to rim	1	Porcelain	White	Lead transparent	White	--	--	Molded	7.8 (D)

Table 77. West Kaka'ako, T-138, Ceramics

Acc. #	Prov.	Type	Portion	No.	Paste	Paste Color	Glaze	Color (Bkg)	Décor.	Design Motif	Rim Motif	Comments
138-A-1	T-138, St. II	Bottle (English)	Complete	1	Stoneware	Buff	Slip glaze	Beige/cream	None	None	--	Bristol-style two tone bottle; 22.0 (H) x 7.0 (D)
2	T-138, St. II	Jar	Complete	1	Stoneware	Tan	Slip glaze	Brown	None	None	--	Asian wide-shouldered jar; unglazed base; 10.3 (D) x 10.5 (H)
3	T-138, St. II	Jar	Base to rim	1	Stoneware	Off-white	Slip glaze	Brown	None	None	--	Asian wide-shouldered jar
4	T-138, St. II	Jar	Base to rim	2	Earthenware	Off-white	Slip glaze	Brown	--	--	Thickened	Asian wide-shouldered jar

Acc. #	Prov.	Type	Portion	No.	Paste	Paste Color	Glaze	Color (Bkg)	Décor.	Design Motif	Rim Motif	Comments
5	T-138, St. II	Hollowware - teapot (Asian)	Base to rim	1	Porcelain	Off-white	Lead transparent	White	Painted under-glaze	Floral	Banded	Asian liquor warmer; Sweet Pea motif; spout missing; two brown bands on rim

Table 78. West Kaka'ako, T-140, Ceramics

Acc. #	Prov.	Type	Portion	No.	Paste	Paste Color	Glaze	Color (Bkg)	Decorati on	Design Motif	Rim Motif	Comments
1	T-140, St. Ih		Base to rim	1	Porcelain	White	Lead transparent	Bluish white	Transfer print	Geometric	Geometric	Dashed line motif; geometric design on interior rim
2	T-140, St. Ih		Base to rim	1	Porcelain	White	Lead transparent	Bluish white	Transfer print	Floral	None	blue dots & curlicues, thin line
3	T-140, St. Ih	Crock/ Jar	Base	1	Earthenware	Tan	Salt glaze	Beige	Embossed	--	--	Embossed horizontally on body: "MR. ADAMS, ...OBE KILLE..."
4	T-140, St. Ih	Hollowware - bowl (Asian)	Base to body	1	Porcelain	Grey	Lead transparent	Bluish white	Painted Under-glaze	Floral	--	Sweet Pea motif; high foot
5	T-140, St. Ih	Dinnerware (Asian)	Rim	1	Porcelain	White	Lead transparent	Bluish white	Transfer print	Floral/geometric	Geometric	Dashed lines motif; Chrysanthemums on fragment; geometric pattern along interior rim

Table 79. West Kaka'ako, T-141, Ceramics

Acc. # 141-A-	Prov.	Type	Portion	No.	Paste	Paste Color	Glaze	Color (Bkg)	Décor.	Design Motif	Rim Motif	Comments
1	T-141, Fea. 5	Crock	Base	1	Stoneware	Tan	Slip glaze	Tan	None	None	--	
2	T-141, Fea. 5	Flatware	Base	1	Porcelain	Off-white	Lead transparent	White	--	--	--	Small square corner
3	T-141, Fea. 5	Hollowware - bowl (Asian)	Base to body	1	Porcelain	Off-white	Lead Opaque/ Lead Transparent	Celadon green	Appliqué ; painted overglaze	Floral?	--	High foot; One brown leaf?; green on exterior, white in interior
4	T-141, Fea. 5	Dinnerware (Asian)	Body	1	Porcelain	Off-white	Lead transparent	Bluish white	Transfer print	Floral	--	Blue waves; Asian pattern on interior and exterior
5	T-141, Fea. 5	Dinnerware (Asian)	Rim	1	Earthenware, Refined	Off-white	Lead opaque	Celadon green	Appliqué ; painted overglaze	Floral	None	Four Flowers motif; Raised daisy flower petals, dots, painted green leaves; possibly same vessel as celadon fragment in same provenience; green color on exterior; white interior; four Flowers
6	T-141, Fea. 5	Flatware	Base	1	Porcelain	Off-white	Lead transparent	White	--	--	--	
7	T-141, Fea. 5	Dinnerware	Rim	2	Earthenware, Refined	White	Lead transparent	White	--	--	None	

Table 80. West Kaka'ako, T-142, Ceramics

Acc. #	Prov.	Type	Portion	No.	Paste	Paste Color	Glaze	Color (Bkg)	Décor.	Design Motif	Rim Motif	Comments
142-A-1	T-142, Ila, Fea. 5	Flatware	Body (2; base (2))	4	Earthenware, Refined	White	Lead transparent	White	None	None	--	
2	T-142, Ila, Fea. 5	Dinnerware	Rim	1	Porcelain	White	Lead transparent	Bluish white	Transfer-print	Floral/geo-metric	Geo-metric	Blue transfer print on exterior
3	T-142, Ila, Fea. 5	Dinnerware	Rim	1	Earthenware, Refined	Buff	Lead transparent	White	None	None	Molded, geo-metric	blue rim
4	T-142, Ila, Fea. 5	Bottle	Base & body	3	Stoneware	Grey	Slip glaze	Brown	None	None	--	8.9 (D)

Table 81. West Kaka'ako, T-143, Ceramics

Acc. #	Prov.	Type	Portion	No.	Paste	Paste Color	Glaze	Color (Bkg)	Décor.	Design Motif	Rim Motif	Comments
143-A-1	T-143, St. Id-II, Fea. 1	Hollowware - bowl (Asian)	Rim	2	Porcelain	Gray	Lead transparent	Gray	Painted underglaze	Floral	None	Asian rice bowl, gray, flower & stems; flowers raised
2	T-143, St. Id/II, Fea. 1	Dinnerware	Body	1	Porcelain	White	Lead transparent	White	Transfer print	Floral	--	blue
3	T-143, St. Id/II, Fea. 1	Flatware	Rim	1	Porcelain	White	Lead transparent	White	Painted underglaze	Floral	Banded	Flowers; red, yellow, green
4	T-143, St. Id/II, Fea. 1	Dinnerware	Rim	1	Earthenware, Refined	White	Lead transparent	White	Painted underglaze	Floral	Banded	

Acc. # 143-A-	Prov.	Type	Portion	No.	Paste	Paste Color	Glaze	Color (Bkg)	Décor.	Design Motif	Rim Motif	Comments
5	T-143, St. Id/II, Fea. 1	Unknown	Body to rim	1	Earthenware Slip glaze	Tan	Slip	Brown	None	None	None	Possible lid
6	T-143, St. Id, Fea 1	Dinnerware	Rim	1	Earthenware, Refined	Buff	Lead transparent	White	--	--	None	
7	T-143, St. Id, Fea 1	Dinnerware	Body	1	Earthenware, Refined	Buff	Lead transparent	White	Painted under-glaze	Floral	--	1 green stem showing
8	T-143, St. Id, Fea. 1	Dinnerware	Body	1	Stoneware	Grey	Slip glaze	Brown	None	None	--	
9	T-143, St. Id, Fea. 1	Hollowware	Body	2	Earthenware	Tan	Slip glaze	Brown	--	--	--	
10	T-143, St. Id, Fea.1	Dinnerware	Body	1	Porcelain	White	Lead transparent	White	None	None	--	
11	T-143, St. Id, Fea. 1	Dinnerware	Body	1	Porcelain	White	Lead transparent	White	--	--	--	
12	T-143, St. Id, Fea. 1	Hollowware	Body	2	Earthenware	Tan	Slip glaze	Brown	--	--	--	
13	T-143, St. Id, Fea. 1	Dinnerware	Rim	3	Earthenware	Buff	Slip glaze	Brown	--	--	None	dark brown dots over brown glaze, spattered
14	T-143, St. Id, Fea. 1	Crock	Body (7); base (2)	9	Stoneware	Brown	Slip glaze	Brown	--	None	None	10.7 (D)
15	T-143, St. Id/II,	Hollowware - bowl (Asian)	Base to Rim	1	Porcelain; Transfer-print	White	Lead transparent	White	Transfer print	Floral/ geometric	Pendant	Asian rice bowl; Three Friends motif; pendant rim pattern

Acc. # 143-A-	Prov.	Type	Portion	No.	Paste	Paste Color	Glaze	Color (Bkg)	Décor.	Design Motif	Rim Motif	Comments
	Fea. 1											
16	T-143, St. Id/II, Fea. 1	Dinnerware (Asian)	Rim	1	Porcelain; Transfer print	White	Lead transparent	White	Transfer print	Floral	Pendant	Dashed lines; Blue pendant rim pattern
17	T-143, St. Id/II, Fea. 1	Dinnerware	Body	1	Porcelain	White	Lead transparent	White	--	--	--	
18	T-143, St. Id/II, Fea. 1	Dinnerware	Rim	2	Earthenware, Refined	Buff	Lead transparent	White	--	--	None	
19	T-143, St. Id-II, Fea 1	Flatware - plate (English)	Base to rim	1	Earthenware, Refined	Buff	Lead transparent	Off-white	None	None	None	Plate; trademark on base in a black stamp "Royal Seal / T. Furnival & Sons/ Trade [anchor] Mark /England". Mark used from 1870-1890 (Stoke-on-Trent 2013)
20	T-143, St. Id-II, Fea 1	Dinnerware	Base to rim	1	Porcelain	White	Lead transparent	Bluish white	Painted under-glaze	Floral/ geometric	Banded	2 bands with geometric dotting between; Wavy interior blue band on rim
21	T-143, St. Id-II, Fea 1	Flatware - plate (English, 1873-1891)	Base to rim	1	Porcelain	Buff	Lead transparent	Off-white	Sponge under-glaze	Sponge	Sponge	Stamped on base "Malypense" and "George Jones & Sons / [Royal Seal]; mark used from 1873-1891 (Stoke-on-Trent)

Acc. # 143-A-	Prov.	Type	Portion	No.	Paste	Paste Color	Glaze	Color (Bkg)	Décor.	Design Motif	Rim Motif	Comments
22	T-143, St. Id-II, Fea 1	Hollowware - bowl (Asian)	Base to body	1	Porcelain	White	Lead transparent	White	Painted under-glaze	Geometric	--	Soy sauce dish? Dots
23	T-143, St. Id-II, Fea 1	Dinnerware (Asian)	Base to body	1	Porcelain	White	Lead transparent	White	Painted under-glaze	Floral	--	Red flower, brown stems; red Asian printed character on base
24	T-143, St. Id-II, Fea 1	Hollowware (Asian)	Base to rim	1	Porcelain	White	Lead transparent	Bluish white	Incised, painted under-glaze	Floral	Floral	4.2 cm diameter; interior bottom is decorated with a chrysanthemum; decorated on the exterior rim with a blue floral pattern
25	T-143, St. Id-II, Fea 1	Hollowware - bowl (Asian)	Base to rim	1	Porcelain	Gray	Lead transparent	Gray	Painted under-glaze	Floral	None	Asian rice bowl, gray , flower & stems; flowers raised
26	T-143, St. Id-II, Fea 1	Dinnerware	Body to rim	1	Porcelain	Off-white	Lead transparent	Bluish white	Painted under-glaze	Floral	Floral	Interior and exterior blue flowers
27	T-143, St. Id/II, Fea. 1	Hollowware - bowl (Asian)	Body	1	Porcelain	White	Lead transparent	Bluish white	Painted under-glaze	Floral	--	Asian style bowl
28	T-143, St. Id-II, Fea 1	Flatware - plate (English, 1873-1891)	Base to body	1	Earthenware, Refined (Ironstone)	White	Lead transparent	Off-white	None	None	--	Mark on base "Royal Seal"; "Royal Pat. / Ironstone/George Jones & S..." black ink; same plate as in T-143, 103 cm; dated to 1873-1891 (Stoke-on-Trent 2013)

Table 82. West Kaka'ako, T-148A, Ceramics

Acc. # 148A-A-	Prov.	Type	Portion	No.	Paste	Paste Color	Glaze	Color (Bkg)	Décor.	Design Motif	Rim Motif	Comments
1	T-148A, St. Ib	Hollowware - cup (Asian)	Body to rim	1	Porcelain	Off-white	Lead transparent	Bluish white	Painted under-glaze	Floral	None	Blue bamboo (?) leaves
2	T-148A, St. Ib	Dinnerware	Body to rim	2	Porcelain	White	Lead transparent	White	Painted under-glaze	Floral	Banded	Green leaves, black stems, large flowers; red band on ext. & int. rim

Table 83. West Kaka'ako, T-152, Ceramics

Acc. # 152-A-	Prov.	Type	Portion	No.	Paste	Paste Color	Glaze	Color (Bkg)	Décor.	Design Motif	Rim Motif	Comments
1	T-152, St. Ig	Dinnerware	Body	1	Porcelain	White	Lead transparent	White	--	--	--	