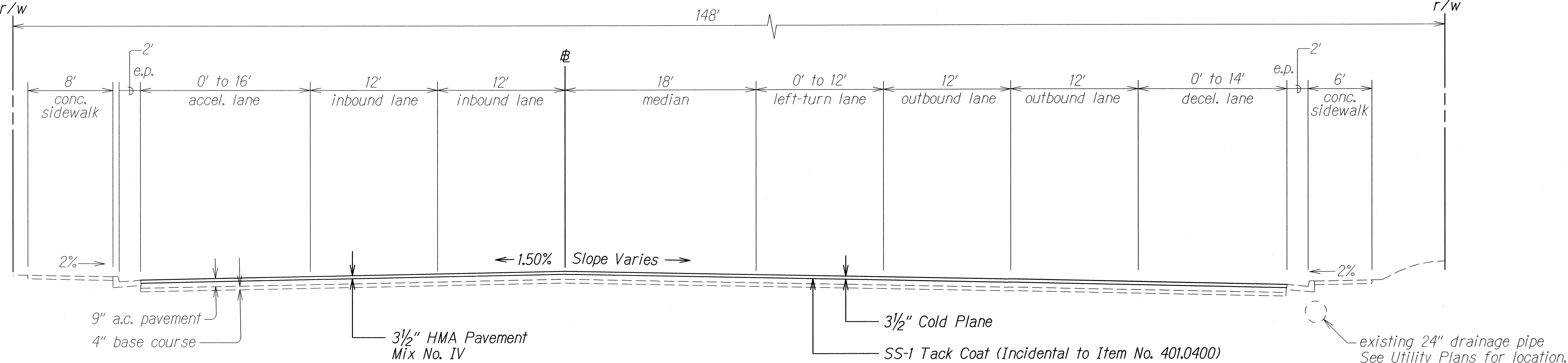
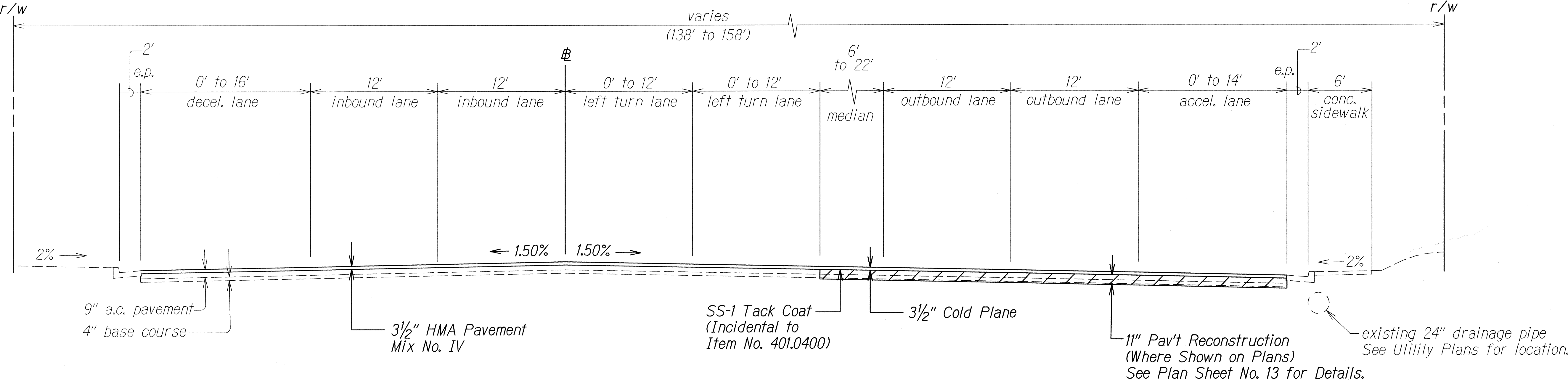


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-099-1(029)	2014	9	84



STA. 0.00 to STA. 3+13.00±
 Scale: 3/16"=1'-0"



STA. 3+13.00± to STA. 13+19.80
 Scale: 3/16"=1'-0"

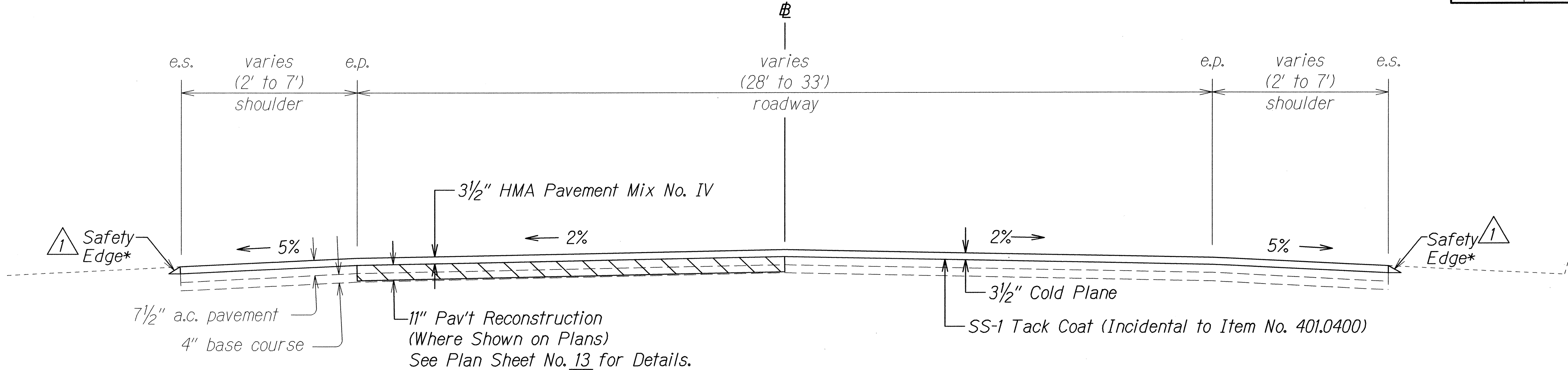
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

TYPICAL SECTIONS
 KAMEHAMEHA HIGHWAY RESURFACING
 Vicinity of Ka Uka Boulevard
 to Vicinity of Waihau Street
 Federal Aid Project No. NH-099-1(29)
 Scale: 3/16"=1'-0" Date: Sept., 2013

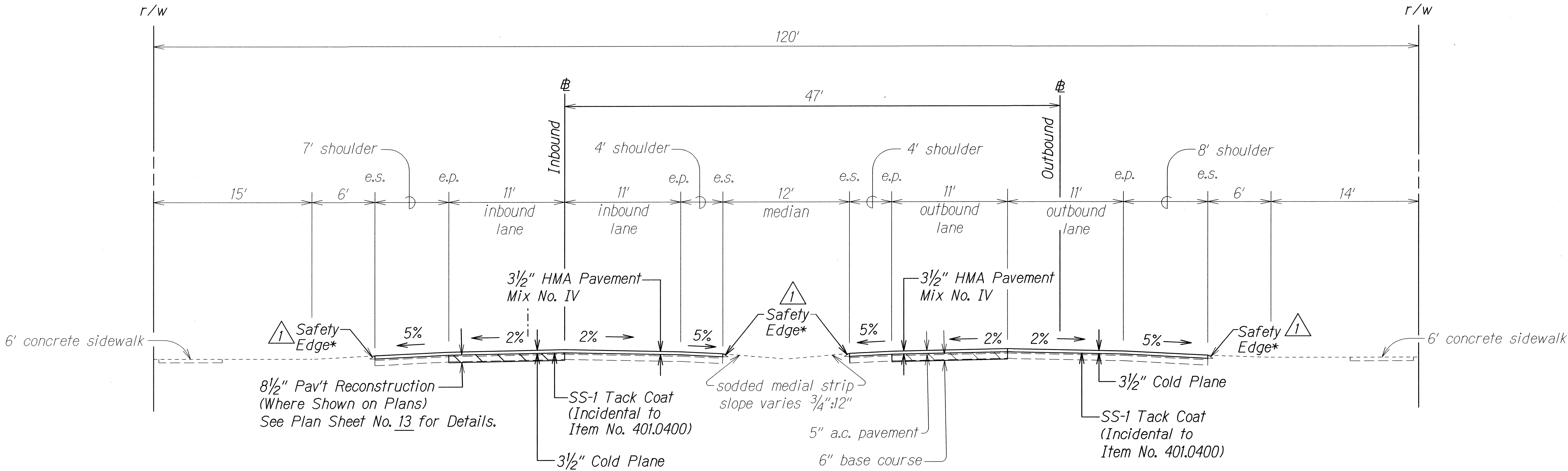
SHEET No. 1 OF 3 SHEETS

SURVEY PLOTTED BY	DATE
DRAWN BY	
TRACED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
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individual	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-099-1(029)	2014	ADD.10	84



TYPICAL SECTION
STA. 13+19.80 to INBOUND # STA. 6+69.51
 Scale: 3/8"=1'-0"



*See Plan Sheet No. 13 for Details.

TYPICAL SECTION
INBOUND # STA. 6+69.51 to INBOUND # STA. 56+00.00
 Scale: 3/16"=1'-0"

1/22/14 Added Safety Edge.

DATE REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

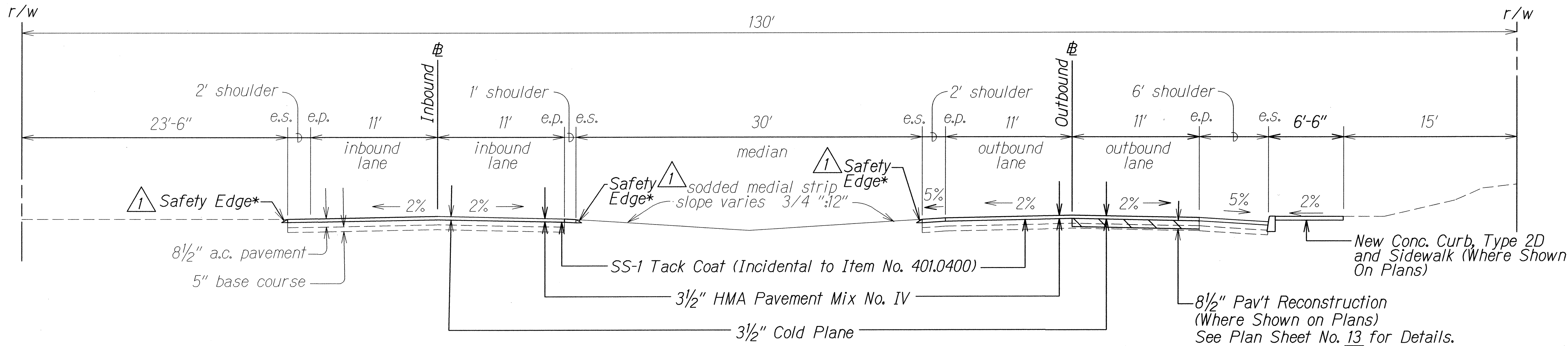
TYPICAL SECTIONS
KAMEHAMEHA HIGHWAY RESURFACING
Vicinity of Ka Uka Boulevard
to Vicinity of Waihau Street
Federal Aid Project No. NH-099-1(029)

Scale: As Shown
Date: Sept., 2013

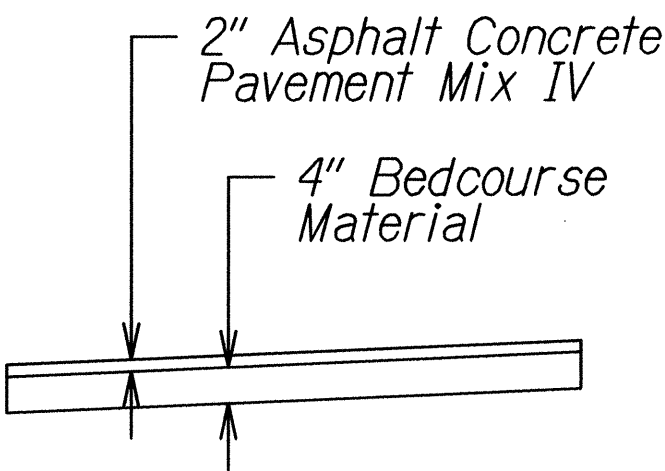
SHEET No. 2 OF 6 SHEETS

DATE	
DESIGNED BY	
TRACED BY	
NOTE BOOK	
QUANTITIES BY	
CHECKED BY	
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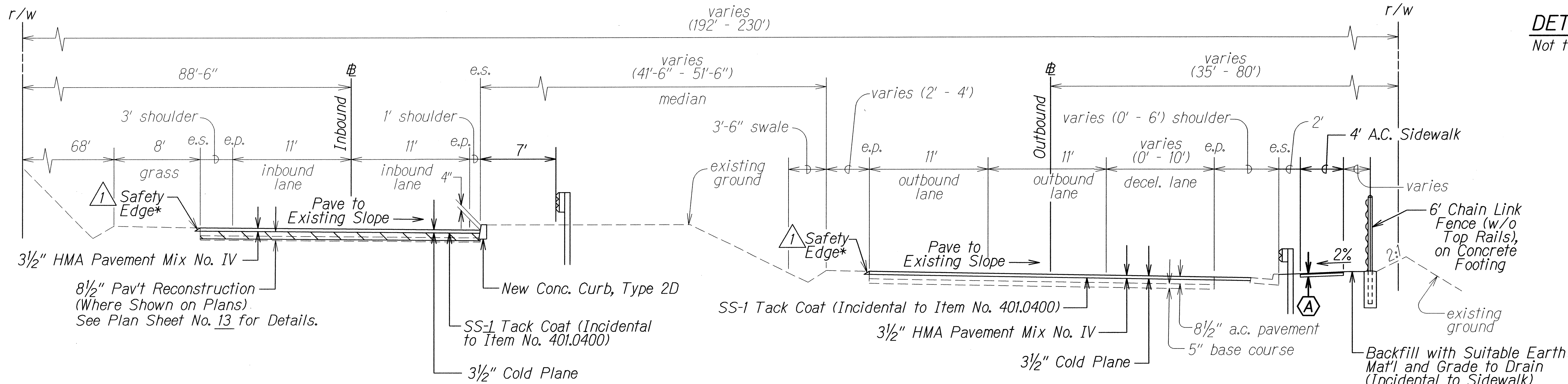
FED. ROAD DIST. NO.	STATE	FEDERAL PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-099-1(029)	2014	ADD.11	84



TYPICAL SECTION
INBOUND Sta. 56+00.00 to INBOUND Sta. 66+00.00
 Scale: 3/16" = 1'



DETAIL A
 Not to Scale



TYPICAL SECTION
INBOUND Sta. 66+00.00 to INBOUND Sta. 81+00.00
 Scale: 3/16" = 1'

1 *See Plan Sheet No. 13 For Details.

1 1/22/14 Added Safety Edge.

DATE REVISION

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

TYPICAL SECTIONS

KAMEHAMEHA HIGHWAY RESURFACING

Vicinity of Ka Uka Boulevard to Vicinity of Waihau Street

Federal Aid Project No. NH-099-1(029)

Scale: 3/16" = 1'-0" Date: Sept., 2013

DATE

REVISION

SHEET No. 3 OF 3 SHEETS

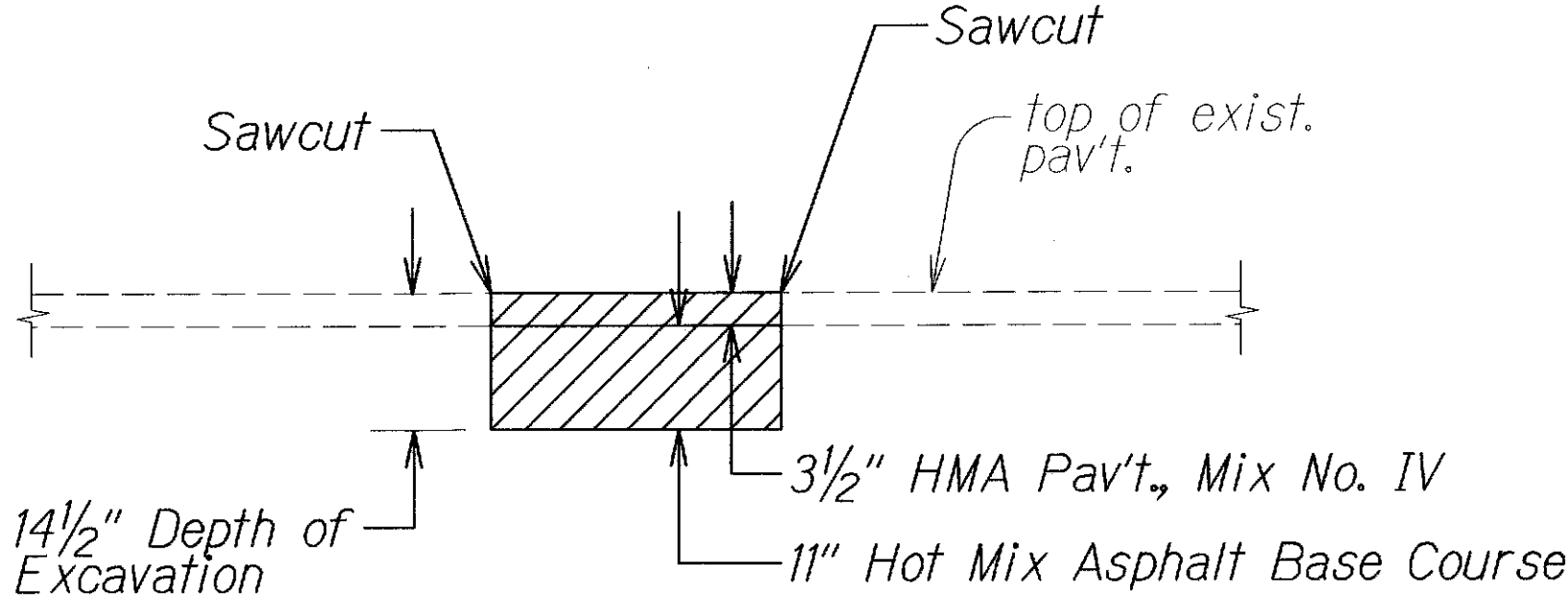
ADD. 11

SURVEY PLOTTED BY	DATE
DESIGNED BY	
TRACED BY	
NOTED BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
QUANTITIES BY	
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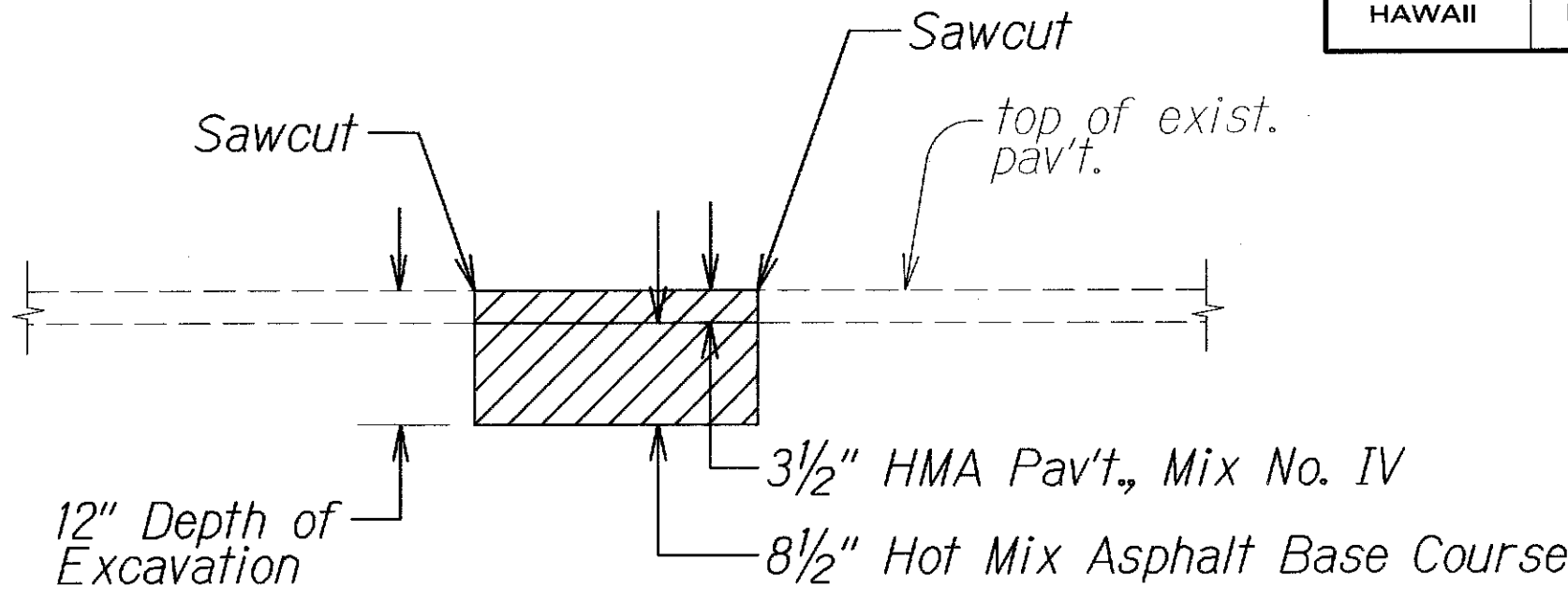
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-099-1(029)	2014	ADD.13	84

Notes:

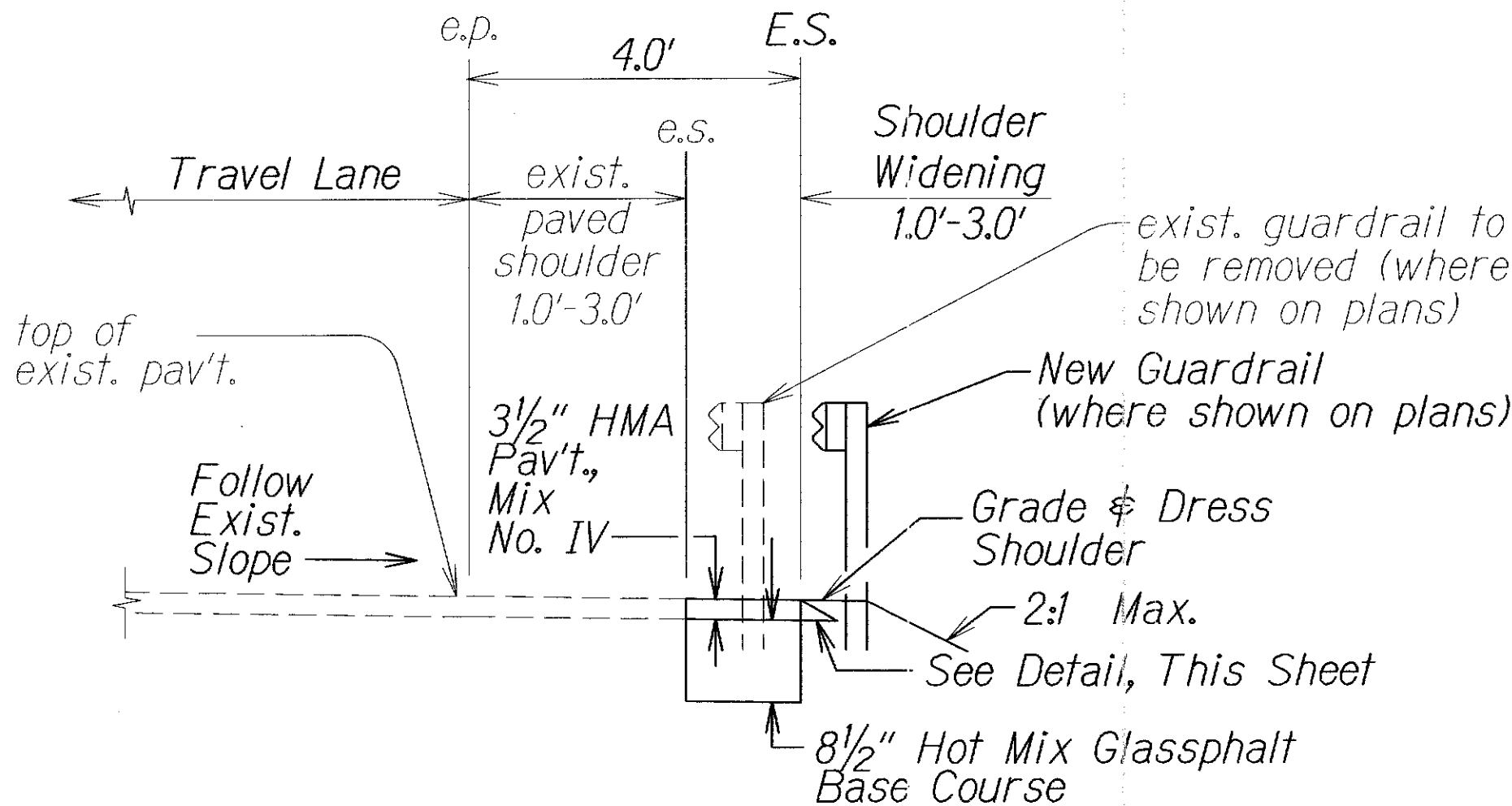
1. Prior to placement of the asphalt base course, the exposed subbase or subgrade shall be recompacted to a dense and unyielding condition. The work shall be considered incidental to the Hot Mix Asphalt Base Course.
2. The minimum width of pavement reconstruction is shown on the plans. Additional reconstruction width required by the Contractor to adequately accommodate paving equipment for placement in accordance with the specifications is assumed to be 7' wide and has been accounted for in the estimated quantities for Hot Mix Asphalt Pavement Mix No. IV and Hot Mix Asphalt Base Course. Reconstruction widths greater than 7' for Contractor's convenience will not be paid.



**TYPICAL PAVEMENT
RECONSTRUCTION DETAIL**
KA UKA BLVD. TO LANIKUHANA AVE.
(~~£~~ STA. 0+00 to ~~£~~ STA. 11+00)
Not to Scale

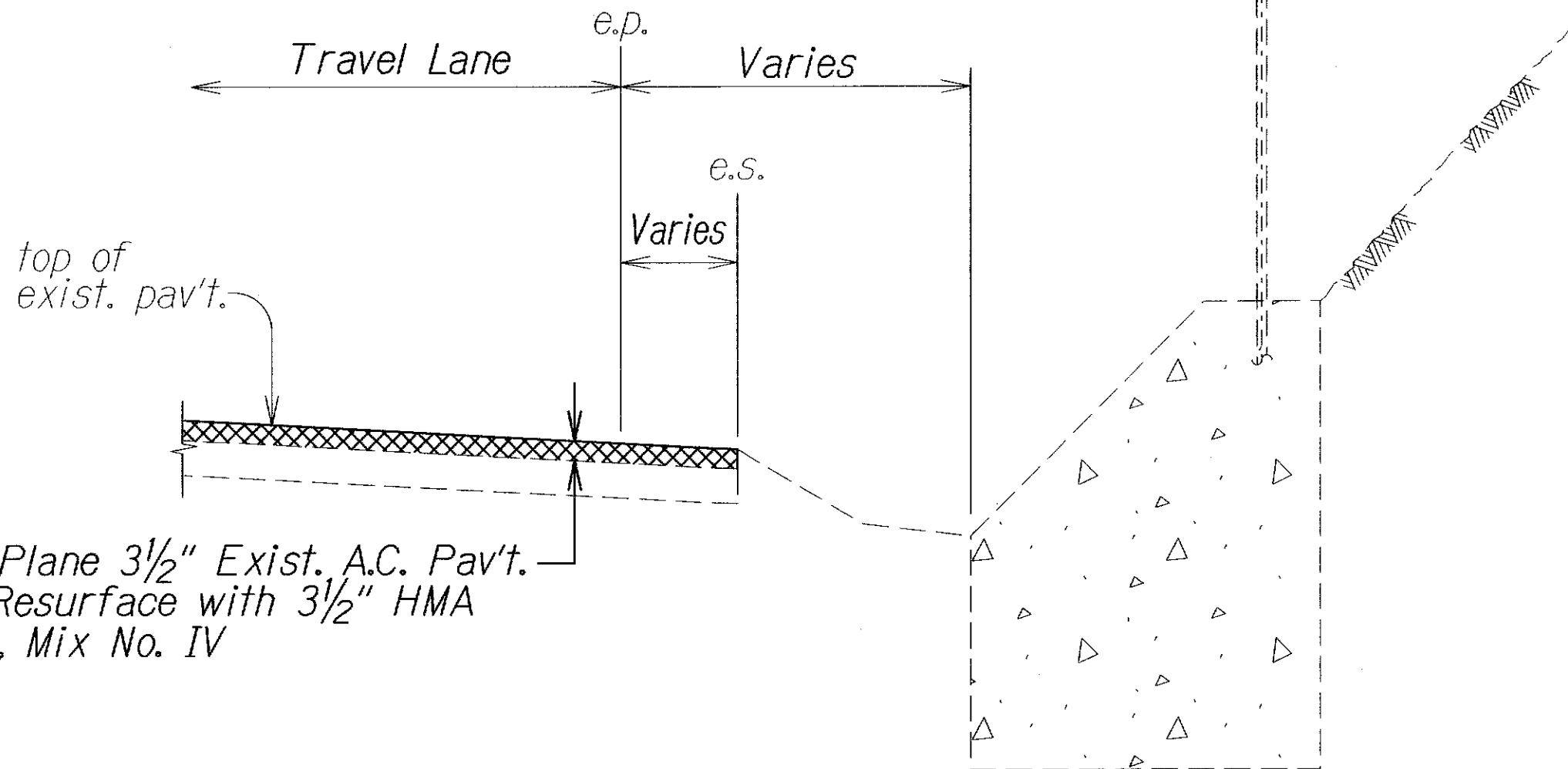


**TYPICAL PAVEMENT
RECONSTRUCTION DETAIL**
LANIKUHANA AVE. TO WAIHAU ST.
(~~£~~ STA. 11+00 to ~~£~~ STA. 81+00)
Not to Scale

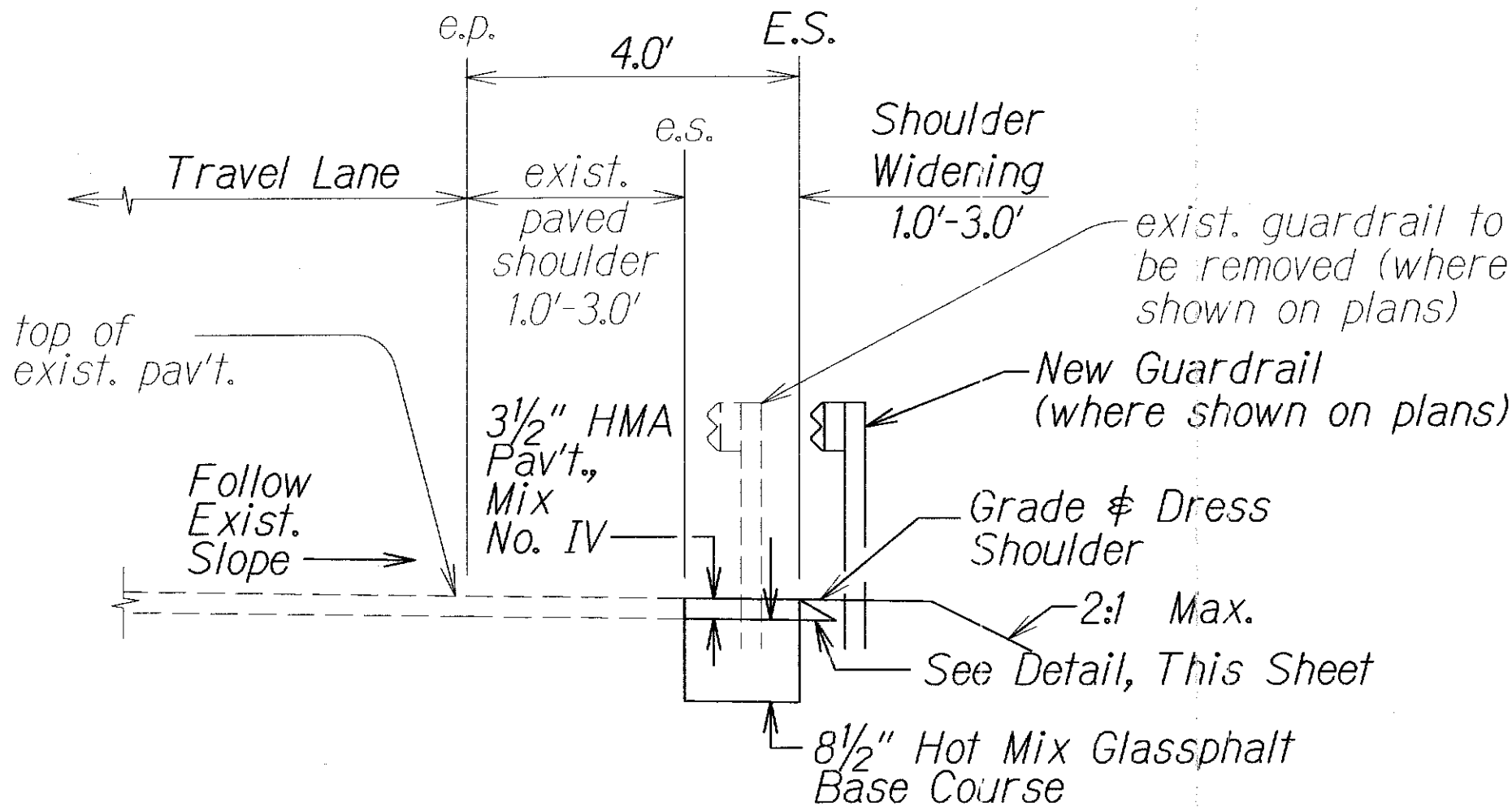


1 TYPICAL SHOULDER WIDENING DETAIL
FOR 8.0' GUARDRAIL POST
Not to Scale

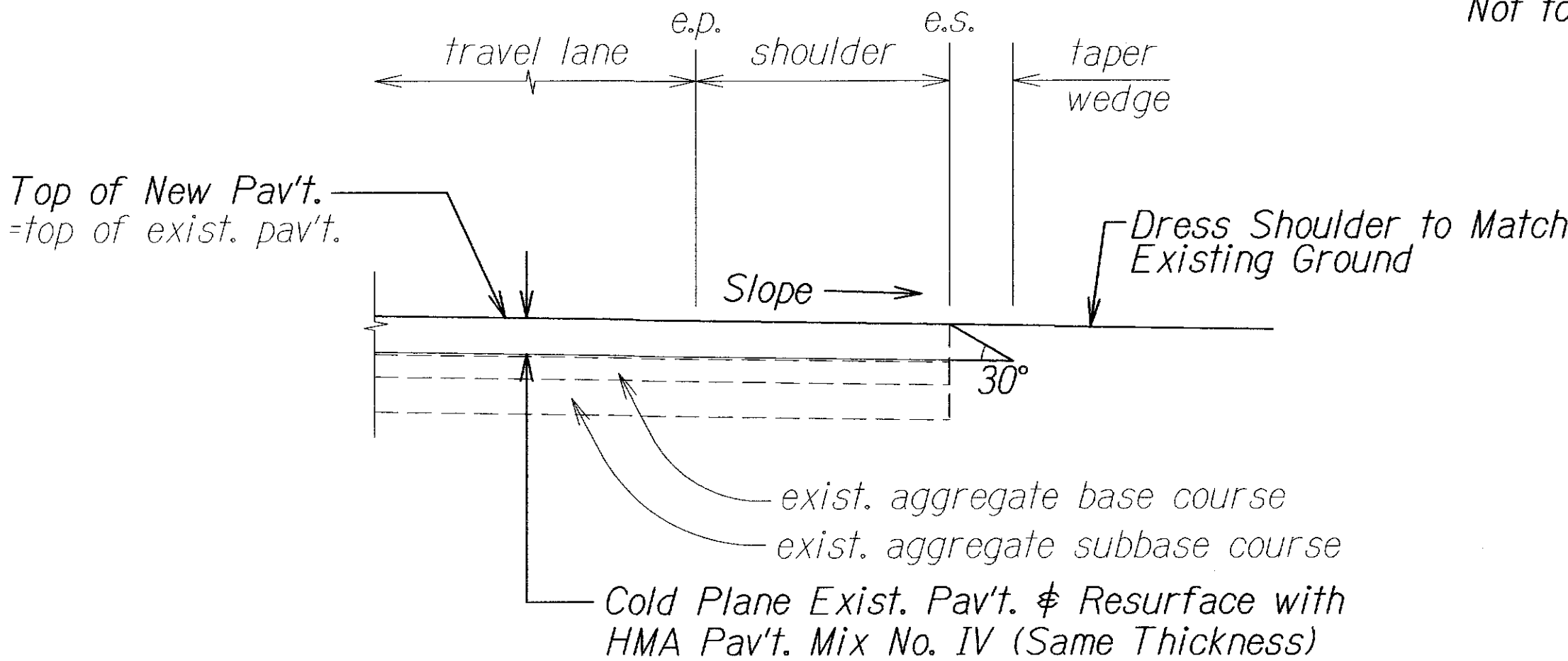
Note: On the Wahiawa side of Kipapa Bridge, the Contractor shall remove boulders and debris from the swale including brooming off prior to cold-planing/paving the adjacent shoulder. See Hydraulics Plan Sheets H3 to H4 for gutter reconstruction details.



SHOULDER PAVING DETAIL
AT EXISTING CHAIN LINK BARRIER
(near Kipapa Bridge)
Not to Scale



1 TYPICAL SHOULDER WIDENING DETAIL
FOR 6.0' GUARDRAIL POST
Not to Scale



1 TYPICAL PAVEMENT EDGE DETAIL (FOR COLD PLANING PROJECT)
Not to Scale

Note: Contractor shall mount a device directly on the paver screed extension to provide a 30° beveled shoulder edge.

1 1/23/14 Revised Details.

DATE REVISION

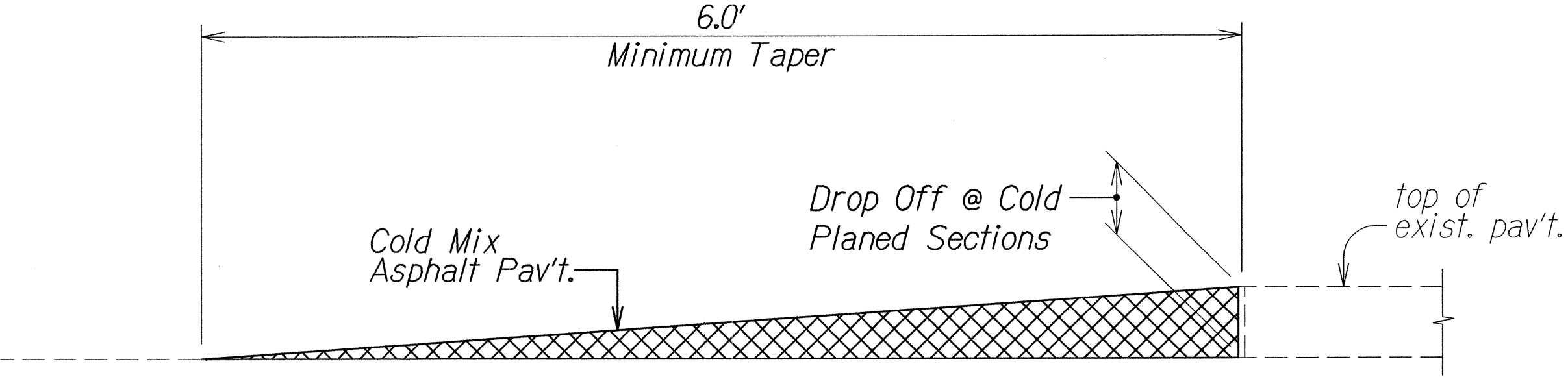
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPICAL DETAILS
KAMEHAMEHA HIGHWAY RESURFACING
Vicinity of Ka Uka Boulevard
to Vicinity of Waihaui Street
Federal Aid Project No. NH-099-1(029)

Scale: NTS Date: Sept., 2013

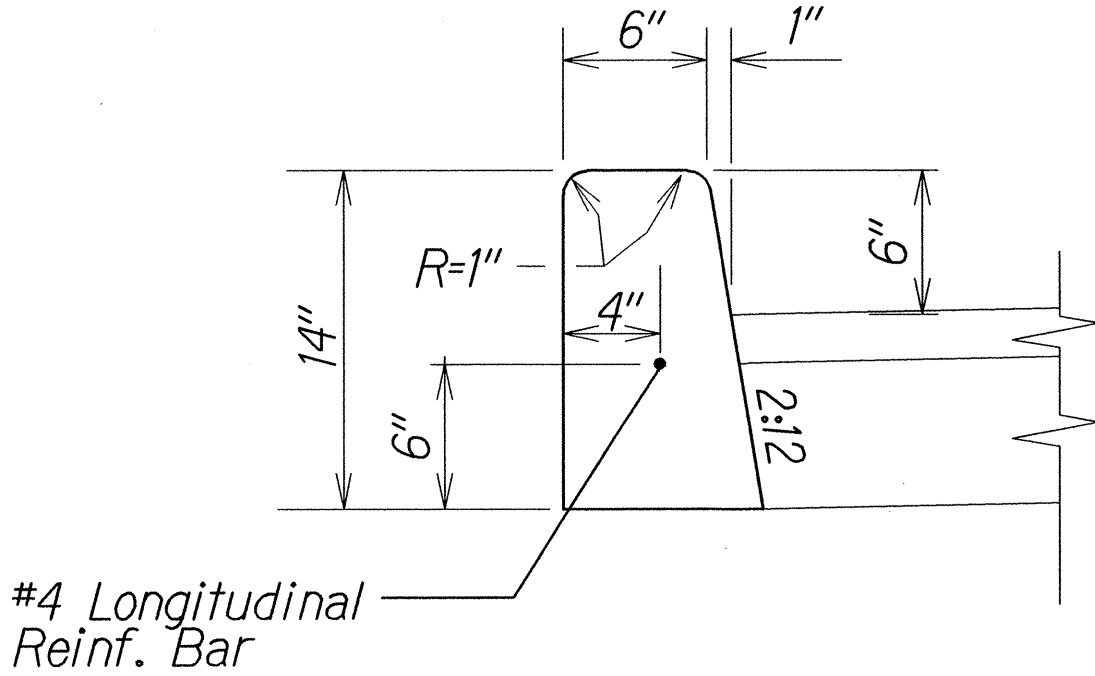
SHEET No. 2 OF 6 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-099-1(029)	2014	14	84

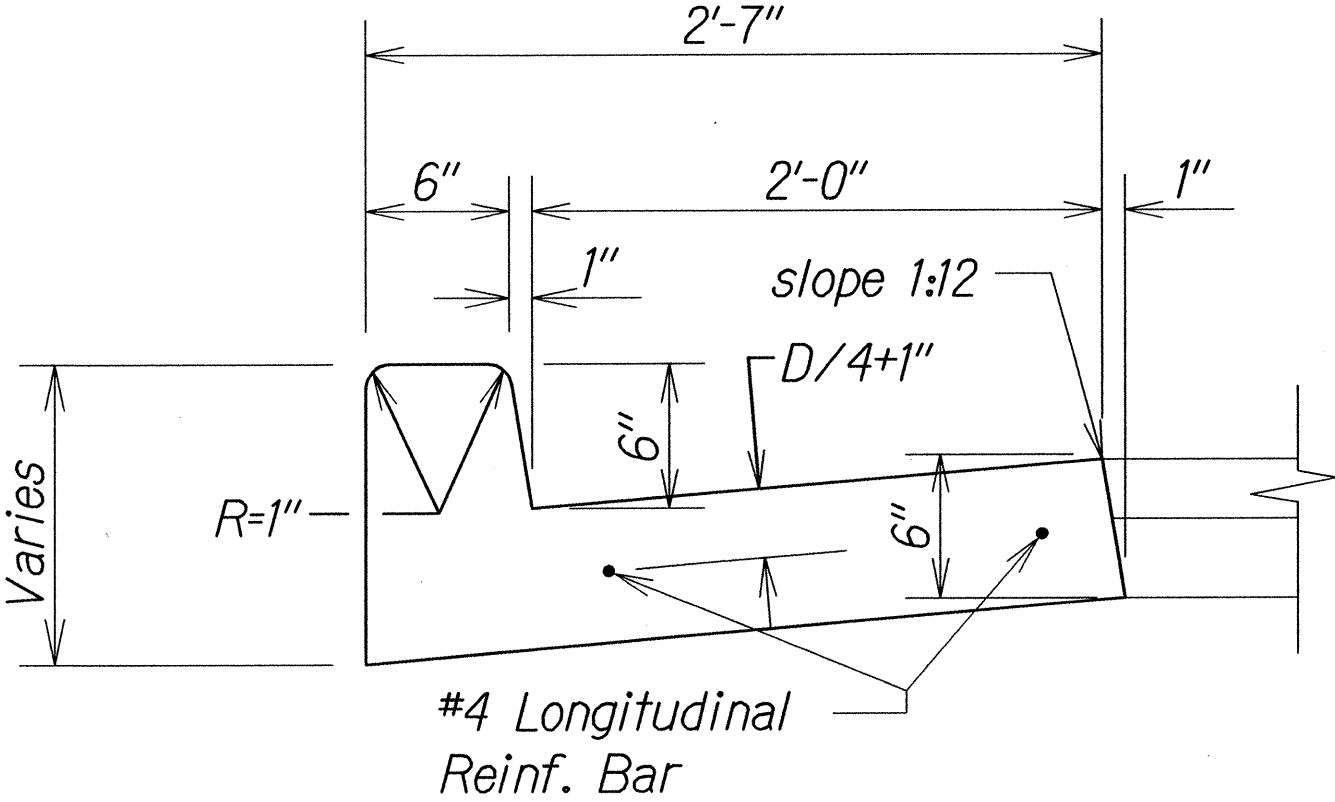


TEMPORARY TRANSITION AT COLD PLANED AREAS
Not to Scale

Note: Contractor shall construct temporary pavement taper to prevent sharp pavement drop-offs at all cold planed sections. Prior to final Hot Mix Asphalt Pavement, Mix No. IV placement, temporary pavement taper shall be removed.



CURB, TYPE 2D
Not to Scale



CURB & GUTTER, TYPE 2DG
Not to Scale

Note: Removal and disposal of existing curbs shall be considered incidental to the respective curb contract items.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

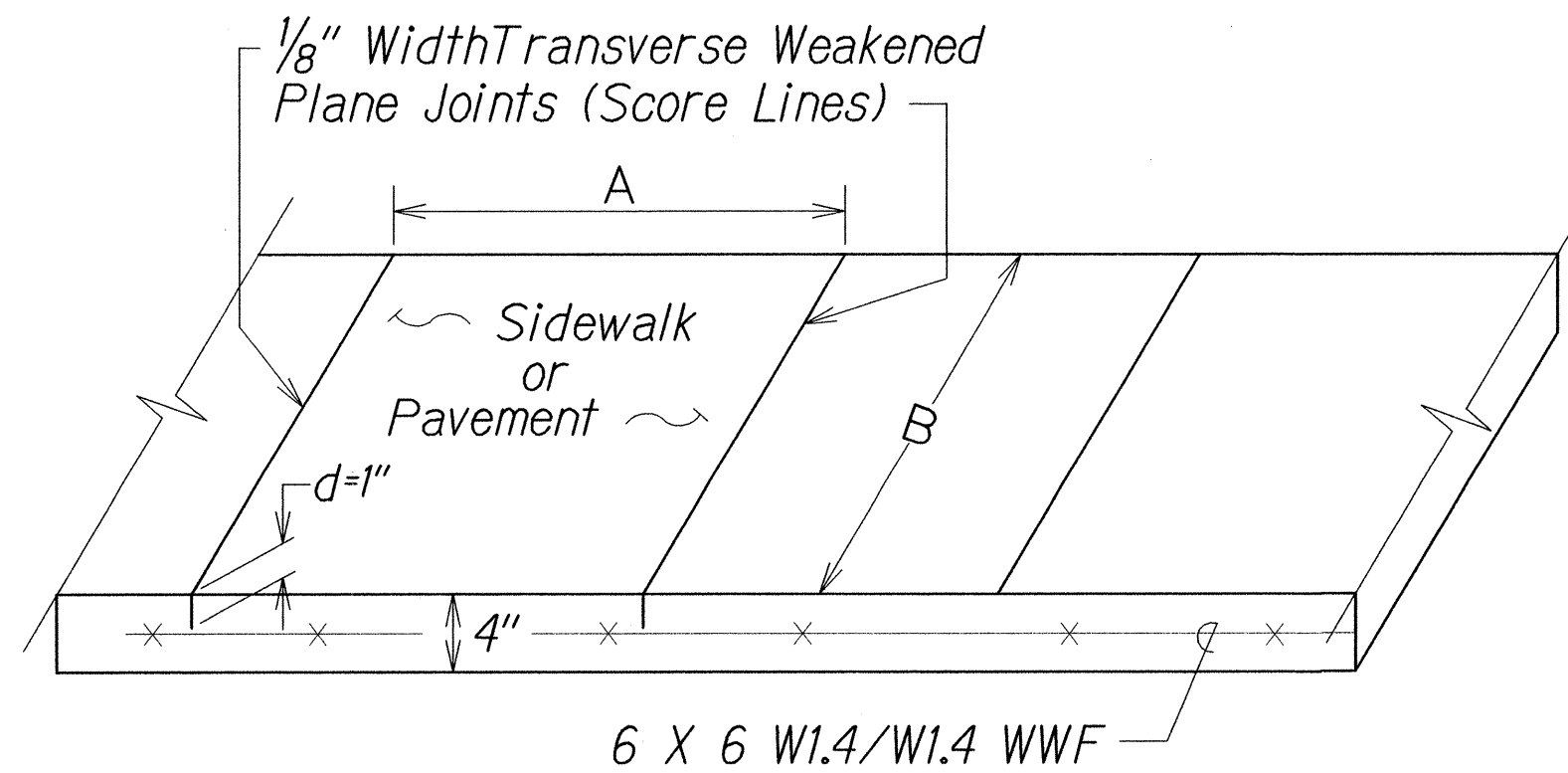
TYPICAL DETAILS
KAMEHAMEHA HIGHWAY RESURFACING
Vicinity of Ka Uka Boulevard
to Vicinity of Waihau Street
Federal Aid Project No. NH-099-1(029)

Scale: NTS
Date: September, 2013

SHEET No. 3 OF 6 SHEETS

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	11/1/13
dd3,renon	DESIGNED BY	
4/10/13,3/10/13	QUANTITIES BY	
	CHECKED BY	

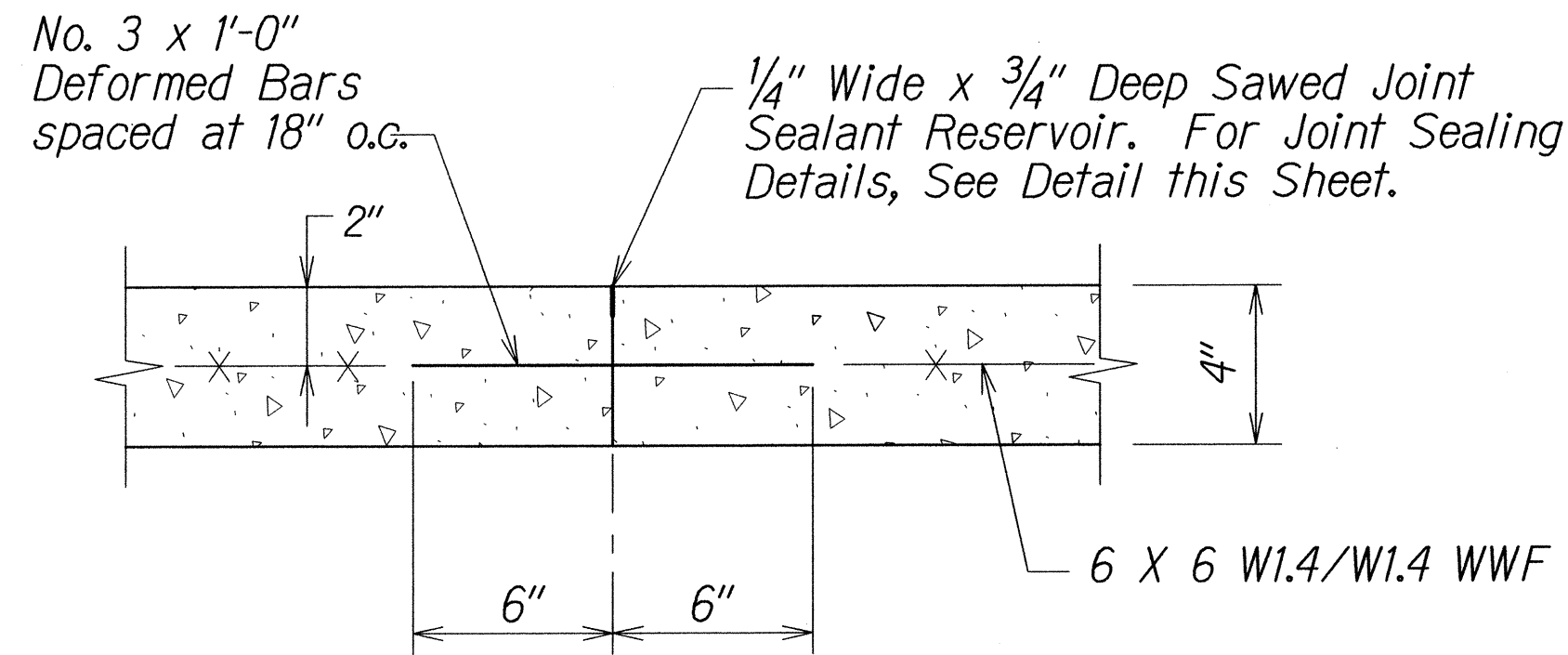
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-099-1(029)	2014	15	84



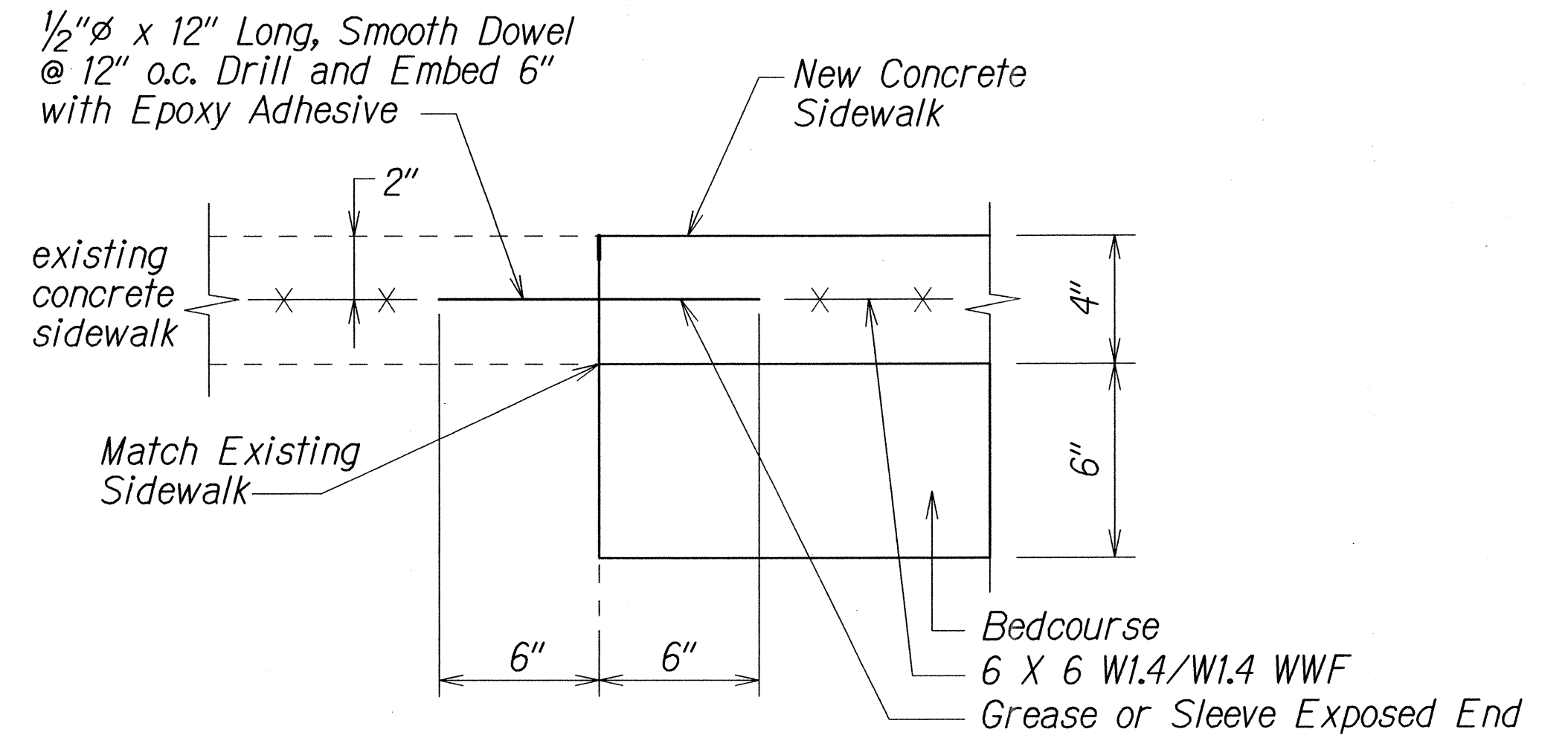
Note:

1. $A = 5'$ if $B < 7'$ or $(B/A \text{ or } A/B) < 1.25$ and $(A \text{ or } B)$ not to exceed $7'0$

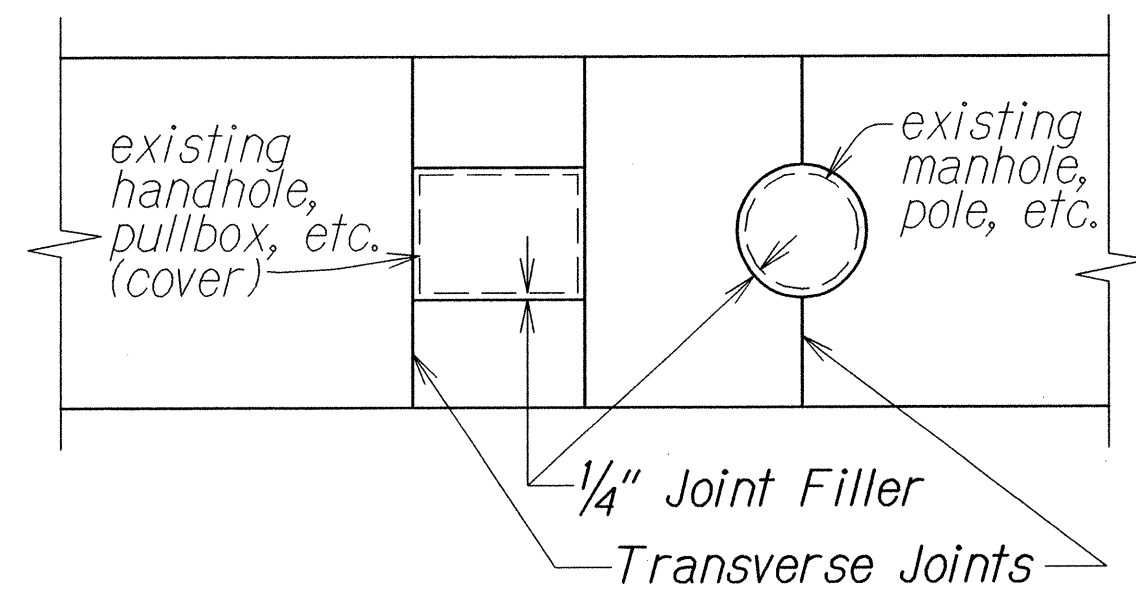
SIDEWALK SCORE LINE DETAIL
Not To Scale



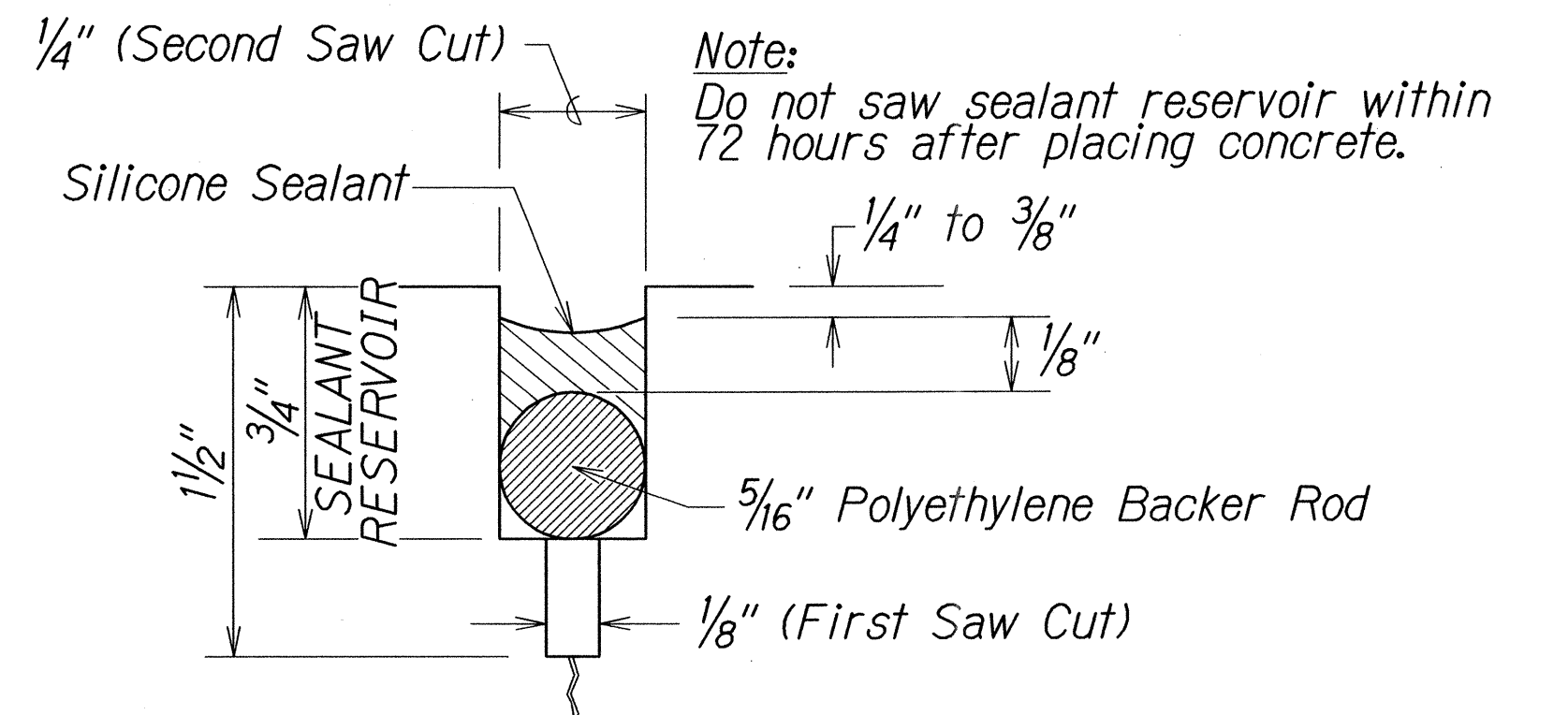
TRANSVERSE CONSTRUCTION JOINT DETAIL
Not to Scale



TRANSVERSE JOINT AT EXISTING SIDEWALK
Not to Scale



SIDEWALK ISOLATION JOINT DETAIL
Not To Scale



JOINT SEAL DETAIL
Not to Scale

Notes:

1. Dressing of sidewalk shall consist of clearing, grubbing, grading, reshaping and compacting the area adjacent to the improvement with suitable material as shown on the plans and/or as directed by the Engineer.
2. Transverse and longitudinal weakened plane joints for sidewalk shall be considered incidental to the P.C.C. sidewalk contract item.
3. Installation of dowels and tie bars including drilling, and epoxy grout shall be considered incidental to the P.C.C. sidewalk contract item.
4. Existing concrete sidewalk shall be saw cut at scorelines prior to reconstructing the sidewalk. Actual location of the scoreline shall be determined in the field. Saw cutting shall be considered incidental to the sidewalk contract item.
5. Provide smooth transition where new sidewalk construction meets the existing grade or sidewalk. Transition shall not be steeper than 2% cross and longitudinal slopes and not less than 6.0 feet long. This work shall be considered incidental to the P.C.C. sidewalk contract item.

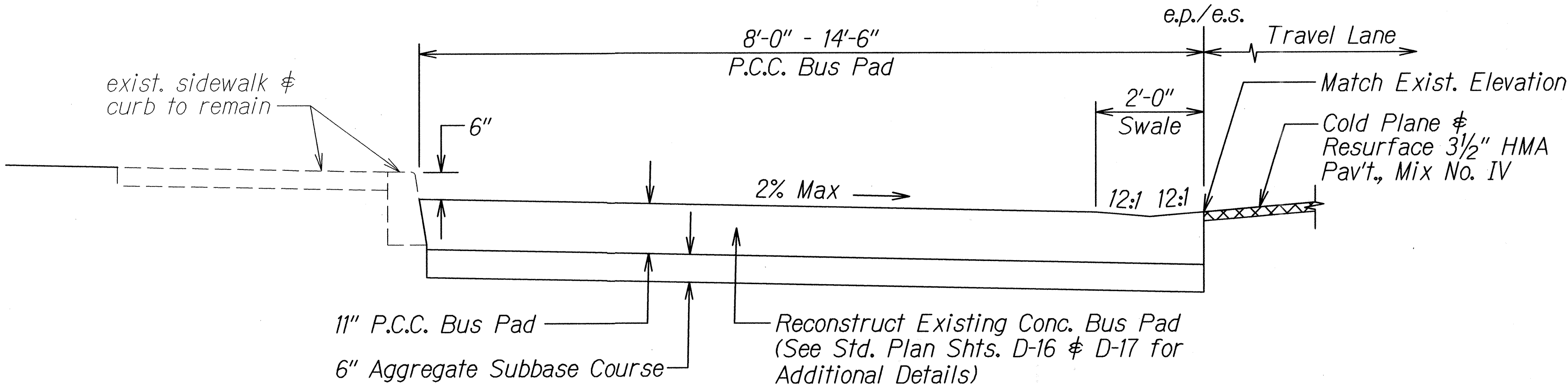
ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
dd/Amke	DESIGNED BY	
N. K. M. H. S. G.	QUANTITIES BY	
	CHECKED BY	

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
TYPICAL DETAILS	
KAMEHAMEHA HIGHWAY RESURFACING Vicinity of Ka Uka Boulevard to Vicinity of Waihau Street Federal Aid Project No. NH-099-1(029)	
Scale: NTS	Date: Sept., 2013
SHEET No. 4 OF 6 SHEETS	

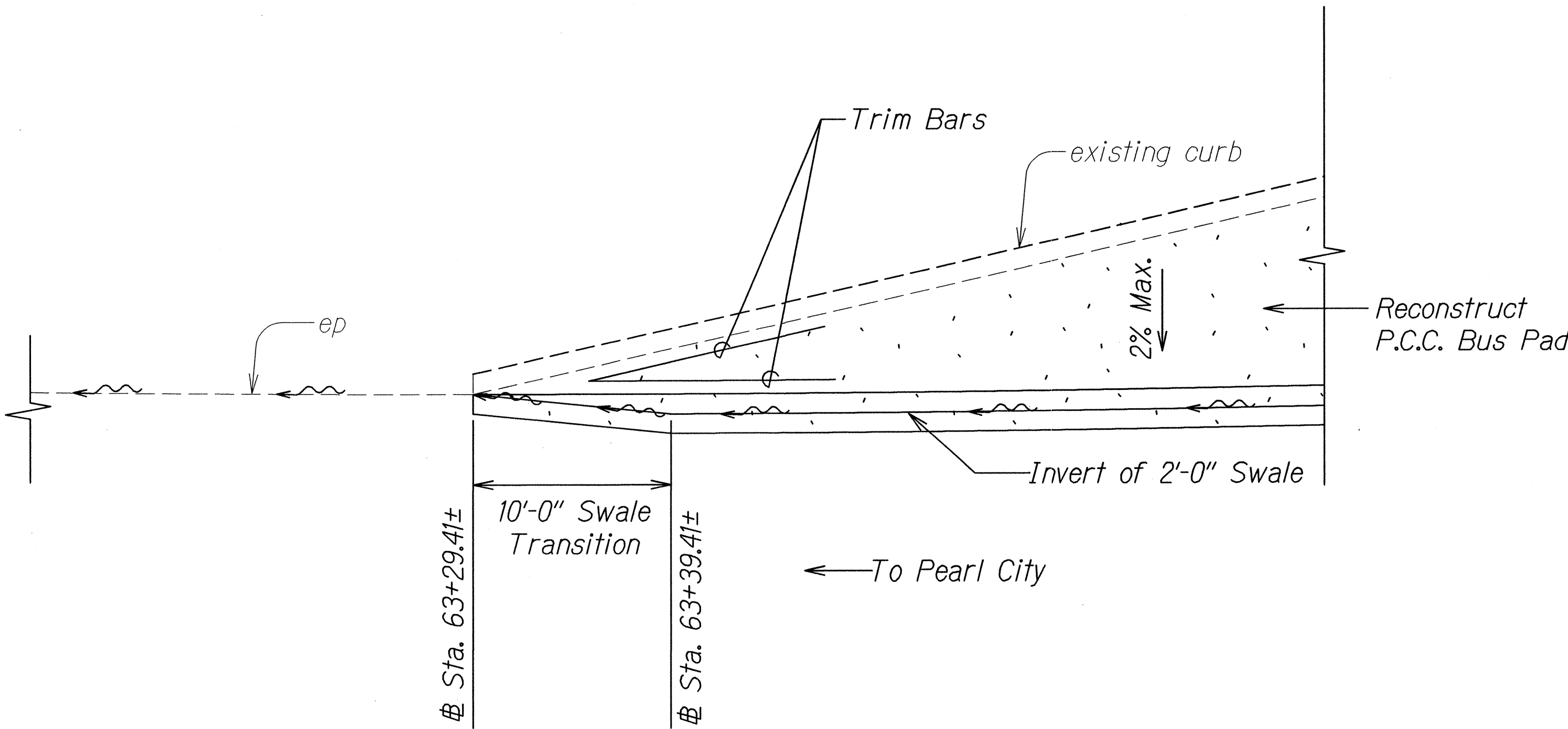
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-099-1(029)	2014	16	84

Notes:

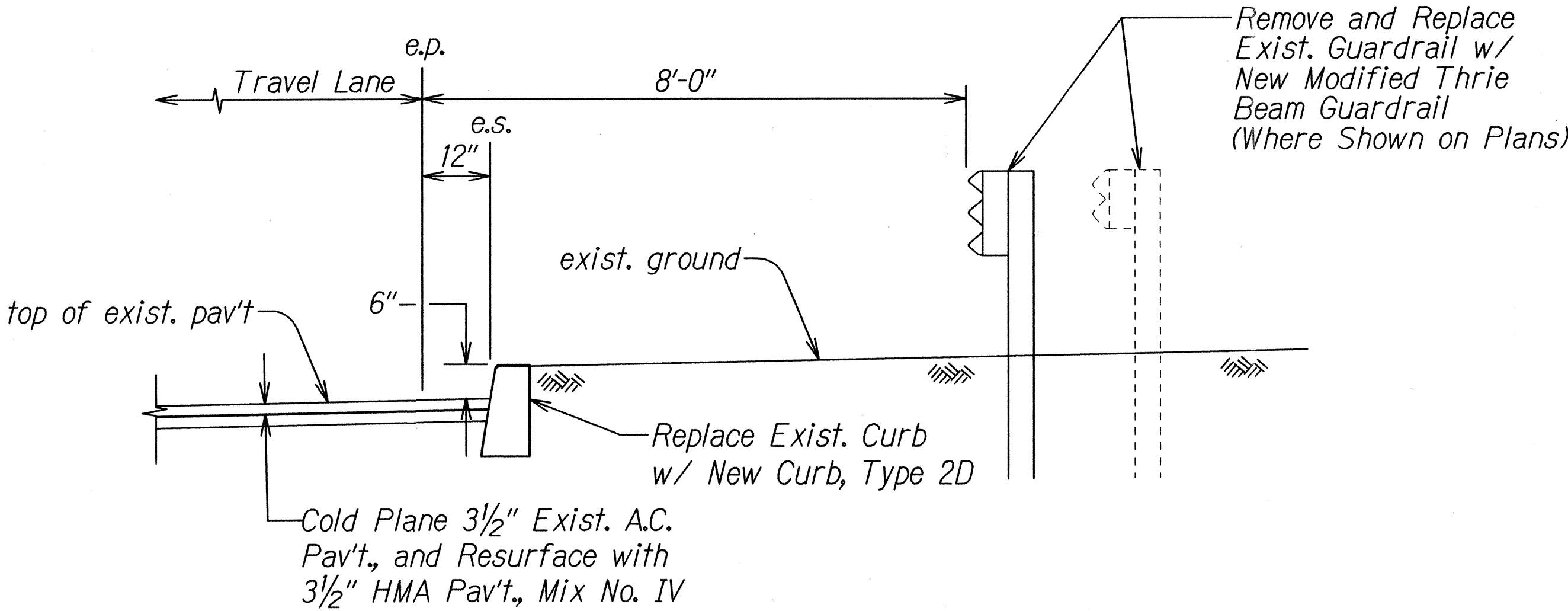
- Dressing of sidewalk shall consist of clearing, grubbing, grading, reshaping and compacting the area adjacent to the improvement with suitable material as shown on the plans and/or as directed by the Engineer.
- Transverse and longitudinal weakened plane joints for sidewalk shall be considered incidental to the P.C.C. sidewalk contract item.
- Installation of dowels and tie bars including drilling, and epoxy grout shall be considered incidental to the P.C.C. sidewalk contract item.
- Existing concrete sidewalk shall be saw cut at scorelines prior to reconstructing the sidewalk. Actual location of the scoreline shall be determined in the field. Saw cutting shall be considered incidental to the sidewalk contract item.
- Provide smooth transition where new sidewalk construction meets the existing grade or sidewalk. Transition shall not be steeper than 2% cross and longitudinal slopes and not less that 6.0 feet long. This work shall be considered incidental to the P.C.C. sidewalk contract item.



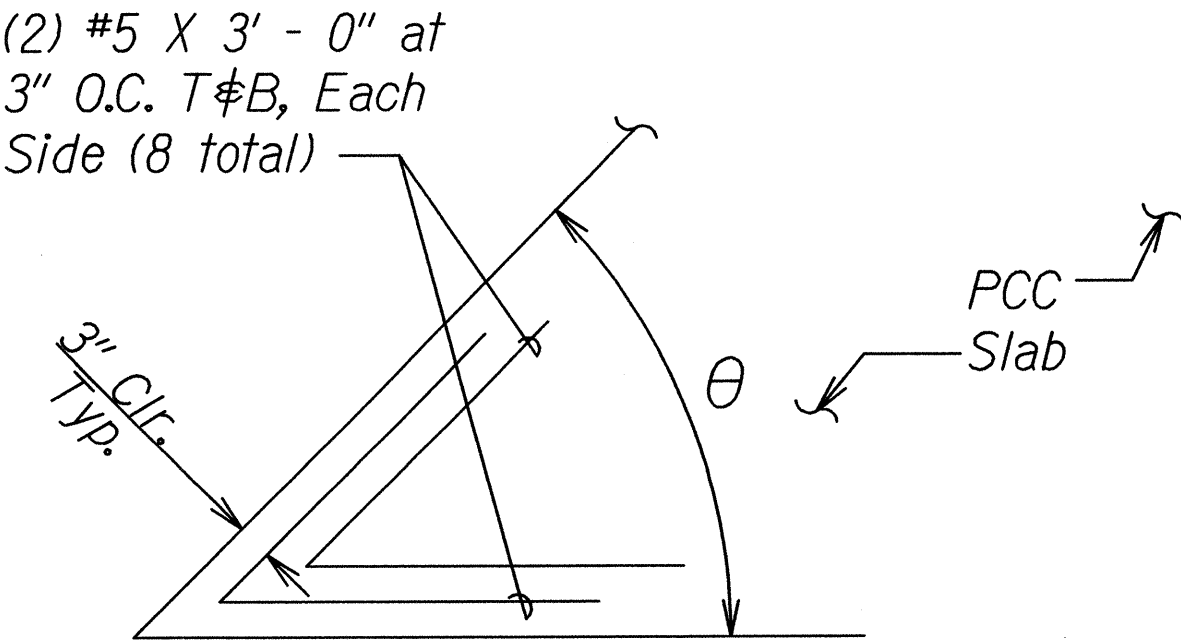
BUS PAD RECONSTRUCTION DETAIL
 I.B. @ Sta. 64+00± to I.B. @ Sta. 65+25±
 Not to Scale



PLAN SWALE TRANSITION DETAIL
 I.B. @ Sta. 63+29.41± to I.B. @ Sta. 63+39.41±
 Not to Scale



TYPICAL CURB & GUARDRAIL REPLACEMENT DETAIL
 I.B. @ Sta. 68+90± to I.B. @ Sta. 81+00±
 Not to Scale



ACUTE ANGLE TRIM BAR DETAIL $\theta < 70^\circ$
 Not to Scale

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

TYPICAL DETAILS

KAMEHAMEHA HIGHWAY RESURFACING

Vicinity of Ka Uka Boulevard

to Vicinity of Waihau Street

Federal Aid Project No. NH-099-1(029)

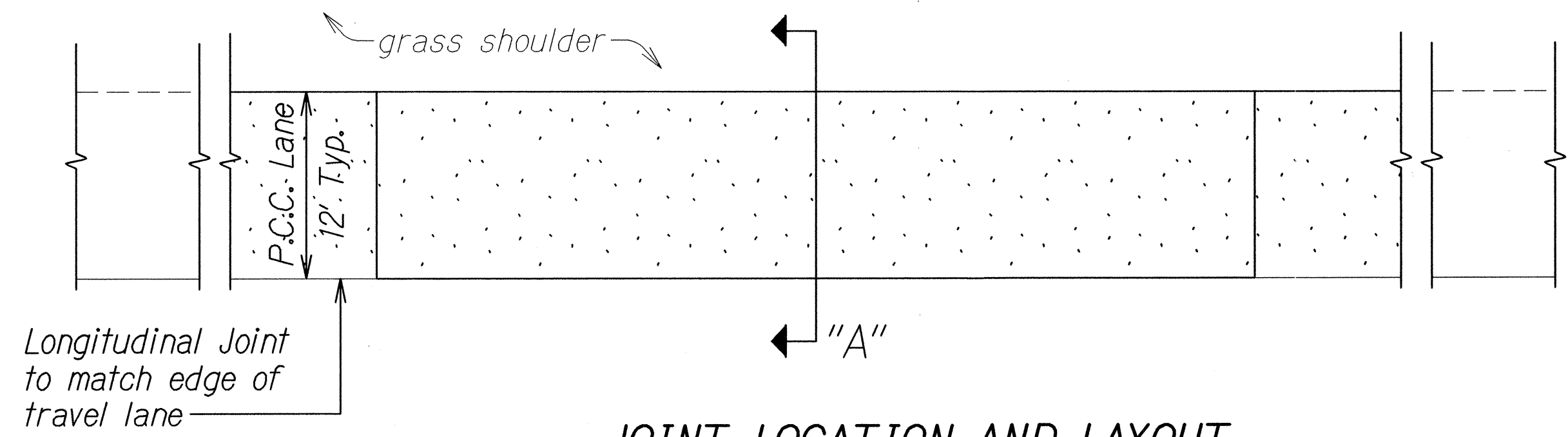
Scale: NTS

Date: Sept., 2013

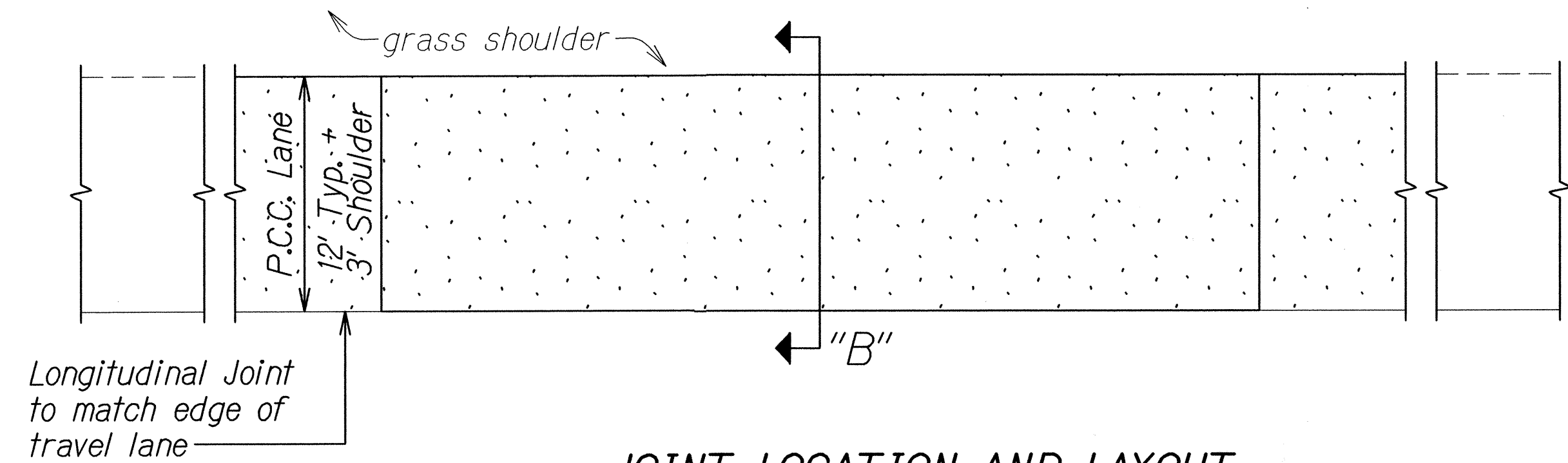
SHEET No. 6 OF 6 SHEETS

SURVEY PLOTTED BY	DATE
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QUANTITIES BY	
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ORIGINAL PLAN	
NOTE BOOK	
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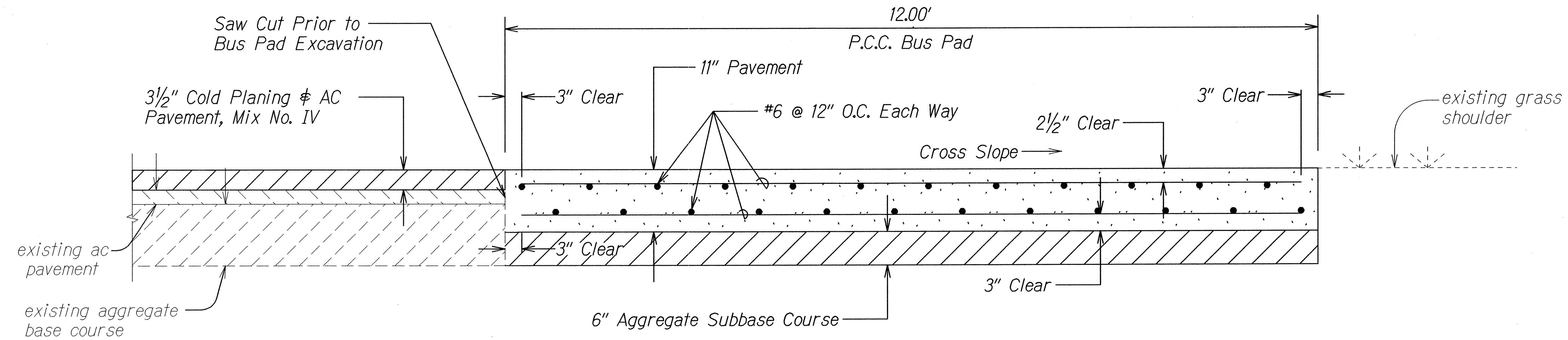
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-099-1(029)	2014	17	84



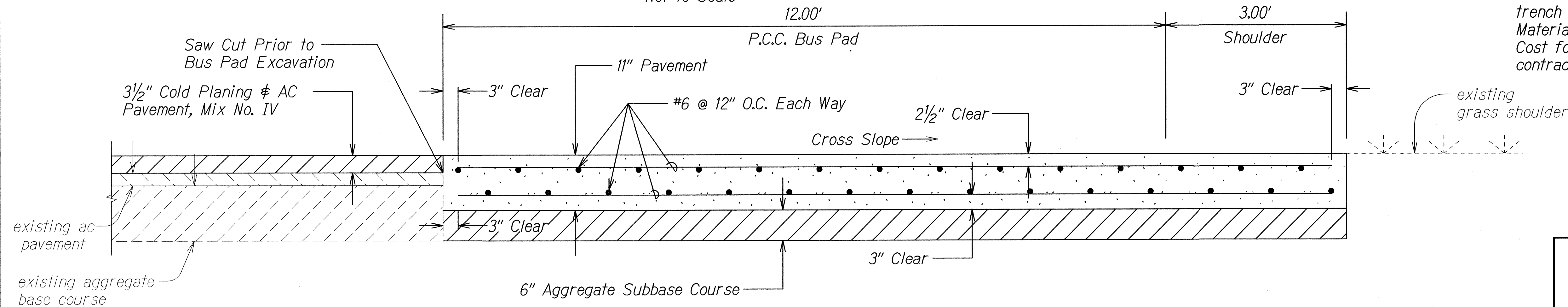
**JOINT LOCATION AND LAYOUT
PLAN FOR P.C.C. BUS PAD AT
IB @ STA. 16+00± AND OB @ STA. 41+00±**
Not to Scale



**JOINT LOCATION AND LAYOUT
PLAN FOR P.C.C. BUS PAD AT
OB @ STA. 15+00± AND IB @ STA. 37+00±**
Not to Scale



**SECTION "A"
P.C.C. BUS PAD PAVEMENT DETAIL**
Not to Scale



**SECTION "B"
P.C.C. BUS PAD PAVEMENT DETAIL**
Not to Scale

- Notes:**
1. Provide continuously reinforced Bus Pad without transverse joints. Both ends of the Bus Pad shall match the existing joints of the adjacent pavement.
 2. Epoxy coated reinforcement shall conform to AASHTO M 284, (ASTM 775).
 3. Concrete shall attain a minimum 14-day flexural strength, $f_r = 650$ psi.
 4. Design is based on the following assumptions:
 - a. Concrete modulus of rupture = 650 psi
 - b. Design life = 50 years
 - c. For stiff clays, subgrade modulus = 100 to 200 pci
 - d. For sands & gravels, subgrade modulus = 200 to 400 pci
 - e. ADTT between 500 and 2000
 - f. 90% 2-axle, 10% 3-axle
 - g. Aggregate interlock joints
 5. Forms shall be used for the concrete Bus Pad. Adjacent A.C. shall not be used as a form. After form is removed, backfill trench with CLSM (Controlled Low Strength Material) instead of aggregate base course. Cost for CLSM shall be included in the contract price for the concrete bus pad.

SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
NOTED BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
dd3/mike	
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BUS PAD DETAILS
KAMEHAMEHA HIGHWAY RESURFACING
Vicinity of Ka Uka Boulevard
to Vicinity of Waihau Street
Federal Aid Project No. NH-099-1(029)
Not to Scale Date: Sept., 2013

SHEET No. 1 OF 1 SHEETS