DEPARTMENT OF LAND UTILIZATION
CITY AND COUNTY OF HONOLULU
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87/EIS-3(RF)

October 13, 1988

Marvin T. Miura, Ph. D
Director
Office of Environmental Quality Control
State of Hawaii
Kekuanaoa Building, Room 104
465 South King Street
Honolulu, Hawaii 96813

Dear Dr. Miura:

Final Environmental Impact Statement (EIS)
Transportation Center and
City Hall Annex Office Complex
City and County of Honolulu
Building Department

We are notifying you that the above is an acceptable EIS document, pursuant to Chapter 343, HRS, and Title 11, Administrative Rules, Department of Health, Chapter 200, Environmental Impact Statement Rules.

A copy of our Acceptance Report is attached. If you have any questions, please contact Robin Foster of our staff at 527-5027.

Very truly yours,

JOHN P. WHALEN
Director of Land Utilization

JPW:sl
0285N

Encl.

cc: Building Dept.

DEPARTMENT OF LAND UTILIZATION

October 13, 1988

ACCEPTANCE REPORT: TRANSPORTATION CENTER & CITY HALL ANNEX OFFICE COMPLEX
CHAPTER 343, HRS
FINAL ENVIRONMENTAL IMPACT STATEMENT (EIS)
BUILDING DEPARTMENT
CITY & COUNTY OF HONOLULU
ALAPAI STREET, HONOLULU, HAWAII
TAX MAP KEY: 2-1-42: 4, 11, 12, 13, 14

A. PROPOSED ACTION

As stated in the EIS, the proposed action is to redevelop the Alapai Bus Barn site in two phases. Phase I would include construction of a new headquarters facility for the Honolulu Police Department (HPD), parking to accommodate 550 vehicles and a new access road to connect Beretania and South Hotel Streets. The HPD building, to be situated in the northeast corner of the parcel, would be a relatively low-rise structure with four floors above ground level fronting Beretania Street and two floors below ground level. Maximum elevation of the building would be about 60 feet above ground level. There would be a heliport on the roof.

Phase II would include construction of a high-rise City office building, conceptually estimated at 250 feet high, an express bus mall with 8 loading bays and a staging area for 12 buses, parking for 700 vehicles, and a new access road between South Hotel and King Streets. The existing bus maintenance operations would be moved to new facilities at Middle Street.

B. PROCEDURE

1. An EIS Preparation Notice (EISPN) was published in the "OEQC Bulletin" of June 23, 1987. The Building Department simultaneously mailed copies of the EISPN to 14 governmental and private organizations.

2. Twelve (12) parties submitted comments on the EISPN. The Building Department responded to these and included comments and responses in the EIS.

3. On March 8, 1988, the Office of Environmental Quality Control (OEQC) circulated copies of the Draft EIS and published an announcement of the comment period in the "OEQC Bulletin". The deadline for public review was set for April 22, 1988.

4. Twenty-three (23) parties submitted comments on the Draft EIS. The Building Department made point-by-point responses to all substantive comments; both comments and responses are included in the Final EIS.

5. The Final EIS was submitted to the DLU on August 15, 1988. In conclusion, the DLU finds that the agency has complied with the EIS procedures in accordance with Chapter 200, Title 11, Environmental Impact Statement Rules, Sub-Chapter 7, Section 11-200-20, 21, and 22.

C. CONTENT

The Final EIS consists of a single volume, which also includes comments and responses and three appendixes. The latter include Traffic Impact Analysis; Air Quality Impact Analysis; and Noise Impact Analysis.

The EIS fulfills the content requirements for a Final EIS in accordance with Chapter 200 of Title 11, Environmental Impact Statement Rules, Sub-Chapter 7, at Section 11-200-18. Unresolved issues are noted in Section E.

D. RESPONSES TO COMMENTS

The Building Department made adequate point-by-point responses to all substantive issues raised by commenting parties. These are reproduced in Section 12 of the Final EIS. The EIS therefore fulfills the public review requirements in accordance with Chapter 200 of Title 11, Environmental Impact Statement Rules, Sub-Chapter 7, at Section 11-200-22.

E. UNRESOLVED ISSUES

Section 16.0 of the EIS lists two unresolved issues: (1) the design of the City Hall Annex and conceptual plans for a 250-foot-high tower, which exceeds the current zoning height limit of 150 feet; and (2) temporary parking for vehicles displaced during Phase I - construction of the police station.

F. DETERMINATION

The Final EIS is determined to be ACCEPTABLE under the requirements of Chapter 343, HRS, and Chapter 11-200, Administrative Rules.

APPROVED John P Whalen

JOHN P. WHALEN
Director of Land Utilization

JPW:sl
0285N

FINAL

Environmental Impact Statement

TRANSPORTATION CENTER AND

CITY HALL ANNEX OFFICE COMPLEX

ALAPAI STREET, HONOLULU, HAWAII

TMK: 2-1-42: PARCELS 4, 11, 12, 13, & 14

Prepared for:

BUILDING DEPARTMENT
CITY & COUNTY OF HONOLULU

SAM CHANG ARCHITECTS & ASSOCIATES, INC.

in association with: PARSONS HAWAII

FINAL

Environmental Impact Statement

TRANSPORTATION CENTER AND

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ALAPAI STREET, HONOLULU, HAWAII

TMK: 2-1-42: PARCELS 4, 11, 12, 13, & 14

Prepared for:

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CITY & COUNTY OF HONOLULU

AUGUST 1988

SAM CHANG ARCHITECTS & ASSOCIATES, INC.

in association with: PARSONS HAWAII

FINAL
ENVIRONMENTAL IMPACT STATEMENT
FOR THE
CITY HALL ANNEX OFFICE COMPLEX
AND
TRANSPORTATION CENTER
HONOLULU, HAWAII

TMK: 2-1-42: Parcels 4, 11, 12, 13, & 14

This environmental document is prepared pursuant to
Chapter 343, HRS

Proposing Agency:
Building Department
City and County of Honolulu

Accepting Authority:
Department of Land Utilization
City and County of Honolulu

Responsible Official: _____ Date: August 12, 1988
Herbert K. Muraoka
Director & Building Superintendent

PREPARED BY
SAM CHANG ARCHITECTS & ASSOCIATES, INC.

IN ASSOCIATION WITH
PARSONS HAWAII

01.0 SUMMARY

01.0 SUMMARY

01.01 BRIEF ACTION DESCRIPTION

Transportation Center and City Hall Annex Office Complex

The proposed action is to redevelop the Alapai Bus Barn site in two phases. Phase I would include construction of a new headquarters facility for the Honolulu Police Department (HPD), parking to accommodate 550 vehicles and a new access road to connect Beretania and South Hotel Streets. The HPD building, to be situated in the northeast corner of the parcel, would be a relatively low-rise structure with four floors above ground level fronting Beretania Street and two floors below ground level. Maximum elevation of the building would be about 60 feet above ground level. There would be a heliport on the roof.

Phase II would include construction of a high-rise City office building, conceptually estimated at 250 feet high, an express bus mall with 8 loading bays and a staging area for 12 buses, parking for 700 vehicles, and a new access road between South Hotel and King Streets. The existing bus maintenance operations would be moved to new facilities at Middle Street.

01.02 SIGNIFICANT BENEFICIAL AND ADVERSE IMPACTS

The proposed action would have a number of significant beneficial impacts including improvements to the efficiency of police and

other public safety operations, alleviation of traffic congestion around the existing HPD headquarters at the Pawaa Annex, improvements in the efficiency of the operations of the City departments which would be relocated to the new office tower from rented space in various downtown locations, savings of money now spent for renting offices for City personnel, alleviation of the overcrowded conditions in the Honolulu Municipal Building and Honolulu Hale, improvements in express bus service, improvements in the visual and aesthetic appearance of the site and its value as wildlife habitat with redevelopment and landscaping into a park-like setting, an increase in public accessibility to and enjoyment of the site for relaxation and scheduled functions such as now occur in other portions of the Civic Center complex and stimulation of business and economic development in the surrounding area.

The proposed project would have some adverse impacts, although the majority may be mitigated to insignificant levels. There may be some soil erosion during construction. An historic, but not architecturally significant, building, the bus barn, would be lost. Views toward the ocean from residences mauka of the project would be obstructed to some extent. During construction, nearby residents would experience some inconvenience due to relocation of a water main and possibly gas lines to a new utilities corridor, as well as from noise and dust associated with construction. Traffic flows would be impeded significantly at six intersections, but with implementation of feasible mitigation measures, two intersections, Alapai at Beretania and

Hotel at Ward, would be significantly adversely impacted. Traffic increases would increase motor vehicle emissions and noise, but not significantly. Helicopter operations would increase noise levels in the area.

01.03 PROPOSED MITIGATION MEASURES

Mitigation of traffic impacts to the following intersections:

- Punchbowl Street at Beretania Street;
- Punchbowl Street at King Street;
- Ward Avenue at Beretania Street; and
- Ward Avenue at King Street

May be accomplished with the following measures:

- Widen westbound Beretania to provide two exclusive right-turn lanes at Punchbowl Street;
- Provide an additional southbound left-turn lane (total of three) on Punchbowl Street at King Street;
- Widen southbound Ward Avenue at Beretania Street to provide one right-turn lane, one shared through and right-turn lane and one through-lane; and
- Restripe eastbound King Street at Ward Avenue to provide one left-turn-only lane and a shared through left lane.

Mitigation of elevated levels of carbon monoxide could be accomplished with the following:

- o Increase capacity of intersections;
- o Increase bus usage;
- o Encourage car-pooling;
- o Modify business/school starting hours;
- o Develop mass transit system; and
- o Eliminate parking facilities to encourage use of public transit.

Dust control during construction would be accomplished by frequent watering of unpaved roads and areas of exposed soil and prompt landscaping of completed areas.

Asbestos waste, if present, would be handled according to mitigation measures specified in U.S. EPA National Emissions Standards to Hazardous Air Pollutants (NESHAPS) Asbestos Regulations.

Mitigation of noise impacts would be accomplished by facilities design, permit conditions which restrict noise levels and standard operating procedures.

01.04 ALTERNATIVES CONSIDERED

All potential categories of alternatives were considered in the impacts analysis. The "no action" alternative is not preferred because the many benefits resulting from the preferred action would not occur. This alternative would perpetuate costly and

inefficient delivery of essential City services and forestall functional and aesthetic improvements to the Civic Center area and special design districts of which the site is a part.

Likewise, the "delayed action" alternative was also judged inferior to the proposed action because the anticipated benefits of the project would be delayed, unnecessarily wasting money through less efficient services, office rentals and probably as a result of increases in the costs of labor and building materials once implementation of the project began.

Two significantly different actions were summarized. The first is redevelopment of the Pawaa Annex site. This alternative would improve police and other public safety operations, but would not improve conditions in other City departments or in express bus service. Additionally, it would not contribute to the goal of consolidating City operations to the Civic Center area.

A second significantly different action considered was purchase of the One Kapiolani Building. This alternative would provide a number of the benefits expected to result from the new City office tower, but as with redevelopment of the Pawaa Annex site, would not improve police or other public safety operations or express bus service.

The final class of alternatives considered was different plans for the Alapai site. Four different combinations of building placement, access points and traffic flow were analyzed with

respect to functionality and impacts. The preferred alternative site plan maximizes police vehicle access and public vehicle flow while minimizing traffic impacts to Alapai Street.

01.05 UNRESOLVED ISSUES

There remain two unresolved issues, one major and one minor. The major issue is the final design of the City Hall Annex. Conceptual plans call for a 250 feet high tower having an architectural style compatible with its location. At this time, design has not commenced. The minor issue is the location of temporary parking for vehicles displaced from the Alapai site during Phase I construction activities, however, sites in the area are available for this.

01.06 COMPATABILITY WITH LAND USE PLANS AND ISSUES

The proposed action is compatible with all relevant plans and policies of the State of Hawaii, including the Hawaii State Plan, the State Land Use District designation and the State environmental policy. With the exception of the zoning height limit, which would require a zoning waiver to build higher than the designation allows, the proposed action is compatible with all other plans and policies of the City and County of Honolulu, including the General Plan, the Development Plans, the Land Use Ordinance, the Thomas Square/Honolulu Academy of Arts special district regulations and the Hawaii Capital District special district regulations.

01.07 LISTING OF NECESSARY PERMITS AND APPROVALS

City and County of Honolulu:

1. Environmental Impact Statement
2. Special Districts Special Design Permits
3. Building Permit for Building, Electrical, Plumbing, Sidewalk/Driveway Work and Demolition
4. Construction Dewatering Permit (Temporary)
5. Grading, Grubbing and Stockpiling Permit
6. Sign Permit
7. Certificate of Occupancy
8. Water and Water System Requirements for Developments
9. Conditional Use Permit for Joint Development of Two or More Adjacent Zoning Lots
10. Trenching Permit
11. Street Usage Permit
12. Permit to Excavate Public Right-of-Way
13. Zoning Waivers for Public Uses, Public Utilities and Walls

State of Hawaii:

1. Well Modification Permit

Federal:

1. Approval of use of the land by the Urban Mass Transportation Administration (UMTA).
2. Determination by Federal Aviation Administration that Notice of Landing Area Proposal for HPD helipad will be a safe and efficient use of airspace.
3. Determination by Federal Aviation Administration that City office building, exceeding 200 feet in height, will not be an obstruction or hazard to air navigation.

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EIS for Alapai project didn't sound alarm

☐ The report's author says oil contamination was little known then

By Peter Wagner
Star-Bulletin SB JUN 8 1991

A 1988 environmental study that cleared the way for the city's troubled project at Alapai and Beretania streets did little to suggest the possibility of contamination at the site, a former bus yard soaked with petroleum from leaking underground storage tanks.

Buried deeply in the $100,000 report, prepared by Sam Chang Architects & Associates, is a brief reference to some of the tanks, later found to be the source of widespread contamination.

"Present operations at the Alapai bus barn have some potential to degrade water quality, but adequate mitigation measures are routinely employed," the document says.

The report identified traffic, views and auto exhaust as the primary environmental concerns.

Anthony Wilkins, the company's vice president, says in retrospect he'd do things differently in investigating problems at the Alapai site.

"At the time we were doing the initial investigations, this kind of problem was not even regulated," Wilkins said. "I think it's now obvious to every owner that they are going to have to do exhaustive studies on their sites before they start turning the sod."

The only soil tests done before the project got under way were 14 borings to determine the strength of the

See EIS, Page A-4

EIS: Test borings made for stability, not toxic leakage

SB JUN 8 1991

Continued from Page A-1

ground to carry the weight of the buildings — a police headquarters, underground parking, and high-rise office complex.

Wilkins said he now believes the entire site should have been drilled to sample the ground for toxic contamination.

"We would have recommended to the city that they do an entire site characterization to determine the extent of any contamination," he said.

But as is still largely the case, there was little oversight from the tiny state office that regulates underground storage tanks and deals with leaks. The four-member office in the Health Department's Solid and Hazardous Waste Branch, is to double in size sometime next year. Four new positions were funded by the Legislature this year.

But even with the new staff, health officials say the office will remain overburdened because of widespread problems with leaking underground tanks.

"The program is still very much in its infancy in the establishment of regulations and procedures," Wilkins said.

The city excavated about 100,000 cubic yards of soil at the site, 15,000 cubic yards of it being toxic.

The toxic material was taken to the Kalaheo landfill in Kailua for decontamination and the rest was taken to various Oahu locations, the city says. Contaminated ground water, still kept at the project site, remains an unsolved problem and potential threat to drinking water, health officials say.

The unexpected problems, discovered only when workers hit ground water last summer while trying to lay concrete footings for a crane, have delayed the project and cost the city $1.5 million in consulting fees and laboratory work.

A planned cleanup is expected to add another $1.5 million.

Filed at the state Office of Environmental Quality Control, the environmental impact statement was reviewed by numerous governmental agencies, including the Department of Health, University of Hawaii Environmental Center, Board of Water Supply, Department of Agriculture, and others.

No comments or concerns were offered beyond those in the report.

Bruce Anderson, deputy state health director, said the Alapai problems are instructive.

"This situation clearly points to the need to clearly assess the situation and come up with a plan for remediation before a project begins," he said.

"Hopefully, we'll all learn through these situations how to better handle cleanup problems."

1. Buildings - Honolulu 2. Radioactive wastes

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03.0 LISTS OF FIGURES, TABLES AND APPENDICES

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FIGURES

FIGURES

TABLES

APPENDICES

04.0 PURPOSE AND NEED FOR ACTION

04.0 PURPOSE AND NEED FOR ACTION

City Hall Annex Office Complex

The City and County of Honolulu, through its more than 20 departments, provides a wide variety of services to Oahu's population of approximately 865,000 residents and visitors (DPED, 1986). Currently, many City agencies are located in the downtown area in rented offices, and others are in the Honolulu Municipal Building and Honolulu Hale in overcrowded offices. The current police headquarters is located in a building more than 27 years old, originally designed as a department store. The premises are inadequate in size and layout for the expansions in personnel and functions that has taken place within the department over the years. A new City office building would consolidate City departments, strengthen interdepartment working relationships and provide adequate office space for present employees and future growth in the municipal labor force. New police facilities would allow a more efficient arrangement of functional areas and upgrade the overall quality of service to the public.

Transportation Center

Islandwide ridership is high on the public bus system with the nominal daily capacity often exceeded. Trips into and from the downtown area generate the greatest demand for service with many buses packed with people standing in the aisles for long rides. The loading area on Alapai Street is a main commuter terminal,

but amenities are lacking, with only a few covered benches available. The mix of pedestrians, automobiles and buses compromises safety on and near the project site. A new express

bus mall would create safer, more efficient service and allow expansion of the express bus service to accommodate more people in increased comfort.

05.0 PROJECT DESCRIPTION

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05.01 PROJECT LOCATION

The project location is in downtown Honolulu, Oahu, and is commonly known as the Alapai Bus Barn. The project site is bounded by King, Alapai and Beretania Streets. Hotel Street runs through the site between King and Beretania Streets from Alapai Street to Ward Avenue. The project location is identified on Figure 1, Project Location Map.

05.02 STATEMENT OF OBJECTIVES

The objective of the project is to optimally develop the Alapai Bus Barn site with the construction of adequate facilities to (1) relocate to the Honolulu Civic Center area, City agencies which are presently scattered in the downtown and Pawaa areas, (2) provide adequate space for many City agencies which are currently housed in overcrowded quarters within the Honolulu Municipal Building and Honolulu Hale, and (3) provide a transit terminal for express buses. The development would expand the campus-like setting of the Honolulu Civic Center and be an enhancement to the Hawaii Capital and the Thomas Square/Honolulu Academy of Arts Districts.

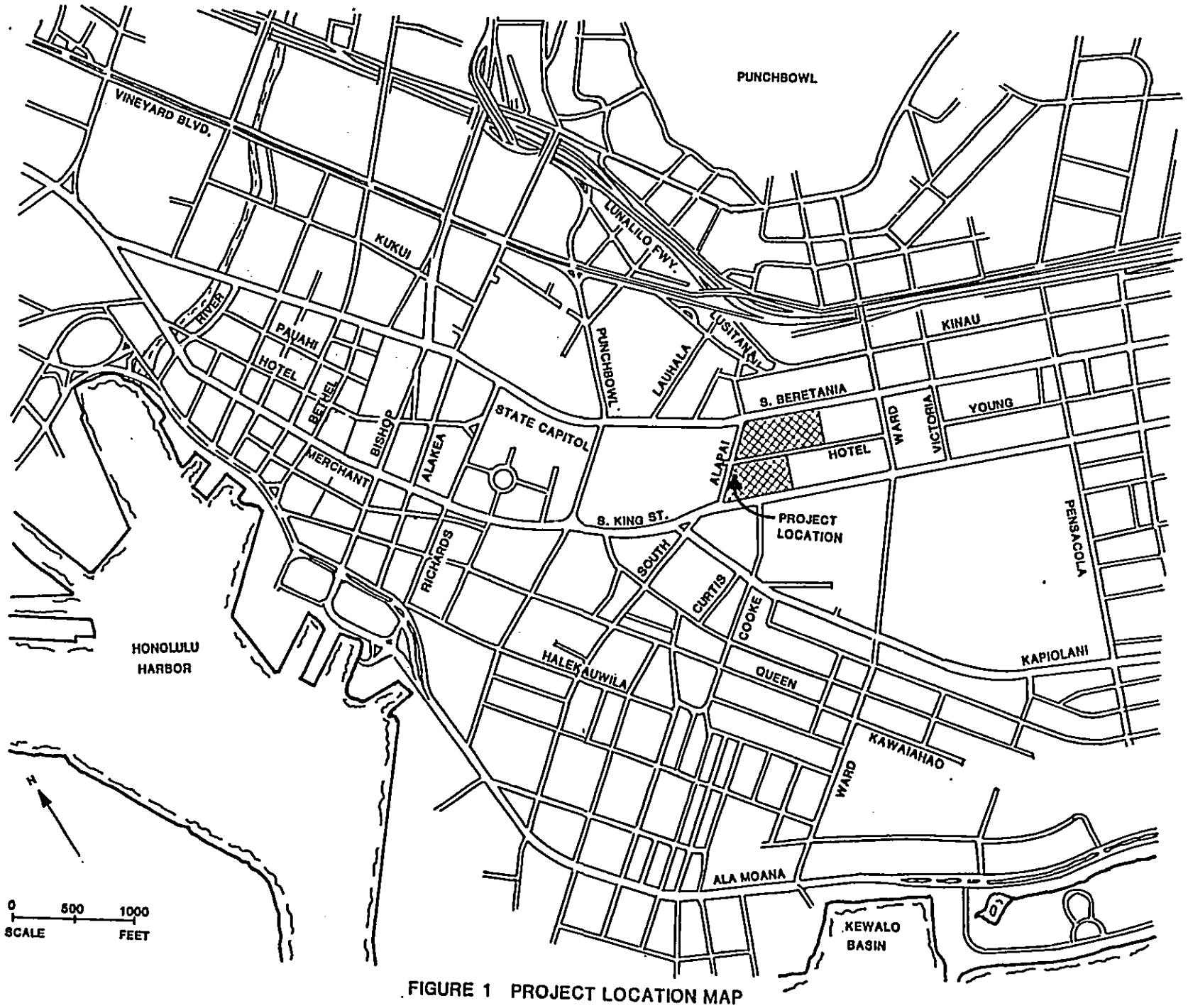

FIGURE 1 PROJECT LOCATION MAP

05.03 GENERAL DESCRIPTION OF THE ACTION

The proposed improvements at the Alapai Bus Barn site are to include a new police headquarters of approximately 251,000 gross square feet, parking facilities for 1,250 vehicles, an express bus transit mall with 8 covered passenger areas and a holding area for an additional 12 buses and a City office building of approximately 309,000 square feet. (See Section 5.06 for more detailed project information.)

05.04 USE OF PUBLIC FUNDS OR LANDS

The land, facilities and equipment at the project site are owned by the City and County of Honolulu, but were purchased in part with Federal grants from the Urban Mass Transportation Administration (UMTA), U.S. Department of Transportation. UMTA approval would be required prior to redevelopment of the site. Sufficient public funds are available to redevelop the site.

05.05 PHASING, TIMING AND COST ESTIMATE

Currently, the project site is used mainly for MTL bus parking and for light bus maintenance operations. A portion of the site also serves as a local bus stop and express bus terminal. The bus parking and light maintenance functions are expected to be moved from the Alapai site and relocated to the former Ameron property on Middle Street in early 1990. As a result, the proposed development of the Alapai site would be done in two

phases. Phase IA, which includes the police headquarters, Beretania Access Road and King Access Road and Phase IB which includes a 550-stall parking structure, would be constructed with minimal disruption to existing on-site MTL bus operations. Loss of parking spaces for some buses and cars would occur. The area set aside for the Phase I work is a two-acre parcel at the extreme northeast corner of the project site which presumably would least impact the bus operations (see Figure 2, Phase IA and Figure 3, Phase IB). Precontractual relocation of the bus washer and rearrangement of the open workshop would occur in order for the HPD building to be constructed. Temporary parking would be located near the site. The police facility is not expected to be occupied until after the bus operations have been moved out so as to avoid any major operational conflicts and traffic problems.

Phase II, which includes the City office building, express bus transit mall, and additional parking facilities, would be constructed after the bus operations have been moved from the site (see Figure 4, Phase II). Demolition of the bus barn and offices would occur, and the transit mall would be constructed along Alapai Street. The new City office building would be located as close as practicable (considering architectural and aesthetic factors) to the Honolulu Municipal Building to facilitate access from one to the other.

The timetable for Phase I (police headquarters) and Phase II (transit mall and City office Building) is as follows:

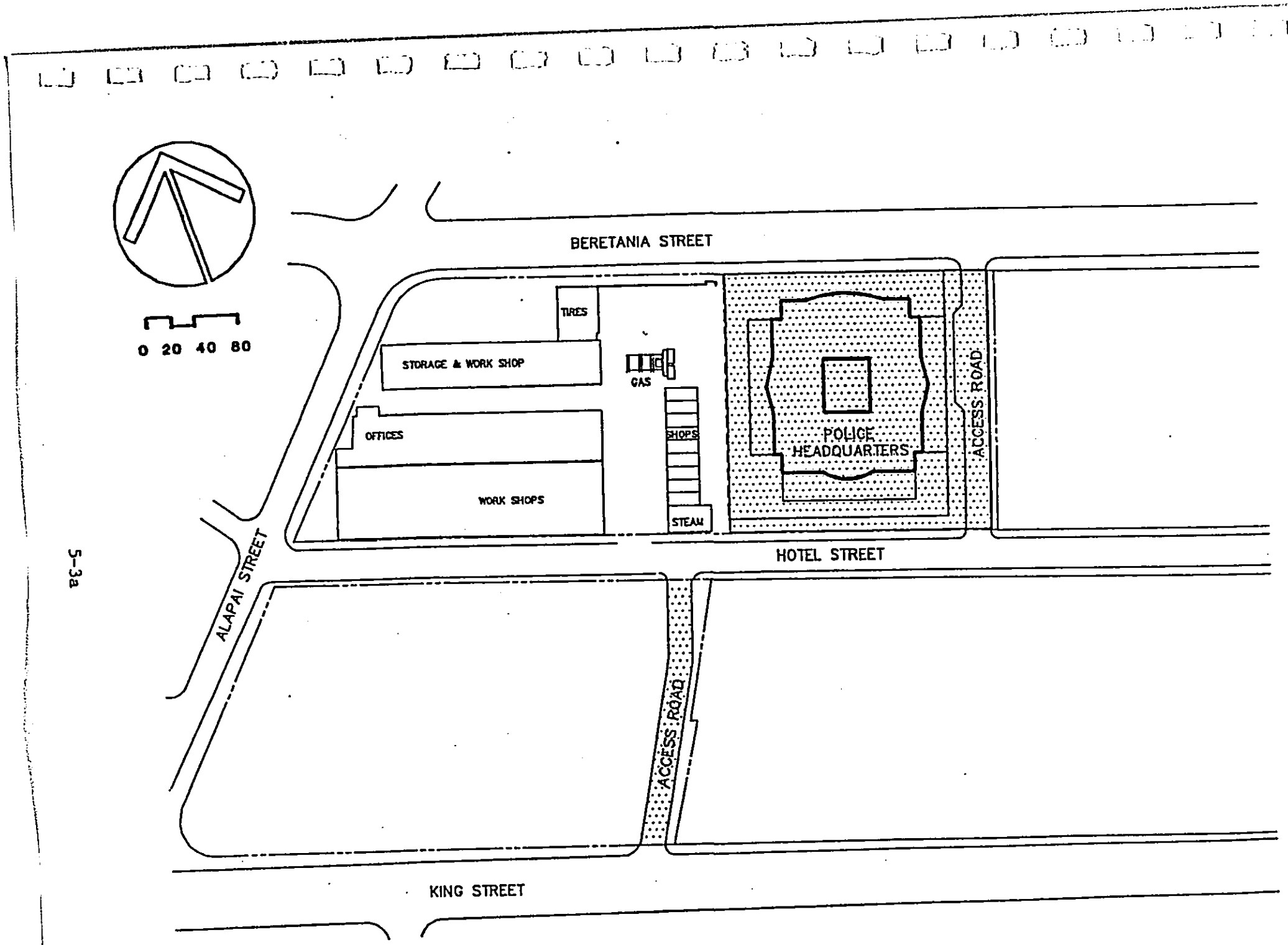

FIGURE 2 PHASE IA - JANUARY 1989 TO JUNE 1990

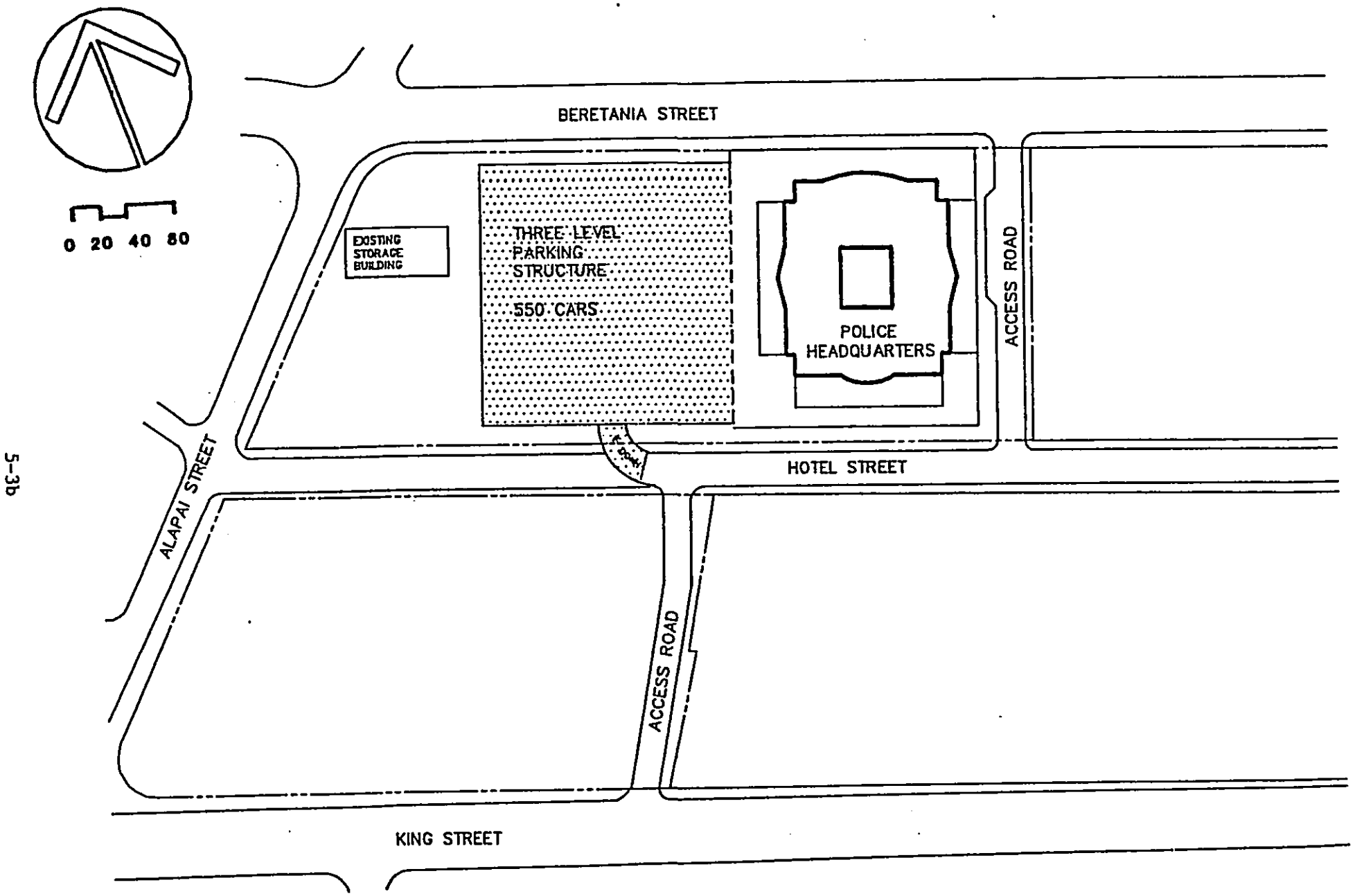

FIGURE 3 PHASE IB - NOVEMBER 1989 TO JUNE 1990

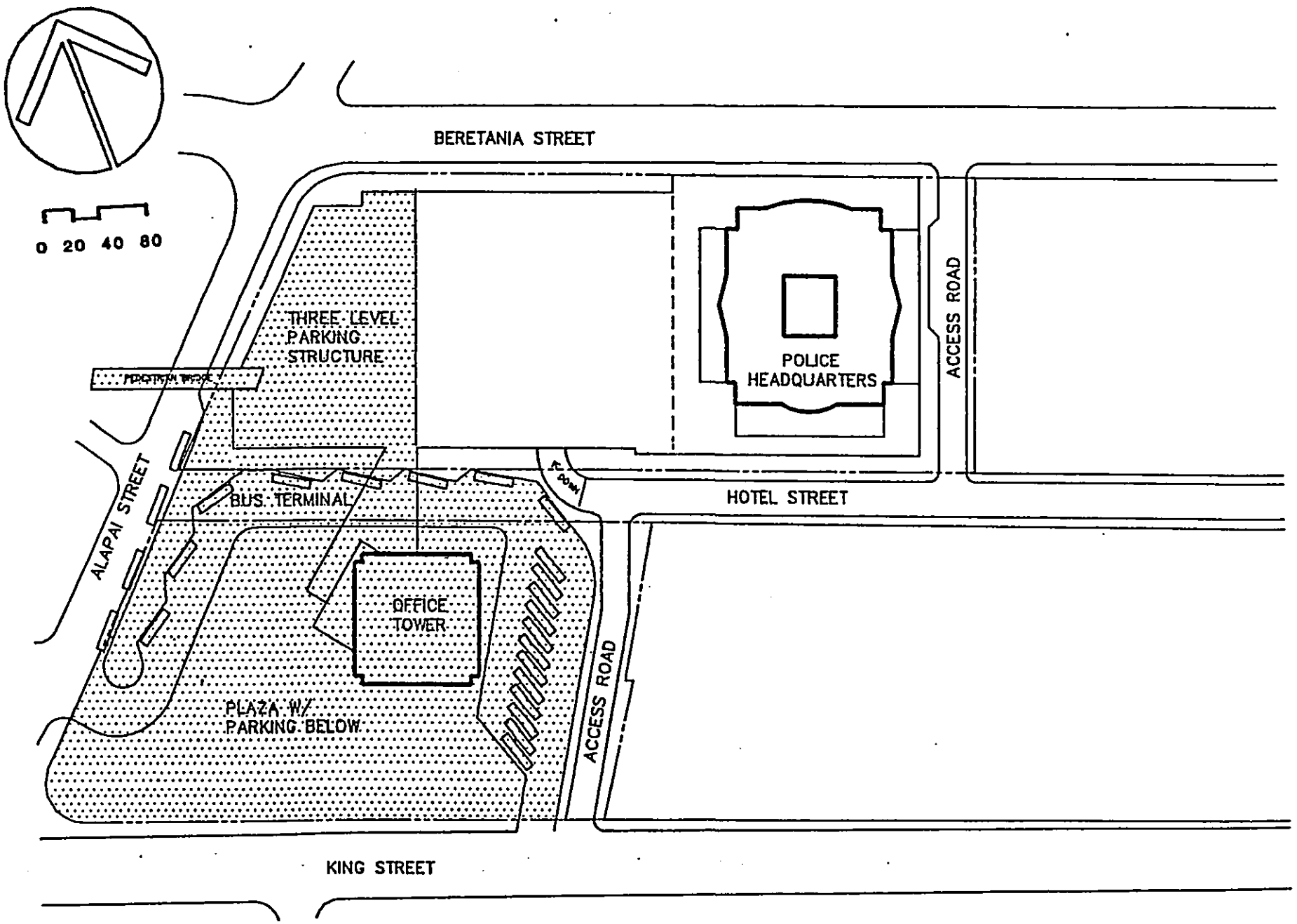

FIGURE 4 PHASE II

TABLE 1

DEVELOPMENT TIMETABLE

DEVELOPMENT TASK	DATE
Commence Planning (entire project)	Oct. 1987
Complete Planning (entire project)	Jan. 1988
Commence Design (Phase I)	Oct. 1987
Complete Design (Phase I)	Sept. 1988
Commence Construction (Phase I)	Jan. 1989
Complete Construction (Phase I)	June 1990
Commence Design (Phase II)	undetermined
Complete Design (Phase II)	undetermined
Commence Construction (Phase II)	April 1990
Complete Construction (Phase II)	Sept. 1991

Cost Estimate

The construction cost estimates are based on current (1987) square footage costs. Escalation factors should be applied to calculate costs in nominal dollars for construction start dates

for various phases. No contingency has been added for design or construction unknowns. The current estimated cost to construct, as shown in Table 2, is $111,000,000 for both Phase I and Phase II. Certain roads and utilities that are a part of Phase II have been added to Phase I costs as they should be constructed at the same time as Phase I. The pedestrian bridge over Alapai Street is not included in the total cost, but is estimated to cost $350,000. A tunnel under Alapai Street would add about $700,000 to total project costs.

TABLE 2

COST SUMMARY

PHASE		COST ESTIMATE
Phase IA (HPD)	$ 40,588,640	
Sitework	2,090,000	$ 42,678,640
Phase IB (Parking Structure)	9,991,560	
Sitework	1,110,000	11,101,560
Site Preparation		300,000
		$ 54,080,000
Rounded		$ 54,000,000
Phase II (Office Tower, Bus Terminal)		57,000,000
TOTAL		$111,000,000

05.06 SUMMARY TECHNICAL DATA, DIAGRAMS, ETC.

The following table is a summary of site development data. The table serves as a checklist of critical land use information for the property.

TABLE 3

SITE DEVELOPMENT DATA

CATEGORY	DATA
Land Area.....	8.7 acres
Tax Map Key Numbers.....	TMK: 2-1-42:4,11,12,13 & 14
Development Plan Area.....	Primary Urban Center
Detailed Land Use Map.....	Public Facility Use
Public Facilities Map.....	Corporation Yard Modification and Government Building
Zoning Map.....	No. 4, Nuuanu - McCully
Zoning Precinct Classification.....	Community Business Mixed Use
Zoning Map Designation....	BMX-3
Floor Area Ratio.....	2.5; 3.5 with open space bonuses
Maximum Height.....	150'
Adjacent Precinct Classifications.....	Medium Density Apartment, Community Business, General Preservation
Planning Area Map-Street Setbacks.....	No designation for future planned improvements
Flood Insurance Rate Map..	Zone X, outside 500-year flood plain
Special Districts.....	Thomas Square (majority of the site) Hawaii Capital District (small portion fronting Alapai Street)
Bordering Streets.....	S. King, Beretania, Alapai & Hotel
Streets with Prominent Vistas.....	Kapiolani/King/South Intersection
Utilities.....	Water, sewer, storm drainage, gas, electrical and telecommunications all available for service.
Issues of Concern.....	Traffic, parking, noise, air quality & aesthetics.

Police Headquarters

All police services now at the Pawaa Annex, except for driver licensing and a large part of the HPD's vehicle and radio maintenance operations, would be transferred to the new police headquarters at the Alapai site. The other agencies now housed at Pawaa Annex (i.e. Finance, Health, Fire) would not move to the new police headquarters. The police activities at the Alapai site would involve the following divisions or functions:

- Administrative and Command functions and their support staff
- Research and Development
- Police Employment Office
- Community Relations
- Finance
- Criminal and Internal Investigations
- Patrol and Traffic for District I, VI, and VII
- Records
- Communications and Dispatch Center
- Specilized Services (Tactical Squad)
- Evidence Storage
- Crime (Forensic) Laboratory

A summary of the square footage needed for various police functions is provided in the following table.

TABLE 4

POLICE HEADQUARTERS SPACE REQUIREMENTS

FUNCTION	SPACE NEEDED (SQ.FT.)1987
Office of the Chief	10,280
Internal Affairs	4,452
Intelligence & Enforcement	6,222
Training	1,000
Research & Development	6,615
Finance	3,158
Supply	6,211
Community Relations	6,800
Personnel	3,742
Specialized Services	7,964
Traffic	5,158
Patrol District I	37,503
Criminal Investigation	19,572
Narco/Vice	8,332
Juvenile Crime Prevention	4,766
Communications	13,755
Records and ID	42,636
Vehicle Maintenance	6,835
Cafeteria	5,625
Complaint Rooms	240
TOTAL NET	200,866
BUILDING TOTALS:	
Lobby and Reception Area	7,030
Structure/Design Factor	18,078
Restrooms/Janitorial/Mechanical	17,074
Elevators	8,035
TOTAL GROSS	251,083

Of the 1250 parking spaces planned for the entire Alapai site, the Honolulu Police Department would use 550 in the following manner:

o Assigned Command Office Stalls	50
o Fleet Vehicles (marked and unmarked)	54
o Metropolitan Police Office Subsidized Vehicles	257
o Police Civilian Employees	179
o Visitors (public)	10
Total	550

Police vehicles that would require access to or parking at the Alapai site include:

- o Fleet cars, marked and unmarked
- o Fleet Cushmans used in Waikiki
- o Subsidized take home patrol vehicles
- o Two and three wheel take home motorcycles used by the Traffic Division
- o Bomb Truck, Specialized Service (SWAT) Command and personnel vans

In addition to police vehicles, helicopter operations, which were abandoned due to roof leakage at the Pawaa Annex, would be resumed at the Alapai site. The Honolulu Police Department presently has one Hughes 500D helicopter, capable of landing in small areas . It has a 5-blade rotor, and is equipped with a noise suppressor. It would possibly make one flight a day, on average, with landings approaching from the Ewa to Koko Head direction and departures in the Koko Head direction.

City Office Building

Present plans call for a 21-story office building containing two lower levels each of 24,000 square feet and 19 upper floors each of about 14,000 square feet for a total of approximately 309,000 square feet. The building height from ground level would be approximately 250 feet and would house 15 existing City departments which, due to expansion and reorganizational requirements, would be relocated from other City buildings. The building would be provided with 700 below-grade parking stalls.

A summary of the square footage needed for various City functions is provided in the following table.

TABLE 5

CITY OFFICE BUILDING SPACE REQUIREMENTS

FUNCTION	SPACE NEEDED (SQ.FT.) 1987
Dept. of Transportation Services	20,940
Prosecuting Attorney	44,876
Fire Department	8,355
Health Department	8,883
Finance Department	43,072
Civil Service	13,495
OIC (Print Shop)	7,421
Data Systems	14,855
Fire Alarm Bureau	1,719
Oahu Civil Defense Agency	4,847
Corporation Counsel	5,690
Housing & Community Development	5,455
Human Resources	9,164
E-911	4,989
MTL	7,700
Police Commission	4,772
TOTAL NET AREA	206,183
TOTAL GROSS AREA (Net x 1.5)	309,199

Transportation Center

The summary of the transportation center facilities and operations provided in the following paragraphs is excerpted from HNTB (1987).

The Bus Systems Division of the Department of Transportation Services of the City and County of Honolulu currently has two primary operations, local service routes and express routes. The key terminus for these operations has for some time been the Ala Moana Shopping Mall Transit Center, but this facility has reached its capacity. As the Ala Moana facility has become saturated, the Alapai terminal has been expanded to become the focal point of 45 out of the 60 routes operated by The Bus System. It serves both as a local service interface for west-bound buses on Alapai and Beretania Streets and east-bound buses on King and Kapiolani Boulevard, and as the terminal for 13 express routes operating as 40 departures during the period from 3:50 p.m. to 5:25 p.m.

The Bus System plans to increase its fleet from its current size of 450 to 500 buses in 1990 and to 600 buses in 1995. An additional operating mode would be implemented to supplement the current local service and express routes. These routes would consist of limited express service and operate throughout the day. This growth in fleet size and implementation of a new service mode necessitates the expansion of the Alapai facility.

The Department of Transportation Services examined the requirements for this expansion and considered the priorities for use of the Alapai property in arriving at a recommendation that a facility be provided which includes 12 passenger loading bays and a holding area for 12 additional buses. These 12 loading bays would replace the three existing express loading bays. The six existing local service bays would remain. (The master plan provides for eight express bus loading bays and three local bus loading bays.)

With approximate 10-minute headways, designated stops provided for twelve 40-foot buses should accommodate 80 buses during the peak hour. This level of activity equals approximately 2,500 riders using the platform. Peak platform population is estimated at 15% of total peak-hour users.

The platform with adjacent loading bays would be covered and provide shelter for 125 people. Included also would be bench-type seating, information boards, trash receptacles, newsstands, bicycle racks, clocks, restrooms, telephones and possibly vending machines. It is anticipated that operational requirements would dictate that a service supervisor be stationed at the transit center during the p.m. peak period to assure that quality of service is high. In addition, customer assistance staff services such as the issuance of senior bus passes and the sale of bus passes would also be provided, either on a full-time basis by a separate staff person or by the service supervisor in combination with other duties.

Site Design Features

The site layout and landscaping are designed to provide continuity with the Hawaii Capital District's "park-like" character. (See Figure 5, Preferred Site Plan.) The grass and tree-covered open space would allow for leisure activities and visual enjoyment. The open space also would allow for future expansion of civic center facilities or operations.

The Alapai/King Street intersection would become a prominant corner with high visibility. A large water fountain has been planned for the corner as an attractive amenity.

Other special landscaping features include a profusion of canopy trees and flowering vine covered trellises to soften and shade the paved areas.

Pedestrian circulation would be accommodated in a number of ways. Major public entrances to buildings would respect the mauka-makai axis. The City office building would have its major entrance facing King Street with another entrance from the park to the north on the second level. The Police Headquarters public entrance would face Beretania Street and present an open arcade and lobby to a sidewalk plaza. A bus drop-off for school childern would be located just to the east along the access road. Special accommodations for handicapped people would also be

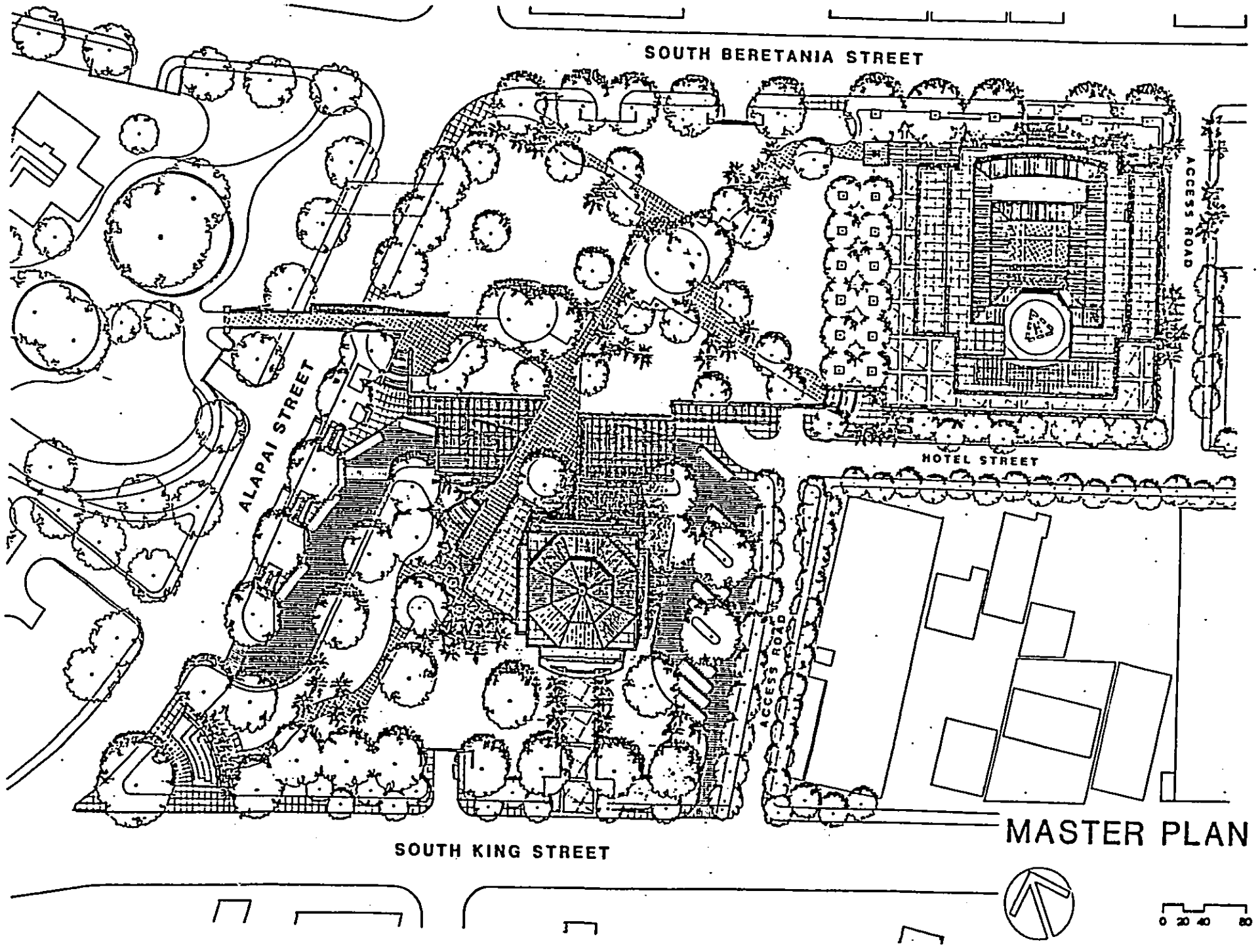

FIGURE 5 PREFERRED SITE PLAN

included in the design of pedestrian circulation. Pathways would extend through the park joining the two buildings on the site. A pedestrian bridge crossing over Alapai Street would connect the project site, including the express bus terminal, to the Honolulu Municipal Building and the Capital District. This bridge would serve pedestrians by allowing safe and fast movement without the conflict of vehicular traffic or traffic signals.

Pedestrians also have the options of crossing from the project site to the Capital District at the three crosswalks that presently exist along Alapai Street. These three crosswalks are at the corners of King and Alapai, mid-block at Alapai, and Beretania and Alapai.

People on bicycles may continue to cross Alapai Street at the three existing crosswalks. When passing through the project site from the bikeway on Hotel Street they may continue to ride along the streets, using access roads leading to Beretania or King Streets, or they may continue along the pathways through the project site by walking their bikes. The pathways and bridges would be wide enough to accommodate both pedestrians and bicycles.

The sidewalks facing the street would be similar to the style of those in the Hawaii Capital District, thus becoming a catalyst for sidewalk improvements on the block which connects the Hawaii Capital District and Thomas Square.

The architectural style and aesthetic features of the Police Headquarters building were derived by studying design elements of other downtown buildings, including Honolulu Hale, the U.S. Post Office, and the Alexander and Baldwin building. A courtyard design was chosen and the building would have a low height, broad street facade, sloped tile roof, arcade rhythm, light colored stucco walls with travertine accents and soft definition of interior and exterior boundaries. All these design features were balanced with the need for building security.

Parking

Parking for the site would occur on three levels, all covered and landscaped. (See Figure 6, Site Section.) The lowest level would extend beneath most of the site. The upper two levels would be on the north side of the site. Vehicular access to the lowest level of the parking facility, dedicated to City employee and public parking, would occur on King Street and at the end of Hotel Street. The upper two levels of the parking facility, dedicated to Police Department use for security reasons, would be accessed from Hotel and Beretania Streets. There would be a second entrance on Beretania to a public parking area for the Police Headquarters. Parking for the handicapped would be provided.

05.07 HISTORIC PERSPECTIVE

It is useful to consider the historic perspective of each of the

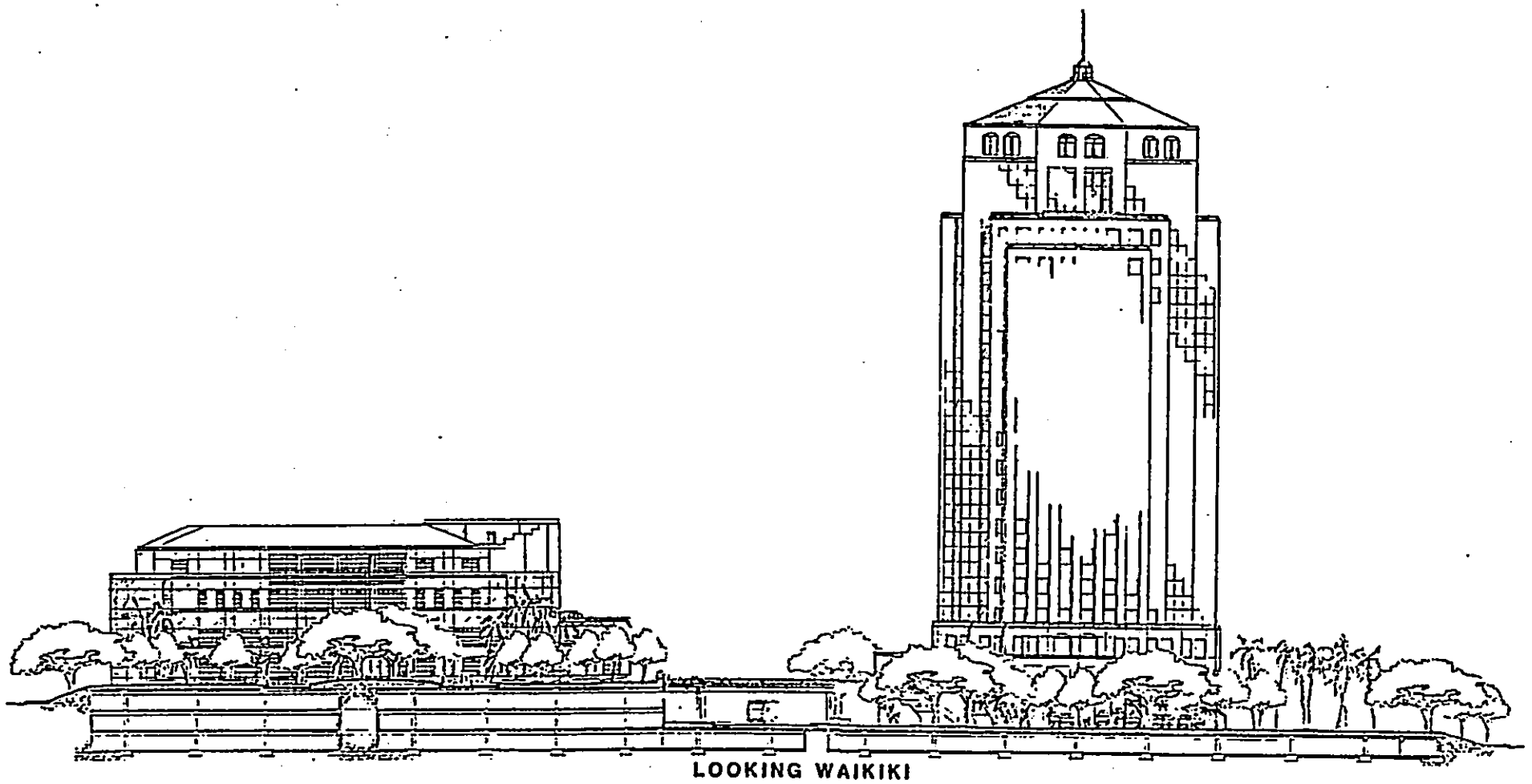

FIGURE 6 SITE SECTION

three main services that the proposed project would provide: the new police headquarters; additional new offices for City and County agencies; and an improved transportation center for express buses. To begin with, the existing police headquarters has been located in the Pawaa Annex since 1961. The Pawaa Annex building originally housed a large retail store. It was renovated for the public safety departments, but is inadequate for the growth in personnel and services that has taken place in the last two decades. During this period, the number of police officers has increased as has the ratio of officers per 1,000 population. By 1968, more parking spaces were needed, but no significant actions were taken. The parking problem is still unresolved. A space utilization study was completed in 1972 for police related activities, but did not instigate any major changes. In 1977, a master plan was completed for redevelopment and expansion of the Pawaa Annex. Again, no significant action was taken.

As other City and County agencies grew and expanded, offices became scattered throughout the downtown area in either purchased or rented office space. In mid-1980 the City made an offer to purchase the One Kapiolani Building for the purpose of resolving its office space problems. However, the offer was withdrawn later that year prior to the change in administration. In 1984 the One Kapiolani Building was again up for sale and the City expressed an interest in the property. It was determined, however, that the building was not large enough to resolve the

office space problem. Meanwhile, City agencies are crowded into existing office space throughout the downtown area with no room for expansion.

A major portion of the project site has always been used for transit purposes, having originally been trolley barns and later converted to bus barns owned and used by the Honolulu Rapid Transit Company. (See Section 7.06, Historic Sites, for more information on historical activities at the project site.) In 1971, with financial assistance from UMTA, the City began the acquisition of the land from HRT. Subsequently, with additional grants, two other parcels of land were acquired. A total of five parcels were acquired, totalling 381,973 square feet. All of the five parcels were acquired with federal financial assistance. The federal share was two-thirds on four of the five parcels and 80 percent on the last parcel. Acquisition began in 1973 and the last parcel was acquired in 1977. The site is presently used by MTL, Inc. for their Honolulu District bus parking, employee parking and light maintenance operations. The site is a key bus stop for downtown area commuters. There are also a few offices on the site related to MTL, Inc. business operations. A new site at Middle Street is being acquired to relocate the Alapai Bus Barn operation, with the exception of the express bus service and local bus service along Alapai Street, which would be improved with implementation of the proposed project.

06.0 ALTERNATIVES TO THE PROPOSED ACTION

06.0 ALTERNATIVES TO THE PROPOSED ACTION

The Alapai site is believed to be the only adequate City-owned land on which to construct the proposed action because of its acreage and proximity to the other City agencies and the court system. Clearly, it is the preferred alternative. Over the years, however, other alternatives have been explored, required and it is useful for assessment purposes to review past and present alternatives to the proposed action.

06.01 DELAYED ACTION

One alternative is to delay the proposed action pending further study. While this alternative is presently available, it would serve no good purpose. All the benefits of the project would be delayed, while environmental quality would be neither protected nor enhanced. Furthermore, the City would continue to pay for rented office space and City agencies would continue to function in crowded working conditions scattered throughout the downtown area. A delay in implementation of the project would likely raise the cost of the project as a result of increases in the costs of labor and building materials. Because actions to remedy the office space problem for City agencies, including the Police Department, have already been postponed for many years, further delay is not a preferred alternative.

06.02 NO ACTION

Another presently available alternative is to choose not to implement the proposed project. This "no action" alternative would neither enhance nor protect environmental quality, but any adverse impacts associated with construction and operation of the proposed facilities would not occur. However, the benefits associated with the project would not be realized either. Furthermore, the costs that would be saved by not redeveloping the site would be partially offset by the rental fees for offices and parking elsewhere. The inconvenience to City employees due to crowded office space, the lack of basic amenities for people who ride TheBUS from downtown and the inadquate facilities for public safety officers each have costs that cannot be calculated in dollar amounts, but must be considered in a comparison of the alternatives. In the long-term, as Oahu's population grows, the "no action" alternative would result in a decline in the quality of service provided by the affected agencies. The "no action" alternative is inconsistant with State and County goals, as described in Section 08.0, Relationship of the Proposed Action to Land Use Plans, Policies and Controls. Because it is the intent of the City to remedy the office space problem and improve transportation services, "no action" is not a preferred alternative.

06.03 SIGNIFICANTLY DIFFERENT ACTIONS

Over the years, two other actions that would provide benefits similar to those of the proposed action have been explored. The first was renovation and expansion of the Pawaa Annex, and the second was the purchase of the One Kapiolani Building. Each is discussed below.

In 1977, a study of the space needs of the various public safety departments located in the Pawaa Annex was completed. Recommendations were made regarding needed renovation and expansion of the existing facility. The Master Plan Report and Site Development Program - Pawaa Annex Multi-Deck Parking and Office Structure, prepared in 1977, described this alternative (Walter Leong & Associates, Inc., 1977). Immediate goals were to build a parking garage and new vehicle maintenance facility, then renovate existing buildings to maximize use of available space. Long-range objectives envisioned a new office tower replacing the old Pawaa Annex or utilizing the Annex and just adding to it as needed. However, the adjacent property that was to be used for a parking structure was sold and became unavailable to the City. Later it was determined that renovation of the existing buildings would not be as efficient as building an entire new structure.

The cost estimate prepared for the 1977 master plan report was divided into four phases. The total project was projected to cost approximately $10,213,982 in 1977 dollars (as shown below). The cost in 1987 dollars would be $18,630,303 using the relative

Consumer Price Indices (State of Hawaii, DPED, 1986) as the basis for conversion.

PHASE 1 (Immediate)	
Parcel 22	
Acquisition of parcel 22	$ 310,000
Demolition of existing houses	6,000
Relocation of residents	6,000
Improvements to parcel 22 (Paving, etc.)	28,000
Parking Garage (8 months construction)	
33,800 s.f./level x 5 levels = 169,000 s.f. x $15/s.f.	2,535,000
Total cost estimate for Phase 1	$2,885,000
PHASE 2 (Following Phase 1)	
Vehicle Maintenance Facility (6 month construction)	
New addition of 13,000 s.f. @ $40/s.f.	520,000
Renovation of existing portion of 13,600 s.f. @ $40/s.f.	540,000
Total cost estimate for Phase 2	$1,064,000
PHASE 3 (By 1985)	
Addition of office space (6 to 8 months construction)	
22,000 gross s.f. x 4 levels + 88,000 s.f. @ $40/s.f.	$3,520,000
PHASE 4 (Immediately following Phase 3)	
Parcel 13	
Acquisition of parcel 13 (assume $22/s.f.) 8,181 s.f. @ $22/s.f.	179,982
Relocation costs	10,000
Demolition of JDCP building and existing building @ parcel 13	20,000
	209,982
Parking Garage (8 months construction) 33,800 s.f./level x 5 levels = 169,000 s.f. x $15/s.f.	$2,535,000
	$2,744,982

Another alternative, considered in more recent years, was the purchase of the One Kapiolani Building. In 1980, with plans to occupy and maintain the existing building and construct a new office-parking structure, the City made an offer to purchase the property. This would have allowed the City to consolidate appropriate City agencies to provide better public services and also reduce renting of private office space. However, in late 1980, prior to the change of administrations, the City withdrew the offer. In 1984, the building was up for sale at the same price and again considered for purchase by the City. However, it was determined that the building was not large enough to resolve the City's office space problem.

The total cost of purchasing and developing the property was estimated at $39,912,700 (1984 dollars). This would convert to $43,704,406 1987 dollars. The breakdown of the cost from the original report is as follows (City and County of Honolulu, Building Department, 1984):

Cost of Property with Existing Improvements	=	$ 8,500,000
Cost of Renovating Existing Building	=	$ 2,090,400
Cost of New Parking Facility	=	$ 7,275,000
Cost of New Structure (on piles)	=	$22,047,300
		$39,912,700

Neither of these alternatives addresses all of the problems that the proposed action would remedy. The Pawaa Annex redevelopment and expansion would serve only the police and related functions and the One Kapiolani Building would serve only selected City

agencies. Neither alternative addresses the need for a transportation center and better utilization of the Alapai Bus Barn site. The proposed action addresses all three areas of concern and consolidates City functions into the Civic Center area. Planning and designing the structures and surrounding uses for a cleared site allows a more concise building form than renovating an old building and expanding into limited extra space on the property.

06.04 DIFFERENT DESIGNS

In developing the master plan, four different site plans were considered. Common to each of the plans were public two-way access roads between Beretania and Hotel Streets and between Hotel and King Streets, location of the HPD building in the northeastern corner of the site and location of the City office tower in the southwestern corner of the site. The key variable among these design options was placement of the transportation center. In the preferred option, depicted in Figure 5 of Section 5.06, placement along Alapai Street was selected on the basis of two key project criteria: 1) that present bus operations be minimally disrupted during Phase I construction; and 2) that future bus operations build on patterns presently established. For these reasons, optional placements of the transportation center mid-site or along King Street were not preferred. The remaining options involved configuration of the transportation center and associated traffic flow patterns. In the preferred option, express buses would all approach from the west, entering

the staging area from King Street east of the office tower. When buses are ready for boarding, they would move to a position along the boarding platform which would extend down Hotel Street (closed to private vehicles) and along Alapai Street. All buses would depart the center onto Alapai Street at a point as close to King Street as possible to avoid congestion of the Alapai/Beretania intersection.

The three other site plans considered, titled Scheme A-C, are described in the following text and depicted in Figures 7-9.

Scheme A

Scheme A depicts a bus circulation arrangement in which express buses would drive down King Street and pull onto the southeast portion of the site. The buses are shown in Figure 7 queuing up north to south. Upon demand, buses would then pull up to a platform parallel and adjacent to King Street. Local bus pick-up would remain on Alapai Street. Access roads between Hotel Street and King Street to the south and Hotel Street and Beretania to the north are located along the eastern edges of the site in a dogleg configuration. A grassy park-like setting over the unerground parking garage constitutes the northwest portion of the site and connects the Transportation Annex Tower and Police Headquarters.

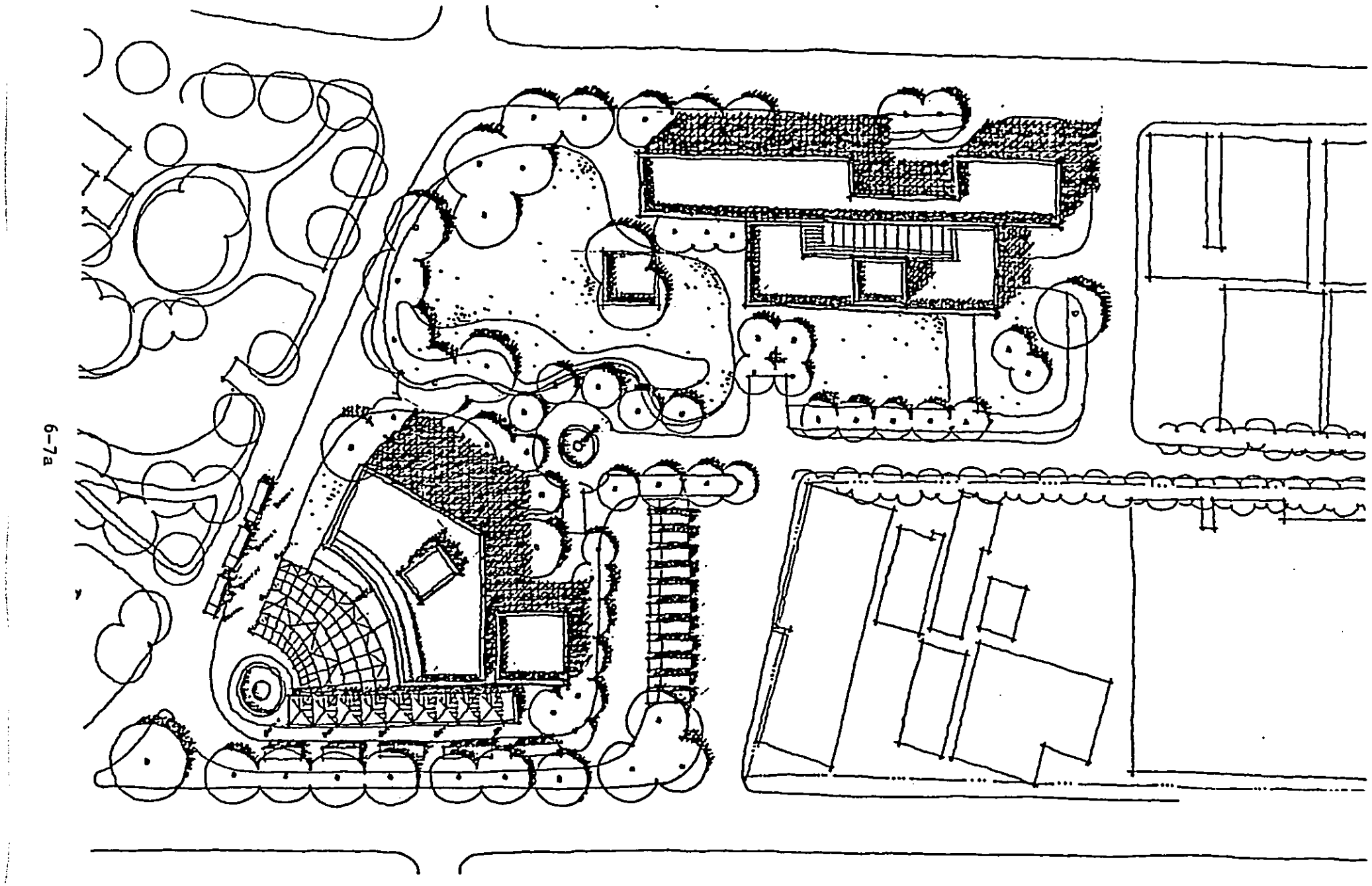

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FIGURE 7 SCHEME A

Scheme B

Scheme B as depicted in Figure 8 has an express bus circulation system in which the transit platform is a long island bisecting the site in the north/south direction. Buses from King Street enter a holding area in the southeast portion of the site. From there they circulate clockwise about the platform and may exit onto either King Street or Beretania. Local bus service could remain along Alapai or be rerouted into the transit platform. An access road connecting King Street, Hotel Street and Beretania runs parallel and adjacent to the transit platform. The transit center and access road divide the eastern portion of the site containing the police headquarters and future expansion space from the western portion containing the City office building to the south and landscaped park over a garage to the north.

Scheme C

Scheme C has express buses entering the site from King Street at the southest corner of the site, shown in Figure 9. The buses traverse the site northbound on the access road to a covered holding area adjacent to Beretania. Upon demand, the buses travel west and then south to the appropriate loading bay along the platform parallel and adjacent to Alapai Street. Local bus service would remain across the platform on the northbound Alapai Street. The access road connecting King Street, Hotel Street and Beretania runs north and south dividing the northeast corner containing the police headquarters from the western half of the

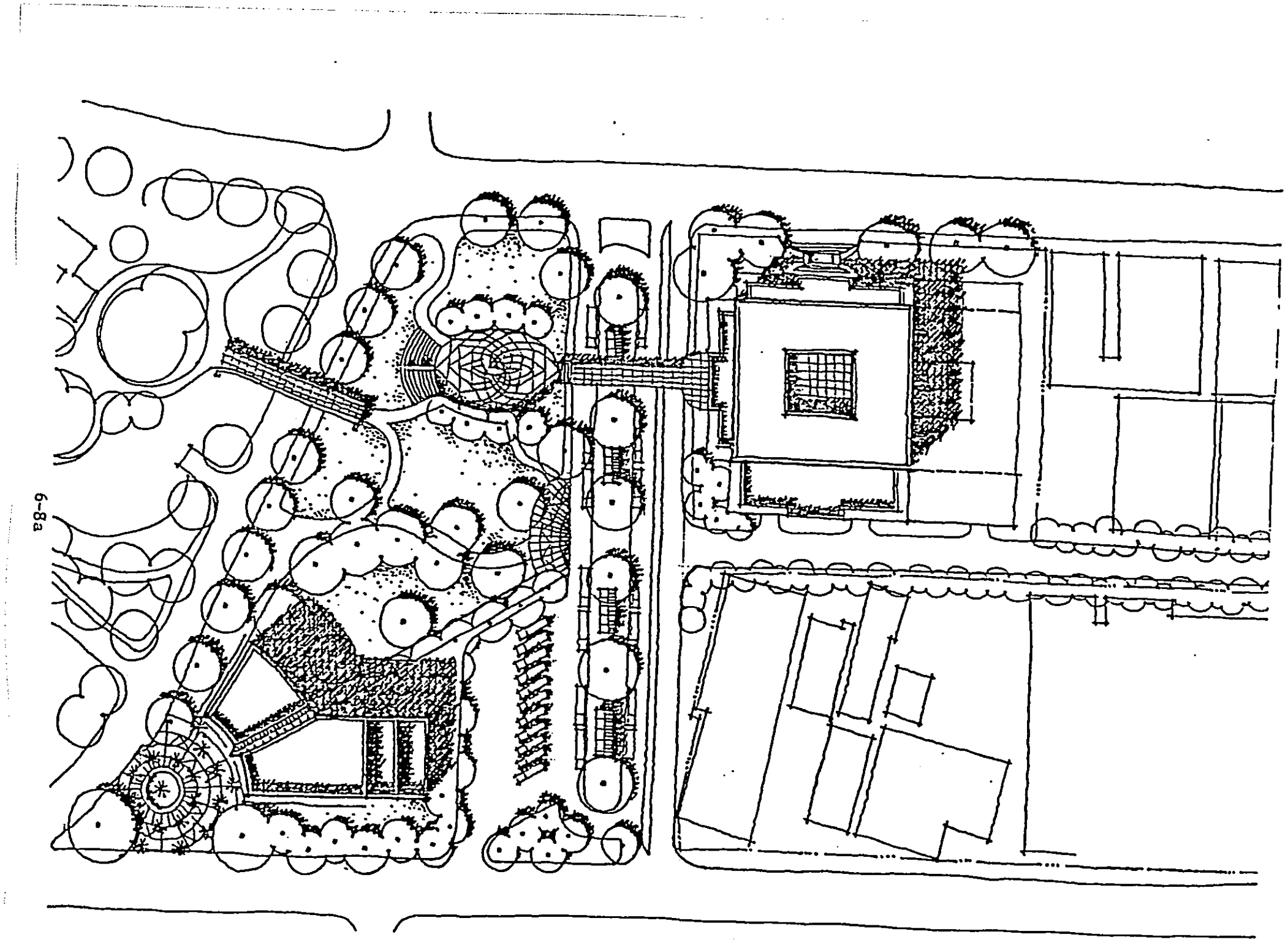

FIGURE 8 SCHEME B

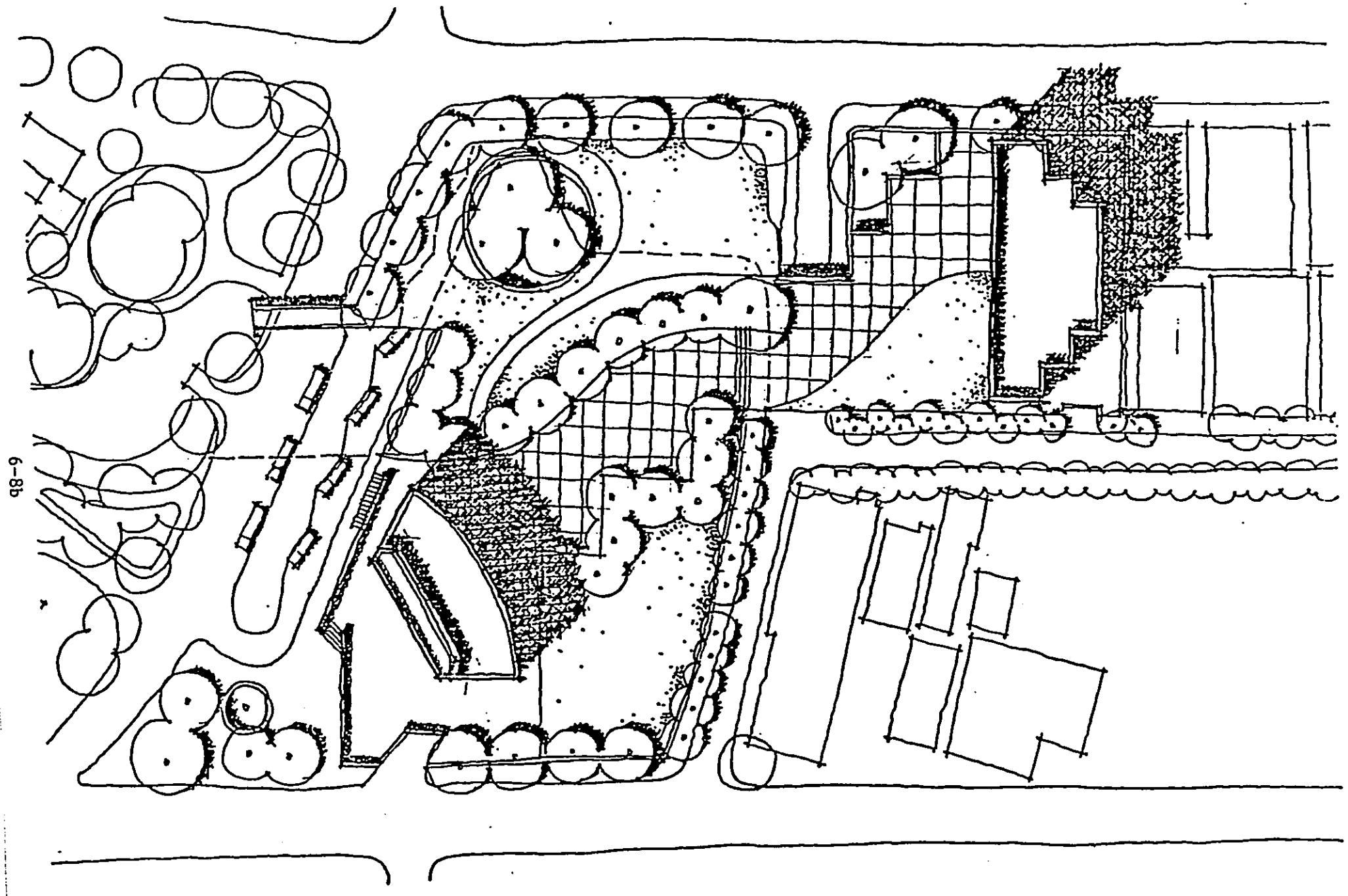

FIGURE 9 SCHEME C

site containing the City office building. A park-like lid covers the parking garage, bus holding area and portions of the bus platform and access road.

07.0 DESCRIPTION OF THE ENVIRONMENTAL SETTING

07.0 DESCRIPTION OF THE ENVIRONMENTAL SETTING

07.01 CLIMATE AND METEOROLOGY

Downtown Honolulu receives a yearly average rainfall of 24 inches. Hawaii, in general, has a small seasonal variation in average temperature ranging from about 74-75°F in March to 79-80°F in September. Northeasterly tradewinds prevail across the islands. Honolulu's average windspeed for the month of January is 9.3 miles per hour, and it reaches 12.8 miles per hour in July. Through the months of October to April, Kona storms with southerly winds may be experienced. Relative humidity for Honolulu remains between 60% and 80% on a year-round average (University of Hawaii, 1984).

07.02 TOPOGRAPHY, GEOLOGY AND SOILS

"In general, the site is relatively level with a slight slope from elevation 21 feet at the corner of Alapai and Beretania Streets down to about elevation 9 feet close to the corner of Alapai and King Streets" (Geolabs-Hawaii, 1978).

Geologically, the site is located on the Honolulu coastal plain, a broad sedimentary plain, in places overlain by tuff cones and ash deposites. The plain contains numerous artificially filled marshes. At the shore, earthy and calcareous sediments, collectively termed caprock, are at least 1,000 feet thick and overlie the Koolau aquifer (Takasaki, 1977). The caprock forms a

wedge-shaped barrier, progressively thinning inland. At the Alapai site, the caprock layer is probably less than half the thickness of that at the shoreline. Deposits in the caprock consist of terrestrial alluvium, marine sediments, calcareous reef deposits, pyroclastic rocks of the Honolulu volcanic series, and weathered basalt, with the first three predominant. The deposits in the caprock vary in their permeability, but the net collective permeability of the layer is low in comparison to the water-bearing basalt (Visher and Mink, 1964).

Soils at the site were examined for their load-bearing properties as part of an earlier proposal to expand bus service facilities at the site (Geolabs-Hawaii, 1978). A total of 14 borings were made, some to as deep as 21.5 feet. Boring logs reveal "...that most of the site is mantled by a layer, about 0.5 to 3 feet thick, of stiff brown clayey silt and silty clay material. Underlying the upper layer, black sand (volcanic cinder) varying from loose to medium density was encountered. The thickness of this layer varies from 5 feet to 10 feet. Beneath the black sand, dense to very dense light tan silty coral and sand were encountered down to 21.5 feet, the depth drilled."

07.03 NATURAL HAZARDS

Tsunami Hazard

According to the Civil Defense "Tsunami Inundation Maps," the project site should not be affected by any tsunami activity (Hawaiian Telephone Company, 1987).

Flood Hazard

The project site is in Zone X according to the National Flood Insurance Program's Firm Flood Insurance Rate Map, revised September 4, 1987 as shown in Figure 10. Zone X is the designation for areas determined to be outside the 500-year flood plain. Nevertheless, the project would be designed and constructed in compliance with the Federal Flood Insurance Program, the City and County of Honolulu Drainage Standards, and the City's Grading Ordinance.

07.04 HYDROLOGY AND WATER QUALITY

There are no surface water resources within, near or seaward of the site. Beneath the site, however, are significant groundwater resources. An extensive basal aquifer containing large supplies of fresh water underlies all of southern Oahu. The caprock near the coast, being less permeable than water-bearing lava flows nearer the Koolau Range, retards the seaward flow of groundwater and results in a higher water table than would exist absent the caprock. Central Honolulu has the highest water table in southern Oahu. The basal groundwater is under artesian pressure; water levels range from 10 to 30 feet above sea level. This corresponds to the area of thickest potable groundwater, about 1,000 feet, measured as the depth to the 250 mg/l chloride level, the potable water standard (Swain, 1973). In the coastal caprock area which includes the Alapai site, water levels are 1-3 feet above sea level.

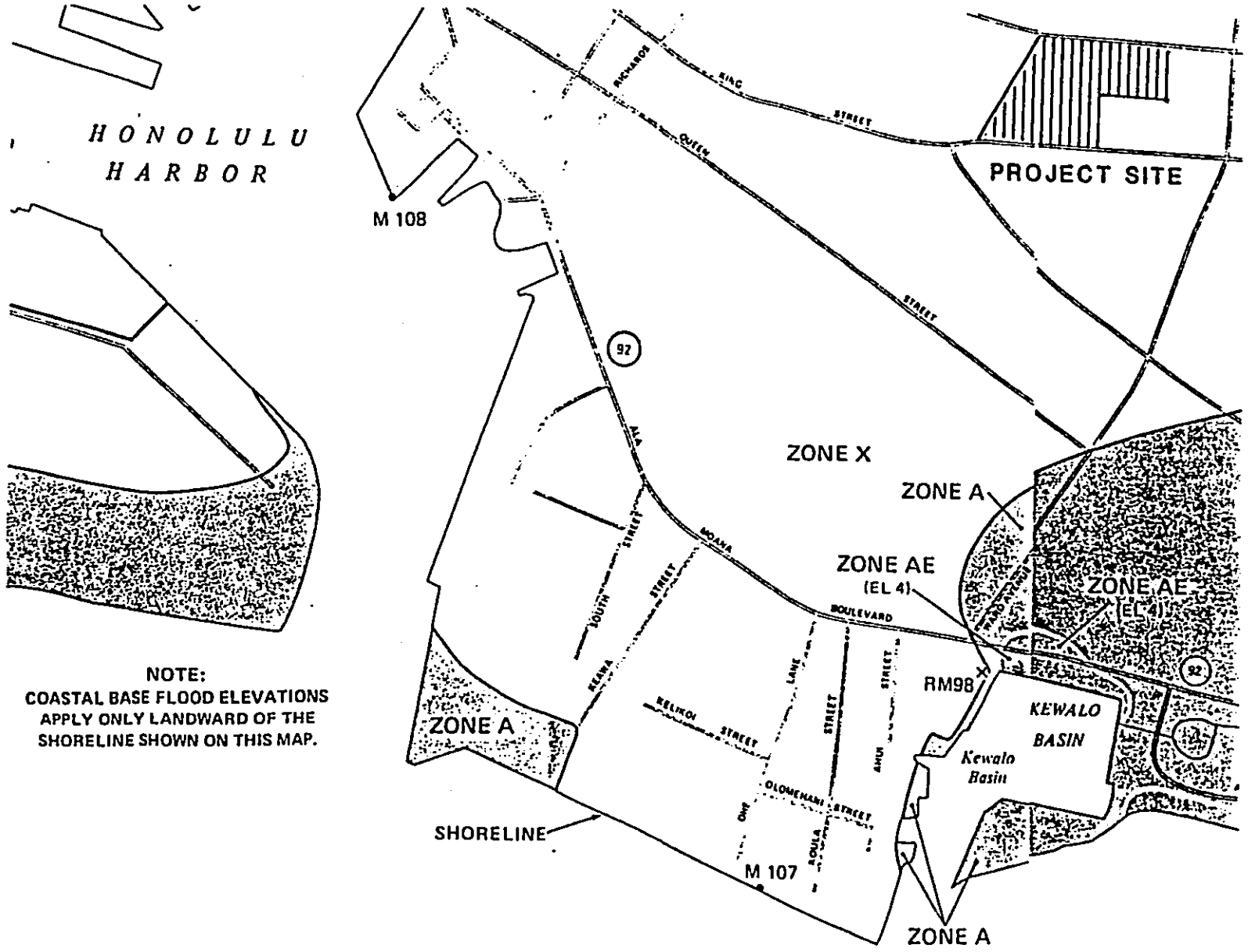

FIGURE 10 FLOOD HAZARD DESIGNATION

Because fresh water is lower in specific gravity (has lower concentrations of dissolved solids) than seawater, the fresh water floats on top of the seawater which saturates lower geological strata. This fresh water "lens" displaces seawater below it in a ratio approximating 1:40 for fresh water above and below sea level, respectively. Typically, the lens is thickest near the middle of the island, thinning towards the coast, with seepage to the sea occuring very close to the shoreline. Recharge to the groundwater is from rainfall on the Koolau Range.

At the interface between the fresh water lens and the underlying seawater, there is a transition zone of brackish water which varies in thickness due to natural factors such as fluctuations in recharge and discharge rates and tidal cycles, and also due to pumping from wells in the aquifer.

Although the capacity of the caprock to store and transmit water is small compared to that of the basalt aquifer, caprock does contain large quantities of water. Where fossil reefs are present, water occurs in large quantities in the caprock. While the permeability of the alluvium and marine mud components of caprock is low, the reef rock is generally permeable and along southern Oahu is locally extensive enough to support formation of fresh water lenses. These lenses, however, are intermittent and poorly defined due to the discontinuous nature of the sediments. Fresh water in the caprock accumulates from rainfall, return irrigation and leakage upward from the artesian portion of the

basaltic aquifer. Along the shore, sea water moves readily into the caprock, as evidenced by the high efficiency in transmitting tidal fluctuations. Caprock water is generally of poor quality due to its relatively high chloride content and is developed for agricultural and industrial purposes only. In Honolulu, caprock water has been developed for purposes such as irrigation and equipment cooling.

Dissolved constituents enter the groundwater from the sea, the atmosphere, the surface layer of soil and vegetation, the rocks through which the water percolates, components of irrigation waters (such as fertilizers) and from waste injection wells. The sea is the primary source of dissolved solids to groundwater, and chloride, being the most abundant ion in seawater (and one which neither reacts with other dissolved constituents nor is subject to appreciable ion exchange), is used as an index of the chemical quality of groundwater.

The chloride content in the caprock under Honolulu varies with distance from the shoreline. Near Honolulu Harbor, levels range to near 18,000 mg/l, close to those of full-strength seawater. Values from wells close to the Alapai site range from 967 to 7,600 mg/l. Chloride content of the basal water underlying the site is much lower, 36-38 mg/l. Total solids range from 172-180 mg/l in samples from wells very close to the site (Swain, 1973).

On the Alapai site is an inactive water well (#1851-20). This well was drilled in 1900 to a depth of 571 feet and a diameter of

12 inches. It was recased in 1956 to a depth of 529 feet with 8 inch diameter casing. The well has not been sampled since 1980. The chloride content at that time was 35 ppm (A. Morisako, pers. comm.). The steel casing has a rated life span of 40 years, so the well may have a few years of useful life remaining for monitoring purposes. However, as the master plan shows a future parking facility over the well, abandonment is proposed.

The flow gradient for the basal water aquifer in central Honolulu toward Pearl Harbor to the northwest, rather than directly from the midline of the Koolau Range to the sea as might be expected. This is because of a marked curvature in the equipotential surface lines for water storage heads around Pearl Harbor. In other words, "downhill" for basal groundwater in central Honolulu is toward Pearl Harbor rather than toward the sea.

The pollution potential of the caprock water is generally high for both point and nonpoint sources, but the pollution potential of the volcanic aquifer underlying the sedimentary deposits in the coastal plain is low with the exception of seawater intrusion due to overpumping of potable water source wells (Takasaki, 1977).

There are numerous injection wells for waste discharge in central Honolulu, including those for thermal water, car-wash return and rain water. Scattered cesspools and abandoned cesspools exist. According to the "Water Quality Management Plan for the City and County of Honolulu" (DOH and City and County of Honolulu, 1980),

the Honolulu population on cesspools (principally the communities of Nuuanu and Makiki Heights) is 15,270. Approximately 1,527,000 gallons of waste per day are disposed of into 4,491 cesspools, of which about 7% are defective. The chief recipient of injected waste is caprock water. However, none of these sources are close enough to impact water quality beneath the Alapai site (E. Akazawa, pers. comm.). In any event, because of the large head difference between water in caprock and Koolau lavas, pollutants would not enter artesian-water resources from the caprock water.

Present operations at the Alapai Bus Barn have some potential to degrade water quality, but adequate mitigation measures are routinely employed. Four old underground fuel storage tanks which had begun to show evidence of water leaking in have been replaced by two 12,000 gallon diesel storage tanks. There is also a 6,000 gallon underground storage tank for unleaded premium gasoline. Lubrication oil and wastewater are separated in tanks and the waste oil is trucked away twice a week. Surface runoff from the bus service area is channeled into a catch basin where a petroleum separation pillow soaks up oils and fuel prior to release of wastewater to the sewer system. Replaced brake linings containing asbestos are sealed in EPA-approved drums prior to removal from the site (D. Miyasato, pers. comm.).

07.05 FLORA AND FAUNA

At present, the project site has minimal landscaping. Most of the surface area is covered with blacktop materials or concrete.

Notable vegetation consists of one monkeypod tree at the corner of Alapai and King Streets surrounded by ground cover. There are also four shower trees and three coconut trees along King Street, a palm tree on Beretania Street and three palms and less than a dozen shrubs near the corner of Alapai and Beretania. None of the trees are listed on the "Register of Exceptional Trees" according to Honolulu Revised Ordinance No. 78-91, Protective Regulations of Exceptional Trees.

Urban bird species that frequent the fences and the vegetation mentioned above are the only notable fauna on the site. These birds most likely use the park-like Civic Center area for their main habitat. No rare, endangered or threatened plant or animal species exist on the site or use the site as habitat.

07.06 HISTORIC SITES

While the history of the project site is interesting, the buildings on the site are not listed as significant historic sites. There are no surface archaeological features at the project location. The Historic Sites Section of the Department of Land and Natural Resources reviewed the Environmental Assessment for this project and concluded that there are unlikely to be subsurface archaeological deposits on these parcels.

History of the Project Site

According to Thrum's "Retrospect for 1900" and for 1901, the

Honolulu Rapid Transit & Land Company, Ltd. constructed their trolley barn and power house on the corner of Alapai and Hotel Streets between June 1900 and the summer of 1901. He did not mention the office building, but it is reasonable to assume it was built at the same time. A photo (Figure 11) in the Hawaii State Archives, thought to date from about 1905, shows the original appearance of the trolley barn and adjacent office building. The smoke stack of the powerhouse is visible in the background. These buildings were constructed largely of red brick. The office structure had elaborate brick corbelling in its false front and the windows had lava stone lintels and sills. This building included a dining room and billiards room for the trolley operators (Hogue; 1933:p. 18). The trolley barn had a stepped false front, framed by brick end piers, capped with stone, and supported by steel beam and columns. The elevation along Hotel Street had 16 large openings, with brick arches and lava stone sills. In 1933 Hogue described "the industrial plant that is concealed behind the prosaic red brick front of the Rapid Transit building. Besides housing the cars and busses, it contains a complete set of shops for handling machinery, painting, carpentry, blacksmith and a warehouse."

The August 31, 1901 inauguration of trolley service was intended only as a trial run day, but was met with such demand that the electric cars were kept running all day. By 1903 the electrified system of the Honolulu Rapid Transit & Land (HRT & L) Company had supplanted the mule-drawn carriages of the Hawaiian Tramways, Ltd. which had been providing Honolulu's public transportation

since 1888. Honolulu residents were anxious to be as modern as Mainland cities. As in many other cities, Honolulu's trolley system spurred residential developments along its routes. Thrum reported in 1900 (p. 170), even before the trolley service started, that:

> "several tracts of suburban properties are being prepared for subdivision into residence lots, in anticipation of the rapid transit car service promised by the city in the near future; viz. the Punahou tract, and H.E. Cooper's in Manoa; the Palolo Land and *Improvement Co. in Palolo;* the McCully tract at Paawa, and the Gulick and Kapiolani tracts at Kalihi."

In the early years of the 20th century, following the annexation of the islands as a Territory of the United States, the population of Honolulu grew rapidly. The trolley system channeled that growth to certain neighborhoods; because of the easy access to town that the HRT & L Co. provided, those areas near the trolley lines were more attractive to developers and potential residents. The company also became involved in tourism in 1903 when it built an aquarium in Kapiolani Park to entice riders to the end of the line (Waikiki Beach Press; Oct. 12, 1987; p. C-9).

Changes on the Site

The major changes that were reported on the trolley barn site involved the power system. "In 1911 improvements were being made

in the power plant with installation of a 1500 HP cross-compound Corliss steam engine and a new generating unit in the power house" (Melvin and Ramsay; 1960: p.15). In 1927 the generators blew up and the system from then on relied on purchased power. "A great 1500-kilowatt rotary converter which changes Hawaiian Electric alterating current into direct current for the Rapid Transit trolley wires" was then housed in the trolley barn (Hogue; 1933: p. 18). The Honolulu Rapid Transit & Land Co. began using buses as early as 1915 (Melvin and Ramsay; 1960:p. 19), but it wasn't until July 1, 1941 that "bus service completely replaced street cars" (Baker; 1941: pl. 44). The trolley barn was converted to a bus barn.

Present Appearance

The facades of the two Honolulu Rapid Transit Company buildings on Alapai Street have been much altered over the years (compare Figures 11 and 12). The office building has been changed the most. Instead of the articulated red brick false front, it now has a smooth plastered gable end, painted light green (Figure 13). The tripartite window on the third floor has been covered over, but the fenestration spacing on the second floor indicates that the original structure still lies beneath. This is also confirmed by the painted brick visible on the rear portion of the side wall (Figure 14). Several additions have been awkwardly attached to the front, side, and rear of the office building. The plastered surfaces and curved roof over the entry indicates these changes were probably made in the 1930s, as stucco plaster

FIGURE 11 HRT&L CO. TROLLEY BARN AND OFFICE, 1905

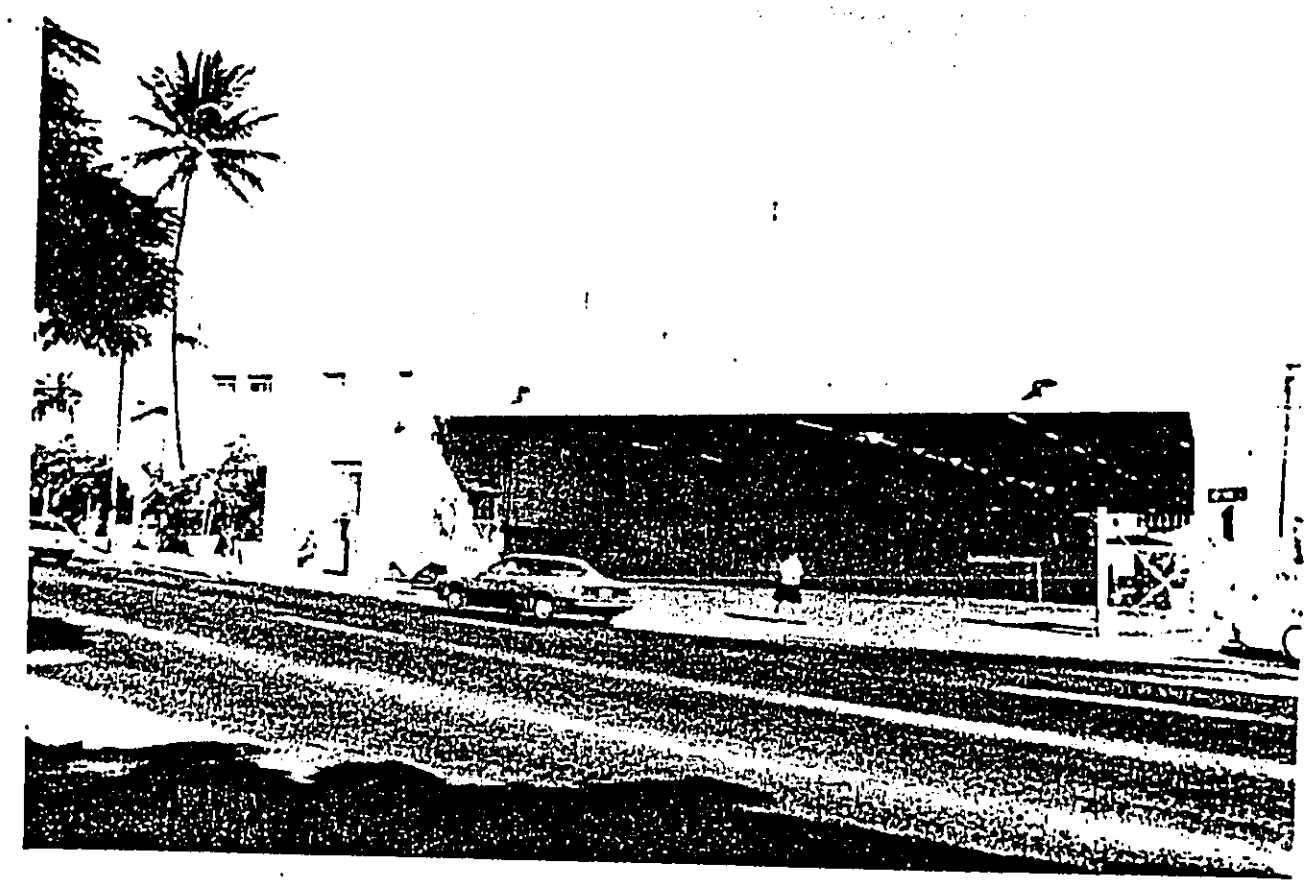

FIGURE 12 MTL BUS BARN AND OFFICE, 1987

FIGURE 13 MTL OFFICE BUILDING–FRONT FACADE, 1987

FIGURE 14 MTL OFFICE BUILDING–NORTH SIDE, 1987

and curves are typical of the Streamline style of that period.

The stepped red brick gable of the trolley barn has also been changed to a simple plastered gable, painted light green. The portions of the facade which rise above the roof line are the "shoulders" on each end of the gable, similar to the office building. The gable is no longer supported by steel posts, but has an unimpeded opening. The trussed roof system provides a floor space free of columns, and probably replaced a post and beam system. The elevation on Hotel Street has not been changed greatly (Figure 15). The brick wall, however, has an ancient coat of peeling light green paint. The window bay nearest Alapai Street has a coat of plaster over the brick wall, which has been built up to the height of the "shoulder" on the facade (Figure 16). Also, a central bay has a window opening converted to a door way. The shallow-arched window openings, one-piece stone lintels and the corbeled cornice are the elements which indicate the building's original period of construction.

07.07 LAND USES AND COMMUNITIES

Land Uses

The proposed project is located in Central Honolulu, bounded on the mauka and makai sides by two major arterials, King and Beretania Streets (see Figure 17). The project site is at the far Diamond Head end of the Hawaii Capital District. This centralized location has made it ideal as the hub of City bus

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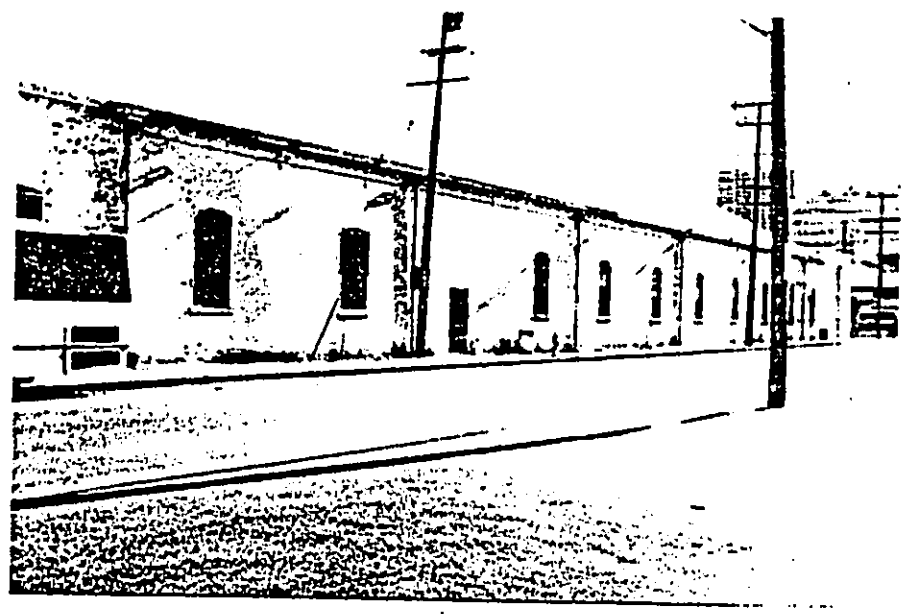


FIGURE 15 EASTERN END OF BUS BARN, 1987

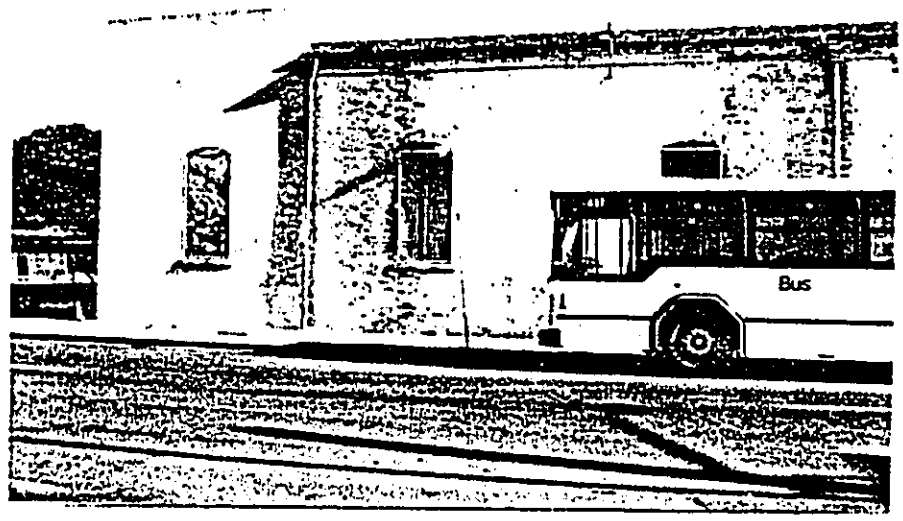


FIGURE 16 WEST END BAYS OF BUS BARN, 1987

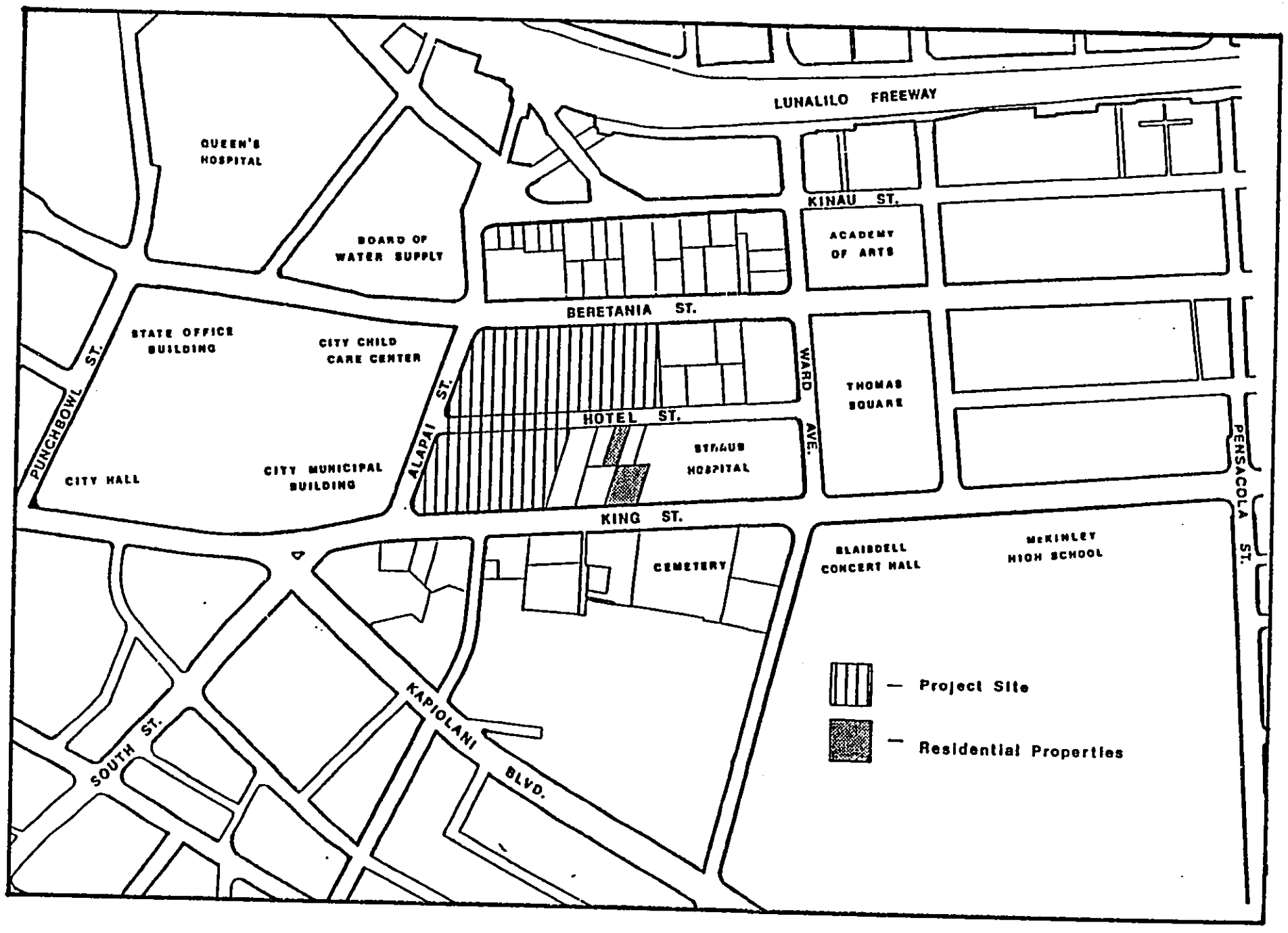


FIGURE 17 LAND USE NEAR THE PROJECT SITE

operations for the entire island.

The general character of the neighborhood surrounding the project site is that of a developed urban environment, primarily consisting of a mixture of low- to mid-rise buildings. There are also several high-rise buildings scattered in the area. The following discussion will provide a brief overview of the various types of activities which currently are present on surrounding parcels.

Public Facilities

Figure 17 also indicates there are numerous public facilities present in the general area. Many of these are located within the Hawaii Capital District. These include City Hall, the City Municipal Building, the State Office Building, The Queens's Medical Center, and the Board of Water Supply.

Towards the east, major public facilities include the Honolulu Academy of Arts, Thomas Square, the Blaisdell Arena and Concert Hall, and Straub Hospital and Clinic.

City Child Care Center

The Early Education Center operated by the City is another public facility which represents a unique surrounding use with particular social impact implications. Therefore, the Center

will be discussed independently in a later section in order to assess both quantitative and qualitative implications of the proposed project.

Commercial/Retail

The majority of retail operations is located along the major thoroughfares of King and Beretania Streets. On Beretania Street, the largest retail outlet is the Furniture Square area, which encompasses the C S Wo and BJ Furniture stores, along with several others. Additional furniture stores, clothing retail shops, and a gas station are other activities located along Beretania Street.

Near the corner of King and Alapai Streets, retail operations include restaurants, business supply services, and auto parts sales. Additional retail activities on King Street include a gas station, a drive-in restaurant, a used car lot, a medical supply center, and a furniture store.

Office

The centralized location of the area has made it ideal for a number of office activities. The most prominent office use in the area is the First Insurance Center located at the corner of Beretania Street and Ward Avenue. Beretania Street is further dotted with smaller insurance company offices, along with medical and dental offices. Located on Hotel Street are the City and County of Honolulu Employees Federal Credit Union and three-story

Thomas Square Centre. Significant office space is located on King Street in the block between Cooke and Alapai Streets, makai of the project site.

Residential

There are only two residential projects on properties immediately surrounding the project site. Both are located just mauka of the proposed police station (see Figure 17). The largest residential structure is the King Manor Apartment building located on King Street next to Straub Hospital. There are 115 units in the building. The other residential project is the Okazaki Apartments, a small three-story "walk-up" building located on Hotel Street. There are nine units in this building.

Other New and Planned Developments

Within the downtown and Kakaako area several other developments are under construction. Identification and assessment of these new projects will aid determination of cumulative impacts on street capacity and traffic flow. The table below lists nine projects that are large-scale and whose clientele would share streets and freeway on-ramps and off-ramps with the proposed project. Table 6 presents a brief description of each of these developments and Figure 18 shows their location in relation to the Alapai project site.

TABLE 6

NEW AND PROPOSED MAJOR DEVELOPMENT PROJECTS IN THE STUDY AREA

TITLE/LOCATION	SQUARE FEET COMMERCIAL	SQUARE FEET INDUSTRIAL	NO. OF UNITS RESIDENTIAL
KAKAAKO AREA			
1. Pacific Park Plaza/Curtis & Kapiolani	261,860	0	297
2. Queen Kapiolani Multi-use Community Facility/South, Kapiolani & Kawaiahao	166,172	860,993	260
3. State DOT Parking Garage/ Halekauwela & Punchbowl	419 new parking stalls		
4. One Waterfront Plaza and Tower/Ala Moana, South & Punchbowl	546,785	49,891	310
DOWNTOWN AREA			
5. Chinatown Gateway/Hotel St. & Bethel	35,000	0	200
6. Pauahi-River-Hotel St. Mall	20,000	0	0
7. Straub Hospital Expansion/ Hotel St.	110,000	0	0
8. Thomas Square Centre/Hotel St.	8,000	0	0
9. Queens Medical Office Building/Lusitana	140,000	0	0

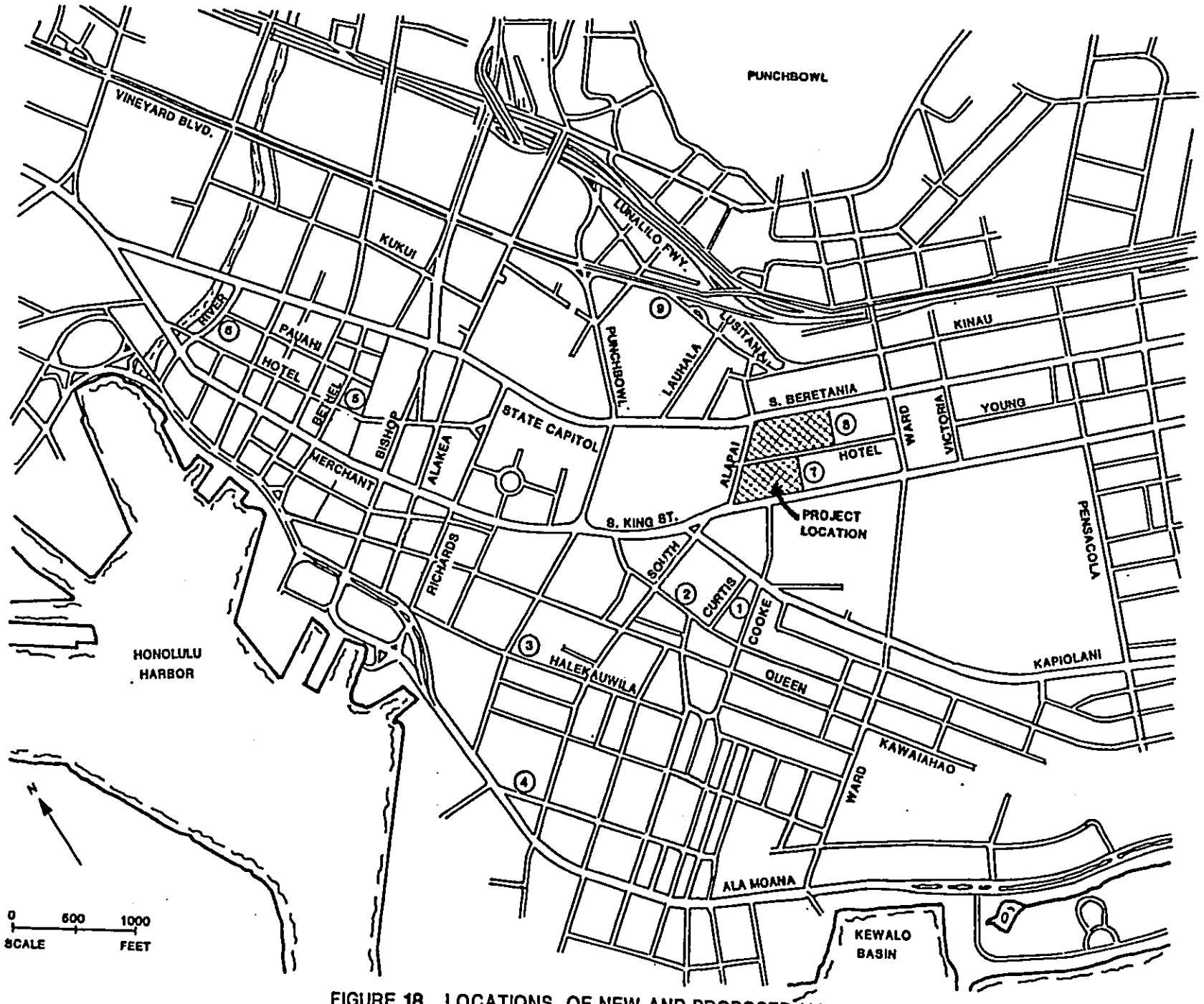


FIGURE 18 LOCATIONS OF NEW AND PROPOSED MAJOR DEVELOPMENTS IN THE STUDY AREA (SEE TABLE 6 FOR DESCRIPTIONS)

Communities

The community in the area of the proposed action was described as part of a qualitative social impact assessment prepared for this EIS by Community Resources, Inc.

The methodology used interviews with representatives of both:

- immediately-surrounding residential, business and service interests; and

- regional and special-interest organizations who have demonstrated concern in developments of this area.

Eighteen people were interviewed during this study. The purpose of the interviews was to identify potential issues related to the project. No attempt was made to assess the extent of project support or opposition.

Further, the issues identified are preliminary--they indicate community reactions at a very early stage in the planning and design phase. Much of the project information was preliminary and subject to change and no formal presentations were made to organizations; hence, none of those interviewed indicated a formal position on the project.

Most knew of various previous plans for the site; a few were aware of this current proposal. Their input was, therefore,

based on their initial reactions to information presented to them during interviews. Changes in attitude and issues may occur in time, given changes in the project and other events or influences in the community.

Each person was informed that input would be summarized in the EIS and that individual conversations would remain confidential. The basic piece of information was the "EA-EIS Office Complex," prepared in June 1987. This information was supplemented by the "Project Proposal Data," as well as by updated plans and information as they became available. The interviews were conducted through one-to-one and small group meetings, as well as by telephone and are summarized in Section 10.04.

07.08 POPULATION AND ECONOMY

Oahu's 1985 resident population was 814,600, including armed forces stationed or homeported in Hawaii and residents temporarily absent, risen from 718,600 ten years ago (DPED, 1986). Looking twenty years into the future, Oahu's resident population is expected to rise to 954,000 (DPED, 1984).

As Oahu's resident population increases, the municipal labor force must also increase to meet the demand for various services provided by the City and County of Honolulu. This increase is critical in order for the public safety departments to fulfill their role. The expansion and improvement of the bus service is also important since the ridership is already high, indicating a heavy demand for the service.

Data collected in the State's 1986 Data Book (State of Hawaii, DPED, 1986) show a 1985 Oahu civilian labor force of 339,863 and a jobcount of 367,980. (A person may hold more than one job.) Total personal income in millions of 1980 dollars was $8,856.9 in 1984 and projected to be $11,398.6 in 1995. Retail sales on Oahu totaled $3,962,598,000 in 1982. Projected increases in these measures of the economy due to the proposed action are given in Section 10.05.

07.09 UTILITIES AND PUBLIC SERVICES

Utilities

Water Supply

The site is currently supplied from the Honolulu Board of Water Supply. Potable water is supplied by underground water distribution mains. There is a 20-inch water main beneath Alapai Street with 8-inch and 20-inch branch mains running parallel to the Hotel Street center line. These lines currently supply the bus maintenance facility and fire hydrants in this area.

Sanitary Sewer

The existing site is currently ringed by an 8-inch underground sanitary sewer line. These underground mains are part of the City and County Department of Public Works sewer collection system. The 8-inch lines lie beneath Beretania, Alapai, and Hotel Streets. An 18-inch line, lying beneath King Street serves as the collection main for the smaller 8-inch lines. Flows in both the Beretania and Hotel Street lines run toward Alapai Street. Flows collected in the Alapai sewer main then empty into the 18-inch King Street main.

Storm Drainage

The existing site which houses the bus maintenance facility and parking area is drained by means of "sheet flows" across the

sites. The center line of Hotel Street is the high point or dividing line for the site. Rain water from the bus maintenance yard flows toward Alapai Street as this is at a lower elevation. The area on the south side of the Hotel Street dividing line drains in the same general direction, i.e., toward Alapai and King Streets. Sheet flows from the site are collected along Alapai and King Streets by a series of catch basins which feed an underground storm drain line running beneath Alapai Street and King Street. Storm water in these drain lines flows toward the ocean.

Natural Gas Service

Natural gas is supplied to the area via an underground 6-inch main running parallel to the center line of Hotel Street. It is supplied from another gas main located beneath Alapai Street.

Electrical Power Services

Power is supplied to the area from HECO's distribution grid via the Alakea and Piikoi substations. The site is served by a combination of both underground and overhead power distribution cables located along Beretania, Alapai, Hotel and King Streets. Underground facilities within the present Hotel Street right-of-way and existing easements would have to be incorporated into site plans or relocated around the project site. Relocation of underground ductlines would require coordination and review by the City and County, Board of Water Supply, Hawaiian Telephone, a

cable TV company and GASCO. This would require a three-month review period. Aside from the bus maintenance facility which is supplied from a step down transformer, the remainder of electrical power is used for street lighting and general area lighting.

Telecommunications

The site is currently served by a combination of overhead and underground communication (telephone) systems. The cable network is owned and maintained by Hawaiian Telephone Company.

Public Services

Fire protection for the proposed project would be provided by the Kakaako, Central and Pawaa Fire Stations. Initial response would be three engine companies, two aerial companies (one ladder truck and one snorkel), a heavy rescue company and a Battalion Chief. Response time would be three to five minutes. Approximately 38 personnel would be in the initial response. Secondary response would be one ladder and two engine companies. Fire protection is considered adequate.

The Police protection facilities would, of course, be located on the project site, after relocating from the Pawaa Annex, a few miles away.

Healthcare services in the area include Straub Clinic and

Hospital, just four doors away, and also The Queens's Medical Center, two blocks away.

Public transit needs are met by TheBus service provided jointly by MTL, Inc. and the City and County of Honolulu. Alapai, Beretania and King Streets each have regular bus service daily. Express bus service would be improved on the project site with the proposed transportation center.

Childcare facilities are availiable directly across Alapai Street from the project site, next to the Honolulu Municipal Building.

07.10 TRAFFIC

A traffic study was conducted by Barton-Aschman Associates, Inc. to determine the traffic-related impacts of the proposed project and to identify improvements needed to mitigate the adverse traffic impacts of the proposed project. (The entire traffic study is included as Appendix D to this EIS.) The study had the following objectives:

(1) Determine existing morning and afternoon peak-hour turning volumes.

(2) Identify projects in the vicinity which would impact the intersections under study.

(3) Determine the approach and departure routes of project and related project trips.

(4) Estimate the weekday morning and afternoon peak-hour trips generated by the project and related projects.

(5) Conduct a level of service analysis of future conditions, both with and without the project to determine the project's traffic-related impacts.

(6) Determine if mitigation measures are required and identify feasible mitigation measures.

Existing Traffic Conditions

Existing roadway and traffic conditions within the vicinity of the study area are discussed in terms of roadway network, existing volumes, and the level of service analysis.

Intersections Studied

During the scoping meeting with the City, the intersections to be studied were agreed upon. These intersections are shown in Figure 19 and include the following:

(1) Punchbowl Street at Vineyard Boulevard

(2) Punchbowl Street at Beretania Street

(3) Punchbowl Street at King Street

(4) Alapai Street at Lusitana Street

(5) Alapai Street at Beretania Street

(6) Alapai Street at Hotel Street

(7) Alapai Street at King Street

(8) Kinau Street at H1-Eastbound

(9) Ward Avenue at H1-Eastbound

(10) Ward Avenue at Kinau Street

(11) Ward Avenue at Beretania Street

(12) Ward Avenue at Hotel Street

(13) Ward Avenue at King Street

(14) Ward Avenue at Kapiolani Boulevard

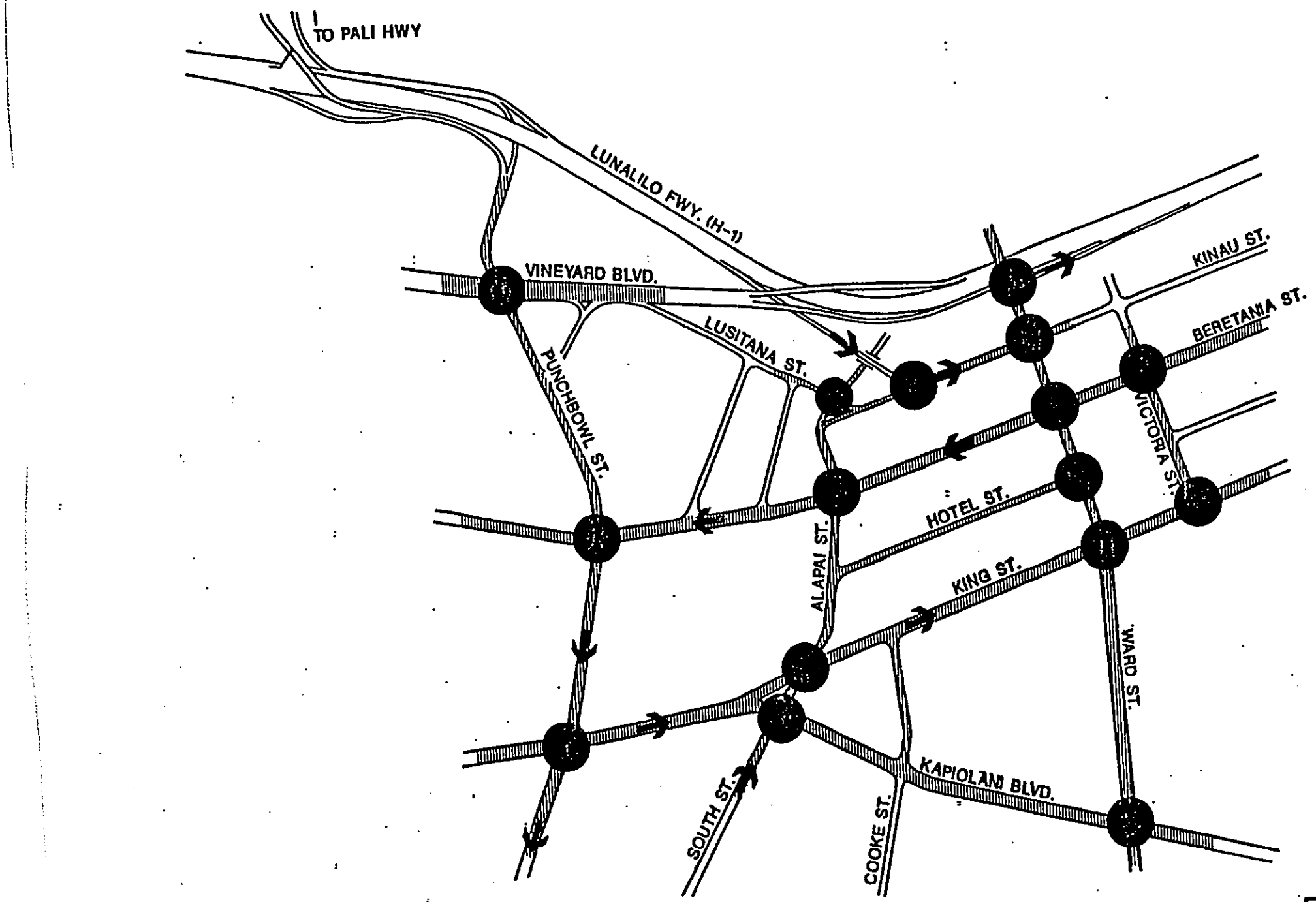
(15) Victoria Street at Beretania Street

(16) Victoria Street at King Street

Existing Roadway Circulation

Figure 19 also shows lane configurations on the study roadways. As shown, many of the streets near the project are high volume (i.e., multilane), one-way roadways. This street system creates many unique situations including project site access.

In the area immediately adjacent to the proposed project, there are three one-way streets. Beretania Street borders the project to the north, and is a westbound one-way street with a 4-5 lane basic cross section. Bordering the project to the west is Alapai Street. This street is a northbound one-way street with three lanes turning left at Beretania Street. South of the project area is King Street which is an eastbound one-way street with a



STUDY INTERSECTIONS AND ROADWAYS

BARTON ASCHMAN ASSOCIATES, INC.

FIGURE 19

six-lane cross section.

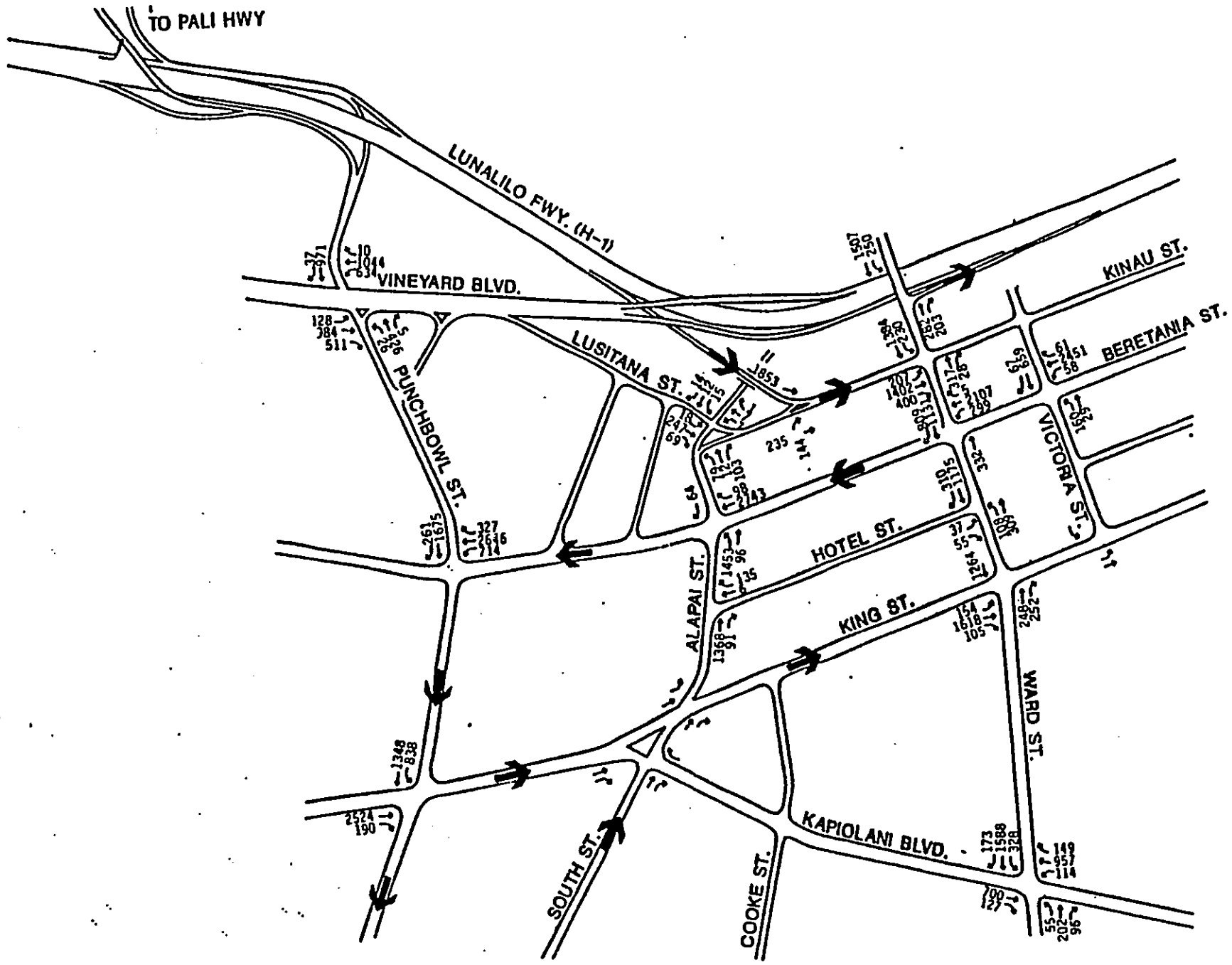
Also of interest are two two-way streets, Hotel Street and Ward Avenue. Hotel Street is an east-west two-lane street connecting Alapai Street and Ward Avenue. Hotel Street divides the project site into two parcels. Ward Avenue is a north-south street just east of the project site. Ward Avenue has a four-lane cross section with a reversible lane during peak hours. Ward Avenue is one of the main accesses to H1 in the area.

Existing Traffic Volumes

During October and November 1987, intersection turning movement counts were conducted for the study intersections. These counts were conducted for the morning (7:00-9:00 a.m.) and afternoon (3:00-6:00 p.m.) peak hours. The results of the morning and afternoon counts are shown in Figures 20 and 21 respectively.

Existing Bus Volumes

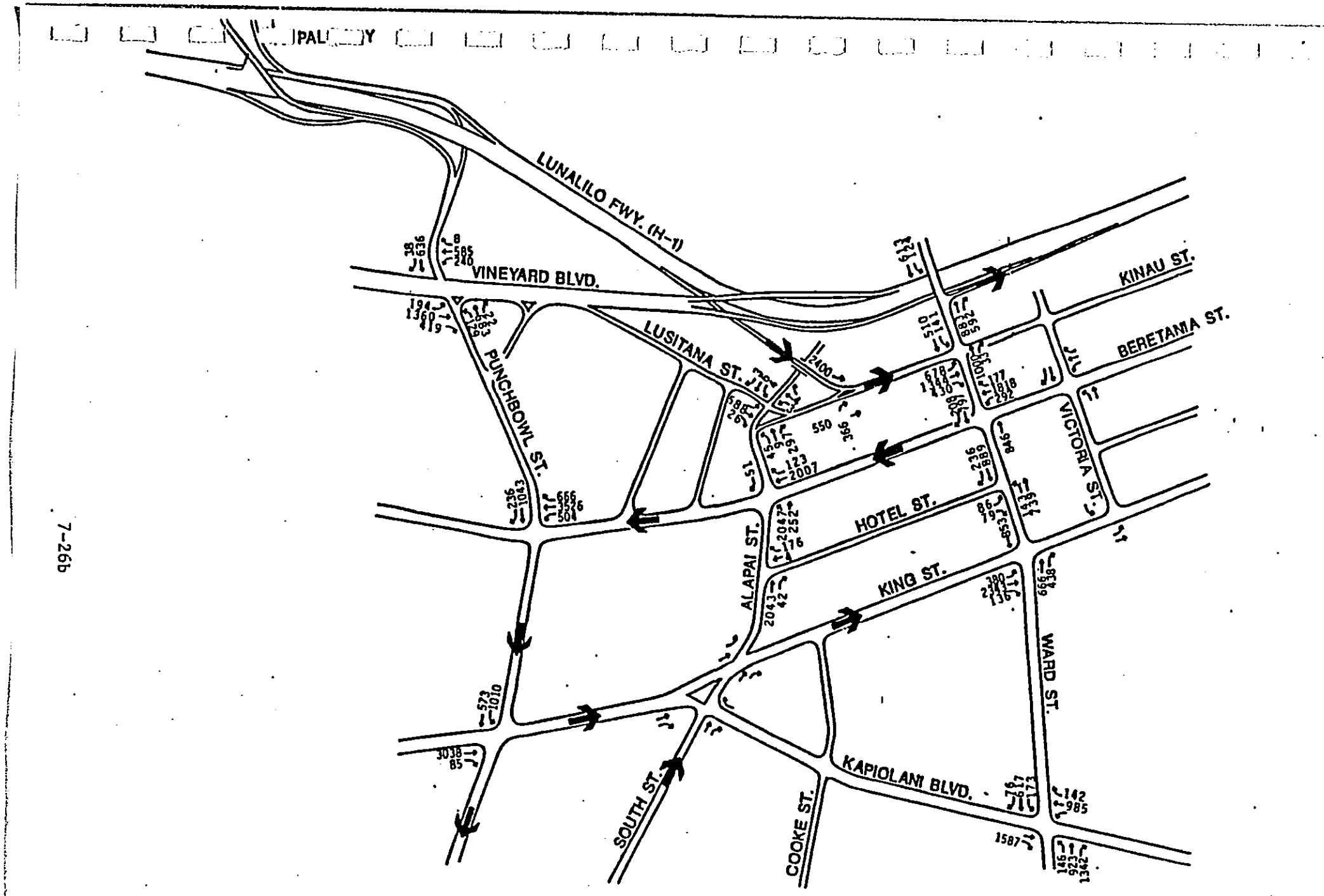
Based on a study completed by Howard Needles Tammen & Bergendoff in October 1987, "Alapai Transit Center Program Documentation," the current bus fleet for the center is between 450 and 500 buses. By 1995, the bus fleet is anticipated to be approximately 600. This is very significant to operations along Alapai Street due to the difference in operating characteristics between buses and automobiles.



1987 EXISTING TRAFFIC VOLUMES - MORNING PEAK HOUR

FIGURE 20

BAHTON ASCHMAN ASSOCIATES, INC.



1987 EXISTING TRAFFIC VOLUMES – AFTERNOON PEAK HOUR

BARTON ASCHMAN ASSOCIATES, INC.

N

FIGURE 21

Level of Service Concept

The Highway Capacity Manual, 1985, Operational Method was used to analyze the operational efficiencies of the intersections adjacent to the subject project. This method involves the calculation of an average vehicle delay, which is related to a level of service.

"Level of service" is a term which denotes any of an infinite number of differing combinations of traffic operating conditions that may occur on a given lane or roadway when it is subjected to various traffic volumes. Level of service is a qualitative measure of the effect of a number of factors, which include speed and travel time, traffic interruptions, freedom to maneuver, safety, driving comfort, convenience, and operating cost. There are six levels of service, A through F, which relate to driving conditions from best to worst, respectively. The characteristics of traffic operations for these various levels of service are summarized in Table 7.

TABLE 7

INTERSECTION LEVEL OF SERVICE DEFINITIONS*

LEVEL OF SERVICE	INTERPRETATION	DELAY/SECONDS
A,B	Uncongested operation; all vehicles clear in a single signal cycle.	0 - 15.0
C	Light congestion; occasional backups on critical approaches.	15.1 - 25.0
D	Congestion on critical approaches, but intersection functional. Vehicles required to wait through more than one cycle during short peaks. No long-standing lines formed.	25.1 - 40.0
E	Severe congestion with some long-standing lines on critical approaches. Blockage of intersection may occur if traffic signal does not provide for protected turning movements.	40.1 - 60.0
F	Total breakdown with stop-and-go operation.	> 60.0

* Source: Highway Capacity Manual, 1985.

Corresponding to each level of service is an average vehicle delay. This is the expected delay of either existing or projected traffic volumes passing through a given intersection. The delay experienced on a particular roadway is dependent on its physical characteristics such as number of lanes, the operational characteristics of the roadway (one-way, two-way, turn prohibitions, bus stops, etc.), and the traffic using the roadway (number of turning movements, percent trucks or buses).

In general, Level of Service A represents free-flow conditions with no congestion. Level of Service F, on the other hand, represents severe congestion with stop-and-go conditions. Many communities have adopted level of service D as a criterion for acceptable levels of service when future conditions are being analyzed.

Level of Service Analysis

A level of service analysis was conducted for existing conditions during the morning and afternoon peak hours. The results of these analyses are shown in Table 8.

As shown, during the a.m.peak hour, two intersections - Punchbowl at Vineyard Boulevard and Ward at Beretania Street- are operating at level E. In the p.m. peak hour, Alapai at Kapiolani Boulevard operates at level E and Ward at Kapiolani Boulevard operates at level F. As mentioned earlier, Level of Service D is typically the minimum acceptable level of service for major

intersections. Presently, during the morning peak hour, the intersection of Ward at the H1 Eastbound operates at this level of service, as does Punchbowl at Vineyard during the afternoon peak hour.

TABLE 8

HONOLULU CIVIC CENTER

	1987 EXISTING			
	AM		PM	
INTERSECTION	DELAY/ SECONDS	LoS	DELAY/ SECONDS	LoS
Punchbowl Street at:				
Vineyard Boulevard	42	E	31	D
Beretania Street	18	C	11	B
King Street	9	B	10	B
Alapai Street at:				
Beretania Street	10	B	11	B
King Street	9	B	10	B
Kapiolani Boulevard	4	A	59	E
Ward Avenue at:				
H1 Eastbound	26	D	3	A
Kinau Street	20	C	12	B
Beretania Street	51	E	10	B
Hotel Street	3	A	3	A
King Street	10	B	10	B
Kapiolani Boulevard	24	C	114	F
Victoria Street at:				
Beretania Street	8	B	8	B
King Street	10	B	7	B

Future Background Traffic Conditions

Future background traffic projections have been estimated by applying a background growth rate to existing traffic volumes and then superimposing related project traffic volumes to obtain an estimate of total background trips. Background trips have been estimated for 1990 and 1993.

An annual background growth rate is typically applied to existing traffic volumes when estimating future conditions. The purpose of this growth rate is to estimate the increase in background traffic resulting from the inherent increase of traffic and not specific projects. During initial scoping meetings with the City it was determined that an annual background growth rate of 1.5 percent per year would be used.

Related projects have been identified in Table 6 and Figure 18 of Section 07.07. These 'new and proposed development projects' located in the study area are either under construction or in the final planning stages and would have an impact on the intersections being analyzed as part of the traffic analysis.

The following assumptions were used to estimate the trips that would be generated by the related projects:

(1) Trip generation rates were obtained from Trip Generation, An Informational Report (Third Edition, 1982) prepared by the Institute of Transportation Engineers.

(2) Trip generation rates used were for the peak hour of the adjacent street.

(3) Dwelling units were undefined; therefore, the rates for apartments were used.

(4) Trip generation rates for research and development offices were used for those land-uses defined as industrial.

(5) The State Department of Transportation parking garage is to serve employees that are part of the existing background traffic. No discount was considered for this double counting. Standard assumptions for an office building were used to estimate the peak-hour trips into and out of the garage. These assumptions are (a) 60 percent of the spaces will be occupied or vacated during the morning and afternoon peak hour, respectively, (b) the directional split is 80/20 during each of the peak hours, and (c) the parking facility is 90 percent utilized. Using these assumptions, the morning inbound rate is 0.60 x 0.90 = 0.54 trips per space and the outbound rate is 0.60 x 0.90 x 0.25 = 0.14 trips per space. The rates would be reversed during the afternoon peak hour. The daily trip generation rate was estimated using a turnover rate of 1.5 per space. Therefore, the total number of weekday trips would be 1.5 x 2 = 3.0 per space.

The resulting trip generation rates and trip generation analysis is summarized in Table 9. Figures 22 and 23 present the estimated 1990 background traffic volumes for the morning and afternoon peak hours, respectively.

The resulting future background traffic volume and the project-related traffic impacts are discussed in Section 10.07.

07.11 AIR QUALITY

An air quality impact study was prepared as part of this assessment and may be found in its entirety in Appendix E. Portions of that study describing existing conditions are summarized here; impacts are summarized in section 10.08.

Standards

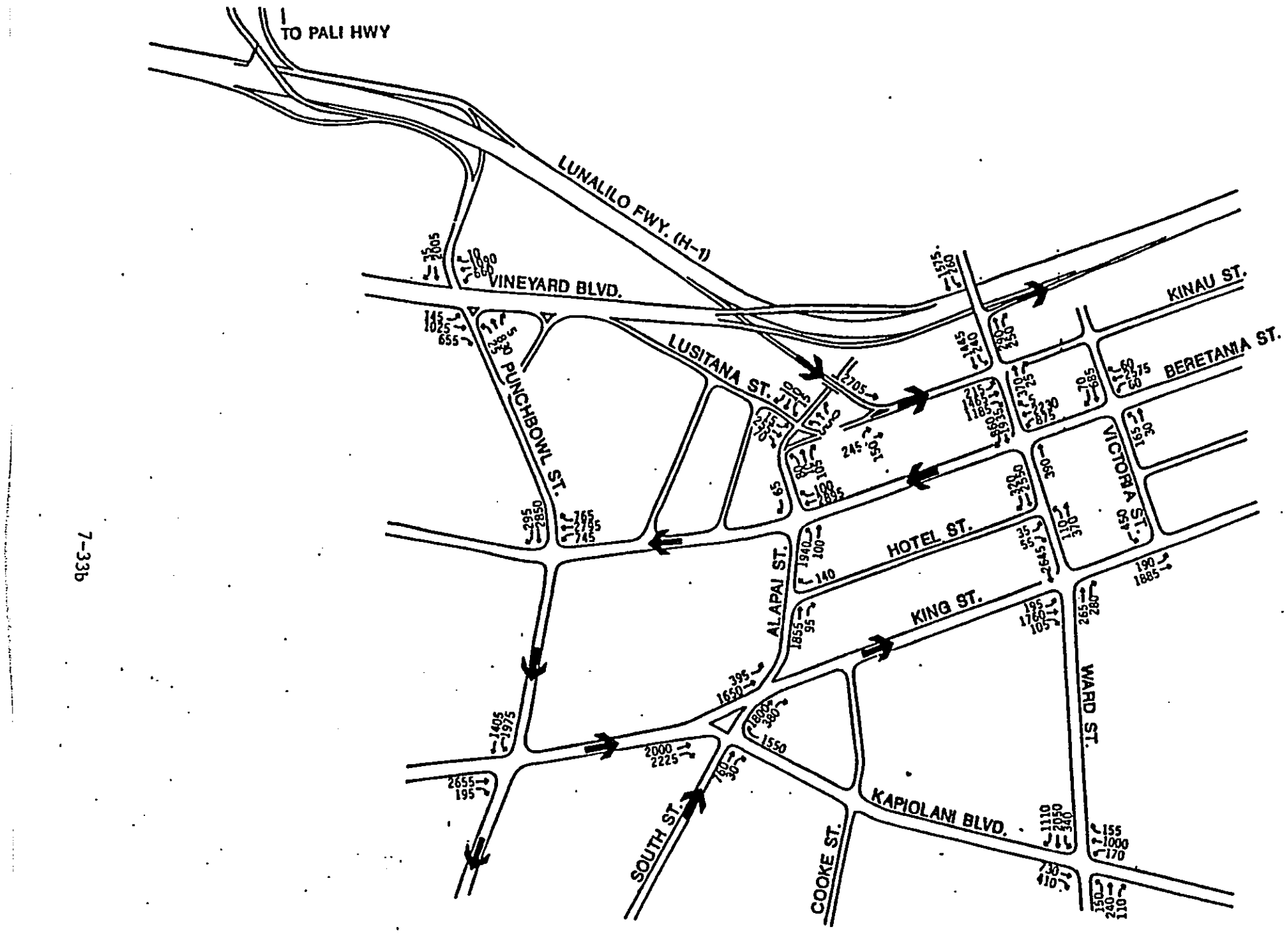
Existing and future conditions are analyzed in relation to regulatory standards. A summary of State of Hawaii and national ambient air quality standards is presented in Table 10 (CFR, Title 40, Part 50; State of Hawaii, 1986). Note that Hawaii's standards are not divided into primary and secondary standards as are the federal standards.

Primary standards are intended to protect public health with an adequate margin of safety while secondary standards are intended to protect public welfare through the prevention of damage to soils, water, vegetation, man-made materials, animals, wildlife,

TABLE
TRIP GENERATION ANALYSIS FOR RELATED PROJECTS
HONOLULU TRANSPORTATION CENTER/CITY HALL ANNEX TRAFFIC STUDY
NOVEMBER, 1987

No.*	Project	Description	Units	Trip Generation Rates: Daily	AM Peak Hour In	AM Peak Hour Out	PM Peak Hour In	PM Peak Hour Out	Trips Generated: Daily	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total
1.	Pacific Park Plaza	261,860 SF Comm.	TGSF	50.6	0.4	0.2	2.1	2.2	13,250	100	50	150	545	575	1,120
		297 DU	Units	6.1	0.1	0.4	0.4	0.2	1,810	25	115	140	115	55	170
		Subtotal							15,060	125	165	290	660	630	1,290
2.	Queen Kapiolani Community Facility	166,172 SF Comm.	TGSF	66.7	0.9	0.8	2.9	2.1	11,080	145	130	275	480	345	825
		860,993 SF Ind.	TGSF	5.3	2.5	0.2	0.1	0.9	4,560	2,150	170	2,320	85	770	855
		260 DU	Units	6.1	0.1	0.4	0.4	0.2	1,585	25	100	125	100	50	150
		Subtotal							17,225	2,320	400	2,720	665	1,165	1,830
3.	State DOT Pkg Garg	419 Spaces	---	3.0	0.54	0.14	0.14	0.54	1,255	225	55	280	55	225	280
		Subtotal							1,255	225	55	280	55	225	280
4.	One Waterfront Plaza	546,785 SF Off.	TGSF	10.9	1.78	0.18	0.23	1.7	5,955	970	95	1,065	125	925	1,050
		49,891 SF Ind.	TGSF	5.3	2.5	0.2	0.1	0.9	260	120	5	125	0	40	40
		310 DU	Units	6.1	0.1	0.4	0.4	0.2	1,890	30	120	150	120	60	180
		Subtotal							8,105	1,120	220	1,340	245	1,025	1,270
5.	Chinatown Gateway	35,000 SF Comm.	TGSF	117.9	0.91	0.8	5.77	5.81	4,125	30	25	55	200	200	400
		200 DU	Units						0	0	0	0	0	0	0
		Subtotal							4,125	30	25	55	200	200	400
6.	Paushi-River Hotel St. Mall	20,000 SF Comm.	TGSF	117.9	0.91	0.8	5.77	5.81	2,355	15	15	30	115	115	230
		Subtotal							2,355	15	15	30	115	115	230
7.	Straub Hospital Exp.	110,000 SF Med. Office	TGSF	54.6	0.64	0.21	0.89	3.05	6,005	70	20	90	95	335	430
		Subtotal							6,005	70	20	90	95	335	430
8.	Thomas Sq. Centre	8,000 SF Med. Office	TGSF	54.6	0.64	0.21	0.89	3.05	435	5	0	5	5	20	25
		Subtotal							435	5	0	5	5	20	25
9.	Queen's Medical Hospital Exp.	140,000 SF Med. Office	TGSF	54.6	0.64	0.21	0.89	3.05	7,640	85	25	110	120	425	545
		Subtotal							7,640	85	25	110	120	425	545

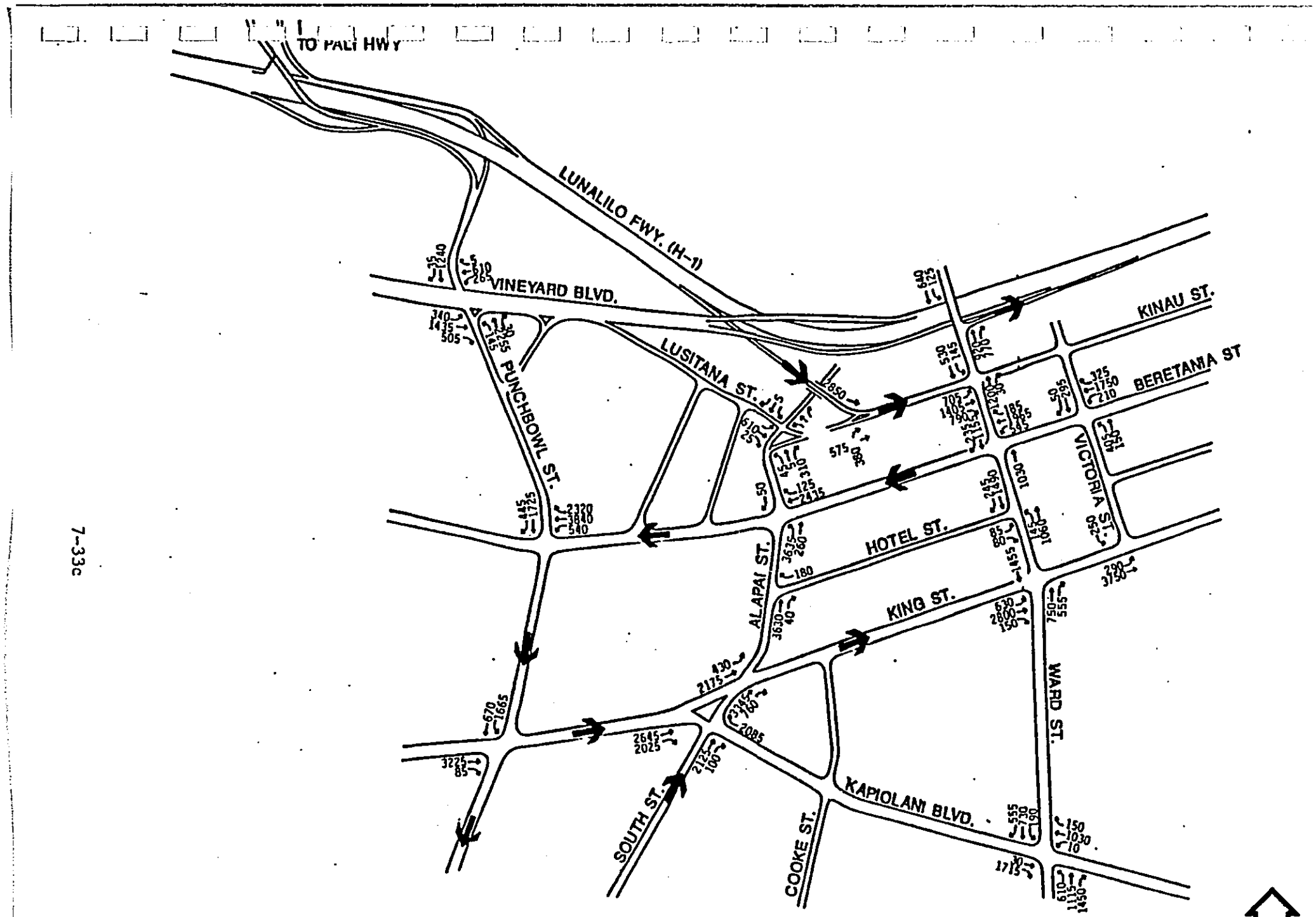
* No. refers to location as shown on Figure 7.



1990 BACKGROUND PLUS RELATED PROJECTS–MORNING

BARTON-ASCHMAN ASSOCIATES, INC.

FIGURE 22



1990 BACKGROUND PLUS RELATED PROJECTS-AFTERNOON

BARTON ASCHMAN ASSOCIATES, INC.

N

FIGURE 23

TABLE 10

SUMMARY OF STATE OF HAWAII AND FEDERAL
AMBIENT AIR QUALITY STANDARDS

POLLUTANT	SAMPLING PERIOD	FEDERAL STANDARDS PRIMARY	FEDERAL STANDARDS SECONDARY	STATE STANDARDS
1. Total Suspended Particulate Matter (TSP)	Annual Geometric Mean	75	60	60
(micrograms per cubic meter)	Maximum Average in Any 24 Hours	260	150	150
2. PM-10	Annual	50	50	--
(micrograms per cubic meter	Maximum Average in Any 24 Hours	150	150	--
3. Sulfur Dioxide (SO2)	Annual Arithmetic Mean	80	--	80
(micrograms per cubic meter)	Maximum Average in Any 24 Hours	365	--	365
	Maximum Average in Any 3 Hours		1,300	1,300
4. Nitrogen Dioxide (NO2)	Annual Arithmetic Mean		100	70
(micrograms per cubic meter)				
5. Carbon Monoxide (CO)	Maximum Average in Any 8 Hours	10		5
(milligrams per cubic meter)	Maximum Average in Any 1 Hour	40		10
6. Photochemical Oxidants (as 03)	Maximum Average in Any 1 Hour	240		100
(micrograms per cubic meter)				
7. Lead (Pb)	Maximum Average in Any Calendar Quarter	1.5		1.5
(micrograms per cubic meter)				

visibility, climate, and economic values (Library of Congress, 1974).

Some of Hawaii's standards are clearly more stringent than their federal counterparts but, like their federal counterparts, may be exceeded once per year. It should also be noted that in April, 1986, the Governor signed amendments to Chapter 59 (Ambient Air Quality Standards) making the state's standards for particulate matter and sulfur dioxide the same as the national standards. In the case of particulate matter, however, this uniformity did not last long. On July 1, 1987, the EPA revised the federal particulate standard to apply only to particles 10 microns or less in diameter (PM-10) (U.S. EPA, 1987a), leaving the state once again with standards different than the federal ones.

In the case of the automotive pollutants [carbon monoxide (CO), oxides of nitrogen (NOx), and photochemical oxidants (Ox)], there are only primary standards. Until 1983, there was also a hydrocarbons standard which was based on the precursor role hydrocarbons play in the formation of photochemical oxidants rather than any unique toxicological effect they had at ambient levels. The hydrocarbons standard was formally eliminated in January, 1983 (U.S. EPA, 1983).

The U.S. Environmental Protection Agency (EPA) is mandated by Congress to periodically review and re-evaluate the federal standards in light of new research findings (U.S. Congress, 1977). The last review resulted in the relaxation of the oxidant

standard from 160 to 240 micrograms/cubic meter (ug/m3) (U.S. EPA, 1979). The carbon monoxide (CO), particulate matter, sulfur dioxide (SO2), and nitrogen dioxide (NO2) standards are currently under review, but final action has not yet been taken (U.S. EPA, 1985).

Finally, the State of Hawaii also has fugitive dust regulations for particulate matter (PM) emanating from construction activities (State of Hawaii, Admin. rules, Ch. 60). There simply can be no visible emissions from fugitive dust sources.

Existing Air Quality

The State Department of Health (DOH) maintains a network of air monitoring stations around the state to gather data on the following regulated pollutants:

- o total suspended particulates (TSP)
- o sulfur dioxide (SO2)
- o carbon monoxide (CO)
- o ozone (O3)
- o lead (Pb)

While there is no continuous air monitoring station at the project site, there is one located only 300 meters northeast of the project site at the Department of Health building on the corner of Punchbowl and Beretania Streets. Summaries of recent

monitoring data from that station are presented in Tables 11 and 12.

The monitoring results indicate general compliance with state and federal ambient air quality standards. Only carbon monoxide and photochemical oxidants (ozone) occasionally exceed their respective state standards. The State also has been having particulate samples analyzed for lead content, and as indicated in Table 13, airborne lead levels have declined as expected due to the federal program for gradual phaseout of leaded gasoline. Particulate lead accumulated over the years in roadside soils and plants, however, will remain indefinitely in the area and provide inhalation exposure whenever dust is re-entrained in the air as a result of scouring winds or mechanical disturbance due to vehicular motion.

07.12 NOISE

Sensitive Locations

The nearest potentially noise sensitive residential units are those above Nikko Restoration Massage and in King Manor shown in Figure 24. Also the Early Education Center located above the State Parking Garage across Alapai Street from the project site is of concern.

Considering the possibility of noise impact caused by the general increase in traffic associated with the project, the potentially

Table 11

Summary of Aerometric Data Collected
at the Department of Health Building
1977 - 1986

Total Suspended Particulates	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986
(24-hr values, ug/m3)										
Period of sampling (mos.):	12	12	12	12	8	12	12	12	12	12
Number of samples:	57	60	8	61	35	55	56	60	59	57
Range of values:	14-51	14-53	22-62	23-103	23-75	11-42	14-58	11-48	10-48	11-61
Mean of values:	31	29	32	37	40	29	26	25	24	25
Number of times State AQS exceeded:	0	0	0	1	0	0	0	0	0	0
Sulfur Dioxide										
(24-hr values, ug/m3)										
Period of sampling (mos.):	12	12	12	12	8	12	12	12	12	12
Number of samples:	59	61	57	58	38	50	56	58	53	57
Range of values:	<5-53	<5-44	<5-42	<5-60	<5-44	<5-38	<5-16	<5-<5	<5-<5	<5-6
Mean of values:	17	18	22	18	19	11	<5	<5	<5	<5
Number of times State AQS exceeded:	0	0	0	0	0	0	0	0	0	0
Photochemical Oxidants										
(Daily 1-hr maxima, ug/m3)										
Period of sampling (mos.):	11	10	12	11	12	12	12	12	12	12
Number of samples:	300	284	337	295	314	335	348	296	341	348
Range of values:	4-61	10-84	10-80	10-84	10-104	0-151	0-123	0-104	8-198	10-88
Mean of values:	25	33	39	38	37	32	46	44	43	39
Number of times State AQS exceeded:	0	0	0	0	1	2	2	1	3	0

Table 12

Summary of Aerometric Data Collected
at the Department of Health Building
1971 - 1986

Nitrogen Dioxide	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
(24-hr values)										
Period of sampling (mos.):	10	12	12	12	12	3	n.d.	n.d.	n.d.	n.d.
Number of samples:	83	113	99	90	91	22				
Range of values:	<20-159	<20-236	<20-95	<20-95	16-70	12-63				
Mean of values:	56	56	46	37	33	35				
Number of times State AQS exceeded:	1	2	0	0	0	0				

Carbon Monoxide	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986
(Daily 1-hr maxima)										
Period of sampling (mos.):	12	12	8	n.d.	n.d.	n.d.	6	12	12	12
Number of samples:	359	365	208				169	318	342	348
range of values:	0-19.6	0-20.7	0-17.3	Station moved to			0-8.6	0.6-10.9	0.0-10.4	0.2-13.5
Arithmetic mean of daily maximum values:	3.5	3.1	3		Kaimuki		2	2.4	1.5	2.2
Number of days State AQS exceeded:	22	19	10				0	1	1	3

TABLE 13

LEAD MONITORING DATA
HONOLULU, OAHU
1970-86

AVERAGE CONCENTRATION (micrograms/cubic meter)

YEAR	1st QUARTER	2nd QUARTER	3rd QUARTER	4th QUARTER
1970	0.78	0.81	0.65	0.92
1971	1.65	0.63	0.65	1.05
1972	--	0.75	0.65	0.48
1973	0.52	0.52	0.72	0.55
1974	0.84	0.61	0.70	0.92
1975	0.65	0.81	0.59	1.05
1976	0.91	0.65	0.99	1.00
1977	0.89	0.59	0.48	0.80
1978	--	--	--	0.72
1979	0.39	0.25	0.26	0.42
1980	0.41	0.23	0.21	0.20
1981	0.25	--	--	--
1982	0.21	0.16	0.09	0.21
1983	n/a	n/a	n/a	n/a
1984	0.3	0.2	0.2	0.3
1985	0.1	0.03	0.02	0.1
1986	0.1	0.0	0.0	0.0

Source: State of Hawaii
Department of Health

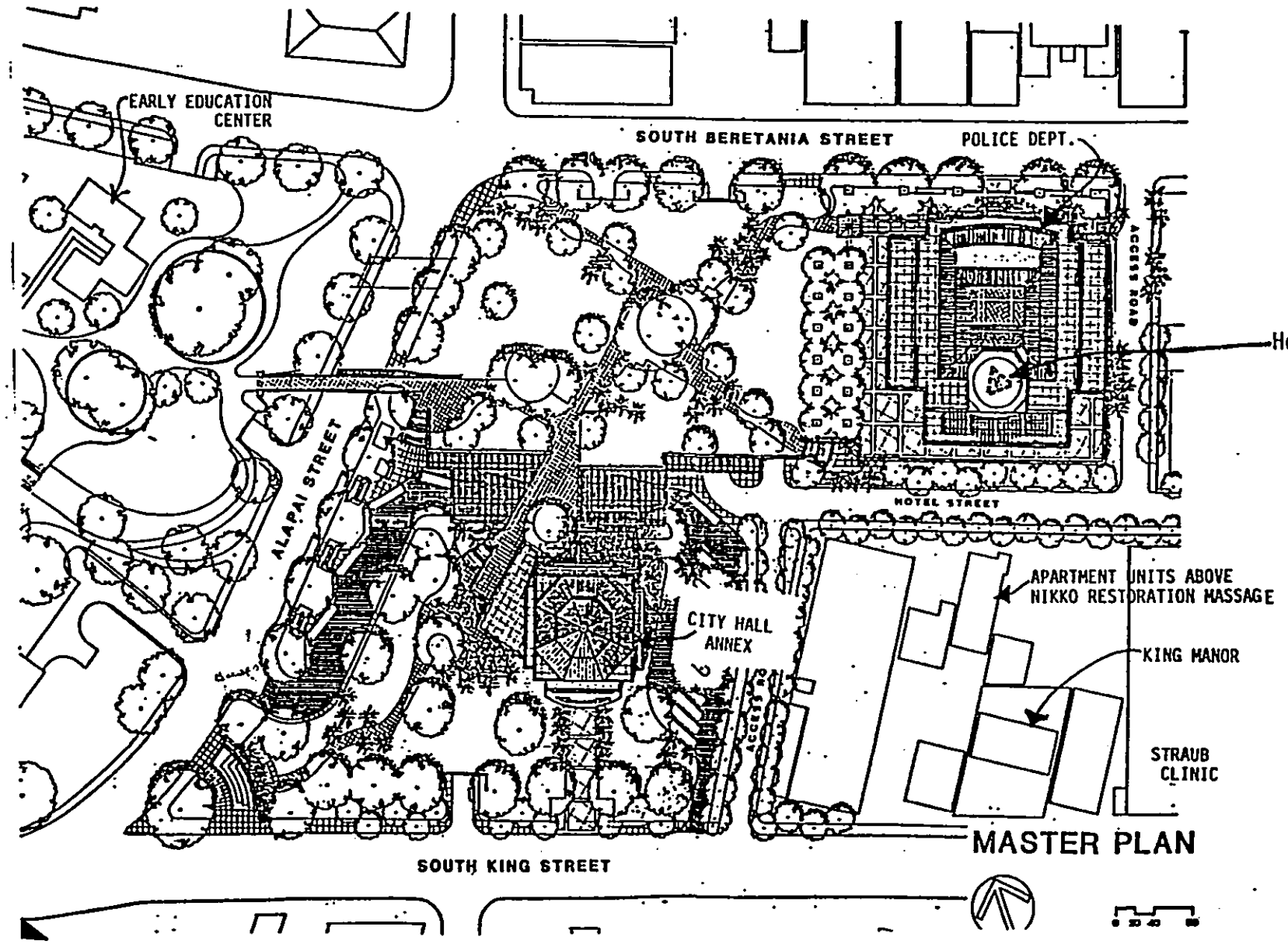


Figure 24 Project Site Plan and Closest Potentially Noise Sensitive Areas

noise sensitive areas include the apartment areas cross-hatched in Figure 25 which primarily border Kinau Street. Non-residential land uses that potentially may be impacted include the Straub Clinic, Thomas Square, the Honolulu Academy of Arts, and possibly the Kaahumanu Elementary School.

Existing Noise Environment

The existing noise environment in the project area and adjacent noise sensitive areas is dominated by normal motor vehicular traffic on the roads and occasional audible aircraft noise events. In the immediate area of the existing bus maintenance facility, significantly intrusive noises from bus movements during servicing at night may occur.

Motor vehicular noise level measurements at typical potentially noise sensitive locations on Ward Avenue are shown in Table 14 (Darby, 1983). The noise measurement locations are shown in Figure 26. The L_{10} noise levels in Table 14 represent the noise level exceeded 10% of the time during a ten-minute sampling period. The Federal Highway Administration (FHWA) criteria (FHWA, 1978) consider traffic noise impact as occurring at the L_{10} levels shown in Table 15. Exterior noise levels near residential units should be about 2 dB (L_{10}) less according to guidelines of acceptability for the Department of Housing and Urban Development (HUD) (HUD, 1984). Note in Table 14 that the traffic noise levels measured on the 8th floor lanai are the same as on the 2nd floor lanai because, despite the greater distance

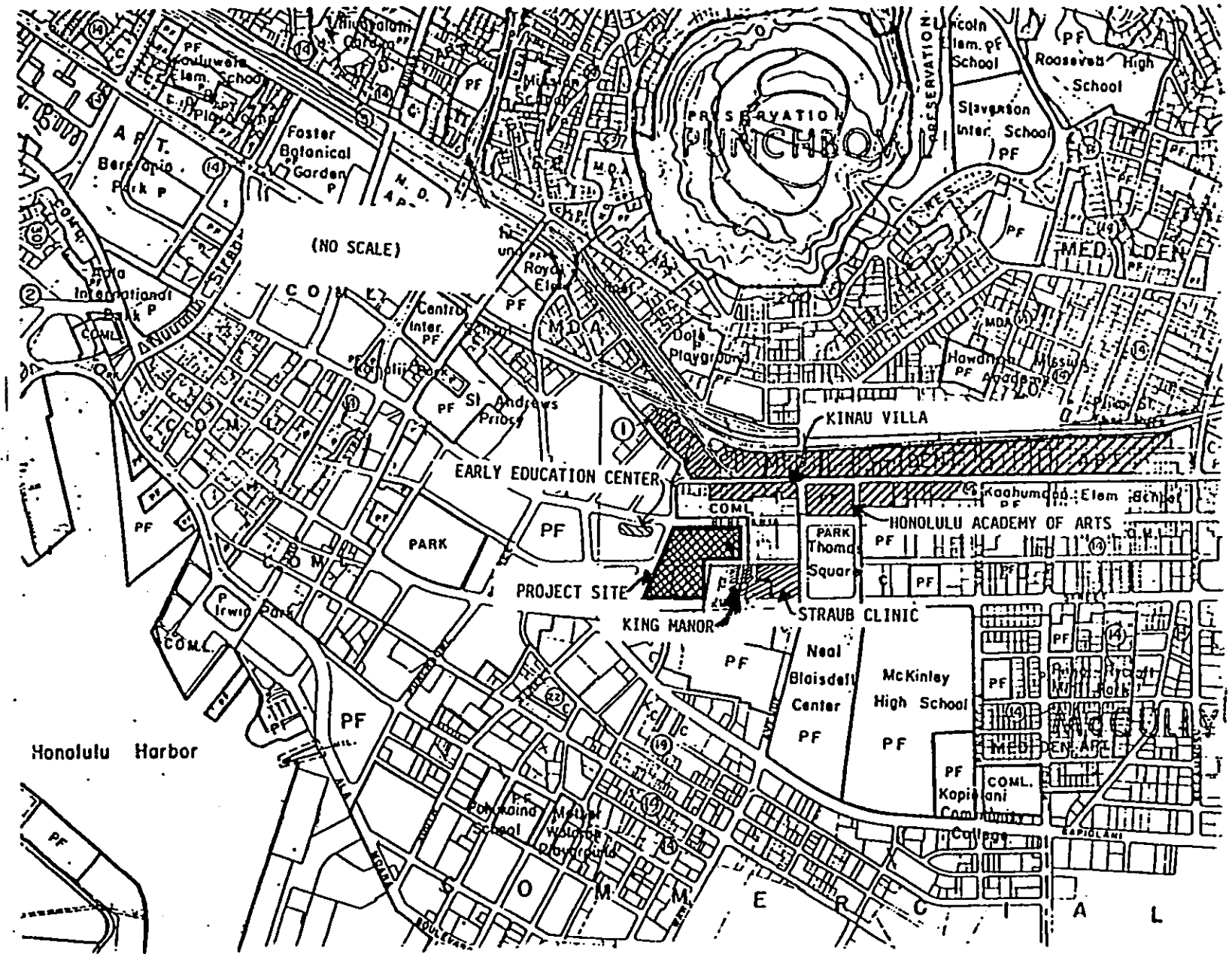


Figure 25 Map Showing Potential Noise Sensitive Areas in Project Environs (Crosshatched Areas)

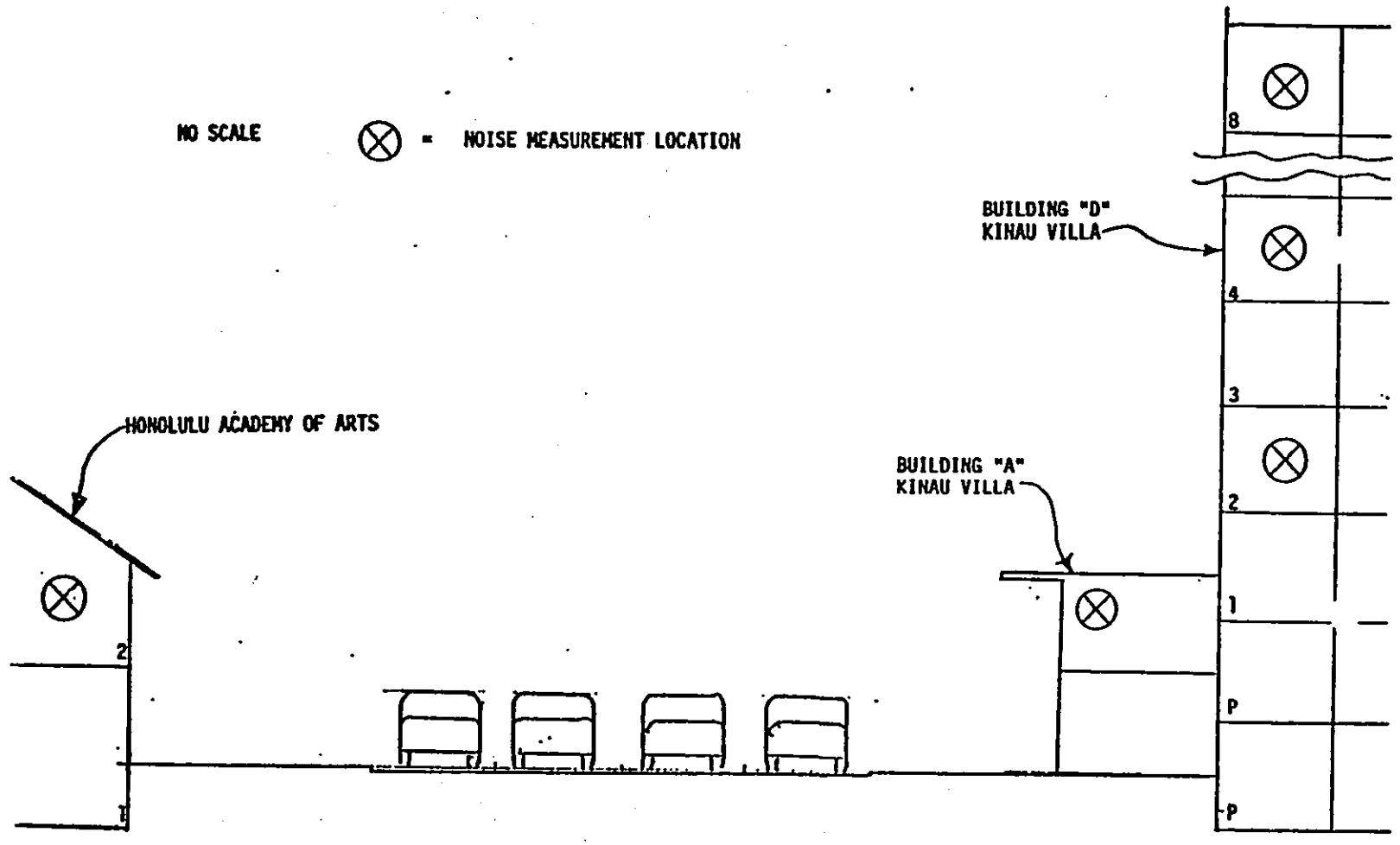
TABLE 14

MEASURED L_{10} TRAFFIC NOISE LEVELS (dBA)
ASSOCIATED WITH NOISE SENSITIVE LOCATIONS ALONG WARD AVENUE

Location & Description	Inside Studio at Academy of Arts			On Lanai at Kinau Villa Building "D"			
	Windows Closed W/O A/C	Windows Closed W/A/C	Windows Opened	Bldg. "A"	2nd Floor	4th Floor	8th Floor
Existing Condition	55	58	68	65	59.5	61	59.5

W/O A/C = Without Air-conditioning

W/A/C = With Air-conditioning



7-37c

Figure 26 Traffic Noise Level Measurement Locations Shown for Typical Potentially Noise Sensitive Locations on Ward Avenue

TABLE 15

NOISE ABATEMENT CRITERIA

HOURLY A-WEIGHTED SOUND LEVEL - DECIBELS (dBA)

Activity Category	$L_{eq}(h)$	$L_{10}(h)$	Description of Activity Category
A	57 (Exterior)	60 (Exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 (Exterior)	70 (Exterior)	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals.
C	72 (Exterior)	75 (Exterior)	Developed lands, properties, or activities not included in Categories A or B above.
D	--	--	Undeveloped lands.
E	52 (Interior)	55 (Interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.

1/ Either $L_{10}(h)$ or $L_{eq}(h)$ (but not both) may be used on a project.

Source: Federal-Aid Highway Program Manual

from the street, more traffic noise sources contribute efficiently to the elevated listener.

Other traffic noise level measurements are shown in Table 16 and include data obtained from 1:30 to 2:30 a.m. in the early morning when very little traffic was flowing. The L_{eq} value shown is the equivalent noise level (or energy averaged noise level) obtained over a 10-minute sampling period. The L_{eq} values are usually 2 dBA less than the L_{10} values aforementioned. Note that traffic noise levels in the areas of concern generally decrease about 10 to 12 dBA during the nighttime as compared to the daytime.

Residents living near the existing bus facility can experience noise from the maintenance of buses including brake inspection and repair, tire changing, and the repairing of air-conditioning units, as well as from refueling and washing operations. Between 5 p.m. and 10 p.m. about 170 buses return to the facility and from 10:30 p.m. to 2 a.m. about 60 more buses arrive typically, noise level measurements and observations made on August 19, 1987 around the perimeter of the facility indicated that noise from the continued movements of buses for routine servicing was the dominant factor; particularly when the buses accelerated from a stopped position (causing 75 to 87 dBA maximum noise level at 50 feet, depending on the type of bus and the operator's manner of driving).

Table 16

Comparisons of Predicted and Measured
Traffic Noise Levels

Roadway	(feet) Distance to Center of Roadway	(dB) Measured Leq[10 min.]	(dB) Predicted Leq[60 min.]
Beretania Street (Honolulu Academy of Arts)	95	54.5	53.9
King Street (King Manor)	100	54.7	53.8
Ward Avenue (Thomas Square)	130	54.4	54.9
Beretania Street * (near State Office Bldg)	120	64.6	65.3

Note: Microphone was about 8' above curb.
Measurements were made January 12, 1988;
1:30 a.m. to 2:30 a.m.

* Measurement was made January 13, 1988;
9:40 a.m. to 9:50 a.m.

07.13 VIEWS

Existing Views

Visual resources in the vicinity of the proposed project have been identified and are listed in the Final Environmental Impact Statement for the Kakaako Community Development District Plan (State of Hawaii, HCDA, 1983) Those view planes, view corridors and view points that incorporate the project site have been photographed to establish existing views. These views have been determined to be significant by the Hawaii Community Development Authority (HCDA). An analysis of how the project may affect these views was done by examining the photographs of the views listed below, and can be found in Section 10.10.

View Planes

- View plane from the Punchbowl lookout point towards the ocean.
- View plane from Kewalo Basin's small peninsula park towards the mountains (minor view point).
- View plane from Mother Waldron Playground towards the mountains (major view point).
- View plane from the top of Cooke Street at Kapiolani Boulevard towards the mountains (major view point).

View Corridors

- View corridor at the top of South Street at Kapiolani Boulevard looking towards the mountains (major viewpoint).
- View corridor at Ilalo and Cooke Streets looking towards the mountains (minor view point).
- View corridor at Ilalo and Coral Streets looking towards the mountains (minor view point).

Additionally, significant views within the Thomas Square/Honolulu Academy of Arts District have been identified by the Department of Land Utilization (DLU) in the Land Use Ordinance. Those views that incorporate the project site are listed below and analysis can be found in Section 10.10.

- Views of Thomas Square from Beretania, Hotel and King Streets.
- Views along Beretania, Hotel and King Streets and from the Hawaii Capital District and the Honolulu Civic Center.

08.0 RELATIONSHIP OF THE PROPOSED ACTION TO LAND USE PLANS, POLICIES AND CONTROLS

08.0 RELATIONSHIP OF THE PROPOSED ACTION TO LAND USE PLANS, POLICIES AND CONTROLS

08.01 STATE OF HAWAII

The Hawaii State Plan

The Hawaii State Plan sets forth goals, objectives and policies that direct development in the State to reflect the needs and desires of the people. It is a tool for dealing positively with change. One of the five major policy areas of the Plan is population. The population growth objective addresses a need that would be met with implementation of the proposed project. The objective is stated as follows:

> "Ensure that adequate support services and facilities are provided to accommodate the desired distribution of future growth throughout the State."

Two other areas of concern under "priority directions" for the State that would also be met with the development of the new police headquarters and transportation center are:

> "Support law enforcement activities that provide a safer environment for both visitors and residents alike."

"Encourage the development and use of energy and cost-efficient transportation systems."

State Land Use District

The State Land Use designation for the project site and the surrounding area is Urban, as shown in Figure 27. The police headquarters, City office building and transportation center would be compatible with this designation.

State Environmental Policy

As required by Chapter 343, Hawaii Revised Statutes for projects using county lands and/or county funds, early assessment of the project was made, and it was determined that preparation of an EIS would be necessary. This ensures that environmental concerns are being given appropriate consideration in the planning process for the project. Identifying environmental concerns, obtaining various relevant data, conducting necessary studies, receiving public and agency input, evaluating alternatives, and proposing measures for minimizing adverse impacts are all tasks to be accomplished prior to implementation of the project, thus complying with environmental policy.

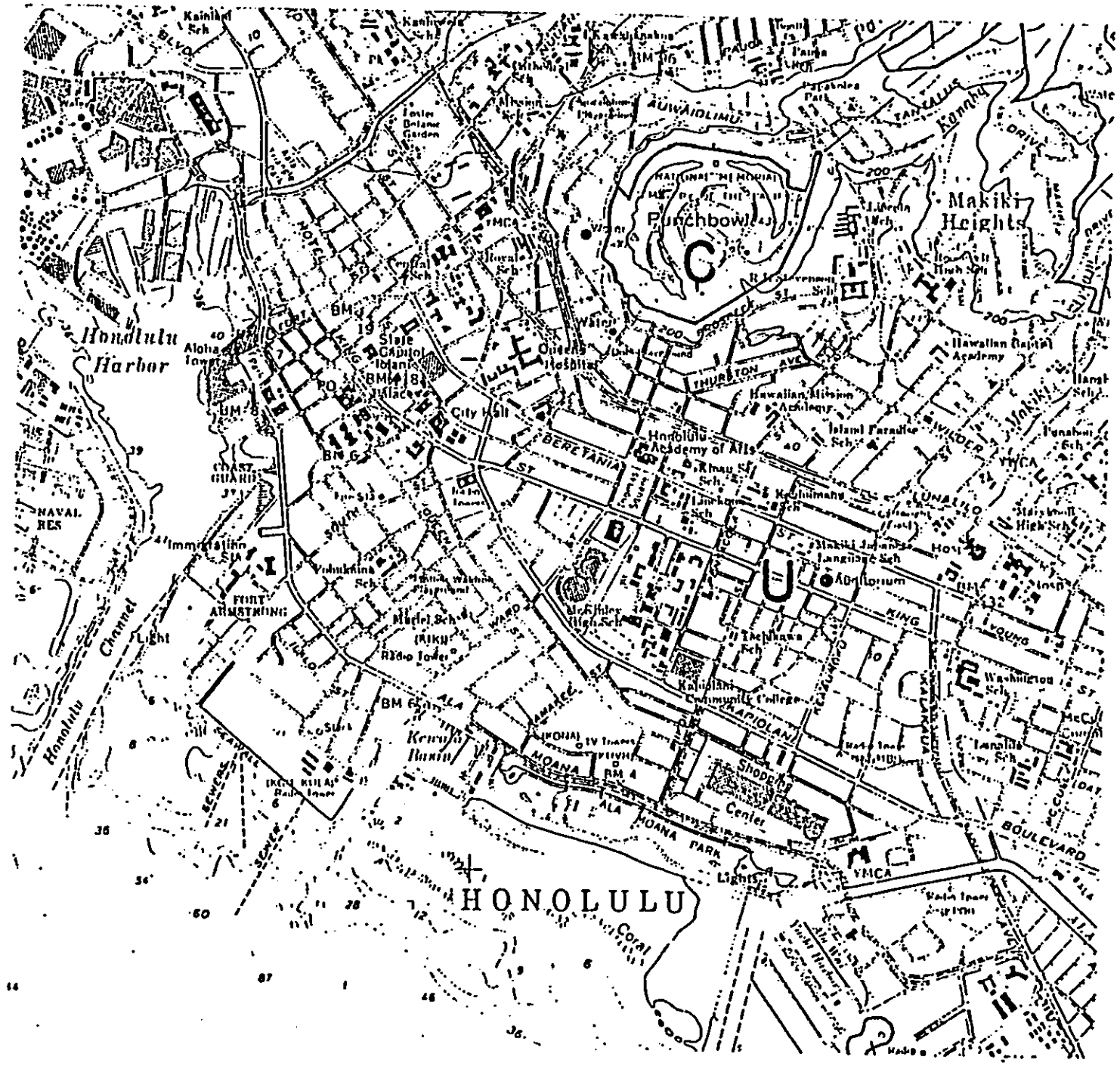


FIGURE 27 STATE LAND USE DESIGNATION

08.02 CITY AND COUNTY OF HONOLULU

The General Plan

The objectives and policies of The General Plan identify actions and directives for City and County government to take to benefit the people of Oahu as growth and development occur on the island. The proposed project would conform with the General Plan, especially in the following areas of concern:

Natural Environment -

"Locate roads, highways, and other public facilities and utilities in areas where they will least obstruct important views of the mountains and the sea."

Physical Development and Urban Design -

"Design public structures to meet high aesthetic and functional standards and to complement the physical character of the communities they will serve."

Public Safety -

"Provide adequate criminal justice facilities and staffing for City and County law-enforcement agencies."

Transportation and Utilities -

"Promote the use of public transportation as a means of moving people quickly and efficiently, of conserving energy, and of guiding urban development."

Development Plans

The Development Plans help to implement the General Plan by establishing controls for geographical regions of the island. The project site is located within the Primary Urban Center Development Plan region and is designated "Public Facility", as shown in Figure 28. As a public facility use, the proposed project is consistant with this Development Plan and would not require any amendments to the Public Facilities Map for construction of support facilities.

Land Use Ordinance

In 1986, a new Land Use Ordinance (Chapter 21 of the Revised Ordinances of Honolulu) replaced the old Comprehensive Zoning Code. The purpose of the Land Use Ordinance (LUO) is to regulate land use in a manner that will encourage orderly development in accordance with adopted land use policies.

The project area is in the BMX-3 Community Business Mixed Use zoning district, as shown in Figure 29. The intent of the BMX-3 Community Business Mixed Use district is to provide areas for both commercial and residential uses outside of and at a lower intensity than the Central Business Mixed Use district. Typically, this zoning would be applied to areas along major thoroughfares adjacent to B-2, BMX-4, A-3, AMX-2 and AMX-3 zoning districts. It is also intended that it be applied to areas, such as the project location, where the existing land use pattern is

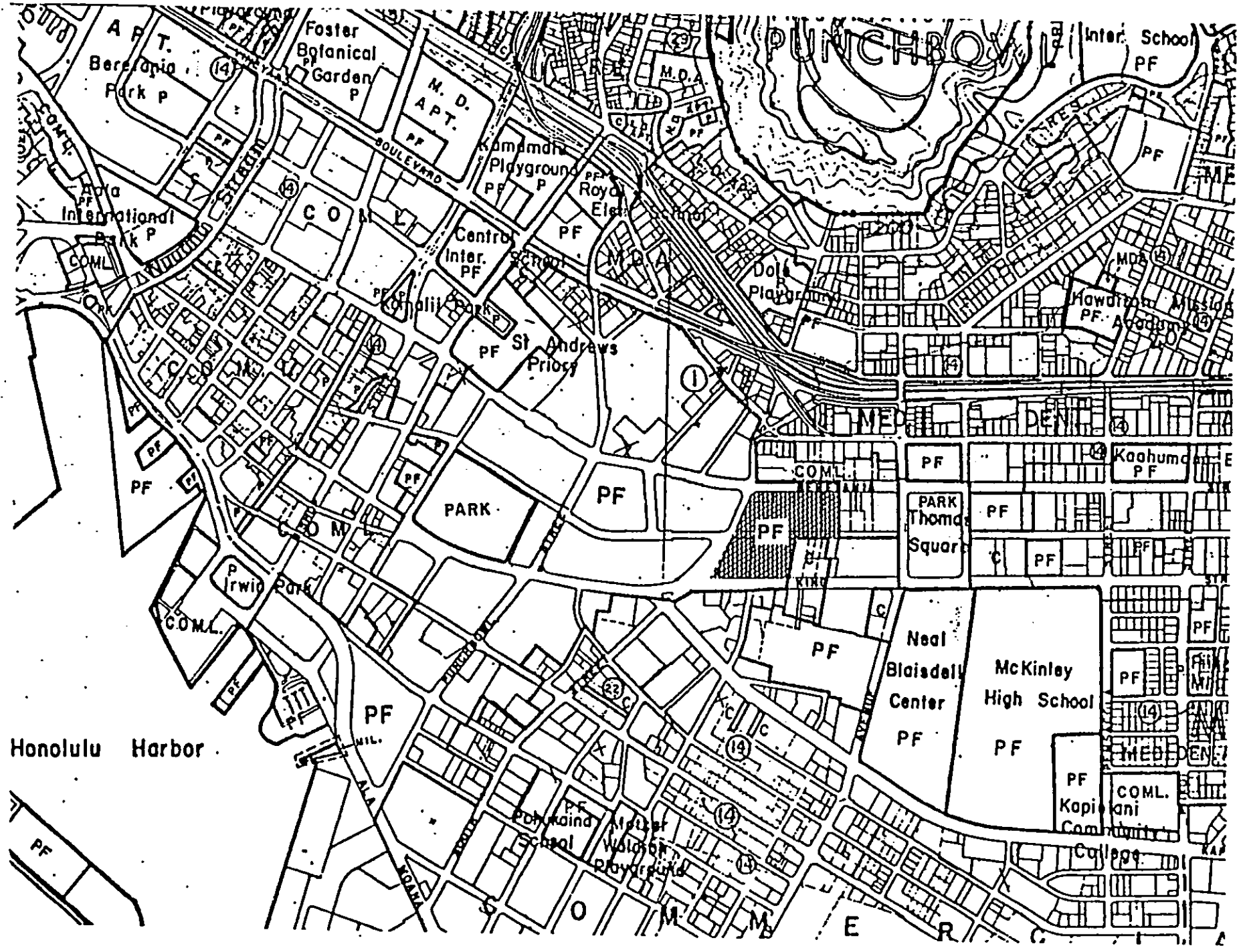


FIGURE 28 DEVELOPMENT PLAN DESIGNATION

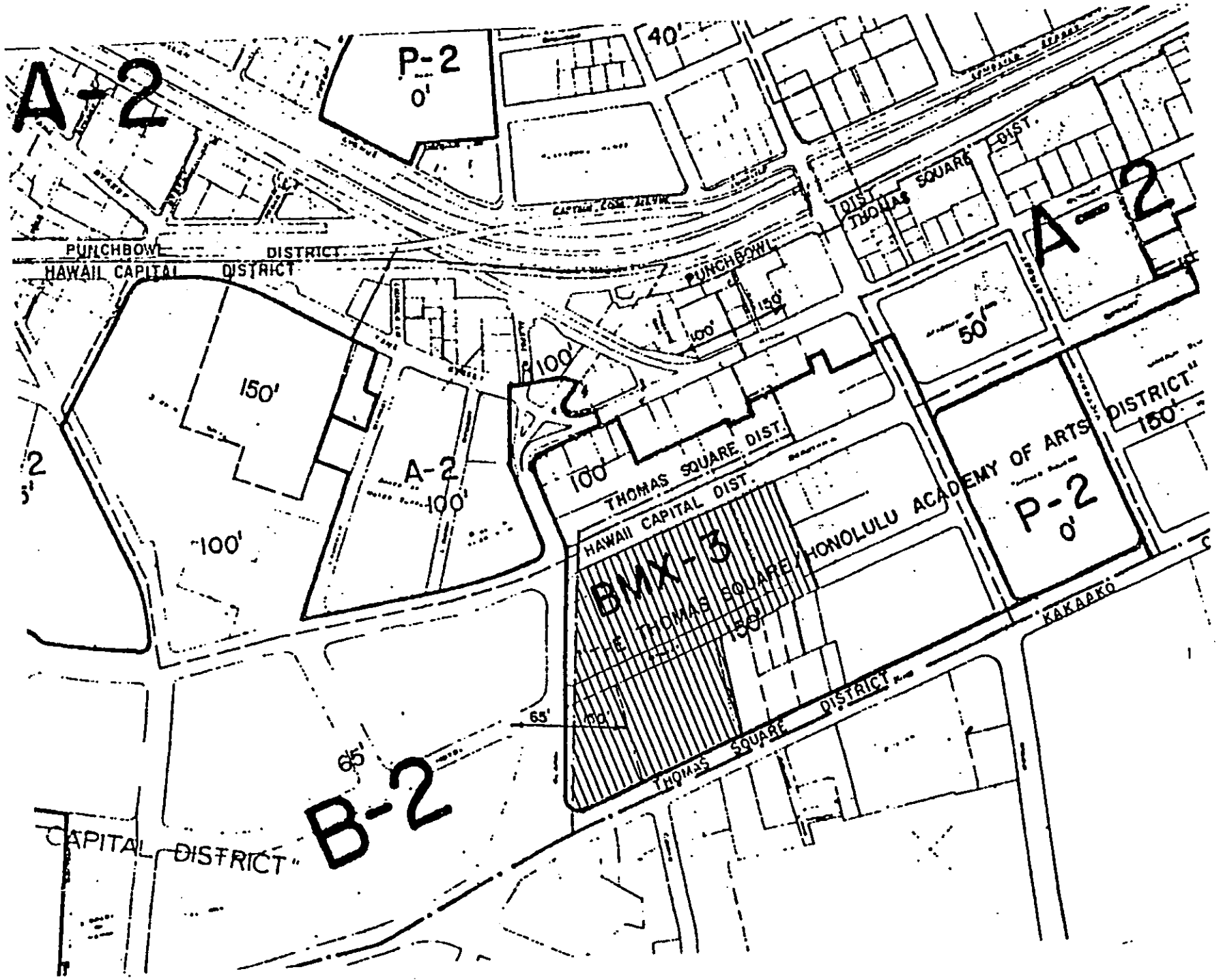


FIGURE 29 ZONING DISTRICT

already a mixture of commercial and residential uses, occurring horizontally, vertically or both. The proposed project would be compatible with existing commercial and residential uses in the area.

The projected 250 foot height of the City office building would exceed the zoned 150 foot height limit for the area. A Zoning Waiver for Public Use would be required as listed in Section 09.0 of this EIS, "List of Necessary Approvals and Their Status". This permit application and related plans would be reviewed by the Department of Land Utilization. The Director may waive zoning requirements if he finds that the proposal is in the best interest of the public, that it would not have an adverse impact on the surrounding neighborhood, and that it meets other applicable code requirements.

The Land Use Ordinance also regulates Special Districts within the City and County of Honolulu. The majority of the project site is within the Thomas Square/Honolulu Academy of Arts District and a portion of the project site, fronting Alapai Street, is within the Hawaii Capital District. The purpose of a Special District is to provide a means by which certain areas in the community in need of restoration, preservation, redevelopment or rejuvenation may be designated as Special Districts to encourage development which protects and/or enhances the physical and visual aspects of an area for the benefit of the community as a whole. The site is also near, but not within, the Kakaako

Special Design District, administered at the State level, by the Hawaii Community Development Authority.

The project site consists of five zoning lots, labeled as TMK 2-1-42:4, 11, 12, 13 & 14. The Land Use Ordinance establishes a requirement for a Conditional Use Permit, Type I (no public hearing required) for projects that combine two or more zoning lots. (A zoning lot is a lot or any portion of a lot within a single zoning district.)

09.0 LIST OF NECESSARY APPROVALS AND THEIR STATUS

09.0 LIST OF NECESSARY APPROVALS AND THEIR STATUS

(Status of all permits pending final design approval.)

City and County of Honolulu

1. Environmental Impact Statement
   Law(s): Chapter 343, Hawaii Revised Statutes
   City Ordinance No. 84-4; 84-54, as amended; 84-111; 85-71; 86-68; 86-76
   Section 5-403, Revised Charter of the City and County of Honolulu, 1973
   Responsible Agency: Department of Land Utilization
   Acceptance by: Mayor of Honolulu

2. Special Districts Special Design Permits
   Law(s): Chapter 46, Hawaii Revised Statutes
   Revised City Charter, Chapter 9, 1979 Supplement
   Revised Ordinances of Honolulu, 1978, Chapter 21
   Responsible Agency: Department of Land Utilization

3. Building Permit for Buildings, Electrical, Plumbing, Sidewalk/Driveway Work and Demolition.
   Law(s): Revised City Charter, Chapter 14, 1979 Supplement
   Revised Ordinances of Honolulu. 1978.
   Chapters 16, 17, 18, 19 and 25
   Responsible Agencies: Building Department and review by various other City agencies

4. Construction Dewatering Permit (Temporary)
   Law(s): Revised Ordinances of Honolulu, Chapter 16
   Responsible Agency: Department of Public Works

5. Grading, Grubbing and Stockpiling Permit
   Law(s): Chapter 180C, Hawaii Revised Statutes
   Revised Ordinances of Honolulu, Chapter 23
   Responsible Agency: Department of Public Works

6. Sign Permit
   Law(s): Chapter 445, Hawaii Revised Statutes
   Revised City Charter, 1973, Chapter 9, 1979 Suppl.
   Revised Ordinances of Honolulu, Chapter 21
   Responsible Agencies: Building Department and review by Department of Land Utilization

7. Certificate of Occupancy
   Law(s): Revised Ordinances of Honolulu. 1978, Chapter 16
   Responsible Agencies: Building Department and review by various other City agencies

8. Water and Water System Requirements for Developments
   Law(s): Chapter 54, Hawaii Revised Statutes
   Revised City Charter, Article VII, 1979 Supplement
   Responsible Agency: Board of Water Supply

9. Conditional Use Permit for Joint Development of Two or More Adjacent Zoning Lots
Law(s): Revised Ordinances of Honolulu, 1978, Chapter 21
Responsible Agency: Department of Land Utilization

10. Trenching Permit
Law(s): Revised Ordinances of Honolulu, 1978, Chapter 20
Responsible Agency: Department of Public Works

11. Street Usage Permit
Law(s): Chapter 286, Hawaii Revised Statutes
City Ordinance No. 4650(76)
Responsible Agency: Department of Transportation Services

12. Permit to Excavate Public Right-of-Way
Law(s): Revised Ordinances of Honolulu, 1978, Chapter 20
Responsible Agency: Department of Public Works

13. Zoning Waivers for Public Uses, Public Utilities, and Walls
Law(s): Chapter 46, Hawaii Revised Statutes
Revised City Charter, Chapter 9, 1979, Suppl.
Revised Ordinances of Honolulu, Chapter 21
and other related ordinances
Responsible Agency: Department of Land Utilization

State of Hawaii

1. Well Modification Permit
Law(s): Regulation 9, Dept. of Land and Natural Resources
Responsible Agency: Department of Land and Natural Resources

Federal

1. Approval of use of the land by the Urban Mass Transportation Administration (UMTA).

2. Determination by Federal Aviation Administration that Notice of Landing Area Proposal for HPD helipad will be a safe and efficient use of airspace.
STATUS: Proposal determined to be acceptable.

3. Determination by Federal Aviation Administration that City office building, exceeding 200 feet in height, will not be an obstruction or hazard to air navigation.

10.0 PROBABLE DIRECT, INDIRECT AND CUMULATIVE IMPACTS OF THE PROPOSED ACTION ON THE ENVIRONMENT

10.0 PROBABLE DIRECT, INDIRECT AND CUMULATIVE IMPACTS OF THE PROPOSED ACTION ON THE ENVIRONMENT

10.01 WATER QUALITY

The proposed action would alter the site and its uses in ways which could have consequences for water quality, but these would be positive in nature. Most importantly, the removal of the bus maintenance facilities and functions would remove a potential source of petroleum pollution to groundwater in the caprock. During construction, sediment runoff to the storm drains could increase because of erosion of exposed land. Adherence to the requirements of the Grading Ordinance should adequately mitigate this potential impact. Because the site is presently in urban use and is essentially entirely paved, the redevelopment would not have cumulative impacts such as increasing runoff. On the other hand, because the landscaped areas of the proposed project would be developed over parking facilities, groundwater recharge would not be increased.

10.02 FLORA AND FAUNA

Because of the minimal landscaping at the project site and with no rare, threatened or endangered species at the site, no negative impact to flora or fauna would occur with implementation and operation of the proposed action.

Positive impacts to flora and fauna would occur with landscaping of the project area around and between the buildings. The landscaping would become an extension of the park-like setting of the Civic Center area.

10.03 HISTORIC SITES

The historical significance of the buildings on the project site lies more in their relationship to the trolley system and its effects on the development of Honolulu than in their architectural value which has been largely lost through remodelings.

Therefore, the site is important as an expression of the development of the city's transportation system and the effect of that system on the growth of Honolulu. The buildings do not, however contribute significantly to the communication of that history, as they are so heavily altered. The proposed transportation center would be a continuation of that historical influence.

There are no surface archaeological features and there do not appear to be subsurface features which would be impacted by the proposed project. Procedures to be followed are outlined in Section 15.0, Mitigation Measures, in the event subsurface features are encountered.

10.04 LAND USES AND COMMUNITIES

Changes in Land Use

Neighborhood Character

The proposed project would expand the City's civic area, which is characterized by office uses and a strong orientation towards pedestrian activities. The existing bus maintenance facility and large asphalt parking area have more of an industrial nature compared to other activities on the surrounding parcels. According to individuals interviewed for this study (see below for a detailed discussion of community issues and concerns), the elimination of the bus operations would provide a major improvement to the overall aesthetic nature of the neighborhood, one more amenable to pedestrian uses.

Development Potential

As discussed above, the proposed project is expected to have a positive impact on the overall character of the site. Such an impact may increase the development potential of surrounding parcels. The capacity for development in the area is governed by the City and County of Honolulu Land Use Ordinance. Over time, it can be reasonably assumed that due to market supply and demand, areas of land zoned for specific uses will be developed towards their highest and best use according to allowable regulations. Constraints to this process include conditions such

as the size of a parcel of land, existing structures with a long economic life expectancy, or an existing long-term lease on the property.

The impact of the proposed project on the development potential of surrounding lands can be estimated by analyzing what changes in the area are likely to occur without the project, then comparing the potential situation with the project.

Changes Expected Even Without City Project: Individuals interviewed for this study included landowners or business operators that would most likely be impacted by the proposed project (i.e., those with boundaries adjacent to the project and others which generate a high daily volume of traffic). Interviews indicated three development projects in the area that have at least some likelihood of occurring by the turn of the century, whether or not the City project is constructed.

The first project, one with some degree of certainty, is the expansion of Straub Hospital and Clinic. This project could begin construction within the next two to four years, according to Ronald Kohn, Director of Plant Operations (pers. comm., December 11, 1987). The project is planned to expand the existing parking facilities and add two floors of clinic space. Expansion will take place on a vacant lot on Hotel Street which is presently owned by the hospital. Because of the limited size of the vacant parcel, consideration has been given to acquiring the adjacent lot (owned by Otis Elevator Company) in order to

more appropriately meet the needs of the hospital, but this matter has not yet been decided.

Two other potential developments in the area presently represent only a desire or a vision of the market potential on the part of the landowners. The first potential project would be the redevelopment of lands adjacent to the proposed police station and currently owned by the Royal Insurance Agency. There are no definite plans for construction, but the existing building is old and in need of frequent repair, according to Gordon Murakami, President of the company (pers. comm., December 11, 1987). Another potential project could be located on land owned by the Hawaiian Electric Company at the corner of King Street and Archer Lane. The land is largely vacant at present, although a portion of the property fronting King Street is utilized as a used car lot. There are presently no plans for the site. However, due to its location and frontage on King Street, the site has a high potential for development by the turn of the century. The most likely future use of the site would be some form of commercial and/or office activities, according to Ted Damron, Director of Land Rights-of-Way, Hawaiian Electric Company (pers. comm., December 9, 1987).

According to those interviewed, none of the three projects would likely be affected by the proposed project at the Alapai bus area in regards to the type or pace of construction.

Project Impacts: The proposed project may increase the development potential of other properties in the area. Landowners or developers could be encouraged to develop lands for new business operations which would service activities at the project site. Examples of this could be professional offices, office supply services, a variety of retail activities, and restaurants/fast food operations.

Rough assumptions as to where these activities might be located can be developed from data on record at the City and County of Honolulu Tax Office. Such factors as the life expectancy of existing structures and/or the length of an existing lease encumbrance can provide indications of future development possibilities.

Properties with potential for rapid new development or redevelopment can be described as having "soft" existing land use which would be characterized by existing structures which are generally in line with allowable standards for development and have a long-term economic life expectancy. Straub Hospital and Clinic would be an example of a "hard" existing use.

Existing "soft" land uses surrounding the project site are shown in Figure 27. Most of these involve parcels of land for which landowners have existing plans for improvement, or at least have indicated some probability for improvement. Additional parcels, particularly on King Street, are currently encumbered by short-term leases or have existing structures which have a

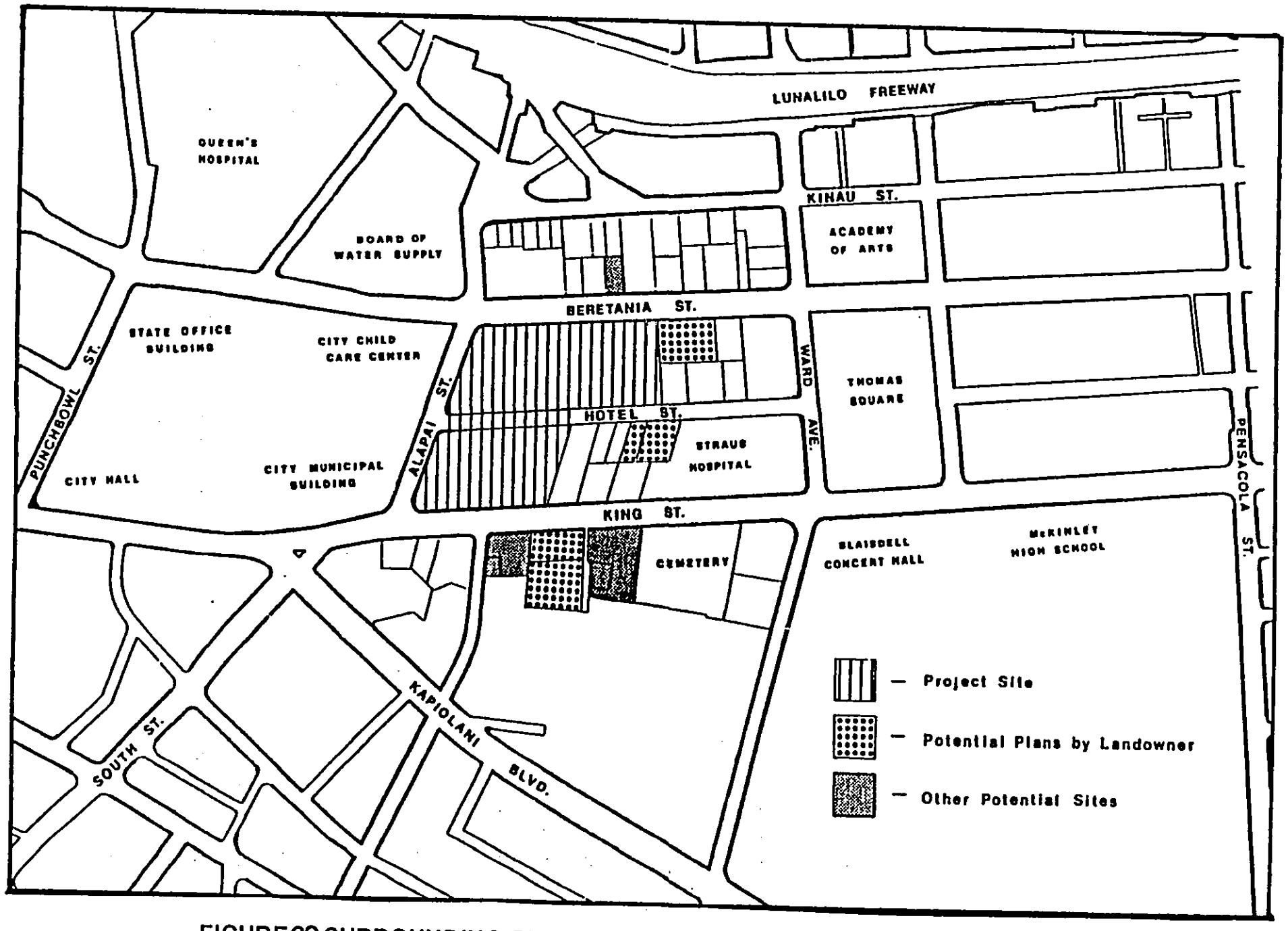


FIGURE 30 SURROUNDING PROJECTS WITH DEVELOPMENT POTENTIAL

limited remaining economic lifespan. This does not indicate that these properties will be redeveloped. Market forces will ultimately be the determining factor for this. However, given the location of these properties and the existing conditions of their use, these properties are considered to have the highest potential for redevelopment.

Summary: The proposed project would improve the aesthetic character of the neighborhood. It would replace an existing activity which is considered to be unattractive and a major source of air pollution, with activities more compatible to present uses in the area. Open space provided by the project will create an environment oriented towards pedestrian use, rather than the present industrial nature of the site. Such an improvement may increase the development potential of other properties surrounding the site. Activities which could possibly locate in the area because of the project include professional offices, retail activities, and restaurants.

Impact on Child Care Facility

Current enrollment at the Early Education Center is 260 children. There is a waiting list of about 100 (pers. comm., Wayne Protheroe, City and County of Honolulu, Office of Human Resources, October 13, 1987). Priority for acceptance is first given to parents who work for the City. Workers for the State are next. Any further openings go to anyone in the general public.

Children of City workers represent only about 20 percent of the current enrollment. This is much lower than was originally expected before the facility was opened. Another large segment of the enrollment consists of children of parents who work at Straub Hospital. Employees of Straub can have the costs of sending their children to the Center deducted from their salary. The hospital then takes care of the administrative arrangements for the child's care.

The expected impact of the proposed project on the Early Education Center will be a likely increase in the demand for classroom space and a need for expanded facilities. The present site of the facility was selected because of its availability and central location. However, there is little room for expansion. There appears to be space for two additional classrooms fronting Alapai Street between the two garage entrances, but there are presently no plans for construction.

A higher demand, along with the lack of space for expansion, could eventually increase the percentage of children at the facility who have parents that work for the City. This would be the result of more City workers in the area. More parents who work at Straub or those of the general public may have to search for other child care facilities in the future. Children of non-City workers presently attending the facility will not be replaced by those who do have parents working for the City.

At this point, it is difficult to quantify the potential increase in demand. Initially, some decrease may actually occur due to existing employees at the MTL bus facility moving their children to another child care center. Current estimates of the number of employees at the Police Station range from 365 officers and 220 civilian personnel, to a possible 542 officers and 383 civilian personnel in year 2005. There are presently no estimates of the number of employees expected to be located at the City Office Building. Since the eventual number of employees will certainly be greater than at present on the site, any initial decrease in demand for child care should be expected to be replaced by an increase in demand in the future.

Zoning Height Limits

The City office building would exceed the zoning height limit as set forth in the Land Use Ordinance and accompanying zoning map which allows a maximum height of 150 feet at the project site. Adjacent properties are zoned BMX-3, A-2, B-2 and P-2 with height limitations ranging from 0 feet in the P-2 zone up to 150 feet in the other zones. Six existing buildings in the surrounding area exceed their respective zoning height limits as well. These buildings and their heights are as follows:

1. Honolulu Municipal Building (220.5 feet)
2. Admiral Thomas (295 feet)
3. Academy Tower (210 feet)
4. Hale O Pumehana (153 feet)

5. Kinau Lanai (210 feet)

6. Coronet (176 feet)

Additionally, the nearby Royal Capitol Plaza is 366 feet in height, which is allowed in designated areas of the Kakaako District. Future developments in the Kakaako District may build to a height of 400 feet, according to Hawaii Community Development Authority (HCDA) plans. Planned development permits have already been issued for properties in the District with allowable heights to 400 feet (letter from HCDA to Office of Environmental Quality Control, May 13, 1985). Whether the proposed development would affect protected view planes and view corridors determined to be significant during development of the Kakaako Community Development District Plan is discussed in Sections 07.13 and 10.10.

Nevertheless, the City and County of Honolulu has decided to proceed with the proposal for a zoning waiver because of the need to accommodate City office space requirements (see Section 05.05) and the desire to develop the site with as much open space as possible to create a park-like setting around the new building. The Director of the Department of Land Utilization may waive zoning requirements if he finds that the proposal is in the best interest of the public, that it would not have an adverse impact on the surrounding neighborhood, and that it meets other applicable code requirements.

Impact on Special Districts

The master plans conform to the intent and requirements of the Special Districts discussed. No significant difficulties should be encountered by this project with regards to the Thomas Square or Hawaii Capital Districts, except for the height issue discussed above.

The project intersects with the Hawaii Capital District in a 50-foot wide strip along Alapai Street. The front portions of the existing buildings on the site fall within this boundary. Therefore, the demolition of bus barn and office buildings could be affected by the District regulations. However, neither building is listed as one of the significant buildings in the District regulation, and historical analysis supports this. New buildings proposed could be outside the Capital District.

Based on a review of the Capital District regulations, it is apparent that the District extends across Alapai Street primarily to provide for landscaping sympathetic to the goal of a park-like setting for the District. The Land Use Ordinance 7.30-5 (par. A2d and A3) provides that the area must be landscaped and maintained and that the required street trees would be selected from an approved list available at the Department of Land Utilization.

The Conceptual Plan of the site indicates that the Alapai edge of the site is to be landscaped with street trees. As long as these

trees conform to the Department of Land Utilization's approved list there should be no difficulty meeting the landscaping requirements for this district.

The remainder of the project site not contained within the Capital District is included within the Thomas Square District. This District will exert controls on the project in three ways: height, building setbacks and street tree plantings.

The height controls of this District, shown on Exhibit 11 of the LUO, indicate that the maximum height of structures on this property should be 150 feet. The Police Department building, planned to be a maximum of 60 feet in height above ground level complies with this height control. However, the City office building, planned at approximately 250 feet in height above ground level exceeds the limit, and this is discussed under Zoning Height Limits preceeding this topic.

The building setbacks for this site, shown on LUO Exhibit 10, are 15 feet on Beretania and King Streets and 5 feet on Hotel Street. All conceptual plans for the project have far exceeded these setback requirements. The proposed project thus would satisfy the requirement of the District with regards to setbacks.

The final control exerted by the Thomas Square District is that of street trees. Specific requirements as to the type of tree and the spacing of trees are presented in LUO Section 7.70-6. All schemes presented to date have provided ample landscaping in

the required setback areas on King and Beretania Streets and have indicated trees which, if the proper type is selected, would satisfy the regulation.

The Hotel Street requirement is for False Olives spaced a maximum of 25 feet on center located in the sidewalks along Hotel Street. LUO Exhibit 12 indicates that these trees only extend up to, but do not include, the project site.

Other New and Planned Developments

The nine new or planned developments in the downtown and Kakaako area would increase the volume of traffic in the region. The cumulative impact of this increased traffic flow is described in section 10.07.

One positive impact of the new and planned developments on the proposed project is the provision of additional public parking in the area. The Queen's Medical Center expansion would build a surplus of 300 parking spaces, available to the public beyond their expected parking requirements. Additionally, the Neal Blaisdell Center is planning to build a 600 space parking structure over their existing parking lot area and these would be available for public use. Both of these parking areas are within 10 minutes walking distance of the proposed project.

A positive impact of the proposed project on the new and planned developments would be the improved bus service for those people

who ride the bus into the downtown area. The residents, employees, clients and patrons of the new developments would receive this benefit.

Impact on Communities

This section presents a discussion of the potential qualitative social impacts resulting from the proposed project. The term "qualitative impacts" refers to those potential changes in the overall character of the neighborhood that may affect present and future residents/businesses of the area. The analysis focuses on residents, businesses, and property owners immediately surrounding the project site on Beretania, King, and Hotel Streets between Alapai Street and Ward Avenue.

Overview of Community Issues

The project was favored by all interviewed, primarily because it would replace the existing bus operations. It was felt that the proposed facilities are preferred because of improvements to the site's visual quality, the addition of landscaping, and the introduction of a more compatible use to the area.

Traffic was the most frequent concern for surrounding users and regional representatives alike. People were concerned that increased activity on the site would inevitably bring more cars to the area.

The second most frequent issue raised by almost all interviewed was parking. People asked about the adequacy of parking to accommodate visitors and employees.

The impact on views and view corridors was a particular concern of regional representatives, although nearby users occasionally expressed this concern. The public response to this issue may change in the future. Initial interviews were conducted without knowledge of the expected height of the City office building. Since those interviews, design plans for the structure have called for an ultimate height of 250 feet. Existing zoning allows for a maximum height of 150 feet.

Issues raised by nearby users were primarily related to compatibility and these included the (1) impact of traffic on their particular activities, (2) potential increase in noise levels, due primarily to the police activities, and (3) impacts of construction activities.

A concern discussed exclusively by a few of the regional representatives was the appropriateness of the proposed uses. Because of the property's value due to its prime location near downtown, the high cost of the proposed parking structure, and the relatively large proportion of open space, these people felt that the proposed uses may be an extravagant commitment of land resources.

Regional representatives also frequently expressed concerns about the projected increase in express bus operations at the site, and suggested on-site user accommodations which included (1) the addition of restaurants, (2) retaining the express bus stops at their current locations in the downtown core, and (3) creating quiet areas for the general public, since many visitors may be coming to the police headquarters for stressful reasons.

A common suggestion raised by all interviewed was that the City and its representatives make formal project presentations to the community organizations and affected government agencies. It is recommended that the City approach these organizations and agencies as more project information becomes available.

Improvements to the General Vicinity

Comparisons Made by Those Interviewed

Currently, the project site is used as the central yard for City bus operations. These operations were described by those interviewed as:

- unsightly because of the lack of landscaping, unattractive structures, and general sprawling of buses;

- a major source of air pollution in the area, which was particularly disturbing to nearby residents; and

- an inappropriate use relative to surrounding commercial, residential, and service activities.

All of those interviewed preferred the proposed project to the bus yard. They felt the project was an opportunity to:

- improve the overall visual quality of the area;
- extend the streetscaping in the Capital District; and
- replace the highly-industrial use--in terms of fumes, noise, and types of vehicles--with quieter, service-oriented activities.

A few people further suggested that the City encourage other landowners along King Street--between the project site and Thomas Square--to participate in the beautification process by landscaping their street frontage properties.

Comment and Analysis

The proposed project is clearly an improvement from a beautification prespective. It is possible to expand this beautification effort along King Street to the Thomas Square Park. However, while the City may encourage private landowners to increase plantings along the street, actual implementation is nevertheless dependent on these landowners.

Traffic and Parking Concerns

Bases for Traffic and Parking Concerns

All of those interviewed were concerned about potential traffic generated by the project. The main source of this concern was people's experience with the current police headquarters located on Young Street. That facility is a multi-use facility which houses police activities, as well as activities related to drivers licensing and vehicular registration.

The traffic concern generally went hand-in-hand with the parking concerns. People felt the Young Street traffic problems were due to inadequate parking, and they strongly recommended that measures be taken to prevent the current traffic problems of the Young Street facility. They suggested adequate public and employee parking spaces to minimize competition for parking spaces. (It should be noted that most of the expressed parking concerns were based on personal experiences with parking while using the driver's licensing and vehicular registration facility at Young Street.)

People were also concerned about the effects of traffic on Alapai, King, and Beretania Streets. They asked about the location of proposed points of ingress and egress and recommended careful planning to relieve congestion.

Comment and Analysis

At the time of the interviews, project information indicated that the Young Street operations would be mostly, if not fully, transferred to the new facility. Further, while the King and Beretania Streets ingress/egress plan was available, the actual configurations were not determined.

The current project information indicates that much of the basis for the traffic concerns have been addressed in the planning stage, as follows:

1) Drivers' licensing and vehicular registration activities would not be relocated to the Alapai site.

2) Of the proposed 1,250 parking spaces, 550 are proposed for use by the Police Department, 10 of which are allocated for visitor use.

3) New two-way streets would connect King and Beretania Streets.

Compatibility with Surrounding Uses

Considerations for Compatibility

As described earlier, parcels surrounding the project site consist of uses such as residential, commercial, and service-related operations. A cross-section of individuals involved with nearby uses was interviewed for this report.

In general, nearby users preferred the proposed project over the current uses for reasons stated earlier in this section. Their concerns were, therefore, directed at how specific project elements might impact their business or way of life.

The most frequent concerns was traffic, particularly for those whose businesses depend on a relatively high visitor volume and for those who require easy access to and from their property.

Noise impacts were also raised, primarily by those who were concerned about the general increase in activity, police sirens, and possible helicopter operations.

There were various concerns regarding construction. Business operators, particularly those adjacent to the project site, were concerned with access to their properties. They expressed apprehension that construction vehicles and activities might discourage their customers. For the residents, construction noise was more of a concern.

Individuals at the Royal Insurance Agency were concerned about their mainframe computer system. Those interviewed suggested that the high frequency radio systems used at the police station could cause interference to the Agency's system, with a potential for damage to their disk drives.

Comment and Analysis

There are generally five types of nearby users which may be impacted in various degrees:

1) Operations which require immediate access on and off their property for both visitors and personnel, i.e., the hospital and clinic facility.

   Comment: The City is already working with this facility to alleviate problems which may impede the emergency operations and general traffic flow.

2) Businesses which are dependent on a relatively high walk-in visitor volume for their operations. These are primarily the furniture stores.

   Comment: These businesses may be impacted by the noise and dust of the construction activities, and long-term traffic may present some problems. Ultimately, however, the project will introduce more potential customers to the immediate vicinity.

3) Establishments which have regular clients or users, who visit the site at generally the same time (as in the pre-school), or throughout the day (as in the insurance and other office buildings).

Comment: These people currently choose to visit the vicinity in order to use certain facilities or services. Their convenience may be affected by the short-term effects of construction, as well as the long-term effects of operation. The City is currently working with the nearest operations to better understand their needs.

4) Operations which depend on high-technology systems to maintain an extensive data base (such as the Royal Insurance Agency and possibly the Credit Union).

Comment: The President of the Royal Insurance Agency expressed his concern in a letter to the City Planning Department. A response from the City and County Building Department assured him that their computer systems would not be affected by new operations in the proposed project.

5) Those who reside in the area.

Comment: These are the people who may be most affected by the project in that they may have first-hand and ongoing observations of all aspects of the proposed project.

Concerns About Views and View Corridors

Considerations for Views Impacts

Views were primarily a concern of the regional representatives. They provided comments from two perspectives:

1) Minimizing the blockage of ocean views and view corridors of residents mauka of the property; and

2) Compliance with height limits of both the Thomas Square Special District and the State Capital District to retain consistency in skyline.

Most of those interviewed felt that the height of the new structures should not exceed the City Municipal Building; some felt that the new building should be shorter.

Comment

The comments on views were based on preliminary plans which included a four-story police headquarters and 309,000 square-foot annex building. A few of those interviewed were subsequently informed that the annex building would exceed the existing height limit in the area, having an ultimate height of 250 feet.

It is suggested that, as project plans become more defined, the City meet with the regional representatives to provide updated information.

Irrevocable Commitment of Land and Public Financial Resources

Regional Concerns About Committing This Land and Public Resources for the Proposed Use

A few of the regional representatives expressed concern that the land would not be used efficiently under the proposed scheme, even though these people generally support the current proposal. They were concerned that the proposed use was "expensive" in the following ways:

1) This property, being in the downtown vicinity, is considered valuable real estate and its development potential should be maximized. The proposed use, with its large amounts of open space, does not support this maximization.

2) Locating the proposed facilities on this site did not seem crucial to these people. They suggested that a more intense use--such as housing--might be more efficient use of the land.

3) It was pointed out that while covered parking, similar to that of the Municipal Building, is attractive, it is an expensive feature, particularly because it uses public funds. Further, the open space planned for the site seemed too expensive.

Comment

It is stressed that these people do not oppose the project, or even the concept. Their views were offered for consideration only and they recognized that others might not support their suggestions of lessening the proportion of open space.

Express Bus Concerns

Basis for Express Bus Concerns

Some people interviewed were concerned about the projected increase in express bus operations at the site. Currently, there are approximately 35 to 40 express buses leaving the site each day. These occur largely in the afternoon. The number of express buses is expected to increase to 100 or more in the future. Concerns involve who are the potential customers of this increase in bus traffic, and whether existing express bus routes would be altered, adversely effecting use of the public service.

Comment and Analysis

The projected increase in the number of express buses is based on a growing demand for such operations and is independent of the proposed project (although the increase in the number of employees at the site could also increase bus usage). Oahu is currently serviced by a system of routes which covers the entire island. As a result, new routes in the future will require less

of a percentage which service local areas. The larger demand will be for express routes from suburban areas into Central Honolulu.

The existing site on Alapai Street is the starting location for express bus services. It is also a primary stop which links many bus routes to each other. These functions will continue at Alapai Street even after the main offices and maintenance facilities are moved to the new location on Middle Street. Even though the project site is the starting point, it does not preclude buses from making stops in Downtown or other locations as currently is the case.

On-Site User Accommodations

Community Suggestions for Accommodating On-Site Visitors

Regional representatives offered some suggestions to accommodate the visitors to the police headquarters, the City annex, and the express bus facilities, as follows:

1) A number of people suggested public restaurants in the proposed buildings. They felt that many of the existing government buildings are inconvenient for the general public. They contain only vending machines and small snack shops, and their distance from other facilities precludes easy access, particularly for people who are attending lengthy hearings or meetings.

2) The express bus facilities should contain passenger waiting areas which shelter people from rain and wind.

3) A few people pointed out that many who visit the police station are under stress, and they should be provided appropriate quiet waiting areas.

10.05 POPULATION AND ECONOMY

The proposed project would be a positive impact on Oahu's population as a whole. It is in the interest of the general public to improve the efficiency of the City agency functions and the existing mass transit system. Accommodating growth in both the resident and visitor population includes expanding the municipal labor force to better serve the public. This is especially critical for the public safety departments.

The economic impacts of the construction activity for this project are shown in Table 20. As indicated, construction is expected to cost $112 million, with activity divided between two periods of 1.5 years duration each. This activity is expected to increase sales on Oahu by an average of $72.4 million per year, increase employment by over 1,000 jobs, and increase household income by $25.3 million per year (1987 dollars).

10.06 UTILITIES AND PUBLIC SERVICES

Utilities

Water Supply

The preliminary analysis of water consumption for the new site is as follows: police headquarters building - 109,000 gallons per day (GPD) with peak demand flows expected to be about 380 gallons per minute (GPM). The City office building would require 119,000 GPD with a peak demand flow expected to approach 500 GPM.

CORRECTION

THE PRECEDING DOCUMENT(S) HAS
BEEN REPHOTOGRAPHED TO ASSURE
LEGIBILITY
SEE FRAME(S)
IMMEDIATELY FOLLOWING

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TABLE 20 **Economic Impacts of Construction Activity**
(1987 dollars)

Item	Phase I	Phase II[1]	TOTAL
Construction Cost (millions)	$54.0	$58.0	$112.0
Duration of Construction Activity (years)	1.5	1.5	3.0
Average Annual Construction Expenditure (millions)	$36.0	$38.7	$37.3
Economic Impacts:			
Annual Sales (millions):			
Construction[2]	$36.0	$38.7	$37.3
Indirect[3,4]	33.8	36.4	35.1
Total	$69.8	$75.1	$72.4
Average Employment (jobs):			
Construction[5]	375	403	388
Indirect[3,6]	600	645	621
Total	975	1,048	1,009
Annual Household Income (millions):			
Construction[7]	$10.4	$11.2	$10.8
Indirect[3,8]	13.7	14.7	14.5
Total	$24.1	$25.9	$25.3

[1]Includes roof pedestrian bridge across Alapai St., and roof tunnel under Alapai St.

[2]Row 3.

[3]Includes "induced" activity related to household expenditures.

[4]Commercial construction multiplier of 0.94.

[5]Commercial construction multiplier of 19 jobs per $1 million in construction, reduced by a factor of 0.548 for inflation (CPI of 171.0 in 1977, and CPI of 311.9 for the first half of 1987).

[6]Commercial construction multiplier of 1.6.

[7]Commercial construction multiplier of 29.0% of construction sales.

[8]Commercial construction multiplier of 38.1% of construction sales.

Sources:

Construction expenditures furnished by the C&C of Honolulu.

Multipliers derived from State of Hawaii Economic Model, Department of Business and Economic Development.

CPI data from Department of Planning and Economic Development, The State of Hawaii Data Book 1986, December 1986, p. 393; and U.S. Department of Labor, Bureau of Labor Statistics, "Consumer Price Indexes, Pacific Cities and U.S. City Average," July 1987 and 1st Half 1987.

Requirements for fire water would be either 2,000 GPM or 4,000 GPM depending on the land use classification assigned to the new site. The Honolulu Board of Water Supply has indicated that the existing off-site water system is adequate to accomodate the proposed project (Hayashida, 1987).

Development during the initial planning for this site has resulted in the creation of a utility corridor beneath what is now Hotel Street. To facilitate construction of the underground parking structure the existing 20-inch water main is currently planned for relocation to this new 'utility corridor' which would lay along the south side of Hotel Street. With proper planning and scheduling during the construction phase the inconvenience of this disruption can be minimized.

Sanitary Sewer

Sanitary sewer flows (average daily flows) generated from the new police headquarters building and City office building are expected to be about 96,000 gallons per day each with peak flows approaching 474,200 gallons per day each.

Initial planning for the project has indicated a new sewer line in sizes from 10 to 15-inch would be required, terminating in an existing manhole in the 18-inch King Street sewer main. A portion of the existing Hotel Street 8-inch sewer main would be abandoned. This line terminates at the 8-inch main running beneath Alapai Street, which is currently running at capacity.

Flows in the King Street sewer lines eventually terminate at the Sand Island Wastewater Treatment Plant. The 18-inch sewer line is considered adequate to handle the flows for this project (Thiede, 1987).

Storm Drainage

There would be no increase in the amount of storm water runoff from the newly developed site. Introduction of new landscaped areas would decrease slightly the rate of runoff in some areas of the site. As the design develops for the police headquarters building, new grading requirements would involve examining the capacity of catch basins along Alapai Street between Beretania and Hotel Streets. Although the existing storm drain line is adequate, regrading requirements would alter the sheet flow of storm water onto Alapai Street. The initial analysis has indicated that due to the closing of a portion of Hotel Street a new storm drainage system would be required to be installed on the east side of the site, between Hotel and King Streets, with accompanying installation on King Street and Alapai Street of new storm drain lines to handle the diverted flows.

Natural Gas Service

At present, there are no requirements for gas service for either the police headquarters building or the City office building. A portion of the existing Hotel Street 6-inch gas main may require relocation into the proposed utility corridor. As with the

relocation of the existing 20-inch water main, advanced planning and scheduling can minimize service disruption.

Electrical Power Services

The development of the proposed site would require an increase in the electrical power supply to this area. New underground ductlines would be provided between the new buildings and existing manholes for the tie into HECO's distribution system. Initial estimates for the police headquarters building indicate a requirement of 3 mega volt amperes (MVA) with another 4 MVA anticipated for the City office building. These projected loads include an allowance for the associated parking areas. At this time it is anticipated that each structure would have its own secondary transformer vault.

Hawaiian Electric Company (HECO) had included in their master plan for the area an increase in demand for some period after 1991. They are currently researching the capacity of their distribution lines in the area to see if they are adequate to handle the police headquarters building. It is realized however, that with the construction of the City office building additional sub-station capacity would be required along with associated increases in power transmission/distribution to the new site. As a result, HECO is investigating increasing substation capacity at either the Alakea or Piikoi stations, or construction of a new station at their Ward Avenue Base Yard.

During construction of the City office building it would be necessary to relocate a portion of the existing HECO services along Hotel Street, as well as some City emergency (E-911) and cable television lines. Here again advanced planning and scheduling would minimize the disruption of services.

New street lighting to be installed would be the same as the existing lighting types and patterns in the area. General area lighting would be provided to produce illumination levels consistant with new area useage.

During construction of the City office building it would be necessary to remove existing transformers supplying the bus maintenance facility. Should these be found to contain PCB, appropriate handling and disposal methods would be required.

Telecommunications

It is anticipated that between 800 to 1000 additional telephone numbers would be required for both the new police headquarters and the City office building. The new police headquarters would account for at least 500 of these new numbers. These additional numbers could be accommodated by the existing distribution system. The new system would be entirely underground. Telephone service for the new police building would be supplied from a new underground telephone line located beneath Beretania, while that of the new City office building would be supplied in a similar manner from along Hotel Street.

The project would also require relocation of radio and microwave communication components from the existing police station on Beretania Street (at the Pawaa Annex) to the new police headquarters or the Honolulu Municipal Building. The components to be relocated consist of two 6-foot parabolic microwave dishes with radome covers and assorted VHF antennas. The new site would be determined during the final design phase of the project, after a study is made to determine which location offers the best "line of site" for microwave operation.

Public Services

Public services such as fire protection, healthcare services, and childcare facilities are adequate to serve employees and patrons of the police headquarters, City office building and transportation center. Police protection and bus services would be impacted in a positive manner with improvements brought by the proposed action. Solid waste generated by the operation of the proposed facilities is expected to be that typical of an office complex, i.e. paper and paper products. It is anticipated that disposal service would be provided by "dumpster pick-up" by the Refuse Division of the City and County Department of Public Works. The new cafeteria may require collection by a private contractor depending on the volume of solid waste generated.

10.07 TRAFFIC

This section presents the results of the trip generation, distribution, and assignment of project-related traffic by phase. The project-related trips for Phase 1 were superimposed on 1990 background traffic and Phase 2 project-related traffic was superimposed on 1993 background plus Phase 1 traffic to obtain traffic projections that were used for the level of service analysis. The level of service analysis results were then compared with the results of the background traffic projections to determine the project-related traffic impacts. Potential mitigation measures were then identified and are presented in Section 15.0.

Trip Generation Analysis for Proposed Project

The trip generation analysis for the proposed project was conducted separately for each of the individual generators as follows:

Police Headquarters

The trip generation analysis for the HPD headquarters was conducted based on information provided by Ruth and Going, Inc., specialists in the planning of police facilities. The trip generation analysis for the police station is subdivided into three categories: (a) police vehicles, (b) civilian employees, and (c) visitors.

(a) Police Vehicles - Information provided by HPD indicates that there are 73 incoming and 73 outgoing officers during the shift change. This would correspond to an additional 146 peak-hour vehicles. This estimate was, therefore, used as the peak hour traffic and superimposed on the peak hour of project-related traffic, even though it is anticipated that the shift change would occur prior to the peak hour of the adjacent street. This procedure is consistent with that of all traffic impact studies in order to evaluate worse case conditions. However, the HPD has no intention of moving its change-of-watch into peak traffic hours.

(b) Civilian Employees - Ruth and Going, Inc. provided an estimate of 700 civilian employees. It is anticipated that these employees would have arrival and departure characteristics comparable to those of typical office workers. Therefore, the trip generation rate for general offices based on the number of employees was used for this portion of the trip generation analysis.

(c) Visitors - Ruth and Going, Inc. estimated that 50 parking spaces allowing a maximum of one hour parking would be sufficient. Typically, 50 to 60 percent of a parking lot will either fill up or empty during the morning and afternoon peak hours, respectively. The directional split is typically 90/10. Using these assumptions, it is estimated that during the morning

there will be 30 inbound trips and 5 outbound. These volumes should be reversed during the afternoon peak hour. Weekday trips were estimated using a turnover rate of 10.0/space.

City Office Building

The City office building is to consist of 309,000 square feet of floor area. Trip generation rates for a typical office building were used as the basis for the trip generation analysis.

Transportation Center

Bus schedules were obtained and used to estimate the number of bus trips that would originate or terminate at the site or would utilize the adjacent streets. During meetings at the initiation of the study, it was determined that by 1993, the bus fleet would be increased from 450 to 600 vehicles. Using this as a basis, the hourly estimate of bus trips was increased by 30 percent to obtain an estimate of the number of bus trips for the design year.

Table 21 shows the results of the trip generation analysis for each of the three generators.

TABLE 21

TRIP GENERATION ANALYSIS FOR PROPOSED PROJECT

Generator	Description	Units	Trip Generation Rates[1] Daily	AM Peak Hour In	AM Peak Hour Out	PM Peak Hour In	PM Peak Hour Out	Daily	Trips Generated AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total
Phase 1 - HPD HQ.														
Police Vehicles				SEE TEXT					75	75	150	75	75	150
Civilian Employees	700 Employees	Emp.	3.59	0.35	0.06	0.08	0.24	2,510	245	40	285	55	165	220
Visitors	50 Parking Spaces	Space	10.00	0.60	0.10	0.10	0.60	500	30	5	55	5	30	35
SUBTOTAL PHASE 1									350	120	470	135	270	405
Phase 2 - Annex and Transportation Center														
City Hall Annex Office	309,000 SF Office	TGSF	10.90	1.78	0.18	0.23	1.70	3,365	550	55	605	70	525	595
Express Buses	600 Bus Fleet			SEE TEXT										
SUBTOTAL PHASE 2									550	55	605	70	525	595
TOTAL PHASE 1 AND 2									900	175	1,075	205	795	1,000

NOTE:

(1) Rates are for peak hour of adjacent street.

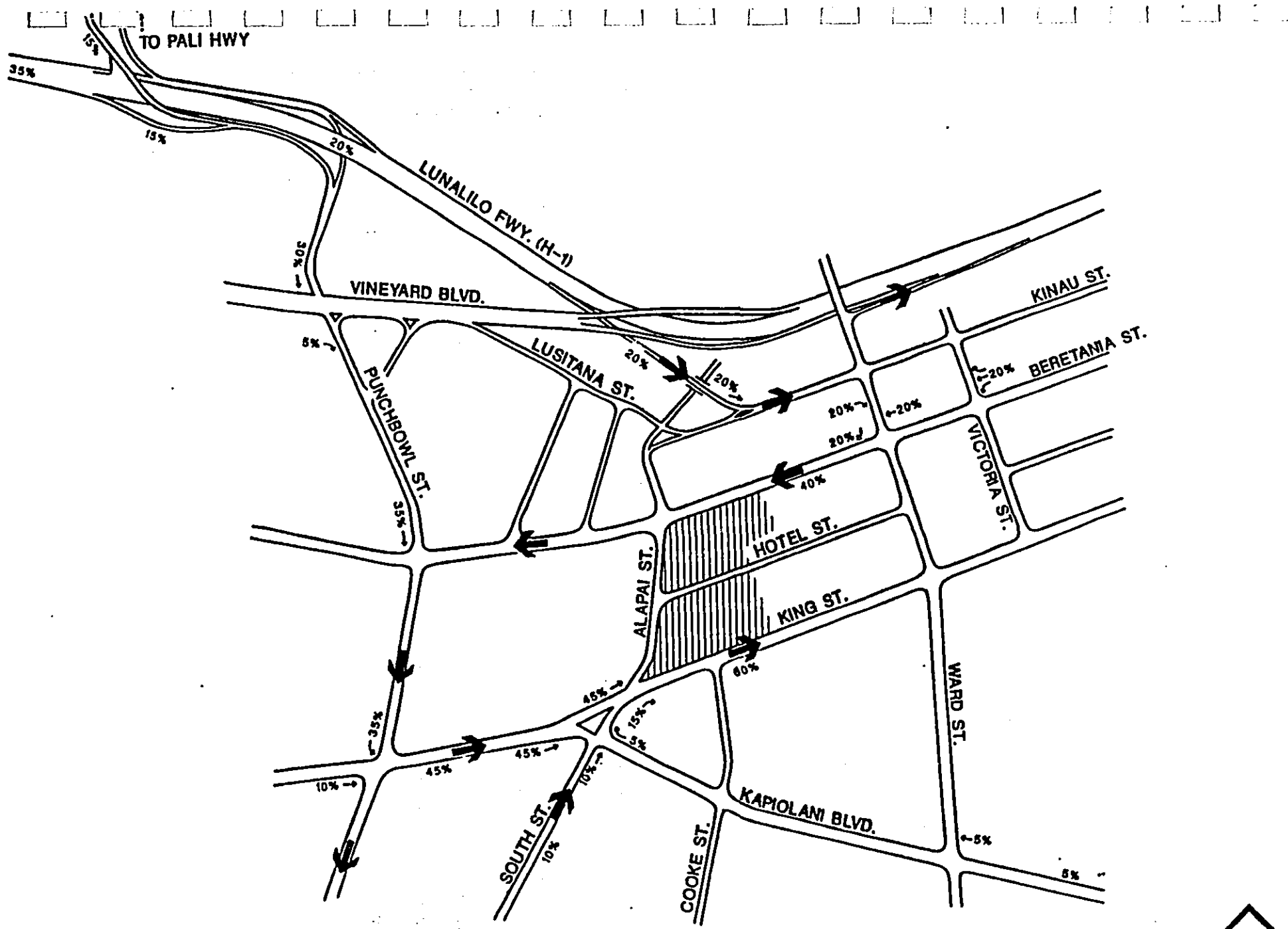
Trip Distribution and Assignment

The project-related trips were distributed among the various approach routes to the site based on known census tract information for the area. According to this information, 15 percent of the traffic will have origins and destinations north of the project, 25 percent east, 50 percent west, and 10 percent south. The inbound and outbound trip distributions are shown graphically in Figures 31 and 32. It should be noted that, due to the additional roadway facilities recommended for site access, the trip distribution for both phases of the proposed project is the same, as are the morning and afternoon peak-hour distributions.

Future Background Plus Project Traffic Volumes

As stated earlier, the project was analyzed in two separate phases, Phase 1 and Phase 2. The Phase 1 traffic analysis was conducted for 1990 background traffic conditions. These conditions were estimated by applying an annual growth rate of 1.5 percent to all traffic volumes, then superimposing related project trips. The Phase 1 traffic was then added to the 1990 background traffic. The resulting volumes are shown in Figures 33 and 34 for morning and afternoon peak hours, respectively.

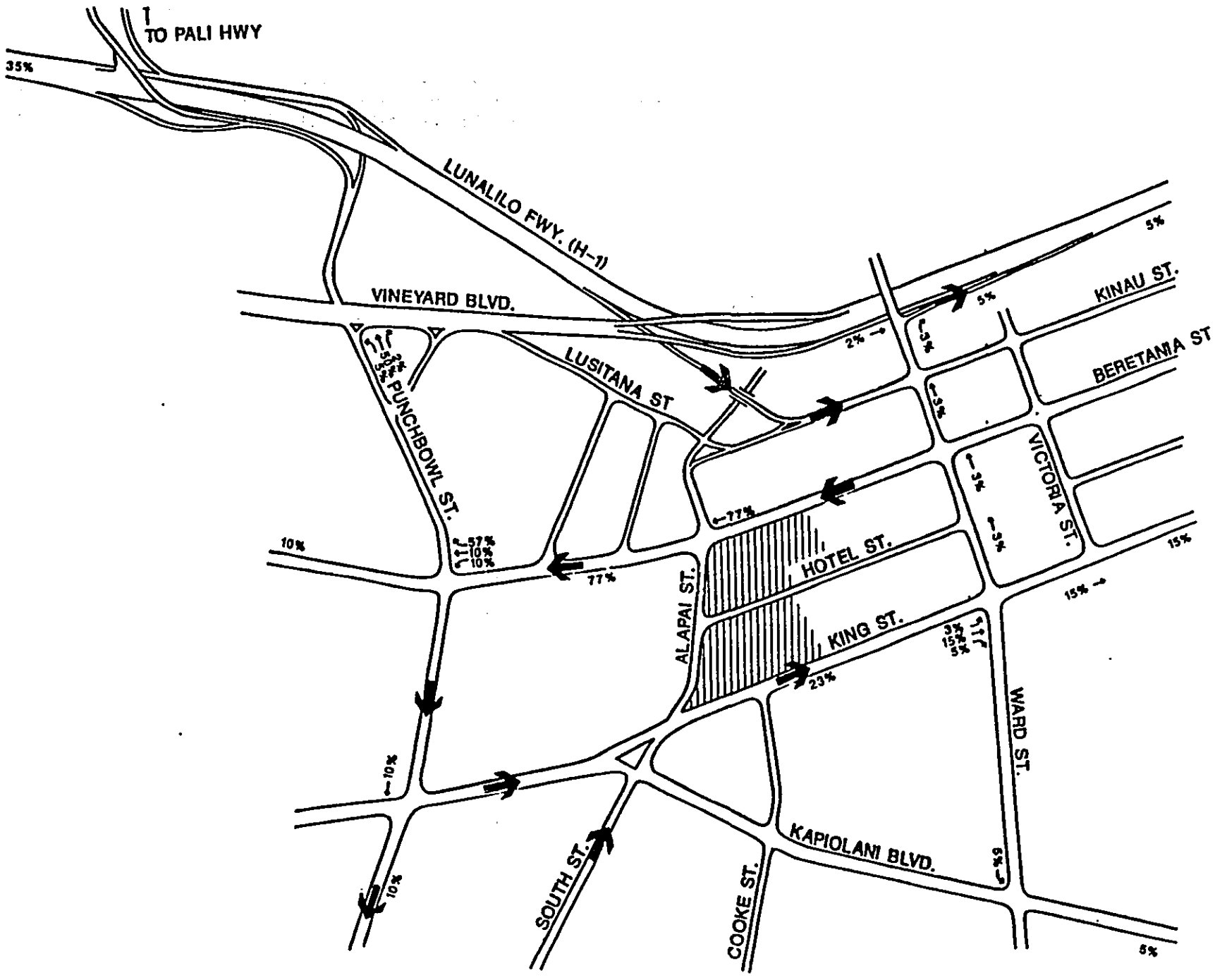
Phase 2 was superimposed on 1993 background plus Phase 1 traffic conditions. To obtain 1993 background conditions, the 1.5 percent growth rate was applied to existing traffic volumes for



INBOUND PROJECT TRIP DISTRIBUTION

BARTON ASCHMAN ASSOCIATES, INC.

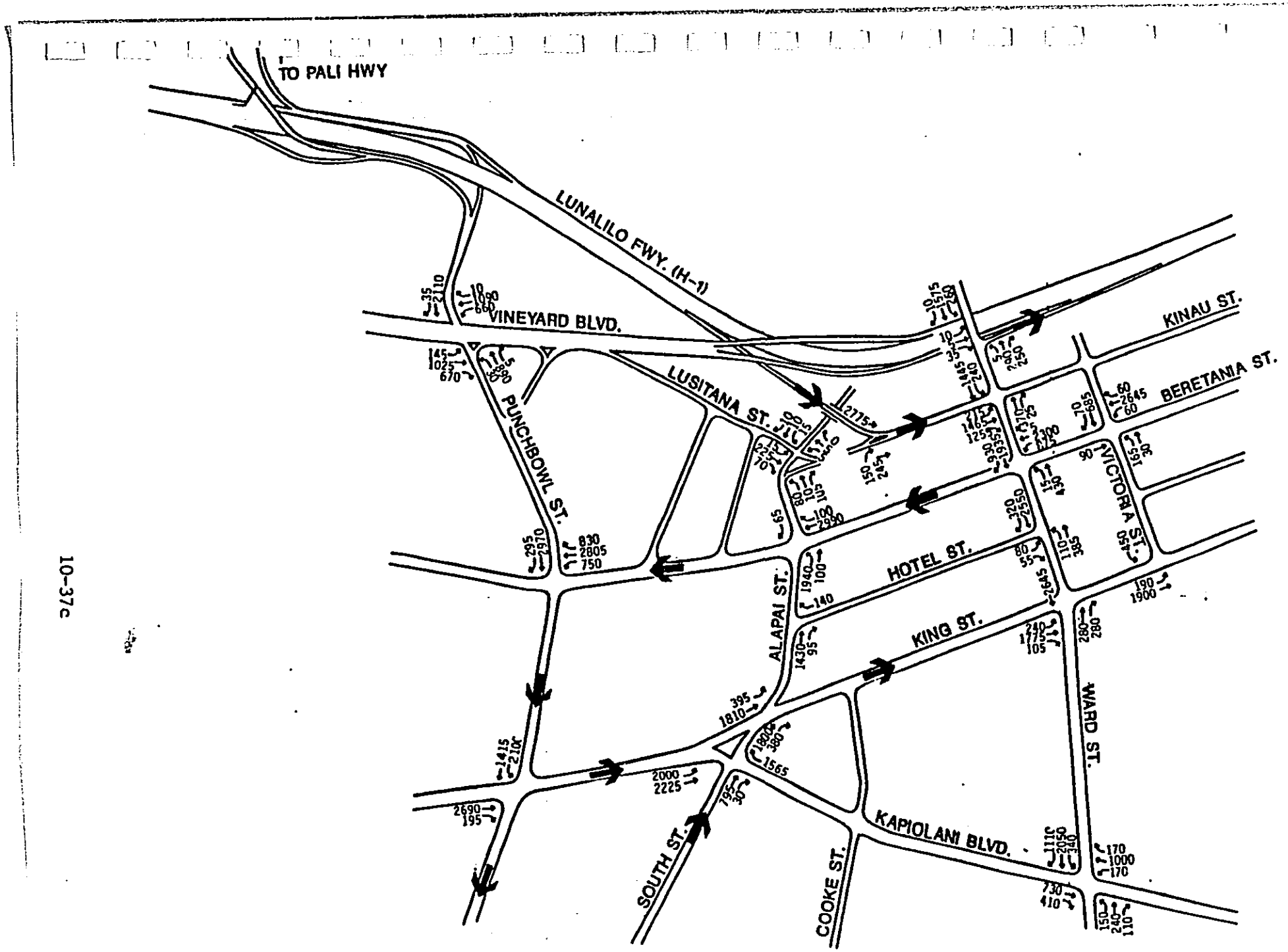
FIGURE 31



OUTBOUND PROJECT TRIP DISTRIBUTION

BARTON ASCHMAN ASSOCIATES, INC.

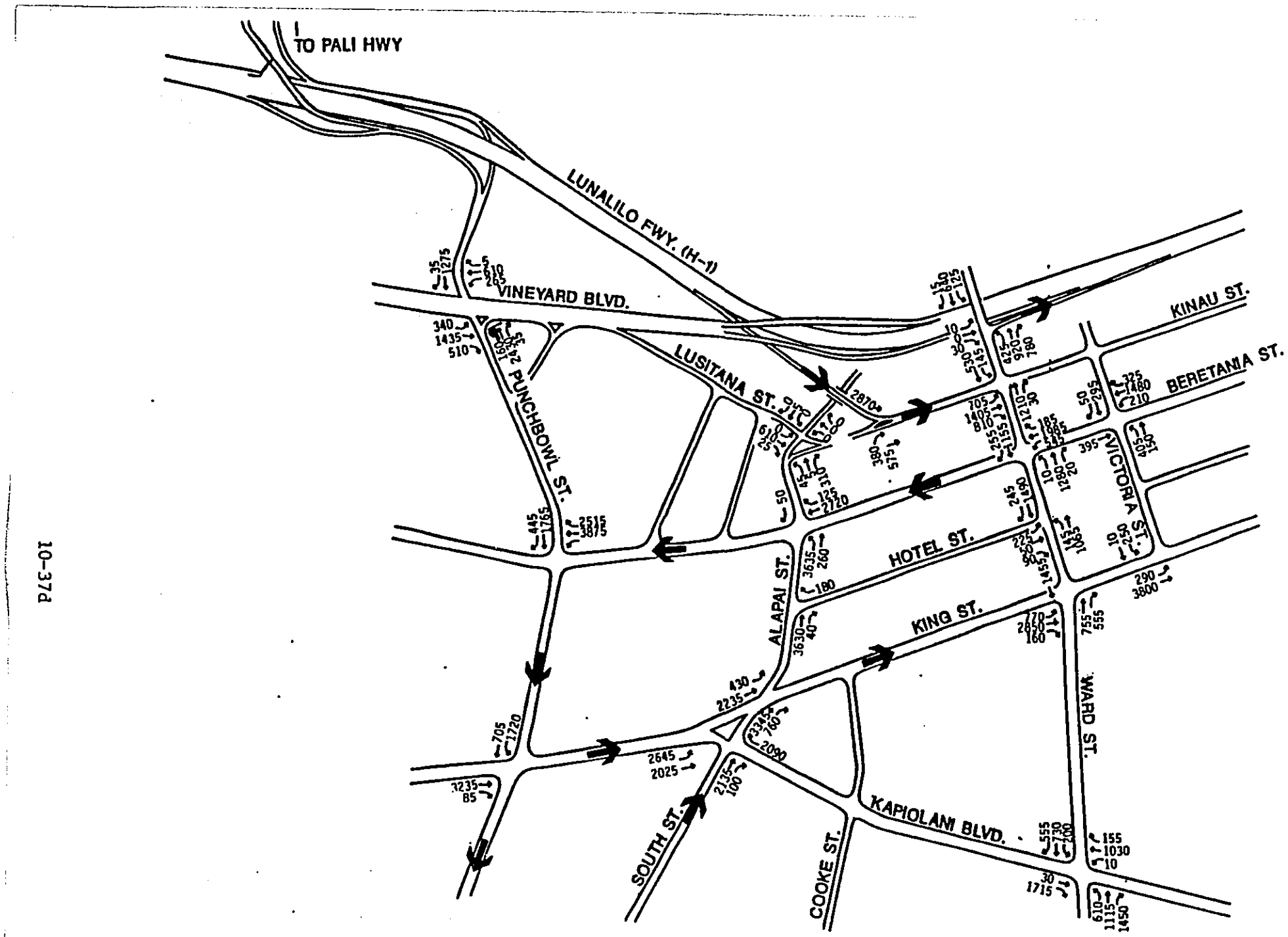
FIGURE 32



1990 BACKGROUND PLUS RELATED PLUS PHASE 1-MORNING

BARTON-ASCHMAN ASSOCIATES, INC.

FIGURE 33



1990 BACKGROUND PLUS RELATED PLUS PHASE 1-AFTERNOON

BARTON-ASCHMAN ASSOCIATES, INC.

N

FIGURE 34

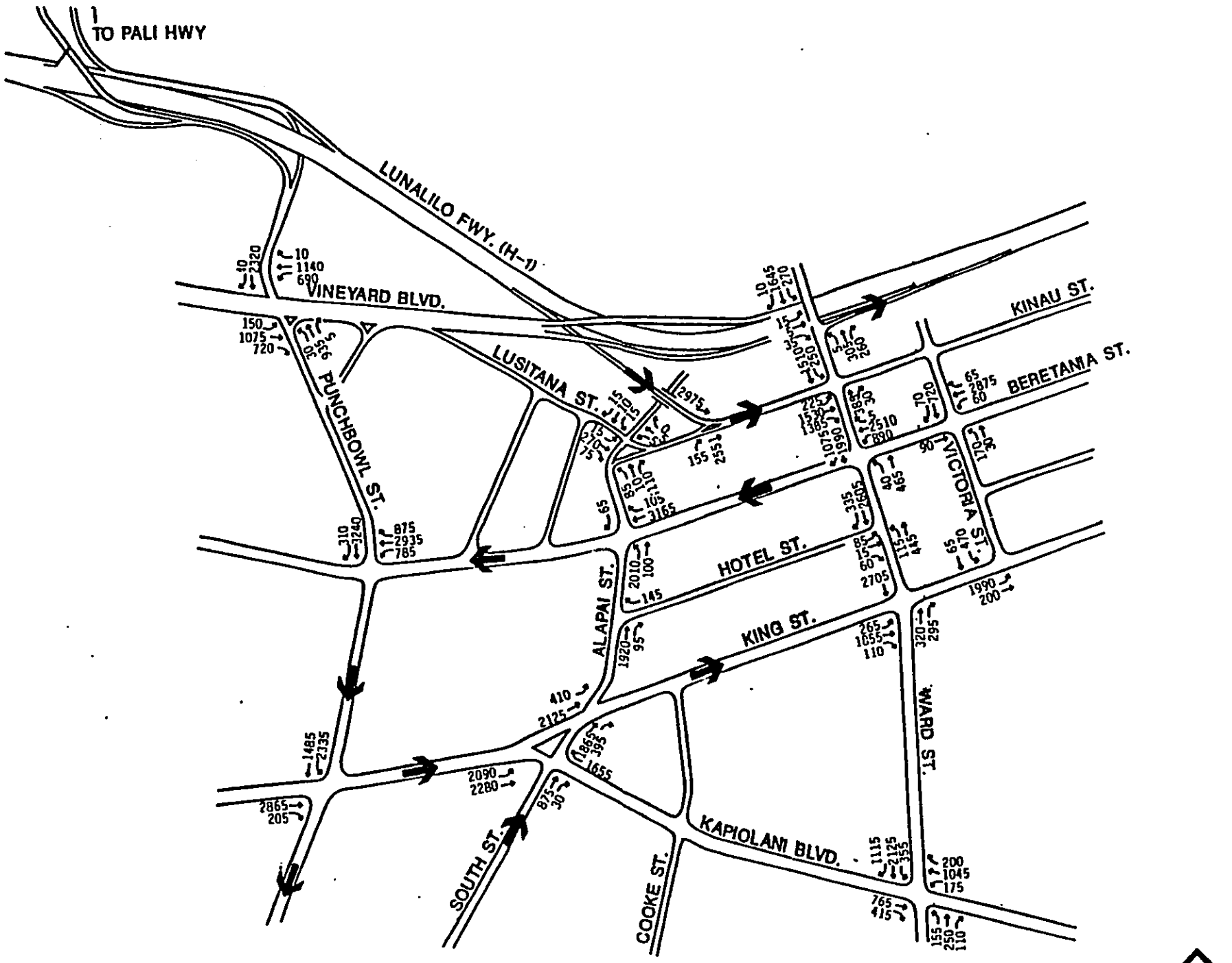
an additional three years. The related project trips were then added as was the Phase 1 traffic. The resulting 1993 Background plus Phase 1 plus Phase 2 traffic volumes are shown in Figures 35 and 36 for morning and afternoon peak hours, respectively.

Level of Service Analysis For Future Background Plus Project Conditions

The traffic impacts due to Phase 1 and Phase 2 of the proposed development are summarized in Table 22 using the level of service analysis. The delays and levels of service are shown for the following conditions:

1. 1987 Existing
2. 1990 Background
3. 1990 Background Plus Phase 1
4. 1993 Background Plus Phase 1
5. 1993 Background Plus Phase 1 Plus Phase 2

As shown, 11 of the 14 study intersections are expected to operate at Level of Service E or F by 1993 Background plus Phase 1 plus Phase 2 conditions. Of these 11, the anticipated level of service can be attributed to factors other than the proposed project at 10 intersections. However, the proposed project does have what is considered to be a significant impact on six of the study intersections. These intersections are:

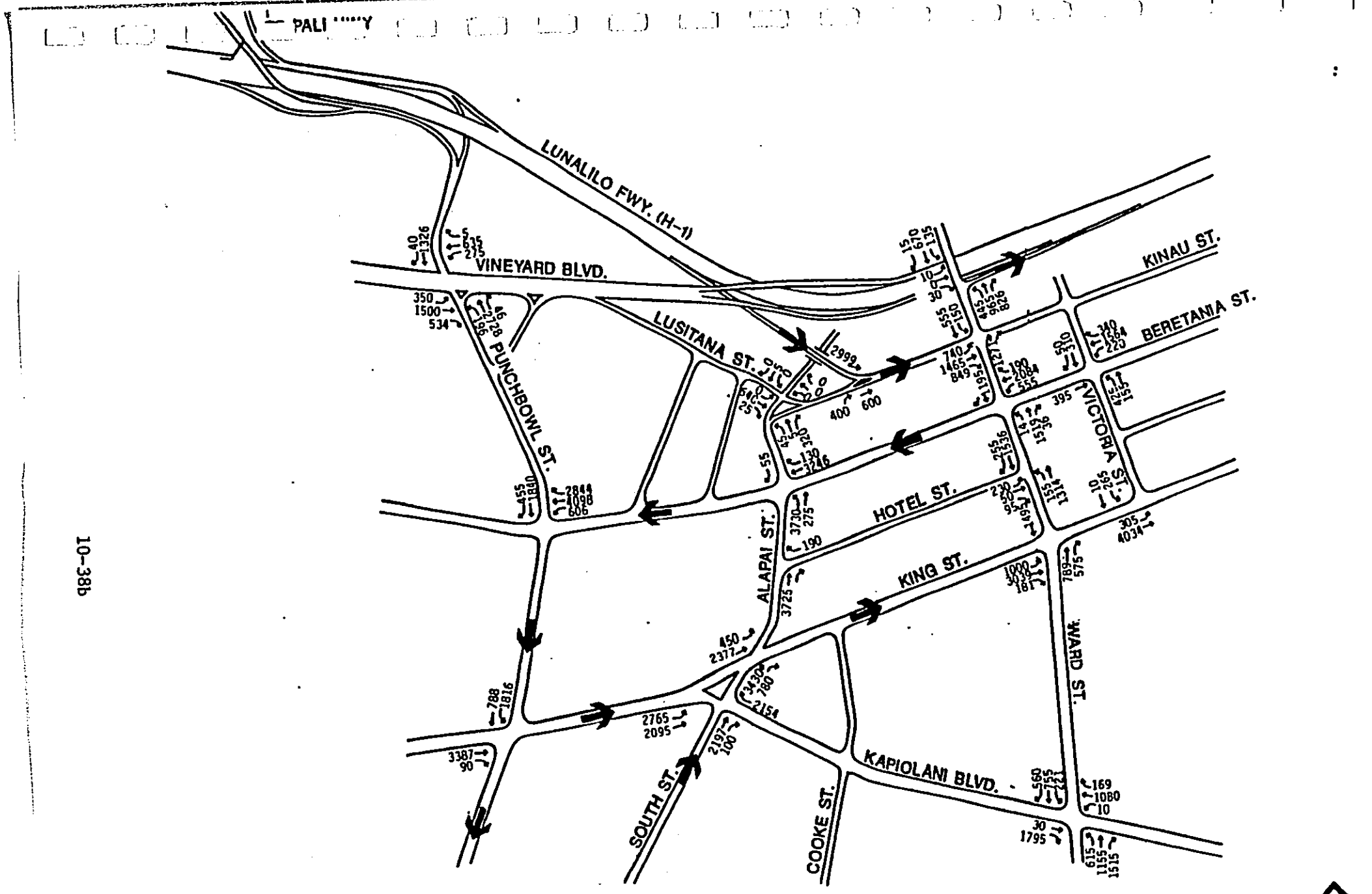


1993 BACKGROUND + RELATED PROJECTS + PHASE 1 + PHASE 2 – MORNING

BARTON ASCHMAN ASSOCIATES, INC.

N

FIGURE 35



1993 BACKGROUND + RELATED PROJECTS + PHASE 1 + PHASE 2 -AFTERNOON

BARTON-ASCHMAN ASSOCIATES, INC.

N

FIGURE 36

TABLE 22

INTERSECTION LEVEL-OF-SERVICE ANALYSIS
FUTURE CONDITIONS WITH PROJECT
HONOLULU CIVIC CENTER

	1987 Existing				1990 Background				1990 Background Plus Phase 1				1993 Background Plus Phase 1				1993 Background Plus Phase 1 Plus Phase 2			
	AM		PM		AM		PM		AM		PM		AM		PM		AM		PM	
Intersection	Delay	LoS	Delay	LoS	Delay	LoS	Delay	LoS	Delay	LoS	Delay	LoS	Delay	LoS	Delay	LoS	Delay	LoS	Delay	LoS
Punchbowl Street at:																				
Vineyard Boulevard	42	E	31	D	134	F	127	F	135	F	122	F	140	F	123	F	141	F	125	F
Beretania Street	18	C	11	B	95	F	62	F	99	F	67	F	107	F	84	F	115	F	88	F
King Street	9	B	10	B	38	D	29	D	46	E	36	D	56	E	48	E	89	F	46	E
Alapai Street at:																				
Beretania Street	10	B	11	B	13	B	106	F	13	B	127	F	14	B	127	F	15	C	127	F
King Street	9	B	10	B	9	B	50	E	10	B	43	E	10	B	54	E	10	B	57	E
Kapiolani Boulevard	4	A	59	E	47	E	104	F	50	E	104	F	61	F	105	F	65	F	105	F
Ward Avenue at:																				
HI Eastbound	26	D	3	A	39	D	3	A	132	F	3	A	63	F	4	A	63	F	4	A
Kinau Street	20	C	12	B	123	F	19	C	125	F	20	C	125	F	27	D	125	F	29	D
Beretania Street	51	E	10	B	92	F	14	B	95	F	14	B	100	F	16	C	113	F	16	C
Hotel Street	3	A	3	A	26	D	3	A	26	D	40	E	35	D	4	A	35	D	6	B
King Street	10	B	10	B	60	F	16	C	61	F	29	D	74	F	30	D	74	F	61	F
Kapiolani Boulevard	24	C	114	F	124	F	134	F	124	F	133	F	125	F	134	F	125	F	133	F
Victoria Street at:																				
Beretania Street	8	B	8	B	9	B	8	B	9	B	8	B	9	B	8	B	9	B	8	B
King Street	10	B	7	B	10	B	7	B	10	B	7	B	10	B	8	B	10	B	8	B

Note: Delay is expressed in seconds

1. Punchbowl Street at Beretania Street.
2. Punchbowl Street at King Street.
3. Alapai Street at Beretania Street.
4. Ward Avenue at Hotel Street.
5. Ward Avenue at Beretania Street.
6. Ward Avenue at King Street.

A significant impact, as defined in this study, is a change in level of service (e.g. Level of Service B to C) or an increase in average vehicle delay greater than four seconds when the level of service is worse than D. The significant impacts, as described, are shown in Table 22.

10.08 AIR QUALITY

Methodology

The principal air quality impacts of the project would result from increased vehicular traffic in the project area. The traffic impact study discussed above served as the basis for a mobile source impact analysis. The following intersections which bound the project site were selected for use in the air quality impact analysis:

- Alapai Street @ King Street
- Alapai Street @ Beretania Street
- Ward Avenue @ King Street
- Ward Avenue @ Beretania Street

Carbon monoxide (CO) emission factors for vehicles were generated for the year 2005 using the MOBILE-3 emissions model (U.S. EPA, 1984). The emission factors were localized by use of the age distribution of registered vehicles in the City & County of Honolulu (Department of Data Systems, 1986). Fraction of vehicle miles traveled (VMT) was assumed to be directly proportional to the registration distribution. Emission factors were based on traffic speeds ranging from 10-30 mph depending on the level of service (LOS) at each intersection. Green-to-cycle ratios at each intersection were estimated based on approach demands. Queue lengths and emission strengths at intersection approaches were determined by an EPA method (U.S. EPA, 1975).

While emissions burden analysis is one means of evaluating a project's impact, it is generally more important to estimate the ambient impact since air quality standards are expressed as ambient concentrations, and it is the ambient concentrations to which living things are exposed. Computer modeling is normally employed to generate these ambient concentration estimates, most commonly with non-reactive pollutants. This is due to the complexity of modeling pollutants which undergo chemical reactions in the atmosphere and are subject to the effects of numerous physical and chemical factors which affect reaction rates and products. For projects involving motor vehicles as the principal air pollution source, carbon monoxide is normally selected for modeling because it has a relatively long half-life in the atmosphere (about 1 month) (Seinfeld, 1975), and it comprises the largest fraction of automotive emissions.

The EPA guideline model CALINE-4 (U.S. EPA, 1986; Calif. Dept. Trans., 1984) was employed to estimate maximum 1-hour CO concentrations at receptor locations 10-40 meters from intersections during the worst-case a.m. peak hour traffic. Worst-case meteorological conditions were selected accordingly.

Because of the time of day of the analysis (a.m. peak hour), the currently low level of urbanization in the area which would otherwise contribute to a "heat island" effect and increased turbulence, a stable atmosphere (Pasquill-Gifford Class "F") (U.S. EPA, 1973) and 1 meter per second (m/sec) wind speed were

assumed as worst-case meteorological conditions. An east-northeast wind direction (70 degrees) was selected based on its prevalence, acute wind-road angles and ability to produce maximum pollutant concentrations at each intersection. Background levels of CO were estimated for each receptor location based on contributions from the upwind street network.

Results

The results of the modeling show that the federal but not the state 1-hour CO standard appears to be met even under worst-case conditions of traffic, meteorology, and receptor location.

Results for the two Alapai Street intersections indicate general declines in nearby CO levels over the 1987-1993 period despite the additional traffic. This is due to the effects of the federal motor vehicle emission control program (U.S. EPA, 1987b). Projected reductions in average per-vehicle emissions appear to have overcome the increase in traffic volume at this particular area for this particular time period.

At the Ward avenue intersections, CO levels tend to rise slightly and then taper off again by 1993. In this case it appears that the projected traffic increase overcomes the projected decline in per-vehicle emissions thus resulting in a slight increase in ambient CO concentrations during the 1987 - 1990 period. By 1993, however, there is again a slight decline.

Estimates of 8-hour concentrations can be derived by applying a "persistence" factor of 0.6 to the 1-hour concentrations. This "persistence" factor is recommended in an EPA publication on indirect source analysis (EPA, 1978a) and has been further corroborated by analysis of carbon monoxide monitoring data in Honolulu which yielded the same 8-hour-to-1-hour ratio (Morrow, 1984). When using this approach, any 1-hour CO concentration greater than 8.4 mg/m3 would indicate exceedance of the State's 8-hour standard. Similarly, any 1-hour concentration over 16.7 mg/m3 would indicate exceedance of the federal 8-hour standard.

Applying this factor to the 1-hour concentration estimates reveals the same potential exceedance of the state 8-hour standard but also indicates possible exceedance of the federal standard in close proximity to the intersection, i.e., within 10 meters.

In light of the possible exceedances predicted, a more detailed analysis of the meteorological data was undertaken in order to estimate the frequency of occurrence of those high concentrations.

A full year (1982) of meteorological data from the Honolulu International Airport was screened to determine the frequency of occurrence of the following worst case meteorological conditions used in the analysis:

- o hours: 6:00 - 8:00 a.m.
- o wind direction: 50 - 90 degrees
- o wind speed: 1 m/sec
- o stability: neutral to stable ("D" to "F")

Five such hours were found, three of which occurred in the same day. On the basis of two possible hours per day (6:00 - 8:00 a.m.), this indicates a frequency of occurrence of 0.68%.

Mobile Source Impacts

As indicated by the worst-case analysis, there is a low probability for violations of the State's 1-hour carbon monoxide standard within 30 meters of the principal streets serving the project area. There is an even lower probability that the federal 8-hour standard might also be exceeded within 10 meters of some intersections. It appears that these exceedances would occur as a result of the completion of already approved projects in that area and that this project will not cause but rather will contribute to those exceedances. It should also be noted that despite the increased traffic and projected exceedance of standards over the study period, the general trend of CO levels is still downward. Thus, it might be said that the projected growth in traffic will retard but not reverse the continued reduction of near roadway CO concentrations during the 1987-1993 period.

Construction Impacts

The principal source of short-term air quality impact will be construction activity. Construction vehicle activity will increase automotive pollutant concentrations along the streets serving the area as well as in the vicinity of the project site itself. Since most construction-related traffic will occur during off-peak hours, the additional construction vehicle traffic should not exceed road capacities although their presence can reduce street capacities as well as lower average travel speeds.

The site preparation and earth moving will create particulate emissions as will building and on-site road construction. Movement of construction vehicles on unpaved on-site roads will also generate particulate emissions. EPA studies on fugitive dust emissions from construction sites indicate that about 1.2 tons/acre per month of activity may be expected under conditions of medium activity, moderate soil silt content (30%), and a precipitation/evaporation (P/E) index of 50 (U.S. EPA, 1978b).

The computed precipitation/evaporation (P/E) Index for the area is 39. Compared to the EPA estimates and conditions, it would appear that there is a greater potential for fugitive dust due to the somewhat drier local climate.

Conclusions

Based on the air quality analysis, the following conclusions may be drawn:

- The proposed project will result in increased air pollutant emissions due to its inherent traffic generation ability;

- The addition of project-related traffic will contribute to projected exceedances of state 1-hour and 8-hour and possibly federal 8-hour carbon monoxide standards in close proximity to the four major intersections serving the project site;

- Due to the relatively dry climate in the area, dust control measures during construction will be important to prevent violations of state fugitive dust standards.

Asbestos Waste

The buildings to be demolished may have "asbestos-containing" materials, such as pipe insulation, in the structures. Demolition has the potential to release friable asbestos into the air. The health hazards of these materials are well documented, and federal regulations specify appropriate mitigation measures.

Offsite Activities

Offsite activities which will have temporary impacts on air quality include concrete batching operations to produce the concrete necessary for building foundations within the project and asphalt batching operations to build new onsite roads and parking areas. At this point in time, the magnitudes of these operations have not been quantified and thus a quantitative impact analysis is not possible.

10.09 NOISE

Long-Term Noise Impacts

The long-term noise impact from the new police department headquarters can be categorized as originating from the additional general traffic caused by the facility; from basic air-conditioning and mechanical equipment required by the complex; from unique vehicle operations required by the police, particularly at night; and from the proposed helicopter operations.

The traffic noise levels caused by future traffic volumes can be predicted using the FHWA traffic noise level prediction model (FHWA, 1978). The prediction model was calibrated using the noise level measurements in Table 16 and spot traffic counts that included the mix of vehicles. From the table it can be seen that agreements within one dB were obtained.

Table 23 involved utilizing the project traffic study and the methodology in the FHWA traffic noise prediction model to estimate the increase in noise level that would exist along selected streets when Phase I is in operation in 1990. From Table 24 it can be seen that general traffic noise levels should increase less than one half dB during the noisiest hour in the daytime along most streets, with the greatest increase occurring on Beretania Street between Alapai Street and Ward Avenue. These increases in general traffic noise caused by the police headquarters are considered insignificant.

Of concern is that police operations near the facility at night may cause significant noise impact. To this end observations and noise level measurements were made at the locations shown in Figure 37 near the existing police headquarters between about 7:30 and 9:00 p.m. on December 28, 1987. General traffic noise typically dominated the overall situation causing L_{10} noise levels of 65 dBA at location P1 on Young Street and 61 dBA at P2 on King Street. The noise events that were unique to police operations were detected only on Young Street and included: a radio communication coming from a police car; a police dog barking for a short time period; a motorcycle revving-up and performing a test run around the block; as well as sounds from the open doorway to the police repair garage - e.g., an engine accelerating during testing, music from a radio, and a loud signal apparently for the telephone.

TABLE 23

Predicted Traffic Volume and Traffic Noise Level Increases
Caused by the Project

Roadway	Traffic Volume Increase Ratio		Traffic Noise Level Increase	
	1990 (Phase 1)	1993 (Phase 1&2)	1990 (Phase 1)	1993 (Phase 1&2)
Kinau Street	1.01	1.01	< 0.1 dB	< 0.1 dB
Beretania Street				
(a) Punchbowl/Alapai	1.05	1.11	0.2 dB	0.5 dB
(b) Alapai/Ward	1.11	1.27	0.5 dB	1.0 dB
(c) Ward/Pensacola	1.01	1.01	< 0.1 dB	< 0.1 dB
King Street				
(a) Pensacola/Ward	1.01	1.04	< 0.1 dB	0.2 dB
(b) Ward/Alapai	1.06	1.14	0.2 dB	0.6 dB
Alapai Street	1.00	1.00	0 dB	0 dB
Ward Avenue				
(a) King/Hotel	1.06	1.13	0.2 dB	0.5 dB
(b) Hotel/Beretania	1.00	1.01	< 0.1 dB	< 0.1 dB
(c) Beretania/Lunalilo FWY	1.01	1.02	< 0.1 dB	< 0.1 dB

NOTE: Estimates were made for the noisiest hours of freely moving traffic before and after the p.m. peak.

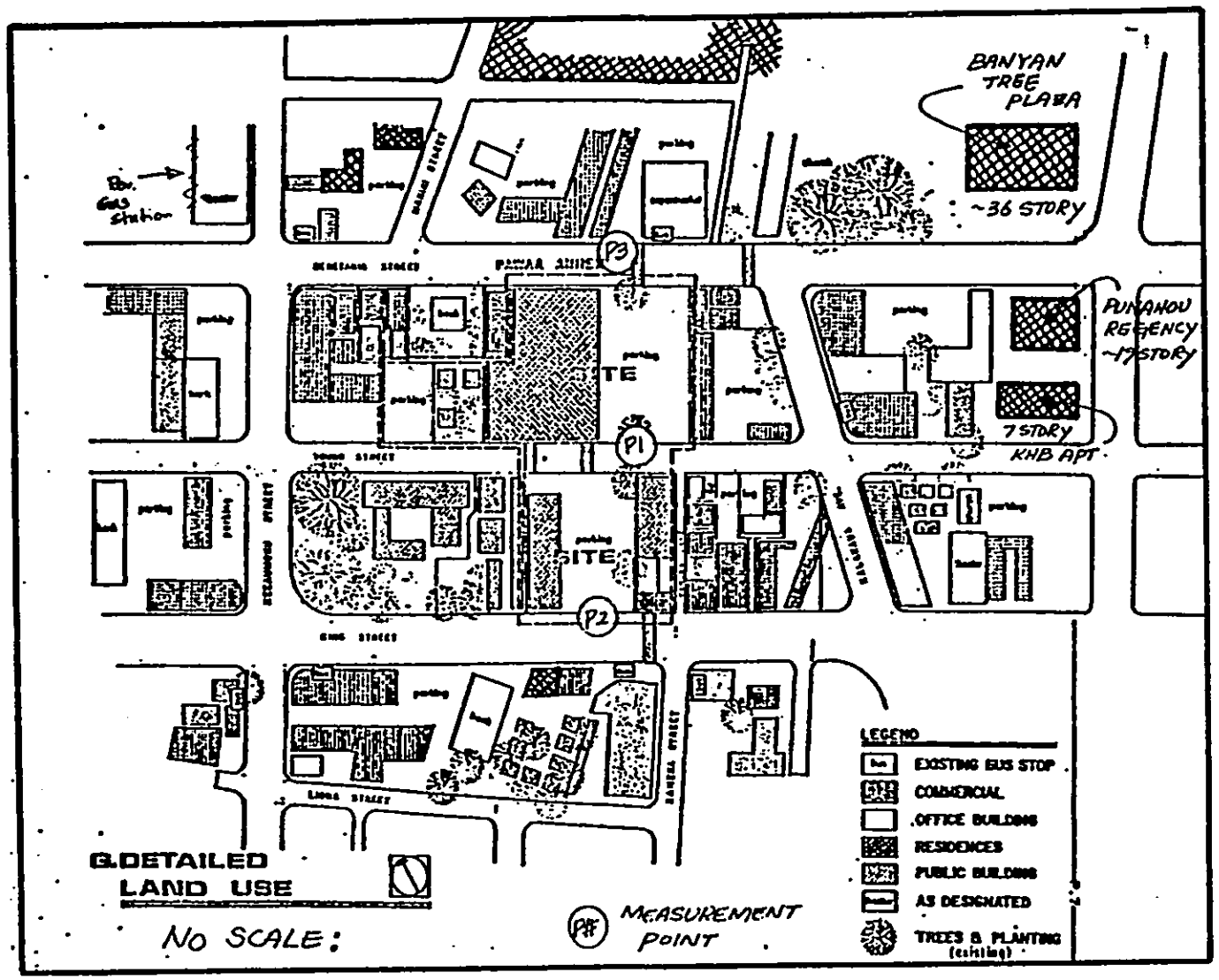


Figure 37 Map Showing Noise Level Measurement Locations Near Existing HPD Headquarters

It is understood that the new police facility would not have many of the vehicle maintenance facilities that presently exist at the Pawaa Annex, but would have provisions for light servicing including refueling, washing, tire changes, and lubrication. It is understood that most of the vehicle maintenance functions would move to the City's new Sand Island vehicle maintenance facility. The vehicle servicing facilities which would remain in the new complex would all be in covered areas below ground. Ventilation systems and noise containment features (if necessary) would be implemented such that any emanating sounds would conform to the allowable noise levels in local noise regulations (DOH, 1981b; City and County of Honolulu, 1986b).

Shift changes and temporary parking now taking place on the street at the existing police headquarters, would be accomplished in the police motorcourt covered parking structure in the new facility. During the noise sensitive nighttime period, the first watch would begin at 11:00 p.m. while the first traffic shifts would begin at 5:00 a.m., 6:00 a.m., and 6:15 a.m. The transfer of detained persons from vehicles would be done in the covered portions of the garage. The use of sirens by the police is limited to emergency response situations. HPD no longer allows routine testing of sirens by "cling-on, click-off" at the exit of the motorcourt. There is an HPD policy prohibiting siren testing at the headquarters or in residential areas.

In response to the question, "On the average, how often can we predict noisy, emergency events to occur near the Police

Headquarters, particularly from 10 p.m. to 7 a.m.?", the response from Ruth and Going, Inc. was: "There is no possible way to predict this type of information. It should be pointed out that after shift change (aside from the Tactical Squad) patrol officers are in the field and respond to emergency situations from the headquarters. So the major component of emergency noises at Alapai will probably continue to be primarily from Straub Hospital, not the Police Department."

A kennel would be maintained at the new complex, but it would be totally indoors such that any barking dog sounds could be contained. Any sounds from dogs entering or leaving vehicles should also be contained by the enclosed parking structure.

Activities at the new HPD facility would <u>not</u> include the registration of reconstructed vehicles, which involves the testing of vehicle engine exhaust mufflers.

The frequency and time of helicopter operations on the helipad of the new HPD building is difficult to predict. At this time it is anticipated that in the beginning there may be an average of one flight per day. A flight constitutes a landing and a take off. The type of helicopter most likely used would be a Hughes 500D and it would approach from Ewa to Koko Head and depart in the Koko Head direction.

The noise from helicopter operations can be expressed in terms of the maximum dBA noise level experienced from each flight and as

an annual average day-night noise level (L_{dn}) that takes into account the daily number of flights and whether they occur during the daytime (7 a.m. to 10 p.m.) or during the nighttime (10 p.m. to 7 a.m.). The L_{dn} noise index penalizes operations during the more noise sensitive nighttime period by treating each nighttime operation as being equal to ten (10) daytime operations. Most federal government agencies consider residential land use as being compatible if the aircraft noise L_{dn} is less than 65 dB; but locally, a limit for L_{dn} of 60 dB is used to account for Hawaiian outdoor lifestyles and the fact that many residences and apartments are naturally ventilated with open windows the year around.

Figures 38 through 40 show L_{dn} noise contours that are predicted to occur when there is an average of one night flight (10 day flights), two night flights (20 day flights) and three night flights (30 day flights), respectively. The noise contours were generated on a computer using the Federal Aviation Administration's (FAA's) Integrated Noise Model (INM) (FAA, 1982). From the three figures it can be seen that, even with an average of three night flights (equivalent to 30 day flights); no housing or apartments are exposed to L_{dn} 60 or greater.

Figures 38 through 40 also show three locations wherein the predicted maximum dBA noise levels associated with a helicopter flight are listed in Table 24. From the table it can be seen that persons on an open lanai or corridor of King Manor would experience a maximum noise level of about 85 dBA as the

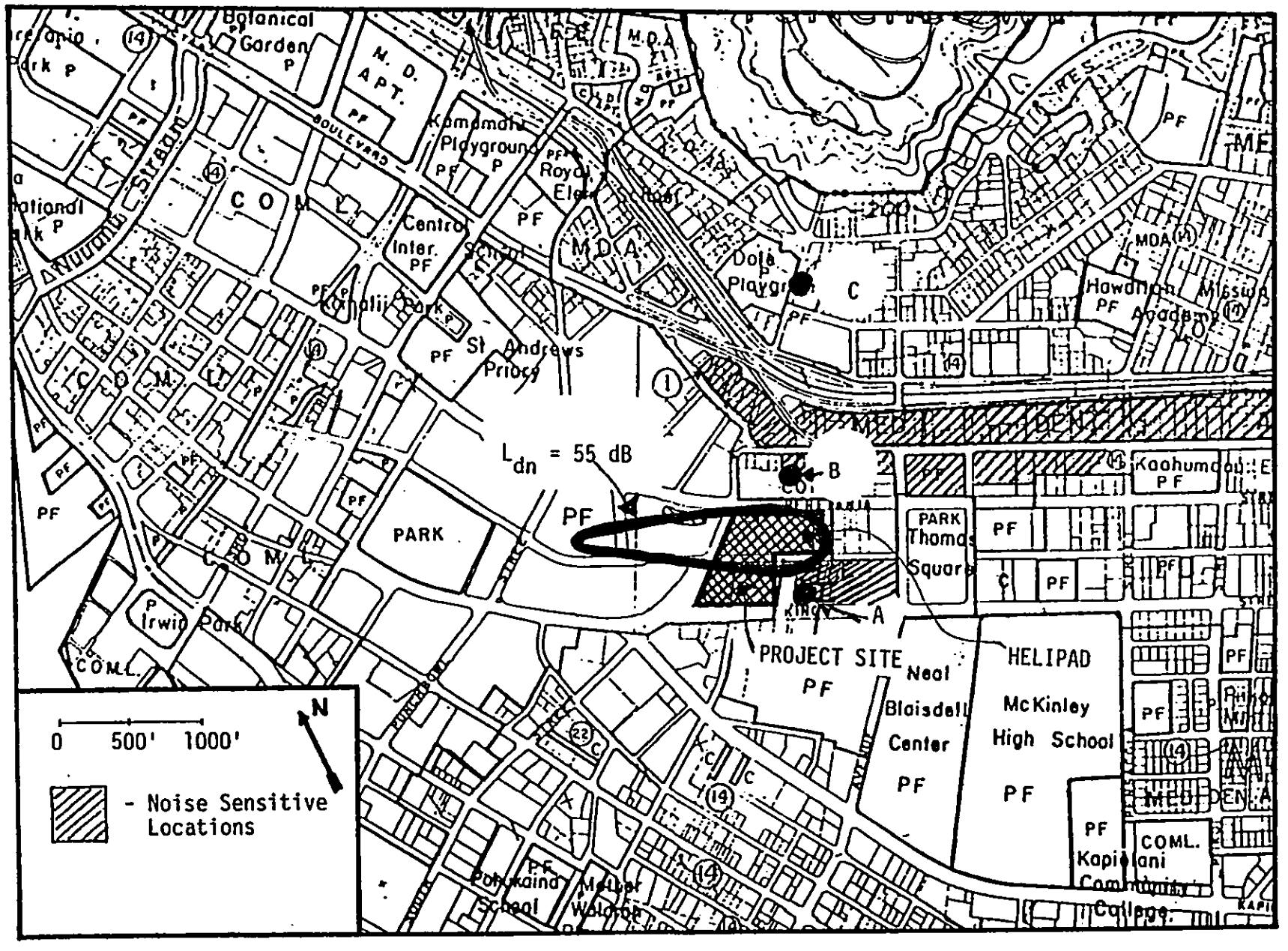


Figure 38 Average Annual Day-Night Noise Contours Estimated for One (1) Night Flight (or 10 Day Flights) by Helicopter(s) to-and-from the Helipad.

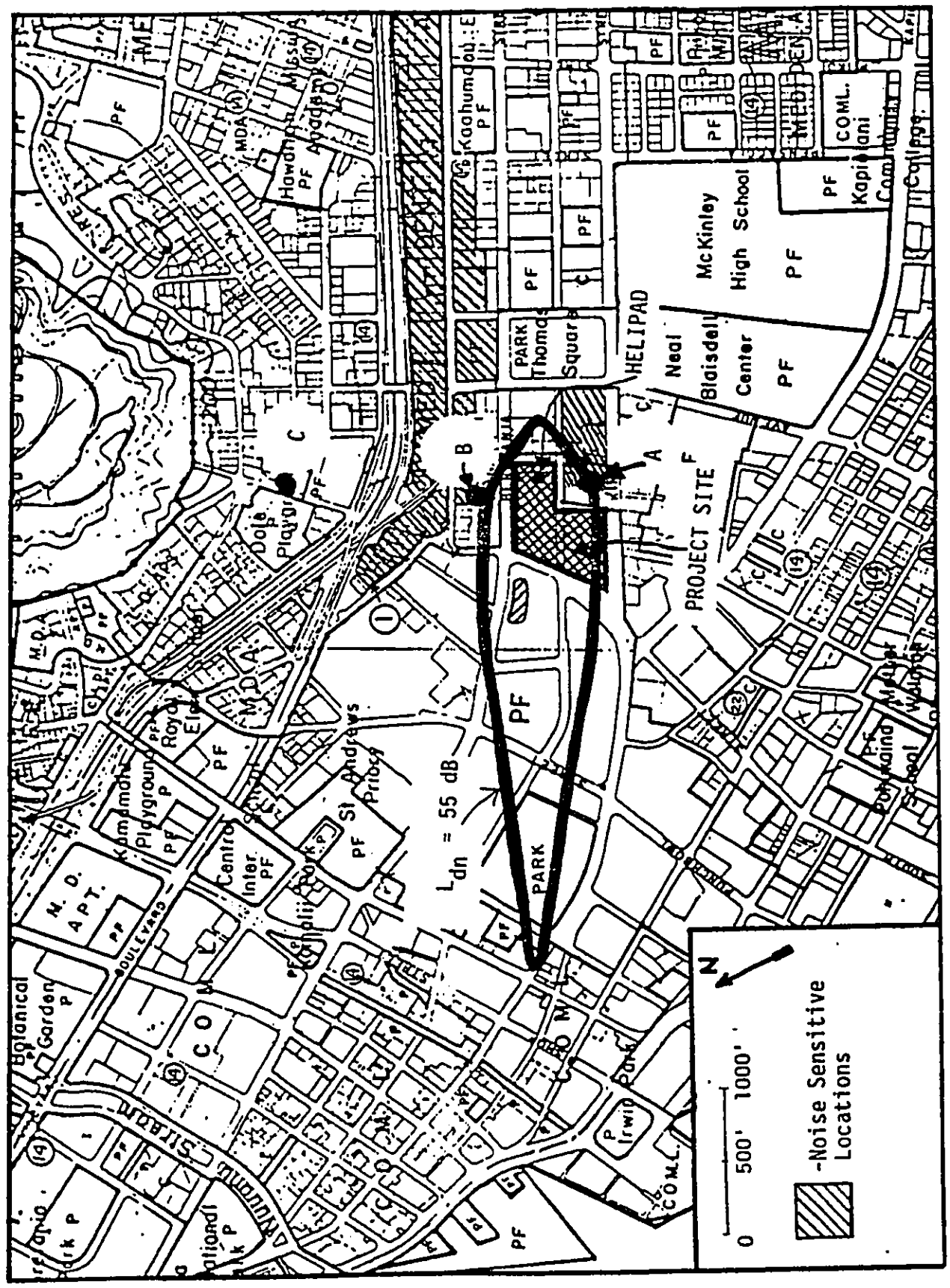


Figure 39 Average Annual Day-Night Noise Contours Estimated for Two (2) Night Flights (or 20 Day Flights) by Helicopter(s) to-and-from the Helipad.

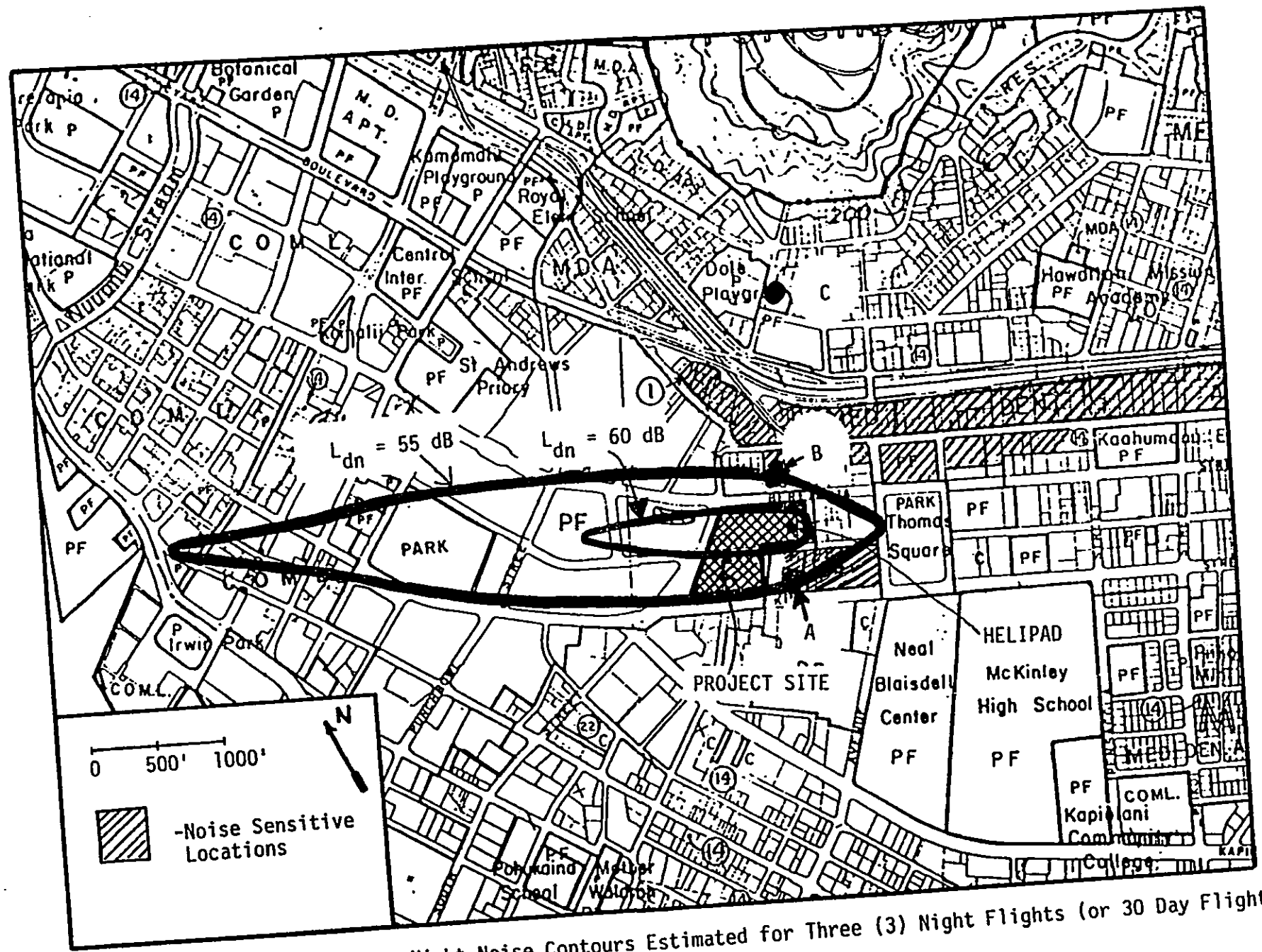


Figure 40 Average Annual Day-Night Noise Contours Estimated for Three (3) Night Flights (or 30 Day Flights) by Helicopter(s) to-and-from the Helipad.

TABLE 24

Predicted Maximum dBA Noise Levels from a Flight to-and-from the Helipad on the Proposed HPD Facility

Location	Distance from Flight Path (A)	Estimated Max. dBA
A. King Manor	330	85 dBA
B. Hi-rise on Kinau St.	450	83 dBA
C. (Residence on slopes of Punchbowl)	1700	74 dBA

helicopter landed on the helipad. Similarly, the maximum dBA level on the makai side of a high-rise on Kinau Street would be about 83 dBA, while 1,700-feet distant on the slopes of Punchbowl the level would be about 74 dBA.

The noise caused by the air-conditioning plant; ventilation fans for the garages; transformers, emergency generators and any other stationary equipment required will meet the allowable noise limits in the local noise regulations.

The long-term noise impact from the City Hall Annex Office Complex after it is completed in 1993 can be categorized as originating from the additional general traffic caused by the complex and from the air-conditioning and mechanical equipment required by the facility.

Table 23, developed using the techniques described earlier, predicts that the increase in traffic noise levels attributable to both phases of the project in 1993 would be less than one dB on the streets under consideration. The greatest traffic noise level increase would occur on Beretania Street between Ward Avenue and Alapai Street. The increase in general traffic noise which would be caused by the total project is considered insignificant.

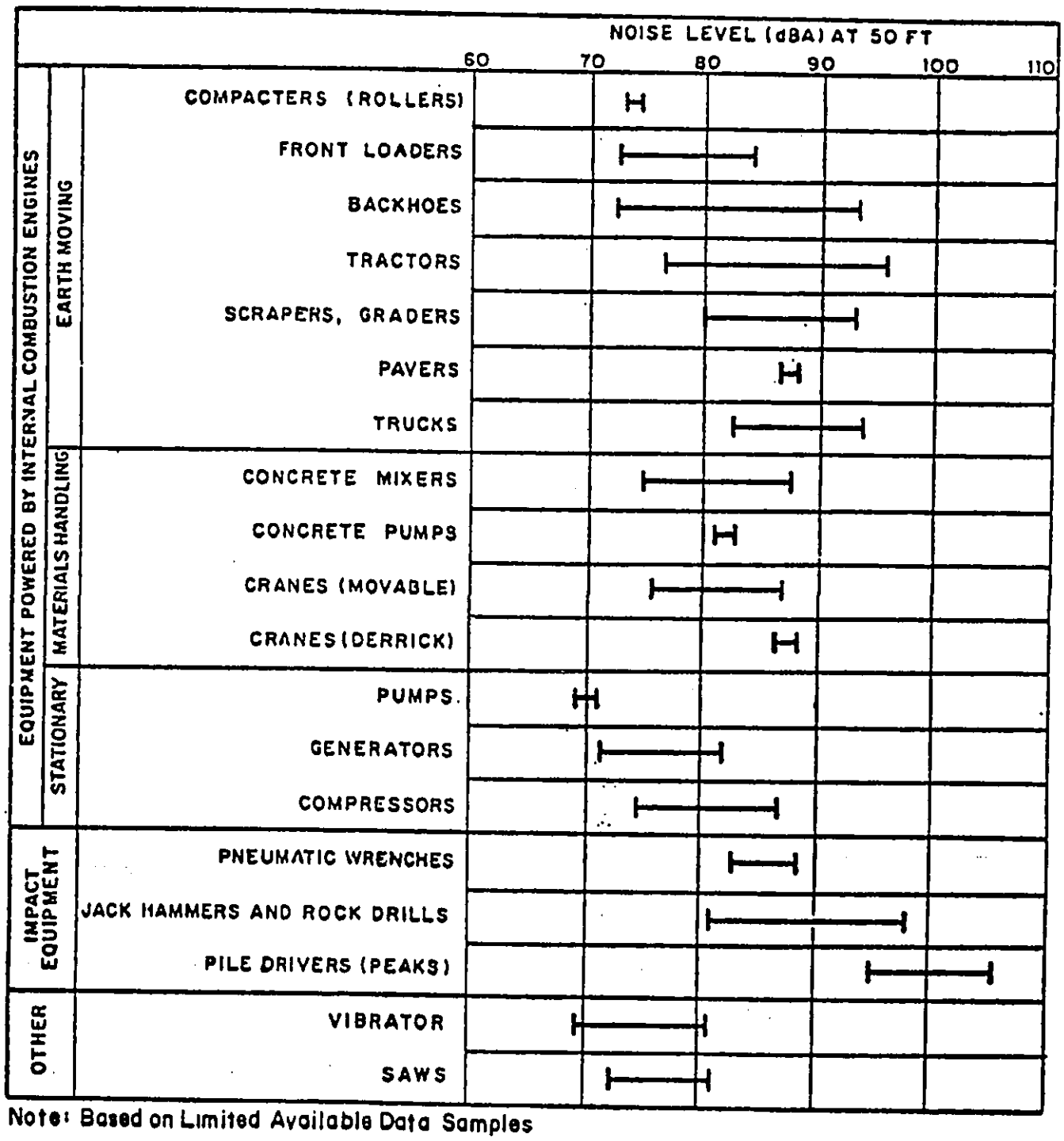
As with the HPD facility, mechanical and electrical equipment required for the City Hall Annex Office building would not exceed the allowable noise limits in the local noise regulations.

Noise Impact from Construction

Development of the project site will involve demolition, site preparation, and the construction of infrastructure and buildings. The various phases of a construction project may generate significant amounts of noise; the actual amounts are dependent upon the methods employed during each stage of the process.

Typical construction equipment noise ranges in dB(A) are shown on Figure 41. Pile-drivers, earthmoving equipment such as bulldozers, and diesel powered trucks would probably be the loudest equipment used during construction. (At this time a "mat-type" foundation rather than piles is planned.) As it is anticipated that noise generated during construction would exceed allowable limits, a permit would be obtained from DOH. DOH may grant permits to operate vehicles, construction equipment, power tools, etc. which emit noise in excess of the allowable limits. Permit conditions to mitigate noise impacts of construction activities are included in Section 15.0.

In addition, construction equipment and on-site vehicles or devices requiring an exhaust of gas or air must be equipped with mufflers. Also, construction vehicles using trafficways will satisfy the noise level requirements defined in Chapter 42, HRS (DOH, 1981a).



Note: Based on Limited Available Data Samples

FIG. 41 CONSTRUCTION EQUIPMENT NOISE RANGES.

10.10 VIEWS

Impact on Views

The views from public view points in the area surrounding the proposed project could be impacted by the City office building, due to its height, but not by the low-rise police headquarters or the ground level transportation center. Therefore, reference is made only to this part of the project throughout most of the analysis. (See Figure 42, Perspective Rendering of Proposed Transportation Center and City Hall Annex.)

To establish existing views, photographs were taken in February of 1988 from specific view points identified by HCDA and DLU.

Punchbowl

Figure 43 shows the view plane from the Punchbowl lookout. The project site can be located in the center of the photograph. This view from Punchbowl looking out over Honolulu towards the ocean would be slightly altered with the implementation of the proposed project as the new buildings would present a difference in style and configuration than the existing bus barn and related facilities. The City office building, at 250 feet, would be slightly taller than the Honolulu Municipal Building (HMB) (220.5 feet) to the left of the project site in the photograph. The new building would not be as wide as the HMB, however, so its appearance would be less massive. The City office building would

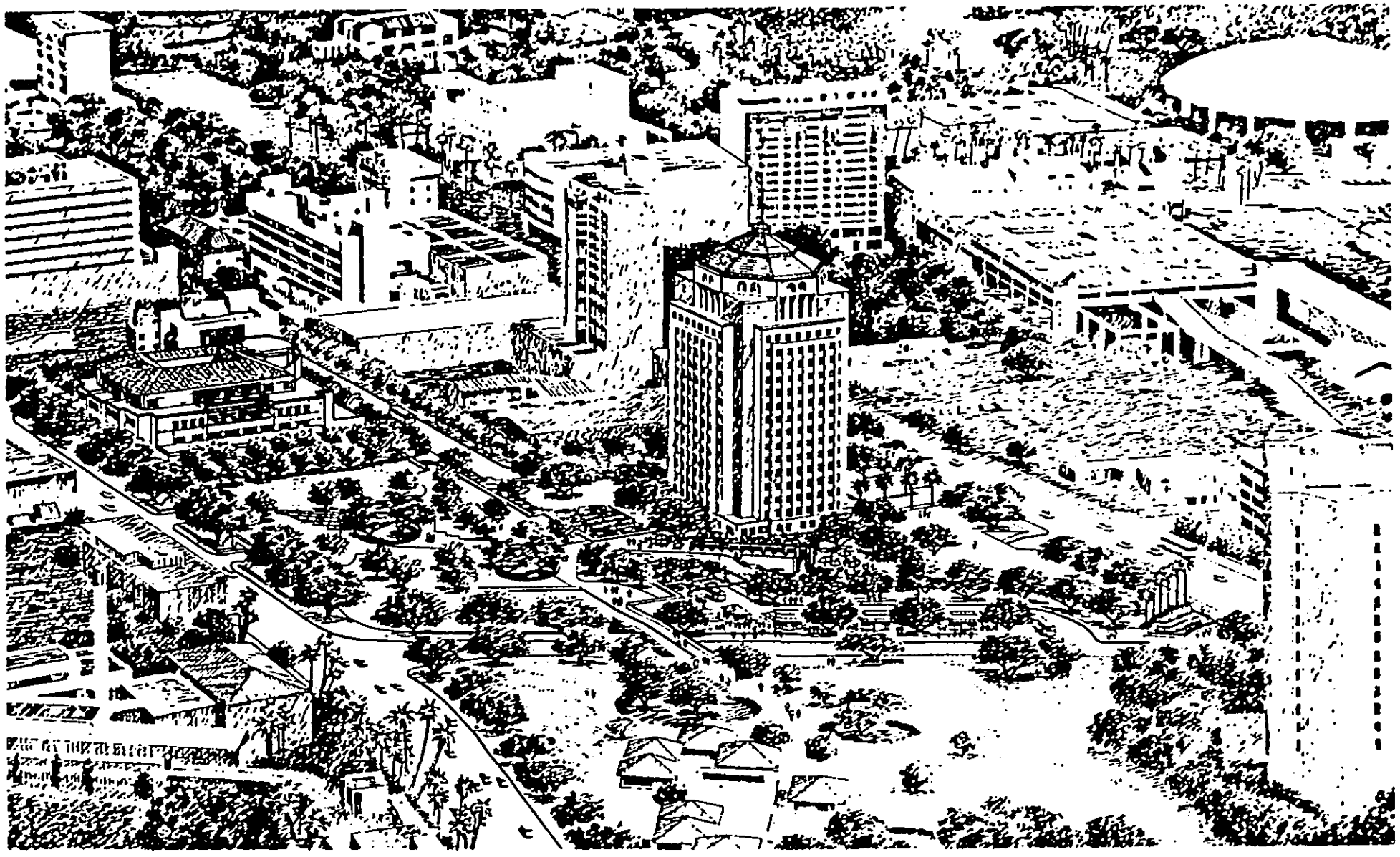


FIGURE 42 PERSPECTIVE RENDERING OF PROPOSED

TRANSPORTATION CENTER AND CITY HALL ANNEX

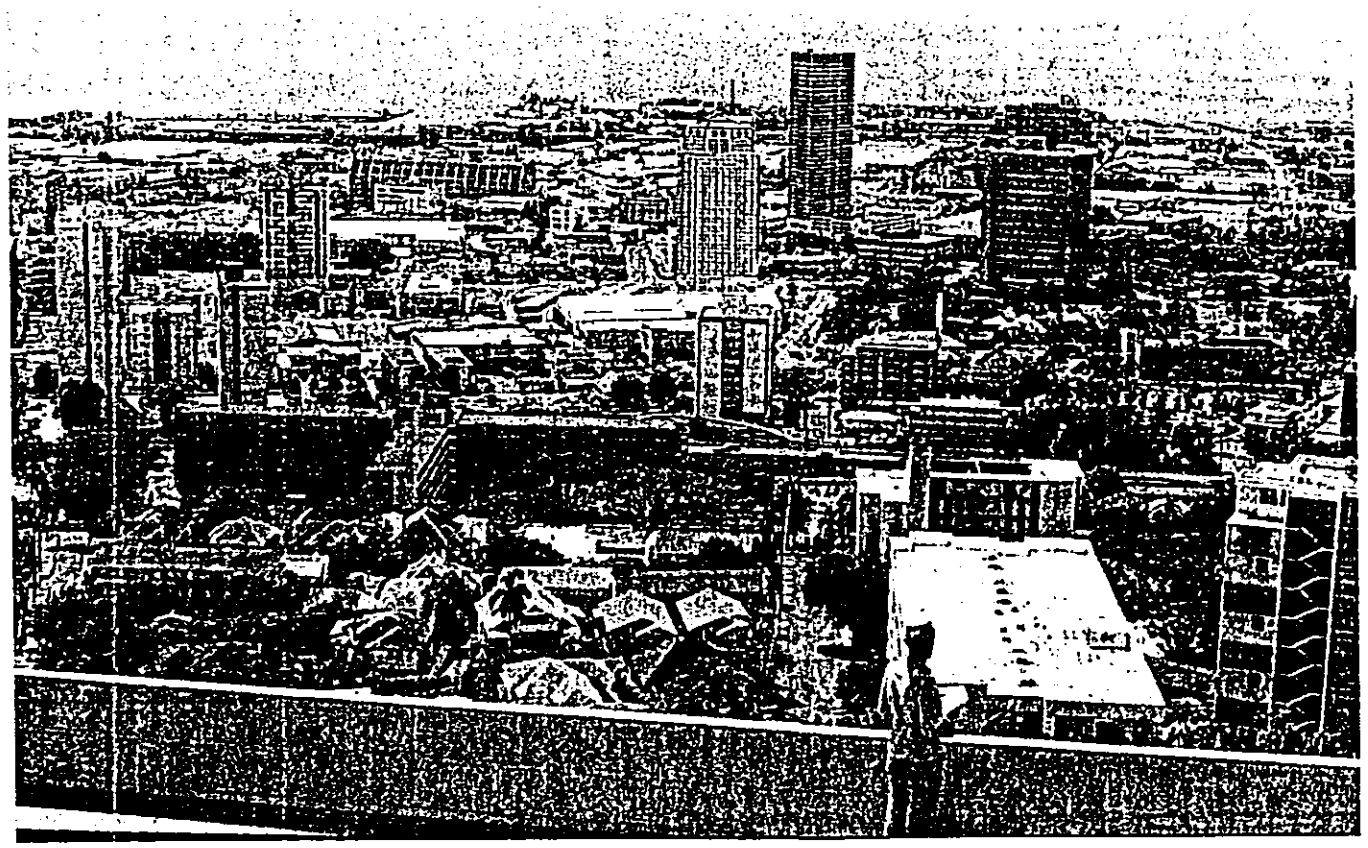


FIGURE 43 VIEW PLANE FROM PUNCHBOWL MEMORIAL PARK

not be as high as the Royal Capitol Plaza (366 feet). The latter building extends above the plane of the shoreline toward the horizon in the photo. The new buildings would not impede the view of the shoreline or the ocean beyond. The addition of landscaping and open space areas would enhance the scenic quality of the view both from this perspective and at closer range.

Kakaako

Figure 44 shows the view plane from Kewalo Basin's small peninsula park. Punchbowl is in the background to the right in the photo. When built, the City office tower would be visible from this vantage point. It would stand just to the right of the HMB which is behind the Royal Capital Plaza (largest building in the photo). Again, with the City office building height only slightly higher than HMB, it would not appear higher than the top of the mountain range and its width would block only a portion of the mountain slopes. It would not affect the view of Punchbowl crater.

The view plane from Mother Waldron Playground at Coral and Pohukaina Streets in Kakaako is shown in Figure 45. A view of Punchbowl's Memorial Park lookout may be seen between the HMB and Royal Capitol Plaza. The City office building, when completed, could appear in tht area shown at the right edge of the photo, however, the Pacific Park Plaza, opening in December of 1988 at Curtis Street and Kapiolani Boulevard, may block the foreground area in front of the project site (to the right of the Royal

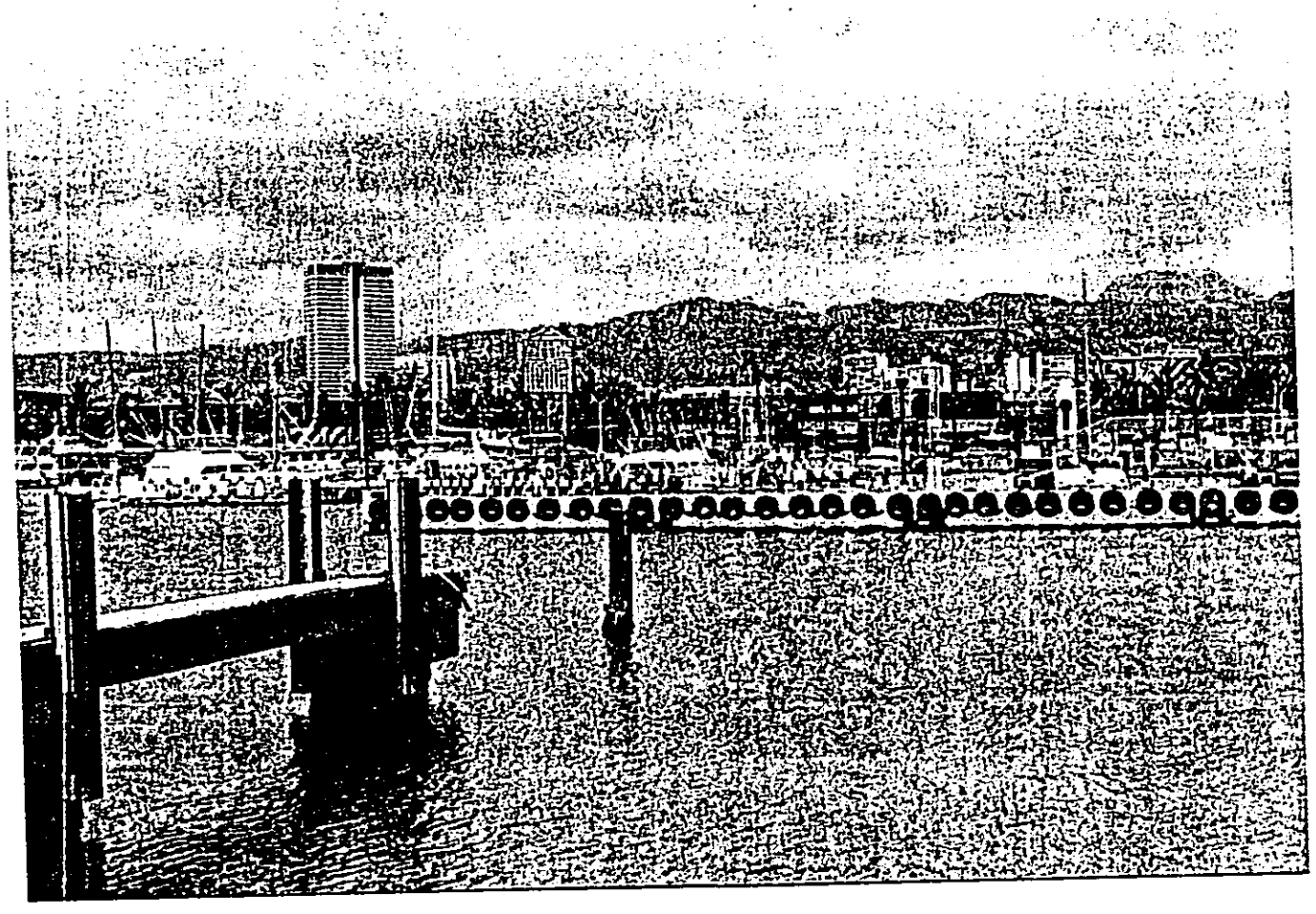


FIGURE 44 VIEW PLANE FROM KEWALO PENINSULA

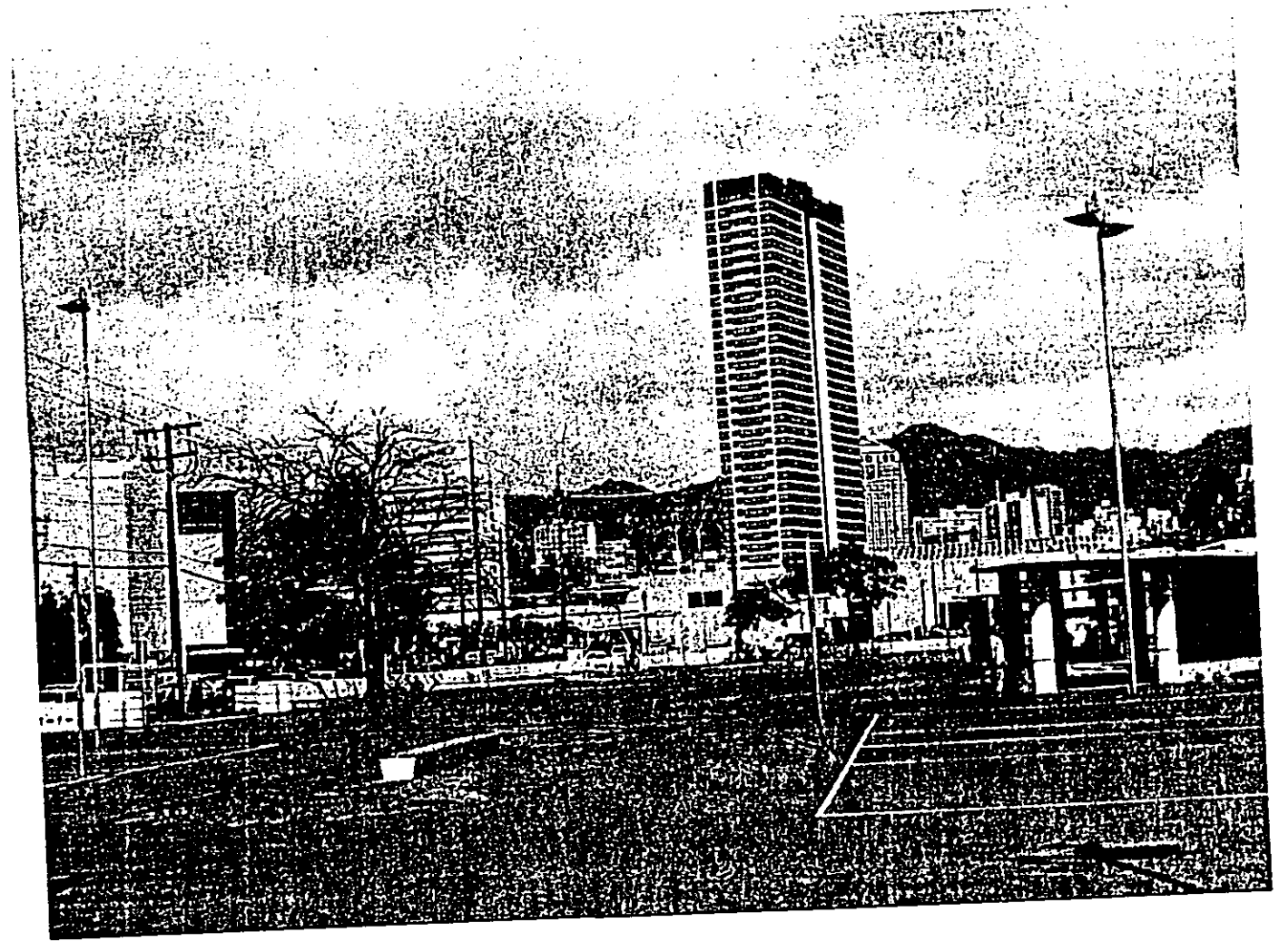


FIGURE 45 VIEW PLANE FROM WALDRON PLAYGROUND

Capitol Plaza) with its wide design and 207 feet height. If the City office building were to be visible in this view plane, it would block a small portion of the mountain slopes.

Figure 46 shows the view plane from the top of Cooke Street at Kapiolani Boulevard towards the mountains. The low vantage point and the existing buildings block the view of the mountains. The City office building would be visible against the skyline, similar to the HMB at the left edge of the photo.

A view corridor beginning at the top of South Street at Kapiolani Boulevard is shown in Figure 47. The project site is seen within this view corridor. Views of the mountains are presently obscured by trees and residential towers. If the proposed project proceeds as planned, the water feature at the corner of King and Alapai Streets would be an added visual resource to this view. The new buildings and landscaped open space would also enhance this view.

The view corridor looking up Cooke Street at Ilalo Street in Kakaako (Figure 48), will soon include the Pacific Park Plaza, to be completed in December of 1988 (as described earlier in this section). The tower will be 207 feet in height and appear to the right of the Royal Capital Plaza. If it is not hidden by the Pacific Park Plaza, the City office building may appear in this corridor when built. Judging from the relative height of the HMB, seen behind the planes at middle left in this photo, the new

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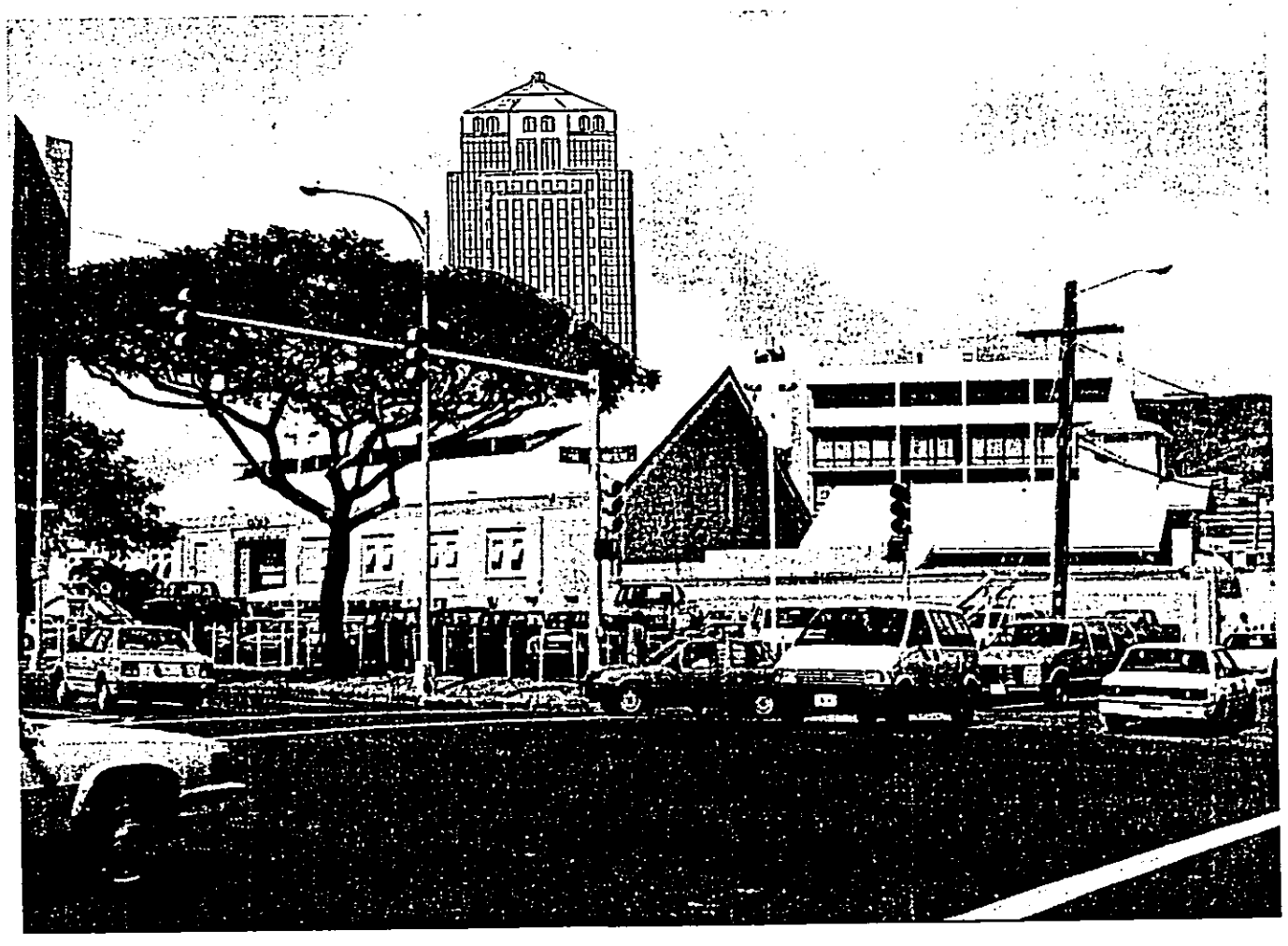

FIGURE 46 VIEW PLANE FROM TOP OF COOKE STREET

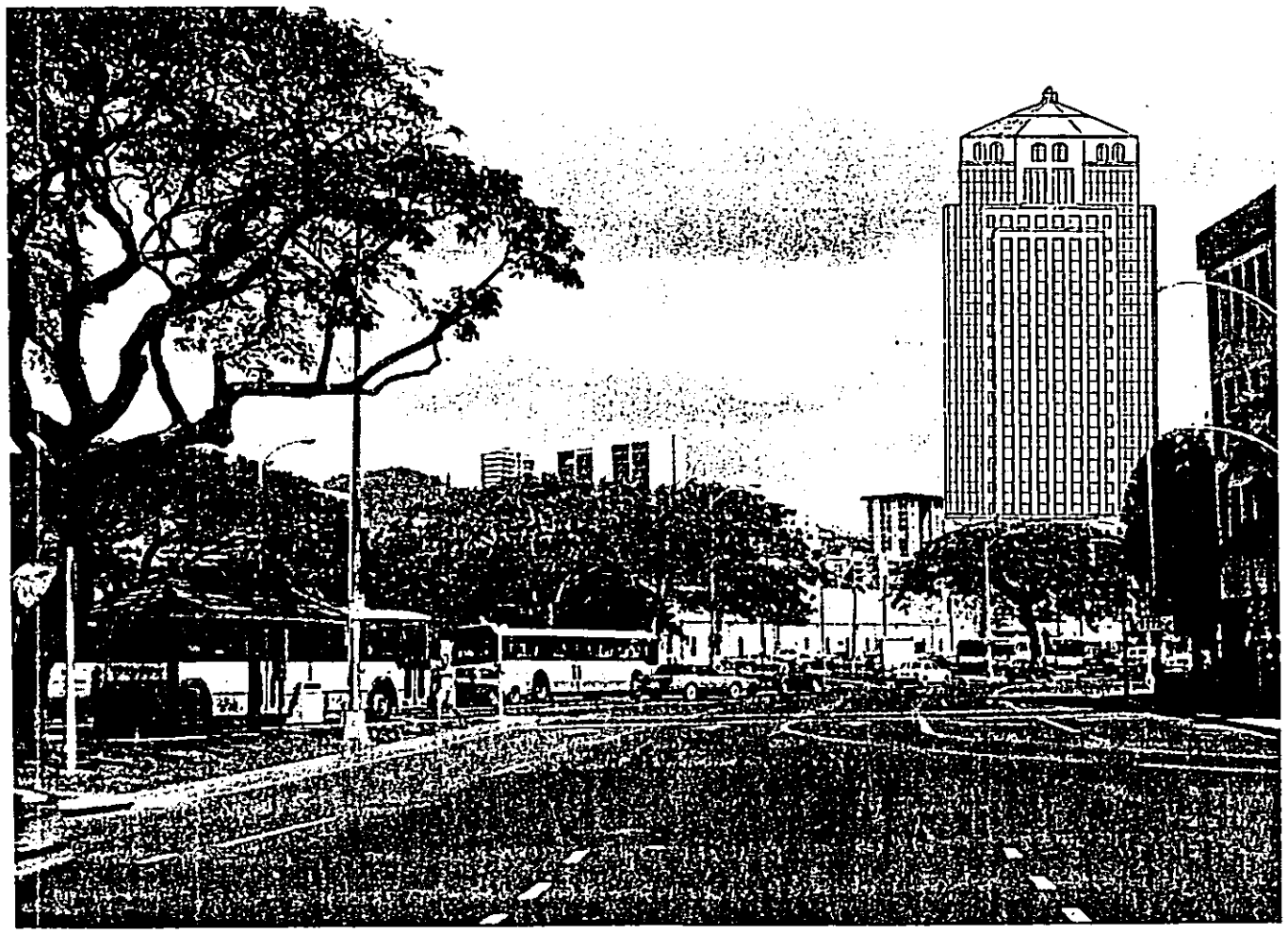

FIGURE 47 VIEW CORRIDOR FROM TOP OF SOUTH STREET

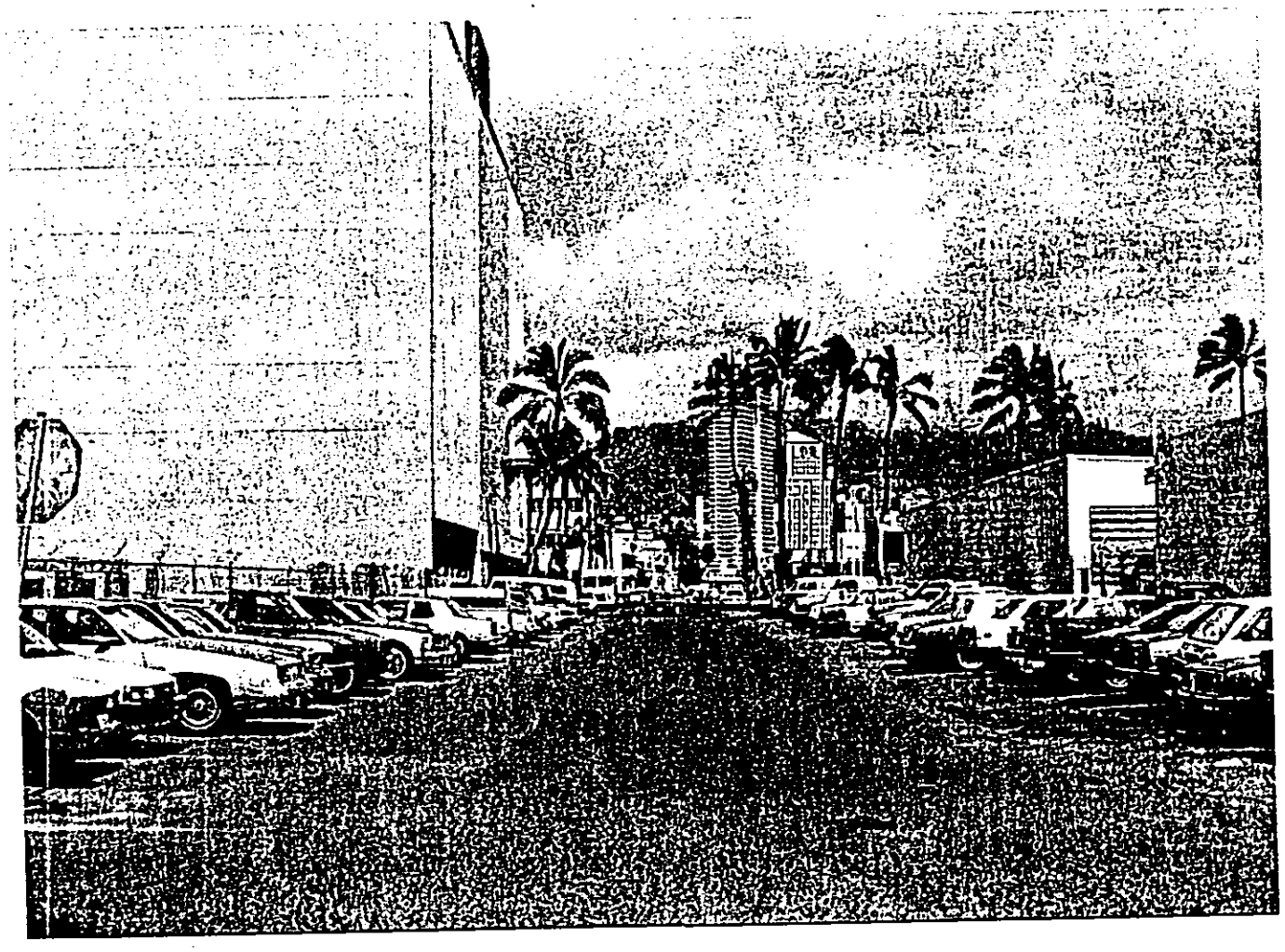

FIGURE 48 VIEW CORRIDOR LOOKING UP COOKE STREET

City office building would not obstruct views of the Koolau ridge.

The view corridor looking up Coral Street at Ilalo Street in Kakaako (Figure 49) does not include the project site. The Royal Capitol Plaza can be seen at the top of this view corridor.

Special Districts

Views of Thomas Square from the project site at the streets listed in the LUO (Beretania, Hotel and King Streets) are minimal at the project site as it now exists, mostly because of the distance to the park and the buildings between the site and the park. Once the street trees and landscaping have grown full after the project is completed, the view towards Thomas Square would be enhanced. The same would hold true for views along Beretania, Hotel and King Streets and from the Hawaii Capital District and the Honolulu Civic Center, in general, as listed in the LUO.

Conclusions

The proposed project would not significantly affect major identified view planes to and from Punchbowl and Kakaako. From Punchbowl, the buildings would be visible, but would not project above the shoreline. They would be visually compatible with the urbanized background, and with their landscaped surroundings would be an aesthetic improvement over the industrialized

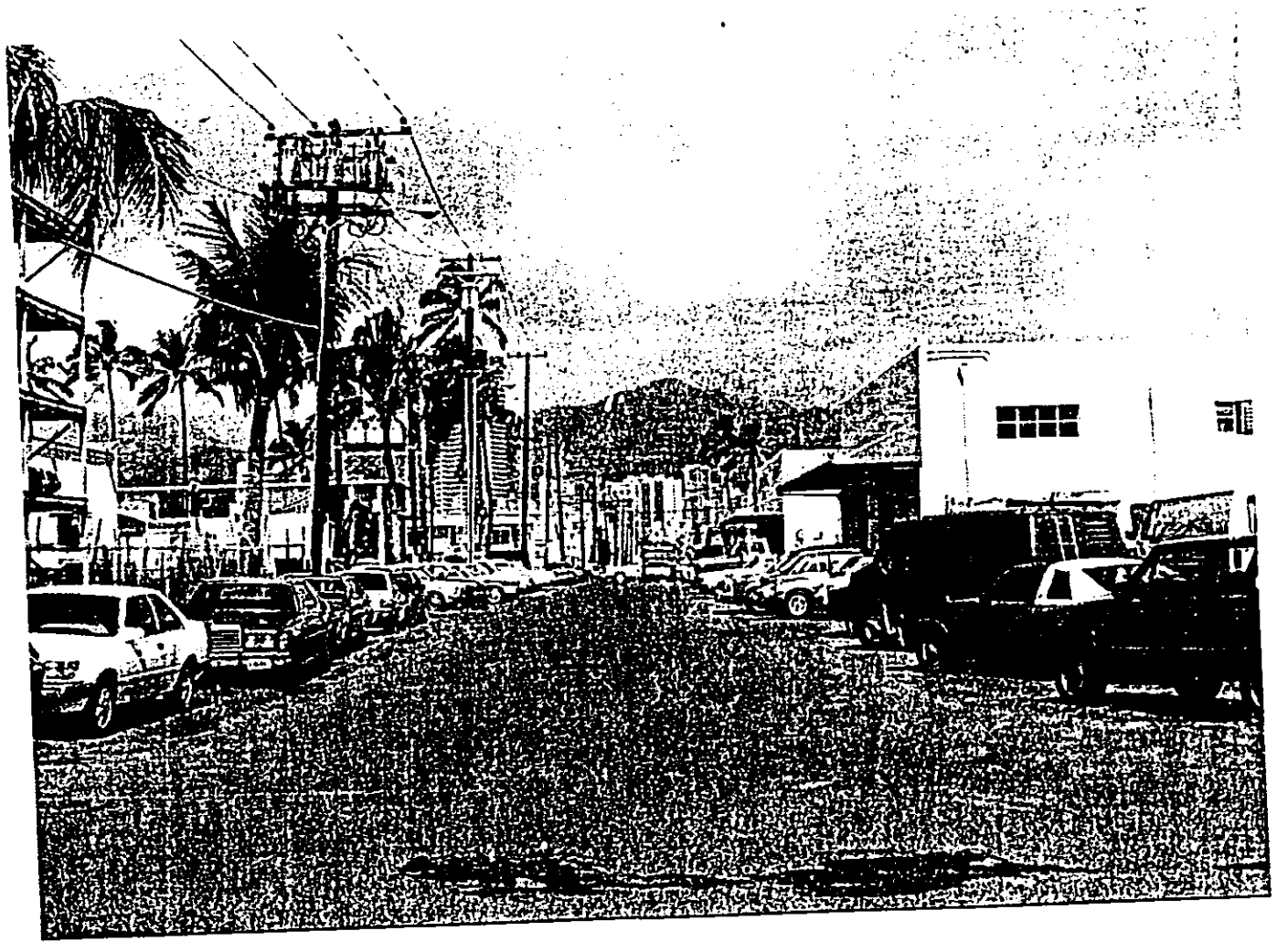

FIGURE 49 VIEW CORRIDOR LOOKING UP CORAL STREET

appearance of the existing bus barn. View planes from Kakaako towards the mountains would be only slightly impacted, if at all. It could be expected that future development within the Kakaako District would block views of the City office building in these view planes. Views from buildings mauka of the site could be negatively impacted, depending on the relative positions of the buildings and the height of an observer.

The existing view corridors through Kakaako are dominated by buildings, signs and utility poles and wires. The features of interest, Punchbowl and the Koolau ridge, would not be obscured by this project.

Views within the immediate project area, including those to and from the special design districts, would be enhanced by the project's attractive architecture, landscaping and water feature at its apex.

11.0 COMPARISON OF THE IMPACTS OF THE PROPOSED ACTION WITH THOSE OF THE ALTERNATIVES

11.0 COMPARISON OF THE IMPACTS OF THE PROPOSED ACTION WITH THOSE OF THE ALTERNATIVES

The impacts of the no-action alternative are a reversal of the impacts of the preferred action. Without the project, any negative impacts are avoided, but likewise, benefits of the project are not experienced. Because the project is expected to have substantial benefits and minimal negative impacts, the no-action alternative would be a comparatively poor choice.

The delayed action alternative has essentially the same impacts as the preferred action, except that as the length of the delay increases, receipt of the social and economic benefits of the action would be delayed. Inefficiencies in delivery of services would continue, as would office rental costs. Assuming the removal of bus maintenance operations would proceed independently, delay of the site redevelopment would likely result in an inefficient interim use of this central location for temporary parking.

Redevelopment of the Pawaa Annex would improve operations of the various affected public safety departments, but would not improve operations of other departments which are scattered about the city or housed in overcrowded or antiquated facilities. Furthermore, it would not improve the express bus operations. Negative impacts would be associated with the redevelopment work including elevated levels of particulate matter in the air, construction-related noise, and temporary worsening of the

traffic and parking problems along Young Street.

Purchase of the One Kapiolani Building would improve efficiency of those departments relocated there, and contribute to the City's goal of consolidating functions into the civic center area. Not all of the various departments' needs for space would be accommodated, however, and neither the public safety departments nor the express bus operations would benefit. The negative impacts associated with renovation of the building and construction of additional facilities would include elevated levels of particulate matter in the air, construction-related noise and probably some relatively minor disruptions of traffic flow and parking opportunities.

The impacts of the proposed action are more far-reaching than those of any of the alternative actions. The project would improve the delivery of services to the public from three distinct areas of City government: public safety, transportation and administration. The other alternatives would improve services in, at most, one of these areas. The proposed action, furthermore, would have a marked beneficial impact on the character of the neighborhood by replacing an industrial-type facility with a landscaped mall and attractive buildings appropriate to the Civic Center. The other alternatives do not have this potential. The negative impacts of the proposed action are not great, and many, especially those short-term impacts associated with construction, would also occur with either Pawaa redevelopment or purchase and renovation of the One Kapiolani

Building. Negative impacts peculiar to the preferred alternative include loss of an historic building and impacts on views resulting from the height of the City hall annex building. However, the architectural value of the bus barn is not significant and the City hall annex building would not significantly impact established view planes or view corridors. On balance, it would seem that the preferred alternative is clearly the most desirable choice.

12.0 RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF HUMANITY'S ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

12.0 RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF HUMANITY'S ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

The local short-term uses of the property at Alapai Street afforded by developing and operating a new police headquarters, City office building and transit mall would result in the enhancement of that property's long-term productivity. Placement of these public services in the downtown Civic Center area would maintain the preferred land use pattern for the long-term. The proposed action does not involve any trade-offs between short-term or long-term losses. Because these activities already exist in the vicinity of the project site, entirely new actions are not being proposed.

Future options for the land are not permanently foreclosed, as the property could, again, be redeveloped. The current redevelopment design allows new opportunities for using the land. In addition to the improved public services, the open space surrounding the buildings would be appropriate for picnic activities and possibly community events. Opportunities such as these do not presently exist at the site. Therefore, the proposed action does not narrow the range of beneficial uses of the environment, but broadens it.

The proposed action does not pose long-term risks to health or safety. Improvements in bus-automobile circulation planned in the design of the project would improve pedestrian and driver

safety. The new police facilities may result in a more safe environment for Oahu's residents and visitors.

13.0 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

13.0 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

Should the proposed action be implemented, several types of resources would be committed to use. Redevelopment of the land would represent the use of one resource. This would not, however, become an irreversible commitment.

The commitment of materials and labor are other resources. Some of the building materials could be recycled if necessary at some future date, but others could not, thus becoming an irretrievable commitment. Labor involved to plan, construct and operate the project would be an irretrievable and irreversible resource but would be compensated with wages.

The project area, being in a Special District and the Civic Center area, represents a cultural resource. Rather than loss or destruction of the resource, redevelopment of the site with landscaping and open space would enhance the value of the resource.

14.0 UNAVOIDABLE IMPACTS

14.0 UNAVOIDABLE IMPACTS

The purpose of this section is to address all probable adverse environmental effects which cannot be avoided, discuss the rationale for proceeding and indicate what other interests and considerations of governmental polices are thought to offset the effects. Where possible, reasonable alternatives to the proposed action that would avoid some or all of the adverse environmental effects are discussed.

Historic Sites

The proposed action would include demolition of the Alapai bus barn. This is not considered to be of overriding concern because of the low architectural value of the structure. The linkage of the site with the historic development of the City's transportation system would be maintained through development of the express bus mall.

Social

Clearly, the proposed action would increase the number of people frequenting the civic center area. However, this is an unavoidable consequence of consolidation of government functions within the Civic Center. Indirectly, this would have positive impacts on nearby businesses and would stimulate other economic activities in the area. During construction, residents and businesses in the immediate area may be inconvenienced by noise,

dust and interrupted utilities services. These impacts would be mitigated to the greatest possible extents, but their imposition is necessary in the context of providing the greater net positive benefits of the project.

View

The master plan calls for an office tower of about 250 feet in height. Analysis of the impacts of this structure on recognized view planes and view corridors shows minimal impacts. However, the views of some residents mauka of the building may be affected to some extent. Existing residences are far enough away that relatively minor proportions of any view would be obstructed. To afford the open space and park-like setting, a high-rise tower is necessary.

Traffic

Some significant traffic impacts are predicted in the project area in coming years. By 1993, 11 of the 14 intersections studied would be operating at levels of service E or F. In 10 of these cases, the bulk of the deterioration would result from the effects of other projects planned in the area. The proposed project would, however, significantly affect six intersections. Impacts at four of these could be effectively mitigated. The availability of enhanced express bus service may help to alleviate these impacts to some extent. It should also be noted that the traffic analysis assumed that trips associated with

shift changes at the police headquarters added to peak hour traffic, when in reality these trips occur at off-peak hours. Nevertheless, an increase in traffic congestion around the Civic Center is an inevitable consequence of consolidation of government offices in the area. The only way to avoid this would be to reverse the present policy and encourage decentralization of government offices. This would reduce the ease with which various agencies interact as well as reduce the accessability of agencies to the center of population.

Air Quality

The proposed action would increase the number of vehicles on nearby roads and, therefore, increase exhaust emissions. In itself, the project would not cause exceedances of state or federal ambient air quality standards, however, the resulting increase in traffic, when combined with traffic increases due to other planned projects in the area, would contribute to possible exceedances of the state's 1-hour and 8-hour carbon monoxide standards at locations very close to adjacent roadways. The federal motor vehicle emissions control program, however, will have the net effect of reducing concentrations of carbon monoxide on adjacent roadways by project completion in 1993. The net effect of this project would be to slightly retard the rate of improvement in air quality.

Noise

Increases in noise would be largely mitigated in project design, however, traffic and helicopter noises would increase ambient levels. Traffic-related noise increases were found to be insignificant, with maximum Phase I and Phase II increases of 0.5 and 1.0 dBA, respectively, along Beretania Street. Helicopter noises could present a more significant problem, however, depending on frequency and time-of-day of flights. Modeling of L_{dn} levels slowed that even with three flights per night (equivalent in impact to 30 flights per day) no residents would be exposed to excessive average noise levels. Peak ambient noise levels at the nearest residence, King Manor, could reach 85 dBA, a level roughly equivalent to the noise from a large truck at 50 feet distance. If these noises become excessive, perhaps operational restrictions could be implemented, but at present, the Police Department feels it necessary to have the flexibility to respond appropriately to unpredictable events.

15.0 MITIGATION MEASURES

15.0 MITIGATION MEASURES

Mitigation measures which would reduce significant, unavoidable, adverse impacts to insignificant levels are detailed below. A few of the minor potential impacts would be effectively mitigated by standard building permit requirements and these are not further elaborated here.

Mitigation of Impacts to Archaeological Remains

In the event that subsurface archaeological remains, such as burials, are encountered during construction, work in the immediate area would be stopped until staff from the Historic Sites Section of the Department of Land and Natural Resources can evaluate the situation and recommend specific mitigation measures.

Mitigation of Traffic Impacts

Based on the analysis performed in the traffic study, it has been determined that the proposed project would have a significant impact on the traffic operations of six of the study intersections. It is, therefore, important that these impacts be mitigated to an acceptable level using reasonable and justifiable means.

Due to the right-of-way restrictions, it may not be possible to mitigate some of the impacts of the proposed project. The intersections that were significantly impacted were examined to determine whether any mitigation measures were feasible. The following mitigation measures were considered feasible:

1. Widen westbound Beretania to provide two exclusive right-turn lanes.

2. Provide an additional southbound left-turn lane (total of three) on Punchbowl Street at King Street.
3. Widen southbound Ward Avenue at Beretania Street to provide one right-turn lane, one shared through and right-turn lane, and one through lane.

4. Restripe eastbound King Street at Ward Avenue to provide one left-turn-only lane and a shared through/left lane.

These four mitigation measures above would provide an improved level of service for the following intersections:

1. Punchbowl Street at Beretania Street.
2. Punchbowl Street at King Street.
3. Ward Avenue at Beretania Street.
4. Ward Avenue Street at King Street.

The results of implementing the recommended improvements are shown in Table 25.

TABLE 25

INTERSECTION LEVEL OF SERVICE ANALYSIS
FUTURE CONDITIONS WITH PROJECT AND MITIGATION
HONOLULU CIVIC CENTER

Intersection	1987 Existing AM Delay	1987 Existing AM LoS	1987 Existing PM Delay	1987 Existing PM LoS	1990 Background AM Delay	1990 Background AM LoS	1990 Background PM Delay	1990 Background PM LoS	1990 Background Plus Phase 1 AM Delay	1990 Background Plus Phase 1 AM LoS	1990 Background Plus Phase 1 PM Delay	1990 Background Plus Phase 1 PM LoS	1993 Background Plus Phase 1 AM Delay	1993 Background Plus Phase 1 AM LoS	1993 Background Plus Phase 1 PM Delay	1993 Background Plus Phase 1 PM LoS	1993 Background Plus Phase 1 Plus Phase 2 AM Delay	1993 Background Plus Phase 1 Plus Phase 2 AM LoS	1993 Background Plus Phase 1 Plus Phase 2 PM Delay	1993 Background Plus Phase 1 Plus Phase 2 PM LoS
Punchbowl Street at:																				
Vineyard Boulevard	42	E	31	D	134	F	127	F	135	F	122	F	140	F	123	F	141	F	125	F
Beretania Street	18	C	11	B	95	F	62	F	99	F	67	F	107	F	84	F	115	F	88	F
w/mitigation					62	F	35	D	74	F	38	D	89	F	43	E	96	F	44	E
King Street	9	B	10	B	38	D	29	D	46	E	36	D	56	E	48	E	89	F	46	E
w/mitigation					11	B	12	B	12	B	12	B	13	B	13	B	15	B	13	B
Alapai Street at:																				
Beretania Street	10	B	11	B	13	B	106	F	13	B	127	F	14	B	127	F	15	C	127	F
King Street	9	B	10	B	9	B	50	E	10	B	43	E	10	B	54	E	10	B	57	E
Kapiolani Boulevard	4	A	59	E	47	E	104	F	50	E	104	F	61	F	105	F	65	F	105	F
Ward Avenue at:																				
H1 Eastbound	26	D	3	A	39	D	3	A	132	F	3	A	63	F	4	A	63	F	4	A
Kinau Street	20	C	12	B	123	F	19	C	125	F	20	C	125	F	27	D	125	F	29	D
Beretania Street	51	E	10	B	92	F	14	B	95	F	14	B	100	F	16	C	113	F	16	C
w/mitigation					89	F	12	B	81	F	12	B	86	F	13	C	80	F	13	C
Hotel Street	3	A	3	A	26	D	3	A	26	D	40	E	35	D	4	A	35	D	6	B
King Street	10	B	10	B	60	F	16	C	61	F	29	D	74	F	30	D	74	F	61	F
w/mitigation					60	F	14	C	61	F	18	C	74	F	19	C	74	F	22	C
Kapiolani Boulevard	24	C	114	F	124	F	134	F	124	F	133	F	125	F	134	F	125	F	133	F
Victoria Street at:																				
Beretania Street	8	B	8	B	9	B	8	B	9	B	8	B	9	B	8	B	9	B	8	B
King Street	10	B	7	B	10	B	7	B	10	B	7	B	10	B	8	B	10	B	8	B

15-2a

It was determined that the following intersections could not effectively be mitigated:

1. Alapai Street at Beretania Street.
2. Ward Avenue at Hotel Street.

Mitigation of Air Quality Impacts

The principal means available to reduce the predicted CO concentrations are:

- improve intersections to increase capacity
- increase bus usage
- encourage car-pooling
- modify business/school starting hours
- develop mass transit system
- eliminate parking facilities to encourage use of public transit

Because there is a potential for fugitive dust due to the dry climate, it will be important for adequate dust control measures to be employed during the construction period. Dust control could be accomplished through frequent watering of unpaved roads and areas of exposed soil. The EPA estimates that twice daily watering can reduce dust emissions by as much as 50%. The soonest possible landscaping of completed areas would also help.

Any friable (able to be pulverized by hand) asbestos waste must be removed prior to general demolition of the buildings. The U.S. EPA National Emissions Standards for Hazardous Air Pollutants (NESHAPS) Asbestos Regulations (40 CFR 61, Subpart M) provide guidelines for preparation of the required notice to the EPA Administrator of intention to demolish, procedures for asbestos emission control during removal and standards for waste Mitigation techniques during removal include wetting the material and sealing it in appropriate bags. The demolition contractor would have to coordinate with the landfill operator (generally the City and County of Honolulu, Kapaa Landfill is used) so that a separate burial site is prepared and promptly covered after disposal of the asbestos waste.

Noise Mitigation Measures

The design of the facilities would include noise mitigation measures in the planning of the location and orientation of the air-conditioning equipment, exhaust fans, the trash compactor and loading docks, such that local noise regulations would be satisfied. Permit conditions to mitigate noise impacts of construction activities are as follows:

> "No permit shall allow construction activities creating excessive noise...before 7:00 a.m. and after 6:00 p.m. of the same day."

"No permit shall allow construction activities which emit noise in excess of ninety-five dB(A)...except between 9:00 a.m. and 5:30 p.m. of the same day."

"No permit shall allow construction activities which exceed the allowable noise levels on Sundays and on...[certain] holidays. Activities exceeding ninety-five dB(A) shall [also] be prohibited on Saturdays."

In addition, construction equipment and on-site vehicles or devices requiring an exhaust of gas or air must be equipped with mufflers. Also, construction vehicles using trafficways will satisfy the noise level requirements defined in Chapter 42, HRS (DOH, 1981a).

16.0 SUMMARY OF UNRESOLVED ISSUES

16.0 SUMMARY OF UNRESOLVED ISSUES

The principle unresolved issue is the final design of the City office building, including its ultimate height and aesthetic considerations. Conceptual plans call for a relatively tall building of approximately 250 feet (resulting in a relatively small footprint) having an architectural style compatible with the surrounding area (see Figure 6, Site Section, in Section 05.0 and Figure 42, Perspective Rendering in Section 10.10). The available, more advanced, plans for the police headquarters building show an external building appearance quite compatible with its setting. Assuming similar criteria are applied in design of the City office building, aesthetic compatibility should be achieved. The analysis of the impacts on significant views concluded that, even for the worst-case, 250-foot height, impacts would be insignificant. Consequently, it is appropriate to proceed with project planning without final resolution of this issue. Furthermore, the public would have an additional opportunity to comment on final design of this building at the public hearing which would be required prior to granting of the Special Districts Special Design Permit. The purpose of such a hearing would be to determine compatibility with the intended character of the Special District, and consequently, this would provide an opportunity to resolve any outstanding issues prior to commencement of the action.

A second unresolved issue is the location of temporary parking for vehicles displaced from the Alapai site during Phase I

construction activities. One potential location is on Board of Water Supply land across Beretania Street. Although plans have not been finalized, this solution will most likely resolve the problem. The minor nature of this issue is the overriding reason for proceeding without resolving the problem.

Appendix A

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Appendix B

The Consultation Process

B. THE CONSULTATION PROCESS

1. AGENCIES, ORGANIZATIONS AND INDIVIDUALS RESPONDING TO THE EIS PREPARATION NOTICE

(See Appendix G for Reproductions of Comments and Responses)

STATE OF HAWAII

Department of Health
Board of Land and Natural Resources

CITY AND COUNTY OF HONOLULU

Board of Water Supply
Department of General Planning
Department of Land Utilization
Department of Public Works

PRIVATE

AOAO King Manor Board of Directors
Royal State National Insurance Co., Ltd.
Honolulu City & County Employees Federal Credit Union
Straub Clinic & Hospital, Inc.
Goodwill Industries of Honolulu, Inc.

ORGANIZATIONS

The Outdoor Circle

2. AGENCIES, ORGANIZATIONS AND INDIVIDUALS CONSULTED PRIOR TO DRAFT EIS, BUT NO COMMENTS RECEIVED

STATE OF HAWAII

Department of Accounting and General Services
Department of Business and Economic Development
Department of Land and Natural Resources-
Division of Forestry and Wildlife

3. AGENCIES, ORGANIZATIONS AND INDIVIDUALS CONSULTED IN PREPARATION OF THE EIS

FEDERAL AGENCIES

William Kramer	Fish and Wildlife Service

STATE OF HAWAII

Matthew Akamu	Hawaii Community Development Authority
Milton Arakawa	" " " "
Arnold Imaoka	" " " "
Rex Johnson	" " " "
Eugene Akazawa	Department of Health
Roy Komoto	Department of Transportation
Orin Omon	" " "
Edward Sakoda	Department of Land and Natural Resources

CITY AND COUNTY OF HONOLULU

Ken Hirata	Department of Transportation Services
Norman Kanada	" " " "
Roy T. Kaneko	" " " "
Glenn S.L. Moir	" " " "
Howard K. Takara	" " " "
Kenneth L. Thong	" " " "
Takashi Higa	Building Department
Chester Hughes	Honolulu Police Department
Brandon Stone	" " "
Ray Azama	" " "
Eileen Mark	Dept. of Housing and Community Development
David Miyasato	Alapai Bus Maintenance Facility
Alwyn Morisako	Board of Water Supply
Albert Koga	" " " "
Chester Low	" " " "
Dan Takamatsu	Neal Blaisdell Center
Chuck Larsen	The Early Education Center
Masami Oishi	Employees Federal Credit Union
David Shiraishi	Dept. of Public Works
Richard Imamoto	Communications Coordinator
Mary Go	Dept. of General Planning

PRIVATE SECTOR

Jack E. Carman	Howard Needles, Tammen & Bergendoff
Jen-Chih Lee	" " " "
Thomas L. Williams	" " " "
Sam Chang	Sam Chang Architects & Associates
Edward Lee	" " " "
Tony Wilkens	" " " "
Warren David	Otis Elevator Co.

Robert Itagaki	Engineers Surveyors Hawaii, Inc.
Ron Kohn	Straub Clinic and Hospital
R. Kosaba	The Queen's Medical Center
Gordon Lum	Oahu Metropolitan Planning Organization
James L. McClaren	Ruth and Going, Inc.
Vincent Miyagawa	ECS, Inc.
Wayne Morioka	Architects Hawaii
Gordon Murakami	Royal Insurance Agency
Ronald Ushijima	" " "
Audrey Newman	The Nature Conservancy of Hawaii
Hachiro Okazaki	Okazaki Apartments
Nolan Pong	Hawaiian Telephone Company
Herb Soon	" " "
Ruben Tyau	Nakamura & Tyau, Inc.
Judy Ward	Scan/Line Office Interiors
Michael Wo	C S Wo and Sons
Phillip Wu	Mechanical Engineers of Hawaii Corp.

ORGANIZATIONS

William Grant	Downtown Improvement Association
Billie Beamer	Outdoor Circle
Susan Fristoe	" "
Carole Simone	" "
Jessica Lloyd-Rodgers	Downtown Neighborhood Board #13
Ray Malloy	Ala Moana/Kakaako Neighborhood Board #11
Raymond Young	King Manor Association of Apartment Owners

Appendix C

Persons, Firms or Agencies

Preparing This Statement

C. PERSONS, FIRMS OR AGENCIES PREPARING THIS STATEMENT

PARSONS HAWAII

1. George J. Krasnick

   Educational Background: Master of Science, Biological Oceanography.

   Professional Experience: Over sixteen years experience in project management and technical production of environmental assessments and impact analyses.

   Responsibilities: Coordinated efforts with subconsultants on technical environmental support studies; prepared the overall EIS document.

2. Juliane L. Mansur

   Educational Background: Master's Degree, Urban and Regional Planning.

   Professional Experience: Over three years experience in the field of Land Use and Environmental Planning.

   Responsibilities: Preparation of the EIS document.

3. Joseph D'Aquila

   Educational Background: Bachelor of Science, Mechanical Engineering.

   Professional Experience: Over seventeen years mechanical engineering experience involving design of mechanical systems and utilities for a wide variety of projects.

   Responsibilities: Assessment of public utilities and infrastructure.

SPENCER MASON, ARCHITECTS

1. Glenn E. Mason

   Educational Background: Master's Degree, Architecture.

   Professional Experience: Over eleven years experience providing architectural services, specializing in historic restoration.

   Responsibilities: Prepared historical analysis and analysis of project's effect on Special Districts.

2. Ann Yoklavich

Educational Background: Master of Science Degree in Architectual Studies.

Professional Experience: Over nine years experience in providing architectural services specializing in historic analysis.

Responsibilities: Prepared historical analysis of the project site.

COMMUNITY RESOURCES, INC.

1. John M. Knox

Educational Background: Ph.D, Psychology.

Professional Experience: Over eight years experience in community dialogue and social impact assessment.

Responsibilities: Assessment of impacts of the proposed project to surrounding communities and land uses.

2. David R. Curry

Educational Background: Master's Degree, Urban and Regional Planning.

Professional Experience: Over eight years experience in the field of Land Use Planning and social impact assessment.

Responsibilities: Assessment of impacts of the proposed project to surrounding communities and land uses.

3. Berna Cabacungan

Educational Background: Bachelor of Arts Degree, English

Professional Experience: Over five years experience in community outreach for social impact assessment.

Responsibilities: Facilitator of citizen input.

BARTON-ASCHMAN ASSOCIATES, INC.

1. Phillip Rowell

Educational Background: Master of Science Degree in Civil Engineering.
Professional Experience: Over 16 years experience in traffic impact analysis and transportation planning.
Responsibilities: Prepared traffic impact analysis for project site and surrounding vicinity.

2. Robert Stachelski

Educational Background: Bachelor's of Science in Civil Engineering
Professional Experience: Over two years of experience in traffic impact analysis and transportation engineering.
Responsibilities: Prepared traffic impact analysis for project site and surrounding vicinity.

DARBY & ASSOCIATES

1. Ronald A. Darby

Educational Background: Master of Science, Engineering.

Professional Experience: Over twenty-eight years of experience in acoustics and noise control engineering.

Responsibilities: Prepared noise impact analysis.

JAMES W. MORROW

1. James W. Morrow

Educational Background: Master of Science, Public Health.

Professional Experience: Over thirteen years experience in the field of environmental management, specializing in air quality impact assessment.

Responsibilities: Prepared air quality impact assessment.

DECISIONS ANALYSTS, HAWAII

1. Bruce S. Plasch

Educational Background: Ph.D, Engineering-Economic Systems.

Professional Experience: Over twenty years experience in economic, financial, market and demographic analysis.

Responsibilities: Prepared economic analysis.

Appendix D

Traffic Impacts Analysis

TRAFFIC IMPACT STUDY
FOR THE
TRANSPORTATION CENTER AND
CITY HALL ANNEX
IN
HONOLULU, HAWAII

Prepared For:

Parsons Hawaii
Honolulu, Hawaii

Prepared By:

Barton-Aschman Associates, Inc.
Pasadena, California

March, 1988

CONTENTS

LIST OF FIGURES AND TABLES

Figures

Tables

1.

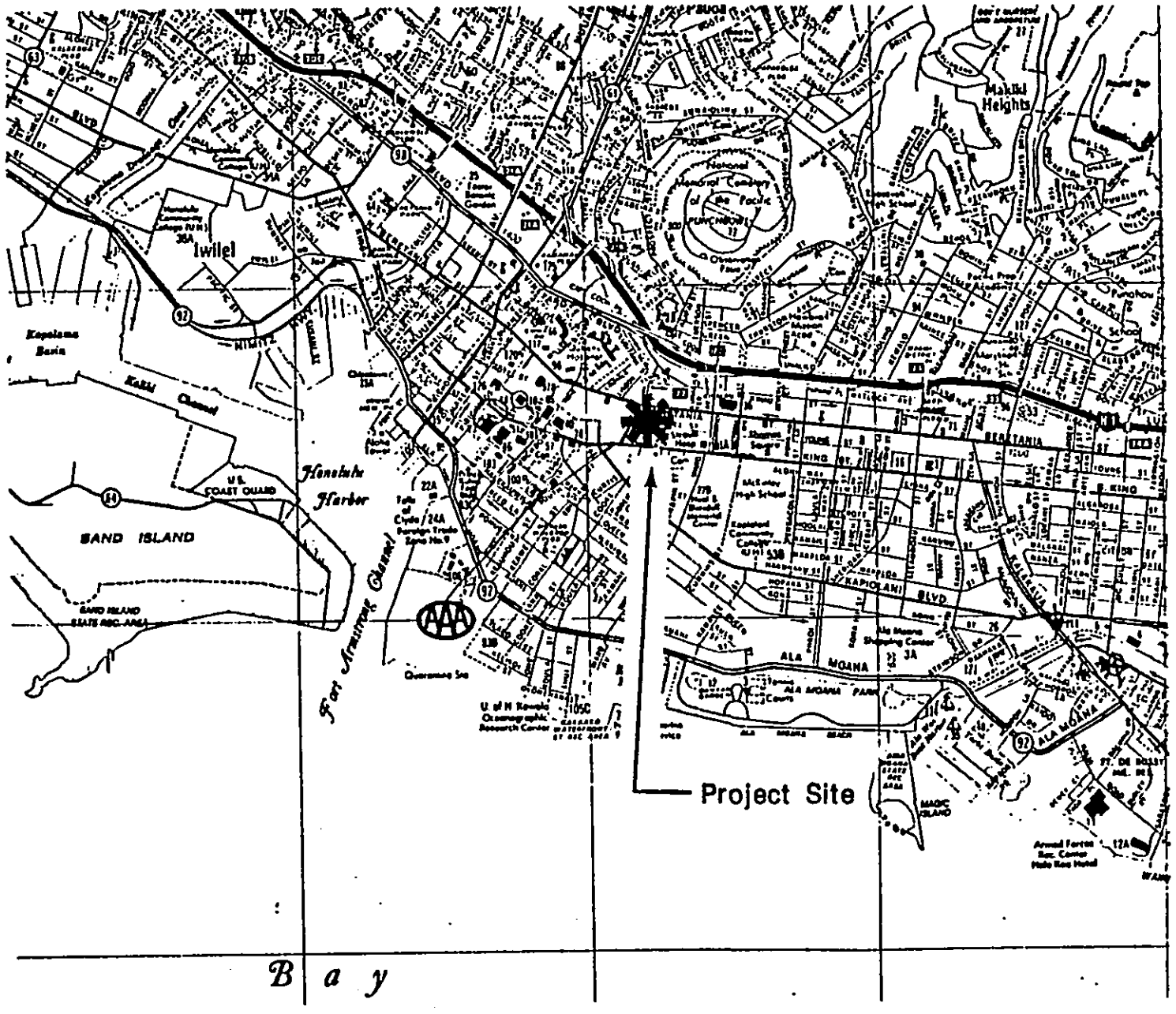
INTRODUCTION

The City and County of Honolulu is currently planning a new Transportation Center and Police Headquarters at the existing Alapai bus maintenance facility. As part of the environmental review process, an Environmental Impact Statement (EIS) is being prepared by Parsons Hawaii of Honolulu. A major element of the EIS is the analysis of the traffic impacts of the project. Barton-Aschman Associates, Inc., was retained to prepare the traffic impact portion of the EIS.

This introductory chapter of the traffic impact study presents a description of the proposed project and an overview of the study methodology.

DESCRIPTION OF PROPOSED PROJECT

The proposed project is located on a site bounded by Beretania Street on the north, Alapai Street on the west, and King Street on the south as shown in Figure 1. The site is currently used as a bus maintenance and parking facility.



REFERENCE: AMERICAN AUTOMOBILE ASSOCIATION

PROJECT SITE LOCATION

BARTON ASCHMAN ASSOCIATES, INC.

N

FIGURE 1

A new police headquarters building, a City Hall Annex, and bus terminal are to be constructed on the site. Construction is to take place in two phases. The first is to be the Police Headquarters, which would be completed in 1990. This facility would consist of approximately 251,000 square feet of floor area.

Phase 2 is to consist of the City Hall Annex and the bus terminal. The City Hall Annex would encompass approximately 309,000 square feet of floor area.

The bus terminal is to consist of 11 bus bays. Three are for local buses and would be along the east side of Alapai Street. The remaining eight bays are for express buses and would be located off-street.

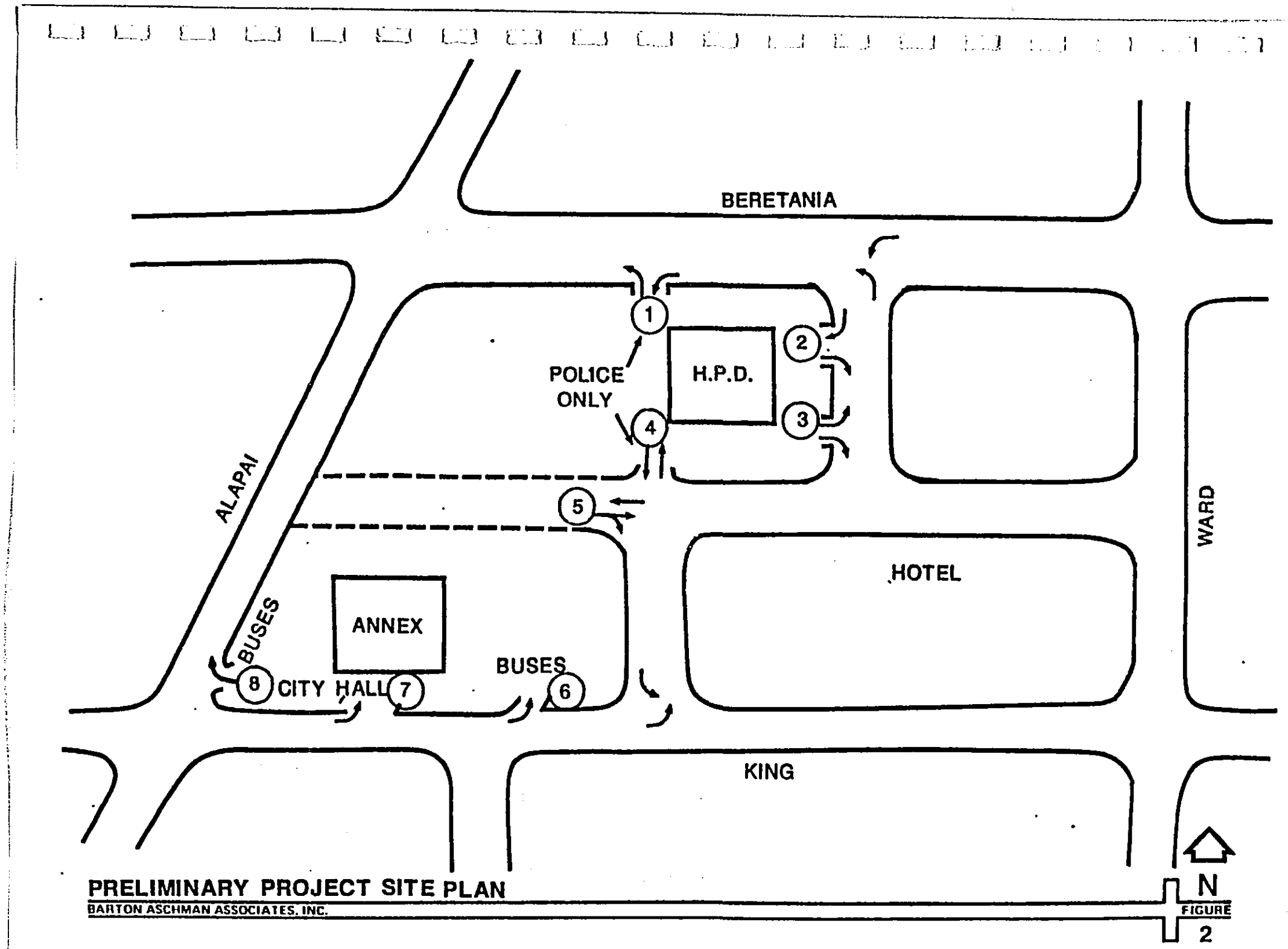
The locations of these facilities are shown in Figure 2. The police headquarters is to be located in the northeastern portion of the site. The annex is to be located in the southwestern portion of the site.

The project phasing is summarized in Table 1.

PURPOSE AND OBJECTIVE OF STUDY

The purpose of the traffic study is to determine the traffic-related impacts of the proposed project and to identify improvements needed to mitigate the adverse traffic impacts of the proposed project. A number of issues have been identified which also had to be addressed. The issues are summarized as follows:

(1) Should two additional north-south streets be constructed, one between Beretania Street and Hotel Street and one between Hotel and King Street?



PRELIMINARY PROJECT SITE PLAN

BARTON ASCHMAN ASSOCIATES, INC.

FIGURE 2

TABLE 1

SUMMARY OF PROPOSED PROJECT
HONOLULU TRANSPORTATION CENTER/CITY HALL ANNEX TRAFFIC STUDY
NOVEMBER, 1987

Phase and Building	Description	Estimated Completion
Phase 1		1990
HPD Headquarters	251,000 Square Feet	
Phase 2		1993
City Hall Annex Office	309,000 Square Feet	
Transportation Center	8 Express Bus Bays 6 Local Bus Bays	

(2) Can six local bus bays be located along the east side of Alapai Street or will queues south of Beretania Street limit the number of bus bays that can be provided?

In order to accomplish the purpose of the study and to address the pertinent issues, the following objectives were established:

(1) Determine existing morning and afternoon peak-hour turning volumes.

(2) Identify projects in the vicinity which would impact the intersections under study.

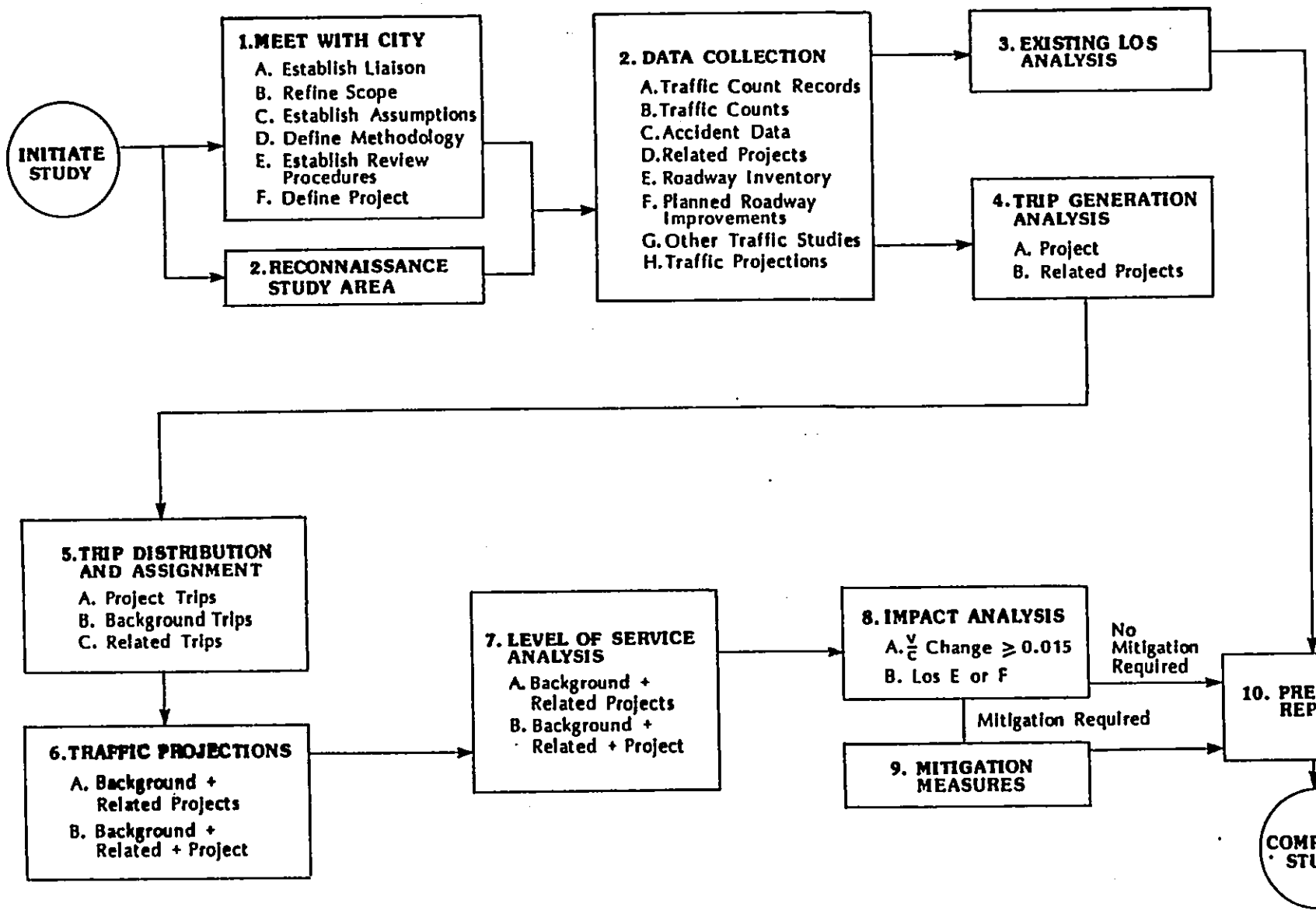
(3) Determine the approach and departure routes of project and related project trips.

(4) Estimate the weekday morning and afternoon peak-hour trips generated by the project and related projects.

(5) Conduct a level-of-service analysis of future conditions, both with and without the project to determine the project's traffic-related impacts.

(6) Determine if mitigation measures are required and identify feasible mitigation measures.

Figure 3 presents the order in which the tasks were undertaken.



TRAFFIC STUDY FLOW CHART

BARTON ASCHMAN ASSOCIATES, INC.

FIGURE 3

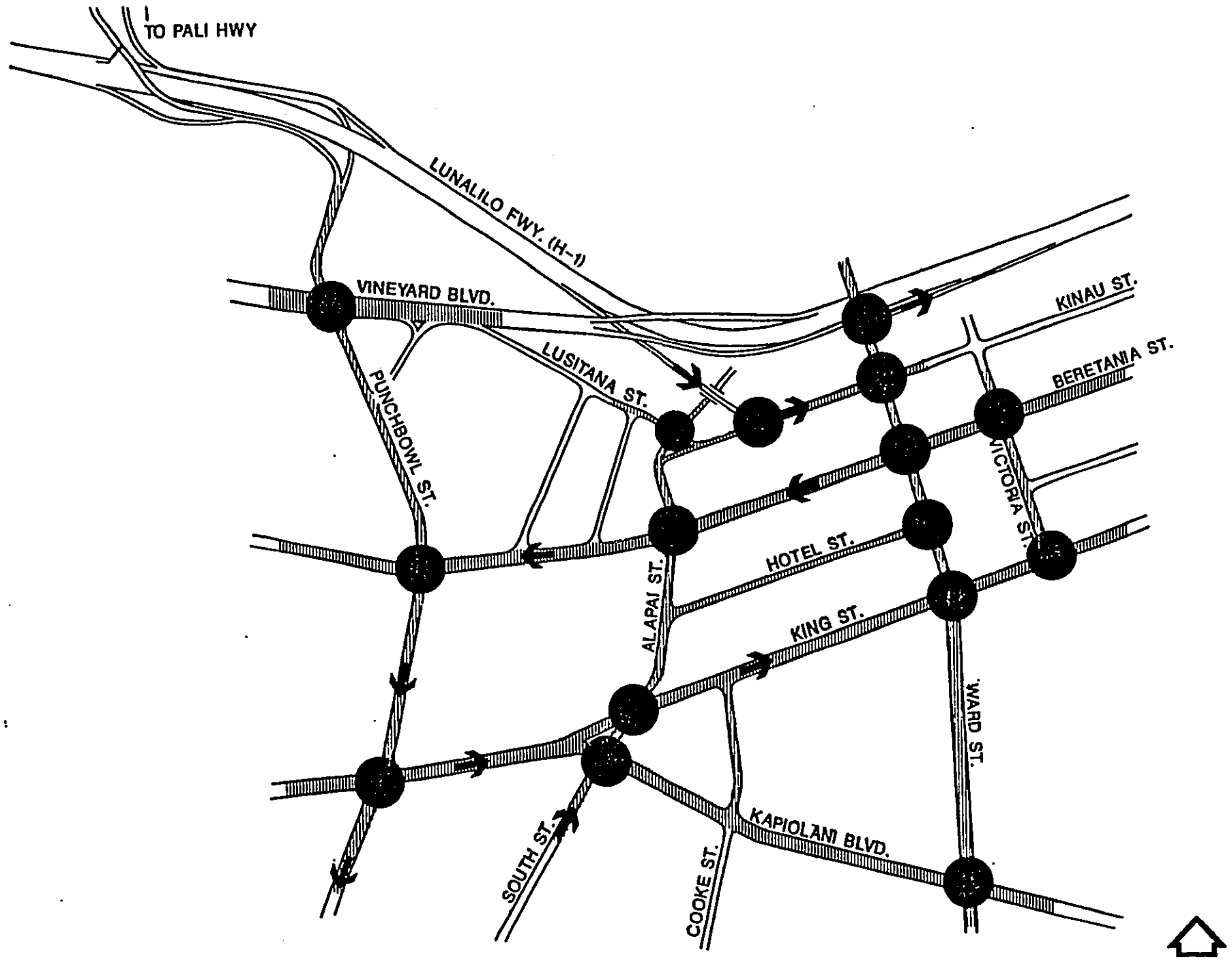
2.
EXISTING TRAFFIC CONDITIONS

The purpose of this chapter is to present a discussion of existing roadway and traffic conditions within the vicinity of the study area. Included in this discussion are the roadway network, existing volumes, and the level-of-service analysis

INTERSECTIONS STUDIED

During the scoping meeting with the City, the intersections that should be studied were agreed upon. These intersections are shown in Figure 4 and include the following:

(1) Punchbowl Street at Vineyard Boulevard
(2) Punchbowl Street at Beretania Street
(3) Punchbowl Street at King Street
(4) Alapai Street at Lusitania Street
(5) Alapai Street at Beretania Street
(6) Alapai Street at Hotel Street



STUDY INTERSECTIONS AND ROADWAYS

BARTON ASCHMAN ASSOCIATES, INC.

FIGURE 4

(7) Alapai Street at King Street
(8) Kinau Street at H1-Eastbound
(9) Ward Avenue at H1-Eastbound
(10) Ward Avenue at Kinau Street
(11) Ward Avenue at Beretania Street
(12) Ward Avenue at Hotel Street
(13) Ward Avenue at King Street
(14) Ward Avenue at Kapiolani Boulevard
(15) Victoria Street at Beretania Street
(16) Victoria Street at King Street

EXISTING ROADWAY CIRCULATION

Figure 4, as indicated earlier, shows the intersections studied and also indicates the roadway lane configurations on the study roadways. As shown, many of the streets near the project are high volume (i.e., multilane) one-way roadways. This street system creates many unique situations including project site access.

In the area immediately adjacent to the proposed project, there are three one-way streets. Beretania Street borders the project to the north and is a westbound one-way street with a 4-5 lane basic cross section. Bordering the project to the west is Alapai Street. This street is a northbound one-way street with three lanes turning left at Beretania Street. South of the project area is King Street which is an eastbound one-way street with a six-lane cross section.

Also of interest are two two-way streets, Hotel Street and Ward Avenue. Hotel Street is an east-west two-lane cross section street connecting Alapai Street and Ward Avenue. Hotel Street divides the project site into two parcels. Ward Avenue is a north-south street just east of the project site.

Ward Avenue has a four-lane cross section with a reversible lane during peak hours. Ward Avenue is one of the main accesses to H1 in the area.

EXISTING TRAFFIC VOLUMES

During October and November 1987, intersection turning movement counts were conducted for the study intersections. These counts were conducted for the morning (7:00-9:00 AM) and afternoon (3:00-6:00 PM) peak hours. The results of the morning and afternoon counts are shown in Figures 5 and 6, respectively.

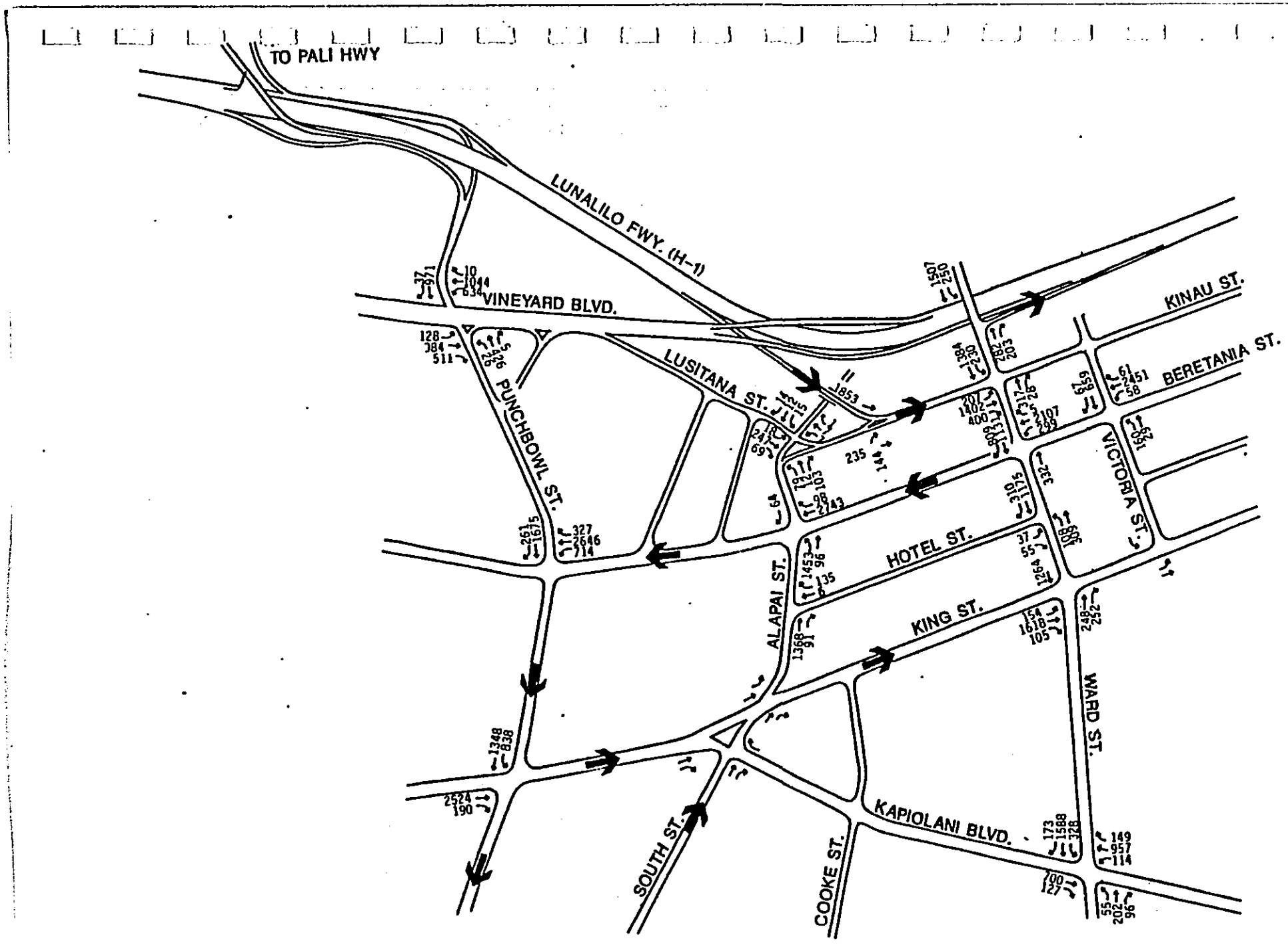
EXISTING BUS VOLUMES

Based on a study completed by Howard Needles Tammen & Bergendoff in October 1987, "Alapai Transit Center Program Documentation," the current bus fleet for the center is between 450 and 500 buses. By 1995, the bus fleet is anticipated to be approximately 600. This is very significant to operations along Alapai Street due to the difference in operational characteristics between buses and passenger vehicles.

LEVEL OF SERVICE CONCEPT

The Highway Capacity Manual, 1985, Operational Method was used to analyze the operational efficiencies of the intersections adjacent to the subject project. This method involves the calculation of an average vehicle delay, which is related to a level of service.

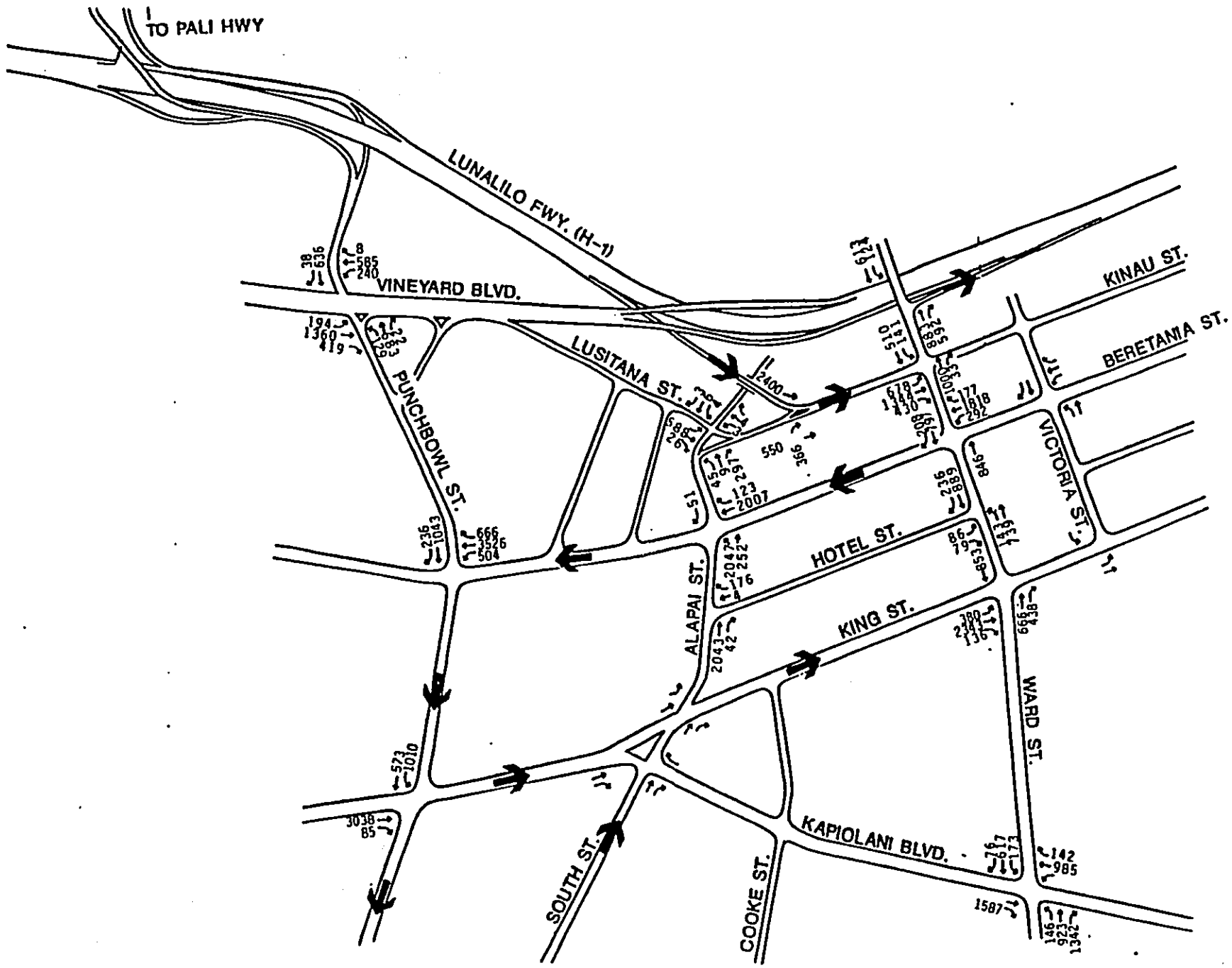
"Level of service" is a term which denotes any of an infinite number of differing combinations of traffic operating conditions that may occur on a given lane or roadway when it is subjected to various traffic volumes. Level of service is a qualitative measure of the effect of a number of



1987 EXISTING TRAFFIC VOLUMES – MORNING PEAK HOUR

BARTON ASCHMAN ASSOCIATES, INC.

FIGURE 5



1987 EXISTING TRAFFIC VOLUMES - AFTERNOON PEAK HOUR

BARTON ASCHMAN ASSOCIATES, INC.

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FIGURE 6

factors, which include speed and travel time, traffic interruptions, freedom to maneuver, safety, driving comfort, convenience, and operating cost. There are six levels of service, A through F, which relate to driving conditions from best to worst, respectively. The characteristics of traffic operations for these various levels of service are summarized in Table 2.

Corresponding to each level of service is an average vehicle delay. This is the expected delay of either existing or projected traffic volumes passing through a given intersection. The delay experienced on a particular roadway is dependent on physical characteristics of the roadway such as number of lanes, operational characteristics (one-way, two-way, turn prohibitions, bus stops, etc.), and the traffic using the roadway (number of turning movements, percent trucks or buses).

In general, Level of Service A represents free-flow conditions with no congestion. Level of service F, on the other hand, represents severe congestion with stop-and-go conditions. Many communities have adopted level of service D as a criterion for acceptable levels of service when future conditions are being analyzed.

LEVEL-OF-SERVICE ANALYSIS

A level-of-service analysis was conducted for existing conditions during the morning and afternoon peak hours. The results of these analyses are shown in Table 3.

As shown, during the morning peak hour, two intersections are operating at Level of Service E. These intersections are Punchbowl Street at Vineyard Boulevard and Ward Avenue at Beretania Street.

TABLE 2

INTERSECTION LEVEL-OF-SERVICE DEFINITIONS(1)

Level of service	Interpretation	Delay (Seconds)
A,B	Uncongested operations; all vehicles clear in a single signal cycle.	0 - 15.0
C	Light congestion; occasional backups on critical approaches.	15.1 - 25.0
D	Congestion on critical approaches, but intersection functional. Vehicles required to wait through more than one cycle during short peaks. No long-standing lines formed.	25.1 - 40.0
E	Severe congestion with some long-standing lines on critical approaches. Blockage of intersection may occur if traffic signal does not provide for protected turning movements.	40.1 - 60.0
F	Total breakdown with stop-and-go operation.	> 60.0

NOTES:

(1) Source: Highway Capacity Manual, 1985.

TABLE 3

HONOLULU CIVIC CENTER

Intersection	1987 Existing AM Delay (Seconds)	AM LoS	1987 Existing PM Delay (Seconds)	PM LoS
Punchbowl Street at:				
Vineyard Boulevard	42	E	31	D
Beretania Street	18	C	11	B
King Street	9	B	10	B
Alapai Street at:				
Beretania Street	10	B	11	B
King Street	9	B	10	B
Kapiolani Boulevard	4	A	59	E
Ward Avenue at:				
H1 Eastbound	26	D	3	A
Kinau Street	20	C	12	B
Beretania Street	51	E	10	B
Hotel Street	3	A	3	A
King Street	10	B	10	B
Kapiolani Boulevard	24	C	114	F
Victoria Street at:				
Beretania Street	8	B	8	B
King Street	10	B	7	B

During the afternoon peak hour, two other intersections operate at Level of Service E or worse. The intersection of Alapai Street at Kapiolani Boulevard operates at Level of Service E, while the intersection of Ward Avenue at Kapiolani Boulevard operates at Level of Service F.

As mentioned earlier, Level of Service D is typically the minimum acceptable level of service for major intersections. Presently, during the morning peak hour, the intersection of Ward at the H1-Eastbound operates at this level of service, as does Punchbowl at Vineyard during the afternoon peak hour.

3.

ANTICIPATED FUTURE BACKGROUND TRAFFIC CONDITIONS

The purpose of this chapter is to present and discuss future background traffic conditions. For this analysis, related projects have been identified. Related projects are defined as those projects either under construction or in the final planning stages which are located in the vicinity and would have an impact on the intersections being analyzed as part of this study.

Future background traffic projections have been estimated by applying a background growth rate to existing traffic volumes and then superimposing related project traffic volumes to obtain an estimate of total background trips. Background trips have been estimated for 1990 and 1993.

This chapter presents a listing of the related projects, discusses the trips generated by the related projects and presents estimated background traffic volumes. A level-of-service analysis for future conditions was conducted and the results are presented in the following chapter.

BACKGROUND GROWTH RATE

An annual background growth rate is typically applied to existing traffic volumes when estimating future conditions. The purpose of this growth rate is to estimate the increase in background traffic resulting from the inherent increase of traffic and not from specific projects, which are considered in the following section of this chapter.

During the initial meeting to scope out the study and establish the assumptions to be used, it was determined that an annual background growth rate of 1.5 percent per year would be used.

TRIP GENERATION FOR RELATED PROJECTS

The trip generation analysis for the related projects is based on the projects described in Table 4 and shown in Figure 7. This listing was compiled from information provided by the City and County of Honolulu, Departments of General Planning and Housing and Community Development, field reconnaissance of the study area, and discussions with adjacent property owners and developers.

To estimate the trips that would be generated by the related projects, the following assumptions were used:

(1) Trip generation rates were obtained from Trip Generation, An Informational Report (Third Edition, 1982) prepared by the Institute of Transportation Engineers.

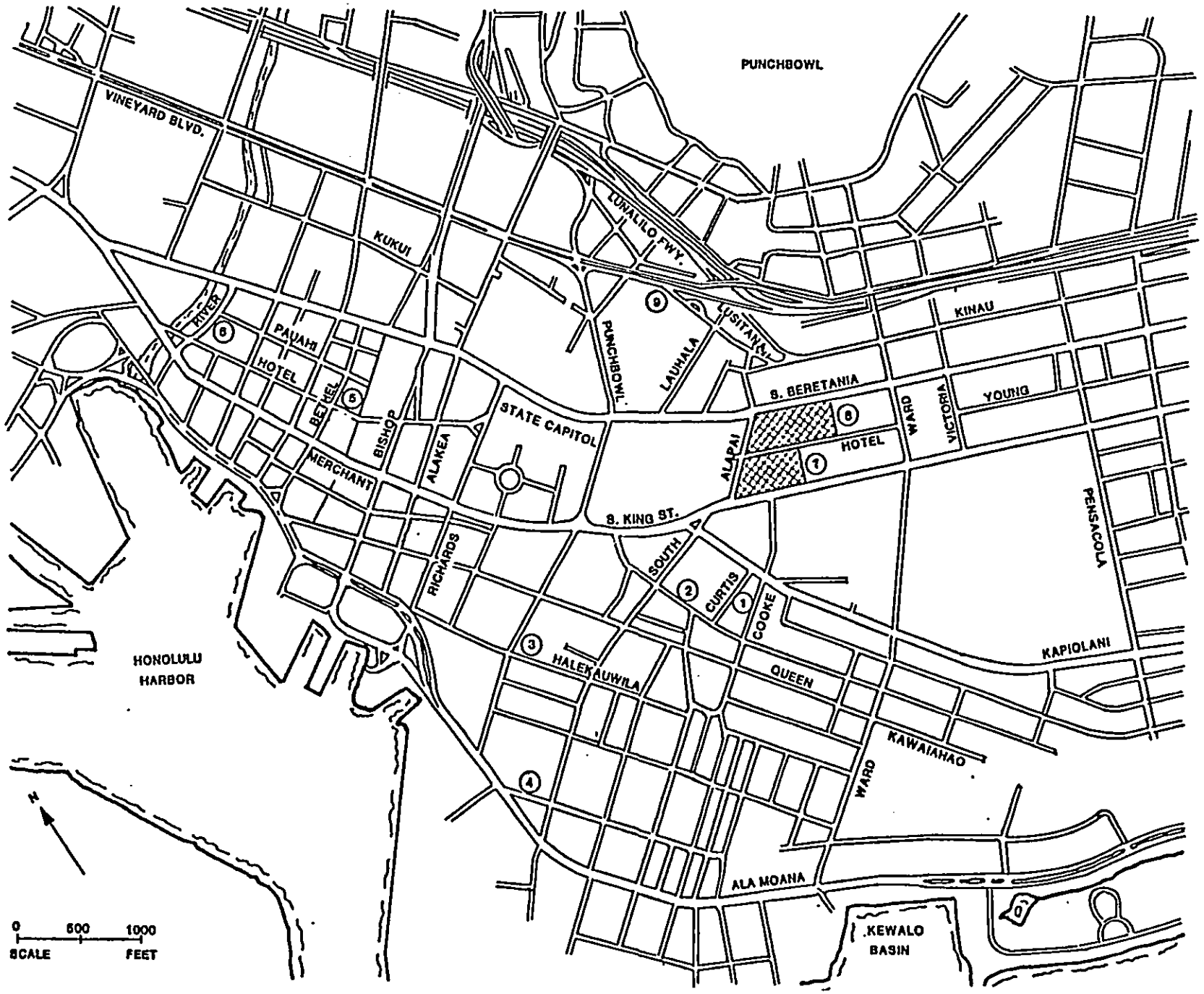
(2) Trip generation rates used were for the peak hour of the adjacent street.

TABLE 4

LISTING OF RELATED PROJECTS
HONOLULU TRANSPORTATION CENTER/CITY HALL ANNEX TRAFFIC STUDY
NOVEMBER, 1987

No.*	Project	Location	Description
1	Pacific Park Plaza	Curtis @ Kapiolani	261,860 SF Commercial 297 Dwelling Units
2	Queen Kapiolani Community Ctr.	Queen to Kapiolani @ South	166,172 SF Commercial 860,993 SF Industrial 260 Dwelling Units
3	State DOT Parking Garage	Halekauwela @ Punchbowl	419 Parking Spaces
4	One Waterfront Plaza & Tower	Ala Moana, South @ Punchbowl	546,785 SF Commercial 49,891 SF Industrial 310 Dwelling Units
5	Chinatown Gateway	Bethel @ Hotel	35,000 SF Commercial 200 Dwelling Units
6	Pauahi-River-Hotel Street Mall	Pauahi @ Hotel	20,000 SF Commercial
7	Straub Hospital Expansion	Hotel Street	110,000 SF Medical Office
8	Thomas Square Centre	Hotel Street	8,000 SF Medical Office
9	Queen's Medical Center Expansion	Kinau Street	140,000 SF Medical Office

* No. refers to location as shown on Figure 7.



LOCATION OF RELATED PROJECTS

BARTON-ASCHMAN ASSOCIATES, INC.

N

FIGURE 7

(3) Dwelling units were undefined; therefore, the rates for apartments were used.

(4) Trip generation rates for research and development offices were used for those land-uses defined as industrial.

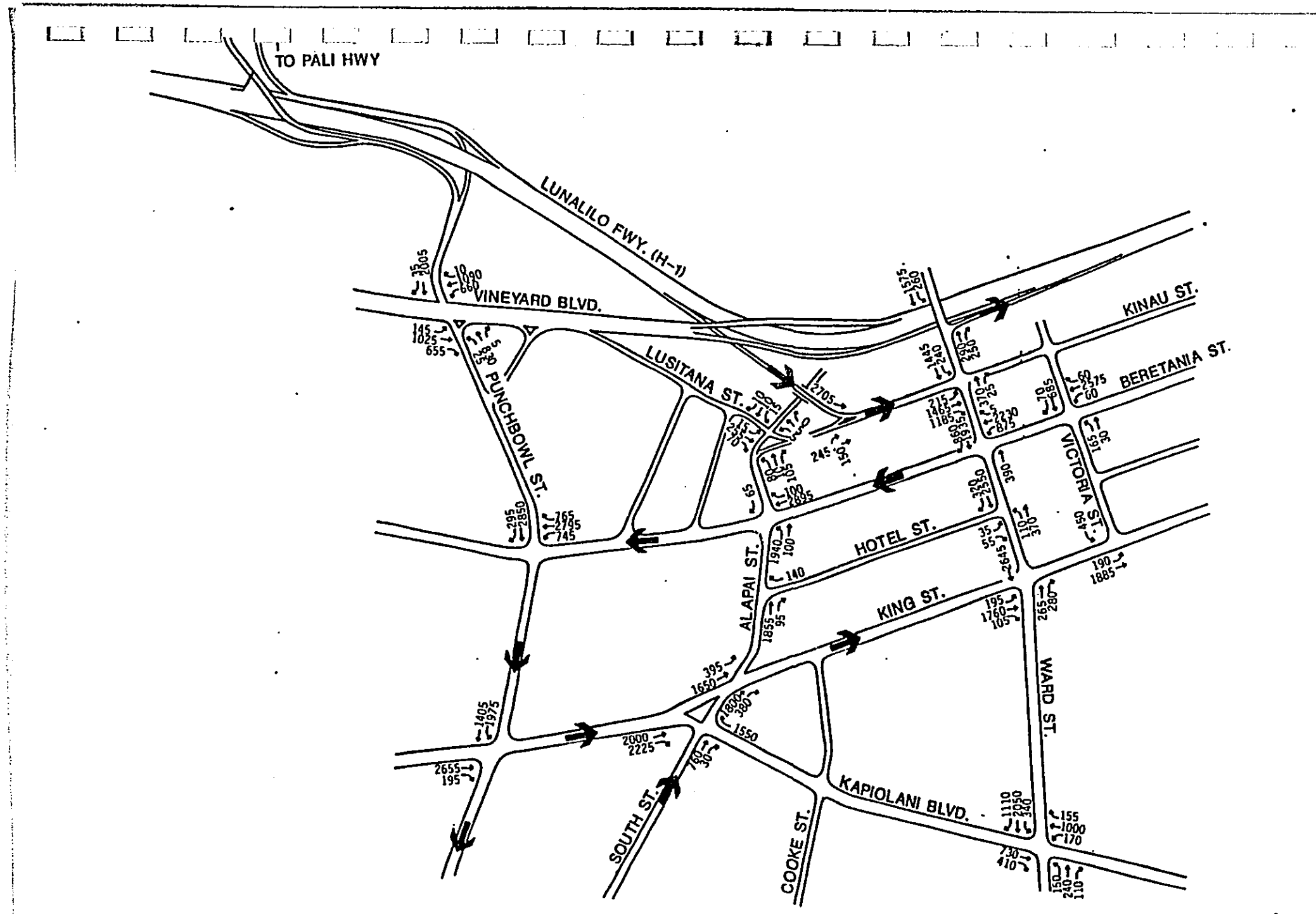
(5) The state DOT parking garage is to serve employees that are part of the existing background traffic. No discount was considered for this double counting. Standard assumptions for an office building were used to estimate the peak-hour trips into and out of the garage. These assumptions are (a) 60 percent of the spaces will be occupied or vacated during the morning and afternoon peak hours, respectively, (b) the directional split is 80/20 during each of the peak hours, and (c) the parking facility is 90 percent utilized. Using these assumptions, the morning inbound rate is 0.60 x 0.90 = 0.54 trips per space and the outbound rate is 0.60 x 0.90 x 0.25 = 0.14 trips per space. The rates would be reversed during the afternoon peak hour. The daily trip generation rate was estimated using a turnover rate of 1.5 per space. Therefore, the total number of weekday trips would be 1.5 x 2 = 3.0 per space.

The resulting trip generation rates and trip generation analysis is summarized in Table 5. Figures 8 and 9 present the estimated 1990 background traffic volumes, including trips generated by related projects, for the morning and afternoon peak hours, respectively.

TABLE 5
TRIP GENERATION ANALYSIS FOR RELATED PROJECTS
HONOLULU TRANSPORTATION CENTER/CITY HALL ANNEX TRAFFIC STUDY
NOVEMBER, 1987

				Trip Generation Rates						Trips Generated						
					AM Peak Hour		PM Peak Hour			AM Peak Hour			PM Peak Hour			
No.*	Project	Description	Units	Daily	In	Out	In	Out	Daily	In	Out	Total	In	Out	Total	
1.	Pacific Park Plaza	261,860 SF Comm.	TGSF	50.6	0.4	0.2	2.1	2.2	13,250	100	50	150	545	575	1,120	
		297 DU	Units	6.1	0.1	0.4	0.4	0.2	1,810	25	115	140	115	55	170	
		Subtotal							15,060	125	165	290	660	630	1,290	
2.	Queen Kapiolani Community Facility	166,172 SF Comm.	TGSF	66.7	0.9	0.8	2.9	2.1	11,080	145	130	275	480	345	825	
		860,993 SF Ind.	TGSF	5.3	2.5	0.2	0.1	0.9	4,560	2,150	170	2,320	85	770	855	
		260 DU	Units	6.1	0.1	0.4	0.4	0.2	1,585	25	100	125	100	50	150	
		Subtotal							17,225	2,320	400	2,720	665	1,165	1,830	
3.	State DOT Pkg Garg	419 Spaces	---	3.0	0.54	0.14	0.14	0.54	1,255	225	55	280	55	225	280	
		Subtotal							1,255	225	55	280	55	225	280	
4.	One Waterfront Plaza	546,785 SF Off.	TGSF	10.9	1.78	0.18	0.23	1.7	5,955	970	95	1,065	125	925	1,050	
		49,891 SF Ind.	TGSF	5.3	2.5	0.2	0.1	0.9	260	120	5	125	0	40	40	
		310 DU	Units	6.1	0.1	0.4	0.4	0.2	1,890	30	120	150	120	60	180	
		Subtotal							8,105	1,120	220	1,340	245	1,025	1,270	
5.	Chinatown Gateway	35,000 SF Comm.	TGSF	117.9	0.91	0.8	5.77	5.81	4,125	30	25	55	200	200	400	
		200 DU	Units						0	0	0	0	0	0	0	
		Subtotal							4,125	30	25	55	200	200	400	
6.	Pauahi-River Hotel St. Mall	20,000 SF Comm.	TGSF	117.9	0.91	0.8	5.77	5.81	2,355	15	15	30	115	115	230	
		Subtotal							2,355	15	15	30	115	115	230	
7.	Straub Hospital Exp.	110,000 SF Med. Office	TGSF	54.6	0.64	0.21	0.89	3.05	6,005	70	20	90	95	335	430	
		Subtotal							6,005	70	20	90	95	335	430	
8.	Thomas Sq. Centre	8,000 SF Med. Office	TGSF	54.6	0.64	0.21	0.89	3.05	435	5	0	5	5.	20	25	
		Subtotal							435	5	0	5	5	20	25	
9.	Queen's Medical Hospital Exp.	140,000 SF Med. Office	TGSF	54.6	0.64	0.21	0.89	3.05	7,640	85	25	110	120	425	545	
		Subtotal							7,640	85	25	110	120	425	545	

* No. refers to location as shown on Figure 7.



1990 BACKGROUND PLUS RELATED PROJECTS–MORNING

BARTON-ASCHMAN ASSOCIATES, INC.

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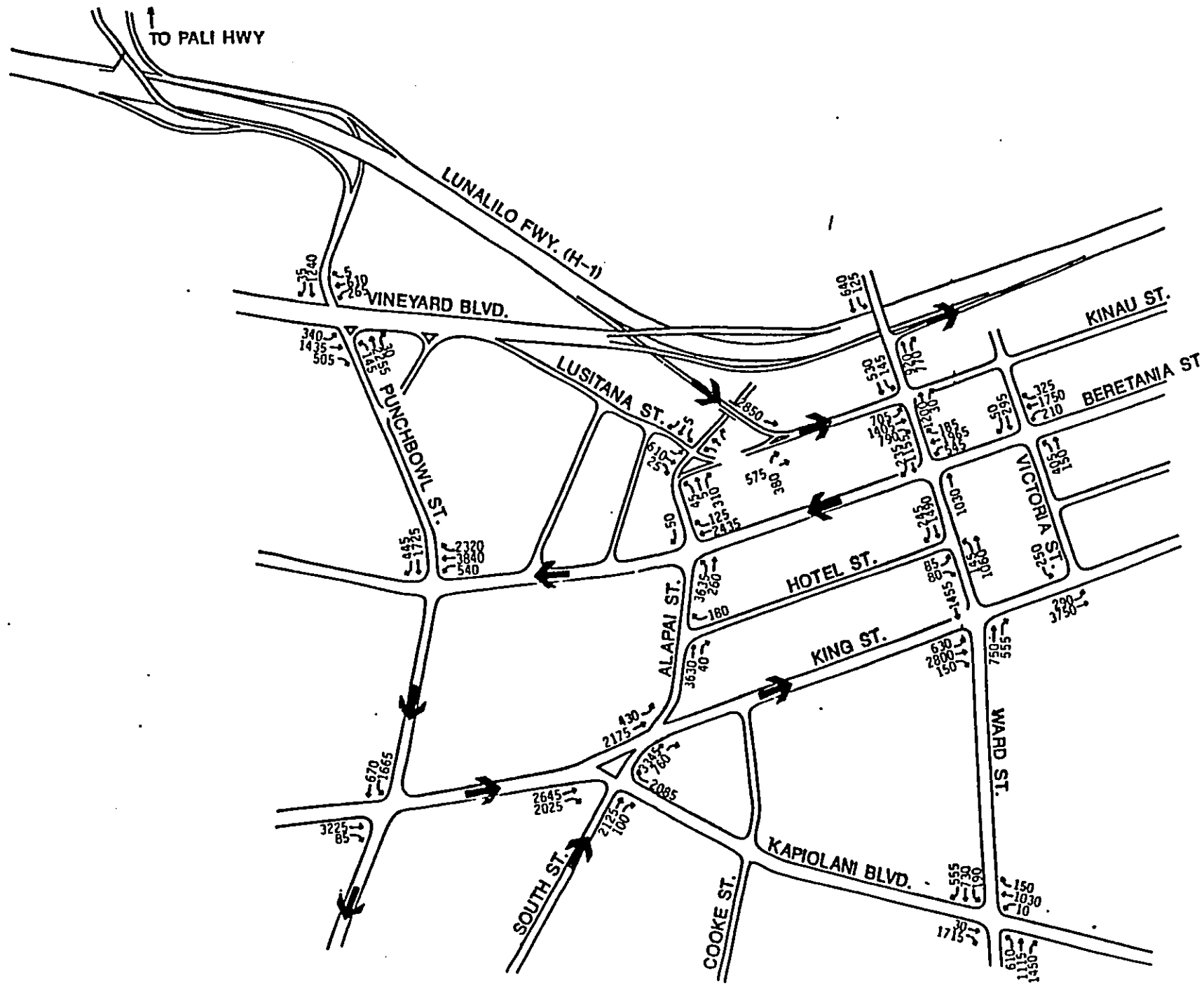
FIGURE 8



1990 BACKGROUND PLUS RELATED PROJECTS–AFTERNOON

BARTON-ASCHMAN ASSOCIATES, INC.

FIGURE 9

4.

PROJECT-RELATED TRAFFIC IMPACTS

This chapter presents the results of the trip generation, distribution, and assignment of project-related traffic by phase. The project-related trips for Phase 1 were superimposed on 1990 background traffic and Phase 2 project-related traffic was superimposed on 1993 background plus Phase 1 traffic to obtain traffic projections that were used for the level-of-service analysis. The level-of-service analysis results were then compared with the results of the previous chapter to determine the project-related traffic impacts. Potential mitigation measures were then identified and are presented in the following chapter.

TRIP GENERATION ANALYSIS FOR PROPOSED PROJECT

The trip generation analysis for the proposed project was conducted separately for each of the individual generators as follows:

- o Police Headquarters
- o City Hall Annex
- o Bus Terminal

Each of these generators is discussed separately in the following paragraphs.

POLICE HEADQUARTERS - The trip generation analysis for the HPD headquarters was conducted based on information provided by Ruth and Going, Inc., who are specialists in the planning of police facilities and who are on the study team. The trip generation analysis for the police station is subdivided into three categories: (a) police vehicles, (b) civilian employees, and (c) visitors.

(a) Police Vehicles — Information provided by HPD indicates that there are 73 incoming and 73 outgoing officers during the shift change. This would correspond to an additional 146 peak-hour vehicles. This estimate was, therefore, used as the peak hour traffic and superimposed on the peak hour of project-related traffic, even though it is anticipated that the shift change would occur prior to the peak hour of the adjacent street. This procedure is consistent with that of all traffic-impact studies in order to evaluate worse case conditions.

(b) Civilian Employees — Ruth and Going provided an estimate of 700 civilian employees. It is anticipated that these employees would have arrival and departure characteristics comparable to those of typical office workers. Therefore, trip generation rates for general offices based on the number of employees was used for this portion of the trip generation analysis.

(c) Visitors — Ruth and Going estimated that 50 parking spaces allowing a maximum of one hour parking would be sufficient. Typically, 50 to 60 percent of a parking lot will either fill up or empty during the morning and afternoon peak hours, respectively. The directional split is typically 90/10. Using these assumptions, it is estimated that during the morning there will be 30 inbound trips and 5 outbound. These volumes should be reversed during the afternoon peak hour. Weekday trips were estimated using a turnover rate of 10.0/space.

CITY HALL ANNEX - The City Hall Annex is to consist of 309,000 square feet of floor area. Trip generation rates for a typical office building were used as the basis for the trip generation analysis.

BUS TERMINAL - Bus schedules were obtained and used to estimate the number of buses that would either be generated by the site or would utilized the adjacent streets. During meetings at the initiation of the study, it was determined that by 1993, the bus fleet would be increased from 450 to 600 vehicles. Using this as a basis, the hourly estimate of buses was increased by 30 percent to obtain an estimate of the number of buses for the design year.

Table 6 shows the results of the trip generation analysis for each of the three generators.

TRIP DISTRIBUTION AND ASSIGNMENT

The project-related trips were distributed among the various approach routes to the site based on known census tract information for the area. According to this information, 15 percent of the traffic will have origins and destinations north of the project, 25 percent east, 50 percent west, and 10

TABLE 6

TRIP GENERATION ANALYSIS FOR PROPOSED PROJECT

Generator	Description	Units	Trip Generation Rates[1] Daily	AM Peak Hour In	AM Peak Hour Out	PM Peak Hour In	PM Peak Hour Out	Trips Generated Daily	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total
Phase 1 - HPD HQ.														
Police Vehicles			SEE TEXT						75	75	150	75	75	150
Civilian Employees	700 Employees	Emp.	3.59	0.35	0.06	0.08	0.24	2,510	245	40	285	55	165	220
Visitors	50 Parking Spaces	Space	10.00	0.60	0.10	0.10	0.60	500	30	5	55	5	30	35
SUBTOTAL PHASE 1									350	120	470	135	270	405
Phase 2 - Annex and Transportation Center														
City Hall Annex Office	309,000 SF Office	TGSF	10.90	1.78	0.18	0.23	1.70	3,365	550	55	605	70	525	595
Express Buses	600 Bus Fleet			SEE TEXT										
SUBTOTAL PHASE 2									550	55	605	70	525	595
TOTAL PHASE 1 AND 2									900	175	1,075	205	795	1,000

NOTE:

(1) Rates are for peak hour of adjacent street.

percent south. The inbound and outbound trip distributions are shown graphically in Figures 10 and 11. It should be noted that, due to the additional roadway facilities recommended for site access, the trip distribution for both phases of the proposed project is the same, as are the morning and afternoon peak-hour distributions.

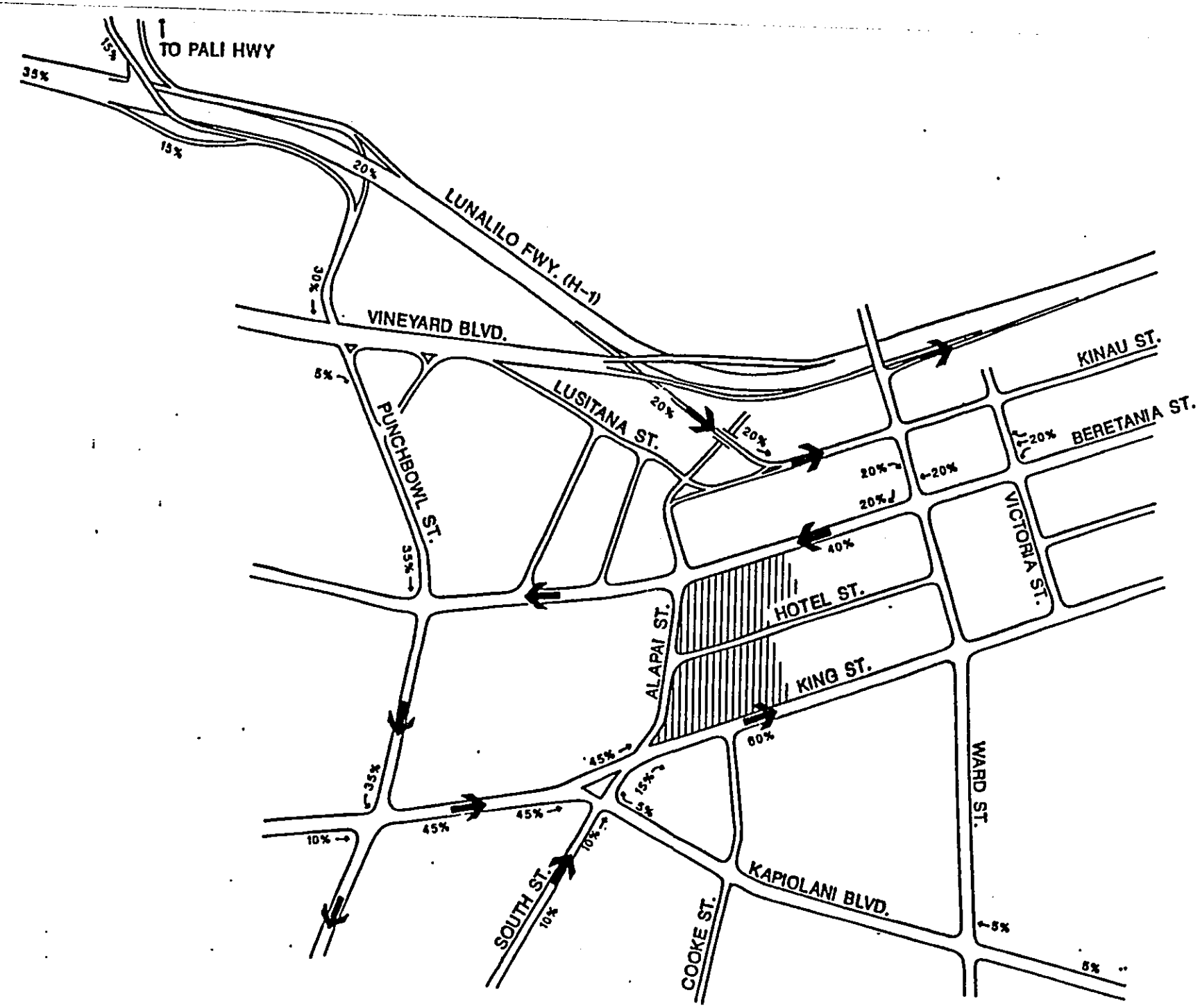
FUTURE BACKGROUND PLUS PROJECT TRAFFIC VOLUMES

As stated earlier, the project was analyzed in two separate phases, Phase 1 and Phase 2. The Phase 1 traffic analysis was conducted for 1990 background traffic conditions. These conditions were estimated by applying an annual growth rate of 1.5 percent to all traffic volumes, then superimposing related project trips. The Phase 1 traffic was then added to the 1990 background traffic. The resulting volumes are shown in Figures 12 and 13 for morning and afternoon peak hours, respectively.

Phase 2 was superimposed on 1993 background plus Phase 1 traffic conditions. To obtain 1993 background conditions, the 1.5 percent growth rate was applied to existing traffic volumes for an additional three years. The related project trips were then added as was the Phase 1 traffic. The resulting 1993 Background plus Phase 1 plus Phase 2 traffic volumes are shown in Figures 14 and 15 for morning and afternoon peak hours, respectively.

LEVEL-OF-SERVICE ANALYSIS FOR FUTURE BACKGROUND PLUS PROJECT CONDITIONS

The traffic impacts due to Phase 1 and Phase 2 of the proposed development are summarized in Table 7 using the level-of-service analysis. The delays and levels of service are shown for the following conditions:



INBOUND PROJECT TRIP DISTRIBUTION

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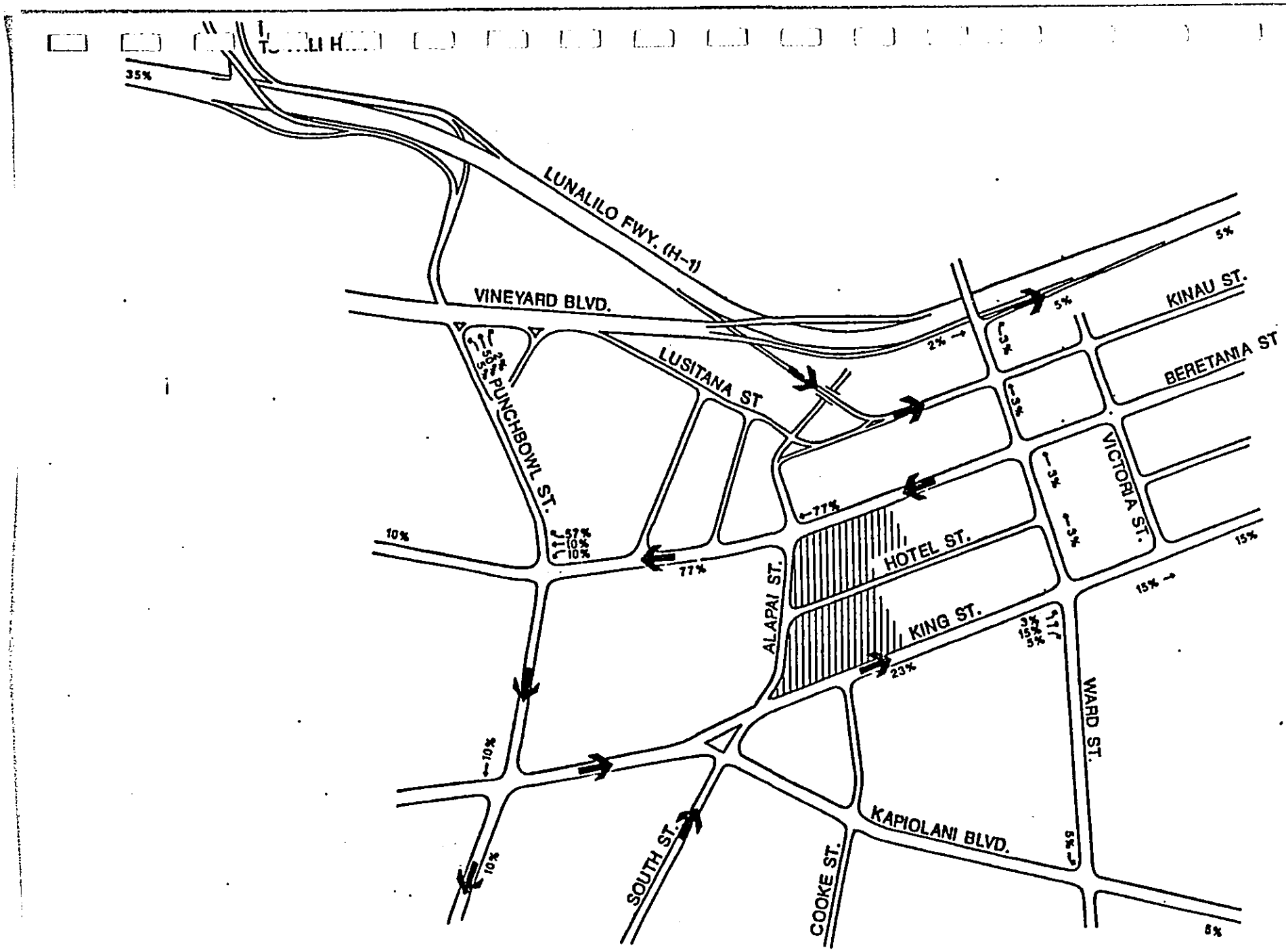
FIGURE 10



OUTBOUND PROJECT TRIP DISTRIBUTION

BARTON ASCHMAN ASSOCIATES, INC.

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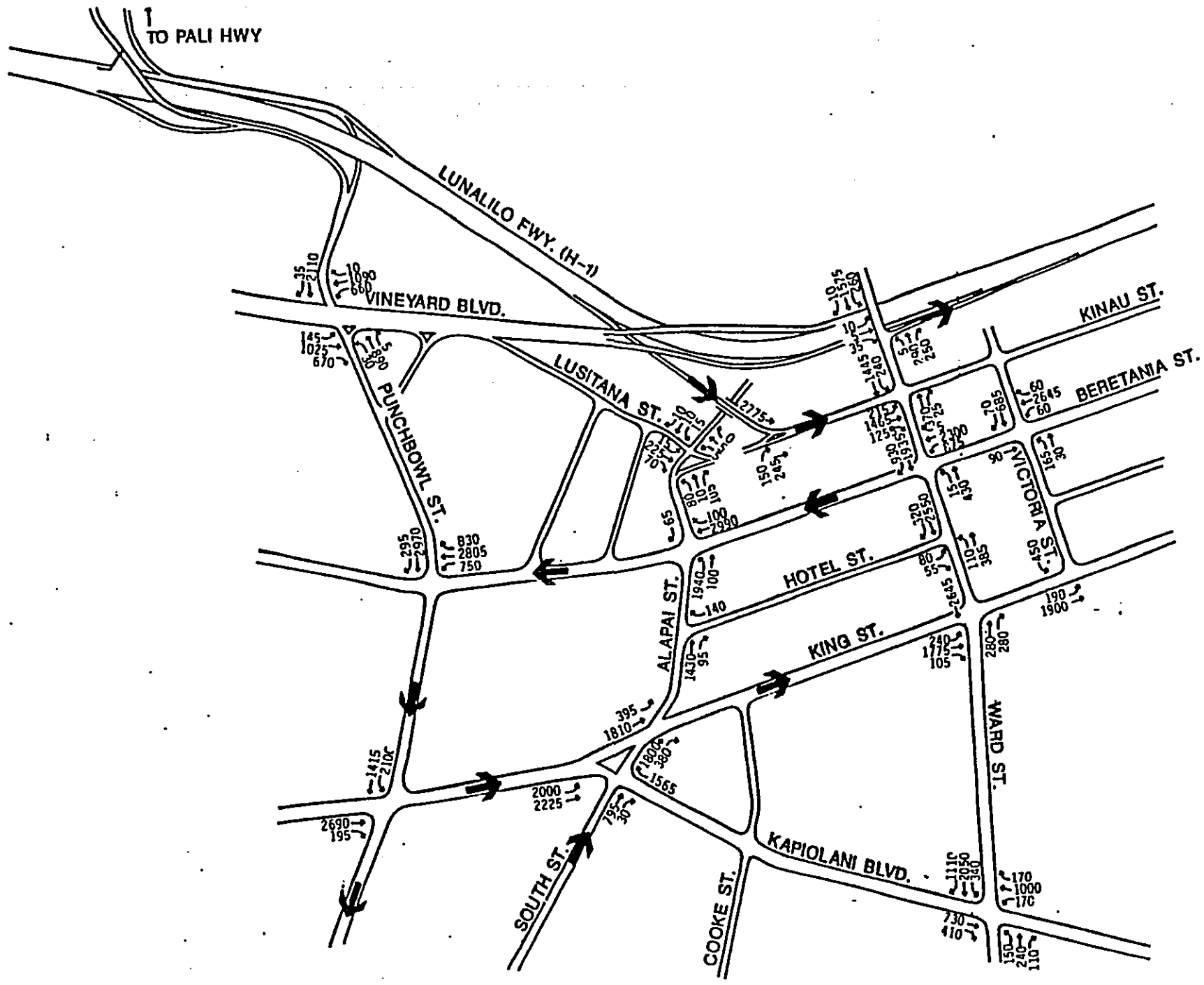
FIGURE 11



1990 BACKGROUND PLUS RELATED PLUS PHASE 1-MORNING

BARTON-ASCHMAN ASSOCIATES, INC.

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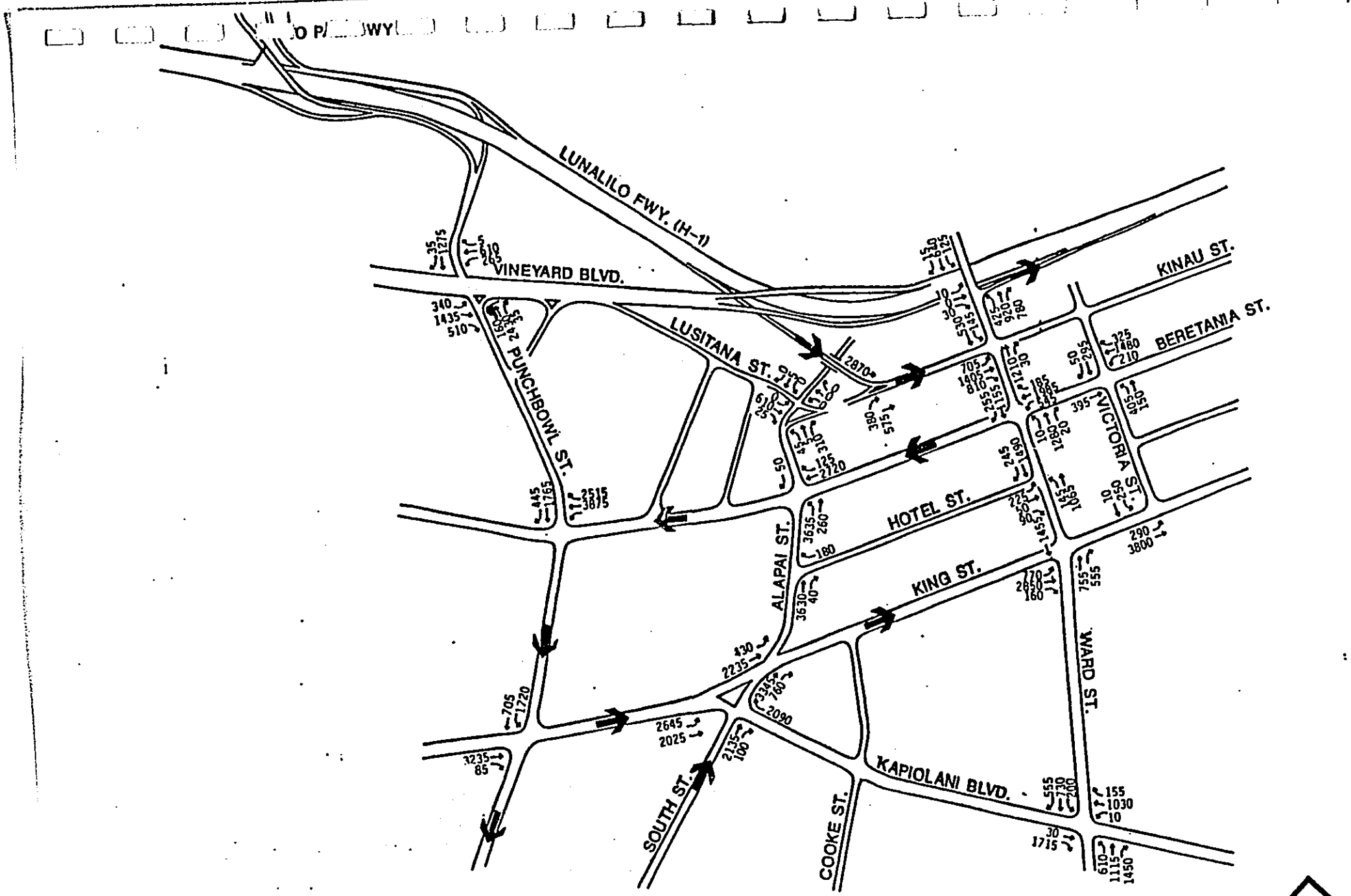
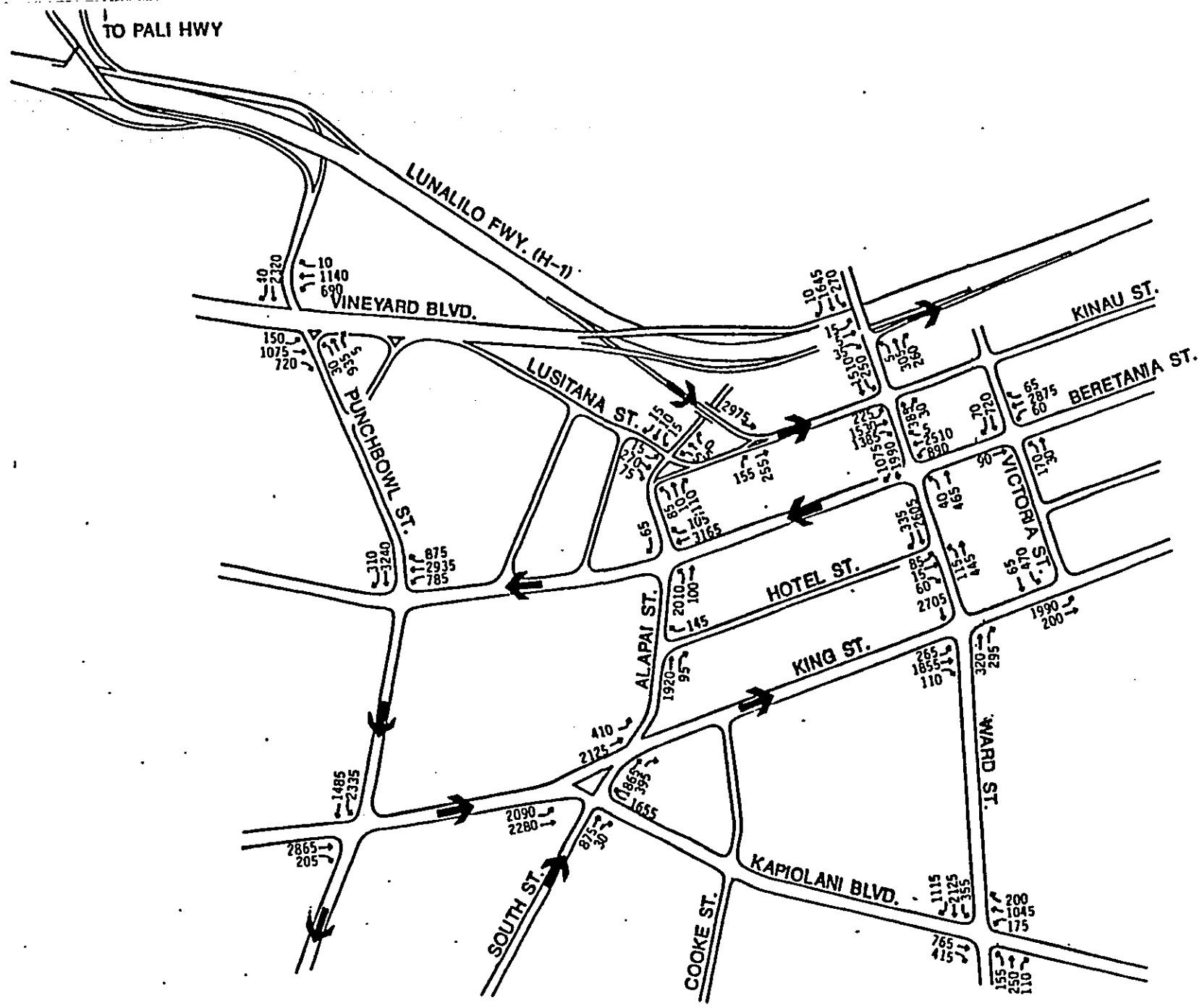
FIGURE 12



1990 BACKGROUND PLUS RELATED PLUS PHASE 1-AFTERNOON

BARTON ASCHMAN ASSOCIATES, INC.

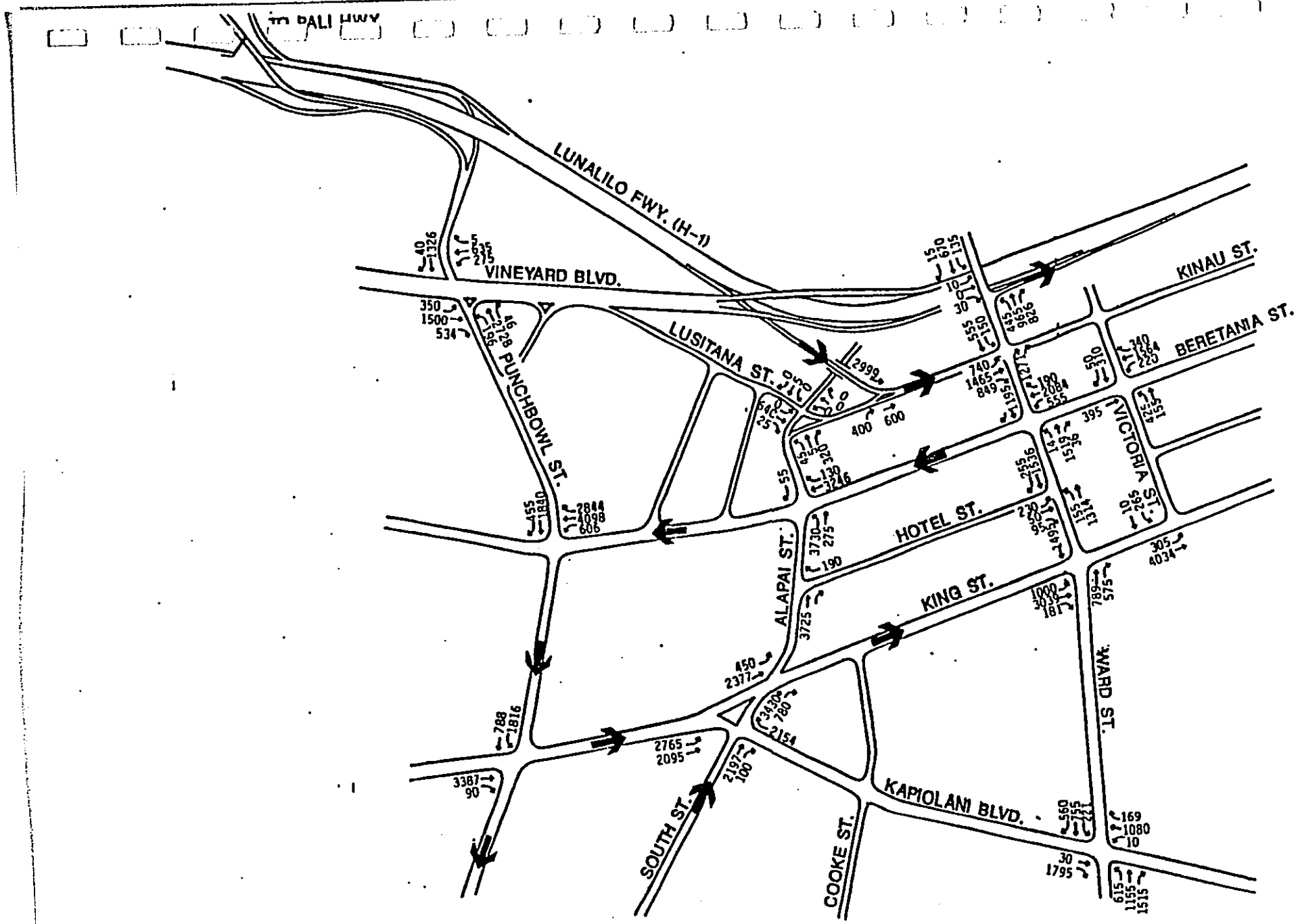
FIGURE 13



1993 BACKGROUND + RELATED PROJECTS + PHASE 1 + PHASE 2 – MORNING

BARTON ASCHMAN ASSOCIATES, INC.

FIGURE 14



1993 BACKGROUND + RELATED PROJECTS + PHASE 1 + PHASE 2 –AFTERNOON

BARTON-ASCHMAN ASSOCIATES, INC.

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FIGURE 15

TABLE 7

INTERSECTION LEVEL-OF-SERVICE ANALYSIS
FUTURE CONDITIONS WITH PROJECT
HONOLULU CIVIC CENTER

	1987 Existing				1990 Background				1990 Background Plus Phase 1				1993 Background Plus Phase 1				1993 Background Plus Phase 1 Plus Phase 2			
	AM		PM		AM		PM		AM		PM		AM		PM		AM		PM	
Intersection	Delay	LoS	Delay	LoS	Delay	LoS	Delay	LoS	Delay	LoS	Delay	LoS	Delay	LoS	Delay	LoS	Delay	LoS	Delay	LoS
Punchbowl Street at:																				
Vineyard Boulevard	42	E	31	D	134	F	127	F	135	F	122	F	140	F	123	F	141	F	125	F
Beretania Street	18	C	11	B	95	F	62	F	99	F	67	F	107	F	84	F	115	F	88	F
King Street	9	B	10	B	38	D	29	D	46	E	36	D	56	E	48	E	89	F	46	E
Alapai Street at:																				
Beretania Street	10	B	11	B	13	B	106	F	13	B	127	F	14	B	127	F	15	C	127	F
King Street	9	B	10	B	9	B	50	E	10	B	43	E	10	B	54	E	10	B	57	E
Kapiolani Boulevard	4	A	59	E	47	E	104	F	50	E	104	F	61	F	105	F	65	F	105	F
Ward Avenue at:																				
H1 Eastbound	26	D	3	A	39	D	3	A	132	F	3	A	63	F	4	A	63	F	4	A
Kinau Street	20	C	12	B	123	F	19	C	125	F	20	C	125	F	27	D	125	F	29	D
Beretania Street	51	E	10	B	92	F	14	B	95	F	14	B	100	F	16	C	113	F	16	C
Hotel Street	3	A	3	A	26	D	3	A	26	D	40	E	35	D	4	A	35	D	6	B
King Street	10	B	10	B	60	F	16	C	61	F	29	D	74	F	30	D	74	F	61	F
Kapiolani Boulevard	24	C	114	F	124	F	134	F	124	F	133	F	125	F	134	F	125	F	133	F
Victoria Street at:																				
Beretania Street	8	B	8	B	9	B	8	B	9	B	8	B	9	B	8	B	9	B	8	B
King Street	10	B	7	B	10	B	7	B	10	B	7	B	10	B	8	B	10	B	8	B

Note: Delay is expressed in seconds

1. 1987 Existing
2. 1990 Background
3. 1990 Background Plus Phase 1
4. 1993 Background Plus Phase 1
5. 1993 Background Plus Phase 1 Plus Phase 2

As shown, 11 of the 14 study intersections are expected to operate at Level of Service E or F by 1993 Background plus Phase 1 plus Phase 2 conditions. Of these 11, the anticipated level of service can be attributed to factors other than the proposed project at 10 intersections. However, the proposed project does have what is considered to be a significant impact on six of the study intersections. These intersections are:

1. Punchbowl Street at Beretania Street.
2. Punchbowl Street at King Street.
3. Alapai Street at Beretania Street.
4. Ward Avenue at Hotel Street.
5. Ward Avenue at Beretania Street.
6. Ward Avenue at King Street.

A significant impact, as defined in this study, is a change in level of service (e.g., Level of Service B to C) or an increase in average vehicle delay greater than four seconds when the level of service is worse than D. The significant impacts, as described, are highlighted in Table 7.

RECOMMENDED MITIGATION

Based on the analysis performed in the previous section, it has been determined that the proposed project will have a significant impact on the traffic operations of six of the study intersections. It is, therefore,

important that these impacts be mitigated to an acceptable level using reasonable and justifiable means.

Due to the right-of-way restrictions, it may not be possible to mitigate some of the impacts of the proposed project. The intersections that were significantly impacted were examined to determine whether any mitigation measures were feasible. The following mitigation measures were considered feasible:

1. Widen westbound Beretania to provide two exclusive right-turn lanes.

2. Provide an additional southbound left-turn lane (total of three) to Punchbowl Street at King Street.

3. Widen southbound Ward Avenue at Beretania to provide one right-turn lane, one shared through and right-turn lane, and one through lane.

4. Restripe eastbound King Street at Ward Avenue to provide one left-turn-only lane and a shared through/left lane.

These four mitigation measures will provide an improved level of service for the following intersections:

1. Punchbowl Street at Beretania Street.
2. Punchbowl Street at King Street.
3. Ward Avenue at Beretania Street.
4. Ward Avenue at King Street.

The results of implementing the recommended improvements are shown in Table 8.

It was determined that the following two intersections could not effectively be mitigated:

1. Alapai Street at Beretania Street.
2. Ward Avenue at Hotel Street.

TABLE 8

INTERSECTION LEVEL OF SERVICE ANALYSIS
FUTURE CONDITIONS WITH PROJECT AND MITIGATION
HONOLULU CIVIC CENTER

Intersection	1987 Existing AM Delay	AM LoS	1987 Existing PM Delay	PM LoS	1990 Background AM Delay	AM LoS	1990 Background PM Delay	PM LoS	1990 Background Plus Phase 1 AM Delay	AM LoS	1990 Background Plus Phase 1 PM Delay	PM LoS	1993 Background Plus Phase 1 AM Delay	AM LoS	1993 Background Plus Phase 1 PM Delay	PM LoS	1993 Background Plus Phase 1 Plus Phase 2 AM Delay	AM LoS	1993 Background Plus Phase 1 Plus Phase 2 PM Delay	PM LoS
Punchbowl Street at:																				
Vineyard Boulevard	42	E	31	D	134	F	127	F	135	F	122	F	140	F	123	F	141	F	125	F
Beretania Street	18	C	11	B	95	F	62	F	99	F	67	F	107	F	84	F	115	F	88	F
w/mitigation					62	F	35	D	74	F	38	D	89	F	43	E	96	F	44	E
King Street	9	B	10	B	38	D	29	D	46	E	36	D	56	E	48	E	89	F	46	E
w/mitigation					11	B	12	B	12	B	12	B	13	B	13	B	15	B	13	B
Alapai Street at:																				
Beretania Street	10	B	11	B	13	B	106	F	13	B	127	F	14	B	127	F	15	C	127	F
King Street	9	B	10	B	9	B	50	E	10	B	43	E	10	B	54	E	10	B	57	E
Kapiolani Boulevard	4	A	59	E	47	E	104	F	50	E	104	F	61	F	105	F	65	F	105	F
Ward Avenue at:																				
H1 Eastbound	26	D	3	A	39	D	3	A	132	F	3	A	63	F	4	A	63	F	4	A
Kinau Street	20	C	12	B	123	F	19	C	125	F	20	C	125	F	27	D	125	F	29	D
Beretania Street	51	E	10	B	92	F	14	B	95	F	14	B	100	F	16	C	113	F	16	C
w/mitigation					89	F	12	B	81	F	12	B	86	F	13	C	80	F	13	C
Hotel Street	3	A	3	A	26	D	3	A	26	D	40	E	35	D	4	A	35	D	6	B
King Street	10	B	10	B	60	F	16	C	61	F	29	D	74	F	30	D	74	F	61	F
w/mitigation					60	F	14	C	61	F	18	C	74	F	19	C	74	F	22	C
Kapiolani Boulevard	24	C	114	F	124	F	134	F	124	F	133	F	125	F	134	F	125	F	133	F
Victoria Street at:																				
Beretania Street	8	B	8	B	9	B	8	B	9	B	8	B	9	B	8	B	9	B	8	B
King Street	10	B	7	B	10	B	7	B	10	B	7	B	10	B	8	B	10	B	8	B

Appendix E

Air Quality Impact Analysis

TRANSPORTATION CENTER
AND CITY HALL ANNEX
February 8, 1988

J. W. MORROW
ENVIRONMENTAL MANAGEMENT CONSULTANT
KAILUA, HAWAII

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1. INTRODUCTION

The City and County of Honolulu is proposing to redevelop its existing Alapai Bus Yard site in order to consolidate city agencies scattered throughout Honolulu and to alleviate overcrowded conditions occurring within other city agencies already within the civic center area. The redevelopment is planned to occur in two phases in order to accomodate the impending move of bus operations to the Ameron property on Middle Street in early 1990. Phase 1 which can occur while bus operations continue at Alapai includes the new police headquarters, a 550-stall parking structure and Beretania Access Road. Phase 2 which will occur after bus operations have moved includes a new city office building, cafeteria, transit terminal, and additional parking.

The purpose of this report is to assess the impact of the proposed development on local air quality. The overall project can be considered an "indirect source" of air pollution as defined in the federal Clean Air Act [1] since its primary association with air pollution is due to its inherent generation of mobile source, i.e., motor vehicle, activity. The primary focus of this analysis, therefore, is on the project's ability to generate traffic and the resultant impact on air quality. Air quality impact was evaluated for existing (1987) and future (1990 and 1993) conditions.

During construction of the various buildings and facilities air pollutant emissions will be generated due to vehicular movement, grading and general dust-generating construction activities. These impacts have also been addressed.

2. AIR QUALITY STANDARDS

A summary of State of Hawaii and national ambient air quality standards is presented in Table 1 [2, 3]. Note that Hawaii's standards are not divided into primary and secondary standards as are the federal standards.

Primary standards are intended to protect public health with an adequate margin of safety while secondary standards are intended to protect public welfare through the prevention of damage to soils, water, vegetation, man-made materials, animals, wildlife, visibility, climate, and economic values [4].

Some of Hawaii's standards are clearly more stringent than their federal counterparts but, like their federal counterparts, may be exceeded once per year. It should also be noted that in April, 1986, the Governor signed amendments to Chapter 59 (Ambient Air

Quality Standards) making the state's standards for particulate matter and sulfur dioxide the same as national standards. In the case of particulate matter, however, this uniformity did not last long. On July 1, 1987, the EPA revised the federal particulate standard to apply only to particles 10 microns or less in diameter (PM-10) [5], leaving the state once again with standards different than the federal ones.

In the case of the automotive pollutants [carbon monoxide (CO), oxides of nitrogen (NOx), and photochemical oxidants (Ox)], there are only primary standards. Until 1983, there was also a hydrocarbons standard which was based on the precursor role hydrocarbons play in the formation of photochemical oxidants rather than any unique toxicological effect they had at ambient levels. The hydrocarbons standard was formally eliminated in January, 1983 [6].

The U.S. Environmental Protection Agency (EPA) is mandated by Congress to periodically review and re-evaluate the federal standards in light of new research findings [7]. The last review resulted in the relaxation of the oxidant standard from 160 to 240 micrograms/cubic meter (ug/m3) [8]. The carbon monoxide (CO), particulate matter, sulfur dioxide (SO2), and nitrogen dioxide (NO2) standards are currently under review, but final action has not been taken yet [9].

Finally, the State of Hawaii also has fugitive dust regulations for particulate matter (PM) emanating from construction activities [10]. There simply can be no visible emissions from fugitive dust sources.

3. EXISTING AIR QUALITY

The State Department of Health (DOH) maintains a network of air monitoring stations around the state to gather data on the following regulated pollutants:

- o total suspended particulates (TSP)
- o sulfur dioxide (SO2)
- o carbon monoxide (CO)
- o ozone (O3)
- o lead (Pb)

In the case of TSP and SO2, measurements are made on a 24-hour basis to correspond with the averaging period specified in the standards. Samples are collected once every six days in accordance with U.S. Environmental Protection Agency (EPA) guidelines. Carbon monoxide and ozone, however, are measured on a continuous basis due to their short-term (1-hour) standards.

Lead concentrations are determined from the TSP samples which are sent to an EPA laboratory for analysis. Note that the lead standard is a quarterly average. Nitrogen dioxide (NO2) was measured in the past but monitoring ceased in 1976.

While there is no continuous air monitoring station at the project site, there is one located only 300 meters north-northeast of the project site at the Department of Health building on the corner of Punchbowl and Beretania Streets. Summaries of recent monitoring data from that station are presented in Tables 2 - 4.

The monitoring results indicate general compliance with state and federal ambient air quality standards. Only carbon monoxide and photochemical oxidants (ozone) occasionally exceed their respective state standards. The State also has been having particulate samples analyzed for lead content, and as indicated in Table 4, airborne lead levels have declined as expected due to the federal program for gradual phaseout of leaded gasoline. Particulate lead accumulated over the years in roadside soils and plants, however, will remain indefinitely in the area and provide inhalation exposure whenever dust is re-entrained in the air as a result of scouring winds or mechanical disturbance due to vehicular motion.

4. CLIMATE & METEOROLOGY

4.1 Temperature & Rainfall. The National Climatic Data Center in its 1982 annual summary for Honolulu notes that:

> "Hawaii's equable temperatures are associated with the small seasonal variation in the amount of energy received from the sun and the tempering effect of the surrounding ocean. The range of temperature averages only 7 degrees between the warmest months (August and September) and the coolest months (January and February) and about 12 degrees between day and night. Daily maximums run from the high 70's in winter to the mid-80's in summer, and daily minimums from the mid-60's to the low 70's. However, the Honolulu Airport area has recorded as high as 93 degrees and as low as 53" [11].

Historical rainfall data from the Honolulu International Airport indicate an annual average rainfall of 23 inches. Based on this annual average rainfall and in accordance with Thornwaite's scheme for climatic classification, the area is considered subhumid grassland [12].

4.2 Surface Winds. Meteorological records were reviewed from the Honolulu International Airport and Hickam Air Force Base (AFB). It is quite evident that northeast tradewinds predominate during much of the year (Table 5). A closer examination of the data, however, indicates that low velocities (less than 10 mph) occur

frequently and that the "normal" northeasterly tradewinds tend to breakdown in the Fall giving way to more light, variable wind conditions through the Winter and on into early Spring. It is during these times that Honolulu generally experiences elevated pollutant levels. This seasonal difference in wind conditions can be seen clearly in Figures 1 and 2.

Of particular interest from an air pollution standpoint were the stability wind roses prepared for the period January 1955 to December 1968 at Hickam Air Force Base [13]. These data indicated that stable conditions, i.e., Pasquill-Gifford stability categories E and F [14], occur about 28% of the time. It is under such conditions that the greatest potential for air pollutant buildup from groundlevel sources exists.

5. MOBILE SOURCE IMPACT

5.1 Mobile Source Activity. A traffic impact study was prepared for the proposed project [15] and served as the basis for this mobile source impact analysis. After a review of that study, the following intersections which bound the project site were selected for use in the air quality impact analysis:

- Alapai Street @ King Street
- Alapai Street @ Beretania Street
- Ward Avenue @ King Street
- Ward Avenue @ Beretania Street

5.2 Mobile Source Emission Factors. Carbon monoxide (CO) emission factors for vehicles were generated for the year 2005 using the MOBILE-3 emissions model [16]. The emission factors were localized by use of the age distribution of registered vehicles in the City & County of Honolulu [17]. Fraction of vehicle miles travelled (VMT) was assumed to be directly proportional to the registration distribution. Emission factors were based on traffic speeds ranging from 10 - 30 mph depending on the level of service (LOS) at each intersection. Green- to-cycle ratios at each intersecton were estimated based on approach demands. Queue lengths and emission strengths at intersection approachs were determined by an EPA method [18].

5.3 Modeling Methodology. While emissions burden analysis is one means of evaluating a project's impact, it is generally more important to estimate the ambient impact since air quality standards are expressed as ambient concentrations, and it is the ambient concentrations to which living things are exposed. Computer modeling is normally employed to generate these ambient concentration estimates, most commonly with non-reactive pollutants. This is due to the complexity of modeling pollutants

which undergo chemical reactions in the atmosphere and are subject to the effects of numerous physical and chemical factors which affect reaction rates and products. For projects involving motor vehicles as the principal air air pollution source, carbon monoxide is normally selected for modeling because it has a relatively long half-life in the atmosphere (about 1 month) [19], and it comprises the largest fraction of automotive emissions.

The EPA guideline model CALINE-4 [20,21] was employed to estimate maximum 1-hour CO concentrations at receptor locations 10 - 40 meters from intersections during the worst-case AM peak hour traffic. Worst-case meteorological conditions were selected accordingly.

Because of the time of day of the analysis (AM peak hour), the currently low level of urbanization in the area which would otherwise contribute to a "heat island" effect and increased turbulence, a stable atmosphere (Pasquill-Gifford Class "F") [14] and 1 meter per second (m/sec) wind speed were assumed as worst case meteorological conditions. An east-northeast wind direction (70 degrees) was selected based on its prevalence, acute wind-road angles and ability to produce maximum pollutant concentrations at each intersection. Background levels of CO were estimated for each receptor location based on contributions from the upwind street network.

5.4 Results: 1-Hour Concentrations. The results of the modeling are presented in Figures 3 - 18 for the intersections under study. It is evident that the federal but not the state 1-hour CO standard appears to be met even under "worst-case" conditions of traffic, meteorology, and receptor location.

Figures 3 - 10 for the two Alapai Street intersections indicate general declines in nearby CO levels over the 1987 - 1993 period despite the additional traffic. This is due to the effects of the federal motor vehicle emission control program [22]. Projected reductions in average per-vehicle emissions appear to have overcome the increase in traffic volume at this particular area for this particular time period. This trend is clearly indicated in Figure 19 which depicts the change in concentration at the receptor location with maximum CO level.

A slightly different pattern presents itself at the Ward Avenue intersections (Figures 11 - 18). CO levels tend to rise slightly and then taper off again by 1993. In this case it appears that the projected traffic increase overcomes the projected decline in per-vehicle emissions thus resulting in a slight increase in ambient CO concentrations during the 1987 - 1990 period. By 1993, however, there is again a slight decline as shown in Figure 20 which depicts the changes in CO level at the receptor site of maximum impact.

5.5 Results: 8-Hour Concentrations. Estimates of 8-hour concentrations can be derived by applying a "persistence" factor

of 0.6 to the 1-hour concentrations. This "persistence" factor is recommended in an EPA publication on indirect source analysis [23] and has been further corroborated by analysis of carbon monoxide monitoring data in Honolulu which yielded the same 8-hour-to-1-hour ratio [24]. When using this approach any 1-hour CO concentration greater than 8.4 mg/m3 would indicate exceedance of the State's 8-hour standard. Similarly, any 1-hour concentration over 16.7 mg/m3 would indicate exceedance of the federal 8-hour standard.

Applying this factor to the 1-hour concentration estimates reveals the same potential exceedance of the state 8-hour standard but also indicates possible exceedance of the federal standard in close proximity to the intersection, i.e., within 10 meters.

5.6 Correlation with Meteorological Data. In light of the possible exceedances predicted, a more detailed analysis of the meteorological data was undertaken in order to estimate the frequency of occurrence of those high concentrations.

A full year (1982) of meteorological data from the Honolulu International Airport was screened to determine the frequency of occurrence of the following worst case meteorological conditions use in the analysis:

- hours: 6:00 - 8:00 a.m.
- wind direction: 50 - 90 degrees
- wind speed: 1 m/sec
- stability: neutral to stable ("D" to "F")

Five such hours were found, three of which occurred in the same day. On the basis of two possible hours per day (6:00 - 8:00 a.m.), this indicates a frequency of occurrence of 0.68%.

6. SHORT-TERM IMPACT

The principal source of short-term air quality impact will be construction activity. Construction vehicle activity will increase automotive pollutant concentrations along the streets serving the area as well as in the vicinity of the project site itself. Since most construction-related traffic will occur during off-peak hours, the additional construction vehicle traffic should not exceed road capacities although their presence can reduce street capacities as well as lower average travel speeds.

The site preparation and earth moving will create particulate emissions as will building and on-site road construction. Construction vehicles movement on unpaved on-site roads will also generate particulate emissions. EPA studies on fugitive dust

emissions from construction sites indicate that about 1.2 tons/acre per month of activity may be expected under conditions of medium activity, moderate soil silt content (30%), and a precipitation/evaporation (P/E) index of 50 [25].

The computed precipitation/evaporation (P/E) Index for the area is 39. Compared to the EPA estimates and conditions, it would appear that there is a greater potential for fugitive dust due to the somewhat drier local climate.

Other offsite activities which will have temporary impacts on air quality include concrete batching operations to produce the concrete necessary for building foundations within the project and asphalt batching operations to build new onsite roads and parking areas. At this point in time, the magnitude of these operations have not been quantified and thus a quantitative impact analysis is not possible.

7. DISCUSSION AND CONCLUSIONS

7.1 Mobile Source Impacts.

As indicated by the "worst case" analysis there is a low probability for violations of the State's 1-hour carbon monoxide standard within 30 meters of the principal streets serving the project area. There is an even lower probability that the federal 8-hour standard might also be exceeded within 10 meters of some intersections. It appears that these exceedance would occur as a result of the completion of already approved projects in that area and that this project will not cause but rather will contribute to those exceedances. It should also be noted that despite the increased traffic and projected exceedance of standards over the study period, the general trend of CO levels is still downward. Thus, it might be said that the projected growth in traffic will retard but not reverse the continued reduction of near roadway CO concentrations during the 1987 - 1993 period.

7.2 Short-Term Impacts. Since as noted in Section 6, there is a potential for fugitive dust due to the dry climate, it will be important for adequate dust control measures to be employed during the construction period. Dust control could be accomplished through frequent watering of unpaved roads and areas of exposed soil. The EPA estimates that twice daily watering can reduce fugitive dust emissions by as much as 50%. The soonest possible landscaping of completed areas will also help.

7.3 Conclusions. Based on the foregoing analysis, the following conclusions may be drawn:

- The proposed project will result in increased air pollutant emissions due to its inherent traffic generation ability;

- The addition of project-related traffic will contribute to

projected exceedances of state 1-hour and 8-hour and possibly federal 8-hour carbon monoxide standards in close proximity to the four major intersections serving the project site;

- Due to the relatively dry climate in the area, dust control measures during construction will be important to prevent violations of state fugitive dust standards.

7.4 Mitigation Measures. The principal means available to reduce the predicted CO concentrations are:

- improve intersections to increase capacity
- increase bus service to area
- encourage car-pooling
- modify business/school starting hours
- develop mass transit system
- eliminate parking facilities to encourage use of public transit

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TABLES

TABLE 1

SUMMARY OF STATE OF HAWAII AND FEDERAL
AMBIENT AIR QUALITY STANDARDS

POLLUTANT	SAMPLING PERIOD	FEDERAL STANDARDS PRIMARY	FEDERAL STANDARDS SECONDARY	STATE STANDARDS
1. Total Suspended Particulate Matter (TSP)	Annual Geometric Mean	75	60	60
(micrograms per cubic meter)	Maximum Average in Any 24 Hours	260	150	150
2. PM-10	Annual	50	50	--
(micrograms per cubic meter	Maximum Average in Any 24 Hours	150	150	--
3. Sulfur Dioxide (SO2)	Annual Arithmetic Mean	80	--	80
(micrograms per cubic meter)	Maximum Average in Any 24 Hours	365	--	365
	Maximum Average in Any 3 Hours		1,300	1,300
4. Nitrogen Dioxide (NO2)	Annual Arithmetic Mean		100	70
(micrograms per cubic meter)				
5. Carbon Monoxide (CO)	Maximum Average in Any 8 Hours	10		5
(milligrams per cubic meter)	Maximum Average in Any 1 Hour	40		10
6. Photochemical Oxidants (as O3)	Maximum Average in Any 1 Hour	240		100
(micrograms per cubic meter)				
7. Lead (Pb)	Maximum Average in Any Calendar Quarter	1.5		1.5
(micrograms per cubic meter)				

Table 2

Summary of Aerometric Data Collected
at the Department of Health Building
1977 - 1986

Total Suspended Particulates	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986
(24-hr values, ug/m3)										
Period of sampling (mos.):	12	12	12	12	8	12	12	12	12	12
Number of samples:	57	60	8	61	35	55	56	60	59	57
Range of values:	14-51	14-53	22-62	23-103	23-75	11-42	14-58	11-48	10-48	11-61
Mean of values:	31	29	32	37	40	29	26	25	24	25
Number of times State AQS exceeded:	0	0	0	1	0	0	0	0	0	0
Sulfur Dioxide										
(24-hr values, ug/m3)										
Period of sampling (mos.):	12	12	12	12	8	12	12	12	12	12
Number of samples:	59	61	57	58	38	50	56	58	53	57
Range of values:	<5-53	<5-44	<5-42	<5-60	<5-44	<5-38	<5-16	<5-<5	<5-<5	<5-6
Mean of values:	17	18	22	18	19	11	<5	<5	<5	<5
Number of times State AQS exceeded:	0	0	0	0	0	0	0	0	0	0
Photochemical Oxidants										
(Daily 1-hr maxima, ug/m3)										
Period of sampling (mos.):	11	10	12	11	12	12	12	12	12	12
Number of samples:	300	284	337	295	314	335	348	296	341	348
Range of values:	4-61	10-84	10-80	10-84	10-104	0-151	0-123	0-104	8-198	10-88
Mean of values:	25	33	39	38	37	32	46	44	43	39
Number of times State AQS exceeded:	0	0	0	0	1	2	2	1	3	0

Table 3

Summary of Aerometric Data Collected
at the Department of Health Building
1971 - 1986

Nitrogen Dioxide	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
(24-hr values)										
Period of sampling (mos.):	10	12	12	12	12	3	n.d.	n.d.	n.d.	n.d.
Number of samples:	83	113	99	90	91	22				
Range of values:	<20-159	<20-236	<20-95	<20-95	16-70	12-63				
Mean of values:	56	56	46	37	33	35				
Number of times State AQS exceeded:	1	2	0	0	0	0				

Carbon Monoxide	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986
(Daily 1-hr maxima)										
Period of sampling (mos.):	12	12	8	n.d.	n.d.	n.d.	6	12	12	12
Number of samples:	359	365	208				169	318	342	348
range of values:	0-19.6	0-20.7	0-17.3	Station moved to			0-8.6	0.6-10.9	0.0-10.4	0.2-13.5
Arithmetic mean of daily maximum values:	3.5	3.1	3		Kaimuki		2	2.4	1.5	2.2
Number of days State AQS exceeded:	22	19	10				0	1	1	3

TABLE 4

LEAD MONITORING DATA
HONOLULU, OAHU
1970-86

AVERAGE CONCENTRATION (micrograms/cubic meter)

YEAR	1st QUARTER	2nd QUARTER	3rd QUARTER	4th QUARTER
1970	0.78	0.81	0.65	0.92
1971	1.65	0.63	0.65	1.05
1972	--	0.75	0.65	0.48
1973	0.52	0.52	0.72	0.55
1974	0.84	0.61	0.70	0.92
1975	0.65	0.81	0.59	1.05
1976	0.91	0.65	0.99	1.00
1977	0.89	0.59	0.48	0.80
1978	--	--	--	0.72
1979	0.39	0.25	0.26	0.42
1980	0.41	0.23	0.21	0.20
1981	0.25	--	--	--
1982	0.21	0.16	0.09	0.21
1983	n/a	n/a	n/a	n/a
1984	0.3	0.2	0.2	0.3
1985	0.1	0.03	0.02	0.1
1986	0.1	0.0	0.0	0.0

Source: State of Hawaii
Department of Health

TABLE 5

HONOLULU INTERNATIONAL AIRPORT
ANNUAL WIND ROSE

Direction	Wind Speed (Kts) 0 - 3	4 - 7	8 - 12	13 - 18	19 - 24	>24	TOTAL
N	0.0149	0.0261	0.0075	0.0020	0.0002	0.0000	0.0506
NNE	0.0114	0.0219	0.0106	0.0046	0.0005	0.0000	0.0490
NE	0.0114	0.0449	0.0829	0.0853	0.0204	0.0018	0.2466
ENE	0.0088	0.0637	0.1559	0.1209	0.0224	0.0014	0.3731
E	0.0039	0.0179	0.0329	0.0210	0.0023	0.0001	0.0782
ESE	0.0021	0.0056	0.0050	0.0015	0.0003	0.0001	0.0146
SE	0.0021	0.0059	0.0091	0.0049	0.0006	0.0002	0.0228
SSE	0.0023	0.0074	0.0123	0.0038	0.0008	0.0002	0.0268
S	0.0025	0.0104	0.0127	0.0033	0.0005	0.0003	0.0296
SSW	0.0011	0.0041	0.0053	0.0017	0.0003	0.0000	0.0125
SW	0.0007	0.0031	0.0058	0.0022	0.0003	0.0001	0.0122
WSW	0.0006	0.0017	0.0031	0.0022	0.0005	0.0001	0.0082
W	0.0019	0.0030	0.0021	0.0009	0.0002	0.0001	0.0082
WNW	0.0027	0.0051	0.0012	0.0003	0.0001	0.0000	0.0094
NW	0.0084	0.0153	0.0031	0.0008	0.0003	0.0000	0.0279
NNW	0.0087	0.0166	0.0041	0.0012	0.0002	0.0000	0.0308
TOTAL:	0.0835	0.2527	0.3534	0.2567	0.0496	0.0043	1.0002

SOURCE: Reference 29

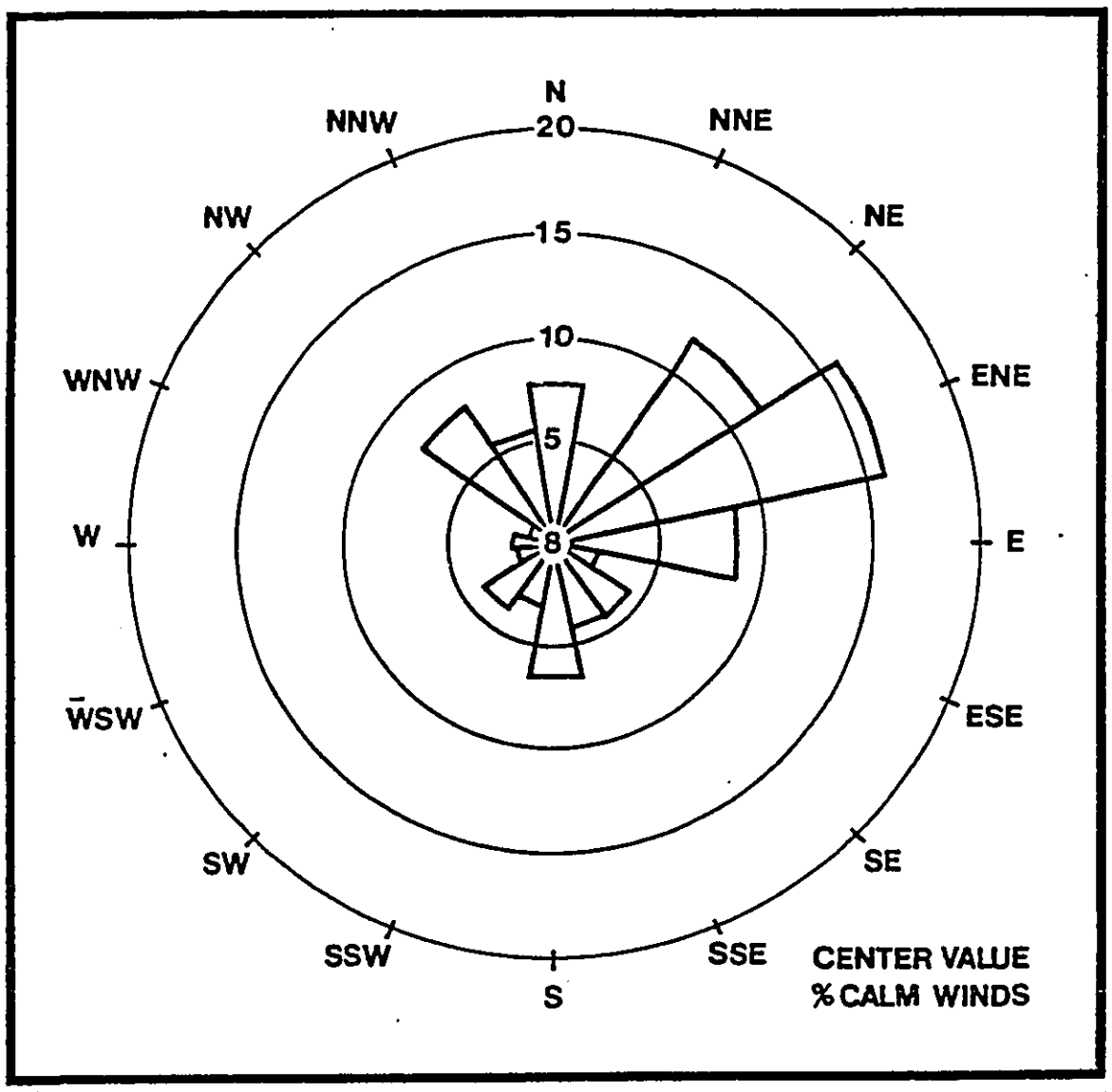
FIGURES

FIGURE 1

FREQUENCY DISTRIBUTION OF WIND DIRECTION IN PERCENTAGE

MONTH OF JANUARY

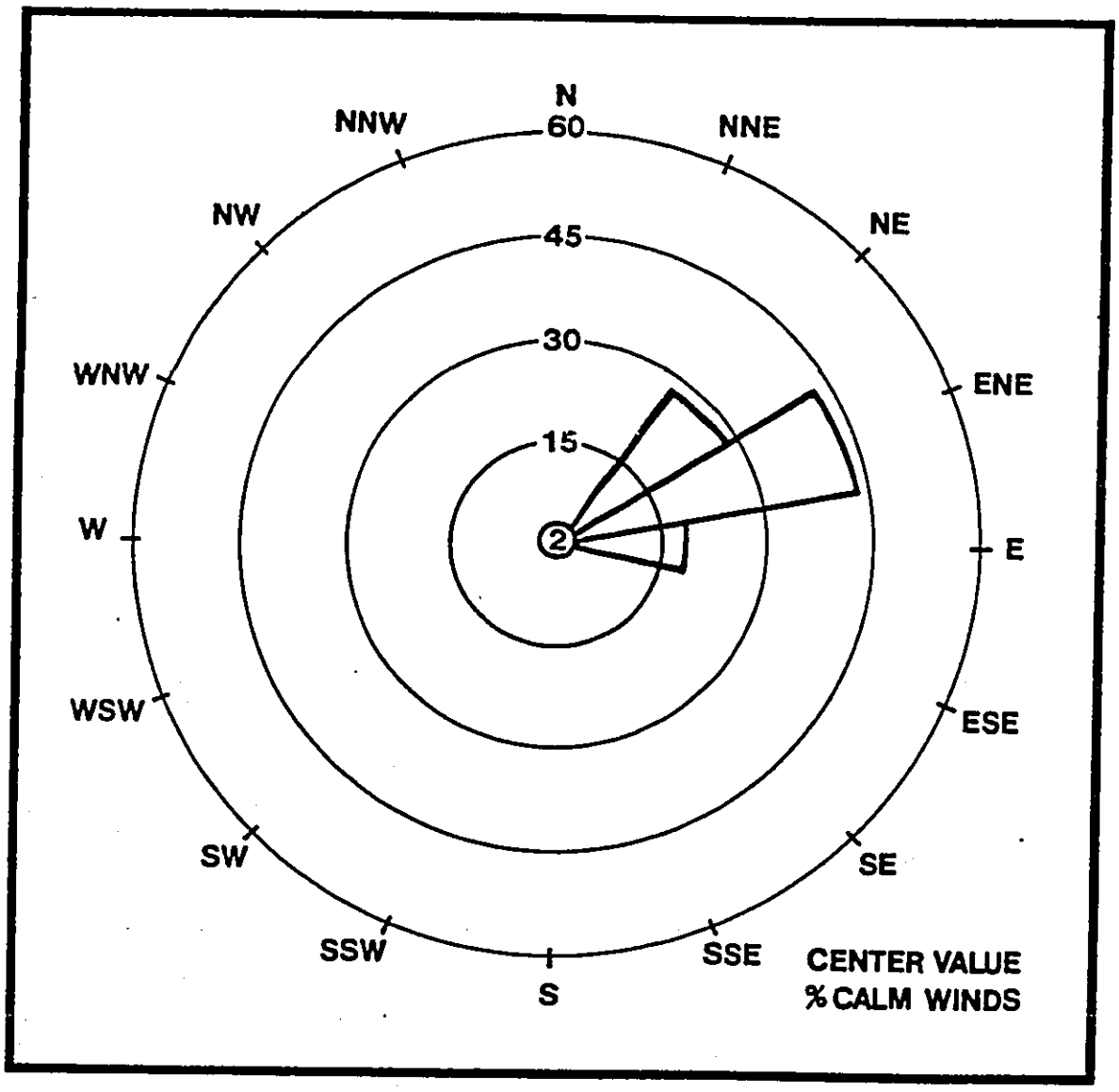
HONOLULU INTERNATIONAL AIRPORT



SOURCE: NATIONAL WEATHER SERVICE
RECORDS (1940-67)

FIGURE 2

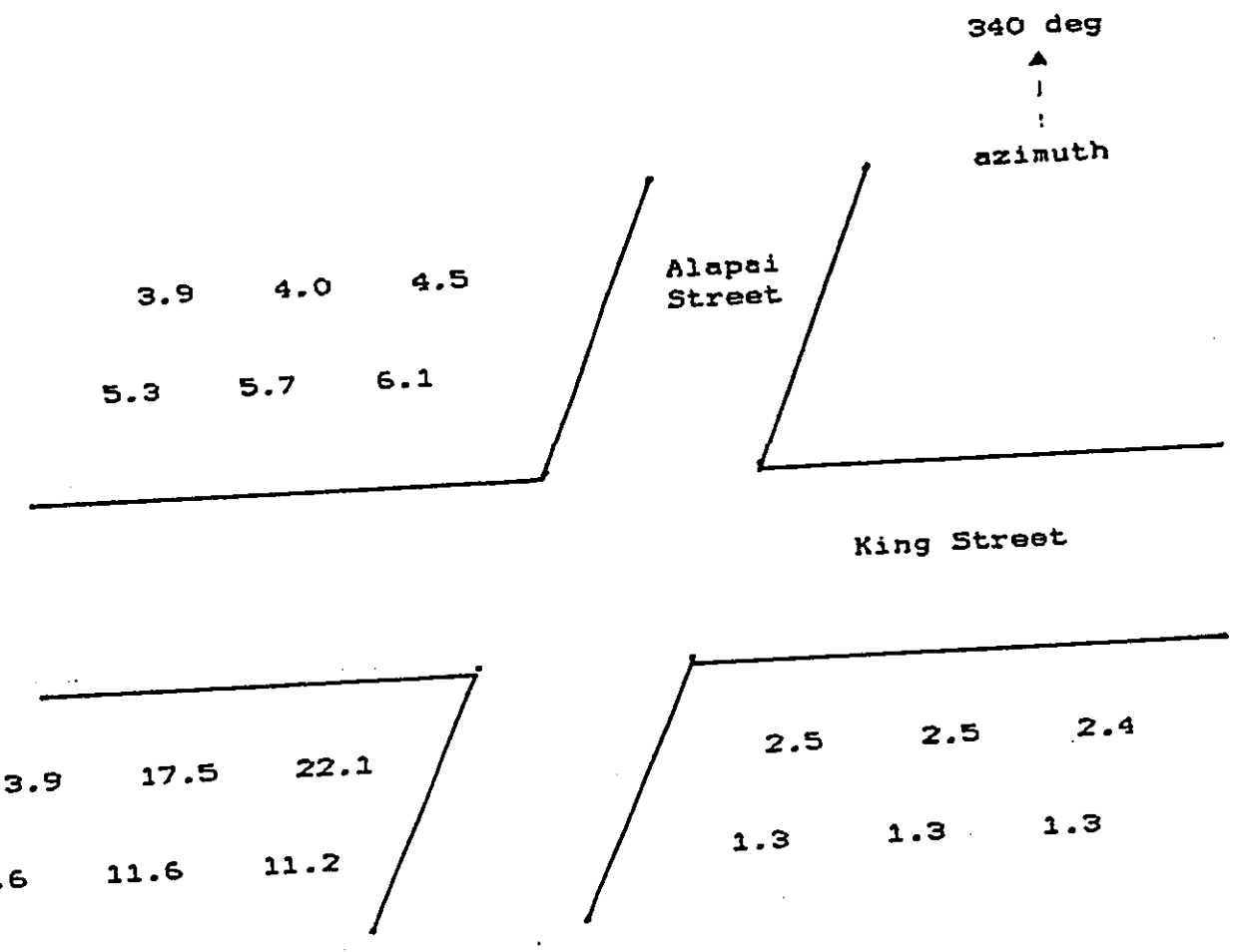
FREQUENCY DISTRIBUTION OF WIND DIRECTION IN PERCENTAGE
MONTH OF AUGUST
HONOLULU INTERNATIONAL AIRPORT



SOURCE: NATIONAL WEATHER SERVICE
RECORDS (1939-48, 1950-68)

FIGURE 3
ESTIMATES OF MAXIMUM 1-HOUR
CARBON MONOXIDE CONCENTRATIONS

ALAPAI STREET @ KING STREET
A.M. PEAK HOUR (1987)

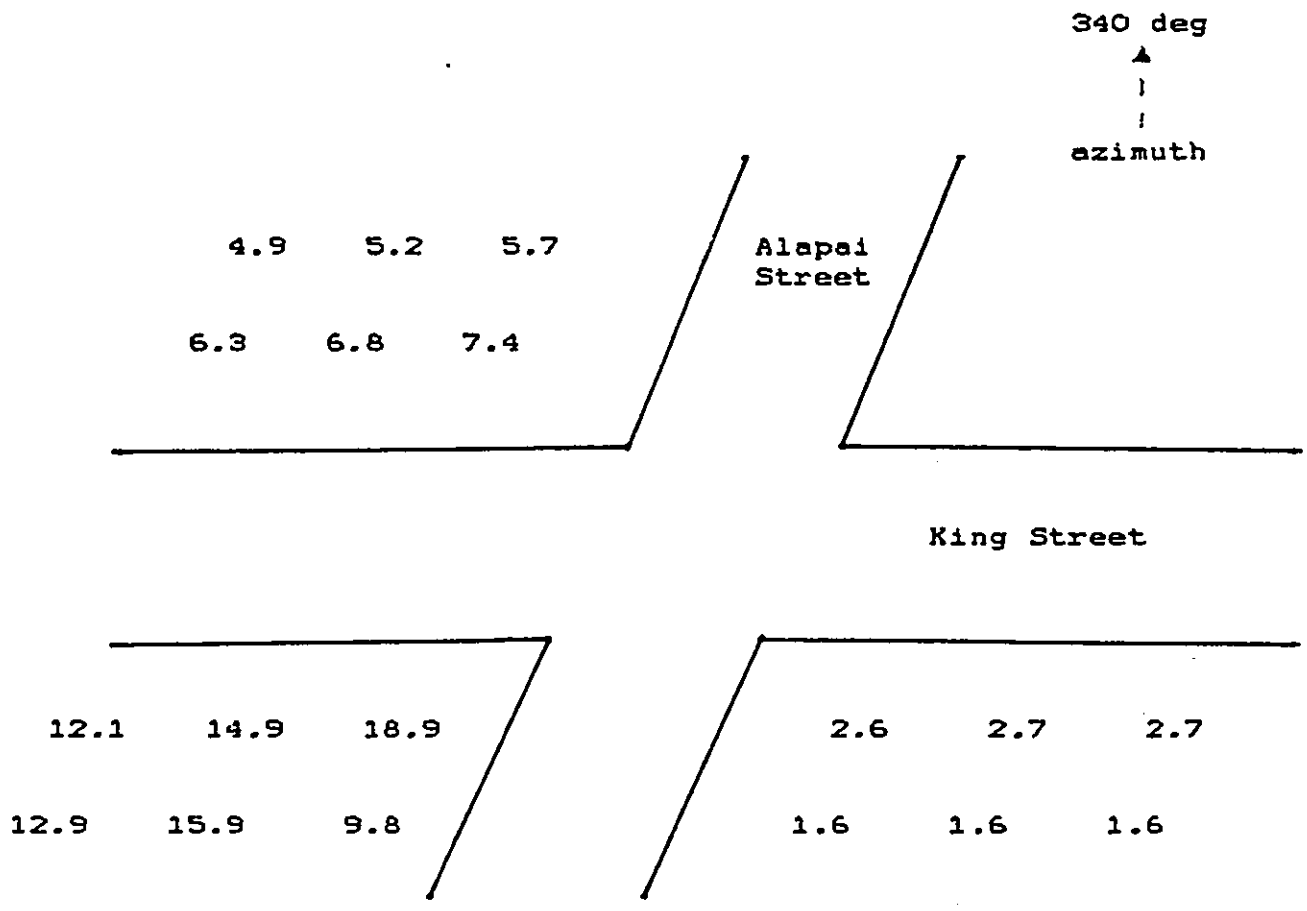


NOTES

CO concentrations = milligrams per cubic meter (mg/m3)
Receptor spacing = 10 meters
Wind direction = 70 deg
Wind speed = 1 meter per second (m/s)
Atmospheric stability = "D" (P-G Class 4)
Background CO concentration = 1.3 - 3.5 mg/m3
Diffusion model: CALINE-4
Emissions model: MOBILE-3

FIGURE 4
ESTIMATES OF MAXIMUM 1-HOUR
CARBON MONOXIDE CONCENTRATIONS

ALAPAI STREET @ KING STREET
A.M. PEAK HOUR (1990) WITHOUT PROJECT

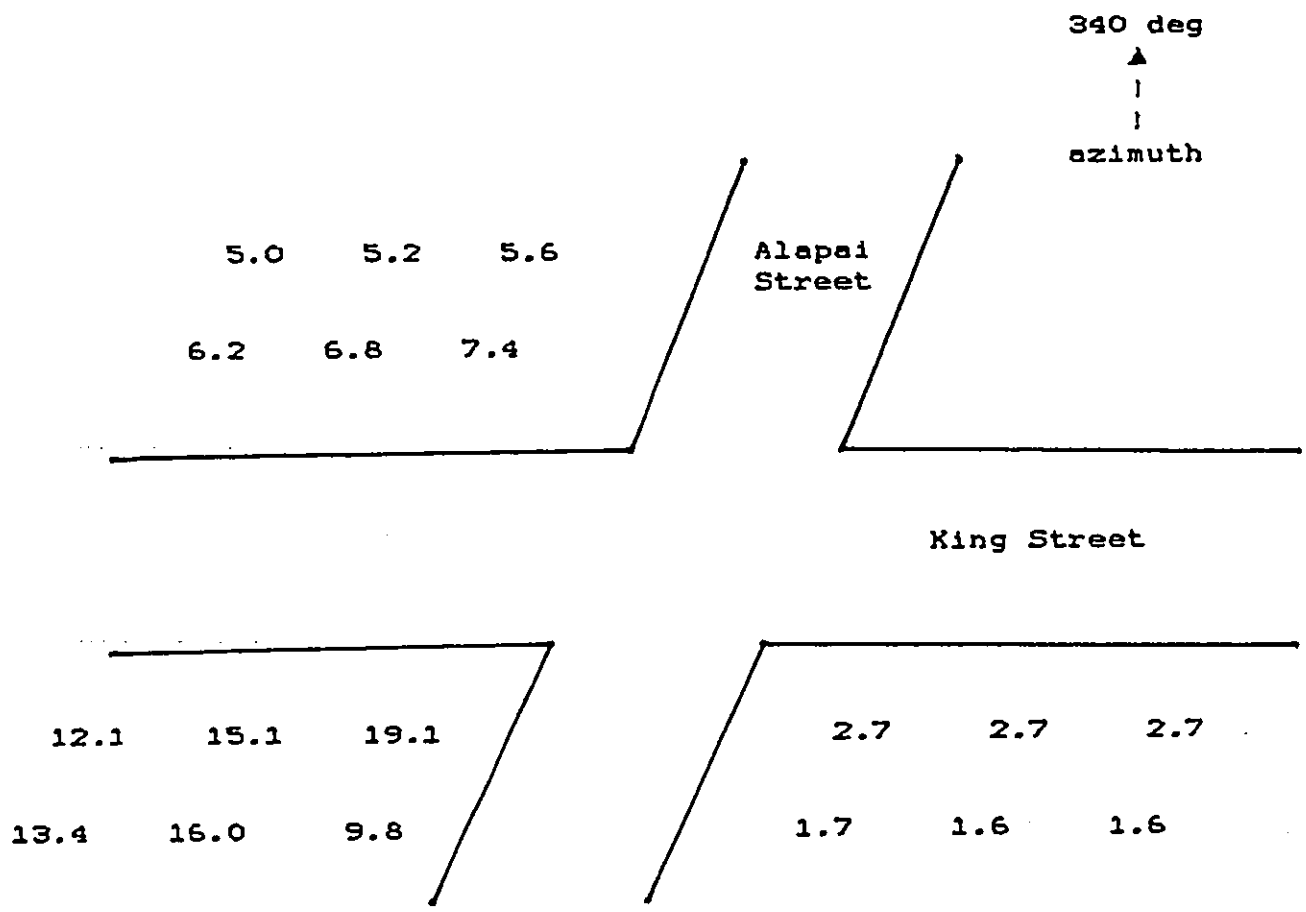


NOTES

CO concentrations = milligrams per cubic meter (mg/m3)
Receptor spacing = 10 meters
Wind direction = 70 deg
Wind speed = 1 meter per second (m/s)
Atmospheric stability = "D" (P-G Class 4)
Background CO concentration = 1.6 - 4.7 mg/m3
Diffusion model: CALINE-4
Emissions model: MOBILE-3

FIGURE 5
ESTIMATES OF MAXIMUM 1-HOUR
CARBON MONOXIDE CONCENTRATIONS

ALAPAI STREET @ KING STREET
A.M. PEAK HOUR (1990) WITH PROJECT PHASE 1

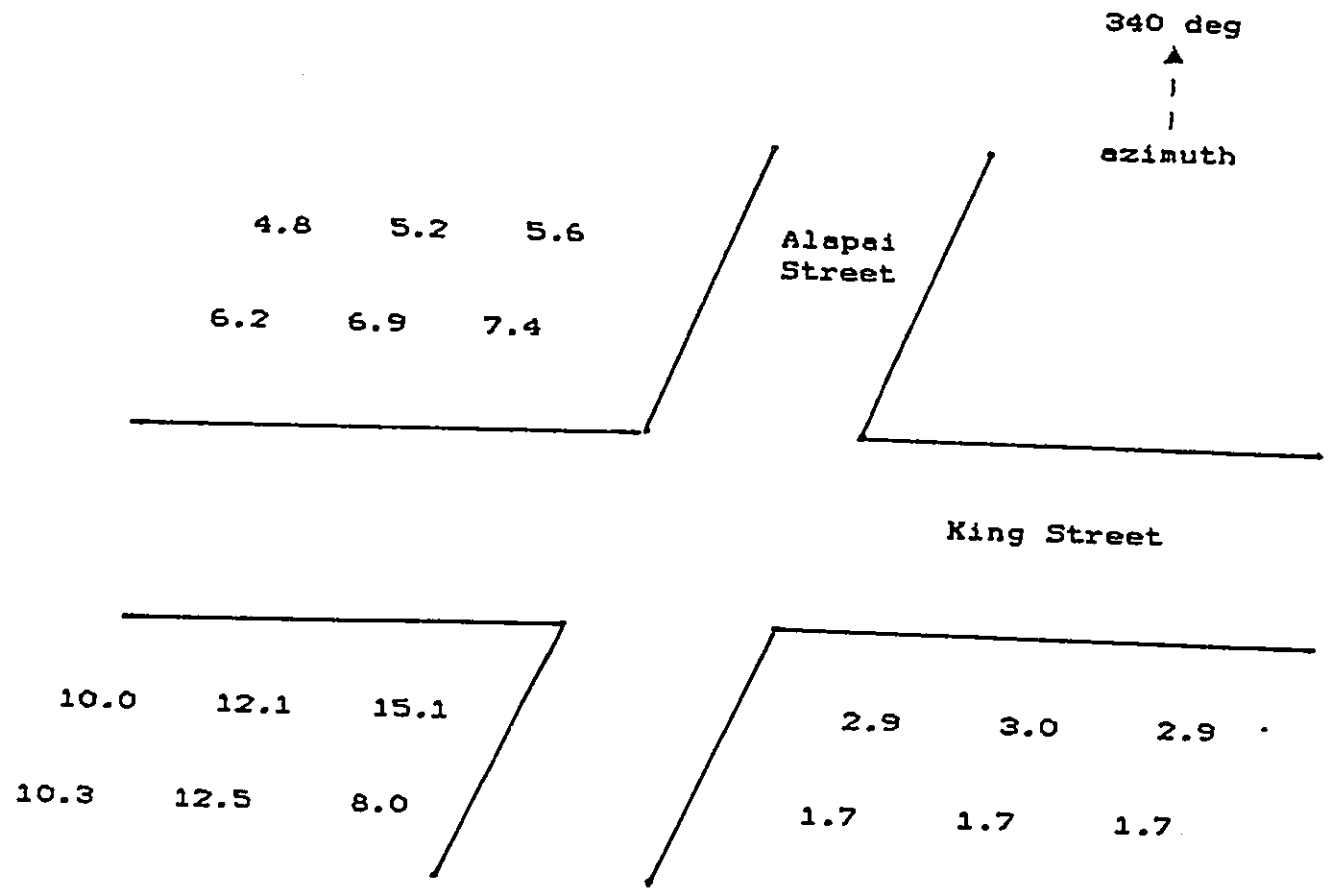


NOTES

CO concentrations = milligrams per cubic meter (mg/m3)
Receptor spacing = 10 meters
Wind direction = 70 deg
Wind speed = 1 meter per second (m/s)
Atmospheric stability = "D" (P-G Class 4)
Background CO concentration = 1.6 - 4.6 mg/m3
Diffusion model: CALINE-4
Emissions model: MOBILE-3

FIGURE 6
ESTIMATES OF MAXIMUM 1-HOUR
CARBON MONOXIDE CONCENTRATIONS

ALAPAI STREET @ KING STREET
A.M. PEAK HOUR (1993) WITH PROJECT PHASES 1&2

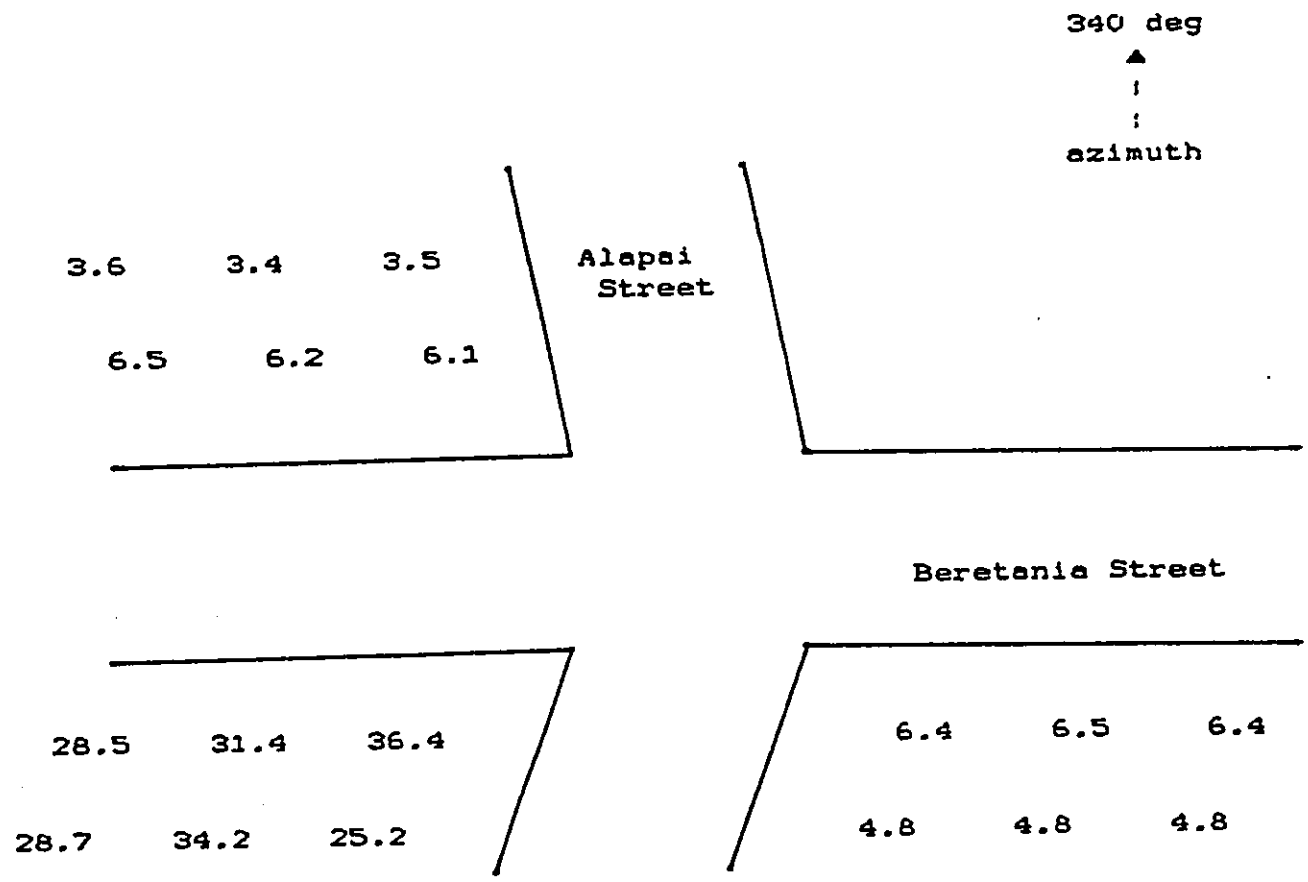


NOTES

CO concentrations = milligrams per cubic meter (mg/m3)
Receptor spacing = 10 meters
Wind direction = 70 deg
Wind speed = 1 meter per second (m/s)
Atmospheric stability = "D" (P-G Class 4)
Background CO concentration = 1.6 - 5.0 mg/m3
Diffusion model: CALINE-4
Emissions model: MOBILE-3

FIGURE 7
ESTIMATES OF MAXIMUM 1-HOUR
CARBON MONOXIDE CONCENTRATIONS

ALAPAI STREET @ BERETANIA STREET
A.M. PEAK HOUR (1987)

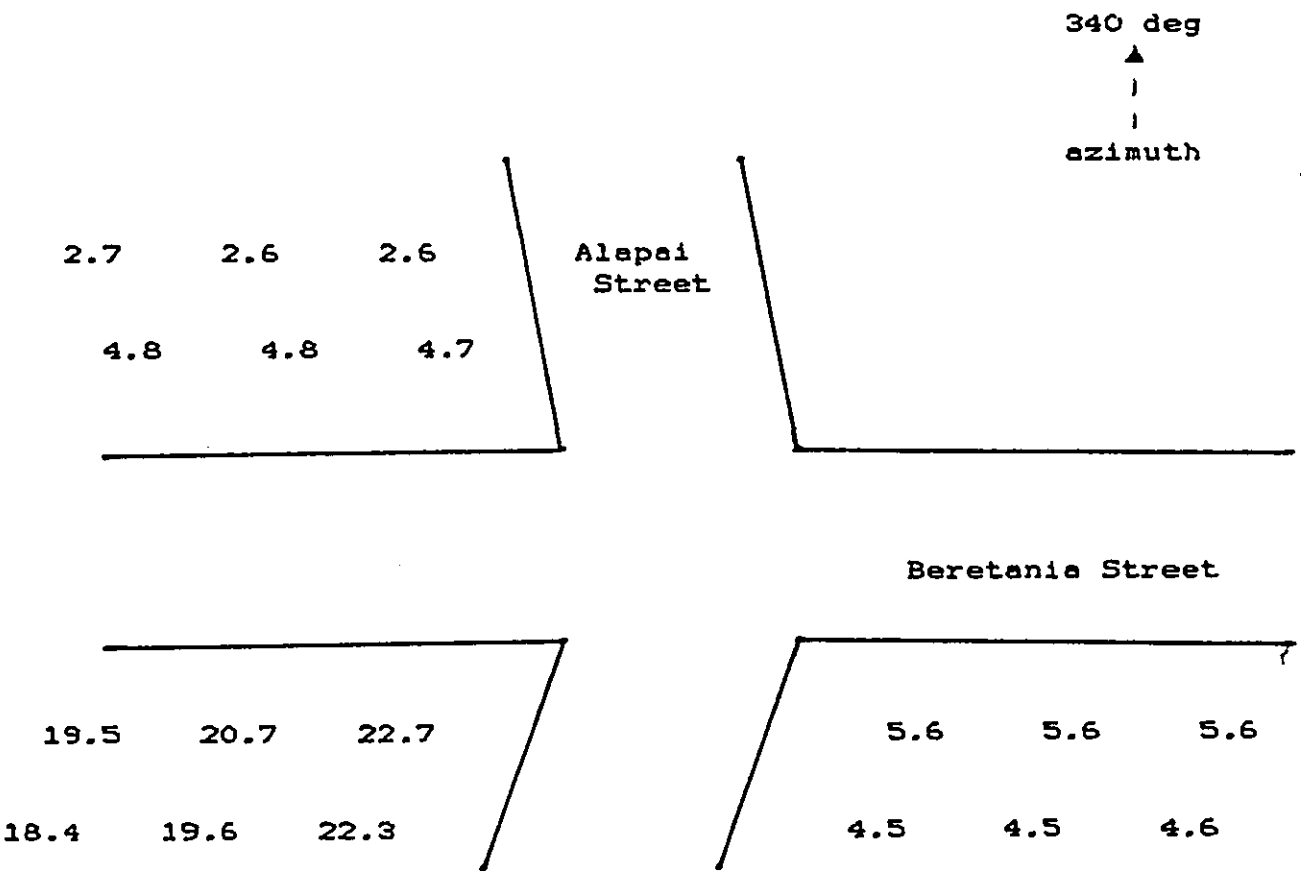


NOTES

CO concentrations = milligrams per cubic meter (mg/m3)
Receptor spacing = 10 meters
Wind direction = 70 deg
Wind speed = 1 meter per second (m/s)
Atmospheric stability = "D" (P-G Class 4)
Background CO concentration = 1.0 - 11.8 mg/m3
Diffusion model: CALINE-4
Emissions model: MOBILE-3

FIGURE 8
ESTIMATES OF MAXIMUM 1-HOUR
CARBON MONOXIDE CONCENTRATIONS

ALAPAI STREET @ BERETANIA STREET
A.M. PEAK HOUR (1990) WITHOUT PROJECT

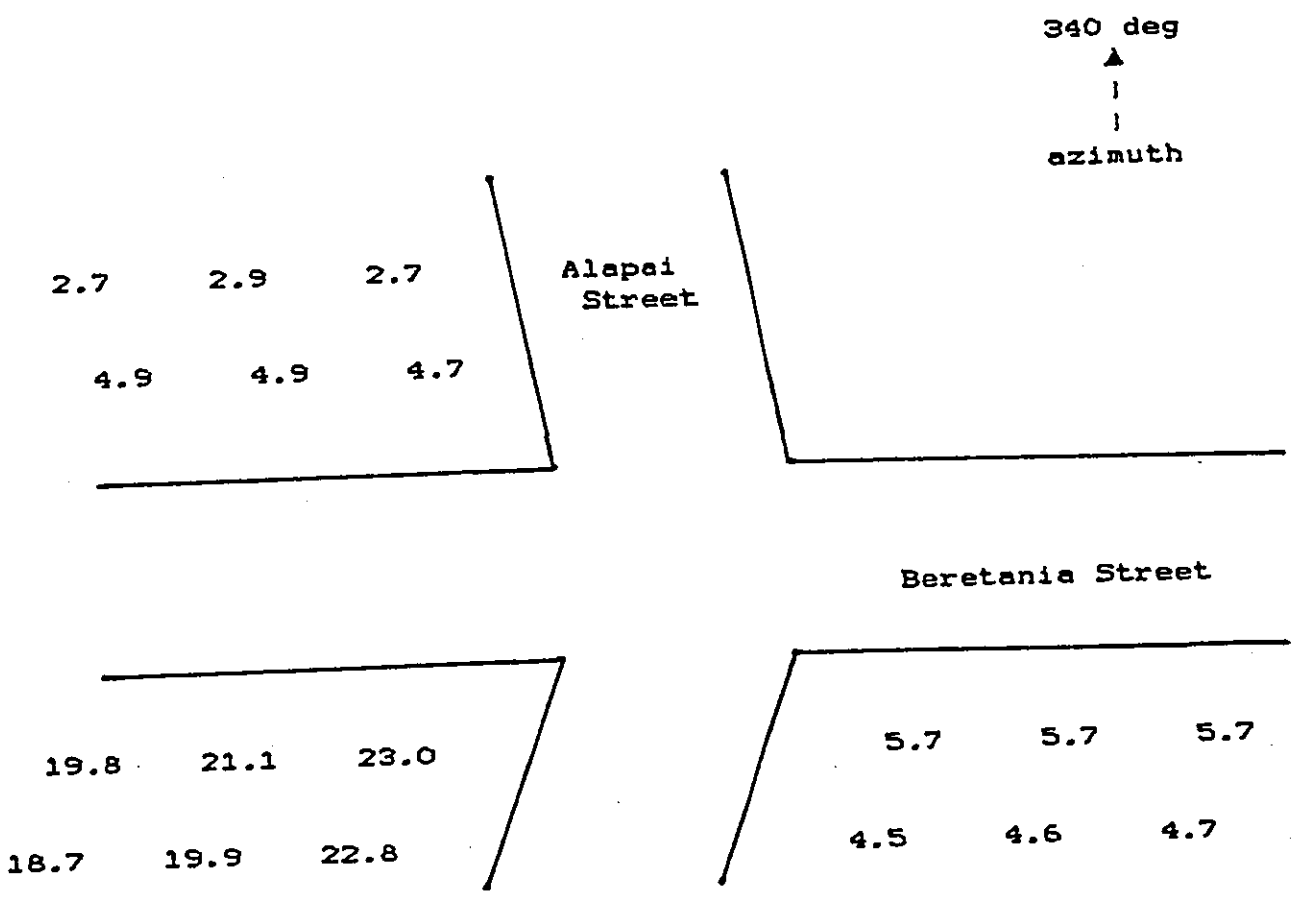


NOTES

CO concentrations = milligrams per cubic meter (mg/m3)
Receptor spacing = 10 meters
Wind direction = 70 deg
Wind speed = 1 meter per second (m/s)
Atmospheric stability = "D" (P-G Class 4)
Background CO concentration = 1.0 - 11.8 mg/m3
Diffusion model: CALINE-4
Emissions model: MOBILE-3

FIGURE 9
ESTIMATES OF MAXIMUM 1-HOUR
CARBON MONOXIDE CONCENTRATIONS

ALAPAI STREET @ BERETANIA STREET
A.M. PEAK HOUR (1990) WITH PROJECT PHASE 1

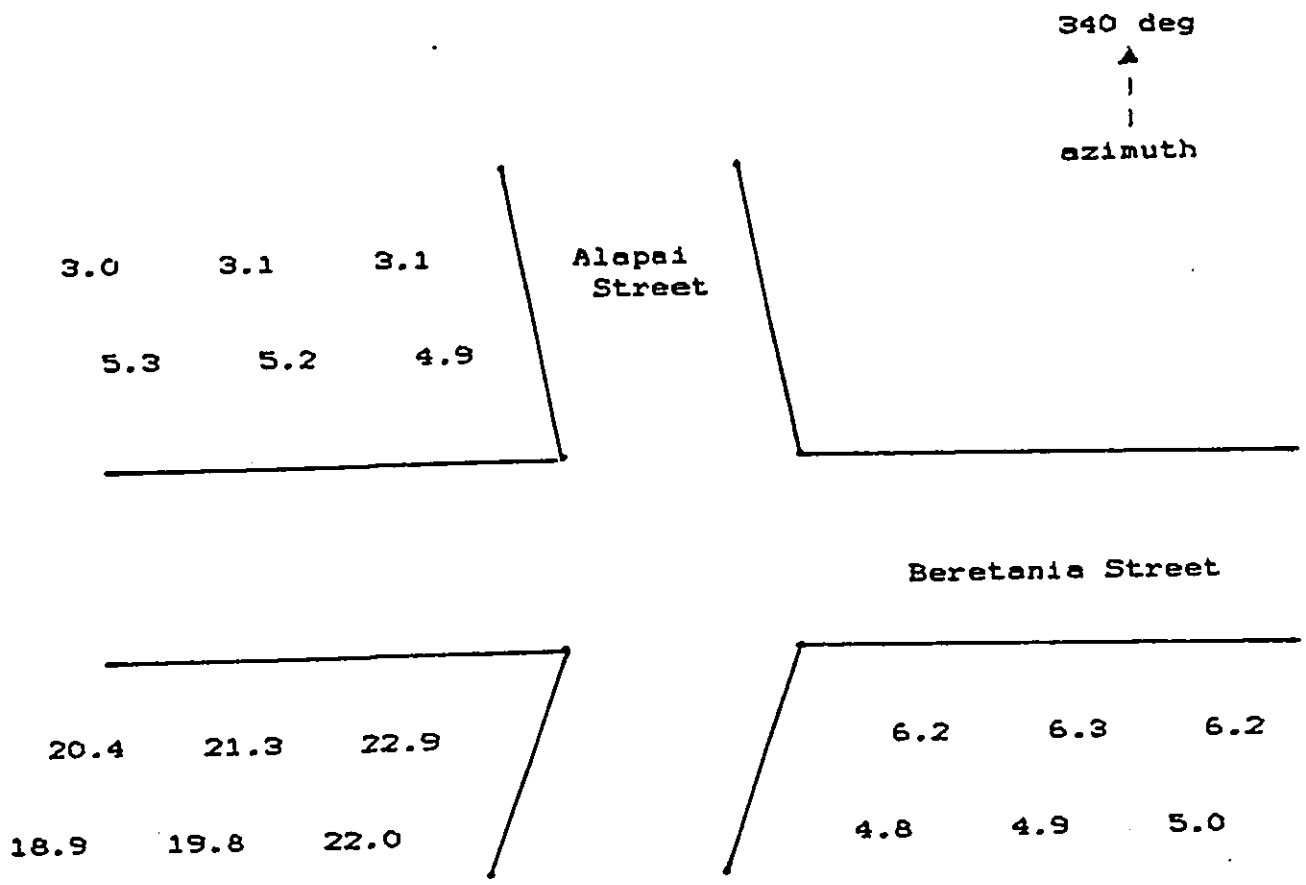


NOTES

CO concentrations = milligrams per cubic meter (mg/m3)
Receptor spacing = 10 meters
Wind direction = 70 deg
Wind speed = 1 meter per second (m/s)
Atmospheric stability = "D" (P-G Class 4)
Background CO concentration = 1.0 - 11.8 mg/m3
Diffusion model: CALINE-4
Emissions model: MOBILE-3

FIGURE 10
ESTIMATES OF MAXIMUM 1-HOUR
CARBON MONOXIDE CONCENTRATIONS

ALAPAI STREET @ BERETANIA STREET
A.M. PEAK HOUR (1993) WITH PROJECT PHASES 1&2

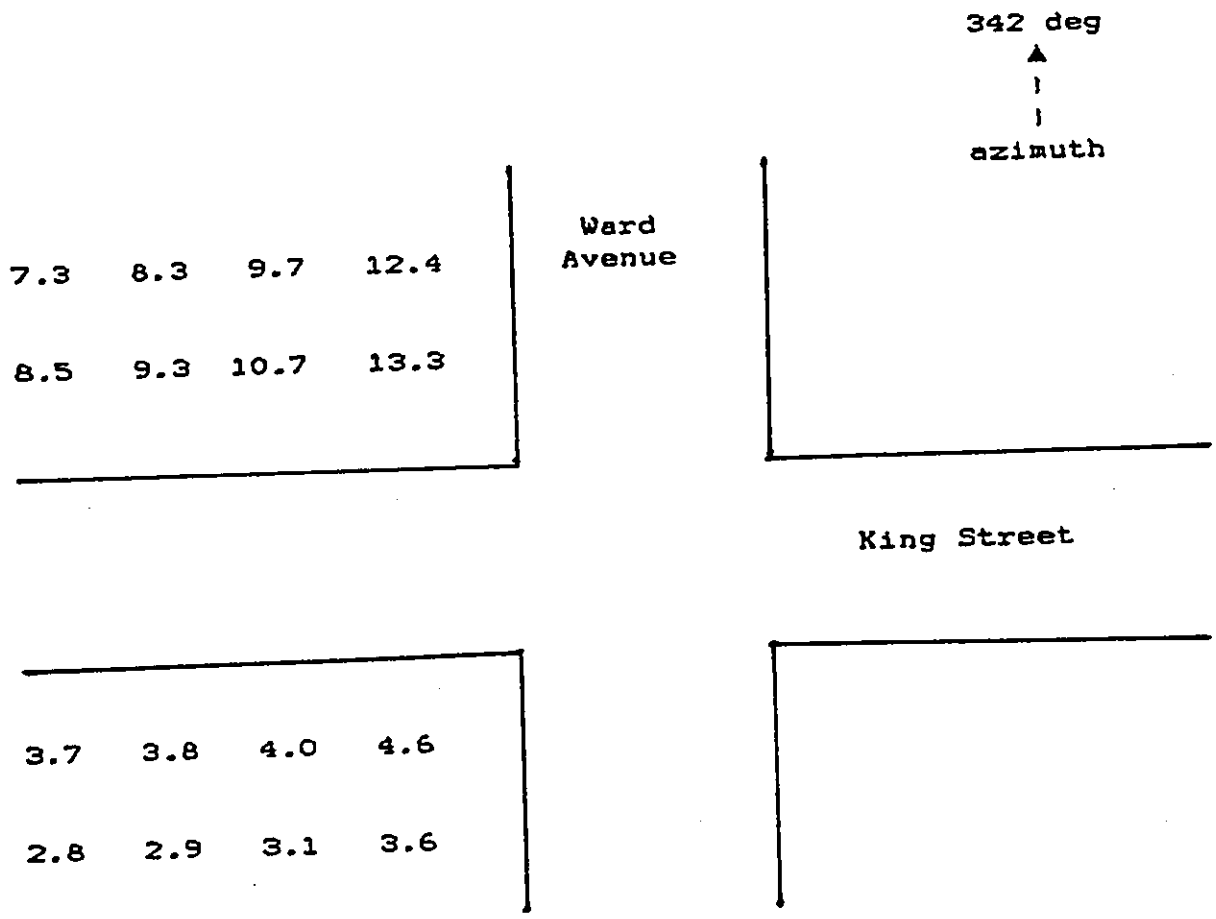


NOTES

CO concentrations = milligrams per cubic meter (mg/m3)
Receptor spacing = 10 meters
Wind direction = 70 deg
Wind speed = 1 meter per second (m/s)
Atmospheric stability = "D" (P-G Class 4)
Background CO concentration = 1.0 - 11.8 mg/m3
Diffusion model: CALINE-4
Emissions model: MOBILE-3

FIGURE 11
ESTIMATES OF MAXIMUM 1-HOUR
CARBON MONOXIDE CONCENTRATIONS

WARD AVENUE @ KING STREET
A.M. PEAK HOUR (1987)

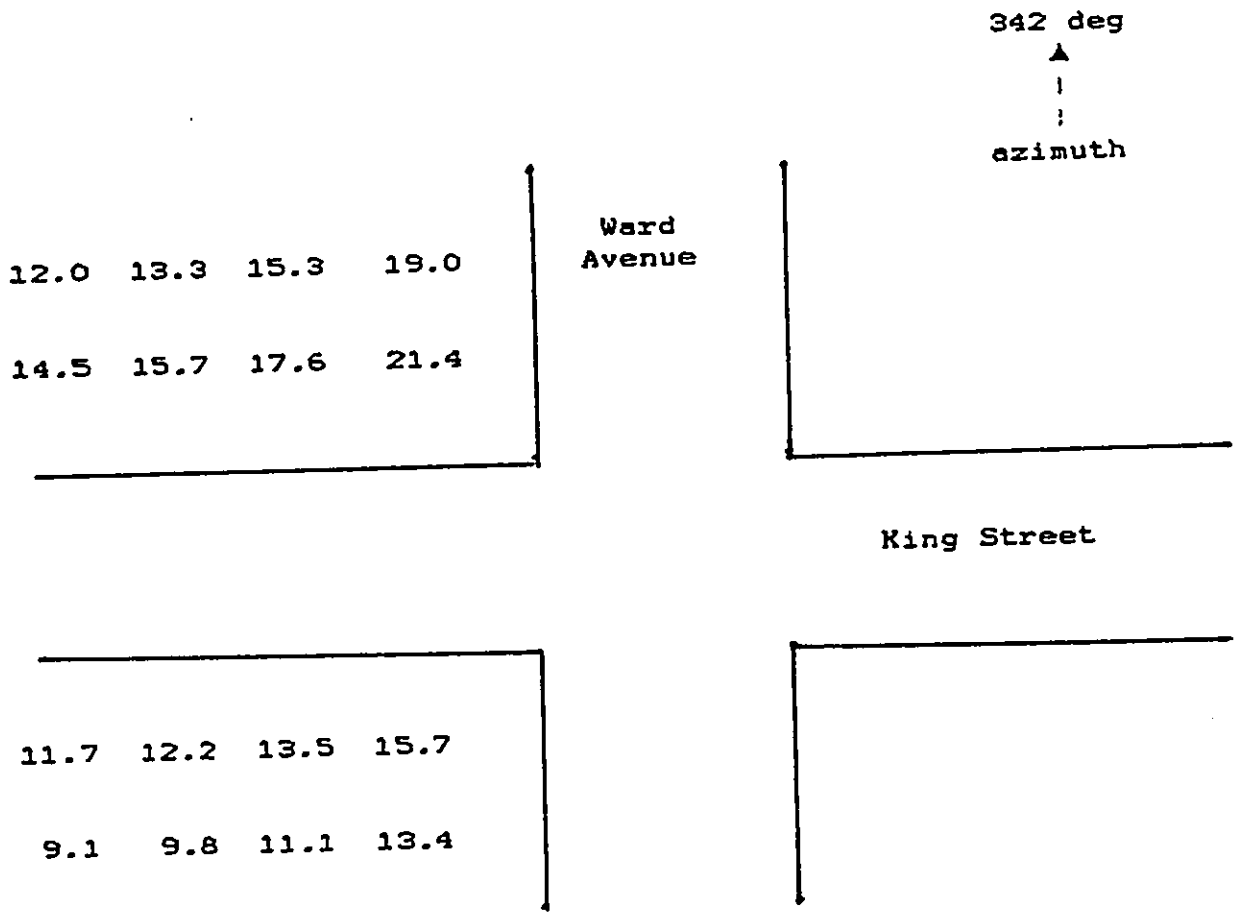


NOTES

CO concentrations = milligrams per cubic meter (mg/m3)
Receptor spacing = 10 meters
Wind direction = 70 deg
Wind speed = 1 meter per second (m/s)
Atmospheric stability = "D" (P-G Class 4)
Background CO concentration = 0.5 - 2.1 mg/m3
Diffusion model: CALINE-4
Emissions model: MOBILE-3

FIGURE 12
ESTIMATES OF MAXIMUM 1-HOUR
CARBON MONOXIDE CONCENTRATIONS

WARD AVENUE @ KING STREET
A.M. PEAK HOUR (1990) WITHOUT PROJECT

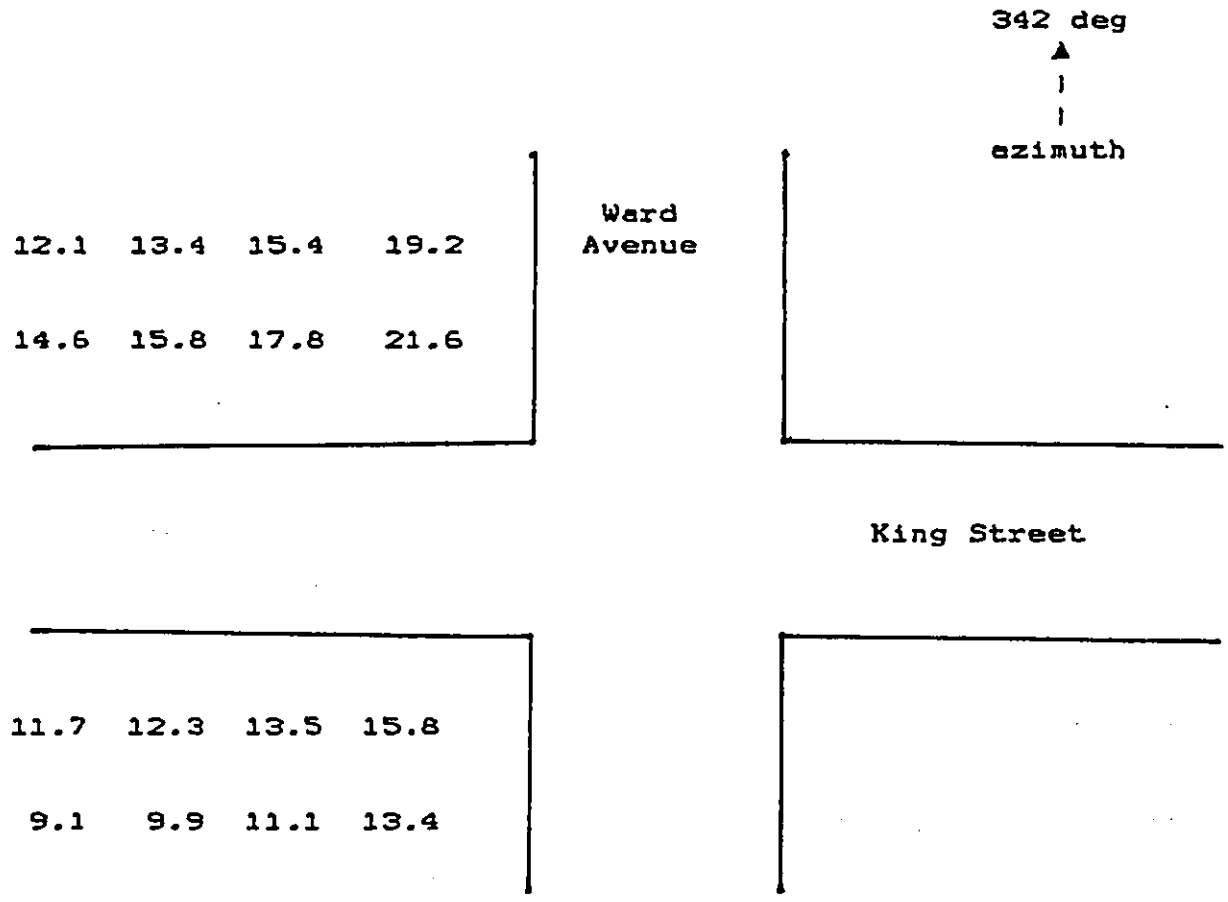


NOTES

CO concentrations = milligrams per cubic meter (mg/m3)
Receptor spacing = 10 meters
Wind direction = 70 deg
Wind speed = 1 meter per second (m/s)
Atmospheric stability = "D" (P-G Class 4)
Background CO concentration = 0.5 - 2.1 mg/m3
Diffusion model: CALINE-4
Emissions model: MOBILE-3

FIGURE 13
ESTIMATES OF MAXIMUM 1-HOUR
CARBON MONOXIDE CONCENTRATIONS

WARD AVENUE @ KING STREET
A.M. PEAK HOUR (1990) WITH PROJECT PHASE 1

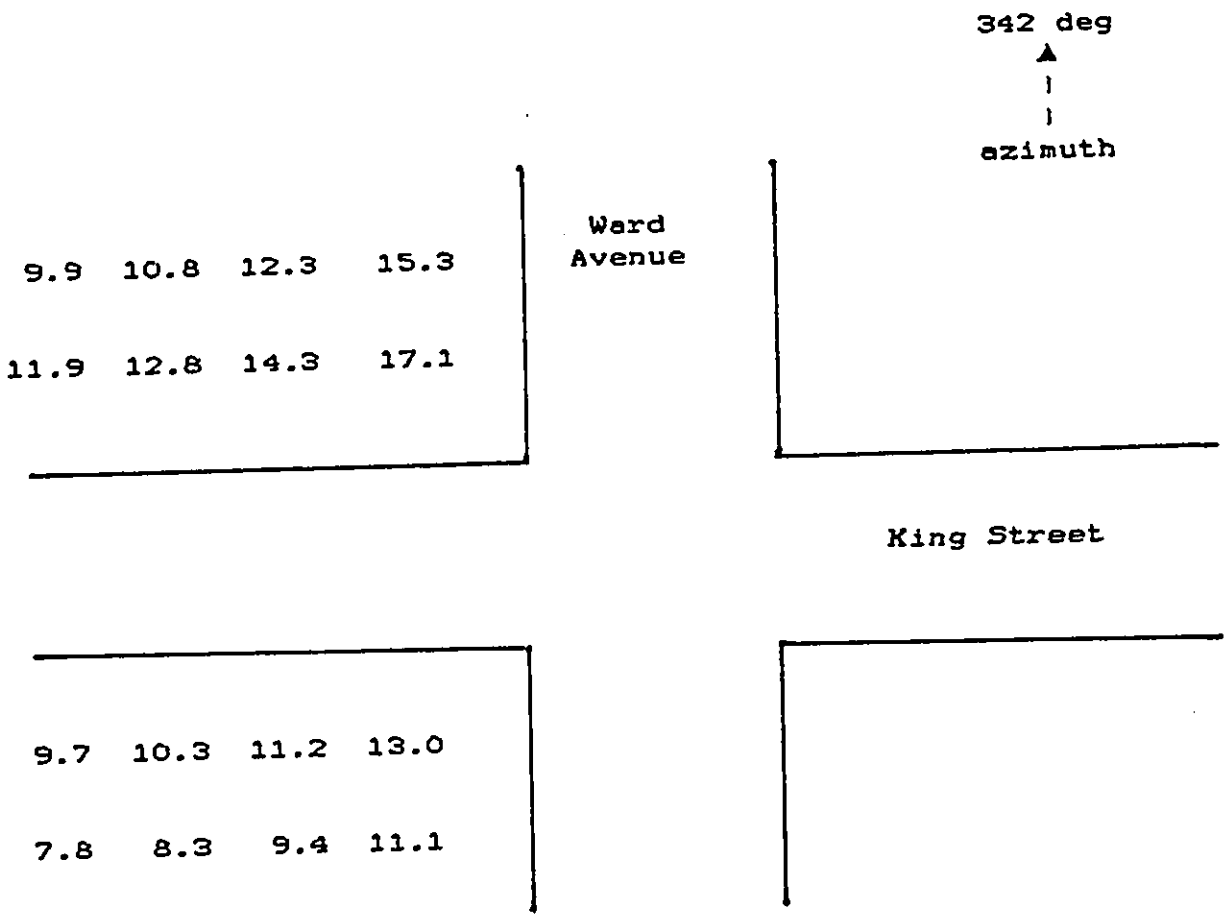


NOTES

CO concentrations = milligrams per cubic meter (mg/m3)
Receptor spacing = 10 meters
Wind direction = 70 deg
Wind speed = 1 meter per second (m/s)
Atmospheric stability = "D" (P-G Class 4).
Background CO concentration = 0.5 - 2.1 mg/m3
Diffusion model: CALINE-4
Emissions model: MOBILE-3

FIGURE 14
ESTIMATES OF MAXIMUM 1-HOUR
CARBON MONOXIDE CONCENTRATIONS

WARD AVENUE @ KING STREET
A.M. PEAK HOUR (1993) WITH PROJECT PHASES 1&2

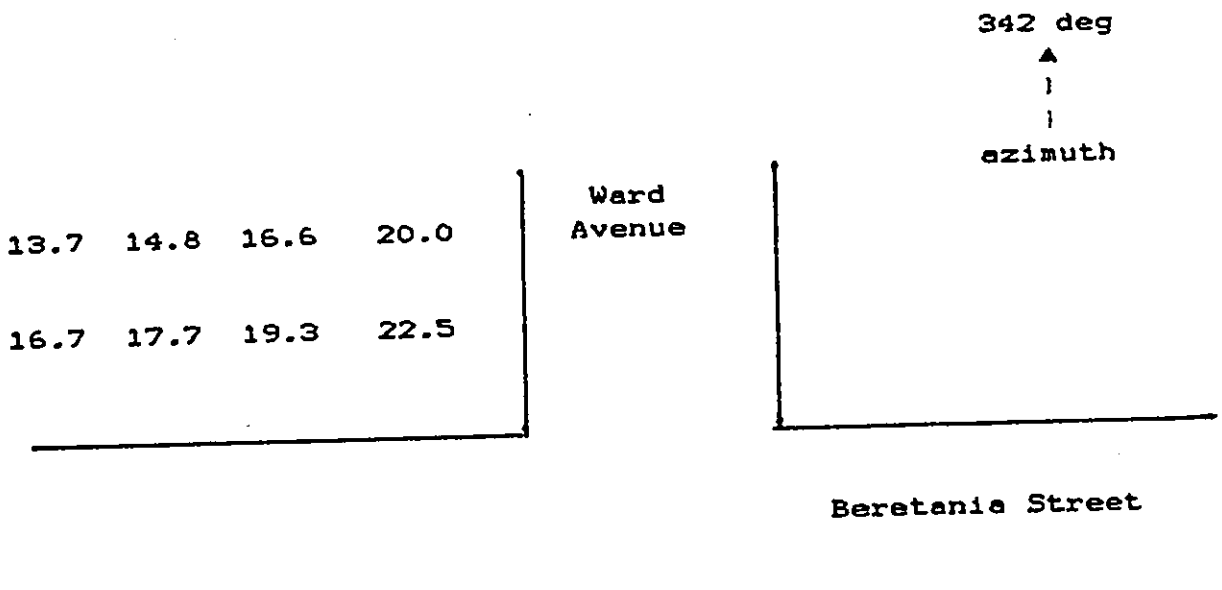


NOTES

CO concentrations = milligrams per cubic meter (mg/m3)
Receptor spacing = 10 meters
Wind direction = 70 deg
Wind speed = 1 meter per second (m/s)
Atmospheric stability = "D" (P-G Class 4)
Background CO concentration = 0.5 - 2.1 mg/m3
Diffusion model: CALINE-4
Emissions model: MOBILE-3

FIGURE 15
ESTIMATES OF MAXIMUM 1-HOUR
CARBON MONOXIDE CONCENTRATIONS

WARD AVENUE @ BERETANIA STREET
A.M. PEAK HOUR (1987)

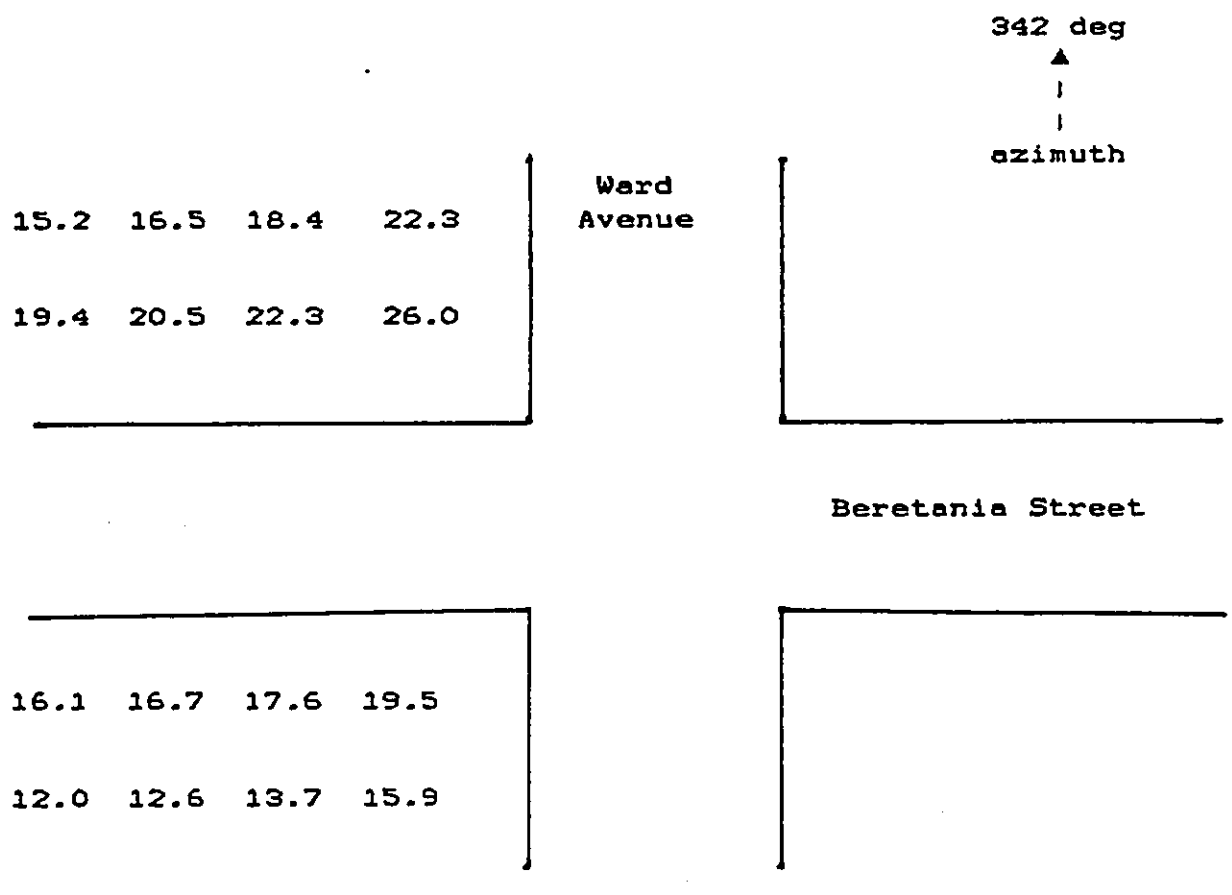


NOTES

CO concentrations = milligrams per cubic meter (mg/m3)
Receptor spacing = 10 meters
Wind direction = 70 deg
Wind speed = 1 meter per second (m/s)
Atmospheric stability = "D" (P-G Class 4)
Background CO concentration = 2.9 - 6.3 mg/m3
Diffusion model: CALINE-4
Emissions model: MOBILE-3

FIGURE 16
ESTIMATES OF MAXIMUM 1-HOUR
CARBON MONOXIDE CONCENTRATIONS

WARD AVENUE @ BERETANIA STREET
A.M. PEAK HOUR (1990) WITHOUT PROJECT

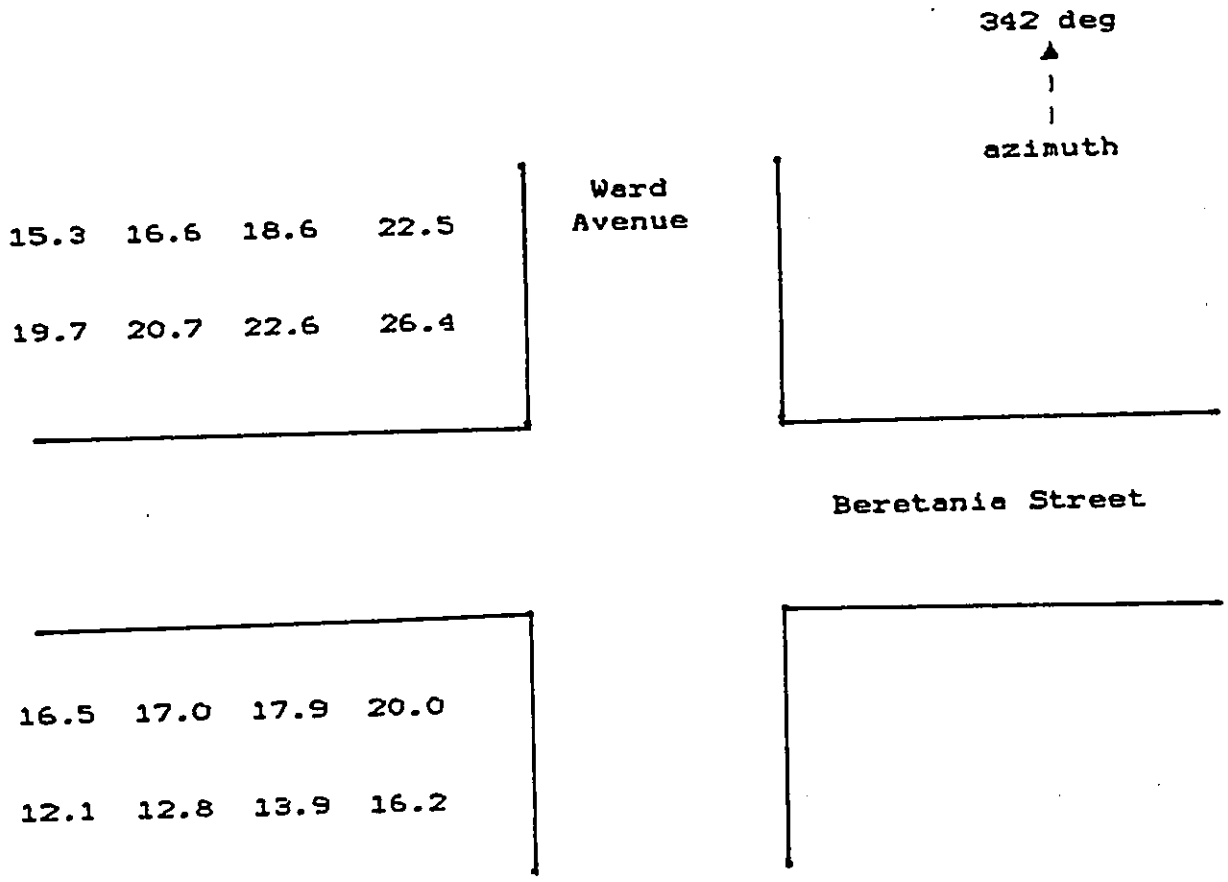


NOTES

CO concentrations = milligrams per cubic meter (mg/m3)
Receptor spacing = 10 meters
Wind direction = 70 deg
Wind speed = 1 meter per second (m/s)
Atmospheric stability = "D" (P-G Class 4)
Background CO concentration = 2.9 - 6.3 mg/m3
Diffusion model: CALINE-4
Emissions model: MOBILE-3

FIGURE 17
ESTIMATES OF MAXIMUM 1-HOUR
CARBON MONOXIDE CONCENTRATIONS

WARD AVENUE @ BERETANIA STREET
A.M. PEAK HOUR (1990) WITH PROJECT PHASE 1

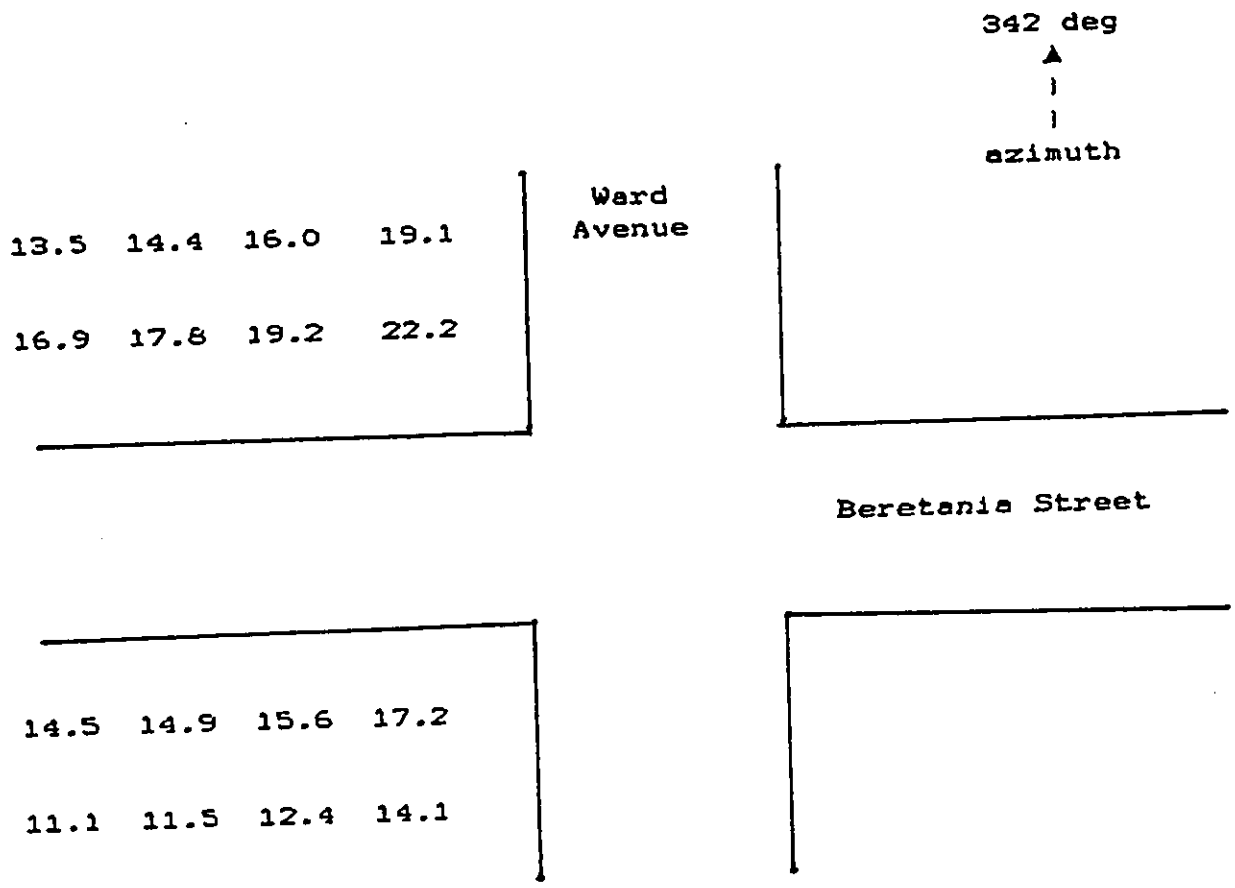


NOTES

CO concentrations = milligrams per cubic meter (mg/m3)
Receptor spacing = 10 meters
Wind direction = 70 deg
Wind speed = 1 meter per second (m/s)
Atmospheric stability = "D" (P-G Class 4)
Background CO concentration = 2.9 - 6.3 mg/m3
Diffusion model: CALINE-4
Emissions model: MOBILE-3

FIGURE 18
ESTIMATES OF MAXIMUM 1-HOUR
CARBON MONOXIDE CONCENTRATIONS

WARD AVENUE @ BERETANIA STREET
A.M. PEAK HOUR (1993) WITH PROJECT PHASES 1&2



NOTES

CO concentrations = milligrams per cubic meter (mg/m3)
Receptor spacing = 10 meters
Wind direction = 70 deg
Wind speed = 1 meter per second (m/s)
Atmospheric stability = "D" (P-G Class 4)
Background CO concentration = 2.9 - 6.3 mg/m3
Diffusion model: CALINE-4
Emissions model: MOBILE-3

FIGURE 19 - MAXIMUM ESTIMATED CO LEVELS

ALAPAI STREET (A.M. PEAK HOUR)

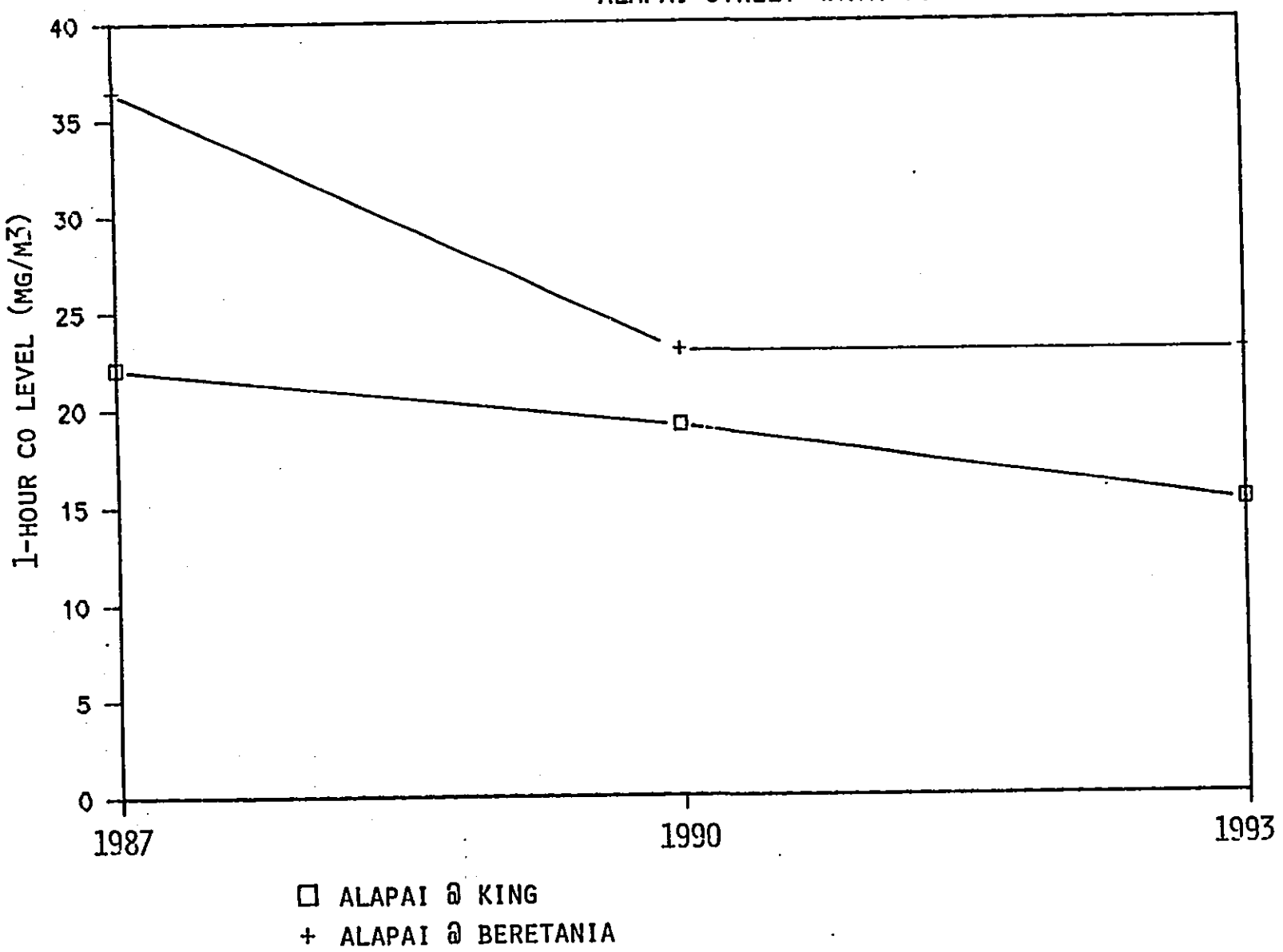
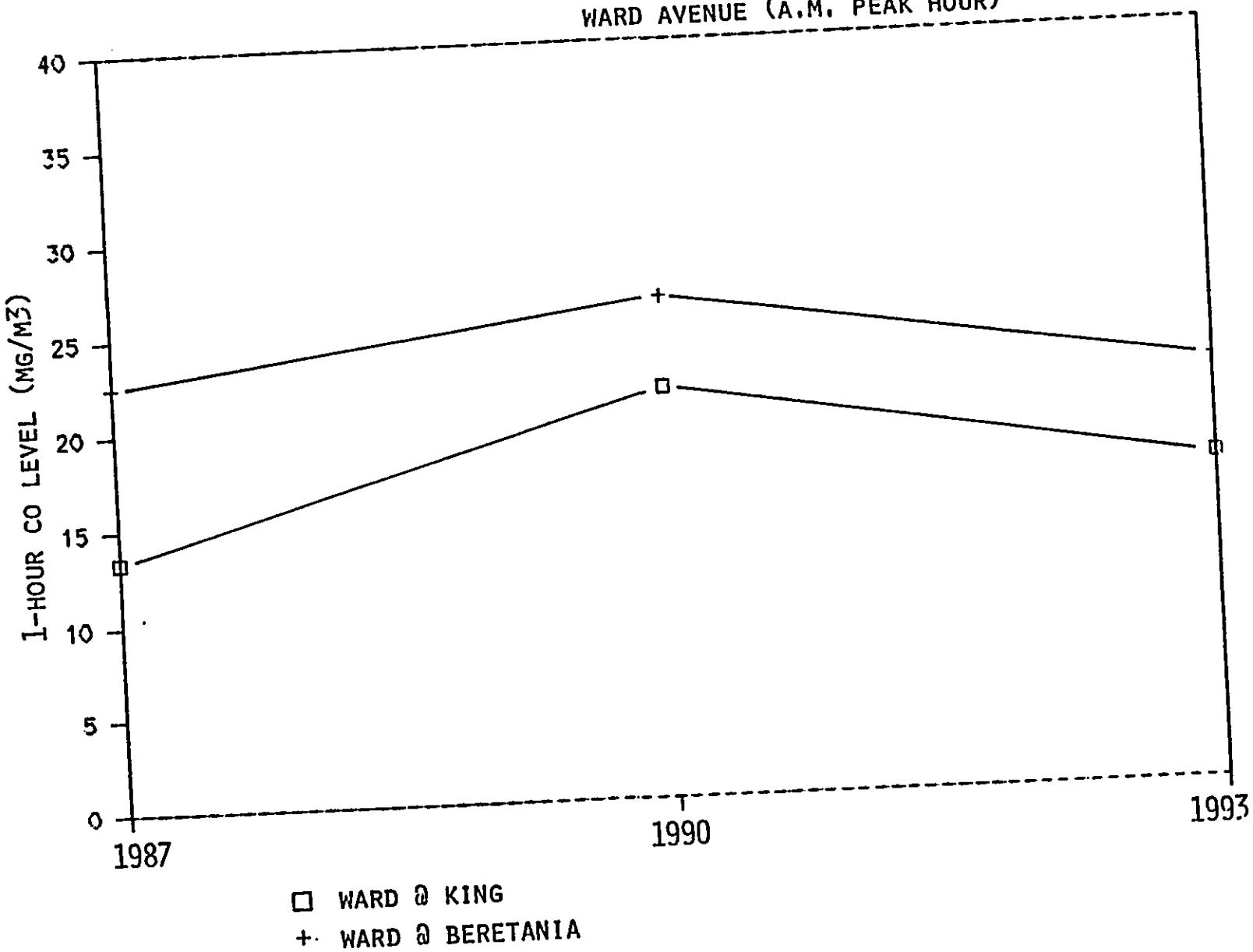


FIGURE 20 - MAXIMUM ESTIMATED CO LEVELS
WARD AVENUE (A.M. PEAK HOUR)



Appendix F

Noise Impact Analysis

DARBY
& ASSOCIATES
ACOUSTICAL CONSULTANTS

#87-31
February 12, 1988

Parsons Hawaii
P.O. Box 29909
Honolulu, Hawaii 96820

Attention: Mr. George Krasnick

Subject: Noise Impact Evaluation for the Proposed Transportation Center and City Hall Annex Office Complex, Alapai Street, Honolulu, Hawaii

Dear Mr. Krasnick:

Following is the result of our noise impact study for the subject project:

I. Description of Proposed Project

The proposed project is located on a site bounded by Beretania Street on the north, Alapai Street on the west, and King Street on the south as shown in Figure 1. The site is currently used as a bus maintenance and parking facility.

A new police headquarters building, a City Hall Annex, and bus terminal are to be constructed on the site. Construction is to take place in two phases. The first is to be the Police Headquarters, which would be completed in 1990. This facility would consist of approximately 180,000 square feet of floor area.

Phase 2 is to consist of the City Hall Annex and the bus terminal. The City Hall Annex would encompass approximately 309,000 square feet of floor area.

The bus terminal is to consist of 12 bus bays. Six are for local buses and would be along the east side of Alapai Street. The remaining six bays are for express buses and would be located off-street.

II. Potentially Noise Sensitive Locations - The nearest potentially noise sensitive residential units are those above Nikko Restoration Massage and in King Manor shown in Figure 1. Also the Early Education Center located above the State Parking Garage across from Alapai Street is of concern.

When one considers the possibility of noise impact caused by the general increase in traffic associated with the project, the potentially noise sensitive areas include the apartment areas cross-hatched in Figure 2 which primarily border Kinau Street. Non-residential land uses that potentially may be impacted include the Straub Clinic, Thomas Square, the Honolulu Academy of Arts, and possibly the Kaahumanu Elementary School.

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KAILUA, HAWAII 96734 • (808) 254-3318

III. The Existing Noise Environment - The existing noise environment in the project area and adjacent noise sensitive areas is dominated by normal motor vehicular traffic on the roads and occasional audible aircraft noise events. In the immediate area of the existing bus maintenance facility, significantly intrusive noises from bus movements during servicing at night may occur.

Motor vehicular noise level measurements at typical potentially noise sensitive locations on Ward Avenue are shown in Table I (from reference 1). The noise measurement locations are shown in Figure 3. The L_{10} noise levels in Table I represent the noise level exceeded 10% of the time during a ten-minute sample period. The Federal Highway Administration (FHWA) criteria (reference 2) consider traffic noise impact as occurring at the L_{10} levels shown in Table II. Exterior noise levels near residential units should be about 2 dB (L_{10}) less according to guidelines of acceptability for the Department of Housing and Urban Development (HUD) [reference 3]. Note in Table I that the traffic noise levels measured on the 8th floor lanai are the same as on the 2nd floor lanai because, despite the greater distance from the street, more traffic noise sources contribute efficiently to the elevated listener.

Other traffic noise level measurements are shown in Table III and include data obtained at 1:30 to 2:30 a.m. in the early morning when very little traffic was flowing. The L_{eq} value shown is the equivalent noise level (or energy averaged noise level) obtained over a 10-minute sample period. The L_{eq} values are usually 2 dBA less than the L_{10} values aforementioned. Note that traffic noise levels in the areas of concern generally decrease about 10 to 12 dBA during the nighttime as compared to the daytime.

Residents living near the existing bus facility can experience noise from the maintenance of buses including brake inspection and repair; tire changing and the repairing of air-conditioning units as well as from refueling and washing operations. Between 5 p.m. to 10 p.m. about 170 buses return to the facility and from 10:30 p.m. to 2 a.m. about 60 more buses arrive typically. Noise level measurements and observations made on August 19, 1987 around the perimeter of the facility indicated that noise from the continued movements of buses for routine servicing was the dominant factor; particularly when the buses accelerated from a stopped position (causing 75 to 87 dBA maximum noise level at 50 feet, depending on the type of bus and the operator's manner of driving).

Parsons Hawaii
Attn: George Krasnick

IV. Long Term Predicted Noise Impact

A. Phase 1 - The long term noise impact from the new police department headquarters can be categorized as originating from the additional general traffic caused by the facility; from basic air-conditioning and mechanical equipment required by the complex; from unique vehicle operations required by the police, particularly at night; and from the proposed helicopter operations.

The traffic noise levels caused by future traffic volumes can be predicted using the FHWA traffic noise level prediction model (reference 2). The prediction model was calibrated using the noise level measurements in Table III and spot traffic counts that included the mix of vehicles. From the table it can be seen that agreements within one dB were obtained.

Table IV involved utilizing the project traffic study (reference 4) and the methodology in the FHWA traffic noise prediction model to estimate the increase in noise level that will exist along selected streets when Phase 1 is in operation in 1990. From Table IV it can be seen that general traffic noise levels should increase less than one half dB during the noisiest hour in the daytime along most streets, with the greatest increase occurring on Beretania Street between Alapai Street and Ward Avenue. These increases in general traffic noise caused by the police headquarters is considered insignificant.

Of concern is that police operations near the facility at night may cause significant noise impact. To this end observations and noise level measurements were made at the locations shown in Figure 4 near the existing police headquarters between about 7:30 to 9:00 p.m. on December 28, 1987. General traffic noise typically dominated the overall situation causing L_{10} noise levels of 65 dBA at location P1 on Young Street and 61 dBA at P2 on King Street. The noise events that were unique to police operations were detected only on Young Street and included: a radio communication coming from a police car; a police dog barking for a short time period; a motorcycle revving-up and performing a test run around-the-block; as well as sounds from the open doorway to the police repair garage - e.g. an engine accelerating during testing, music from a radio, and a loud ringing signal apparently for the telephone.

It is understood that the new police facility will not have many of the vehicle maintenance facilities that presently exist on Young Street, but will have provisions for light servicing including refueling, washing, tire changes, and lubrication. It is understood that most of the vehicle maintenance functions will move to the City's new Sand Island vehicle maintenance facility. The vehicle servicing facilities which reamin in the new complex will all be in covered areas below ground. Ventilation systems and noise containment features (if necessary) will be implemented such that any emanating sounds will conform to the allowable noise levels in local noise regulations (references 5 and 6).

It also should be understood that all shift change and parking functions now handled on the street at the existing police headquarters, will be accomplished in the police motorcourt covered parking structure in the new facility. During the noise sensitive nighttime period, the first watch will occur at 11:00 p.m. while the first traffic shifts will occur at 5:00 a.m.; 6:00 a.m.; and 6:15 a.m. The transfer of detained persons from vehicles will be done at sally ports located in the covered portions of the garage. The use of sirens by the police is limited to emergency response situations. HPD no longer allows routine testing of sirens by "click-on, click-off" at the exit of the motorcourt. There is an HPD policy prohibiting siren testing at the headquarters or in residential areas.

In response to the question, "On the average, how often can we predict noisy, emergency events to occur near the Police Headquarters, particularly from 10 p.m. to 7 a.m.?", the response from Ruth and Going, Inc. was: "There is no possible way to predict this type of information. It should be pointed out that after shift change (aside from the Tactical Squad) patrol officers are in the field and respond to emergency situations from wherever they may be when the call comes in. They do not respond to each call directly from the headquarters. So the major component of emergency noises at Alapai will probably continue to be primarily from Straub Hospital, not the Police Department."

A kennel will be maintained at the new complex, but it will be totally indoors such that any barking dog sounds can be contained. Any sounds from dogs entering or leaving vehicles should also be contained by the enclosed parking structure.

Activities at the new HPD facility will not include the registration of reconstructed vehicles, which involves the testing of vehicle engine exhaust mufflers.

The frequency and time of helicopter operations on the helipad of the new HPD building is difficult to predict. At this time it is anticipated that in the beginning there may be an average of one flight per day. A flight constitutes a landing and a take off. The type of helicopter most likely used would be a Hughes 500D and it would approach from Ewa to Koko Head and depart in the Koko Head direction.

The noise from helicopter operations can be expressed in terms of the maximum dBA noise level experienced from each flight and as an annual average day-night noise level (L_{dn}) that takes into account the daily number of flights and whether they occur during the daytime (7 a.m. to 10 p.m.) or during the nighttime (10 p.m. to 7 a.m.). The L_{dn} noise index penalizes operations during the more noise sensitive nighttime period by treating each nighttime operation as being equal to ten(10) daytime operations. Most Federal government agencies consider residential land use as being compatible if the aircraft noise L_{dn} is less than 65 dB; but, locally a limit for L_{dn} of 60 dB is used to account for Hawaiian outdoor lifestyle and the fact that many residences and apartments are naturally ventilated with open windows the year around.

Figures 5 through 7 show L_{dn} noise contours that are predicted to occur when there is an average of 1 night flight (10 day flights); 2 night flights (20 day flights) and 3 night flights (30 day flights) respectively. The noise contours were generated on a computer using the Federal Aviation Administration's (FAA's) Integrated Noise Model (INM) [reference 7]. From the three figures it can be seen that, even with an average of 3 night flights (equivalent to 30 day flights); no housing or apartments are exposed to L_{dn} 60 or greater.

Figures 5 through 7 also show three locations wherein the predicted maximum dBA noise levels associated with a helicopter flight are listed in Table V. From the table it can be seen that persons on an open lanai or corridor of King Manor would experience a maximum noise level of about 85 dBA as the helicopter landed on the helipad. Similarly, the maximum dBA level on the makai side of a high-rise on Kinau Street would be about 83 dBA, while 1,700-feet distant on the slopes of Punchbowl the level would be about 74 dBA.

The noise caused by the air-conditioning plant; ventilation fans for the garages; transformers, emergency generators and any other stationary equipment required will meet the allowable noise limits in the local noise regulations (references 5 and 6).

B. Phase 2 - The long term noise impact from the City Annex Office Complex after it is completed in 1993 can be categorized as originating from the additional general traffic caused by the complex and from the air-conditioning and mechanical equipment required by the facility.

Table IV developed using the techniques described earlier, predicts that the increase in traffic noise levels attributable to both phases of the project in 1993 will be less than one dB on the streets under consideration. The greatest traffic noise level increase is seen to occur on King Street between Ward Avenue and Alapai Street. The increase in general traffic noise caused by the total project is considered insignificant.

As with the HPD facility, all mechanical and electrical equipment required for the City Hall Annex Office building will not exceed the allowable noise limits in the local noise regulations (references 5 and 6).

V. Noise Impact from Construction - Development of the project site will involve demolition, site preparation, and the construction of infrastructure and buildings. The various construction phases of a development project may generate significant amounts of noise; the actual amounts are dependent upon the methods employed during each stage of the process.

Typical construction equipment noise ranges in dB(A) are shown on Figure 8. Pile-drivers,; earthmoving equipment such as bulldozers; and diesel powered trucks will probably be the loudest equipment used during construction. Since it is anticipated that noise generated during construction will exceed allowable limits, in reference 5, a permit will be obtained from DOH. DOH may grant permits to operate vehicles, construction equipment, power tools, etc. which emit noise levels in excess of the allowable limits. Required permit conditions for construction activities are:

> "No permit shall allow construction activities creating excessive noise...before 7:00 a.m. and after 6:00 p.m. of the same day."
>
> "No permit shall allow construction activities which emit noise in excess of ninety-five dB(A)...except between 9:00 a.m. and 5:30 p.m. of the same day."
>
> "No permit shall allow construction activities which exceed the allowable noise levels on Sundays and on...[certain] holidays. Activities exceeding ninety-five dB(A) shall [also] be prohibited on Saturdays."

In addition, construction equipment and on-site vehicles or devices requiring an exhaust of gas or air must be equipped with mufflers. Also, construction vehicles using trafficways will satisfy the noise level requirements defined in reference 8.

VI. Noise Mitigation Measures - The design of the facility will include noise mitigation measures in the planning of the location and orientation of the air-conditioning equipment, exhaust fans, the trash compactor and loading docks, such that local noise regulations (references 5 and 6) will be satisfied.

Sincerely,

Ronald A. Darby

Ronald A. Darby, P.E.

RAD:djs
Encls.

References:

1. Letter report to T. Kawahigashi from R. Darby dated October 7, 1983.
2. "FHWA Highway Traffic Noise Prediction Model", Federal Highway Administration, December 1978.
3. "Noise Abatement and Control", Department of Housing and Urban Development, 24 CRF 21, Part B, January 6, 1984.
4. "Traffic Impact Study for the Transportation Center and City Hall Annex in Honolulu, Hawaii", Barton-Aschman Associates, Inc., Pasadena, California, December 1987.
5. "Chapter 43 - Community Noise Control for Oahu", Department of Health, State of Hawaii, Administrative Rules, Title 11, 1981.
6. "Section 3.100, Noise Regulations", Land Use Ordinance, City and County of Honolulu, October 22, 1986.
7. "INM Integrated Noise Model Version 3, User's Guide", prepared by CACI, Inc.-Federal for the Office of Environment and Energy, FAA-EE-81-17, October 1982.
8. "Chapter 42 - Vehicular Noise Control for Oahu", Department of Health, State of Hawaii, Administrative Rules, Title 11, 1981.

TABLE I

MEASURED L_{10} TRAFFIC NOISE LEVELS (dBA)

ASSOCIATED WITH NOISE SENSITIVE LOCATIONS ALONG WARD AVENUE

Location & Description	Inside Studio at Academy of Arts			On Lanai at Kinau Villa Building "D"			
	Windows Closed W/O A/C	Windows Closed W/A/C	Windows Opened	Bldg. "A"	2nd Floor	4th Floor	8th Floor
Existing Condition	55	58	68	65	59.5	61	59.5

W/O A/C = Without Air-conditioning

W/A/C = With Air-conditioning

(See Figure 3)

TABLE II

NOISE ABATEMENT CRITERIA

HOURLY A-WEIGHTED SOUND LEVEL - DECIBELS (dBA)

Activity Category	$L_{eq}(h)$	$L_{10}(h)$	Description of Activity Category
A	57 (Exterior)	60 (Exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 (Exterior)	70 (Exterior)	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals.
C	72 (Exterior)	75 (Exterior)	Developed lands, properties, or activities not included in Categories A or B above.
D	--	--	Undeveloped lands.
E	52 (Interior)	55 (Interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.

1/ Either $L_{10}(h)$ or $L_{eq}(h)$ (but not both) may be used on a project.

Source: Federal-Aid Highway Program Manual

Table III

Comparisons of Predicted and Measured
Traffic Noise Levels

Roadway	(feet) Distance to Center of Roadway	(dB) Measured Leq[10 min.]	(dB) Predicted Leq[60 min.]
Beretania Street (Honolulu Academy of Arts)	95	54.5	53.9
King Street (King Manor)	100	54.7	53.8
Ward Avenue (Thomas Square)	130	54.4	54.9
Beretania Street * (near State Office Bldg)	120	64.6	65.3

Note: Microphone was about 8' above curb.
Measurements were made January 12, 1988;
1:30 a.m. to 2:30 a.m.

* Measurement was made January 13, 1988;
9:40 a.m. to 9:50 a.m.

Table IV

Predicted Traffic Volume and Traffic Noise Level Increases
Caused by the Project

Roadway	Traffic Volume Increase Ratio		Traffic Noise Level Increase	
	1990 (Phase 1)	1993 (Phase 1&2)	1990 (Phase 1)	1993 (Phase 1&2)
Kinau Street	1.01	1.01	< 0.1 dB	< 0.1 dB
Beretania Street				
(a) Punchbowl/Alapai	1.05	1.11	0.2 dB	0.5 dB
(b) Alapai/Ward	1.11	1.27	0.5 dB	1.0 dB
(c) Ward/Pensacola	1.01	1.01	< 0.1 dB	< 0.1 dB
King Street				
(a) Pensacola/Ward	1.01	1.04	< 0.1 dB	0.2 dB
(b) Ward/Alapai	1.06	1.14	0.2 dB	0.6 dB
Alapai Street	1.00	1.00	0 dB	0 dB
Ward Avenue				
(a) King/Hotel	1.06	1.13	0.2 dB	0.5 dB
(b) Hotel/Beretania	1.00	1.01	< 0.1 dB	< 0.1 dB
(c) Beretania/Lunalilo FWY	1.01	1.02	< 0.1 dB	< 0.1 dB

NOTE: Estimates were made for the noisiest hours of freely moving traffic before and after the p.m. peak.

TABLE V

Predicted Maximum dBA Noise Levels from a Flight to-and-from the Helipad on the Proposed HPD Facility

Location	Distance from Flight Path (A)	Estimated Max. dBA
A. King Manor	330	85 dBA
B. Hi-rise on Kinau St.	450	83 dBA
C. (Residence on slopes of Punchbowl)	1700	74 dBA

See Figures 5, 6 or 7.

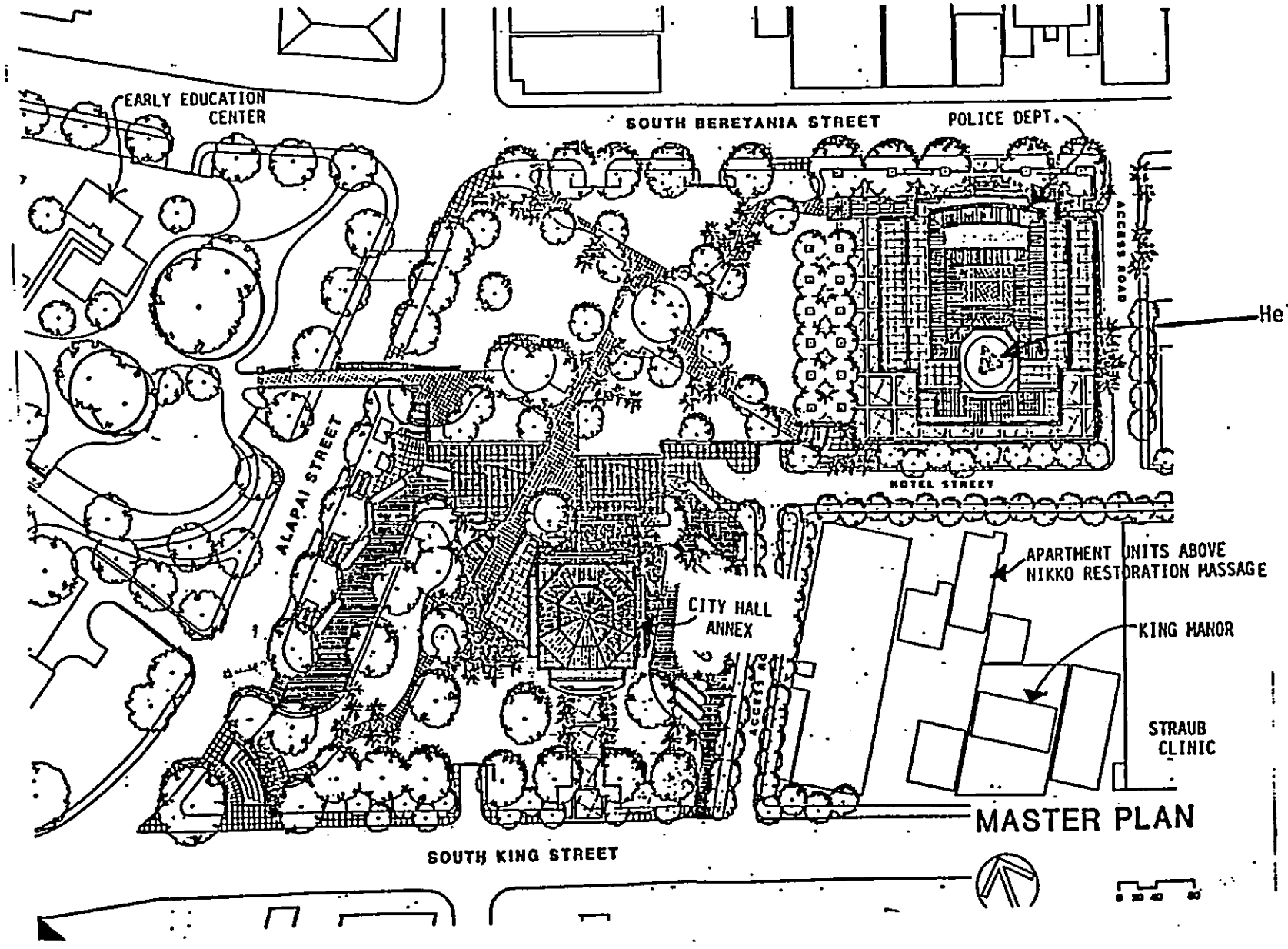


Figure 1 - Project Site Plan and Closest Potentially Noise Sensitive Areas

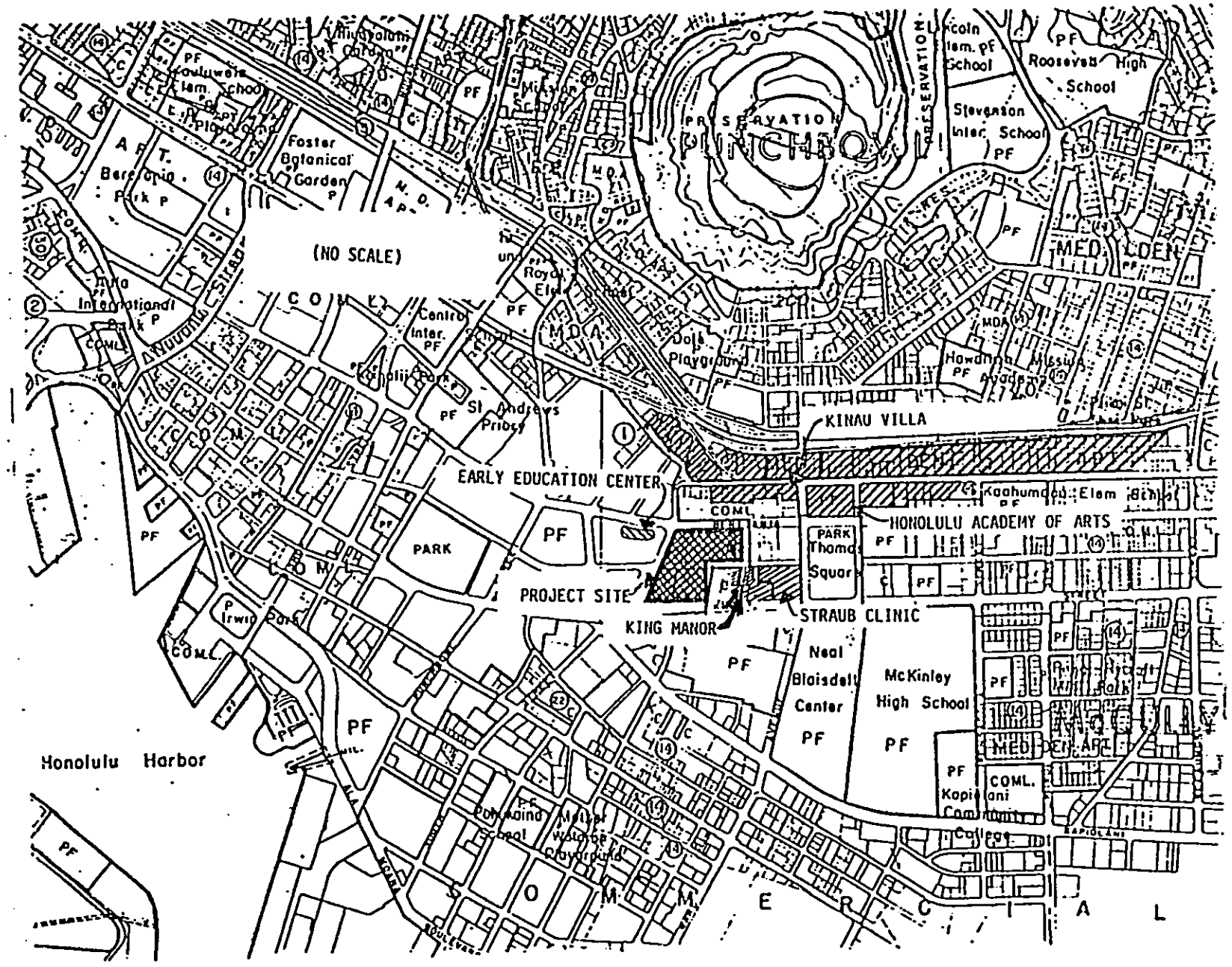


Figure 2 - Map Showing Potential Noise Sensitive Areas in Project Environs (Crosshatched Areas)

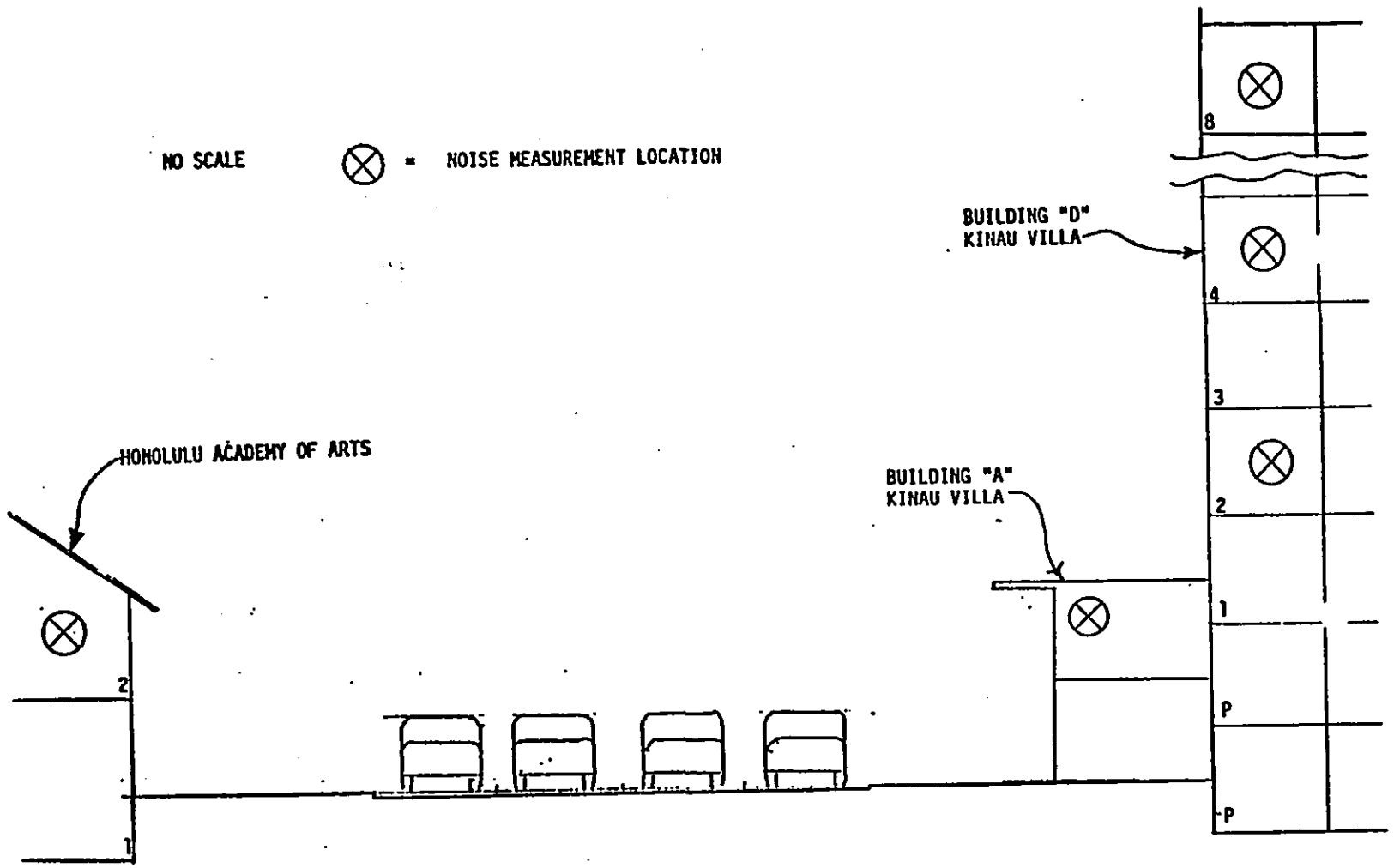


Figure 3 - Traffic Noise Level Measurement Locations Shown for Typical Potentially Noise Sensitive Locations on Ward Avenue

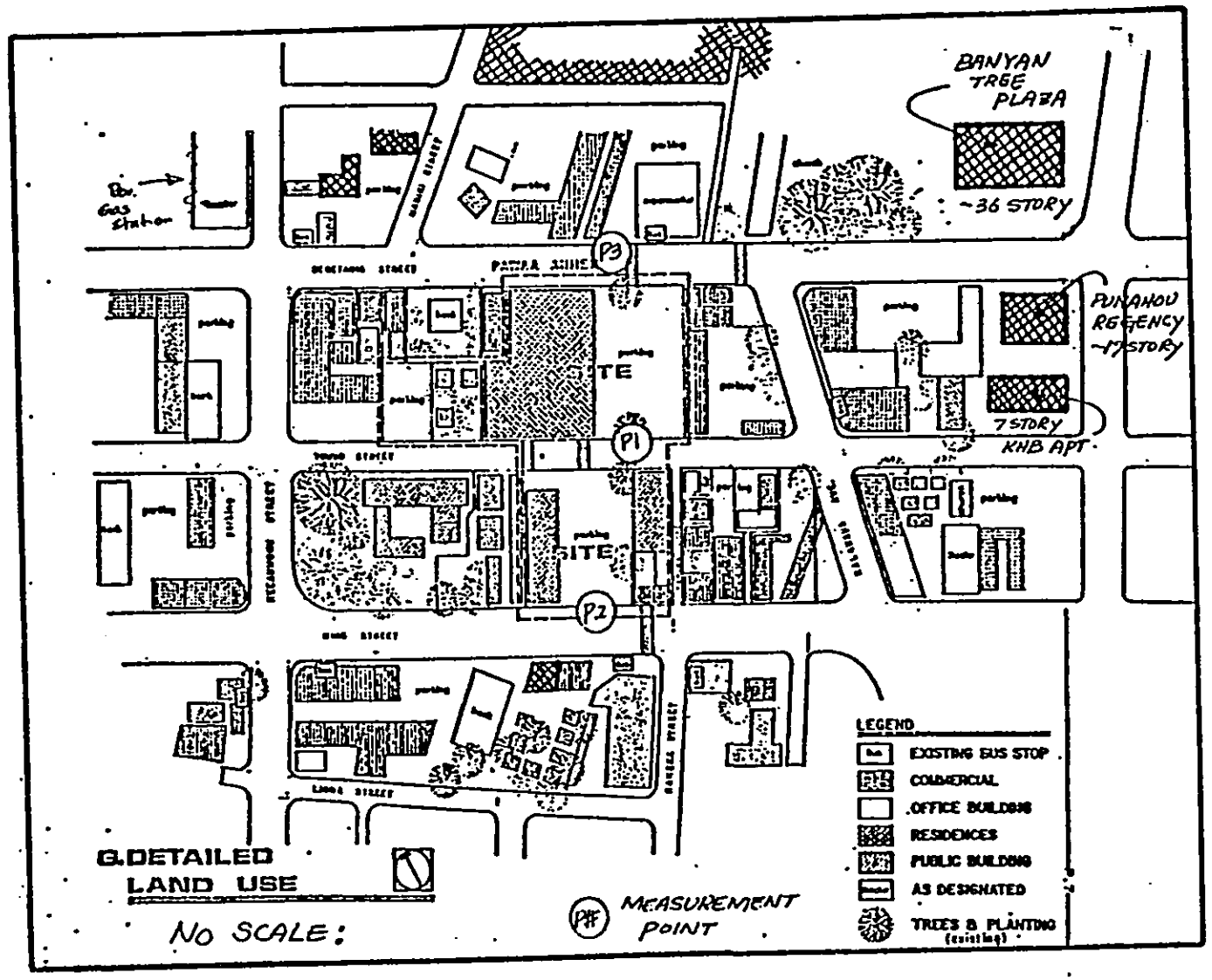


Figure 4 - Map Showing Noise Level Measurement Locations Near Existing HPD Headquarters

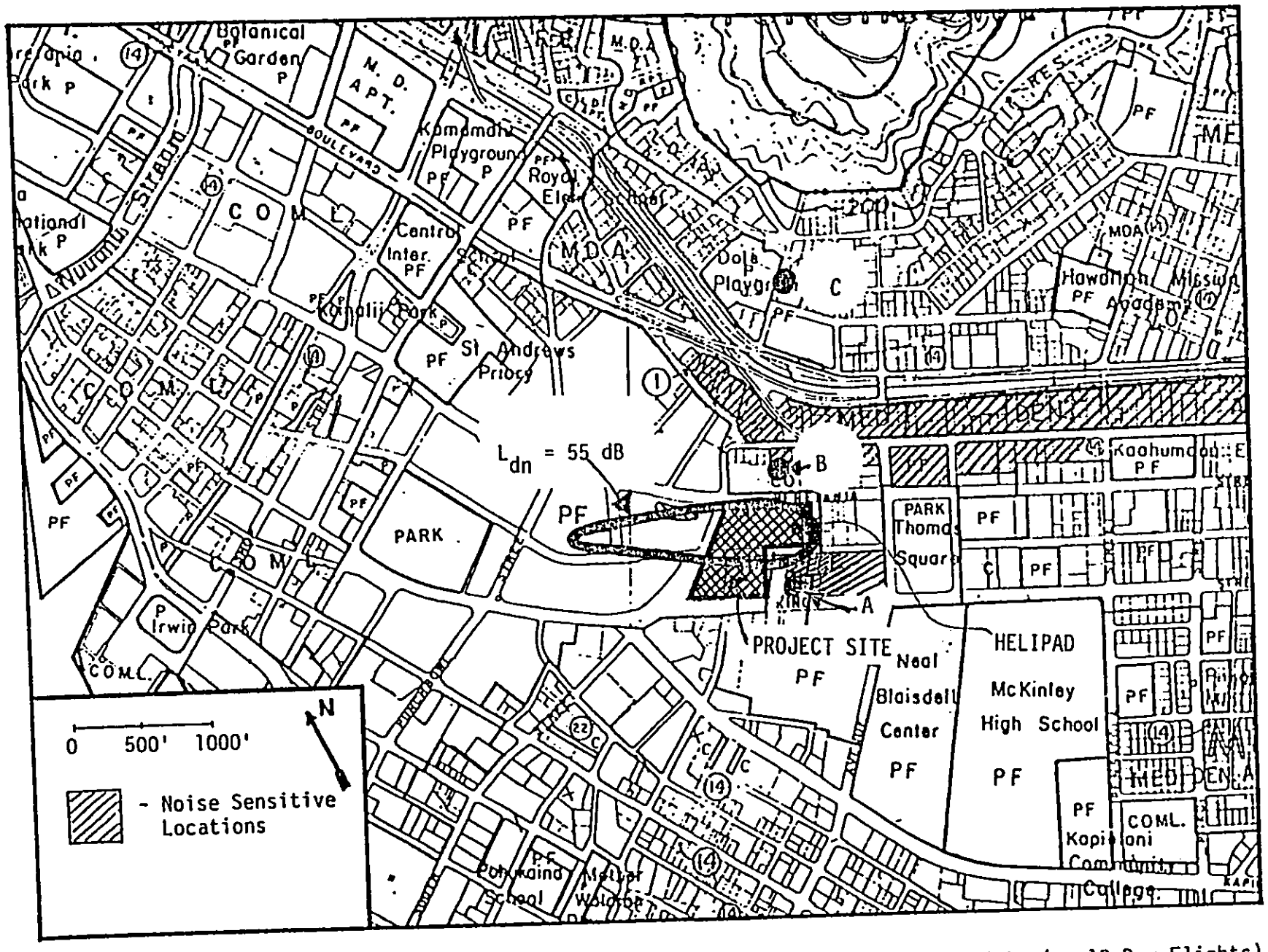


Figure 5 - Average Annual Day-Night Noise Contours Estimated for One (1) Night Flight (or 10 Day Flights) by Helicopter(s) to-and-from the Helipad.

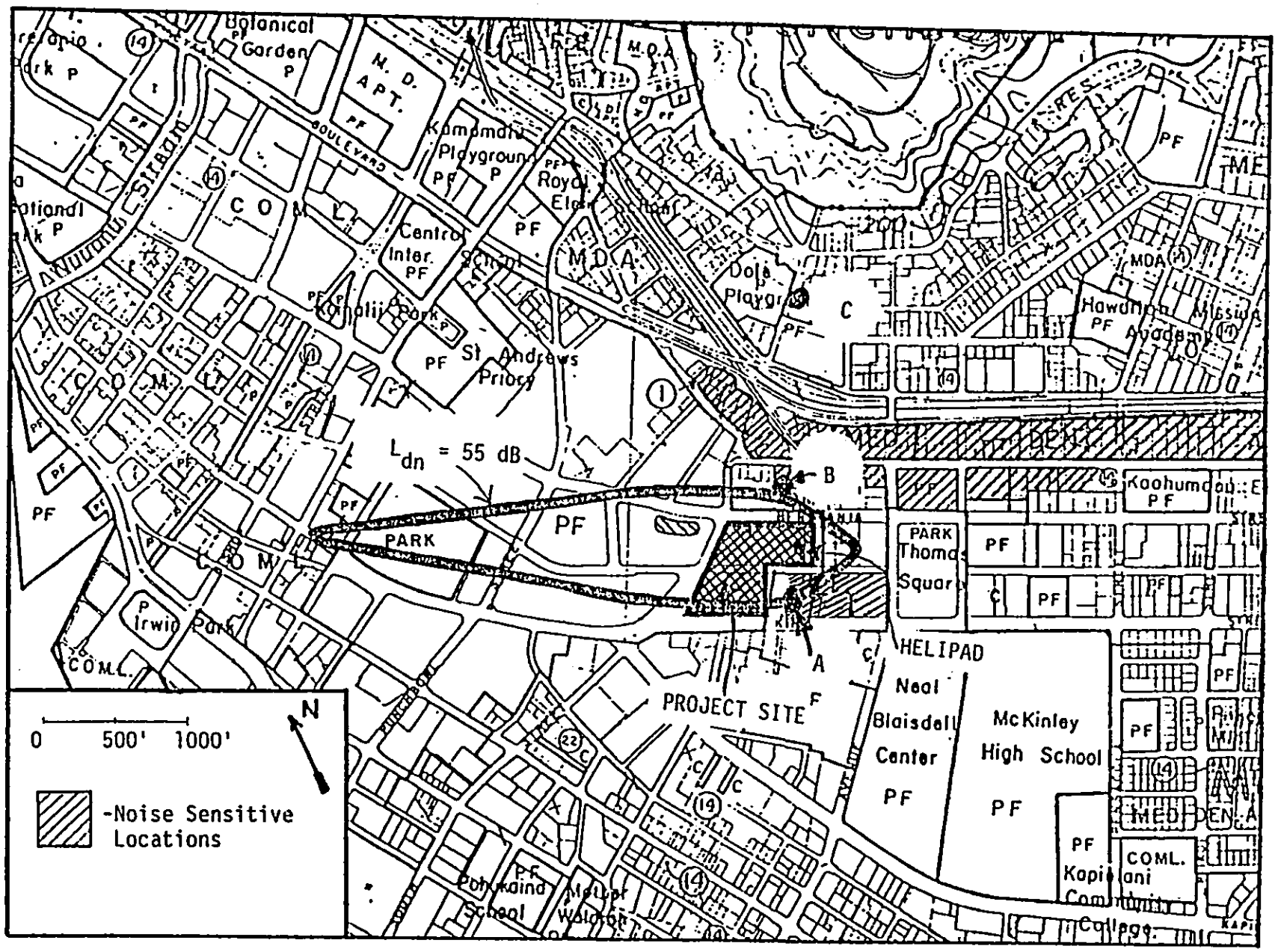


Figure 6 - Average Annual Day-Night Noise Contours Estimated for Two (2) Night Flights (or 20 Day Flights) by Helicopter(s) to-and-from the Helipad.

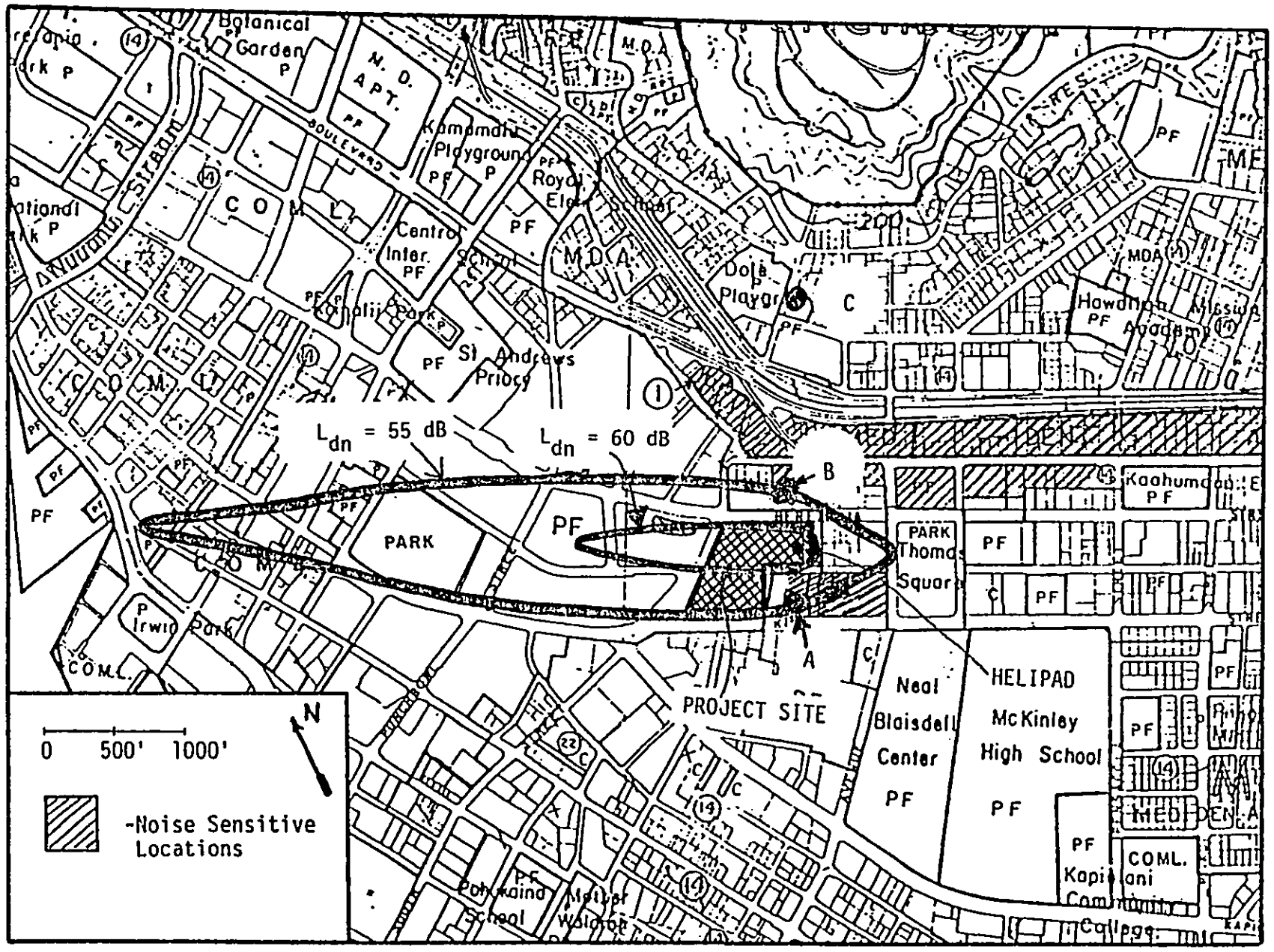
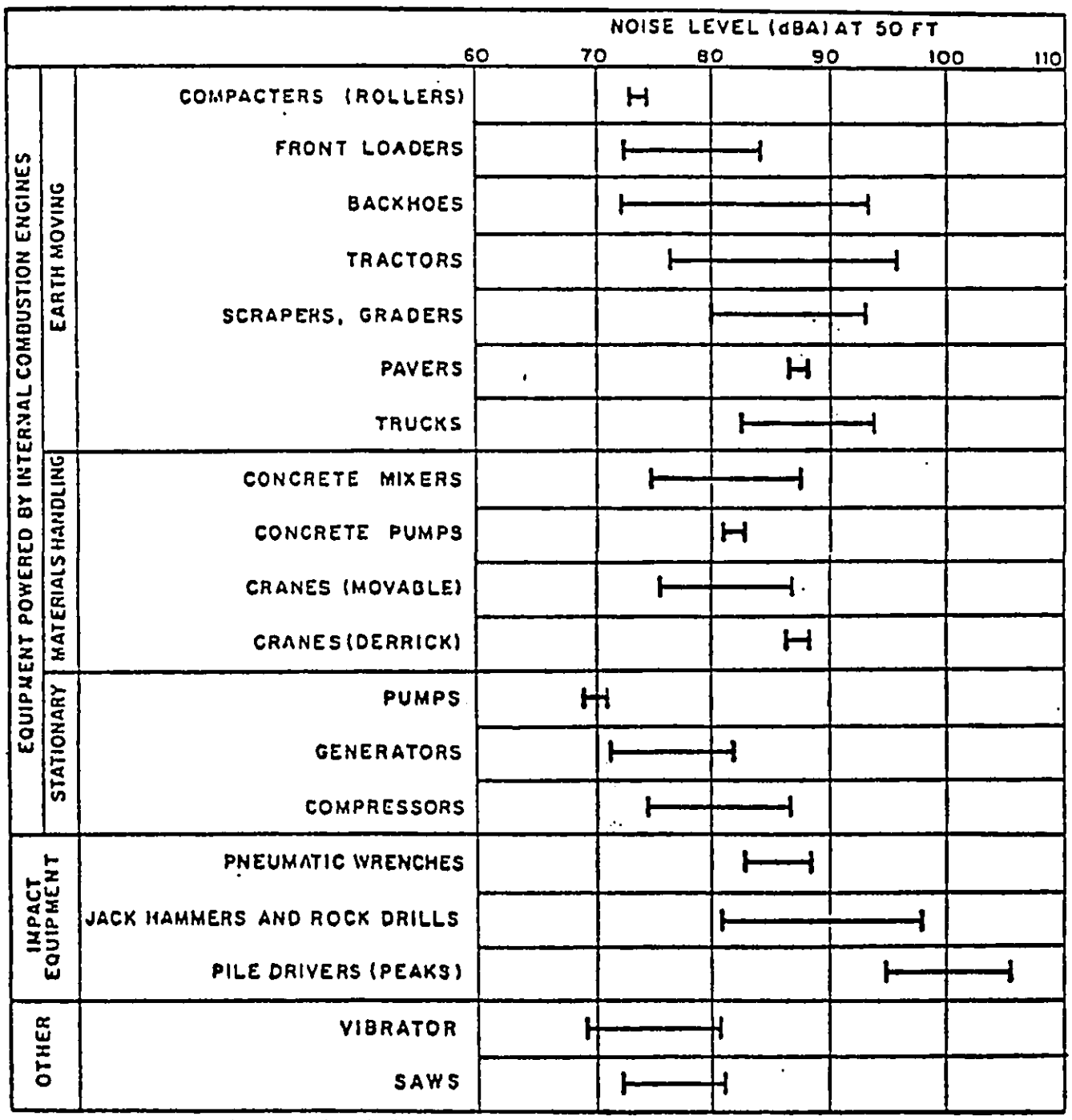


Figure 7 - Average Annual Day-Night Noise Contours Estimated for Three (3) Night Flights (or 30 Day Flights) by Helicopter(s) to-and-from the Helipad.



Note: Based on Limited Available Data Samples

FIG. 8. CONSTRUCTION EQUIPMENT NOISE RANGES.

Appendix G

Reproductions of All Substantive

Comments and Responses

EIS Preparation Notice

Comments and Responses

GOODWILL INDUSTRIES OF HONOLULU, INC.
2610 Kilihau Street, Honolulu, HI 96819 (808) 836-0313 FAX: (808) 833-4943

Richard N. Westover, President-CEO

June 30, 1987

Mr. Herbert K. Muraoka
Director & Building Superintendent
City & County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

RE: Environmental Assessment - Environmental Impact Statement Preparation Notice
Transportation Center & City Hall Annex
Alapai Business Yard

Dear Mr. Muraoka:

After a review of your proposed actions, Goodwill's only concern will be the impact of traffic and parking, that could possibly affect our business interruption at 780 S. Beretania Street.

I would appreciate a schedule of events and possible traffic problems we can expect on Beretania, and the duration of this interruption.

I will look forward to hearing from you soon.

Sincerely,

RICHARD N. WESTOVER
President & CEO

RNW:ian

PB 87-714

July 16, 1987

Mr. Richard N. Westover, President
and CEO
Goodwill Industries of Honolulu, Inc.
2610 Kilihau Street
Honolulu, Hawaii 96819

Dear Mr. Westover:

Subject: Environmental Assessment - Environmental Impact Statement Preparation Notice
Transportation Center and City Hall Annex
Office Complex

Thank you for your June 30, 1987 comments on the subject EIS Preparation Notice. In response to your concerns, we offer the following:

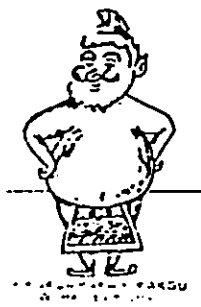
1. The construction schedule for the project is not firm at this time. We will provide you with the construction timetable at a later date.

2. During the construction period, access to the project site will be from Alapai and South King Streets and, therefore, the traffic during the construction period should not significantly affect your business at 780 S. Beretania Street.

Very truly yours,

HERBERT K. MURAOKA
Director and Building Superintendent

TH:ly



HONOLULU CITY AND COUNTY EMPLOYEES
FEDERAL CREDIT UNION

"Not For Profit - Not For Charity - BUT FOR SERVICE"

832 South Hotel Street • Honolulu, Hawaii 96813 • Tel 531-3711

July 20, 1987

Mr. Herbert K. Muraoka
Director and Building
Superintendent
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Dear Mr. Muraoka:

Re: Transportation Center and City Hall Annex Office Complex

Our area of concern on this proposed project is the traffic congestion that will be generated.

Hopefully, there will be adequate "feeders" from King and Beretania streets to alleviate the traffic congestion that is bound to occur with a project of this size.

Very truly yours,

Masami Oishi
President/General Manager

mo:ch

G-2

PB 87-798

August 3, 1987

Mr. Masami Oishi, President/General
Manager
Honolulu City and County Employees
Federal Credit Union
832 South Hotel Street
Honolulu, Hawaii 96813

Dear Mr. Oishi:

Subject: EIS Preparation Notice for the Transportation Center and City Hall Annex Office Complex

Thank you for your July 20, 1987 comments on the subject EIS Preparation Notice.

Your concern regarding traffic will be addressed in the EIS.

Very truly yours,

HERBERT K. MURAOKA
Director and Building Superintendent

TH:ly
cc: Sam Chang Architect &
Assoc. w/ attach.

G-5

JOHN WAIHEE
GOVERNOR OF HAWAII

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
P O BOX 621
HONOLULU HAWAII 96809

WILLIAM W. PATY, CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES

ALBERT H. LANDGRAF
DEPUTY

AQUACULTURE DEVELOPMENT
PROGRAM
BOATING AND OCEAN RECREATION
CONSERVATION AND RESOURCES
ENFORCEMENT
CONSERVATION AND ENVIRONMENTAL AFFAIRS
CONSERVATION AND RESOURCES
ENFORCEMENT
CONVEYANCES
FORESTRY AND WILDLIFE
LAND MANAGEMENT
STATE PARKS
WATER AND LAND DEVELOPMENT

AUG 12 1987

Honorable Herbert K. Muraoka
Director and Building
Superintendent
Building Department
City & County of Honolulu
650 South King Street
Honolulu, HI 96813

Dear Mr. Muraoka:

G-3

Subject: Environmental Assessment - Environmental Impact Statement Preparation Notice
Transportation Center and City Hall Annex Office Complex, TMK: 2-1-42:4, 11, 12 13 and 14

We have received the environmental assessment concerning the above proposed transportation center and office complex and inquire whether the City is willing to hold the matter in abeyance.

As you may know, the City is presently thinking about relocating its baseyard operations to State land on Sand Island. Should the City's request be entertained, we were looking into the possibility of obtaining land area at the Alapai Bus Yard site in exchange for the land at Sand Island to construct an office building to relocate State agencies which are presently scattered throughout downtown Honolulu in private offices.

We would like the EIS to include the possibility of the State acquiring a parcel of the Alapai lands for State office building purposes.

Very truly yours,

WILLIAM W. PATY
Chairperson of the Board

cc: Mr. J. D. Ing
Mr. M. Kealoha

PB 87-938

September 16, 1987

Mr. William W. Paty, Chairman
Board of Land and Natural Resources
Department of Land and Natural Resources
P. O. Box 621
Honolulu, Hawaii 96809

Dear Mr. Paty:

Subject: Environmental Assessment - Environmental Impact Statement Preparation Notice
Transportation Center and City Hall Annex Office Complex
TMK: 2-1-42:4,11,12,13 & 14

Thank you for your August 12, 1987 comments on the EIS Preparation Notice for the Transportation Center and City Hall Annex project. In response to your letter, we offer the following:

1. The project cannot be held in abeyance because it is presently under design and the construction funds must be encumbered by December 31, 1988.

2. It is not possible to exchange a parcel of the Alapai lands for the State-owned Honolulu Corporation Yard site on Sand Island because the Federal Government (UMTA) is a part owner of the properties. The City plans to return the Kewalo Corporation Yard properties to the State for the Sand Island site.

Limited parking stalls will be provided at the Alapai site. Please inform us immediately if the State, despite the limited parking, wishes to construct an office building at the Alapai site. Should the State desire to construct the building, we would like to have the State participate in the Master Plan cost as the State building will have to be included in the Master Plan.

Very truly yours,

HERBERT K. MURAOKA
Director and Building Superintendent

TH:jo
cc: Russel Nagata, Dept. of Acctng. & Gen. Services
Sam Chang Architect & Assoc.

CONCUR:

Jeremy Harris

JEREMY HARRIS
Managing Director

888 KING ST. • HONOLULU, HAWAII • 96813 • (808) 523-

Straub
CLINIC & HOSPITAL

July 27, 1987

Mr. Herbert K. Muraoka
Building Department
City & County of Honolulu
650 S. King Street
Honolulu, HI 96813

Re: Environmental Assessment - Environmental Impact Statement Preparation Notice
Transportation Center & City Hall Annex Office Complex

Dear Mr. Muraoka:

We have reviewed the preparation notice for the Environmental Impact Statement (EIS) for subject project.

Overall, the project would seem to be an improvement to the area as well as a more suitable use for the particular parcel. However, we do have significant concerns regarding traffic flow patterns, as well as impact on parking availability. For instance, we feel that it is essential to provide a means for 2-way cross traffic between Beretania St and King St. Accordingly, request we be included in the private agencies to be consulted during preparation of the EIS.

Our point of contact would be the Director of Plant Management, Mr. Ron Kohn, who can be reached at 523-2311 ext 8583.

Thank you for your pre-notice of this action.

Very truly yours,

Nathan Mau
Associate Administrator

cc: Ron Kohn

PB 87-803

August 4, 1987

Mr. Nathan Mau, Associate Administrator
Straub Clinic and Hospital
888 S. King Street
Honolulu, Hawaii 96813

Dear Mr. Mau:

Subject: EIS Preparation Notice for Transportation Center and City Hall Annex Office Complex

Thank you for your July 27, 1987 comments on the subject EIS Preparation Notice.

Your concerns regarding traffic flow patterns and parking will be addressed in the EIS. Straub Clinic and Hospital will be included in the list of private agencies to be consulted during the preparation of the EIS.

Very truly yours,

HERBERT K. MURAOKA
Director and Building Superintendent

TH:jo
cc: Sam Chang Arch. & Assoc. w/ attach.

S-7

Royal State Corporation

July 6, 1987

Director and Building Superintendent
City and County of Honolulu
Honolulu Municipal Building
650 South King Street
Honolulu, Hawaii 96813

Subject: Environmental Assessment - Environmental Impact Statement Preparation Notice - Transportation Center and City Hall Annex Office Complex
TMK: 2-1-42: 4, 11, 12, 13, & 14

Gentlemen:

Thank you for the opportunity to comment on your Preparation Notice regarding the above subject for our subsidiary company, Royal State National Insurance Co., owner of the property adjacent to the Bus yard on Beretania Street (TMK 2-1-42: 15, & 16, further consolidated into Lot A in January, 1984).

We, along with Royal State National Inc., Co., and our other subsidiary companies, occupy the adjacent lot to the proposed site and express our concern for the following:

a. Any interference from police communication equipment and associated RF energy on our IBM 4341 mainframe computer, micro-computers and related equipment, and the above ground computer data lines from our complex to vicinity of Mililani and Queen Streets. More data lines for the outer islands are planned for the near future.

b. Damage to computer disk drives and structural damages to our office buildings during demolition.

Please contact Mr. Ronald Ushijima, Vice President if you have any questions.

Sincerely,

Gordon C. Murakami
President

GCM/alb

819 South Beretania Street Suite 102. Honolulu Hawaii 96813 Telephone (808) 531-2226

PB 87-735

July 16, 1987

Mr. Gordon C. Murakami, President
Royal State Corporation
819 South Beretania Street, Suite 102
Honolulu, Hawaii 96813

Dear Mr. Murakami:

Subject: Environmental Assessment - Environmental Impact Statement Preparation Notice
Transportation Center and City Hall Annex Office Complex

Thank you for your July 6, 1987 comments on the subject EIS Preparation Notice. In response to your concerns, we offer the following:

1. We foresee no interference on your IBM 4341 mainframe computer, micro-computers and relatod equipment, and the above ground computer data lines from the police communication equipment and associated RF energy. Should there be any interference, we will take corrective action.

2. We foresee no damages to your computer disk and building during the construction period. The contractor will be instructed to exercise great care while working near your building and he will be held responsible to repair any damages to your building caused due to his negligence.

Very truly yours,

HERBERT K. MURAOKA
Director and Building Superintendent

TH:ly

Royal State Corporation

July 23, 1987

Mr. Herbert K. Muraoka
Director and Building Superintendant
Honolulu Municipal Building
650 South King Street
Honolulu, Hawaii 96813

Subject: EIS Notice TMK: 2-1-42:4, 11, 12, 13, & 14

Dear Mr. Muraoka:

Thank you for your letter of July 16, 1987, reassuring us of our concerns regarding the proposed construction of a City and County of Honolulu, Transportation Center and City Hall Annex Office Complex.

G-7

For a number of years now we have contemplated the construction of a new office building on our property (TMK 2-1-42:15 & 16) adjacent to the proposed complex. The actual date is undetermined, and we do not foresee doing it for number of years. We are however, highly interested in learning more about the above proposed project. In specific, architectural design, general layout of buildings, including landscaping and street accesses.

If the above data can be obtained from the Environment Impact Statement (EIS) then we would appreciated information on having access or a copy of the statement. If not, we would appreciate any information you are able to provide.

We will need to review and consider the City's plans in the event we decide to develop our property. We would rather compliment than contrast with City facilities.

Your attention to this matter would be greatly appreciated.

Sincerely,

Gordon C. Murakami
Gordon C. Murakami
President

GCM/slb

819 South Beretania Street, Suite 102, Honolulu Hawaii 96813 Telephone (808) 531-2026

PB 87-794

July 30, 1387

Mr. Gordon C. Murakami, President
Royal State Corporation
819 South Beretania Street, Suite 102
Honolulu, Hawaii 96813

Dear Mr. Murakami:

Subject: EIS Preparation Notice for the Transportation Center and City Hall Annex Office Complex

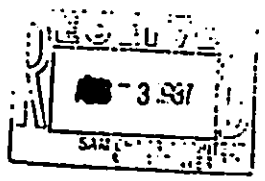
Thank you for your letter dated July 23, 1987 which expressed interest in learning more about the Transportation Center and City Hall Annex Office Complex project.

Your particular interest on the project will be included in the EIS.

Very truly yours,

Herbert K. Muraoka
HERBERT K. MURAOKA
Director and Building Superintendent

TH:ly
cc: Sam Chang Architect & Assoc., Inc. w/ attach.



AOAO King Manor
c/o Ind-Comm Management, Inc.
681 S. King Street, Suite 202
Honolulu, HI 96813
July 22, 1987

Mr. Herbert Muraoka
Director of Building Supplies
Building Department
City & County of Honolulu
650 S. King Street, 2nd Floor
Honolulu, HI 96813

SUBJECT: EIS Preparation Notice for the Transportation Center & City Hall Annex Office Complex

Dear Mr. Muraoka:

Thank you for including the King Manor Association of Apartment Owners in your environmental impact statement process.

G-8

The following items should be addressed in the preparation of the Draft EIS as it relates to the residents of the King Manor condominium:

TRAFFIC

What will the impact of traffic circulation be at full operation of the proposed facility as it relates to the King Manor access on King Street and how are the adverse impacts to be mitigated? Will Hotel Street between Alapai and Ward continue as a local thoroughfare or will Hotel Street be closed causing King Manor residents to use Victoria Street to gain access to Beretania Street? Presently no left turns are permitted from Ward to Beretania and Victoria Street, with parking on both sides, is already heavily used. This condition is further complicated when there are functions at the Neil S. Blaisdell Center and Thomas Square.

AIR QUALITY

Presently, the air quality in terms of diesel odors from the bus terminal is unacceptable. The prolonged inhalation of these fumes is a potential hazard. What is the current state of air quality at its worst case around King Manor and what will be the proposed project's air quality impact as it relates to current conditions and the Department of Health's air quality standards?

NOISE QUALITY

Currently, bus operations (i.e. the running of diesel engines, maintenance of buses, bus washing equipment, etc.) run from 4:00 A.M. to 1:00 A.M. the next day, except weekends when the hours are slightly different. What impact will noise generators (i.e. regular and emergency traffic, motorcycles, police vehicles, maintenance of police vehicles, bus transit terminal and other noise sources) have on the residents of King Manor? A study on noise generated by the existing police station on Beretania as it relates to the intensity/hours of operation of the proposed police station as projected for the proposed site is necessary.

The DEIS should also address the impact of the proposed project on the domestic water supply, sewage transmission and drainage as it relates to King Manor.

For your information, the Okazaki residential apartments located on TMK: 2-1-4: parcel 8 is another residential use not mentioned in your EIS Preparation Notice. The residents there should be contacted for comment.

Sincerely,

Ray Young, Treasurer
AOAO King Manor

RY/mm

PB 87-739

July 30, 1987

Mr. Ray Young, Treasurer
AOAO King Manor
c/o Ind-Comm Management, Inc.
681 South King Street, Suite 202
Honolulu, Hawaii 96813

Dear Mr. Young:

Subject: EIS Preparation Notice for the Transportation Center and City Hall Annex Office Complex

Thank you for your July 22, 1987 comments on the subject EIS Preparation Notice.

6-9 Your concerns regarding traffic, air and noise qualities, and utilities will be addressed in the EIS.

We have contacted Mr. Eachiro Okazaki and owners of other properties located in the vicinity of the project site for their comments.

Very truly yours,

HERBERT K. MURAOKA
Director and Building Superintendent

TH:ly
cc: Sam Chang Architect & Assoc. w/ attach.

STATE OF HAWAII
DEPARTMENT OF HEALTH
P. O. BOX 3378
HONOLULU, HAWAII 96801

July 20, 1987

MEMORANDUM

To: Mr. Herbert K. Muraoka, Director & Building Superintendent
Building Department, City & County of Honolulu

From: Deputy Director for Environmental Health

Subject: Environmental Assessment/Environmental Impact Statement Preparation
Notice for Transportation Center and City Hall Annex Office Complex

In the preparation of an environmental assessment/environmental impact statement for the subject project, the following noise concerns must be addressed.

G-10

1. The proposed project must be designed to comply with the provisions of Title 11, Administrative Rules Chapter 43, Community Noise Control for Oahu. Noise generated by stationary equipment, such as air conditioners and exhaust fans, must be attenuated through project design.

2. Noises from activities associated with the Transportation Center may adversely affect the residents at King Manor, and the patients at Straub Clinic and Hospital on South King Street. Plans to minimize these noise impacts should be developed.

3. Construction activities must comply with the provisions of Title 11, Administrative Rules Chapter 43, Community Noise Control for Oahu.

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

   b. Construction equipment and onsite vehicles requiring an exhaust of gas or air must be equipped with mufflers.

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

4. Traffic noise from heavy vehicles travelling to and from the construction sites must be minimized near existing residential areas and must comply with provisions of Title 11, Administrative Rules Chapter 42, Vehicular Noise Control for Oahu.

BRUCE S. ANDERSON, Ph.D.

PB 87-733

July 31, 1987

Mr. Bruce S. Anderson
Department of Health
State of Hawaii
P. O. Box 3378
Honolulu, Hawaii 96801

Dear Mr. Anderson:

Subject: EIS Preparation Notice for the Transportation Center and City Hall Annex Office Complex

Thank you for your July 20, 1987 comments on the subject EIS Preparation Notice.

Your concern regarding noise impact will be addressed in the EIS.

Very truly yours,

HERBERT K. MURAOKA
Director and Building Superintendant

THily
cc: Sam Chang Architect & Assoc., Inc. w/ attach.

RECEIVED
AUG 3

DEPARTMENT OF LAND UTILIZATIO.
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET
HONOLULU, HAWAII 96813 PHONE 523 4432

FRANK F. FAS[illegible]
MAYOR

A-4(LEN)
DIRECTOR

LU6/87-3206(RF)

July 20, 1987

MEMORANDUM

TO: HERBERT K. MURAOKA, DIRECTOR & BUILDING SUPERINTENDENT
BUILDING DEPARTMENT

FROM: JOHN P. WHALEN, DIRECTOR

SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE (EISPN)
FOR TRANSPORTATION CENTER/CITY HALL ANNEX OFFICE COMPLEX

Thank you for forwarding to us the EISPN. We offer the following comments:

1. The EIS should include appropriate technical studies of impacts on traffic, noise, air quality, and infrastructure.

2. What will be the height of the proposed structure(s) and what impact will the project have on views? View impacts should be described using photographs and/or perspective renderings. Important views include (a) from Punchbowl looking seaward and (b) from public viewpoints in Kakaako looking toward Punchbowl.

3. The site occupies a prominent position between the Civic Center and the Thomas Square district. Will the proposal enhance the pedestrian connection here?

4. The EIS should include a discussion of alternatives and comparative evaluation of their costs and benefits.

JOHN P. WHALEN
Director of Land Utilization

JPW:sl
11298

PB 87-792

July 30, 1987

MEMO TO: MR. JOHN P. WHALEN, DIRECTOR
DEPARTMENT OF LAND UTILIZATION

FROM: HERBERT K. MURAOKA
DIRECTOR AND BUILDING SUPERINTENDENT

SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE
FOR THE TRANSPORTATION CENTER AND CITY HALL ANNEX
OFFICE COMPLEX

Thank you for your July 20, 1987 comments on the subject EIS Preparation Notice.

Your concerns will be addressed in the EIS.

HERBERT K. MURAOKA
Director and Building Superintendent

TH:ly
cc: Sam Chang Architect &
Assoc. w/ attach.

BOARD OF WATER SUPPLY
CITY AND COUNTY [illegible]
630 SOUTH BERETANIA STREET
HONOLULU, HAWAII 96843

July 23, 1987

TO: HERBERT K. MURAOKA
DIRECTOR AND BUILDING SUPERINTENDENT
BUILDING DEPARTMENT

FROM: KAZU HAYASHIDA, MANAGER AND CHIEF ENGINEER
BOARD OF WATER SUPPLY

SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE FOR THE TRANSPORTATION CENTER AND CITY HALL ANNEX OFFICE COMPLEX, TMK: 2-1-42: 4, 11, 12, 13 AND 14

We have the following comments regarding the proposed project:

1. The existing off-site water system is presently adequate to accommodate the proposed project.

2. The availability of additional water will be determined when the building permit application is submitted for our review and approval. If additional water is made available, our Water System Facilities Charges will be assessed for source-transmission and daily storage.

3. There are existing domestic and fire services for the subject parcels.

4. If new three-inch or larger meters are required for the domestic and fire services, the construction drawings showing the installations should be submitted for our review and approval.

If you have any questions, please contact Lawrence Whang at 527-6138.

Very truly yours,

for KAZU HAYASHIDA

G-12

PB 87-791

July 30, 1987

TO: MR. KAZU HAYASHIDA, MANAGER AND CHIEF ENGINEER
BOARD OF WATER SUPPLY

FROM: HERBERT K. MURAOKA
DIRECTOR AND BUILDING SUPERINTENDENT

SUBJECT: EIS PREPARATION NOTICE FOR THE TRANSPORTATION CENTER AND CITY HALL ANNEX OFFICE COMPLEX
TMK: 2-1-42:4, 11, 12, 13 and 14

Thank you for your July 23, 1987 comments on the subject EIS Preparation Notice.

We are happy to be informed that the existing off-site water system is presently adequate to accommodate the proposed project and that domestic and fire services are available for the project site.

During the design stage, the consultant for the project will submit the water connection plans for your review and approval.

HERBERT K. MURAOKA
Director and Building Superintendent

TH:ly
cc: Sam Chang Architect & Assoc., Inc. w/ attach.

THE OUTDOOR CIRCLE

200 No. Vineyard, Suite 506, Honolulu, Hawaii 96817
808-521-0074

July 13, 1987

Mr. Herbert K. Muraoka
Director & Building Superintendent
City & County of Honolulu
650 So. King Street
Honolulu, Hawaii 96813

Subject: Environmental Assessment - EIS Preparation Notice
Transportation Center and City Hall Annex Office Complex.

Dear Mr. Muraoka:

Thank you for the Environment Assessment Environmental Impact Statement Preparation Notice Transportation Center and City Hall Annex Office Complex.

At this date we have no comments , but would like to review the final EIS.

Sincerely,

Susan L. Fristoe
Susan Fristoe (Mrs. Ashby)
Landscape & Planting

Carolie R. Simone
Carolie Simone (Mrs. Albert)
President

SF:sp

BRANCHES

PB 87-751

July 21, 1987

Mrs. Carolie Simone, President
The Outdoor Circle
200 North Vineyard Boulevard,
Suite 506
Honolulu, Hawaii 96817

Attn: Mrs. Susan Fristoe, Landscape and
Planting Chairman

Dear Mrs. Simone:

Subject: Environmental Assessment - Environmental Impact
Statement Preparation Notice
Transportation Center and City Hall Annex
Office Complex

Thank you for your letter dated July 13, 1987 pertaining to the subject EIS Preparation Notice.

We will submit to you a copy of the EIS of the project for review when it is completed.

Very truly yours,

HERBERT K. MURAOKA
Director and Building Superintendent

TH:ly
cc: Sam Chang Architect &
Assoc., Inc. w/ attach.

JUL 14 1987
SAM

G-13

DEPARTMENT OF GENERAL PLANNING
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STR
HONOLULU HAWAII

DONALD A. CLEGG
GENE CONNELL

MH/DGP 6/87-2103

July 14, 1987

MEMORANDUM

TO: HERBERT K. MURAOKA, DIRECTOR & BUILDING SUPERINTENDENT
BUILDING DEPARTMENT

FROM: DONALD A. CLEGG, CHIEF PLANNING OFFICER
DEPARTMENT OF GENERAL PLANNING

SUBJECT: ENVIRONMENTAL ASSESSMENT - ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE FOR THE CITY HALL ANNEX OFFICE COMPLEX AND TRANSPORTATION CENTER
TAX MAP KEY 2-1-42: 4, 11, 12, 13 AND 14

G-14

The proposal is generally consistent with the Development Plan for the Primary Urban Center which identifies the subject area for Public Facility use on the Land Use Map and for Corporation Yard Modification and Government Building on the Public Facilities Map.

Your assessment should spell out the specifics of the proposed development and relate this to the facility needs of the City agencies. In addition, the assessment should address whether additional amendments to the Public Facilities Map would be required for the implementation of these support facilities.

Thank you for giving us an opportunity to comment on this matter.

Donald Clegg
DONALD A. CLEGG
Chief Planning Officer

PB 87-753

July 21, 1987

MEMO TO: MR. DONALD A. CLEGG, CHIEF PLANNING OFFICER
DEPARTMENT OF GENERAL PLANNING

FROM: HERBERT K. MURAOKA
DIRECTOR AND BUILDING SUPERINTENDENT

SUBJECT: ENVIRONMENTAL ASSESSMENT - ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE
CITY HALL ANNEX OFFICE COMPLEX AND TRANSPORTATION CENTER

Thank you for your July 14, 1987 comments on the subject EIS Preparation Notice. In response to your concerns, we offer the following:

1. The EIS will cover the specifics of the proposed development and how the development relates to the facility needs of City Agencies.

2. It is our understanding that the existing support facilities such as water and sewer are adequate to accommodate the proposed development and we do not anticipate the requirement for additional amendments to the Public Facilities Map for construction of support facilities.

Herbert K. Muraoka
HERBERT K. MURAOKA
Director and Building Superintendent

TH:ly
cc: Sam Chang Architect & Associates, Inc.
w/ attach.

DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET
HONOLULU, HAWAII 96813

FRANK F. FASI
MAYOR

ALFRED J. THIEDE
DIRECTOR AND CHIEF ENGINEER

ENV 87-106

July 6, 1987

MEMORANDUM

TO: HERBERT K. MURAOKA
DIRECTOR AND BUILDING SUPERINTENDENT
BUILDING DEPARTMENT

FROM: ALFRED J. THIEDE
DIRECTOR AND CHIEF ENGINEER

SUBJECT: EISPN FOR THE TRANSPORTATION CENTER AND CITY HALL ANNEX OFFICE COMPLEX
TMK: 2-1-42: 4, 11, 12, 13 AND 14

We are responding to your memorandum dated June 24, 1987, regarding the EIS Preparation Notice for the subject project.

The proposed project should be connected to the existing 18-inch sewer on King Street.

for ALFRED J. THIEDE
Director and Chief Engineer

PB 87-752

July 21, 1987

MEMO TO: MR. ALFRED J. THIEDE, DIRECTOR AND CHIEF ENGINEER
DEPARTMENT OF PUBLIC WORKS

FROM: HERBERT K. MURAOKA
DIRECTOR AND BUILDING SUPERINTENDENT

SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE
TRANSPORTATION CENTER AND CITY HALL ANNEX OFFICE COMPLEX
TMK: 2-1-42:4, 11, 12, 13 and 14

Thank you for your memo dated July 6, 1987 regarding the subject EIS Preparation Notice.

The proposed project will connect to the existing King Street sewer. The consultant for the project will be instructed to contact your Wastewater Management Division for additional details.

HERBERT K. MURAOKA
Director and Building Superintendent

TH:ly
cc: Sam Chang Architect & Assoc., Inc. w/ attach.

Draft EIS

Comments and Responses

THE OUTDOOR CIRCLE
Established 1912
A Non-profit Organization
200 No. Vineyard Blvd., Suite 506, Honolulu, HI 96817
(808) 521-0074

March 28, 1988

Mr. John P. Whalen, Director
City & County of Honolulu
Department of Land Utilization
650 So. King Street
Honolulu, Hawaii 96813

SUBJECT: Transportation Center and City Hall Annex Office Complex

Dear Mr. Whalen:

The Outdoor Circle, with one exception, has no doubt that the proposed complex will improve upon the existing use of the area.

Among our many concerns we have always pressed for the greening and beautification of Honolulu, the planting of street trees to mitigate the cold austerity of concrete and asphalt, the aesthetic ambience of proposed development, the preservation of open spaces, the protection of view planes to the mountains and the sea and the proper provisions for the maintenance of our public areas.

If all existing ordinances are complied with, we envision that the complex will certainly be a complement to the Thomas Square and Capitol Districts.

We oppose the exploratory submittal that a City Hall annex with a 250' height limit is needed.

1. We already have an obtrusive high rise of 400 + feet of "The Royal Capital Plaza" development.
2. A 250' highrise would be incongruous with the existing building heights in the block and the immediate area, e.g. Straub Clinic, Fronk Clinic, C.S. Wo complex, King Manor Condominium and the existing Municipal Building Complex.
3. A 250' highrise would certainly disrupt the ambience of the area and district.

4. A 250' highrise would definitely be an intrusion on the view planes.
5. A 250' highrise structure would require an entirely new and revised EIS as it would impact dramatically on all existing premises made in the existing EIS.
6. If the City's need for office space exceeds that which can be accommodated in a 150' structure which is in compliance with the existing height limit for the area, we propose another site should be located for a second city office building.
7. In preliminary review of the plans we had previously expressed the following concerns for implementation:
   - that the design of the building allow for open view of the trees and green of the outdoors, which provide a calming effect for those waiting to be serviced.
   - that ample comfortable benches in shaded areas, be provided for the anxious and nervous or angry waiters.
   - that food service areas with booths or tables be available to the public.
   - that there be ample parking at reasonable rates.
   - that ample parking for the police shift changes be provided to preclude the problem they now create on Young Street.
   - that the Buses using the port area also be cautioned to drive cautiously in the area, particularly when they are returning to change shifts.
   - that both the increased vehicular and pedestrian traffic that will result from this development, be given paramount consideration in aspects of congestion and safety.

The Outdoor Circle thanks you for this opportunity to express our views and concerns.

Sincerely,

Carolie Simone

Carolie Simone (Mrs. Albert J.)
President

BUILDING DEPARTMENT

CITY AND COUNTY OF HONOLULU

HONOLULU MUNICIPAL BUILDING
650 SOUTH KING STREET
HONOLULU, HAWAII 96813

FRANK F. FASI
MAYOR

HERBERT K. MURAOKA
DIRECTOR AND BUILDING SUPERINTENDENT

PB 88-749

August 8, 1988

Mrs. Caroline Simone, President
The Outdoor Circle
200 North Vineyard Blvd., Suite 506
Honolulu, Hawaii 96817

Dear Mrs. Simone:

Subject: Draft Environmental Impact Statement (DEIS)
for Transportation Center and City Hall
Annex Office Complex
TMK: 2-1-42:4 and 11-14

Thank you for your comments of March 28, 1988 on the subject DEIS.

We understand that you oppose the proposed 250' height of the City Hall Annex. The basic rationale for the proposed configuration is to provide adequate floor area for identified office needs while also providing adequate open space to create a park-like setting surrounding the building. There is, to be sure, a trade-off involved here. We do feel the height of the annex is well-justified and our reasons are given below in response to your numbered comments.

1. The Royal Capital Plaza, only a block away, does extend to 400 feet in height. Properties makai of King Street, between Punchbowl and Piikoi Streets, are in the Kaka'ako Community Development District, administered by the Hawaii Community Development Authority (HCDA). HCDA rules permit "Planned Developments" of more than 80,000 square feet and a maximum building height of 400 feet. Eventually, a number of buildings in Kaka'ako will rise to 400 feet and it can be expected that mauka/makai view planes will be consequently impacted.

2. The 250' tall City Hall annex would be about 30 feet taller than the existing Honolulu Municipal Building (HMB) just across Alapai Street. It would be a relatively thin building presenting a much less massive appearance than the HMB. The juxtaposition of buildings of greatly disparate height will conform to the guidelines established for Kaka'ako, beginning just across King Street. This would, in effect, create a continuity in character both with the adjacent Kaka'ako District to the south, and because of the park-like character of the grounds, with the Civic Center area to the west.

3. The area surrounding the project site is in somewhat of a transitional phase with redevelopment of Kaka'ako and relocation of the bus maintenance facility. The present "ambience" of the area is greatly influenced by the bus maintenance facility. The proposed redevelopment would markedly improve the ambience of the site, regardless of the height of the City Hall Annex. As stated above, the trade-off is additional park space against a taller building.

4. We take strong exception to this contention. In our visual impact analysis, we considered the "significant views" identified in the City's Land use Ordinance (LUO) for the Thomas Square/Honolulu Academy of Arts District. We considered the "Prominent Vistas" identified in the LUO for the Hawaii Capital District. We also considered HCDA's significant view planes, view corridors and view points which incorporate the project site. In no instance was there a significant degradation of an identified view plane. Granted, a high rise office tower would obstruct a minor portion of the makai view from mauka residences. This would be unavoidable, however in the long term the 400' height limit in the Kaka'ako District may render this a moot point.

5. The proposal analyzed in the EIS is for a 250' high office tower (see Section 05.06)..

6. Constructing two office buildings, one sited elsewhere, would be unfeasible for two reasons. First, it would be considerably more expensive due to additional planning, design, site acquisition, site preparation and other costs. Economies of scale would be reduced. Second, it would be contrary to the administration's philosophy of centralizing services in the Civic Center.

7. Your earlier comments have been considered and to the greatest possible extent, the ideas incorporated into the master plan.

Thank you for your interest on this project.

Very truly yours,

HERBERT K. MURAOKA
Director and Building Superintendent

cc: Sam Chang Architect & Assoc.

STATE OF HAWAII
DEPARTMENT OF HEALTH
P. O. BOX 3378
HONOLULU, HAWAII 96801

April 5, 1988

MEMORANDUM

To: Mr. John P. Whalen, Director
Department of Land Utilization, City & County of Honolulu

From: Deputy Director for Environmental Health

Subject: Draft Environmental Impact Statement (DEIS) for Transportation Center and City Hall Annex Office Complex, Alapai Street, Honolulu, Oahu

Thank you for allowing us to review and comment on the subject DEIS. We provide the following comments:

Noise

In the past the Department of Health has received numerous complaints concerning bus engine noise from the Alapai Street depot. Although the projected traffic-related Leq noise increases from the Transportation Center and City Hall Annex were found to be low, isolated noise above background levels from the bus staging areas can have a disturbing effect on residents in the area, especially during the quiet early morning hours.

Air Pollution

The air quality impact analysis conducted by James W. Morrow for the environmental impact statement (EIS) concluded that the exceedances of the state 1-hour and 8-hour, and possibly, the federal 8-hour carbon monoxide standards may occur as a result of the completion of already approved projects in the area. The proposed project will not cause, but rather will contribute to those exceedances. Due to the potential exceedances, the EIS should address and discuss the mitigating actions which shall be implemented, or initiate a study and monitoring program to verify that the standards, in fact, will not be exceeded.

BRUCE S. ANDERSON, Ph.D.

cc: Mr. Herbert K. Muraoka

BUILDING DEPARTMENT

CITY AND COUNTY OF HONOLULU

HONOLULU MUNICIPAL BUILDING

FRANK F. FASI
MAYOR

HERBERT K. MURAOKA
BUILDING SUPERINTENDENT

PB 88-759

August 8, 1988

Dr. Bruce Anderson, Deputy Director
Department of Health
State of Hawaii
P. O. Box 3378
Honolulu, Hawaii 96801

Dear Dr. Anderson:

Subject: Draft Environmental Impact Statement (DEIS) for Transportation Center and City Hall Annex Office Complex
TMK: 2-1-42:4, 11-14

Thank you for your comments of April 5, 1988 on the subject DEIS. We offer the following response to the concerns expressed in your letter:

1. Noise - The amount of bus activity at the proposed project site during noise sensitive times would be reduced dramatically. As outlined in Section 07.12, Noise (Environmental Setting), of the DEIS, residents are now exposed to noises from bus movements, as well as noises from servicing and maintenance operations of approximately 230 buses each 24-hour day. At the proposed facility, it is understood that the only bus activity in the morning would be normal local bus service on Alapai Street which was included in the DEIS as a component of the traffic noise. It is understood that the staging of express buses in the proposed facility would occur only during the afternoon during which times the noise level from overall traffic movements on Alapai, South King and Beretania Streets is high. Thus, isolated noise events from the bus staging areas would not occur during quiet, noise-sensitive times.

2. Air Pollution - We would note the following:

   a. The 1990 contribution of the project related traffic to air quality impact is small, i.e., 1-3%.

   b. The general trend in carbon monoxide (CO) concentration over the 1987-1993 study period is downward.

   c. The frequency of occurrence of worst case meteorological conditions which would contribute to the possible exceedance of the 1-hour standard was only 0.68%.

   d. As the concentrations are inversely proportional to mean wind speed, a slight increase in wind speed from 1 m/sec to 2 m/sec would result in a halving of the CO estimates and elimination of most of the predicated violations.

Because the project would be a small contributor to the predicted exceedances of standards, any direct mitigation measures implemented by this project would have minimal impact on those exceedances. The most significant steps being taken by the City and County of Honolulu to reduce traffic impacts on air quality are operation of the existing bus system and development of a mass transit system. Another ongoing program involves upgrading of the traffic signals system in order to optimize traffic flow and reduce queuing and delays at lights.

Because some of the highest 1-hour CO concentrations were predicted for existing conditions, the City might consider conducting some limited a.m. peak hour CO monitoring at the "worst case" locations during the September - December 1988 period to see if actual concentrations really do approach the levels predicted. The problem, of course, would be whether or not in a short-term air sampling the "worst case" weather conditions would occur, particularly in light of the apparently low frequency of occurrence, i.e., <1%.

Thank you for your interest on this project.

Very truly yours,

HERBERT K. MURAOKA
Director and Building Superintendent

cc: Sam Chang Architect & Assoc.

JOHN WAIHEE
GOVERNOR OF HAWAII

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
P. O. BOX 621
HONOLULU, HAWAII 96809

APR 11 1988

WILLIAM W. PATY, CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES

LIBERT K. LANDGRAF
DEPUTY

AQUACULTURE DEVELOPMENT PROGRAM
AQUATIC RESOURCES
CONSERVATION AND ENVIRONMENTAL AFFAIRS
CONSERVATION AND RESOURCES ENFORCEMENT
CONVEYANCES
FORESTRY AND WILDLIFE
LAND MANAGEMENT
STATE PARKS
WATER AND LAND DEVELOPMENT

DOC. NO.: 3071E
FILE NO.: 88-414

Honorable John P. Whalen, Director
Department of Land Utilization
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Dear Mr. Whalen:

SUBJECT: City and County of Honolulu Transportation Center and City Hall Annex Complex, Draft EIS
TMK: 2-1-42: 4, 11-14

We have reviewed the document cited above and have the following comments to offer.

The existing conditions section of this Draft EIS fails to include a consideration of subsurface historic sites. Our office reviewed the Environmental Assessment for this project prior to the preparation of the EIS. At that time we concluded that there were unlikely to be subsurface archaeological deposits on these particular parcels. Such a statement should be included in the text.

We believe that the project will have "no effect" on significant historic sites.

In the event, however, that subsurface archaeological remains, such as burials, are encountered during construction, work in the immediate area should be stopped until staff from the Historic Sites Section can evaluate the situation and make appropriate recommendations for mitigation. This mitigation plan is included; however, it is placed under the existing conditions section and not under the mitigation measures, Section 15.

Thank you for the opportunity to comment on this project.

Very truly yours,

WILLIAM W. PATY, Chairperson
Board of Land and Natural Resources

cc: Honorable Herbert K. Muraoka

FRANK F. FASI
MAYOR

BUILDING DEPARTMENT
CITY AND COUNTY OF HONOLULU
HONOLULU MUNICIPAL BUILDING
650 SOUTH KING STREET
HONOLULU, HAWAII 96813

HERBERT K. MURAOKA
DIRECTOR AND BUILDING SUPERINTENDENT

PB 88-754

August 8, 1988

Honorable William W. Paty, Chairperson
Board of Land and Natural Resources
P. O. Box 621
Honolulu, Hawaii 96809

Dear Mr. Paty:

Subject: Draft EIS for the Transportation Center and City Hall Annex Office Complex
TMK: 2-1-42:4, 11-14

Thank you for your comments of April 11, 1988 on the subject Draft Environmental Impact Statement. We offer the following response to the concerns expressed in your letter:

1. The introductory paragraph of Section 07.06, Historic Sites (Environmental Setting), has been amended to include consideration of subsurface historic sites, as suggested.

2. Section 10.03, Historic Sites (Probable Impacts), has been amended to delete mitigation details. Reference to Section 15.0, Mitigation Measures, has been added.

3. Section 15.0, Mitigation Measures, has been amended to include the procedure you recommended should subsurface archaeological remains be encountered.

Thank you for your interest on this project.

Very truly yours,

HERBERT K. MURAOKA
Director and Building Superintendent

cc: Land Utilization Dept.
Sam Chang Arch. & Assoc., Inc.

D ARTMENT OF GENERAL PLANNING
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET
HONOLULU, HAWAII 96813

FRANK F. FASI
MAYOR

DONALD A. CLEGG
CHIEF PLANNING OFFICER

GENE CONNELL
DEPUTY CHIEF PLANNING OFFICER

April 18, 1988

JM/DGP 3/88-961

MEMORANDUM

TO: JOHN P. WHALEN, DIRECTOR
DEPARTMENT OF LAND UTILIZATION

FROM: DONALD A. CLEGG, CHIEF PLANNING OFFICER
DEPARTMENT OF GENERAL PLANNING

SUBJECT: REVIEW AND RECOMMENDATION CONCERNING A DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR A TRANSPORTATION CENTER AND CITY HALL ANNEX OFFICE COMPLEX ON ALAPAI STREET, HONOLULU, HAWAII
TAX MAP KEY 2-1-42: PARCELS 4, 11, 12, 13 & 14

Thank you for the opportunity to review the above Environmental Impact Statement. The subject project is consistent with the Objectives and Policies of the General Plan in that it would increase the efficiency of the Police Department in promoting public safety and would promote efficiency in City and County government by consolidating programs and services in the Primary Urban Center. It is also consistent with the Development Plan Public Facilities Map which has been amended to provide for the subject project.

The Draft EIS is generally adequate. However, we feel that the traffic impacts analysis should be expanded to include a more detailed discussion of potential impacts on the conflux of King, Kapiolani, South and Alapai Streets which lies makai of the project site. As shown in Appendix D, Tables 3 and 7, the intersection of Alapai and Kapiolani is already at an unacceptable E level during the afternoon peak. If mitigating measures are being considered to prevent this situation from deteriorating further, they should be more fully discussed in the text.

Donald A. Clegg

DONALD A. CLEGG
Chief Planning Officer

cc: √ Herbert K. Muraoka, Director & Building Superintendent
Building Department

BUILDING DEPARTMENT
CITY AND COUNTY OF HONOLULU
HONOLULU MUNICIPAL BUILDING
650 SOUTH KING STREET
HONOLULU, HAWAII 96813

FRANK F. FASI
MAYOR

HERBERT K. MURAOKA
DIRECTOR AND BUILDING SUPERINTENDENT

PB 88-755

August 8, 1988

MEMO TO: MR. DONALD A. CLEGG, CHIEF PLANNING OFFICER
DEPARTMENT OF GENERAL PLANNING

FROM: HERBERT K. MURAOKA
DIRECTOR AND BUILDING SUPERINTENDENT

SUBJECT: DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS) FOR THE TRANSPORTATION CENTER AND CITY HALL ANNEX OFFICE COMPLEX
TMK: 2-1-42:4, 11-14

Thank you for your comments of April 18, 1988 on the subject DEIS.

With regard to the Alapai/Kapiolani intersection, there are two important considerations to review. First, during the period of traffic counts for the analysis, South Street remained under construction. Although new counts were made, it was felt that these counts were not representative of conditions either before or after reconstruction of South Street. It was obvious that traffic was avoiding the area. For this reason, older counts made by the Department of Transportation Services were used and adjusted for background traffic increases in intervening years. Use of these counts necessitated use of the old lane configuration for South Street. In essence, what this means is that mitigation measures have already been implemented with widening and restriping of South Street. The second consideration is that the area makai of Kapiolani is under the control of the HCDA, and any proposed mitigation plans in that area would require their approval and integration into their master plans.

Thank you for your interest on this project.

Herbert K. Muraoka

HERBERT K. MURAOKA
Director and Building Superintendent

cc: Sam Chang Arch. &
Assoc., Inc.

PL1.1049
TF-1691

April 14, 1988

MEMORANDUM

TO: JOHN P. WHALEN, DIRECTOR
DEPARTMENT OF LAND UTILIZATION

FROM: JOHN E. HIRTEN, DIRECTOR

SUBJECT: TRANSPORTATION CENTER AND CITY HALL OFFICE COMPLEX
DRAFT ENVIRONMENTAL IMPACT STATEMENT
ALAPAI STREET, HONOLULU, HAWAII

This is in response to the Office of Environmental Quality Control's letter dated March 8, 1988 for our review and comments on the subject Draft Environmental Impact Statement.

We offer the following comments:

1. Table 25 on page 15-7a indicates little or no improvement to the intersection LOS for the Punchbowl Street-Beretania Street, Nard Avenue-Beretania Street, and Nard Avenue-King Street intersections, even with mitigating measures. The need and/or practicality of additional R.O.W. acquisitions should be addressed.

2. Table 21 on page 10-36A utilizes trip generation factors for civilian employees based on information provided by Ruth and Going, Inc. The generation factors reflected in the ITE report for government office buildings per employee is more than double the values used in the traffic study. The consultant should verify the lower factors and, if necessary, recalculate the trips generated.

ac(K. Hirata)
DISK#5B PL1.1049

3. We assume that through traffic to Alapai Street via Hotel Street will no longer be possible, as shown on Figure 5 on page 5-13a. If this is the case, we anticipate that a large proportion of traffic on the access road fronting the proposed police headquarters will be used by drivers wishing access to Beretania Street from mauka bound Nard Avenue. Potential problems associated with this use, along with potential sight distance problems due to the grade differential at Beretania Street should be addressed.

4. Page 5-7 indicates that other agencies now housed at Pawaa Annex (i.e. Finance, Health, Fire) would not move to the new police headquarters. If the functions of licensing and motor vehicle registration are relocated to the new City office building at Alapai Street, the need for adequate public parking and the impact of the added traffic needs to be addressed, as evidenced by the current situation at the Pawaa Annex.

5. Significant impact to current bus operations at Alapai will occur if construction for Phase 1A starts in January 1989, unless adequate off-street parking is provided for buses and cars displaced by the access road and by other construction activities during Phase 1A. The statement on page 5-3 should be revised to state that construction cannot commence without disruption to existing on-site MTL bus operations until such time that bus operations at Alapai are completely relocated in December 1989.

6. A standard turnaround should be constructed at the end of Hotel Street.

7. The pedestrian walkway over Alapai Street should be designed to allow continuity of the existing bike routes.

Questions concerning our comments may be referred to Kenneth Hirata of my staff at Local 5009.

APR 15 '88

JOHN E. HIRTEN

ac(K. Hirata)
DISK#5B PL1.1049P.1

BUILDING DEPARTMENT

CITY AND COUNTY OF HONOLULU

HONOLULU MUNICIPAL BUILDING

FRANK F. FASI
MAYOR

HERBERT K. MURAOKA
DIRECTOR AND BUILDING SUPERINTENDENT

PB 88-750

August 8, 1988

MEMO TO: JOHN E. HIRTEN, DIRECTOR
DEPARTMENT OF TRANSPORTATION SERVICES

FROM: HERBERT K. MURAOKA
DIRECTOR AND BUILDING SUPERINTENDENT

SUBJECT: DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS) FOR TRANSPORTATION CENTER AND CITY HALL OFFICE COMPLEX
TMK: 2-1-42:4, 11-14

Thank you for your comments of April 14, 1988 on the subject DEIS. We offer the following response to the concerns expressed in your memorandum:

1. Our comments regarding the three intersections noted in your letter are as follows:

   a. Punchbowl Street-Beretania Street Intersection - The recommended mitigation measure is to widen westbound Beretania to provide two exclusive right-turn lanes at Punchbowl. The effect of this measure would not be insignificant, contrary to what the comment indicates. A significant impact is defined as a change in LOS or a change in average vehicle delay of greater than four seconds when the level of service is worse than D. In every case projected, a significant positive impact would result. Afternoon LOS are improved by one and even two levels. Even when the LOS is not improved (mornings), delays are reduced by at least 18 seconds and by as much as 33 seconds. This mitigation measure should be considered by DTS as a future CIP project. Acquisition of additional rights-of-way at this intersection would not improve the situation because the turning capacity is constrained by the width of Punchbowl Street fronting Queen's Hospital. Widening the latter would have no significant benefit in the absence of improved access to and from the freeway.

   b. Ward Avenue-Beretania Street Intersection - Mitigation of impacts to the Ward Avenue-Beretania Street intersection is proposed by widening Ward southbound to provide one right-turn lane, one shared through and right-turn lane, and one through lane. Significant improvements would be experienced in all three morning peak hour scenarios which include this project. DTS has a current project to widen the ewa-side of Ward Avenue.

   c. Ward Avenue-King Street Intersection - Mitigation of impacts to the Ward Avenue-King Street intersection is proposed by restriping eastbound King Street to provide one left-turn-only lane and a shared through/left-turn lane. Significant improvements would be experienced in all three afternoon peak hour scenarios which include this project. This mitigation measure should be considered by DTS for future CIP project. Given existing uses and structures at this intersection, acquisition of additional ROW is very unlikely.

2. The following is provided in response to your request for an explanation of the methodology and assumptions used to derive trip generation rates for the police station. For a typical traffic study, the generation rates are taken from the current edition of Trip Generation Manual prepared by the Institute of Transportation Engineers (ITE). This is the standard reference for use in traffic impact studies and, in fact, is required by ordinance in some cities. The manual, however, does not contain rates for all land uses. In those cases a special trip generation study can be conducted, or generation rates can be derived using basic traffic engineering and parking assumptions.

   The manual did not contain trip generation rates for police stations nor would a trip generation study for the current HPD facility at the Pawaa Annex be practical because of the current access, egress and parking systems.

   To derive trip generation rates, it was necessary to divide the trips into three catagories: Police vehicles, civilian employee vehicles, and visitor's vehicles. Ruth and Going, Inc. are recognized authorities in the field of police facility planning and provided Barton-Aschman traffic analysis consultants with the information contained in their report.

For police vehicles, Barton-Aschman was advised that all 73 vehicles would turn over in one hour. Therefore, maximum peak hour traffic would be 2 x 73 = 146 vehicles. For civilian employees, standard office building trip rates per employee were used. Barton-Aschman was advised that the civilian employee population would be 700. Visitor traffic was the most difficult to quantify as Barton-Aschman was only provided with the number of visitor parking spaces. Based on studies on short-term parkers in southern California, it is known that 50 to 60 percent of the spaces will fill up during the morning peak hour and empty during the afternoon peak hour. The 90/10 directional split was a worse-case assumption.

3. The diversion of traffic from Hotel Street has been factored into the background conditions used for the traffic analysis. We do not expect an increase over present levels of traffic transiting Hotel Street to access Beretania. Sight distance is a problem because the adjacent Royal Insurance Company Building is built to the property line. Potential mitigating measures appear to be three:

   a. Condemn the Royal Insurance Building, demolish the front and reestablish an adequate setback;

   b. Make the access road private with drop curbs, reducing the sight line requirement; or

   c. Signalize the intersection.

   The latter seems the most reasonable approach, and would have three additional benefits. It would allow traffic exiting onto Beretania unimpeded access to the far right lane leading to the freeway and Pali Highway; it would eliminate competition between traffic entering and exiting the access road; and it would allow a convenient pedestrian crossing which is presently needed.

4. Licensing and motor vehicle registration functions are not planned to be relocated at Alapai Street. These functions are responsible for a large proportion of the traffic and parking problems at the Pawaa Annex.

5. The text has been revised to reflect that some loss of bus and car parking would occur during Phase I construction.

6. Private vehicles westbound on Hotel Street would exit via access roads to King or Beretania Streets or enter a parking structure. Hotel Street would not become a cul-de-sac and a turnaround would be necessary.

7. Hotel Street near the project site is an official existing bikeway (Honolulu DTS, March, 1981, "Bicycling - Recreation and Transportation," 24-page Pamphlet). A bikeway is defined as "shared use of that roadway." There would be no obstruction to the use of the pedestrian walk-way over Alapai Street by bike traffic from Hotel Street.

Thank you for your interest on this project.

Herbert K. Muraoka

HERBERT K. MURAOKA
Director and Building Superintendent

cc: Sam Chang Architect

April 19, 1988

Mr. John P. Whalen, Director
Department of Land Utilization
City & County of Honolulu
650 South King Street
Honolulu, HI 96813

SUBJECT: Draft Environmental Impact Statement on the Proposed Transportation Center & City Hall Annex Office Complex

Dear Mr. Whalen:

The following are our comments to the subject Draft EIS:

1) Page 7-12 LAND USES and COMMUNITIES - Land Uses.
This section does not adequately describe all the existing residential land uses in the immediate area. The narrative on Residential and the map on pages 7-12b should describe and locate the additional residential users of the areas as follows: Alohalani Tropicana, Kinau Lanais, Hale O Punehana, Admiral Thomas, Royal Court, Coronet, Pacific Manor and Kinau Villa. In addition, Section 07.12 NOISE on page 7-35 should be revised to adequately describe the noise sensitive residential areas as previously stated.

2) Page 10-35 (a) Police Vehicles.
This section should contain information on the additional traffic to be generated by the police department such as patrol cars, motorcycle traffic, three wheel vehicles and maintenance vehicle trips. Visitors - The predicted volume of visitors generated should also be based on current experience at the existing police station. This section does not adequately describe the current traffic situation at the existing police station and its volume at the proposed site.

3) Figures 33, 34, 35 and 36 do not accurately describe the current traffic and proposed traffic patterns. Presently, no left turns are allowed from Ward Avenue onto Beretania. The EIS should reassign the projected traffic distribution. All maps indicate a flow thru pattern for Hotel Street but this is not true.

4) Page 10-50 thru 10-52 and Figures 38, 29, 40.
The proposed helipad and helicopter operation is not acceptable to the residents in the area. Even one flight per day will create numerous inconveniences to the residents of King Manor. It is unclear how many flights will be anticipated in the future and what other aircraft can be expected. Furthermore, your maps indicating the location of King Manor is inaccurate. If accurately mapped, King Manor will be impacted by the 55 Ldn for Figures 38-40. We suggest you delete this helipad from the proposed project.

5) Mitigation Measurer Traffic.
We suggest left turns be allowed in off-peak hours from Ward onto Beretania to alleviate traffic from Victoria onto Beretania. Furthermore, Victoria Street parking should be restricted on peak traffic conditions. Noise - This section lacks discussion on noise generated by the proposed helicopter operations. The section should include noise screening measures for the police station and parking structures to include dense foliage and man-made barriers to mitigate impacts to nearby residents.

6) The EIS should also address alternatives such as locating land use with the least amount of adverse impact directly mauka of the King Manor. The master plan should also consider locating the parking structure where the police station is proposed.

In summary, the Final EIS needs to address more fully the noise and traffic impacts on nearby residents especially makai of Hotel Street and should contain specific mitigation as it relates to noise measures. We believe that if this complex is to be built, the adverse impacts should be less than what occurs presently.

Thank you for the opportunity to comment.

Very truly yours,

Raymond Young

Raymond Young, ~~Treasurer~~ Secretary
AOAO King Manor

RY/cm

cc: Herbert Muraoka

BUILDING DEPARTMENT

CITY AND COUNTY OF HONOLULU

HONOLULU MUNICIPAL BUILDING
650 SOUTH KING STREET
HONOLULU, HAWAII 96813

FRANK F. FASI
MAYOR

HERBERT S. MURAOKA
DIRECTOR AND BUILDING SUPERINTENDENT

PB 88-757

August 8, 1988

Mr. Raymond Young, Secretary
AOAO Manor
c/o Ind-Comm Management, Inc.
681 S. King Street, Suite 202
Honolulu, Hawaii 96813

Dear Mr. Young:

Subject: Draft Environmental Impact Statement (DEIS)
for Transportation Center and City Hall
Annex Office Complex
TMK: 2-1-42:4, 11-14

Thank you for your comments of April 19, 1988 on the subject DEIS. Our response to your concerns is as follows:

1. The "immediate area" potentially impacted by the proposed project includes the area bounded by King Street, Alapai Street, Beretania Street and Ward Avenue. The only residential uses within that area are King Manor and the Okazaki Apartments. Potential impacts to these properties have been described to illustrate worst case scenarios, as is appropriate in an EIS. The purpose of describing the existing environment in an EIS is to set the scene to analytically overlay the proposed project on the existing environment and examine the consequences. If potential impacts to residences in the immediate area are judged insignificant, then it becomes only an academic exercise to expand the focus to more distant areas.

   With regard to "noise sensitive residential areas", Figures 24 and 25 show potential noise sensitive areas and are believed to include all of the additional residential users cited above, except for Royal Court and possibly Alohalani Tropicana, which we have not been able to locate. Royal Court on Ward Avenue (approximately in the middle

of the block between King Street and Kapiolani Blvd.) is sufficiently distant from the project that adverse noise impacts are not anticipated.

2. The section contains information on the total number of peak-hour trips generated by the facility. Maximum turnover rates for available spaces were assumed. Patrol cars, motorcycles and three-wheeled vehicles are equivalent for this analysis. Trips by other police related vehicles are included under the category "Civilian Employees" in Table 21. The volume of visitor traffic to the Pawaa Annex facility has no relevance to the proposed new facility because the vast majority of such trips are related to licensing and vehicle registration activities which would not be housed in the new facility. The traffic impact analysis was based on information generated by Ruth and Going, Inc., specialists in police facility planning. Their analysis documented the present police and civilian population at the headquarters and projected the future populations based on anticipated growth factors specific to the Honolulu community. This very detailed and sophisticated analysis (produced as a separate report) was the basis for traffic volume projections.

3. None of the figures cited are intended to describe current traffic patterns. They are all projections of future conditions based on actual traffic counts during present peak AM and PM hours. The fact that left turns from Ward Avenue onto Beretania are prohibited by signs does not deter all motorists. There are a small percentage of illegal turns routinely made. These were duly recorded during the surveys and also show up in projections based on these counts. The projected traffic distribution is shown in Figures 31 and 32. As it is impossible to predict where future employees will reside, traffic distribution is based on current and projected census tract data which show distribution of population island-wide. The commenter is correct in that Hotel Street would no longer be a through street. The projections, however, utilized counts made on the existing roadway system and hence show present connections. Traffic shown exiting Hotel Street onto Alapai would be displaced onto the access road to Beretania. Traffic shown entering Hotel from Alapai would be displaced onto the access road to King Street.

4. The EIS is based on the proposed project as described in the respective master plan. It serves to identify and describe impacts of the project as described. The inclusion of the heliport in the master plan resulted from the police needs assessment performed by Ruth and

Going, Inc. It was not possible to specify when or how many flights would occur, as these are generally of an emergency nature. The location of King Manor is incorrectly identified in figure 25 and that was the basis for the noise contour plots (Figures 38, 39 and 40). All four figures have been corrected. Correcting the positioning of King Manor on these figures does not change the conclusions of the analysis for the situations of 1 or 2 flights per night. In the case of three flights per night, the Ldn 60 contour would pass through King Manor.

No further information is available on the number of helicopter flights that are anticipated in the future. The noise contours in the DEIS were based on the Hughes 500C helicopter which has source noise levels similar to other helicopters of similar size that seem reasonable for police work. In Figure 40, the large dot near the letter "A" refers to the location of King Manor. Here it is estimated that if there were 30 daytime flights (or 3 nighttime flights) on the average day over 365 days, then the 55 dB day-night contour does touch King Manor. The U.S. EPA considers an Ldn of 55 dB as a long-term goal which "will ensure protection of the public health and welfare from all adverse effects of noise based on present knowledge". ("Towards a National Strategy for Noise Control," U.S. EPA, April 1977.) Based on this information, an adverse noise impact from helicopter operations is not foreseen at King Manor.

5. The traffic analysis included counts at the intersections of both King and Beretania. Levels-of-service at these intersections were both "B", and projections showed no degradation of flow in any future scenario examined. Mitigation measures to Victoria Street are not warranted. The analysis did not look at off-peak hours so we cannot determine what effect your suggested change would have.

   Aside from restricting non-essential helicopter flights during noise-sensitive times and restricting the use of helicopters that are unusually noisy, there are no known pratical noise mitigation measures for helicopter noise events. The basic design of the police station utilizing covered garages, covered sally-ports, enclosed kennels, etc., represents the incorporation of maximumly effective noise mitigation measures as compared to the case where these facilities would be in the open with noise barriers and plantings as the only noise attenuation measures. Therefore, additional noise screening is not required.

6. In the master planning process, all potential configurations of the various facilities on the site were examined. The final site layout, however, was driven in large part by several major constraints including the flow-through characteristics of the express bus terminal, extension of the "campus" setting of the civic center across Alapai Street and coordinated phasing of relocation of the bus maintenance facilities with construction of the Alapai facilities. All of these constraints and others combined to effect the present layout.

   We believe that both noise and traffic impacts were conscientiously examined and wherever possible, practical mitigation measures identified for unavoidable impacts. The bulk of the section on noise does address the impact on nearby residents and great expense will be involved to create a facility which encloses all major potentially noisy operations associated with vehicles, police dogs, the transferring of detained persons, etc. The noise impact from the proposed facility is predictably much less than that presently caused by the bus complex. The positive benefits to the surrounding neighborhood greatly outweigh the negative impacts.

Thank you for your interest on this project.

Very truly yours,

HERBERT K. MURAOKA
Director and Building Superintendent

cc: Sam Chang Architect & Assoc.

BUILDING DEPARTMENT

CITY AND COUNTY OF HONOLULU

HONOLULU MUNICIPAL BUILDING

FRANK F. FASI
MAYOR

HERBERT K. MURAOKA
DIRECTOR AND BUILDING SUPERINTENDENT

PB 88-758

August 8, 1988

Dr. Brenner Munger, Manager
Environmental Department
Hawaiian Electric Company
P. O. Box 2750
Honolulu, Hawaii 96840-0001

Dear Dr. Munger:

Subject: Draft Environmental Impact Statement (DEIS) for
Transportation Center and City Hall Office Complex
TMK: 2-1-42:4, 11-14

Thank you for the information and comments of April 28, 1988 regarding the subject DEIS. Our response to the concerns expressed in your letter is as follows:

1. The information on Hawaiian Electric Company's existing facilities in South Hotel Street right-of-way and within easement areas has been added to Section 07.09 of the Environmental Impact Statement (EIS).

2. Information on 138 KV transmission lines has been referred to the design team for coordination.

3. Information on the coordination and the review process on the relocation of the underground ductline has been added to Section 07.09 of the EIS and also forwarded to the design team.

4. Your comment that "HECO communication circuits are also located in the underground ductline within and around the proposed development" has been referred to the design team for coordination. It would have been more meaningful to us if plans showing the locations of the circuits were submitted to us.

5. Please be assured that the relocation of the radio and microwave communication components from the existing police station to the new station would not cause radio frequency interference on nearby communication systems including the existing HECO radio and microwave facilities.

6. At the present time, the exact location of the Annex Office Tower has not been determined. Therefore, it would not be possible to determine if the office tower is directly in the "line of sight" of the existing HECO Ward Avenue to Tripler microwave transmission path.

Thank you for your interest on this project.

Very truly yours,

HERBERT K. MURAOKA
Director and Building Superintendent

cc: Sam Chang Architect

BUILDING DEPARTMENT

CITY AND COUNTY OF HONOLULU

HONOLULU MUNICIPAL BUILDING

HERBERT K. MURAOKA

PB 88-298

March 22, 1988

Mr. Ernest Kosaka, Field Supervisor
Office of Environmental Services
Pacific Island Office
Fish and Wildlife Service
United States Department of the Interior
300 Ala Moana Boulevard
P. O. Box 50167
Honolulu, Hawaii 96850

Dear Mr. Kosaka:

Subject: Draft Environmental Impact Statement
Transportation Center and City Hall
Annex Office Complex

Thank you for your letter dated March 9, 1988 regarding the Draft Environmental Impact Statement for the Transportation Center and City Hall Annex Office Complex project.

We understand that the proposed project will have no significant deleterious impact on fish and wildlife resources.

Very truly yours,

HERBERT K. MURAOKA
Director and Building Superintendant

cc: Parsons Hawaii

United States Department of the Interior

FISH AND WILDLIFE SERVICE

300 ALA MOANA BOULEVARD
P O BOX 50167
HONOLULU HAWAII 96850

March 9, 1988

Mr. John P. Whalen, Director
City and County of Honolulu
Department of Land Utilization
650 South King Street
Honolulu, Hawaii 96813

Re: Environmental Impact Statement, Transportation Center and City Hall Annex Office Complex, Alapai Street, Honolulu, Oahu

Dear Mr. Whalen:

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

We appreciate this opportunity to comment.

Sincerely yours,

for Ernest Kosaka, Field Supervisor
Office of Environmental Services
Pacific Islands Office

✓ cc: C&C of Honolulu Building Dept.

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BUILDING DEPARTMENT

CITY AND COUNTY OF HONOLULU

HONOLULU MUNICIPAL BUILDING
650 SOUTH KING STREET
HONOLULU, HAWAII 96813

FRANK F. FASI
MAYOR

HERBERT K. MURAOKA
DIRECTOR AND BUILDING SUPERINTENDENT

PB 88-756

August 8, 1988

Mr. Ron Kohn, Director
Plant Management
Straub Clinic and Hospital
888 S. King Street
Honolulu, Hawaii 96813

Dear Mr. Kohn:

Subject: Draft Environmental Impact Statement (DEIS) for Transportation Center and City Hall Annex Office Complex
TMK: 2-1-42:4, 11-14

Thank you for your comments of April 22, 1988 on the subject DEIS. Our response to your comments is as follows:

1. Traffic/Parking

   a. The Environmental Impact Statement (EIS) process established by Chapter 343, HRS, and implemented by the EIS Rules (Administrative Rules, Chapter 11-200) does not provide for mandatory implementation of suggested mitigation measures. The process results in disclosure of potential impacts, development of means to reduce or eliminate some impacts, public comment and agency consideration. Imposition of conditions to mitigate impacts is done in association with granting of a permit. Often, conditions attached to a permit are developed from the mitigation measures contained in the EIS. The measures, however, must be achievable by the applicant. In other words, the applicant cannot reasonably be expected to modify structures or operations outside of his direct control.

   b. The scope of the project is generally limited to the physical boundaries of the site, although certain off-site improvements may be included. The traffic analysis does not indicate a need for mitigation measures along Hotel Street. Before parking prohibitions could be seriously considered, there would have to be an analysis of the impacts of such a measure on the various businesses and residential units which may depend on the availability of these spaces. A mid-block crosswalk may or may not affect jaywalking. Frequently they are undesirable due to the false sense of security they may provide to pedestrians.

   c. The capacity analysis did not reveal a need for the suggested improvements. We agree that if it becomes necessary to improve the left turn opportunities at the intersection, it may be possible to do so by changing the timing of the traffic signals which bracket the intersection. We also agree with the writer's assessment of the effectiveness of signage prohibiting blockage of the intersection.

2. Utility Interruption

   a. At this time, the proposed utility corridor is planned to run within the project boundaries.

   b. During review of construction plans by the various utility companies, the tie-ins to existing distribution systems are determined by the utility. At that time, it is usually determined if and when service will need to be interrupted to accomplish the tie-in. It is usually left to the utility to give notice to a user of the date, time and length of any interruption.

3. The comment is noted and has been passed to the design team for consideration.

Thank you for your interest on this project.

Very truly yours,

HERBERT K. MURAOKA
Director and Building Superintendent

cc: Sam Chang Architect & Associates

University of Hawaii at Manoa

Environmental Center
Crawford 317 • 2550 Campus Road
Honolulu, Hawaii 96822
Telephone (808) 948-7361

April 22, 1988
RE:0493

Mr. John P. Whalen, Director
Department of Land Utilization
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Dear Mr. Whalen:

Draft Environmental Impact Statement
City Hall Annex Office Complex and Transportation Center
(Redevelopment of Alapai Bus Barn Site)
Honolulu, Hawaii

The above referenced document involves construction of a new headquarters facility for the Honolulu Police Department, 550 parking stalls, and a new access road to connect Beretania and South Hotel Streets. A second phase of the project would involve construction of a high-rise office building. The Environmental Center has conducted a review of this document with the assistance of Anders Daniels, Meteorology; Yu-Si Fok, Henry Gee, and Edwin Murabayashi, Water Resources Research Center; Kem Lowry, Urban and Regional Planning; and Jennifer Crummer, Environmental Center.

Air Quality

Our reviewer found the air quality section in this Environmental Impact Statement exceptionally well done, prepared using the latest dispersion model with appropriate input parameters. It is complemented by a very good discussion of current standards and existing air quality. Possibly some discussion of the climate of the site could have been included, but such a discussion is difficult and rather subjective, lacking meteorological data from the site. It has been suggested that the projected concentrations might be on the high side, but since there are no data available or experiments conducted to test the model used (CALINE 4) in Hawaii, we only can accept the modeled numbers. Such a test of the model seems very appropriate as, in the future, all EIS air quality considerations should use this model.

It has also been suggested that the Office of Environmental Quality Control should consider keeping the air quality section of this EIS as a model of how one should be presented and use it as a standard to judge

others. This is particularly true in view of several extremely poor ones we have recently reviewed.

Parking

Of the 550 parking stalls planned for this complex only 10 are apparently allotted to the public. This does not seem adequate for a public structure. We concur with the consultants recommendation for 50 public parking stalls.

We have no further comments to add at this time. We thank you for the opportunity to review this document and look forward to your consideration and response to our comments.

Yours truly,

John T. Harrison, Ph.D.
Environmental Coodinator

cc: OEQC
✓Herbert K. Muraoka, Honolulu Building Department
Anders Daniels
Kem Lowry
Yu-Si Fok
Henry Gee
Edwin Murabayashi
Jennifer Crummer
L. Stephen Lau

BUILDING DEPARTMENT

CITY AND COUNTY OF HONOLULU

HONOLULU MUNICIPAL BUILDING
650 SOUTH KING STREET
HONOLULU, HAWAII 96813

FRANK F. FASI
MAYOR

HERBERT K. MURAOKA
DIRECTOR AND BUILDING SUPERINTENDENT

PB 88-753

August 8, 1988

MEMO TO: MR. FRANK K. KAHOOHANOHANO, FIRE CHIEF
HONOLULU FIRE DEPARTMENT

FROM: HERBERT K. MURAOKA
DIRECTOR AND BUILDING SUPERINTENDENT

SUBJECT: DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS) FOR THE TRANSPORTATION CENTER AND CITY HALL ANNEX OFFICE COMPLEX
TMK: 2-1-42:4, 11-14

Thank you for your comments of April 20, 1988 on the subject DEIS. Our response to your comments is as follows:

1. The information on fire protection for the proposed project, which you provided, has been included in Section 07.09, Utilities and Public Services, of the EIS.

2. The space requirements for the Fire Department in the New Annex Tower will be determined when the Need Assessment Study is completed prior to the design of the structure.

3. Allocation of parking spaces is the Administration's responsibility and will be done at the appropriate time.

4. Your comment regarding Fire Code requirements has been referred to the design team.

Thank you for your interest in this project.

Herbert K. Muraoka

HERBERT K. MURAOKA
Director and Building Superintendent

cc: Sam Chang Arch. & Assoc., Inc.

FIRE DEPARTMENT

CITY AND COUNTY OF HONOLULU

1455 S. BERETANIA STREET ROOM 305
HONOLULU, HAWAII 96814

FRANK F. FASI
MAYOR

FRANK E. KANDOHANDOHARD
FIRE CHIEF

LIONEL E. CAMARA
DEPUTY FIRE CHIEF

April 20, 1988

TO: JOHN P. WHALEN, DIRECTOR
DEPARTMENT OF LAND UTILIZATION

FROM: LIONEL E. CAMARA, ACTING FIRE CHIEF

SUBJECT: TRANSPORTATION CENTER AND CITY HALL ANNEX OFFICE COMPLEX
ENVIRONMENTAL IMPACT STATEMENT

We have reviewed the subject EIS and wish to offer the following comments:

1. Fire protection for the proposed project is currently provided by the Kakaako, Central and Pawaa Fire Stations. Initial response would be three engine companies, two aerial companies (one ladder truck and one snorkel), a heavy rescue company and a Battalion Chief. Response time is three to five minutes. Approximately 38 personnel are in the initial response. Secondary response would be one ladder and two engine companies. Fire protection is considered adequate.

2. We have reviewed the space requirements and feel the 8,355 square feet allocated to the Fire Department is insufficient. We request an additional 1,800 square feet for a Prevention Bureau classroom/briefing room, a senior officer locker room and an employee lunch room/lounge

3. We request ten parking spaces be assigned to senior officers who are required to respond to emergency incidents as part of an integrated Incident Command System (ICS). The ICS is used for all major fire, hazardous material and disaster incidents. Senior officers have key roles in the system and must be able to have immediate access to vehicles and be able to exit the complex without delay. Regular employees will utilize standard parking.

4. The project is subject to applicable Fire Codes. Built-in fire protection systems will be addressed during plans review.

Thank you for the opportunity to comment on this subject. Should you have any questions, please contact Battalion Chief Kenneth Word of our Administrative Services Bureau at local 3838.

LIONEL E. CAMARA
Acting Fire Chief

LEC/KAW:lm

cc: Herbert Muraoka,
Director and Building Superintendent

DEPARTMENT OF LAND UTILIZATION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET
HONOLULU, HAWAII 96813 ☎ (808) 523-4432

FRANK F. FASI
MAYOR

87/ELS-3(R

April 22, 1988

MEMORANDUM

TO: HERBERT K. MURAOKA, DIRECTOR & BUILDING SUPERINTENDENT
BUILDING DEPARTMENT

FROM: JOHN P. WHALEN, DIRECTOR

SUBJECT: DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS) FOR THE TRANSPORTATION CENTER AND CITY HALL ANNEX OFFICE COMPLEX

We have reviewed the Draft EIS and have the following comments:

1. The existing pedestrian/bicycle corridor along Hotel Street between the Civic Center and Thomas Square is well-used. We suggest that this ground-level corridor be maintained and strengthened. Especially during the afternoon rush hour, this corridor will be needed to convey bus riders to the express bus terminal. The Draft EIS does not make clear where pedestrians will be allowed to cross Alapai Street. While a pedestrian bridge may appear the optimal solution for traffic flow and safety purposes, experience indicates that many such overpasses are little used.

2. Section 10.10, "Impacts on Views" should be improved. We have the following suggestions:

   a. The analysis and photographs should include important viewpoints in the Capital District and the Thomas Square District.

   b. In addition to photographs of existing views, the analysis should include photographs with the proposed structures superimposed. Even more desirable would be exhibits comparing 250-foot and 150-foot office building envelopes.

   c. The quality of photographic reproduction is poor and should be improved.

We appreciate the opportunity to comment on the EIS.

JOHN P. WHALEN
Director of Land Utilization

JPW:sl
1784B

BUILDING DEPARTMENT
CITY AND COUNTY OF HONOLULU
HONOLULU MUNICIPAL BUILDING
650 SOUTH KING STREET
HONOLULU, HAWAII 96813

FRANK F. FASI
MAYOR

HERBERT K. MURAOKA
DIRECTOR AND BUILDING SUPERINTENDENT

PB 88-751

August 8, 1988

MEMO TO: JOHN P. WHALEN, DIRECTOR
DEPARTMENT OF LAND UTILIZATION

FROM: HERBERT K. MURAOKA
DIRECTOR AND BUILDING SUPERINTENDENT

SUBJECT: DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS) FOR TRANSPORTATION CENTER AND CITY HALL OFFICE COMPLEX
TMK: 2-1-42:4, 11-14

Thank you for your comments of April 22, 1988 on the subject DEIS. We offer the following response to the concerns expressed in your memo:

1. To clarify the issue of pedestrian circulation and bikeways the following text has been added to Site Design Features in Section 5.06 of the EIS, as follows:

   "The pedestrian bridge crossing over Alapai Street would connect the project site, including the express bus terminal, to the Honolulu Municipal Building and the Capital District. This bridge would serve pedestrians by allowing safe and fast movement without the conflict of vehicular traffic or traffic signals.

   Pedestrians also have the options of crossing from the project site to the Capital District at the three crosswalks that presently exist along Alapai Street. These three crosswalks are at the corners of King and Alapai, mid-block at Alapai, and Beretania and Alapai.

   People on bicycles may continue to cross Alapai Street at the three existing crosswalks. When passing through the project site from the bikeway on Hotel Street they may continue to ride along the streets, using acess roads leading to Beretania or King Streets, or they may continue along the pathways through the project site by walking their bikes. The pathways and bridges would be wide enough to accommodate both pedestrians and bicycles."

We believe these options will both maintain and strengthen the existing pedestrian/bicycle corridor along Hotel Street between the Civic Center and Thomas Square, both at ground-level and through the upper level park-like settings connected by the walkway over Alapai Street.

2. Our response to your comments regarding Section 10.10, Impact on Views, is as follows:

   a. In the process of analyzing the impacts to views, we examined the "Significant Views" identified (LUO, Section 7.70-3, pages 7-39) for the Thomas Square/Honolulu Academy of Arts District, and discussed these in Section 7.13 and 10.10 of the DEIS. Likewise, those view planes, view corridors, and view points which incorporate the project site and which were determined to be significant by the Hawaii Community Development Authority (HCDA) were discussed in the same sections. We also examined the "Prominent Vistas" identified in the LUO for the Hawaii Capital District (LUO, Section 7.30-3, pages 7-23), but we did not mention the latter group in the DEIS because none of the vistas included the proposed project site.

   b/c. The photographs must be examined in close conjunction with the accompanying text. The photographs in the FEIS have been reproduced for better quality results and also show the City office building superimposed onto the photos to aid in the view analysis. The analysis isolates the important visual characteristics of each view such as ridge-lines and the horizon, and determines if they would be interrupted by the Annex building. In most of the photos only a small portion of the building (if anything) would be visible.

Thank you for your interest on this project.

HERBERT K. MURAOKA
Director and Building Superintendent

cc: Sam Chang Architect

BUILDING DEPARTMENT

CITY AND COUNTY OF HONOLULU

HONOLULU MUNICIPAL BUILDING
650 SOUTH KING STREET
HONOLULU, HAWAII 96813

FRANK F. FASI
MAYOR

HERBERT K. MURAOKA
DIRECTOR AND BUILDING SUPERINTENDENT

PB 88-752

August 8, 1988

Dr. John T. Harrison, Environmental
Coordinator
Environmental Center
University of Hawaii at Manoa
Honolulu, Hawaii 96822

Dear Dr. Harrison:

Subject: Draft EIS for the Transportation Center
and City Hall Annex Office Complex
TMK: 2-1-42:4, 11-14

Thank you for your comments of April 22, 1988 on the subject DEIS. Our response to your concerns are as follows:

1. Air Quality - We agree that CALINE 4 Model should be validated for use in Hawaii. This may be an appropriate project for a University of Hawaii or a State Department of Health researcher to undertake.

2. Parking - Visitor parking for the Honolulu Police Department will be located in the same parking area as the new Annex Tower. The number of stalls will be allocated based on demand.

Thank you for reviewing the DEIS.

Very truly yours,

HERBERT K. MURAOKA
Director and Building Superintendent

cc: Sam Chang Arch. & Assoc.,
Inc.

ENV 2-1
JA/G

Brenner Munger, Ph.D., P.E.
Manager
Environmental Department
(808) 548-6880

April 28, 1988

Mr. John P. Whalen, Director
City & County of Honolulu
Department of Land Utilization
650 South King Street
Honolulu, HI 96813

Subject: Draft Environmental Impact Statement for the City Hall Annex Office Complex and Transportation Center, Honolulu, Hawaii

We have reviewed the above document and have several comments:

1. The site location is presently served by underground handholes, ducts and cables as shown in red in Figure 5 on page 5-14 (see Enclosure 1). These facilities are within easements and the present Hotel Street right-of-way and will serve the entire area from our Archer Substation. The facilities will have to be incorporated into the new plans or relocated around the project site.

2. There are no existing 138 KV transmission lines crossing or in proximity to the subject development. However, the route for the proposed Archer 138 KV lines may be impacted.

3. Relocation of the underground ductlines will require coordination and review by City & County, Board of Water, Hawaii Telephone, Cable TV and GASCO. This will require a three month review process.

4. HECO communication circuits are also located in the underground ductlines within and around the proposed development.

5. The relocation of radio and microwave communication components from the existing police station to this proposed development site may cause radio frequency interference (RFI) and may have impacts on the existing HECO radio and microwave facilities.

6. The proposed twenty-one story office building which is approximately 250 feet in height appears to be directly in the "line of sight" of the existing HECO Ward Avenue to Tripler microwave transmission path. As a result of this configuration, the HECO Ward Avenue microwave station may require relocation.

Sincerely,

Brenner Munger

Enclosure

cc: Mr. Herbert K. Muraoka

BUILDING DEPARTMENT

CITY AND COUNTY OF HONOLULU

HONOLULU MUNICIPAL BUILDING

HERBERT K. MURAOKA
DIRECTOR AND BUILDING SUPERINTENDENT

PB 88-411

April 26, 1988

Ms. Suzanne D. Peterson, Chairperson
Board of Agriculture
Department of Agriculture
1428 South King Street
Honolulu, Hawaii 96814-2512

Dear Ms. Peterson:

Subject: Draft EIS for Transportation Center and City Hall Annex Office Complex

Thank you for reviewing the draft EIS for the Transportation Center and City Hall Annex Office Complex.

We received your memo dated April 14, 1988 and understand that you have no comments.

Very truly yours,

HERBERT K. MURAOKA
Director and Building Superintendent

cc: Parsons Hawaii

JOHN WAIHEE
GOVERNOR

SUZANNE D. PETERSON
CHAIRPERSON, BOARD OF AGRICULTURE

ROBERT Y. TSUYEMURA
ACTING DEPUTY
TO THE CHAIRPERSON

State of Hawaii
DEPARTMENT OF AGRICULTURE
1428 So. King Street
Honolulu, Hawaii 96814-2512

Mailing Address:
P. O. Box 22159
Honolulu, Hawaii 96822-0159

April 14, 1988

MEMORANDUM

To: Mr. John P. Whalen, Director
Department of Land Utilization
City and County of Honolulu

Subject: Draft Environmental Impact Statement (DEIS) for Transportation Center and City Hall Annex Office Complex
Building Department, City and County of Honolulu
TMK: 2-1-42: 4, 11, 12, 13, 14
Area: 8.7 acres

The Department of Agriculture has reviewed the subject DEIS and has no comments to offer.

Thank you for the opportunity to comment.

SUZANNE D. PETERSON
Chairperson, Board of Agriculture

cc: Mr. Herbert K. Muraoka, Director and Building Superintendent, Building Department
OEQC (with copy of DEIS)

BUILDING DEPARTMENT

CITY AND COUNTY OF HONOLULU

HONOLULU MUNICIPAL BUILDING
650 SOUTH KING STREET
HONOLULU, HAWAII 96813

HERBERT K. MURAOKA
DIRECTOR AND BUILDING SUPERINTENDENT

PB 88-439

May 5, 1988

Mr. Richard N. Duncan, State Conservationist
Soil Conservation Service
United States Department of Agriculture
P. O. Box 50004
Honolulu, Hawaii 96850

Dear Mr. Duncan:

Subject: Draft Environmental Impact Statement (EIS) for Transportation Center and City Hall Annex Office Complex

Thank you for reviewing the draft EIS for the Transportation Center and City Hall Annex Office Complex.

We understand that you have no comments on the draft EIS. The final EIS will be available at all regional libraries.

Very truly yours,

HERBERT K. MURAOKA
Director and Building Superintendent

cc: Parsons Hawaii

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
P. O. BOX 50004
HONOLULU, HAWAII
96850

April 18, 1988

Mr. John P. Whalen, Director
C & C of Honolulu
Dept. of Land Utilization
650 S. King Street
Honolulu, HI 96813

Dear Mr. Whalen:

Subject: Draft Environmental Impact Statement (DEIS) - Transportation Center & City Hall Annex Office Complex, Honolulu, HI

We have no comment to offer at this time, however, we would appreciate the opportunity to review the final Environmental Impact Statement.

Sincerely,

RICHARD N. DUNCAN
State Conservationist

cc:
Mr. Herbert K. Muraoka, Director & Building Superintendent, C & C of Honolulu, Building Department, 650 S. King Street, Honolulu, HI 96813

19.002.1j(8)
2396

STP 8 2939

June 23, 1988

Mr. John P. Whalen, Director
Department of Land Utilization
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Dear Mr. Whalen:

Draft Environmental Impact Statement
Transportation Center and City Hall
Annex Office Complex

We would like to supplement the comments submitted to you by our letter of June 15, 1988 (attached) on the subject proposed development.

Since a heliport is planned, this proposal should be coordinated with our Airports Division who are currently preparing a heliport plan for Oahu. Further coordination should be made with the Federal Aviation Administration.

Thank you for this opportunity to provide comments.

Very truly yours,

Edward Y. Hirata
Director of Transportation

DT:ko

Attachment

cc: HWY-P, AIR, STP(dt)
Herbert K. Muraoka

19.002.1j(8)
2396

STP 8.2924

June 15, 1988

Mr. John P. Whalen, Director
Department of Land Utilization
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Dear Mr. Whalen:

Draft Environmental Impact Statement
Transportation Center and City Hall
Annex Office Complex

We have no objections to the proposed development of a Transportation Center and City Hall Annex Office Complex.

Thank you for this opportunity to provide comments.

Very truly yours,

Dan T. Kochi

Edward Y. Hirata
Director of Transportation

DT:ko

cc: HWY-P, STP(dt)

BUILDING DEPARTMENT

CITY AND COUNTY OF HONOLULU

HONOLULU MUNICIPAL BUILDING

FRANK F. FASI
MAYOR

HERBERT K. MURAOKA
DIRECTOR AND BUILDING SUPERINTENDENT

PB 88-644

July 7, 1988

Mr. Edward Y. Hirata, Director
Department of Transportation
State of Hawaii
869 Punchbowl Street
Honolulu, Hawaii 96813

Dear Mr. Hirata:

Subject: Draft Environmental Impact Statement (DEIS)
for the Transportation Center and City Hall
Annex Office Complex
TMK: 2-1-42:4, 11-14

Thank you for your letter dated June 23, 1988 which supplements your comments of June 15, 1988 on the subject project.

We will advise the Consultant for the project, Sam Chang Architect and Associates, Inc., to coordinate the planning and design of the heliport with your Airports Division and the Federal Aviation Administration.

Very truly yours,

HERBERT K. MURAOKA
Director and Building Superintendent

cc: Sam Chang Arch. &
Assoc., Inc. w/ attach.

BUILDING DEPARTMENT

CITY AND COUNTY OF HONOLULU

HONOLULU MUNICIPAL BUILDING
650 SOUTH KING STREET
HONOLULU, HAWAII 96813

HERBERT K. MURAOKA
DIRECTOR AND BUILDING SUPERINTENDENT

PB 89-395

April 21, 1988

Mr. Roger A. Ulveling, Director
Department of Business and
Economic Development
P. O. Box 2359
Honolulu, Hawaii 96804

Dear Mr. Ulveling:

Subject: Draft EIS for the Transportation Center and City Hall Annex Office Complex

Thank you for reviewing the draft EIS for the Transportation Center and City Hall Annex Office Complex.

We understand that the project has no significant impacts relative to the Hawaii Coastal Zone Management Program.

Very truly yours,

HERBERT K. MURAOKA
Director and Building Superintendent

cc: Parsons Hawaii

STATE OF HAWAII

DEPARTMENT OF BUSINESS AND ECONOMIC DEVELOPMENT

GEORGE R. ARIYOSHI
GOVERNOR

ROGER A. ULVELING
DIRECTOR

BARBARA KIM STANTON
DEPUTY DIRECTOR

LESLIE S. MATSUBARA
DEPUTY DIRECTOR

KAMAMALU BUILDING, 250 SOUTH KING ST., HONOLULU, HAWAII
MAILING ADDRESS: P.O. BOX 2359, HONOLULU, HAWAII 96804 TELEPHONE NUMBER NOTED

Ref. No. P-8254

April 11, 1988

The Honorable John P. Whalen
Director
Department of Land Utilization
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Dear Mr. Whalen:

Subject: Draft Environmental Impact Statement (EIS) for the Transportation Center and City Hall Annex Office Complex, Alapai Street, Honolulu, Hawaii

We have reviewed the subject EIS and find that there are no significant adverse impacts relative to the Hawaii Coastal Zone Management Program. Thank you for the opportunity to review the EIS and provide our comments.

Sincerely,

ORIGINAL SIGNED BY
ROGER A. ULVELING

Roger A. Ulveling

cc: The Honorable Herbert K. Muraoka
Director and Building Superintendent
Building Department
City and County of Honolulu

BUILDING DEPARTMENT
CITY AND COUNTY OF HONOLULU
HONOLULU MUNICIPAL BUILDING
850 SOUTH KING STREET
HONOLULU, HAWAII 96813

HERBERT K. MURAOKA
DIRECTOR AND BUILDING SUPERINTENDENT

PB 88-399

April 22, 1988

MEMO TO: MR. KAZU HAYASHIDA, MANAGER AND CHIEF ENGINEER
BOARD OF WATER SUPPLY

FROM: HERBERT K. MURAOKA
DIRECTOR AND BUILDING SUPERINTENDENT

SUBJECT: DRAFT EIS FOR TRANSPORTATION CENTER AND
CITY HALL ANNEX OFFICE COMPLEX
TMK: 2-1-42:4,11,12,13 & 14

Thank you for reviewing the draft EIS for the Transportation Center and City Hall Annex Office Complex.

We understand that you do not anticipate any adverse impacts to potable groundwater resources and to the water distribution system serving the project area.

HERBERT K. MURAOKA
Director and Building Superintendent

cc: Parsons Hawaii

BOARD OF WATER SUPPLY
CITY AND COUNTY OF HONOLULU

April 13, 1988

TO: JOHN P. WHALEN, DIRECTOR
DEPARTMENT OF LAND UTILIZATION

FROM: KAZU HAYASHIDA, MANAGER AND CHIEF ENGINEER
BOARD OF WATER SUPPLY

SUBJECT: DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR
TRANSPORTATION CENTER AND CITY HALL ANNEX OFFICE
COMPLEX, TMK: 2-1-42: 4, 11, 12, 13, AND 14

We do not anticipate any adverse impacts to potable groundwater resources and to our water distribution system serving the area from the proposed project.

Our comments, as stated in our letter of July 23, 1987 on the EIS Preparation Notice for the proposed project, are still applicable.

If you have any questions, please contact Lawrence Whang at 527-6138.

cc: Mr. Herbert K. Muraoka

BUILDING DEPARTMENT

CITY AND COUNTY OF HONOLULU

HONOLULU MUNICIPAL BUILDING

HERBERT K. MURAOKA
DIRECTOR AND BUILDING SUPERINTENDENT

PB 88-340

April 5, 1988

MEMO TO: ALFRED J. THIEDE, DIRECTOR AND CHIEF ENGINEER
DEPARTMENT OF PUBLIC WORKS

FROM: HERBERT K. MURAOKA
DIRECTOR AND BUILDING SUPERINTENDENT

SUBJECT: DRAFT EIS FOR THE TRANSPORTATION CENTER AND CITY HALL ANNEX OFFICE COMPLEX

Thank you for reviewing the draft EIS for the Transportation Center and City Hall Annex Office Complex.

We understand that you do not have any additional comments to offer.

HERBERT K. MURAOKA
Director and Building Superintendent

cc: Parsons Hawaii

ENV 88-72

March 30, 1988

MEMORANDUM

TO: JOHN P. WHALEN, DIRECTOR
DEPARTMENT OF LAND UTILIZATION

FROM: ALFRED J. THIEDE, DIRECTOR AND CHIEF ENGINEER

SUBJECT: DRAFT EIS FOR THE TRANSPORTATION CENTER
AND CITY HALL ANNEX OFFICE COMPLEX
(TAX MAP KEY: 2-1-42: 4, 11-14)

We have reviewed the subject DEIS and do not have any additional comments to offer.

ALFRED J. THIEDE
Director and Chief Engineer

cc: Building Department

BUILDING DEPARTMENT
CITY AND COUNTY OF HONOLULU
HONOLULU MUNICIPAL BUILDING
650 SOUTH KING STREET
HONOLULU, HAWAII 96813

HERBERT K. MURAOKA
DIRECTOR AND BUILDING SUPERINTENDENT

PB 88-381

April 18, 1988

Mr. Kisuk Cheung, Chief
Engineering Division
U.S. Army Engineer District, Honolulu
Building 230
Fort Shafter, Hawaii 96858-5440

Dear Mr. Cheung:

Subject: Draft EIS for Transportation Center and City Hall Annex Office Complex

Thank you for reviewing the subject draft EIS.

We are pleased that you found the document adequately addressed your concerns.

Very truly yours,

Charles S. Fernandez Jr.
FOR HERBERT K. MURAOKA
Director and Building Superintendent

cc: Parsons Hawaii

DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, HONOLULU
BUILDING 230
FT. SHAFTER, HAWAII 96858-5440

REPLY TO ATTENTION OF:

April 11, 1988

Planning Branch

Mr. John P. Whalen
City and County of Honolulu
Department of Land Utilization
650 South King Street
Honolulu, Hawaii 96813

Dear Mr. Whalen:

Thank you for the opportunity to review the Draft Environmental Impact Statement (DEIS) for the Transportation Center and City Hall Annex Office Complex, Honolulu, Hawaii. The following comments are offered:

a. Based on the DEIS, no work is to be done in waters of the U.S. or adjacent wetlands. A Department of the Army permit is therefore not required.

b. The flood hazard information presented on page 7-3 of the DEIS appears to be correct.

Sincerely,

Kisuk Cheung
Chief, Engineering Division

Copy Furnished:

Mr. Herbert K. Muraoka
Director and Building Superintendent
City and County of Honolulu Building Department
650 South King Street
Honolulu, Hawaii 96813

BUILDING DEPARTMENT

CITY AND COUNTY OF HONOLULU

HONOLULU MUNICIPAL BUILDING

HERBERT H. MURAOKA
DIRECTOR AND BUILDING SUPERINTENDENT

PB 88-300

March 22, 1988

Mr. William K. Liu
Assistant Base Civil Engineer
Naval Base Pearl Harbor
Box 110
Pearl Harbor, Hawaii 96860-5020

Dear Mr. Liu:

Subject: Draft Environmental Impact Statement
Transportation Center and City Hall
Annex Office Complex

Thank you for reviewing the subject document. We have received your letter dated March 11, 1988 and understand that you have no comments.

Very truly yours,

HERBERT K. MURAOKA
Director and Building Superintendent

cc: Parsons Hawaii

DEPARTMENT OF THE NAVY
COMMANDER
NAVAL BASE PEARL HARBOR
BOX 110
PEARL HARBOR, HAWAII 96860-5020

IN REPLY REFER TO
5090 (14B)
Ser N5B/525

March 11, 1988

Mr. John P. Whalen, Director
Department of Land Utilization
City and County of Honolulu
650 South King Street
Honolulu, HI 96813

Dear Mr. Whalen:

DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)
TRANSPORTATION CENTER & CITY HALL ANNEX OFFICE COMPLEX

The Draft EIS for the Transportation Center and City Hall Annex Office Complex has been reviewed and we have no comments to offer. Since we have no further use for the EIS, it is being returned to the Office of Environmental Quality Control.

Thank you for the opportunity to review the Draft EIS.

Sincerely,

W. K. Liu

W K LIU
Assistant Base Civil Engineer
By direction of
the Commander

Enclosure

Copy to:
Mr. Herbert K. Muraoka
Director & Building Superintendent
Building Department
City and County of Honolulu
650 South King Street
Honolulu, HI 96813

Office of Environmental Quality Control

BUILDING DEPARTMENT

CITY AND COUNTY OF HONOLULU

HONOLULU MUNICIPAL BUILDING
650 SOUTH KING STREET
HONOLULU, HAWAII 96813

HERBERT K. MURAOKA
DIRECTOR AND BUILDING SUPERINTENDENT

PB 88-301

March 22, 1988

Major Jerry M. Matsuda
Construction and Engineering Officer
Hawaii Air National Guard
Office of the Adjutant General
Department of Defense
State of Hawaii
3949 Diamond Head Road
Honolulu, Hawaii 96816

Dear Major Matsuda:

Subject: Draft Environmental Impact Statement
Transportation Center and City Hall
Annex Office Complex

Thank you for your letter dated March 15, 1988 regarding the Draft Environmental Impact Statement for the Transportation Center and City Hall Annex Office Complex project.

We understand that you have no comments on the subject document.

Very truly yours,

Herbert K. Muraoka

HERBERT K. MURAOKA
Director and Building Superintendent

cc: Parsons Hawaii

Engineering Office

march 15, 1988

Mr. John P. Whalen, Director
C & C of Honolulu Dept. of Land Utilization
650 South King Street
Honolulu, Hawaii 96813

Dear Mr. Whalen:

Transportation Center & City Hall Annex Office Complex
Alapai St., Honolulu, Oahu

Thank you for providing us the opportunity to review the above subject project.

We have no comments to offer at this time regarding this project.

Sincerely,

Jerry M. Matsuda
Major, Hawaii Air
National Guard
Contr & Engr Officer

cc:
Mr. Herbert K. Muraoka

BUILDING DEPARTMENT

CITY AND COUNTY OF HONOLULU

HONOLULU MUNICIPAL BUILDING

HERBERT K. MURAOKA

PB 88-302

(P)1208.E

March 22, 1988

Mr. Teuane Tominaga
State Public Works Engineer
Public Works Division
Department of Accounting and
General Services
1151 Punchbowl Street
Honolulu, Hawaii 96813

Dear Mr. Tominaga:

Subject: Draft Environmental Impact Statement
Transportation Center and City Hall
Annex Office Complex

Thank you for reviewing the Draft Environmental Impact Statement for the Transportation Center and City Hall Annex Office Complex project.

We have received your letter dated March 16, 1988 and understand that you have no comments.

Very truly yours,

HERBERT K. MURAOKA
Director and Building Superintendent

cc: Parsons Hawaii

March 16, 1988

Mr. John P. Whalen
Director
Department of Land Utilization
City and County of Honolulu
650 South King Street, 7th Floor
Honolulu, Hawaii 96813

Dear Mr. Whalen:

Subject: Draft Environmental Impact Statement
Transportation Center and
City Hall Annex Office Complex

We have reviewed the subject document and have no comments to offer.

Very truly yours,

TEUANE TOMINAGA
State Public Works Engineer

CI:jk
cc: Mr. Herbert K. Muraoka

BUILDING DEPARTMENT

CITY AND COUNTY OF HONOLULU

HONOLULU MUNICIPAL BUILDING
650 SOUTH KING STREET
HONOLULU, HAWAII 96813

HERBERT K. MURAOKA
DIRECTOR AND BUILDING SUPERINTENDENT

PB 88-334

April 4, 1988

Mr. Joseph Conant, Executive Director
Housing Finance and Development Corporation
Department of Business and Economic Development
P. O. Box 17907
Honolulu, Hawaii 96817

Dear Mr. Conant:

Subject: Draft Environmental Impact Statement (EIS) for the Proposed Transportation Center and City Hall Annex Office Complex

Thank you for reviewing the Draft EIS for the proposed Transportation Center and City Hall Annex Office Complex.

We understand that you have no comments on the document.

Very truly yours,

HERBERT K. MURAOKA
Director and Building Superintendent

cc: Parsons Hawaii

JOHN WAIHEE
GOVERNOR

STATE OF HAWAII
Department of Business and Economic Development
Housing Finance and Development Corporation
P. O. BOX 17907
HONOLULU, HAWAII 96817

Joseph K. Conant
Executive Director

IN REPLY REFER TO

88:PLNG/1372JT

March 24, 1988

Mr. John P. Whalen, Director
Department of Land Utilization
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Dear Mr. Whalen:

Subject: Draft Environmental Impact Statement (EIS) for the Proposed Transportation Center and City Hall Annex Office Complex

Thank you for the opportunity to review the subject draft EIS. We have no comments to offer.

Sincerely,

JOSEPH K. CONANT
Executive Director

cc: Herbert K. Muraoka

888 KING ST. • HONOLULU, HAWAII • 96813 • (808) 523
Straub
CLINIC & HOSPITAL

April 22, 1988

Mr. John P. Whalen, Director
C & C of Honolulu Dept. of Land Utilization
650 S. King St.
Honolulu, HI 96813

Dear Mr. Whalen:

Thank you for providing an opportunity to comment on the Environmental Impact Statement (EIS) regarding the construction of the Transportation Center and City Hall Annex Office complex. The EIS was comprehensive, well-documented, and thorough.

Our comments, concerns, and questions are as follows:

1. Traffic/Parking

   a. The proposed mitigation measures for several highly impacted intersections appear feasible and beneficial; however, the EIS does not indicate whether those measures will be done concurrently with the project, or if they will actually be done. Please advise.

   b. The traffic projections indicate that there will be an increased usage of the remaining portion of Hotel Street. This area already experiences congestion and hazards due to limited sight distances caused by parked vehicles. Prohibiting on-street parking between the hours of 7:00 a.m. and 6:00 p.m. is advisable. In addition, provisions for a mid-block pedestrian crosswalk would improve traffic flow by centralizing numerous unofficial crossing points. Please advise if these actions can be included in the scope of the project.

   c. Improvements were recommended for the intersections at Ward Avenue and Beretania Street as well as at Ward Avenue and King Street; however, that portion of Ward Avenue between Beretania and King will remain restricted. Since (as confirmed in the EIS) widening of Ward Avenue is impossible, the next best alternative is to enhance the traffic flow. In that regard, the most prevalent impediment is left turns into and out of Hotel Street from and to Ward Avenue. Improvement would result from either prohibiting left turns or making provisions for safe left turns.

   (1) Prohibition of left turns could be restricted to heavy traffic periods by time of day but, in any case, would have to exempt emergency vehicles.

   (2) Provision for safe left turns could best be accomplished with a properly sequenced traffic light. The current timing for the Beretania/Ward and King/Ward lights are such that (assuming average vehicle velocity between the two intersections of 25 mph) there is a 15 second "window" at the Hotel/Ward intersection during which no traffic can flow in either direction anyway. This time could be used to allow left turns.

   An alternative (which may not be effective) would be "Do Not Block Intersection" signage and enforcement of same.

2. Utility Interruption

   a. The extent of the proposed utility corridor is not specified. Will it extend the entire length of Hotel Street between Alapai and Ward, or be restricted to the project boundary?

   b. The EIS states that impacts of utility outages can be mitigated by scheduling and coordination. Please advise what mechanism will be used to ensure that the "scheduling and coordination" occurs. We require a minimum of 48 hours advance notification of any outages or interruptions of any utility service.

3. Placement of, and access to, the Helipad will be addressed during the design phase. For future contingency planning, we recommend that consideration be given to providing relatively direct access between our Emergency Department and this Helipad.

If amplification, clarification and/or discussion of the above could be of assistance, please contact me at 523-2311, ext 6583.

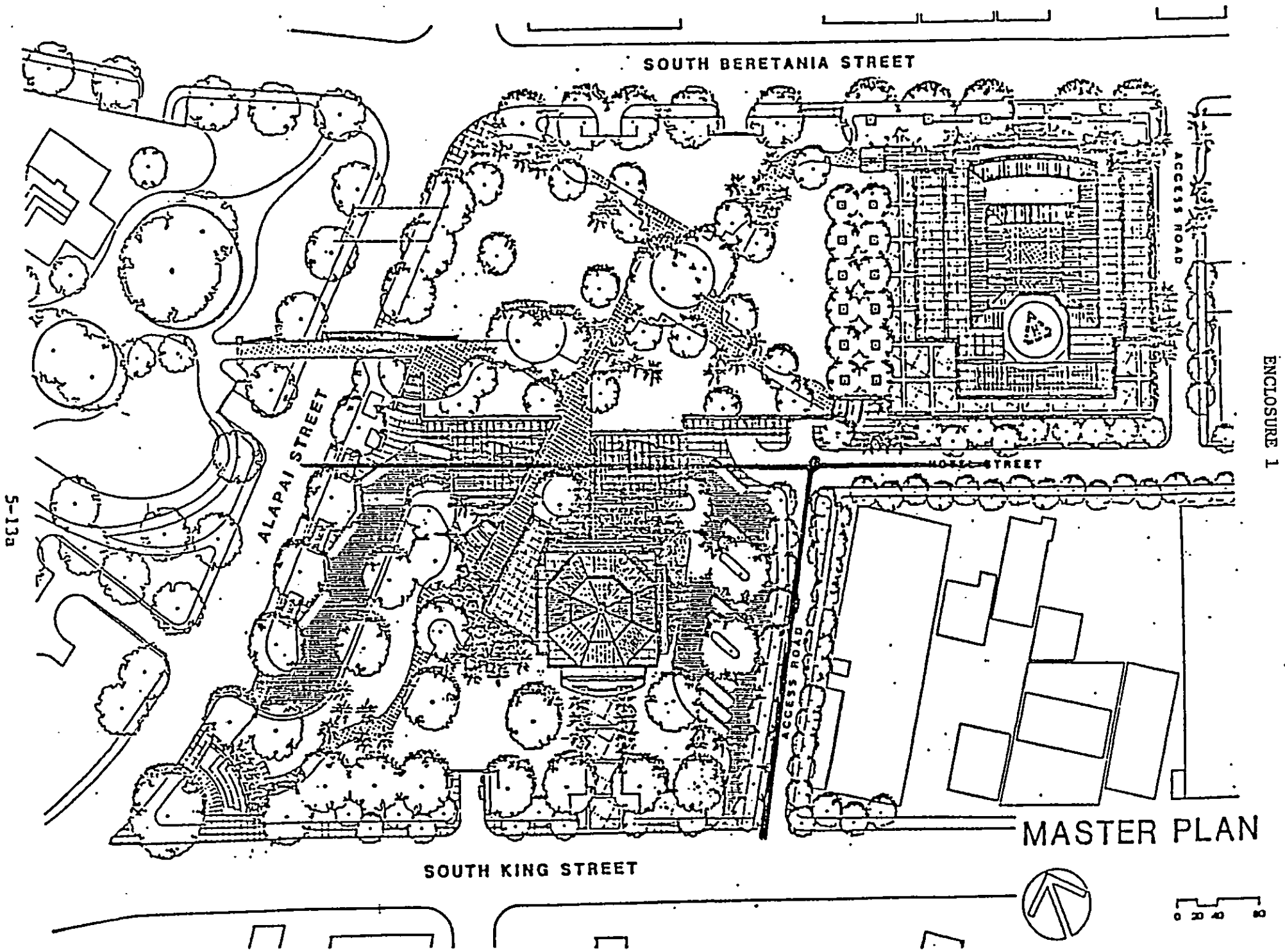
Yours truly,

Ron Kohn, P.E.
Director, Plant Management

RKK:lwk

cc: Herbert K. Muraoka
Director & Building Superintendent
C & C of Honolulu Building Dept

Administrators
Straub Clinic & Hospital, Inc.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