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GOVERNOR



MAR 14 1990

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STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
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HONOLULU, HAWAII 96813-5097

'90 MAR 13 8:56

IN REPLY REFER TO:  
HWY-DD  
2.0759

MAR 12 1990

MEMORANDUM

TO: The Honorable John C. Lewin  
Director, Department of Health

ATTN: Office of Environmental Quality Control

FROM: Director of Transportation

SUBJECT: NEGATIVE DECLARATION FOR FARRINGTON HIGHWAY,  
REPLACEMENT OF MAKAHA BRIDGE NOS. 3B, 4, 5  
AND 5A, FEDERAL-AID PROJECT NO. BR-093-1(11)

We hereby notify you that an Environmental Impact Statement will not be required by us for the subject project. We are abiding by Title 11, D.O.H., Chapter 200, EIS Rules.

Attached is our Negative Declaration on the proposal (original plus three copies).

If you have any question on the action, please contact Dennis Imada at 548-7493.

Edward Y. Hirata

Enclosures

OFC. OF ENVIRONMENTAL  
QUALITY CONTROL  
90 MAR 21 13:31  
RECEIVED

u/sko  
Per Dennis Imada for TMK, list 8-3 various  
JBI

1990-04-08-0A-FA

*Makaha Bridge 3B, 4, 5, 5A Replacement - Farrington Hwy*

**FILE COPY**

RECEIVED

A PROPOSAL FOR  
'90 MAR 21 P3:32  
FARRINGTON HIGHWAY

REPLACEMENT OF MAKAHA BRIDGE NOS. 3B, 4, 5 & 5A

FEDERAL-AID PROJECT NO. BR-093-1(11)

NEGATIVE DECLARATION

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

DECEMBER 19, 1989

TABLE OF CONTENTS

	<u>Page No.</u>
I. INTRODUCTION . . . . .	1
II. FINDINGS AND CONCLUSION . . . . .	2
III. DESCRIPTION OF EXISTING FACILITIES . . . . .	3
IV. PURPOSE AND NEED FOR THE ACTION . . . . .	4
V. DESCRIPTION OF PROPOSED ACTION . . . . .	5
VI. IDENTIFICATION AND EVALUATION OF POTENTIAL IMPACTS . . . . .	7

I. INTRODUCTION

The proposed action calls for replacing 4 existing timber bridges with 4 new concrete bridges along Farrington Highway on Oahu.

The purpose of this action is to provide new concrete bridges compatible with present day standards. Greater lateral clearances for vehicles will be provided, bridge railings meeting current standards will be installed, and the new concrete bridges will be built to accommodate present day load standards.

The following is our assessment of the necessity for this action, and subsequent assessment of the SEE impacts that would result should the proposal be implemented.

## II. FINDINGS AND CONCLUSION

### A. Findings

1. Impact on highway operation will be minimal since Farrington Highway will continue to operate as a 2-lane undivided highway.
2. Traffic safety will improve with the greater lateral clearances provided by the new bridges. New concrete bridge railings will be installed, meeting current standards for redirecting vehicles.
3. There will be no significant air and noise impacts.
4. Construction related impacts will result in inconveniences to vehicular traffic, minor inconvenience to pedestrians and some construction-related noise and dust. These impacts will be minimized by requiring as part of the Construction Contract documents the use of effective construction phasing and detour plans and provisions to mitigate dust by watering the sites regularly.
5. Impact on archaeological and historical resources will be minimal since a study in 1983 found that none of the existing wooden bridges along the Makaha Coast had sufficient historical value to warrant its preservation.
6. There will be no right-of-way acquisition related impacts since no right-of-way will be acquired. However, some temporary construction parcels will be necessary for temporary detour roads.
7. There will be no permanent impact to land use or development patterns.

### B. Conclusion

Implementation of the proposed action will not have a significant impact on the quality of human environment.

### III. DESCRIPTION OF EXISTING FACILITIES

Farrington Highway, in the vicinity of the 4 bridges, is a 2-lane highway with a total roadway width of 21'. Unpaved shoulders with various widths of 7' to 10' are provided on both sides of the roadway. Farrington Highway is the only route serving the Keaau-Kaena area.

The existing bridges are located between M.P. 15.77 and M.P. 17.05 (Figure 1). The bridges were built in 1937 and provides a total roadway width of 21', made up of an asphalt plank wearing surface. A 3'-10" wide wooden sidewalk is provided on the mauka side of the bridges and wooden railings are provided on both sides of the bridges. The bridge pier footings are made of concrete. The remainder of the bridges including piers and cross beams are made entirely of wood.

The stream beds under the bridges are dry except for heavy storm periods.

IV. PURPOSE AND NEED FOR THE ACTION

The existing timber bridges do not meet current standards and repair costs for damages to the substructure as a result of heavy storms, termite infestation and fires are expensive.

The proposed concrete bridges will require less maintenance since they will be less susceptible to damage by heavy storms, fire mishaps, termite infestation or traffic accidents. More importantly, severe damages could result in closure of the timber bridges to traffic as was the case when fire damaged Makaha Bridge No. 2 in September 1986 whereby the community was temporarily crippled due to lack of transportation. The new structures will be designed to accommodate present day traffic loads and the wider bridges will enhance safety.

The existing nonstandard wooden railings will be eliminated when the new bridges are built, and new concrete bridge railings are installed.

V. DESCRIPTION OF PROPOSED ACTION

- A. The proposed action consists of the replacement of 4 existing wooden bridges with 4 new wider concrete bridges. Roadway approach work at both ends of the structures will also be made to provide a smooth transition from the existing road to the new bridges. The alignment of the existing streams which run under the bridges will remain unchanged.

The new concrete bridges will provide the same vertical clearance as the existing wooden bridges. Although Bridge No. 3B will have a trapezoidal section, the flow capacity will be increased to meet the FHWA guidelines. The stream flow capacity of Bridge No. 4 will be reduced to follow FHWA guidelines requiring a 1' backwater. However, with the increase in span lengths and use of vertical abutment walls, the stream flow capacity of Bridge Nos. 5 and 5A will increase.

New concrete abutments will be constructed as well as new concrete piers making the new bridges 1, 2 or 3 span structures. Precast concrete planks will be used for the new bridge decks. Concrete vertical face railings and 8' wide shoulders will be provided on both sides of the bridges (Figure 2).

B. Proposed Scope of Work

The proposed action will involve the following scope of work.

1. Construct temporary detour roads and remove the detour roads and restore the sites after completion of the new bridges.
2. Demolish existing wooden bridges.
3. Construct new concrete bridges.
4. Grade, scarify and construct new roadway A.C. pavement along Farrington Highway, approximately 150 linear feet at both approaches to the new bridges, to transition the existing roadway to the new bridges.



5. Regrading upstream of Bridge No. 4.
6. Install guardrails.
7. Temporary relocation of existing First Hawaiian Bank 3-inch and existing Department of the Army 4-inch water lines and reinstall the water lines on the new bridges.
8. Install pavement markings and signs.
9. FTTCO underground conduits to be accommodated during new bridge construction.

C. Right-of-Way

No right-of-way acquisition will be involved. The right-of-way width of Farrington Highway at Bridge Nos. 3B, 4, 5 and 5A is 60 feet. Temporary construction parcels will be required for 3 to 6 months to construct each structure and the necessary detour roads.

D. Cost and Timetable

The estimated project cost is \$3,890,000 with the following breakdown:

Construction	\$3,570,000.00
Preliminary Engineering	<u>320,000.00</u>
	\$3,890,000.00

The estimated completion timetable follows:

Design	May	1990
Construction	December	1991

## VI. IDENTIFICATION AND EVALUATION OF POTENTIAL IMPACTS

### A. Traffic Operation and Safety

#### 1. Traffic Operation

Farrington Highway will remain a 2-lane facility upon completion of the new bridges. Very little, if any, impact is expected to occur on the movement of traffic.

Farrington Highway is the only route serving the Keaau-Kaena area. Potential impact to this area will be serious should this route be closed due to closure of any of the bridges caused by failure. The new concrete bridges will be less susceptible to failure due to damages by fire, storms, termite infestation or traffic accidents.

#### 2. Traffic Safety

Traffic safety will improve as a result of the replacement of the existing wooden bridges with new concrete bridges.

The new wider concrete bridges will provide greater lateral clearances for vehicles traveling on Farrington Highway. The greater lateral clearances will also provide increased safety for pedestrians and bikers by providing a greater distance separating them from the motor vehicles.

New concrete vertical face bridge railings will be installed, meeting current standards.

### B. Noise and Air Quality

Farrington Highway will remain a 2-lane facility upon completion of this action; therefore, noise levels and air quality will remain unchanged.

### c. Construction Impacts and Inconveniences

Inconveniences to vehicular traffic during construction will be unavoidable. Detour shifting of traffic around the construction sites may result in increased travel time, but a roadway lane in each direction of travel will be maintained throughout the

duration of construction. Signs, and other traffic control devices, as well as publications in the news media will be utilized to warn the public of any changes in traffic pattern.

Short-term noise and dust during construction will be controlled in accordance with applicable sections of the contract specifications and special provisions.

Containment of silt and construction debris from entering the near shore water during construction will be in compliance with the project specifications under Temporary Project Water Pollution Control. In addition, fill material will be required to be of suitable quality, free from toxic pollutants in other than trace amounts, and be able to withstand expected high flows.

D. Archaeological and Historical Resources

The State Department of Transportation has worked with the Department of Land and Natural Resources, and the Federal Highway Administration, in determining the historical value of the existing wooden bridges along the Makaha coast. The study (1983) found that none of the existing wooden bridges had any significant historical value to warrant its preservation.

E. Other Elements and Factors

1. The proposed action will involve the replacement of 4 existing wooden bridges along the present highway facility and are confined to the existing highway right-of-way. Temporary detour roads will be constructed on the adjacent pasture or former pasture lands on the East side paralleling the highway within temporary construction parcels except for the detour roads for Bridge No. 5A which will be constructed on the West side. Upon completion of the new bridges, the detour roads will be removed and the site restored to its original condition. The pasture lands are zoned AG-2 (Agriculture, General) by the City and County of Honolulu. The State Land Use designation is Agriculture. The proposed action, therefore, will not have any significant effects upon the following factors:

- A. Land use
- B. Development patterns
- C. Regional and community growth
- D. Public facilities and services
- E. Community cohesion
- F. Economic activity

2. The proposed action does not involve primary impacts upon the following elements:

- A. Natural, ecological and scenic resources
- B. Aesthetics
- C. Water quality
- D. Relocation of residences and businesses
- E. Residential and neighborhood character
- F. Public facilities
- G. Minority or disadvantaged groups

RECEIVED AND ACCEPTANCE RECOMMENDED:

\_\_\_\_\_  
 T. HARANO  
 Chief  
 Highways Division

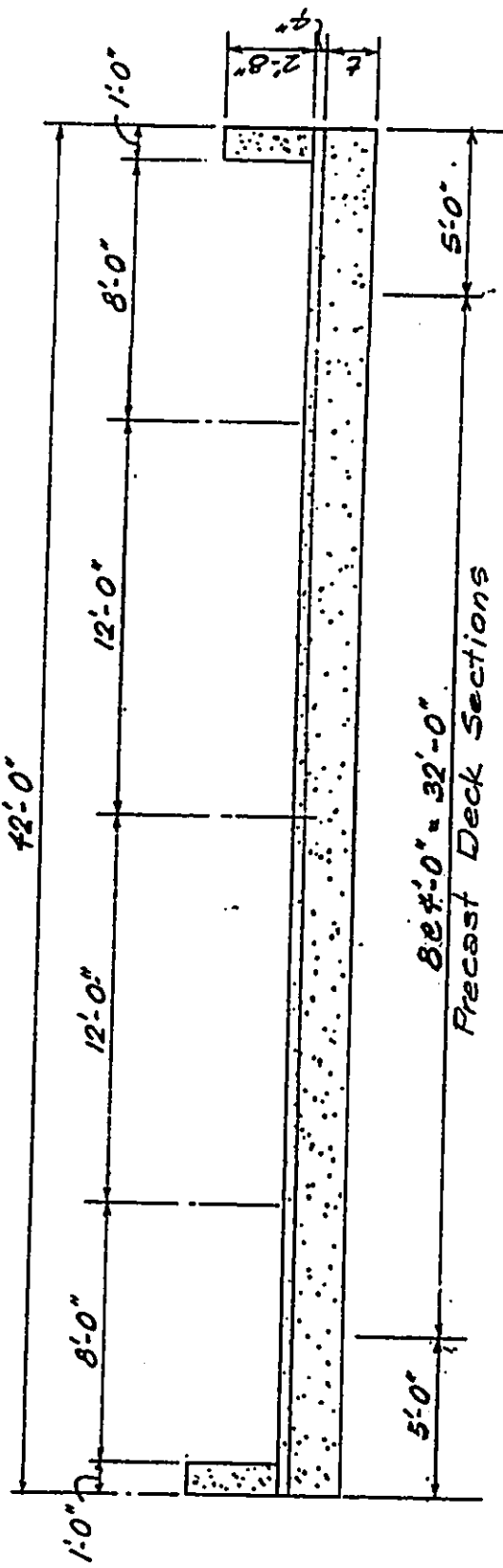
\_\_\_\_\_  
 Date

CONCURRENCE:

\_\_\_\_\_  
 EDWARD Y. HIRATA  
 Director

\_\_\_\_\_  
 Date





TYPICAL DECK SECTION

Scale: 3/16" = 1'-0"

Figure 2