

STANDARD PLANS SUMMARY

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|---------------------|-------|------------|-------------|-----------|--------------|
| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
| HAWAII | HAW. | 78A-01-91M | 1992 | 2 | 70 |

| STANDARD PLAN NO. | TITLE | DATE |
|-------------------|--|----------|
| B-01 | Notes and Miscellaneous Details | 07/01/86 |
| B-02 | | |
| B-03 | Typical Structure Excavation and Backfill Pay Limits | 07/01/86 |
| B-04 | | |
| B-05 | | |
| B-06 | Concrete Box Girder | 07/01/86 |
| B-07 | Concrete Box Girder | 07/01/86 |
| B-08 | Concrete Box Girder | 07/01/86 |
| B-09 | | |
| B-10 | | |
| B-11 | | |
| B-12 | Prestressed Concrete Piles | 07/01/86 |
| B-13 | Prestressed Concrete Piles | 07/01/86 |
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|------|--|-----------|
| D-01 | Chain Link Fence With Toprail | r03/06/87 |
| D-02 | Chain Link Fence Without Toprail | 07/01/86 |
| D-03 | Wire Fence With Metal Posts | 07/01/86 |
| D-04 | Typical Details of Curbs and/or Gutters | 07/01/86 |
| D-05 | Typical Details of Reinforced Concrete Drop Driveway | 07/01/86 |
| D-06 | Centerline and Reference Survey Monument | 07/01/86 |
| D-07 | Street Survey Monument | 07/01/86 |
| D-08 | Landscaping Shrub and Tree Planting | 07/01/86 |
| D-09 | Field Office | 07/01/86 |
| D-10 | Field Office | 07/01/86 |
| D-11 | Project Site Laboratory | 07/01/86 |
| D-12 | Project Site Laboratory | 07/01/86 |
| D-13 | Field Office & Project Site Laboratory | 07/01/86 |
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|------|---|----------|
| H-01 | Type A, B, C and D Catch Basin | 07/01/86 |
| H-02 | Type A1, B1, C1 and D1 Catch Basin | 07/01/86 |
| H-03 | Type A2, B2, C2 and D2 Catch Basin | 07/01/86 |
| H-04 | Typical Reinforcing Details for Catch Basins | 07/01/86 |
| H-05 | Type A, B and C Storm Drain Manhole | 07/01/86 |
| H-06 | Type D and E Storm Drain Manhole | 07/01/86 |
| H-07 | Type F Storm Drain Manhole | 07/01/86 |
| H-08 | Catch Basin and Manhole Casting | 07/01/86 |
| H-09 | Type A-9 and A-9P Frames and Grates | 07/01/86 |
| H-10 | Type A-9B Frames and Grates | 07/01/86 |
| H-11 | Type 61614 and 61214 Grated Drop Inlet | 07/01/86 |
| H-12 | Type 61616 Grated Drop Inlet | 07/01/86 |
| H-13 | 61214, 61614 & 61616 Steel Frames and Grates | 07/01/86 |
| H-14 | 61214B Steel Frame and Grates | 07/01/86 |
| H-15 | 61614B Steel Frame and Grates | 07/01/86 |
| H-16 | Concrete and Cement Rubble Masonry Structures | 07/01/86 |
| H-17 | Inlet Structures | 07/01/86 |
| H-18 | Flared End Section for Culverts | 07/01/86 |
| H-19 | Outlet Structures | 07/01/86 |
| H-20 | Concrete Spillway Inlet | 07/01/86 |
| H-21 | 18" Slotted C.M.P. Drain | 07/01/86 |
| H-22 | C.M.P. Coupling Details Standard Joint | 07/01/86 |
| H-23 | Hat Shaped Coupling Band | 07/01/86 |
| | | |
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| STANDARD PLAN NO. | TITLE | DATE |
|-------------------|--|-----------|
| TE-01 | Miscellaneous Sign Details | 07/01/86 |
| TE-02 | Galvanized Flanged Channel Sign Post Mounting | 07/01/86 |
| TE-03 | Galvanized Square Tube Sign Post Mounting | 07/01/86 |
| TE-04 | Regulatory Signs | r09/01/87 |
| TE-05 | Warning Signs | 07/01/86 |
| TE-06 | Miscellaneous Signs | r11/03/89 |
| TE-07 | Reserved | 07/01/86 |
| TE-08 | Construction Signs | r09/01/87 |
| TE-09 | Miscellaneous Intersection Signs | r03/06/87 |
| TE-10 | Reserved | 07/01/86 |
| TE-11 | Bike Route Sign and Supplementary Plates | 07/01/86 |
| TE-12 | State Route Marker and Auxiliary Markers | 07/01/86 |
| TE-13 | Interstate Route Marker | 07/01/86 |
| TE-14 | State Route Marker and Border Detail for Guide Signs | 07/01/86 |
| TE-15 | Route Marker Assemblies | 07/01/86 |
| TE-16 | Miscellaneous Reflector Markers | 07/01/86 |
| TE-17 | Type II Object Markers | 07/01/86 |
| TE-18 | Mileposts | 07/01/86 |
| TE-19 | Reserved | 07/01/86 |
| TE-20 | Overhead Sign Supports | 07/01/86 |
| TE-21 | Overhead Sign Support, Box Truss Type, Aluminum | 07/01/86 |
| TE-22 | Foundation Details and Schedules | 07/01/86 |
| TE-23 | Supports for Ground Mounted Guide Sign | r11/03/89 |
| TE-24 | Breakaway Sign Supports for Ground Mounted Guide Signs | 07/01/86 |
| TE-25 | Laminated Aluminum Sign Panels (Overhead) | 07/01/86 |
| TE-26 | Laminated Aluminum Sign Panels (Ground Mounted) | 07/01/86 |
| TE-27 | Solid Aluminum Extruded Sign Panel and Accessory Details | 07/01/86 |
| TE-28 | Guide Signs Luminaire Mountings | 07/01/86 |
| TE-29 | Reserved | 07/01/86 |
| TE-30 | Raised Pavement Markers and Striping | r11/03/89 |
| TE-31 | Miscellaneous Pavement Markings | r11/03/89 |
| TE-32 | Miscellaneous Pavement Markings | r11/03/89 |
| TE-33 | Miscellaneous Pavement Markings | r11/03/89 |
| TE-34 | Reserved | 07/01/86 |
| TE-35 | Pavement Alphabets, Numbers & Symbols | 07/01/86 |
| TE-36 | Pavement Alphabets, Numbers & Symbols | 07/01/86 |
| TE-37 | Reserved | 07/01/86 |
| TE-38 | Traffic Signal System, Miscellaneous Details | r11/03/89 |
| TE-39 | Traffic Signal System, Miscellaneous Details | 07/01/86 |
| TE-40 | Loop Detectors | r11/03/89 |
| TE-41 | Pullboxes | 07/01/86 |
| TE-42 | Type III Traffic Signal Standard | 07/01/86 |
| TE-43 | Concrete Pullbox (2' x 3') | 07/01/86 |
| TE-44 | Reserved | 07/01/86 |

| STANDARD PLAN NO. | TITLE | DATE |
|-------------------|---|-----------|
| TE-45 | Reserved | 07/01/86 |
| TE-46 | Reserved | 07/01/86 |
| TE-47 | Reserved | 07/01/86 |
| TE-48 | Reserved | 07/01/86 |
| TE-49 | Reserved | 07/01/86 |
| TE-50 | Metal Guardrail | r03/06/87 |
| TE-51 | Metal Guardrail | r09/01/87 |
| TE-52 | Metal Guardrail with Rubrail | r11/03/89 |
| TE-53 | Metal Guardrail with Rubrail at Obstruction | r09/01/87 |
| TE-54 | Beam Type Guardrail with Rubrail at Obstruction (Shoulder Installation) | r11/03/89 |
| TE-55 | Metal Guardrail Connection to Concrete Barrier | r11/03/89 |
| TE-56 | Concrete Barrier Transition | 07/01/86 |
| TE-57 | Guardrail Type 3, Thrie Beam | r11/03/89 |
| TE-57A | Guardrail Type 3, Modified Thrie Beam | 11/03/89 |
| TE-58 | Approach End Flare, One & Two Way Roadway | 07/01/86 |
| TE-59 | Trailing End Flare, One & Two Way Roadway | r11/03/89 |
| TE-60 | Anchor Block Details | 07/01/86 |
| TE-61 | Breakaway Cable Terminal (BCT) | r11/03/89 |
| TE-62 | Breakaway Cable Terminal (BCT) | r09/01/87 |
| TE-63 | Guardrail Type 4 (Rigid Barrier) | r09/01/87 |
| TE-64 | Portable Concrete Barrier | r11/03/89 |
| TE-65 | Guardrail Type 4, Miscellaneous | r09/01/87 |
| TE-66 | Barricades | 07/01/86 |
| TE-67 | Delineation & Pavement Markings at Bridges | 07/01/86 |
| TE-68 | Wheelchair Ramps | r11/03/89 |
| TE-69 | Wheelchair Ramps | r11/03/89 |
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|---------------|-------------------|------|
| ORIGINAL PLAN | SURVEY PLOTTED BY | DATE |
| NOTE BOOK | DRAWN BY | |
| | DESIGNED BY | |
| | QUANTITIES BY | |
| | CHECKED BY | |

NOTE:
STANDARD PLANS APPLICABLE TO THIS PROJECT ARE INDICATED BY A " ● " NEXT TO THE STANDARD PLAN NO. (D-07 ●)

| | |
|----------|--|
| 11/03/89 | REVISED STANDARD PLANS TE-06,TE-23, TE-30, TE-31, TE-32, TE-33, TE-38, TE-40, TE-52, TE-54, TE-55, TE-57, TE-59, TE-61, TE-64, TE-68 & TE-69. ADDED TE-57A TO STANDARD PLANS |
| 09/01/87 | REVISED STANDARD PLANS TE-04,TE-06, TE-08, TE-32, TE-51, TE-53, TE-54, TE-55, TE-57, TE-59, TE-62, TE-63, TE-65 & TE-69. |
| 03/06/87 | REVISED STANDARD PLANS D-01, TE-09, TE-40, TE-50, TE-51, TE-57, TE-59, TE-61, TE-63 & TE-64. |
| DATE | REVISION |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD PLANS SUMMARY

MOANALUA FREEWAY RESURFACING
Aiea Interchange To Moanalua
Stream Bridge (Outbound Lanes)
PROJECT NO. 78A-01-91M

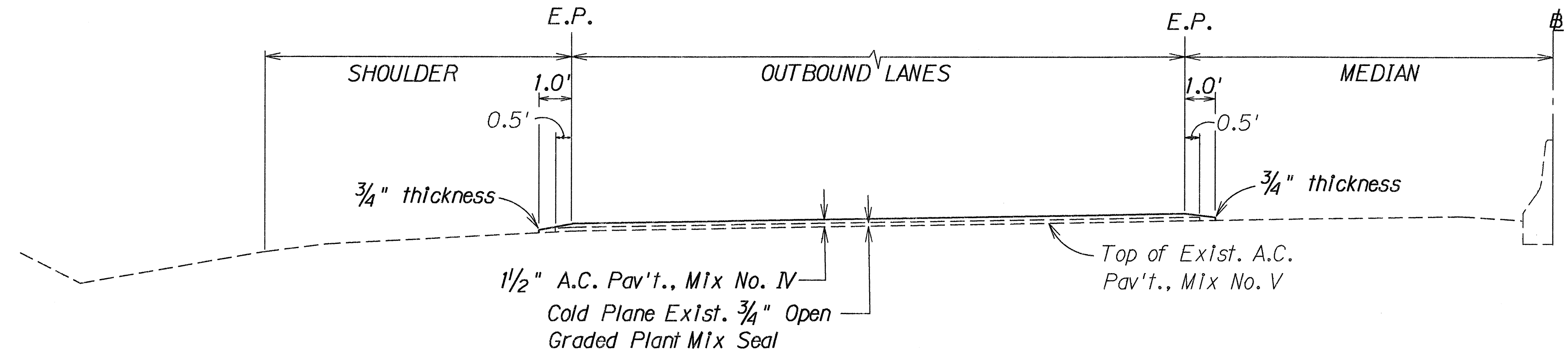
Date: Dec.,1991

SHEET No. 1 OF 1 SHEETS

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|------------|-------------|-----------|--------------|
| HAWAII | HAW. | 78A-01-91M | 1992 | 3 | 70 |

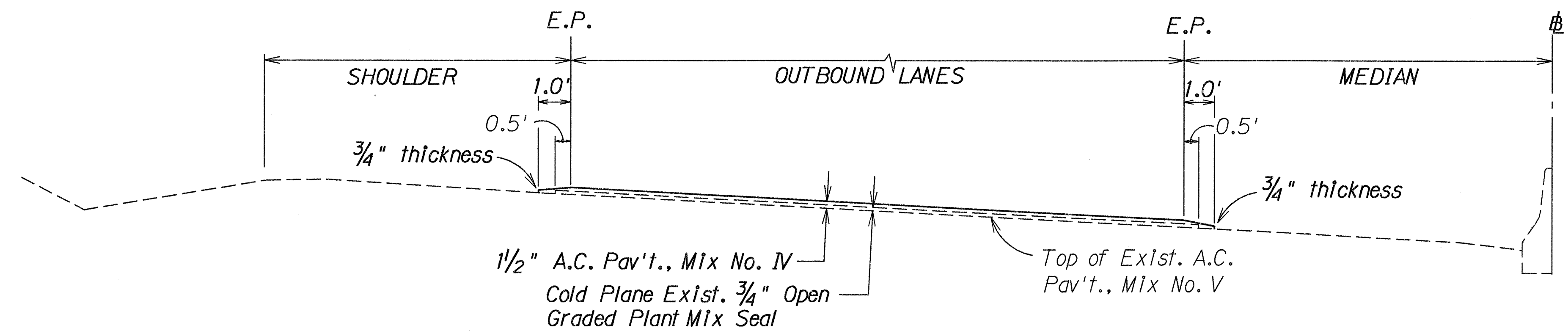
GENERAL NOTES

1. This project consists of reconstructing existing weakened pavement areas, removing approximately $\frac{3}{4}$ " thick existing open graded plant mix seal by cold planing, resurfacing with $1\frac{1}{2}$ " thick Asphalt Concrete Pavement, Mix No. IV, adjusting manhole frames and covers, refurbishing expressway and destination signs, and installing pavement markers, striping and signing.
2. The existence and location of underground utilities, manholes, C&C street survey monuments, centerline monuments and structures as shown on the plans are from the latest available data but the accuracy is not guaranteed. Furthermore, the encountering of other obstacles during the course of work may be possible. The Contractor shall be responsible and shall pay for all damages to existing facilities resulting from his operations.
3. The Contractor's attention is directed to Section 107-Legal Relations and Responsibility to Public and Section 645-Traffic Control for traffic control requirements.
4. All holes and wheel ruts shall be filled and compacted with Asphalt Concrete Pavement, Mix No. IV prior to resurfacing. This work will be paid for under Item No. 401.0400, Asphalt Concrete Pavement, Mix No. IV.
5. The Contractor shall remove and dispose of all existing raised pavement markers in the resurfacing areas prior to overlaying of Asphalt Concrete. This work shall be considered incidental to Item No. 401.0400-Asphalt Concrete Pavement, Mix No. IV and will not be paid for separately.
6. Smooth riding connections shall be constructed at the beginning and end of project and at all connecting approaches as shown on the plans and as directed by the Engineer.
7. No resurfacing shall be done over the bridges. The existing asphalt concrete pavement at the bridge approaches and trailing ends shall be removed by cold planing. For details, see Plan Sheet No. 4.
8. Transition cold planing at the beginning and end of project at ramp ends, and at concrete structures will be paid for under Item No. 652.1000-Cold Planing.
9. At reconstruction areas adjacent to gutter sections, the contractor shall cold plane the A.C. taper within the gutter section, and construct a new A.C. taper with A.C. Pavement, Mix No. IV to replace the removed taper. The new taper shall be constructed as part of the reconstruction work prior to the resurfacing course. The cold planing and replacement of the A.C. taper shall be paid for under Item No. 652.1000-Cold Planing and Item No. 401.0500-Asphalt Concrete Pavement, Mix No. IV.



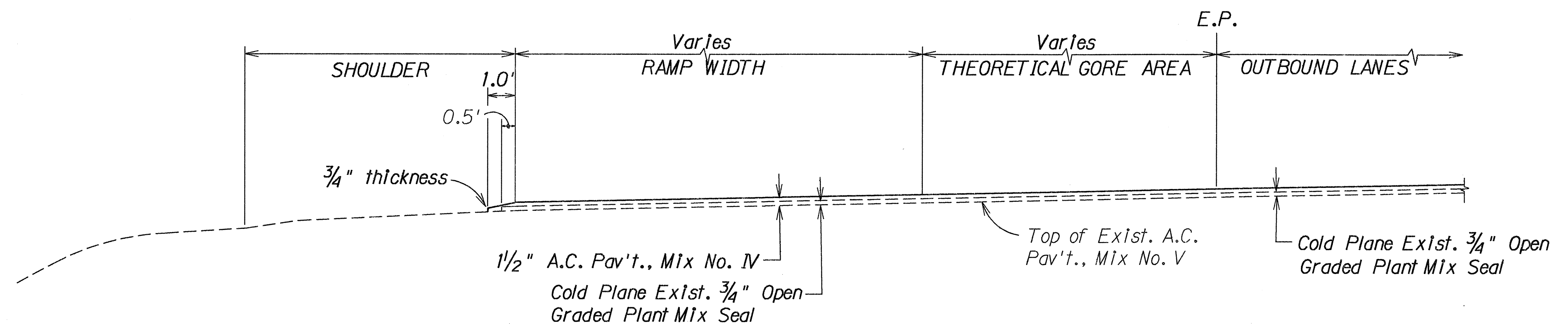
TYPICAL TANGENT HALF SECTION-MOANALUA FREEWAY

Scale: $\frac{3}{8}$ " = 1' - 0"



TYPICAL SUPERELEVATED HALF SECTION-MOANALUA FREEWAY

Scale: $\frac{3}{8}$ " = 1' - 0"



TYPICAL SECTION THROUGH RAMP GORE AREA

Scale: $\frac{3}{8}$ " = 1' - 0"

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

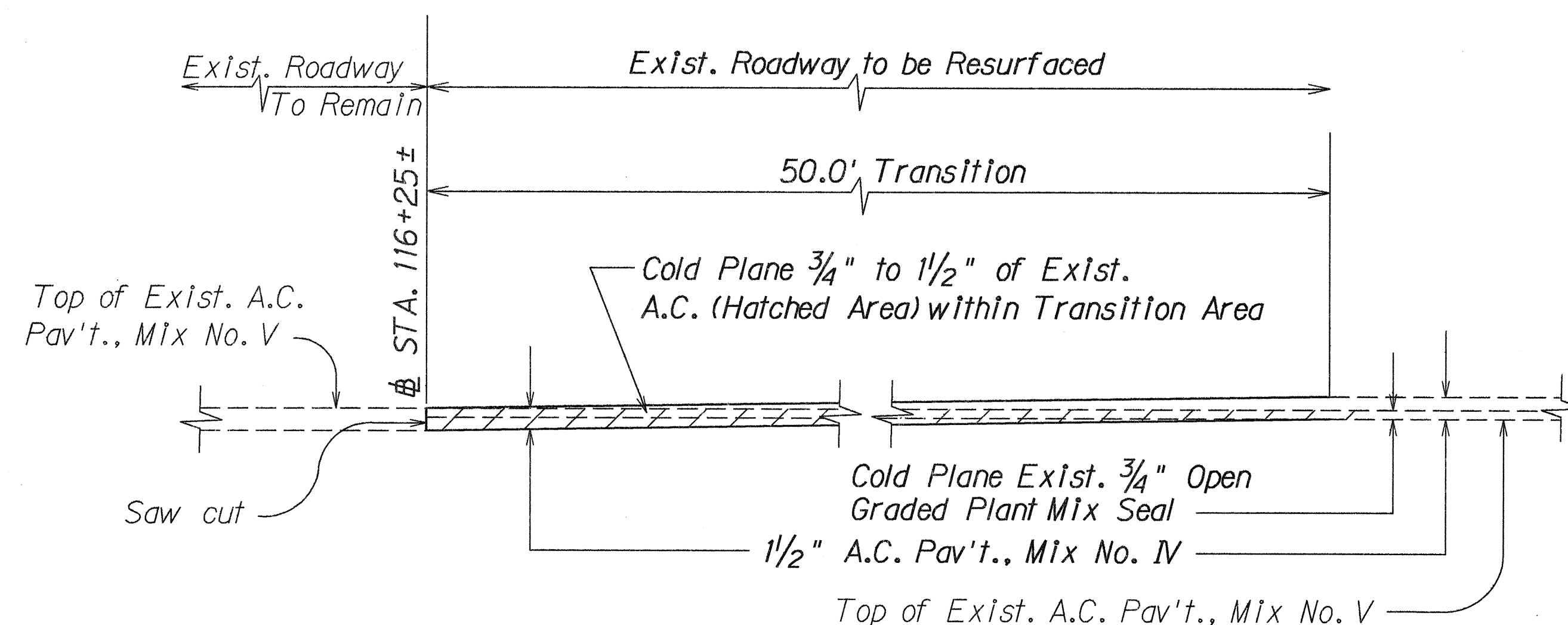
GENERAL NOTES AND TYPICAL SECTIONS

MOANALUA FREEWAY RESURFACING
Ala Interchange to Moanalua
Stream Bridge (Outbound Lanes)
PROJECT NO. 78A-01-91M

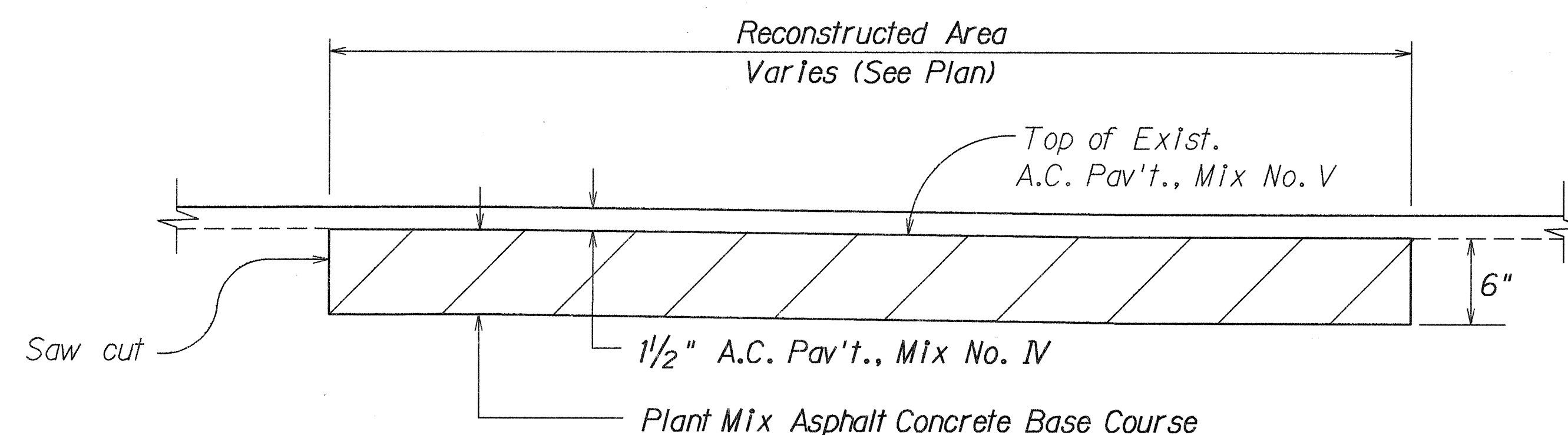
Scale: As Noted Date: Dec, 1991

SHEET No. 1 OF 1 SHEETS

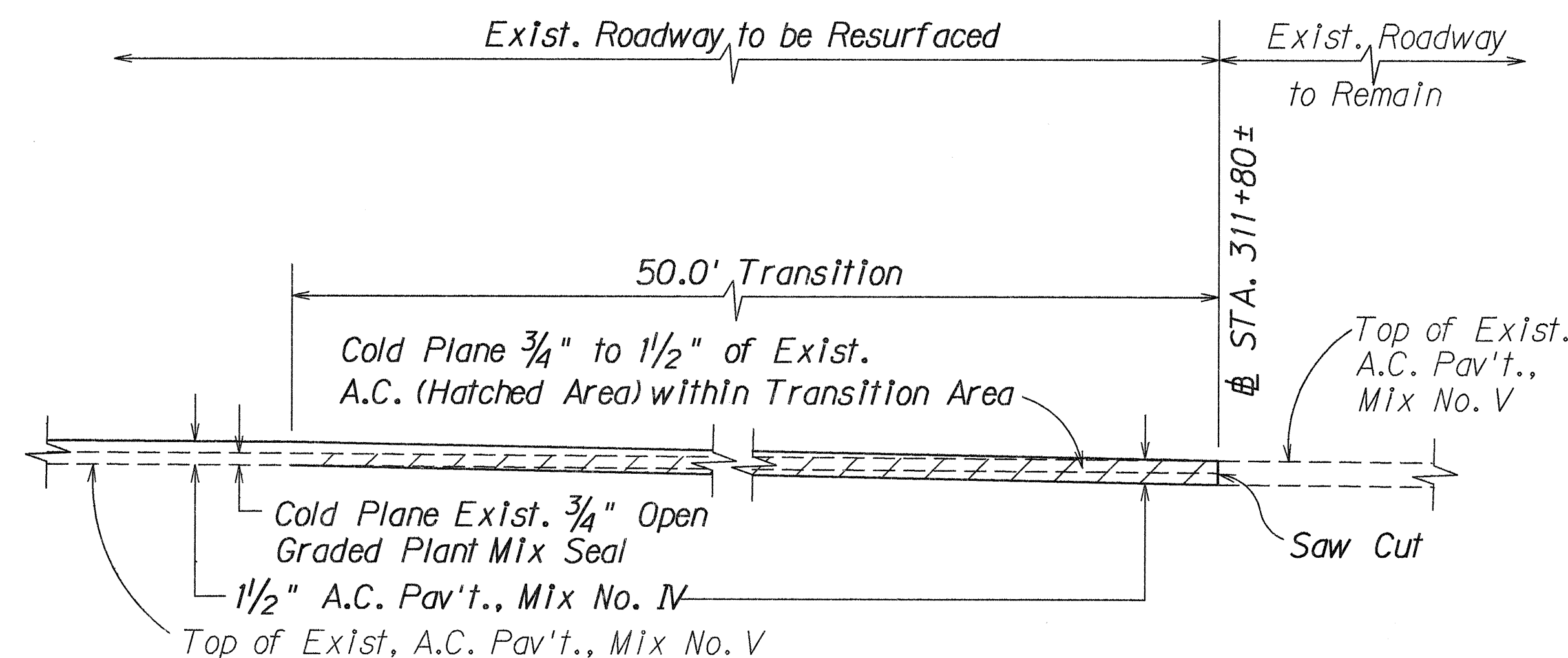
| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
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| HAWAII | HAW. | 78A-01-91M | 1992 | 4 | 70 |



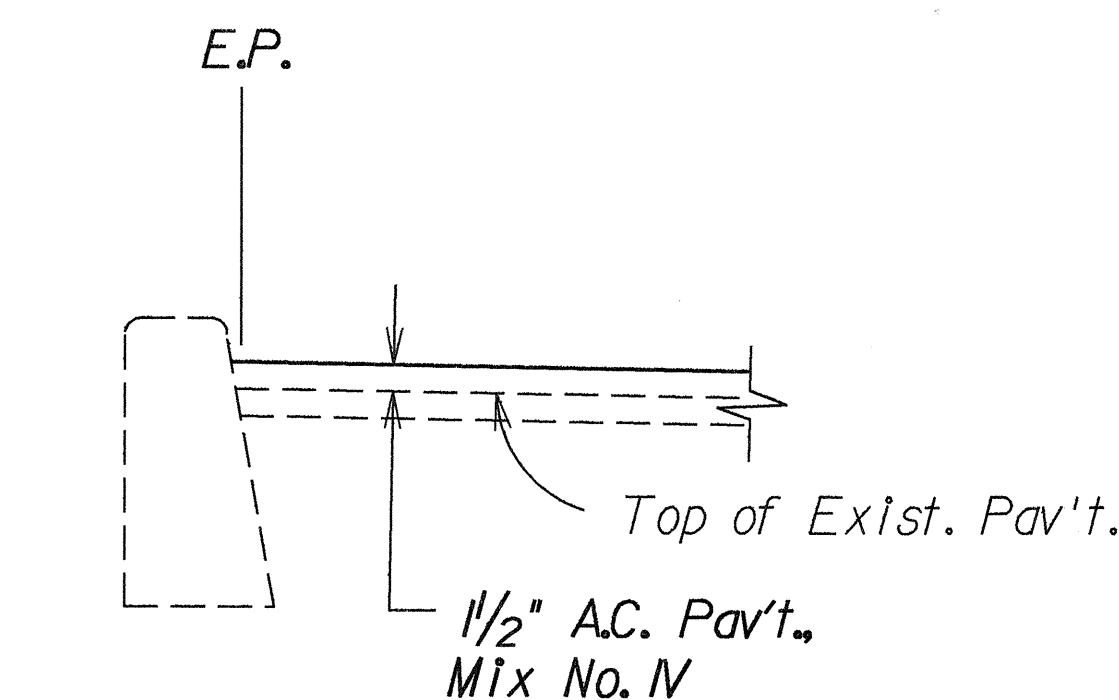
RESURFACING DETAIL AT BEGINNING OF PROJECT
Not to Scale



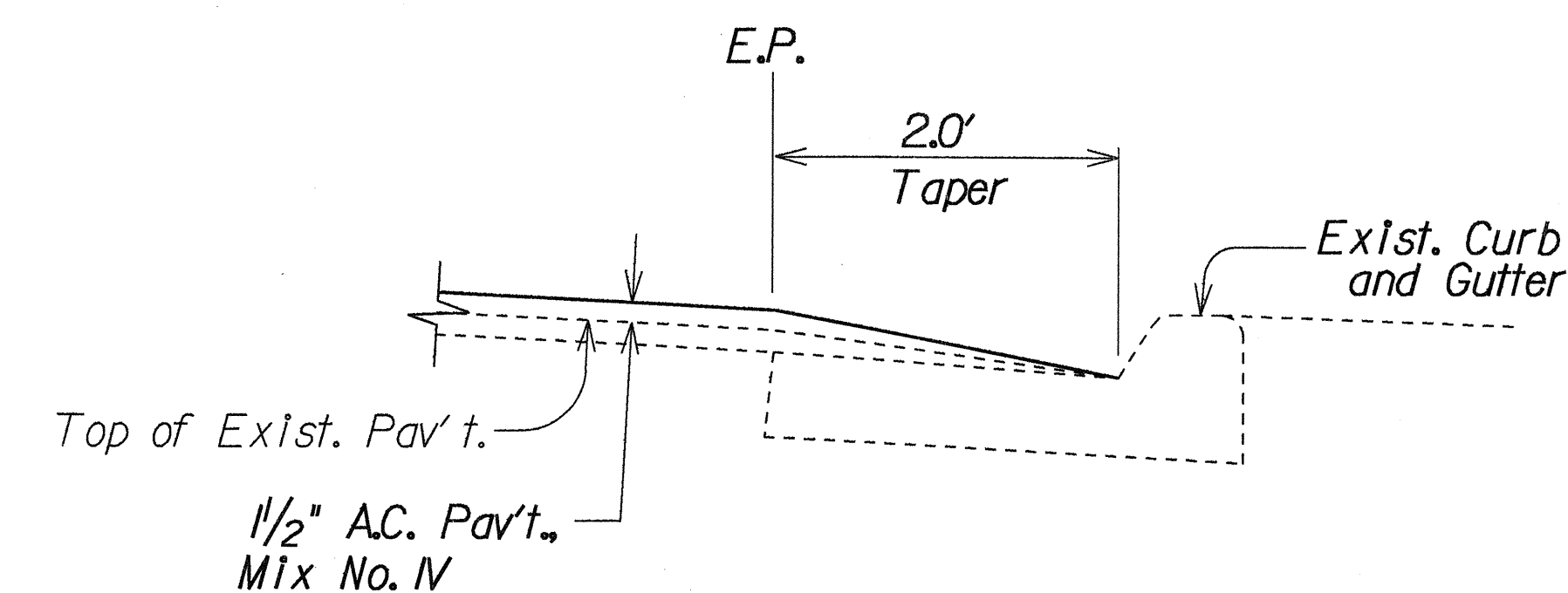
TYPICAL RECONSTRUCTION AREA
Not to Scale



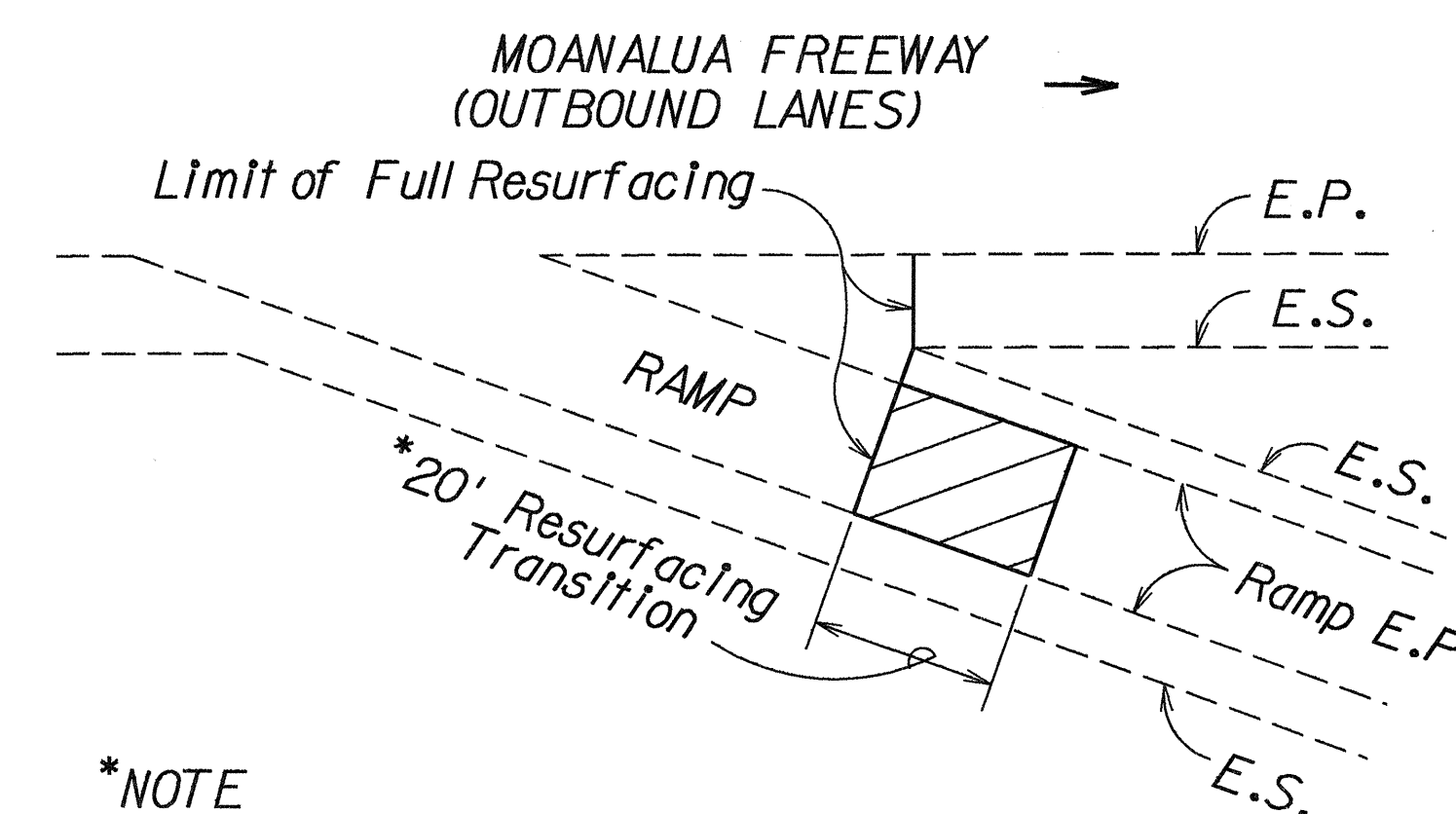
RESURFACING DETAIL AT END OF PROJECT
Not to Scale



TYPICAL DETAIL AT EXISTING CURB
Not to Scale



TYPICAL DETAIL AT EXISTING CURB AND GUTTER
Not to Scale

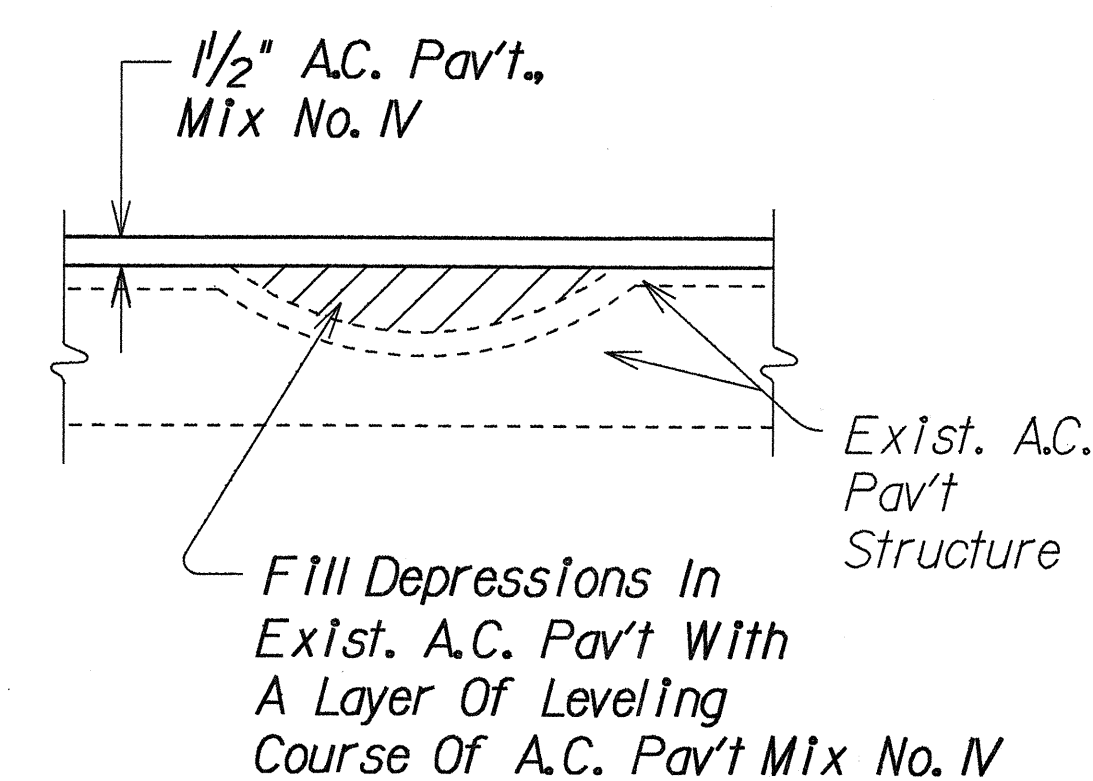


***NOTE**

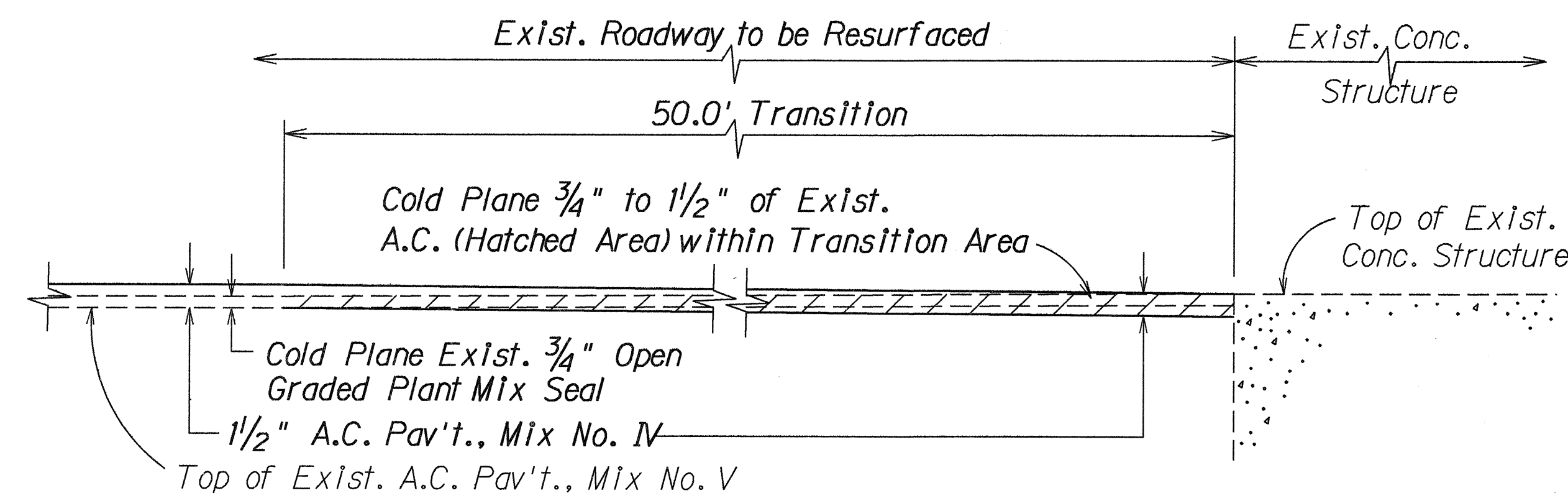
The resurfacing transition used to end the paving at the existing ramp pavement shall be similar to "Resurfacing Detail at End of Project", as shown on this sheet.

PLAN

TYPICAL DETAIL-RAMP RESURFACING
Not to Scale



LEVELING COURSE DETAIL
Not to Scale



TYPICAL DETAIL-TRANSITION AT CONCRETE STRUCTURE
Not to Scale

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

MISCELLANEOUS DETAILS

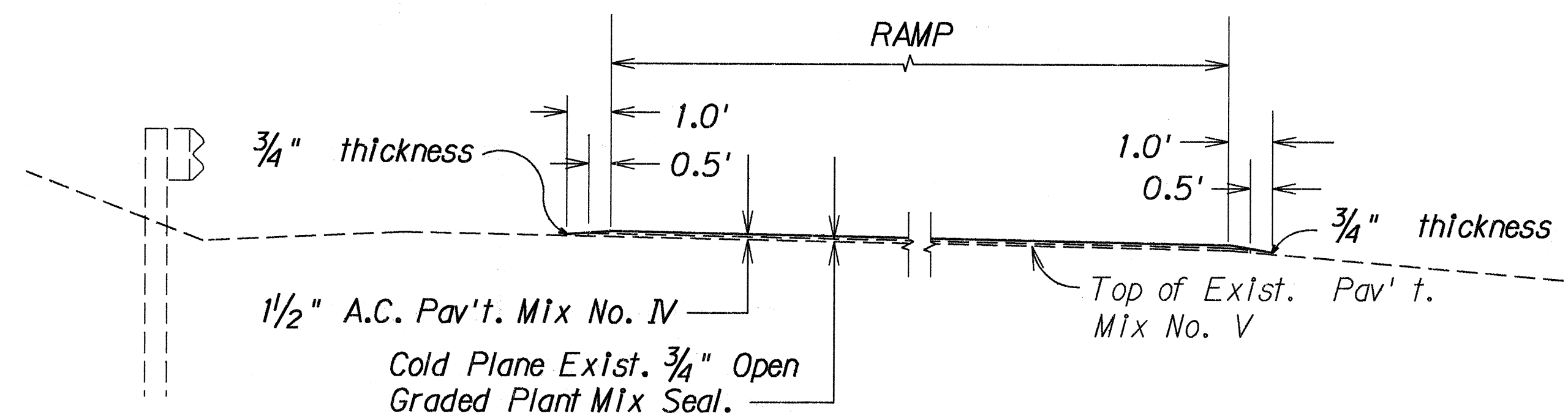
MOANALUA FREEWAY RESURFACING
Aiea Interchange to Moanalua
Stream Bridge (Outbound Lanes)
PROJECT NO. 78A-01-91M

Scale: As Noted Date: Dec, 1991

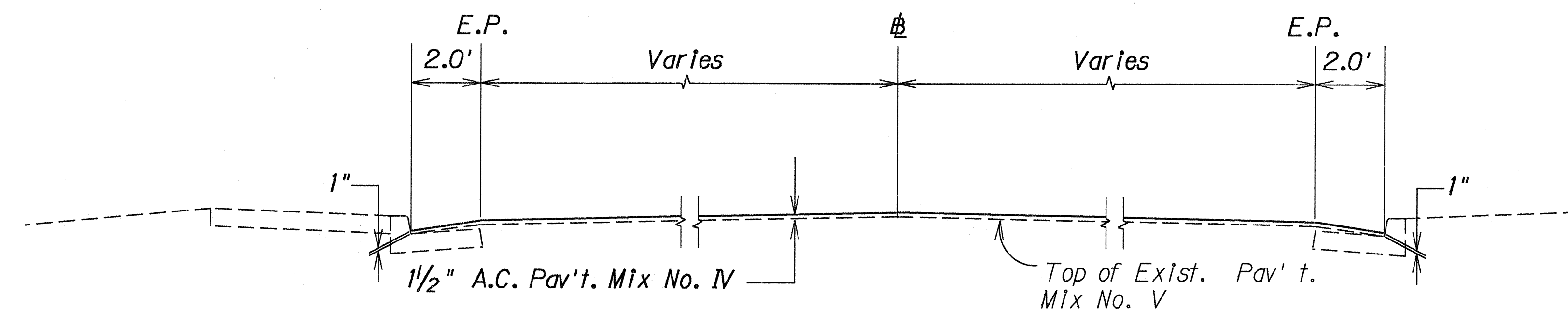
SHEET No. 1 OF 1 SHEETS

| | |
|-------------------|------|
| SURVEY PLOTTED BY | DATE |
| DRAWN BY | |
| DESIGNED BY | |
| NOTED BY | |
| CHECKED BY | |
| ORIGINAL PLAN | |
| NOTE BOOK | |
| QUANTITIES BY | |
| CHECKED BY | |

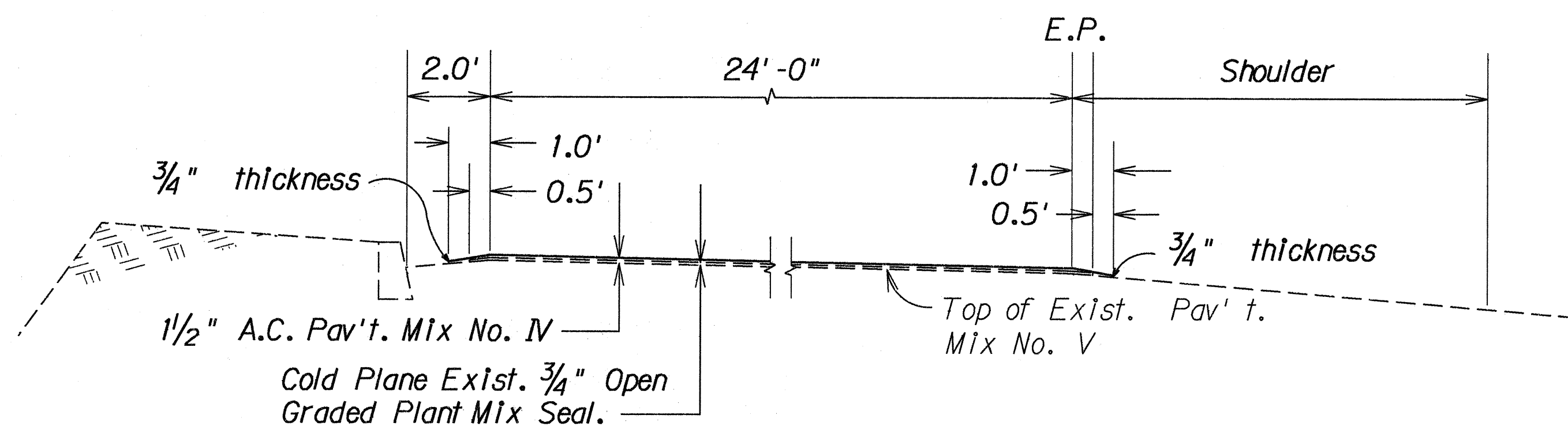
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII | HAW. | 78A-01-91M | 1992 | 5 | 70 |



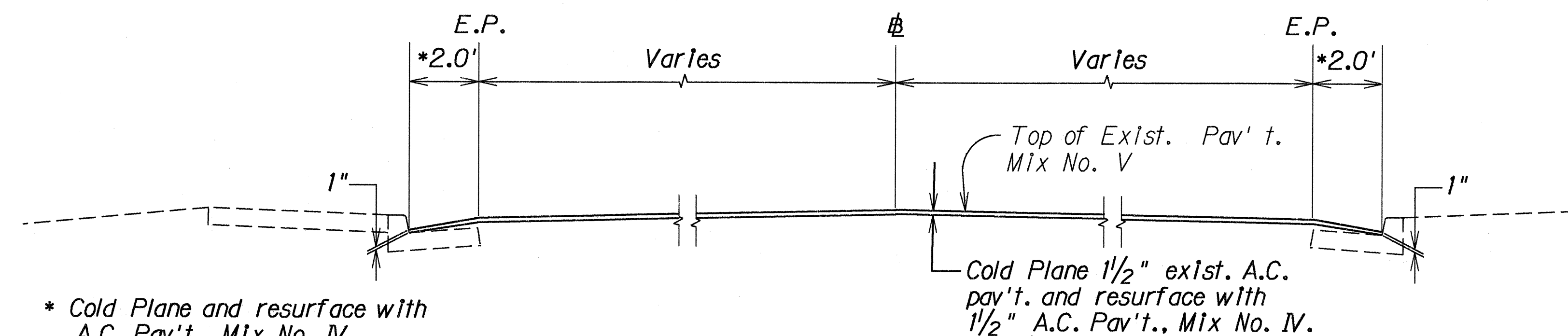
TYPICAL SECTION
RAMP RESURFACING
Scale: $\frac{3}{8}$ " = 1'0"



TYPICAL SECTION
SERVICE ROAD STA. 14+60± TO STA. 16+71.58
Scale: $\frac{3}{8}$ " = 1'0"



TYPICAL SECTION
FRONTAGE ROAD RESURFACING
Scale: $\frac{3}{8}$ " = 1'0"

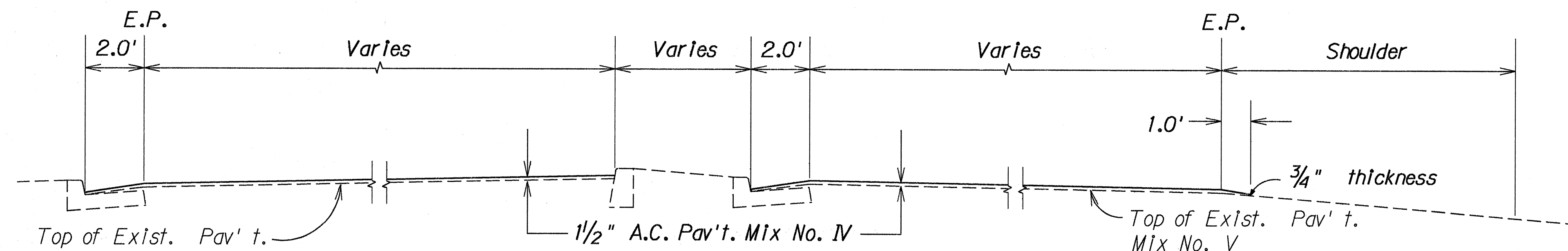


TYPICAL SECTION
SERVICE ROAD STA. 16+71.58 TO STA. 24+84.05
Scale: $\frac{3}{8}$ " = 1'0"

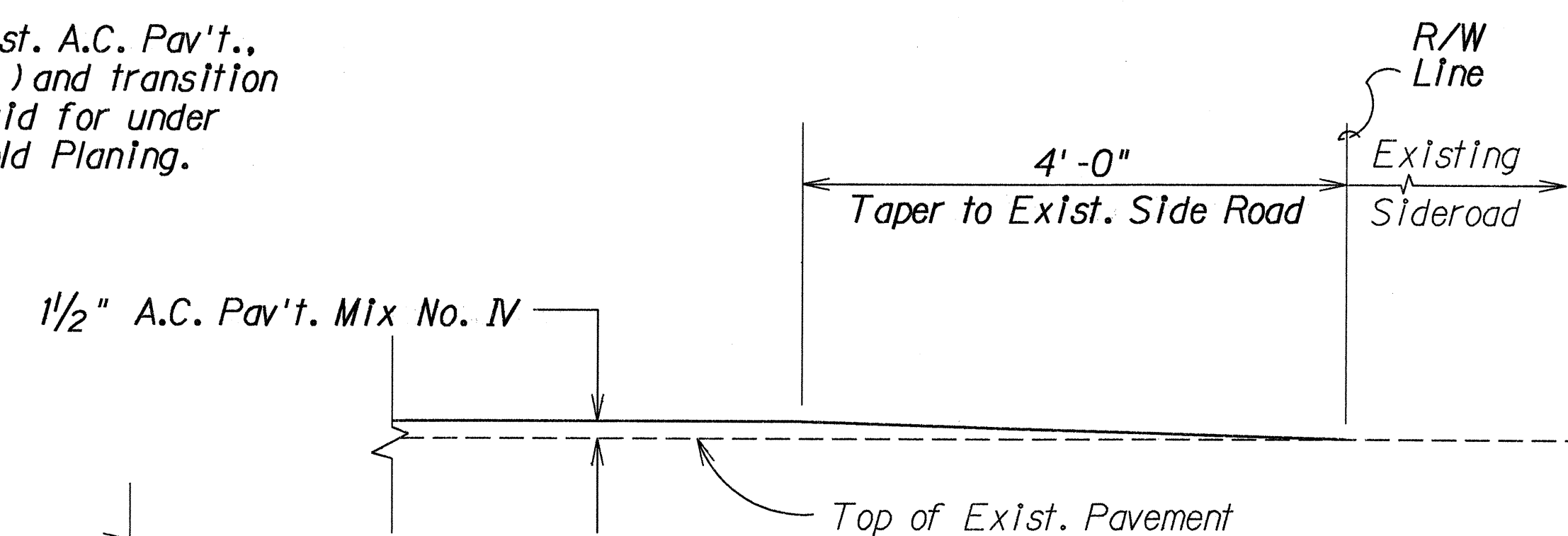
* Cold Plane and resurface with A.C. Pav't., Mix No. IV (1/2" to 1" A.C. taper)

NOTE:

- 1) Provide transition cold planing from 0" to 1/2" in 50' at ends of cold plane section.
- 2) Cold planing 1/2" exist. A.C. Pav't., A.C. taper (1/2" to 1") and transition cold planing will be paid for under Item No. 652.1000, Cold Planing.



TYPICAL SECTION
ULUNE EXTENSION, RAMP "G" & SERVICE ROAD STA. 10+13± TO STA. 14+60±
Scale: $\frac{3}{8}$ " = 1'0"



A.C. RESURFACING AT SIDEROAD OR DRIVEWAY RESURFACING DETAIL
Scale: 1" = 1'0"

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPICAL SECTIONS

MOANALUA FREEWAY RESURFACING
Alea Interchange to Moanalua
Stream Bridge (Outbound Lanes)
PROJECT NO. 78A-01-91M

Scale: As Noted Date: Nov. 1991
SHEET No. 1 OF 1 SHEETS