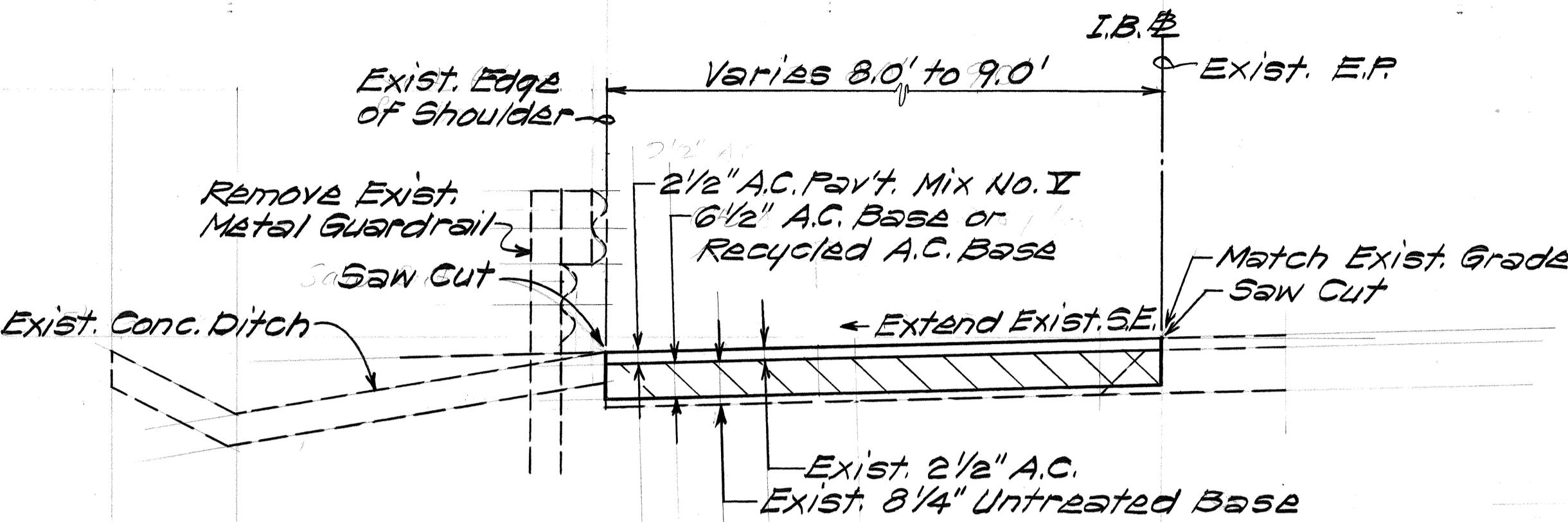
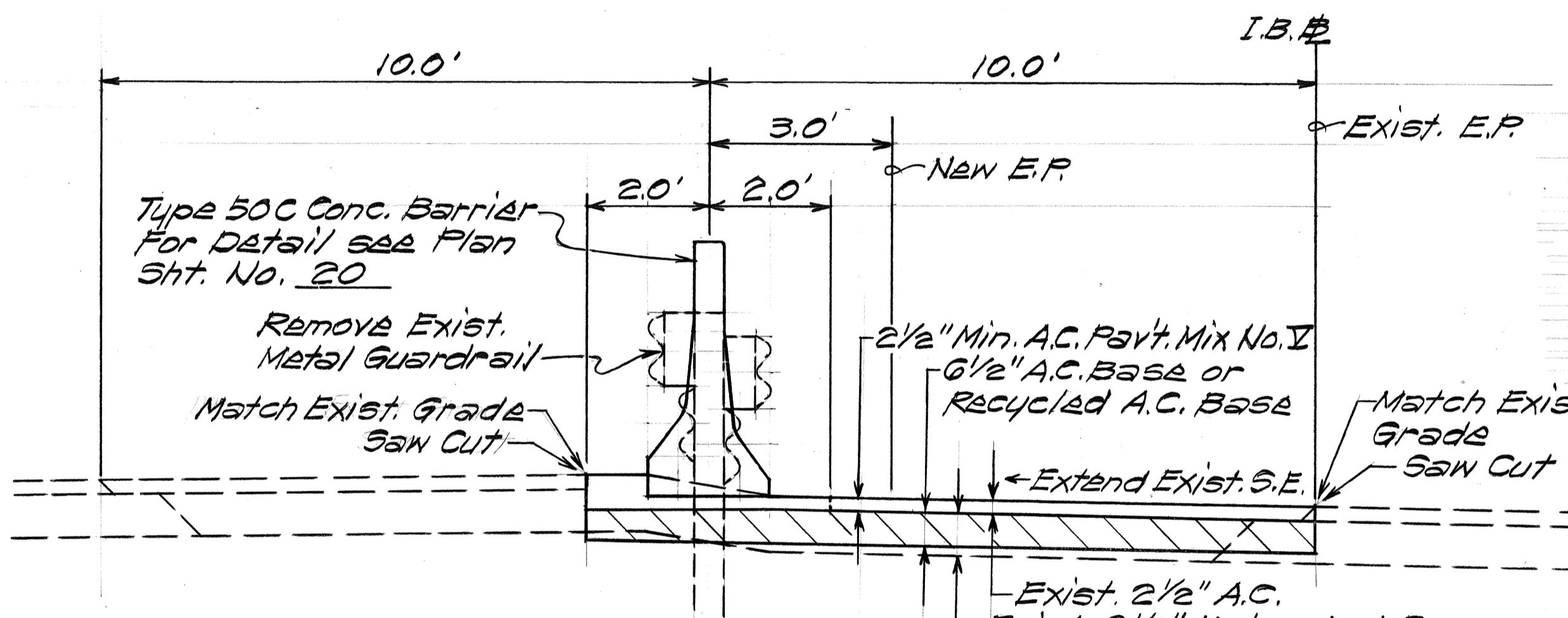


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-HI-1(193)	1986	3	62



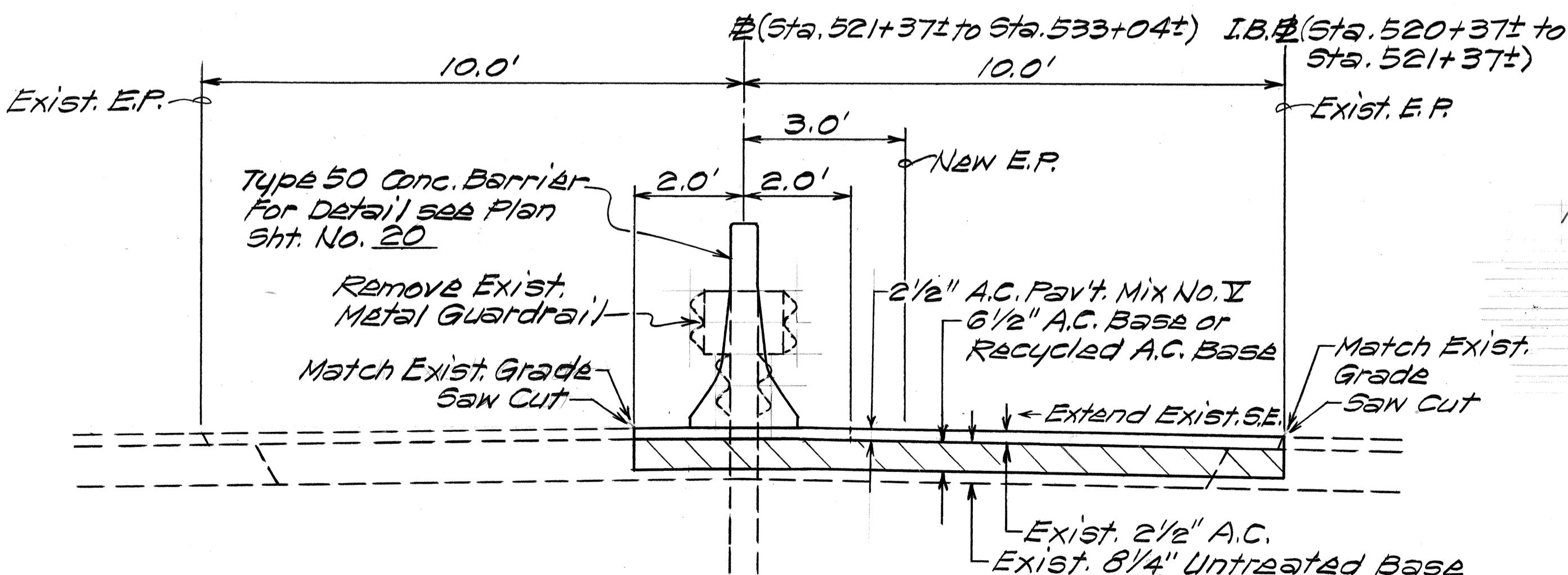
MEDIAN A.C. SHOULDER

I.B. # Sta. 482+60± to H-1 I.B. # Sta. 518+87±
Scale: 1/2" = 1'-0"



MEDIAN A.C. SHOULDER

I.B. # Sta. 518+87± to I.B. # Sta. 520+37±
Scale: 1/2" = 1'-0"

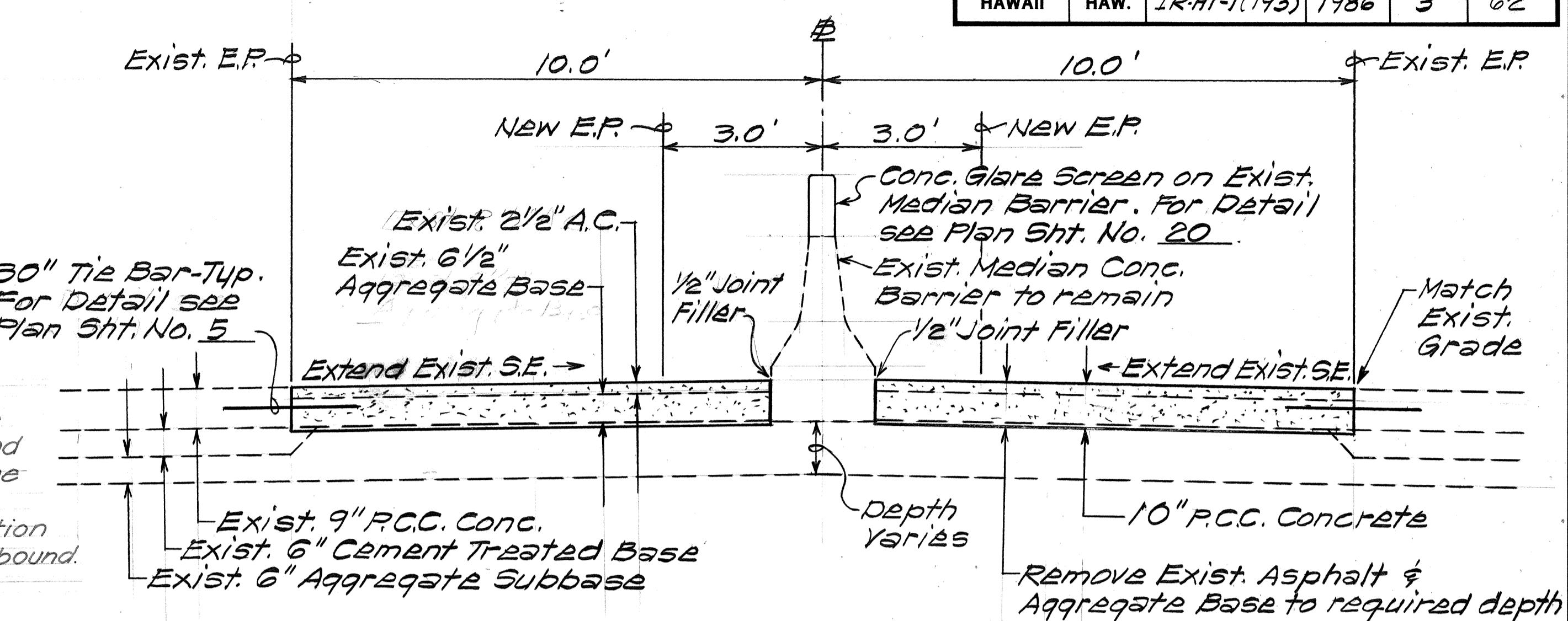


NOTE: Shoulder work on I.B. side only at Structure No. 1 ~ Width Varies.

MEDIAN A.C. SHOULDER

I.B. # Sta. 520+37± to # Sta. 533+04±
Scale: 1/2" = 1'-0"

NOTE:
Delete the CTB from the median PCC shoulder and travelway and increase the PCC thickness to 14.5 inches between H-1 station 149+64± and 150+50± outbound.



NOTE: Shoulder work width varies at Kaonohi St. Overpass.
New PCC Pavement to be longitudinally grooved.

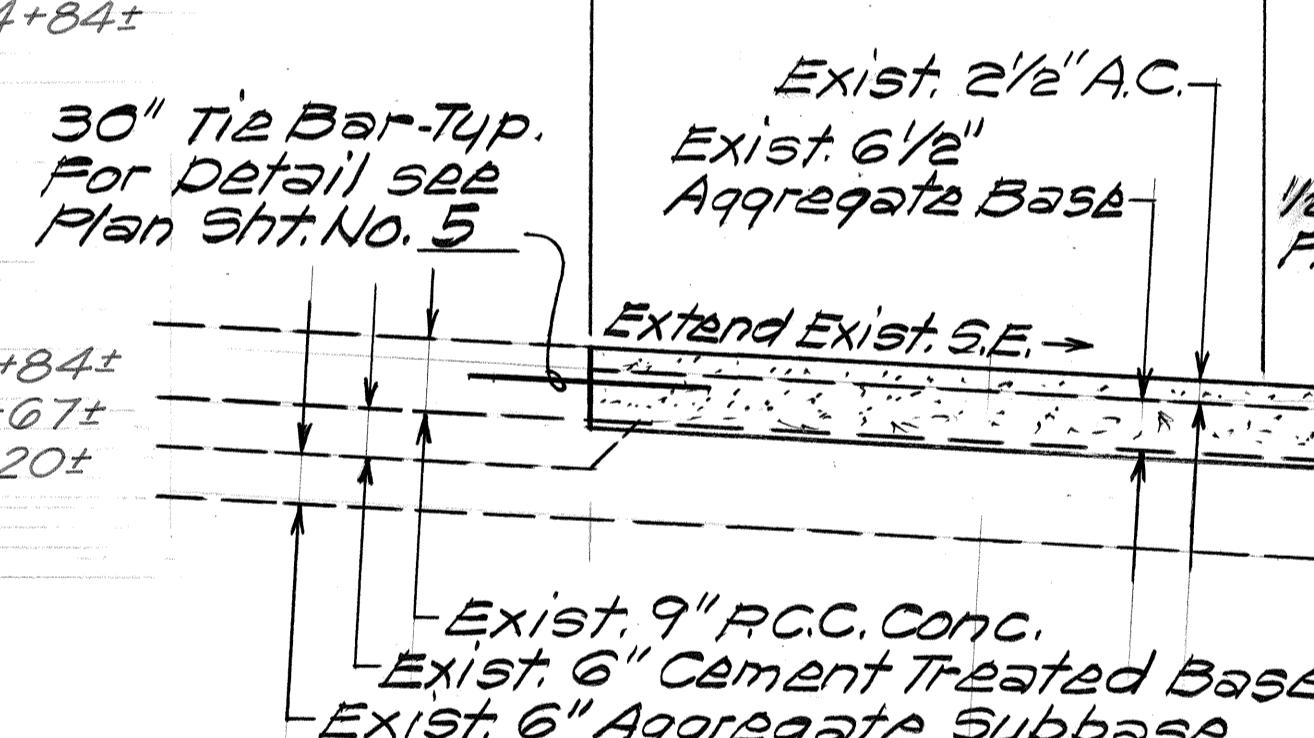
MEDIAN PCC SHOULDERS ~ TANGENT SECTION

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

NOTE:
Delete 6-inches of cement treated base from the median PCC shoulder widening areas Exist. E.P. and increase the PCC thickness to 10-inches as listed below:

OUTBOUND:
H-1 Sta. 99+00± to 102+44±
H-1 Sta. 123+74± to 144+84±

INBOUND:
H-1 Sta. 62+07± to 72+22±
H-1 Sta. 75+13± to 97+00±
H-1 Sta. 123+74± to 144+84±
H-1 Sta. 149+64± to 162+67±
H-1 Sta. 168+70± to 175+20±



NOTE: Shoulder work width varies at Kaamilo St. Overpass & at Kaahumanu St. Overpass.
New PCC Pavement to be longitudinally grooved.

MEDIAN PCC SHOULDERS ~ CURVE SECTION

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

NOTE:
Use curing compound material in lieu of MC-30 liquid asphalt as curing seal for cement treated base.

I.B. STA. TO I.B. STA.	TANGENT SECTION L.F.	CURVE SECTION L.F.
(I.B. on 1/4) 62+97± - 72+22±		925
(I.B. on 1/4) 75+10± - 97+00±		2190
97+00± - 100+25±		325
100+25± - 102+44±	219	
123+74± - 144+84±	2110	
149+64± - 154+00±	440	
154+00± - 162+70±		870
168+70± - 175+20±		650
TOTAL	2769	(I.B. on 1/4) 925
		1845
		(I.B. on 1/4) 2190

9/3/86 Revised Median A.C.
Shoulder Limits, Median
PCC Pav't. Structure &
Median PCC Shoulder
Work Schedule

DATE REVISION

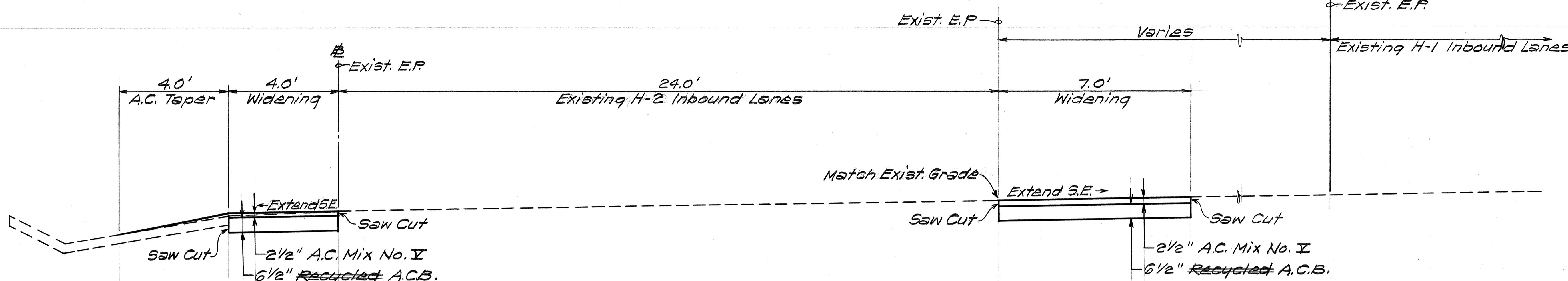
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPICAL SECTIONS & SCHEDULE MEDIAN SHOULDER

INTERSTATE ROUTE H-1
ADDITIONAL LANES
FAI. Proj. No. IR-HI-1(193)

Scale: As Shown Date: July 1, 1985
SHEET NO. 1 OF 7 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-HI-1(193)	1986 CO 35-1	62	



MEDIAN A.C. SHOULDER
H-2 I.B. # Sta. 474+90± to
H-2 I.B. # Sta. 482+60±

TYPICAL SECTION
H-2 ~ H-1 MERGE
Scale: 1/2" = 1'-0"

EXTENSION OF RIGHT E.P.
H-2 I.B. # Sta. 474+45± to
H-2 I.B. # Sta. 477+50±

NOTE: Extension of Right E.P. shall be completed prior to construction of Median A.C. Shoulder H-2 # Sta. 474+90± to H-2 # Sta. 482+60±. All material excavated shall be replaced with new pavement within the same day.

ORIGINAL PLAN
SURVEY PLOTTED BY
DRAWN BY
TRACED BY
DESIGNED BY
QUANTIFIED BY
CHECKED BY
No. _____

9/3/86	Additional work on H-2 I.B. Ramp
DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

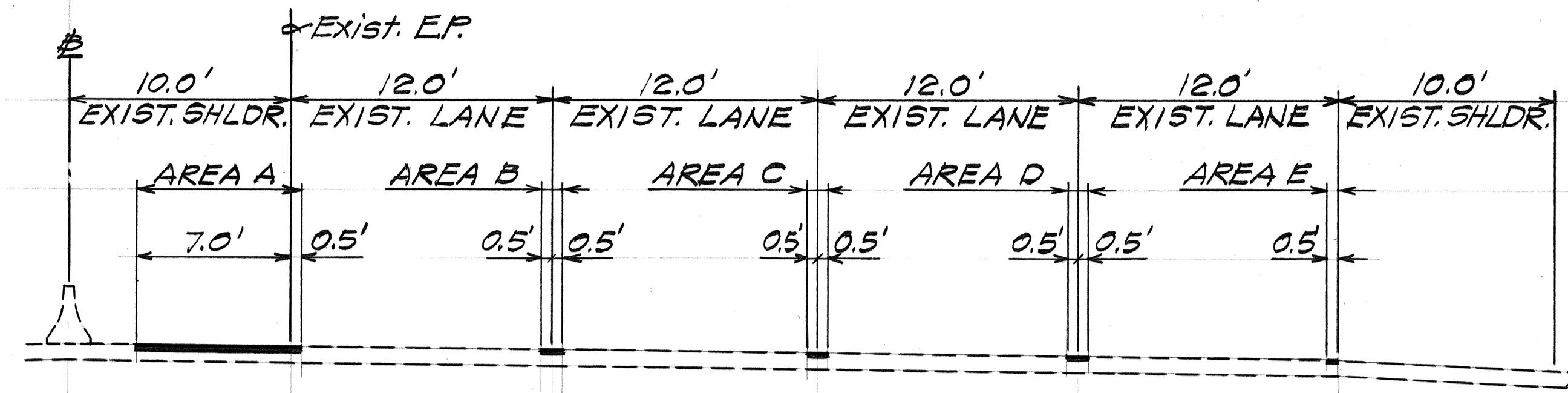
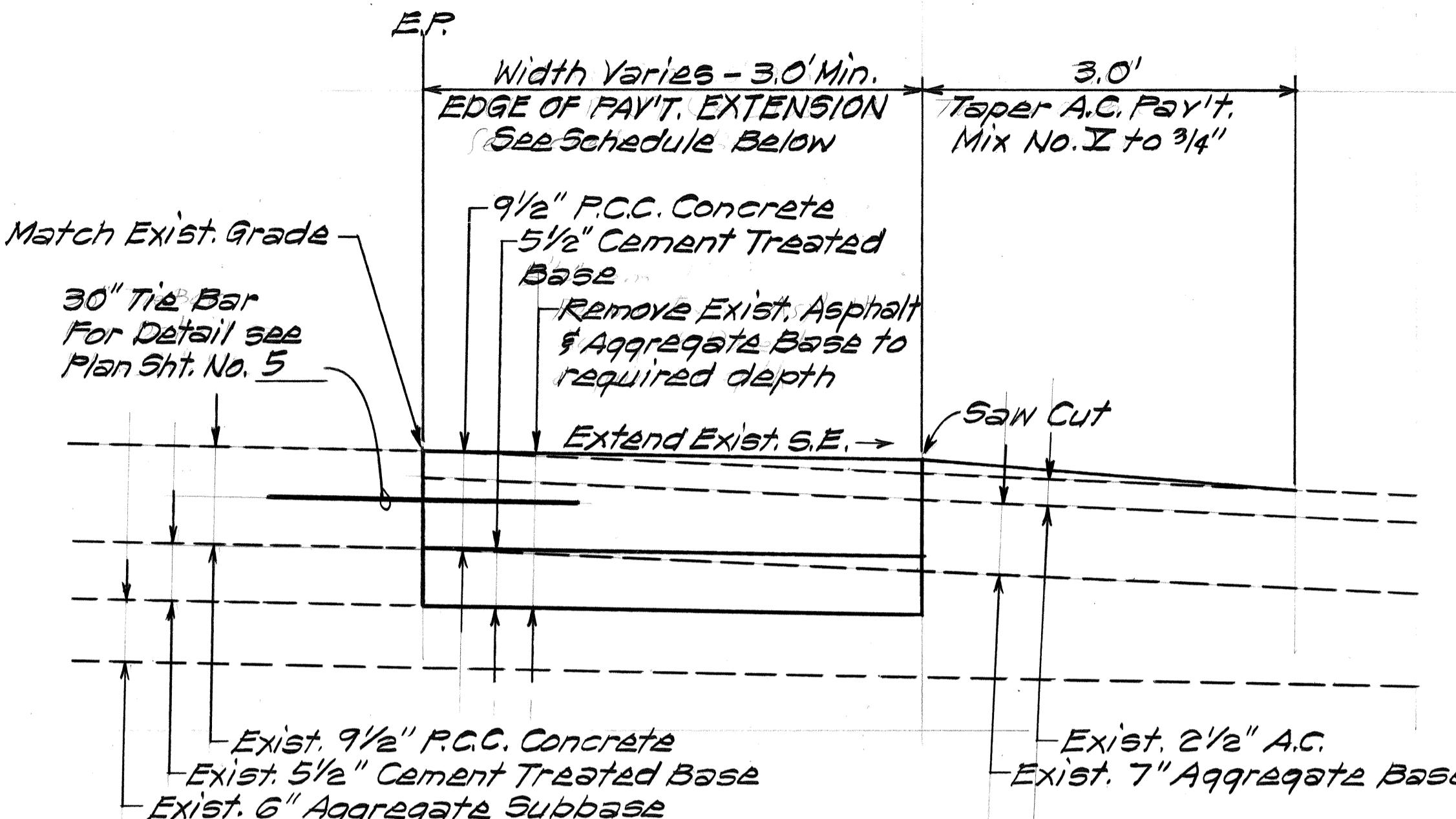
TYPICAL SECTION
H-2 ~ H-1 MERGE

INTERSTATE ROUTE H-1
ADDITIONAL LANES
F.A.I Proj. No. IR-HI-1(193)

Scale: As Shown Date: June, 1986
SHEET NO. 1A OF 7 SHEETS

CO. 35-1

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-HI-1(193)	1986	4	62



NOTE: AREAS A, B, C, D & E to be grooved. See Schedule Below.
Existing Raised Pavement Markers to be removed prior to grooving.

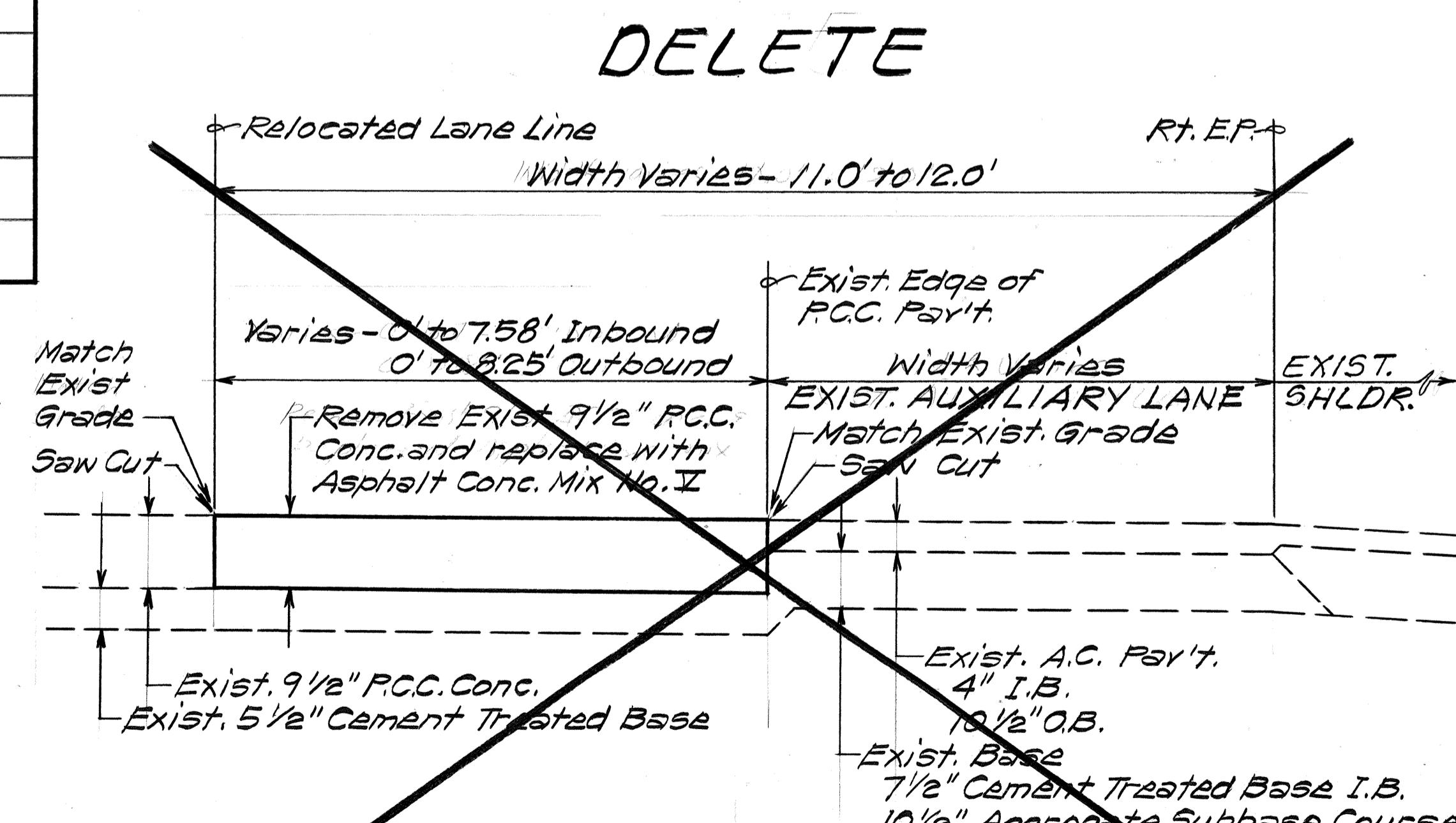
TYPICAL SECTION
GROOVING OF EXIST. P.C.C. PAV'T.
Not to Scale

NOTE: New P.C.C. Pavement to be longitudinally grooved.

TYPICAL SECTION
EXTENDING OUTSIDE E.P. WITH P.C.C. PAV'T.
Scale: 1" = 1'-0"

SCHEDULE FOR OUTSIDE E.P. EXTENSION	
LIMITS ~ STA. TO STA.	WIDTH
I.B. 168+90± - 171+00±	3'
" 171+00± - 172+92.20	Variety 3' to 6'-8"
" 172+92.20 - 174+90±	Variety 3'-8" to 3'
" 174+90± - 175+46±	3'
O.B. 170+70± - 172+60±	3'
" 172+60± - 173+03.58	Variety 3' to 6'
" 173+03.58 - 177+30±	3'

Triangular P.C.C. Taper Ends, # Sta. 172+89.20 to # Sta. 172+92.20 I.B. and # Sta. 173+00.58 to # Sta. 173+03.58 O.B., shall be saw cut perpendicular to the existing Edge of Pavement and removed prior to placement of new P.C.C. Pavement Extension.



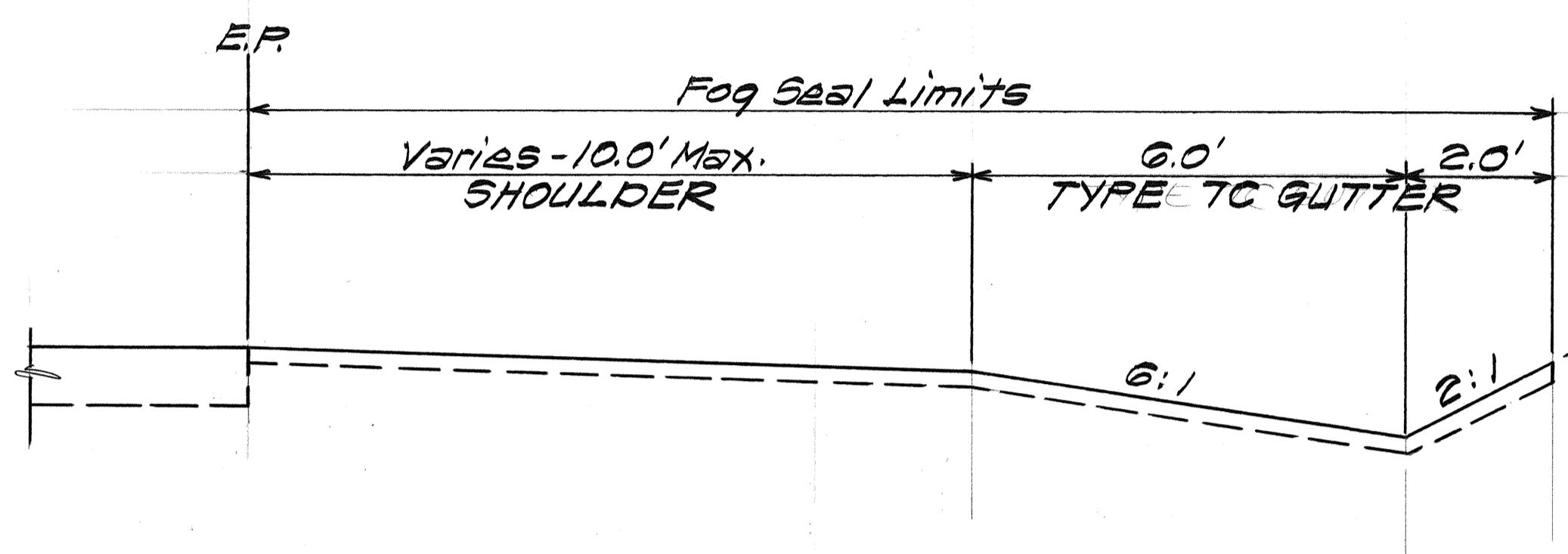
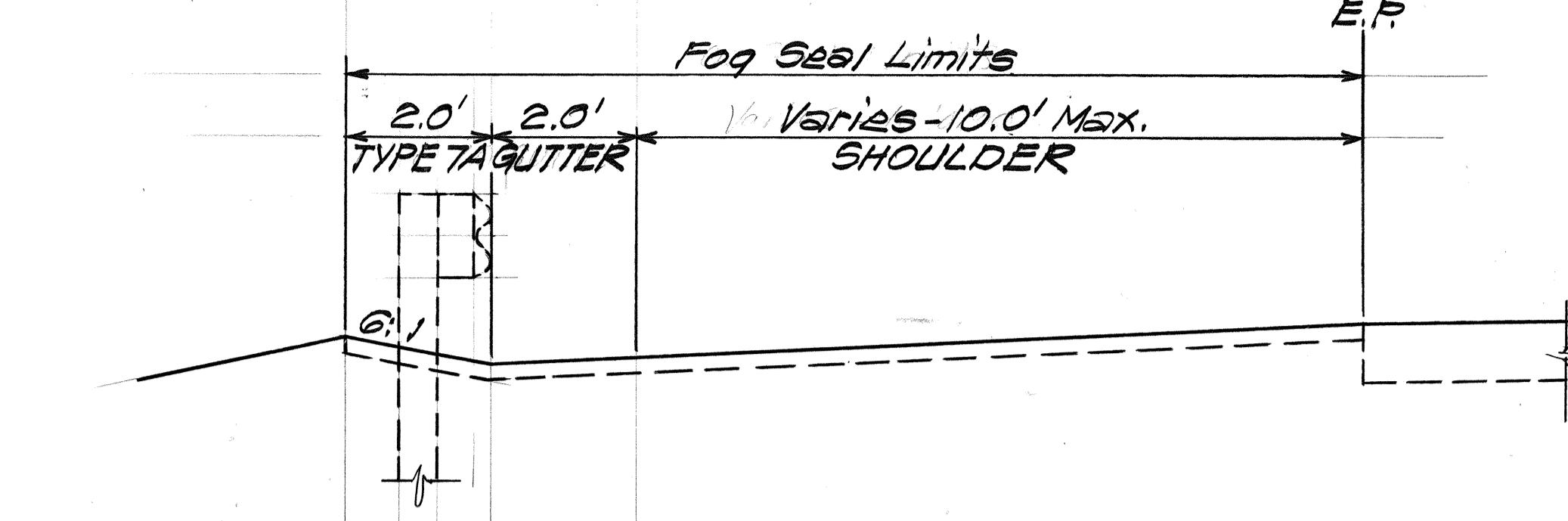
TYPICAL SECTION
REPLACEMENT OF P.C.C. PAV'T. IN OUTSIDE LANE
I.B. & O.B. # STA. 97+00± to # STA. 102+44±
Scale: 3/4" = 1'-0"

LIMITS ~ STA. TO STA.	GROOVING WIDTH IN FEET					TOTAL AREA (S.Y.)
	AREA A	AREA B	AREA C	AREA D	AREA E	
I.B. 3+79± - 62+67±	7.5	1	1	1	0	6867
" 75+10± - 102+44±	0.5	1	1	1	0	1063
" 111+04± - 123+74±	7.5	1	1	1	0	1481
" 123+74± - 144+84±	0.5	1	1	1	0	821
" 149+64± - 162+70±	0.5	1	1	1	0	508
" 168+70± - 175+46±	0.5	1	1	1	0.5	300
O.B. 111+04± - 123+74±	7.5	1	1	1	0	1481
" 123+74± - 144+84±	0.5	1	1	1	0	821
" 149+64± - 170+70±	0.5	1	1	1	0	819
" 170+70± - 177+30±	0.5	1	1	1	0.5	293
I.B. 63+17± - 72+22±	0.5	1	1	1	0	352
I.B. 72+22± - 75+10±	7.5	1	1	1	0	336
TOTAL						15,142

DATE	REVISION
9/3/86	Deleted Typical Section - Replacement of P.C.C. Pav't. in Outside Lane. Revised Schedule for Grooving Exist. P.C.C. Pav't.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
TYPICAL SECTION & SCHEDULES
PCC PAVEMENT ~ EXTENSION,
REPLACEMENT & GROOVING
INTERSTATE ROUTE H-1
ADDITIONAL LANES
F.A.I. Proj. No. IR-HI-1(193)
Scale: As Shown Date: Aug. 1985
SHEET NO. 2 OF 7 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-HI-1(193)	1986	5	62



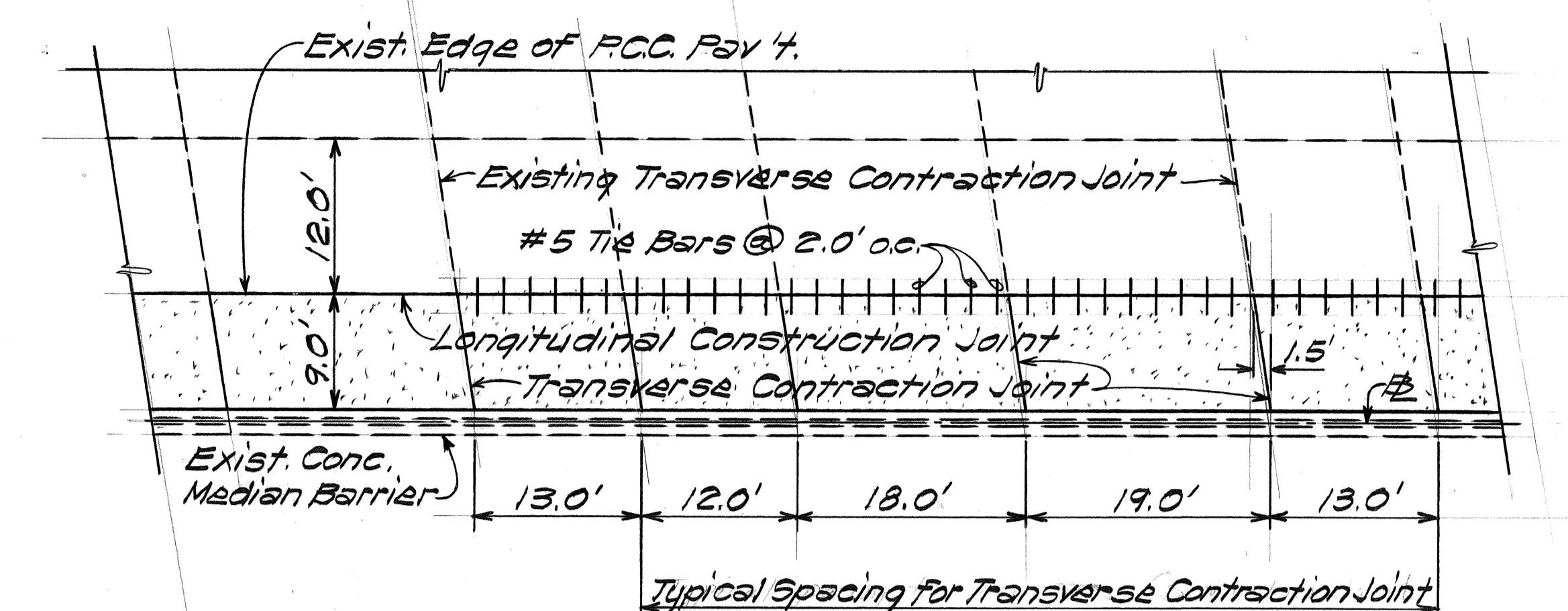
FOG SEAL TREATMENT OF A.C. SHOULDER & GUTTERS DETAILS

Scale: $\frac{1}{2}'' = 1'-0''$

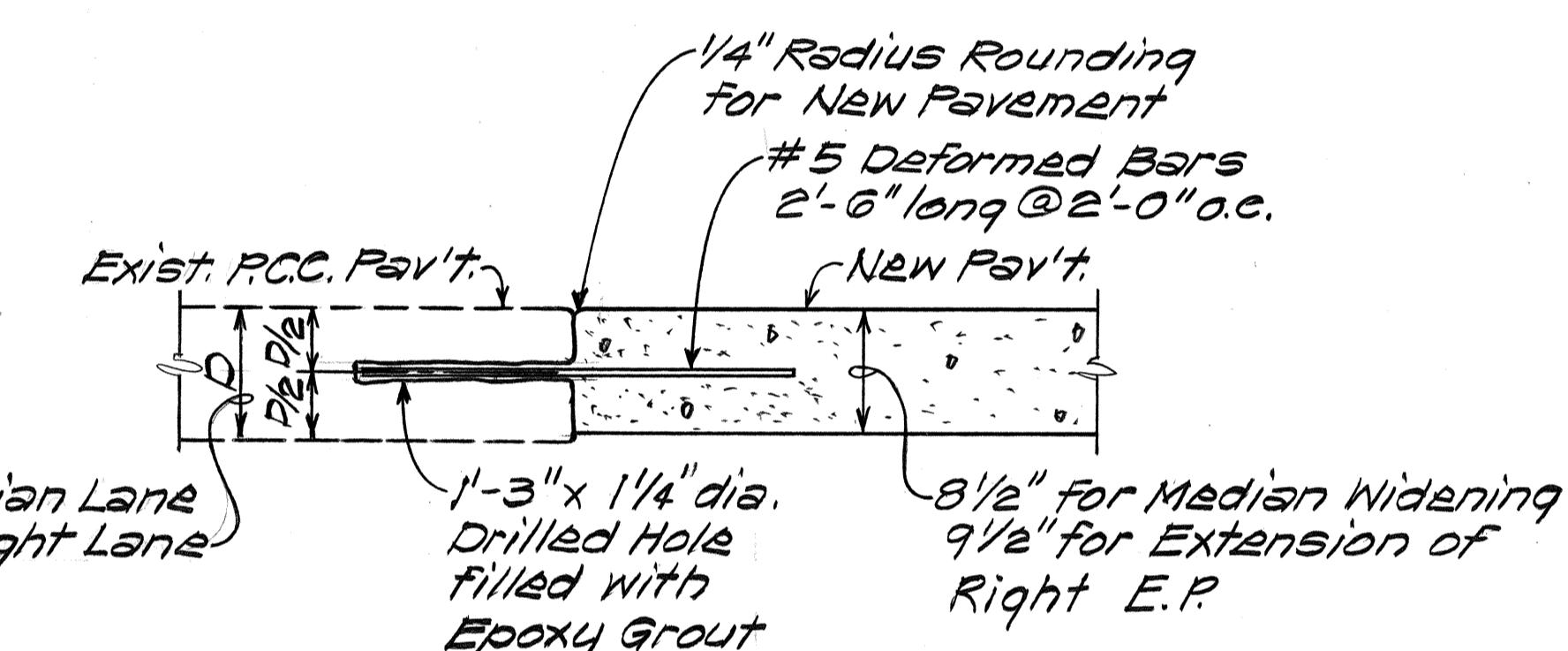
FOG SEAL TREATMENT OF A.C. SHOULDER & GUTTERS SCHEDULE

LIMITS ~ # STA. TO # STA.	SHLDR. WIDTH (in. FT)	GUTTER TYPE	LENGTH X WIDTH (FT. X FT.)	AREA (sq. ft.)
I.B. 76+00± - 91+00±	10	7A	1500 x 14.1	21,150
" 91+00± - 101+00±	10	7C	1000 x 18.3	18,300
" 101+00± - 102+44±	10	7A	144 x 14.1	2,030
" 124+00± - 144+84±	10	7C	2084 x 18.3	38,137
" 149+64± - 162+70±	10	7C	1306 x 18.3	23,900
" 168+70± - 175+46±	* Varies	7C	-	9,317
" 175+46± - 183+50±	6	7A	804 x 10.1	8,120
" 185+00± - 189+00±	6	7A	400 x 10.1	4,040
O.B. 124+00± - 144+84±	10	7C	2084 x 18.3	38,137
" 149+64± - 151+00±	10	7A	136 x 14.1	1,918
" 151+00± - 163+00±	10	7C	1200 x 18.3	21,960
" 163+00± - 170+70±	10	7A	770 x 14.1	10,857
" 170+70± - 173+04±	Varies 7 to 5	7C	234 x 14.3	3,346
" 173+04± - 177+50±	5	7C	446 x 13.3	5,932
" 177+50± - 187+50±	Varies 8 to 6	7A	1000 x 11.1	1,110
TOTAL				208,244

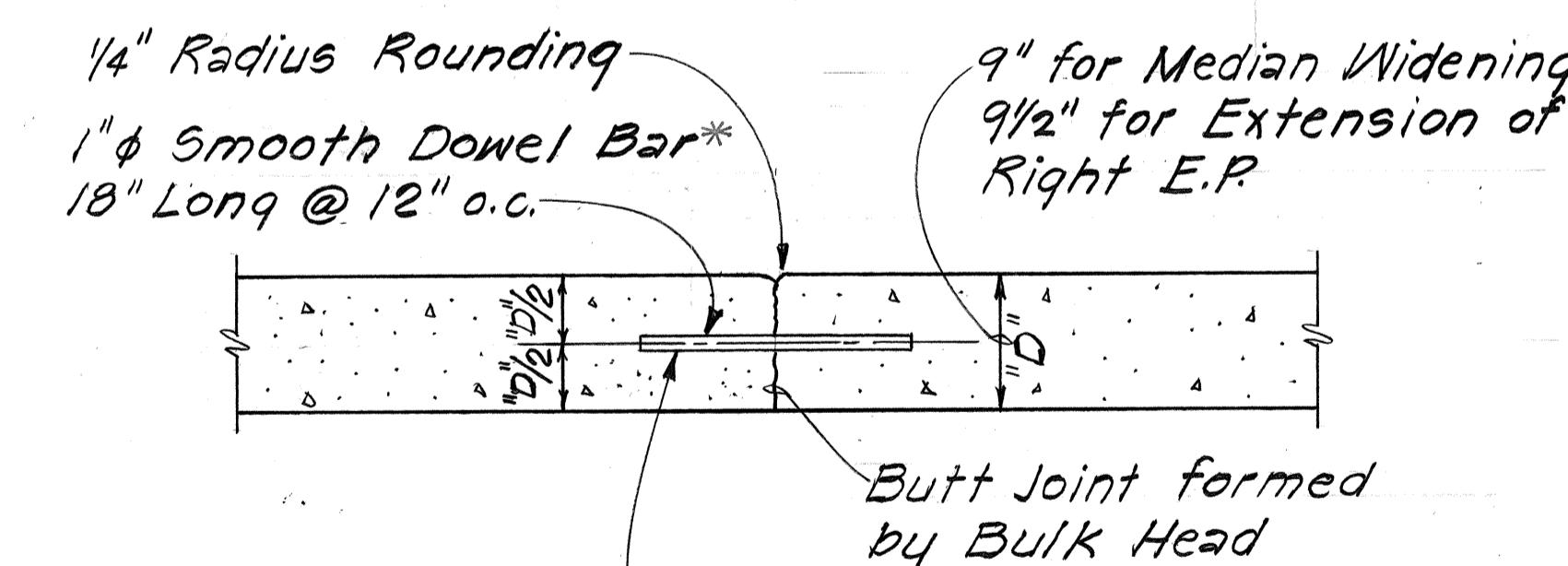
* See Schedule for Right E.P. Extension on Plan Sht. No. 4



NOTE: All work symmetrical about $\frac{1}{2}$.
TYPICAL JOINT LOCATION AND LAYOUT PLAN
Scale: $1'' = 10'$

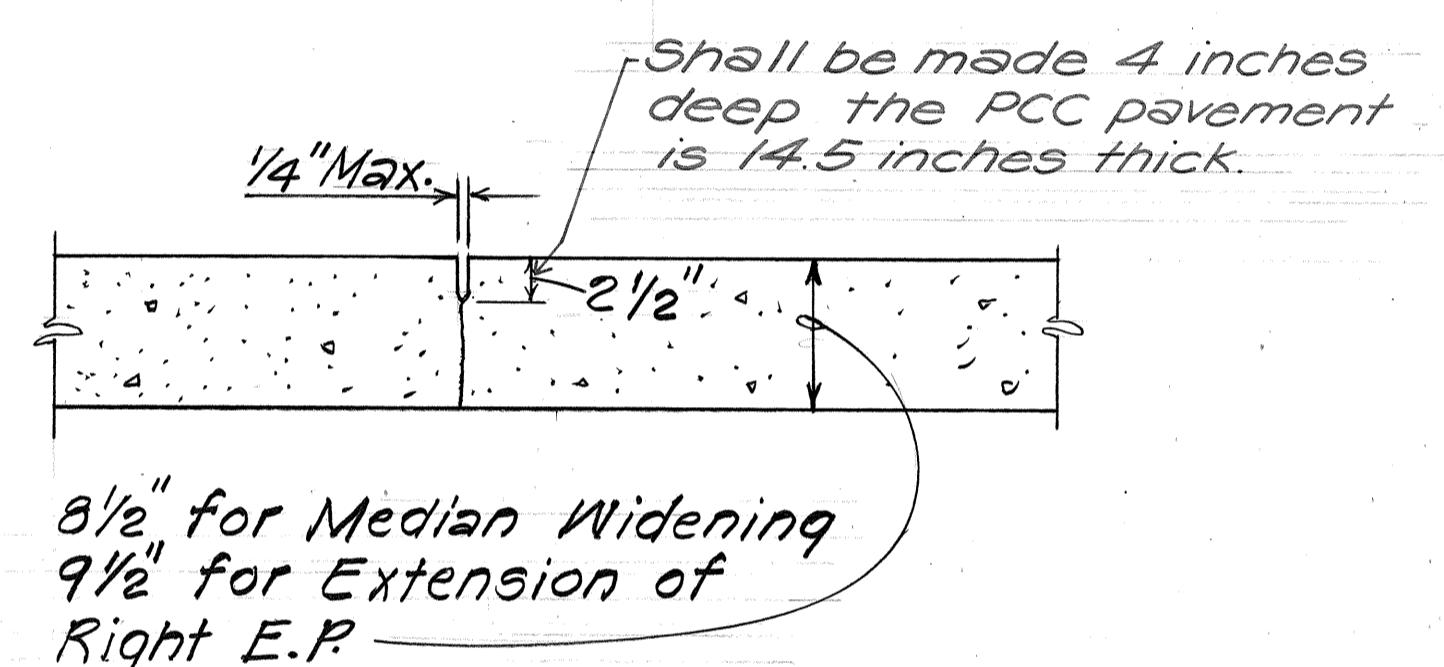


LONGITUDINAL CONSTRUCTION JOINT
Scale: $1'' = 1'-0''$



Dowels shall be positioned in place parallel to the pavement surface prior to paving and the ends of the Dowels shall not deviate more than 0.02' from the parallel.

TRANSVERSE CONSTRUCTION JOINT
Scale: $1'' = 1'-0''$



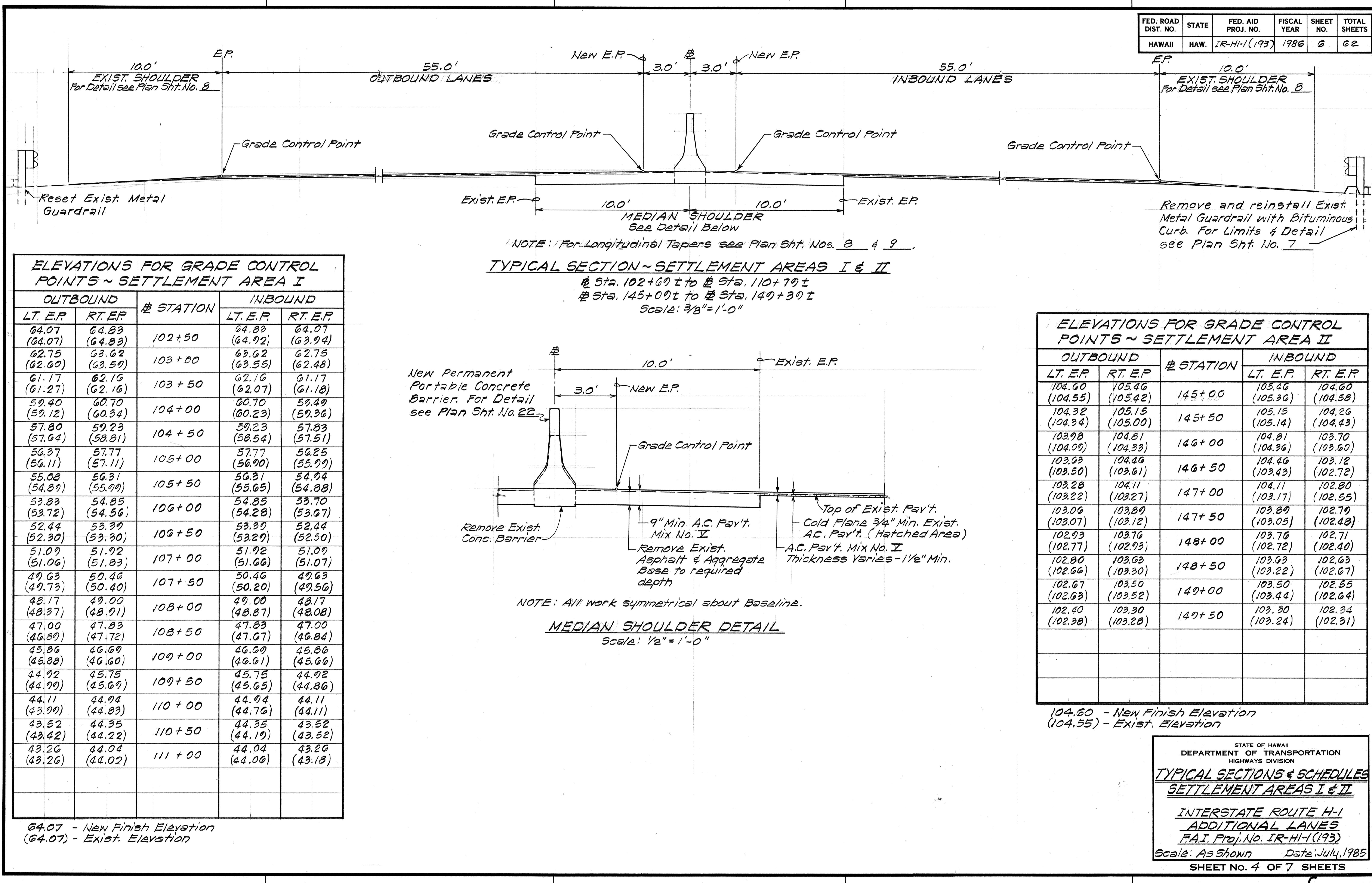
TRANSEVERSE CONTRACTION JOINT

SAWED JOINT
Scale: $1'' = 1'-0''$

*NOTE:
A3G-81A 1-inch smooth dowel bars used in lieu of ASTM-G15 1-inch smooth dowel bars.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
DETAILS & SCHEDULE
FOG SEAL &
PCC PAVEMENT JOINTS
INTERSTATE ROUTE HI-1
ADDITIONAL LANES
FAI Proj. No. IR-HI-1(193)
Scale: As Shown Date: Sept, 1985
SHEET NO. 3 OF 7 SHEETS

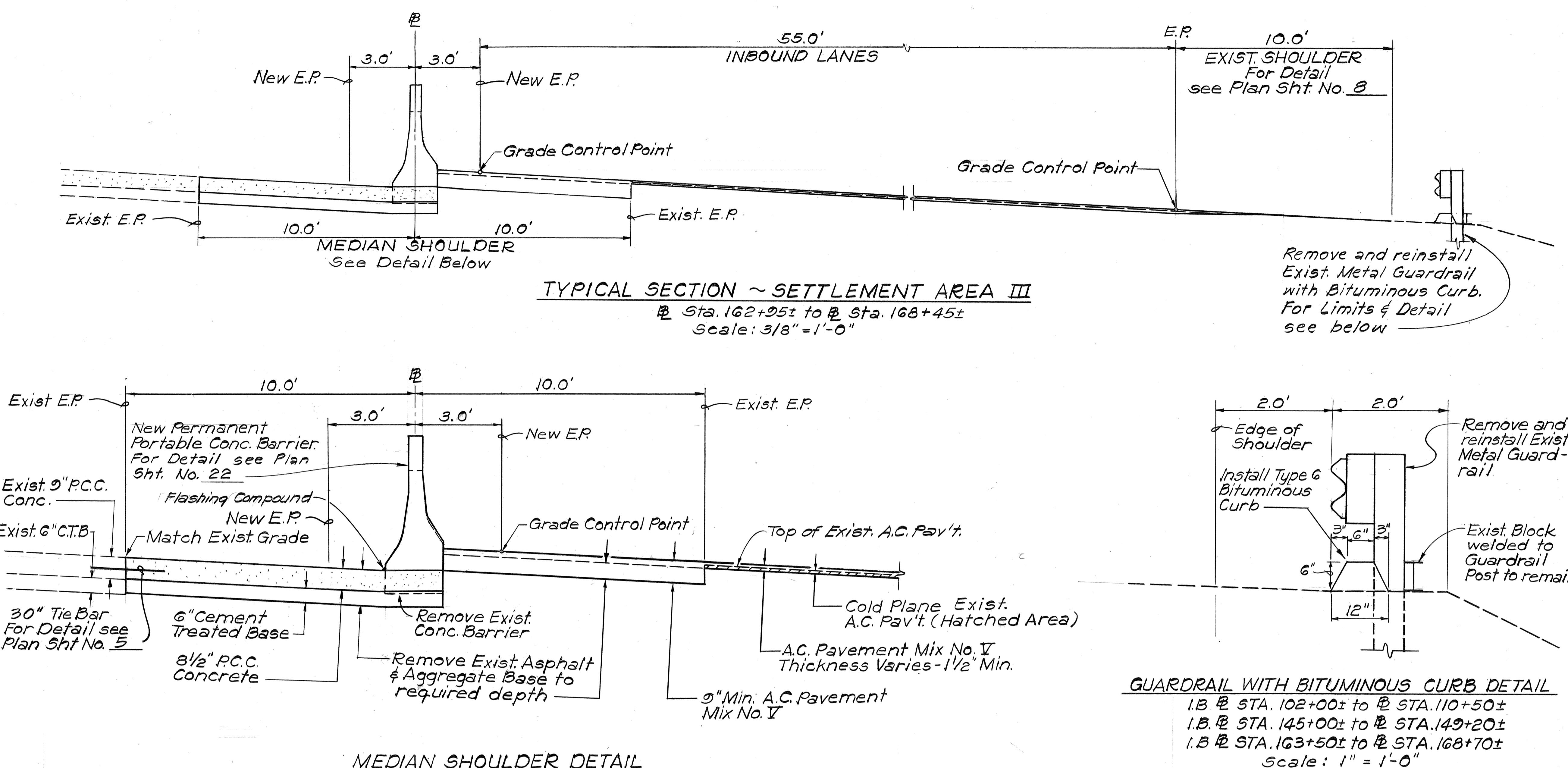
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-HI-1(193)	1986	6	62



ORIGINAL PLOTTED BY _____
DRAWN BY _____
DESIGNED BY _____
QUANTIFIED BY _____
CHECKED BY _____
NO. _____

64.07 - New Finish Elevation
(64.07) - Existing Elevation

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-HI-1(193)	1986	7	62



GUARDRAIL WITH BITUMINOUS CURB DETAIL

1.B. B STA. 102+00± to B STA. 110+50±
 1.B. B STA. 145+00± to B STA. 149+20±
 1.B. B STA. 163+50± to B STA. 168+70±
 Scale: 1" = 1'-0"

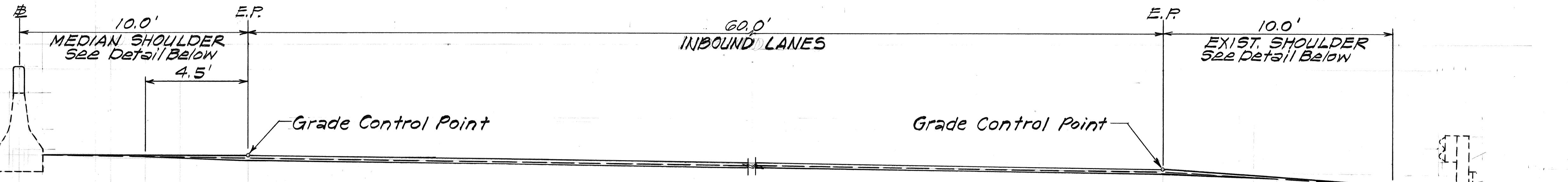
96.86 - New Finish Elevation
 (96.67) - Exist. Elevation

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
<u>TYPICAL SECTIONS & SCHEDULE</u>	
<u>SETTLEMENT AREA III</u>	
INTERSTATE ROUTE H-1	ADDITIONAL LANES
FA.I. Proj. No. IR-HI-1(193)	Scale: As Shown Date: July, 1986
SHEET NO. 5 OF 7 SHEETS	ADD. 7

ORIGINAL PLAN
SURVEY PLOTTED BY _____
DRAWN BY _____
TRACED BY _____
DESIGNED BY _____
QUANTITIES BY _____
CHECKED BY _____
NOTE BOOK NO. _____

1/7/86	Revised Typical Section.
DATE	REVISION

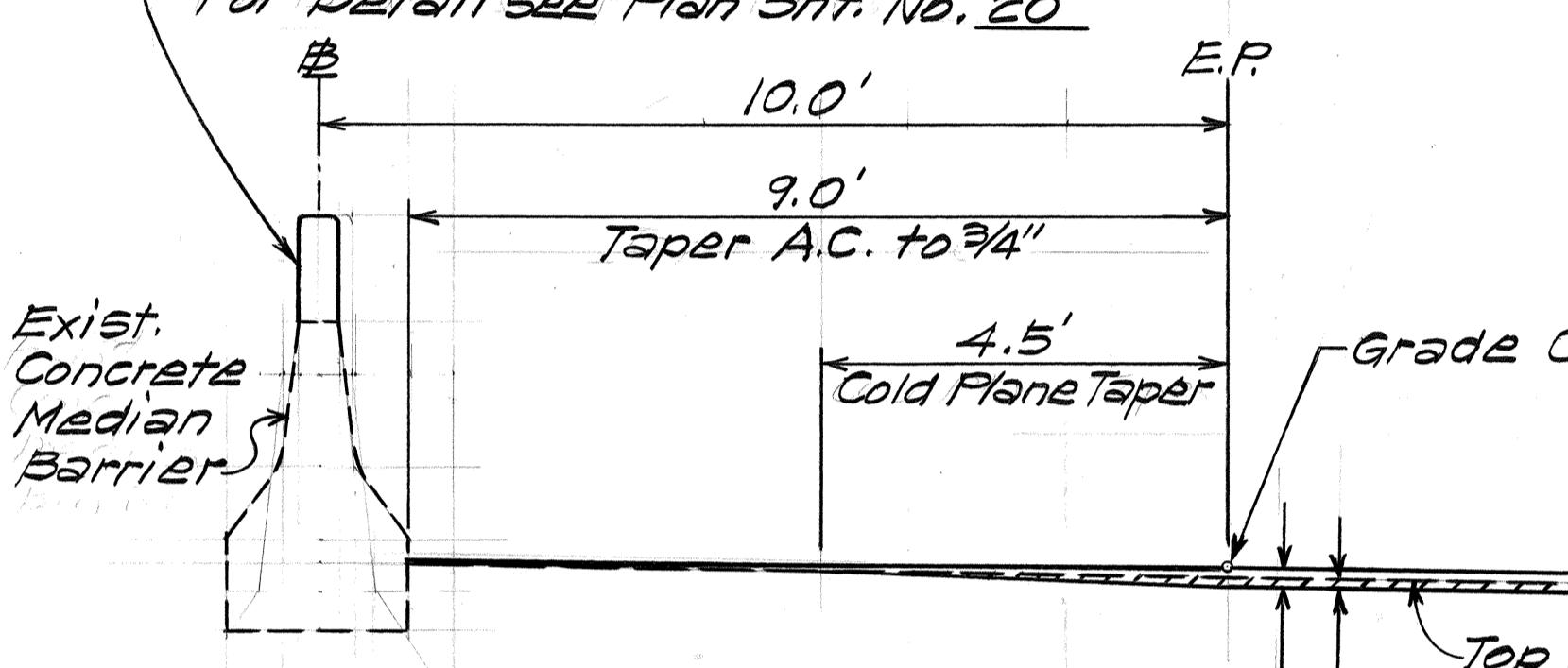
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-HI-1(193)	1986	8	62



TYPICAL SECTION ~ SETTLEMENT AREA IV

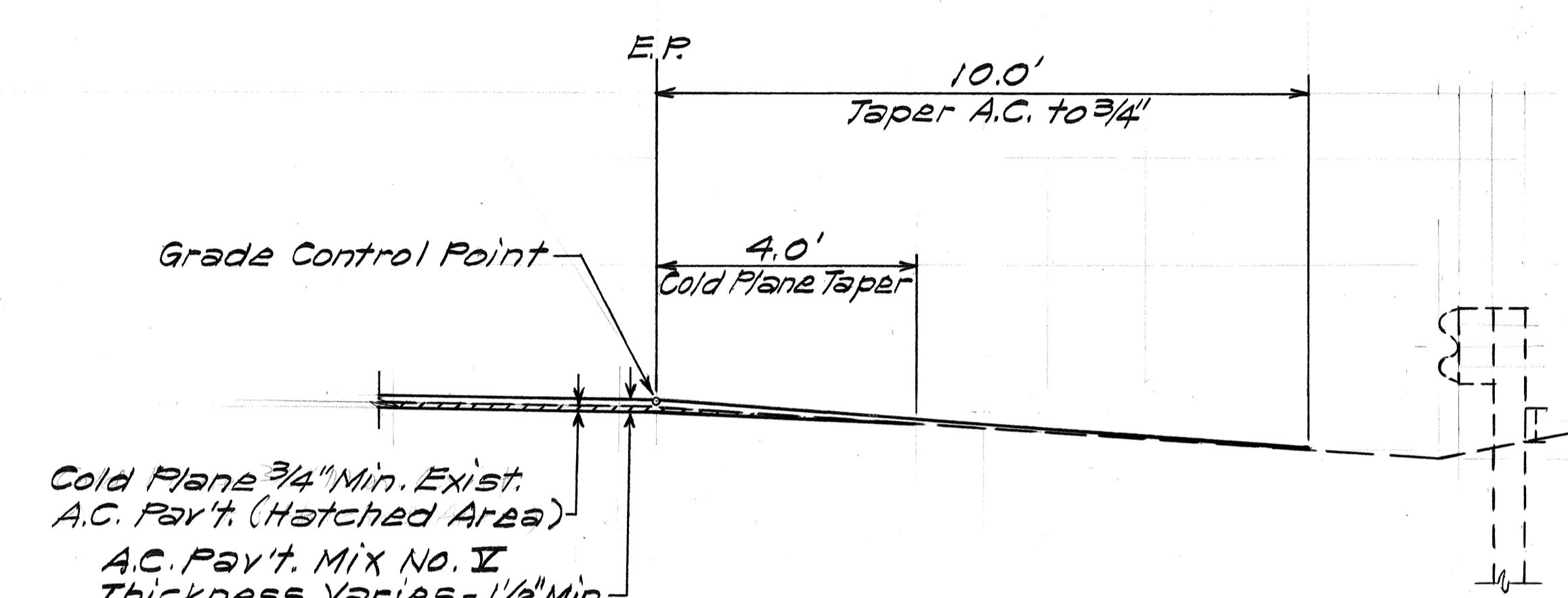
I.B. # Sta. 183+75± to # Sta. 184+75±
Scale: 3/8" = 1'-0"

Cone. Glare Screen on
Exist. Median Barrier
For Detail see Plan Sht. No. 20



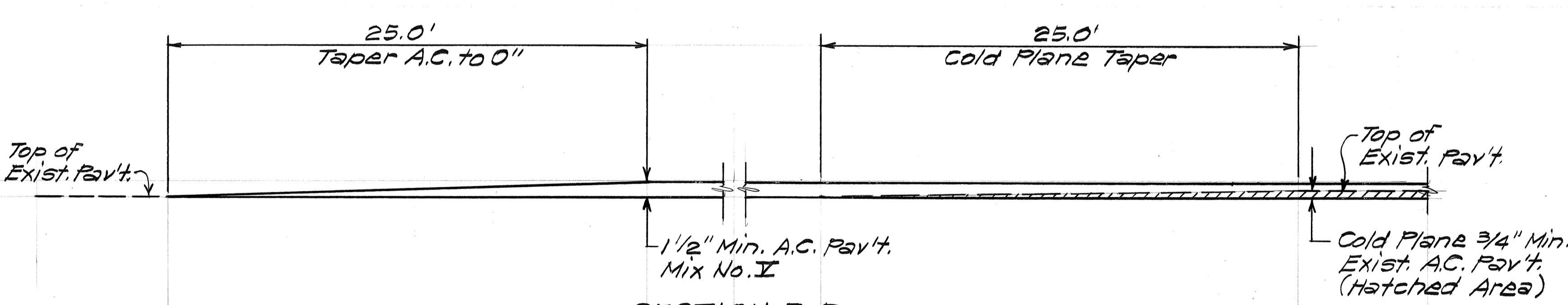
MEDIAN SHOULDER DETAIL

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



TYPICAL SHOULDER DETAIL

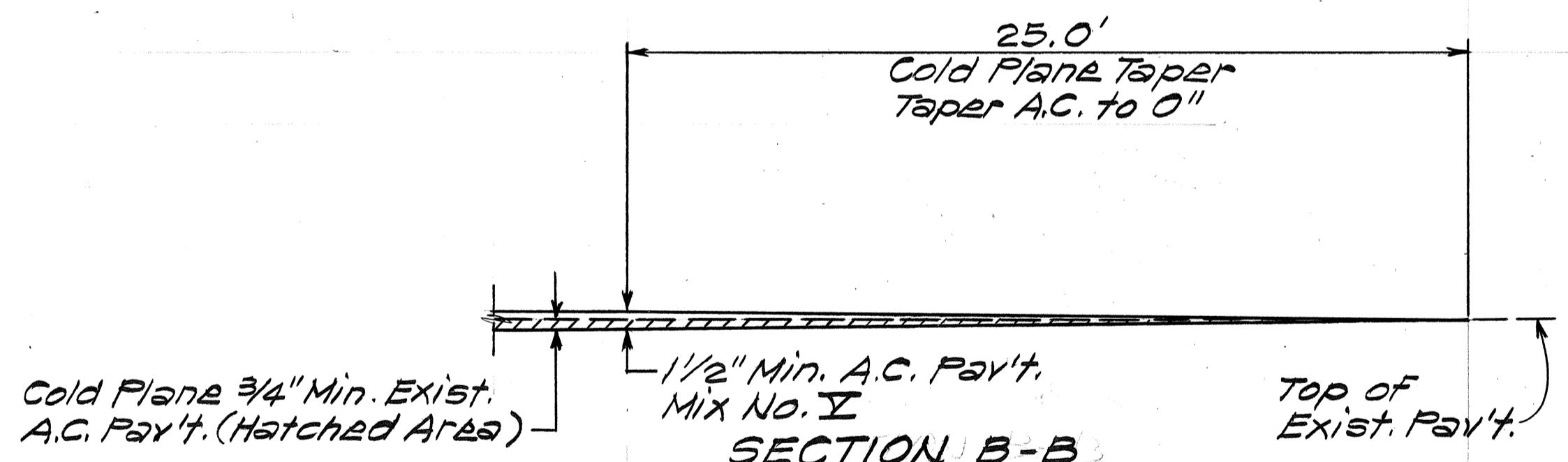
Scale: 1/2" = 1'-0"



SECTION B-B

LONGITUDINAL TAPER ~ TYPE 1

I.B. # O.B. # Sta. 102+44± to # Sta. 102+69±
I.B. # O.B. # Sta. 144+84± to # Sta. 145+09±
I.B. # Sta. 149+39± to # Sta. 149+64±
I.B. # Sta. 183+50± to # Sta. 183+75±
Not to Scale



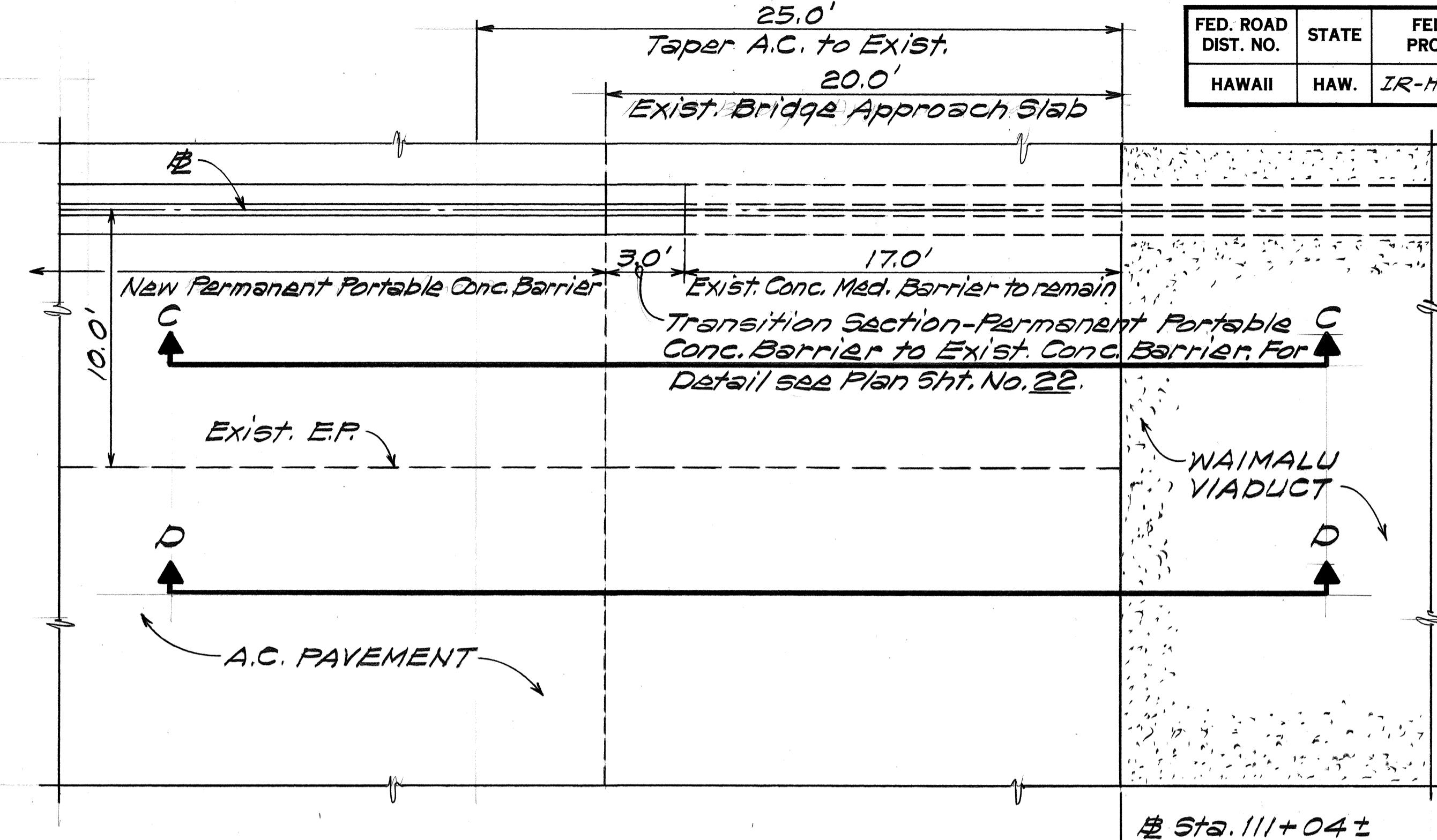
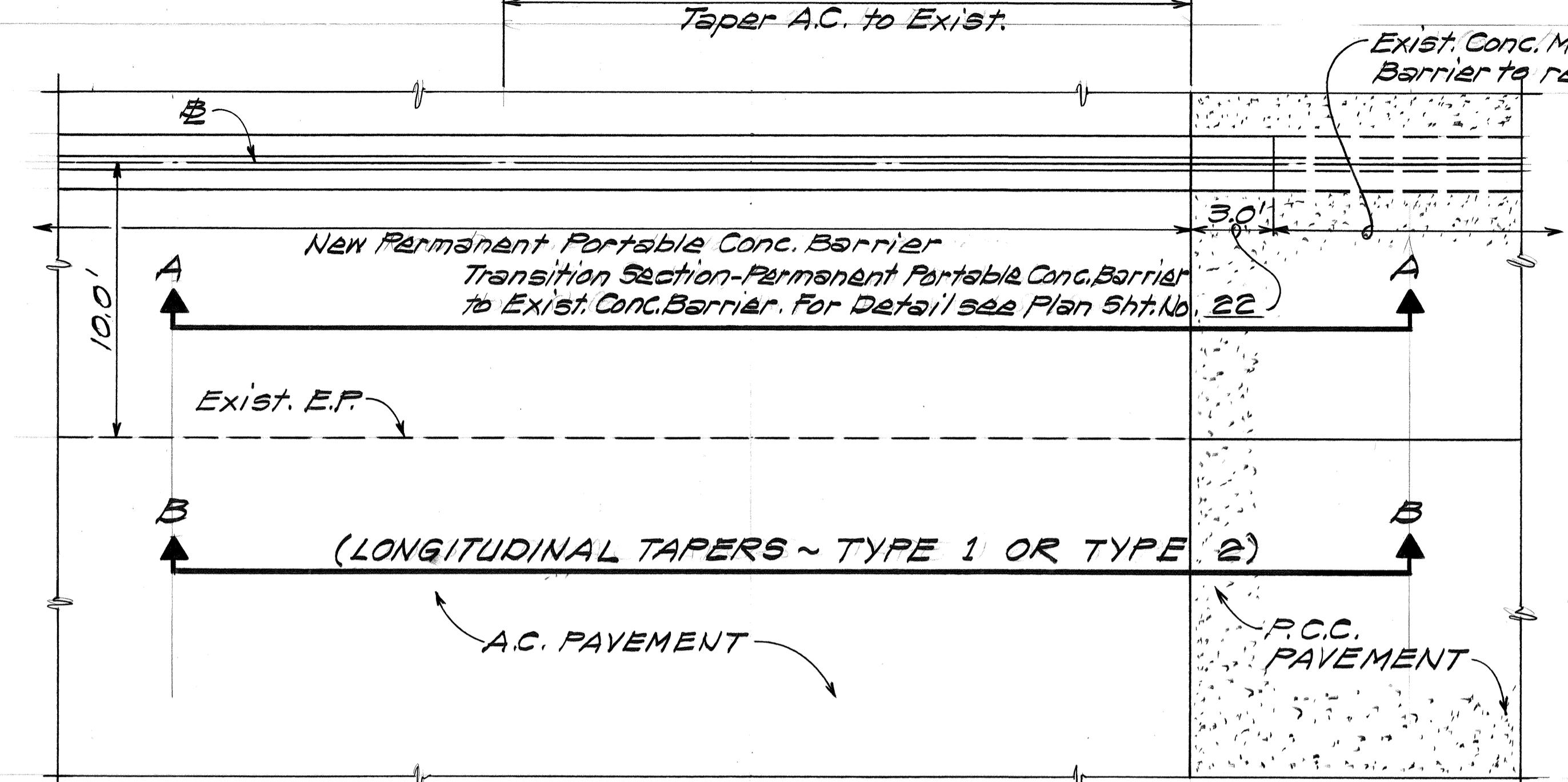
LONGITUDINAL TAPER ~ TYPE 2

O.B. # Sta. 149+39± to # Sta. 149+64±
I.B. # Sta. 162+70± to # Sta. 162+95±
I.B. # Sta. 168+45± to # Sta. 168+70±
I.B. # Sta. 184+75± to # Sta. 185+00±
Not to Scale

ORIGINAL PLAN
SURVEY PLOTTED BY
DRAWN BY
DESIGNED BY
QUANTIFIED BY
CHECKED BY
NOTE BOOK NO.

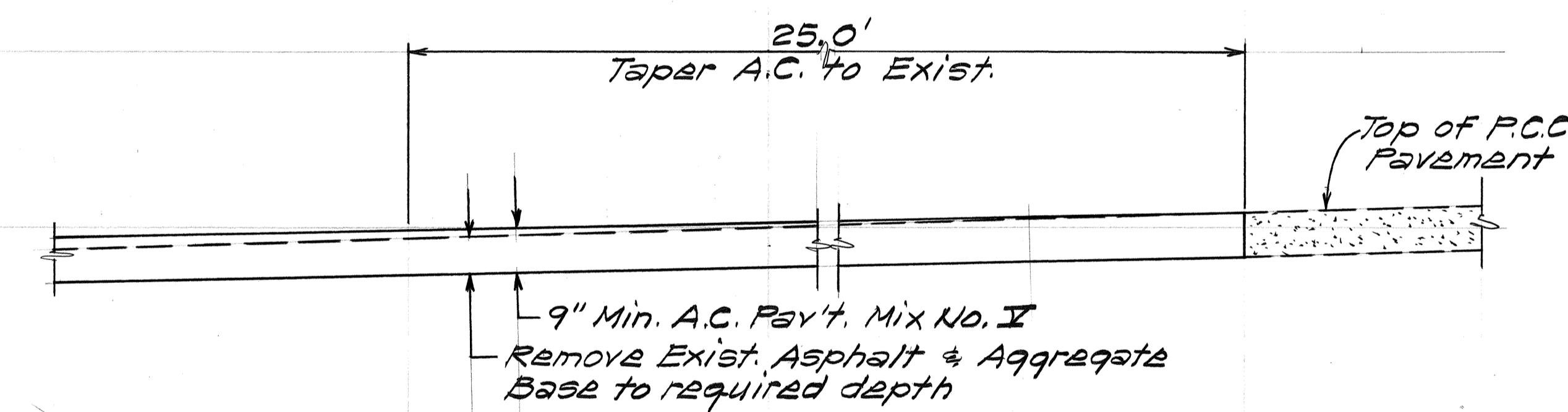
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
TYPICAL SECTIONS & SCHEDULE
FOR SETTLEMENT AREA IV &
LONGITUDINAL TAPER DETAILS
INTERSTATE ROUTE H-1
ADDITIONAL LANES
F.A.I. Proj. No. IR-HI-1(193)
Scale: As Shown Date: July 1, 1985
SHEET NO. 6 OF 7 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-HI-1(193)	1985	9	62



PARTIAL PLAN ~ LONGITUDINAL TAPER

I.B. & O.B. # Sta. 102+44± to # Sta. 102+69±
 I.B. & O.B. # Sta. 144+84± to # Sta. 145+09±
 I.B. & O.B. # Sta. 149+35± to # Sta. 149+60±
 I.B. # Sta. 162+70± to # Sta. 162+95±
 I.B. # Sta. 168+45± to # Sta. 168+70±
 Not to Scale



SECTION A-A

Not to Scale

SECTION B-B

For details see Plan Sht. No. 8.

LONGITUDINAL TAPER ~ TYPE 1

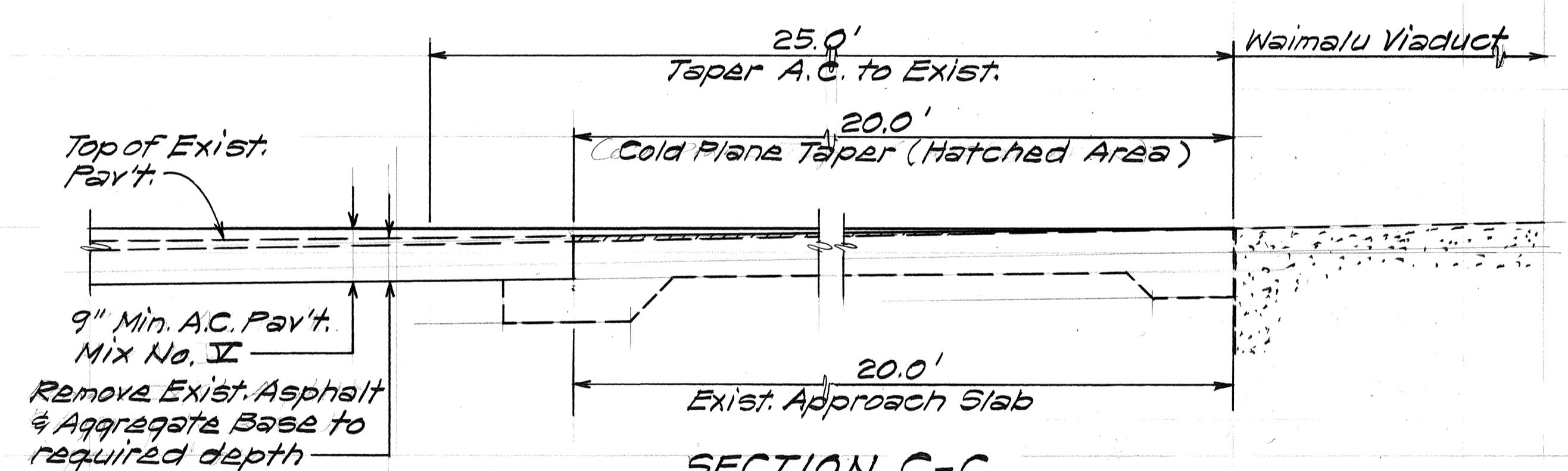
I.B. & O.B. # Sta. 102+44± to # Sta. 102+69±
 I.B. & O.B. # Sta. 144+84± to # Sta. 145+09±
 I.B. # Sta. 149+39± to # Sta. 149+64±

LONGITUDINAL TAPER ~ TYPE 2

O.B. # Sta. 149+39± to # Sta. 149+64±
 I.B. # Sta. 162+70± to # Sta. 162+95±
 I.B. # Sta. 168+45± to # Sta. 168+70±

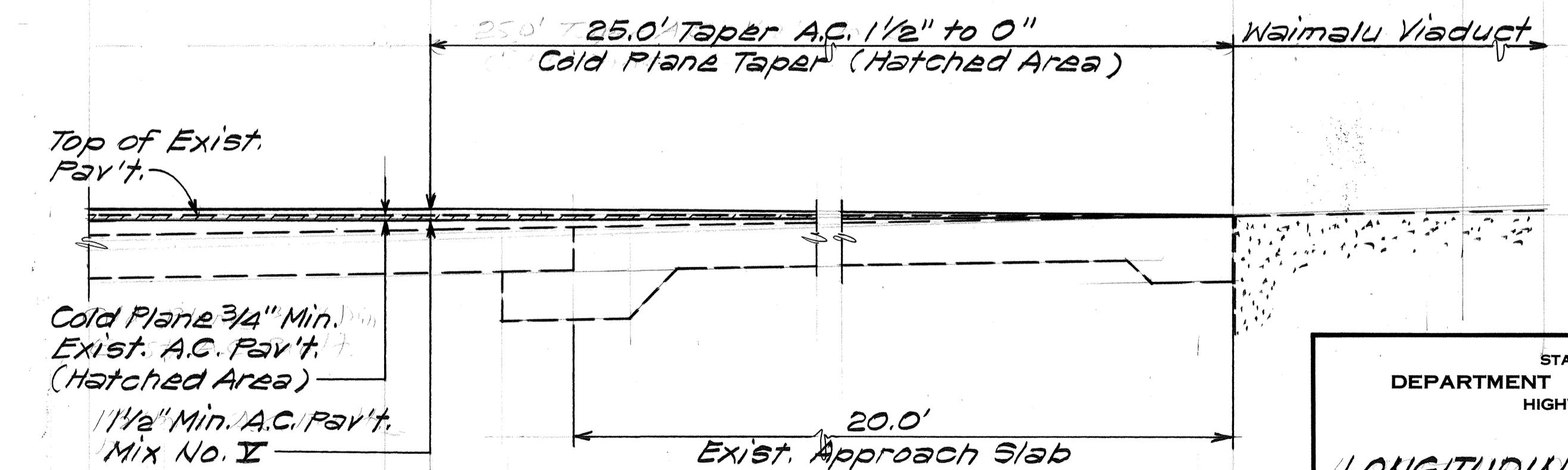
PARTIAL PLAN ~ LONGITUDINAL TAPER

I.B. & O.B. # Sta. 110+79± to # Sta. 111+04±
 Not to Scale



SECTION C-C

Not to Scale



SECTION D-D

Not to Scale

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

LONGITUDINAL TAPER DETAILS

INTERSTATE ROUTE H-1
 ADDITIONAL LANES
 FA.I. Proj. No. IR-HI-1(193)

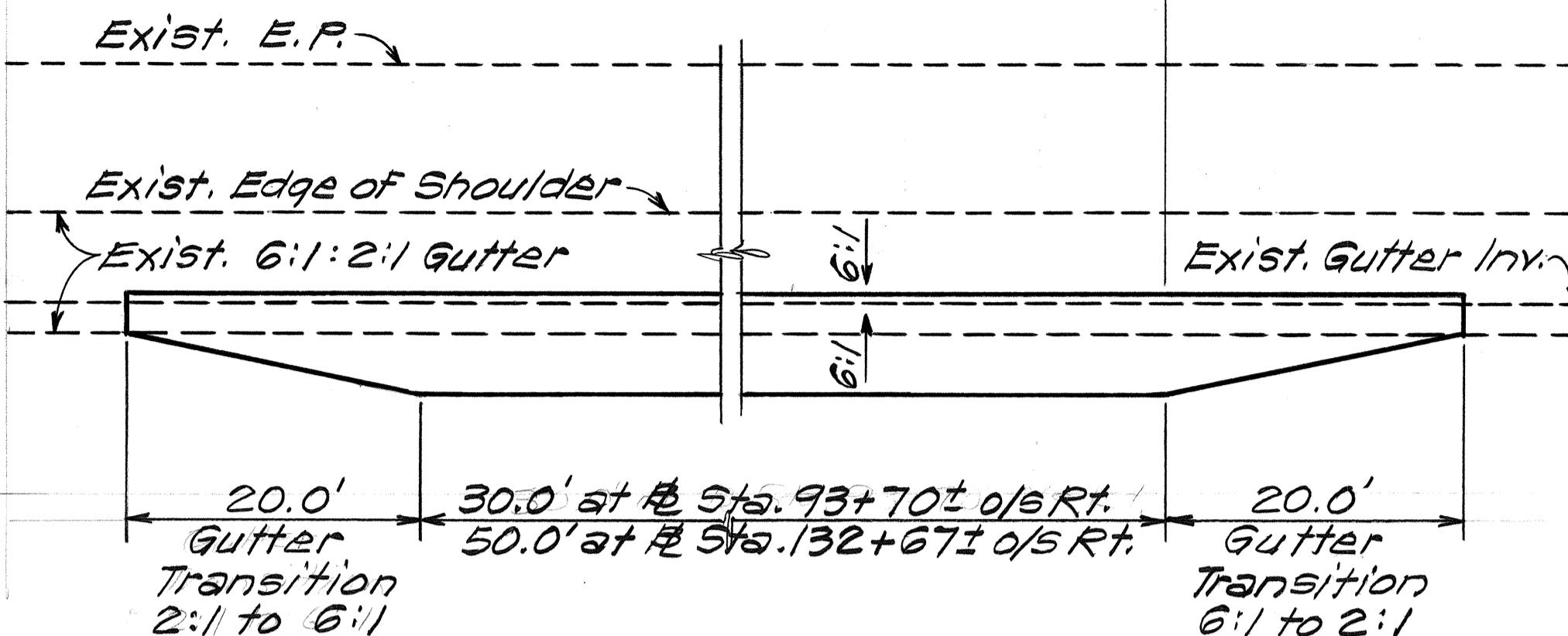
Not to Scale Date: July, 1985

SHEET NO. 7 OF 7 SHEETS

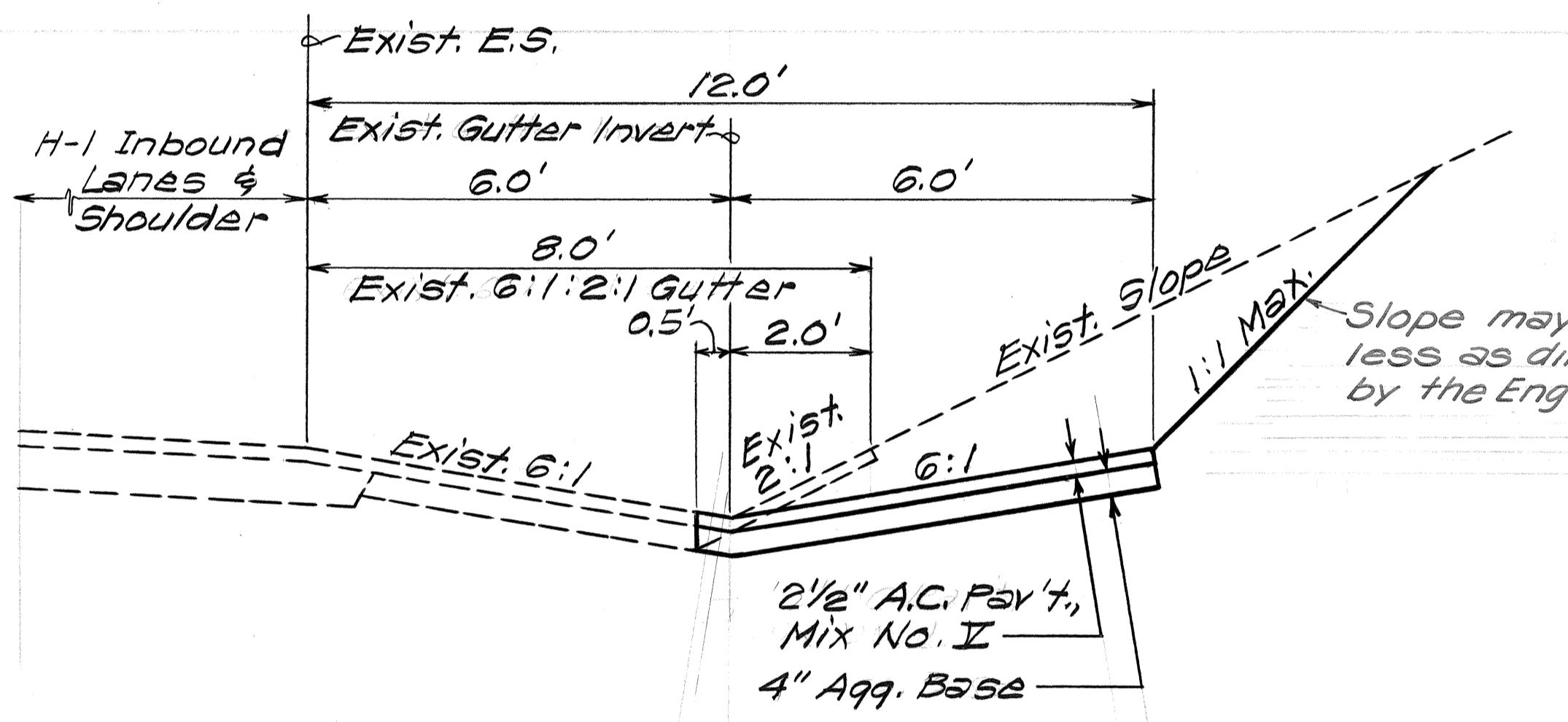
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-HI-1(193)	1988	C095-1	62

H-1 Inbound Lanes →

Sta. Reference



PLAN
Scale: 1" = 10'



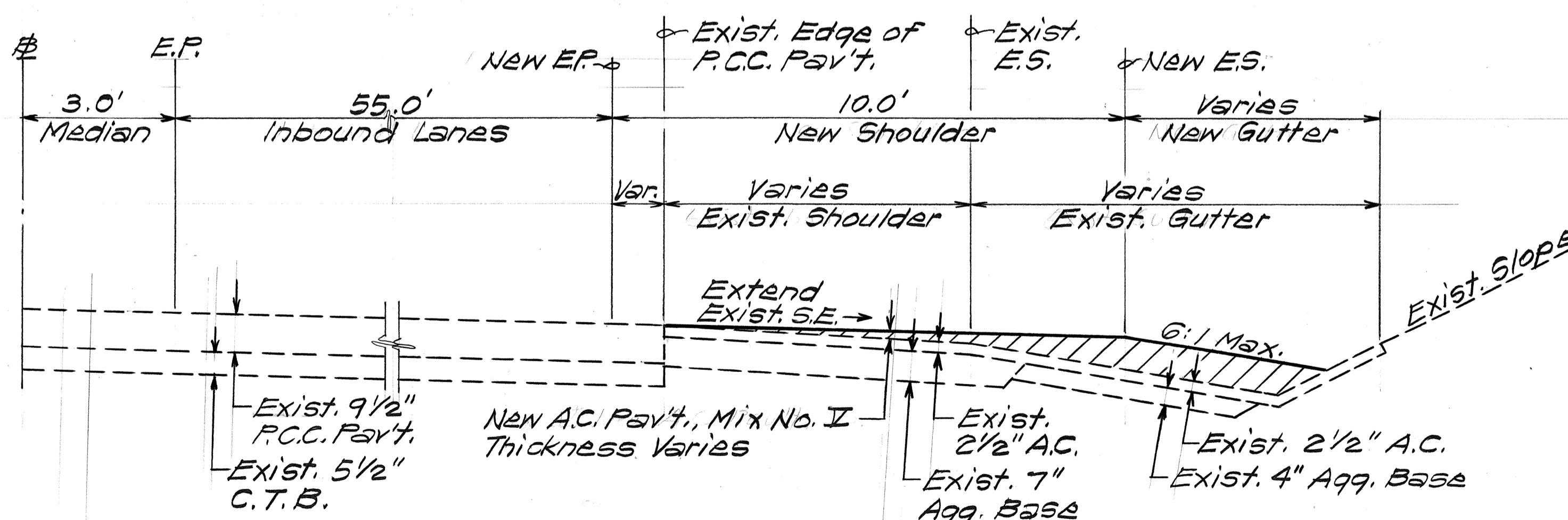
TYPICAL SECTION
Scale: ½" = 1'-0"

BITUMINOUS GUTTER MODIFICATION

STA. 93+70± 0/s RT.
STA. 132+67± 0/s RT.

BITUMINOUS GUTTER MODIFICATION

STA. 158+52± 0/s RT.
STA. 170+63± 0/s RT.



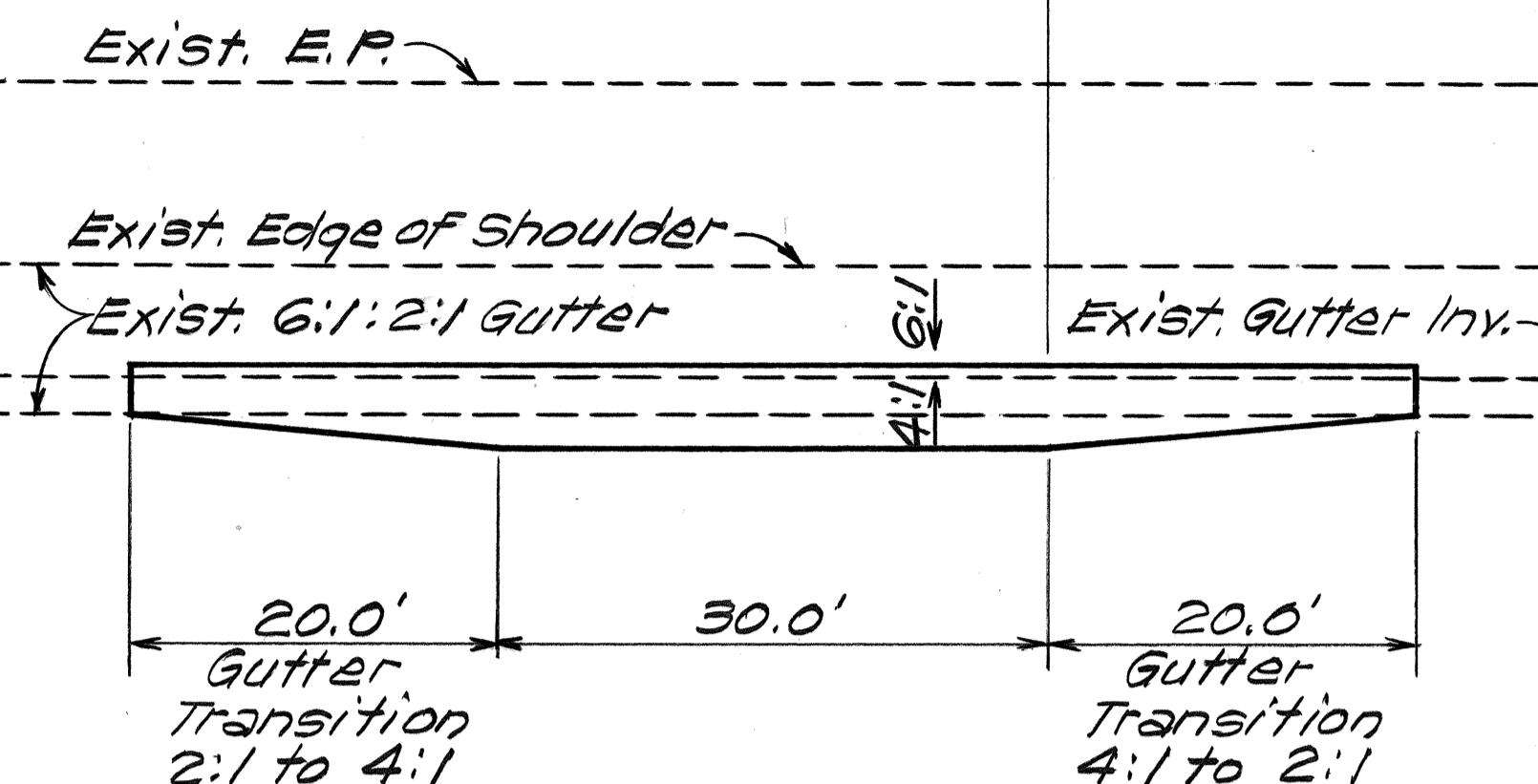
TYPICAL SECTION ~ SHOULDER MODIFICATION

STA. 171+25± 0/s RT.
STA. 173+25± 0/s RT.
Scale: ½" = 1'-0"

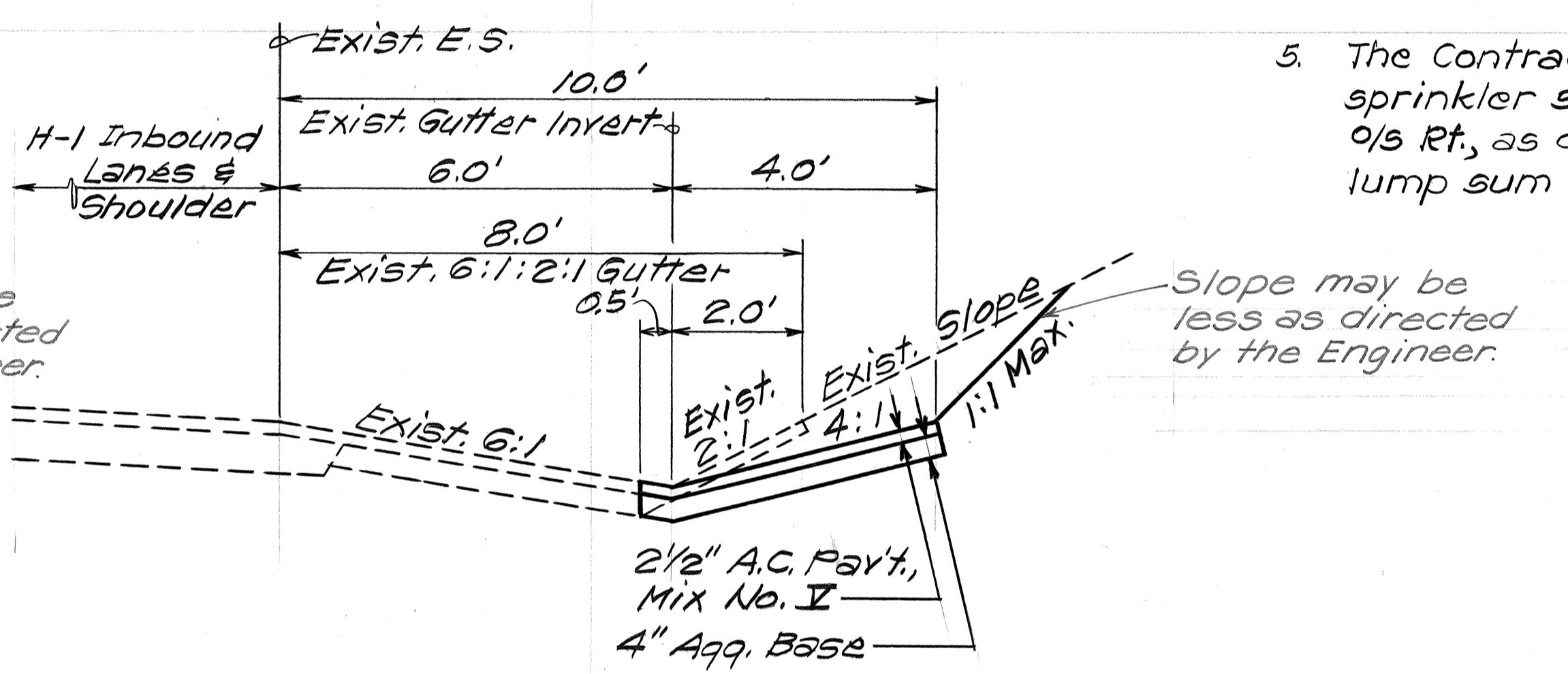
NOTES:

- The limits and locations of the Bituminous Gutter Modifications and Shoulder Modification as shown on the plans are approximate. The exact limits will be determined in the field by the Engineer.
- The new gutter for the Shoulder Modification, # Sta. 171+25± to # Sta. 173+25± 0/s RT, shall be paved to drain.
- At the four locations where the Bituminous Gutter Modifications are to be constructed, the Contractor shall install new highway lighting conduit and 2 cables, 18 inches below grade, as directed by the Engineer. This work shall be paid on a lump sum basis, complete in place.
2" PVC Conduit, Schedule 40 - 725 ± L.F.
#2 Cable - 1,400 ± L.F.
- The Contractor shall keep the highway lighting system operational during all hours of darkness.
- The Contractor shall cut and plug a portion of the existing sprinkler system at Bituminous Gutter Modification, # Sta. 170+63± 0/s RT, as directed by the Engineer. This work shall be paid on a lump sum basis.

H-1 Inbound Lanes →
Sta. Reference



PLAN
scale: 1" = 10'



TYPICAL SECTION
Scale: ½" = 1'-0"

ORIGINAL PLAN	SURVEY PLOTTED BY
NOTE BOOK	DRAWN BY
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPICAL SECTIONS AND NOTES

INTERSTATE ROUTE H-1
ADDITIONAL LANES
F.A.T. PROJ. NO. IR-HI-1(193)

Scale: As Shown Date: Oct. 1987
DATE REVISION SHEET NO. OF SHEETS

10/5/87 Added Typical Sections and Notes
for Inbound Shoulder Lane
DATE REVISION SHEET NO. OF SHEETS

C.O. 9S-1