March 18, 1981

Mr. Donald Bremner, Chairman
Environmental Quality Commission
State of Hawaii
550 Halekauwila Street, Rm. 301
Honolulu, Hawaii

Dear Mr. Bremner:

Revised Environmental Impact Statement
Waikiki Windsor
Mountain View Ventures

In accordance with Section 1:72 of the EIS Regulations implementing Chapter 343, HRS, we are notifying you of our acceptance of the above as an adequate fulfillment of the provisions of the Chapter.

Should you have any questions regarding this matter, please contact Marge Kimmerer of our staff at 523-4077.

Very truly yours,

MICHAEL M. McELROY
Director of Land Utilization

MM: ey
Attach.
cc: Mr. Fred J. Rodriguez
ACCEPTANCE REPORT: Environmental Impact Statement (EIS)
Waikiki Windsor
Mountain View Ventures

A. BACKGROUND

The EIS was prepared for Mountain View Ventures by Environmental Communications, Inc. This document describes the anticipated environmental impacts of the development of the Waikiki Windsor condominium project, including the construction of a high-rise apartment tower consisting of 120 studio units above a five-level parking garage. The studio units will range from 271 to 301 square feet. A total of 136 parking stalls will be provided. Amenities include a swimming pool, running deck, jacuzzi, sauna, a private garden restaurant, and a private club bar/lounge. Existing utilities (sewer lines, gas service, electricity and telephones) can adequately serve the project; a new drainage system (catch basins and inlets) will be installed.

The proposed project is located in Waikiki and is subject to the provisions of the Waikiki Special Design District (WSDD) Ordinance No. 4573, as amended. The project was assessed by the Department of Land Utilization (D LU), and an EIS was required of the applicant.

B. PROCEDURES

1. The DLU issued an EIS Preparation Notice, which appeared in the Environmental Quality Commission (EQC) Bulletin of October 23, 1980, under the Register of Chapter 343, HRS Documents. This was distributed to all interested Federal, State, and City and County agencies, as well as public officials, community organizations, and private citizens.

2. Comments from consulted parties were received until November 28, 1980, allowing all parties the required 30-day minimum consultation required by Section 1:41(b) of the EIS Regulations. A total of 17 letters were received during this period; 15 letters required written responses which were made by the applicant.

3. The Draft EIS was received by the EQC on January 20, 1981; notice of its availability appeared in the EQC Bulletin of January 23, 1981. The deadline for the public review period was then set for February 22, 1981. A list of reviewers is attached.

4. The applicant made a point-by-point response to all comments received within the 14-day response period.
C. CONTENT

The revised EIS meets all of the basic content and style requirements specified in Sections 1:42 and 1:43 of the EIS Regulations.

D. RESPONSE

The applicant made adequate point-by-point responses to all comments, and included them in the Revised EIS.

E. DETERMINATION

The Revised EIS is determined to be acceptable under the criteria for acceptance established in Section 1:71 of the EIS Regulations.

This determination in no way implies a favorable recommendation on the applicant's request for a Development Conformance Certificate, required for projects constructed within the Waikiki Special Design District.

APPROVED

MICHAEL M. MCELROY
Director of Land Utilization

MMM:ey
Attach.
Agencies Involved in the Draft EIS Review

Response Date

FEDERAL

U.S. Army Corps of Engineers 2/12/81
U.S. Dept. of the Interior--Fish & Wildlife Service 1/23/81
U.S. Dept. of Agriculture--Soil Conservation Service 2/5/81
U.S. Dept. of Defense--Naval Base Pearl Harbor 1/29/81
U.S. Dept. of Defense--Dept. of the Army 2/2/81
U.S. Coast Guard 1/28/81
U.S. Dept. of Transportation--FAA 1/27/81

STATE

Office of Environmental Quality Control 2/17/81
Dept. of Agriculture 1/28/81
" Land & Natural Resources 2/11/81
" Health 2/9/81
" Planning & Economic Development 2/18/81
" Defense 1/28/81
" Accounting & General Services 2/2/81
" Social Services & Housing
" Transportation
" Land & Natural Resources--State Historic Preservation Officer

State Energy Office
Environmental Center 2/23/81
Water Resources Research Center 2/3/81

CITY & COUNTY OF HONOLULU

Dept. of General Planning 2/4/81
" Land Utilization 2/25/81
" Transportation Services
" Parks & Recreation 2/4/81
" Public Works 1/29/81
" Housing & Community Development

Building Dept. 2/4/81
Board of Water Supply
Mass Transit Division

NEWS MEDIA

Honolulu Star-Bulletin
Honolulu Advertiser
LIBRARIES

State Main Branch
Regional: Kaimuki
Kaneohe
Pearl City
Hilo
Wailuku
Lihue
McCully-Moiliili
Waikiki-Kapahulu

OTHERS

Hamilton Library, Hawaiian Collection
State Archives
LRB Library
Municipal Reference Center
Windward Community College Library
Outdoor Circle
Life of the Land
American Lung Association
Waikiki Community Center, Inc.
Waikiki Residents Association
Waikiki Neighborhood Board
Hawaii Visitors Bureau
Waikiki Improvement Assn.
Jack Schweigert--Voice of the Pacific
Mr. Earl Neller
WAIKIKI WINDSOR

REVISED ENVIRONMENTAL IMPACT STATEMENT

MARCH 1981
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1. SUMMARY

Project Name: Waikiki Windsor

Site Location: The site is located at the east (Diamond Head) end of Waikiki. It is bounded by Liliuokalani Avenue, Tuisitala Street, and Mountain View Drive.

Property Size: The site is 26,227± square feet.

Tax Map Key: 2-6-24, parcels 65 to 68 and 80 to 83.

Zoning: Apartment Precinct, under the Waikiki Special Design District (WSDD) Ordinance No. 4573.

Owners: Betty D. Greenstein
Marvin M. Hee
Edwin and Patricia Suzuki
Michael M. Okumura
Howard K. and Mae M. Okumura
Mountain View Ventures

Developer: Mountain View Ventures

WSDD Agent: Paul S. Osumi, Jr.

Environmental Consultants: Environmental Communications, Inc.
P.O. Box 536
Honolulu, Hawaii 96809
Telephone: 521-8391

Request: Development Conformance Certificate within the WSDD.

Approving Agency: Department of Land Utilization, City and County of Honolulu

Determination: EIS required in accordance with Chapter 343, Hawaii Revised Statutes.

Project Description: The developer intends to construct a high-rise apartment tower consisting of 120 studio units above a five-level parking garage. The front cover of the Draft EIS shows an artist's rendering of the final building. A total of 136 parking stalls will be provided. Above the parking structure there will be a recreational deck with amenities such as swimming pool, running deck, Jacuzzi, sauna, etcetera. At the ground level 50 percent of the area will be used for lawns, landscaping, and recreational activities. Within the apartment tower, six (6) studio units are planned per floor. The studio units will
range from 271 to 301 square feet. The studios will be furnished with various kitchen appliances, optional individual air-conditioning unit for each studio and a fold-up queen-size bed; each unit will also have a smoke detector. The units will not have a lanai; the exterior of the building will consist of bronze glass (not to be confused with reflective glass). A private club garden restaurant on the ground floor is planned; a private club bar/lounge is also planned for the roof top of the apartment tower. Estimated sales price for the studio units range from $69,900 to $99,990+. The total construction cost for the project is $7.5 million. No public funds will be used for the construction of the project.

Present Site Conditions:

There are presently eleven (11) structures on the site having a total of 19 dwelling units. Seven (7) of these structures are one-story, single-family wooden dwellings over thirty (30) years old. Two (2) are one-story wooden duplexes, and two (2) are two-story apartment buildings. Of the total 19 units, six (6) are occupied; the remaining units are vacant. Except for the two (2) apartment buildings, the remaining structures are not structurally sound. Flora on the site consists of coconut palms, shrubs, ornamental, flowering and fruiting plants. Having long been urbanized, and cleared of its original vegetation, there are no endangered or rare flora and fauna of the project site.

Adjacent Land Uses:

The site's immediate neighborhood consists of a mixture of older low- and mid-rise apartments, hotels and new high-rise condominium developments. It is noted that since 1975, three (3) apartment condominiums ranging from 14 to 23 stories high have been built directly Ewa and mauka of the project site.

Probable Impacts:

Site clearing and construction will create the following impacts:

1. Dislocation of six (6) families or individuals.

2. Noise from site clearing and construction activities.

3. Fugitive dust.

4. Air pollution from heavy construction equipment.

5. Traffic disruption during construction.
(6) Subsurface archaeological deposits may exist on the project site. If no mitigation measure is provided these deposits (if there) may be destroyed.

(7) Construction jobs equivalent to 95 full-time jobs over a one year period.

(8) Destruction or displacement of the flora and fauna.

These impacts, with the exception of fugitive dust control and salvaging of the possible archaeological deposits, cannot be effectively mitigated. However, they are unavoidable and short-term. The contractor must comply with the applicable laws, regulations, and codes in the construction of this building.

Impact on topography, soils, climate, flora, and fauna will be minimal.

Traffic from the project site at the peak hour was estimated to be 65 cars. This is not a significant number of additional cars. Ingress/egress for the parking structure will be provided on Tusitala Street and Mountain View Drive; an egress only will be located on Liliuokalani Avenue. These streets have sufficient capacity to accommodate the additional cars.

The project will indirectly cause adverse impact on the ambient air quality. Vehicles from the project site will add to the levels of carbon monoxide. At this time, under worst case traffic and meteorological conditions portions of Waikiki may exceed the State's Air Quality Standard for carbon monoxide. The additional vehicles will further degrade the air quality. However, the increased amount of carbon monoxide is predicted to be quite minimal.

Noise created by tire squeals and vehicles coming in and out of the project's garage may affect residents in low-rise structures immediately makai of the project and those residents with open lanais facing the project site. Proper design of the parking structure will mitigate tire squeals. Noise from vehicles should lessen as automobile manufacturers meet the Federal standards for "quieter" vehicles.

Parking meets the Comprehensive Zoning Code (CZC) requirement. An additional 16 spaces are planned for visitor parking.
Mass transit is within walking distance of the project site. Mass transit in Waikiki is good, providing five (5) bus destinations (throughout Honolulu) with frequent headway.

The proposed Waikiki Windsor will partially block the views of several condominium buildings. This impact is unavoidable. However, no identified view corridors of Diamond Head will be affected.

The project's estimated potable water demand is 21,000 gallons per day. Although water lines are available to serve the project site, the Board of Water Supply cannot make a water commitment to the project until construction or building plans are submitted to the Board for review and approval (if water is available). This has been identified as an unresolved issue.

It is estimated that the project will generate 18,900 gallons of sewage per day. Discussions with the Department of Public Works indicate that the existing 8-inch sewer line on Liliuokalani Avenue is adequate to accommodate the additional flow from the project.

Solid waste generated by the project is estimated to be 520 pounds per day. A private refuse company will be retained to collect and dispose of the solid waste.

Energy, in form of electricity will be used. Based on an average 400 kwh per month usage (for studios); the project will use approximately 48,000 kwh per month.

Little or no impact is foreseen on the existing fire protection services.

The project's additional population (200) will likely require the need for one (1) additional police officer for the area.

Purchasers of the studio units are expected to be single individuals, or unmarried or married couples without children. It is expected that the residents will have a moderate to medium income and have professional or skilled jobs. This is similar to typical condominium owners in Waikiki.

Economically, the project will provide from 10 to 20 jobs (maintenance, management, security). Revenue from income taxes, property taxes, sales taxes, etcetera will be provided to the State or County.
Impact on public parks such as Waikiki Beach is unknown. Based on the various recreational amenities within the site, including lawns and a tot lot at the ground level, it is anticipated that the residents will utilize the more convenient and private recreational areas provided within the project site.
2. PROJECT DESCRIPTION

2.1 Project Location

The 26,227 square feet project site is located in the eastern end of Waikiki on the island of Oahu. The site is bounded by Liliuokalani Avenue, Tusitala Street, and Mountain View Drive. The project site is identified on Hawaii tax maps as TMK 2-6-24, parcels 65, 66, 67, 68, 80, 81, 82, and 83. Figure 1 and 2 shows the location of the project site within the island of Oahu and the Waikiki District, respectively. The immediate neighborhood consists of a mixture of older low- and mid-rise apartments, hotels, and new luxury high-rise residential developments.

2.1.1 The Waikiki District

The Waikiki District is located within the area bounded on the north and west by Ala Wai Canal, on the east by Kapahulu Avenue, and on the south by the Pacific Ocean. Waikiki is the heart of Hawaii's tourist industry, containing over 20,000 hotel units, 16,000+ condominium units, major shopping and commercial areas, and numerous nightclubs and entertainment facilities. Kalakaua Avenue which runs one-way in the Diamond Head direction is the main thoroughfare in Waikiki. Ala Wai Boulevard, a five-lane street, runs one-way in the opposite, Ewa direction. Kuhio Avenue, a four-lane street (two lanes in each direction), is the major interior arterial which runs parallel to and between Kalakaua Avenue and Ala Wai Boulevard.

2.2 Statement of Objectives

The site is presently occupied by eleven (11) structures units (single-family, duplexes, and apartments), most of which are in poor structural condition. The developer intends to demolish these units and build on the site a 20-story condominium building having a total of 120 studio units above a five-level parking structure recreational amenities, a private club garden restaurant, and a private club rooftop bar/lounge. The developer proposes to do this because such a project will increase the economic returns on the land. The project would also be the "highest and best use" of the site based on the following definition:

"Highest and best use is that use which may be reasonably expected to yield the highest net return to the land over a given period of time. This use must be legal and in compliance with the regulations and ordinances within the police power of the City, County and State, including health regulations, zoning ordinances, building code requirements, etc."

Like other major projects, information on the marketing conditions and the demand for condominium units were obtained by the developer. This information indicated that the project is marketable. Preliminary sales inquiry indicates that there are numerous potential purchasers for the project.
FIGURE 2. VICINITY MAP
Finally, it should be noted that although the size of the studio units (271 to 301 square feet) is relatively small, these units are affordable (estimated sales price range of $69,900 to $99,990+) to a growing population of single people, retirees, and married couples without children.

The building of studio units with recreational amenities, parking, convenient location within Waikiki, immediate access to various recreational activities, and access to a mass transit system are significant beneficial factors in the marketability of these units.

2.3 Description of the Proposed Action

The developer, Mountain View Ventures, proposes to demolish eleven (11) structures containing nineteen (19) living units and construct a high rise apartment tower consisting of 120 studio units above a five-level parking garage. See Figure 3, Site Plan for Waikiki Windsor. Specific details on the proposed project are provided below.

2.3.1 Information on the Proposed Building

(1) Parking Structure. The parking structure will house 136 parking stalls. The approximate size of the structure is: 102.4± feet by 141.0± feet, the structure will be 38± feet high. There will be a total of five (5) levels, each level having a height of eight (8) feet with the exception of the fifth level (E) which will have a height of ten (10) feet. The first level (A) will have 15 parking stalls (for visitors) and two (2) loading zones. A recreation deck is planned at the 5th level parking deck.

(2) Apartment tower. The apartment tower will have a total of 20 stories. Each floor will have six (6) studio units, as shown on Figure 4. The tower and parking structure will be made of reinforced concrete. The foundation of the structure will consist of precast concrete pilings topped with reinforced concrete pile caps. Ground floor, upper level and parking deck slabs will be reinforced concrete supported by a reinforced concrete frame composed of vertical columns and beams anchored to the pile caps and concrete footings. Exterior walls will be of reinforced concrete and hollow tile inset with annodized aluminum frame, and bronze glass. This bronze glass is regular glass toned a darker shade and is not to be confused with "reflective glass" which affects the neighboring buildings with its reflective light and heat. Access within the building will be provided via two (2) high-speed elevators located on either side of the residential tower. Additional access will be via two (2) enclosed stairwells in the center of the tower. The tower will be double-loaded with a small lobby providing access to the residential units, which will be situated around the central core. Within the building, interior walls will be composed of double hung gypsum board
25 stories
First floor of apartments begin eight floors from ground level
Estimated completion April 1982
Private garden restaurant proposed on ground level
Private recreation room on roof of parking structure with pool, jogging track, saunas, showers and whirl pool type bath
Private Club bar-lounge proposed for roof of top floor
20 floors of the most incredible studio apartments you ever saw — 118 in all. And, only six to a floor. First floor of apartments begin eight floors above ground level. Automatic fire sprinklers throughout the building and smoke detectors in every unit.

In every apartment: Oven, range, dishwasher, refrigerator, "out-of-sight" disappearing Queen size bed, carpeting, draperies, and individually controlled air conditioner.
Recreation deck with jogging track, swimming pool with island bar; oversized whirlpool type hot tub, saunas & showers for men and women; fully equipped exercise area; and sun deck with shade trellises, lounge chairs. Your own private health club!
Street level private Garden Bistro: Delicious meals throughout the day in a lush tropical garden setting, a stream, fish, birds, bamboo pleasant and just an elevator ride away.
A rooftop rendezvous. The "Top of the W" a private club bar-lounge, watch a sunset, watch the stars, watch out!
with party walls being insulated. Ceilings on residential levels will be concrete with sprayed acoustic finish and floors in the corridor will be carpeted. The total height of the building (with the parking structure) will be 240.0 feet. The total net floor space is 40,111 square feet.

2.3.2 Studio Units

See Figure 4 for the Floor Plan. The floor plan for the units vary, in that the 05 and 06 tier are corner units, rectangular, and are a little larger (301 square feet) than the other four (4) units. The remaining units 01, 02, 03, and 04 are a modified pie shape with unit types 01 and 04 having 271 square feet and unit types 02 and 03 having 285 square feet. Project plans call for the kitchens to be furnished with a refrigerator, range-oven, hood, garbage disposal and dishwasher. Counter tops will be of formica and floors will be covered with vinyl asbestos tile. Bathrooms will be furnished with a vanity, a water closet, and a combination tub-shower. Floors are also of vinyl asbestos tile in the bathrooms. Floors in all other rooms will be carpeted and ceilings throughout will have a sprayed acoustic finish. Additional unit features will include optional unit air-conditioning and a fold-up queen-size bed, which will be enclosed in a wood frame decorator wall cabinet. Automatic fire sprinklers will be installed throughout the building and each unit will have a smoke detector.

2.3.3 Vehicular Access

Vehicular access (ingress/egress) to the building will be by way of Tusitala Street and Mountain View Drive. An egress only will be provided to Liliuokalani Avenue.

2.3.4 Recreational Amenities

(1) Recreational Deck. The roof deck of the parking garage will be designed as a partial recreation deck with wet bar, swimming pool, sauna, jacuzzi, and running (jogging) deck. This recreational area will be for the exclusive use of the residents and their guests.

(2) Private Park. The architect has provided for two (2) park areas to be located at the Ewa-makai and Diamond Head-makai corners of the project site (see Figure 3). The larger park area (Diamond Head-makai corner) is 2,680 square feet and contains landscaping and an enclosed lawn. The other smaller area (1,432 square feet) will be a childrens' park area with landscaping, an enclosed lawn, and a tot lot. These park areas (total 4,112 square feet) are expected to satisfy the Park Dedication Ordinance (Ordinance No. 4621).

(3) Landscaping. Heavy landscaping around the ground floor (first floor of the parking structure) and on the top deck (in planters) is planned (see Figure 3). Coconut palm trees, shrubs, flowering and ornamental plants, and grass will be planted along the perimeter of the building.
(4) **Private Club Restaurant and Bar/Lounge.** A private club
garden restaurant is planned on the first floor for resident
members and their guests. Likewise, at the roof top of the
apartment tower, a private club bar/lounge is planned.

2.3.5 **Utilities**

(1) **Potable Water.** Water service for the project can be made
available from the existing 8-inch water main under
Liliuokalani Avenue. Applicable water development charges
must be paid before water would be made available for the
project. The Board of Water Supply will provide water when
the building permit is obtained if water is available at
that time.

(2) **Sewer System.** Sewage disposal from the project will be
via an existing 8-inch sewer line located under
Liliuokalani Avenue. The 8-inch sewer line is adequate
to handle the additional flow from the proposed 120 units
from the project.

(3) **Drainage System.** Catch basins and inlets as required shall
be installed within the roadway to collect the surface
drainage runoff. These catch basins and inlets can be
connected to the existing 9 x 5 feet box culvert in
Liliuokalani Avenue.

(4) **Gas, Electricity, and Telephone.** Gas service is available
to the property via two (2), two-inch mains extending
beneath Liliuokalani Avenue and Mountain View Drive and from
a one-inch line on Tusitala Street. Power and telephone
lines extend underground.

2.3.6 **Roadway Improvements.**

Setbacks along Tusitala Street and Mountain View Drive are required.
Tusitala Street requires a 2-foot setback; Mountain View Drive requires
a 4-foot setback. Roadway improvements on Liliuokalani Avenue,
Mountain View Drive, and Tusitala Street required under Ordinance
2412 will be done. The 2-foot and 4-foot setbacks for Tusitala Street
and Mountain View Drive, respectively, will be dedicated to the City.

2.3.7 **Unit Cost**

The estimated sales price for the studio units range from $69,900
to $99,990+. The estimated sales price for each unit is shown in
Exhibit A. The cost difference for the units is primarily based
on its size and view from the unit (the higher floors have a better
view, and thus, are more costly). This price range serves the mo-
derate to medium income bracket.

The developer feels that these studio units will especially appeal to
young married couples, single professional people, and older couples
(without children). The pricing structure is below the average condominium
prices in Hawaii, allowing a greater variety of owners who can qualify
for financing.
The units will be leasehold residential condominium units. Parking will not be sold with the studio unit, but will be available to each unit on a rental basis. Timesharing will not be considered. Hotel operation is not contemplated or planned.

2.4 Project Construction Cost

The estimated construction cost for this project is $7.5 million dollars (1980 dollars). This cost will be borne by the developer who will likely seek financing from conventional lending institutions. No public monies or land will be involved in the construction of the proposed building. No governmental housing assistance funds or subsidies are being sought by the developer for this project.

2.5 Phasing and Timing of the Proposed Action

Plans call for construction to begin in April, 1981 and end April, 1982. The total construction time is about one year.

2.6 Historic Perspective

The present structures on the site indicate that the project site has been in urban use for well over thirty (30) years. The use of the site prior to 1940 is not known. However, it is likely that prior to that time, the site was used for residential purposes; this is assumed because the Historic Sites Division has noted (in their letter to Environmental Communications, Inc., dated November 5, 1980) that: "It is worth pointing out that a residence of Queen Liliuokalani was located adjacent to the area of the proposed undertaking."
3. DESCRIPTION OF THE EXISTING ENVIRONMENTAL SETTING

3.1 Present Uses of the Project Site

The present uses of the site are shown on Figure 5. Presently the site is divided into eight (8) separate lots, most with old single-family dwellings. Four (4) of the eight (8) parcel lots are approximately 2,500 square feet and two (2) of the remaining four (4) lots are also substandard. Specifically, there are eleven (11) structures on the site: seven (7) are wooden, one-story, single-family dwellings, two (2) are wooden, one-story, duplex family dwellings, and two (2) are two-story, concrete tile apartment buildings. The architect has examined these structures and found that only two (2) apartment buildings are structurally sound. The remaining dwellings have termite and flea infestations, rotten wood, and faulty electrical and plumbing systems. It is not known whether repair is possible on most of these structures, but even if it were, large amounts of money would be necessary to bring them up to Building Code. It should also be noted that in October, 1980, the Board of Health cited two (2) of these buildings for sanitation reasons.

As of January 1, 1981, six (6) of the units were occupied. The occupants are aware of the pending development plan and are on a month to month rental agreement. The developer has indicated that these houses are not suitable as reasonable living accommodations. Additionally, for reasons cited above, these properties are not rentable. The present six (6) tenants are transients who most frequently do not pay rent. The rent history is most unstable and the only reason that these tenants are allowed to remain is that the developer feels that if the property is left unattended, vandals, squatters, and kids may use the property for nefarious reasons.

Flora on the site consists of exotic plants, trees, and weeds. (Specific plants and trees are identified later in this Section.) Most of the plants on the site are ornamental or flowering plants which are maintained by the residents and management of the site. Potted flowering, ornamental, and fruit-bearing plants are found between the existing structures. There are no sidewalks along the edge of the site, fronting Tusitala Street and Mountain View Drive.

3.2 Adjacent Uses

The site's immediate neighborhood consists of a mixture of older low- and mid-rise apartments, hotels and new high-rise condominium developments. See Figure 6, Surrounding Land Uses. Land uses on the mauka (northerly) side of the site include the Monte Vista (condominium apartments, 23 stories) and the Fairway Villa (condominium apartments, 14 stories); both have been built within the past six (6) years, 1977 and 1975, respectively. The Pacific Islander (condominium apartments, 7 stories) and the Waikiki Lanais (condominium apartments, 21 stories) lies Ewa (west) of site. Older two-story small apartment structures and one-story wooden single-family dwellings lie immediately mauka of Tusitala Street across the site. Immediately across the site along Liliuokalani Avenue is King Kalani (11 stories). Other structures along the Liliuokalani Avenue frontage range from one (1) to three (3) stories high.
FIGURE 6. SURROUNDING LAND USES
The area Diamond Head of Kaiulani Avenue where the site is located has undergone dynamic change during the past ten (10) years. Transition from residential to hotel or apartment use began about 1960, increased steadily until 1969, and began to stabilize during 1970. Most of the land remaining in single-family residential use is located in various "pockets" in the adjacent areas.

It is estimated that the project site and the adjacent area has been in some form of urban use since the 1930's.

3.3 Topography and Soils

The proposed project site is level and lies approximately 5± feet above mean sea level. The site has been filled in and graded for the present structures. Based on various site visits, no unique and/or unusual topographic or natural features are located on the site.

The project site was once part of a swamp-type environment which existed in Waikiki until the early 1920's when the Ala Wai Canal was built and drainage was provided. This allowed lands adjacent to Ala Wai Canal to be filled in and urbanization to occur. Consequently, the soil is classified Fill land, mixed (FL) by the Soil Conservation Service (SCS). The SCS publication, Soil Survey Interpretation - Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii, describes this soil type (FL) as follows:

"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."

The plans call for a pile-driven foundation to support the proposed building. Construction plans for the support and fill materials (if required) will follow the recommendations of a detailed soil study. The preparation of a detailed soil study is a normal procedure in which a qualified soil engineering firm is retained to take soil borings so that the site's specific soil conditions are known and the appropriate engineering measures for structural support and stability can be taken.

3.4 Climate

The climate in the Waikiki area is dry, mild, and uniform. The annual average rainfall for Waikiki is approximately 20 inches. The temperature, much like the rest of Oahu, ranges from 60°F (January - mean low temperature) to 85°F (mean high temperature) in the summer months.

The observed surface winds (as recorded at the Honolulu International Airport) show that the predominant wind direction and higher wind speeds are from the north, northeast, and east direction (66.7 percent of the time), and averages 11.2 knots per hour. This wind is commonly referred to as the "tradewinds". Wind blowing from north to west quadrant, known as "Kona winds" occur 13 percent of the time at lower wind speeds, 5.75 knots per hour.
3.5 Flora

The flora on the project site consists of trees and plants found along the perimeter of the site and between the existing structures. These trees, plants, and weeds are exotic and have been planted and maintained by man. Flora on the site includes: several specimen (mature) coconut palm trees, three (3) specimen mango trees, false walnut trees, octopus trees, African tulip tree, tangerine tree, plumeria trees, panex hedges, mock orange hedges, hibiscus, croton, banana, bougainvillea, ixora, and koa haole. Other potted ornamental and flowering plants were also noted between the dwellings. Weeds and grasses are found scattered in and around the site. Because there are no sidewalks between the site and Tusitala Street and Mountain View Drive, plants and grasses are found up to the pavements of these streets. There are no known indigenous, native, or rare and endangered plants or trees on the project site.

3.6 Fauna and Avifauna

Fauna on the project site is limited to stray cats, unleashed pet dogs (from neighboring properties), and pests such as mice and rats. Avifauna (birds) are more numerous than other fauna on the site. Because of the availability of specimen trees and discarded food stuff from garbage cans, a number of urban birds nest in the site. These include the common mynah, cardinals, pigeons, doves, white-eyes, house finches, ricebirds, sparrows, and mockingbirds. These are common birds which have adapted to urban and rural areas throughout Honolulu. There are no known or identified rare and/or endangered birds on the project site.

3.7 Existing Ambient Air Quality

The information provided in this subsection is abstracted from the "Air Quality Study for Waikiki Windsor," prepared by Barry D. Root, air pollution consultant. (This study is included in the Draft EIS as Appendix I.) Because the report is included in the Appendix only the summary portion of the study is provided below; readers wanting more information on this subject may review Appendix I.

Monitoring data from the Department of Health building (in the downtown Honolulu area) shows that carbon monoxide concentrations (primarily from motor vehicles) have frequently been in excess of allowable State of Hawaii Air Quality Standards (which are several times more stringent than Federal Air Quality Standards). Other pollutants (with the exception of particulate matter) have been well within the State's Air Quality Standards (AQS). Because the monitoring station's location (Department of Health Building) is next to a major intersection, the air pollution levels would generally be higher than that found in almost any urban area on Oahu. Additionally, because of the lack of stationary (i.e. industrial) sources of pollution, the air pollutants emitted by the automobile (principally carbon monoxide) was felt to be the most significant pollutant that would be found in the Waikiki area.
Based on present and projected traffic conditions (without the traffic from the project), and under worst case conditions, Root calculated the carbon monoxide levels at four (4) sites. At site 1, near the intersection of Liliuokalani Avenue and Ala Wai Boulevard, the peak morning rush hour traffic, under worst case conditions, is likely to cause carbon monoxide levels above the allowable State of Hawaii limit. This will continue up to the late 1980's. At site 2, across Liliuokalani Avenue from the project and site 3, at the Ewa-makai corner of Kuhio Avenue and Liliuokalani Avenue, the ambient air quality is and will continue to be well within the State's AQS. At site 4, along Kalakaua Avenue across Liliuokalani Avenue, the late afternoon traffic, under worst case conditions is likely to exceed the State's AQS until sometime in the mid-1980's. It should be noted that both present and future estimated carbon monoxide levels at these sites are well within allowable Federal limits even under the worst case traffic and meteorological conditions.

Except for localized site clearing work and rare instances of high winds or gusts in Waikiki, particulate matter (i.e. fugitive dust) is felt to be within the State's AQS.

3.8 Ambient Noise Levels

No noise level readings were taken for this project. However, based on available information (see Table 1), the Waikiki neighborhood has one of the highest ambient noise levels in Honolulu. This is caused primarily by vehicles traveling along the major arterials.

In the case of the project site, the major thoroughfares contributing to the ambient noise levels would be Liliuokalani Avenue, Ala Wai Boulevard, Kuhio and Kalakaua Avenues, and the immediately adjacent streets (Tusitala and Mountain View). Additionally, the parking structures from the four (4) adjacent apartment condominiums (Monte Vista, Waikiki Lanais, Pacific Islander, and Fairway Villa) also contribute to the ambient noise level (especially in the morning and afternoon peak traffic hours). This traffic noise produces a constant huming sound; periodically, buses and trucks create a louder noise which is noticeable above the sounds of other automobiles.

Noise from people activities is a frequent nuisance in the Waikiki area. The night and day time activities of visitors, and the number of restaurant, bar, and entertainment facilities open to late night or early morning, are partial causes for noise from people activities.

Three (3) parking structures are adjacent (on the Ewa and mauka sides) to the project site, subsequently noise from automobiles going to and from these structures will be created. Some automobiles will create tire squeal noise going up and down the parking decks. Noise from tire squeal is dependent on the turning radius, car weight, and the tire condition, the speed of the car when making the turns, and the type of surface. Based on site visits, it was found that tire squeals from cars in the adjacent parking structures are infrequently heard at the project site.
### TABLE 1. NOISE LEVELS IN VARIOUS NEIGHBORHOODS ON OAHU: 1974

<table>
<thead>
<tr>
<th>Neighborhood</th>
<th>10 percent of time</th>
<th>50 percent of time</th>
<th>90 percent of time</th>
</tr>
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<tr>
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</tr>
<tr>
<td>Aina Haina</td>
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</tr>
<tr>
<td>Aina Koa</td>
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<td>48.4</td>
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<td>Downtown</td>
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<td>Hawaii Kai</td>
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<td>45.5</td>
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<td>50.7</td>
<td>44.0</td>
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<td>44.0</td>
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<td>56.0</td>
<td>46.0</td>
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<td>46.3</td>
<td>40.5</td>
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<td>Ward to Punchbowl</td>
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<td>60.2</td>
<td>57.0</td>
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<td><strong>REST OF OAHU</strong></td>
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<td>Halawa Heights, Foster Village, Salt</td>
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<tr>
<td>Waipahu</td>
<td>59.0</td>
<td>51.0</td>
<td>45.5</td>
</tr>
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</table>

Source: Survey conducted by Dr. Iwao Miyake for the Hawaii State Department of Health, and summarized by the Noise and Radiation Branch, Department of Health.
3.9 Existing Highways

The existing highway system serving the Waikiki District is shown on Plate 2 of the "Traffic Impact Statement for the Waikiki Windsor Project" (Appendix II). The streets in light lines are local streets primarily for access to abutting properties and are intended for local traffic. The local streets have been included to relate its effect on the major highway system and its impact at the local level. However, with the conversion of the street system to a one-way system (1971), the traffic load is spread over more streets, and these local streets assume the role of major collector streets. Their impact on the transportation system caused some adverse environmental effects.

Except for Ala Moana Boulevard, a Federal-aid highway, the existing highway system is administered by the City and County of Honolulu. As shown on Plate 2, the major highway system consists of Ala Moana Boulevard, McCully Street, Kalakaua Avenue, Kuhio Avenue, Ala Wai Boulevard, and Kapahulu Avenue.

The project will have direct access to Tusitala Street and Mountain View Drive. Both streets are two-lane (one lane in each direction) deadend, paved streets. Tusitala Street has no paved sidewalks. Mountain View Drive has a sidewalk on the mauka end, and no paved sidewalk on the opposite side (along the project site). Presently the parking structures of the Monte Vista and Fairway Villa have an ingress/egress on Mountain View Drive. Tusitala Street is used by residents of single-family and low-rise apartments on the makai of the street and the present residents of the project site.

Liliuokalani Avenue will provide connection to other major arterials in Waikiki and the rest of Honolulu. Liliuokalani Avenue with a 60-foot right-of-way width, is a one-way street (going mauka), and accommodates three (3) lanes of traffic. Traffic on Liliuokalani Avenue merges with Ala Wai Boulevard about one hundred feet beyond the planned exit point (on Liliuokalani Avenue) of the project's parking structure. From Ala Wai Boulevard (one-way going Ewa), vehicles can make various left-turn movements back into the Waikiki District or continue to other major arterials that intersect Ala Wai Boulevard.

The report by the traffic consultant (see Appendix II) indicates that all the local streets and Liliuokalani Avenue have excess capacity.

3.10 Scenic Views

This area has witnessed considerable growth of high-rise condominium apartments in the 1970's. Although the "scenic" aspects of a view is highly subjective, it was judged by the writers of this document (Environmental Communications, Inc.) to be somewhat average for the Waikiki District. That is, much of the residents living in the units will have a view of the "urban" nature of Waikiki (i.e. other high-rise buildings and low-rises, streets, and some beach or mountain scenery). Depending on the location of the unit, the view will differ. In some cases, the view will be primarily of the Monte Vista, Fairway Villa,
Waikiki Lanais, or Pacific Islander. On the other hand, the view from these high-rises will also be partially blocked by the Waikiki Windsor. (The exception is the Monte Vista whose fire escape staircase faces the project site; Fairway Villa apartments also appear to have a smaller picture window (no lanais) facing the project site.) In this area of Waikiki numerous high-rises have been built adjacent to each other or on adjacent blocks so that a view of the building in front of the condominium unit is not unusual.

3.11 Stormwater Runoff and Flood Hazard

The present stormwater from the project site drains into the box culvert on Liliuokalani Avenue. The stormwater collected by this street system is then drained into the Ala Wai Canal which flows into the ocean at the Ala Wai Boat Harbor. Because of the low rainfall, the grading and urban use of the site, and the available street drainage system, no severe drainage problems have been encountered.

A check with the Department of Land Utilization, City and County of Honolulu, shows that the site is given a "B" rating on the Flood Hazard Maps. The definition for Zone B is the area between limits of the 100-year and 500-year floods; or certain areas subject to the 100-year flooding with average depths less than one foot (the 100-year and the 500-year flood refer to an event having a 1.0 percent and 0.2 percent chance, respectively, of being equalled or exceeded in any given year.) (Reference: U.S. Army Engineer District, Honolulu, letter dated February 12, 1981, in response to the Draft EIS for Waikiki Windsor.)

3.12 Available Utilities

All utilities are presently available to the site; this includes water, sanitary sewer, gas, telephone and electricity. Water lines to the property is provided by a pair of 8-inch mains on Liliuokalani Avenue and Tusitala Street. Sanitary sewer lines include parallel 6- and 8-inch mains on Liliuokalani Avenue, a 6-inch line on Tusitala Street and a 4-inch line on Mountain View Drive. Gas service is available to the site via two (2), 2-inch lines extending beneath Liliuokalani Avenue and Mountain View Drive and from a 1-inch main on Tusitala Street. Electrical power and telephone lines extend underground. Cablevision service is also available.

It should be noted that the availability of the project to existing utilities does not automatically mean that these utilities will accommodate the project site. The exception in this case is potable water. The concern of overpumping fresh water from the Pearl Harbor aquifer, has resulted in a "tight" water situation for all developments using water pumped from this aquifer. The Board of Water Supply's policy has generally been to not make a water commitment until construction plans or the building permit is submitted. When such plans are reviewed and if water is available, the project is given a water commitment. In the case of this project, although water lines are available, the plans must still be reviewed and approved by the Board of Water Supply. Additionally, the developer is responsible for applicable water development charges before water would be made available to this project.
A check with other utilities indicate that these are available and can accommodate the proposed project. Construction plans must be reviewed and approved by the responsible utility companies. The construction work must also be performed in compliance with their respective standards and procedures.

3.13 Public Schools

It is unlikely that the future residents of this project will have children of school-age; therefore, the availability of public schools was not found to be relevant. This conclusion was confirmed by the State Department of Education's response to the EIS Preparation Notice (letter dated November 12, 1980) see page 13-8. The letter, in part, states:

"Our review of the proposed Waikiki Windsor Apartment Project indicates that it should have a negligible effect on the enrollment at the following schools: Jefferson Elementary, Washington Intermediate and McKinley High."

3.14 Fire Protection and Police Services

Fire protection services. A fire station is located in Waikiki (Company Number 7) on 381 Kapahulu Avenue. This is located several blocks Diamond Head of the project site. Other fire stations in Makiki, Pawaa, and Kaimuki would also serve as back-up units should a major fire occur.

Police services. Regular walking police beats and police cars patrol the Waikiki area. Because of the high incidence of crime, prostitution, and other outbreaks (i.e. fights), the police are found on every major block. However, any additional resident population will require that increased manpower be utilized, as indicated in the Police Department's response to the EIS Preparation Notice dated November 5, 1980 (see page 13-4).

3.15 Hospitals and Medical Care

The need for hospital or immediate medical care will likely be utilized only on an emergency basis. In these cases, several hospitals, including Kapiolani Hospital, Kaiser Hospital, and Straub Clinic are all within twenty (20) minutes for the project site. Several private and public ambulances will respond within minutes to any medical emergencies.

Doctors and other medical specialists are located in the Honolulu area (within 3.5 miles of the site) for regular medical care.

3.16 Commercial Facilities

Shopping areas, including food markets are located within three (3) blocks of the project site. Waikiki has numerous shopping areas and specialty shops to serve the project site. Ala Moana Shopping Center would be the major shopping area outside the Waikiki District. This Center is located about 3 miles Ewa of the site; mass transit to the Center is readily available.
3.17 **Historical and Archaeological Sites**

As noted in Section 2, although the site has been modified by man and urbanised, the State Historic Sites Section has indicated that there is a possibility that archaeological deposits may be found. This is of special concern since this site was once adjacent to one of Queen Liliuokalani's residences.

3.18 **Socioeconomic Considerations**

The area bounded by Kaulani Avenue, Ala Wai Canal, Kapahulu Avenue, and Kalakaua Avenue, is identified as census tract 18; as of July 1, 1979, the resident population in this census tract was 5,356. Not included are the numerous visitors housed in the hotel units within this census tract. It is projected (by the State Department of Planning and Economic Development) that by 1985 the population in this census tract will be 10,365.

The current population and housing units within the census tract is not known because several condominium apartments completed as of July, 1979, have not been fully occupied by end of 1980. Because the detailed results of the 1980 U.S. Census is not known, the socioeconomic profile of the residents living in Waikiki is unknown. However, based on information available from secondary sources, and from the average prices of condominium units in Waikiki, the residents are typically single, married or unmarried couples without children, who have a medium income. These persons tend to have professional or skilled jobs here or on the mainland. The Waikiki area has a great number of visitors, subsequently the residents of Waikiki are somewhat anonymous in this District. The renters, turnovers, and transients in various condominium apartments, the lack of a community gathering place, and physical barriers (i.e. secured buildings) are principal factors in the indifference to neighboring condominium buildings and apartments.

3.19 **Recreational and Park Lands**

In this part of Waikiki (Diamond Head of Kaulani Avenue) there are three (3) major public recreational areas. The first is Waikiki Beach, the second is the Honolulu Zoo, and the third and largest, is Kapioalani Park. All three (3) recreational areas receive high usage by residents and visitors (especially Waikiki Beach). Private recreational areas and activities are provided for in the newer (after 1970) high-rise condominiums. These private recreational areas are intended for the exclusive use of the condominium's residents and their guests.
4. THE RELATIONSHIP OF THE PROPOSED ACTION TO LAND USE PLANS, POLICIES, AND CONTROLS FOR THE AFFECTED AREA

4.1 The Waikiki Special Design District (WSDD)

Ordinance No. 4573 was enacted in 1976 by the City Council of Honolulu establishing the Waikiki Special Design District (WSDD) to ensure quality growth and development of Waikiki with due consideration to optimum community benefits. This Ordinance became effective on April 1, 1976. The zoning ordinance superseded all zoning previously governed by the City's Comprehensive Zoning Code within the Waikiki District. This legislation divides Waikiki into three (3) principal use precincts - Apartment, Resort Hotel, and Resort Commercial.

The project site is included in the Apartment Precinct of the WSDD. The principal uses in the Apartment Precinct include multiple family dwellings, hospitals, public structures and uses, and recreational facilities of an outdoor nature. Special attention must be given to the fact that uses permitted within this Precinct do not include hotels or allow commercial activities as a principal activity, as was previously allowed under the former Hotel District (H-2) classification.

The maximum height permitted under the Apartment Precinct is 240 feet. The floor area ratios have also been reduced from 4.0 to a range from 1.07 to 1.13. A minimum of 50 percent of the zoning lot must also be devoted to open space at the ground level.

Based on the above restrictions, the WSDD has limited the size of Waikiki's ultimate development to the capacity of the area to handle such growth. There are three (3) objectives for the WSDD:

(1) To guide the orderly growth and development of Waikiki.

(2) To provide safeguards for the preservation, protection, and enhancement of the area.

(3) To protect it from physical deterioration, overcrowding, traffic congestion, and other adverse influences.

4.2 Conformity of the Proposed Action with the WSDD

This proposed action conforms with the WSDD Ordinance. The total net floor space is 40,111 square feet; the height is 196 feet; and 50 percent or more of the ground floor is in open space (i.e. landscaping). The project site will conform with one of the principal uses of the site, multiple dwellings. Because this project complies with the WSDD, and the WSDD provides guidance for the growth of Waikiki, it is felt that the project is consistent with the primary land use policy governing this area.
4.3 Relationship of the Proposed Action to the General Plan, State, and Functional Plans

The General Plan was reviewed in relationship to this project. The General Plan broadly identifies the objectives, policies, and goals of the City in providing for economic growth, housing, population growth, environmental quality, public safety, et cetera. The General Plan identifies Waikiki as a part of the primary urban center; that is, the area of highest population and economic activity. In the housing objectives, the General Plan identifies the need for decent and affordable housing in areas adequately served by public utilities and facilities. The proposed action is consistent with these objectives. Other considerations relating to environmental quality are general and it can be argued that the proposed development will not be consistent with the objective of the Plan to protect and maintain the natural environment and natural resources (i.e., greater use of Waikiki Beach).

The State Plan and the State Functional Plans (draft form) were reviewed. Like the General Plan these documents identify, in general terms, the optimum goals for tourism, energy, transportation, housing, economic development, et cetera. It was found that the project is consistent with the housing, transportation (access to mass transit), and public utilities (existing facilities being available to housing). Like the General Plan, it was found that this development would adversely (for a short-term) affect air quality, noise, and dislocate six (6) individuals or families. Additionally, the development may not be consistent with the objectives to preserve and protect existing viewplanes and natural resources.

The site is not within the Special Management Area (coastal zone) as identified by Ordinance 4529.
5. THE PROBABLE IMPACT OF THE PROPOSED ACTION ON THE ENVIRONMENT

5.1 Site Clearing and Construction Impacts

Site clearing and construction will create the following short-term adverse environmental impacts:

1) Dislocation. A total of six (6) families or individuals will be dislocated. It is not likely that they will find comparable rent in another location in Waikiki. Many may seek to share housing with relatives or friends; a few may request welfare assistance based on their situation. Tenants have been notified of pending development and are on a month to month rental agreement. No relocation assistance to these residents is required or planned.

2) Noise. Noise from pile driving activities, site work, and construction will occur. This noise will be adverse to the nearby residents in the high-rise condominium units and the low-rise apartments and single-family dwelling immediately makai of Tusitala Street. If the noise levels from the construction activities exceed the allowable levels of Chapter 44B, Community Noise Control for Oahu, the contractor must obtain a noise permit.

3) Fugitive dust. Fugitive dust during the site work will be generated. Demolition and construction activities associated with the proposed project will inevitably generate a noticeable amount of fugitive dust. An EPA-sponsored study involving field measurement of particulate emission rates from apartment and shopping center construction has yielded an estimate of 1.2 tons of dust per acre of construction per month of activity. Actual emissions for this project will vary daily based on the amount of activity and the moisture condition of exposed soil in the project area. However, using the above emission rate, about 1,200 pounds per month of airborne dust could be expected from this project. It is expected that demolition and site clearing work will be completed within two (2) weeks. Once demolition, site clearing, excavation, and ground floor levels of the project have been completed, particulate emissions should drop substantially. Use of mitigation measures such as wetting down the affected area will significantly reduce particulate emissions.

4) Air pollution from heavy construction equipment. Heavy construction equipment used on the site can also be expected to contribute some exhausts to the air, but most such equipment is diesel-powered and diesel motors emit very low levels of carbon monoxide (which is of greatest concern in the project area).

5) Traffic disruption during construction. There will be periodic traffic congestion during construction. This
is caused by the heavy construction equipment that will be used on the site and the parking of construction workers' vehicles along the perimeter of the site, Liliuokalani Avenue, and other adjacent streets. In addition, the pouring of concrete and the delivery of construction material will periodically block the local streets and Liliuokalani Avenue. This is unavoidable.

(6) Pedestrian safety. Construction work will also require the temporary closing of the sidewalk (along Liliuokalani Avenue). The site will be enclosed to prevent any mishaps and to keep bypassers from entering the work areas. This is a normal construction procedure in heavily populated areas.

(7) Economic impact of construction. The construction cost of this project is estimated to be $7.5 million. Assuming that 50 percent of this cost is used for labor, the project would be generating about $3.75 million in incomes (salaries, profits, dividends, et cetera). This can be equated to about 95 full-time jobs over a one year period for the construction industry. The multiplier process would increase this to about 200 jobs in Hawaii's economy and about $6.7 million in income, both over a period of a year. (The multipliers are based on an updated version of the State's interindustry model originally prepared by the Department of Planning and Economic Development.)

(9) Destruction or displacement of the flora and fauna. The flora and fauna presently on the site will be destroyed or displaced (with the exception of a few coconut palm trees that will remain as part of the landscaping). Because of the exotic nature and common distribution of the flora and fauna, their destruction or displacement is not expected to be significantly adverse. In the case of the avifauna (birdlife), it has been found that they normally return when the project is completed. The loss of the site's flora will be compensated by the landscaping of 50 percent of the ground floor and planters around the recreational decks.

5.2 Impact on Topography and Soils

The topography and soils of the site will not be adversely affected. As indicated a detailed soils study will be prepared and the contractor will follow the recommendations of the study. It is likely that piles will be required to support the proposed building. In addition, the ground landscaping will introduce various plant enhancement chemicals and pesticides to the soil. This is normal and today's pesticides and herbicides are routinely tested for health safety.
5.3 Impact on Climate

The project is not anticipated to impact climatic conditions. Factors controlling the climate are based on regional conditions which will not be affected by this project. The building will affect certain surface winds and depending on the parking structure and building’s design, localized, surface wind paths may occur. This is a normal occurrence and should not create a significant or adverse impact.

The bronze glass to be used on the building design should not be confused with reflective glass which reflects sunlight and heat.

5.4 Impact on Ambient Air Quality

The information in this subsection is abstracted from the "Air Quality Study for Waikiki Windsor," prepared by Barry D. Root, air pollution consultant. See Appendix I. As stated earlier, the carbon monoxide levels are of major concern. Carbon monoxide is the principal air pollutant emitted by motor vehicles. The project will indirectly contribute to the degradation of the ambient air quality due to the vehicular traffic that will be created by future residents and employees of this project.

At site 1, near the intersection of Liliuokalani and Ala Wai, peak morning rush hour traffic is likely to cause carbon monoxide levels above the allowable State of Hawaii AQ5 limit under worst case conditions until sometime in the late 1980's whether the proposed project is built or not. Even with project-related traffic considered, 1983 carbon monoxide levels at this site are likely to be lower than current levels. The main effect of project traffic will be to raise worst case levels at this location by about 1 mg/m$^3$ over the values that would be expected without the project. This could delay by about one year the date when the State of Hawaii AQ5 is likely to be achieved at this location. The worst case wind direction at site 1 is north.

At site 2 traffic from the proposed project could raise morning peak hour carbon monoxide levels by more than 2 mg/m$^3$, but even then all predicted values are well within allowable State of Hawaii AQ5 even under the worst case conditions considered here. For this site the worst case wind direction is west.

At site 3, under a worst case easterly wind, late afternoon traffic generated by the project is likely to add less than 0.5 mg/m$^3$ to predicted levels and no carbon monoxide problems are expected.

At site 4, heavy late afternoon traffic on Kalakaua Avenue is likely to cause State of Hawaii peak hour carbon monoxide standards to be exceeded under worst case conditions until sometime in the mid-1980's whether the proposed project is completed or not. Worst case wind direction for this site is also east, and the project related contribution of carbon monoxide is also less than 0.5 mg/m$^3$.

Worst case 8-hour values parallel those of the peak hour analysis with potential problems meeting the State of Hawaii 8-hour AQ5 at
sites 1 and 4 with or without project-related traffic until some time in the late-1980's.

As shown in Figures 4 and 5 (in Appendix I), both present and future carbon monoxide levels at the critical sites considered are well within allowable Federal limits even under worst case traffic and meteorological conditions.

It is important to note that the receptor sites selected are those likely to have the highest carbon monoxide concentrations in the project area. It would be necessary for an individual to spend at least an hour at any of these sites during the worst case conditions specified in the air quality study for him to experience levels of carbon monoxide as high as those calculated. Such a degree of exposure does not seem very likely. The nearest dwelling units to these sites are located more than ten (10) meters from the edge of the nearest traffic lane and at that distance carbon monoxide levels would be computed to be about 25 percent lower than those shown.

The overall air quality impact of the proposed project was determined to be minimal and no significant mitigation measures are recommended.

5.5 Impact on Ambient Noise Levels

Impact on noise during construction was covered in an earlier subsection. Discussion in this subsection relates to long-term noise impacts.

(1) Project's impact on the existing ambient noise level.
The enclosed building (as shown on the cover of the Draft EIS) will mitigate outside, ambient noise. With the windows closed, it is unlikely that the future residents will be disturbed by noises from the adjacent garages, and streets.

(2) Noise from the project site affecting the adjacent uses.
Noise indirectly generated by residents' vehicles will add to the existing noise levels. However, it is noted that when the ambient noise level is relatively high (as in this situation), the noise created by an additional project is masked by the existing noise level. This being the case, the overall impact on ambient noise will be minimal. Based on site visits, it is anticipated that the surrounding residents most likely to be affected by any noise increase are those residents in low-rise structures immediately makai of Tusitala Street, and those residents with open lanais facing the project site (i.e. Waikiki Lanais).

5.6 Impact on the Highway System, Traffic, and Parking

This information is abstracted from the traffic impact statement, included in its entirety as Appendix II. For details, the reviewer is requested to refer to Appendix II. The findings of the traffic impact statement are provided below.
Impact on the existing traffic and highway system. The existing highway system will be able to accommodate the present as well as the future traffic volumes, with no consideration being given to the beneficial consequences resulting from the establishment of the WSDD. The 120 dwelling units of the project will generate a 24-hour volume of 504 trips and a peak hour volume of 65 trips. The capacity of Tusitala Street, Mountain View Drive, and Liliuokalani Avenue has considerable excess and will be able to accommodate the proposed development without any adverse traffic effects. The future highway system will mitigate at a future time any possible undesirable traffic congestion. Other factors will also influence and mitigate, at a future time, any possible undesirable traffic congestion.

Impact on parking. The CZC requires at least one parking space for each dwelling unit. Project plans call for 136 parking spaces to be available; one space for each unit (although the parking space will not be sold with the unit, but rented), and the remainder will be for visitors. (It should be noted that the 136 parking spaces is a reduction from the original 161 planned by the architect. The air quality and traffic impact studies reflect the original 161 parking spaces. Because this is a higher number, the writers of this document determined that the results of the studies remain valid as a worst case condition.) There should be sufficient parking for residents and visitors within the project’s parking structure. Private parking lots and on-street public parking are available within two blocks of the project. Based on these considerations and the closeness of the bus stops, it is felt that there will not be a significant parking problem created by this project.

Availability of mass transit. The City’s "desirable" service guideline for accessibility to buses is five (5) minutes walking distance or the equivalent distance of one-fourth of a mile. Based on this criteria, adequate mass transportation service is available to serve the project area and the Waikiki District. Bus routes include Routes 2, 4, 5, 8, and 57.

5.7 Impact on Scenic Views

The impact on scenic views is described in subsection 3.10. The proposed building will partially block views of several condominium buildings. Exhibits B, C, D, and E show various views of the completed building. This is an adverse impact which is unavoidable. However, no identified (i.e. Diamond Head) view corridors will be impacted. It is noted that the blocking of views by high-rises frequently occurs in the Waikiki District.

5.8 Impact on Stormwater Runoff

The proposed building will occupy most of the project site. The drainage runoff from the building will be collected and conveyed by an underground pipe system to the existing box drain on Liliuokalani Avenue. The surface runoff from the rest of the site will flow to the existing intakes on Liliuokalani Avenue.

5-5
The civil engineer's preliminary analysis of the runoff indicates that very little increase over the present stormwater runoff will occur. This is due to the present urbanization and structures (i.e. hard surfaces) on the project site. The quality of the runoff should be similar to the present and adjacent stormwater runoff.

5.9 Impact on Available Utilities

Certain impacts on utilities were discussed in subsection 3.12. As stated utilities which are readily available and can accommodate the proposed project include: gas, telephone, electricity, cablevision.

Sanitary sewers. The mechanical engineer has estimated that the project will generate 18,900 gallons of sewage per day. Disposal of the sanitary sewage from the project will be via an existing 8-inch sewer line located in Liliuokalani Avenue. The 8-inch sewer line is adequate to handle the additional flow from the proposed 120 units from the project.

Solid waste disposal. The proposed project will not utilize the public refuse collection and disposal system. Currently, 2.6 pounds of solid waste per capita per day is generated by residents living in high-rise apartments on Oahu. Using that figure (source: Department of Public Works), the project, when fully occupied will generate about 520 pounds of solid waste per day. A private commercial refuse company will be retained to collect and dispose of the solid waste. Disposal of the solid waste will be at a site approved by the State Department of Health and the City's Department of Public Works.

Electricity. Based on the average electrical usage of 400± kwh per month per unit (Hawaiian Electric Company estimates), the total project will require an estimated 48,000 kwh per hour.

Potable water. The project's estimated potable water demand (including the landscaping) is 21,000 gallons per day. The 21,000 gallons of potable water use per day was estimated based on the number of plumbing fixtures and the relatively small size of the studio unit (thus resulting in less number of people per unit). It is anticipated that no more than 200 people will be residing in the building at any one time. Using a rule of thumb figure of 100 gallons per person per day, the mechanical engineer estimated that 21,000 gallons of potable water will be needed per day. The additional 1,000 gallons would be for landscaping and for water used by the private restaurant and bar/lounge.

Water lines are available to convey water to the project; however, the Board of Water Supply, reflecting a "tight" water budget, will not commit potable water to a project until they review construction plans or a building permit application. If water is available at that time, a water commitment to this project will be approved.

5.10 Impact on Fire Protection Services

No impact on fire protection services is anticipated. As stated by the Fire Department (letter dated November 6, 1980, see page 13-5):
"Fire protection services for (the) above project are adequate and would not affect our present or future fire capital improvement program."

It should also be noted that the project will comply with the placing of fire hydrants. Additionally, automatic water sprinklers will be provided throughout the building and each dwelling unit will have smoke detectors. The building will comply with other fire and building codes.

5.11 Impact on Police Services

The project's estimated 200 residents will place an additional demand on the present police force. Using a ratio of four (4) policemen per 1000 people, the project will require an addition of a policeman.

5.12 Impact on Archaeological Deposits

As stated in subsection 3.17, subsurface archaeological deposits may exist on the project site. The State's Historic Sites Section has recommended that an archaeologist be retained during the site work to determine if such deposits are found on the project site. Should deposits exist and no consideration be given to special review of excavation, it is very likely that these archaeological deposits will go unnoticed and be destroyed.

5.13 Impact on Socioeconomic Aspects

It is anticipated that an additional 200 people will be residing in the completed project. This represents less than .04 percent of the census tract's 1979 population, and less than .02 percent of the projected 1985 population. Subsequently, the total new population of 200 would not significantly change the socioeconomic characteristics of the tract. It is also likely the the project will attract both local and mainland residents, as owner-occupants or investors. The residents, in terms of income, would likely be similar to other condominium residents in Waikiki.

Economically, the project will require between ten (10) to twenty (20) employees to manage, maintain, secure the project. This will provide direct benefits to these employees as well as provide the State with additional taxable income. Also, taxes from the sales of the units, rental of parking stalls, and property taxes will be added to the revenue of the State and the County (property taxes). The multiplier impact of the long-term jobs and sales created by the project will also be beneficial to the economic welfare of the State.

5.14 Impact on Recreational Areas and Park Land

The project will have some impact on the existing public parks in the area, that is, Waikiki Beach and Kapiolani Park. The use of these parks will depend on the individual resident and is not predictable. As Waikiki Beach becomes more crowded certain individuals will decide to go to other beaches; again the individual's attitude and action will determine use. Although it can be argued that this project places additional pressures on the Beach area, this impact cannot be determined
without extensive studies. No right-of-way to the beach or other public parks is located on the project site; subsequently, there is no impact on public access.

Rather, it is anticipated that future residents will use the recreational facilities (swimming area, recreational deck, tot lot) within the building. The addition of these amenities is provided to allow convenient and private access to these recreational facilities.

A total of 4,112+ square feet of ground space is being set aside for a private park concept. This is expected to satisfy the Park Dedication Ordinance (Ordinance No. 4621).
6. ANY PROBABLE ADVERSE IMPACTS WHICH CANNOT BE AVOIDED

Of the impacts identified in Section 5, the following short-term and long-term adverse impacts cannot be effectively mitigated and are subsequently unavoidable should the proposed project be implemented.

1. Dislocation of present occupants living in six (6) units on the project site. These occupants must seek their own relocation to housing elsewhere in Honolulu.

2. Construction noise especially from pile driving will be short-term, adverse, and will affect the surrounding residents.

3. Traffic disruption during construction due to the work along the streets and delivery of construction materials will occur periodically during the construction period.

4. Air pollution will slightly increase due to the indirect impact of vehicles generated by this project. It should be noted, however, that ambient air quality will, by 1988, be within the State's AQS.

5. The proposed building will partially block the views of immediately adjacent condominium apartments. This is unavoidable.

6. Increase demand on potable water, sewage treatment, solid waste, energy, police services, and other public facilities and services will occur.
7. MITIGATION MEASURES PROPOSED TO MINIMIZE ADVERSE IMPACTS

The following mitigation measures will reduce adverse short-term and long-term environmental impacts.

(1) Mitigation of unwanted noise.
   
   (a) The contractor must have adequate mufflers on his construction equipment and through proper management avoid the "gunning" of machinery.

   (b) Noise from vehicles will be mitigated as automobile manufacturers comply with Federal mandates for a "quieter" running automobile.

   (c) The design of the parking structure will allow for a turning radius, surface, and internal speed controls to reduce tire squeals.

(2) Mitigation of fugitive dust. Compliance with the grading permit and the wetting down of work areas will effectively reduce fugitive dust.

(3) Air pollution from vehicles. Carbon monoxide from motor vehicles will be decreasing over the next several years due to Federal laws which will require automobile manufacturers to reduce air emissions from new automobiles. As the vehicular fleet replaces the cars on the road, the newer automobiles will contribute less to the air pollution.

(4) Consideration of archaeological deposits. During the site clearing and excavation work, the contractor will be advised to carefully inspect the subsurface work and immediately stop and advise the developer should archaeological or unusual deposits beneath the site are found. If such deposits are found, the developer will notify the State Historic Sites Section for advice. During the Draft EIS review period, the Department of Land and Natural Resources (letter dated February 11, 1981) further recommended that "...our staff be allowed to inspect the site when excavation is in progress." Prior to site excavation, the developer or his agent will inform the Department of the excavation schedule. The Department staff, will be requested to advise the contractor in advance of the site visit to provide adequate construction safety equipment and possibly personnel to accompany them around the work area.

(5) Internal security and security awareness. To lessen impact on police services, there will be a security guard employed by management. Additionally, the architect has designed the building so that it has restricted entrances, dead-bolt locks for each dwelling, and lighting in corner areas around the building.
(6) **Lessen impact on public recreational facilities.** By incorporating the private park concept and a recreational deck with various recreational activities, into the building plans, it is anticipated that the residents will be more inclined to use on-site recreational facilities.

Other mitigation measures are inherently provided by adhering to all City and State laws, regulations, and standards applicable to the project.
8. ALTERNATIVES TO PROPOSED ACTION

The developer has not considered other alternatives to the proposed development as described in this EIS. Therefore, from the developer's standpoint, no other alternatives are feasible or desirable. The developer has the development rights for this parcel and no other sites in the vicinity are available for this type of development. At this time, the developer has not considered alternative building designs.

An alternative of no action exists and if such an alternative is followed, the present uses of the project site will not likely continue. Structures on the site are dilapidated and must be abandoned and demolished in the near future even if the project is not built. It is then likely that the landowner and/or developer will pursue other plans to intensify the land use to achieve a greater return on their investments.
9. THE RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF
MAN'S ENVIRONMENT AND THE MAINTENANCE
AND ENHANCEMENT OF LONG-TERM
PRODUCTIVITY AND COMMITMENT
OF RESOURCES

The proposed action will result in the net gain of 101 dwelling units on
the project site. That is, 120 new units will replace the existing 19 units
on the project site. The six (6) individuals or families now occupying the
site will be dislocated and must seek other housing.

The proposed action will use or commit the following resources:

(1) Labor. Labor will be the primary human resource used.
Labor in the forms of planning, designing, engineering, and
construction will be utilized during a short-term period.
In the long-term period, labor related to building maintenance
and security, management, real estate sales, and services
will be used. Although labor will be used, this resource is
renewable and will be compensated for during the various
stages of the project.

(2) Land. The 26,277 square fee of project site will represent
a long-term commitment to condominium use. Once this use and
density has been achieved, it is likely that this investment
must remain viable over 30+ years. Additionally, it is rare
that once a site has been developed, the use of the site is
downgraded. The use of this site forecloses other future use
options of the land.

(3) Construction materials. Construction materials (e.g. concrete,
steel, wood, asphalt and household appliances) will be used in
the proposed project. Additionally, food, services, and
merchandise sold in the building will be used or consumed.
Once construction materials are used, it is unlikely that these
materials will be used again.

(4) Consumption of energy, water, and use of public facilities and
services. The project will place additional demands on
energy, potable water, sewer system, police services, and
public recreational areas.
10. LIST OF NECESSARY APPROVALS

The following approvals and permits must be obtained prior to the implementation of the proposed project.

(1) Environmental Impact Statement (EIS) Acceptance - (Project is located within the Waikiki-Diamond Head Area); accepting agency - Department of Land Utilization.

(2) Ordinance 4573, Waikiki Special Design District (Development Conformance Certificate) - issued by the Department of Land Utilization.

(3) Grading Permit - issued by the Department of Public Works.

(4) The Water Master Plan must be reviewed and approved by the Board of Water Supply so that a water commitment can be provided to the project.

(5) Sewage and Drainage Plans must be reviewed and approved by the Department of Public Works.

(6) Building Permit - Building Department.

(7) Other general building permits (relating to utilities and trades) will be obtained by the Contractor from the appropriate private and governmental agencies as stipulated in the contractor's specifications.

(8) The Contractor must obtain a Noise Permit if noise levels from the construction activities are expected to exceed the allowable levels of Chapter 44B, Community Noise Control for Oahu.

(9) The proposed building 240± feet will be subject to Part 77, Federal Aviation Regulations, Objects Affecting Navigable Airspace. The developer's agent will file the required notice with the Federal Aviation Administration, Pacific-Asia Region.
11. AN INDICATION OF WHAT OTHER INTERESTS AND CONSIDERATIONS OF GOVERNMENTAL POLICIES ARE THOUGHT TO OFFSET THE ADVERSE ENVIRONMENTAL EFFECTS OF THE PROPOSED ACTION

The height, setbacks, and use of the proposed building have been determined largely by the use precincts and design control established by Ordinance 4573, Waikiki Special Design District (WSDDD). The determination of parking spaces and loading zones was based on complying with the Comprehensive Zoning Code. To this extent, it is felt that the compliance and mitigation measures within governmental policies are inherent in the initial project design.
12. ORGANIZATIONS AND PERSONS CONTACTED DURING THE
EIS CONSULTATION PERIOD

12.1 The EIS Preparation Notice

The EIS Preparation Notice was prepared by the Department of Land
Utilization, City and County of Honolulu based on the information
obtained from the developer's authorized agent, Paul S. Osumi, Jr.
The Notice is dated September 29, 1980. In accordance with the
"Environmental Impact Statement Regulations," the Notice was filed
with the State Environmental Quality Commission (EQC). The Notice
was included in the EQC Bulletin of October 23, 1980. The Regulations
call for the Notice to appear in the EQC Bulletin; interested agencies
and/or individuals have 30 days (from the date of the Bulletin) to
request a copy of the EIS Preparation Notice. If request is received
to review the Notice, the reviewer is given 30 days (from the date of
the request) to provide comments. In addition to reviewers requesting
a copy of the Notice, the applicant or his representative is expected
to circulate to various governmental and civic agencies, and other
interested parties a copy of the Notice. In conformity with the latter
process, Environmental Communication, Inc. (ECI) distributed 30 copies
of the EIS Preparation Notice to various agencies identified in Table 2.
The Notice was mailed out on October 29, 1980 and requested comments
on or before November 28, 1980.

12.2 Comments on the EIS Preparation Notice

A total of 18 letters were received on the EIS Preparation Notice.
Of these, three (3) agencies had no comments to offer. The remaining
15 agencies provided information or comments on the EIS Preparation
Notice. In most cases, the comments identified specific concerns
(i.e. detailed description, parking spaces, traffic impacts) which
should be addressed in the Draft EIS document. Table 2 identifies
the agencies who received a copy of the EIS Preparation Notice, the
date of response (if any), the date the response was received at ECI,
and requests for a copy of the EIS Preparation Notice. It is noted
that one organization (Voice of the Pacific) not on the distribution
list requested a copy of the Notice (on November 7, 1980) and commented
on the Notice (November 21, 1980).

Reduced, half-size copies of the letters received and the ECI's responses
to comments are provided in Section 13.
TABLE 2.
WAIKIKI WINDSOR PROJECT
AGENCIES INVOLVED IN THE CONSULTATION PERIOD

<table>
<thead>
<tr>
<th>Agencies</th>
<th>Date Mailed</th>
<th>Comment</th>
<th>Date of Comment</th>
<th>Date Received</th>
<th>Date Copies Sent</th>
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13. REPRODUCTION OF COMMENTS AND RESPONSES MADE DURING
THE CONSULTATION PROCESS

Pages 13-2 through 13-22 contain reduced size copies of the comments
and responses to the comments on the EIS Preparation Notice. The
comments are reproduced in chronological order (earliest to latest). Where
a response was provided, the response immediately follows the
comment. The comments are provided in the following order:

<table>
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<tr>
<th>Agency</th>
<th>Date of Letter</th>
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<td>Department of Transportation*</td>
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<td>Hawaii Housing Authority, DSSH</td>
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<td>Office of Environmental Quality Control</td>
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<tr>
<td>American Lung Association, Hawaii State</td>
<td>12/2/80</td>
<td>13-22</td>
</tr>
</tbody>
</table>

An asterisk (*) indicates that the agency had no comments of offer.
November 5, 1980

Mr. F. J. Rodriguez
Environmental Communications, Inc.
1152 Bishop Building, Suite 508
P. O. Box 536
Honolulu, Hawaii 96809

Dear Mr. Rodriguez:

Proposed Waikiki Windsor Project

Thank you for consulting us prior to preparing the EIS for the subject project.

The Department of Transportation has no existing or proposed programs in the subject area and therefore foresee no conflicts with this project.

Very truly yours,

Yoshikichi Megashima
Director of Transportation

November 5, 1980

Mr. F. J. Rodriguez
Environmental Communications, Inc.
P. O. Box 536
Honolulu, Hawaii 96809

Dear Mr. Rodriguez:

SUBJECT: EIS, proposed Waikiki Windsor apartment, Waikiki, Oahu

Thank you for giving our office the opportunity to comment on the proposed undertaking. More than ten Hawaiian burials have been discovered during construction projects in Waikiki, and it is possible that human bones will be encountered during the early phases of the proposed development. We know very little about the burials uncovered in the past because of the manner they were excavated and reported.

Recent archaeological research in Waikiki has shown that significant archaeological deposits exist in the area, especially historic trash dumps from the late 1800's. It is worth pointing out that a residence of Queen Liliuokalani was located adjacent to the area of the proposed undertaking.

Our historic preservation concerns are not necessarily incompatible with the proposed development. One alternative would be to conduct archaeological testing in the area prior to construction. However, such testing could not guarantee that burials and other important archaeological deposits would not be discovered and destroyed during construction. Another alternative would be to hire an archaeological consultant to monitor construction activities and to write a report on the features such as burials, trash dumps, and buried irrigation ditches that might be discovered. Another alternative would be to hold up construction activities in those parts of the site where bones and other remains are found until an archaeologist is hired to excavate them.
In any event, our office would like to recommend that some kind of plan be devised to mitigate whatever adverse impacts the project may have on archaeological sites.

We suggest an archaeological consultant be hired to monitor the early excavation phases of construction, to salvage excavations on whatever features are discovered during construction, and submit a final report to our office describing and analyzing the archaeological remains discovered during construction. These historic preservation expenses should be included in the budget of the proposed undertaking. For additional information, contact our office at 546-7460.

Sincerely yours,

[Signature]

Ralston Nagata, Director
Historic Sites Section

Mr. Ralston Nagata, Director
Historic Sites Section,
Division of State Parks
Department of Land and Natural Resources
State of Hawaii
P.O. Box 821
Honolulu, Hawaii 96809

Dear Mr. Nagata,

SUBJECT: EIS PREPARATION NOTICE FOR WAIKIKI WINDSOR PROJECT

We have received and reviewed your letter of November 5, 1980, commenting on the abovementioned EIS Preparation Notice. Your concern about archaeological deposits being found during excavation is noted. We will recommend to the developer, that during the site clearing and earth moving activities, he advise the contractor to report any unusual finds and stop work until such discoveries are examined by a qualified archaeologist. This recommendation will be included in the Draft EIS.

Thank you for your comments on this matter.

Very truly yours,

[Signature]

F. J. Rodriguez

cc: Department of Land Utilization
Environmental Quality Commission
Paul S. Oumi, Jr.
November 5, 1980

Mr. F. J. Rodriguez
President
Environmental Communications, Inc.
P.O. Box 536
Honolulu, Hawaii 96809

Dear Mr. Rodriguez:

Subject: Environmental Impact Statement for the proposed Waikiki Windsor Project

At this stage of planning for the proposed condominium project we have three main concerns.

First, the addition of 120 studio units in the proposed condominium will add approximately 200 new residents, which will increase the demand for police services in this area.

Second, the addition of approximately 140 vehicles to the area will put a considerable strain on the existing road network. Even though proposed vehicular access may be off the dead end streets, Tuisala Street and Mountain View Drive, all traffic must be routed down the one-way LilinoKalani Avenue, which may not be adequate for the increased volume. Another proposed condominium project two blocks away, between Paoakalani Avenue and Wai Kani Way, will also be contributing approximately 250 vehicles to the congestion of Ala Wai Boulevard and Kuhio Avenue.

Finally, since the condominium is to be located in a high crime area, we believe that a particular effort should be made to design the units and adjacent areas so as to minimize opportunities for criminal activity. Environmental security measures such as additional exterior lighting, door viewers, deadbolt locks, bars inside sliding doors, and window locks should not only reduce the demand for police services, but also increase the residents' sense of security and satisfaction with the project.

Sincerely,

FRANCIS KEALA
Chief of Police

By

EARL THOMPSON
Assistant Chief
Administrative Bureau

CC: Paul S. Osumi, Jr.
Department of Land Utilization

November 5, 1980
January 5, 1981

Mr. Francis Keala, Chief of Police
Police Department
City and County of Honolulu
1455 South Beretania Street
Honolulu, Hawaii 96814

Dear Mr. Keala,

SUBJECT: EIS PREPARATION NOTICE WAIKIKI WINDSOR PROJECT

Thank you for your letter of November 5, 1980, commenting on the aforesaid EIS Preparation Notice. We have reviewed your concerns and provide the following responses.

Increase in demand for police services. With the additional residents, there will be a demand for additional police services.

Traffic impact. A traffic impact study for the proposed project has been prepared and includes the impact on the adjacent streets. The traffic impact statement will be incorporated in the Draft EIS.

Security measures. The architect has informed us that several security measures will be included in the building design.

a. Exterior building and landscaping lights will be provided to prevent any darkened areas from becoming a hazard.

b. Door viewers will be provided.

c. Deadbolt locks will be specified.

In addition to the above planned security of the project, it is also the intent of the developer to have a full-time security guard on the premises to protect the building and the grounds at all times.

We appreciate your concerns and will include the above information in the Draft EIS document.

Very truly yours,

F. J. Rodriguez

cc: Department of Land Utilization
Environmental Quality Commission
Paul S. Osumi, Jr.
January 5, 1981

Mr. Stanley W. G. Tom, Acting Fire Chief
Fire Department
City and County of Honolulu
1655 South Beretania Street, Room 305
Honolulu, Hawaii 96814

Dear Mr. Tom,

SUBJECT: EIS PREPARATION NOTICE WAIKIKI WINDSOR PROJECT

Thank you for your letter of November 6, 1981, commenting on the above-mentioned EIS Preparation Notice. The information provided on the fire protection services being adequate for the proposed project will be included in the Draft EIS.

Very truly yours,

F. J. Rodriguez

cc: Department of Land Utilization
Environmental Quality Commission
Paul S. Osemi, Jr.

November 7, 1980

Mr. F. J. Rodriguez, President
Environmental Communications, Inc.
P. O. Box 536
Honolulu, Hawaii 96809

Dear Mr. Rodriguez:


In addition to the usual impacts, such as traffic, noise, sewage loads and view corridors, the impact statement should include discussion on the following topics:

Market Segment--What are the projected price ranges for the units to be built? What segment of the market is to be served—i.e., low-, moderate-, medium- or high-income brackets?

Marketing Strategy--Fee simple sales, leasehold? Is time-sharing considered?

Thank you for affording us the opportunity of commenting on your preparation notice.

Sincerely,

GEORGE S. MORIGUCHI
Chief Planning Officer

GSM:fmt

NOV 10 1980
January 5, 1981

Mr. George S. Moriguchi, Chief Planning Officer
Department of General Planning
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Dear Mr. Moriguchi,

SUBJECT: EIS PREPARATION NOTICE WAIKIKI WINDSOR PROJECT

Thank you for your letter dated November 7, 1980, commenting on the abovementioned EIS Preparation Notice. In reply to your concerns we provide the following information.

1. Market segment. The estimated sales price for the units is between $89,900 to $99,900. It serves the moderate to medium income bracket.

2. Market strategy. Timesharing will not be considered and units will be sold in leasehold.

We appreciate your concern on this matter.

Very truly yours,

F. J. Rodriguez

Environmental Communications, Inc.
P. O. Box 338
Honolulu, Hawaii 96809

Gentlemen:

Subject: Environmental Impact Statement Preparation Notice for the Proposed Waikiki Windsor Project

we have reviewed the environmental impact statement preparation notice for the proposed Waikiki Windsor Project and have no comments to offer.

Thank you for the opportunity to review the preparation notice.

Very truly yours,

RIKO NISHIYAMA
State Public Works Engineer

ET: JM

cc: Mr. Tyrone Kusao
Mr. Tom Nakai

cc: Department of Land Utilization
Environmental Quality Commission
Paul S. Onuki, Jr.
Mr. F. J. Rodriguez  
Environmental Communications  
P.O. Box 536  
Honolulu, Hawaii  96809  

Dear Mr. Rodriguez:

SUBJECT: Consultative EIS for Waikiki Windsor Project

Our review of the proposed Waikiki Windsor Apartment Project indicates that it should have a negligible effect on the enrollment at the following schools: Jefferson Elementary, Washington Intermediate and McKinley High.

Should there be any questions, please contact Mr. Howard Lau at 737-5231.

Sincerely,

CHARLES G. CLARK  
Superintendent

cc: Honolulu District  
Dept. Land Utilization

AN EQUAL OPPORTUNITY EMPLOYER  
NOV 1 8 1980
Mr. F. J. Rodriguez
Environmental Communications Inc.
P. O. Box 536
Honolulu, HI 96809

Dear Mr. Rodriguez:

Subject: Request for Comments on Proposed Environmental Impact Statement (EIS) for the Proposed Waikiki Windsor Project

Thank you for allowing us to review and comment on the subject proposed EIS.

We submit the following comments for your consideration and information:

1. The proposed project must be designed to comply with the provisions of Public Health Regulations, Chapter 44B, Community Noise Control for Oahu. Noise from equipment such as air conditioning/ventilation units and exhaust units must be attenuated to meet the allowable noise levels of the regulations based on zoning districts.

2. Parking structures or multi-level garages must be designed to control noise, specifically from tire squeals and vehicular emissions.

3. Noise from activities associated with the use of recreational facilities can adversely affect adjacent residents. Areas utilized for such purposes should be designed to minimize noise impacts and annoyances to surrounding neighbors.

4. Noise from activities associated with the building’s operations can adversely affect residents in the surrounding neighborhood. An increase in vehicular traffic, including heavy vehicles utilized for deliveries and trash pick-ups, may create unwanted noise impacts on adjacent residents. Noise barriers and the use of landscape buffers/screens may provide a reduction in disturbances.

5. Residents of the proposed project may be adversely affected by noise from the surrounding area. These noise sources include vehicular noise from heavy car and bus traffic along Ala Wai Boulevard and Liliuokalani Avenue, stationary equipment, and various activities from nearby hotels and condominiums.

6. Construction activities must comply with the provisions of Public Health Regulations Chapter 44B, Community Noise Control for Oahu:

a. The contractor must obtain a noise permit if the noise levels from the construction activities are expected to exceed the allowable levels of the regulations.

b. Construction equipment and on-site vehicles or devices requiring an exhaust of gas or air must have a muffler.

c. The contractor must comply with the conditional use of the permit as specified in the regulations and the conditions issued with the permit.

7. Traffic noise from heavy vehicles traveling to and from the construction site must be minimized in residential areas and must comply with the provisions of Public Health Regulations Chapter 44A, Vehicular Noise Control for Oahu.

We realize that the statements are general in nature due to preliminary plans being the sole source of discussion. We, therefore, reserve the right to impose future environmental restrictions of the project at the time final plans are submitted to this office for review.

Sincerely,

Melvin K. Koizumi
Deputy Director for Environmental Health

NOV 17 1980
January 5, 1981

Mr. Melvin K. Kozo, Deputy Director 
for Environmental Health 
Department of Health 
State of Hawaii 
P.O. Box 3378 
Honolulu, Hawaii 96801

Dear Mr. Kozo,

SUBJECT: EIS PREPARATION NOTICE WAIKIKI WINDSOR PROJECT

Thank you for your letter dated November 12, 1980, commenting on the EIS Preparation Notice. Your concerns included noises created during the construction and long-term occupancy of the proposed condominium. These concerns will be addressed in the Draft EIS. Wherever possible, we will identify mitigation measures for adverse noise impacts.

Very truly yours,

F. J. Rodriguez

cc: Department of Land Utilization
Environmental Quality Commission
Paul S. Okumi, Jr.

Mr. F. J. Rodriguez
Environmental Communications Inc.
P. O. Box 536
Honolulu, Hawaii 96809

Dear Mr. Rodriguez:

Subject: Your Letter of October 29, 1980, on the Environmental Impact Statement (Consultation Phase) for the Proposed Waihiki Windsor Project

We cannot, at this time, make a water commitment to the project because of our tight water situation. Until we develop new sources, water commitment determinations for new developments are being made only when construction drawings or building permits are submitted to us for review and approval. Developments that require action by the City's Department of Land Utilization must first be approved by that department before we will take any action.

Furthermore, when we review your project, we cannot guarantee that water can be made available. The issuance of a water commitment will depend on the adequacy of our reserve pumping capacity to accommodate your project.

Should the developer decide to proceed with the project, he should contact us before preparing the construction drawings to determine the water system improvements that may be necessary in order for the project to meet our Water System Standards.

Should you have questions or require additional information, please call Lawrence Whang at 548-5221.

Very truly yours,

KAZU HAYASHIDA
Manager and Chief Engineer

cc: Mr. Tyrone Rusao,
Department of Land Utilization
January 5, 1981

Mr. Kaz Hayashida, Manager and
Chief Engineer
Board of Water Supply
City and County of Honolulu
630 South Beretania Street
Honolulu, Hawaii 96813

Dear Mr. Hayashida,

SUBJECT: EIS PREPARATION NOTICE WAICHIKI WINDSOR PROJECT

Thank you for your letter of November 13, 1981, commenting on the aforementioned EIS Preparation Notice. Responses to your comments are provided below.

Water Commitment. We understand that no water commitments can be made to the proposed project at this time. This information will be included in the Draft EIS.

Coordination. The consultant engineering firm has been in contact with your staff and will continue to coordinate water concerns with your staff. This coordination will include construction drawings and determination if water facilities are available to meet your Water System Standards.

Your concern on this proposed project is appreciated.

Very truly yours,

F. J. Rodriguez

cc: Department of Land Utilization
Environmental Quality Commission
Paul S. Osumi, Jr.
Mr. Susumu Ono, Chairman
Board of Land and Natural Resources
State of Hawaii
P.O. Box 621
Honolulu, Hawaii 96809

Dear Mr. Ono,

SUBJECT: EIS PREPARATION NOTICE FOR WAIKIKI WINDSOR PROJECT

Thank you for your letter of November 14, 1980, in response to the abovementioned EIS Preparation Notice. Your concern on the overcrowding of Waikiki Beach is noted. However, considering the island-wide attraction of beachgoers to the Beach, we feel that any population growth and visitor increase is likely to generate additional use of the Beach. Perhaps, as in the case of other famous beaches, the apparent "crowdedness" of the Beach creates an environment which attract visitors. This type of beach becomes a social place where tourists and residents intermingle. Crowding becomes a safety factor as well as a place to meet other people in a casual, recreational atmosphere. Finally, one can choose to be anonymous in such an environment. Considering the overuse of such a Beach would probably constitute an interesting social study; however, given the length of the study, the survey work involved, and the overall use of the Beach, we find that such a study is not directly related to the proposed project. We will identify this potential problem in the Draft EIS.

Very truly yours,

F. J. Rodriguez

cc: Department of Land Utilization
Environmental Quality Commission
Paul S. Gomi, Jr.

Mr. F. J. Rodriguez
Environmental Communications, Inc.
1140 Bishop Building, Suite 500
Honolulu, Hawaii 96813

Dear Mr. Rodriguez:

SUBJECT: RECREATIONAL ASSESSMENT FOR THE PROPOSED WAIKIKI WINDSOR PROJECT

We have reviewed the proposed condominium project and have the following comments and recommendations:

1. The proposed project will be subject to compliance with Park Dedication Ordinance No. 4921.

2. Due to the size of the project and the lack of adequate park facilities in the subject area, we recommend that the "private park" method be used to comply with the Park Dedication requirements.

3. The private park plans will be subject to review and approval by the Department of Parks and Recreation.

Should you have any questions, please call Mr. Jason Yuen of our Advance Planning Section at 523-4055.

Warm regards,

F. J. Rodriguez

RAMON DURAN, Director

NOV 18 1980
Mr. Ramon Duran, Director
Department of Parks and Recreation
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Dear Mr. Duran,

SUBJECT: EIS PREPARATION NOTICE WAIKIKI WINDSOR PROJECT

Thank you for your letter of November 14, 1980, commenting on the abovementioned EIS Preparation Notice. We have reviewed your comments and provide the following dispositions.

1. The project will comply with Ordinance No. 4621, relating to Park Dedication.

2. The architect informs us that the "private park" method will be used to comply with the Park Dedication requirements.

3. The plans for the private park will be coordinated with and reviewed by your Department. It is also our understanding that these plans will be subject to the approval of your Department.

We will include this information in the Draft EIS.

Very truly yours,

F. J. Rodriguez

cc: Department of Land Utilization
Environmental Quality Commission
Paul S. Osumi, Jr.

November 20, 1980

Mr. F. J. Rodriguez
Environmental Communications, Inc.
P.O. Box 536
Honolulu, Hawaii 96809

Dear Mr. Rodriguez:

Subject: Proposed Waikiki Windsor Project
EIS Preparation Notice

Thank you for giving us the opportunity to review the subject EIS Preparation Notice.

We have no specific comments to offer at this time. However, we would appreciate an opportunity to review the draft EIS when it is available.

Sincerely,

Hideto Kono

cc: Mr. Tyrone Kusao
Dept. of Land Utilization
November 20, 1980

Mr. F. J. Rodriguez, President
Environmental Communications, Inc.
P.O. Box 516
Honolulu, Hawaii 96809

Dear Mr. Rodriguez:

SUBJECT: Consultation Process Prior to Filing the EIS for the Proposed Waikiki Windsors Project

We reviewed the proposed project for the subject property and at present we have no comments on the physical impacts it may impose. We, however, would like to further comment when more definite dimensions and plans are available.

We also recommend and suggest the social and economic impacts of the project be fully covered in your preparation of the EIS. The types of families to be served, the price ranges, use of Federal and/or State Housing Assistance Program to be utilized, the amenities to be included, etc., should be included and discussed.

We thank you for the opportunity to review and comment on this matter.

Sincerely,

Paul A. Tom
Executive Director

cc: Dept. of Land Utilization, CIC
Dept. of Social Services & Housing

January 3, 1981

Mr. Paul A. Tom, Executive Director
Hawaii Housing Authority,
Department of Social Services and Housing
P.O. Box 17907
Honolulu, Hawaii 96817

Dear Mr. Tom,

SUBJECT: EIS Preparation Notice for Waikiki Windsors

Thank you for your letter dated November 20, 1980 commenting on the aforementioned EIS Preparation Notice. We have reviewed your concerns on socioeconomic impacts and provide the following information.

The price ranges will be included in the Draft EIS. The estimated sales price (completion April, 1981) ranges from $69,000 to $99,900.

No Federal, State, or County housing assistance programs will be used. The developer does not have a profile of the typical buyer; however, based on the units' size (studio) and location (Waikiki), it is reasonable to assume that some buyers will purchase the unit for investment purposes. Local, mainland, and foreign buyers are expected due to the project's location in Waikiki. Further socioeconomic impacts will be addressed in the Draft EIS. The amenities to be included within the project are: a recreation deck with a jogging track, a swimming pool with island bar, an oversize whirlpool type hot tub, saunas and showers for men and women, a fully equipped exercise area, and a sun deck with shade trellises and lounge chairs; a private garden restaurant; and a private rooftop bar/lounge. In every unit there will be an oven, range, dishwasher, refrigerator, "disappearing" queen-size bed, carpeting, draperies, and individually controlled air conditioner.

We appreciate your comments on this EIS Preparation Notice.

Very truly yours,

F. J. Rodriguez

cc: Department of Land Utilization
Environmental Quality Commission
Paul S. Ohumi, Jr.

1152 Bishop Building SL11 316
P.O. Box 516
HONOLULU, HAWAII 96817
TELEPHONE: (808) 547-3191
November 21, 1980

Re: Consultation Process Prior to Filing the EIS for the proposed Waikiki Windser Project

Dear Mr. Rodriguez:

In your letter dated November 7, 1980 appraising me of the above project, the following questions came to mind:

1. There is mention of displacement of families in that you note there will be a displacement of 19 families. I am concerned with this displacement and want to know what efforts are being taken by the developer to accommodate these families' needs, at least as far as relocation and/or continued residency in the present structure until said relocation is achieved.

2. There is notice that the area is changing from predominant one-story apartment units to high-rise structures. Yet in the next breath it is questioned whether the present infrastructure can accommodate this development. Do you now believe time has come to stop such change and allow the Waikiki area to maintain status quo image? Also, please answer the apparent inconsistencies so noted.

3. I am concerned with the parking requirements for 161 stalls does not seem to account for the 161 apartment units that will be constructed. What arrangements are being made for guest parking and for an over-night basis as well? As you know, parking in Waikiki is an incredible problem.

4. You mention that there will be some problems with beach access yet I don't understand why this is so.

Are you saying that you will be ruling the area private property and that access to this beach will not be had through this property?

5. You mention that demolition and construction will create jobs but is that really a creation of jobs or a continuation of those already on the job with further places to go?

6. Although you mention that there is a planning alternative now being prepared, I don't know if I have an understanding of what the building itself will look like. Would you be so kind as to send me a rough sketch of what the structure will look like and include that some of the overall environment to which it will be placed so that I get a feeling for the setting within which the project will sit.

7. What will be the price range of these units and has there been a comparison between this price range and the need for low- and moderate-income housing in Honolulu? Furthermore, would the developer be agreeable to putting some of the 161 units into low- and moderate-income ranges so it can help meet the need of these people? (The theme is called inclusionary zoning)

These are some of the questions that came to mind and I ask that they be answered, and I assume that they will probably be answered by the Environmental Impact Statement that will be prepared as a result of the determination of Tyronne Kusao. Please keep me appraised of the developments in this area and send me a copy of the EIS so that I might further follow up on environmental concerns that the Voice of the Pacific might have in this matter.

Aloha,

Jack Schmeidler
Chief Counsel, Voice of the Pacific

cc: Department of Land Utilization
January 5, 1981

Mr. Jack Schweigert, Chief Counsel
Voice of the Pacific
250 South Hotel Street
2nd Floor Auditorium
Honolulu, Hawaii 96813

Dear Mr. Schweigert,

SUBJECT: EIS PREPARATION NOTICE WAIKIKI WINDSOR PROJECT

We have received and reviewed your letter of November 21, 1980, commenting on the aforementioned EIS Preparation Notice. Below, we have provided responses to your comments.

1. The tenants on the property are on a month-to-month rental basis. We have been informed by the developer that the tenants remaining (presently six units are occupied) are transients who must frequently do not pay rent. The developer has further stated: "The rent history is most unstable and the only reason we allow these transients to live on the property is that left unattended, vandals, squatters, and kids use the property for nefarious reasons." This is a private project; no relocation assistance is required or anticipated.

2. The EIS Preparation Notice was prepared by the Department of Land Utilization. In evaluating the impacts of the project in greater detail, we find that the present infrastructures are available to accommodate the needs of this project. The HDC does establish limits for growth in the Waikiki district. In that sense, we feel that Waikiki has and will continue to witness a slower growth.

3. The total number of units (all studio) will be 120. A parking stall for each unit will be constructed as per the Comprehensive Zoning Code (CZC). Additionally, the project will include 10 parking stalls for visitors.

4. The property is located several blocks from Waikiki Beach. No beach access is presently provided through the property and therefore, beach access is not a problem.

5. Construction jobs must be continually available since the building of a project, most frequently, is a short-term. The jobs created by the construction of this project will provide work opportunities for the construction industry.

6. A drawing of the building's exterior will be provided in the Draft EIS.

7. The estimated sales price (completion expected to April, 1982) is between $59,900 to $99,900. The units are well below the average sales price of other condominium units on Oahu. This will allow a greater variety of owners who will be able to qualify for financing. Pragmatically speaking, given the size and location of the project, low and/or moderate income families will not be typical purchasers.

We appreciate your concerns on this project. A copy of the Draft EIS will be sent to you for review and further comments.

Very truly yours,
F. J. Rodriguez

cc: Department of Land Utilization
Environmental Quality Commission
Paul S. Osami, Jr.
November 24, 1980

Environmental Communications, Inc.
P.O. Box 536
Honolulu, Hawaii 96809

Gentlemen:

Re: EIS Preparation Notice for the Proposed
Waikiki Windsor Project, Honolulu, Hawaii
(TM: 2-8-24: 65-68, 80-83)

In response to your letter dated October 29, 1980, relating to
the subject project, we have the following comments:

1. The existing municipal sewers are adequate for the proposed
development. Sewer connection should be made to the 8-inch
line on Liliuokalani Avenue. If there are any questions,
call Jay Hama at 523-4067.

2. The EIS should address the existing and future drainage flow
patterns for the area. Also, the development will be required
to provide an on-site drainage system that will be connected
to the City's system on Liliuokalani Avenue. Call Richard
Nishizawa at 523-4931 if there are any questions.

3. Full frontage improvements along all streets fronting the
development will be required under the provisions of Ordinance
2412. Removal and relocation of all existing utilities need
to be done. In addition, a 2-foot strip on Pusitala Street
and a 4-foot strip on Mountain View Drive will have to be
dedicated for road widening. If there are any questions,
contact Raymond Won at 523-4071.

Very truly yours,

WALLACE MIYAHIRA
Director and Chief Engineer

cc: Dept. of Land Utilization

NOV 2 8 1980

Mr. Wallace Miyahira, Director and
Chief Engineer
Department of Public Works,
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Dear Mr. Miyahira,

SUBJECT: EIS PREPARATION NOTICE WAIKIKI WINDSOR PROJECT

Thank you for your letter of November 24, 1980, responding to
the above-mentioned EIS Preparation Notice. In regards to your com-
ments, we would like to provide the following dispositions:

1. The information on the adequacy of the municipal sewers
will be included in the Draft EIS.

2. The existing and future drainage flow patterns for the
project site will be discussed in the Draft EIS.

3. The developer plans to conform with Ordinance 2412 for
the required street improvements.

We appreciate your concerns regarding this project.

Very truly yours,

F. J. Rodriguez

cc: Department of Land Utilization
Environmental Quality Commission
Paul L. Onishi, Jr.
November 25, 1980

Mr. F. J. Rodriguez
Environmental Communications, Inc.
P.O. Box 536
Honolulu, Hawaii 96809

Dear Mr. Rodriguez:

Subject: Your Letter dated October 29, 1980 Regarding Consultation Process Prior to Filing the EIS for the Proposed Waikiki Windsor Project

We recommend that a traffic engineer be engaged to prepare a traffic impact study for the project.

The study should address the following concerns:

1. The traffic impact of the project on the surrounding street system during peak-hours.
2. The need for an on-site passenger loading, freight loading and tour bus loading areas.

If hotel operation is contemplated, the planned improvement should be designed to accommodate this type of use.

Very truly yours,

Akira Fujita
Director

cc: Dept. of Land Utilization

January 5, 1980

Mr. Akira Fujita, Director
Department of Transportation Services,
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Dear Mr. Fujita,

SUBJECT: EIS PREPARATION NOTICE WAIKIKI WINDSOR PROJECT

Thank you for your letter of November 25, 1980, responding to the abovementioned EIS Preparation Notice. We note that the traffic impact statement prepared does include the "traffic impact of the project on the surrounding street system during peak-hours". The traffic impact statement will be included in the Draft EIS document. Secondly, in regards to freight and passenger loading zones, the architect informs us that there will be, on the site, two loading zones for freight and passengers.

Finally, in response to your last paragraph, hotel operation is not contemplated or planned.

Very truly yours,

F. J. Rodriguez

cc: Department of Land Utilization
Environmental Quality Commission
Paul S. Osumi, Jr.
November 28, 1980

Mr. F. J. Rodriguez  
Environmental Communications, Inc.  
P.O. Box 536  
Honolulu, Hawaii 96809

Subject: Environmental Impact Statement Preparation Notice for the Proposed Waikiki Windsor Project

In response to the EIS preparation notice we have reviewed the subject document and offer the following comments for your consideration in preparing the EIS:

Proposed Action

The project description should include a detailed discussion of the entire project. Will other facilities in addition to apartments be included in the project? The preparation notice briefly mentions operation of commercial establishments. What are these establishments? Are commercial establishments a permitted use under the WSDD guidelines?

Existing Setting

The preparation notice states 11 structures presently occupy the site. What are these structures? Are these all residential units? The EIS should include more detailed discussion of the existing setting and consider the impact of relocation on the present residents.

Economic Considerations

The discussion of economic considerations should be updated. The preparation notice states the project cost is unknown. A November 9th, Honolulu Advertiser ad announced apartments for sale at Waikiki Windsor along with estimated sale price per unit. If approximate price per unit is available, then the overall project cost should be known and stated in the EIS.

Parking

Why are 41 more parking stalls than studio apartments being provided?

Cumulative Impacts

The EIS should discuss the cumulative impacts of the proposed project together with other projects under construction and planned for the Waikiki area. What will the cumulative impact of these projects be on traffic, water supply, energy use, public facilities, etc.

Noise

The EIS should discuss fully noise impacts to neighboring residents both during and after construction.

Energy Conservation

The EIS should consider the energy requirements of the project. Have any conservation measures been considered in the design of the project such as solar heating and cooling or natural ventilation?

Reflectivity

The preparation notice states bronze glass will be used for the project. The EIS should consider problems caused by reflective glass such as heat increase to neighboring buildings and glare to motorists and pedestrians.

We thank you for the opportunity to provide input to the EIS preparation process.

Sincerely,

Harry Y. Akagi  
Acting Director

cc: Paul S. Osuni, Jr.  
Dept. of Land Utilization
January 5, 1981

Mr. Harry Akagi, Acting Director
Office of Environmental Quality Control,
Department of Health
550 Halikaua Street, Room 301
Honolulu, Hawaii 96813

Dear Mr. Akagi,

SUBJECT: EIS PREPARATION NOTICE WAIKIKI WINDSOR PROJECT

We have received and reviewed comments from your office relating to the aforementioned EIS Preparation Notice. Below, we have provided responses to your comments. Generally, we have incorporated your concerns into the Draft EIS to the extent feasible.

Project Action:

1. The Draft EIS will contain more detailed information on the project description.

2. Facilities to be provided in addition to the apartments and parking include a private recreational lawn on the parking structure's roof with pool, jogging track, saunas, showers and whirlpool-type bath, a private garden restaurant on the ground level, and private club bar/lounge proposed for the roof on the top floor of the building.

3. The garden restaurant and top floor bar/lounge are anticipated to be private (available to the residents and their guests and to registered members). There is a possibility that these establishments may be made available to the public; however the management and clientele have not been identified at this time.

4. These commercial uses are permitted under the MSDB.

Existing Setting:

1. The structures presently on the site include six (6) single-family wooden dwellings (one-story), one (1) wooden structure with a wooden shed, two (2) wooden duplex dwellings (one-story), and two (2) two-story apartment structures.

2. These structures were all, at one time, residential units. At present, only six (6) of these units are occupied. Only two (2) of the existing structures are considered "sound"; the remaining structures are in dilapidated condition.

3. The Draft EIS will discuss the existing setting in greater detail; the tenants on the property are on a month-to-month rental basis. We have been informed by the developer that the tenants remaining are transients who most frequently do not pay rent. The developer has further stated: "The rent history is most unstable and the only reason we allow these transients to live on the property is that left unattended, vandals, squatters, and kids use the property for nefarious reasons." No relocation assistance is anticipated.

Economic Considerations:

The estimated construction cost (in 1980 dollars) is $5.5 million.

Parking:

The architect has revised the number of parking stalls to be provided to 136. As per the Comprehensive Zoning Code (CZC), 120 parking stalls will be provided for the studio units; the remaining sixteen (16) will be for guest or visitor parking.

Cumulative Impacts:

Cumulative impacts are taken into consideration in the traffic impact and air quality studies. This was done by using a average rate of growth. However, other considerations mentioned in your letter cannot easily be analyzed on a cumulative basis. Cumulative demand on water, energy, and public facilities can be calculated if the plans for all projects are known. In many cases the developer or his consultants are unaware of all the proposed or pending projects; in other cases, the information is too premature to be released or is even confidential at this time. Consequently, it would be inappropriate as well as unfeasible to request one project to identify the cumulative impact on all planned and proposed projects. This type of information/evaluation is best handled by a governmental agency that has access to the project information and can obtain the overall perspective needed for identifying such broad impacts.

Noise:

Noise will be discussed in the Draft EIS. We acknowledge that ambient noise levels will increase during the construction and long-term period. The construction work along with the increased vehicles using the streets (in the long-term) will be the major noise sources.
Energy Conservation.

Each unit will have a microwave oven. Additionally, the architect informs us that the building has been designed for natural cooling and ventilation in each of the units.

Reflectivity.

The architect informs us that: "The use of bronze glass is to further retain a cool environment in the units. This bronze glass is a regular glass toned a darker shade and is not to be confused with "reflective glass" which affects the neighboring buildings with its reflective light and heat."

Thank you for your comments; we will include this information in the Draft EIS.

Very truly yours,

F. J. Rodriguez

cc: Department of Land Utilization
    Environmental Quality Commission
    Paul S. Oshiro, Jr.
December 2, 1980

Environmental Communications, Inc.
P. O. Box 536
Honolulu, Hawaii 96809

Gentlemen:

Subject: Proposed Waikiki Windsor Project

Thank you for forwarding a copy of the EIS Preparation Notice for the subject project. Our only comment at this time is that we trust that the EIS will adequately address the growing cumulative impact that projects such as this have on both traffic and air quality in the Waikiki area.

Sincerely yours,

James W. Morrow
Director, Environmental Health

cc: Dept. of Land Utilization

Mr. James W. Morrow, Director
Environmental Health
American Lung Association
Hawaii State
245 North Kukui Street
Honolulu, Hawaii 96817

Dear Mr. Morrow,

SUBJECT: EIS PREPARATION NOTICE WAIKIKI WINDSOR PROJECT

Thank you for your letter of December 2, 1980 on the abovementioned EIS Preparation Notice. A traffic impact study and air quality study have been prepared for the proposed project. These studies will be included in the Draft EIS.

Very truly yours,

[Signature]

F. J. Rodriguez

cc: Department of Land Utilization
Environmental Quality Commission
Paul S. Ozumi, Jr.
14. COMMENTS RECEIVED DURING THE DRAFT EIS REVIEW PERIOD

The Draft EIS was submitted to the Environmental Quality Commission (EQC) on January 20, 1981. Five (5) copies of the Draft EIS were submitted to the Department of Land Utilization (DLU) at the same time, as the approving agency. The deadline date for comments on the Draft EIS was set for February 22, 1981. As of March 2, 1981, 25 letters on the Draft EIS have been received. (The Draft EIS was sent to a total of 64 agencies listed on pages 14-2 through 14-4.) Of the 25 letters received, 14 agencies had no comment to offer; 10 agencies provided comments which required responses. The University of Hawaii's Environmental Center provided a late response. Their letter was not received at Environmental Communications, Inc. until February 27, 1981. Because the revisions were underway and the very short time available to draft a reply, no response is reproduced in the Revised EIS. However, the letter from the Environmental Center will be reviewed and a response prepared as soon as possible.

Reduced-size copies of the comments on the Draft EIS and response to the comments are provided in this section. Table 3 identifies the commenting party, the date of the letter, and the page on which the letter begins. Where a response to the comment was provided, the response immediately follows the letter.
EQC DISTRIBUTION LIST

( ) E.A. (x) EIS (x) APPLICANT ACTION ( ) AGENCY ACTION

Title: Waikiki Windsor
Location: Waikiki, Oahu
Proposing Agency/Applicant: Mountain View Ventures, et al.
Accepting Authority/Approving Agency: Dept. of Land Utilization, City & County of Honolulu
Deadline for Comments: February 22, 1981
Date Sent: JAN 22 1981

By: 

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HONOLULU - CITY & COUNTY AGENCIES

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| Dept. of Land Utilization | 1         |
| Dept. of Transportation Services | 1         |
| Dept. of Parks and Recreation | 1         |
| Dept. of Public Works | 1           |
| Board of Water Supply | 1           |
| Dept. of Housing & Community Development | 1         |
| Mass Transit Division* | 1         |
| Building Department | 1           |

HAWAII - COUNTY AGENCIES

| Planning Department | 1         |
| Dept. of Public Works | 1         |
| Dept. of Parks and Recreation | 1         |
| Dept. of Water Supply | 1           |
| Dept. of Research and Development |             |
| University of Hawaii - Mili Campus Library |             |

MAUI - COUNTY AGENCIES

| Planning Department (2) | 1         |
| Dept. of Public Works | 1           |
| Dept. of Parks and Recreation | 1         |
| Dept. of Water Supply | 1           |
| Economic Development Agency |             |
| Maui Community College Library |             |

KAUAI - COUNTY AGENCIES

<p>| Planning Department | 1         |
| Dept. of Public Works | 1         |
| Dept. of Water Supply | 1           |
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<td>Jack Schewelger, Esq. (Voice of the Pacific)</td>
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<td>James Cox, FAA, Airport Division</td>
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<td>Waikiki Residents Association 1720 Ala Moana Blvd. B 42 Honolulu, HI 96815</td>
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<td>Waikiki Improvement Association 2222 Kalakaua Avenue, Ste. 1410 Honolulu, HI 96815</td>
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<td>Waikiki Neighborhood Board 89 c/o Waikiki-Kapahulu Library 400 Kapahulu Ave. Honolulu, HI 96815</td>
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<td>Jack Schweigert, Esq. Voice of the Pacific 250 S. Hotel Street 2nd Floor Auditorium Honolulu, HI 96813</td>
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<td>James Owa, Chief-Airports Div. Pacific-Asia Region P.O. Box 50109 Honolulu, HI 96870</td>
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<td>U.S. Department of Interior, Fish and Wildlife Service</td>
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<td>State Department of Defense</td>
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<td>Mr. Earl Neller</td>
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<td>University of Hawaii at Manoa, Water Resources Research Center</td>
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<td>Board of Water Supply, C &amp; C of Honolulu</td>
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<td>State Department of Health</td>
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<td>U.S. Army Engineer, Department of the Army</td>
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<td>State Office of Environmental Quality Control</td>
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<td>State Department of Planning &amp; Economic Development</td>
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<td>University of Hawaii at Manoa, Environmental Center</td>
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<td>Department of Land Utilization, C &amp; C of Honolulu</td>
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<td>State Energy Office</td>
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<td>State Department of Agriculture</td>
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* Response to Letter was not Necessary.
** Response not provided due to late receipt of letter (received 2/27/81).
Department of Land Utilisation
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Re: (RIS) Waikiki Windsor
Waikiki, Oahu, Hawaii

January 23, 1981

Dear Sir:

We have reviewed the referenced material and find that due to its location, the proposed project will have no significant deleterious impact on fish and wildlife resources. Please do not hesitate to call on us if we may be of further assistance.

We appreciate the opportunity to comment.

Sincerely yours,

Neva D. Holmberg
Deputy Project Leader for Environmental Services

cc: Mountain View Ventures,
c/o Environmental Communications, Inc.
P.O. Box 536
Honolulu, Hawaii 96809

State of Hawaii
Environmental Quality Commission
550 Halekauila Street, Room 301
Honolulu, Hawaii 96813

Dear Sir:

We offer the following comments on your Waikiki Windsor Draft Environmental Impact Statement, January 1981:

Section 10, Page 10-1: Construction of the 9240 foot structure is subject to notice requirements under Part 77 of the Federal Aviation Regulations, Objects Affecting Navigable Airspace.

With a copy of this letter, we have forwarded a FAA Form 7460-1, Notice of Proposed Construction or Alteration to the proposing party. The notice should be filed with:

Federal Aviation Administration
Pacific-Asia Region
Air Traffic Division
P.O. Box 50109
Honolulu, Hawaii 96850

Sincerely,

George Harvey
Chief, Air Traffic Division

Enclosure

cc: Mountain View Ventures, et al w/encl
Mr. George Harvey, Chief  
Air Traffic Division  
Federal Aviation Administration  
Department of Transportation  
Pacific-Asia Region  
P. O. Box 50108  
Honolulu, Hawaii 96850  

Dear Mr. Harvey,

Subject: Draft Environmental Impact Statement for  
Proposed Waikiki Windsor Project

Thank you for your response of January 27, 1981, regarding the above- 
mentioned Draft EIS. We include in the Final EIS the following  
information:

"The proposed building (2401 feet) will be subject to Part 77,  
Federal Aviation Regulations. Object Affecting Navigable  
Airspace. The developer's agent will file the required notice  
with the Federal Aviation Administration, Pacific-Asia Region."

We appreciate your comment on this matter.

Very truly yours,

P. J. Rodrigues

cc: Department of Land Utilization  
Environmental Quality Commission  
Mr. Paul S. Owaki, Jr.

Mountain View Ventures, et al.  
c/o Environmental Communications, Inc.  
P. O. Box 536  
Honolulu, Hawaii 96809

Dear Sirs:

Per your request for comments on the Environmental Impact Statement on the Waikiki Windsor, I would like to submit the following response.

Much work has apparently been done and done well. There is some disagreement with the report on potential purchasers. In my work with the Community Center it has become apparent to me that fewer people own their condominiums and many more prefer to rent. The renter is more likely to be an older individual or couple. Statistics show the population of individuals over fifty years steadily increasing in Waikiki. The fact that this project will have a number of recreational amenities leads me to believe that increased maintenance could be a deterrent.

There is a question as to why the exclusiveness of a private club. As stated in the report on page 3-11, under Socioeconomic Considerations: "The renters, turnovers, and transients in various condominium apartments, the lack of a community gathering place, and physical barriers (i.e. secured building) are principal factors in the indifference to neighboring condominum buildings and apartments." Would the developers of this project consider a community meeting place that could contribute toward a more positive action rather than indifference?

Thank you for this opportunity to respond.

Sincerely,

Terrie Lee  
Executive Director

copy to: Department of Land Utilization  
* ALOHA UNITED WAY AGENCY *

GL:blw

FEB 2 1981
March 6, 1981

Ms. Gerri Lee, Executive Director
Waikiki Community Center, Inc.
245 Paokalani Avenue
Honolulu, Hawaii 96813

Dear Ms. Lee,

Subject: Draft Environmental Impact Statement for Proposed Waikiki Windsor Project

Thank you for your letter of January 28, 1981, on the above mentioned Draft EIS. In reply to your comments, we provide the following information:

(1) Although tenants are anticipated, we believe that because of the recreational facilities and other amenities, younger couples or individuals with professional jobs will likely be attracted to the rental units (placed on the rental market by an owner-investor). As you indicated, individuals over 50 would probably not want to use or pay the maintenance for the recreational facilities.

(2) The "private club" relates to the garden restaurant and bar/lounge; it would not be suitable for public or community meetings. Also, the limitation on parking areas will likely be a disadvantage to having a meeting facility within a residential condominium building.

We appreciate your concerns in these matters.

Very truly yours,

F. J. Rodrigues

F. J. Rodrigues

cc: Department of Land Utilisation
Environmental Quality Commission
Mr. Paul S. Osumi, Jr.

cc: Mountain View Ventures, et al.
c/o Environmental Communications, Inc.
P. O. Box 336
Honolulu, Hawaii 96809
January 29, 1981

MEMORANDUM

TO : MR. MICHAEL MCELROY, DIRECTOR
DEPARTMENT OF LAND UTILIZATION

FROM : MICHAEL J. CHUN, DIRECTOR AND CHIEF ENGINEER

SUBJECT: EIS ON WAIKIKI WINDSOR, WAIKIKI, OAHU, HAWAII

We have reviewed the subject EIS and have no additional comments.

MICHAEL J. CHUN
Director and Chief Engineer

cc: Environmental Communications, Inc.
Department of Land Utilization
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Sir:

Gentlemen:

Waikiki Windsor
Draft Environmental Impact Statement

The Draft Environmental Impact Statement for Waikiki Windsor
forwarded by the Environmental Quality Commission has been reviewed,
and the Navy has no comments to offer.

The opportunity to review the subject EIS is appreciated.

Sincerely,

Copy to:
Mountain View Ventures, et al.
c/o Environmental Communications, Inc.
P.O. Box 536
Honolulu, HI 96809
Dear Mr. McElroy:

Subject: Draft EIS. Proposed Waikiki Windsor Condominium Project.

I have reviewed the draft EIS and am concerned about the project's potential impact on important archaeological sites.

In order to mitigate the adverse impact to potential nineteenth century archaeological sites that will be destroyed by the Waikiki Windsor project, the draft plan proposes notifying the State Historic Sites Section for advice. In the event the contractor determines that archaeological deposits are being disturbed and decides to stop work.

This plan is not practical from a historic preservation perspective. It is unlikely that a contractor will bother to stop work and let his crew stand idle for 24 hours because a backhoe has unearthed a few pieces of charcoal, some cowrie shells, a few pieces of coral, some old bottles, a broken stone axe, a backfilled ouli (drainage ditch), or many of the other seemingly unimportant kinds of data that archaeologists excavate and study.

Contractors have even been known to dig up human burials without taking proper care of them. It is also unlikely the developer will have the funds available to sponsor an emergency archaeological project on a day's notice. It is also unlikely that the developer would be able to locate a consultant archaeologist to conduct the necessary salvage excavations on such short notice.

More than ten Hawaiian burials have been discovered during construction projects in Waikiki, and it is likely that human bones will be uncovered during this project. We know very little about the burials uncovered in the past because of the manner they were excavated and reported. In addition, recent archaeological research in Waikiki by myself has shown that archaeologically significant historic trash dumps from the late 1800's exist in Waikiki.
It is my recommendation that an archaeologist be hired by the developer to monitor the early phases of construction when archaeological sites are likely to be discovered. I also recommend that the appropriate investigations are conducted to ensure that the project's potential impact on archaeological sites is mitigated satisfactorily.

Yours truly,

[Signature]

Earl Neller

---

March 6, 1981

Mr. Earl Neller
P.O. Box 641
Honolulu, Hawaii 96809

Dear Mr. Neller,

Subject: Draft Environmental Impact Statement for Proposed Waikiki Windsor Project

Thank you for your comments, dated February 2, 1981, on the above-mentioned Draft EIS. A copy of your letter was forwarded by the Department of Land Utilization and received at our office on February 25, 1981, for review and response.

Your concern on archaeological and/or historical artifacts has also been voiced by the Department of Land and Natural Resources. In response to the Draft EIS, the Department of Land and Natural Resources requested permission to send staff from their historic sites division to visit the site during the excavation stage. This was found to be a reasonable action and the developer will cooperate with the Department in this course of action. Copies of the Department's comments and our response are attached for your review and information.

Very truly yours,

[Signature]

P. J. Rodriguez

Attachments

cc: Department of Land Utilization
   Environmental Quality Commission
   Mr. Paul S. Osami, Jr.

FJS:CKT:p1
3 February 1981

Mr. Edwin T. Murabayashi
EIS Coordinator
University of Hawaii at Manoa
Water Resources Research Center
Holmes Hall 203
2540 Dole Street
Honolulu, Hawaii 96822

Dear Mr. Murabayashi,

Subject: Draft EIS Waikiki Windsor

We have reviewed the Draft EIS for Waikiki Windsor and have no comment except to wonder if solar water heating may be a viable option for this development. This material was reviewed by WESC and affiliate personnel.

Thank you.

Sincerely,

Edwin T. Murabayashi
EIS Coordinator

cc: H. Gee
    Y.S. Pah
    C. Liu
    Mr. Van Vantua, et al.

ENVIRONMENTAL COMMUNICATIONS INC.

March 6, 1981

Mr. Edwin T. Murabayashi
EIS Coordinator
University of Hawaii at Manoa
Water Resources Research Center
Holmes Hall 203
2540 Dole Street
Honolulu, Hawaii 96822

Dear Mr. Murabayashi,

Subject: Draft Environmental Impact Statement for Proposed Waikiki Windsor Project

Thank you for your letter of February 3, 1981 on the abovementioned Draft EIS. The following is our response to your comments:

COMMENTS:

"....except to wonder if solar water heating may be a viable option for this development."

RESPONSE:

The initial development budget does not allow for any method of energy conservation; however, various types of energy saving devices can be installed, at a later time by the apartment owners.

We appreciate your comments in this matter.

Very truly yours,

F. J. Rodriguez

cc: Department of Land Utilization
    Environmental Quality Commission
    Mr. Paul S. Oumui, Jr.
TO: MR. MICHAEL M. MCCLAYOY  
DIRECTOR  
DEPARTMENT OF LAND UTILIZATION

FROM: KAZU HAYASHIDA  
BOARD OF WATER SUPPLY

SUBJECT: ENVIRONMENTAL IMPACT STATEMENT FOR  
MAUIKI WINDSOR, MAUIKI, OAHU

February 4, 1981

We have no objections to the proposed project. However, the assessment should use the design guidelines in our Water System Standards for estimating water demand requirements.

Also, as mentioned in the statement, we have made no water commitment on the project because of our "tight" water situation. The issuance of a water commitment will depend on the adequacy of our water supply to accommodate the project at the time the project's Building Permit is submitted to us.

If you have questions or require additional information, please call Lawrence Wai at 548-5221.

KAZU HAYASHIDA  
Manager and Chief Engineer

CC: Mountain View Ventures, et al.

March 6, 1981

Mr. Kazu Hayashida  
Manager and Chief Engineer  
Board of Water Supply  
City and County of Honolulu  
630 South Beretania Street  
Honolulu, Hawaii 96813

Dear Mr. Hayashida,

Subject: Draft Environmental Impact Statement for  
Proposed Waikiki Windsor

We have received and reviewed your letter of February 4, 1981, commenting on the aforesaid Draft EIS. In reply to your comment: "However, the assessment should use the design guidelines in our Water System Standards for estimating water demand requirements...", we provide the following response:

The 21,000 gallons of potable water use per day estimated was based on the number of plumbing fixtures and the relatively small size of the studio unit (thus resulting in lesser number of people per unit). It is anticipated that no more than 200 people will be occupying the building at any one time. Using a rule of thumb of 100 gallons per person per day, the mechanical engineer estimated that 21,000 gallons of potable water is needed per day (the additional 1,000 would be for landscaping and use at the private restaurant and private bar/lounge). Using the higher BWS guidelines (300 gallon/unit) would have been considerably higher than the estimated use.

It is acknowledged that a water commitment will be determined at the time the building plans are submitted to your office.

Very truly yours,

F. J. Rodriguez

cc: Department of Land Utilization  
Environmental Quality Commission  
Mr. Paul S. Geum, Jr.

FEB 10 1981  

1117 BISHOP BUILDING, SUITE 210  
P O BOX 536  
HONOLULU HAWAII 96813  
TELEPHONE 848-3814
February 4, 1981

MEMORANDUM

TO: MR. MICHAEL M. McELROY, DIRECTOR
DEPARTMENT OF LAND UTILIZATION

FROM: WILLARD T. CHOW, CHIEF PLANNING OFFICER

SUBJECT: ENVIRONMENTAL IMPACT STATEMENT FOR THE PROPOSED WAIKIKI WINDSOR PROJECT, JANUARY 1981

We have reviewed the Environmental Impact Statement and have no comments to offer.

Thank you for affording us the opportunity of reviewing the impact statement.

WILLARD T. CHOW
Chief Planning Officer

February 4, 1981

ROY H. TAMJI
DIRECTOR AND BUILDING SUPERINTENDENT

DEPARTMENT OF LAND UTILIZATION

We have reviewed the Environmental Impact Statement for the Waikiki Windsor and do not have any objections to the project.

Thank you for the opportunity to comment.

ROY H. TAMJI
Director and Building Superintendent

C: Mountain View Ventures, et al.
MEMORANDUM

TO: MICHAEL M. McELROY, DIRECTOR
DEPARTMENT OF LAND UTILIZATION

FROM: ROBERT K. MASUDA, DIRECTOR

SUBJECT: DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR
THE PROPOSED WAIKIKI WINDSOR PROJECT

February 4, 1981

We have reviewed the draft environmental impact statement and
would like to reiterate that the proposed project will be
subject to compliance with Park Dedication Ordinance No. 4621.

Should you have any questions, please call Mr. Jason Yuen of
our Advance Planning Section at 4695.

RKM: VC

ENVIRONMENTAL
COMMUNICATIONS
INC.

FEB 25 1981

March 6, 1981

Mr. Robert K. Masuda, Director
Department of Parks and Recreation
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Dear Mr. Masuda,

Subject: Draft Environmental Impact Statement for
Proposed Waikiki Windsor Project

Thank you for your letter of February 4, 1981 on the abovementioned
Draft EIS. Regarding your comment: "We have reviewed the draft
environmental impact statement and would like to reiterate that the
proposed project will be subject to compliance with Park Dedication
Ordinance No. 4621." We note that Page 2-7, Subsection 2.3.4 Item (2),
last sentence of the Draft EIS states: "These park areas (total 4,112
square feet) are expected to satisfy the Park Dedication Ordinance
(Ordinance No. 4621)."

We appreciate your comments in this matter.

Very truly yours,

F. J. Rodriguez

FJR: CRT:pl

cc: Department of Land Utilisation
Environmental Quality Commission
Mr. Paul S. Saumi, Jr.
February 9, 1981

Department of Land Utilization
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Dear Sirs:

Thank you for letting me review the Draft EIS for the Waikiki Windsor, Waikiki, Oahu.

I have no comments.

Sincerely,

[Signature]

Mark S. Goray
Acting District Conservationist

cc: Mountain View Ventures, et al
    c/o Environmental Communications, Inc.
    P. O. Box 336
    Honolulu, Hawaii 96809

MEMORANDUM

To:    Mr. Michael M. McElroy, Director of Land Utilization
        City & County of Honolulu

From:  Deputy Director for Environmental Health

Subject: Environmental Impact Statement (EIS) for Waikiki Windsor, Waikiki, Oahu

Thank you for allowing us to review and comment on the subject EIS. On the basis that the project will comply with all applicable Public Health Regulations, please be informed that we do not have any objections to this project.

We realize that the statements are general in nature due to preliminary plans being the sole source of discussion. We, therefore, reserve the right to impose future environmental restrictions on the project at the time final plans are submitted to this office for review.

[Signature]

cc: OEGC
    Mountain View Ventures

FEB 9 1981
February 11, 1981

Honorable Michael McElroy
Department of Land Utilization
City & County of Honolulu
650 S. King Street
Honolulu, Hawaii 96813

Dear Mr. McElroy:

We have reviewed the draft EIS for the proposed Waikiki Windsor project.

The draft provides that the contractor will stop work and contact the Historic Sites office (Phone 548-7480) for advice in the event archaeological deposits are encountered during excavation work. We favor this action as a way of mitigating adverse impact on potential archaeological finds. We further recommend that our staff be allowed to inspect the site when excavation is in progress.

Sincerely,

SUSUMU ONO
Chairman of the Board

cc: Mountain View Ventures

Mr. Susumu Ono, Chairman
Board of Land and Natural Resources
State of Hawaii
P. O. Box 621
Honolulu, Hawaii 96809

March 6, 1981

Mr. Susumu Ono, Chairman
Board of Land and Natural Resources
State of Hawaii
P. O. Box 621
Honolulu, Hawaii 96809

Subject: Draft Environmental Impact Statement for Proposed Waikiki Windsor

Thank you for your letter of February 11, 1981, commenting on the above-mentioned subject.

In response to your recommendation, "...that our staff be allowed to inspect the site when excavation is in progress...." We will request the developer to contact your Department several days prior to the excavation. Site inspection by your staff should then be scheduled with the contractor to adhere to construction safety regulations. Also, if necessary, personnel can be assigned to accompany your staff through the work area.

Very truly yours,

F. J. Rodriguez

F. J. Rodriguez

cc: Department of Land Utilization
Environmental Quality Commission
Mr. Paul S. Osumi, Jr.
Dear Mr. McElroy:

Thank you for the opportunity to review the Draft Environmental Impact Statement (DEIS) for the Waikiki Windsor. Based on this review, we provide the following comments:

a. No Department of the Army permit is required for the project.

b. According to the Flood Insurance Study for the island of Oahu, prepared by the Federal Insurance Administration, the proposed project site is designated Zone B (refer to pages 3 thru 9 of the DEIS). The correct definition for Zone B is the area between limits of the 100-year and 500-year floods; or certain areas subject to the 100-year flooding with average depths less than one foot (the 100-year and the 500-year flood refer to an event having a 1.0 percent and 0.2 percent chance, respectively, of being equalled or exceeded in any given year).

A copy of this reply will be sent to the proposing party:

Mountain View Ventures, et al.
c/o Environmental Communications Inc.
PO Box 536
Honolulu, HI 96809

Sincerely,

KISUK CHEUNG
Chief, Engineering Division

FEB 19 1981
EXPLANATION OF ZONE DESIGNATIONS

ZONE

EXPLANATION

A Areas of 100-year flood; base flood elevations and flood hazard factors not determined.

AO Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; average depths of inundation are shown, but no flood hazard factors are determined.

AH Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; base flood elevations are shown, but no flood hazard factors are determined.

Al-A30a Areas of 100-year flood, base flood elevations and flood hazard factors determined.

A99 Areas of 100-year flood to be protected by flood protection system under construction; base flood elevations and flood hazard factors not determined.

B Areas between limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depths less than one (1) foot or where the contributing drainage area is less than one square mile; or areas protected by levees from the base flood. (Medium shading)

C Areas of minimal flooding. (No shading)

D Areas of undetermined, but possible, flood hazards.

V Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined.

VI-V30* Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors determined.

* The numerals indicate the magnitude of difference between the 100-year and 10-year flood elevations. For numerals between 1-20, the difference is one half of the value; for values greater than 20, the difference is 10 less than the numerals shown. This information is used in establishing insurance rates.

18 100-year tsunami or riverine elevation line, with elevation in feet above mean sea level.

Zone boundary line
March 5, 1981

Mr. Kiuak Cheung, Chief
Engineering Division
U.S. Army Engineer District, Honolulu
Fort Shafter, Hawaii 96858

Dear Mr. Cheung,

Subject: Draft Environmental Impact Statement for Proposed Waikiki Windsor

We appreciate your response of February 12, 1981 to the aforementioned Draft EIS. Below, dispositions to your comments are provided.

a. No disposition required.

b. The definition for Zone B (relating to flood hazard areas) will be included in the Final EIS on revised pages 3-9.

Thank you for your concern.

Very truly yours,

F. J. Rodriguez

F. J. Rodriguez

cc: Department of Land Utilization
Environmental Quality Commission
Paul S. Osumi, Jr.

Mr. Michael W. McElroy, Director
Department of Land Utilization
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Dear Mr. McElroy:

Subject: Environmental Impact Statement for the Proposed Waikiki Windsor, Waikiki, Oahu

We have reviewed the subject document and offer the following comments for your consideration:

Page 1-5 mentions a tot lot at the ground level but it appears the project is not designed for persons with children (page 3-10). Why is a tot lot being included?

Why is a unit with only 271 square feet that will sell for $70,000 ($258/square foot) considered "affordable"?

Thank you for allowing us to review this document.

Sincerely,

Harry Y. Akagi
Acting Director

cc: Environmental Communications, Inc.
March 6, 1981

Mr. Harry Y. Akagi, Acting Director
Office of Environmental Quality Control
State of Hawaii
550 Halekauila Street, Room 301
Honolulu, Hawaii 96813

Dear Mr. Akagi,

Subject: Draft Environmental Impact Statement for Proposed Wailuku Windaer Project

Thank you for your letter of February 17, 1981 regarding the above-mentioned subject.

The following is our response to your comments:

COMMENTS:

Page 1-3 mentions a tot lot at the ground level but it appears the project is not designed for persons with children (page 3-10). Why is a tot lot being included?

RESPONSE:

A tot lot may appear to be inappropriate for this project. The tot lot had been incorporated from the preliminary stages of design and was never deleted when the final concept was developed. Although, as stated in the EIS (page 2-4) "retirees" may be occupants and visiting grandchildren may use it as well as other visiting relatives and friends of the tenants. Also, households consisting of a single parent with a child is a possibility.

COMMENTS:

Why is a unit with only 271 square feet that will sell for $70,000 ($238/square foot) considered "affordable?"

RESPONSE:

Considering the cost of today's condominiums, the $70,000 price is within reach of the low medium income family. The cost per square

cc: Department of Land Utilization
Environmental Quality Commission
Mr. Paul S. Ono, Jr.

FJR/CTtip

Mr. Harry Y. Akagi, Acting Director
March 6, 1981
Page 2
February 18, 1981

Ref. No. 2750

Mr. Michael McElroy, Director
Department of Land Utilization
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Dear Mr. McElroy:

SUBJECT: Draft Environmental Impact Statement for the
Waikiki Windsor Apartment Tower

We have reviewed the above document and find that it has adequately
identified the major environmental impacts which can be anticipated to result
from the proposed project.

Thank you for the opportunity to review this matter.

Sincerely,

[Signature]

M. Meno

cc: Office of Environmental Quality Control
Mountview Ventures, et al
C/O Environmental Communications, Inc.
Thank you for the opportunity to review this document. We look forward to hearing from you in the near future.

Yours truly,

Diane C. Drigot, Ph.D.
Acting Director

cc: Mountain View Ventures
OEQC
John Holmstrom
Jacquelin Miller
Alexis Cheong Linder

The Environmental Center's review of the above EIS has been conducted with the assistance of John Holmstrom, Urban and Regional Plannings Jacqueline Miller and Alexis Cheong Linder, Environmental Center.

We find that the proposal is consistent with the parameters set forth in the Waikiki Special Design District ordinance no. 8373. However, two items of design are called to your attention: security for residents of the building and construction of a children's park on the premises.

Non-resident accessibility to elevators which service the building might potentially add to security problems for residents. Are there any plans to make the restaurant/bar facilities accessible to the general public? Will ground level security measures such as private guard service and security locks to the tower be included? Residents of other condominiums of similar design and use have encountered problems with inadequate security measures.

It is stated that the building's most probable occupants will be single, unmarried or married couples without children (p. 1-4). If this is the case we question the need to construct a children's playground and tot park (p. 2-7). Perhaps design and open space criteria can be better met by dedicating the use of this space to a passive park area suitable for a broader age group and with minimal "playground" type equipment or facilities.

We note that Mr. Root has provided air quality studies for both the proposed Hasegawa-Komuten condominium project and the Waikiki Windsor. Will the cumulative impacts generated by these projects continue to meet the State Department of Health's standards for ambient air quality during the construction and demolition phases?

We address the same question to traffic concerns. Will DOH's standards for air quality continue to be met despite the cumulative impacts of traffic in the Waikiki area?
February 25, 1981

Mr. Fred J. Rodriguez
Environmental Communications, Inc.
P.O. Box 536
Honolulu, Hawaii 96809

Dear Mr. Rodriguez:

Draft Environmental Impact Statement (EIS)
Waikiki Windsors

We have reviewed the above cited EIS and found that most of the potential impacts of the proposed project have been adequately addressed. Our comments are as follows:

ordinance No. 4573 - Waikiki Special Design District (WSDD)

Yard Setback Requirements

The EIS indicates that roadway improvements will include a 2-foot setback requirement along Tuitale Street and a 4-foot setback on Mountain View Drive. This means that the building setback from the street right-of-way on these streets will have to be 22-feet and 24-feet respectively. These setback improvements do not appear on the preliminary plans filed with our office.

Open Space Requirement

It appears that the open space requirement may not have been met. The lot size is 26,227 square feet. The building size, based on our calculation of the plan, appears to be 13,919 square feet, which covers more than 50% of the lot. The WSDD requires that 50% of the lot remain in open space.

3. Parking

The preliminary plans filed with our office do not reflect the reduction in the number of parking spaces, as indicated in the Draft EIS. Since the number of spaces has been reduced to 136, it will be necessary to submit a revised parking plan. According to the Comprehensive Zoning Code, Section 21-2.5(c)(6), "Seventy-five percent of required parking shall be regular parking spaces. All others provided may be compact spaces." Therefore, you must provide a minimum of 90 regular parking spaces (75 percent of the required 120) when you revise your plan.

4. Traffic

The traffic consultant's report concludes that the "existing highway system will be able to accommodate the present as well as the future traffic volumes." This contrasts significantly with the conclusion of a recent EIS prepared for another condominium project located three blocks away (Hasegawa-Kunten), which made the following prediction based on the Highway Capacity Manual Method:

"At two locations, Ala Wai Boulevard Ewa of Lewers Street and Kuhio Avenue (eastbound) at Lewers Street, the future traffic levels predicted in the analyses exceed the capacities. Note that in the Ala Wai case, the future traffic without the proposed project would exceed capacity."

This suggests that there is a serious discrepancy in the methods used to predict traffic capacities. These discrepancies can only confuse the issue of traffic congestion in Waikiki.

Traffic capacity for the roads surrounding the project is apparently based on width of the roadway. For example, Liliuokalani Avenue has an assumed traffic capacity of 625 vehicles per hour based on its present condition as a one-way street with a right-of-way width of 60 feet and pavement width of 32 feet. This analysis, however, does not consider the time that vehicles must wait at signalized intersections. An intersection analysis may be a more valid means of determining peak capacities since it takes into consideration delays at intersections due to green or signal time ratios as well as turning movements.
Some of the data used in the consultant's report should be updated. For example, is it really a valid assumption to make traffic projections based on growth trends of traffic volumes if the data is over 10 years old? Also, what is the relevance to this project of the change in average daily traffic on Kalakaua Avenue between 1967 and 1971? The most recent traffic data available should be used.

Should you have any questions regarding the above matter, please contact Marge Kimerer of our staff at 523-4077.

Very truly yours,

MICHAEL M. McELROY
Director of Land Utilization

Mr. Michael M. McElroy, Director
Department of Land Utilization
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

March 6, 1981

Dear Mr. McElroy,

Subject: Draft Environmental Impact Statement for Proposed Waikiki Windsor

Thank you for your letter of February 24, 1981, regarding the abovementioned subject. The following is our response to your comments:

COMMENT:

1. Yard Setback Requirements

The EIS indicates that roadway improvements will include a 2-foot setback requirement along Tuisita Street and a 4-foot setback on Mountain View Drive. This means that the building setback from the street right-of-way on these streets will have to be 22-feet and 24-feet respectively. These setback improvements do not appear on the preliminary plans filed with our office.

RESPONSE:

Although it was identified on the Site Plan, the 2'-0" and 4'-0" street widening setback on Tuisita and Mountain View respectively are incorporated, and will be dedicated to the City and improved as required.

(This is stated in the EIS on page 5-4.)

COMMENT:

2. Open Space Requirement

It appears that the open space requirement may not have been met. The lot size is 26,227 square feet. The building size, based on our calculation of the plan, appears to be 13,319 square feet, which covers more than 50% of the lot. The WODD requires that 50% of the lot remain in open space.
In the final drawings, the 50% open space requirement will be met, as stated on page 3-1 of the EIS.

RESPONSE:

3. Parking

The preliminary plans filed with our office do not reflect the reduction in the number of parking spaces, as indicated in the Draft EIS. Since the number of spaces has been reduced to 136, it will be necessary to submit a revised parking plan. According to the Comprehensive Zoning Code, Section 21-2.5(c)(6), "Seventy-five percent of required parking shall be regular parking spaces. All others provided may be compact spaces." Therefore, you must provide a minimum of 90 regular parking spaces (75 percent of the required 120) when you revise your plan.

RESPONSE:

Seventy-five (75) percent of the required parking stalls will be full-sized and 25 percent will be compact. This and the revised parking layout, as well as compliance with all other applicable codes and regulations, will be clarified when the building permit is formally submitted.

COMMENT:

4. Traffic

The traffic consultant's report concludes that the "existing highway system will be able to accommodate the present as well as the future traffic volumes." This contrasts significantly with the conclusion of a recent EIS prepared for another condominium project located three blocks away (Masagawa-Roeuten), which made the following prediction based on the Highway Capacity Manual Method:

"At two locations, Ala Wai Boulevard/Ewa of Lewers Street and Kuhio Avenue (eastbound) at Lewers Street, the future traffic levels predicted in the analyses exceed the capacities. Note that in the Ala Wai case, the future traffic without the proposed project would exceed capacity."

This suggests there is a serious discrepancy in the methods used to predict traffic capacities. These discrepancies can only confuse the issue of traffic congestion in Waikiki.

RESPONSE:

The capacity of a highway as defined in the Highway Capacity Manual is "a measure of its ability to accommodate traffic and is represented by the maximum number of vehicles that can be carried under prevailing roadway and traffic conditions. However, what is not understood and even many traffic and transportation engineers are not familiar with it, is that the capacity of a highway is a rate instead of a quantity and is not directly comparable to the capacity of a container or enclosed space. The capacity of a highway, therefore, is a variable and can be affected by a number of factors. Until the publication of the "Transportation & Traffic Engineering Handbook 1976", the capacity of a traffic facility, heretofore, has never been fully explained. This clarification is now set forth on page 309 of the "Handbook".

With this clarification, one will have a clearer and better understanding of the explanations of capacity contained in the "Highway Capacity Manual 1965". The following explanations, therefore are quoted from the "Manual". On page 3, the quotation is: "The information given in this manual has been selected to represent typical or average conditions reported throughout the United States at the time of its preparation. The user must appreciate the possibility that individual locations or areas may differ from the average, and avail himself of additional information for specific problems. The Manual does not, therefore, provide rigid standards for capacity measurements, but instead provides a guide in lieu of more detailed information."

On page 25, the quotation is: "These maximum observed volumes are given primarily to acquaint the reader with the peak traffic that has been carried on some of the more heavily traveled routes. They are also intended to indicate the wide range of capacities of highways that are seemingly alike in type, but actually have significant differences in their physical, as well as traffic characteristics. The reason for much of the variation in capacity will become more apparent as the subject is developed in the succeeding material. However, considerable variation must still remain unexplained, awaiting further research".
On page 76, the quotation is: "It must be remembered, however, that these values were determined from studies of many highways under a variety of conditions. In all cases, it would be impossible to state that the volume measured was the absolute maximum that could be carried. Inasmuch as maximum volumes observed at different times at one point will show a range of values. Rather, each capacity value given in Table 4.1 should be considered as the average maximum volume, or a maximum volume that has a reasonable expectation of occurring frequently on the particular type of highway under ideal conditions."

Since the traffic impact study for the Haagene-Keouen project was prepared by another consultant, it is to be expected that the two conclusions will differ, depending on the technical skill, foresight and judgment of the consultants. Science is integrated into the environmental process and scientific and technological judgment must be made in a traffic impact analysis. There is no magical formula or model that will take the place of technical skill, foresight and judgment. Until such time as more scientific method is established, professional judgment combined with scientific evidence and facts is the best available method for evaluating and predicting significant traffic and environmental consequences.

Under these circumstances, determination should be made as to whether or not any one or both of the consultants qualify as an expert witness so that his conclusion may be regarded as being the more appropriate or correct conclusion. The consultant for the Waikiki Winders Project has by education, training and experience qualified as an expert witness in traffic and considers his conclusion as being the more appropriate and correct conclusion.

COMMENT:

Traffic capacity for the roads surrounding the project is apparently based on the width of the roadway. For example, Liliuokalani Avenue has an assumed traffic capacity of 625 vehicles per hour based on its present condition as a one-way street with a right-of-way width of 60 feet and pavement width of 31 feet. This analysis, however, does not consider the time that vehicles must wait at signalized intersections. An intersection analysis may be a more valid means of determining peak capacities since it takes into consideration delays at intersections due to green over signal time ratios as well as turning movements.

RESPONSE:

The traffic capacities of the roads surrounding the project are based on at grade interections since urban street capacities are controlled by the capacities at intersections, i.e., signalized intersections. The amount of vehicular traffic which can approach and pass through an intersection depends on the following factors:

a) Physical and Operating Conditions:
   - Width of approach
   - One-way or two-way operation
   - Parking conditions

b) Environmental Conditions:
   - Load factor
   - Peak-hour factor
   - Metropolitan area population
   - Location within metropolitan area

c) Traffic Characteristics:
   - Turning movements
   - Trucks and through buses
   - Local transit buses

d) Control Measures:
   - Traffic signals (signal timing, cycle length, green time to cycle time ratio, G/C ratio and yellow interval)
   - Marking of approach lanes

The traffic capacity analysis, therefore, not only considered the time that vehicles must wait at signalized intersections, it also considered other meaningful factors set forth above, such as green over signal time ratios, turning movements, trucks and through buses, parking conditions, etc.

COMMENT:

Some of the data used in the consultant's report should be updated. For example, is it really a valid assumption to make traffic projections based on growth trends of traffic volumes if the data is over 10 years old? Also, what is the relevance to this project of the change in average daily traffic on Kamehameha Avenue between 1967 and 1971? The most recent traffic data available should be used.
RESPONSE:

In any planning process, whether it be city planning or transportation planning, the fundamental and the first step to be taken is to study the underlying conditions and the traffic volumes of the past in order that the planner may better understand the elements that have promoted the growth in traffic. There may have been changes in land uses and roadway conditions but it is nevertheless apparent that there is much we can learn by examining and analyzing the historical and current data relative to vehicular traffic and travel.

These data give an indication of the mistakes and successes in past developments, the possibility of securing improvements and the existence of features that are unchangeable. Thus confusion has prevailed due to the failure to distinguish properly what is valuable information for guidance in planning, design and policy and what is outdated information. Because of local conditions and the unpredictable future changes in land uses, there is no magical mathematical formula that will take the place of technical skill, foresight and judgment.

As set forth on pages T-15 and T-18 of the Traffic Impact Statement for the project, the various established methods of traffic projections do not yield a reasonably accurate forecast of future traffic volumes. As an example, the Oahu Transportation Study projection of future traffic volumes are extremely conservative. The Study, completed in 1967, indicated that by 1980, the 24 hour volume on Kuhio Avenue between Kahului Avenue and Kapahulu Avenue will total 8,000 vehicles. In contrast, the 1975 traffic count, and not the 1980 traffic volume, totaled more than 21,000 vehicles per day.

Traffic projections based on growth trends of traffic volumes for major streets in the City and County of Honolulu crossing the screen lines give a more realistic and reasonably accurate method for estimating future traffic volumes. Since highway facilities are more permanent than the land uses, traffic projections should be high for sound planning so that the highway system will be able to accommodate changing requirements and unpredictable future land uses.

The change in average daily traffic on Kalaaua Avenue between 1967 and 1971 not only is relevant to the project, it also provides an understanding of the growth and distribution of traffic volumes on the highway system due to changes in traffic and roadway conditions. Prior to 1971, the roadways in the Wahiiki District were operating as two-way roadways and were converted to one-way operation in 1971. With a one-way operation, there was a significant change in traffic volume and distribution on the highway system. Thus, should Kalakaua Avenue be converted to a pedestrian mall, this knowledge of changing traffic conditions will enable the traffic planner to determine the most probable distribution of traffic volumes so that the highway system will be able to accommodate the present and future traffic volumes.

The latest traffic data were used in the traffic analysis as indicated in Tables 1 to 6. In fact, the traffic volumes at the intersection of Oahu Avenue and Kuhio Avenue were taken in 1980 (Table 6).

Very truly yours,

F. J. Rodrigues

cc: Environmental Quality Commission
    Mr. Paul S. Onui, Jr.

FRJ:CKTipi
Dear Reviewer:

Attached for your review is an Environmental Impact Statement (EIS) that was prepared pursuant to Chapter 343, Hawaii Revised Statutes and the Rules and Regulations of the Environmental Quality Commission:

Title: Wailiki Windsor

Location: Wailiki, Oahu

Classification: Applicant Action

Your comments or acknowledgement of no comments on the EIS are welcomed. Please submit your reply to the accepting authority or approving agency:

Department of Land Utilization
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Please send a copy of your reply to the proposing party:

Mountain View Ventures, et al.

Encl. 4/2 Environmental Communications, Inc.
P.O. Box 516
Honolulu, Hawaii 96809

Your comments must be received or postmarked by: February 22, 1981

If you have no further use for this EIS, please return it to the Commission.

Thank you for your participation in the EIS process.

No comment - State Energy Office.  

JAN 27 1981  

John Farias, Jr.
Chairman, Board of Agriculture

JAN 30 1981
15. SUMMARY OF UNRESOLVED ISSUES

At this time the only identified unresolved issue is the commitment of potable water. As stated in the Board of Water Supply's letter, dated November 13, 1980 (see page 13-10):

"We cannot, at this time, make a water commitment to the project because of our tight water situation. Until we develop new sources, water commitment determinations for new developments are being made only when construction drawings or building permits are submitted to us for review and approval. Developments that require action by the City's Department of Land Utilization must first be approved by that department before we will take any action."

"Furthermore, when we review your project, we cannot guarantee that water can be made available. The issuance of a water commitment will depend on the adequacy of our reserve pumping capacity to accommodate your project."

The estimated potable water need of this project is 21,000 gallons per day. No offsite water system improvements will be required. Therefore, the availability of potable water is the issue which will be resolved when construction drawings or building permits are submitted to the Board of Water Supply for review.
EXHIBITS

EXHIBIT A. Reproduction of newspaper advertisement entitled, "Exclusive Offering To Owner Occupants".

EXHIBIT B. Liliuokalani Street Elevation of Building

EXHIBIT C. Mountain View Drive Elevation of Building

EXHIBIT D. Tusitala Street Elevation of Building

EXHIBIT E. Ewa Side Elevation of Building
Exclusive Offering To Owner Occupants

Waikiki Windsor
Waikiki’s most exciting new condominium!

- 25 stories
- First floor of apartments begin eight floors from ground level
- Estimated completion April 1982
- Private garden restaurant proposed on ground level
- Private recreation lanai on roof of parking structure with pool, jogging track, saunas, showers and whirlpool type bath
- Private Club bar lounge proposed for roof of top floor

Mountain View Ventures plans to develop a 25-story, 121 condominium project in Waikiki on the West side of Liululua Avenue, bounded by Tuolala Street on the south and Mountain View Drive on the north. Waikiki Windsor will have 121 condominium apartments with 53 commercial apartments and 118 residential studio apartments.

Fifty percent of the apartments will be reserved for sale to prospective owner-occupants for a 10-day period commencing with the date of issuance of the Preliminary Public Report. Mountain View Ventures intends to apply for the Preliminary Public Report on or about November 20, 1990, and expects issuance of the Report within three to five weeks thereafter. Since the Report has not been issued, the Real Estate Commission has not yet determined whether the developer has adequately disclosed all material facts as required by law.

The intended use of the studio apartments in the project is residential; however, apartments not purchased for owner-occupancy can be used for short-term or long-term rentals, including transient and vacation rentals, but specifically excluding time-sharing. The intended use of the other apartments is commercial.

Contact the brokers, Spaces Ltd., REALTORS for Consolidated Realty Corporation for further information on how to make a reservation. Apartments will be offered for sale at a maturity date of their reservation in the order in which they were made.

This notice is published in compliance with Act 169 of the 1983 Session Laws of Hawaii. Listed below are apartment size and estimated sale price. Each apartment’s estimated maintenance fee is $81.00.

Apartments that may be reserved by prospective owner-occupants are listed in bold face type. All apartments are studios. Refer to typical building floor plan for arrangement and location of residential units.

EXCLUSIVE SALES AGENTS:
Spaces Ltd., REALTORS |
Suite 2, 1411 Kapalama Boulevard
Honolulu, Hawaii 96814
Telephone 948-7921

Consolidated Realty Corporation
2828 Pau Street, Suite 3010
Honolulu, Hawaii 96819
Telephone 833-0088

The Waikiki Windsor Condominium is believed to be the first project offered that is to be designed under the Waikiki Special Design District guidelines. The Waikiki Special Design District was created to guide development in the area. Among other objectives, the Waikiki Special Design District is intended to implement the general plan of the city and to enhance and improve the physical and visual aspects of the urban environment.
APPENDICES

APPENDIX I.  AIR QUALITY STUDY FOR WAIKIKI WINDSOR  
Prepared by Barry D. Root, December, 1980

APPENDIX II.  TRAFFIC IMPACT STATEMENT WAIKIKI WINDSOR PROJECT  
AIR QUALITY STUDY

FOR

WAIKIKI WINDSOR
Waikiki, Oahu, Hawaii

Prepared by

Barry D. Root
Air Pollution Consultant
Kaneohe, Hawaii

December, 1980
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I. PROJECT DESCRIPTION

The proposed Waikiki Windsor Project involves demolition of eleven existing one- and two-story structures and construction of a 20-story apartment building above a five-level, 161-stall parking garage on the ewa side of Liliuokalani Avenue between Tusitala Street and Mountain View Drive in Waikiki (Figure 1). The project area consists of 26,227 square feet as indicated in Figure 2. The finished project is expected to provide 120 new studio units for occupancy by mid-1982.

* Present plans call for 136 parking stalls.
II. AIR QUALITY STANDARDS

State of Hawaii and Federal Ambient Air Quality Standards (AQS) have been established for seven classes of pollutants as shown in Table 1. An AQS is a concentration not to be exceeded over given sampling time periods which vary from pollutant to pollutant depending on the type of exposure necessary to cause adverse effects. Each of the regulated pollutants has the potential to cause some form of adverse health effect or to produce environmental degradation when present in sufficiently high concentration. The Federal AQS have been divided into Primary and Secondary levels. Primary AQS are designed to prevent adverse health impacts while Secondary AQS refer to welfare impacts such as decreased visibility, diminished comfort levels, damage to vegetation, animals, or property, or a reduction in the overall aesthetic quality of the atmosphere. The State of Hawaii AQS have been set at a single level which is in most cases significantly more stringent than the lowest comparable Federal limit. Each Federal AQS is defined as a level not to be exceeded more than once per year, but State of Hawaii AQS are specified as levels not to be exceeded at any time.

Federal research regarding the adequacy of current AQS is ongoing. At present there is a U.S. Environmental Protection Agency (EPA) proposal to lower the one-hour level of carbon monoxide from 40 milligrams per cubic meter to 25 parts per million (about 29 milligrams per cubic meter).

There is presently a desire on the part of the State of Hawaii air pollution control agency (Department of Health) to eliminate State AQS for those pollutants covered by Federal Prevention of Significant Deterioration (PSD) regulations. These regulations apply in areas where the Federal AQS are currently being met. Most of the State of Hawaii falls within this category. For PSD regulation purposes air pollutants have been divided into two sets. PSD Set I pollutants are largely the result of fixed industrial or power generating sources. PSD Set II pollutants are carbon monoxide, hydrocarbons, nitrogen oxides, lead, and ozone which result mostly from fuel combustion in mobile sources.

PSD Set I regulations were issued in June 1978 and require use of best available control technology (BACT) for all major new sources of particulates and sulfur dioxide. Specific increments are set for how
much additional degradation will be permitted in specific areas. Since no major new fixed or long term sources of these emissions are associated with the proposed project, the PSD Set I regulations are important only in that they should help to prevent any serious increases in current levels of particulates and sulfur dioxide in the project area. Present zoning and land use in the Waikiki area would preclude establishment of any new major fixed sources of these particular pollutants in any case.

PSD Set II regulations are in the process of being developed. Because the Set II pollutants are emitted primarily by mobile sources they will require a more complex regulatory approach. The Federal Motor Vehicles Emissions Control Program (FMVECP), which requires, for example, catalytic converters and the use of unleaded fuel in most new automobiles, addresses only part of the problem. Other possible PSD Set II control measures could involve mandatory motor vehicle emissions inspection programs or limits on traffic volumes or new roadways in recognized problem areas.

It is not anticipated that the PSD Set II regulations will be promulgated in time to affect planning for this particular project, but such regulations could have some beneficial impacts on future travel patterns and vehicle pollutant emissions in the project area.
III. PRESENT AIR QUALITY

Until late 1979, there were no air pollutant monitoring stations in Waikiki. In that year particulate and sulfur dioxide samplers were moved from Ala Moana Park to Fort DeRussy. The Ala Moana sampling station was located a little over two miles west northwest of the project while the current Waikiki sampling location is only about one mile in the same direction (see Figure 3). A summary of measurements collected at those locations over the last several years is shown in Table 2. From the data presented it appears that the State of Hawaii 24-hour AQS for particulates is presently being violated in the Ala Moana/Waikiki area at the rate of about once per year. No values above allowable Federal AQS have been recorded in this area since 1975, however, and the high 1980 particulate reading, for example, occurred at the time of a severe January windstorm which no doubt generated increased levels of fugitive dust and sea spray. A once-per-year particulate level of this nature is of no major regulatory concern and it seems reasonable to conclude that there are presently no real problems regarding either particulates or sulfur dioxide in the project area. Data from Table 2 also shows that at least until 1976 nitrogen dioxide levels in the area were well below allowable AQS.

Unfortunately, there are no long term measurements of hydrocarbons anywhere in Hawaii so that little can be said about present or future levels of this pollutant. Hydrocarbons are primarily important because of the precursor role that they play in the formation of photochemical pollutants such as ozone. Both ozone and carbon monoxide have routinely been measured at a location just outside the Department of Health Building in urban Honolulu (less than 3 miles northwest of the project site). A summary of those measurements is presented in Table 3. From ozone levels measured at this site it appears that photochemical pollutants and, by inference, hydrocarbons are not a major problem in Honolulu.

On the other hand, it is clearly evident from the data in Table 3 that short term carbon monoxide concentrations have frequently been in excess of allowable State of Hawaii AQS during the last several years. Since 1975 there has been a steady decrease in peak hour averages of this pollutant and no values above the Federal AQS have been recorded.
In late 1979 the carbon monoxide sampler was moved from the Department of Health Building to Leahi Hospital in Kaimuki (about 2 miles east of the project area). At that location values for the first three quarters of 1980 have ranged from zero to 3.5 milligrams per cubic meter with an average value of 0.5. Data from this site can no longer be considered to be representative of the urban Honolulu/Waikiki area, however, and from the available measurements summarized in Tables 2 and 3 it appears that carbon monoxide is likely to be the air pollutant of greatest concern in the Waikiki project area.
IV. DIRECT AIR QUALITY IMPACT OF PROJECT CONSTRUCTION

Demolition and construction activities associated with the proposed project will inevitably generate a noticeable amount of fugitive dust. An EPA-sponsored study involving field measurement of particulate emission rates from apartment and shopping center construction has yielded an estimate of 1.2 tons of dust per acre of construction per month of activity. Actual emissions for this project will vary daily based on the amount of activity and the moisture condition of exposed soil in the project area, but using the above emission rate, about 1,200 pounds per month of airborne dust could be expected from this project.

Once demolition, site-clearing, excavation, and ground floor levels of the project have been completed, however, particulate emissions should drop substantially.

Heavy construction equipment used on site can also be expected to contribute some exhausts to the air, but most such equipment is diesel-powered and diesel motors emit very low levels of carbon monoxide (which is of greatest concern in the project area).
V. INDIRECT AIR QUALITY IMPACT OF INCREASED TRAFFIC

Once construction is completed the proposed project will not in itself constitute a significant direct source of air pollutants other than minor air conditioner losses and fugitive cooking aromas. But by serving as an attraction for increased motor vehicle traffic in the area the project can be considered to be an indirect air pollutant emissions source.

Motor vehicles, especially those with gasoline-powered engines, are prodigious emitters of carbon monoxide. They also produce significant quantities of hydrocarbons and nitrogen oxides. Vehicles burning fuel which contains lead as an additive also contribute some lead particles to the atmosphere.

The major control measure designed to limit vehicular lead emissions is a Federal law requiring the use of unleaded gasoline in most new automobiles. As older cars are gradually removed from the vehicle fleet, lead emissions should be steadily falling. Federal control regulations also call for increased efficiency in removing carbon monoxide, hydrocarbons, and nitrogen oxides from vehicle exhausts. By 1993, in fact, carbon monoxide emissions from the vehicle fleet then operating should be less than half the amounts now emitted.

In order to evaluate the impact of this mandated decrease in carbon monoxide emissions in the project area it is necessary to carry out a detailed carbon monoxide modeling study to translate forecast emission levels into concentrations that can be compared to current measurements and allowable air quality standards.

A. Carbon Monoxide Diffusion Modeling

Four critical receptor sites in the project area were selected for analysis as shown in Figure 3. Expected worst case concentrations of carbon monoxide for those locations at present and in future years was computed as described below.

Existing peak hour traffic levels on roadways near the project area are presented in the traffic study for the project. The traffic study uses an annual growth rate of 1.32 percent per year to estimate future
traffic volumes in order to appraise roadway capacities. In fact, however, this growth value is representative of a time of explosive traffic growth in Waikiki and for the period of time covered by this air quality study an annual traffic growth rate of one percent per year was deemed appropriate to represent the most likely condition.

Peak hour traffic volume associated with the proposed project is expected to be 65 vehicles. To be as conservative as possible it is assumed that all 65 vehicles will depart from the parking garage via a single exit onto Tusitala Street and then onto Ala Wai Boulevard via Liliuokalani Avenue. Maximum morning air quality impact from project-related traffic would thus be expected to occur near the intersection of Ala Wai and Liliuokalani (site 1) and across Liliuokalani from the proposed five-level parking structure (site 2).

Since the project is scheduled to be completed during 1982 the year 1983 is likely to represent the major air quality impact since project-related traffic patterns should be established by then. Two future years, 1993 and 2003, were selected to evaluate long term air quality at critical receptor sites in the project area.

Vehicular carbon monoxide emission rates for the study years were determined using a Federal Highway Administration tabulated version of the EPA's computerized Mobile Source Emissions Model (MOBILE I). The emission factors listed in the publication are predicated upon implementation of stringent emission controls on a timetable set by existing Federal laws. Those goals were set several years ago and are not being met as quickly as expected. Continued economic problems in the U.S. auto industry may cause Congress to approve even greater delays in the achievement of those goals. To account for current and future delays in meeting published emission goals, the emission factors used in this study for 1980 are based on estimates for 1979, those for 1983 on estimates for 1981, 1993 on estimates for 1988, and 2003 on estimates for 1995.

By observation the vehicle mix on Ala Wai and Liliuokalani during morning rush hours is about 86 percent automobiles, 10 percent light duty trucks less than 6,000 pounds gross vehicle weight (GVW), 1 percent light duty trucks between 6,000 and 8,000 pounds GVW, 1 percent heavy duty gas trucks, and 2 percent diesel-powered vehicles. For project-
related parking garage traffic a vehicle mix of 97 percent automobiles and 3 percent light duty trucks and vans is assumed. For morning rush hour conditions an ambient temperature of 60°F is assumed with 50 percent of the vehicles operating in an inefficient cold start mode. For parking garage traffic all vehicles are assumed to be operating in the cold start mode.

There is a traffic signal at Ala Wai and Liliuokalani with a green to signal ratio of about 73 percent in the Ala Wai direction. Vehicle speeds upstream from the red signal on Liliuokalani are assumed to be about 5 mph. Speeds through the green signal would be about 15 mph. On the Ala Wai downstream from a red signal accelerating vehicles are assumed to travel at 15 mph while vehicles passing through the signal should be able to maintain a speed of about 25 mph. Parking garage traffic is assumed to move at 5 mph within and near the garage. For analysis purposes it is assumed that all morning traffic originates from the lowest four levels of the garage. In fact, traffic moving within the garage above the third level should have no measurable impact on ground level carbon monoxide receptors in the project area.

Morning peak hour traffic on the Ala Wai occurs from 0700 to 0800 while that on Liliuokalani is from 0800 to 0900. For this analysis these peak hour levels are assumed to coincide.

Receptor sites 3 and 4 were selected to evaluate carbon monoxide contributions from vehicles returning to the parking garage during the afternoon rush hour. For this part of the analysis it is assumed that half the returning automobiles travel via Kuhio Avenue to Liliuokalani Avenue, while the other half travel via Kalakaua to Liliuokalani and then to the parking garage. For afternoon traffic conditions (4 to 5 PM) an ambient temperature of 80°F is assumed with just 20 percent of the vehicles traveling in the cold start mode. The traffic mix is also somewhat different: 86 percent automobiles, 9 percent light duty trucks, and 5 percent buses and other diesel vehicles. Near site 4 there is one lane of Kalakaua Avenue that is reserved exclusively for buses. Bus traffic in this lane was assumed to be about 20 per hour for all years considered.

The EPA computer model HIWAY was used to calculate estimated carbon monoxide concentrations at each receptor site. Stability category D (4)
was used for determining diffusion coefficients. This stability category represents the most stable (least favorable) atmospheric condition that is likely to exist in an urban area such as Waikiki. To simulate worst case wind conditions a uniform windspeed of one meter per second was assumed with worst case wind direction determined by the roadway geometry at each receptor site. All receptor sites were located on the sidewalk about one meter from the edge of the nearest traffic lane at a breathing height of 1.5 meters.

Background contributions of carbon monoxide from roadways not considered directly in the analysis were assumed to be about 1 milligram per cubic meter (mg/m$^3$) in 1980, 0.8 in 1983, 0.4 in 1993, and 0.3 in 2003. These decreasing background levels reflect expected increases in emission control effectiveness in future years.

Results of the peak hour carbon monoxide analysis are presented in Figure 4.

At site 1, near the intersection of Liliuokalani and the Ala Wai peak morning rush hour traffic is likely to cause carbon monoxide levels above the allowable State of Hawaii limit under worst case conditions until sometime in the late 1980's whether the proposed project is built or not. Even with project-related traffic considered 1983 carbon monoxide levels at this site are likely to be lower than current levels. The main effect of project traffic will be to raise worst case levels at this location by about 1 mg/m$^3$ over the values that would be expected without the project. This could delay by about one year the date when the State of Hawaii Standard is likely to be achieved at this location. The worst case wind direction at site 1 is north.

At site 2 traffic from the proposed project could raise morning peak hour carbon monoxide levels by more than 2 mg/m$^3$, but even then all predicted values are well within allowable State of Hawaii AQS even under the worst case conditions considered here. For this site the worst case wind direction is west.

At site 3, under a worst case easterly wind, late afternoon traffic generated by the project is likely to add less than 0.5 mg/m$^3$ to predicted levels and no carbon monoxide problems are expected. For this analysis, it is assumed that Kuhio Avenue remains in its present two lane, one-way configuration throughout the study period. Kuhio Avenue is scheduled
for widening and conversion to two-way operation at some date in the future, but no traffic forecasts are available for estimating what the traffic flow pattern in this area will be after that change occurs. It is not likely, however, that such a roadway change would raise carbon monoxide by more than $8 \text{ mg/m}^3$, even during peak hour, worst case conditions.

At site 4, heavy late afternoon traffic on Kalakaua Avenue is likely to cause State of Hawaii peak hour carbon monoxide standards to be exceeded under worst case conditions until sometime in the mid 1980's whether the proposed project is completed or not. Worst case wind direction for this site is also east, and the project related contribution of carbon monoxide is also less than $0.5 \text{ mg/m}^3$.

Worst case eight-hour values for the four selected critical receptor sites are shown in Figure 5. These values are similar to those in Figure 4 but are reduced by the application of two factors. The first factor is a correction to account for the fact that the average traffic level for an eight hour period is less than the peak hour level. Eight hour traffic factors for roadways considered are as follows: Lili'uokalani - 0.98, Ala Wai - 0.89, Kalakaua - 0.86, and Kuhio - 0.85. The second factor is a 'meteorological persistence factor' of 0.6 recommended in EPA guidelines to account for the fact that meteorological dispersion conditions are likely to be more variable (and hence more favorable) over an eight hour period than over a one hour period.

In general the results of the eight hour analysis parallel those of the peak hour analysis with potential problems meeting the State of Hawaii 8-hour AQS at sites 1 and 4 with or without project-related traffic until some time in the late 1980's.

As shown in Figures 4 and 5, however, both present and future carbon monoxide levels at the critical sites considered are well within allowable Federal limits even under worst case traffic and meteorological conditions.

It is important to note that the receptor sites selected are those likely to have the highest carbon monoxide concentrations in the project area. It would be necessary for an individual to spend at least an hour at any of these sites during the worst case conditions specified in this study for him to experience levels of carbon monoxide as high as those
calculated. Such a degree of exposure does not seem very likely. Nearest dwelling units to these sites are located more than 10 meters from the edge of the nearest traffic lane and at that distance carbon monoxide levels would be computed to be about 25 percent lower than those shown.
VI. POSSIBLE MITIGATIVE MEASURES

As stated earlier the only significant direct emission of air pollutants that this project is likely to create is fugitive dust generated by construction activities. State of Hawaii Department of Health Rules and Regulations (Chapter 43, Section 10) stipulate control measures that are to be employed to reduce this type of emission. Primary control consists of frequent wetting down of loose soil areas with water, oil or suitable chemicals. An effective watering program can reduce particulate emissions from construction sites by as much as 50 percent. Other control measures include good housekeeping on the job site and possibly, erection of dust-catching barriers if nearby local residents are being subjected to suspended particulate levels more than 150 micrograms per cubic meter higher than existing background concentrations (as measured on a 12-hour basis).

The planners of this project can do very little to mitigate the indirect impact likely to be caused by emissions from vehicles traveling to and from the parking garage on the project site. Vehicular emissions can be decreased if (1) the emission rate of each vehicle is decreased, (2) the total number of vehicles is decreased, (3) the project is designed to permit vehicle movement in such a way that excessive queuing is avoided.

Changes in the emission rate of each vehicle have been mandated by the Federal government, but the laws apply only to new vehicles and it will take time for older, air-polluting vehicles to disappear from the vehicle fleet.

The number of vehicles attracted to the project is determined by the number of spaces in the parking garage, which is in turn related to the floor space in the residential portion of the project. In this case there are limits to those values set by the Waikiki Special Design District legislation and this project is planned within those limits.

Current project designs include a significant amount of peripheral landscaping. Such landscaping can serve a mitigative role in helping to remove some particulates and carbon monoxide from the air in the project area.
One other measure that project managers can employ to improve the overall air quality environment of future tenants is to prohibit smoking in the garage area and within confined spaces such as elevators. Resident exposure to dangerous levels of carbon monoxide and other air pollutants is likely to be greater in those areas than it is on the sidewalks of Waikiki.

Finally, it is worth noting that traffic and emission levels used in this study do not take into account current socio-economic factors which could lead to decreased private vehicle usage in future years and the possible development of non-gasoline-powered vehicles which create few or none of the air pollutants that are presently of concern.
VII. SUMMARY

The proposed Waikiki Windsor project can be expected to produce direct air pollutant emissions in the form of wind-blown dust from demolition and construction activities and indirect emissions from vehicles traveling to and from the parking garage on the site.

The fugitive dust emissions will be of a short term nature and adequate control measures exist to insure that such emissions do not become a problem to nearby residents. Measurements of long-term particulate concentrations at nearby monitoring stations indicate that State of Hawaii ambient standards are exceeded at the rate of approximately once per year, but in general airborne particulates do not seem to be a significant problem in the Waikiki area.

Vehicular traffic generated by the project will produce carbon monoxide, hydrocarbons, nitrogen oxides, and airborne lead. Federal regulations mandate future reductions in these emissions, but recent carbon monoxide readings from the urban Honolulu sampling station indicate that carbon monoxide levels are still somewhat of a problem when the stringent State of Hawaii one-hour standard is considered.

A detailed worst case modeling study of four selected critical receptor sites in the project area indicates that present and near-future levels of carbon monoxide near the intersections of Ala Wai Boulevard and Kalakaua Avenue with Liliuokalani Avenue are likely to be in excess of the allowable State of Hawaii AQS whether the proposed project is constructed or not. At most, however, project-related traffic will raise carbon monoxide concentrations near those intersections by only one milligram per cubic meter. Two other sites along Liliuokalani Avenue are likely to have carbon monoxide levels within State of Hawaii AQS even with the additional project-related traffic considered. Predicted worst case carbon monoxide at all sites is well within allowable Federal Standards.

The overall air quality impact of the proposed project is herein predicted to be quite minimal and no significant mitigative measures are recommended.
REFERENCES


FIGURE 1. LOCATION MAP

Scale: 1 inch = approximately 3,000 feet

PROJECT SITE
(Waikiki Windsor)
FIGURE 2. PROPERTY LOCATION MAP - Proposed Waikiki Windsor Condominium
Waikiki, Honolulu, Hawaii
Location of air pollutant monitoring station (Ala Moana and Department of Health)

1 - Carbon monoxide receptor sites

SCALE 1" = 2000'

FIGURE 3.

LOCATION OF AIR POLLUTANT MONITORING STATIONS
AND
CARBON MONOXIDE RECEPTOR SITES

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FIGURE 4  RESULTS OF PEAK HOUR CARBON MONOXIDE ANALYSIS
FIGURE 5   RESULTS OF EIGHT-HOUR CARBON MONOXIDE ANALYSIS
<table>
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<tr>
<th>POLLUTANT</th>
<th>SAMPLING PERIOD</th>
<th>FEDERAL STANDARDS</th>
<th>STATE STANDARDS</th>
</tr>
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<tr>
<td>1. Suspended particulate matter</td>
<td>Annual Geometric Mean</td>
<td>75</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>Annual Arithmetic Mean</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Maximum Average in any 24 hours</td>
<td>260</td>
<td>150</td>
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<tr>
<td>2. Sulfur Dioxide</td>
<td>Annual Arithmetic Mean</td>
<td>80</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Maximum Average in any 24 hours</td>
<td>365</td>
<td>-</td>
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<tr>
<td></td>
<td>Maximum Average in any 3 hours</td>
<td>-</td>
<td>1300</td>
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<td>3. Carbon Monoxide</td>
<td>Maximum Average in any 8 hours</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Maximum Average in any 1 hour</td>
<td>40</td>
<td>10</td>
</tr>
<tr>
<td>4. Hydrocarbons Non-methane</td>
<td>Maximum Average in any 3 hours</td>
<td>160</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>(micrograms per cubic meter)</td>
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<tr>
<td>5. Ozone</td>
<td>Maximum Average in any 1 hour</td>
<td>240</td>
<td>100</td>
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<tr>
<td></td>
<td>(micrograms per cubic meter)</td>
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<td></td>
</tr>
<tr>
<td>6. Nitrogen Dioxide</td>
<td>Annual Arithmetic Mean</td>
<td>100</td>
<td>70</td>
</tr>
<tr>
<td></td>
<td>Maximum Average in any 24 hours</td>
<td>-</td>
<td>150</td>
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<tr>
<td>7. Airborne Lead</td>
<td>Average Over 3 Months</td>
<td>1.5</td>
<td>1.5</td>
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<tr>
<td></td>
<td>(micrograms per cubic meter)</td>
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### TABLE 2
SUMMARY OF AIR POLLUTANT MEASUREMENTS AT
ALA MOANA AND WAIKIKI MONITORING STATIONS

<table>
<thead>
<tr>
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<tr>
<td><strong>PARTICULATE MATTER</strong></td>
<td></td>
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<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>No. of Samples</td>
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<td>73</td>
<td>53</td>
<td>61</td>
<td>57</td>
<td>43</td>
</tr>
<tr>
<td>Range of Values</td>
<td>41-152</td>
<td>24-130</td>
<td>18-109</td>
<td>21-79</td>
<td>20-102</td>
<td>20-116</td>
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<tr>
<td>Average Value</td>
<td>64</td>
<td>65</td>
<td>40</td>
<td>38</td>
<td>39</td>
<td>36</td>
</tr>
<tr>
<td>No. of times State AQS Exceeded</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

| **SULFUR DIOXIDE**      |      |      |      |      |      |      |
| No. of Samples          | 88   | 70   | 54   | 61   | 48   | 39   |
| Range of Values         | <5-9 | <5-7 | <5-5 | <5-5 | <5-13 | <5-5 |
| Average Value           | <5   | <5   | <5   | <5   | <5   | <5   |
| No. of times State AQS Exceeded | 0   | 0   | 0   | 0   | 0   | 0   |

| **NITROGEN DIOXIDE**    |      |      |      |      |      |      |
| No. of Samples          | 88   | 21   |      |      |      |      |
| Range of Values         | 5-64 | 24-61 |      |      |      |      |
| Average Value           | 38   | 44   |      |      |      |      |
| No. of times State AQS Exceeded | 0   | 0   |      |      |      |      |

**NOTES:** Sampling Station moved from Ala Moana Park Sewer pumping station to McCoy Pavilion on 2/28/77 and then to Fort DeRussy on 12/5/79. All values in micrograms per cubic meter for a 24 hour sampling period. Data for 1980 through 9/80. Nitrogen dioxide sampling discontinued 4/76.

**SOURCE:** State of Hawaii Department of Health.
TABLE 3
SUMMARY OF AIR POLLUTANT MEASUREMENTS AT
DEPARTMENT OF HEALTH LAB, HONOLULU

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>CARBON MONOXIDE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>No. of Sampling Days</td>
<td>169</td>
<td>355</td>
<td>359</td>
<td>365</td>
<td>207</td>
<td></td>
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<tr>
<td>Range of Values</td>
<td>.9-27.4</td>
<td>.5-24.2</td>
<td>0-19.6</td>
<td>0-20.7</td>
<td>0-17.3</td>
<td></td>
</tr>
<tr>
<td>Average Value</td>
<td>6.6</td>
<td>5.4</td>
<td>3.5</td>
<td>3.1</td>
<td>2.9</td>
<td></td>
</tr>
<tr>
<td>No. of times State AQS Exceeded</td>
<td>35</td>
<td>41</td>
<td>22</td>
<td>19</td>
<td>10</td>
<td></td>
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NOTES: Carbon monoxide in milligrams per cubic meter; ozone in micrograms per cubic meter. Values shown are peak one hour values. Carbon monoxide sampling discontinued 9/79. Data for 1980 through 9/80.

TRAFFIC IMPACT STATEMENT

WAIKIKI WINDSOR PROJECT
Waikiki, Oahu
Tax Map Key 2-6-24: 65-68 and 80-83

Prepared By

Henry Tuck Au, Consulting Engineer
33 S. King Street
Suite 507
Honolulu, Hawaii 96813

November 1980
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<td>4</td>
<td>Hourly Variations of Traffic</td>
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<td>Kuhio Avenue at Lewers Street</td>
<td>A-42</td>
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<td>Ala Wai Boulevard at Lewers Street</td>
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<tr>
<td></td>
<td>Kuhio Avenue at Liliuokalani Avenue</td>
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<td></td>
<td>Ohua Avenue at Kuhio Avenue</td>
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<td>Household Characteristics</td>
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<td>9</td>
<td>Trip Characteristics</td>
<td>A-52</td>
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<td>10</td>
<td>Trip Generation</td>
<td>A-52</td>
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<tr>
<td>11</td>
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</table>
SUMMARY

1. The proposed Waikiki Windsor Project is located on the ewa side of Liliuokalani Avenue between Tuisitala Street and Mountain View Drive. The site is composed of 8 small individual parcels of land and is identified by Tax Map Key 2-6-24: 65-68 and 80-83. The project will combine the individual parcels of land into a single project area consisting of 26,227 square feet with frontages on Tuisitala Street, Liliuokalani Avenue and Mountain View Drive.

2. The tentative proposal for the project is to demolish the existing one and two story structures containing 19 dwelling units and construct a 20-story apartment tower consisting of 120 dwelling units and 161 parking spaces. All of the dwelling units will be studio units, with 6 studio units per floor.

3. The Waikiki Special Design District Ordinance enacted by the City Council in 1976 is to insure quality growth and development of Waikiki with due consideration to optimum community benefits. The creation of the Special District is an attempt to relate the size of Waikiki's ultimate development to the capacity of the area to handle it.

4. The future highway system was developed by the addition of new facilities built onto or added to the existing system with improvements to the present highways of higher standards and designs for future traffic volumes. With these improvements, the future highway system will mitigate at a future time, any possible undesirable traffic congestion.

5. In 1967, the average daily traffic on Kalakaua Avenue, then operating as a two-way street was 37,729. Upon conversion of Kalakaua Avenue and the street system of Waikiki into one-way operation in 1971, the traffic volume on Kalakaua showed a considerable reduction from the 1967 volume of 37,729 to 30,061 in 1971, a decrease of 7,668 vehicles or 20.3 per cent.

6. The one-way operation distributed the traffic load over more streets and diverted the ewa bound traffic of Kalakaua Avenue to Kuhio Avenue and Ala Wai Boulevard, primarily to Ala Wai Boulevard.

7. The peak hour volume for Liliuokalani Avenue is only 416 vehicles during the afternoon peak hour. Being a one way street with a right of way width of 60 feet and pavement width varying from 32 feet to 40 feet, Liliuokalani Avenue has considerable excess capacity and will be able to accommodate the proposed development without any adverse traffic effects.

8. Weekend traffic in the Waikiki District reflects recreational and social travel and the peak hour volume is only slightly higher than the weekday peak hour volume. The weekend peak hour volume, therefore, is less critical than the weekday peak hour volume and is usually disregarded.

* Project plans now call for 136 parking stalls.
9. Traffic surveys show that traffic crossing the Lewers Street Screenline extending from Kalakaua Avenue to Ala Wai Boulevard increased at the rate of 1.32 per cent per year for the period from 1967 to 1975. At this rate of growth, the traffic volume crossing the screenline will increase by 26.4 per cent or 23,620 vehicles within the 20 year period from 1975 to 1995 for a total screenline volume of 113,091 vehicles.

10. The existing highway system will be able to accommodate the present as well as the future traffic volumes, with no consideration being given to the beneficial consequences resulting from the establishment of the Waikiki Special Design District.

11. The future highway system will mitigate at a future time any possible undesirable traffic congestion. Other factors will also influence and mitigate at a future time any possible undesirable traffic congestion.

12. The 120 dwelling units of the project will generate a 24 hour volume of 504 trips and a peak hour volume of 65 trips.

13. The capacity of Liliuokalani Avenue under its present condition as a one-way street with a right-of-way width of 60 feet and pavement width of 32 feet is approximately 625 vehicles per hour total at level of Service C. Liliuokalani Avenue, therefore, has considerable excess capacity and will be able to accommodate the proposed development without any adverse traffic effects.

14. The traffic study conducted by the Department of Transportation Services of the City and County of Honolulu on Wednesday, March 18, 1970, indicated that contrary to common belief, through traffic in Waikiki was not a major problem. The majority of vehicles had origins and destinations within Waikiki.

15. The Comprehensive Zoning Code requires at least one parking space for each dwelling unit. However, 136 parking spaces, more than required by the Code, will be provided for the development with its 120 dwelling units.

16. The City's "desirable" service guideline for accessibility to buses is five minutes walking distance or the equivalent distance of one-fourth of a mile. Thus, adequate mass transportation service is available to serve the project area and the Waikiki District. Bus routes include Routes 2, 4, 5, 8 and 57.

17. Analyzing the various factors, it may be concluded that the proposed project will enhance the aesthetic, environmental and economic aspects of the Waikiki District and provide a service to the community with a minimum disruption of environmental activities. The existing highway system will be able to accommodate the present and future traffic volumes with no consideration being given to the beneficial consequences resulting from the establishment of the Waikiki Special Design District.
FIGURE 1. LOCATION MAP

Scale: 1 inch = approximately 3,000 feet

PROJECT SITE
(Waikiki Windsor)
DESCRIPTION OF PROJECT

The proposed Waikiki Windsor Project is located on the ewa side of Liliuokalani Avenue between Tusitala Street and Mountain View Drive. The site is composed of 8 small individual parcels of land and is identified by Tax Map Key 2-6-24: 65-68 and 80-83. The project will combine the individual parcels of land into a single project area consisting of 26,227 square feet with frontages on Tusitala Street, Liliuokalani Avenue and Mountain View Drive. The project location maps, Plate 1 and Figure 1, outline its relation to the highway system and the neighborhood.

The tentative proposal for the project is to demolish the 11 existing one and two story structures containing 19 dwelling units and construct a 20-story apartment tower consisting of 120 dwelling units and 161 parking spaces.* All of the dwelling units will be studio units, with 6 studio units per floor. A 5-level parking structure will provide the 161 parking spaces.*

The property or site is designated as "Apartment Precinct" under the Waikiki Special Design District. No change in land use designation is required for the development.

WAIKIKI SPECIAL DESIGN DISTRICT

An ordinance was enacted in 1976 by the City Council establishing the Waikiki Special Design District to insure quality growth and development of Waikiki with due consideration to optimum community benefits. This ordinance became effective on April 1, 1976. The special design district drastically reduced the number of hotel rooms and apartments that could be constructed in the area and require that significant development or construction projects be approved by the City Council.

The Special Design District lowered the floor area ratio for apartments from 4.0 to 1.5 and for hotels from 4.5 to 2.8. In 1976, there were approximately 22,500 hotel rooms in Waikiki and the prior zoning would have permitted more than 68,000 hotel rooms in Waikiki. Under the Special Design District, the number of hotel rooms is limited to approximately 26,000, an increase of only 3,500 more than existed in 1976. With such limitations, the population of Waikiki would be maintained at 65,000, compared to the 1976 population of approximately 55,000. With the prior zoning, the population of Waikiki could increase to approximately 177,000 or 122,000 more than the 1976 population.

The creation of the Special District, therefore, is an attempt to relate the size of Waikiki's ultimate development to the capacity of the area to handle it. There are three objectives for the Special District.*

* Present project plans call for 136 parking stalls.

A-35
1. To guide the orderly growth and development of Waikiki.

2. To provide safeguards for the preservation, protection and enhancement of the area.

3. To protect it from physical deterioration, overcrowding, traffic congestion and other adverse influences.

The plan specifies the type of structures permitted, the density, height limits and the amount of open space required for each type of land use. Open space amounts to 50 per cent at the ground level, with one half of this space to be landscaped.

EXISTING HIGHWAY SYSTEM

The existing highway system serving the Waikiki District is shown on Plate 2. The streets in light lines are local streets primarily for access to abutting properties and are intended for local traffic. The local streets have been included to relate its effect on the major highway system and its impact at the local level. However, with the conversion of the street system to a one-way operation, the traffic load is spread over more streets, and these local streets assume the role of major collector streets. Their impact on the transportation system caused some adverse environmental effects.

Except for Ala Moana Boulevard, a Federal-aid highway, the existing highway system is administered by the City and County of Honolulu. As shown on the plan, the major highway system consists of Ala Moana Boulevard, McCully Street, Kalakaua Avenue, Kuhio Avenue, Ala Wai Boulevard and Kapahulu Avenue.

FUTURE HIGHWAY SYSTEM

The future highway system is set forth in the Waikiki Special Design District Plan and is shown on Plate 3. Since the existing highway system establishes the foundation of the future highway system and these highways must continue in use, the future highway system was developed by the addition of new facilities built onto or added to the existing system with improvements to the present highways of higher standards and designs for future traffic volumes. With these improvements, the future highway system will mitigate at a future time, any possible undesirable traffic congestion.

The future highway system proposes the widening of several streets and the extension or construction of additional new facilities. Streets proposed for widening include Kalia Road, Kalakaua Avenue, Ala Wai Boulevard and Kapahulu Avenue. Kuhio Avenue from Kalulani Avenue is proposed to be widened and extended to connect with Kapahulu Avenue.
TRAFFIC VOLUMES

Traffic volume information and data were obtained from the report "Traffic Summary, Island of Oahu 1973" of the State Department of Transportation and from traffic volume counts collected by the Department of Transportation Services of the City and County of Honolulu. The latest traffic volume counts of the City and County of Honolulu are shown on Tables 2 to 4. These counts were taken for each 15 minute period during the 24 hours of the day.

The "Traffic Summary" is a digest of current and historical data relative to vehicular traffic and travel, and includes a tabulation of the average daily traffic counts at selected stations. Traffic volumes are collected annually making it possible to compare and analyze the growth trends of traffic on the various sections of the highway system.

Table 1 shows the past and present traffic volumes on the major streets of Waikiki at the Lewers Street Screenline for the years 1963 to 1979. Very few traffic counts were taken prior to 1967. In 1967, the average daily traffic on Kalakaua Avenue, then operating as a two-way street, was 37,729. Upon conversion of Kalakaua Avenue and the street system of Waikiki into one-way operation in 1971, the traffic volume on Kalakaua Avenue showed a considerable reduction from the 1967 volume of 37,729 to 30,061 in 1971, a decrease of 7,668 vehicles or 20.3 per cent. One year prior to the conversion, the traffic volume on Kalakaua Avenue in 1970 was only slightly lower than the 1967 traffic volume. In effect, the one-way operation distributed the traffic load over more streets and diverted the ewa bound traffic of Kalakaua Avenue to Kuhio Avenue and Ala Wai Boulevard, primarily Ala Wai Boulevard. Whereas, in 1967, the traffic volume on Ala Wai Boulevard was only 69 per cent of the traffic volume on Kalakaua Avenue, in 1979 the traffic volume on Ala Wai Boulevard equalled the traffic volume on Kalakaua Avenue.

Using the data from the traffic volume counts, the variations in daily time patterns may be illustrated as shown in Plate 4. Unlike most urban or rural highways, the travel pattern on the streets of Waikiki does not depict two distinct peak travel periods, usually one in the morning and one in the afternoon. Instead, the duration of the peak travel period extends for a longer period of time. For Kalakaua Avenue, the peak travel period may be said to begin at 8:00 A.M. and extend over the entire period until 6:00 P.M. in the afternoon. In fact, the morning peak hour does not occur until midday, between 12:00 noon and 1:00 P.M. This longer period represents not only travel to and from home or the hotels but also non-home based travel to Waikiki.

This special characteristics is of greater importance in determining the ability of the streets to accommodate an increased volume of traffic without exceeding the capacities of the streets. The significant difference in peak hour characteristics would result in an equalization and spacing of the traffic load. Resort facilities to accommodate primarily the tourists, therefore, will cause only a mild traffic impact on the highway during the
### Table 1

24 Hour Traffic Volumes
Lewers Street Screenline

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<thead>
<tr>
<th>Year</th>
<th>Ala Wai Blvd.</th>
<th>Kuhio Avenue</th>
<th>Kalakaua Ave.</th>
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<td>32,057</td>
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<td>32,201</td>
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</tr>
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<td></td>
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<td>28,583</td>
<td>18,837</td>
<td>31,891</td>
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<td>1975</td>
<td>30,351</td>
<td>22,647</td>
<td>36,473</td>
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<tr>
<td>1973</td>
<td>30,816</td>
<td>19,725</td>
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<tr>
<td>1972</td>
<td>29,906</td>
<td>22,362</td>
<td>29,950</td>
<td>82,218</td>
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<tr>
<td>1971</td>
<td>29,906*</td>
<td>15,413</td>
<td>30,060*</td>
<td>75,380</td>
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<tr>
<td>1970</td>
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<td>15,118</td>
<td>36,648</td>
<td>78,821</td>
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<tr>
<td>1967</td>
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<td>1963</td>
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* Converted to one way operation

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<th>P.M. Peak</th>
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<th>A.M. Peak</th>
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<td>1979</td>
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<td>2104</td>
<td>988</td>
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<td>933</td>
<td>1218</td>
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<tr>
<td>1977</td>
<td>1986</td>
<td>1764</td>
<td>1128</td>
<td>1345</td>
<td>1688</td>
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<td>2669</td>
<td>1982</td>
<td>1046</td>
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<td>1970</td>
<td>1841</td>
<td>2120</td>
<td>832</td>
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<tr>
<td>1967</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1963</td>
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Table 2
24 Hour Traffic Volume - 1979
Kalakaua Avenue At Lewers Street

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<thead>
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<th>Time Period</th>
<th>No. of Vehicles</th>
<th>Percent of Total</th>
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<tr>
<td>5:00 - 6:00 A.M.</td>
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<tr>
<td>6:00 - 7:00 A.M.</td>
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</tr>
<tr>
<td>7:00 - 8:00 A.M.</td>
<td>1,679</td>
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</tr>
<tr>
<td>8:00 - 9:00 A.M.</td>
<td>1,711</td>
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</tr>
<tr>
<td>9:00 - 10:00 A.M.</td>
<td>1,568</td>
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</tr>
<tr>
<td>10:00 - 11:00 A.M.</td>
<td>1,592</td>
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</tr>
<tr>
<td>11:00 - 12:00 N.</td>
<td>1,731</td>
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</tr>
<tr>
<td>12:00 - 1:00 P.M.</td>
<td>1,733</td>
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</tr>
<tr>
<td>1:00 - 2:00 P.M.</td>
<td>1,676</td>
<td></td>
</tr>
<tr>
<td>2:00 - 3:00 P.M.</td>
<td>1,738</td>
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</tr>
<tr>
<td>3:00 - 4:00 P.M.</td>
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</tr>
<tr>
<td>4:00 - 5:00 P.M.</td>
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</tr>
<tr>
<td>5:00 - 6:00 P.M.</td>
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<tr>
<td>6:00 - 7:00 P.M.</td>
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</tr>
<tr>
<td>7:00 - 8:00 P.M.</td>
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</tr>
<tr>
<td>8:00 - 9:00 P.M.</td>
<td>1,398</td>
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</tr>
<tr>
<td>9:00 - 10:00 P.M.</td>
<td>1,566</td>
<td></td>
</tr>
<tr>
<td>10:00 - 11:00 P.M.</td>
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<tr>
<td>11:00 - 12:00 P.M.</td>
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</tr>
<tr>
<td>12:00 - 1:00 A.M.</td>
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</tr>
<tr>
<td>1:00 - 2:00 A.M.</td>
<td>696</td>
<td></td>
</tr>
<tr>
<td>2:00 - 3:00 A.M.</td>
<td>531</td>
<td></td>
</tr>
<tr>
<td>3:00 - 4:00 A.M.</td>
<td>350</td>
<td></td>
</tr>
<tr>
<td><strong>24 Hour Volume</strong></td>
<td><strong>32,201</strong></td>
<td><strong>100.00</strong></td>
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</table>
### Table 3
24 Hour Traffic Volume - 1979
Kuhio Avenue At Lewers Street

<table>
<thead>
<tr>
<th>Time Period</th>
<th>No. of Vehicles</th>
<th>Percent of 24 Hour Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Movement 1</td>
<td>Movement 2</td>
</tr>
<tr>
<td>4:00 - 5:00 A.M.</td>
<td>126</td>
<td>88</td>
</tr>
<tr>
<td>5:00 - 6:00 A.M.</td>
<td>96</td>
<td>127</td>
</tr>
<tr>
<td>6:00 - 7:00 A.M.</td>
<td>158</td>
<td>394</td>
</tr>
<tr>
<td>7:00 - 8:00 A.M.</td>
<td>202</td>
<td>571</td>
</tr>
<tr>
<td>8:00 - 9:00 A.M.</td>
<td>274</td>
<td>714</td>
</tr>
<tr>
<td>9:00 - 10:00 A.M.</td>
<td>316</td>
<td>642</td>
</tr>
<tr>
<td>10:00 - 11:00 A.M.</td>
<td>326</td>
<td>666</td>
</tr>
<tr>
<td>11:00 - 12:00 N.</td>
<td>335</td>
<td>720</td>
</tr>
<tr>
<td>12:00 - 1:00 P.M.</td>
<td>310</td>
<td>743</td>
</tr>
<tr>
<td>1:00 - 2:00 P.M.</td>
<td>332</td>
<td>678</td>
</tr>
<tr>
<td>2:00 - 3:00 P.M.</td>
<td>343</td>
<td>731</td>
</tr>
<tr>
<td>3:00 - 4:00 P.M.</td>
<td>326</td>
<td>796</td>
</tr>
<tr>
<td>4:00 - 5:00 P.M.</td>
<td>285</td>
<td>887</td>
</tr>
<tr>
<td>5:00 - 6:00 P.M.</td>
<td>271</td>
<td>820</td>
</tr>
<tr>
<td>6:00 - 7:00 P.M.</td>
<td>325</td>
<td>722</td>
</tr>
<tr>
<td>7:00 - 8:00 P.M.</td>
<td>290</td>
<td>564</td>
</tr>
<tr>
<td>8:00 - 9:00 P.M.</td>
<td>305</td>
<td>547</td>
</tr>
<tr>
<td>9:00 - 10:00 P.M.</td>
<td>344</td>
<td>516</td>
</tr>
<tr>
<td>10:00 - 11:00 P.M.</td>
<td>349</td>
<td>575</td>
</tr>
<tr>
<td>11:00 - 12:00 P.M.</td>
<td>361</td>
<td>386</td>
</tr>
<tr>
<td>12:00 - 1:00 A.M.</td>
<td>270</td>
<td>269</td>
</tr>
<tr>
<td>1:00 - 2:00 A.M.</td>
<td>241</td>
<td>175</td>
</tr>
<tr>
<td>2:00 - 3:00 A.M.</td>
<td>248</td>
<td>112</td>
</tr>
<tr>
<td>3:00 - 4:00 A.M.</td>
<td>138</td>
<td>63</td>
</tr>
<tr>
<td>24 Hour Volume</td>
<td>6,571</td>
<td>12,506</td>
</tr>
</tbody>
</table>
# Table 4
24 Hour Traffic Volume - 1979
Ala Wai Boulevard At Lewers Street

<table>
<thead>
<tr>
<th></th>
<th>No. of Vehicles</th>
<th>Percent of 24 Hour Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Movement</td>
<td>Movement</td>
</tr>
<tr>
<td>4:00 - 5:00 A.M.</td>
<td>208</td>
<td></td>
</tr>
<tr>
<td>5:00 - 6:00 A.M.</td>
<td>459</td>
<td></td>
</tr>
<tr>
<td>6:00 - 7:00 A.M.</td>
<td>1,300</td>
<td></td>
</tr>
<tr>
<td>7:00 - 8:00 A.M.</td>
<td>2,079</td>
<td></td>
</tr>
<tr>
<td>8:00 - 9:00 A.M.</td>
<td>1,721</td>
<td></td>
</tr>
<tr>
<td>9:00 - 10:00 A.M.</td>
<td>1,577</td>
<td></td>
</tr>
<tr>
<td>10:00 - 11:00 A.M.</td>
<td>1,669</td>
<td></td>
</tr>
<tr>
<td>11:00 - 12:00 N.</td>
<td>1,771</td>
<td></td>
</tr>
<tr>
<td>12:00 - 1:00 P.M.</td>
<td>1,665</td>
<td></td>
</tr>
<tr>
<td>1:00 - 2:00 P.M.</td>
<td>1,709</td>
<td></td>
</tr>
<tr>
<td>2:00 - 3:00 P.M.</td>
<td>1,867</td>
<td></td>
</tr>
<tr>
<td>3:00 - 4:00 P.M.</td>
<td>2,099</td>
<td></td>
</tr>
<tr>
<td>4:00 - 5:00 P.M.</td>
<td>2,104</td>
<td></td>
</tr>
<tr>
<td>5:00 - 6:00 P.M.</td>
<td>1,952</td>
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</tr>
<tr>
<td>6:00 - 7:00 P.M.</td>
<td>1,548</td>
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</tr>
<tr>
<td>7:00 - 8:00 P.M.</td>
<td>1,276</td>
<td></td>
</tr>
<tr>
<td>8:00 - 9:00 P.M.</td>
<td>1,086</td>
<td></td>
</tr>
<tr>
<td>9:00 - 10:00 P.M.</td>
<td>1,344</td>
<td></td>
</tr>
<tr>
<td>10:00 - 11:00 P.M.</td>
<td>1,336</td>
<td></td>
</tr>
<tr>
<td>11:00 - 12:00 P.M.</td>
<td>1,080</td>
<td></td>
</tr>
<tr>
<td>12:00 - 1:00 A.M.</td>
<td>752</td>
<td></td>
</tr>
<tr>
<td>1:00 - 2:00 A.M.</td>
<td>564</td>
<td></td>
</tr>
<tr>
<td>2:00 - 3:00 A.M.</td>
<td>377</td>
<td></td>
</tr>
<tr>
<td>3:00 - 4:00 A.M.</td>
<td>314</td>
<td></td>
</tr>
<tr>
<td>24 Hour Volume</td>
<td>32,057</td>
<td></td>
</tr>
</tbody>
</table>
peak commuting hours. Typically, the peak commuting hours on a highway are hours of subdued activity at a resort facility. The peak hour of activities at a resort facility occurs during the daytime between the peak commuting hours of a highway or during the evening hours, with the evening peak hour being a higher percentage of the daytime peak hour.

Table 5 shows the traffic volumes for Liliuokalani Avenue which serves the proposed project. As indicated in Table 5, the peak hour volume for Liliuokalani Avenue is only 416 vehicles during the afternoon peak hour. Being a one way street with a right of way width of 60 feet and pavement width varying from 32 feet to 40 feet, Liliuokalani Avenue has considerable excess capacity and will be able to accommodate the proposed development without any adverse traffic effects as explained in the section under "Traffic Generation".

Inasmuch as it is the opinion of many people that critical traffic conditions in the Waikiki District usually occur on weekends, the Department of Transportation Services of the City and County of Honolulu in its traffic survey of the Waikiki District conducted a 3-day weekend traffic volume count for Ohua Avenue, a nearby street approximately one block Waikiki of Liliuokalani Avenue. These traffic volume counts will determine the characteristics and variations in traffic flow on a Friday, Saturday and Sunday. The counts were taken for each 15 minute period and are shown on Table 6 on an hourly basis only for the 12 hour period from 12:00 Noon to 12:00 Midnight for each weekend day.

It should be pointed out that weekend traffic in the Waikiki District reflects recreational and social travel. An analysis of Table 6 indicates that on Saturdays, the hourly volumes are lower than the weekday traffic volumes for most of the day until approximately 5:00 P.M. After 5:00 P.M. and during the evening hours, the hourly volumes are higher and more uniform and continuous until approximately midnight. The Sunday hourly traffic volumes are even lower than the weekday and Saturday traffic volumes.

The Saturday peak hour volume occurs at approximately the same time as the weekday peak hour between 5:00 P.M. and 6:00 P.M. and is only slightly higher than the weekday peak hour volume. The significant difference is that on a weekday, the afternoon peak hour volume represents commuting traffic, whereas the Saturday peak hour volume represents recreational and social travel. The Saturday peak hour volume, therefore, is less critical than the weekday peak hour volume and is usually disregarded. For this reason, traffic volumes used for the design of highways are based primarily on average daily traffic and weekday peak hour volumes.

FUTURE TRAFFIC VOLUMES

The various established methods of traffic projection do not yield a reasonably accurate forecast of future traffic volumes. As an example, the Oahu Transportation Study projection of future traffic volumes are extremely conservative. The Study, completed in 1967, indicated that by
<table>
<thead>
<tr>
<th>Time</th>
<th>Movement 1</th>
<th>Movement 2</th>
<th>Total</th>
<th>Percent of 24 Hour Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>4:00 - 5:00 A.M.</td>
<td>81</td>
<td>66</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5:00 - 6:00 A.M.</td>
<td>71</td>
<td>58</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6:00 - 7:00 A.M.</td>
<td>237</td>
<td>138</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7:00 - 8:00 A.M.</td>
<td>267</td>
<td>209</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8:00 - 9:00 A.M.</td>
<td>336</td>
<td>341</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9:00 - 10:00 A.M.</td>
<td>423</td>
<td>331</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:00 - 11:00 A.M.</td>
<td>461</td>
<td>307</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11:00 - 12:00 N.</td>
<td>506</td>
<td>307</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12:00 - 1:00 P.M.</td>
<td>493</td>
<td>306</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1:00 - 2:00 P.M.</td>
<td>517</td>
<td>294</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2:00 - 3:00 P.M.</td>
<td>550</td>
<td>314</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3:00 - 4:00 P.M.</td>
<td>565</td>
<td>382</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4:00 - 5:00 P.M.</td>
<td>588</td>
<td>416</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5:00 - 6:00 P.M.</td>
<td>637</td>
<td>358</td>
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<td></td>
</tr>
<tr>
<td>6:00 - 7:00 P.M.</td>
<td>468</td>
<td>330</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7:00 - 8:00 P.M.</td>
<td>371</td>
<td>303</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8:00 - 9:00 P.M.</td>
<td>304</td>
<td>299</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9:00 - 10:00 P.M.</td>
<td>307</td>
<td>297</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:00 - 11:00 P.M.</td>
<td>394</td>
<td>328</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11:00 - 12:00 P.M.</td>
<td>382</td>
<td>395</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12:00 - 1:00 A.M.</td>
<td>270</td>
<td>212</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1:00 - 2:00 A.M.</td>
<td>181</td>
<td>150</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2:00 - 3:00 A.M.</td>
<td>133</td>
<td>137</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3:00 - 4:00 A.M.</td>
<td>97</td>
<td>108</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24 Hour Volume</td>
<td>8,639</td>
<td>6,386</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No. of Vehicles</td>
<td>No. of Vehicles</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------------</td>
<td>----------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Movement 1</td>
<td>Movement 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4:00 - 5:00 A.M.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5:00 - 6:00 A.M.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6:00 - 7:00 A.M.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7:00 - 8:00 A.M.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8:00 - 9:00 A.M.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9:00 - 10:00 A.M.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:00 - 11:00 A.M.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11:00 - 12:00 N.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12:00 - 1:00 P.M.</td>
<td>489</td>
<td>466</td>
<td>462</td>
<td>248</td>
</tr>
<tr>
<td>1:00 - 2:00 P.M.</td>
<td>532</td>
<td>477</td>
<td>441</td>
<td>225</td>
</tr>
<tr>
<td>2:00 - 3:00 P.M.</td>
<td>564</td>
<td>499</td>
<td>439</td>
<td>290</td>
</tr>
<tr>
<td>3:00 - 4:00 P.M.</td>
<td>631</td>
<td>527</td>
<td>451</td>
<td>295</td>
</tr>
<tr>
<td>4:00 - 5:00 P.M.</td>
<td>744</td>
<td>561</td>
<td>568</td>
<td>307</td>
</tr>
<tr>
<td>5:00 - 6:00 P.M.</td>
<td>809</td>
<td>602</td>
<td>601</td>
<td>271</td>
</tr>
<tr>
<td>6:00 - 7:00 P.M.</td>
<td>535</td>
<td>522</td>
<td>376</td>
<td>232</td>
</tr>
<tr>
<td>7:00 - 8:00 P.M.</td>
<td>420</td>
<td>442</td>
<td>308</td>
<td>245</td>
</tr>
<tr>
<td>8:00 - 9:00 P.M.</td>
<td>398</td>
<td>427</td>
<td>304</td>
<td>161</td>
</tr>
<tr>
<td>9:00 - 10:00 P.M.</td>
<td>438</td>
<td>491</td>
<td>325</td>
<td>195</td>
</tr>
<tr>
<td>10:00 - 11:00 P.M.</td>
<td>561</td>
<td>667</td>
<td>400</td>
<td>208</td>
</tr>
<tr>
<td>11:00 - 12:00 M.N.</td>
<td>616</td>
<td>697</td>
<td>367</td>
<td>157</td>
</tr>
<tr>
<td>12:00 - 1:00 A.M.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1:00 - 2:00 A.M.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2:00 - 3:00 A.M.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3:00 - 4:00 A.M.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 Hour Volume</td>
<td>6,737</td>
<td>6,378</td>
<td>5,042</td>
<td>2,834</td>
</tr>
<tr>
<td>24 Hour Volume</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
1985, the 24 hour volume on Kuhio Avenue between Kaiulani Avenue and Kapahulu Avenue will total 8,000 vehicles. It must be pointed out that the projection was made on the assumption that the proposed Fixed Guideway Rapid Transit System would be in operation by 1995. In contrast, the present traffic count on Kuhio Avenue (1975) for the existing improved section from Kalakaua Avenue to Kaiulani Avenue averages more than 21,000 vehicles per day.

Traffic projections based on growth trends of traffic volumes for major streets in the City and County of Honolulu crossing the screenlines give a more realistic and reasonably accurate method of estimating future traffic volumes. Since highway facilities are more permanent than the land uses, traffic projections should be high for sound planning so that the highway system will be able to accommodate changing requirements and unpredictable future land uses.

From traffic counts obtained from traffic surveys conducted by the State Department of Transportation, traffic crossing the Manoa-Palolo Drainage-Ala Wai Canal Screenline, which includes the Waikiki District, increased at the rate of 5.9 per cent per year over the past decade from 1960 to 1970. In comparison, traffic volumes across the Kalihi Stream Screenline increased at a considerably higher rate of 10.5 per cent per year over the same period.

For the Waikiki District only, traffic counts obtained from various traffic surveys conducted by the Department of Transportation Services of the City and County of Honolulu (Table 1) show that traffic crossing the Lewers Street Screenline extending from Kalakaua Avenue to Ala Wai Boulevard increased at an even lower rate of 1.32 per cent per year for the period from 1967 to 1975. It should be emphasized that during this period, the Waikiki District experienced the highest level of activity in the construction of hotels, condominiums and commercial facilities. The growth in traffic volumes for any other period, therefore, cannot be expected to equal or even keep pace with the growth in traffic volumes for the period from 1967 to 1975. The traffic volumes through the Lewers Street Screenline beyond 1975 support this contention.

In 1975, the traffic volume through the Lewers Street Screenline was a high of 89,471 vehicles. One year later in 1976, the year that the Waikiki Special Design District Ordinance was enacted limiting the growth and development of Waikiki, the screenline traffic volume decreased to 79,311 vehicles. By 1979 the screenline traffic volume increased to only 83,335 vehicles, considerably less than the 1975 screenline volume of 89,471 vehicles. The 1979 screenline volume of 83,335 vehicles is even less than the 1973 screenline volume of 84,034 vehicles. A significant change in the screenline traffic flow is the decrease in the traffic volume on Kalakaua Avenue and the increase in traffic volume on Ala Wai Boulevard.

With the establishment of the Waikiki Special Design District regulating land use and growth, traffic crossing the Lewers Street Screenline
should be considerably lower than the present rate of 1.32 per cent per year. With a 66.9 per cent reduction in hotel rooms than is permitted under existing zoning, the rate of growth of traffic should not exceed 0.44 per cent or less than one-half per cent per year. The 0.44 per cent increase per year is equivalent to an increase of only 8.8 per cent or 7,873 vehicles crossing the screenline within the 20 year period from 1975 to 1995.

To assure that a sufficient margin of safety is built into the analysis, the higher rate of growth of 1.32 per cent per year will be used so that the traffic projection will still be valid for the future. At the rate of growth of 1.32 per cent per year, the traffic volume crossing the screenline will increase by 26.4 per cent or 23,620 vehicles within the 20-year period from 1975 to 1995 for a total screenline volume of 113,091 vehicles. Assuming the worst situation whereby the increase in traffic will be equally distributed between Kuhio Avenue and Ala Wai Boulevard, the capacities of these streets will be able to accommodate the additional traffic volumes.

The existing capacities of the major streets in Waikiki may be considered to be equal to its peak hour volumes. The 1975 peak hour volumes at the intersections are as follows:

<table>
<thead>
<tr>
<th>Ala Wai Blvd.</th>
<th>Kuhio Avenue</th>
<th>Kalakaua Avenue</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,913</td>
<td>1,345</td>
<td>2,200</td>
<td>5,458</td>
</tr>
</tbody>
</table>

These capacity figures, however, are conservative when compared to the maximum observed traffic volumes recorded as early as 1961 on similar classifications of highways throughout the United States. On four-lane one-way highways, (Ala Wai Boulevard, for example) the highest hourly volumes ranged from 653 vehicles per lane to 958 vehicles per lane. These are average volumes per lane, so that the total hourly volumes for the four-lanes ranged from 2,612 vehicles to 3,832 vehicles. On five-lane one-way highways, the highest hourly volumes ranged from 477 vehicles per lane to 619 vehicles per lane for a total hourly volume ranging from 2,385 to 3,095 vehicles. It may be pointed out that one of the major streets in the United States reporting the highest hourly volume in 1961 on a five-lane one-way highway is South King Street in Honolulu, Hawaii. The section referred to is South King Street in the Civic Center between Richards Street and Kapiolani Boulevard Extension. In 1961, South King Street recorded an average volume of 619 vehicles per hour per lane and ADT of 30,000 vehicles. From traffic counts conducted by the Department of Transportation Services of the City and County of Honolulu in 1972, South King Street recorded a
total peak hour volume of 3,521 vehicles for an average volume of 704 vehicles per hour per lane, and an ADT of 37,387 vehicles.

There is justification to assume that the actual capacities of the major streets in the Waikiki District will be within the range of 653 to 958 vehicles per hour per lane as observed in 1961 on similar classifications of highways throughout the United States. That the existing capacity is very conservative and the actual capacity will be considerably higher is substantiated by past and present traffic volumes. It must also be emphasized that traffic volumes used for establishing the numerical values of the different types of roadways were determined from studies of many highways under a variety of conditions. Thus, it would be impossible to state that the volume measured or calculated is the absolute maximum that could be carried, inasmuch as maximum volumes observed at different times at one point show a range of values. The capacity values obtained should, therefore, be considered as the average maximum volume and need to be adjusted to actual roadway conditions inasmuch as there are too many variables.

Assuming the 26.4 per cent increase in traffic volume will occur by 1995, the peak hour volume at the screenline will rise from 5,458 to 6,899. With equal distribution between any two combinations of streets, Kalakaua Avenue and Kuhio Avenue or Kuhio Avenue and Ala Wai Boulevard, each street must be able to accommodate a peak hour volume of 3,450 vehicles. Inasmuch as all the major streets are or can be converted to a four-lane one-way street, their actual total capacities for each street will range from 2,612 to 3,832 per hour, based on the assumption that the actual capacities of the major streets in the Waikiki District will be within the range of 653 to 958 vehicles per hour per lane as observed in 1961 on similar classifications of highways throughout the United States. The existing highway system, therefore, will be able to accommodate the present as well as the future traffic volumes, with no consideration being given to the beneficial consequences resulting from the establishment of the Waikiki Special Design District.

The future highway system will mitigate at a future time, any possible undesirable traffic congestion. Other factors also will influence and mitigate at a future time any possible undesirable traffic congestion. These include the following:

1. Should visitor arrivals exceed the capacity of the ultimate number of hotel rooms limited by the Waikiki Special Design District, much of the living units occupied by permanent residents will be converted to tourist use. Tourists own or drive very few automobiles.

2. Since traffic seeks its own level, much as water, the motoring public will find its own alternate route and avoid the Waikiki District.

3. The energy crisis will encourage the trend towards smaller cars and the use of public transportation.
TRIP GENERATION

Trip generation data or the number of trips generated by the project will make it possible to determine whether significant adverse effects will be produced on the highway system, the neighborhood and the community. The data will also determine how many additional cars can be accommodated by the highway network. This data may also be considered in relation to air quality and traffic noise.

It is a known fact that the dwelling unit is the primary origin of all traffic movements and that approximately 80 per cent of all urban area trips are made either from or to the home. The traffic generated by the proposed development, therefore, is related to the number of dwelling units in the project and can be estimated with reasonable accuracy from data relating to traffic generating characteristics appropriate for the area or district. For residential land uses, the trip and household characteristics must be analyzed since these are the primary factors affecting traffic flow and volume.

To assure that a sufficient margin of safety is built into the analysis, higher than normal traffic generation figures will be used so that the traffic projections will still be valid for the future. Tables 9 and 10 show the trip and household characteristics that are assumed to be typical of the development. Using these various factors, it is possible to analyze and evaluate traffic conditions that may be expected to occur on the highway system and thus measure the present and future demand for service.

Table 8
Dwelling Characteristics

<table>
<thead>
<tr>
<th>Dwelling Unit Type</th>
<th>No. of Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Studio</td>
<td>120</td>
</tr>
</tbody>
</table>

Table 9
Household Characteristics

<table>
<thead>
<tr>
<th>Auto Per Dwelling Unit</th>
<th>Persons Per Dwelling Unit</th>
<th>Employed Persons Per Dwelling Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.3</td>
<td>2.0</td>
<td>1.8</td>
</tr>
</tbody>
</table>
Table 10
Trip Characteristics

<table>
<thead>
<tr>
<th>Trips Per Person</th>
<th>Trips To Work Per Dwelling Unit</th>
<th>Trips Per Dwelling Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td>0.9</td>
<td>4.2</td>
</tr>
</tbody>
</table>

Table 11
Trip Generation

<table>
<thead>
<tr>
<th>No. of Units</th>
<th>No. of Auto</th>
<th>No. of Employed Persons</th>
<th>Work Trips</th>
<th>24 Hour Volume</th>
<th>Peak Hour Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>120</td>
<td>156</td>
<td>216</td>
<td>108</td>
<td>504</td>
<td>65</td>
</tr>
</tbody>
</table>

Note: The decrease in parking stalls to 136 will reduce the total number of autos.

On the basis of these factors, the 24 hour and peak hour volumes were developed as shown in Table 11. The 120 dwelling units will generate a 24 hour volume of 504 trips and a peak hour volume of 65 trips.

The average rate of the peak hour flow of 65 vehicles from the development is equal to 1.08 vehicles per 60 seconds. This peak hour flow of only 65 vehicles from the development is insignificant when compared to the capacity of a local street. As a comparison the capacity of a local two-way street with a right of way width of 44 feet, with no parking and at grade intersection is approximately 400 vehicles per hour in one direction and 600 for both directions of travel, assuming a cycle split of 60 per cent assigned to the main highway.

However, Liliuokalani Avenue is a one-way street with a right of way width of 60 feet and pavement width varying from 32 feet to 40 feet. The existing pavement width is 32 feet although the present City and County standard is a 40 foot pavement width for a 60 foot right of way. Thus, as each development occurs, the City and County requires the owner or developer to widen the pavement on his side of the street or approximately 4 feet on each side to conform with the City and County standard. With the rapid development of the Waikiki District, it is expected that the entire length of Liliuokalani Avenue from Kuhio Avenue to Ala Wai Boulevard will be widened to a uniform 40 foot pavement width within the near future.
Considering the worst case condition of Liliuokalani Avenue having only a 32 foot pavement width, the capacity of Liliuokalani Avenue is approximately 625 vehicles per hour total at level of Service C. With a 36 foot pavement width, the capacity is 780 vehicles per hour and with a 40 foot pavement width, the capacity increases to approximately 925 vehicles per hour total. The present peak hour volume on Liliuokalani Avenue is 416 vehicles per hour. Adding the peak hour volume of 65 vehicles generated by the proposed development, the peak hour volume on Liliuokalani Avenue will total 481 vehicles. Liliuokalani Avenue, therefore, has considerable excess capacity and will be able to accommodate the proposed development without any adverse traffic effects.

TRAFFIC CIRCULATION

A traffic study was conducted by the Department of Transportation Services of the City and County of Honolulu on Wednesday, March 18, 1970 from 3:00 P.M. to 6:00 P.M. to determine the proportion of traffic passing through Waikiki. The study indicated that of the 22,300 vehicles that crossed the Ala Wai Screenline entering and leaving Waikiki during the three-hour study, only 2,600 or 12 per cent were through traffic. Furthermore, 71 per cent of the vehicles that entered the area did not exit within 20 minutes and vehicles that entered and exited Waikiki over the Ala Wai Canal constituted only 14 per cent of the total. Thus, the majority of the vehicles had origins and destinations within Waikiki. Through traffic, therefore, was not a major problem, contrary to common belief.

PARKING

In accordance with the amended Comprehensive Zoning Code, at least one parking space is required for each dwelling unit or a total of 120 parking spaces for the proposed development. However, 136 parking spaces, more than required by the Code, will be provided for the apartment tower with its 120 dwelling units. Proposed vehicular access will be off Tusitala Street, Liliuokalani Avenue and Mountain View Drive. Both Tusitala Street and Mountain View Drive are dead-end streets.

The number of parking spaces provided should also be valid for the future, taking into consideration the energy crisis, the trend towards fewer and small cars and the increased availability, improvement and use of public transportation.

MASS TRANSPORTATION

The City's "desirable" service guideline for accessibility to buses is five minutes walking distance or the equivalent distance of one-
fourth of a mile. Thus, public mass transportation service is available on Kalakaua Avenue to serve the project. There are several bus routes on Kalakaua Avenue. These are: Route 2, Waikiki-Liliha; Route 5, Manoa-Waikiki; and Route 8, Hickam-Waikiki. Average headway is 4 minutes, peak hour and 5 minutes, off-peak. There are two other bus routes that service the Waikiki District. Route 4, Nuuanu-Punahou travels makai on McCully Street, left Kalakaua Avenue, left Kuhio Avenue. The return route is from Kuhio Avenue, right Kalakaua Avenue, right Pau Street, left Ala Wai Boulevard, right McCully Street, right Kapiolani Boulevard. Average headway is 15 minutes, peak and off-peak periods.

Route 57 is from Ala Moana Center, travels along Ala Moana Boulevard, passes through Waikiki on Kalakaua Avenue, turns left on Monsarrat Avenue to Diamond Head Road, left into Eighteenth Avenue and then proceeds on Kilauea Avenue to Kahala. The return route is the same, except in the opposite direction. Average headway is 30 minutes, peak and off-peak periods.

With these many bus routes, adequate mass transportation service is available to serve the Waikiki District and the project area. There is now increasing dependence on the use of public transportation. The energy crisis and the consequent enforced use of public transportation and other modes of travel should not only improve the environment of the Waikiki District, but also bring about considerable relief to the present and future traffic problems.

CONCLUSION

Analyzing the various factors, it may be concluded that the proposed project will enhance the aesthetic, environmental and economic aspects of the Waikiki District and provide a service to the community with a minimum disruption of environmental activities. The existing highway system will be able to accommodate the present and future traffic volumes, with no consideration being given to the beneficial consequences resulting from the establishment of the Waikiki Special Design District.