

VOLCANO ROAD, PROJECT NO.
11MN-01-73, SLAUGHTER HOUSE
ROAD TO BEG. PROJECT NO.
F-011-2(2), Island of Hawaii

Dept. of Transportation, Land
Transportation Facilities Division

Office of Environmental Quality Control
235 S. Beretania #702
Honolulu HI 96813
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DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

Prepared By

LAND TRANSPORTATION FACILITIES DIVISION

DEPARTMENT OF TRANSPORTATION

STATE OF HAWAII

FINAL

Office Of Environmental Quality Control
Office Of The Governor
550 Halekuanila Street
Tani Office Building, Third Floor
Honolulu, Hawaii 96813

ENVIRONMENTAL IMPACT STATEMENT

ADMINISTRATIVE ACTION

for

VOLCANO ROAD, PROJECT NO. 11M-01-73
SLAUGHTER HOUSE ROAD TO BEG. PROJECT NO. F-011-2(2)

THIS STATEMENT FOR IMPROVEMENT WAS DEVELOPED IN CONSULTATION WITH THE STATE
OFFICE OF ENVIRONMENTAL QUALITY CONTROL AND IS SUBMITTED PURSUANT TO:

CHAPTER 343
HAWAII REVISED STATUTES

4/22/77
Date

A. Harris
Chief
Land Transportation Facilities Division
State of Hawaii

REVIEWED FOR CONTENT AND ACCEPTED BY STATE DOT

4/25/77
Date

E. Alvey Wright
E. ALVEY WRIGHT, Director
Department of Transportation
State of Hawaii

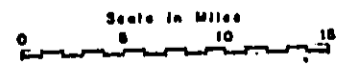
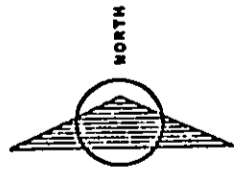
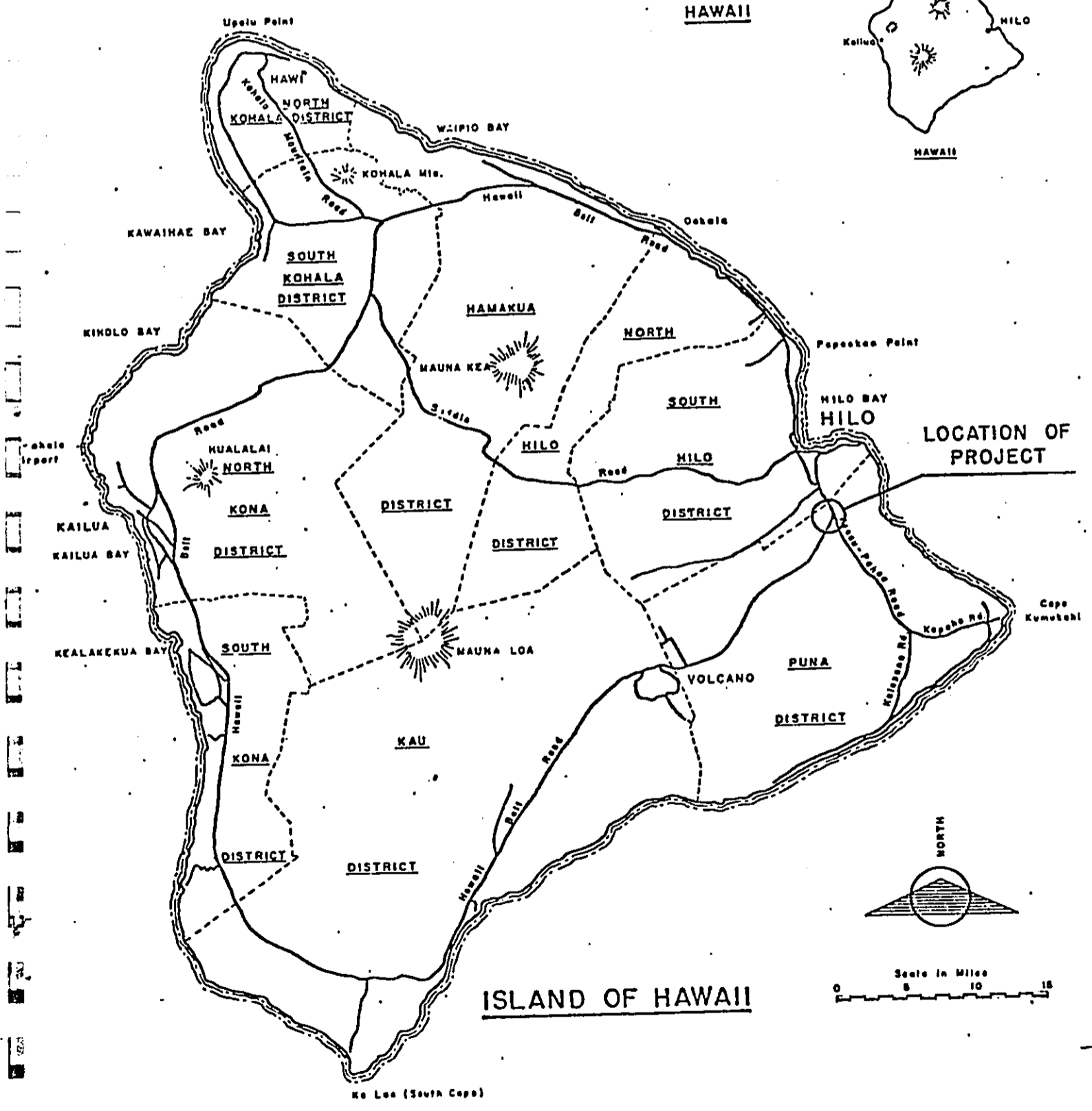
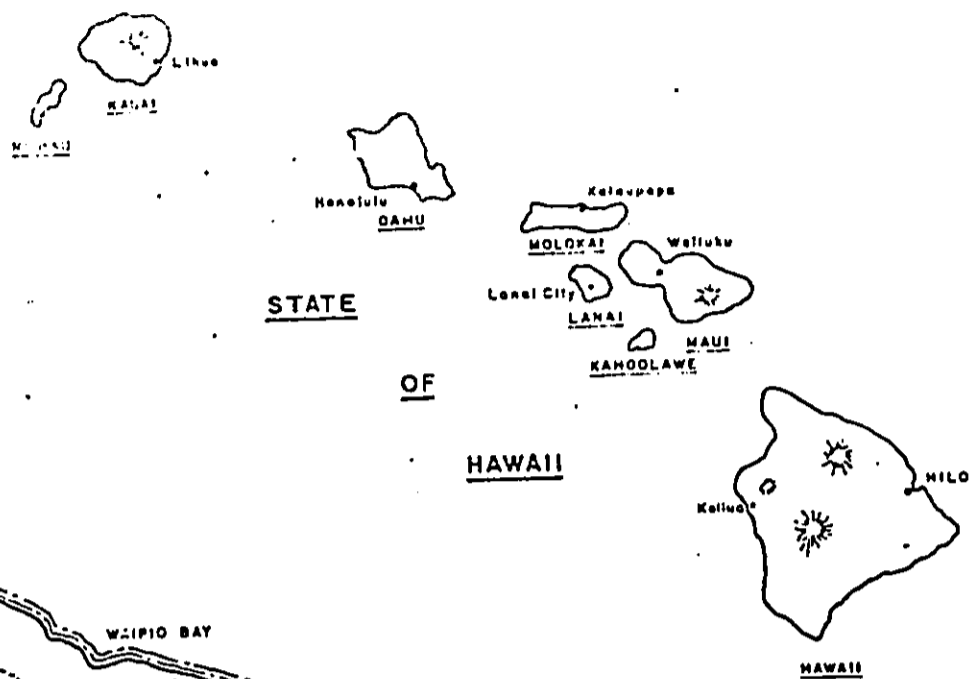


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SUMMARY

1. Administrative Action

This is a Final Environmental Impact Statement with no Section 4(f) Statement. (Section 4(f) of the 1968 Federal Aid Highway Act forbids the use of publicly owned park, recreational, wildlife or waterfowl refuge, or historic lands unless no prudent or feasible alternatives to use of such lands exist; and all possible means to minimize harm to such lands are considered.)

2. Project Description

This project consists of the construction of additional lanes of roadway to upgrade approximately 2 miles of an existing section of highway to a four-lane, divided facility with partial access control. The project is located in the vicinity of the village of Keaau in the district of Puna, on the island of Hawaii, state of Hawaii.

3. Environmental Impact

Impact of the proposed improvements will be minimal inasmuch as the major portion of the construction will be confined to existing right-of-way acquired under Project No. F-011-2(2). An additional 4.2 acres required to implement the recommended alternate is presently used for sugar cane cultivation by the Puna Sugar Company.

Significant long-term environmental effects of an adverse nature are not anticipated, while undesirable short-term construction effects will be minimized through constant monitoring of pollution elements.

The project will not open any new lands to development, but passage through the project area will be greatly improved from the standpoints of safety and convenience.

4. Alternatives

Because of the existing highway and right-of-way acquired under Project No. F-011-2(2), the proposed construction corridor runs along the present

highway alignment. The major difference in the four alternatives developed, aside from the "Do Nothing" alternate, is in the separation of inbound and outbound lanes.

5. Comments

Governmental, private, and public individuals and organizations from whom comments were solicited are listed in Attachment 3.

ENVIRONMENTAL IMPACT STATEMENT

FOR

VOLCANO ROAD, SLAUGHTER HOUSE ROAD TO REG. PROJECT NO. F-011-2(2)

I. PROJECT DESCRIPTION AND PURPOSE

This highway project proposes to upgrade approximately two miles of an existing two-way highway to a four-lane, divided facility with partial access control in the vicinity of the village of Keaau, district of Puna, island of Hawaii. Implementation of this project will provide a continuous divided highway from Keaau to Kamehameha Avenue in the city of Hilo with the completion of Project No. F-RF-011-2(13), Kanoelehua Avenue, Makalika Street to Kamehameha Avenue in 1977. This highway is the only direct route from the population, economic, and governmental center of Hilo to all destinations south of Hilo.

The project site is located in rolling terrain with slopes generally in the range of 2% to 5% and ground cover consisting primarily of sugar cane and forested areas. Soils are basically extremely stony silty clay loam of the Oloa Series underlain by Aa lava. Permeability is rapid, runoff is slow, and the erosion hazard is slight.¹

Annual mean rainfall in the watershed is between 100 and 120 inches per year.

The village of Keaau east of the highway is comprised of residential and small scale commercial developments, while the Puna Sugar Company with its sugar cane processing operations and facilities is the main local industry.

The proposed improvements will facilitate the flow of traffic through the project area with increased safety, as continuing residential developments in the Puna District put growing demands on the Volcano Road between Hilo and

1. Soil Survey of the Island of Hawaii, State of Hawaii, USDA Soil Conservation Service, December 1973

Keaau. Additional burdens are imposed on the highway during periods of volcanic activity in the Hawaii Volcanoes National Park, when crowds numbering in the thousands flock to view the eruptions, particularly during the hours of darkness when the panorama is much more impressive. Average daily traffic (ADT) for 1973 was 4,800 vehicles and is estimated for the design year of 1995 at 11,600 vehicles with 5% truck traffic.

The proposed project will:

1. Correct a potentially hazardous condition which now exists on a section of the present inbound lanes where residential properties have direct access to these lanes;

2. Remedy a bottleneck situation at Keaau, which is fed from Hilo by two lanes of a four-lane divided highway up to the outskirts of the village, but then converges to a single lane of a two-lane, two-way highway before the bulk of traffic reaches the major siphoning turnoff at the Keaau-Pahoia junction where 65% of outbound traffic turns off to the Pahoia-Kalapana area and 35% continues south. Lack of left turn storage lanes at the junction and slow moving sugar cane and equipment hauling trucks aggravate the situation, particularly during the sugar cane harvesting season. And;

3. Eliminate an existing 8° curve on a vertical crest which has been the site of 31 single auto accidents (6 in 1973, 4 in 1974, 3 in 1975, and 1 in 1976) due to loss of vehicle control, in the fourteen year period prior to 1977. Corrective work with open graded skid control pavement was completed in September, 1976 as an interim safety improvement.

The proposed construction does not conflict with the County of Hawaii's General Plan and will not provide access to any new lands for possible development.

Project design is scheduled from 1974 to 1977; right-of-way acquisition in 1976-1977; and construction in 1977 and 1978.

II. IMPACT OF PROJECT ON THE ENVIRONMENT

A. General. Environmental impact will be minimal due to the nature of the proposed project, that of upgrading an existing facility, essentially within existing right-of-way which was acquired for this express purpose.

B. Social.

1. Public Health and Safety. The primary objective of the proposed project is the improvement of traffic flow and safety in the vicinity of Keaau. In addition, roadway drainage improvements, consisting primarily of additional drywells, will correct some existing water ponding problems which have occurred during prolonged downpours, and improve health and safety aspects of the surrounding community of Keaau.

Adverse environmental effects will be confined primarily to the construction period of the project, during which time measures will be taken to minimize construction pollution. No significant long term adverse effects on public health and safety are expected.

2. Residential and Neighborhood Character and Location. We anticipate no change in the character of the area surrounding the proposed project. Upgrading of the existing highway facility should have little effect aside from improving traffic flow and safety through the area.

3. Religious Institutions. The project will affect no religious institutions or practices.

4. Replacement Housing. The project will displace no families, hence no replacement housing will be required.

C. ECONOMICS

1. Economic Activity. The only economic activity directly affected by the project is that of the Puna Sugar Company, which raises sugar cane on the estimated 4.2 acres of land required for highway right-of-way. The acreage,

however, is small in comparison to Puna Sugar Company's total acreage in sugar cane production and the economic effect should be negligible. Crop damage payments will compensate the Puna Sugar Company for anticipated loss of revenues.

2. Employment. No change in employment should occur as a result of the proposed project, except possibly that due to work connected with the project construction, which will be of a temporary nature.

3. Conduct and Financing of Government. Financing of the project from design to construction will be the major cost to government. Loss of tax revenues from the 4.2 acres of land taken out of agricultural production and into public use will have a negligible effect on the conduct and financing of government.

4. Displacement of Families and Businesses. The project will not displace any families or businesses.

5. Project Costs.

Recommended Alternate No. 3

Construction	\$1,037,850.00
Construction Engineering	155,680.00
Preliminary Engineering	155,680.00
Right-of-Way Acquisition	183,000.00
State Maintenance Forces	2,000.00
Miscellaneous and Contingencies	76,790.00
Total	\$1,611,000.00

Total costs for the other alternates developed were: Alternate No. 1 - \$1,969,000.00; Alternate No. 2 - \$1,917,000.00; and Alternate No 4 - \$1,125,000.00.

6. Maintenance and Operating Features. Construction of additional lanes of traffic will increase roadway maintenance requirements but maintenance of existing right-of-way will decrease with the construction of roadway thereon.

The additional lanes of traveled way will allow more free and safe movement of traffic through the area.

7. Operation and Use of Existing Highway Facilities. The existing roadway in the proposed project area will be utilized and incorporated into the final roadway plans to the fullest extent possible. Other sections of existing roadway, primarily the section of existing inbound which will be converted to two-way local circulation status, will be put to more appropriate and safer use.

D. ENVIRONMENTAL

1. Aesthetics. Aesthetically, the change from one roadway traversing the proposed project area to two parallel roadways through the same area should not be significant. Roadway geometrics will be dictated primarily by the existing roadway to keep costs and environmental impact to a minimum. Landscaping other than for erosion control is not contemplated because of the limited right-of-way available.

2. Recreation and Parks. The recommended alternate will not affect any existing or planned park and recreational areas.

3. Fire Protection. The proposed project will have no effect on fire protection aside from facilitating the movement of fire fighting equipment through the area. The function of a highway as a fire break will be enhanced where additional right-of-way is acquired.

4. Public Utilities. Approximately one-half (1/2) mile of existing electric power lines will require relocation to accommodate the proposed improvements. Any inconvenience to the public such as power interruptions will be kept to a minimum.

5. Conservation. The proposed project will not affect any fish and wildlife resources.

6. Natural and Historic Landmarks. The proposed project will not affect any natural or historic landmarks listed in the National Register of Historic Places.

7. Noise, Air, and Water Pollution. Little or no change in noise, air, and water pollution levels are anticipated as a direct consequence of the proposed improvements. Any increase in traffic on this roadway will be the result of developments external to the highway improvement. Rather than generate additional traffic, the improvements are designed to facilitate the smoother and safer flow of vehicles through the area. Therefore, pollution levels with or without the highway improvement will be substantially the same.

If anything, air and noise pollution generated by motor vehicles will probably be lower with the proposed improvements due to the more efficient flow of vehicles through the area. The change, however, will not be significant. No pollution, air or noise, control agencies have been consulted for this impact statement.

Drainage patterns will not be altered or modified, and proposed drainage construction will consist of the extension of existing culverts on the present roadway and the construction of additional drywalls to handle runoff.

Temporary pollution control measures for the construction period, including Section 639 - Temporary Project Water Pollution Control (Soil Erosion) and Section 618 - Grassed Surfaces, as amended, will be incorporated into the special provisions section of the project specifications.

8. Multiple Use of Space. Due to the limited right-of-way available and the intermixing of new and existing roadways, no multiple use of space is contemplated for the proposed project.

9. Education. The proposed project will not affect any educational institutions or practices.

10. Local Circulation Plans. With the relegation of a portion of the existing inbound to two-way local circulation road status on completion of the proposed construction, properties adjoining the road will be better

and more safely served without disrupting the major flow of high speed traffic through the area. Inconvenience to the motoring public due to construction activities should be minor with proper utilization of existing roadways.

III. ADVERSE ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED SHOULD THE PROJECT BE IMPLEMENTED

Adverse environmental effects which will occur with implementation of the proposed project are the degradation of the existing stabilized environment with new construction materials and contours, and the depletion of resources required for the roadway construction. Although some environmental harm is unavoidable with any new construction, every effort will be made to minimize these effects throughout the design and construction periods.

Water, air, and noise pollution during the construction period is amenable only to abatement, not elimination, but these are short term elements which should have no significant residual consequences.

The acquisition of an estimated 4.2 acres of sugar cane growing land will result in diminished oxygen production and carbon dioxide absorption, 60 and 90 tons per acre respectively, over a two-year growing period.

The setting for the proposed project, bordered on the west by sugar cane fields and on the east by sugar cane fields and the village of Keaau, is not particularly scenic, and the additional lanes of traffic will detract little, aesthetically, from the surrounding terrain.

IV. ALTERNATIVES

Four alternates were developed for consideration in the highway design study. In order to obtain maximum use of the existing right-of-way reserved for future lanes under Project No. F-011-2(2), the alternates were confined to the existing corridor with minor changes. Alternates 1, 2, and 3 are similar in concept, with the proposed construction consisting of new lanes

to separate inbound and outbound traffic; and conversion of a section of existing inbound lanes with residential properties having direct access to the highway to a local circulation road. The major difference in the three alternates is in the separation of inbound and outbound traffic lanes, with medians ranging from 65 feet for Alternate No. 1 to 26 feet for Alternate No. 3. Alternate No. 4, which will not require the acquisition of additional right-of-way, will involve the extension of the existing inbound lanes to the beginning of Project No. F-011-2(2) and the addition of a third lane to the section of inbound bordering residential properties.

A "Do Nothing" alternate will perpetuate:

1. The potentially hazardous condition which exists on the present inbound lanes section bordering residential properties.

2. The bottleneck at Keaau, which is fed from Hilo by a four-lane divided highway up to the outskirts of the village, but then converges to a two-lane two-way highway before the bulk of traffic reaches the major siphoning turnoff (to the Pahoa-Kalapana area) at the Keaau-Pahoa junction. The roadway within the proposed project limits is also subject to heavy sugar cane hauling truck traffic, and the slow moving trucks compound the problem of four lanes converging to two in the Keaau area.

3. The existing 8° curve on a vertical crest which has been the site of 31 single auto accidents (6 in 1973, 4 in 1974, 3 in 1975, and 1 in 1976) in the fourteen year period prior to 1977. Corrective work with open graded skid control pavement completed in September, 1976 is only a stop-gap measure.

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

Project associated short-term uses of the environment such as the utilization of 4.2 acres of sugar cane producing land and presently undeveloped

highway right-of-way for roadway, and the use of off-site materials, equipment, and labor will not have any appreciable effect on long-term productivity. The proposed project will not lead to any change in land use patterns or alter significantly existing environmental resources.

VI. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

Materials such as asphalt, reinforcing steel, paint, and portland cement, to be used for the roadway construction will be irretrievable for all practical purposes. Other materials, such as aggregate and fill material, are amenable to recycling and use elsewhere although the process would not be economical.

Labor and fuels expended and loss of service life of equipment used will be totally irretrievable.

The land on which the roadway will be built may be reclaimed at some later date for other purposes should the roadway be abandoned.

VII. MINIMIZATION OF UNAVOIDABLE ENVIRONMENTAL IMPACT

Unavoidable environmental effects will be minimized by:

1. Utilizing existing roadways and right-of-way as much as possible, and acquiring only such land as is necessary to implement the proposed project;
2. Adopting roadway design standards of the existing roadway, which will not require as much right-of-way as current design standards would;
3. Correcting deficiencies in existing roadway drainage by constructing additional drywells;
4. Grassing of exposed slopes to control erosion;
5. Including construction pollution and erosion control measures in the plans and contract specifications; and
6. Considering all reasonable suggestions and criticisms, and incorporating those which are consistent with the objectives of the project.

Any inconvenience to the motoring public during construction of the highway should be minimal with proper programming of the work to be done. No appreciable increase in traffic should result from the highway construction proposed, while traffic flow through the project area will be improved.

Dust and noise nuisances will be constantly monitored during construction and corrective measures should minimize all objectionable emissions associated with the construction work.

VIII. CONSULTATION AND COORDINATION

This project is being coordinated with all affected public and private agencies and organizations.

Informational meetings to inform the public of the proposed project were held in April and August of 1976. As a result of these meetings, some changes in the operational characteristics of the proposed improvements are being considered.

An opportunity to request a combined Corridor and Design Public Hearing (Attachment No. 5) was published in the Honolulu Advertiser on November 20 and 26, 1976 and in the Hawaii Tribune-Herald on November 19 and 26, 1976. No request for a hearing was received from the public.

Correspondence received with comments on the draft environmental impact statement are contained in the appendix.

Following are our responses to specific comments:

**Office Of Environmental Quality Control
Office Of The Governor
550 Halekuanila Street
Tani Office Building, Third Floor
Honolulu, Hawaii 96813**

UNITED STATES DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE

Comment: Update soils information.

Response: Soils information has been updated to that contained in the 1973 Soil Survey for the Island of Hawaii, State of Hawaii.

Comment: Soils in the area are poorly suited to roadway construction.

Response: Pavement structure for the proposed project will be designed for the existing soil conditions in accordance with approved methods.

Comment: Recommend permanent vegetative cover for erosion control be planted rather than encouraging natural re-vegetation.

Response: Grassing of exposed cuts and embankments will be included in the project plans and specifications.

STATE OF HAWAII, DEPARTMENT OF LAND AND NATURAL RESOURCES

Comment: Project does not affect any State park, or known historical or archaeological sites.

Response: This agrees with our preliminary determination.

STATE OF HAWAII, DEPARTMENT OF PLANNING AND ECONOMIC DEVELOPMENT

Comment: EIS should consider effects on possible suburban development of Keaau-Kurtistown area due to increased accessibility to Hilo.

Response: We feel that the improved accessibility resulting from the proposed project will not lead to any significant suburban development in the Keaau-Kurtistown area for the following reasons:

1. Access to Kurtistown (south of Keaau) will still be limited by the existing highway beyond Keaau inasmuch as the proposed improvement will end just south of Keaau village.

2. The greatest pressure for residential development will be on agricultural lands surrounding Keaau, but with current emphasis on preservation of agricultural lands, high density residential development is open to question. Upzoning of these lands would also be in conflict with the County of Hawaii's General Plan.
3. Unimproved residential properties are plentiful within the city of Hilo, albeit higher priced. Hence, for anyone who considers accessibility to Hilo and environs a major factor, lots are available within the immediate vicinity of the city.

STATE OF HAWAII, OFFICE OF ENVIRONMENTAL QUALITY CONTROL

Comment: What is the relationship between Project No. F-011-2(7)¹ and the proposed Project No. F-011-2(2)²? If both projects are segments of an entire project which will improve the route to/from Hilo, we suggest you consider both projects together as one to better foresee the total environmental impact.

Response: Both Project No. F-RF-011-2(13), with a projected 1993 ADT of 30,000 vehicles, and Project No. 11MN-01-73, with a projected 1995 ADT of 11,600 vehicles, are designed primarily to improve traffic flow and safety at the terminals of the route between Hilo and Keaau, and will not significantly affect future increases in traffic volumes between them. In essence, these projects, separated by 3 miles of highway, may be considered as spot improvements even though they constitute portions of a common route. See response to STATE OF HAWAII, DEPARTMENT OF PLANNING AND ECONOMIC DEVELOPMENT.

1. Current Federal Aid Project designation is F-RF-011-2(13)
2. Proposed Project No. is 11MN-01-73

Comment: What provisions will be made in the project to correct traffic flow and safety problems associated with sugar cane and equipment hauling trucks and trailers?

Response: The proposed project will provide two lanes of through traffic each way and additional left turn storage lanes at major intersections where now only single lanes each way and no storage lanes exist. An acceleration lane is also being considered for southbound traffic entering the Volcano Road from the west at the Keaau-Paho junction.

Comment: Expand on existing flooding conditions and drainage improvements.

Response: The text of the final EIS has been revised to correct the impression that a flooding problem exists. The only "flooding" which has been recorded since the construction of the existing highway in 1962 has been on one residential property, where the problem consisted of a front yard under water as a result of roadway runoff during heavy and prolonged rainfalls. Corrective action was taken in 1974 with the construction of a drywell on a drainage easement obtained from the affected property owner. See Plate 4.

Drainage improvements consist primarily of additional drywells to handle runoff which cannot be effectively channeled to existing drainage outlets, as a result of the new construction.

Comment: What is the "final roadway plan" and "more appropriate and safer use" of the existing inbound lanes?

Response: Final roadway plans are the plans which will be used for actual construction of the roadway improvements.

The "more appropriate and safer use" consists of conversion of sections of highway to two-way local circulation status. For example, the section of existing inbound lanes fronting residential

properties is a resurfaced portion of the old Volcano Road which was not constructed as a high speed highway, making it more appropriate and safer for use as a local circulation road for low density, low speed traffic.

Comment: The EIS should briefly describe what a Section 4(f) Statement is.

Response: A brief description of the Section 4(f) requirement has been included in this final EIS.

UNIVERSITY OF HAWAII AT MANOA, ENVIRONMENTAL CENTER

Comment: What is the percentage of truck traffic and traffic continuing on to Volcano for 1973 and 1995?

Response: Percent truck traffic and movements of outbound traffic on the Volcano Road at the Keaau-Pahoia junction have been included in the final EIS.

Comment: The traffic bottleneck might never be reduced with current cane hauling practices. We suggest the problem of cane hauling trucks be addressed in the Final EIS and a separate solution (possibly alternate routes) be found.

Response: See our response to the OFFICE OF ENVIRONMENTAL QUALITY CONTROL for ways in which the proposed project will alleviate the problem of sugar cane hauling trucks-within the project limits. Beyond the project limits, the problem of cane haul trucks and other slow moving vehicles will remain.

An alternate route strictly for cane hauling is beyond the province of the State Department of Transportation and would have to be developed by the plantation as an economic alternative.

Comment: Is there a traffic master plan? If so, how does this project relate to future plans?

Response: A highway system master plan for the Island of Hawaii exists, but there are no proposed improvements currently scheduled for highway sections in the immediate vicinity of Project No. 11MN-01-73, the last phase of highway improvements between Hilo and Keaau for which right-of-way was obtained in 1960-61 for a four lane divided highway. Traffic planning, however, is being conducted on a continuing basis and is reflected in the Capital Improvements Program for the State of Hawaii.

Comment: Include Specifications Section 639 and 641 in the Final EIS. Will these specifications be adequate to control erosion?

Response: Section 639 and Section 618 (replacing Section 641) are appended to this final EIS. Any inadequacies in these sections will be corrected as the need arises in the field by the State's inspection personnel and the Contractor.

The following agencies made no comments on the draft EIS requiring specific responses:

DEPARTMENT OF THE AIR FORCE, H. Q. 15TH AIR BASE WING (PACAF)
DEPARTMENT OF THE ARMY, H.Q. U. S. ARMY SUPPORT COMMAND, HAWAII
DEPARTMENT OF THE ARMY, U. S. ARMY ENGINEER DISTRICT, HONOLULU
STATE OF HAWAII, DEPARTMENT OF AGRICULTURE
STATE OF HAWAII, DEPARTMENT OF HEALTH
COUNTY OF HAWAII, DEPARTMENT OF PUBLIC WORKS
COUNTY OF HAWAII, DEPARTMENT OF WATER SUPPLY
HAWAII ELECTRIC LIGHT COMPANY

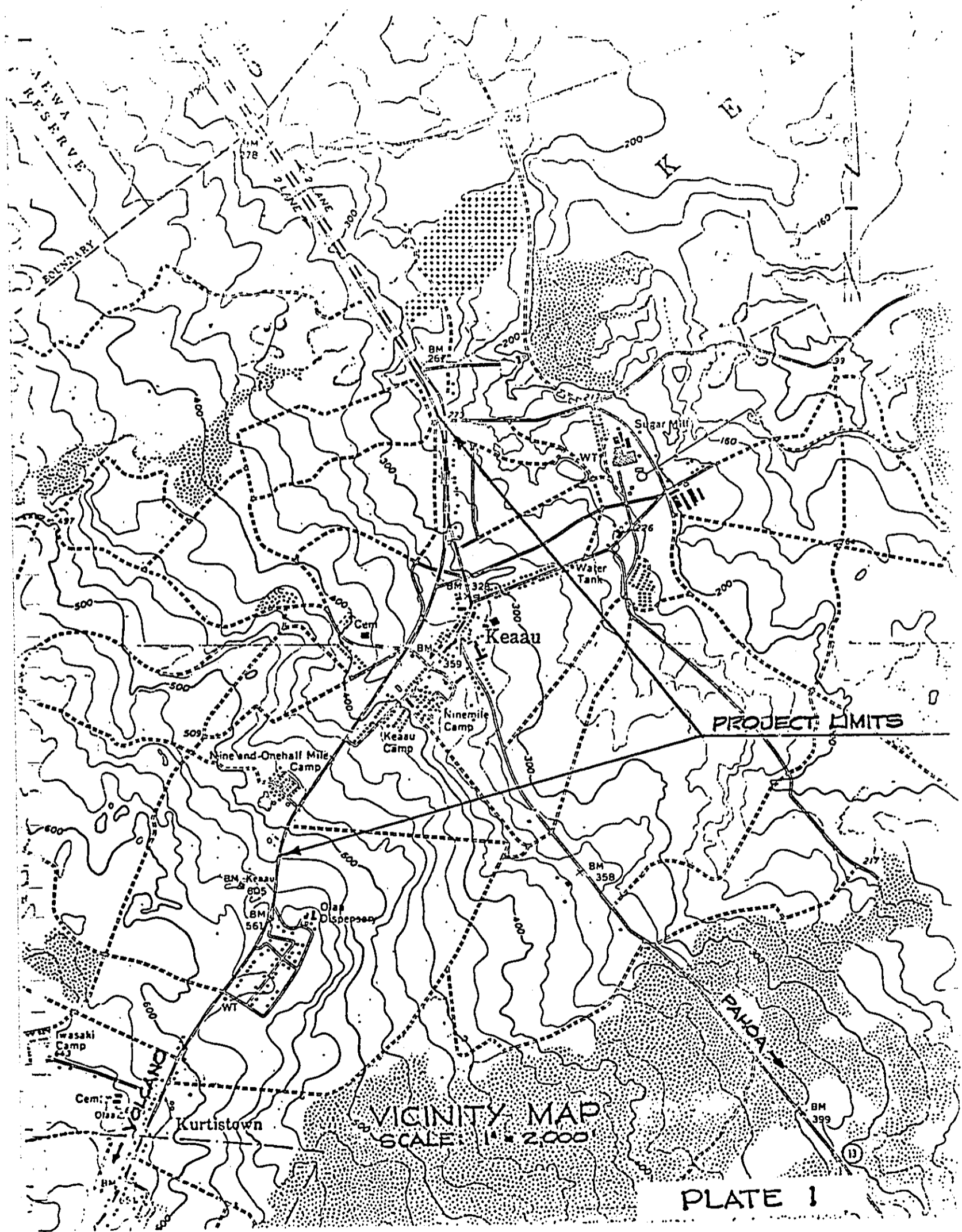
IX. LIST OF NECESSARY APPROVALS

1. Subdivision Approval - County of Hawaii, Planning Department

APPENDIX

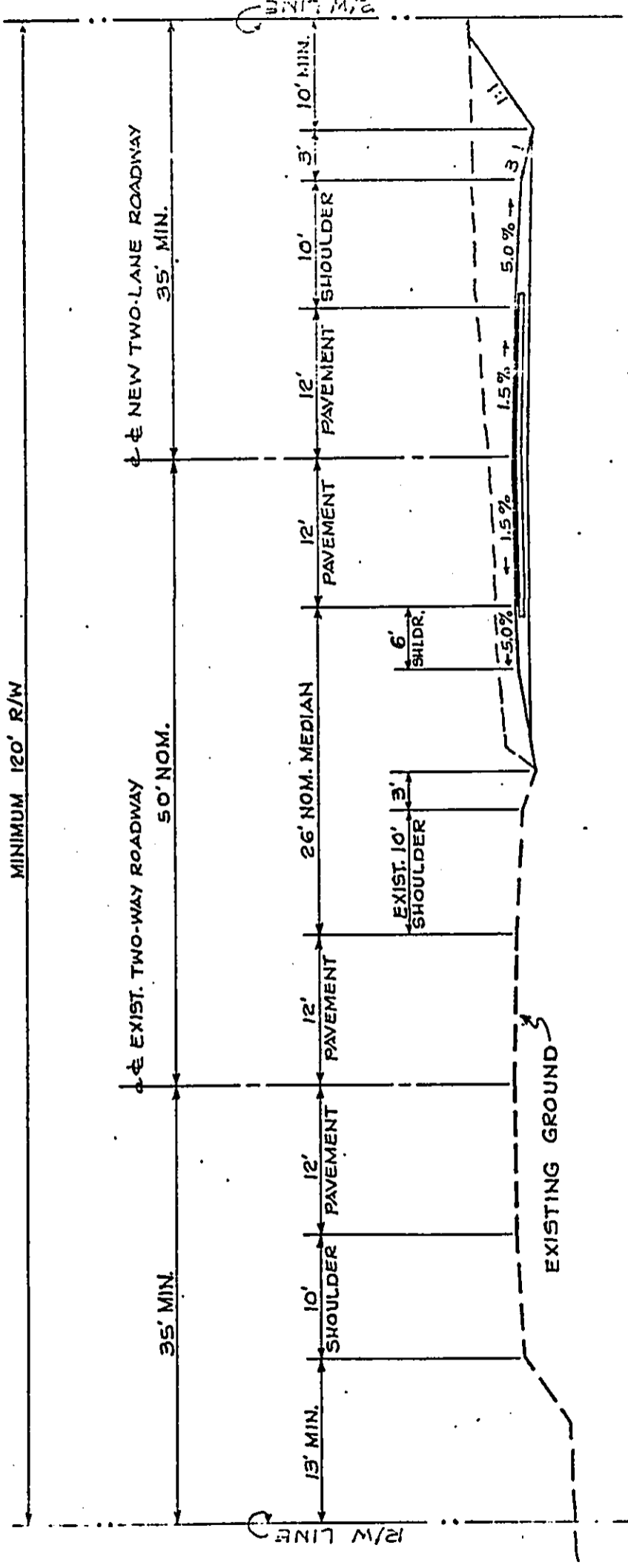
<u>Plate No.</u>	<u>Description</u>
1	Vicinity Map
2	Typical Roadway Section
3	Vicinity Zoning Map
4	Recommended Alignment (Alternate No. 3)
5	Recommended Alignment (Southern Portion Common to All Alternates)

<u>Attachment No.</u>	
1	"Section 639 - Temporary Project Water Pollution Control (Soil Erosion)"
2	"Section 618 - Grassed Surfaces"
3	EIS Distribution List
4	Written Comments on Draft EIS
5	Responses to Written Comments
6	Public Notice and Affidavits of Publication (Opportunity to Request Combined Corridor and Design Public Hearing)



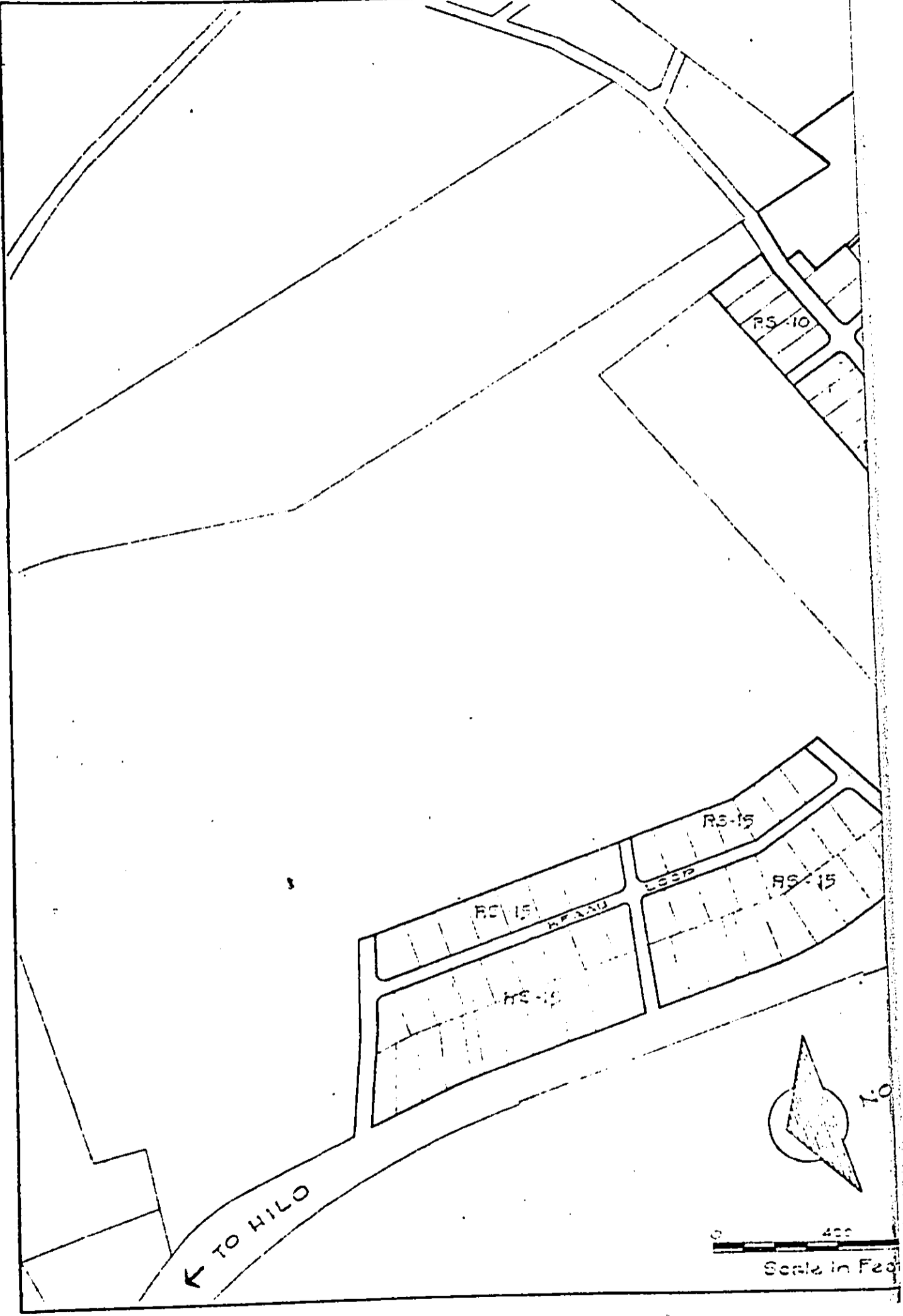
VICINITY MAP
SCALE: 1" = 2,000'

PLATE I



TYPICAL ROADWAY SECTION

NOT TO SCALE.



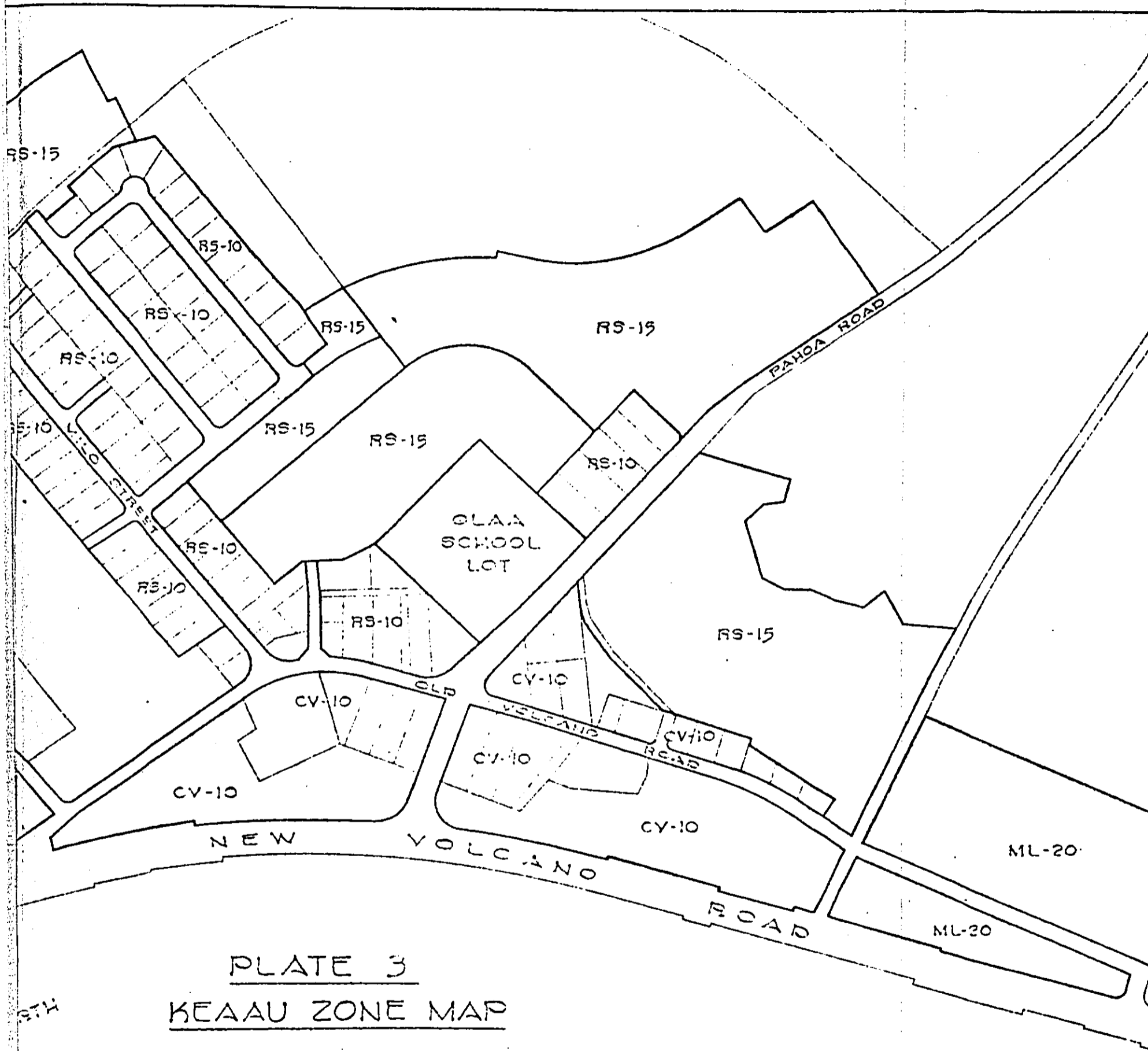
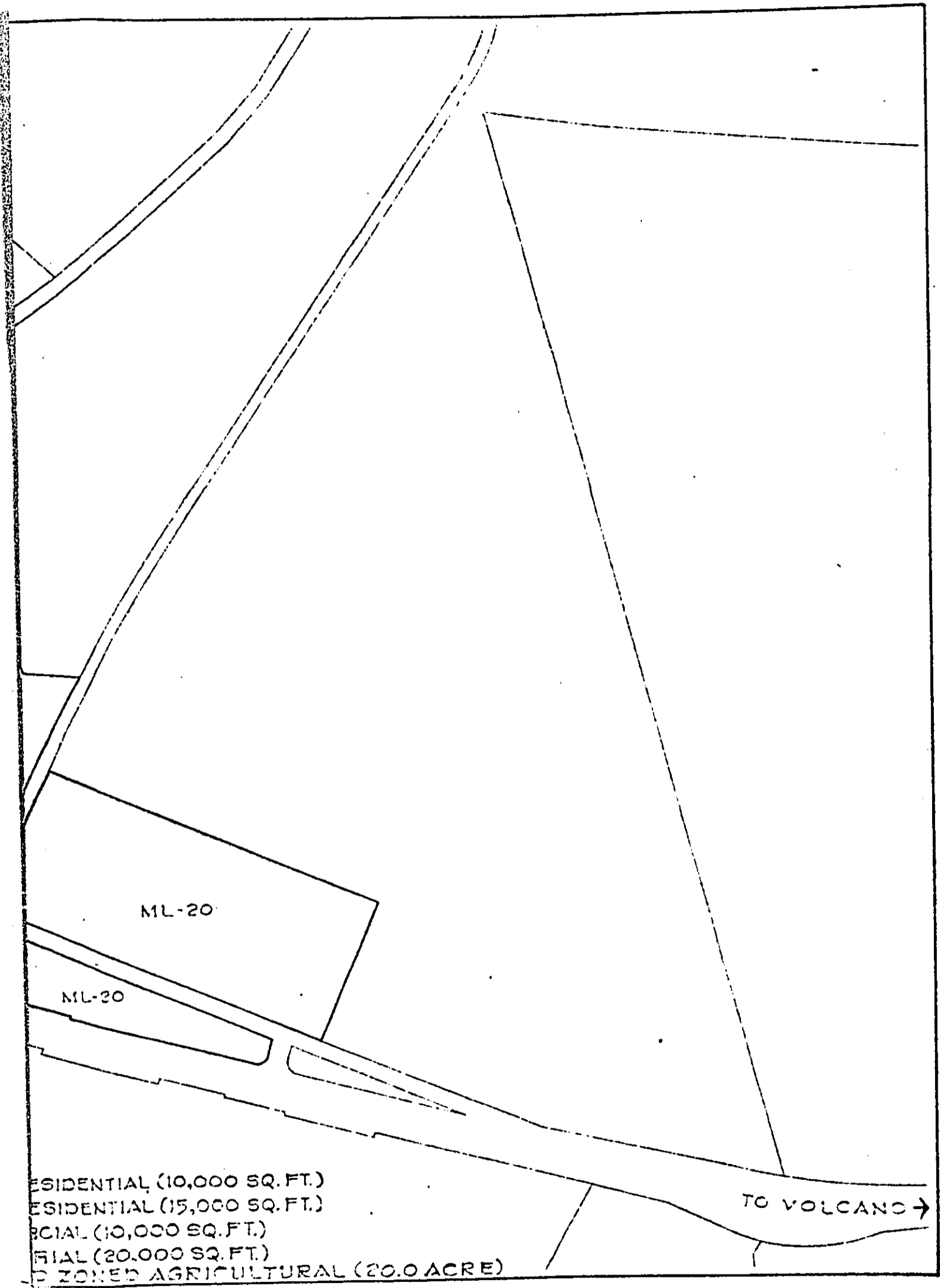


PLATE 3
KEAAU ZONE MAP

LEGEND:

- RS-10 SINGLE FAMILY RESIDENTIAL (10,000 SQ. FT.)
- RS-15 SINGLE FAMILY RESIDENTIAL (15,000 SQ. FT.)
- CV-10 VILLAGE COMMERCIAL (10,000 SQ. FT.)
- ML-20 LIMITED INDUSTRIAL (20,000 SQ. FT.)
- ALL REMAINING LAND ZONED AGRICULTURE

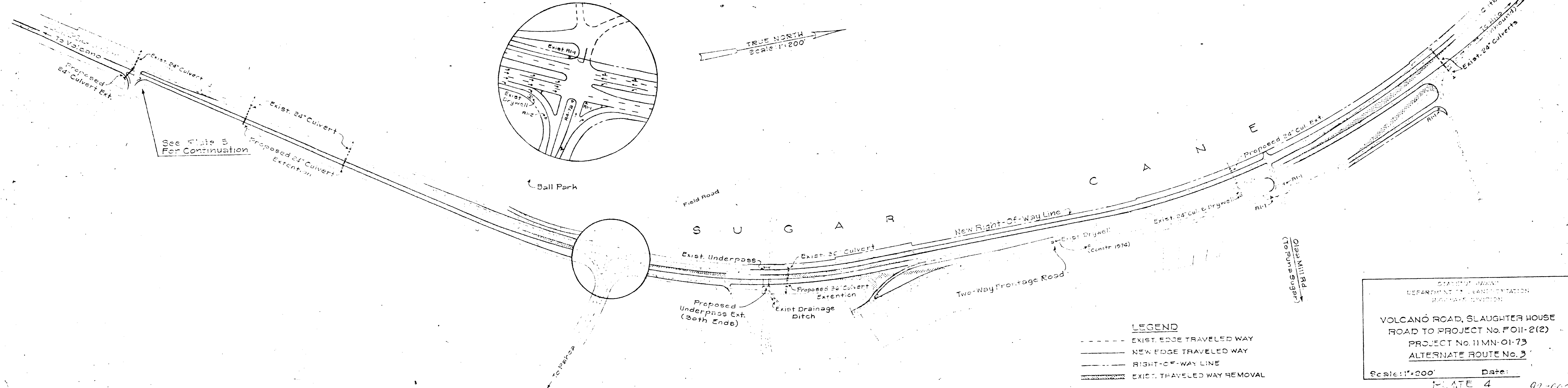


ML-20

ML-20

TO VOLCANO →

- RESIDENTIAL (10,000 SQ. FT.)
- RESIDENTIAL (15,000 SQ. FT.)
- COMMERCIAL (10,000 SQ. FT.)
- INDUSTRIAL (20,000 SQ. FT.)
- UNZONED AGRICULTURAL (20.0 ACRE)



TRUE NORTH
Scale: 1"=200'

- LEGEND**
- EXIST. EDGE TRAVELED WAY
 - NEW EDGE TRAVELED WAY
 - RIGHT-OF-WAY LINE
 - ~~~~~ EXIST. TRAVELED WAY REMOVAL

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

VOLCANO ROAD, SLAUGHTER HOUSE
ROAD TO PROJECT No. FOII-2(2)
PROJECT No. 11 MN-01-73
ALTERNATE ROUTE No. 3

Scale: 1"=200' Date: _____

TRUE NORTH
Scale: 1"=100'

To Volcano
10 Mile Post

Lane Ends,
Merge Right

END OF PROJ. F-2(4)
BEG. OF PROJ. F-011-2(2)

Left Lane Ends

R1-2

R1-2

To Hilo

To Keaau

- LEGEND**
- - - - - EXIST. EDGE TRAVELED WAY
 - NEW EDGE TRAVELED WAY
 - RIGHT-OF-WAY LINE
 - XXXXXXX EXIST. TRAVELED WAY REMOVAL

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

VOLCANO ROAD, SLAUGHTER HOUSE
ROAD TO PROJECT No. F 011-2(2)
PROJECT No. 11MN-01-73
SOUTHERN PORTION COMMON
TO ALL ALTERNATES

Scale: 1"=100' Date:

PLATE 5

92-003

SECTION 639--TEMPORARY PROJECT WATER POLLUTION CONTROL (SOIL EROSION)

639.01 Description. This work shall consist of temporary control measures as shown on the plans, required by these specifications or as ordered by the Engineer during the life of the contract to control water pollution, through use of berms, dikes, dams, sediment basins, fiber mats, netting, gravel, mulches, grasses, slope drains, and other erosion control devices or methods.

Temporary erosion and siltation control measures as described herein shall be applied to any erodible material of this project, including local material sources and work areas and all haul roads.

The temporary pollution control provisions contained herein shall be coordinated with the permanent erosion control features specified elsewhere in the contract to the extent practicable to assure economical, effective and continuous erosion control throughout the construction and postconstruction period.

The temporary or permanent drainage facilities shall be installed as required by these specifications or as ordered by the Engineer.

639.02 Materials.

(A) Mulches may be bagasse, hay, straw, fiber mats, netting, wood cellulose, bark, wood chips, or other suitable material acceptable to the Engineer and shall be reasonably clean and free of noxious weeds and deleterious materials.

(B) Slope drains may be constructed of pipe, fiber, mats, rubble, portland cement concrete, bituminous concrete, plastic sheets, or other materials acceptable to the Engineer that will adequately control erosion.

(C) Grass shall be a quick growing species (such as rye grass, Italian rye grass, or cereal grasses) suitable to the area providing a temporary cover which will not later compete with the permanent cover.

(D) Fertilizer and soil conditioners shall be a standard commercial grade acceptable to the Engineer. Fertilizer

shall conform to ... (E) Others.

639.03 Erosion Control Conference. An erosion control conference shall be held prior to the start of the applicable construction to discuss the sequence of work, plans and proposals for accomplishment of temporary and permanent erosion control. The Contractor shall plan, design and submit to the Engineer, at least 10 days prior to the scheduled conference,

diagrams which indicate the installation of each erosion control feature in exact relation to the sequence of each construction operation, and

plans (drawings) which illustrate approximate locations and typical details of each erosion control feature, and drainage patterns. Whenever it is expected that drainage patterns are to be critically altered by the progress of the construction, a separate drawing shall be submitted for each phase.

No work shall be started until the erosion control plans, sequence of operations and methods of operations have been submitted and accepted by the Engineer.

639.04 Construction Requirements. The Engineer has the authority to limit the surface area of erodible earth material exposed by clearing and grubbing, the surface area of erodible earth material exposed by excavation, borrow and fill operations and to direct the Contractor to provide immediate permanent or temporary pollution control measures to prevent contamination of adjacent streams or other watercourses, lakes, ponds, or other areas of water impoundment. Such work may involve the construction of temporary berms, dikes, dams, sediment basins, slope drains and use of temporary mulches, mats, seeding or other control devices or methods as necessary to control erosion. Cut slopes shall be seeded and mulched as the excavation proceeds to the extent considered desirable and practicable.

The Contractor will be required to incorporate all erosion control features into the project as shown on the accepted plans and schedule. The accepted plans and schedules shall be modified to correct conditions that develop during con

is suspended or halted and the slope is bare for more than 15 consecutive days or for more than 15 days in any 30-day period, the exposed surfaces shall be hydro-mulch seeded or protected as directed by the Engineer at the Contractor's expense without cost to the State.

Fill slopes shall be finished as specified and in accordance with the requirements of cut slopes hereinbefore described. In addition, the Contractor shall take extra precaution to protect and preserve the finished and previously seeded areas from any damages and spillover materials placed in the upper lifts of embankment.

Construction of berms, cofferdams or diversions in or near the vicinity of streams, ponds, waterways or any body of water shall be of approved materials.

Failure to conform with the above requirements will be cause for suspension of all operations.

All brush, limbs and root mat, except stumps cleared on the project shall be used to the fullest extent possible to construct silt barriers as noted on the plans or as directed by the Engineer. Whenever rock excavation is available on the project, an 8 to 15 inch layer of such materials shall be dumped spread over the lower region of embankments in the immediate vicinity of stream crossings and shall be used to cover ditches, channels and other drainage ways leading away from cuts and fills; however all drainage ways shall be prepared to receive the rock excavation to the extent necessary to avoid reducing their cross-section. In the event rock excavation is not available on the project, materials as specified in Sub-section 639.02 (A) shall be used as directed by the Engineer.

The Engineer may increase or decrease the amount of surface area of erodible earth material to be exposed at one time by clearing and grubbing, excavation, borrow and fill operations as determined by his analysis of project conditions.

In the event of conflict between these requirements and pollution control laws, rules, or regulations of other Federal or State or local agencies, the more restrictive laws, rules, or regulations shall apply.

639.05 Method of Measurement and Basis of Payment. In the event that temporary erosion and pollution control measures

struction that were not foreseen during the design or pre-construction stage.

The Contractor shall limit the surface area of earth material exposed by grubbing, stripping of topsoil, excavation, borrow and embankment operation within a given area and shall perform the next operation within a given area and his capability and progress in keeping the finish grading, mulching, seeding, and other such pollution control measures current in accordance with the accepted plans and schedule. Unless specifically authorized by the Engineer, the grubbing of vegetative root mat and stumps, and the stripping of topsoil shall be confined within the limits of excavation which shall be actively and continuously prosecuted within 15 days; and, excavation, borrow and embankment construction shall be confined to the minimum area necessary to accommodate the Contractor's equipment and work force engaged in the earth moving work; and the surface area of earth material exposed shall not at any time exceed 750,000 square feet without prior approval of the Engineer. Any area remaining bare or cleared for more than 15 days which is not within the limits of active construction or excavation shall be hydro-mulch seeded or remedied within 3 days as directed by the Engineer at the Contractor's expense without cost to the State.

The Contractor shall, at the end of each work operation in any one day, shape the earthwork in such a manner as to control and direct the runoff of rainwater. He shall construct earth berms along the top edges of embankments or any critical area within the project such as along the right-of-way or streams, water channels or any bodies of water to intercept runoff water. Temporary slope drains shall be provided to carry runoff from cuts and embankments. The slope drains may be of flexible or rigid construction but shall be capable of being readily shortened or extended as the cut or fill advances. A portable flume shall be provided at the entrance to the temporary slope drains. Controlled discharges shall be provided for all waters impounded, directed or controlled by project activities or erosion control measures.

Cut slopes shall be shaped, topsoiled and planted or finished as specified as the work progresses unless otherwise directed by the Engineer. In no case shall exposed surface be greater than 15 feet in height. Whenever major excavation

639.05

Temporary pollution control may include construction work outside the right of way where such work is necessary as a result of roadway construction such as borrow pit operations, haul roads and equipment storage sites.

The erosion control features installed by the Contractor shall be acceptably maintained by the Contractor.

639.05

are required due to the Contractor's convenience, negligence, carelessness, or failure to install permanent controls as a part of the work as scheduled, and are ordered by the Engineer, such work shall be performed by the Contractor at his own expense. Temporary erosion and pollution control work required, which is not attributed to the Contractor's convenience, negligence, carelessness or failure to install permanent controls, will be performed as ordered by the Engineer.

Where the work to be performed is not attributed to the Contractor's convenience, negligence, carelessness or failure to install permanent controls and falls within the specifications for a work item that has a contract price, the units of work will be paid for at the proper contract price. Should the work not be comparable to the project work under the applicable contract items, the Contractor will be ordered to perform the work on a force account basis, or by agreed unit prices.

The work involved in shaping the earthwork to control or direct the runoff of rainwater at the end of each work operation in any one day and to construct and maintain earth berms, swales, temporary slope drains, and cofferdams or diversions in or near the vicinity of streams, ponds, waterways or any body of water or anywhere within the limits of the project and any other erosion work as called for in the specifications and, work necessary for the Contractor's convenience and operation shall be at the Contractor's expense and no measurement or payment will be made, unless otherwise specified.

The work involved in dump spreading rock excavation material, when available on the jobsite, or other materials when rock excavation is not available on the project as described in paragraph 9 of Subsection 639.04 will be paid for on a force account basis or by agreed unit prices.

In case of repeated failures on the part of the Contractor to control erosion, pollution, and/or siltation, the Engineer reserves the right to employ outside assistance or to use his own forces to provide the necessary corrective measures. Such incurred direct costs plus project engineering costs will be charged to the Contractor and appropriate deductions made from the Contractor's monthly progress estimate.

SECTION 618 — GRASSED SURFACES

618.01 Description. This work shall consist of preparation of areas designated on the plans (median strip; shoulder and other areas) and planting with grass on such areas in accordance with the requirements of the contract.

618.02 Materials. Unless otherwise specified, the grass to be planted shall be Bermuda (Cynodon dactylon) except giant varieties. The grass shall be obtained by digging up luxuriant growths thereof from areas that are free of seeds, roots, plants, and grasses that are foreign to this grass. The grass will not be acceptable unless it is planted and watered within 24 hours after being dug out from its original growing position.

Other materials shall meet the requirements specified in the following subsections of Division 700 — Materials.

Topsoil

712.17

Inorganic Fertilizer

712.18(A)

618.03 Construction Requirements.

(A) Ground Preparation. Prior to planting, the areas to be grassed shall be cleared of all unwanted plants (including their root system), stones over 3 inches in diameter, papers, trash and debris and graded to the dimension and elevations shown on the plans or as directed.

If the existing soil in the areas to be grassed is suitable for use as top soil, the soil shall be scarified to a depth of not less than 6 inches from the finished surface shown on the plans. The soil shall be worked until it is of a uniform and loose texture, free from all stones greater than 1/2 inch in diameter and appropriate for planting. If additional material is required to bring the said areas to plan grade, topsoil shall then be spread and graded to conform to the finish surface shown on the plans.

Areas unsuitable for planting, as determined by the Engineer shall be excavated to a depth of not less than 6 inches from the finished surface and backfilled with topsoil. The topsoil shall be spread and graded to conform to the finish grade shown on the plans. The Contractor shall be responsible for the disposal of all excavated material.

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1. Milo grass (*Paspalum conjugatum*) will be specified for this project.

(B) Planting. Planting shall be by sprigging, matting, seeding, mulch seeding or other methods at the option of the Contractor. If planting is by sprigging or matting, the surface shall be rolled with a suitable lawn roller after planting is completed.

Water shall be applied within the same day of planting in such quantities as to moisten the soil to the depth of the planted grass. Additional application shall be made so that the planted areas are continually kept damp at all times to the grass depth and until the commencement of plant establishment work.

Fertilizer shall be applied at not less than the rate of 300 pounds per acre, 23 to 30 days after the grass has been planted.

A planting period shall begin immediately after an area is planted. During the planting period the Contractor shall provide 95 per cent coverage with 5 inch tall, healthy grass within 90 days. If satisfactory coverage is attained prior to 90 days, the Contractor may submit a written request to the Engineer asking for earlier beginning of the plant establishment period. During this period, the Contractor shall be responsible for all grassed areas which shall include watering, fertilizing, removal and disposal of trash and debris, insects and disease control and protection.

After the planting along a 1/4 mile section of road or smaller areas as determined by the Engineer has been satisfactorily planted in accordance with the specifications the planted area upon written notice from the Engineer shall be cared for as specified hereinafter under (C) Plant Establishment.

All planting shall be completed by end of the contract time.

(C) Plant Establishment. Plant establishment is required for all painted areas until final acceptance for a period of 9 months from the accepted completion date of the planting period. During this plant establishment period, the grassed areas shall be watered, fertilized, weeded, unless otherwise indicated on the plans or in the Special Provisions, and mowed with approved equipment whenever the average height of the grass becomes 3 inches. Days upon which

413

no work is required, as determined by the Engineer, will be credited as one of the plant establishment days, regardless of whether or not the Contractor performs plant establishment work. Days when the Contractor fails to adequately perform plant establishment work including but not limited to watering, fertilizing, weeding (unless otherwise indicated on the plans or in the Special Provisions), mowing or replacing unsuitable grass determined to be necessary by the Engineer, will not be credited as plant establishment days.

Weeding shall be defined as the removal of undesirable plants and their root systems except nut grass.

Surplus earth, papers, trash and debris which accumulate in the planted areas shall be removed and disposed of and the planted areas shall be cared for as to present a neat and clean condition at all times.

Watering equipment shall be of a type that will not cause damage to the planted area or its surroundings. Water systems that cause erosion or runoff and deemed unacceptable by the Engineer shall be corrected by the Contractor. Should the planted area or its surroundings be eroded due to the watering method, the Contractor shall immediately remove the runoff material and restore the area to the original grade and condition.

In addition to the initial application during the planting period, fertilizer shall be applied at least 3 times during the plant establishment period at intervals not closer than 2-1/2 months at a rate of not less than 300 pounds per acre per application.

Any area that does not show a thorough "catch" shall be replanted, and this replanting and subsequent care shall be repeated until the entire area meets its satisfactory growth in accordance with these specifications.

The acceptability of the planted areas will be determined at the end of the period of establishment during which the Contractor shall employ all possible means to promote the grass to healthy growth condition. Final acceptance will be upon providing 98 per cent coverage with 3 inch tall, healthy grass. In no case shall any 100 square feet area have more than a total of 2 square feet of bare spot.

The Contractor shall be responsible for protecting the planted areas until final acceptance of this work. He shall repair at his own expense any damage by pedestrian or vehicular traffic or other causes, except for conditions as covered in Subsection 107.20 — Contractor's Responsibility for Work.

618.04 Method of Measurement. Grassed surfaces will be measured by the square foot as ordered and accepted or as shown on the plans.

Ground preparation other than topsoil will not be measured but shall be considered incidental to grassed surfaces.

Topsoil will be measured and paid for as specified in Section 617 — Topsoil.

618.05 Basis of Payment. The accepted quantities of grassed surfaces will be paid for at the contract unit price per square foot which price shall be full compensation for furnishing, placing and/or planting all materials, and for ground preparation and plant establishment together with all equipment, tools, labor, and incidentals necessary to complete this work. It shall not include Topsoil.

Water used during the planting, planting period and the plant establishment period shall be considered incidental to grassed surfaces.

Payment will be made under:

Pay Item	Pay Unit
Grassed Surfaces	Square Foot

Partial payment will be made as follows:

40 per cent of the contract bid price based upon the actual ground surface planted will be allowed upon completion of planting;

20 per cent of the contract bid price based upon the actual ground surface planted will be allowed upon completion the planting period;

40 per cent of the contract bid price based upon the actual ground surface planted will be allowed in 3 trimonthly payments of 10, 10 and 20 per cent for satisfactory progress during the plant establishment period.

MAILING LISTFEDERAL AGENCIES

		No. of Copies
Agricultural Stabilization and Conservation Service U.S. Department of Agriculture	1833 Kalakaua Avenue Honolulu, Hawaii 96815	1
Soil Conservation Service U.S. Department of Agriculture	Alexander Young Building Room 440 Honolulu, Hawaii 96813	1
Forest Service U.S. Department of Agriculture	530 South Hotel Street Honolulu, Hawaii 96813	1
U.S. Department of Agriculture	Office of the Secretary Washington, D.C. 20250	1
Federal Aviation Administration Department of Transportation	1833 Kalakaua Avenue Honolulu, Hawaii 96815	1
Director, Office of Environ- mental Project Review U.S. Department of the Interior	18th and "C" Streets, NW Washington, D.C. 20242	12
Department of Housing and Urban Development	P.O. Box 3377 Honolulu, Hawaii 96801	1
Department of Housing and Urban Development	450 Golden Gate Avenue P.O. Box 36003 San Francisco, CA 94102	1
Department of Health, Education and Welfare	Federal Office Building 50 Fulton Street San Francisco, CA 94102	1
Council on Environmental Quality	722 Jackson Place, NW Washington, D.C. 20006	5

175
SEP 23 1970

National Bureau of Standards U. S. Department of Commerce	Administration Building Washington, D. C. 20234	1
U. S. Department of Commerce National Marine Fisheries Service	2570 Dole Street Honolulu, Hawaii 96822	1
Environmental Protection Agency	Bishop Trust Building 1000 Bishop Street, Rm. 601 Honolulu, Hawaii 96813	1
Environmental Protection Agency Region IX	100 California Street San Francisco, CA 94111	2
Advisory Council on Historic Preservation Attn: Mr. Robert Garvey Executive Director	801 19th Street NW Suite 618 Washington, D. C. 20006	1
Department of Commerce Attn: Dr. Sydney R. Galler Deputy Assistant	Secretary for Environ- mental Affairs Washington, D.C. 20230	1
Mr. Ernest E. Sligh, Director Environmental Impact Division Office of Environmental Programs Federal Energy Administration	New Post Office Building 12th & Pennsylvania Ave, NW Washington, D.C. 20461	5
Department of the Air Force Base Commander	15th Airbase Wing (CC) Hickam Airbase Honolulu, Hawaii 96553	1
Department of the Navy Commandant, 14th Naval District	Pearl Harbor Naval Base Pearl Harbor, Hawaii 96610	1
Department of the Army Commanding General Attn: Directorate of Engineering	Headquarters, U.S. Army Hawaii APO San Francisco 96557	1
U.S. Army - Corps of Engineers Honolulu District	Building 230, Fort Shafter APO San Francisco 96558	1
Department of Transportation U.S. Coast Guard Commandant	14th Coast Guard District 677 Ala Moana Boulevard Honolulu, Hawaii 96813	1

Congressional Representatives

The Honorable Miram L. Fong	1313 New Senate Ofc. Bldg. Washington, D.C. 20515	1
The Honorable Daniel K. Inouye	442 Richard Russell Bldg. Washington, D.C. 20510	1
The Honorable Patsy Mink	442 Cannon House Bldg. Washington, D.C. 20515	1
The Honorable Spark M. Matsunaga	442 Cannon Ofc. Bldg. Washington, D.C. 20515	1

State Legislators

The Honorable Jack K. Suwa Representative, 1st District	P. O. Box 8 Kurtistown, Hawaii 96760	1
The Honorable Stanley H. Roehrig Representative, 2nd District	80 Pauahi Street Hilo, Hawaii 96720	1
The Honorable Herbert A. Segawa Representative, 2nd District	P. O. Box 1476 Hilo, Hawaii 96720	1
The Honorable Yoshito Takamine Representative, 3rd District	P. O. Box 608 Honokaa, Hawaii 96727	1
The Honorable Minoru Inaba Representative, 4th District	P. O. Box 233 Kealahou, Hawaii 96750	1
The Honorable Stanley I. Hara Senator, 1st District	203 Kilauea Avenue Hilo, Hawaii 96720	1
The Honorable Richard Henderson Senator, 1st District	P. O. Box 747 Hilo, Hawaii 96720	1
The Honorable John T. Ushijima Senator, 1st District	P. O. Box 964 Hilo, Hawaii 96720	1

State Agencies

Department of Agriculture	Attn: John Farias, Jr.	1
Department of Accounting and General Services	Attn: Hideo Murakami	1
Department of Defense	Attn: Maj. Gen. Valentine A. Siefertmann	1
Department of Education	Attn: James Eddington	1
Department of Health	Attn: Shinji Soneda	3
Department of Land and Natural Resources	Attn: Christopher Cobb	3
Department of Planning and Economic Development	Attn: Hideto Kono	1
Department of Social Services and Housing	Attn: Ronald Lin	10
OEQC	Attn: Dr. Richard Marland	10
<u>University of Hawaii</u>		
Environmental Center	Dr. Doak Cox	4
Water Resources Research Center	Dr. Stephen Lau	1
<u>News Media</u>		
Honolulu Star Bulletin	Attn: Mr. Hobart Duncan 605 Kapiolani Blvd. Honolulu 96813	1
Honolulu Advertiser	Attn: Mr. George Chaplin 605 Kapiolani Blvd. Honolulu 96813	1
Hawaii Tribune Herald	355 Kinoole Street Hilo, Hawaii 96720	1

COUNTY OF HAWAII PROJECTS

- ✓ County Council
County of Hawaii 25 Aupuni Street 1
Hilo, Hawaii 96720
- ✓ Department of Planning 25 Aupuni Street 2
Attn: Mr. Raymond Suefuji Hilo, Hawaii 96720
- ✓ Department of Public Works 25 Aupuni Street 1
Attn: Mr. Edward Harada Hilo, Hawaii 96720
- ✓ Department of Parks and Recreation 25 Aupuni Street 1
Attn: Mr. Milton Hakoda Hilo, Hawaii 96720
- ✓ Department of Water Supply P. O. Box 1820 1
Attn: Mr. Akira Fujimoto Hilo, Hawaii 96720
- ✓ Department of Research and Development 25 Aupuni Street 1
Attn: Mr. Clarence Garcia Hilo, Hawaii 96720

Public Utilities

- ✓ Hawaiian Telephone Company 115 Kalakaua Street 1
Hilo, Hawaii 96720
- ✓ Hawaii Electric Light Co., Inc. P. O. Box 1027 1
Hilo, Hawaii 96720
- ✓ Gasco, Inc., Hawaii Division 945 Kalaniana'ole Avenue 1
Hilo, Hawaii 96720

State Public Libraries

15

/ State Library Branch

Other Public Libraries

University of Hawaii (Sinclair
and Hamilton)

Attn: Mrs. Muraoka

2

DPED Library

Attn: Anthony Oliver
c/o DPED

1

Municipal Library
City and County

City & County of Honolulu
Honolulu

1

State Archives

1

Legislative Reference Bureau

1

Other Organizations

Puna Sugar Company, Ltd.

Keaau, Hawaii 96749

1

W. H. Shipman, Ltd.

Keaau, Hawaii 96749

1

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Attachment No. 4

440 Alexander Young Bldg., Honolulu, HI 96813

June 9, 1975

Dr. Richard E. Marland
Office of Environmental Quality Control
550 Halekauwila St., Room 301
Honolulu, HI 96813

Dear Dr. Marland:

Re: Draft Environmental Impact Statement for Volcano Road,
Project No. 11MN-01-73, Slaughter House Road to
Project No. F-011-2(2)

We have reviewed the above-mentioned statement and offer the following comments:

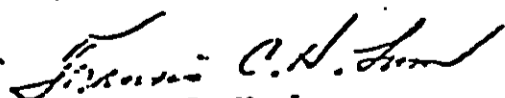
The soils information in the draft was taken from the 1955 Soil Survey for the Territory of Hawaii. More detailed information is available in the 1973 Published Soil Survey for the Island of Hawaii, in which the soils on the proposed route are mapped as Olaa extremely stony clay loam.

The 1973 published soil survey rates the Olaa soils as poor for road fill and highway location. They are characterized by stoniness with fragmental Aa lava at a depth of 1-1/2 to 2-1/2 feet. Olaa soils have high compressibility and low bearing capacity. Density when compacted is low and workability is poor. This soil is continuously wet and dehydrates irreversibly in pebble-sized aggregates. Olaa soils are low in fertility. While these properties do not preclude road construction activity, they do indicate that additional construction measures may be needed.

The draft indicates that natural vegetation will be encouraged to re-establish itself after construction has been completed. The Soil Conservation Service recommends that permanent vegetative cover be planted on exposed slopes as soon as grading and paving are completed.

Thank you for the opportunity to review this draft.

Sincerely,


Francis C. H. Lum
State Conservationist



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 15th AIR BASE WING (PACAF)
APO SAN FRANCISCO 96353

Attachment 1



28 MAY 1975

REPLY TO
ATTN OF:

DEEE (Mr. Kimura, 4492158)

SUBJECT:


Draft Environmental Impact Statement

TO:

Office of Environmental Quality Control
Office of the Governor
550 Halekauwila Street
Tani Office Building, Third Floor
Honolulu, Hawaii 96813

We have no comment to render relative to the draft environmental impact statements for the following projects:

- a. Hanamalu Sewer Extension
- b. Variety Club School
- c. Actions in Hawaii Kai Marina
- d. Drainage Channel Improvement at Waimanalo
- ✓ e. Volcano Road (Slaughter House Road)
- f. Ala Moana Sewage Force Main


ROBERT Q K CHING
Chief, Engrg & Constr Div
Dep Comdr for Civil Engineering



DEPARTMENT OF THE ARMY
 HEADQUARTERS UNITED STATES ARMY SUPPORT COMMAND, HAWAII
 APO SAN FRANCISCO 96558

Attachment No. A

9 June 1975

AFZY-SG-EC

Richard E. Marland, PhD
 Director
 Office of Environmental Quality Control
 State of Hawaii
 Room 301, 550 Halekauwila Street
 Honolulu, Hawaii 96813

75 JUN 31 11 13 AM
 RECEIVED
 ENVIRONMENTAL QUALITY CONTROL
 HONOLULU, HAWAII

Dear Dr. Marland:

The Draft Environmental Impact Statements for the Administrative Action for Volcano Road, Project No. 11MN-01-73, Slaughter House Road to Project No. F-011-2(2), and the New Ala Moana Sewage Force Main were reviewed by this office.

We have no comments to offer at this time.

Thank you for the opportunity to review these statements.

Sincerely,

LEE C. HERWIG, JR.
 Colonel, MSC
 Environmental Consultant to Commander,
 U.S. Army Support Command, Hawaii



DEPARTMENT OF THE ARMY
 U. S. ARMY ENGINEER DISTRICT, HONOLULU
 BLDG. 230, FT. SHAFTER
 APO SAN FRANCISCO 96358

Attachment No. 4

11 June 1975

PODED-P

Dr. Richard E. Marland, Director
 Office of Environmental Quality Control
 State of Hawaii
 550 Halekauwila Street
 Honolulu, Hawaii 96813

75 JUN 31 11 13 45
 HAWAII ENGINEER DISTRICT

Dear Dr. Marland:

We have reviewed the draft environmental impact statement for Volcano Road, Project No. 11MN-01-73 and Slaughter House Road to Project No. F-011-2(2) and have no comments to offer. Thank you for the opportunity to review this statement.

Sincerely yours,

Kisuk Cheung
 KISUK CHEUNG
 Chief, Engineering Division



GEORGE R. ARIYOSHI
GOVERNOR



STATE OF HAWAII
DEPARTMENT OF AGRICULTURE
1428 SO. KING STREET
HONOLULU, HAWAII 96814

Attachment No. 4
JOHN FARIAS, JR.
CHAIRMAN, BOARD OF AGRICULTURE
YUKIO KITAGAWA
DEPUTY TO THE CHAIRMAN

June 3, 1975

RECEIVED
HONOLULU
JUN 31 AM 10 45
HONOLULU DISTRICT

MEMORANDUM

To: Dr. Richard E. Marland, Director
Office of Environmental Quality Control

Subject: Draft EIS for Volcano Road, Project No. 11MN-01-73
Slaughter House Road to Project No. F-011-2(2)

Thank you for the opportunity to review this draft statement.
No agricultural impacts are foreseen. Acceptance of the draft
as final is recommended.

John Farias, Jr.
John Farias, Jr.
Chairman, Board of Agriculture

JF:d:h

GEORGE R. ARIYOSHI
GOVERNOR



STATE OF HAWAII
DEPARTMENT OF AGRICULTURE
1428 SO. KING STREET
HONOLULU, HAWAII 96814

June 3, 1975

Attachment No. 4

JOHN FARIAS, JR.
CHAIRMAN, BOARD OF AGRICULTURE

YUKIO KITAGAWA
DEPUTY TO THE CHAIRMAN

HAWAII DISTRICT

JUN 31 10 10 AM '75

MEMORANDUM

To: Dr. Richard E. Marland, Director
Office of Environmental Quality Control

Subject: Draft EIS for Volcano Road, Project No. 11MN-01-73
Slaughter House Road to Project No. F-011-2(2)

Thank you for the opportunity to review this draft statement.
No agricultural impacts are foreseen. Acceptance of the draft
as final is recommended.

Yukio Kitagawa
John Farias, Jr.
Chairman, Board of Agriculture

JF:d:h

GEORGE R. ARIYOSHI
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF HEALTH
P.O. Box 3378
HONOLULU, HAWAII 96801

June 12, 1975

Attachment No. 4

GEORGE A. LYUEN
DIRECTOR OF HEALTH
Audrey W. Mertz, M.D., M.P.H.
Deputy Director of Health
Henry N. Thompson, M.A.
Deputy Director of Health
James S. Kumagai, Ph.D., P.E.
Deputy Director of Health

In reply, please refer to:
File: EPMS - SS

MEMORANDUM


To: Dr. Richard E. Marland, Interim Director
Office of Environmental Quality Control

From: Deputy Director for Environmental Health

Subject: Draft Environmental Impact Statement (EIS) for Volcano Road,
Project No. 11MN-01-73, Slaughter House Road to Project
No. F-011-2(2)

Thank you for allowing us to review and comment on the subject
EIS. Please be informed that we have no objections to this project.

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


JAMES S. KUMAGAI, Ph.D.

Attachment No. 4

GEORGE W. ANIYOSHI
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
P. O. BOX 621
HONOLULU, HAWAII 96809

CHRISTOPHER COBB, CHAIRMAN
BOARD OF LAND & NATURAL RESOURCES

EDGAR A. MAMASU
DEPUTY TO THE CHAIRMAN

DIVISIONS:
CONVEYANCES
FISH AND GAME
FORESTRY
LAND MANAGEMENT
STATE PARKS
WATER AND LAND DEVELOPMENT

June 30, 1975

MEMORANDUM

TO: Hon. R. E. Marland, Director
Office of Environmental Quality Control

FROM: Christopher Cobb, Chairman
Board of Land and Natural Resources

SUBJECT: DRAFT EIS Administrative Action for Volcano Road,
Project No. 11MN-01-73, Slaughter House Road to
Project No. F-011-2(2)

We have reviewed the subject EIS and find that the project does not affect any State Park interests nor any known historic or archaeological sites.

Thank you for referring this matter for our review.

Edgar A. Mamasu
for CHRISTOPHER COBB
Chairman of the Board.

RECEIVED
75 JUN 31 AM 10 45
HAWAII STATE DEPARTMENT OF LAND AND NATURAL RESOURCES



DEPARTMENT OF PLANNING
AND ECONOMIC DEVELOPMENT

Amamalu Building, 250 South King St., Honolulu, Hawaii • Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804

Attachment 15. 42. 211

HIDETO K. O.
Director

FRANK SKRIVANEK
Deputy Director

June 26, 1975

Ref. No. 4530

MEMORANDUM

TO: Dr. Richard E. Marland, Director
Office of Environmental Quality Control

FROM: Hideto Kono, Director *[Signature]*

SUBJECT: Draft Environmental Impact Statement for Volcano Road, Slaughter
House Road, Hawaii, Project No. F-011-2(2)

RECEIVED
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LEGISLATION
HONOLULU

Our staff has reviewed the subject draft statement and find that it adequately considers most environmental impacts resulting from the proposed project.

We feel that the statement should further consider the effects due to increased accessibility between the Hilo urban center and Keaau-Kurtistown area. While we agree that the project will not directly contribute to urban development in this area, it will make employment centers in Hilo more accessible. In a long term perspective, this could result in the development of suburban communities in Keaau-Kurtistown, with services and employment centers in Hilo. The final impact statement might further address the issue of increased accessibility and its secondary effects.

We have no further comments to offer at this time but appreciate the opportunity to review the draft statement.

GEORGE R. ARIYOSHI'S OFFICE
GOVERNOR



JUL 19 3 05 PM '75

DEPARTMENT OF TRANSPORTATION
OFFICE OF ENVIRONMENTAL QUALITY CONTROL
OFFICE OF THE GOVERNOR
550 HALEKAUWILA ST.
ROOM 301
HONOLULU, HAWAII 96813

July 9, 1975

Attachment No. 4
RICHARD E. MAILAND, PH.D.
DIRECTOR

RECEIVED
TELEPHONE NO. 548-6915

JUL 17 8 52 AM 1975

DEPT. OF TRANSPORTATION
HIGHWAY DIVISION

MEMORANDUM

TO: The Honorable E. Alvey Wright, Director
Department of Transportation

ATTN: Dave Blevier, Design Division

FROM: Richard E. Mailand, Director
Office of Environmental Quality Control

SUBJECT: Draft Environmental Impact Statement for Volcano
Road, Project No. 11MN-01-73 Slaughter House Road to
Project No. F-011-2(2)

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DESIGN BRANCH
HIGHWAY DIVISION
DEPT. OF TRANSPORTATION

This Office has completed its review of the subject draft EIS. As of this date we have received a total of eleven (11) comments as indicated on the attached list.

Provided below is a brief summary of our Office's comments.

COMMENTS

PROJECT DESCRIPTION AND PURPOSE

The EIS notes construction of Project No. F-011-2(7), Kanoelehua Avenue, Makalika Street to Kamehameha Avenue scheduled for 1975. What is the relationship between this Project No. F-011-2(7) and the proposed Project No. F-011-2(2)? It seems that both projects are segments of an entire project which will improve the route to/from Hilo. If this is correct, we suggest that you consider both projects together as one to better foresee the total environmental impact.

JUL 31 1975
RECEIVED

Page 2

Page 2, #2 - What provisions will be made in the proposed project for the sugar cane and equipment hauling trucks and trailers which aggravate the present traffic situation?

IMPACT OF PROJECT ON THE ENVIRONMENT

Social - Public Health & Safety

Apparently this area is subject to flooding. The EIS claims that "...roadway drainage improvements to be incorporated in the project will serve to correct some flooding conditions..." There are two concerns to be addressed here. First, the EIS should fully discuss what these "drainage improvements" are. The one-sentence paragraph on page 6 is inadequate information and should be expanded. Secondly, what exact flooding conditions will the drainage improvements correct and what flooding conditions will still exist?

Economics - Operation and Use of Existing Highway Facilities

What exactly is the "final roadway plan" referred to in this section? What is a "more appropriate and safer use" of the existing inbound lane? We suggest expansion of this section for the final EIS.

SUMMARY

Administrative Action

The EIS should briefly describe what a Section 4(f) Statement is.

RECOMMENDATIONS

We recommend that each commentor including this Office be given individual concern. Written responses should be sent to each indicating how specific comments were considered, evaluated, and disposed. This Office would appreciate a copy of these responses.

For the final EIS, we recommend that: 1) all comments and responses be appended to the fEIS, incorporating comments as appropriate into the context of the fEIS and 2) a copy of the fEIS be provided to those individuals who offered substantial comments on the draft EIS.

Thank you for the opportunity to review this draft environmental impact statement. We look forward to receiving the final environmental impact statement.

Attachment

LIST OF COMMENTORS FOR DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR
VOLCANO ROAD, PROJECT NO. 11MN-01-75, SLAUGHTER HOUSE ROAD TO
PROJECT NO. F-011-2(2), DOT - DESIGN DIVISION

Date of Receipt

FEDERAL

*Department of the Air Force	May 29, 1975
Soil Conservation Service	June 10, 1975
*Department of the Army	June 11, 1975
*Department of the Army, Engineering Division	June 12, 1975

STATE

*Department of Agriculture	June 5, 1975
*Department of Health	June 17, 1975
Department of Planning and Economic Development	June 30, 1975
*Department of Land and Natural Resources	July 3, 1975

COUNTY OF HAWAII

*Department of Public Works	May 21, 1975
*Department of Water Supply	May 29, 1975

UNIVERSITY OF HAWAII

Environmental Center	June 20, 1975
----------------------	---------------

*No comments



University of Hawaii at Manoa

Environmental Center
Maile Bldg. 10 • 2540 Maile Way
Honolulu, Hawaii 96822
Telephone (808) 948-7361

Office of the Director

June 20, 1975

MEMORANDUM

TO: Richard E. Marland
FROM: Doak C. Cox *Doak C. Cox*
RE: Review of DEIS Volcano Project No. 11MN-01-73
Slaughter House Road to Project No. F-011-2(2)

HAWAII STATE
DEPARTMENT OF
TRANSPORTATION

JUN 23 1975

The Environmental Center review of the above cited DEIS has been prepared by Blaise Caldeira, Jacquelin Miller, and Clare Shinsato of the Environmental Center.

P. 2.

Of the 4,800 vehicles (ADT) cited for 1973 what percent of this figure represents truck (bus etc.) traffic? What percent of the (ADT) bypasses the Keaau-Pahoa Junction continuing on towards Volcano? A similar analysis of the design year 1995 traffic flow pattern would greatly help in evaluating the long term environmental impact.

At present the bottleneck is due in part to truck traffic mainly sugar cane hauling trucks in both the inbound and outbound lanes. Traffic is hampered by cane hauling operations from Keaau through Mountainview (app. 8 mi.). With the expected increase in traffic and the continuation of present cane hauling practices, the bottleneck might never be reduced. Cane hauling trucks produce unique problems which influence the safety and efficiency of the highway. We suggest that the problem of cane hauling trucks be addressed in the Final EIS and a separate solution be found (possibly an alternate route for cane hauling).

Is there a traffic master plan? If so how does this project relate to future plans? If not consideration should be implemented to establishing a plan.

P. 6.

We are unfamiliar with Section 639 and Section 641 and recommend both sections or a summary thereof and a reference source be included in the Final EIS. Since rainfall in this area is 100" to 120" will the regulations specified

Richard E. Marland

2

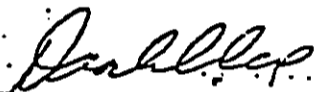
June 20, 1975

in Sections 639, 641 be adequate to control erosion?

P. 3, B.1.

Mention is made of roadway drainage improvements. Where are existing drainage systems located and of what type are they? To what extent will extensions of the present system be expanded? What existing or future residential areas could be affected by the increased runoff volume, or possible flooding (as noted in the DEIS) during heavy rains. Due to the brevity of the section in the DEIS on the drainage system, it is difficult to assess what environmental impacts, if any, will occur due to the proposed drainage improvements. Therefore, we recommend that this section be expanded and included in the Final EIS. In addition, location of the present drainage system and proposed extensions should be shown on appropriate maps in the Final EIS.

We appreciate the opportunity to review this DEIS.


Doak C. Cox, Director

Attachment No. 4.

- BUREAUS AND DIVISIONS
- AUTOMOTIVE EQUIPMENT & MOTOR POOL
- BUILDING CONSTRUCTION AND INSPECTION
- PLANS AND SURVEYS
- ROAD CONSTRUCTION AND MAINTENANCE
- SEWERS AND SANITATION
- TRAFFIC SAFETY AND CONTROL



EDWARD K. HARADA
CHIEF ENGINEER

COUNTY OF HAWAII
DEPARTMENT OF PUBLIC WORKS
25 AUPUNI STREET
HILO, HAWAII 96720

May 19, 1975

Office of Environmental Quality Control
550 Halekauwila Street
Honolulu, Hawaii 96813

SUBJECT: Draft E.I.S. for Volcano Road,
Project No. 11MN-01-73, Slaughter House
Road to Project No. F-011-2(2)

In response to your May 15, 1975 transmittal of the Draft E.I.S. for the subject project, we have reviewed the draft and have no comments.

Thank you for the opportunity to review the draft E.I.S.

Edward Harada
EDWARD HARADA
Chief Engineer

HAWAII DISTRICT

75 JUN 31 AM 10 45



DEPARTMENT OF WATER SUPPLY • COUNTY OF HAWAII

P. O. BOX 1820

HILO, HAWAII 96720

25 AUPUNI STREET

May 27, 1975

Office of Environmental Quality Control
550 Halekauwila Street, Room 301
Honolulu, HI 96813

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HAWAIIAN WATER SUPPLY
DEPARTMENT

Re: Draft Environmental Impact Statement
Volcano Road, Project No. IIMN-01-73
Slaughter House Road to Project No. F-011-2(2)

Within the jurisdictional confines of our Department, we have no adverse environmental objections to the subject project.

Akira Fujimoto

Akira Fujimoto
Manager

GK

... *Water brings progress...*

HAWAII ELECTRIC LIGHT COMPANY, INC.
P. O. BOX 1027 HILO, HAWAII-96720



July 25, 1975

State of Hawaii
Department of Transportation
Highways Division
869 Punchbowl Street
Honolulu, Hawaii 96813

Attention: Mr. Tetsuo Harano, Chief Engineer

Gentlemen:

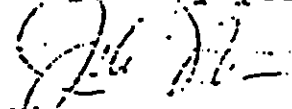
We have reviewed the Draft Environmental Impact Statement for Volcano Road Project No. 11MN-01-73, Slaughter House Road to Project No. F-011-2(2).

Please be advised that the new road alignment will affect the existing poles carrying transmission lines that ties the Puna Power Plant with the Helco Power Plant and also Puna Power Plant to the Volcano Switching Station.

The tentative cost for relocating these poles is \$67,900 which includes a steel pole.

We estimate that it will require approximately 18 months delivery time to obtain the steel pole.

Very truly yours,


Jitsuo Niwao, Manager
Engineering Department

JN:ja

cc: C. Schuster ✓
M. Valera

RECEIVED
HAWAII ELECTRIC LIGHT COMPANY
HONOLULU, HAWAII

May 3, 1977

LT-DD
2.37172

MEMORANDUM

TO: THE HONORABLE RICHARD E. MARLAND, DIRECTOR
OFFICE OF ENVIRONMENTAL QUALITY CONTROL

FROM: DIRECTOR OF TRANSPORTATION

SUBJECT: DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR VOLCANO ROAD,
PROJECT NO. 11MN-01-73, SLAUGHTER HOUSE ROAD TO
BEG. PROJECT NO. F-011-2(2)

We have reviewed your comments on our draft EIS and have incorporated changes in the final EIS where deemed appropriate. Following are our evaluations of the comments under specific headings.

PROJECT DESCRIPTION AND PURPOSE

Both Project No. F-RF-011-2(13) currently under construction and Project No. 11MN-01-73 will improve the route between Hilo and Keaau; however, we feel these improvements at the terminals of the route will not lead to a material increase in traffic movements between Hilo and Keaau. Project No. F-RF-011-2(13) improving the Hilo terminus along Kanoelehua Avenue is designed primarily to accommodate increased traffic demands within the Hilo city limits, as evidenced by the projected ADT for Kanoelehua Avenue in 1993 of 30,000 vehicles while the ADT projected for the Volcano Road at Keaau in 1995 is only 11,600 vehicles.

As regards sugar cane and equipment hauling truck traffic, the proposed project will provide for two lanes of through traffic each way and additional left turn storage lanes at major intersections where now only single lanes each way exist. An acceleration lane is also being considered for southbound traffic entering the Volcano Road from the west at the Keaau-Pahoa junction.

The Honorable Richard E. Marland
Page 2
May 3, 1977

LT-DD 2.37172

IMPACT OF PROJECT ON THE ENVIRONMENT

The only floodings which have been recorded since the construction of the existing highway in 1962 have been on one residential property east of the highway in the vicinity of the junction of the new and old Volcano Roads. The flooding was caused by roadway runoff accumulating in the parcel after heavy and prolonged rainfalls. Corrective action was taken in 1974 with the construction of a drywell on a drainage easement obtained from the property owner. The proposed project will include provisions for intercepting roadway runoff before it reaches the affected parcel.

New traveled ways will be constructed with a normal crown so that roughly half of the roadway runoff will be concentrated in the median and then dissipated in drywells or discharged into existing drainage channels. Existing and proposed drainage structures have been incorporated on Plate 4.

ECONOMICS

Final roadway plans are the plans which will be used for actual construction of the roadway improvements. Currently only preliminary alignments have been established, and minor corrections and adjustments may be required before the construction plans can be finalized.

The "more appropriate and safer use" consists of conversion of sections of highway to two-way local circulation status. For example, the section of existing inbound lanes fronting residential properties is a resurfaced portion of the old Volcano Road, which was not constructed as a high speed highway. Also, residential properties adjoining the roadway make it more appropriate and safer for use as a local circulation road for low-density, low-speed traffic.

SUMMARY

A brief description of a Section 4(f) Statement has been included in the final EIS.

Thank you for your comments,

R. Alvey Wright

for E. ALVEY WRIGHT

GK/DLB:gsm

cc: LT-DD

May 3, 1977

LT-DD
2.37109

MEMORANDUM

TO: MR. DOAK C. COX
ENVIRONMENTAL CENTER
UNIVERSITY OF HAWAII AT MANOA

FROM: DIRECTOR OF TRANSPORTATION

SUBJECT: DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR VOLCANO ROAD,
PROJECT NO. 11MN-01-73, SLAUGHTER HOUSE ROAD TO
BEG. PROJECT NO. F-011-2(2)

We have reviewed your comments on our draft EIS and our response follows:

Percent truck traffic and movements of outbound traffic on the Volcano Road at the Keaau-Pahoia junction have been included in the final EIS.

See attached response to the Office of Environmental Quality Control for ways in which the proposed project will alleviate the problem of sugar cane hauling trucks within the project limits. Beyond the project limits, the problem of cane haul trucks and other slow moving vehicles will remain.

An alternate route strictly for cane hauling is beyond the province of the State Department of Transportation and would have to be developed by the plantation as an economic alternative.

A highway system master plan for the Island of Hawaii exists, but there are no proposed improvements scheduled for highway sections in the immediate vicinity of Project No. 11MN-01-73. Project No. 11MN-01-73 is the last phase of highway improvements between Hilo and Keaau for which right-of-way was obtained in 1960-61 for a four lane divided highway. However, traffic planning is being conducted on a continuing basis and is reflected in the Capital Improvements Program for the State of Hawaii.

LT-DD 2.37169

Mr. Deak C. Cox
Page 2
May 3, 1977

Sections 639 and 641 of the special provisions to contract specifications are now obsolete and have been superseded by Sections 639 and 641 of the Standard Specifications for Road and Bridge Construction. Accordingly said sections have been deleted from the final EIS except by reference. Copies of the Standard Specifications are available at all public libraries and at the University of Hawaii library.

Existing drainage facilities and proposed construction have been incorporated on Plate 4 of the Final EIS. Also see response to the Office of Environmental Quality Control for comments on flooding.

Thank you for your comments.

R. Wright
for E. ALVEY WRIGHT

GK/DLB:gsm

Attachment

cc: LT-DD

LT-DD
2.37171

May 3, 1977

Mr. Francis C. H. Lum
State Conservationist
Soil Conservation Service
United States Department of Agriculture
440 Alexander Young Building
Honolulu, Hawaii 96813

Dear Mr. Lum:

Subject: Draft Environmental Impact Statement for
Volcano Road, Project No. 11MN-01-73,
Slaughter House Road to Beg.
Project No. F-011-2(2)

Thank you for your comments on subject Draft Environmental
Impact Statement.

We have revised the Final EIS to incorporate the soils
information from the 1973 Soil Survey of the Island of
Hawaii, State of Hawaii.

Pavement structure for the proposed project will be
designed for the existing ground condition in accordance
with approved methods, and will be more substantial than
that used for the existing highway through the project area.

Grassing of exposed cuts and embankments will be included
in the project plans.

Very truly yours,

R. Higashimura
for E. ALVEY WRIGHT
Director

GK/DLB:gsm

cc: LT-DD

May 3, 1977

LT-DD
2.37170

MEMORANDUM

TO: THE HONORABLE HIDETO KONO, DIRECTOR
DEPARTMENT OF PLANNING AND ECONOMIC DEVELOPMENT

FROM: DIRECTOR OF TRANSPORTATION

SUBJECT: DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR VOLCANO ROAD,
PROJECT NO. 11MN-01-73, SLAUGHTER HOUSE ROAD TO
BEG. PROJECT NO. F-011-2(2)

Thank you for your comments on our draft EIS.

We feel that the improved accessibility resulting from the proposed project will not lead to any major suburban development in the Kurtistown-Keaau area for the following reasons:

1. Access to Kurtistown will still be limited by the existing highway past Keaau inasmuch as the proposed highway construction will end just south of the town of Keaau.
2. The greatest pressure for residential development will be on agricultural lands surrounding Keaau, but with current emphasis on preservation of agricultural lands, high density residential development is open to question. Upzoning of these lands would also be in conflict with the County of Hawaii's General Plan.
3. Unimproved residential properties are plentiful within the city of Hilo, albeit higher priced. Hence, for anyone who considers accessibility to Hilo and environs an important factor, lots are available within the immediate vicinity.

R. Nigamshina
for E. ALVEY WRIGHT

GK/DLB:gsm

cc: LT-DD

AFFIDAVIT OF PUBLICATION

State of Hawaii)
) ISS:
(County of Hawaii)

LEILANI K. R. IIOGAKI _____, being first

duly sworn, deposes and says:

1. That she is the _____ ASSISTANT OFFICE MANAGER _____ of
HAWAII TRIBUNE-HERALD, LTD. _____, a

newspaper published in the City of _____ HILO _____, a
State of Hawaii.

2. That the "NOTICES - The public is advised that the Department of Transportation is planning to improve Volcano Road, Portion of Route Control Sections 11M and N, Slaughter House Road to Beginning of Project No. F-011-2(2), Project No. 11M-10-73, District of Puna, etc." of which a clipping from the newspaper

as published is attached hereto, was published in said newspaper on the following date(s) _____ November 19, 26, _____, 19 76 _____ (cic).

Subscribed and sworn to before me

this _____ 29th _____ day of _____ November _____, 19 76 _____

Notary Public, Third Circuit,
State of Hawaii

My commission expires _____ JAN 15 1977 _____



LOCATION MAP
VOLCANO ROAD
Section 11M, 11N (Keoua)
District of Puna

SCALE: 1:10000

The public is advised that the Department of Transportation is planning to improve Volcano Road, Portion of Route Control Sections 11M and N, Slaughter House Road to Beginning of Project No. F-011-2(2), Project No. 11M-10-73, District of Puna, Island of Hawaii. The widening of Volcano Road from a two-lane roadway to a four-lane divided highway in the vicinity of the Keoua Interchange will provide a safe and efficient link from Keoua to Hilo. The proposed improvements will eliminate the undulating and unsafe features of the existing roadway by providing for a smoother alignment, left turn storage lanes, and conversion of existing one way roadway to a local circulation roadway.

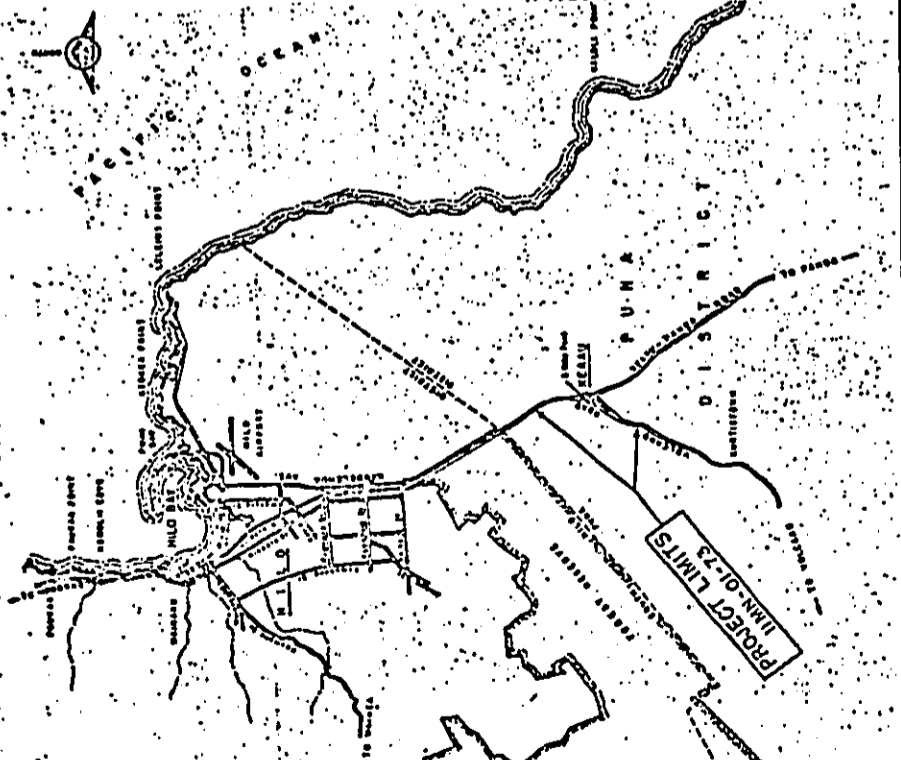
Plans showing the proposed design, ditch cross-sectional report, and other data as required by the National Environmental Policy Act of 1969 and other pertinent information will be available for public inspection and copying at the Department of Transportation, Highway Division, District Branch, 839 Peabody Street, Honolulu, Hawaii 96813, and District Engineer's office, 30 Peabody Street, Hilo, Hawaii 96720.

The transportation project described herein is available for public review and copying at the following locations: Office of Environmental Quality Control, 530 Kalia Avenue, Room 301, Honolulu, Hawaii; and Reference Desk, Hawaii State Library, 478 South King Street, Honolulu, Hawaii; and Reference Desk, Hilo Public Library, 300 Waiawa Avenue, Hilo, Hawaii. Public informational meetings covering the proposed scope of work were held on May 26, 1976 and August 11, 1976 at the Keoua Community School Library in Keoua, Hawaii.

Any interested citizen offered by said construction may request a combined corridor and design public hearing to be held to discuss the engineering design features and the social, economic, and environmental effects of the proposed improvement by submitting a written request to the Director, Department of Transportation on or before December 17, 1976. In the event such a request is received, a further notice of the time and place of the combined corridor and design public hearing will be published.

R. Higashimura
District Engineer

NOTICE



AFFIDAVIT OF PUBLICATION

STATE OF HAWAII, }
CITY AND COUNTY OF HONOLULU. } 88.

Nancy Kirabeing

duly sworn, deposes and says, that she is Clerk of the HAWAII NEWSPAPER AGENCY, INC., agent for HONOLULU ADVERTISER, INC., publishers of THE HONOLULU ADVERTISER and SUNDAY STAR-BULLETIN and ADVERTISER, a daily newspaper published in the City and County of Honolulu, State of Hawaii, that the ordered publication in the above entitled matter of which the annexed is a true and correct printed notice, was published.....
times in said daily newspaper, commencing on the...20th day of November....., 1976, and ending on the 26th day

of November....., 1976.. (both days inclusive), to wit, November 20, 26, 1976

and that affiant is not a party to or in any way interested in the above entitled matter.

Nancy Kira

Subscribed and sworn to before me this 26th day of November....., A. D. 1976....

Richard S. Judd
Notary Public of the First Judicial Circuit,
State of Hawaii

My commission expires..... NOV. 15, 1980.

NOTICE

The public is advised that the Department of Transportation is planning to improve Volcano Road, Portion of Route Control Sections 11M and N, Slaughter House Road to Beginning of Project No. F-011-201, Project No. 11MN-01-73, District of Puna, Island of Hawaii. The widening of Volcano Road from a two-lane roadway to a four-lane divided highway in the vicinity of the Keanu intersection will provide a safe and efficient link from Keanu to Hilo. The proposed improvements will eliminate the undesirable and unsafe features of the existing roadway by providing for a smoother alignment, left turn storage lanes, and conversion of existing one way roadway to a local circulation roadway.

Plans showing the proposed design, draft environmental impact statement as required by the National Environmental Policy Act of 1969 and other pertinent information will be available for public inspection and copying at the Department of Transportation, Highways Division, Design Branch, 539 Punchbowl Street, Honolulu, Hawaii 96813, and District Engineer's office, 50 Makalea Street, Hilo, Hawaii 96720.

The draft environmental impact statement is also available for public review and copying at the following locations: Office of Environmental Quality Control, 550 Halekiauila Street, Room 301, Honolulu, Hawaii; Reference Desk, Hawaii State Library, 478 South King Street, Honolulu, Hawaii; and Reference Desk, Hilo Public Library, 3000 Waiamanu Avenue, Hilo, Hawaii.

Public informational meetings covering the proposed scope of work were held on May 26, 1976 and August 11, 1976 at the Keanu Community School Library in Keanu, Hawaii. Any interested citizen affected by said construction may request a combined corridor and design public hearing to be held to discuss the engineering design features and the social, economic, and environmental effects of the proposed improvement by submitting a written request to the Director, Department of Transportation on or before December 17, 1976. In the event such a request is received, a further notice of the time and place of the combined corridor and design public hearing will be published.

F. ALVEY WRIGHT
Director
Department of Transportation (A.P.547)

