

DRAFT ENVIRONMENTAL ASSESSMENT
HALEKAUWILA PLACE
KAKAAKO COMMUNITY DEVELOPMENT DISTRICT, HONOLULU, HAWAII

Applicant:
Halekauwila Partners, LLC

Prepared By:
Environmental Communications, Inc.

December 2009

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**SECTION ONE
PROJECT SUMMARY**

APPLICANT: Halekauwila Partners, LLC
1100 Alakea Street, 27th Floor
Honolulu, Hawaii 96813

AGENT: Environmental Communications, Inc.
1188 Bishop Street, Suite 2210
Honolulu, Hawaii 96813

ACCEPTING AUTHORITY: Hawaii Housing Finance and Development
Corporation (HHFDC)

PROJECT NAME: Halekauwila Place

PROJECT LOCATION: The project is located at southeastern corner of the
intersection of Halekauwila and Keawe Streets in
Kakaako, Honolulu, Hawaii.

TAX MAP KEY: 2-1-51: portion of 9

OWNERSHIP: State of Hawaii
Dept. of Land and Natural Resources

LOT AREA: Approximately 54,407 SF (1.249 acres)

ZONING: The project area is designated Public on the Hawaii
Community Development Authority Kakaako
Community Development District (KCDD) Mauka
Area Plan.

SPECIAL DISTRICT: Kakaako Community Development District
(KCDD) Mauka Area

STATE LAND USE: Urban

EXISTING LAND USE: The project site is located on the consolidated block
within KCDD Mauka Area bounded by
Halekauwila Street to the northeast (mauka), Cooke
Street to the southeast (Diamond Head), Pohukaina
Street to the southwest (makai), and Keawe Street
to northwest (Ewa). Presently, the project area is
used for parking.

Other uses on the project block include the Mother Waldron Playground along Cooke Street and the Department of Education Library Services warehouse along Pohukaina Street.

Adjacent uses include senior housing and commercial uses mauka of the block, commercial/industrial uses in the Diamond Head direction, commercial/warehouse uses in the makai area, and a vacant lot in the Ewa direction.

NATURE OF DEVELOPMENT:

The Applicant is a consortium of developers, workforce specialists and affordable housing managers and owners proposing the development of an affordable rental housing facility on the project site. The Applicant and project proposal was selected through a Request for Proposal (RFP) process. The project will provide critical affordable housing inventory for the urban Honolulu area.

The project will consist of 204 studio, 1-bedroom, 2-bedroom, and 3-bedroom units configured in a 19-floor tower structure and a separate parking building/townhouse structure.

The first floor of the tower structure will include common areas including a laundry room, community meeting room, leasing office, police officer workroom, resident manager's unit, retail space, and other appurtenant service and maintenance areas. The second through nineteenth floor will consist of residential units.

The parking structure building will feature five townhouse units and two retail units as well as parking on the ground floor. The five levels of parking will contain 284 parking stalls.

PROJECT COST:

Approximately \$86,000,000

PROJECT SCHEDULE:

The project is anticipated to be completed in 2012.

SECTION TWO

PROPOSED PROJECT AND STATEMENT OF OBJECTIVES

2.1 PROJECT LOCATION

The project is located at the southeastern corner of the intersection of Halekauwila and Keawe Streets in Kakaako, Honolulu, Hawaii. The site is identified as Tax Map Key: 2-1-51: portion of 9. The site is owned by the State of Hawaii and also consists of ceded lands.

The project site is located within the Kakaako Community Development District (KCDD) Mauka Area which dictates the regulatory zoning laws for the project site. The project area is zoned for public use under the KCDD Mauka Area Plan and is subject to the KCDD Mauka Area Rules.

The project site represents a portion of a consolidated block that is presently bounded by Halekauwila Street to the northeast (mauka), Cooke Street to the southeast (Diamond Head), Pohukaina Street to the southwest (makai), and Keawe Street to northwest (Ewa).

Other uses on the project block include the Mother Waldron Playground along Cooke Street and the Department of Education Library Services warehouse along Pohukaina Street.

This use for the project site was selected for its central urban location, proximity to community and medical services, and availability.

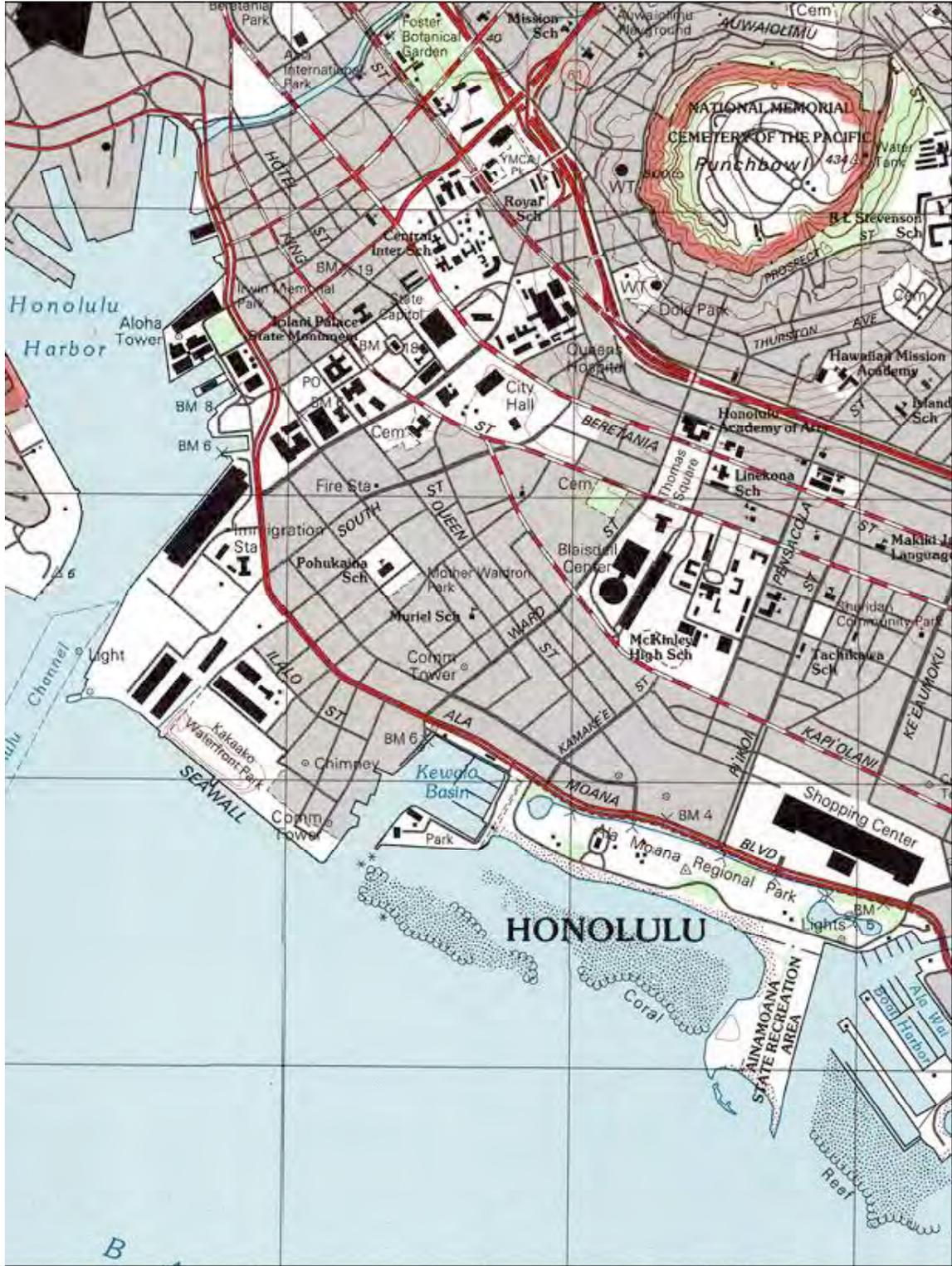
The project block was the subject of a master development plan created in 2000 which examined the revitalization and development of the entire block as a unified community core element. The master plan concept was developed by the Hawaii Community Development Authority, the Department of Education, the Hawaii Housing Finance and Development Corporation, and the Department of Parks and Recreation. Under the master plan proposal, of which the proposed housing development was an integral component, a community park and an elementary school would also be planned for development albeit at individual schedules as funding allows. The elementary school site is presently identified for future development however its use is not determined at this time. Park improvements will be installed in year 2010.

2.2 PROJECT DESCRIPTION

2.2.1 REQUEST FOR PROPOSAL PROCESS

Under the initiative of the Hawaii Housing Finance and Development Corporation (HHFDC), a Request for Proposals to develop an affordable housing was issued for the subject project site.

FIGURE 1: LOCATION MAP



TN
MN
10°

0 5 1 MILE
0 1000 FEET 0 500 1000 METERS

Map created with TOPO!® ©2003 National Geographic (www.nationalgeographic.com/topo)

FIGURE 2: TAX MAP

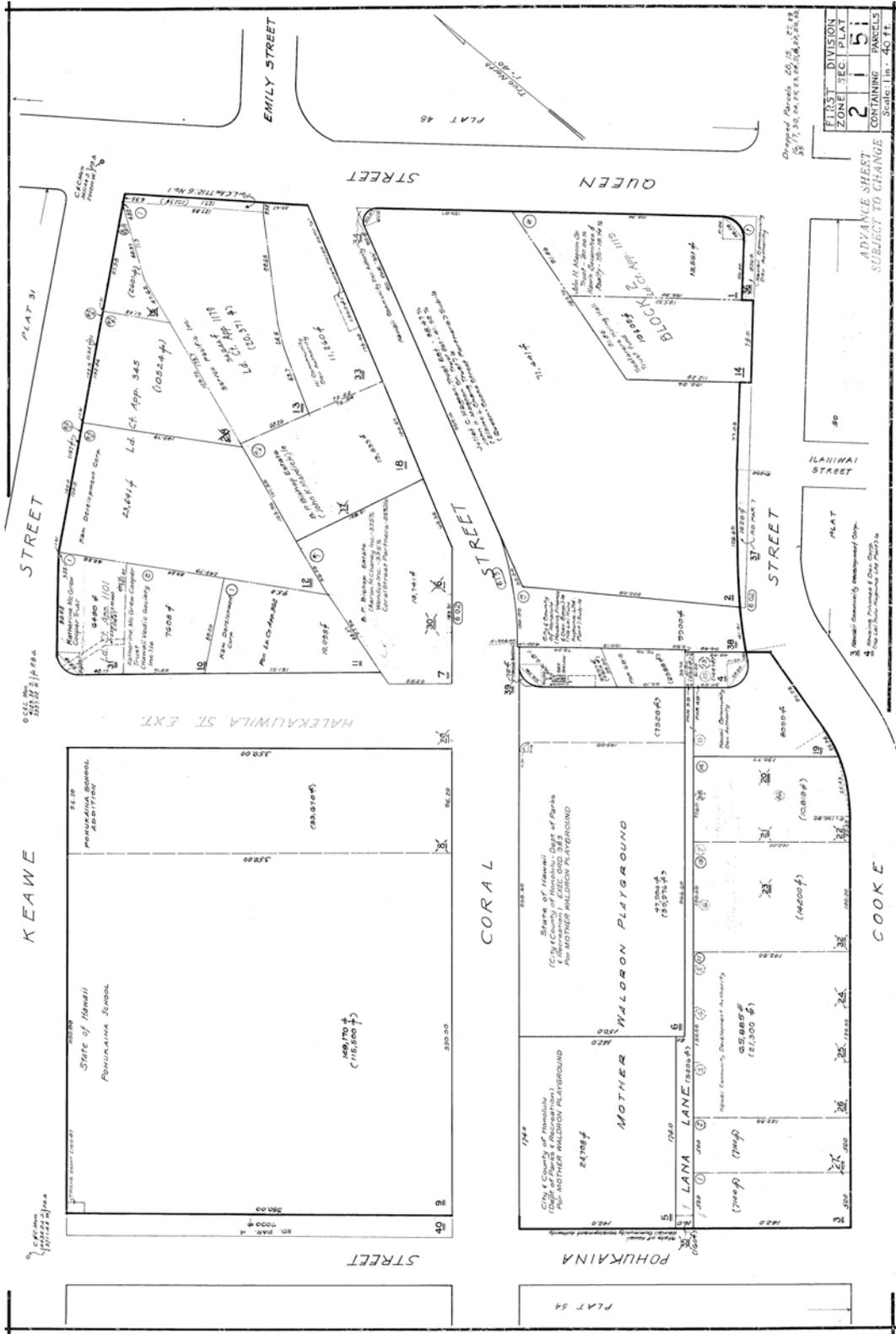
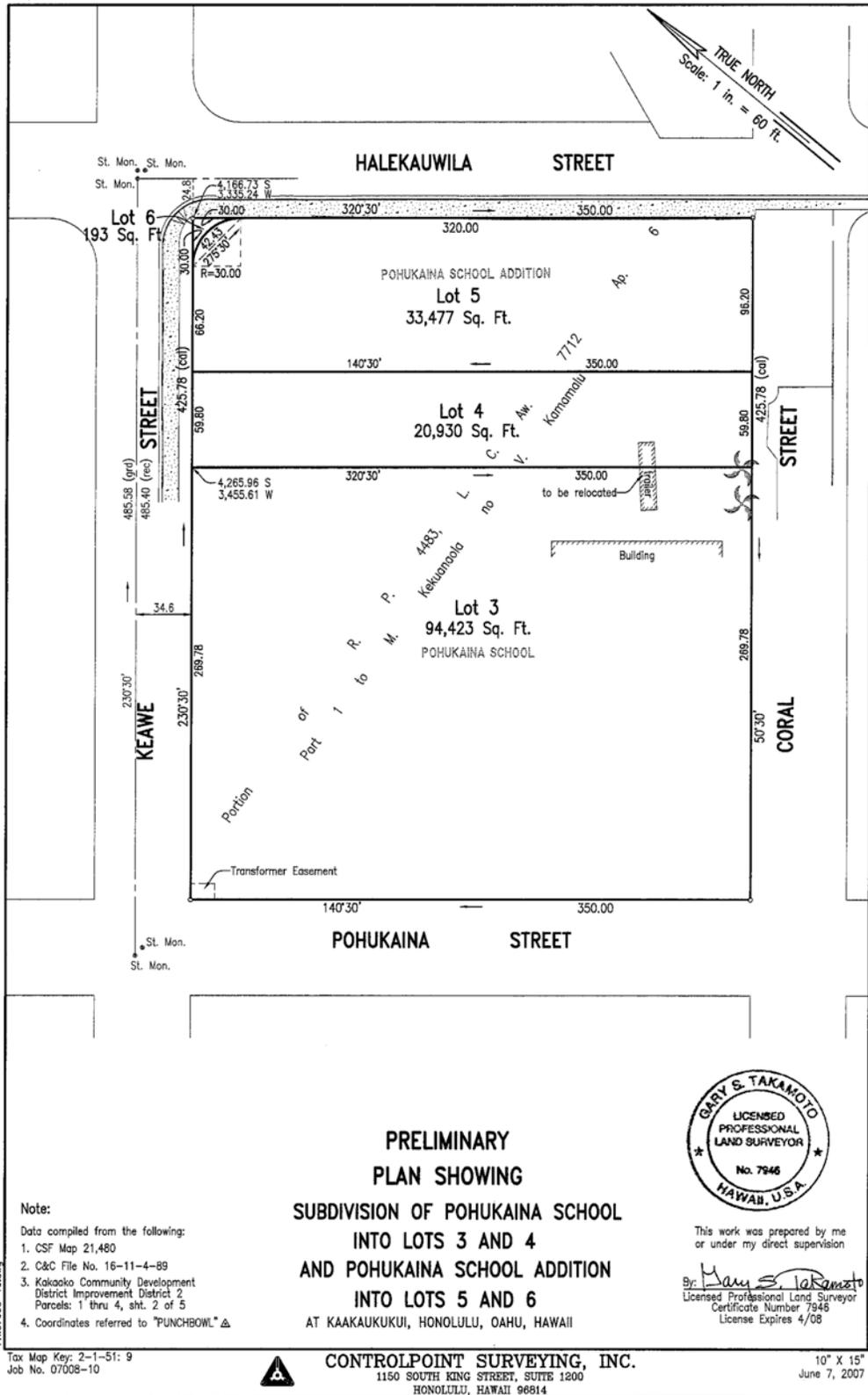


FIGURE 3: SURVEY BOUNDARY MAP



Through this RFP process, the Applicant was selected for its proposal to develop a high-rise affordable rental housing project. The applicant's proposal was selected and a 65-year lease will be issued to the Applicant by HHFCD.

2.2.2 CONCEPTUAL DESIGN

A conceptual design was developed to provide a model of optimal density, provision of residential units, meeting areas, and supporting retail spaces. Numerous iterations of the design were developed with the present model selected as the most efficient design with the least impact on the surrounding environment. The project was also designed to ensure a desirable appearance.

As presently proposed, the project will consist of approximately 188,777 square feet and will provide up to 3,898 square feet of open space on the 54,407 square foot lot.

2.2.3 RESIDENTIAL UNITS

The proposed project will consist of a mix of studio, 1-bedroom, 2-bedroom and 3-bedroom units located within the tower structure or the parking structure. Units within the tower structure are located around a centrally located elevator lobby.

Studio units will range from 414 to 433 square feet. The studio units will be located on floors 2 through 19. One-bedroom units will range from 581 to 643 square feet and will also be located on floors 2 through 19. Two-bedroom units will be generally located from floor 2 through 19 with the exception of the resident manager's unit which will be located on the ground floor. Two-bedroom units will range from 749 to 771 square feet. The resident manager's unit will consist of 903 square feet. Three-bedroom units located in the tower will be 1,106 square feet in size and will be located on floors 2 through 19. Five three-bedroom units of 1,382 square feet will be located on the ground level of the parking structure building.

Studio Units	26 Units
One-bedroom	72 Units
Two-Bedroom	83 Units
Three-Bedroom	18 Units
Three-Bedroom Townhouse	5 Units

The project will consist of a total of 204 residential units.

2.2.4 PARKING AND VEHICULAR ACCESS

A total of 284 resident and guest parking stalls will be provided within the structure or adjacent to the driveway on five parking levels. This total will comprise of:

Residential Parking:	222 stalls
Office Parking:	3 stalls

Retail Parking:	8 stalls
Additional Parking:	49 stalls

Of the total of 282 parking stalls, 44 of the stalls will be reserved for public use. All parking will be accessed through Halekauwila Street. A curb cut is provided on Keawe Street but this driveway is limited to loading and trash collection.

2.2.5 TOWER GROUND LEVEL

The lobby level of the tower structure will include a lobby, service and mechanical areas, laundry, restrooms and a community room. The community center's location next to the park is ideally suited to serve residents of the building as well as other community groups within the project vicinity. In addition, there will be a leasing/management office, a police officer work office, and a retail space.

2.2.6 PARKING STRUCTURE GROUND LEVEL

The ground level of the parking structure provides a single entry/exit point to Halekauwila Street. Handicap parking is located on the ground level as are a mechanical room and two retail spaces. Unique to the project are five two-storey townhouse units located on the Diamond Head end of the project.

2.3 PROJECT OBJECTIVE

The applicant is proposing the development of an affordable rental housing project. The project, which was selected through a Request for Proposal (RFP) process, will provide critical rental housing inventory for the urban core.

This project is consistent with the State's Blueprint for Affordable Housing to increase rental housing. Income and eligibility requirements for the project will be determined by the project owner in coordination with the Hawaii Housing Finance and Development Corporation.

2.4 FUNDING AND SCHEDULE

The total development cost of approximately \$65,000,000 will be borne by the applicant. HHFCD and HCDA issued loans of approximately \$15,000,000 to the project total. The land is owned by the State of Hawaii and has been leased to the applicant for a term of 65 years.

The anticipated construction start date at the time of publication of this document is during the summer of 2010. The project is anticipated to be completed in early 2012.

FIGURE 4: SITE PLAN/GROUND FLOOR PLAN

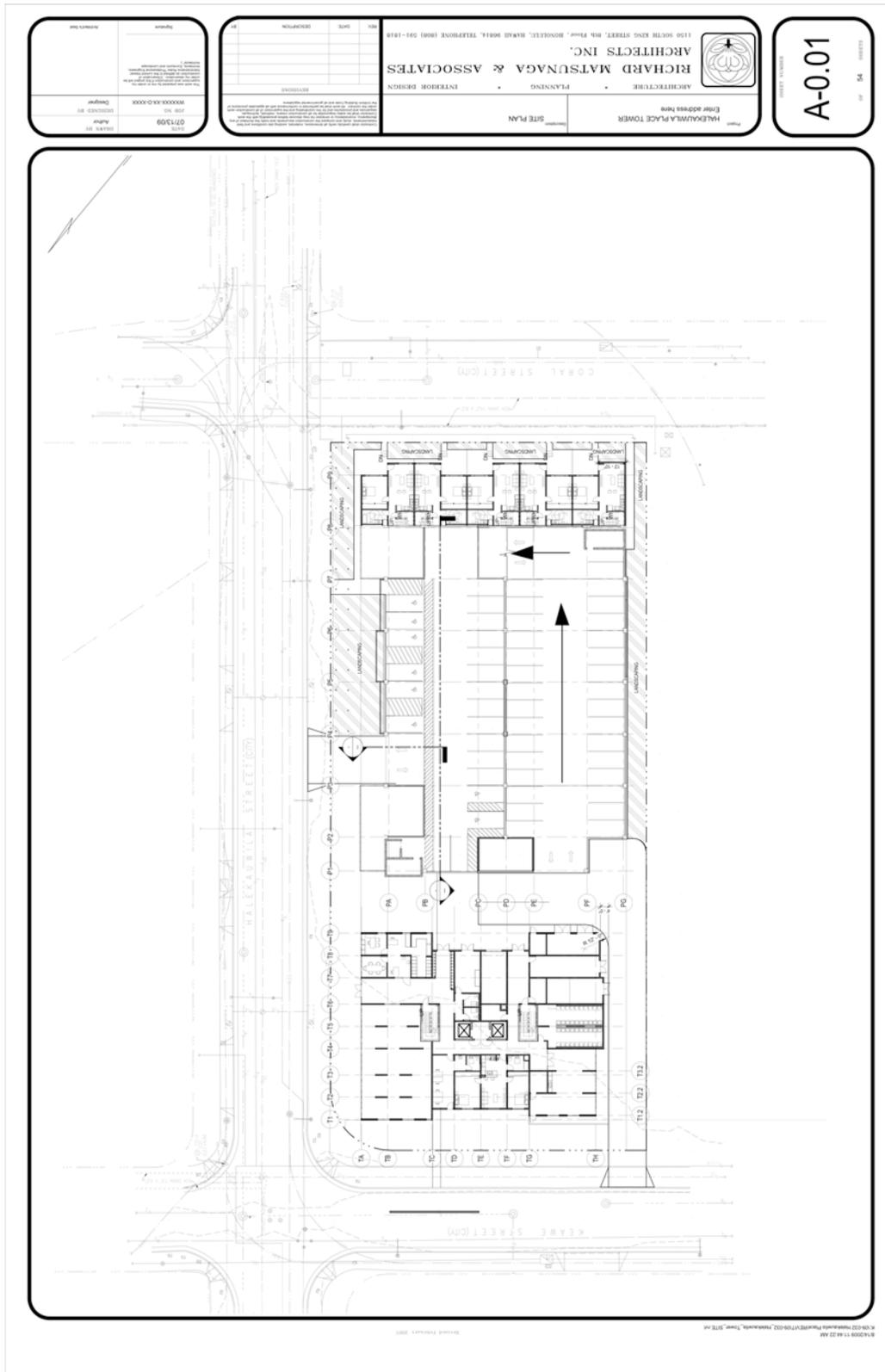
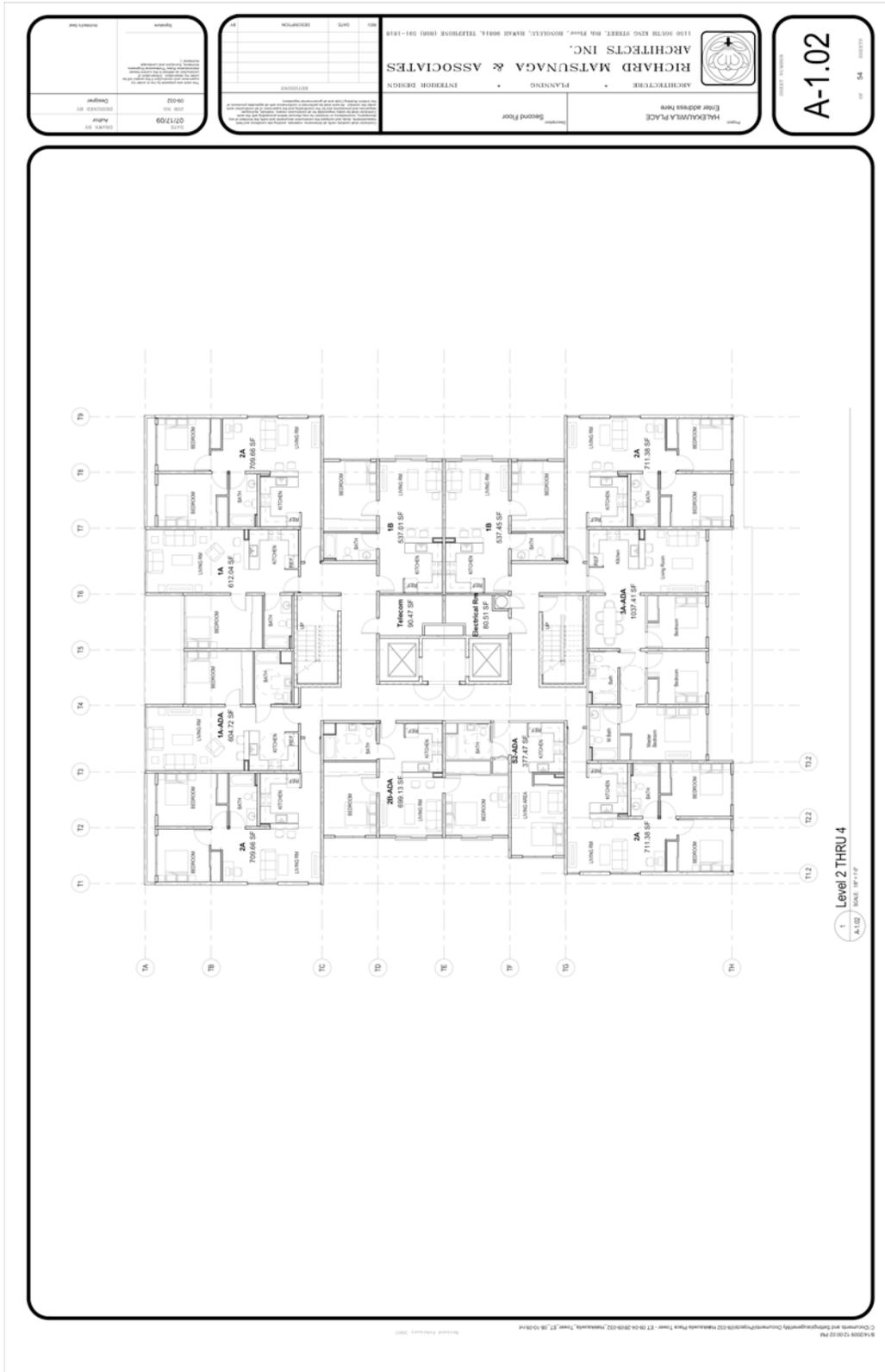


FIGURE 6: TOWER LEVEL 2 THRU 4



<p>1150 SOUTH KING STREET, 9TH FLOOR, HONOLULU, HAWAII 96813, TELEPHONE (808) 591-1818</p> <p>RICHARD MATSUNAGA & ASSOCIATES ARCHITECTS INC.</p> <p>ARCHITECTURE • PLANNING • INTERIOR DESIGN</p>		<p>HALEKAUWILA PLACE Enter Address Here</p> <p>Second Floor</p>	<p>A-1.02</p> <p>Sheet Number</p> <p>of 34 Sheets</p>
<p>DATE: _____</p> <p>DESCRIPTION: _____</p> <p>REVISIONS:</p>	<p>DESIGNER: _____</p> <p>DATE: _____</p> <p>SCALE: AS SHOWN</p>		

FIGURE 7: TOWER LEVEL 5 THRU 15

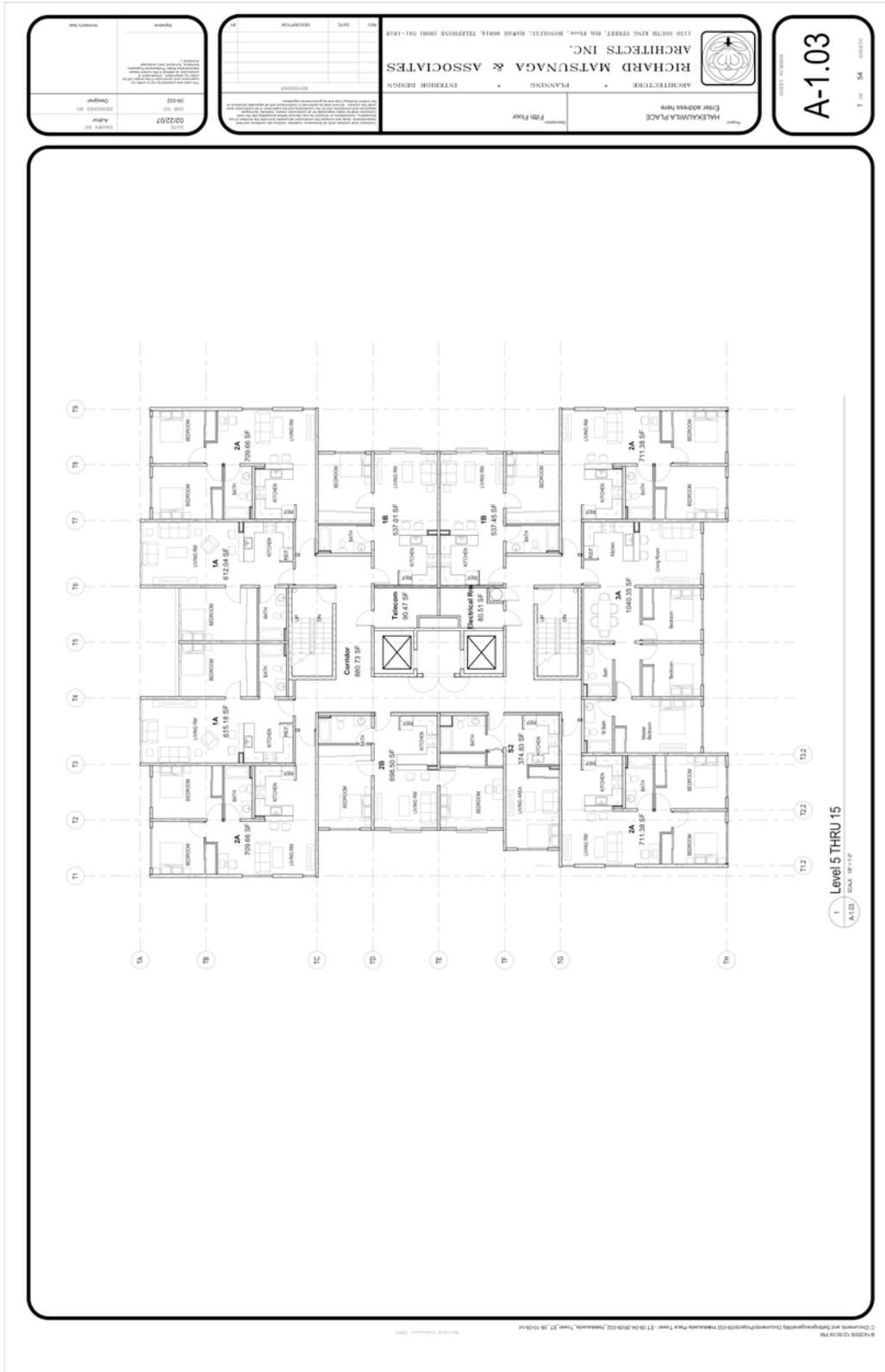


FIGURE 8: TOWER LEVEL 16 THRU 19

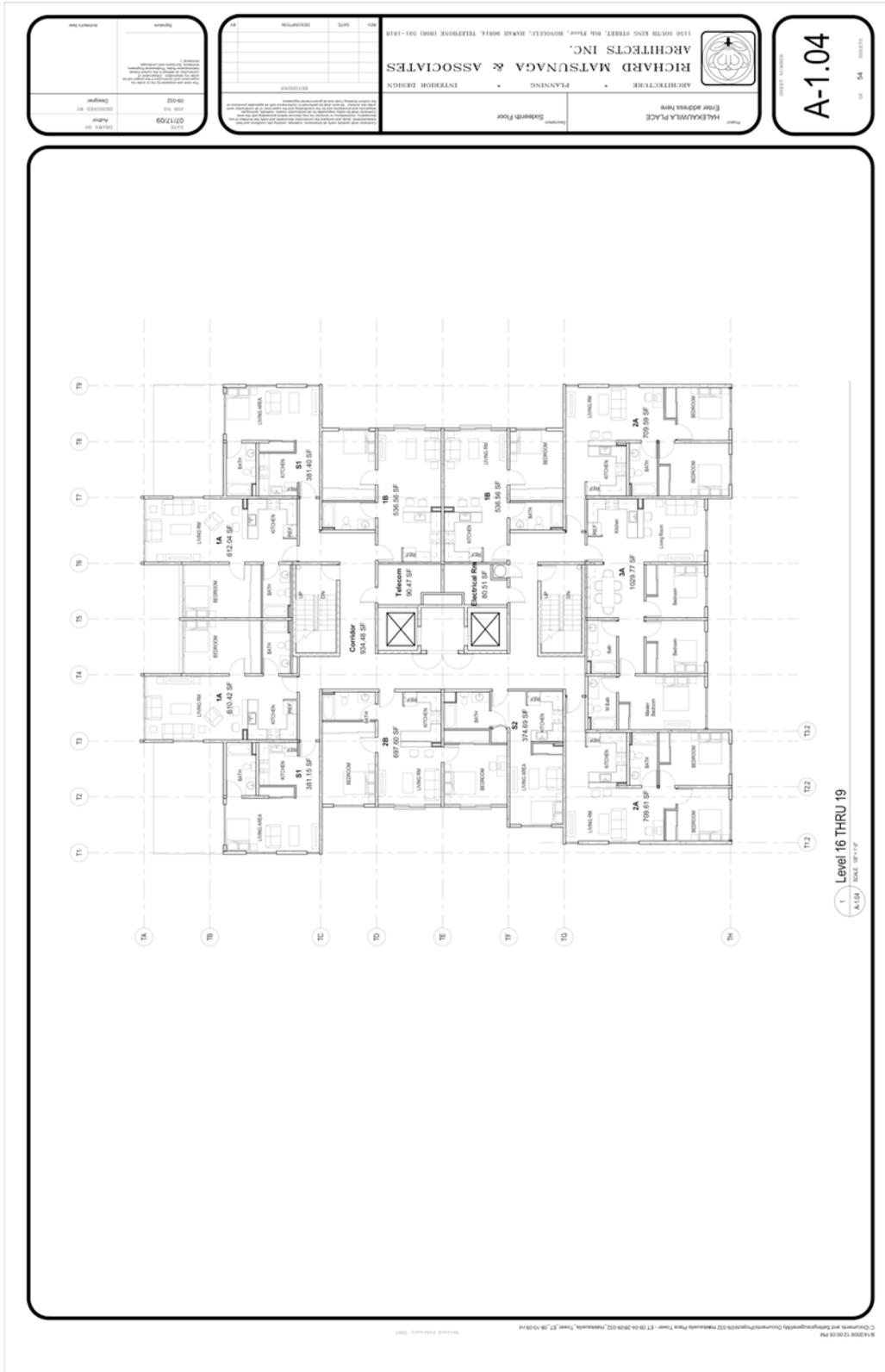


FIGURE 9: NORTH, WEST AND SOUTH ELEVATIONS

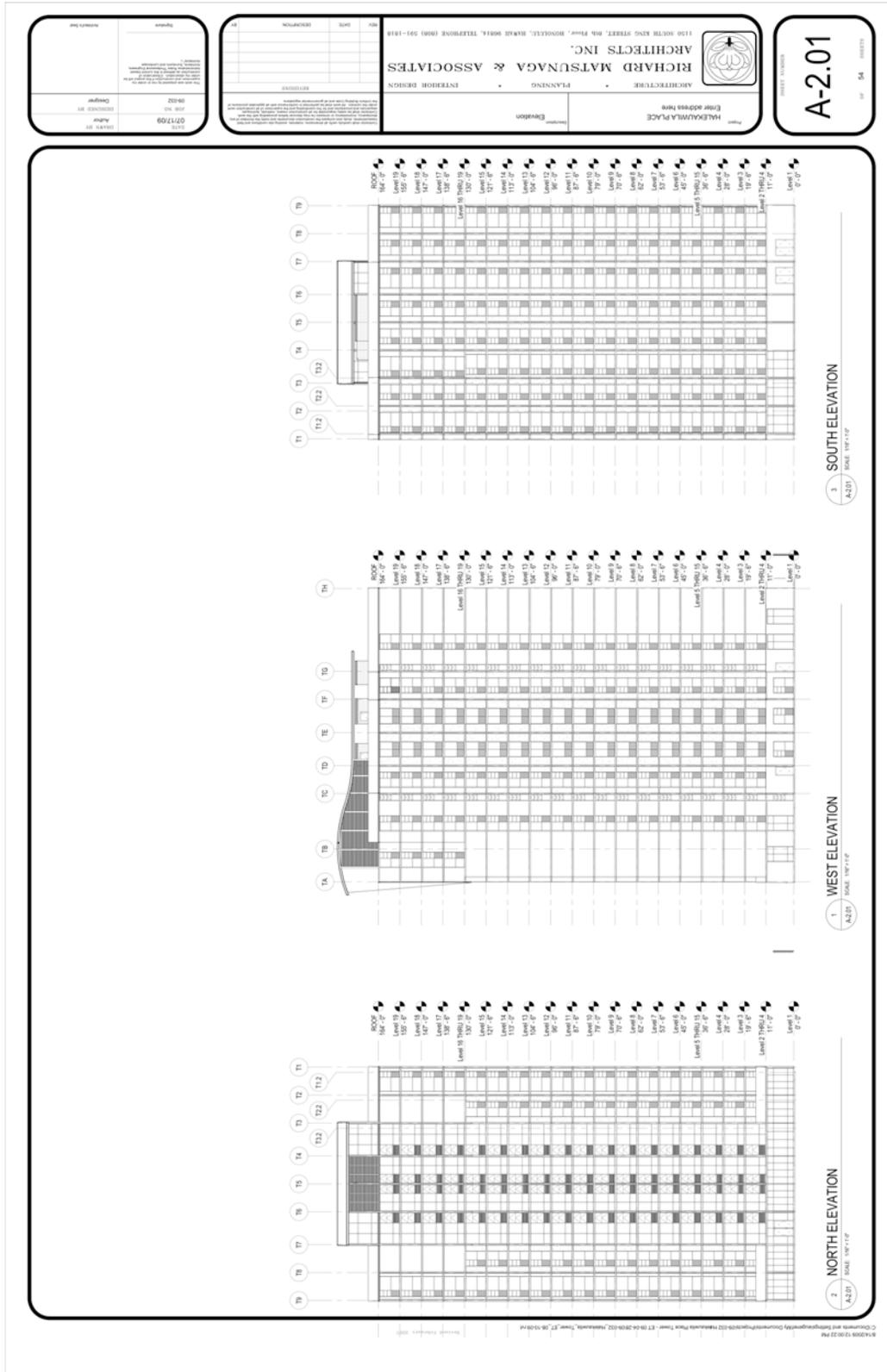
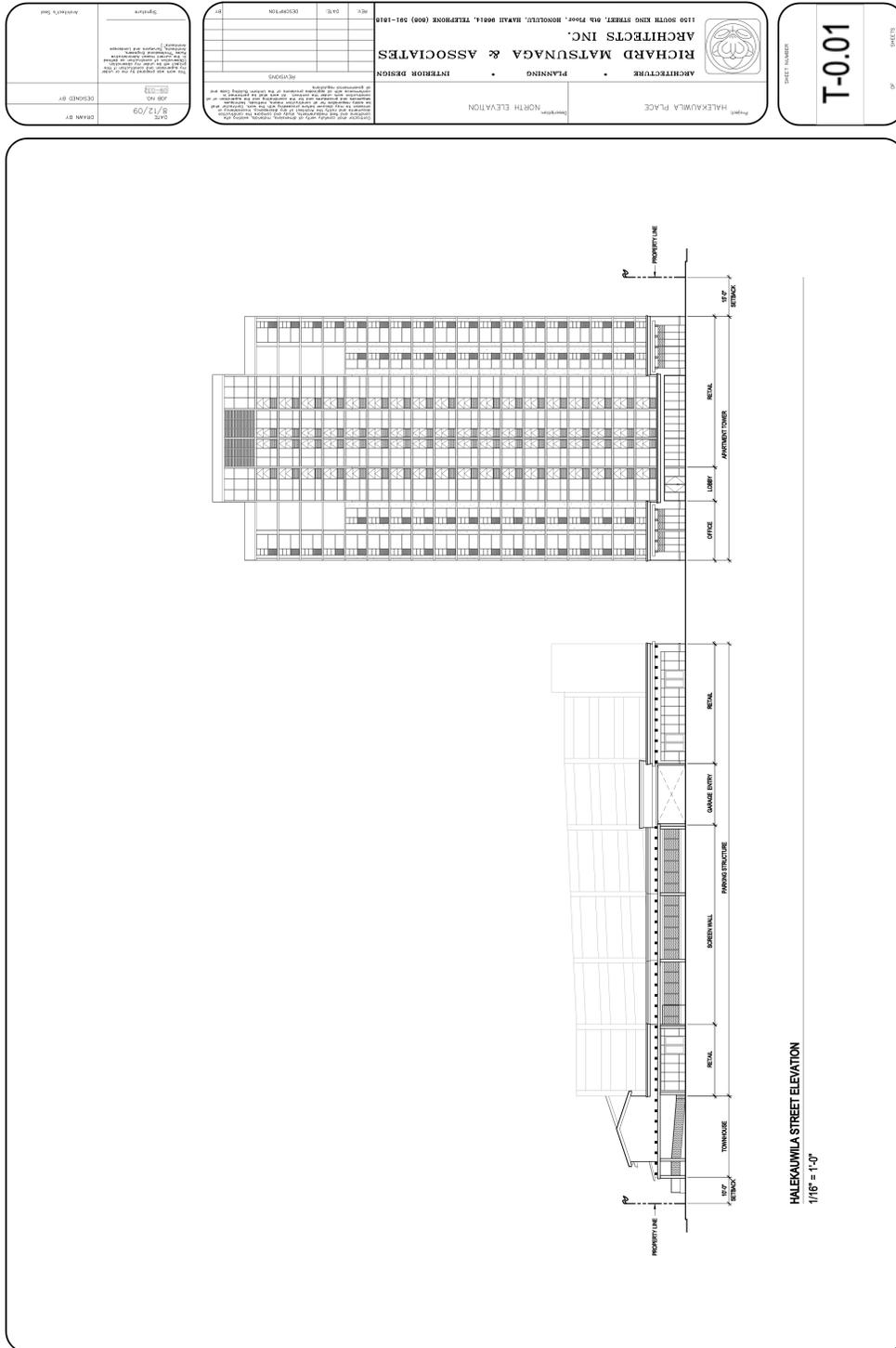


FIGURE 10: HALEKAUWILA STREET ELEVATION (EAST)



SECTION THREE
DESCRIPTION OF ENVIRONMENT, ANTICIPATED IMPACTS
AND MITIGATION MEASURES

3.1 ENVIRONMENTAL SETTING

The project site represents a portion of a large consolidated project block that is located within a highly urbanized area located within the Primary Urban Center. A mix of high-rise residential structures, warehouses, commercial and industrial uses are located within the project vicinity. The site is also located in the core of the KCDD Mauka Area.

The project site is located on a relatively flat open urban site that is presently used as a public day-rate parking lot. The paved lot was formerly in use for warehousing and other light industrial operations. All structures were cleared from the site and the open area paved. There are minimal improvements within the site. The project lot is partially surrounded by perimeter chain-link fencing and a small wooden toll booth is located at the parking lot access point off Pohukaina Street. Medium to large shade trees are located along the project boundaries however the site is otherwise devoid of any vegetation.

The project block, on which the project site is located, consists of the Mother Waldron urban park along Cooke Street, and the Department of Education Library Services warehouse along Pohukaina Street. The park consists of a comfort station, basketball courts and a low wall along the perimeter and the former Coral Street right-of-way. The Library Services complex consists of a single warehouse and appurtenant on-grade parking. An office trailer is located immediately mauka of the warehouse and is formerly used as a Police Department beat officer base. All utilities are located underground.

3.2 SURROUNDING USES

Adjacent uses include senior housing and commercial uses mauka of the block, commercial/ industrial uses in the Diamond Head direction, commercial/ warehouse uses in the makai area, and a vacant lot in the Ewa direction. All surrounding areas are or were heavily urbanized with no areas left in a natural, undisturbed condition. Roadways and infrastructure in the surrounding areas have been the subject of recent upgrades and improvements consistent with the KCDD Mauka Area Plan. All utilities have been placed underground. Many of the surrounding blocks have supported high-rise development while other blocks, such as the adjacent Ewa block were once planned for high-rise residential projects.

3.3 MASTER PLAN

As summarized in the Pohukaina School Development Master Plan prepared for the State of Hawaii Community Development Authority by AM Partners, Inc. in November 2000, the purpose of the master plan process was to determine the feasibility of development on the project block to accommodate three proposed uses.

- 1) A Department of Education (DOE) Elementary School
- 2) An enhanced community park
- 3) An Elderly Housing facility planned by the HCDCH.

Through an extensive charette process by the master planning participants, numerous schemes were developed. The following scheme is used as the basis for the proposed project.

The scheme used as the basis of future development on the site integrates the existing historic comfort station with the other essential components of the site.

Under this plan, the elementary school is located on the corner of Pohukaina and Keawe Streets with an administrative center located on the prominent corner. A drop-off area was provided from Keawe Street and parking is provided with access from Pohukaina Street allowing for the possibility of joint use with the adjacent park. Classrooms are organized in the main building around an interior courtyard and connected to the cafeteria/multipurpose building by a covered walkway. An exterior courtyard is created between the two buildings for school gatherings and assemblies.

This scheme also located the housing facility subject of this document on the corner of Keawe and Halekauwila Streets. This location was noted by participants to be well suited due to its convenient access to the City bus system. Access to parking is provided from Halekauwila Street. An open area adjacent to the building is provided for senior activities.

The walls of the historic comfort station help define the boundaries of the park space. An open play field was provided at the corner of Cooke and Pohukaina Streets for shared use by the school and community park functions. A volleyball court and a basketball court are provided adjacent to the comfort station along Cooke Street. A recreational/community center is planned at the corner of Halekauwila and Cooke Streets with an adjacent courtyard area for the community Farmer's Market program.

Subsequent to the issuance of the above referenced Master Plan, the DOE site remains inactive with no immediate plan for development. The Mother Waldron Park is scheduled for extensive improvement with new landscaping in year 2010. It has been determined that the need for affordable rental housing is now of the highest priority and therefore, the proposed action has been initiated.

3.4 ENVIRONMENTAL CONSIDERATIONS

3.4.1 GEOLOGICAL CHARACTERISTICS

Topography

The project site is essentially flat and has been graded and paved to serve as a parking lot. Warehouse/industrial uses formerly occupied the site. A small tollbooth is located along the Pohukaina Street entrance to the parking lot. Vegetation is limited to a few shade trees along the perimeter and weedy species in broken paving areas.

Climate

The geography of the Honolulu District is typically warm and dry in climate. Prevailing tradewinds arrive from the northeast. According to the National Weather Service Honolulu Office, over a period of 30 years, normal monthly high temperatures range from 80 degrees in January to a high of 89 degrees in August for an average of 84 degrees. Normal month low temperatures range from a low of 65 degrees in February and a high of 74 degrees in August for a monthly average of 70 degrees. Precipitation typically ranges from 0.44 inches in August to a high of 3.8 inches in December. The annual average rainfall in Honolulu is 70 inches per year.

USDA Soil Survey Report

The project site is located on soils classified FL fill land according to the Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii by the U.S. Department of Agriculture Soil Conservation Service. Fill land is typically found near Pearl Harbor and in Honolulu, adjacent to the ocean. It consists of areas filled with material dredged from the ocean or hauled from nearby areas, garbage, and general material from other sources. This land type is used for urban development including airports, housing areas, and industrial facilities.

3.4.2 WATER RESOURCES

Hydrologic Hazards and Resources

According to Panel 150001 0115 C of the Federal Emergency Management Agency Flood Insurance Rate Map, the project site is located in Zone X an area determined to be outside the 500-year flood plain.

Tsunami Inundation

The Civil Defense Tsunami Inundation Maps Panel 19 indicates that the project site is not located in an area vulnerable to tsunami inundation (Verizon Hawaii).

Special Management Area

The project site is not located within the boundaries of the Special Management Area (SMA) Map.

3.4.3 HISTORICAL AND ARCHAEOLOGICAL ASSESSMENT

A study titled Archaeological Assessment of the Proposed Halekauwila Place Project, Kakaako, Honolulu District, Oahu Island was prepared by Cultural Surveys Hawaii in August 2009. The study is summarized in this section and included in its entirety as Appendix A.

Overview of Kaka‘ako

The modern urban district known as Kaka‘ako is significantly larger than the traditional area of the same name, which is described in mid-19th century documents and maps as a small *‘ili* (traditional land unit within an *ahupua‘a*) within the *ahupua‘a* (traditional land division) of Honolulu. In addition to the *‘ili* of Kaka‘ako, the modern Kaka‘ako area also includes lands once known as Ka‘ākaukukui, Kukuluāe‘o, and Kewalo, and even smaller areas—possibly portions of *‘ili*—called Kawaiaha‘o, Honuakaha, Pu‘unui, Ka‘ala‘a, ‘Āpua, and ‘Auwaiolimu. The current project area is located within the Pu‘unui area of Ka‘ākaukukui ‘Ili.

The original location and extent of an area called Kaka‘ako is ambiguous. The ethnographer Henry Kekahuna (1958:4), who was born in Hawai‘i in 1891 and was a long-time resident of O‘ahu, placed it “on the Ewa side of Kuloloia Stream where the Honolulu Iron Works and Fort Armstrong are now,” an area now covered by One Waterfront Plaza (between South and Punchbowl Streets). Kekahuna (1958:4) also related that “there were formerly scattered dunes of white sand there. Gilbert Islanders (Kilipaki) squatted there, and made a living by fishing, collecting coral for curios, and catching octopus.” Only four LCA claims list their location as within the *‘ili* of Kaka‘ako. These are also generally located adjacent to the sea, east of Punchbowl Street between Pohukaina Street and Reed Lane. The 1884 map of the “Kewalo” section of Honolulu by S.E. Bishop does not show an area named Kaka‘ako at all. On an 1897 map of Honolulu by M.D. Monsarrat, the area adjacent to the coastal wharfs is labeled Kaka‘ako. These maps and documents all place the *‘ili* of Kaka‘ako at the western end of the modern Kaka‘ako district. The only late nineteenth century map that has a mark for Kaka‘ako east of this general area is an 1876 C.J. Lyons map of Ka‘ākaukukui

and Pu‘unui, which has a coastal point (marked by a triangle) labeled Kaka‘ako. However, this is likely a triangulation station used by surveyors for mapping, rather than a point marking the central section of Kaka‘ako.

Until the end of the 19th century, Kaka‘ako was considered to be something of a wasteland, or empty space, between the better-known locations of Kou (modern-day Honolulu) and Waikīkī. Recent archaeological projects, associated with development and construction in the area, have documented several large cemeteries dating from the earlier historic period and perhaps late pre- Contact times. Otherwise, the place is known, and famous in a traditional sense, for its low-lying marshes, fishponds and salt making.

It does not appear that the current project area was in an area of dense or permanent settlement in traditional times. Most of the pre-contact and early post-contact population was clustered in the village of Honuakaha, northwest of the current project area, or scattered adjacent to the main trails (i.e. Queen and King Streets), north of the current project area. However, in later post-contact times (post-1850), this changed, as population pressure in Honolulu and urban expansion led to the infilling of marshes and wetlands on the outskirts of Honolulu, and the subsequent development of the Kaka‘ako area.

Pohukaina School and Mother Waldron Park

In the surveyor’s notes for an 1873 map of land parcels at the corner of King and Punchbowl streets, the present site of the Hawai‘i State Public Library, one of the parcels is identified as the “lot purchased by the Government of Prince Lunalilo in 1872, said portion now to be transferred to the control of the Board of Education.” The parcel was, in 1874, to become the site of the Pohukaina School for Girls, one of three government-supported schools on O‘ahu during the second half of the 19th century. The other two schools were the Royal School for Boys and the Fort Street School.

In 1907 the Hawai‘i Territorial Legislature passed an act to establish the Library of Hawai‘i. After evaluating several possible locations, the government committee decided that the King Street lot of the Pohukaina School would be the best location. Governor Frear wrote, “I arranged to have Pohukaina School moved to Kakaako- a more central location with reference to its constituency and with much more space for buildings and playgrounds” (Frear 1938, cited in Schilz 1991).

As Gov. Frear noted, Pohukaina School was moved to Kaka‘ako, within the city block bounded by Pohukaina Street, Keawe Street, Halekauwila Street, and Coral Street. The main building was located immediately *makai* (seaward) of the current project area. Constructed at a cost of \$28,000, the new school building opened in 1913.

Pohukaina School remained in operation in Kaka‘ako until 1980, by which time it had developed into a special education facility. The buildings were demolished, and in 1981, the Pohukaina School special education program was transferred to the campus of Kaimukī Intermediate School.

One of the teachers at the Pohukaina School was Margaret Waldron. Mrs. Waldron taught at Pohukaina School for 18 years until her retirement in 1934. She was also noted for her volunteer work in Kaka‘ako, and was “generally credited with being the individual who had most influence in transforming the so-called ‘Kakaako gangs’ into law abiding groups and wiping out the unsavory reputation which at one time clung to the district” (*Honolulu Star-Bulletin*; May 8, 1936:A1). Mrs. Waldron died on May 8, 1936. The following year, when a new playground was constructed across Coral Street from Pohukaina School, the Honolulu Board of Supervisors authorized the park’s designation as “Mother Waldron Playground.” The playground, designed by Harry Sims Ben, was opened in September 20, 1937 on the site of the former County stables. It was constructed at a cost of \$50,000.

The Mother Waldron Playground was then, in 1937, the most modern facility in the Territory. The following year, Lewis Mumford, the noted author and social scientist, was invited by the Honolulu Park Board to study the county’s parks and playgrounds. He noted the “spirit called forth in the Mother Waldron Playground.” Mumford defined that spirit exemplified by Mother Waldron Playground and other county parks.

Development within the Current Project Area

A series of fire insurance maps illustrates the history of the current project area in greater detail. The current project area is not shown on any of the Dakin Fire Insurance maps for 1891, 1899, or 1906, suggesting that there were no permanent structures in the area during those years. The current project area and vicinity is first indicated on the 1914 Sanborn Fire Insurance map. The 1914 map shows the project area within the *mauka* (northeastern) portion of the city block bounded by Keawe Street, 2nd Street (i.e. Pohukaina Street), Coral Street, and an unnamed lane (i.e. future Halekauwila Street). The block is dominated by the “Pohukaina Public School,” which occupies much of the *makai* (southwestern) portion of the block. The *mauka* portion of the block contains small residential “dwellings,” portions of which are located within the current project area. The 1927 Sanborn map continues to show the “Pohukaina Public School” dominating the block. The school has greatly expanded since 1914, with several classroom buildings surrounding the central school building. Several classrooms, an automobile garage, and water closet (i.e. restroom) are located within the current project area. The *mauka* portion of the block continues to be used for residential “dwellings.” By 1950, the “Pohukaina Public School” has expanded to cover the entire block, including the current project area. Several classroom buildings, an automobile

garage, and a portion of the school cafeteria building are located within the current project area. The 1956 Sanborn map continues to show the “Pohukaina Public School” in the same configuration as the 1950 map. As previously discussed, the Pohukaina School was closed in 1980 and the school buildings were subsequently demolished in 1981.

Archaeological Background

Most traditional Hawaiian surface structures in Honolulu had been demolished by the time of the first scientific archaeological surveys. In his report on the survey of O‘ahu archaeological sites conducted in the early 1930s, McAllister (1933:80) says of Honolulu: “Information regarding former sites within the present limits of Honolulu must come entirely from literary sources.”

The Kaka‘ako district of Honolulu became a focus of archaeological work during the 1980s, impelled by the construction of local and federal government buildings and by the state-planned redevelopment of the area. Recent archaeological investigations have been conducted in parcels in the vicinity of the current project area and within road alignments near and adjacent to the project area.

Summary of Archaeological Resources

A total of 297 burials have been recorded in the Kaka‘ako area from Punchbowl Street to Ward Avenue, including 257 from four historic cemeteries, three additional historic burials, and 37 scattered, possibly pre-contact burials. Based on the archaeological reports, it appears that all pre-contact human burials that have been encountered in the Kaka‘ako area were buried in sandy deposits.

In several cases, the pre-contact/early post-contact burials are located around or within former fishpond areas, such as: SIHP # -1604, four burials recorded in an area once covered by a pre- 1867 filled fishpond; SIHP # -4553, a single burial found in an area once covered by a fishpond owned by Queen Kapi‘olani; and SIHP # -2963, 13 burials found adjacent to the former north shore of an ‘Auwaiolimu ‘Ili fishpond. In the eastern section of the Kaka‘ako area, at the eastern extension of Queen Street, a nineteenth century cemetery (SIHP # -6658) was found along the lip of a former fishpond called Kolowalu. It is possible that the artificial earthen berms around fishponds were considered desirable places for burials. These earthen berms would have been higher than the surrounding easily-flooded coastal areas, and the soil of the built-up berms was probably easier to dig than undisturbed ground.

In the Kaka‘ako area between Punchbowl Street and Pi‘ikoi Street, there are four historic cemeteries: Ka‘ākaukui Cemetery (SIHP # 50-80-14-2918, 8 burials recorded, 5-8 disinterred), possibly utilized from the 1700s to the early 1800s; the Honuakaha Smallpox Cemetery (SIHP # -3712, 87 burials recorded, 62 disinterred), used from 1853-1854; a portion of Kawaiaha‘o Cemetery (SIHP # -

4534, 129 burials recorded, 116 disinterred), used from 1875- 1920, and the King Street Roman Catholic Cemetery (SIHP # -5455, 33 burials estimated, three disinterred), used from the mid-1800s to the 1920s. The full extent of these cemeteries has not been determined, and there are likely hundreds of burials remaining in these cemeteries, within the modern cemetery boundaries or under modern structures.

The burial at SIHP # -4532 is a known historic burial. At least 2 of the 9 burials in the Kaka‘ako ID-3 area (SIHP # -5280) were historic (one coffin and one with historic grave goods). There is no historic documentation on this small historic burial area and its extent and time of use is unknown.

The remaining 37 burials found in the Kaka‘ako area west of Ward Avenue, at SIHP #s -1604 (4 individuals), -2963 (13), -4380 (9), 4533 (1), -5280 (7), and 6371 (1) were not interred in coffins, do not have associated historic grave goods, or consist of partial, previously disturbed, burials. Some burials were found in a flexed position, a traditional Hawaiian burial practice. These may date to the pre-contact period or the early post-contact period (before the mid-nineteenth century), when most Hawaiians adopted Western style burial practices (usually extended within a coffin). Most of these burials cannot be assigned to a specific time period.

The main early (nineteenth century) historic habitation area in the Kaka‘ako area was within Honuakaha Village on both sides of Punchbowl Street at the junction with Queen Street. There was a second cluster of houselots near LCA 982 and the Pu‘unui lot to Queen Emma. No intact early post-contact cultural layers have been recorded in these areas, due to extensive disturbance, but possible pre-contact/early post-contact burials are concentrated in these two areas.

Also found within the Kaka‘ako area west of Ward Avenue were historic deposits/ trash pits (SIHP # -1973, -3984, -6766, -9917, and -9991), which usually date around the last decades of the nineteenth to the early decades of the twentieth century. There are also several historic structures/properties with SIHP numbers, such as Kawaiaha‘o Church and Mission grounds (SIHP # -9991), the Royal Brewery (SIHP # -9917), Mother Waldron Park (SIHP # -1388) and the old Kaka‘ako Fire Station (SIHP # -1346).

Previous Archaeological Work in the Current Project Area and Immediate Vicinity

A review of reports currently on file at the State Historic Preservation Division (SHPD) indicates that no comprehensive archaeological studies of any portion of the current project area have been completed. However, in 1991 and 1992, during excavations for infrastructure improvements associated with the Hawai‘i Community Development Authority project in Kaka‘ako, eleven human burials were inadvertently exposed in the immediate vicinity of the project area. The

improvements included installation of a storm drain along Halekauwila Street, and installation of electric lines on Keawe Street and at the intersection of Halekauwila and Cooke streets. The fact that six of the burials were flexed (the position of 4 could not be determined and one was in an extended position) and the general absence of historic artifacts suggest that most (or all) of the burials were of a pre-contact date.

Following consultation with the SHPD, all the burials were disinterred and curated by Cultural Surveys Hawai'i until they were returned to the SHPD in July of 1993. Subsequently, the burials were reinterred at a specially constructed site at the corner of Halekauwila and Cooke streets; the reinterment was coordinated by the burial administrator of the SHPD.

According to a memorandum of July 2, 1993 from the HCDA to the SHPD burial administrator, the reinterment site at the corner of Halekauwila and Cooke streets comprised "site A [to] be utilized for Improvement Districts 1 and 3 burials." The memorandum also designates the corner of Cooke and Pohukaina streets, as "site B [which] will be reserved for future reinterments."

Background Summary and Predictive Model

Background research indicates a low intensity of use in the vicinity of the current project area in pre-contact and early post contact times. Adjacent areas to the west were marshy into the 1880s and this may have restricted the early use and development of Kaka'ako to areas to the north and east of the current project area. Coral Street, forming the southeast side of the project area, was slowly established as a major *mauka/makai* artery for Kaka'ako in the mid 1880s and 1890s. Kaka'ako grew rapidly in the first decades of the twentieth century. The large Pohukaina School was re-established on a new campus just seaward of the current project area in 1913. A variety of "dwellings" were present on the *mauka* side of the project area by 1914. By 1927, Pohukaina School had expanded into the project area and covered the entire block by 1950. Classroom buildings were aligned along Keawe, Coral, and Halekauwila streets, arranged around the perimeter of the current project area. Structures then present within the present project area included seven classrooms, a cafeteria and a couple of small storage structures. The school continued to dominate the project area until it was demolished in 1980. Since then, the current project area has been used as a public parking lot.

The historic record would suggest only remnants of turn of the twentieth century habitation and school related finds in the time frame of 1913 to 1980. However, the archaeological record suggests a somewhat different picture. The identification of three burials near the intersection of Halekauwila and Keawe streets and 8 burials near the intersection of Coral and Halekauwila streets (both addressed in Winieski and Hammatt 2000), clearly suggests a pattern of pre-contact human interment in the vicinity.

Survey Findings

The project area is almost entirely asphalt-paved and is currently used as a parking lot. No surface structures are present within the project area, with the exception of a modern portable trailer used by the Honolulu Police Department as a substation.

Test Excavation Findings

Subsurface testing consisted of the excavation of 18 test trenches within the project. Test trenches were distributed throughout the project area to provide representative coverage and assess the stratigraphy and potential for subsurface cultural resources. Test trenches generally measured 6 m long and were excavated approximately 2 m deep, terminating at the surface of the coral shelf. The stratigraphic sequence generally consisted of three to five layers (i.e. Stratum I and Stratum II) of historic and modern fill material beneath the modern asphalt pavement and gravel base course. The natural sediment layers (Stratum III) were generally encountered at depths approximately 0.9-1.3 m below the current land surface, within approximately 0.5-1.0 m of the water table.

Stratum I includes historic and modern fill materials, subdivided into sub-strata based on differences in soil composition. Stratum I generally consisted of mixed terrigenous fill material in the upper sub-strata, and crushed-coral fill material in the lower sub-strata. Construction debris and abandoned utilities were observed within Stratum I. Excavation features were observed in the upper fill layers of Trenches 1-3, 8, 9, 11, and 15. The features consist mainly of a mix of fill strata with utility and foundation remnants, and are likely related to historic and modern construction/demolition events of the former Pohukaina School. Stratum II includes a layer of ash and burnt garbage, and layers of sandy clay fill material. The layer of burnt garbage and ash is interpreted to be fill material generated by the city's municipal garbage incinerator that was formerly located in the Kaka'ako area. Diagnostic artifacts, consisting primarily of glass bottles, were analyzed (see Section 5: Results of Laboratory Analysis), dating the layer to the late 1800s and early 1900s. The sandy clay layers are interpreted to be fill material generated by the dredging of Honolulu Harbor and other coastal areas in the vicinity. The dredge material was also used to fill the low-lying marsh areas of Kakaako in the late 1800s and early 1900s. Stratum III includes the natural sandy clay and gleyed clay sediments underlying the historic and modern fill layers. Stratum III generally consisted of a pale brown sandy clay over a gleyed sandy clay. The gleyed sandy clay was located at or near the water table. The Stratum III sediments are typical of a wet, marsh-type environment.

No significant cultural material was observed through the subsurface testing program.

Summary and Interpretation

The current project area is located in Ka‘ākaukui ‘Ili, within the greater area now known as Kaka‘ako. Background research indicates a low intensity of use in the vicinity of the current project area in pre-contact and early post contact times. The area was generally low-lying and marshy. Kaka‘ako was considered outside the Honolulu town boundary and was used in the mid to late 1800s as a place for cemeteries, burial grounds, and for the quarantine of contagious patients. From pre-contact times into the early 1900s, the land in Ka‘ākaukui was also used to produce salt. Major land reclamation projects of the late 1800s and early 1900s transformed the low-lying marsh lands into dry land for the expanding urban Honolulu area.

Kaka‘ako grew rapidly in the first decades of the twentieth century. Development in the immediate vicinity of the current project area began circa 1913, with the construction of the Pohukaina School. A variety of residential “dwellings” were present within the project area by 1914. By 1927, Pohukaina School had expanded into the project area and covered the entire block by 1950. Classroom buildings were aligned along Keawe, Coral, and Halekauwila streets, arranged around the perimeter of the current project area. Pohukaina School was present within the project area until it was demolished in 1980. Following the demolition of the school, the project area was paved over and has been used as a public parking lot.

The findings of the current archaeological assessment study are consistent with expectations based on background research. No surface structures are present within the project area. Subsurface testing revealed several historic and modern fill layers overlying the natural sediments. The natural sandy clay sediments are typical of a wet, marsh-type environment. Fill layers overlying the natural sediments included a layer of ash and burnt garbage, interpreted to be fill material generated by the city’s municipal garbage incinerator, and layers of sandy clay, interpreted to be fill material generated by the dredging of Honolulu Harbor and other coastal areas in the vicinity. The presence of the dredge fill material and incinerator fill material is consistent with background research of Kaka‘ako land reclamation projects in the late 1800s and early 1900s. The upper terrigenous fill layers included construction debris and abandoned utilities, evidence of the former Pohukaina School.

No significant cultural material was encountered through the subsurface testing program. However, the archaeological record, including the identification of three burials near the intersection of Halekauwila and Keawe streets and 8 burials near the intersection of Coral and Halekauwila streets (both addressed in Winieski and Hammatt 2000), clearly suggests a pattern of pre-contact human interment in the vicinity.

Project Effect and Mitigation Recommendations

The following project effect discussion and cultural resource management recommendations are intended to facilitate project planning and support the project's required historic preservation consultation. This discussion is based on the results of this archaeological assessment and CSH's communication with agents for the project proponents regarding the project's potential impacts to historic properties.

The proposed Halekauwila Place Project consists of development of a mixed-income urban housing community, including: a 19-story residential tower with ground-level retail and meeting spaces; multi-family residential units; and a multi-level parking garage with ground-level retail spaces. Minimally, land disturbing activities would include: grubbing and grading; excavations for building foundations and subsurface utilities; and associated infrastructure improvements. The proposed project's area of potential effect (APE) is defined as the entire 1.25-acre project area.

No historic properties were identified during the current archaeological assessment study. However, based on background research, including the previous identification of human skeletal remains in the immediate vicinity of the project area, there is potential for encountering human skeletal remains within the natural sandy clay-type sediments underlying fill material in the project area. Due to the potential adverse effect on significant historic properties within the project's APE, specifically inadvertent burial discoveries, CSH's project-specific effect recommendation is "effect, with proposed mitigation commitments." The recommended mitigation measures will reduce the project's potential adverse effect to significant historic properties.

To reduce the proposed project's potential adverse effect on significant historic properties, the following mitigation measures are recommended. The mitigation measures should be completed prior to any land disturbing activities associated with the proposed Halekauwila Place Project.

1. Archaeological monitoring is recommended during all land disturbing activities within the project area. Archaeological monitoring will ensure proper treatment and documentation should any historic properties be discovered during project-related construction activities.
2. An archaeological monitoring plan should be prepared for review and approval of the State Historic Preservation Division (SHPD) prior to project construction. In accordance with HAR 13-279, the monitoring plan should detail specific archaeological monitoring provisions.

3.4.4 CULTURAL ASSESSMENT

A study titled Cultural Assessment of the Former Waldron Playground/Former Pohukaina School Parcel (6.8 Acres) in the Kaka'ako District of Honolulu, Island of O'ahu was prepared by Cultural Surveys Hawaii (CSH) in July 2001. Portions of the previous section have been synthesized for the Cultural Assessment.

In addition to the archaeological and historic research conducted for the project, CSH placed a greater emphasis into consultation efforts rather than replicating the existing archival and historical research.

Letters requesting (1) identification of cultural concerns and (2) referrals of knowledgeable individuals were written to the following organizations: the State Historic Preservation Division, the Office of Hawaiian Affairs, the Oahu Island Burial Council, Hui Malama I Na Kupuna o Hawaii Nei and Kamehameha Schools Bishop Estate. An attempt was made to contact all the individuals referred by the various organizations, either by letter and/or telephone. A complete list of organizations and individuals contacted during the consultation period can be found in the appended report.

In consultation with the SHPD Culture/History Branch, it was determined that the consultation process need not be as broad as originally intended due to several factors: 1) the Kakaako area previously consisted of fish ponds and tidal flats and were not subject to intertidal influences; 2) the soil in the project area is Fill (FL); 3) the project area is in a developed and previously disturbed area; 4) due to development of the commercial and business district, the original homes were torn down in the last 10-15 years and the once tight-knit community dispersed and relocated elsewhere.

The consultation portion of the study did not identify any traditional cultural practices occurring in the project area nor identify any cultural concerns. Nearly everyone contacted had only peripheral knowledge of the subject parcel. Two of the people consulted know Mother Waldron and were able to add some personal information regarding her life.

3.4.5 TRAFFIC CONDITIONS

A Traffic Impact Assessment Study was conducted by Wilson Okamoto Corporation for the proposed project. The study, titled *Traffic Impact Report for Halekauwila Place*, is summarized in this section and included in its entirety as Appendix B. The study was completed in October of 2009.

3.4.5.1 EXISTING TRAFFIC CONDITIONS

Area Roadway System

The proposed project site is located adjacent to Halekauwila Street in Kakaako. Halekauwila Street originates at Nimitz Highway as a one-lane, one-way (eastbound) roadway that transitions to a two-lane, two-way roadway at Punchbowl Street and terminates at Ward Avenue. At the northwest corner of the project site, Halekauwila Street intersects Keawe Street. At this all-way stop intersection, both approaches of Halekauwila Street have one lane that serves all traffic movements. Keawe Street is a predominately two-lane, two-way roadway generally oriented in the north-south direction between Ilalo Street and Queen Street. At the intersection with Halekauwila Street, the Keawe Street approaches have one lane that serves all traffic movements.

East of the intersection with Keawe Street, Halekauwila Street intersects Coral Street. At this uncontrolled T-intersection, the eastbound approach of Halekauwila Street has one lane that serves left-turn and through traffic movements while the westbound approach has one lane that serves through and right-turn traffic movements. Coral Street is a predominately two-lane, two-way roadway generally oriented in the north-south direction. The northern segment of Coral Street extends between Queen Street and Halekauwila Street while the southern segment extends between Pohukaina Street and Ala Moana Boulevard. At the intersection with Halekauwila Street, the Coral Street approach has one stop-controlled lane that serves left-turn and right-turn traffic movements.

Further east, Halekauwila Street intersects Cooke Street. At this all-way stop intersection, both approaches of Halekauwila Street have one lane that serves all traffic movements. Cooke Street originates at Ilalo Street as a two-lane, two-way roadway, transitions to a four-lane roadway between Ala Moana Boulevard and Kapiolani Boulevard, then returns to a two-lane roadway until its terminus at South King Street. At the intersection with Halekauwila Street, both approaches of Cooke Street have shared left-turn and through lane and a shared through and right-turn lane.

South of the intersection with Halekauwila Street, Keawe Street intersects Pohukaina Street. At this all-way stop intersection, both approaches of Keawe Street have one lane that serves all traffic movements. Pohukaina Street is a two-lane, two-way roadway generally oriented in the east-west direction between Punchbowl Street and Kaimani Street. At the intersection with Keawe Street, both approaches of Pohukaina Street have one lane that serves all traffic movements.

East of the intersection with Keawe Street, Pohukaina Street intersects Coral Street. At the uncontrolled T-intersection, the eastbound approach of Pohukaina Street has one lane that serves through and right-turn traffic movements while the westbound approach has one lane that serves left-turn and through traffic

movements. The Coral Street approach has one stop-controlled lane that serves left-turn and right-turn traffic movements.

Further east, Pohukaina Street intersects Cooke Street. At this all-way stop intersection, both approaches of Pohukaina Street have one lane that serves all traffic movements while both approaches of Cooke Street have a shared left-turn and through lane and a shared through and right-turn lane.

Existing Peak Hour Traffic

Figures 3 and 4 show the existing AM and PM peak period traffic volumes and operating conditions. The AM peak hour of traffic generally occurs between 7:30 AM and 8:30 AM in the vicinity of the hospital. In the afternoon, the PM peak hour of traffic generally occurs between the hours of 4:30 PM and 5:30 PM. The analysis is based on these peak hour time periods for each intersection to identify the traffic impacts resulting from the proposed project. LOS calculations are included in Appendix C.

Halekauwila Street and Keawe Street

At the intersection with Keawe Street, Halekauwila Street carries 177 vehicles eastbound and 217 vehicles westbound during the AM peak period. During the PM peak period, the overall traffic volume is slightly higher with 290 vehicles traveling eastbound and 136 vehicles traveling westbound. The eastbound approach of Halekauwila Street operates at LOS “A” and LOS “B” during the AM and PM peak periods, respectively, while the westbound approach operates at LOS “B” and LOS “A” during the AM and PM peak periods, respectively.

The Keawe Street approaches of the intersection carry 66 vehicles northbound and 98 vehicles southbound during the AM peak period. During the PM peak period, traffic volumes are higher with 101 vehicles traveling northbound and 113 vehicles traveling southbound. The northbound approach of Keawe Street operates at LOS “A” during both peak periods while the southbound approach operates at LOS “A” and LOS “B” during the AM and PM peak periods, respectively.

Halekauwila Street and Coral Street

At the intersection with Coral Street, Halekauwila Street carries 130 vehicles eastbound and 187 vehicles westbound during the AM peak period. During the PM peak period, the overall traffic volume is slightly higher with 334 vehicles traveling eastbound and 127 vehicles traveling westbound. The critical traffic movement on the Halekauwila Street approaches is the eastbound approach which operates at LOS “A” during both peak periods.

The Coral Street approach of the intersection carries 57 vehicles and 47 vehicles southbound during the AM and PM peak periods, respectively. This approach operates at LOS “B” during both peak periods.

Halekauwila Street and Cooke Street

At the intersection with Cooke Street, Halekauwila Street carries 119 vehicles eastbound and 169 vehicles westbound during the AM peak period. During the PM peak period, the overall traffic volume is slightly higher with 332 vehicles traveling eastbound and 154 vehicles traveling westbound. Both approaches of Halekauwila Street operate at LOS “B” during both peak periods.

The Cooke Street approaches of the intersection carry 184 vehicles northbound and 345 vehicles southbound during the AM peak period. During the PM peak period, traffic volumes are higher with 331 vehicles traveling northbound and 407 vehicles traveling southbound. The northbound approach of Cooke Street operates at LOS “A” and LOS “C” during the AM and PM peak periods, respectively, while the southbound approach operates at LOS “B” and LOS “B” during the AM and PM peak periods, respectively.

Pohukaina Street and Keawe Street

At the intersection with Keawe Street, Pohukaina Street carries 109 vehicles eastbound and 192 vehicles westbound during the AM peak period. During the PM peak period, traffic volumes are higher with 211 vehicles traveling eastbound and 266 vehicles traveling westbound. The eastbound approach of Pohukaina Street operates at LOS “A” and LOS “B” during the AM and PM peak periods, respectively, while the westbound approach operates at LOS “B” during both peak periods.

The Keawe Street approaches of the intersection carry 86 vehicles northbound and 186 vehicles southbound during the AM peak period. During the PM peak period, the overall traffic volume is slightly higher with 110 vehicles traveling northbound and 185 vehicles traveling southbound. Both approaches of Keawe Street operate at LOS “A” and LOS “B” during the AM and PM peak periods, respectively.

Pohukaina Street and Coral Street

At the intersection with Coral Street, Pohukaina Street carries 102 vehicles eastbound and 223 vehicles westbound during the AM peak period. During the PM peak period, the overall traffic volume is slightly higher with 225 vehicles traveling eastbound and 149 vehicles traveling westbound. The eastbound approach of Pohukaina Street operates at LOS “A” and LOS “B” during the AM and PM peak periods, respectively, while the westbound approach operates at LOS “A” during both peak periods.

The Coral Street approach of the intersection carries 86 vehicles and 178 vehicles northbound during the AM and PM peak periods, respectively. This approach operates at LOS “A” during both peak periods.

Pohukaina Street and Cooke Street

At the intersection with Cooke Street, Pohukaina Street carries 125 vehicles eastbound and 174 vehicles westbound during the AM peak period. During the PM peak period, the overall traffic volume is slightly higher with 340 vehicles traveling eastbound and 173 vehicles traveling westbound. The eastbound approach of Halekauwila Street operates at LOS “B” and LOS “C” during the AM and PM peak periods, respectively, while the westbound approach operates at LOS “B” during both peak periods.

The Cooke Street approaches of the intersection carry 163 vehicles northbound and 272 vehicles southbound during the AM peak period. During the PM peak period, traffic volumes are higher with 210 vehicles traveling northbound and 401 vehicles traveling southbound. Both approaches of Cooke Street operate at LOS “A” and LOS “B” during the AM and PM peak periods, respectively.

3.4.5.2 TRAFFIC IMPACT ANALYSIS

The Year 2012 cumulative AM and PM peak hour traffic conditions with the Halekauwila Place development are summarized in the table below. The existing and projected Year 2010 (Without Project) operating conditions are provided for comparison purposes.

**Existing and Projected Year 2012 (Without and With Project)
LOS Traffic Operating Conditions**

Intersection	Critical Traffic Movement		AM			PM		
			Exist	Year 2012		Exist	Year 2012	
				w/out Proj	w/ Proj		w/out Proj	w/ Proj
Halekauwila St/ Keawe St	Eastbound	LT-TH-RT	A	A	A	B	B	B
		Westbound	LT-TH-RT	B	B	B	A	A
	Northbound	LT-TH-RT	A	A	A	A	A	B
	Southbound	LT-TH-RT	A	A	A	B	B	B
Halekauwila St/ Coral St	Eastbound	LT-TH	A	A	A	A	A	A
	Southbound	LT-RT	B	B	B	B	B	B
Halekauwila St/ Cooke St	Eastbound	LT-TH-RT	B	B	B	C	D	D
	Westbound	LT-TH-RT	B	B	B	B	C	C
	Northbound	LT-TH-RT	A	A	B	C	C	C
	Southbound	LT-TH-RT	B	B	B	C	C	C
Pohukaina St/ Keawe St	Eastbound	LT-TH-RT	A	A	A	B	B	B
	Westbound	LT-TH-RT	B	B	B	B	B	B
	Northbound	LT-TH-RT	A	A	A	B	B	B
	Southbound	LT-TH-RT	A	A	A	B	B	B

Pohukaina St/ Coral St	Eastbound	TH-RT	A	A	A	B	B	B
	Westbound	LT-TH	A	A	A	A	A	A
	Northbound	LT-RT	A	A	A	A	A	A
	Eastbound	LT-TH-RT	B	B	B	C	C	C
	Westbound	LT-TH-RT	B	B	B	B	B	B
	Northbound	LT-TH-RT	A	A	A	B	B	B
	Southbound	LT-TH-RT	A	B	B	B	B	B

Traffic operations in the vicinity of the Halekauwila Place development are expected to remain similar to Year 2012 without project conditions. Along Halekauwila Street, the northbound approach of the intersection with Cooke Street is expected to operate at a slightly lower LOS “B” during the AM peak period while the westbound and northbound approaches of the intersection with Keawe Street are expected to operate at a slightly lower LOS “B” during the PM peak period. The remaining critical traffic movements at these intersections, as well as, the other study intersections are expected to continue operating at levels of service similar to without project conditions.

3.4.5.3 RECOMMENDATIONS AND CONCLUSION

Based on the analysis of the traffic data, the following are the recommendations of this study to be incorporated in the project design.

Maintain sufficient sight distance for motorists to safely enter and exit all project driveways. Parking along Halekauwila Street and Keawe Street fronting the project site may need to be restricted to ensure that sufficient sight distances are maintained.

Provide adequate on-site loading and off-loading service areas and prohibit off-site loading operations.

Provide adequate turn-around area for service, delivery, and refuse collection vehicles to maneuver on the project site to avoid vehicle-reversing maneuvers onto public roadways.

Provide sufficient turning radii at all project driveways to avoid or minimize vehicle encroachments to oncoming traffic lanes.

Provide sufficient storage for entering vehicles at the parking garage access control (i.e., automatic gate, etc.) to ensure that queues do not extend onto the adjacent public roadway.

The proposed Halekauwila Place development includes approximately 204 affordable rental units with a parking garage and amenities. In addition, the development will include some office space for Honolulu Police Department staff to replace the existing portable trailer they are currently utilizing within the project site. Despite the anticipated increases in traffic along the surrounding roadways due to the proposed project, the traffic movements at the study intersections are anticipated to continue operating at levels-of-service similar to without project conditions during both peak periods. As such, with the implementation of the aforementioned recommendations, the proposed Halekauwila Place development is not expected to have a significant impact on traffic operations in the vicinity.

3.4.6 AIR QUALITY

B.D. Neal & Associates conducted an Air Quality Impact Assessment on the proposed project in November 2009. A summary from this report is provided below. The report can be found in its entirety in Appendix C. The study's findings were modeled for project completion in 2012.

3.4.6.1 AMBIENT AIR QUALITY STANDARDS

Both federal and state standards have been established to maintain ambient air quality. At the present time, seven parameters are regulated including: particulate matter, sulfur dioxide, hydrogen sulfide, nitrogen dioxide, carbon monoxide, ozone and lead. Hawaii air quality standards are comparable to the national standards except those for nitrogen dioxide and carbon monoxide which are more stringent than the national standards.

3.4.6.2 REGIONAL AND LOCAL CLIMATOLOGY

Regional and local climate together with the amount and type of human activity generally dictate the air quality of a given location. Winds are predominantly trade winds which are deviated somewhat from the northeast toward the east or southeast by the local terrain. During winter, occasional storms may generate strong winds from the south (kona winds) for brief periods. When the trade winds or kona winds are weak or absent, landbreeze- seabreeze circulations may develop. Wind speeds are often lower compared to more exposed coastal locations, but the trade winds still provide relatively good ventilation much of the time. Temperatures in the Oahu area leeward of the Koolaus are generally very moderate with average daily temperatures ranging from about 70°F to 84°F. Extreme temperatures range from about 53°F to about 95°F. Rainfall is relatively low with an average of about 22 inches per year.

3.4.6.3 EXISTING AIR QUALITY CONDITIONS

Air quality in the vicinity of the project presently is mostly affected by emissions from vehicular sources which emit carbon monoxide, nitrogen oxides, hydrocarbons and other

air pollutants. Air quality data from the nearest monitoring stations operated by the Hawaii Department of Health suggest that all state and national air quality standards are currently being met in the downtown Honolulu area.

3.4.6.4 AIR QUALITY IMPACTS OF PROJECT

Short-term direct and indirect impacts on air quality could potentially occur during project construction. For a project of this nature, there are two potential types of air pollution emissions that could directly result in short-term air quality impacts during project construction: (1) fugitive dust from soil excavation, aggregate processing and vehicle movement; and (2) exhaust emissions from on-site construction equipment. Indirectly, there also could be short-term air quality impacts from the disruption of traffic on nearby roadways, from slow-moving construction equipment traveling to and from the project site, and from a temporary increase in local traffic caused by commuting construction workers.

Fugitive dust emissions from construction activities are difficult to estimate accurately because of their elusive nature of emission and because the potential for dust generation varies greatly depending upon the type of soil at the construction site, the amount and type of dirt-disturbing activity taking place, the moisture content of exposed soil in work areas, and the wind speed. The U.S. EPA has provided a rough estimate for uncontrolled fugitive dust emissions from construction activity of 1.2 tons per acre per month under conditions of "medium" activity, moderate soil silt content (30%), and precipitation/evaporation (P/E) index of 50. Uncontrolled fugitive dust emissions from project construction would likely be somewhere near this level. In any case, State of Hawaii Air Pollution Control Regulations prohibit visible emissions of fugitive dust from construction activities at the project property line. Thus, an effective dust control plan for the project construction phase should be prepared.

Adequate fugitive dust control can usually be accomplished by the establishment of a frequent watering program to keep bare-dirt surfaces in active construction areas from becoming significant sources of dust. On days without rainfall, construction areas should be watered at least twice during the workday to help keep dust to a minimum. Control regulations further stipulate that open-bodied trucks be covered at all times when in motion if they are transporting materials likely to give rise to airborne dust. Haul trucks tracking dirt onto paved streets from unpaved areas are oftentimes a significant source of dust in construction areas. Some means to alleviate this problem, such as tire washing or road cleaning, may be appropriate. Dust monitoring could be considered as a means to quantitatively evaluate the effectiveness of dust control measures.

On-site mobile and stationary construction equipment also will emit air pollutants from engine exhausts. The largest of this equipment is usually diesel-powered. Nitrogen oxides emissions from diesel engines can be relatively high compared to gasoline-powered equipment, but the standard for nitrogen dioxide is set on an annual basis and is not likely to be violated by short-term construction equipment emissions. Carbon monoxide emissions from diesel engines, on the other hand, are low and should be

relatively insignificant compared to vehicular emissions on nearby roadways.

Indirectly, slow-moving construction vehicles on roadways leading to and from the project site could obstruct the normal flow of traffic to such an extent that overall vehicular emissions increase. This impact can be mitigated by moving heavy construction equipment during periods of low traffic volume. Likewise, the schedules of commuting construction workers can be adjusted to avoid peak hours in the project vicinity.

After the period of construction, long-term impacts on air quality from motor vehicle exhausts can potentially occur at or near any project that attracts large volumes of motor vehicle traffic. Carbon monoxide emissions are usually the primary issue, and public areas near traffic-congested intersections are the main concern. Primary access to the project will be provided via driveways off Halekauwila Street between Cooke Street and Keawe Street with a secondary driveway providing access to a loading area off Keawe Street between Halekauwila Street and Pohukaina Street. The project traffic study examined six nearby roadway intersections along Halekauwila Street and Pohukaina Street. These included Halekauwila Street at Cooke Street, Halekauwila Street at Coral Street, Halekauwila Street at Keawe Street, Pohukaina Street at Keawe Street, Pohukaina Street at Coral Street, and Pohukaina Street at Cooke Street. The project traffic study indicates that with the project, peak-hour traffic volumes at these intersections would likely increase by about 5 percent or less except at the intersection of Coral Street and Halekauwila Street where an increase of about 11 to 12 percent would occur (which is a maximum traffic increase of 61 vehicles per hour during the afternoon peak hour). The traffic study also indicates that traffic level-of-service at these intersections is presently good and that by the year 2012, with or without the project, traffic level-of-service conditions would remain essentially unchanged.

3.4.6.5 AIR QUALITY CONCLUSIONS AND RECOMMENDATIONS

Based on extensive experience in assessing traffic-related air quality impacts, traffic volume increases of less than about 5 percent or less than about 100 vehicles per hour and traffic approach volumes of less than about 1,000 vehicles per hour do not cause any significant impacts on air quality if adequate traffic level-of-service is provided. The project traffic study indicates that traffic volumes in the project area should remain well within these criteria. Considering the small project-related traffic volumes that are expected, traffic from the proposed project should have no measurable long-term impacts on air pollution levels in the project area. Although a detailed air quality modeling study could be performed to quantitatively predict project impacts, such an analysis is probably unwarranted.

In summary, short-term impacts from fugitive dust during project construction may potentially occur. Because of this, an effective dust control plan for the period of construction should be prepared and implemented. After construction, any long-term impacts on air quality from motor vehicle traffic related to this project will likely be negligible.

3.4.7 NOISE ENVIRONMENT

Y. Ebisu & Associates prepared a revised report titled Acoustic Study for the Halekauwila Place Project Kakaako, Oahu in October 2009. The report is summarized in the following section and is included in its entirety as Appendix D of this report. This study was modeled for project completion in year 2012.

3.4.7.1 EXISTING ACOUSTICAL ENVIRONMENT

The existing background ambient noise levels within the project area are controlled by traffic along Cooke, Pohukaina, Halekauwila, and Keawe Streets; by local traffic within the existing parking lot; and by interisland and military jet aircraft departures from Honolulu International Airport. Traffic, aircraft, and background ambient noise measurements were obtained at six locations in the project environs.

Aircraft noise level measurements were obtained in 2000 and 2009. In 2000, the loudest aircraft noise events were typically associated with departures by interisland jet aircraft. Occasionally, departures by the louder military jet aircraft (such as the F-15) were also audible and measurable. Aircraft noise events were typically louder than motor vehicles, and were audible over longer periods than other noise events. Nevertheless, aircraft noise levels at the project site did not exceed 60 Ldn in 2000, which is the level above which the Hawaii State Department of Transportation, Airports Division, considers to be unacceptable for residences. By 2009, the B-737 and DC-9 jet aircraft formerly used for interisland passenger service had been replaced by quieter CRJ 200 and B-717 (200) aircraft, so aircraft noise in the project area have been reduced by at least 3 Ldn units. Because of the modernization of the interisland passenger jet aircraft, aircraft noise is not a major contributor to the noise environment at the project site.

The existing traffic noise levels in the project environs along Cooke Street are in the "Moderate Exposure, Acceptable" category and less than 65 Ldn within 50 feet of the roadway's centerline. Along Halekauwila, Pohukaina, and Keawe Streets, existing traffic noise levels are also in the "Moderate Exposure, Acceptable" category at 50 feet or greater distance from the roadways' centerlines.

The traffic, aircraft, and background ambient noise level measurements indicated that total noise levels are between 60 to 62 Ldn on the project site in the vicinity of the proposed residential tower. Aircraft noise levels are approximately 55 to 58 Ldn, while traffic noise levels range from approximately 55 to 62 Ldn at ground level to 59 to 60 Ldn at receptor elevations of 43 feet or more above ground level. Traffic noise levels increase with receptor elevation due to the decrease in noise shielding effects and the reduction of excess ground attenuation effects.

Results of calculations of existing (CY 2009) traffic noise levels at the future residential tower building on the project site indicate that the existing noise levels over the project site are higher near Halekauwila Street (along the north side of the project site), and are

lower near the south side of the project site. Existing traffic and aircraft noise levels, singly and in combination, do not exceed 65 Ldn, and existing noise levels are considered to be "Acceptable" for residences by FHA/HUD and other federal agencies.

3.4.7.2 FUTURE NOISE ENVIRONMENT

Predictions of future traffic noise levels were made using the traffic volume assignments for CY 2012 with and without the proposed project. Essentially no significant changes in traffic noise levels are expected in the project environs between CY 2009 and 2012, with or without the project. With the construction of the proposed garage and residential tower buildings, traffic noise levels along the east and south faces of the tower building should decrease due to the shielding of the traffic noise contributions from Halekauwila and Keawe Streets. Except for noise shielding effects from the project's tower building, future traffic noise levels should be nearly identical with or without the proposed housing project.

The dominant traffic noise source in the project area will continue to be traffic noise from Halekauwila, Cooke, Keawe, and Pohukaina Streets, but the changes in traffic noise levels following project build-out are not expected to be significant. The elevated residential units in the tower building are expected to be exposed to traffic noise levels less than 65 Ldn, and are expected to be in the "Acceptable" noise exposure category in respect to the FHA/HUD noise standard for residences.

Aircraft noise levels over the project site are not expected to change significantly between CY 2009 and 2012, and should remain at or below the current levels of 55 to 58 Ldn. The future changes in aircraft noise levels over the project site will be more dependent upon the future changes in military jet aircraft operations rather than upon the future changes in civilian jet aircraft operations at Honolulu International Airport. This is because the composite civilian jet aircraft fleet has become quieter in recent times, while the composite military jet aircraft fleet has not.

The Noise and Vibration Technical Report for the Honolulu High-Capacity Transit Corridor Project indicates that noise levels from the Honolulu Fixed Guideway System could range between 56 to 61 Ldn from ground level to the 6th floor level at the 860 Halekauwila Street and, by analogy, also at the Halekauwila Place project. From the 7th to the 13th floors, rail system noise levels are predicted to range from 65 to 69 Ldn. Above the 13th floor, rail system noise levels decline from 64 to 61 Ldn or less. These noise level predictions assumed that wheel skirts and sound attenuation walls were incorporated into the Honolulu Fixed Guideway System as noise mitigation measures. However, because the sound attenuation walls are not effective at elevated receptor locations above the 6th floor level, both the FHA/HUD and Federal Transit Administration noise impact criteria will probably be exceeded along portions of the north, west, and east tower faces of the Halekauwila Place project.

3.4.7.3 DISCUSSION OF PROJECT-RELATED NOISE AND VIBRATION IMPACTS AND POSSIBLE MITIGATION MEASURES

Traffic Noise

For the residential units in the proposed residential tower building, traffic noise mitigation measures should not be required for traffic noise projected through year 2012. Noise impacts from project related traffic along the surrounding roadways which are expected to service the project are not expected due to the very low levels of traffic noise associated with project traffic.

General Construction Noise

Audible construction noise will probably be unavoidable during the entire project construction period. The total time period for construction is estimated to be 18 to 24 months, but it is anticipated that the actual work will be moving from one location on the project site to another during that period. Actual length of exposure to construction noise at any receptor location will probably be less than the total construction period for the entire project.

Direct line-of-sight distances from the construction equipment to existing residential and commercial buildings will range from 70 FT to 450 FT, with corresponding average noise levels of 83 to 65 dBA (plus or minus 5 dBA). For receptors along a cross-street, the construction noise level should be reduced by approximately 8 dBA when the work is occurring at the intersection with the cross street, and should be reduced by 15 dBA when work is occurring at least 100 FT from the intersection (and the visual line-of-sight is blocked by intervening buildings). Typical levels of construction noise inside naturally ventilated and air-conditioned structures are approximately 10 and 20 dB less.

The business offices, produce business, and elderly housing facility across Halekauwila Street are predicted to experience the highest noise levels during construction activities due to their close proximity to the construction site. Adverse impacts from construction noise are not expected to be in the "public health and welfare" category due to the temporary nature of the work, the business/commercial character of the neighborhood, and due to the administrative controls available for regulation of construction noise. Instead, these impacts will probably be limited to the temporary degradation of the quality of the acoustic environment in the immediate vicinity of the project site.

Mitigation of construction noise to inaudible levels will not be practical in all cases due to the intensity of construction noise sources (80 to 90+ dB at 50 FT distance), and due to the exterior nature of the work (pile driving, grading and earth moving, trenching, concrete pouring, hammering, etc.). The use of properly muffled construction equipment should be required on the job site.

Peak airborne noise levels from pile driving may be as much as 15 dBA greater than noise levels for non-impulsive (steady) construction noise sources. Although the pile driving can produce more intense noise levels, each pulse is of short individual duration (less than one second). Therefore, its impact on speech communication is not as severe as that of steady source of the same noise level.

Severe noise impacts are not expected to occur inside air-conditioned structures which are within 70 to 450 FT of the project construction site. Inside naturally ventilated structures, interior noise levels (with windows or doors opened) are estimated to range between 55 to 73 dBA at 70 FT to 450 FT distances from the construction site. Closure of all doors and windows facing the construction site would generally reduce interior noise levels by an additional 5 to 10 dBA.

The incorporation of State Department of Health construction noise limits and curfew times, which are applicable throughout the State of Hawaii, is another noise mitigation measure which is normally applied to construction activities. Noisy construction activities are not allowed on Sundays and holidays, during the early morning, and during the late evening and nighttime periods under the DOH permit procedures.

Vibration from Pile Driving

Pile driving will probably be necessary to implant piles into the ground over the project site. Impact driven concrete and sheet piles may both be used on the project site. Induced ground vibrations from the pile driving operations have the potential to cause architectural and structural damage to structures.

Ground vibrations generated during pile driving operations are generally described in terms of peak particle (or ground) velocity in units of inches/second. The human being is very sensitive to ground vibrations, which are perceptible at relatively low particle velocities of 0.01 to 0.04 inches/second. Damage to structures, however, occur at much higher levels of vibration. The most commonly used damage criteria for structures is the 2.0 inches/second limit derived from work by the U.S. Bureau of Mines. A more conservative limit of 0.2 inches/second is also used, and is suggested for planning purposes on this project because of the repetitive nature of pile driving operations which can increase risks of damage due to fatiguing.

Predictions of peak ground vibration levels vs. scaled energy distance factor from the driven pile are not precise, with initial uncertainty factor for a given location in the order of 10:1. For this reason, it is standard practice to employ seismograph monitoring of ground vibrations during pile driving operations with a 3-axis geophone or accelerometer. If sheet pile drivers of approximately 2,500 foot-pounds or smaller ratings are anticipated to be used on the job site, the initial vibration predictions indicate that there is some risk of exceeding the 0.2 inches/second vibration damage criteria at 47 to 71 FT separation distances, and

monitoring during pile driving operations is warranted if pile driving are planned at those distances from any existing structures. For pile driver operations, risks of damage to the buildings across Halekauwila Street are considered to be very low.

The following preventative measures are recommended for implementation during the planning and design phases of the project:

In addition to the normal planning and design concerns regarding potential damage due to settling and heaving during construction, consideration should also be given to risks of damage due to vibration from pile driving. A damage criteria of 0.2 inches/second should be used in conjunction with the vibration prediction method of the Highway Research Record "Damage to Pile Driving Vibration" report to identify the potential damage risk distances to the driven piles.

If predicted vibration levels from pile driving exceed 0.2 inches/second at a building, and predicted levels cannot be reduced by sizing of the pile driver, test piles should be driven and their vibrations monitored and recorded prior to completion of the foundation design. The monitoring of the test piles should be designed to measure the expected peak, 3-axis vibration levels at the building. The results of the monitoring should be used to define empirical distance from the driven pile to the 0.2 inches/second damage risk location, and to evaluate the risks of structural damage to the adjacent structure during actual construction.

If predicted vibration levels from pile driving exceed 2.0 inches/second at a building, the use of alternate types of piles or shoring should be considered for implementation during the design phase.

Honolulu Fixed Guideway System Noise. The Halekauwila Place living units are not planned to be air-conditioned, so noise mitigation measures will not be included in the project plans. However, wall openings in the living units will be provided for the addition of air conditioning units by the building's occupants. If the Halekauwila Place project is completed prior to the completion of the Honolulu Fixed Guideway System, it is possible that noise mitigation measures at Halekauwila Place may be incorporated into the Honolulu Fixed Guideway System project. So the mitigation of potential noise impacts from the Honolulu Fixed Guideway System will be deferred to the rail project.

3.4.8 BIOLOGICAL CHARACTERISTICS

3.4.8.1 FLORA

The project lot is presently covered with asphalt paving. Seven monkey pod trees remain on-site along the perimeter of the lot. A particularly large specimen is located along the Keawe Street boundary. No rare or endangered species of flora were identified on the site. Six trees must be removed or relocated.

3.4.8.2 FAUNA

The site does not serve as a wildlife habitat although avifauna, feral cats, dogs and rodents may be found on-site.

3.4.9 INFRASTRUCTURE AND UTILITIES

The proposed improvements are readily serviced by existing utilities located in the immediate vicinity. All utilities are presently located underground largely through the Kakaako district improvements that were recently completed.

3.4.9.1 POTABLE WATER

The project will continue to be serviced by the existing water system that the Board of Water Supply has determined to be adequate to accommodate the proposed project. Use of this service will increase significantly from current levels as a result of the project but can be readily accommodated by the existing water system. Water conservation efforts are likely to be implemented by the project operator upon completion.

3.4.9.2 STORMWATER

The site is presently naturally drained. The proposed project will be required to control drainage according to prevailing drainage regulations. Stormwater lines in the area were installed in 1990-1991 and are adequate to service the project site. All storm water runoff from the proposed improvements will be reviewed for conformance with City and County of Honolulu Ordinance 96-34 regarding peak runoff.

3.4.9.3 WASTEWATER

The Department of Planning and Permitting has determined that the municipal sewer system is adequate to accommodate the proposed project.

3.4.9.4 SOLID WASTE

It is expected that private refuse collection service will be used to service the project location. The project operator may implement recycling programs upon project completion. The Department of Health has indicated that recycled paving material should be used if available at acceptable prices and that solid waste generated during the project's construction should be directed to a permitted solid waste disposal, processing or recycling facility.

3.4.9.5 TELEPHONE AND ELECTRICAL SERVICES

Telephone and electrical services are available to the site. Coordination with the local electric and telephone service providers will be expected during the design and construction phases.

3.4.10 PUBLIC FACILITIES

The proposed project is not expected to have any impact on any existing public facilities including schools, parks, police, and fire or emergency medical services.

Accommodation for a future inner city public elementary school as part of the project block has been evaluated as part of a master plan effort by HCDA. In consultation with the Department of Education (DOE), it was determined that the conceptual design for this project can co-exist with the DOE space requirements for an “inner city” public elementary school. There are no immediate plans for DOE development of the site at this time.

The location of a school site adjacent to the proposed project is considered acceptable by the HCDA. Within the highly urban Kakaako community, school, park and senior housing uses are all considered high priority items and do not require the exclusion of other uses to maintain viability of the project block. School use adjacent to the project site will result in significantly higher levels of activity including traffic, noise and use of park space in the general vicinity. The proposed housing project will remain secured from the school site and housing residents are not likely to access the school site nor is it likely that students will enter the housing site. School related noise, particularly during recesses or after school may intrude onto the housing site. Noise attenuation measures, including air conditioning may be provided by the developer to mitigate noise intrusion.

The proposed project is also adjacent to the Mother Waldron Park, which is listed in the Hawaii Register of Historic Places. The proposed project will not have any physical impact on the park site, which is planned for landscaping improvements in 2010. Residents of the project may use the site slightly increasing park activity. The project is also located next to a possible future elementary school site. The school was included in a conceptual planning process in 1998 but no commitments to the development of the school have been made. The Department of Education has indicated that it has no objections to the proposed housing project based on conceptual school schemes prepared for the makai portion of the block.

3.4.10.1 FIRE PROTECTION

Kakaako Fire Station Number 9 provides fire protection service to the project area as well as emergency medical service. The station is located at 555 Queen Street and is located two blocks from the project site. Response time to the site is less than 5 minutes.

3.4.10.2 POLICE SERVICE

Police service is provided by the Honolulu Police Department (HPD) Beats Number 167 and 168. The project block currently houses a trailer used by beat officers as an informal substation used for report writing and communications. Response time to the site is less than 5 minutes.

3.4.10.3 PUBLIC TRANSPORTATION AND HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

Public transportation by TheBus is available along Queen Street, approximately 500-feet from the project site along either Keawe Street or Coral Street. Bus stops are located both mauka and makai of Queen Street near the Queen Street/Emily Street intersection. These stops are located along Route 6 – Pauoa Valley/UH Woodlawn.

The Honolulu High-Capacity Transit Corridor Project often referred to as the Rail Transit project, is proposed for alignment along Halekauwila Street. This alignment will be within the immediate vicinity of the proposed Halekauwila Place project. This elevated system will front the mauka side of the project at approximately the 40-foot elevation. This is a visual impact to units facing the mauka direction located at or below this elevation. As stated in the Noise Impact section of this report, noise impacts are expected to be within the acceptable range. Furthermore, it is the responsibility of the City and County of Honolulu to ensure that any noise concerns that may arise from the Rail Transit project are mitigated to acceptable levels. This mitigation may include the possibility of the City installing air-conditioning units for affected units. The Kakaako transit station will be conveniently located one block Ewa of the project site.

3.5 RELATIONSHIP TO PLANS, CODES AND ORDINANCES

The project site is located within the Kakaako Community Development District (KCDD) Mauka Area administrated by the Hawaii Community Development Authority (HCDA). The KCDD Mauka Area Plan is part of the Hawaii Administrative Rule Title 15, Department of Business, Economic Development & Tourism: Subtitle 4, Hawaii Community Development Authority, Chapter 22, Mauka Area.

A Final Environmental Impact Statement for the Mauka Area Plan was accepted in June 1983. Under this master FEIS, impacts relating to the implementation of the Mauka Area Plan and associated rules were assessed in accordance with Chapter 343, Hawaii Revised Statutes. This FEIS document serves as the principal disclosure and impact assessment document for KCDD Mauka Area Plan. The intent of the Draft EA for the Halekauwila Place project is to assess impacts that will result from the proposed rezoning action.

Under the KCDD Mauka Area Plan, the project site is identified as Public with surrounding Park and Residential uses. It is the intent of the applicant to rezone the project parcel for Residential Use with the HCDA Board or seek exemptions from zoning requirements and fees from HCDA and the City Council.

The proposed zoning change will result in a decrease in Public zoned lands based on the current inventory of State owned lands. While the Public zoning of the parcel was intended to accommodate a school site, site feasibility studies reviewed by the

Department of Education indicate that the proposed residential use can also be accommodated within the Public zoned area.

Section 201H-38, Hawaii Revised Statutes (HRS) provides a process where affordable housing projects may be granted exemptions from any statutes, ordinances and rules of any government agency relating to planning , zoning and construction standards that do not negatively affect the health and safety of the general public.

The Halekauwila Place project will seek the following from State regulations:

1. Increase in floor area ratio 2.86 for maximum planned development to 3.47 FAR. This will increase floor area from an allowed 155,804 square feet to 188,777 square feet.
2. Reduce open space requirements from 5,440 square feet to 3,898 square feet.
3. A waiver from the 11,220 square foot recreation space requirement. This item will be negotiated with HCDA for an acceptable alternative.
4. A reduction from the requirement for one commercial and two multi-family parking stalls to two multi-purpose loading stalls.

The State Land Use Commission Boundary Maps identify the project site as being within the Urban area. This is consistent with the surrounding uses that include commercial uses and high-density residential development.

3.6 PROBABLE IMPACT ON THE ENVIRONMENT

The proposed project represents a significant change from its current and former uses. The project is consistent with surrounding land uses and the intent of the prevailing KCDD Mauka Area Plan. Impacts associated with the proposed project have generally been determined to be negligible. Views will be impacted as a result of the new facility but should be considered in the context that any development of the site will result in the loss of open space. Some loss of parking will be experienced with the development of the project. This is to be expected since public parking use was not the long-term intended use for the lot.

When viewed in the cumulative with the other components proposed for the project block, impacts to the environment will be more significant. In addition to significantly higher urban density resulting from the build out of all components, traffic and noise impacts will rise over the no-action alternative. These cumulative impacts are largely due to the intensive level of activities that are typically associated with school use. These other uses are however uncertain at this time. Assessment of these cumulative impacts is difficult at best as until uses and specific dates are provided, there are not adequate means of projecting these impacts.

As previously stated these impacts are typical and unavoidable from school use. The Department of Education previously stated that a school will be necessary within the

project area to accommodate existing and future demand for an elementary school. It is noted that there are no current plans to the development of the school as proposed in the Master Plan and it remains possible that the site could be used for other Department of Education related uses.

The Hawaii Housing Finance Development Corporation has also determined that there is a significant need for affordable housing in this highly urban environment. Community park use is also a highly sought use that is considered a necessity within the urban Kakaako area. Finally, the Department of Land and Natural Resources has indicated that the remaining structures from the original Mother Waldron Park are historically significant and must be preserved.

All are essential elements that compete for a very important central parcel in central Kakaako. The parcel is also the only publicly owned (State of Hawaii) land available within the project vicinity which compels all competing uses to accommodate each other. The proposed master plan represents the best compromise that allows all uses to remain with the least amount of impact to the environment. Cumulatively, implementation of all components will result in greater impact. These impacts, as addressed in the specific sections of this report, are considered acceptable, especially when viewed with respect to the overall benefit provided by their implementation. It remains uncertain however, if the school project will proceed. It remains undeniable that affordable rental housing is required.

Positive environmental impacts are expected as a result of the additional affordable residential inventory. An increase in community activity may be expected as a result of the new residents.

Based on the information available at the time of this study, the collective implementation of all site components will result in significantly positive overall impacts that offset negative environmental impacts. Implementation of any single component will also yield community improvements however the specific impact of the school is beyond the scope of this study and is likely to be addressed in its own environmental report as planning progresses.

3.7 ADVERSE IMPACTS WHICH CANNOT BE AVOIDED

Adverse impacts that cannot be avoided are generally related to short-term construction impacts. These impacts can be minimized by sound construction practices, Best Management Practices (BMPs) adherence to applicable construction regulations as prescribed by the Department of Health, and coordination with applicable County agencies. Primary construction related impacts are discussed in greater detail in the Noise Environment and Air Quality Study appendices.

Archaeological artifacts have been uncovered in the project vicinity. Subsurface testing of the project site did not find any significant artifacts. It is recommended by the

consulting archaeologist that a monitoring plan be developed due to the proximity of other archaeological finds in the near vicinity of the project site.

Increases in traffic and air and noise pollution will occur as is expected of any development of this nature. When viewed in respect to the current parking lot use, these impacts are relatively small and do not have significant impact on the surrounding environment. When viewed cumulatively with the build out of the elementary school and park improvements, these impacts are more significant but will remain within acceptable levels, particularly with the offsetting benefits obtained by these important public uses.

It should be noted that while a master plan has been developed for the project block, cumulative impacts resulting from the implementation of all components can only be evaluated effectively with a concrete timetable and a verified program. This report is dependant upon the planning assumptions that were used in the master plan report which did not contain definitive build out schedules. As the first component of the master plan to implemented, the subject affordable housing project can only address with any certainty the impacts that result from its direct action. Future components, when further planned and developed, will provide better measures of the cumulative impacts resulting from the full build out of the project block. This will also apply to any future development within the project area outside of the project site.

3.8 ALTERNATIVES TO THE PROPOSED ACTION

No other use alternatives beyond the non-action alternative were considered for this project. Non-action was considered and rejected since no benefit to the community would be provided.

Within the scope of proposed improvements, alternative density configurations were considered however an optimal high-density scheme was selected to serve as the basis of impact assessment.

Alternative locations were not considered because no other suitable State owned lands in the vicinity are available. Privately owned lands in the project area could accommodate the proposed project however acquisition costs would be prohibitive and would be counterproductive to the RFP process which initiated this project.

Open space, while also beneficial to the community, does not represent a highest and best use of the project lot. Possible future school use of the project site would provide greater flexibility in the school design but would be gained at the expense of affordable rental housing inventory.

3.9 MITIGATION MEASURES

Long-term impacts resulting from the proposed improvements are expected to be minimal or non-existent based upon the subject environmental assessment. Long-term traffic, air and noise impacts are not expected to change significantly after improvements are completed. Short-term construction related noise and air quality impact mitigation measures include general good housekeeping practices and scheduled maintenance to avoid a prolonged construction period. The contractor will be directed to use best management practices (BMP) wherever applicable.

3.10 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

Implementation of the proposed project will result in the irreversible and irretrievable commitment of resources in the use of non-recyclable energy expenditure and labor. Materials used for new construction may have salvage value; however, it is unlikely that such efforts will be cost-effective. The expenditure of these resources is offset by gains in construction-related wages, increased tax base and tertiary spending.

SECTION FOUR NECESSARY PERMITS AND APPROVALS

Permits and approvals that may be required are contingent upon the actual design of the proposed project. The project will seek a change of zone which is a discretionary approval issued by the Hawaii Community Development Authority (HCDA). All other permits and approvals are generally ministerial in nature. Permits listed below represent a general list that represents permits and approvals that will be required by the proposed project.

State Agencies

<u>Permit or Approval</u>	<u>Approving Agency</u>
Public to MUZ-R Zoning	HCDA
Kakaako Community Development District Permit	HCDA
National Pollutant Discharge Elimination System (NPDES) Permit	Dept. of Health
HRS 201 H Exemptions from Zoning	HHFDC, HCDA

County Agencies

<u>Permit or Approval</u>	<u>Approving Agency</u>
Building Permits	Dept. of Planning and Permitting
Certificate of Occupancy	Dept. of Planning and Permitting
Construction Dewatering Permit	Dept. of Environmental Services
Grading and Stockpiling Permits	Dept. of Environmental Services
Sewer Connection Permit	Dept. of Environmental Services
HRS 201 H Exemptions from Fees	City Council
Subdivision Approval	Dept. of Planning and Permitting

SECTION FIVE
FINDINGS AND REASONS SUPPORTING
FINDING OF NO SIGNIFICANT IMPACT

As stated in Section 11-200-12, EIS Rules, Significance Criteria: in determining whether an action may have a significant effect on the environment, every phase of a proposed action shall be considered. The expected consequences of an action, both primary and secondary, and the cumulative as well as the short-term and long-term effects must be assessed in determining if an action shall have significant effect on the environment. Each of the significance criteria is listed below and is followed by the means of compliance or conflict (if extant).

- Involves an irrevocable commitment to the loss or destruction of any natural or cultural resource.

The proposed action will occur on an existing developed site and will not impact any topographical resources other than the removal or relocation of some existing trees. Subsurface archaeological artifacts are a possibility; therefore, an archaeological inventory survey has been conducted with no significant findings. In the event that any archaeological remains are uncovered during the course of construction, all work will stop and the State Historic Preservation Office will be contacted for appropriate action.

The adjacent Mother Waldron Park is considered a historic site; however, none of the structures will be demolished or impacted by the proposed project. Presently the plantings and minor non-structural work is planned for installation in 2010.

- Curtails the range of beneficial uses of the environment.

The proposed use will result in a significant change from its existing and former uses but represents an appropriate use that will benefit the public and will be environmentally consistent with the surrounding urban area. Beneficial uses of the environment will be expanded by the proposed project by providing needed housing inventory in a convenient urban location in central Honolulu. Recreational uses on the adjacent Mother Waldron Park will not be affected. The existing parking lot located makai of the project site is under consideration by the Department of Education (DOE) for an elementary school. Site studies conducted for the Hawaii Community Development Authority (HCDA) and the DOE indicate that the adequate space remains for future school use. This was acknowledged by the DOE however there are no current plans to build this facility.

- Conflicts with the State's long-term goals or guidelines as expressed in Chapter 344, HRS, and any revisions thereof and amendments thereto, court decisions, or executive orders.

The proposed action is consistent with the goals and guidelines expressed in Chapter 344, Hawaii Revised Statutes. The proposed action is triggered by the use of State lands and funds. The subject Environmental Assessment has been developed in compliance with the Chapter 343.

- Substantially affects the economic or social welfare of the community or state.

The proposed action will make a positive contribution to the welfare and economy of the State and City by providing desirable and needed affordable rental housing to the State of Hawaii. The proposed use will eliminate the existing temporary daily parking use for a long-term use. The facility will also contribute positively to the community through the use of goods and services in the area, through construction related employment, and through secondary and tertiary spending and taxes.

- Substantially affects public health.

The proposed improvements are not expected to have any direct impact on public health but will provide affordable housing thereby ensuring a better standard of living for those unable to rent market housing. No recreational resources will be impacted by the project, nor will the project increase any undesirable environmental impacts.

- Involves substantial or adverse secondary impacts, such as population changes or effects on public facilities.

The proposed action will increase the population within the community and will increase the demand for public facilities. These impacts are consistent with residential development of this nature and are not considered adverse impacts. The change in population and demand for public facilities will be readily met by existing infrastructure and services.

- Involves a substantial degradation of environmental quality.

The proposed action will not degrade environmental quality. Impacts associated with the project, such as traffic impact and air and noise quality have been assessed to be minimal. The project is located in a highly urban environment that is expected to be heavily developed in the future. In that respect, the project is consistent with the overall land use of the district.

- Is individually limited but cumulatively has a considerable effect upon the environment or involves a commitment for larger actions.

The proposed action is not a first phase of, or related to, any larger action. The cumulative effect of the project is disclosed in this document (and associated figures and charts) and does not involve any planned future actions that will cumulatively impact the environment. Other actions in the vicinity include a possible elementary school, and park improvements planned for 2010; however, these actions are not part of the subject action

and no timeframes or commitments have been provided to these possible future improvements.

- Substantially affects rare, threatened or endangered species, or their habitats.

The proposed action will not affect any rare, threatened or endangered species of flora or fauna, nor is it known to be near or adjacent to any known wildlife sanctuaries.

- Detrimentially affect air or water quality or ambient noise levels.

The proposed action will not impact air or water quality. Noise levels will change from those of an open-air parking lot to a residential structure.

Minimal impacts on air quality and noise are anticipated during construction, but will be limited by normal construction practices and Department of Health construction mitigation standards.

- Affects or is likely to suffer damage by being located in an environmentally sensitive area such as a flood plain, tsunami zone, beach erosion prone area, geologically hazardous land, estuary, fresh water, or coastal waters.

The project will not have any impact on an environmentally sensitive area.

- Substantially affects scenic vistas and viewplanes identified in County or State plans or studies.

The proposed action will not affect any scenic vistas or significant viewplanes as identified in HCDA or City and County plans. The project is located in a highly urban environment and is not located on a Kakaako Community Development District Mauka Area Plan view corridor street.

- Require substantial energy consumption.

The project will increase electrical energy consumption over the existing use. This increase will be consistent with residential use and will be typical of any high-density urban use.

Based on the above stated criteria, the proposed Halekauwila Place affordable rental project will not have a significant effect on the environment. As such, a Finding of No Significant Impact (FONSI) is anticipated for the project.

SECTION SIX
LIST OF PARTIES CONSULTED PRIOR TO THE
DEVELOPMENT OF THE DRAFT ENVIRONMENTAL ASSESSMENT

Agencies with ministerial or specific interests regarding the proposed project were contacted for their early comments regarding the proposed project. Parties contacted are listed below.

State Agencies

Department of Education
Department of Health
Department of Land and Natural Resources
Department of Land and Natural Resources
 State Historic Preservation Officer
Department of Transportation
Hawaii Community Development Authority
Hawaii Housing Finance and Development Corporation

County Agencies

Board of Water Supply
Department of Transportation Services
Fire Department
Police Department

APPENDICES