

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	3	470

LEGEND

SYMBOL

R/W ————

METAL GUARD RAIL ————

STANDARD WIRE FENCE x——x——x——x——x

SILT FENCE ————

FILL SECTION ————

CUT SECTION ————

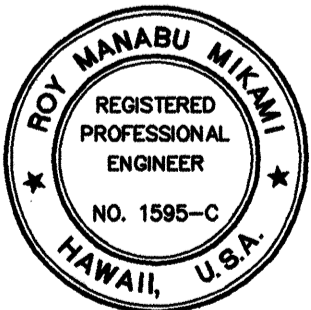
LIMIT OF GRADING ————

REFERENCE MONUMENT ⊕

DUMPED RIPRAP

EROSION CONTROL MATTING/HYDROMULCH

ABUT	ABUTMENT	EXP	EXPANSION	PCC	PORTLAND CEMENT CONCRETE
AC	ACRE	F	FILL	PCVC	POINT OF COMPOUND
ALUM	ALUMINUM	FAI	FEDERAL AID INTERSTATE		VERTICAL CURVE
APPROX	APPROXIMATE	FED	FEDERAL	PG	PEA GRAVEL
AZ	AZIMUTH	FF	FAR FACE	PI	POINT OF INTERSECTION
BL	BASELINE	FIN	FINISH	PIVC	POINT OF INTERSECTION OF VERTICAL CURVE
BCT	BREAKAWAY CABLE TERMINAL	FG	FINISH GRADE	PL	PLATE
BM	BEAM	FT	FOOT/FEET	POC	POINT ON CURVE
BOF	BOTTOM OF FOOTING	FT'G	FOOTING	PROJ	PROJECT
BOT	BOTTOM	GA	GAUGE	PRVC	POINT ON REVERSE VERTICAL CURVE
BOTT	BOTTOM	GALV	GALVANIZED		
BR	BRIDGE	GRD	GRADE	PT	POINT OF TANGENCY
C	CUT	GC	GRADE CONTROL	PVC	POLYVINYL CHLORIDE
CAP	CORRUGATED ALUMINUM PIPE	GRP	GROUTED RUBBLE PAVING	R	RADIUS
CAR	CONSTRUCTION ACCESS ROAD	GS	GALVANIZED STEEL	RCP	REINFORCED CONCRETE PIPE
CC	CENTER TO CENTER	HAW	HAWAII	REF	REFERENCE
CF	CUBIC FEET	HORIZ	HORIZONTAL	REINF	REINFORCED
CH	CHORD	HS	HIGH STRENGTH	REQ'D	REQUIRED
CL	CENTERLINE	HWL	HIGH WATER LEVEL	RT	RIGHT
CLR	CLEAR	IB	INBOUND	RT EP	RIGHT EDGE OF PAVEMENT
CLR	CLEARANCE	HWY	HIGHWAY	RT ES	RIGHT EDGE OF SHOULDER
CMP	CORRUGATED METAL PIPE	ID	INSIDE DIAMETER	R/W	RIGHT-OF-WAY
COMM	COMMUNICATION	IN	INCH	δ	EXISTING SEWER LINE
CONC	CONCRETE	INV	INVERT	S	SLOPE
CONT	CONTINUOUS	LB	POUND	SCS	STREAM CROSSING STRUCTURE
CORR	CORRUGATED	Lc	LENGTH OF CURVE	SE	SUPERELEVATION
CRM	CONCRETE RUBBLE MASONRY	LD	LINED DITCH	SECT	SECTION
CY	CUBIC YARD	Lf	LINEAR FOOT/FEET	SF	SQUARE FEET
d	EXISTING DRAIN LINE	LONGIT	LONGITUDINAL	SGF	SELECT GRANULAR FILL
DET	DETAIL	LT	LEFT	SHLDR	SHOULDER
DI	DRAIN INLET	LTG	LIGHTING	SHT	SHEET
DIA	DIAMETER	LT EP	LEFT EDGE OF PAVEMENT	SRC	SIDE ROAD CONNECTOR
DISCONT	DISCONTINUED	LT ES	LEFT EDGE OF SHOULDER	SRMP	SPIRAL RIB METAL PIPE
DIST	DISTANCE	MAX	MAXIMUM	STA	STATION
DL	DRAIN LINE	MH	MANHOLE	STD	STANDARD
DWGS	DRAWINGS	MIN	MINIMUM	STIRR	STIRRUP
E	EAST	MISC	MISCELLANEOUS	STRUC	STRUCTURE
EA	EACH	ML	MATCH LINE	SY	SQUARE YARD
EER	EMERGENCY ESCAPE RAMP	MSERW	MECHANICALLY STABILIZED EARTH RETAINING WALL	T & B	TOP AND BOTTOM
EF	EACH FACE			TAN	TANGENT
EQ SPC	EQUAL SPACE	N	NORTH	THK	THICK
ELEV	ELEVATION	NF	NEAR FACE	TP	TOP OF PAVEMENT
EMB	EMBANKMENT	NHV	NORTH HALAWA VALLEY	TPB	TELEPHONE PULLBOX
EMH	ELECTRIC MANHOLE	NIC	NOT IN CONTRACT	TYP	TYPICAL
ENGR	ENGINEER	NO	NUMBER	VAR	VARIES
EP	EDGE OF PAVEMENT	NTS	NOT TO SCALE	VC	VERTICAL CURVE
ES	EDGE OF SHOULDER	OC	ON CENTER	VERT	VERTICAL
EVC	END OF VERTICAL CURVE	OB	OUTBOUND	W	EXISTING WATER LINE
EW	EACH WAY	OD	OUTSIDE DIAMETER	W/	WITH
EXC	EXCAVATION	OPEN'G	OPENING	WWF	WELDED WIRE FABRIC
EXC	EXCAVATION	o/s	OFFSET		
EXIST	EXISTING	PC	POINT OF CURVATURE, PRECAST		



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*Roy Manabu Mikami*  
PARE, Inc.  
dba PARK ENGINEERING

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**LEGEND**

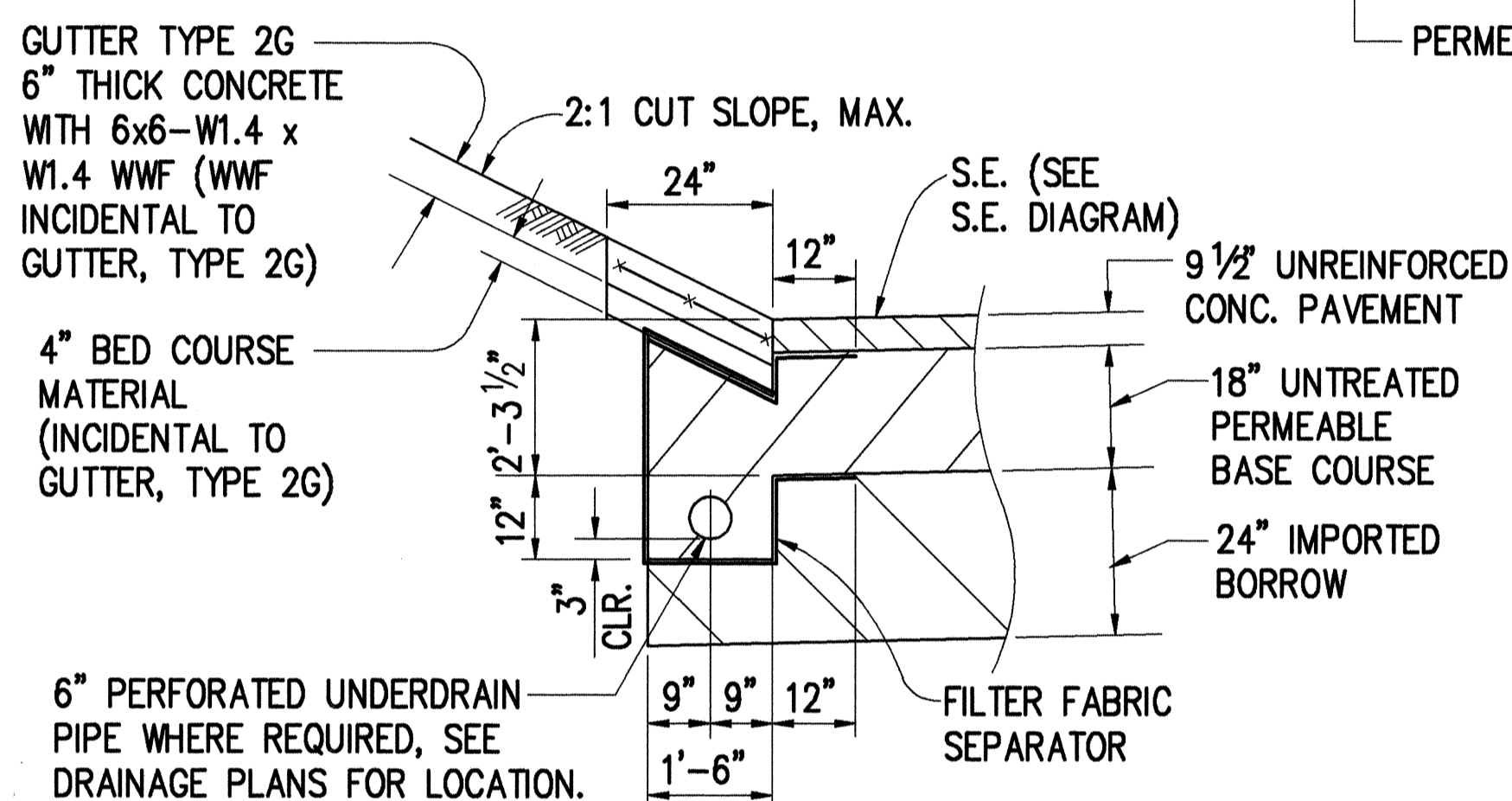
INTERSTATE ROUTE H-3  
North Halawa Valley Highway, Unit 1, Phase 1B  
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED DATE: MAR. 1994

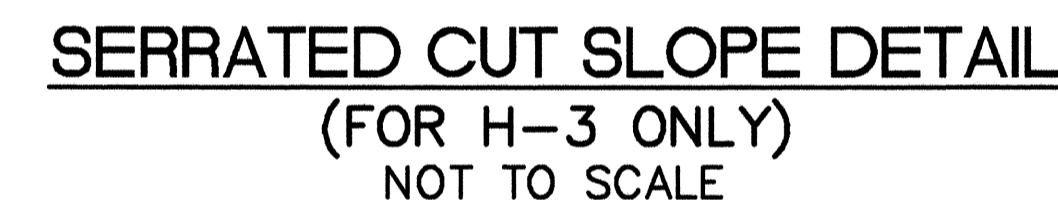
SHEET No. T1 OF 8 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	4	470

1. CONCRETE BARRIER, TYPE 4E SHALL CONSIST OF A TOP SLAB, DOUBLE BARRIERS, IMPORTED BORROW FILL, AND ALL REINFORCING.
2. SEE STANDARD PLAN TE-63 AND TE-65 FOR GENERAL NOTES, EXPANSION JOINT DETAIL, CONSTRUCTION AND CONTROL JOINT DETAIL, AND OPTIONAL CONSTRUCTION JOINT DETAILS.



SCALE: 1"=5'



1/4" RADIUS ROUNDO LONGITUDINAL ALONG CONCRETE BARRIER AND CONCRETE SLAB EDGES.

TOP SLAB, 4" CLASS B CONCRETE WITH 6x6, W1.4xW1.4 WELDED WIRE FABRIC REINFORCEMENT.

3/4" CONT. CHAMFER

VARIES

9"

3"

2-#5

#4 @ 12" CONT. EA. FACE

#4 @ 15" O.C.

#5 @ 9" O.C.

#4 @ 12"

IMPORTED BORROW

R=10"

9"

7"

2"

1'-2"

1'-7"

10"

3'-10"

1/2"

3"

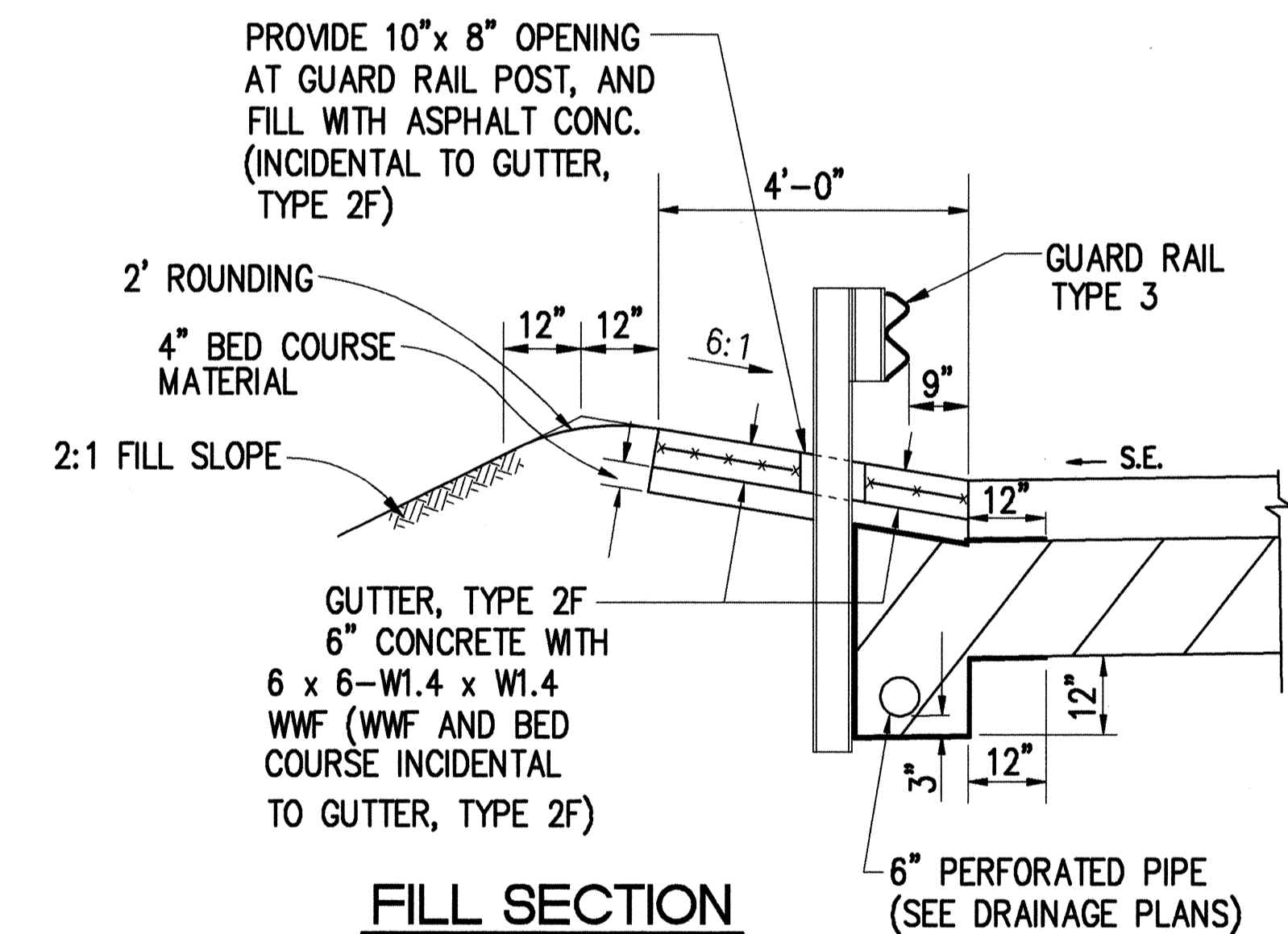
9 1/2"

TOP OF FINISH GRADE

UNREINFORCED CONCRETE PAVEMENT

1'-6"

SCALE:  $3/4" = 1'-0"$

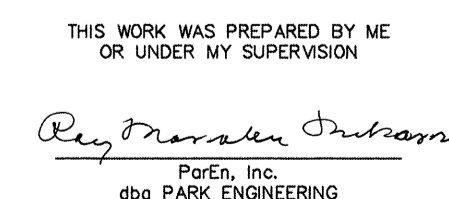


SCALE: 1/2" = 1'-0"

7/12/94	Revised Concrete Barrier, Type 4E Detail
DATE	REVISION

<p>STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION</p> <p><u><b>TYPICAL</b></u></p> <p><u><b>ROADWAY SECTION</b></u></p> <p><u><b>INTERSTATE ROUTE H-3</b></u>  <u><b>North Halawa Valley Highway, Unit I, Phase IB</b></u>  <u><b>F.A.I. PROJECT NO. I-H3-(68)</b></u></p> <p>SCALE: AS NOTED                      DATE: MAR. 1994</p> <p><b>SHEET No. T2 OF 8 SHEETS</b></p>
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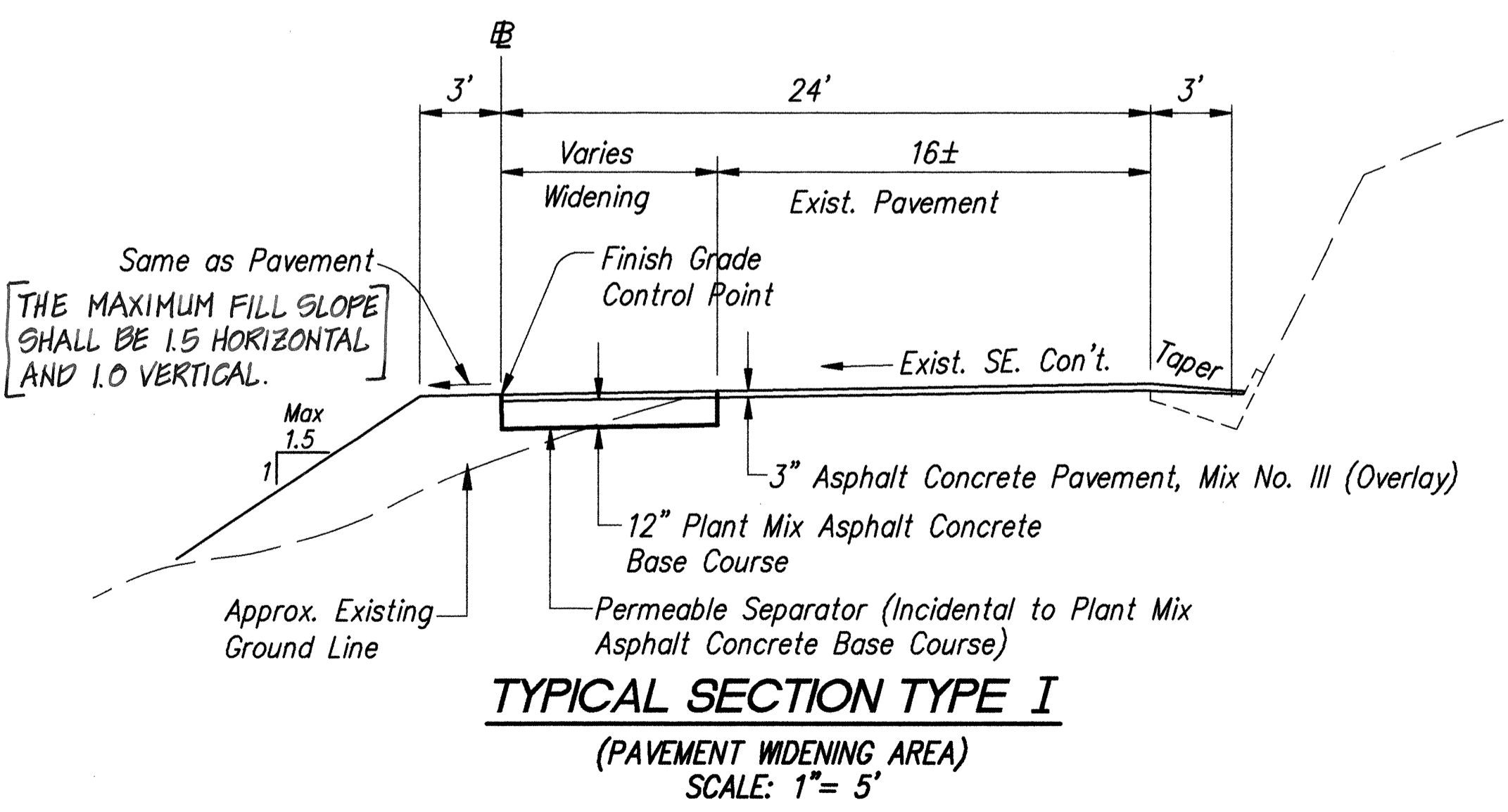
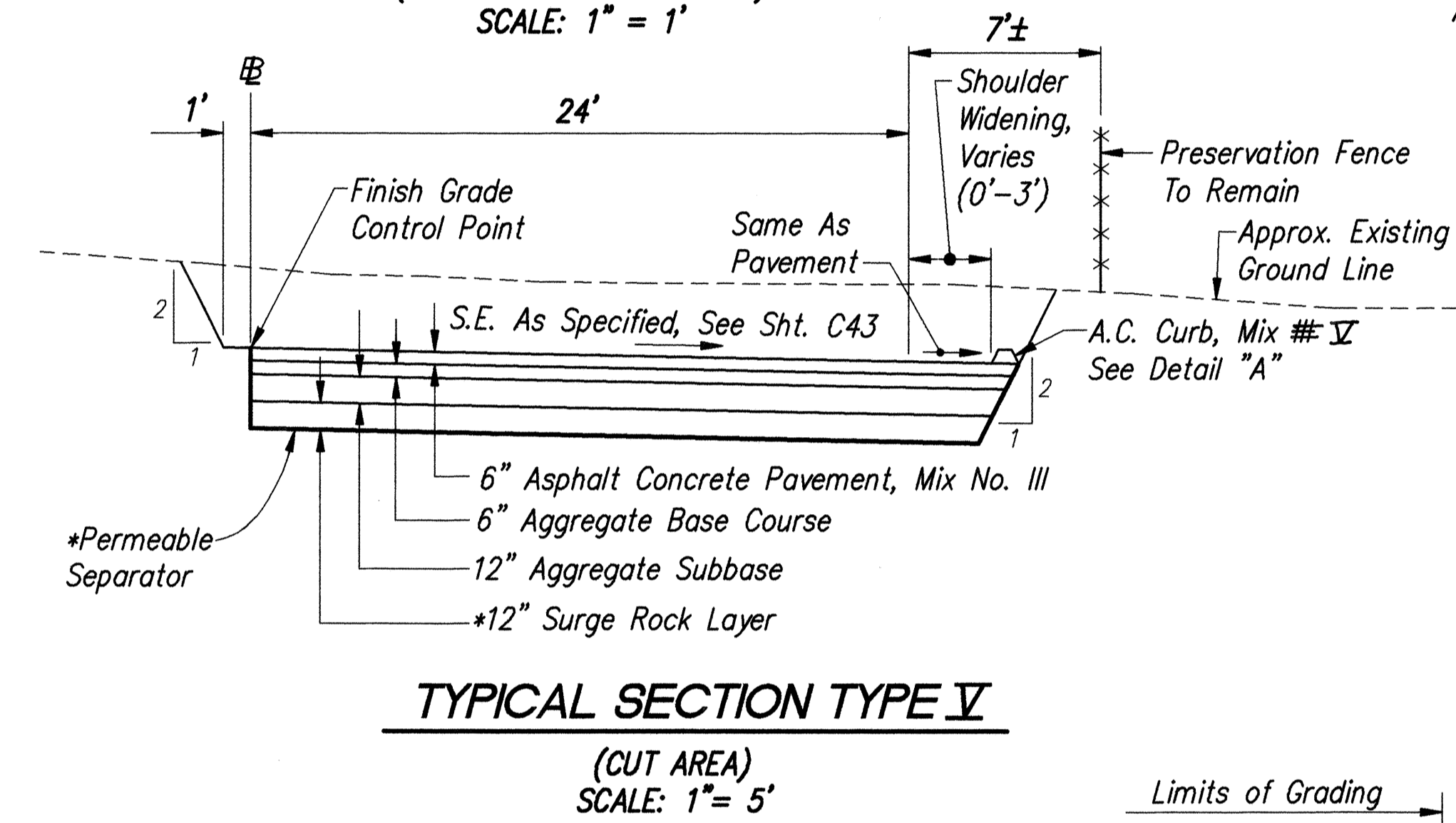
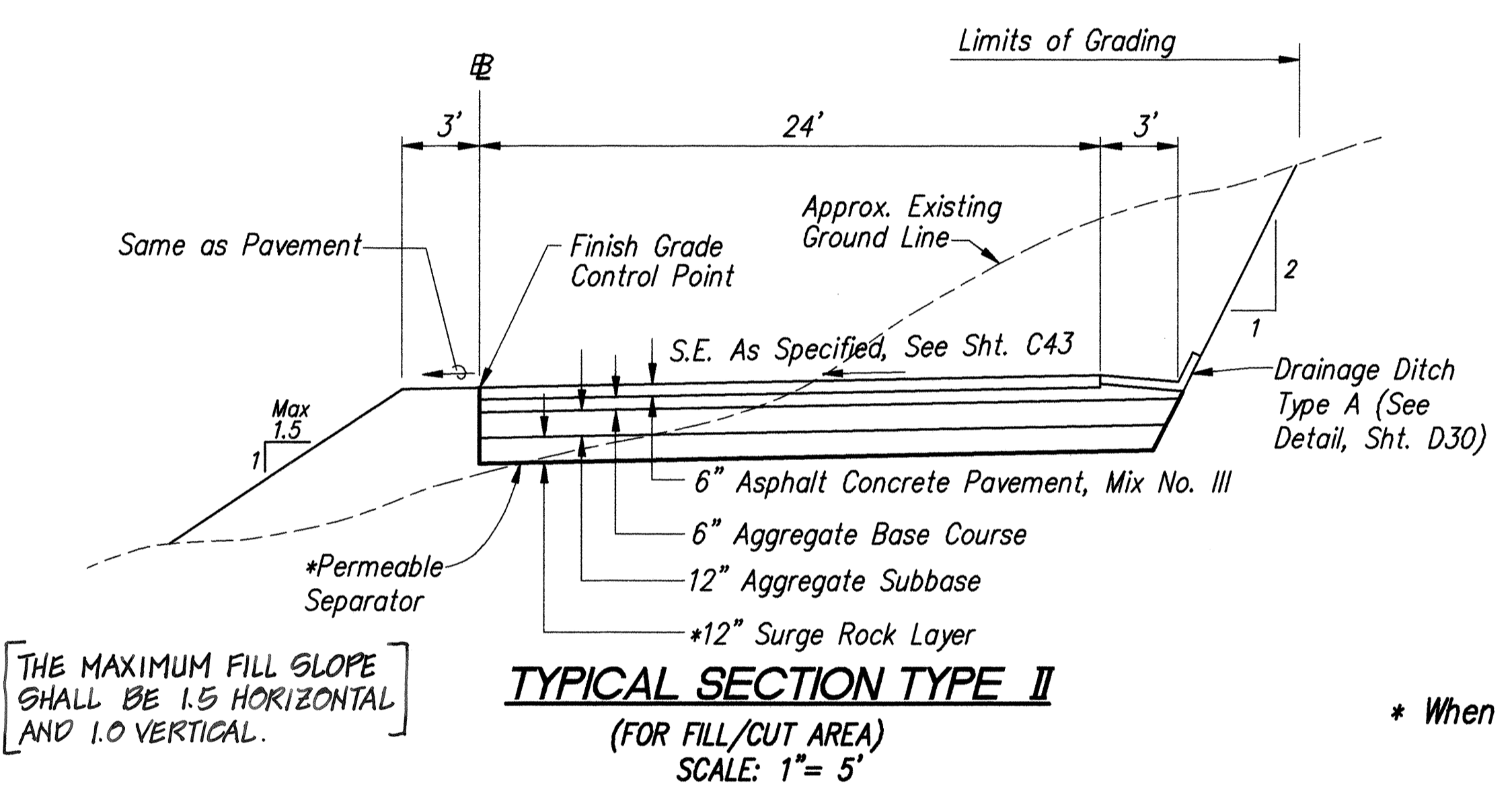
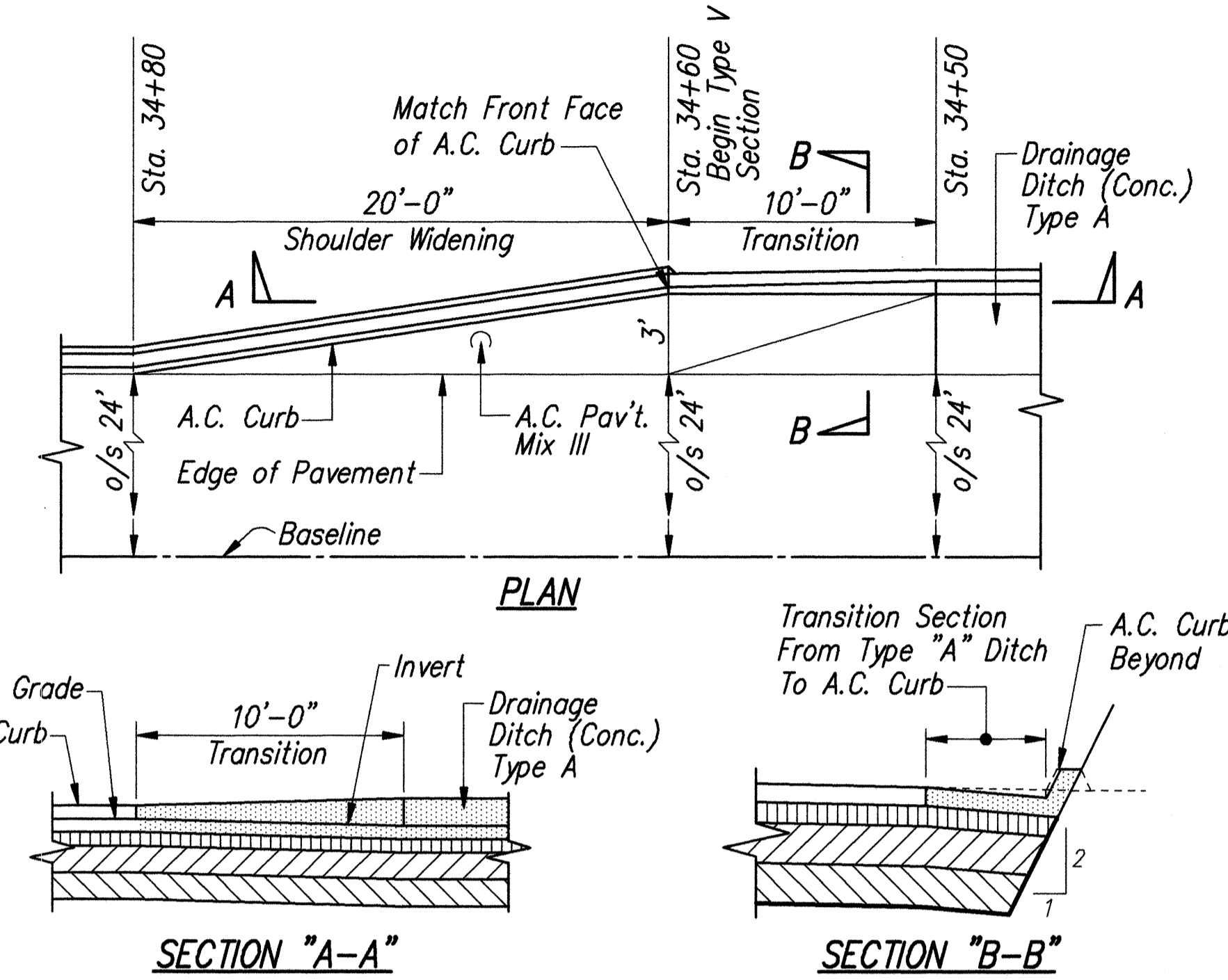
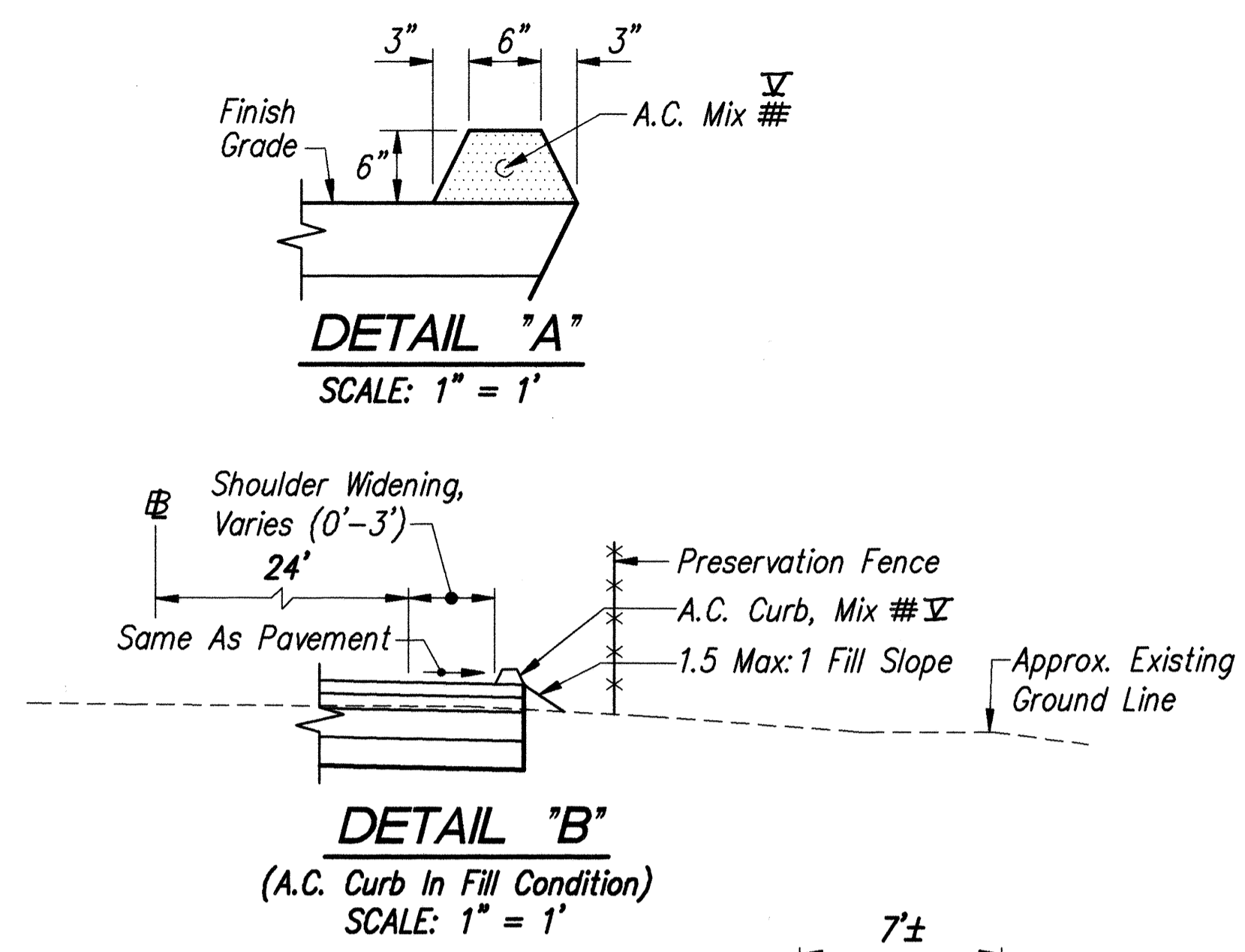
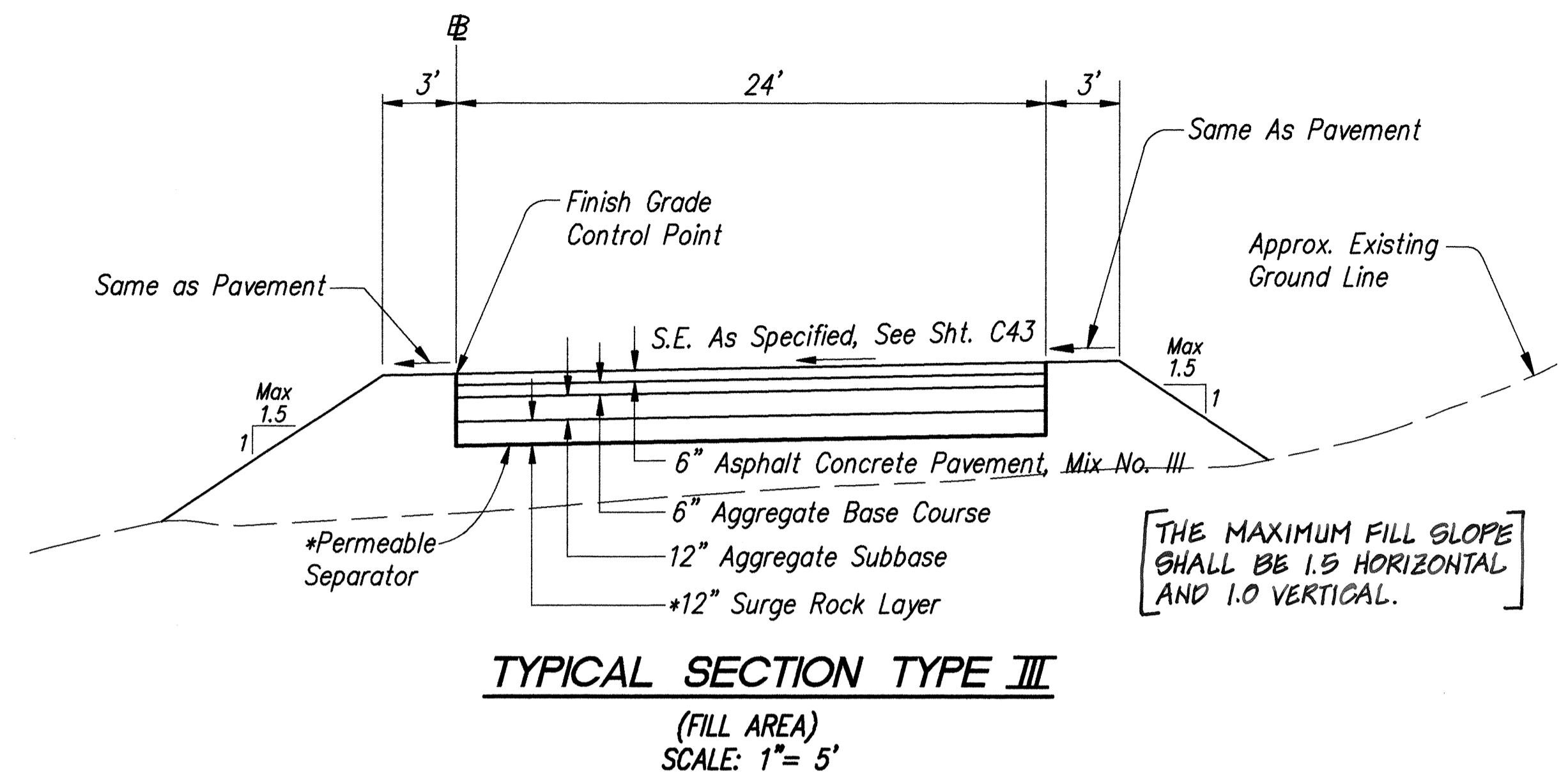


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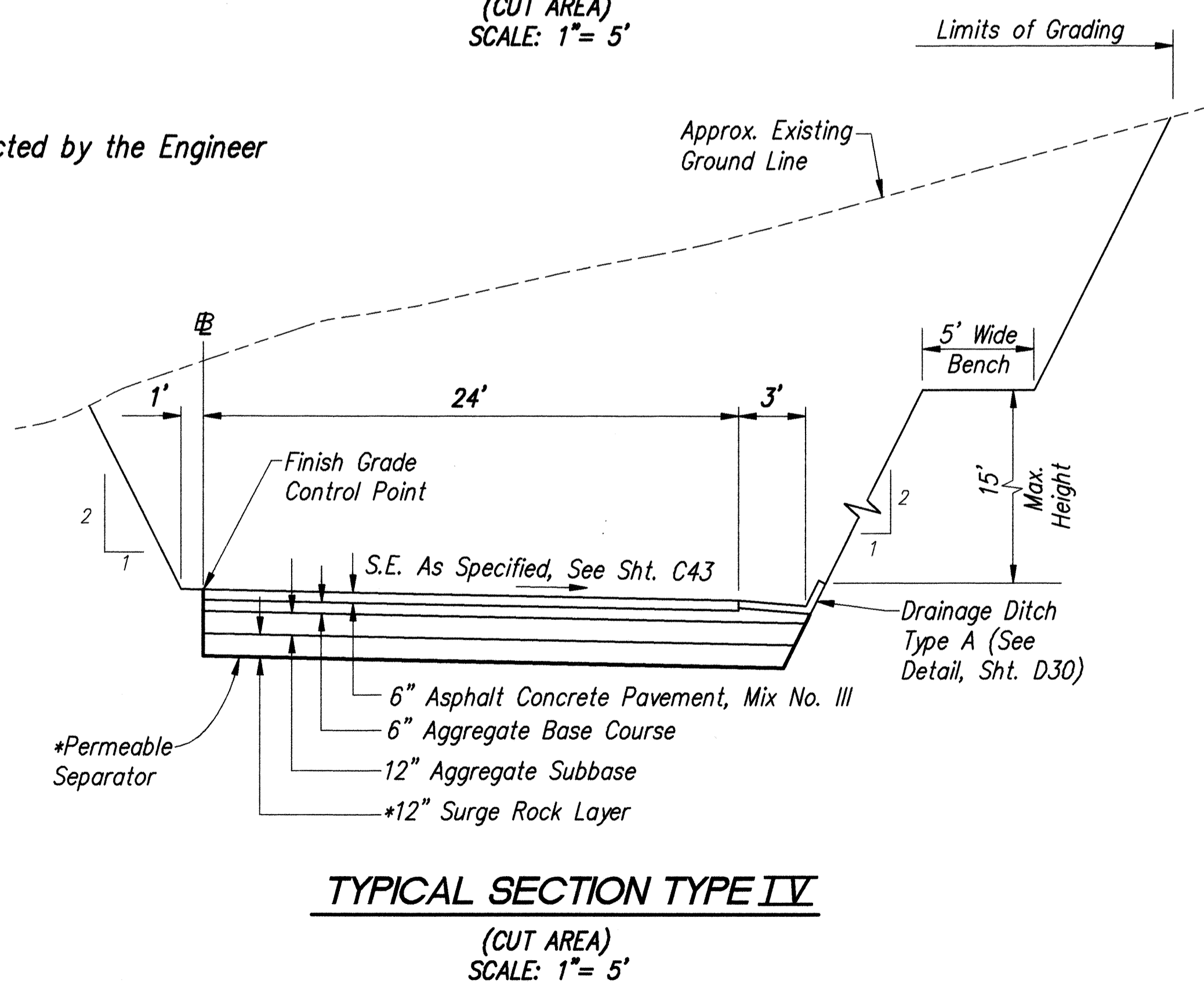
Ray Nordeen Dubois  
PerEn, Inc.  
dba PARK ENGINEERING

\\JB: STATE\DOT\H-3\H3030\

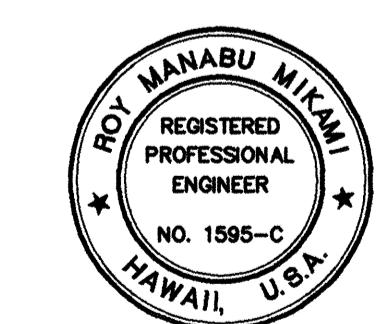
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	5	470



\* When Directed by the Engineer



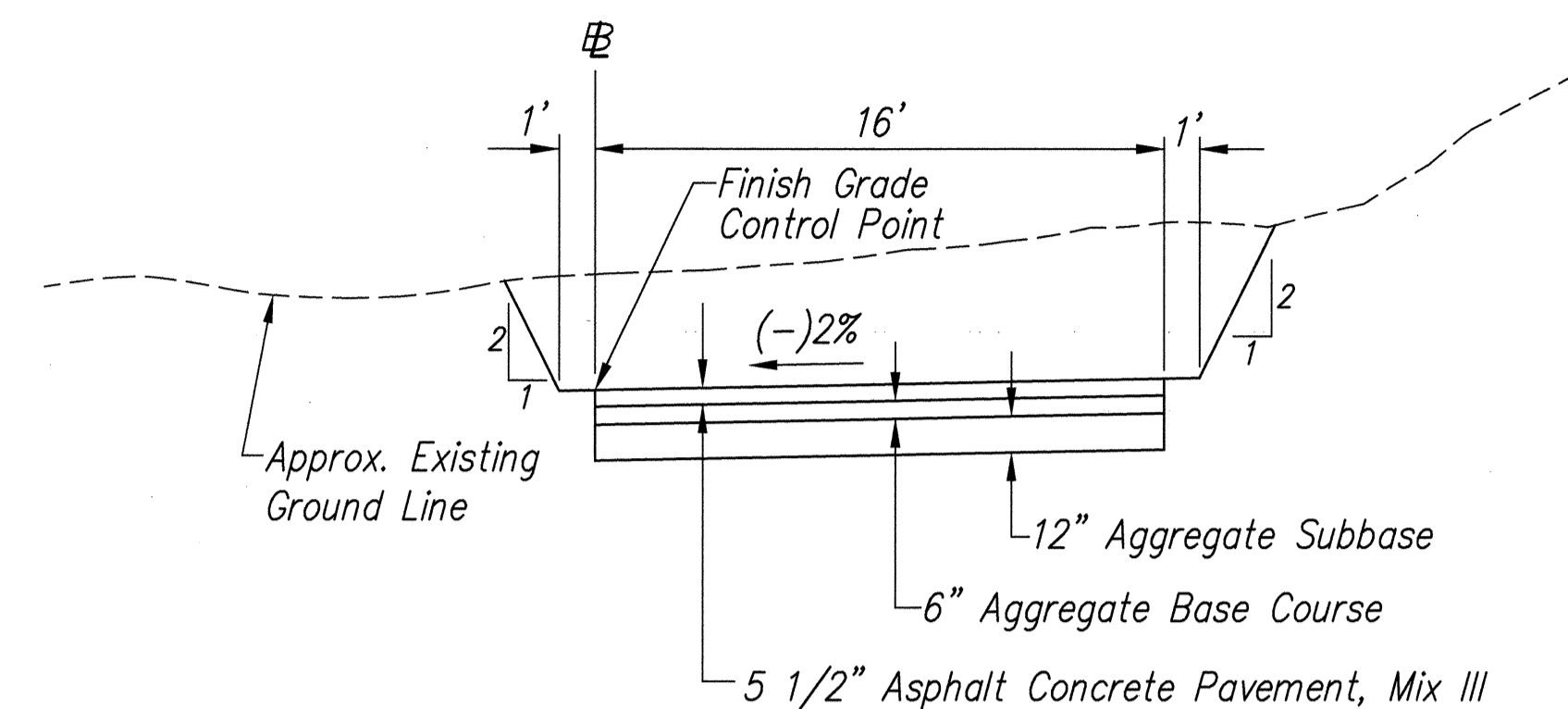
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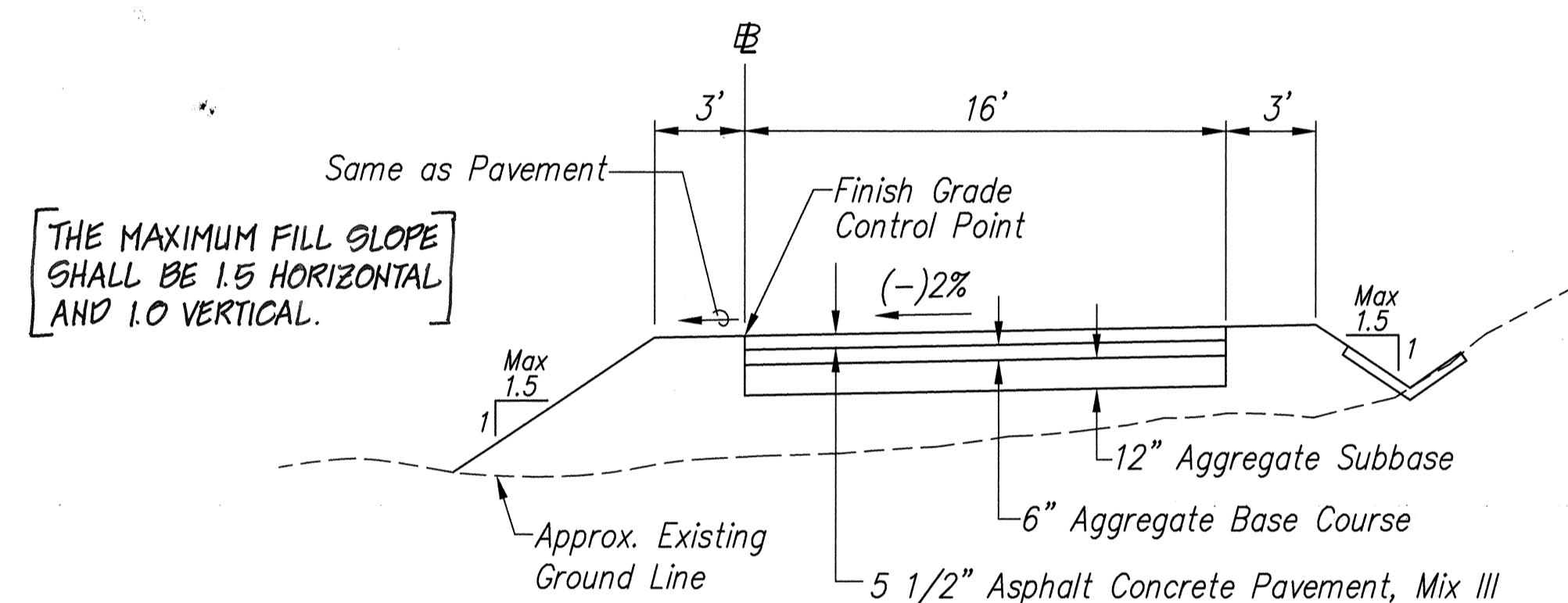
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Roy Manabu Miyaki  
P.E., Inc.  
dba PARK ENGINEERING

9/19/95	ADDITION OF TYPICAL SECTION TYPE V.
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
<b>CONSTRUCTION ACCESS ROAD</b>	
<b>TYPICAL SECTIONS</b>	
INTERSTATE ROUTE H-3 North Halawa Valley Highway, Unit I, Phase IB F.A.I. PROJECT NO. I-H3-(68)	
SCALE: AS NOTED	DATE: MAR. 1994
SHEET No. T3 OF 8 SHEETS	

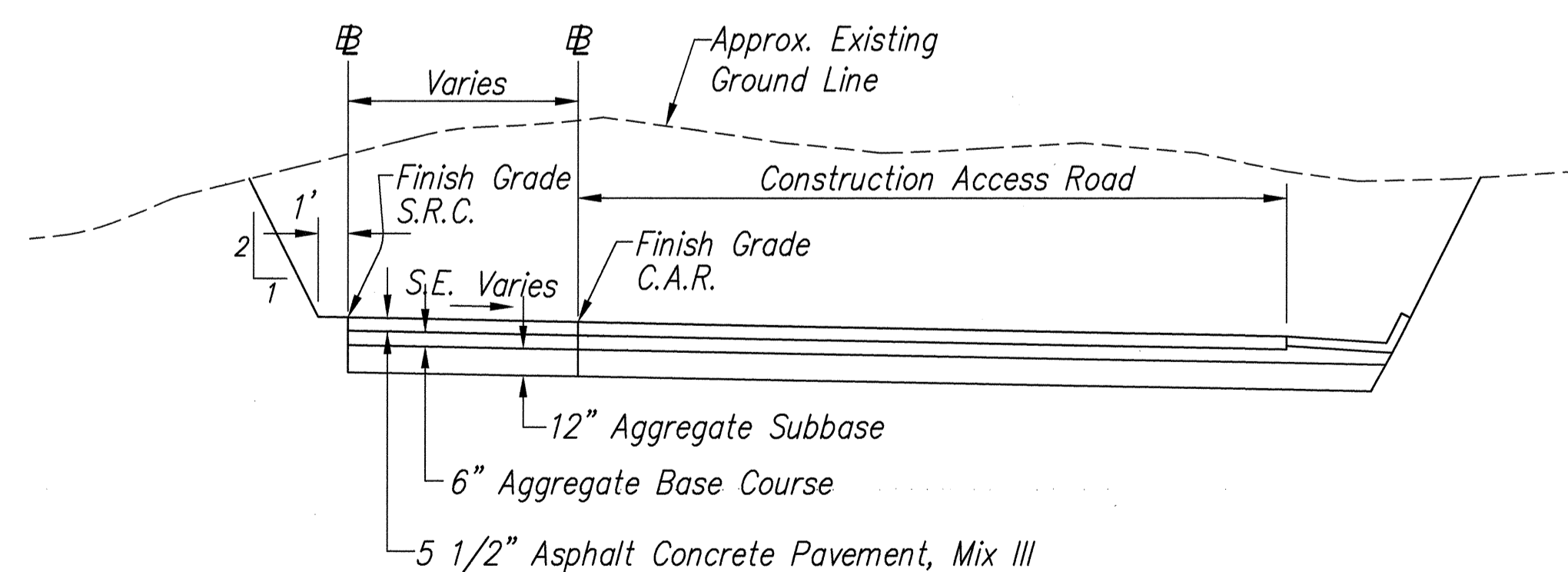
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	6	470



**TYPICAL SECTION**  
STA. 1+08.93 TO STA. 2+90  
(FOR CUT AREA)  
SCALE: 1"= 5'



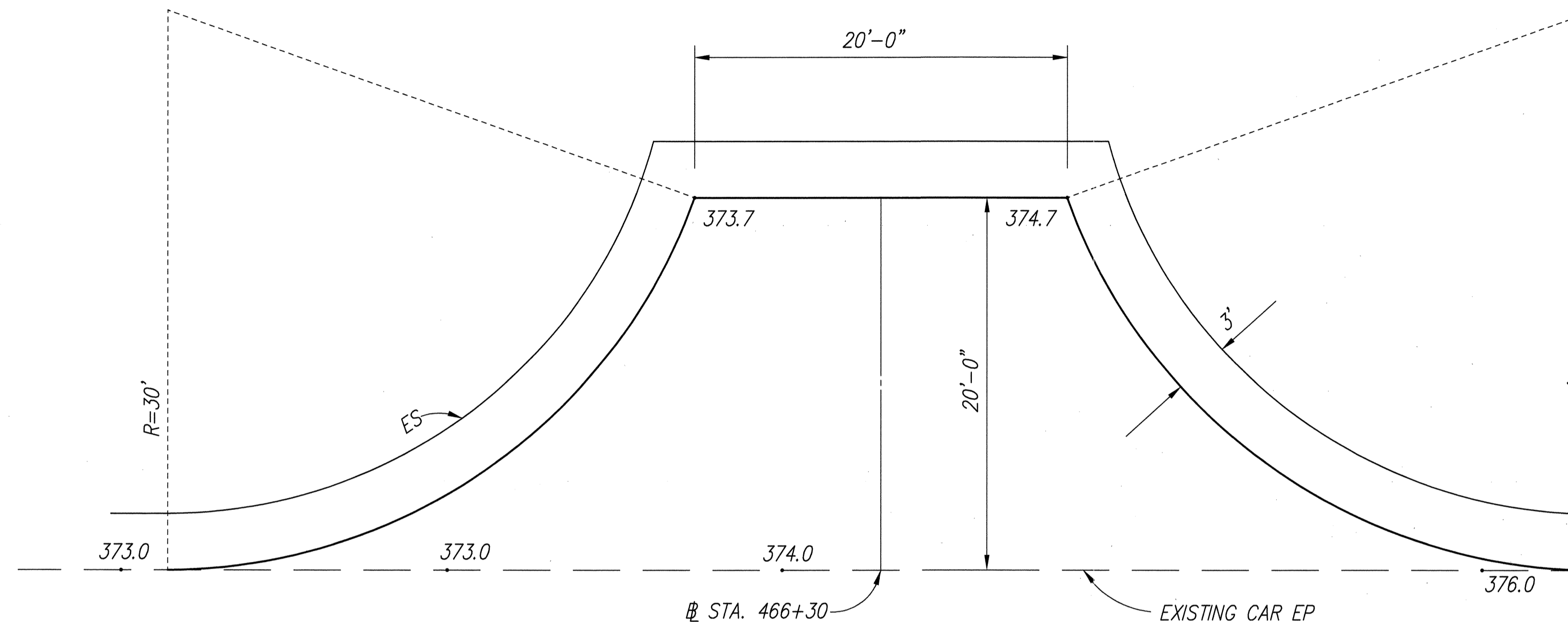
**TYPICAL SECTION**  
STA. 1+08.93 TO STA. 2+90  
(FOR FILL AREA)  
SCALE: 1"= 5'



**TYPICAL SECTION**  
STA. 0+00 TO STA. 1+08.93  
SCALE: 1"= 5'

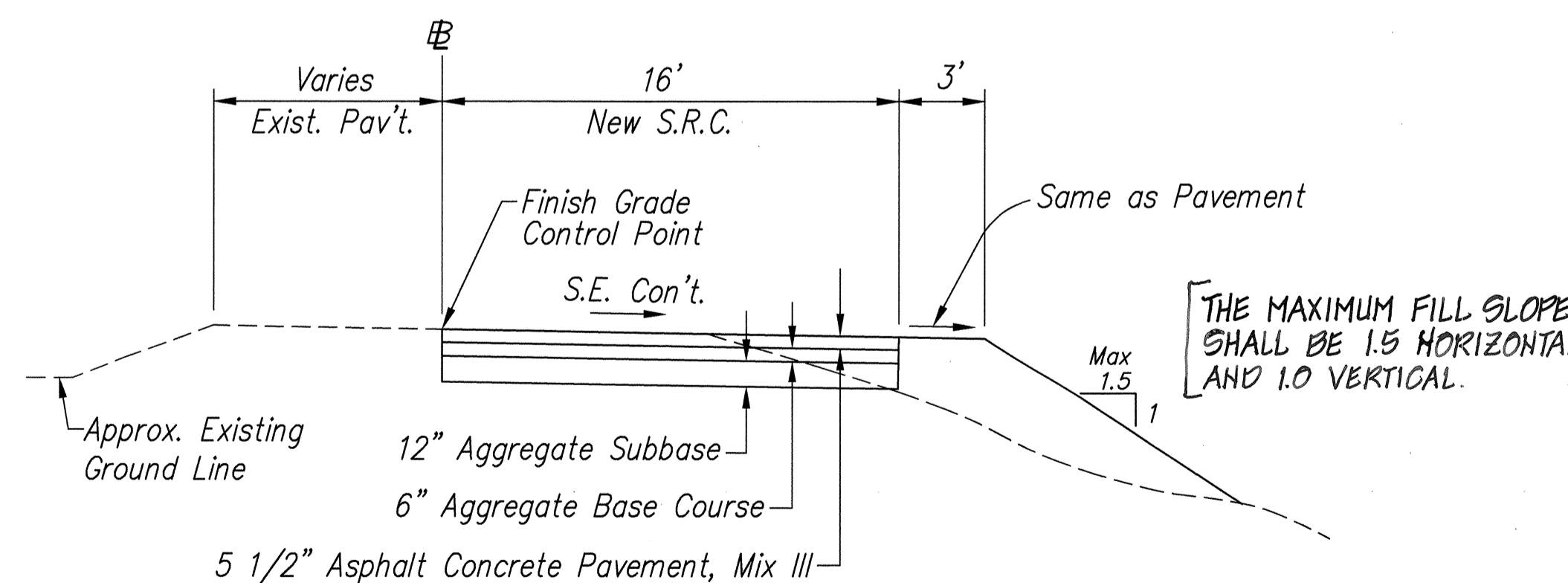
**NOTE:**

1. Pavement Structure same as Sideroad Connector.
2. Shoulder shall be 3'-0".
3. Fill Slopes shall be 1:1

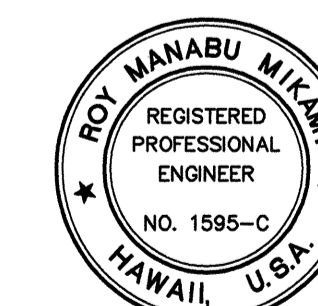


**TURN AROUND**  
STA. 466+30  
SCALE: 1"= 5'

NOTE: [ ] INDICATES ADDENDUM NO. 9 REVISIONS.



**TYPICAL SECTION**  
STA. 2+90 TO END  
SCALE: 1"= 5'



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STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

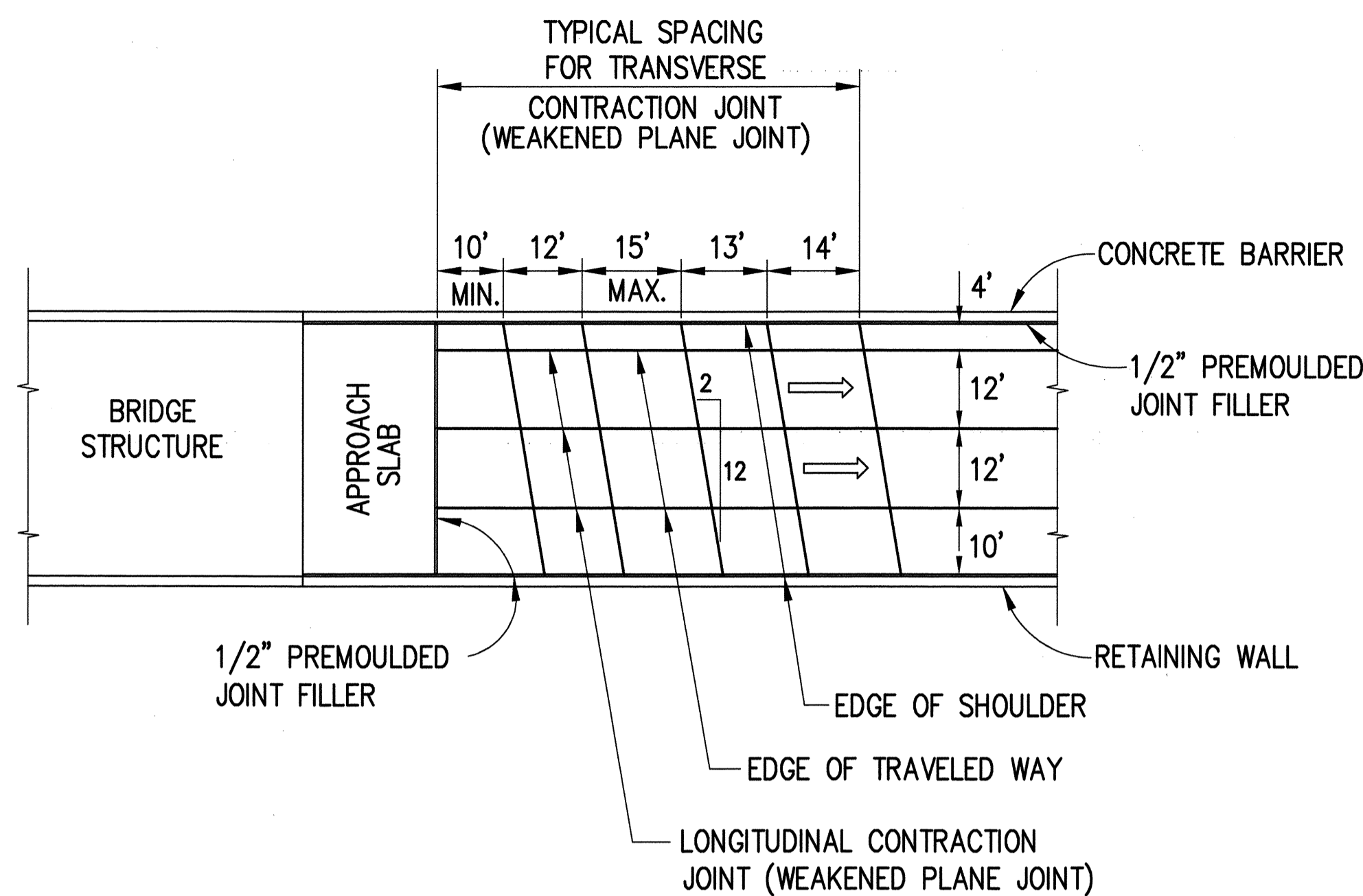
**SIDE ROAD CONNECTOR**  
**TYP. SECTIONS AND MISC. DETAILS**

INTERSTATE ROUTE H-3  
North Halawa Valley Highway, Unit I, Phase IB  
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED DATE: MAR. 1994

SHEET No. T4 OF 8 SHEETS

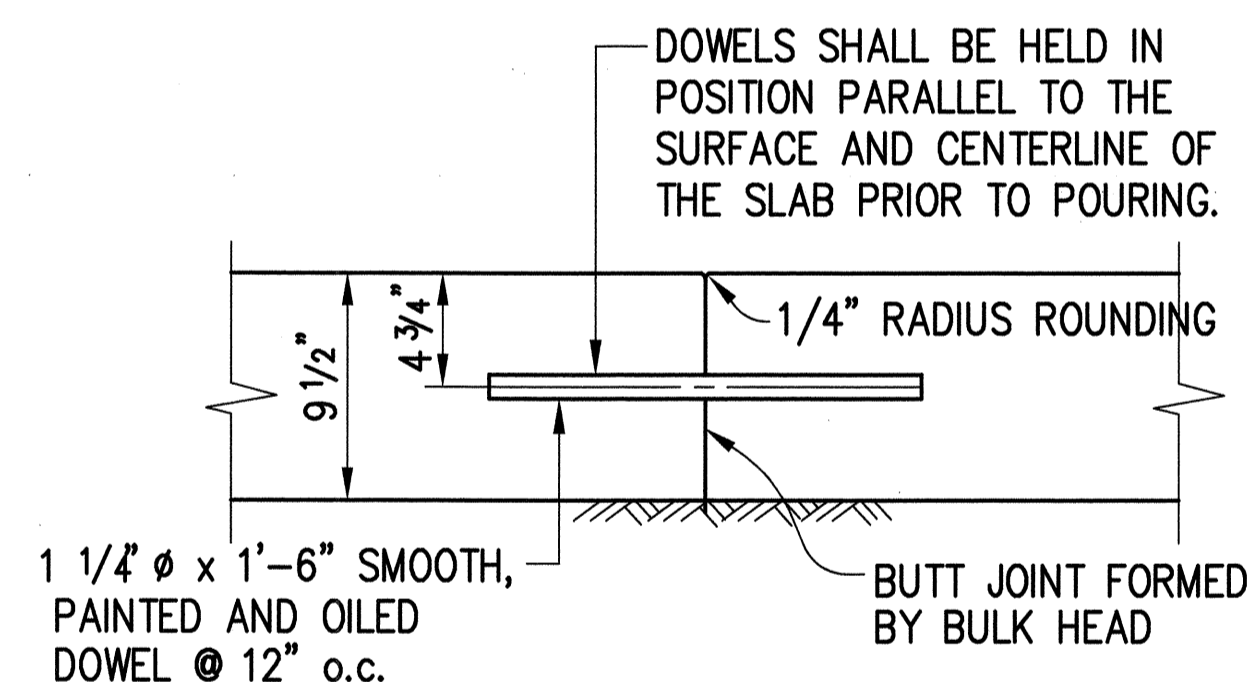
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	7	470



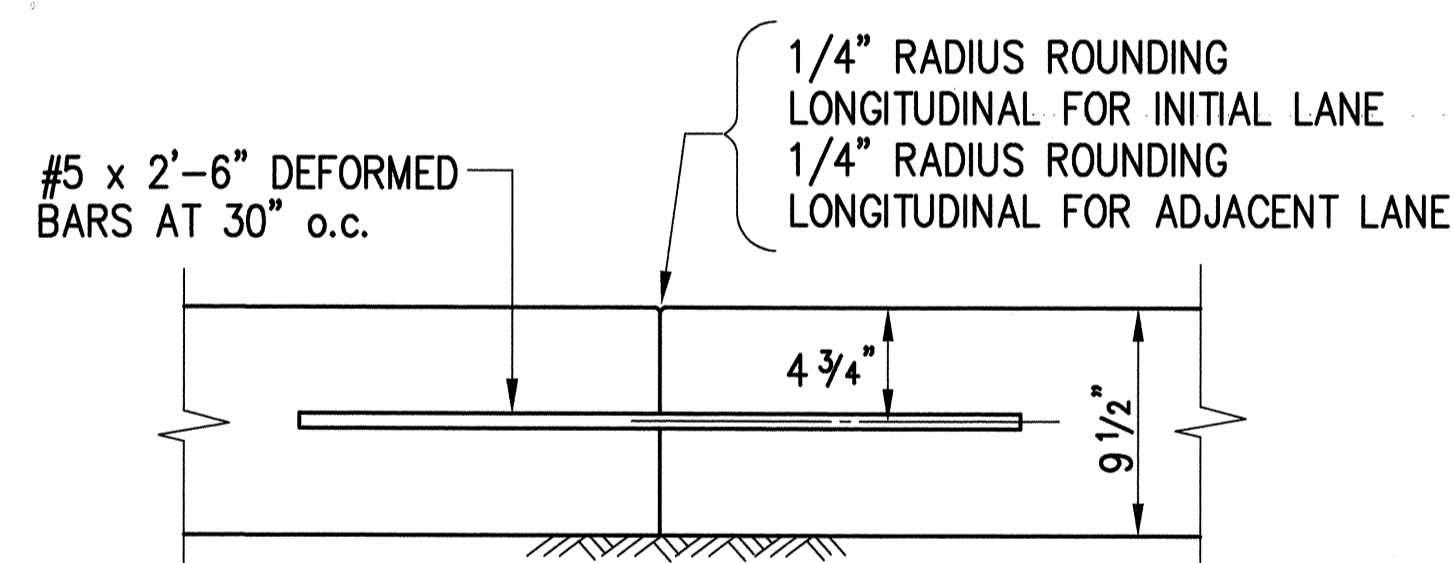
**TYPICAL JOINT LOCATION AND LAYOUT PLAN**  
SCALE: 1"= 20'

### GENERAL NOTES

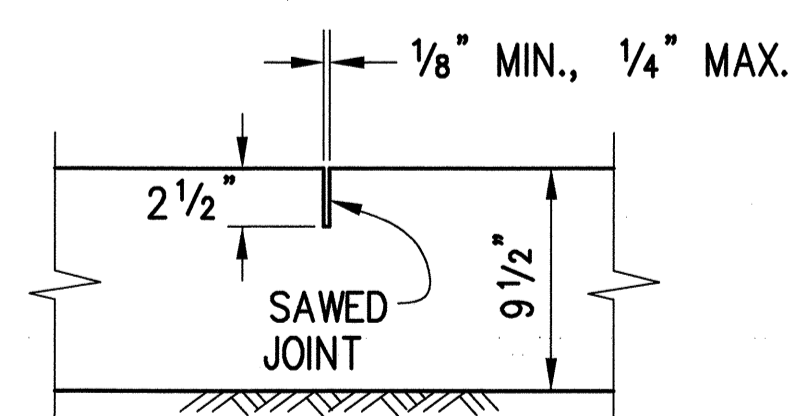
- 1 - TRANSVERSE CONTRACTION JOINTS SHALL BE SAWED DIAGONALLY AS SHOWN, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. UNDER TYPICAL CONDITIONS, TRANSVERSE CONTRACTION JOINTS SHALL BE SKEWED COUNTER-CLOCKWISE WITH AN OFFSET OF 2' FOR EVERY 12' OF LANE WIDTH FROM THE PERPENDICULAR TO THE EDGE OF TRAVELED WAY.
- 2 - TRANSVERSE CONTRACTION JOINTS SHALL BE SPACED AT SUCCESSIVE INTERVALS OF 12', 15', 13' AND 14' IN THE DIRECTION OF TRAFFIC. REPEAT FOR THE REMAINING JOINTS. TEN (10) FEET MINIMUM SPACING SHALL BE MAINTAINED FROM BRIDGE APPROACH SLAB AS SHOWN.
- 3 - TRANSVERSE CONSTRUCTION JOINTS SHALL BE LOCATED AT A MINIMUM DISTANCE OF 10' FROM THE NEAREST PLANNED TRANSVERSE CONTRACTION JOINT.
- 4 - THE LONGITUDINAL CONTRACTION JOINT DETAIL SHALL BE APPLICABLE AT THE INTERMEDIATE TRAFFIC LANE EDGE WHEN TWO OR MORE LANES ARE PAVED IN ONE CONTINUOUS POUR. THE STRAIGHT TIE BARS SHALL BE PLACED MECHANICALLY TO THE DEPTH AS SHOWN ON THE DETAIL. ALL OTHER LONGITUDINAL JOINTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LONGITUDINAL CONSTRUCTION JOINT (CONTACT JOINT) DETAIL SHOWN ON THIS PLAN.
- 5 - AT THE OUTER EDGE OF THE P.C.C. PAVEMENT, 1/4" RADIUS ROUNDING SHALL BE UTILIZED LONGITUDINALLY OR AS DIRECTED BY THE ENGINEER.



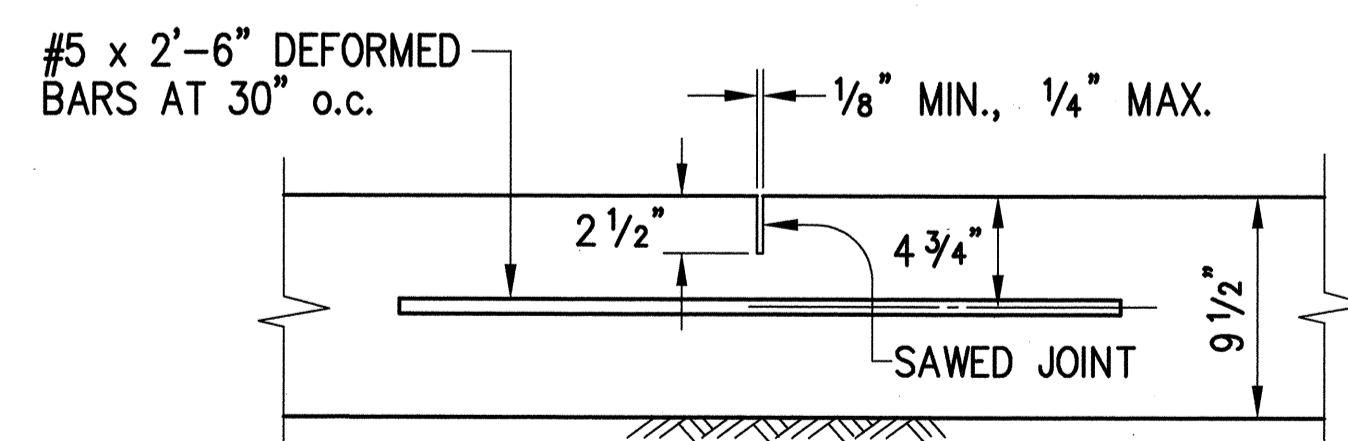
**TRANSVERSE CONSTRUCTION JOINT (CONTACT JOINT)**  
SCALE: 1 1/2"= 1'-0"



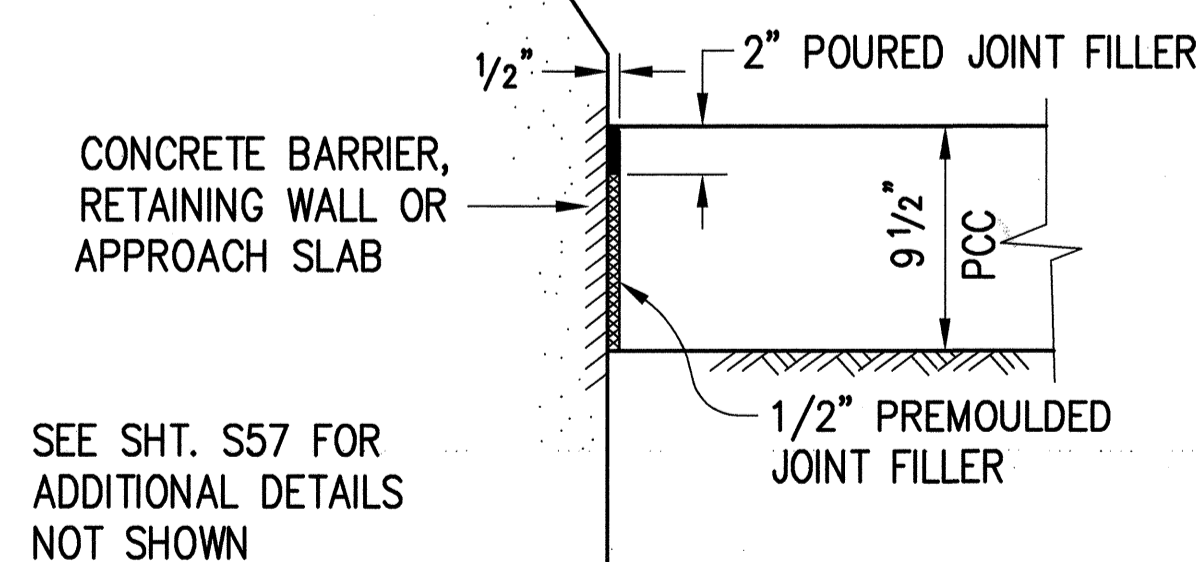
**LONGITUDINAL CONSTRUCTION JOINT (CONTACT JOINT)**  
SCALE: 1 1/2"= 1'-0"



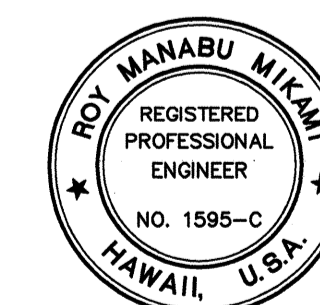
**TRANSVERSE CONTRACTION JOINT (WEAKENED PLANE JOINT)**  
SCALE: 1 1/2"= 1'-0"



**LONGITUDINAL CONTRACTION JOINT (WEAKENED PLANE JOINT)**  
SCALE: 1 1/2"= 1'-0"



**EXPANSION JOINT DETAIL**  
SCALE: 1 1/2"= 1'-0"

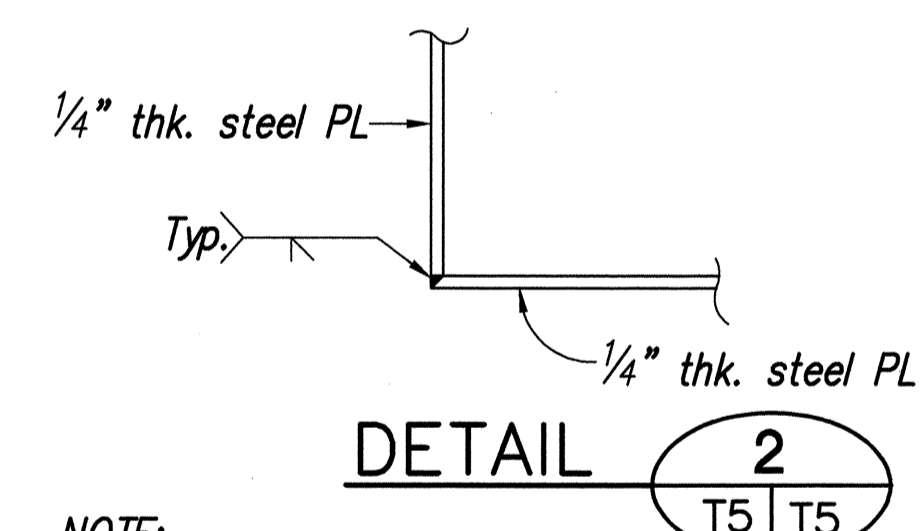
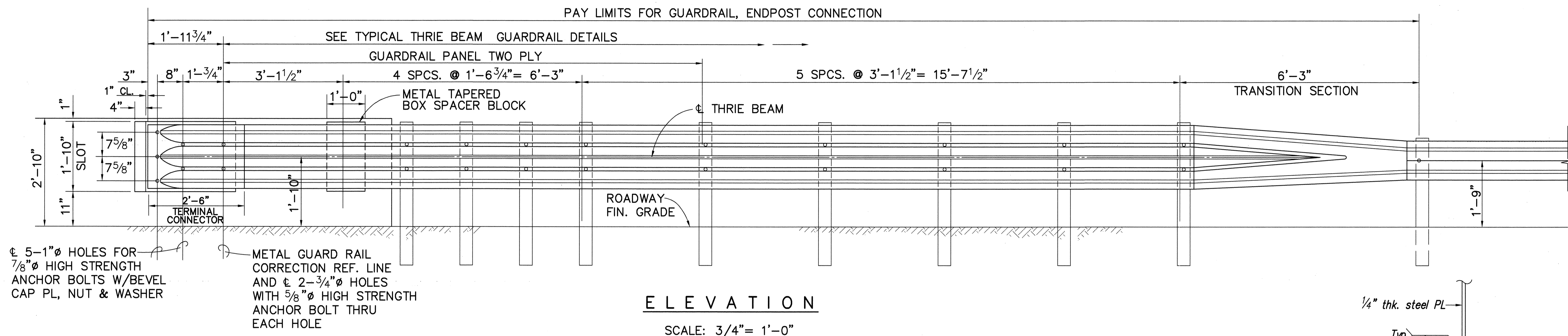
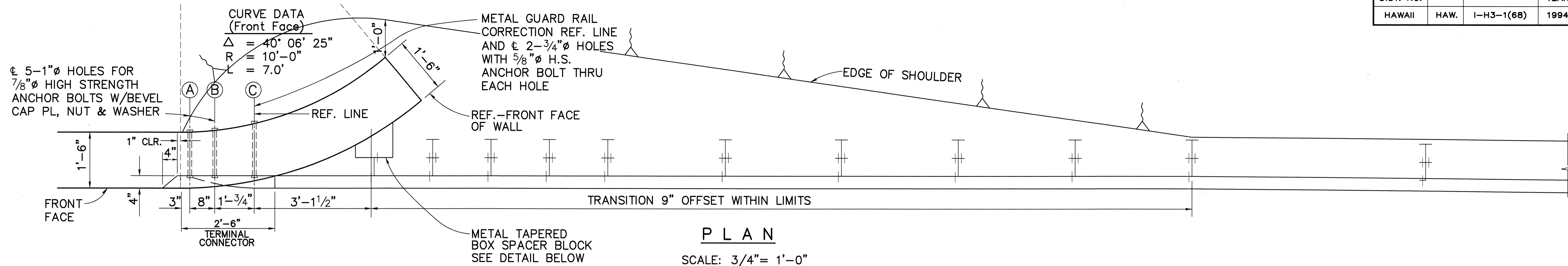


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dba PARK ENGINEERING

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
<b>P.C.C. PAVEMENT JOINT DETAILS</b>	
INTERSTATE ROUTE H-3 North Halawa Valley Highway, Unit I, Phase IB F.A.I. PROJECT NO. I-H3-(68)	
SCALE: AS NOTED	DATE: MAR. 1994
SHEET No. T5 OF 8 SHEETS	

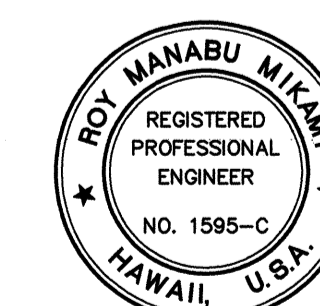
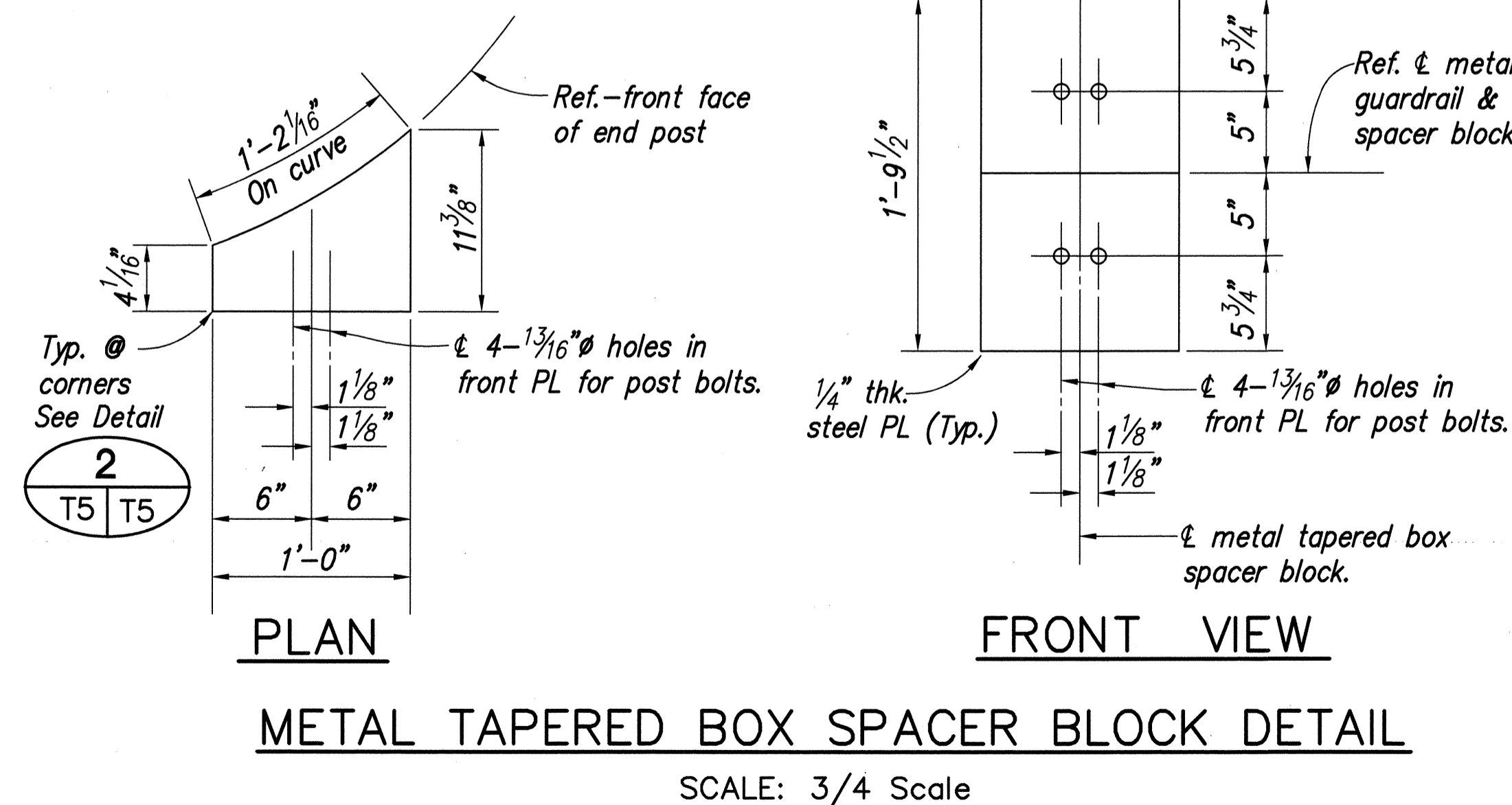
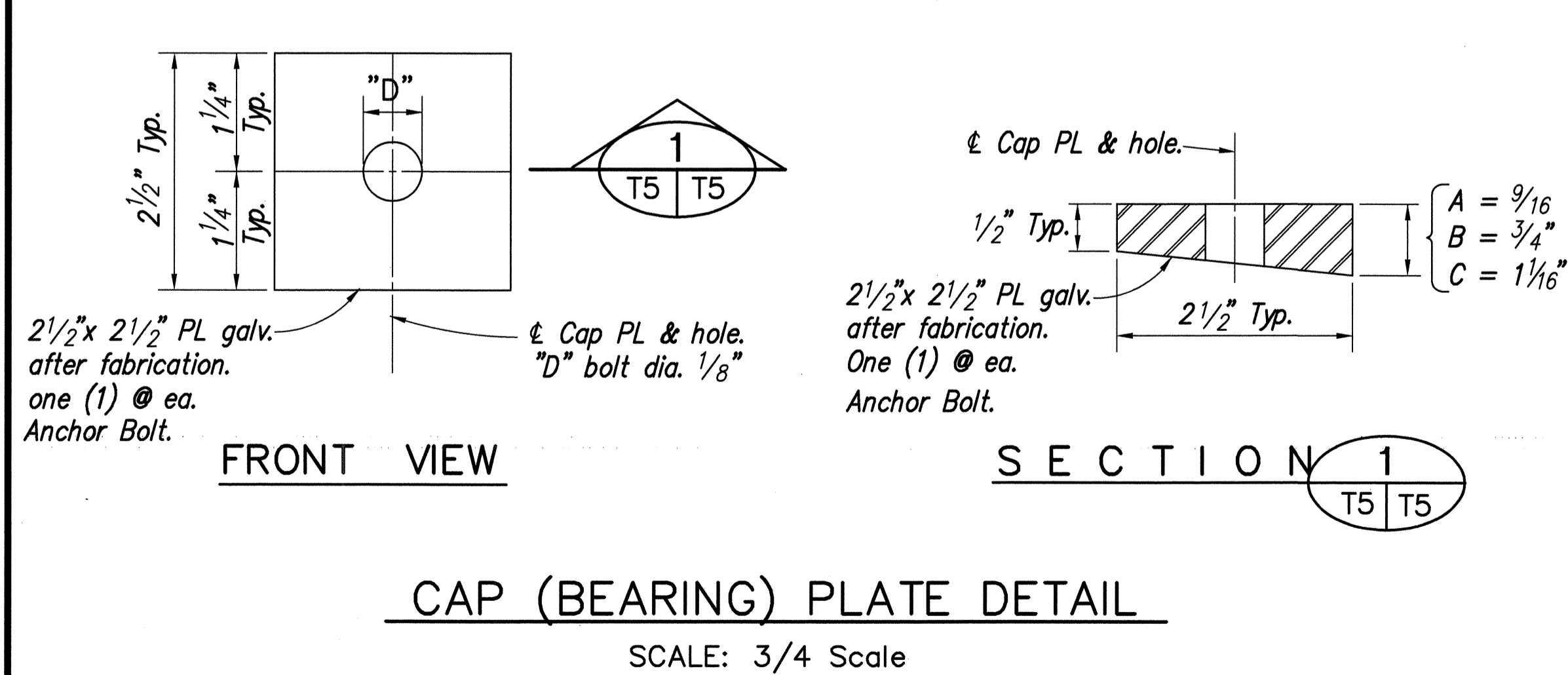
LIB. STATE DOT/VI-31/30301  
PCGPART 2/25/94 RSO

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	8	470



**NOTE:**

1. Cap PL and tapered box spacer shall be fabricated from ASTM A 36 steel and hot-dip galvanized after fabrication.
2. Cap PL's tapered box spacer, anchor bolts including nuts and washers and other appurtenances shall be incidental to Guardrail Type 3 (Thrie Beam) endpost connection and will not be paid for separately.
3. See Standard Plan TE-57 for guard rail, type 3, thrie beam detail.



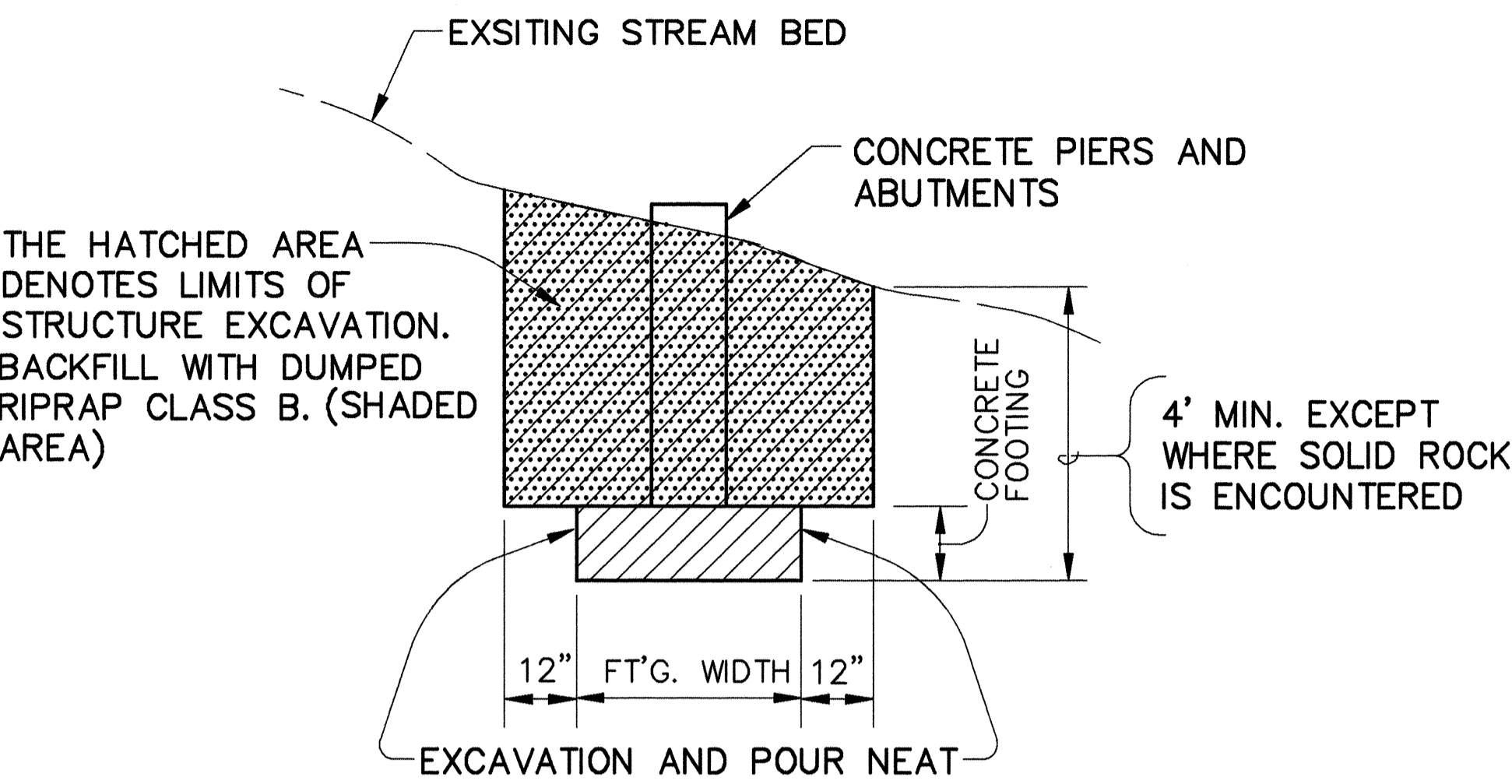
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*Roy Manabu Miki*

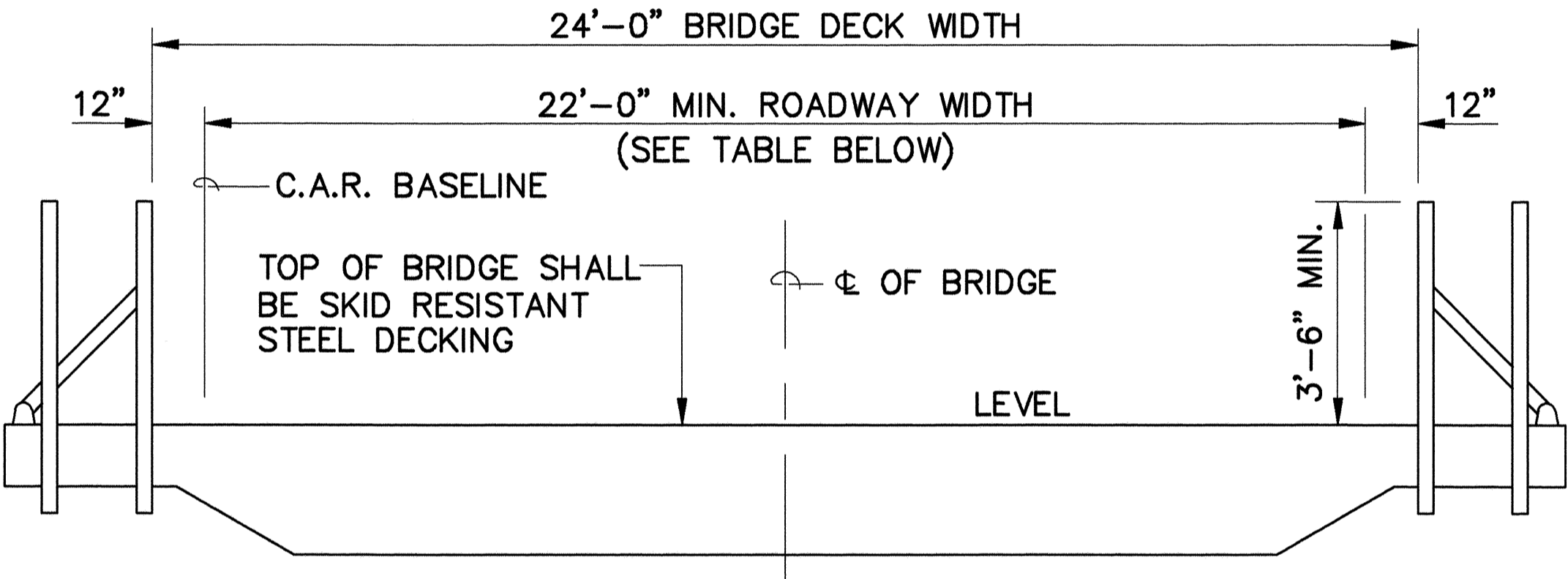
ROY MANABU MIKI  
 REGISTERED PROFESSIONAL ENGINEER  
 NO. 1595-C  
 HAWAII, U.S.A.

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
<b>ENDPOST CONNECTION DETAILS</b>	
INTERSTATE ROUTE H-3 North Halawa Valley Highway, Unit 1, Phase 1B F.A.I. PROJECT NO. I-H3-(68)	
SCALE: AS NOTED	DATE: MAR. 1994
SHEET No. T6 OF 8 SHEETS	

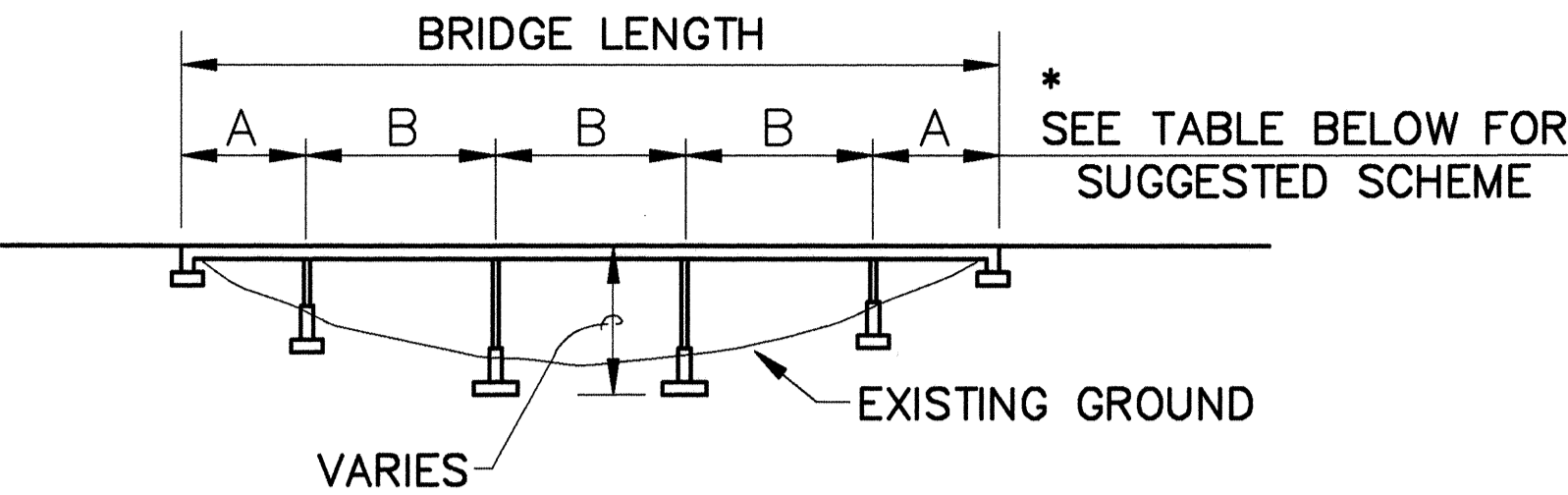
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	9	470



BRIDGE STRUCTURE FOOTING EXCAVATION PAY LIMIT  
N.T.S.



TYPICAL SECTION FOR STREAM CROSSING STRUCTURE  
SCALE: 3/8" = 1'-0"



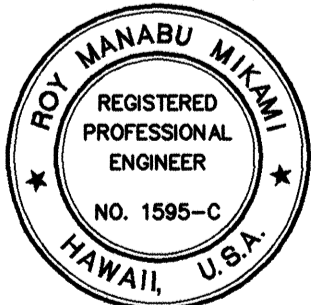
TYPICAL ACCESS ROAD BRIDGE ELEVATION  
N.T.S.

NOTES:

- ESTIMATED TOTAL BRIDGE LENGTH AND QUANTITIES SHOWN IN PROPOSAL ARE BASED ON MODULE LENGTHS SHOWN IN TABLE OF SUGGESTED BRIDGE SPAN SCHEMES.
- BRIDGE CONCRETE PIERS AND ABUTMENTS SHALL BE PERPENDICULAR WITH THE LONGITUDINAL AXIS OF BRIDGE.
- THE PIERS SHALL NOT BE LOCATED WITHIN THE PRESENT CHANNEL FLOW.

TABLE OF SUGGESTED BRIDGE SPAN SCHEMES					
STREAM CROSSING STRUCTURE NO.	TOTAL BRIDGE LENGTH (FT)	ROADWAY WIDTH (FT)	BRIDGE DECK WIDTH (FT)	* A SPAN (FT) X NO. OF SPANS	* B SPAN (FT) X NO. OF SPANS
4	120	16	18	30' x 2	60' x 1
5	120	22	24	30' x 1	90' x 1
6	120	22	24	30' x 1	90' x 1
7	250	22	24	40' x 2 50' x 1	120' x 1
8	100	22	24	0	100' x 1

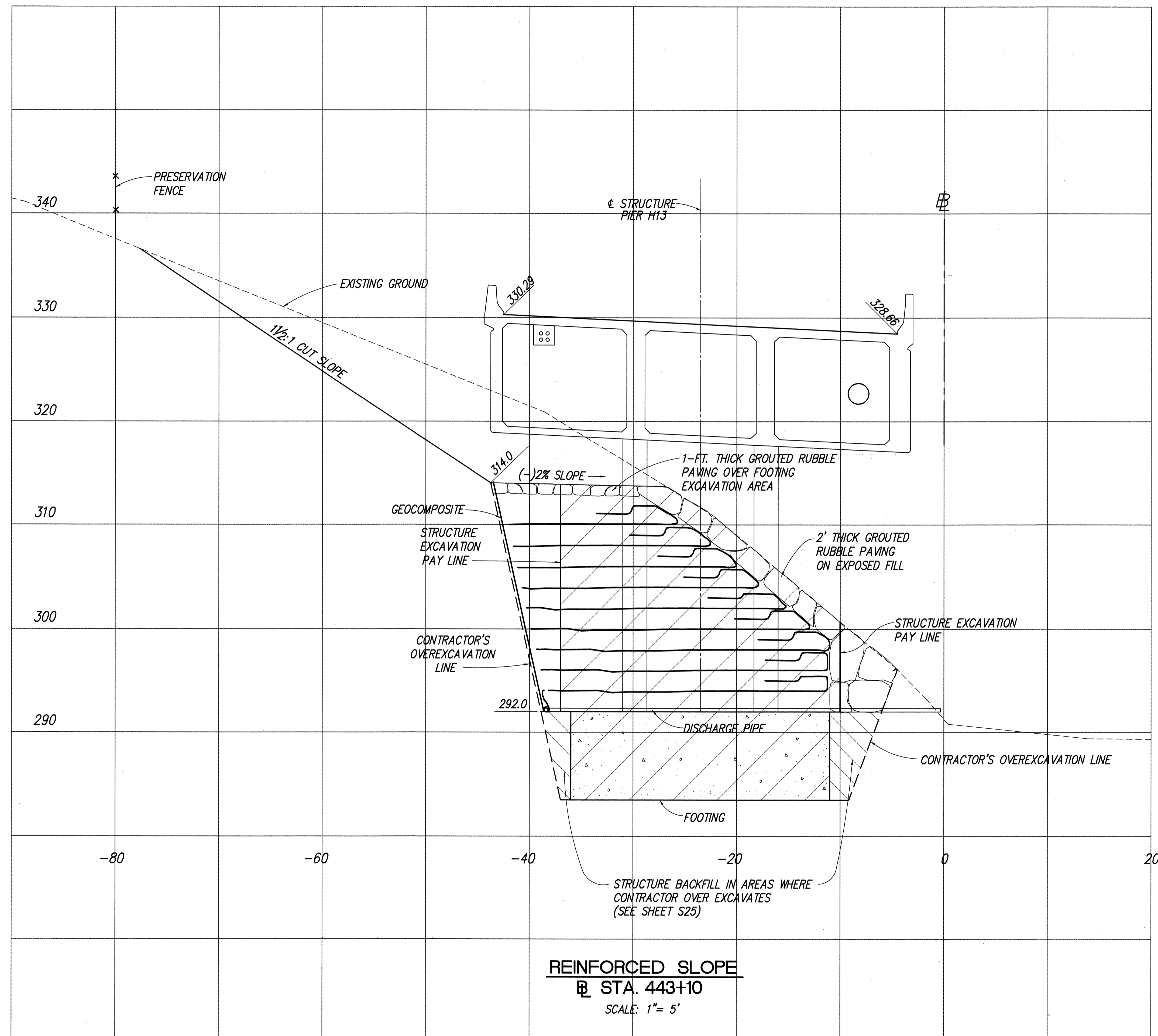
8/25/94	Revised Table and added "Deck Width".
7/12/94	Revised Note 2, backfill designation and span schemes.
DATE	REVISION



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Pape, Inc.  
dbs PARK ENGINEERING

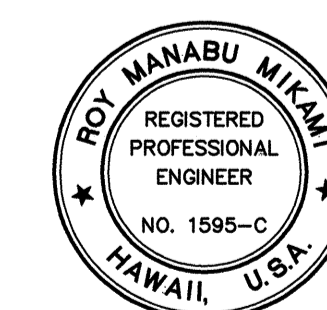
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION <b>CONSTRUCTION ACCESS ROAD</b> <b>STREAM CROSSING STRUCTURE</b> <b>INTERSTATE ROUTE H-3</b> <b>North Halawa Valley Highway, Unit I, Phase IB</b> <b>F.A.I. PROJECT NO. I-H3-(68)</b> SCALE: AS NOTED DATE: MAR. 1994 SHEET No. T7 OF 8 SHEETS
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FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	10	470



# NOTES:

1. DETAILS SHOWN FOR GENERAL GUIDE.
2. SEE SPECIAL PROVISIONS SECTION 209- MECHANICALLY STABILIZED SLOPE FOR REQUIREMENTS.
3. SEE SHEET NO. S25 FOR OVER EXCAVATION.



THIS WORK WAS PREPARED BY ME  
OR UNDER MY SUPERVISION  
*Roy Manabu Miki*  
Roy Miki, Inc.  
dba PARK ENGINEERING

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
<b>MECHANICALLY STABILIZED SLOPE</b>	
AT STA. 443+10	
INTERSTATE ROUTE H-3	
North Halawa Valley Highway, Unit I, Phase IB	
F.A.I. PROJECT NO. I-H3-(68)	
SCALE: AS NOTED	DATE: MAR. 1994
SHEET No. T8 OF 8 SHEETS	