| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | ADD. 60 | 521 |

## GRADING NOTES

1. All grading work shall be done in accordance with Chapter 23, Grading, Soil Erosion and Sediment Control, of the Revised Ordinances of Honolulu, 1978, as amended (Ordinance No. 81-31), and the soils report by Ernest K. Hirata and Associates, Inc., dated December 1991.

2. The Contractor shall remove all silt and debris resulting from his work and deposited in drainage facilities, roadways and other areas. The costs incurred for any necessary remedial action by the Chief Engineer, Department of Public Works, City and County of Honolulu, shall be payable by the Contractor.

3. The Contractor, at his own expense, shall keep the project area and surrounding area free from dust nuisance. The work shall be in conformance with the Air Pollution Control Standards and Regulations of the State Department of Health.

4. The underground pipes, cables or ductlines known to exist by the Engineer from his search of records are indicated on the plans. The Contractor shall verify the location and depth of the facilities and exercise proper care in excavating in the area. Wherever connections of new utilities to existing utilities are shown on the plans, the Contractor shall expose the existing lines at the proposed connections to verify their locations and depths prior to excavation for the new lines.

5. All slopes and exposed areas shall be topsoiled with 6" of topsoil, grassed and covered with Erosion Mat as soon as final grades have been established. Planting shall not be delayed until all grading work has been completed. Grading to final grade shall be continuous, and any area, within which work has been interrupted or delayed, shall be planted.

6. Fills on slopes steeper than 5:1 shall be keyed.

7. The City shall be informed of the location of the borrow/disposal site for the project when the application for a grading permit is made. The borrow/disposal site must also fulfill the requirements of the grading ordinance.

8. No grading work shall be done on Saturdays, Sundays, and holidays at any time without prior notice to the Chief Engineer.

9. Temporary erosion controls shall not be removed before permanent erosion controls are in-place and established.

10. All grading operations shall be performed in conformance with the applicable provisions of the Water Pollution Control and Water Quality Standards contained in the Public Health Regulations, State Department of Health, On Water Pollution Control and Water Quality Standards.

11. Temporary Erosion Control procedures will be submitted by the Contractor for approval prior to application for a Grading Permit.

12. The Bench Mark for this project will be furnished and established by the State Department of Transportation, Highways Division.

13. The Contractor, at his expense, shall flag limits of grading before the commencement of the grading work.

14. The Contractor shall be responsible for conformance to Chapter 37 and 37A of Public Health Regulations, State Department of Health.

15. All top and bottom of slopes and changes in profile of the finished grading work shall be smoothly graded and rounded with a minimum radius of 10 feet.

16. The Contractor will obtain a Grading Permit prior to the commencement of grading work.

## TEMPORARY EROSION CONTROL

1. Follow sequence of operation as recommended on page 26 of the Soil Erosion Standards and Guidelines, Department of Public Works, City and County of Honolulu, November 1975.

2. The Contractor shall minimize the amount of land to be exposed at any one time.

3. Grading operations shall proceed from the higher ground area first, where excavation operations are necessary. The vegetation on the lower area shall be left in place as long as feasible to serve as a filtering medium.

4. If the excavated material from the higher area is needed to fill the lower areas described in No. 3 above, filling operations shall be done in phases in order that erosion and sedimentation problems can be held to a minimum.

5. Hydromulch seeding for permanent grassing shall be done immeditely after final grades are established.

6. Graded areas that are not at final grade and is expected to be exposed for more than 15 days, shall be mulched (at the rate of 45 pounds per 1,000 square feet) in order to prevent erosion and silt runoff.

7. When installing the drainage system for the project, filtering material (jute strips or equal) at the inlets to the system shall be provided to prevent silt from entering the system.

8. The above procedure for erosion and sediment control may be revised by the Contractor to conform to his grading operation procedure. But any revision to the above shall be submitted to the Chief Engineer, Department of Public Works, City and County of Honolulu for approval, by the Contractor.

## ESTIMATED IN-PLACE EARTHWORK QUANTITIES

| | | | |
|---|---|---|---|
| Excavation | = | 330,600 | Cu. Yds. |
| Embankment | = | 298,400 | Cu. Yds. |
| Area of Grading | = | 40 | Acres |

1. The earthwork quantities above are approximate and are shown for permit purposes only. The Contractor shall make his own determinations and verify these figures.

2. The above quantities are computed to finish grade as shown on the grading plan, and have been adjusted for base course, concrete pavement and underdrains. No corrections have been made for topsoil, if required.

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ORIGINAL PLAN
NOTE BOOK No.
SURVEY PLOTTED BY DATE
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY

A83-45.2 F:G-NOTES.DWG D:MRG2 FILES Plot:1=1 Date:8/96 KAA

| DATE | REVISION |
|---|---|
| 3/27/92 | Revised Earthwork Quantities |
| 1/27/92 | Revised Grading Note 11 & 16 such that Contractor shall obtain grading permit. |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GRADING NOTES

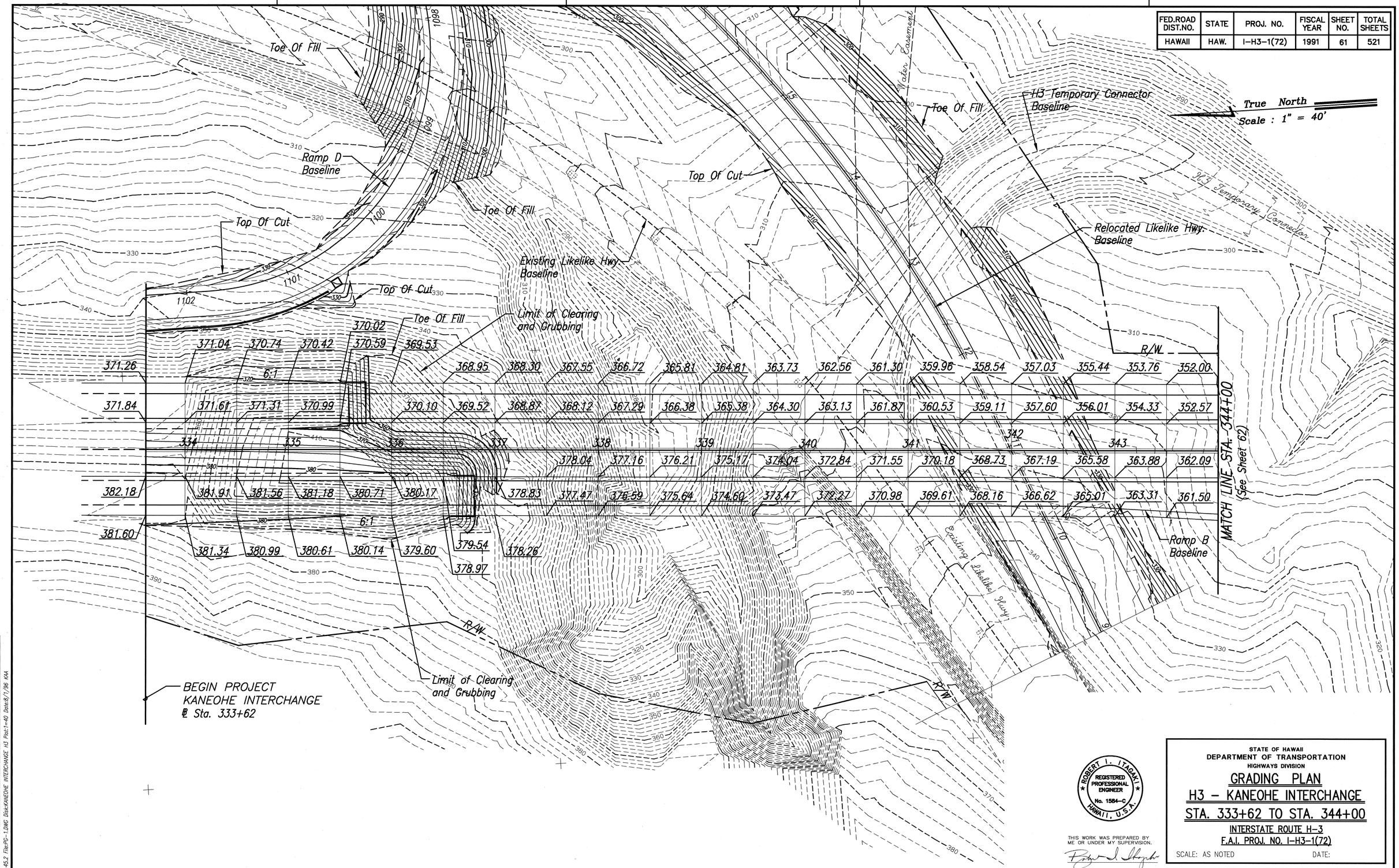
INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(72)

SCALE: AS NOTED DATE: DEC. 1991

SHEET No. OF SHEETS

ADD. 60

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | 61 | 521 |




| ORIGINAL PLAN | SURVEY PLOTTED BY | DATE |
|---|---|---|
| | DRAWN BY | |
| NOTE BOOK | TRACED BY | |
| | DESIGNED BY | |
| No. | QUANTITIES BY | |
| | CHECKED BY | |

83-45.2 File:PG-1.DWG Disk:KANEOHE INTERCHANGE H3 Plot:1=40 Date:8/1/96 KAA

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# GRADING PLAN
## H3 - KANEOHE INTERCHANGE
## STA. 333+62 TO STA. 344+00

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(72)

SCALE: AS NOTED DATE:

SHEET No. OF SHEETS

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O. 62 | 521 |

True North

Scale : 1" = 40'

H3 Temporary Connector Baseline

H3 Temporary Connector

R/W

MATCH LINE STA. 344+00 (See Sheet 61)

| | | |

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | ADD. 63 | 521 |

True North

Scale : 1" = 40'

H3 Temporary Connector Baseline

H3 Temporary Connector

R/W

Begin Ramp B Sta. 0+00

=H3 ℄ Sta. 342+54.52 (o/s 64.00' Rt.)

H3 Baseline

Attenuator with Backup H-3 ℄ Sta. 349+80

344.28 341.71 339.71 337.71 335.74 334.00 332.77

341.52 339.56 337.84 336.73 336.31 332.01 331.45 331.07

341.14 339.13 337.04 335.30 334.44 334.49 335.39 337.12

336.46 337.36 339.09

Limit of Clearing and Grubbing

Toe Of Fill

Ramp B Sta. 2+86.22 (o/s 15.00' Lt.)

=H3 ℄ Sta. 345+47.13 (o/s 54.00' Rt.)

Ramp B Baseline

Pukuu Overpass

MATCH LINE STA. 10+00 (See Sheet 64)

Existing Likelike Highway R/W

Relocated Likelike Hwy. Baseline

Toe Of Fill

Exist. Likelike Hwy Baseline

Top Of Cut

| DATE | REVISION |
|---|---|
| 1/27/92 | Deleted superceeded exist. Likelike R/W. |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# GRADING PLAN
## RAMP B
## STA. 0+00 TO STA. 10+00

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(72)

SCALE: AS NOTED DATE: DEC. 1991

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SHEET No. OF SHEETS

ADD. 63

ORIGINAL PLAN

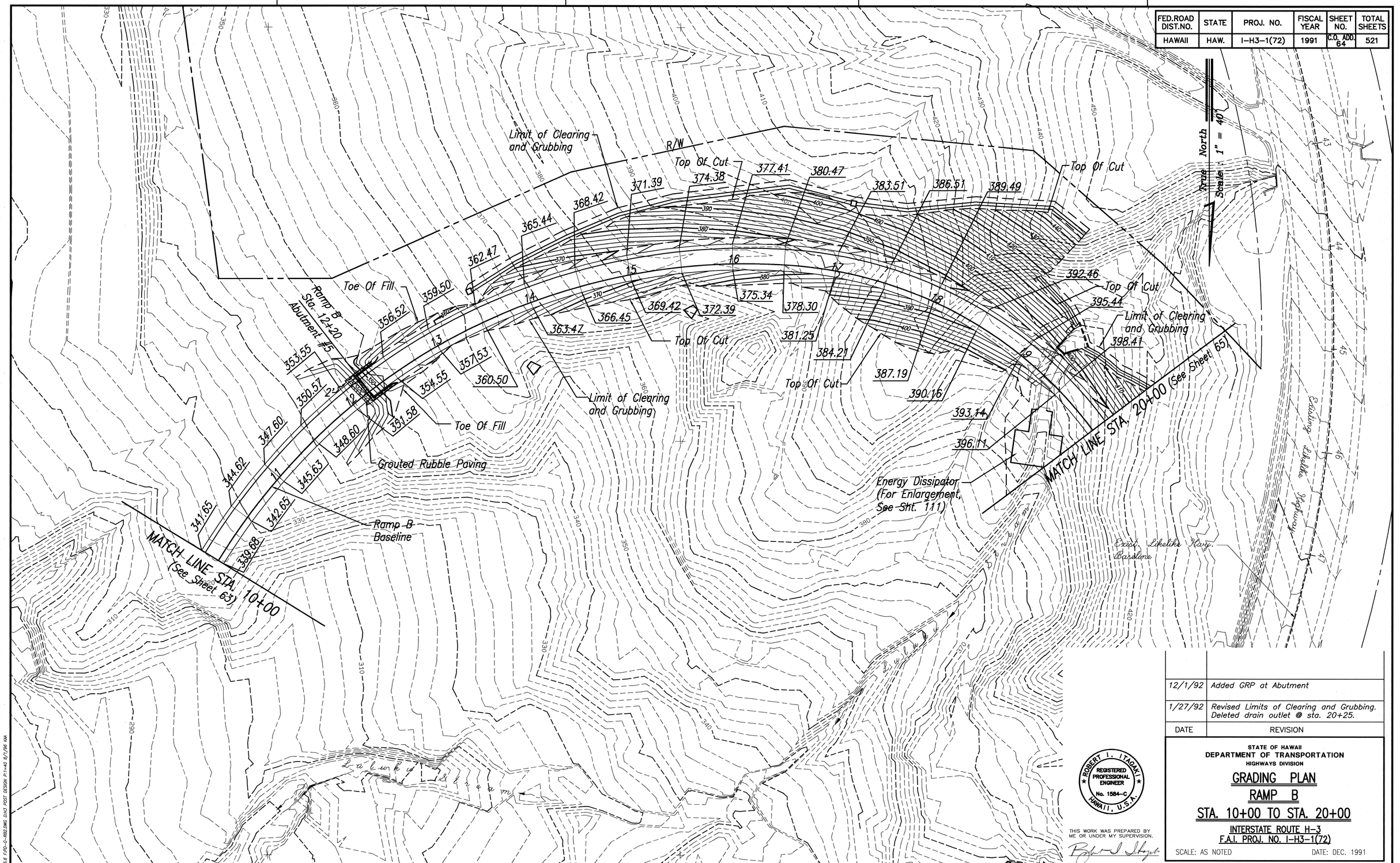
SURVEY PLOTTED BY
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY
DATE

NOTE BOOK

No.

83-45.2 File:D-RBI.DWG Disk:GRADING PLANS Disk 1 of 6 Plot:1=40 Date:8/1/96 KAA

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O. ADD. 64 | 521 |




| DATE | REVISION |
|---|---|
| 12/1/92 | Added GRP at Abutment |
| 1/27/92 | Revised Limits of Clearing and Grubbing. Deleted drain outlet @ sta. 20+25. |

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# GRADING PLAN
# RAMP B
# STA. 10+00 TO STA. 20+00

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(72)

SCALE: AS NOTED DATE: DEC. 1991

SHEET No. OF SHEETS

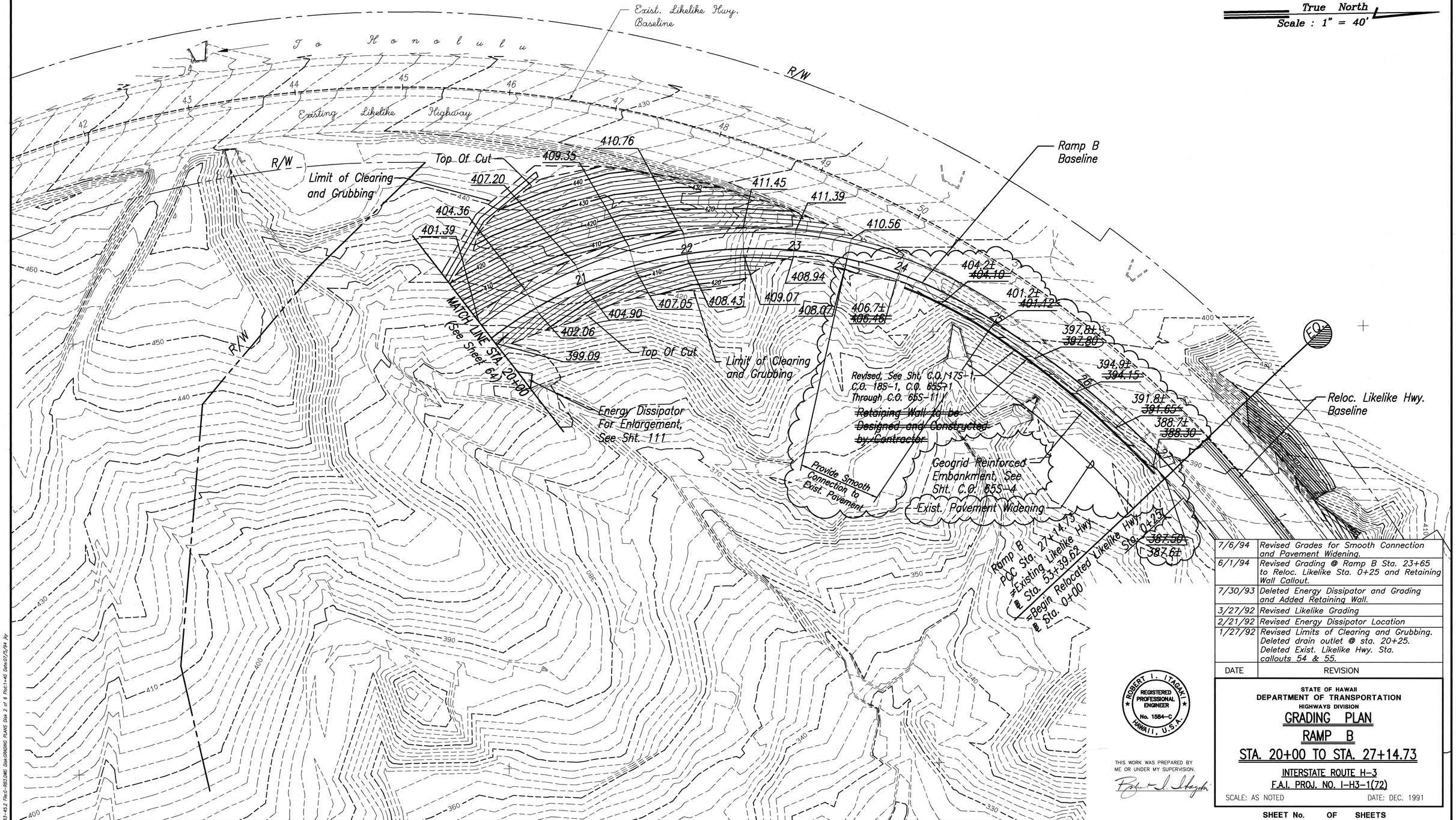
ORIGINAL PLAN
NOTE BOOK No.
SURVEY PLOTTED BY
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY
DATE

83-45.6 F:\RD-D-REQ.DWG 0243 RDST DESIGN P-1=40 8/1/96 AM

C.O. ADD. 64

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O. ADD 65 | 521 |

True North
Scale : 1" = 40'




| | |
|---|---|
| 7/6/94 | Revised Grades for Smooth Connection and Pavement Widening. |
| 6/1/94 | Revised Grading @ Ramp B Sta. 23+65 to Reloc. Likelike Sta. 0+25 and Retaining Wall Callout. |
| 7/30/93 | Deleted Energy Dissipator and Grading and Added Retaining Wall. |
| 3/27/92 | Revised Likelike Grading |
| 2/21/92 | Revised Energy Dissipator Location |
| 1/27/92 | Revised Limits of Clearing and Grubbing. Deleted drain outlet @ sta. 20+25. Deleted Exist. Likelike Hwy. Sta. callouts 54 & 55. |
| DATE | REVISION |

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# GRADING PLAN
## RAMP B
## STA. 20+00 TO STA. 27+14.73

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(72)

SCALE: AS NOTED DATE: DEC. 1991

SHEET No. OF SHEETS

ORIGINAL PLAN
SURVEY PLOTTED BY DATE
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY
NOTE BOOK
No.

83-63 FileC:\RB3.DWG DskC:\ROAD\ PLANS Dist 2 of 6 Plot:1=40 Date:07/5/94 Jay

C.O. ADD. 65

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1 (72) | 1991 | C.O. 65 S-1 | 521 |

## LEGEND:

- EXISTING GROUND CONTOUR (410)
- FINISH GRADE ELEVATION (397.80)
- BORING NUMBER AND LOCATION (B5)
- TOP OF SLOPE / FILL SLOPE / TOE OF SLOPE
- CUT SLOPE
- DRAINAGE FLOW DIRECTION
- TO BE REMOVED
- CONCRETE BARRIER/ UNDERDRAIN

TRUE NORTH

RAMP B ROADWAY STRUCTURE ENDS AT RELOCATED LIKELIKE HWY. STA. 0+50. CONNECT UNDERDRAIN TO STRUCTURE AT 0+50

1 – 6" 1/16 BEND

℄ RELOCATED LIKELIKE HWY

℄ EXIST. LIKELIKE HWY

EXIST. 6' X 6' REINF. CONC. BOX CULVERT

6" PERFORATED UNDER DRAIN PIPE

EXIST. 48"ø RCP CULVERT

REMOVE EXIST. CONC. CURB, GUTTER, AND GUARDRAILS

REMOVE EXIST. CONC. CURB AND GUTTER

5' LONG CONC. TRANSITION GUTTER

END TYPE 7C GUTTER ℄ STA. 23+70

REMOVE EXISTING GUARD RAIL

5' BARRIER SHOULDER (TYP.)

TOP OF FILL

℄ TYPE 7C GUTTER

DRAIN INLET

TOP CONC. CURB (–)0.5 TO BOT.

CBMH

ELECT BOX

SIGN

MONKEY POD D=3' H=50' S=40'

MANGO D=2' H=60' S=35

RELOCATED LIKELIKE HWY UNDER DRAIN STA. 0+37.07 1 – 6" 1/16 BEND

RELOCATED LIKELIKE HWY. STA. 0+25 BEGIN TYPE 7C GUTTER

PERMANENT SLOPE

EXISTING HEADWALL TOP = 374.8 INV. = 366.1

TOE OF FILL

EXISTING WING WALL TO REMAIN TOP HEADWALL EXTENSION = 386.69 INV. = 377.5±

NEW CONC. COVER OVER EXISTING CULVERT WING WALLS SEE SHEET RB-12

REMOVE CORRUGATED METAL PIPE (W=2.0')

2 KUKUI NUT D=1 H=40' S=25'

CULVERT HW EXTENSION SEE SHEET RB-12 NEW TOP/HW = 375.8±

ARCHAELOGICAL BOUNDARY

EXIST. FENCE AND ARCHAELOGICAL BOUNDARY

BEND UNDERDRAIN STA. 23+65

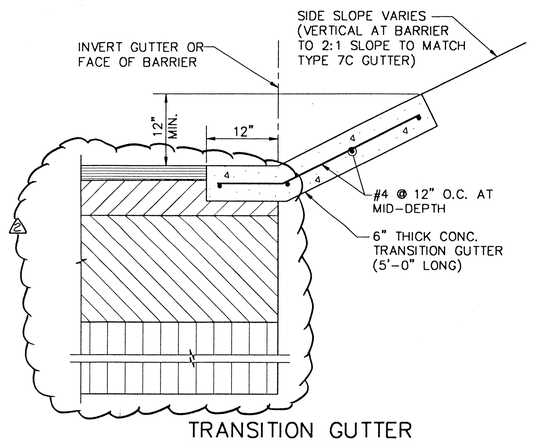
TYPE 7C GUTTER

℄ RAMP B STA. 23+00 BEGIN TYPE 7C GUTTER

℄ RAMP B PCC STA. 27+16.23 = ℄ EXIST. LIKELIKE HWY. STA. 53+39.62 = ℄ P.C. RELOCATED LIKELIKE HWY. STA. 0+00

TRANSITION FROM A 30" UNDERDRAIN AT RAMP B STA. 23+05 TO A 12" UNDERDRAIN AT RAMP B STA. 23+55

PLAN
SCALE: 1" = 20'




TRANSITION GUTTER
NOT TO SCALE

GRAPHIC SCALE:
20' 10' 0 20' 40'
SCALE: 1" = 20'

NOTES:
1. FOR PERMANENT SLOPE AT RAMP B PROFILE, SEE SHT. RB-3.
2. FOR RAMP B SEE INTERSTATE ROUTE H-3, KANEOHE INTERCHANGE, FAIP NO. I – H3 – 1(72) (SHTS. 9, 10, 17, 18, 46, 65, 94) (BASE DESIGN)

LESTER H. FUKUDA REGISTERED PROFESSIONAL ENGINEER No. 4908-C HAWAII, U.S.A.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# PERMANENT SLOPE AT RAMP B
# GRADING AND DRAINAGE PLAN

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(72)

SCALE: AS NOTED DATE: JAN. 1994

| DATE | REVISION |
|---|---|
| 2 | REVISED ROAD SECTION |
| | |
| | |

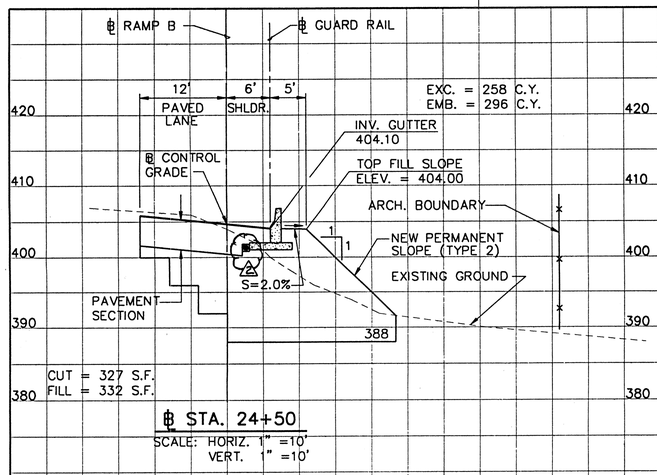
SHEET NO. RB-2 OF 13 SHEETS
C.O. 65 S-1

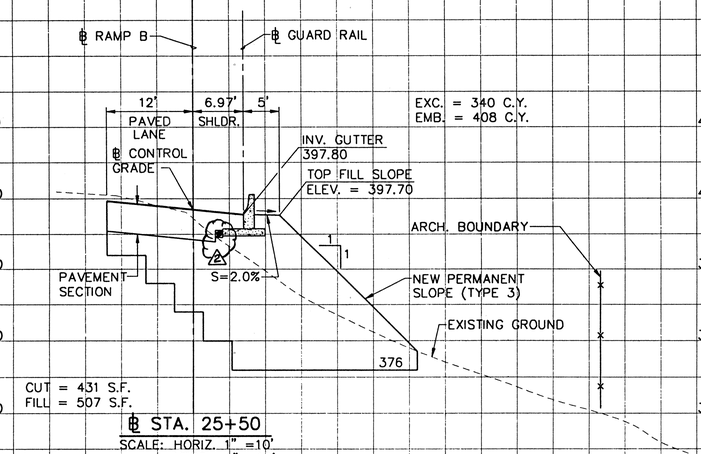
PM: LHF/ERO
OPER: SHA/ERO, FAI, BBT, CDK
REVISED: 1/10/95 CHECK/DATE: / /
FILE: 9318-05
SCALE: 1" = 20'
DATE: 8/25/93 CHECK/DATE: / /

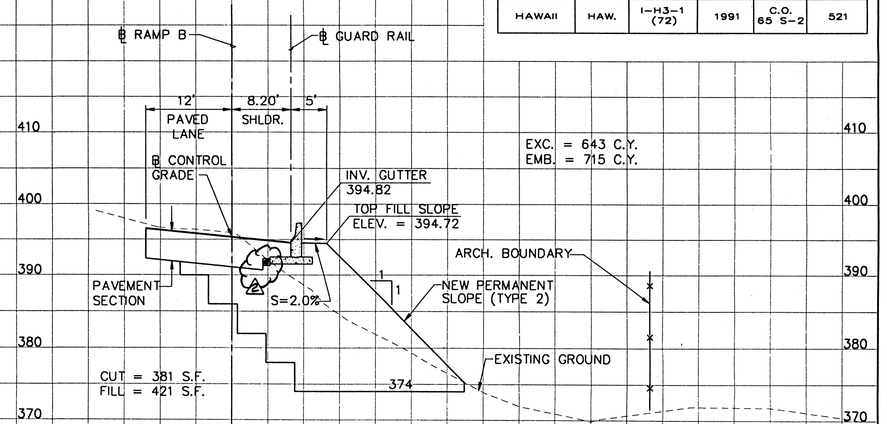
ORIGINAL PLAN
NOTEBOOK No.
SURVEY PLOTTED BY DATE
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY

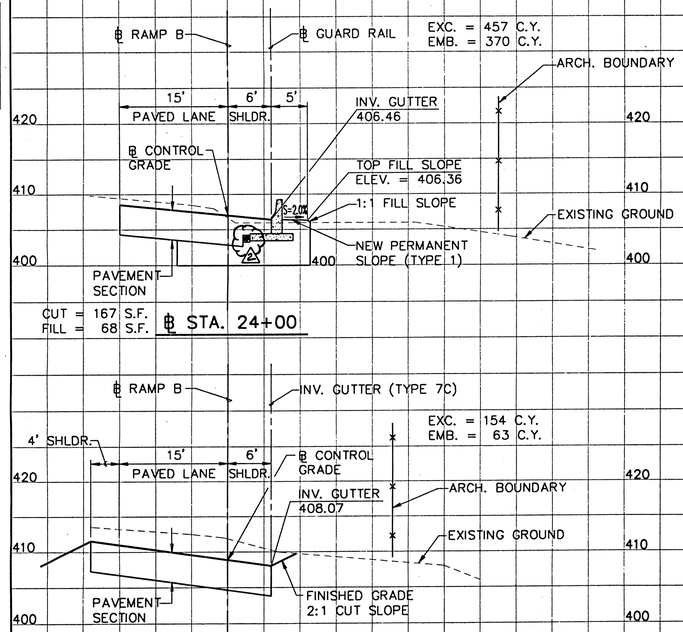
ROTATED: (+)43° 00' 08"

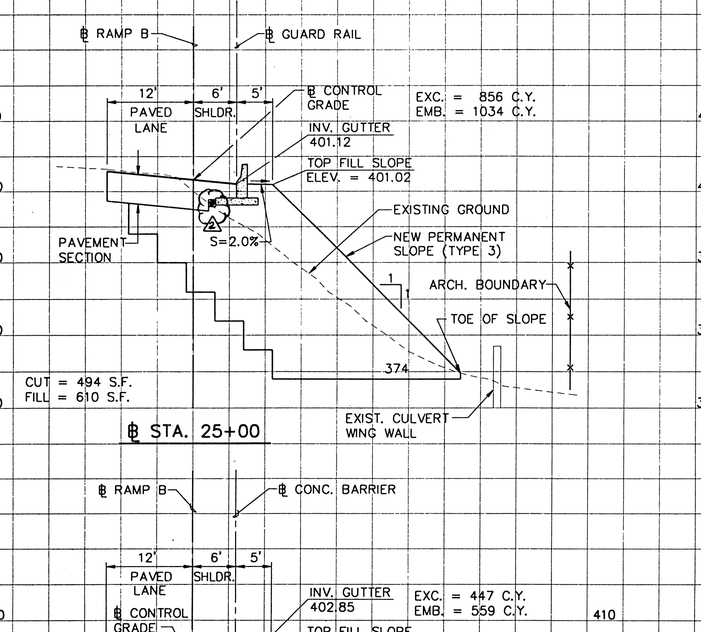
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1 (72) | 1991 | C.O. 65 S-2 | 521 |

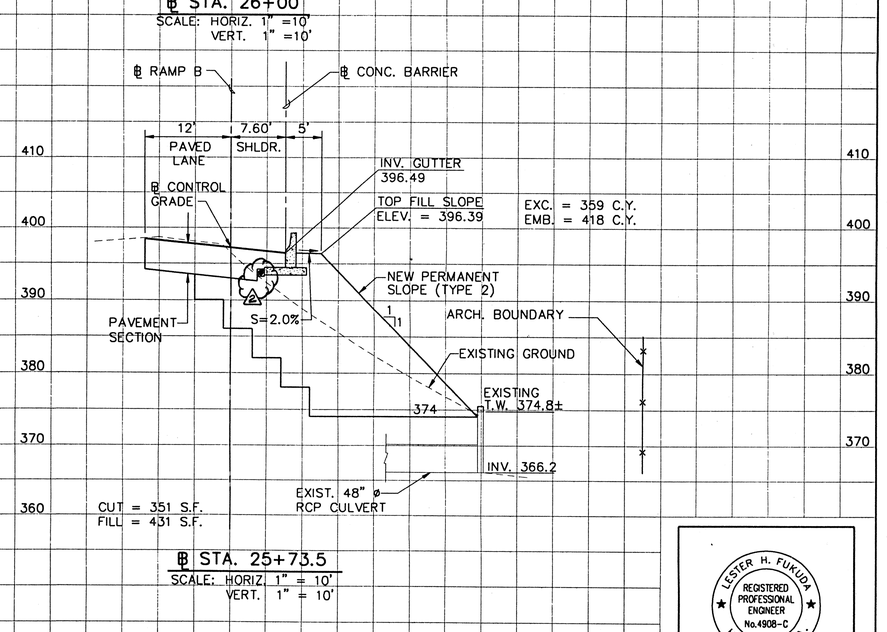



PM: LHF/ERO CHECK/DATE: / /
OPER: SHA,FAI,BBT,*CDK CHECK/DATE: / /
REVISED: 1/9/95
FILE: 9318-03
SCALE: 1" = 10'
DATE: 8/25/93

| ORIGINAL PLAN | SURVEY PLOTTED BY | DATE |
|---|---|---|
| NOTEBOOK No. | SURVEY NOTES BY | |
| | TRACED BY | |
| | DESIGNED BY | |
| | QUANTITIES BY | |
| | CHECKED BY | |

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No. 4908-C
HAWAII, U.S.A.

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GRAPHIC SCALE:
10 0 10 20
SCALE: 1" = 10'

| DATE | REVISION |
|---|---|
| 4 | REVISED ROAD SECTION |
| | |
| | |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# PERMANENT SLOPE AT RAMP B – CROSS SECTIONS STA. 23+00 TO STA. 26+00

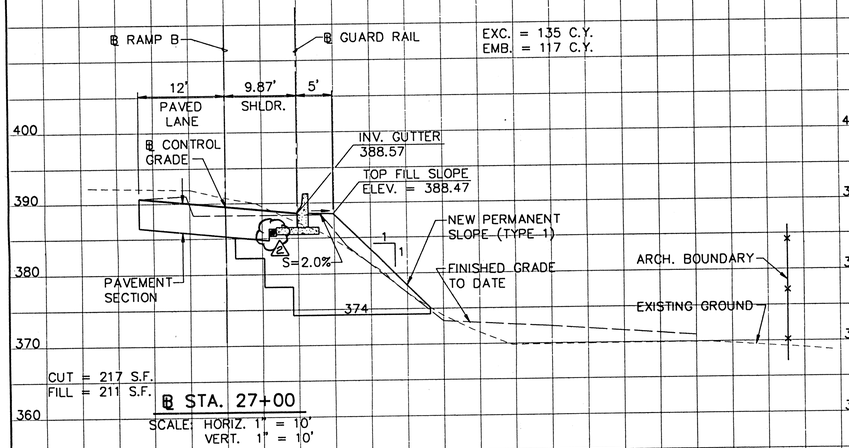
INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(72)

SCALE: AS NOTED DATE: JAN. 1994

SHEET NO. RB-4 OF 13 SHEETS

C.O. 65 S-2

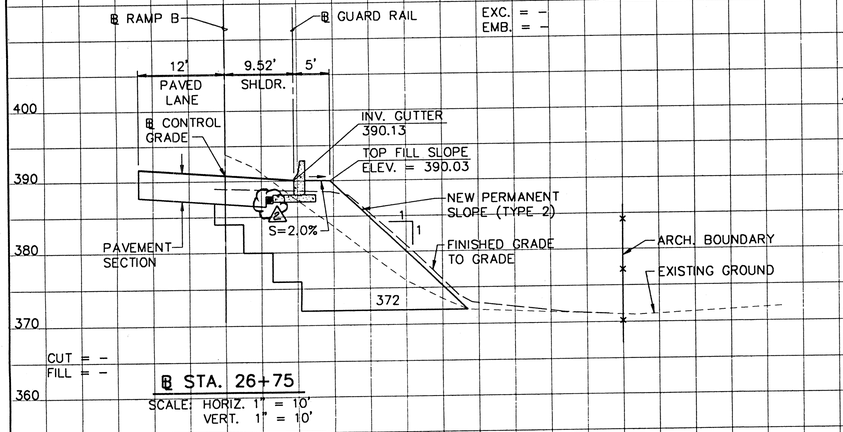
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1 (72) | 1991 | C.O. 65 S-3 | 521 |




CUT = 217 S.F.
FILL = 211 S.F.

## ℄ STA. 27+00

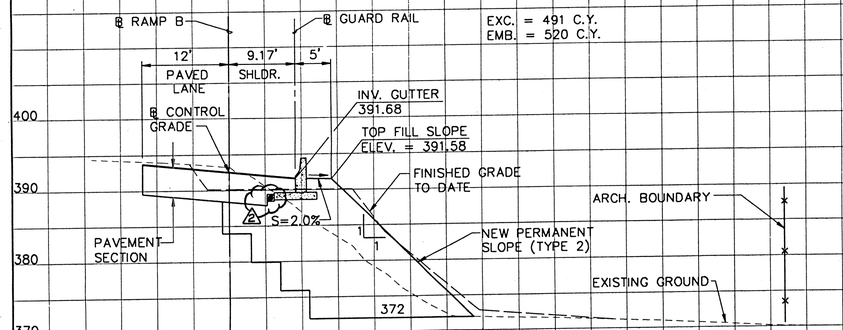
SCALE: HORIZ. 1" = 10'
VERT. 1" = 10'




CUT = –
FILL = –

## ℄ STA. 26+75

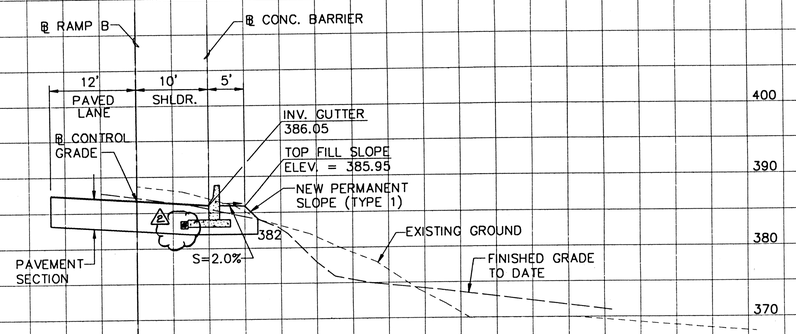
SCALE: HORIZ. 1" = 10'
VERT. 1" = 10'




CUT = 313 S.F.
FILL = 351 S.F.

## ℄ STA. 26+50

SCALE: HORIZ. 1" =10'
VERT. 1" =10'

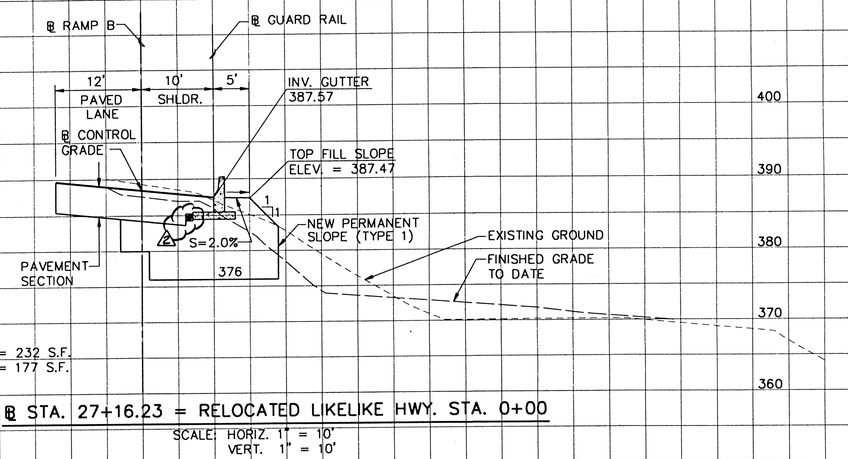



CUT = 41 S.F.
FILL = 23 S.F.

## RELOCATED LIKELIKE HWY. ℄ STA. 0+25

SCALE: HORIZ. 1" = 10'
VERT. 1" = 10'

EXC. = 127 C.Y.
EMB. = 93 C.Y.




CUT = 232 S.F.
FILL = 177 S.F.

## ℄ STA. 27+16.23 = RELOCATED LIKELIKE HWY. STA. 0+00

SCALE: HORIZ. 1" = 10'
VERT. 1" = 10'

GRAPHIC SCALE:

10 0 10 20

SCALE: 1" = 10'

| DATE | REVISION |
|---|---|
| 2 | REVISED ROAD SECTION |
| | |
| | |

LESTER H. FUKUDA
REGISTERED PROFESSIONAL ENGINEER
No. 4908-C
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THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# PERMANENT SLOPE AT RAMP B – CROSS SECTIONS STA. 26+50 TO RELOCATED LIKELIKE HWY. ℄ STA. 0+25

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(72)

SCALE: AS NOTED DATE: JAN. 1994

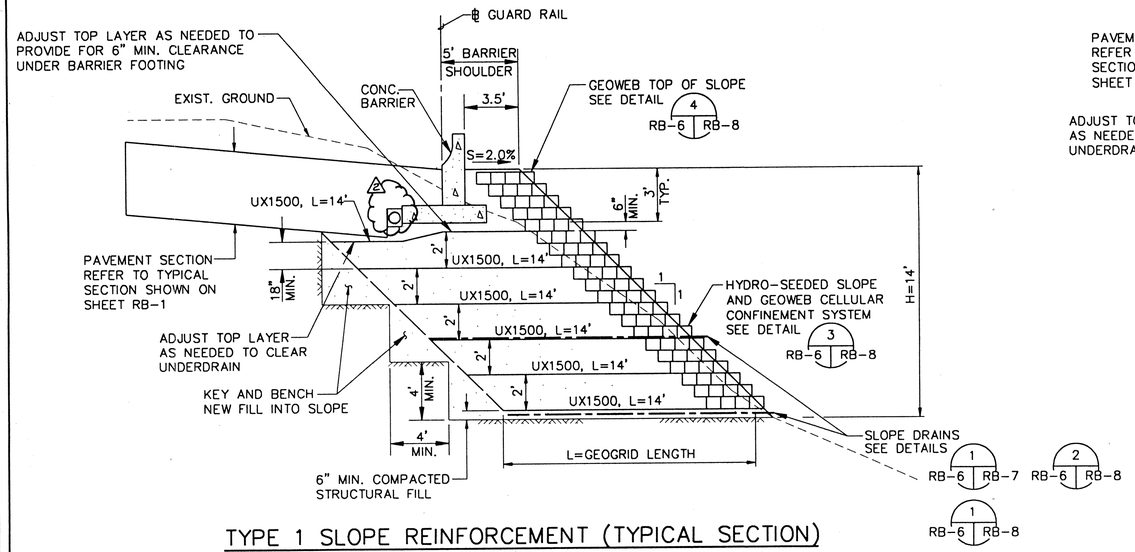
SHEET NO. RB-5 OF 13 SHEETS

C.O. 65 S-3

FILE: 9318-04
SCALE: 1" = 10'
DATE: 8/25/93
PM: LHF/ERO
OPER: SHA,F.AI,BBT,TCL,*CDK
REVISED: 1/9/95

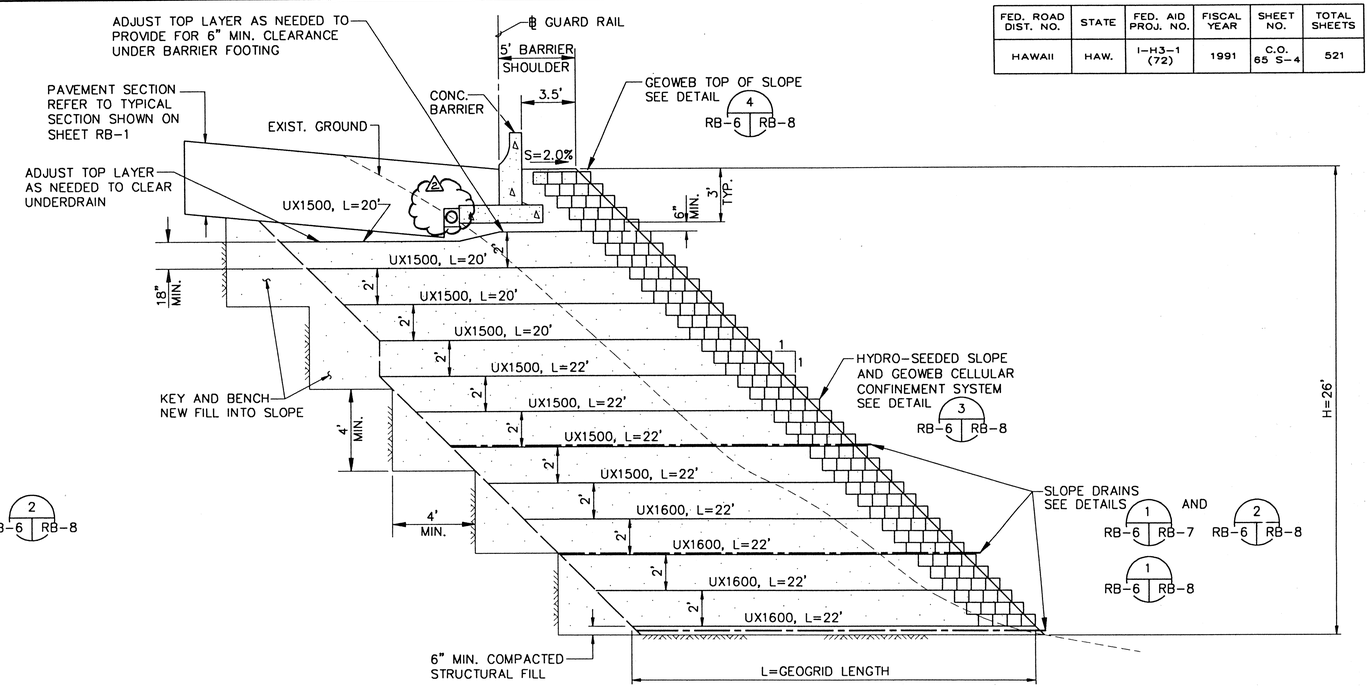
ORIGINAL PLAN
NOTEBOOK No.
SURVEY PLOTTED BY DATE
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY
CHECK/DATE:
CHECK/DATE:

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1 (72) | 1991 | C.O. 65 S-4 | 521 |



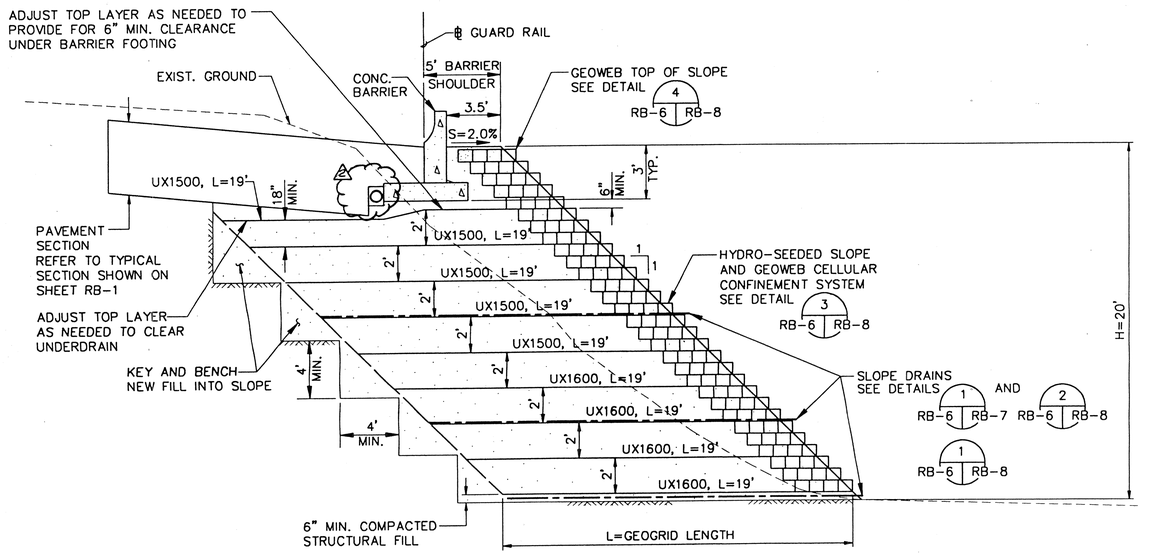

## TYPE 1 SLOPE REINFORCEMENT (TYPICAL SECTION)

NOT TO SCALE



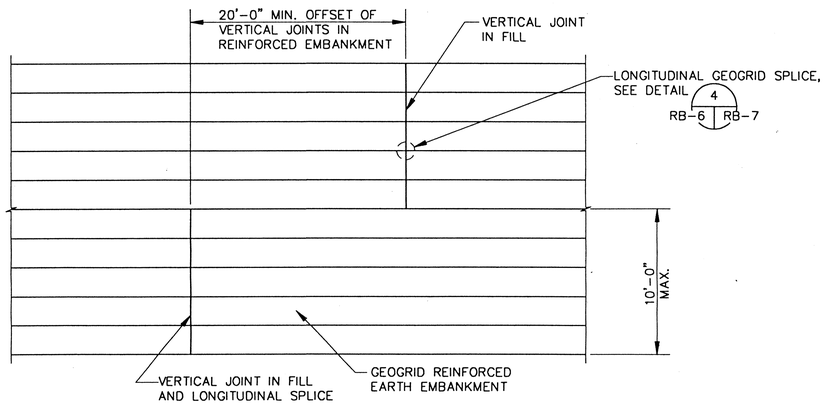

## TYPE 3 SLOPE REINFORCEMENT (TYPICAL SECTION)

NOT TO SCALE




## TYPE 2 SLOPE REINFORCEMENT (TYPICAL SECTION)

NOT TO SCALE




1 RB-6 | RB-6 GEOGRID REINFORCED EARTH SLOPE ELEVATION

NOT TO SCALE

FILE: 9318-10
SCALE: 1/4" = 1'-0"
DATE: 10/6/93

PM: LHF/ERO
OPER: •CDK,FAI,SHA
REVISED: 5/18/94

DESIGN BY: GYL/11-02-93 CHECK/DATE:
DRAWN BY: CHECK/DATE:
TRACED BY:
DESIGNED BY:
QUANTITIES BY:
CHECKED BY:
SURVEY PLOTTED BY:
DATE:

ORIGINAL PLAN
NOTEBOOK
No.

| DATE | REVISION |
|---|---|
| 2 | REVISED ROAD SECTION |
| | |
| | |

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DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# PERMANENT SLOPE AT RAMP B
# GEOGRID REINFORCEMENT DETAILS 1

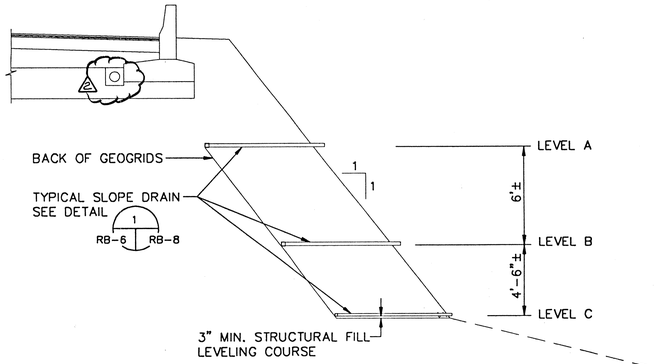
INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(72)

SCALE: AS NOTED DATE: MAY 1994

SHEET NO. RB-6 OF 13 SHEETS

C.O. 65 S-4

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1 (72) | 1991 | C.O. 65 S-5 | 521 |



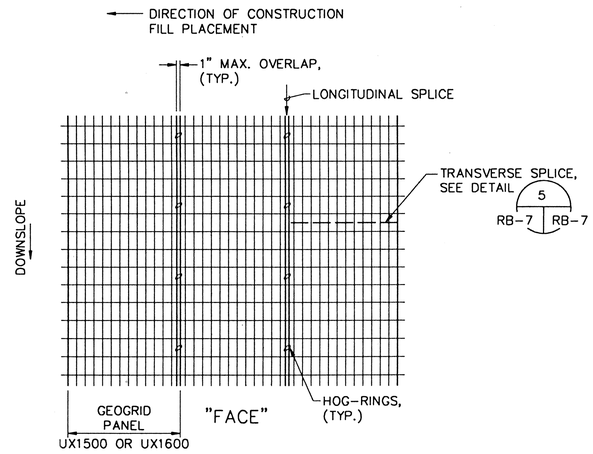

NOTES:

A) LEVEL A AND LEVEL B SLOPE DRAINS SPACED @ 20'-0" O.C.

B) LEVEL C SLOPE DRAINS ARE SPACED @ 10'-0" O.C.

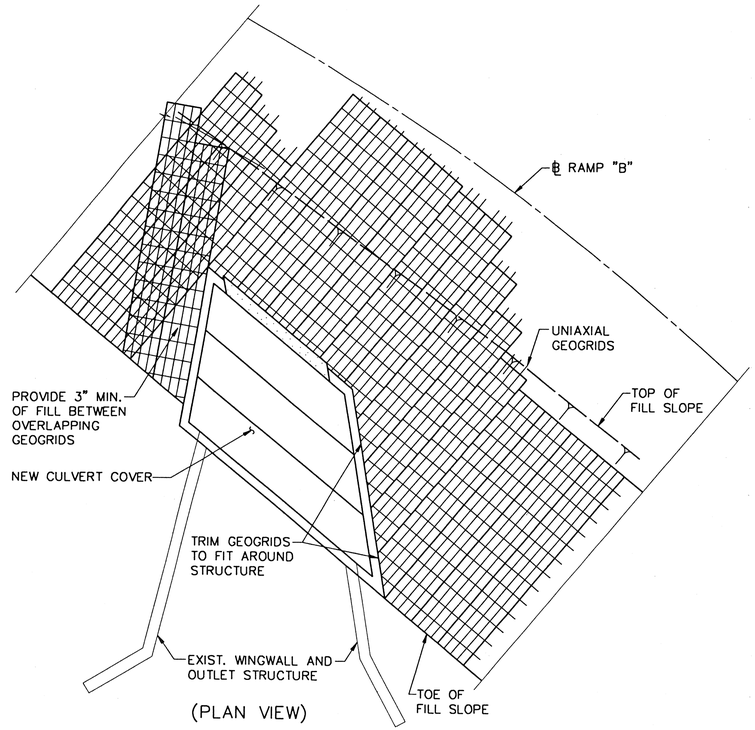
C) OMIT LEVEL A SLOPE DRAINS WHEN SLOPE HEIGHT IS LESS THAN 15'. OMIT LEVEL A & LEVEL B SLOPE DRAINS WHEN SLOPE HEIGHT IS LESS THAN 8'.

1 DRAIN DETAIL
RB-6 | RB-7 NOT TO SCALE



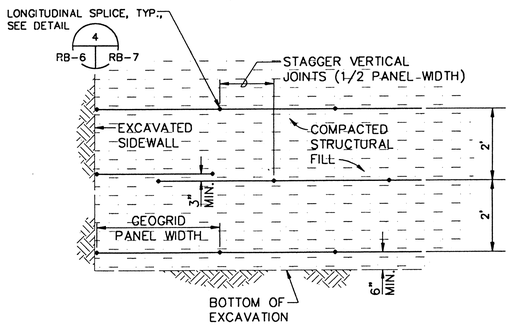

(PLAN VIEW)

4 GEOGRID LONGITUDINAL SPLICE DETAIL
RB-6 | RB-7 NOT TO SCALE




(PLAN VIEW)

8 GEOGRID PLACEMENT AROUND CULVERT (STA. 24+71)
RB-7 | RB-7 NOT TO SCALE

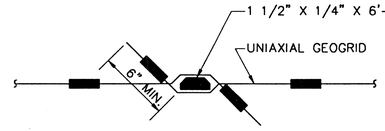



NOTES:

1. GEOGRID JOINTS TO BE CONSTRUCTED IN RUNNING BOND, ALTERNATING EVERY OTHER LIFT.
2. GEOGRID TO BE ROLLED OUT PERPENDICULAR TO SLOPE FACE AND CUT TO PROPER LENGTH.

(ELEVATION VIEW)

6 GEOGRID OVERLAP DETAIL
RB-7 | RB-7 NOT TO SCALE




5 GEOGRID TRANSVERSE SPLICE DETAIL (BODKIN CONNECTION)
RB-7 | RB-7 NOT TO SCALE

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DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# PERMANENT SLOPE AT RAMP B GEOGRID REINFORCEMENT DETAILS 2

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(72)
SCALE: AS NOTED DATE: MAY 1994
SHEET NO. RB-7 OF 13 SHEETS
C.O. 65 S-5

| DATE | REVISIONS |
|---|---|
| 2 | REVISED ROAD SECTION |
| | |
| | |

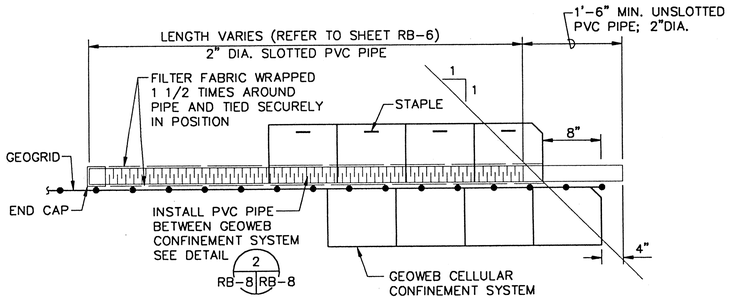
FILE: 9318-11
SCALE: 1 = 1
DATE: 10/5/93

PM: LHF/ERO
OPER: SHA+CDK,FAI
REVISED: 1/9/95

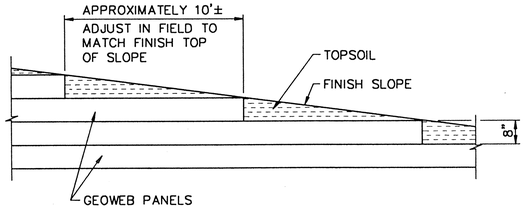
CHECK/DATE: GYL/11-02-93
CHECK/DATE: /

ORIGINAL PLAN
NOTEBOOK No.
SURVEY PLOTTED BY
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY
DATE

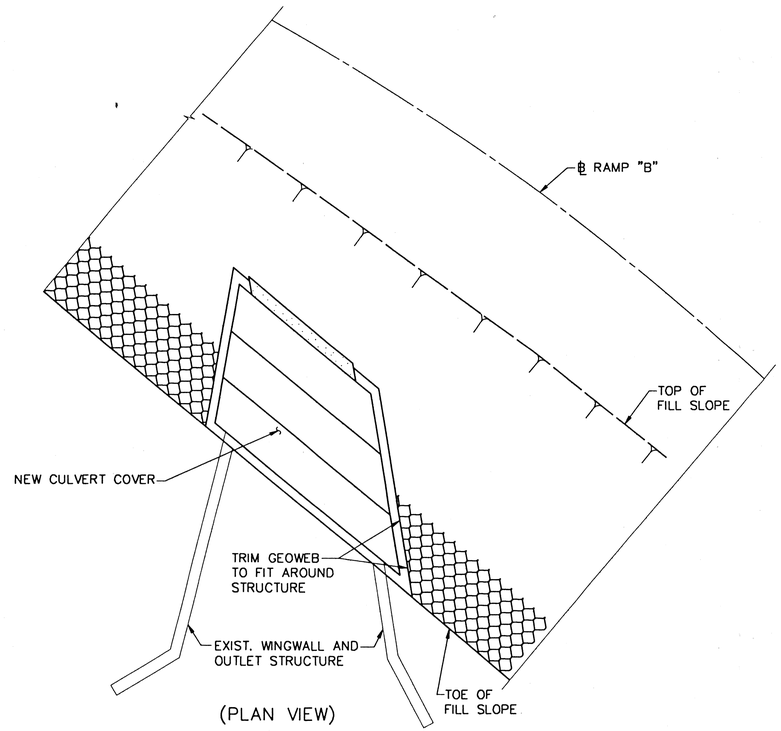
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1 (72) | 1991 | C.O. 65 S-6 | 521 |

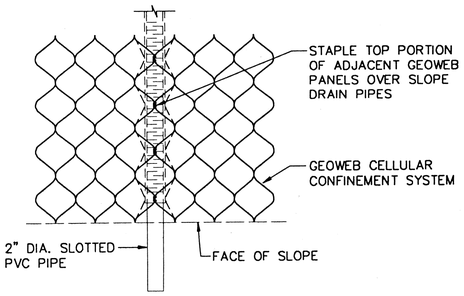



## 1 SLOPE DRAIN DETAIL
RB-6 | RB-8 NOT TO SCALE

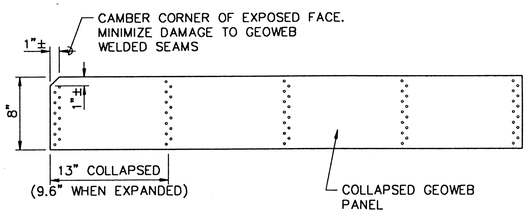



## 4 GEOWEB TOP OF SLOPE ELEVATION DETAIL
RB-3, RB-6 | RB-8 NOT TO SCALE

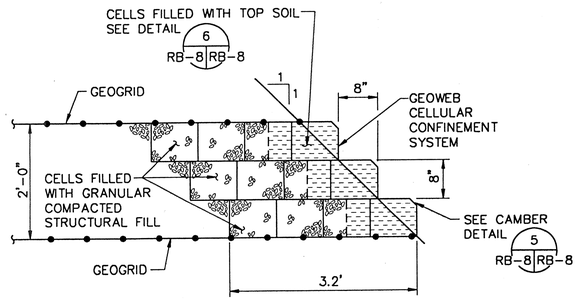


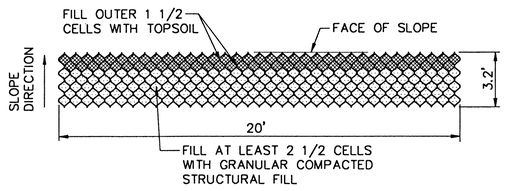

## 2 SLOPE DRAIN DETAIL
RB-6, RB-8 | RB-8 NOT TO SCALE

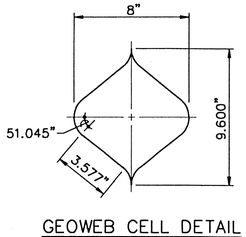



## 5 GEOWEB CELLULAR CONFINEMENT SYSTEM (B8-4 SERIES)
RB-8 | RB-8 NOT TO SCALE




## 7 GEOWEB PLACEMENT AROUND CULVERT (STA. 24+71)
RB-8 | RB-8 NOT TO SCALE




GEOWEB CELL DETAIL
NOT TO SCALE

## 3 SEEDED CELLULAR CONFINEMENT SYSTEM FACE DETAIL
RB-6, RB-7 | RB-8 NOT TO SCALE

## 6 GEOWEB TOPSOIL DETAIL PLAN
RB-8 | RB-8 NOT TO SCALE

SURVEY PLOTTED BY
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY
DATE
ORIGINAL PLAN
NOTEBOOK
No.

FILE: 9318-12
SCALE: 1 = 1
DATE: 04/15/94
PM: LHF/ERO CHECK/DATE: GYL/11-02-93
OPER: SHA,*CDK CHECK/DATE: /
REVISED: 5/18/94

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# PERMANENT SLOPE AT RAMP B
# GEOWEB REINFORCEMENT DETAILS

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(72)
SCALE: AS NOTED DATE: MAY 1994

| DATE | REVISIONS |
|---|---|
| | |
| | |
| | |
| | |

SHEET NO. RB-8 OF 13 SHEETS
C.O. 65 S-6

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1 (72) | 1991 | C.O. 65 S-7 | 521 |

## BORING 1 (Page 1 of 1)

PROJECT Kaneohe Interchange
LOCATION Kaneohe, Oahu, Hawaii
JOB No. 4399-001
DRAWN BY my (05-03-93)
SURFACE ELEVATION 407.9 ± Feet
DATUM Mean Sea Level

| LAB DATA: MOISTURE CONTENT % | LAB DATA: DRY DENSITY (pcf) | CORE INFO: CORE TYPE | CORE INFO: RECOVERY % | CORE INFO: ROD % & (RQD) % | BLOWS/FT. | DEPTH(feet) | SAMPLES | GRAPHIC LOG | SOIL CLASS | DESCRIPTION |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 0 | | | MH | DARK BROWN CLAYEY SILT, SOFT, WITH SOME BASALTIC SAND AND GRAVEL, MOIST |
| | | | | | 30 | | | | MH | MOTTLED DARK BROWN AND YELLOWISH BROWN CLAYEY SILT, MEDIUM STIFF, WITH SOME HIGHLY WEATHERED BASALTIC SAND AND GRAVEL, MOIST |
| 67 | 59 | | | | 26 | 5 | | | | GRADES MEDIUM STIFF |
| 42 | 81 | | | | 36 | 10 | | | | GRADES MOTTLED BROWNISH GRAY AND YELLOWISH BROWN, STIFF |
| | | | | | 7 | 15 | | | | GRADES SOFT |
| | | | | | 35 | 20 | | | | GRADES MEDIUM STIFF |
| | | | | | 8 | 25 | | | | GRADES BROWN TO REDDISH BROWN AND SOFT |
| | | | | | 10 | 30 | | | | GRADES WITH INCREASING BASALTIC GRAVEL CONTENT |
| | | | | | | | | | | (WATER LEVEL AT 1030 HOURS ON 03-18-93) |
| | | | | | 36 | 35 | | | GM | DARK BROWN SILTY SANDY HIGHLY WEATHERED BASALTIC GRAVEL, MEDIUM DENSE, SATURATED |
| | | | | | 10 | 40 | | | MH | DARK BROWN SANDY CLAYEY SILT, MEDIUM, STIFF, WITH HIGHLY WEATHERED BASALTIC GRAVEL, SATURATED |
| | | | | | | | | | | GRADES MOTTLED BROWNISH GRAY AND BROWN |
| 61 | 65 | | | | 19 | 45 | | | | GRADES STIFF |
| | | | | | 12 | 50 | | | | |
| 69 | 61 | | | | 27 | 55 | | | | GRADES MEDIUM STIFF |
| | | | | | 25 | 60 | | | | GRADES MOTTLED DARK YELLOWISH BROWN AND BROWNISH GRAY, STIFF |
| | | | | | 53/11" | 65 | | | | GRADES WITH SOME HIGHLY WEATHERED BASALTIC COBBLES |
| | | | | | 24 | 70 | | | | |
| | | | | | 40/2" | 75 | | | GM | GRAY SILTY SANDY HIGHLY WEATHERED BASALTIC GRAVEL, COBBLES, AND BOULDERS, VERY DENSE, SATURATED |
| | | | | | 20 | 80 | | | | GRADES MEDIUM DENSE AND WITH SOME DARK BROWN CLAYEY SILT |
| | | | | | 60/5" | 85 | | | | |
| | | | | | 13 | 90 | | | MH | MOTTLED BROWN AND GRAY CLAYEY SILT, MEDIUM STIFF, WITH SOME HIGHLY WEATHERED BASALTIC SAND, SATURATED |

BORING COMPLETED AT 91 FEET ON 03-17-93

## BORING 2 (Page 1 of 1)

PROJECT Kaneohe Interchange
LOCATION Kaneohe, Oahu, Hawaii
JOB No. 4399-001
DRAWN BY my (05-03-93)
SURFACE ELEVATION 370.1 ± Feet
DATUM Mean Sea Level

| LAB DATA: MOISTURE CONTENT % | LAB DATA: DRY DENSITY (pcf) | CORE INFO: CORE TYPE | CORE INFO: RECOVERY % | CORE INFO: ROD % & (RQD) % | BLOWS/FT. | DEPTH(feet) | SAMPLES | GRAPHIC LOG | SOIL CLASS | DESCRIPTION |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 0 | | | MH | DARK BROWN SANDY CLAYEY SILT, SOFT, AND MOIST |
| 29 | 64 | | | | 10 | | | | SP | DARK BROWN MEDIUM TO COARSE BASALTIC SAND, LOOSE, WITH SOME SUBROUNDED GRAVEL, MOIST |
| | | | | | 5 | 5 | | | MH | DARK BROWN CLAYEY SILT, MEDIUM STIFF, WITH SOME WEATHERED BASALTIC SAND AND GRAVEL, MOIST |
| 31 | 91 | | | | 51 | 10 | | | GM GC | DARK BROWN SILTY SANDY CLAYEY WEATHERED BASALTIC GRAVEL, MEDIUM DENSE, MOIST |
| | | | | | 30/3" | 15 | | | | GRADES MOTTLED DARK BROWN AND YELLOWISH BROWN, VERY DENSE |
| | | | | | 25 | | | | | GRADES MEDIUM DENSE |
| | | | | | 50/1" | 20 | | | | GRADES VERY DENSE |
| | | | | | 8 | 25 | | | | GRADES LOOSE AND WITH INCREASING SAND CONTENT |
| | | | | | | | | | | (WATER LEVEL AT 0950 HOURS ON 03-18-93) |
| 79 | 55 | | | | 12 | 30 | | | MH | MOTTLED DARK BROWN AND YELLOWISH BROWN CLAYEY SILT, STIFF, WITH TRACE OF SAND AND HIGHLY WEATHERED BASALTIC GRAVEL, SATURATED |
| | | | | | 14 | 35 | | | | |
| 70 | 59 | | | | 38 | 40 | | | | |
| | | | | | 15 | 45 | | | SM | BROWN SILTY GRAVELLY HIGHLY WEATHERED SAND, MEDIUM DENSE TO DENSE, SATURATED |
| 56 | 68 | | | | 74 | 50 | | | | |
| | | | | | 28 | 55 | | | | GRADES MEDIUM DENSE |
| 67 | 64 | | | | 48 | 60 | | | | |
| | | | | | 43 | 65 | | | | GRADES DENSE |
| 76 | 57 | | | | 40 | 70 | | | MH | MOTTLED DARK BROWN AND YELLOWISH BROWN SANDY CLAYEY SILT, STIFF, WITH SOME HIGHLY WEATHERED BASALTIC GRAVEL, SATURATED |

BORING COMPLETED AT 71.5 FEET ON 03-16-93

## BORING 3 (Page 1 of 1)

PROJECT Kaneohe Interchange
LOCATION Kaneohe, Oahu, Hawaii
JOB No. 4399-001
DRAWN BY my (05-03-93)
SURFACE ELEVATION 368.5 ± Feet
DATUM Mean Sea Level

| LAB DATA: MOISTURE CONTENT % | LAB DATA: DRY DENSITY (pcf) | CORE INFO: CORE TYPE | CORE INFO: RECOVERY % | CORE INFO: ROD % & (RQD) % | BLOWS/FT. | DEPTH(feet) | SAMPLES | GRAPHIC LOG | SOIL CLASS | DESCRIPTION |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 0 | | | MH | DARK BROWN SANDY CLAYEY SILT, SOFT, MOIST |
| 69 | 59 | | | | 8 | | | | | |
| 62 | 62 | | | | 7 | 5 | | | | GRADES MOTTLED DARK BROWN AND YELLOWISH BROWN WITH SOME HIGHLY WEATHERED BASALTIC GRAVEL AND SOME COBBLES |
| | | | | | 28 | 10 | | | | |
| | | | | | | | | | MH | MOTTLED DARK BROWN AND YELLOWISH BROWN CLAYEY SILT, SOFT, WITH SOME BASALTIC SAND AND GRAVEL, MOIST |
| | | | | | 5 | 15 | | | | |
| 70 | 59 | | | | 9 | 20 | | | | GRADES WITH DECREASING GRAVEL CONTENT |
| | | | | | 41 | 25 | | | | GRADES WITH INCREASING GRAVEL CONTENT |
| 67 | 62 | | | | 45 | 30 | | | SC | MOTTLED DARK BROWN AND YELLOWISH BROWN SILTY CLAYEY BASALTIC SAND, MEDIUM DENSE, WITH SOME HIGHLY WEATHERED BASALTIC GRAVEL, SATURATED |
| | | | | | 14 | 35 | | | | GRADES LOOSE |
| | | | | | | | | | | (WATER LEVEL AT 1018 HOURS ON 03-18-93) |
| | | | | | 60/3" | 40 | | | MH | MOTTLED BROWN AND YELLOWISH BROWN VERY SANDY CLAYEY SILT, MEDIUM STIFF, WITH TRACE OF BASALTIC GRAVEL, SATURATED |
| | | | | | | | | | | BOULDER AT 40 TO 41 FEET |
| 63 | 62 | | | | 34 | 45 | | | GM | BROWN SILTY SANDY HIGHLY WEATHERED BASALTIC GRAVEL, MEDIUM DENSE, SATURATED |
| 59 | 62 | | | | 49 | 50 | | | | |
| 72 | 59 | | | | 15 | 55 | | | ML SM GM | SEAM OF VERY SANDY CLAYEY SILT WITH TRACE OF GRAVEL |
| 56 | 71 | | | | 64 | 60 | | | | GRADES MEDIUM DENSE TO DENSE AND WITH INCREASING SAND CONTENT |
| | | | | | 68 | 65 | | | | |
| 66 | 48 | | | | 27 | 70 | | | | GRADE LOOSE TO MEDIUM DENSE |

BORING COMPLETED AT 71.5 FEET ON 03-16-93

## BORING 4 (Page 1 of 1)

PROJECT Kaneohe Interchange
LOCATION Kaneohe, Oahu, Hawaii
JOB No. 4399-003
DRAWN BY my (08-13-93)
SURFACE ELEVATION 399.9 ± Feet
DATUM Mean Sea Level

| LAB DATA: MOISTURE CONTENT % | LAB DATA: DRY DENSITY (pcf) | CORE INFO: CORE TYPE | CORE INFO: RECOVERY % | CORE INFO: ROD % & (RQD) % | BLOWS/FT. | DEPTH(feet) | SAMPLES | GRAPHIC LOG | SOIL CLASS | DESCRIPTION |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 0 | | | MH | BROWN CLAYEY SILT, MEDIUM STIFF, WITH SOME BASALTIC GRAVEL, ROOTS, BRANCHES, AND DEBRIS, MOIST (FILL) |
| | | | | | 11 | | | | | |
| | | | | | 11 | 5 | | | | BRANCHES AND DEBRIS GRADE-OUT |
| 50 | 71 | | | | 8 | | | | | GRADES MOTTLED DARK BROWN AND YELLOWISH BROWN, AND STIFF |
| | | | | | 10 | 10 | | | MH | GRADES WITH HIGHLY WEATHERED BASALTIC COBBLES |
| | | | | | | | | | | BOULDER AT 9.5 TO 10 FEET |
| 49 | 72 | | | | 32 | | | | | GRADES STIFF |
| | | | | | | 15 | | | MH | COBBLE AT 14.8 FEET |
| | | | | | | | | | | GRADES WITH HIGHLY WEATHERED BASALTIC BOULDERS |
| | | | | | | | | | MH | BOULDER AT 16.5 TO 18.0 FEET |
| 37 | 81 | | | | 43 | 20 | | | SM | MOTTLED BROWN AND GRAYISH BROWN SILTY GRAVELLY SAND, MEDIUM DENSE, MOIST |
| | | | | | | | | | | (WATER LEVEL AT 0955 HOURS ON 08-19-93) |
| | | | | | 170" | 25 | | | | GRADES WITH INCREASING COBBLES AND SATURATED |
| | | | | | | | | | SM | |
| | | | | | | | | | SM | BOULDER AT 27.5 TO 29.0 FEET |
| 28 | | | | | 64 | 30 | | | GM | MOTTLED BROWN AND GRAYISH BROWN HIGHLY WEATHERED SILTY SANDY GRAVEL, DENSE WITH SOME CLAYEY SILT, SATURATED |
| | | | | | 58 | 35 | | | ML | GRAYISH BROWN SANDY CLAYEY SILT, MEDIUM STIFF, WITH HIGHLY WEATHERED BASALTIC GRAVEL AND COBBLES, SATURATED |
| 54 | 70 | | | | 84 | | | | | GRADES MOTTLED GRAYISH AND YELLOWISH BROWN |
| | | | | | 50 | 40 | | | | GRADES WITH INCREASING SAND CONTENT |
| 55 | 69 | | | | 53 | | | | | |
| | | | | | 45 | 45 | | | | |

BORING COMPLETED AT 48.5 FEET ON 08-06-93

NOTES:
- ■ UNDISTURBED SAMPLE
- ⊠ DISTURBED SAMPLE
- □ SAMPLE LOST DURING EXTRACTION
- ◪ STANDARD PENETRATION TEST SAMPLE (SPLIT-SPOON SAMPLER)
- I CORE RUN
- DRIVING ENERGY: 140-LB. DROPPING 30 INCHES

LOG OF BORING
Pacific Geotechnical Engineers, Inc.
PLATE

PM: LHF/ERO
OPER: CDK,*FAI
REVISED: 01/05/94
CHECK/DATE: GYL/11-02-93
CHECK/DATE: /

FILE: 9318-06
SCALE: 1 = 1
DATE: 10/4/93

ORIGINAL PLAN
NOTEBOOK No.
SURVEY PLOTTED BY
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY
DATE

GLEN Y. F. LAU
REGISTERED PROFESSIONAL ENGINEER
No. 6095-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# PERMANENT SLOPE AT RAMP B
# BORING LOGS

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(72)
SCALE: AS NOTED
DATE: JAN. 1994
SHEET NO. RB-9 OF 13 SHEETS
C.O. 65 S-7

| DATE | REVISION |
|---|---|
| | |
| | |
| | |

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1 (72) | 1991 | C.O. 65 S-8 | 521 |

## BORING 5 (Page 1 of 1)

PROJECT Kaneohe Interchange JOB No. 4399-003
LOCATION Kaneohe, Oahu, Hawaii DRAWN BY my (08-13-93)
SURFACE ELEVATION 404.5 ± Feet
DATUM Mean Sea Level

| MOISTURE CONTENT % | DRY DENSITY (pcf) | CORE TYPE | RECOVERY % | ROD % & (RQD) % | BLOWS/FT. | DEPTH (feet) | SAMPLES | GRAPHIC LOG | SOIL CLASS | DESCRIPTION |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 0 | | | GM | 6.5 INCHES THICK OF ASPHALTIC CONCRETE |
| 47 | 76 | | | | 31 | | | | MH | GRAYISH BROWN SILTY SANDY BASALTIC GRAVEL, MOIST (BASE COURSE) |
| 58 | 67 | | | | 18 | 5 | | | | BROWN CLAYEY SILT, STIFF, WITH BASALTIC GRAVEL AND SOME CORALLINE GRAVEL, MOIST (FILL) |
| 52 | 66 | | | | 17 | | | | | MOTTLED BROWN AND GRAYISH BROWN CLAYEY SILT, STIFF, WITH SOME WEATHERED BASALTIC GRAVEL, AND TRACE OF ROOTS AND LEAVES, MOIST |
| | | | | | 16 | 10 | | | | GRADES MEDIUM STIFF |
| 56 | 66 | | | | 18 | 15 | | | | GRADES STIFF |
| | | | | | 77 | 20 | | | GC | MOTTLED BROWN AND GRAYISH BROWN HIGHLY WEATHERED CLAYEY GRAVEL AND COBBLES, MEDIUM DENSE TO DENSE, MOIST |
| | | | | | | | | | GC | GRADES WITH BOULDERS |
| | | | | | | 25 | | | | BOULDERS AT 23.5 TO 25.8 FEET |
| | | | | | 32 | | | | GC | GRADES DARK GRAYISH BROWN, MEDIUM DENSE, AND WET |
| | | | | | | 30 | | | GC | BOULDER AT 29.0 TO 30.0 FEET |
| | | | | | 66 | | | | | BOULDER AT 33.5 TO 34.5 FEET |
| 62 | | | | | 42 | 35 | | | ML | BROWN SANDY SILT, MEDIUM DENSE TO DENSE, WITH SOME FINE HIGHLY WEATHERED BASALTIC GRAVEL, SATURATED |
| | | | | | 22 | 40 | | | | GRADES LOOSE |
| | | | | | 41 | 45 | | | | GRADES MEDIUM DENSE |
| | | | | | 9 | | | | | GRADES LOOSE |
| | | | | | | 50 | | | | |

BORING COMPLETED AT 53.5 FEET ON 08-06-93. UNABLE TO MEASURE STABILIZED WATER LEVEL BECAUSE THIS BORING WAS DRILLED ON LIKELIKE HIGHWAY AND HAD TO BE BACKFILLED THE SAME DAY IT WAS DRILLED.

## BORING 6 (Page 1 of 1)

PROJECT Kaneohe Interchange JOB No. 4399-003
LOCATION Kaneohe, Oahu, Hawaii DRAWN BY my (08-02-93)
SURFACE ELEVATION 384.2 ± Feet
DATUM Mean Sea Level

| MOISTURE CONTENT % | DRY DENSITY (pcf) | CORE TYPE | RECOVERY % | ROD % & (RQD) % | BLOWS/FT. | DEPTH (feet) | SAMPLES | GRAPHIC LOG | SOIL CLASS | DESCRIPTION |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 0 | | | MH | BROWN SANDY CLAYEY SILT, MEDIUM STIFF, WITH FINE GRAVEL, WET (FILL) |
| | | | | | 84 | 5 | | | MH | BASALTIC COBBLES AND BOULDERS FROM 1.9 TO 5.0 FEET |
| | | | | | | | | | | GRADES STIFF AND WITH INCREASING GRAVEL CONTENT |
| 44 | 77 | | | | 34 | | | | MH | BASALTIC BOULDER FROM 6.5 TO 7.5 FEET |
| 31 | 93 | | | | 35 | 10 | | | | GRADES MEDIUM STIFF TO STIFF |
| | | | | | 74/7" | | | | GM | MOTTLED BROWN AND GRAY HIGHLY WEATHERED SILTY SANDY BASALTIC GRAVEL, MEDIUM DENSE, WET |
| | | | | | 28 | 15 | | | | GRADES WITH INCREASING CLAYEY SILT CONTENT AND MEDIUM DENSE |
| | | | | | 4 | | | | | (WATER LEVEL AT 1017 HOURS ON 08-19-93) |
| | | | | | | 20 | | | | GRADES VERY LOOSE |
| | | | | | 46 | | | | | GRADES DENSE |
| | | | | | 23 | 25 | | | MH | MOTTLED BROWN AND GRAY SANDY CLAYEY SILT, STIFF, WITH HIGHLY WEATHERED BASALTIC GRAVEL, SATURATED |
| | | | | | 29 | 30 | | | | GRADES WITH INCREASING SAND CONTENT |
| | | | | | 26 | | | | | |
| | | | | | | 35 | | | | GRADES WITH LESS SAND AND MEDIUM STIFF |
| | | | | | 25/14" | | | | | GRADES WITH INCREASING GRAVEL CONTENT |
| | | | | | | 40 | | | SM | BROWN SILTY SAND, MEDIUM DENSE, WITH HIGHLY WEATHERED BASALTIC GRAVEL, SATURATED |
| | | | | | 29 | 45 | | | | |

BORING COMPLETED AT 45.0 FEET ON 07-30-93

## BORING 7 (Page 1 of 1)

PROJECT Kaneohe Interchange JOB No. 4399-003
LOCATION Kaneohe, Oahu, Hawaii DRAWN BY my (08-13-93)
SURFACE ELEVATION 397.8 ± Feet
DATUM Mean Sea Level

| MOISTURE CONTENT % | DRY DENSITY (pcf) | CORE TYPE | RECOVERY % | ROD % & (RQD) % | BLOWS/FT. | DEPTH (feet) | SAMPLES | GRAPHIC LOG | SOIL CLASS | DESCRIPTION |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 0 | | | GM | 7 INCHES OF ASPHALTIC CONCRETE |
| 52 | 72 | | | | 14 | | | | MH | GRAYISH BROWN SILTY SANDY BASALTIC GRAVEL, MOIST (BASE COURSE) |
| | | | | | 17 | 5 | | | | MOTTLED DARK BROWN AND YELLOWISH BROWN CLAYEY SILT, MEDIUM STIFF, TO STIFF WITH BASALTIC SAND AND GRAVEL, MOIST (FILL) |
| | | | | | 22 | | | | MH | DARK GRAYISH BROWN CLAYEY SILT, MEDIUM |
| | | | | | | | | | MH | STIFF, WITH SOME LEAVES AND ROOTS |
| 56 | 68 | | | | 21 | 10 | | | | MOTTLED DARK BROWN AND YELLOWISH BROWN CLAYEY SILT, STIFF, WITH HIGHLY WEATHERED BASALTIC SAND AND GRAVEL, MOIST |
| 52 | 69 | | | | 22 | | | | | |
| | | | | | | 15 | | | | |
| 58 | 66 | | | | 10 | | | | | |
| | | | | | | 20 | | | | |
| | | | | | 43 | | | | | GRADES WITH HIGHLY WEATHERED BASALTIC COBBLES AND BOULDERS |
| | | | | | | 25 | | | | |
| 50 | 71 | | | | 56/3" | | | | | GRADES DARK GRAYISH BROWN AND SOFT |
| | | | | | | 30 | | | | GRADES MOTTLED DARK BROWN AND REDDISH BROWN |
| | | | | | | | | | | BOULDER AT 31.0 TO 33.0 FEET |
| | | | | | | 35 | | | | BOULDER AT 33.8 TO 35.9 FEET |
| | | | | | 25 | | | | | GRADES MOTTLED DARK BROWN AND GRAYISH BROWN, AND MEDIUM STIFF |
| | | | | | | 40 | | | MH | BOULDER AT 38.0 TO 38.5 FEET |
| | | | | | 28 | | | | ML | MOTTLED DARK BROWN AND YELLOWISH BROWN CLAYEY SILT, SOFT TO MEDIUM STIFF, WITH |
| | | | | | 20 | | | | | SOME HIGHLY WEATHERED BASALTIC GRAVEL, SATURATED |
| | | | | | | 45 | | | | |
| | | | | | | | | | MH | MOTTLED DARK BROWN AND YELLOWISH BROWN |
| 71 | 60 | | | | 22 | | | | | CLAYEY SILT, SOFT TO MEDIUM STIFF, WITH SOME SAND AND HIGHLY WEATHERED SURROUNDED BASALTIC GRAVEL, SATURATED |
| | | | | | | 50 | | | | |
| 68 | 62 | | | | 28 | | | | | GRADES WITH INCREASING GRAVEL CONTENT, AND MEDIUM STIFF |
| | | | | | 55 | | | | GC | DARK BROWN HIGHLY WEATHERED SILTY CLAYEY BASALTIC GRAVEL, LOOSE TO MEDIUM DENSE, SATURATED |
| | | | | | 26 | | | | | |

BORING COMPLETED AT 57.5 FEET ON 08-09-93. UNABLE TO MEASURE STABILIZED WATER LEVEL BECAUSE THIS BORING WAS DRILLED ON LIKELIKE HIGHWAY AND HAD TO BE BACKFILLED THE SAME DAY IT WAS DRILLED.

## BORING 8 (Page 1 of 1)

PROJECT Kaneohe Interchange JOB No. 4399-003
LOCATION Kaneohe, Oahu, Hawaii DRAWN BY my (08-02-93)
SURFACE ELEVATION 375.9 ± Feet
DATUM Mean Sea Level

| MOISTURE CONTENT % | DRY DENSITY (pcf) | CORE TYPE | RECOVERY % | ROD % & (RQD) % | BLOWS/FT. | DEPTH (feet) | SAMPLES | GRAPHIC LOG | SOIL CLASS | DESCRIPTION |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 0 | | | MH | BROWN CLAYEY SILT, MEDIUM STIFF, WITH WEATHERED BASALTIC GRAVEL, MOIST |
| | | | | | | | | | | GRADES MOTTLED BROWN AND GRAY |
| | | | | | | | | | | BASALTIC BOULDER FROM 2.5 TO 5.0 |
| | | | | | | 5 | | | SM | BROWN SILTY SAND, LOOSE, WITH HIGHLY WEATHERED BASALTIC GRAVEL, WET |
| | | | | | 25 | | | | SC | BROWN SILTY CLAYEY SAND, MEDIUM STIFF, WITH HIGHLY WEATHERED BASALTIC GRAVEL, WET |
| 48 | 76 | | | | 35 | | | | GM | MOTTLED BROWN AND GRAY HIGHLY WEATHERED |
| | | | | | | | | | GC | SILTY SANDY BASALTIC GRAVEL, MEDIUM DENSE, WITH CLAYEY SILT, WET |
| 38 | 84 | | | | 77 | 10 | | | GC | MOTTLED BROWN AND GRAY SILTY SAND, LOOSE WITH WEATHERED BASALTIC GRAVEL, WET |
| | | | | | | | | | GC | MOTTLED BROWN AND GRAY HIGHLY WEATHERED SILTY CLAYEY, SUBROUNDED BASALTIC GRAVEL, |
| | | | | | 55 | | | | | MEDIUM DENSE, WET |
| | | | | | | | | | | BOULDER FROM 13.0 TO 15.0 |
| 63 | 64 | | | | 16 | 15 | | | MH | MOTTLED BROWNISH GRAY AND REDDISH BROWN CLAYEY SILT, STIFF, WITH HIGHLY WEATHERED |
| | | | | | | | | | GM | BASALTIC GRAVEL, WET |
| 65 | 64 | | | | 21 | | | | GC | MOTTLED BROWN AND GRAY HIGHLY WEATHERED SILTY SANDY BASALTIC GRAVEL, LOOSE, WITH |
| | | | | | | 20 | | | MH | SOME CLAYEY SILT, WET |
| | | | | | 17 | | | | | MOTTLED BROWN AND GRAY SANDY CLAYEY SILT, STIFF, WITH TRACE OF FINE HIGHLY WEATHERED BASALTIC GRAVEL, WET |
| 66 | 63 | | | | 19 | 25 | | | | (WATER LEVEL AT 1023 HOURS ON 8-19-93) |
| | | | | | | | | | | GRADES WITH FINE, SUBROUNDED, HIGHLY WEATHERED BASALTIC GRAVEL |
| 76 | 57 | | | | 15 | 30 | | | | |
| 61 | 65 | | | | 17 | 35 | | | | |
| | | | | | 31 | 40 | | | | GRADES VERY STIFF, SATURATED |
| | | | | | | 40.5 | | | | |

BORING COMPLETED AT 40.5 FEET ON 07-29-93

NOTES:
- ■ UNDISTURBED SAMPLE
- ⊠ DISTURBED SAMPLE
- □ SAMPLE LOST DURING EXTRACTION
- ◪ STANDARD PENETRATION TEST SAMPLE (SPLIT-SPOON SAMPLER)
- I CORE RUN
- DRIVING ENERGY: 140-LB. DROPPING 30 INCHES

LOG OF BORING
Pacific Geotechnical Engineers, Inc.
PLATE

GLEN Y. F. LAU
REGISTERED PROFESSIONAL ENGINEER
No. 6095-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Glen Y. F. Lau

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# PERMANENT SLOPE AT RAMP B
# BORING LOGS

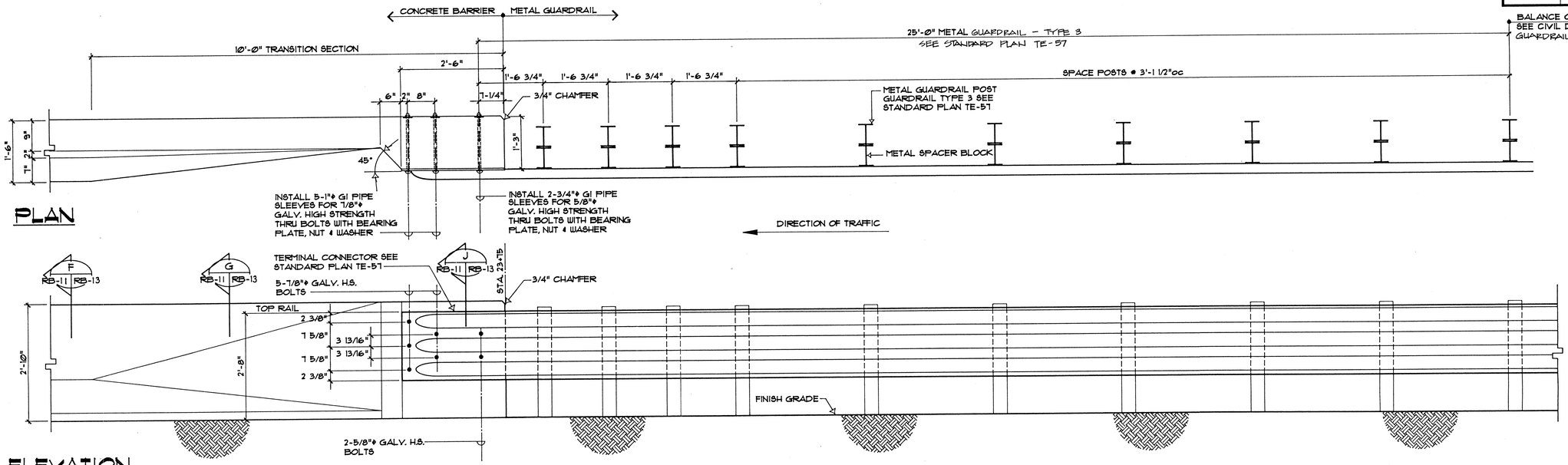
INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(72)
SCALE: AS NOTED DATE: JAN. 1994
SHEET NO. RB-10 OF 13 SHEETS
C.O. 65 S-8

| DATE | REVISION |
|---|---|
| | |
| | |
| | |

PM: LHF/ERO CHECK/DATE: GYL/11-02-93
OPER: CDK:*FAI CHECK/DATE: /
REVISED: 01/05/94
FILE: 9318-07
SCALE: 1 = 1
DATE: 10/1/93

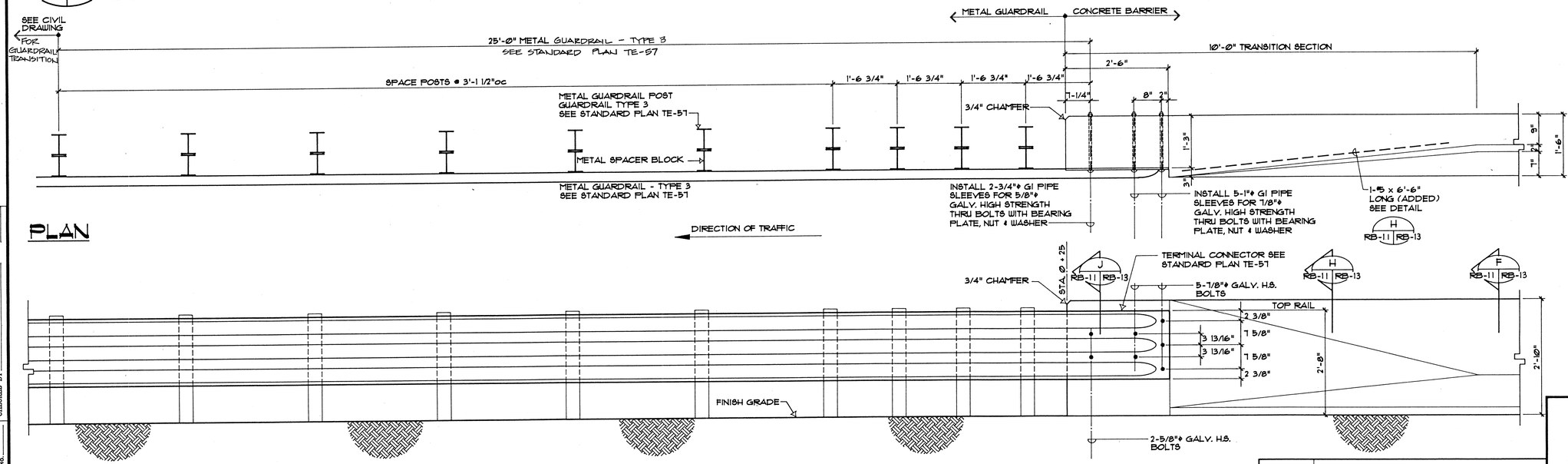
ORIGINAL PLAN
NOTEBOOK No.
SURVEY PLOTTED BY
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY
DATE

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O. 65S-9 | 521 |




## METAL GUARDRAIL TRANSITION TO CONCRETE BARRIER - RAMP B STATION 23+75

1 RB-11 | RB-11 SC: 3/4" = 1'-0"




## CONCRETE BARRIER TRANSITION TO METAL GUARDRAIL - RELOCATED LIKELIKE HWY. STATION Ø+25

2 RB-11 | RB-11 SC: 3/4" = 1'-0"

SURVEY PLOTTED BY
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY
DATE
ORIGINAL PLAN
NOTE BOOK
No.
SCALE: 1"=1'-0" 1-19-94 0073810

| DATE | REVISION |
|---|---|
| | |
| | |
| | |
| | |

LESLIE M. NAGATA
REGISTERED PROFESSIONAL ENGINEER
No. 4540-S
HAWAII, U.S.A.
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

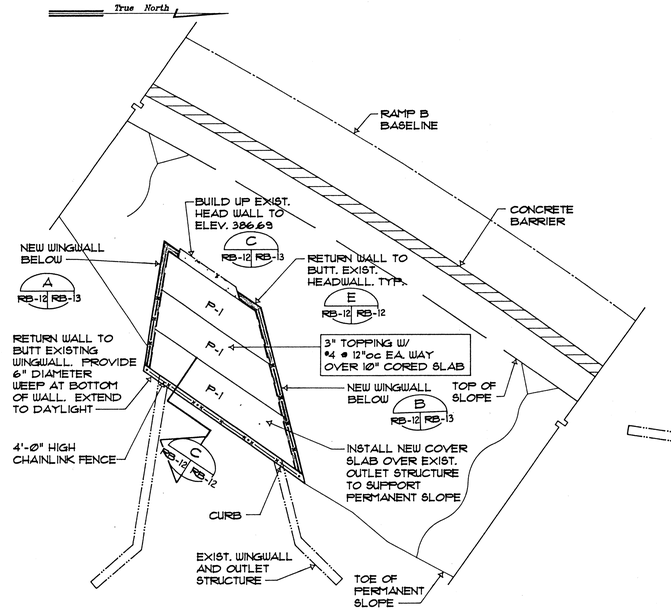
# PERMANENT SLOPE AT RAMP B
# CONCRETE BARRIER TRANSITION

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(72)

SCALE: AS NOTED DATE: JAN. 1994

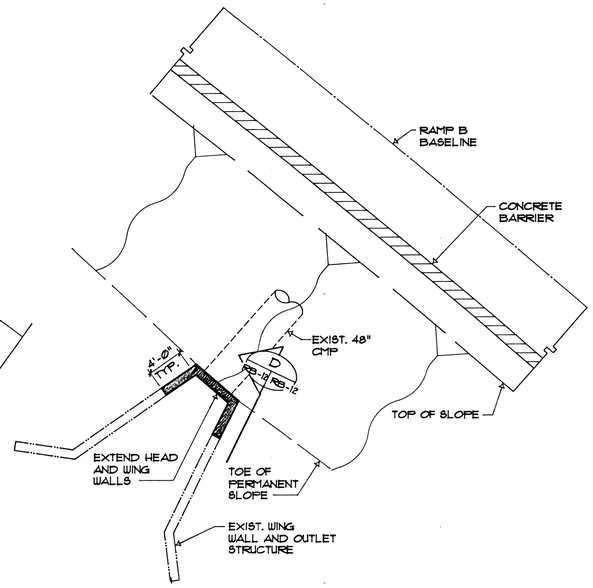
SHEET No. RB-11 OF 13 SHEETS

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O. 65S-10 | 521 |



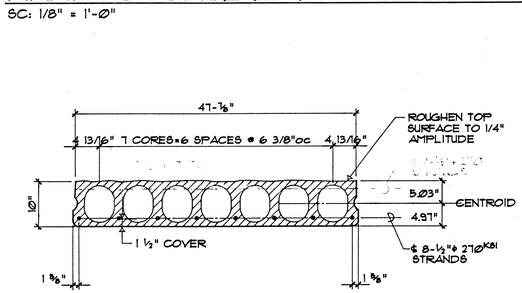

## PLAN-EXISTING OUTLET STRUCTURE RAMP "B" BASE LINE STATION 24 + 71

SC: 1/8" = 1'-0"

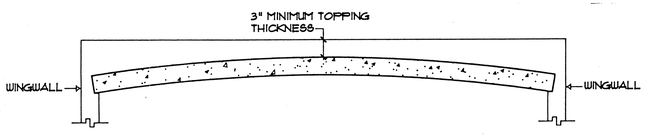



## PLAN-EXISTING OUTLET STRUCTURE RAMP "B" BASE LINE STATION 25 + 73.5

SC: 1/8" = 1'-0"




## CORED SLAB CROSS SECTION




## CORED SLAB LONGITUDINAL SECTION (EXAGGERATED)

NOTES:

A. CONCRETE STRENGTH FOR PRECAST/PRESTRESSED CONCRETE SHALL BE
6000 PSI AT 28 DAYS
4000 PSI AT RELEASE

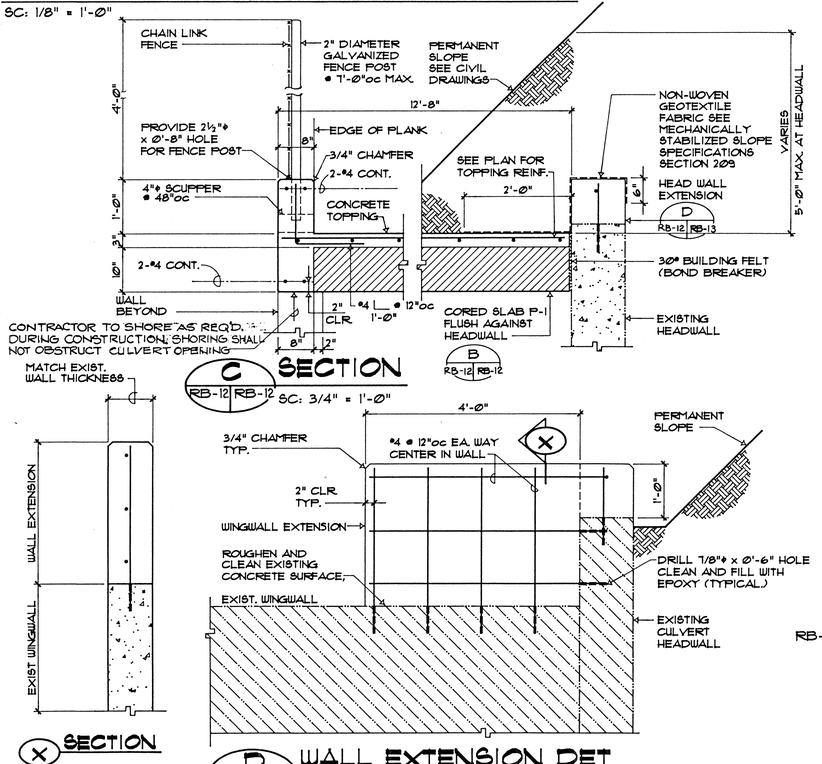
B. CONCRETE TOPPING SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3500 PSI. MINIMUM CONCRETE STRENGTH AT START OF SLOPE CONSTRUCTION SHALL BE 3000 PSI.

C. PRESTRESSING STRANDS SHALL BE 1/2" DIAMETER 270 KSI STRESS RELIEVED STRANDS CONFORMING TO ASTM A416. PROVIDE MINIMUM EFFECTIVE PRESTRESS OF 55.10 KIPS PER FOOT AFTER ALL LOSSES.

D. STRAND SLIPPAGE: AT TRANSFER OF PRESTRESS (STRAND BURN OFF) THE STRAND SLIPPAGE IN HALF THE STRANDS SHALL NOT EXCEED ⅛ INCH. FABRICATOR SHALL MEASURE AND RECORD SLIPPAGE FOR ALL STRANDS.

## B RB-12 RB-12 PRECAST/PRESTRESSED CORED SLAB (P-1)

NOT TO SCALE




CONTRACTOR TO SHORE AS REQ'D. DURING CONSTRUCTION. SHORING SHALL NOT OBSTRUCT CULVERT OPENING

## C RB-12 RB-12 SECTION

SC: 3/4" = 1'-0"

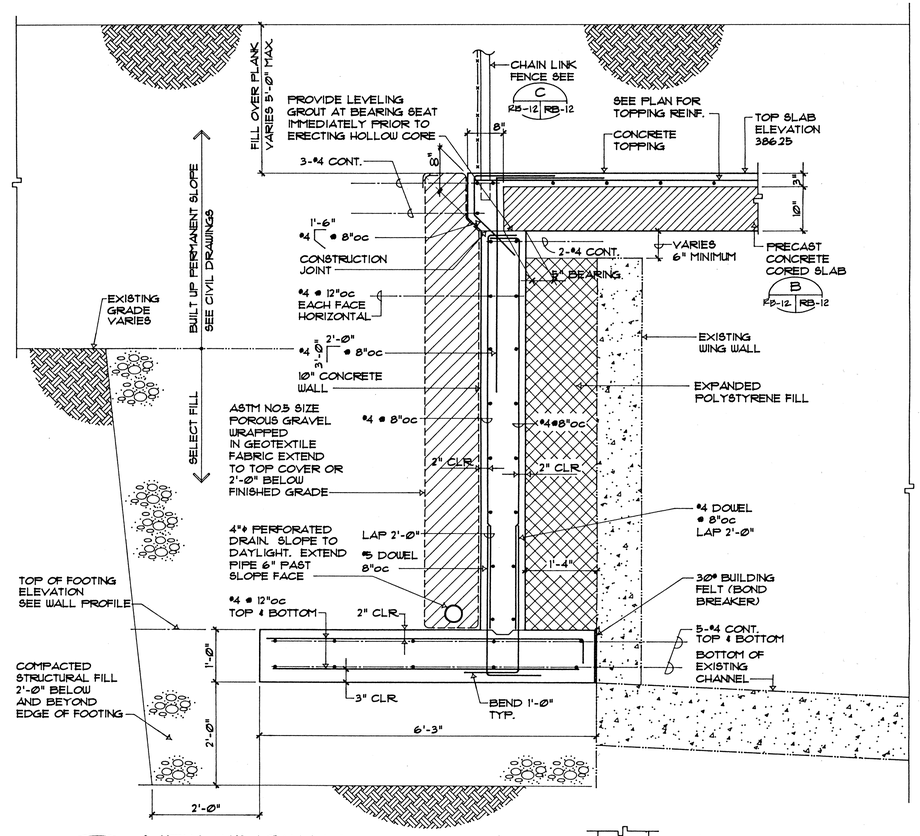



## X SECTION



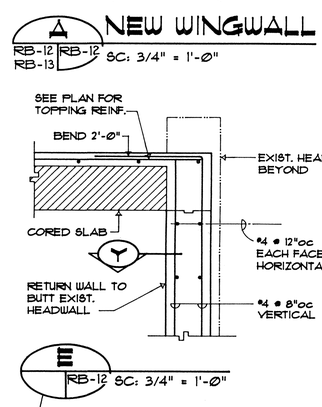

## D RB-12 RB-12 WALL EXTENSION DET.

SC: 3/4" = 1'-0"



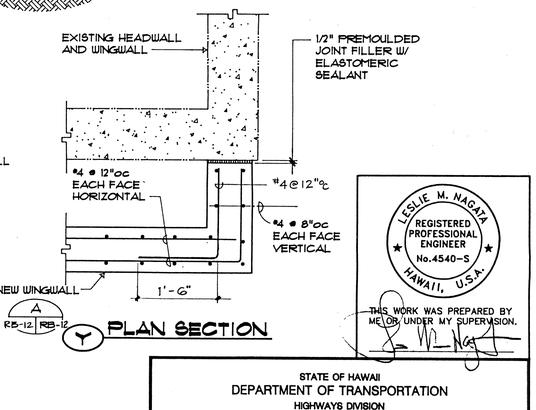

## A RB-12 RB-12 RB-13 NEW WINGWALL

SC: 3/4" = 1'-0"




## E RB-12 RB-12, RB-13

SC: 3/4" = 1'-0"




## Y PLAN SECTION

LESLIE M. NAGATA
REGISTERED PROFESSIONAL ENGINEER
No. 4540-S
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

| DATE | REVISION |
|---|---|
| | |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# PERMANENT SLOPE AT RAMP B MODIFICATIONS TO EXIST. CULVERTS

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(72)

SCALE: AS NOTED DATE: JAN. 1994

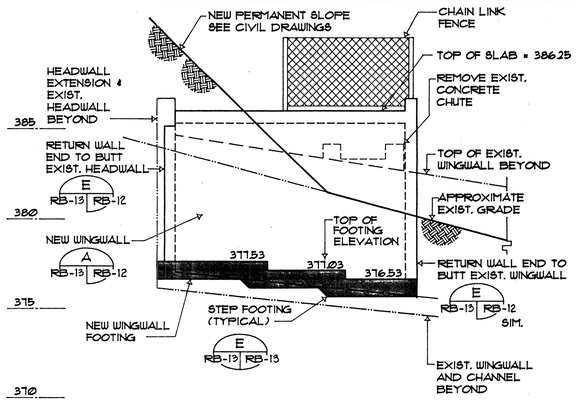
SHEET No. RB-12 OF 13 SHEETS

C.O. 65S-10

SURVEY PLOTTED BY
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY
DATE

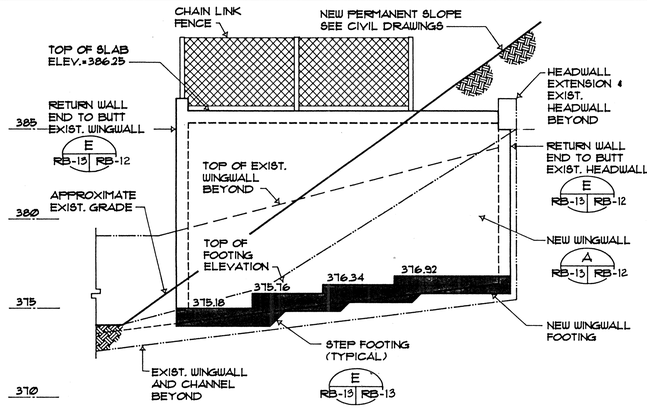
ORIGINAL PLAN
NOTE BOOK
No.
00130911
1-26-94
SCALE: 1"=1'-0"

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O. 65S-11 | 521 |



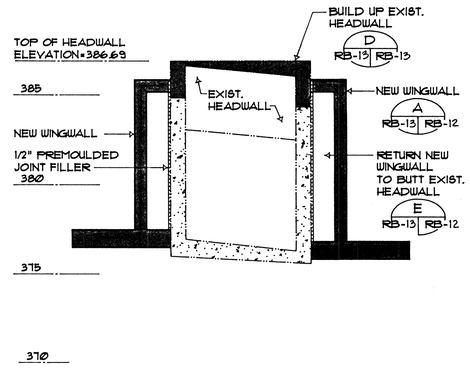

## A WINGWALL PROFILE

2B-12 | RB-13 SC: 1/4" = 1'-0"



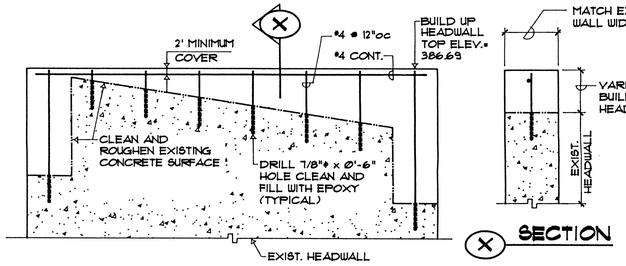

## B WINGWALL PROFILE

2B-12 | RB-13 SC: 1/4" = 1'-0"




## C HEADWALL ELEVATION

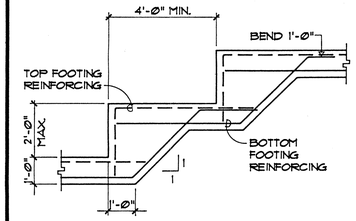
2B-12 | RB-13 SC: 1/4" = 1'-0"




X SECTION

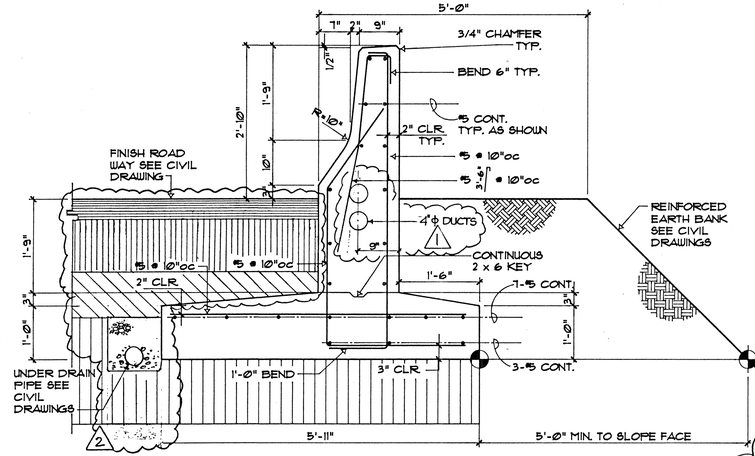
## D ELEVATION-HEADWALL EXTENSION

RB-12 | RB-13 RB-13 SC: 3/4" = 1'-0"



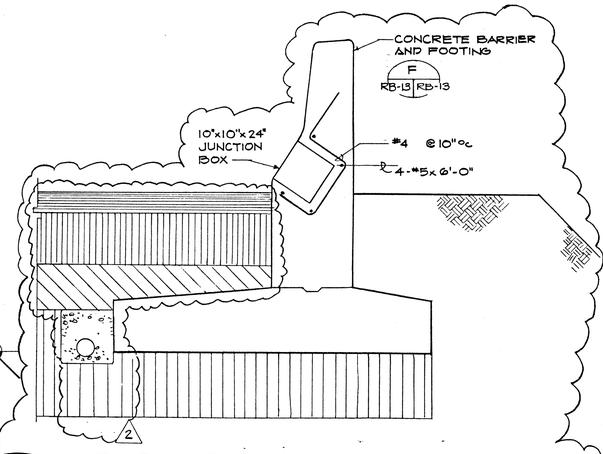

## E STEPPED FOOTING

RB-13 | RB-13 NOT TO SCALE




## F TYPICAL CONCRETE BARRIER

RB-11 | RB-13 RB-13 SC: 3/4" = 1'-0"




## L ADDED REINFORCING AT JUNCTION BOX

1 RB-13 | RB-13 SC: 3/4" = 1'-0"

GENERAL NOTES:

A. CONTRACTOR SHALL VERIFY ALL FIELD DIMENSIONS AND CONDITIONS PRIOR TO STARTING WORK.

B. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL EXCAVATION PROCEDURES INCLUDING SHORING, LAGGING, AND PROTECTION OF ADJACENT PROPERTIES AND UTILITIES.

C. ALL CONCRETE WORK SHALL CONFORM TO 1989 AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES

D. 28 DAY COMPRESSIVE STRENGTH, AGGREGATE SIZE AND SLUMP SHALL BE AS FOLLOWS:

| | STRENGTH PSI | MAXIMUM AGGREGATE | SLUMP +/- 1" |
|---|---|---|---|
| FOOTINGS | 3000 | 1-1/2" | 3-1/2" |
| SUSPENDED SLABS | 3000 | 3/4" | 3-1/2" |
| WALLS | 3000 | 3/4" | 3-1/2" |
| TOPPING | 3500 | 3/4" | 3-1/2" |
| PRESTRESSED CONCRETE | 6000 | 3/4" | NA |
| CONCRETE BARRIER | 3000 | 3/4" | 3-1/2" |

E. ALL REINFORCING BARS SHALL CONFORM TO ASTM A615-81, GRADE 60.

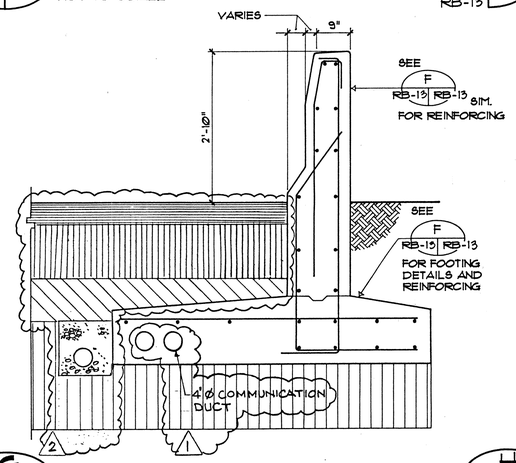
F. BARS NOTED "CONT." SHALL BE SPLICED A MINIMUM OF 32 BAR DIAMETERS, BUT NEVER LESS THAN 2'-0".

G. MINIMUM CONCRETE COVER FOR REINFORCING BARS SHALL BE:
- CONCRETE CAST AGAINST EARTH ..... 3"
- EXPOSED TO EARTH OR WEATHER ..... 2"
- STIRRUP AND TIES ..... 1-1/2"

H. METAL TRAFFIC BARRIER SHALL BE GUARDRAIL TYPE 3, THRIE BEAM. SEE STANDARD PLAN TE-51.

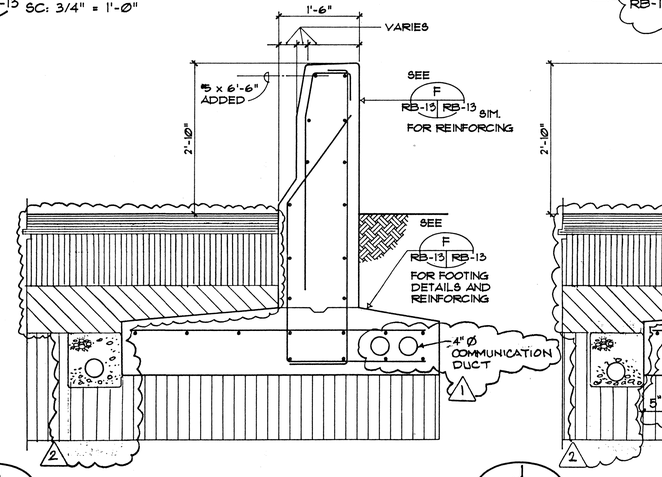
I. CONCRETE BARRIER:
1. PLACE EXPANSION JOINTS AT MAXIMUM 90'-0" INTERVALS. SEE STANDARD PLAN TE-63. EXPANSION JOINT SHALL EXTEND THROUGH BARRIER WALL AND FOOTING. DISCONTINUE REINFORCING AT EXPANSION JOINT. SEAL EXTERIOR SURFACE OF JOINT WITH AN ELASTOMERIC SEALANT.
2. BETWEEN EXPANSION JOINTS PROVIDE KEYED CONTROL OR COLD JOINTS AT MAXIMUM 30'-0" INTERVALS.

J. CONCRETE CULVERT COVER:
1. CONTRACTOR SHALL NOT BACKFILL CULVERT EXTENSION UNTIL THE CONCRETE COVER IS IN PLACE AND CURED SUFFICIENTLY TO SUPPORT ALL APPLIED LOADS.
2. COMPACTION OF FILL OVER COVER SHALL BE DONE WITH LIGHT HAND OPERATED VIBRATORY PLATE COMPACTORS.
3. COMPACTION OF FILL ADJACENT TO THE NEW WING WALLS SHALL BE DONE WITH HAND OPERATED ROLLERS AND/OR JUMPING JACK COMPACTORS
4. PERMANENT SLOPE CONSTRUCTION SHALL NOT BEGIN UNTIL THE TOPPING HAS ATTAINED A COMPRESSIVE STRENGTH OF 3000 PSI. CONTRACTOR SHALL TEST CONCRETE CYLINDERS TO DETERMINE TOPPING STRENGTH.
5. NO SHORING IS ALLOWED IN EXISTING CULVERT CHANNEL.



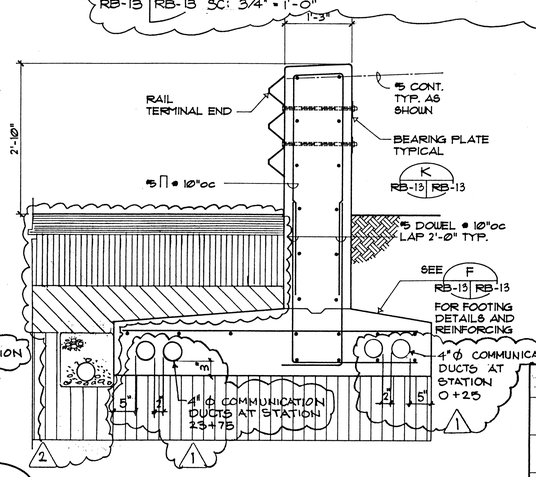

## G

RB-11 | RB-13 SC: 3/4" = 1'-0"



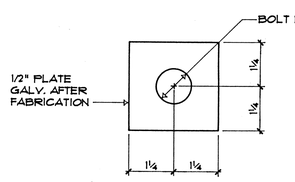

## H

RB-11 | RB-13 SC: 3/4" = 1'-0"




## J

RB-11 | RB-13 SC: 3/4" = 1'-0"




## K BEARING PLATE DET.

RB-11 | RB-13 RB-13 SC: HALF SIZE

LESLIE M. NAGATA
REGISTERED PROFESSIONAL ENGINEER
No. 4540-S
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

| DATE | REVISION |
|---|---|
| 12-27-94 | 1 4" DIAMETER COMMUNICATION DUCT LINE |
| 12-27-94 | 2 REVISED ROAD SECTION |
| | |
| | |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# PERMANENT SLOPE AT RAMP B
# STRUCTURAL DETAILS

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(72)

SCALE: AS NOTED DATE: JAN. 1994

SHEET No. RB-13 OF 13 SHEETS

C.O. 65S-11

ORIGINAL PLAN
SURVEY PLOTTED BY
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY
NOTE BOOK
No.
DATE
1-28-94 007369/2
SCALE 1"=1'-0"

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O. ADD 66 | 521 |

True North
Scale 1" = 40'

Likelike Emergency Escape Ramp Baseline
Exist. Dirt Road
Toe Of Fill
Top Of Cut
Ramp TK Baseline
Reloc. Likelike Hwy. Baseline
Ramp D Baseline
Limit of Clearing and Grubbing
Exist. Likelike Highway
Exist. Likelike Highway Baseline
MATCH LINE STA. 1091+00 (See Sheet 6)
Begin Ramp D Sta. 1083+57.76 =Relocated Likelike Hwy. @ Sta. 33+06.86 (o/s 59.00' Lt.)
R/W

250.50 250.94 252.59 252.89 254.90 254.81 257.64 256.00 260.69 257.45
1089 252.08 254.45 1090 257.06 259.86

| | |
|---|---|
| 10/8/93 | Revised Lined Trap Ditch Alignment. |
| 9/7/93 | Deleted Revision Dated 5/10/93. |
| 7/2/93 | Revised Likelike E.E.R. Grading. |
| ~~5/10/93~~ | ~~Revised Ditches and Limit of Clearing and Grubbing @ Reloc. Likelike Sta. 33+80± Lt. to 34+80± Lt.~~ |
| 3/29/93 | Revised grading @ TK Station 1+90± & ℄ Sta. 33+00 to 35+17± |
| 1/27/92 | Revised Right of Way @ Castle Hills Subd. Revised values and locations of finish roadway elevations @ Reloc. Likelike Sta. 27+00 Lt. & Ramp D Sta. 1089+50 Lt. Revised Limits of Clearing and Grubbing. |
| DATE | REVISION |

ROBERT I. ITAGAKI
REGISTERED PROFESSIONAL ENGINEER
No. 1584-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# GRADING PLAN
## RAMP D
## STA.1083+57.76 TO STA. 1091+00

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(72)

SCALE: AS NOTED DATE: DEC. 1991

SHEET No. OF SHEETS

C.O. ADD. 66

ORIGINAL PLAN
NOTE BOOK
No.

SURVEY PLOTTED BY
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY
DATE

83-453 Files\-D-\DWG Back\GRADING PLAN Disk 1 of 6 Plot:1=40 Date:10/13/93 By

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | 67 | 521 |

Toe Of Fill
Top Of Cut
Réloc. Likelike Hwy. Baseline
Likelike Emergency Escape Ramp Baseline
MATCH LINE STA. 1091+00 (See Sheet 66)
Top Of Cut
East Likelike Highway Baseline
Limit of Clearing and Grubbing
Top Of Cut
Ramp D Baseline
Toe Of Fill
Limit of Clearing and Grubbing
Top Of Cut
Top Of Cut
MATCH LINE STA. 1102+00 (See Sheet 68)
H3 Baseline
Toe Of Fill
R/W
BEGIN KANEOHE INTERCHANGE
℄ Sta. 333+62
True North
Scale : 1" = 40'

ORIGINAL PLAN
SURVEY PLOTTED BY
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY
DATE
NOTE BOOK
No.

83-45.2 F:\G-D-2.DWG DGRADING PLANS Sht. 3 of 6 Plot1=40 Date8/1/96 kkk

ROBERT I. ITAGAKI
REGISTERED PROFESSIONAL ENGINEER
No. 1584-C
HAWAII, U.S.A.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

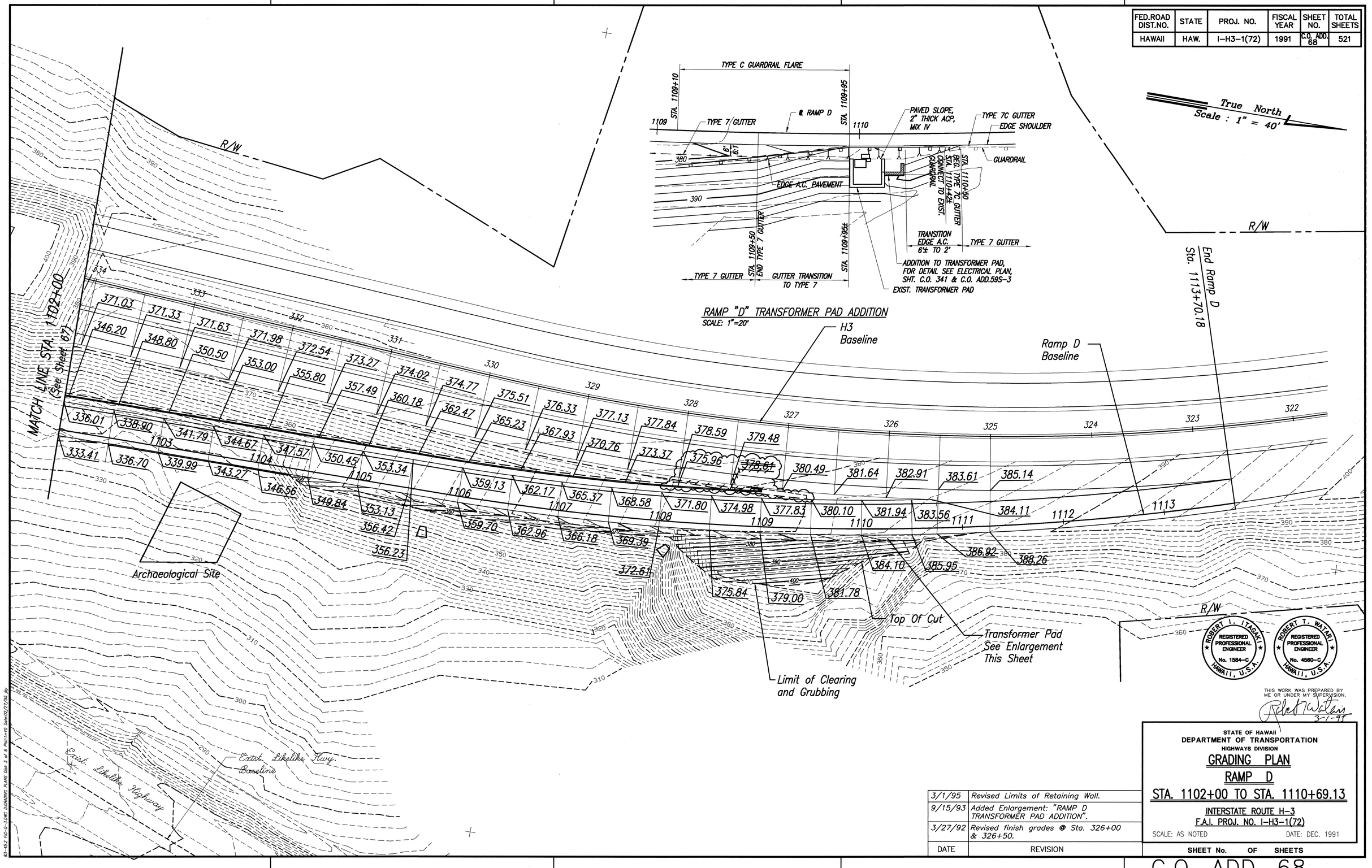
# GRADING PLAN
## RAMP D
## STA. 1091+00 TO STA. 1102+00

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(72)

SCALE: AS NOTED DATE:

SHEET No. OF SHEETS

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O. ADD. 68 | 521 |







RAMP "D" TRANSFORMER PAD ADDITION
SCALE: 1"=20'

| ORIGINAL PLAN | SURVEY PLOTTED BY | DATE |
|---|---|---|
| | DRAWN BY | |
| NOTE BOOK | TRACED BY | |
| | DESIGNED BY | |
| No. | QUANTITIES BY | |
| | CHECKED BY | |

82-452 FIG-D-3.DWG DGRADING PLANS Disk 3 of 6 Plot1=40 Date02/27/95 Pw

| DATE | REVISION |
|---|---|
| 3/1/95 | Revised Limits of Retaining Wall. |
| 9/15/93 | Added Enlargement: "RAMP D TRANSFORMER PAD ADDITION". |
| 3/27/92 | Revised finish grades @ Sta. 326+00 & 326+50. |

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

ROBERT I. ITAGAKI REGISTERED PROFESSIONAL ENGINEER No. 1584-C HAWAII, U.S.A.

ROBERT T. WATARI REGISTERED PROFESSIONAL ENGINEER No. 4560-C HAWAII, U.S.A.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# GRADING PLAN
## RAMP D
## STA. 1102+00 TO STA. 1110+69.13

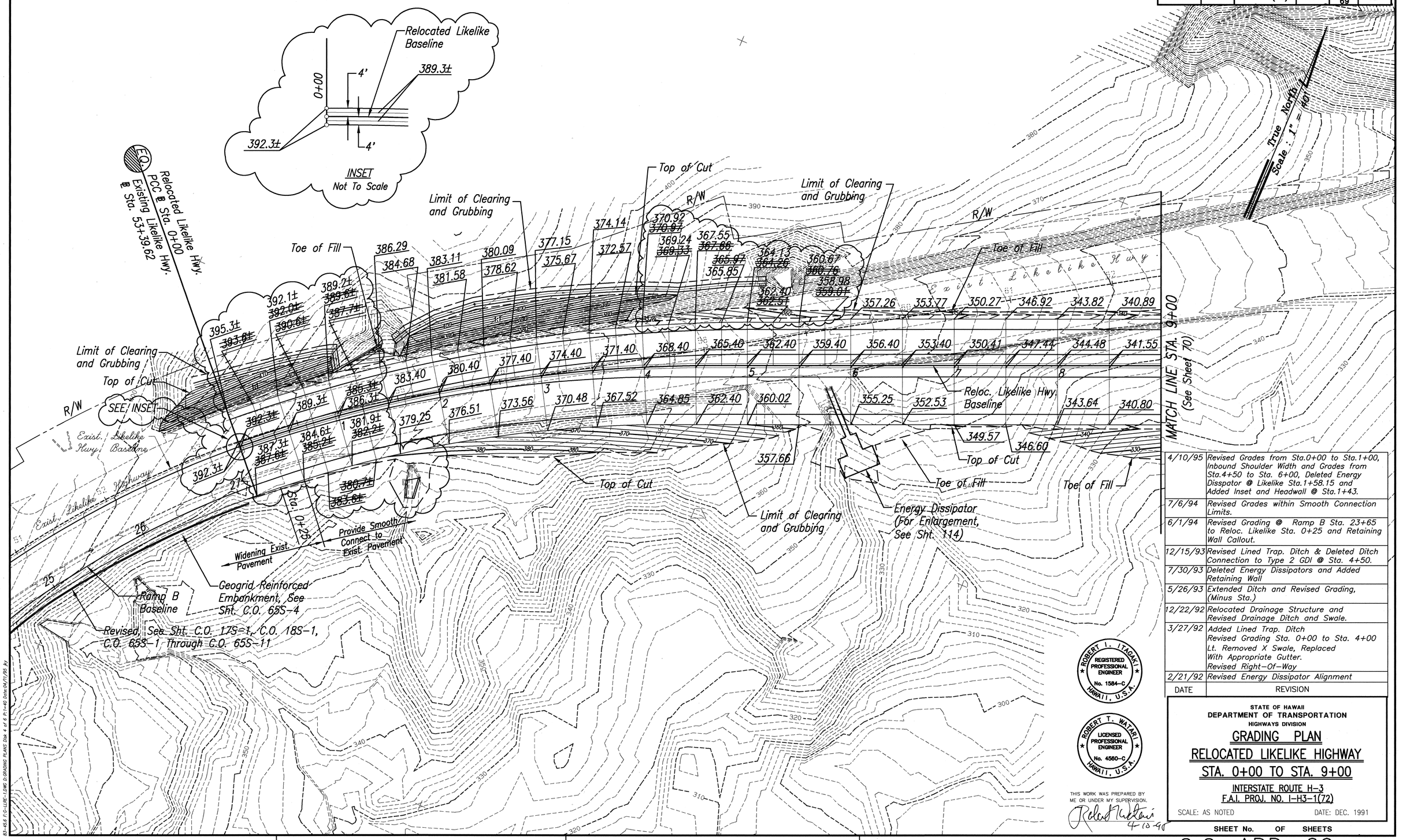
INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(72)

SCALE: AS NOTED DATE: DEC. 1991

SHEET No. OF SHEETS

C.O. ADD. 68

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O. ADD. 69 | 521 |




| DATE | REVISION |
|---|---|
| 4/10/95 | Revised Grades from Sta.0+00 to Sta.1+00, Inbound Shoulder Width and Grades from Sta.4+50 to Sta. 6+00, Deleted Energy Disspator @ Likelike Sta.1+58.15 and Added Inset and Headwall @ Sta.1+43. |
| 7/6/94 | Revised Grades within Smooth Connection Limits. |
| 6/1/94 | Revised Grading @ Ramp B Sta. 23+65 to Reloc. Likelike Sta. 0+25 and Retaining Wall Callout. |
| 12/15/93 | Revised Lined Trap. Ditch & Deleted Ditch Connection to Type 2 GDI @ Sta. 4+50. |
| 7/30/93 | Deleted Energy Dissipators and Added Retaining Wall |
| 5/26/93 | Extended Ditch and Revised Grading, (Minus Sta.) |
| 12/22/92 | Relocated Drainage Structure and Revised Drainage Ditch and Swale. |
| 3/27/92 | Added Lined Trap. Ditch<br>Revised Grading Sta. 0+00 to Sta. 4+00 Lt. Removed X Swale, Replaced With Appropriate Gutter.<br>Revised Right-Of-Way |
| 2/21/92 | Revised Energy Dissipator Alignment |

ROBERT I. ITAGAKI
REGISTERED PROFESSIONAL ENGINEER
No. 1584-C
HAWAII, U.S.A.

ROBERT T. WATARI
LICENSED PROFESSIONAL ENGINEER
No. 4560-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
4-15-92

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# GRADING PLAN
# RELOCATED LIKELIKE HIGHWAY
# STA. 0+00 TO STA. 9+00

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(72)

SCALE: AS NOTED DATE: DEC. 1991

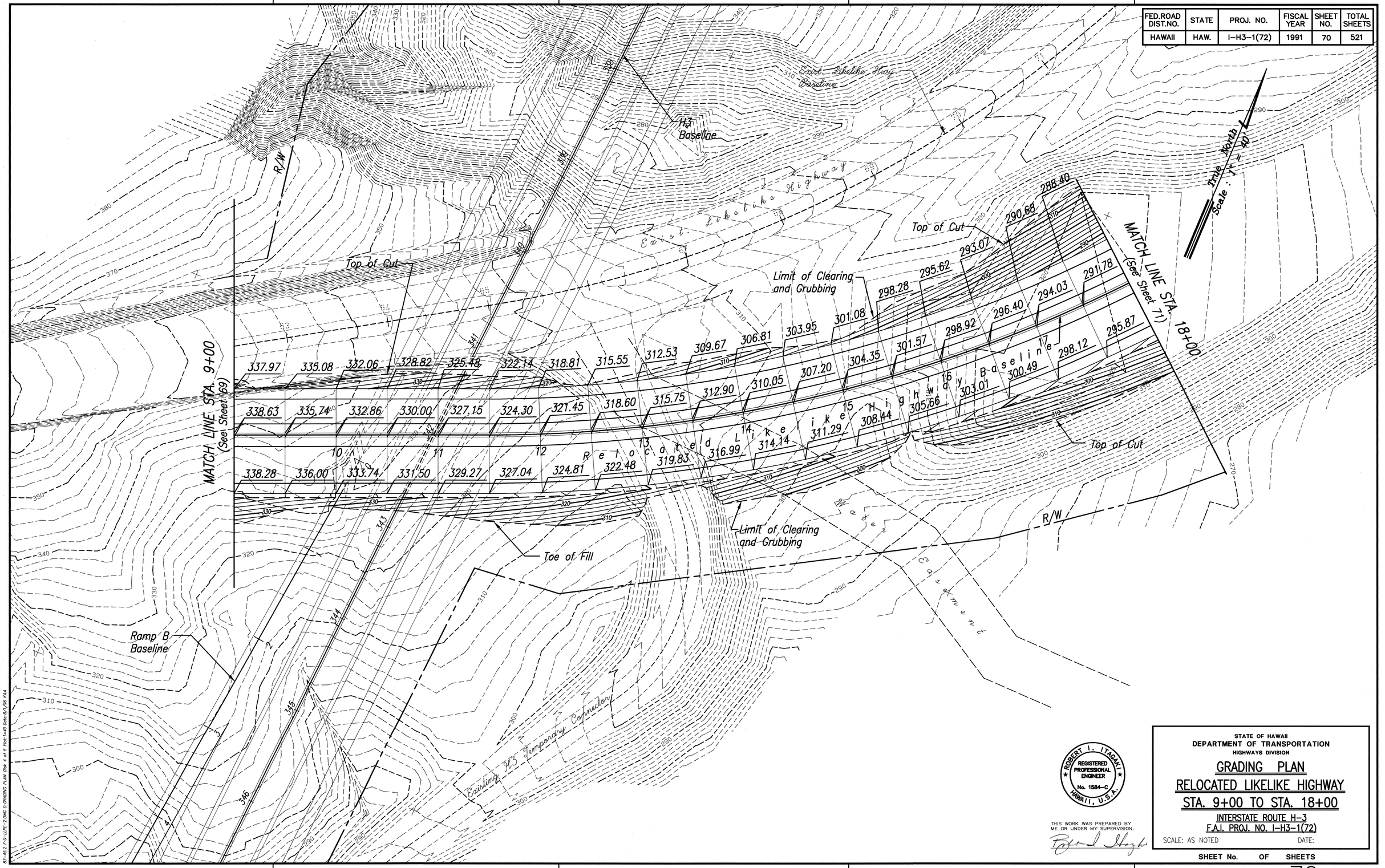
SHEET No. OF SHEETS

ORIGINAL PLAN
NOTE BOOK No.
SURVEY PLOTTED BY DATE
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY

83-45 F:\C-I\GRC-1\DWG D\GRADING PLANS Disk 4 of 6 P.1+40 Date:04/11/92 By

C.O. ADD. 69

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | 70 | 521 |




| | | |
|---|---|---|
| ORIGINAL PLAN | SURVEY PLOTTED BY | DATE |
| | DRAWN BY | |
| NOTE BOOK | TRACED BY | |
| | DESIGNED BY | |
| No. | QUANTITIES BY | |

83-45.2 P:\C-LIBE-2.DWG D:GRADING PLAN Disk 4 of 6 Plot:1=40 Date:8/1/91 KAA

ROBERT I. ITAGAKI
REGISTERED PROFESSIONAL ENGINEER
No. 1584-C
HAWAII, U.S.A.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

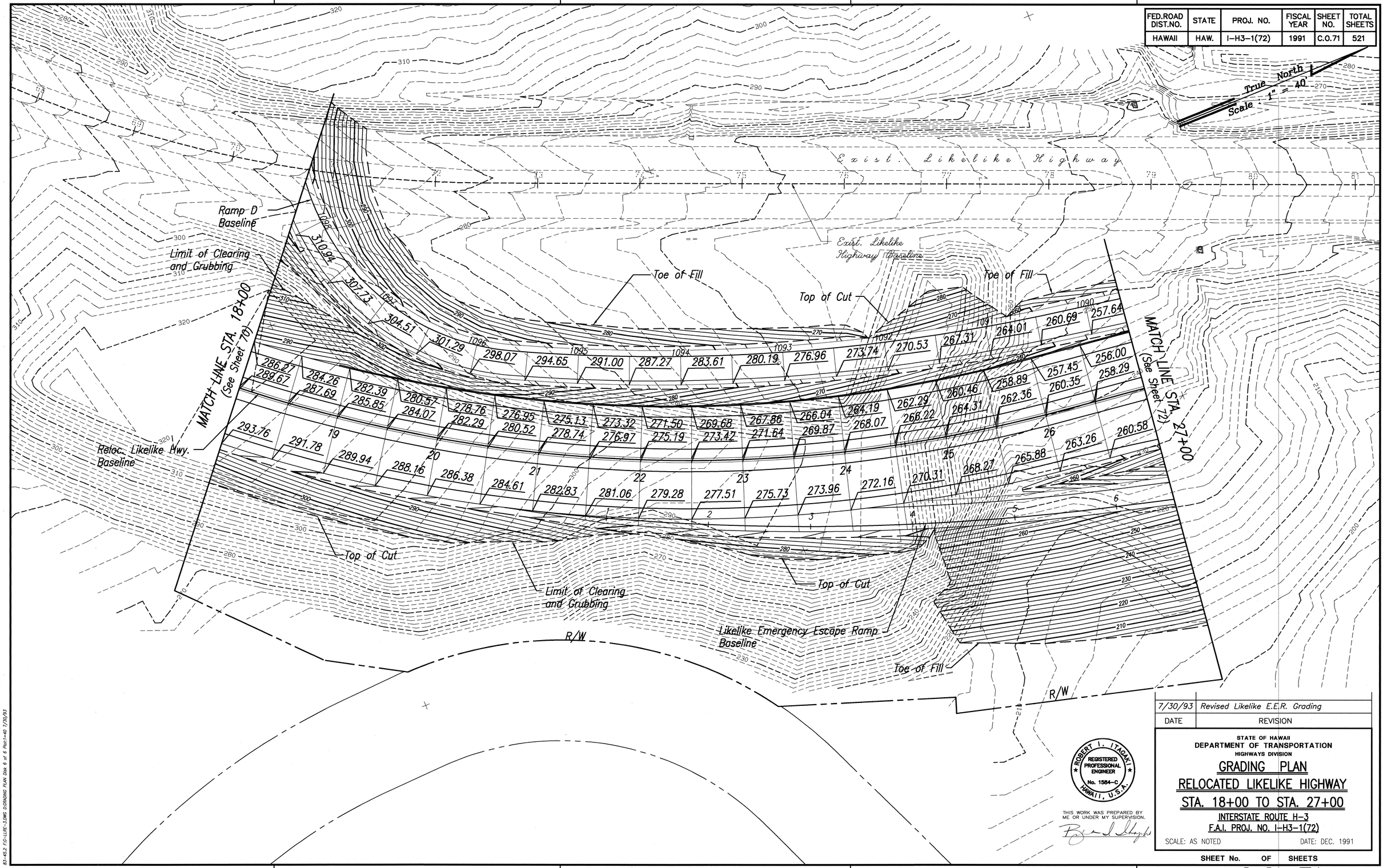
# GRADING PLAN
## RELOCATED LIKELIKE HIGHWAY
## STA. 9+00 TO STA. 18+00

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(72)

SCALE: AS NOTED DATE:

SHEET No. OF SHEETS

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O.71 | 521 |




| DATE | REVISION |
|---|---|
| 7/30/93 | Revised Likelike E.E.R. Grading |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# GRADING PLAN
## RELOCATED LIKELIKE HIGHWAY
## STA. 18+00 TO STA. 27+00

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(72)

SCALE: AS NOTED DATE: DEC. 1991

ROBERT I. ITAGAKI
REGISTERED PROFESSIONAL ENGINEER
No. 1584-C
HAWAII, U.S.A.

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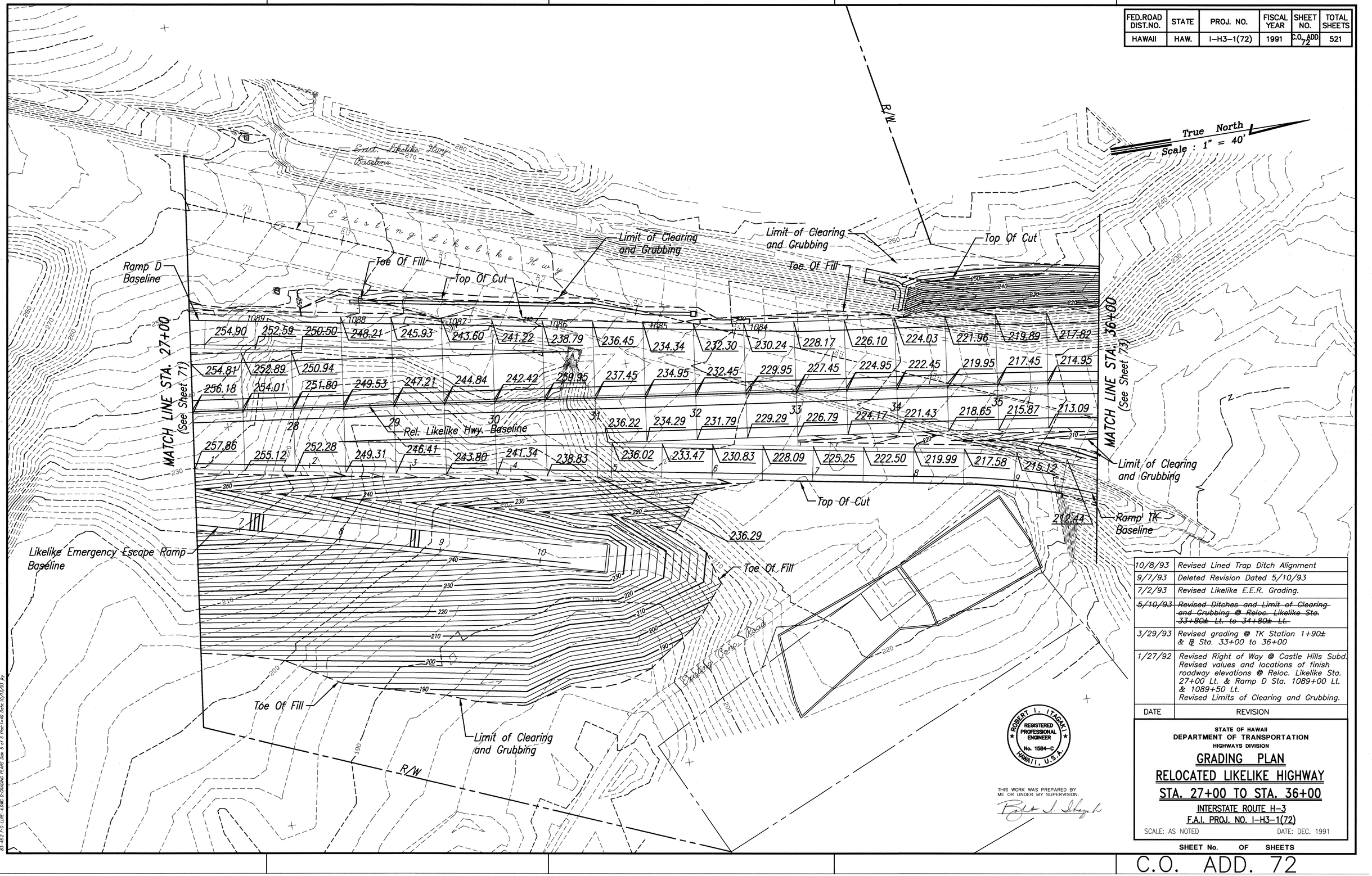
SHEET No. OF SHEETS

C.O. 71

| | | |
|---|---|---|
| ORIGINAL PLAN | SURVEY PLOTTED BY | DATE |
| | DRAWN BY | |
| NOTE BOOK | TRACED BY | |
| No. | DESIGNED BY | |
| | QUANTITIES BY | |
| | CHECKED BY | |

83-45.2 FG-LIKE-1(MM) DGNGNG PLAN Dist 6 of 6 Pkt1-40 7/30/93

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O. ADD. 72 | 521 |




| DATE | REVISION |
|---|---|
| 10/8/93 | Revised Lined Trap Ditch Alignment |
| 9/7/93 | Deleted Revision Dated 5/10/93 |
| 7/2/93 | Revised Likelike E.E.R. Grading. |
| ~~5/10/93~~ | ~~Revised Ditches and Limit of Clearing and Grubbing @ Reloc. Likelike Sta. 33+80± Lt. to 34+80± Lt.~~ |
| 3/29/93 | Revised grading @ TK Station 1+90± & ℄ Sta. 33+00 to 36+00 |
| 1/27/92 | Revised Right of Way @ Castle Hills Subd. Revised values and locations of finish roadway elevations @ Reloc. Likelike Sta. 27+00 Lt. & Ramp D Sta. 1089+00 Lt. & 1089+50 Lt. Revised Limits of Clearing and Grubbing. |

ROBERT I. ITAGAKI
REGISTERED PROFESSIONAL ENGINEER
No. 1584-C
HAWAII, U.S.A.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# GRADING PLAN
# RELOCATED LIKELIKE HIGHWAY
# STA. 27+00 TO STA. 36+00

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(72)

SCALE: AS NOTED DATE: DEC. 1991

SHEET No. OF SHEETS

ORIGINAL PLAN
NOTE BOOK No.
SURVEY PLOTTED BY DATE
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY

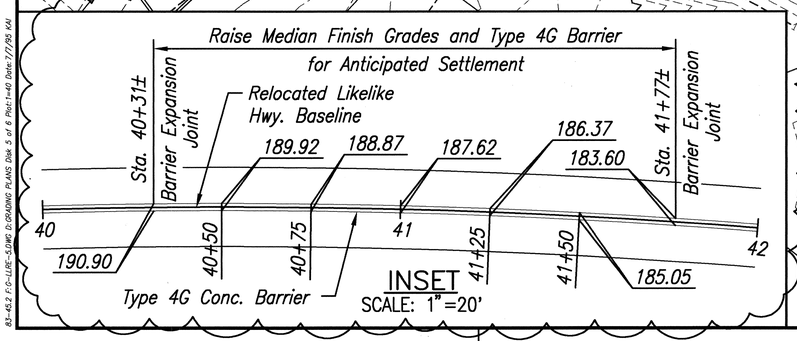
81-46.2 F:\D--LIKE-4.DWG D:GRADING PLANS Dgn 5 of 6 Plot:1=40 Date:10/1/93 By

C.O. ADD. 72

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O. ADD 73 | 521 |

True North
Scale : 1" = 40'

Limit of Clearing and Grubbing
R/W
Top Of Cut
Toe Of Fill
See Inset Below
MATCH LINE STA. 36+00 (See Sheet 72)
MATCH LINE STA. 45+00 (See Sheet 74)
Reloc. Likelike Hwy. Baseline
Exist. Likelike Highway
Exist. Likelike Hwy. Baseline
Ramp TK Baseline
Ramp KM Baseline




| | |
|---|---|
| 7/7/95 | Revised Median Finish Grades from Sta. 40+31± to Sta. 41+77±. |
| 1/27/92 | Revised Right of Way @ Castle Hills Subd. Revised Limits of Clearing and Grubbing. |
| DATE | REVISION |

ROBERT I. ITAGAKI
REGISTERED PROFESSIONAL ENGINEER
No. 1584-C
HAWAII, U.S.A.

ARNOLD H. FUKUMOTO
LICENSED PROFESSIONAL ENGINEER
No. 8393-C
HAWAII, U.S.A.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# GRADING PLAN
## RELOCATED LIKELIKE HIGHWAY
## STA. 36+00 TO STA. 45+00

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(72)

SCALE: AS NOTED DATE: DEC. 1991

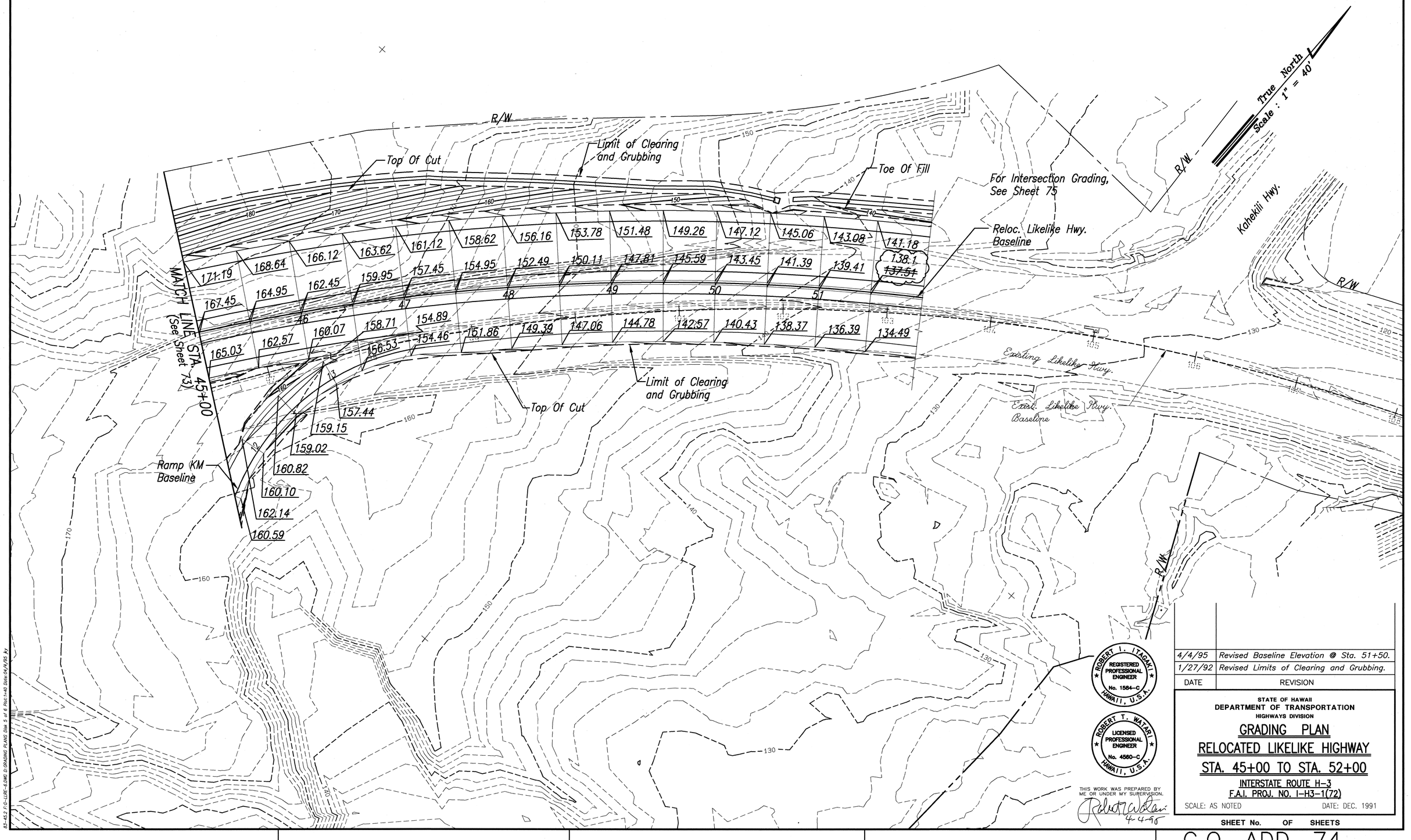
SHEET No. OF SHEETS

ORIGINAL PLAN
NOTE BOOK No.
SURVEY PLOTTED BY DATE
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY

83-45.2 P:\C-I-H3-1(72)\DGN\ D-GRADING PLANS Disk 5 of 6 Plot:1=40 Date:7/7/95 KH

C.O. ADD. 73

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O. ADD 74 | 521 |




| DATE | REVISION |
|---|---|
| 4/4/95 | Revised Baseline Elevation @ Sta. 51+50. |
| 1/27/92 | Revised Limits of Clearing and Grubbing. |

ROBERT I. ITAGAKI
REGISTERED PROFESSIONAL ENGINEER
No. 1584-C
HAWAII, U.S.A.

ROBERT T. WATARI
LICENSED PROFESSIONAL ENGINEER
No. 4560-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
4-4-95

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# GRADING PLAN
## RELOCATED LIKELIKE HIGHWAY
## STA. 45+00 TO STA. 52+00

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(72)

SCALE: AS NOTED DATE: DEC. 1991

SHEET No. OF SHEETS

C.O. ADD. 74

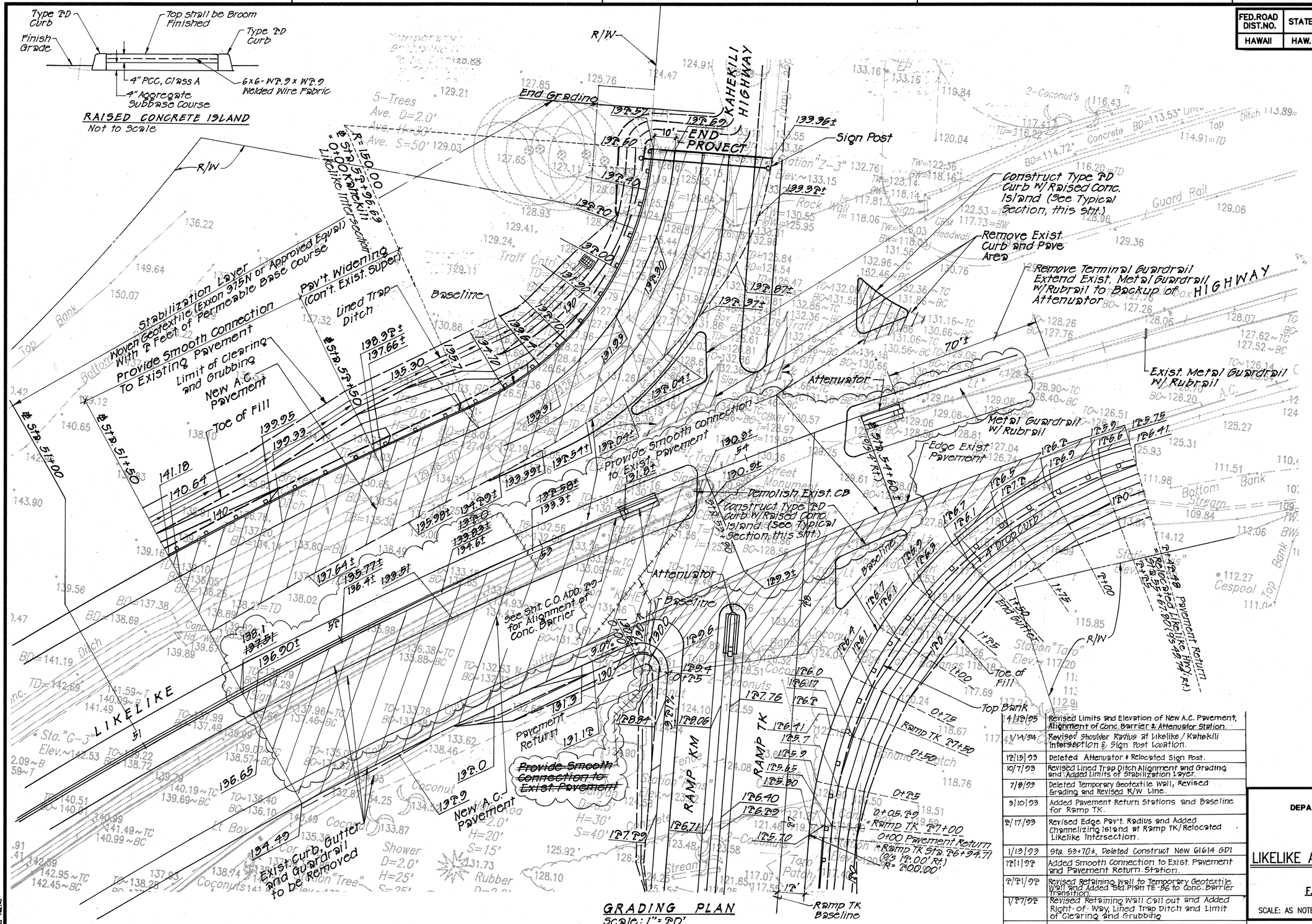
ORIGINAL PLAN
NOTE BOOK No.
SURVEY PLOTTED BY DATE
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY

81-452 F:\O-L\PE-4.DWG D:\DRAWING PLANS\Dgn 5 of 6 Plot:1=40 Date:04/4/95 by

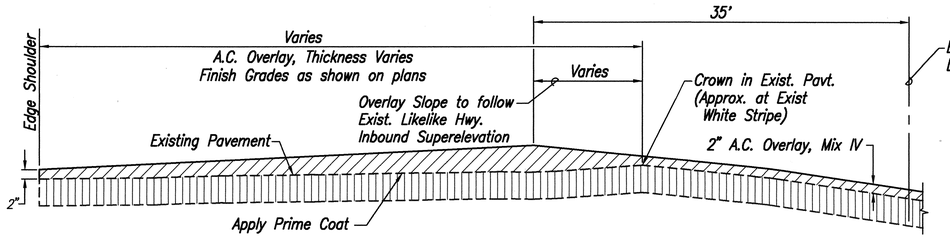
| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O. ADD.75 | 521 |



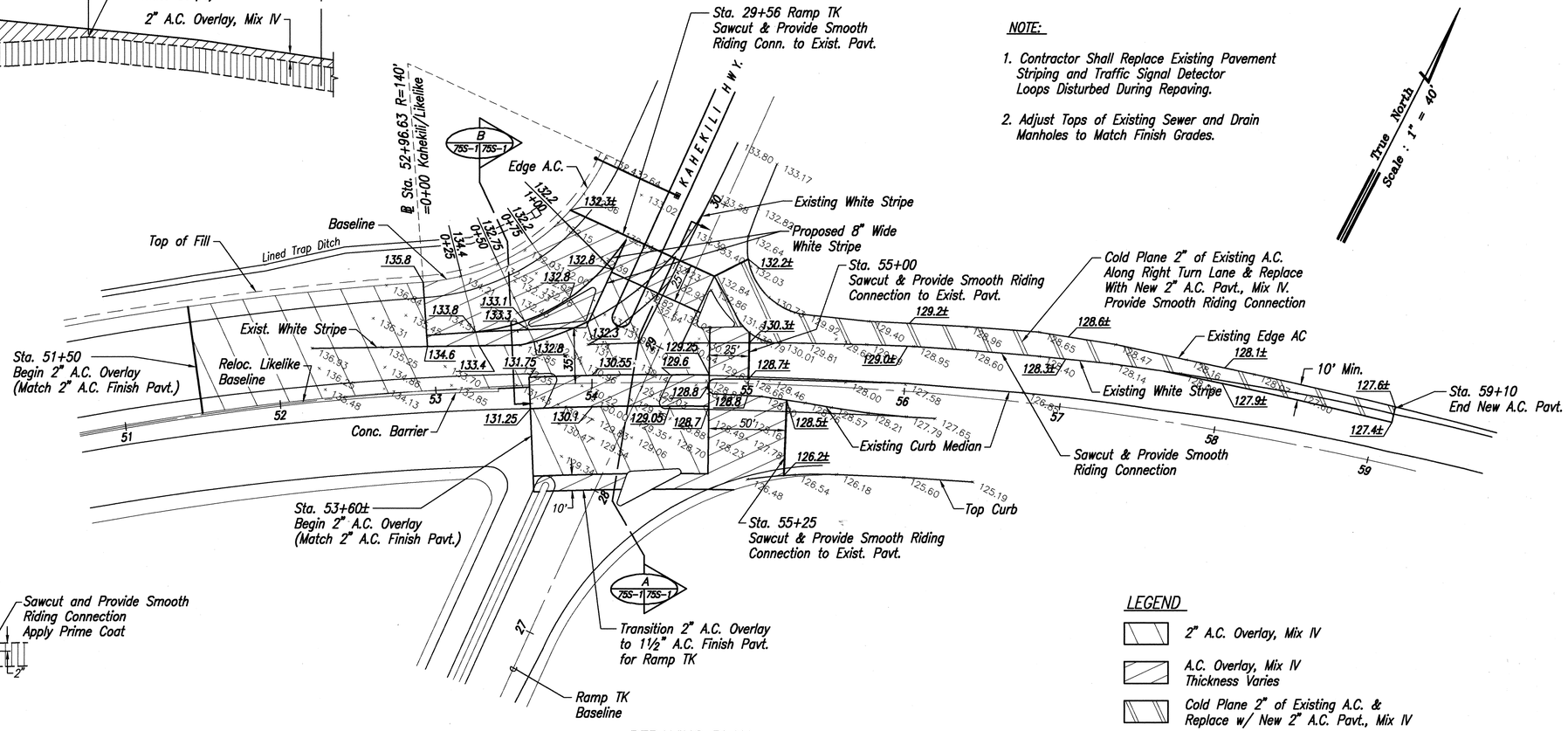

RAISED CONCRETE ISLAND
Not to Scale


R/W
End Grading
KAHEKILI HIGHWAY
10' END PROJECT
Sign Post
Construct Type PD Curb w/ Raised Conc. Island (See Typical Section, this Sht.)
Remove Exist. Curb and Pave Area
Remove Terminal Guardrail Extend Exist. Metal Guardrail w/Rubrail to Backup of Attenuator
HIGHWAY
Exist. Metal Guardrail w/ Rubrail
Attenuator
70'±
Metal Guardrail w/ Rubrail
Edge Exist. Pavement
Sta. 51+00
Sta. 51+50
Sta. 52+50
Sta. 53+70±
Sta. 54+60±
R=150.00'
Sta. 55+96.69 = 0+00 Kahekili Likelike Intersection
Stabilization Layer Woven Geotextile (Exxon 315N or Approved Equal) With 1' Feet of Permeable Base Course
Provide Smooth Connection To Existing Pavement
Pav't. Widening (Con't. Exist. Super)
Limit of Clearing and Grubbing
New A.C. Pavement
Toe of Fill
Lined Trap Ditch
Baseline
LIKELIKE
Exist. Curb, Gutter and Guardrail to be Removed
Demolish Exist. CB
Construct Type PD curb w/Raised Conc. Island (See Typical Section this Sht.)
Provide Smooth connection to Exist. Pavement
Attenuator
Baseline
See Sht C.O. ADD. 70 for Alignment of Conc. Barrier
Pavement Return
Provide Smooth Connection to Exist. Pavement
New A.C. Pavement
RAMP KM
RAMP TK
0+75
Ramp TK Sta. 87+50
0+50
0+25
0+00 Pavement Return
*Ramp TK Sta. 86+94.71 (C/S 12.00' Rt. R= 200.00')
Ramp TK Baseline
Toe of Fill
Top Bank
End Barrier
1+00
1+25
1+50
Pavement Return Likelike Hwy. (Rt.)
Relocated Likelike Hwy. (Rt.)
R/W
1:1½
2:1
4' Drop Curb
Guard Rail
Concrete
Ditch
Top
Bottom
Bank
Stream
Cespool
Rock Wall
Coconuts
Shower
Rubber
Iron Wood
Monkey Pod
Traff Cntrl
Headwall
Sign
Street
Light
Monument
Station "Z-3"
Station "G-3"
Sta. "C-3"
Sta. "D-3"
Sta. "E-3"
Sta. "F-3"
Sta. "Top"
Elev.~142.53
Elev.~117.20
Elev.~133.15
Elev.~119.84
Elev.~116.43
Elev.~116.22
Elev.~114.91
Elev.~113.53
Elev.~112.27
Elev.~111.98
Elev.~111.51
Elev.~109.84
Elev.~108.89
Elev.~108.08
Elev.~129.08
Elev.~129.36
Elev.~128.96
Elev.~128.26
Elev.~127.76
Elev.~127.62
Elev.~127.52
Elev.~126.20
Elev.~125.27
Elev.~125.31
Elev.~125.93
Elev.~124.10
Elev.~124.08
Elev.~123.87
Elev.~123.48
Elev.~122.56
Elev.~121.65
Elev.~121.48
Elev.~120.04
Elev.~119.51
Elev.~118.76
Elev.~118.67
Elev.~118.16
Elev.~117.81
Elev.~117.73
Elev.~117.69
Elev.~117.07
Elev.~116.90
Elev.~116.49
Elev.~115.85
Elev.~114.25
Elev.~112.98
Elev.~112.06
Elev.~111.02
Elev.~110.4
Elev.~109.08
Elev.~108.06
Elev.~107.76
Elev.~107.69
Elev.~107.41
Elev.~107.27
Elev.~107.17
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Elev.~102.09
Elev.~102.08
Elev.~102.07
Elev.~102.06
Elev.~102.05

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O. 75S-1 | 521 |



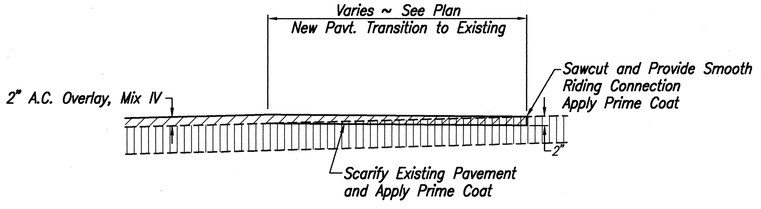

SECTION B (75S-1 | 75S-1)
Not to Scale




NOTE:

1. Contractor Shall Replace Existing Pavement Striping and Traffic Signal Detector Loops Disturbed During Repaving.
2. Adjust Tops of Existing Sewer and Drain Manholes to Match Finish Grades.

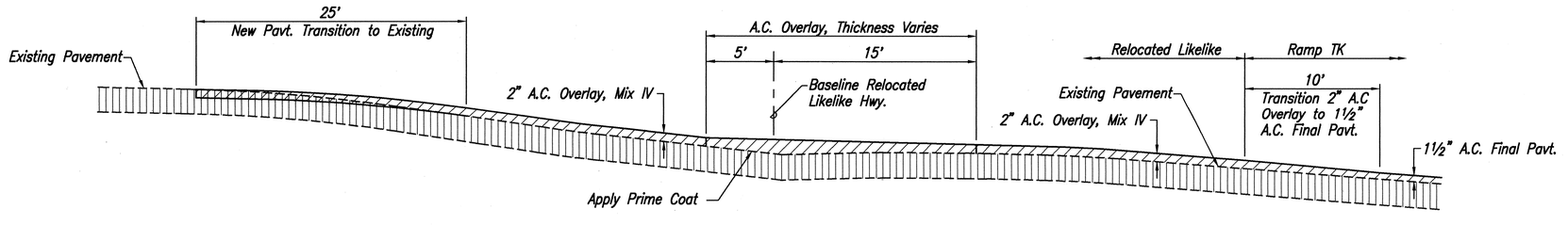
REPAVING PLAN
Scale: 1" = 40'




TYPICAL CONNECTION TO EXISTING PAVEMENT
Scale: 1" = 40'

LEGEND

- 2" A.C. Overlay, Mix IV
- A.C. Overlay, Mix IV Thickness Varies
- Cold Plane 2" of Existing A.C. & Replace w/ New 2" A.C. Pavt., Mix IV




SECTION A (75S-1 | 75S-1)
Not to Scale

| DATE | REVISION |
|---|---|
| 6/22/95 | Sheet Added for Repaving of Likelike Hwy. and Kahekili Hwy. Intersection. |

ARNOLD H. FUKUMOTO
LICENSED PROFESSIONAL ENGINEER
No. 8393-C
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THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# REPAVING PLAN
# LIKELIKE AND KAHEKILI INTERSECTION

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(72)

SCALE: AS NOTED DATE: DEC. 1991

SHEET No. OF SHEETS

C.O. 75S-1

ORIGINAL PLAN | NOTE BOOK No. | SURVEY PLOTTED BY | DRAWN BY | TRACED BY | DESIGNED BY | QUANTITIES BY | DATE

83-45.6 F:\HWE-H1\DWG D-POST DESIGN (MCG) Plot1=40 06/23/95 KH

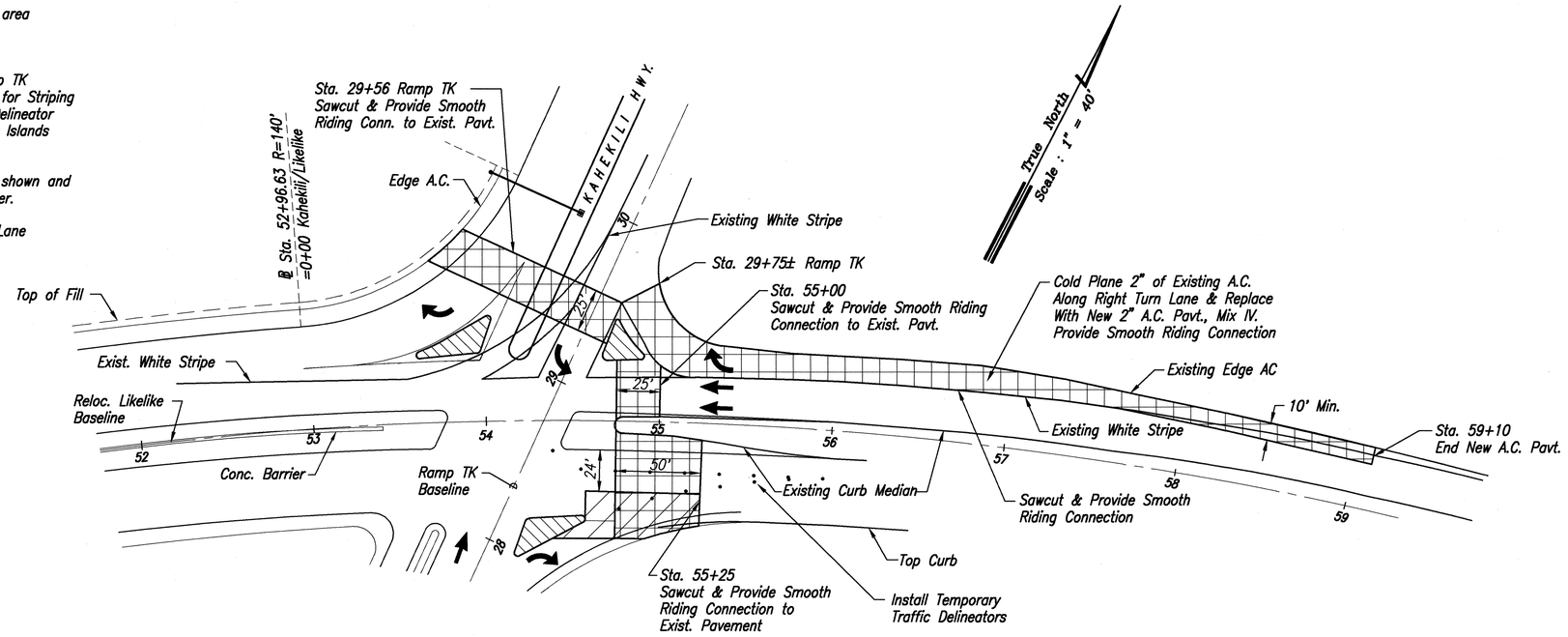
| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O. 75S-2 | 521 |

Defer A.C. Overlay in this area to Ramp TK Final Paving

PHASE 1
Realign Traffic along Ramp TK
See Sheet C.O. ADD. 368 for Striping
Install Temporary Traffic Delineator
Construct Raised Concrete Islands

PHASE 2
Mill Existing Pavement as shown and as directed by the Engineer.

Vehicular Movement, One Lane

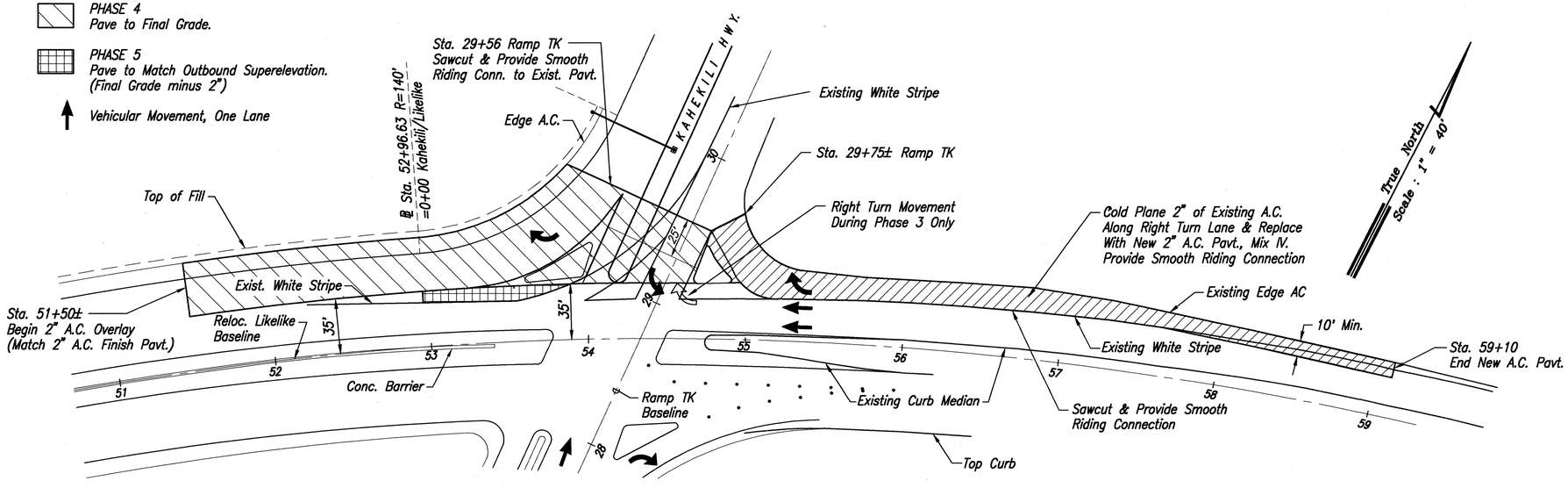



PHASE 3
Pave to Final Grade. May be postponed to later phase.

PHASE 4
Pave to Final Grade.

PHASE 5
Pave to Match Outbound Superelevation.
(Final Grade minus 2")

Vehicular Movement, One Lane




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THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

Arnold Fukumoto

| DATE | REVISION |
|---|---|
| 7/13/95 | Sheet Added for Repaving Sequence. |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# REPAVING SEQUENCE
# LIKELIKE AND KAHEKILI INTERSECTION

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(72)

SCALE: AS NOTED DATE: DEC. 1991

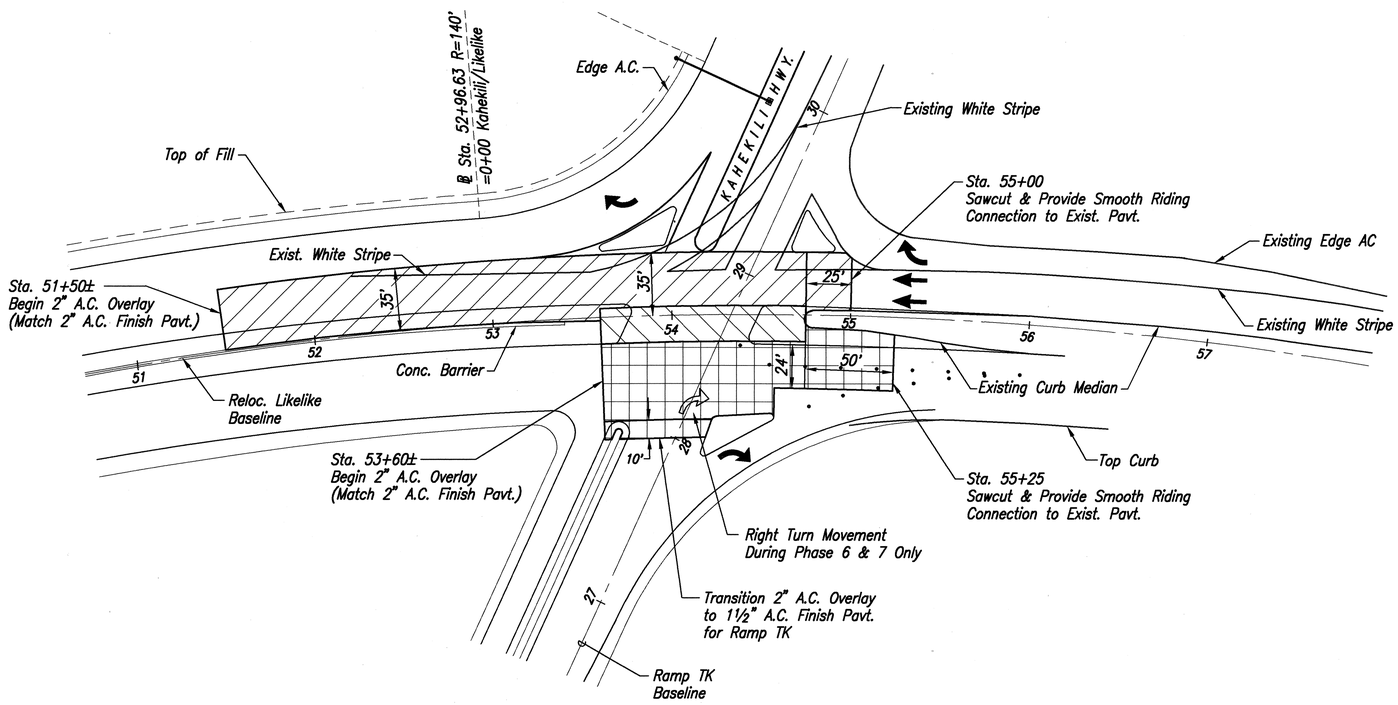
SHEET No. OF SHEETS

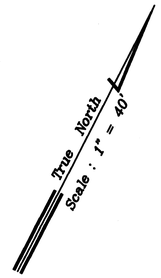
C.O. 75S-2

ORIGINAL PLAN
NOTE BOOK No.
SURVEY PLOTTED BY
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
DATE

83-46.6 F:\H1-PH1.DWG D:\H1ER_JE\TOORS Plot:1-40 7/13/95 AM

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O. 75S-3 | 521 |



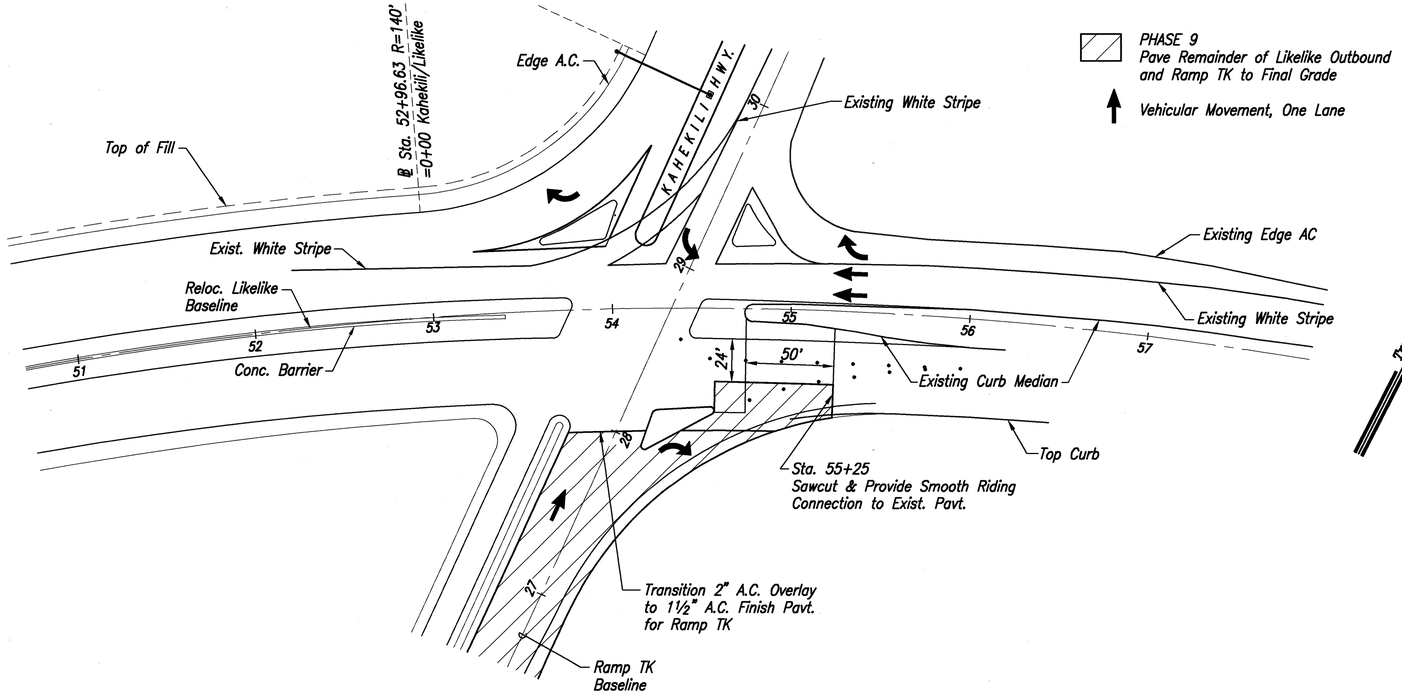




PHASE 6
Pave to Final Grade. Implement Traffic Control Plan for Detour. See Sheet C.O. 75S-4.

PHASE 7
Pave to Final Grade. Implement Traffic Control Plan for Detour. See Sheet C.O. 75S-4.

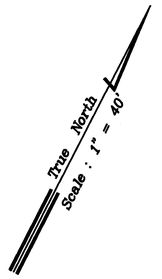
PHASE 8
Pave to Final Grade. Implement Traffic Control Plan for Detour. See Sheet C.O. 75S-4.

Vehicular Movement, One Lane




PHASE 9
Pave Remainder of Likelike Outbound and Ramp TK to Final Grade

Vehicular Movement, One Lane




| ORIGINAL PLAN | SURVEY PLOTTED BY | DATE |
|---|---|---|
| NOTE BOOK | DRAWN BY | |
| No. | TRACED BY | |
| | DESIGNED BY | |
| | QUANTITIES BY | |

81-45.6 F:\NT-PROJ\DWG D-INTER. DETOURS Plot1=40 7/13/95 AM

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No. 8393-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

Arnold Fukumoto

| DATE | REVISION |
|---|---|
| 7/13/95 | Sheet Added for Repaving Sequence. |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# REPAVING SEQUENCE
# LIKELIKE AND KAHEKILI INTERSECTION

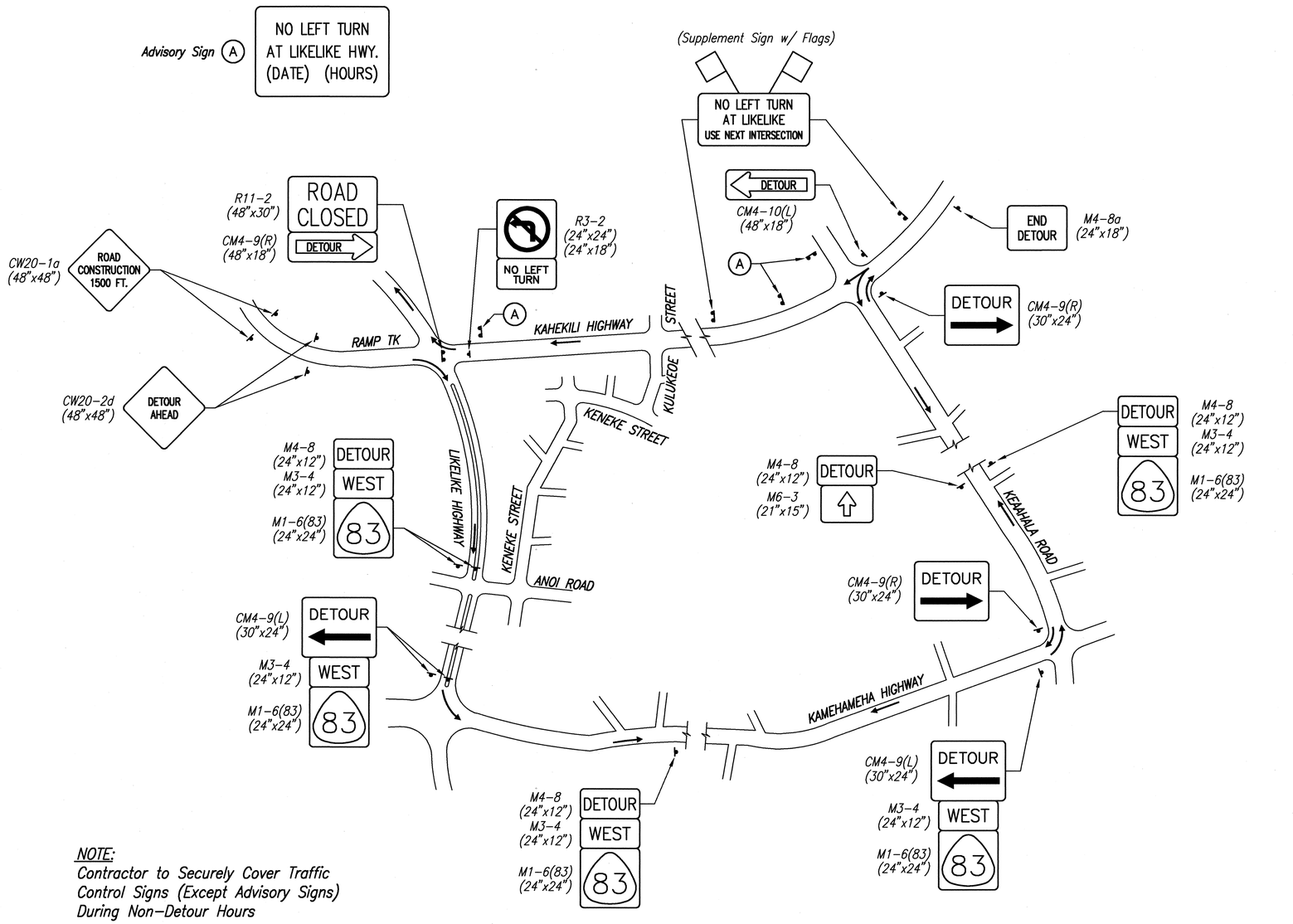
INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(72)

SCALE: AS NOTED DATE: DEC. 1991

SHEET No. OF SHEETS

C.O. 75S-3

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O. 75S-3 | 521 |




*NOTE:*
*Contractor to Securely Cover Traffic Control Signs (Except Advisory Signs) During Non-Detour Hours*

## TRAFFIC CONTROL PLAN
## PHASES 6 thru 8
NOT TO SCALE

ARNOLD H. FUKUMOTO
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No. 8393-C
HAWAII, U.S.A.

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Arnold Fukumoto

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

## TRAFFIC CONTROL PLAN
## INTERSECTION REPAVING DETOUR

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(72)

SCALE: AS NOTED DATE: DEC., 1991

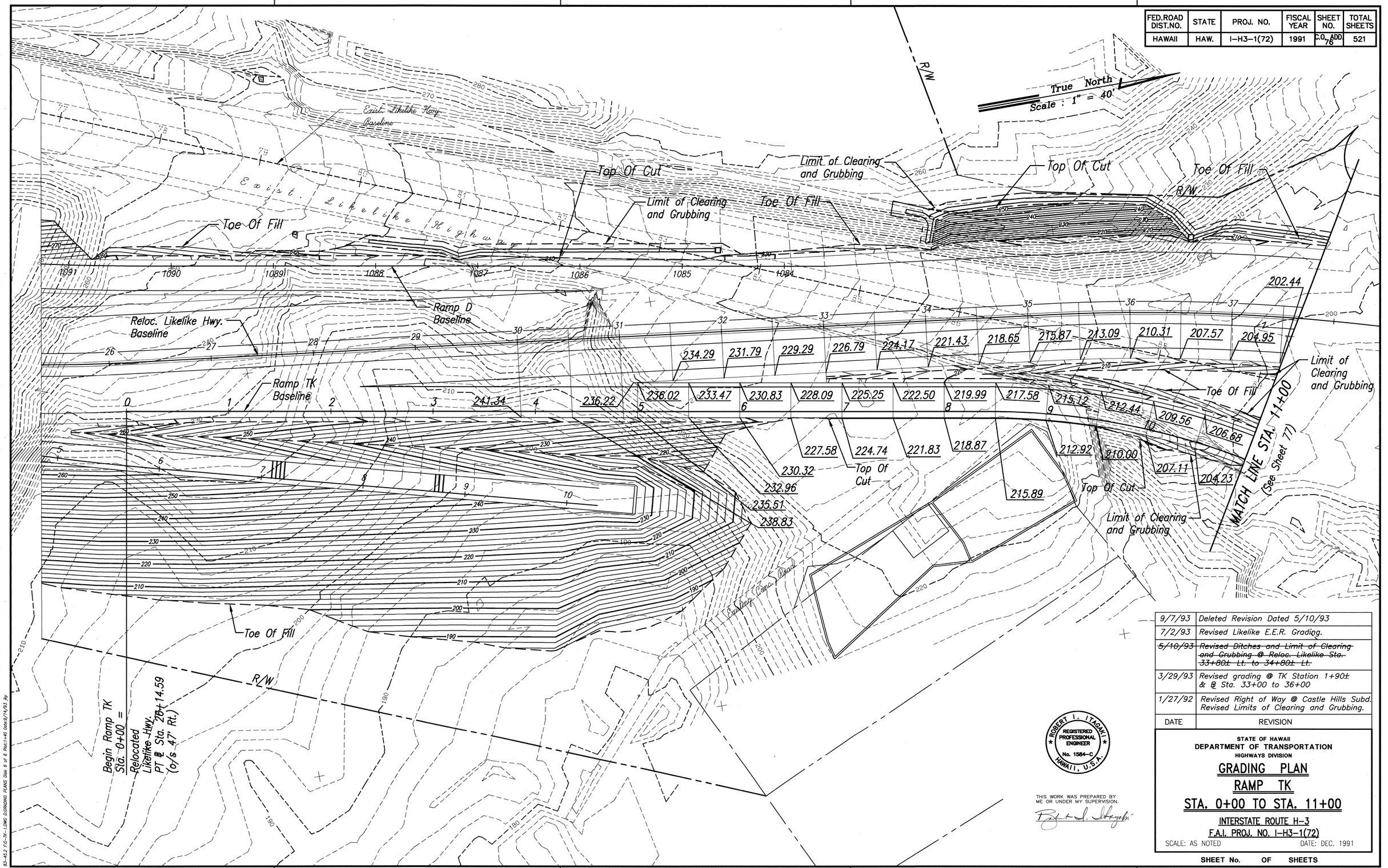
SHEET No. OF SHEETS

| DATE | REVISION |
|---|---|
| 7/13/95 | Sheet Added for Traffic Control Plan. |

ORIGINAL PLAN
NOTE BOOK No.
SURVEY PLOTTED BY DATE
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
Job-No.83-45.6 File:TC-MAP.DWG Disk:INTERSECTION DETOUR Plot:1-2 7/13/95 KH

C.O. 75S-4

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O. 76 ADD | 521 |




| | |
|---|---|
| 9/7/93 | Deleted Revision Dated 5/10/93 |
| 7/2/93 | Revised Likelike E.E.R. Grading. |
| ~~5/10/93~~ | ~~Revised Ditches and Limit of Clearing and Grubbing @ Reloc. Likelike Sta. 33+80± Lt. to 34+80± Lt.~~ |
| 3/29/93 | Revised grading @ TK Station 1+90± & ℄ Sta. 33+00 to 36+00 |
| 1/27/92 | Revised Right of Way @ Castle Hills Subd. Revised Limits of Clearing and Grubbing. |
| DATE | REVISION |

ROBERT I. ITAGAKI
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# GRADING PLAN
# RAMP TK
## STA. 0+00 TO STA. 11+00

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(72)

SCALE: AS NOTED DATE: DEC. 1991

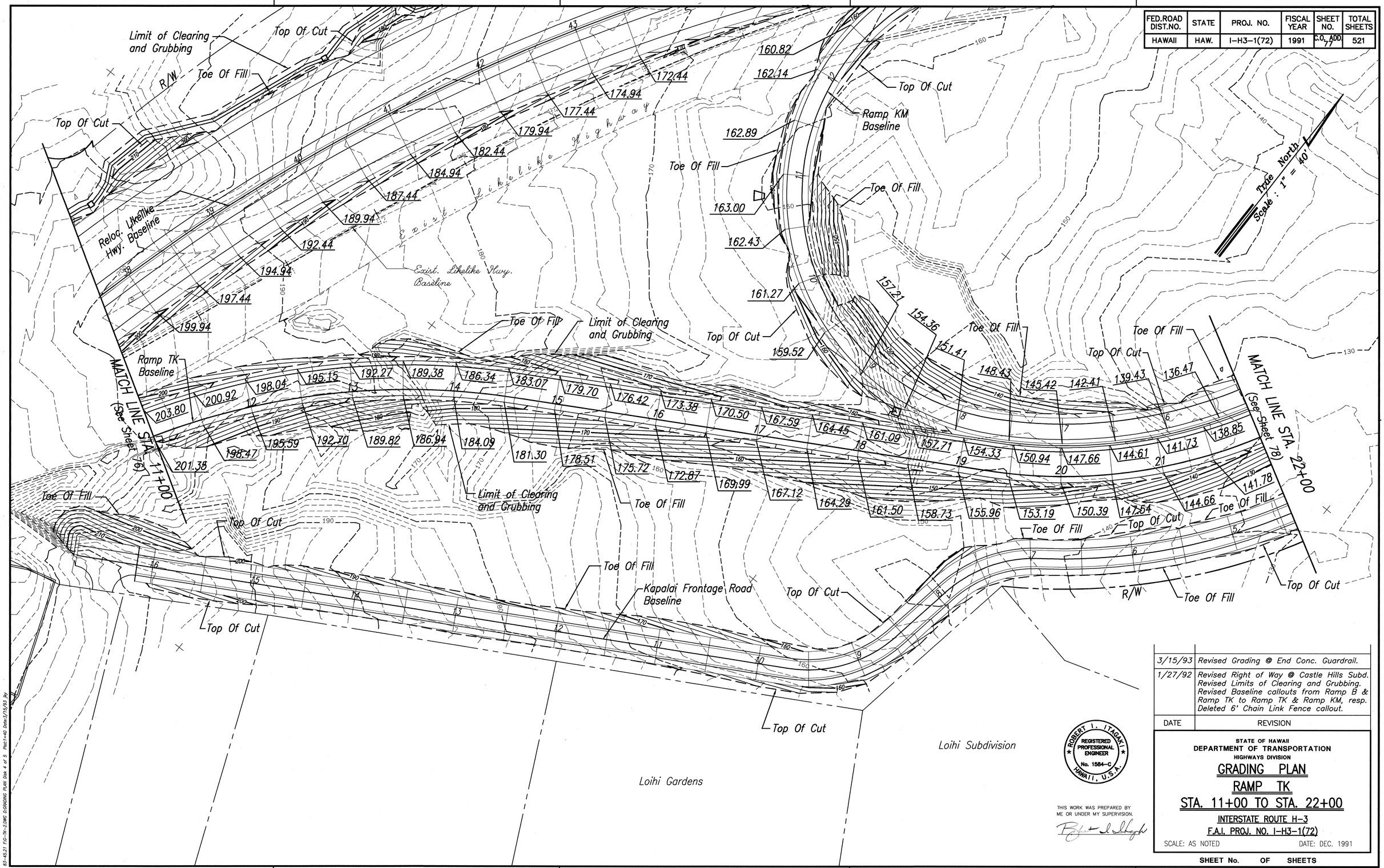
SHEET No. OF SHEETS

C.O. ADD. 76

ORIGINAL PLAN
NOTE BOOK No.
SURVEY PLOTTED BY DATE
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY

83-45.2 FG-7K-1.DWG DGNBOOK PLANS Disk 6 of 6 Plot:1=40 Date:9/14/93 By:

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O. ADD. 77 | 521 |




| DATE | REVISION |
|---|---|
| 3/15/93 | Revised Grading @ End Conc. Guardrail. |
| 1/27/92 | Revised Right of Way @ Castle Hills Subd. Revised Limits of Clearing and Grubbing. Revised Baseline callouts from Ramp B & Ramp TK to Ramp TK & Ramp KM, resp. Deleted 6' Chain Link Fence callout. |

ROBERT I. ITAGAKI
REGISTERED PROFESSIONAL ENGINEER
No. 1584-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# GRADING PLAN
## RAMP TK
## STA. 11+00 TO STA. 22+00

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(72)

SCALE: AS NOTED DATE: DEC. 1991

SHEET No. OF SHEETS

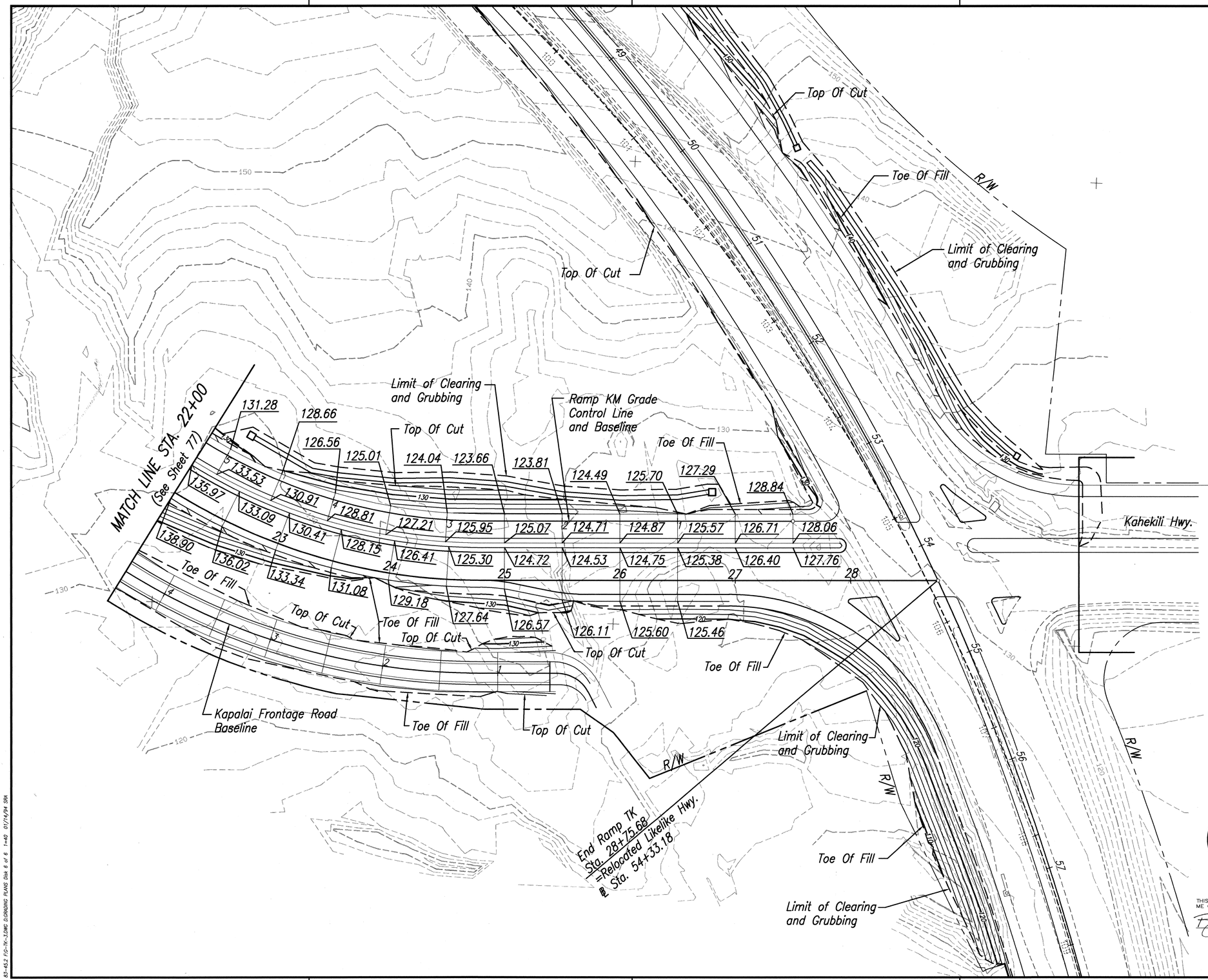
C.O. ADD. 77

ORIGINAL PLAN
NOTE BOOK No.
SURVEY PLOTTED BY DATE
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY

83-45.21 FG-TK-2.DWG GRADING PLAN Dist 4 of 5 Plot:1=40 Date:3/15/93 By

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O. ADD. 78 | 521 |

True North
Scale : 1" = 40'




| | |
|---|---|
| 1/14/94 | Revised Shoulder Radius at Likelike/ Kahekili Intersection |
| 2/17/93 | Revised Edge Pav't Radius and Added Channelizing Island at Ramp TK/Reloc. Likelike Intersection. Revised Ramp TK grades along rt. shoulder @ 25+00 & 25+50. |
| 1/27/92 | Revised Limits of Clearing and Grubbing. |
| DATE | REVISION |

ROBERT I. ITAGAKI
REGISTERED PROFESSIONAL ENGINEER
No. 1584-C
HAWAII, U.S.A.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# GRADING PLAN
# RAMP TK
## STA. 22+00 TO STA. 28+75.68

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(72)

SCALE: AS NOTED DATE: DEC. 1991

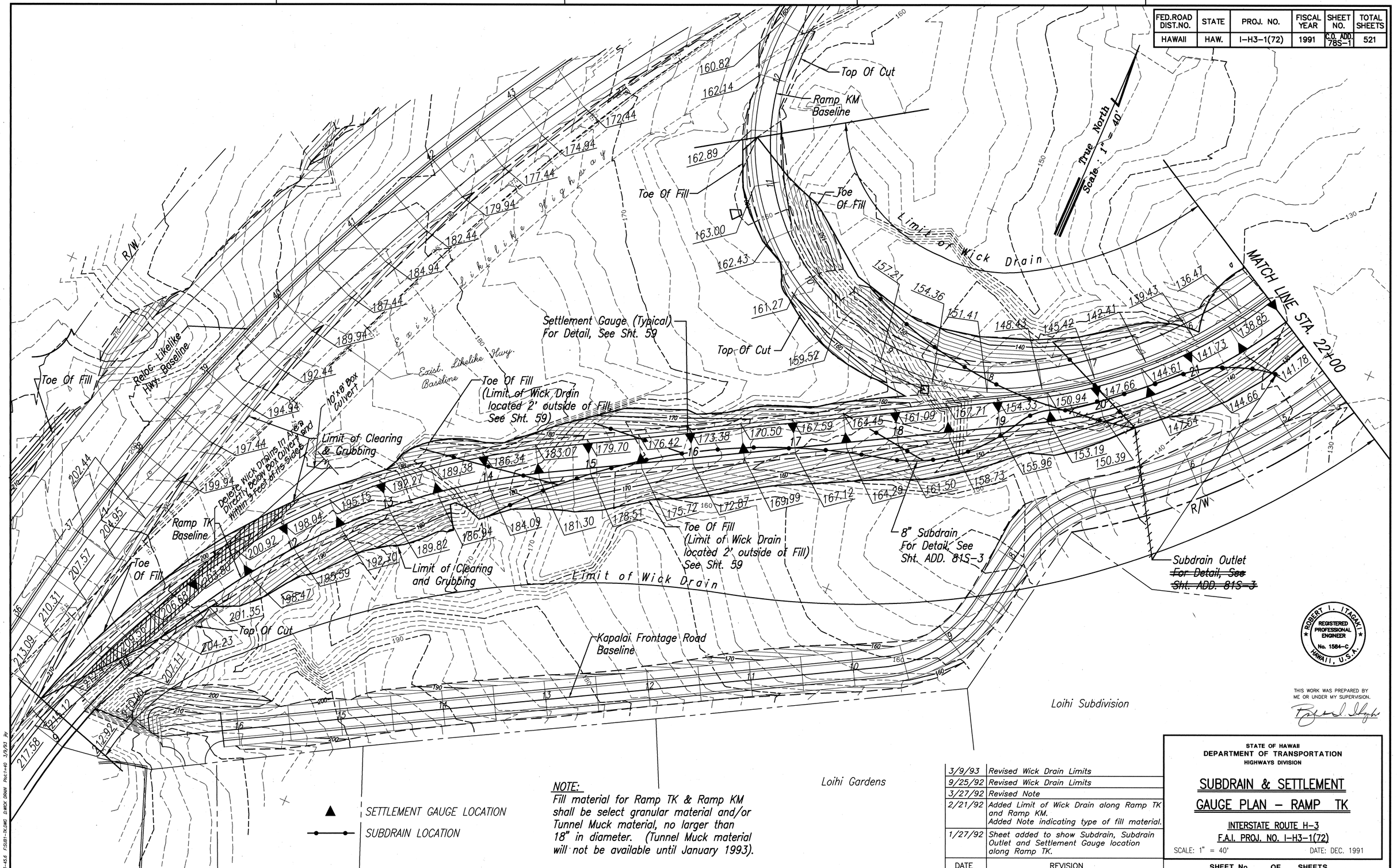
SHEET No. OF SHEETS

ORIGINAL PLAN
NOTE BOOK No.
SURVEY PLOTTED BY DATE
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY

83-453 FG-TK-33W0 GRADING PLANS Sht 6 of 6 1=40 01/14/94 SM

C.O. ADD. 78

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O. ADD. 78S-1 | 521 |




NOTE:
Fill material for Ramp TK & Ramp KM shall be select granular material and/or Tunnel Muck material, no larger than 18" in diameter. (Tunnel Muck material will not be available until January 1993).

ROBERT I. ITAGAKI
REGISTERED PROFESSIONAL ENGINEER
No. 1584-C
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| DATE | REVISION |
|---|---|
| 3/9/93 | Revised Wick Drain Limits |
| 9/25/92 | Revised Wick Drain Limits |
| 3/27/92 | Revised Note |
| 2/21/92 | Added Limit of Wick Drain along Ramp TK and Ramp KM. Added Note indicating type of fill material. |
| 1/27/92 | Sheet added to show Subdrain, Subdrain Outlet and Settlement Gauge location along Ramp TK. |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# SUBDRAIN & SETTLEMENT GAUGE PLAN - RAMP TK

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(72)

SCALE: 1" = 40' DATE: DEC. 1991

SHEET No. OF SHEETS

ORIGINAL PLAN
NOTE BOOK
No.
SURVEY PLOTTED BY
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY
DATE

81-45.6 FSUBI-TK.DWG DWCK DRAW Plot1=40 3/9/93 BY

C.O. ADD. 78S-1

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O. ADD. 78S-2 | 521 |

True North
Scale : 1" = 40'

Top Of Cut
Toe Of Fill
R/W
Top Of Cut
Settlement Gauge (Typical) For Detail, See Sht. 59
Limit of Wick Drain
Ramp KM Baseline
Top Of Cut
10'x8' Box Culvert
Toe Of Fill
Kahekili Hwy.
STA. 22+00
MATCH LINE STA. 22+00
131.28
128.66
126.56
125.01
124.04
123.66
123.81
124.49
125.70
127.29
128.84
135.97
133.53
130.91
128.81
127.21
125.95
125.07
124.71
124.87
125.57
126.71
128.06
138.90
136.02
133.09
130.41
128.15
126.41
125.30
124.72
124.58
124.75
125.38
126.40
127.76
133.34
131.08
129.18
127.64
126.57
126.11
125.60
125.46
Top Of Cut
Toe Of Fill (Limit of Wick Drain located 2' outside of Fill, See Sht. 59)
Ramp TK Baseline
Delete Wick Drains In Area Directly Below Box Culvert and Within 3 Feet of its Sides.
Limit of Wick Drain
Kapalai Frontage Road Baseline
Toe Of Fill (Limit of Wick Drain located 2' outside of Fill, See Sht. 59)
R/W
End Ramp TK Sta. 28+75.68 =Reloacated Likelike Hwy. @ Sta. 54+33.18
Toe Of Fill

NOTE:
Fill material for Ramp TK and Ramp KM shall be select granular material and/or Tunnel Muck material, no larger than 18" in diameter. (Tunnel Muck material will not be available until January 1993).

▲ SETTLEMENT GAUGE LOCATION

| | |
|---|---|
| 1/14/94 | Revised Shoulder Radius at Likelike/ Kahekili Intersection |
| 2/17/93 | Revised Edge Pav't Radius, Limit of Wick Drain and Addded Channelizing Island at Ramp TK/Reloc. Likelike Intersection. Revised Ramp TK grades along rt. shoulder @ 25+00 & 25+50. |
| 9/25/92 | Revised Wick Drain Limits |
| 3/27/92 | Revised Note |
| 2/21/92 | Added Limit of Wick Drain along Ramp TK and Ramp KM. Added Note indicating type of fill material. |
| 1/27/92 | Sheet added to show settlement gauge location along Ramp TK. |
| DATE | REVISION |

ROBERT I. ITAGAKI
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# SUBDRAIN & SETTLEMENT GAUGE PLAN - RAMP TK

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(72)
SCALE: 1" = 40' DATE: DEC. 1991

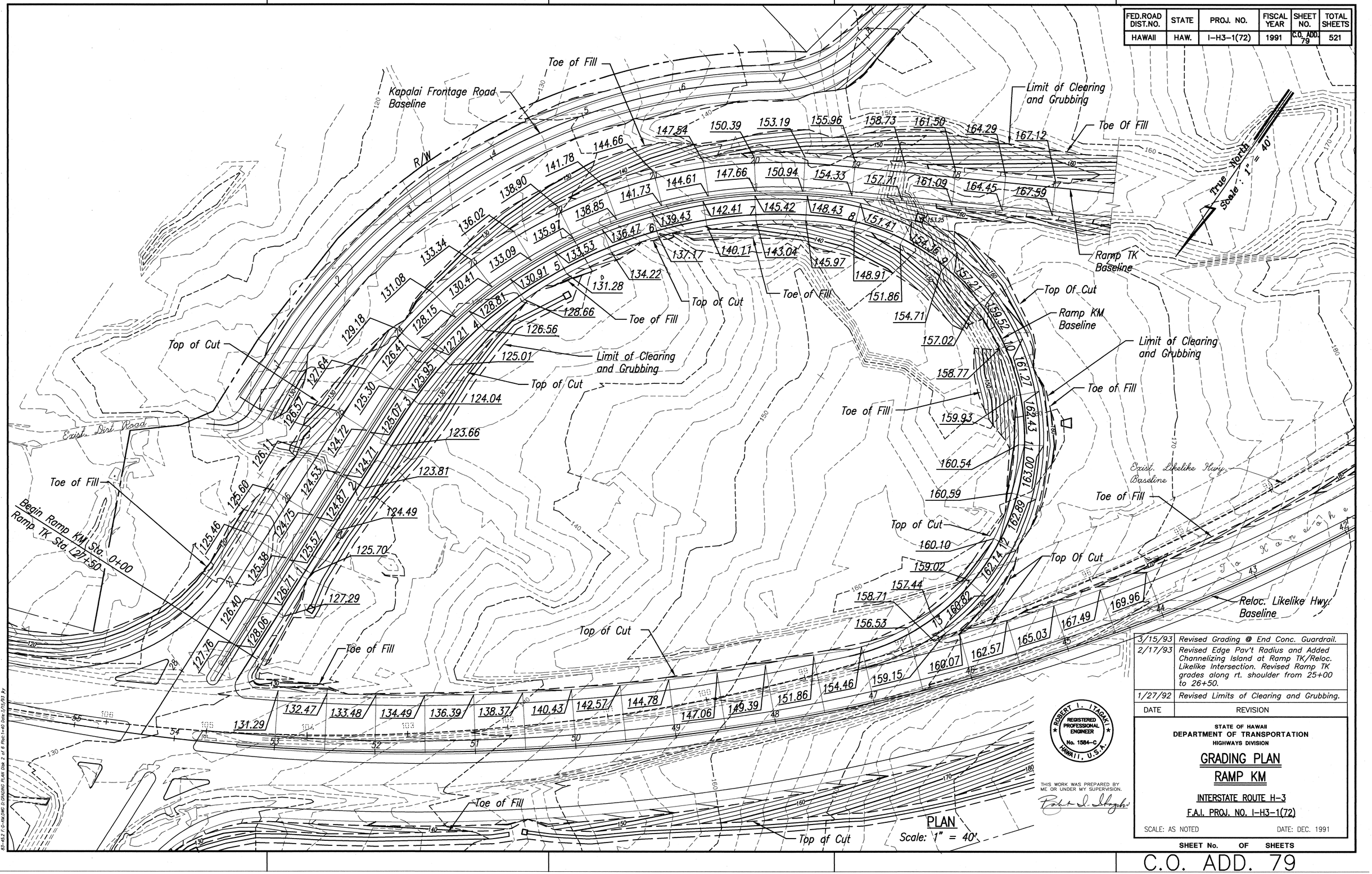
SHEET No. OF SHEETS

C.O. ADD. 78S-2

ORIGINAL PLAN
NOTE BOOK No.
SURVEY PLOTTED BY
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY
DATE

83-45.6 FSUBD-TK.DWG DWCK DWGN 1=40 01/14/94 SPA

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O. ADD. 79 | 521 |




| | |
|---|---|
| 3/15/93 | Revised Grading @ End Conc. Guardrail. |
| 2/17/93 | Revised Edge Pav't Radius and Added Channelizing Island at Ramp TK/Reloc. Likelike Intersection. Revised Ramp TK grades along rt. shoulder from 25+00 to 26+50. |
| 1/27/92 | Revised Limits of Clearing and Grubbing. |
| DATE | REVISION |

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# GRADING PLAN
## RAMP KM

INTERSTATE ROUTE H-3

F.A.I. PROJ. NO. I-H3-1(72)

SCALE: AS NOTED DATE: DEC. 1991

SHEET No. OF SHEETS

C.O. ADD. 79

ORIGINAL PLAN
NOTE BOOK No.
SURVEY PLOTTED BY DATE
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY

83-457 FG-KM.DWG D:\GRADING PLAN Disk 2 of 6 Plot: 1=40 Date: 1/15/93 by

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O. ADD. 80 | 521 |

True North
Scale : 1" = 40'

END PROJECT
@ STA. 354+37.14
=399+00 Windward Hwy.

H3 Temporary Connector

R/W

INBOUND

OUTBOUND

Toe Of Fill

H3 Baseline

Begin Emergency Escape Ramp
Sta. 0+00
= @ Sta. 353+30.54 (o/s 64' Rt.)
Kaneohe Interchange

Ramp B
Baseline

Existing C.L. Fence

Top Of Cut

Limit of Clearing and Grubbing

Grassed Swale

Winward Emergency Escape Ramp Baseline

R/W

Toe Of Fill

Top Of Cut
New 6 feet High Chain Link Fence with Top Rail and Concrete Footing

End Windward Emergency Escape Ramp
Sta. 10+00

Existing C.L. Fence

Limit of Clearing and Grubbing

Toe Of Fill

Top Of Cut

Grassed Swale

Winward Emergency Escape Ramp Baseline

330.84 330.94 330.49 330.36 330.59 330.87 331.40 332.86 333.81 334.76 336.26 338.86 342.56 347.36 352.71 358.06 363.41 368.76 374.11 379.46

330.85 330.97 330.99 330.89 330.90 331.17 331.70 331.01 332.61 334.15 336.37 339.16 342.86 347.66 353.01 358.36 363.71 369.06 374.41

330.85 331.13 331.80 332.65 333.69 334.91 336.30 337.74 339.15 340.45 341.67 342.79

332.49 333.16 334.11 335.06 336.56

332.19

PLAN
Scale: 1" = 40'

| DATE | REVISION |
|---|---|
| 9/8/94 | Added Lined Trap. Ditch |
| 4/21/94 | Revised Median Grading from 353+00 to End Project. Deleted Elevations along H3 Baseline. |
| 10/7/92 | Moved Inlet and added Grassed Swale |
| 1/27/92 | Revised value and location of finish roadway elevation @ Win. Escape Ramp Sta. 4+50 Lt. |

ORIGINAL PLAN
NOTE BOOK No.
SURVEY PLOTTED BY
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
DATE

83-45.6 F.C.-WEDING D:GRADING PLANS P:1=40 09/8/94 By

ROBERT I. ITAGAKI
REGISTERED PROFESSIONAL ENGINEER
No. 1584-C
HAWAII, U.S.A.

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STATE OF HAWAII
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HIGHWAYS DIVISION

# GRADING PLAN
# WINDWARD HIGHWAY
# EMERGENCY ESCAPE RAMP

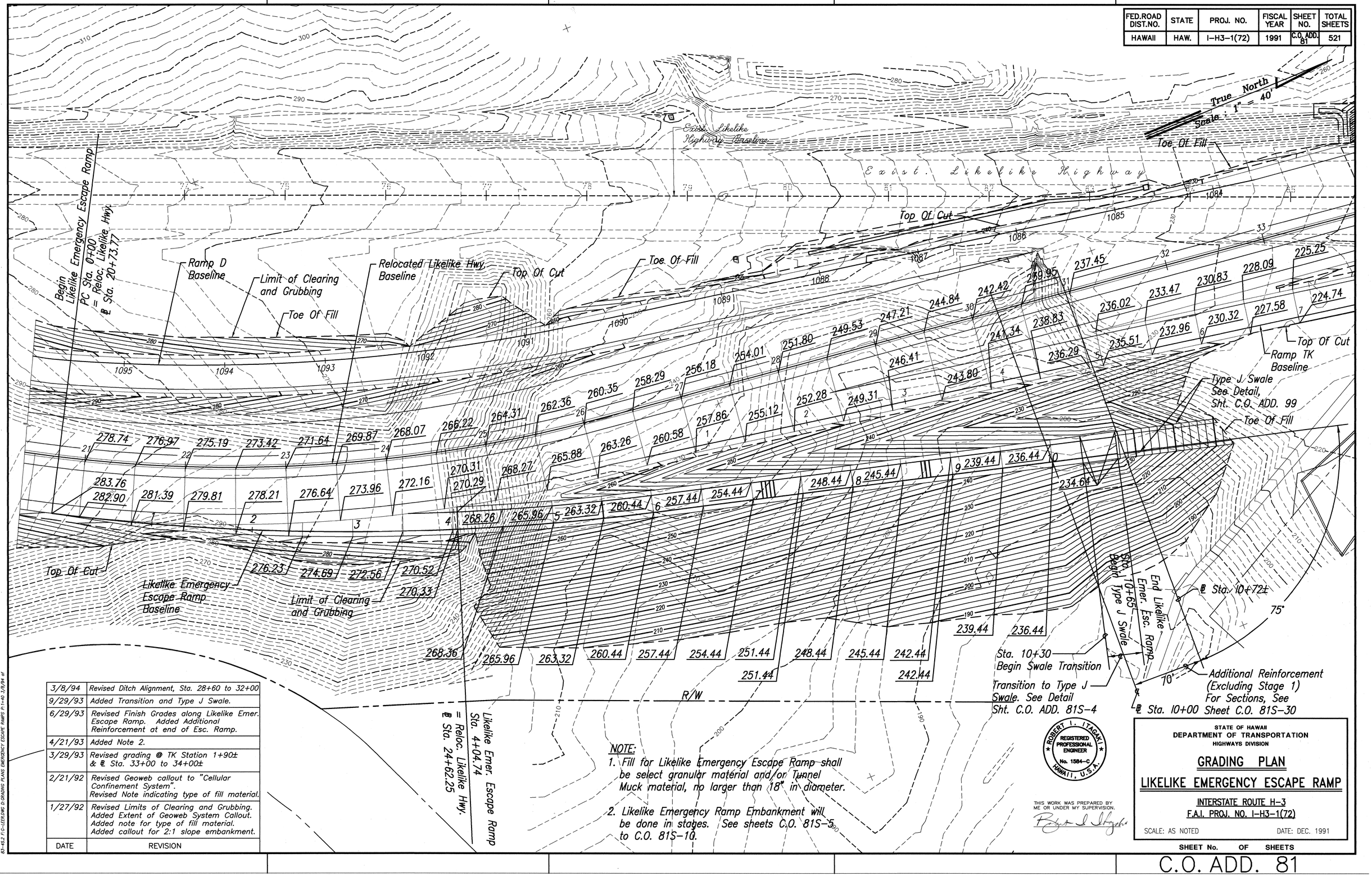
INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(72)

SCALE: AS NOTED DATE: DEC. 1991

SHEET No. OF SHEETS

C.O. ADD. 80

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O. ADD. 81 | 521 |




| | |
|---|---|
| 3/8/94 | Revised Ditch Alignment, Sta. 28+60 to 32+00 |
| 9/29/93 | Added Transition and Type J Swale. |
| 6/29/93 | Revised Finish Grades along Likelike Emer. Escape Ramp. Added Additional Reinforcement at end of Esc. Ramp. |
| 4/21/93 | Added Note 2. |
| 3/29/93 | Revised grading @ TK Station 1+90± & @ Sta. 33+00 to 34+00± |
| 2/21/92 | Revised Geoweb callout to "Cellular Confinement System". Revised Note indicating type of fill material. |
| 1/27/92 | Revised Limits of Clearing and Grubbing. Added Extent of Geoweb System Callout. Added note for type of fill material. Added callout for 2:1 slope embankment. |
| DATE | REVISION |

NOTE:

1. Fill for Likelike Emergency Escape Ramp shall be select granular material and/or Tunnel Muck material, no larger than 18" in diameter.
2. Likelike Emergency Ramp Embankment will be done in stages. See sheets C.O. 81S-5 to C.O. 81S-10.

ROBERT I. ITAGAKI
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HIGHWAYS DIVISION

# GRADING PLAN

## LIKELIKE EMERGENCY ESCAPE RAMP

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(72)

SCALE: AS NOTED DATE: DEC. 1991

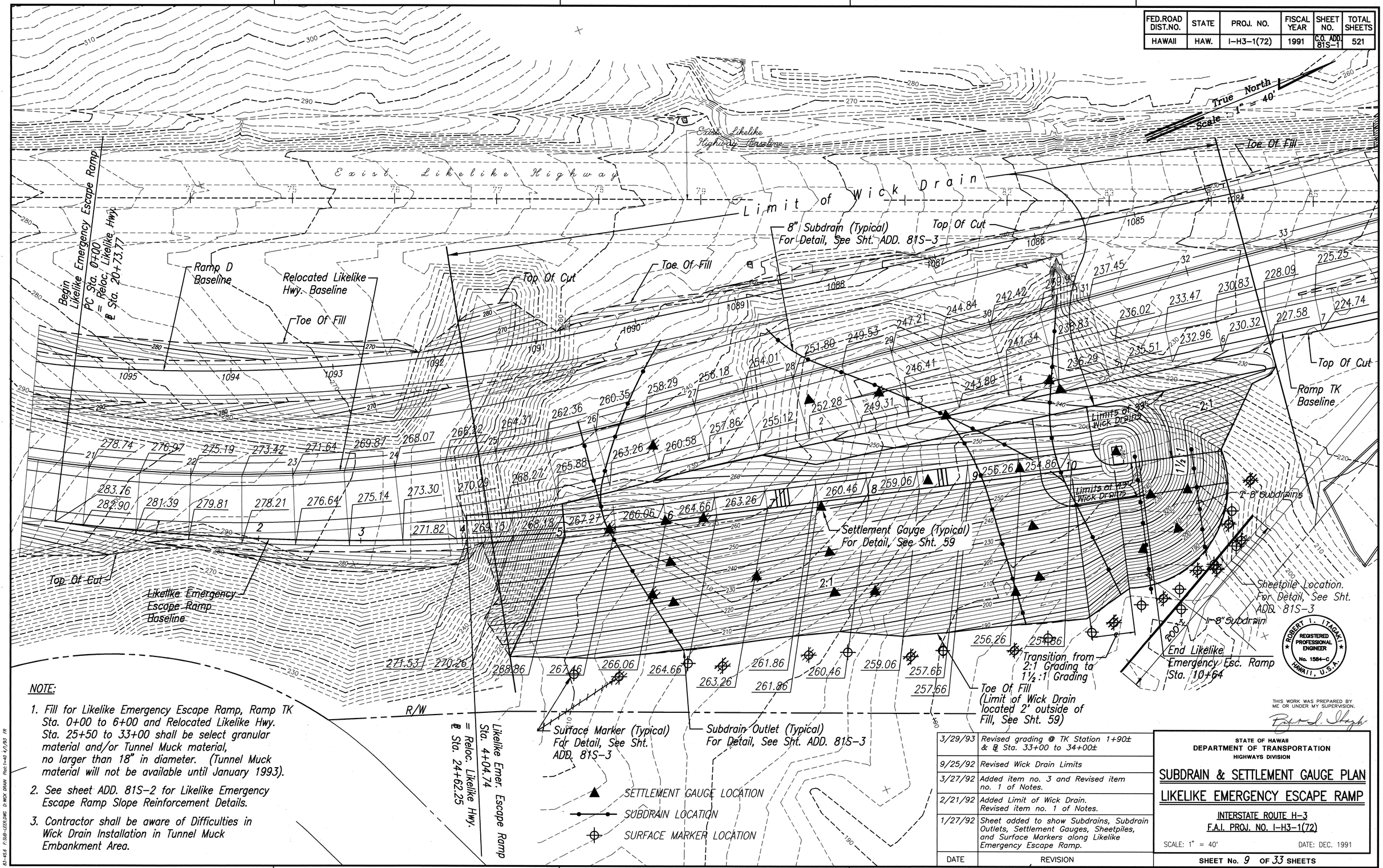
SHEET No. OF SHEETS

C.O. ADD. 81

ORIGINAL PLAN | SURVEY PLOTTED BY | DRAWN BY | TRACED BY | DESIGNED BY | QUANTITIES BY | CHECKED BY | DATE
NOTE BOOK | No.

83-453 P:\C-LEEDING D:\GRADING PLANS EMERGENCY ESCAPE RAMPS P1-40 3/8/94 ar

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O. ADD. 81S-1 | 521 |




NOTE:

1. Fill for Likelike Emergency Escape Ramp, Ramp TK Sta. 0+00 to 6+00 and Relocated Likelike Hwy. Sta. 25+50 to 33+00 shall be select granular material and/or Tunnel Muck material, no larger than 18" in diameter. (Tunnel Muck material will not be available until January 1993).
2. See sheet ADD. 81S-2 for Likelike Emergency Escape Ramp Slope Reinforcement Details.
3. Contractor shall be aware of Difficulties in Wick Drain Installation in Tunnel Muck Embankment Area.

| DATE | REVISION |
|---|---|
| 3/29/93 | Revised grading @ TK Station 1+90± & ℄ Sta. 33+00 to 34+00± |
| 9/25/92 | Revised Wick Drain Limits |
| 3/27/92 | Added item no. 3 and Revised item no. 1 of Notes. |
| 2/21/92 | Added Limit of Wick Drain. Revised item no. 1 of Notes. |
| 1/27/92 | Sheet added to show Subdrains, Subdrain Outlets, Settlement Gauges, Sheetpiles, and Surface Markers along Likelike Emergency Escape Ramp. |

ROBERT I. ITAGAKI REGISTERED PROFESSIONAL ENGINEER No. 15841-C HAWAII, U.S.A.

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HIGHWAYS DIVISION

# SUBDRAIN & SETTLEMENT GAUGE PLAN
# LIKELIKE EMERGENCY ESCAPE RAMP

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(72)

SCALE: 1" = 40' DATE: DEC. 1991

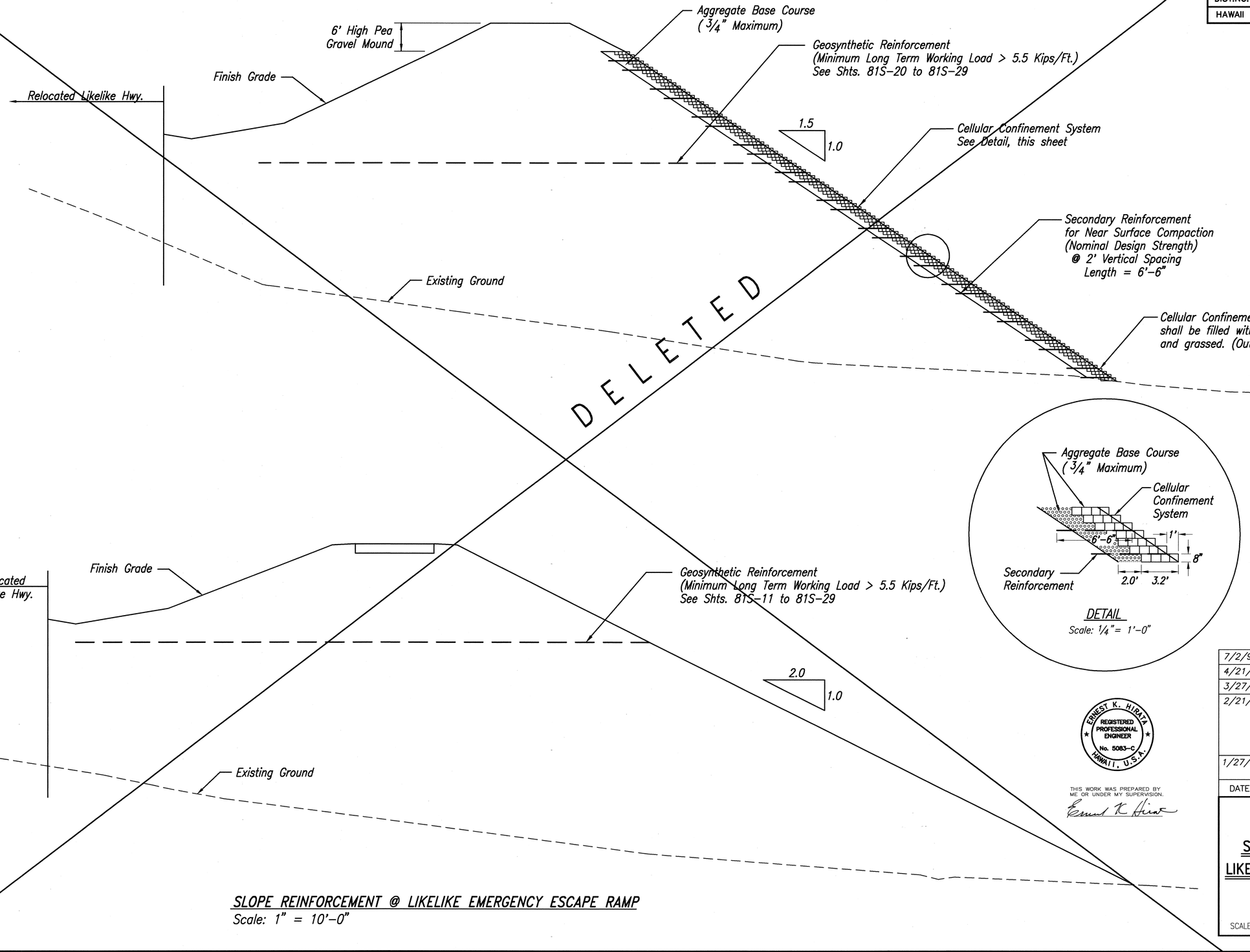
SHEET No. 9 OF 33 SHEETS

ORIGINAL PLAN | SURVEY PLOTTED BY | DRAWN BY | TRACED BY | DESIGNED BY | QUANTITIES BY | CHECKED BY | DATE
NOTE BOOK | No.

81-45.6 F:SUB-LEEDUMS D:WICK DRAIN Plot:1-40 1/7/93 FR

C.O. ADD. 81S-1

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O. ADD. 81S-2 | 521 |




SLOPE REINFORCEMENT @ LIKELIKE EMERGENCY ESCAPE RAMP
Scale: 1" = 10'-0"

ORIGINAL PLAN
NOTE BOOK No.
SURVEY PLOTTED BY
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY
DATE

81-462 F:\SDMS\DWG DMSD2 Plot=no 7/1/93 AF

ERNEST K. HIRATA
REGISTERED PROFESSIONAL ENGINEER
No. 5083-C
HAWAII, U.S.A.

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| DATE | REVISION |
|---|---|
| 7/2/93 | Deleted this Sheet. |
| 4/21/93 | Revised Geosynthetic Reinforcement. |
| 3/27/92 | Added bench to existing slope. |
| 2/21/92 | Added Agg. Base Course to 1.5:1 slope. Revised no. of units and dimensions for Cellular Confinement System. Deleted Cellular Confinement System and Geosynthetic Reinforcement along upper 6' of 1.5:1 embankment. |
| 1/27/92 | Sheet added to show Slope Reinforcement details. |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

## SLOPE REINFORCEMENT DETAIL
## LIKELIKE EMERGENCY ESCAPE RAMP

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(72)

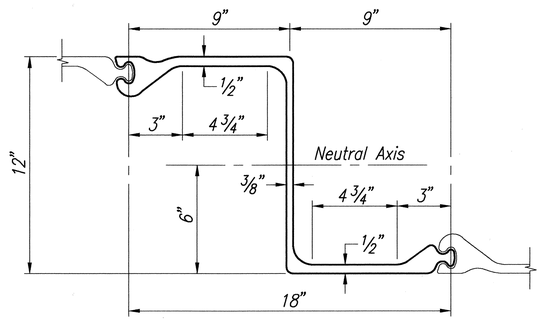
SCALE: 1" = 10' DATE: DEC. 1991

SHEET No. OF SHEETS

TRACING PRIOR TO C.O. DATED 7/93 VOID C.O. ADD. 81S-2

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | ADD. 81S-3 | 521 |

Section MZ-38 – 18" Wide, 12" Deep

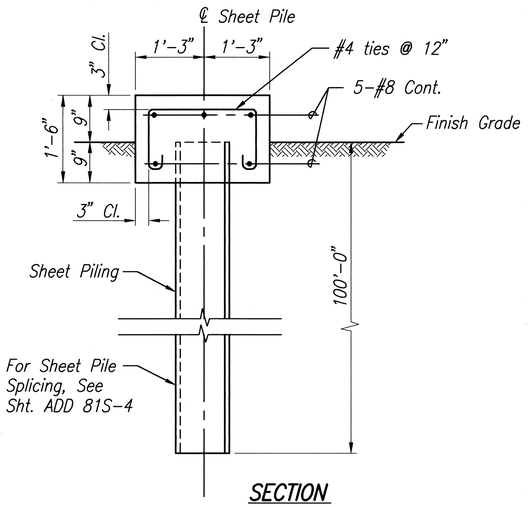



| | | |
|---|---|---|
| Section Number MZ-38 | | |
| Driving Distance Per Pile | = | 18" |
| Thickness: | | |
| Web | = | 3/8" |
| Flange | = | 1/2" |
| Weight: | | |
| Per Lin. Ft. of Pile | = | 57.0 lbs. |
| Per Sq. Ft. of Wall | = | 38.0 lbs |
| Section Modulus: | | |
| Per Pile | = | 70.2 $in.^3$ |
| Per Ft. of Wall | = | 46.8 $in.^3$ |
| Area | = | 16.77 $in.^2$ |
| Moment of Inertia | = | 421.2 $in.^4$ |

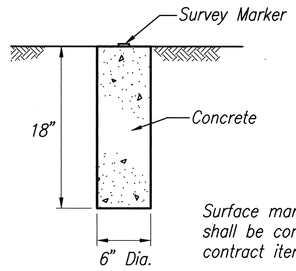
*Sheet piles of equivalent or greater section properties per ft. of wall may be substituted with the approval of the Engineer.*

## SHEET PILE DETAIL

Scale: 3" = 1'-0"



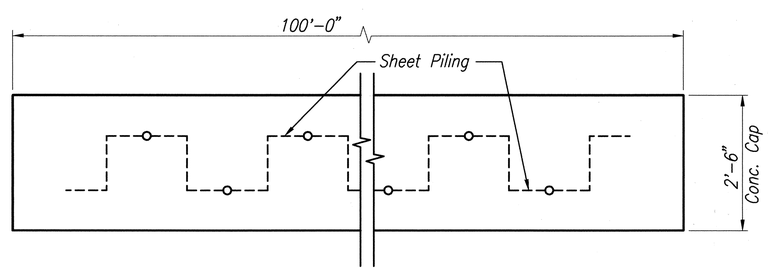

## SECTION




*Surface marker will not be paid for directly, but shall be considered incidental to the various contract items in the proposal.*

## SURFACE MARKER DETAIL

not to scale



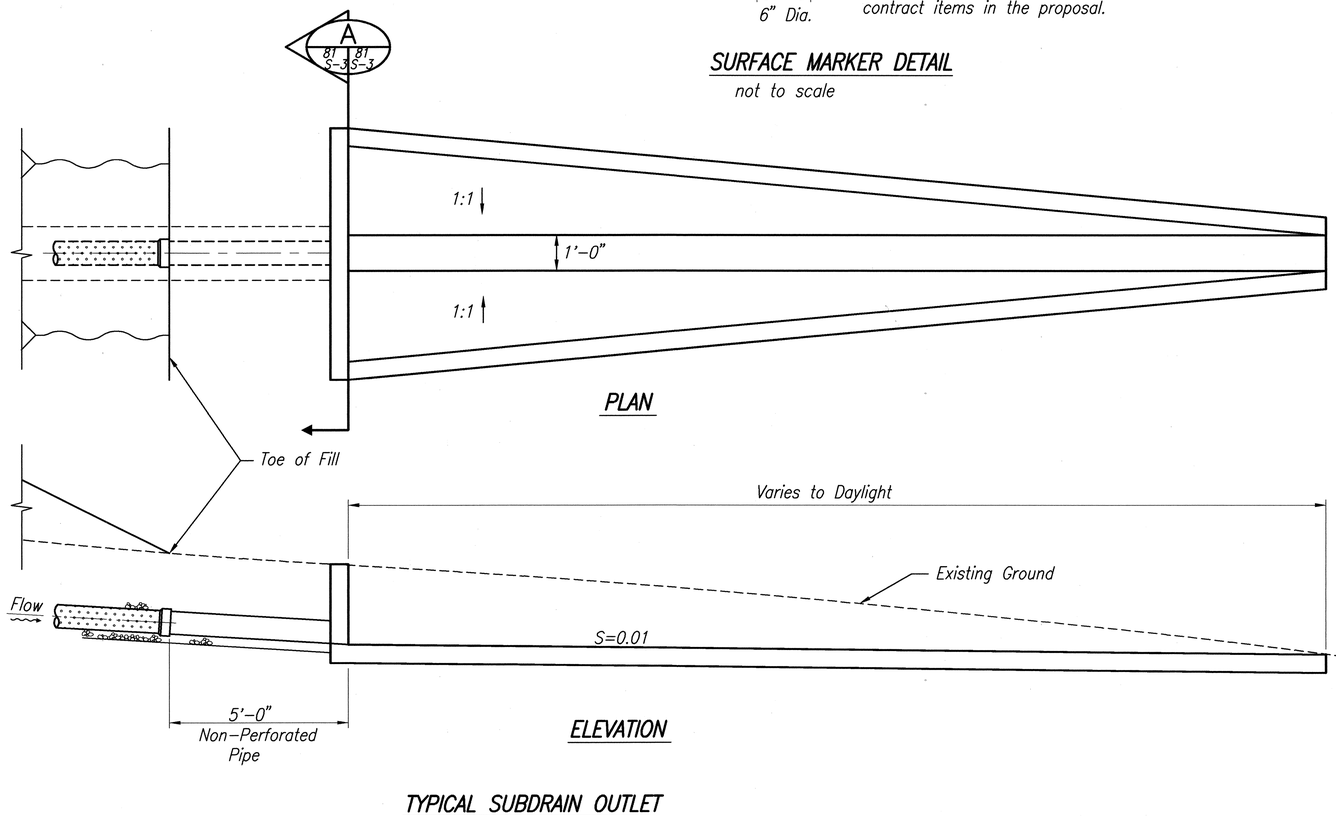

## TOP PLAN

NOTE:

*Concrete Cap will not be paid for directly, but shall be considered incidental to sheet piling.*

## SHEET PILING W/ CONC. CAP

Scale: 3/4" = 1'-0"




## PLAN

## ELEVATION

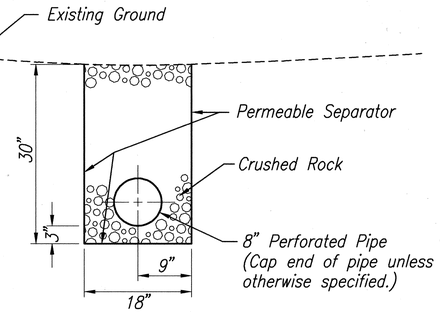
## TYPICAL SUBDRAIN OUTLET

Scale: 1/2" = 1'-0"

NOTE:

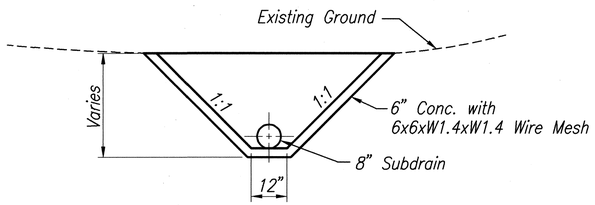
1. *Subdrain will be constructed as shown on these plans and specified under section 605 underdrain of the Specifications.*

3. *Exact location of subdrain, vertical and horizontal, shall be determined in the field by the Engineer.*




## TYPICAL 8" SUBDRAIN DETAIL

Scale: 1" = 1'-0"




## SECTION A

Scale: 1/2"=1'-0"

| | |
|---|---|
| 3/27/92 | Deleted item 2 of Subdrain Notes and Added Note for Sheet Piling w/Conc. Cap |
| 2/21/92 | Added item no. 3 to Notes. Added callout for Sheet Pile Splicing. |
| 1/27/92 | Sheet added to show details of Sheet Pile, Surface Marker, Subdrain, and Subdrain Outlet. |
| DATE | REVISION |

ROBERT I. ITAGAKI ★ REGISTERED PROFESSIONAL ENGINEER ★ No. 1584-C ★ HAWAII, U.S.A.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# MISCELLANEOUS DETAILS

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(72)

SCALE: AS NOTED DATE: DEC. 1991

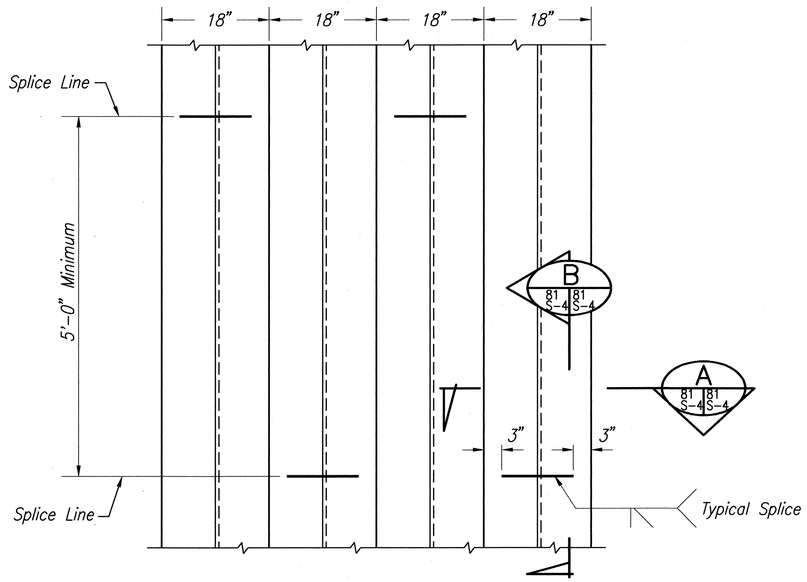
SHEET No. OF SHEETS

ADD. 81S-3

ORIGINAL PLAN | NOTE BOOK | No. | SURVEY PLOTTED BY | DRAWN BY | TRACED BY | DESIGNED BY | QUANTITIES BY | DATE

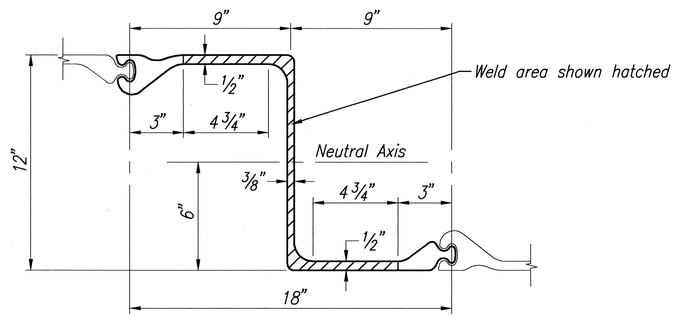
81-45.2 FileSHTPILE.DWG DateMSD2 Plot1-1.333 Date8/29/96 AM

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O. ADD 81S-4 | 521 |



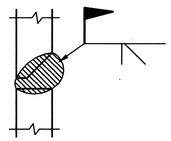

PARTIAL ELEVATION OF SHEET PILING

Scale: 1" = 1'-0"



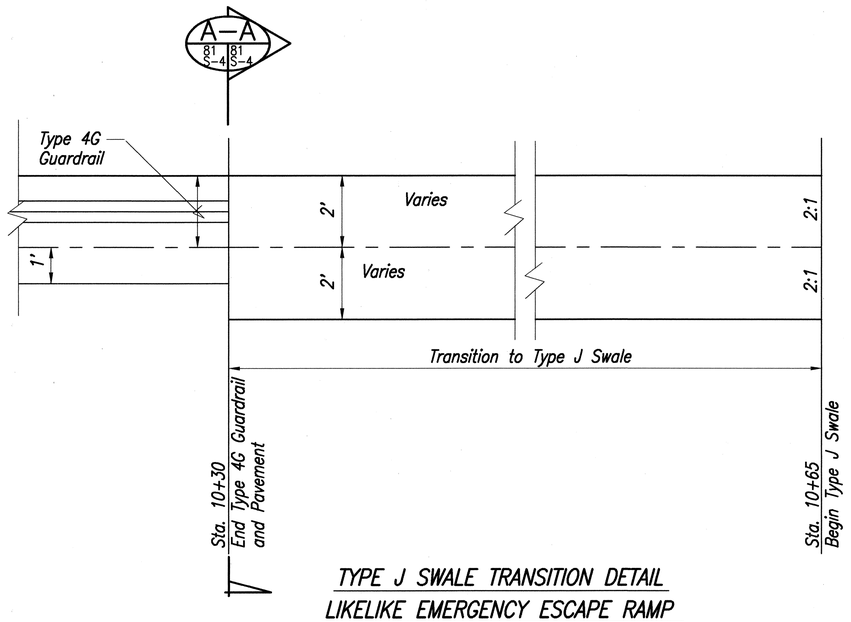

SECTION A
81 S-4 81 S-4

N.T.S.



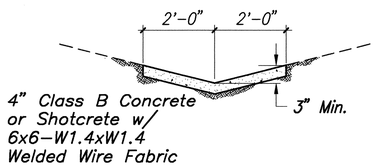
SECTION B
81 S-4 81 S-4

Scale: Full




TYPE J SWALE TRANSITION DETAIL
LIKELIKE EMERGENCY ESCAPE RAMP

Not to Scale




SECTION A-A
81 S-4 81 S-4

Not to Scale

ROBERT I. ITAGAKI
REGISTERED PROFESSIONAL ENGINEER
No. 1584-C
HAWAII, U.S.A.

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| DATE | REVISION |
|---|---|
| 9/29/93 | Added Plan and Section of Type J Swale Transition. |
| 2/21/92 | Sheet added to show Sheet Pile Splice Detail |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SHEET PILE SPLICE DETAIL

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(72)

SCALE: AS NOTED DATE: DEC. 1991

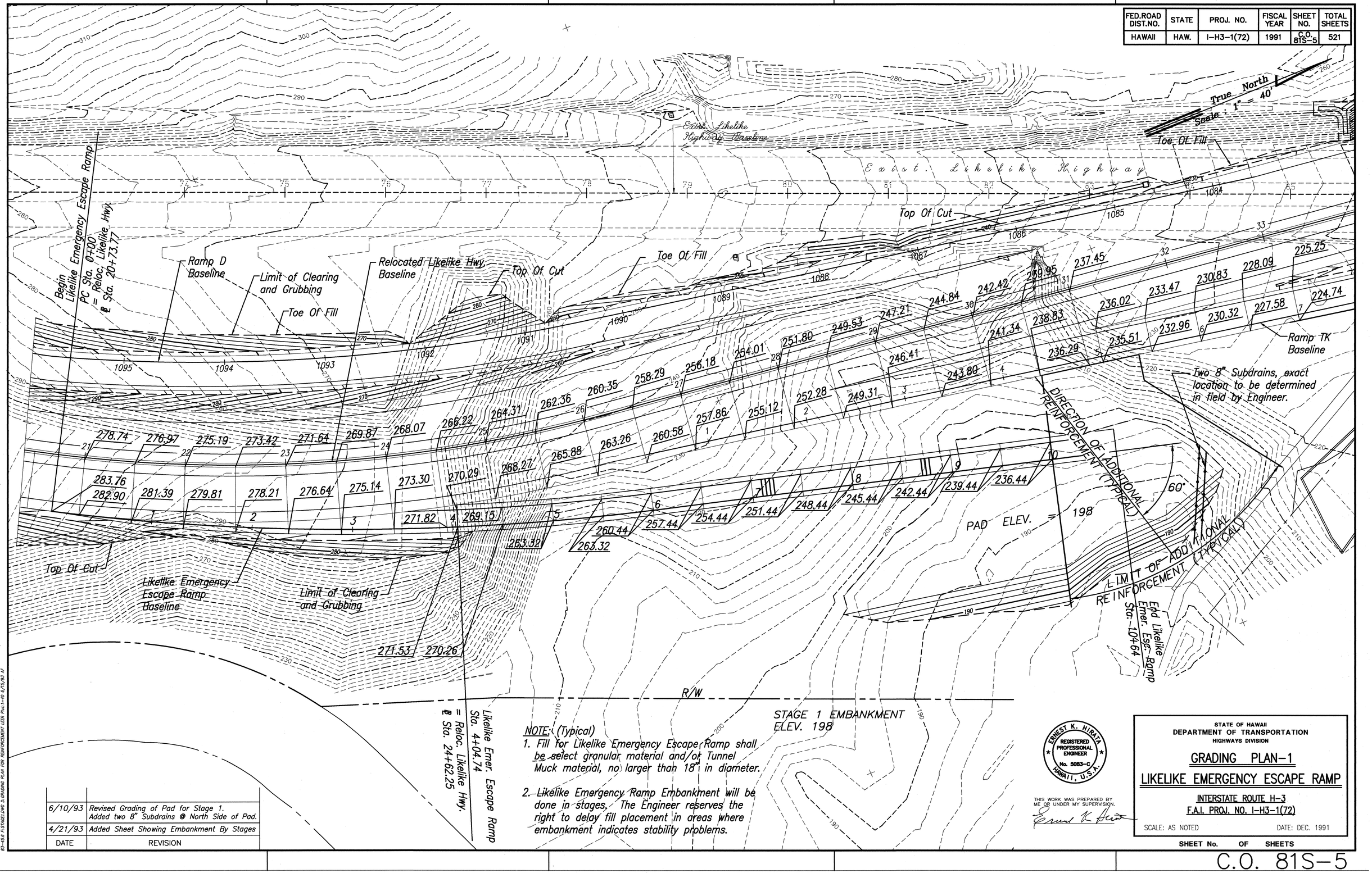
SHEET No. OF SHEETS

ORIGINAL PLAN
NOTE BOOK No.
SURVEY PLOTTED BY DATE
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY

81-45.2 PlnSPVEC.DWG Date:6/6/02 Plot:1-1 Date:10/14/93 by

C.O. ADD. 81S-4

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O. 81S-5 | 521 |




NOTE: (Typical)

1. Fill for Likelike Emergency Escape Ramp shall be select granular material and/or Tunnel Muck material, no larger than 18" in diameter.
2. Likelike Emergency Ramp Embankment will be done in stages. The Engineer reserves the right to delay fill placement in areas where embankment indicates stability problems.

| DATE | REVISION |
|---|---|
| 6/10/93 | Revised Grading of Pad for Stage 1. Added two 8" Subdrains @ North Side of Pad. |
| 4/21/93 | Added Sheet Showing Embankment By Stages |

ORIGINAL PLAN | SURVEY PLOTTED BY | DRAWN BY | TRACED BY | DESIGNED BY | QUANTITIES BY | CHECKED BY | NOTE BOOK | No. | DATE

81-45.6 F:\STAGE1\DWG 2\GRADING PLAN FOR REINFORCEMENT LER Plot1=40 6/15/93 AF

ERNEST K. HIRATA
REGISTERED PROFESSIONAL ENGINEER
No. 5083-C
HAWAII, U.S.A.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# GRADING PLAN-1

## LIKELIKE EMERGENCY ESCAPE RAMP

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(72)

SCALE: AS NOTED DATE: DEC. 1991

SHEET No. OF SHEETS

C.O. 81S-5

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O. 81S-6 | 521 |

True North
Scale : 1" = 40'

Exist. Likelike Highway Baseline

Exist. Likelike Highway

Begin Likelike Emergency Escape Ramp
PC Sta. 0+00
= Reloc. Likelike Hwy.
℄ Sta. 20+73.77

Ramp D Baseline

Limit of Clearing and Grubbing

Relocated Likelike Hwy. Baseline

Toe Of Fill

Top Of Cut

Toe Of Fill

Top Of Cut

Toe Of Fill

Ramp TK Baseline

Likelike Emergency Escape Ramp Baseline

Top Of Cut

Limit of Clearing and Grubbing

PAD ELEV. = 213

Temporary Slope, Between Embankment Stages
Geosynthetic Reinforcement overlap is not required, Geosynthetic Reinforcement shall be butt against each other (side by side) (Typical)

End Likelike Emer. Esc. Ramp
Sta. 10+65

R/W

STAGE 2A EMBANKMENT
ELEV. 213

Likelike Emer. Escape Ramp
Sta. 4+04.74
= Reloc. Likelike Hwy.
℄ Sta. 24+62.25

| DATE | REVISION |
|---|---|
| 6/29/93 | Revised Grading of Pad for Stage 2A & Finish Grades along Likelike Emer. Esc. Ramp. |
| 4/21/93 | Added Sheet Showing Embankment By Stages |

ORIGINAL PLAN
NOTE BOOK
No.

SURVEY PLOTTED BY
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY
DATE

83-45.6 I:\STAGE2A\ING D-GRADING PLAN FOR REINFORCEMENT LERS Plot:1=40 6/29/93 KF

ERNEST K. HIRATA
REGISTERED PROFESSIONAL ENGINEER
No. 5083-C
HAWAII, U.S.A.

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HIGHWAYS DIVISION

# GRADING PLAN-2A
## LIKELIKE EMERGENCY ESCAPE RAMP

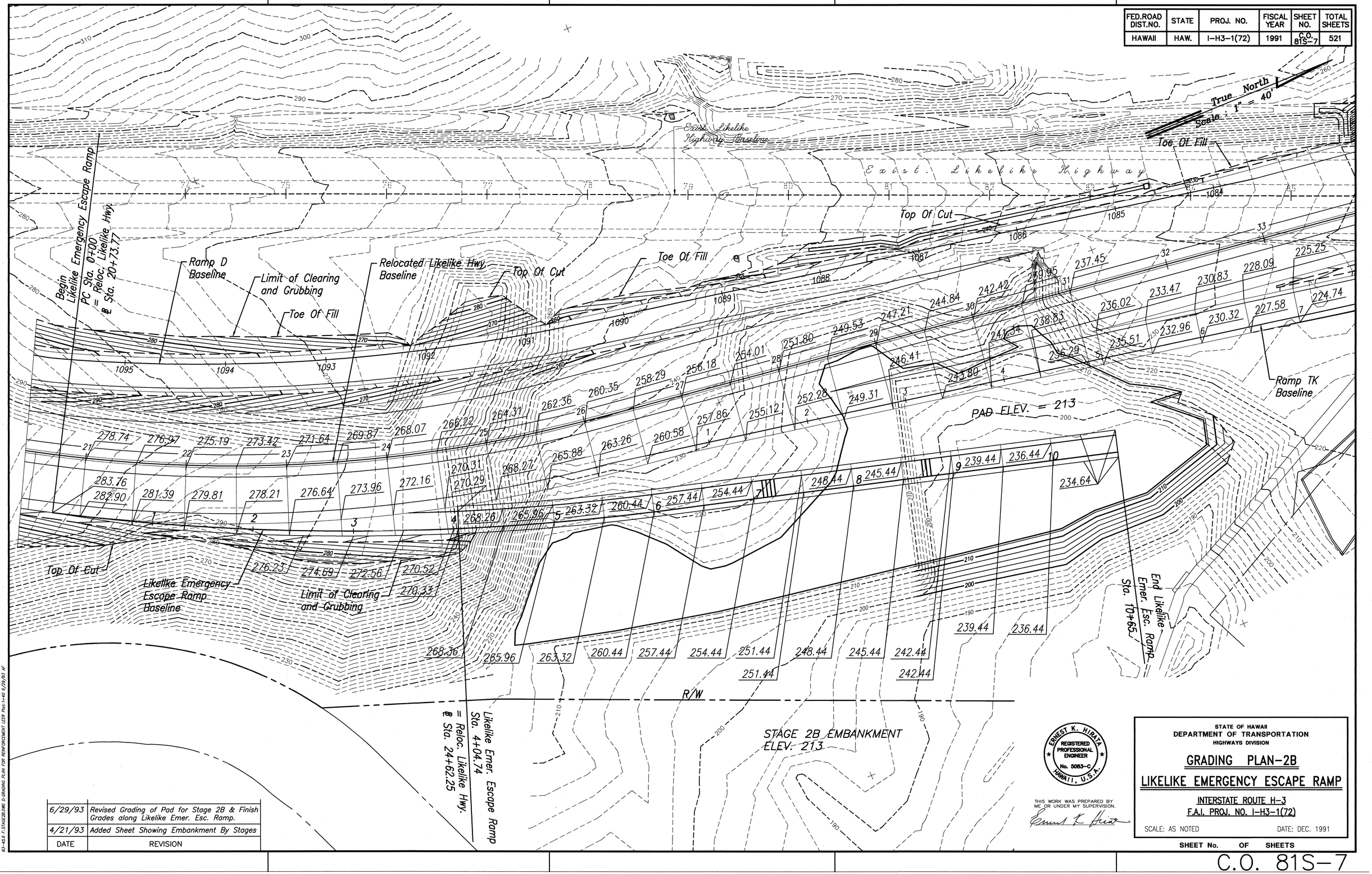
INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(72)

SCALE: AS NOTED DATE: DEC. 1991

SHEET No. OF SHEETS

C.O. 81S-6

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O. 81S-7 | 521 |




| DATE | REVISION |
|---|---|
| 6/29/93 | Revised Grading of Pad for Stage 2B & Finish Grades along Likelike Emer. Esc. Ramp. |
| 4/21/93 | Added Sheet Showing Embankment By Stages |

ORIGINAL PLAN
NOTE BOOK No.
SURVEY PLOTTED BY DATE
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY

83-45.6 I:\STAGE2B\ING D\GRADING PLAN FOR REINFORCMENT LCER Plot:1=40 6/29/93 AF

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No. 5083-C
HAWAII, U.S.A.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# GRADING PLAN-2B
## LIKELIKE EMERGENCY ESCAPE RAMP

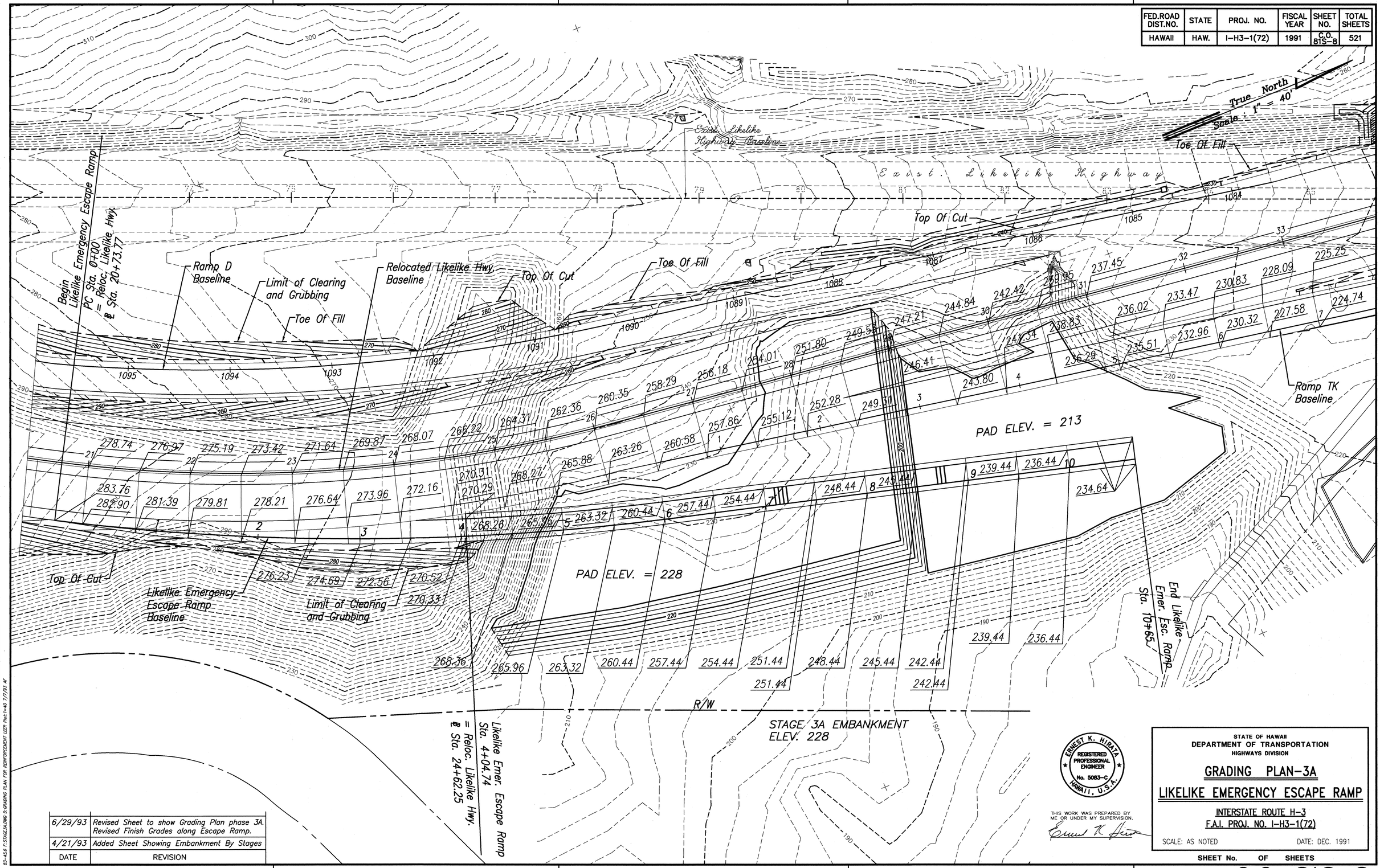
INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(72)

SCALE: AS NOTED DATE: DEC. 1991

SHEET No. OF SHEETS

C.O. 81S-7

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O. 81S-8 | 521 |




| DATE | REVISION |
|---|---|
| 6/29/93 | Revised Sheet to show Grading Plan phase 3A. Revised Finish Grades along Escape Ramp. |
| 4/21/93 | Added Sheet Showing Embankment By Stages |

ORIGINAL PLAN

NOTE BOOK No.

SURVEY PLOTTED BY DATE
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY

83-45.6 F:\STAGE3A.DWG D:GRADING PLAN FOR REINFORCEMENT LEER Plot:1=40 7/7/93 AF

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No. 5083-C
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DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# GRADING PLAN-3A

## LIKELIKE EMERGENCY ESCAPE RAMP

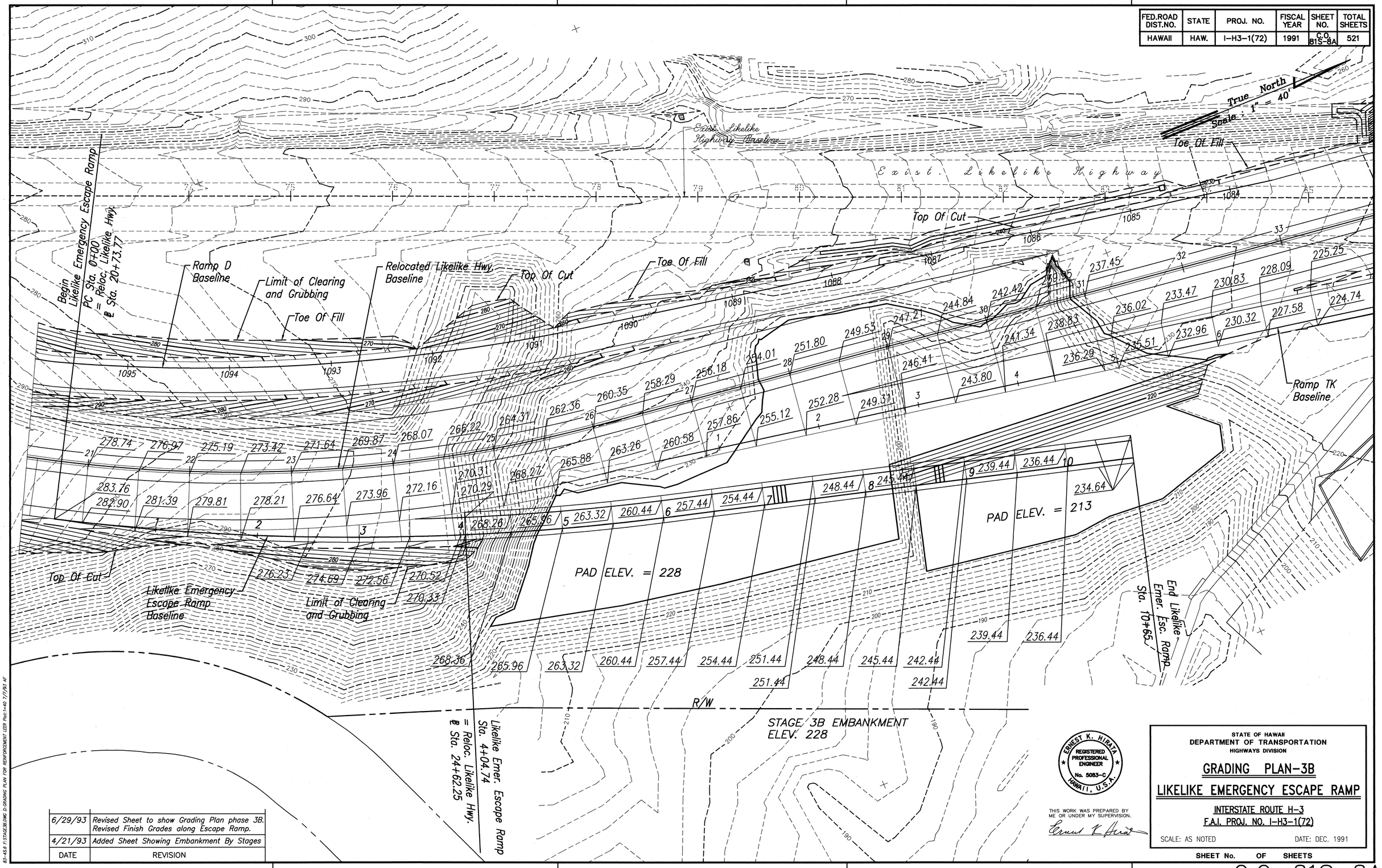
INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(72)

SCALE: AS NOTED DATE: DEC. 1991

SHEET No. OF SHEETS

C.O. 81S-8

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O. 81S-8A | 521 |




| | | |
|---|---|---|
| ORIGINAL PLAN | SURVEY PLOTTED BY | DATE |
| | DRAWN BY | |
| NOTE BOOK | TRACED BY | |
| No. | DESIGNED BY | |
| | QUANTITIES BY | |
| | CHECKED BY | |

| DATE | REVISION |
|---|---|
| 6/29/93 | Revised Sheet to show Grading Plan phase 3B. Revised Finish Grades along Escape Ramp. |
| 4/21/93 | Added Sheet Showing Embankment By Stages |

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DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# GRADING PLAN-3B

## LIKELIKE EMERGENCY ESCAPE RAMP

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(72)

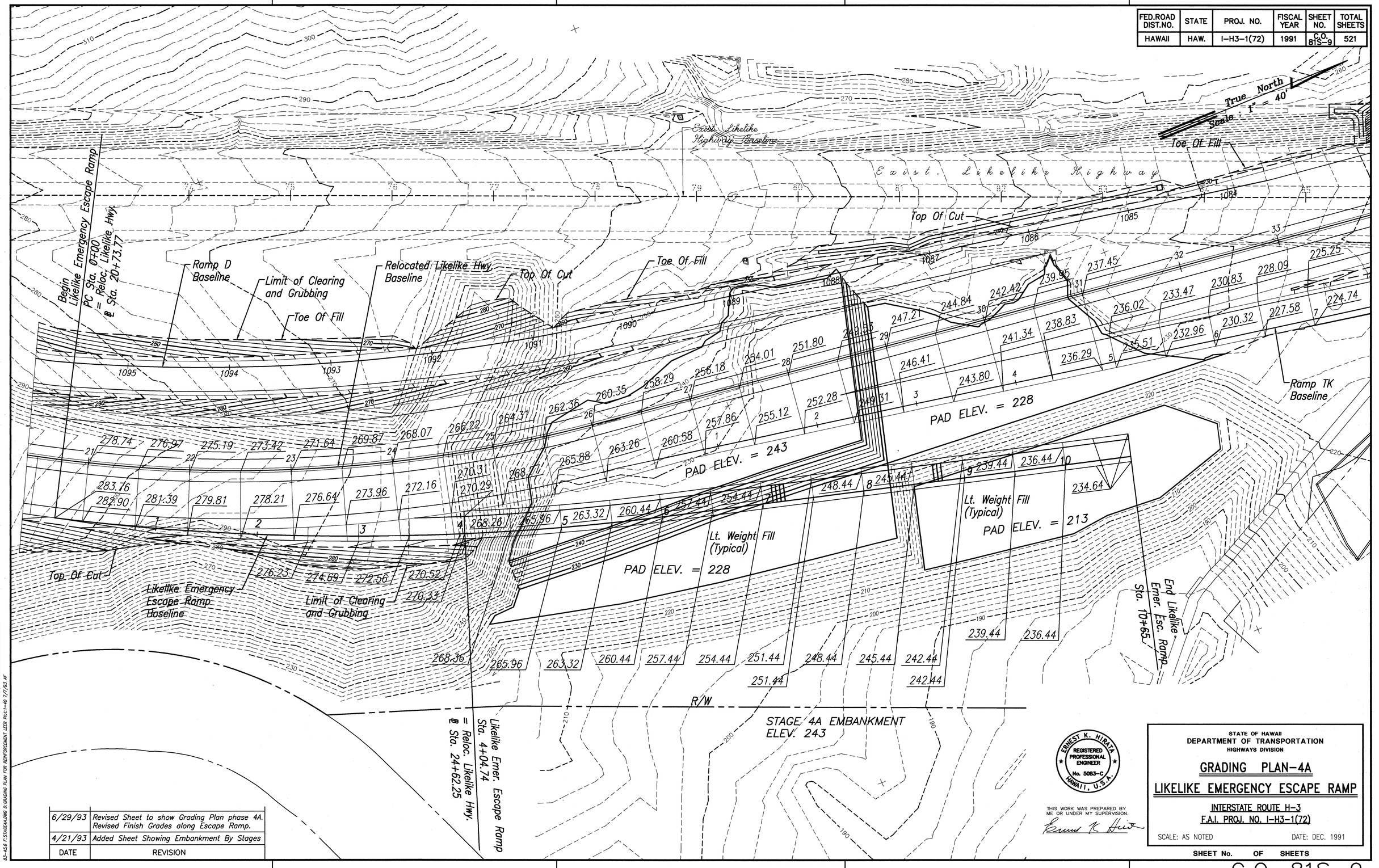
SCALE: AS NOTED DATE: DEC. 1991

SHEET No. OF SHEETS

C.O. 81S-8A

43-45.6 F:\STAGE3\WG D:\DRAWING PLAN FOR REINFORCMENT LEER Plot:1=40 7/7/93 JF

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O. 81S-9 | 521 |




| | |
|---|---|
| 6/29/93 | Revised Sheet to show Grading Plan phase 4A. Revised Finish Grades along Escape Ramp. |
| 4/21/93 | Added Sheet Showing Embankment By Stages |
| DATE | REVISION |

ORIGINAL PLAN

NOTE BOOK No.

SURVEY PLOTTED BY DATE
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY

83-45.6 F:STAGE4A.DWG D:GRADING PLAN FOR REINFORCEMENT LEER Rel:1+40 7/7/93 AF

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No. 5083-C
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STATE OF HAWAII
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HIGHWAYS DIVISION

# GRADING PLAN-4A

## LIKELIKE EMERGENCY ESCAPE RAMP

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(72)

SCALE: AS NOTED DATE: DEC. 1991

SHEET No. OF SHEETS

C.O. 81S-9

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O. 81S-9A | 521 |

True North
Scale : 1" = 40'

Begin Likelike Emergency Escape Ramp
PC Sta. 0+00
= Reloc. Likelike Hwy.
@ Sta. 20+73.77

Ramp D Baseline

Limit of Clearing and Grubbing

Toe Of Fill

Relocated Likelike Hwy. Baseline

Top Of Cut

Toe Of Fill

Existing Likelike Highway Baseline

East. Likelike Highway

Toe Of Fill

Top Of Cut

PAD ELEV. = 243

Ramp TK Baseline

Lt. Weight Fill (Typical)
PAD ELEV. = 228

Lt. Weight Fill (Typical)
PAD ELEV. = 213

Top Of Cut

Likelike Emergency Escape Ramp Baseline

Limit of Clearing and Grubbing

End Likelike Emer. Esc. Ramp Sta. 10+65

Likelike Emer. Escape Ramp Sta. 4+04.74
= Reloc. Likelike Hwy. @ Sta. 24+62.25

R/W

STAGE 4B EMBANKMENT ELEV. 243

| | |
|---|---|
| 8/9/93 | Added Finish Grades (from elevation 230' to 243') along Relocated Likelike Hwy. |
| 6/29/93 | Revised Sheet to show Grading Plan phase 4B. Revised Finish Grades along Escape Ramp. |
| 4/21/93 | Added Sheet Showing Embankment By Stages |
| DATE | REVISION |

ORIGINAL PLAN
NOTE BOOK No.
SURVEY PLOTTED BY DATE
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY

83-46.6 F:\STAGE4B\ENG D\GRADING PLAN FOR REINFORCEMENT LCER Plot:1=40 8/9/93 JF

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HAWAII, U.S.A.

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DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# GRADING PLAN-4B
## LIKELIKE EMERGENCY ESCAPE RAMP

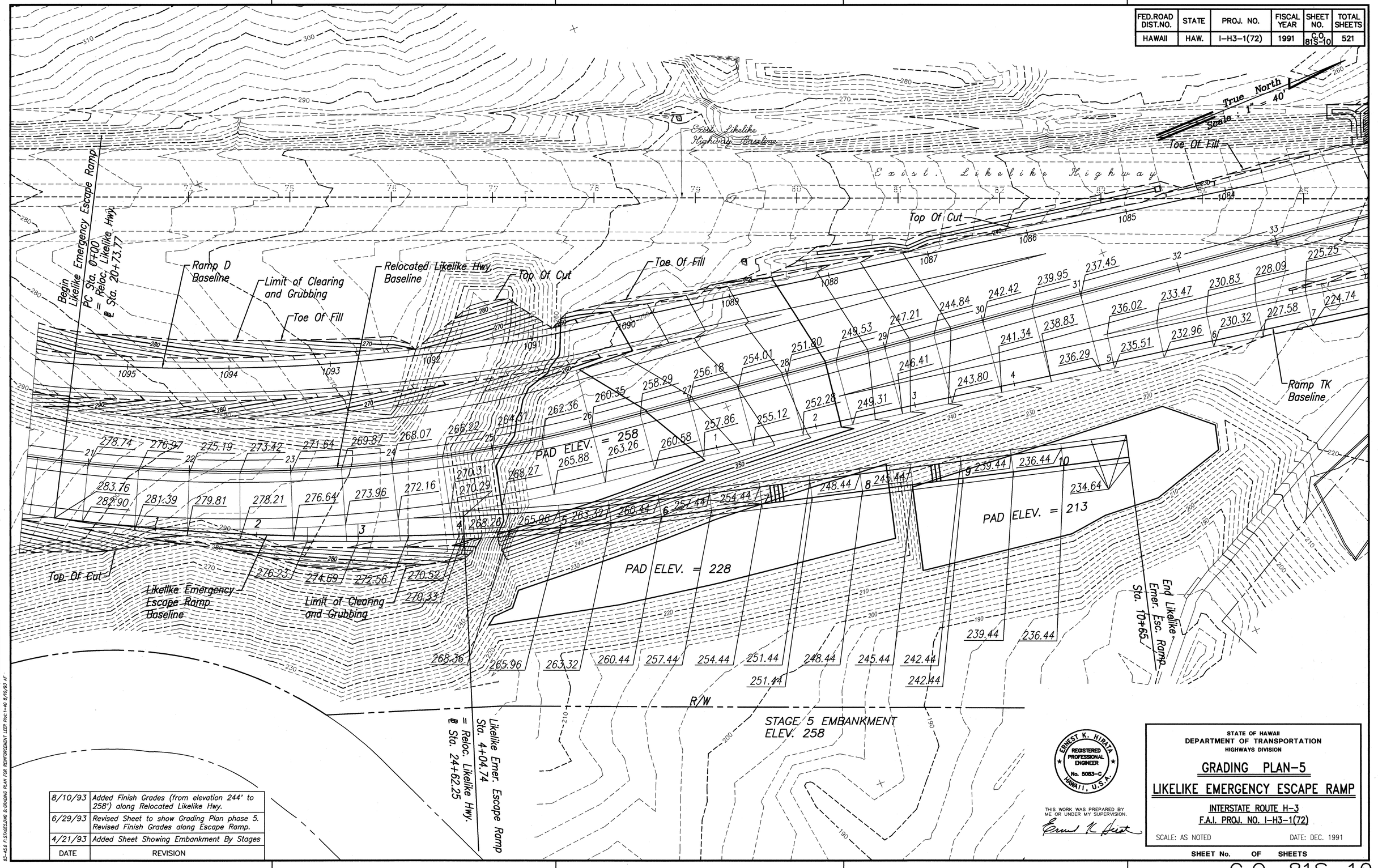
INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(72)

SCALE: AS NOTED DATE: DEC. 1991

SHEET No. OF SHEETS

C.O. 81S-9A

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O. 81S-10 | 521 |




| | |
|---|---|
| 8/10/93 | Added Finish Grades (from elevation 244' to 258') along Relocated Likelike Hwy. |
| 6/29/93 | Revised Sheet to show Grading Plan phase 5. Revised Finish Grades along Escape Ramp. |
| 4/21/93 | Added Sheet Showing Embankment By Stages |
| DATE | REVISION |

ORIGINAL PLAN
NOTE BOOK No.
SURVEY PLOTTED BY DATE
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY

83-45.6 F:\STAGES.DWG G:\GRADING PLAN FOR REINFORCEMENT LEER Plot:1=40 8/10/93 AF

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# GRADING PLAN-5

## LIKELIKE EMERGENCY ESCAPE RAMP

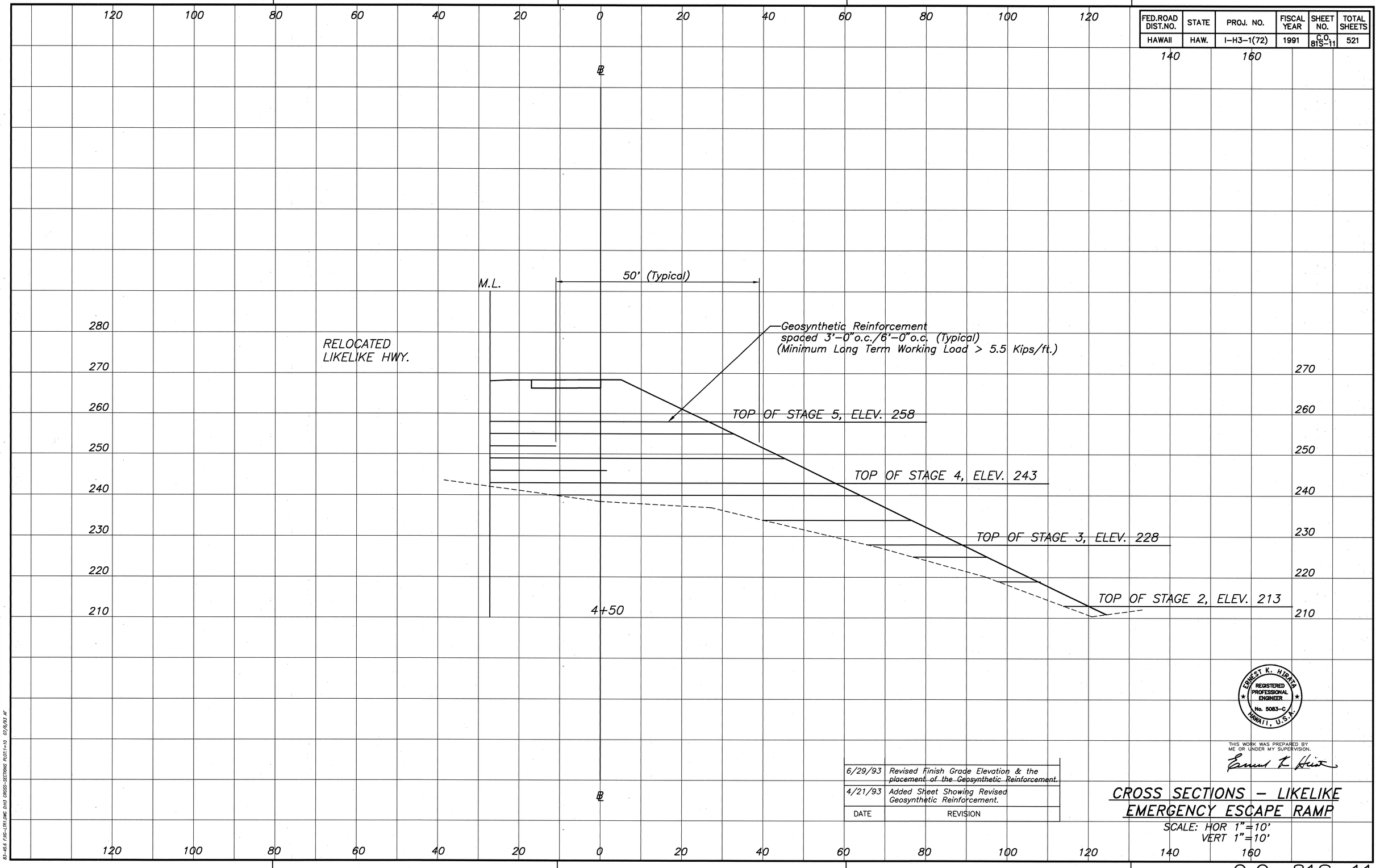
INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(72)

SCALE: AS NOTED DATE: DEC. 1991

SHEET No. OF SHEETS

C.O. 81S-10

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O. 81S-11 | 521 |




ORIGINAL PLAN

NOTE BOOK
No.

SURVEY PLOTTED BY
DRAWN BY
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QUANTITIES BY
CHECKED BY
DATE

83-45.6 EXC-LIKELIKE EMG DWG CROSS-SECTIONS R.001-1-10 07/6/93 JF

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REGISTERED PROFESSIONAL ENGINEER
No. 5083-C
HAWAII, U.S.A.

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Ernest K. Hirata

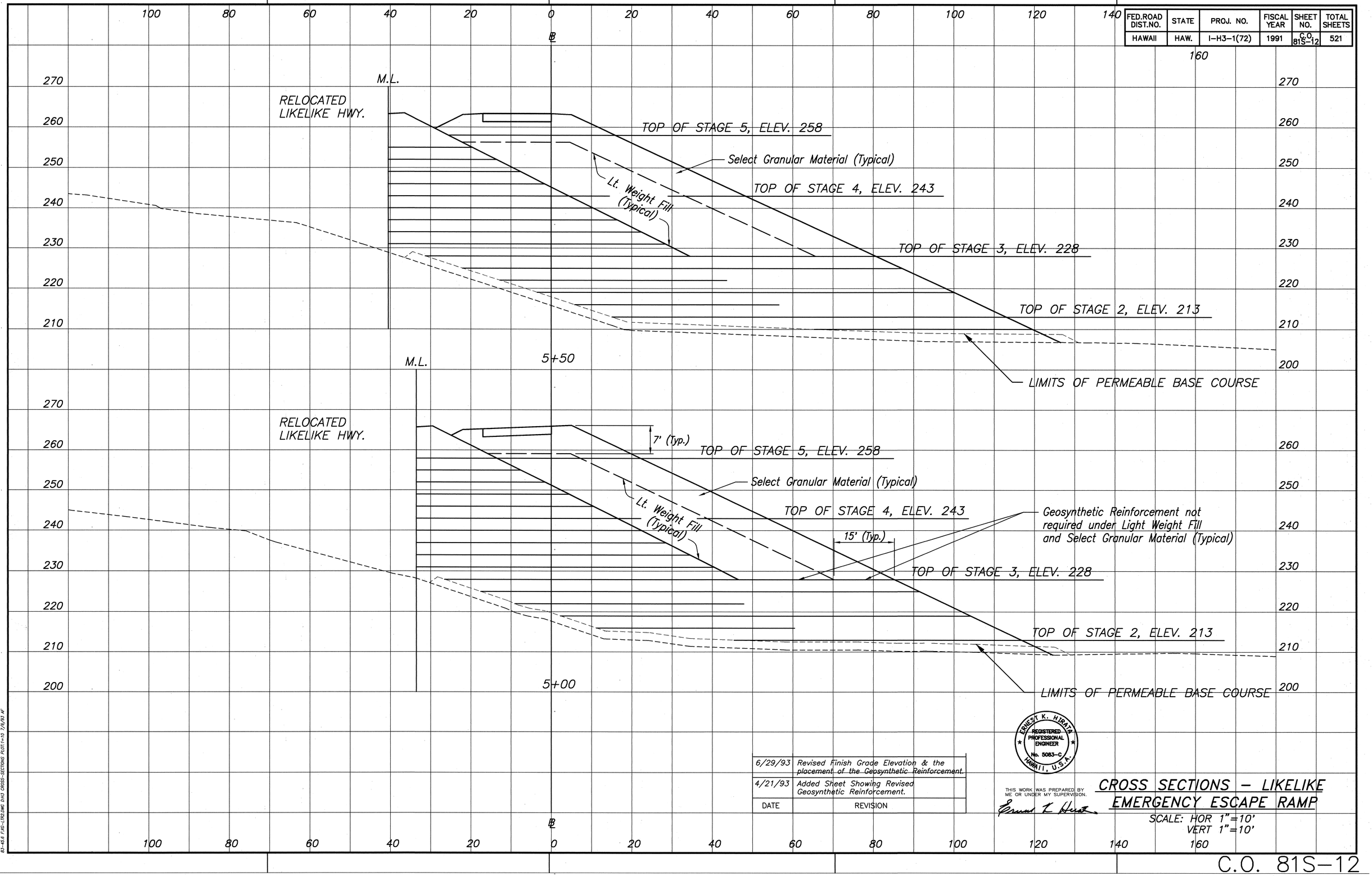
| DATE | REVISION |
|---|---|
| 6/29/93 | Revised Finish Grade Elevation & the placement of the Geosynthetic Reinforcement. |
| 4/21/93 | Added Sheet Showing Revised Geosynthetic Reinforcement. |

# CROSS SECTIONS - LIKELIKE EMERGENCY ESCAPE RAMP

SCALE: HOR 1"=10'
VERT 1"=10'

C.O. 81S-11

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O. 81S-12 | 521 |




| ORIGINAL PLAN | SURVEY PLOTTED BY | DATE |
|---|---|---|
| NOTE BOOK | DRAWN BY | |
| No. | TRACED BY | |
| | DESIGNED BY | |
| | QUANTITIES BY | |
| | CHECKED BY | |

83-45.6 FJC-I-TRDWG 0n1 CROSS-SECTIONS PLOT:1=10 7/6/93 AF

| DATE | REVISION |
|---|---|
| 6/29/93 | Revised Finish Grade Elevation & the placement of the Geosynthetic Reinforcement. |
| 4/21/93 | Added Sheet Showing Revised Geosynthetic Reinforcement. |

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REGISTERED PROFESSIONAL ENGINEER
No. 5083-C
HAWAII, U.S.A.

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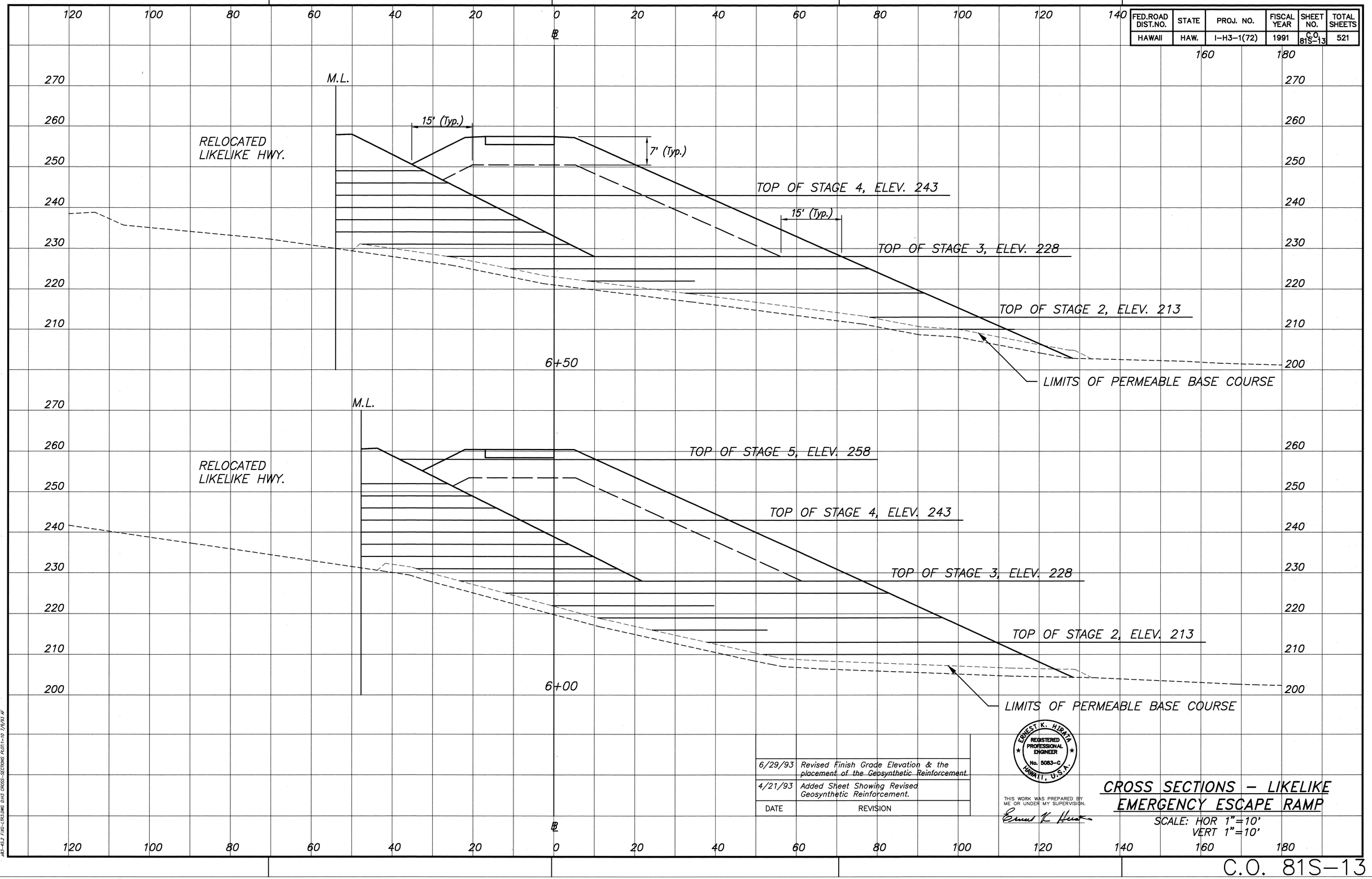
Ernest K. Hirata

# CROSS SECTIONS – LIKELIKE EMERGENCY ESCAPE RAMP

SCALE: HOR 1"=10'
VERT 1"=10'

C.O. 81S-12

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O. 81S-13 | 521 |




| | |
|---|---|
| ORIGINAL PLAN | SURVEY PLOTTED BY |
| NOTE BOOK | DRAWN BY |
| No. | TRACED BY |
| | DESIGN BY |
| | QUANTITIES BY |
| | CHECKED BY |
| | DATE |

| DATE | REVISION |
|---|---|
| 6/29/93 | Revised Finish Grade Elevation & the placement of the Geosynthetic Reinforcement. |
| 4/21/93 | Added Sheet Showing Revised Geosynthetic Reinforcement. |

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REGISTERED PROFESSIONAL ENGINEER
No. 5083-C
HAWAII, U.S.A.

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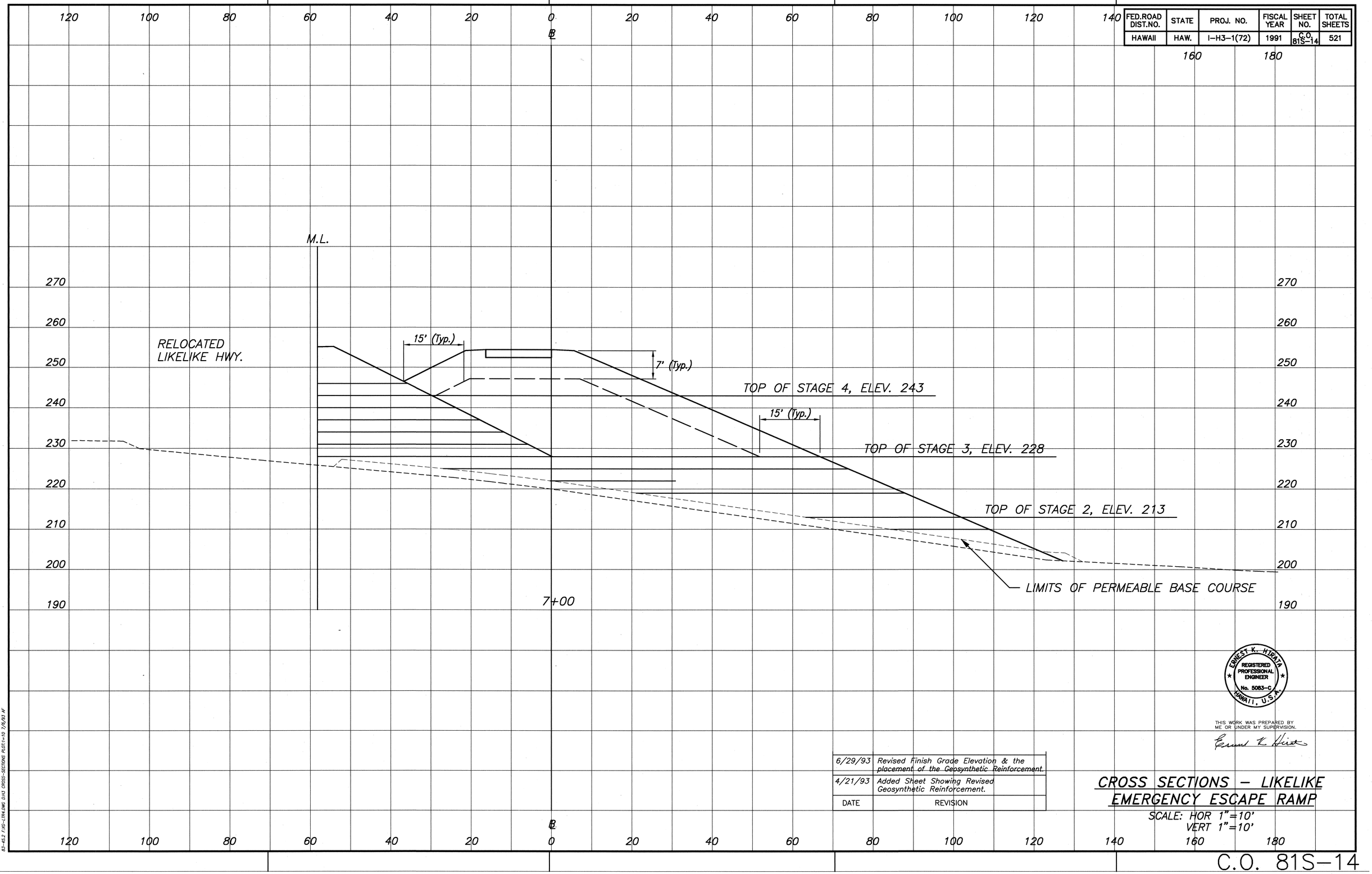
Ernest K. Hirata

# CROSS SECTIONS – LIKELIKE EMERGENCY ESCAPE RAMP

SCALE: HOR 1"=10'
VERT 1"=10'

81S-45.2 F:\PC-LITE\DWG\ 8415 CROSS-SECTIONS PLOT=1:10 7/6/93 AF

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O. 81S-14 | 521 |




ORIGINAL PLAN
NOTE BOOK
No.

SURVEY PLOTTED BY
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY
DATE

81-45.2 EXC-LIKE.DWG D:\1 CROSS-SECTIONS PLOT:1=10 7/6/93 JF

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REGISTERED PROFESSIONAL ENGINEER
No. 5083-C
HAWAII, U.S.A.

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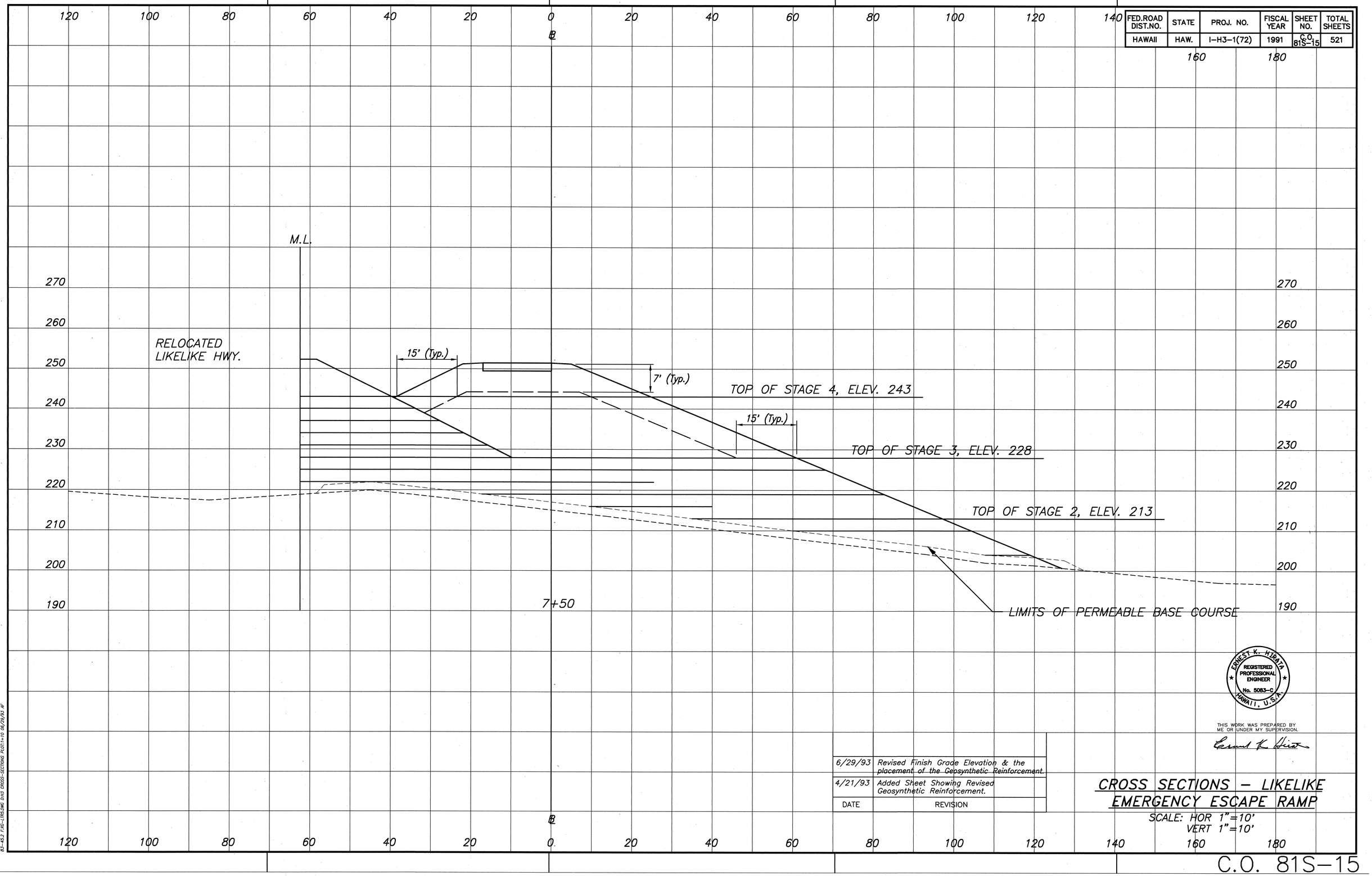
| DATE | REVISION |
|---|---|
| 6/29/93 | Revised Finish Grade Elevation & the placement of the Geosynthetic Reinforcement. |
| 4/21/93 | Added Sheet Showing Revised Geosynthetic Reinforcement. |

# CROSS SECTIONS – LIKELIKE EMERGENCY ESCAPE RAMP

SCALE: HOR 1"=10'
VERT 1"=10'

C.O. 81S-14

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O. 81S-15 | 521 |




ORIGINAL PLAN

NOTE BOOK
No.

SURVEY PLOTTED BY
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY
DATE

83-452 FHC-1(RUMC DHS CROSS-SECTIONS PLOT=1.0 06/29/93 JF

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No. 5083-C
HAWAII, U.S.A.

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Ernest K. Hirata

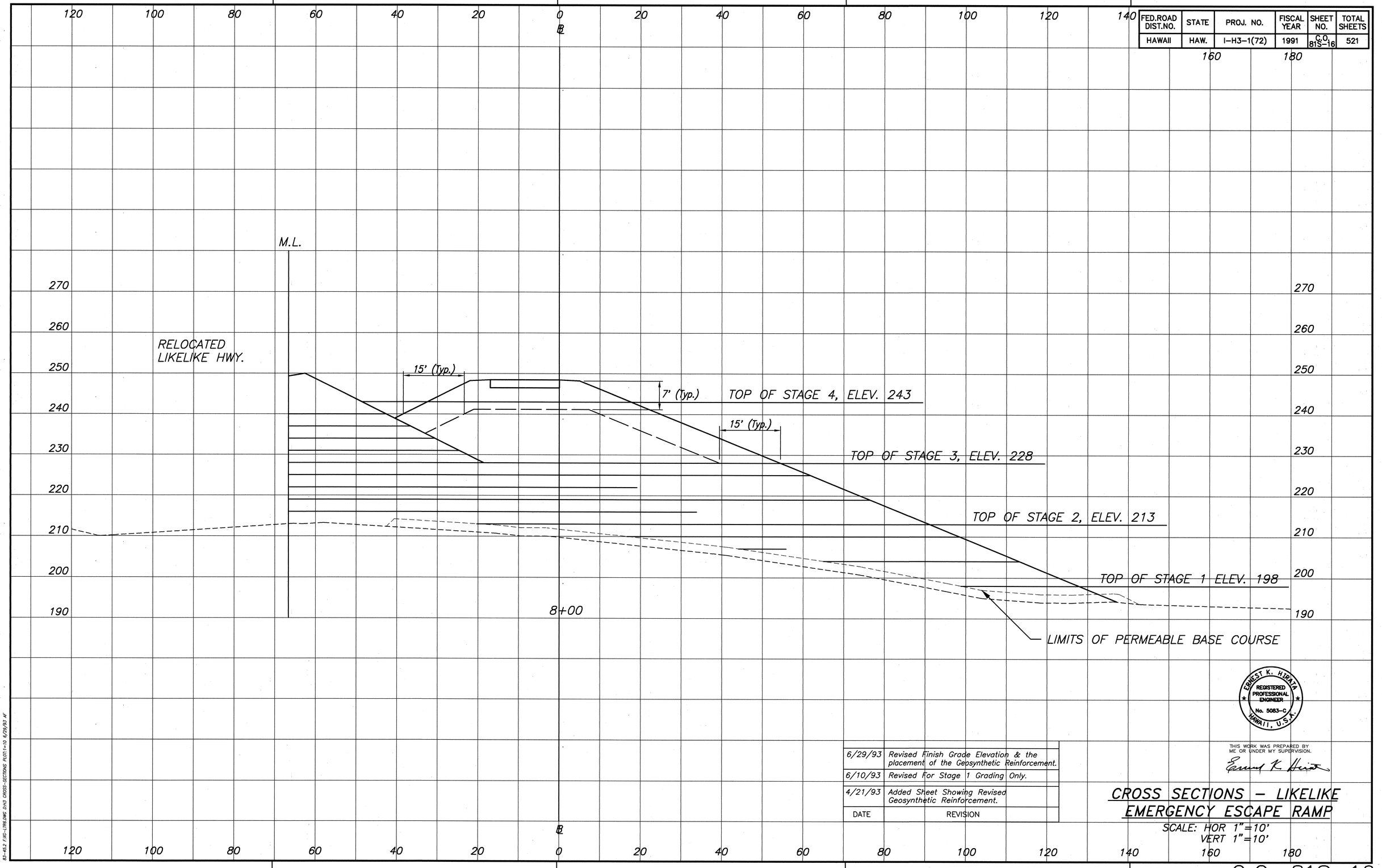
| DATE | REVISION |
|---|---|
| 6/29/93 | Revised Finish Grade Elevation & the placement of the Geosynthetic Reinforcement. |
| 4/21/93 | Added Sheet Showing Revised Geosynthetic Reinforcement. |

# CROSS SECTIONS - LIKELIKE EMERGENCY ESCAPE RAMP

SCALE: HOR 1"=10'
VERT 1"=10'

C.O. 81S-15

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O. 81S-16 | 521 |




ORIGINAL PLAN

NOTE BOOK No.

SURVEY PLOTTED BY DATE
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY

83-452 EXC-1TRDWG D:\1 CROSS-SECTIONS PLOT:1=10 6/29/93 AF

| DATE | REVISION |
|---|---|
| 6/29/93 | Revised Finish Grade Elevation & the placement of the Geosynthetic Reinforcement. |
| 6/10/93 | Revised For Stage 1 Grading Only. |
| 4/21/93 | Added Sheet Showing Revised Geosynthetic Reinforcement. |

ERNEST K. HIRATA
REGISTERED PROFESSIONAL ENGINEER
No. 5083-C
HAWAII, U.S.A.

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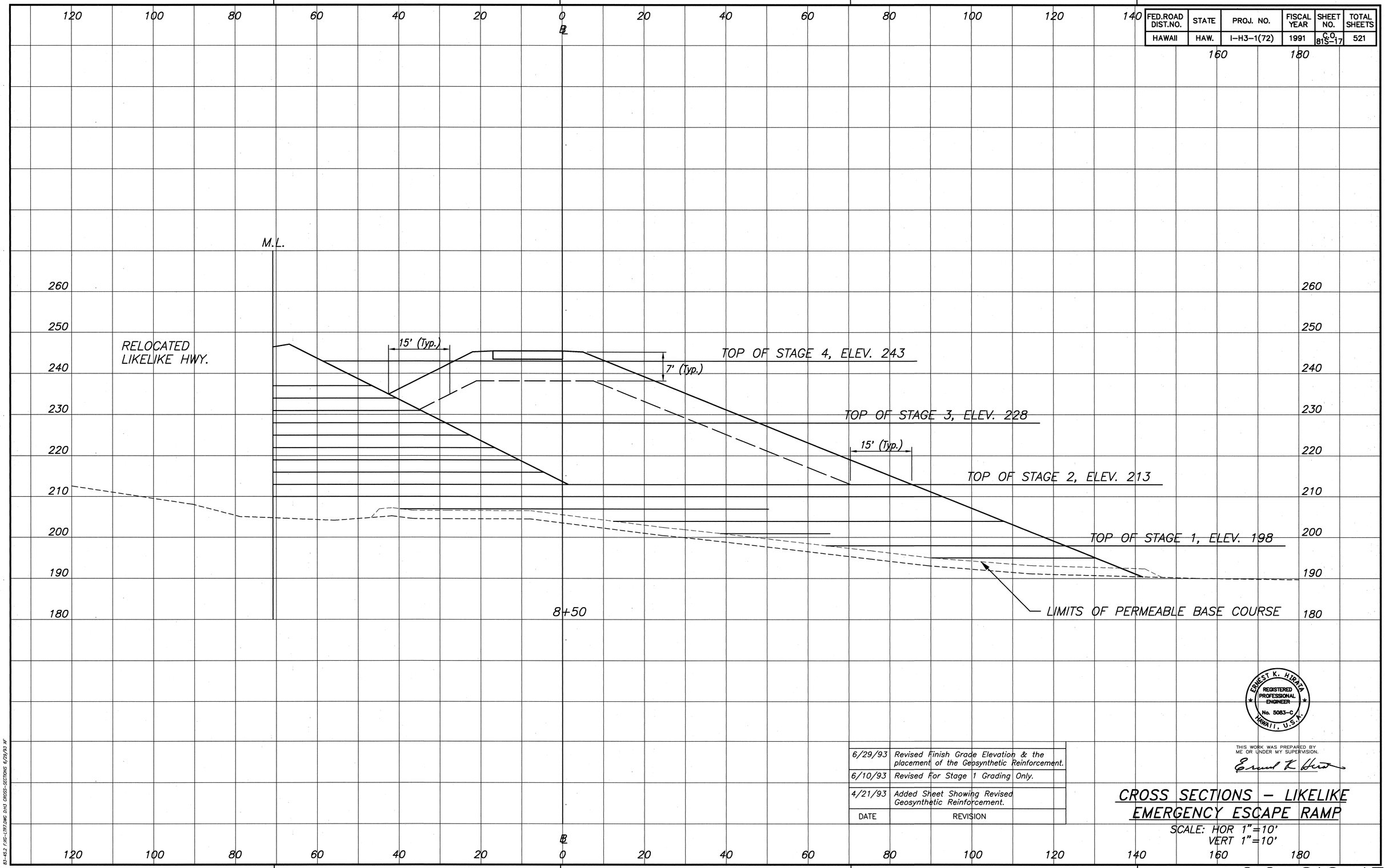
Ernest K. Hirata

# CROSS SECTIONS - LIKELIKE EMERGENCY ESCAPE RAMP

SCALE: HOR 1"=10'
VERT 1"=10'

C.O. 81S-16

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O. 81S-17 | 521 |




ORIGINAL PLAN

NOTE BOOK No.

SURVEY PLOTTED BY DATE
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY

83-452 FHC-1(87)HI 043 CROSS-SECTIONS 6/29/93 AF

| DATE | REVISION |
|---|---|
| 6/29/93 | Revised Finish Grade Elevation & the placement of the Geosynthetic Reinforcement. |
| 6/10/93 | Revised For Stage 1 Grading Only. |
| 4/21/93 | Added Sheet Showing Revised Geosynthetic Reinforcement. |

ERNEST K. HIRATA
REGISTERED PROFESSIONAL ENGINEER
No. 5083-C
HAWAII, U.S.A.

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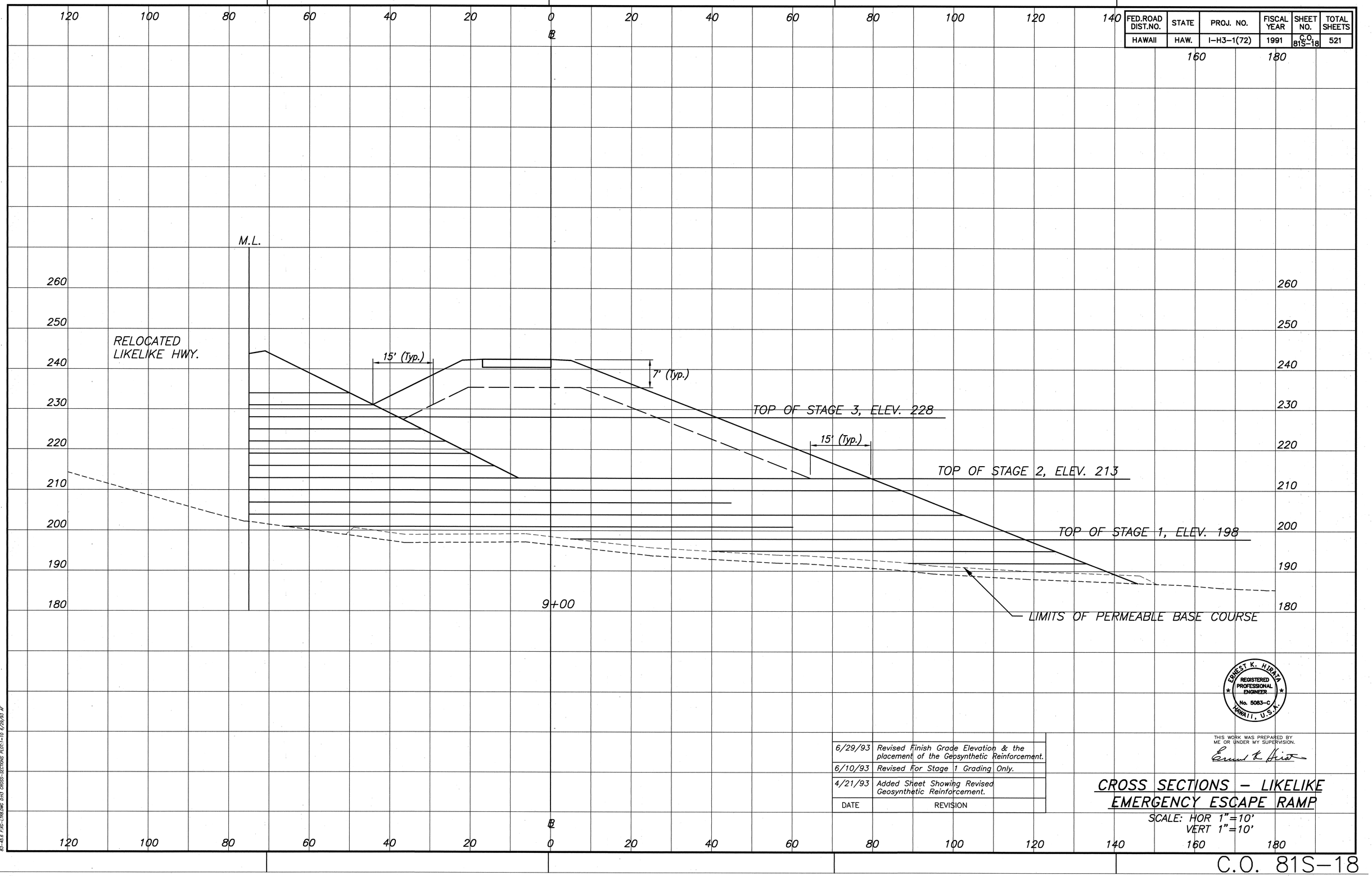
Ernest K. Hirata

# CROSS SECTIONS - LIKELIKE EMERGENCY ESCAPE RAMP

SCALE: HOR 1"=10'
VERT 1"=10'

C.O. 81S-17

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O. 81S-18 | 521 |




ORIGINAL PLAN
NOTE BOOK No.

SURVEY PLOTTED BY DATE
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY

83-45.6 F:\IC-1\ROUND 0\81 CROSS-SECTIONS PLOT=1:10 6/29/93 AF

| DATE | REVISION |
|---|---|
| 6/29/93 | Revised Finish Grade Elevation & the placement of the Geosynthetic Reinforcement. |
| 6/10/93 | Revised For Stage 1 Grading Only. |
| 4/21/93 | Added Sheet Showing Revised Geosynthetic Reinforcement. |

ERNEST K. HIRATA
REGISTERED PROFESSIONAL ENGINEER
No. 5083-C
HAWAII, U.S.A.

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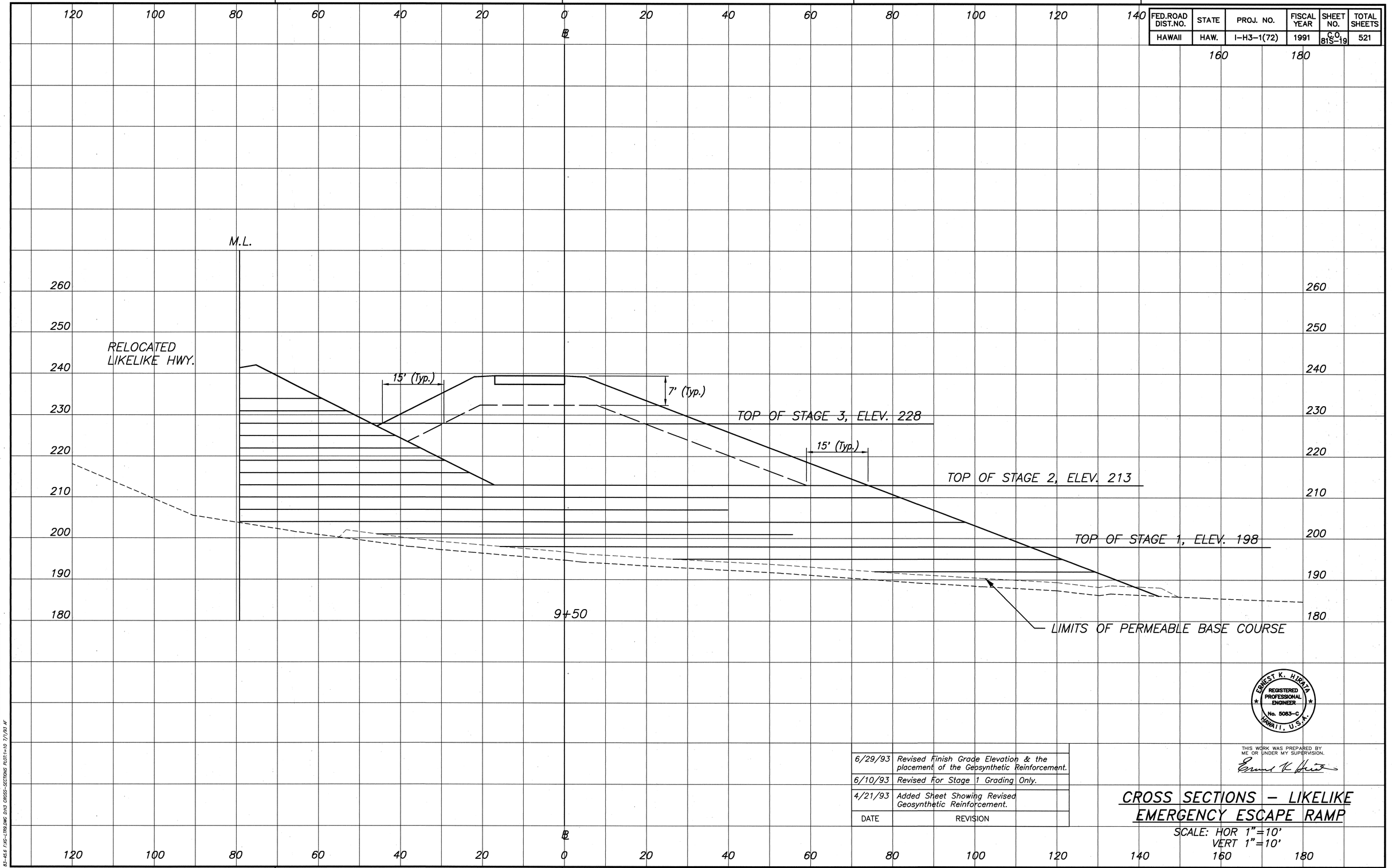
Ernest K. Hirata

## CROSS SECTIONS - LIKELIKE EMERGENCY ESCAPE RAMP

SCALE: HOR 1"=10'
VERT 1"=10'

C.O. 81S-18

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O. 81S-19 | 521 |




| | |
|---|---|
| 6/29/93 | Revised Finish Grade Elevation & the placement of the Geosynthetic Reinforcement. |
| 6/10/93 | Revised For Stage 1 Grading Only. |
| 4/21/93 | Added Sheet Showing Revised Geosynthetic Reinforcement. |
| DATE | REVISION |

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REGISTERED PROFESSIONAL ENGINEER
No. 5083-C
HAWAII, U.S.A.

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Ernest K Hirata

# CROSS SECTIONS – LIKELIKE EMERGENCY ESCAPE RAMP

SCALE: HOR 1"=10'
VERT 1"=10'

ORIGINAL PLAN

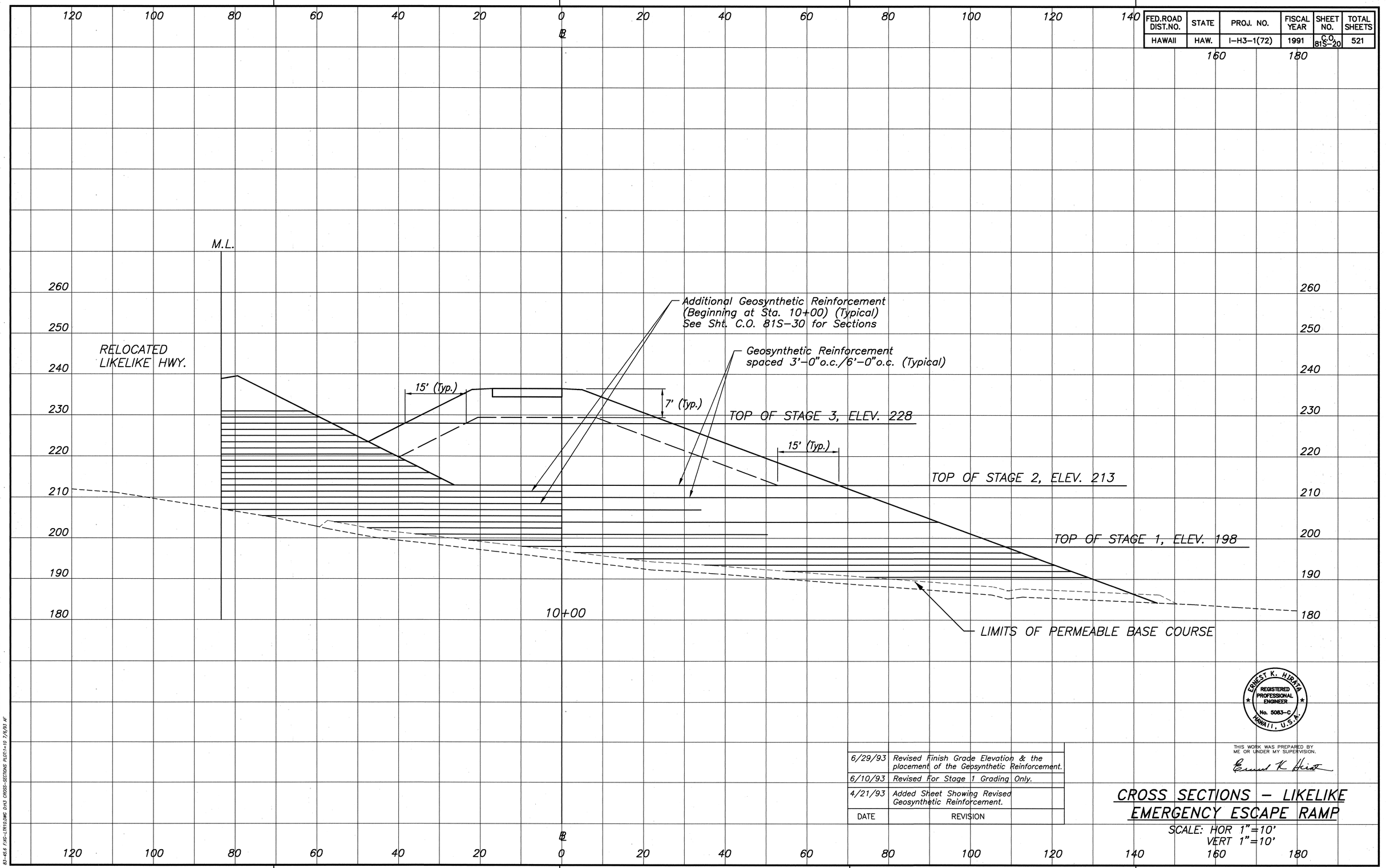
NOTE BOOK
No.

SURVEY PLOTTED BY
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY
DATE

83-45.6 FJC-L1R9.DWG DH3 CROSS-SECTIONS PLOT:1=10 7/1/93 AF

C.O. 81S-19

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O. 81S-20 | 521 |




ORIGINAL PLAN

NOTE BOOK No.

SURVEY PLOTTED BY DATE
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY

83-45.6 FWG-1R10.DWG DIAG CROSS-SECTIONS PLOT:1=10 7/6/93 JF

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REGISTERED PROFESSIONAL ENGINEER
No. 5083-C
HAWAII, U.S.A.

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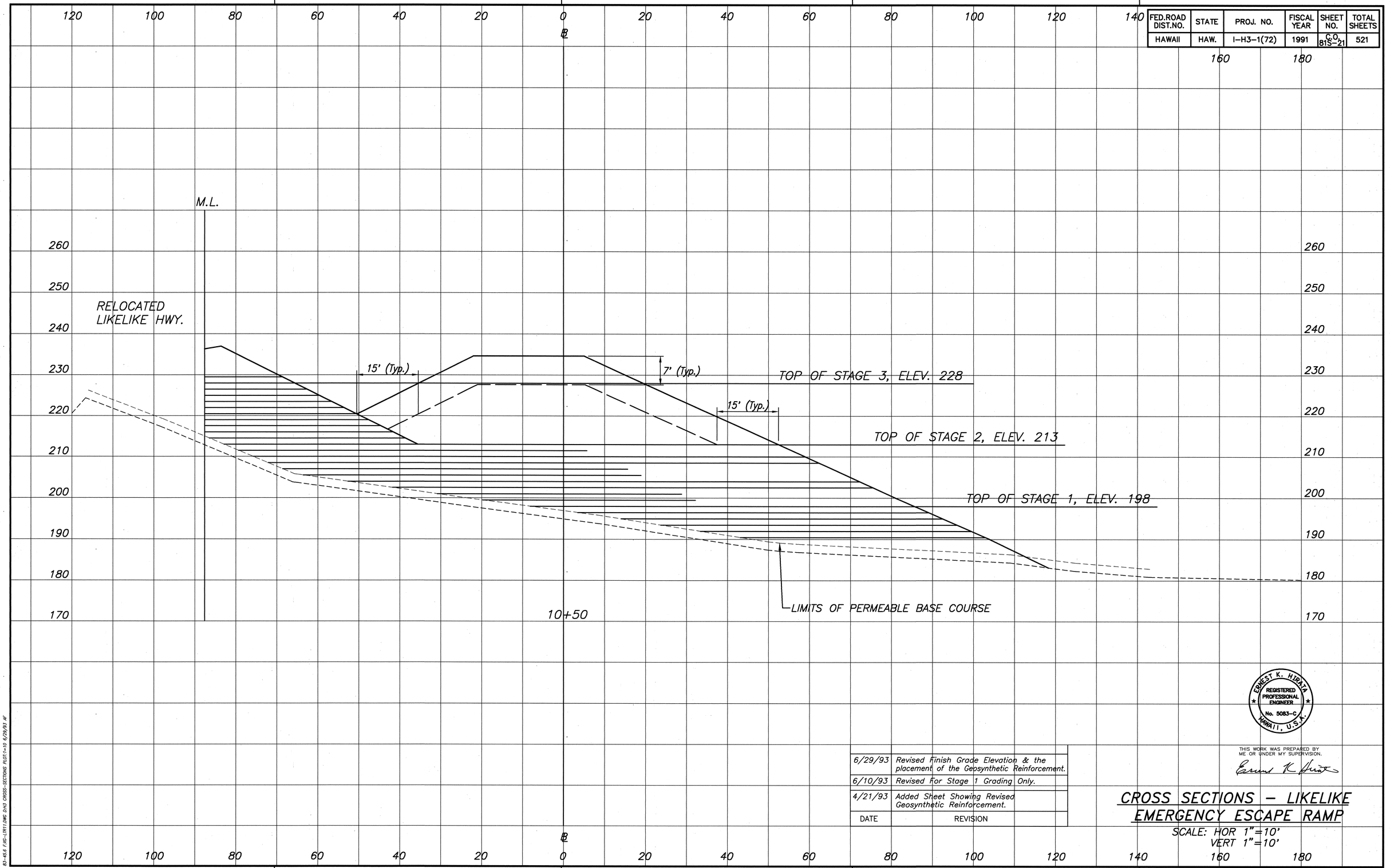
| DATE | REVISION |
|---|---|
| 6/29/93 | Revised Finish Grade Elevation & the placement of the Geosynthetic Reinforcement. |
| 6/10/93 | Revised For Stage 1 Grading Only. |
| 4/21/93 | Added Sheet Showing Revised Geosynthetic Reinforcement. |

# CROSS SECTIONS - LIKELIKE EMERGENCY ESCAPE RAMP

SCALE: HOR 1"=10'
VERT 1"=10'

C.O. 81S-20

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O. 81S-21 | 521 |




ORIGINAL PLAN

NOTE BOOK No.

SURVEY PLOTTED BY DATE
DRAWN BY
TRACED BY
DESIGN BY
QUANTITIES BY
CHECKED BY

83-45.6 FJSC-LIKELIKE DHS CROSS-SECTIONS PLOT=1:10 6/29/93 AF

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REGISTERED PROFESSIONAL ENGINEER
No. 5083-C
HAWAII, U.S.A.

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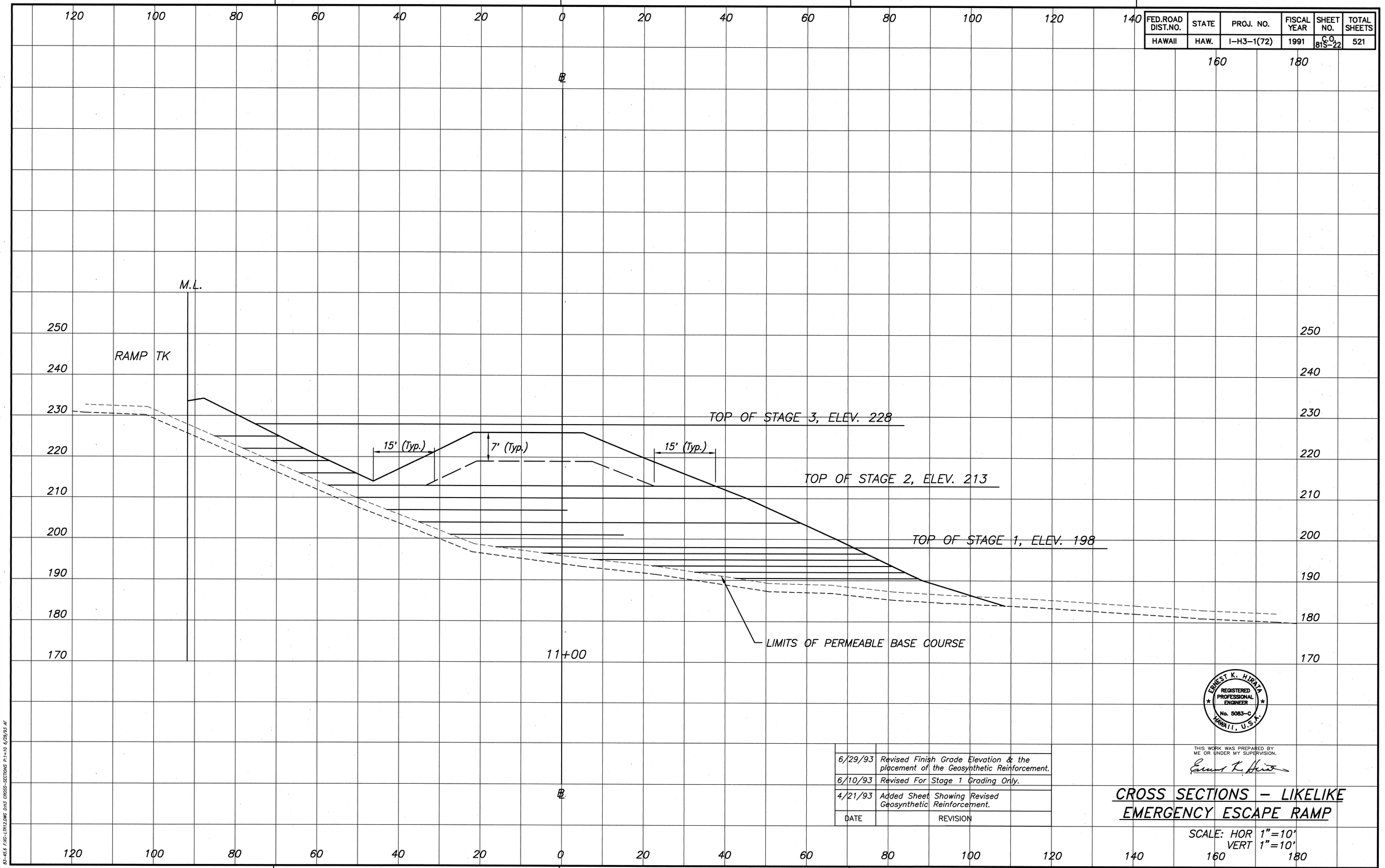
| DATE | REVISION |
|---|---|
| 6/29/93 | Revised Finish Grade Elevation & the placement of the Geosynthetic Reinforcement. |
| 6/10/93 | Revised For Stage 1 Grading Only. |
| 4/21/93 | Added Sheet Showing Revised Geosynthetic Reinforcement. |

# CROSS SECTIONS - LIKELIKE EMERGENCY ESCAPE RAMP

SCALE: HOR 1"=10'
VERT 1"=10'

C.O. 81S-21

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O. 81S-22 | 521 |




| DATE | REVISION |
|---|---|
| 6/29/93 | Revised Finish Grade Elevation & the placement of the Geosynthetic Reinforcement. |
| 6/10/93 | Revised For Stage 1 Grading Only. |
| 4/21/93 | Added Sheet Showing Revised Geosynthetic Reinforcement. |

ORIGINAL PLAN

NOTE BOOK
No.

SURVEY PLOTTED BY
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY
DATE

83-45.6 FJC-LIK12.DWG (DH3 CROSS-SECTIONS P1=10 6/29/93 AF

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REGISTERED PROFESSIONAL ENGINEER
No. 5083-C
HAWAII, U.S.A.

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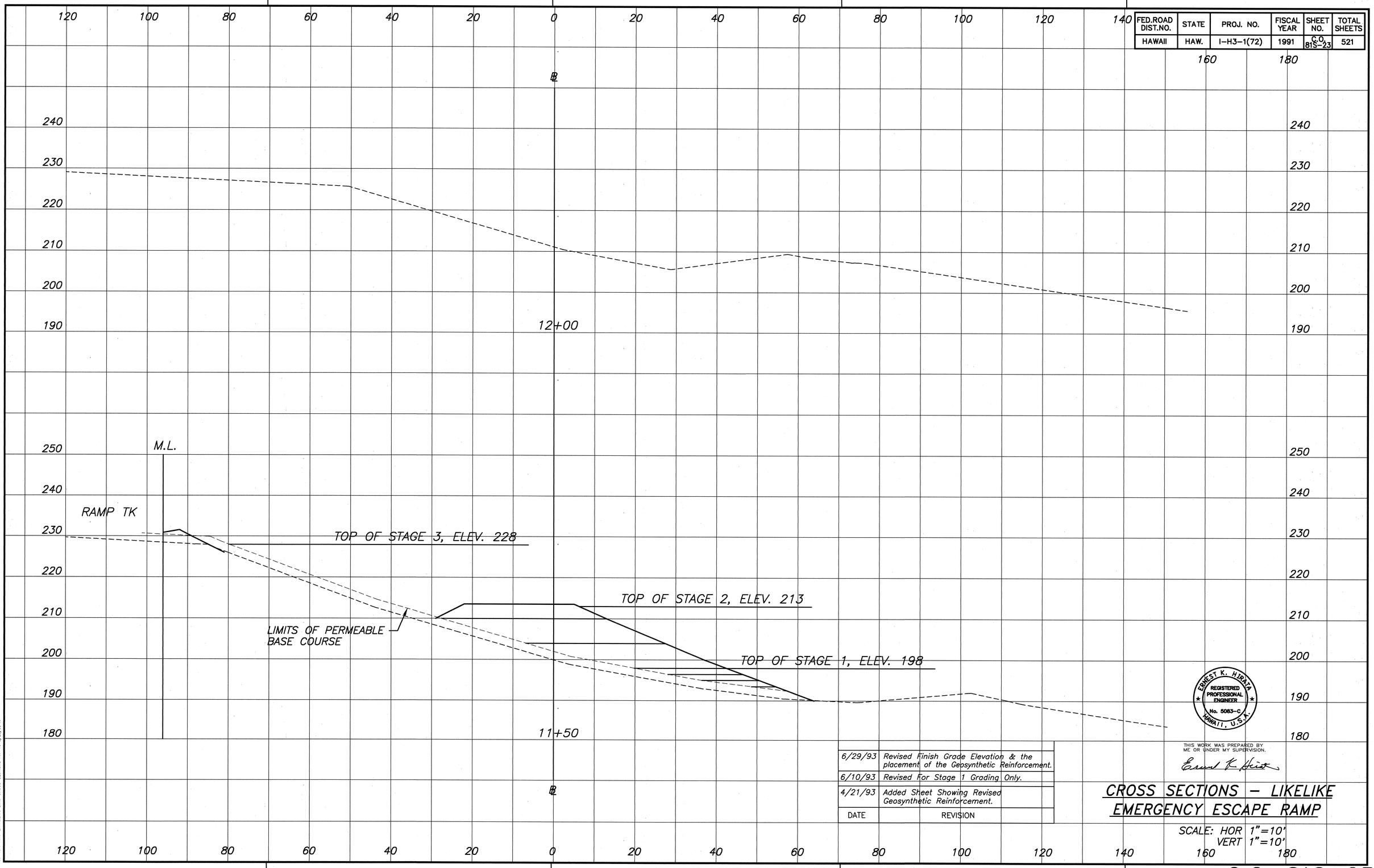
Ernest K. Hirata

# CROSS SECTIONS – LIKELIKE EMERGENCY ESCAPE RAMP

SCALE: HOR 1"=10'
VERT 1"=10'

C.O. 81S-22

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O. 81S-23 | 521 |




| | | |
|---|---|---|
| ORIGINAL PLAN | SURVEY PLOTTED BY | DATE |
| | DRAWN BY | |
| NOTE BOOK | TRACED BY | |
| No. | DESIGNED BY | |
| | QUANTITIES BY | |
| | CHECKED BY | |

83-456 FXS-1R1LONG DN1 CROSS-SECTIONS P.I=10 6/29/93 AF

| DATE | REVISION |
|---|---|
| 6/29/93 | Revised Finish Grade Elevation & the placement of the Geosynthetic Reinforcement. |
| 6/10/93 | Revised For Stage 1 Grading Only. |
| 4/21/93 | Added Sheet Showing Revised Geosynthetic Reinforcement. |

ERNEST K. HIRATA
REGISTERED PROFESSIONAL ENGINEER
No. 5083-C
HAWAII, U.S.A.

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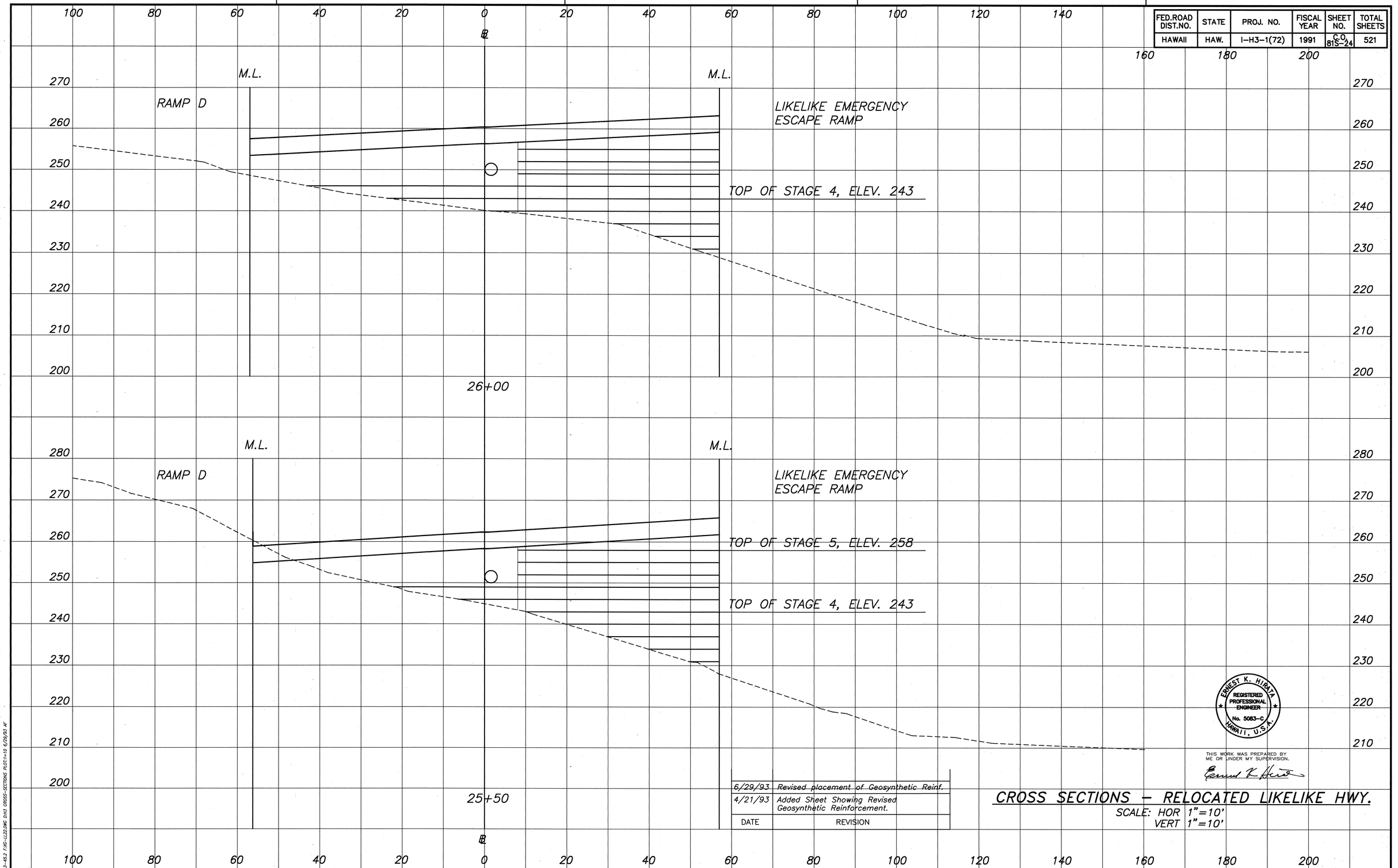
Ernest K. Hirata

# CROSS SECTIONS – LIKELIKE EMERGENCY ESCAPE RAMP

SCALE: HOR 1"=10'
VERT 1"=10'

C.O. 81S-23

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O. 81S-24 | 521 |




SURVEY PLOTTED BY
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY
DATE

ORIGINAL PLAN

NOTE BOOK
No.

83-452 FJC-U22DMC Dist CROSS-SECTIONS PLOT=10 6/29/93 AF

| DATE | REVISION |
|---|---|
| 6/29/93 | Revised placement of Geosynthetic Reinf. |
| 4/21/93 | Added Sheet Showing Revised Geosynthetic Reinforcement. |

ERNEST K. HIRATA
REGISTERED PROFESSIONAL ENGINEER
No. 5083-C
HAWAII, U.S.A.

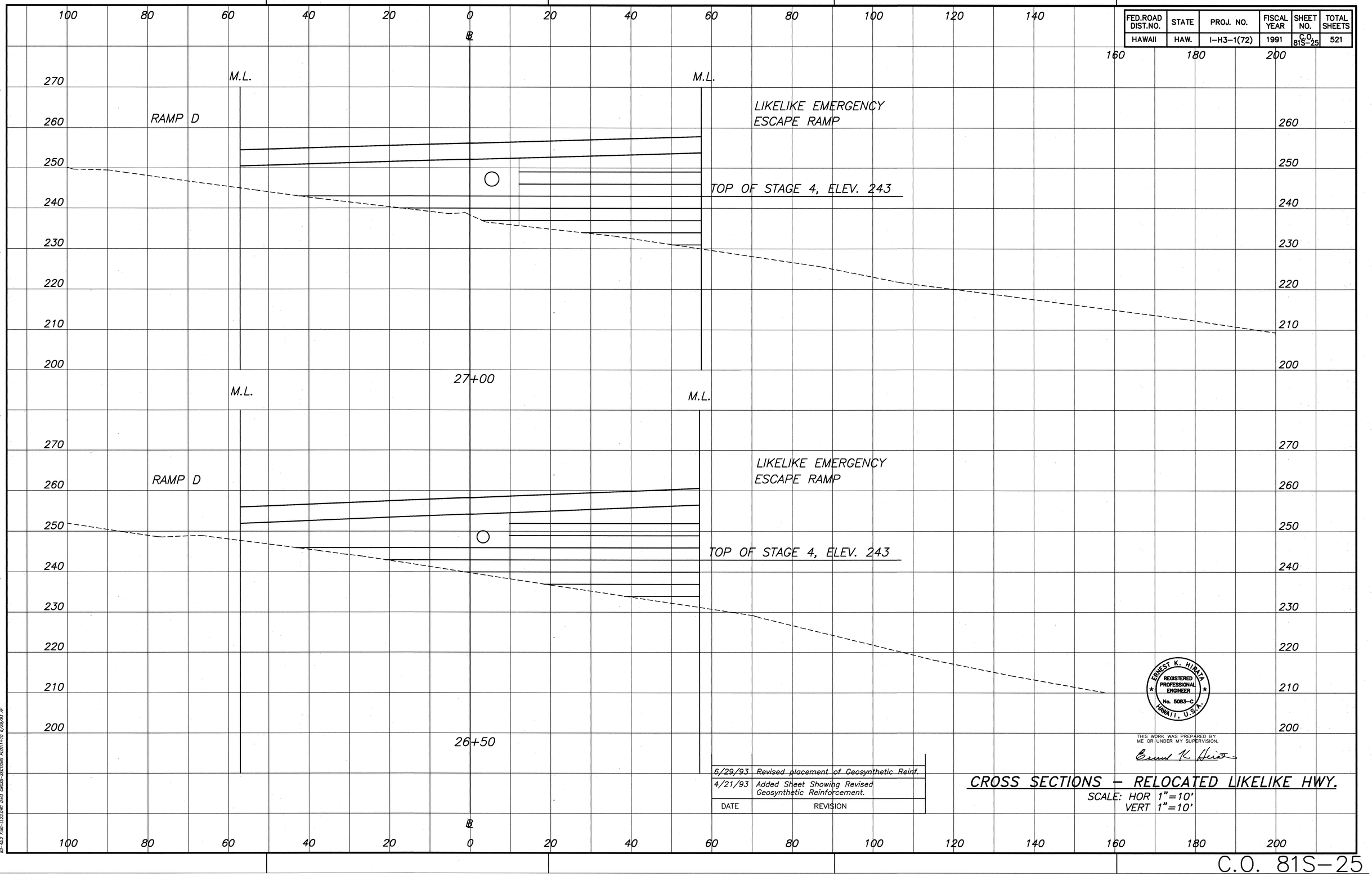
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Ernest K. Hirata

## CROSS SECTIONS - RELOCATED LIKELIKE HWY.

SCALE: HOR 1"=10'
VERT 1"=10'

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O. 81S-25 | 521 |




| DATE | REVISION |
|---|---|
| 6/29/93 | Revised placement of Geosynthetic Reinf. |
| 4/21/93 | Added Sheet Showing Revised Geosynthetic Reinforcement. |

ERNEST K. HIRATA
REGISTERED PROFESSIONAL ENGINEER
No. 5083-C
HAWAII, U.S.A.

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# CROSS SECTIONS - RELOCATED LIKELIKE HWY.

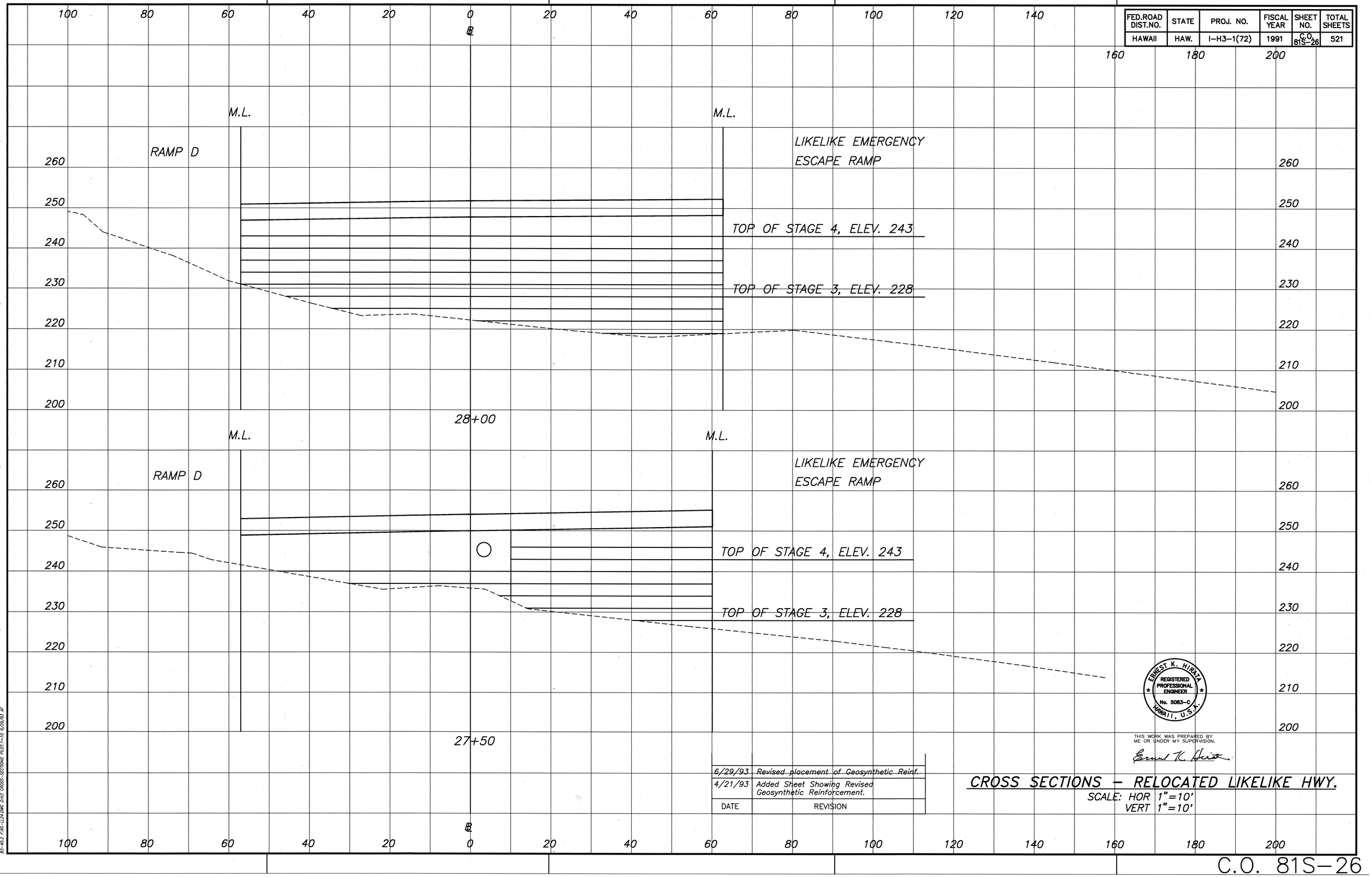
SCALE: HOR 1"=10'
VERT 1"=10'

ORIGINAL PLAN
NOTE BOOK No.
SURVEY PLOTTED BY DATE
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY

81-452 FWC-I-(2)HWC DH3 CROSS-SECTIONS PLOT:I=10 6/29/93 AF

C.O. 81S-25

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O. 81S-26 | 521 |




| ORIGINAL PLAN | SURVEY PLOTTED BY | DATE |
|---|---|---|
| | DRAWN BY | |
| NOTE BOOK | TRACED BY | |
| | DESIGNED BY | |
| No. | QUANTITIES BY | |
| | CHECKED BY | |

83-453 FWS-1(24)HI3 DIST CROSS-SECTIONS PLOT1-10 6/29/93 AF

| DATE | REVISION |
|---|---|
| 6/29/93 | Revised placement of Geosynthetic Reinf. |
| 4/21/93 | Added Sheet Showing Revised Geosynthetic Reinforcement. |

ERNEST K. HIRATA
REGISTERED PROFESSIONAL ENGINEER
No. 5083-C
HAWAII, U.S.A.

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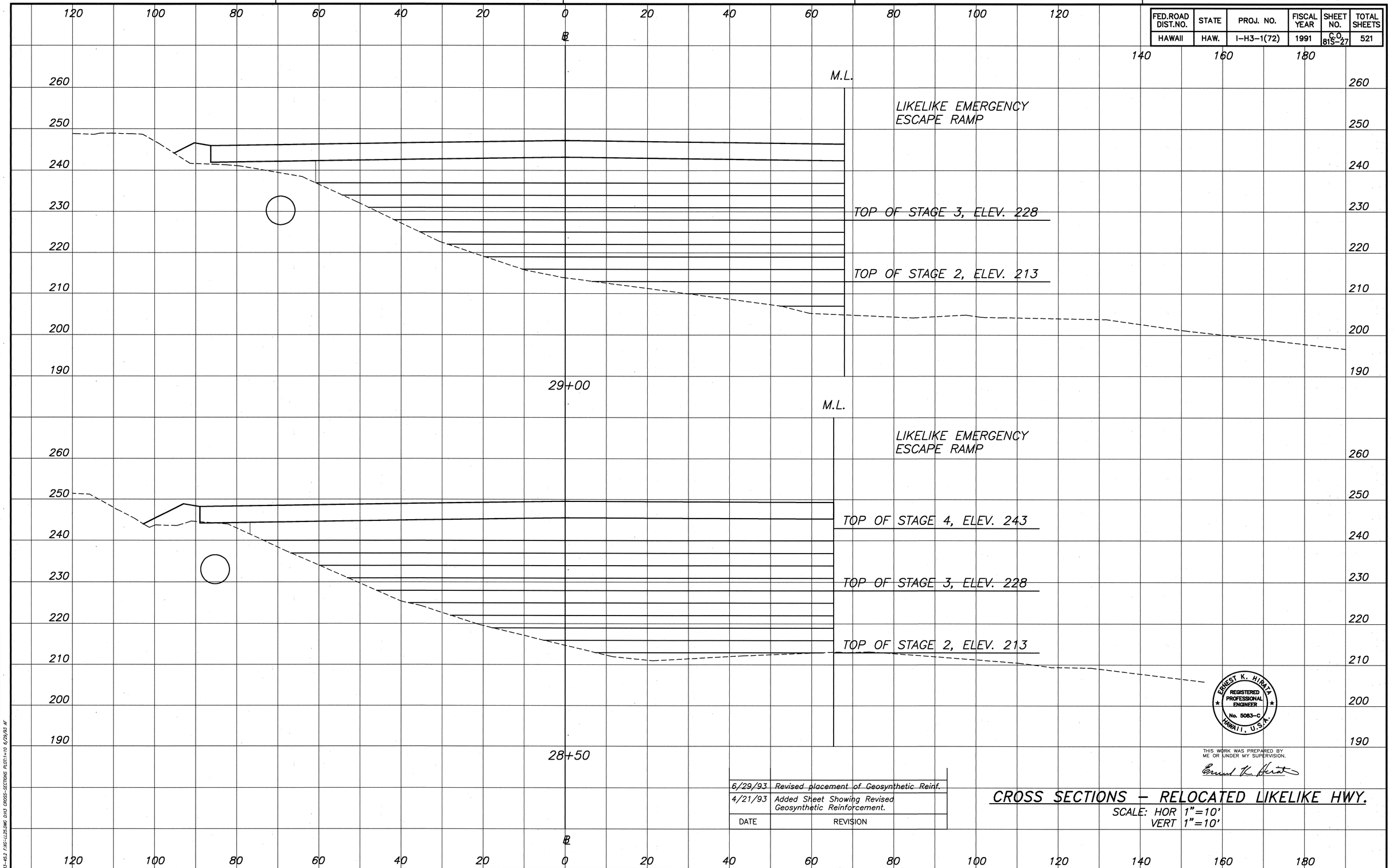
Ernest K. Hirata

## CROSS SECTIONS – RELOCATED LIKELIKE HWY.

SCALE: HOR 1"=10'
VERT 1"=10'

C.O. 81S-26

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O. 81S-27 | 521 |




| ORIGINAL PLAN | SURVEY PLOTTED BY _____ DATE _____ |
|---|---|
| NOTE BOOK _____ No. _____ | DRAWN BY _____ |
| | TRACED BY _____ |
| | DESIGNED BY _____ |
| | QUANTITIES BY _____ |
| | CHECKED BY _____ |

| DATE | REVISION |
|---|---|
| 6/29/93 | Revised placement of Geosynthetic Reinf. |
| 4/21/93 | Added Sheet Showing Revised Geosynthetic Reinforcement. |

ERNEST K. HIRATA
REGISTERED PROFESSIONAL ENGINEER
No. 5083-C
HAWAII, U.S.A.

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Ernest K. Hirata

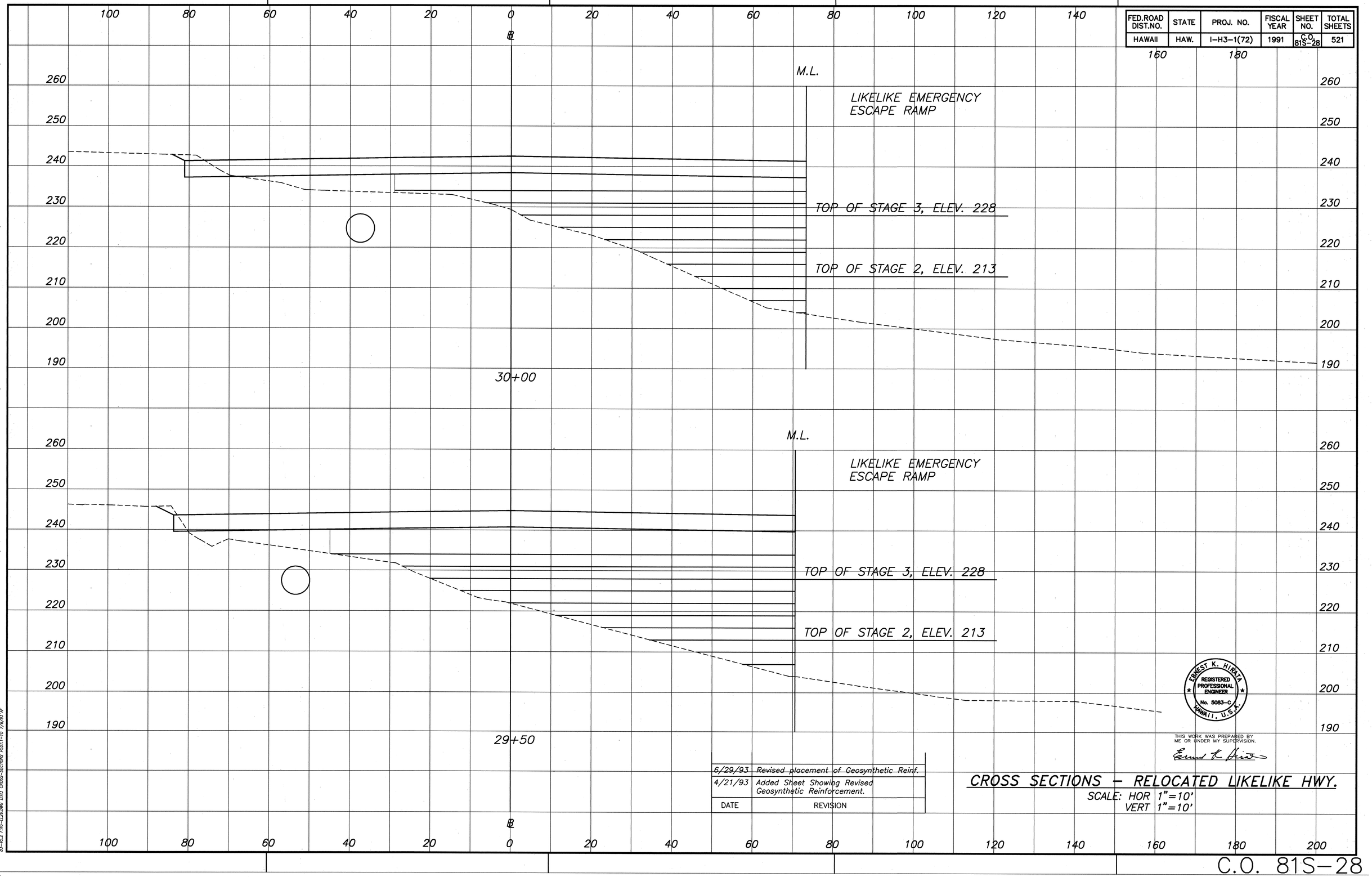
# CROSS SECTIONS – RELOCATED LIKELIKE HWY.

SCALE: HOR 1"=10'
VERT 1"=10'

B3-452 FHC-1(25)HI 043 CROSS-SECTIONS PLOT1-10 6/29/93 AF

C.O. 81S-27

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O. 81S-28 | 521 |




| | |
|---|---|
| SURVEY PLOTTED BY | DATE |
| DRAWN BY | |
| TRACED BY | |
| DESIGNED BY | |
| QUANTITIES BY | |
| CHECKED BY | |
| ORIGINAL PLAN | |
| NOTE BOOK | |
| No. | |

83-45.2 FJG-LLDG.DWG DH3 CROSS-SECTIONS PLOT=1:0 7/6/93-JF

| DATE | REVISION |
|---|---|
| 6/29/93 | Revised placement of Geosynthetic Reinf. |
| 4/21/93 | Added Sheet Showing Revised Geosynthetic Reinforcement. |

ERNEST K. HIRATA
REGISTERED PROFESSIONAL ENGINEER
No. 5083-C
HAWAII, U.S.A.

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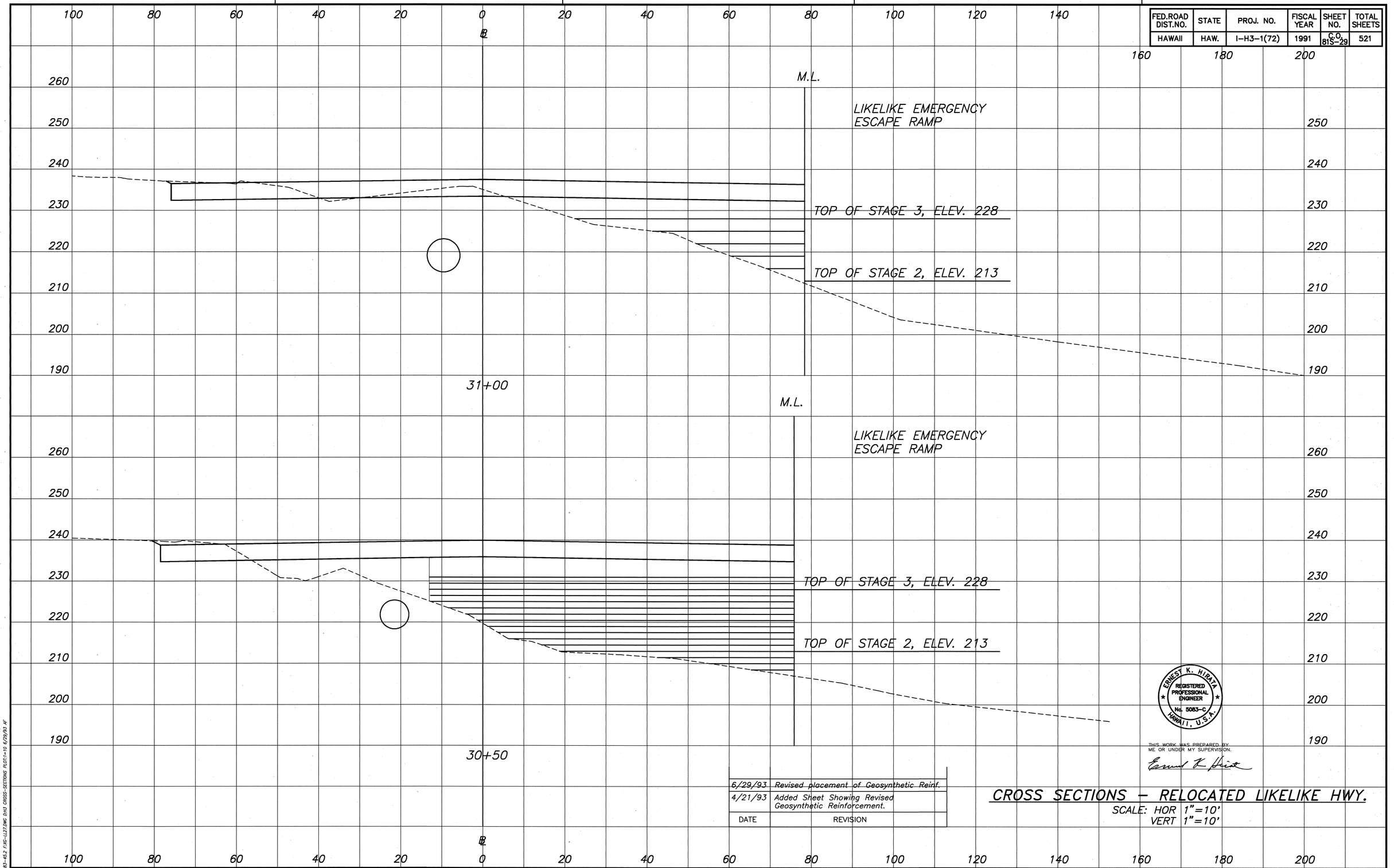
Ernest K. Hirata

## CROSS SECTIONS – RELOCATED LIKELIKE HWY.

SCALE: HOR 1"=10'
VERT 1"=10'

C.O. 81S-28

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O. 81S-29 | 521 |




| DATE | REVISION |
|---|---|
| 6/29/93 | Revised placement of Geosynthetic Reinf. |
| 4/21/93 | Added Sheet Showing Revised Geosynthetic Reinforcement. |

ERNEST K. HIRATA
REGISTERED PROFESSIONAL ENGINEER
No. 5083-C
HAWAII, U.S.A.

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Ernest K. Hirata

## CROSS SECTIONS – RELOCATED LIKELIKE HWY.

SCALE: HOR 1"=10'
VERT 1"=10'

ORIGINAL PLAN
NOTE BOOK No.
SURVEY PLOTTED BY
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TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY
DATE

83-43.2 EXC-LIZ.DWG EXH. CROSS-SECTIONS PLOT:1=10 6/29/93 AF

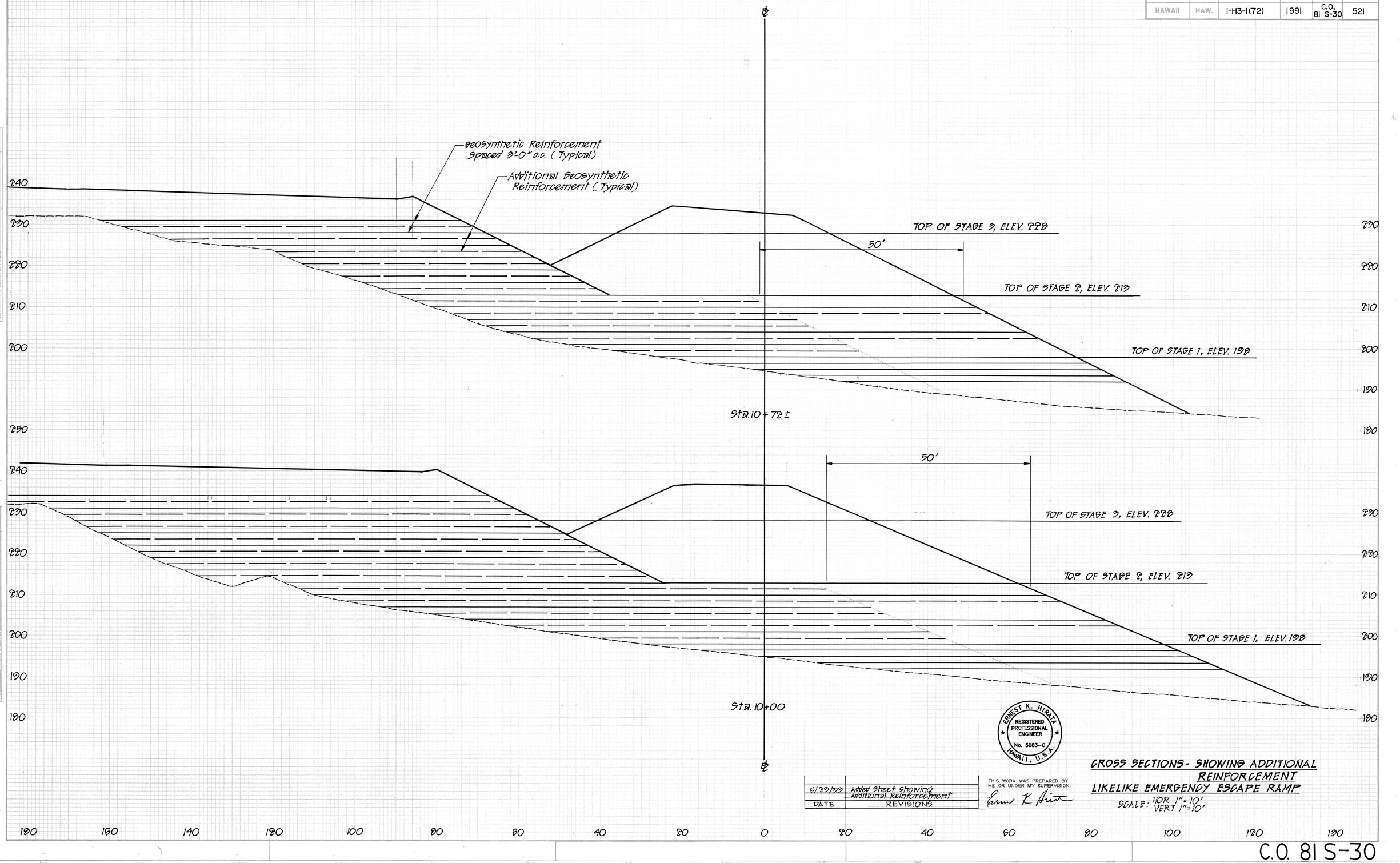
C.O. 81S-29

84732

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O. 81 S-30 | 521 |

| FINAL SURVEY | DATE | BY |
|---|---|---|
| NOTE BOOK | SURVEYED | |
| NO. | PLOTTED | |
| | TEMPLATE | |
| | AREAS | |
| | AREAS CHECKED | |

| ORIGINAL SURVEY | DATE | BY |
|---|---|---|
| NOTE BOOK | SURVEYED | |
| | PLOTTED | |
| | TEMPLATE | |
| | AREAS | |
| | AREAS CHECKED | |




| DATE | REVISIONS |
|---|---|
| 6/27/93 | Added Sheet Showing Additional Reinforcement |

ERNEST K. HIRATA
REGISTERED PROFESSIONAL ENGINEER
No. 5083-C
HAWAII, U.S.A.

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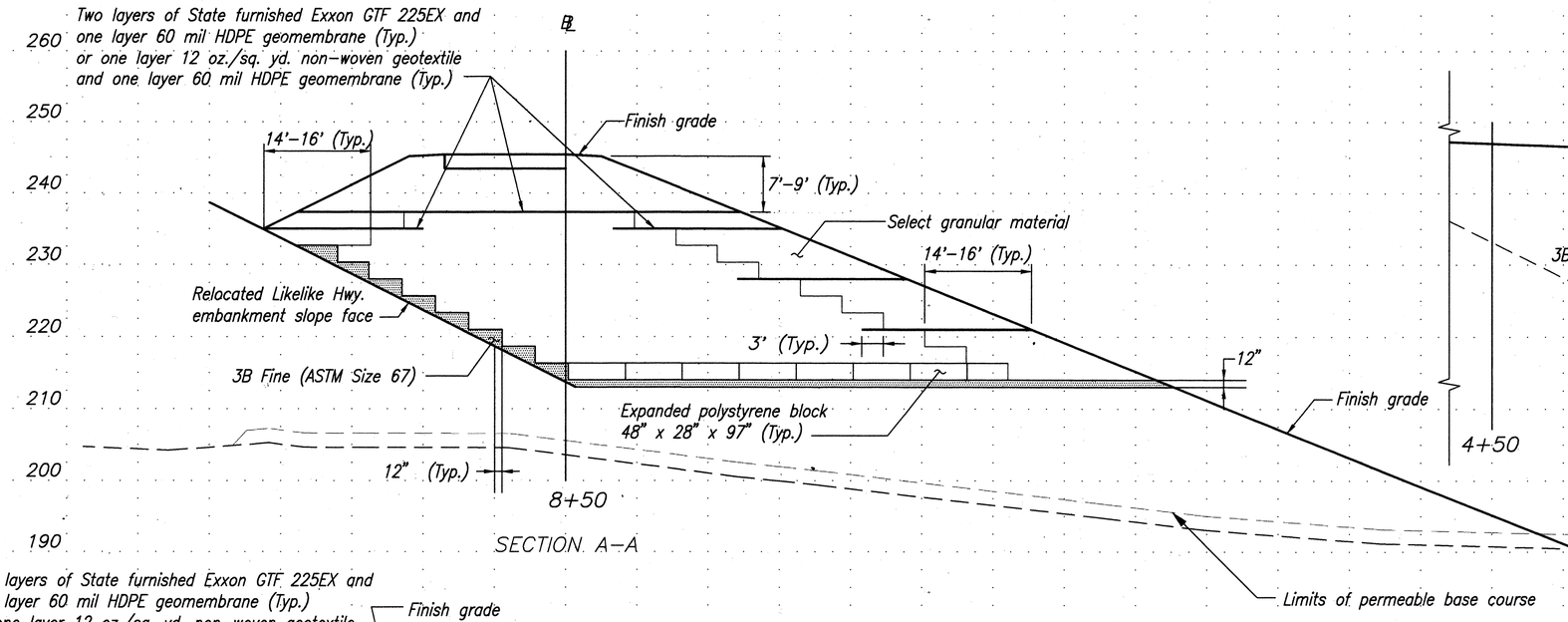
Ernest K Hirata

## CROSS SECTIONS - SHOWING ADDITIONAL REINFORCEMENT LIKELIKE EMERGENCY ESCAPE RAMP

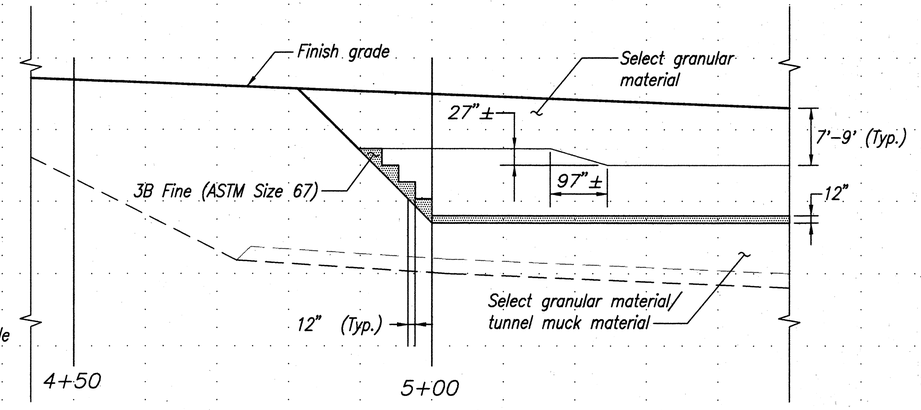
SCALE: HOR 1" = 10'
VERT 1" = 10'

C.O. 81 S-30

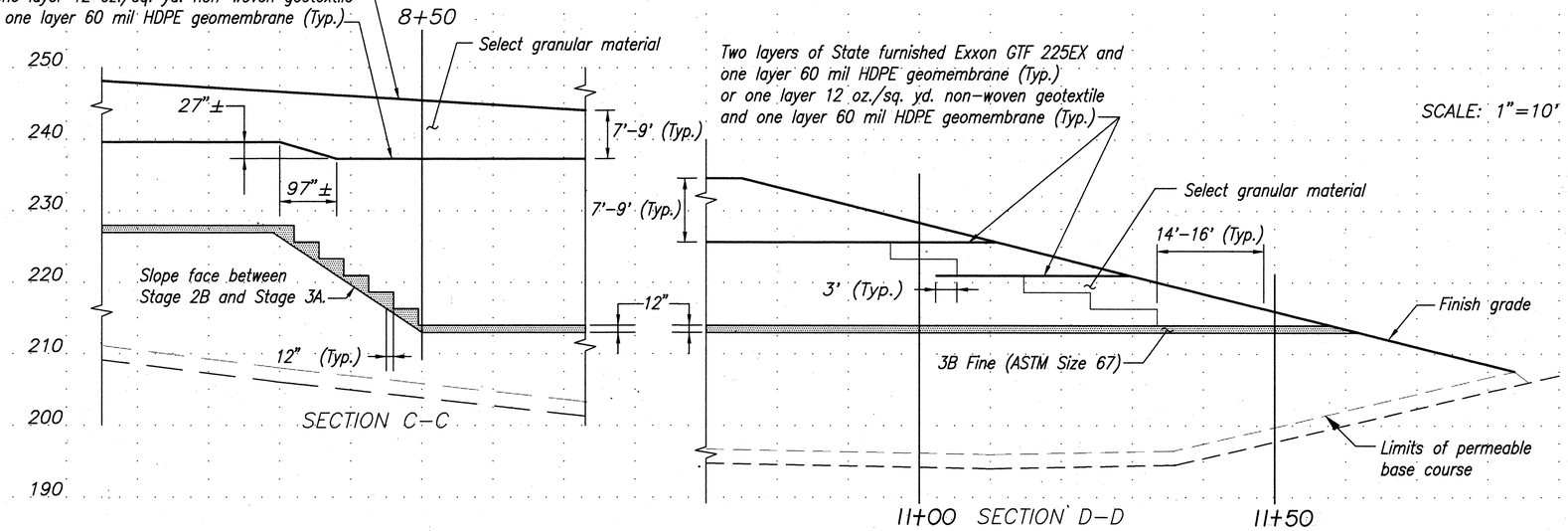
| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O. 81S-31 | 521 |




SECTION A-A




SECTION B-B (70' Offset Right)




SECTION C-C

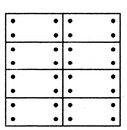



SECTION D-D

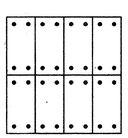
Notes:

1) 3B Fine material shall be placed on a horizontal plane from elevation 213' to elevation 214' from Sta. 8+50 to the end of the Escape Ramp.
2) 3B Fine material shall be placed on a horizontal plane from elevation 227' to elevation 228' from Sta. 5+00 to Sta. 8+29.
3) Type "A" and Type "B" blocks shall be placed in alternating layers, with the bottom of Type "A" at elevation 214'.
4) Block placement shall be controlled by the 12" (typ.) of 3B Fine material to be placed from the slope face of the Relocated Likelike Hwy. embankment or by the 12" (typ.) of 3B Fine material to be placed from the slope face between Stage 2B and Stage 3A or by the 12" (Typ.) of 3B Fine material to be placed from the slope face at Sta. 5+00.
5) Blocks shall be placed to produce a 1H:1V slope from Sta. 5+00 toward Sta. 4+70±.
6) Non-woven geotextile shall be placed on geomembrane prior to placement of select granular material.
7) Geomembrane and geotextile shall be placed as shown after every 3 expanded polystrene block layers.
8) Geomembrane shall be seamed in accordance with manufacturer's recommendations (either fusion welding or extrusion welding).

Clip Layout:



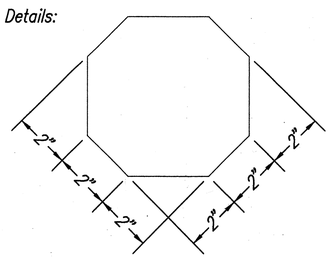
Type "A" block, perpendicular to Escape Ramp Baseline
Clips shall be placed on the two outer blocks and any partial blocks where the blocks are adjacent to the select granular material.



Type "B" block, parallel to Escape Ramp Baseline
Clips shall be placed on the four outer blocks and any partial blocks where the blocks are adjacent to the select granular material.

Views shown are the bottoms of the blocks

Clip Details:




Plan View

Notes:

1) Clips shall me fabricated of 16 gauge galvanized steel plates 6" x 6".
2) Corners of clip shall be bent alternating in an upward and downward direction.

| ORIGINAL PLAN | SURVEY PLOTTED BY | DATE |
|---|---|---|
| | DRAWN BY | |
| NOTE BOOK | TRACED BY | |
| No. | DESIGNED BY | |
| | QUANTITIES BY | |
| | CHECKED BY | |

Plot: f=40, 8/16/93

ERNEST K. HIRATA REGISTERED PROFESSIONAL ENGINEER No. 5083-C HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

Ernest K. Hirata

| DATE | REVISION |
|---|---|
| 9/16/93 | Added sheet for lightweight fill details. |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# LIGHTWEIGHT FILL DETAILS

## LIKELIKE EMERGENCY ESCAPE RAMP

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(72)

SCALE: AS NOTED DATE: SEPT. 1993

SHEET No. OF SHEETS

C.O. 81S-31

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | 82 | 521 |

H 3 Temporary Connector

True North

Scale : 1" = 20'

R/W

Retaining Wall

Abutment

H3 Kaneohe Interchange

Attenuator with Backup
H3 ℄ Sta. 349+80

H3 Baseline

348 349 350 351 352 353

344.28 342.28 340.28 338.28 336.31 334.52 333.05

339.86 337.86

341.71 339.71 337.71 336.69

337.24 335.74 334.00 332.77 332.01 331.45 331.07

RAMP B

5 6 7 8 9

343.34 341.52 341.14 339.56 339.49 339.13 337.14 337.64 337.84 337.04 336.73 335.30 336.46 336.31 334.49 334.44 337.36 335.39 339.09 337.12

H3 ℄ Sta. 348+08.37
=Ramp B Sta. 54+53.62

Ramp B
Baseline

Kulukstream

280 270 290 310 320 300

| ORIGINAL PLAN | SURVEY PLOTTED BY | DATE |
|---|---|---|
| | DRAWN BY | |
| NOTE BOOK | TRACED BY | |
| No. | DESIGNED BY | |
| | QUANTITIES BY | |
| | CHECKED BY | |

ROBERT I. ITAGAKI
REGISTERED PROFESSIONAL ENGINEER
No. 1584-C
HAWAII, U.S.A.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# ENLARGEMENT
# RAMP B

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(72)

SCALE: AS NOTED DATE:

SHEET No. OF SHEETS

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O. ADD. 83 | 521 |

Toe Of Fill
Ramp TK Baseline
Ramp TK
Type W Swale
Type 2 Gutter
Relocated Likelike Hwy. Baseline
Relocated Likelike Hwy.
Relac. Likelike Hwy. ℄ Sta. 27+00
End Retaining Wall
End Gore Paving
Attenuator with Backup
For Detail, See Sht. 57
Sta. 27+13.96
Gore Area to be Paved
250.94
250.50
252.89
252.59
254.35
254.35
254.81
257.48(TW)
254.81(BW)
258.67(TW)
256.00(BW)
260.12(TW)
257.45(BW)
254.68
254.90
255.42
255.64
257.64
260.79
260.69
RAMP D
Ramp D Baseline
1088
1089
1090
252.08
254.45
257.06
259.86
Toe Of Fill
Limit of Clearing and Grubbing
Metal Guardrail Connection to Concrete Barrier, See Standard Plan TE-55
Top Of Cut
Toe Of Fill
Existing Likelike Highway
Exist. Likelike Hwy. Baseline
MATCH LINE STA. 1091+00 (See Sheet 84)
True North
Scale : 1" = 20'

ROBERT I. ITAGAKI
REGISTERED PROFESSIONAL ENGINEER
No. 1584-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

| DATE | REVISION |
|---|---|
| 10/8/93 | Revised Lined Trap Ditch Alignment. |
| 3/29/93 | Revised grading @ TK Station 1+90± |
| 1/27/92 | Revised Limits of Clearing and Grubbing. |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# ENLARGEMENT
## RAMP D
## STA.1083+57.76 TO STA. 1091+00

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(72)

SCALE: AS NOTED DATE: DEC. 1991

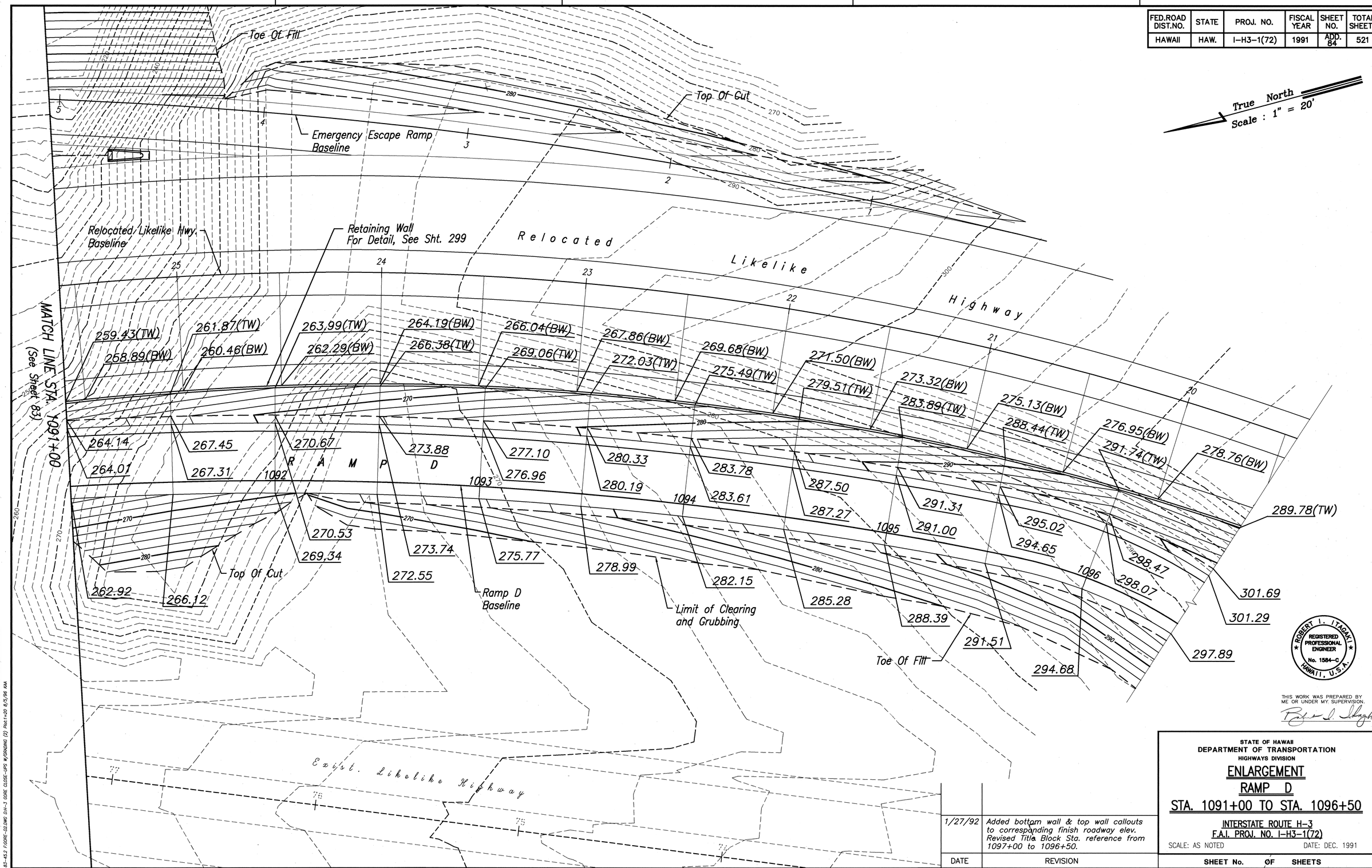
SHEET No. OF SHEETS

C.O. ADD. 83

ORIGINAL PLAN
NOTE BOOK No.
SURVEY PLOTTED BY DATE
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY

81-45J F:\SDRE-SYL\Rel. Dsgn. Disk\ Disk-Up #2\Drawing\01 Pad 1-20 Date:10/13/93 By:

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | ADD. 84 | 521 |




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ORIGINAL PLAN | SURVEY PLOTTED BY | DRAWN BY | TRACED BY | DESIGNED BY | QUANTITIES BY | CHECKED BY | DATE

NOTE BOOK | No.

83-45.2 FGDRC-02.DWG D/H-3 GORE CLOSE-UPS W/GRADING (2) Plot=20 8/5/96 KAA

| DATE | REVISION |
|---|---|
| 1/27/92 | Added bottom wall & top wall callouts to corresponding finish roadway elev. Revised Title Block Sta. reference from 1097+00 to 1096+50. |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# ENLARGEMENT
## RAMP D
## STA. 1091+00 TO STA. 1096+50

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(72)

SCALE: AS NOTED DATE: DEC. 1991

SHEET No. OF SHEETS

ADD. 84

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O. 85 | 521 |

True North

Scale : 1" = 20'

℄ Bearing Abutment #3

Grouted Rubble Paving

2' From Toe of Slope

Limit of Clearing and Grubbing

Toe Of Fill

Inbound Abutment #1
℄ Sta. 335+75

BEGIN KANEOHE INTERCHANGE
℄ Sta. 333+62

H3 Baseline

H3

Grouted Rubble Paving

2'

370.02 370.42 370.74 371.03

371.33 371.63 371.98 372.54 373.27
371.83 372.13 372.48 373.04 373.29

368.30 368.95 369.53 369.78

Retaining Wall 348.0± (TW)

Type V Swale

345.0± (TW)

349.0± (TW)

351.17± (TW) 353.33± (TW) 355.5± (TW) 357.5± (TW)

331.59 (TW) 338.0± (TW)

342.10 344.92 347.74 350.56
340.79 (BW) 343.67 (BW) 346.57 (BW) 349.45 (BW)

339.29 341.79 344.67 347.57
337.98 (BW) 344.67 346.56 (BW)

333.12 338.90 343.27 (BW) 1104 350.45
336.46 336.70 (BW) 339.99 (BW)
335.01 (BW) 1102 336.01

330.15 333.64 342.82 (TW) 346.10 (TW) 349.39 (TW) 349.84
332.12 (BW) 337.4± (BW) 338.7± (BW) 340.8± (BW)

330.73 328.80 1101 333.41 339.53 (TW)
329.15 (BW) 327.2± (BW) 336.4± (BW)

Begin Retaining Wall
H3 ℄ Sta. 335+44.38 (o/s 156.33' Lt.)
= Ramp D Sta. 1100+68.63 (o/s 34' Lt.)
For Detail, See Sht. 301

326.86 330.13

Top Of Cut

Retaining Wall

Archaeological Site

Top Of Cut

MATCH LINE STA. 1105+00
(See Sheet 86)

327.02 323.62

RAMP D

Ramp D Baseline

Limit of Clearing and Grubbing

323.81 320.59 1100 320.41

Toe Of Fill

Limit of Clearing and Grubbing

317.19

ROBERT I. ITAGAKI ★ REGISTERED PROFESSIONAL ENGINEER ★ No. 1584-C ★ HAWAII, U.S.A.

ROBERT T. WATARI ★ LICENSED PROFESSIONAL ENGINEER ★ No. 4560-C ★ HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

Robert T. Watari 4/1995

| ORIGINAL PLAN | SURVEY PLOTTED BY | DATE |
|---|---|---|
| | DRAWN BY | |
| | TRACED BY | |
| NOTE BOOK | DESIGN BY | |
| No. | QUANTITIES BY | |
| | CHECKED BY | |

83-46.6 F:\SDRE-D\DWG D41 SDRE CLOSE-UP DRAWING2) P:1=20 04/28/95 RY

| DATE | REVISION |
|---|---|
| 4/28/95 | Added Top Wall Elevations @ Sta.1100+68.63 Revised Bottom Wall Elevations @ Sta. 1100+00 Lt. to Sta. 1104+50 Lt. |
| 10/3/94 | Revised Retaining Wall Begin Station and Top Wall Elevations @ Sta.1101+00 Lt. to Sta.1104+50 Lt. |
| 8/16/93 | Revised Top Wall Elevations @ Sta.1102+50 Rt. to Sta.1104+00 Rt. |
| 12/1/92 | Added GRP at Abutment |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# ENLARGEMENT
# RAMP D
## STA. 1099+50 TO STA. 1105+00

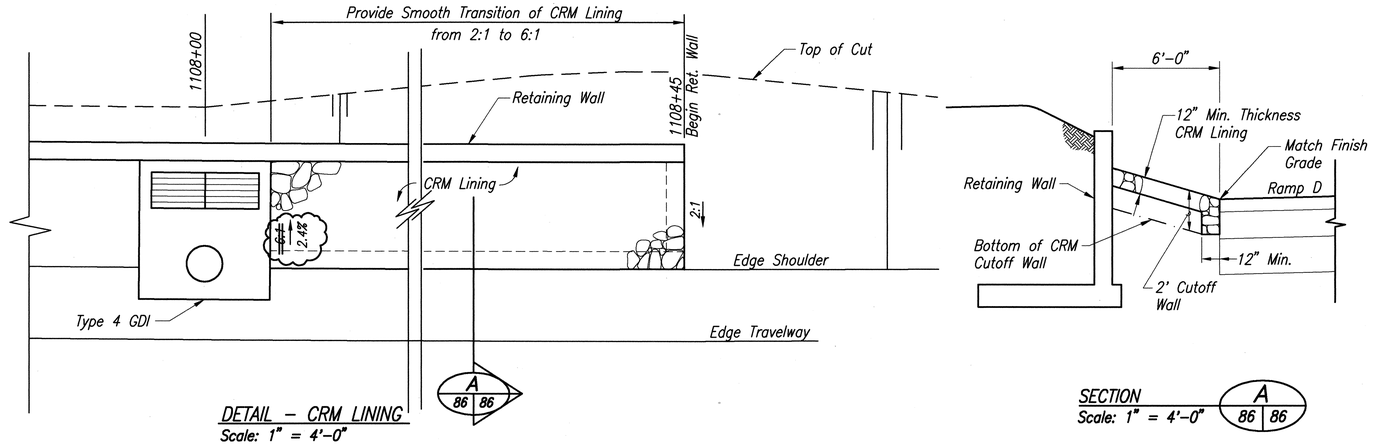
INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(72)

SCALE: AS NOTED DATE: DEC. 1991

SHEET No. 26 OF 33 SHEETS

C.O. 85

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O. 86 | 521 |

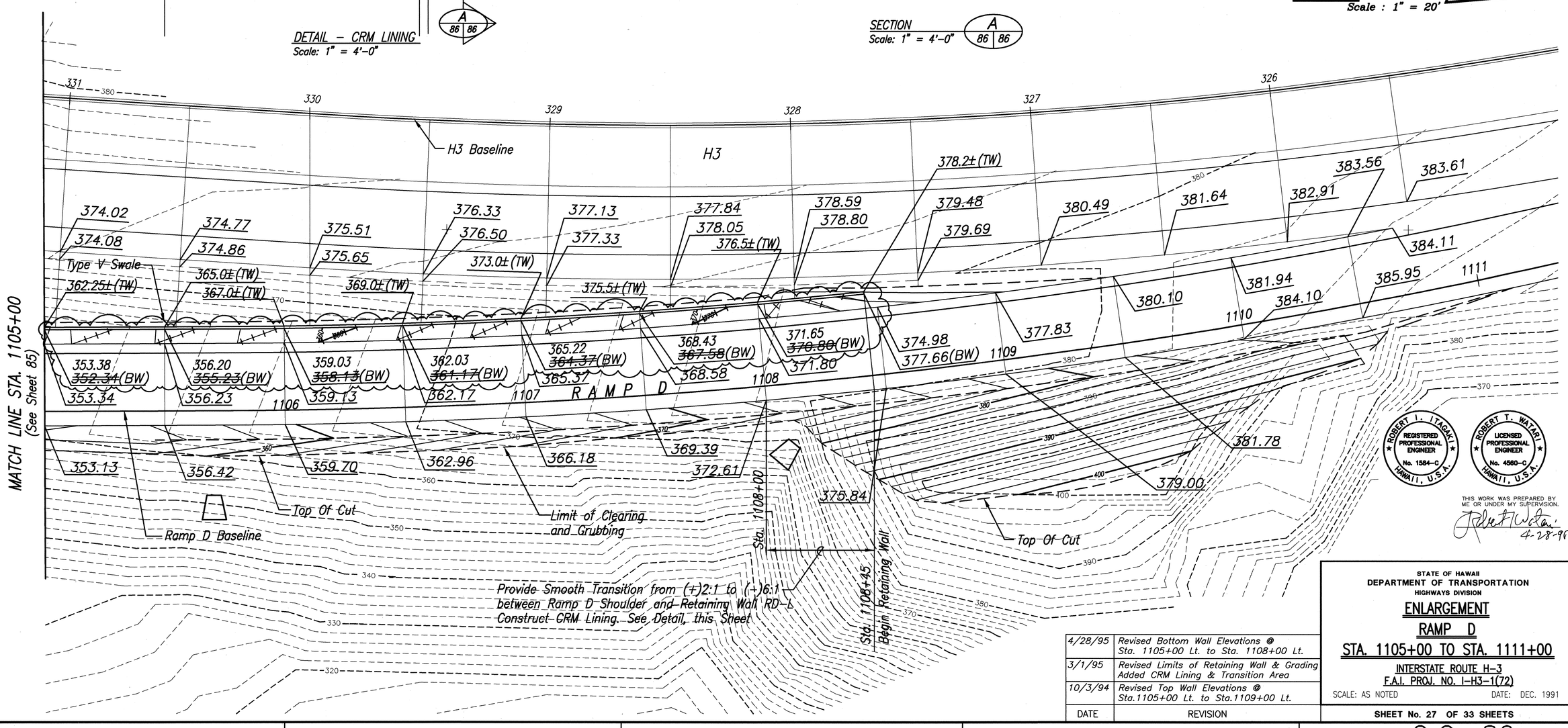



DETAIL – CRM LINING
Scale: 1" = 4'-0"




SECTION
Scale: 1" = 4'-0"
A
86 86

True North
Scale : 1" = 20'




| | | |
|---|---|---|
| ORIGINAL PLAN | SURVEY PLOTTED BY | DATE |
| | DRAWN BY | |
| | TRACED BY | |
| | DESIGNED BY | |
| NOTE BOOK | QUANTITIES BY | |
| No. | CHECKED BY | |

83-45.2 FIORE-04WE D:Gov Dsgn Sys w/ Grading (2) Plot=30 05/1/95 jby

| DATE | REVISION |
|---|---|
| 4/28/95 | Revised Bottom Wall Elevations @ Sta. 1105+00 Lt. to Sta. 1108+00 Lt. |
| 3/1/95 | Revised Limits of Retaining Wall & Grading Added CRM Lining & Transition Area |
| 10/3/94 | Revised Top Wall Elevations @ Sta.1105+00 Lt. to Sta.1109+00 Lt. |

ROBERT I. ITAGAKI ★ REGISTERED PROFESSIONAL ENGINEER No. 1584-C HAWAII, U.S.A.

ROBERT T. WATARI ★ LICENSED PROFESSIONAL ENGINEER No. 4580-C HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
4-28-95

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# ENLARGEMENT
## RAMP D
## STA. 1105+00 TO STA. 1111+00

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(72)

SCALE: AS NOTED DATE: DEC. 1991

SHEET No. 27 OF 33 SHEETS

C.O. 86

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O. ADD. 87 | 521 |

~~Transition Type Y Swale to Match Top of Headwall~~

~~Transition Type 7 Gutter to Type Z Swale~~

Transition Type 7 Gutter to Type J Swale

Limit of Clearing and Grubbing

Shoulder Transition

Toe of Fill

℄ Sta. 1+55 Lt. Connect Conc. Spillway to Raised Headwall

℄ Sta. 1+40± End Modified Type 7 Gutter and Transition to Std. Conc. Spillway See Std. Plan H-20

℄ Sta. 1+55

℄ Sta. 1+50

℄ Sta. 1+50 End Type Y Gutter

℄ Sta. 1+50 End Type Z Swale

℄ Sta. 4+90 End Type 7 Gutter

℄ Sta. 5+10

℄ Sta.5+50 (o/s 42' Lt.)

℄ Sta.6+00 (o/s 45' Lt.)

True North

Scale : 1" = 20'

R/W

Lined Trap Ditch

Raise Wall of Existing Inlet for Detail, See Sheet 118

Eq. Sta.

E 561,600

N 83,200

562,000

RELOCATED LIKELIKE HWY.

INBOUND LANES

OUTBOUND LANES

1 2 3 4 5 6

54 55 56 57 58 59

11' 24' 1' 1' 11' 36' 10'

Type 4G Conc. Guardrail

Relocated Likelike Highway Baseline

Exist. Metal Guardrail

Metal Guardrail Connection to Concrete Barrier, See Standard Plan TE-55

Top of Cut

Top of Cut

Limit of Clearing and Grubbing

Concrete Guardrail Transition from Type 4A to Type 4G, See Detail, Sht. ADD. 59S-1

℄ Sta. 0+25

℄ Sta. 0+35

℄ Sta. 0+45

O.B. P.T. ℄ Sta. 4+25.33 (o/s 10.39' Rt.)

℄ P.T. Sta. 4+66.25

I.B. P.T. ℄ Sta. 5+06.85 (o/s 11.00' Lt.)

Toe of Fill

Revised, See Shts. C.O. 17S-1, C.O. 18S-1, C.O. 65S-1 Through C.O. 65S-11

Begin Relocated Likelike Hwy. ℄ PCC Sta. 0+00 = Existing Likelike Hwy. ℄ Sta. 53+39.62 (o/s 4.97' Lt.)

Toe of Fill

## PLAN

Scale: 1" = 20'

~~Varies~~ ~~4'-0"~~ ~~Existing Ground~~ ~~1'-0"~~ ~~2:1 Max.~~ ~~4" Class B Concrete or Shotcrete w/ 6x6-W1.4xW1.4 Welded Wire Fabric~~

## ~~TYPE Y SWALE~~

~~Scale: 1/2" = 1'-0"~~

Existing Ground Varies Varies 4'-0" Edge Shoulder Slope Varies 1'-0" 2:1 Max. 1'-0" 4" Class B Concrete or Shotcrete w/ 6x6-W1.4xW1.4 Welded Wire Fabric

## TYPE Z SWALE

Scale: 1/2" = 1'-0"

ROBERT I. ITAGAKI * REGISTERED PROFESSIONAL ENGINEER * No. 1584-C * HAWAII, U.S.A.

ROBERT T. WATARI * LICENSED PROFESSIONAL ENGINEER * No. 4580-C * HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

Robert T. Watari 4-10-96

| DATE | REVISION |
|---|---|
| 6/7/95 | Revised Type 7 Gutter to Modified Type 7 and Type Z Swale to Type J. Deleted Type Y Swale and Replaced w/Std. Conc. Spillway. |
| 4/10/95 | Deleted Energy Dissipator, Added Headwall and Relocated Shoulder Transition. |
| 6/1/94 | Revised Guardrail, Slope and Added Callout for Revisions. |
| 12/22/92 | Relocated End of Type Z Swale. |
| 3/27/92 | Revised Grading & R/W from Sta. 0+00 to 4+00± Lt. Deleted Metal Guardrail & Type X Swale Detail. Ammended Swales. |
| 1/27/92 | Revised callout to Raise Wall of Ex. inlet. Added detail sht. no. for guardrail trans. |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# ENLARGEMENT
# RELOCATED LIKELIKE HIGHWAY

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(72)

SCALE: AS NOTED DATE: DEC. 1991

SHEET No. OF SHEETS

ORIGINAL PLAN
NOTE BOOK No.
SURVEY PLOTTED BY DATE
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY

83-45.2 FILE:-BEGLINE D:\REF Plot:1=20 Date:06/7/95 By:

C.O. ADD. 87

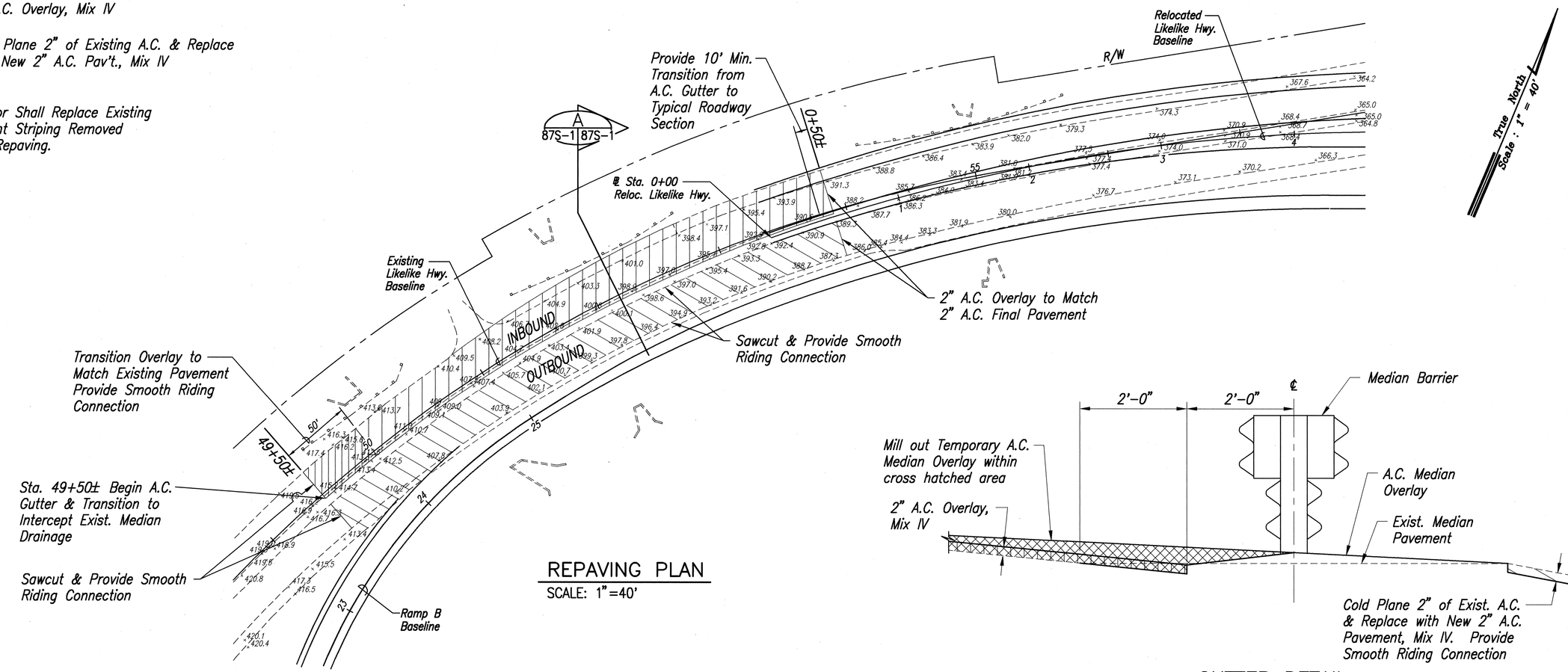
| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O. 87S-1 | 521 |

LEGEND

2" A.C. Overlay, Mix IV

Cold Plane 2" of Existing A.C. & Replace with New 2" A.C. Pav't., Mix IV

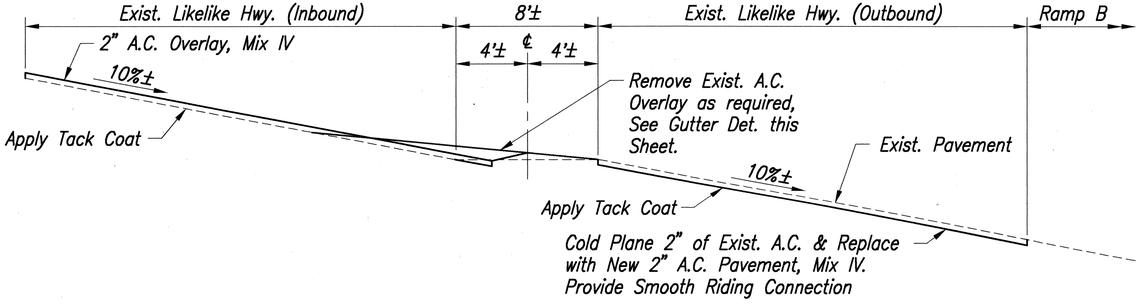
NOTE:
1. Contractor Shall Replace Existing Pavement Striping Removed During Repaving.




REPAVING PLAN
SCALE: 1"=40'




GUTTER DETAIL
NOT TO SCALE




A
87S-1 87S-1 TYPICAL REPAVING SECTION

STA. 49+50± EX. LIKELIKE TO STA. 0+50± RE. LIKELIKE
NOT TO SCALE

ORIGINAL PLAN
NOTE BOOK No.
SURVEY PLOTTED BY DATE
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY

83-45.6 F:\BEG-DLA\SIGNS D-H3 KANOHE INTERC. P-1-40 7/1/95 KAI

ARNOLD H. FUKUMOTO
LICENSED PROFESSIONAL ENGINEER
No. 8393-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

REPAVING PLAN
EX.LL 49+50± to RE.LL 0+50±

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(72)

SCALE: AS NOTED DATE: DEC., 1991

SHEET No. OF SHEETS

| DATE | REVISION |
|---|---|
| 7/12/95 | Sheet Added for Repaving Plan. |

C.O. 87S-1

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O. ADD. 88 | 521 |

True North
Scale : 1" = 20'

Existing Likelike Hwy. Baseline
Existing Likelike Hwy
Limit of Clearing and Grubbing
Top Of Cut
Toe Of Fill
R/W
Ramp D Baseline
Ramp D
Relocated Likelike Highway
Reloc. Likelike Hwy. Baseline
Reloc. Likelike Hwy @ Sta. 32+80
Attenuator with Backup
Paved Gore Area
Transition From Type Z Swale To Type 7F Gutter
Ramp TK Baseline
RAMP TK
Ramp TK Sta. 6+62
Existing Corner Road
Limit of Clearing and Grubbing
Top Of Cut
Toe Of Fill

1084 1085 1086
4 5 6 7 8 9 10
30 31 32 33 34 35 36

234.29 233.54 231.79 230.99 229.29 228.51 227.91 226.79 224.17 224.84 221.43 222.10 220.46 218.65 219.32 217.64 215.87 216.54 213.09 212.92 210.31 210.98
236.22 236.02 234.24 233.47 231.62 230.83 228.92 228.09 227.41 226.11 225.25 222.50 220.87 220.12 219.99 217.78 217.58 215.38 215.12 212.73 212.44
241.34 238.83 235.51 232.96 230.32 227.58 224.74 221.83 218.87 215.89 212.92 210.00 209.85 209.56 207.11

| | |
|---|---|
| 7/2/93 | Revised Likelike E.E.R. Grading. |
| 5/10/93 | Revised Ditches and Limit of Clearing and Grubbing @ Reloc. Likelike Sta. 33+80± Lt. to 34+80± Lt. |
| 3/29/93 | Revised SDMH-"B5" & grading @ @ Sta. 33+00 to 36+00 |
| 2/21/92 | Revised Gore Area, Length of Z Swale Due To Change in Location of SDMH |
| 1/27/92 | Revised Right of Way @ Castle Hills Subd. Revised Limits of Clearing and Grubbing. |
| DATE | REVISION |

ROBERT I. ITAGAKI
REGISTERED PROFESSIONAL ENGINEER
No. 1584-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# ENLARGEMENT
# RAMP TK
# STA. 4+00 TO STA. 10+00

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(72)

SCALE: AS NOTED DATE: DEC. 1991

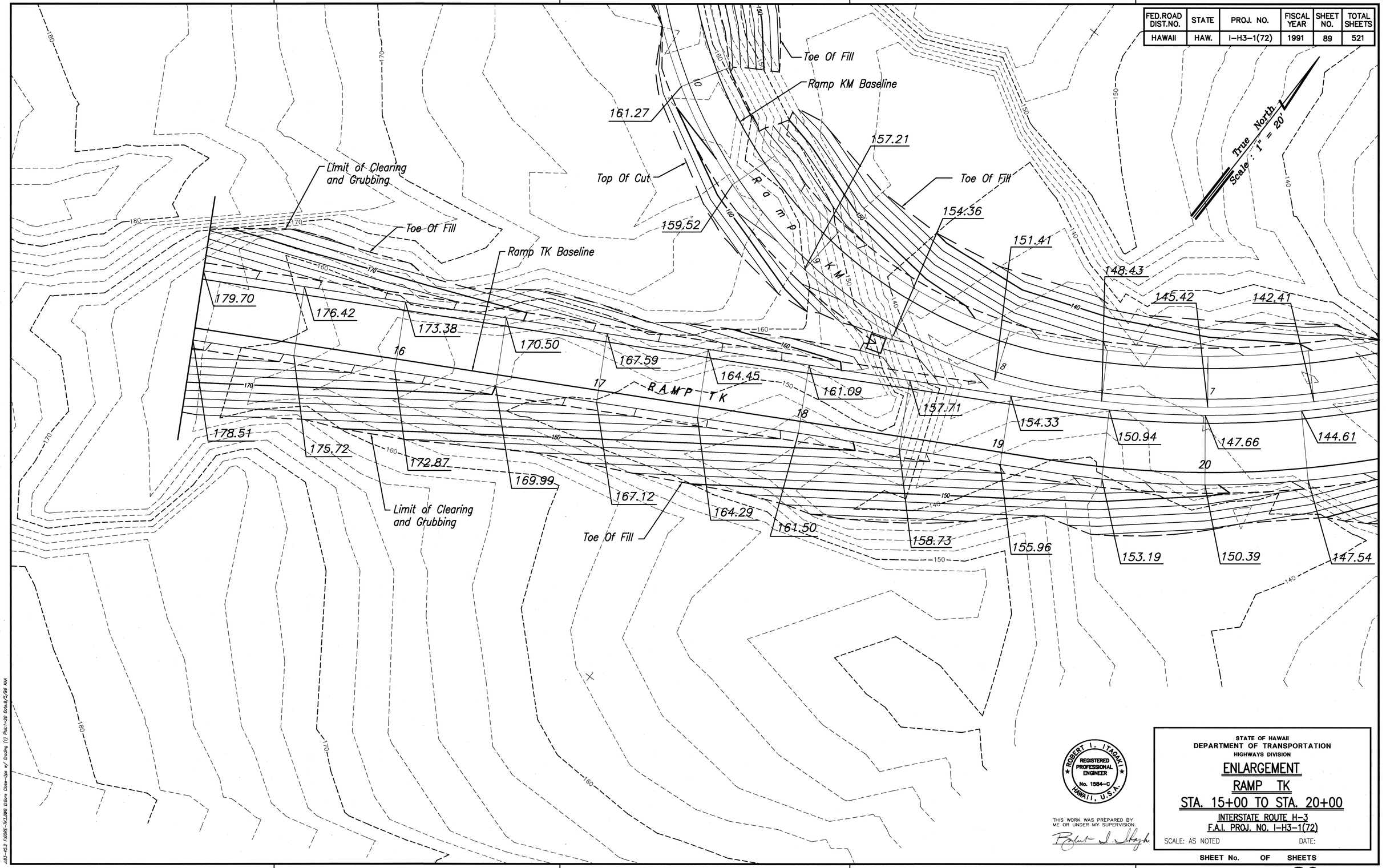
SHEET No. OF SHEETS

ORIGINAL PLAN
NOTE BOOK No.
SURVEY PLOTTED BY DATE
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY

8.1-45.2 F:\GRE~1\H3\RE DGen Close-Ups w/ Grading (1) P1-20 8/6/93 AF

C.O. ADD. 88

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | 89 | 521 |




| ORIGINAL PLAN | SURVEY PLOTTED BY | DATE |
|---|---|---|
| | DRAWN BY | |
| NOTE BOOK | TRACED BY | |
| No. | DESIGNED BY | |
| | QUANTITIES BY | |
| | CHECKED BY | |

J:\83-45.2 FIGURE-TK3.DWG Data-Use w/ Grading (1) Plot1-20 Dated:5/96 KM

ROBERT I. ITAGAKI
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Robert I. Itagaki

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# ENLARGEMENT
## RAMP TK
## STA. 15+00 TO STA. 20+00

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(72)

SCALE: AS NOTED DATE:

SHEET No. OF SHEETS

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | 90 | 521 |

161.27
158.77
Toe Of Fill
Toe Of Fill
162.43
159.93
160.54
Limit of Clearing and Grubbing
163.00
Limit of Clearing and Grubbing
160.59
162.89
160.10
Ramp KM Baseline
159.02
162.14
160.82
157.44
156.53
154.46
151.93
149.43
146.93
Top Of Cut
158.71
159.15
160.07
165.03
162.57
167.49
169.96
Relocated Likelike Hwy. Baseline
Top Of Cut
Relocated Likelike Hwy.
Top Of Cut
RAMP KM
To Kaneohe
True North
Scale : 1" = 20'

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HIGHWAYS DIVISION

ENLARGEMENT
RAMP KM

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(72)

SCALE: AS NOTED DATE:

SHEET No. OF SHEETS

90

ORIGINAL PLAN
NOTE BOOK No.
SURVEY PLOTTED BY
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
DATE

#43-45.2 F:\DRE-HJ\MS Bizbox Close-Ups w\ Grading (2) Plot:1=20 Date:8/5/96 KAA

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O. 91 | 521 |

END PROJECT
℄ STA. 354+37.14
=399+00 Windward Hwy.

H3 Temporary Connector

H3 Kaneohe Interchange

H3 Windward Hwy.

INBOUND

OUTBOUND

R/W

Attenuator with Backup
H3 Windward Hwy.
℄ Sta. 402+40

True North
Scale : 1" = 20'

330.84 330.85 330.97 330.99 330.89 330.90 331.17 331.70 332.49 331.01 331.61 332.17 334.15 336.37 339.16
330.94 330.49 330.36 330.59 330.87 331.40 332.19 333.16 334.11 335.06 336.56 339.16
331.13 331.41 330.85 331.77 331.80 332.65 333.69 334.91
332.86 333.81 334.76 336.26 338.86

1 2 3 4 5 6

EMERGENCY ESCAPE RAMP

Grass Swale
Top Elev. 330.5

Toe Of Fill
Top Of Cut
Limit of Clearing and Grubbing
Top Of Cut
Toe Of Fill
R/W
R/W

| DATE | REVISION |
|---|---|
| 9/8/94 | Added Lined Trap. Ditch |
| 4/21/94 | Revised Median Grading from 353+00 to End Project. Deleted Elevations along H3 Baseline. |
| 10/7/92 | Moved Drain Inlet and added Grass Swale. |

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No. 1584-C
HAWAII, U.S.A.

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HIGHWAYS DIVISION

# ENLARGEMENT
# WINDWARD HIGHWAY
# EMERGENCY ESCAPE RAMP

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(72)

SCALE: AS NOTED DATE: DEC. 1991

SHEET No. 32 OF 33 SHEETS

C.O. 91

ORIGINAL PLAN
NOTE BOOK No.
SURVEY PLOTTED BY
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
DATE

83-45.6 F.GORE--WID.DWG P.GORE CLOSE--WPS P.I=20 09/13/94 RY

| FED.ROAD DIST.NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(72) | 1991 | C.O. ADD. 92 | 521 |

Top Of Cut
Toe Of Fill
Ramp D Baseline
R a m p D
Toe Of Fill
Limit of Clearing and Grubbing
True North
Scale : 1" = 20'
Attenuator with Backup Reloc. Likelike Hwy. @ Sta. 27+00
Reloc. Likelike Hwy. @ Sta. 25+50
End Gore and Pavement Sta. 25+25
Relocated Likelike Hwy. Baseline
Sta. 25+75
Core Area to be Paved
Ramp TK Baseline
R e l o c a t e d L i k e l i k e H w y.
R a m p T K
E M E R G E N C Y E S C A P E R A M P
Emergency Escape Ramp Baseline
Sta. 5+50
Sta. 7+10
Sta. 8+70
Top Of Cut
Limit of Clearing and Grubbing
Likelike Emer. Escape Ramp Sta. 4+04.74 =Reloc. Likelike Hwy. @ Sta. 24+62.25
Toe Of Fill
Attenuator with Backup Likelike Emer. Esc. Ramp Sta. 4+75.03 =Relocated Likelike Hwy. @ Sta. 25+29

| DATE | REVISION |
|---|---|
| 7/2/93 | Revised Finish Grade Elevations and Grading along Likelike Emer. Esc. Ramp. |
| 3/29/93 | Revised grading @ TK Station 1+90± |
| 1/27/92 | Revised Limits of Clearing and Grubbing. Revised finish roadway elevation @ Reloc. Likelike Hwy. sta. 25+75 Rt. |

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HIGHWAYS DIVISION

# ENLARGEMENT
# LIKELIKE EMERGENCY ESCAPE RAMP

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(72)

SCALE: AS NOTED DATE: DEC. 1991

SHEET No. OF SHEETS

ORIGINAL PLAN
NOTE BOOK No.
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CHECKED BY
DATE

83-45.2 F:\DRC-LEVLNG D:\Core Clean-Ups w/ Grading (1) Post-I-w26 1/2/93 ef

C.O. ADD. 92