

JOHN WAINEE  
GOVERNOR OF HAWAII



1967  
Keith W. Ahue, Chairperson  
BOARD OF LAND AND NATURAL RESOURCES

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John P. Keppeler, II  
Dona L. Hanaike

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

AQUACULTURE DEVELOPMENT  
PROGRAM  
AQUATIC RESOURCES  
CONSERVATION AND  
ENVIRONMENTAL AFFAIRS  
CONSERVATION AND  
RESOURCES ENFORCEMENT  
CONVEYANCES  
FORESTRY AND WILDLIFE  
HISTORIC PRESERVATION  
PROGRAM  
LAND MANAGEMENT  
STATE PARKS  
WATER AND LAND DEVELOPMENT

APR 19 1993

FILE NO.: OA-2592  
DOC. NO.: 2590

MEMORANDUM

TO: The Honorable Brian J. J. Choy, Director  
Office of Environmental Quality Control

FROM: KEITH W. AHUE, Chairperson *OK*  
Board of Land and Natural Resources

SUBJECT: Negative Declaration for Hana Highway Erosion Control  
Improvements

The Department of Land and Natural Resources has reviewed the comments received during the 30-day public comment period which began on December 8, 1992. The agency supports the Department of Transportation's determination that the project will not have significant environmental effect and has issued a negative determination. Please publish this notice in the OEQC Bulletin as soon as possible.

We have enclosed a completed OEQC Bulletin Publication Form and four copies of the final EA.

Please contact Don Horiuchi at 587-0381 if you have any questions.

Encls.

1993-05-01-MA-PEA-Hana Hwy Storm Drain Repair, Huelo 1993  
TOWARDS NAHIKU MAY - 8 1993

FINAL ENVIRONMENTAL ASSESSMENT

FOR

HANA HIGHWAY STORM DAMAGE REPAIRS

HUELO TOWARDS NAHIKU

PROJECT NO. 360AB-01-92

SUBMITTED PURSUANT TO CHAPTER 343  
HAWAII REVISED STATUTES AND TITLE 11  
DEPARTMENT OF HEALTH ADMINISTRATIVE RULES, CHAPTER 200

April 13, 1992

FINAL ENVIRONMENTAL ASSESSMENT

FOR

HANA HIGHWAY STORM DAMAGE REPAIRS

HUELO TOWARDS NAHIKU

PROJECT NO. 360AB-01-92

PREPARED FOR:

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

PREPARED BY:

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

April 13, 1993

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SECTION 1

GENERAL INFORMATION

A. PROPOSING AGENCY:

Department of Transportation  
Highways Division  
State of Hawaii

B. APPROVING AGENCY:

Department of Land and Natural Resources  
State of Hawaii

C. AGENCIES CONSULTED:

Department of Land and Natural Resources,  
State of Hawaii  
Department of Transportation, State of Hawaii  
U.S. Geological Survey  
Department of Health, State of Hawaii  
County of Maui, Department of Planning  
County of Maui, Department of Water Supply

## SECTION 2

### DESCRIPTION OF THE PROPOSED ACTION

#### A. GENERAL DESCRIPTION

The project is at a section of Hana Highway on the Northeast slope of Haleakala Crater, on the edge of a cliff. Hana Highway, a 2-lane highway with a varying roadway width, is the only developed roadway serving the Hana area of the island of Maui (see figure 1 and 2).

The purpose of the project is to repair the locations that were seriously damaged by storms, and to improve some areas to mitigate frequent road closures due to slides during storms. Repairs will consist of constructing cement rubble masonry walls to prevent undermining of the roadway. Improvements will consist of slope excavation, and installation of horizontal drains to stabilize sideslopes from falling onto the roadway.

Repairs and improvements at the area designated as M.P. 16.13 extend outside of the State Highway Right-of-way, into Conservation Lands. A Conservation District Use Application is being sought for the proposed use at this mile post. Repairs at M.P. 14.39 extend beyond the State Highway Right-of-way and into the Special Management Area and Conservation Lands. However, the repairs at M.P. 14.39 are routine maintenance and are not considered new, different or greater land use as defined by Chapter 183-41, Hawaii Revised Statutes. Repairs and improvements at the other locations are all within the State Highway Right-of-way.

The contract time to complete the repairs and improvements will be 328 working days.

#### B. TECHNICAL CHARACTERISTICS

The following repairs and improvements are proposed at the respective mile posts:

1. M.P. 7.52 - Construct a 60 feet long cement rubble masonry (CRM) wall along the makai (ocean) side shoulder.
2. M.P. 8.15 - Replace 113 feet of existing metal guardrail with metal guardrail on CRM wall (See figure 4). Construct a 3 feet wide, 240 feet long

bituminous gutter along the mauka (mountain) side shoulder.

3. M.P. 9.30 - Construct a 38 feet long CRM wall along the makai side shoulder.
4. M.P. 12.66 - Construct a 70 feet long CRM wall along the makai side shoulder.
5. M.P. 13.14 - Construct a 20 feet long CRM wall along the makai side shoulder to replace an existing damaged wall.
6. M.P. 13.60 - Construct 120 feet of grouted rubble pavement slope protection along the makai side shoulder.
7. M.P. 14.39 - Replace 150 feet of existing metal guardrail with metal guardrail on CRM wall. The repairs are routine maintenance and are not considered new, different or greater land use as defined by Chapter 183-41, Hawaii Revised Statutes.
8. M.P. 16.13 - Construct a 30 feet wide rock catchment area, graded at 2%, on the mauka side of the roadway. The cut slope will be approximately 1 horizontal to 3 vertical, with the extreme top section rounded (See figure 5 and 6). Approximately 75,500 cubic yards of erodible soil and rock will be excavated and removed. Install approximately 61 PVC horizontal drain pipes (each 150 feet long and 2 inch diameter, see figure 7). And construct approximately 895 feet of 4 feet wide bituminous gutter along the foot of the proposed cut slopes with 2 concrete drop inlets (See figure 8). Outflow from the horizontal drain pipes will be collected by the concrete drop inlets and conveyed by a 24-inch reinforced concrete pipe to the existing drain outlets. These repairs and improvements are within the Conservation District, Subzones Limited and Resource (See Figure 9).
9. M.P. 19.08 - Construct a 60 feet long CRM wall along the makai side shoulder to replace an existing damaged wall.
10. M.P. 20.90 - Construct a 30 feet long CRM wall along the makai side shoulder and approximately 256 feet of 2 feet wide bituminous gutter along the mauka side shoulder.

C. ECONOMIC AND SOCIAL CHARACTERISTICS

Hana Highway is the only developed roadway serving the Hana Community. The existing traffic volumes are as follows; average daily traffic is 1959 vehicles per day, a.m. peak hour traffic is 161 vehicles per hour, and p.m. peak hour traffic is 227 vehicles per hour.

There will be no displacement or relocation of residents.

There are two vendors near the project area, one in Keanae and one in Wailua. The businesses will not be displaced or relocated.

The cost of the repairs and improvements is \$3,904,870.

The project is expected to provide temporary employment over a period of approximately 15 months.

D. ENVIRONMENTAL CHARACTERISTICS

Hana Highway is a 2-lane asphaltic concrete highway with a width varying from 14 feet to 21 feet. The highway is primarily on the side of a cliff, and is the only developed roadway serving the Hana Community.

The existing peak hour traffic volumes are 161 vehicles per hour for a.m. peak hour traffic, and 227 vehicles per hour for p.m. peak hour traffic.

The major source of noise and air pollution is vehicular traffic along the highway.

Surface soils in the area are identified as Kailua Silty Clays and rough mountainous lands (U.S. Department of Agriculture, Soil Survey Report).

Species of flora in the project area include; lehua tree, hala tree, kukui tree and fern. Introduced species of birds and mammals are the only known fauna species. There are no known threatened or endangered flora/fauna species in the project area.

SECTION 3

DESCRIPTION OF THE AFFECTED ENVIRONMENT

Existing Use - The project site is located in Keanae which is on the northeast side of Maui, approximately 35 miles from Kahului.



The project limits are along a 1,000 feet section of Hana Highway, beginning approximately 3,300 feet west of the Keanae Arboretum Access Road (See Figure 3b). Several slides have occurred along this section of the highway. In April 1989, two slides deposited silts, sands, cobbles and boulders onto the highway, blocking traffic in both directions for several days. Prior to the 1989 slides, there were six other slides. Visual evidence of all the slides are noted by signs of existing scarps along the cut slopes.

Soils - The U.S. Department of Agriculture's Soil Survey Report identifies the surface soils as Kailua Silty clays (KBID) at the ridge tops and rough mountainous lands (rRT) along the ridge sides.

Hydrology - According to the Department of Land and Natural Resources, Division of Water Resource Management, there are no water resources, surface water bodies, or drainage channels adjacent to or within the project area.

Rainfall - According to the "Rainfall of the Hawaiian Islands," by the State of Hawaii, Hawaii Water Authority, the median annual rainfall in the Keanae area is around 150 inches.

Flora - According to the Department of Land and Natural Resources, Forestry and Wildlife Division, there are no known endangered or threatened flora species in the project area. Species of flora observed around the project area include; lehua tree, hala tree, kukui tree and fern.

Fauna - According to the Department of Land and Natural Resources, Forestry and Wildlife Division, there are no known threatened or endangered fauna species in the project area. However, there are several introduced species of birds and mammals.

Archaeology - According to the Department of Land and Natural Resources, State Historic Preservation Division, there are no known historic, archaeological, or cultural resources in the project area.

Land Use - The majority of land in the Keanae area is zoned agricultural or conservation. There are no areas classified urban. The area mauka of Hana Highway is zoned conservation, and the area on the makai side is within the Special Management Area.

A small portion of the site designated as M.P. 14.39 is within the Special Management Area. A Special Management Area Minor Permit approval was granted by the Department of Planning, County of Maui, on March 31, 1992 (See Exhibit A). The site designated as M.P. 16.13 requires a Conservation District Use Application. The site is within the Limited (L) and Resource (R) subzones of the conservation district.

DEPARTMENT OF PLANNING  
COUNTY OF MAUI  
250 S. High Street  
Wailuku, Maui, Hawaii 96793  
(808) 243-7735

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DEPT. OF TRANSPORTATION  
HIGHWAYS DIVISION  
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APR 3 4 50 PM '92  
DEPT. OF TRANSPORTATION  
HIGHWAYS DIVISION

March 31, 1992

Tetsuo Harano, Chief  
State Department of Transportation  
Highways Division  
869 Punchbowl Street  
Honolulu, HI 96813

Dear Mr. Harano:

Re: Special Management Area (SMA) Minor permit -- for construction of a CRM retaining wall with metal guardrail along approximately 148 feet of the Hana Highway, approximately 3,000 feet northeast of Honomanu Bridge at TMK: 1-1-1:01 (92/SM2-076).

In response to your application, received on March 25, 1992, for a determination in accordance with the Special Management Area Rules and Regulations, Section 2-9.5 of the County of Maui, a determination has been made relative to the above project that:

1. Said project is a development;
2. Said project has a valuation not in excess of \$125,000.00;
3. Said project has no significant adverse environmental or ecological effect, taking into account potential cumulative effects; and
4. Said project is consistent with the objectives, policies, and Special Management Area guidelines set forth in the Hawaii Revised Statutes 205-A and is consistent with the County General Plan and Zoning.

In consideration of the above determination, you are hereby granted a Special Management Area Minor Permit approval, subject to the following conditions:

1. That construction shall be in accordance with plans submitted March 12, 1992.
2. That a building permit shall be obtained prior to the initiation of construction.
3. That appropriate measures shall be taken to mitigate the short-term impact of the project relative to soil erosion from wind and rain; and ambient noise levels.

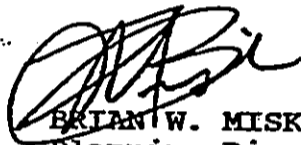
EXHIBIT A

Mr. T. Harano  
March 31, 1992  
Page 2

5. That Erosion Control measures described in Section 639- Temporary Project Water Pollution Control (Soil Erosion), included with application, shall be implemented for the subject project.
6. That construction shall be initiated within a period of six (6) months from the date of the granting of this permit.
7. That construction of the project shall be complete within one (1) year after the date of its initiation.
8. That full compliance with all other applicable governmental requirements shall be rendered.

Thank you for your cooperation. If additional clarification is required, please contact this office.

Very truly yours,



BRIAN W. MISKAE  
Planning Director

BWM/EA/sc  
encl.

cc: LUCA/CZM (5)  
E. Anderson

EXHIBIT A

#### SECTION 4

##### SUMMARY OF POTENTIAL IMPACTS AND PROPOSED MITIGATION MEASURES

The existing conditions and feature's which could be affected by the project were identified and an impact assessment was made. The potential impacts are as follows:

Air Quality - Earthwork operations will produce fugitive dust. Dust will be suppressed by frequent water sprinkling. The Contractor will be responsible for keeping adjacent areas free of mud and sediment by exercising water pollution control measures required by our contract.

Construction equipment will emit exhausts. However, such emissions are temporary and should be significantly less than levels generated by daily traffic on Hana Highway.

Noise - There will be a temporary increase in noise from the construction activity during construction. Noise generated by the activity shall comply with noise provisions established by the State Department of Health.

Water Quality - The improvements will have minimal impact on the existing water quality. Storm waters will be collected by two drain inlets and piped to the existing drain outlets. No new drainage runoff areas will be added to the drainage system, and no appreciable increase in runoff volume is anticipated. The primary temporary water pollution control measures that will be implemented during construction, include but are not limited to the construction of berms, sediment basins, slope drains and underdrains; and the useage of mulching, grassing and gravel packing.

Erosion - Excavation will be a major construction activity at some of the project sites. Short-term erosion during the construction activity will be minimized by temporary erosion control features. These measures include but are not limited to the following: constructing slope drains and underdrains, mulching, grassing, or other control devices or methods necessary to control erosion. Grassing of the denuded areas will be implemented on a cost-effective basis (e.g. areas where slopes are steep and rocky will not be grassed since it is difficult to establish growth in such areas). Erosion over the long term will be limited. Hydromulch seeding will be applied over excavated areas where feasible to control erosion.

Traffic - Vehicular traffic will be temporarily inconvenienced during construction. The Contractor will be required to minimize any impact on traffic. Lane and/or road closure will be permitted in accordance with the contract specifications. Lane closure will be allowed anytime during the construction period. Road closure will be allowed only during the following hours:

10:00 a.m. to 11:30 a.m.  
12:30 p.m. to 2:00 p.m.  
2:30 p.m. to 4:00 p.m.  
5:00 p.m. to 6:30 p.m.  
7:00 p.m. to 8:30 p.m.

Economic - Temporary road closure will not substantially affect the businesses near this project. However, the road work is needed to do necessary repairs and minimize prolonged road closures due to slides which would have untimely and greater economic impacts on the businesses. The economic affects will be temporary, and will be minimized by limiting the road closure to four hours of a normal work day.

Archaeology - The project area does not contain any known archaeological sites. Should any archaeological features be encountered, work in the immediate area will cease immediately and proper historic authorities will be notified.

SECTION 5

ALTERNATIVE TO THE PROPOSED ACTION

No Action - A no action alternative would maintain the status quo of the conditions at the project site.

Further slides and retaining wall failures will continue to render unexpected road closures resulting in social and economic hardship to the Hana Community. No action could also lead to serious consequences to motorists if the slides and falling rocks were to be untimely.

SECTION 6

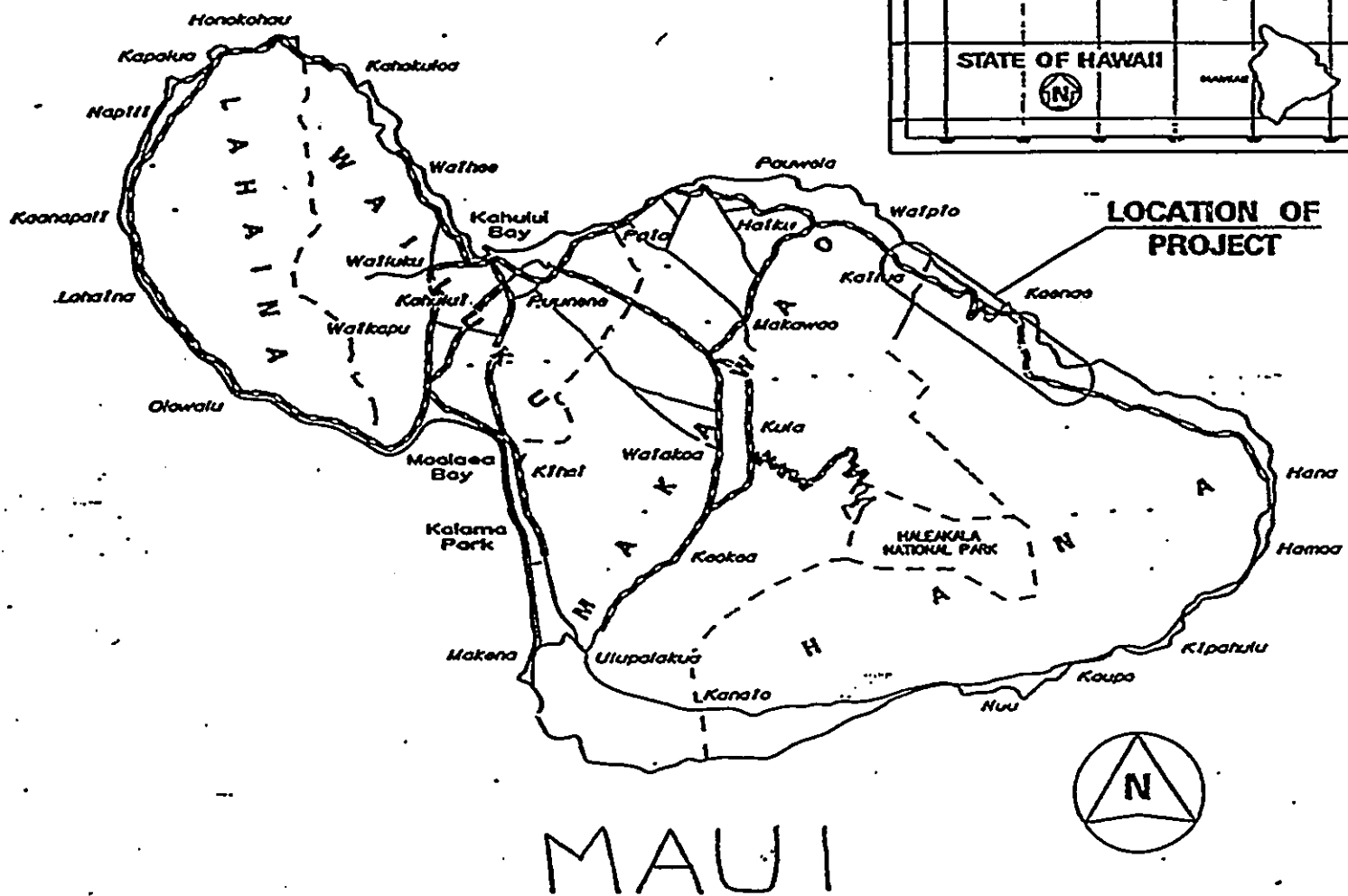
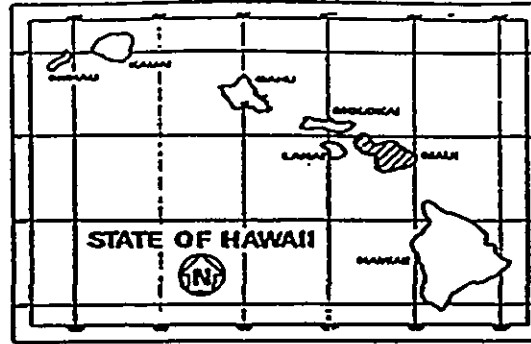
DETERMINATION, FINDINGS,  
AND REASONS SUPPORTING DETERMINATION

Determination - The project is required to prevent the roadway from damage and to stabilize the roadway sideslopes.

The project is not expected to result in significant environmental impacts. Therefore, an environmental impact statement is not required, and a negative declaration will be filed.

Findings and Reasons Supporting Determination - The following findings and reasons supporting the determination were developed using the criteria of Title 11, Chapter 200, Environmental Impact Statement Rules. The proposed project will not:

1. Involve an irrevocable commitment to loss or destruction of any natural or cultural resource;
2. Curtail the range of beneficial uses of the environment;
3. Conflict with the State's long-term goals or guidelines as expressed in Chapter 344, Hawaii Revised Statutes;
4. Substantially affect the economic or social welfare of the community or State;
5. Substantially affect public health;
6. Involve substantial secondary impacts, such as population changes or effects on public facilities;
7. Involve a substantial degradation of environmental quality;
8. Substantially affect a rare, threatened or endangered species of flora or fauna, or its habitat;
9. Detrimentially affect air or water quality or ambient noise levels; or
10. Detrimentially affect an environmentally sensitive area, such as a flood plain, tsunami zone, erosion-prone area, geologically hazardous land, estuary, freshwater area, or coastal waters.

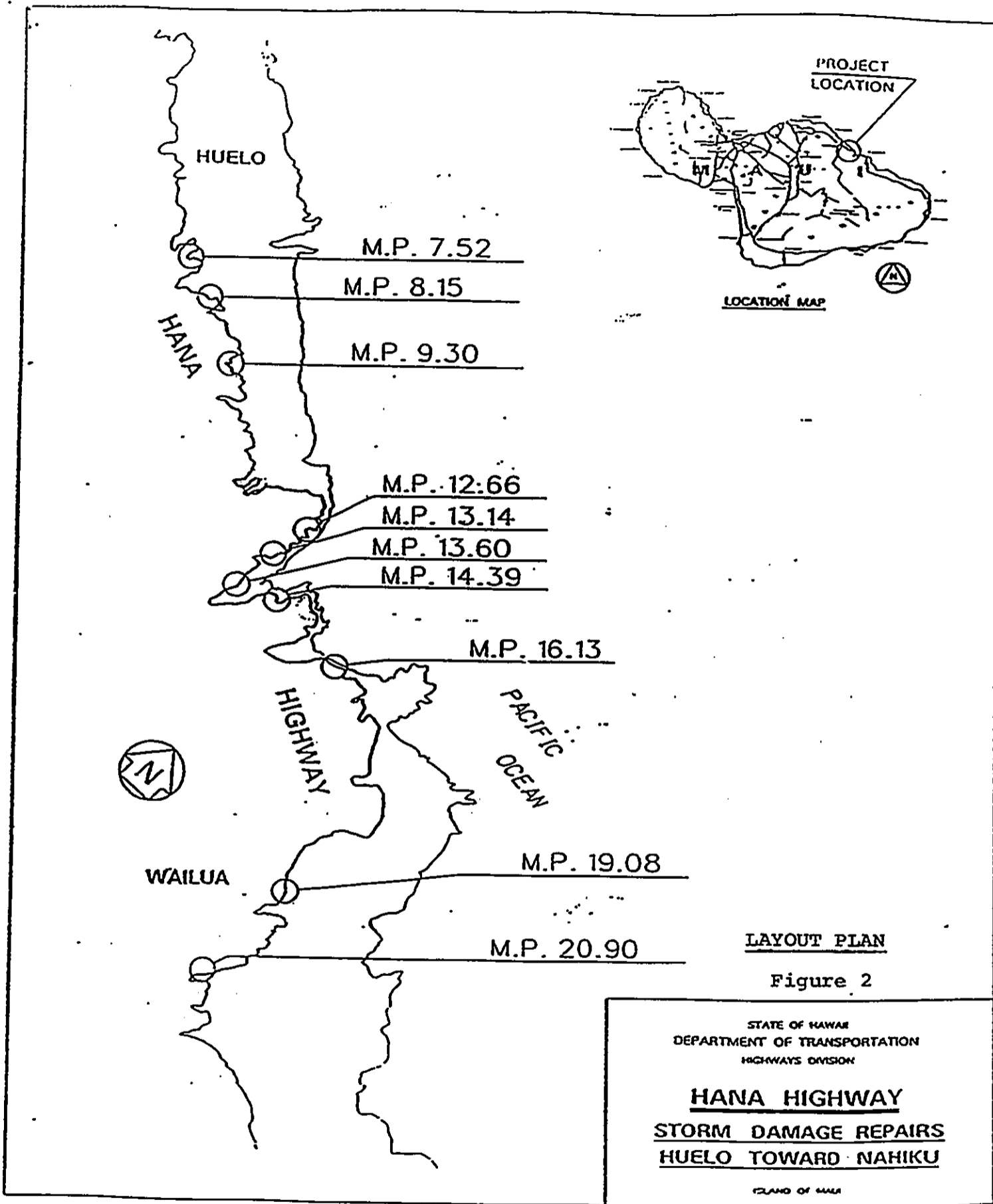


**MAUI**

LOCATION MAP

Figure 1





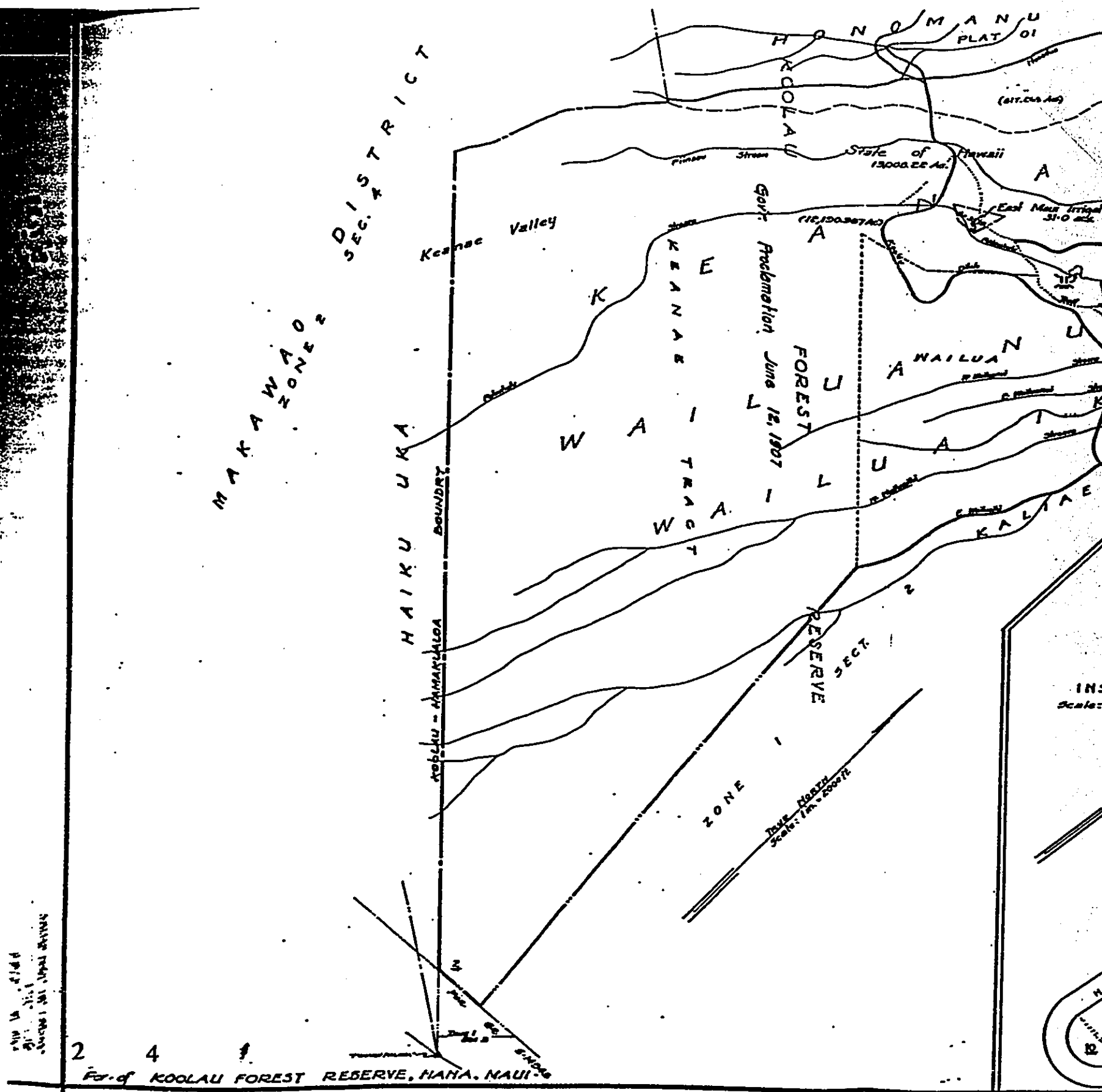
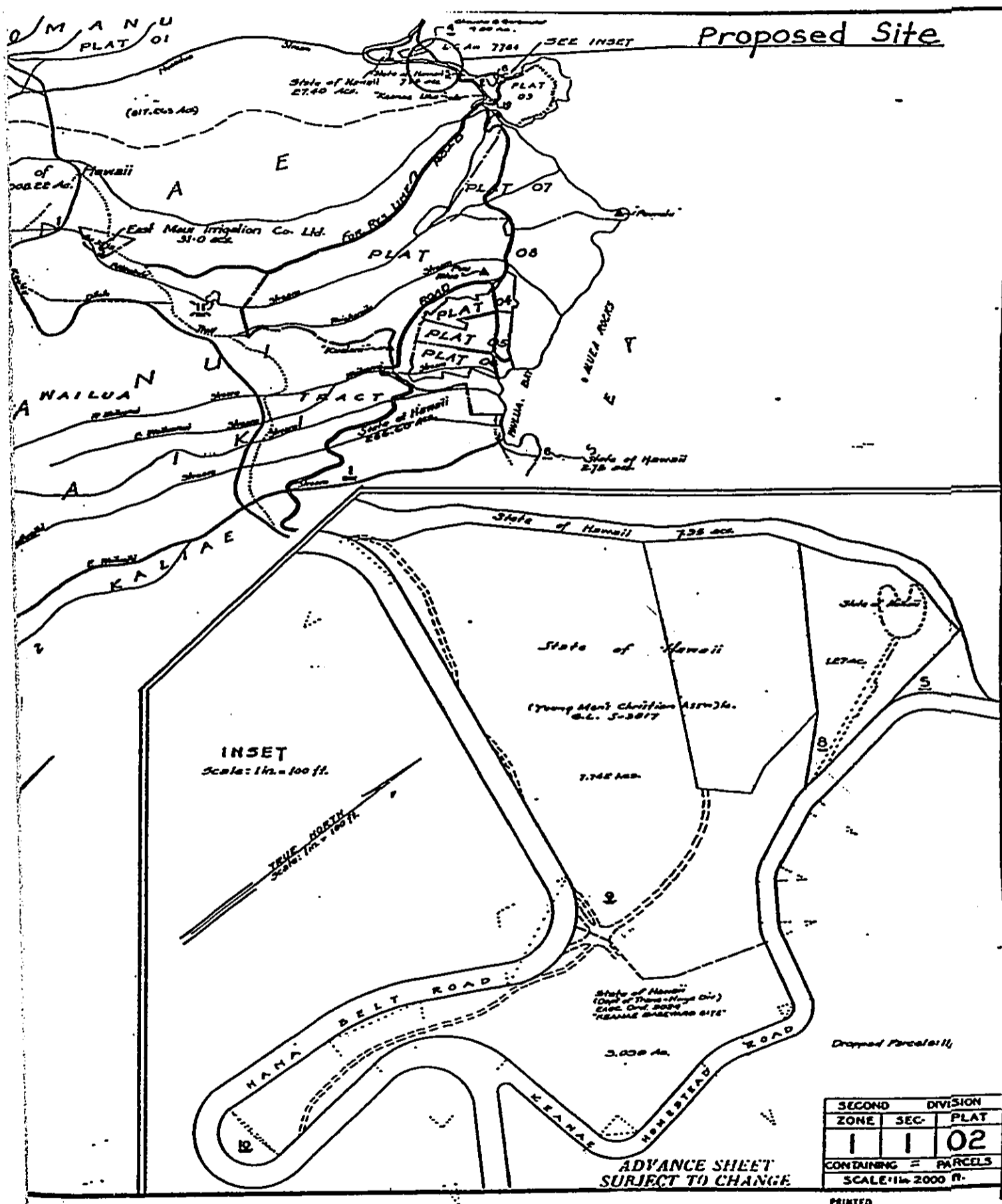


Figure 3a



Proposed Site

SEE INSET

INSET  
Scale: 1 in. = 100 ft.

TRUE NORTH  
Scale: 1 in. = 100 ft.

SECOND DIVISION	
ZONE	SEC. PLAT
1	1 02
CONTAINING 2 PARCELS	
SCALE 1 in. = 2000 ft.	

ADVANCE SHEET  
SUBJECT TO CHANGE

PRINTED

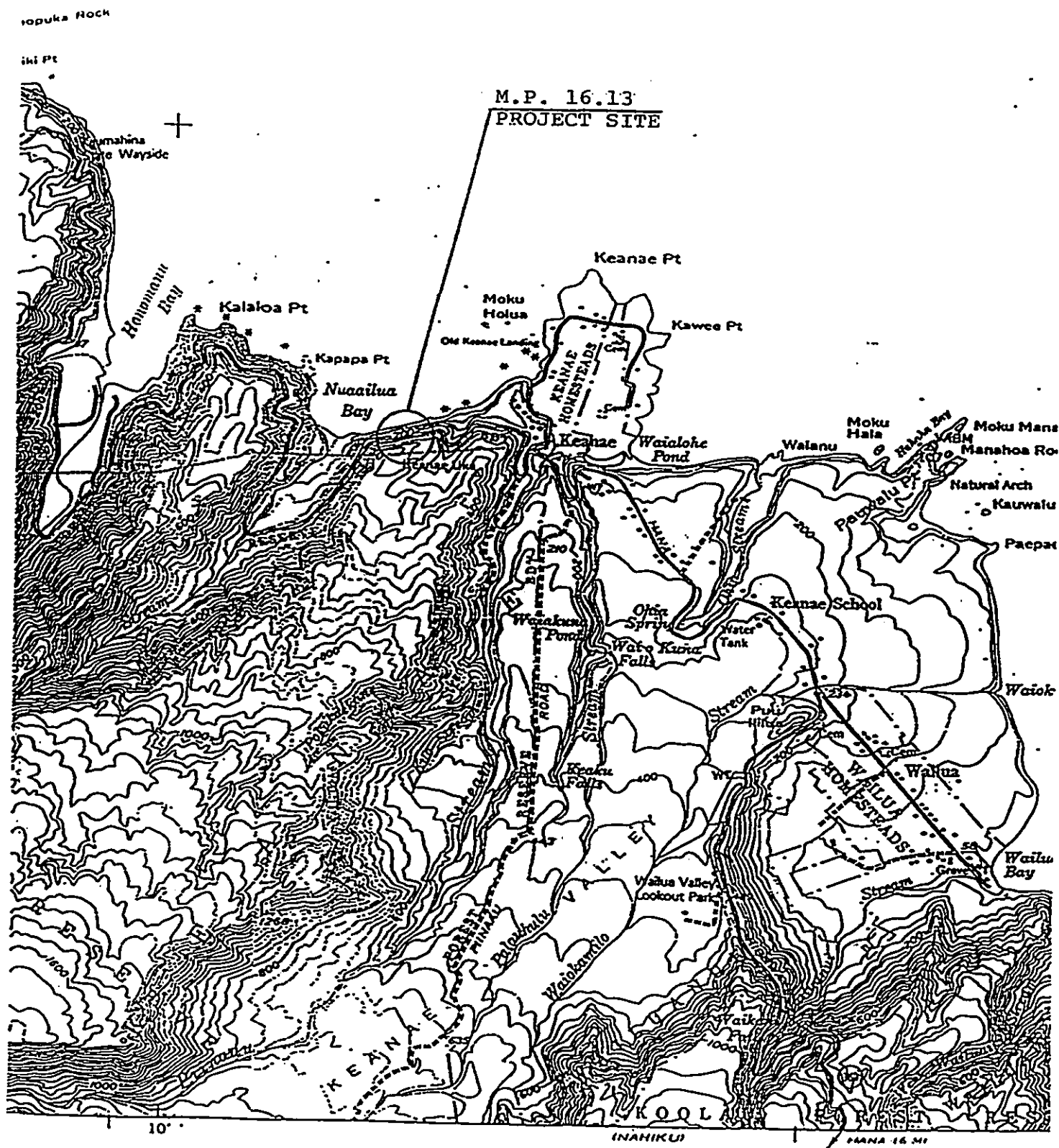
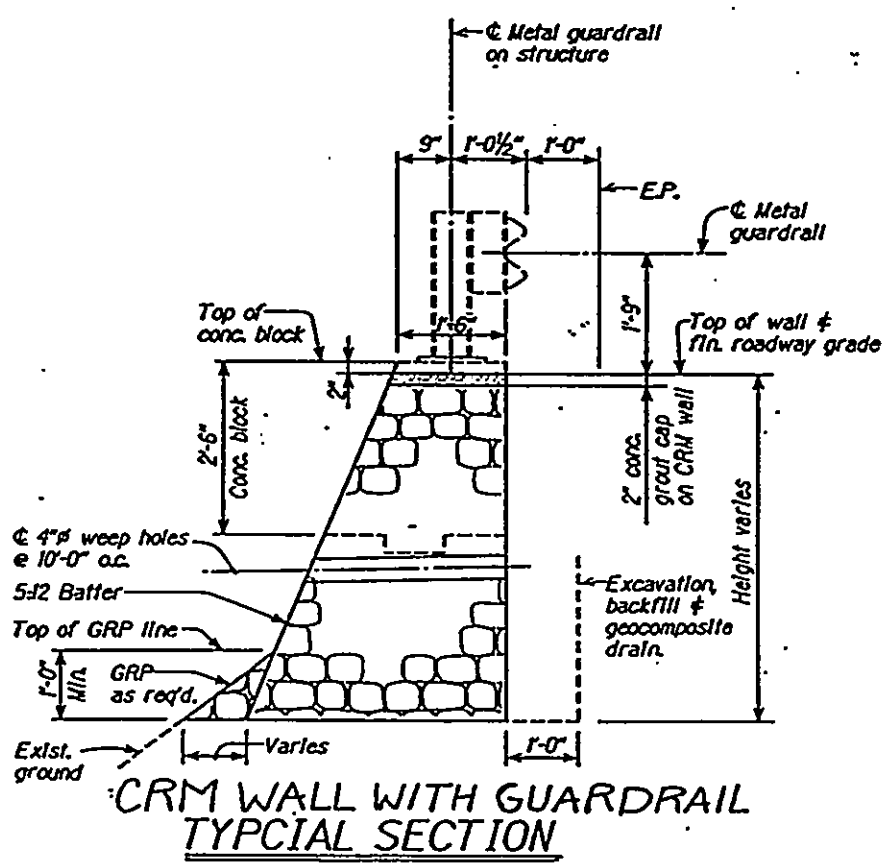
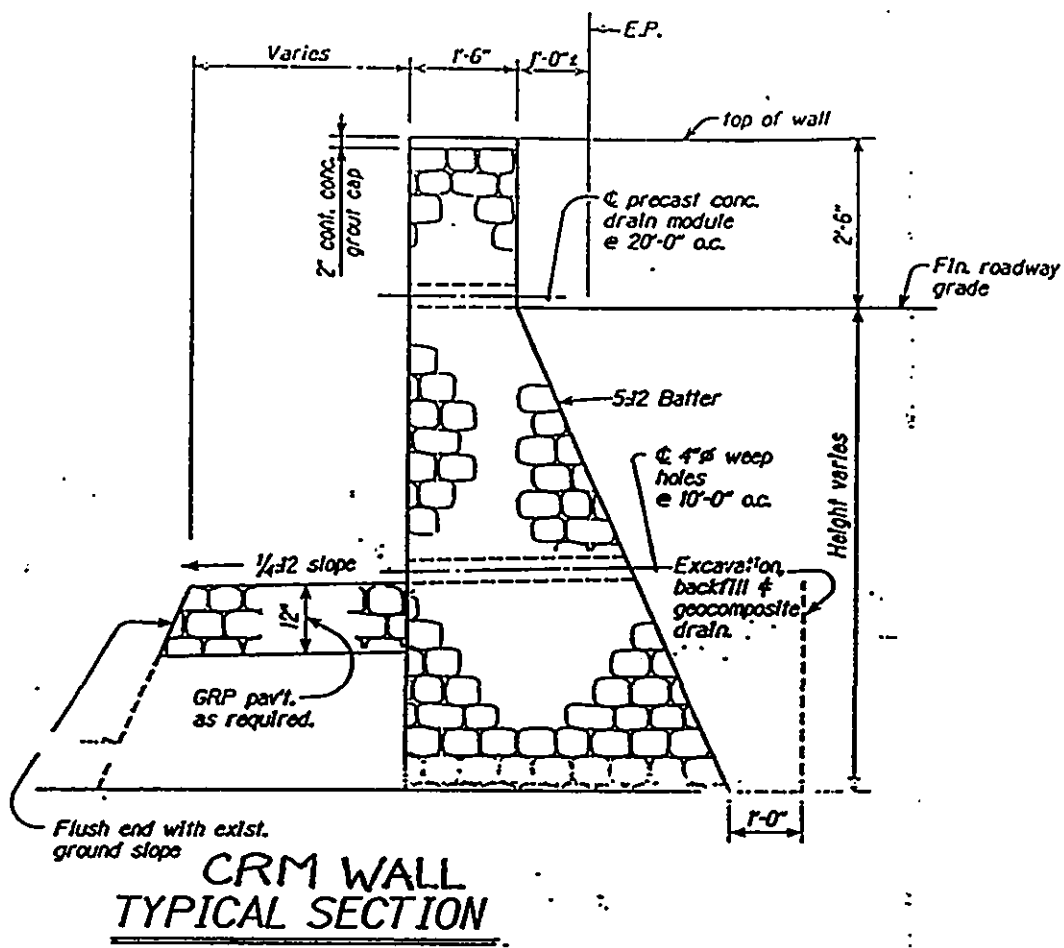


Figure 3b  
-13-



scale: 3/8" = 1'  
 FIGURE 4

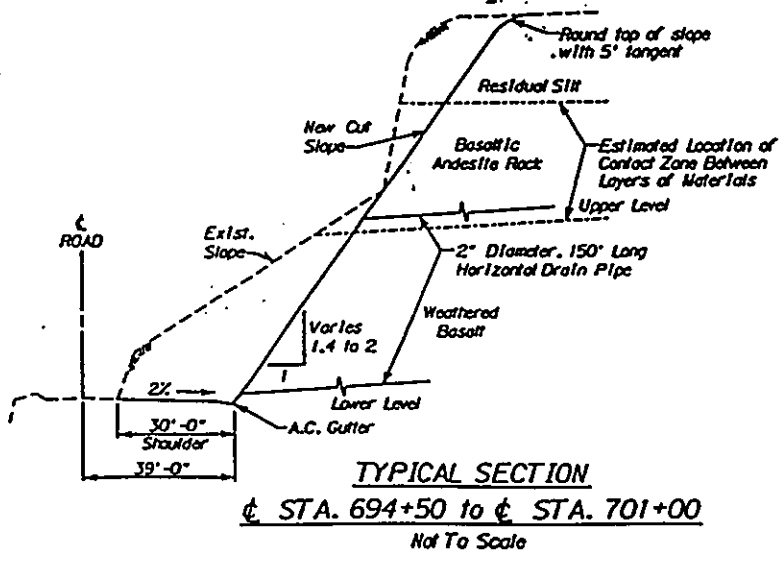
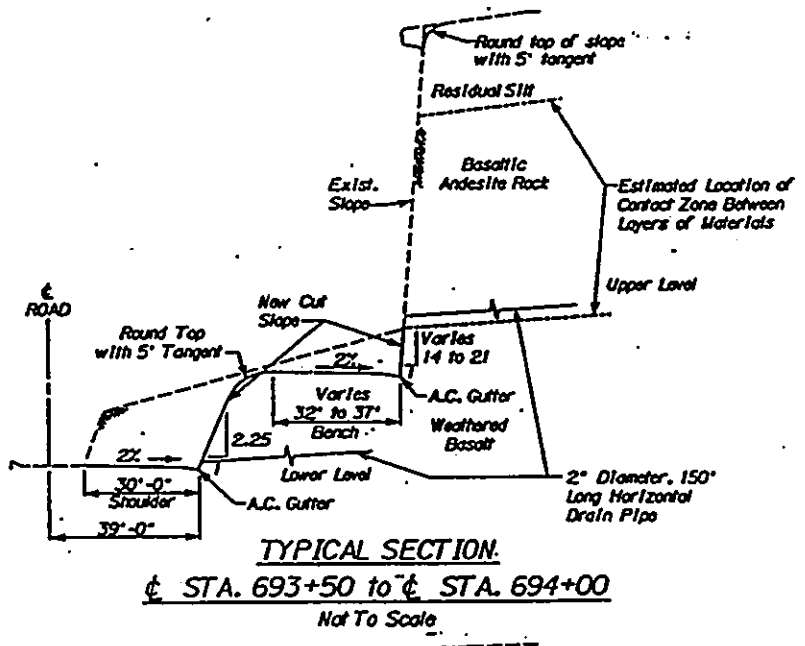
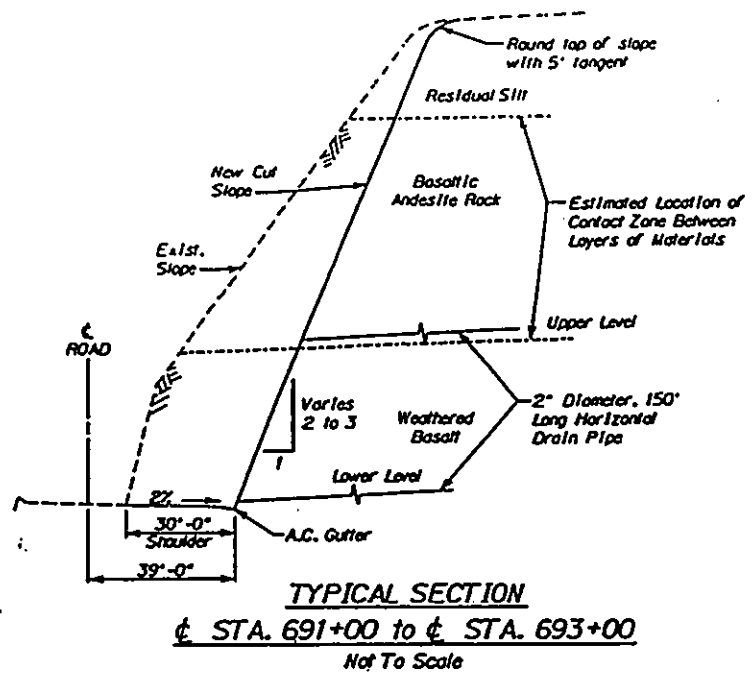
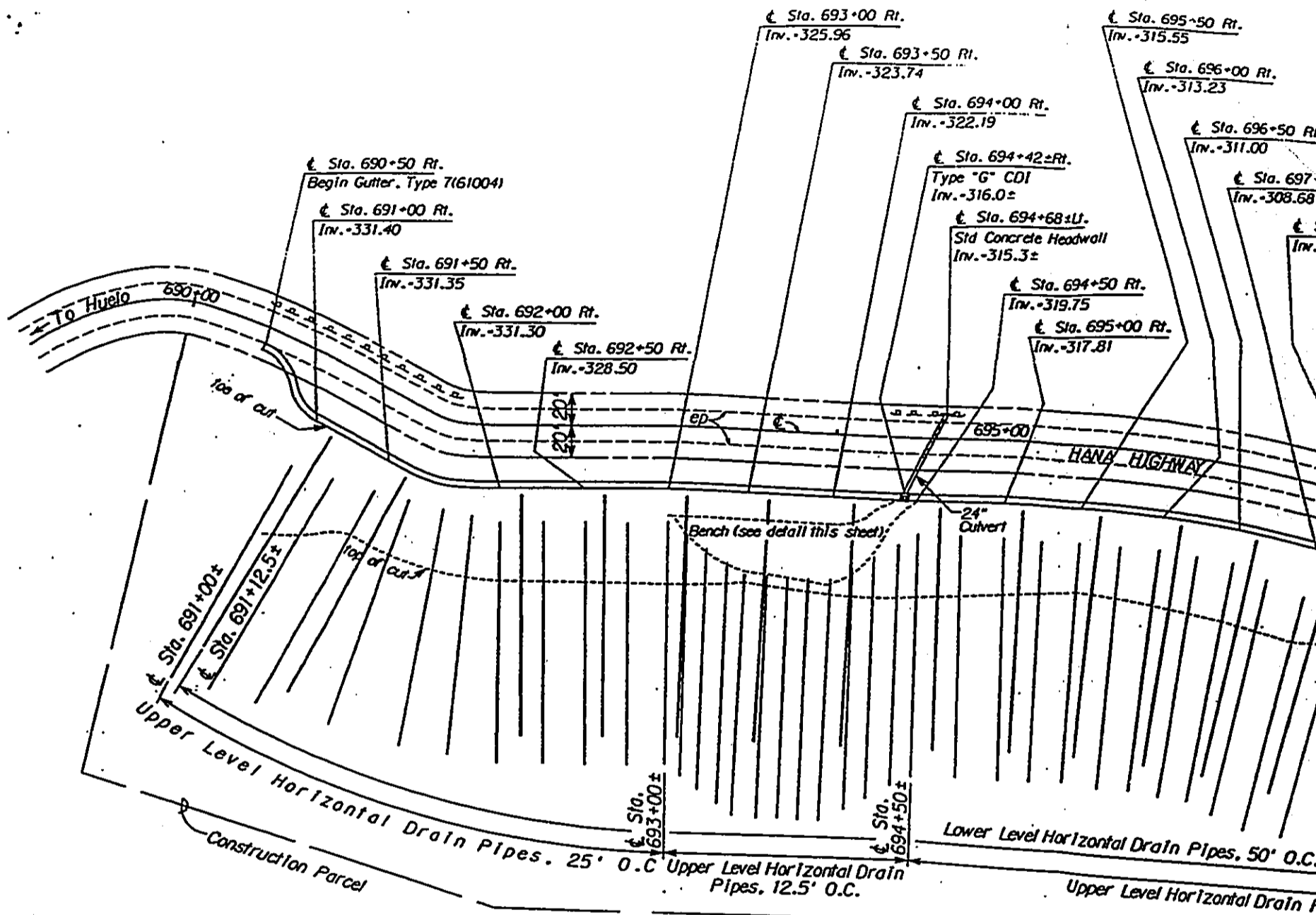


FIGURE 5



± Sta. 691+00± to ± Sta. 693+00±  
 Install Horizontal Drain Pipes (perpendicular  
 at tangents and radial to roadway on  
 curves) at 25' Intervals on centerline  
 roadway. See Detail on Plan Sht. No. 5.

± Sta. 693+00± to ± Sta. 694+50±  
 Install Horizontal Drain Pipes (perpendicular  
 at tangents and radial to roadway on  
 curves) at 12.5' Intervals on centerline  
 roadway. See Detail on Plan Sht. No. 5.

m.p. 16.13

± Sta. 694+00± to ± Sta. 694+50±  
 Construct Maintenance Access Road  
 Bench, 10' Minimum Width.

± Sta. 690+00± Rt. to ± Sta. 700+00± Rt.  
 Install 4" White Edge Stripe (Tape, Type II  
 or Thermoplastic Extrusion).

± Sta. 691+12.5± to ± Sta. 699+12.5±  
 Install Horizontal Drain Pipes (perpendicular  
 at tangents and radial to roadway on  
 curves) at 50' Intervals on centerline  
 roadway. See Detail on Plan Sht. No. 5.

BENCH DETAIL

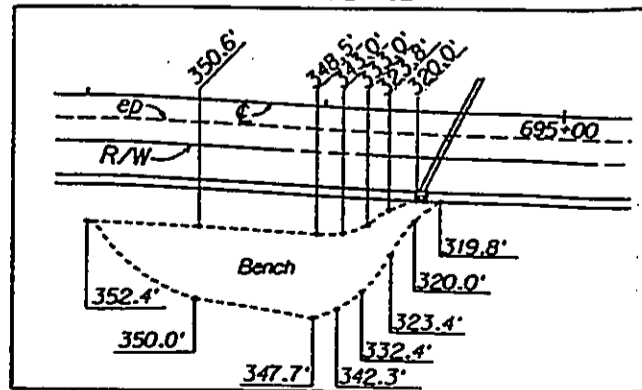
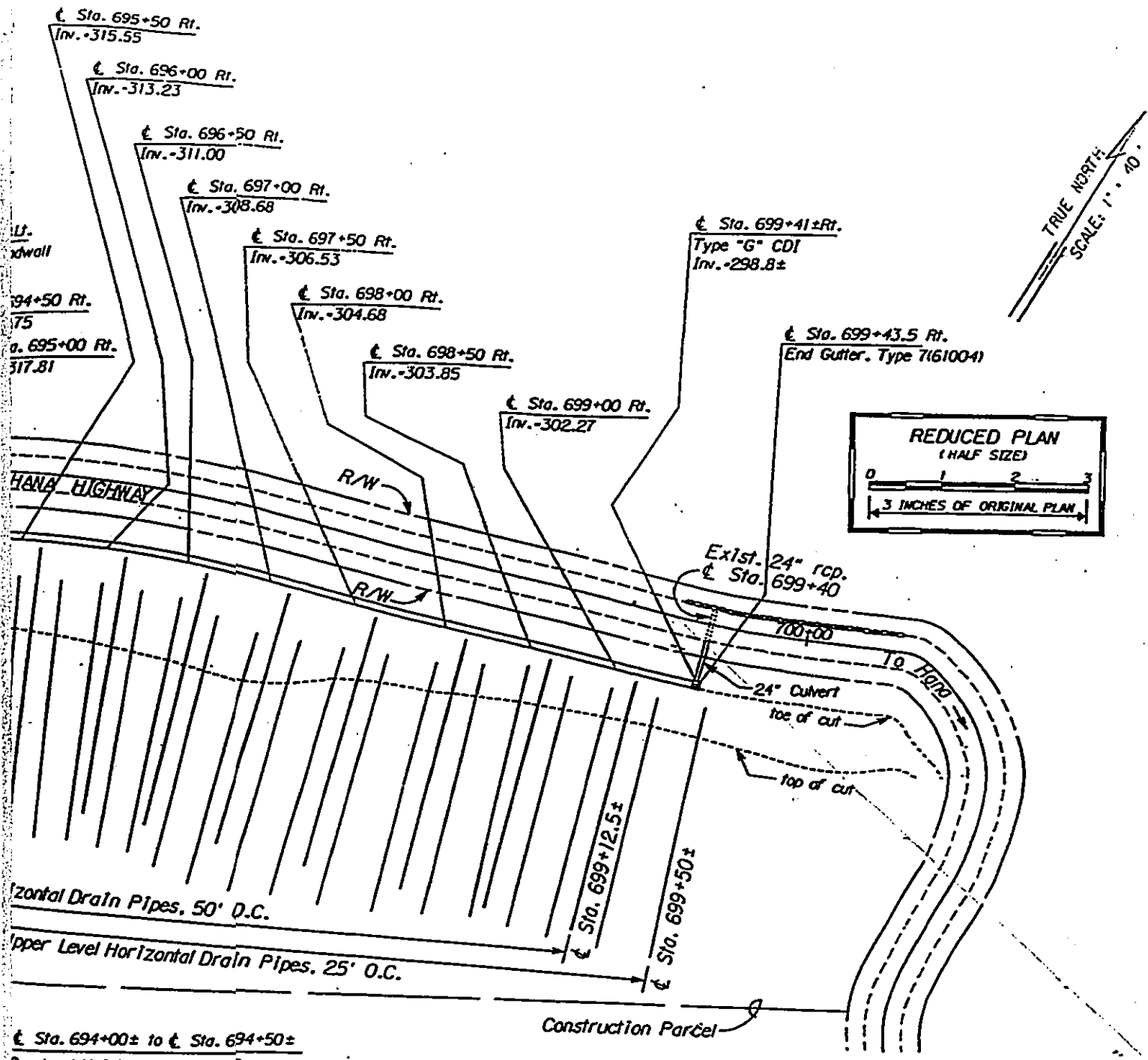


FIGURE 6

LEGB



TRUE NORTH  
SCALE: 1" = 40'

REDUCED PLAN  
(HALF SIZE)  
0 1 2 3  
3 INCHES OF ORIGINAL PLAN

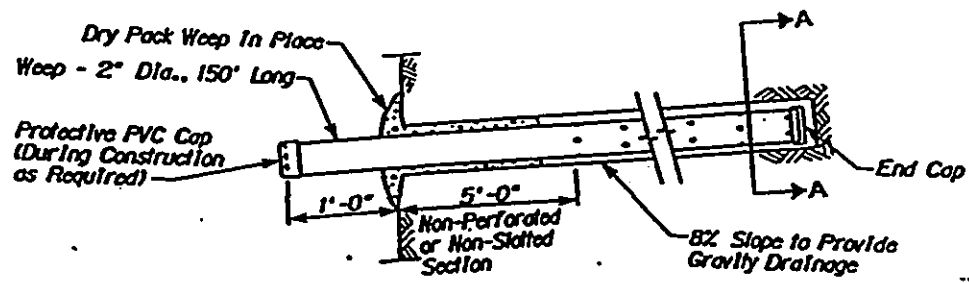
€ Sta. 694+00± to € Sta. 694+50±  
Construct Maintenance Access Road to Bench, 10' Minimum Width.

€ Sta. 694+50± to € Sta. 699+50±  
Install Horizontal Drain Pipes (perpendicular at tangents and radial to € roadway on curves) at 25' Intervals on centerline roadway. See Detail on Plan Sht. No. 5.

LEGEND: ———— 150' Long, 2" Diameter, Horizontal Drain Pipe

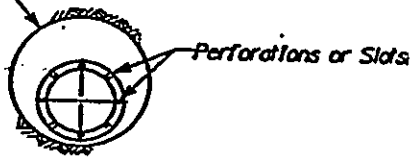
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**PLAN**  
HANA HWY. STORM DAMAGE REPAIRS  
Huelo Towards Nahiku  
PROJ. NO. 360AB-01-92  
Scale: 1" = 40' Date: May, 1992





**HORIZONTAL DRAIN PIPE DETAIL**  
*Not To Scale*

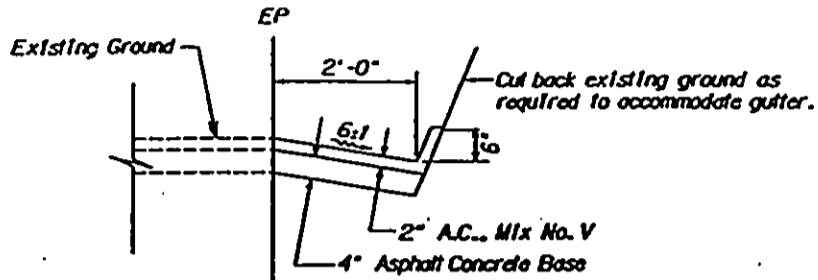
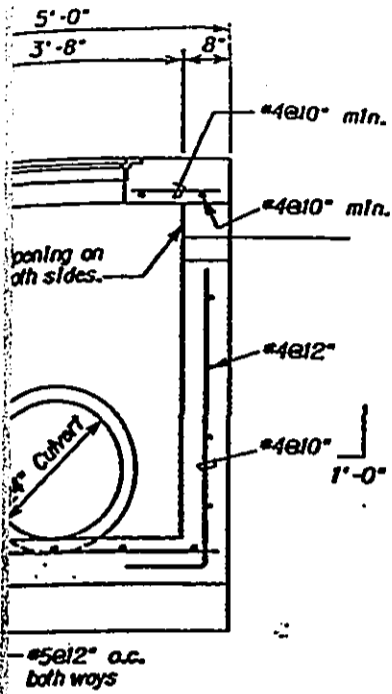
*The Difference Between the Diameter of the Drilled Hole and Weep Shall Not Exceed 2"*



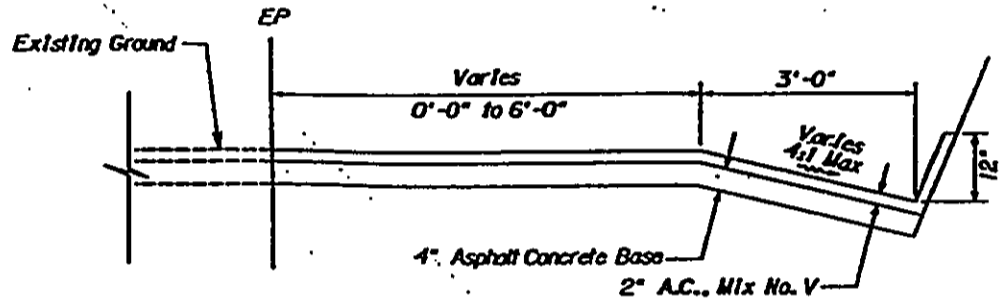
**SECTION A**  
*Not To Scale*

**FIGURE 7**

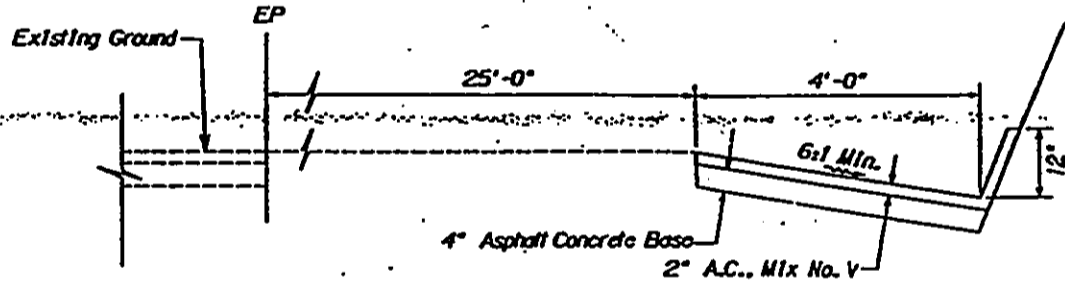




**GUTTER TYPE 7(61002) AT MILE POST 20.9**

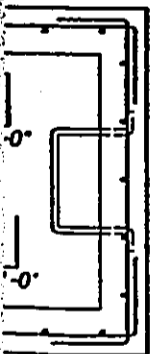


**GUTTER TYPE 7(61003) AT MILE POST 8.15**

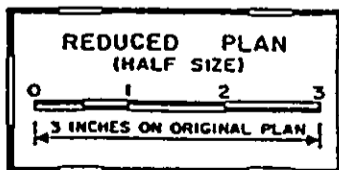


**GUTTER TYPE 7(61004) AT MILE POST 16.13**

**DETAILS OF GUTTERS, TYPE 7**



**REINFORCING**

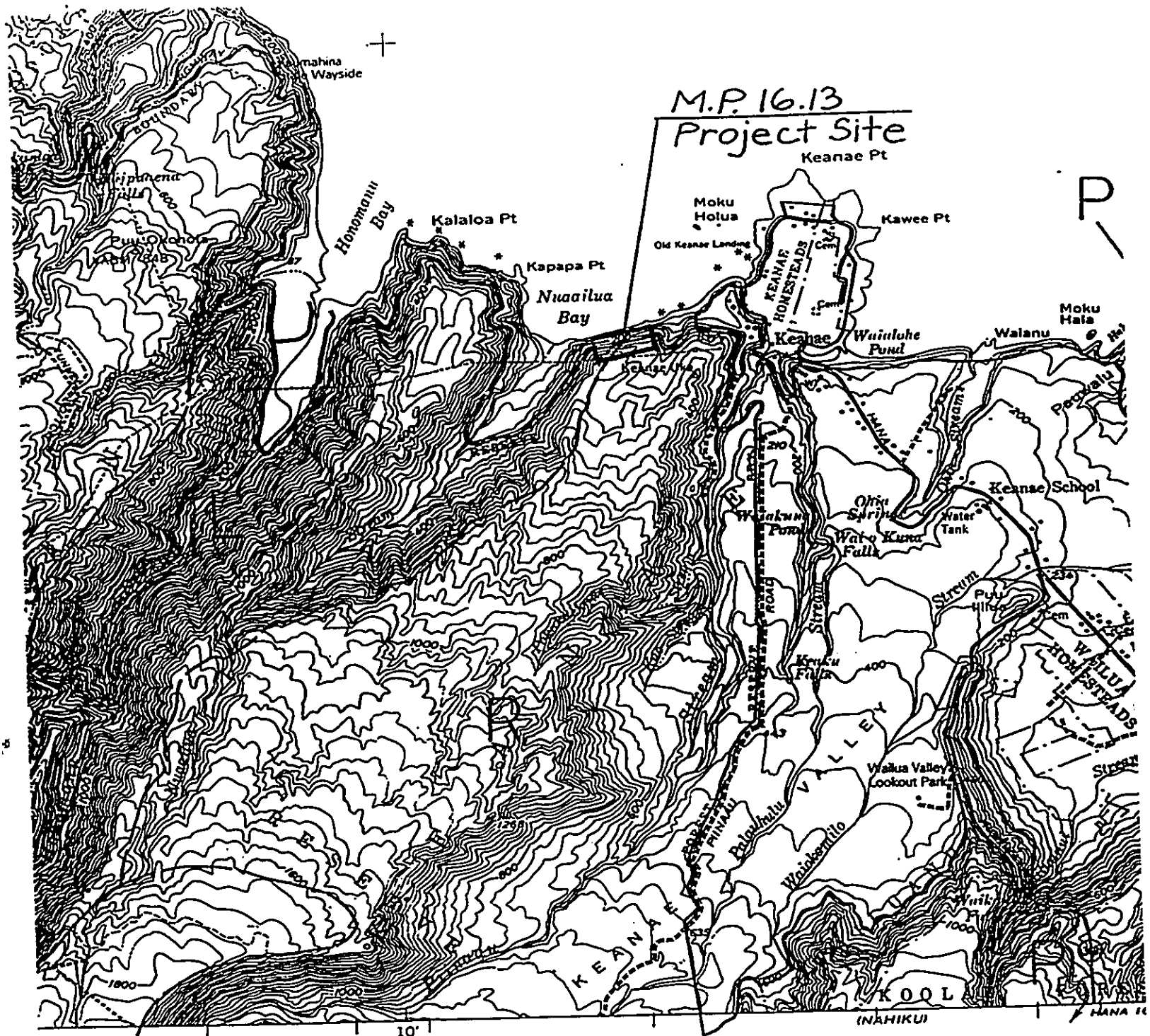


STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**DRAINAGE DETAILS**

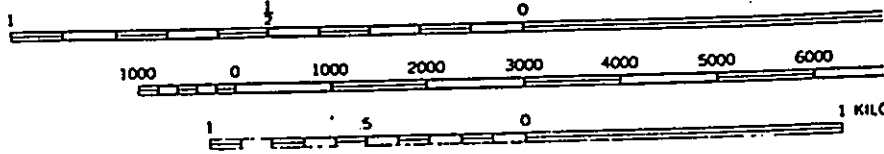
**HANA HWY. STORM DAMAGE REPAIRS**  
*Huulo Towards Nahiku*  
**PROJ. NO. 360AB-01-92**

Scale: 3/4" = 1'-0" Date: May, 1992



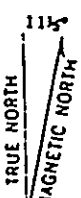
M.P. 16.13  
Project Site

SCALE 1:24000



CONSERVATION DISTRICT SUBZONES

- 1 = PROTECTIVE
- 2 = RESOURCES
- 3 = LIMITED
- 4 = GENERAL

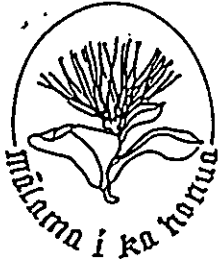


APPROXIMATE MEAN DECLINATION 1983

CONTOUR INTERVAL 40 FEET  
DATUM IS MEAN SEA LEVEL  
SHORTLINE SHOWN REPRESENTS THE APPROXIMATE LINE OF MEAN HIGH WATER  
THE AVERAGE RANGE OF TIDE IS APPROXIMATELY 2 FEET

FIGURE 9

APPENDIX  
COMMENTS TO THE DRAFT ENVIRONMENTAL ASSESSMENT



SIERRA CLUB : MAUI GROUP  
hawai'i CHAPTER  
P.O. BOX 2000 KAHULUI, hawai'i 96732

Jan. 6, 1993

Don Horiuchi  
Department of Land & Natural Resources  
P.O. Box 621  
Honolulu, HI 96809

RE: Hana Highway Storm Damage Repairs

The Sierra Club submits the attached comments regarding the Draft Environmental Assessment for Hana Highway Storm Damage Repairs, Project NO. 360AB-01-92.

We acknowledge that this is a much needed project and hopefully these repairs will eliminate the problem of landslides blocking the highway in this area.

During the preparation of an EA the Department of Health Administrative Rules Title 11, Chapter 200-9 requires consultation with citizen groups and individuals. The Sierra Club was not consulted nor were the Keānae Community Association or the Hana Community Association, two groups who represent the citizens most affected by this project. Early consultation and working with the community could have alleviated many of the concerns the people now have regarding this project.

Public informational meetings that were held in Keānae are a start but the public must be given the opportunity to express their concerns and their knowledge. A person who has spent his entire life in an area, such as Keānae, may have important input into such a project in his area. This is why we have the EIS process.

Thank you,

Marc Hodges

Conservation Committee  
Maui Group, Sierra Club

COMMENTS ON DRAFT ENVIRONMENTAL ASSESSMENT  
HANA HIGHWAY STORM DAMAGE REPAIRS, HUELO TOWARDS NAHIKU  
BY  
SIERRA CLUB, MAUI GROUP

Although the Draft Environmental Assessment (DEA) addresses work being done in various locations, our comments concern the work at the area designated as M.P. 16.13, located between Nua'ailua and the Ke'anae YMCA Camp.

#### INTRODUCTION

Although the DEA is dated August 1, 1992, it was not filed with OEQC until December 8, 1992. Work began in September, 1992, before the DEA was even filed or a determination made as to whether an Environmental Impact Statement (EIS) would be required. The Department of Transportation (DOT) contends that the work consists of "emergency repairs" and that therefore it was proper to proceed before that determination was made. However, the landslide which created the damage being repaired occurred on April 5, 1989, three and one-half years before repairs began. In addition, the work does not consist simply of repairs. As the DEA notes on page 3, DOT has decided to widen the road area by thirty feet to create a rock catchment area. To do so it is literally moving a mountain, excavating approximately 93,000 cubic yards of erodible soil and rock, according to the contractor (not 75,500 cu. yd., as stated in the DEA). This is a volume of material greater than the size of the nine-story Maui County Building.

The area is within the Conservation District, Subzones Limited and Resource. The DEA states that a Conservation District Use Application (CDUA) "is being sought for the proposed use." By law, a final EIS should have been accepted and a CDU Permit issued before work commenced. This after-the-fact DEA makes a mockery of the EIS and CDUA statutes and rules.

In addition, because of the use of dirt berms on the makai side of the highway, the dumping into the ocean and severe impact (discussed below) that the work is having on the shoreline and nearshore waters, a Special Management Area (SMA) Permit should have been obtained from the County of Maui before work began.

#### ECONOMIC AND SOCIAL CHARACTERISTICS

Ke'anae-Waihami is one of the last remaining traditional Hawaiian taro-growing and fishing communities. The Ke'anae community has a population of approximately 250, at least 90% of whom are Hawaiian. These coastal waters are among the most pristine in Hawai'i. Fishing and gathering of 'opihī, 'opae, hihīwai and limu are important activities, both for subsistence and for income. The shoreline area directly below M.P. 16.13 is one of Ke'anae's most important 'opihī grounds and the principal akule fishing ground. During the last three months of work on this project, the 'opihī grounds have been completely covered by dirt and soil from the project. These fishing grounds have been continually polluted with mud and it is impossible to spot akule--if indeed any are present. We do not know if the area will ever recover.

#### ENVIRONMENTAL CHARACTERISTICS

Sec. 11-200-10(4) of the EIS Rules requires "General description of the action's technical, economic, social and environmental characteristics." The DEA omitted the critical environmental description. This is separate from the requirements of (5) "Summary description of the affected environment..." and (6) "Identification and summary of major impacts and alternatives considered."

## DESCRIPTION OF THE AFFECTED ENVIRONMENT

Hydrology - Although the DEA states that "there are no water resources, surface water bodies, or drainage channels adjacent to or within the project area," there has been water flowing onto the highway from the area for years, and the contractor has bulldozed other springs, causing additional runoff and erosion.

Rainfall - The DEA states that the rainfall is "between 80 and 100 inches per year and is fairly evenly distributed except for occasional storms." In fact, the Atlas of Hawaii shows Ke'anāe to average 150 inches a year, and there is usually substantially more rain during the winter months, exactly the time when this project is being done. For the past seven years our rainfall has ranged between 115 and 186 inches per year. A year in which only 80 inches falls in Ke'anāe is considered a drought.

Flora/Fauna/Archaeology - In these three areas, there should have at least been a walk-through by appropriate experts to insure that valuable resources were not being destroyed. It is well-known that the windward side of Maui is one of the least explored areas of Hawai'i in terms of archaeology.

In addition, since the project area borders on the shoreline, the effect on the flora and fauna of the ocean should have been considered. Native species such as 'opae, hihiwai and 'o'opu must spend an early part of their life cycle in the ocean. They cannot survive in waters which are continually polluted with mud. 'Opihi also cannot survive in polluted water. Fish and limu populations are also affected. This should have been discussed.

Land Use - The use of the shoreline area below the project area for fishing and gathering should have been discussed (see above).

## SUMMARY OF POTENTIAL IMPACTS AND PROPOSED MITIGATION MEASURES

Water Quality - The DEA states: "The improvements will have a minimal impact on the existing water quality." This is a project which may last as long as a year. It has been ongoing for over three months. We have seen a continual fouling of our shoreline and nearshore waters by rocks and boulders. At times the ocean has been a chocolate brown color for days on end, extended out thousands of feet into the ocean and at times covering Honomānu Bay. The pollution has been far in excess, and of much longer duration, than that caused by any natural landslide. The DEA states that "Temporary Water Pollution (sic) Control Measures will be implemented during construction." Guidelines for Preparing Environmental Assessments published by OEQC specifically states: "It is not sufficient to write one sentence stating that appropriate mitigation measures shall be instituted wherever necessary. The potential problems must be identified and appropriate mitigation described in general terms."

According to the Project Manager Dick Walker, one way in which rock and dirt are entering the ocean is through blasting. He has stated that up to 10% of blasted material may enter the ocean. It would be possible to limit or completely eliminate this source of pollution by netting or matting the blasts, but apparently the state has not required this mitigation method. We would like to know why.

Another source of pollution is deliberate dumping. We were told by DOT before the job began that no deliberate dumping of dirt and rocks into the ocean would be allowed. According to DOT, the only time deliberate dumping was allowed by them was on November 13 and 19 when there were landslides which would have closed the road for several days if they were not dumped. However, according to Walker, the present schedule, whereby the road is closed for only one and a half hours at a time, places severe constraints on the amount of work that can be accomplished. Every time they have to open the road they have to clear it off. If they are unable to clear the road in time to reopen on schedule by trucking out the material, then they dump over the side. This is particularly true if a landslide occurs. According to statements made at a meeting on November 24 and reported in The Maui News the next day, small landslides occur "almost daily." Huge boulders have come to rest part way down the ocean cliff. Who knows when in the future they may break loose and land on someone below?



A DOT inspection on November 5 found "a large ring of light brown cloud in the ocean. We assumed this condition occurs when the tide is high and the waves are large." Why was this assumption made? There are no facts to back it up. And even if true, high tides occur twice a day and large waves are a fact of life on the windward side. The same report stated that the contractor claimed that "Most of the material which fell over the cliff occurred during the initial grading work and during the construction of the berm." This is hard to believe since these events occurred more than a month earlier.

We have been told by a worker on the job that deliberate dumping has occurred routinely. However, he is unwilling to state this publicly for fear of losing his job.

DOT claims to have an inspector on the job daily. However, work does not begin until 10 a.m. and he leaves by mid-afternoon. Work continues until 8:30 or 10 p.m. with no inspector present. Obviously, any intentional dumping is being done during the hours when the inspector is not present. We have been told that on other jobs, such as the Kahului Airport roadwork, no work is allowed to proceed without the presence of an inspector. We do not understand why on a job such as this, which is far more dangerous and in a far more environmentally sensitive area, most work is allowed to proceed without the presence of an inspector.

Polluted waters increase the danger to surfers and swimmers from shark attacks. Honomanu Bay is a popular fishing and surfing spot and Ke'anāe Landing is our primary swimming area.

Additional sources of water pollution will be discussed below.

Erosion - With the excavation and moving of 93,000 cubic yards of rock and dirt, erosion and the resulting water pollution is of course our major environmental concern.

The project area has an other-worldly feel to it. The slope above the road, dozens of feet high, has been completely denuded for hundreds of feet. Below the road, the 200 feet of cliff face between the road and the ocean has been almost completely denuded by material going over the edge. We have seen a rapid increase in scouring of the makai cliff face as the project progresses.

The destabilization of the cliff by bulldozing and blasting has increased the possibility of landslides while the work progresses, thus adding to our risk of injury when travelling the road for a year. Many of us travel outside to work and must pass the area twice daily. Of course the workers are at even greater risk.

One source of erosion and resulting pollution are the more than 1,000 linear feet of dirt berms along the makai side of the road which the contractor claims are for the purpose of preventing material from going into the ocean. However, in a high rainfall area such as Ke'anāe—where we had 37 inches of rain during the last three months of 1992—the berms actually increase the runoff as they gradually erode into the ocean. This is the worst possible choice of materials to do the job. DOT claims dirt berms are necessary in case a landslide needs to be pushed over the side. But even if the dubious wisdom of this questionable practice is accepted, it should be enough to have one area that could be pushed. One thousand linear feet is clearly excessive. Large boulders, cement barriers or even large sandbags would make far more sense as barriers.

In addition, there have always been at least one, and usually four, deliberate cuts left in the berms for runoff from the upper slope, the mauka side of the berms and the washing down of the road that occurs every time it is reopened (now five times a day) to enter the ocean. When it rains, or the road is washed down, there is a brown river going into the ocean. DOT has instructed the contractor to fill in these cuts, which are not permitted, and yet the cuts still persist.

The DEA again does not specify the mitigation measures, but instead refers to the contract. The contractor is supposed to maintain gravel packing, grated inlets and perforated pipes to control silt materials from entering the ocean. The state did not perform a full inspection of these facilities until the end of December, despite the fact that a state inspector is present daily. The inspector found that there was heavy mud on the system and instructed the contractor to improve their maintenance of these structures.

Contract item 639.04 states: "Any area remaining bared 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...In no case shall exposed surface be greater than 15 feet in height...Construction of berms...in or near the vicinity of ...any body of water shall be of approved materials..."

Many areas have been bared for over 15 days, exposed surfaces are greatly in excess of 15 feet and there is no evidence of hydromulching or other mitigative action. In fact, according to DOT the contractor is only now even obtaining price quotations to install such measures.

Please include in the EA copies of all inspection reports made by DOT and/or DLNR and/or other inspectors concerning this project.

Traffic and Economics - The DEA incorrectly states that the road will be closed only between the hours of 10 a.m. to 2 p.m., a total of four hours daily. In fact, the road is currently being closed for five periods of one and one half hours each, or a total of seven and one half hours daily, almost twice as long.

The question of road closures has caused a lot of controversy, all of which could have been avoided if the required EIS process had been followed, in which case the community would have been consulted before the contract was signed. When DOT informed us that the road would be closed from 10-2 five days a week, the affected businesses cried out in alarm. Those hours are the peak traffic hours for tourists, on whom the two Ke'anae roadside stands and several other businesses in Nahiku and Hana depend for income. Because of this outcry, the closure schedule was changed to provide for not more than one and one half hours of closure at a time. This has mitigated, although not eliminated, the effect on the businesses but has admittedly made the job more difficult for the contractor.

An adequate EA or EIS would have included an analysis of the economic impact of the road closures. The dollar impact on the affected businesses could have been assessed, and a plan for compensation could have been included in the total cost of the job. Compared to the total cost of the project of four million dollars, this cost would have been miniscule. We believe that it would have been small compared to the extra costs currently necessitated by the short closure times and night work. The businesses should not be expected to absorb the total negative economic impact of a public works project. If adequate planning had occurred, this source of controversy could have been eliminated, the road could have been closed for longer periods and the work could be completed sooner.

We also had no idea that the trade-off for shorter closure periods would be increased dumping in the ocean, which is what the contractor implies.

#### ALTERNATIVE TO THE PROPOSED ACTION

The cursory discussion in this section is not helpful in deciding whether in fact the decision to provide a thirty foot wide rock catchment area by tearing down 93,000 cubic yards of dirt and rocks in an environmentally sensitive shoreline area is a wise one. More information and more discussion, such as would have been provided in the required EIS process, would help in making this decision.

If the decision to go forward were made after this process, more stringent safeguards could have been put in place to truly mitigate the environmental impacts.

#### DETERMINATION, FINDINGS, AND REASONS SUPPORTING DETERMINATION

Since there have already been significant environmental impacts from the project, and only a small portion of it is complete, it is not possible to support the finding that "a negative declaration is anticipated."

Already the project has involved an irrevocable commitment to loss or destruction of natural and cultural resources and curtailed the range of beneficial uses of the environment. Entry into the shoreline area below the

project area is not allowed, so that fishing and gathering are not possible. There has been so much dirt and rocks dumped into the ocean that we do not know when, if ever, the 'opihi and akule grounds will be restored. This pollution also substantially affects the economic and social welfare of the community, as well as its public health, and involves a substantial degradation of environmental quality. The lives and habitats of several rare and possibly threatened or endangered species has been substantially affected, and both water quality and coastal waters have been detrimentally affected. All of these factors place the project in conflict with the State's long-term goals or guidelines as expressed in Ch. 344 HRS.

An EIS should be prepared.

HWY-DD  
2.6366

APR 14 1993

Sierra Club, Maui Group  
Hawaii Chapter  
P.O. Box 2000  
Kahului, Hawaii 96732

Attention: Marc Hodges, Conservation Committee

Gentlemen:

Subject: Your letter dated January 6, 1993 concerning the  
Draft Environmental Assessment for Hana Highway  
Storm Damage Repairs, Huelo to Nahiku  
Project No. 360AB-01-92

Thank you for your comments on the Draft Environmental  
Assessment (DEA). We have reviewed your letter and offer the  
following responses to your comments.

First of all, any infractions, violations and deviations from  
the DEA that occur during construction should be addressed if  
unwarranted and stopped immediately, but will not be included  
as part of the environmental assessment since the DEA is  
usually done prior to construction. This project is considered  
an emergency project and should be done as soon as possible in  
order to minimize inconveniences and danger to the public.

Although the major slides occurred on April 5, 1989, the funds  
to start design, which needed to be appropriated by the  
legislature, was not available until June 15, 1990. Furthermore,  
this project required extensive soil investigation and studies  
to arrive at the necessary recommendation. This had to be done  
after the funds were made available. Therefore, considerable  
time was necessary to determine the scope of the project.  
Since further slides and falling rocks which would occur  
unexpectedly could cause serious consequences as mentioned in  
DEA, we elected to proceed with the construction on an  
emergency basis, as fast as we possibly could within all legal  
constraints.

The estimated excavation amount of 75,500 cubic yards as stated in the DEA is okay. The additional excavation (the amount of which is estimated to be 18,000 cubic yards) is due to a contract change order necessitated by conditions that occurred at a later date after construction was started.

Regarding the Conservation District Use Application (CDUA) Permit, we received emergency authorization to proceed with the work from the Department of Land and Natural Resources, on the condition that a CDUA is filed. A CDUA was filed on August 20, 1992.

As for the Special Management Area (SMA) Permit, we had not anticipated any dumping into the ocean at that time since it was intended that this work would not be permitted on the project. If during construction this condition prevails, we will take the necessary action to terminate this practice. We had cleared SMA matter with the County of Maui Planning Department who determined that the work was not within the SMA, therefor, an SMA permit was not required.

As we stated in the DEA, there are no water resources, surface water bodies, or drainage channels within the project area. However, there have been water seepage onto the highway at certain areas after periods of heavy rainfall.

We believe the information received from the sources stated in the DEA regarding flora, fauna and archaeology was sufficient, and a walk-through was not necessary.

This section of roadway has been subject to constant slides and erosion. Landslides, which occurred daily as reported in the Maui News, are not dumped over the side. Instead the road is sometimes closed longer so that the material can be cleaned up and hauled away. The only times when material was dumped over the side were on November 13 and 19, 1992 when large slides occurred. If material were not dumped over the side, the highway could have been closed for approximately seven days, resulting in unacceptable consequences to motorists and the surrounding community.

The muddying of the ocean is due to the wave action on the material deposited at the foot of the cliff, most of which is due to the constant slides and some due to the contractor dumping over the side.

Regarding the blast material entering the ocean, it is highly unlikely that ten percent of the blast material ends up in the ocean. Most of the material is contained within the banks and the working table. It very seldom enters directly into the ocean. Blasting mats or netting were considered expensive and unfeasible for this particular case.

On November 5, 1992, there were several large piles of dirt on the bottom of the cliff. As the ocean waves washed upon the shore, it would take some of the dirt into the ocean. During high tide and/or when waves are larger, more of the dirt would be taken in the ocean causing a larger brown cloud in the ocean. This is the reason the assumption was made. During another field inspection on January 27, 1993, the piles of dirt at the bottom were considerably smaller and above the shore where waves can no longer reach them. Also, there was no noticeable brown cloud in the water as was observed on November 5, 1992.

The makai side of the berm will be seeded with grass to prevent erosion of dirt on the makai side. The contractor does not want to use boulders or concrete barriers because of safety reasons. They had a situation where a boulder fell on a barrier and shattered the barrier making it act as shrapnel. Also, use of sand bags is not feasible for them since they scour the face of the berm daily when loading trucks with dirt and during cleaning operations.

During the field inspection on January 27, 1993, the berm cuts were observed to be closed.

Regarding section 639.04, please note that these measures would be undertaken only if it were found to be cost-effective and feasible. Also, all the work mentioned in section 639.04 are done under force account and an allowance has been provided in the amount of \$20,000.00 under item number 639.0100 of our contract. We have every intent to use this money to do any feasible water pollution control measures.

Based upon community meetings held prior to construction, the road closure hours were changed after receiving input from the community and businesses.

The DEA does include an analysis of the economic impact of the road closure. However, we did not do actual dollar value calculations for the effects of the road closures on businesses. We minimized any economic effects by limiting the allowable time for road closure.

Sierra Club, Maui Group  
Page 4

HWY-DD  
2.6366

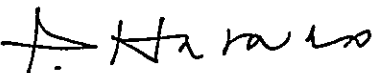
As a result of your invaluable comments we have revised the DEA as follows:

1. Included a separate section "Environmental Characteristics";
2. Revised the median annual rainfall;
3. Included descriptions of appropriate water pollution control measures;
4. Included the mitigative measures to minimize soil erosion during construction activities; and
5. Revised the road closure hours.

Enclosed is a copy of the Environmental Assessment with the above revisions.

Thank you once again for your genuine interest and concerns regarding this project.

Sincerely,

*JHL*   
Rex D. Johnson  
Director of Transportation

KKI:rv

Enc.

c: HWY-DD (w/enc.)  
HWY-M "  
HWY-C "

bc: DLNR (w/o enc.)