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**ENVIRONMENTAL ASSESSMENT  
FORT STREET MALL RENOVATION**

Prepared for:  
**CITY AND COUNTY OF HONOLULU  
DEPARTMENT OF PARKS AND RECREATION**

By:  
**SPENCER MASON ARCHITECTS**  
1050 Smith Street  
Honolulu, Hawaii

**November 1989**

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## SECTION 1 DESCRIPTION AND PURPOSE OF THE PROPOSED PROJECT

### 1. INTRODUCTION

The Department of Parks and Recreation, City and County of Honolulu proposes to implement a renovation plan for Fort Street Mall, between Beretania and Queen Streets. Figure 1 shows the location of the project area. Fort Street Mall was first completed in 1968 as a major part of a long-range effort to improve the downtown experience for pedestrians. To a great extent the Mall has been a resounding success: it is one of the most heavily trafficked pedestrian pathways in Honolulu and is an active retail and eating area during the its peak use period at midday.

For several reasons, after two decades of use the Mall is in need of a thorough renovation. These reasons include:

1. a need to redesign the Mall to reflect increased current use,
2. changes in properties adjacent to the Mall, and
3. two decades of wear and tear.

The Mall was originally designed as a public open space with some park-like amenities. The Mall's success as a pedestrian corridor for walking, eating, and shopping; and the changing nature of Honolulu's financial district have rendered some of those amenities obsolete. The sandbox and water features have long since been eliminated and the underutilized King Street underpass has been converted to a Satellite City Hall.

In addition to the need to recognize different usage patterns, an additional impetus for renovation comes from development of properties fronting the Mall (Fig. 2). Since 1968, Pioneer Plaza, Executive Center and Century Center have been completed. Liberty House has been rebuilt. The property at the mauka/Diamond Head corner of the Mall/King Street intersection has

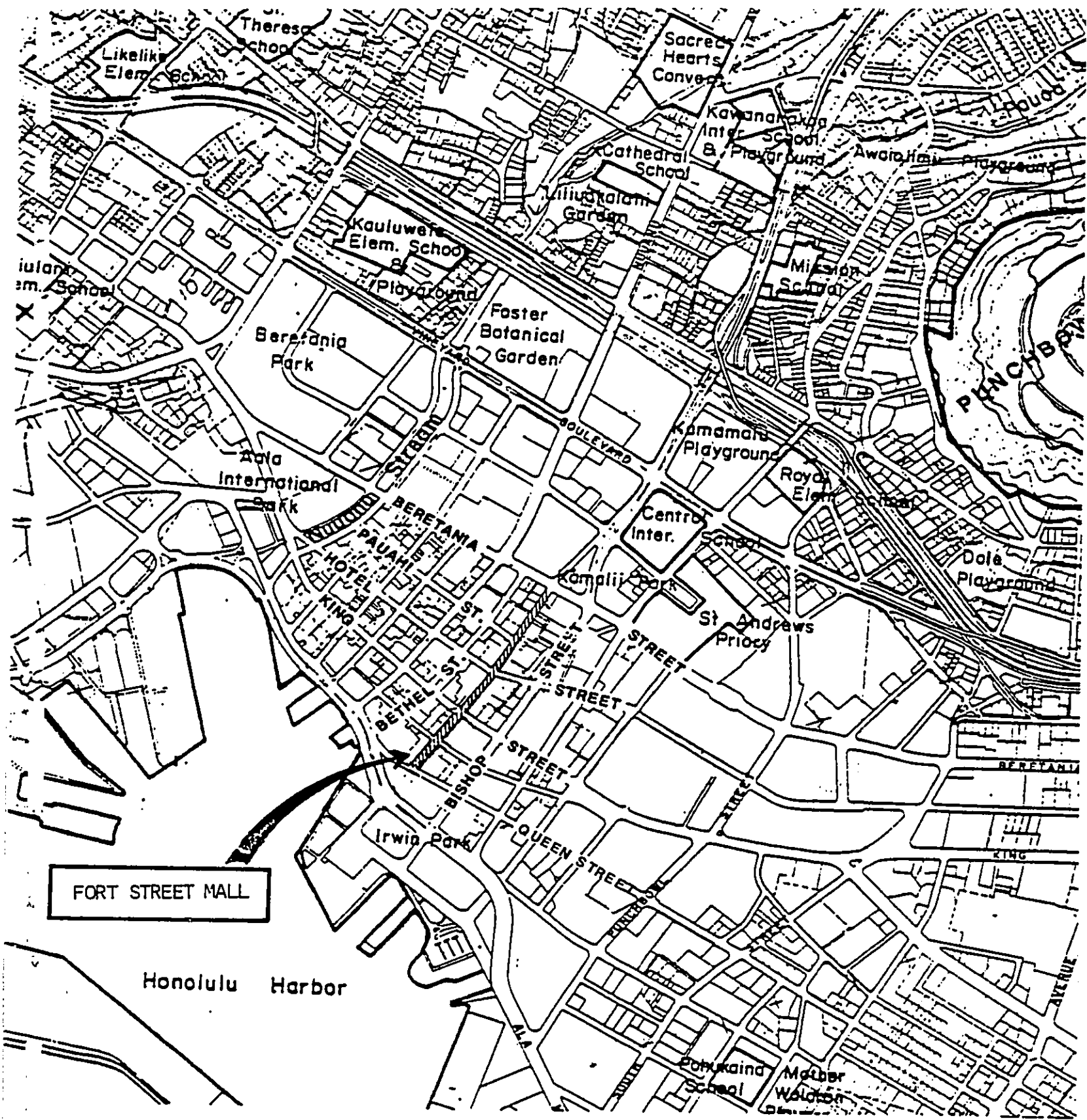
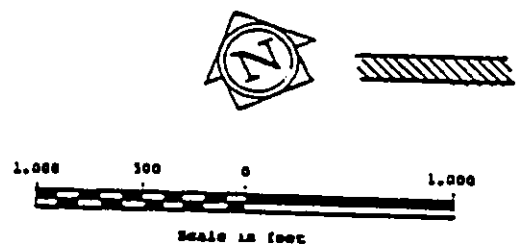


FIGURE 1  
LOCATION MAP



EXTENT OF  
RENOVATION  
PROJECT



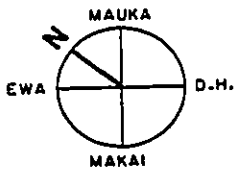
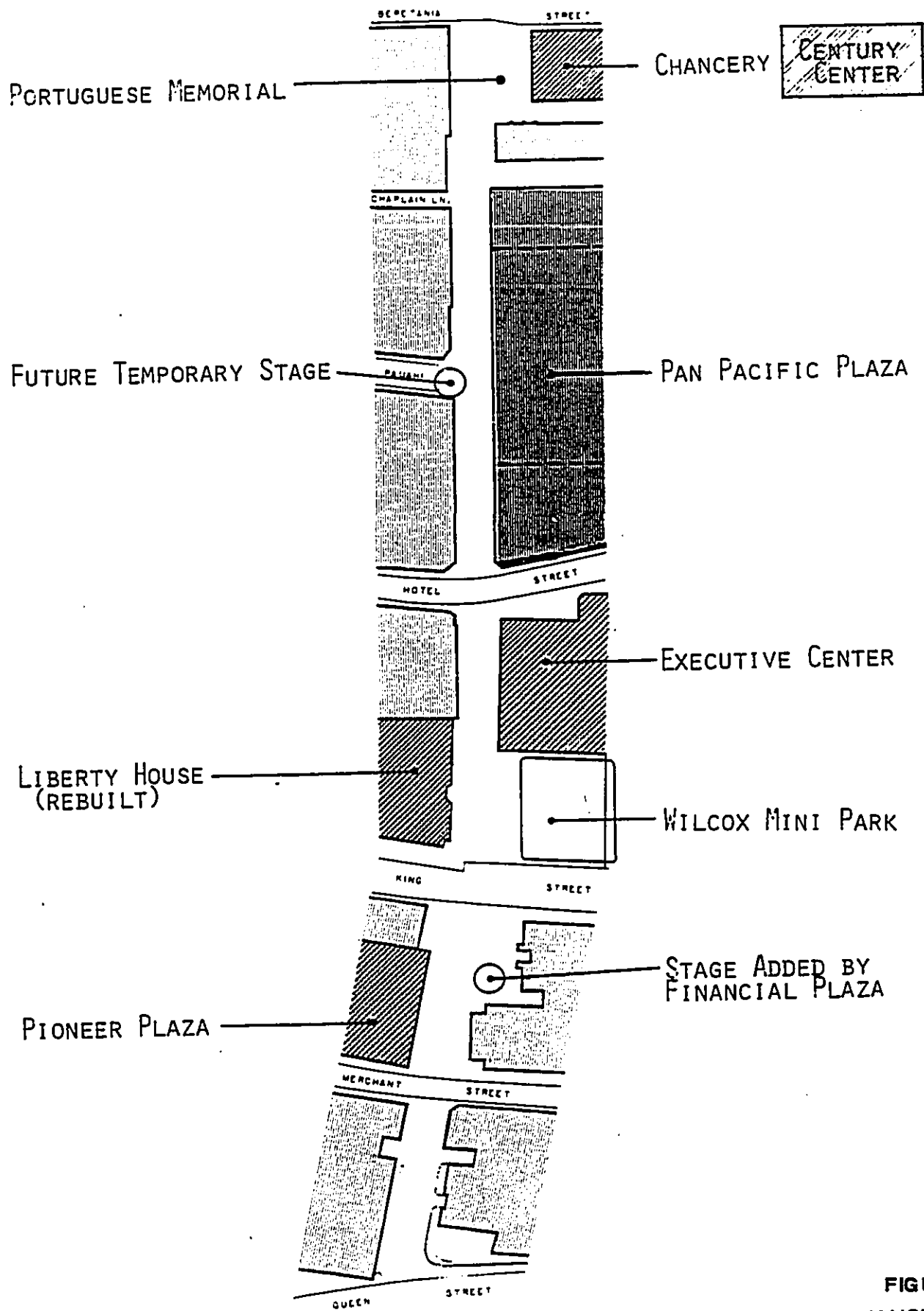


FIGURE 2  
 MAJOR PAST & FUTURE CHANGES TO  
 ADJACENT PROPERTIES SINCE 1968

0 50 100 150 200 250 300  
 FORT STREET MALL

been cleared and is a mini park to be called Wilcox Park is under construction. Financial Plaza renovated its planters and created a stage which fronts on the Mall. The Portuguese Memorial has been added to Damien Plaza at Beretania Street. The Kress Block development is underway.

The nearly 20 years of use also necessitates changes. The brick pavement dividers are deteriorating and create safety and maintenance problems. Some of the concrete paving is beginning to deteriorate, lighting is in need of repair, and many of the plants are either overgrown, mismatched, or otherwise inappropriate to the Mall and a subject of complaints received by the City.

For the purposes of discussion the Mall has been divided into five zones (Fig. 3). The analysis illustrates that each zone has its own character and requirements for improvement.

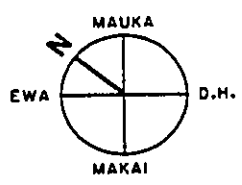
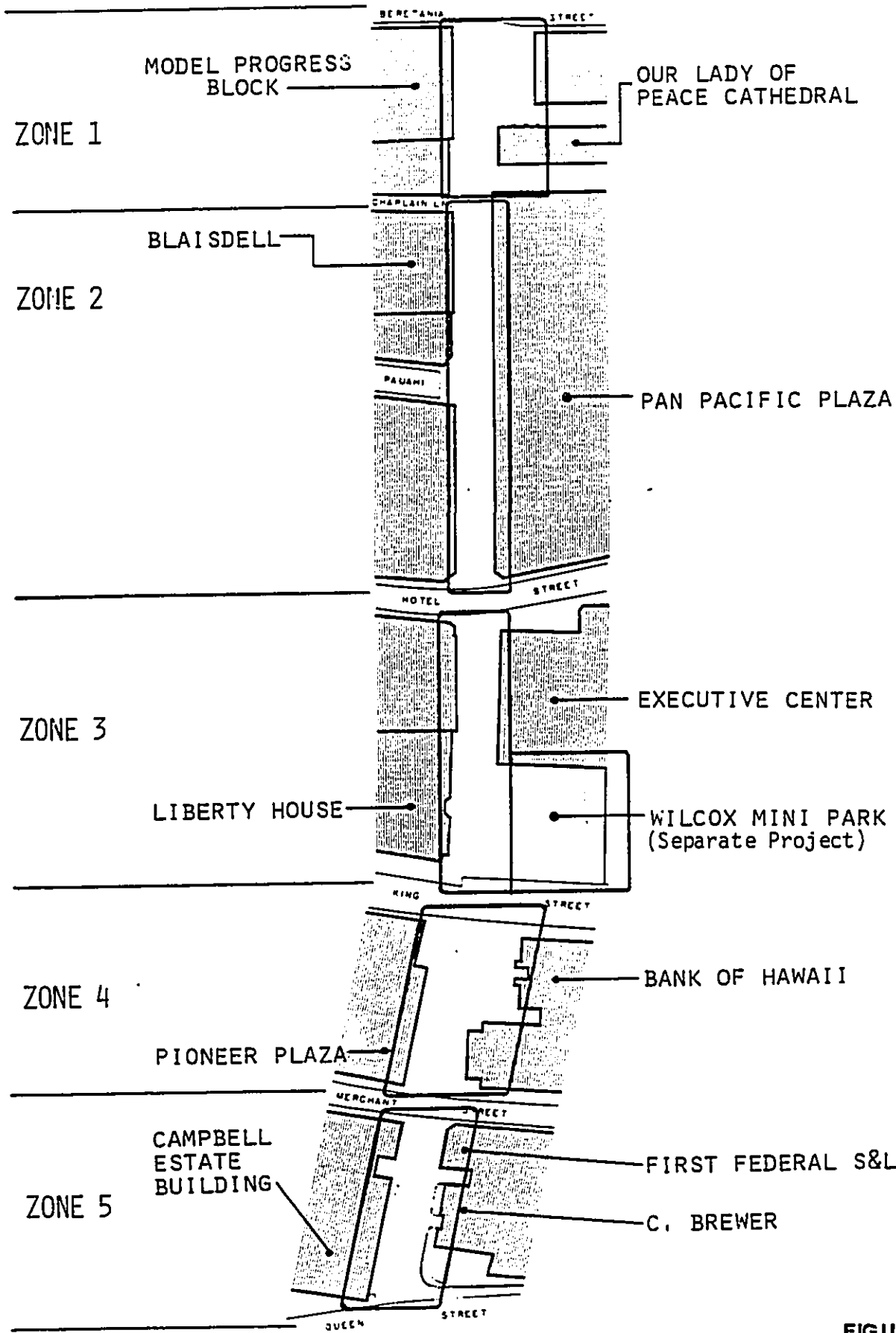
## **2. DESIGN CONCEPT AND SUMMARY OF RECOMMENDED CHANGES**

The goals of the Fort Street Mall renovation project are to:

1. Improve the pedestrian experience.
2. Upgrade the plant materials.
3. Provide for necessary emergency vehicle access.
4. Recognize and respond to existing and future activity nodes.
5. Design for maintenance ease and efficiency.

Several major design parameters shaped the renovation project. These "givens" affect the design possibilities for the Mall:

1. Budget : \$2,500,000 maximum;
2. Provision for a portable stage at Pauahi Street intersection;
3. A 16-foot clear right-of-way for emergency vehicles;
4. Establishment of Wilcox Park at King Street intersection;
5. Retention of the Portuguese Memorial; and
6. The design must address problems caused by vagrants.



**FIGURE 3**  
**ZONES**  
0 50 100 150 200 250 300  
**FORT STREET MALL**

In redesigning the Mall it was assumed that no major changes in surrounding buildings will be made in the near future, except for the redevelopment of the Kress block.

The *Schematic Design Report* on the renovation plans for the Fort Street Pedestrian Mall, prepared by Spencer Mason Architects (August 7, 1987) incorporated these goals, design parameters and assumptions. The report details the recommended changes in the Mall design. The recommendations address each component of the Mall -- circulation, paving, hardscape elements (mall furniture), landscaping, and power, water, lighting and sign systems. In addition to addressing each of these topics, the report includes a summary of the recommended improvements by zone. This 1987 report and the schematic design drawings received extensive review, as outlined in Section 5 of this EA. Subsequently, the design for the Mall was further refined in the design development drawings (dated September 1989) which are included as Figures 4 to 10.

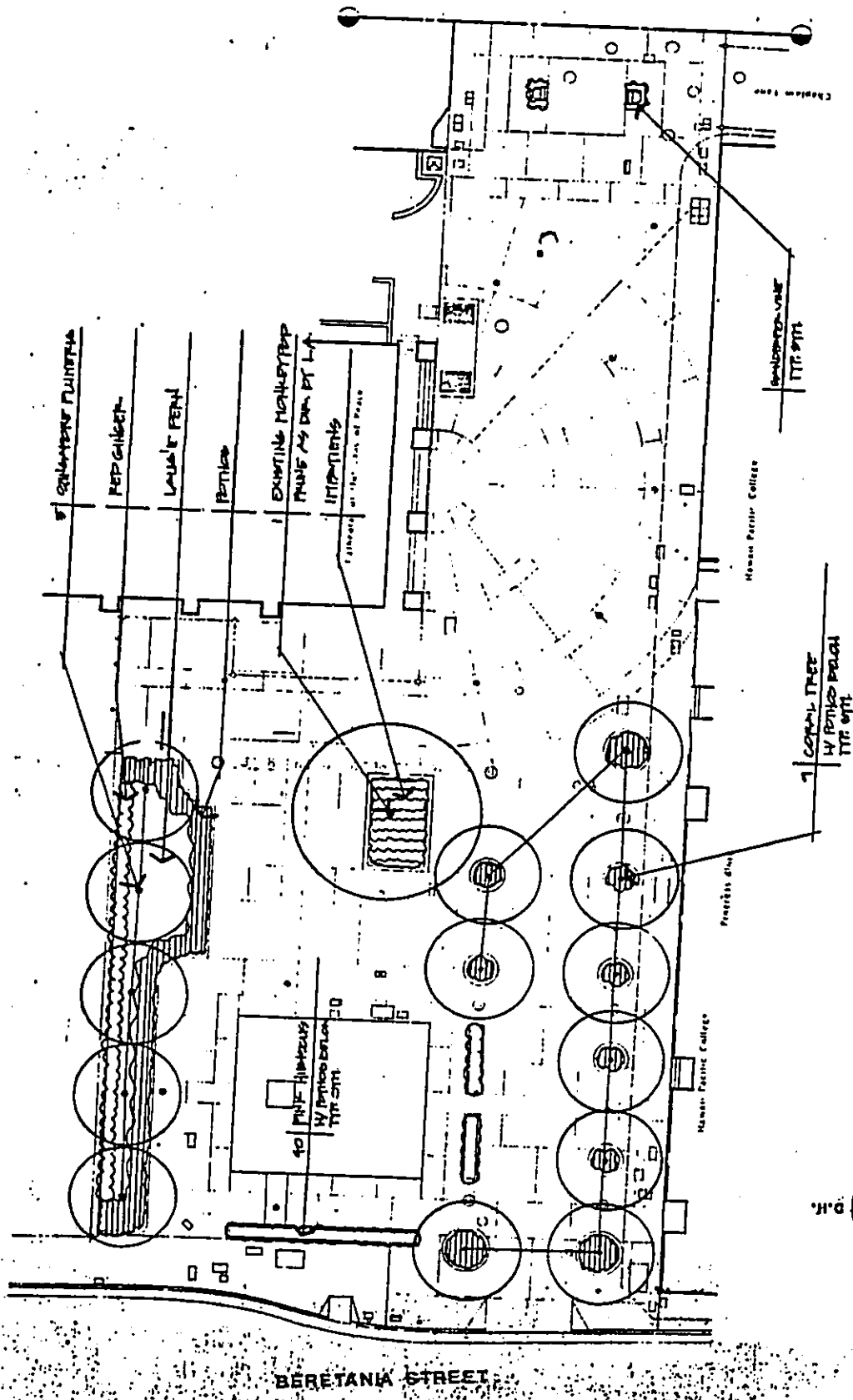


FIGURE 4  
 FORT STREET MALL  
 ZONE 1 RENOVATION PLAN

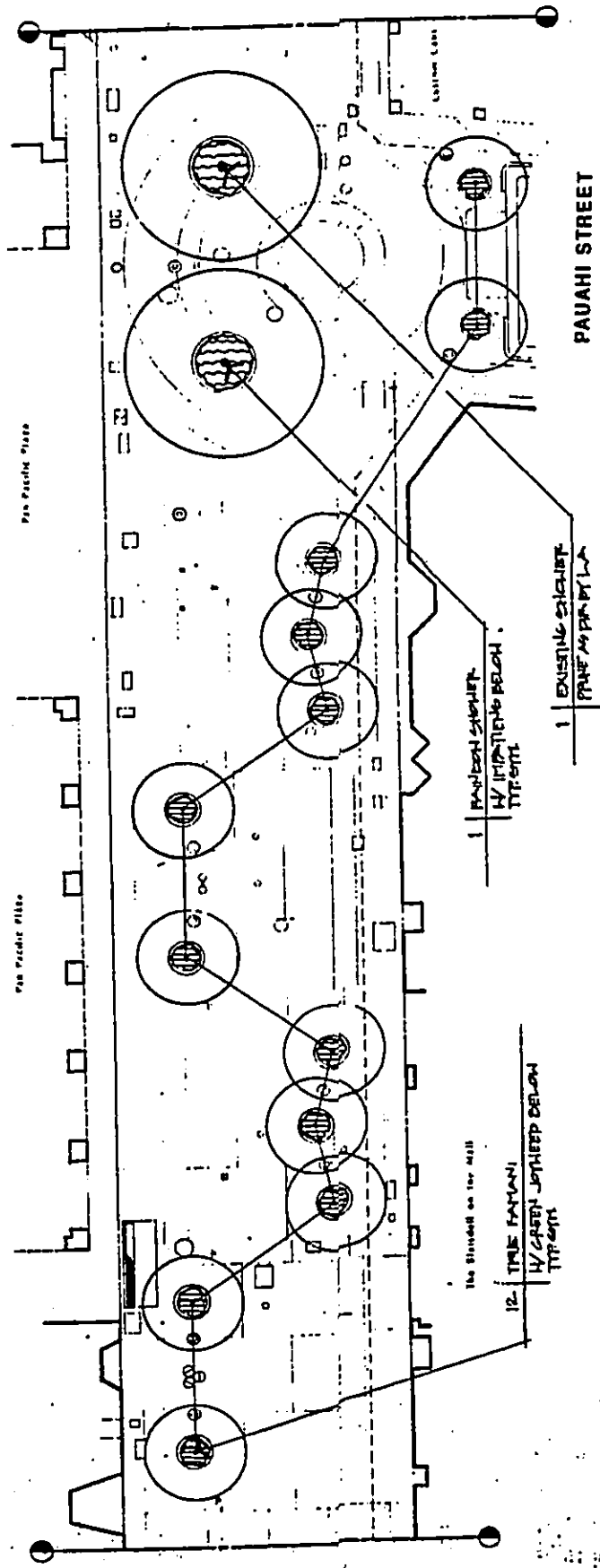
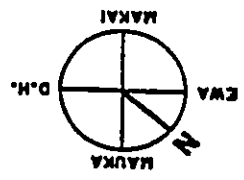


FIGURE 5  
FORT STREET MALL  
ZONE 2A RENOVATION PLAN



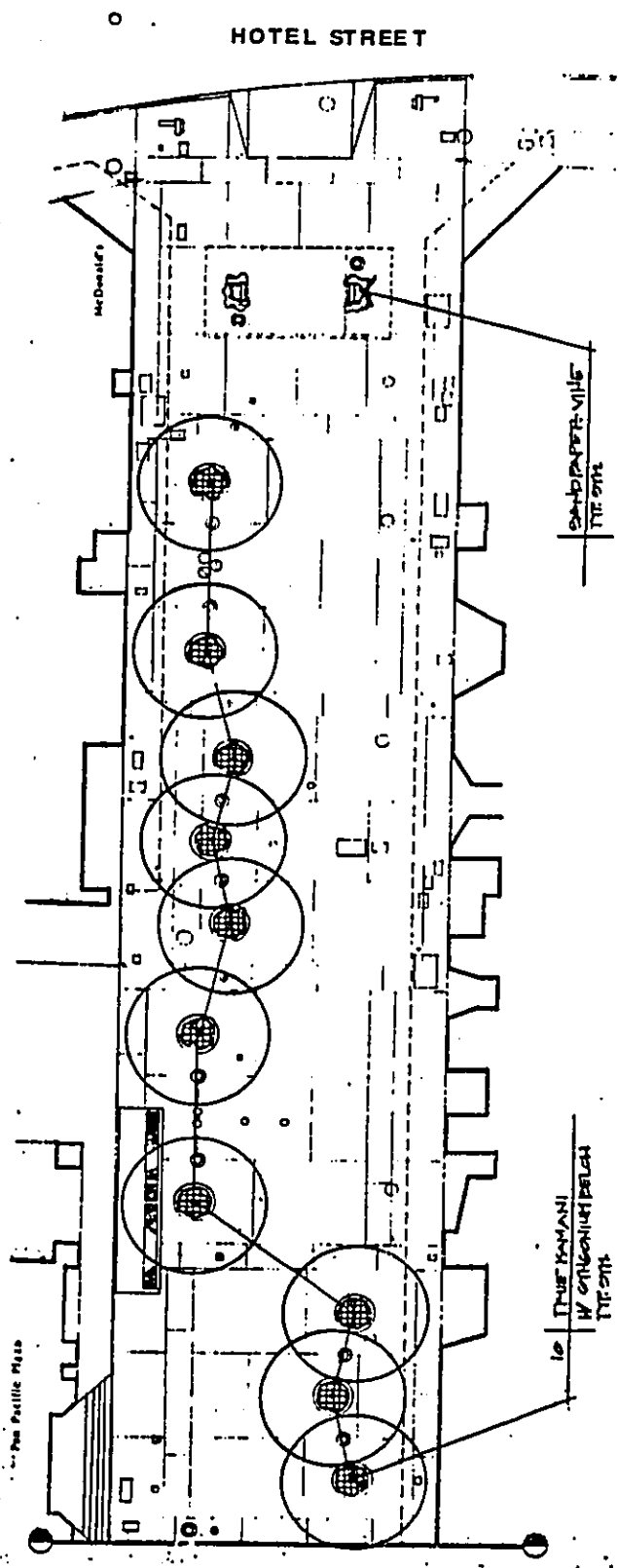
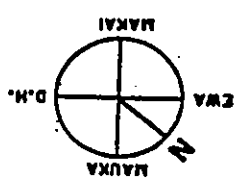


FIGURE 6  
 FORT STREET MALL  
 ZONE 2B RENOVATION PLAN



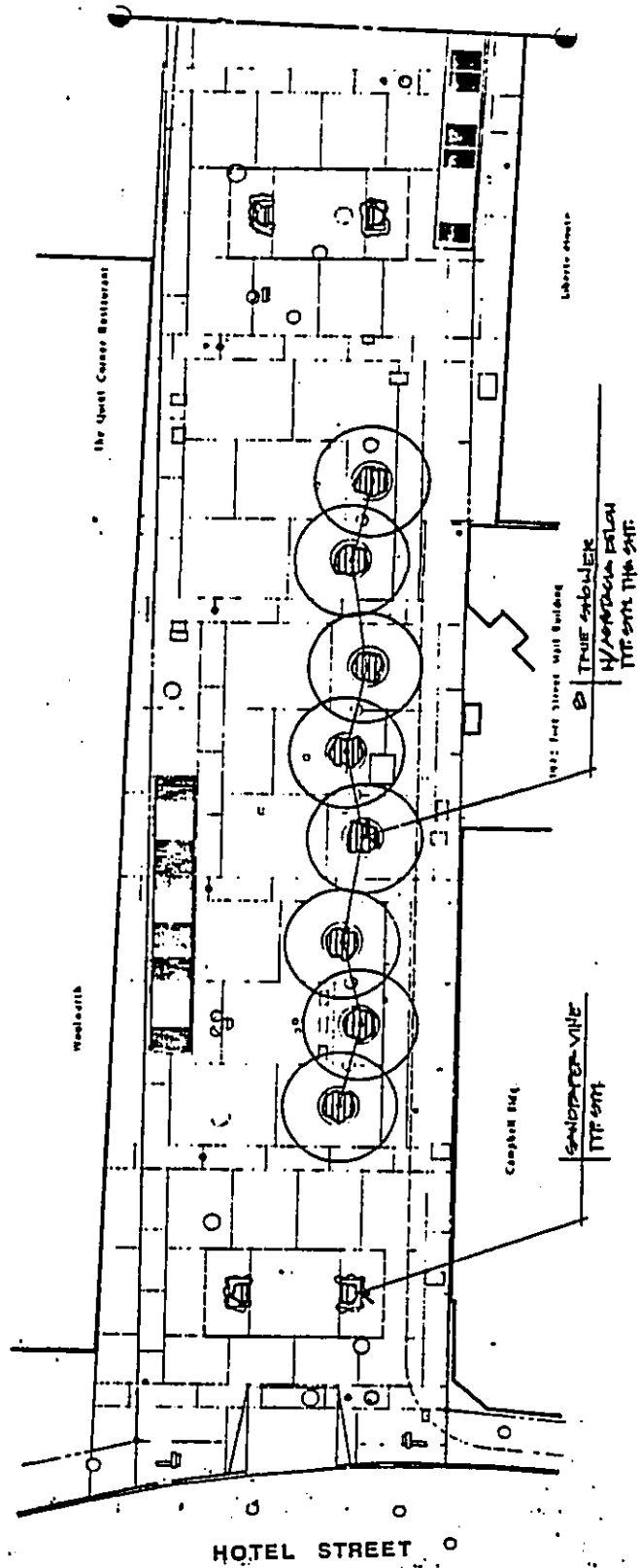
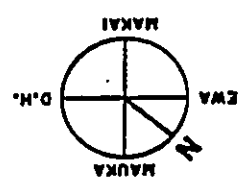


FIGURE 7  
FORT STREET MALL  
ZONE 3A RENOVATION PLAN





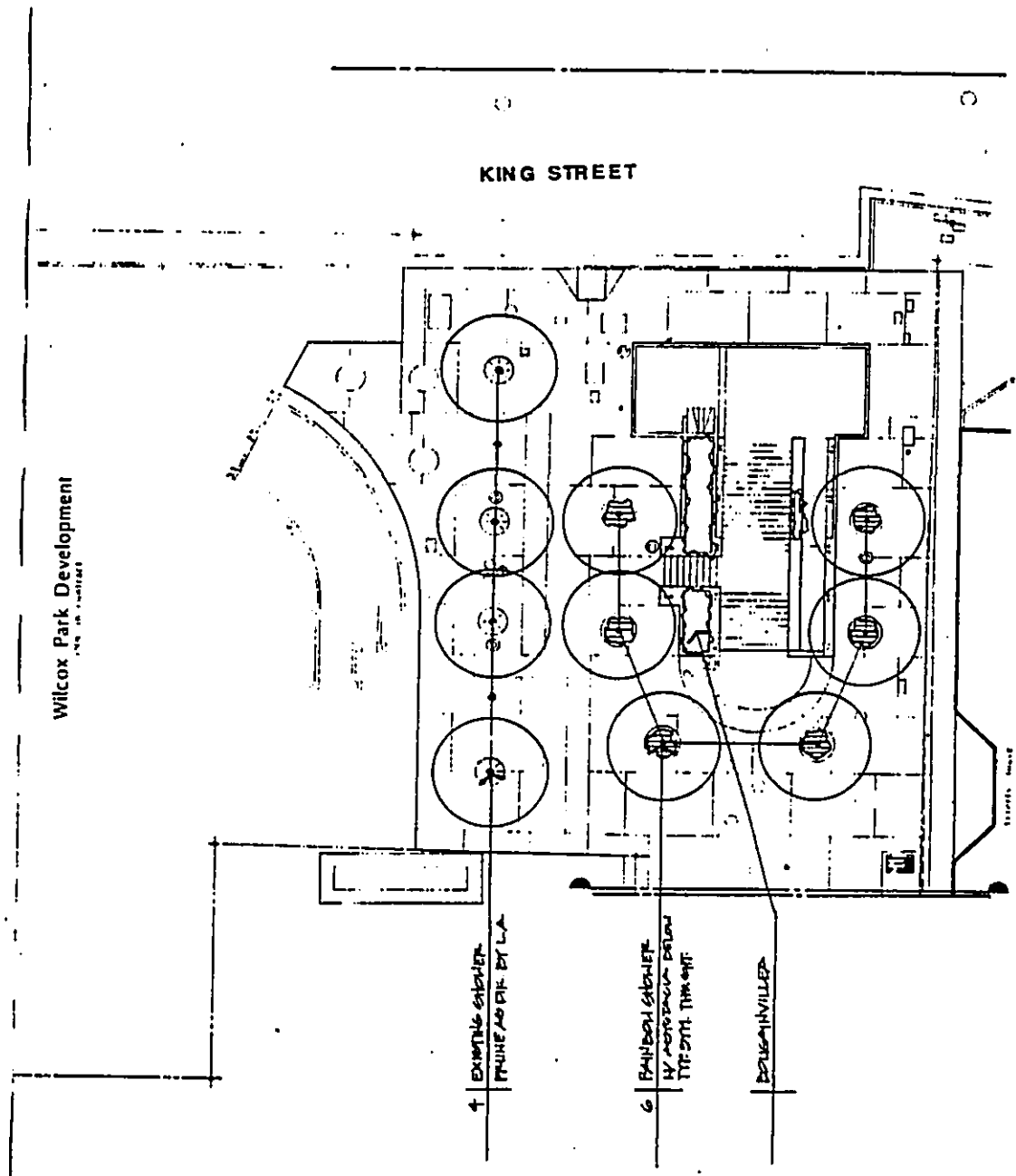
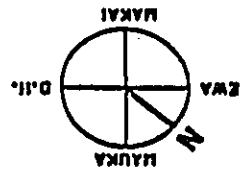


FIGURE 8  
 FORT STREET MALL  
 ZONE 3B RENOVATION PLAN



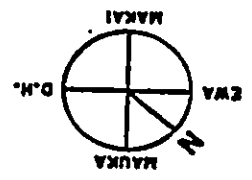
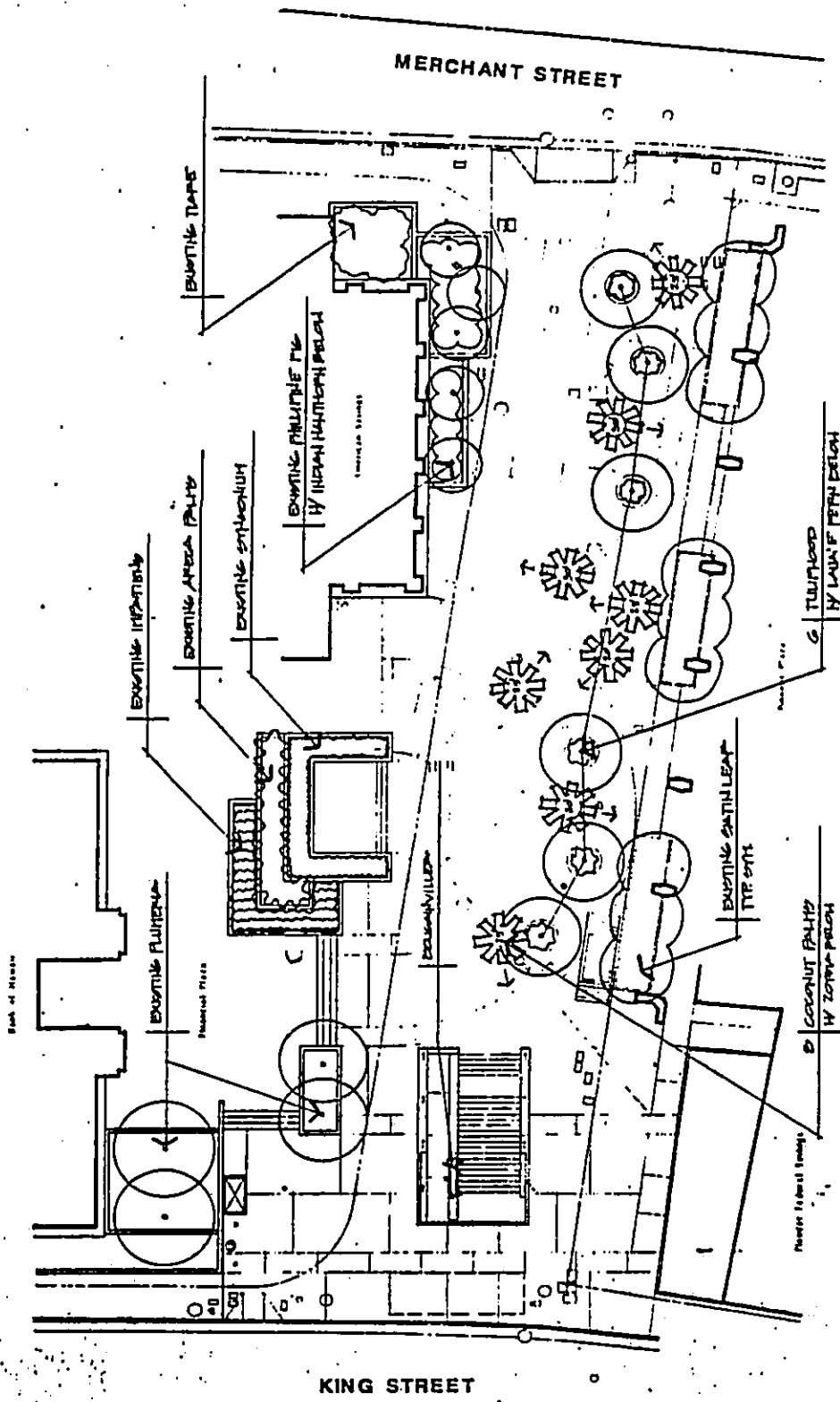


FIGURE 9  
FORT STREET MALL  
ZONE 4 RENOVATION PLAN

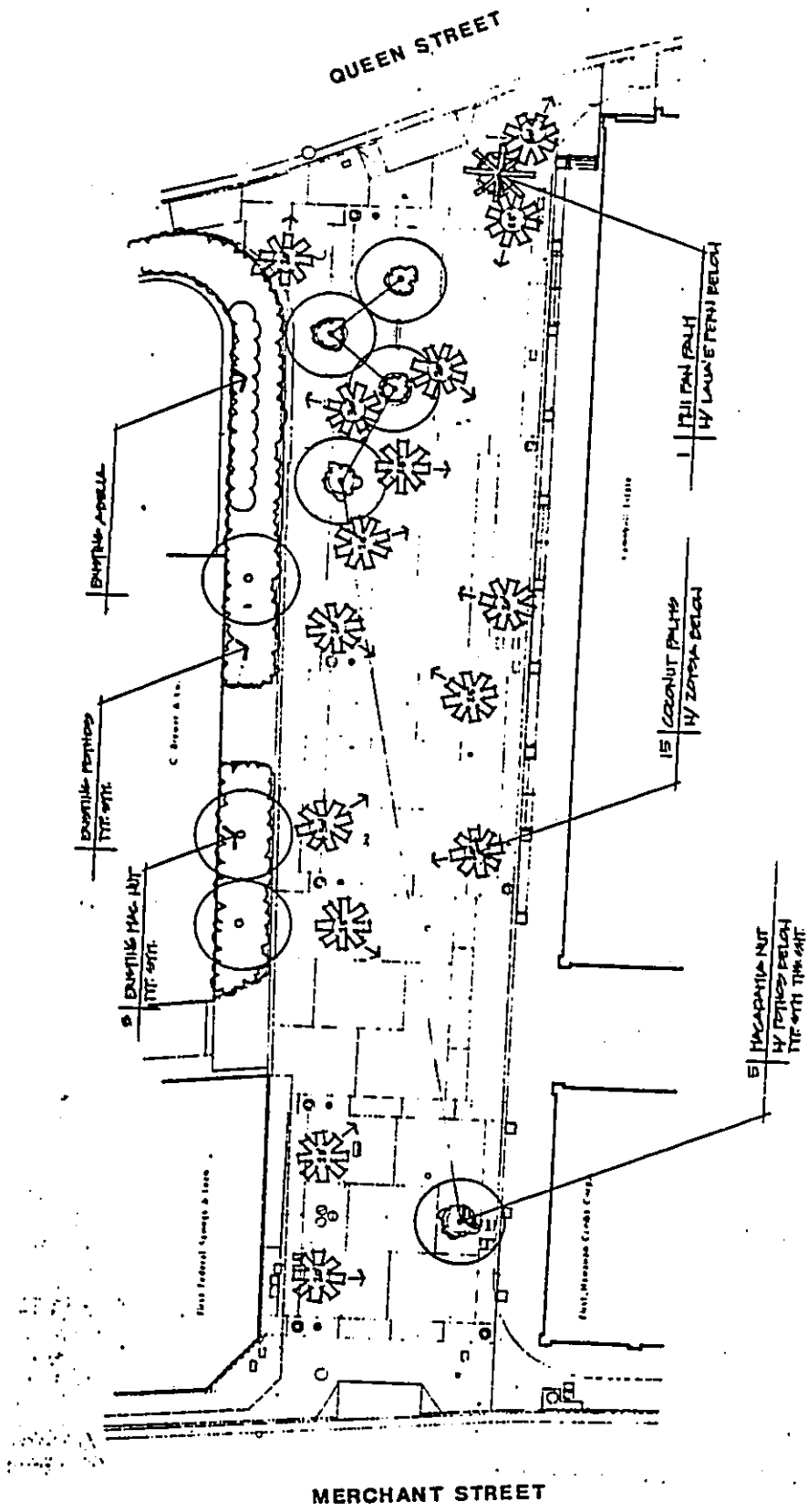
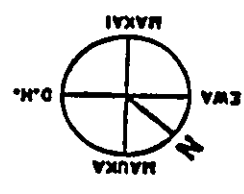


FIGURE 10  
 FORT STREET MALL  
 ZONE 5 RENOVATION PLAN



## SECTION 2 DESCRIPTION OF THE AFFECTED ENVIRONMENT

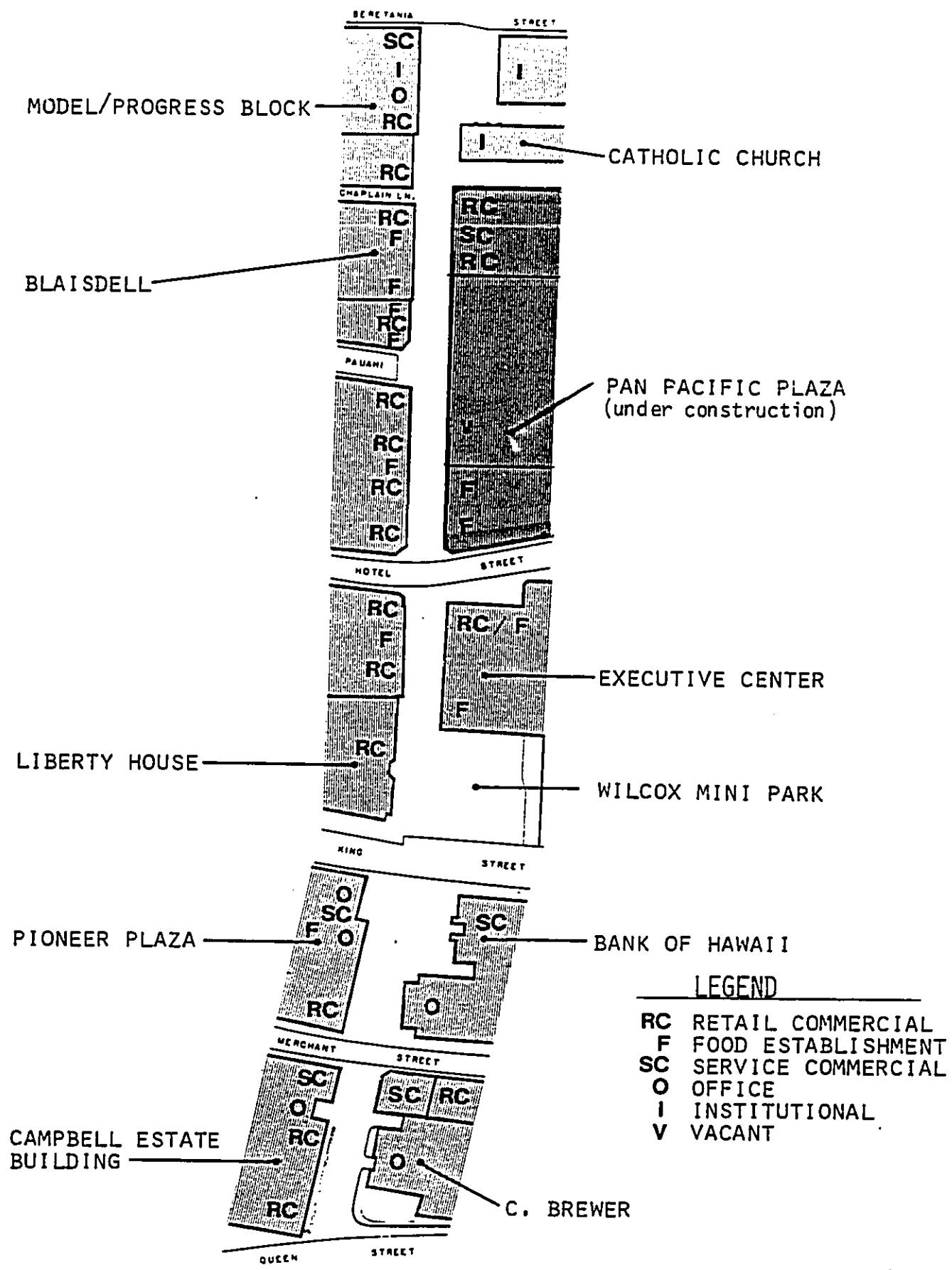
### 1. EXISTING ZONING

Properties adjacent to the Fort Street Mall are in the heart of Honolulu and are all in the BMX-4 District, allowing for the highest density under the current Land Use Ordinance.

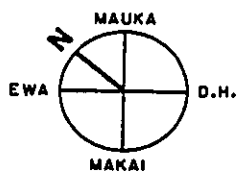
This allows a maximum height of 350 feet and without bonuses, a floor area ratio (FAR) of 4.0. Bonuses for arcades and open space can increase the allowable FAR to 7.5. Most sites in Zones 3, 4 and 5 have been developed to these maximums. Buildings in Zones 1 and 2 are generally lower in scale, two or three stories in height and do not approach the maximum FAR for their sites.

### 2. EXISTING PROPERTY USE

The primary ground floor property uses in Zones 1, 2 and 3 are retail commercial and food vendors, while in Zones 4 and 5 there are more office and service uses. Figure 11 shows the uses by category, and Figures 4 to 10 give the name of each ground floor use fronting the Mall. Pedestrian activity is affected by the differences in type and concentration of uses in each zone. In Zones 2 and 3 particularly, the pedestrian traffic is much heavier during lunch hours due to the predominance of food and retail establishments.



**FIGURE 11**  
**EXISTING LAND USE - GROUND LEVEL**  
 0 50 100 150 200 250 300  
**FORT STREET MALL**



### 3. HISTORIC PROPERTIES

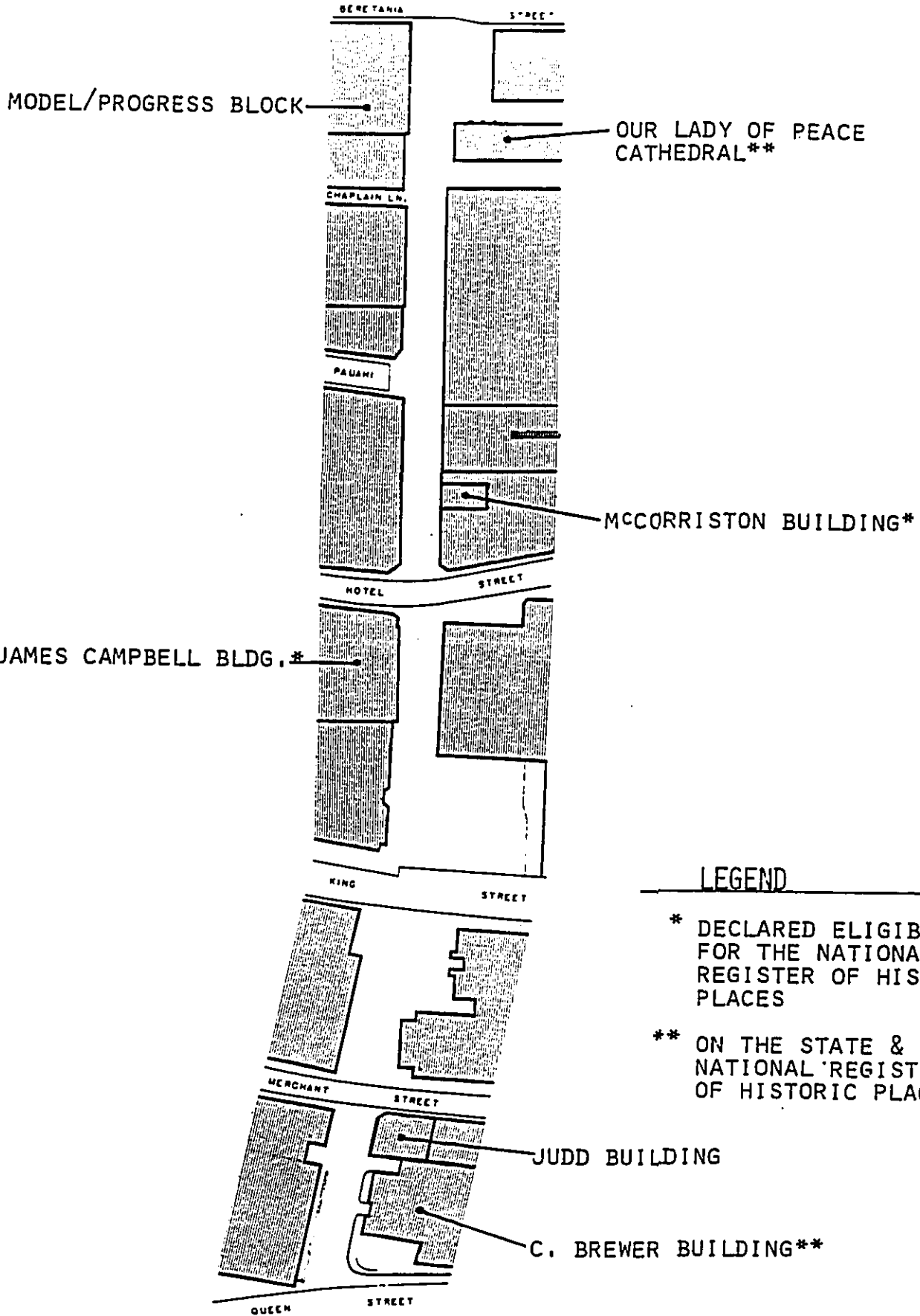
Despite the recent redevelopment of many properties along the Mall, several buildings on the Mall have historic importance and are shown on Figure 12. Two structures, one at each end of the Mall, have been placed on the Hawaii and National Registers of Historic Places (Our Lady of Peace Cathedral and the C. Brewer building -- see Photos A & B). Two others have been declared eligible for the National Register (the McCorriston and Campbell buildings).

Two turn-of-the-century buildings on the Mall are possibly eligible for the Hawaii and National Registers. These buildings are by important local architects: the Model/Progress Block by C.W. Dickey and the Judd Building by A.O. Traphagen. Besides the buildings mentioned above, there are older buildings in Zones 1 and 2.

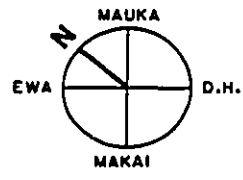
### 4. VISUAL ENVIRONMENT

#### 4.1 General

The visual environment of Fort Street changes significantly as the pedestrian traverses its length. Views beyond the structures lining the Mall are limited. The mountains can be viewed from the mauka end only, and even this view is partially blocked by the Kukui Plaza towers. This mountain view diminishes greatly as one moves makai, due in part to the heavy growth on the concrete trellises. There is no view of the mountains from the makai side of Zone 4 because the Mall shifts direction by about 10 degrees. This same shift eliminates any makai views from Zones 1 through 3. The ocean horizon is not visible because of the buildings on piers 8, 9, 10 & 11. Instead the ten-story spire of Aloha Tower provides a strong focal point for the pedestrian, emphasized by the vertical framing of the buildings in Zone 5 (Photo C).



- LEGEND**
- \* DECLARED ELIGIBLE FOR THE NATIONAL REGISTER OF HISTORIC PLACES
  - \*\* ON THE STATE & NATIONAL REGISTERS OF HISTORIC PLACES



**FIGURE 12**  
**HISTORIC PROPERTIES**  
 0 50 100 150 200 250 300  
**FORT STREET MALL**



PHOTO A  
OUR LADY OF PEACE CATHEDRAL

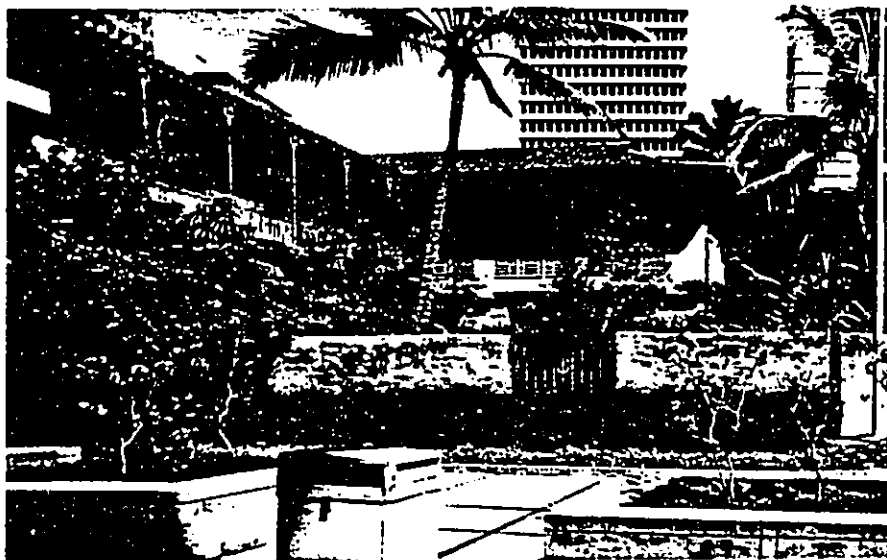


PHOTO B  
C. BREWER BUILDING



The mauka end of the Mall starts at Beretania Street and is entered between the lava-rock Model Progress Block and a low, dark, lava-rock wall with the sign of "FORT STREET MALL" in individual bronze letters mounted on the wall. This sign is currently difficult to read because of the lack of contrast between the letters and wall, and the last "L" is missing (Photo D). Also serving to announce the beginning of the Mall are two flagpoles.

There are several design problems to be solved in the plaza at this entry. The Portuguese Memorial Plaza (Photo E) appears empty, out of scale with the rest of the Mall, and lacks clearly defined edges. The lava-rock wall on the mauka edge of the plaza lacks sufficient mass (either depth or height) to provide a visual enclosure. On the Diamond Head side the existing planting strip is poorly landscaped and provides a poor transition to the blank, massive concrete wall. The makai portion of the plaza is defined by the presence of a large monkeypod and Our Lady of Peace Cathedral. There is insufficient seating in this area, which is the best shaded in an otherwise hot plaza. The Ewa side is defined strongly by the Model/Progress Block and the planters immediately in front of this building (Photo F).

The plaza has a vertical monument element set in a marble mosaic pavement. The vertical element is comprised of a cross and base, not well-scaled to the large size of the plaza. The mosaic pattern pavement portion of the memorial is not well defined within the surrounding plaza pavement.

The plaza space flows into the forecourt area of the Catholic Church. The church is a massive, symmetrical building with the long axis perpendicular to the Mall. There is ample landscaping along the Mall in front of the church, as well as private landscaping on the makai side of the church. There is very little landscaping on the mauka side of the church.

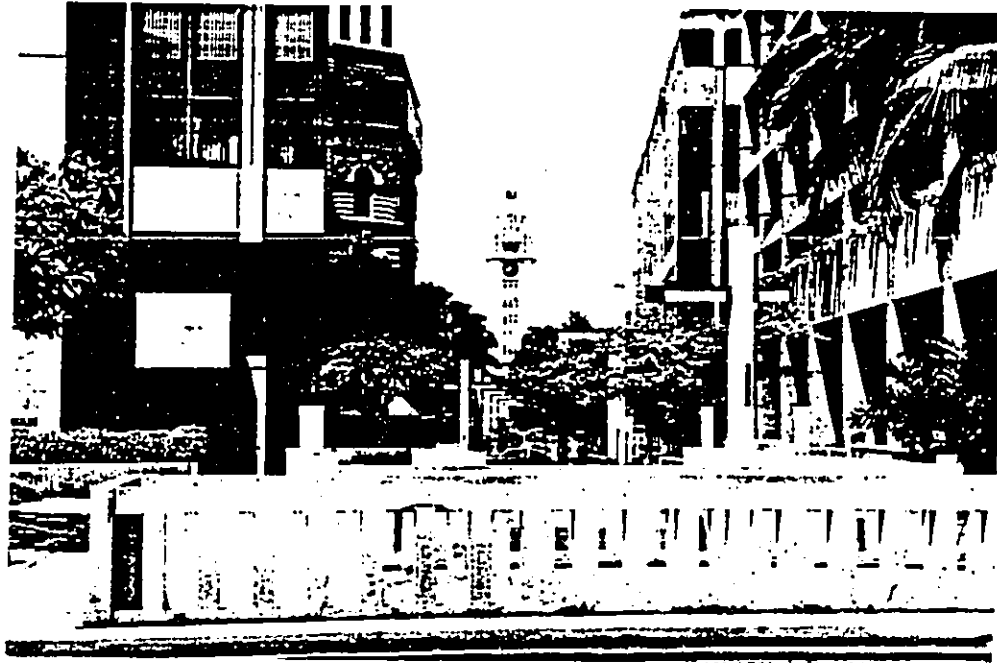


PHOTO C  
VIEW TOWARD ALOHA TOWER

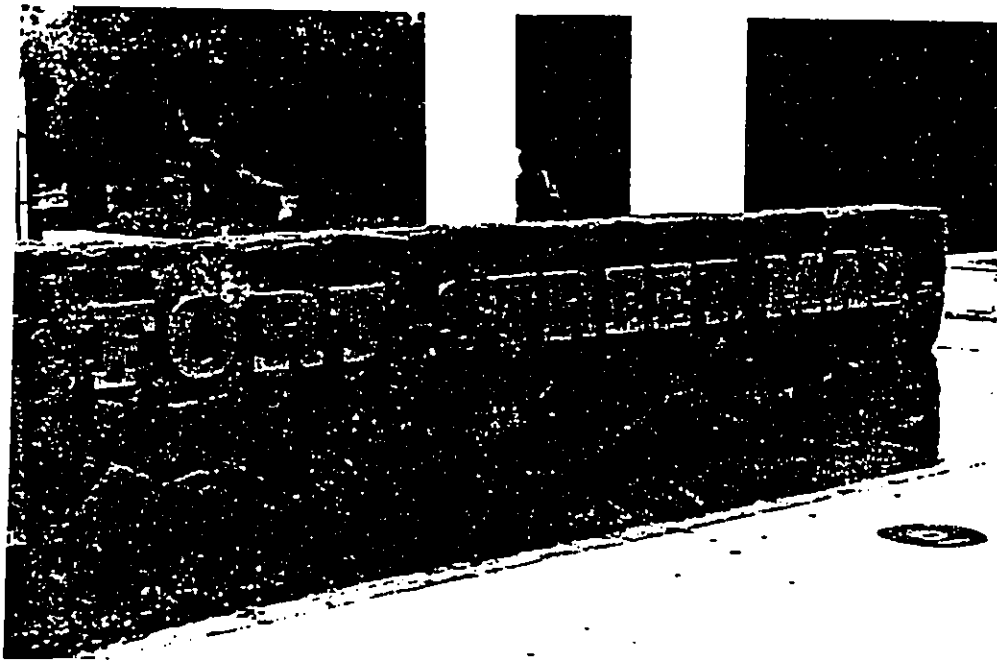


PHOTO D  
FORT STREET MALL SIGN

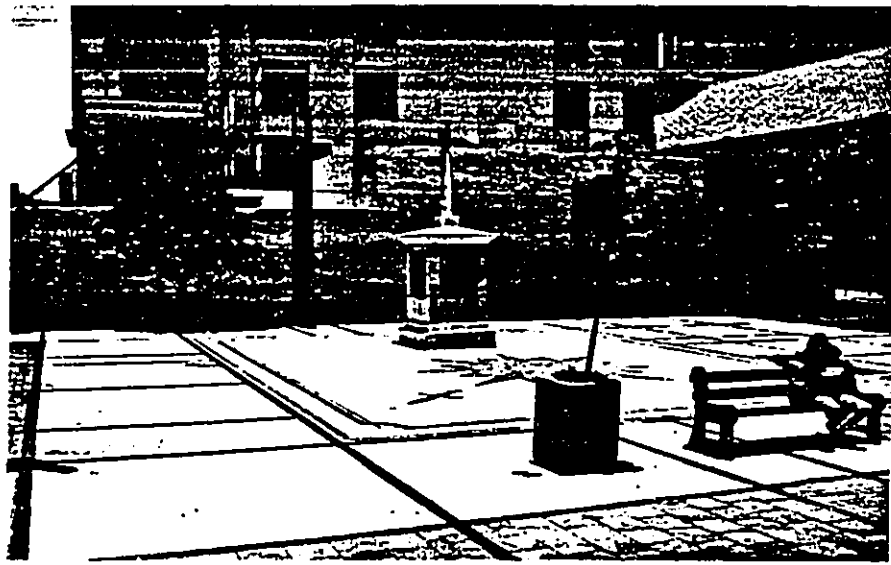


PHOTO E  
PORTUGUESE MEMORIAL IN DAMIEN PLAZA



PHOTO F  
MODEL/PROGRESS BLOCK

One end of Zone 2 is defined by the mauka-most concrete trellis, obscured by draping vines. This trellis, as well as the other three, act as entry forms to the most linear spaces on the Mall. Between Chaplain Lane and the King Street underpass at the end of Zone 3 the Mall is contained by nearly continuous storefronts. This linearity has been reinforced through the introduction of very regularly spaced landscaping and a static paving pattern. All existing buildings in this area have canopies, which also contribute to the feeling of closure and intimacy.

Opportunities for opening vistas to the sides are very limited. The Hotel Street/Mall intersection provides some opportunity for lateral views. On the makai/Diamond Head corner of this intersection the linear axis of the Mall is dissipated by the irregularly shaped open space of the Executive Center.

Two other opportunities for lateral views from Zones 2 exist: at Pauahi Street (Photo G) and at Chaplain Lane. The transition from the Mall to these streets is very poor and consists of little more than a dropped curb. These views are unattractive and detract from the appearance of the Mall.

The width of the Mall increases dramatically makai of the last concrete trellis in Zone 3. This is due to the outdoor dining area on Executive Center property and the adjacent Wilcox Park. The wide King Street corridor also adds to this feeling of openness. The cross-axis orientation of this portion of the Mall is further reinforced by the presence of the King Street underpass, which is the only significant visual and circulatory blockage in the entire length of the Mall. Although the presence of the underpass has unfortunate circulation consequences, by forcing pedestrians to angle their path down the Mall, it promotes lateral views down the King Street corridor, toward the Capitol District or Chinatown.

Zone 4 is also quite wide, and maintains this open feeling in its mauka portion due to the deep setbacks of the Bank of Hawaii building on the Diamond Head side. The Mall then narrows again before it crosses Merchant Street, but the sense of enclosure which is felt in Zones 2 and 3 is not as great here due to increased building setbacks and a lack of canopies.



PHOTO G  
VIEW DOWN PAUAHI STREET



PHOTO H  
FINANCIAL PLAZA STAGE

The focal node of Zone 4 includes the stage constructed on Bank of Hawaii property (Photo H) and the well-designed and maintained landscaping and plaza sculpture behind it. The existing Mall relates poorly to the stage. The current landscaping in this Zone of the Mall is too sparse to work with the excellent private plantings.

The chief problem of the Mall in Zone 4 is the King Street underpass (Photo I). It is a significant visual and physical block to pedestrians using the Mall and to those walking along the makai sidewalk of King Street.

Zone 5 contains two excellent older buildings on the Diamond Head side (Judd Building and C. Brewer Building) and the newer Campbell Building on the Ewa side. The arcade of the James Campbell Building (Photo J) offers a protected walkway and welcome sheltered seating at a slightly higher elevation than the Mall. The building itself is somewhat overpowering with its dark color and lack of surface modulation on the upper floors of the makai end. This contrasts strongly with the surface modulation, smaller scale and, in the case of the C. Brewer building, the landscaping on the opposite side of the Mall.

This area of the Mall has a relaxed atmosphere, even more than the Portuguese Memorial Plaza. It is bracketed by two narrow cross streets which, while sometimes busy, present little difficulty for the pedestrian.

#### 4.2 Existing Hardscape and Lighting

The elements which form the Mall can be divided into the landscape plantings and the hard elements, such as benches, trellises, drinking fountains, planter walls, bollards, paving, news stands and other street furniture. The hardscape elements have borne the years of use with varying degrees of success.

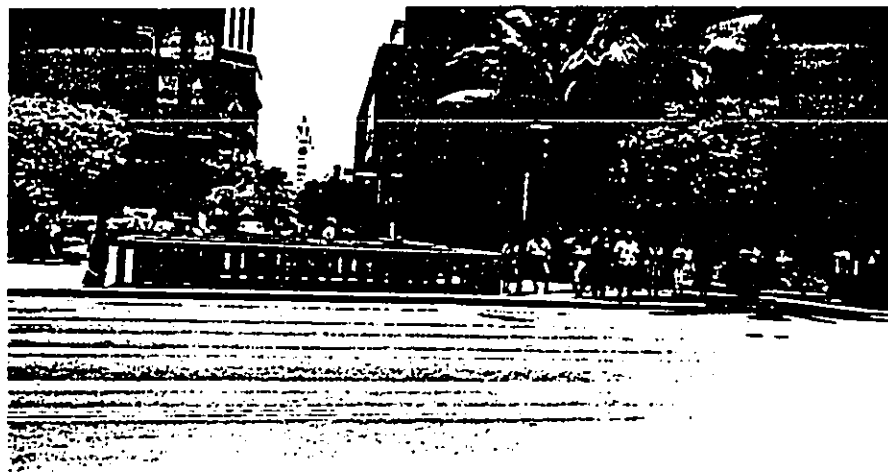


PHOTO I  
KING STREET UNDERPASS IN ZONE 4



PHOTO J  
CAMPBELL ESTATE BUILDING ARCADE

The concrete trellises are perhaps the most noticeable of those elements (Photo K). Stripped of their vines they are airy, attractive structures which are in good condition.

Seating is provided in three ways: raised planter walls, benches, and concrete bollards. Raised planter walls exist in Zones 1 and 5. They provide adequate seating, often shaded (Photo L). This is not comfortable seating for a long period of time because the walls are hard and unyielding and offer no back support.

Benches are placed throughout the Mall often according to need. Groupings frequently occur near areas with a high concentration of food vendors. They are usually placed between the tree cutouts (Photo M). The seating they offer is more comfortable, but suffers from the direct exposure to the pedestrian corridors which are crowded at midday in Zones 2 and 3. The benches in Zone 1 are placed to face the memorial and are unprotected from the sun during most of the day.

The concrete bollards provide additional seating adjacent to the landscaped areas (Photo N). They are uncomfortable and are not suitable for use by groups. There is no place to put anything one might be carrying, except on one's lap or the ground, which adds to the difficulty of using them. They are adequate only for very short-term seating.

The drinking fountains and telephone stands were important design elements in the 1968 Fort Street Mall plan. The original telephone booths had plexiglass enclosures at each end; however, these were somewhat fragile and have since been replaced by standard wall mounted enclosures, as well as two additional phone enclosures, one at each side of the original concrete supports. A two-unit phone fixture on a metal pole has also been added near Liberty House.

To make the drinking fountains substantial enough to be significant landscape elements, four were grouped into one unit. Only two of these sets were provided: one in Zone 4, and one in Zone 2. Pedestrians must often go out of their way to use them.



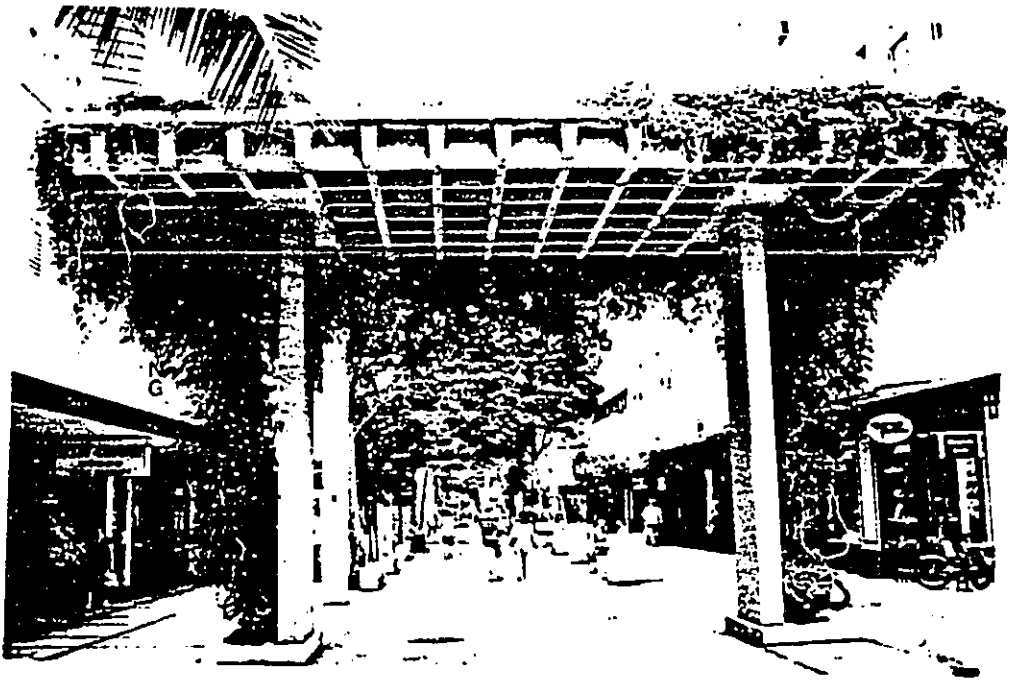


PHOTO K  
TRELLIS



PHOTO L  
RAISED PLANTER SEATING

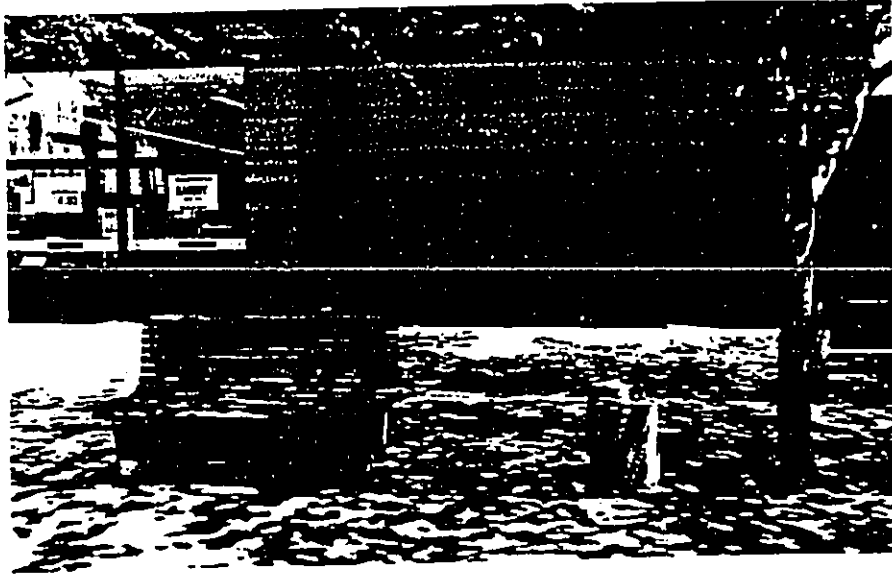


PHOTO M  
BENCHES

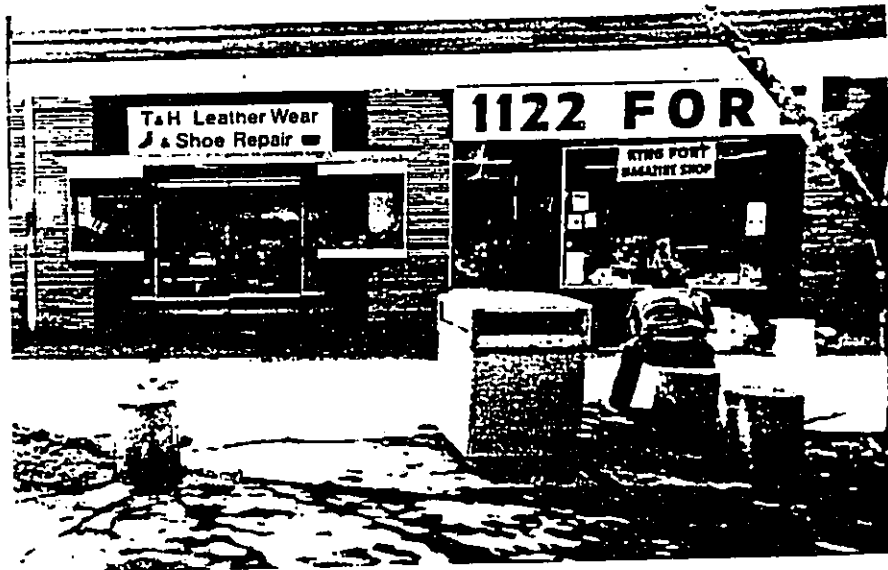


PHOTO N  
BOLLARDS

Other hardscape elements include the planters and paving. The planters are both sidewalk cutouts and raised beds. The raised planters are larger than the sidewalk cutouts. Generally, the landscaping in them is in better condition. The steel grates and groundcover for the sidewalk cutouts are often missing and they appear unkept (Photo O). The paving is probably the most consistent and ubiquitous part of the Mall. The concrete paving is divided into a grid composed of alternating four and five foot widths separated by brick dividers. Generally, the concrete is still sound, but some areas show extensive surface cracking. The brick pavers have been a constant problem as they have crumbled and spalled (Photo P). They have been replaced in some areas with red colored concrete or red tile in a time-consuming and expensive process.

Essential items of street furniture that have a major aesthetic affect on the Mall are the trash receptacles. These are currently beige metal trash containers equipped with locks (Photo Q) to keep street people from opening them to go through the garbage. Their material is not compatible with the other sturdy sandblasted concrete elements throughout the Mall. This incompatibility is aggravated by their haphazard location and orientation. They are often moved totally or partially within the main pedestrian corridors.

The original lighting system consisted of a variety of systems and lamp sources ranging from incandescent landscape accent uplighting, incandescent trellis downlighting, safety walkway lighting, and decorative custom concrete poles with fluorescent lamps.

The following is a summary of the present lighting systems:

1. Incandescent landscape well and accent uplighting is completely deteriorated and/or abandoned.
2. Concrete poles (Photo R) have been converted from fluorescent to high pressure sodium (HPS). In addition, the design of the arms of the poles in Zones 1, 2 and 3 are different from those in Zones 4 and 5.

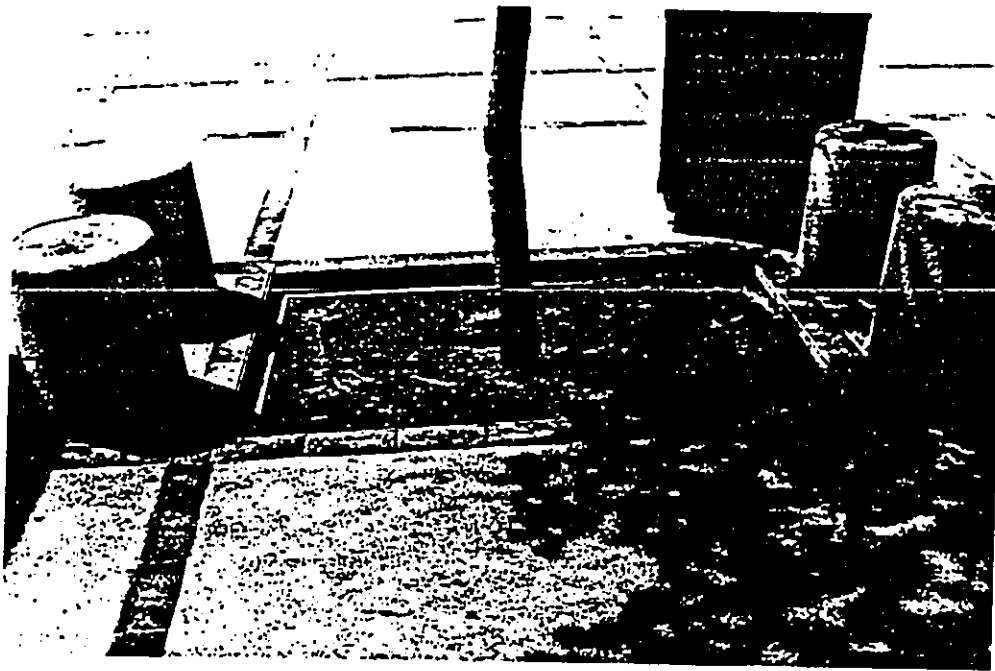


PHOTO O  
SIDEWALK CUTOUT WITH NO GRATE  
OR GROUND COVER

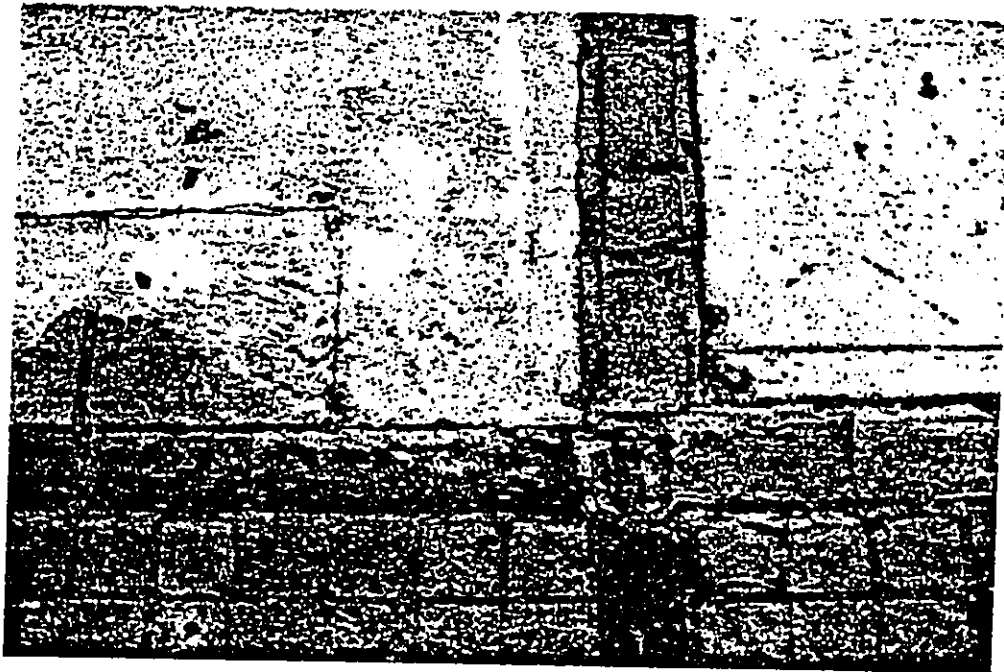


PHOTO P  
DETERIORATED BRICK PAVERS

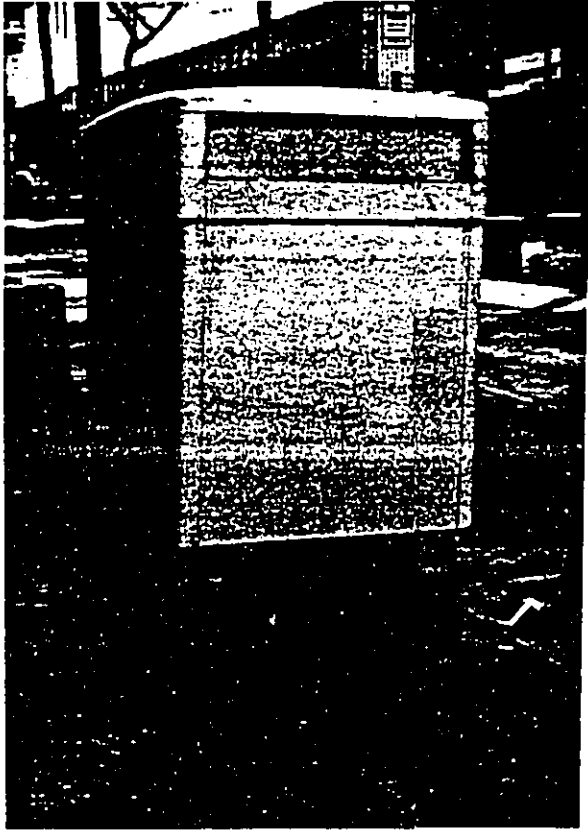


PHOTO Q  
TRASH CAN

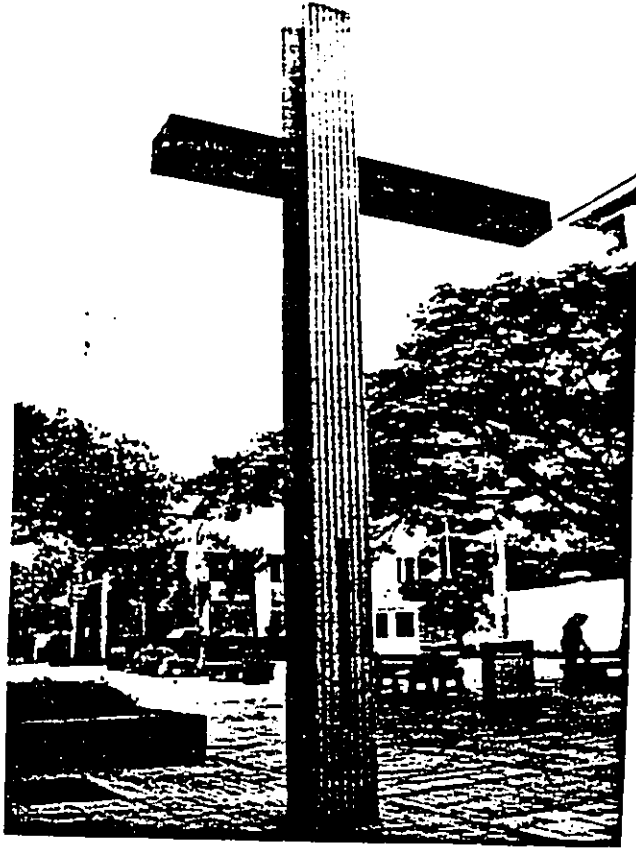


PHOTO R  
LIGHT POLE

3. Incandescent trellis downlights have not been maintained, probably due to the high maintenance costs.
4. Safety lighting, at stairs etc., is mostly damaged and non-functional.

Only the concrete pole luminaires presently have any significant existing illumination impact within the Mall. The existing concrete poles appear to have been originally designed primarily for mall aesthetics. The original fluorescent lamp chosen was only marginally efficient and was designed to provide horizontal illumination on the Mall walkway. Vertical illumination of building surfaces does not appear to have been addressed. The existing incandescent trellis lighting system is very inefficient and difficult to maintain.

#### **4.3 Existing Landscaping**

Existing landscaping within the Fort Street Mall exhibits the same general need for renovation and reorganization that is evident in other elements of the Mall. Plantings in many areas do not address major adjacent projects that have been constructed since the completion of the Mall. As a result some of the Mall areas are no longer functionally compatible or aesthetically in scale with neighboring privately owned spaces and structures.

The dominant existing plant materials within the Mall are small- to medium-size canopy trees, planted in rows in sidewalk cutouts to emphasize a formal effect. The Brisbane Box trees initially utilized for this purpose failed and have been replaced over a period of years by other species such as False Olive and Satin Leaf. The original consistent formal intent of the plantings has been disrupted by these changes. The formal layout is also adversely affected by the uneven, overgrown appearance of many of the Satin Leaf trees.

Raised planters within the Mall typically contain smaller trees or large shrubs such as Coral trees, Gardenia, or Pittosporum.

Significant existing trees and palms within the Mall include a large Monkeypod adjacent to the Portuguese Memorial, a large Rainbow Shower tree adjacent to the plaza at Pauahi Street (Photo S), and several Rainbow Shower trees adjacent to Wilcox Park. These will be retained in place.

Both at-grade and raised planters within the Mall contain some small shrub and ground cover plantings which have been replanted over the years with a wide variety of ground covers including Pothos and Wedelia.

Plantings within the Mall are currently hand watered by the use of existing hose bibs. The irrigation system initially installed with the Mall improvements is no longer used.

#### **5. EXISTING PEDESTRIAN AND VEHICULAR CIRCULATION**

Fort Street Mall is the most intensively used pedestrian space in Honolulu. The intensity of that use varies over the day with the busiest times being between 11:30 am and 1:30 pm each week day. It also varies with the area of the Mall. Zone 1 and 5 are almost always lightly travelled compared to the other Zones. Zone 4 is somewhat busier than the end zones. However, Zones 2 and 3 are by far the most heavily used spaces on the Mall. The heaviest pedestrian flows, approximately 3,600 per hour, have been determined to be in the area between Woolworth's and Liberty House (Downtown Improvement Association; October 1985).

The current circulation pattern is shown graphically in Figure 13. The double rows of trees and hardscape features along most of the Mall create a three-corridor circulation pattern of pedestrian flow. The seating areas are confined to narrow strips between these three streams of walkers.



PHOTO S  
RAINBOW SHOWER TREE  
NEAR PAUHI STREET



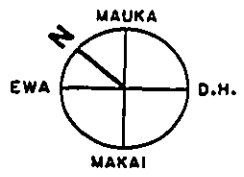
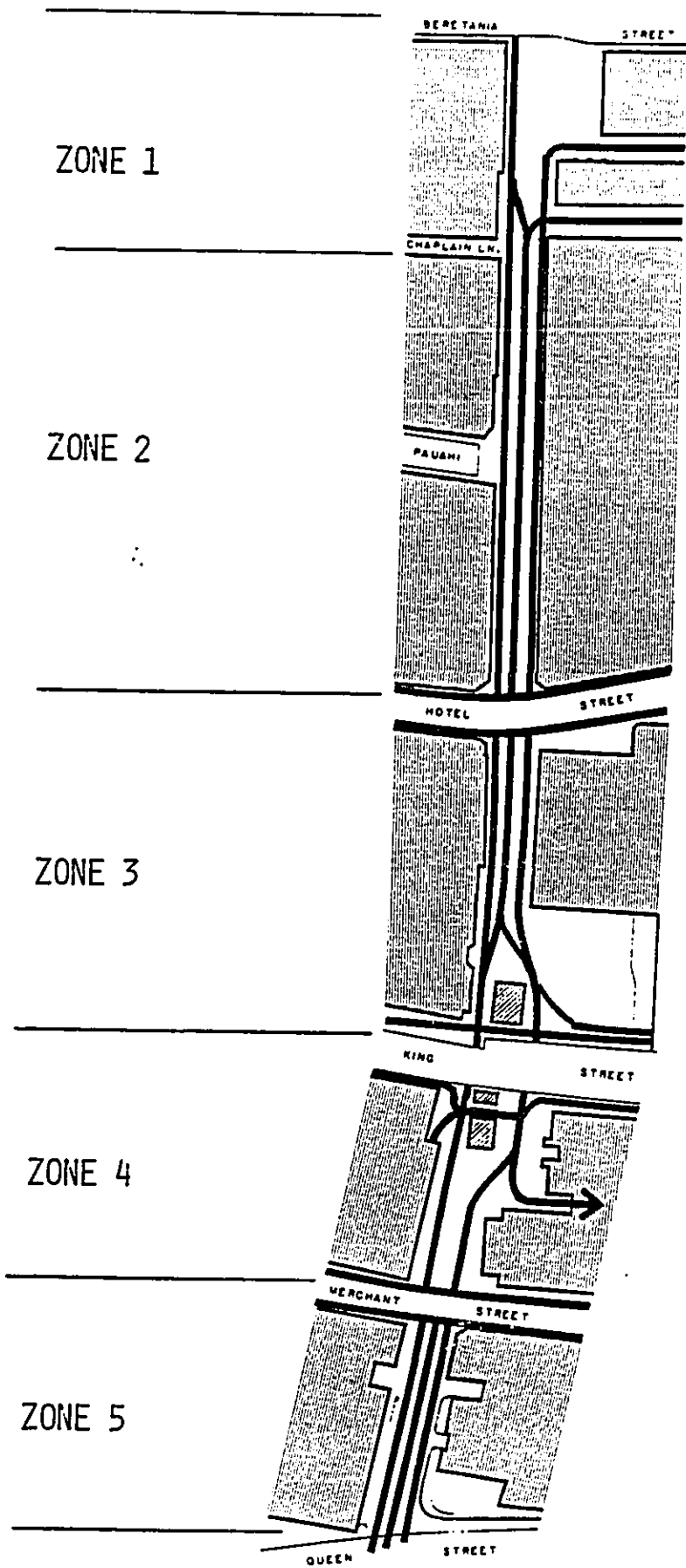


FIGURE 13  
 SCHEMATIC OF EXISTING CIRCULATION  
 0 50 100 150 200 250 300  
 FORT STREET MALL

The King Street underpass creates a blockage to pedestrian flow along the Mall on both the makai and mauka sides of King Street. Pedestrians must veer around the entry stairs to the underpass. In addition, the light well to the underpass on the makai side of King Street is too close to the curb, creating a dangerously narrow sidewalk width (Photo T). Pedestrians walking the length of the Mall must cross three streets: Hotel, King and Merchant. Of these, King Street is by far the most daunting, with its width and higher speed traffic. Still, it is clearly not as great a barrier as the underpass route and offers the pedestrian a way to cross the street at any angle. Many pedestrians cross from one side of the Mall to the other in the King Street roadway area (Photo U).

Regulations now restrict commercial and passenger vehicle use of the Mall to off-peak hours and to the stretch between Hotel and Beretania Streets. Cars are also allowed to exit the C. Brewer parking lot to Merchant Street. Parking on the Mall is allowed only while loading and unloading, except for special events at the Cathedral and construction vehicles with permits. However, this no-parking rule and the hour limits are often violated. Mopeds are sometimes secured to trees, thereby damaging groundcover under them.

The Department of Transportation Services (Tagawa; July 15, 1987) has stated that since Hotel Street is a bus-only mall, vehicular traffic on Fort Street Mall between Pauahi and Hotel will be prohibited, since turn arounds can not be accommodated.

## 6. SUBSURFACE UTILITIES

An extensive network of underground utilities exists under Fort Street Mall, including gas, storm drains, sanitary sewers, water lines, irrigation systems, electrical and telephone conduits, and metering devices.

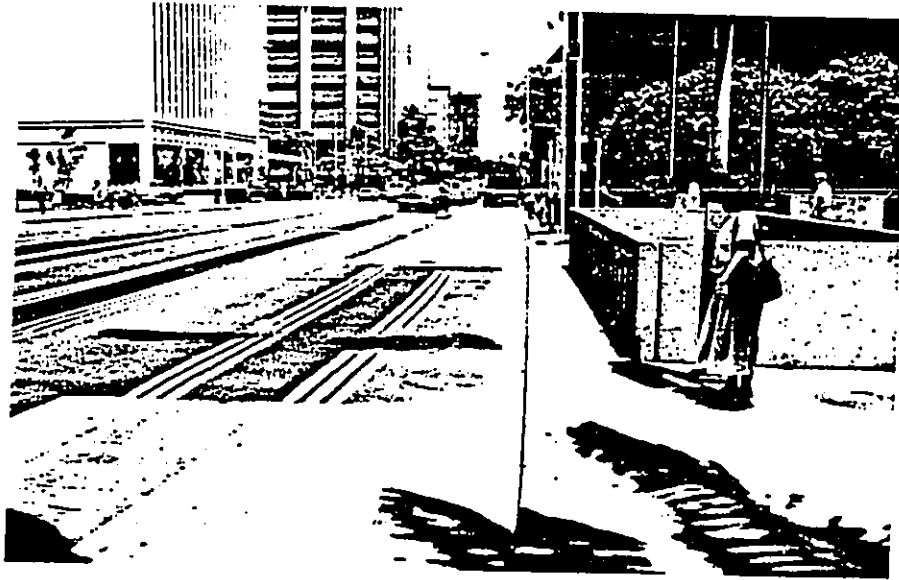


PHOTO T  
NARROW SIDEWALK ALONG MAKAI  
SIDE OF KING STREET



PHOTO U  
PEDESTRIANS CROSSING KING STREET

## SECTION 3 POTENTIAL ENVIRONMENTAL EFFECTS

Many of the environmental impacts of the proposed Fort Street Mall Renovation project are limited to the construction period, which is estimated to be approximately one year. Considering the short-term, long-term, primary, and secondary consequences of the project, both by themselves and cumulatively, the project would not have a significant effect on the environment, as defined by the significance criteria in section 11-200-12 of the Environmental Quality Commission's Administrative Rules.

### 1. AIR QUALITY IMPACTS

No significant adverse effects on air quality are anticipated. Only the top layer of paving on the Mall would be removed and the existing five-inch sub-base of concrete would remain. The exception is the construction of sewers which is addressed herein under Utilities Impacts. Consequently, there would be little fugitive soil dust created during the construction period. The small amount of concrete dust and dust from sewer excavation raised during the renovation would be controlled by water sprinkling. The exhaust emissions from construction vehicles would not create significant impacts. The contractor would be required to conduct construction activities to minimize dust and to comply with the Air Pollution Control Regulations of the State Department of Health.

### 2. NOISE IMPACTS

There would be no long-term effect on noise levels along Fort Street Mall due to the renovation project, but during the construction period,

construction activities would increase noise levels. The noisiest type of construction equipment is a jackhammer, which can create noise levels as high as 98 decibels on a A-weighted scale (dBA), and average noise levels of 88 dBA measured at 50 feet (Belt, Collins & Associates; April 30, 1987: p. 3-30). An estimation of concrete sidewalk demolition in Means (1985: p. 26) indicates that a three-person crew can remove about 150 square yards per day. The frontage of the average business along the Mall is less than 50 feet and the Mall width averages about 50 feet. The length of exterior exposure of the typical business to noise levels in the 90 dBA range would total about five days out of the construction period. This period could be shortened with additional demolition crews. Other construction activities are generally quieter than demolition, but those requiring heavy trucks, including the concrete pouring phase, can generate noises in the 80 to 90 dBA range. These noise levels will have a more obvious impact on those businesses which are not closed off from the Mall with shop windows and doors.

The Community Health Regulations of the State Department of Health (Title 11, Chapter 43, Community Noise Control for Oahu) require that a Department of Health permit be obtained for activities which produce noise levels at the property line in excess of 60 dBA. Permits are generally only valid for the hours between 7 am and 6 pm, Monday through Saturday, excluding holidays. Construction noise levels over 95 dBA are limited to Monday through Friday between 9 am and 5:30 pm. The permit may stipulate other time limitations to mitigate noise impacts. A possible mitigation measure for Fort Street Mall would be to prohibit the noisiest construction activities during the mid-day lunch period which is the busiest time for Mall merchants.

### **3. IMPACTS ON FLORA/FAUNA**

No adverse impacts on flora or fauna are expected. Existing plantings would be almost entirely replaced, except for the large Monkeypod Tree adjacent to Our Lady of Peace Cathedral, and the large Rainbow Shower Tree near the Pauahi Street intersection. The other existing Rainbow

Shower trees adjacent to the mini-park and the palms along the Mall will be retained, but relocated. The existing False Olive trees have small, staining fruit which make them unacceptable as Mall vegetation, and many of the Satin Leaf trees have an uneven, overgrown appearance. The new plantings are intended to create a more tropical appearance, but still respond to the conditions present at this intensively used urban space. The criteria used to select the plant species were:

1. adaptable to tight spaces (non-aggressive root system);
2. withstands some neglect and abuse;
3. palette adaptable to wide range of microclimatic conditions, including shade, reflected and direct sun, and windy spaces (down drafts, wind tunnels);
4. minimal level of maintenance required, including no specialized or exotic requirements;
5. insect and disease resistant;
6. minimum of litter from leaves and branches with the possible exception of small concentrated areas where accent trees could be used;
7. no messy or staining fruit;
8. relatively long-lived species;
9. provides color, form, or foliage interest; and
10. supports 'local' or 'Hawaii' design theme.

The species which meet these criteria and which are proposed for use in the Fort Street Mall Renovation are listed in Table 1.

Since the amount of vegetation on the renovated Mall would equal or exceed the present condition, no adverse impacts to bird or other animal species on the Mall are anticipated. There may be some temporary disruption of their habitat during construction, but the urban avian species are expected to quickly return when the new vegetation is installed.

**Table 1**  
**Plant Species Proposed for Fort Street Mall Renovation**

1. Canopy Shade Trees
  - Rainbow Shower
  - True Kamani
  - Tulip Wood
  - Macadamia Nut Tree
  
2. Accent Trees
  - Plumeria
  - Coral Tree
  
3. Palms
  - Coconut Palm
  
4. Small Palms
  - Loulu Palm
  - or
  - Fiji Fan Palm
  
5. Shrubs
  - Red Ginger
  - Hibiscus
  - Natal Plum
  
6. Groundcovers/Vines
  - Pothos
  - Syngonium
  - Laua'e Fern
  - Impatiens
  - Asystacia
  - Bougainvillea
  - Zoysia
  - Sandpaper Vine
  - Green Joyweed

#### 4. IMPACTS ON HISTORIC PROPERTIES

The Mall renovation project would not adversely affect any of the historic sites along the Mall (see Section 2 of this Assessment). In fact, the proposed planting design in front of the historic buildings adjacent to the Mall recognizes and enhances these structures.

#### 5. CIRCULATION IMPACTS

The proposed design for the Mall renovation would improve pedestrian circulation along the Mall by consolidating the two or three pedestrian corridors into two paths or a single corridor (Fig. 14). The advantages of this consolidation are that the areas for planting are increased and there will be fewer conflicts between walking and seated users of the Mall. An expected result of the improvements in aesthetics, seating and circulation patterns will be to encourage more users of the Mall, thus increasing the number of potential customers for Mall businesses.

The design accommodates emergency vehicle circulation, by providing a minimum 16-foot clear right-of-way as required for Fire Department access.

During construction pedestrian flow along the Mall and to business entrances will be maintained. Only when work is proceeding directly in front of a shop entrance will access be denied, for perhaps a few hours. Circulation along the length of the Mall can be assured by confining work to half the width of the Mall or less at any one time. Access to buildings may require temporary pathways across the construction area. The smaller walking area and the additional obstacles, such as construction equipment and uneven surfaces, will perhaps make pedestrian movement slightly more crowded, circuitous, and hazardous during the construction period. Vehicular use of the Mall will also be more restricted during the construction period.



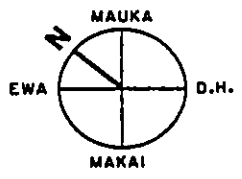
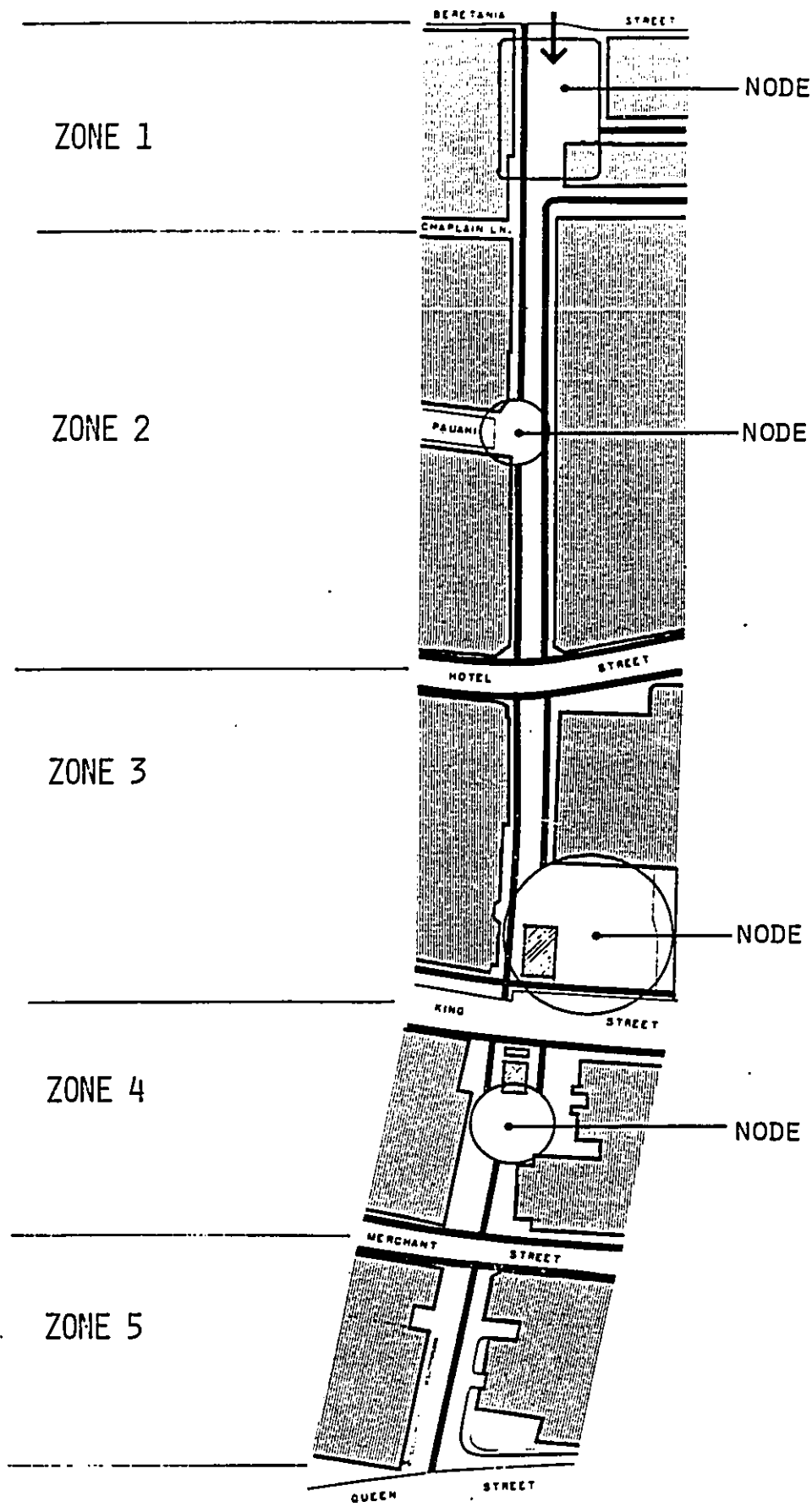


FIGURE 14  
 PROPOSED CIRCULATION PATTERN  
 0 50 100 150 200 250 300  
 FORT STREET MALL

The underpass skylight on the makai side of King Street is a significant pedestrian obstruction that should be removed and converted to sidewalk. This work is not included as part of the Mall renovation.

## 6. UTILITIES IMPACTS

The Mall renovation will not create any significant additional demands for utility services. The design and the construction schedule are being coordinated with the Department of Public Works. Two sections of existing sewers under the Mall -- a 10-inch pipe between Queen and Merchant Streets and an 8-inch pipe between Hotel and Pauahi Streets -- are old and will be inadequate in capacity for the planned development period. The sewer section between Merchant and Hotel Streets was reconstructed during the 1968 Fort Street Mall renovations and is in satisfactory capacity and condition. The proposed sewer project will consist of approximately 300 feet of 12-inch pipe between Queen and Merchant Streets (estimated construction cost is \$70,000) and approximately 300 feet of 10-inch pipe between Hotel and Pauahi Streets (estimated construction cost is \$40,000). Additional electrical outlets along the Mall will be provided for special events, and the new lighting system will be more efficient and effective than the present one. The existing network of gas lines, electric lines, drainage pipes, sanitary sewer lines, and water lines under the Mall will be disturbed as little as possible during the construction period. Plans will be submitted to the responsible departments and utility companies for their approval prior to construction.

## 7. VISUAL IMPACTS

The proposed project would visually enhance Fort Street Mall by installing a more tropical, colorful, and easily maintained landscape, and by providing new paving and other hardscape elements that are more consistent and

better related to the adjoining buildings on the Mall. A combination sketch of the elevation and plan of a typical planter is shown in Figure 15.

During construction, the appearance of the Mall will suffer temporarily. The best way to minimize the adverse visual effects would be to limit the extent of the construction area at any one time, and to limit the duration of the disruption in any one area.

## **8. ECONOMIC IMPACTS**

### **8.1 COSTS**

The proposed renovation plan is estimated to cost approximately \$2.5 million. A large proportion of this cost will be for new paving, but this is the most important element in upgrading the appearance of the Mall.

### **8.2 Methods of Funding**

Establishment of an Improvement District is the likely method of funding for the improvements to the Mall. Since the project is expected to increase the market value of adjoining property, the benefiting property owners are assessed a portion of the costs of the improvements. Costs are usually determined on a lot-area basis, after two public hearings. Since Wilcox Park is for general public use and benefits all, its costs will not be included in the improvement district calculations. Generally, property assessments total about half the cost of the project. They can be paid in a lump sum or in 20 annual installments with interest (not to exceed 10 %) charged on the deferred payments (Honolulu, City and County, Department of Public Works; July 1983). Paving costs for private property which adjoins the Mall will be the responsibility of the landowner. The cost for the proposed sewer projects will be funded through the City's Capital Improvements Program.

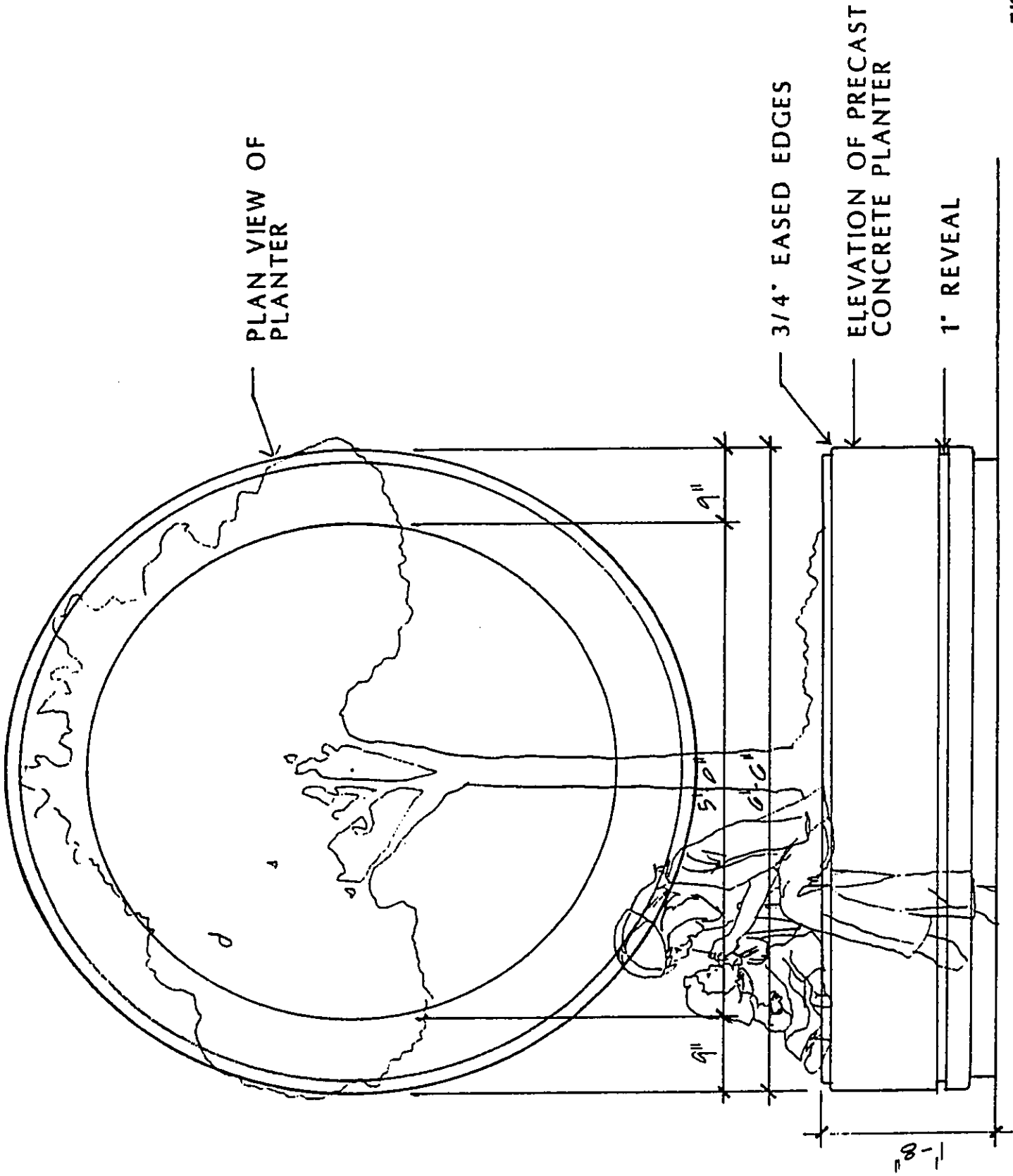


FIGURE 15  
ELEVATION AND PLAN  
OF TYPICAL PLANTER

## 9. SOCIAL IMPACTS

### 9.1 Construction Period

Access for police, fire, medical and similar emergency vehicles along the Mall may be more difficult during the construction period. However, most buildings are accessible from cross streets, so the impact on public services is not expected to be great.

Public use of the outdoor space of the Mall will undoubtedly drop during the construction period, as the typical activities of walking, resting, and eating are not enjoyable where construction activities are occurring. If the contractor is held to lower noise limits during the mid-day period of heaviest use, the impacts on public use of the Mall will be minimized.

### 9.2 Public Use of the Renovated Mall

The Mall renovation plan will provide a more pleasantly designed and landscaped spaces for the public. The replacement of deteriorated paving and fixtures will also improve the appearance and atmosphere of the Mall. The addition of Wilcox Park at King Street and provisions for temporary stage facilities at Pauahi Street will enhance these areas of the Mall, since they will become additional activity nodes. The level of use of the Mall is expected to rise after completion of the renovation project. One advantage of increasing the number of activity nodes is that events attract crowds which can displace vagrants and improve the public perception of the Mall as a fun and safe place. The use of raised planters only as seating elements will discourage vagrants from sleeping on the Mall.

## SECTION 4 ALTERNATIVES TO THE PROPOSED ACTION

### 1. ALTERNATIVE DESIGN DETAILS

The design details of such hardscape elements as raised planters, telephone enclosures, drinking fountains, litter containers, or lighting fixtures could be slightly altered in the final stages of the project, but the intent is to have all of these elements compatible in material and design. The Mayor's Committee's comments on the Schematic Design report included recommendations for minor changes. Some of these suggestions have been implemented in the final design. Design refinements do alter the analysis of the project's impacts.

### 2. ALTERNATIVE PAVING MATERIALS

For the Mall paving, patterned concrete is the material proposed, because it is simple, durable, relatively inexpensive, replicable, strong enough to withstand occasional vehicular traffic, and light colored to reflect heat. It can also be textured to reduce glare and minimize slippage when wet. Non-slip quarry tile, certain durable stones, and pressed concrete could meet most of these criteria, but used as the basic paving material, would exceed the project budget limit. Other materials, such as slate and most tiles, could not meet the cost and strength criteria.

### 3. NO-ACTION (STATUS QUO)

This alternative would leave the Mall in its present deteriorating condition. The impact of this alternative on the Mall's businesses and on the general public would be greater in the long run than the temporary impacts of the renovation project. As the appearance and condition of the Mall would worsen, less people would patronize the shops and resulting vacancies would fuel the cycle of neglect and abandonment of the area.

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**SECTION 5**  
**PARTIES CONSULTED DURING THE PREPARATION OF THIS**  
**RENOVATION DESIGN**

The Fort Street Mall renovation project has been the subject of continuing discussions since the summer of 1985. The original consultants on the project were Tongg, Clarke & Mechler, Inc., but a subcontract was made with Spencer Mason Architects on April 28, 1987 to complete the work on the design. Several groups representing downtown businesses and individuals have been providing valuable input throughout the design process. The two major organizations which have been involved are the Downtown Improvement Association (DIA) and the Mayor's Committee on Fort Street Mall. The former organization has a membership of 400. Members are kept informed through the DIA newsletter's *The Downtowner*. The latter was established on July 30, 1979 and representatives of downtown businesses and organizations were invited to advise the city on this project. The committee's membership has changed slightly, and has ranged between 13 and 17 members, but now includes:

<u>Individual</u>	<u>Affiliation</u>
Keawe P. Dowsett	Pantheon Company
Thomas M. Foley	Foley, Maehara, Judge, Nip & Chang
Andrew D. Friedlander	Monroe & Friedlander
William A. Grant	Downtown Improvement Association
Dana Gray	Downtown Resident
Richard W. Gushman, II	OKOA, Inc.
Colby Jones	Bell Center, Inc.
Rose Kamuri	Ritz Stores
Victor Lim	McDonald's
Rudy Loftis	Woolworth's
Wade McVay	Campbell Estate
Edward M. Slavish	Slavish & Associates
Jeffrey Stone	Bishop Steet Associates
Ivan Takeuchi	Liberty House
Susie Thieman	Downtown Planet
Terrance Watanabe	Our Lady of Peace Cathedral
C. Robert Worley	Bank of Hawaii



Meetings of the Mayor's Committee have been held frequently, usually monthly. Especially since May 1987, these meetings have provided forums for the committee, the consultants, and city entities with jurisdiction and interest in the Mall to exchange ideas. Representatives from the Department of Parks and Recreation, Department of Public Works, Department of Transportation Services, Department of Land Utilization, City Council, and the Police Department have attended.

The Department of Parks and Recreation, which is the proposing agency for this project, has maintained open communications with the DIA and the Mayor's Committee, as well as with other city agencies and the City Council.

Correspondence regarding the proposed renovations for the Mall has been received and shared among the agencies, organizations and consultants involved. The Downtown Neighborhood Board has been contacted regarding the project.

Twenty copies of the *Renovation of the Fort Street Pedestrian Mall: Schematic Design Report* were distributed by the DIA to Mayor's Committee members and also to:

<u>Individual</u>	<u>Affiliation</u>
• Doreen German	Pioneer Plaza
• James Higgins	C. Brewer & Company
• Wayne Jack	First Federal S & L
• Barbara Mason	Liberty House
• Sukarman Sukamto	Executive Center
• Ty Sutton	Kress Block Development
• Bill Wanket	Kress Block Development

Several recipients of the report wrote with suggestions for slight changes to the schematic design. After this input and City review, substantial changes were made in the final design drawings.

The final contract drawings for the project will be submitted to at least the following agencies for review and approval before construction:

- Department of Parks and Recreation, City and County of Honolulu,
- Department of Land Utilization, City and County of Honolulu,
- Department of Public Works, City and County of Honolulu,
- Board of Water Supply, City and County of Honolulu,
- Department of Transportation Services, City and County of Honolulu,
- Building Department, City and County of Honolulu, and
- Environmental Health Division, State of Hawaii.

It is evident that extensive consultation with interested parties on the design of the project has already been undertaken and will continue through the development of construction documents.

## SECTION 6 DESCRIPTION OF THE ASSESSMENT PROCESS AND RECOMMENDATION

### 1. PROCESS

The project has been discussed thoroughly with many groups and individuals as outlined in the previous section. The consultants reviewed existing documents pertaining specifically to the Fort Street Mall. These included:

- Original contract documents for the Mall by Victor Gruen's office
- Mall Renovation Plan (1984) - Mayor's Committee on Fort Street Mall
- Downtown Plan (1968) - Victor Gruen's office
- Parks and Open Space Plan (1975) - Downtown Improvement Assn.
- Downtown Street Tree Plan

Information and comments by City agencies and the public previously submitted to the City or the Mayor's Committee have also been studied. The plans of the Department of General Planning, Department of Land Utilization, and State Planning office covering the downtown area have been reviewed as well. Further information was obtained from meetings with City agencies, the Mayor's Committee and site visits. In addition to the site-specific research, national publications concerning public open space were consulted, including *The Social Life of Small Urban Spaces* (Whyte; 1980) and *Managing Downtown Public Spaces* (Project for Public Spaces; 1984).

Base maps which reflect the existing conditions on the Mall were developed. Analysis proceeded using these base maps and the information obtained from the sources discussed above. This process led to the formulation of schematic design solutions for the Mall. The possible impacts of the proposed Fort Street Mall renovation design were then assessed.

## 2. RECOMMENDATION

A Negative Declaration for the proposed Fort Street Mall renovation is recommended because the project will not have any significant adverse effects on the environment. Environmental impacts, such as noise and disturbances to businesses, which result from construction activities are temporary and can be mitigated by appropriate measures.

The long-term effects of the project will be positive. The aesthetic and functional improvements to this important urban pedestrian corridor are expected to have beneficial social and economic results.

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