DEPARTMENT OF
HOUSING AND HUMAN CONCERNS
COUNTY OF MAUI

JAMES "KIMO" APANA
Mayor
ALICE L. LEE
Director
PRISCILLA P. MIKELL
Deputy Director

200 SOUTH HIGH STREET • WAILUKU, HAWAII 96793 • PHONE (808) 270-7805 • FAX (808) 270-7165

September 10, 1999

Ms. Genevieve Salmonson, Director
Office of Environmental Quality Control
State of Hawaii
235 South Beretania Street, Suite 702
Honolulu, Hawaii 96813

Dear Ms. Salmonson:

Subject: Finding No Significant Impact for the Front Street Apartments, Lahaina
TMK: 4-5-03: 13, 14, 15, 38, 39 and 40

The Maui County Department of Housing and Human Concerns has reviewed the comments received during the 30-day public comment period which began on August 8, 1999, and has determined that the Front Street Apartments project will not have significant environmental effects. Therefore, a Finding Of No Significant Impact (FONSI) determination has been made and we hereby request that a FONSI notice be published in the September 23, 1999 OEQC Environmental Notice.

Enclosed are four copies of the Final EA. Mr. Rory Frampton of Chris Hart & Partners will be transmitting a completed OEQC Publication Form to your office via e-mail. Please call Ed Okubo of our Housing Division at 270-7355 or Mr. Frampton at 242-1955 if you have any questions.

Very truly yours,

ALICE L. LEE
Director of Housing and
Human Concerns

ETO:df
Enclosures
xc: John Min, Planning Department
Rory Frampton, Chris Hart & Partners
Edwin Okubo, Housing Division

1999-09-23-MA-FEA-Cover of title in Yellow)

FINAL ENVIRONMENTAL ASSESSMENT

Front Street Apartments

in support of
Special Management Area Use Permit
&
Section 201G-118, HRS, Application

Lahaina, Maui, Hawaii
TMK: (2) 4-5-03:13, 14, 15, 38, 39, 40

CHRIS HART & PARTNERS

Prepared for
SunAmerica Affordable Housing Partners, Inc.

Prepared by
Chris Hart & Partners
Landscape Architecture & Planning
1955 Main Street, Suite 200
Wailuku, Maui, Hawaii 96793

SEPTEMBER 1999

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SEPTEMBER 1999

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APPENDICES

I. INTRODUCTION

A. OVERVIEW OF REQUEST

The proposed project involves the construction of the Front Street Apartments, a 142-unit low income rental project. The project site is located in Lahaina Town and will contain a mixture of one and two story buildings containing studio, one-bedroom and two-bedroom units. The project will be targeted towards families earning 60% of the County of Maui's median income and below as determined by State and Federal Low Income Housing Tax Credit Guidelines. This Environmental Assessment (EA) is intended to comply with the provisions of Chapter 343, Hawaii Revised Statutes (HRS), since the project is located within the Lahaina Historic Landmark District. The EA is also intended to provide information in support of a request for Special Management Area (SMA) permit as well as a request for approval of a Section 201G-118, HRS, application.

B. PROJECT OVERVIEW

District	Kainehi, Paunau *ahupua`a*, Lahaina District, Island of Maui, Hawai`i
Tax Map Key	4-5-03: 13, 14, 15, 38, 39, and 40
Project Name	Front Street Apartments
Location	Front Street at Kenui and Wainee Streets
Area	8.73 acres
Developer	SunAmerica Affordable Housing Partners, Inc. agent: Kent R. Smith KRS Development, Inc. 1043 Makawao Avenue, Suite #208 Makawao, Hawai`i 96768

Land Owner	3900 Corporation 3660 Waialae Avenue, Suite 400 Honolulu, Hawai`i 96816 contact: Mr. Alvin Awaya, V. P.
Planning Consultant	Chris Hart & Partners 1955 Main Street, Suite 200 Wailuku, Maui, Hawai`i 96793 contact: Mr. Rory Frampton
Land Use Designations	State Land Use Commission: *Urban* West Maui Community Plan: *Multi-Family* and *Business/Multi-Family* County Zoning: TMK 4-5-03: 13 (7.846 Acres) *A-1 Apartment* District TMK 4-5-03: 14, 15, 38, 39 & 40 (0.884 acres) *R-2 Residential* District Other: *Special Management Area and* *Lahaina Town Historic Landmark*
Existing Land Use	The majority of the site is vacant except parcel TMK 4-5-03: 14 ,which contains a wood-frame structure that was originally established as a pre-school.
Proposed Land Use	142 low income rental, apartments and related improvements. The former pre-school building will be converted to learning/tele-medicine center.
Preconsultation	See Appendix E for Agency Comments and Responses Lahaina Town Action Committee

II. DESCRIPTION OF THE PROPERTY

A. PROPERTY LOCATION

The project site is bounded by Front Street, Kenui Street, and Wainee Street in the northern section of Lahaina (See Figure Nos. 1 and 2).

B. PROPERTY DESCRIPTION

The project site is a combination of six parcels with a total area of 8.73 acres and is currently vacant except for Parcel 14, which is occupied with a wood-frame structure which was formerly utilized as a preschool. This structure will be renovated and incorporated into the project as a learning/tele-medicine center.

III. DESCRIPTION OF THE PROPOSED REQUEST

Project Data		
Total Area		8.73 acres
Number of Units		142
Density	142/8.73	16 units/acre
Unit Mix	Studio at 448 sq.ft.	16
	1 Bedroom at 528 sq.ft.	80
	2 bedroom at 840 sq.ft.	46
Number of Buildings		19
Average units per Building		7.47
Lot Coverage	Allowable = 25%	Proposed = 17.24%
Floor Area-Lot Area Ratio	Allowable = 40%	Proposed = 23 %
Parking	Number of Spaces	240
	Covered	142
	Open	98
	Parking Stalls/Unit	1.5

The project layout consists of a mixture of one and two story units with the number of units per building ranging from four to eight. Access will be via Kenui Street, about midway between Front Street and Wainee. A large portion of the site will be landscaped lawns which can be used for active or passive recreation. Three recreational areas will be provided, including two "tot lots". A covered parking stall will be available to every unit (142 total covered stalls), a feature is not generally available in other comparable apartments or condominiums in West Maui (ACM Consultants, Inc., 1999). Other amenities will include energy efficient air conditioning and solar water heaters.

The project will be designed to accommodate the latest technology in the areas of telemedicine and distance learning. These facilities will be housed in the existing structure which was formally used as a pre-school. It is envisioned that the building will be utilized as a pilot/demonstration project of Help Innovations' Telemedicine program. The project will be developed in conjunction with Maui Community College as a MCC Telehealth and Education Center. The demonstration project would provide an video and audio link with MCC. Medical information, visual check ups, prescription checks, preventative medical advice and other types of information will be provided to occupants of the project. In addition, the facility will provide an educational facility capable of providing instructional classes through on-site teaching or distance learning technologies. These educational services will be provided to the project residents as well as to the larger West Maui Community on a limited basis. The existing building is 3,600 sq. ft. in size and 12 parking stalls will be provided.

A community building will contain on-site administrative offices for the property management company as well as a laundry facility to service the residents of the facility. The facility will be one story and approximately 1,000 sq. ft. in size. Two parking spaces will be provided for the two employees of the management company. In addition, a maintenance/storage shed will be incorporated into the end of a covered parking structure for on-site personnel.

The project is scheduled to start construction in November, 1999 with a projected completion date of November, 2000.

A market study conducted for the project concluded that the project's location is its primary asset since it is within a very short walking distance from places of employment, shopping, financial institutions, post office and professional and medical offices.

Fifty percent of the units will be available to families earning no more than fifty percent of the annual median gross income (AMGI) for the County of

Maui as established by the State and Federal governments through the Low Income Housing Tax Credit Program. The remaining fifty percent will be available to families or individuals earning no more than 60 percent of AMGI. The following table presents the proposed project's rents which have been established by HCDCH.

	Rents not to exceed 50% AMGI	Rents not to exceed 60% of AMGI
Studio	17 @ $565	17 @ $581
One Bedroom	30 @ $592	30 @ $681
Two Bedroom	22 @ $702	23 @ $828

The following table presents a comparison of the proposed project's rents versus the established rates by the HCDCH based on the 60% affordable rental rates.

AFFORDABLE RENT GUIDELINES
60% Affordable Rental Rates

					Utility Allowances		
	HCDCH*	Project Rents*	Market Rents	Percentage Below Market	HCDCH	Solar Credit	Project Rents (paid by tenant)
Studio	$702	$619	$742	-17%	$57	($19)	$581
1 Bedroom	$752	$723	$912	-21%	$62	($20)	$681
2 Bedrooms	$903	$889	$1,175	-25%	$90	($29)	$828
*Rental rates include utilities							

IV. REQUESTED WAIVERS AND EXEMPTIONS

The success of this project is dependent upon cooperation and assistance from all levels of government. The developer has recently received an allocation of Federal and State Low Income Housing Tax Credits from the State of Hawaii. These tax credits are awarded annually on competitive basis by the Housing & Community Development Corporation of Hawaii (HCDCH) which was formerly Housing Finance and Development Corporation (HFDC).

On the County level the developer is requesting to process the project as a 201G-118, HRS application which would exempt the project from "...all statues, ordinances, charter provisions, and rules of any governmental agency relating to planning, zoning, construction standards for subdivisions, development and improvement of land, and the construction of units thereon." (201G-118, HRS) Approval of the 201G-118 request is critical in order to reduce development related costs, especially with regards to project scheduling.

To this end, the following variations from development standards are requested in accordance with provisions of Section 201G-118, HRS.

1. Zoning

   The majority of the property, approximately 7.74 acres (parcel 13) is zoned A-1 Apartment and is therefore consistent with the proposed project. Near the center of the property there are five parcels which are zoned R-2 Residential totaling approximately 38,629 square feet or .867 acres. A waiver will be required to allow apartment units in the residentially zoned area and to provide for flexibility in project design.

2. Off Street Parking and Loading

   Reduce the parking requirement from 2 stalls per unit (280) to 1.5 stalls per unit (210). One covered parking stall will be available for every unit (142

covered stalls). Seventy additional stalls would be provided. Since a number of the units will be one bedroom or studios, two cars per unit would be excessive and would increase project costs as well as impervious surfaces. Also, due to the project's close proximity to places of employment, shopping, and other services, project residents will not be dependent on the automobile as in other areas of Maui.

3. Park Assessment

Waive a portion of the requirements for Parks and Playground, Section 18.16.320, MCC. The project will provide for playground and open space recreational areas on-site, however, these areas will not satisfy the total park assessment requirements as required by County Code. Three recreational areas will be provided, two of which will be "tot lots". The three areas total approximately one acre in size. The code provisions would require the dedication of 1.57 acres of land being set aside and improved for park purposes.

4. Utility Lines

Waive requirement for placing off-site utility lines underground fronting Kenui Street and Front Street (there are no utility lines along the Wainee Street frontage.) Utility lines along Front Street are above ground to the north and south. To the south, the above grades lines are in place fronting already developed properties. Also, as part of the Front Street Improvement project, which ended at Baker Street, only the secondary power lines were buried, the primary power lines were left above grade based on recommendations contained within the Design Guidelines for Front Street Improvements (Belt Collins and Associates, December 1992) which were adopted by the Maui County Cultural Resources Commission. Utilities will be placed underground on-site.

V. WEST MAUI HOUSING MARKET SUMMARY

A market study was prepared by ACM Consultants, Inc., which analyzed the West Maui apartment rental market as it relates to the proposed Front Street Apartments. The following discussion is a summary of the analysis.

The ACM market study utilizes information from the Hawaii Housing Policy Study Update 1997 which provided information illustrating that West Maui is unique when considering the market reaction to its existing rental market. With respect to monthly shelter cost (rent), the survey revealed that West Maui renters pay a higher level of monthly rent than all other districts in the County. It further revealed that West Maui renters have the highest indication of overcrowding of all the housing units in the County of Maui. West Maui is also the only region in Maui County in which the rental preference was higher than the preference for ownership. These factors are supportive of the fact that the cost of home ownership in West Maui is high, forcing many to turn to rental options. Even this option, however, is expensive, compelling a great number of tenants to double up to lessen the individual cost of housing. In addition, the reason for the rental preference over ownership is the fact that the majority of the tenants are employed primarily by tourism-related businesses, restaurants and retailers. These employees prefer the rental option because they are typically very transient and generally do not have the necessary down payment for a purchase, especially in light of our real estate prices.

The Hawaii Housing Policy Study Update 1997 also indicated that West Maui respondents demonstrate the highest preference in the County for condominium and apartment living, and, they were also the most willing to accept the smallest living area of 800 square feet or less.

Finally, the survey disclosed that the Lahaina-Napili region achieved the highest scores regarding the preferred location of new housing units (rent). The Lahaina-Napili score of 21 percent outdistanced all other districts in Maui County, with Kahului and Kihei following at 12.4 and 11.5 percent,

respectively. The 1997 Update also declared that the highest number of respondents preferring to rent fell into the 50 to 80 percent range of the HUD median income. As pointed out earlier, this range is consistent with the rent being proposed for Front Street Apartments.

The market study concluded that market acceptance is expected to be high and project absorption should be rapid.

VI. ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION MEASURES

A. PHYSICAL ENVIRONMENT

1. Surrounding Land Uses

Existing Conditions:

The subject property is located on the west side of Maui on the northern fringe of historic Lahaina Town. Lahaina Town contains regional commercial services, a substantial amount of visitor oriented services medical facilities, major civic facilities and spaces, and residential neighborhoods. The town's significant features -- its historic character, compact small-town scale, and it's vitality -- are embodied in the Front Street environs.

The subject site is located in the north end of the Lahaina Town's Urban District, which extends from above Honoapiilani Highway to the ocean and from the Puamana Park to just north of Mala. The Community Plan map presents an illustration the range of uses planned within the Lahaina's Urban core *(See Figure No. 4)*.

Specific uses surrounding the subject site include the following: *(See Figure Nos. 2 & 4)*

- North: Across Kenui Street is a 24 acre vacant parcel owned by the Weinberg Foundation, a portion of which is proposed to be developed in the near future as Wainee Village, an elderly housing project. According to the West Maui Community Plan, the remainder of this parcel will include business, multi-family and park uses. Further north, across the Kahoma Stream

Channel is the Lahaina Cannery Shopping Center. County Zoning: *A-1 Apartment*. West Maui Community Plan: *Project District No. 4*.

- South: Abutting the subject property's southern boundary are apartments and condominiums. County Zoning: *Historic District No. 1* and *A-1 Apartment*. West Maui Community Plan: *Multi-Family*.

- East: Abutting the subject property's eastern boundary is Wainee Street, across Wainee Street are elderly apartments. Further east, beyond the elderly housing is Honoapiilani Highway. County Zoning *A-1 Apartment*. West Maui Community Plan: *Multi-Family*.

- West: Across Front Street are single family residences. Further west, is the Pacific Ocean. County Zoning: *R-1 Residential*. West Maui Community Plan: *Single Family*.

Potential Impacts and Mitigation Measures:

The proposed 142 apartment complex is similar to its neighbors to the east and south and the proposed Wainee Village to the north. The project site has been zoned *A-1 Apartment* District since 1969 and designated for *Multi-Family* use in the West Maui Community Plan since 1983. Therefore, there should be no significant impact with regards to land use patterns in the area.

Short-term impacts could arise during the construction period. Construction-related activities during site work such as grading and

building construction, for example, could generate airborne particulate. Dust control measures such as regular watering, sprinkling, and the installation of dust screens will be implemented to minimize the potential impact from wind-blown emissions. In addition, to minimize noise from the construction activities and equipment, the developer will limit construction to normal daylight working hours and adhere to the State Department of Health's noise regulations.

2. **Topography and Soils**

Existing Conditions:

The subject property slopes to the west from Wainee Street. The elevations range from 6 feet AMSL at Front Street to 16 feet AMSL at Wainee Street. There are no significant topographic constraints within the subject property.

The soil type specific to the subject property are Pulehu silt loam, 0 to 3 percent slopes (PpA) and Ewa silty clay loam, 0 to 3 percent slopes (EaA). PpA and EaA soils consist of well-drained soils in basins and on alluvial fans. These soils developed in alluvium derived from basic igneous rock. Permeability is moderate, while runoff is slow to very slow and the erosion hazard is slight.

Potential Impacts and Mitigation Measures:

The soils are conducive to the proposed project and will not result in a significant obstacles.

3. **Flood and Tsunami Hazard**

Existing Conditions:

The majority of the property is designated Zone "C" with a very small portion designated Zone "A4", along Front Street (Flood Insurance Rate

Map No. 150003 161 C). Zone "C" defines areas of minimal flooding, and Zone "A4" defines an area of 100 year flood and with a base flood elevation determined to be seven feet MSL for the subject property (See Figure No. 5).

Potential Impacts and Mitigation Measures:

The proposed project should not be affected by or have adverse impacts upon its neighbors or downstream properties with regards to flood hazard potential. (See Section VI.D.4. Drainage for a discussion of stormwater runoff as well as Appendix A.)

4. Flora and Fauna

Existing Conditions:

The subject property was previously used for agriculture. The property was recently cleared and is mostly covered with weeds, grasses and shrubs. There are no rare, endangered or threatened species of plant at the site.

Animal life in the project vicinity similarly reflects the urban character of the region. Avifauna typically found Lahaina Town includes the common myna, several species of dove, cardinal, house finch, and house sparrow. Mammals common to this area include cats, dogs, rodents, and mongoose.

Potential Impacts and Mitigation Measures:

There are no known significant habitats of rare, endangered or threatened species of flora and fauna located on the subject property. The proposed project will have no significant impact upon the flora and fauna found on the subject property or in the immediate vicinity.

5. Air Quality

Existing Conditions:

Air quality in the Lahaina region is considered relatively good. Point sources (Pioneer Sugar Mill) and non-point sources (automobile) of emissions are not significant to generate high concentration of pollutants. The relatively high quality of air can also be attributed to the region's exposure to wind, which quickly disperses concentrations of emissions. West Maui is currently in attainment of all criteria pollutants established by the Clean Air Act, as well as the State of Hawai'i Air Quality Standards. This means that ambient air in West Maui, is in compliance with the State and Federal air quality standards (DOH pers. com.).

Potential Impacts and Mitigation Measures:

Air quality impacts attributed to the proposed project could include dust generated by the short-term, construction-related activities. Site work such as grading and building construction, for example, could generate airborne particulate. Dust control measures such as regular watering, sprinkling, and the installation of dust screens will be implemented to minimize the potential impact from wind-blown emissions.

The increase in the number of residents may result in a slight increase in the volume of traffic in the region. However, this increase is not considered significant when compared to the overall amount of vehicles in Lahaina Town. Also, given the project's proximity to employment areas, it is envisioned that residents will walk or bicycle to work, thus reducing vehicle dependency and potential air quality impacts. As such, proposed project is not anticipated to be detrimental to local air quality.

6. **Noise Characteristics**

Existing Conditions:

Traffic noise from Front Street and Honoapiilani Highway are the predominant source of background noise in the vicinity of the subject property.

Potential Impacts and Mitigation Measures:

In the short-term, the proposed project could generate some adverse impacts during construction. Noise from heavy construction equipment, such as bulldozers, front-end loaders, and material-carrying trucks and trailers, would be the dominant source of noise during the construction period. To minimize construction related impact to the surrounding neighbors, the developer will limit construction activities to normal daylight working hours, and adhere to the State Department of Health's noise regulations for construction equipment.

In the long-term, the project, once completed, is not expected to have any adverse impact upon the existing noise conditions in the Lahaina region.

7. **Visual Resources/Urban Design**

Existing Conditions:

The subject property is located on the northern fringe of Historic Lahaina Town area. The site is not a part of any scenic resource or unique scenic corridor.

The project site is visible from both Front Street and Honoapiilani Highway, the two most significant public roadways in the area. While not in the direct line of sight to the ocean or mountains, the site represents a potentially significant visual feature within the northern area of Lahaina Town. At present the site is vacant. In the past the site

has been a blight in the area due to unauthorized rubbish dumping and illegal squatting by homeless individuals.

Potential Impacts and Mitigation Measures:

The project's site plan incorporates a mixture of one and two story buildings as well as landscape features including shade trees and large front yard setbacks in order to soften the appearance form adjacent streets. Building heights will not impede view corridors to the ocean or mountains from public roadways. The proposed project's unified design and landscape amenities should improve the visual character of the immediate area. On September 7, 1999, the Maui County Urban Design Review Board voted unanimously to recommend approval of the project to the Maui Planning Commission as part of the project's Special Management Area permit review process.

8. Archaeological/Historical Resources

Existing Conditions:

Lahaina Town is registered in the National and State Registers of Historic Places.

Lahaina was a significant place in the Hawaiian Kingdom, serving as its capital during the first half of the nineteenth century. The subject property is located in close proximity to the Seamen's Hospital.

The subject property has been previously cleared and graded for use as plantation sugar cane fields. It is unlikely that any significant historic or cultural remains exist at the subject property.

In April 1994, Berdena Burgett, BA and Robert L. Spear, Ph.D. conducted an Archaeological Inventory Survey of the subject property. The survey

consisted of twenty-two 5.0 by 1.0 meter (m) stratigraphic trenches, with an average depth of 1.6 m, which were excavated by backhoe. The surface had been recently bulldozed leaving berms and push piles. The survey was conducted on all parcels except for parcel 14, which at the time was in use as a preschool. Until the recent development of the preschool, this parcel had been used for sugar cane cultivation, as was the surrounding parcels.

Although the 22 trenches displayed similar statigraphic character, the layers in a number of trenches showed areas of deep subsurface disturbance. Significant cultural remains were identified in only one trench. Human skeletal remains were located during the excavation of ST-17. The associated glass beads artifact indicates that the burial occurred during the historic period. In a letter dated November 30, 1994, the landowner's representative was notified of the Maui/Lana`i Island Burial Council's decision to preserve in place the unmarked burial site. The approximate location of the burial is shown on Figures 3 and 8.

Potential Impacts and Mitigation Measures:

The archaeological inventory report which was accepted by SHPD, included a recommendation that a qualified archaeologist remain on-call during construction activities. The archaeological consultant will prepare a monitoring plan for review and acceptance by SHPD consistent with this accepted recommendation, prior to initiating ground disturbance activities. A revised burial treatment plan will be submitted to the Maui/Lana`i Island Burial Council for review and approval. With the incorporation of the archaeological monitoring plan as well as preservation of the burial site in situ, the project should have no significant impacts to historic or cultural resources. If any unanticipated

remains are encountered, work in the immediate area must cease and the office of State Historic Preservation Division notified at 243-5169.

B. SOCIO-ECONOMIC ENVIRONMENT

1. Population

Population growth on Maui over the last decade (1980 to 1990) has been exceptionally high, and has outpaced the County's ability to provide adequate infrastructure and housing for this added number of people. Overall, population growth for the County of Maui during 1980 to 1990 was 41.57 percent. Broken down into smaller segments, the subject Lahaina region reflected a rate of 41.72 percent over the same 10-year period. With this growth in population came a surge in real estate prices in the late 1980's. This increase, driven primarily by foreign and domestic investment and speculation, put the price of homes in Maui County well above the reach of many local residents, and affordable housing has become major concern to everyone.

The proposed project will provide housing opportunities in close proximity to existing centers of employment. It is intended to satisfy existing market needs and will not necessarily lead to a direct increase in regional population. Within the West Maui region, the project may result in a slight redistribution of population to the Lahaina town area. This is seen as a positive impact in that residents will live closer to places of employment as well as other services such as medical, shopping, and professional offices.

2. Economy

Existing Conditions:

The Lahaina economy is based primarily upon the visitor industry. Visitor accommodations are located near the shoreline along with necessary support facilities and residential communities. Kapalua and

Kaanapali have developed into important visitor destination anchors while the old Lahaina Town, with its historic character and charm, has developed into the region's visitor, service, commercial and residential center. Agriculture is also an important part of Lahaina's economy. Sugar cane and pineapple fields are found in the Lahaina district, and the historic Pioneer Mill on Lahainaluna Road continues to process cane.

Potential Impacts and Mitigation Measures:

On a short-term basis, the project will support construction and construction-related employment.

On a long-term basis, the proposed project will not have a significant direct impact on the economy. The provision of affordable housing in close proximity to places of employment will have positive secondary impacts on businesses in the area, primarily those on Front Street.

C. PUBLIC SERVICES

1. Recreational Facilities

Existing Conditions:

Lahaina has a wide reputation as a recreational destination, particularly for ocean related activities. Ocean sports and recreation available in the Lahaina District include swimming, fishing, surfing, scuba diving, snorkeling, sailing, and para-sailing. State and County beach parks in the Lahaina District include the Honolua-Mokuleia Marine Life Conservation District, the D. T. Fleming Park, Honokowai Beach Park, Wahikuli State Wayside, Kamehameha Iki Park, Puamana Beach Park, Launiupoko St. Wayside, Ukumehame Beach Park, and Papalaua State

Wayside. Other important non-ocean parks are Lahaina Recreational Center, which is currently being expanded, and Malu`ulu `O Lele Park.

Potential Impacts and Mitigation Measures:

Three recreational areas, including two "tot lots" will be included on site in order to satisfy the neighborhood park needs of the project residents. These three areas amount to approximately 44,000 sq. ft., or slightly over one acre, of dedicated recreational space. The County of Maui's is currently addressing community and regional recreational needs through the expansion of the Lahaina Recreational Center. This expansion should be completed within the buildout phase of the subject project. Thus, neighborhood and community park facilities should be adequate to handle the expected increase in residents from the project.

With regards to long term recreational space needs in the area in light of future development potential, we note that the West Maui Community Plan has designated a six acre park on lands to the immediate north of the project site. This park land will be improved when the adjacent parcel is developed and should address the cumulative park needs created by future growth in the immediate area. In addition, it is noted that Maui County has a Park Dedication Ordinance. As future projects in the area are built out, this ordinance requires developers to provide dedicated park space or to pay an in-lieu park assessment fee. The fees are used to upgrade and expand park facilities in the area in which a project is located. Recently the ordinance was amended by doubling the per unit park assessment requirement. In summary, long term recreational needs in the immediate area have been or will be addressed through park land designation in the West Maui Community Plan and through the County's Park Dedication requirements.

2. Police and Fire Protection

Existing Conditions:

The Lahaina District Station of the Maui County Police Department has provided police protection for Lahaina District since 1974. The station is located behind the Lahaina Civic Center in Wahikuli. Police protection in the Front Street commercial area is supplemented by the Front Street "Koban" (substation) which is the base for Lahaina's three police bicycle patrol officers.

Fire protection in the Lahaina District is provided by the Maui County Fire Department's Lahaina Station. The Lahaina Fire Station, built in 1972, is staffed by 30 firefighters. There are three shifts with ten men on each shift. The station has two fire trucks.

Potential Impacts and Mitigation Measures:

The proposed project will not have a significant impact on public services, since it is well within the existing service area for police and fire protection.

3. Solid Waste

Existing Conditions:

Only two landfills are currently operating on Maui, the Central Maui Landfill in Puunene, and the Hana landfill. Single-family residential solid waste collection is provided by the County and taken to the Central Maui Landfill, which also accepts waste from private refuse collection companies. A convenience station is located in Olowalu to service West Maui residents. Solid wastes are transported from this convenience station to the Central Maui Landfill.

Potential Impacts and Mitigation Measures:

Solid Waste collection for the subject property will be provided by a private collection company. During construction, a job-site recycling plan in order to reuse the amount of construction waste generated by the project. Smith Development, the Maui based project manager for this project, has been at the forefront of implementing tremendously successful job-site recycling programs in previous Maui projects. In addition, spaces will be provided for recycling and waste diversion opportunities during occupancy.

4. Schools

Existing Conditions:

The Lahaina District is serviced by both private and public schools, which provide education for preschool through high school age children. Public schools in the Lahaina District include the King Kamehameha III Elementary School for children from kindergarten through fifth grade, Princess Nahienaena Elementary School for children from preschool through fifth grade, the Lahaina Intermediate School for grades six through eight, and Lahainaluna High School for grades nine through twelve. Private schools in the Lahaina District include Sacred Hearts School for grades kindergarten through eight and several preschools.

D. INFRASTRUCTURE

1. Roadways

A traffic impact analysis was prepared for the project by The Traffic Management Consultant and is included in this report as Appendix B. The following includes excerpts and summaries of the report's conclusions.

Honoapiilani Highway is the primary arterial highway for West Maui. In the vicinity of the project, Honoapiilani Highway is a four-lane highway with traffic signals at major intersections. Honoapiilani Highway is unsignalized at its intersection with Kenui Street. Only right-turn-in and right-turn-out movements are permitted at the intersection.

Kenui Street is a two-way, two-lane, local road between Honoapiilani Highway and Front Street. Kenui Street is unimproved, i.e., without curbs gutters and sidewalks. Kenui Street is stop-controlled at Honoapiilani Highway and at Front Street. Kai Pali Place also intersects Front Street, opposite Kenui Street and offset to the north.

Wainee Street is a collector street within Lahaina Town. In the vicinity of the project, Wainee Street is an unimproved, two-lane, two-way roadway. Wainee Street is stop-controlled at Kenui Street. Because of the restricted access at the intersection of Kenui Street and Honoapiilani Highway, traffic from the south of Lahaina must turn onto Kenui Street from Wainee Street, via Papalaua Street.

Front Street is a two-way, two-lane major collector street, which extends the entire length of Lahaina Town. On street parking is permitted on the west (makai) side of Front Street, north of Kenui Street/Kai Pali Place. Due to the restricted traffic movements at Honoapiilani Highway, northbound traffic from Kenui Street must turn north onto Front Street and access Honoapiilani Highway through the Lahaina Cannery Mall or via Kapunakea Street.

The traffic report noted the following existing deficiencies:

a. The adjoining halves of Kenui Street, Wainee Street, and Front Street should be upgraded to County standards, which would include curbs, gutters and sidewalks.

b. Kenui Street should be realigned to intersect Front Street, opposite Kai Pali Place. This would impact the Wainee Village property to the north.

c. A clear sight triangle on the southwest corner of Front Street and Kenui Street/Kai Pali Place should be maintained.

In order to correct the existing conditions related to the realignment of Kenui and Kai Pali Place, the Wainee village property to the North would be affected.

The AM peak hour of traffic in the vicinity of the project occurs between 7:15 AM and 8:15 AM. The PM peak hour of traffic occurs between 4:00 PM and 5:00 PM. All intersections within the study area operate at satisfactory Levels of Service, i.e., LOS "B" or better, during both the existing AM and PM peak hour traffic and results of the capacity analysis, respectively.

The proposed Front Street Apartments are expected to generate a total of 73 vehicles per hour (vph) during the AM peak hour of traffic, 15 vph entering the site and 58 vph exiting the site. During the PM peak hour of traffic, the proposed project is expected to generate a total of 89 vph, 59 vph entering the site and 30 vph exiting the site.

Potential Impacts and Mitigation Measures:
The results of the capacity analysis indicate that all the intersections within the study area will continue to operate at satisfactory Levels of Service, i.e., LOS "C" or better, during both the AM and PM peak hours of traffic. The left turn movement from southbound Front Street meets the minimum volume warrant for an exclusive left turn lane, however the need for the lane is marginal.

The report concluded that Kenui Street would operate at satisfactory Levels of Service under existing conditions and is expected to continue

to operate satisfactory under future conditions with and without the proposed project. The proposed left turn lane would require the upgrade of Front Street, associated with the future Wainee Village as well as along the proposed project frontage. These upgrades would correct the existing deficiencies related to the realignment of Kenui and Kai Pali Place and are proposed to be implemented during the development of Wainee Village. The proposed Front Street Apartments are not expected to significantly impact Kenui Street and its intersections.

Project related improvements will include right of way widening and improvements for the adjoining halves of Front Street, Kenui Street and Wainee Street. Ultimate right of way widths and specific improvement requirements will be determined in conjunction with the Department of Public Works and Waste Management (DPWWM). At a minimum the improvements will include pavement widening, curbs, gutters and sidewalks. These improvements will be implemented at the time of project development.

2. Wastewater

Existing Conditions:

Wastewater disposal from the area is provided by the 8" gravity sewer main on Kenui Street. The 8" sewer discharges into the existing sewerline on Front Street. The wastewater will then be transmitted to the Lahaina Wastewater Reclamation Plant, about 3 1/2 miles away, by a series of force main and gravity sewerlines. The sewer system serving the area is part of the Lahaina Sewerage System.

Potential Impacts and Mitigation Measures:

The estimated average wastewater flow generated by the proposed project is 42,000 gallons per day (gpd) based on Wastewater Reclamation Division's criteria of 300 gpd per unit. The proposed on-site system will consist mainly of 8" PVC sewer pipes that will be connected to the

existing 8" gravity sewer on Kenui Street. According to County personnel, the existing capacity of the Lahaina Wastewater Reclamation Facility is adequate to meet the needs of this project

3. **Water**

Existing Conditions:

The Lahaina Town's water sources are the Kahana Stream and a water well near Lahainaluna School. This system is reinforced by the Alaeloa Source with a 16-inch transmission line along Lower Honoapiilani Road and Honoapiilani Highway to Lahaina Town.

Water for the area is currently provided by an 8" water main on Wainee Street and Kenui Street and a 12" water main on Front Street.

Potential Impacts and Mitigation Measures:

According to the Department of Water Supply (DWS) standards, the average daily demand for a multi-family low rise residential development is 560 gallons per day. Thus, at 142 units, the average daily demand for the proposed project is approximately 80,000 gallons per day or about 60 gallons per minute. According to DWS standards, fire flow for a town house development is 1,500 gallons per minute.

The proposed subdivision will be serviced by a network of 8" pipes. The new system will be connected to the existing waterline on Front Street and Wainee Street for fire protection and connected to existing waterline on Kenui Street for domestic demand. Based on comments from the Department of Water supply the waterlines on Kenui Street will be connected down to Front Street. Fire hydrants along Kenui Street will be installed at spacing no less than 250 feet apart. Fire hydrants on-site will be spaced at no more than 150 feet from any building. Currently there are no restrictions on water use in the

Lahaina area and the proposed project should not have a significant negative impact on the County's water system.

4. **Drainage**

Existing Conditions:

The present on-site drainage condition is characterized by surface waters sheet flowing across the project site in a westerly direction onto Front Street. The existing runoff expected to be generated by the project site is about 7.6 cfs and 9.6 cfs for 10-year and 50-year storms, respectively.

The proposed development site will be affected by off-site drainage runoff generated by a portion of Wainee, Kenui and Front Street, fronting the project site.

There is no drainage system within the road right-of-way fronting the project site.

Potential Impacts and Mitigation Measures:

Future drainage improvements include the installation of catch basins and piping of storm drain runoff generated within the paved roadway areas to the detention chamber within the site.

The proposed design concept for the drainage system is illustrated on Figure 6 within Appendix A. The main feature of the design concept is the installation of retention chambers to contain the runoff generated by the development, thus attaining a zero runoff increase to Front Street. The following is a comparison between existing and new conditions of the 10-year storm runoff to Front Street.

Existing Condition	= 9.6 cfs
Developed Conditions	= 1.8 cfs
Reduction	= 7.8 cfs

Other features of the proposed drainage system are the installation of catch basins and drain manholes within the proposed roadways. Runoff collected by these structures will then be conveyed to the drainage chamber via underground culverts.

5. **Electrical and Telephone Systems**

Existing Conditions:

Electrical, Telephone and CATV services to the project will be tapped off from the existing overhead utility lines on Front Street, Kenui Street and Wainee Street. The on-site utility services will be installed underground and in accordance with the requirements of the respective utility companies.

VII. RELATIONSHIP TO GOVERNMENTAL PLANS, POLICIES, AND CONTROLS

A. STATE LAND USE DISTRICT

The Hawaii Land Use Law, Chapter 205, Hawaii Revised Statutes, establishes four major land use districts in which all lands in the State are placed. These districts are designated "Urban", "Rural", "Agricultural", and "Conservation". The Subject Property is located within the State "Urban" District. The proposed improvements are considered a permitted use within the "Urban" District.

B. MAUI COUNTY GENERAL PLAN

The General Plan of the County of Maui (1990), updated in 1991, provides long term goals, objectives, and policies directed toward the betterment of living conditions in the County. Addressed are social, environmental, and economic issues that influence future growth in Maui County. The proposed use of the subject property is consistent with the following General Plan objective and policies:

Objectives: To see that all developments are well designed and are in harmony with their surroundings.

Policies:

- Require that appropriate principles of urban design be observed in the planning of all new developments.

Objectives: To use the lands within the County for social and economic benefit of all the County's residents.

Policies:

- Encourage land use methods that will provide a continuous balanced inventory of housing types in all price ranges.
- Encourage land use patterns that foster a pedestrian oriented environment to include such amenities as bike paths, linear parks, landscaped buffer areas, and mini-parks.

Objectives: To provide a choice of attractive, sanitary and affordable homes for all residents.

Policies:

- Encourage the construction of housing in a variety of price ranges and geographic locations.

Objectives: To encourage development which reflects the character and culture of Maui county's people.

C. WEST MAUI COMMUNITY PLAN

The subject parcel is located in the West Maui Community Plan region which is one of nine Community Plan regions established in the County of Maui. Planning for each region is guided by the respective Community Plans, which are designed to implement the Maui County General Plan. Each Community Plan contains recommendations and standards which guide the sequencing, patterns and characteristics of future development in the region.

The proposed project site is designated "Multi-Family" and "Business Multi-Family" by the West Maui Community Plan Land Use Map. The proposed project is consistent with these land use map designations.

Approval of the proposed request would be consistent with the West Maui Community Plan by addressing the following objectives:

Goal: An attractive, well-planned community with a mixture of compatible land uses in appropriate areas to accommodate the future needs of the

residents and visitors in a manner that provides for the stable social and economic well-being of residents and preservation and enhancement of the region's open spaces and natural environmental resources.

Goal: A sufficient supply and choice of attractive, sanitary and affordable housing accommodations for a broad cross section of residents.

Objectives and Policies:

- Accommodate the 20-year housing needs of the region.

Goal: An attractive and functionally integrated urban environment that enhances neighborhood character, promotes quality design at the resort destinations of Kaanapali and Kapalua, defines a unified landscape planting and beautification theme along major roads and highways, watercourses, and at major public facilities, and recognizes the importance and traditions of the region.

D. MAUI COUNTY ZONING

The majority of the subject parcel, approximately 7.74 acres, is zoned A-1 Apartment. Near the center of the property there are five parcels which are zoned R-2 Residential, totaling approximately 38,629 sq.ft. or .867 acres. The processing of this application through the 201G-118, HRS, process will allow for a waiver of the R-2 zoning requirements. The proposed project meets the intent and purpose of the Apartment District and has been designed to confirm to the requirements of the A-1 Apartment District within Chapter 19.012, Maui County Code.

E. SPECIAL MANAGEMENT AREA

The subject property is located within the Special Management Area (SMA). As such, the proposed improvements will require an SMA Use Permit. Pursuant to Chapter 205A, Hawaii Revised Statutes, and the Rules and Regulations of the Planning Commission of the County of Maui, projects

located within the SMA are evaluated with respect to SMA objectives, policies and guidelines. This section addresses the project's relationship to applicable coastal zone management considerations, as set forth in Chapter 205A and the Rules and Regulations of the Planning Commission

1. Recreational Resources

Objectives: Provide coastal recreational resources accessible to the public.

Policies:

a. Improve coordination and funding of coastal recreation planning and management; and

b. Provide adequate, accessible and diverse recreational opportunities in the coastal zone management area by:

1. Protecting coastal resources uniquely suited for recreation activities that cannot be provided in other areas;

2. Requiring replacement of coastal resources having significant recreational value, including, but not limited to, surfing sites and sandy beaches, when such resources will be unavoidably damaged by development; or requiring reasonable monetary compensation to the State for recreation when replacement is not feasible or desirable;

3. Providing and managing adequate public access, consistent with conservation of natural resources, to and along shorelines with recreational value;

4. Providing an adequate supply of shoreline parks and other recreational facilities suitable for public recreation;

5. Encouraging expanding public recreational use of county, state and federally owned or controlled shoreline lands and waters having recreational value;

6. Adopting water quality standards and regulating point and non-point sources of pollution to protect and, where feasible, restore the recreational value of coastal waters; and

7. Encouraging reasonable dedication of shoreline areas with recreational value for public use as part of discretionary approvals or permits, and crediting such dedication against the requirements of Section 46-6 of the Hawaii Revised Statutes.

Response:
The subject property is separated from the ocean by Front Street and residential homes fronting the coastline and thus, will have no direct impact on the public's use of the shoreline area. In order to protect the recreational value of nearshore resources, Best Management Practices will be employed during construction activities to minimize the potential of erosion and silt movement. Due to presence of an on-site drainage collection and retention system, which will reduce run-off from the property compared to existing conditions, there will be minimal impacts to nearshore waters due to run-off or other potential sources of non-point sources of pollution.

2. Historical/Cultural Resources

Objectives: Protect, preserve and where desirable, restore those natural and man-made historic and prehistoric resources in the coastal zone management areas that are significant in Hawaiian and American history and culture.

Policies:

a. Identify and analyze significant archaeological resources;

b. Maximize information retention through preservation of remains and artifacts or salvage operation; and

c. Support state goals for protection, restoration, interpretation and display of historic resources.

Response:

As discussed earlier, an Archaeological Inventory Survey was conducted for the subject property to determine the presence or absence and the extent of archaeological remains within the project area. Archival and background research indicated that the project area was previously used for sugar cane. The inventory survey, which consisted of 22 exploratory trenches and pedestrian sweeps, did not identify any significant surface archaeological features. Although the 22 trenches displayed similar statigraphic character, the layers in a number of trenches showed areas of deep subsurface disturbance. Significant cultural remains were identified in only one trench. Human skeletal remains were located during the excavation of ST-17. The associated glass beads artifact indicates that the burial occurred during the historic period. This unmarked burial will be preserved in place and an burial treatment plan will be submitted to the Maui/Lanai Islands Burial Council for acceptance. With the incorporation of an archaeological monitoring plan which will be established with SHPD, as well as preservation of the burial site in situ, the project should have no significant impacts to historic or cultural resources.

In the unlikely event that sub-surface historic/cultural remains are encounter during construction, work will be stopped and the State Historic Preservation Office will be contacted to access the significance of the find and recommend appropriate mitigation measures, if necessary.

3. Scenic and Open Space Resources

Objectives: Protect, preserve and, where desirable, restore or improve the quality of the coastal scenic and open space resources.

Policies:

a. Identify valued scenic resources in the coastal zone management area;
b. Insure that new developments are compatible with their visual environment by designing and locating such developments to minimize the alteration of the natural land forms and existing public views to and along the shoreline;
c. Preserve, maintain and, where desirable, improve and restore shoreline open space and scenic resources; and
d. Encourage those developments which are not coastal dependent to locate in inland areas.

Response:

The site is not a part of any scenic resource or unique scenic corridor.

The project site is visible from both Front Street and Honoapiilani Highway, the two most significant public roadways in the area. While not in the direct line of sight to the ocean or mountains, the site represents a potentially significant visual feature within the northern area of Lahaina Town. At present the site is vacant. In the past the site has been a blight in the area due to unauthorized rubbish dumping and illegal squatting by homeless individuals. The project's site plan incorporates a mixture of one and two story buildings as well as landscape features including shade trees and large front yard setbacks in order to soften the appearance form adjacent streets. Building heights will not impede view corridors to the ocean or mountains from public roadways. The proposed project's unified design and landscape amenities should improve the visual character of the immediate area.

4. **Coastal Ecosystems**

Objectives: Protect valuable coastal ecosystems from disruption and minimize adverse impacts on all coastal ecosystems.

Policies:

a. Improve the technical basis for mature resource management;

b. Preserve valuable coastal ecosystems of significant biological or economic importance;

c. Minimize disruption and degradation of coastal water ecosystems by effective regulation of stream diversions, channelization and similar land and water uses, recognizing competing water needs; and

d. Promote water quantity and quality planning and management practices which reflect the tolerance of fresh water and marine ecosystems and prohibit land water uses which violate state water quality standards.

Response:

The projects impacts on coastal ecosystems should be minimal given the following points:

1) The proposed project will result in a decrease, not an increase, in surface water runoff from the property.

2) The project's proposed sub-surface retention chambers will collect runoff from the of the projects internal roadways as well as from the adjoining portions of Front Street, Kenui Street and Wainee Street. This will mitigate the potential for non-point source pollution from the roadways from entering the marine environment.

Therefore, the project will not have a significant direct impact on the region's coastal ecosystem, and with the incorporation of the appropriate measures during construction, there should be no significant adverse impacts to nearshore waters from point and non-point sources of pollution.

5. Economic Uses

Objectives: Provide public or private facilities and improvements important to the State's economy in suitable locations.

Policies:

a. Concentration in appropriate areas the location of coastal dependent development necessary to the state's economy;

b. Insure that coastal dependent development such as harbors and ports, visitor facilities, and energy-generating facilities are located, designed, and constructed to minimize adverse social, visual and environmental impacts in the coastal zone management areas; and

c. Direct the location and expansion of coastal dependent developments to areas presently designated and used for such developments and permit reasonable long-term growth at such areas, and permit coastal dependent development outside of presently designated areas when:

   1. Utilization of presently designated locations is not feasible,

   2. Adverse environmental effects are minimized, and

   3. The development is important to the State's economy.

Response:
The subject property will be developed in accordance with residential zoning and the community plan designations. The location is considered complimentary to the urban uses within West Maui, especially within the downtown Lahaina area. The project's emphasis towards meeting the housing needs for families earning less than 50% and 60% of median income will have a positive impact on West Maui's housing market for Maui residents.

6. **Coastal Hazards**

Objectives: Reduce hazard to life and property from tsunami, storm waves, stream flooding, erosion and subsidence.

Policies:

a. Develop and communicate adequate information on storm wave, tsunami, flood, erosion and subsidence hazard;

b. Control development in areas subject to storm wave, tsunami, flood, erosion and subsidence hazard;

c. Ensure that development comply with requirements of the Federal Flood Insurance Program; and

d. Prevent coastal flooding from inland projects.

Response:
The majority of the property is designated Zone "C" with a very small portion designated Zone "A4", along Front Street (Flood Insurance Rate Map No. 150003 161 C). Zone "C" defines areas of minimal flooding, and Zone "A4" defines an area of 100 year flood and with a base flood elevation determined to be seven feet MSL for the subject property (See Figure No. 5). The proposed project should not be affected by or have adverse impacts upon its neighbors or downstream properties with regards to flood hazard potential. (See Section VI.D.4. Drainage for a

discussion of stormwater runoff as well as Appendix A.). The property is not subject to threat from coastal hazards such as tsunamis or storm waves.

7. Managing Development

Objectives: Improve the development review process, communication, and public participation in the management of coastal resources and hazard.

Policies:

a. Effectively utilize and implement existing law to the maximum extent possible in managing present and future coastal zone development;

b. Facilitate timely processing of the application for development permits and resolve overlapping of conflicting permit requirements; and

c. Communicate the potential short and long-term impacts of proposed significant coastal developments early in their life-cycle and in terms understandable to the general public to facilitate public participation in the planning and review process.

Response:

The development of the subject property is being conducted in accordance with applicable State and County requirements. Opportunity for review of the proposed action is provided through the County's Special Management Area (SMA) permitting processes as well as through the environmental review process established by Chapter 343, HRS.

8. **Public Participation**

Objective: Stimulate public awareness, education and participation in coastal management.

Policies:

a. Maintain a public advisory body to identify coastal management problems and to provide policy advice and assistance to the coastal zone management program;

b. Disseminate information on coastal management issues by means of educational materials, published reports, staff contact and public workshops for persons and organizations concerned with coastal related issues, development, and government activities; and

c. Organize workshops, policy dialogues, and site specific mediations to respond to coastal issues and conflict.

Response:

The public will have ample opportunity to review and comment on the proposed project. Surrounding land owners will be notified of the scheduled public hearing dates. Public hearing dates and location maps will also be published in the Maui News. The public will be allowed to participate in the public hearing portion of the Maui Planning Commission's review process.

9. **Beach Protection**

Objectives: Protect beaches for public use and recreation.

Polices:

a. Locate new structures inland from the shoreline setback to conserve open space and to minimize loss of improvements due to erosion;

b. Prohibit construction of private erosion-protection structures seaward of the shoreline, except when they result in improved aesthetic and engineering solutions to erosion at the sites and do not interfere with existing recreational and waterline activities; and

c. Minimize the construction of public erosion-protection structures seaward of the shoreline.

Response:
The subject property is separated from the shoreline by Front Street as well as residential structures along the coastline. Accordingly, the project will not involve the construction of any structures within the shoreline area and the subject property will not have a direct physical impact upon any public beaches, due to its separation from the coastline.

10. Marine Resources

Objective: Implement the State's ocean resource management plan.

Policies:

a. Exercise an overall conservation ethic, and practice stewardship in the protection, use, and development of marine and coastal resources;

b. Assure that the use and development of marine and coastal resources are ecologically and environmentally sound and economically beneficial;

c. Coordinate the management of marine and coastal resources and activities management to improve effectiveness and efficiency;

d. Assert and articulate the interest of the state as a partner with federal agencies in the sound management of the ocean resources within the United States exclusive economic zone;

e. Promote research, study, and understanding of ocean processes, marine life, and other ocean resources in order to acquire and inventory information necessary to understand how ocean development activities relate to and impact upon the ocean and coastal resources; and

f. Encourage research and development of new, innovative technologies for exploring, using, or protecting marine and coastal resources.

Response:

The proposed project does not involve the direct use or development of marine resources. The project will have no direct impact on the region's coastal or marine resources, and with the incorporation of erosion control measures during construction as identified in this report, there should not be significant adverse impacts to nearshore waters from point and non-point sources of pollution. Therefore, the subject property will not have any significant impacts upon any coastal or marine resources.

F. ENVIRONMENTAL ASSESSMENT SIGNIFICANCE CRITERIA

A finding of no significant impact (FONSI) is anticipated and therefore an environmental impact statement will not be required for the project. This determination has been made in accordance with the following significance criteria, which are outlined in section 11-200-12 of the Department of Health's rules relating to environmental impact statements.

1. *Involves an irrevocable commitment to loss or destruction of any natural or cultural resource;*

   As documented in this report, the proposed project will not involve the loss or destruction of any natural or cultural resource.

2. *Curtails the range of beneficial uses of the environment;*

The project will provide an opportunity for families earning 50% or less of the County's median income to live in close proximity to places of employment. This is considered a positive benefit for these families. The project will not curtail the range of beneficial uses of the environment in the project vicinity.

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

The project is being developed in compliance with the state's long term environmental goals. As documented in this report, adequate mitigation measures will be implemented to minimize the potential for negative impacts to the environment.

4. *Substantially affects the economic or social welfare of the community or state;*

The proposed project will result in positive social benefits for West Maui residents by providing housing opportunities at an affordable price. Short term economic impacts will result from the increase in activity associated with the construction of the project. As documented in this report there will be no significant long term impacts to the socio-economic environment.

5. *Substantially affects public health;*

There are no special or unique aspects of the project which will have an direct impact on public health. It is envisioned that the incorporation of the tele-medicine center will present an opportunity to determine whether this technology will improve the delivery of medical care to elderly and low-income persons.

6. *Involves substantial secondary impacts, such as population changes or effects on public facilities;*

There will be a slight affect on local population levels upon buildout of the project with the addition of 142 new rental units. However, most of the units will be occupied by families who currently reside in West Maui and therefore the impacts on regional population will be minimized. As documented in this report, the project will not result in a significant impact on existing public facilities.

7. *Involves a substantial degradation of environmental quality;*

Mitigation measures will be implemented during the construction stage in order to minimize negative impacts on the environments, especially with regards to construction runoff. Also, the design of the project has incorporated measures to minimize negative environmental impacts including the incorporation of a sub-surface retention chambers. As such, there is minimal potential for degradation of environmental quality.

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

The project does not involve a commitment for larger actions on behalf of the applicant or any public agency. In terms of cumulative impacts, the project site is situated in an urban area that is substantially developed. Infrastructure and utilities which service the site are capable of accommodating the project. The traffic consultant as well as the State of Hawaii Department of Transportation have concluded that the project will not result in significant negative impacts to roadways in the area. Therefore, the project will not lead to cumulative negative impacts on the environment.

9. *Substantially affects a rare, threatened, or endangered species, or its habitat;*

There are no rare, threatened, or endangered species or habitat at the project site.

10. *Detrimentally affects air or water quality or ambient noise levels;*

As documented in this report, there is a potential for negative impacts to air or water quality and ambient noise levels related to short term construction activities. Potential noise and dust related impacts during construction are limited due to the site's relatively flat topography and the resultant minimal amount of earthwork necessary for the project. Air, noise and dust impacts will be mitigated through implementation of standard mitigation measures as identified previously in this report.

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

The majority of the property is designated Zone "C" with a very small portion designated Zone "A4", along Front Street (Flood Insurance Rate Map No. 150003 161 C). Zone "C" defines areas of minimal flooding, and Zone "A4" defines an area of 100 year flood and with a base flood elevation determined to be seven feet MSL for the subject property (See Figure No. 5). The proposed project should not be affected by or have adverse impacts upon its neighbors or downstream properties with regards to flood hazard potential. (See Section VI.D.4. Drainage for a discussion of stormwater runoff as well as Appendix A.). The property is not subject to threat from coastal hazards such as tsunamis or storm waves.

12. *Substantially affects scenic vistas and viewplanes identified in county or state plans or studies; or,*

As noted earlier, the project site is visible from both Front Street and Honoapiilani Highway, the two most significant public roadways in the area. While not in the direct line of sight to the ocean or mountains, the site represents a potentially significant visual feature within the northern area of Lahaina Town. At present the site is vacant. In the past the site has been a blight in the area due to unauthorized rubbish dumping and illegal squatting by homeless individuals. The project's site plan incorporates a mixture of one and two story buildings as well as landscape features including shade trees and large front yard setbacks in order to soften the appearance form adjacent streets. Building heights will not impede significant view corridors to the ocean or mountains from public roadways. The proposed project's unified design and landscape amenities should improve the visual character of the immediate area.

13. *Requires substantial energy consumption.*

Upon buildout of the project, energy consumption will be increased, however, given existing levels of usage in the area the increase is considered insignificant. The project will incorporate use of energy efficient fixtures and lighting as appropriate. It is envisioned that the majority of project residents will work in the Lahaina Town area and would be within walking or bicycle commuting distances. Future tenants who currently live outside of the Lahaina Town area, will experience a reduction commuting distances, and the net effect of the project should be a reduction in vehicular energy usage. However, given the existing level of vehicular energy usage in West Maui and on Maui, these changes will be inconsequential.

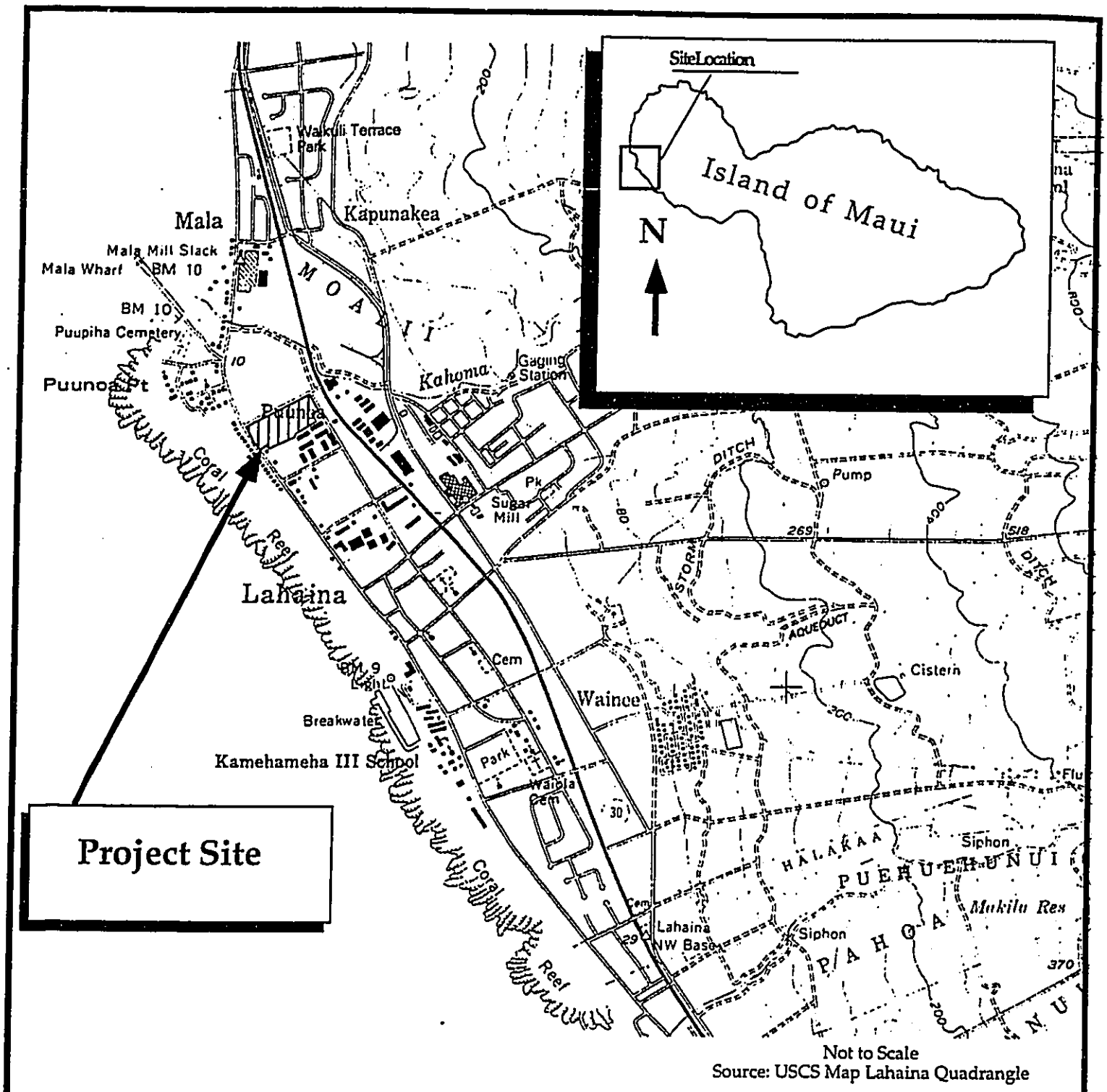
VII. CONCLUSION

In conclusion, the project is intended to address the affordable rental market needs of West Maui, which are more pronounced in Lahaina than in other areas of Maui. The project will have positive benefits for individuals and families earning 50 percent or less and 60 percent or less of the County's median income. The project has been designed to address public health and safety and appropriate mitigation measures can be implemented to reduce potential negative impacts during construction. Lastly, the project's prime location within the limits of Lahaina Town's urban core is considered a major asset with positive secondary benefits accruing to the community by lessening future residents' dependency on the automobile.

The project is in compliance with the goals and objectives of the Chapter 205A, HRS, as well as the West Maui Community Plan Land Use Map. Based on the provision of a 100 percent affordable housing component, processing and approval of this project through the provisions of Section 201G-118, HRS, is warranted.

This Environmental Assessment meets the informational requirements of Chapter 343, HRS and Chapter 200 of the of the State Department of Health's Administrative Rules, and based on the assessment contained herein, an Finding of No Significant Impact is supported.

FIGURES



Regional Location Map
Front Street Apartments
Kenui Street
Lahaina, Maui, Hawai`i
TMK 4-5-03: 13, 14, 15, 38, 39 & 40

CHRIS HART & PARTNERS

Figure No. 1

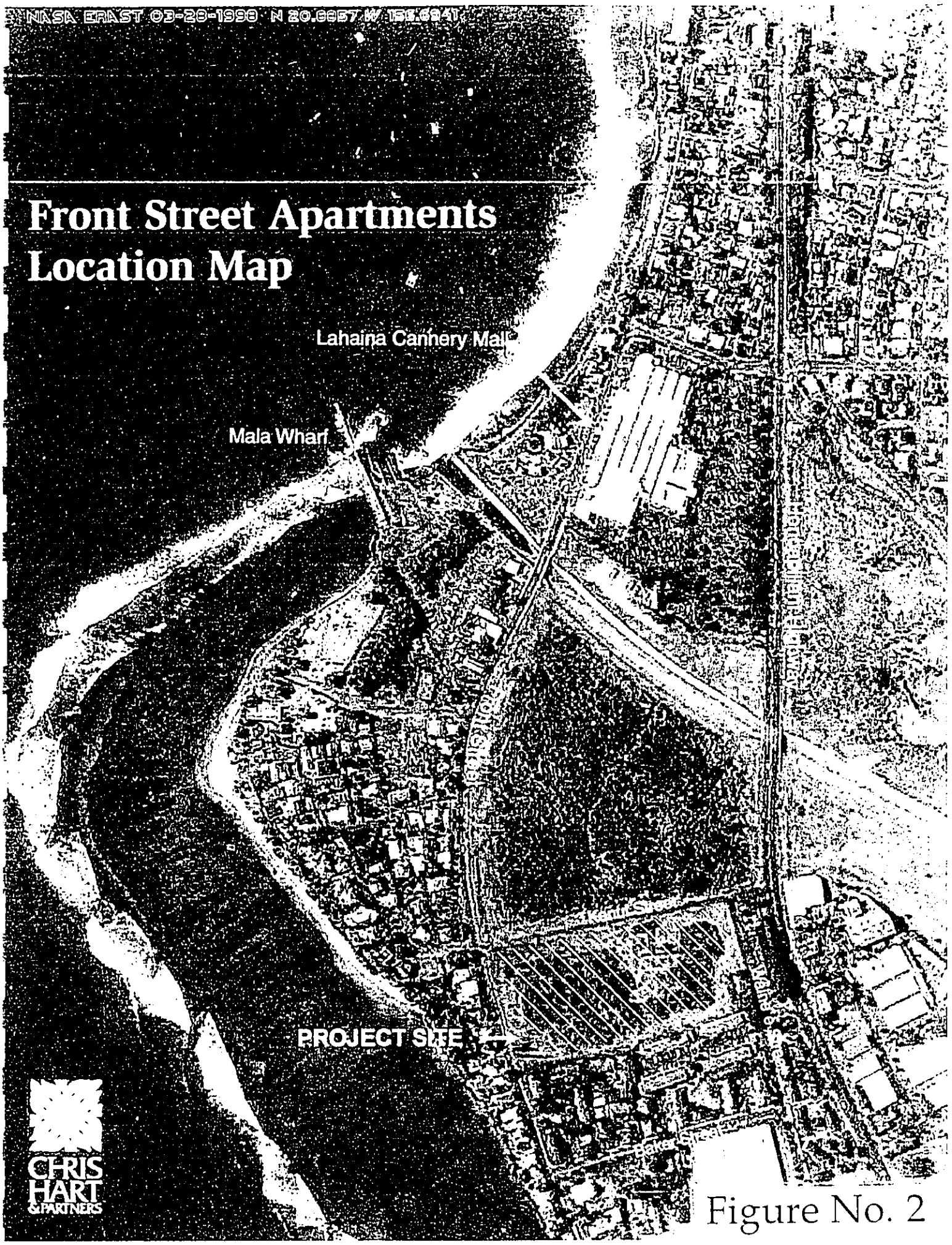
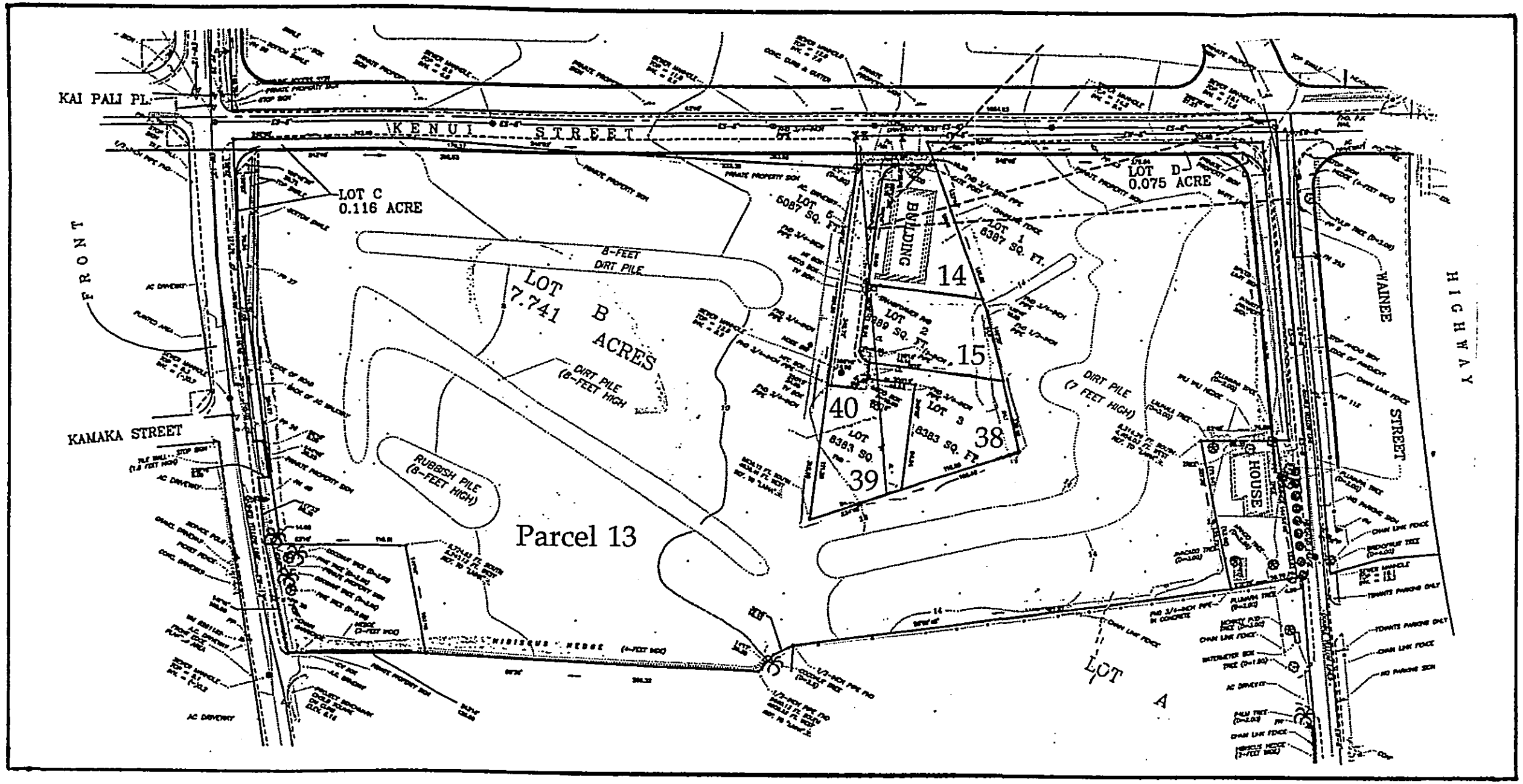

NASA ERAST 03-28-1998 N 20.8857 W 156.6941
Front Street Apartments
Location Map
Lahaina Cannery Mall
Mala Wharf
PROJECT SITE
CHRIS
HART
&PARTNERS

Figure No. 2



Topographical Survey
Front Street Apartments
Lahaina, Maui, Hawai`i

Figure No. 2a

CHRIS HART & PARTNERS

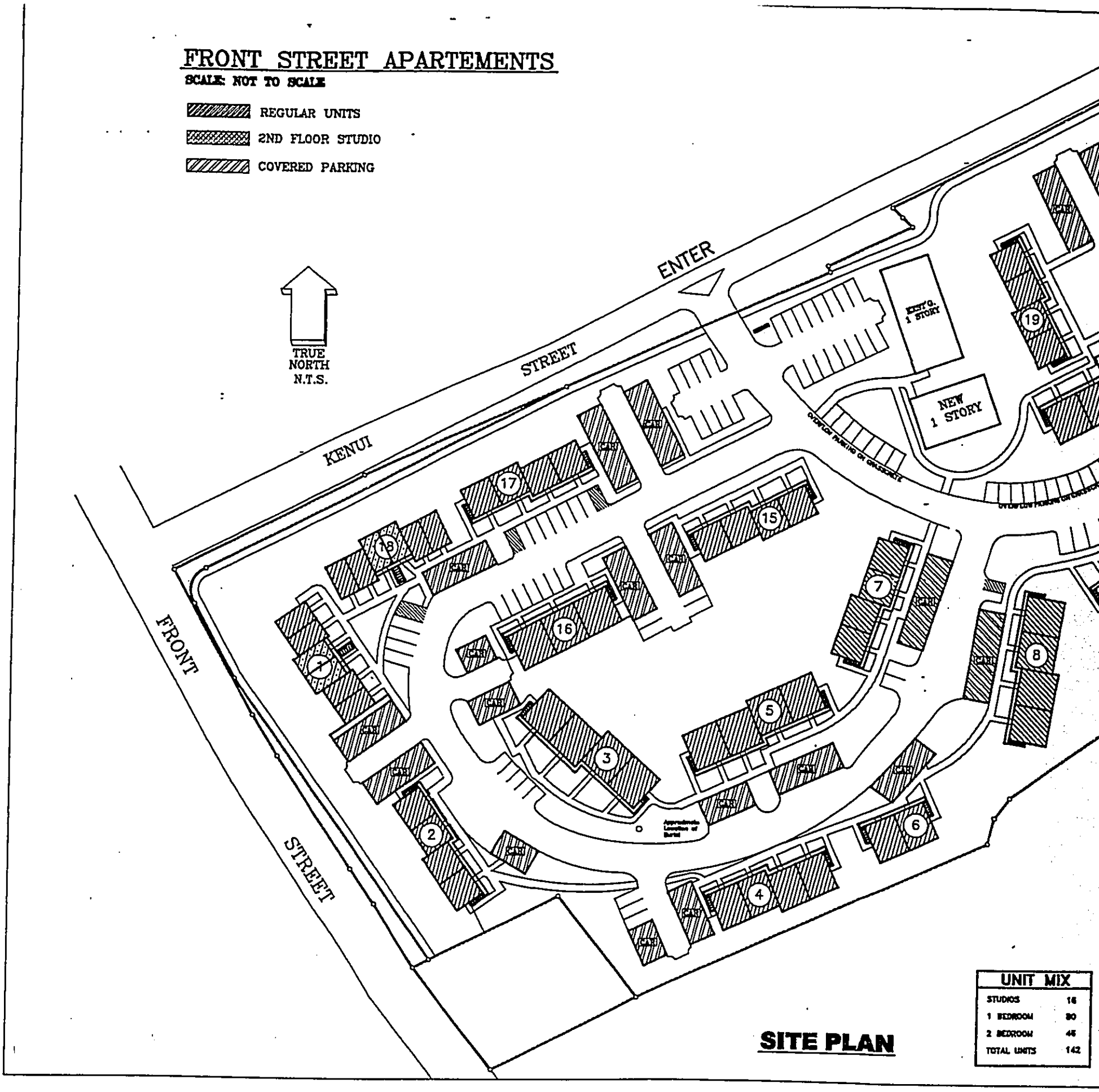
FRONT STREET APARTEMENTS

SCALE: NOT TO SCALE

REGULAR UNITS

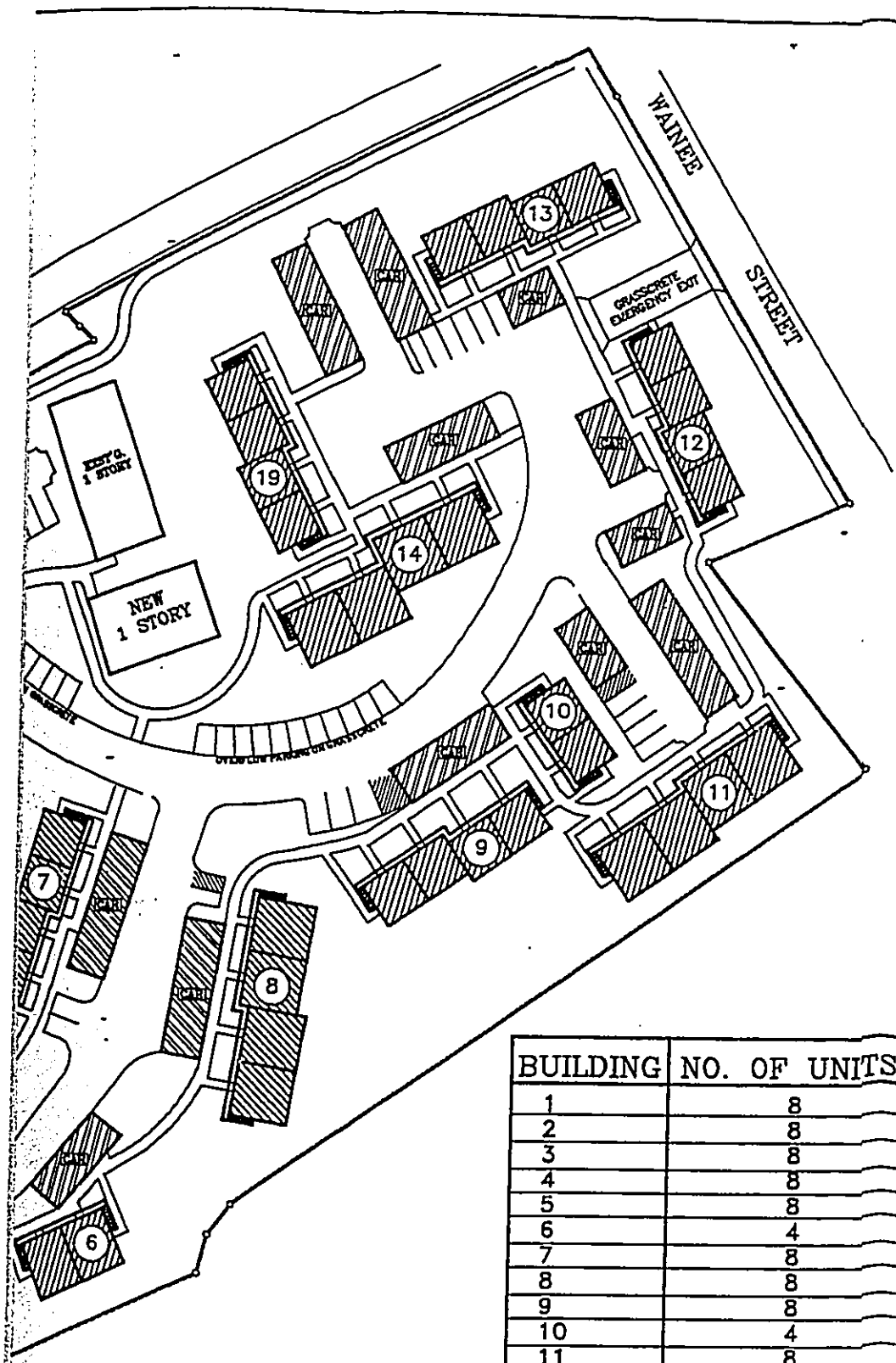
2ND FLOOR STUDIO

COVERED PARKING



SITE PLAN

UNIT MIX	
STUDIOS	16
1 BEDROOM	80
2 BEDROOM	46
TOTAL UNITS	142



FRONT STREET APARTMENTS

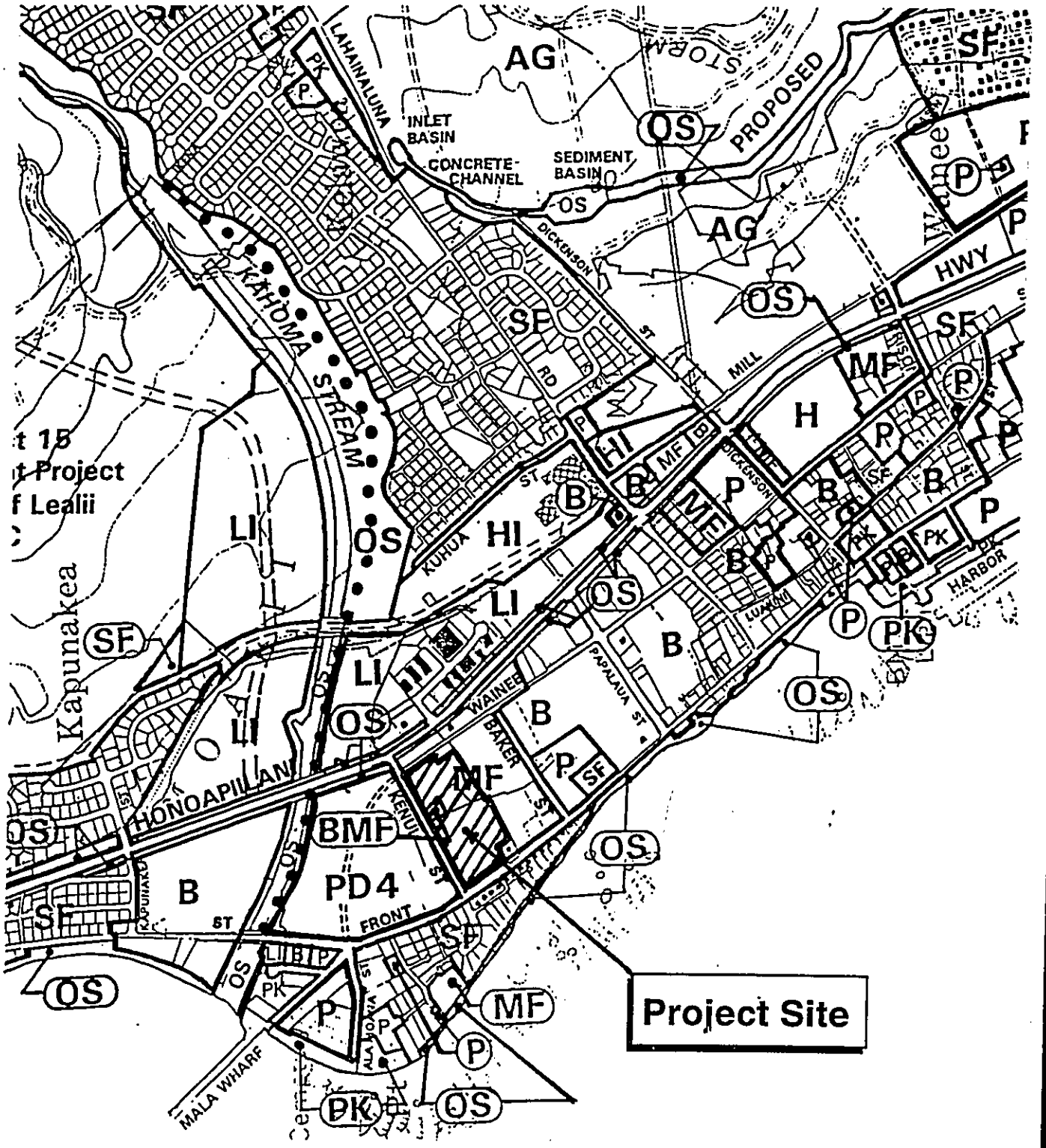
BUILDING	NO. OF UNITS	TYPE
1	8	STUDIO
2	8	1 BEDROOM
3	8	2 BEDROOM
4	8	1 BEDROOM
5	8	1 BEDROOM
6	4	1 BEDROOM
7	8	1 BEDROOM
8	8	1 BEDROOM
9	8	1 BEDROOM
10	4	1 BEDROOM
11	8	2 BEDROOM
12	8	1 BEDROOM
13	8	1 BEDROOM
14	8	2 BEDROOM
15	8	1 BEDROOM
16	6	2 BEDROOM
17	8	1 BEDROOM
18	8	STUDIO
19	8	1 BEDROOM
TOTAL	142	

AN

UNIT MIX	
STUDIOS	16
1 BEDROOM	80
2 BEDROOM	46
TOTAL UNITS	142

FIGURE NO. 3

SEPTEMBER 7, 1999



West Maui Community Plan
Front Street Apartments
Kenui Street
Lahaina, Maui, Hawai`i

Figure No. 4

CHRIS HART &PARTNERS

REVISED TO
REFLECT LOMR
DATED DEC 6 1991

APPROXIMATE SCALE
500 0 500 FEET

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

MAUI COUNTY, HAWAII

PANEL 161 OF 400
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER
150003 0161 B

EFFECTIVE DATE:
JUNE 1, 1981

federal emergency management agency
federal insurance administration

AUAU

ZONE A4

M 32

CANE HAUL ROAD

KAPUNAKEA STREET

MILL STREET

ACCESS ROAD

Wharf

ZONE V12

MALA WHARF

RM22

ALAMOANA STREET

PUUNOA STREET

Puunoa Point

KAI PALI PLACE

KENUI STREET

NEW HONOAPIILANI HIGHWAY

WAINEE STREET

BAKER STREET

ZONE A4

PROJECT SITE

REFERENCE MARK	ELEVAT IN FT. (N
RM 20	25.28
RM 21	96.1
RM 22	9.67
RM 23	22.8
RM 24	39.8

[1]National Geodetic Vertical Datu

ELEVATION REFERENCE MARKS

REFERENCE MARK	ELEVATION IN FT. (NGVD)[1]	DESCRIPTION OF LOCATION
RM 20	25.28	Square cut on top of parapet at northeast corner of Honoapiilani Highway, bridg south of golf cart overpass.
RM 21	96.1	Square cut on concrete foundation at southeast corner of railroad trestle over Hahal
RM 22	9.67	1.0 mile north of Lahaina, on east side of westbound road to Mala Wharf, on top painted 9.3 set in concrete.
RM 23	22.8	Square cut on base of parapet at northeast corner of Honoapiilani Highway, bridge
RM 24	39.8	Square cut on top of parapet at northwest end of railroad bridge over Kahoma Stre

[1]National Geodetic Vertical Datum of 1929

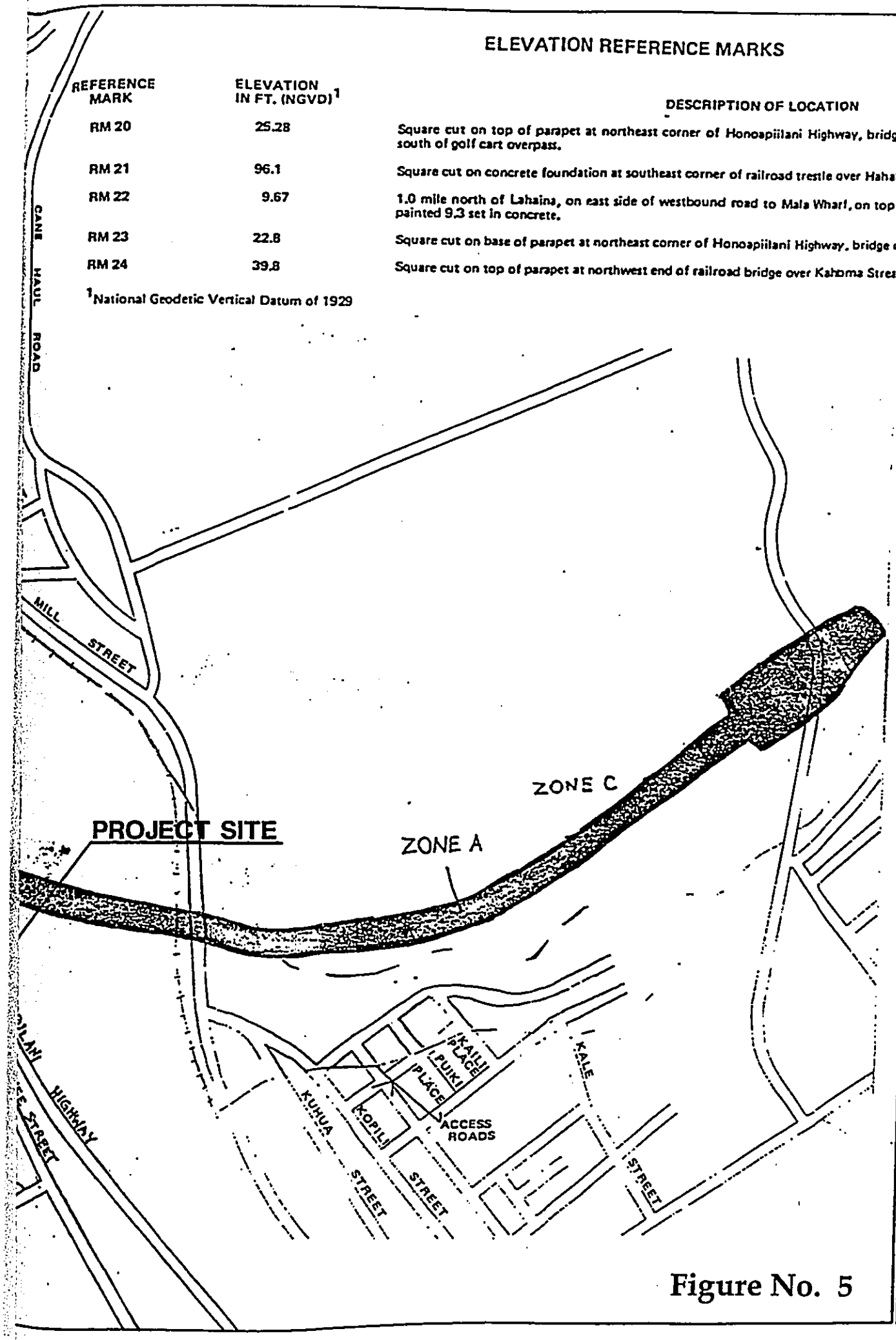


Figure No. 5

CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS

871 KOLU STREET
SUITE 201
WAILUKU, MAUI, HAWAII
PHONE No.: 242-6881

FRONT STREET APARTMENTS
AT LAHAINA, MAUI, HAWAII
TAX MAP KEY: (2) 4-5-03: 13, 14, 15, 38, 39 & 40
PREPARED FOR MILLENNIUM PACIFIC INVESTMENTS, LLC

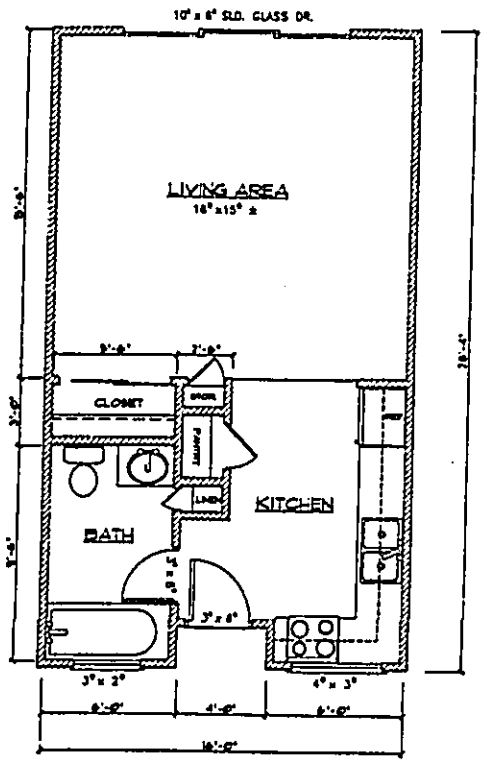
THIS WORK WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION.

DATE: _____

REVISIONS:

T.M.K.: (2)4-5-03:13
SCALE: AS NOTED
DESIGNED BY: R.T.
CHECKED BY: R.T.
DRAWN BY: M.D.
DATE: DECEMBER 1998
JOB No.: 98-78

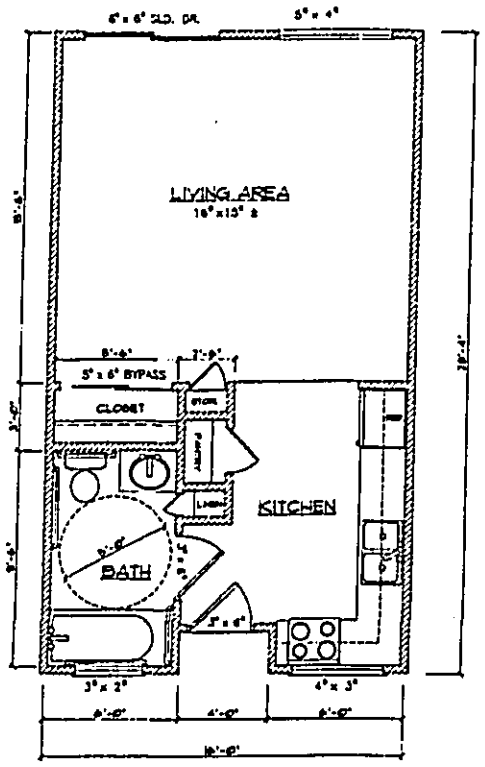
SHEET
OF _____ SHEETS



STUDIO

SCALE: 1/4" = 1'-0"

OPTION 1 = 16x28 = 448 SQ. FT.
OPTION 2 = 16x26 = 416 SQ. FT.

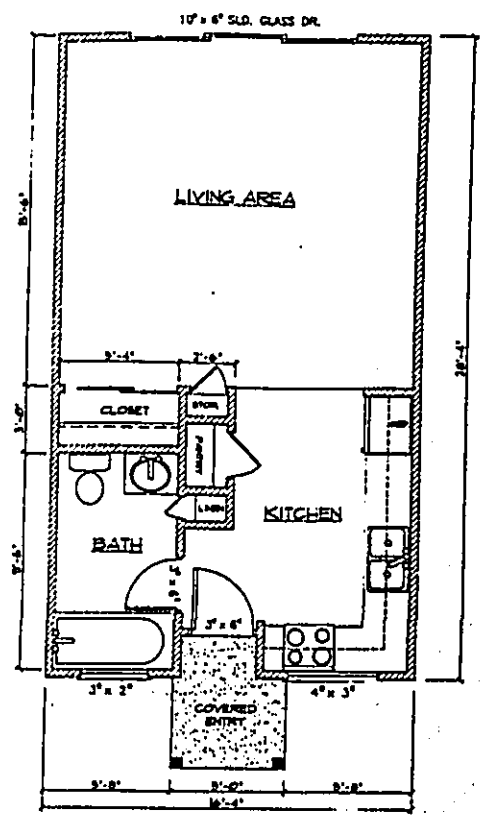


A. D. A.

STUDIO

SCALE: 1/4" = 1'-0"

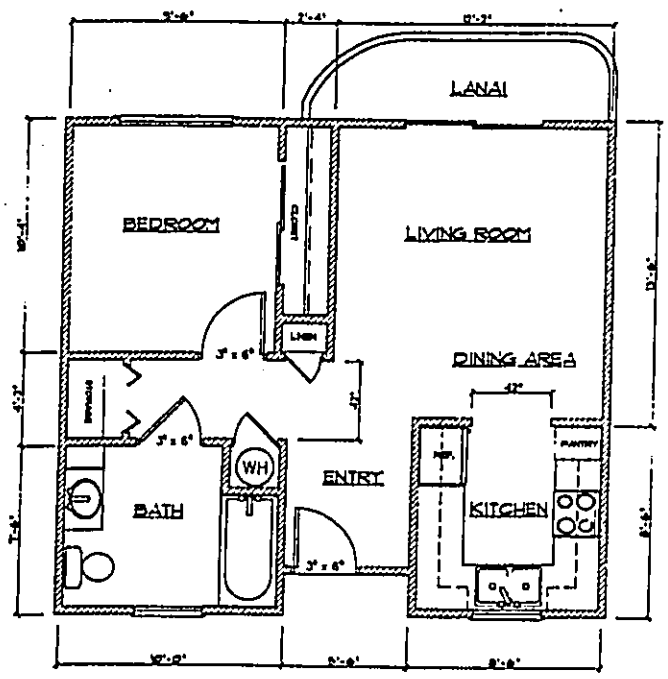
OPTION 1 = 16x28 = 448 SQ. FT.
OPTION 2 = 16x26 = 416 SQ. FT.



STUDIO (END UNITS)

SCALE: 1/4" = 1'-0"

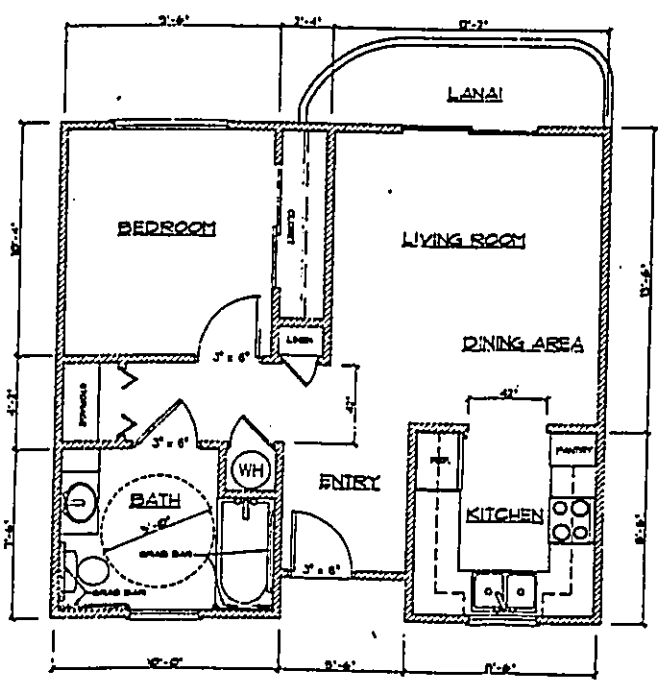
OPTION 1 = 16x28 = 448 SQ. FT.
OPTION 2 = 16x26 = 416 SQ. FT.



ONE BEDROOM

SCALE: 1/4" = 1'-0"

OPTION 1 = 514 SQ. FT.
OPTION 2 = 609 SQ. FT.

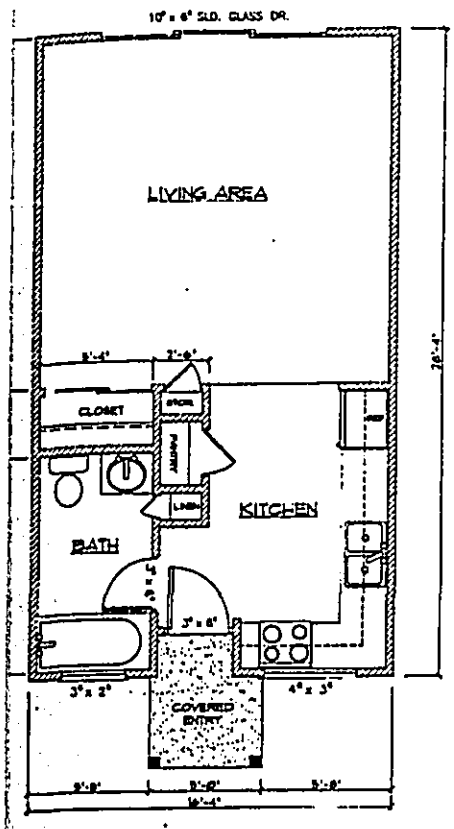


A. D. A.

ONE BEDROOM

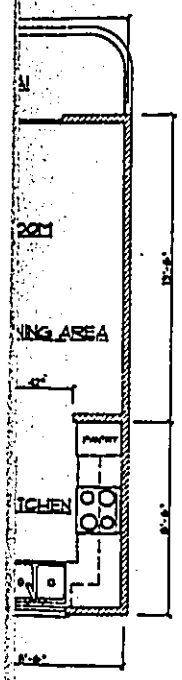
SCALE: 1/4" = 1'-0"

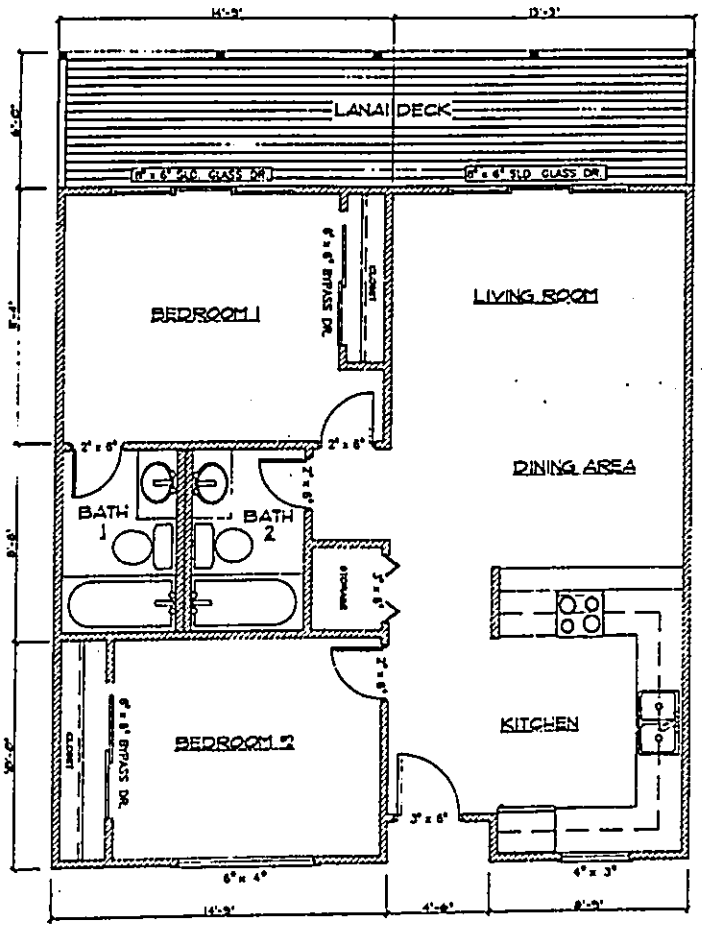
OPTION 1 = 514 SQ. FT.
OPTION 2 = 609 SQ. FT.



STUDIO (END UNITS)
SCALE: 1/4" = 1'-0"

OPTION 1 = 16x28 = 448 SQ. FT.
OPTION 2 = 16x26 = 416 SQ. FT.





TWO BEDROOM (UPSTAIRS UNIT)
SCALE: 1/4" = 1'-0"
840 SQ. FT. (+ 154 SQ. FT. LANAI)

Figure No. 6

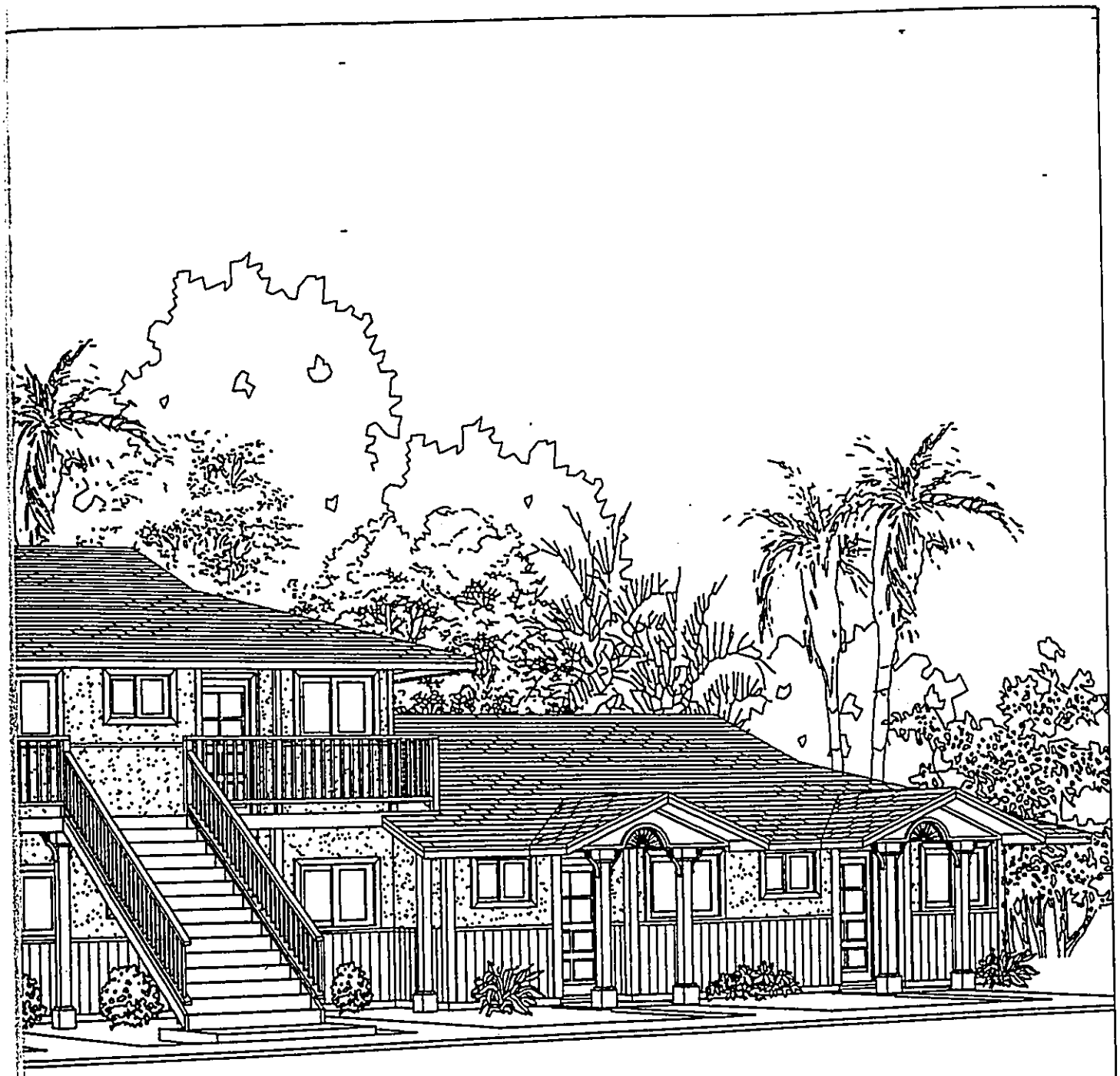
UWE H.H. SCHULZ AIA & ASSOCIATES, INC.
PLANNING, ARCHITECTURE AND DESIGN CONSULTANTS
1022 FRONT STREET, LAHAINA, MAUI, HAWAII 96761
PHONE: (808) 661-8317 / (808) 667-7149 / FAX: (808) 667-5063

FRONT STREET APARTMENTS

SCALE:
DATE: 1-26-11
DRAWN:
CHECKED:
REVISIONS:
JOB NO:

SHEET P – 2 OF

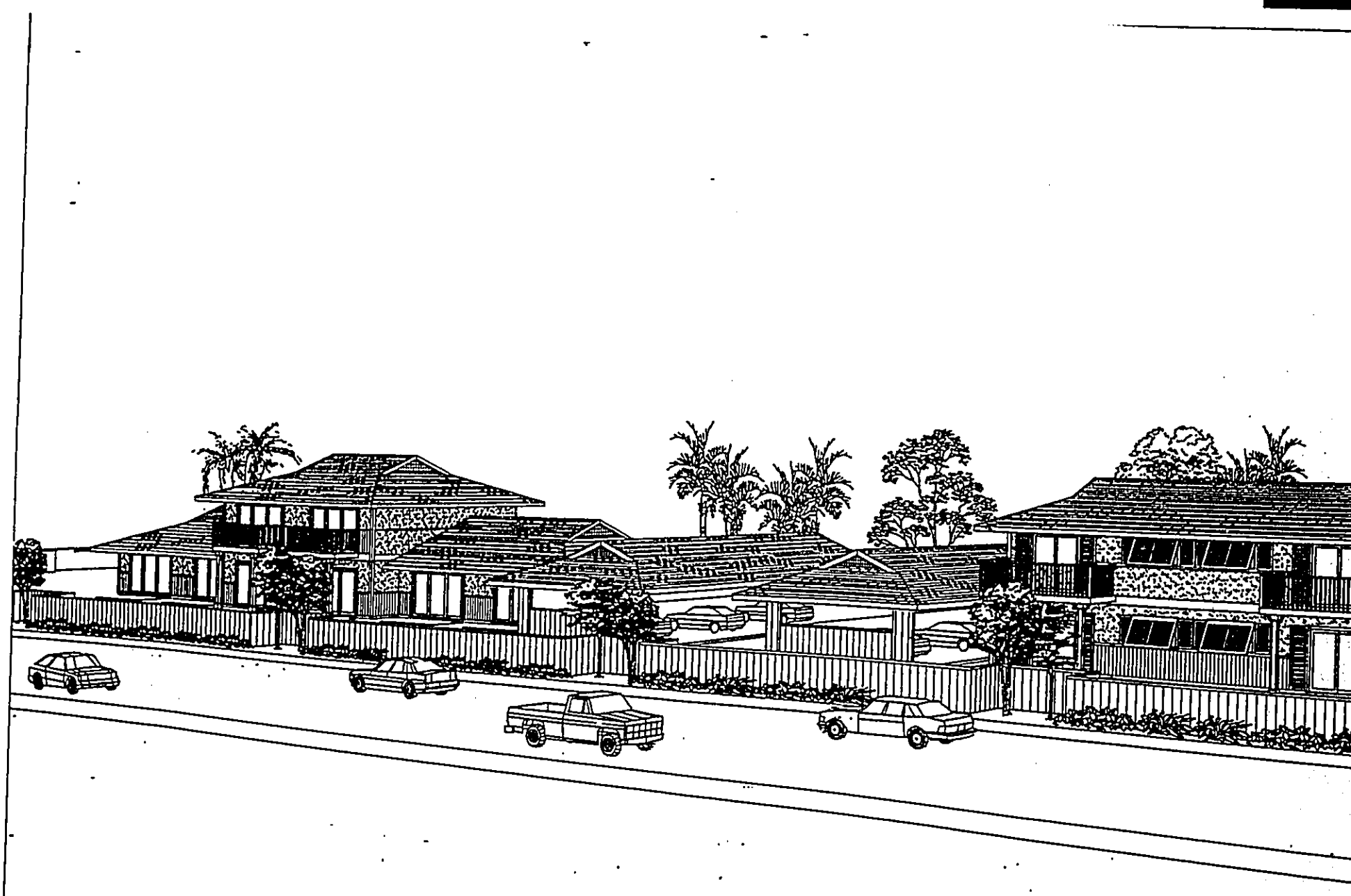
STUDIO 8 PLEX



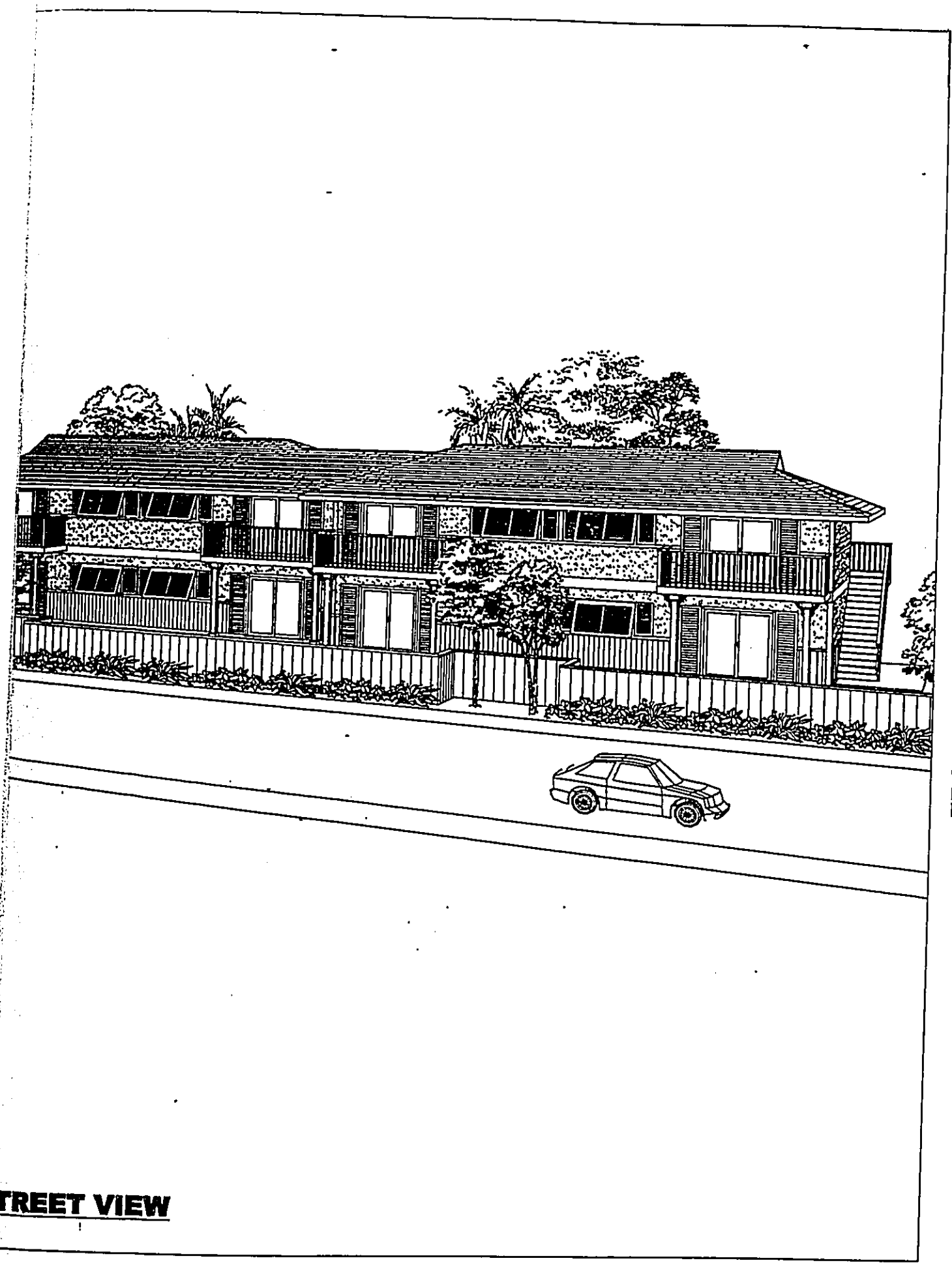
FRONT STREET APARTMENTS

O 8 PLEX

FIGURE NO. 7A
SEPTEMBER 7, 1999



FRONT STREET VIEW



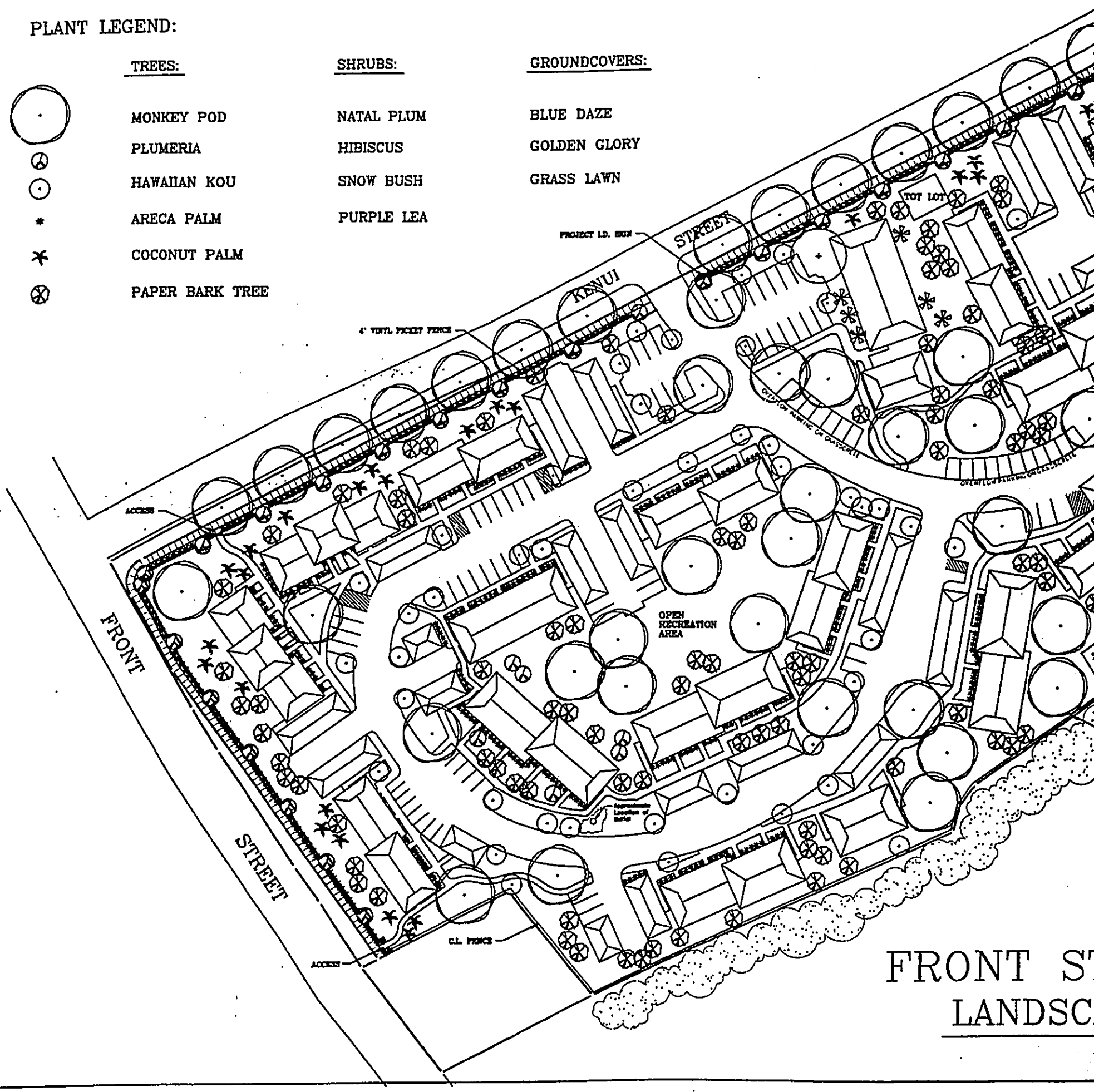
FRONT STREET APARTMENTS

STREET VIEW

FIGURE NO. 7B
SEPTEMBER 7, 1999

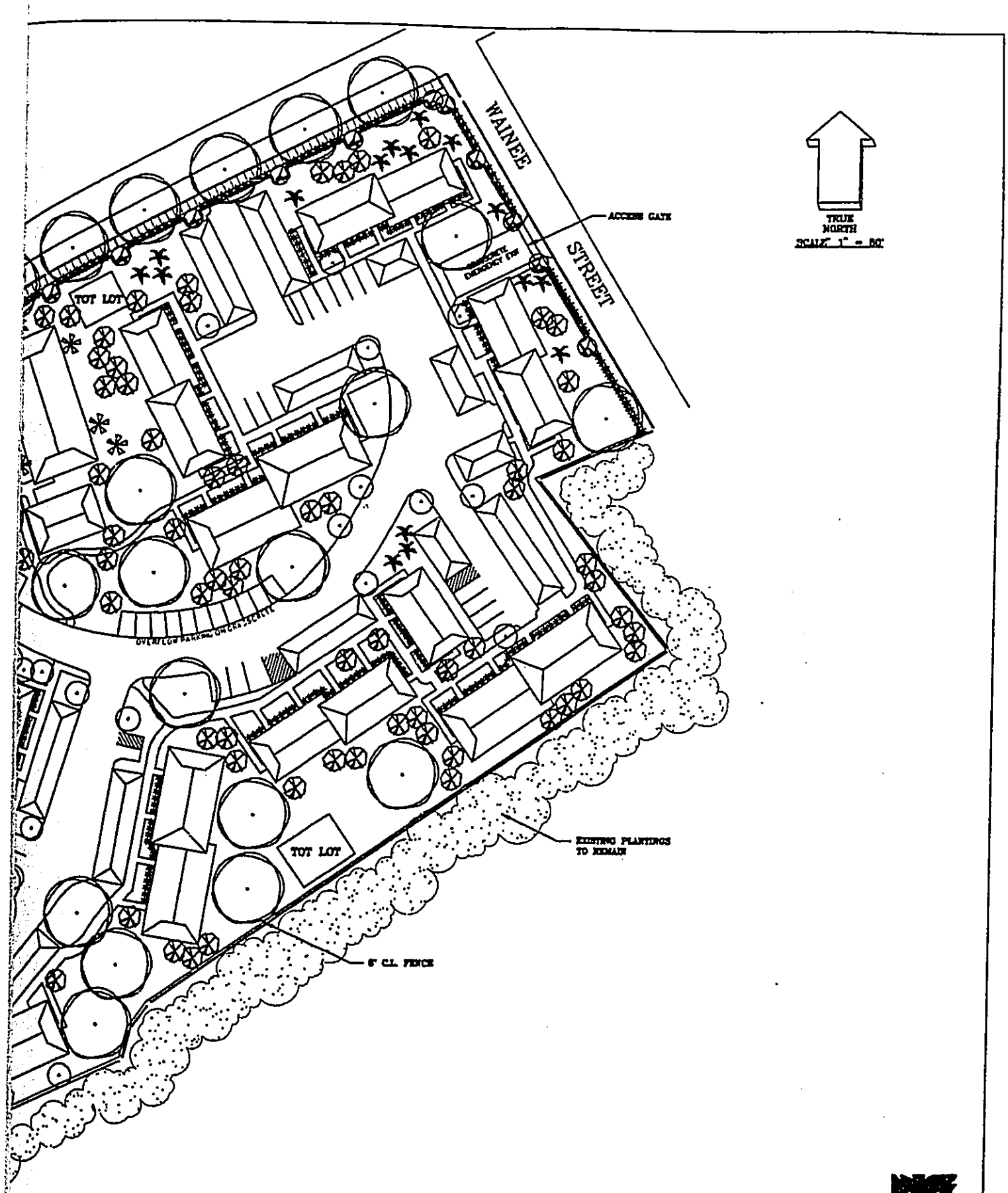
PLANT LEGEND:

TREES:	SHRUBS:	GROUNDCOVERS:
MONKEY POD	NATAL PLUM	BLUE DAZE
PLUMERIA	HIBISCUS	GOLDEN GLORY
HAWAIIAN KOU	SNOW BUSH	GRASS LAWN
ARECA PALM	PURPLE LEA	
COCONUT PALM		
PAPER BARK TREE		



FRONT ST
LANDSC

FRONTST1.DWG - 11X17@60'SCALE



FRONT STREET APARTMENTS

LANDSCAPE CONCEPT PLAN

SCALE: 1" = 80'

CHRIS HART

LANDSCAPE ARCHITECTURE AND PLANNING

FIGURE NO. 8

September 7, 1999

APPENDICES

APPENDIX A

Preliminary Drainage and Engineering Report

PRELIMINARY

ENGINEERING STUDY

FOR

PROPOSED FRONT STREET APARTMENTS

AT LAHAINA, MAUI, HAWAII

TAX MAP KEY: (2) 4-5-03:13, 14, 15, 38, 39 & 40

PREPARED FOR:

MILLENNIUM PACIFIC INVESTMENTS, LLC
P. O. BOX 12047
LAHAINA, MAUI, HAWAII - 96761

PREPARED BY:

R. T. TANAKA ENGINEERS, INC.
871 KOLU STREET, SUITE 201
WAILUKU, MAUI, HAWAII - 96793
JOB NO. 98-76

FEBRUARY 1999

TABLE OF CONTENTS

I. PURPOSE:

The purpose of this preliminary report is to investigate the infrastructural requirements of developing Parcels 13, 14, 15, 38, 39 and 40 of TMK 4-5-03 into a townouse development.

This preliminary study will present a brief description of the existing infrastructure at the project area. It also provides contemplated improvements required for the development by appropriate governmental agencies such as roadways, drainage, water and sewer systems. It also includes probable construction costs of the various infrastructural improvements needed to support the development.

II. SITE DESCRIPTION:

A. LOCATION:

The site is situated between Front Street and Wainee Street and adjacent to Kenui Street at Lahaina, Maui, Hawaii, ½ mile north of the center of Lahaina Town. It is also about 1/10 mile west of Honoapiilani Highway. The site is bounded by Kenui Street to the north and Hale Mahaolu - Senior Citizen Complex to the south.

Figure 1 (Site Plan) shows the general location of the proposed project.

B. SOIL CONDITIONS:

The U.S. Department of Agriculture Soil Conservaticn Service's Soils Survey of the Island of Kauai, Oahu, Maui, Molokai and Lanai [2], classifies the

soils within the project site as Ewa Silty Clay Loam (EaA) and Pulehu Silty Loam (PpA). Figure 2 shows the soil classification at the site.

Ewa Silty Clay Loam (EaA) is the dominant soil at the site. It consists of well-drained soils. Runoff is very slow and erosion hazard is no more than slight. Slopes range from 0 to 3 percent.

C. FLOOD HAZARD CONDITIONS:

The Flood Insurance Rate Maps, Maui County designates the site within Flood Zone "C" and "A4" (Figure 2). Most of the site is in Zone "C". Zone "A4" encompasses only the lower southwest corner of the project site.

Zone "C" is designated as area of minimal flooding

Zone "A4" designates areas of 100-year flood; base flood elevations and flood hazard factors determined.

D. TOPOGRAPHY:

The existing site is an abandoned cane field and recently has been cleared and grubbed. The grubbed material is piled within the site. There exists one (1) building on the site.

The existing ground has elevations ranging from 6 feet to 18 feet above mean sea level. In general, the ground surface slopes down in a westerly direction toward Front Street, at an average slope of about 1½ percent. A detailed topography of the site is shown on Figure 3.

III. EXISTING INFRASTRUCTURE:

A. GENERAL:

The existing roadways and utility systems in the vicinity of the project site are shown on Figure 3.

B. ACCESS:

The project site is located between Front Street on the west, Kenui Street to the north and Wainee Street on the east. Access to the project site will be from Kenui Street. There will be no vehicular access from Front Street which is the major arterial through Lahaina Town. The existing roadway system in the area will be described in the "Traffic Impact Analysis Report" for the proposed development (by others).

C. WATER:

Water for the area is currently provided by an 8" water main on Wainee Street and Kenui Street and a 12" water main on Front Street.

D. SEWER:

Wastewater disposal from the area is provided by the 8" gravity sewer main on Kenui Street. The 8" sewer discharges into the existing sewerline on Front Street. The wastewater will then be transmitted to the Lahaina Wastewater Reclamation Plant, about 3½ miles away, by a series of force main and gravity

sewerlines. The sewer system serving the area is a part of the Lahaina Sewerage System.

E. ELECTRICITY/TELEPHONE:

There are existing overhead electrical and telephone facilities along Front Street, Kenui Street and Wainee Street.

F. ONSITE DRAINAGE:

The present onsite drainage condition is characterized by surface waters sheet flowing across the project site in a westerly direction onto Front Street.

The existing runoff expected to be generated by the project site is about 7.6 cfs and 9.6 cfs for 10-year and 50-year storms, respectively.

G. OFFSITE DRAINAGE:

The proposed development site will be affected by drainage runoff generated by a portion of Wainee, Kenui and Front Street, fronting the project site.

There is no drainage system within the road right-of-way fronting the project site.

IV. FUTURE WAINEE, KENUI AND FRONT STREET IMPROVEMENTS:

Future roadway improvements in front of the proposed development site include pavement widening, installation of curb and gutter, construction of sidewalk and grade adjustment wall.

Future drainage improvements include the installation of catch basins and piping of storm drain runoff generated within the paved roadway areas to the detention chambers within the site.

V. PRELIMINARY DEVELOPMENT LAYOUT:

The proposed development is for a 140 Unit Apartment Complex development with onsite open and covered parking. Also, included is an Activity Center Building and a park. The schematic development layout is shown on Figure 1 (Site Plan).

VI. PROPOSED ONSITE INFRASTRUCTURAL IMPROVEMENTS:

A. GENERAL:

Proposed infrastructural improvements, such as roadways, water, sewer and drainage systems will be designed and constructed in accordance with the guidelines and requirements of appropriate governmental agencies who have jurisdiction over this type of development.

B. ROADWAYS AND TRAFFIC:

The project will have access from Kenui Street. Interior roadways will be 22-feet wide with A.C. pavement.

Traffic and roadway system are further analyzed in the "Traffic Impact Analysis Report" for the proposed development (by others).

C. WATER SYSTEM:

According to Department of Water Supply (DWS) standards, the average daily demand for a multi-family low rise residential development is 560 gallons per day. Thus at 140 units, the average daily demand for the proposed project is approximately 80,000 gallons per day or about 60 gallons per minute. Based on an average fixture unit of 16 F.U. per unit for a total of 2,240 fixture units, the required domestic flow is approximately 350 gallons per minute. With a small residential development like this, the size of the distribution line is usually governed by the fire flow requirements. According to DWS standards, fire flow for a townhouse, low rise apartment development is 1,500 gallons per minute.

The proposed subdivision will be serviced by a network of 8" pipes as shown on Figure 4. The new system will be connected to the existing waterline on Front Street and Wainee Street for fire protection and connected to existing waterline on Kenui Street for domestic demand. Fire hydrants will be spaced at no more than 150 feet from any building.

D. SEWER SYSTEM:

The estimated average wastewater flow generated by the proposed project is 42,000 gallons per day (gpd) based on Wastewater Reclamation Division's criteria of 300 gpd per unit.

The proposed sewer system is shown on Figure 5. The proposed system consisting mainly of 8" PVC sewer pipes that will be connected to the existing 8" gravity sewer on Kenui Street.

E. ELECTRICITY, TELEPHONE AND CATV:

Electrical, Telephone and CATV services to the project will be tapped off from the existing overhead utility lines on Front Street, Kenui Street and Wainee Street. The onsite utility services will be installed underground and in accordance with the requirements of the respective utility companies.

F. DRAINAGE & GRADING:

1. Drainage:

The proposed design concept for the drainage system is illustrated on Figure 6. The main feature of the design concept is the installation of a retention chambers (Figs. 8 and 9) to contain the runoff generated by the development, thus attaining a zero runoff increase to Front Street. The following is a comparison of 10-year storm runoff between existing and new conditions:

To Front Street

Existing Condition = 9.6 cfs (Fig. 6)

Developed Conditions = 1.8 cfs (Area 4, Fig. 7)

Reduction = 7.8 cfs

The detailed drainage calculations are reflected in Appendix "A".

At developed conditions (Refer to Fig. 7), runoff from Areas 1, 2 and 3 will be collected by the drain inlets and conveyed to individual drainage chambers via underground culverts.

Area 4 will sheet flow onto Front Street (as it exists today), but with a reduction of 7.8 cfs.

The proposed retention chambers will be designed to contain the additional 50-year runoff volume. A present condition, the development site will generate a 50-year storm runoff volume of about 27,412 cf; and at developed conditions, the volume will be increased by 11,096 cf to 38,508 cf.

Other features of the proposed drainage system are the installation of catch basins and drain manholes within the proposed roadways. Runoff collected by these structures will then be conveyed to the drainage chamber via underground culverts.

a. Alternative Drainage Outlet:

Disposal of runoff from the project site directly to Kahoma Stream was considered as a possible alternative

to the construction of the retention chambers. Due to the elevation difference and the length from the project site to Kahoma Stream, this Alternative was considereed not workable.

b. Conclusion:

Based on this preliminary drainage investigation, completion of the proposed development will not have any adverse drainage effects on adjacent lots and downstream properties.

Grading of the project site for building pads will not increase the flood water surface elevation, since the site is within Flood Zone "C" (see Fig. 2).

G. EROSION CONTROL:

The proposed erosion control will include silt fences to prevent sediment-laden runoff flowing into surrounding areas and dust fence around the project site to control any dust nuisance.

Prior to issuance of a Grading Permit for this project, the contractor will be required, to submit a satisfactory soil erosion control plan to the County (Land Use & Codes Administration). The erosion control plan at a minimum, shall include Best Management Practices in compliance with Section 20-08.035 of the Maui County Code (Grading Ordinance No. 2684).

Temporary erosion control measures will include, but not limited to, the following:

1. Clear areas only that are needed for new improvements.
2. Control dust by means of waterwagon and/or sprinklers and/or erection of dust fences during period of construction.
3. Construct temporary diversion swales away from graded areas to natural drainageways or natural ground depressions during construction.
4. Graded areas will be thoroughly watered after construction activity has ceased for the day and for weekends and holidays.
5. All exposed graded areas will be grassed and/or paved immediately upon completion of finished grading.
6. Installation of silt fences or other approved methods along the perimeter of the graded areas to prevent sediment from leaving the graded area. A typical installation of silt fence is shown on Figure 10.

VII. PROJECTED CONSTRUCTION COSTS:

The preliminary estimated cost is based on the preceding design concepts and present design standards of responsible government agencies. It is also based on present day costs and that an increase of 5% to 10% per year can be anticipated. A factor of 5%± was added to the construction cost estimate to account for contingencies. The cost presented should be viewed as an "order of magnitude". It does not include cost for planning, engineering services,

construction administration and inspection and assessment fees when required by governmental agencies and utility companies. Itemized costs are tabulated on Appendix B. The preliminary estimated projected construction costs are summarized as follows:

A.	Roadway & General Grading	$272,375.00
B.	Water System	388,900.00
C.	Sewer System	230,500.00
D.	Drainage System	605,750.00
E.	Electrical, Telephone & CATV Systems	250,000.00
F.	Contingency	87,000.00

Total Projected Construction Cost = $1,834,525.00

Note: The above projected construction cost does not include any cost for the anticipated improvements required by the County of Maui along Front Street, Kenui Street and Wainee Street.

VIII. REFERENCES:

1. Rules for the Design of Storm Drainage Facilities in the County of Maui, Title MC-15, Department of Public Works and Waste Management, County of Maui, Chapter 4.

2. Soil Survey of Islands of Kauai, Oahu, Maui, Molokai and Lanai, State of Hawaii, prepared by U. S. Department of Agriculture, Soil Conservation Service, August 1972.

3. Erosion and Sediment Control Guide for Hawaii, prepared by U. S. Department of Agriculture, Soil Conservation Service, March 1981.

4. Rainfall-Frequency Atlas of the Hawaiian Islands, Technical Paper No. 43, U. S. Department of Commerce, Weather Bureau, 1962.

5. Flood Insurance Rate Maps for the County of Maui, June 1981.

6. Hydrology Report for Honoapiilani Highway (Honokowai to Kahana), F.A.P. RF-030-1(7), prepared by State Department of Transportation, Highways Division, October 1975.

APPENDIX B

Traffic Impact Analysis

TRAFFIC IMPACT ANALYSIS REPORT
FOR THE PROPOSED

FRONT STREET APARTMENTS

PREPARED FOR

MILLENIUM PACIFIC INVESTMENTS, LLC

FEBRUARY 11, 1999

PREPARED BY

THE TRAFFIC MANAGEMENT CONSULTANT

RANDALL S. OKANEKU, P. E., PRINCIPAL • 1188 BISHOP STREET, SUITE 1907 • HONOLULU, HAWAII 96813

Table of Contents

Table of Contents (cont'd)

List of Figures

TRAFFIC IMPACT ANALYSIS REPORT
FOR THE PROPOSED
FRONT STREET APARTMENTS

I. Introduction

A. Purpose of Study

The purpose of this study is to identify and analyze the traffic impacts resulting from the proposed Front Street Apartments, located in Lahaina, Maui, Hawaii. This report presents the findings and recommendations of the study.

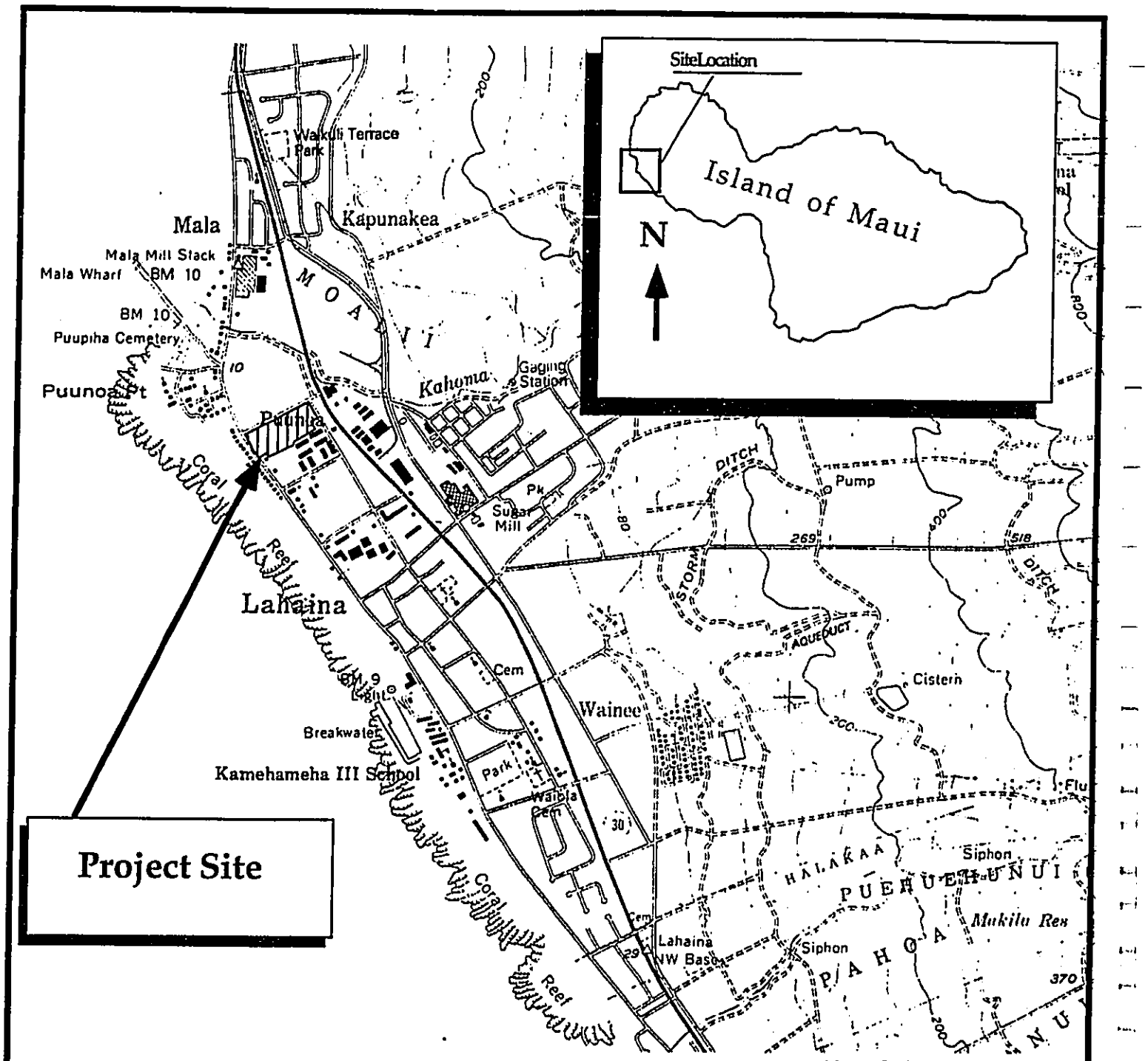
B. Scope of the Study

The scope of this traffic study includes:

1. Description of the proposed project.
2. Description of the study area.
3. Evaluation of existing roadway and traffic conditions.
4. Estimation of future traffic without the project.
5. Development of trip generation characteristics for the proposed project.
6. The identification and analysis of traffic impacts resulting from the proposed project.
7. Recommendation of improvements that would mitigate the roadway deficiencies, identified in this study.

C. Project Description

The proposed Front Street Apartments is located on the south side of Kenui Street, between Front Street to the west and Wainee Street to the east. The 8.820 acre site is identified as Tax Map Key 4-5-03: 12, 13, 15, 38, 39 and 40. Figure 1 depicts the location of the proposed project.



Not to Scale
Source: USCS Map Lahaina Quadrangle

Regional Location Map
Front Street Apartments
Kenui Street
Lahaina, Maui, Hawai`i
TMK 4-5-03: 13, 14, 15, 38, 39 & 40

CHRIS HART & PARTNERS

Figure No. 1

The proposed Front Street Apartments consists of a total of 140 apartment dwelling units (DU). Access to the project is proposed via a driveway on Kenui Street, located about midblock between Wainee Street and Front Street. Full build-out and occupancy of the proposed Front Street Apartments are expected by the Year 2001. Figure 2 illustrates the site plan.

II. Study Area Conditions

A. Study Area

The limits of the study area were defined between the project access and the immediate major arterial highways and collector roads in the project vicinity. The intersections under study include:

1. Honoapiilani Highway and Kenui Street
2. Wainee Street and Kenui Street
3. Front Street and Kenui Street/Kai Pali Place

B. Existing and Anticipated Future Development

1. Project Environs

The project site is currently undeveloped, except for a single family dwelling (formerly used as a pre-school). Existing residential developments are located immediately to the south. The property on the north side of Kenui Street is undeveloped. The Lahaina Cannery Mall is located to the north of the project site, across Kahoma Stream.

2. Wainee Village

Wainee Village is located immediately across Kenui Street from the proposed project. It is envisioned to contain an elderly housing project, a neighborhood shopping center, and the extension of Wainee Street from Kenui Street to Front Street. Wainee Village is still in the early planning stages and therefore was not included in this traffic impact analysis.

3. Lahaina Business Park

Lahaina Business Park will be constructed on a 37.7 acre property, located on the east (mauka) side of Honoapiilani Highway, north of the project vicinity. The "Traffic Impact Analysis Report for the Proposed Lahaina

Front Street Apartments

Project Data:

TMK: (2) 4-5-03: 13,14,15,38,39,& 40

Zoning: A-1 Apartments

Height Restriction: 2 Stories or 30 feet

Set backs: 15 Feet Front Set Back
6 Feet Side yard Set Back - 1 story
12 Feet Side yard Set Back - 2 stories

Unit Mix 34 Studios 448 sq. ft.
60 One bedrooms 528 sq. ft.
46 Two bedrooms 840 sq. ft.

Lot Area: 380400.76 sq. ft.

Lot Coverage
Allowable Lot Coverage 25%
25% of 380400.76 = 95100.19 sq. ft.
Proposed 65384.00 sq. ft. or 17.24 %

Floor Area - Lot Area Ratio
Allowable Floor Area - Lot area Ratio
40% of gross Lot Area.
40% of 380400.76 = 152160.3 sq. ft.
Proposed 90512.00 sq. ft. or 23 %

Parking

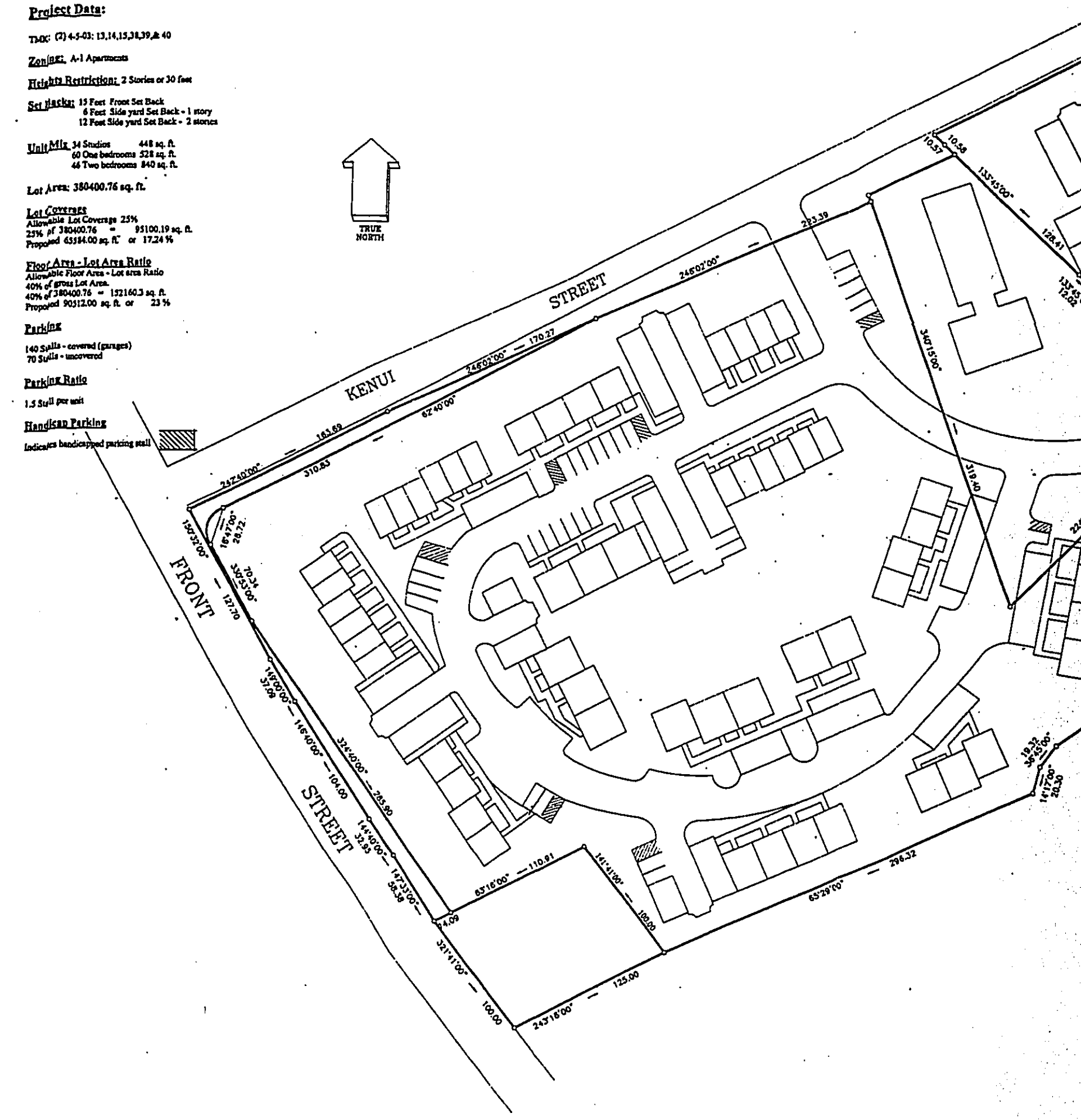
140 Stalls - covered (garages)
70 Stalls - uncovered

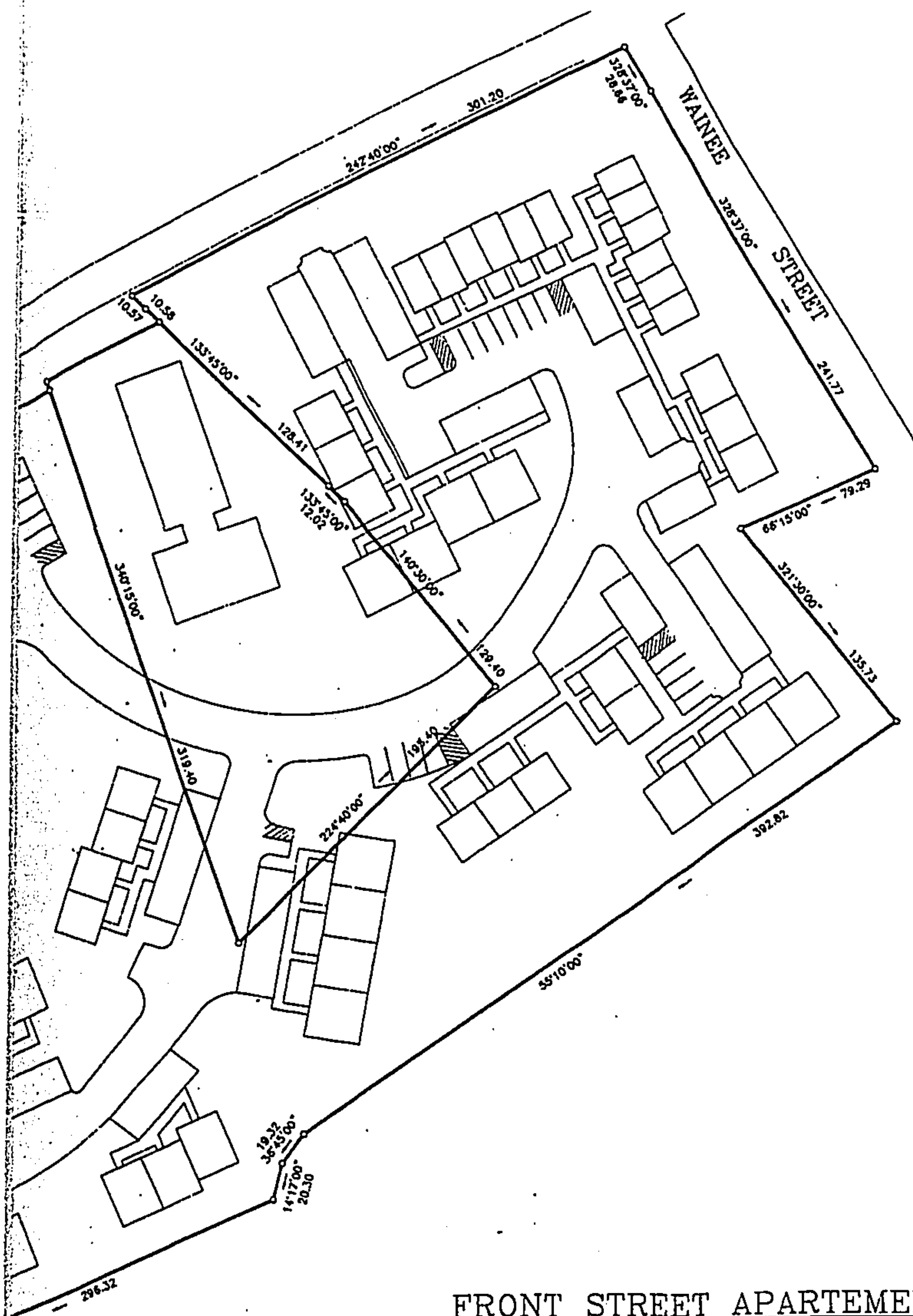
Parking Ratio

1.5 Stall per unit

Handicap Parking

Indicates handicapped parking stall





FRONT STREET APARTEMENTS

SCALE: 1" = 40'

UWE H.H. SCHULZ AIA & ASSOCIATES, INC
PLANNING, ARCHITECTURE AND DESIGN CONSULTANTS
1022 FRONT STREET, LAHAINA, MAUI, HAWAII 9676
PHONE: (808) 661-8317 / (808) 667-7149 / FAX: (808) 667-506

FRONT STREET APARTMENTS

SCALE:
DATE: 1/26/99
DRAWN:
CHECKED:
REVISIONS:
JOB NO.:

THE WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY SUPERVISION

UWE H.H. SCHULZ — STATE OF CALIFORNIA — REGISTERED PROFESSIONAL ARCHITECT

UWE H.H. SCHULZ — HAWAII U.S.A. — REGISTERED PROFESSIONAL ARCHITECT

SHEET P - 1 OF

Business Park" was prepared by The Traffic Management Consultant on July 19, 1994. The Lahaina Business Park subdivision will consist of quarter acre to five-acre lots, totaling 32 net acres. The proposed Lahaina Business Park was assumed to be 30 percent built out and occupied by the Year 2001, according to a marketing study prepared for the project.

4. **Hawaii Omori Project**

The Hawaii Omori Mauka Light Industrial project is a 27 acre light industrial park located between the Lahaina Business Park and Honoapiilani Highway, opposite of the Lahaina Cannery Mall. The Lahaina Business Park traffic study also analyzed the Hawaii Omori project. By the Year 2001, it was assumed that the Hawaii Omori project would be 30 percent built-out and occupied.

5. **HFDC Project**

The State Housing Finance and Development Corporation (HFDC) is planning to develop 1,120 acres. The infrastructure for the first phase of the Villages of Lei'ali'i, which includes 240 lots, has been completed. Four thousand eight hundred (4,800) dwelling units are planned. The State project is "on hold" at this writing. The Villages of Lei'ali'i were not included in this traffic impact analysis.

6. **AMFAC/JMB Project**

AMFAC/JMB Hawaii, Inc. will develop the Kaanapali Vacation Club, a time-share resort, in Kaanapali by the Year 2004. Because the development of Kaanapali Vacation Club is beyond the time frame of this study, it was not included in this analysis.

7. **Lahaina Bypass Highway**

The proposed Lahaina Bypass Highway is planned by State Department of Transportation (DOT) as a high quality, two-lane arterial highway, which would ultimately be expanded to a four-lane, divided highway. The proposed Highway would extend from Puamana to Honokowai, bypassing Lahaina and Kaanapali. The construction of two-lane Lahaina Bypass is beyond the Year 2001 and was not included in this analysis.

III. Existing Conditions

A. Area Roadway System

Honoapiilani Highway is the primary arterial highway for West Maui. In the vicinity of the project, Honoapiilani Highway is a four-lane highway with traffic signals at major intersections. Honoapiilani Highway is unsignalized at its intersection Kenui Street. Only right-turn-in and right-turn-out movements are permitted at this intersection.

Kenui Street is a two-way, two-lane, local road between Honoapiilani Highway and Front Street. Kenui Street is unimproved, i.e., without curbs, gutters, and sidewalks. Kenui Street is stop-controlled at Honoapiilani Highway and at Front Street. Kai Pali Place also intersects Front Street, opposite Kenui Street and offset to the north. The sight distance from Kai Pali Place, looking towards the south on Front Street, is limited by the vegetation on the southwest corner of the intersection.

Wainee Street is a collector street, which is located immediately makai (west) of and runs parallel to Honoapiilani Highway. Fronting the project site, Wainee Street is an unimproved, two-lane, two-way roadway. Wainee Street is stop-controlled at Kenui Street. Because of the restricted access at the intersection of Kenui Street and Honoapiilani Highway, northbound traffic on Honoapiilani Highway must turn onto Kenui Street from Wainee Street, via Papalaua Street.

Front Street is a two-way, two-lane major collector street, which extends the entire length of Lahaina Town. Due to the restricted traffic movements at Honoapiilani Highway, northbound traffic from Kenui Street must turn north onto Front Street and access Honoapiilani Highway through the Lahaina Cannery Mall or via Kapunakea Street.

B. Existing Traffic Volumes and Operating Conditions

1. General

a. Field Investigation

A manual traffic count survey was conducted in the project vicinity in January, 1999, from 6:00 AM to 9:00 AM, and from 2:30 PM to 6:00 PM. Additional traffic count data were obtained from the State DOT and other studies conducted in the vicinity.

b. Capacity Analysis Methodology

The highway capacity analysis, performed in this study, is based upon procedures presented in the "Highway Capacity Manual" (HCM), Special Report 209, Transportation Research Board, 1994 as amended, and the "Highway Capacity Software", Federal Highways Administration.

Level of Service (LOS) is defined as "a qualitative measure describing operational conditions within a traffic stream". Several factors are included in determining LOS such as: speed, delay, vehicle density, freedom to maneuver, traffic interruptions, driver comfort, and safety. LOS "A", "B", and "C" are considered satisfactory levels of service. LOS "D" is generally considered a "desirable minimum" operating level of service. LOS "E" is an undesirable condition and LOS "F" is an unacceptable condition.

Level of Service (LOS) is defined as "a qualitative measure describing operational conditions within a traffic stream". Several factors are included in determining LOS such as: speed, delay, vehicle density, freedom to maneuver, traffic interruptions, driver comfort, and safety. LOS "A", "B", and "C" are considered satisfactory levels of service. LOS "D" is generally considered a "desirable minimum" operating level of service. LOS "E" is an undesirable condition and LOS "F" is an unacceptable condition.

2. Existing Peak Hour Traffic Analysis

The AM peak hour of traffic in the vicinity of the project occurs between 7:15 AM and 8:15 AM. The PM peak hour of traffic occurs between 4:00 PM and 5:00 PM. All intersections within the study area operate at satisfactory Levels of Service, i.e., LOS "B" or better, during both the existing AM and PM peak hours of traffic. Figures 3 and 4 depict the existing AM and PM peak hour traffic and results of the capacity analysis, respectively.

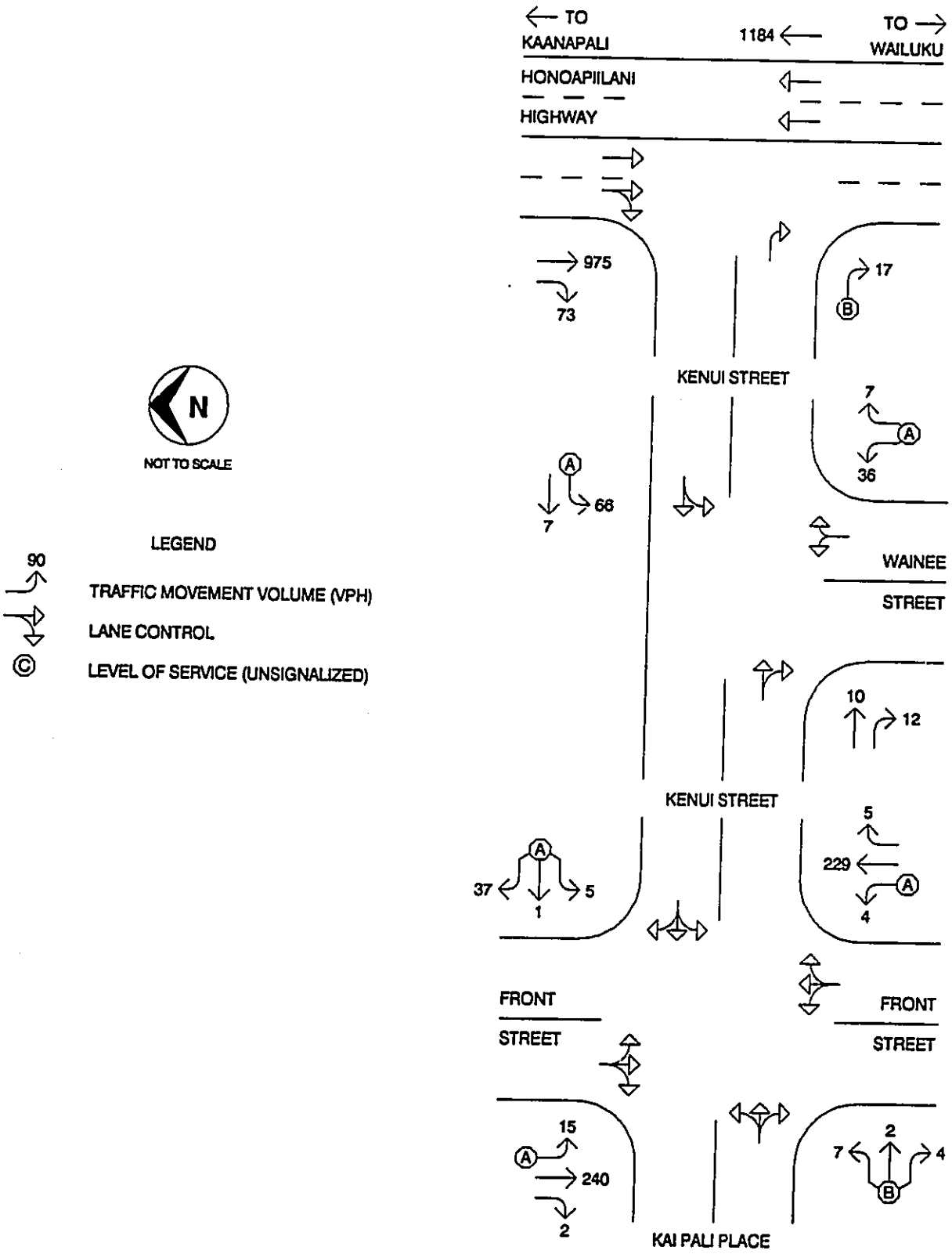


Figure 3 - Existing AM Peak Hour Traffic

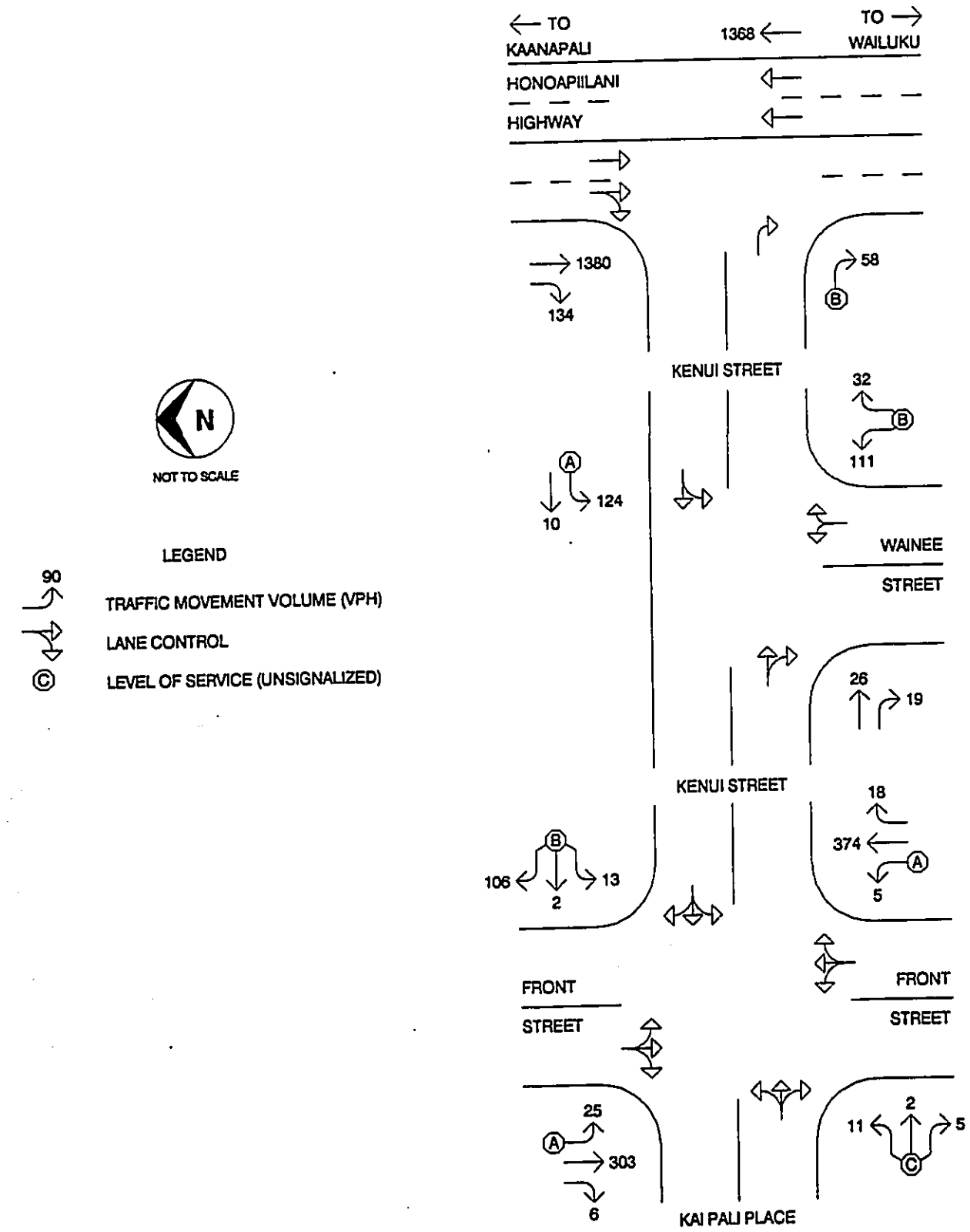


Figure 4 - Existing PM Peak Hour Traffic

IV. Projected Traffic

A. Site Traffic

1. Trip Generation Methodology

The trip generation methodology, used in this study, was based upon generally accepted techniques developed by the Institute of Transportation Engineers (ITE) and published in "Trip Generation", 6th Edition, 1997. The ITE trip rates for low-rise residential apartments were developed by correlating the vehicle trip generation data with various land use characteristics, such as vehicle trips per dwelling unit.

2. Trip Generation Characteristics

The proposed Front Street Apartments are expected to generate a total of 73 vehicles per hour (vph) during the AM peak hour of traffic, 15 vph entering the site and 58 vph exiting the site. During the PM peak hour of traffic, the proposed project is expected to generate a total of 89 vph, 59 vph entering the site and 30 vph exiting the site. Table 1 shows a summary of the trip generation characteristics.

Table 1. Trip Generation Summary

Land Use Intensity = 140 DU			Rate	VPH
Peak Hour of Adjacent Street Traffic	AM Peak	Enter	0.11	15
		Exit	0.41	58
		Total	0.52	73
	PM Peak	Enter	0.42	59
		Exit	0.22	30
		Total	0.64	89

B. External Traffic

1. General

The purpose of analyzing projected peak hour traffic conditions without the proposed project was to establish the base line conditions from which to analyze the traffic impacts directly attributable to the proposed project. The Year 2001 was selected as the planning horizon, corresponding to the expected first full year of operation of the proposed project.

2. Through Traffic

The Maui Long-Range Land Transportation Plan, prepared for the State Department of Transportation (DOT) in cooperation with the County of Maui Department of Public Works and Planning Department (February 1997), developed traffic projections for the Year 2020. Traffic in Lahaina was estimated to increase at an annual rate of approximately 1.2 percent. The growth rate in traffic of 1.024 was applied uniformly over the existing conditions to estimate the projected Year 2001 peak hour traffic conditions.

3. Future Off-Site Traffic In Study Area

The major projects, expected to be developed within the time frame of this project, include portions of the Lahaina Business Park and the Hawaii Omori Mauka Light Industrial Park. The traffic generated by these projects were added to the background growth in traffic in the analysis.

C. Peak Hour Traffic Analysis Without Project

During the Year 2001 AM and PM peak hours of traffic without project, all intersections within the study area are expected to operate at satisfactory Levels of Service. Year 2001 AM and PM peak hour traffic without the proposed project and the results of the capacity analysis are depicted on Figures 5 and 6, respectively.

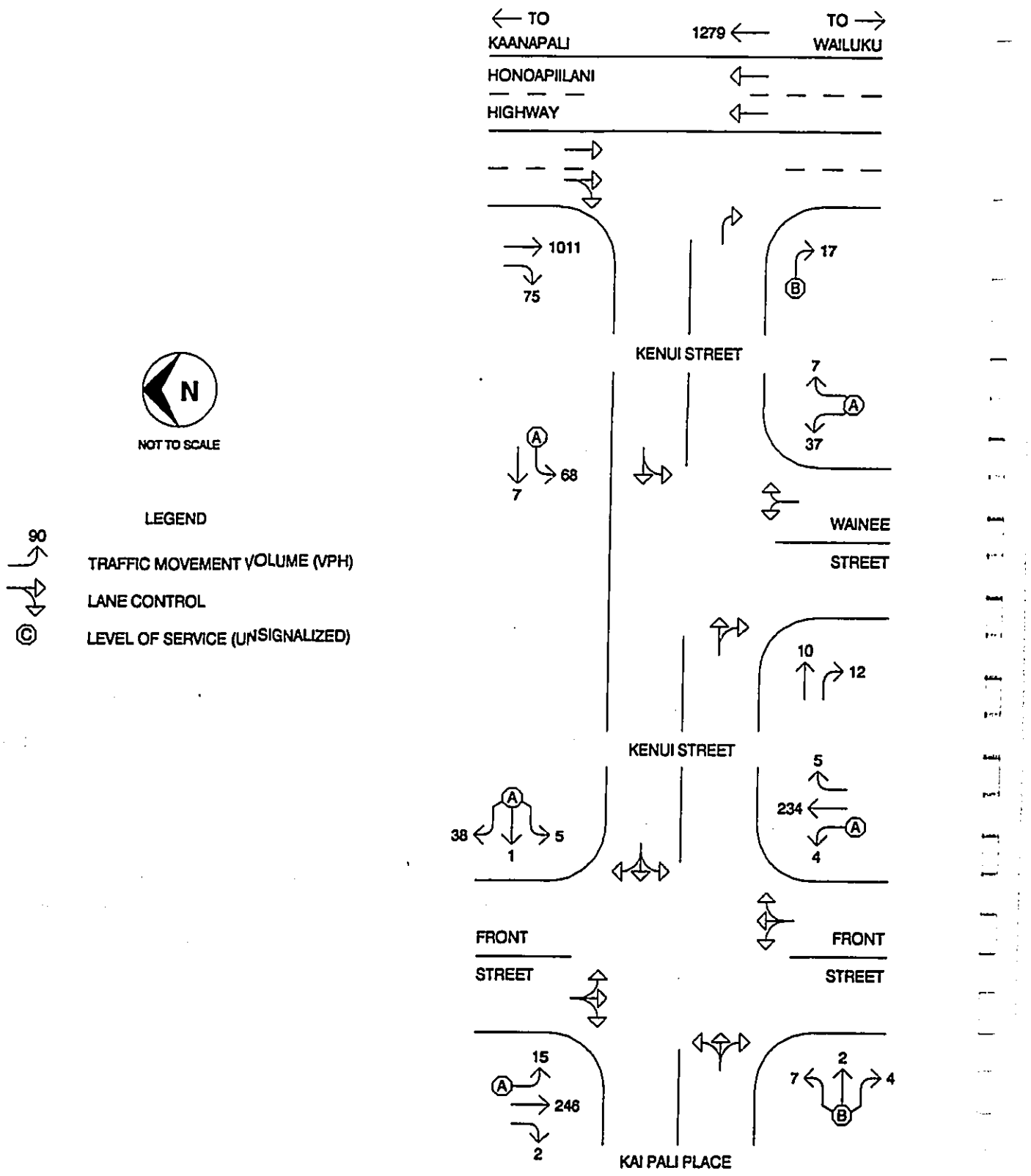


Figure 5 - AM Peak Hour Traffic Without Project

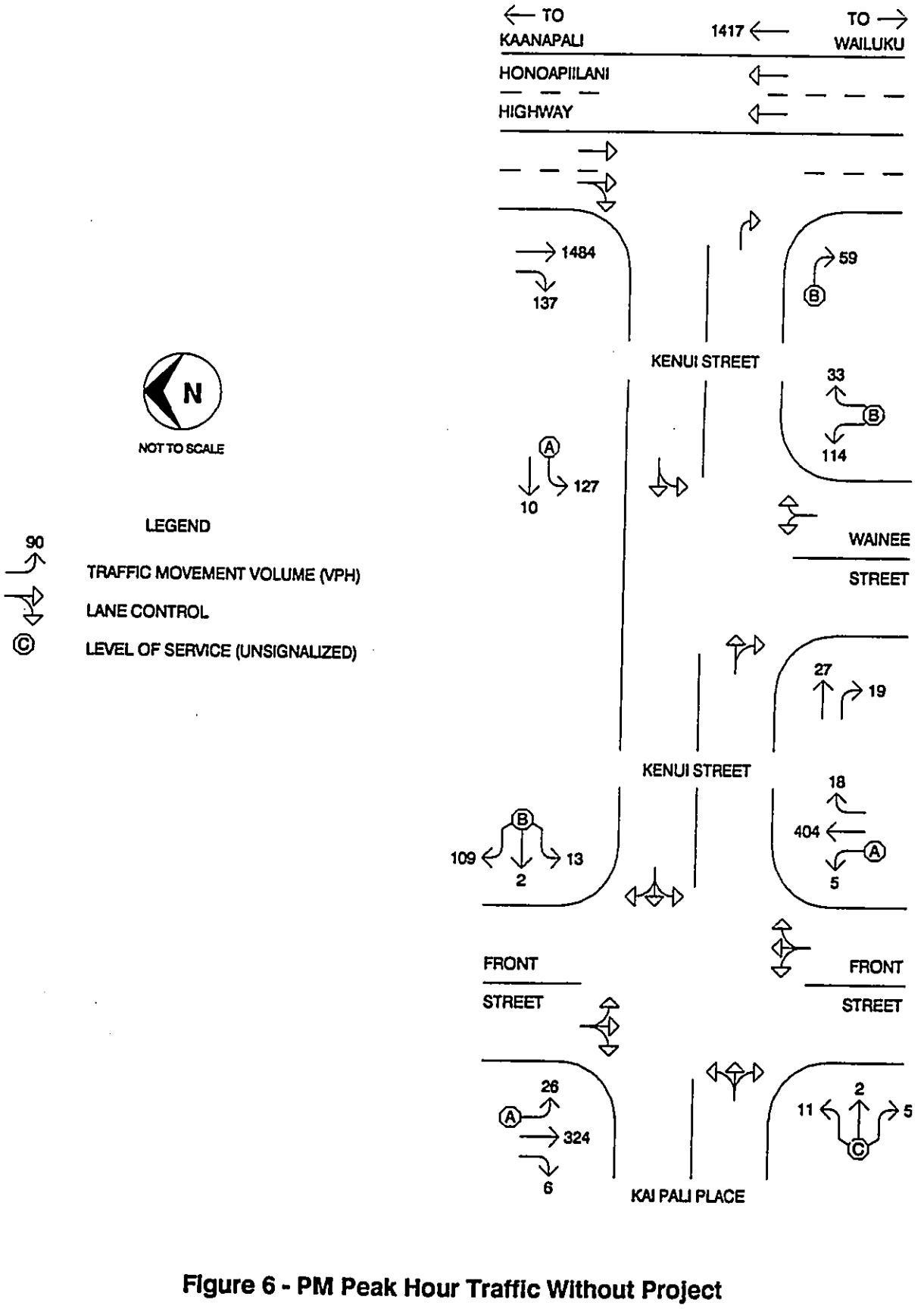


Figure 6 - PM Peak Hour Traffic Without Project

D. Traffic Impact Analysis

Figures 7 and 8 depict the AM and PM peak hour traffic with the proposed project and the results of the capacity analysis, respectively. All the intersections within the study area continue to operate at satisfactory Levels of Service, i.e., LOS "C" or better, during both the AM and PM peak hours of traffic. Although the left turn movement from southbound Front Street to Kenui Street operates at LOS A, during the PM peak of traffic with the proposed project, the projected traffic demand meets the minimum volume warrant for an exclusive left turn lane.

V. Recommendations and Conclusions

A. Recommendations

1. Recommended Improvements Without Project

The following traffic improvements are proposed to mitigate existing deficiencies:

a. Kenui Street, Wainee Street, and Front Street should be upgraded to County standards, which would include the construction of curbs, gutters, and sidewalks.

b. A clear sight triangle on the southwest corner of Front Street and Kenui Street/Kai Pali Place should be maintained.

2. Recommended Improvements With Project

a. The project site frontages along Kenui Street, Wainee Street, and Front Street should be upgraded to County standards, which would include the construction of curbs, gutters, and sidewalks.

b. Exclusive left turn lane should be provided on the southbound approach of Front Street at Kenui Street/Kai Pali Place. The proposed left turn lane would require the upgrade of Front Street, along the future Wainee Village frontage, as well as the proposed project frontage.

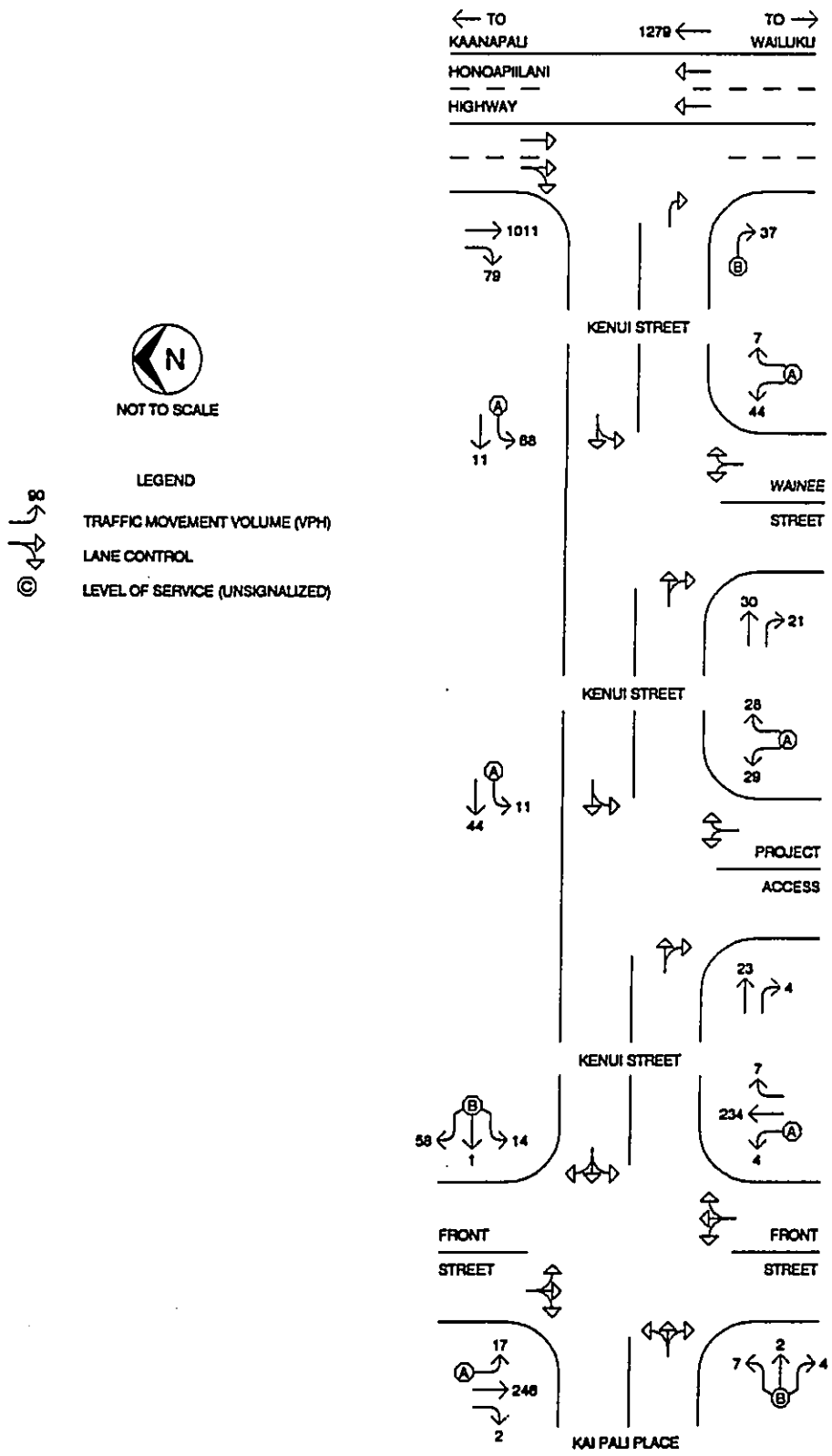


Figure 7 - AM Peak Hour Traffic With Project

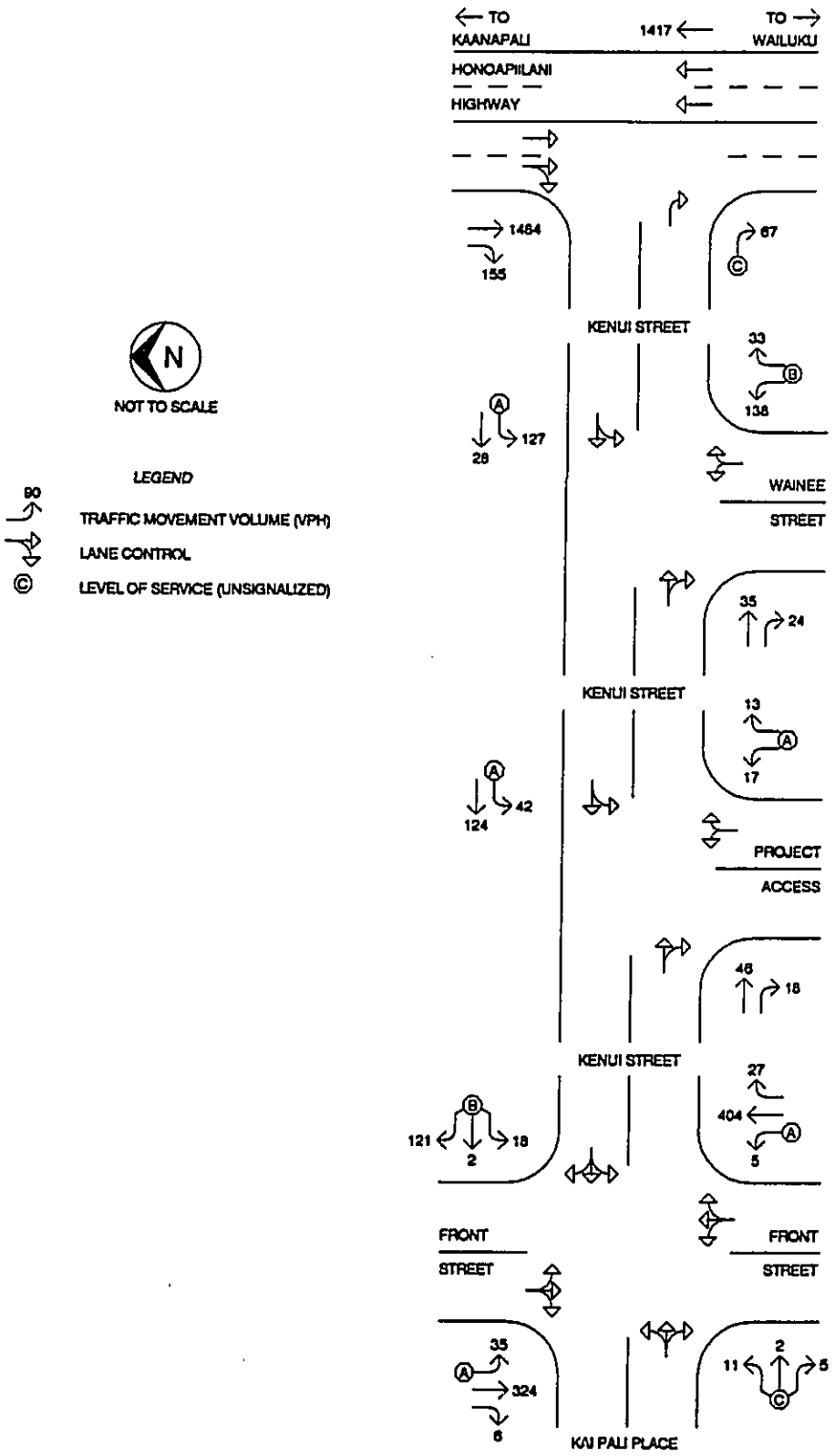


Figure 8 - PM Peak Hour Traffic With Project

3. Future Improvements

The following traffic improvements should be considered together with the future development of Wainee Village.

a. As recommended in the previous section, an exclusive left turn lane should be provided on the southbound approach of Front Street at Kenui Street/Kai Pali Place, when Front Street is upgraded along the frontage of the future Wainee Village.

b. Kenui Street should be realigned to intersect Front Street, opposite Kai Pali Place. This improvement would encroach on the future Wainee Village site on the north side of Kenui Street, leaving a remnant parcel on the project side of Kenui Street.

c. An exclusive left turn lane also should be provided on the northbound approach of Front Street at Kenui Street/Kai Pali Place. While the northbound left turn lane is not warranted, based upon traffic demands, it would complement the proposed left turn lane on the southbound approach. However, the exclusive left turn lane on northbound Front Street would require the realignment of Kenui Street , described above,

B. Conclusions

Kenui Street operated at satisfactory Levels of Service under existing conditions and is expected to continue operate satisfactorily under future conditions with and without the proposed project. The proposed traffic improvements, recommended herein, should be coordinated with the future development of Wainee Village. The proposed Front Street Apartments are not expected to significantly impact Kenui Street and its intersections.

APPENDIX A

DRAINAGE CALCULATIONS

ONSITE 10-YEAR RUNOFF DISCHARGE

A. Methodology: Rational Method

Q = CIA.

Where:

Q = Runoff in Cubic Feet per Second (c.f.s.)

C = Runoff Coefficient

I = Rainfall Intensity (in./hr.)

A = Area, Acres

B. Given Data:

Site Area = 8.733 Acres

Rainfall:

10-year, 1-hr. Rainfall = 2.0"

Runoff Coefficient (C):

Existing Conditions = 0.30 (unimproved)

Developed Conditions = 0.70 (Apartments)

C. Runoff Calculations

See attached Hydrology Chart

50-YEAR RUNOFF VOLUME CALCULATIONS

(HYDROLOGY MAP - NEW CONDITIONS)

A. Methodology: SCS Method

B. Given Data:

Type of Soil: Ewa Silty Clay Loam (EaA), 0 to 3 percent slopes

Pulehu Silt Loam (PpA), 0 to 3 percent slopes

Soil Series: Ewa & Pulehu

Hydrologic Soil Group: B

50-yr, 1-hr. Rainfall, P = 2.5"

Area, A:

Drainage Area "1"	= 1.74 Acs.
Drainage Area "2"	= 1.86 Acs.
Drainage Area "3"	= 4.55 Acs.
Drainage Area "4"	= 0.84 Acs.
Total Drainage Area	= 8.99 Acs.

Curve Number, CN:

Undeveloped:	Range Land	= 79 (Poor Conditions)
Developed:	Residential (Apt.)	= 85 (65% Impervious)

Runoff depth, Q:

Q = Runoff Depth, inches

P = Rainfall Amount, inches

$$Q = \frac{(P - 0.2S)^2}{P + 0.8S}$$

$$\text{Where } S = \frac{1{,}000}{CN} - 10$$

$$\text{Volume} = Q \times A$$

C. Total Runoff Volume Calculations for Existing and New Conditions:

Existing Conditions:

Area = 8.99 Acs.

CN = 79

$$S = \frac{1{,}000}{CN} - 10$$

$$= \frac{1{,}000}{79} - 10 = 2.66$$

$$Q = \frac{(2.5 - 0.2 \times 2.66)^2}{2.5 + 0.8 \times 2.66} = 0.84''$$

$$\therefore V = \frac{0.84''}{12} \times 8.99 \text{ s.f.} = 0.6293 \text{ Ac.-ft.} = 27{,}412 \text{ c.f.}$$

New Condition

Area = 8.99 Acs.

CN = 85

$$S = \frac{1{,}000}{85} - 10 = 1.76''$$

$$Q = \frac{(2.5 - 0.2 \times 1.76)^2}{2.5 + 0.8 \times 1.76} = 1.18''$$

$$\therefore V = \frac{1.18''}{12} \times 8.99 \text{ Acs.} = 0.844 \text{ Ac.-ft.} = 38{,}508 \text{ c.f.}$$

Increase in Runoff Volume

Due to Development = 38,508 - 27,412

= 11,096 c.f.

D. VOLUME CALCULATIONS FOR PROPOSED RETENTION BASINS:

1. Drainage Area "1":

Area = 1.74 Acs.

Q = 1.18"

$$\therefore V = \frac{1.18''}{12} \times 1.74 \text{ Acs.} = 0.171 \text{ Ac.-ft.} = 7{,}450 \text{ c.f.}$$

2. Drainage Area "2":

Area = 1.86 Acs.

Q = 1.18"

$$\therefore V = \frac{1.18''}{12} \times 1.86 \text{ Acs.} = 0.183 \text{ Ac.-ft.} = 7{,}970 \text{ c.f.}$$

3. Drainage Area "3":

Area = 4.55 Acs.

Q = 1.18"

$$\therefore V = \frac{1.18''}{12} \times 4.55 \text{ Acs.} = 0.447 \text{ Ac.-ft.} = 19{,}470 \text{ c.f.}$$

E. TOTAL VOLUME TO BE RETAINED:

Drainage Area 1 = 7,450 c.f.

Drainage Area 2 = 7,970 c.f.

Drainage Area 3 = 19,470 c.f.

= 34,890 c.f.

New Flow into Front Street = 38,508 - 34,890 c.f.

= 3,618 c.f.

Existing Flow onto Front Street = 27,412 c.f.

Therefore, Decrease of Runoff onto Front

Street Due to Development = 27,412 - 3,618

= 23,794 c.f.

PROJECT: Proposed Front Street Apartments

DATE: February 1999

LOCATION: Lahaina, Maui, Hawaii

HYDROLOGY

TMK: (2) 4-5-03:13, 14, 15, 38, 39 & 40

Drainage Area Designation	Inlet Structure/ Designation	Area (Acres)	Length of Overland Flow (feet)	Average Slope, %	Character of Grcund	T_c (min.)	C	TM (years)	1-Hour Rainfall (inches)	I (in./hr.)	Q=AIC (c.f.s.)	Remarks
	EXISTING CONDITION:											
---	---	8.733	960	1.0%	Poor Grassed	28	0.30	10	2.0	2.90	7.6	
---	---	8.733	960	1.0%	Poor Grassed	28	0.30	50	2.5	3.65	9.6	
	NEW CONDITION:											
---	---	8.733	500	1.0%	Grassed	27	0.70	10	2.0	2.60	15.9	
			460	1.0%	Paved	8 > 35						
---	---	8.733	500	1.0%	Grassed	27	0.70	50	2.5	3.00	18.3	
			460	1.0%	Paved	8 > 35						
												Increase in Runoff
												10-Year Storm:
												15.9 - 7.6 = 8.3 cfs
												50-Year Storm:
												18.3 - 9.6 = 8.7 cfs

JOB NO.: _____

R. T. TANAKA ENGINEERS, INC.
ENGINEERS - SURVEYORS

SHEET 1 of 1

APPENDIX B

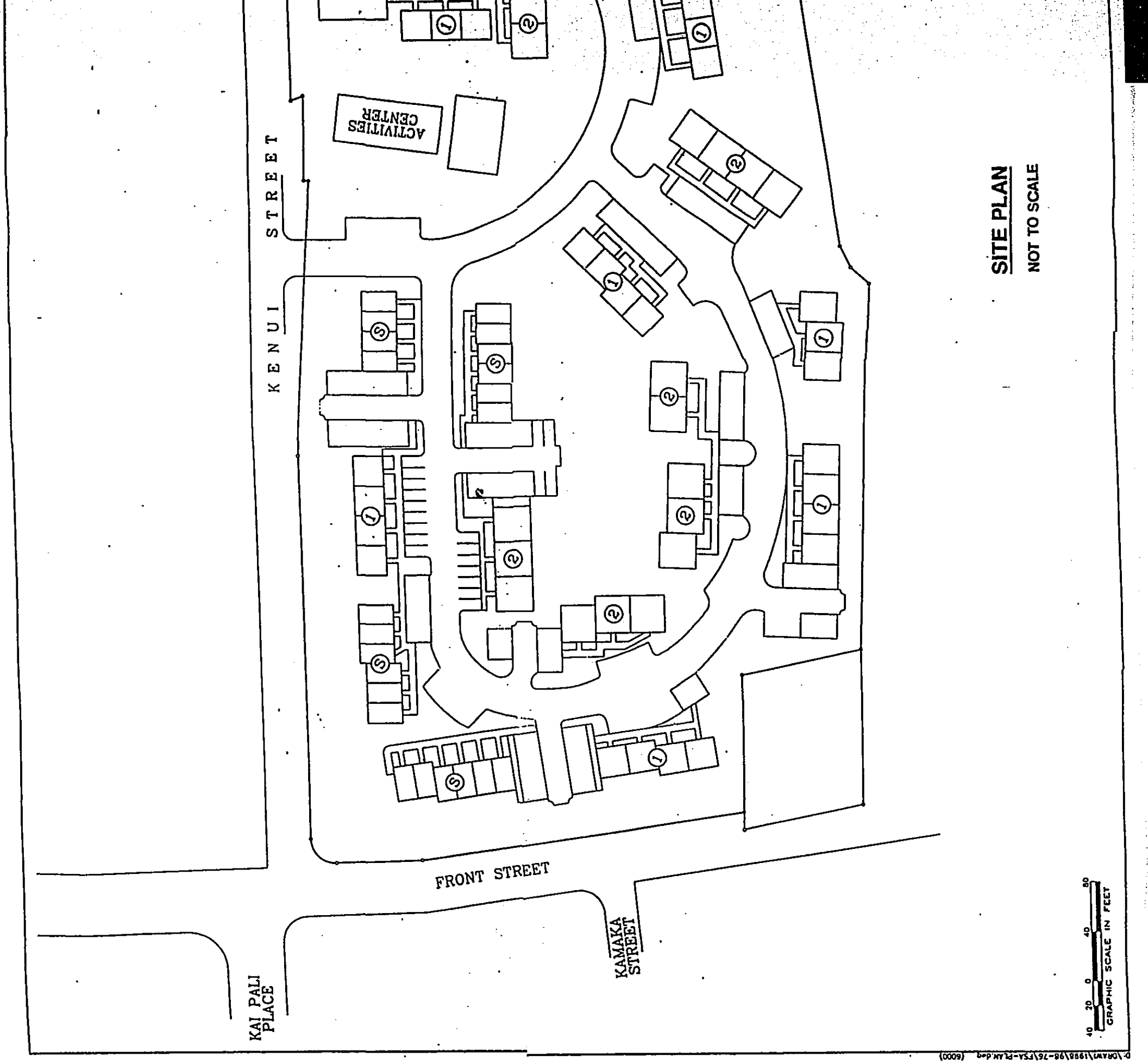
PRELIMINARY ENGINEER'S ESTIMATE

PRELIMINARY ENGINEER'S ESTIMATE
"FRONT STREET APARTMENTS" (February 1999)

Item	Description	Quantity		Unit Price	Total
A.	Roadway - General Grading				
1.	Clear & Grubbing & Demolition	8.75	Ac.	$4,500.00	$39,375.00
2.	General Grading		L.S.		$50,000.00
3.	A.C. Pavement	820	tons	$100.00	$82,000.00
4.	Base Course	1,200	c.y.	$60.00	$72,000.00
5.	Concrete Curbing	2400	ft.	$10.00	$24,000.00
6.	Stripping		L.S.		$5,000.00
				Subtotal =	$272,375.00
B.	Water System				
1.	12" Waterline	130	ft.	$120.00	$15,600.00
2.	8" Waterline	1,860	ft.	$70.00	$130,200.00
3.	6" Waterline	160	ft.	$50.00	$8,000.00
4.	Fire Hydrant	9	ea.	$2,500.00	$22,500.00
5.	8" Gate Valve w/SVB	16	ea.	$800.00	$12,800.00
6.	6" Gate Valve w/SVB	9	ea.	$600.00	$5,400.00
7.	Fittings	8,000	lbs.	$2.00	$16,000.00
8.	Reaction Blocks	23	ea.	$300.00	$6,900.00
9.	Meter w/Box	1	ea.	$20,000.00	$20,000.00
10.	8" Detector Check Valve w/M.H.	2	ea.	$20,000.00	$40,000.00
11.	Backflow Preventer	1	ea.	$5,000.00	$5,000.00
12.	Connection to Existing Main	3	ea.	$8,500.00	$25,500.00
13.	Chlorinate-Test System		L.S.		$5,000.00
14.	12" Gate Valve w/SVB	5	ea.	$1,200.00	$6,000.00
15.	Domestic Service to Units		L.S.		$70,000.00
				Subtotal =	$388,900.00

Item	Description	Quantity		Unit Price	Total
C.	Sewer System				
1.	8" Sewerline	1,780	ft.	$50.00	$89,000.00
2.	6" Sewerline	1,100	ft.	$45.00	$49,500.00
3.	Sewer Manhole	13	ea.	$4,000.00	$52,000.00
4.	C.O.T.G.	25	ea.	$1,000.00	$25,000.00
5.	Connection to Existing Sewerline		L.S.		$15,000.00
				Subtotal =	$230,500.00
D.	Drainage System				
1.	Grated Inlets	24	ea.	$5,000.00	$120,000.00
2.	Drain Manholes	1	ea.	$4,000.00	$4,000.00
3.	18" Drainline	920	ft.	$60.00	$55,200.00
4.	24" Drainline	160	ft.	$80.00	$12,800.00
5.	Retention Chambers	1,655	ft.	$250.00	$413,750.00
				Subtotal =	$605,750.00
E.	Electrical, Telephone & CATV System		L.S.		$250,000.00
				Total =	$1,747,525.00
				5% Contingency =	$87,000.00
				Total Estimate =	$1,834,525.00

Note: The above cost estimate does not include any cost for the anticipated improvements required by the County of Maui along Front Street, Kenui Street and Wainee Street.



SITE PLAN

NOT TO SCALE

PLAN
SCALE

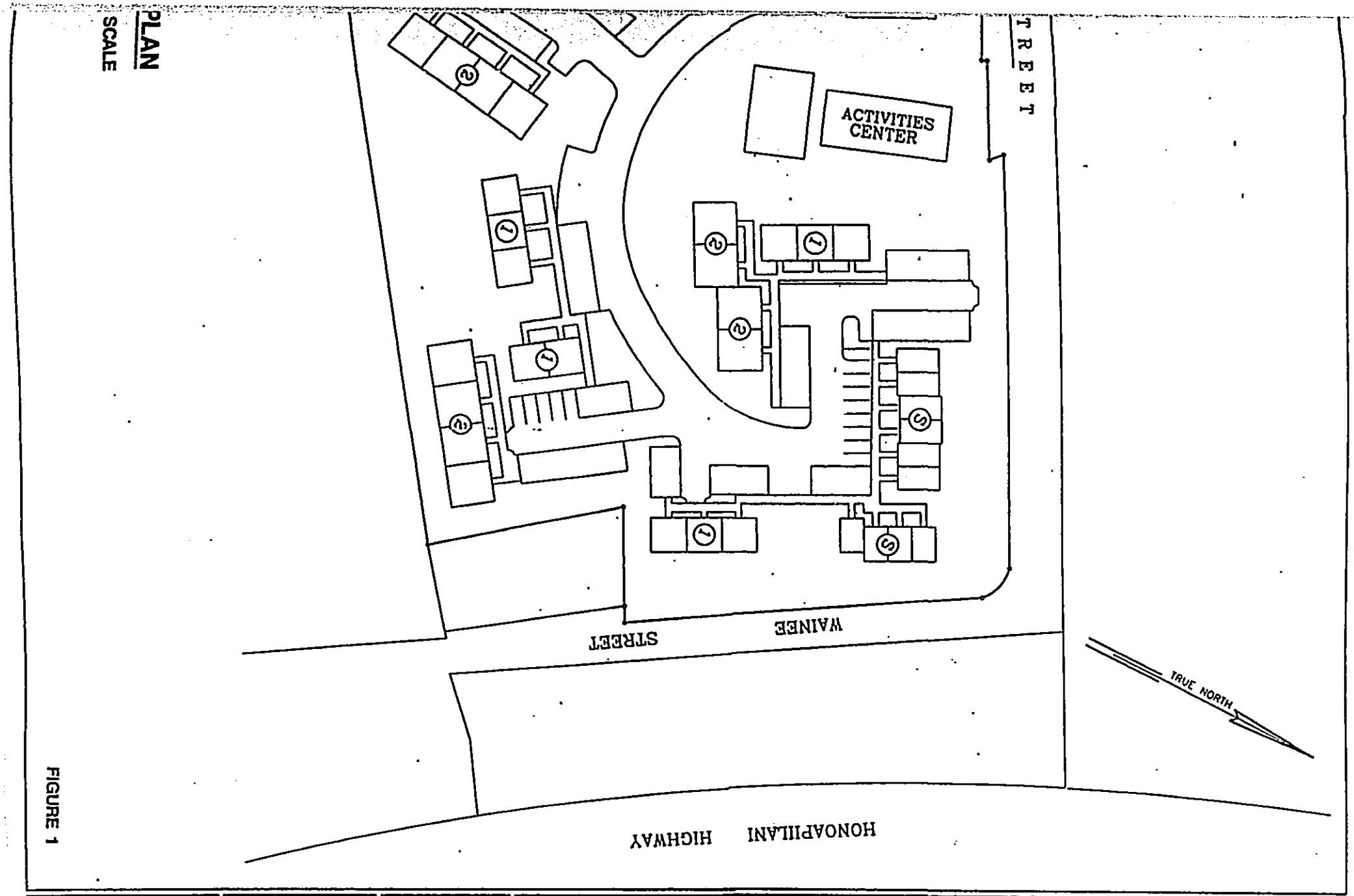


FIGURE 1

T.M.K.: (2)-4-03:13 SCALE: AS NOTED DESIGNED BY: R.T. CHECKED BY: R.T. DRAWN BY: N.D. DATE: JANUARY 1999 JOB No.: 98-76 SHEET OF ____ SHEETS	REVISIONS:	THIS WORK WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION. DATE:		**FRONT STREET APARTMENTS** **AT LAHAINA, MAUI, HAWAII** **TAX MAP KEY: (2) 4-5-03: 13, 14, 15, 38, 39 & 40** PREPARED FOR: MILLENNIUM PACIFIC INVESTMENTS, LLC **SITE PLAN**	Eanoka CIVIL & STRUCTURAL ENGINEERS LAND SURVEYORS 871 KOLU STREET SUITE 201 WAILUKU, HAWAII PHONE No.: 242-8001

REVISED TO
REFLECT LOMR
DATED DEC 6 1991

APPROXIMATE SCALE
500 0 500 FEET

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

MAUI COUNTY, HAWAII

PANEL 161 OF 400
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER
150003 0161 B

EFFECTIVE DATE:
JUNE 1, 1981

federal emergency management agency
federal insurance administration

REFERENCE MARK	ELEVATION IN FT. (NGV
RM 20	25.28
RM 21	96.1
RM 22	9.67
RM 23	22.8
RM 24	39.8

[1]National Geodetic Vertical Datum o

AUAU

ZONE A4

M 32

CANE HAUL ROAD

KAPUNAKEA STREET

MILL STREET

ACCESS ROAD

Wharf

ZONE V12

PROJECT SITE

MALA WHARF

RM22

ALAMOANA STREET

NEW

PUUNOA STREET

Puunoa Point

KAI PALI PLACE

KENUI STREET

KONOPULANI

WAHEE STREET

HIGHWAY

BAKER STREET

ZONE A4

ELEVATION REFERENCE MARKS

REFERENCE MARK	ELEVATION IN FT. (NGVD)[1]	DESCRIPTION OF LOCATION
RM 20	25.28	Square cut on top of parapet at northeast corner of Honoapiilani Highway, bridg south of golf cart overpass.
RM 21	96.1	Square cut on concrete foundation at southeast corner of railroad trestle over Hahal
RM 22	9.67	1.0 mile north of Lahaina, on east side of westbound road to Mala Wharf, on top painted 9.3 set in concrete.
RM 23	22.8	Square cut on base of parapet at northeast corner of Honoapiilani Highway, bridge (
RM 24	39.8	Square cut on top of parapet at northwest end of railroad bridge over Kahoma Strea

[1]National Geodetic Vertical Datum of 1929

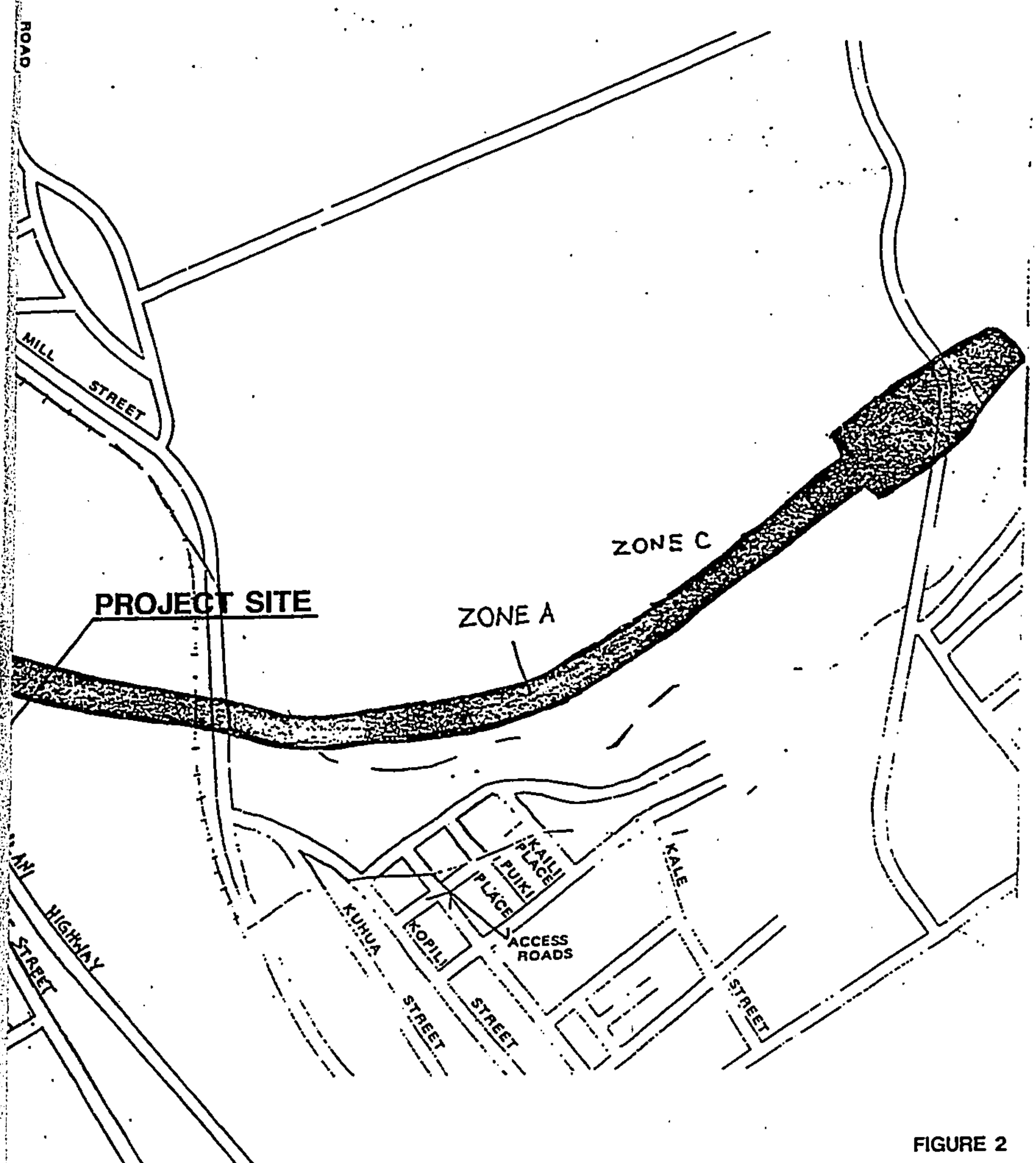


FIGURE 2

Tanaka Engineers, Inc.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS

871 KOLU STREET SUITE 201
WAILUKU, MAUI, HAWAII
PHONE No.: 242-6861

FRONT STREET APARTMENTS
AT LAHAINA, MAUI, HAWAII
TAX MAP KEY: (2) 4-5-031 13, 14, 15, 38, 39 & 40
PREPARED FOR: MILLENNIUM PACIFIC INVESTMENTS, LLC

THIS WORK WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION.

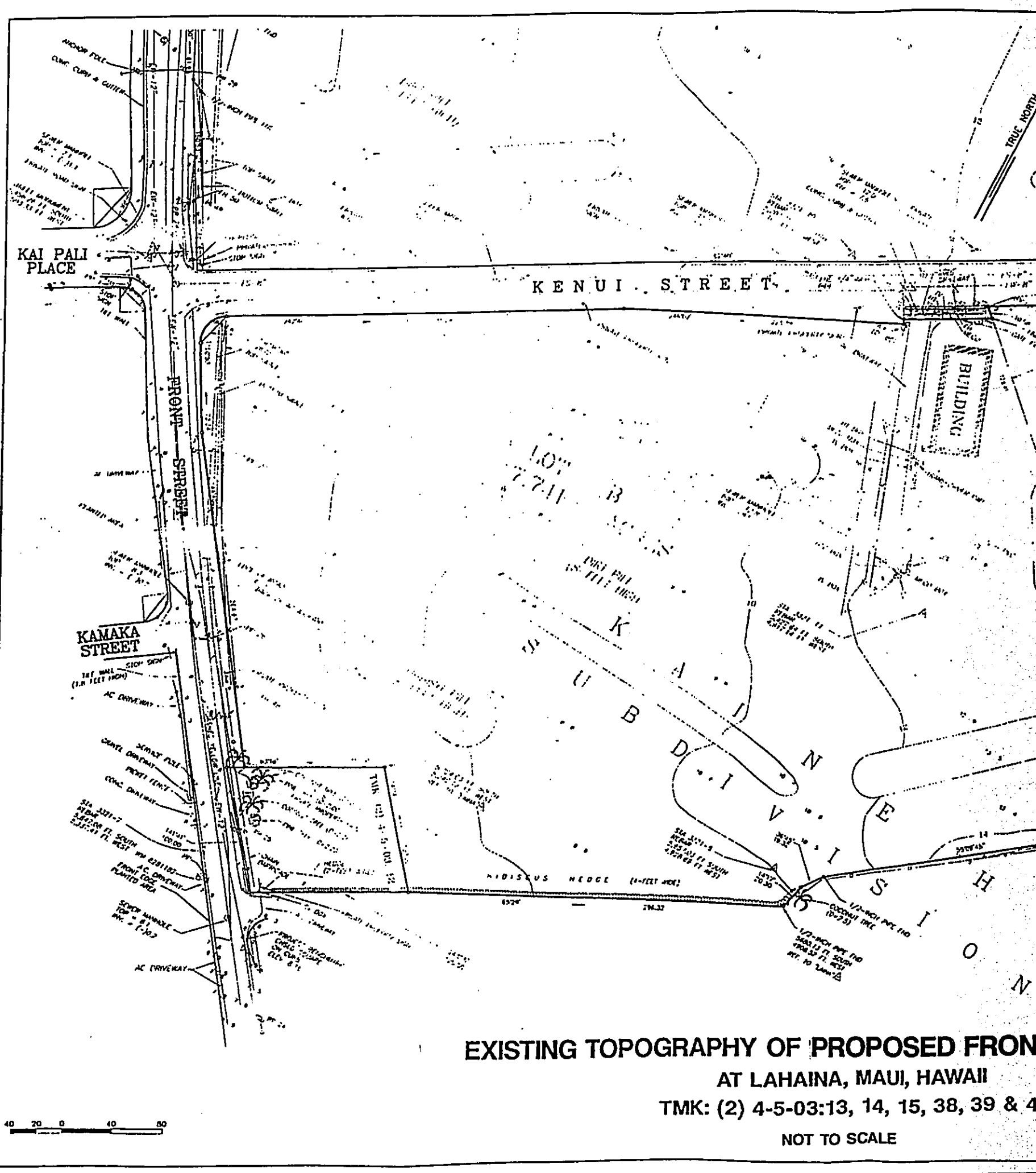
DATE:

REVISIONS:

T.M.K.: (2)4-5-03:13
SCALE: AS NOTED
DESIGNED BY: R.T.
CHECKED BY: R.T.
DRAWN BY: N.D.
DATE: DECEMBER 1998
JOB No.: 98-79

SHEET

OF ____ SHEETS

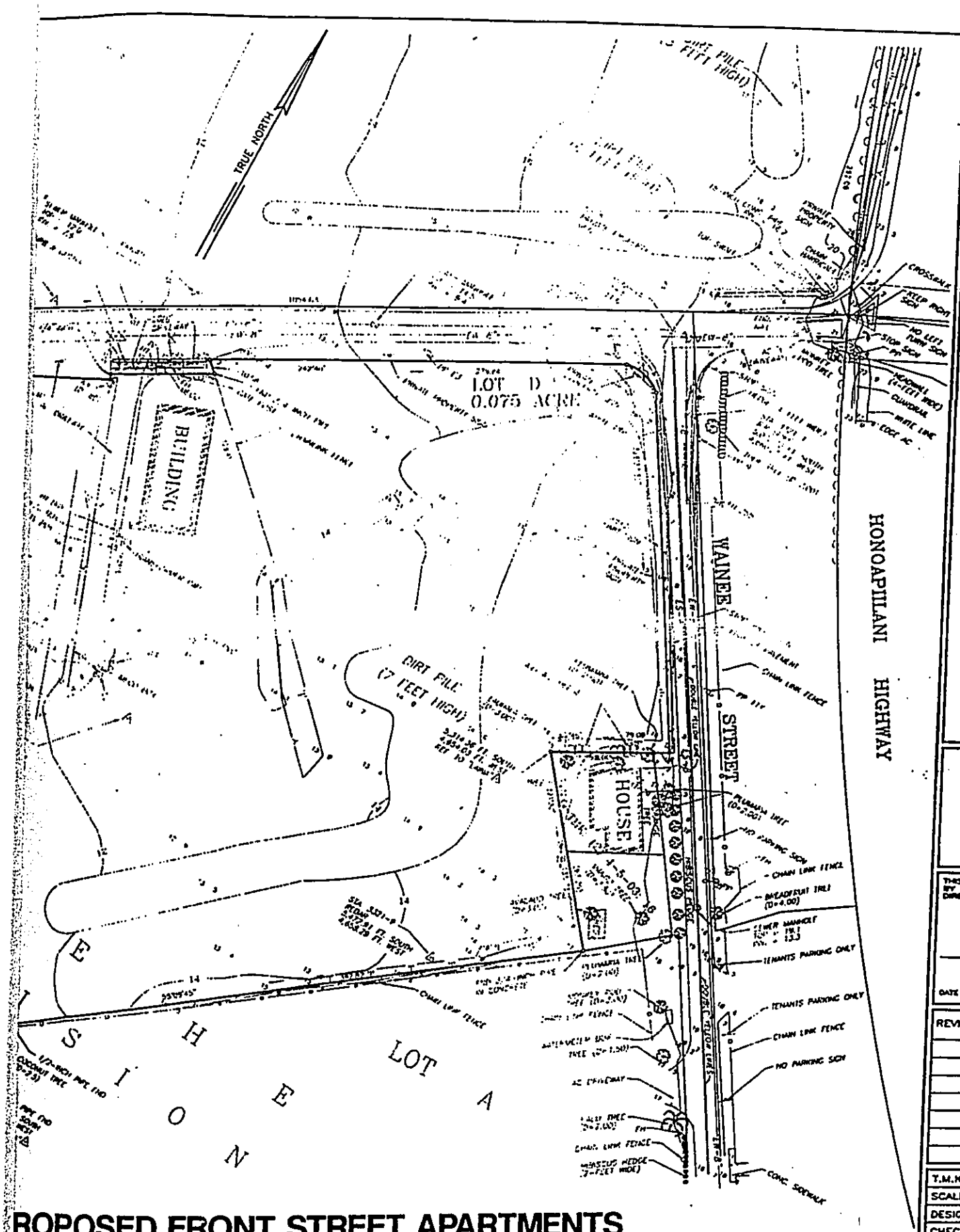


EXISTING TOPOGRAPHY OF PROPOSED FRON

AT LAHAINA, MAUI, HAWAII

TMK: (2) 4-5-03:13, 14, 15, 38, 39 & 4

NOT TO SCALE



ROPOSED FRONT STREET APARTMENTS

A, MAUI, HAWAII

13, 14, 15, 38, 39 & 40

O SCALE

FIGURE 3

SURVEY & MAP PREPARED BY:
BRUCE LEE - 5983 LS
DATED: DEC. 23, 1993

Bonaka ENGINEERS, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS

871 KOLU STREET
SUITE 201
WAILUKU, MAUI, HAWAII
PHONE No.: 242-6881

FRONT STREET APARTMENTS
AT LAHAINA, MAUI, HAWAII
TAX MAP KEY: (2) 4-5-03: 13, 14, 15, 38, 39 & 40
PREPARED FOR: MILLENNIUM PACIFIC INVESTMENTS, LLC

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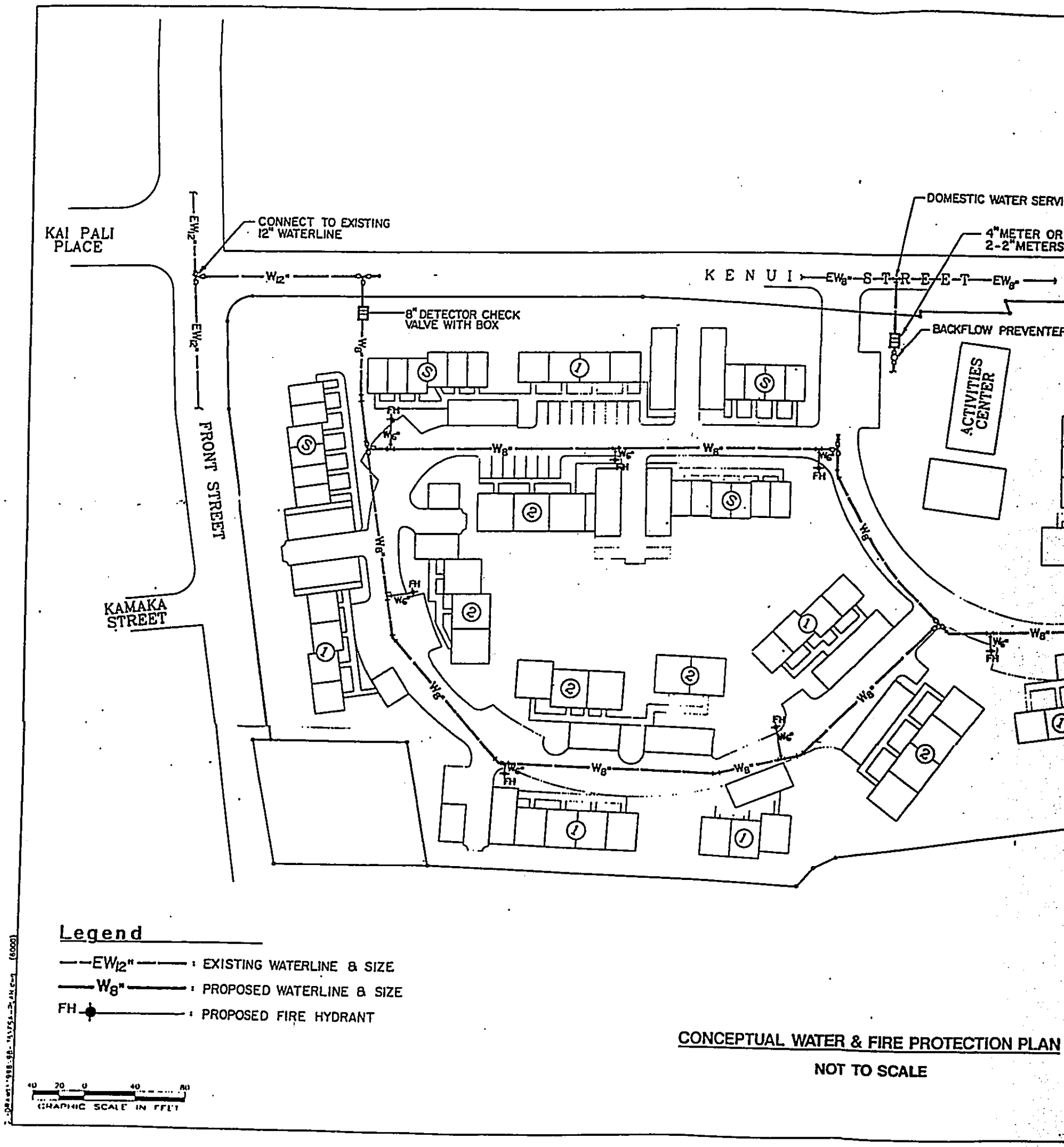
DATE :

REVISIONS:

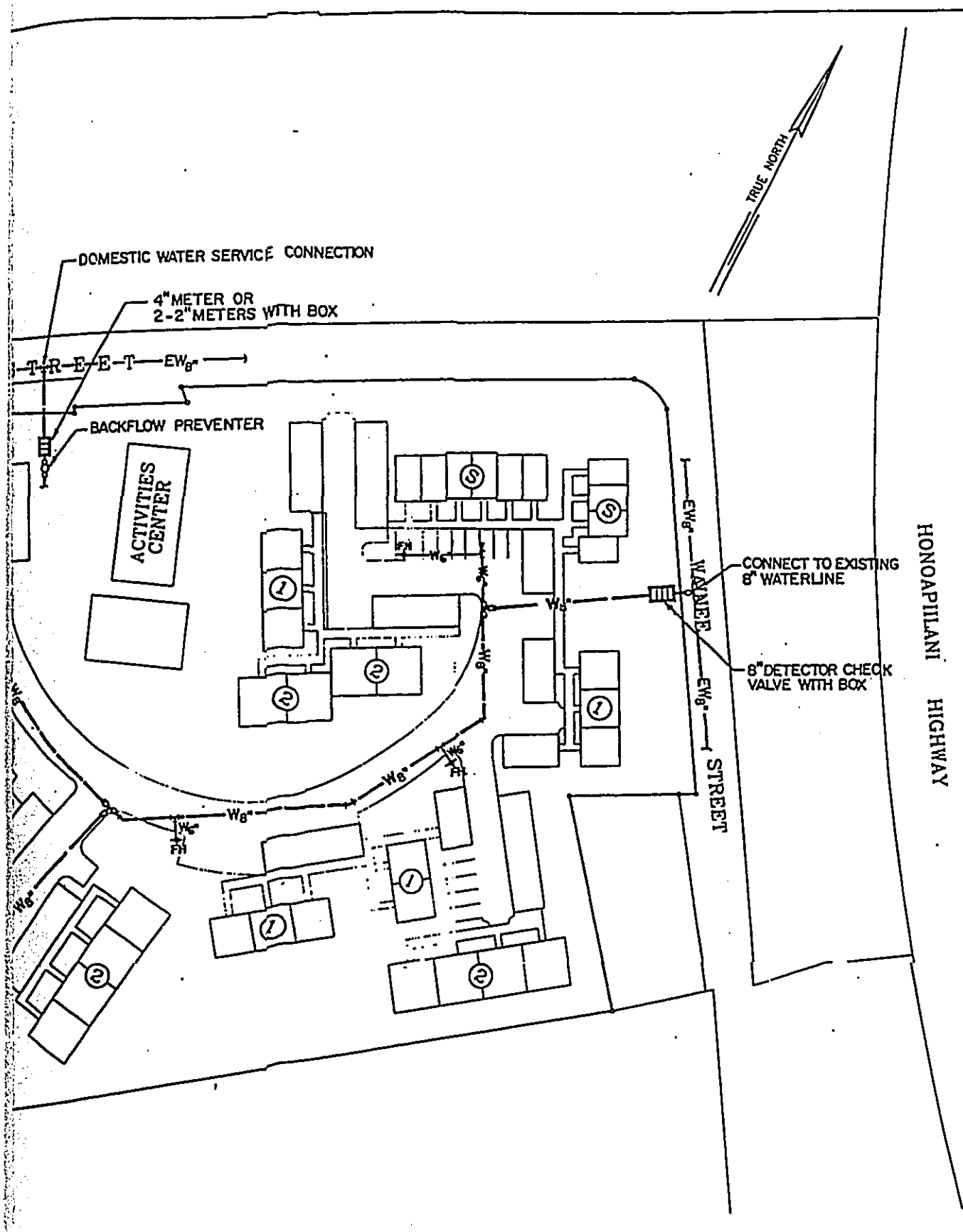
T.M.K.: (2)4-5-03:13
SCALE: AS NOTED
DESIGNED BY: R.T.
CHECKED BY: R.T.
DRAWN BY: N.D.
DATE: DECEMBER 1998
JOB No.: 98-78

SHEET



CONCEPTUAL WATER & FIRE PROTECTION PLAN

NOT TO SCALE



& FIRE PROTECTION PLAN

TO SCALE

FIGURE 4

Tanaka
ENGINEERS, INC.
CIVIL & STRUCTURAL
ENGINEERS
LAND SURVEYORS

871 KOLU STREET
SUITE 201
WAILUKU, MAUI, HAWAII
PHONE No.: 242-8861

FRONT STREET APARTMENTS
AT LAHAINA, MAUI, HAWAII
TAX MAP KEY: (2) 4-5-03: 13, 14, 15, 38, 39 & 40
PREPARED FOR: MILLENNIUM PACIFIC INVESTMENTS, LLC

CONCEPTUAL WATER & FIRE PROTECTION PLAN

THIS WORK WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION

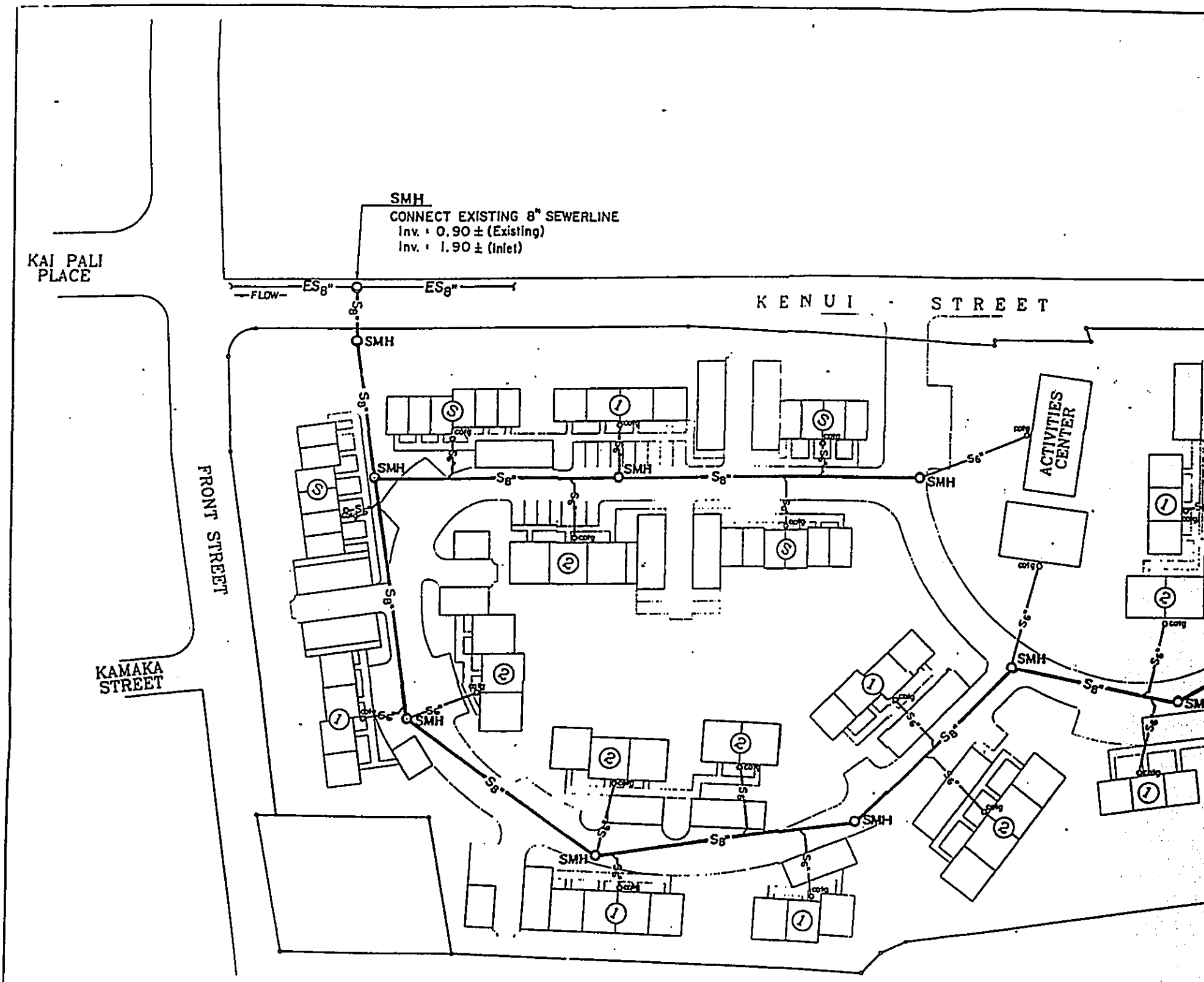
DATE : _____

REVISIONS:

T.M.K.: (2)4-5-03:13
SCALE: AS NOTED
DESIGNED BY: R.T.
CHECKED BY: R.T.
DRAWN BY: N.D.
DATE: JANUARY 1999
JOB No.: 98-75

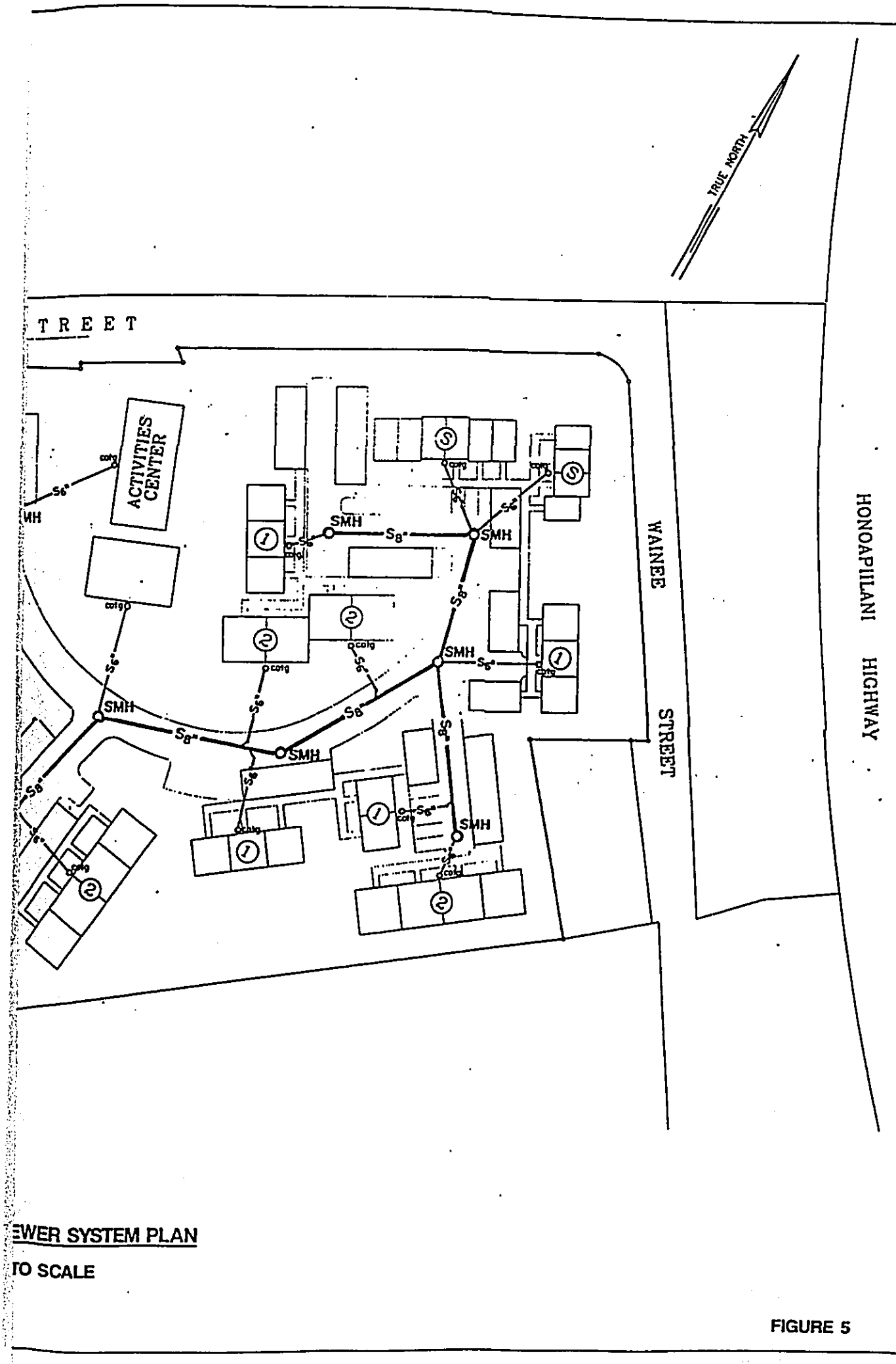
SHEET

OF ____ SHEETS



CONCEPTUAL SEWER SYSTEM PLAN

NOT TO SCALE



EWER SYSTEM PLAN

TO SCALE

FIGURE 5

Tanaka ENGINEERS, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS

871 KOLU STREET
SUITE 201
WAILUKU, MAUI, HAWAII
PHONE No.: 242-6661

FRONT STREET APARTMENTS
AT LAHAINA, MAUI, HAWAII
TAX MAP KEY: (2) 4-5-03: 13, 14, 15, 38, 39 & 40
PREPARED FOR: MILLENNIUM PACIFIC INVESTMENTS, LLC

CONCEPTUAL SEWER SYSTEM PLAN

THIS WORK WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION.

DATE: _____

REVISIONS:

T.M.K.: (2)4-5-03:13
SCALE: AS NOTED
DESIGNED BY: R.T.
CHECKED BY: R.T.
DRAWN BY: N.D.
DATE: JANUARY 1999
JOB No.: 98-76

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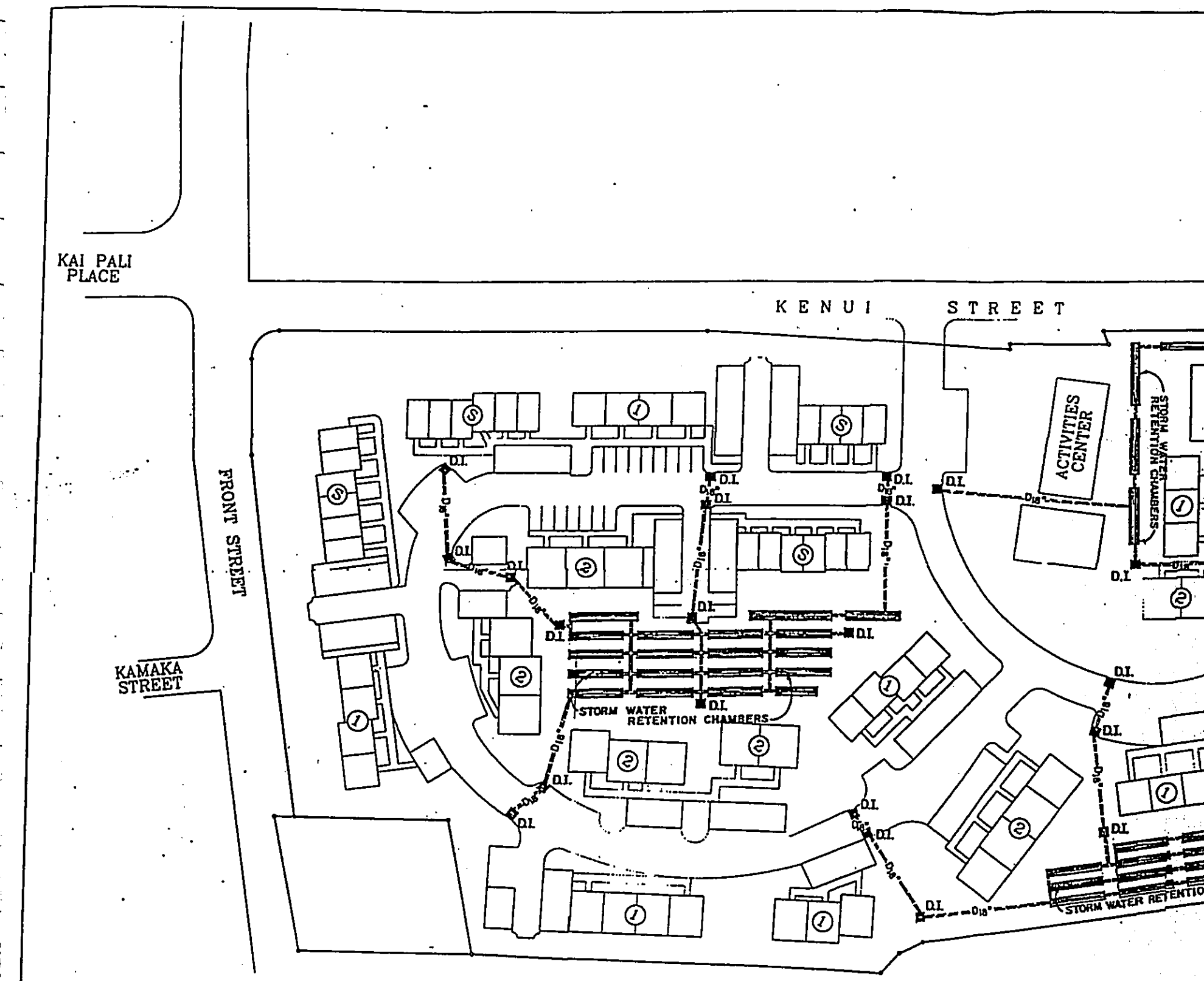
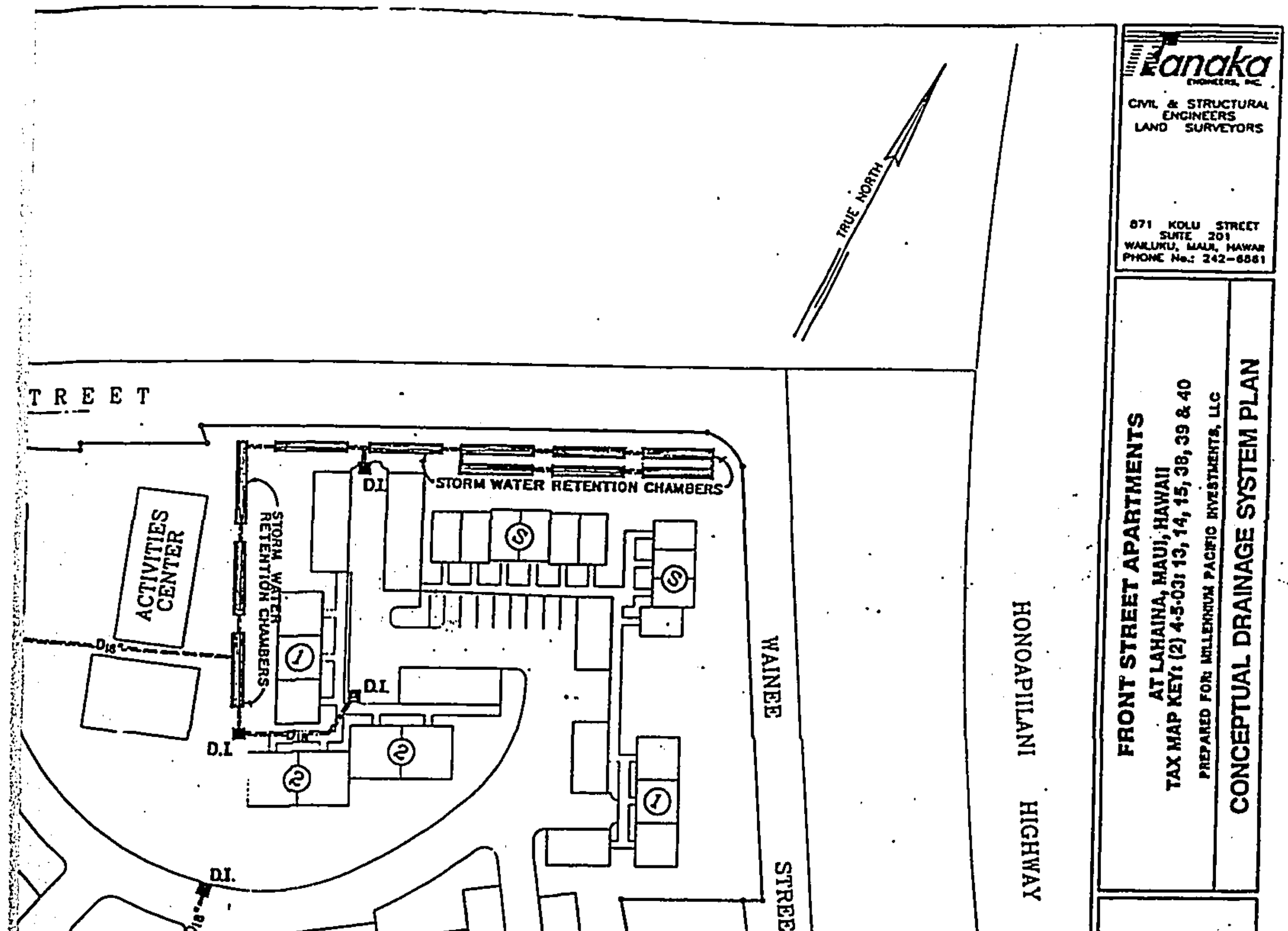
OF _____ SHEETS



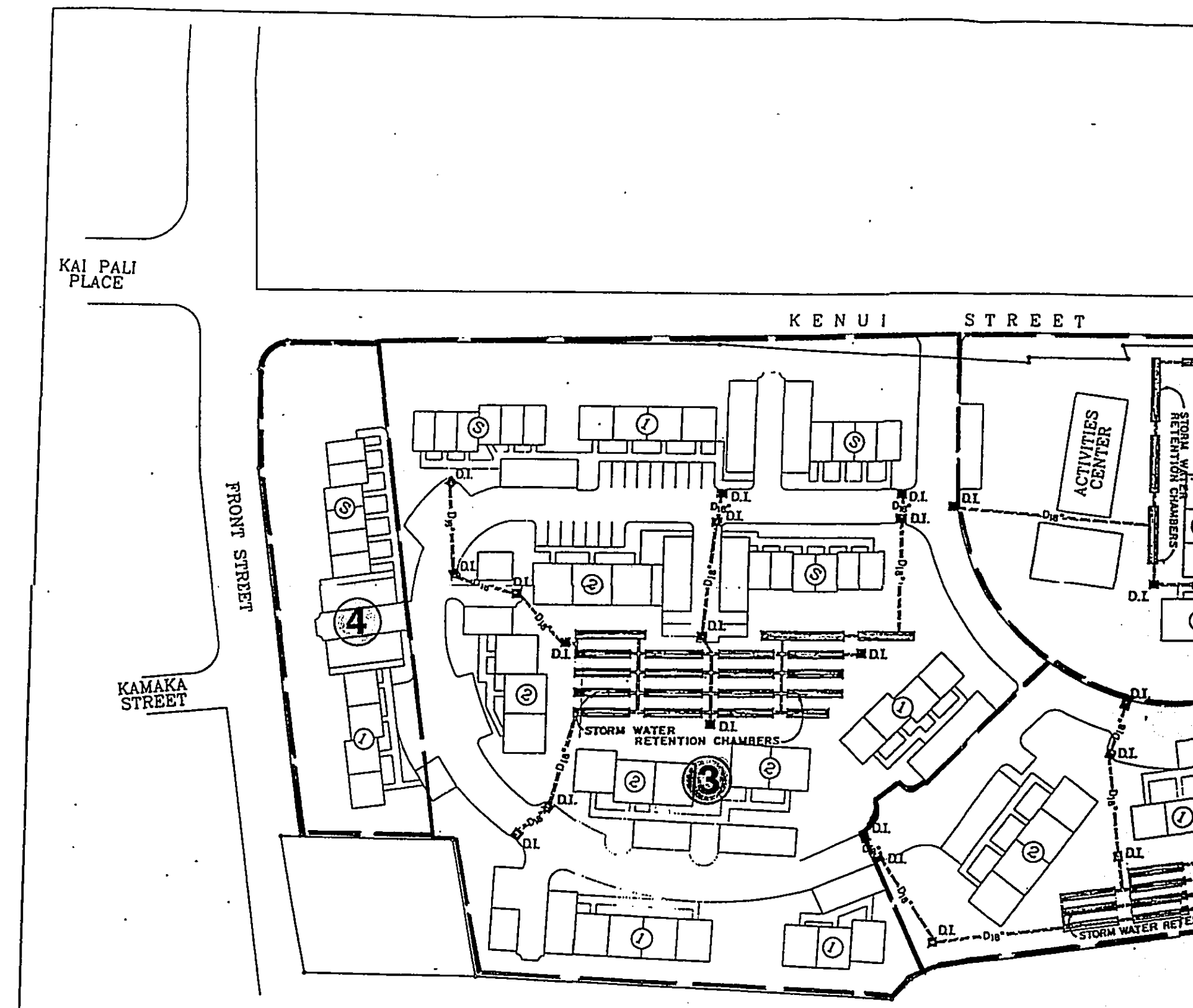
CONCEPTUAL DRAINAGE SYSTEM PLAN

NOT TO SCALE



Tanaka Engineers, Inc.
CIVIL & STRUCTURAL ENGINEERS LAND SURVEYORS
871 KOLU STREET SUITE 201 WAILUKU, MAUI, HAWAII PHONE No.: 242-6861
FRONT STREET APARTMENTS
AT LAHAINA, MAUI, HAWAII
TAX MAP KEY: (2) 4-5-03: 13, 14, 15, 38, 39 & 40
PREPARED FOR: MILLENNIUM PACIFIC INVESTMENTS, LLC
CONCEPTUAL DRAINAGE SYSTEM PLAN
THIS WORK WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION.
DATE :
REVISIONS:
T.M.K.: (2)4-5-03:13
SCALE: AS NOTED
DESIGNED BY: R.T.
CHECKED BY: R.T.
DRAWN BY: N.D.
DATE: JANUARY 1999
JOB No.: 98-76
SHEET
OF SHEETS
TRUE NORTH
HONOAPIILANI HIGHWAY
WAINEE STREET
TREET
ACTIVITIES CENTER
STORM WATER RETENTION CHAMBERS
D.I.
NAGE SYSTEM PLAN
SCALE

FIGURE 6



Legend

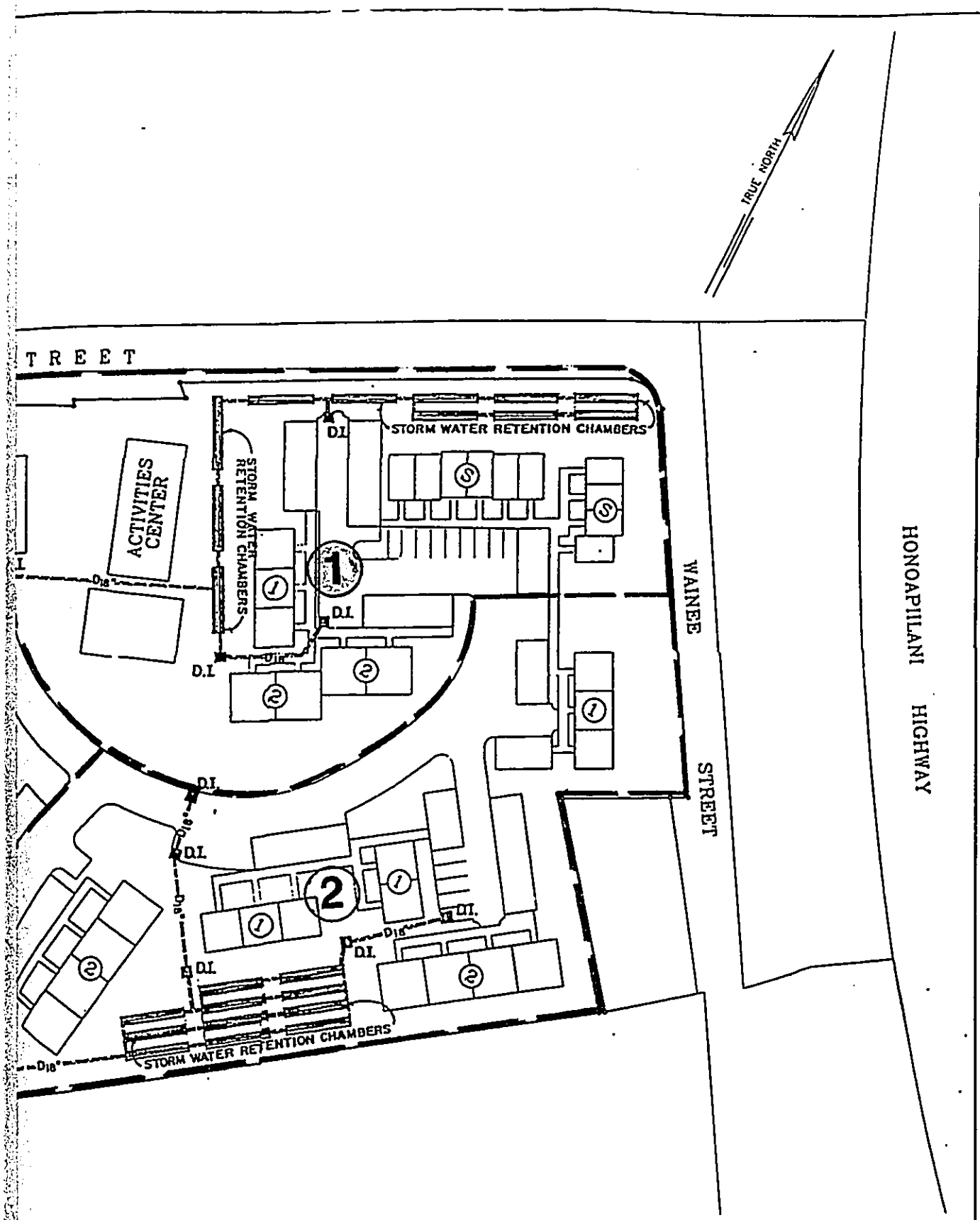
D18" : PROPOSED DRAINLINE & SIZE

D.I. : PROPOSED DROP INLET

GRAPHIC SCALE IN FEET (40 20 0 40 80)

CONCEPTUAL DRAINAGE SYSTEM PLAN

NOT TO SCALE



INAGE SYSTEM PLAN

O SCALE

FIGURE 7

Tanaka ENGINEERS, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS
871 KOLU STREET
SUITE 201
WAILUKU, MAUI, HAWAII
PHONE No.: 242-6861

FRONT STREET APARTMENTS
AT LAHAINA, MAUI, HAWAII
TAX MAP KEY: (2) 4-5-03: 13, 14, 15, 38, 39 & 40
PREPARED FOR: MILLENNIUM PACIFIC INVESTMENTS, LLC

CONCEPTUAL DRAINAGE SYSTEM PLAN

THIS WORK WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION.

DATE :

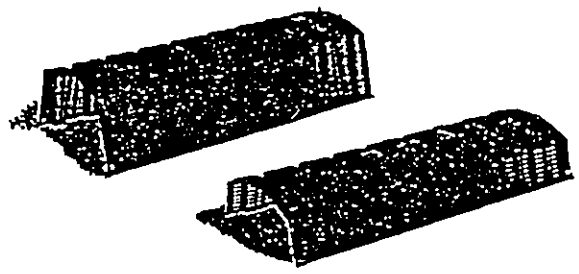
REVISIONS:

T.M.K.: (2)4-5-03:13
SCALE: AS NOTED
DESIGNED BY: R.T.
CHECKED BY: R.T.
DRAWN BY: N.D.
DATE: JANUARY 1999
JOB No.: 98-76

SHEET

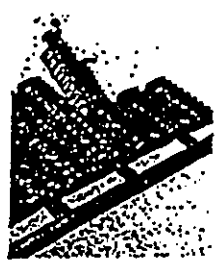
OF ___ SHEETS

EnviroChamber™ Stormwater Retention Systems



Hancor EnviroChamber units are extremely efficient, economical solutions for stormwater retention applications. Available in 87-gallon standard capacity and 138-gallon high-capacity models.

Cost-Effective Flexibility and Installation



EnviroChamber units can be divided in two by cutting on the center line. This saves time, reduces additional excavation costs and eliminates using more product than is necessary. Installation is fast and easy, because Hancor EnviroChamber units are made from lightweight high density polyethylene, so no heavy equipment is needed. Manufactured with a strong, innovative rib design, EnviroChamber units meet load requirements.

Designed for Optimum Performance

The Hancor EnviroChamber stormwater retention chamber is engineered with an open bottom and louvered sidewalls to maximize subsurface infiltration into the native soil. Each chamber can withstand H-10 traffic loads with only 12" of compacted backfill and cover and H-20 loads with 18" of compacted backfill and cover. This means LandMax™ systems can be installed underneath parking lots, allowing owners to maximize the available surface area. Available in standard and high capacity chambers, both low-profile EnviroChamber options provide optimal subsurface alternatives in high groundwater applications.

Table 1*

Product	Product Volume CF/FT	Stone Void Volume CF/FT	Total Retention Storage CF/FT	Retention Surface Area Required SF/CF
EnviroChamber Standard	1.65	1.60	3.25	0.87
EnviroChamber High Capacity	2.95	1.60	4.55	0.62

Note: Length of One (1) Unit = 75"
= 6.25'

R. T. TANAKA ENGINEERS, INC.
CIVIL & STRUCTURAL ENGINEERS & LAND SURVEYORS
871 KOLU ST. STE. 201
WAILUKU, MAUI, HAWAII

CALC. BY _____ DATE _____
DRAWN BY _____ DATE _____
CHECKED BY _____ DATE _____

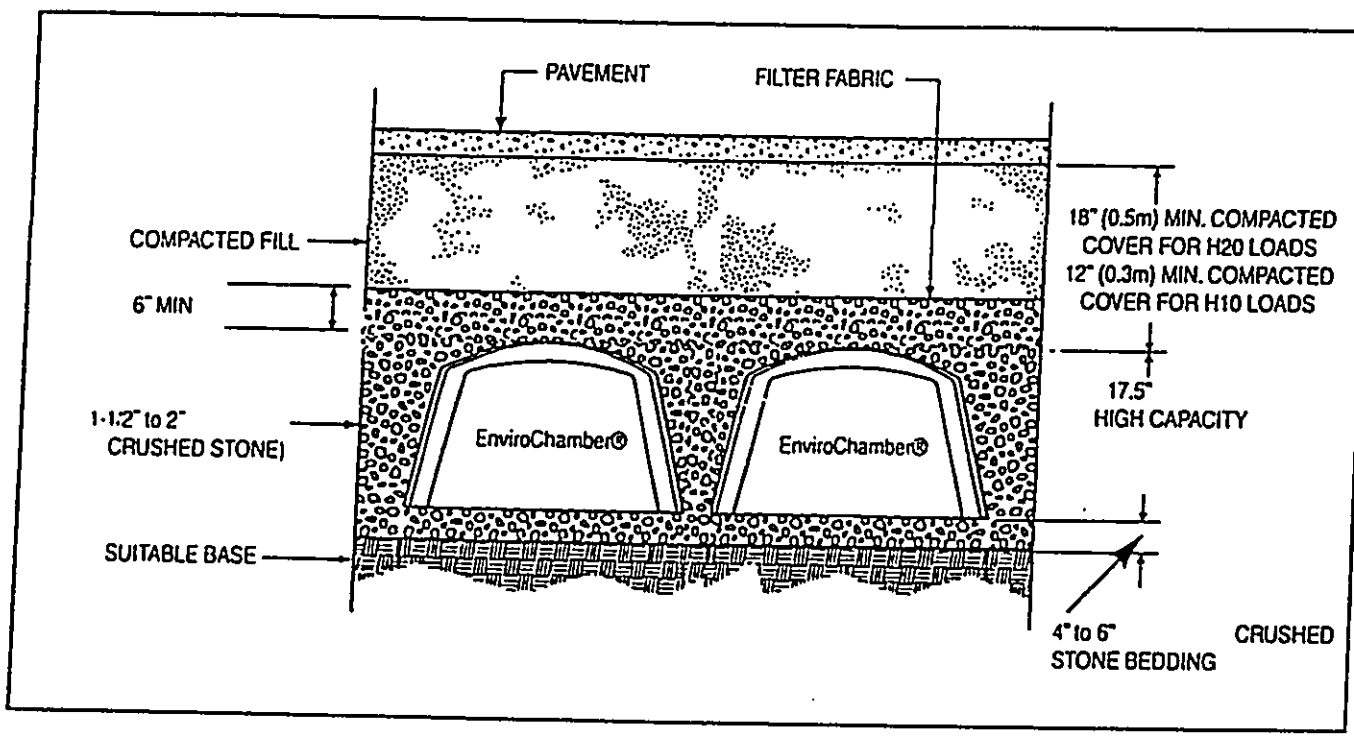
JOB NO.

FRONT STREET APARTMENTS
AT LAHAINA, MAUI, HAWAII

SCALE

SHT. NO. OF SHTS.

FIGURE 8

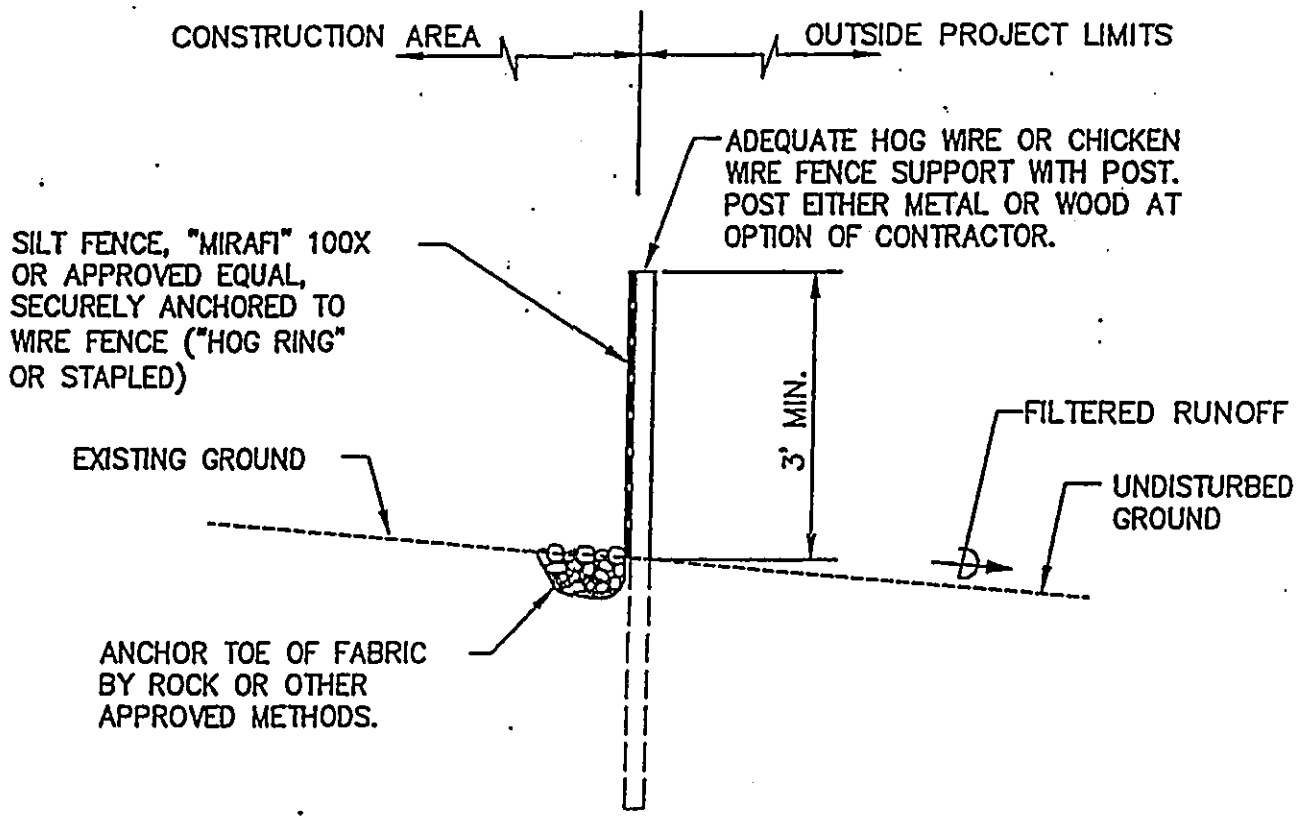


TYPICAL CROSS SECTION

Scale: None

R. T. TANAKA ENGINEERS, INC. CIVIL & STRUCTURAL ENGINEERS & LAND SURVEYORS 871 KOLU ST. STE. 201 WAILUKU, MAUI, HAWAII		FRONT STREET APARTMENTS AT LAHAINA, MAUI, HAWAII
CALC. BY _____ DATE _____ DRAWN BY _____ DATE _____ CHECKED BY _____ DATE _____	JOB NO.	SCALE / SHT. NO. OF SHTS.

FIGURE 9



TYPICAL INSTALLATION - SILT FENCE

NOT TO SCALE

MAINTENANCE NOTES:

1. SILT FENCES OR FILTER BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
2. SHOULD THE FABRIC ON THE SILT FENCE OR FILTER BARRIER DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER STILL BE NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY.
3. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE–HALF THE HEIGHT OF THE BARRIER.
4. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OR FILTER BARRIER IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE, PREPARED AND SEEDED.

FIGURE 10

APPENDIX C

Archaeological Report

ASC94-8

AN ARCHAEOLOGICAL INVENTORY SURVEY OF AN 8.8-ACRE PARCEL
Kenui Street Project
Paunau, Lahaina, Maui
(TMK 4-5-03:12, 13, 15, 38-40)

By

Berdena Burgett, B.A.

and

Robert L. Spear, Ph.D.

Prepared for

KCOM Corporation
99-1379 Koaha Place
Aiea, Hawai'i 96701

June 1994

Aki Sinoto Consulting
2333 Kapiolani Blvd. No. 2704
Honolulu, Hawai'i 96826

ABSTRACT

At the request of KCOM Corp. an archaeological inventory survey was conducted on a parcel of land located in the Land of Kainehi, Paunau *ahupua'a*, Lahaina District, Island of Maui (TMK:4-5-03:12, 13, 15, 38, 39, and 40). A total of 22 test trenches were excavated within the project area. A single human burial (State Site number 50-50-03-3550) was identified and no other significant cultural deposits were encountered. The identified burial remains in place pending discussions between the KCOM Corp, and the Maui Island Burial Council. It is recommended that an archaeological monitor be "on call" in the event of encountering unanticipated findings as the development of this parcel proceeds.

TABLE OF CONTENTS

MAPS

ILLUSTRATIONS

Stratigraphic Trench Profiles :

INTRODUCTION

At the request of KCOM Corp., an Archaeological Inventory Survey was conducted by Aki Sinoto Consulting in association with Scientific Consultant Services, Inc. (SCS) on a parcel of land located in the Land of Kainehi, Paunau *ahupua'a*, Lahaina District, Island of Maui at (TMK:4-5-03:12, 13, 15, 38, 39, and 40)(Fig. 1). The purpose of the survey was to determine the presence or absence of significant cultural remains within the project area. Field work was carried out on April 18-26, 1994 by Project Director Berdena Burgett with the assistance of Field Archaeologists Leina'ala Benson and Andree Conley under the overall direction of Robert L. Spear, Ph.D.

SETTING

The project area consists of c. 8.8 acres located approximately 300 feet inland of the shoreline. The property is bounded by Front Street on the west, by Kenui Street on the north, and by Wainee Street on the east (Fig. 2). The southern extent of the parcel is defined by a fence along most of its length.

The terrain is generally flat and has been modified by sugarcane cultivation and by recent bulldozing. Rainfall in the area is c. 14 inches per year. The mean annual temperature is approximately 80 degrees Farenheit (Armstrong 1983:62, 64).

Two classifications of soil are present within the parcel; Ewa silty clay loam and Pulehu silt loam which are found on 0-3% slopes. Both series represent well drained soils found in basins and alluvial plains. These soils are generally used for sugarcane planting and homesteads (Foote, et al. 1973:30,115).

A leveled c. 50 foot wide band of lawn has been planted around the perimeter of the project area. Naturally occurring vegetation is confined to the area enclosed by bulldozed berms and on the berms and pushpiles in the central portion. The vegetation is primarily a low ground cover of grasses and weeds that includes fingergrass (*Chloris inflata*, Link), Bermuda grass (*Cynodon dactylon* [L.} pers. var. *dactylon),* and *klu* (*Acasia farnensiana* [L.] Willd.).

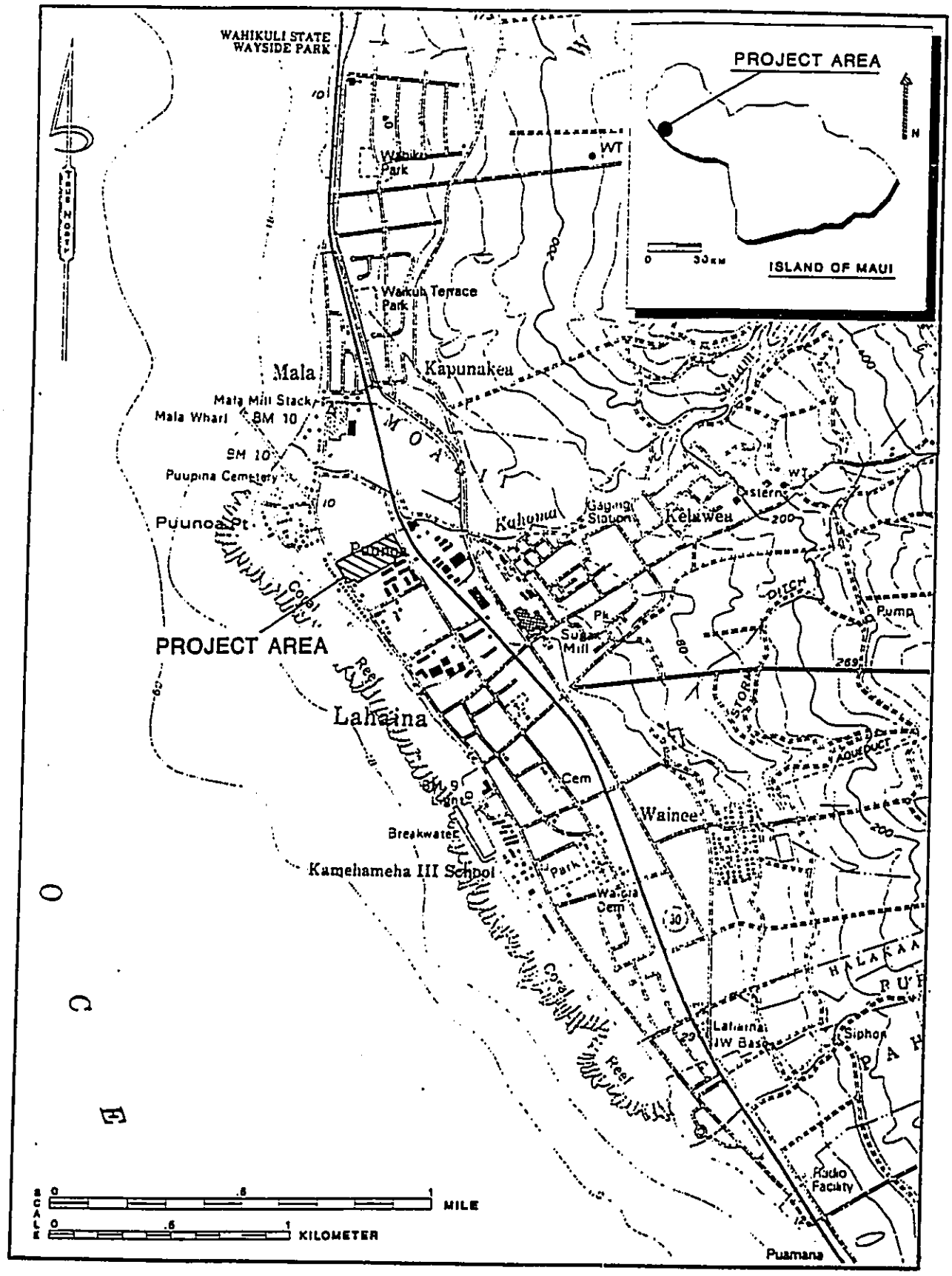


FIGURE 1: USGS LAHAINA QUADRANGLE SHOWING PROJECT AREA.

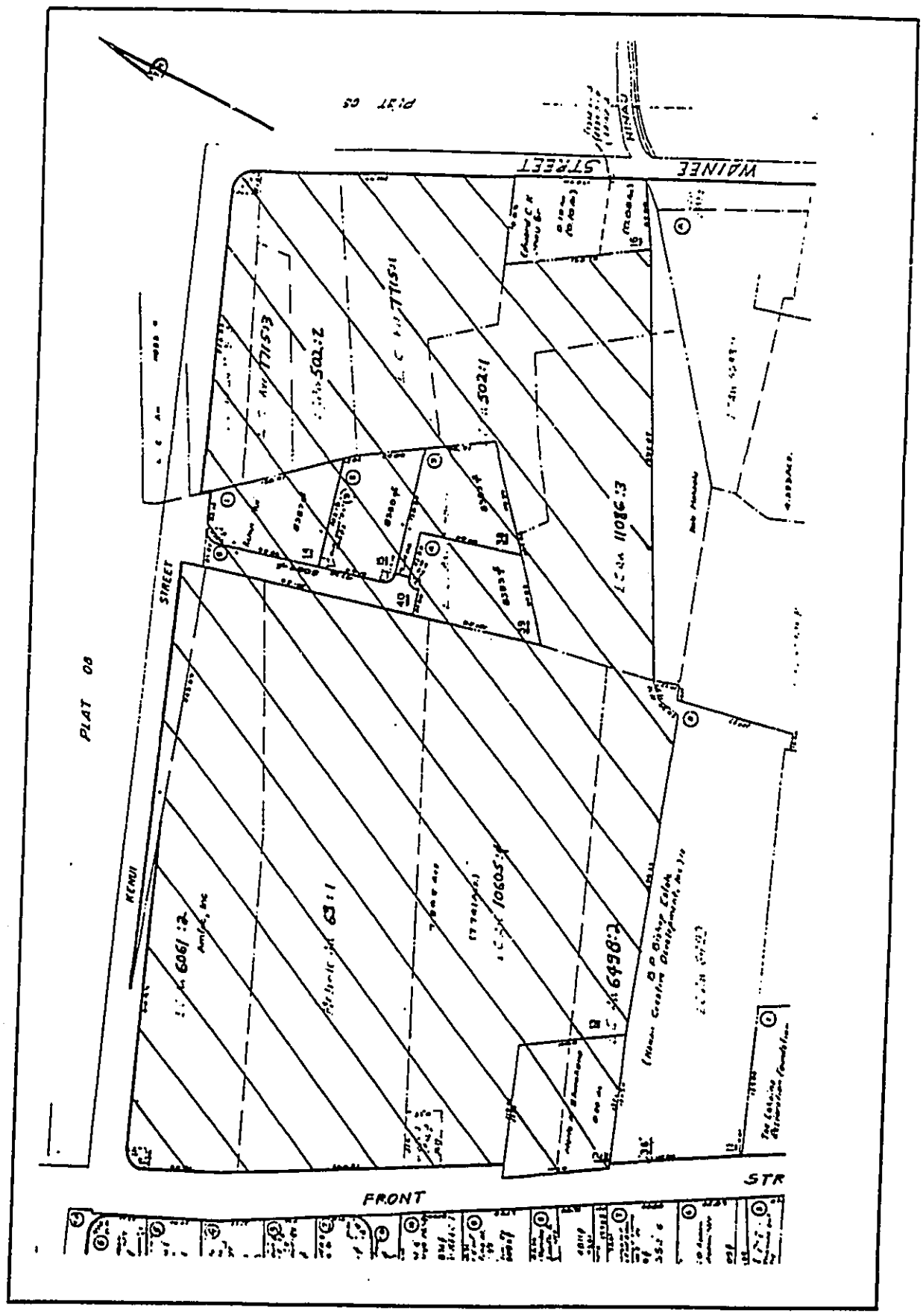


FIGURE 2: TAX MAP 4-5-03:12, 13, 15, 38, 39 AND 40 SHOWING PROJECT AREA (SHADED) AND LAND COMMISSION AWARDS (LCAs).

HISTORICAL BACKGROUND

Lahaina District was one of two main centers of population in West Maui. It was favored as a place of residence by the high chiefs of Maui because of the climate, the abundant food resources, and easy communication with the other heavily populated areas of eastern and northeastern West Maui. Also in its favor was the proximity to Lana'i and Moloka`i (Handy and Handy 1972:492).

At the time of Captain George Vancouver's visit to the Island of Maui in 1793 there was much devastation resulting from the wars of unification that had been raging since the mid-1700s. At Lahaina Village, the irrigated taro fields, ponds, and water system had been destroyed. Alapa`i-nui of Hawaii, at war against the Oahu *mo`i* Peleiohani on Maui, dried up Kaua`ula, Kahana, and Kahoma streams, destroyed the terraces and *auwai*, and the productive capabilities of the *lo'i* below (*Kamakau in Klieger 1993*).

All of Lahaina was not the scene of devastation. A description of the village of Lahaina was written in March 1793 by Archibald Menzies, naturalist and surgeon with Vancouver:

> March 17. On the forenoon of the 17th, I accompanied Captain Vancouver and a party of officers, with two Niihau women, to see the village of Lahaina, which we found scattered along the shore on a low tract of land that was neatly divided into little fields and laid out in the highest state of cultivation and improvement by being planted in the most regular manner with the different esculent roots and useful vegetables of the country, and watered at pleasure by aqueducts that ran here and there along the banks intersecting the fields, and in this manner branching through the plantation.
>
> These little fields were transplanted in a variety of forms, some in rows, in squares, in clumps and others were with equal care kept dry by gathering earth around them in little hills. In short, the whole plantation was cultivated with such studious care and artful industry as to occupy our minds and attention with a constant gaze of admiration during a long walk through it, in which we were accompanied by a numerous group of natives that continued very peaceful and orderly the whole time (Menzies in Handy and Handy 1972:493).

The strategic location of Lahaina, its fresh water supplies, and forests brought Kamehameha I to Lahaina to build a fleet for his planned invasion of Kaua`i.

Kamehameha and a court of 1,000 encamped in Lahaina in 1802 and constructed his brick palace on the point. Under the direction of Governor Ke'eaumoku, reconstruction in Lahaina continued. Taro field walls destroyed during the wars of unification were repaired and the land was made productive again (Klieger and Dixon 1993:6).

The first map of the Lahaina area was made by M.L.I. Duperry, officer of a French battleship that visited Lahaina in August 1819 (Fig. 3). Duperry's map depicts the buildings of the village and identifies various agricultural fields planted in taro, sugarcane, and cotton. The map shows no houses or agricultural fields in the present project area, but appears to place a stream within the area. The limits of Lahaina Village are to the immediate south. To the north, a cluster of houses and a taro field are shown near the mouth of the Kahoma Stream and scattered houses along the coast.

At the time of William Ellis's visit, Lahaina District had "extensive tracts of well watered, land in a high state of cultivation...the level land of the whole district, for about three miles, is one continuous garden, laid out in beds of taro, potatoes, yams, sugar-cane, or cloth plants" (Ellis 1979:5, 41).

Handy and Handy, citing Fornander (1917-1919), state that: according to legend, the country from Keka`a to Wahikuli, north of Lahaina, once had many houses and was intensively cultivated. Handy interprets this legend to imply "continuous cultivation of the coastal region along the northwest coast" of Maui (Handy and Handy 1972:494).

Information on settlement patterns and land tenure during the mid-1800s is often found in testimony given in support of Land Commission Awards. A review of cartographic sources and LCA Testimonies indicate that several house lots and a number of taro pondfields were present in the project area. The Indices to Land Commission Awards lists 10 LCAs in the project area parcel and Native Testimony on land use is available for four of the LCAs:

> LCA 6061:2 to S. Kanemo: 17 taro *lo'i*, nine *mo'o*, and three breadfruit trees.
>
> LCA 10605:4 to Iona Pi'ikoi:
>
> LCA 6498:2 to Kokio: Five *mo'o*, one *pauku* of taro, four breadfruit trees, and a houselot.

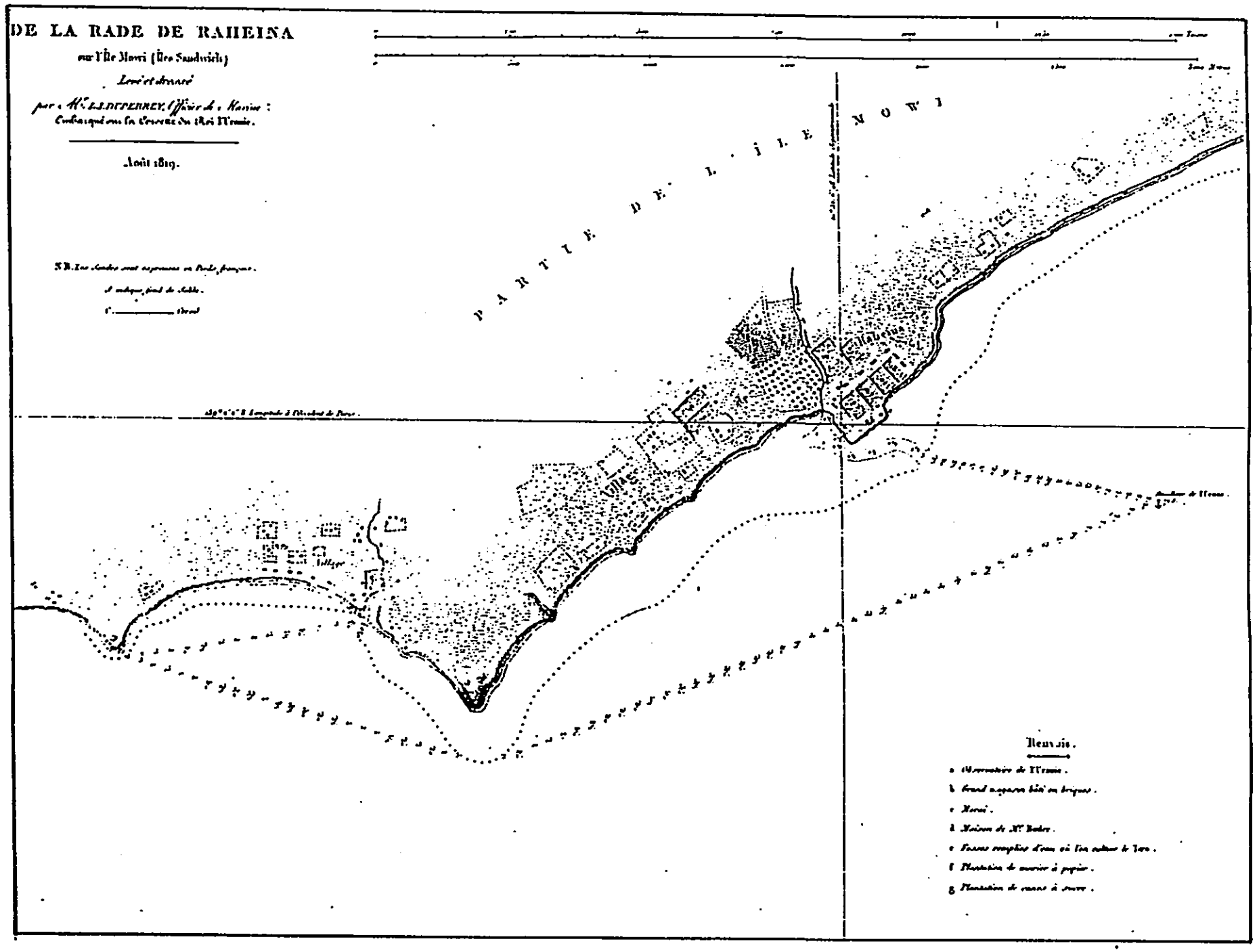


FIGURE 3: 1819 MAP OF LAHAINA BY DUPERREY SHOWING LAND USE.

LCA 3425-B:3 to Alu: three parcels of *kula* land. "Purchased by Kekahuna. Since sold to a foreigner."

LCA 7715:1 and 7715:2 to Lotta Kapuaiwa Kamehameha:

LCA 502:1 and 502:2 to Pupuka:

LCA 485:1 and 11086:3 to J. H. Kaiheekai: *Kalo* land

Commercial sugarcane operations on Maui began with the opening of a sugar mill in Lahaina in 1849. Lahaina Sugar Company was established in 1859 and Pioneer Mill in 1860. Lahaina Sugar Company went bankrupt in 1863 and was sold to Pioneer Mill Company. Another plantation formed by Lot Kamehameha and others in 1870, was bought by Pioneer Mill Company a few years later. When Pioneer Mill Company reorganized in 1900 the prospectus for the change designated the land area of plantation property in Lahaina as "1,000 acres of land on the flat and outside small *kuleanas*..." (Conde in Jensen 1989).

Most of the arable land in the district was under cultivation of the sugar plantations by the late 1800s. Pioneer Mill Company, and the smaller companies that serviced it, produced 2,000 tons of sugar annually. Expansion of sugar cane cultivation continued until shortly before W.W.II when no additional land was available (Lind 1967; in Kennedy and Denham 1992:9).

A map of general land use in the Lahaina area in 1884 (Community Planning, Inc. 1960) shows that a single Hawaiian residence, in LCA 485:1, was occupied within the project area (Fig. 4). On a 1960 map of the same area the entire project area is planted in sugarcane.

PREVIOUS ARCHAEOLOGY

Only two archaeological investigations have been recorded in the immediate vicinity of the present project area. Three backhoe trenches were excavated by Folk (1991) during a trench survey of a 0.28 acre lot located at the southwest corner of the current study area. No cultural deposits were identified. Kurashina and Sinoto (1984) conducted a reconnaissance survey of an 11.7 acre lot on the east side of Front Street between Baker and Papalaua Streets. This location is a block and a half south of the present project location. Two sites associated with Pioneer Mill were identified; an irrigation gate

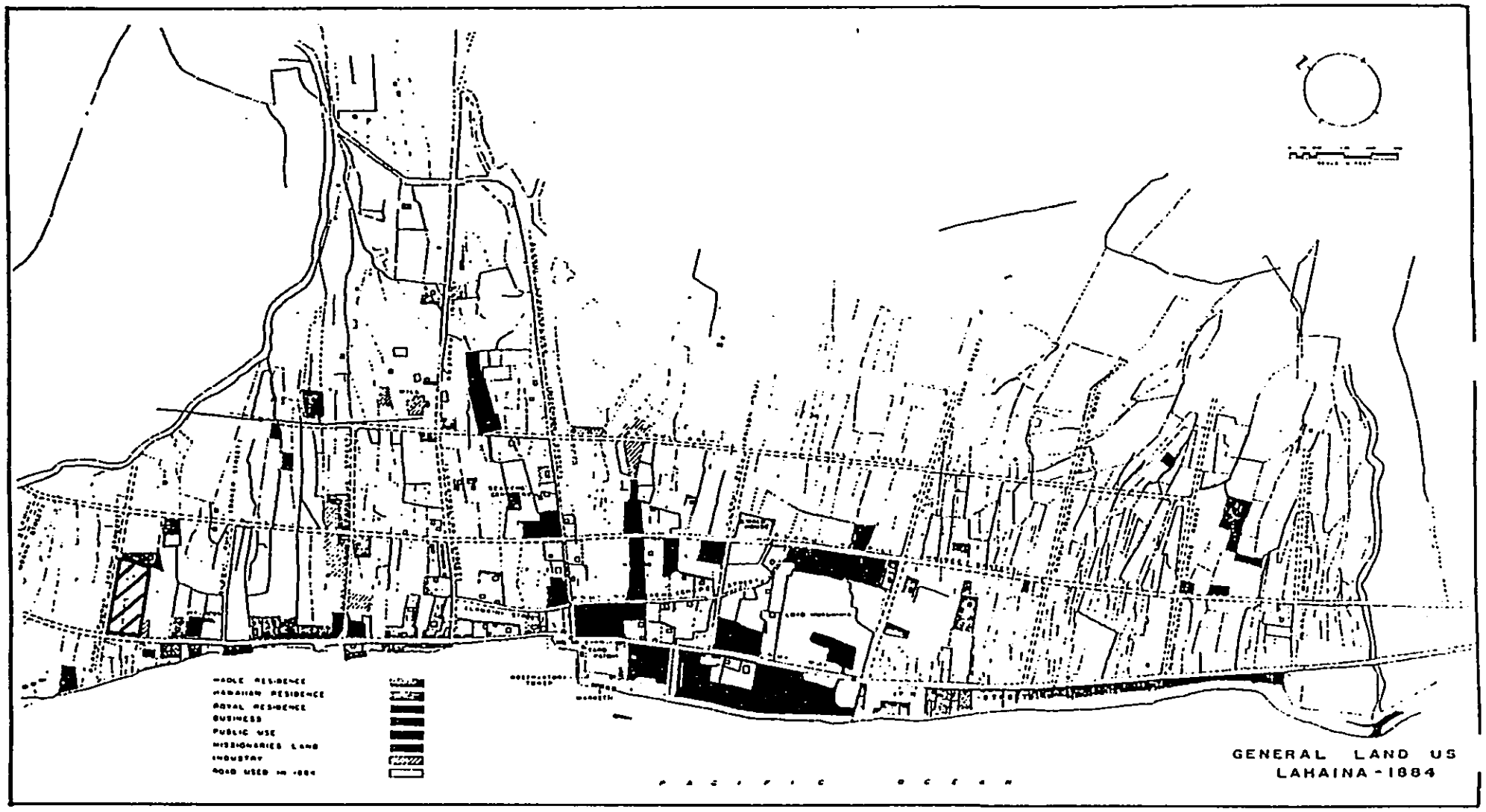


FIGURE 4: 1884 LAND USE MAP OF LAHAINA, MAUI SHOWING PROJECT AREA (SHADED). (REPRODUCED FROM COMMUNITY PLANNING, INC. 1960).

which once served to regulate the flow of water from Kahoma Stream into the cane fields; and surface remains of the Pioneer Mill Hospital. No archaeological sites or portable artifacts were located (Kurashina and Sinoto 1984:8-9).

Although no previous archaeological work has been done within the project area, the area on the south side of the mouth of the Kahoma Stream became the focus of a number of archaeological projects during the 1970s and 1980s. Several studies associated with proposed flood control improvements for Kahoma Stream were conducted on the south side of Kahoma Stream by Hommon (1973), Connolly (1974), Joerger and Kaschko (1979), and Ahlo and Morgenstein (1980). Additional studies were conducted in conjunction with the development of the nearby Mala Wharf Boat Launch Ramp (Davis 1974, Sinoto 1975, and Hammatt 1978). These studies identified numerous burials in the sand berm inland of Mala Wharf and an *imu* to the south of the wharf. Hammatt (1978) monitored removal of 90 burials from the sand berm and identified a cultural deposit in the berm. He also recorded a ditch which may have connected `Alamihi Fishpond and Kahoma Stream to the north (Hammatt 1978). Later excavation of the *imu* by Ahlo and Morgenstein (1980) proved it to be of recent origin.

Subsurface surveys in the vicinity of the `Alamihi Fishpond and Mala Wharf were conducted by Haun (1988) and Jensen (1988). Haun excavated 19 backhoe trenches and identified a 25-50cm thick cultural deposit and possible pondfield deposits. Dating analyses of samples from the cultural deposit indicated occupation of the area from AD 1260 to 1761 (Haun 1988:17). Jensen's excavation of eight backhoe trenches south of the fishpond yielded negative findings (Jensen 1988).

The Kahoma Complex (Site 1203) is located on the south bank of the Kahoma Stream approximately 1.7 miles inland of the coast. A rockshelter and 38 petroglyphs were originally recorded at the site in 1978. The complex was relocated by Barrera who identified additional agricultural features including at least three terraces and a possible *auwai (*Barrera 1989:9).

Six sites were identified by Jensen (1989) near the Kahoma Stream in the general vicinity of the Kahoma Complex. In addition to habitation and agricultural features, Jensen recorded a site composed of 13 probable burial structures and a large cairn/marker (Jensen 1989:17).

Investigations in the Lahaina area south of the present project site include test excavations by Cleghorn (1975) at the Seamen's Hospital; a several hundred acre survey of Waine'e Village by Hommon (1982b); survey and data recovery at the Plantation Inn site by the Fredericksens (1989a, 1990); and testing in the area of Canal and Front Streets (Kennedy 1989).

In summary, the various studies mentioned above document the presence of prehistoric and historic resources in the Lahaina District and in the general vicinity of the project area. No previous archaeological work has been done within the present project area, but two investigations were conducted in the immediate vicinity; one documented historic sites; the other had negative test findings. The results of previous archaeological work and historical documentary research have shown that the project area and much of the surrounding lands have been extensively disturbed by historic and recent sugarcane cultivation. This cultivation has involved extensive surface modification and considerable subsurface disturbance. It was expected that few, if any, intact, significant cultural remains would be identified.

METHODOLOGY

The purpose of this inventory survey was to determine the presence or absence of significant cultural remains through subsurface testing. Although all of the project area has been bulldozed, the area inside the berms/pushpiles was recently bulldozed, fallow canefield. This area was inspected for surface scatters of midden or other cultural materials. Five meter long stratigraphic trenches (ST) were laid out along four parallel baselines running approximately east-west. The trenches were excavated by a backhoe and each excavation was monitored by an archaeologist. Only the soil from Trench #17 was screened.

Recording of the trenches included scaled profile drawings of soil stratigraphy; soil layer colors (moist), based on Munsel color charts, and soil composition were entered on soil stratigraphy forms; and 35 mm black and white photographs were taken of each trench. Locational mapping was done with tape and compass.

RESULTS OF FIELDWORK

Twenty-two 5.0 by 1.0 m stratigraphic trenches, with an average depth of 1.6 m, were excavated by backhoe. Trenches 1-6 were placed in the band of lawn on the north side of the parcel and trenches 21 and 22 on south side lawn. The remaining 14 trenches were placed in the vegetation area between the dozer berms or in the lawn at the bases of the berms (Fig. 5). Detailed soil analysis of each stratigraphic trench is presented in Appendix A. Average depths are given for the following layer descriptions.

Trench 1 had a maximum depth of 1.60 m and contained four natural layers. Layer I was a dark reddish brown (5 YR 3/2) silty clay 0.52 m thick. Charcoal flecks were present throughout the layer. Small coral pieces, several marine shell fragments, and historic glass fragments were identified near the surface. Layer II, a dark grayish brown (10 YR 4/2) silty clay 0.70 m thick, contained charcoal flecks and two lenses. Lens 1 was a very dark gray (5 YR 3/1) sandy silt containing a few pebbles. Lens 2 was a very dark gray to grayish brown (5 YR 3/1-3/2) coarse silty sand. Layer III was a dark gray (10 YR 4/1) sandy clay containing some gravel and a few small pebbles. The average thickness of this layer was 8 cm. No cultural materials were present. Layer IV was a dark gray (10 YR 4/1) clay. Only an 8 cm portion of this basal layer was exposed.

Trench 2 had a maximum depth of 1.53 m and showed three natural layers. Layer I was a dark yellowish brown (10 YR 4/3) silty clay 0.63 m thick. The layer contained recent glass fragments and one kukui nut shell, c. 5 cm below the surface. Charcoal flecks were scattered throughout the layer. Layer II, a light olive brown (2.5 YR 5/3) silty clay, averaged 0.48 m in thickness. Layer III was a dark gray (10 YR 4/1) slightly sandy clay, 0.25+ m thick. This layer continues below the bottom of the trench. No cultural materials were present in Layers II or III.

Trench 3 was excavated to a maximum depth of 1.6 m and displayed three natural layers. Layer I was a dark reddish brown (5 YR 3/2) silty clay 0.60 m thick. The layer contained sparse charcoal flecking. Layer II was a very dark greyish brown (10 YR 3/2) silty clay 0.65 m thick. Layer III was a dark reddish brown (5 YR 2.5/2) sandy clay. A 65 cm portion of this basal layer was exposed. No charcoal or other materials were present in Layers II and III.

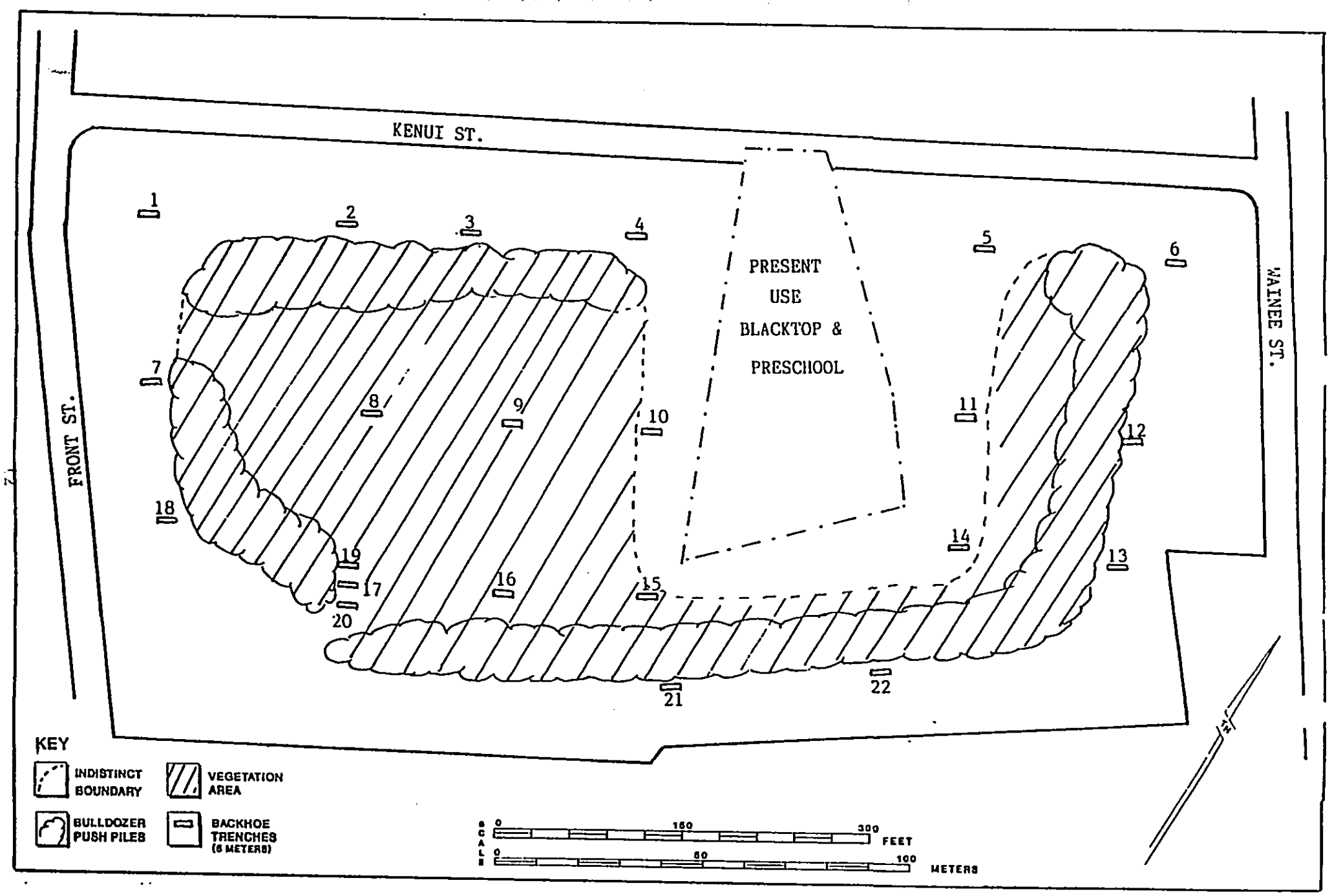


FIGURE 5: PROJECT AREA SHOWING BACKHOE TRENCH LOCATIONS, BULLDOZER BERMS, AND VEGETATION AREA.

Trench 4 (Fig. 6) was the first trench in which a gravel layer was present. The trench reached a maximum depth of 1.50 m and showed three layers. Layer I was a dark reddish brown (5 YR 3/2) silty clay 0.59 m thick. It contained charcoal flecks, three pieces of coral, and two waterworn pebbles. Layer II was a dark grayish brown (10 YR 4/2) silty clay loam with charcoal flecks and was 0.74 m thick. Also present were a few small waterworn pebbles and one piece of coral. A small isolated pocket near the top of the layer (Feature 1) at the southwest end of the trench, contained charcoal, fish bone, small animal bone, and several small marine shell fragments. Layer III was composed of sand, small waterworn pebbles and gravel. The material in this layer has the appearance of stream wash. This sand-gravel-pebble layer appears in nine of the stratigraphic trenches, and shows as lenses in two others.

Trench 5 which was excavated to a maximum depth of 1.64 m exhibited three layers. Layer I was a very dark grayish brown (10 YR 3/2) silty clay, 1.29 m thick. The layer contained a few small cobbles. Layer II, a very dark grayish brown (7.5 YR 3/2) silty clay loam, measured 0.19 m in thickness. Layer III was a very dark brown (10 YR 2/2) silty clay that continued below the bottom of the trench. No cultural materials were present in any of the strata.

Trench 6 was excavated to a maximum depth of 1.62 m. Two soil layers were identified. Layer I was a 1.13 m thick deposit of dark reddish brown (5 YR 3/2) silty clay that contained a few small cobbles. Sparse charcoal flecking was revealed throughout the layer. Layer II was a dark brown (7.5 YR 3/2) silty clay loam basal layer. No cultural materials were identified in the two layers.

Trench 7 reached a maximum depth of 1.75 m and contained six soil layers (Fig. 7). Layer I was a dark reddish brown (5 YR 3/2) silty clay 0.37 m thick. This layer contained several coral pieces, a historic glass fragment, charcoal flecks, and a small animal tooth and bone fragment. Layer II was a very dark grayish brown (10yr 3/2) silty clay loam, 0.88 m thick. Charcoal flecking was present. Layer III, dark brown (7.5 YR 3/2) loamy sand, was 15 cm thick. Layer IV was composed of pebbles, gravel, and fine to coarse sand. It had an average thickness of 0.15 m. Layer V was the same dark brown (7.5 YR 3\2) loamy sand as in Layer III. The average thickness of this layer was 10 cm. Layer VI, the basal layer, was a dark brown (10 YR 3/2) sterile clay.

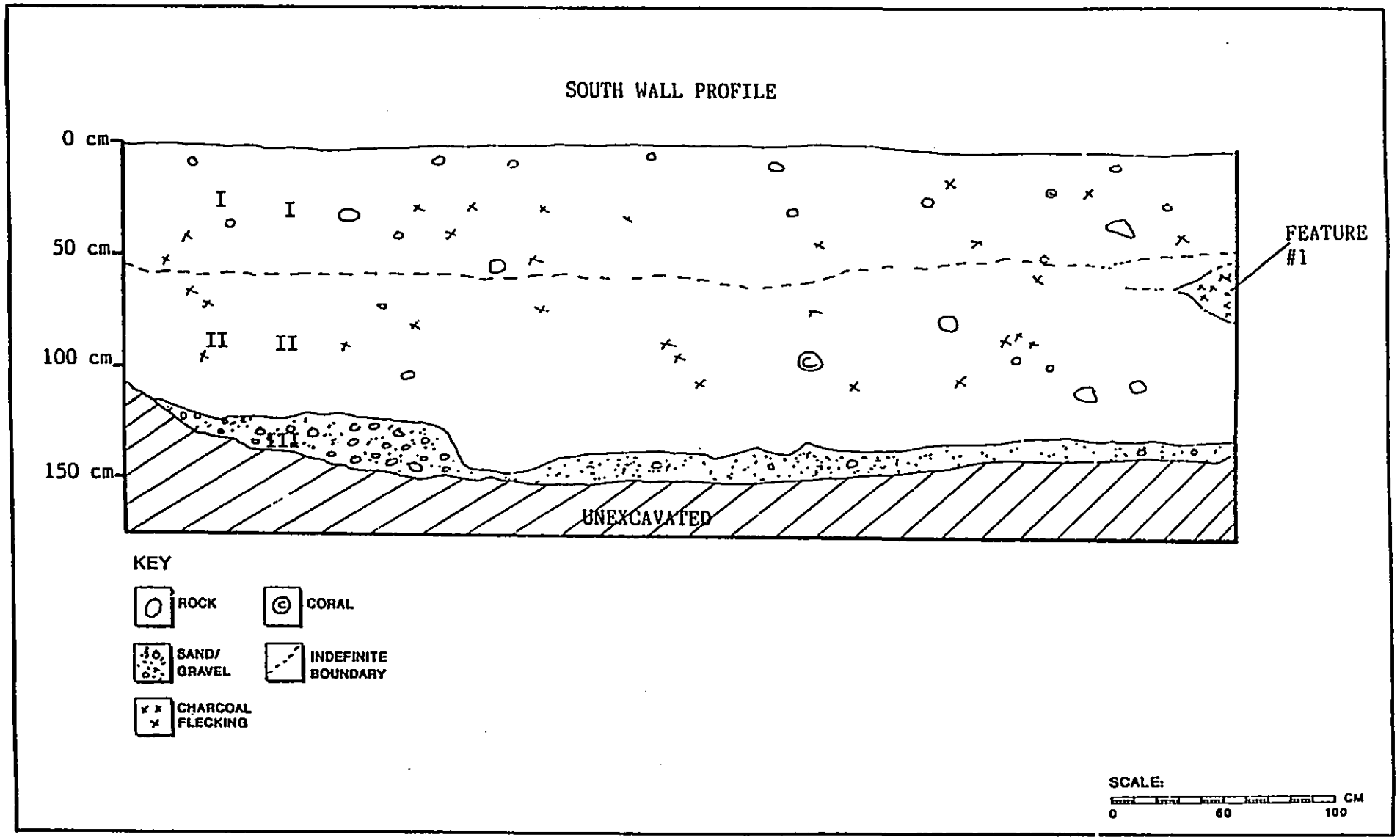


FIGURE 6: SOUTH WALL PROFILE OF ST-4. FEATURE 1 IS SHOWN ON THE RIGHT.

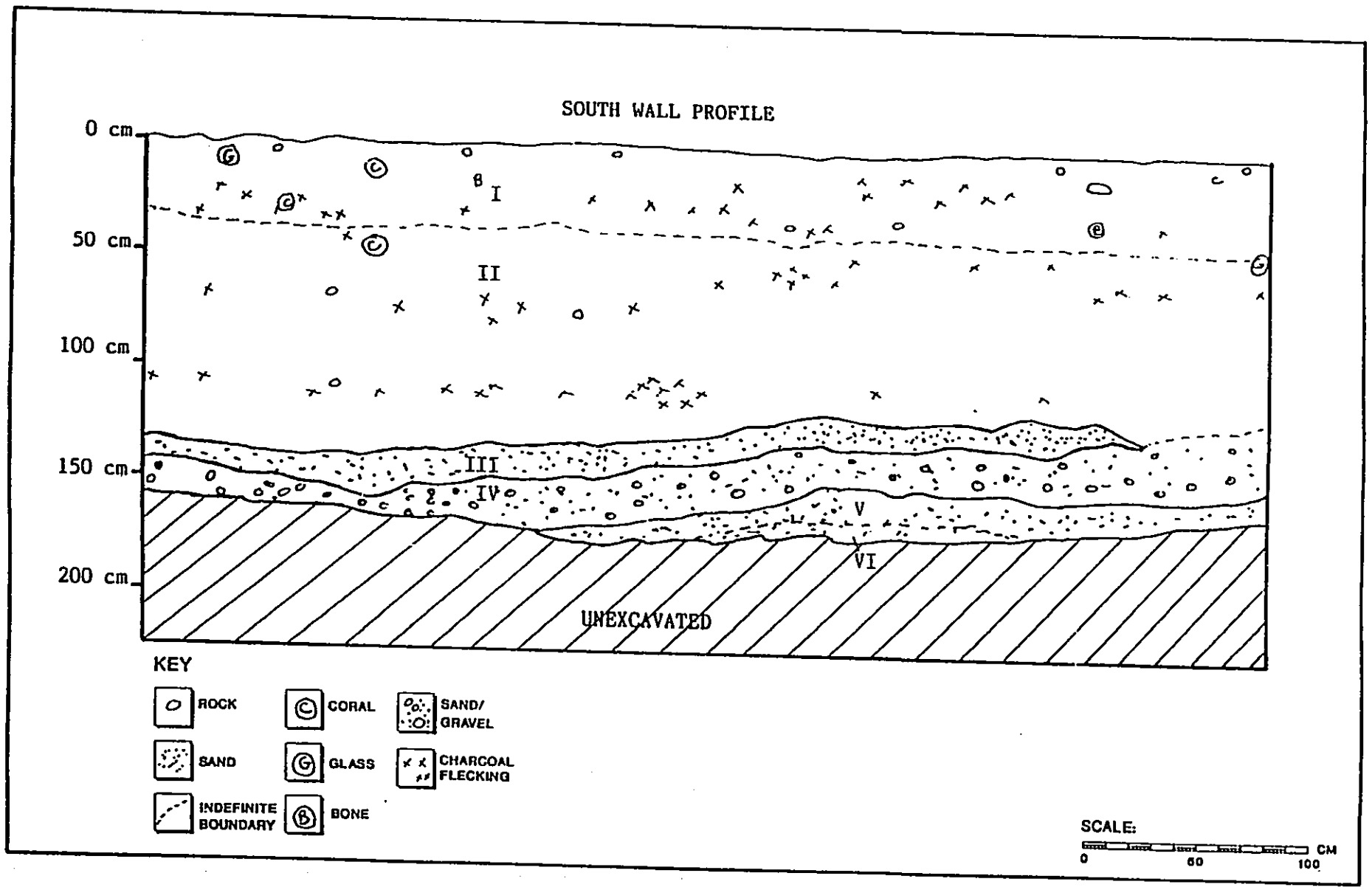


FIGURE 7: SOUTH WALL PROFILE OF ST-7.

Trench 8 was excavated to a depth of 1.8 m and revealed 5 soil layers. Layer I was a dark reddish brown (5 YR 3/2) silty clay, 0.46 m thick. It contained charcoal flecks, several small cobbles, and one piece of modern glass. Layer II was a dark brown (7.5 YR 3/2) silty clay loam, 0.65 m thick. Layer III was a very dark gray (10 YR 3/1) silty clay, 0.39 m thick. Layer IV was a very dark brown (10 YR 2/2) silty sand 0.26 m thick. Layer V was composed of coarse sand, gravel and pebbles. This layer was also identified in ST. 4 and ST. 7.

Trench 9 reached a maximum depth of 1.50 m and displayed six layers. Layer I was a dark reddish brown (5 YR 3/2) silty clay, 0.59 m thick. This layer contained charcoal flecks and occasional cobbles and pebbles. Layer II was 0.23 m of very dark grayish brown (10 YR 3/2) silty clay loam containing charcoal flecks. Layer III was composed of pebbles, gravel, and fine to coarse sand 17 cm thick. Layer IV was a dark brown (10 YR 3/3) sandy clay loam 0.24 m thick. Layer V was a dark brown (7.5 YR 3/2) loamy sand 0.22+ m thick and is the basal layer in most of the trench. This layer contained a thin, 1.10 m long lens of dark grayish brown (10 YR 4/2) silty clay loam. Layer VI, a very dark grayish brown (10 YR 3/2) silty clay, was the basal layer in the west end of the trench.

Trench 10 was excavated to a maximum depth of 1.84 m and contained six distinct soil layers and two soil lenses (Fig. 8). Layer I was a dark reddish brown silty clay, 0.56 m thick. It contained charcoal flecks, pebbles, and a few small cobbles. Layer II was a very dark grayish brown (10 YR 3/2) silt clay loam, 0.56 m thick. This layer contained a dark brown (7.5 YR 3/2) lens of silty clay loam. Layer III, a very dark brown (10 YR 2/2) loamy sand, was 0.31 m thick and contained a 4.3 m by 6 cm thick lens of dark brown (7.5 YR 3/2) silty clay loam. Layer IV was 11 cm thick and composed of coarse sand, gravel and pebbles. Layer V was a very dark brown (10 YR 3/3) silty clay loam 0.18+ m thick. This was the basal layer for most of the trench. Layer VI, a dark brown (7.5 YR 3/4) sandy clay, 0.6+ m thick, was the basal layer in the center and west end of the trench.

Trench 11 was excavated to a depth of 1.50 m and contained five layers. Layer I was composed of a dark reddish brown silty clay 0.80 m thick and contained charcoal flecks, and one piece of coral. A recent glass bottle was seen in the backdirt pile. A water line ditch, 42 cm deep, cut through Layer I just west of midpoint in the trench. Layer II was a disturbed, dark brown (7.5 yr3/2 and 10 YR 3/3) silty clay loam, 0.32 m thick. Layer II was located within Layer I and began at 37 cm below the surface near the center of the

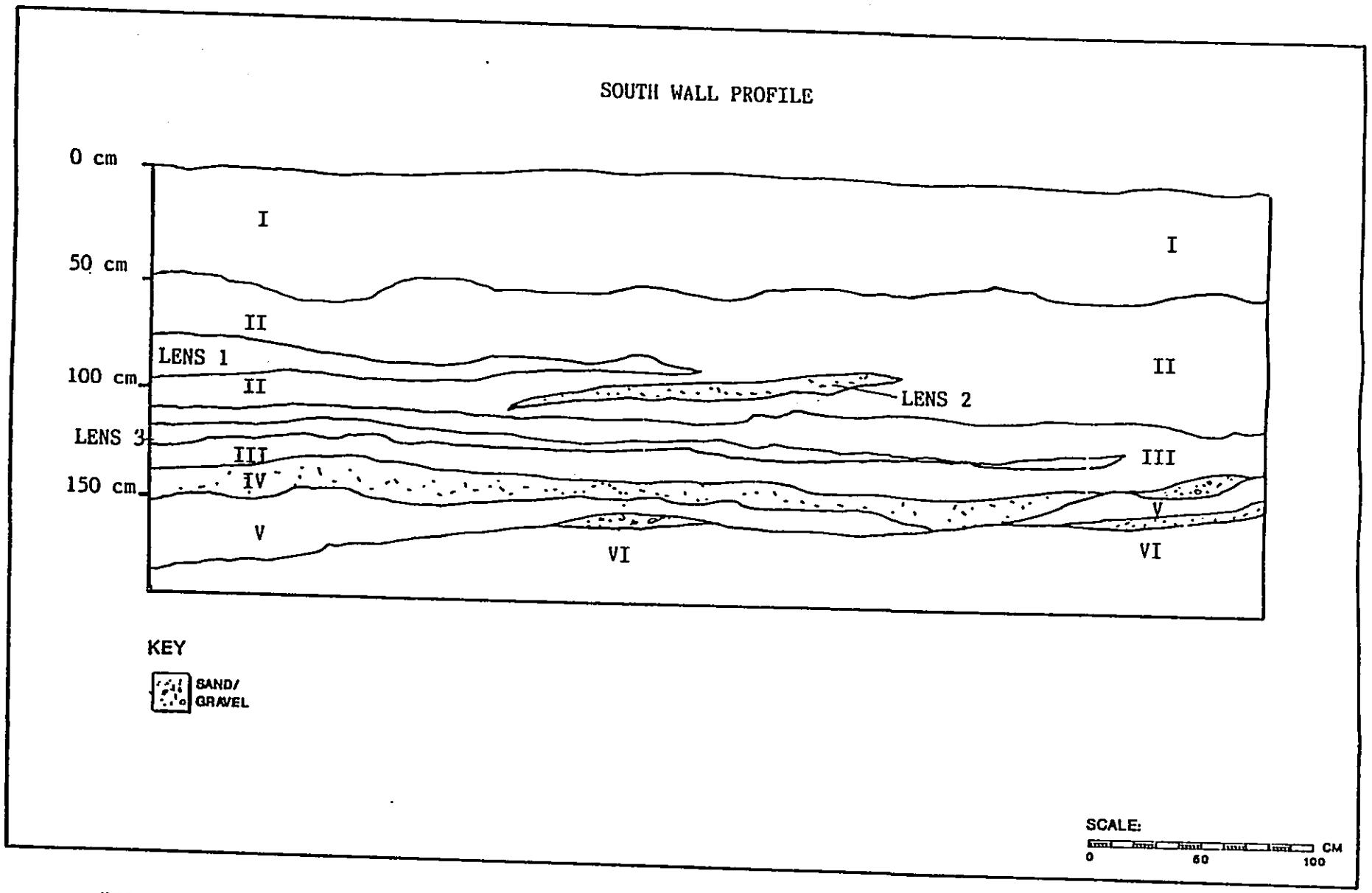


FIGURE 8: SOUTH WALL PROFILE OF ST-10.

trench. It abutted the bottom and part of the west side of the waterline ditch. This layer could be a ditch that was previously part of the water system. Layer III, a very dark grayish brown (10 YR 3/2) silty clay loam, was 0.30 m thick. Layer IV was an olive brown (2.5yr 4/2) silty clay, 0.13 m thick. Layer V was dark brown (7.5 YR 3/3) loamy sand, 0.27 m thick. Three sand, gravel, and pebble lenses were present within Layer V.

Trench 12 displayed five layers and was excavated to a maximum depth of 1.6 m. Layer I was a dark brown (7.5 YR 3/3) silty clay, 0.42 m thick, and contained small cobbles, charcoal flecks, two pieces of coral, and one piece of historic glass. Layer II, a dark brown (10 YR 3/3) silty clay loam, was 0.50 m thick. One piece of coral, several small cobbles, and charcoal flecks were scattered throughout the layer. Layer III was composed of a 0.22 m thick accumulation of sand, gravel, and pebbles. Layer IV, the basal layer, was a dark brown (10 YR 3/3) loamy silt, 0.32+ m thick. A small pocket of Layer V, a very dark grayish brown (10 YR 3/2) loamy sand, 8+ cm thick, was exposed near the west end of the trench.

Trench 13 was excavated to a maximum depth of 1.80 m. and showed four stratigraphic layers and an interesting distribution of eight lenses (Fig. 9). Layer I, a dark brown (10 YR 3/3) silty clay 0.55 m thick, contained one piece of historic glass and abundant charcoal flecking. Two lenses were present at the interface of the Layers 1 and 2. Lens 1 was composed of dark grayish brown (10 YR 4/2) loamy sand and overlied Lens 2, a brown (10 YR 4/3) coarse sand and gravel. Layer II, a dark brown (10 YR 3/3) silty clay loam 80 cm thick, contained several charcoal flecks and six lenses. Two lenses of dark brown (10 YR 4/3) silt (Lens 3) were present; one at the west and one at the east end of the trench. These lenses were possible remnants of a disturbed layer. Below were four lenses (Lens 4) of dark grayish brown loamy sand. These sand lenses appear below the silt lenses at the top of the layer, and below the gap between the soil lenses at the east and west ends of the trench. A small, isolated cluster of charcoal flecks was found above the largest sand lens. No other charcoal was present in the layer. Layer III was 15 cm thick and contained pebbles, gravel, and coarse sand. Layer IV, the basal layer, was dark brown (10 YR 3/3) silty clay loam.

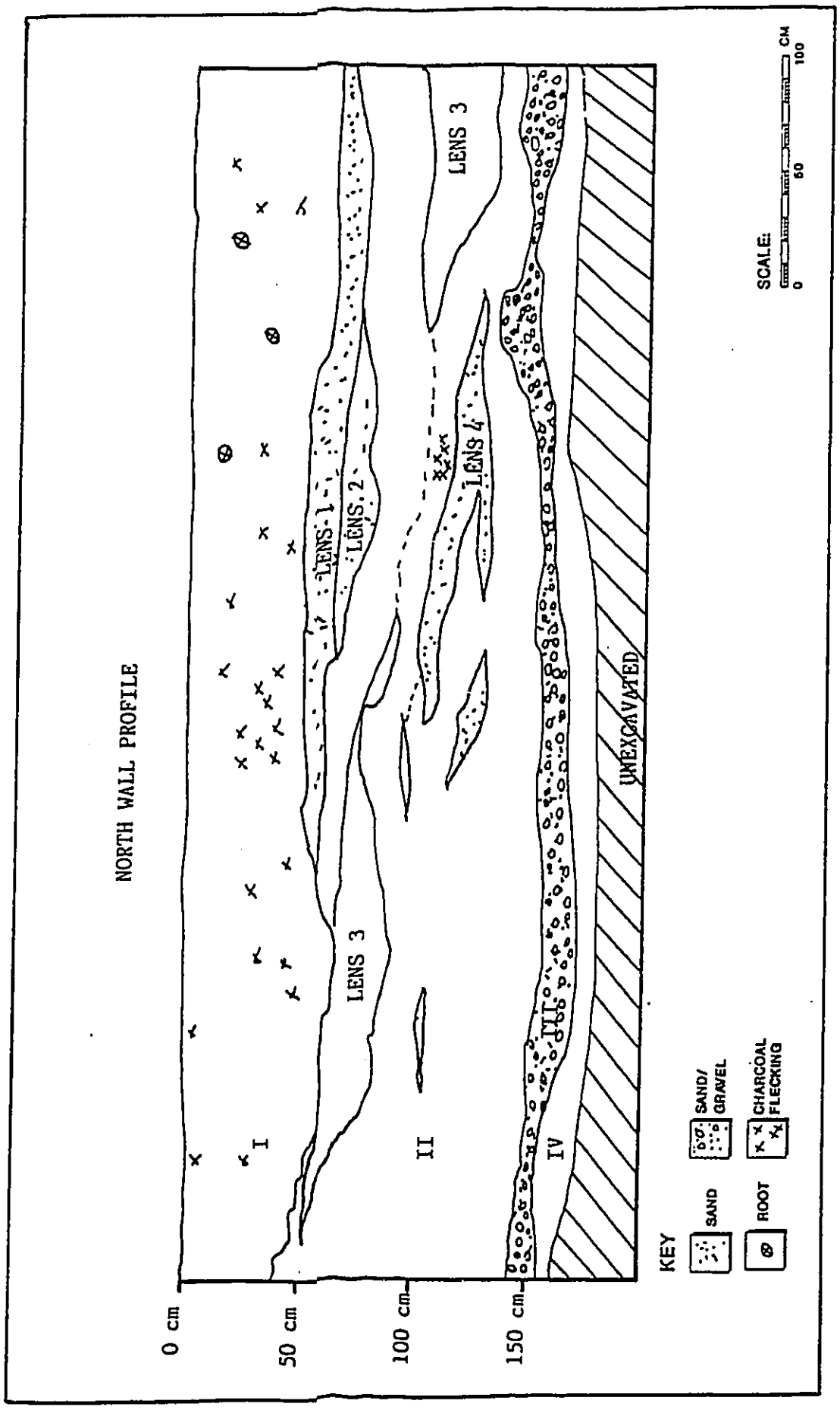


FIGURE 9: NORTH WALL PROFILE OF ST-13.

Trench 14 shows five soil layers and was excavated to a maximum depth of 1.58 m. The profile shows disturbance in all layers. Layer I was a dark brown (5yr 3/2) silty clay, 0.65 m thick. Coral pieces, small waterworn cobbles and pebbles, and historic glass fragments were present. Layer II, a dark grayish brown (10 YR 3/2) silty clay loam, had an irregular, broken-discontinuous boundary. Charcoal flecking was scattered throughout. Within the layer was a pocket of dark brown (10 YR 3/3), mottled sand, lenses of dark brown (7.5 YR 3/2) silty clay loam, and brown (10 YR 4/3) coarse sand and gravel. Layer III was a dark brown (7.5 YR 3/2) silty clay loam, 0.12 m thick. This layer also had an irregular, broken-discontinuous boundary. Layer IV was a dark brown (10 YR 3/3) loamy sand, 0.48+ m thick. It contained sparse charcoal flecking, pocket of dark brown (10 YR 3/3), coarse mottled sand, and a lens of very dark grayish brown (10 YR 3/2) sand and gravel. A thin (5 cm) strip of Layer V, a very dark brown (10 YR 2/2) silty clay loam, was exposed in the east portion of the trench.

Trench 15 was excavated to a maximum depth of 1.95 m. The profile showed five layers (Fig. 10). Layer I was a 0.44 m thick dark reddish brown (5 YR 3/3) silty clay containing historic glass fragments and charcoal flecks. Layer II was a brown (10 YR 4/3) sandy clay loam, 0.02 to 0.20 m thick. Layer III was a silty clay loam, 0.50 m thick. Sparse charcoal flecking was noted. Layer IV was a dark yellowish brown (10 YR 3/4) loamy sand, 11 cm thick. Layer V was a dark yellowish brown (10 YR 2/2) silty clay loam, 0.70 m thick. Two lenses were within the layer. Lens 1 was a dark reddish brown (5 YR 2.5/2) silty clay. Lens 2 was composed of sand, gravel and pebbles.

Trench 16 was excavated to a depth of 1.76 m, in an area that proved to be a recent rubbish pit. The pit had been dug through Layer I and intruded into Layer II; it occupied most of the length of the trench. Layer I showed dark brown (7.5 YR 3/2) loamy sand and gravel, approximately 0.64 m thick, in the least disturbed portion. Six coral pieces were noted in the least disturbed area. The bottom of the rubbish pit was 1.20 m below the surface. Layer II was a very dark grayish brown (10 YR 3/2) silty clay loam, 0.49 m thick. Layer III was a dark brown (7.5 YR 3/2) loamy sand. Layer IV, a very dark grayish brown (10 YR 3/2) silty clay loam, was 0.17 m thick. Layer II, below the rubbish pit, and Layers III and IV were sterile.

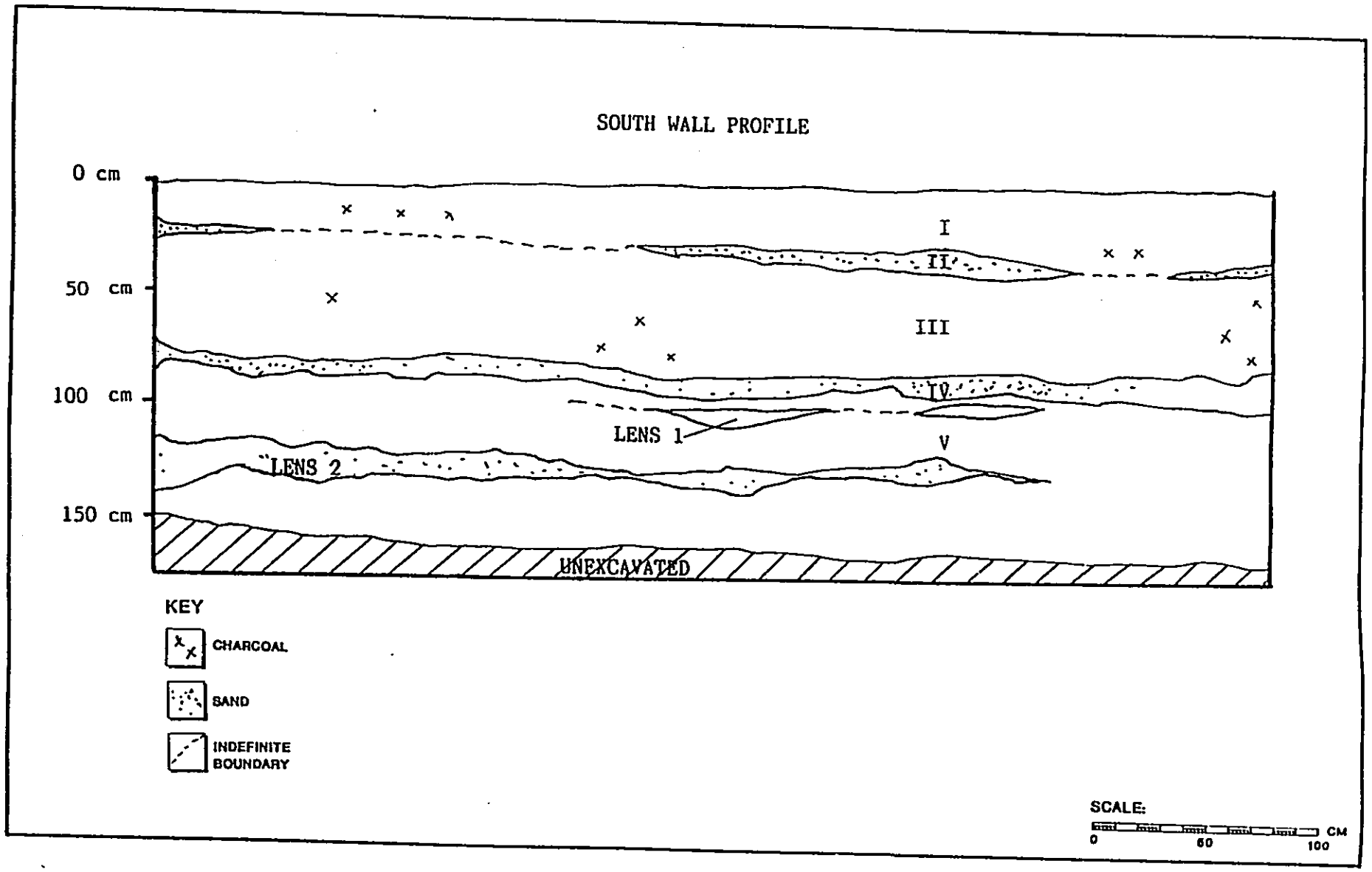


FIGURE 10: SOUTH WALL PROFILE OF ST-15.

Trench 17, excavated to a maximum depth of 1.7 m, showed three stratigraphic layers and contained a human burial, Site number 50-50-03-3550 (Fig. 11). Layer I, a dark reddish brown (5 YR 2.5/2) silty clay, was 0.86 m thick. The layer contained sparse charcoal flecking, historic glass fragments, and coral pieces. Layer II was a very dark brown (10YR 3/2) loamy sand. Layer III, a dark brown (10 YR 2/2) silty clay, was 0.75+ m thick. It contained two lenses of dark olive brown (2.5 y 3/3) silty clay.

Site 3550 appears to be a historic burial of an adult human female of undetermined ethnicity. Gender is presumed from the small stature indicated by the size of recovered bones. Adult status is suggested by wear and flattening of tooth surfaces. A blue glass bead recovered from the pit fill indicates that this was an historic interment.

The burial, encountered in the west end of Trench 17, was partially removed by the backhoe. An indistinct burial pit outline, visible in the south wall of the trench, appeared c. 30 cm below the surface and extended c. 15 cm through Layer II and into Layer III. The bottom of the pit was at approximately 100 cm below surface. What appeared to be an ulna and radius, and other bones, were visible in the side wall of the trench. The bones occured in very damp soil and were in poor condition. Much of the skeletal material recovered from the back dirt pile consisted of bone dust adhered to soil clots. The soil and bone dust were collected. The remaining material excavated from the area of the burial, and most of the backdirt from the remainder of the trench was water screened through 1/8 wire mesh to recover bone fragments and artifacts. In addition to skeletal material, 2 volcanic glass flakes, 2 basalt flakes, 'ili`ili, and a large pig mandible were recovered from the screens. One blue glass bead 16 mm in diameter was recovered from the pit fill prior to screening. This glass bead was the only artifact from this trench directly associated with the burial. The location of the burial was marked by two PVC pipes placed against the trench wall on either side of the burial. All recovered materials were placed in a cloth bag and reburied in the trench overlying just above the burial. The west end of the trench was backfilled to within c.20 cm from the top. The remainder of the trench was backfilled to the level of the surrounding soil surface.

Trench 18 had a maximum depth of 1.65 m and showed five soil layers. Layer I, a dark brown (7.5 YR 3/2) silty clay 0.69 m thick, contained small cobbles, pebbles, charcoal bits, five pieces of coral, and historic glass fragments. Layer II was a dark brown (10 YR 3/3) silty clay, 0.65 m thick. The layer contained charcoal flecks and a pocket of mottled dark brown and dark yellowish brown (7.5 YR 3/2 and 10 YR 4/2) silty clay with

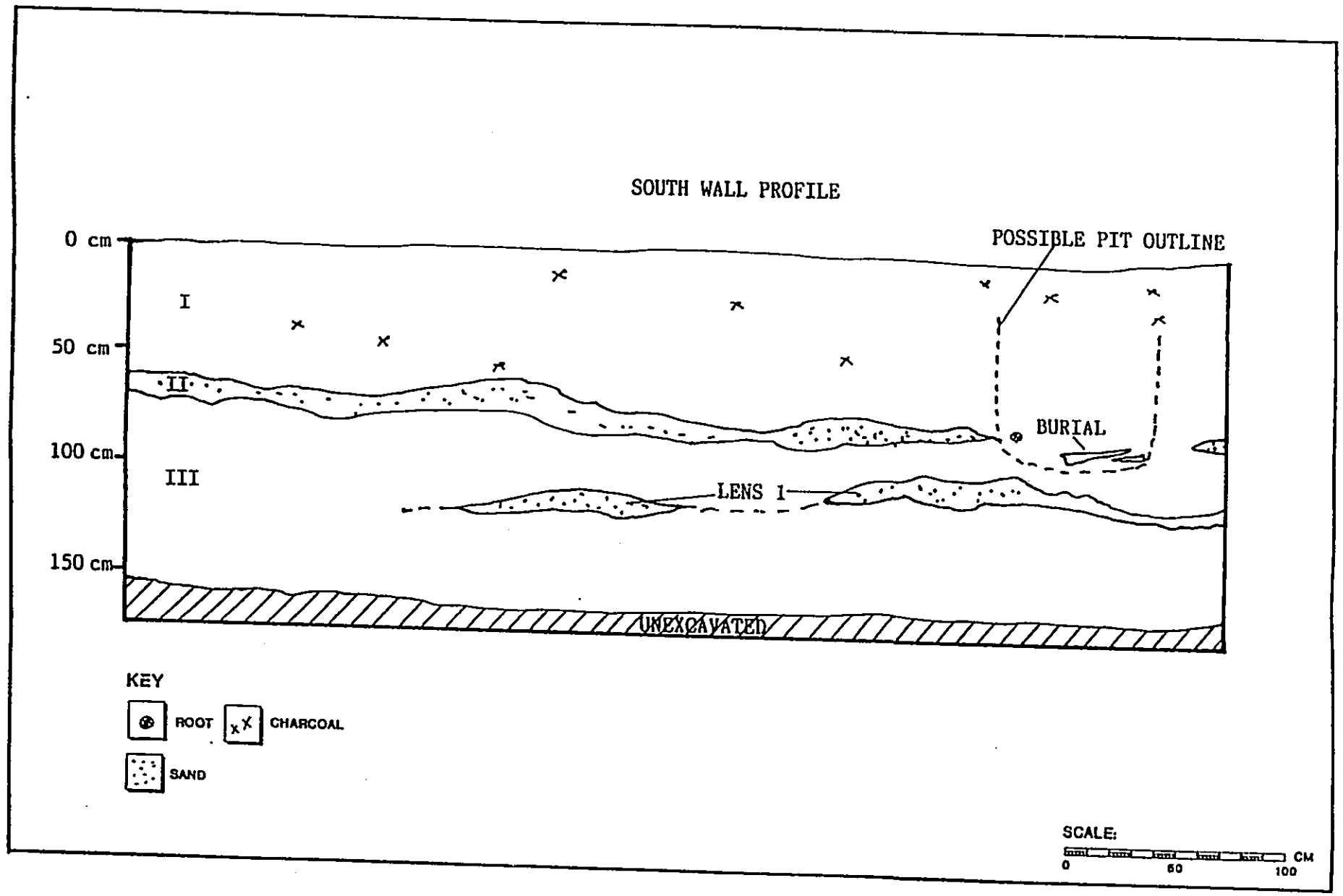


FIGURE 11: SOUTH WALL PROFILE OF ST-17.

charcoal flecks. Layer III was a dark brown (10 YR 3/3) sandy silt loam, 0.12 m thick. Layer IV was very dark grayish brown (10 YR 3/2) silty clay loam, 0.09+ m thick. A small area of Layer V was exposed at the west end of the trench. The layer was a grayish brown (10 YR 5/2) sandy clay loam 0.07+ m thick.

Trenches 19 and 20 were placed paralleling the north and south sides of trench 17 to determine if additional burials were present in the vicinity of Site 3550. Trench 19 was placed c.5.0 m north of Trench 17. and Trench 20 c. 5.o m south. **Trench 19** was excavated to a depth of 1.26 m. The profile showed two stratigraphic layers. Layer I was a very dark brown (10 YR 2/2) loamy clay, 0.70 m thick. The layer contained two pieces of small animal bone, charcoal flecks, one waterworn pebble, and small pebbles and gravel. Two lenses were identified within the layer. Lens 1 was a dark yellowish brown (10 YR 2/2) loamy sand. Lens 2 was a dark brown (7.5 YR 3/2) silty clay. Layer II, a very dark grayish brown (10 YR 3/2) loamy sand, 0.08 m thick, contained charcoal flecks. No burial was present. **Trench 20** had a maximum depth of 1.3 m and showed three stratigraphic layers. Layer I was a very dark brown (10 YR 2/2) silty clay, 0.67 m thick. Charcoal flecks, one piece of coral and a recent soda bottle were within the layer. Layer II was a sterile, dark brown (7.5 YR 3/2) loamy sand, 0.15 m thick. Layer III was a very dark grayish silty clay loam, 0.38+ m thick. No burial was present.

Trenches 21 and 22, excavated to a depth of c. 1.50 m, showed the same soil layers displayed in various trenches throughout the project area. In both trenches, Layer I was a dark reddish brown (5 YR 3/2) silty clay, c. 0.50 m thick. Layer II of Trench 21 was a very dark grayish brown (10 YR 3/2) silty clay loam that contained a coarse sand lens and a lens of Layer I silty clay. Layer II of Trench 22 was the sand, gravel, and pebble layer present in ten other trenches. Layers III and IV were dark grayish brown (10 YR 4/2) sandy clay loam and sandy clay.

SUMMARY AND DISCUSSION

The trenches (see Fig. 5) generally exhibited three to five stratigraphic layers. The band of lawn around the perimeter of the project area was at a lower level than the soil surface between the dozer berms. Trenches 2 through 6, excavated in the lawn area paralleling Kenui Street, showed two and three layers. The surface layers of these trenches varied from dark reddish brown to dark yellowish brown and the basal layers varied from silty clay loam or silty clay, to a sand-pebble-gravel layer in Trench 4.

Trenches in the remainder of the study area contained surface layers of clay overlaying two to five layers of clay, silty clay, silty clay loam, loamy sand, or sand-gravel-pebbles.

Coral pieces were seen on the surface, in the area between the bulldozer berms, and in Layers I and II in ten of the trenches. Agricultural tilling was probably responsible for coral found below surface to a depth of 92 cm. Charcoal flecking, found in the upper layers of all trenches, to a depth of 1.30 m, is also attributable to agricultural cultivation.

Although LCA testimony states that taro was grown in four of the LCAs within the project area, no firm evidence of such cultivation was identified. However, yellowish brown deposits identified in Trenches 2, 11 and 15 were unique, and may indicate the presence of former taro fields.

A sand, gravel, pebble layer was present in ten (Trenches 4, 7-15) of the trenches. The layer follows a northeast-southwest orientation between Wainee and Front Streets. It appears to be stream wash and possibly marks the path of an earlier stream as depicted on the 1819 map by Duperrey (see Fig. 3). A stream, if present, would have provided water for *lo'i* in the project area.

In summary, during the current survey, significant cultural remains (Site 3550) were identified in only one trench. Human skeletal remains were located during the excavation of ST-17. The associated glass bead artifact indicates that the burial occurred during the historic period. Testing of the area around the site identified no additional burials.

Although the 22 stratigraphic trenches excavated within the project area displayed similar stratigraphic character, the layers in a number of trenches showed areas of deep subsurface disturbance, with coral pieces and charcoal occuring to a depth of 1.30 m.

SITE SIGNIFICANCE

The burial, Site 50-50-03-3550, is significant under State significance evaluation riteria D and E. Criterion D applies to sites that have yeilded or are likely to yeild information important for research on prehistory or history. The data represented by the burial meets this criterion. Criterion E applies to sites that have traditional cultural value to a contemporary ethnic group. The burial also meets this criterion.

CONCLUSION AND RECOMMENDATIONS

The findings of the survey generally correspond with expectations based on prior research in the immediate and general vicinity. No surface or subsurface structures or pond field deposits were identified. However, the burial in ST-17 was not expected. Although burials had been found near Mala Wharf to the north, they were located in sand berm and known burial grounds.

The preferred method of treatment for confirmed human burials is *in situ* preservation. If disinterment is necessary the procedures of Chapter 6E (Historic Preservation, Haw. Rev. Stat., as amended by Act 306[1990 S.L.H.]) should be followed. DLNR-SHPD should be notified and the specific Island Burial Council should be contacted. The developer, DLNR, and the specific Island Burial Council would work out a burial treatment plan to be approved by the Island Burial Council.

A qualified archaeological monitor should be on call during future construction activities involving surface and subsurface alterations. If any unanticipated remains are encountered, work in the immediate area must cease and Ms. Theresa Donham, resident Maui staff archaeologist of the State Historic Preservation Division, be notified at 243-5169.

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APPENDIX A

STRATIGRAPHIC TRENCH (ST) SOIL DESCRIPTIONS

Appendix A : Soil Description of ST-1

Layer	Color	Thickness cm.	Texture	Structure	Consistency	Roots	Rocks	Boundary	Cultural Material
I	Dark Reddish Brown (10 yr 3/2)	52	Silty Clay	Moderate Fine Medium Sub-Angular Blocky	Slightly Hard .....Slightly Sticky Slightly plastic	Many Fine	Few Small	Diffuse Wavy	Coral, Historic glass, Charcoal Flecks
II	Very Dark Grayish Brown (10 yr 4/2)	70	Silty Clay Loam	Moderate Medium Sub-Angular Blocky	Slightly Hard SlightlySticky SlightlyPlastic	Few	-	Clear Wavy	Charcoal Flecks
Lens #1	Very Dark Gray (5 yr 3/2)	17	Sandy Loam	Moderate Medium Sub--Angular Blocky	Friable Slightly Sticky Slightly Plastic	-	Gravel	Clear	-
Lens #2	Very Dark Grayish Brown (10 yr 3/1 - 3/2)	13	Loamy Sand	Structureless Fine to Coarse	Loose Non-Sticky Non-Sticky	-	-	Clear	-
III	Dark Gray Gray (10 yr 4/2)	08	Sandy Clay Loam	Moderate to Weak Sub-Angular Blocky	Friable Slightly Sticky Slightly Plastic	-	Gravel	Clear	-
IV	Dark Gray (10 yr 4/1)	BOE	Sandy Clay	Moderate Coarse Platy	Slightly Hard Sticky Plastic	-	-	-	-

Appendix A (Con't.): Soil Description of ST-2

Layer	Color	Thickness cm.	Texture	Structure	Consistency	Roots	Rocks	Boundary	Cultural Material
I	Dark Reddish Brown (5 yr 3/2)	60	Silty Clay	Strong V-F to Medium Sub-angular Blocky	Firm Slightly Sticky Slightly Slightly plastic	Many Fine	-	Gradual Smooth	Charcoal Flecks
II	Very Dark Grayish Brown (10 yr 3/2)	65	Silty Clay	Strong V-F to Medium Sub-ngular Blocky	Friable Sticky Plastic	Few	-	Clear Wavy	Charcoal Flecks
III	Dark Gray Gray (5 yr 2.5/2)	BOE	Sandy Clay	Weak Very Fine Granular	Friable Slightly Sticky Slightly Plastic	-	Gravel	-	-

Appendix A (Con't.): Soil Description of ST-3

Layer	Color	Thickness cm.	Texture	Structure	Consistency	Roots	Rocks	Boundary	Cultural Material
I	Dark Reddish Brown (5 yr 3/2)	60	Silty Clay	Strong V F Subangular Blocky	Hard Firm Slightly sticky Plastic	Many Fine	Few Small	Diffused	Coral, Historic glass, Charcoal lecks
II	Very Dark Grayish Brown (10 yr 3/2)	65	Silty Clay	Moderate Medium Sub-angular Blocky	Slightly Hard Slightly Sticky Slightly Plastic	Few	-	Clear	Charcoal Flecks
III	Dark Gray (10 yr 4/1)	BOE	Sandy Clay	Weak Very Fine Granular	Friable Slightly Sticky Slightly Plastic	-	-	-	-

Appendix A (Con't.): Soil Description of ST-4

Layer	Color	Thickness cm.	Texture	Structure	Consistency	Roots	Rocks	Boundary	Cultural Material
I	Dark Reddish Brown (5 yr 3/2)	59	Silty Clay	Moderate Fine-Medium Subangular	Hard Firm Slightly sticky Slightly Plastic	Many Fine	Few Small	Diffused	Coral, Historic glass, Charcoal Flecks
II	Very Dark Grayish Brown (10 yr 4/2)	74	Silty Clay	Moderate Medium Sub-angular Blocky	Friable Sticky Plastic	-	-	Clear	Charcoal Flecks Coral
III	Dark Grayish Brown (10 yr 4/2)	BOE	Cobble Pebble Gravel	Structureless Fine-Coarse Single Grain	Non-Sticky Non-Plastic	-	-	-	-
Fea.	Dark Brown (7.5 tr 4/2)	14	Silty Clay	Fine - Coarse Subangular Blocky	Friable Slightly Sticky Slightly Plastic	-	1-Water Worn	-	Charcoal Fish, Bone Animal Bone, Marine Shell Fragments

Appendix A (Con't.): Soil Description ST-5

Layer	Color	Thickness cm	Texture	Structure	Consistency	Roots	Rocks	Boundary	Cultural Material
I	Very Dark Grayish Brown (10 YR 3/2)	129	Silty Clay	Moderate Fine-Medium Subangular Blocky	Slightly Hard Friable Slightly Sticky Slightly Plastic	Common Very Fine to Fine	Few	Clear Wavy	Charcoal Flecks
II	Very Dark Grayish Brown (7.5 yr 3/2)	19	Silty Clay Loam	Moderate Fine Subangular Blocky	Slightly Hard Friable Slightly Sticky Slightly Plastic	- -	- -	Clear Wavy	Charcoal Flecks -
III	Very Dark Brown (10 yr 2/2)	BOE	Silty Clay Loam	Moderate Fine-Medium Subangular Blocky	Slightly Hard Friable Slightly Sticky Slightly Plastic	-	-	-	-

Appendix A (Con't.): Soil Description ST-6

Layer	Color cm	Thickness	Texture	Structure	Consistency	Roots	Rocks	Boundary	Cultural Material
I	Dark Reddish Brown (5 yr 3/2)	113	Silty Clay	Moderate Fine-Medium Subangular Blocky	Slightly Hard Friable Slightly Sticky Slightly Plastic	Very Fine	-	Clear Wavy	Sparse Charcoal Flecking
II	Dark Brown (7.5 yr 3/2)	BOE	Silty Clay Loam	Moderate Medium Subangular Blocky	Slightly Hard Very Friable Sticky Plastic	-	-	-	-

Appendix A (Con't.): Soil Description ST-7

Layer	Color	Thickness cm	Texture	Structure	Consistency	Roots	Rocks	Boundary	Cultural Material
I	Dark Reddish Brown (5 yr 3/2)	37	Silty Clay	Moderate Fine-Medium Subangular	Firm Friable Slightly Sticky Slightly Plastic	Many Very Fine	Few Smooth	Diffuse	Coral, Charcoal
II	Very Dark Grayish Brown Brown (10 yr 3/2)	17	Silty Clay Loam	Moderate Coarse Subangular Blocky	Friable Sticky Plastic	Few	-	Diffuse Wavy	Charcoal Flecks
III	Dark Brown (7.5 yr 3/2	15	Loamy Sand	Structureless Single Grain	Non-Sticky Non-Plastic	-	-	Clear Wavy	-
IV	Dark Brown ((10 yr 3/3)	15	Sand Gravel Pebbles	Structureless Single grain	Non-Sticky Non-Plastic	-	-	Clear Wavy	-
V	Dark Brown (7.5 yr 3/2)	10	Loamy Sand	Structureless Single Grain	Non-Sticky Non-Plastic	-	-	Clear	-
VI	Dark Grayish Brown (10 YR 3/2)	BOE	Silty Clay	Moderate Thick Platy	Friable Sticky Very Plastic	-	-	-	-

Appendix A (Con't.): Soil Description of ST-8

Layer	Color	Thickness cm	Texture	Structure	Consistency	Roots	Rocks	Boundary	Cultural Material
I	Dark Reddish Brown (5 yr 3/2)	46	Silty Clay	Fine-Medium Subangular Blocky	Hard Friable Slightly Sticky Plastic	Many Fine	Few	Gradual Smooth	Charcoal Historic Glass Fragments
II	Dark Brown (7.5 yr 3/2)	65	Silty Clay Loam	Moderate Fine Sub-angular Blocky	Slightly Hard Friable Sticky Slightly Plastic	Many Fine	Few	Gradual Wavy	-
III	Very Dark Gray (10 YR 3/1)	39	Silty Clay Loam	Moderate Fine Sub-angular Blocky	Slightly Hard Friable Sticky Slightly Plastic	-	-	Clear Wavy	-
IV	Very Dark Brown (10 yr 2/2)	26	Loamy Sand	Structureless Very Fine Single Grain	Loose Non-Sticky Non-Plastic	-	-	Clear Smooth	-
V	Dark Brown (10 yr 3/3)	BOE	Sand Gravel Pebbles	Structureless Fine to Coarse Single Grain	Loose Non-Sticky Non-Plastic	-	-	-	-

Appendix A (Con't.): Soil Description of ST-9

Layer	Color	Thickness cm	Texture	Structure	Consistency	Roots	Rocks	Boundary	Cultural Material
I	Dark Reddish Brown (5 yr 3/2)	59	Silty Clay	Moderate Fine-Medium Subangular Blocky	Firm Slightly Sticky Slightly Plastic	Many Fine to Medium	Few	Diffused Smooth	Charcoal Flecks
II	Very Dark Grayish Brown (10 yr 3/2)	23	Silty Clay Loam	Moderate Coarse Subangular Blocky	Slightly Hard Sticky Plastic	Few	Few	Clear Wavy	Charcoal Flecks
III	Very Dark Grayish Brown (10 yr 3/2)	17	Sand Gravel Pebbles	Structureless Fine-Coarse Single Grain	Loose Non-Sticky Non-Plastic	-	-	Clear Wavy	-
IV	Dark Brown (7.5 yr 3/2)	24	Sandy Clay Loam	Weak Fine to Medium Crumb	Very Friable Slightly Sticky Slightly Plastic	-	-	Clear Wavy	-
Lens	Dark Grayish Brown (10 yr 4/2)	08	Silty Clay Loam	Moderate Medium-Coarse Granular	Friable Slightly Sticky Slightly Plastic	-	-	Clear	-
V	Dark Brown (7.5 yr 3/2)	22+ BOE	Loamy Sand	Structureless Fine-Coarse	Non-Sticky Non-Plastic	-	-	-	-
VI	Very Dark Grayish Brown (10 yr 3/2)	08+ BOE	Loamy Clay	Moderate Thick Platy	Hard Sticky Very Plastic	-	-	-	-

Appendix A (Con't.): Soil Description of ST-10

Layer	Color	Thickness cm	Texture	Structure	Consistency	Roots	Rocks	Boundary	Cultural Material
I	Dark Reddish Brown (5 yr 3/2)	56	Silty Clay	Moderate Fine-Medium Subangular Blocky	Hard Friable Slightly Sticky Slightly Plastic	Many	Cobbles	Clear Wavy	Charcoal Flecks
II	Very Dark Grayish Brown (10 yr 3/2)	56	Silty Clay Loam	Moderate Fine-Medium Subangular Blocky	Slightly Hard Very Friable Slightly Sticky Slightly Plastic	-	-	Clear Smooth	-
Lens #1	Dark Brown (7.5 yr 3/2)	13	Silty Clay	Moderate Fine-Medium Angular Blocky	Slightly Hard Very Friable Sticky Plastic	-	-	Clear Smooth	-
III	Very Dark Brown (10 yr 2/3)	31	Loamy Sand	Structureless Very Fine-Fine Single Grain	Loose Non-Sticky Non-Plastic	-	-	Clear Smooth	-
Lens #2	Dark Brown (7.5 yr 3/2)	06	Silty Clay Loam	Moderate Very Fine-Fine Blocky	Slightly Hard Very Friable Sticky Plastic	-	-	Clear Smooth	-
IV	Dark Brown (7.5 yr 3/2)	11	Sand Gravel Pebbles	Structureless Fine-Coarse Single Grain	Loose Non-Sticky Non-Plastic	-	-	Clear	-
V	Very Dark Brown (10 yr 3/3)	BOE	Silty Clay Loam	Moderate Medium Sub-angular Blocky	Friable Slightly Sticky Slightly Plastic	-	-	-	-

Appendix A (Con't.): Soil Description of ST-11

Layer	Color	Thickness cm	Texture	Structure	Consistency	Roots	Rocks	Boundary	Cultural Material
I	Dark Reddish Brown (5 yr 3/2)	80	Silty Clay	Strong Very Fine-Medium Subangular Blocky	Hard Friable Slightly Sticky Slightly Plastic	Many Fine to Coarse	Few	Clear Wavy	Charcoal Flecks Coral
II	Dark Brown (7.5 yr 3/2) (10 yr 3/3)	32	Silty Clay	Moderate Fine-Medium Subangular Blocky	Slightly Hard Very Friable Sticky Slightly Plastic	- -	- -	Clear Wavy	Charcoal Flecks
III	Very Dark Grayish Brown (10 yr 3/2)	30	Silty Clay Loam	Moderate Fine-Medium Subangular Blocky	Slightly Hard Very Friable Slightly Sticky Slightly Plastic	-	-	Clear Wavy	-
IV	Olive Brown (2.5 yr 4/2)	13	Silty Clay	Moderate Fine-Thick Platy	Slightly Hard Friable Sticky Plastic	-	-	Clear	-
V	Dark Brown (7.5 yr 3/2)	BOE	Silty Clay Loam	Moderate Very Fine Subangular Blocky	Weak Very Friable Slightly Sticky Slightly Plastic	-	-	-	-
Lens	Dark Brown (7.5 yr 3/3)		Sand Gravel Pebbles	Structureless Fine-Coarse Single Grain	Loose Non-Sticky Non-Plastic	-	-	-	-

Appendix A (Con't.): Soil Description of ST-12

Layer	Color	Thickness cm	Texture	Structure	Consistency	Roots	Rocks	Boundary	Cultural Material
I	Dark Brown (7.5 yr 3/3)	42	Silty Clay	Moderate Fine-Medium Subangular Blocky	Slightly Hard Very Friable Slightly sticky Slightly Plastic	Many Very Fine - Fine	Small Cobbles Pebbles	Diffuse Wavy	Charcoal Flecks Coral, Historic Glass Fragments
II	Dark Brown (10 yr 3/3)	50	Silty Clay Loam	Moderate Fine-Medium Subangular Blocky	Slightly Hard Slightly Sticky Slightly Plastic	-	Small Cobbles Pebbles	Clear	
III	Brown (10 yr 4/3)	22	Sand Gravel Pebbles	Structureless Fine-Coarse Single Grain	Loose Non-Sticky Non-Plastic	-		Clear	-
IV	Dark Brown (10 yr 3/3)	BOE	Silty Loam	Weak Fine - Medium Subangular Blocky	Slightly Hard Very Friable Slightly Sticky Non-Plastic	-	-	-	-
V	Very Dark Grayish Brown (10 yr 3/2)	08	Sandy Loam	Moderate Fine-Medium Crumb	Slightly Hard Very Friable Non-Sticky Non-Plastic	-	-	-	-

Appendix A (Con't.): Soil Description of ST-13

Layer	Color	Thickness cm	Texture	Structure	Consistency	Roots	Rocks	Boundary	Cultural Material
I	Dark Brown (10 yr 3/3)	55	Silty Clay	Moderate Fine-Medium Subangular Blocky	Slightly Hard Very Friable Slightly Sticky Slightly Plastic	One	Few	Clear Wavy	Charcoal Flecks Historic Glass Fragment
II	Dark Brown (10 yr 3/3)	80	Silty Clay Loam	Moderate Fine-Medium Subangular Blocky	Slightly Hard Very Friable Slightly Sticky Slightly Plastic	-	-	Clear Wavy	Charcoal Flecks
III	Dark Brown (10 yr 3/3)	15	Sand Gravel Pebbles	Structureless Fine-Coarse Single Grain	Loose Non-Sticky Non-Plastic	-	-	Clear Wavy	-
IV	Dark Brown (10 yr 3/3)	BOE	Silty Clay Loam	Moderate Fine-Medium Subangular Blocky	Slightly Hard Very Friable Slightly Sticky Slightly Plastic	-	-	-	-
Lens #1 #4	Dark Grayish Brown (10yr/42)	11	Loamy Sand	Structureless Very-Fine Single Grain	Non-Sticky Non-Plastic	-	-	-	-
Lens #2	Brown (10 yr 4/3)	10	Sand Gravel	Structureless Fine-Coarse	Non-Sticky Non-Plastic	-	-	-	-
Lens #3	Dark Brown (7.5 yr 3/2)	16	Silty Clay	Moderate Fine Sub-Angular Blocky	Slightly Hard Slightly Sticky Slightly Plastic	-	-	-	-

Appendix A (Con't.): Soil Description of ST-14

Layer	Color	Thickness cm	Texture	Structure	Consistency	Roots	Rocks	Boundary	Cultural Material
I	Dark Reddish Brown (5 yr 3/2)	65	Silty Clay	Moderate Fine-Medium Subangular Blocky	Slightly Hard Very Friable Slightly Sticky Slightly Plastic	Many Very Fine to Fine	Small Cobbles	Diffuse Smooth	Charcoal Flecks Historic Glass Fragment, Coral
II	Dark Grayish Brown (10 yr 3/2)	59	Silty Clay Loam	Moderate Fine-Coarse Subangular Blocky	Slightly Hard Very Friable Slightly Sticky Slightly Sticky	Few	-	Clear Wavy	Charcoal Flecks
III	Dark Brown (7.5 yr 3/2)	12	Silty Clay Loam	Moderate Fine-Coarse Subangular Blocky	Slightly Hard Very Friable Slightly Sticky Slightly Sticky		-	Clear Wavy	Charcoal Flecks
IV	Dark Brown (10 yr 3/3)	BOE	Loamy Sand	Moderate Fine-Coarse Subangular Blocky	Slightly Hard Very Friable Slightly Sticky Slightly Sticky	-	-	-	
Lens #1	Dark Brown (7.5 yr 3/2)	12	Silty Clay Loam	Moderate Fine-Coarse Subangular Blocky	Slightly Hard Very Friable Slightly Sticky Slightly Plastic	-	-	-	
Lens #2	Brown (10 yr 4/3)	11	Sand Gravel	Structureless Very Fine to Coarse	Loose Non-Sticky Non-Plastic	-	-	-	
Lens #3	Dark Brown (10 yr 3/3)	06	Sand Gravel	Structureless Fine-Coarse Single Grain	Loose Non-Sticky Non-Plastic	-	-	-	-

Appendix A (Con't.): Soil Description of ST-15

Layer	Color	Thickness cm	Texture	Structure	Consistency	Roots	Rocks	Boundary	Cultural Material
I	Dark Reddish Brown (5 yr 3/2)	44	Silty Clay	Moderate Fine-Medium Subangular Blocky	Slightly Hard Very Friable Slightly Sticky Slightly Plastic	Many Very Fine	Three Cobbles	Clear Smooth	Charcoal Flecks Historic Glass Fragments
II	Brown (10 yr 3/2)	11	Sandy Clay Loam	Moderate Very Fine - Fine Granular	Slightly Hard Friable Slightly Sticky Slightly Plastic	Few	Few Pebbles	Clear Smooth	-
III	Dark Reddish (7.5 yr 3/2)	12	Silty Clay Loam	Strong Fine-Medium Subangular Blocky	Slightly Hard Friable Slightly Sticky Slightly Sticky	-	-	Gradual Smooth	Charcoal Flecks
IV	Dark Yellowish Brown (10 yr 3/3)	11	Sandy Loam	Weak Very Fine to Fine Subangular Blocky	Very Friable Non--Sticky Non- Plastic	-	-	Gradual Smooth	
V	Dark Yellowish Brown (10 yr 2/2)	BOE	Silty Clay Loam	Medium Very Fine Subangular Blocky	Slightly Hard Very Friable Slightly Sticky Slightly Plastic	-	-	-	-
Lens #1	Dark Reddish Brown (7.5 yr 2.5/2)		Silty Clay	Moderate Fine-Medium Platy	Slightly Hard Very Friable Slightly Sticky Slightly Sticky	-	-	-	-
Lens #2	Brown (7.5 yr 3/2)		Sand Gravel Pebbles	Structureless Very Fine to Coarse	Loose Non-Sticky Non-Plastic	-	-	-	-

Appendix A (Con't.): Soil Description of ST-16

Layer	Color	Thickness cm	Texture	Structure	Consistency	Roots	Rocks	Boundary	Cultural Material
I	Dark Brown (7.5 yr 3/2)	64	Loamy Sand Gravel	Structureless Very Fine to Coarse	Loose Non-Sticky Non-Plastic	Medium Coarse	Cobbles Boulders	Clear Wavy	Coral Historic Refuse
II	Dark Grayish Brown (10 yr 3/2)	49	Silty Clay Loam	Medium Fine-Medium Subangular Blocky	Slightly Hard Very Friable Sticky Slightly Plastic	One Medium	-	Abrupt Smooth	Historic Refuse
III	Dark Brown (7.5 yr 3/2)	14	Loamy Sand	Structureless Fine Single Grain	Loose Non-Sticky Non-Plastic	-	-	Abrupt	-
IV	Very Dark Grayish Brown (10 yr 3/2)	BOE	Silty Clay Loam	Moderate Fine-Medium Subangular Blocky	Very Friable Slightly Sticky Slightly Plastic	-	-	-	-

APPENDIX B

SELECTED PROJECT AREA PHOTOGRAPHS

FIGURE B1: GENERAL VIEW OF ST-2. VIEW TO EAST.

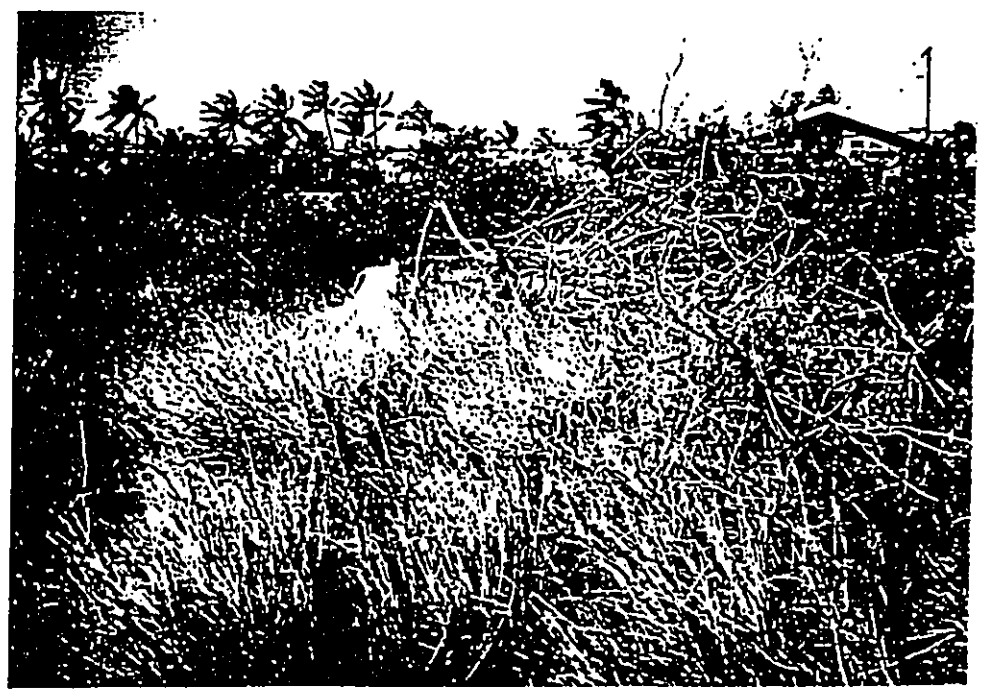

FIGURE B2: GENERAL VIEW OF VEGETATION BEHIND BERMS. VIEW TO WEST.

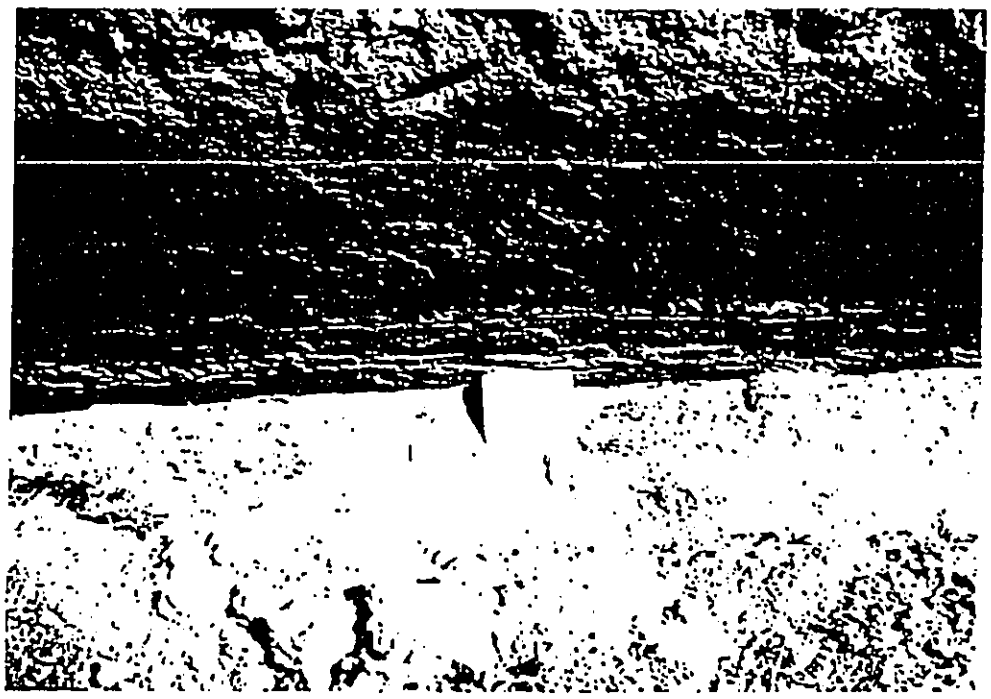

FIGURE B3: SOUTH WALL PROFILE OF TRENCH 10.

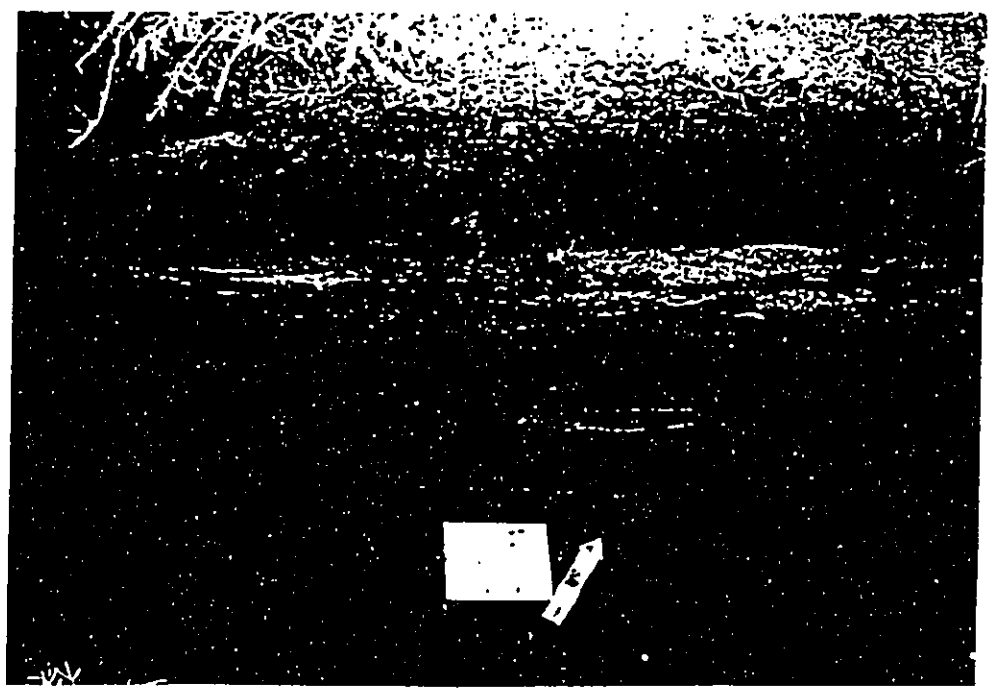

FIGURE B4: NORTH WALL PROFILE OF TRENCH 13.

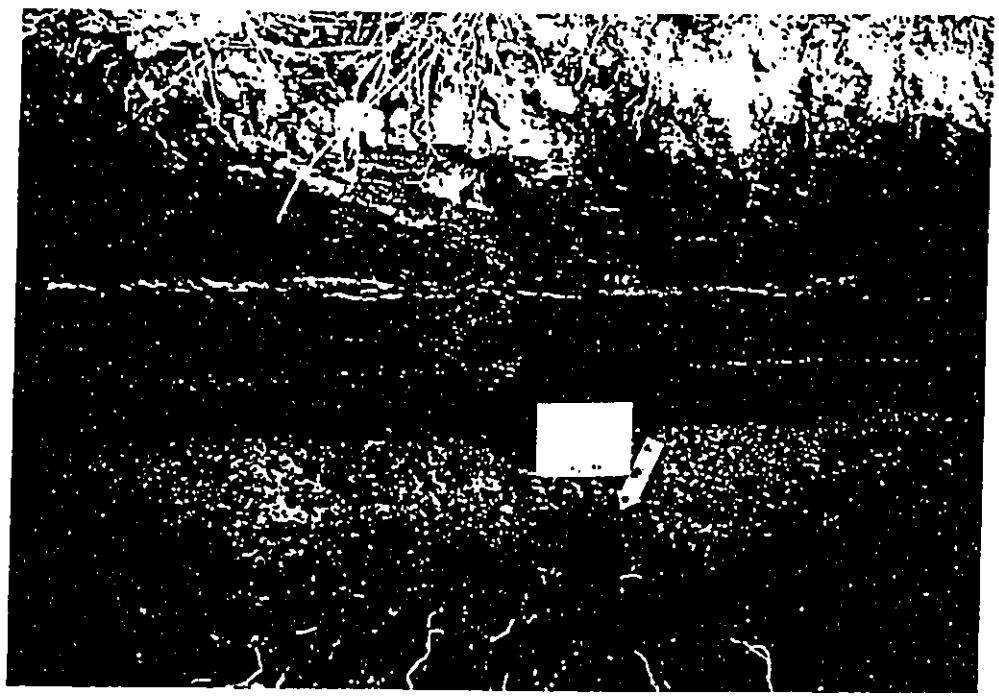

FIGURE B5: SOUTH WALL PROFILE OF TRENCH 17.

APPENDIX D

Project Specifications

Project Specifications for Front Street Apartments.

1.0 Apartment Exterior:

1.1 Foundations: Slab on Grade
1.2 Framing: Wood or Galvanized Steel
1.3 Structural Roof: Trusses with plywood
1.4 Insulation: Fiberglass to meet R value required by code
1.5 Roof: Asphalt Shingles
1.6 Exterior Walls: Composite horizontal siding or 5/8" grooved vertical plywood siding.
1.7 Sliding Doors: Vinyl
1.8 Windows: Vinyl
1.9 Entry Doors: Solid Core-raised panels
1.10 First Floor Lanais: Concrete slab on grade
1.11 Second Floor Lanais: 2 x 6 trex wood, spaced
1.12 Stairways: Wood with trex wood or prestressed concrete steps

2.0 Apartment Interior:

2.1 Interior Walls: 1/2" gypsum board (sheetrock)
2.2 Ceilings: 1/2" gypsum board (sheetrock)
2.3 Floors: Concrete at first floor, plywood on second floor
2.4 Interior Doors: Hollow core
2.5 Flooring: Kitchen-Sheet vinyl, Bath-Sheet vinyl, Livingroom and Bedrooms recycled carpet
2.6 Cabinets: Composite laminate
2.7 Hardware: Quik-set or equal
2.8 Plumbing fixtures: American Standard
2.9 Tubs & Tub enclosures: Fiberglass
2.10 Appliances: Westing House or equal

3.0 Garages:

3.1 Foundations: Slab on Grade
3.2 Exterior Walls: Composite horizontal siding or grooved 5/8" plywood siding
3.3 Interior Walls: Open 2 x 4 studs
3.4 Interior Partitions: Sheetrock, 1 hour fire separation
3.5 Structural Roof: Trusses with plywood
3.6 Roof Asphalt: Shingles
3.7 Insulation: Fiberglass to meet R value required by code
3.8 Garage Doors: Solid Core-Raised panel, manual operated

4.0 Water Heating:

4.1 Solar

March 2, 1999

Appendix E
Agency Comment Letters and Responses

BENJAMIN J. CAYETANO
GOVERNOR

RECEIVED
HOUSING DIVISION

99 APR -5 P4:25

COUNTY OF MAUI

BRUCE S. ANDERSON, Ph.D.
Director of Health

ALFRED M. ARENSDORF, M.D.
DISTRICT HEALTH OFFICER

STATE OF HAWAII
DEPARTMENT OF HEALTH
MAUI DISTRICT HEALTH OFFICE
54 HIGH STREET
WAILUKU, MAUI, HAWAII 96793

March 30, 1999

HOUSING AND HUMAN CONCERNS

	EVI	COMMENTS	CALL ME	SEE ME	FILE	REVIEW	RESPOND
DIRECTOR	☐	☐	☐	☐	☐	☐	☐
DEP DIR	☐	☐	☐	☐	☐	☐	☐
ADM ASST	☐	☐	☐	☐	☐	☐	☐
SECRETARY	☐	☐	☐	☐	☐	☐	☐
CLERK	☐	☐	☐	☐	☐	☐	☐
HSG ADMIN	☐	☐	☐	☐	☐	☐	☐
AGING EXEC	☐	☐	☐	☐	☐	☐	☐
SR SVC ADMIN	☐	☐	☐	☐	☐	☐	☐
HAWAIIAN COORD	☐	☐	☐	☐	☐	☐	☐
YOUTH COORD	☐	☐	☐	☐	☐	☐	☐
[illegible] COORD	☐	☐	☐	☐	☐	☐	☐
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[illegible]	☐	☐	☐	☐	☐	☐	☐

4/5

DL

Ms. Alice L. Lee
Director
Department of Housing and
Human Concerns
County of Maui
200 South High Street
Wailuku, Hawaii 96793

Dear Ms. Lee:

Subject: Front Street Apartments (Family Units)
TMK: (2) 4-5-3: 13, 14, 15, 38, 39 and 40

Thank you for the opportunity to comment on the proposed housing development. We have the following comments to offer:

1. Pursuant to Hawaii Administrative Rules, Chapter 11-46, "Community Noise Control", a noise permit may be required and should be obtained prior to any construction activity.

2. The applicant is required by Hawaii Administrative Rules, Chapter 11-26, to determine whether rodents are present at the site and to eradicate these rodents prior to clearing the lot. Should this action be necessary, the applicant is also required to notify the Department by submitting Form VC-12 to this office.

Should you have any questions, please call me at 984-8230.

Sincerely,

HERBERT S. MATSUBAYASHI
District Environmental Health Program Chief

c: Edwin Okubo
Rory Frampton

CHRIS HART & PARTNERS

July 23, 1999

Mr. Herbert S. Matsubayashi
District Environmental Health Program Chief
State Department of Health
54 High Street
Wailuku, Hawaii 96793

Subject: Front Street Apartments
Lahaina, Maui, Hawaii
TMKs: 4-5-03: 13, 14, 15, 38, 39 and 40

Dear Mr. Matsubayashi,

In response to your review letter for the Front Street Apartments project, dated March 30, 1999, to Ms. Alice Lee, Director of the Department of Housing and Human Concerns for the County of Maui, we offer the following responses.

1. **Noise.** The project will comply with the Community Noise Control rules of the State (Chapter 11-46, HAR). At this point in time it does not appear as though a noise permit will be required, since the project's construction hours and noise levels will be within the state's prescribed standards.

2. **Rodent Control.** The developer will contract with a local pest exterminator company to determine the presence of rodents on the property, and if eradication is required, form VC-12 will be submitted to your office.

Thank you for commenting on the proposed project. Please contact me if there are any questions at 242-1955.

Respectfully submitted,

Rory Frampton
Project Planner

cc: Alice Lee, Department of Housing and Human Concerns
John Min, Planning Department
Kent Smith, Smith Development

LANDSCAPE ARCHITECTURE AND PLANNING
1955 MAIN STREET, SUITE 200 · WAILUKU, MAUI, HAWAII 96793-1706 · PHONE: 808-242-1955 · FAX: 808-242-1956

DEPARTMENT OF
PARKS AND RECREATION
COUNTY OF MAUI

1580-C KAAHUMANU AVENUE WAILUKU, HAWAII 96793

JAMES "KIMO" APANA
Mayor

FLOYD S. MIYAZONO
Director

ELIZABETH D. MENOR
Deputy Director

(808) 243-7230
FAX (808) 243-7934

MEMORANDUM

March 30, 1999

TO: Alice L. Lee, Director of Housing & Human Concerns

FROM: Floyd S. Miyazono, Director

SUBJECT: **Front Street Apartments**
Section 201G-118, HRS Application

Thank you for the opportunity to review the above subject action. The following are our comments, as it pertains to recreational opportunities and park assessment requirements:

- Page 20, section C., 1. Existing Conditions: The closest of the active recreational parks, listed as being nearby, are beyond walking distance for small children. Malu Ulu O Lele Park and Lahaina Recreation Center are on the other end of Lahaina. Wahikuli Wayside Park is across Honoapiilani Highway. In the application it is stated that available on-site parking will be reduced because the residents will be less dependent on vehicles than other areas of Maui. This fact would suggest that provisions should be made for designated recreation structures and facilities within the project.

- Page 20, section C., 1. Potential Impacts and Mitigation Measures: The use of lawn areas does not satisfy the park assessment requirements for privately-owned parks and playgrounds and should not be so stated in the application. Although it is a fact that a portion of the 24-acre parcel (PD4) immediately north of the project is designated for parks, it should not be considered in this application. Whether or when this area is developed is beyond the control of Maui County. Also, that park area is meant to satisfy the needs of that project district.

- Park assessment requirements for this project would amount to 1.57 acres of land being specifically set aside and improved for park purposes. We would recommend that, at a minimum, a centrally located, one acre site be developed with a basketball court, a tot lot, picnic tables and bar-b-que pits, and other related recreation opportunities for use by the project residents. Although H.R.S. 201G-118 approval may exempt the developer from construction standards for subdivisions, we could not support that approval without these recreation amenities being included in the preliminary design submittal.

Should you need further comments or clarifications, please call me or Patrick Matsui, Chief of Parks Planning & Development at 243-7387.

c: Patrick Matsui, Chief of Parks Planning & Development

CHRIS HART & PARTNERS

July 23, 1999

Mr. Floyd Miyazono, Director
Department of Parks and Recreation
County of Maui
1580-C Kaahumanu Avenue
Wailuku, Hawaii 96793

Subject: Front Street Apartments
Lahaina, Maui, Hawaii
TMKs: 4-5-03: 13, 14, 15, 38, 39 and 40

Dear Mr. Miyazono,

In response to your review letter for the Front Street Apartments project, dated March 30, 1999, to Ms. Alice Lee, Director of the Department of Housing and Human Concerns for the County of Maui, we offer the following response.

On-site recreational amenities have been included in the preliminary site plan, a copy of which is transmitted herewith. These amenities include two "tot lot" play area with play equipment in the as well as an area with barbecue pits and picnic tables. These areas amount to approximately 1 acre (44,100 sq. ft.), consistent with your recommended 1 acre minimum.

Thank you for commenting on the proposed project. Please contact me if there are any questions at 242-1955.

Respectfully submitted,

Rory Frampton
Project Planner

cc: Alice Lee, Department of Housing and Human Concerns
John Min, Planning Department
Kent Smith, Smith Development
Uwe Schultz, AIA

LANDSCAPE ARCHITECTURE AND PLANNING
1955 MAIN STREET, SUITE 200 · WAILUKU, MAUI, HAWAII 96793-1706 · PHONE: 808-242-1955 · FAX: 808-242-1956

JAMES "KIMO" APANA
Mayor

PATRICK Y.P. NITTA
Director of Finance

WESLEY P. LO
Deputy Director of Finance

COUNTY OF MAUI
DEPARTMENT OF FINANCE
200 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAII 96793

HOUSING AND HUMAN CONCERNS

	COMMENTS	CALL ME	SEE ME	FILE	SIGN	RESPONSE
DIRECTOR	☐	☐	☐	☐	☐	☐
DEP DIR	☐	☐	☐	☐	☐	☐
ADM ASST	☐	☐	☐	☐	☐	☐
SECRETARY	☐	☐	☐	☐	☐	☐
CLERK	☐	☐	☐	☐	☐	☐
HSG ADMIN	☐	☐	☐	☐	☐	☐
AGING EXEC	☐	☐	☐	☐	☐	☐
SR SVC ADMIN	☐	☐	☐	☐	☐	☐
HAWAIIAN COORD	☐	☐	☐	☐	☐	☐
YOUTH COORD	☐	☐	☐	☐	☐	☐
HCDP COORD	☐	☐	☐	☐	☐	☐
HOMELESS	☐	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐	☐

REQ'D DATE 3/12/99
DUE ASAP
BY AL

March 12, 1999

TO: Alice Lee, Director of Housing and Human Concerns

FROM: Patrick Nitta, Director of Finance

SUBJECT: FRONT STREET APARTMENTS
REQUESTED WAIVERS AND EXEMPTIONS

Regarding Section IV, Requested Waivers and Exemptions, my concerns are the following:

2. **Off Street Parking and Loading:** Is there adequate off street parking to waive the two stalls per unit? Are the stalls going to be standard or compact?

3. **Special Management Area/Environmental Assessment:** Do we want to waive all of this?

4. **Road Improvements:** Shouldn't we consider the additional volume of vehicles with the completion of this project? There would be additional traffic when the Wainee Village, Elderly Housing project and business, and multi-family and park is built according to the West Maui Community Plan. With 34 studios, 60 one bedrooms, and 46 two bedrooms, there will be at least 292 more people in the area.

Your response to my concerns will be greatly appreciated.

CHRIS HART & PARTNERS

July 23, 1999

Mr. Patrick Nitta, Director
Department of Finance
County of Maui 200 S. High Street
Wailuku, Hawaii 96793

Subject: Front Street Apartments
Lahaina, Maui, Hawaii
TMKs: 4-5-03: 13, 14, 15, 38, 39 and 40

Dear Mr. Nitta,

In response to your review letter for the Front Street Apartments project, dated March 12, 1999, to Ms. Alice Lee, Director of the Department of Housing and Human Concerns for the County of Maui, we offer the following responses.

1. **Off-Street Parking and Loading.** The project will provide 210 parking stalls for the apartments at an overall ratio of 1.5 stalls per unit. The proposed unit mix includes 34 studios, 60 one-bedroom and 46 two bedroom. Using ratios of 1 car per studio, one car per one bedroom and 2 cars per two bedroom, the number of stalls would amount to 206 stalls, below the total provided. In addition, provision will be made for guest parking and separate stalls will be provided for the tele-medicine center and multi-purpose building.

2. **Special Management Area Permit/Environmental Assessment.** The project will comply with the permitting and review requirements of Chapters 205A and 343, Hawaii Revised Statutes.

3. **Road Improvements.** Your comment refers to concerns regarding additional traffic, especially in light of other projects in the area. The traffic report which was prepared for this project and which was included in the report which you reviewed, included an assessment of future traffic conditions given other anticipated developments in the area. The report concluded that there should be no significant impacts to Kenui Street and its intersections. In addition, after reviewing the preliminary application, the State Department of Transportation concluded that the proposed project should have no adverse affect on State transportation facilities.

LANDSCAPE ARCHITECTURE AND PLANNING
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Thank you for commenting on the proposed project: Please contact me if there are any questions at 242-1955.

Respectfully submitted,

Rory Frampton
Project Planner

cc: Alice Lee, Department of Housing and Human Concerns
John Min, Planning Department
Kent Smith, Smith Development

JAMES "KIMO" APANA
Mayor

PATRICK Y.P. NITTA
Director of Finance

WESLEY P. LO
Deputy Director of Finance

COUNTY OF MAUI
DEPARTMENT OF FINANCE
200 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAII 96793

March 10, 1999

TO: Ms. Alice Lee, Director of Housing and Human Concerns

THRU: Mr. Patrick Nitta, Director of Finance

FROM: Wesley Lo, Deputy Director of Finance

SUBJECT: Front Street Apartments

In response to your request for comments regarding the Front Street Apartments, the following is provided.

Please understand that these comments are related to the request for exemptions. I am unaware of the full impact of the requested waivers and exemptions; however, the comments provided are related to financial aspects of the development that may have an affect in the future on the waivers and exemptions.

1) Although it is not the County's duty to provide any credit to the project, it would be interesting to see operating projections and a development budget on the project.

   The rationale behind this is that if the project becomes financially unfeasible, the project may be sold and there is a possibility that the use of the project may change in the future (i.e. condo conversion, etc.) If this were to occur, there may be some impact on the surrounding areas and the "exemptions and waivers requested". (For Example, is there more impact on traffic if the project were converted to a condo, as compared to apartment?, Would the reduced number of parking stalls preclude any other use of the project?)

   If the project has sufficient financial backing, and appears to be feasible, there will be only a nominal chance that the project will no longer be a "low income rental"

If, however, the project is only marginally feasible, we may need to analyze if the exemptions will preclude the project from being converted to some other use at a later point in time.

In the LLC's request for Tax Credits, this information will need to be provided to the HCDCH.

2) I would suggest that more market research be obtained. Perhaps a review of the entire market study prepared by ACM Consultants would be warranted (as opposed to relying on the summary provided in the request). A quick review of the proposed rents is that the average rent in the project is $818. A review of the Sunday, March 7, 1999 Maui News, reflect that West Maui had 28 comparable units for rent (studio's, 1 bedrooms and 2-bedrooms), the average rent of these units totaled $853. This included several oceanfront units with additional amenities (pool, etc.).

As a result, it appears that this project does not necessarily add inventory that is not currently filled by the market place. However, a market study may provide further information.

Vacancy factors, absorption and existing inventory in West Maui should be addressed.

It should be noted that the project will not receive tax credits until it reaches certain occupancy levels, as well as other operating benchmarks. However, waivers and exemptions may already have been granted.

3) This project should assist in the economic activity in Maui, and provide for much needed development in Maui. However, it is anticipated that this may have an affect on the market values in the surrounding areas.

4) Although we cannot suggest any management companies, the long term viability of the project will depend on strong property management, the development budget will show replacement reserves and the projected fees for management. The LLC should be questioned on its view of management.

Hopefully, these comments can be utilized by you in your analysis. If you have any questions, please feel free to contact me at ext, 7474.

CHRIS HART & PARTNERS

July 23, 1999

Mr. Wesley Lo, Deputy Director
Department of Finance
County of Maui 200 S. High Street
Wailuku, Hawaii 96793

Subject: Front Street Apartments
Lahaina, Maui, Hawaii
TMKs: 4-5-03: 13, 14, 15, 38, 39 and 40

Dear Mr. Lo,

In response to your review letter regarding the Front Street Apartments project, dated March 10, 1999, to Ms. Alice Lee, Director of the Department of Housing and Human Concerns for the County of Maui, we offer the following responses.

1. **Project Feasibility.** Since the date of your previous review, the project was awarded Low Income Housing Tax Credits from HCDCH. The tax credits are allocated over a ten year period. With the award of these tax credits there is a requirement that the project remain as a low income rental for 51 years. There was extensive review of the project's operating and development budget by HCDCH staff. The decision to award the tax credits was based in part on the financial feasibility of the project as well as the committed financial backing. If you have further concerns regarding the project's feasibility or the potential for conversion to another use, please contact myself or HCDCH for more information.

2. **Market Study.** Based on the review and approval of HCDCH, fifty percent of the project's units will be targeted towards families or individual earning fifty percent of less of the County's annual median gross income (AMGI), while the remaining fifty percent will be targeted to families earning sixty percent or less of Maui's AMGI. The rental rates are established by established by HCDCH based on statistics provided by HUD. The market study concluded that the proposed rents would be between 17 and 25 percent less than comparable units on the market in West Maui today. This information was presented to HCDCH for extensive review and analysis. If you have further interest in reviewing the market study, please contact me and we will provide you with a complete copy.

LANDSCAPE ARCHITECTURE AND PLANNING
1955 MAIN STREET, SUITE 200 · WAILUKU, MAUI, HAWAII 96793-1706 · PHONE: 808-242-1955 · FAX: 808-242-1956

3. **Affect on Market Values.** This project is being marketed toward working class families and individuals. Rents will not be subsidized as in other federally supported programs (e.g. Section 8). The project is being developed at substantially lower density (16 units per acre) than many other West Maui multi-family projects. The project will incorporate substantial front yard setbacks and landscape plantings. We see no basis for your statement implying that the project could have a negative impact on property values in the immediate area.

4. **Project Management.** You are correct in noting that the project will need a strong property management organization. The developers plan to utilize an existing Maui based organization, however, the specific operator has yet to be chosen. The operator will need to be capable of servicing Low Income Housing Tax Credit projects. Computer software is available to assist in monitoring the strict requirements as set forth by HCDCH.

Thank you for commenting on the proposed project. Please contact me if there are any questions at 242-1955.

Respectfully submitted,

Rory Frampton
Project Planner

cc: Alice Lee, Department of Housing and Human Concerns
John Min, Planning Department
Kent Smith, Smith Development
Glen Kunihisa, ACM

[illegible]
Director

[illegible]

RECEIVED
HOUSING DIVISION
99 APR -1 P3:47
COUNTY OF MAUI

COUNTY OF MAUI
DEPARTMENT OF PLANNING
COUNTY OF MAUI

March 30, 1999

HOUSING AND HUMAN CONCERNS	INITIAL	COMMENTS	CALL ME	SEE ME	FILE	ROUTE
DIRECTOR		☐	☐	☐	☐	☐
DEP DIR		☐	☐	☐	☐	☐
ADM ASST		☐	☐	☐	☐	☐
SECRETARY		☐	☐	☐	☐	☐
CLERK		☐	☐	☐	☐	☐
HSG ADMIN		☐	☐	☐	☐	☐
AGING EXEC		☐	☐	☐	☐	☐
SP SVC ADMIN		☐	☐	☐	☐	☐
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YOUTH COORD		☐	☐	☐	☐	☐
RSVP COORD		☐	☐	☐	☐	☐
[illegible]ELESS		☐	☐	☐	☐	☐
[illegible]NTS		☐	☐	☐	☐	☐
		☐	☐	☐	☐	☐

[illegible]'S DATE 4/1/99
[illegible] DUE

Ms. Alice L. Lee, Director
Department of Housing and Human Concerns
200 South High Street
Wailuku, Hawaii 96793

Dear Ms. Lee:

RE: Millennium Pacific Investments, LLC Front Street Apartments - Preliminary Application; Section 201G-118, Hawaii Revised Statutes (HRS); Tax Map Key: 4-5-03:013, 014, 015, 038, 039, and 040, Kenui, Wainee and Front Streets, Lahaina, Maui, Hawaii

The Maui Planning Department (Department) received your request to review the above subject application by April 5, 1999. In general, the Department has no objections to the overall project. However, the Department has some specific concerns that are discussed below.

The proposed site is located in the State Land Use Urban District. The West Maui Community Plan land use map designates the property as Multi-Family and Business/Multi-Family. The County zoning is A-1 Apartment district for TMK: 4-5-03:013 (7.846 acres), and R-2 Residential for TMK: 4-5-03:014, 015, 038, 039, and 040 (0.884 acres). The proposed development is located in the Special Management Area (SMA) and in the Lahaina Town National Historic Landmark District.

Through the HRS, Section 201G-118 process, the proposed development is exempt from all statutes, ordinances, charter provisions, and rules of any governmental agency relating to planning, zoning, construction standards for subdivisions, development and improvement of land, and the construction of units thereon. As such, the Department encourages your office to ensure that the issues and mitigative measures generally reviewed and addressed in HRS, Chapters 343, "Environmental Impact Statements" and 205A, "Coastal Zone Management," and in a change in zoning application are identified and appropriate mitigation incorporated in this application.

The Applicant has attempted to address the primary concerns that would normally be addressed in the preparation of an Environmental Assessment and an SMA application. However, this Department has the following specific comments which the Applicant should address:

1. Community Building. The application identifies a community building and offices. The application lacks specific information on the sizes and number of offices or the size of the general community assembly/activity center building and area. The Applicant stated on Page 3 that the existing preschool building located on the site will be retained and incorporated into the project as a learning/tele-medicine center. The Applicant should clarify if this learning/tele-medicine center would provide services for residents outside the apartment complex. If so, how many people will be served? How many employees and where are the parking spaces for employees and clients? Of concern is the lack of parking around the community activities/office building site for employees and guests.

2. Off-Street Parking. The Applicant is proposing 1.5 stalls as opposed to the required 2.0 stalls. The Planning Department has no objections to the reduction of parking stalls for residents, however, there is concern regarding parking for guests and employees, particularly at the community activities center site.

   The site plans should identify the covered parking garages. How many parking structures will there be? It is not clear from the site plans, "Illustrative Site Plan" (Figure No. 3), "Landscape Concept Plan" (Figure No. 9), and other site plans, which buildings are the parking structures. The landscape concept plan should show all 210 parking spaces and, specifically, identify the location of the parking garage stalls.

   Of concern is that the tenants may use the covered garages as additional living and/or storage areas which could create parking problems on and off the premises. Will storage lockers be permitted in or outside the garages? Will house rules restrict the garage for parking purposes only? Are the garages enclosed, with doors or without doors? How will the use be monitored? Have

"Crime Prevention by Environmental Design" criteria been applied at these facilities to provide better surveillance and prevent criminal activities in and around the garage areas?

The parking and/or site plan should also show the location of the laundry facilities in the garage buildings and measures for resident security. The parking plan should also identify which parking stalls will be used by the community activities center/office/tele-medicine building complex as noted in Comment No. 2 above.

3. Access. There should be an emergency vehicle access into the complex from either Front Street and/or Wainee Street.

4. Front, Kenui, and Wainee Streets Rights-of-Way, Street Parking, Bike Lane, Curbs, Gutters, and Sidewalks. The "Topographical Survey" map, Figure No. 2a, shows the widening of Kenui and Wainee Streets. However, the "Illustrative Site Plan," Figure No. 3, shows that the Applicant is not providing any land area for street widening. Consideration should be given to providing on-street parking and bike lanes on Front, Kenui, and Wainee Streets at the time of development.

However, the Applicant is proposing to defer all roadway improvements until Wainee Village is developed. It should be noted, however, that the developers of the projects may not be the same and the cost of these improvements would appear to fall on the Wainee Village developers and the County. HRS, Section 201G-118 makes exception to the exemptions if minimum requirements of health and safety are not met.

The Applicant has also provided justification for the reduction in parking on the basis that the tenants would be able to walk or bike to work, school, or play. For this reason, it would seem more appropriate to complete versus defer improvements to Front, Kenui, and Wainee Streets.

In addition, the Traffic Impact Analysis Report (TIAR) recommends improvements with or without the project to include the construction of curbs, gutters, and sidewalks. With the project,

the TIAR recommends an exclusive left-turn lane on the southbound approach of Front Street at Kenui Street/Kai Pali Place. The TIAR notes that future improvements, other than those noted above, should be coordinated with the future development of Wainee Village. To insure that these improvements will be done, the Applicant should consider bonding these future improvements which include an exclusive left-turn lane on the southbound approach of Front Street at Kenui; realignment of Kenui to intersect with Front Street; and an exclusive left-turn lane on northbound approach of Front Street at Kenui.

Currently, there are no drainage systems within the road rights-of-ways fronting the project. The Drainage Report states that the topography of the site slopes toward Front Street at an average slope of about 1½ percent. The report further states that future roadway improvements in front of the proposed development site include pavement widening, installation of curb and gutter, construction of a sidewalk and grade adjustment wall. Future drainage improvements include the installation of catch basins and piping of storm drain runoff generated within the paved roadway areas to the detention chambers within the site. No mention was made of Kenui and Wainee Streets drainage improvements. Deferring curbs, gutters, and sidewalk improvements as proposed by the Applicant would create an unpleasant and unsafe walking environment.

5. Building Design, Materials, and Color. The Urban Design Review Board would normally review the design, materials, and colors of the buildings since the property is located in the SMA area. Based upon the elevation drawings submitted, the building designs seem to be in keeping with the character of the area. Exhibits 6c and 7c are the best examples of building design.

The building mass has been reduced in some of the buildings by breaking up the roof lines, jogging of the building walls, and by the eyebrow roofs above some of the unit entries. The rounded edges of the balconies, as opposed to the standard straight edges, also create some visual relief to the sharper, rectangular-shaped buildings. The recessed window areas and eyebrow roofs over the

doorways, as shown in Figures 7a (studio elevation) and 7b (studio rear and front view), provides visual relief and adds shade.

The Department, however, has comments on several design issues. The application does not identify and include the type of materials and colors for the building walls and roofs. There are some buildings, particularly the one-bedroom and two-bedroom unit buildings shown in figure 7a, which are massive. The fenestration should be broken up by color changes, building material changes, or other architectural elements such as the change in roof lines and walls and the eyebrow roofs. As noted above, the eyebrow roofs are ideal in that, in addition to the fenestration improvement and reducing the mass and density, they provide shade to windows and doorways particularly for the one- and two-bedroom buildings. Changing the window types from flat to more defined windows also would improve the appearance of the buildings.

There are no elevation drawings for the garage buildings. If these buildings are enclosed with little, if any, architectural elements to break up the mass of the structures, the buildings could resemble warehouses. The location of the parking structures could also create isolated areas that could present safety and security concerns. Consideration should be given to providing either semi-enclosed garages or trellises.

6. Landscaping. The Landscape Concept Plan shows minimal number of trees in the parking lot areas. The Applicant should provide more shade trees for the parking areas to reduce the heat from the impervious surfaces of the parking area. The Department also recommends that the Applicant be encouraged to provide native plants which are indigenous to the area and utilize the Maui County Planting Plan for recommended plants in the area.

The Department has no further comments at this time. Should you have any questions, please contact Ms. Julie Higa, Staff Planner, of this office at 243-7735.

Very truly yours,

JOHN E. MIN
Director of Planning

JEM:JMH:cmb
c: Clayton Yoshida, AICP, Deputy Director of Planning
State Office of Planning, Coastal Zone Management Program, DBEDT
Office of Environmental Quality Control
Kelly Cairns, Deputy Corporation Counsel
LUCA (2)
Julie Higa, Staff Planner
Project File
General File
S:\ALL\JULIE\FRONTST.APT\REVISED.LEE

CHRIS HART & PARTNERS

July 23, 1999

Mr. John Min, Director
Department of Planning
County of Maui
250 S. High Street
Wailuku, HI 96793

Subject: Front Street Apartments
TMKs: 4-5-03: 013, 014, 015, 038, 039 and 40
Lahaina, Maui, Hawaii

Dear Mr. Min:

This letter is in response to your letter dated March 30, 1999, in which you provided comments on the proposed Front Street Apartments project. The following points respond to your comments.

For your information, and as has been presented to you in previous correspondence, an Environmental Assessment pursuant to Chapter 343, HRS as well as a Special Management Area Use permit will be processed for the project.

1. **Community Building.** This building will contain on-site administrative offices for the property management company as well as a laundry facility to service the residents of the facility. The facility will be one story and approximately 2,400 sq. ft. in size. Two parking spaces will be provided for the two employees.

It is envisioned that the former pre-school building will be utilized as a pilot/demonstration project of Help Innovations' Telemedicine program. The project will be developed in conjunction with Maui Community College as an MCC Telehealth and Education Center. The demonstration project would provide an video and audio link with MCC. Medical information, visual check ups, prescription checks, preventative medical advice and other types of information will be provided to occupants of the project. In addition, the facility will provide an educational facility capable of providing instructional classes through on-site teaching or distance learning technologies. These educational services will be provided to the project residents as well as to the larger West Maui Community on a limited basis. The existing building is 3,600 sq. ft. in size and 12 parking stalls will be provided.

2. **Off-street Parking.** The project plans have been amended to more clearly illustrate where the covered parking stalls will be located. In response to your concerns regarding potential problems with garages and based on your suggestions in your comment number 5, we have amended the project plans to provide covered parking without garage doors. Storage lockers will be provided at the rear of the structures, however, the front portions will remain open. This will allow for easier monitoring and less abuse of these areas which are intended primarily for parking purposes.

As noted above the laundry facilities will be located in the community building, located adjacent to the existing (former preschool) structure.

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3. **Access.** Emergency vehicle access has been provided to Wainee Street.

4. **Right of Way widening and improvements.** The project will not be seeking a deferment of roadway improvements as originally contemplated. Right of way widening and improvement requirements for the adjoining halves of Front Street, Kenui Street and Wainee Street, will be implemented at the time of project development, including the provision of sidewalks. Ultimate right of way widths and specific improvement requirements will be determined in conjunction with the Department of Public Works and Waste Management (DPWWM). At a minimum the improvements will include pavement widening, curbs gutters and sidewalks. Realignment of Kenui Street and Kai Pali Place and the provision of left turn lanes on Front Street would occur in conjunction with development of the neighboring property to the north since this would involve the northern half of the Kenui Street right of way as well as the frontage of Front Street bordering the proposed Wainee Village site.

5. **Building Design, Materials, and Color.** As noted in previous correspondence to your office, the project will proceed through the SMA permitting process and will involve a presentation to the Urban Design Review Board. Building materials are listed in the document submitted to you for review and include asphalt shingles roofing and composite horizontal siding or 5/8" grooved vertical plywood siding. Colors will be presented along with the UDRB review package.

As noted above, the garage buildings have been modified to semi enclosed structures, i.e. with no garage doors, in accordance with your recommendations based on concerns for security as well as abuses which could reduce or eliminate their function for parking purposes. Architectural details will be provided with the design review package for the UDRB.

6. **Landscape Plantings.** Shade trees have been provided in the parking areas. Species selection is based on the Maui County Planting Plan, in consideration of the environmental conditions in the Lahaina area.

Thank you for your comments on the preliminary application. These responses will be incorporated into the Draft EA document and which will be submitted to your Department for processing as part of the SMA permit application. Please contact me if you have any further questions or comments.

Respectfully submitted,

Rory Frampton
Project Planner

cc: Alice Lee, Department of Housing and Human Concerns
John Min, Planning Department
Kent Smith, Smith Development
Uwe Schultz, AIA

BENJAMIN J. CAYETANO
GOVERNOR

FILE

RECEIVED
HOUSING DIVISION
99 APR -6 P2:37
COUNTY OF MAUI

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
MAUI DISTRICT
650 PALAPALA DRIVE
KAHULUI, HAWAII 96732

KAZU HAYASHIDA
DIRECTOR

DEPUTY DIRECTORS
BRIAN K. MINAAI
GLENN M. OKIMOTO

IN REPLY REFER TO:
HWY-M 2.138-099

March 31, 1999

Ms. Alice Lee, Director
County of Maui
Housing and Human Concerns
200 South High Street
Wailuku, Maui, Hawaii 96793

Dear Ms. Lee:

Re: Front Street Apartments
ME 99-10

This letter is in response to your transmittal dated 3/5/99, regarding the referenced project. Based on our review of the Preliminary Section 201G-118, HRS Application, the proposed apartment complex should not have an adverse impact on our facilities. Therefore, we have no comments to offer at this time.

If there are any questions or concerns, please call Paul M. Chung at 873-3535.

Very truly yours,

ROBERT OYSIAROT
District Engineer, Maui

/pmc

CHRIS HART & PARTNERS

July 23, 1999

Mr. Robert Siarot, Maui District Engineer
Department of Transportation
State of Hawaii
650 Palapala Drive
Kahului, Hawaii 96732

Subject: Front Street Apartments
Lahaina, Maui, Hawaii
TMKs: 4-5-03: 13, 14, 15, 38, 39 and 40

Dear Mr. Siarot,

Thank you for your review letter regarding the Front Street Apartments project, dated March 31, 1999, to Ms. Alice Lee, Director of the Department of Housing and Human Concerns for the County of Maui. Your letter concluded that the proposed project should have no adverse affect on State Highway Facilities.

Thank you for commenting on the proposed project. Please contact me if you have any further questions at 242-1955.

Respectfully submitted,

Rory Frampton
Project Planner

cc: Alice Lee, Department of Housing and Human Concerns
John Min, Planning Department
Kent Smith, Smith Development

LANDSCAPE ARCHITECTURE AND PLANNING
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JAMES "KIMO" APANA
Mayor

CHARLES JENCKS
Director

DAVID C. GOODE
Deputy Director

Telephone: (808) 243-7845
Fax: (808) 243-7955

DEPARTMENT OF PUBLIC WORKS
AND WASTE MANAGEMENT
200 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAII 96793

RALPH NAGAMINE, L.S., P.E.
Land Use and Codes Administration

Wastewater Reclamation Division

LLOYD P.C.W. LEE, P.E.
Engineering Division

BRIAN HASHIRO, P.E.
Highways Division

ANDREW M. HIROSE
Solid Waste Division

April 5, 1999

MEMO TO: ALICE L. LEE, DIRECTOR OF HOUSING AND HUMAN CONCERNS

FROM: for CHARLIE JENCKS, DIRECTOR OF PUBLIC WORKS AND WASTE MANAGEMENT

SUBJECT: EARLY CONSULTATION
FRONT STREET APARTMENTS
TMK: (2) 4-5-003:013, 014, 015, 038, 039 & 040

We have reviewed the subject project and have the following comments.

1. Road widening lots shall be provided for the adjoining halves of Kenui Street, Waine'e Street, and Front Street to provide for future rights-of-way and to be improved to County standards to include, but not be limited to, pavement widening, construction of curb, gutter and sidewalks, street lights, and relocation of utilities underground. Said lots shall be dedicated to the County upon completion of the improvements. Exact rights-of-way width and realignment of Kenui with Kai Pali Place should be discussed in detail with the department.

2. A 30' radius shall be provided at all intersections of the proposed subdivision road/driveway and the adjoining subdivision and State roads.

3. Some of the floor plans of the proposed dwelling units do not meet Title 16.08 of the Maui County Code Housing Code. Discrepancies can be resolved during the building permit process.

4. In our opinion, the proposed park plan does not conform with the intent of Maui County Code Section 18.16.320 "Parks and Playgrounds."

5. All parcels should be consolidated so buildings do not encroach onto adjacent parcels.

6. Off-street parking spaces are required for the Activities Center Building as well as some reasonable number of guest stalls. The 1.5 stall per unit ratio should be acceptable for the project given the mix of studios and one bedroom apartments. A contingency plan should be in place to satisfy demand for additional stalls to ensure no parking is done along adjacent streets.

7. A detailed final drainage report and an erosion control Best Management Practices (BMP) plan shall be submitted with the construction plans for review and approval prior to issuance of grading or building permits. The drainage report shall include hydrologic and hydraulic calculations and the schemes for disposal of runoff waters. It must comply with the provisions of the "Rules for Design of Storm Drainage Facilities in the County of Maui" and must provide verification that the grading and runoff water generated by the project will not have an adverse effect on adjacent and downstream properties. The BMP plan shall show the location and details of structural and non-structural measures to control erosion.

If you have any questions, please call David Goode at 243-7845.

DG:msc/mt
S:\LUCA\CZM\FRONTST.WPD

CHRIS HART & PARTNERS

July 23, 1999

Mr. Charlie Jencks, Director
Department of Public Works and Waste Management
County of Maui
200 S. High Street
Wailuku, Hawaii 96793

Subject: Front Street Apartments
Lahaina, Maui, Hawaii
TMKs: 4-5-03: 13, 14, 15, 38, 39 and 40

Dear Mr. Jencks,

In response to your review letter regarding the Front Street Apartments project, dated April 5, 1999, to Ms. Alice Lee, Director of the Department of Housing and Human Concerns for the County of Maui, we offer the following responses.

1. Road widening lots will be provided for the adjoining halves of Kenui Street, Wainee Street and Front Street for future right of way and will be improved based on the requirements of your Department.

2. The project will comply with the radius requirements of 30 ft. for all affected intersections as required by your department.

3. The project architectural floor plans will be developed in accordance with Title 16.08 of the Maui County Housing Code.

4. We have addressed the concerns of the Parks Department by incorporating on-site recreational amenities in the preliminary site plan.

5. All parcels will be consolidated into one parcel as part of the 201G-118, HRS, approval process.

6. Parking spaces will be provided for employees of the activities building as well as for the tele-medicine center. These spaces have been incorporated into the preliminary site plan. In addition, the plan also incorporates provisions for overflow guest parking.

7. A detailed drainage and erosion control report will be submitted with the construction plans for review and approval by your department.

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Thank you for commenting on the proposed project. Please contact me if there are any questions at 242-1955.

Respectfully submitted,

Rory Frampton
Project Planner

cc: Alice Lee, Department of Housing and Human Concerns
John Min, Planning Department
Kent Smith, Smith Development

JAMES "KIMO" APANA
MAYOR

OUR REFERENCE

YOUR REFERENCE

POLICE DEPARTMENT
COUNTY OF MAUI

55 MAHALANI STREET
WAILUKU, HAWAII 96793
(808) 244-6400
FAX (808) 244-6411

THOMAS M. PHILLIPS
CHIEF OF POLICE

CHARLES H.P. HALL
DEPUTY CHIEF OF POLICE

April 6, 1999

Alice L. Lee, Director
Dept. of Housing and Human Concerns
County of Maui
200 South High Street
Wailuku, Hawaii 96793

Re: Front Street Apartments (Family Units)

Dear Ms. Lee:

We realize the importance of our comments on the above-referenced matter, and apologize for not submitting them by the due date on April 5, 1999.

Attached is a copy of a report submitted by our Bicycle Patrol Officer Kaid Thompson. If you have any further questions, please call me.

Sincerely,

THOMAS M. PHILLIPS
Chief of Police

Attachment

TO : THOMAS PHILLIPS, CHIEF OF POLICE

VIA : GEORGE KAHOOHANOHANO, CAPTAIN, DISTRICT IV

FROM : KAID K. THOMPSON, POLICE OFFICER III
DISTRICT IV, BICYCLE PATROL

SUBJECT : REVIEW OF FRONT STREET APARTMENTS

Sir be advised the following To-From report is in review of the preliminary application for the Front Street Apartments, TMK: 4-5-03:13, 14, 15, 38, 39 and 40. Location of the project is at Front St. and Kenui St. and heading up East to Wainee St.

The project will consist of approximately 140 units and target the families earning approximately 60% of the County of Maui's median income as determined by State and Federal Low Income Housing Tax Credit Guidelines. Also there scheduled 210 parking stalls within the property.

Upon inspection of the project and specifically about the impact on traffic, figure #3, map of the proposed development, shows the only access into the property is from Kenui St. Page #8 states this project would NOT impact traffic in the area however I disagree. The traffic situation along Wainee St. and Papalaua St. is very congested and most especially at peak times of 1500 to 1800 hours. People getting off work and parents traveling to pick children up from schools make this area congested just with the existing situation. An extra 210 vehicles specifically traveling to the Front Street Apartments would be added burden in an already overwhelmed traffic area. Also noted on page #8 the improvements of Kenui St. and Wainee St. should be deferred until developments of the property on the North. I also disagree with this idea. The improvements for the property should be undertaken now with the development of Front Street Apartments. Are there going to be any developments of sidewalks, especially for children going to and from school or near by shopping malls? I believe the roads should be improved now for safety.

One way this project would not impact the traffic situation is by altering the intersection at Kenui St. and Honoapiilani HWY. If this intersection could be reconstructed and have a traffic light installed this would relieve the traffic congestion at the intersection of Wainee St. and Papalaua St. and also the intersection of Papalaua St. and Honoapiilani HWY.

On page #21 the Socio-Economic Environment impact states that police protection along Front St. would be supplemented by the Front St. "Koban" which is base for the three Bicycle Patrol Officers. The Koban is our base however the idea of the Bicycle Officers would add to the one existing patrol officer in the area is somewhat misleading to the developers. They are under the impression the Bicycle Patrol Officer just patrol along Front St., however because of our community based operations with merchants on Front St. our role in patrolling out to the Front Street Apartments are on a limited bases.

I agree with the developers that the population growth of Maui has been exceptionally high. Lahaina is in need for this type of housing to meet the existing needs. However considering the impact of the Front Street Apartments on the increase of vehicular and padestrian traffic the existing infrastructure needs to catch up. The traffic in the area is already congested. The roads and other changes at the intersection of Kenui St. and Honoapiilani HWY. must be met now.

With the developers stand on deferring these changes I would have side with not approving this project.

Submitted by:

Kaid K. THOMPSON E-0307
P.O. III, Bicycle Patrol Officer
04/06/99 1200 hours.

Concur with officer Thompson, impact of traffic would be a major problem. Also to use the Koban as the area of Police coverage is wrong. This would realy stretch the Personnel from the coverages of the town area. The factors mentioned there really should be looked at.

Capt. H Kahilewa
4/6/99 1210

CHRIS HART & PARTNERS

July 23, 1999

Mr. Thomas Phillips
Chief of Police
55 Mahalani Street
Wailuku, Hawaii 96793

Subject: Front Street Apartments
Lahaina, Maui, Hawaii
TMKs: 4-5-03: 13, 14, 15, 38, 39 and 40

Dear Mr. Phillips,

In response to your review letter for the Front Street Apartments project, dated April 6, 1999, to Ms. Alice Lee, Director of the Department of Housing and Human Concerns, County of Maui, we offer the following responses.

1. **Traffic congestion.** Comments from Officer Thompson indicated a concern due perceived impacts to traffic in the Wainee Street and Papalaua Street area. Specifically, the concern expressed related to PM peak hour period. The traffic report conducted for the project did not share the same conclusion as Officer Thompson. This is primarily due to alternative accesses to the project. Residents leaving the project traveling in a southbound direction can proceed directly to Honoapiilani Highway via the existing Kenui Street intersection. The only residents who would affect the Wainee Papalaua area would be those traveling northbound on Honoapiilani Highway who would turn left onto Papalaua and then right onto Wainee.

The traffic report stated that during the PM peak hour of traffic (4:00 to 5:00 p.m.) a total of 89 vehicle trips per hour (vph) will be generated, 59 vph entering the site and 30 vph leaving the site. Of the 59 trips entering the project site, it is estimated that 24 vehicles would utilize Wainee St. (or approximate 1 vehicle every 2 1/2 minutes.) Of the vehicles leaving the site, approximately 5 vph will utilize Wainee Street (or approximately one vehicle every 12 minutes.)

2. **Improvement deferral.** The project will not be seeking a deferment of roadway improvements as originally contemplated. Right of way widening and improvement requirements will be implemented at the time of project development, including the provision of sidewalks.

3. **Traffic Light at Kenui/Honoapiilani Intersection.** The traffic report concluded that there was no need for improvements to this intersection as a result of the project. Via a letter dated March 31, 1999, Mr. Robert Siarot, Maui District

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Engineer for the State Department of Transportation, also concluded that the proposed project would not have an adverse impact on State Highway facilities.

4. **Police coverage.** We will specify that your bicycle patrol officers cover the commercial area of Front Street.

Thank you for commenting on the proposed project. Please contact me if there are any questions at 242-1955.

Respectfully submitted,

Rory Frampton
Project Planner

cc: Alice Lee, Department of Housing and Human Concerns
John Min, Planning Department
Kent Smith, Smith Development

RECEIVED
[illegible] DIVISION

'99 APR 16 P1:55

[illegible]UNTY OF MAUI

DEPARTMENT OF WATER SUPPLY
COUNTY OF MAUI
P.O. BOX 1109
WAILUKU, MAUI, HAWAII 96793-7109
Telephone (808) 243-7816 • Fax (808) 243-7833

	FYI	COMMENTS	CALL ME	SEE ME	FILE	DRAFT RESPONSE
HOUSING						
ADMINISTRATION						
CONCERNS						
DIRECTOR	☐	☐	☐	☐	☐	☐
DEPUTY	☐	☐	☐	☐	☐	☐
ADMIN ASST	☐	☐	☐	☐	☐	☐
SECRETARY	☐	☐	☐	☐	☐	☐
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April 13, 1999

Ms. Alice L. Lee, Director
County of Maui
Department of Housing and Human Concerns
250 South High Street
Wailuku, Maui, Hawaii 96793

Re: Front Street Apartments (Family Units)

Dear Ms. Lee,

Thank you for the opportunity to comment on this application. We provide the following information:

As stated in the preliminary report, this project is served by the Alaeloa-Lahaina Water System. Your office should be advised that no guarantee of additional water is granted or implied as a result of these comments or the approval of the requested permits. Water availability is determined at the time of meter application.

The report states that 350 gallons per minute for domestic use will be needed to service the project. however there was no mention of irrigation within the report. Irrigation calculations should be added to the domestic unless no irrigation will be utilized for this project. As it stands from the report without irrigation use, a 3-inch water meter or equivalent thereof would be sized for this project. The cost of a 3-inch meter under our Water System Development Fee is $77,050 not including installation. The exact size of meter should be verified before budgeting this item.

We suggest that the waterlines from Kenui Street down to Front St. be connected. Fire protection along Kenui Street will be required with fire hydrant spacing no less than 250 apart. Please have your consultant engineer contact our engineering division at 243-7835 to discuss specific requirements for storage, fire protection, domestic and irrigation use.

In order to protect Maui's groundwater and surface water resources, DWS recommends that the applicant utilize Best Management Practices (BMP's) designed to minimize infiltration and runoff from all construction and vehicle operations. We have attached sample BMP's for principle operations and a list of references for the applicants use. Additional information is available from the State Department of Health.

Additionally, wherever appropriate, the application should always consider conservation measures in and around the property. Some conservation measures are listed below for your use including:

Eliminate Single-Pass Cooling: Single-pass. water-cooled systems should be eliminated per Maui County Code Subsection 14.21.20. These units pass water once-through for cooling. and then dispose

of the water into the drain. Although prohibited by code, single-pass water cooling is still manufactured into some models of air conditioners, freezers, and commercial refrigerators.

Utilize Low-Flow Fixtures and Devices: Maui County Code Subsection 16.20.675 requires the use of low flow water fixtures and devices in faucets, showerheads, water closets and hose bibs. Water conserving washing machines, ice-makers and other units are also available, and can help cut back on water bills.

Maintain Fixtures to Prevent Leaks: A simple, regular program of repair and maintenance can prevent the loss of hundreds or even thousands of gallons a day. Refer to the attached handout, "The Costly Drip". The applicant should establish a regular maintenance program.

Use Climate-adapted Plants: The project site is located in "Maui County Planting Plan" - Plant Zones 3&5. Please refer to the "Maui County Planting Plan" for Maui, and to the attached documents, "XERISCAPE: Water Conservation Through Creative Landscaping" and "Some of Maui's Native and Polynesian Plants." We encourage the applicants to review the attached documents, refer to the Planting Plan, and consider using climate-adapted and salt-tolerant native plants. Native plants adapted to the area, conserve water and further protect the watershed from degradation due to invasive alien species.

Prevent Over-Watering By Automated Systems: Provide rain-sensors on all automated irrigation controllers. Check and reset controllers at least once a month to reflect the monthly changes in evapotranspiration rates at the site. As an alternative, provide the more automated, soil-moisture sensors on controllers.

Should you have any further comments, please contact our Water Resources & Planning Division at 243-7199.

Sincerely,

David R. Craddick
Director
rs

cc: engineering division
attachments:

1) The Costly Drip"
2) Some of Maui's Native and Polynesian Plants"
3) Ordinance 2108 - An ordinance amending Chapter 16.20 of the Maui County Code, pertaining to the plumbing code"
4) XERISCAPE - Water Conservation through Creative Landscaping"
5) A Checklist for Water Conservation Ideas for Cooling"
6) "Hawaiian Alien Plant Studies - Pest Plants of Native Hawaiian Ecosystems"
7) Maui County Planting Plan
8) Selected BMP's from "The Megamanual - Nonpoint Source Management Manual." Commonwealth of Massachusetts
9) References for Further Reading from "The Megamanual - Nonpoint Source Management Manual." Commonwealth of Massachusetts

CHRIS HART & PARTNERS

July 23, 1999

Mr. David Craddick, Director
Department of Water Supply
County of Maui
200 S. High Street
Wailuku, Hawaii 96793

Subject: Front Street Apartments
Lahaina, Maui, Hawaii
TMKs: 4-5-03: 13, 14, 15, 38, 39 and 40

Dear Mr. Craddick,

In response to your review letter for the Front Street Apartments project, dated April 13, 1999, to Ms. Alice Lee, Director of the Department of Housing and Human Concerns for the County of Maui, we offer the following responses.

1. **Irrigation Requirements.** Preliminary estimates of irrigation requirements for the project will be submitted to your Department for review. Climate adapted plants and automated irrigation systems will be incorporated in the plans in order to lesson irrigation water requirements. A more detailed estimate of total water demand will be included in the construction plan submittals. The costs of a new water meter have been budgeted into the development costs.

2. **Water lines and hydrants.** The water lines along Kenui Street will be connected based on your recommendation. Also, the fire hydrants will be installed based on the requirements of your department.

3. **Best Management Practices.** The project will utilize best management practices during construction of the project in order to minimize construction related impacts from runoff.

4. **Conservation Measures.** The project will incorporate the conservation measures you have listed with regards to elimination of single pass cooling, low flow fixtures and devices, maintenance of leaks, climate adapted plants and prevention of over watering.

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Thank you for commenting on the proposed project. Please contact me if there are any questions at 242-1955.

Respectfully submitted,

Rory Frampton
Project Planner

cc: Alice Lee, Department of Housing and Human Concerns
John Min, Planning Department
Kent Smith, Smith Development

BENJAMIN J. CAYETANO
GOVERNOR

STATE OF HAWAII
OFFICE OF ENVIRONMENTAL QUALITY CONTROL
235 SOUTH BERETANIA STREET
SUITE 702
HONOLULU, HAWAII 96813
TELEPHONE (808) 586-4185
FACSIMILE (808) 586-4186

GARY GILL
DIRECTOR

HOUSING
DEP HUMAN CONCERNS
DIRECTOR
DEP DIR
ADM ASST
SECRETARY
CLERK
PRG ADMIN
ADMIN EXEC
SP SVC ADMIN
PLANNING COORD
YOUTH COORD
RSVP COORD
HOMELESS
GRANTS

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To Alice Lee	From OEQC
Co. Maui DHHC	Co. DOH
Dept (808) 243-7829	Phone # (808) 586-4185

April 19, 1999

The Honorable Alice L. Lee, Director
Department of Housing and Human Concerns
County of Maui
200 South High Street
Wailuku, Hawai'i 96793

Dear Ms. Lee:

The Office of Environmental Quality Control (OEQC) received a copy of a March 30, 1999, letter to you from Mr. John Min, Director of Planning, concerning "Millennium Pacific Investments, LLC, Front Street Apartments - Preliminary Application: Section 201G-118, Hawaii Revised Statutes (HRS); Tax Map Key: 4-5-03:013, 014, 015, 038, 039, and 040, Kenui, Wainee and Front Streets, Lahaina, Maui, Hawaii." In his letter at paragraph 3, Director Min states that "[t]hrough the HRS, Section 201G-118 process, the proposed development is exempt from all statutes, ordinances, charter provisions, and rules of any governmental agency relating to planning, zoning, construction standards for subdivisions, development and improvement of land, and the construction of units thereon." We respectfully disagree with Director Min's statement and believe that an environmental assessment needs to be prepared for the following reasons.

1. The Planning Department noted that the project site is located in the state land use urban district, the special management area and the Lahaina Town National Historic Landmark District. Section 343-5(a)(4), Hawai'i Revised Statutes requires that an environmental assessment be prepared for a project that "propose[s] any use within any historic site as designated in the National Register or Hawaii Register as provided for in the Historic Preservation Act of 1966, Public Law 89-665, or chapter 6E [Hawaii Revised Statutes]."

2. Act 51, Session Laws of Hawaii, Fourteenth State Legislature, Regular and Special Sessions of 1988, at section 7, states that "[t]he [housing finance and development] corporation shall not be exempt from compliance with Chapters 343, and 205A, which are intended to maintain and protect the quality of the environment and shorelines."

[Emphasis supplied].

3. Act 350, Session Laws of Hawaii, Nineteenth State Legislature, Regular Session of 1997 repealed Chapter 201E, Hawaii Revised Statutes. The functions exercised by the Hawaii Housing Authority, the Rental Housing Trust Fund and the Housing Finance and Development Corporation were transferred to the new Housing and Community Development Corporation of Hawaii (HCDCH). Section 25 of the Act states that "[a]ll laws and parts of laws heretofore enacted which are in conflict with the provisions of this Act, are hereby amended to conform herewith."

   We do not believe that the provisions of Act 51, 1988, conflict with the present 1997 Act 350 since the environmental review process augments the HCDCH process.

4. Based on advice from our legal counsel, we do not believe that the project is statutorily exempted from Chapter 343, Hawaii Revised Statutes. Attorney General Opinion 86-13 (attached) says that Chapter 343, Hawaii Revised Statutes is not covered by the statutory exemption for certain housing developments from laws "relating to planning, zoning, and construction standards." That opinion dealt with the exemption in Section 359G-4.1(a), Hawai'i Revised Statutes and was largely copied in Section 201E-210(a), Hawaii Revised Statutes, its successor, which was adopted in 1987 after the AG opinion.

If there are any questions, please call us at 586-4185.

Sincerely,

GARY GILL
Director

CHRIS HART & PARTNERS

July 23, 1999

Mr. Genevieve Salmonson, Director
Office of Environmental Quality Control
235 South Beretania Street, Suite 702
Honolulu, Hawaii 96813

Subject: Front Street Apartments
Lahaina, Maui, Hawaii
TMKs: 4-5-03: 13, 14, 15, 38, 39 and 40

Dear Mr. Craddick,

In response to your review letter for the Front Street Apartments project, dated April 19, 1999, to Ms. Alice Lee, Director of the Department of Housing and Human Concerns for the County of Maui, we offer the following response.

1. Based on your letter, the project will comply with the requirements of Chapters 205A and 343, Hawaii Revised Statutes.

Thank you for commenting on the proposed project. Please contact me if there are any questions at 242-1955.

Respectfully submitted,

Rory Frampton
Project Planner

cc: Alice Lee, Department of Housing and Human Concerns
John Min, Planning Department
Kent Smith, Smith Development

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Post-it® Fax Note 7671	Date	
To Helen Sakugawa	From	
Co./Dept.	Co.	
Phone #	Phone #	
Fax #	Fax # 243-7829	

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STATE OF HAWAII
'99 MAY 11 P4:30
DEPARTMENT OF LAND AND NATURAL RESOURCES

HISTORIC PRESERVATION DIVISION
Kakuhihewa Building, Room 555
601 Kamokila Boulevard
Kapolei, Hawaii 96707
MAUI

TIMOTHY E. JOHNS, CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES

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LAND
STATE PARKS
WATER RESOURCE MANAGEMENT

May 5, 1999

Alice L. Lee
Director of Housing and Human Concerns
200 South High Street
Wailuku, Hawaii 96793

LOG NO:23343
DOC NO: 9904BR

Dear Ms. Lee:

SUBJECT: **Historic Preservation Review of a Building Permit Application for the Front Street Apartments:**
Lahaina, Maui, Maui Island
TMK: 4-5-03: 13, 14, 15, 38, 39 and 40

Thank you for the opportunity to comment on the building permit for the Front Street Apartments in Lahaina. This review is based on reports and maps maintained at the State Historic Preservation Office; no field inspection was made of the subject property.

Based on our records this area was likely to have once been the location of pre-Contact agricultural fields and perhaps habitation sites. An acceptable archaeological inventory survey (Burgett and Spear 1994) was conducted on the subject property, excluding parcel 14. The inventory found that the subject parcels had long undergone modern agricultural tilling and recent grading activities, which probably destroyed many of the historic sites once present. However, a single human burial (State site # 50-50-03-3550) was identified. This burial was determined to be significant.

A burial treatment plan (Spear 1994) was submitted to our office and the Maui/Lanai Islands Burial Council. The burial treatment plan for site #50-50-03-3550 recommended that the single burial be disinterred and relocated, however the Burial Council voted on 11/23/94 to preserve the burial in place. As yet a revised treatment plan has not been accepted.

Because of the burial find, the inventory survey report recommended that professional archaeological monitoring occur during the construction phase of this project -- to treat any inadvertent burial finds that might occur.

Given the above, to ensure that the proposed undertaking's impacts on significant historic sites will be mitigated, we recommend that the following three conditions be attached to any approved permits:

1. The mitigation plan for the burial must be resolved. A revised burial treatment plan, to preserve in place the existing burial, must be taken to the Maui/Lanai Islands burial Council for a vote on the preservation proposal and a burial treatment plan. Once mitigation treatment and a detailed plan of action is approved, then prior to land alteration in the vicinity of the burial sites, the successful execution of the treatment plan must be verified in writing by the State Historic Preservation Division.

2. Parcel 14 shall undergo an archaeological inventory survey using subsurface testing to determine if significant historic sites are present. A copy of the final report presenting the results should be submitted to the State Historic Preservation Division our office for review and acceptance. If significant historic sites are present, an acceptable mitigation plan needs to be submitted to the Historic Preservation Division and the County and must be approved and executed prior to any land alteration in parcel 14.

3. An archaeological monitor shall be present during all ground altering activities (including grading and grubbing, etc.). Prior to the commencement of the ground altering activities an archaeological monitoring plan needs to be submitted to the State Historic Preservation Division for review and acceptance. This scope of work needs to itemize the procedures to be followed if any additional burials are identified (including how the burials will be documented and treatment procedures following Chaptor 6E), and describe the measures to be followed to ensure adequate time for proper recording and treatment of any burials that might be identified. The monitoring plan must also stipulate that an acceptable monitoring report is to be submitted to the State Historic Preservation Division upon completion of the monitoring project.

Aloha,

Don Hibbard, Administrator
State Historic Preservation Division

BR:jen

c. Charles Maxwell, Chairperson, Maui/Lanai Islands Burial Council
Ka'i Markell, DLNR Burials Director
Helen Sakugawa Maui Planning Fax 243-7829, 250 S. High Street, Wailuku 96793

CHRIS HART & PARTNERS

July 23, 1999

Mr. Don Hibbard, Administrator
State Historic Preservation Division
Department of Land and Natural Resources
Kekuhihawa Building, Room 558
601 Kamakila Blvd.
Kapolei, Hawaii 96707

Subject: Front Street Apartments
Lahaina, Maui, Hawaii
TMKs: 4-5-03: 13, 14, 15, 38, 39 and 40

Dear Mr. Hibbard,

In response to your review letter for the Front Street Apartments project, dated May 5, 1999, to Ms. Alice Lee, Director of the Department of Housing and Human Concerns for the County of Maui, we offer the following responses.

1. **Burial Treatment Plan.** Site #50-50-03-3550 will be preserved in place, in accordance with the previous approval by the Burial Council. A revised burial treatment plan will be submitted to the Maui/Lanai Islands burial council for review and approval.

2. **Parcel 14.** The archaeological report prepared for the subject properties excluded parcel 14 from examination due to its developed state. The parcel size is 8,387 sq. ft. in size and contains a building approximately 3,600 sq. ft. is size which was previously used as a pre-school. This building will be incorporated into the project as the tel-medicine center and a classroom and as such very little ground disturbance will take place during development. The archaeological report which was prepared and accepted by SHPD covered the surrounding 8 acres, which have had similar, if not identical, historical land uses. The parcel will be covered by the archaeological monitoring plan for the project. Given the previous level of disturbances on parcel 14, plans to incorporate the existing structure within the project, the substantial amount of survey work which occurred on the surrounding properties, and mitigation measures which will be incorporated into the monitoring plan, we believe that an archaeological inventory survey report for parcel 14 is not necessary.

3. **Archaeological monitoring.** The archaeological inventory report which was accepted by SHPD, included a recommendation that a qualified archaeologist remain on-call during construction activities. Our archaeological consultant will prepare a

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monitoring plan for review and acceptance by SHPD consistent with this accepted recommendation, prior to initiating ground disturbance activities.

Thank you for commenting on the proposed project. Please contact me if there are any questions at 242-1955.

Respectfully submitted,

Rory Frampton
Project Planner

cc: Alice Lee, Department of Housing and Human Concerns
John Min, Planning Department
Kent Smith, Smith Development
Robert Spear, SCS Archaeology

JAMES "KIMO" APANA
MAYOR

CLAYTON T ISHIKAWA
CHIEF

FRANK E. FERNANDEZ, JR
DEPUTY CHIEF

COUNTY OF MAUI
DEPARTMENT OF FIRE CONTROL

200 DAIRY ROAD
KAHULUI, MAUI, HAWAII 96732
(808) 243-7561
FAX (808) 243-7919

April 7, 1999

Ms Alice L. Lee, Director
County of Maui
Department of Housing and Human Concerns
200 South High Street
Walluku, HI 96793

RE: Front Street Apartments, Lahaina, Maui; TMK: 4-5-03:13, 14, 15, 38, 39 and 40; Preliminary Section 201G-118, HRS, Application

Dear Ms Lee,

Thank you for the opportunity to comment on the Front Street Apartments project in Lahaina.

The Department of Fire Control has no comment at this time, however, I wish to reserve the right to comment when plans and specifications are submitted for review.

Ms Alice L. Lee
Page 2
April 7, 1999

If you have any questions you may contact me at extension 7566.

Sincerely,

LEONARD F NIEMCZYK
Captain, Fire Prevention Bureau

cc: Inspector C. Pico

Appendix F

Draft Environmental Assessment Comment Letter and Response

BENJAMIN J. CAYETANO
GOVERNOR

GENEVIEVE SALMONSON
DIRECTOR

STATE OF HAWAII
OFFICE OF ENVIRONMENTAL QUALITY CONTROL

235 SOUTH BERETANIA STREET
SUITE 702
HONOLULU, HAWAII 96813
TELEPHONE (808) 586-4185
FACSIMILE (808) 586-4186

August 9, 1999

Alice Lee
Dept. of Housing & Human Concerns
200 South High Street
Wailuku, HI 96793

Attn: Edwin Okubo

Dear Ms. Lee:

Subject: Draft Environmental Assessment (EA) for Front Street Apartments, Lahaina

In order to reduce bulk and conserve paper, we recommend printing on both sides of the pages in the final document. In addition we have the following comments:

1. Appendices: Appendix E, *Agency Comment Letters and Responses*, is incorrectly labelled Appendix D.

2. Figure 4: Please add a legend to figure 4 that defines the map designations.

3. Sustainable Building Design: Please consider applying sustainable building techniques as presented in the enclosed "Guidelines for Sustainable Building Design in Hawaii." In the final EA include a description of any of the techniques you will implement.

4. Cumulative Impacts: The Environmental Impact Statement law requires that full disclosure of cumulative impacts be made on all geographically-related projects. The draft EA and Traffic Impact Analysis Report (TIAR) mention the future Wainee Village, and adjacent business, multi-family and park uses; Lahaina Business Park, to be located north of the project site; the Hawaii Omori Project; the Villages of Lei'alii, with 4800 dwelling units on 1120 acres; the Kaanapali Vacation Club, to be developed by 2004; and the Lahaina Bypass Highway. Provide a full analysis and discussion of these projects according to the following factors:

▸ **Traffic:**

The TIAR concludes that there would be no significant impacts from this project. Although the report lists 7 other existing and planned developments in this vicinity, the analysis specifically excluded impacts from Wainee Village, the Villages of Lei'alii, Kaanapali Vacation Club and the Lahaina Bypass Highway. Full buildout from these projects is a known factor, and their impacts can be factored in the analysis.

Section B of the TIAR, *External Traffic*, mentions inclusion of impacts from the Lahaina Business Park and Hawaii Omori Project in the background growth factor of this analysis. The Lahaina Business Park TIAR, cited in the text, which included the Hawaii Omori Project, contains an analysis that is now 5 years out of date. Conditions on which its 1994 analysis were based have likely changed. An updated analysis needs to be provided.

Section B also notes that 2001 is used as a planning horizon. 2001 is less than 2 years away. A standard long term planning horizon is 5 years.

In the final EA enclose a traffic analysis that includes all of the above-mentioned projects for a time period that encompasses their full buildout.

Also address cumulative impacts for the following:

- **drainage impacts**
- **recreational resources**
- **secondary development**
- **visual impacts**

If you have any questions, please call Nancy Heinrich at 586-4185.

Sincerely,

GENEVIEVE SALMONSON
Director

Enc.

c: Rory Frampton

CHRIS HART & PARTNERS

September 9, 1999

Ms. Genevieve Salmonson, Director
Office of Environmental Quality Control
235 South Beretania Street, Suite 702
Honolulu, HI 96813

Dear Ms. Salmonson:

Subject: Draft Environmental Assessment (EA) for Front Street Apartments, Lahaina

In response to your comment letter dated August 9, 1999, regarding the Draft EA for the proposed Front Street Apartments, we offer the following responses:

1. The appendices will be appropriately labeled in the Final EA.

2. A legend will be added to Figure 4.

3. Sustainable Building Design. A number of sustainable building design techniques will be implemented, including but not limited to the following:

   a. Site selection in a neighborhood in close proximity to places of employment, shopping, services, etc.

   b. Site location in close proximity to existing infrastructure systems.

   c. Preservation of existing site features including mature trees, natural topography, and the existing former preschool structure.

   d. Provision of pedestrian paths, bicycle racks and access to off-site sidewalks.

   e. Consolidation of utility and infrastructure in common corridors to improve efficiency and minimize costs.

   f. Provision of spaces for recycling and waste diversion opportunities during occupancy.

   g. Tree planting to shade buildings and paved areas.

   h. Use of renewable energy (solar water heaters).

   i. Use of energy efficient lighting.

   j. Installation of low flow water fixtures.

   k. Properly planned and efficient irrigation system.

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l. Appropriate plant selection for the Lahaina area, minimizing need for irrigation.

m. Use of locally produced soil amendments (compost product made up of green waste and sewage sludge produced at the Central Maui Landfill.)

n. Sub-metering of the irrigation system to reduce water consumption and consequently water and sewer fees.

o. Use of recycled materials for park benches.

p. Incorporation of a job-site recycling plan. Smith Development, the Maui based project manager for this project, has been at the forefront of implementing tremendously successful job-site recycling programs in previous Maui projects.

4. Cumulative Impacts.

a. Traffic. Our traffic consultant has responded to your concerns regarding the methodology used in the Traffic Impact Assessment Report (TIAR) for the project. His letter is attached herewith. Essentially, the TIAR has conservatively estimated traffic impacts by accounting for anticipated traffic from projects in the vicinity as well as using background growth rate estimates developed by the State.

b. Drainage. As noted in the report, runoff from the project will be decreased after project development by retaining a significant portion of the project's drainage on-site. Thus, from a cumulative perspective, the project will have a beneficial impact on drainage conditions in the area.

c. Recreational resources. As noted in the Draft EA, provisions for recreational facilities will be located on-site in order to address the neighborhood recreational needs for project residents. One acre of designated park space will be provided on-site. In addition, there are other open grassed areas on-site which could be used for recreation by project residents. The County of Maui's is currently addressing community and regional recreational needs through the expansion of the Lahaina Recreational Center. This expansion should be completed within the buildout phase of the subject project. Thus, neighborhood and community park facilities should be adequate to handle the expected increase in residents from the project.

With regards to long term recreational space needs in the area in light of future development potential, we note that the West Maui Community Plan has designated a six acre park on lands to the immediate north of the project site. This park land will be improved when the adjacent parcel is developed and should address the cumulative park needs created by future growth in the immediate area.

In addition, it is noted that Maui County has a Park Dedication Ordinance. As future projects in the area are built out, this ordinance requires developers to provide dedicated park space or to pay an in-lieu park assessment fee. The fees are used to upgrade and expand park facilities in the area in which a project is located. Recently the ordinance was amended by doubling the per unit park assessment requirement. In summary, long term recreational needs in the immediate area have been addressed through park land designation in the West Maui Community Plan and through the County's Park Dedication requirements.

d. Secondary Development. We are unaware any impacts this project will have on secondary development. It is envisioned that this project will help satisfy affordable rental housing needs for existing West Maui residents. As noted in the Draft EA, the market study for the project noted the exceptionally high cost of monthly rents in West Maui versus other areas of the County. The area also had the highest indicators of overcrowding. This is due in part to high demand for rental units in West Maui due to the transient nature of its work force. Increasing the supply of affordable rental units should have a beneficial impact in terms of meeting housing needs for West Maui residents.

e. Visual Impact. Cumulative impacts on visual resources would need to consider the character and density of existing as well as planned development. The subject property is adjacent to existing multi family projects to the south and east. These projects were built at substantially higher densities than the proposed project, and used rather uniform building layout and design. The subject project has been designed at a lower density than that which is allowed in the current A-1 Zoning. Current zoning allows up to 25% lot coverage whereas the proposed project will have approximately 17% lot coverage. Current zoning allows for a floor area to lot area ratio of 40% whereas the proposed project will have an approximate ratio of 23%.

In addition the project has incorporated various architectural and landscape elements to invoke a residential character and to be in consonance with urban design themes in the Lahaina area. These include but are not limited to dutch gable roofs, providing for a mix of one and two story structures, and large yard setbacks. On September 7, 1999, the Maui Urban Design Review Board voted unanimously to recommend approval of the project to the Maui Planning Commission a part of the project's SMA permit review. Thus, it has been determined that the project is in keeping with the established urban design character of the area.

With regards to future development of the properties to the North, we are unaware of the future design theme for this parcel and can only comment that the West Maui Community Plan has designated the area as a project district for a mixture of multi-family, elderly housing, business and park uses. The project site is located within the Lahaina Historic Landmark District as well as the Special Management Area and as such will require Chapter 343 review and processing as well as review by the Urban Design Review Board.

Thank you for your comments on this project. If you have any further questions, please do not hesitate to contact me at 242-1955.

Respectfully,

Rory Frampton
Project Planner

cc: Alice Lee, Department of Housing and Human Concerns
John Min, Planning Department
Kent Smith

THE TRAFFIC MANAGEMENT CONSULTANT
Randall S. Okaneku, P.E., P.T.O.E., Principal • 1188 Bishop St. • Suite 1907 • Honolulu, HI 96813
Telephone: (808) 536-0223 • *Facsimile: (808) 537-2985*

Job No. 9409.1
August 30, 1999

Chris Hart & Partners
1955 Main Street, Suite 200
Wailuku, Maui, Hawaii 96793

Attention: Mr. Rory Frampton

Gentlemen:

Subject: Front Street Apartments

I have reviewed the comments under Item No. 4 in the letter dated August 9, 1999 to Ms. Alice Lee, Department of Housing & Human Concerns from Ms. Genevieve Salmonson, Office of Environmental Quality Control. My responses follow:

The background growth in traffic and the off-site traffic, generated by known projects in the vicinity, are distinct and separate components of the TIAR's traffic forecast. The traffic forecast was based upon a background growth in traffic that was derived from the Maui Long Range Land Transportation Plan (MLRLTP), as discussed on Page 11 of the TIAR. It is my understanding that the MLRLTP developed a land use forecast that included known projects, such as the Villages of Lei'ali'i, North Beach Kaanapali (Kaanapali Vacation Club), Wainee Village, the Lahaina Bypass Highway, and the Hawaii Omori project. Therefore, the background growth in traffic, developed in the TIAR, accounts for growth in the region within the time frame of the traffic study. By adding known projects that can be expected to be developed within the time frame of the TIAR, such as the Hawaii Omori project, the traffic impact analysis is "double counting" the off-site traffic, which was already included in the background growth developed in the MLRLTP.

The TIAR analyzed 1999 existing traffic conditions to establish its base line conditions. The 1994 existing traffic conditions, analyzed in the Lahaina Business Park TIAR, were not used in the analysis. Only the trip generation and traffic assignment were adopted from the traffic study for the Lahaina Business Park and Hawaii Omori Project. Unless their development plans have changed significantly since the 1994 study, their traffic characteristics should still be valid. Any substantial changes in their development plans would likely require updates of the TIARs for their respective projects.

I am not aware of a "standard" long term planning horizon of five years. In general, the planning horizon for a TIAR is established at full build-out and occupancy of the project that is being analyzed. At this time, the project's traffic is expected to peak and is assumed to remain constant thereafter. A longer planning horizon would not affect the project's contribution to traffic in the vicinity. Its relative impact on traffic would actually become less significant as the background traffic continues to grow.

If you require clarification on the above discussion or if you have any other questions, please do not hesitate to call me.

Very Truly Yours,
The Traffic Management Consultant

By
Randall S. Okaneku, P. E., P.T.O.E.,
Principal