

CONTRACT No. B-12642

SPANS OVER 20 FEET			
STATE	PROJECT NO.	SHEET	DATE
IND.	I-FRI-65-2(104)68	1	25

INDEX				
PROJECT	STRUCTURE	TYPE	SPAN	OVER
I-FRI-65-2(104)68	1-65-68-4699 B & JB	DECK RECONSTRUCTION AND OVERLAY	SEE GENERAL PLAN	DRIFTWOOD RIVER
SHEET NO.	SHEET DESIGNATION	SUBJECT	I.H.S.A. APPROVAL	
1		Title and Index Sheet		
2		Traffic Maintenance Details		
3		Traffic Maintenance Details		
4	D1	General Plan		
5	D2	Construction Procedures, General Notes, Material Notes, Standard Drawing Table And Details		
6	D3	Expansion Joint Class S-S Details		
7	D4	Expansion Joint Class S-S Details		
8	D5	Expansion Joints Class S-S		
9	D6	Barrier Railing, Type X Details		
10	D7	Miscellaneous Details		
11		Estimate of Quantities		

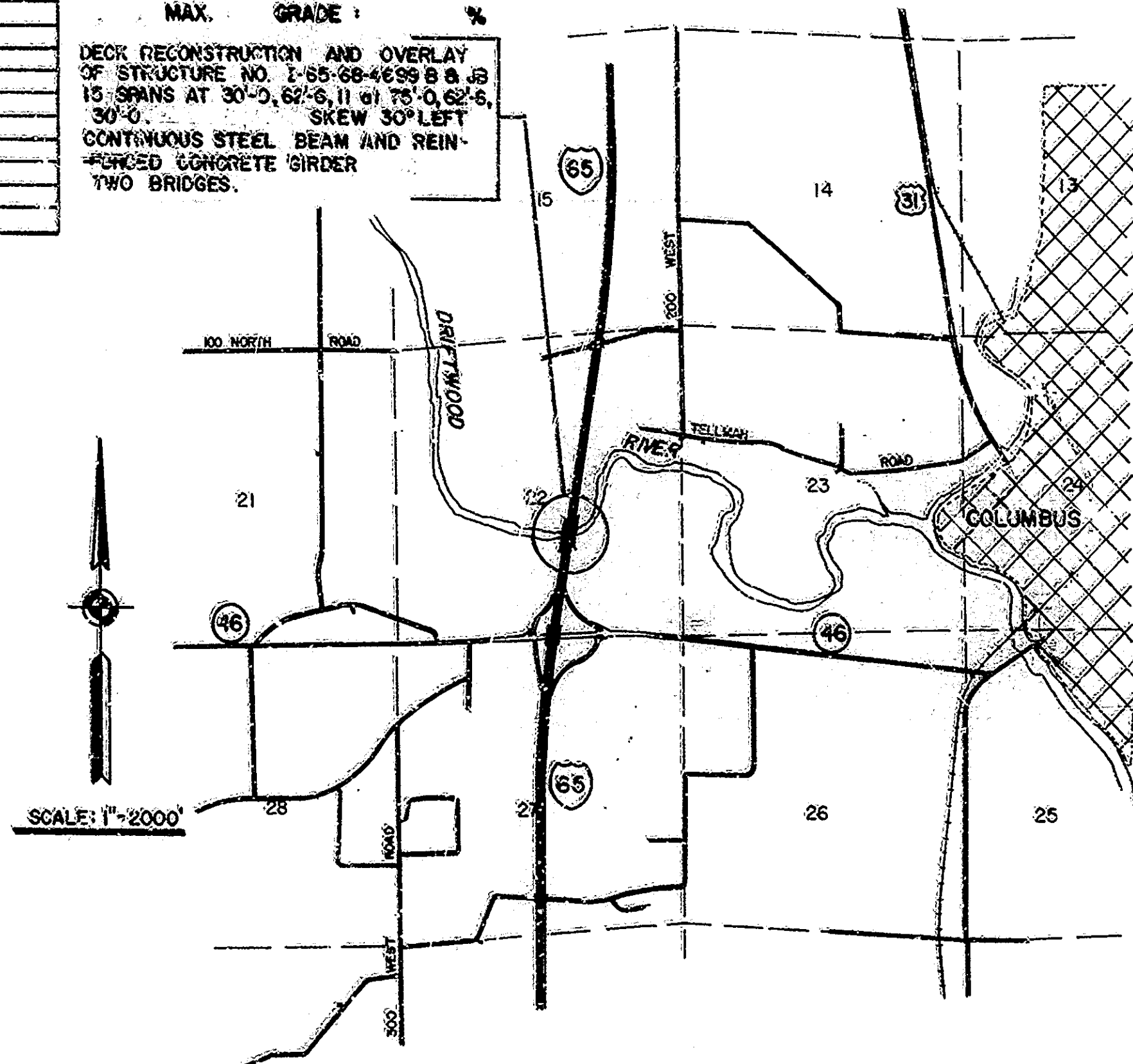
STATE OF INDIANA
INDIANA STATE HIGHWAY COMMISSION

**BRIDGE PLANS
FOR SPANS OVER 20 FEET
ON
INTERSTATE 65
PROJECT NO. I-FRI-65-2(104)68**

STRUCTURE NO. 1-65-68-4699 B & JB LOCATED ON INTERSTATE 65 OVER DRIFTWOOD RIVER IN SECTION 22, T9N, R5E, APPROXIMATELY 0.3 MILES NORTH OF S.R. 46 IN BARTHOLOMEW COUNTY.

BRIDGE LENGTH: MI.
ROADWAY LENGTH: MI.
TOTAL LENGTH: MI.
MAX. GRADE: %

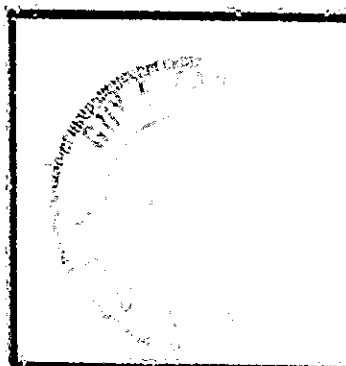
DECK RECONSTRUCTION AND OVERLAY OF STRUCTURE NO. 1-65-68-4699 B & JB IS SPANS AT 30'-0", 62'-6", 11' at 75'-0", 62'-6", 30'-0". SKEW 30° LEFT CONTINUOUS STEEL BEAM AND REINFORCED CONCRETE GIRDER TWO BRIDGES.



TRAFFIC DATA		
A.D.T. (1978)	15,300	V.P.D.
A.D.T. (19 PROJECTED)		V.P.D.
D.H.V. (19 PROJECTED)		V.P.D.
TRUCKS	D.H.V. % A.D.T. %	
DESIGN SPEED		M.P.H.
ACCESS CONTROL		

THESE PLANS PREPARED BY
FINK, ROBERTS & PETRIE INC.
CONSULTING ENGINEERS
INDIANAPOLIS, INDIANA

Certified By *Ann S. Cottrell*
Date Feb 28, 1980



INDEX CONTINUED			
SHEET NO.	SHEET DESIGNATION	SUBJECT	DATE
12	DRIVE STD. 21	ALUMINUM WIRE MESH	6-18-77
	DRIVE STD. 22	ALUMINUM WIRE MESH DETAILS	6-1-77
	DRIVE STD. 23	ALUMINUM WIRE MESH DETAILS	
	DRIVE STD. 24	ALUMINUM WIRE MESH DETAILS	
	DRIVE STD. 25	ALUMINUM WIRE MESH DETAILS	
	DRIVE STD. 26	ALUMINUM WIRE MESH DETAILS	
	DRIVE STD. 27	ALUMINUM WIRE MESH DETAILS	
	DRIVE STD. 28	ALUMINUM WIRE MESH DETAILS	
	DRIVE STD. 29	ALUMINUM WIRE MESH DETAILS	
	DRIVE STD. 30	ALUMINUM WIRE MESH DETAILS	
	DRIVE STD. 31	ALUMINUM WIRE MESH DETAILS	
	DRIVE STD. 32	ALUMINUM WIRE MESH DETAILS	
	DRIVE STD. 33	ALUMINUM WIRE MESH DETAILS	
	DRIVE STD. 34	ALUMINUM WIRE MESH DETAILS	
	DRIVE STD. 35	ALUMINUM WIRE MESH DETAILS	
	DRIVE STD. 36	ALUMINUM WIRE MESH DETAILS	
	DRIVE STD. 37	ALUMINUM WIRE MESH DETAILS	
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	DRIVE STD. 39	ALUMINUM WIRE MESH DETAILS	
	DRIVE STD. 40	ALUMINUM WIRE MESH DETAILS	
	DRIVE STD. 41	ALUMINUM WIRE MESH DETAILS	
	DRIVE STD. 42	ALUMINUM WIRE MESH DETAILS	
	DRIVE STD. 43	ALUMINUM WIRE MESH DETAILS	
	DRIVE STD. 44	ALUMINUM WIRE MESH DETAILS	
	DRIVE STD. 45	ALUMINUM WIRE MESH DETAILS	
	DRIVE STD. 46	ALUMINUM WIRE MESH DETAILS	
	DRIVE STD. 47	ALUMINUM WIRE MESH DETAILS	
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	DRIVE STD. 95	ALUMINUM WIRE MESH DETAILS	
	DRIVE STD. 96	ALUMINUM WIRE MESH DETAILS	
	DRIVE STD. 97	ALUMINUM WIRE MESH DETAILS	
	DRIVE STD. 98	ALUMINUM WIRE MESH DETAILS	
	DRIVE STD. 99	ALUMINUM WIRE MESH DETAILS	
	DRIVE STD. 100	ALUMINUM WIRE MESH DETAILS	

DATE	REVISIONS	DATE	REVISIONS
6-27-80	V/S/II : 17A add		

INDIANA STATE HIGHWAY COMMISSION
STANDARD SPECIFICATIONS DATED 1978
TO BE USED WITH THESE PLANS.

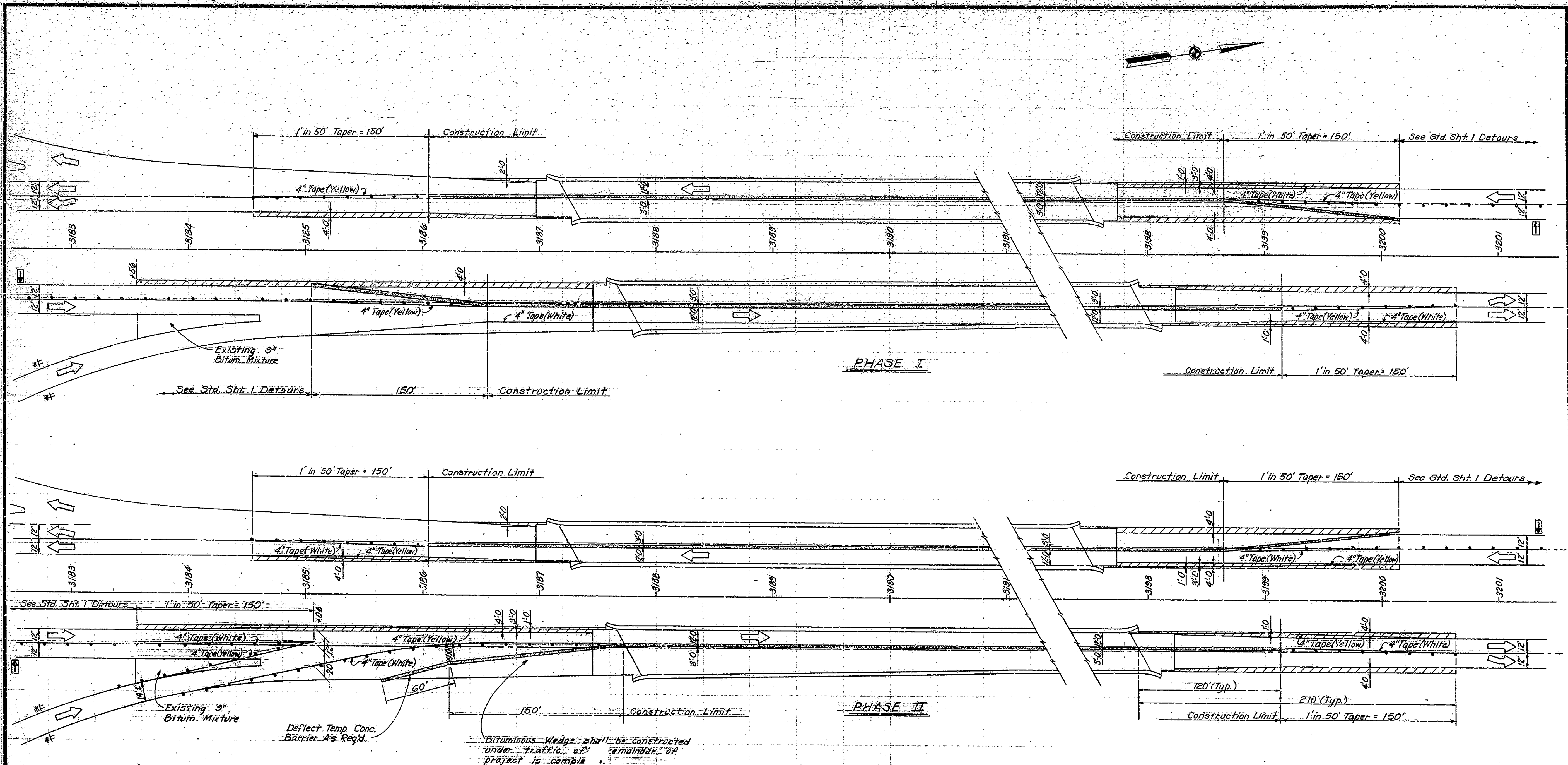
APPROVED 4-17-80
R. Hall
DIRECTOR OF TRANSPORTATION

RECOMMENDED FOR APPROVAL *L.H.B.*
E.W. Walker
CHIEF OF FIELD OPERATIONS

FEDERAL HIGHWAY ADMINISTRATION
DEPARTMENT OF TRANSPORTATION

APPROVED: _____
DIRECTOR ADMINISTRATOR DATE

DWGS FILE: I-65-68-4699 B & JB



LEGEND

- ▣ Temporary Concrete Barrier. For details, see Sheet 3.
- ▣ Bituminous Widening. To remain in place. See Material Notes, Dwg. D2.
- ▣ Flashing Arrow Sign.
- Metal drum of Type I or II Barricade with Type "C" Steady Burning Light (Not a pay item).
- ▣ Construction Sign, XW-1A with Low Intensity Flashing Yellow Light, Type "A".

For Traffic Maintenance Notes, Estimated Quantities and additional details, see Sheet 3.

TRAFFIC MAINTENANCE DETAILS
INDIANA STATE HIGHWAY COMMISSION

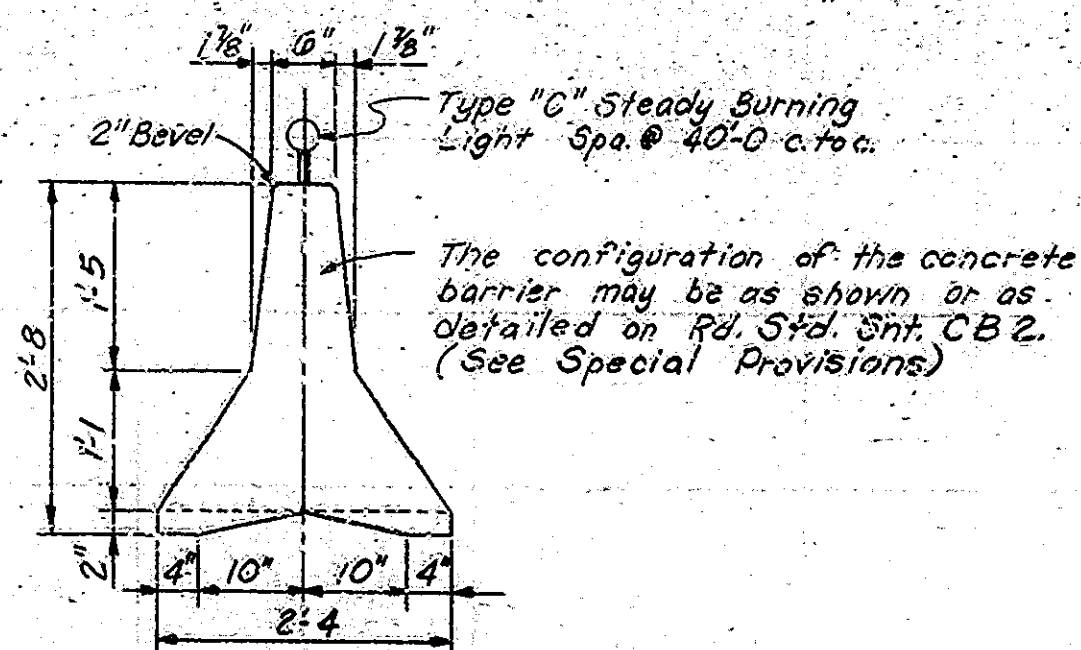
SCALE: 1" = 40' DATE: 2-28-80

Ray C. Cartmell

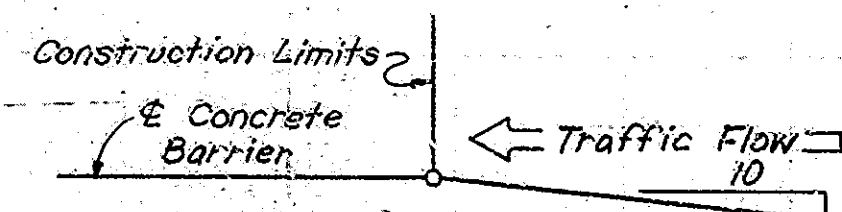
DRAWING OF SHEET 2 OF 25
 PROJECT: I-FRI-65-2(104)68
 CONTRACT NO. B-12640
 BRIDGE FILE: I-65-68-4699 B & JB



DESIGNED	PCB	CKC	YEM
DRAWN	PCB	CKC	YEM
TRACED		CKC	



TEMPORARY CONCRETE BARRIER
Scale: 3/4" = 1'-0"



BARRIER RAIL OFFSETS

NOTES

One lane of traffic shall be maintained each way through the project area. Advance signing and merging two lanes to one lane is required ahead of structure. See Road Standard Sheet 1 Detours for advance signing and merging from two lanes to one lane.

The existing white pavement edge lines on the right adjacent to the bituminous widening and on the bridge deck and approach slabs shall be removed prior to Phase I.

The existing white skip center lines shall be removed at all locations where traffic is to be merged from two lanes to one lane.

The existing yellow pavement edge lines on the left adjacent to the bituminous widening outside the limits of the bituminous wedging placed during Phase I shall be removed prior to Phase II.

All signs shall be mounted in such a manner that the vertical distance between the bottom of the sign and the edge of the pavement shall not be less than 5 feet and the horizontal distance from the edge of the pavement to the edge of the sign shall not be less than 12 feet (RTW permitting) or 6 feet from edge of a paved shoulder.

The spacing of the metal drums on the type I or II barricades shall be as shown on Detour Sheet 1B.

Approved lights shall mark barricades and signs continuously at night.

Flashing Arrow panel shall be mounted in such a manner that the vertical distance between the bottom of the panel and the top of the pavement surface shall be not less than 7 feet.

The Flashing Arrow Sign shall be operated continuously day and night while any lane is closed.

Type C Steady Burning Lights shall be mounted on the top of Temporary Concrete Barrier when barrier is used to define an edge of lane. Spacing of lights shall be numerically equal to the posted speed limit with a maximum spacing of 40 feet.

Yellow tape shall be placed along left edge of taper when median lane traffic is merged into outside lane.

White tape shall be placed along right edge of taper when outside lane traffic is merged into median lane.

ESTIMATED QUANTITIES

Temporary Concrete Barrier	2820 LFT
Construction Sign, Type "A"	20 EA.
Flashing Arrow Sign	2 EA.
# Bituminous Widening	34470N

Temporary Pavement Marking, Tape	6761 LFT
Removal of Line, Solid, White, 4"	3122 LFT
Removal of Thermoplastic Line, Skip, White, 5"	362 LFT
Removal of Line, Solid, Yellow, 4"	745 LFT
Line, Solid, White, 4"	3122 LFT
Thermoplastic Line, Skip, White, 5"	992 LFT
Line, Solid, Yellow, 4"	3122 LFT

* Included in pay item "Bituminous Mixture For Approaches"

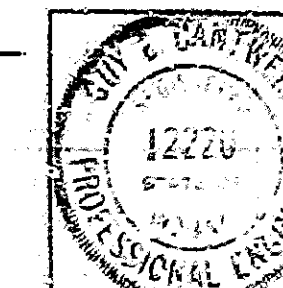
TRAFFIC MAINTENANCE DETAILS

INDIANA STATE HIGHWAY COMMISSION

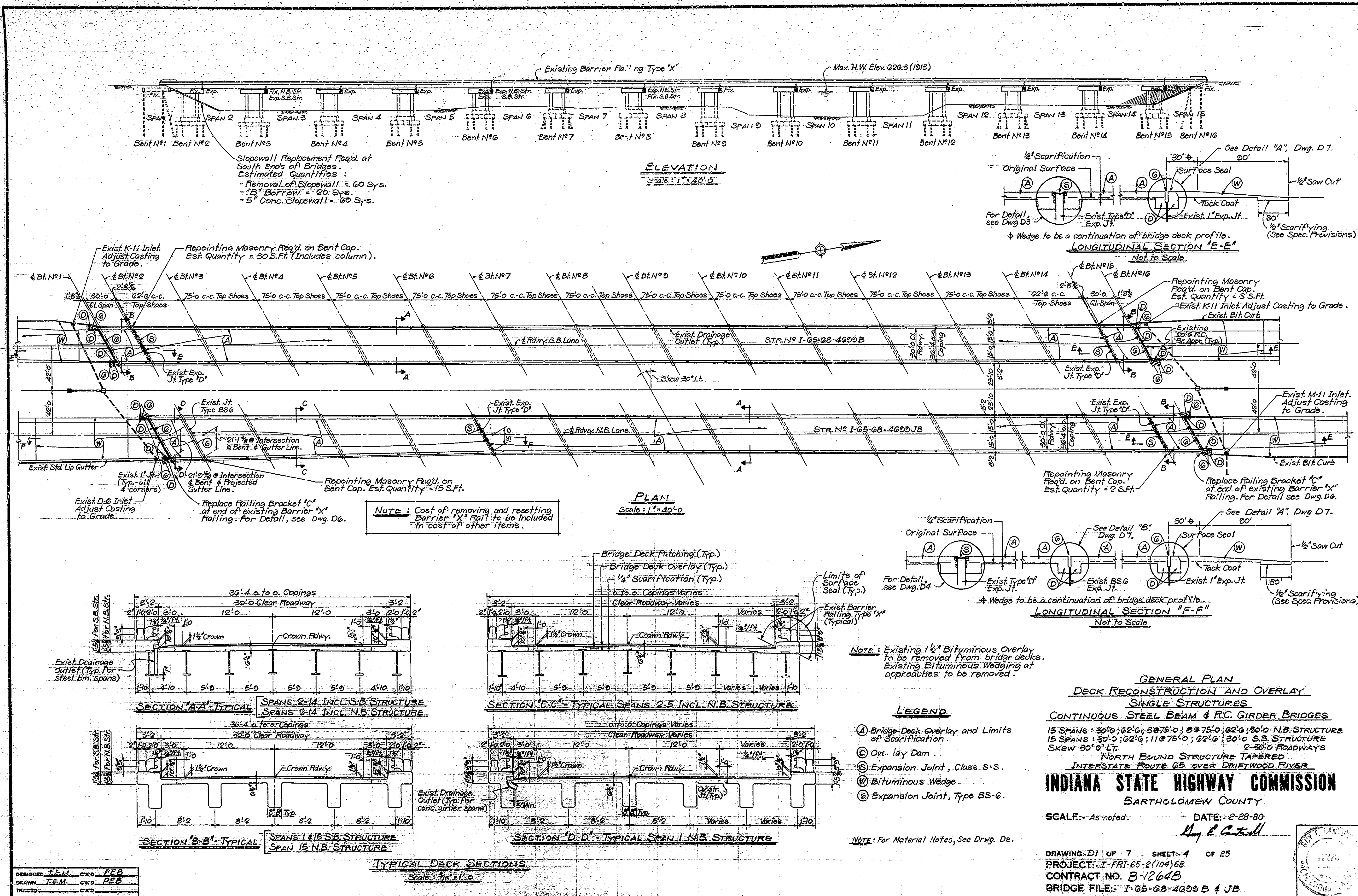
SCALE: None, Unless Noted DATE: 2-28-30

My P. C. Hull

DRAWING OF SHEET 3 OF 25
PROJECT: I-FRI-65-2(104)68
CONTRACT NO: B-1264B
BRIDGE FILE: I-65-68-4699 B & UB



DESIGNED: PEB CWS JEM
DRAWN: PEB CWS JEM
TRACED: CWS

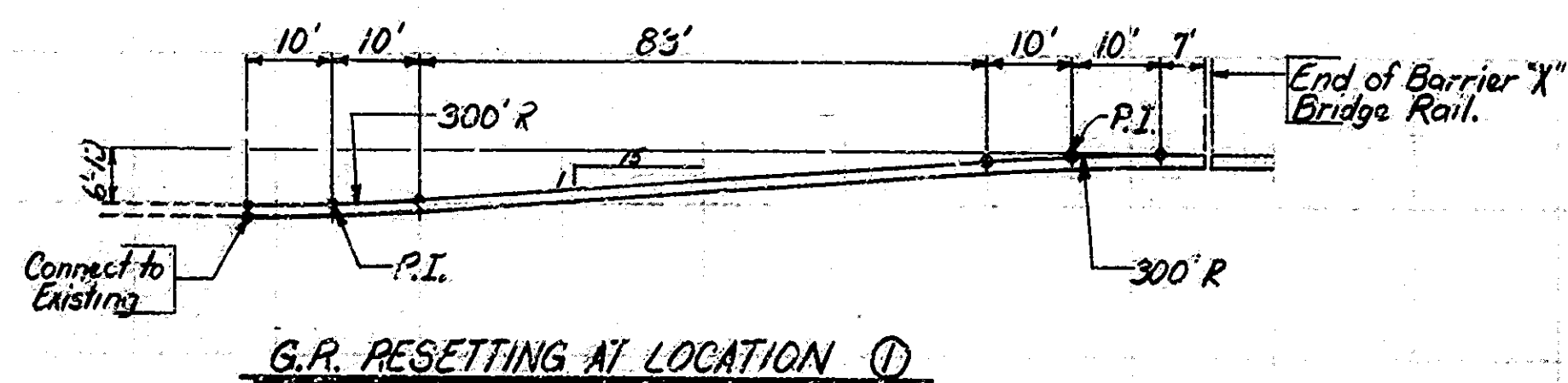


CONSTRUCTION PROCEDURES

1. Construct all bituminous widening, install temporary barrier railing and other traffic control devices to divert traffic to one lane of travel in each direction.
2. Remove bituminous overlay from deck. Scarify bridge deck to a minimum of 1/4". Scarify an additional 1/4" as directed by the Engineer.
3. Remove all deteriorated concrete from all areas of the bridge floor and around all exposed reinforcing as directed by the Engineer and in accordance with the Special Provisions.
4. Blast and clean all scarified and removal areas.
5. Remove existing Expansion Joints, Types "D" and "BS", and construct Expansion Joints, Class "S-S" and Type "BS".
6. Place Bridge Deck Patching and Bridge Deck Overlay as shown on the plans and in accordance with the Special Provisions.
7. Replace broken brackets for Barrier "X" Rail.
8. Construct Bituminous Wedges.
9. Update guard rail at approaches to bridge.
10. Seal roadway face, top and coping face of curbs, parapet walls and wingwalls, all exposed surfaces of Barrier "X" Rail brackets and top of overlay dams on approaches with a penetrating epoxy sealer.
11. Clean and paint all structural steel. (Est. weight = 1254 tons)
12. Repaint pier caps and repair slopewall as required and perform all other work shown on the plans.
13. Reset traffic control devices to divert traffic to completed lane and repeat steps 2 thru 12. When all work is completed, open structure to traffic.

(The numbers do not necessarily indicate the exact sequence of operation)

All removal equipment used for partial concrete removals of bridge structures shall be hand held. Pneumatic hammers, 30 lbs. maximum weight shall be used for all removal areas to be patched and all areas within 24 inches of full depth removal lines. Pneumatic hammers, up to 90 lbs. maximum weight may be used for all other removals outside these limits. Deck areas that are to be removed full depth shall be completely separated from adjacent concrete before hammers heavier than 30 lbs. may be used.



GENERAL NOTES

- Plans for existing structures are on file in the Bridge Dept. Indiana State Highway Commission as Project I-FI-65-2(104)68 Bridge File I-65-68-4699A & JA and are available upon request.
- Where new work is to be fitted to old work, the Contractor shall check all dimensions and conditions in the field and report any errors or discrepancies to the Engineer and assume responsibility for their correctness and the fit of the new part to the old.
- The handchipping and cleaning of deteriorated deck areas shall be as directed by the Engineer. It is the intent of these plans that all such deteriorated concrete be removed and should there be any doubt as to the quality of the concrete, removal shall continue until perfectly sound concrete is exposed. All existing non-full depth patches shall be removed.
- Concrete in patches for deteriorated concrete areas to scarified surface to be Special Class "A" Concrete bonded with epoxy bonding compound or Modified Portland Cement Concrete. See Special Provisions.
- All bituminous material required in this contract to be included in the pay item "Bituminous Mixture for Approaches, unless noted.
- The quantity shown for Overlay is based on theoretical lines while the quantity shown for Patching is estimated. Over-runs or under-runs of material will require adjustment of patching quantities only.
- Reinforcing steel covering shall be 1 inch at top (2 1/2" from surface of Modified P.C.C. Overlay or 3 1/4" from surface of Dense P.C.C. Overlay) and 1 inch minimum at bottom of floor slabs and 2" in all other parts, unless noted.
- Concrete in Superstructure to be Class "A".

MATERIAL NOTES

Bridge Deck Overlay: 1 3/4" Modified Portland Cement Concrete or 2 1/2" Dense Portland Concrete (See Special Provisions).
 Top of 1 3/4" Mod. P.C.C. Overlay to be 1/2" above existing bridge floor and top of 2 1/2" Dense P.C.C. Overlay to be 2 1/4" above existing bridge floor.

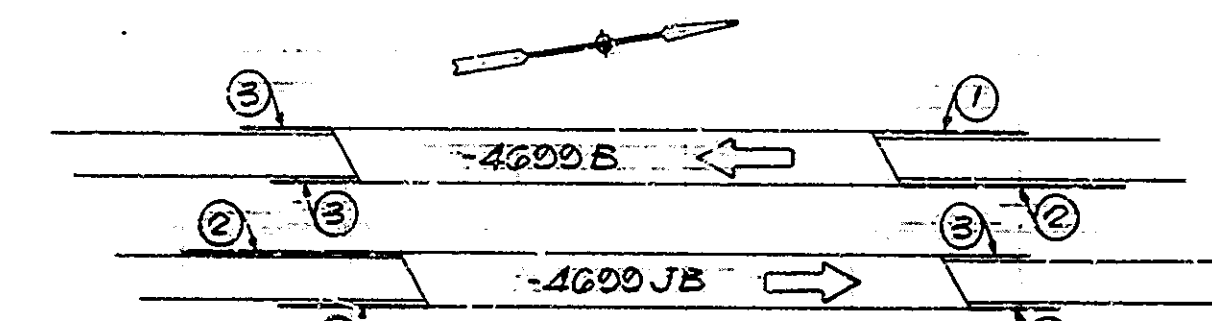
344 Tons Bituminous Widening: 990 lbs./Syd. Bituminous Base, Type 5D.
 118.5 Tons Bituminous Wedge: Bituminous Surface Type II.B.

463 Tons Bituminous Mixture for Approaches.

Painting Old Steel Bridge: All paint to be in accordance with the Special Provisions:
 First Field Coat: Zinc Silicate.
 Second Field Coat: Finish Coat.

STANDARD DRAWING TABLE

BRIDGE STD.	ROAD STD.	PURPOSE
CI		Bar Bending Details, Rebar Notes
	MB	Lip Gutter details
	MB2	Slopewall details
	GR4	Guard Rail Class "GA" details
	GR5	Aluminum Guard Rail details
	GR10	Guard Rail Buried End details
	GR9	Guard Rail Class Da details
	CB2	Temporary Concrete Barrier details
	Shft.1 Detours	Advance signing and merging of traffic
	Shft.1B Detours	Barricade Spacing
	Shft.2A Detours	Barricade Details
	Shft.3 Detours	Standard Detour Signs
	Shft.4 Detours	Standard Detour Signs
	Shft.5A Detours	Sign Design Details
	Sheet 9	Traffic Sign details



- LEGEND:**
- ① Reset 100' L.F. Guard Rail Class "GA" adjacent to bridge. Connect to guard rail in place. (See Detail)
 - ② 35% of existing guard rail adjacent to bridge to remain in place. Reset 100' L.F. Guard Rail Class "GA" and 50' L.F. Guard Rail Class "GA" Buried End. Remove exist. buried end and install Guard Rail End Treatment.
 - ③ No Change Req'd.

QUANTITIES:

Guard Rail Class "GA" 364.42 L.F.
 Reset Guard Rail Class "GA" 660.52 L.F.
 Removal of Guard Rail 0.00 L.F.
 Guard Rail End Treatment 0.22 Each

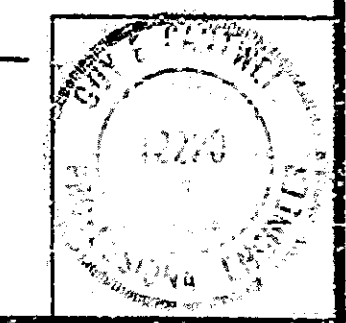
GUARD RAIL REVISIONS
 Not to Scale

- ② 35% of existing guard rail adjacent to bridge to remain in place. Reset 100' L.F. Guard Rail Class "GA" and 100' L.F. Guard Rail Class "GA", then reset existing buried end. New 5' Reset Guard Rail & Buried End shall conform to the alignment and post spacing shown on GR9 for Class Da G.R.

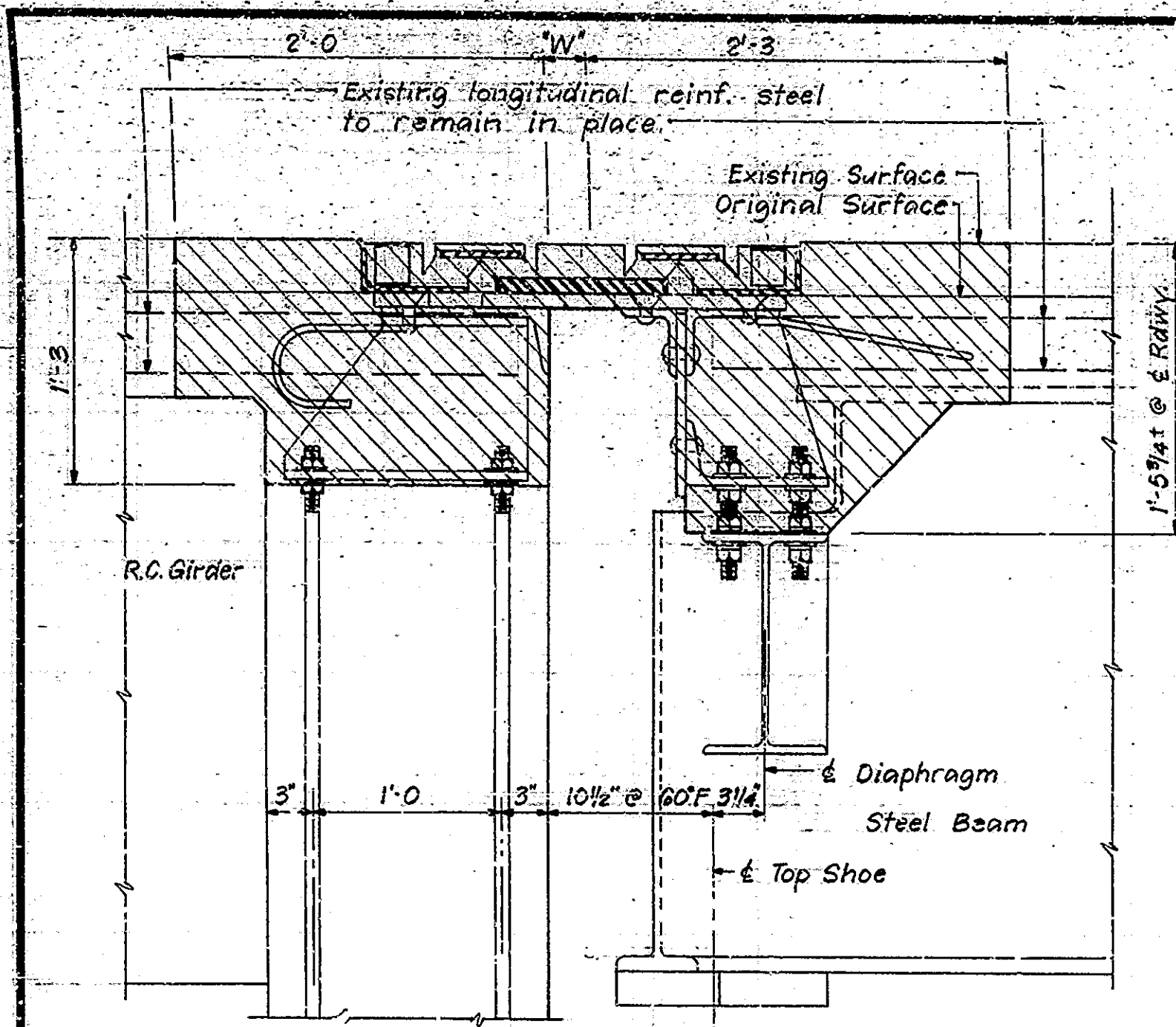
CONSTRUCTION PROCEDURES, GENERAL NOTES, MATERIAL NOTES, STANDARD DRAWING TABLE AND DETAILS
INDIANA STATE HIGHWAY COMMISSION

SCALE: As noted. DATE: 2-28-80

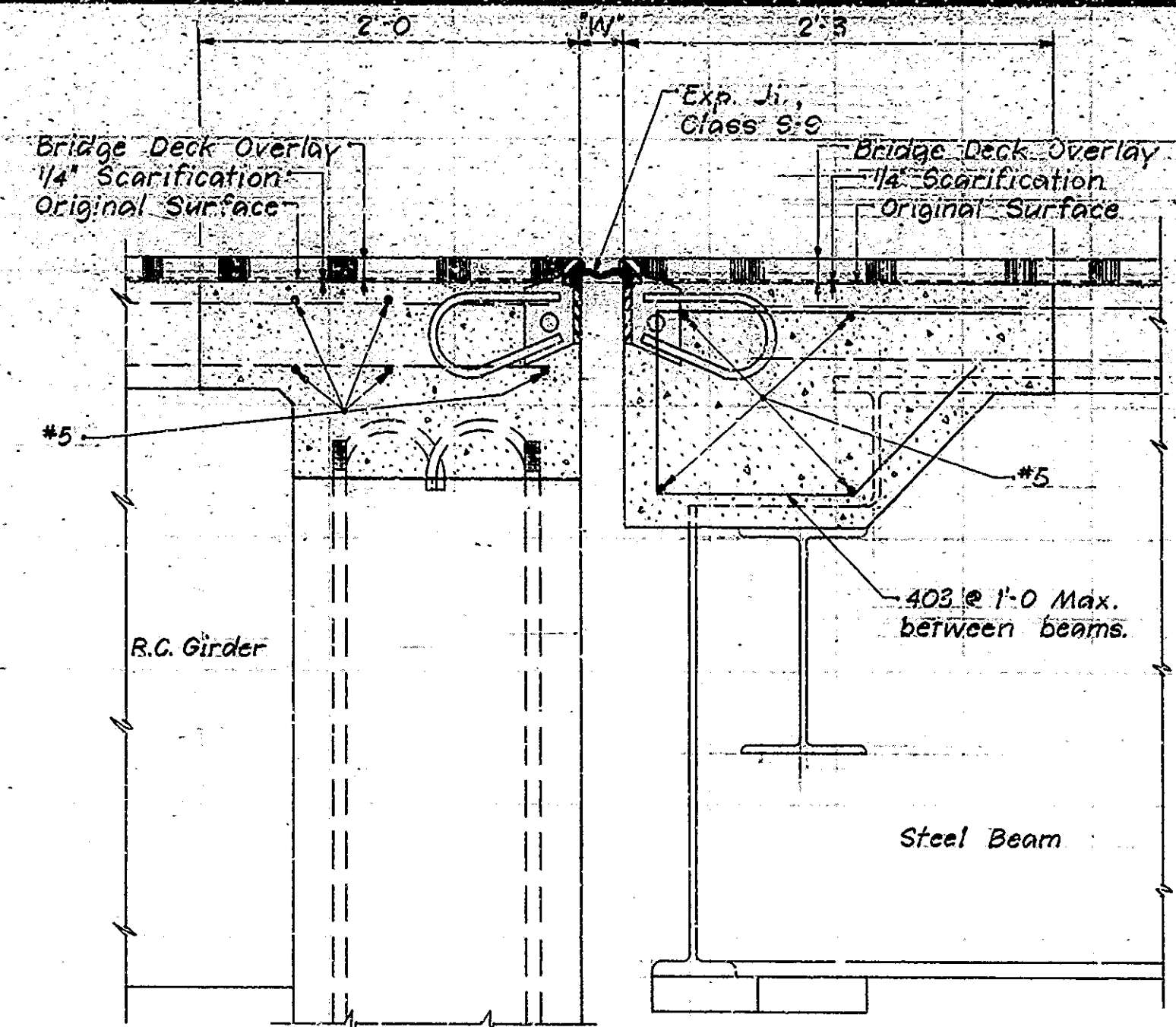
DRAWING: D2 OF 7 SHEET: 5 OF 25
 PROJECT: I-FRI-65-2(104)68
 CONTRACT NO: B-1264B
 BRIDGE FILE: I-65-68-4699B & JB



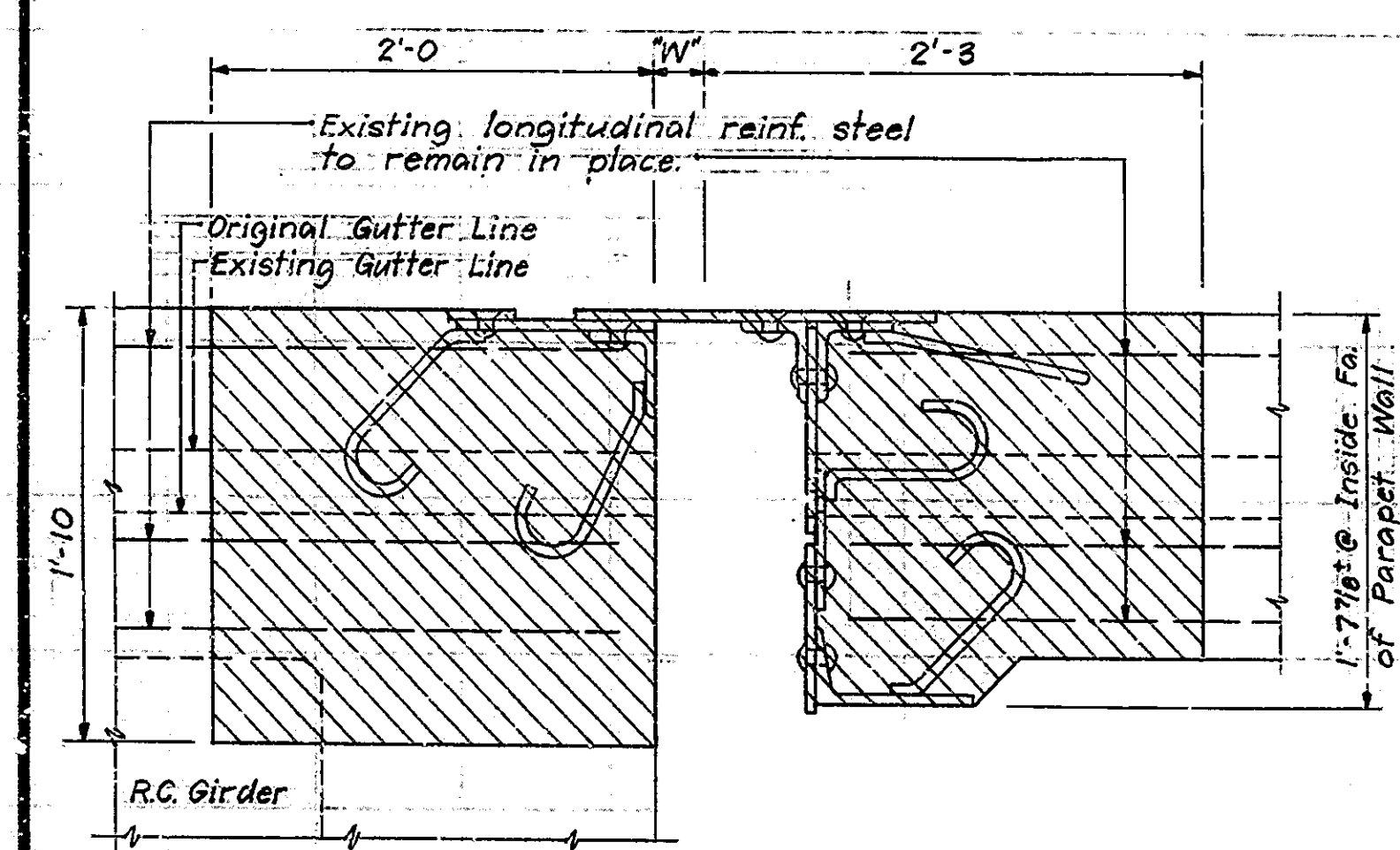
Rev. 6-27-80 G.R. Resetting, Legend ①, ②, & Standard Drawing Table



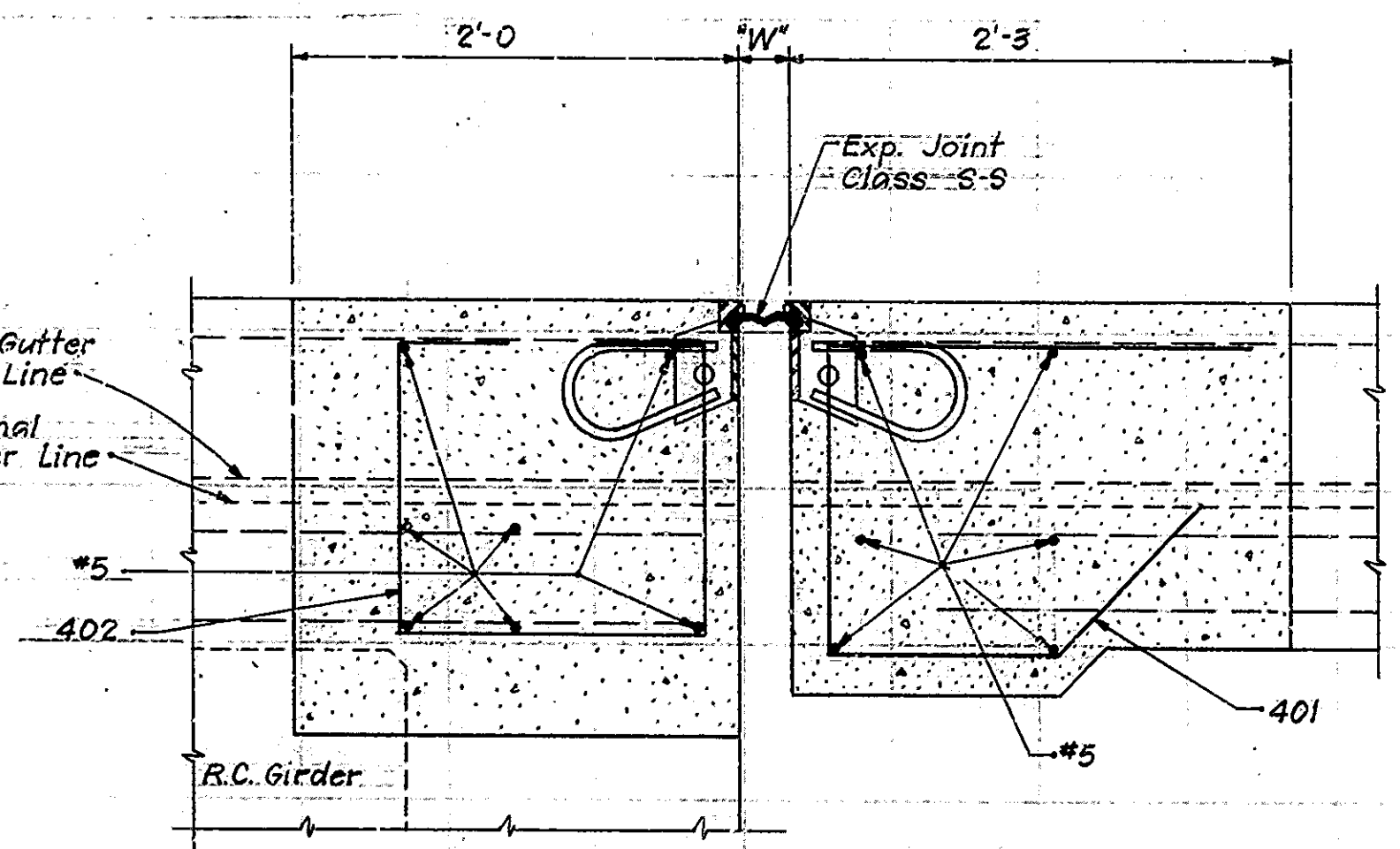
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SHOWING LIMITS OF REMOVAL
Scale: 1 1/2" = 1'-0"



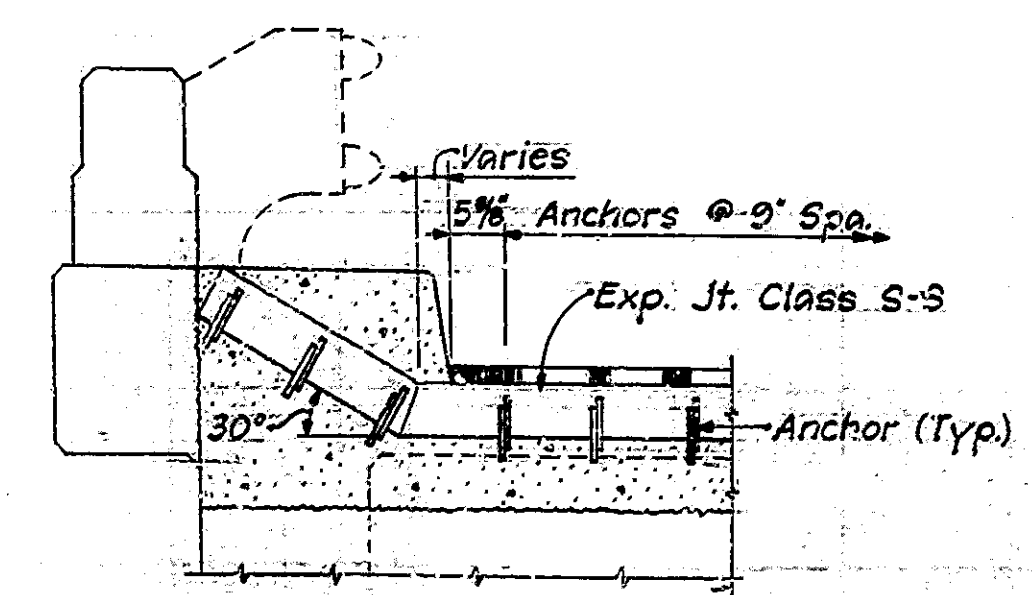
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SHOWING NEW CONSTRUCTION
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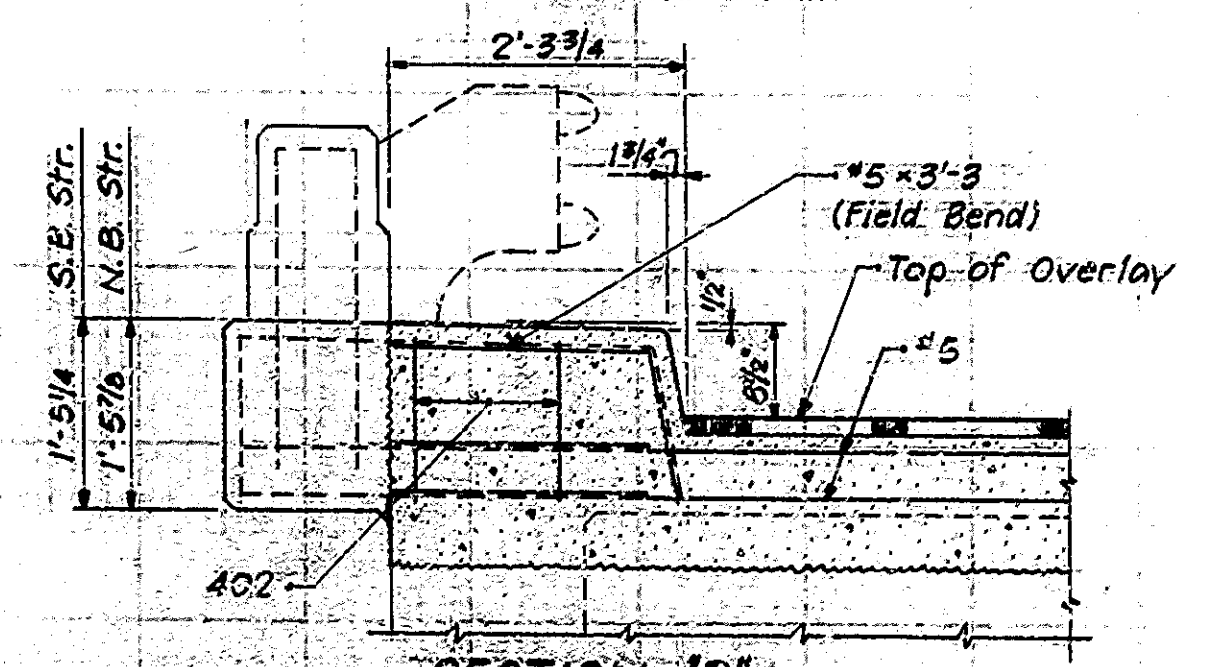
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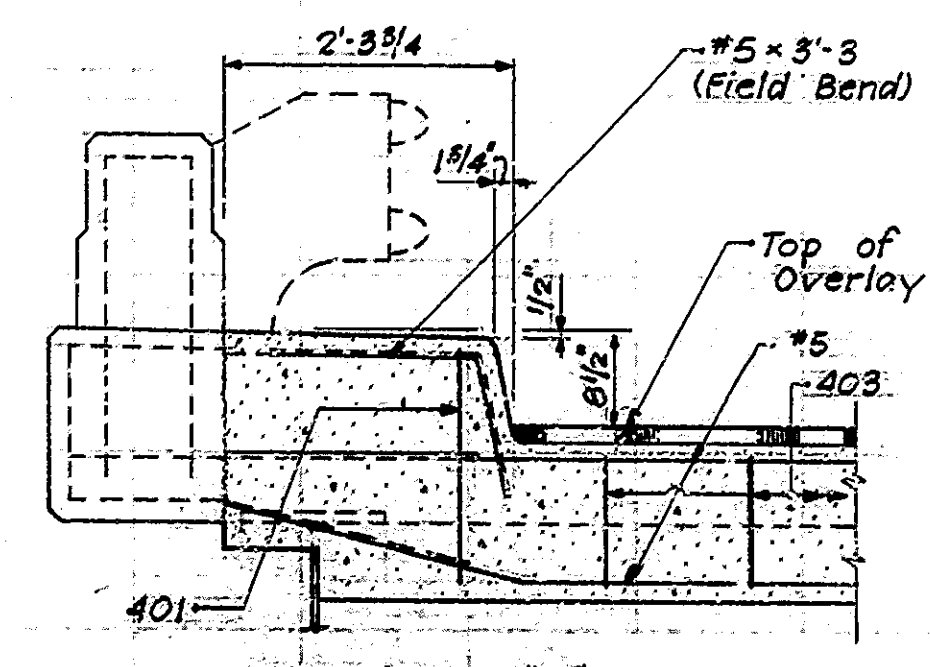
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SHOWING NEW CONSTRUCTION
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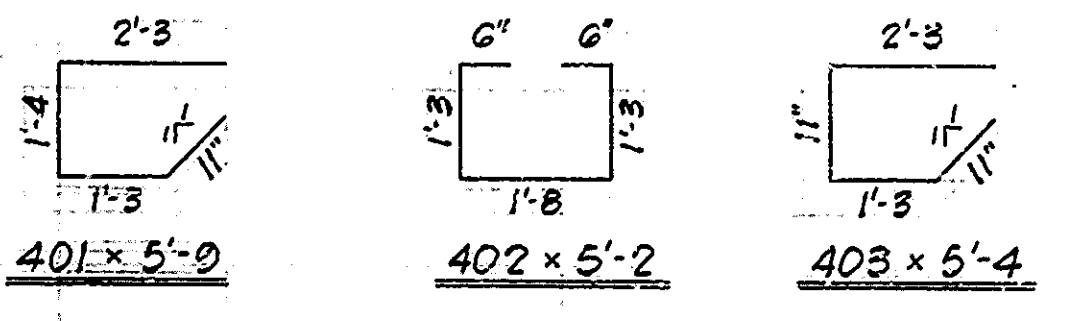
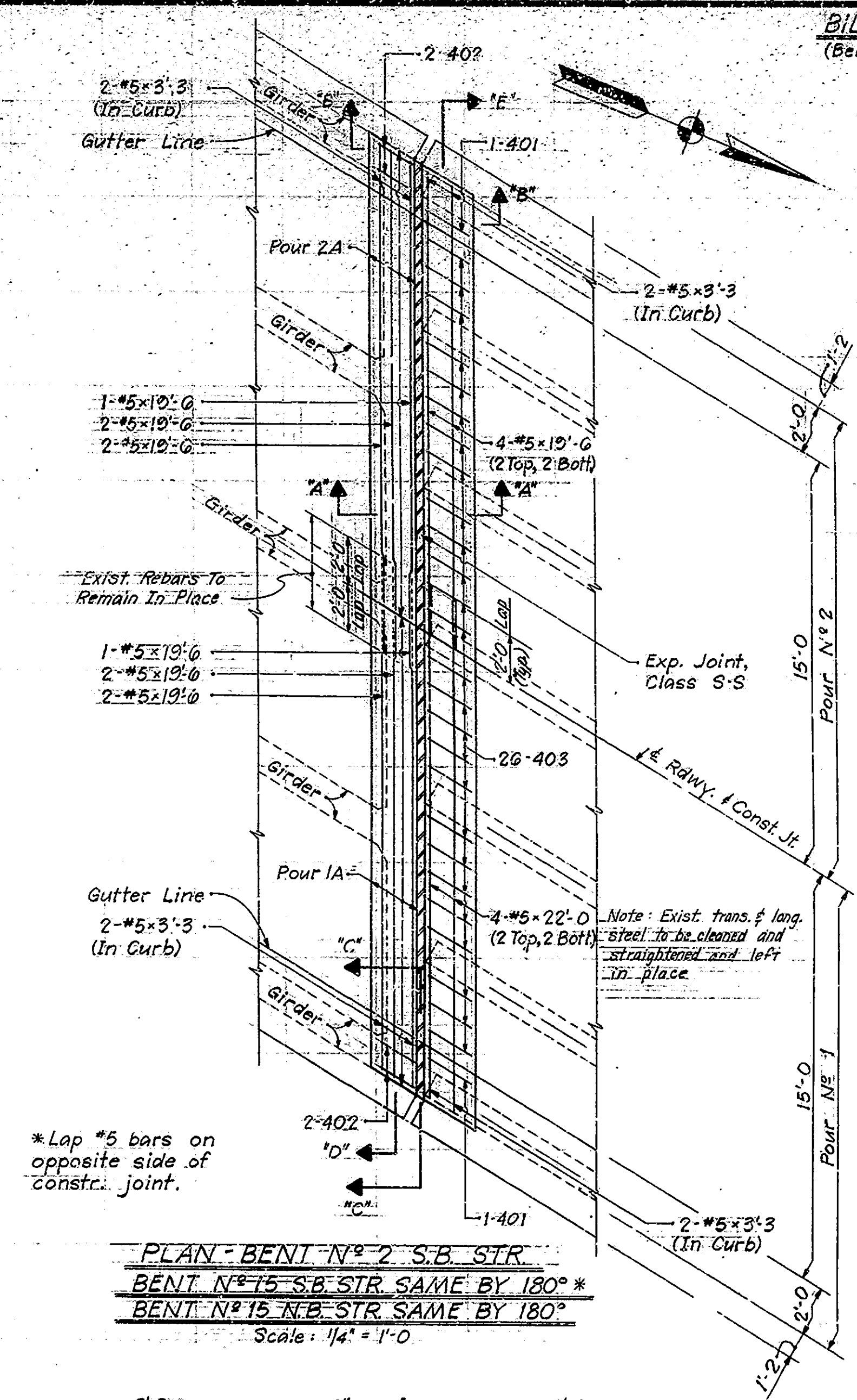
SECTION "C-C"
No Scale



SECTION "D"
Scale: 1/4" = 1'-0"



SECTION "E"
Scale: 1/4" = 1'-0"



BILL OF MATERIALS - BT N° 2 S.B.
(Bent N° 15 S.B. & N° 15 N.B. Same)

REINFORCING STEEL				
Size & Mark	N° of Bars	Length	Weight (Lbs.)	
#5	4	22'-0"		
#5	14	19'-6"		
#5	8	3'-3"		
Total #5			404	
401	2	5'-0"		
402	4	5'-2"		
403	26	5'-4"		
Total #4			114	
Total Reinforcing Steel				518
CONCRETE				
Class "A" Concrete in Superstructure				
Pour N° 1		1.9 Cys.		
Pour N° 1A		1.5 Cys.		
Pour N° 2		1.9 Cys.		
Pour N° 2A		1.5 Cys.		
Total Class "A" Concrete			6.8 Cys.	
MISCELLANEOUS				
Exp. Joint Class S-S			40 L.Ft.	
Barrier "X" Railing Bracket, Type "A"			2 Ea.	

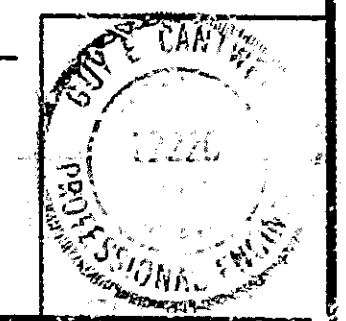
For Notes, see Dwg. D4.

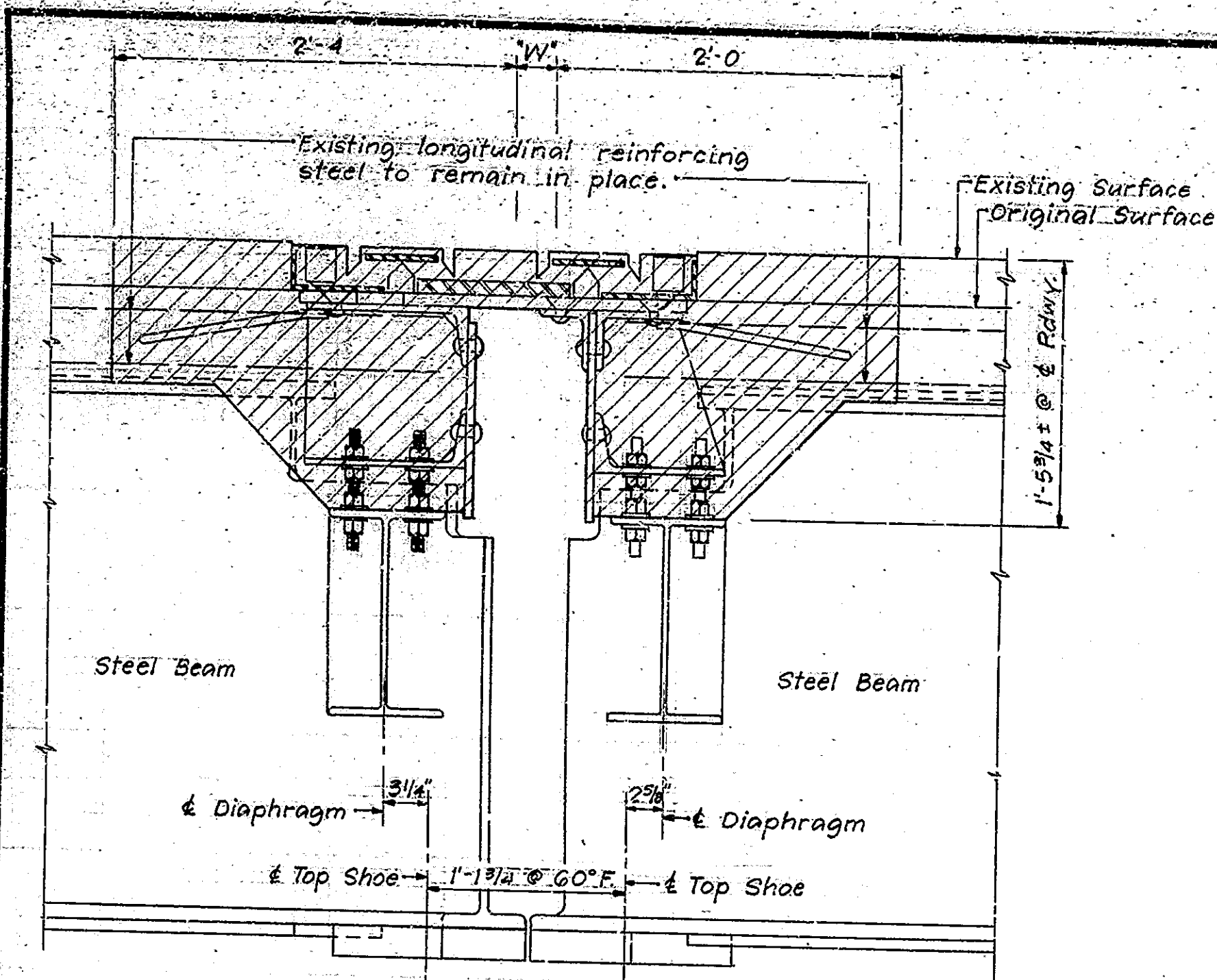
EXPANSION JOINT CLASS S-S @ BENT N° 2 S.B. BENT N° 15 S.B. AND BENT N° 15 N.B.

INDIANA STATE HIGHWAY COMMISSION

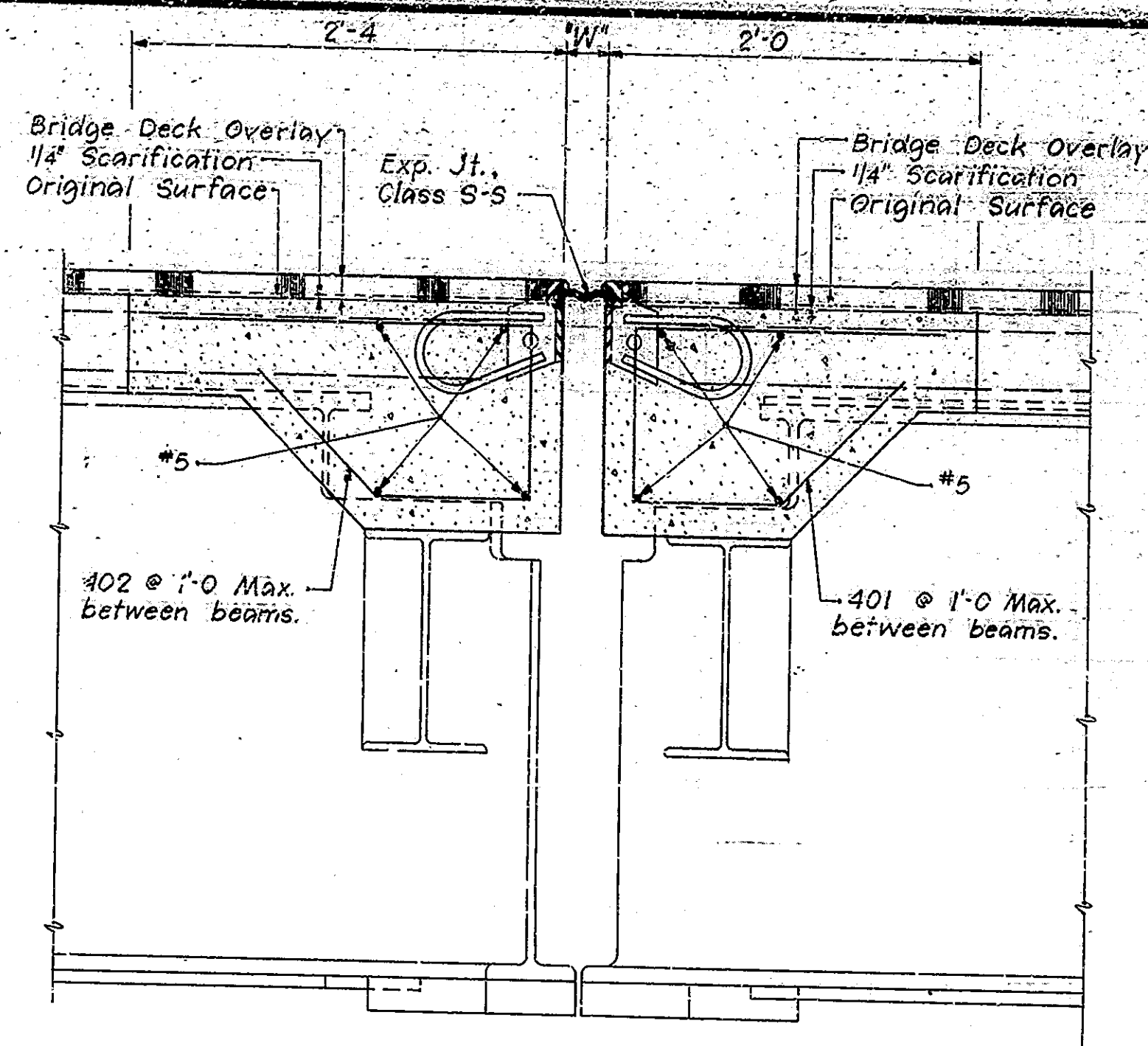
SCALE: As shown DATE: 2-28-80
By E.C. Field

DRAWING: D3 OF 7 SHEET: 6 OF 25
PROJECT: I-FRI-65-2(104)68
CONTRACT NO: B-1264B
BRIDGE FILE: I-65-68-4000B+JB

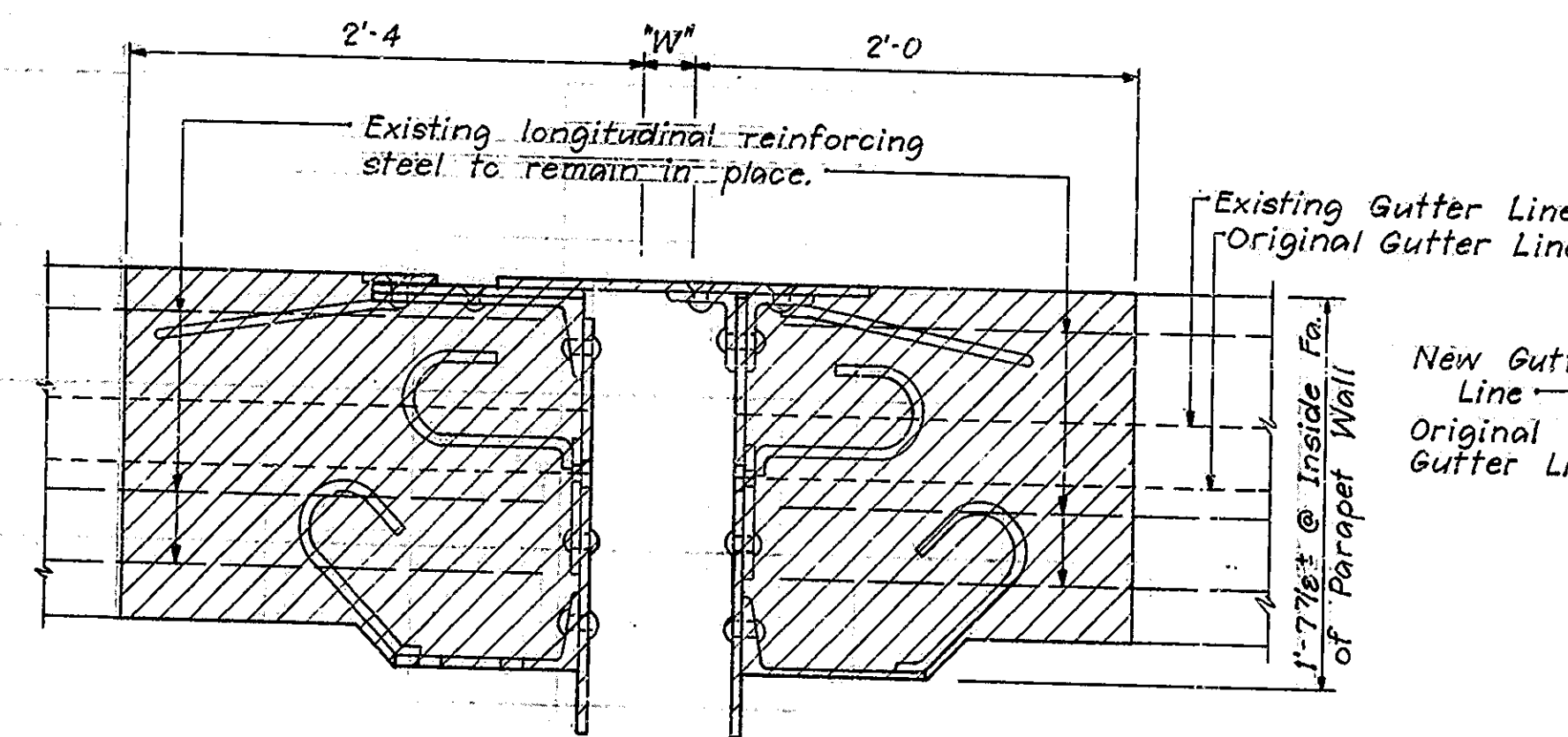




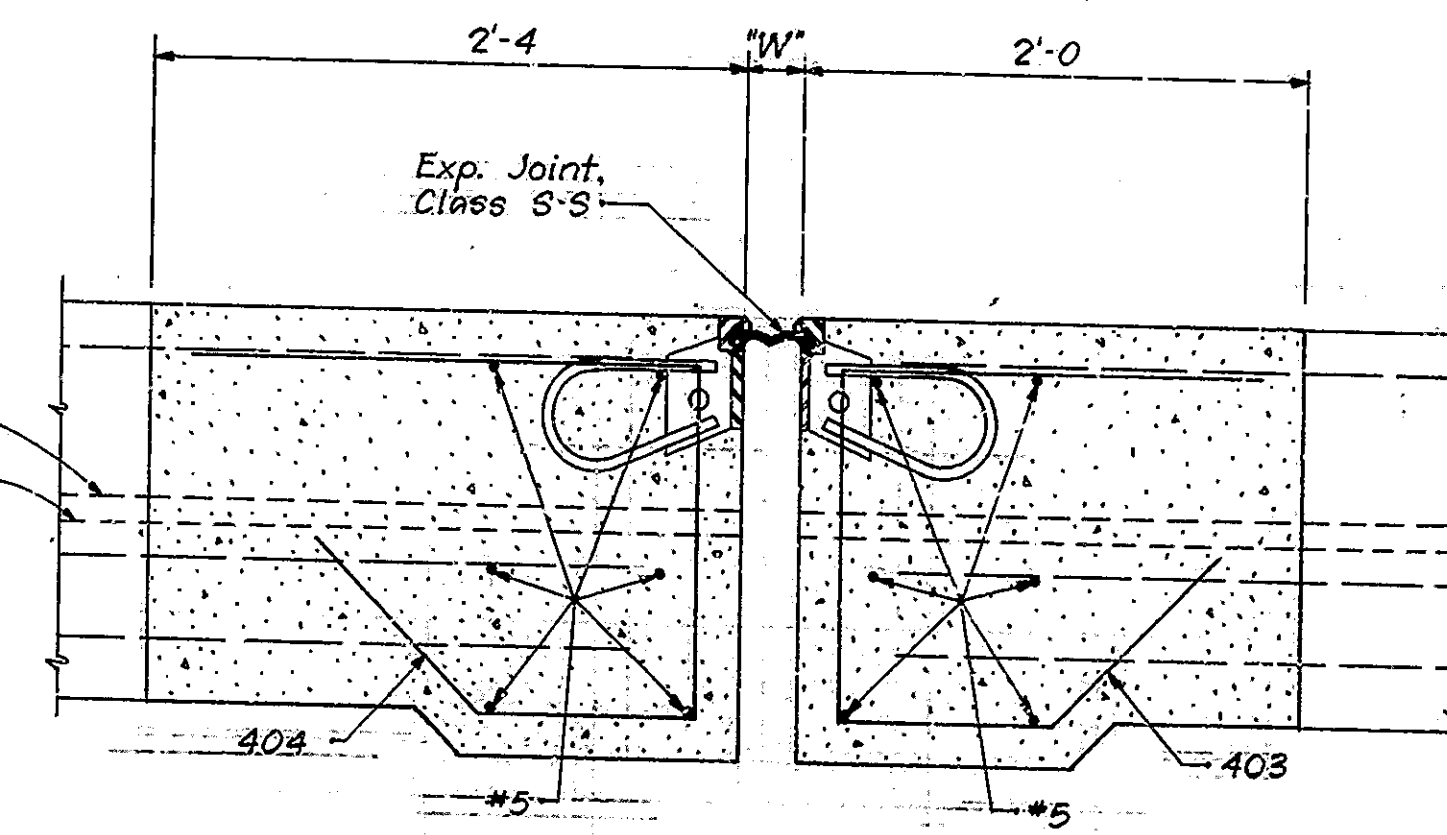
SECTION A-A
(SHOWING LIMITS OF REMOVAL)
Scale: 1 1/2" = 1'-0"



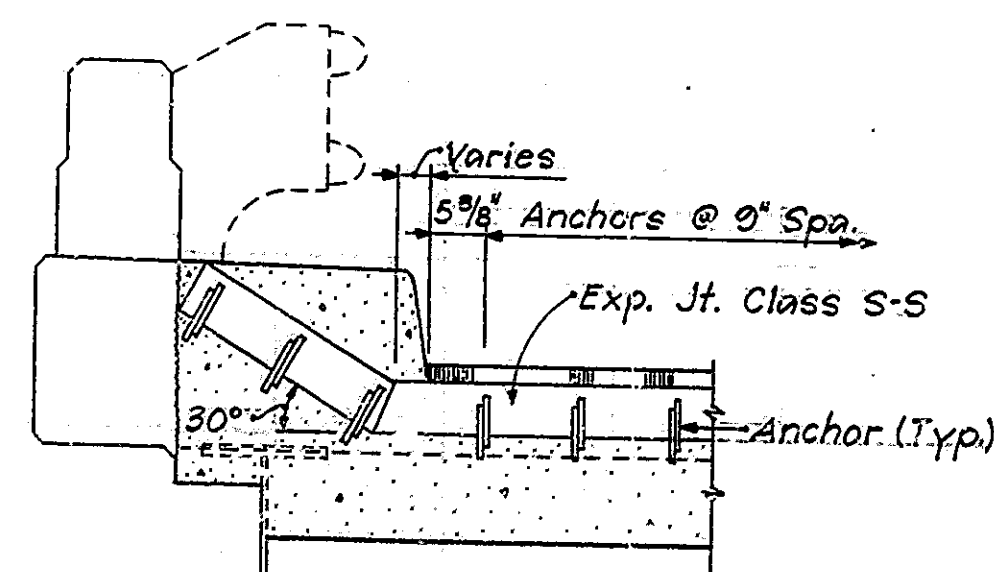
SECTION A-A
(SHOWING NEW CONSTRUCTION)
Scale: 1 1/2" = 1'-0"



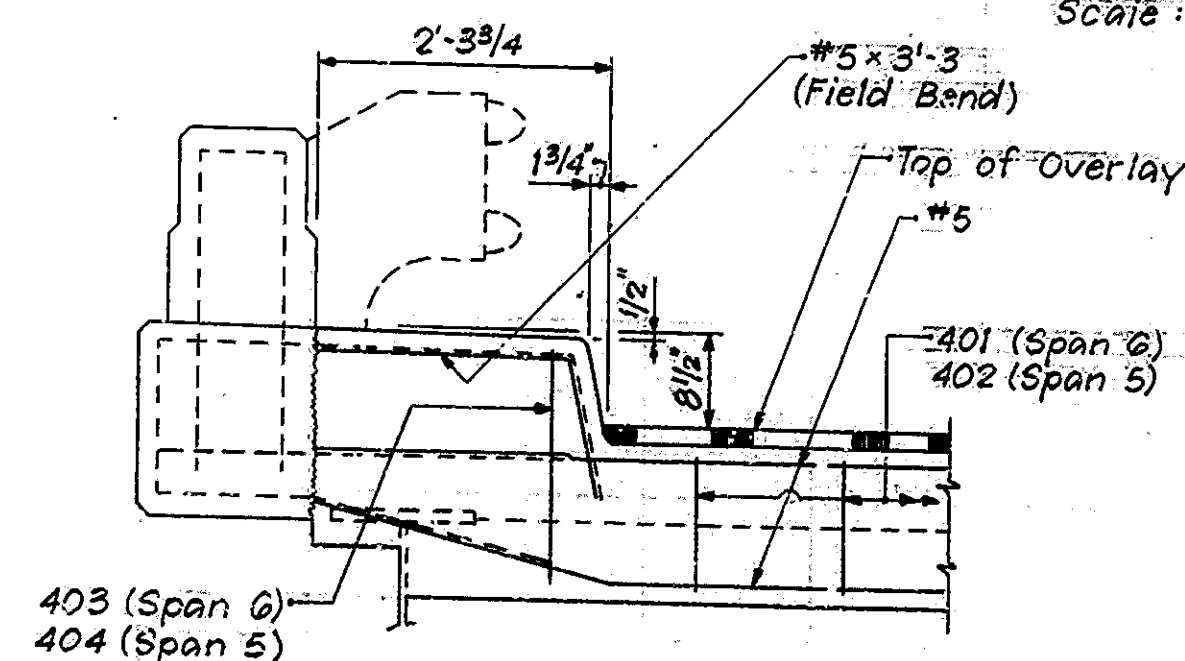
SECTION B-B
(SHOWING NEW CONSTRUCTION)
Scale: 1 1/2" = 1'-0"



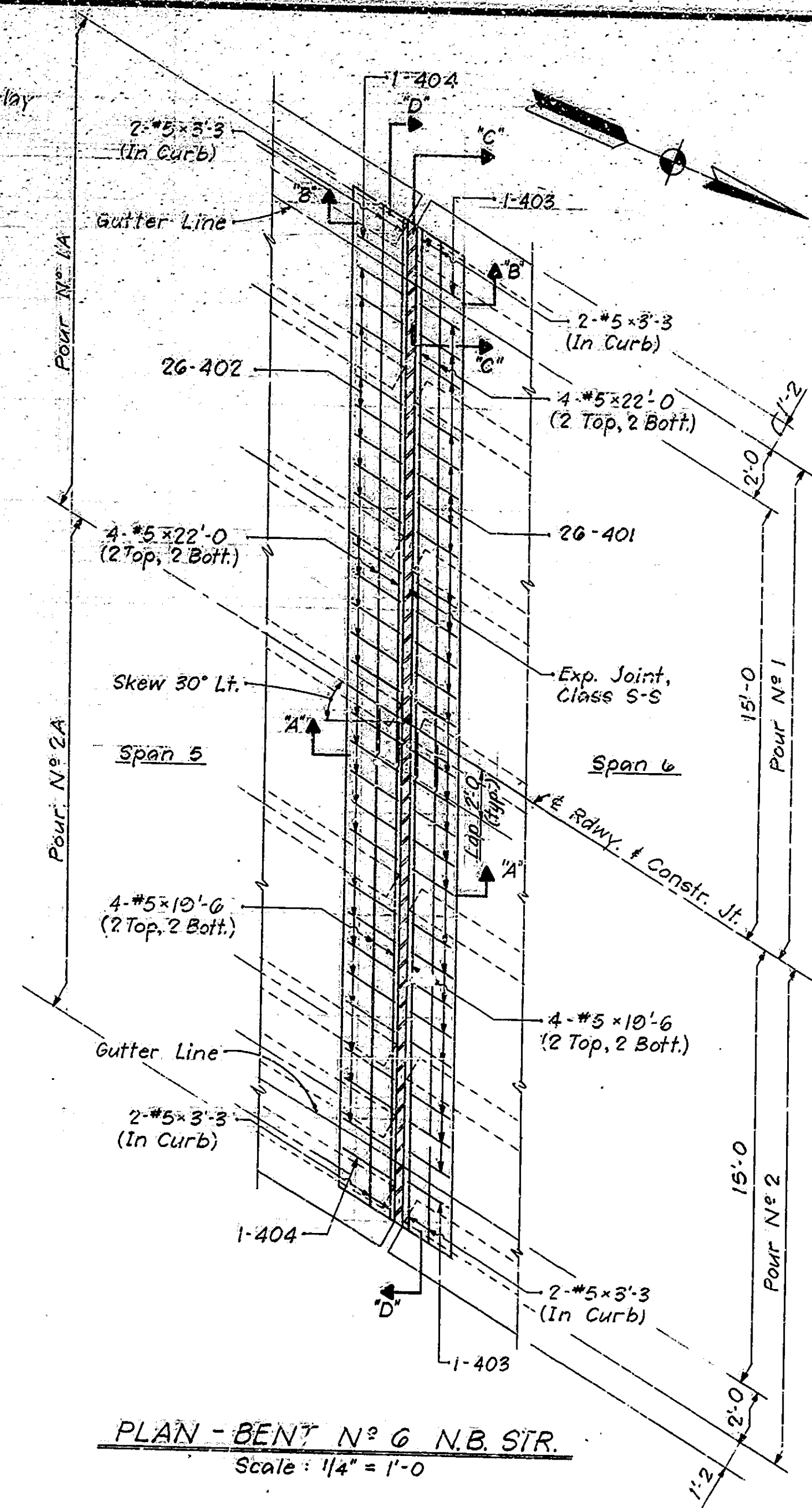
SECTION B-B
(SHOWING NEW CONSTRUCTION)
Scale: 1 1/2" = 1'-0"



SECTION C-C
No Scale



SECTION D-D
Scale: 3/4" = 1'-0"



PLAN - BENT N° 6 N.B. STR.
Scale: 1/4" = 1'-0"

BILL OF MATERIALS
(BENT N° 6 N.B. STR.)

REINFORCING STEEL			
Size #	No. of Bars	Length	Weight (Lbs.)
#5	8	22'-0"	
#5	8	10'-6"	
#5	8	3'-3"	
Total #5			373
401	20	4'-10"	
402	20	5'-2"	
403	2	5'-3"	
404	2	5'-7"	
Total #4			188
Total Reinforcing Steel 561			

CONCRETE			
Class A Concrete in Superstructure			
Pour N° 1	1.0	Cys.	
Pour N° 1A	1.7	Cys.	
Pour N° 2	1.0	Cys.	
Pour N° 2A	1.7	Cys.	
Total Class A Concrete			6.6 Cys.

MISCELLANEOUS	
Exp. Joint Class S-S	40 Lft.
Barrier "X" Railing Bracket, Type "A"	2 Ea.

2'-4"	404
2'-0"	403
2'-4"	402
2'-0"	401
1'-4"	404
1'-4"	403
1'-4"	402
1'-4"	401
1'-0"	401
1'-0"	402
1'-0"	403
1'-0"	404
401 x 4'-10"	
402 x 5'-2"	
403 x 5'-3"	
404 x 5'-7"	
No Scale	

NOTES:

- Dimension "W" to be as shown in Joint Setting Table, Dwg. D5
- Existing transverse and longitudinal reinforcing steel to be cleaned, straightened and left in place.
- See Bridge Std. C1 for reinforcing bar notes.

- For Details of Exp. Joint, Class S-S, see Dwg. D5

- All contact surfaces of steel and concrete to be coated with epoxy bonding compound prior to pouring new concrete.
- All concrete in superstructure to be Class "A".
- Cost of removal and resetting of existing Barrier "X" Railing to be included in cost of other items. Cost of removal of existing Barrier "X" Railing Bracket, Type "A", included in cost of Barrier "X" Railing Bracket, Type "A".

EXPANSION JOINT CLASS S-S @ BENT N° 6 N.B.
INDIANA STATE HIGHWAY COMMISSION

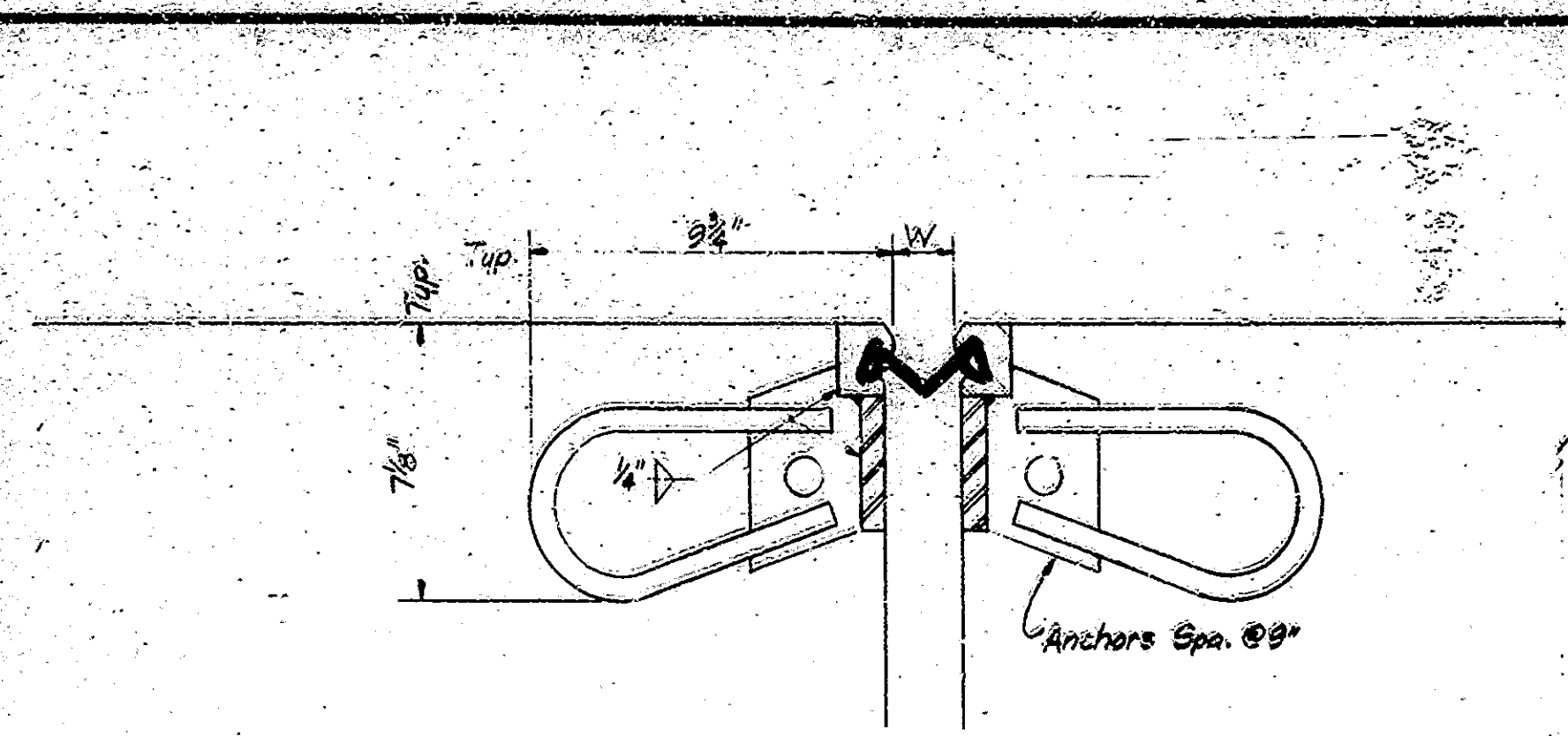
SCALE: As shown

DATE: 2-28-80

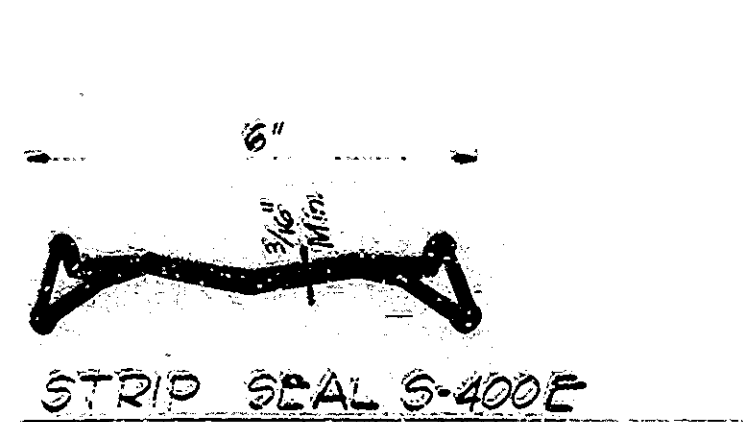
DRAWING: DA-CE-7 SHEET: 7 OF 25
PROJECT: I-FRI-65-2(104)68
CONTRACT NO. B-1064B
BRIDGE FILE: I-65-68-4699B F JB



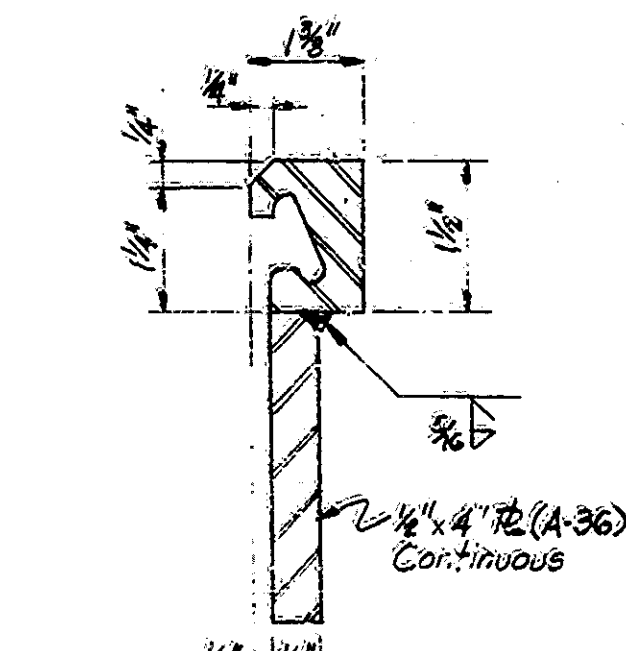
DESIGNED: J.L.M. CRD. PEB
DRAWN: J.L.M. CRD. PEB
TRACED: CRD.



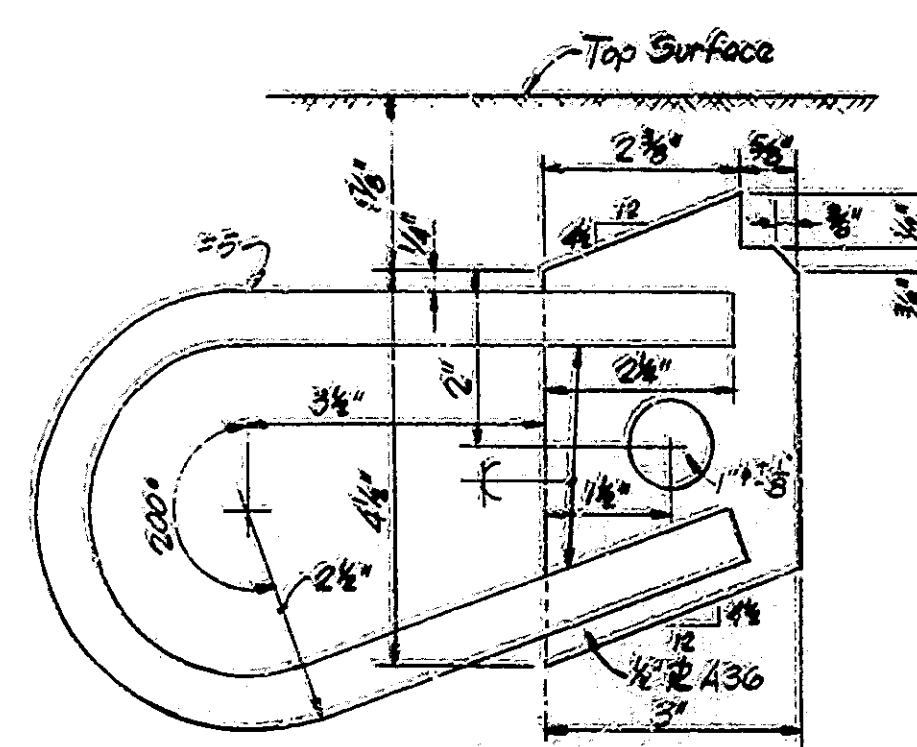
TYPICAL SECTION



STRIP SEAL S-400E

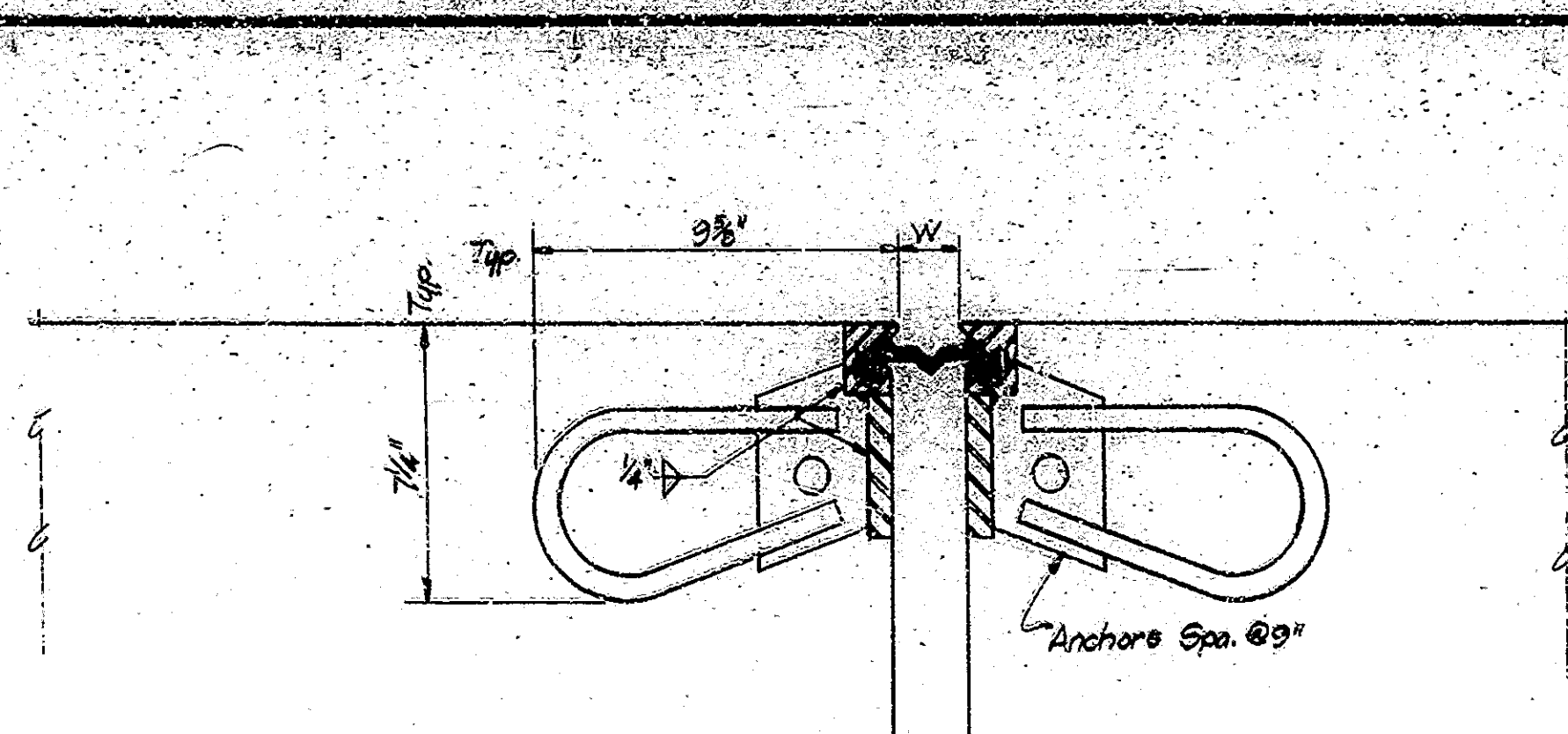


STEEL EXTRUSION
TYPE E



ANCHOR DETAIL

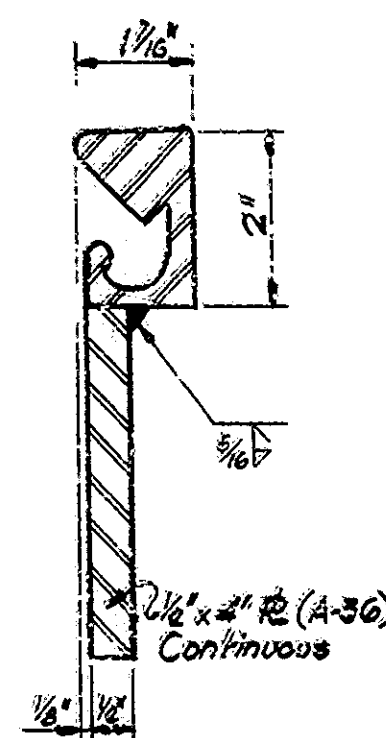
JOINT WABO S-400E



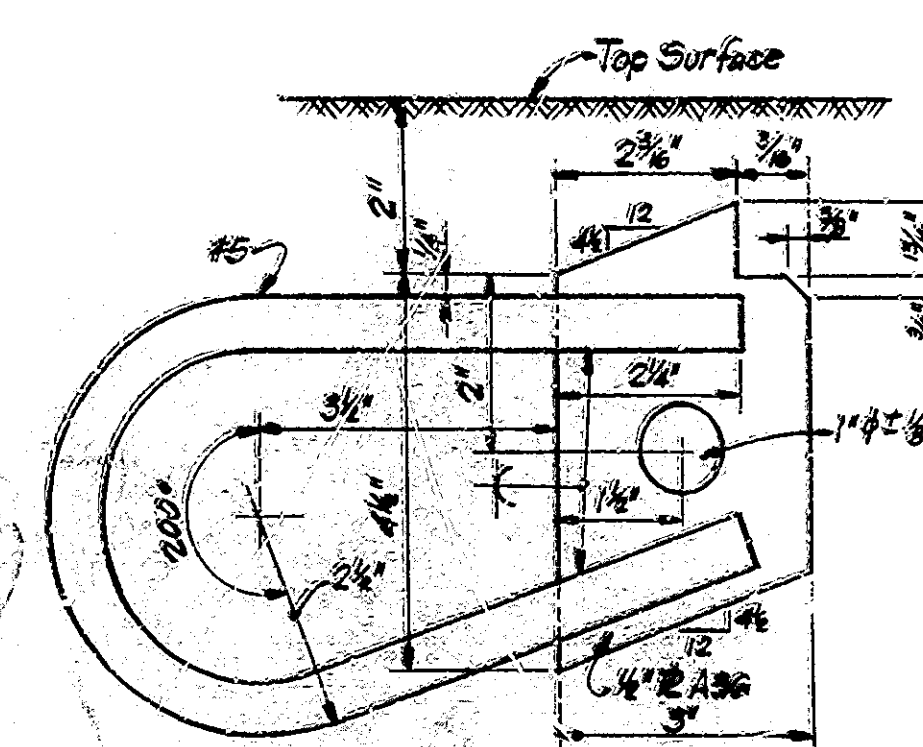
TYPICAL SECTION



NEOPRENE SEAL

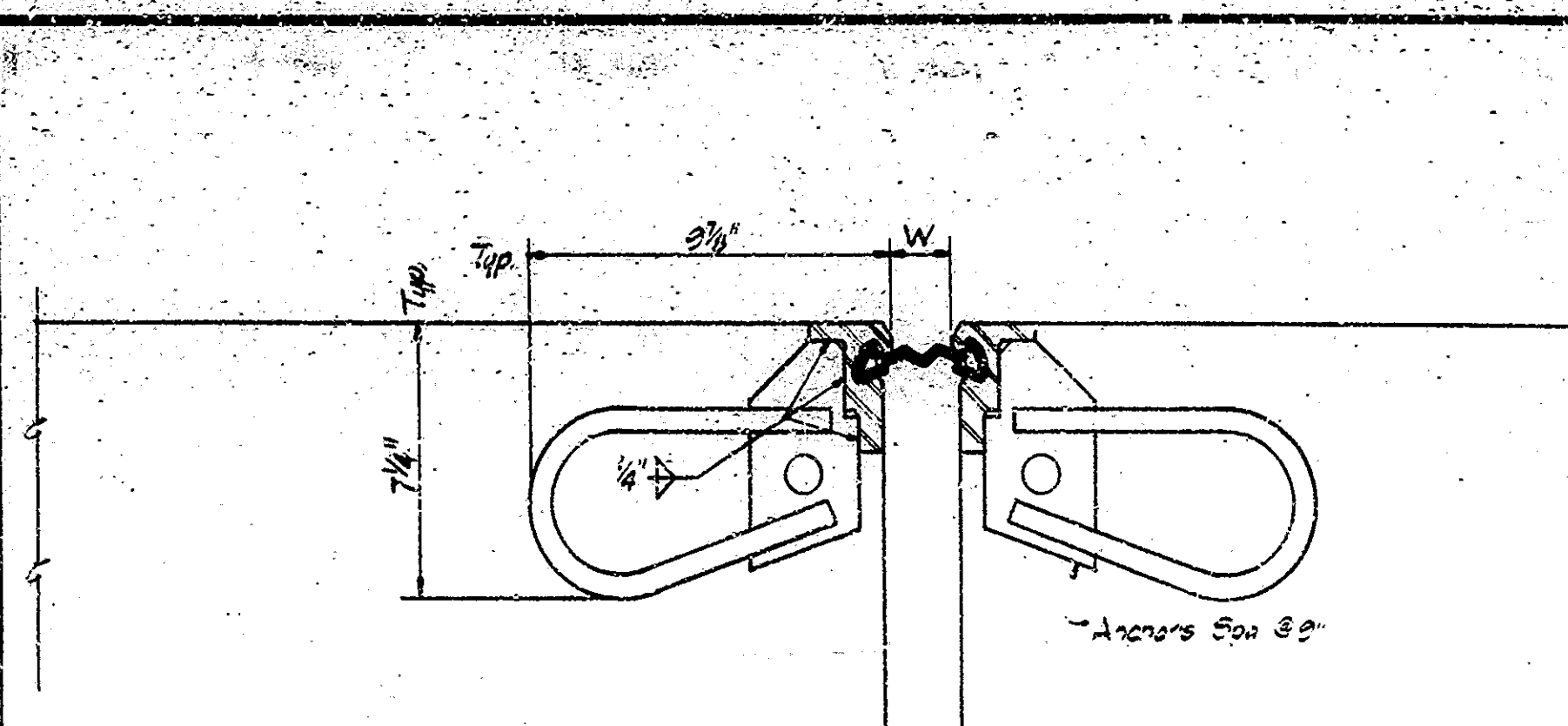


STEEL EXTRUSION

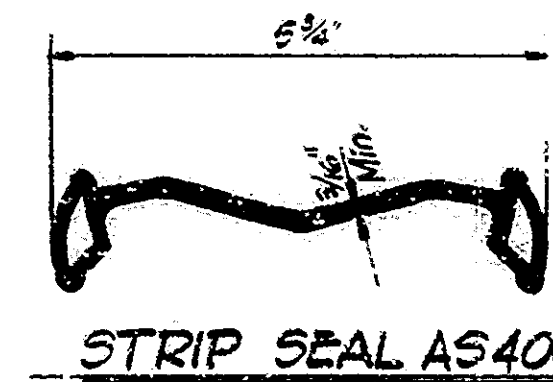


ANCHOR DETAIL

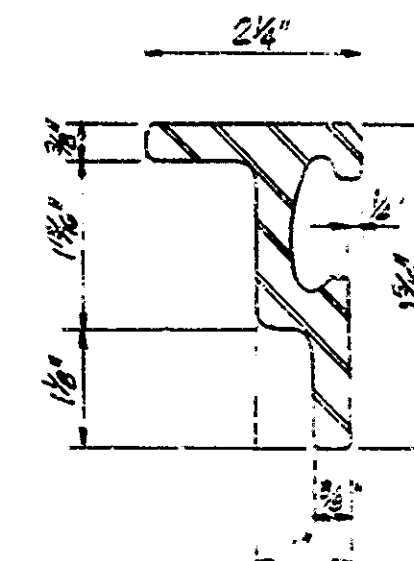
JOINT DELASTIFLEX®



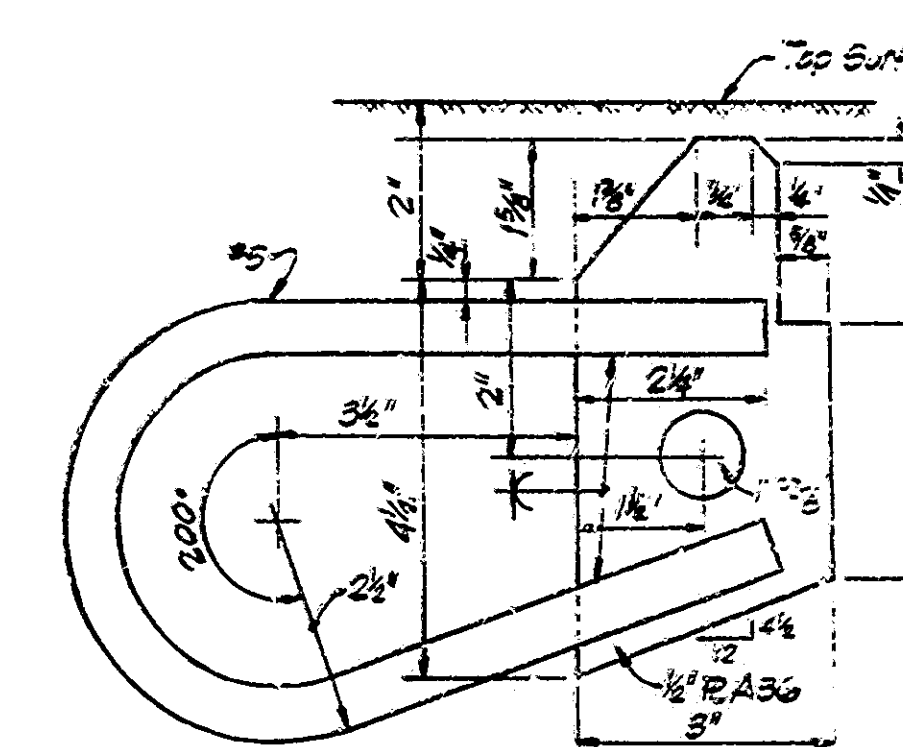
TYPICAL SECTION



STRIP SEAL AS400



STEEL EXTRUSION
TYPE C



ANCHOR DETAIL

JOINT ACMA AS 400 C

NOTES

SEE THE SPECIAL PROVISIONS FOR PROPERTIES OF MATERIALS.
 THE COST OF EXTRUSIONS, ELASTOMERIC SEAL ELEMENTS, SEALANTS, ADHESIVE, CEMENT GROUT,
 ANCHOR SYSTEM AND INSTALLATION OF JOINT SHALL BE INCLUDED IN THE COST OF EXPANSION JOINT.
 THE PROFILE OF THE JOINT IS TO CONFORM TO THE WORKMAN CROSS SECTION.
 THE SEAL ELEMENT SHALL BE MODIFIED AND FINISHED IN A CONTINUOUS LENGTH EQUAL TO THAT
 REQUIRED FOR THE JOINT.
 AT CHANGES IN DIRECTION (AT CURBS, MEDIAN BARRIERS, ETC.) THE SECTIONS OF JOINT ARE TO BE CUT
 TO THE LEVEL REQUIRED TO PRODUCE THE JOINT CROSS SECTION ON EACH PIECE BEING JOINED.
 THE ANCHOR ASSEMBLY IS TO BE SHOP FABRICATED AND DELIVERED TO THE JOB SITE AS
 A COMPLETE CONTINUOUS UNIT FOR JOINT LENGTHS UP TO 44 FEET. JOINTS ABOVE LENGTHS OF 44 FEET
 OR JOINTS USED WITH STAGE CONSTRUCTION SHALL BE FIELD WELDED WITH ENDS TO BE SHOP PREPARED.
 ALL WORK, BOTH SHOP AND FIELD, SHALL BE IN ACCORDANCE WITH 711.10.
 ALL EXPOSED STRUCTURAL STEEL SURFACES WILL BE PAINTED IN ACCORDANCE WITH ISHC STANDARD SPECIFICATIONS.
 THE CONTRACTOR SHALL SUBMIT 3 COPIES OF SHOP DRAWINGS FOR ALL JOINTS INVOLVING CURBS OR OTHER
 SPECIAL FEATURES.

JOINT SETTING TABLE	
Amount of Expansion	Expansion Length
100"	100"
120"	120"
140"	140"
160"	160"
180"	180"
200"	200"
220"	220"
240"	240"
260"	260"
280"	280"
300"	300"
320"	320"
340"	340"
360"	360"
380"	380"
400"	400"
420"	420"
440"	440"
460"	460"
480"	480"
500"	500"
520"	520"
540"	540"
560"	560"
580"	580"
600"	600"
620"	620"
640"	640"
660"	660"
680"	680"
700"	700"
720"	720"
740"	740"
760"	760"
780"	780"
800"	800"
820"	820"
840"	840"
860"	860"
880"	880"
900"	900"

Rev. 4-26-76 Bar and Anchor Spacing
 Rev. 5-28-76 Joint Name AS 400 C
 Rev. 9-2-76 Joint S-400E
 Rev. 11-22-76 Notes
 Rev. 3-3-78 1/4" dia.
 Rev. 11-6-79 Joint Details

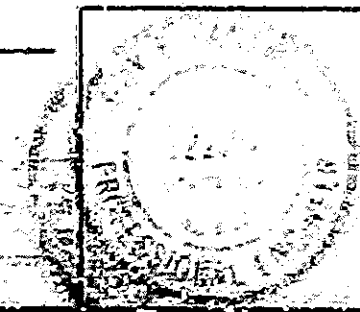
EXPANSION JOINTS CLASS S-S
 INDIANA STATE HIGHWAY COMMISSION

SCALE: NONE

DATE: 2-28-80

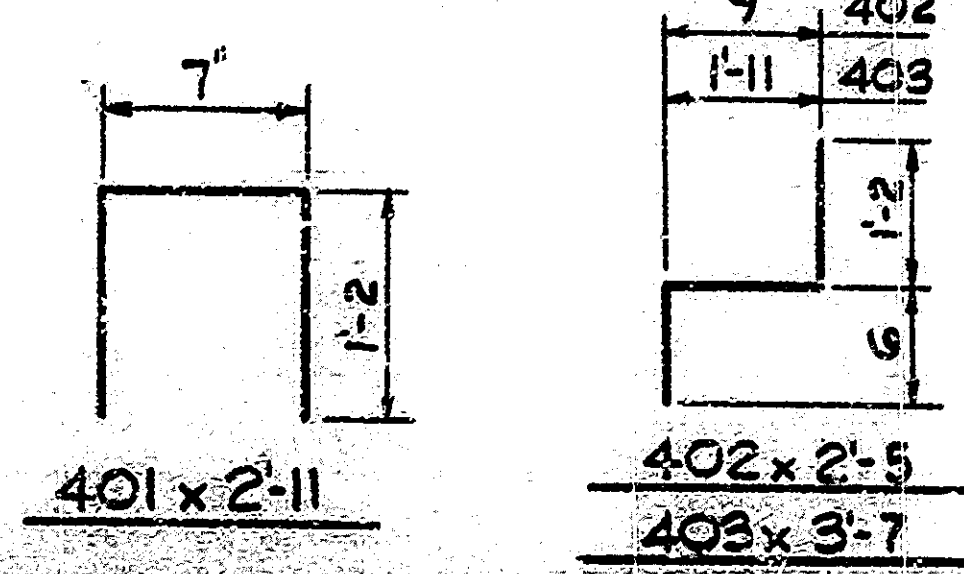
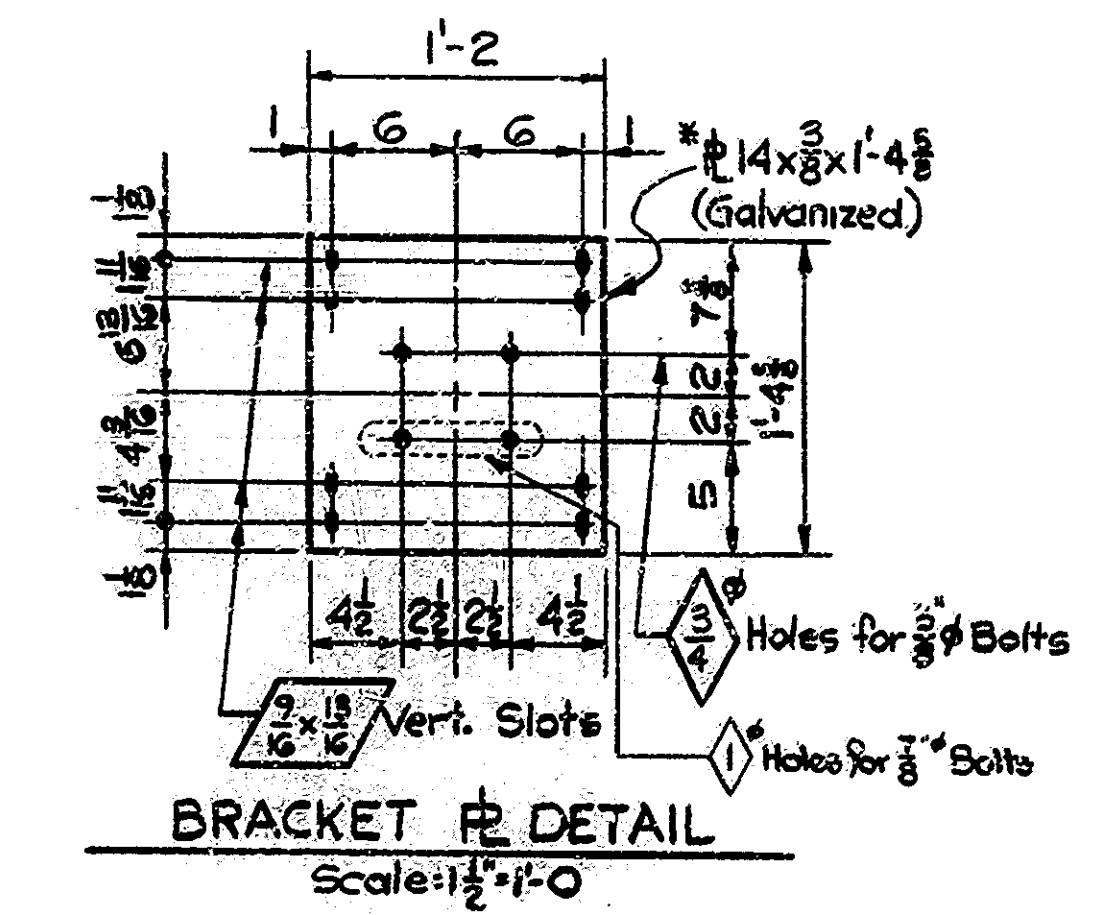
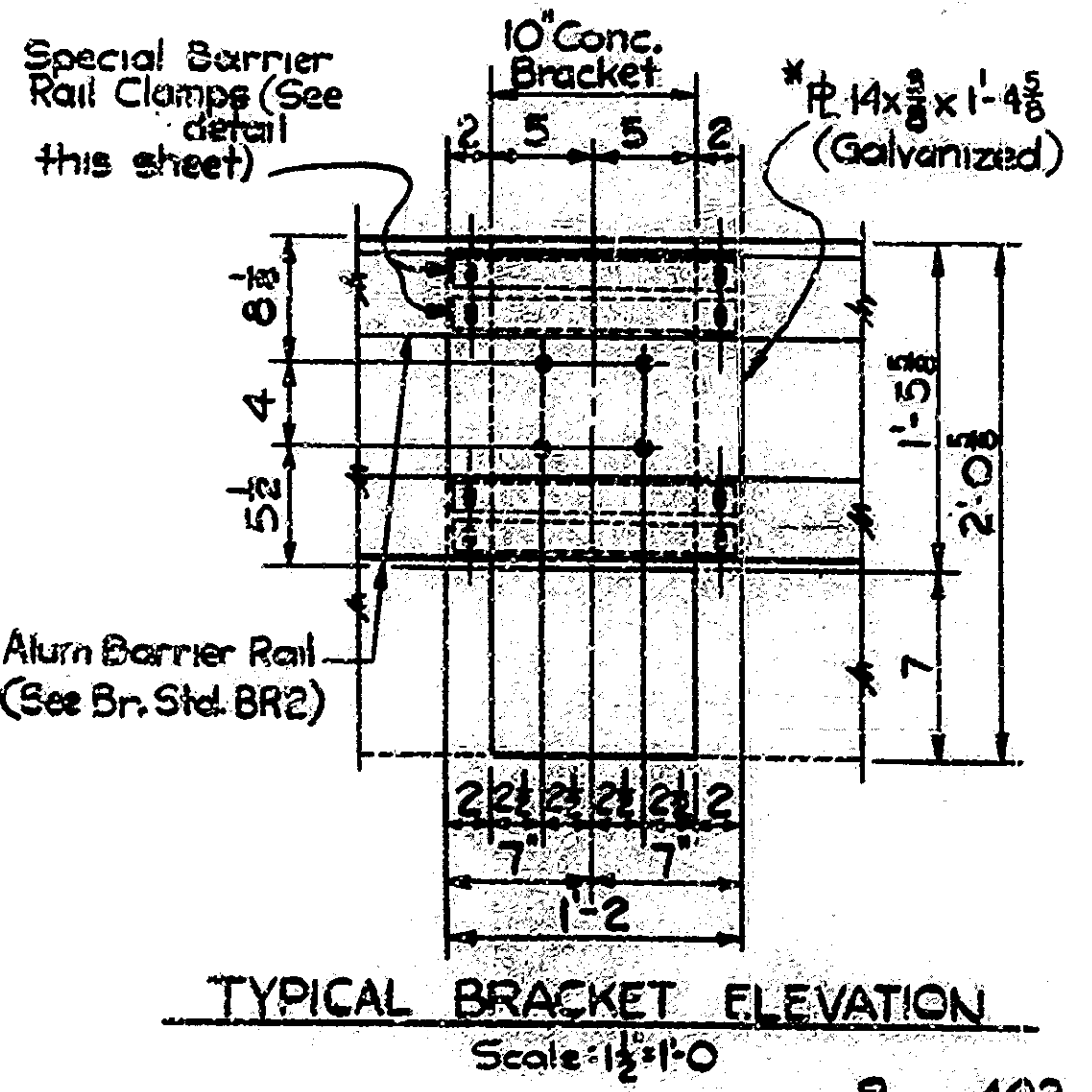
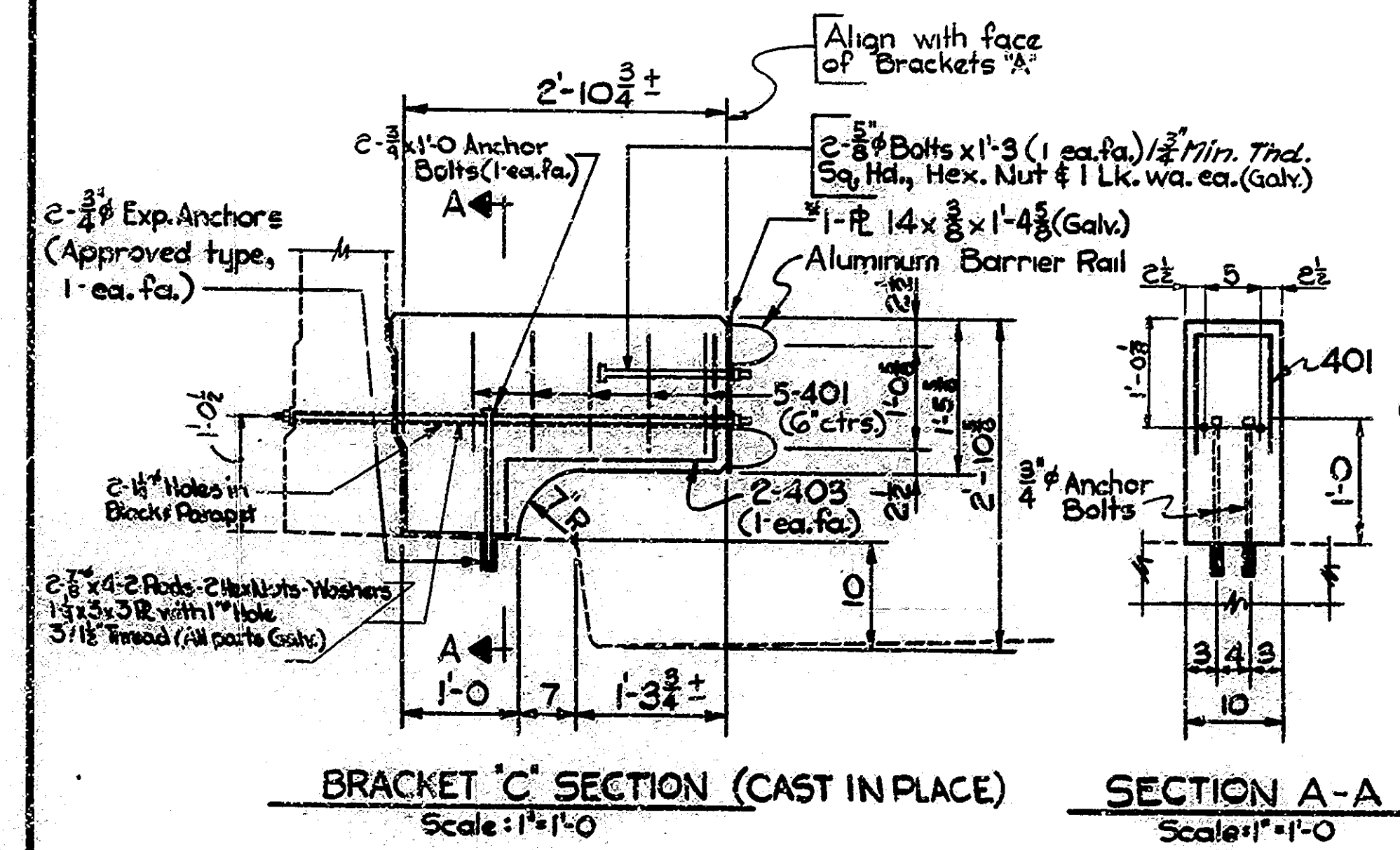
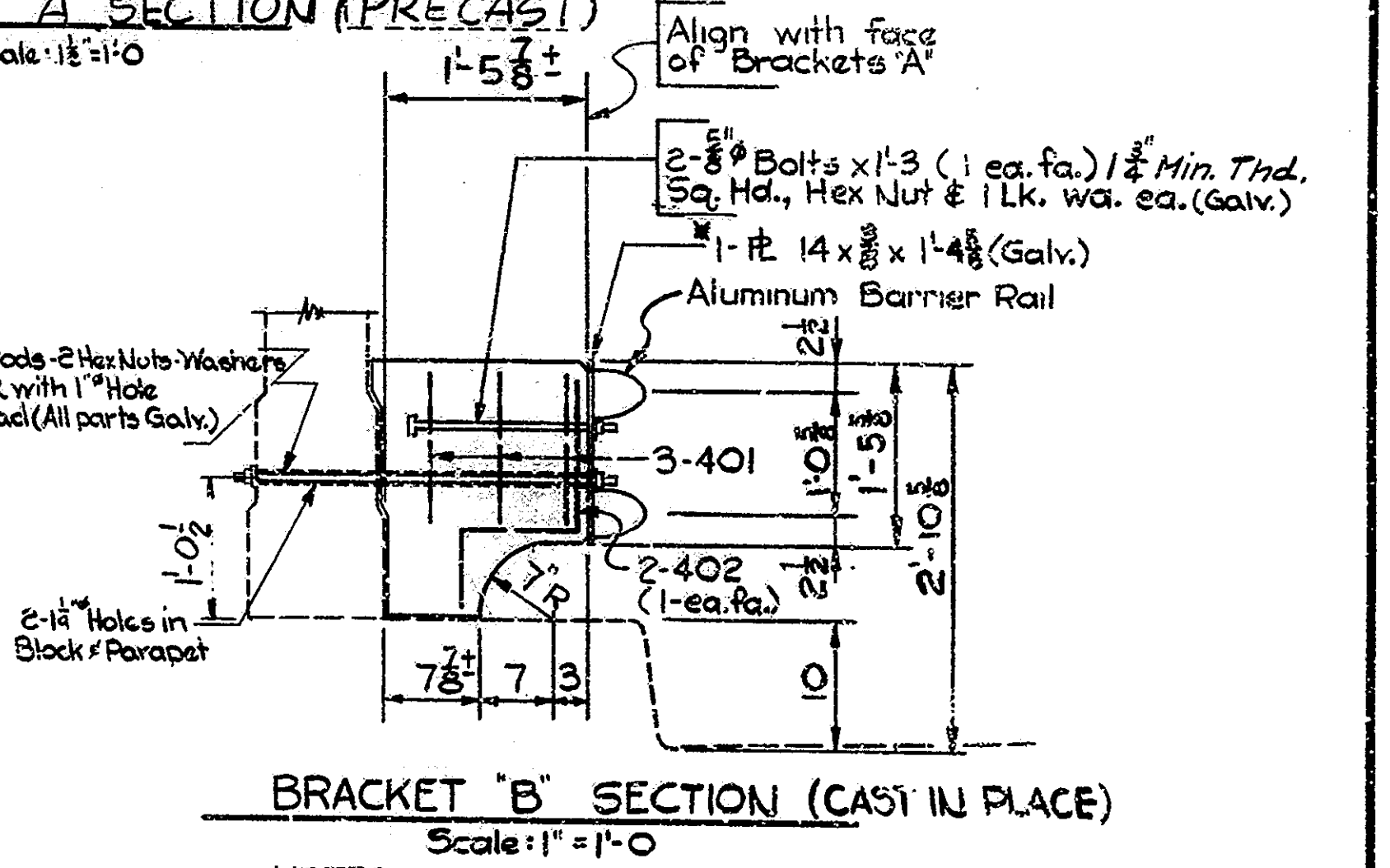
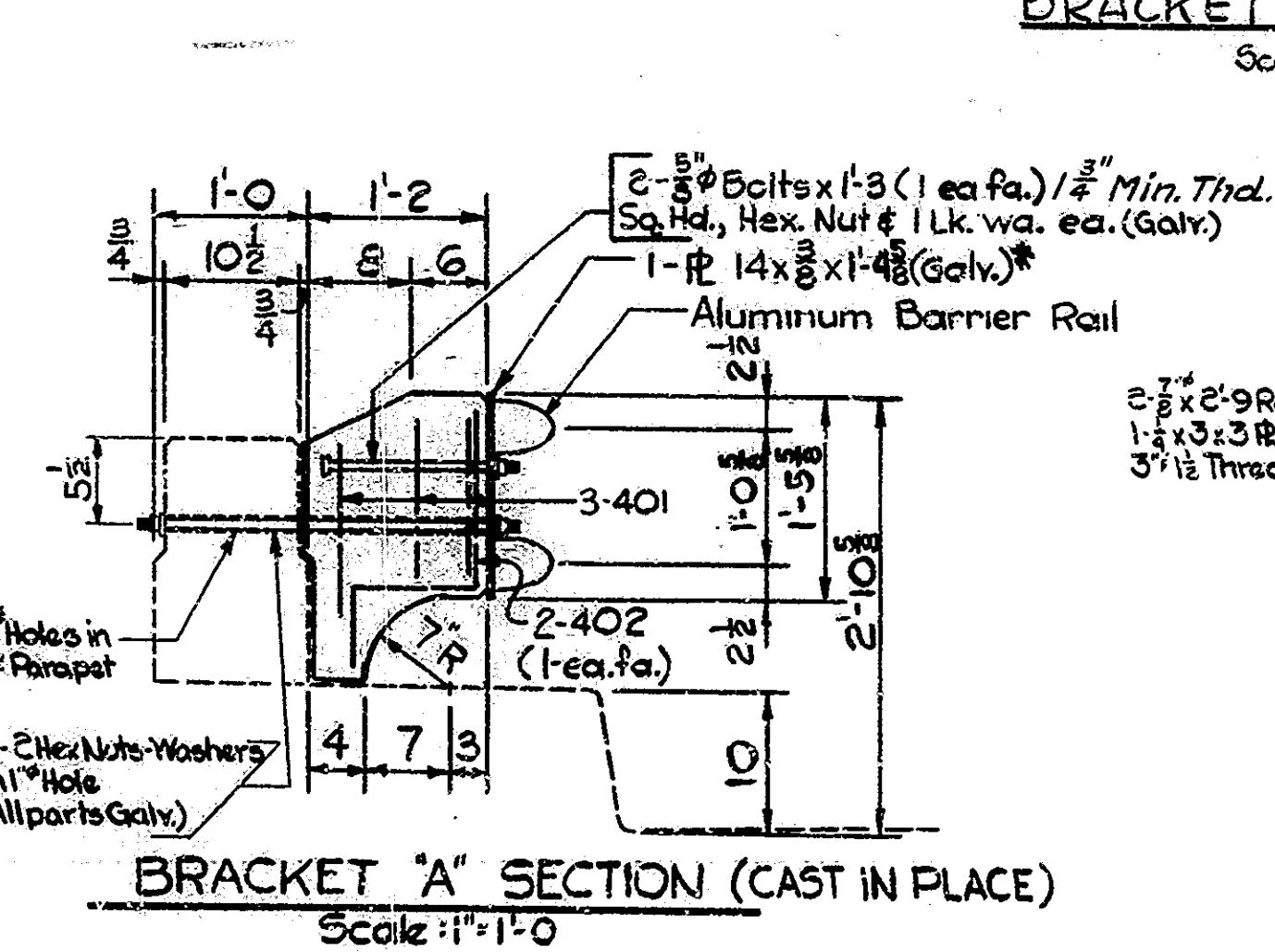
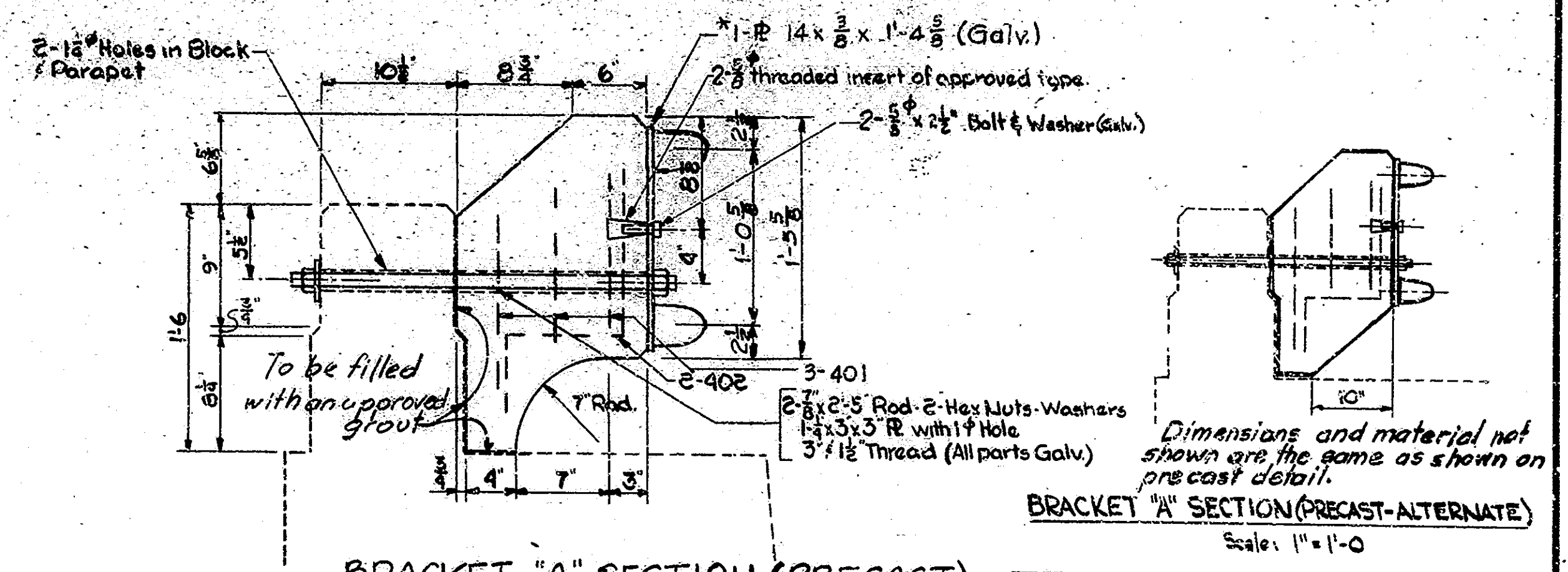
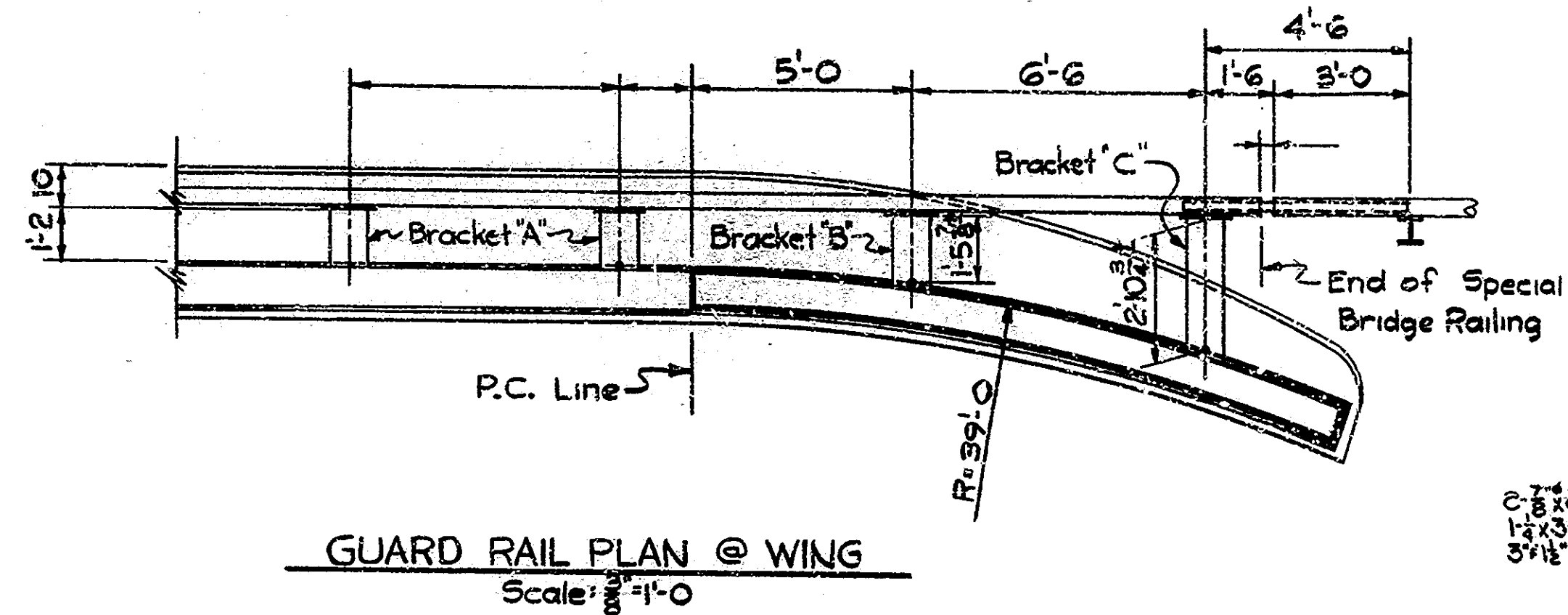
By: P. G. G. [Signature]

DRAWING: D5 OF 7 SHEET: 8 OF 25
 PROJECT: I-71-65-2(104)EB
 CONTRACT NO. B-12648
 BRIDGE FILE: I-65-65-4698 BT JB



DESIGNED	CYD
DRAWING	CYD
TRACED	CYD

SEE 7-5-80 NOTES



NOTES:
Material in $\frac{3}{8}$ " Steel Rods and $\frac{3}{4}$ " R's to be A-36, $\frac{5}{8}$ " and $\frac{3}{4}$ " bolts shall conform to ASTM A-307.
 $\frac{3}{4}$ " Expansion Anchors shall be of a type approved by the Engineer. They shall be a minimum of 3 inches in length and capable of a pull-out test of 12,000 pounds.
Concrete in Brackets to be Class 'A'.
Chamfer exposed concrete edges $\frac{3}{8}$ " inch.
See Br. Stds. BR1 & BR2 for Guard Rail in .es and details.
Alternate Pre-cast Brackets may be used. If the Pre-cast Bracket is used, details of the proposed Bracket shall be submitted to the Engineer for approval.
*As an alternate, an aluminum plate may be used. If used, it shall be aluminum alloy 6061-T5 conforming to ASTM B-209. Plates shall be free of sharp edges and irregularities.
Standard drawings reqd. : BR1, BR2, C1.

PAY ITEMS

BARRIER RAILING, TYPE "X" BRACKET "C"	=	2	EACH
BARRIER RAILING, TYPE "X" BRACKET "A"	=	8	EACH

BARRIER RAILING, TYPE "X" DETAILS

INDIANA STATE HIGHWAY COMMISSION

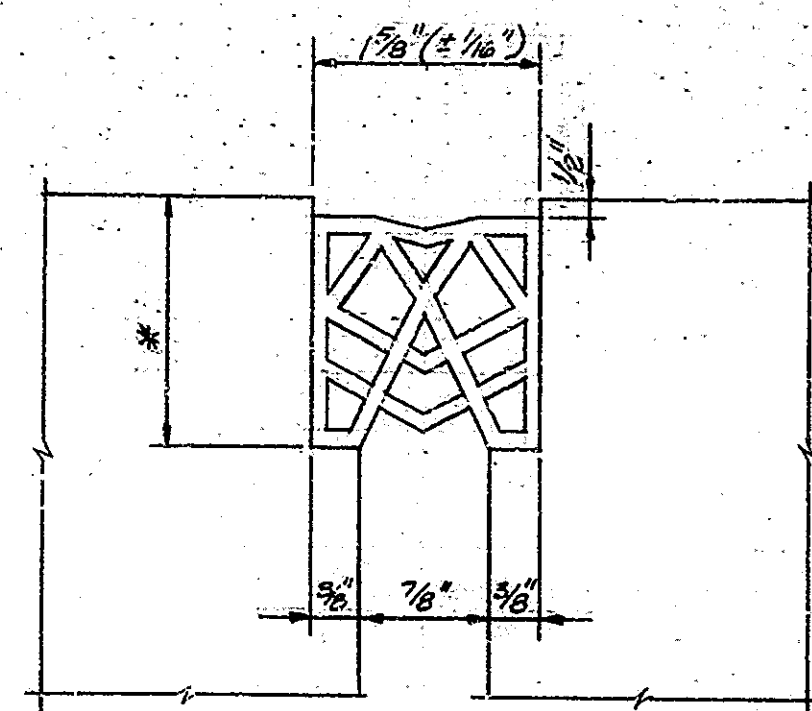
SCALE: As Noted DATE: 2-28-80
RECOMMENDED FOR APPROVAL: *My C. Atwell*

DRAWING: DS OF 7 SHEET: 9 OF 25
PROJECT: I-75-FRI-85-2(104)68
CONTRACT NO: B-1264B
BRIDGE FILE: 1-65-68-4699 B:TB

Rev 1-31-74 RWS/rochey
6-14-74 RWS/mchay /MFG

DESIGNED RDS:RFB:VLD WEA:R:11-74
DRAWN CKD
TRACED CKD

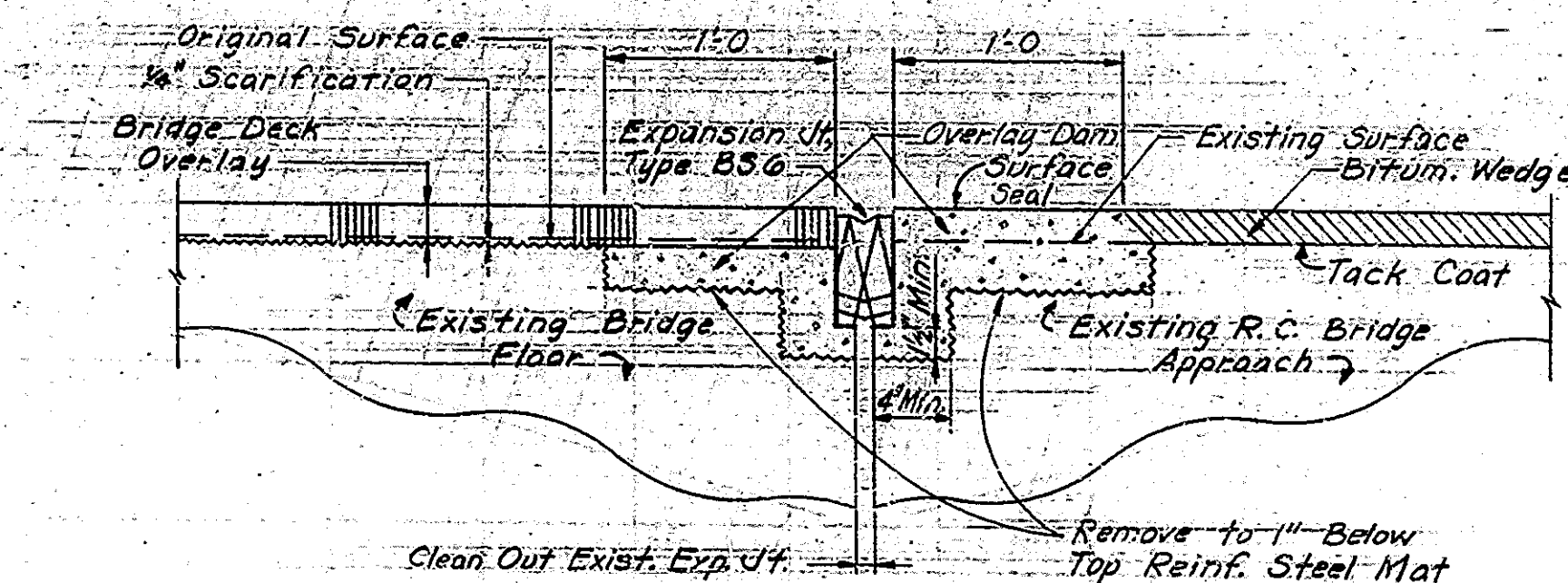
Rev 1-31-74 Railing Height Rev 6-14-74 Anchor Bolt Detail Rev 4-1-77 Material Notes



Note: Clean out and rebuild existing curb joints to accommodate joint seal. Such work to be included in cost of Expansion Joint, Type BS 6.

* To be determined in field. See the Special Provisions.

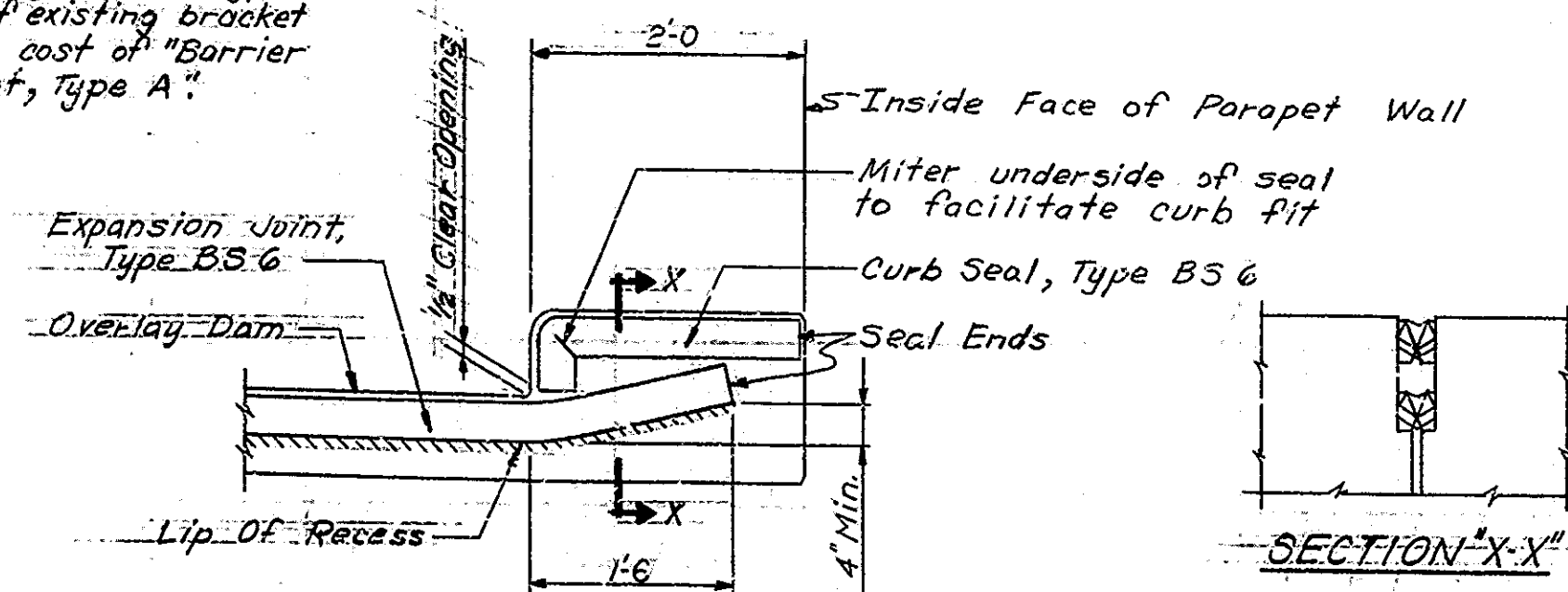
EXPANSION JOINT, TYPE BS 6
Not To Scale



DETAIL "A"

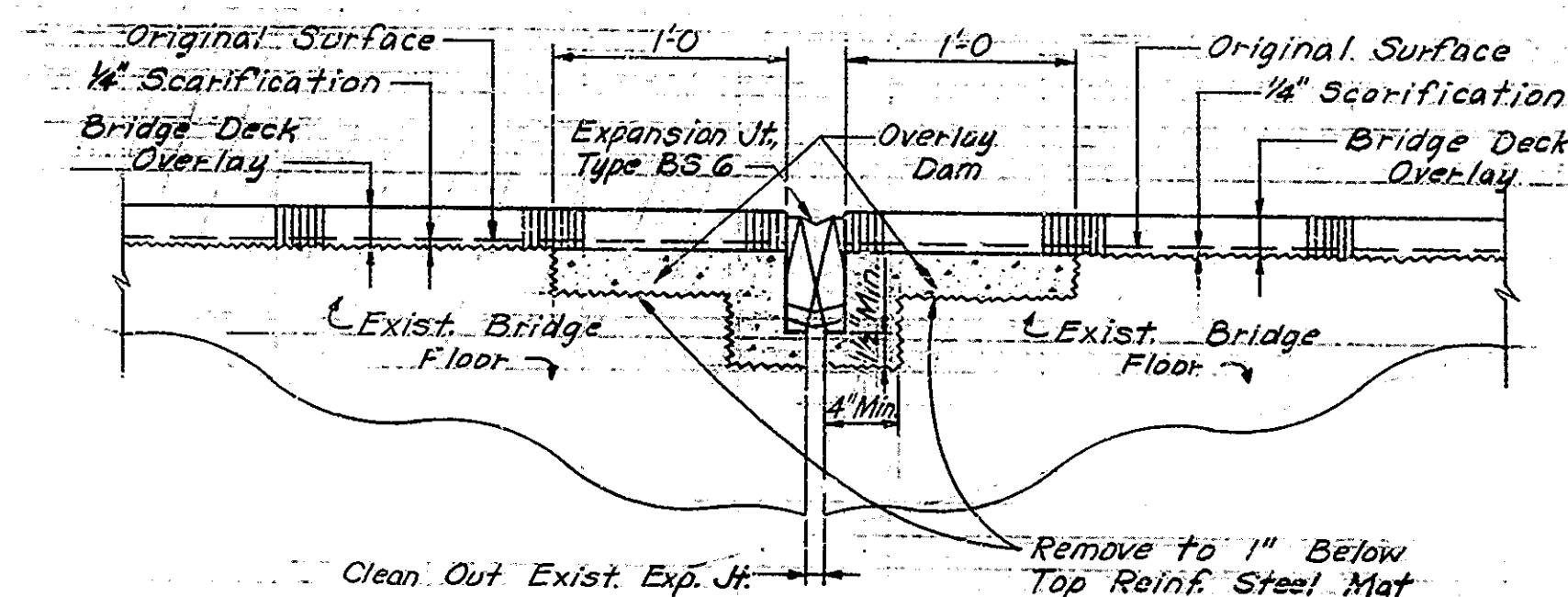
Scale: 1/2" = 1'-0"

Note: Construction of BS Joint thru curb will require removal and replacement of Barrier "X" Railing Bracket, Type "A". Cost of removal of existing bracket to be included in cost of "Barrier "X" Railing Bracket, Type "A".



TYPICAL BS JOINT INSTALLATION AT CURBS

Not To Scale



DETAIL "B"

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

MISCELLANEOUS DETAILS

INDIANA STATE HIGHWAY COMMISSION

SCALE: AS NOTED

DATE: 2-28-80

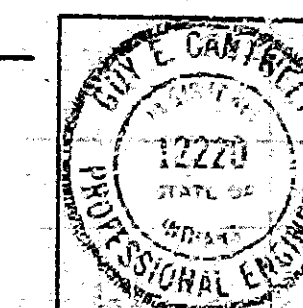
Ray C. Cantrell

DRAWING: DT OF 7 SHEET: 10 OF 25

PROJECT: I.F.R.I. 85-2104) 68

CONTRACT NO. B-126.4B

BRIDGE FILE: I-65-68-4699 B & JB



DESIGNED	PEB	CKD	TEM
DRAWN	PEB	CKD	TEM
TRACED		CKD	

ESTIMATE OF QUANTITIES

STRUCTURE PAY ITEMS					
CODE NO.	DESCRIPTION	UNIT	FUNDING		TOTAL QUANTITY
			90/10	75/25	
51005	CONCRETE CLASS C IN SUPERSTRUCTURE	CYS.			
51001	CONCRETE CLASS A IN SUPERSTRUCTURE	CYS.		✓	270
51005	CONCRETE CLASS A IN SUBSTRUCTURE	CYS.			
51010	CONCRETE CLASS B ABOVE FOOTINGS	CYS.			
51015	CONCRETE CLASS B IN FOOTINGS	CYS.			
51025	SPECIAL CLASS A CONCRETE	SFT			
51045	CONCRETE STRUCTURAL MEMBERS	LSUM			
51030	REINFORCING STEEL	LBS.		✓	2115
51032	EPOXY COATED REINFORCING STEEL	LBS.			
51035	STRUCTURAL STEEL	LBS.			
51038	STRUCTURAL STEEL	LSUM			
51090	BRONZE PLATES	LBS.			
51070	ANCHOR PLATES (MK-AP 1)	EACH			
51075	ANCHOR PLATES (MK-AP 2)	EACH			
51080	ANCHOR PLATES (MK-AP 3)	EACH			
51085	ANCHOR PLATES (MK-AP 4)	EACH			
51112	ANCHOR BOLTS	EACH			
51068	TIE DOWN ASSEMBLY MK-UA	EACH			
51095	CAST IRON DRAIN PIPE, 4 INCH	LBS.			
51100	CAST IRON DRAIN PIPE, 5 INCH	LBS.			
51105	CAST IRON DRAIN PIPE, 6 INCH	LBS.			
51110	CAST IRON GRATES, BASINS AND FITTINGS	LBS.			
51134	REMOVAL OF PRESENT RAILING	LFT.			
51132	RAILING RESET	LFT.			
51115	RAILING (TYPE 5 OR C)	LFT.			
51120	RAILING (TYPE 5A OR C1)	LFT.			
51125	RAILING (TYPE 6 OR D)	LFT.			
51130	RAILING (TYPE 7 OR E)	LFT.			
51020	CLASS C, CONCRETE RAILING	CYS.			
51025	CLASS C, CONCRETE RAILING	LFT.			
51131	BARRIER RAILING TYPE X	LFT.			
51215	CLASS X EXCAVATION	CYS.			
51220	NEW EXCAVATION	CYS.			
51225	WATERWAY EXCAVATION	CYS.			
51224	WATERWAY EXCAVATION	LSUM			
51225	DRY EXCAVATION	CYS.			
51230	FOUNDATION EXCAVATION (UNCLASSIFIED)	CYS.			
51231	FOUNDATION EXCAVATION (UNCLASSIFIED)	LSUM			
51813	PNEUMATICALLY PLACED MORTAR	SFT.			
51870	REPOINTING MASONRY IN STR'S	SET.			50
51814	WELDED STEEL WIRE FABRIC	SFT.			
51859	PAINTING OLD STEEL BRIDGE	LSUM			
51881	CLEAN AND PAINT STRUCT STEEL	LSUM			1
51881	EXPANSION JOINT, TYPE B82	LFT.			
51885	EXPANSION JOINT, TYPE B86	LFT.		✓	272
51887	EXPANSION JOINT, TYPE B89	LFT.			
51888	EXPANSION JOINT, TYPE B90	LFT.			
51890	EXPANSION JOINT, TYPE B91	LFT.			
51925	EXPANSION JOINT, CLASS 3-3	LFT.		✓	160
51926	EXPANSION JOINT, CLASS T-5	LFT.			
	BARRIER "X" RAILING BRACKET, TYPE "A"	EACH		✓	8
	BARRIER "X" RAILING BRACKET, TYPE "C"	EACH			2

STRUCTURE PAY ITEMS					
CODE NO.	DESCRIPTION	UNIT	FUNDING		TOTAL QUANTITY
			90/10	75/25	
51135	TIMBER PILES FURNISHED, UNTREATED	LFT.			
51140	TIMBER PILES DRIVEN, UNTREATED	LFT.			
51145	TIMBER PILES FURNISHED, TREATED	LFT.			
51150	TIMBER PILES DRIVEN, TREATED	LFT.			
51155	PILE SHELLS FURNISHED AND DRIVEN (12 INCH)	LFT.			
51160	PILE SHELLS FURNISHED AND DRIVEN (14 INCH)	LFT.			
51165	STEEL H PILES FURNISHED AND DRIVEN (8 BP 35)	LFT.			
51170	STEEL H PILES FURNISHED AND DRIVEN (10 BP 42)	LFT.			
51175	STEEL H PILES FURNISHED AND DRIVEN (12 BP 50)	LFT.			
51180	STEEL H PILES FURNISHED AND DRIVEN (12 BP 55)	LFT.			
51210	PILE ENCASMENT (CONCRETE)	LFT.			
51328	REMOVAL OF PRESENT STRUCTURE (PORTIONS)	LSUM		✓	1
51330	REMOVAL OF PRESENT STRUCTURE	LSUM			
51335	TEMPORARY BRIDGE AND APPROACHES	LSUM			
	REMOVAL OF SLOPEWALL	SYS.			60
51366	CONCRETE SLOPEWALL 5 INCH	SYS.			60
51365	SLOPEWALL	SYS.			
51370	RIPRAP	SYS.			
51375	REVESTMENT RIPRAP	TON			
51371	HANDLAID RIPRAP 12 INCH	SYS.			
51372	DUMPED RIPRAP	TON			
51374	PLASTIC FILTER CLOTH	SYS.			
51106	DECK DRAINS	EACH			
51395	STEEL DRAIN PIPE (6 INCH)	LSUM			
51400	STEEL DRAIN PIPE (8 INCH)	LSUM			
51092	STEEL PIPE CONDUIT (2 INCH)	LFT.			
51866	PIVETS REMOVED	EACH			
51864	FIELD DRILLED HOLES	EACH			
51867	STRUCTURAL STEEL CUTTING	SIN			
51868	FIELD DRILLED HOLES IN CONCRETE	EACH			
	REMOVAL OF BITUMINOUS SURFACE	SYS.		✓	6923
	OVERLAY DAMS	SFT.		✓	510
51826	SURFACE SEAL	SFT.		✓	38,774
51827	BRIDGE DECK MEMBRANE	LSUM			
51842	BRIDGE DECK OVERLAY	SYS.		✓	6923
51835	BRIDGE DECK SURFACE	SYS.			
51898	BRIDGE DECK PATCHING	SET.		✓	7056
51833	CONCRETE SCABBYING	SYS.		✓	7590
51840	ADDITIONAL CONCRETE SCABBYING	SYS.		✓	1430
51837	BLASTING AND CLEANING	SYS.		✓	6923
51838	FINISHING AND CURING	SYS.		✓	6923

APPROACH PAY ITEMS					
CODE NO.	DESCRIPTION	UNIT	FUNDING		TOTAL QUANTITY
			90/10	75/25	
02020	UNCLASSIFIED EXCAVATION	CYS.			
52240	COMMON EXCAVATION	CYS.			
52245	BORROW	LFT.			
52250	B BORROW	CYS.			20
52255	B BORROW FOR STRUCTURE BACKFILL	CYS.			
52300	REMOVAL OF PAVEMENT	SYS.			
02230	REPAVING PAVEMENT	SYS.			
52490	TERMINAL JOINT	LFT.			
52495	CONTRACTION JOINT, TYPE D-1	LFT.			
52580	CONCRETE PAVEMENT REINFORCED (7 INCH)	SYS.			
52285	CONCRETE PAVEMENT REINFORCED (8 INCH)	SYS.			
52290	CONCRETE PAVEMENT REINFORCED (9 INCH)	SYS.			
52300	CONCRETE PAVEMENT REINFORCED (10 INCH)	SYS.			
66070	CONCRETE SIDEWALK	SYS.			
52305	TYPE P COMPACTED AGGREGATE FOR BASE (SIZE NO. 53)	TON			
52600	COVER A/C SUBGRADE	TON			
52805	COVER AGGREGATE (SIZE NO. 12)	TON			
52805	AGGREGATE FOR SHOULDER DRAINS	TON			
52810	AGGREGATE FOR UNDER DRAINS	CEN.			
52908	TYPE O COMPACTED AGGREGATE FOR BASE (SIZE NO. 53)	TON			
52310	SUBBASE	CYS.			
52315	BITUMINOUS STABILIZED SUBBASE TYPE I, II, OR III	TON			
52320	BITUMINOUS STABILIZED SUBBASE	TON			
52445	BITUMINOUS BASE	TON			
04260	BITUMINOUS BASE (SIZE NO. 5D)	TON			
52451	BITUMINOUS BINDER	TON			
52450	BITUMINOUS SURFACE	TON			
52465	BITUMINOUS MATERIAL FOR TACK COAT	SYS.		✓	2535
52461	BITUMINOUS MATERIAL FOR PRIME COAT	SYS.			
04248	SEAL COAT TYPE 2	SYS.			
52470	BITUMINOUS MIXTURE FOR APPROACHES	TON		✓	463
52475	BITUMINOUS MIXTURE FOR SHOULDER	TON			
52480	BITUMINOUS MATERIAL, APPLIED	TON			
52500	GUARD RAIL, TYPE B	LFT.			
52505	GUARD RAIL, TYPE C	LFT.			
52510	GUARD RAIL, TYPE D	LFT.			
52515	GUARD RAIL, TYPE E	LFT.			
52520	GUARD RAIL, TYPE F	LFT.			
52530	GUARD RAIL, CLASS GA	LFT.		✓	364
52531	GUARD RAIL, TYPE B	LFT.			
08035	RESIST GUARD RAIL CLASS GA	LFT.		✓	660
52535	REMOVAL OF GUARD RAIL	LFT.		✓	520
52380	SODDING	SYS.			20
52385	MULCHED SEEDING "R"	SYS.			
52388	SEED MIXTURE "R"	LBS.			
52397	SEED MIXTURE "TR"	LBS.			
52400	MULCHING MATERIAL	TON			
52405	FERTILIZER	TON			
52410	WATER	M.G.			
52415	AGRICULTURAL LIMESTONE	TON			
52388	SEED MIXTURE "CV"	LBS.			
52401	MULCHING MATERIAL (WOOD CHIPS)	TON			
52401	CELLULOSE FIBER	TON			
52401	GUARD RAIL END TREATMENT	EACH		✓	0
52440	MAINTAINING TRAFFIC	LSUM		✓	0
52370	CLEARING RIGHT-OF-WAY	LSUM			
52381	BREAKAWAY CABLE	LFT.			
	TERMINAL TYPE "A"	EACH			

1. INCLUDES _____ TONS FOR SEED MIXTURE "R"
 2. INCLUDES _____ TONS FOR SEED MIXTURE "TR"
 3. INCLUDES _____ TONS FOR SEED MIXTURE "CV"
- * FOR BREAKDOWN, SEE DWG. D2
 ○ INDICATES 100% STATE FUNDS

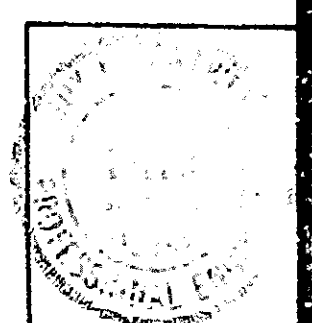
REVISIONS	
DATE	ITEM
Rev. 6-27-80	52330, 06035, 52535, Guard Rail End Treatment

BRIDGE ESTIMATE OF QUANTITIES INDIANA STATE HIGHWAY COMMISSION

DATE 2-28-80
Ray C. Caldwell

PROJECT: I-FRI-65-2(104)68
 CONTRACT NO: B-1264B
 BRIDGE FILE: I-65-68-4699 B JB

SHEET 11 OF 25



END STR
I-65-68-4699B