

CONSTRUCTION PLAN FOR BRIDGE DECK REPAIR

BRIDGE NO. 02501
C.S.A.H. 24 OVER RUM RIVER AT
ST. FRANCIS.

BRIDGE NO. 02521
C.S.A.H. 3 (COON RAPIDS BLVD. BY-PASS)
OVER BURLINGTON NORTHERN P.R. IN
COON RAPIDS.

BRIDGE NO. 02522
C.S.A.H. 3 (COON RAPIDS BLVD. BY-PASS)
OVER EAST RIVER ROAD N.B. (C.S.A.H. 1)
IN COON RAPIDS.

BRIDGE NO. 02523
C.S.A.H. 2 OVER YARD TRACKS
AT NORTH TOWN.

SHT NO.	INDEX
1	TITLE SHEET
2	BR. NO. 02501 GENERAL PLAN # ELEV.
3	BR. NO. 02521 GENERAL PLAN # ELEV.
4	BR. NO. 02522 GENERAL PLAN # ELEV.
5	BR. NO. 02523 GENERAL PLAN # ELEV.
6	RECONSTRUCT EXP. JTS. TYPE 1
7	RECONSTRUCT EXP. JTS. TYPE 2
8	APPROACH OVERLAY # TAPER DETAILS
8	RECONSTRUCT EXP. JTS. TYPE 3
9	DRAIN DETAILS
9	WATERPROOF EXPANSION DEVICE
10	TRAFFIC CONTROL DETAILS

SCHEDULE OF QUANTITIES								
ITEM NO.	ITEM	UNIT	BRIDGE NO.				TOTAL	
			02501	02521	02522	02523		
2021.501	MOBILIZATION	LUMP SUM	1				1	
2101.501	CONCRETE, MIX NO. SPECIAL	CU. YD.	83	162	157	376	778	
0101.604	WEARING COURSE FINISH	SQ. FT.	11720 (P)	22800 (P)	21780 (P)	53834 (P)	110134 (P)	
2102.591	EXPANSION JT. DEVICES TYPE 2.5'	LIN. FT.	60			88	148 (P)	
2133.505	REMOVE SLAB TYPE 1	SQ. FT.	300	150	150	400	1000	
0433.601	SCARIFY BRIDGE DECK	SQ. FT.	11720 (P)	22800 (P)	21780 (P)	53834 (P)	110134 (P)	
0433.601	SCARIFY BITUM. APPROACH	SQ. FT.	1750	7200	7250	4400	20600	
0433.601	RECONSTRUCT EXP. JT. TYPE 1	LIN. FT.	60			88	148 (P)	
0433.601	RECONSTRUCT EXP. JT. TYPE 2	LIN. FT.		173	266		439 (P)	
0433.601	RECONSTRUCT EXP. JT. TYPE 3	LIN. FT.				88	88 (P)	
2361.504	ASPHALT CEMENT	TON	2	9	9	6	26	
2361.508	WEARING COURSE MIXTURE	TON	25	105	105	65	300	
0563.604	TEMPORARY LANE MARKING	LIN. FT.				7500	7500	
2102.501	PAVEMENT MARKING REMOVAL	SQ. FT.				2000	2000	
0564.626	TRAFFIC CONTROLS	LUMP SUM	1				1	
0563.623	TRAFFIC CONTROL	LUMP SUM	1				1	

CONSTRUCTION NOTES:

THE MINNESOTA DEPARTMENT OF TRANSPORTATION
"STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION"
1978 EDITION SHALL GOVERN.

NO REMOVAL WILL BE PERMITTED UNTIL THE REMOVAL
LIMITS HAVE BEEN OUTLINED BY THE CONTRACTOR
AND APPROVED BY THE ENGINEER. REMOVAL AND
RECONSTRUCTION SHALL CONFORM TO SPEC. 2433.

PROVIDE SAW CUT IN CONCRETE WEARING COURSE OVER ALL
CONSTRUCTION JOINTS IN EXISTING SLAB AND APPROACH
PANELS. SEAL WITH CONCRETE JOINT SEALER PER SPEC. 3123.

THE CONTRACTOR SHALL MAKE FIELD MEASUREMENTS AS
NECESSARY, PRIOR TO FABRICATION OF THE EXPANSION JOINT DEVICES
AND CURB OR RAIL PLATES, TO ASSURE PROPER FIT IN THE FINAL WORK.

APPROVED _____ DATE _____
COUNTY ENGINEER

I HEREBY CERTIFY THAT THIS PLAN WAS
PREPARED BY ME OR UNDER MY DIRECT
SUPERVISION AND THAT I AM A DULY
REGISTERED PROFESSIONAL ENGINEER
UNDER THE LAWS OF THE STATE OF
MINNESOTA.
Robert R. Linn
DATE 4.5.17 REG. NO. 4311 ENGINEER

PLANS PREPARED BY
ERICKSON ENGINEERING CO.
3340 REPUBLIC AVE.
ST. LOUIS PARK, MINNESOTA 55426

TITLE SHEET	DES: _____	DR: R.H.	APPROVED: _____	BRIDGE NO. 02501
	CHK: _____	CHK: _____		02521
	SHEET NO. 1 OF 10 SHEETS			02522
				02523

CONSTRUCTION PLAN FOR BRIDGE DECK REPAIR

BRIDGE NO. 02501
C.S.A.H. 24 OVER RUM RIVER AT
ST. FRANCIS.

BRIDGE NO. 02521 C.S.A.H. 3 (COON RAPIDS BLVD. BY-PASS) OVER BURLINGTON NORTHERN R.F. IN COON RAPIDS.
BRIDGE NO. 02522 C.S.A.H. 3 (COON RAPIDS BLVD. BY-PASS) OVER EAST RIVER ROAD N.B. (C.S.A.H. 1) IN COON RAPIDS.
BRIDGE NO. 02523 C.S.A.H. 2 OVER YARD TRACKS AT NORTHTOWN.

SHT NO.	TITLE SHEET
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SCHEDULE OF QUANTITIES		BRIDGE NO.					TOTAL
ITEM NO.	ITEM	UNIT	02501	02521	02522	02523	
2021.501	MOBILIZATION	LUMP SUM	1				1
2401.501	CONCRETE, MIX NO. SPECIAL	CU. YD.	83	162	157	376	778
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2402.591	EXPANSION JT. DEVICES TYPE 2.5	LIN. FT.	60			88	148 (P)
2433.505	REMOVE SLAB TYPE 1	SQ. FT.	300	150	150	400	1000
0433.601	SCARIFY BRIDGE DECK	SQ. FT.	11720 (P)	22800 (P)	21780 (P)	53834 (P)	110134 (P)
0433.601	SCARIFY BITUM. APPROACH	SQ. FT.	1750	1200	1250	4400	20600
0433.607	RECONSTRUCT EXP. JT. TYPE 1	LIN. FT.	60			88	148 (P)
0433.607	RECONSTRUCT EXP. JT. TYPE 2	LIN. FT.		173	266		439 (P)
0433.607	RECONSTRUCT EXP. JT. TYPE 3	LIN. FT.				88	88 (P)
2361.504	ASPHALT CEMENT	TON	2	9	9	6	26
2361.508	WEARING COURSE MIXTURE	TON	25	105	105	65	300
0563.604	TEMPORARY LANE MARKING	LIN. FT.				7500	7500
2102.501	PAVEMENT MARKING REMOVAL	SQ. FT.				2000	2000
0564.626	TRAFFIC CONTROLS	LUMP SUM	1				1
0563.623	TRAFFIC CONTROL	LUMP SUM	1				1

CONSTRUCTION NOTES:

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THE CONTRACTOR SHALL MAKE FIELD MEASUREMENTS AS NECESSARY, PRIOR TO FABRICATION OF THE EXPANSION JOINT DEVICES AND CURB OR RAIL PLATES, TO ASSURE PROPER FIT IN THE FINAL WORK.

NOTE

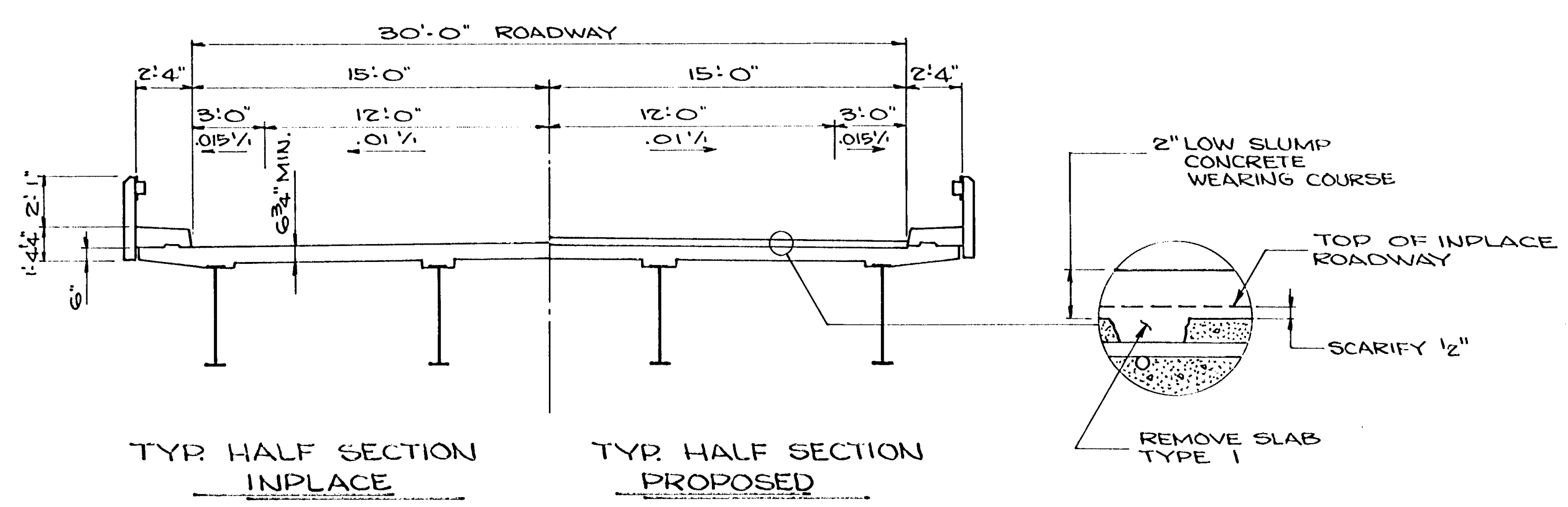
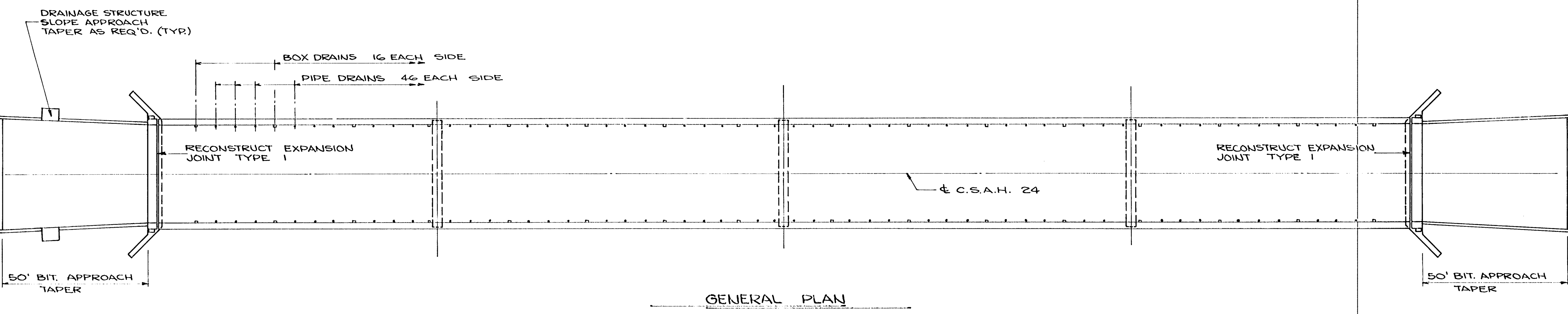
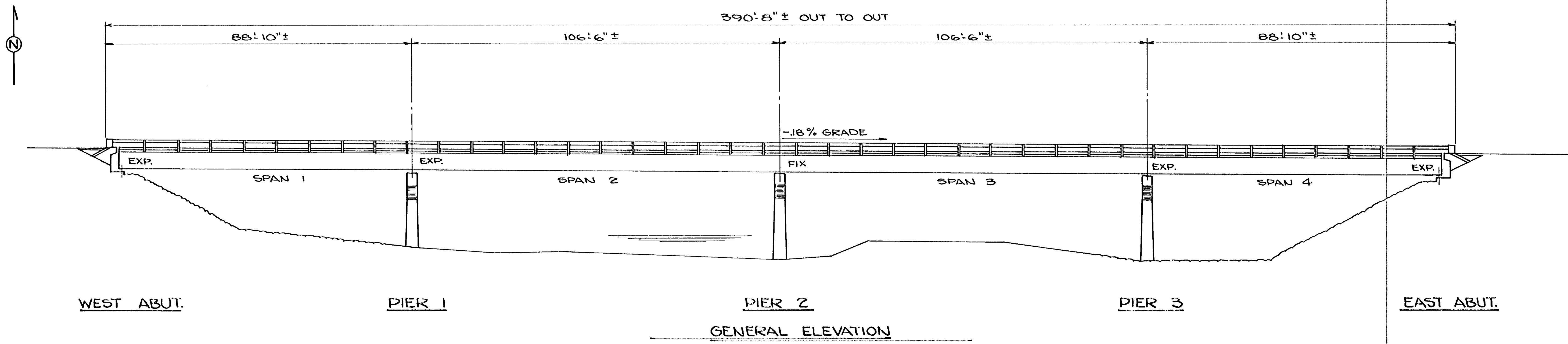
CONTRACT A IS FOR BRIDGE NO. 02501 ONLY.

APPROVED *Lawrence K. Lund* 4-13-79
COUNTY ENGINEER DATE

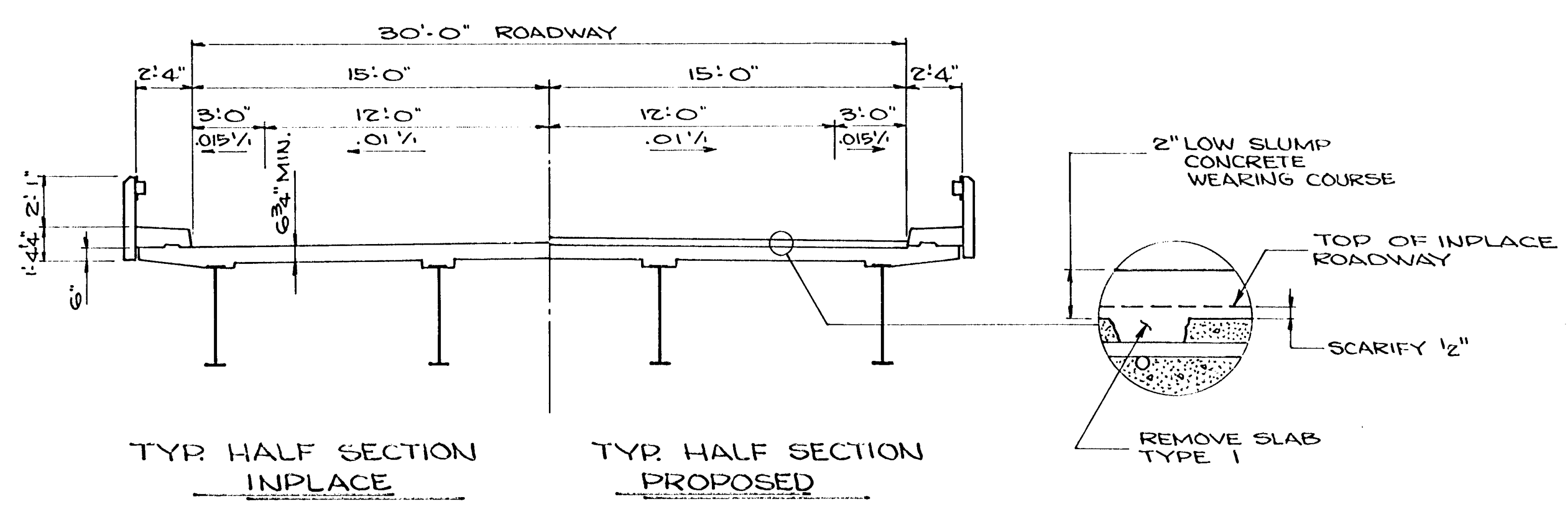
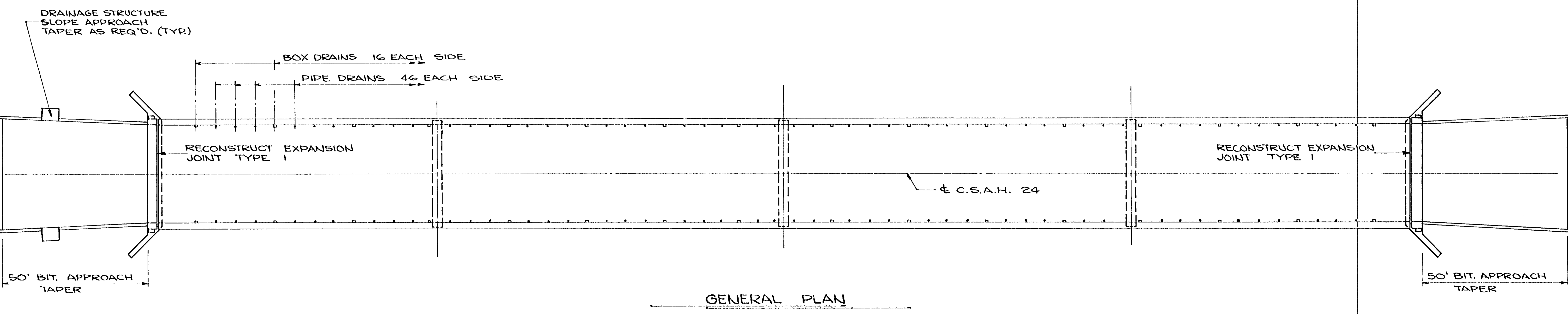
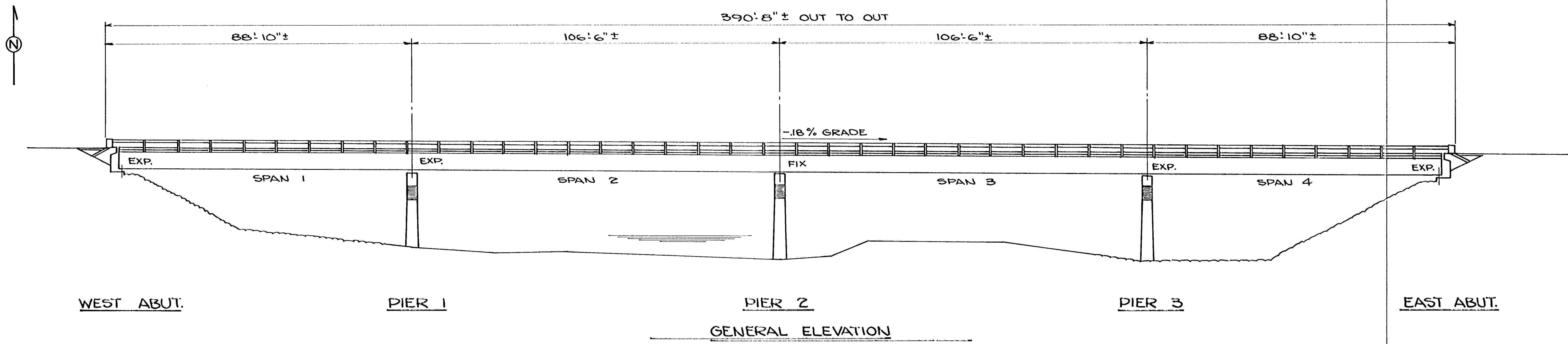
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
4-13-79 6924 *Lawrence K. Lund*
DATE REG. NO. ENGINEER

PLANS PREPARED BY
ERICKSON ENGINEERING CO.
3340 REPUBLIC AVE.
ST. LOUIS PARK, MINNESOTA 55426

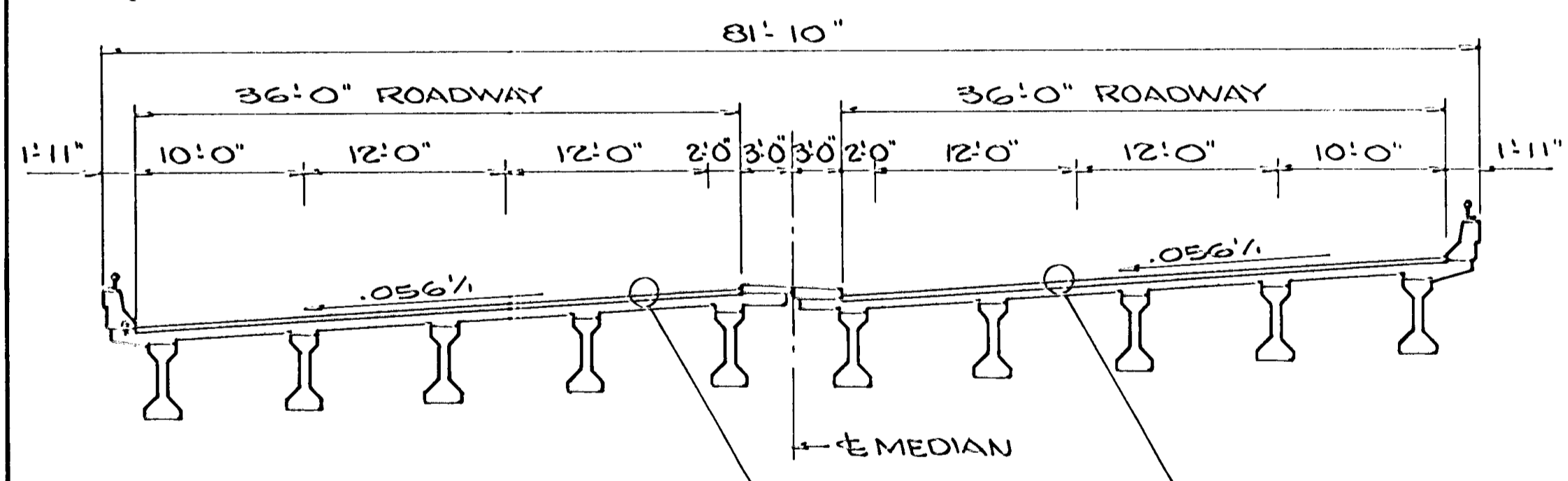
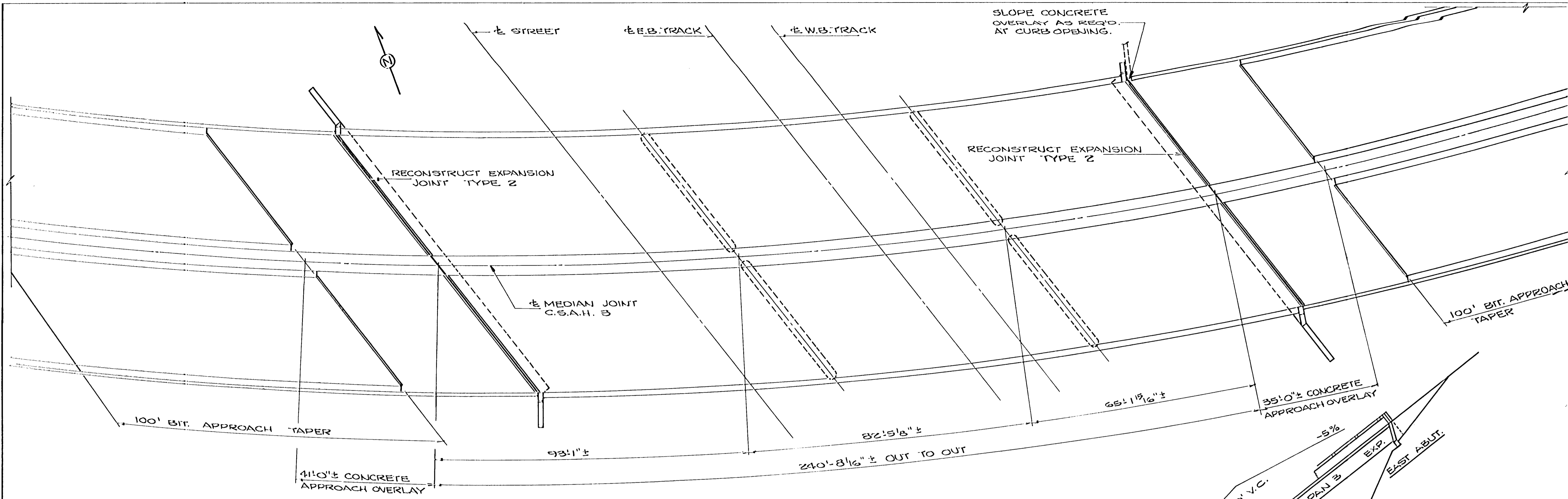
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SHEET NO. 1 of 11 SHEETS				



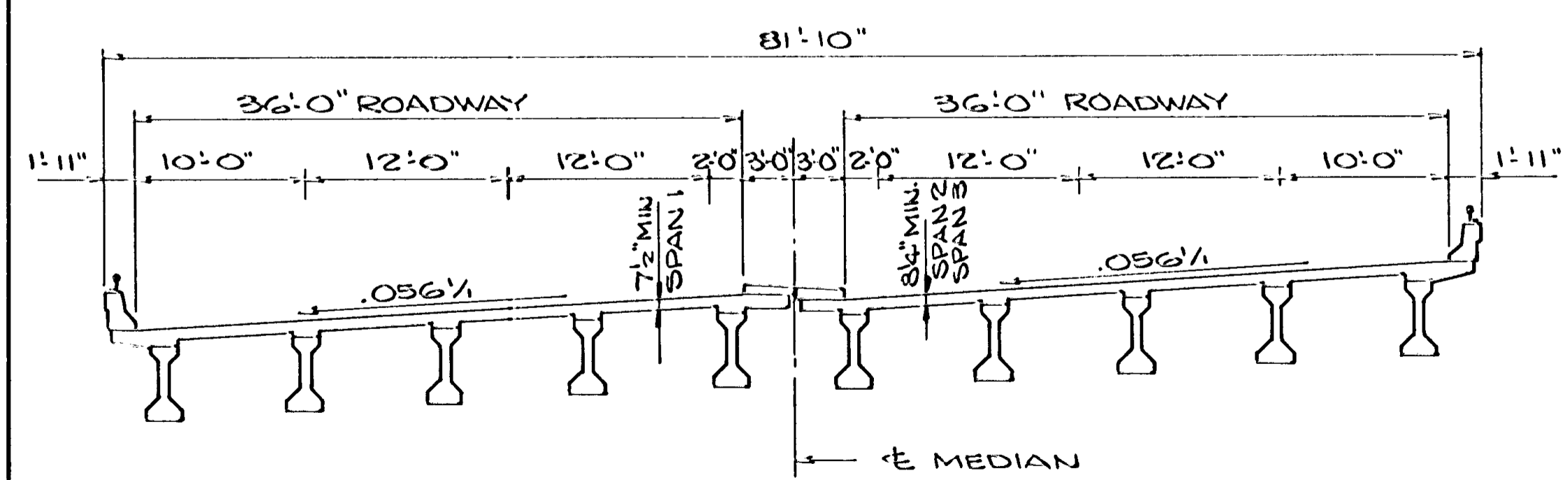
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C.S.A.H. 24 OVER RUM RIVER AT ST. FRANCIS, ST. FRANCIS TWP.		CHK:	CHK:		02501
		SHEET NO. 2 of 10 SHEETS			



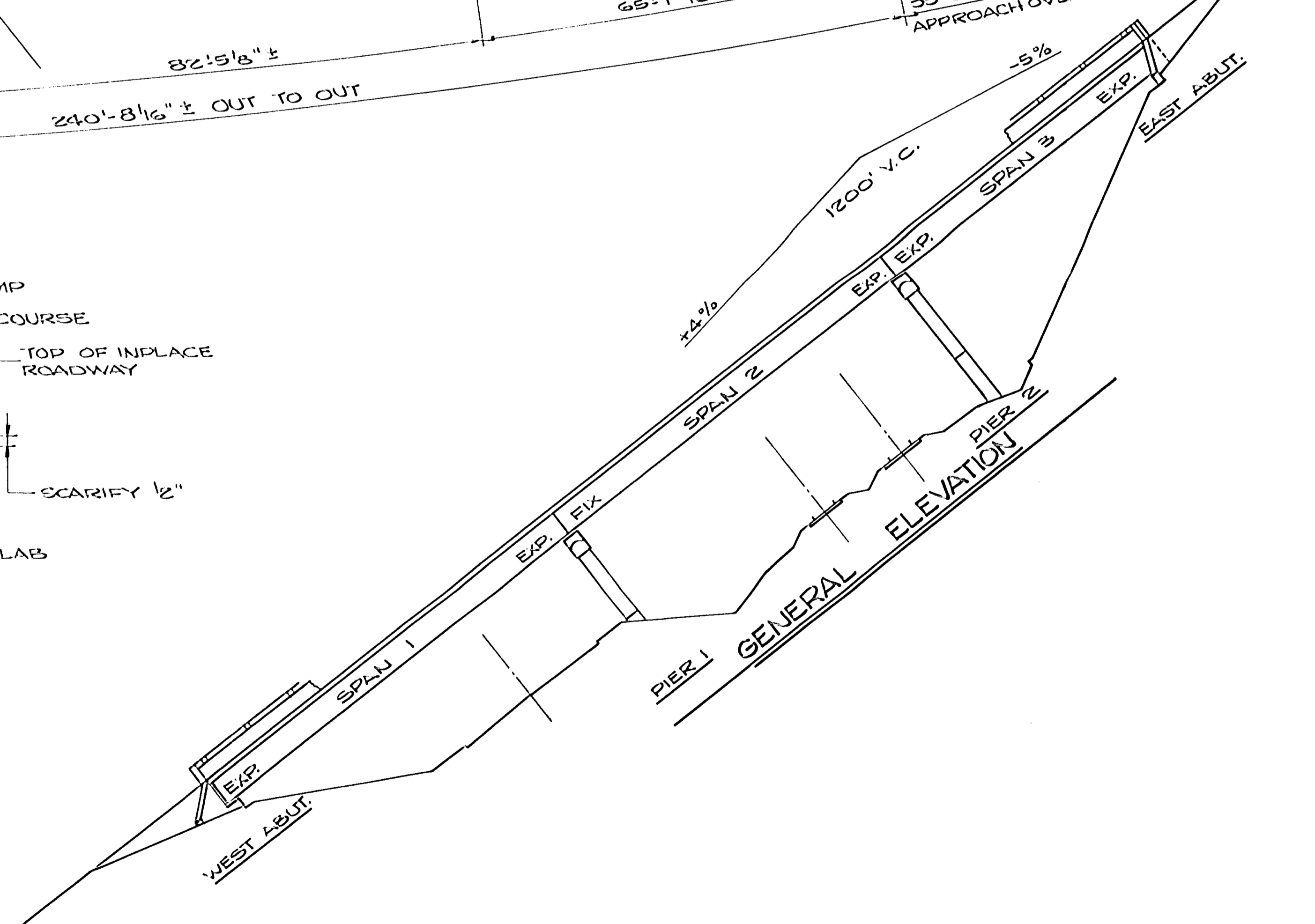
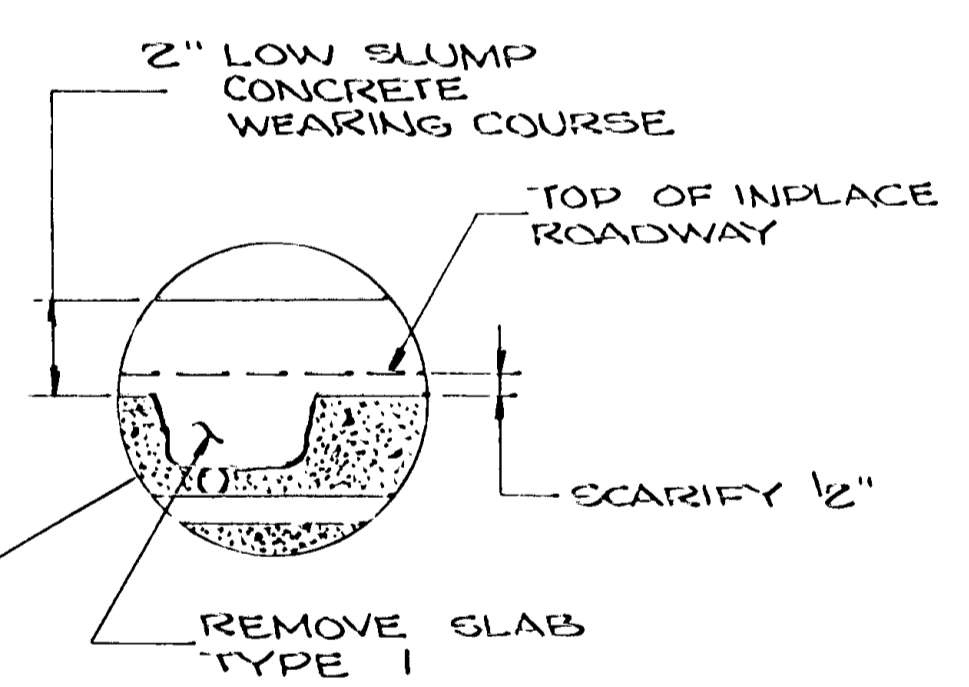
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C.S.A.H. 24 OVER RUM RIVER AT ST. FRANCIS, ST. FRANCIS TWP.		CHK:	CHK:		02501
		SHEET NO. 2 of 10 SHEETS			



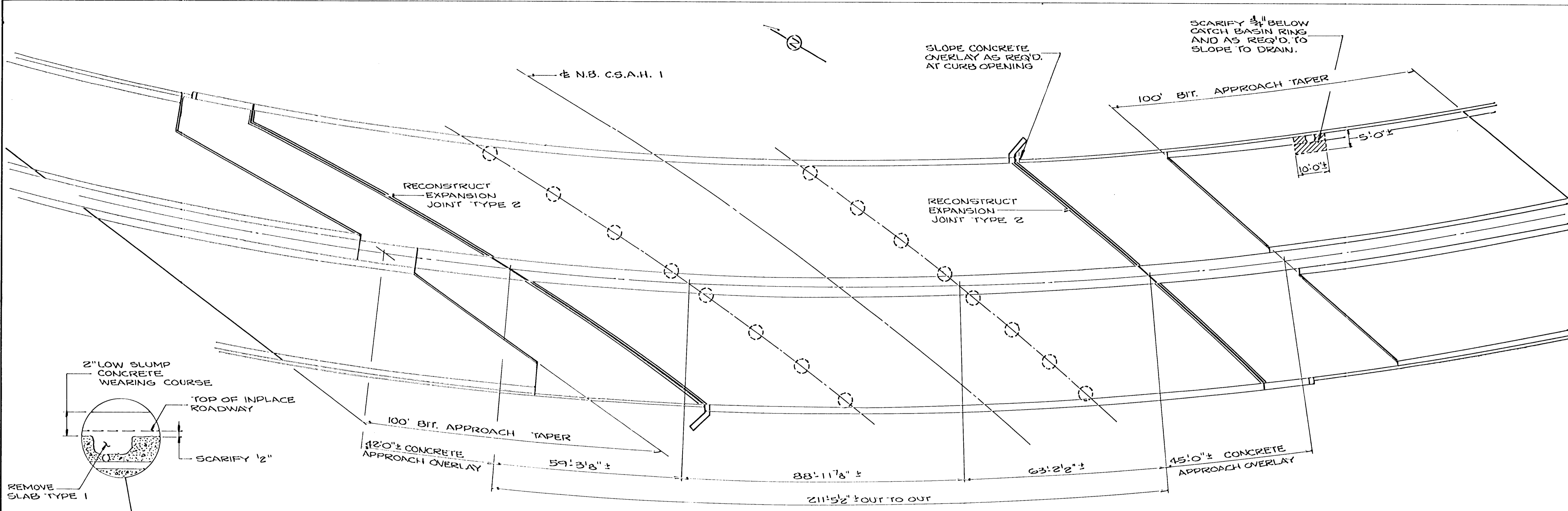
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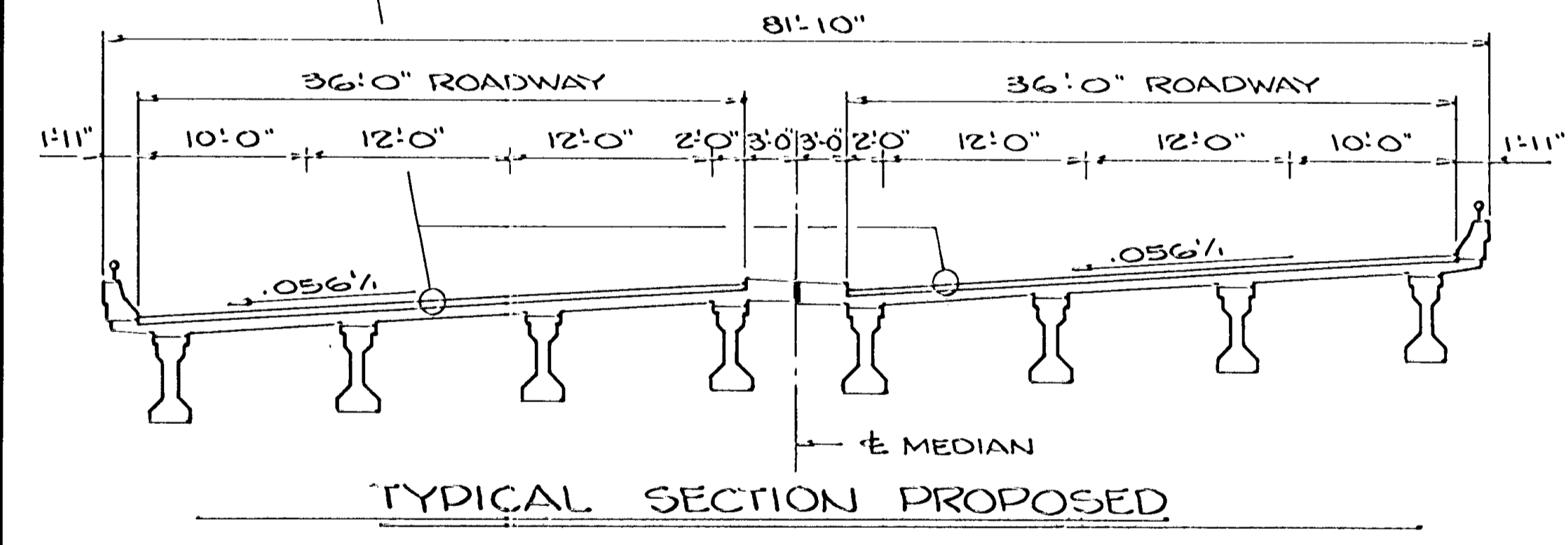
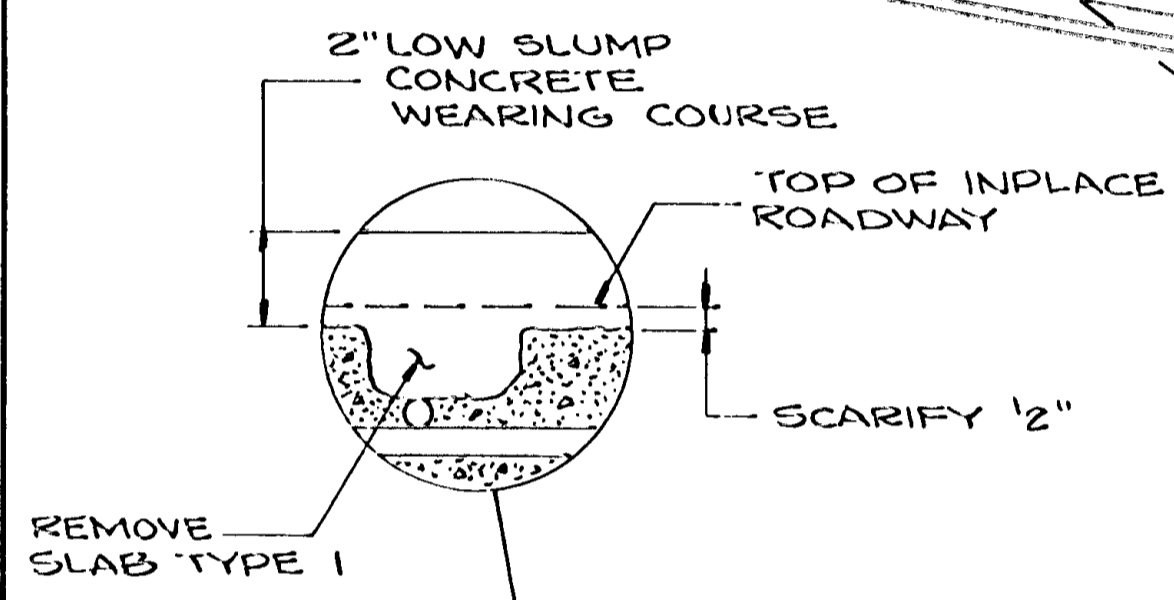
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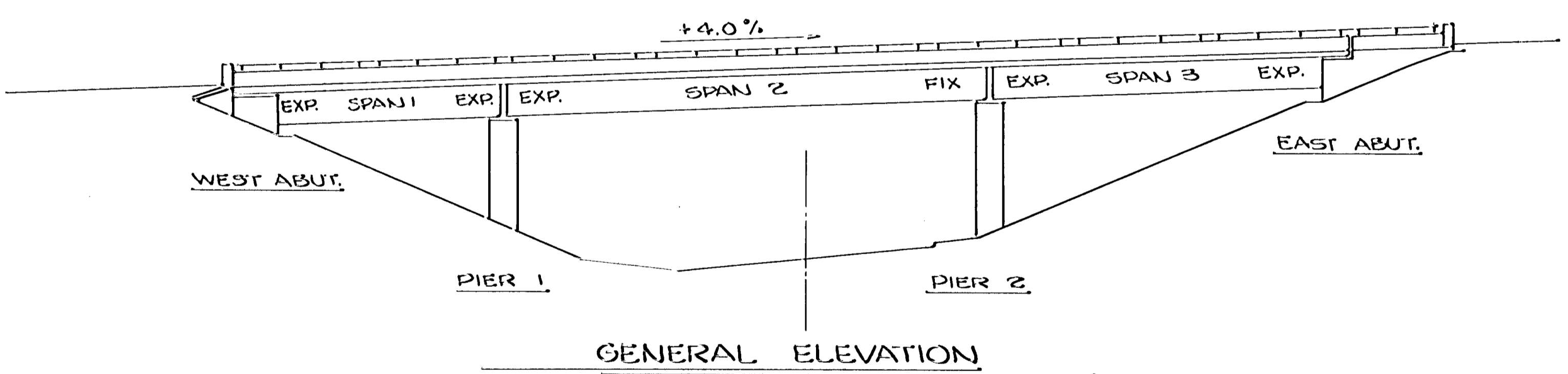
GENERAL PLAN & ELEVATION C.S.A.H. 3 (COON RAPIDS BLVD. BY-PASS) OVER BURLINGTON NORTHERN R.R. IN COON RAPIDS		DES: _____ CHK: _____	DR: R.H. CHK: _____	APPROVED _____	BRIDGE NO. 02521
SHEET NO. 3 of 10 SHEETS					



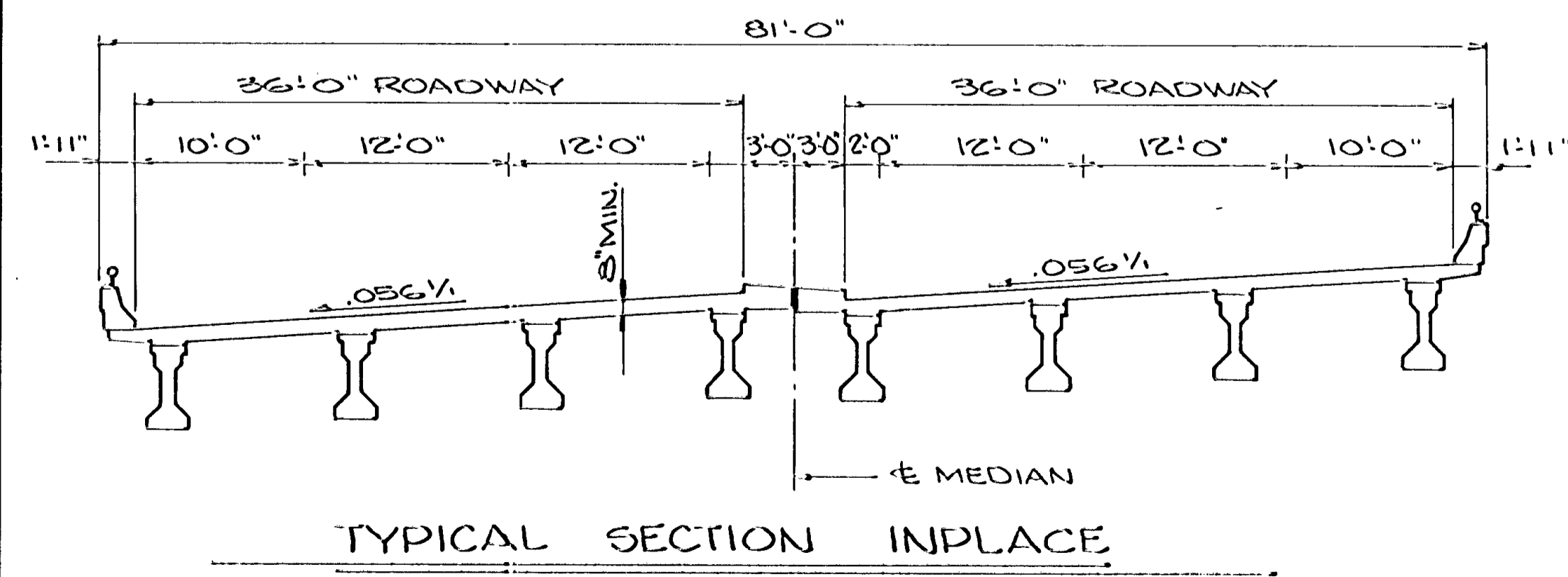
GENERAL PLAN



TYPICAL SECTION PROPOSED

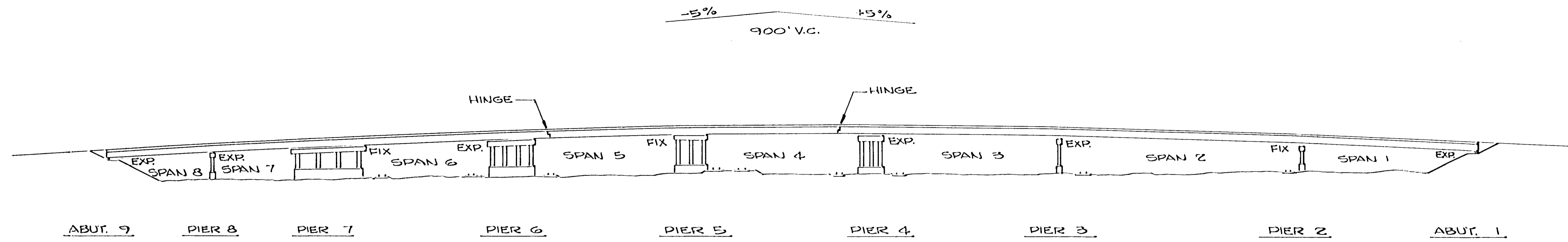


GENERAL ELEVATION

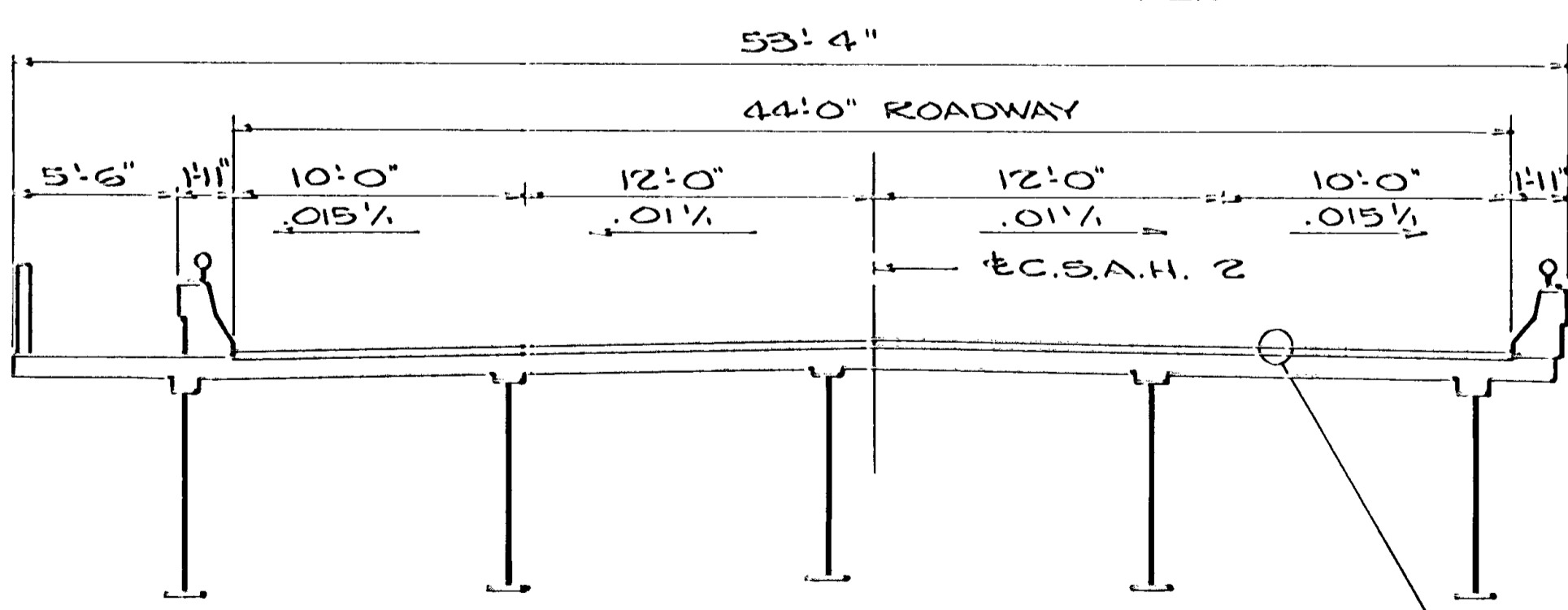
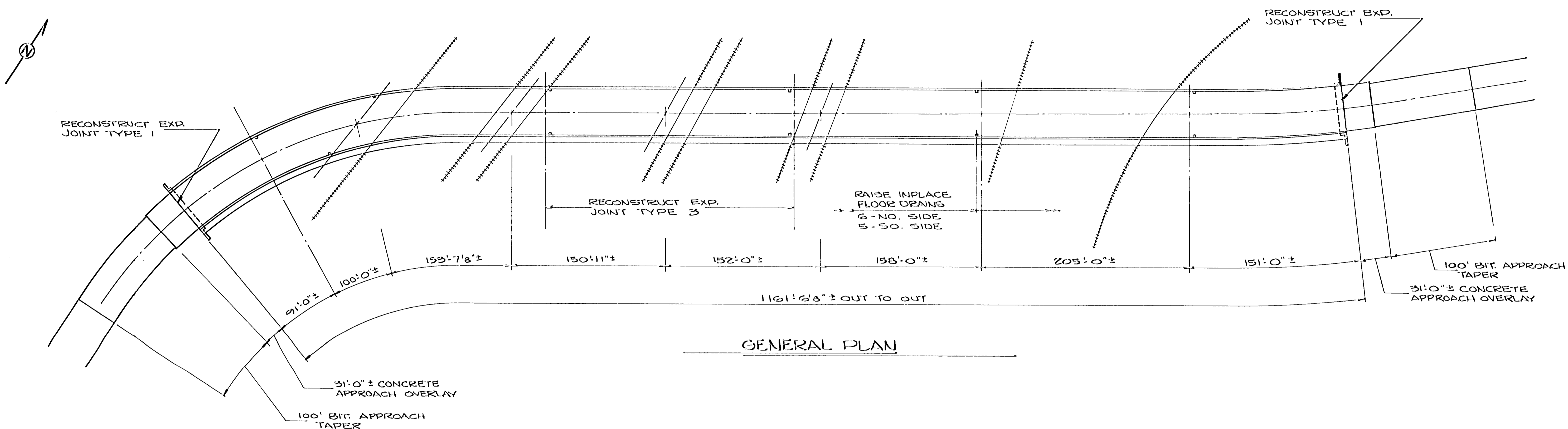


TYPICAL SECTION INPLACE

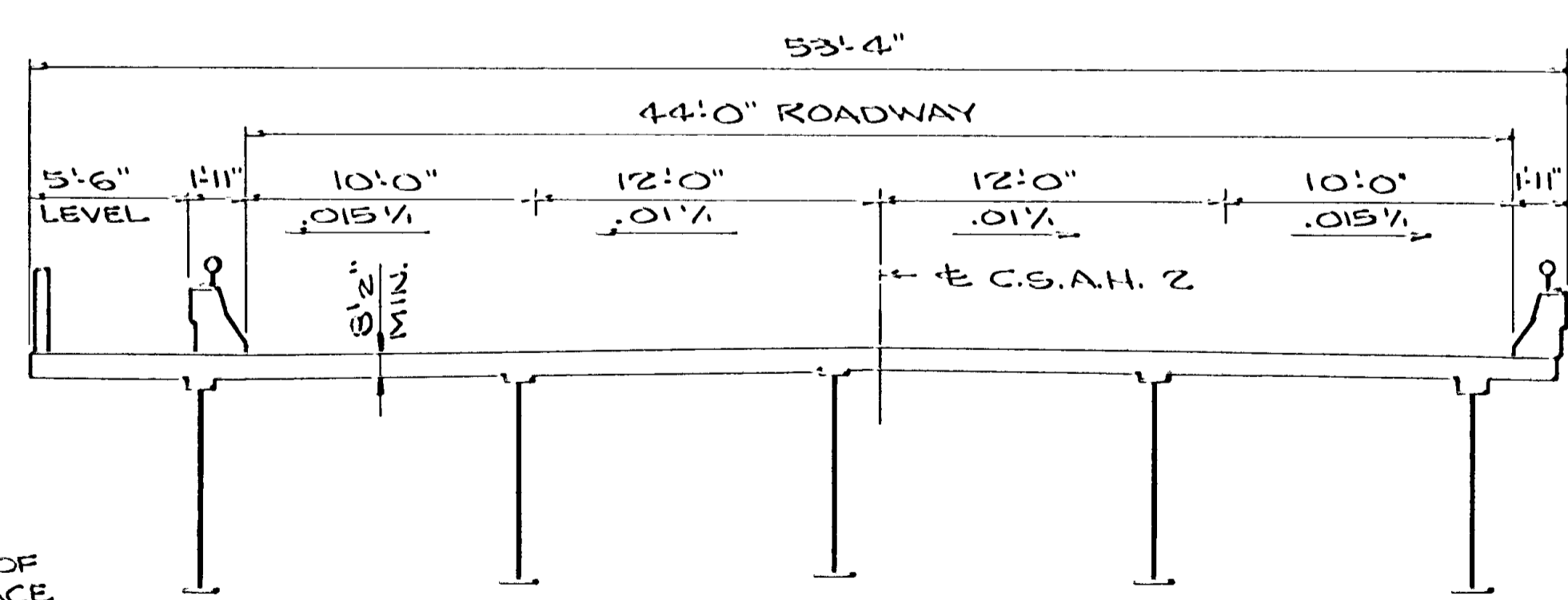
GENERAL PLAN & ELEVATION		DES:	DR: R.H.	APPROVED:	BRIDGE NO. 02522
C.S.A.H. 3 (COON RAPIDS BLVD. BY-PASS) OVER EAST RIVER RD. N.B. (C.S.A.H. 1) IN COON RAPIDS.		CHK:	CHK.		
SHEET NO. 4 of 10 SHEETS					



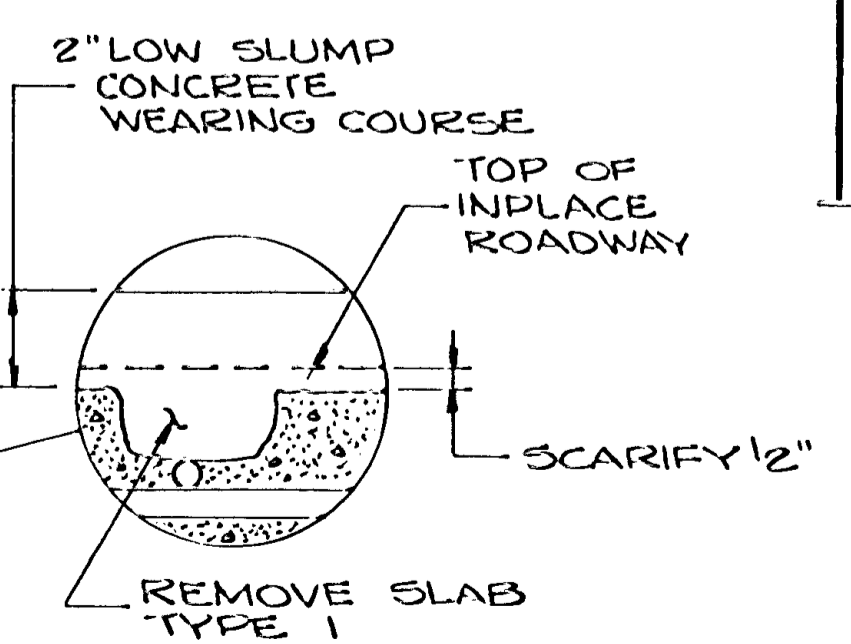
GENERAL ELEVATION



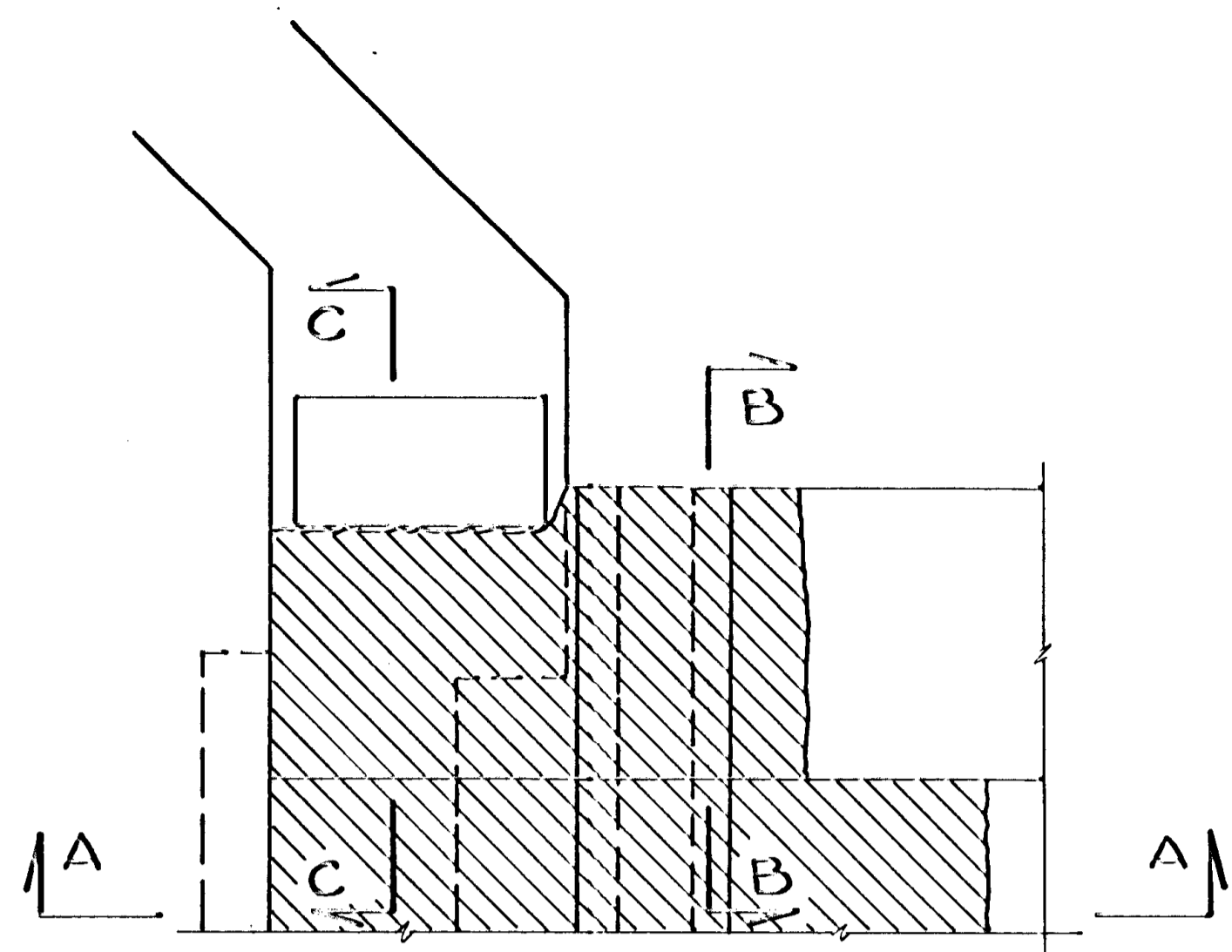
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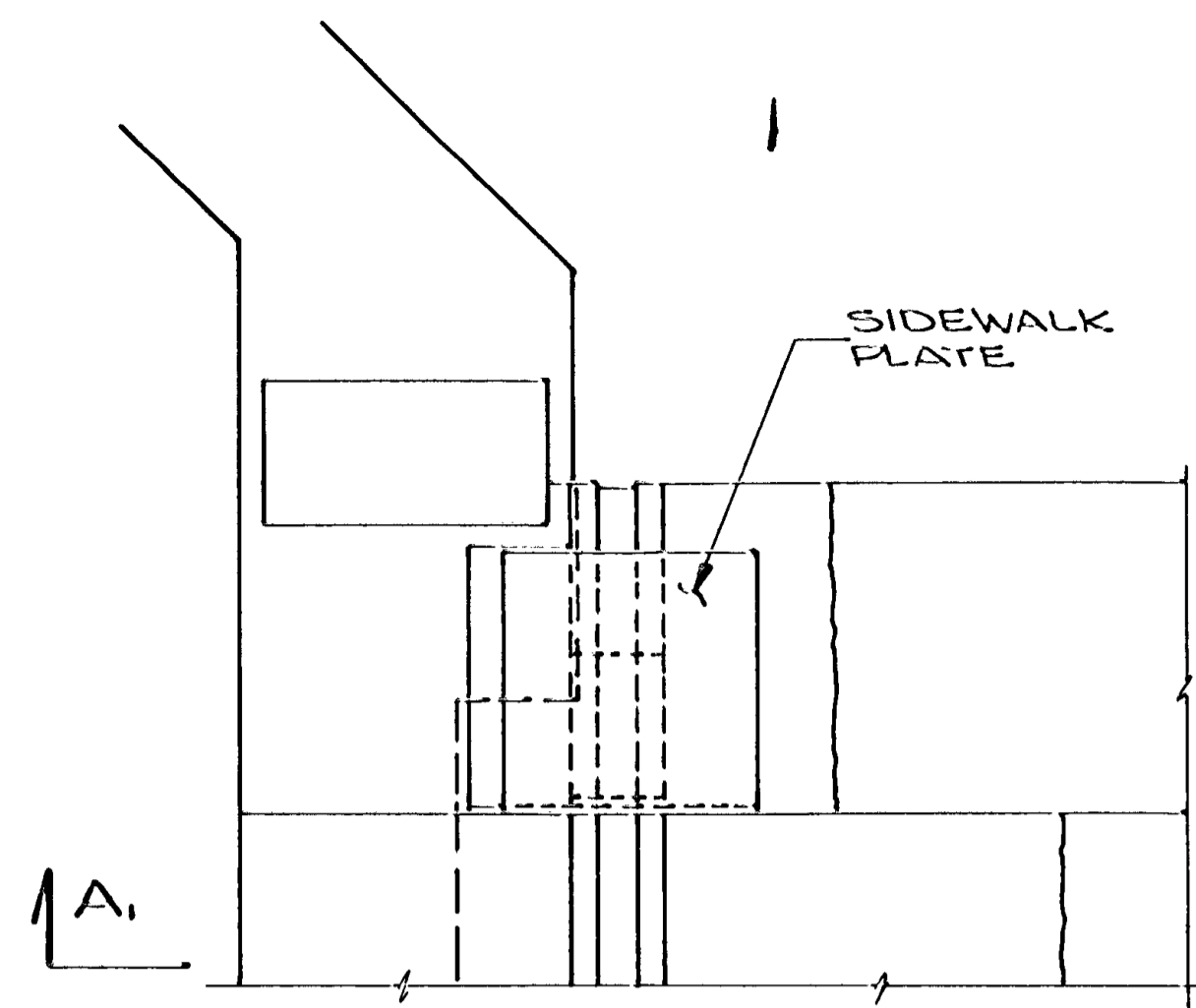
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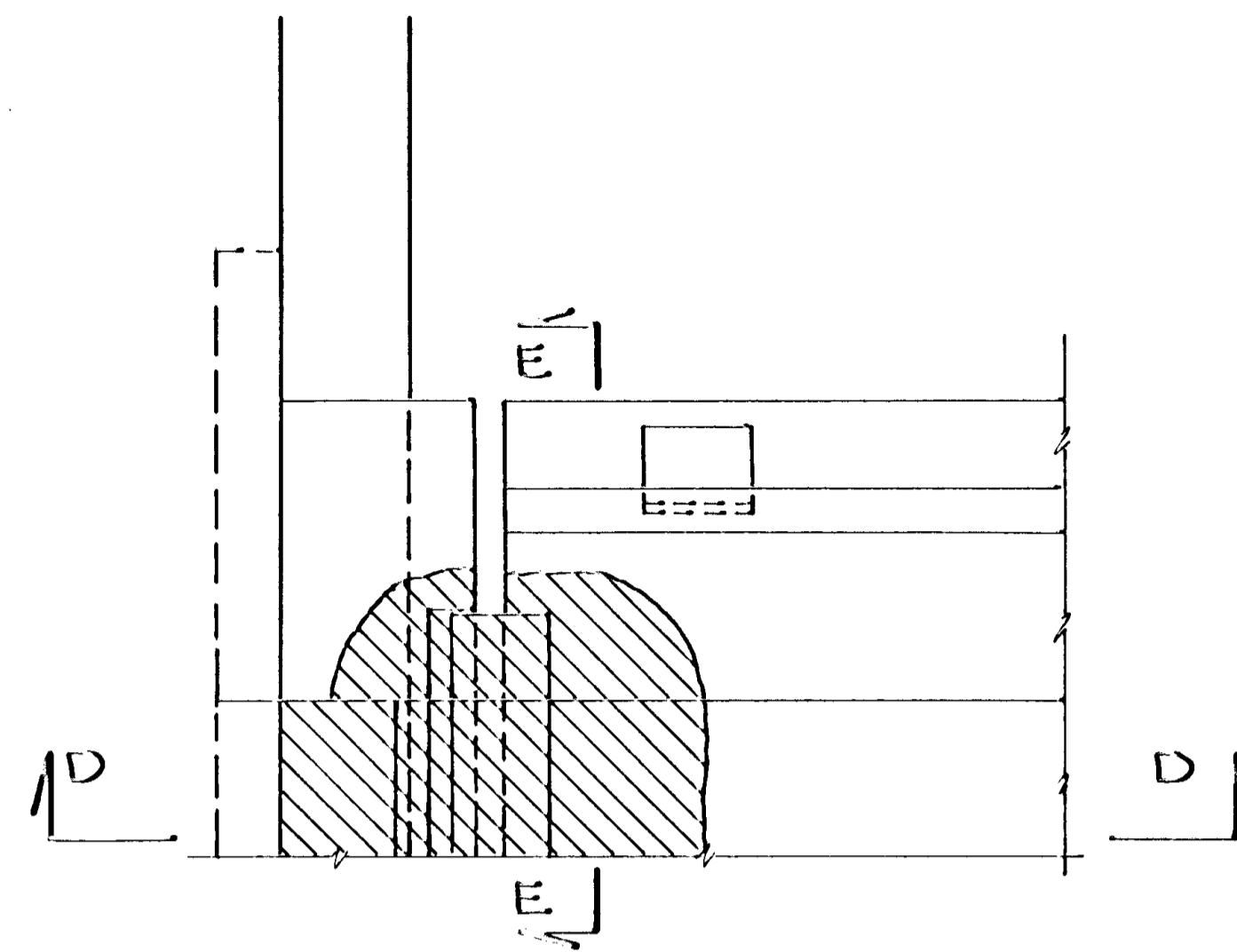
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C.S.A.H. 2 OVER YARD TRACKS AT NORTHTOWN		CHK: _____	CHK: _____	SHEET NO. 5 of 10 SHEETS	



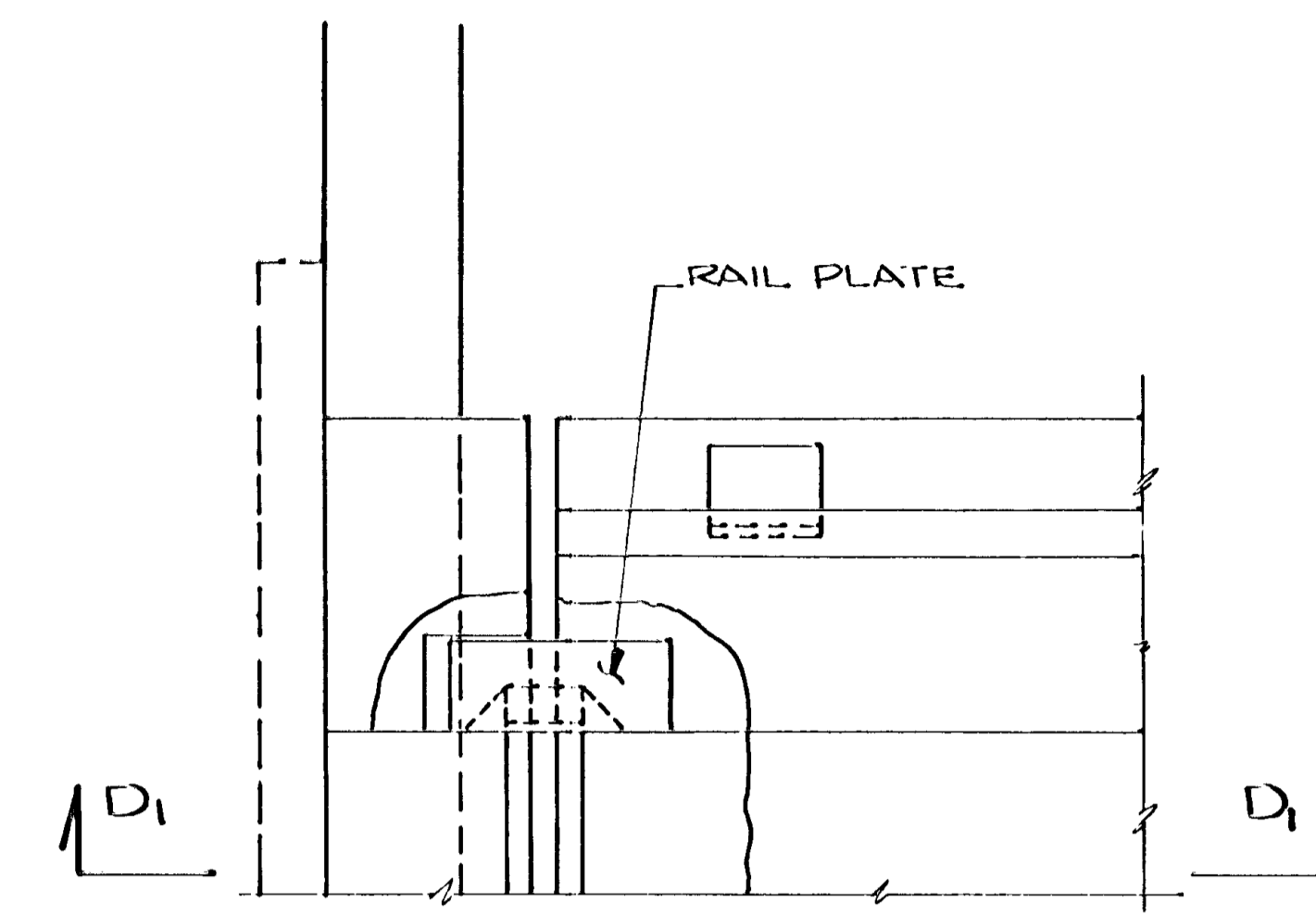
PLAN VIEW - INPLACE



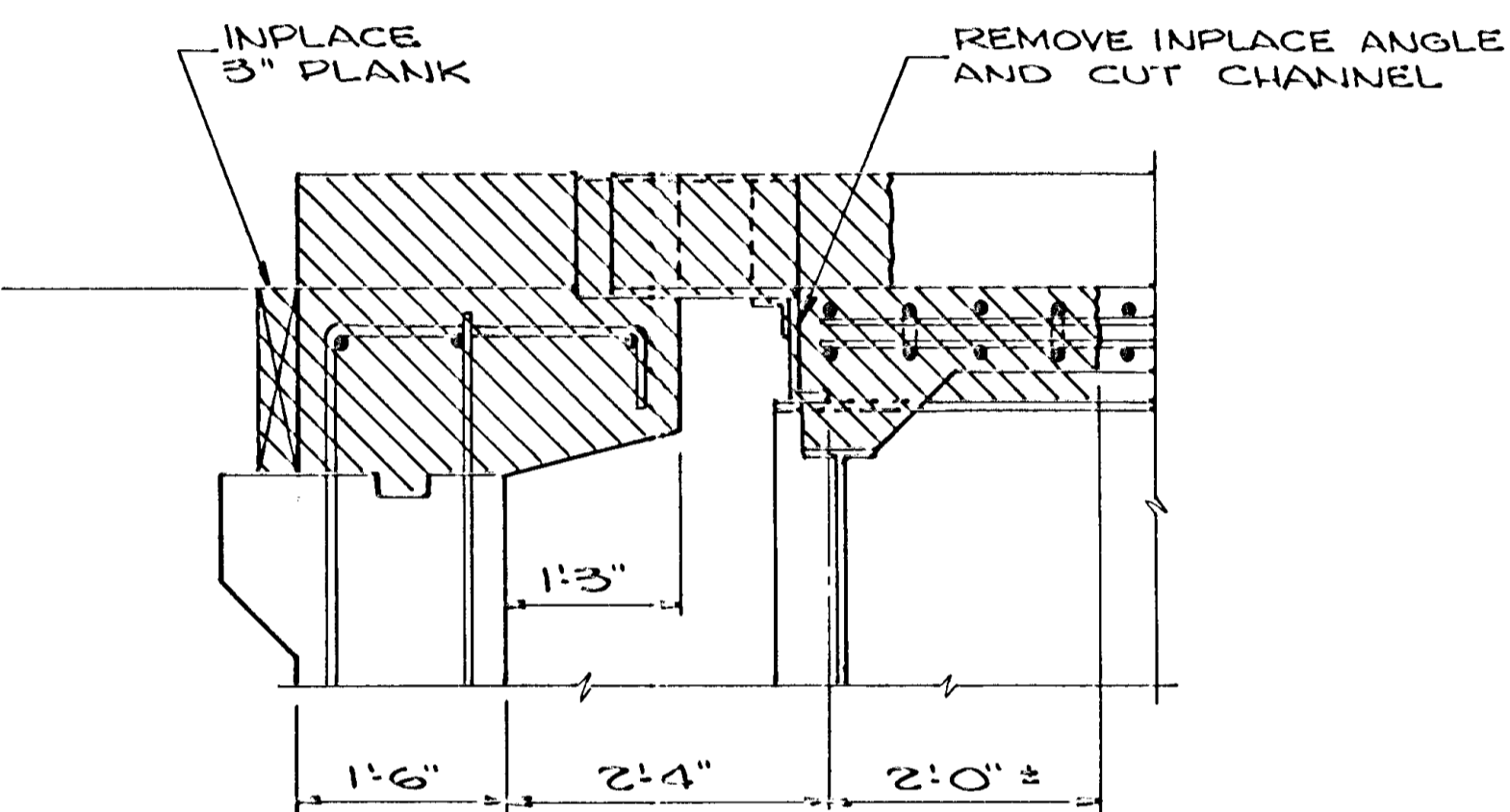
PLAN VIEW - PROPOSED



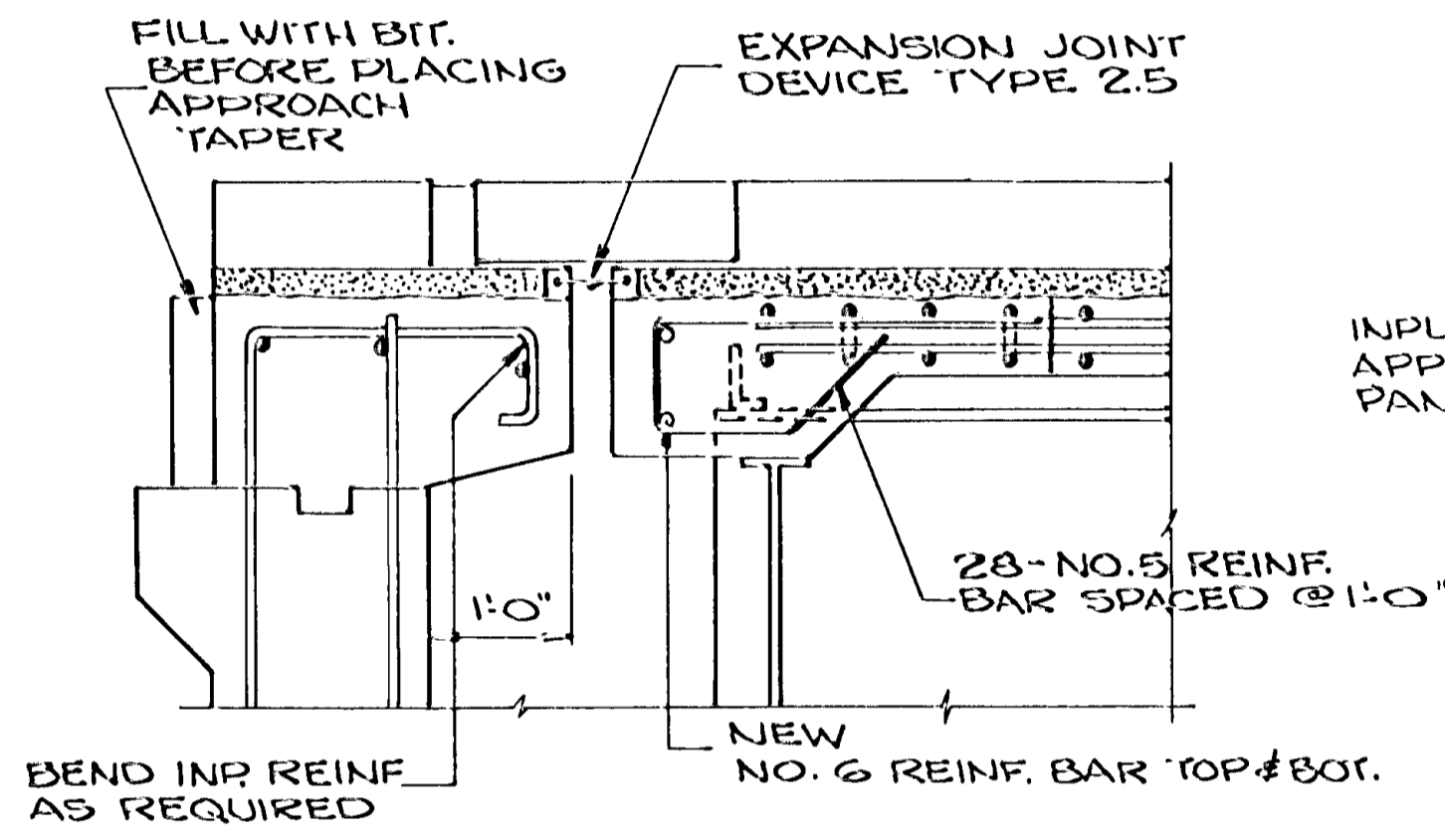
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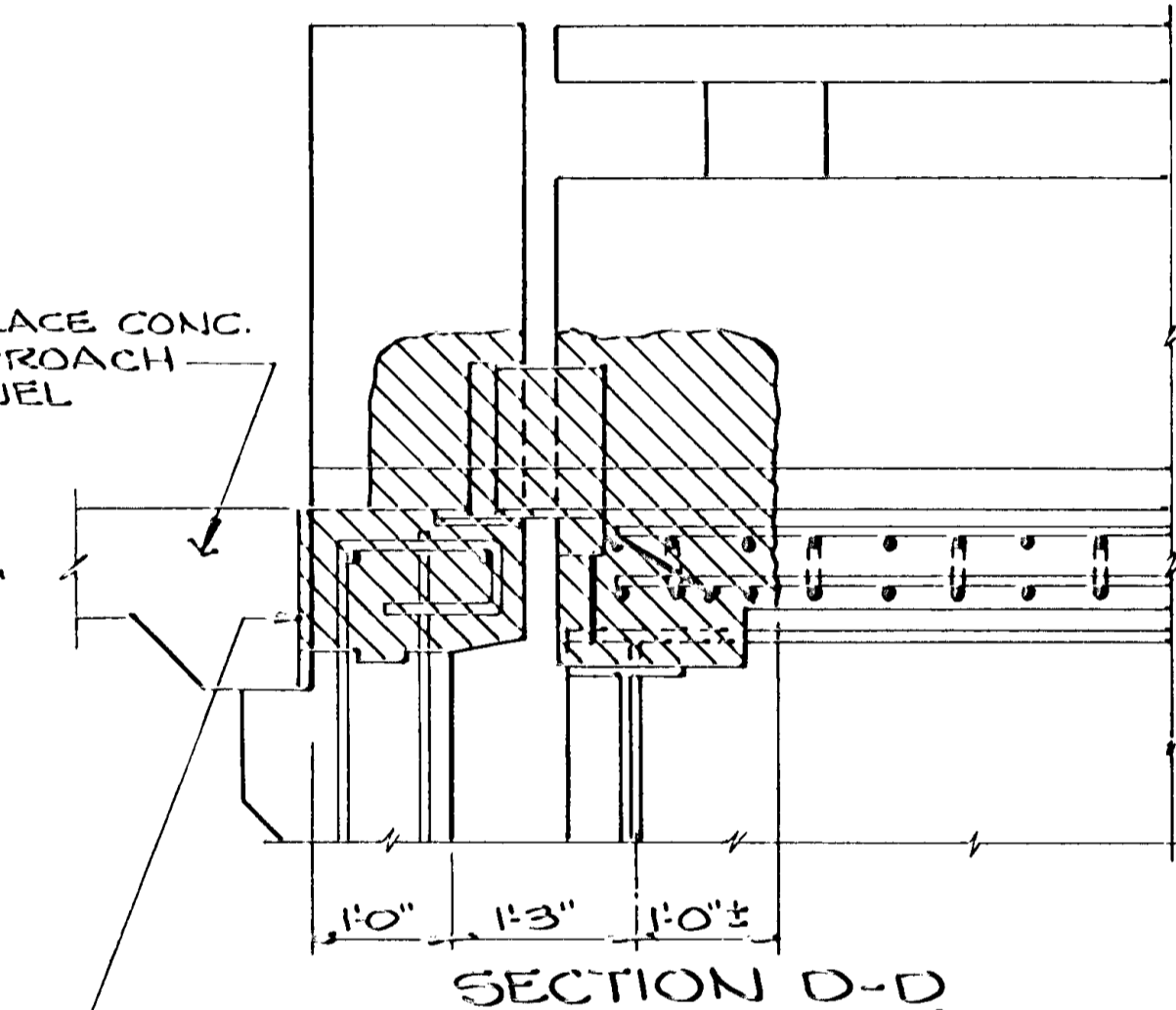
PLAN VIEW - PROPOSED



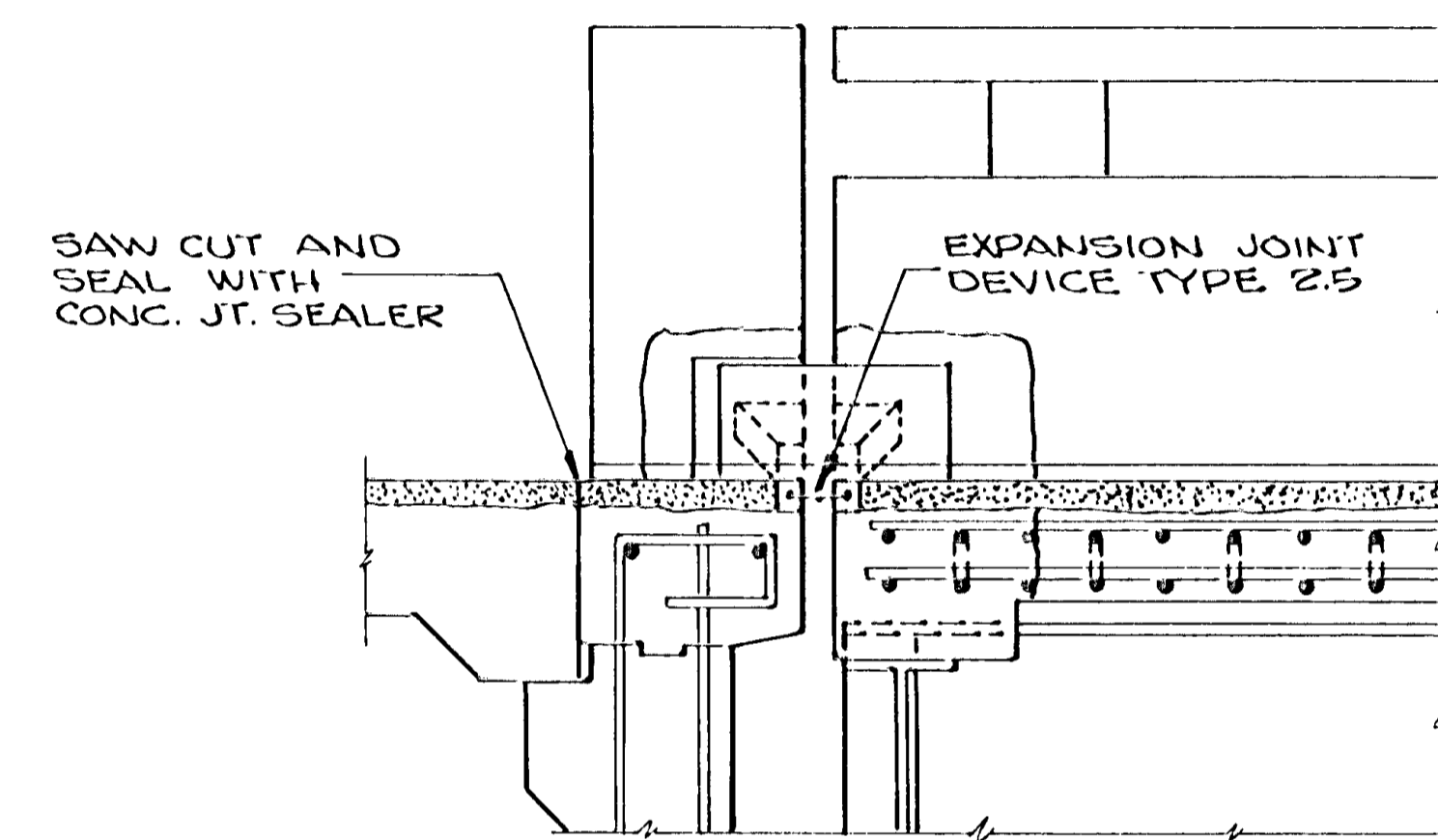
SECTION A-A



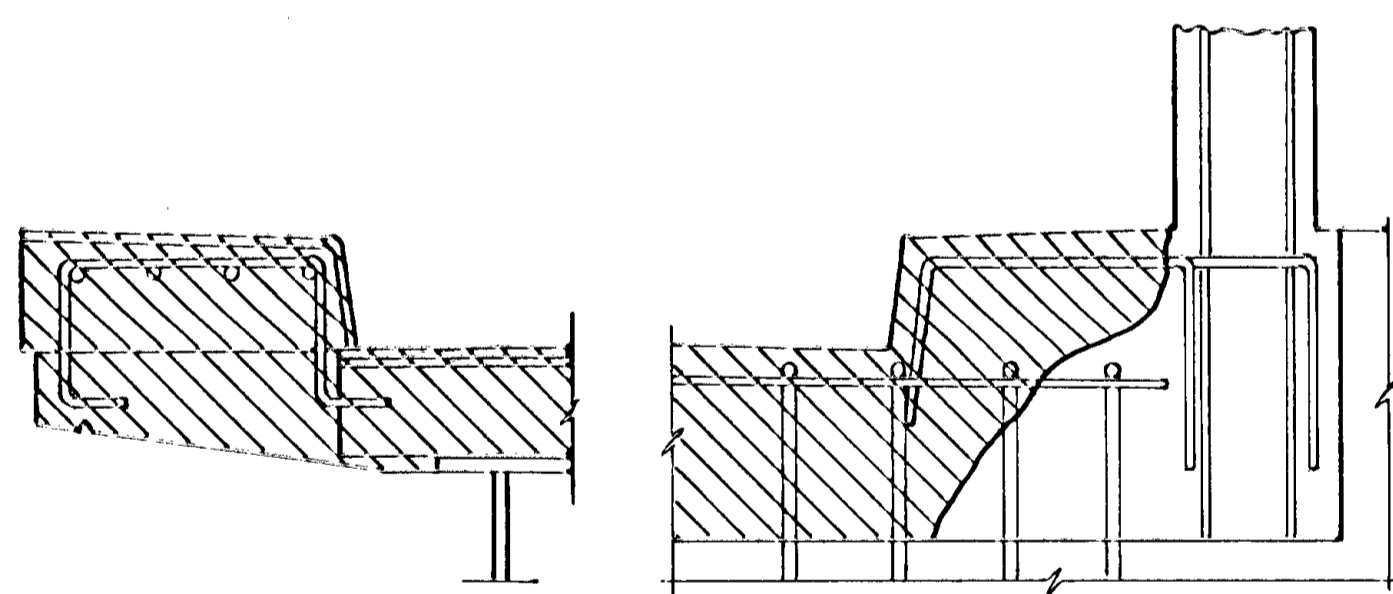
SECTION A1-A1



SECTION D-D

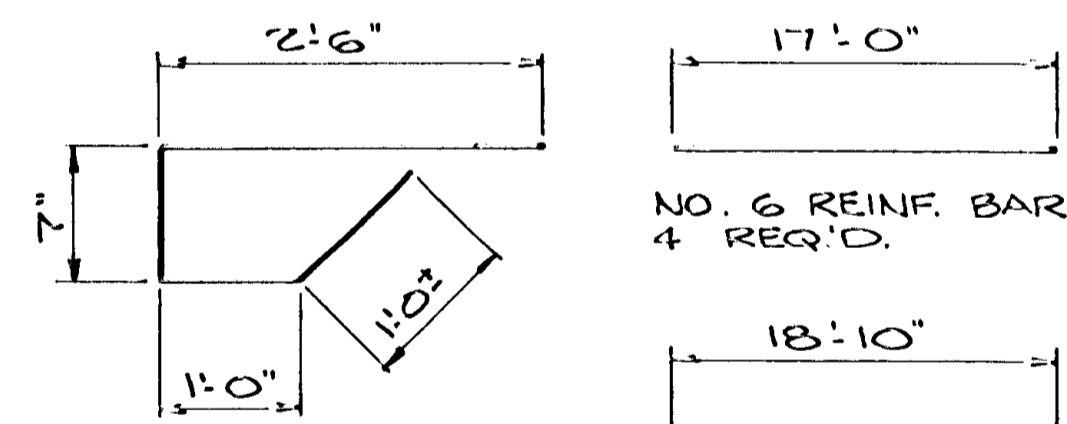


SECTION D1-D1



SECTION B-B

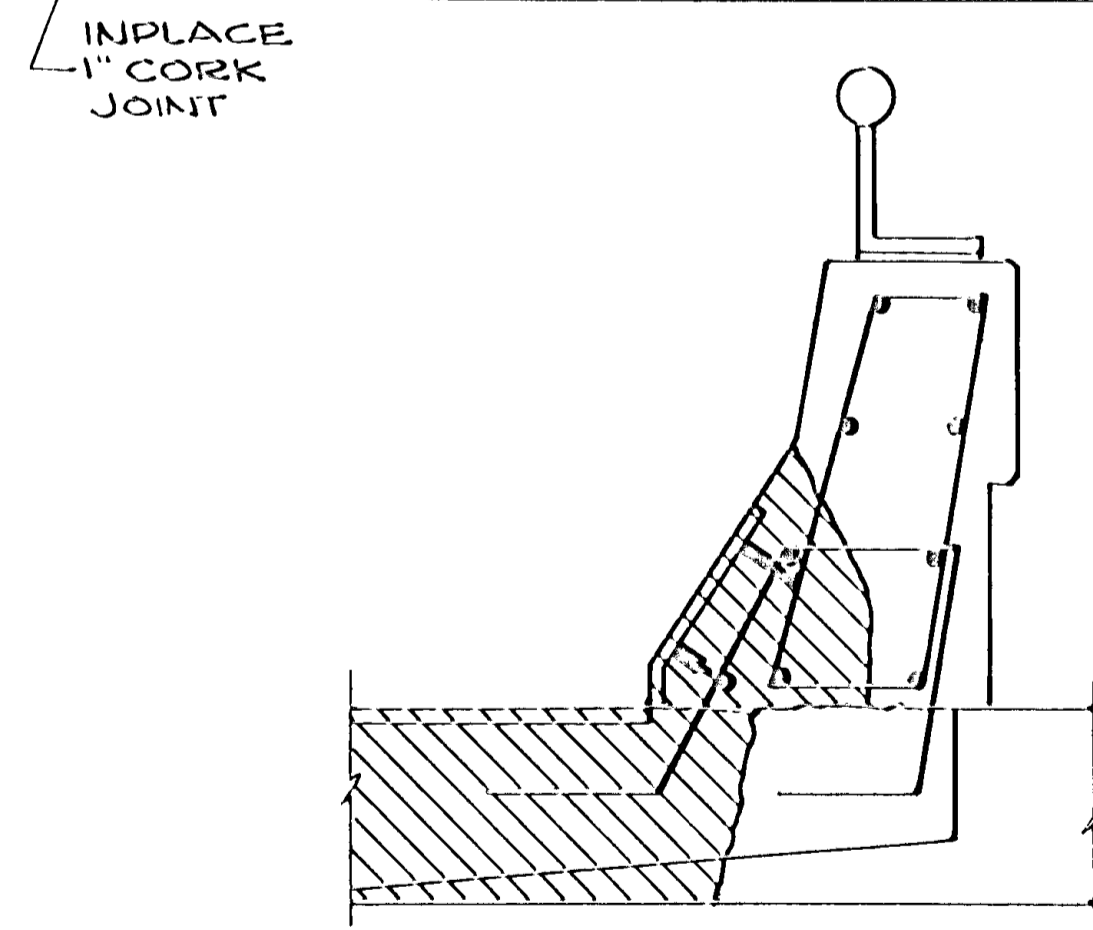
SECTION C-C



NO. 5 REINF. BAR 56 REQ'D. NO. 6 REINF. BAR 4 REQ'D.

REINF. BARS INCLUDED IN PRICE BID FOR RECONSTRUCT EXPANSION JOINT.

NOTE: FOR PROPOSED CURB SECTIONS & DETAILS SEE WATERPROOF EXP. DEVICE DETAILS.



SECTION E-E

SAW CUT AND SEAL WITH CONC. JT. SEALER

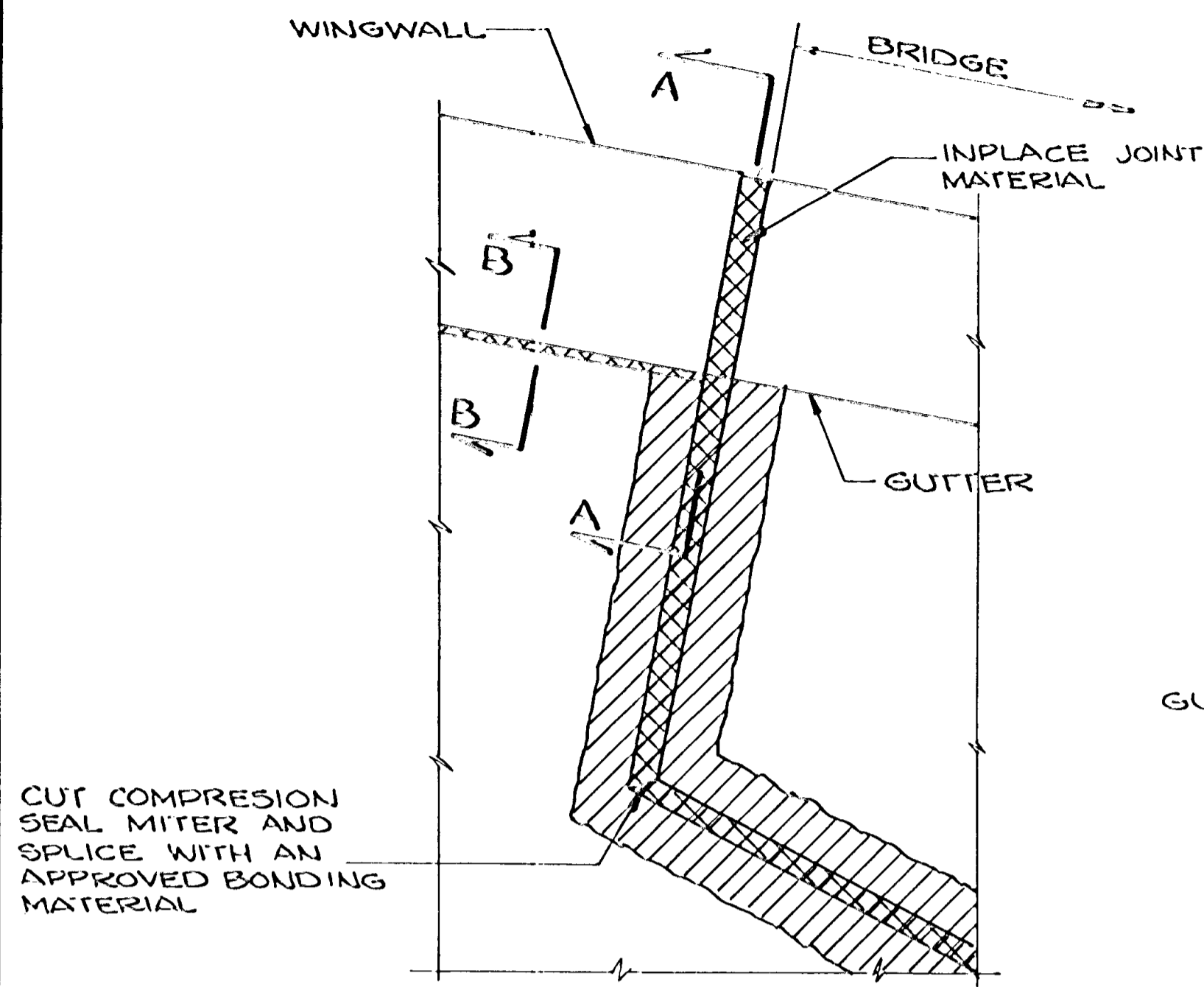
NOTE: FOR PROPOSED RAIL SECTIONS & DETAILS SEE WATERPROOF EXP. DEVICE DETAILS.

RECONSTRUCT EXPANSION JOINT TYPE 1
BRIDGE NO. 02501

RECONSTRUCT EXPANSION JOINT TYPE 1
BRIDGE NO. 02523

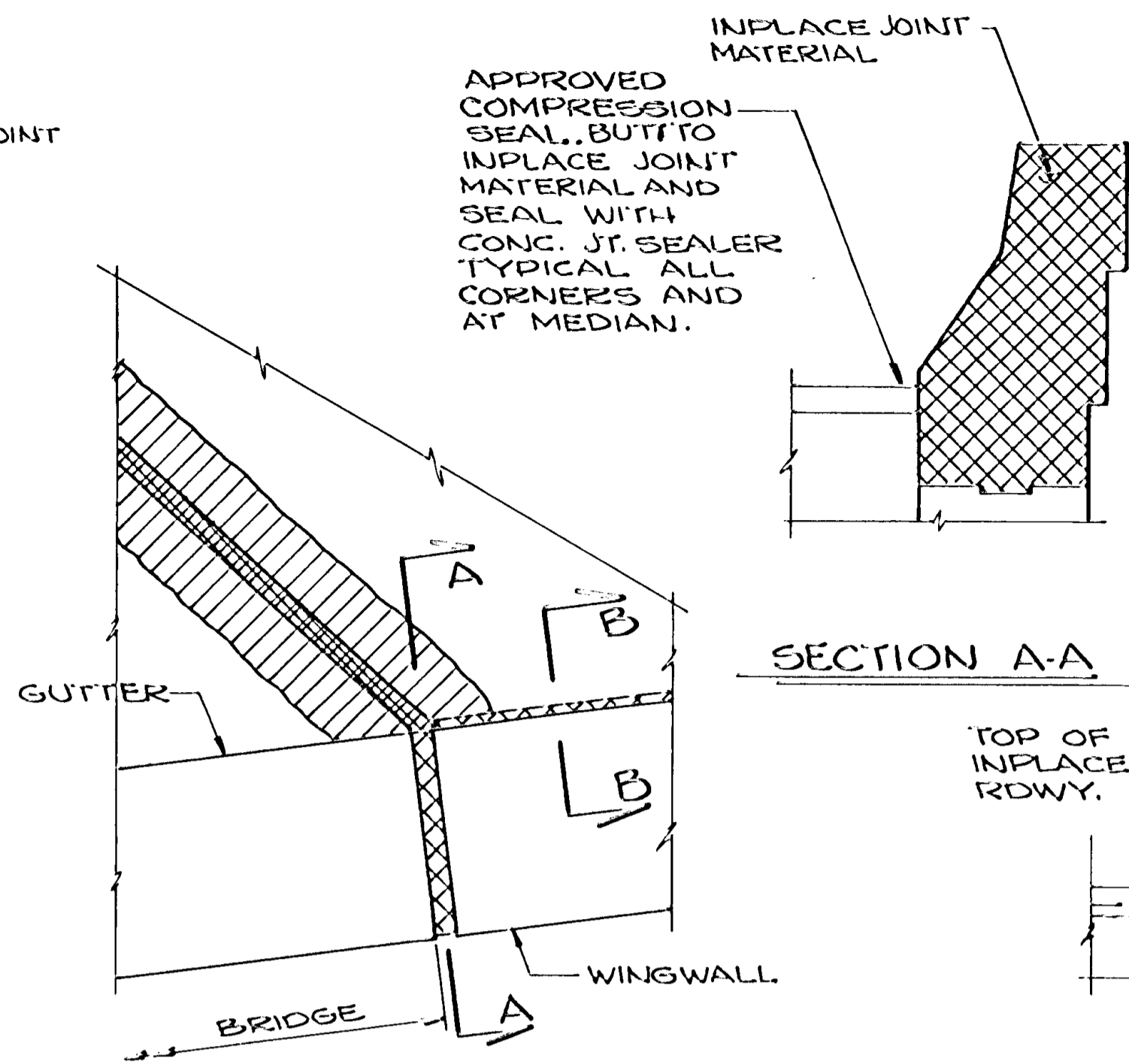
RECONSTRUCT EXPANSION JOINTS TYPE 1

DES:	DR: R.H.	APPROVED:	BRIDGE NO.
CHK:	CHK:		02501
SHEET NO. 6 OF 10 SHEETS			02523

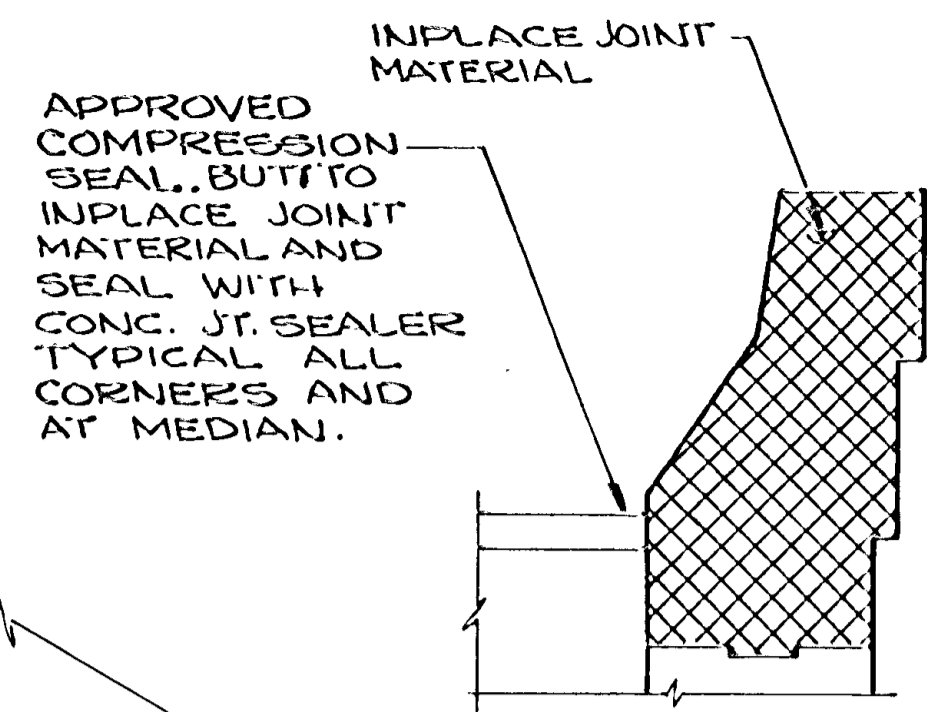


CUT COMPRESSION SEAL MITER AND SPLICE WITH AN APPROVED BONDING MATERIAL

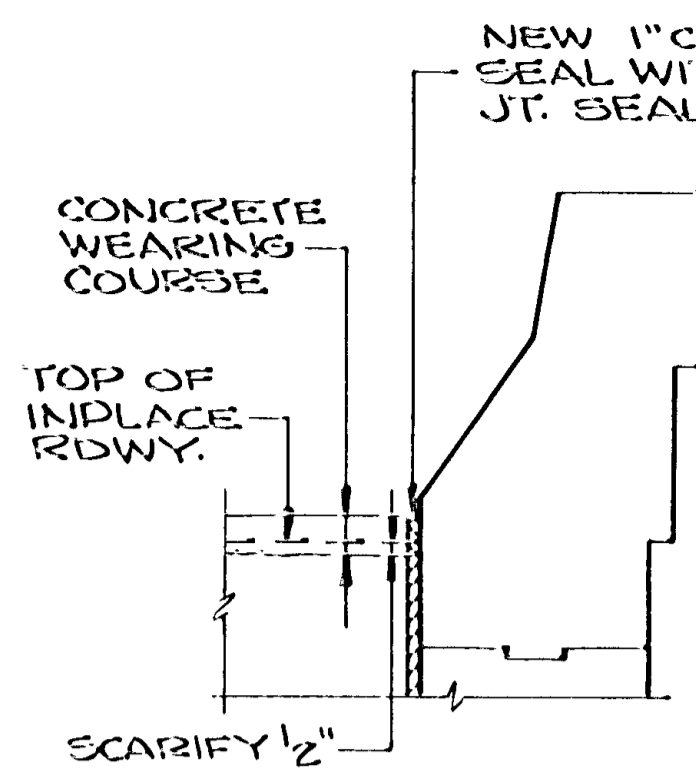
PLAN VIEW
N.W. CORNER BR. NO. 02522



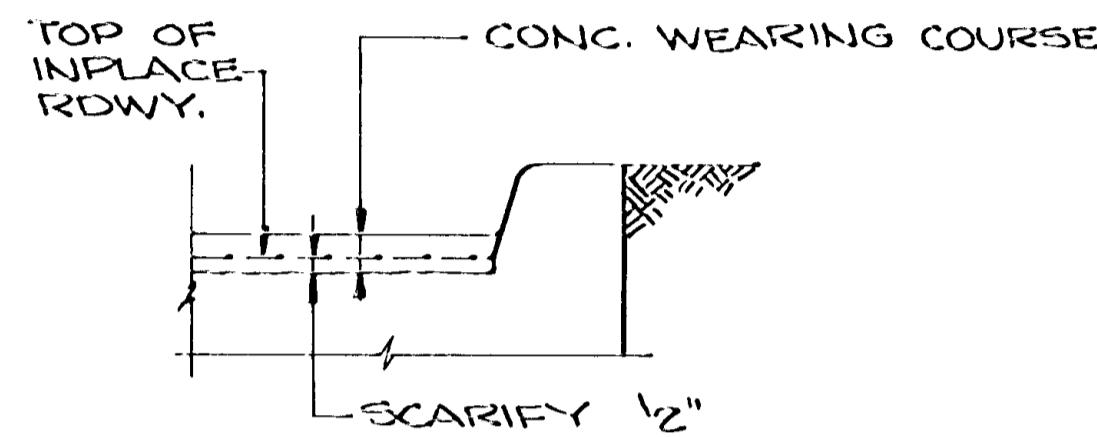
PLAN VIEW
S.E. CORNER BR. NO. 02522



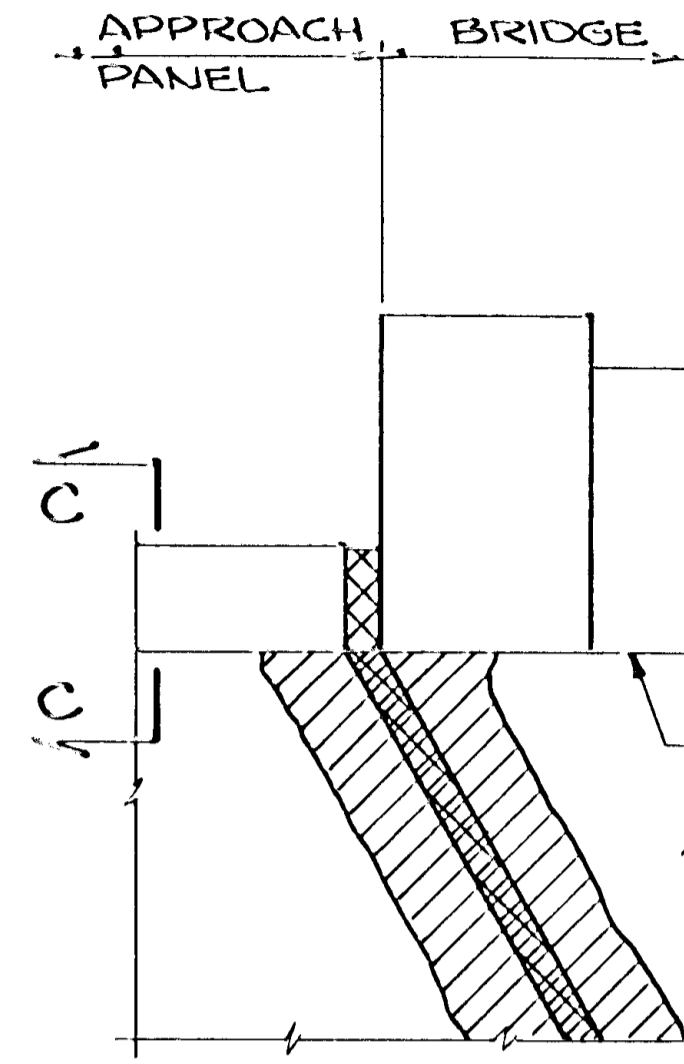
SECTION A-A



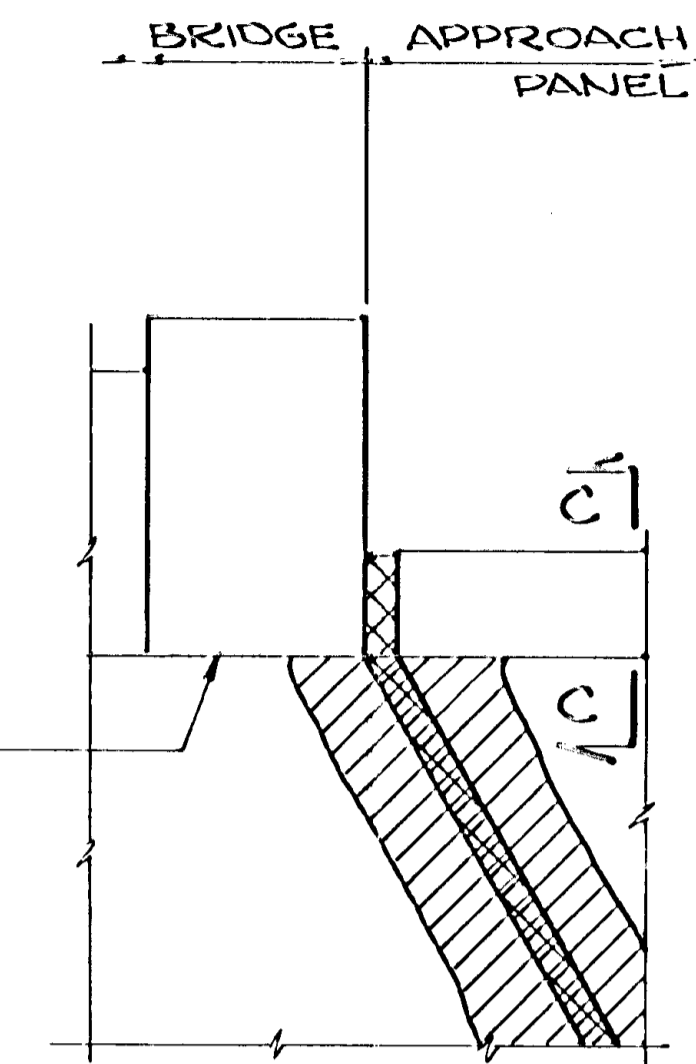
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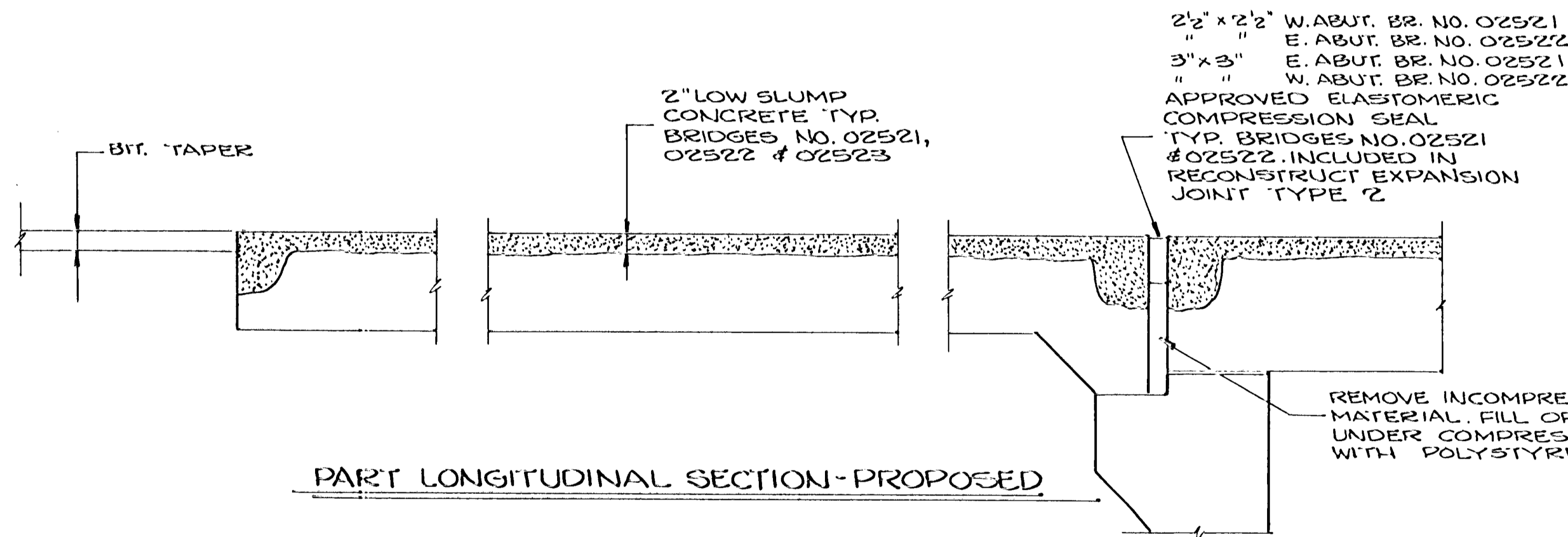
SECTION C-C



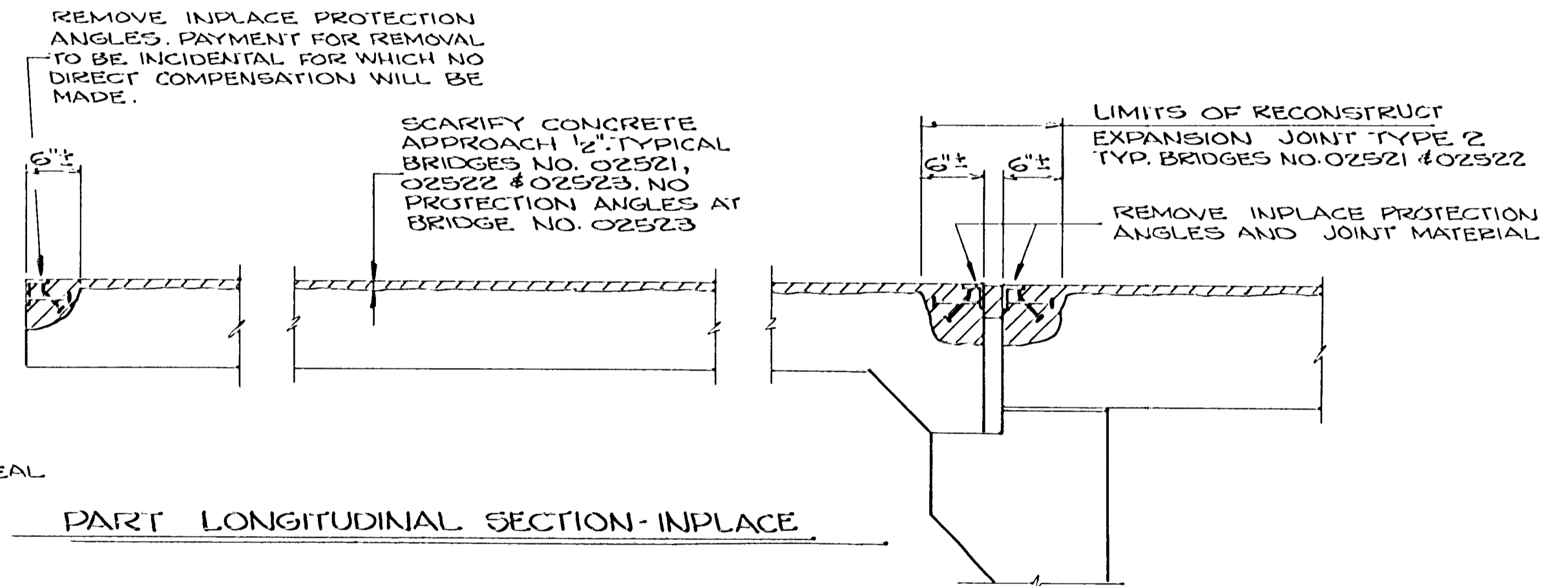
PLAN VIEW
N.W. & S.E. CORNERS
BR. NO. 02521



PLAN VIEW
N.E. & S.W. CORNERS
BR. NO. 02521 & 02522

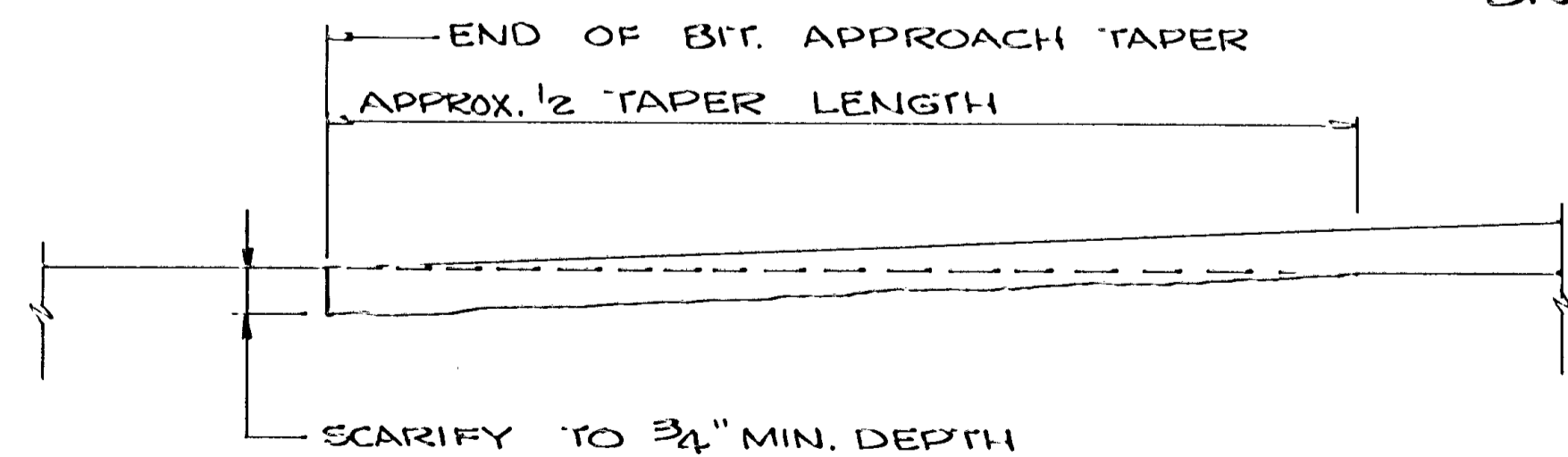


PART LONGITUDINAL SECTION - PROPOSED



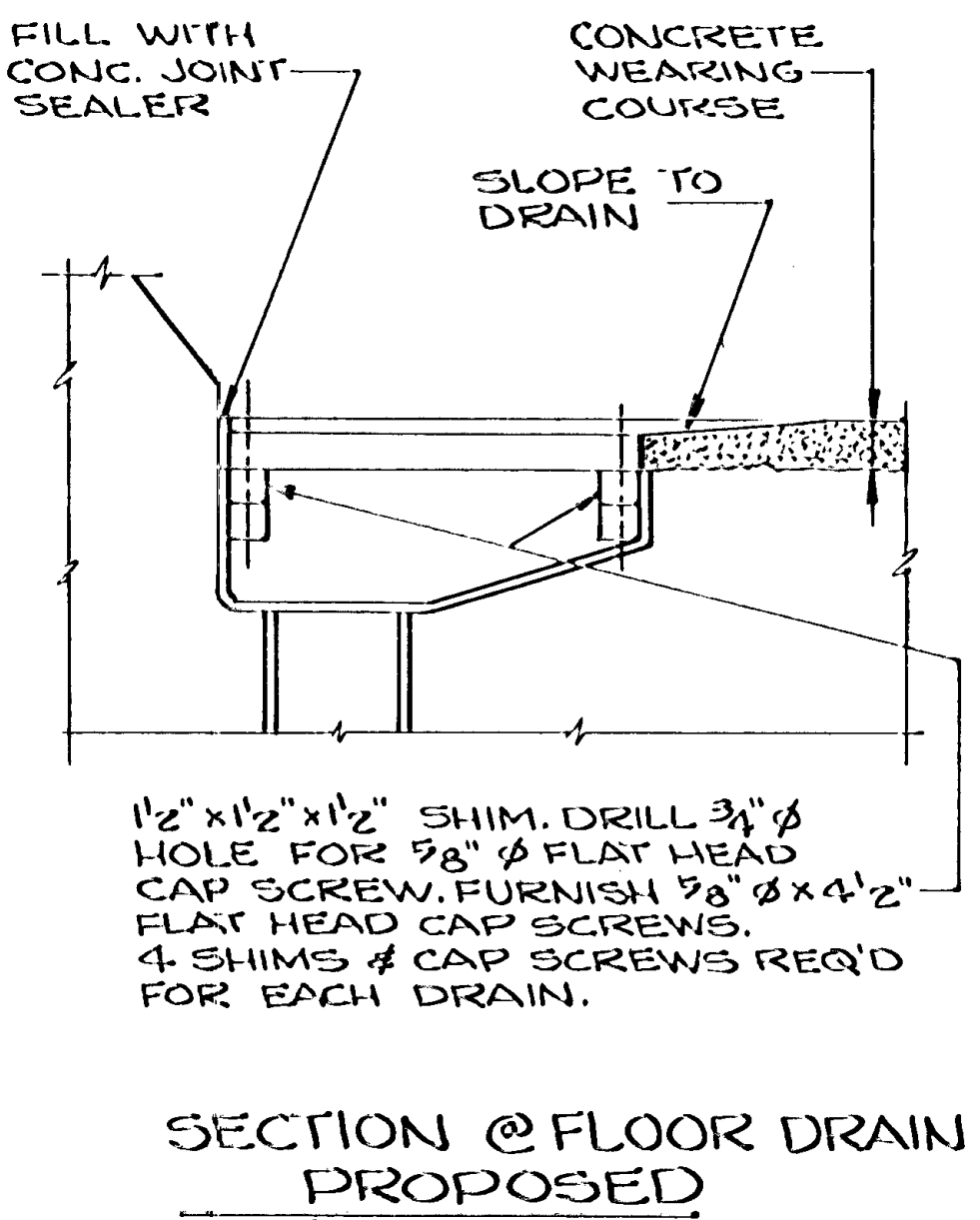
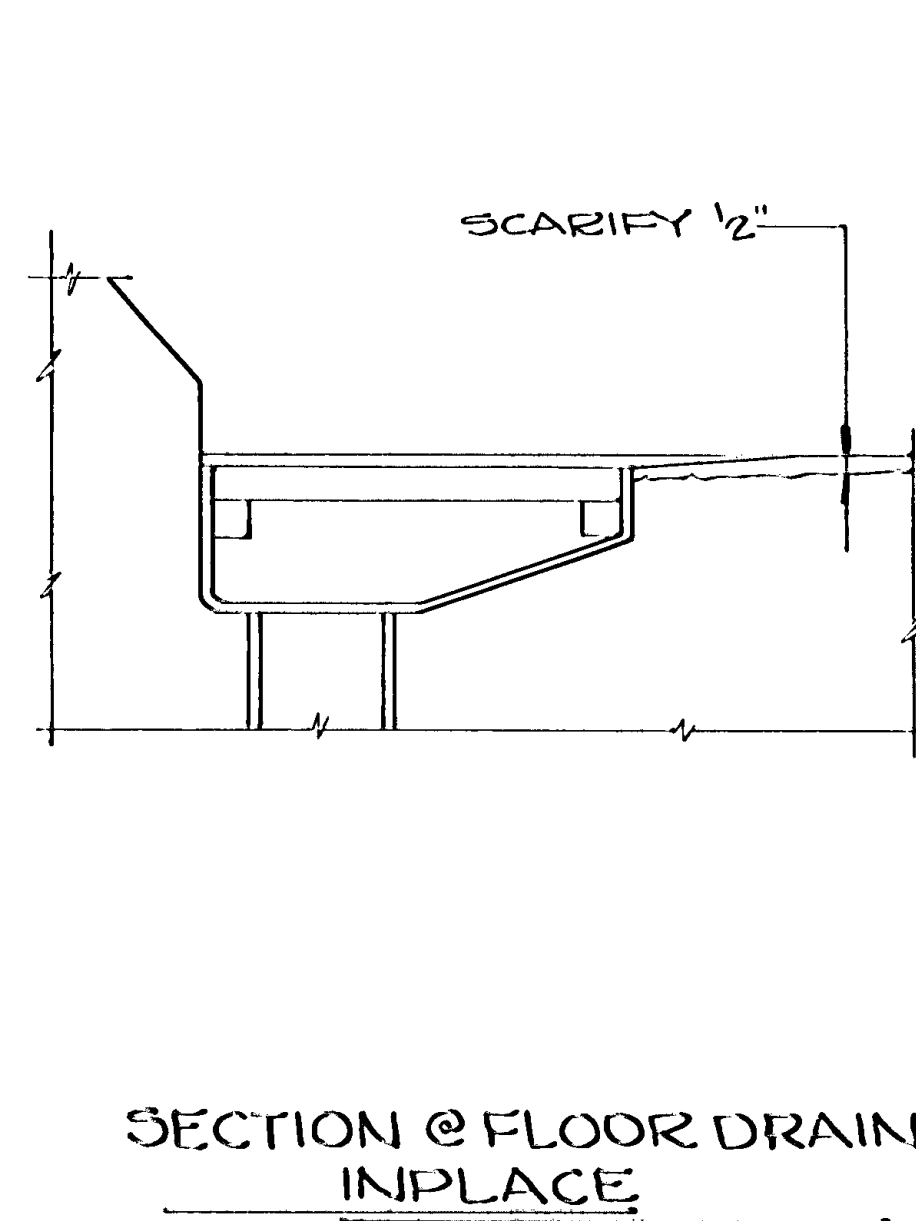
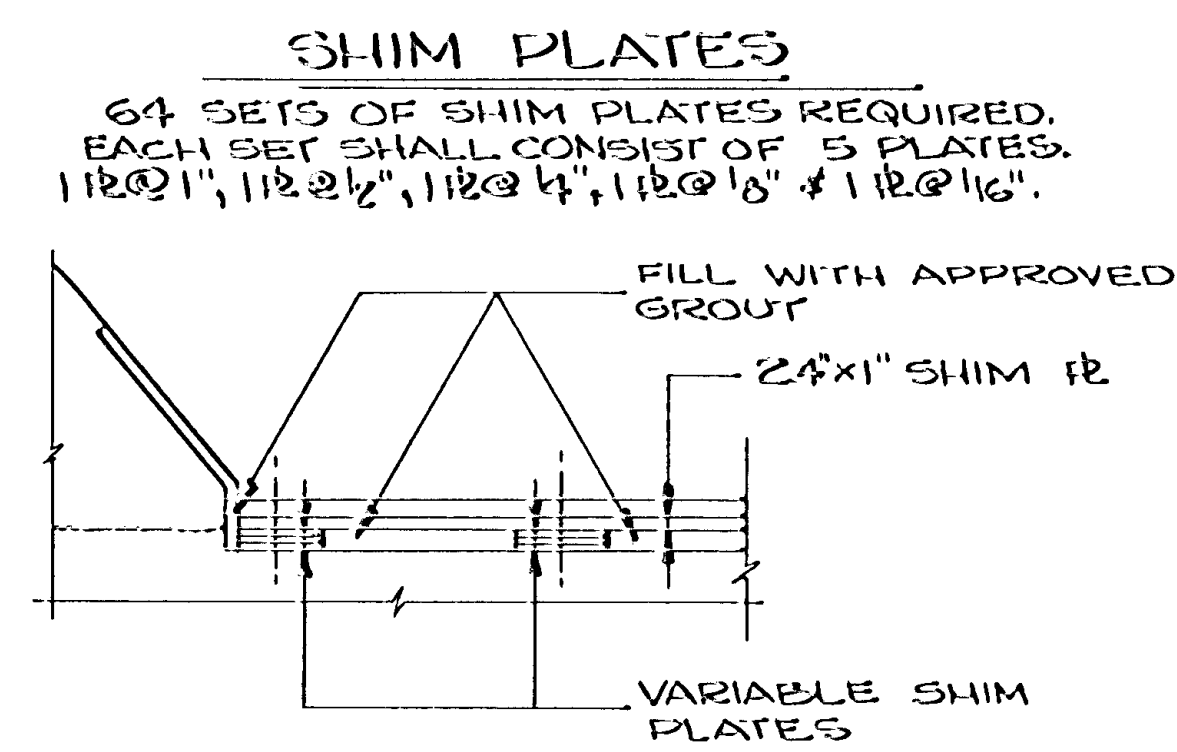
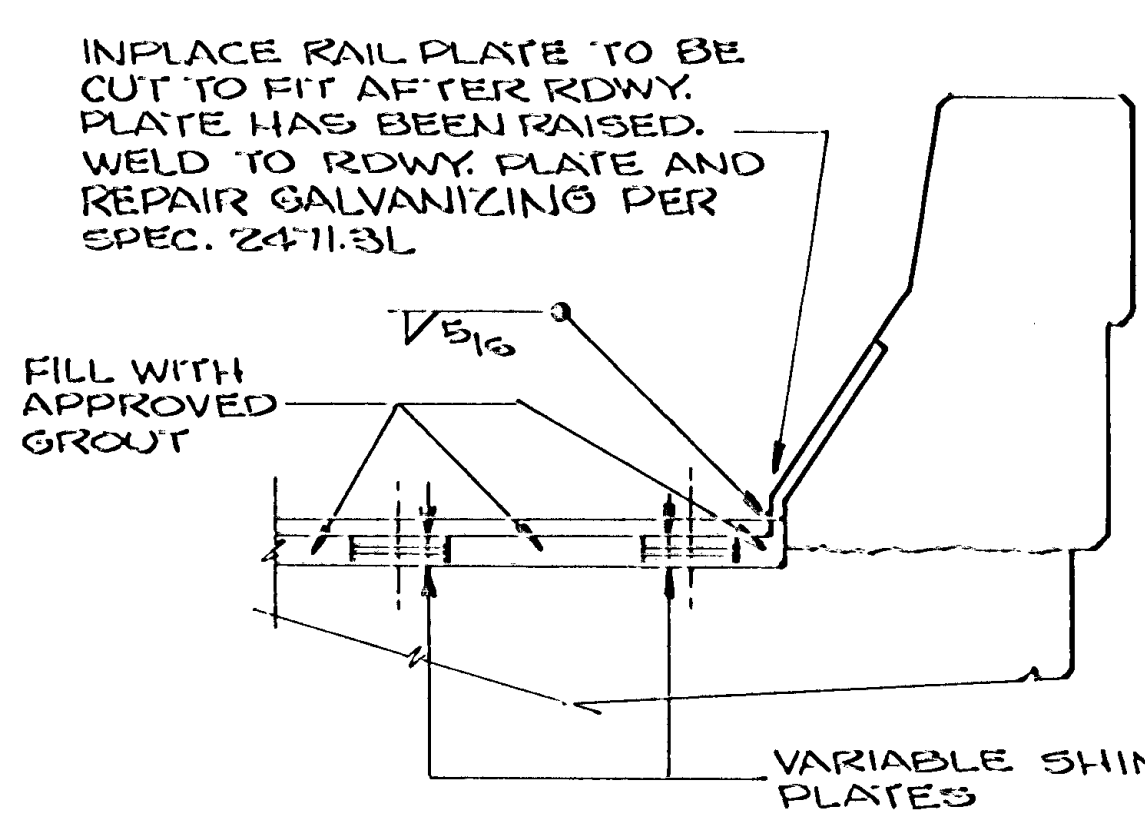
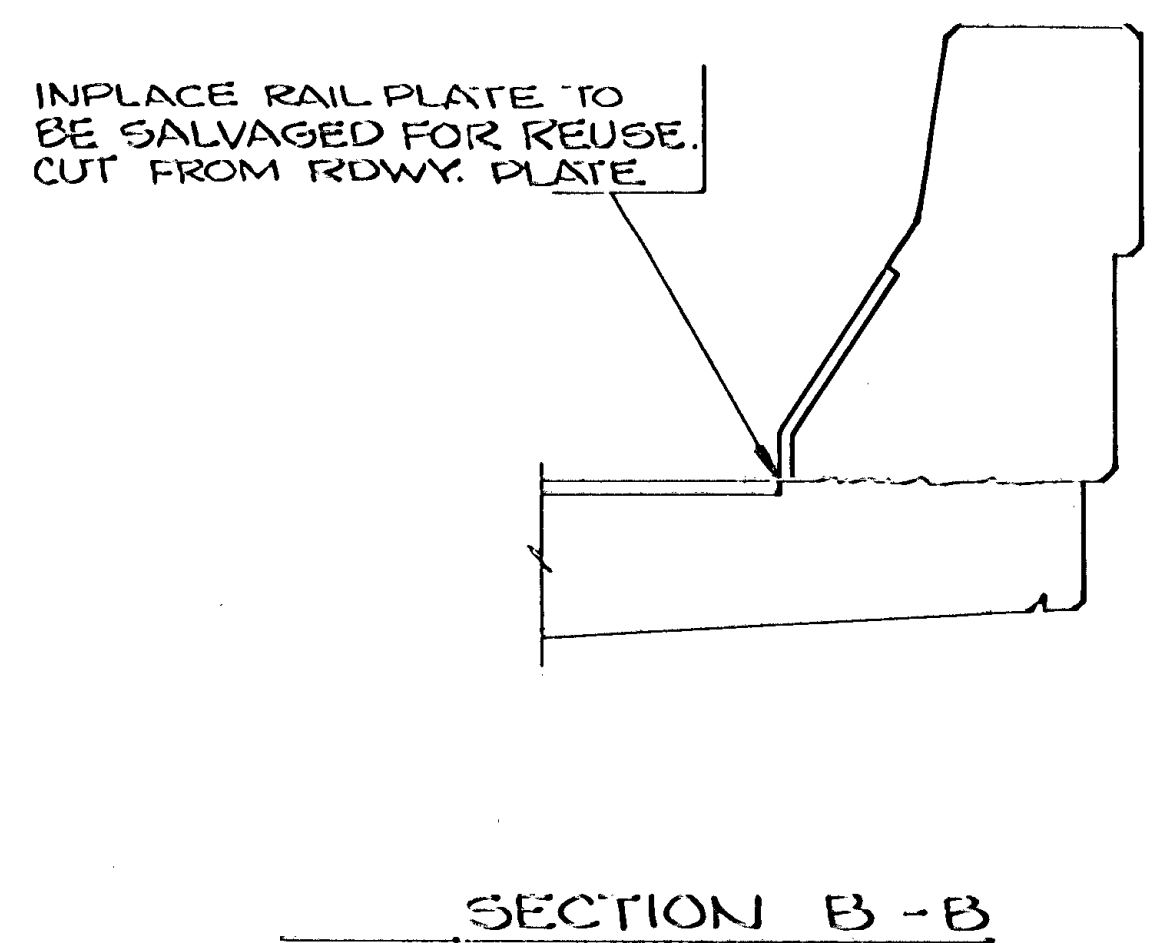
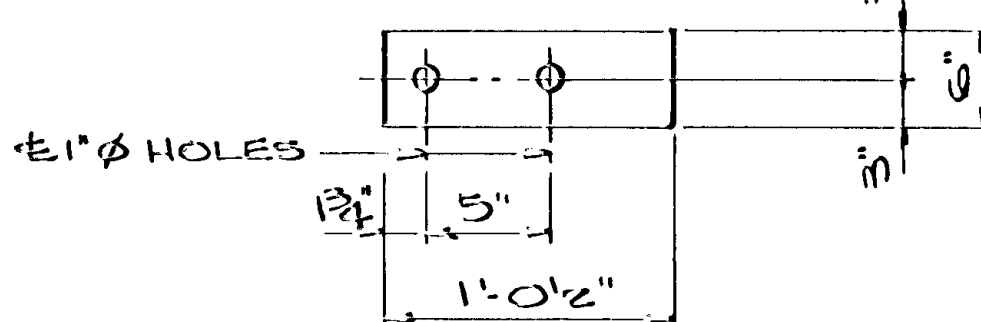
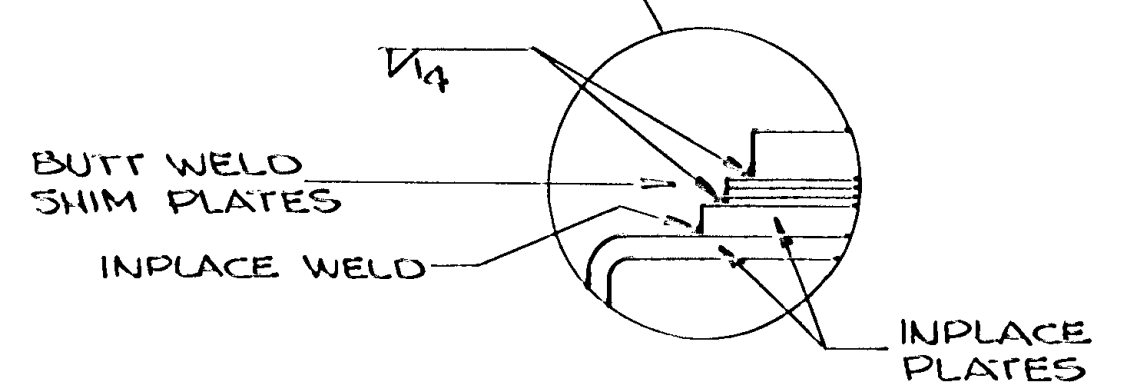
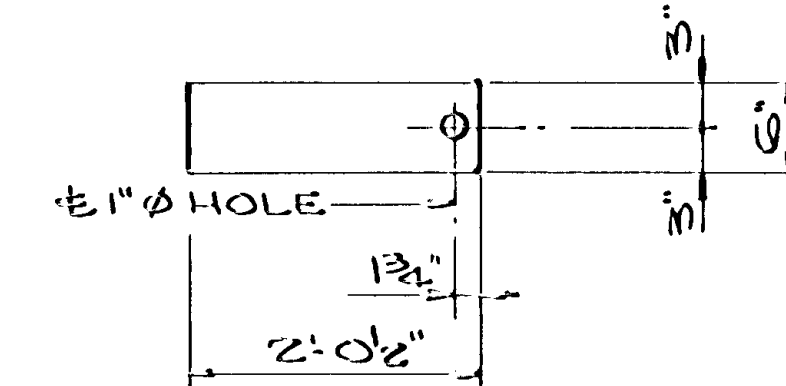
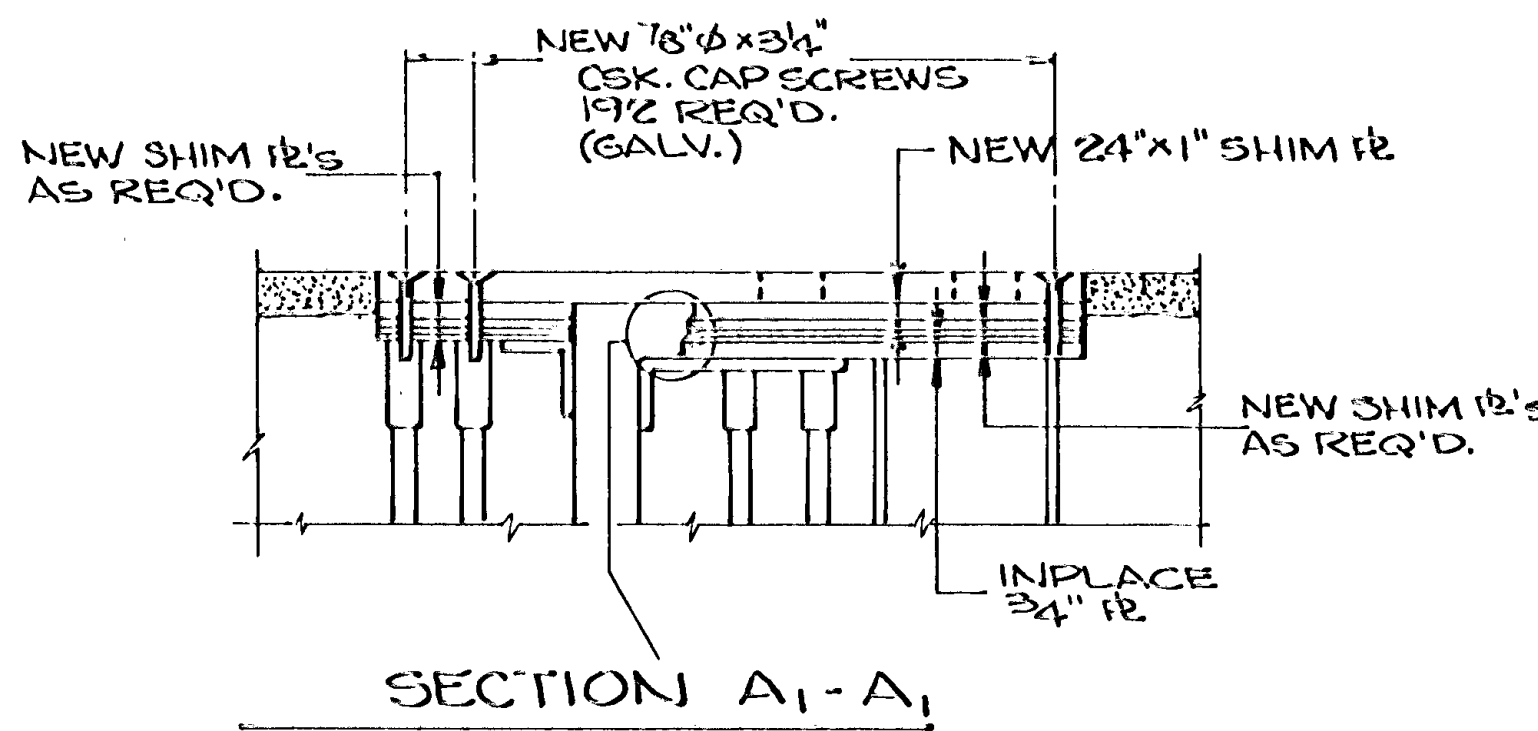
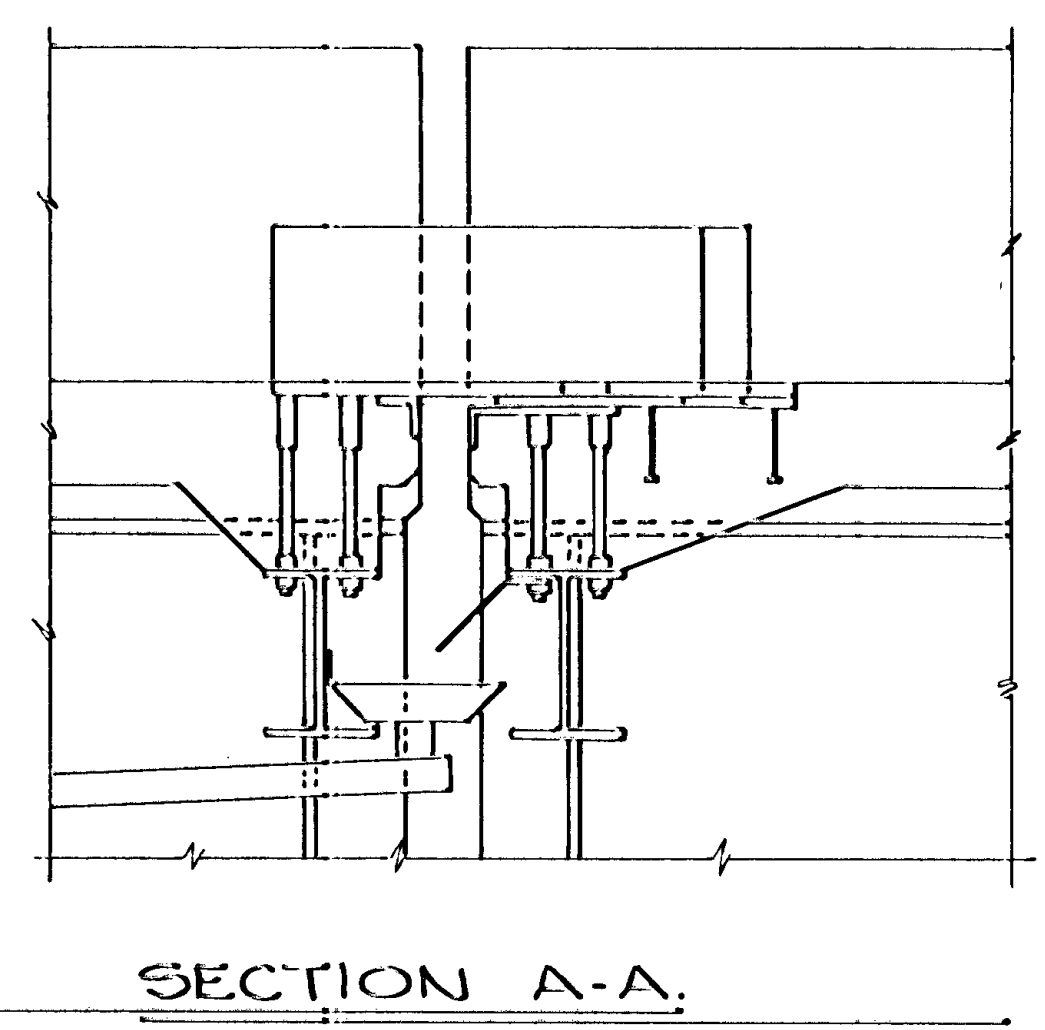
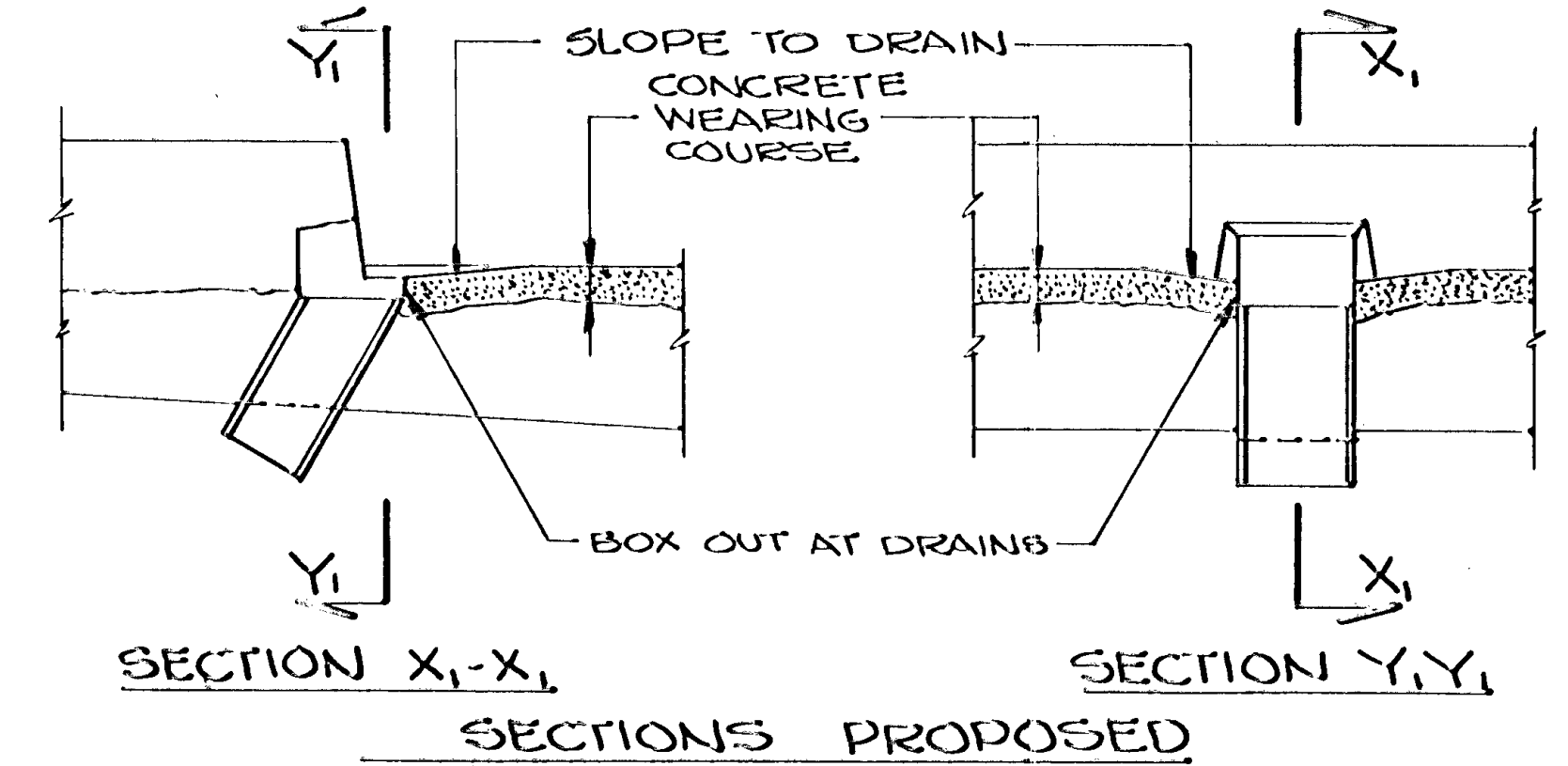
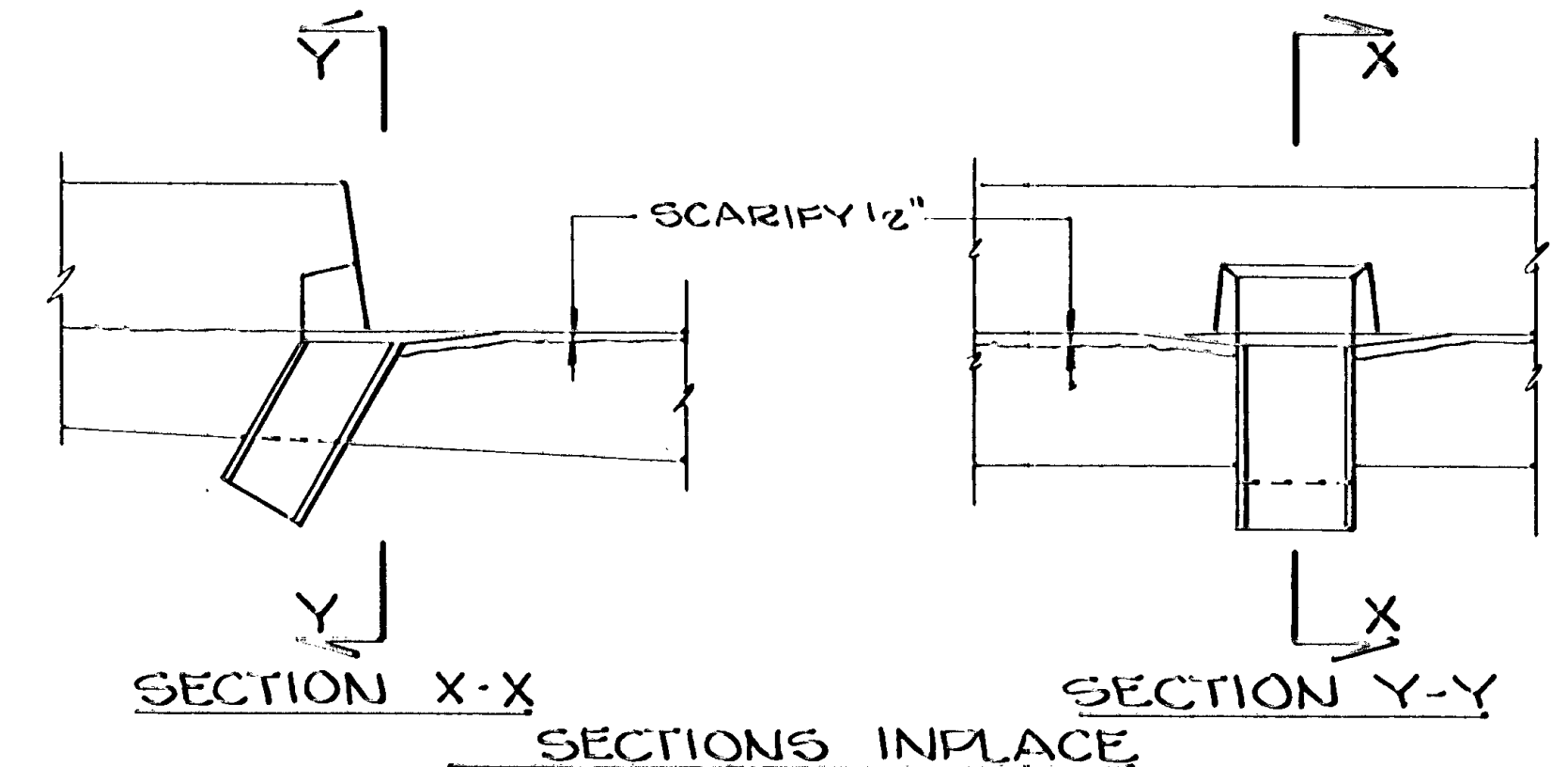
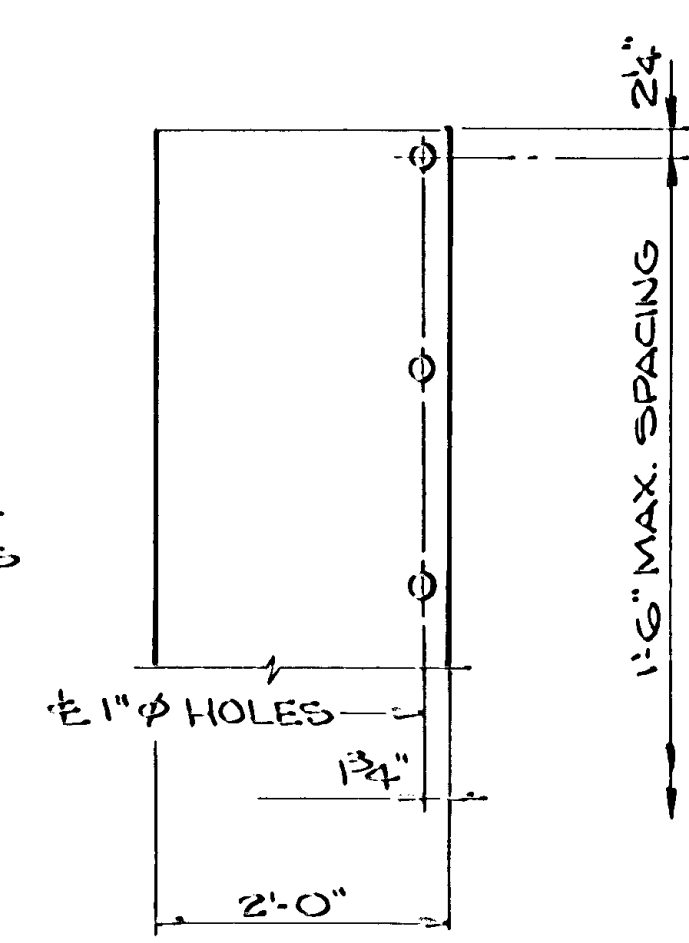
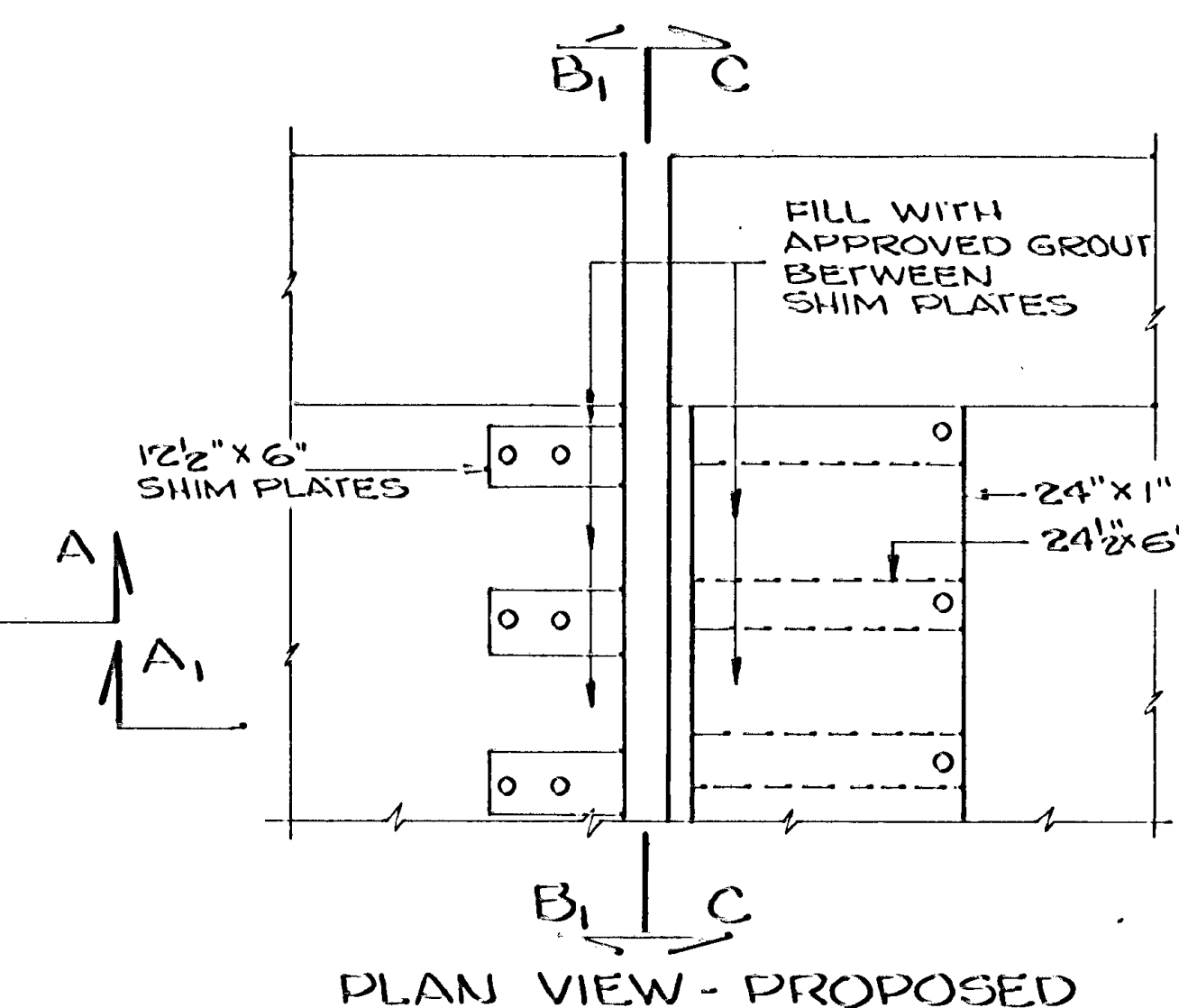
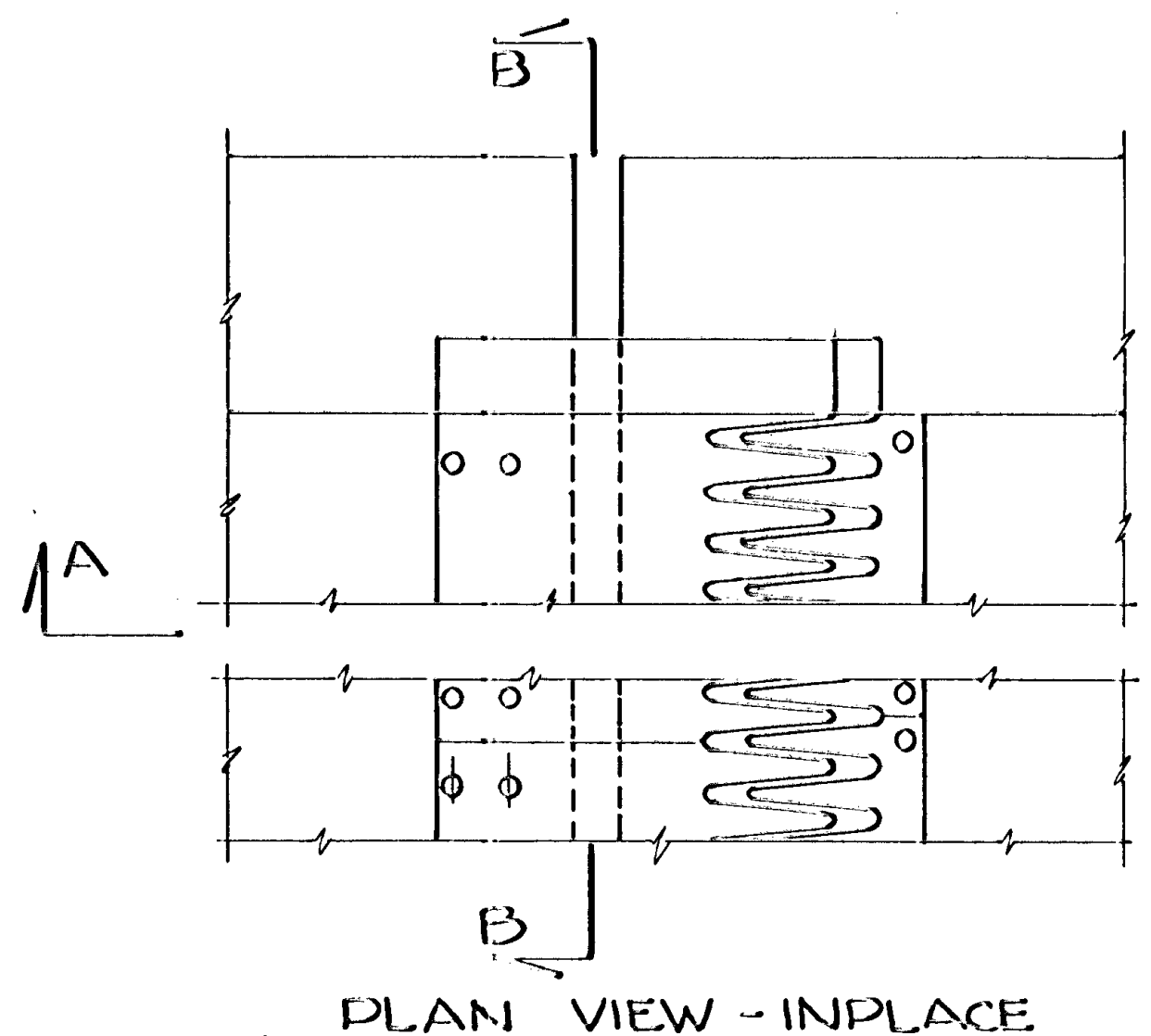
PART LONGITUDINAL SECTION - INPLACE

RECONSTRUCT EXPANSION JOINT TYPE 2
BRIDGES NO. 02521 & 02522



BITUMINOUS TAPER DETAIL
TYPICAL BRIDGES NO. 02501, 02521, 02522 & 02523

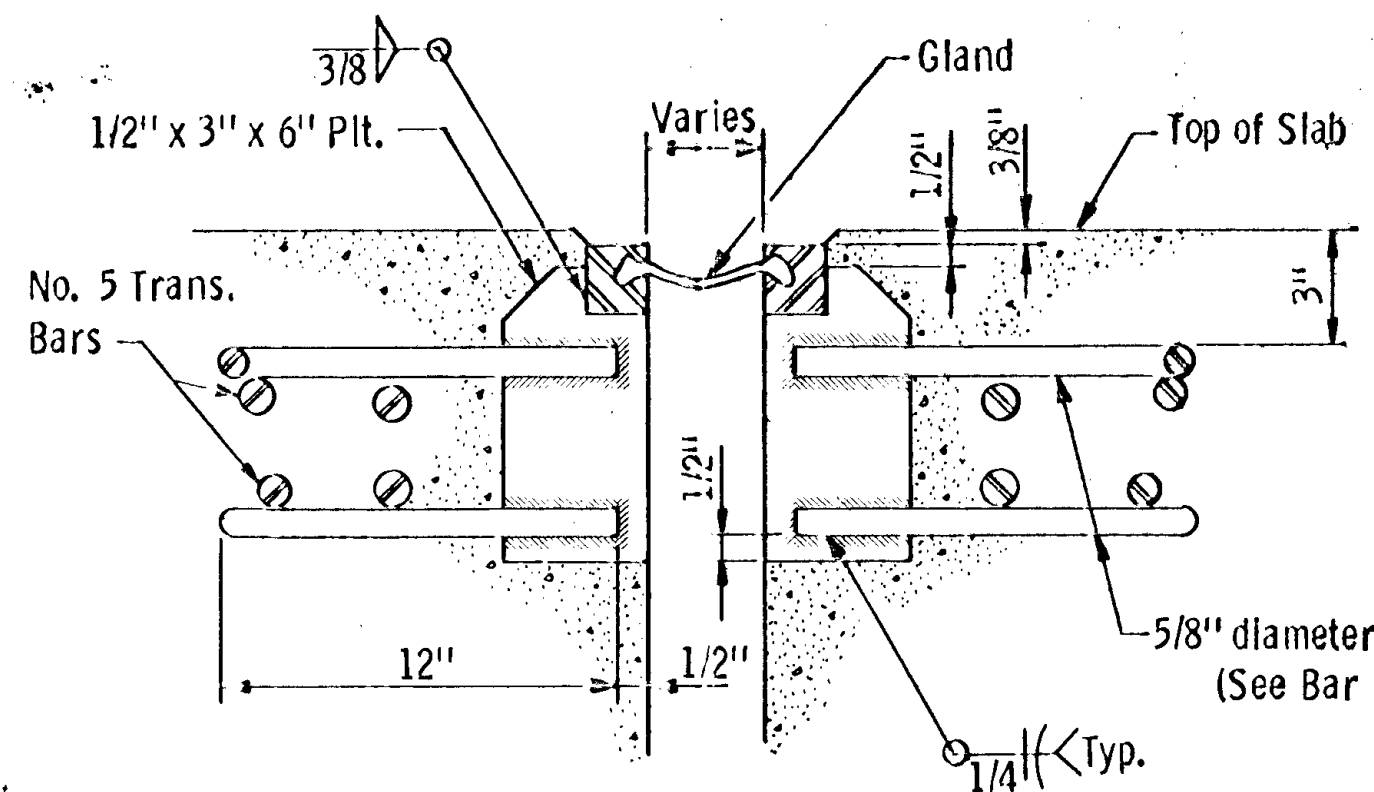
RECONSTRUCT EXPANSION JOINT TYPE 2 APPROACH OVERLAY & TAPER DETAILS		DES:	DR: R.H.	APPROVED:	BRIDGE NO. 02501 02521 02522 02523
		CHK:	CHK:		
		SHEET NO. 7 of 10 SHEETS			



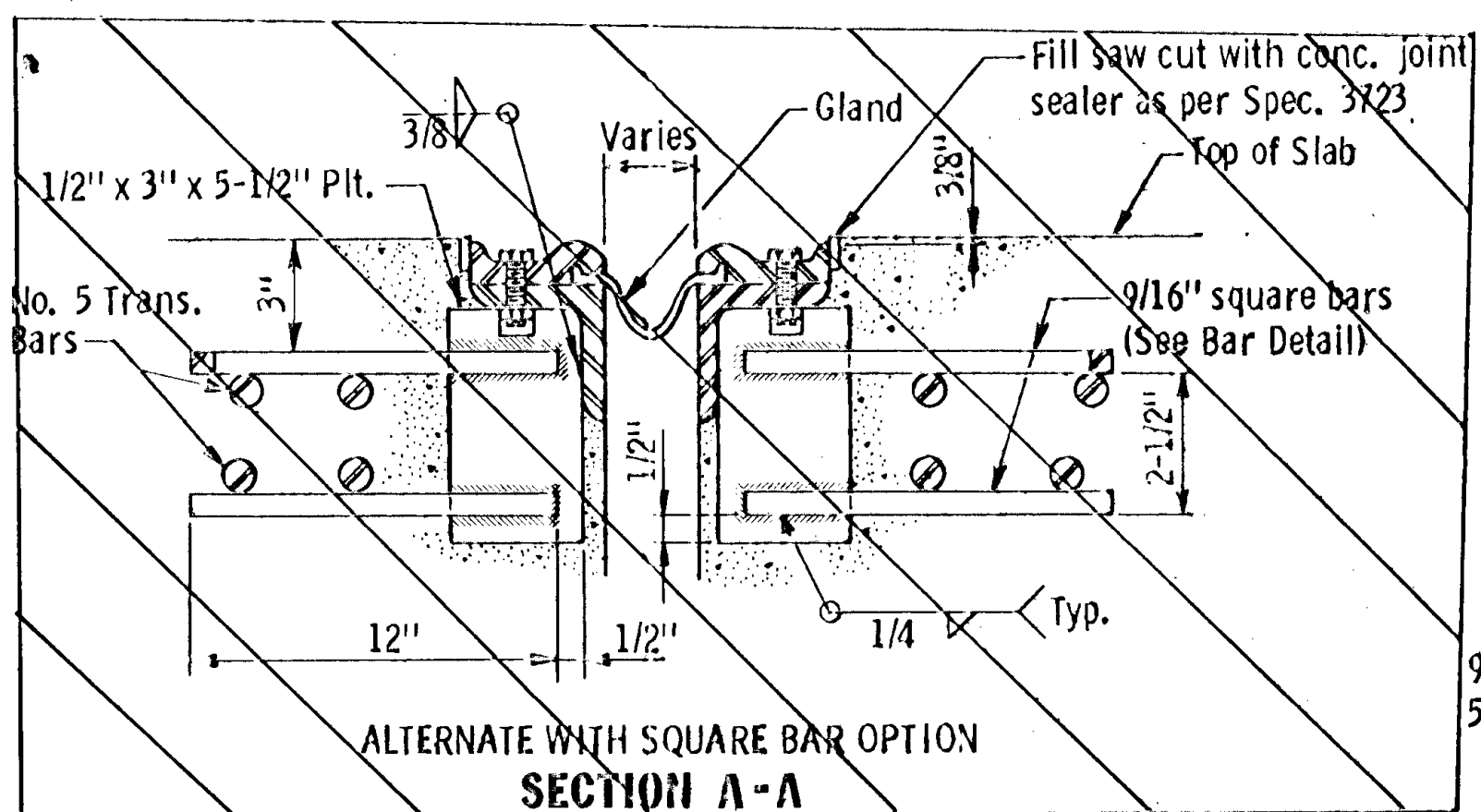
ALL NEW PLATES SHALL COMPLY WITH SPEC. 3306. GALVANIZE PER SPEC. 3394. SHIM PLATES NOT USED SHALL BECOME PROPERTY OF THE COUNTY. SHIM PLATES & NEW BOLTS ARE INCLUDED IN PRICE BID FOR RECONSTRUCT EXPANSION JOINT TYPE 3

RECONSTRUCT EXPANSION JOINT TYPE 3
BRIDGE NO. 02523

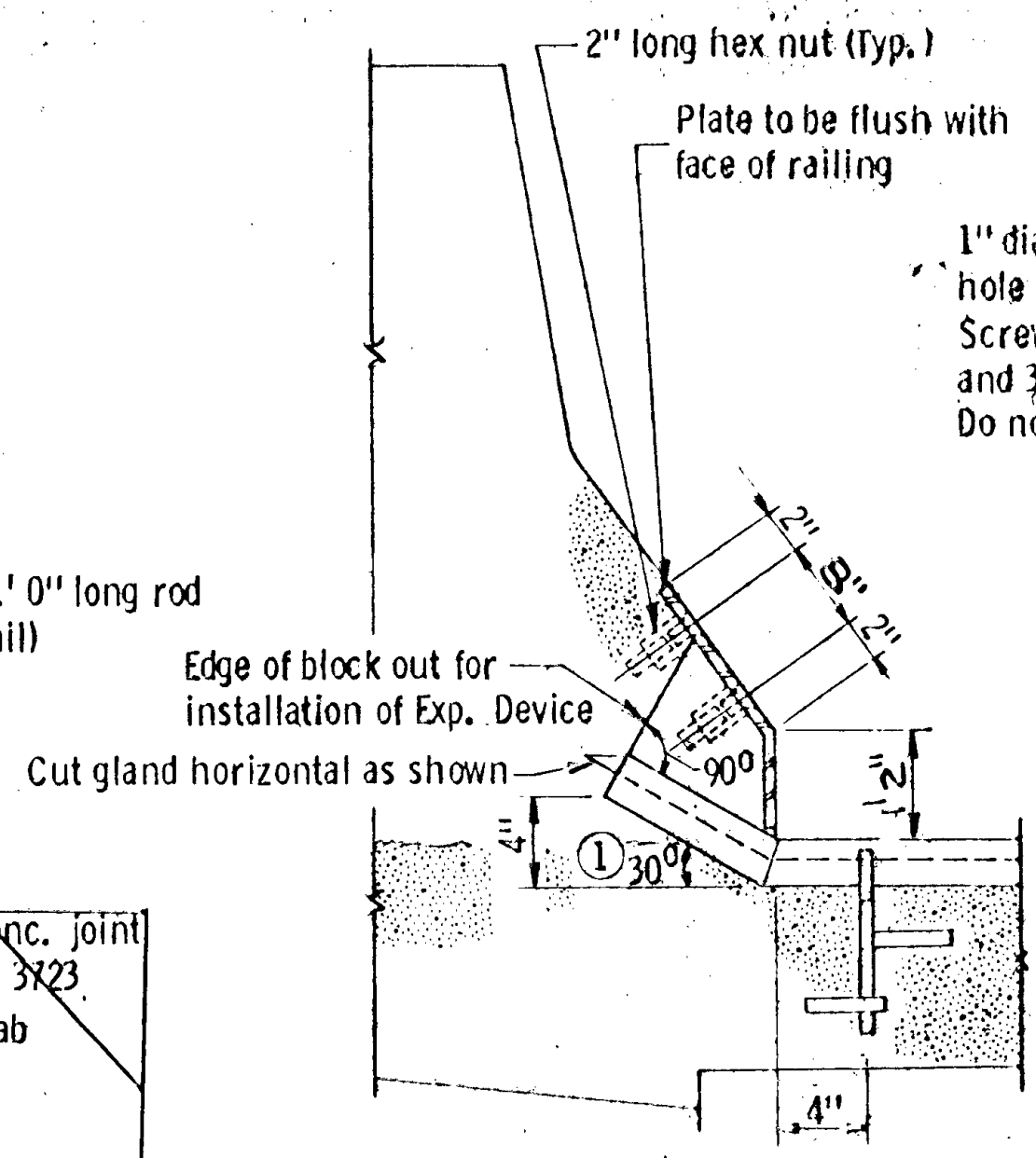
RECONSTRUCT EXPANSION JOINT TYPE 3 DRAIN DETAILS	DES:	DR: R.H.	APPROVED:	BRIDGE NO. 02523 02501
	CHK:	CHK:		
	SHEET NO. 8 OF 10 SHEETS			



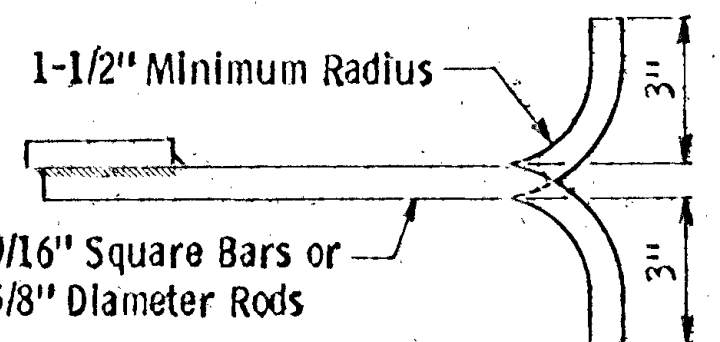
SECTION A-A
ALTERNATE WITH ROD OPTION



ALTERNATE WITH SQUARE BAR OPTION
SECTION A-A



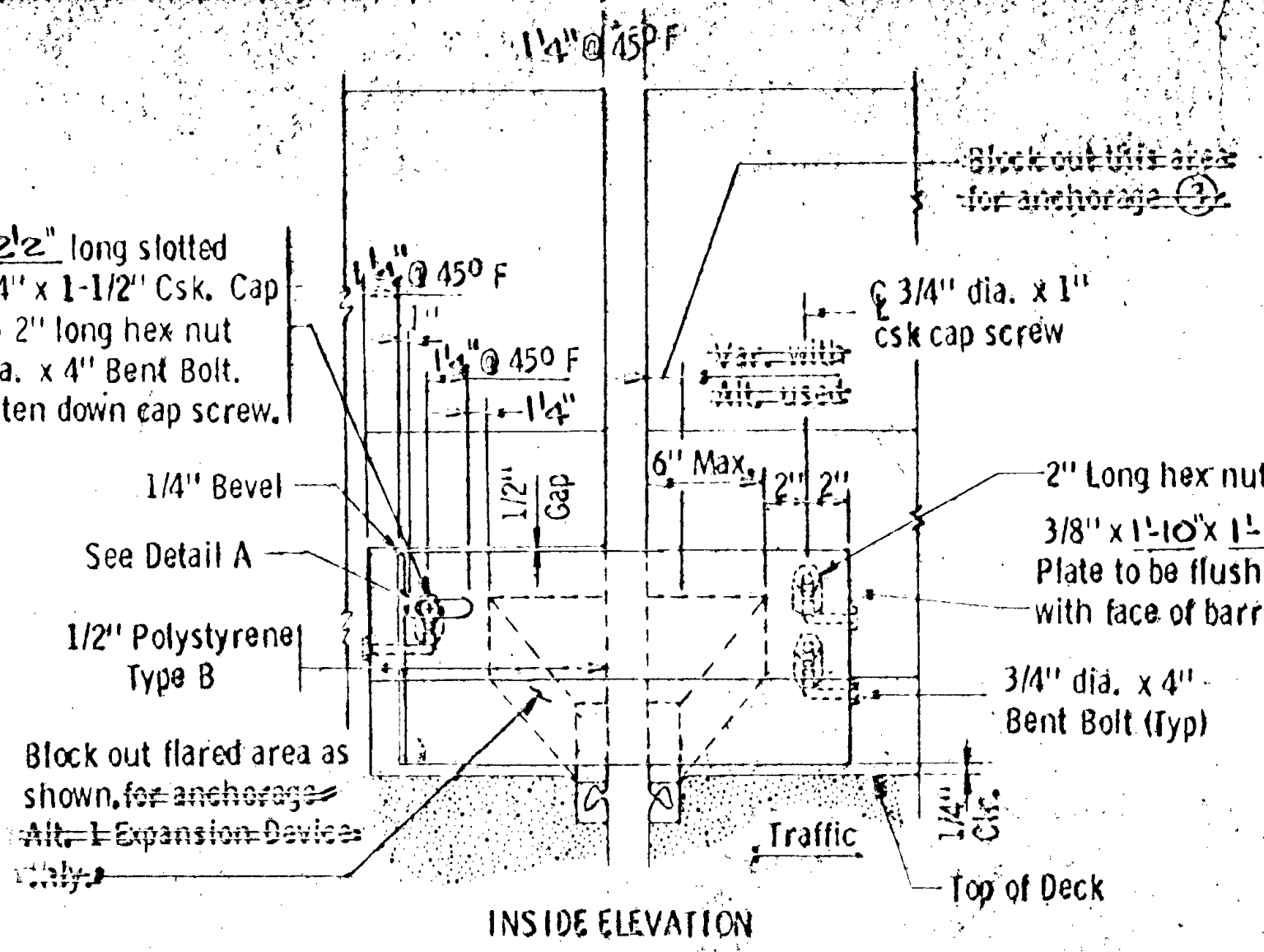
SECTION



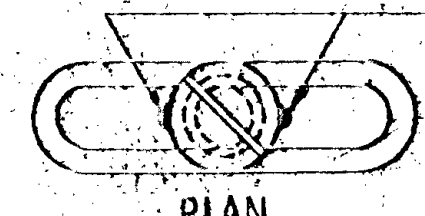
BAR DETAIL

1" dia. x 2 1/2" long slotted hole for 3/4" x 1-1/2" Csk. Cap Screw with 2" long hex nut and 3/4" dia. x 4" Bent Bolt. Do not tighten down cap screw.

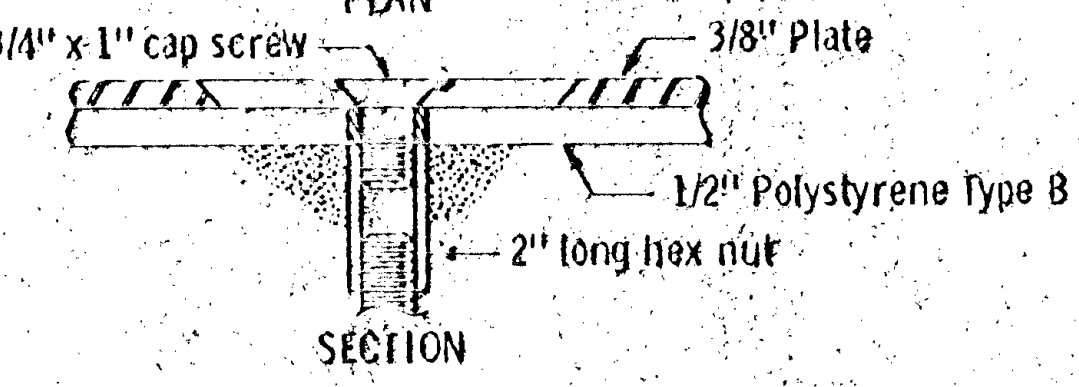
RAILING OR MEDIAN BR. NO. 02523



INSIDE ELEVATION



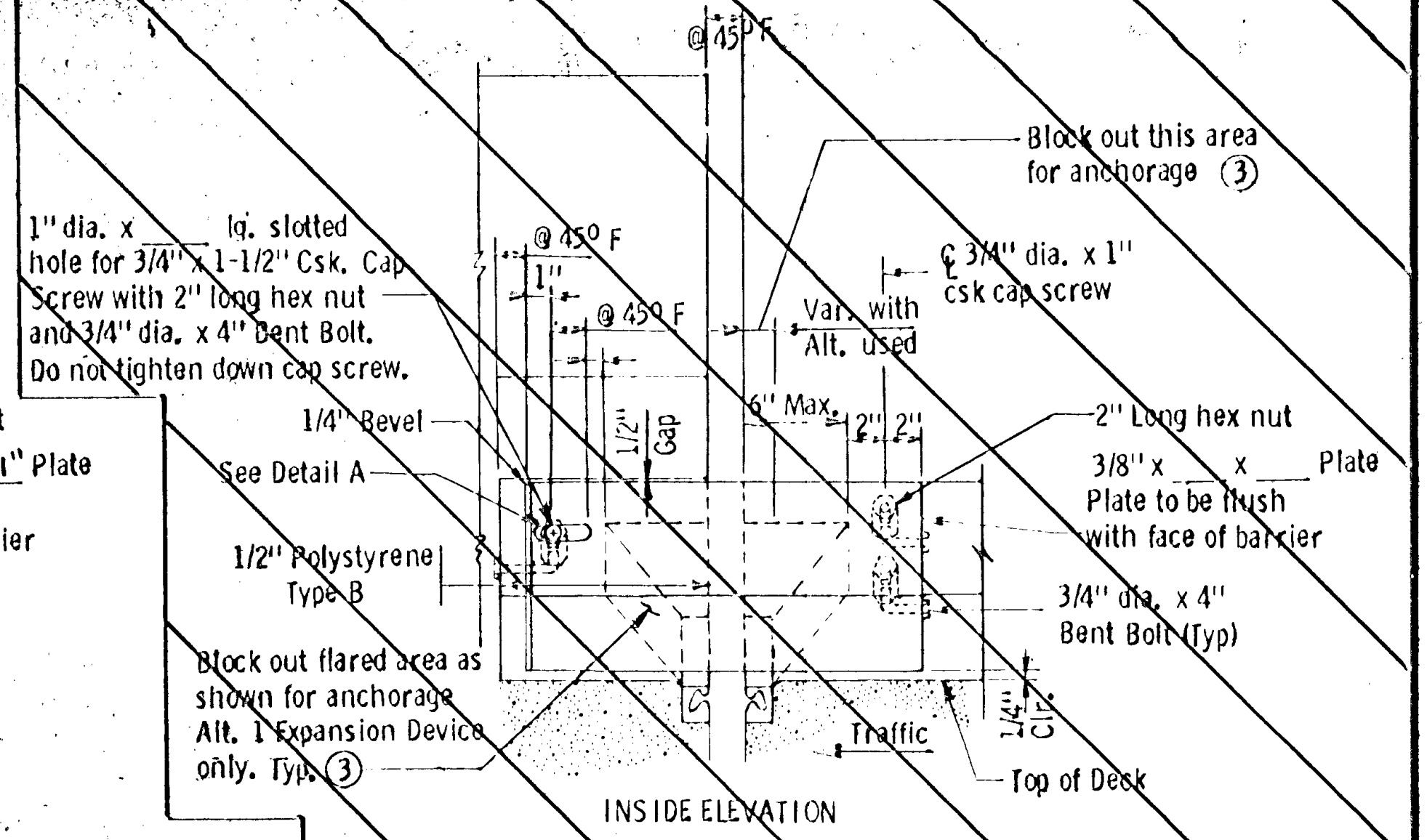
PLAN



SECTION

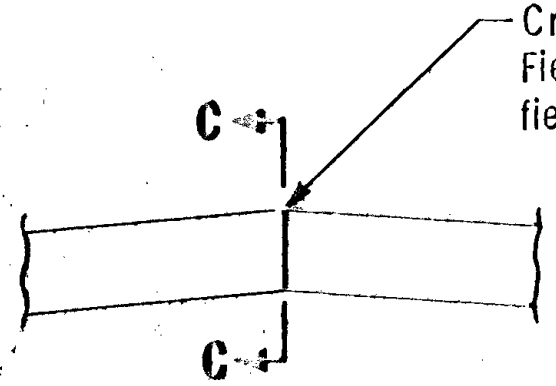
DETAIL A

After assembly, field weld lugs on each edge of Cap Screw only to prevent turning. Cap Screw must be able to slide along slot.

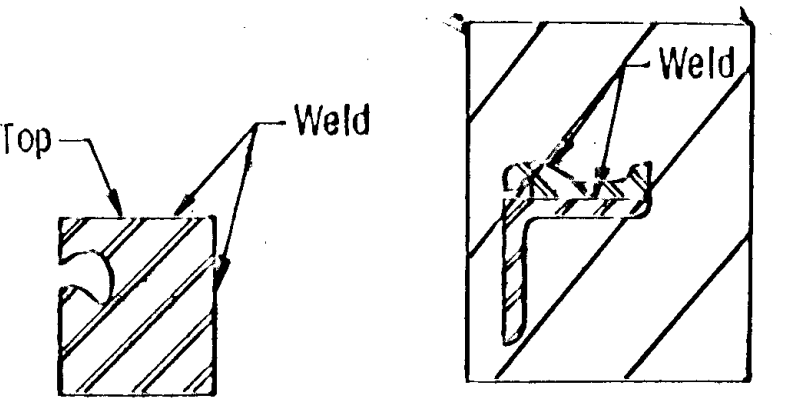


INSIDE ELEVATION

RAILING AT CURB TRANSITION

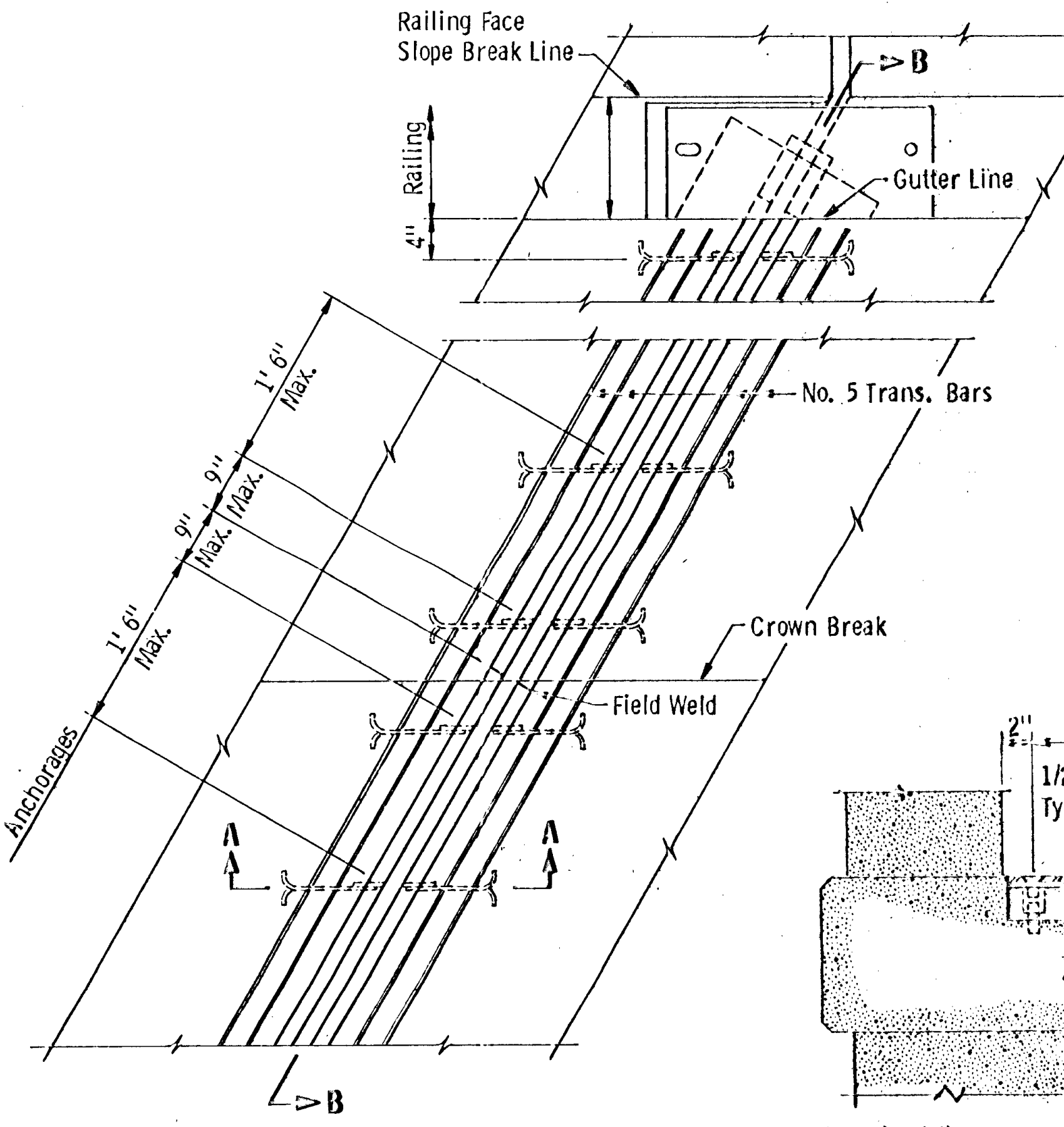


DETAIL B

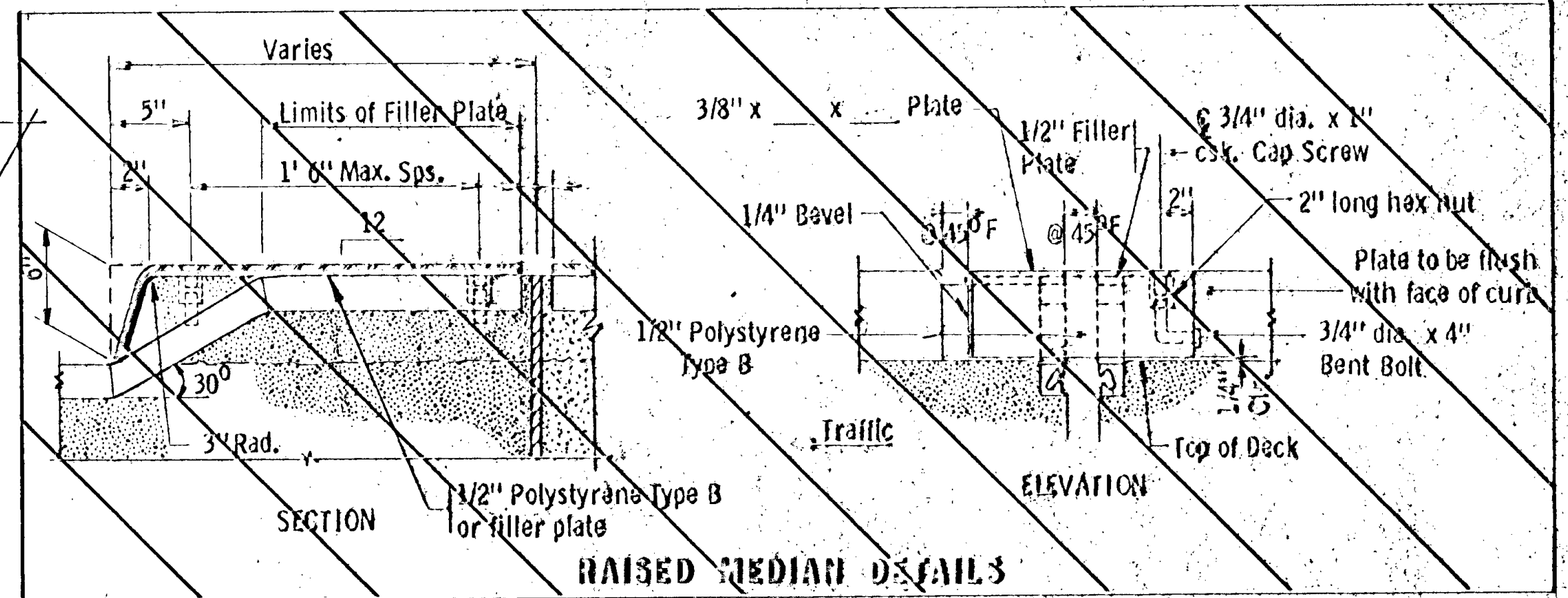


ALTERNATE TYPES OF EXPANSION DEVICES

SECTIONS C-C

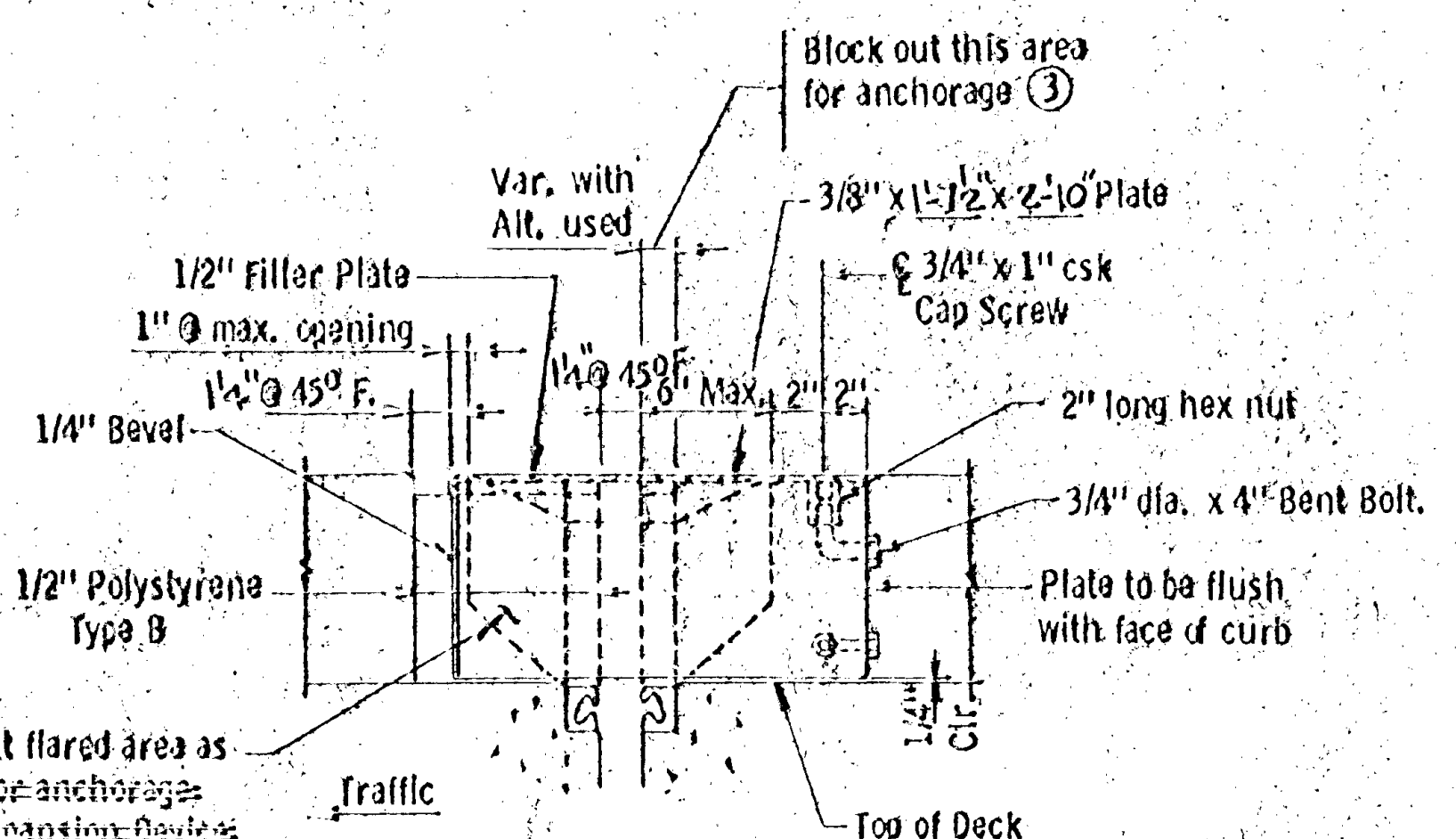


PLAN VIEW AT EXPANSION DEVICE

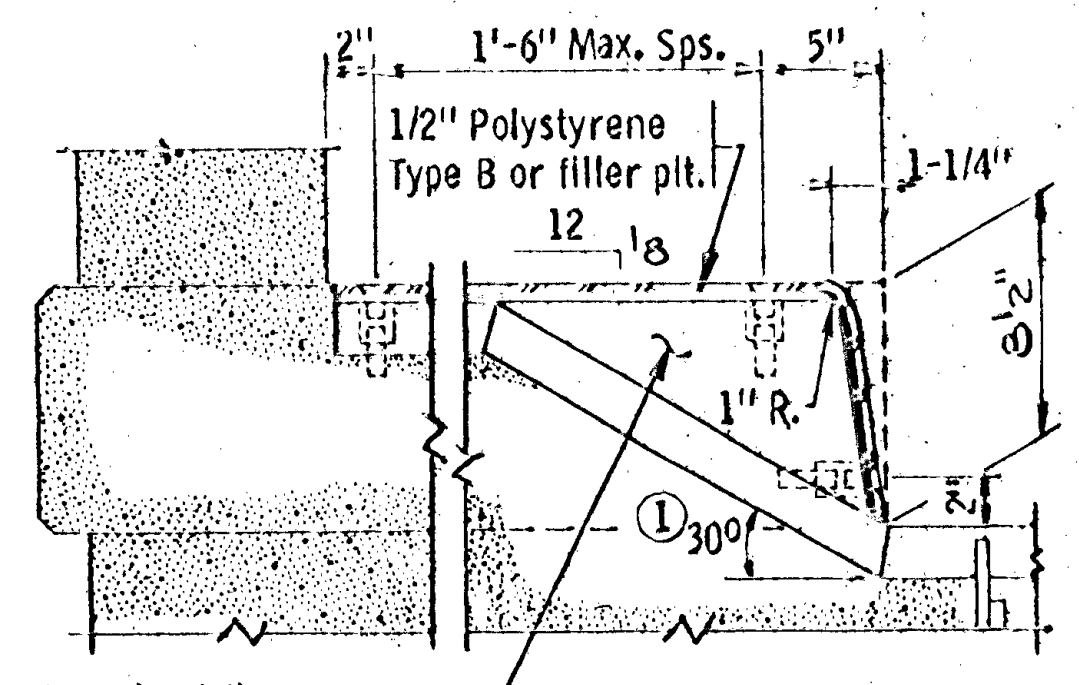


SECTION

RAISED MEDIAN DETAILS

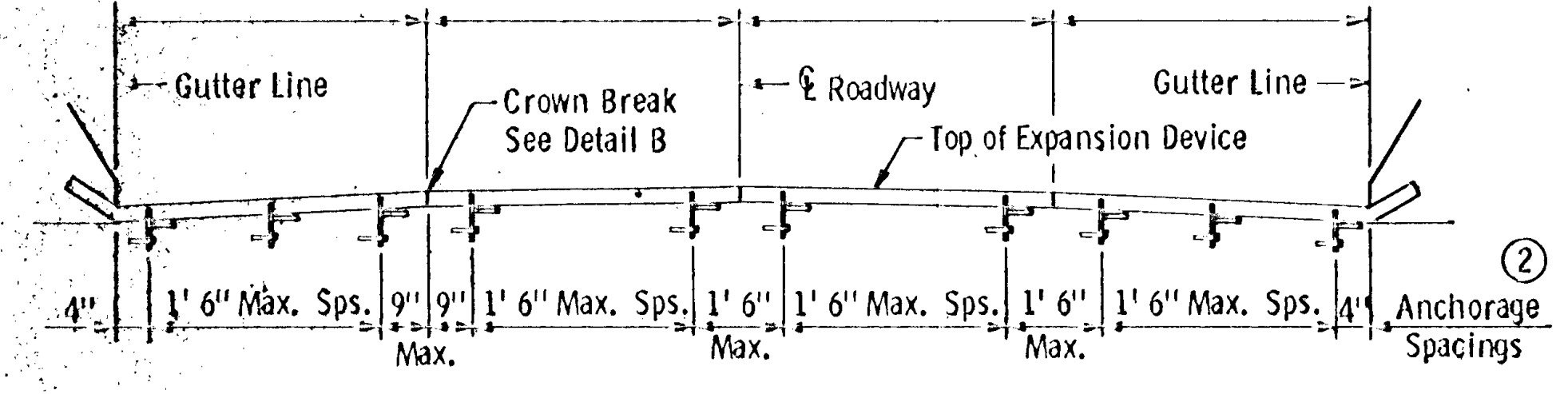


INSIDE ELEVATION



SECTION

SIDEWALK DETAILS BR. NO. 02501



SECTION B-B

- ① For skews over 25°, use 45°.
- ② Dimension along skew.
- ③ See Figure 5-397.623 for additional block-out information.

NOTES:
Galvanize structural steel after fabrication as per Spec. 3394.
Joints in roadway plate or extrusion shall be located at breaks in transverse profile and as otherwise required. Joints shall be close fit and welded. Repair after welding as per Spec. 2471.31.
Structural steel shall comply with Spec. 3306. or Spec. 3309.
Galvanize screws and nuts as per Spec. 3392
Plates shall be flat after galvanizing.
Cap screws shall be csk. 1/16" below top of plate.
New reinforcement bars are to have the same treatment as the in-place slab reinforcement.

Fig. 5-397.629
Approved: May 30, 1973

TITLE: WATERPROOF EXPANSION DEVICE FOR REPAIR WORK		DES: CHK:	DR: R.H. CHK:	APPROVED:	Bridge No. 02501 02523
		Sheet No. 9 of 10 Sheets			

