

OEQC LIBRARY

**ADDENDUM TO THE
FINAL
ENVIRONMENTAL
IMPACT STATEMENT**
for the proposed
YACHT HARBOUR PLAZA
Waikiki, Oahu, Hawaii
January 1985

Developer: Jack E. Myers
Architect: Welton Becket Associates
Environmental Consultants:
Environmental Communications, Inc.

OA
334A
385

NOTICE

ALL reference material borrowed from this library will be on a 30-day loan period, limited to ONE RENEWAL ONLY.

If borrowed material is not returned when DUE, is DAMAGED, or LOST, there will be a REPRODUCTION CHARGE OF 25¢ PER PAGE.

OEQC LIBRARY - PHONE 548-6915
~~560 HAIKRAUWILA STREET ROOM 301~~

9
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100

OEQC LIBRARY

**ADDENDUM TO THE
FINAL
ENVIRONMENTAL
IMPACT STATEMENT**
for the proposed
YACHT HARBOUR PLAZA
Waikiki, Oahu, Hawaii
January 1985

THIS ADDENDUM IS A REVISION TO THE MAIN BODY OF THE FINAL EIS (SECTIONS I - VIII), AND IS INTENDED TO SUPPLANT THAT PART OF THE FINAL EIS DOCUMENT. THE OTHER PARTS OF THE FINAL EIS DOCUMENT REMAIN UNCHANGED: SECTION IX ("ORGANIZATIONS AND PERSONS CONSULTED DURING THE EIS AND REPRODUCTION OF COMMENTS AND RESPONSES MADE"); THE APPENDICES (TECHNICAL REPORTS); AND THE THREE (3) OVERSIZED EXHIBITS PROVIDED IN THE REAR COVER POCKET OF THE FINAL EIS (VIEW PLANE ANALYSES).



F.J. RODRIGUEZ
AUTHORIZED AGENT FOR JACK E. MYERS

Developer: Jack E. Myers
Architect: Welton Becket Associates
Environmental Consultants:
Environmental Communications, Inc.

TABLE OF CONTENTS

<u>Section</u>	<u>Title</u>	<u>Page</u>
I.	SUMMARY	I-1
II.	PROJECT DESCRIPTION	II-1
	A. Project Location	II-1
	B. Statement of Objectives	II-4
	C. General Description of the Action's Technical, Economic, Social and Environmental Characteris- tics Design Characteristics	II-5
	Economic Characteristics	II-14
	Social Characteristics	II-21
	D. Funding and Phasing	II-21
III.	ENVIRONMENTAL SETTING AND PROBABLE IMPACTS	III-1
	A. Geographic Characteristics	III-1
	Topography	III-1
	Soils	III-2
	Climate	III-3
	B. Biological Characteristics	III-4
	Flora	III-4
	Fauna	III-4
	C. Hydrological Characteristics	III-6
	D. Traffic	III-8
	Traffic Count Data	III-8
	Field Investigation	III-9
	Trip Generation	III-10
	Traffic Impact Summary	III-13
	E. Air Quality	III-14
	Present Air Quality	III-14
	Direct Air Quality Impact of Project Construction	III-17
	Indirect Air Quality Impact of Decreased Traffic	III-17
	F. Noise Quality	III-18
	Existing Noise Environment	III-19
	Predicted Noise Impacts	III-20
	G. Public Utilities and Services	III-23
	Water	III-23
	Sewer System	III-24
	Site Drainage	III-25
	Other Utilities	III-26
	H. Service Facilities	III-27
	Fire Protection Services	III-27
	Police Protection Services	III-27
	Hospital and Medical Care	III-28
	Schools and Public Recreational Facilities	III-28
	I. Historic and Archaeological Sites	III-31
	J. Socio-Economic Characteristics	III-32

Table of Contents
(continued)

<u>Section</u>	<u>Title</u>	<u>Page</u>
IV.	RELATIONSHIP TO EXISTING LAND USE, POLICIES, PLANS AND CONTROLS	IV-1
	A. Land Uses	IV-1
	B. Special Management Area	IV-1
	C. Park Dedication	IV-15
	D. Reflective Glass	IV-15
	E. Waikiki Special Design District	IV-17
V.	ANY PROBABLE ADVERSE ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED AND MITIGATION MEASURES PROPOSED TO MINIMIZE IMPACT	V-1
VI.	ALTERNATIVES TO THE PROPOSED ACTION	VI-1
VII.	THE RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF MAN'S ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG- TERM PRODUCTIVITY AND THE COMMITMENT OF RESOURCES	VII-1
VIII.	AN INDICATION OF WHAT OTHER INTERESTS AND CONSIDERATIONS OF GOVERNMENTAL POLICIES ARE THOUGHT TO OFFSET THE ADVERSE ENVIRONMENTAL EFFECTS OF THE PROPOSED ACTION	VIII-1
IX.	ORGANIZATIONS AND PERSONS CONSULTED DURING THE EIS COMMENTS AND RESPONSES MADE	IX-1
APPENDIX I	Traffic Report	
APPENDIX II	Air Quality Analysis	
APPENDIX III	Evaluation of Potential Noise Impact	

LIST OF FIGURES

<u>Figure</u>		<u>Page</u>
1	Project Location	II-2
2	Tax Map Key	II-3
3	Model Perspective	II-6
4	Model Perspective	II-7
5	Preliminary Site Plan	II-8
6	Alternative Site Plan	II-9
7	Pedestrian Access	II-11
8	Public Access	II-12
9	Vehicular Access	II-13
10	Landscape Concept Plan	II-15
11	Typical Section (Mauka)	II-16
12	Typical Section (Makai)	II-17
13	Flood Zone Designation	III-7
14	Existing Parking on State Lands	III-30
15	Waikiki Census Tracts	III-33
16	Zoning Map	IV-2
17	Shadow Study	IV-6
18	Exterior Finish-Tower	IV-18
18-A	Sun Reflection Study	IV-20
18-B	Sun Reflection Study	IV-21
18-C	Sun Reflection Study	IV-22
18-D	Sun Reflection Study	IV-23
19	Waikiki Special Design District	IV-24
20	Angular Towers	IV-26
21	Curvilinear Towers	IV-28
22	Single Curvilinear Structure	IV-30
23	Scheme 1	IV-31
24	Scheme 2	IV-32
25	Scheme 3	IV-33
26	View Study	IV-35
27	View Study	IV-36
28	View Corridor	IV-37

LIST OF TABLES

<u>Table</u>		<u>Page</u>
1	Plant Inventory	III-5
2	Trip Generation Summary	III-11
3	Summary of Air Pollutant Measurements At Nearest Monitoring Stations	III-15
4	Waikiki Census Data	III-34
5	Organizations and Agencies Consulted During the EIS preparation Notice	IX
6	Organizations and Commenting on the Draft EIS	IX

LIST OF EXHIBITS

<u>Exhibit</u>		
1	Letter from Department of Accounting and General Services	IV-3
2	Letter from Department of Transportation, Harbors Division	IV-4

I. SUMMARY

I. SUMMARY

Developer/Applicant: Jack E. Myers

Approving Agency: Department of Land Utilization

Agent for the EIS: Environmental Communications, Inc.

Architect: Welton Becket Associates

Project Location: 1697 Ala Moana Boulevard
Waikiki, Honolulu, Hawaii

Tax Map Key: 2-6-10: 10, 6
2-6-10: 3 and portion of roadway
(State owned lands)

Project Name: Yacht Harbour Plaza

A. Proposed Action

The developer and applicant, Jack E. Myers, proposes to construct a mixed-use hotel and residential condominium comprised of 408 hotel guest rooms and 174 condominium apartments respectively. The 350 foot curvilinear structure will be located on a 2 1/2 acre site at the Makai Ewa corner of the Waikiki Special Design District. Specifically, the rectangular project site is bounded by Ala Moana Boulevard, the Ilikai Marina hotel condominium and a State of Hawaii owned service road on the south and west bounds along the Ala Wai Boat Harbor. Portions of the State owned Service Road are being negotiated for at the present time for use in the Floor Area Ratio (F.A.R.) calculations. Also certain design features such as the

water fountain amenity and the curbs, sidewalks, and entry-exit areas are planned on State lands. The State portions consist of approximately 21,637 s.f.

The hotel portion of the tower will consist of 29 single-loaded floors atop a five-story base of lobbies, parking garage and common areas provided for the entire project.

The hotel floors are separated linearly from the condominium portion of the project by a solid concrete partition wall. The exterior of the structure will be encased with low reflectivity glass, colored in a mauve tone within code requirements.

A typical hotel floor would contain approximately 12 guest rooms, ranging in size from 435 to 450 square feet. Suites will range from 600 to 900 square feet.

The condominium, as contemplated, will contain one-bedroom and two-bedroom units ranging from approximately 840 to 975 square feet and 930 to 1450 square feet respectively. All condominium amenities including an extensive recreation deck, pool, jacuzzi and cabana are currently planned to be on the same level as the hotel amenities.

All public access is designed to be on the makai side of the structure facing the Ala Wai Boat Harbor. An expansive porte cochere for both the hotel and condominium entrances will be open towards the yacht harbor directing traffic away from Ala Moana Boulevard. A State-owned roadway, which was originally designed as an internal harbor road for harbor users, will be utilized under preliminary design plans as the major access and egress road for the proposed project.

The hotel, in addition to some 408 guest rooms, will provide meeting and ballroom facilities along with a fine gourmet restaurant. There will also be a lounge,discotheque, lobby bar, and poolside bar and grill with outdoor cafe services.

The design concept and planning theme which has been developed by the project architect utilizes portions of State-owned lands for certain architectural design features and open space requirements. These State-owned lands are currently under negotiation therefore, two design alternatives were developed. The focus of this document is on a preliminary design which utilizes the aforementioned lands. An alternative design, which is completely within the developer's properties bounds, is also included in this document as an alternative design.

The site is in urban use and is presently designated as public facility. Since 1958 the site has housed the Kaiser Foundation Hospital and outpatient clinic. The hospital, which is scheduled to move to the newly built Moanalua facility and proposed out-patient clinic on Pensacola and King streets, will vacate in early 1986 allowing the site to revert back to its underlying resort zoning.

The demolition of the existing structure and construction of the proposed hotel condominium will take place in one phase with no additional phases. Total development and construction cost is approximately 124 million dollars.

B. Evaluation of Major Impacts

1. Physical Impacts. The impact of construction is normally adverse; however, it is not a long-term impact and is

subject to many standards, codes, and regulations. A review of noise and air quality impacts indicate that no significant effects related to these concerns will likely occur.

Vehicular traffic will be accommodated as indicated in the traffic impact study. The site is bounded by major thoroughfares which can adequately serve the expected number of vehicles generated by the proposed uses on the project site. The preliminary project plan proposes the use of an internal harbor road as the principal access road for the project.

Air Quality will be improved due to the decrease in traffic volume generated by the proposed facility.

Noise. The building, once constructed, will not generate excessive noise. The commercial use of the building and its fully enclosed business spaces will not add to the ambient noise environment. Noise from the parking garage in form will be mitigated through careful design with the an emphasis on sound attenuation.

The visual environment will be affected. The building will be noticeable from various streets and other structures. However, the height will be within the zoning regulations and the WSDD review will include height considerations. In the surrounding area, there are a significant number of buildings with heights of 300'+, the proposed building will not be inconsistent with these high-rise developments. Unobstructed pedestrian and vehicular views are currently limited through a small parking area located between the Ilikai Marina and the Kaiser facility. The remainder of the areas fronting Ala Moana Boulevard contain multi-story structures and a stone wall along the Ewa end of the site.

2. Economic Impacts. A wide range of economic impacts will occur. These include direct and indirect income generated by the project, employment, property taxes, and increased governmental expenditures for services and facilities on and for the project. For the most part, long-term economic impacts are expected to be very beneficial to the State economy.
3. Social Impacts. There will be no dislocations or job losses due to the development of the proposed project. The project will be a significant employment generator and is consistent and compatible with surrounding uses.

Public services and facilities are essentially adequate as indicated by the letters received from various City agencies. Where appropriate, the consultant engineer and architect will work with the City agencies to insure the adequacy of facilities, connection procedures, easements and maintenance rights, and agreement to pay a fair share cost of the proposed improvements.

C. Alternatives

An alternative plan for the proposed development has been considered and is presented in this document. While the preliminary design of the project utilizes State-owned lands, currently under negotiation, the alternative plan will contain the project entirely within the project site bounds.

D. Land Use Considerations

The extension of the hotel/condominium into the Public Precinct is considered a non-conforming use by the City and County of Honolulu Department of Land Utilization. However, the major portion of the project is located on the designated project site and is consistent with the

State and County land use designations. A final decision as to whether the State lands will need to be rezoned has not been resolved at this time. This decision must be addressed at the time that the various permit application are prepared for filing with DLU.

E. Other Considerations

No commitment of natural resources will occur if the project is implemented. Building material, labor, and land will be committed to the project.

A remaining unresolved issue exists in the land negotiations ongoing between the developer and the State DOT Harbors Division. This consideration is detailed in the document; however, final resolution of this issue cannot be addressed presently.

11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

II. PROJECT DESCRIPTION

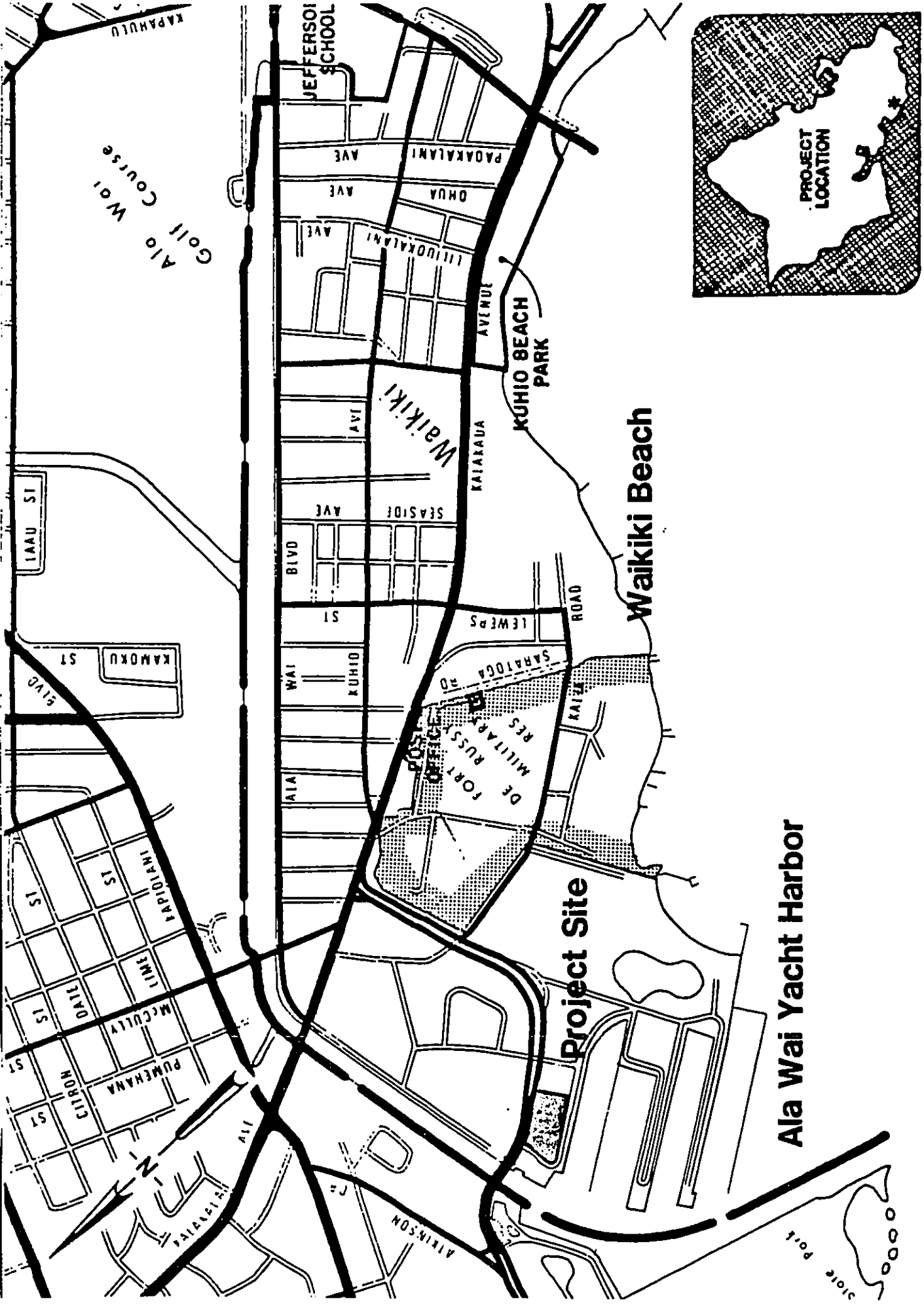
II. PROJECT DESCRIPTION

A. Project Location

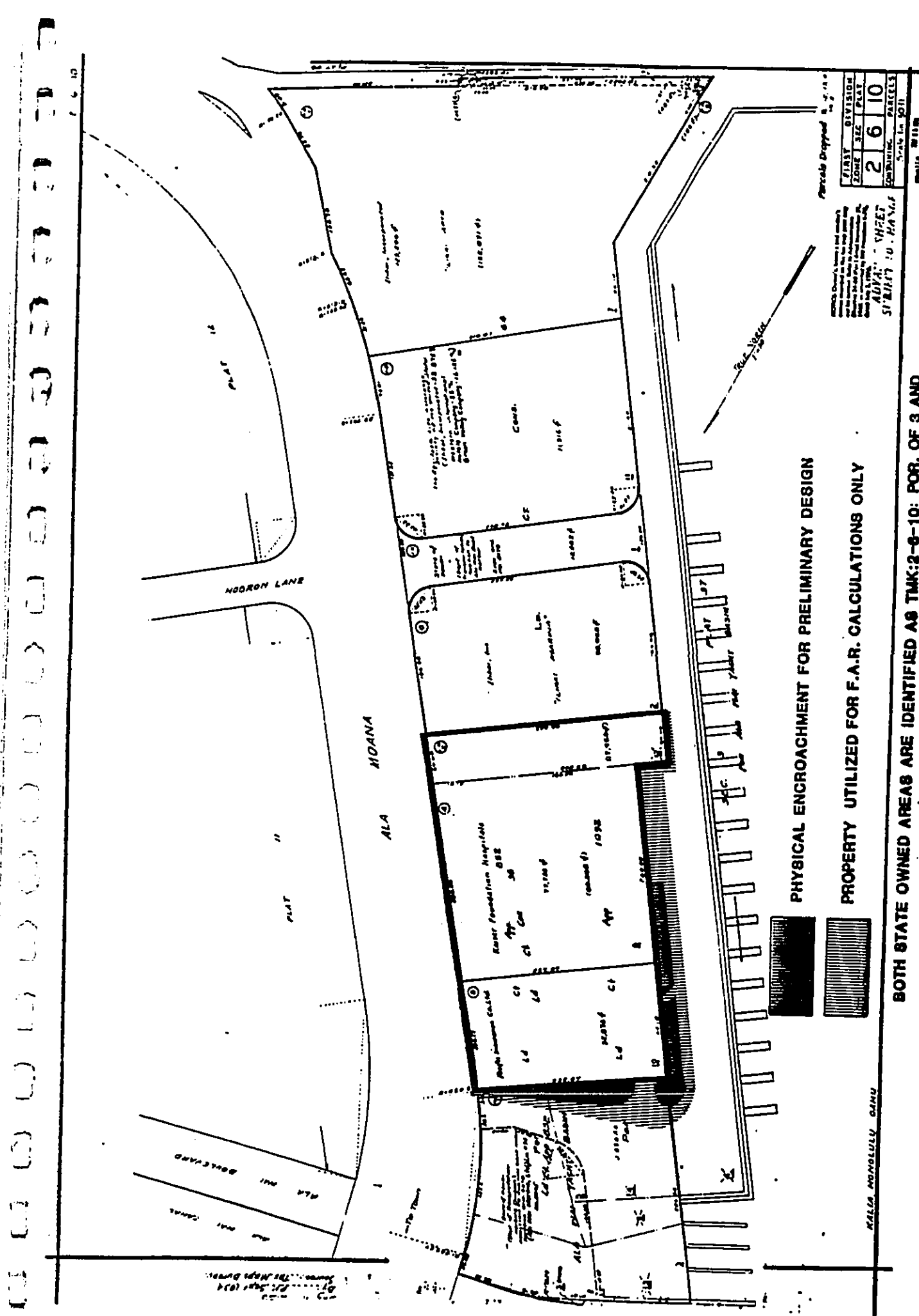
The project site is located at the entrance to Waikiki on Ala Moana Boulevard fronting the Ala Wai Boat Harbor (Figure 1). The lot area consists of 110,607 square feet bounded by Ala Moana Boulevard, the Ilikai Marina and a State owned service road. A portion of the Ala Wai Boat Harbor lies along the southwest end of the site. The site is defined by Tax Map Key 2-6-10: 10, 6 (Figure 2). The State portions consisting of 21,637 s.f. are identified as Tax Map Key 2-6-10: 3 and a portion of the roadway.

The site is presently in urban use and is designated as a resort hotel and public facility on the Development Plan Land Use Maps. The State portions are listed as Public Precinct in the WSDD Ordinance No 4573. The project site is the current location of the Kaiser Medical Center housed in two structures, the 216,953 square foot hospital and the 33,193 square foot Pacific Insurance Building containing some administrative and out patient clinic facilities. The State portions are in use as a service road. The Medical Center employs some 1,080 workers composed of 601 hospital employees and 479 clinic employees.

The present Kaiser Medical Center consists of a 174 bed hospital and a clinic providing both in-patient and out-patient health care services, respectively. Their operations are separate and distinct; however, they are integrated. Their proximity provides mutual benefits of convenience and shared facilities.



PROJECT LOCATION **FIGURE 1**



PHYSICAL ENCROACHMENT FOR PRELIMINARY DESIGN

PROPERTY UTILIZED FOR F.A.R. CALCULATIONS ONLY



BOTH STATE OWNED AREAS ARE IDENTIFIED AS TMK:2-6-10: POR. OF 3 AND POR. OF STATE ROADWAY

TAX MAP KEY

FIGURE 2

FIRST	DIVISION
ZONE	SIZE
PLAT	PLAT
2	6
10	10

PARCELS DROPPED 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100

The project site is located along the Airport-to-Waikiki corridor at the entrance to Waikiki. The proposed hotel extends the chain of hotels along the Waikiki shoreline, of which the Ilikai Hotel is its immediate neighbor to the east (Diamond Head). Mauka of Ala Moana Boulevard lies a high-rise residential area, while to the west (Ewa) and Makai of the proposed development lies recreational areas including the Ala Wai Yacht Harbor and Ala Moana Beach Park.

Ongoing negotiations with the State Department of Transportation for approximately 21,637 s.f. of State lands are under way. The State lands are to be used primarily for Floor Area Ratio (FAR) calculations and will retain their existing use as a service road except for the design features currently planned. These include the water fountain, sidewalks, curbing, and entry-ways to the front of the hotel which is located on the Boat Harbor side of the project site. There will be no taking of State lands under lease to existing tenants, and existing uses will be permitted to operate uninterrupted.

The preliminary proposed project site lies within the Resort Hotel and Public Precincts of the Waikiki Special Design District (WSDD) and is considered to be within a Waikiki gateway area. The alternative project design would be continued within the metes and bounds of the applicant's land.

B. Statement of Objectives

It is the developer's intent to create a project comprised of hotel guest rooms and condominium units that will provide a deluxe level of service to the visitors

and residents of Oahu. The Waikiki gateway project is designed to create a desirable destination for visitors as well as provide additional housing opportunities to full time and part time residents.

The project site currently designated as a public facility, would utilize the site to its "highest and best use" and provide a visually attractive landmark at Waikiki's entrance in addition to increasing the value of the surrounding area.

C. General Description of the Action's Technical, Economic, Social and Environmental Characteristics

1. Design Characteristics

Presently, the developer proposes to construct a mixed-use hotel and residential condominium comprised of 408 hotel guest rooms and 174 condominium apartments. The curvilinear structure will rise 350 feet over a 2 1/2 acre site which will incorporate extensive park-like landscaping (Figures 3 and 4).

The hotel and condominium are to be incorporated into a single structure (figures 5 and 6). Each will benefit from this approach in connection with the cost to develop and maintain the entire project. Both the hotel and condominium will operate completely separate systems (energy, mechanical, parking security, etc.) so that all aspects of operations will be clearly identifiable to the corresponding user. Figure 6 depicts the project as developed entirely within the confines of the Kaiser site, without the use of any State lands.

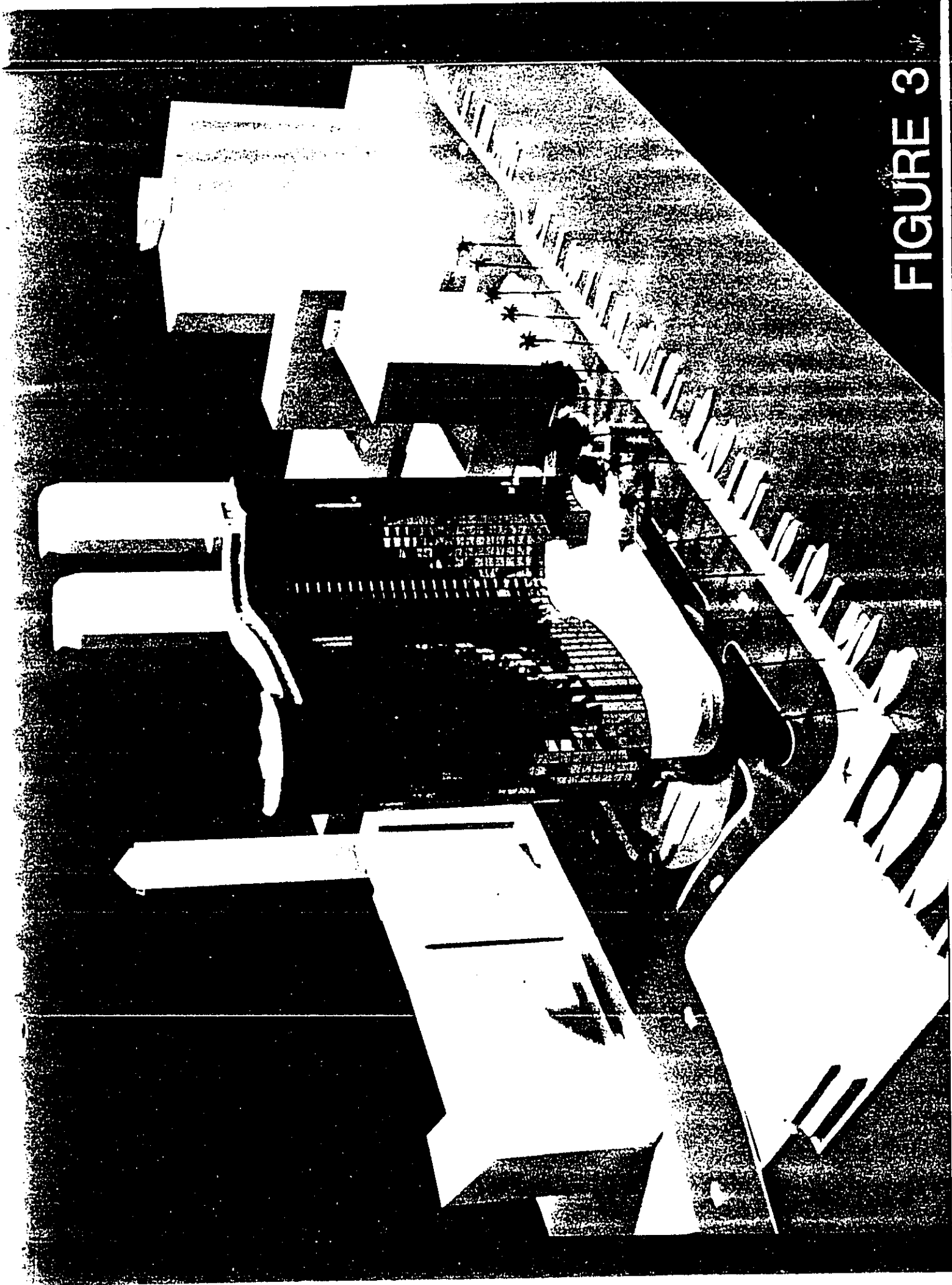


FIGURE 3

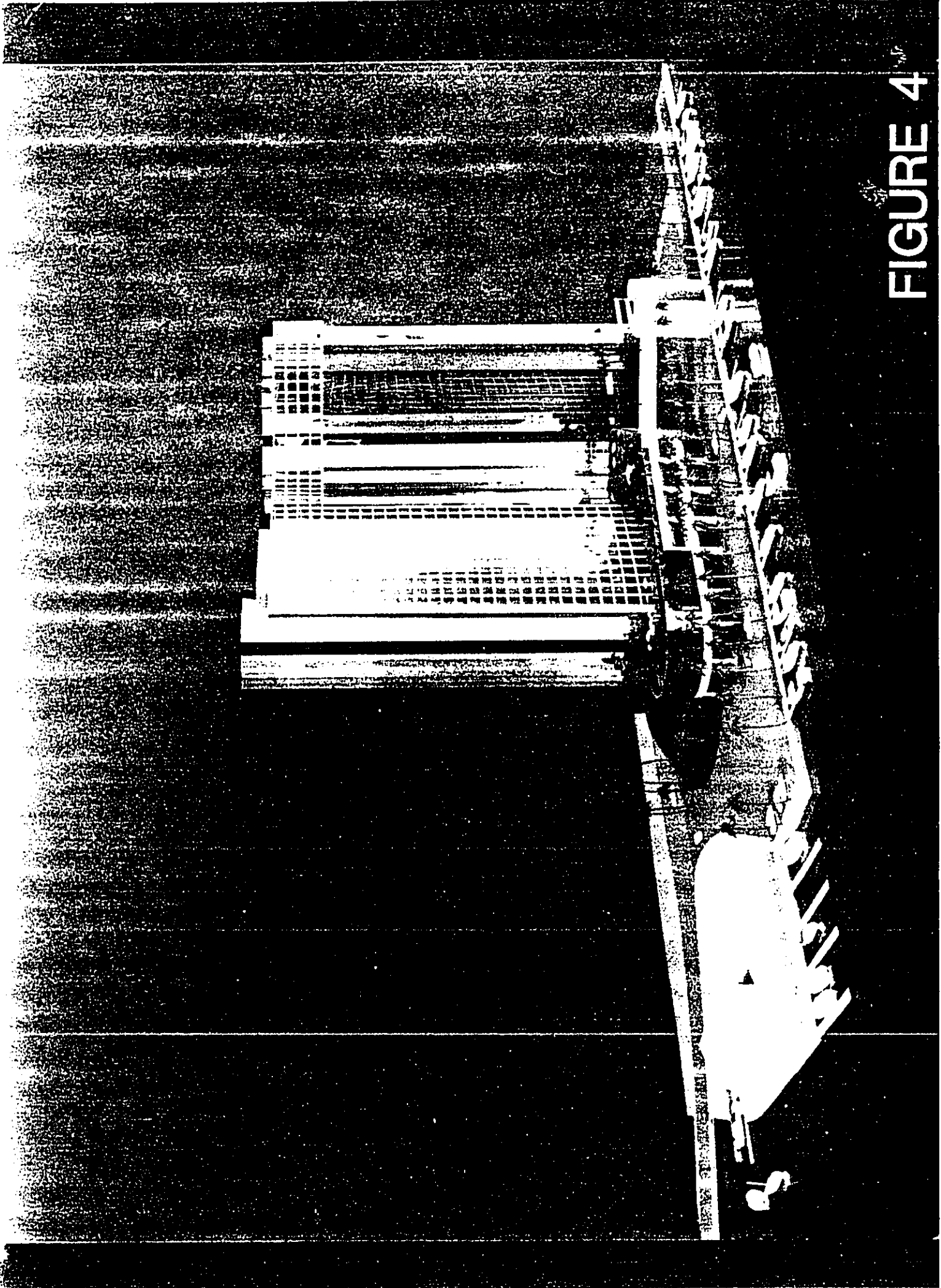


FIGURE 4

ZONING LOT AREA 110,608.4 SF
 STATE EASEMENT AREA 21,036.7 SF
 HALF ABUTTING RIGHT OF WAY 44,582.2 SF

TOTAL LAND AREA ATTRIBUTABLE TO F.A.R. CALCULATIONS 176,827.3 SF

X 2.8 = MAXIMUM F.A.R. AREA ALLOWED 495,116.5 SF

ALA MOANA BLVD.

LANDSCAPE ELEMENT ON STATE LANDS

REQUESTED EASEMENT OVER STATE OWNED LANDS

LINE OF TYPICAL TOWER ABOVE

LINE OF GROUND FLOOR STRUCTURE

EDGE OF PAVEMENT AND CURB

MAXIMUM ALLOWABLE F.A.R. AREA : 495,116.5 SF (WITH STATE EASEMENT LANDS)

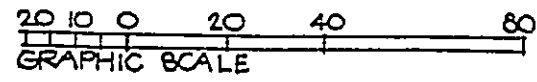
NUMBER OF PROPOSED UNITS: HOTEL : 408
 CONDO : 174
 TOTAL UNITS : 582

F.A.R. AREA TOWER : 441,289 SF
 F.A.R. AREA BASE : 57,400 SF
 TOTAL F.A.R. AREA : 489,689 SF

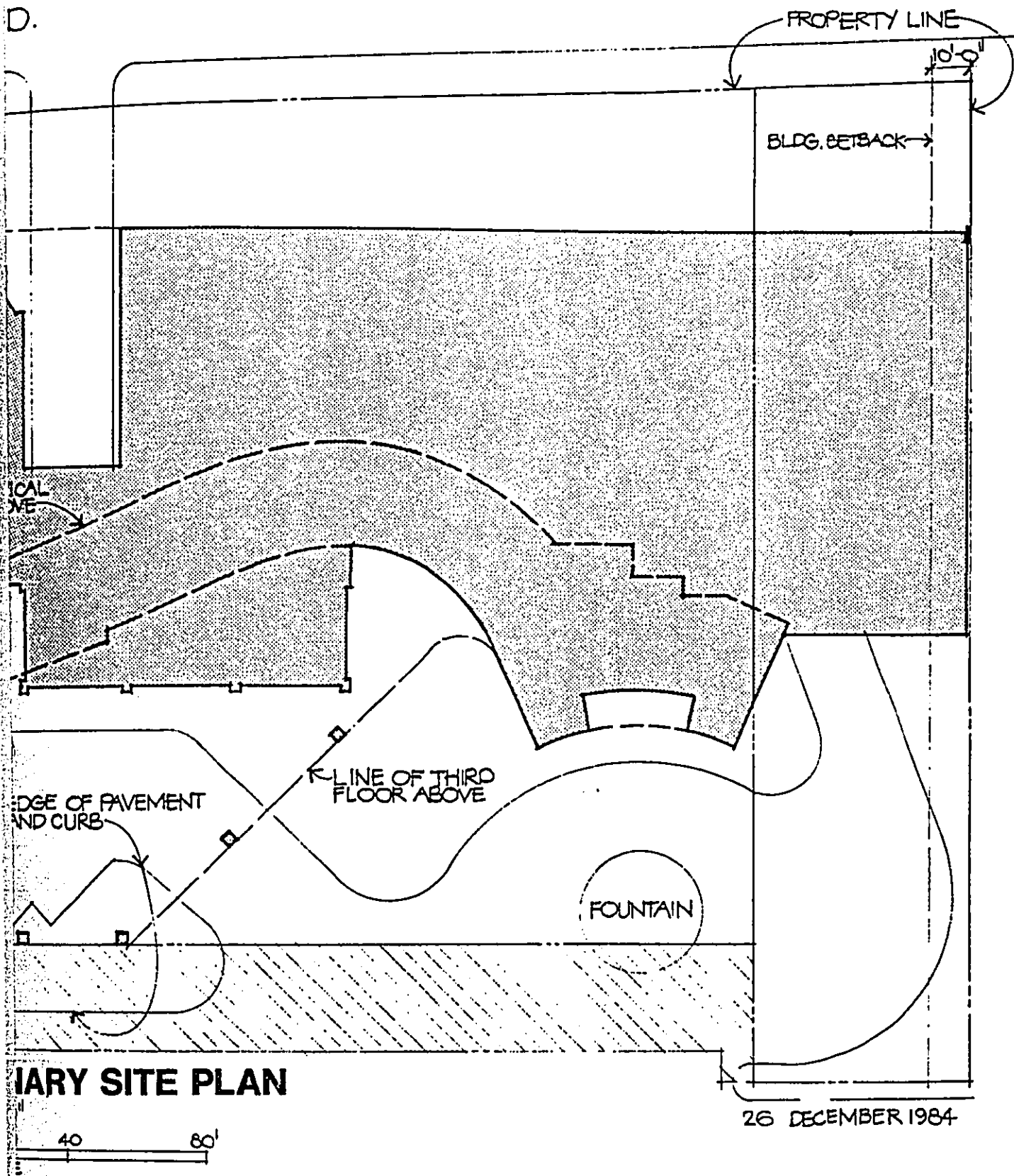


PRELIMINARY SITE PLAN

SCALE: 1" = 40'-0"



D.



PRELIMINARY SITE PLAN

- LEGEND**
- PROPOSED BUILDING FOOTPRINT
 - REQUESTED EASEMENT OVER STATE OWNED LANDS

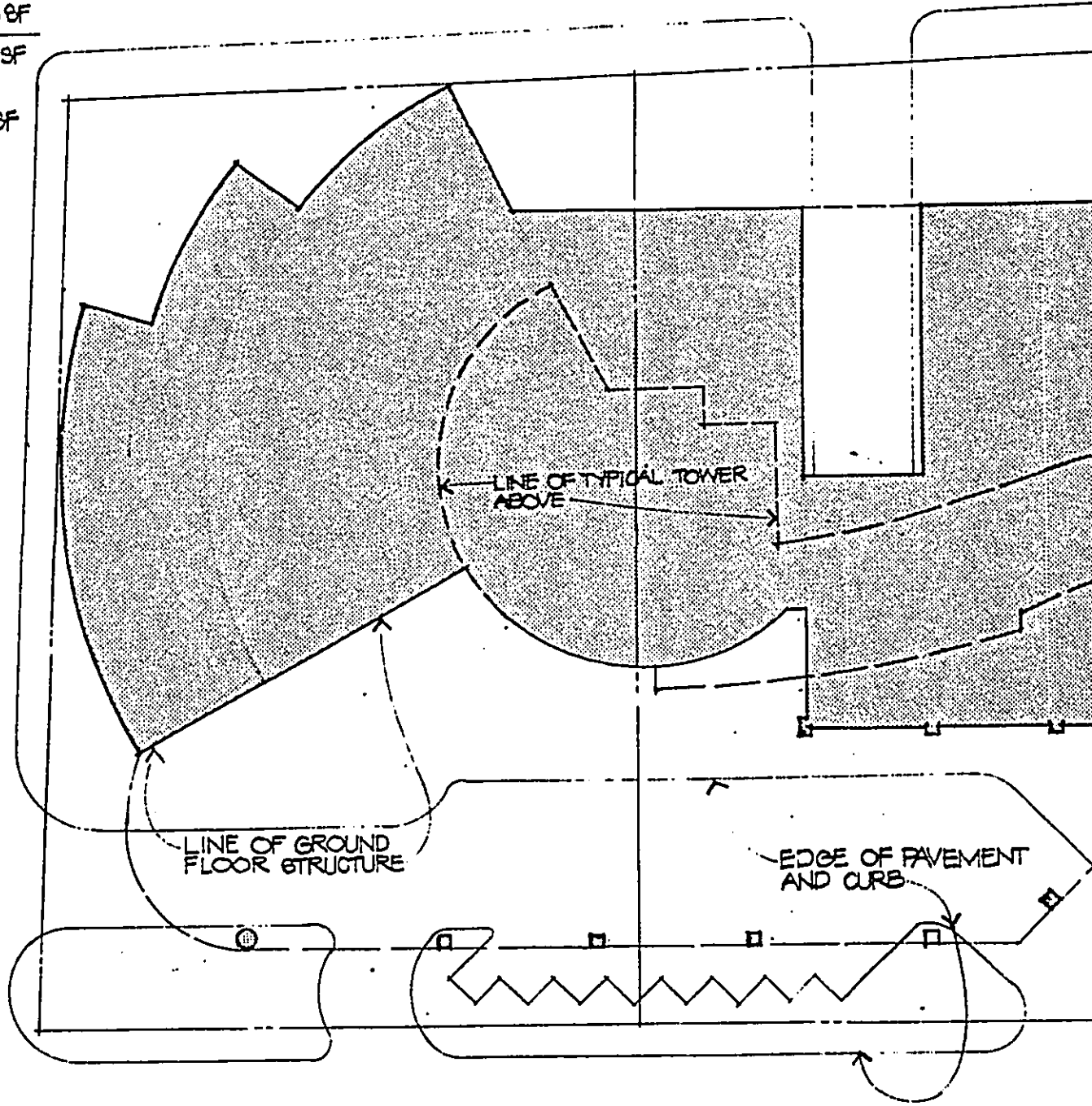
PRELIMINARY SITE PLAN FIGURE 5

ALA MOANA BLVD.

ZONING LOT AREA 110,608.4 SF
 HALF ABUTTING RIGHT OF WAY 40,872.6 SF

 TOTAL LAND ATTRIBUTABLE TO F.A.R. CALCULATIONS 151,481.0 SF

 X 2.8 = MAXIMUM F.A.R. AREA ALLOWED 424,146.8 SF



MAXIMUM ALLOWABLE F.A.R. AREA: 424,146.8 SF
 NUMBER OF PROPOSED UNITS: HOTEL: 348
 CONDO: 145

TOTAL UNITS: 493

F.A.R. AREA TOWER: 12,771 SF/FLR X 29 FLOORS = 370,359 SF
 F.A.R. AREA BASE: 53,500 SF

 TOTAL F.A.R. AREA: 423,859 SF

ALTERNATE SITE PLAN

SCALE: 1" = 40'-0"
 20 10 0 20 40 80'
 GRAPHIC SCALE

BLVD.

PROPERTY LINE

10'-0"

BLDG SETBACK

OF PAVEMENT
URB

LINE OF THIRD
FLOOR ABOVE

FOUNTAIN

SITE PLAN

20 DECEMBER 1984

0 80'

FIGURE 6

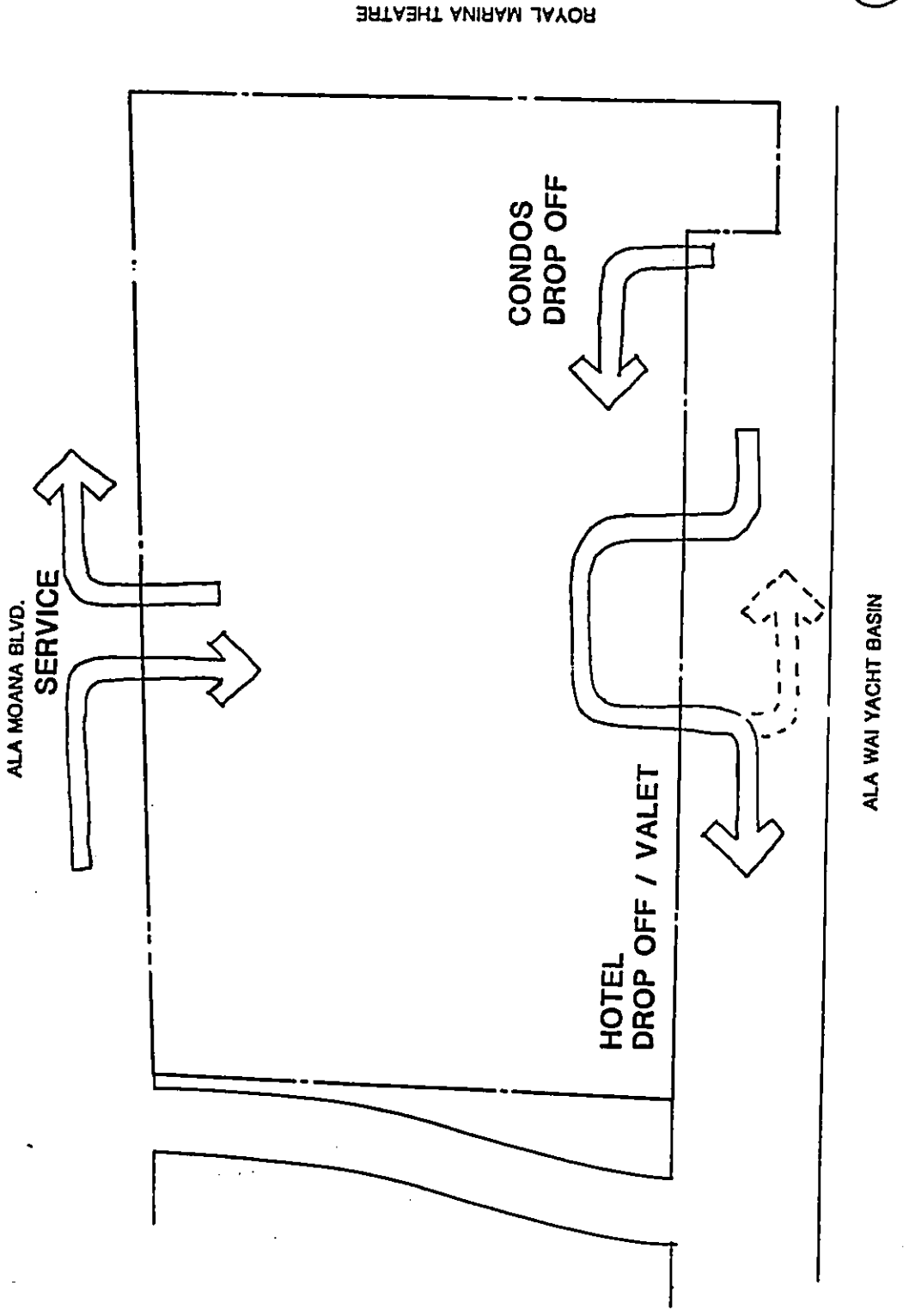
ALTERNATIVE SITE PLAN

11-9

The hotel portion of the tower will consist of 29 single-loaded floors atop a five-story base of lobbies, parking garage and common areas provided for the entire project. The hotel floors are separated linearly from the condominium portion of the project by a solid concrete partition wall. The exterior window wall system is laminated glass, colored in a mauve gold tone designed to comply with Ordinance No. 82-35 (Sunlight Reflection Regulation).

All public access is designed on the makai side of the structure facing the Ala Wai Boat Harbor (Figure 7 & 8) utilizing the Boat Harbor service road. This road is on land which is currently under negotiation, will be designed to conform to State Department of Transportation requirements for road width, curbs and sidewalks. The design work for improvements to the service road will be done when negotiations for use of these State Lands have been finalized. There will be a loss of 46 metered parking stalls currently located along the Kaiser Hospital property line. The replacement of these stalls are in negotiation between the applicant and the State at the present time; replacement in kind or revenue compensation are alternatives being reviewed. The two State owned buildings in the State lands area will not be replaced by the State. Final disposition rests with the State. Loss of the restroom facilities will mean using other available facilities. An expansive porte cochere for both the hotel and condominium entrances will be open towards the yacht harbor directing traffic away from Ala Moana Boulevard (Figure 9).

The hotel, in addition to some 408 guest rooms,



VEHICULAR ACCESS **FIGURE 9**

10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

will have meeting and ballroom facilities along with a fine gourmet restaurant. There will also be a lounge, discotheque, lobby bar, poolside bar and grill with outdoor cafe services.

A typical hotel floor would contain approximately 12 guest rooms, ranging in size from 435 to 450 square feet. Suites will range from 600 to 900 square feet.

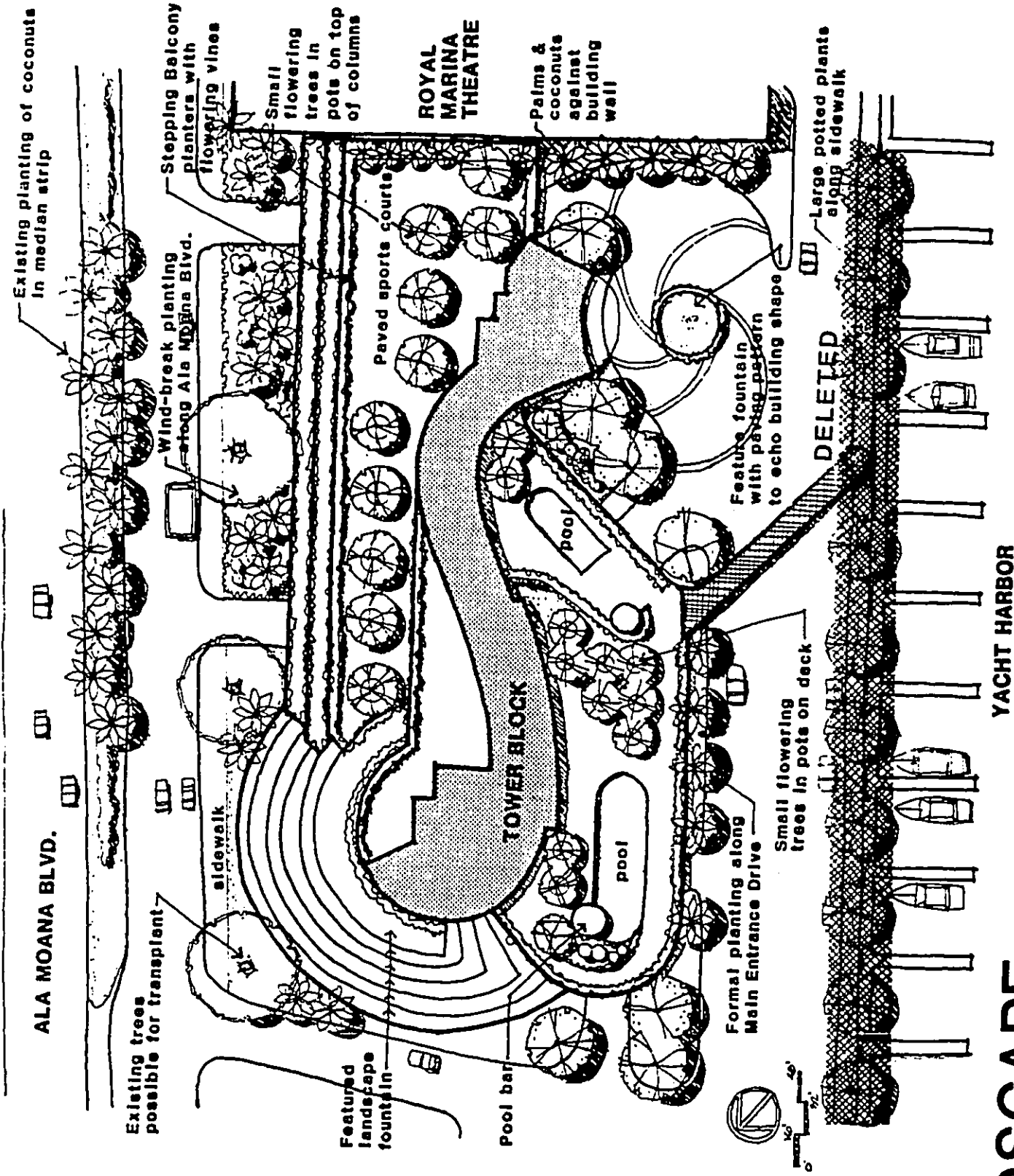
The condominium, as contemplated, will contain one-bedroom and two-bedroom units ranging from 840 to 975 square feet and 930 to 1450 square feet respectively. All condominium amenities including an extensive recreation deck, pool, jacuzzi and cabana will be on the same level as the hotel amenities.

2. Landscaping Plan

The conceptual landscape plan (Figures 10, 11 and 12) features extensive use of shade trees, palms, hardy windbreak plants, shade tolerant plant material and flowering plants. Revised concept plans will delete the potted plants placed along the harbor sidewalk (Figures 3, 4 and 8).

3. Economic Characteristics

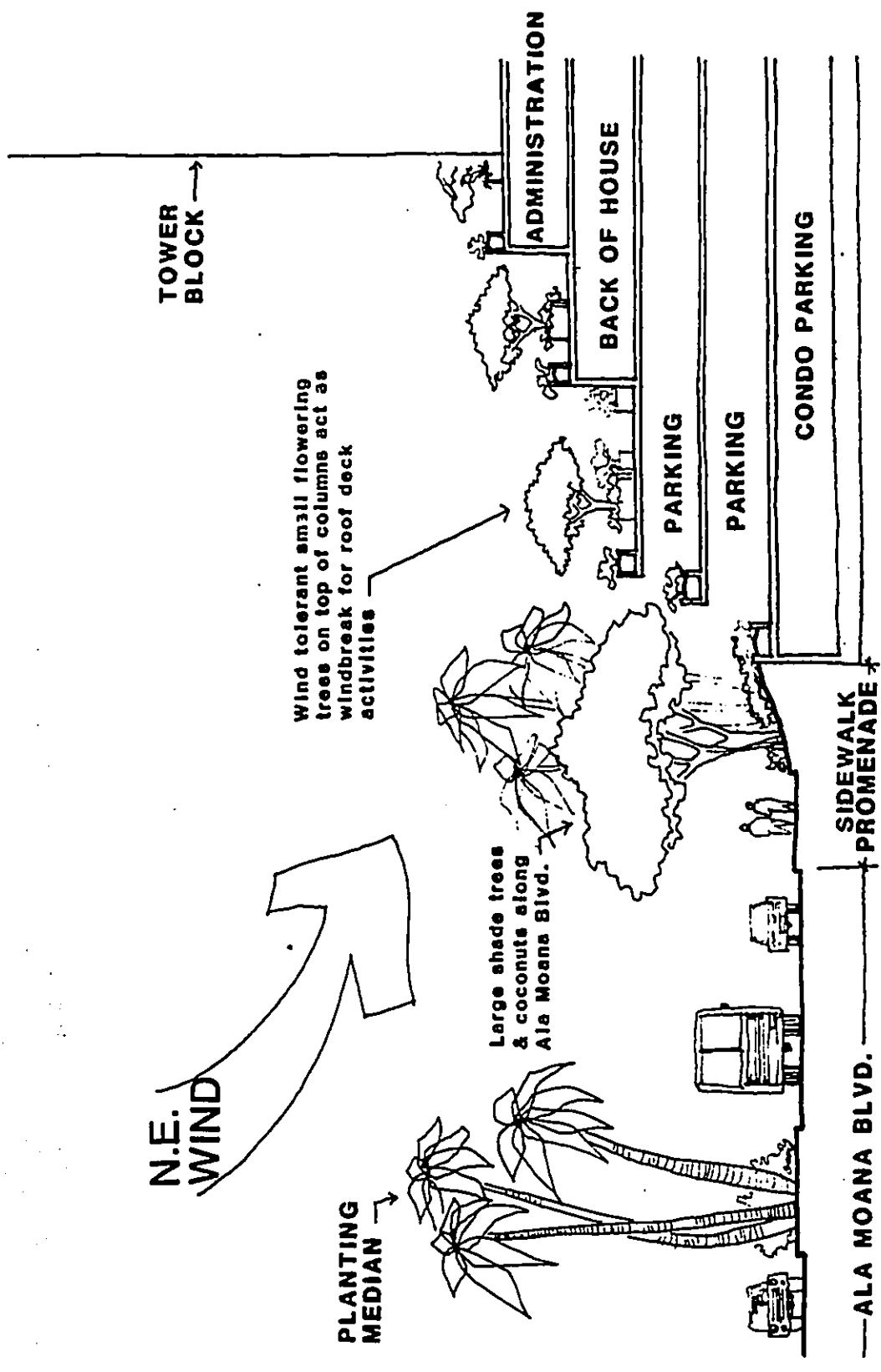
An economic analysis of the proposed development (Pannel Kerr Forster, May 1984) projects that approximately 500 jobs will be created and \$2.5 million in State and County tax revenues will be generated annually.



LANDSCAPE CONCEPT PLAN

BELT, COLLINS & ASSOCIATES

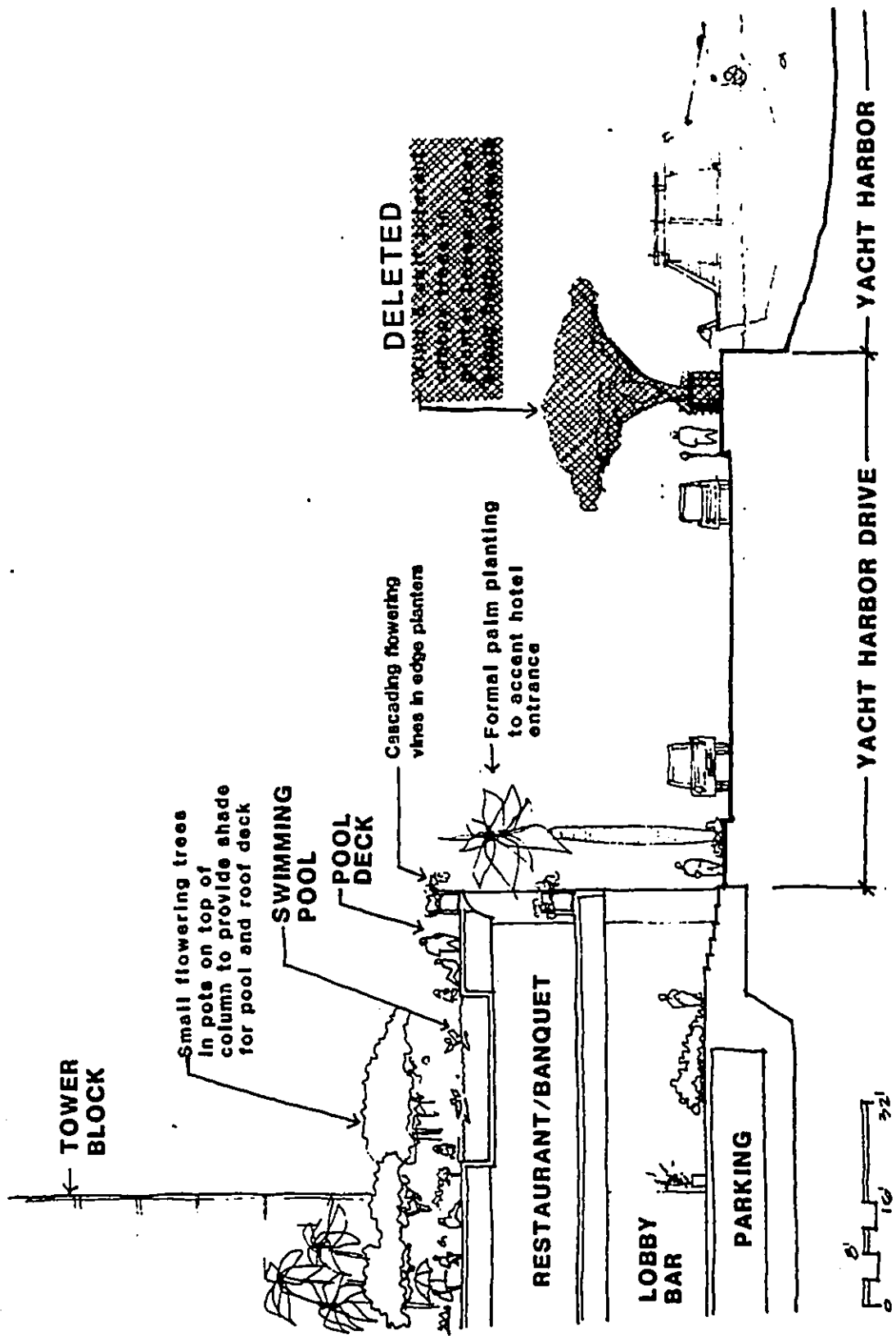
FIGURE 10



BELT, COLLINS & ASSOCIATES

TYPICAL SECTION (MAUKA)

FIGURE 11



TYPICAL SECTION (MAKAI) FIGURE 12

Hotel Complex Impacts

It is estimated that the proposed project will generate total direct (405) and indirect (81) employment of 486 jobs. In addition to the creation of employment opportunities, the development will generate approximately \$2.0 million in State and County revenues expressed in current 1984 dollars as follows:

State Unemployment Tax	\$ 319,000
State Gross Income Tax	931,000
State Personal Income Tax	393,000
County Real Property Tax	<u>318,000</u>
	<u>\$1,961,000</u>

Employment

According to the Department of General Planning, City and County of Honolulu report "Employment and Population Impacts of Resort Development at Five Oahu Sites," March 1978, the average number of direct employees per hotel room is .7. According to PKF experience of deluxe hotel facilities, the ratio is 1.5 employees per room. Based on the quality orientation of the proposed hotel, a ratio of 1.0 employees per hotel room (405 x 1.0 = 405) was applied to compute total direct employment. Secondary or indirect employment was computed using a factor of 20 percent of total direct jobs (405 x 20% = 81) in accordance with the above mentioned study.

State Unemployment Tax

These funds were estimated based on 4.5 percent of

the first \$14,600 of salaries and wages of each of the 486 new employees. The 4.5 percent rate was derived from State of Hawaii Tax Department records as the average currently paid by hotel taxpayers (wage earners).

State Gross Income Tax

These funds were based on 4.0 percent of total estimated revenues generated from all sources at the proposed hotel. Revenue estimates are as follows:

Rooms	\$13,337,900
Food	6,401,261
Beverage	2,444,118
Telephone	302,605
Other Departments	232,773
Other Income	93,109
Rentals	<u>465,546</u>
Totals	<u>\$23,277,312</u>

State Personal Income Tax

These funds were estimated based on taxable income per employee of \$9,058 x an average tax rate of 6.7 percent x the 486 employees. State tax office records were the source of estimated data.

Real Property Tax

These funds were estimated based on currently applied tax rates per thousand dollars of assessed valuation. The 1986 land and construction costs were reduced to

1984 values using a deflator of 5.0 percent in 1986 and 4.6 percent in 1985.

	<u>1986</u>	<u>1984</u>
Construction Cost	\$26,500,000	\$24,017,000
Land Cost	<u>12,500,000</u>	<u>11,329,000</u>
	\$39,000,000	\$35,346,000
		<u>1,000</u>
		35,346
		X
		<u>\$9.00</u>
		\$318,114

Say \$318,000

Condominium Complex Impacts

The employment generated by this segment of the project will not be significant since, only approximately 10 jobs will be created. However, the project will generate approximately \$635,400 in 1988, in County real property taxes based upon the projected sales price of the units, \$70.6 million, at the 1983/84 tax rate of \$9.00 a thousand.

Converting this 1988 potential tax revenue to current 1984 dollars based upon the estimated deflators referred to previously will mean tax revenues of approximately \$513,000 in 1984, or a total of almost \$2.5 million for the entire project.

Full absorption of the units by the market place is expected to take between 1 1/2 to 2 years.

While the hotel is presently designed to accomodate approximately 408 guest rooms, the total potential for guest rooms at this quality level is nearly 800 rooms.

This would be achieved by reducing or eliminating the condominium portion of the project. The exact balance and mix of hotel and condominium use is sufficiently flexible at this stage pending the refinement of market strategies, concepts, financing techniques and timing for the development.

4. Social Characteristics

The mixed use concept for the proposed project makes total occupancy projections difficult, however, the hotel's target market of Free Independent Travelers (FIT's) are generally unaffected by adverse national economic trends. For this reason occupancy is expected to remain stable.

Residents of the condominium units of the project are expected to be primarily older, affluent, professionals. Many are also anticipated to be part time residents to Hawaii. The project's entertainment facilities should be utilized by both Waikiki residents and those residing outside of Waikiki; however, total use of the entire complex is not expected to be as intensive as the existing hospital facility.

D. Funding and Phasing

The developer will fund the proposed project through monies obtained from conventional loan sources or institutions. No State or County monies will be involved in the construction of the proposed building; however, portions

of State-owned lands will be utilized under the preliminary design alternative. Total construction costs are estimated to be \$ 124,000,000 million.

The project will be constructed in one phase with no additional phases. The developer intends to initiate construction of the project upon filing and granting of all approvals and permits. Construction is estimated to take 21 months, with final outfitting of furniture, fixtures, and equipment (FFE) taking an additional 3 months.

**III. ENVIRONMENTAL SETTING
AND PROBABLE IMPACTS**

III. ENVIRONMENTAL SETTING AND PROBABLE IMPACTS

Impacts of the proposed project can be viewed in the short-and long term. Short-term impacts, beneficial and adverse, generally result from construction-related activities. Consequently, these impacts are of short term duration and should last no longer than the duration of the construction. Long-term impacts, beneficial and adverse, result from the implementation and operation of the proposed project.

A. Geographical Characteristics

1. Topography

The project is a level, graded parcel which currently contains the Kaiser Foundation Hospital. The hospital site contains two separate buildings connected by an overhead ramp. The makai boundary of the site is contiguous with the Ala Wai Boat Harbor and lies approximately 90 feet from the water's edge within the harbor. The site rises approximately 45 feet above mean sea level.

The entire site is at grade as are all adjacent and surrounding sites. The entire area is intensively developed, and there are no unique or unusual topographic features.

Topographic Impacts

Minimal impact is anticipated. Some excavation for the basement parking and utilities will be required;

however, the existing structure is currently sub-graded for the existing basement/garage.

2. Soils

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, described this land type 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. The 150 ton precast concrete piles will be driven approximately 85 feet below grade.

A soils study will be undertaken, if required, for the foundation of the structure.

Impact on Soils

Minimal impact on the site's soil is anticipated. Presently the soil is covered with buildings and pavement. The proposed action will not significantly alter this condition.

3. 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 the island, 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, north-east, and east direction (66.7 percent of the time), and averages 11.2 knots per hour.

Although 13 percent of the time winds blow from the north to west quadrant, these winds have lower wind speeds, 5.75 knots per hour. The yearly mean wind speed is 9.7 miles per hour.

Impacts on Climatic Conditions

Little or no impact on climatic conditions is expected. The factors controlling the climatic conditions should not be affected by the relatively miniscule land area utilized by this project; however, surface winds will be altered by the building mass

and the landscaping material. Wind related impacts upon the Ala Wai Yacht Harbor and surrounding sites are addressed in Section IV.

B. Biological Characteristics

1. Flora

The flora on the project site primarily consists of common and exotic plants and shrubs (Table 1). Because the project site is already highly developed, there are not many existing plants. These plants have been planted and maintained by man's efforts and there are no indigenous or rare plants on the project site.

Impact on Flora

The impact on existing vegetation will be significant since construction will require removal of most of the trees; however, many can be saved for relocation later. Present plans call for more extensive landscaping than now exists. These plans will augment the retained vegetation and provide a denser, more attractive variety of plants.

2. Fauna

The commercial uses of the project site limits fauna to pests such as rats and mice. Avifauna (birds) are more numerous on the project site. Because of the availability of discarded food, many sparrows were noted on the project site. Other birds in this area include the common mynah, cardinals, pigeons,

TABLE 1

PLANT MATERIAL INVENTORY LIST - 1697 ALA MOANA (KAISER SITE)

PLANT MATERIAL	QTY	SIZE/CONDITION
<u>SHRUB</u>		
Red Ginger (<i>Alpinia Purpurata</i>)	10	
Shell Ginger (<i>Alpinia speciosa</i>)	20	
Ti (<i>Cordyline</i> spp.)	15	
Croton (<i>Codiaeum hookerianum</i>)	40	hedge planting in front of Pacific Building
Golden Eranthemum (<i>Pseudoeranthemum reticulatum</i>)	25	hedge planting along Pacific Building
Bougainvillea (<i>Bougainvillea</i> spp.)	8	
Mock Orange (<i>Murraya paniculata</i>)		hedge planting along sidewalk & parking lot
Natal Plum (<i>Carissa grandiflora</i>)	5	
<u>GROUNDCOVER</u>		
Lauae fern (<i>Polypodium phymatodes</i>)		limited quantity
Syngonium (<i>Syngonium podophyllum</i>)		limited quantity
Pothos (<i>Scindapsus aureus</i>)		limited quantity
Lawn		limited area
<u>TREES</u>		
Monkeypod (<i>Samanea saman</i>)	3	30-40' - difficult to transplant, possible save 1.
Coconut (<i>Cocos nucifera</i>)	10	40-60' trunk; difficult to transplant
	11	12-15' trunk; on state land, possible to transplant
Brassaia (<i>Brassaia actinophylla</i>)	3	12-15'
Pandanus (<i>Pandanus</i> spp.)	1	12'
Vitex (<i>Vitex</i> spp.)	1	15'
Autograph Tree (<i>Clusia rosea</i>)	1	10'; in planter, possible to save
Plumeria (<i>Plumeria</i> spp.)	3	8-10'; in planter, possible to save
Banyon (<i>Ficus retusa</i>)	1	40'; difficult to transplant, possible to save.

Prepared by: Belt, Collins Assoc. September 25, 1984.

doves, white-eye, house finch, ricebird, and mockingbird. These are common, exotic birds found throughout the urban areas of Honolulu. There are no threatened or endangered species of fauna at the site.

Impact on Fauna

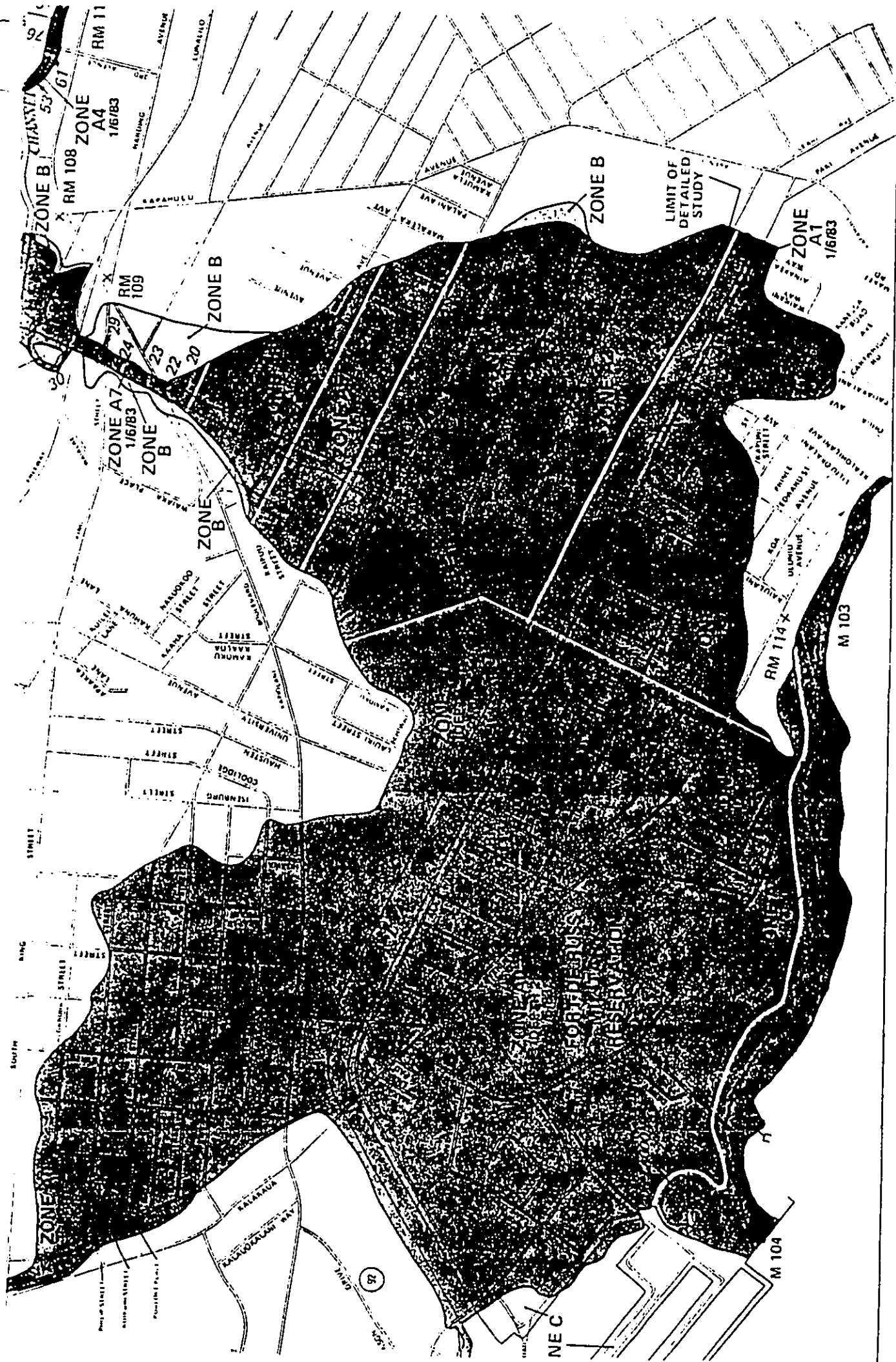
Site clearing and construction activities will displace birds which presently feed or nest on the project site. Upon completion, some birds may periodically visit the area, and possibly nest in the trees. The primary impact will be the displacement of the birds feeding on discarded foodstuff. This is not considered an adverse impact because of the common species and other available urban areas in which these birds can relocate.

C. Hydrological Characteristics

The project site is located makai and Diamond Head of the Ala Wai Canal and Mauka of the Ala Wai Boat Harbor.

During the EIS Consultation Period, the U.S. Army Corps of Engineers, Pacific Ocean Division stated that the project site is located in an "AO" Zone (Figure 13) where the average depth of flooding is 2 feet. "AO" zones are defined as areas of 100-year shallow flooding where depths are between one (1) and three (3) feet. Base flood elevations are shown, but not flood hazard factors are determined. The site is not in a designated tsunami zone.

The building will be elevated above the present ground level. Additionally, vehicular entrance/exits to the



FLOOD ZONE DESIGNATION

FIGURE 13

basement area will include drainage features so that flooding in the basement will not occur. Additionally, the basement slab has been designed for hydrostatic uplift pressure due to the high water elevation of +3.0 feet.

D. Traffic

The information provided in this section is from Appendix I. Traffic report for the proposed Hotel/Condominium project on the existing Kaiser Medical Center site, Honolulu, Hawaii, prepared by Austin, Tsutsumi and Associates, Inc.

1. Traffic Count Data

Traffic counts were taken on Hobron Lane and Yacht Harbor Drive at Ala Moana Boulevard on July 5-6, 1984 (Thursday-Friday). Twenty-four hour count totals show 12,138 vehicles per day (vpd) on Hobron Lane with a 50/50 directional split and 2,656 vpd on Yacht Harbor Drive with an 80/20 directional split, makai bound. The afternoon peak hour occurs roughly between 3:00 PM and 4:00 PM with 871 vehicles per hour (vph) and 251 vph on Hobron Lane and Yacht Harbor Drive, respectively. There was no apparent morning peak period of traffic.

Additional traffic counts on Ala Moana Boulevard at the Ala Wai Canal Bridge were obtained from the State Department of Transportation. The January 11-12, 1983 (Tuesday-Wednesday) counts show 47,487 vph with a 55/45 split, westbound. The morning peak hour occurs between 7:30 AM to 8:30 AM with 3,222 vph, total for both directions. The afternoon peak

hour occurs between 4:00 PM and 5:00 PM with 3,824 vph, total for both directions.

2. Field Investigation

Field investigation during the morning and afternoon peak periods showed queueing in the right lane of Ala Moana Boulevard in the eastbound direction up to the Yacht Harbor Drive intersection. Because of the upstream signal control at Atkinson Drive/Ala Moana Park Drive, the vehicular platoons arrive in regular intervals and volumes. The traffic congestion during the morning peak period is not as heavy as in the afternoon peak period due primarily to the relatively light side street demands. The eastbound lanes clear on most signal cycles. However, while the through lanes clear, the left turn lane stores vehicles for the next signal cycle. During the afternoon peak period, the left turn lane is usually full and sometimes queues into the through lane.

During the afternoon peak period, Hobron Lane queues in the mauka bound direction back to Yacht Harbor Drive. Yacht Harbor Drive experiences occasional congestion when vehicles turning into the Kaiser Medical Center parking lot queue back onto the roadway, blocking both directions of traffic.

The existing traffic conditions are generally heavy during the peak periods and throughout most of the afternoon. Traffic is generally heavy on weekends during the afternoons and evenings.

3. Trip Generation

The proposed hotel/condominium project is a redevelopment of an existing hospital and clinic. In terms of traffic generation, a hospital and a clinic are considered higher land use intensities than a hotel and condominium development of the type proposed. Therefore, a net reduction in traffic demand can be expected with the redevelopment of the existing Kaiser Medical Center site into the proposed hotel/condominium development.

Comparative trip generation rates for both the hospital/clinic facility and the hotel/condominium development are based upon generally accepted methods developed by the Institute of Transportation Engineers (ITE) and published in a report entitled "Trip Generation, Third Edition - 1982". These empirical rates are developed by correlating traffic demand with various independent variables commonly used to define the magnitude of land development in terms of trip generation potential.

The trip generation totals for the existing development and for the proposed development are shown in Table 2. The hospital/clinic and the hotel/condominium have different trip generating characteristics; the first being a destination and the latter being an origin. The proposed development shows significant decreases in traffic demand over the existing development, especially during the peak hours of generation.

On the average weekday, the morning peak period of a

TABLE 2
TRIP GENERATION SUMMARY

			EXISTING	PROPOSED	NET CHANGE %
AVERAGE WEEKDAY VEHICLE TRIP ENDS			5771	4315	-25
PEAK	A.M.	Enter	246	197	-20
HOUR	Between	Exit	120	157	+31
OF	7 and 9	Total	366	354	-3
ADJACENT	P.M.	Enter	322	176	-45
STREET	Between	Exit	383	150	-61
TRAFFIC	4 and 6	Total	705	326	-54
PEAK	A.M.	Enter	354	207	-42
HOUR		Exit	252	161	-36
OF		Total	606	368	-39
GENERATOR	P.M.	Enter	437	199	-54
		Exit	527	173	-67
		Total	964	372	-61
SATURDAY VEHICLE TRIP ENDS			4285	3551	-17
PEAK		Enter	327	148	-54
HOUR OF		Exit	462	145	-69
GENERATOR		Total	789	294	-63
SUNDAY VEHICLE TRIP ENDS			2001	3658	+83
PEAK		Enter	133	132	-1
HOUR OF		Exit	228	138	-39
GENERATOR		Total	361	270	-25

hospital or clinic is relatively low, primarily consisting of employees. The afternoon peak hour of generation generally occurs between 3:00 PM and 4:00 PM during the afternoon employee shift change which coincides with the after-work hospital visitation and out-patient trips to the clinic. On the other hand, the hotel and condominium will exhibit two distinct peak periods between 7:00 AM and 9:00 AM and between 4:00 PM and 6:00 PM. The proposed project shows an increase in exiting traffic during the AM peak hour, as can be expected by an origin trip generator; however, the overall demand shows a net decline. The PM peak hour for the proposed development shows the most dramatic decrease in traffic generation over the existing medical center.

On weekends, the hospital and clinic trip activity shows higher peak period conditions, except on Sunday, when the clinic is closed. The hotel and the condominium exhibit a more balanced entering and exiting traffic demand as opposed to what can be expected during a workday. On Saturday, the existing medical center's peak hour of generation is generally about midday. On the other hand, the hotel peak hour of generation should coincide with banquet activities, i.e., between 6:00 PM and 7:00 PM at the beginning of the festivities and between 9:30 PM and 10:30 PM at the end of these functions. However, the ITE trip rates generally show a higher trip generation potential during the average weekday's PM peak period than that on Saturday. Therefore, the PM peak hour in the average weekday, which has been shown to have the greatest decrease in traffic generation over the existing conditions, is

the more critical period. The proposed hotel/condominium is expected to generate more daily traffic on Sunday than the hospital/clinic due to the clinic being closed. However, the peak period conditions still show a net decline in total traffic demand for the proposed development.

4. Traffic Impact Summary

Overall, the trip generation for the proposed hotel/condominium shows a dramatic decrease in travel demand over the existing hospital/clinic as was hypothesized prior to undertaking this study.

Conclusions

1. Existing traffic conditions are generally heavy throughout the afternoon and into the evenings.
2. The proposed hotel/condominium development should result in a net decrease in traffic demand and should not deteriorate the existing conditions.
3. The restricted access driveway to the condominium parking on Ala Moana Boulevard creates a negative impact on the surrounding street system and poses potential traffic safety problems.

Recommendations

1. The access driveway to the condominium parking be relocated on Yacht Harbor Drive.

2. Further consideration be given to upgrading the intersections of Ala Moana Boulevard/Yacht Harbor Drive and Hobron Lane/Yacht Harbor Drive during the design phase of the development to facilitate bus turning movements.
3. Based upon the proposed development plan presented herein and the recommendations stated above, a comprehensive traffic impact report need not be conducted for the proposed hotel/condominium project on the existing Kaiser Medical Center site.

E. Air Quality

The information provided in this section is from Appendix II, "Air Quality Analysis for Proposed Hotel/Condominium Project on the Existing Kaiser Medical Center Site, Honolulu, Hawaii," prepared by Barry D. Root.

1. Present Air Quality

A summary of air pollutant measurements from State of Hawaii long term monitoring stations located nearest to the project is presented in Table 3. Data from several different sampling stations are included in the tabulation.

From the data presented in Table 3, it appears that the State of Hawaii 24-hour AQS for particulates is presently being exceeded in the Ala Moana/Waikiki area at a rate of not more than once per year. No values above Federal AQS have occurred during the

TABLE 3

SUMMARY OF AIR POLLUTANT MEASUREMENTS AT NEAREST MONITORING STATIONS

POLLUTANT	1977	1978	1979	1980	1981	1982	1983
PARTICULATE MATTER							
No. of Samples	53	61	57	57	40	51	53
Range of Values	18-109	21-79	20-102	20-116	18-78	15-52	18-59
Average Value	40	38	39	36	36	29	33
No. of Times							
State AQS Exceeded	1	0	1	1	0	0	0
SULFUR DIOXIDE							
No. of Samples	54	61	48	52	32	30	56
Range of Values	<5-<5	<5-<5	<5-13	<5-<5	<5-<5	<5-<5	<5-16
Average Value	<5	<5	<5	<5	<5	<5	<5
No. of Times							
State AQS Exceeded	0	0	0	0	0	0	0
CARBON MONOXIDE							
No. of Samples	359	365	207		286	311	169
Range of Values	0-19.6	0-20.7	0-17.3		1.2-13.8	0-4.6	0-8.6
Average Value	3.5	3.1	2.9		5.1	1.2	2.4
No. of Times							
State AQS Exceeded	22	19	10		13	0	0
OXIDANT (OZONE)							
No. of Samples	300	284	338	295	314	335	349
Range of Values	4-61	10-84	10-80	10-84	10-104	0-151	0-123
Average Value	25	33	39	48	37	32	46
No. of Times							
State AQS Exceeded	0	0	0	0	1	2	2
NITROGEN DIOXIDE							
No. of Samples					46		
Range of Values					6-77		
Average Value					25		
No. of Times							
State AQS Exceeded					0		

NOTES: See text for locations of monitoring stations. Carbon monoxide reported in milligrams per cubic meter; other pollutants in micrograms per cubic meter. Carbon monoxide and ozone readings are daily peak one hour values; other pollutant values are for a 24 hour sampling period.

SOURCE: State of Hawaii Department of Health

last seven years, and the last high particulate reading in 1980 was recorded during a January wind-storm which created greatly increased levels of natural pollutants such as blowing 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 no present problems with particulate pollution in the project area. Table 3 also shows that sulfur dioxide and nitrogen dioxide levels in the area are running well below allowable AQS.

On the other hand, Table 3 indicates that there could be a potential problem with carbon monoxide concentrations in urban areas of Oahu. During the years from 1975 to 1979 when carbon monoxide was measured at the Department of Health building (Kinau Hale) there were numerous violations of the State of Hawaii peak one-hour AQS for this pollutant. There was, however, an encouraging trend toward fewer violations each year and average peak hour values were steadily decreasing until the monitor was moved to Leahi Hospital in late 1979. The Leahi site is located in a low density residential district and the 1982 readings shown in Table 3 from that site are probably indicative of background levels of carbon monoxide at locations well removed from major highways and urban traffic.

In any case the data shows that carbon monoxide would be the primary pollutant of concern in evaluating the impact of new residential development on Oahu.

2. Direct Air Quality Impact of Project Construction

During the site preparation and construction phases of this project, it is inevitable that a certain amount of fugitive dust will be generated. Field measurements of such emissions from shopping center and apartment construction projects has yielded an estimated emission rate of 1.2 tons of dust per acre of activity per month of activity. This figure assumes medium level activity in a semi-arid climate with a moderate soil silt content. In fact actual emissions from this project can be expected to vary daily depending upon the amount of activity and the moisture content of the exposed soil in work areas.

It is also inevitable that construction equipment will emit some air pollutants in their exhausts as they are used at various points within or adjacent to the project site. The largest equipment is generally diesel-powered. Carbon monoxide emissions from large diesel engines are usually no more than those of the average automobile, but nitrogen dioxide emissions can be quite high. Fortunately, nitrogen dioxide emissions from other sources in the area should be relatively low and the overall impact of pollutant emissions from construction equipment should be minor compared to levels generated by normal traffic on Ala Moana Boulevard nearby.

3. Indirect Air Quality Impact of Decreased Traffic

Once construction is completed, the proposed project will not in itself constitute a significant direct source of air pollutants. By serving as an attraction for motor vehicle traffic in the area, however,

the project must be considered to be a significant indirect air pollution source. This project is somewhat unique, however, in that the hospital complex that currently occupies the site generates more traffic than the planned hotel/condominium is expected to produce. It is therefore expected that this project will result in a net reduction of automobile-related pollutants in the project area.

Air Impact Summary

Once completed, the proposed project is expected to have little direct impact on the air quality of the surrounding area. The only potential long term indirect impact will be in the form of vehicular air pollutant emissions from traffic entering and leaving the the project. In this case, the proposed project is expected to generate less traffic than the existing Kaiser Hospital complex and the project itself can be viewed as a mitigative measure.

F. Noise Quality

The information provided in this section is from Appendix III "Evaluation of Potential Noise Impact and Mitigation Measures Related to the Proposed Hotel/Condominium Development, Kaiser Hospital Site," by Darby-Ebisu and Associates, Inc.

The proposed hotel/condominium project at the site of the existing Kaiser Hospital is not expected to produce noise impacts, except for short term construction noise impacts. The site, proposed tower design features, and the low traffic generation attributable to the project are all

favorable in minimizing future noise impacts on surrounding properties and on future project occupants.

Noise mitigation measures are not required since construction noise has been, and will continue to be, successfully regulated by the State Department of Health. Also, standard construction features can be implemented to control tire squeal noise and complaint risks. The proposal appears to be relatively problem-free in respect to adverse noise impacts, and optimally situated for minimizing noise exposure to future building occupants.

1. Existing Noise Environment

In order to determine the existing noise levels in the area of the proposed hotel/condominium, continuous noise measurements were obtained from the 8th floor lanais at the mauka and makai ends of the Yacht Harbor Tower, Ilikai Hotel. The mauka location was selected to measure noise from traffic on Ala Moana Boulevard. The makai location was selected to measure noise from local traffic on the yacht harbor entrance road, from Ala Wai Heliport, and from transiting fixed-wing aircraft.

The existing noise environment at the project site can be characterized with the following statements:

Noisy to very noisy at setback distances of 100 ft. or less from the centerline of Ala Moana Boulevard, and with direct line-of-sight to the boulevard. Existing federal noise criteria for residences are exceeded by 2 to 5 L_{dn} units.

Moderately noisy to quiet on the makai side of the buildings when direct line-of-sight to Ala Moana Boulevard is obstructed. Existing federal noise criteria for residences are not exceeded under these conditions.

The hourly noise pattern is typical of the Waikiki area, in that the traffic noise persists through the night and into the early morning hours.

2. Predicted Noise Impacts

Possible noise impacts associated with the project include the additional traffic noise generated by the hotel/condominium, tire squeal noise emanating from the proposed parking garage, environmental noise impacts on future residents/hotel guests, and short term construction noise impacts on adjacent properties. Possible noise impacts associated with traffic were evaluated thru use of the methodology of Reference 3, the traffic counts of Reference 4, and the traffic projection of Reference 5. Tire squeal noise and construction noise evaluations were based on previous work on similar projects.

a. Tire Squeal Noise From Parking Garage

Tire squeal noise in indoor parking structures has been the cause of complaints from persons residing in adjacent properties in Hawaii where year round open windows are the norm. Tire squeal is produced by high-frequency vibration of tire-tread elements when cornering a vehicle. The factors which influence the inception and

intensity of tire squeal noise include: road surface texture, vehicle forward speed, vehicle weight, tire-tread design, and slip angle (difference between tire steering angle and direction of vehicle movement).

b. Aircraft Noise

Existing aircraft noise levels in the project area are below 55 L_{dn} , and are not anticipated to change significantly by the year 2000. As long as current traffic patterns of rotary and fixed-wing aircraft are maintained, serious noise impacts resulting from aircraft fly-bys are not anticipated. Mitigation measures for aircraft noise reduction are not considered necessary.

c. Construction Noise

Short-term noise impacts associated with construction activities will occur as a result of the proposed project. These impacts are unavoidable due to the general noisiness of heavy construction activities, and the proximity (within 100 ft.) of the site to adjacent residential/hotel structures. Noise exposure from construction activities at any one location will be intermittent during the construction period as the various phases are completed.

d. Project Generated Traffic Noise

The trip generation projections for the project,

when compared to existing hospital/clinic trip generation characteristics, indicate that the proposed hotel/condominium traffic should, at worst, replace the existing traffic associated with Kaiser Hospital operations. Total peak hour traffic volume associated with the proposed hotel/condominium is projected at approximately 350 VPH. Tour bus traffic is anticipated to be minimal at the proposed project due to the type of clientele expected.

Because it is assumed that the project traffic will essentially replace existing traffic associated with present hospital operations, no increase in traffic noise along Ala Moana Boulevard or Hobron Lane is predicted to be attributable to the project. Along the yacht harbor entrance road, hotel guest traffic will essentially replace existing traffic associated with hospital operations, and increases in traffic noise attributable to the project are not expected. Because of the minimal traffic anticipated from the proposed project, and the elimination of current traffic associated with the hospital, the noise impacts resulting from project-related traffic are not considered significant.

e. Exterior Noise at Project Site

In order to predict the probable impact on future guests/residents of the hotel/condominium, base year traffic noise levels were calculated along the exterior walls of the proposed building. Of interest was the predicted noise levels at the proposed living

Ala Moana Boulevard is required before the traffic noise predictions increase by 1 L_{dn} unit.

Noise impacts on yacht harbor users and residents from the project's recreation deck will be consistent with Hotel-Resort Zoning. The ambient daylight noise levels are currently fairly high due to traffic and adjacent uses. The proposed project will offer shielding from mauka sources (Ala Moana Boulevard) therefore, recreation deck activities should not create any significant gains and may, in effect, lower noise levels. Evening noise sources are expected to primarily consist of traffic noise from theatre goers since pool use will be limited in the evening.

G. Public Utilities and Services

1. Water

Potable water is available to the site via 2-inch and 4-inch meters currently servicing the Kaiser Foundation Hospital. The projected water requirement for the proposed project is 237,700 gallons per day. The availability of additional water required for the project will be determined by the Board of Water Supply after the building permits have been submitted to BWS for approval. The additional water requested for the development will require that the developer cover costs for the water development charge for source, reservoir, and transmission facilities to serve the project. The water demands for

the proposed project will not require new source development since the BWS source development limits have not been exceeded.

The Board of Water Supply indicated in their letter dated August 2, 1984 that "should additional water requirements exceed 0.25 MGD, then the developer should arrange to discuss source development with us." The calculated daily requirement of 237,700 GPD should be accommodated within the limit indicated. (Current usage + 0.25 MGD)

2. Sewer System

Sewer lines are available along the major streets bordering the project site; however, the City and County Department of Public Works has stated that the 12-inch sewer in Ala Moana Boulevard from Kaiser Hospital to Hobron Lane is inadequate to accommodate the proposed development.

The developer will install at his expense, a 15 to 18 inch sewer relief line to join the existing Ala Moana Boulevard main. The length of the sewer line will be approximately 350 to 500 feet depending on which existing sewer manhole it is connected to. The sewage collected in this line is treated at the Sand Island Sewage Treatment Plant in which the treated effluent is discharged via outfall into the ocean.

Plans for the sewer system will be coordinated with and must be approved by the Department of Public Works, City and County of Honolulu.

3. Site Drainage

The existing site is currently drained by an existing municipal system which directs runoff in the existing Ala Moana Boulevard drainage system and the Ala Wai Boat Harbor. The area is heavily developed and is dominated by buildings and parking structures which results in high impermeability. Slopes are slight and runoff reaches the street only where there is no curb to contain the flow.

Drainage along Ala Moana Boulevard flows into a drop intake or catch basin, both of which front the project site. The runoff is carried by 18" concrete pipe to a concrete box culvert on the mauka side of the street which discharges into the Ala Wai Canal.

Drainage on the makai side of the site flows onto the street that separates the project site from the Harbor. The sidewalk curb on the makai side of the street prevents the runoff from flowing directly into the Harbor. The runoff then flows to one of the catch basins along the street which discharges into the Harbor. These catch basins are located approximately 150 ft. Ewa and 250 ft. Diamond Head of the site, with the other catch basin located opposite Parcel 6.

Proposed System

The drainage system planned for the project site will utilize existing drainage systems along Ala Moana Boulevard and into the Harbor. A State allowed quantity of runoff will flow into the Ala Moana

Boulevard system while the excess runoff will be discharged into the harbor.

Because the site is already highly developed, the new development is not expected to increase the quantity of runoff. Given the short distance, the runoff travels overland, impurities in the water will be minimal. The Ala Wai Boat Harbor is classified by the State's "Water Quality Standards" as an embayment and artificial basin (Class A and Class II for marine waters).

4. Other Utilities

Gas, electrical, and telephone lines are presently available at the project site. Prior to preparing the construction plans, the project's civil engineer will coordinate and get approvals from the respective utility companies to connect on to these existing utilities.

Roadway specifications including rights-of-way, minimum roadway and sidewalk widths will be subject to DOT review and approval; however, at this stage in the design phase, such specifications are not yet defined. The existing Service Road has a 40' entryway off Ala Moana Boulevard and is 50' wide along the makai perimeter of the Harbor.

The proposed project will continue to need refuse collection services. It is anticipated that refuse collection by private contractor will continue to accommodate the proposed project.

H. Service Facilities

1. Fire Protection Services

The Fire Department, City and County of Honolulu, has stated that fire protection for the area is adequate and can accommodate the proposed development.

The developer will meet all fire codes and install the necessary fire protection devices and systems required.

Because fire protection is provided on an emergency basis, the demand for this service is unpredictable. The proximity of fire stations in the near vicinity assures that should a fire occur, immediate response will be taken.

2. Police Protection Services

The Honolulu Police Department provides service to the area and will be consulted as the project is developed.

Previous Police Department concerns for similar projects have included pedestrian safety during construction, vehicular traffic hazards, and security provisions for the completed project.

During construction, standard barriers and posted signs will be erected for pedestrian safety; if required, the contractor will retain off-duty policemen to direct traffic for large trucks and construction equipment moving in and out of the project site.

Entrances and exits have been located away from major intersections. Also, the entrance/exits provide for a uniform distribution of vehicles entering and leaving the site so that no one entrance will result in congesting the immediate public street. Finally, a security force will be provided for the the protection of the building's occupants, property, and vehicles. Police calls to the project site are expected in emergency cases and little impact for police services is anticipated.

3. Hospital and Medical Care

Because of the nature of the proposed development, the need for hospital and/or medical care will likely be utilized only on an emergency basis. In these cases, several hospitals, including Kapiolani Hospital, Straub Clinic, and several ambulances (City and County), will respond in minutes to any medical emergencies.

4. Schools and Public Recreational Facilities

- a. Lunalilo and Ala Wai Elementary, Washington Intermediate and Kaimuki High Schools are located in the area. The Department of Education will be consulted in the availability of primary to secondary educational facilities in the area. The project is not expected to create any significant demand for educational facilities.
- b. Ala Moana and Ala Wai Parks are located within close proximity to the project site. The Department of Parks and Recreation, City and

County of Honolulu, has stated that the proposed action would have significant impact on public park facilities in the area.

The project plan has provided recreational facilities for both the condominium and hotel portions of the complex; however, compliance with Park Dedication Ordinance 4621 must be met. DPR will be consulted on all park dedication requirements. This requirement will be met by equitable cash dedication.

- c. The Ala Wai Boat Harbor is the largest and best light-draft harbor in the State. Its prime location at the western boundary of Waikiki Beach in central Honolulu along with the recent increase in the number of small boat enthusiasts, has resulted in a long waiting list for berthing spaces. The facilities include berthing spaces for nearly 950 craft, a haul-out and repair facility, ancillary shops and services, parking stalls, and restroom facilities for the boating community. It should be made clear at this point that the use of State lands will not affect existing uses except for 1) the elimination of 46 parking stalls along the Kaiser Hospital boundary (figure 14) and 2) two auxiliary buildings, one of which is a restroom facility. The service road will remain in its existing alignment and use except where the curbs and sidewalks for the hotel entry are proposed. The boat repair facility will not be affected since the Service Road lands abutting this operation will be utilized for Floor Area Ratio calculations only. The negotiations for the State

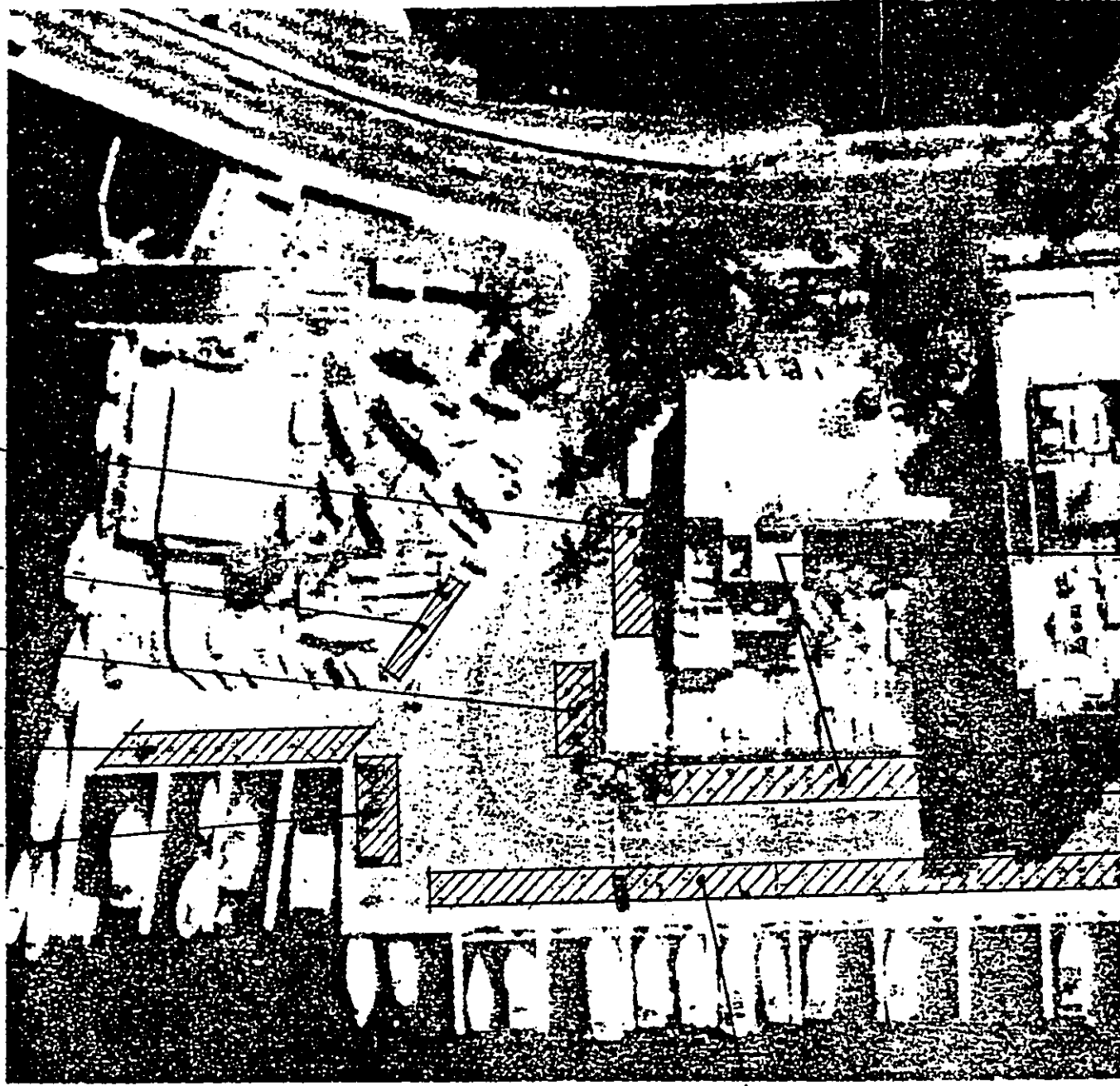
6 PERPENDICULAR STALLS
TO BE ELIMINATED

3 PARALLEL STALLS
TO REMAIN

5 PERPENDICULAR STALLS
TO BE ELIMINATED

10 ANGLED STALLS
TO REMAIN

5 PERPENDICULAR STALLS
TO REMAIN



44 PERPENDICULAR STALLS
TO REMAIN

SUMMARY

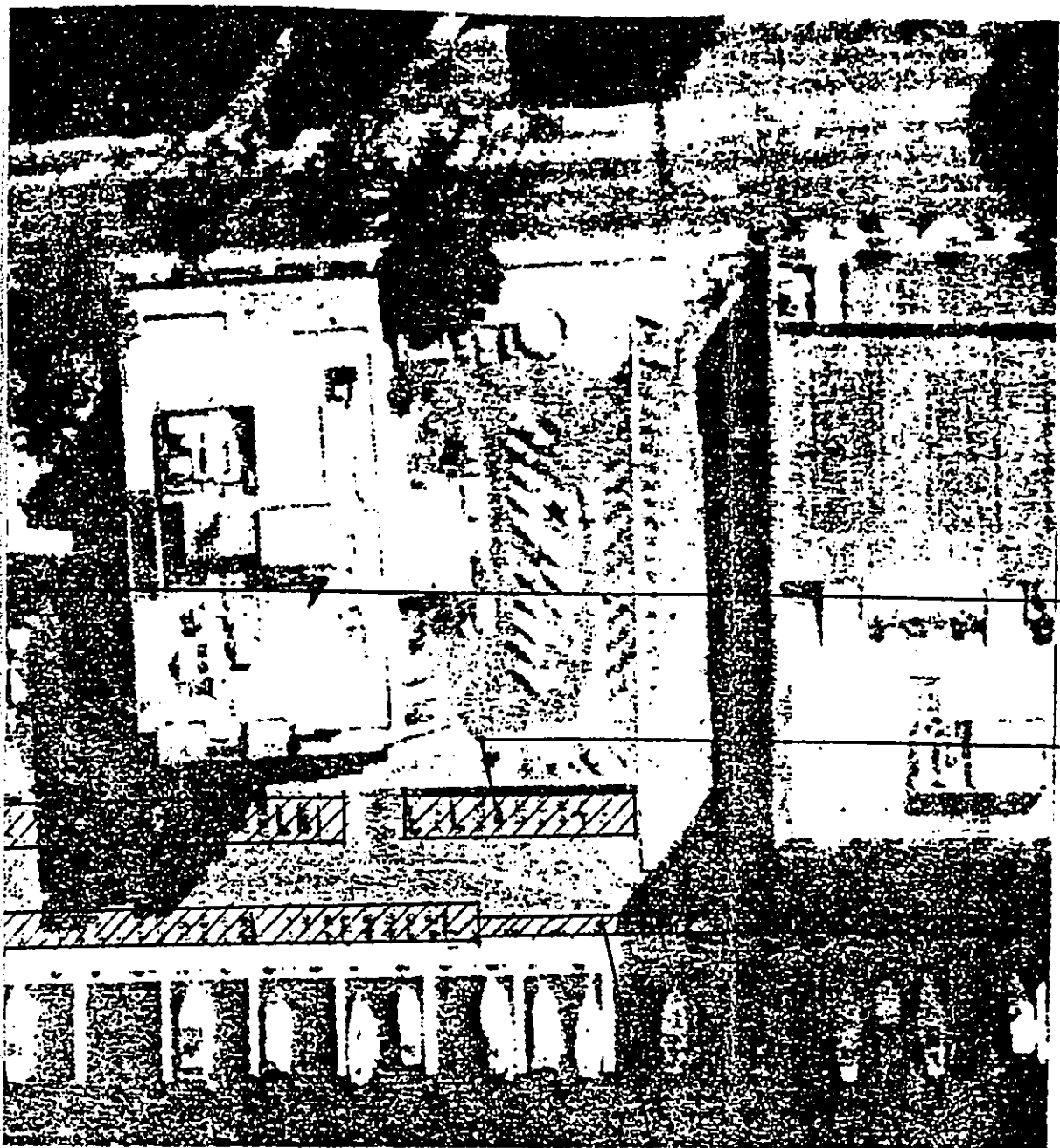
(STALLS BETWEEN HOEY LN TO ALA MOANA BLVD.)

120 STALLS TOTAL
- 46 STALLS TO BE ELIMINATED
74 NET STALLS TO REMAIN

EXISTING PARKING ON STATE LANDS

NO SCALE

FIGURE 14



24 PERPENDICULAR STALLS PLUS 1 LOADING SPACE TO BE ELIMINATED

11 PERPENDICULAR STALLS TO BE ELIMINATED

12 PARALLEL STALLS TO REMAIN

1697 ALA MCANA
20 DECEMBER 1984

STATE LANDS

EXISTING PARKING
ON STATE LANDS

lands are considering replacement of boat harbor parking stalls in kind or revenue replacement to the State. The restroom facility will not be replaced by the State. Final disposition will rest with the State, but at present, loss of the facility will mean using other available restrooms.

I. Historical and Archaeological Sites

There are no historic properties within the proposed project area listed either on the Hawaii Register or the National Register of Historic Places, nor are there any which have been determined Eligible for Inclusion on the National Register. However, in view of the recent archaeological findings in the Waikiki district, particularly at several localities along the beach front, the possibility that similar cultural/historical resources may still remain substantially intact within the subject property cannot be summarily dismissed. While it is true, as discussed in previous sections describing the existing land use, topography, and soils, that much of the property has been extensively modified in the past, approximately one-third of the property may still contain potentially significant material. Surface modifications have, of course, obliterated more readily observable or accessible evidence. But subsurface remains could include various fire pits, refuse pits, post holes, and similar features containing food refuse (midden) and other portable artifacts.

The present limitation on substantiating the presence or absence of such buried remains is the fact that most of the property not physically occupied by the existing

structures is covered over by various surface modifications including concrete slabs and asphalt paving. This restricts any preliminary subsurface exploration to a few small lawn areas around the Pacific Insurance building which necessarily overlooks the entire opposite end of the property.

To overcome this limitation and yet obtain sufficient usable information for further planning as early into the proposed project as possible, the developer will contract with a reputable archaeological consultant to monitor the demolition phase of the project. Should the archaeologist identify potentially significant remains, work will cease until such time when the appropriate actions have been taken to adequately mitigate any adverse effect upon those remains. This will be done in coordination with the Hawaii State Historic Preservation Office.

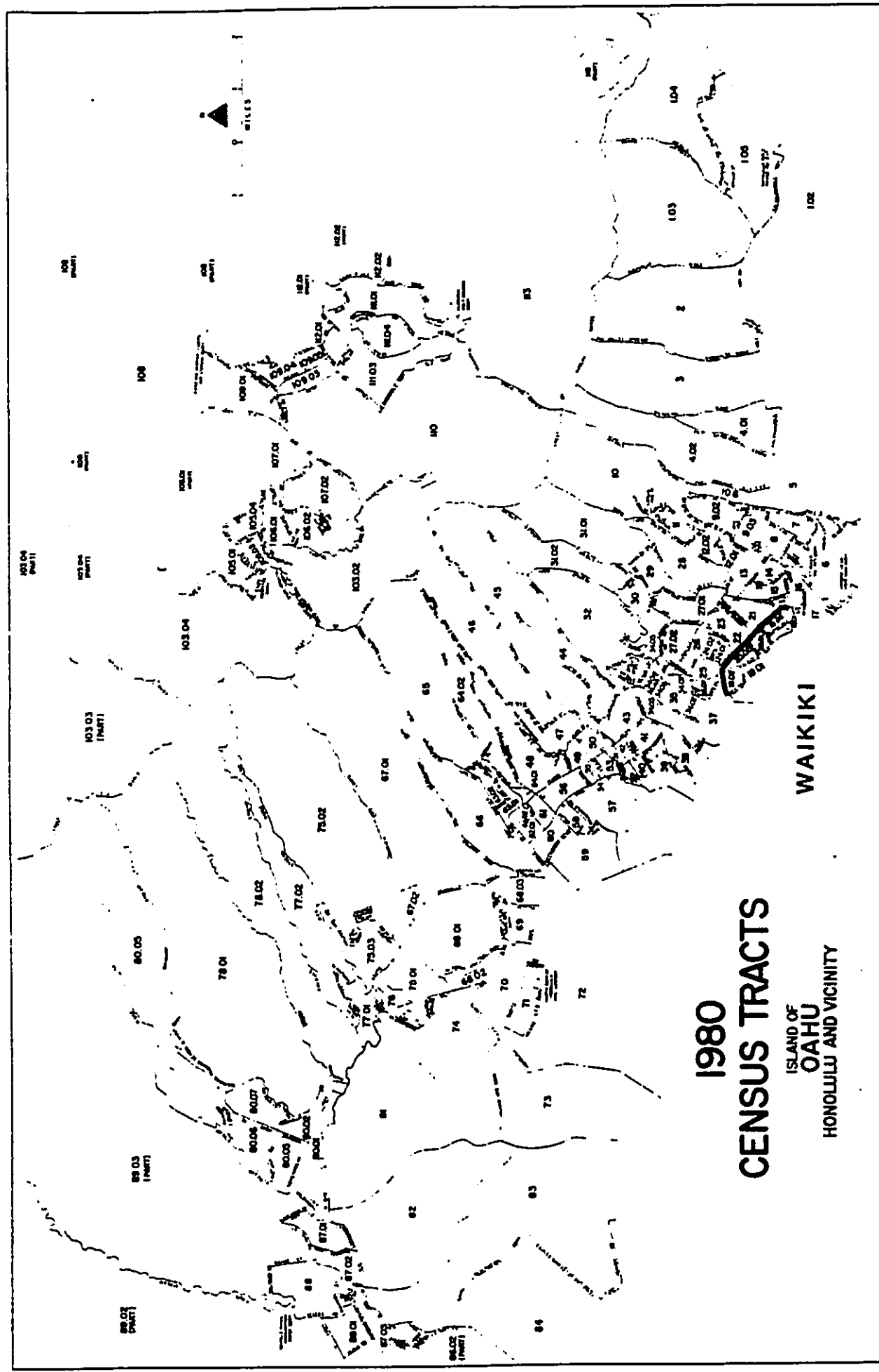
J. Socio-Economic Characteristics

Waikiki is a highly dense urban area (Figure 14, Table 4) comprised primarily of hotel resort facilities, entertainment destinations, small retail stores and residential apartments.

As the primary and largest tourist destination in the state, Waikiki plays a major part in Oahu's economy.

Socio-Economic Impacts

As indicated previously, impacts can be classified as being of short-term or long-term nature. Short-term socio-economic impacts are generally business related impacts due to construction. Long-term impacts are often the result of relocation of outgoing and incoming services or population change.



WAIKIKI CENSUS TRACTS

FIGURE 15

**TABLE 4
WAIKIKI CENSUS DATA**

Census Tract*	Land Area (acres)	Resident Population			Population per acre 1980	House- holds 1980
		1980	1970	Percent change		
18.01	40	1140	1286	-11.4	28.5	668
18.02	69	3259	2774	17.5	47.2	1733
19.01	316	1412	1111	27.1	4.5	868
19.02	55	5413	3368	60.7	98.4	3064
20.01	73	2560	2186	17.1	35.1	1445
20.02	65	3600	2399	50.1	55.4	2074

* Census tracts bounded by the Ala Wai Canal and Kapahulu Avenue.

The existing Kaiser Foundation Hospital will be relocated to a new medical center facility in Moanalua. A new 10-story out-patient clinic is also proposed for construction on Pensacola Street between King and Young streets. These two facilities will replace all functions currently housed at the Waikiki facility.

Impacts associated with the relocation of the hospital are not expected to be significantly adverse, and in all probability, should be beneficial overall. The new hospital proposed outpatient clinic will be able to provide a higher level of service with modern and expanded facilities. Service to Kaiser Foundation Health Plan beneficiaries should be improved with the newer, central locations.

Long-term impacts associated with the proposed hotel/condominium such as employment, and tax revenues have been mentioned earlier. Another positive impact that will be associated with the development is the potential increase in property values to adjacent properties due to the quality and gateway status of the proposed project.

Some short-term, construction related, economic impacts are expected. Only one structure is immediately adjacent to the project site. The Ilikai Marina hotel/condominium contains the Chart House restaurant and the Royal Marina theaters. Noise and fugitive dust as well as disruption due to construction will impact these establishments. These impacts are unavoidable although standard construction mitigation procedures will be followed. Construction related noise will also affect the condominiums located across Ala Moana Boulevard. Some boats located in the Ala Wai Boat Harbor will also be affected by fugitive dust.

K. Demolition Impacts

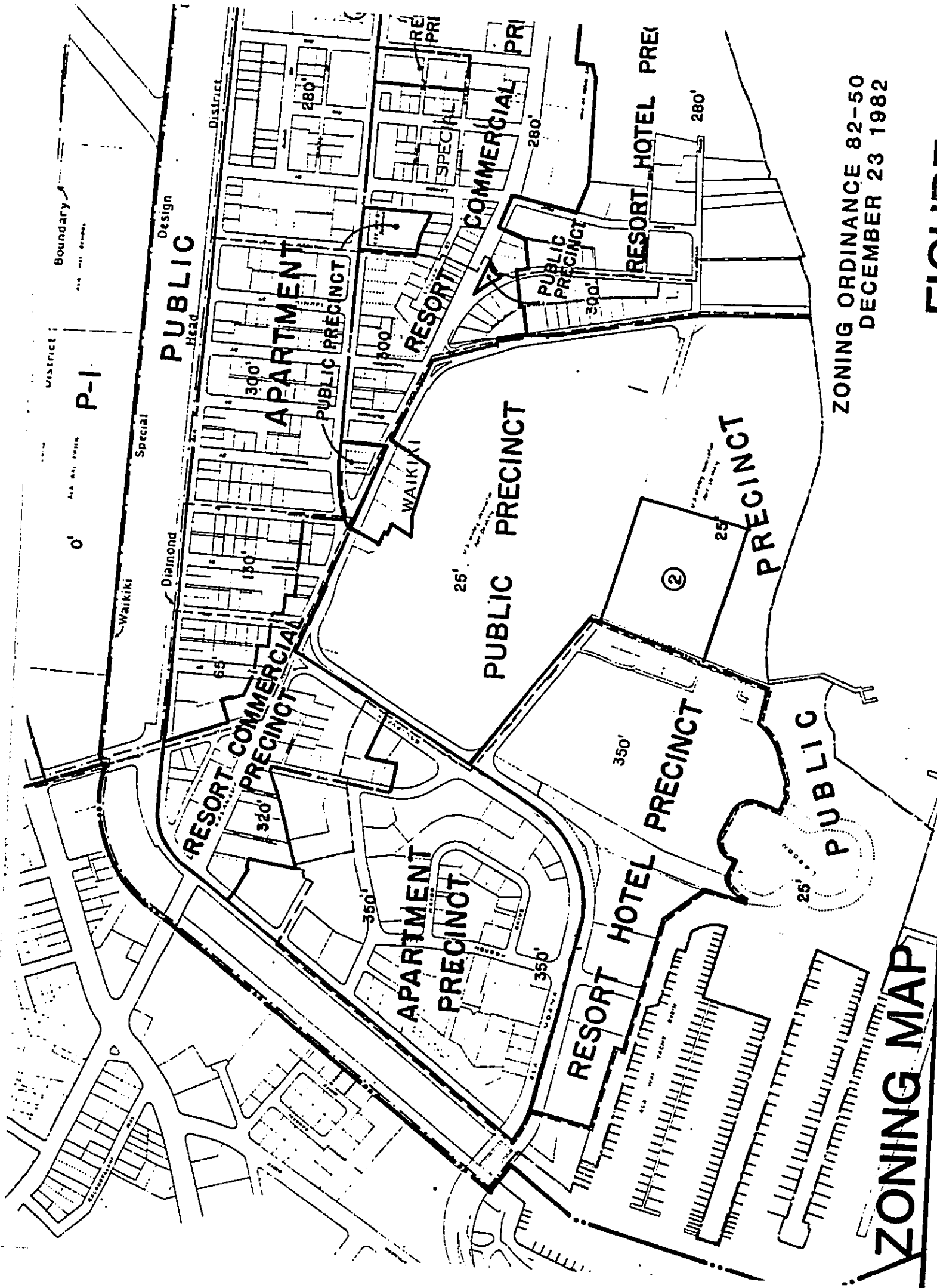
Demolition of the existing structures will be accomplished, in all probability, by steel ball and crane. Noise, air, and water quality impacts during demolition must be within Department of Health requirements and will be regulated in the following manner:

- 1) A noise permit will be obtained from the Noise and Radiation branch to insure compliance of demolition noise impacts to Title II, Chapter 43 HRS.
- 2) If fugitive dust exceeds the property line or degrades air and surrounding water quality, the Department of Health will impose restraints on the demolitions contractor to limit fugitive dust impacts on adjacent properties (Title II, Chapter 60 HRS).
- 3) A rodent infestation survey will be conducted prior to demolition to determine the extent of infestation. If any infestation is evident, the extermination will be conducted to prevent rodents from moving into adjacent properties upon demolition commencement.
- 4) The demolitions contractor will also comply with OSHA requirements for public safety as per City and County Building Department permit requirements.

**IV. RELATIONSHIP
TO EXISTING LAND USE**

IV. RELATIONSHIP TO EXISTING LAND USE, POLICIES, PLANS AND CONTROLS

- A. The project site and surrounding area is designated urban by the State Land Use Commission.
1. The Primary Urban Center Development Plan designates one portion of the site as a public facility and the other as resort. When the existing hospital site is completely vacated, the public facility of the site will revert back to the underlying zoning. This guideline document provides certain criteria which conflict with existing ordinances governing this area. Ordinance 4573 will remain as the controlling land use policy for specific implementation.
 2. Current zoning for the site is Resort Hotel (Figure 15) which allows building heights of 350 feet. The surrounding areas are zoned and have uses consistent with the resort hotel precinct. This includes the apartment precinct directly across Ala Moana Boulevard.
 3. The preliminary project design utilizes portions of State-owned lands which are designated as Public Precinct (Exhibits 2 & 3). These areas include the 21,637 s.f. of State lands that provide for a narrow portion of the Ewa water feature and a portion of the parking island fronting the porte cochre.
- B. The project, which lies on the makai side of Ala Moana Boulevard, is within the Special Management Area, Ordinance No. 84-4. The shoreline has been determined to be at the mouth of the harbor (exhibit 1). The impacts to recreation resources are described in detail in sections following.



ZONING ORDINANCE 82-50
 DECEMBER 23 1982

FIGURE 16

ZONING MAP

16 1984

GEORGE R. ARIYOSHI
GOVERNOR



HIDEO MURAKAMI
COMPTROLLER

STATE OF HAWAII
DEPARTMENT OF ACCOUNTING
AND GENERAL SERVICES

SURVEY DIVISION
P. O. BOX 119
HONOLULU, HAWAII 96810

FILE NO. _____

July 27, 1984

RECEIVED

JUL 27 1984

88

Mr. Sam O. Hirota
President
Sam O. Hirota, Inc.
345 Queen Street, Suite 500
Honolulu, Hawaii 96813

SAM O. HIROTA, INC.

By _____

Dear Mr. Hirota:

Pursuant to our telephone conversation on Wednesday,
July 25, 1984, this is to advise you that the mouth of the harbor is
the shoreline for any improvements related to Waikiki Yacht Harbor.

Very truly yours,

KAZUTAKA SAKI
State Land Surveyor

EXHIBIT 1

IV-3

GEORGE R. ARIYOSHI
GOVERNOR



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
260 PUNCHBOWL STREET
HONOLULU, HAWAII 96813

WAYNE J. YAMASAKI
DIRECTOR

DEPUTY DIRECTORS
JONATHAN K. SHIMADA, Ph.D.
WALTER T.M. HO
CHERYL D. SOON
ADAM D. VINCENT

IN REPLY REFER TO

December 5, 1984

HAR-EP 1992

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

Dear Mr. McElroy:


Yacht Harbor Plaza Environmental Impact
Statement-Waikiki, Oahu

Our comments of November 23, 1984 on the subject EIS were made in direct response to the contents of the document.

To help in clarifying the situation, we would like to inform you that the developer is presently discussing with the Department of Transportation for the use of the State lands adjacent to the development project. As part of these discussions the developer will need to address our expressed concerns. The areas which are being considered are designated on the enclosed map. In addition any decisions reached by the Department of Transportation would be subject to the results of any necessary hearings on this matter.

If you should have any questions, please contact the Harbors Division Planning Section at 548-2559.

Very truly yours,


Wayne J. Yamasaki
for Director of Transportation

Enclosure

EXHIBIT 2

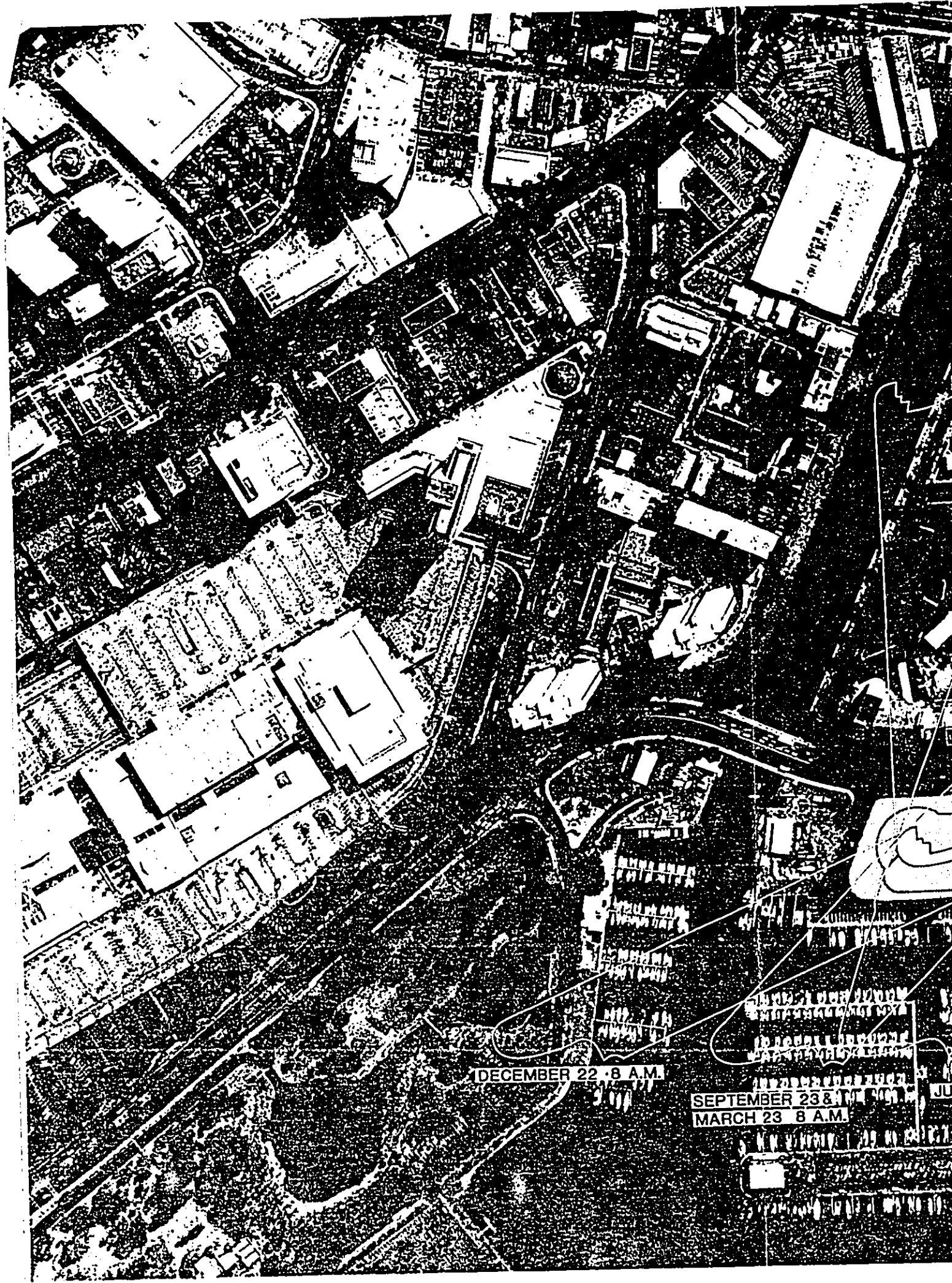
IV-4th

Several studies have been conducted to address concerns related to project area (SMA) and water quality impacts. Concerns expressed on the development have included: shadow impacts, wind impacts, and water quality impacts. The following studies and discussion have been provided in response to these specific concerns.

1. The shadow study (Figure 16), provided by the project architect, depicts shadow castings during the summer and winter solstices, the vernal and autumnal equinox for significant morning and afternoon hours. From these depictions, it can be assumed that shadows throughout the length of the day from 8:00 a.m. through 4:00 p.m. for all other dates will fall between these extremes. It should be noted that a range of shadow coverage is expected along the Ala Moana Boulevard side. Landscaping in this area will be shade tolerant to present as pleasant an atmosphere as possible for the pedestrian and traffic along the north side of the building.

The degree of the effect of the shadow coverage at this point is unknown on the general populace except that it will occur as noted.

2. A wind impact study has been performed by Arthur N.L. Chiu, Ph.D., P.E. for the proposed project. Chiu has stated that in order to fully ascertain all possible wind effects, a detailed wind tunnel study of the surrounding area would have to be performed. However, the following information is offered by Chiu.



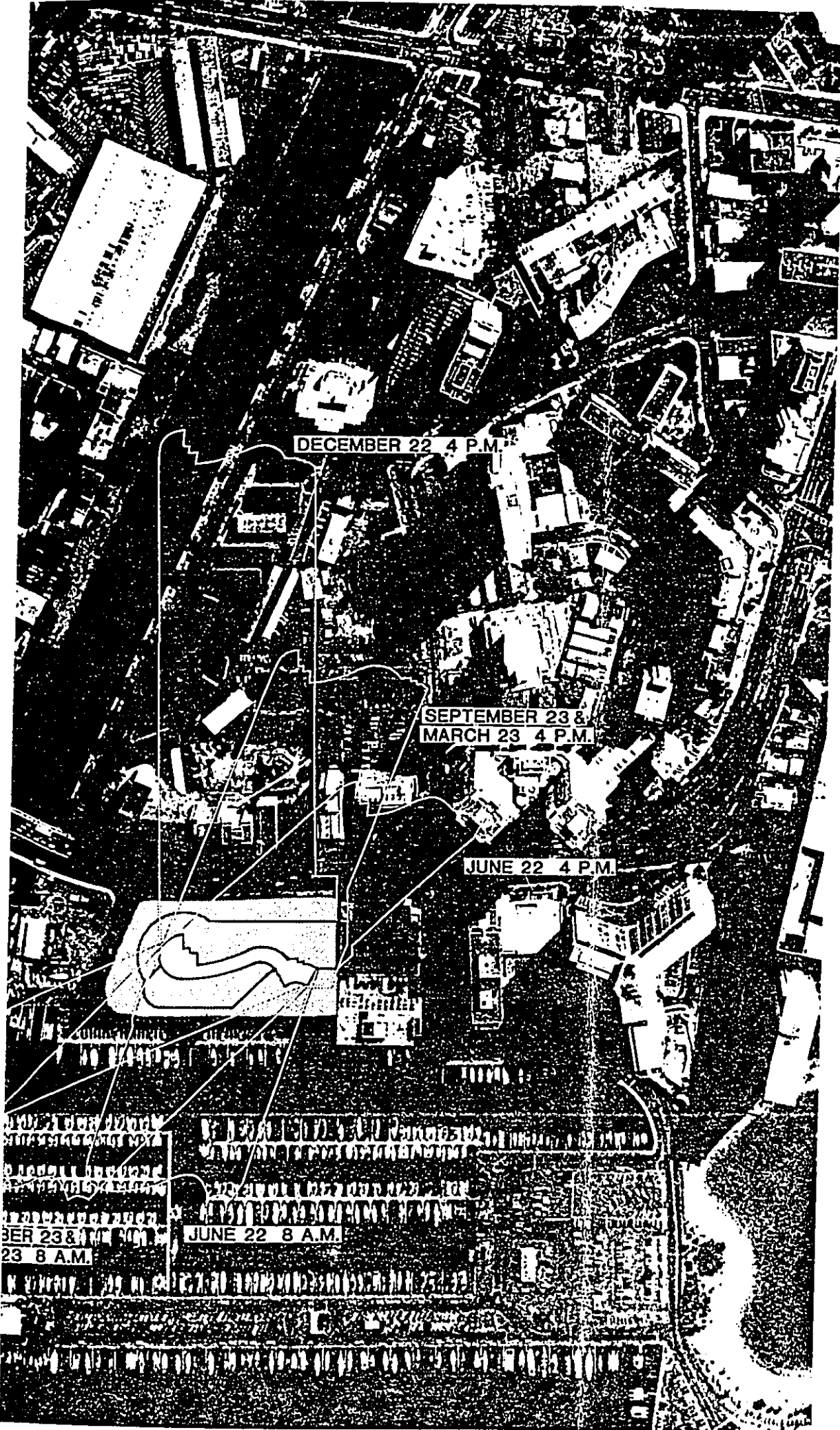
DECEMBER 22 8 A.M.

SEPTEMBER 23 8 A.M.

MARCH 23 8 A.M.

ILLEGIBLE TEXT

ILLEGIBLE TEXT



BECKET
 WELTON BECKET ASSOCIATES
 ARCHITECTS
 AND ENGINEERS
 COLORADO PLACE
 2501 COLORADO AVENUE
 SANTA MONICA, CALIFORNIA 90401-3105
 TELEPHONE: 310 307 8000
 LOS ANGELES CHICAGO NEW YORK

1697 ALA MOANA BLVD.
 HONOLULU, HAWAII

FIGURE 17
 SHADOW STUDY



The proposed structure will be bounded by existing tall buildings on the mauka side of Ala Moana Boulevard and also on the Diamond Head side of the project site. There are no tall structures on the makai and Ewa sides because of the Ala Wai Boat Harbor and the Ala Wai canal.

These existing tall buildings are in the path of the trade winds that blow from the NE/ENE directions and they will offer some sheltering effects to the lower portions of the proposed structure. The higher portions of the proposed structure may be subjected to strong buffeting trade winds. Overall effects from strong Kona winds impinging on the proposed structure will probably be more severe than trade wind conditions because of the open exposure of the terrain on the makai and Ewa sides.

The Ilikai Hotel Marina Tower balconies may be affected by the windflow patterns around the proposed structure.

The pedestrian wind environment on the mauka side (Ala Moana Boulevard) of the proposed structure may be affected from the "downwash" of the trade winds impinging on the face of the structure. This situation could probably occur during periods of very strong, gusty trade winds. These effects could be minimized by providing properly placed windbreaks and by planting adequate hedges and trees to divert and obstruct the wind flow patterns. The proposed structure is set back forty feet from its own property line along Ala Moana Boulevard. This space is likely to serve to some extent as a "diffuser" zone to mitigate the effects from wind downwash. A mauka

parapet wall on the top deck of the proposed structure could also be helpful in this respect.

On the makai side, the downwash during strong Kona wind periods could cause an uncomfortable wind environment for recreational area and pedestrian uses.

However,, the tower block is set back from the sidewalk, the parking decks are terraced and planted with trees and shrubs on the mauka side to diffuse the wind flow pattern, and the parapet walls at each level provide additional protective barriers to deflect the wind.

On the makai side, the bulkhead of the Ala Wai Boat Harbor is approximately 150 feet from the face of the tower block, and again there are trees as well as parapet walls at the makai edge of the recreational deck level to minimize the "downwash" effects at the pedestrian level. There will still be wind flowing around the makai side of the structure; it would not be a "dead calm" zone.

The wind impinging on the mauka and makai faces will also flow around the Ala Moana and Diamond Head (NW and SE, respectively) ends as well as over the top of the structure. At the Ala Moana end, the distance from the edge of the structure to the Ala Wai canal is approximately 400 feet. It is doubtful that the deflected wind from the proposed structure would cause too much changes to the wind environment than what exists currently at the entrance channel to the Ala Wai Boat Harbor.

At the Diamond Head end, the distance between the proposed structure and the Marina Tower building is approximately 55 feet. The mauka portion of the Marina Tower building is low-rise (6 stories) and the tower portion is 18 stories.

There could be channeling of the wind flow between the two structures at the lower portions. However, as mentioned previously, there are many surrounding high-rise buildings in the vicinity so that wind speeds at the lower elevations will tend to be smaller, and it is doubtful if the channeling effects would be of major concern.

The curved plan configuration of the structure will tend to "streamline" the wind flow to some extent. This, of course, will help to minimize some of the turbulent flow patterns at the corners of the usual rectangular configurations of high-rise buildings.

There should not be any concern of the shielding effect, on the makai side of the structure, against the flow of trade winds. The existing surrounding high-rise structures already have caused some blockage to the free-field wind, and it is doubtful if there would be a "dead calm" area on the makai side of the structure. The boat harbor being much further away from the structure would of course continue to be affected by the trade winds and should not expect to find any major change to the wind environment that exists currently.

3. Additionally, in response to comments on the potential impact of wind effects, a study was also conducted by Dr. Karl H. Bathen on potential water

temperature changes and tube worm growth problems for Boat Harbor boatowners. Specifically, concern has been raised regarding a) the impact such a structure would have on local wind patterns and the attendant problems with small vessel navigation in the adjacent Ala Wai boat harbor; and b) a potential change (increase) in water temperature and attendant problem of growth on vessels in the harbor. The basis of these comments for this report are derived from an analysis of historical Ala Wai harbor water temperature data, dating back to prior 1970, plus recent (1976 to 1984) Department of Health water temperature data taken adjacent to the Ala Moana bridge. In addition, several other historical references and studies of the Ala Wai canal, harbor and area water quality (biota, nutrient loading and bacteriology) were considered. These first hand observations of conditions in the harbor are by Bathen as a boat owner since 1969 and, as a resident-live-aboard owner.

(a): The impact on the Ala Wai harbor prevailing wind patterns have changed over the last 15 or more years. No long term specific historical wind data exists for the harbor (aside from sparse Oahu Water Quality Program data) but personal experience has noted that the increasing wall of structures landward of the harbor has permanently altered local wind patterns within the harbor. Such seems to have been the case since the early 1970's when most all the existing structures upwind of the harbor were in place. Since that prior construction boom period, relatively little local construction activity has ensued. Two notable exceptions occurred, however, with the addition of the Yacht Harbor Towers and Discovery Bay complexes.

The result of completing the construction of the Yacht Harbor Towers has been an increase in winds funneled down Atkinson Drive between the twin tower buildings and the Ala Moana Americana Hotel. Examining data for the statistically prevailing wind vectors shows that the tower buildings are aligned such as to deflect the prevailing trades approximately 10° to 30° clockwise, thereby causing the downwind conditions to shift the deflected trade-winds towards the Ala Moana park entrance and away from the harbor.

The numerous highrise structures now existing on the landward side of the harbor, effectively blocks the tradewind flow patterns except for localized wind funneling effects between buildings on particularly windy days. Generally, buildings create a turbulent downstream wind condition extending five times the building height and disturbs more laminar like downwind flow conditions up to 25 times the structure height. These distances, when converted to horizontal distances indicate that most of the harbor slips already lie in the shade now of the predominantly turbulent wake.

An exception, however, is evident in the main Marina entrance channel, turning basin, and the navigational area extending up to the Ala Moana bridge. The prevailing tradewind vectors in these more open areas align west-southwest, angularly down and slightly across the Ala Wai canal. The open area of the Ala Wai canal creates somewhat more consistent winds across these open harbor areas. A curvilinear shaped 350' high structure located at the

Kaiser Hospital site is thus a high structure located at one side of this open area. As such, the project is not expected to cause any statistically significant change in wind patterns throughout the harbor slip area considering the already existing wind obstructions upwind of the slips. Further, an increase in winds across the harbor open area extending seaward from the Ala Moana bridge, would be expected, decreasing in effect seaward to the Magic Island breakwater. Winds in these navigational areas may become slightly stronger, particularly during strong tradewind conditions, and in the landward most portions of the harbor around the Ala Moana bridge; this is a condition similar to that presently observed at the Ala Moana Boulevard-Atkinson Drive intersection. Some boaters may view increased, more consistent, winds as a positive impact; others, as small day sailers, may take issue with the conditions.

(b): A potential increase in water temperature and biota growth on boats - an examination of Ala Wai harbor historical water temperature data shows widely varying surface temperatures have existed in the area since 1970. State Department of Health data does imply an increase, using a linear trend analysis, from 1976 to 1984, of 0.05° C. However, the data are widely scattered, showing a standard error of estimate of 1.59° C and poor correlation coefficient of 0.18. Analyzing these data for annual minimums (in February), maximums (in September) and annual averages for 1976 to 1983, shows a widely varying thermal envelope. In this case, a cooling trend is evident from 1978 to 1980. Most all significant high rise construction in the area was completed prior to 1976.

Thus, the cooling and warming trends implied in the data could be: real, or the result of normal secular fluctuations dependent upon the time of day and weather conditions during measurement. The other possibilities are that sampling tests were taken at different depths (as much as 0.5° C change can result in the first few cm); or the result of different operator technique or instrument error.

The historical data for 1978 to 1984 show an average annual thermal envelope of 3.6° and therefore, (likely up to a 1.8° C year to year warming or cooling trend,) may not be statistically significant or meaningful.

In summary, the data base is simply too short and diurnally variable for a trend judgement in this case. Long term however, the existing upwind structures, the attendant increase in paved harbor boundaries acting as heat sinks, and the increase in boats in the Ala Wai harbor have impacted harbor conditions significantly. Nutrient concentrations have increased within the harbor and in the Moana stream and Ala Wai canal. These are the primary factors that have contributed to active and increased biota growth on boats. As a general rule, biota activity approximately doubles for a 10° C increase. However, the proper pH range and nutrients for growth of most biofouling organisms must also exist. The long term water quality degradation, already documented within the Ala Wai harbor since 1970, appears to be the predominant factor in biofouling increase.

4. In addition to the technical discussions on local

wind patterns and their potential impacts on small boat navigational problems in the Ala Wai Marina, Environmental Communications, Inc. discussed with two long time small boat owners, the concerns they would have in the event that the proposed project were to be implemented. These discussions were on a voluntary basis and both respondents do not have interests in the project. The discussions took place on August 20, 1984.

- a. Gil Budar is the owner of a 43' sailboat since 1971 and has berthed his vessel at the Ala Wai Marina for that period of time. His comments represent his opinions and do not extend beyond the impacts on his own practice of yachting at the Ala Wai Marina. As the owner of a power operated sailboat, Budar does not experience difficulty in moving in and out of the Marina since he operates under power to reach the off-shore waters. He did comment that there has already been negative impacts on the Marina basin area since the construction of the Ilikai Hotel and the Kaiser Hospital. The Marina basin is where small non-powered sailboats are most active. The addition of Discovery Bay, Westbury, Villa, Chateau Waikiki, and the other high rise condominium projects that ring the Ala Wai Canal and Ala Moana Boulevard have further created erratic winds for the non-powered sailboats.
- b. Budar stated that he would consider the development of the hotel/condominium project as beneficial. Budar felt that dust problems would be reduced on his yacht since swirling winds that

usually gust around the Hospital and blow on the yachts berthed immediately makai of the Hospital might be decreased or eliminated.

- c. Budar also cited the beneficial sheltering effect that the proposed project would have on shielding his yacht from the gusty trade winds. This sheltering would extend the life of the awnings on his yacht. Before the Ilikai was built, an awning would last 6-12 months; now the awnings last up to four years.
- d. Improved security will also be a benefit to the yacht owners closest to the hotel site.

The second small boat owner is Mike Doyle who is also a marine surveyor and owner of his own company, Mike Doyle, Ltd. Mr. Doyle's concerns are primarily in small, non-powered boats since he has been involved in the Junior Sailing Program since 1972. He acknowledges that the wind patterns have been erratic and have deteriorated since the advent of high-rise development mauka of the Ala Wai Marina. We asked if these erratic wind patterns would either create navigational hazards to the small, non-powered sailing craft or affect their recreational use and he answered in the negative.

- C. The project, which will contain residential condominium units, will be subject to Park Dedication Ordinance 4621.
- D. Use of reflective glass on the project exterior will require compliance with Sunlight Reflection Regulation Ordinance 82-35.

While compliance with Ordinance 82-35 will be met by use of low reflectant glass, concerns were still expressed by some commenting parties; therefore, a reflective glare study was done for the project by the project architect. Special attention was given to peak reflectivity situations during solstice dates. Because of the curvilinear nature of the tower, the impact of reflectivity on off-site areas is diffused. Areas located within the curvilinear portion may be subject to some reflectance focus, however, this area is located within the project site and should not affect any areas outside the project site. These impacted areas are point specific; that is at any one time the affected zones are separated by large bands of unaffected zones. As such, no single zone would be continuously impacted as the sun changes position during the day. This effect is further lessened by the low (27%) reflectivity of the building's exterior.

The glass proposed for the building's exterior is a 1/4" to 5/8" thick assembly made up of two layers of pink plastic laminate sandwiched between two pieces of clear float or heat-strengthened glass. Benefits of this product are the rose-copper color (a crucial design element in the building), its ability to insulate hotel guests or condominium residents from traffic noise and the fact that if broken, it will remain in place, thereby removing the possibility of broken glass falling on pedestrians below.

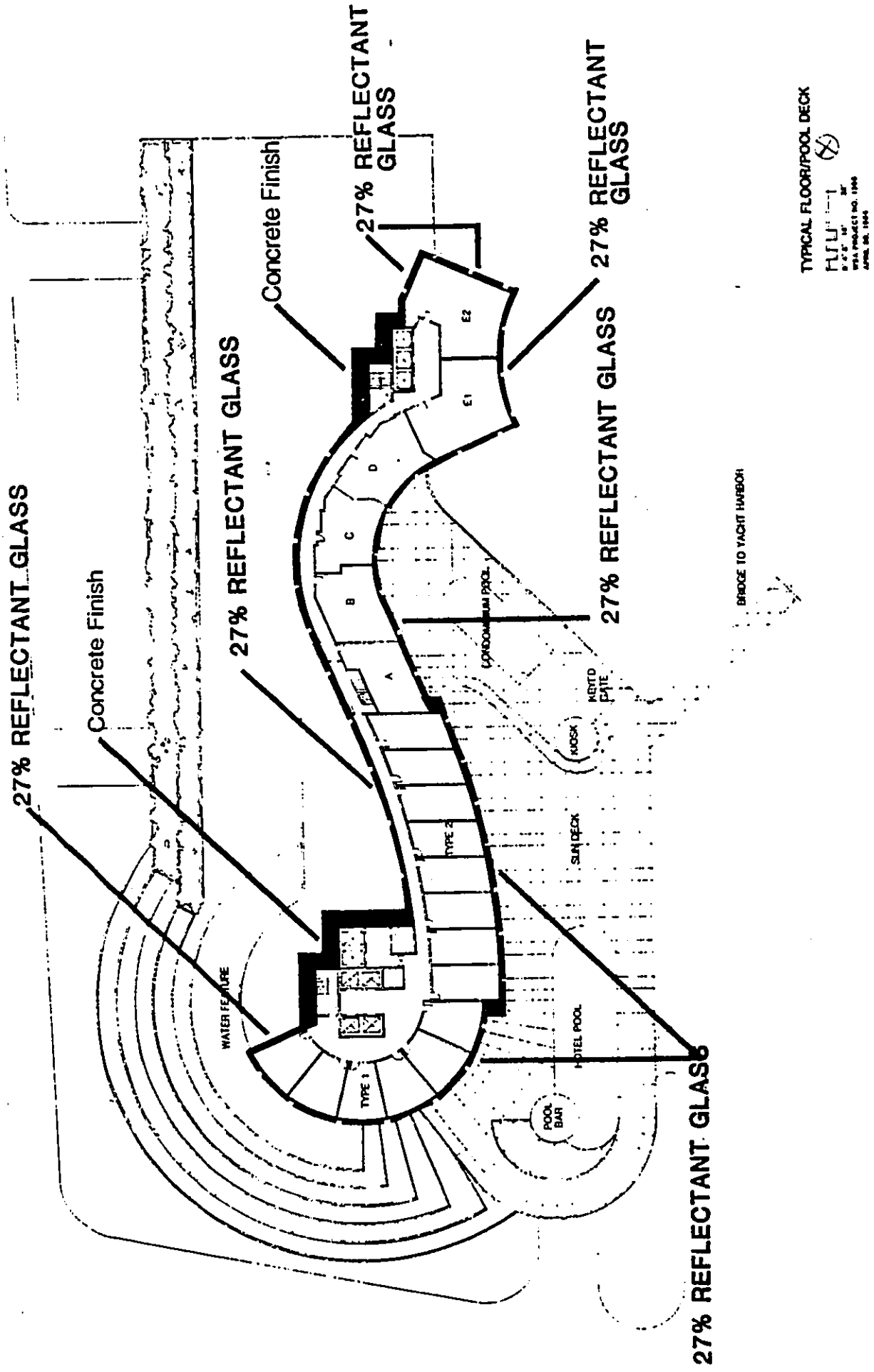
When required to help control heat gain within the building, the assembly can be mirrored. Since the creation of a reflectant building is not a driving force in the development of the design of the structure, the amount of coating specified for the glass has been kept to the minimum to meet energy conservation standards and mitigate

as much as possible any potential impact on adjacent structures and pedestrian/vehicular traffic. (It is the intention of the Developer to use mitigative measures if the reflective effect is critical to the environs.)

A gold reflectant coating of 27% reflectivity has been applied to the glass laminate throughout the tower. It has been used in both vision and spandrel glass areas to create a uniform appearance throughout the building's exterior (Figure 17). The ground/entry level elements however, have no mirroring, thereby allowing full visibility into as well as out of the public areas of the base. This approach to the building's exterior brings the average heat gain in the building into compliance with local energy conservation requirements, while maintaining in all locations a reflectivity of less than 30%. The various products of reflective glass that have been used in Honolulu are in the order of 42% reflectivity. Ordinance No. 82-35, the sunlight reflection regulation, defines reflective surfaces as having reflectance of over 30 percent.

- E. The two land use policy documents that govern the development in the Waikiki District are Ordinance No. 4573 (Waikiki Special Design District) and the Development Plan Land Use Policy for the Primary Urban Center (Ordinance No. 83-25).

Examination of the legislative intent that forms the basis of these two policy documents indicate that the intrinsic values common to both ordinances strive to achieve through sound planning; the preservation of physical attractions, controls on development that will not exceed capacity of utilities and infrastructure, and the recognition that Waikiki is both a primary destination resort and permanent residential sector.



EXTERIOR FINISH - TOWER **FIGURE 18**

11-18

This linkage of common emphasis in planning principles that is found in both policy documents is further demonstrated in the language contained in the Legislative Intent sections of Ordinance No. 4573 (Section I) and Ordinance No. 83-25 (Part II, section 15(2), (b) Waikiki). It should be noted that in Ordinance No. 83-25, the recommendations and guidelines are more restrictive and stringent in certain situations; there is recognition however, that the prevailing ordinance on actual height, bulk, size, and location of proposed buildings defer to the zoning ordinance in effect at the present time.

F. Governmental approvals required include:

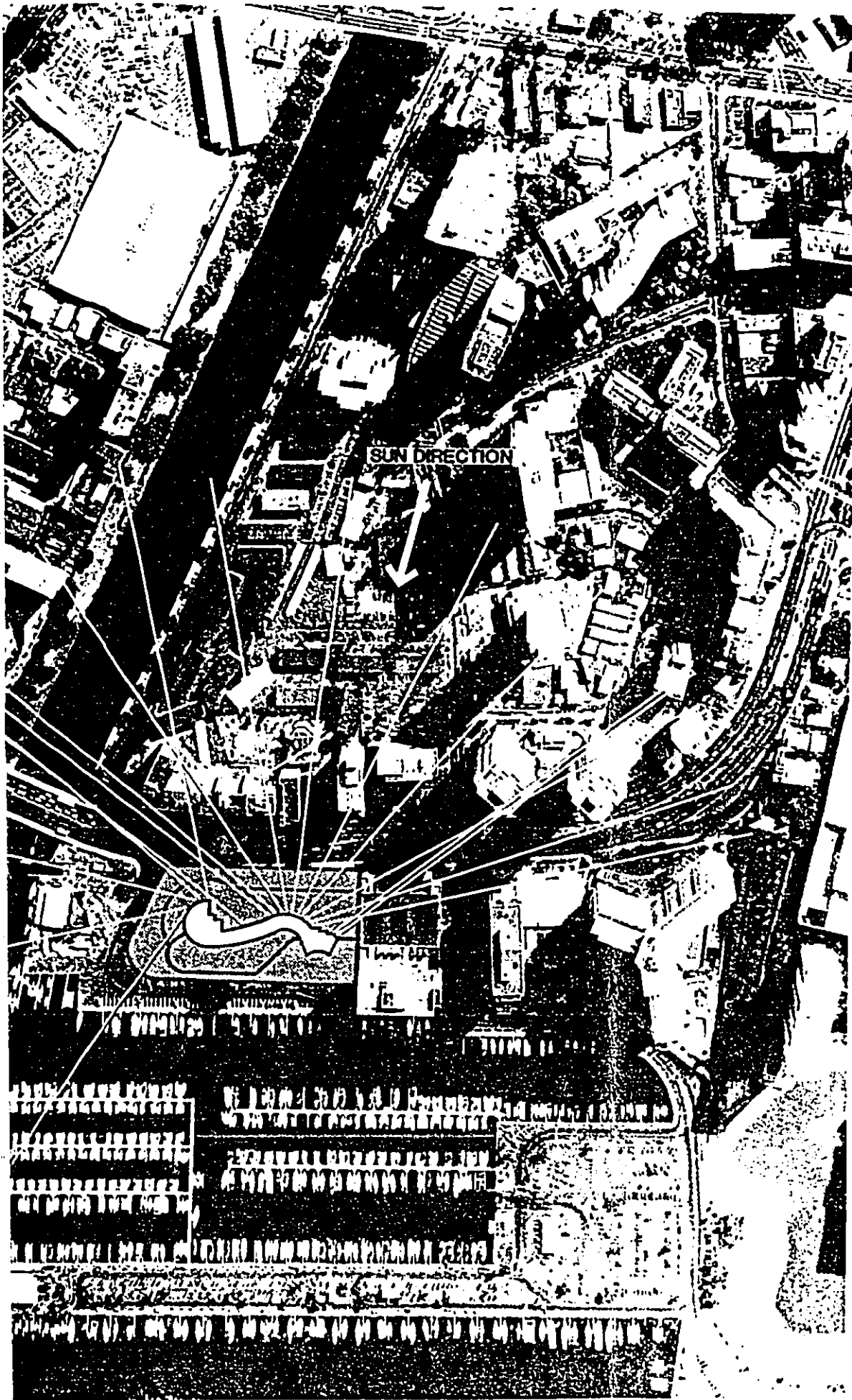
Department of Land Utilization, City and County
Special Management Area Use Permit - Recommendations
Waikiki Special Design District
Approval to Construct within the Public Precinct
Zoning Variance From Setback Requirements - Recommendations

City Council
Special Management Area Use Permit - Approvals

Zoning Board of Appeals - Approvals
Zoning Variance From Setback Requirements - Approvals

Department of Transportation, Harbors Division
State Lands under Negotiation

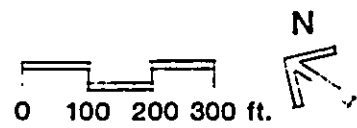
Board of Land and Natural Resources
State Lands under negotiation

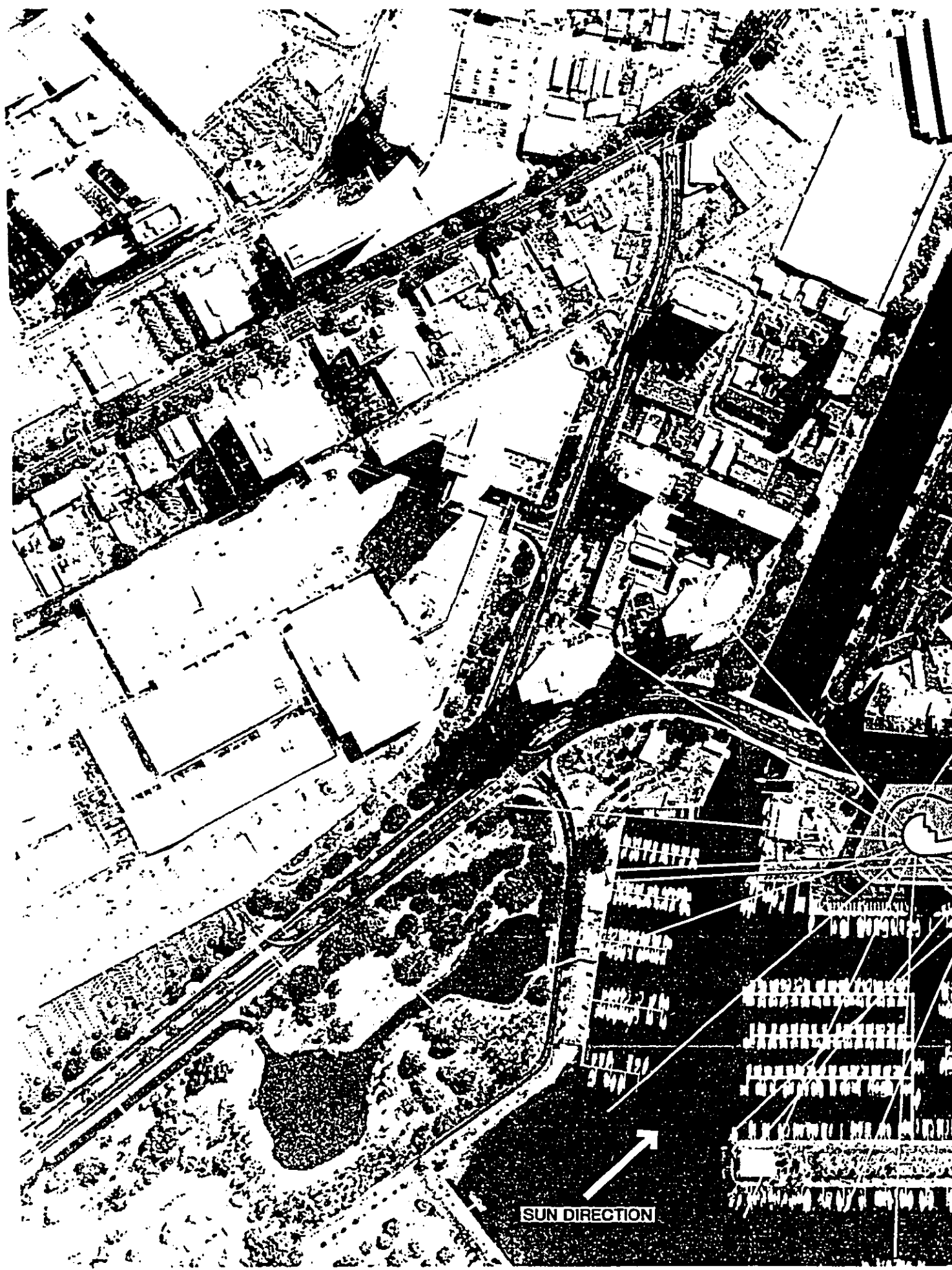


BECKET
 WELTON BECKET ASSOCIATES
 ARCHITECTS
 AND ENGINEERS
 1000 CALIFORNIA STREET
 SAN FRANCISCO, CALIFORNIA 94109
 TELEPHONE 371-1100
 LOS ANGELES CHICAGO NEW YORK

1697 ALA MOANA BLVD.
 HONOLULU, HAWAII

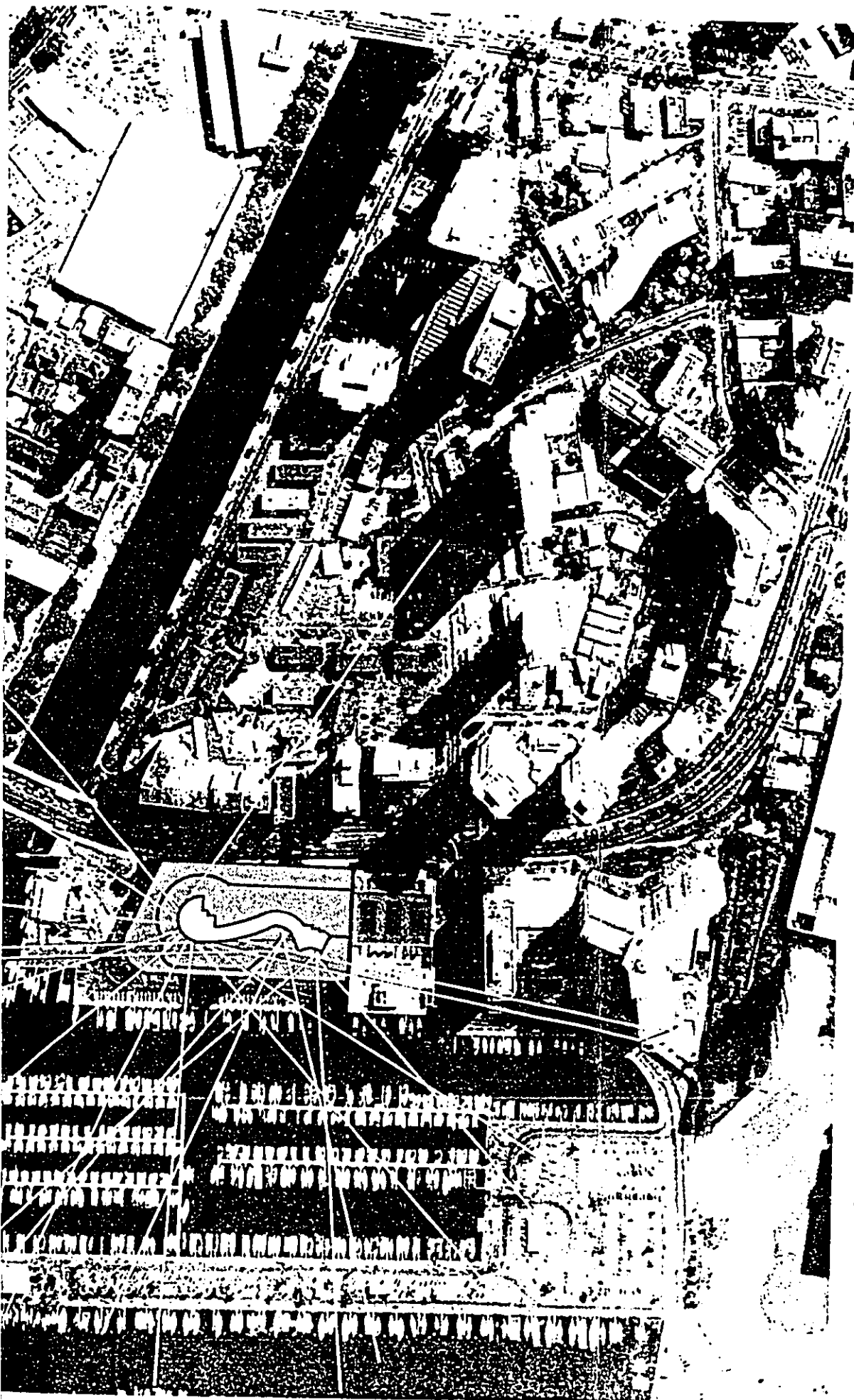
FIGURE 18-A
 SUN REFLECTION STUDY
 JUNE 22, 6:30 A.M.





SUN DIRECTION

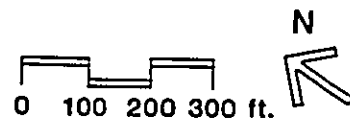
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100

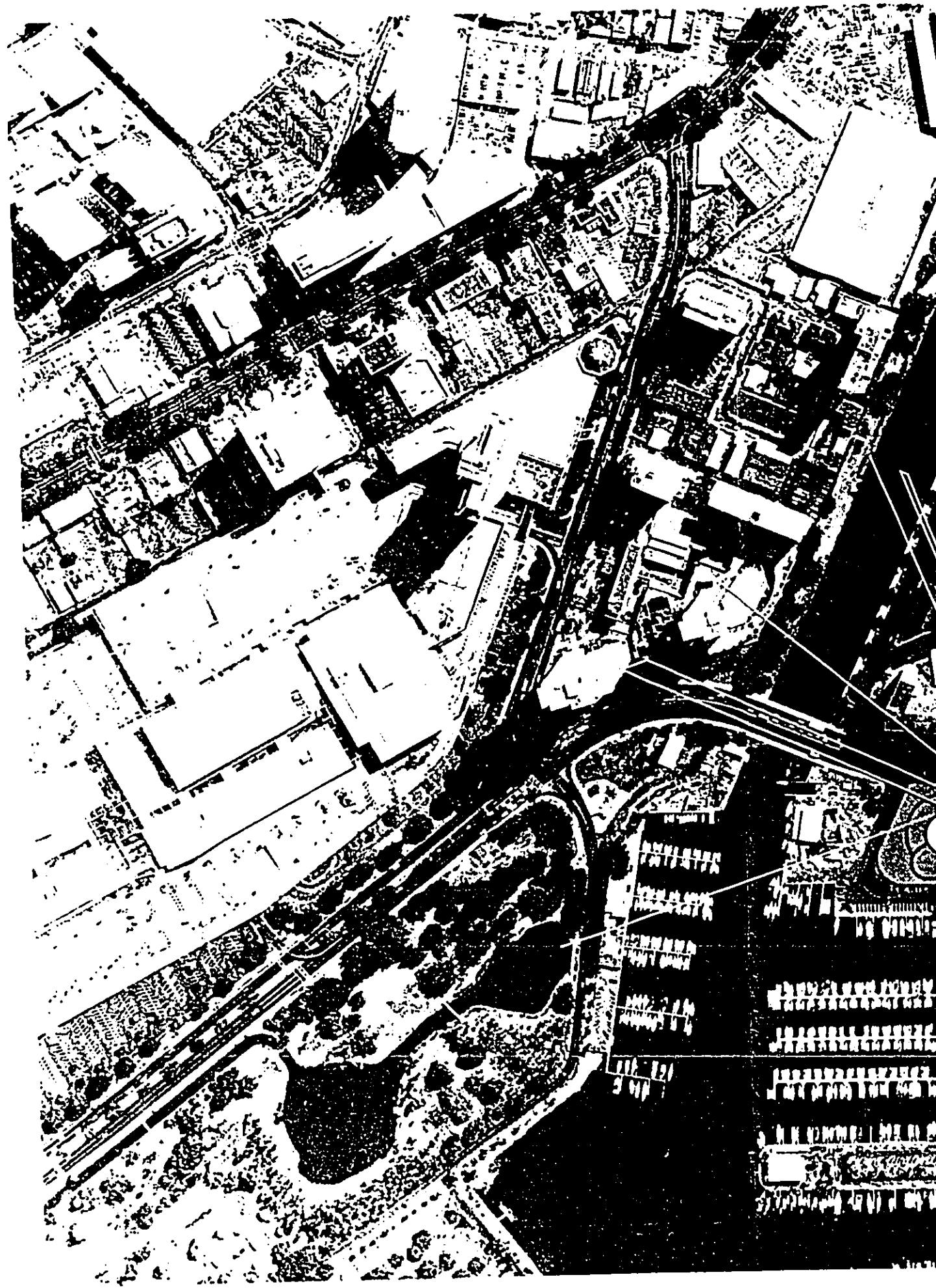


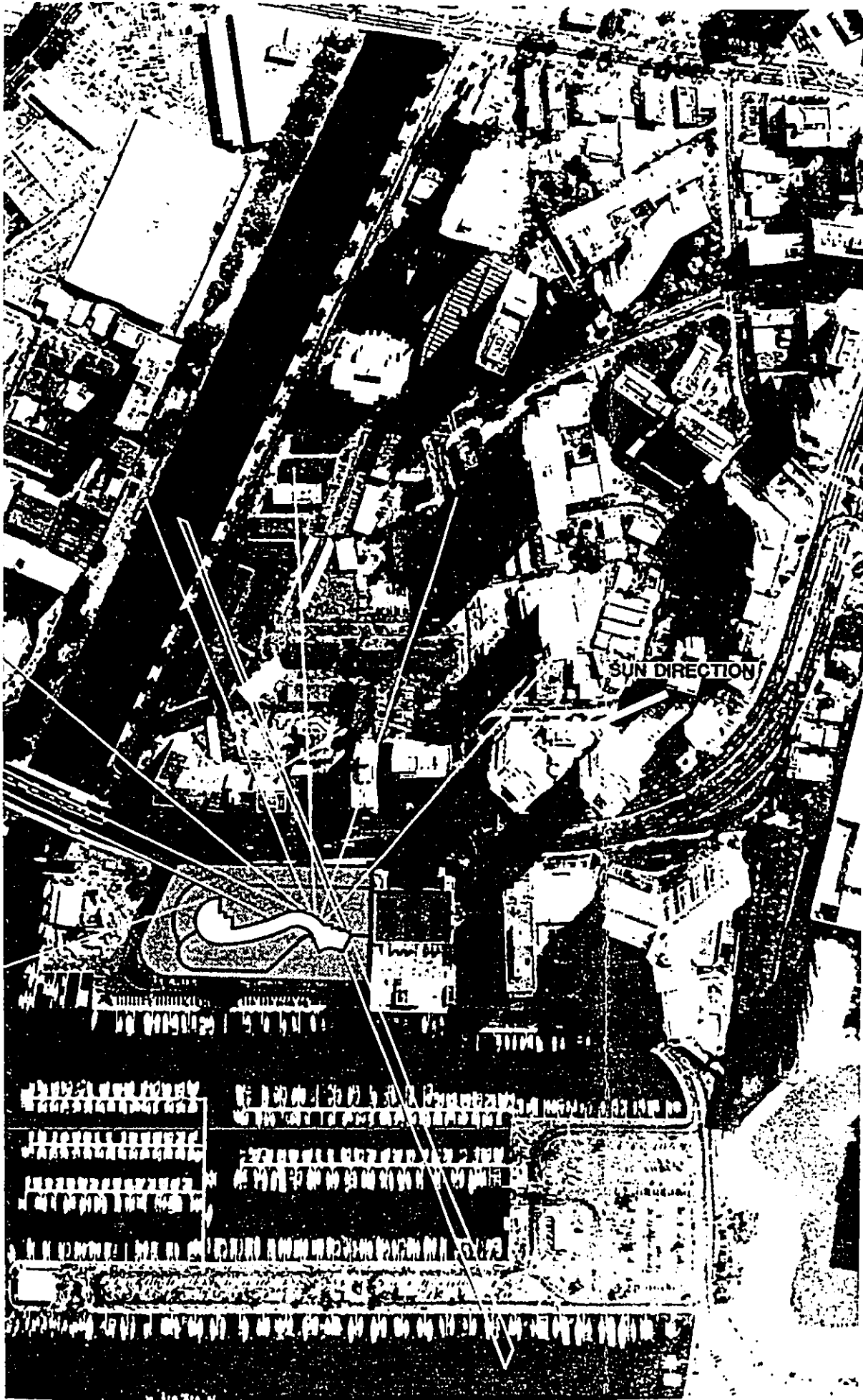
BECKET
 WELTON BECKET ASSOCIATES
 ARCHITECTS
 AND ENGINEERS
 1697 ALA MOANA BLVD.
 HONOLULU, HAWAII
 ADVANCE CITY CHICAGO NEW YORK

1697 ALA MOANA BLVD.
 HONOLULU, HAWAII

FIGURE 18-B
 SUN REFLECTION STUDY
 JUNE 22, 6:00 P.M.



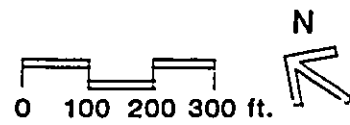




BECKET
 WELTON BECKET ASSOCIATES
 ARCHITECTS
 AND ENGINEERS
 P.O. BOX 1000
 215 COLIFRADO AVENUE
 SANTA MONICA, CALIFORNIA 90401
 TELEPHONE 310-317-8100
 LOS ANGELES CHICAGO NEW YORK

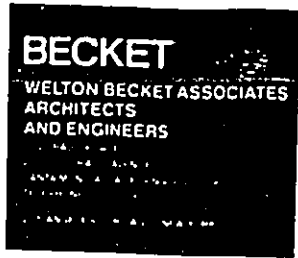
1697 ALA MOANA BLVD.
 HONOLULU, HAWAII

FIGURE 18-C
 SUN REFLECTION STUDY
 DEC. 22, 8:00 A.M.





1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100



1697 ALA MOANA BLVD.
HONOLULU, HAWAII

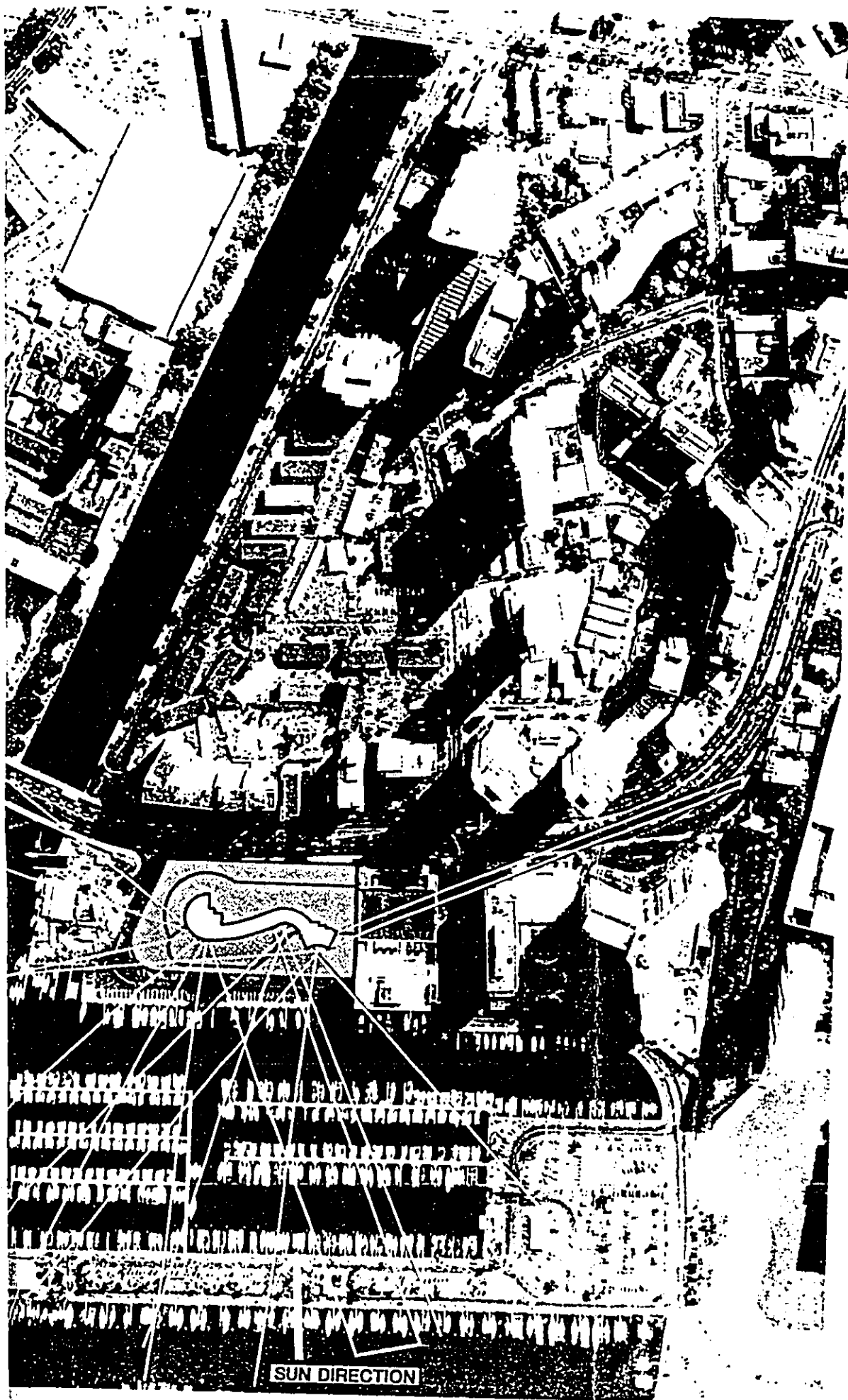
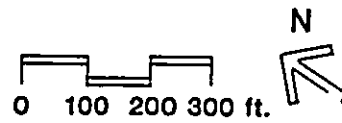
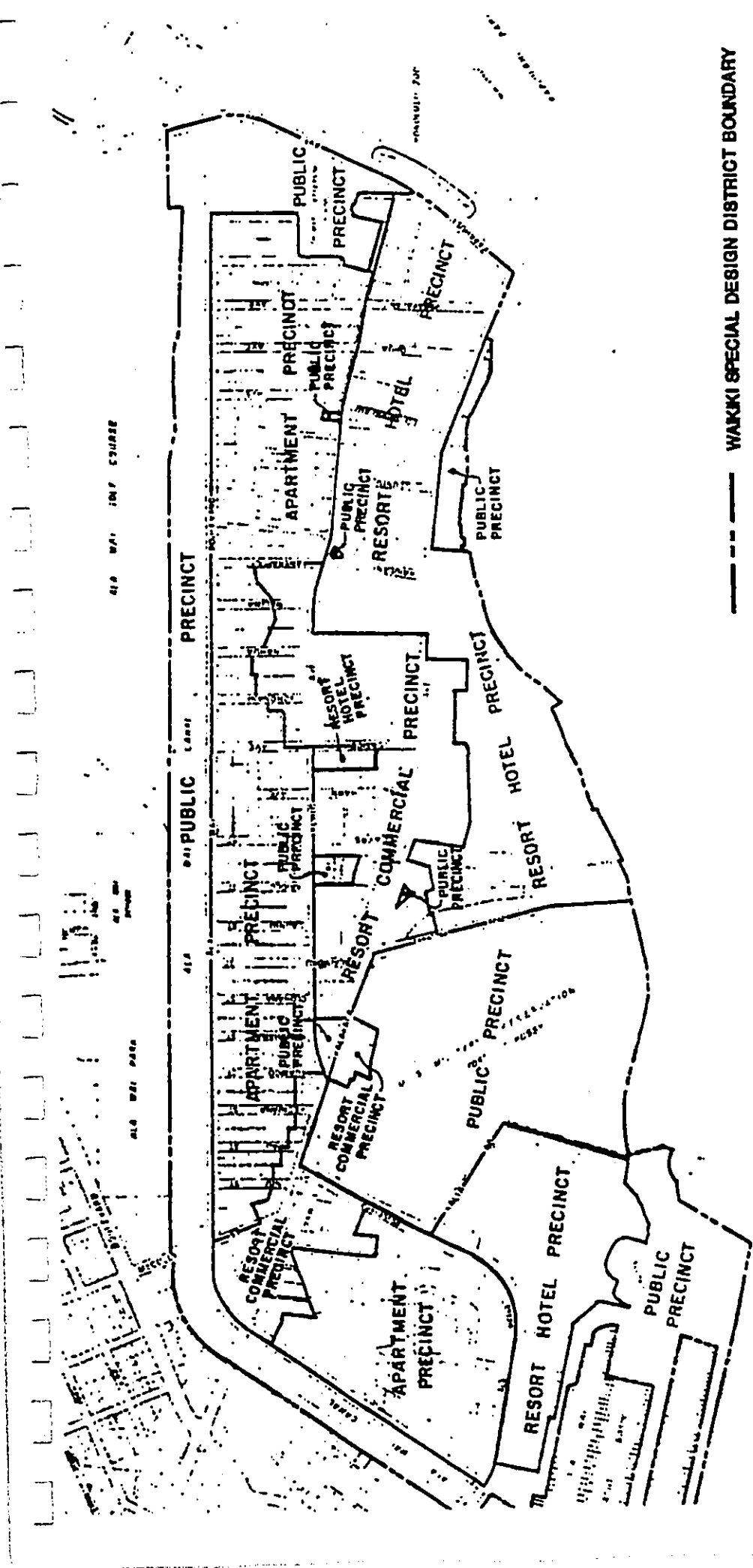


FIGURE 18-D

SUN REFLECTION STUDY

DEC. 22, 3:30 P.M.





Use Precincts

WAIKIKI SPECIAL DESIGN DISTRICT



FIGURE 19

F. Chronology of Design

The following chronology briefly summarizes the overall design development process for the proposed mixed-use development complex to be constructed at 1697 Ala Moana Boulevard adjacent to Ala Wai Yacht Basin.

1. Welton Becket Associates, architects and engineers, were commissioned to work on a development plan which initially contemplated an even mix of 300 hotel guest rooms and 300 condominium units. Subsequent changes and refinement in the development plan, due primarily to zoning requirements and perceived market conditions, modified the initial development plan to a mix of approximately 406 hotel rooms and 174 condominiums (roughly a 2.3 to 1 ratio).

The site is a rectilinear parcel running parallel to the Ala Wai Yacht Basin. The parcel configuration lends itself to a design solution developed along the same parallel line. The initial design study concept, Figure 19, contemplated angular twin reflective silver glass towers. Certain design criticisms for this approach were noted and summarized as follows:

- a. The natural waterfront location and the severe angular design seem to be incompatible;
- b. The view orientation of the lodging units and guest rooms within two towers was not optimized; and
- c. There was no perceived benefit in the two tower concept. Only sixty feet separated the two towers. There was concern about air currents between the towers and their impact at the recreation deck level of the hotel and condominium.

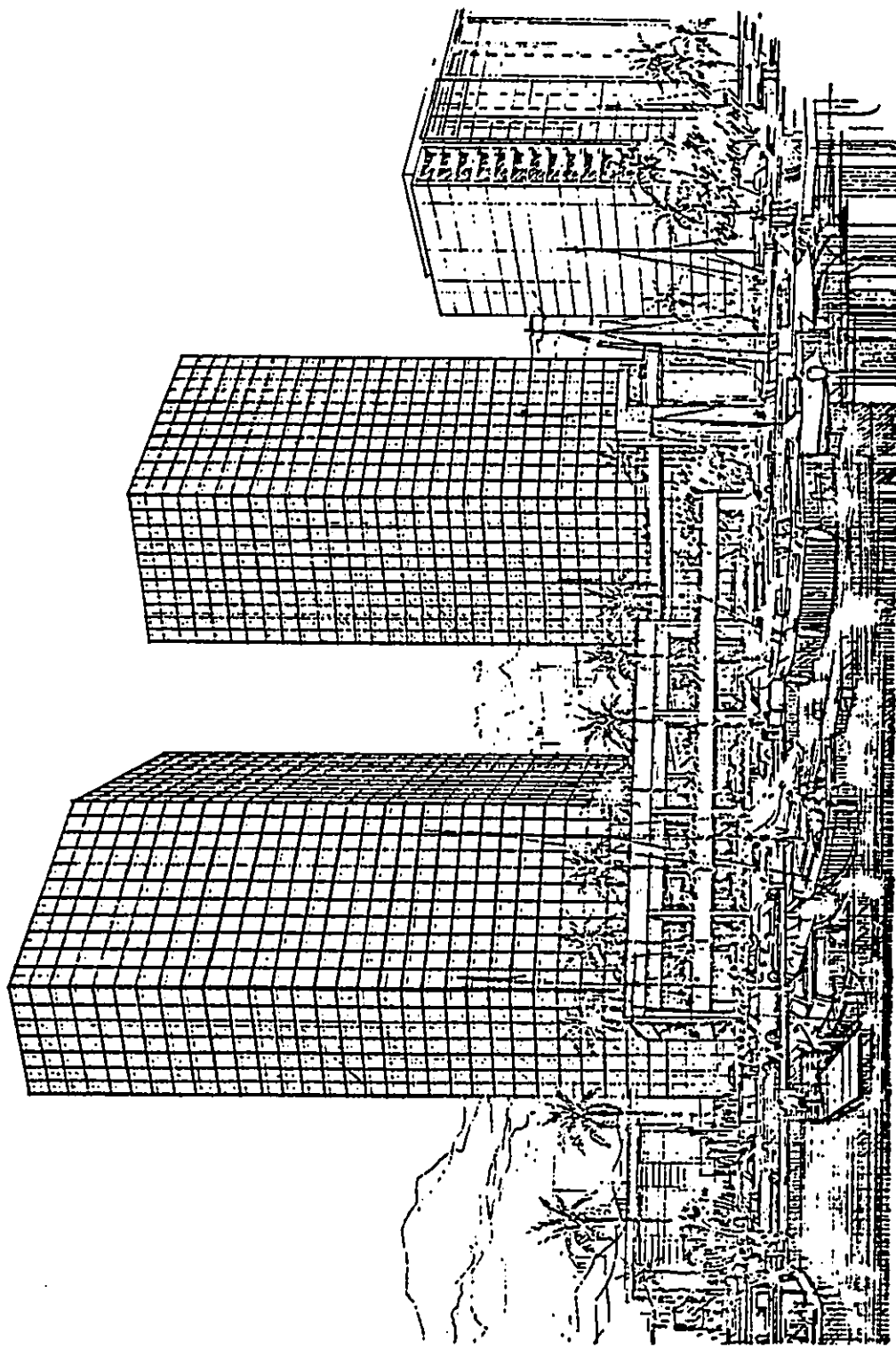


FIGURE 20

IV-26

Some modification of the initial design approach outlined above was attempted but adjustments fell short of achieving the desired design effect.

2. The next primary design solution proposed by Welton Becket was somewhat similar to the first but, while the project was proposed to be two towers, the building lines were softened with curvilinear features in both towers combined with the angular form of the first design solution, Figure 20. For reasons that were largely summarized for the design proposed under the first concept, this approach was also rejected. An important result of this second effort, however, was a recognition of the values and feelings created with the softer curvilinear lines.
3. Three alternative design solutions in a single tower structure were developed from the second design solution proposed by Welton Becket. The first emphasized the curvilinear feature of the building, provided all condominium and hotel units with ocean views, but tended overall to create design problems aesthetically and functionally in connection with laying out unit interiors. The second alternative along these lines created two curvilinear features and a more elongated building. These softer features of two curvilinear themes blended the angular configuration under the first approach with the narrower streamline mass of the building under the second approach. This design effort began to achieve the desired result of combining dramatic, yet compatible architecture with the intended business development plan.
4. With an emphasis towards the smoother characteristics and softer feeling of a curved line, the architects developed

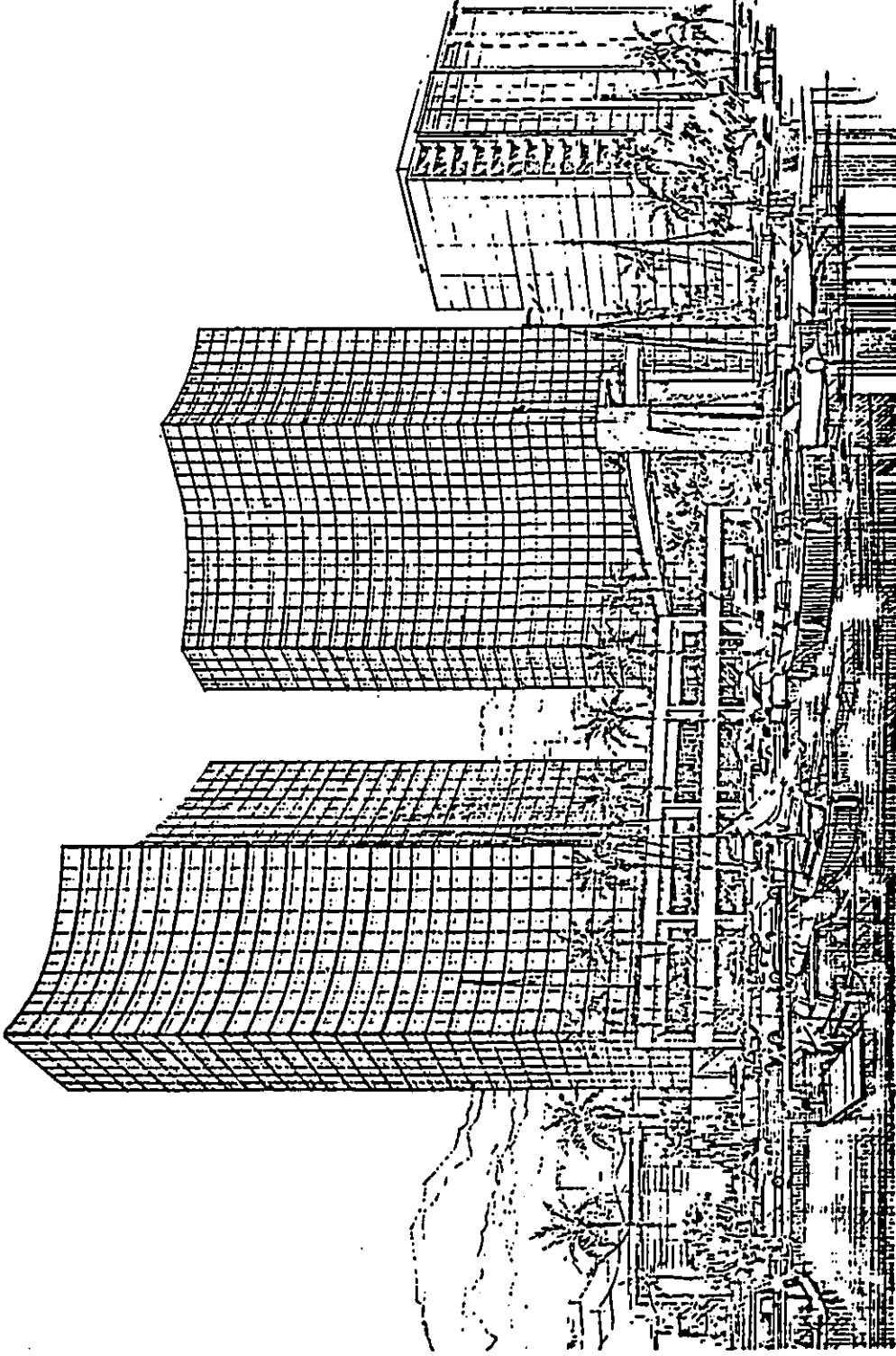


FIGURE 21

a plan and form, Figure 21 that, with still much refinement, would result in the design solution now being proposed. Working with the plan, as shown in Figure 21 the architect began integrating the entire structure into a base for the building which was complimentary to the structure and, at the same time, began to consider more on a pedestrian scale the impact of this proposed development. Terraced parking garages with landscape, water features, soft colors and landscape treatment all became part of the continued refinement in the design suggested under Figure 21. The architecture seemed to be embracing the elements. The winding curve of the building closely resembles the pattern of the winding curve and approach to Waikiki over the Ala Wai bridge. The form is harmonious with the nautical features of the Ala Wai Yacht Basin. All residential units and hotel guest rooms have unobstructed views of the ocean, yacht harbor and beach parks. All traffic ingress and egress began working more smoothly.

Several site study schemes were analyzed, Figures 22, 23, 24. Scheme 1 essentially canted the building on a line roughly diagonal to the site with a south-easterly orientation. Scheme 2 was essentially a reverse of Scheme 1 where the building was on a diagonal with a south-westerly orientation. Scheme 3, the one selected and proposed for approval, is running parallel to the Ala Wai Yacht Basin, Ala Moana Boulevard and the basic configuration of the combined parcels.

The architects selected a muted, mauve colored glass at low levels of reflectivity. The site's prominent visibility ensures that the overall impact and effect of the building's design will set this project firmly in the

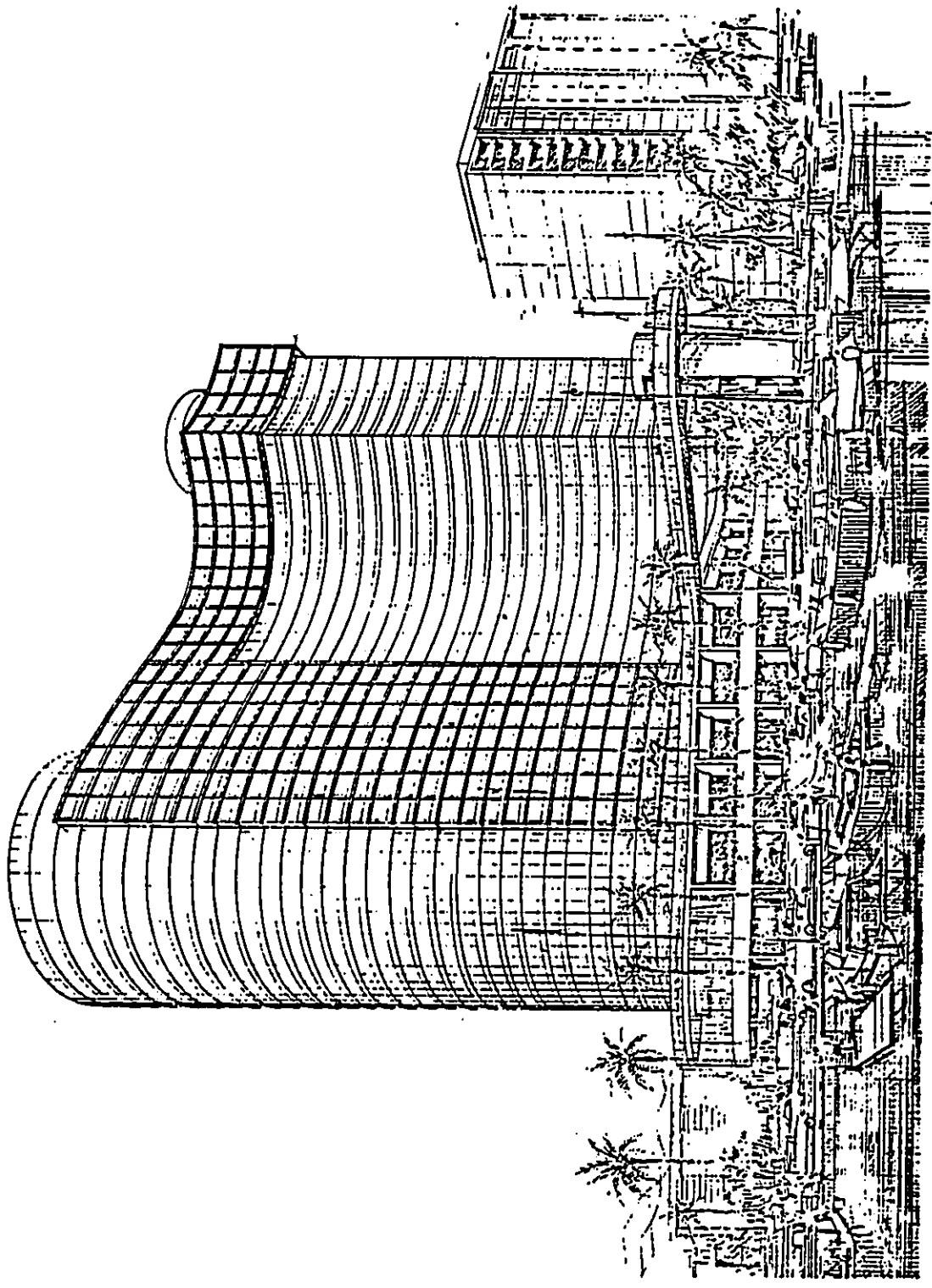
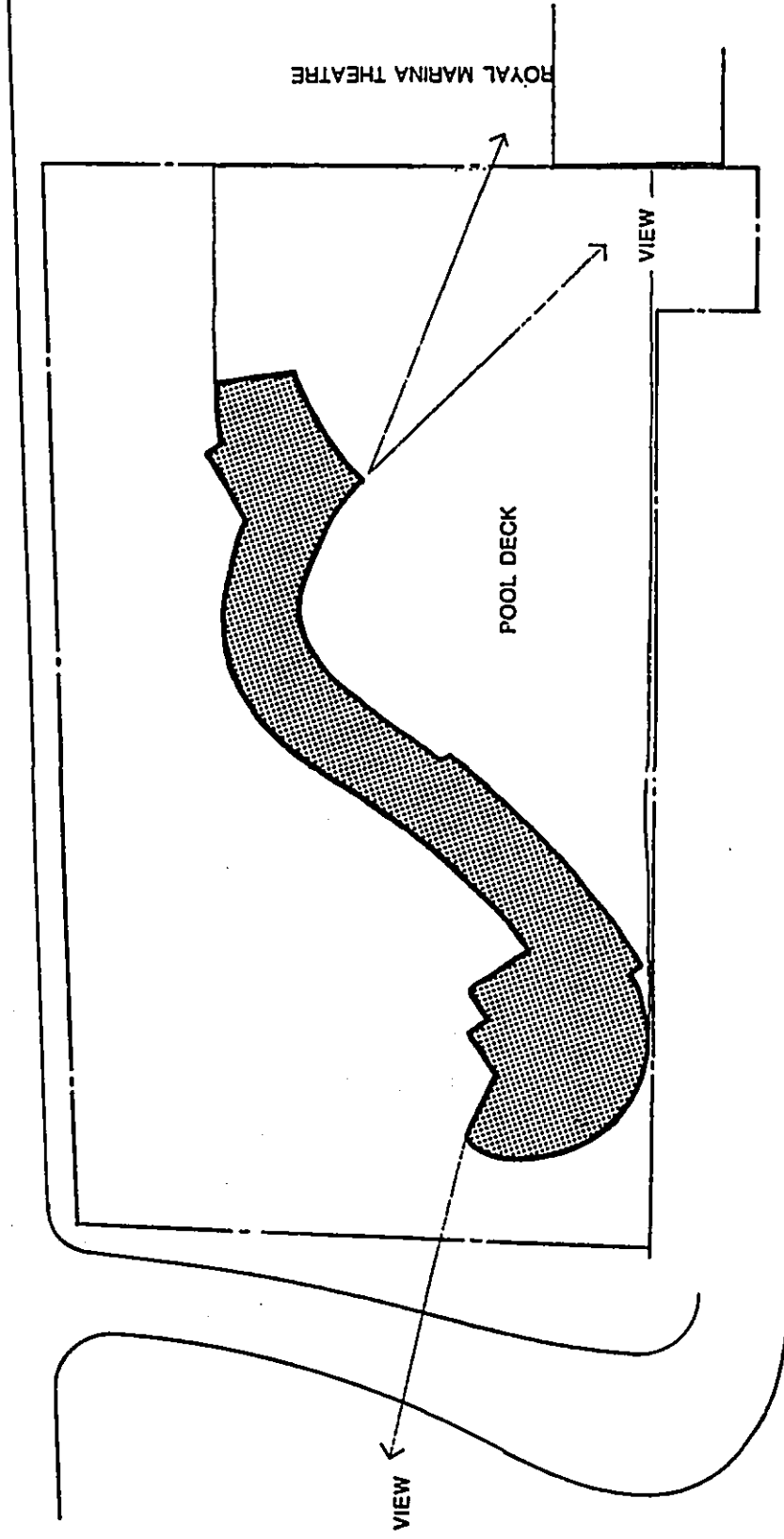


FIGURE 22

IV-30

ALA MOANA BLVD.



ALA WAI YACHT BASIN

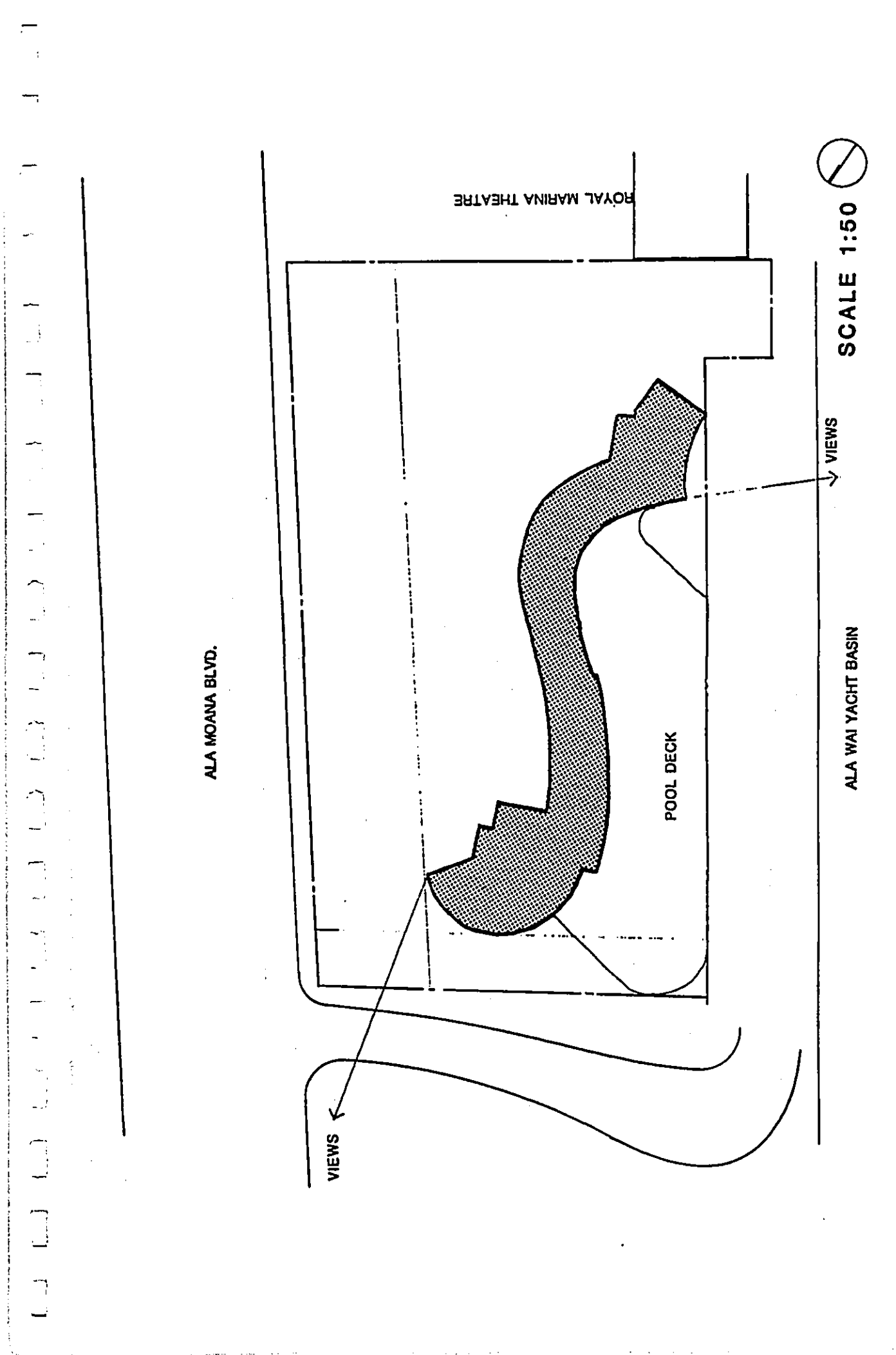
SCALE 1:50



SCHEME 1

FIGURE 23

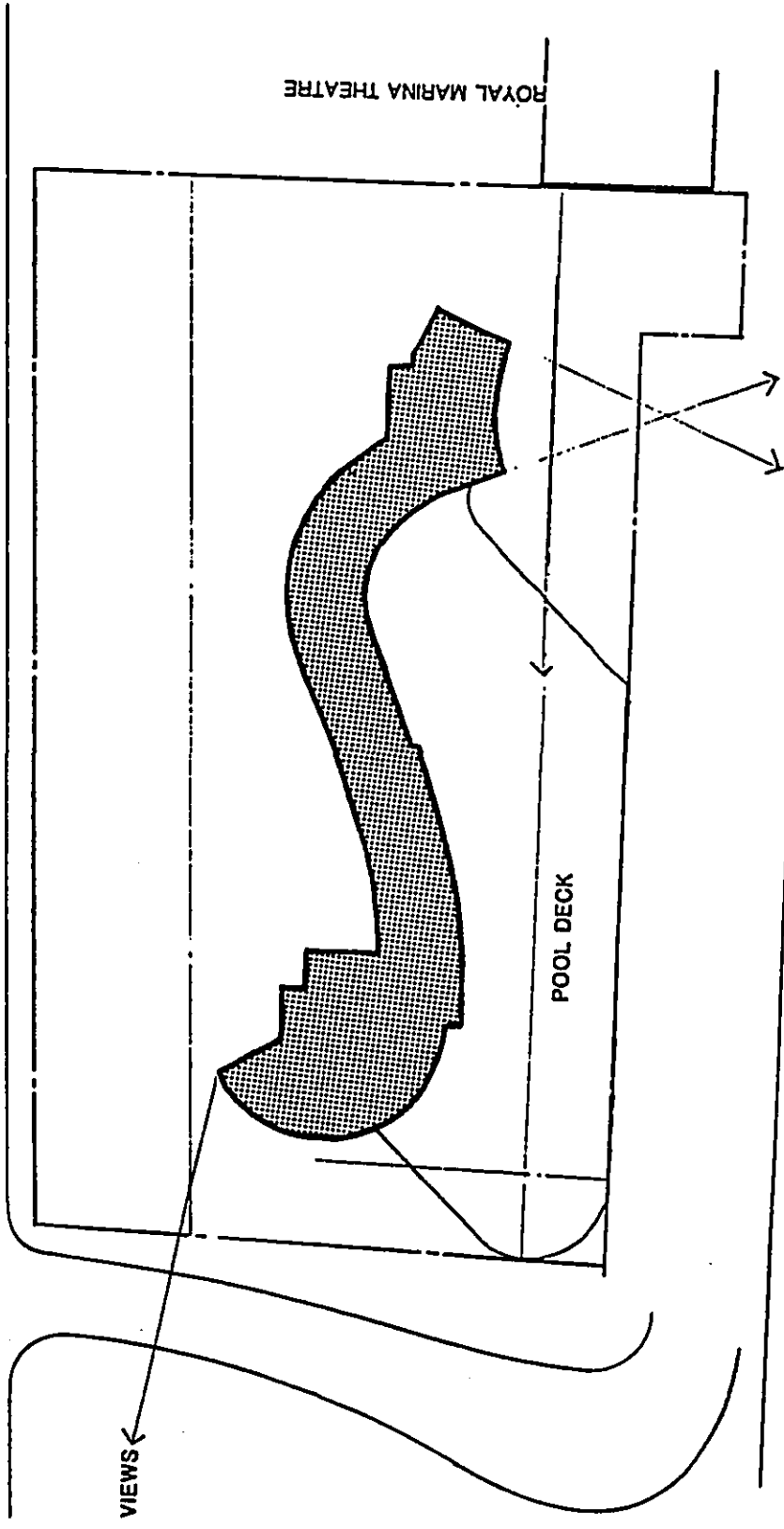
14-31



SCHEME 2

FIGURE 24

ALA MOANA BLVD.



ALA WAI'YACHT BASIN



SCHEME 1:50

SCHEME 3

FIGURE 25

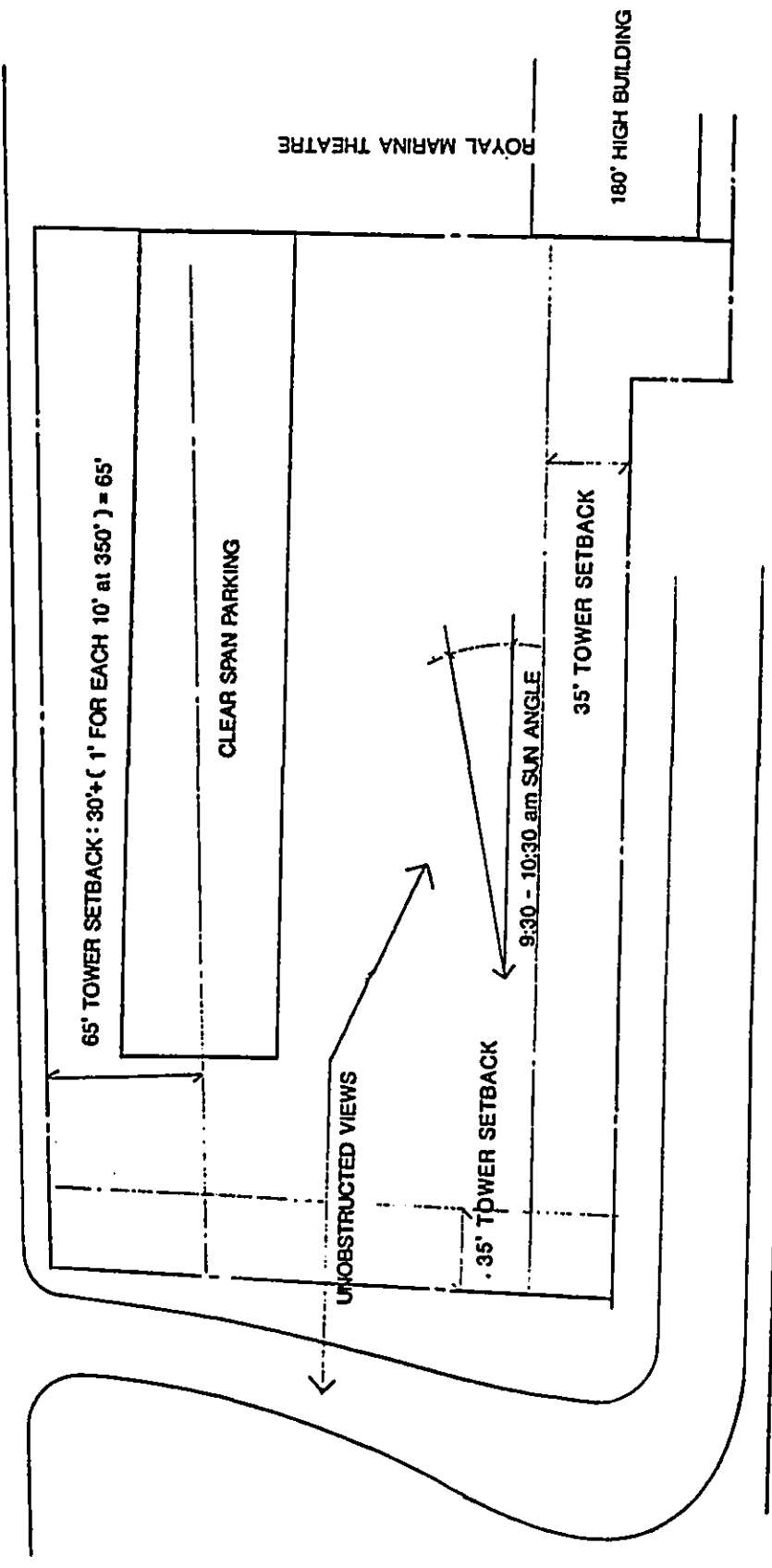
ALA MOANA BLVD. ALA WAI'YACHT BASIN ROYAL MARINA THEATRE IV-33

observer's mind as a cornerstone and landmark development for an improving Waikiki.

Additionally, to address WSDD concerns, the architect has developed a view plane study (Figures 25, 26, and 27) which depict view corridor impacts to surrounding condominiums. Such impact is, unfortunately, unavoidable; however, the extent of this impact on the view corridor is not unreasonably large. Ocean views should not be lost from any public places in the vicinity. Pedestrian views from the sidewalks are presently obstructed by the existing Kaiser Hospital Building and the Pacific Insurance Annex, therefore, no significant view plane changes are expected.

An aerial view plan analysis and a ground level view plane analysis are provided in the pocket part of this document. These analyses show the project site in relation to greater Waikiki as viewed from the air and major scenic points.

ALA MOANA BLVD.



ALA WAI YACHT BASIN

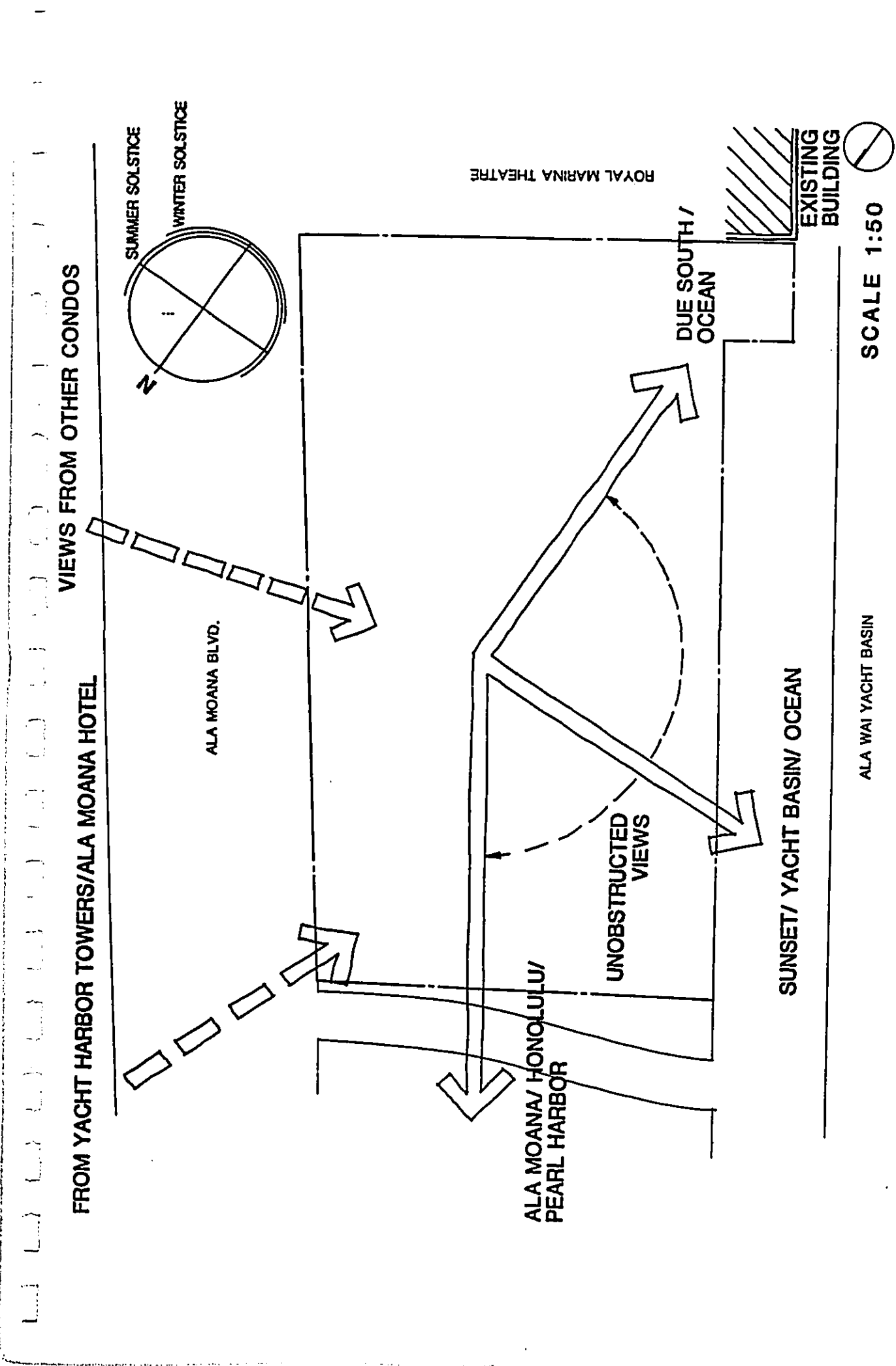


SCALE 1:50

VIEW STUDY

FIGURE 26

14-35



VIEW STUDY

FIGURE 27



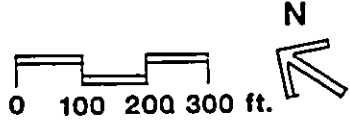
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50



BECKET
WELTON BECKET ASSOCIATES
ARCHITECTS
AND ENGINEERS
P.O. BOX 100
HONOLULU, HAWAII 96808
PHONE: 535-1111
FAX: 535-1112

1697 ALA MOANA BLVD.
HONOLULU, HAWAII

FIGURE 28
VIEW CORRIDOR



V. ENVIRONMENTAL EFFECTS

V. ANY PROBABLE ADVERSE ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED AND MITIGATION MEASURES PROPOSED TO MINIMIZE IMPACT

There are areas in which adverse environmental effects, both short-term and long-term, will occur. These include: (1) air quality during construction, (2) construction noise, and (3) impact on view planes. Each of these foreseeable adverse impacts are discussed below; mitigation measures that will be implemented are also discussed under that same topic.

1. Air Quality Impact The proposed project will directly affect ambient air quality during the construction period.

Fugitive dust generated during construction will be mitigated through compliance with the State of Hawaii Department of Health Rules and Regulations (Chapter 43, Section 10) which stipulates that control measures be employed to reduce fugitive dust. Primary control consists of frequent wetting down of loose soil areas with water, oil or suitable dust retardent chemicals. An effective watering program can reduce particulate emissions on construction sites by as much as 50 percent. Other control measures include good housekeeping on the job site and possibly, the erection of dust-catching barriers if nearby local residents are being subjected to suspended particulate levels more than 150 micrograms per cubic meter above existing background levels.

2. Noise Impact. Adverse noise impact on the surrounding areas will occur during the construction period.

This will be especially evident during site clearing, demolition, and pile driving activities. Several enforceable regulations and standards require the reduction of construction related noise and these include: the Comprehensive Zoning Code, OSHA standards (for occupational safety), Public Health Regulations, 44-A and 44-B.

3. Impact on View Planes. The building will be highly visible from several surrounding high-rise buildings and from the major streets adjacent to the project site. This is unavoidable and no mitigation measures for this impact are possible without the alteration of project plans.

**VI. ALTERNATIVES TO
THE PROPOSED ACTION**

VI. ALTERNATIVES TO THE PROPOSED ACTION

The developer has not considered another alternative 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.

The alternative that would discuss the potential use of the project site in a 100% hotel use, was determined by the project architect on the basis of the lot size only; there has been no economic feasibility study conducted to state that this is viable or recommended.

The twin tower concept has been previously discussed in the project chronology section. Design considerations as well as certain negative environmental considerations such as increased wind flow (Venturi effect) between the twin towers make this alternative subject to further review if it is to be implemented.

**VII.
ENVIRONMENTAL
RELATIONSHIPS**

VII. THE RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF MAN'S ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY AND THE COMMITMENT OF RESOURCES

It is anticipated that the construction of the proposed building will commit the necessary construction materials and human resources (in the form of planning, designing, engineering, construction labor, landscaping, and personnel for the sales, management, services, offices, and maintenance functions). Some of the construction material could be reused if and when the complex is demolished; however, at the present time and state of our economy, it is felt that the reuse of much of these materials is not economical. The human resources expended for this project also will not be retrievable. The primary human resource, labor, will be compensated during the various stages of the project by the developer, commercial and business offices, and the building's management.

In addition to construction material and labor resources, the services and merchandise sold in the building can also be considered resources, which will be utilized or consumed by the purchasers.

There will be some loss of view planes; as cited previously, the building will block certain views from some surrounding high-rise apartments. The principal view plane consists mainly of other buildings in Waikiki and the proposed development will not be incompatible with other high-rise buildings in the surrounding area.

The project development will result in a commitment of land for a long-term period. Once in a high density commercial use, it is unlikely that the land will be reverted to a lower usage in the distant future.

The project will, in the long-term, result in the availability of hotel and condominium space for tourists and residents of Hawaii. The revenue from the property and businesses operating on the premises will increase and result in a higher gross revenue for this property.

VIII. OFFSETTING INTERESTS

VIII. 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. The determination of parking spaces and loading zones were 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.