

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	MISS. JOB NO.	SHEET NO.	TOTAL SHEETS
1-20-89	886-1-26-89	5-31-89	620-5-31-89	6	ARK.	85-0057-01-002-10		
2-3-89	595-2-9-89							
3-8-89	602-3-9-89							

① 2899R - QUANTITIES - 29544

SCHEDULE OF BRIDGE QUANTITIES-ARK. JOB 110104 , MISS. JOB 85-0057-01-002-10

BRIDGE NO.	CODE NO.	NAME PLATE TITLE	UNIT OF STRUCTURE	ITEM NO.	SS & 802	SS & 802	JOB SPEC. PROV.	803	804	804	804	804	SS & 807	SS & 807	812	820	822	JOB SPEC. PROV.	JOB SPEC. PROV.	JOB SPEC. PROV.	JOB SPEC. PROV.	JOB SPEC. PROV.	JOB SPEC. PROV.	JOB SPEC. PROV.	JOB SPEC. PROV.
				ITEM	CLASS S CONCRETE	CLASS S(AE) CONCRETE	LIGHTWEIGHT AGGREGATE CONCRETE (A. E.)	BOILED LINSEED OIL	REINFORCING STEEL (GRADE 60)	EPOXY COATED REINFORCING STEEL (GR. 60)	REINFORCING STEEL (GRADE 40)	EPOXY COATED REINFORCING STEEL (GR. 40)	STRUCTURAL STEEL IN TRUSS SPANS (A36)	STRUCTURAL STEEL IN PLATE GIRDER SPANS (A36)	BRIDGE NAME PLATE (TYPE C)	CLEANING AND PAINTING EXISTING STRUCTURAL STEEL (TYPE 11)	BRIDGE DECK REPAIR	REPAIR OF GIRDER SPLICE	REMODELING EXISTING ABUTMENTS	REMODELING EXISTING MAIN RIVER SPANS	REMODELING EXISTING APPROACH SPANS	PIER REPAIR	SILANE BRIDGE DECK SURFACE TREATMENT	CLOSED CELL JOINT FILLER	REPAIR OF WIND SHEAR DEVICE
				UNIT	CU. YD.	CU. YD.	CU. YD.	GAL.	LB.	LB.	LB.	LB.	LB.	LB.	EACH	TON	SQ. YD.	LB.	LUMP SUM	LUMP SUM	LUMP SUM	CU. FT.	SQ. YD.	LIN. FT.	LB.
2899R	X075	MISSISSIPPI RIVER	WEST ABUTMENT		15.90			0.3	1,865		273			825	1				0.5					84.0	
			APPROACH UNIT NO. 1			247.96		22.7	28,482	32,297	3,216	1,105		4,318				415			0.14				133
			APPROACH UNIT NO. 2			374.50		33.8	42,470	49,959	4,788	1,643		5,244				732			0.20				190
			APPROACH UNIT NO. 3			410.81		37.1	46,712	54,063	5,272	1,805		5,853				1,111			0.23				121
			APPROACH UNIT NO. 4			410.81		37.1	46,712	54,063	5,272	1,805		5,853				1,111			0.23				121
			APPROACH UNIT NO. 5			356.22		32.1	40,422	45,645	4,572	1,562		5,402				581			0.20				95
			TRUSS UNIT NO. 1				178.47		37,360	12,193			20,274	29,363			182			0.20			2,461.7	249.4	
			TRUSS UNIT NO. 2				119.54		25,060	8,152			14,750	20,781			123			0.14			1,648.4	187.8	
			TRUSS UNIT NO. 3				213.82		44,657	14,558			25,222	36,160			219			0.24			2,949.4	344.7	
			TRUSS UNIT NO. 4				190.20		39,790	12,983			22,588	32,366			194			0.22			2,621.6	344.7	
			TRUSS UNIT NO. 5				178.37		37,361	12,197			20,416	29,693			182			0.20			2,457.3	344.7	
			PIER NO. 12																		210				
			EAST ABUTMENT		25.00			0.3	2,449		367			825					0.5					56.0	
			TOTALS FOR JOB 110104 (85-0057-01-002-10)		40.90	1,800.30	880.40	163.4	393,540	296,110	23,760	7,920	103,250	28,320	1	8,026*	900	3,950	1.0	1.00	1.00	210	12,138.4	1,611.3	660

△ 148,363

EXISTING NEW
* APPROACH UNITS WEST - 858 TONS - 8 TONS
TRUSS UNITS - 6,446 TONS - 52 TONS
APPROACH UNITS EAST - 656 TONS - 6 TONS

BRIDGE NO.	CODE NO.	NAME PLATE TITLE	UNIT OF STRUCTURE	ITEM NO.	JOB SPEC. PROV.	JOB SPEC. PROV.	633	JOB SPEC. PROV.
				ITEM	RENOVATION OF NAVIGATION LIGHTING SYSTEM	HIGH STRENGTH BOLTS	BRIDGE CONSTRUCTION CONTROL	REMOVING AND REPLACING MEMBER M7-L7
				UNIT	LUMP SUM	LB.	LUMP SUM	LUMP SUM
2899R	X075	MISSISSIPPI RIVER	WEST ABUTMENT					
			APPROACH UNIT NO. 1					
			APPROACH UNIT NO. 2					
			APPROACH UNIT NO. 3			2		
			APPROACH UNIT NO. 4					
			APPROACH UNIT NO. 5					
			TRUSS UNIT NO. 1					
			TRUSS UNIT NO. 2			5		
			TRUSS UNIT NO. 3			7		
			TRUSS UNIT NO. 4			4		
			TRUSS UNIT NO. 5			5		
			PIER NO. 12					
			EAST ABUTMENT					
			TOTALS FOR JOB 110104 (85-0057-01-002-10)		1.0	23	1.0	1.0

△ Revised: Str. Steel in Truss Spans 5-31-89, D.H.P.

DALE LOE
DESIGN SECTION SUPERVISOR

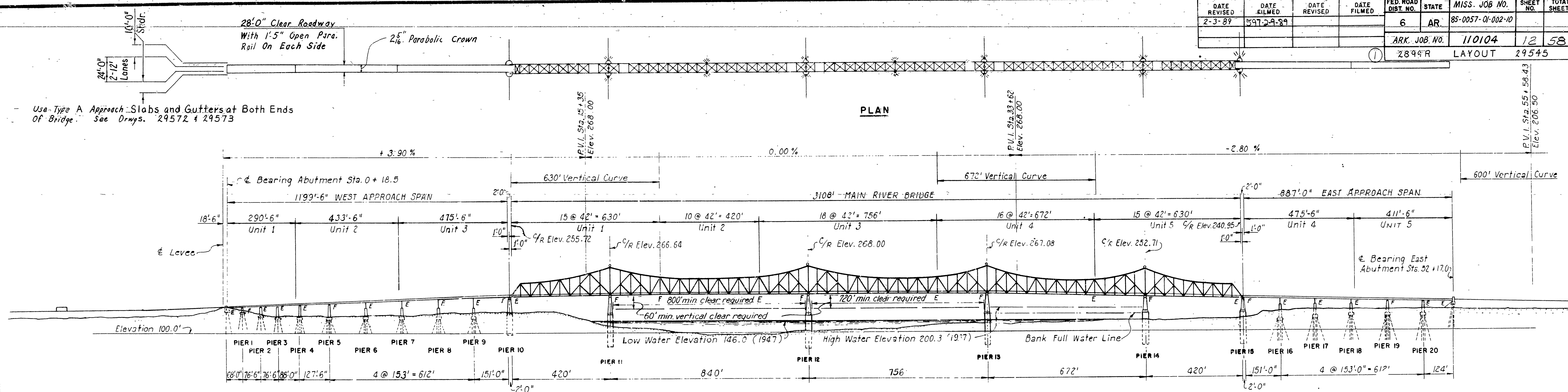
SCHEDULE OF BRIDGE QUANTITIES
HELENA BRIDGE DECK REHAB.
PHILLIPS COUNTY
ROUTE 49 SEC. 11
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

David Pinkerton
BRIDGE ENGINEER

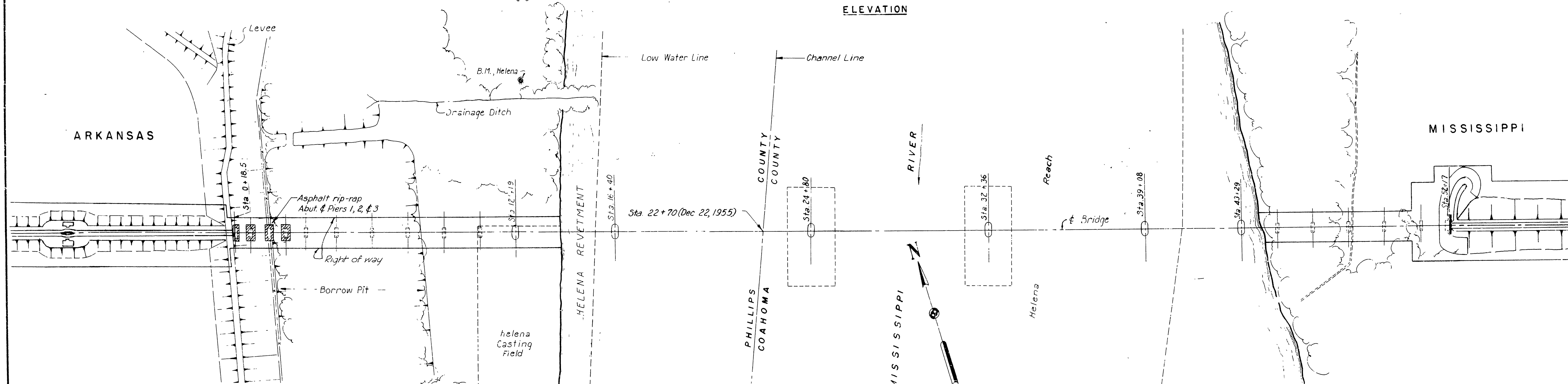
DRAWN BY: KDH DATE: 14 JAN 88
CHECKED BY: DHP DATE: 1-20-88 SCALE:
DESIGNED BY: DATE:
BRIDGE NO. 2899R DRAWING NO. 29544

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	MISS. JOB NO.	SHEET NO.	TOTAL SHEETS
2-3-89	5-9-89			6	AR	85-0057-01-002-10		
						ARK. JOB NO. 110104	12	58
						2894R LAYOUT	29545	

Use Type A Approach Slabs and Gutters at Both Ends of Bridge. See Drwgs. 29572 & 29573



ELEVATION



GENERAL NOTES

IN GENERAL THE PROPOSED WORK CONSISTS OF WIDENING THE EXISTING ROADWAY FROM 26'-0" TO 28'-0" IN STAGES AS SHOWN ON DWG. NO. 29547 AND AS LISTED BELOW:

- FOR APPROACH UNITS
- (1) REMOVE THE EXISTING CURBS, RAILINGS, AND DECK.
 - (2) CONSTRUCT A NEW DECK HAVING A 28'-0" CLEAR ROADWAY AND CONCRETE PARAPET RAILS. NORMAL WEIGHT CONCRETE SHALL BE USED.
 - (3) REMODEL THE EXISTING JOINTS TO MATCH THE WIDENED ROADWAY AND WATERPROOF THE JOINTS.
 - (4) REMOVE AND REPLACE EACH ABUTMENT BACKWALL AND CONSTRUCT NEW TURNBACK WINGS.
 - (5) CLEAN AND PAINT ALL STRUCTURAL STEEL.
 - (6) REPAIR GIRDER FIELD SPLICES BY REPLACING THE BOTTOM SPLICE PLATE.
- FOR THE TRUSS UNITS
- (1) REMOVE THE EXISTING CURBS AND RAILINGS.
 - (2) WIDEN THE EXISTING ROADWAY TO 28'-0" AND CONSTRUCT CONCRETE PARAPET RAILS. LIGHTWEIGHT AGGREGATE CONCRETE SHALL BE USED.
 - (3) REMODEL EXISTING JOINTS TO MATCH WIDENED ROADWAY AND WATERPROOF THE JOINTS.
 - (4) CLEAN AND PAINT ALL STRUCTURAL STEEL.
 - (5) REPLACE THE NAVIGATION LIGHTING SYSTEM.
 - (6) REPAIR FAULTY CONCRETE IN PEDESTALS OF PIER 12.

ALL DIMENSIONS RELATING TO THE EXISTING BRIDGE ARE TO BE VERIFIED IN THE FIELD AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE NEW WORK TO THE EXISTING STRUCTURE. PLANS OF THE EXISTING STRUCTURE WILL BE MADE AVAILABLE TO THE CONTRACTOR UPON REQUEST.

CONSTRUCTION SPECIFICATIONS: ARKANSAS STATE HIGHWAY COMMISSION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 1988 AND APPLICABLE SPECIAL PROVISIONS AND SUPPLEMENTAL SPECIFICATIONS.

DESIGN SPECIFICATIONS: AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 1983 WITH CURRENT INTERIM SPECIFICATIONS.

LIVE LOAD: HS20

METHOD OF DESIGN: LOAD FACTOR

DETAIL DRAWINGS

ABUTMENTS
APPROACH SPANS
TRUSS SPANS
JOINTS & WATERPROOFING
APPROACH GUTTERS & SLABS

GUARD RAIL CONNECTION
TYPE C BRIDGE NAME PLATE
TEMPORARY BARRIERS
NAVIGATIONAL LIGHTING

DRAWING NO.

29548-29552
29554-29559
29560-29565
29566-29571
29572-29573

GR-B, GR-BA
2387A
1896B
E-1, E-2, E-3

SILANE BRIDGE DECK SURFACE TREATMENT SHALL BE APPLIED TO THE ROADWAY SURFACE AND TO THE ROADWAY FACE AND TOP OF THE CONCRETE PARAPET RAIL OF THE TRUSS SPANS.

BOILED LINSEED OIL TREATMENT SHALL BE APPLIED TO THE ROADWAY SURFACE AND TO THE ROADWAY FACE AND TOP OF THE CONCRETE PARAPET RAIL OF THE APPROACH SPANS.

THE ROADWAY SURFACE OF THE APPROACH SPANS SHALL BE GIVEN A TINE FINISH AS SPECIFIED FOR FINAL FINISHING IN SUBSECTION 802.20 FOR CLASS 5 ROADWAY SURFACE FINISH.

LAYOUT OF BRIDGE
OVER MISSISSIPPI RIVER
HELENA BRIDGE DECK REHAB.
PHILLIPS COUNTY
ROUTE 49 SEC. II
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, AR.

DRAWN BY MEC DATE 2-5-86
CHECKED BY CJF DATE 1-21-88
DESIGNED BY MEC DATE 2-5-86

SCALE 1" = 200'

BRIDGE NO. 2899R

DRAWING NO. 29545

Veral Pinkerton
BRIDGE ENGINEER

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	MISS. JOB NO.	SHEET NO.	TOTAL SHEETS
1-20-89	828-1-24-88			6	ARK.	85-0051-01-002-10		
2-3-89	598-2-9-89					110104	13	58
				ARK. JOB NO.		2899R	NOTES	29546

GENERAL NOTES

APPROACH SPANS: All concrete shall be Class S(AE) with a minimum 28 day compressive strength $f'c = 4,000$ psi.

TRUSS SPANS: All concrete to be Lightweight Aggregate Concrete (AE). Minimum 28 day compressive strength, $f'c = 3,000$ psi. See Job Spec. Prov. "Lightweight Aggregate Concrete (AE)."

All exposed corners to be chamfered $3/4"$ unless otherwise noted.

Concrete in bridge superstructure shall be placed and consolidated for the entire pour before any concrete has taken its initial set. This may require the use of a retarding agent. The concrete bridge deck shall be finished in accordance with Section 802.20 of the Standard Specifications. Movement of the finishing machine across new concrete shall be on planks placed on the surface and shall be prohibited for 72 hours after finishing pour.

The concrete bridge deck of the approach spans shall be given a time finish as specified for final finishing in subsection 802.20 for Class 5 Bridge Roadway Surface Finish.

Silane Bridge Deck Surface Treatment shall be applied to the roadway surface and the roadway face and top of the concrete parapet railing of the truss spans. See Job Spec. Prov. "Silane Bridge Deck Surface Treatment."

Reinforcing extending from the new slab in Stage I Construction on the approach spans may interfere with the finishing machine operation. The contractor shall be responsible for providing suitable forming and finishing machine support in the limited space available. See Detail "A" on Drawing No. 29554.

Stay in place forms may be used on the approach spans if they do not increase the dead load of the slab.

REINFORCING STEEL: Bars S405, S406, & S701 in the approach units (See Dwg. Nos. 29554 - 29559) and Bar S401 in the abutments (See Dwg. Nos. 29548 & 29550) shall be ASTM A617, Grade 40. No other grade shall be accepted. All other reinforcing steel shall conform to ASTM A615 or A617, Grade 60 (yield strength = 60,000 psi.). The reinforcing steel is to be accurately located in the forms and firmly held in place by steel wire supports, sufficient in number and size to prevent displacement during the course of construction. The wire supports will not be paid for directly but will be considered subsidiary to the item of "Reinforcing Steel."

All Structural Steel except for flange splice plates shall be A36. Flange splice plates shall be A572 (Gr. 50). Unless otherwise noted on the detail drawings, all new structural steel shall not be painted in the shop and shall be erected unpainted. Once erected the new structural steel and the existing structural steel shall be cleaned and painted as specified in Section 820 of the Standard Specifications unless otherwise noted. All structural steel in the approach spans shall be paid for as "Structural Steel in Plate Girder Spans (A36)." All Structural Steel in the Truss Spans will be paid for as "Structural Steel in Truss Spans (A36)." Payment for the painting shall be made under the pay item "Cleaning and Painting Existing Structural Steel (Type II)." The weight of the new structural steel has been added to the total tons shown on the quantity schedule for that item.

A barge loading facility is located just downstream of the bridge on the west bank. Care shall be taken to avoid getting paint on the facility and any barges moored there.

Structural shapes of equal or greater strength may be substituted for shapes shown if approval is obtained from the Bridge Engineer. Payment will be on the basis of the shapes shown.

Splice plates for flanges shall be cut and fabricated so that the primary direction of rolling is parallel to the direction of the main tensile and/or compressive stresses. The plates are considered main load carrying members and shall meet the Longitudinal Charpy V-Notch test specified in section 807.05 of the Standard Specifications and Supplemental Specification 807-2. This work and material are to be considered as subsidiary to item "Structural Steel in Plate Girder Spans (A36)" and will not be paid for directly.

Drawings show general features of design only. Shop drawings shall be made in accordance with the specifications, submitted and approval secured before fabrication is begun.

Field connections to be bolted with high strength bolts. Unless otherwise shown, bolts shall be $3/4"$ diameter, open holes $13/16"$ diameter. Bolt spacing shall be $2-1/2"$ unless otherwise noted. Minimum edge distance shall be $1-1/4"$ unless otherwise noted. Bolts shall be placed with the heads on the bottom of the girder flange.

Any bolts in the existing finger castings that are broken while being loosened or retightened to allow installation of the copper sheeting shall be replaced at the contractor's expense.

Galvanizing shall conform to ASTM A153 and be paid for subsidiary to "Structural Steel in Plate Girder Spans (A36)."

CONSTRUCTION SPECIFICATIONS: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction, 1988 edition, with applicable supplemental specifications and special provisions.

DESIGN SPECIFICATIONS: AASHTO Standard Specifications for Highway Bridges, 1983 with current interim specifications.

METHOD OF DESIGN: Load Factor (New Construction)

Design Live Load: HS20

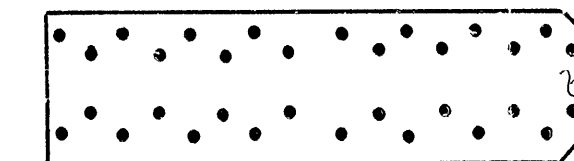
Type 6 Joint Seal shall be measured and paid for as Class S(AE) Concrete on the approach spans and Lightweight Aggregate Concrete (AE) on the truss spans. See Section 501.03(h) and 501.04(j) of the Standard Specifications.

The $1/8"$ nylon reinforced neoprene trough material shall conform to Section 809.05(m) of the Standard Specifications. Payment shall be subsidiary to "Structural Steel in Plate Girder Spans (A36)."

Copper sheeting shall conform to ASTM B152 and shall weigh 16 oz. per square foot. Payment shall be subsidiary to "Structural Steel in Plate Girder Spans (A36)."

Closed cell foam strips used to seal finger joints on the truss spans shall fit snugly and be glued on all surfaces that come in contact with steel, concrete, or other foam. Preparation of the contact surfaces shall follow the recommendations of the manufacturer. See Job Spec. Prov. "Closed Cell Joint Filler."

All dimensions relating to the existing bridge are to be verified in the field and the contractor shall be responsible for adjusting the new work to the existing bridge.

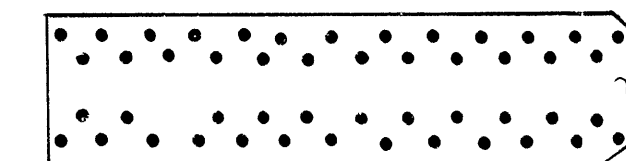


$13 \times \frac{3}{8} \times 4'-2"$

See Note Below.

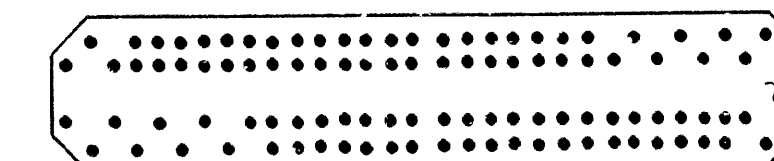
GIRDER SPLICE APPROACH UNIT 1

N.T.S.



$17 \times \frac{3}{8} \times 6'-9"$

Note: See Job Special Provision "Repair of Girder Splice". Drawing is General in Nature. Specific Details are not Shown. Verify Dimensions in Field.



$18 \times \frac{3}{4} \times 8'-3"$

GIRDER SPLICES APPROACH UNITS 2-5

N.T.S.

GENERAL NOTES

HELENA BRIDGE

ROUTE 82C.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: MFC DATE: 1-21-88

CHECKED BY: CJE DATE: 1-21-88

DESIGNED BY: DATE:

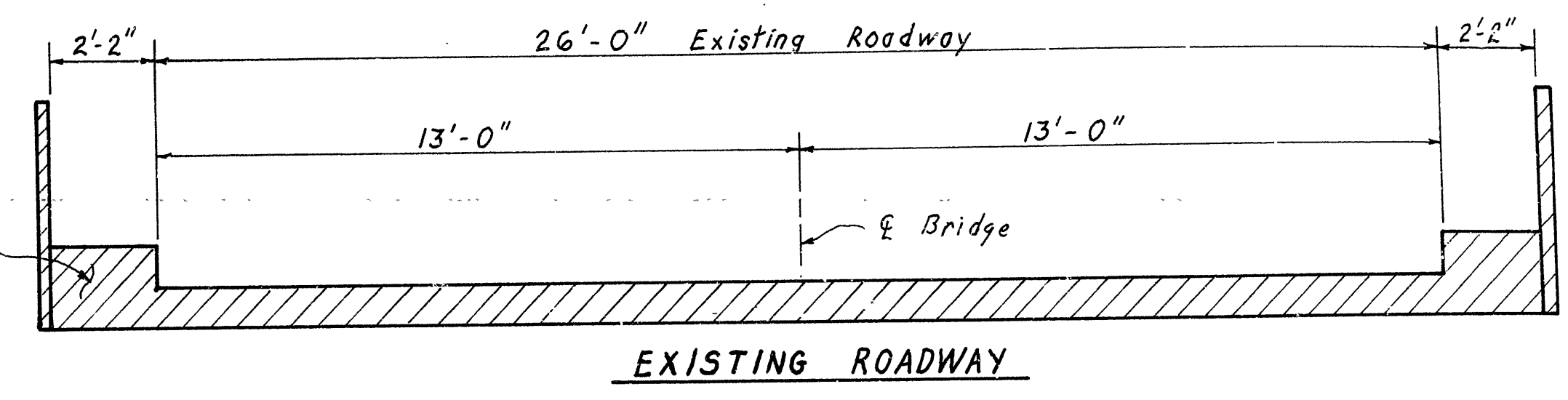
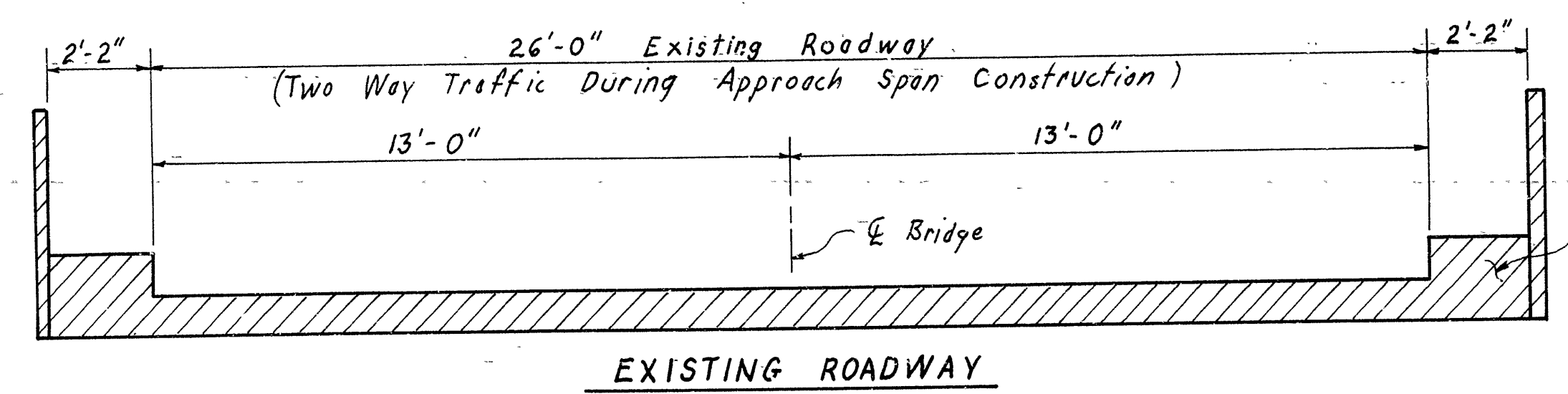
SCALE:

Vernon Pinkerton
BRIDGE ENGINEER

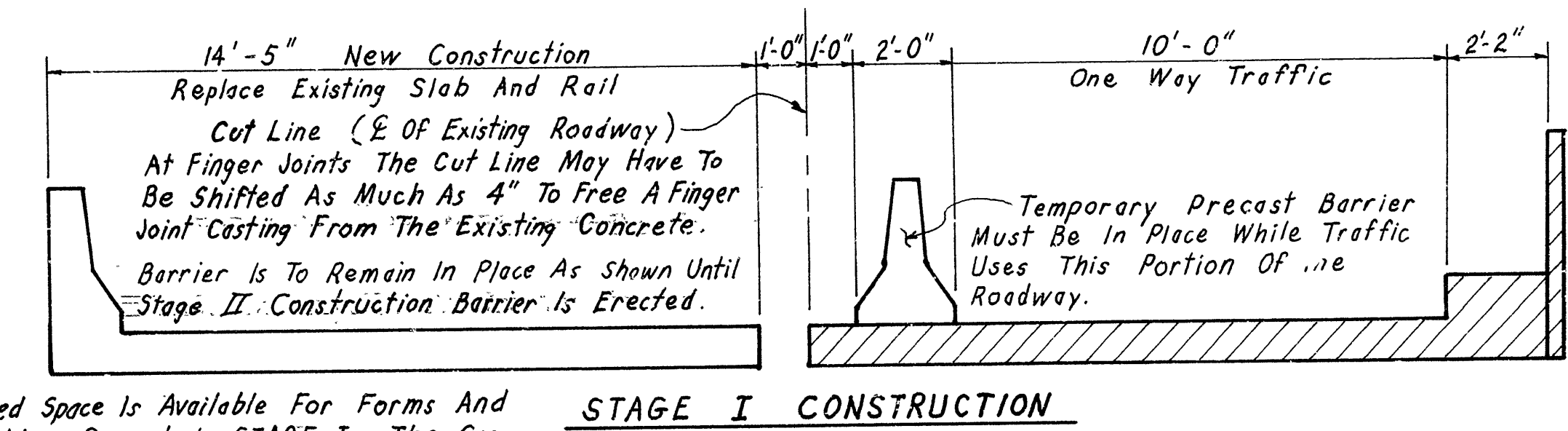
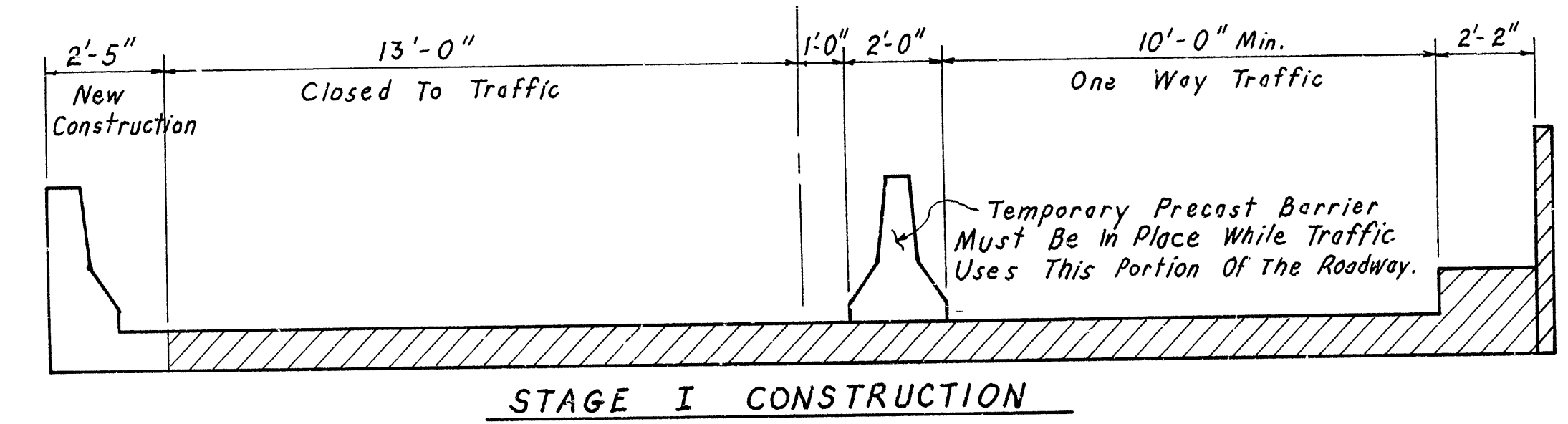
BRIDGE NO. 2899R

DRAWING NO. 29546

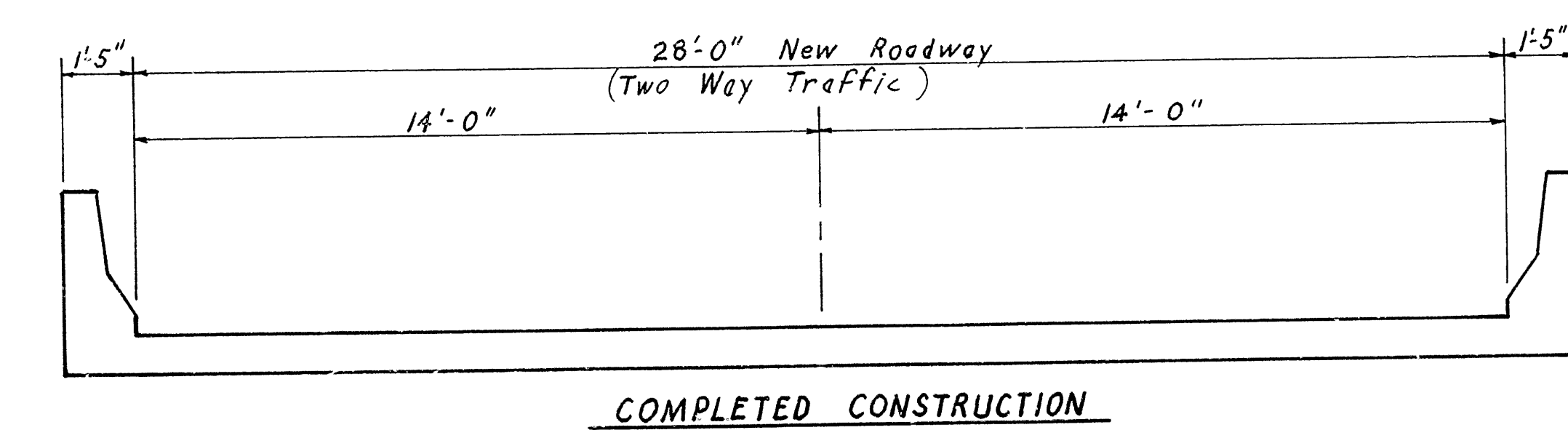
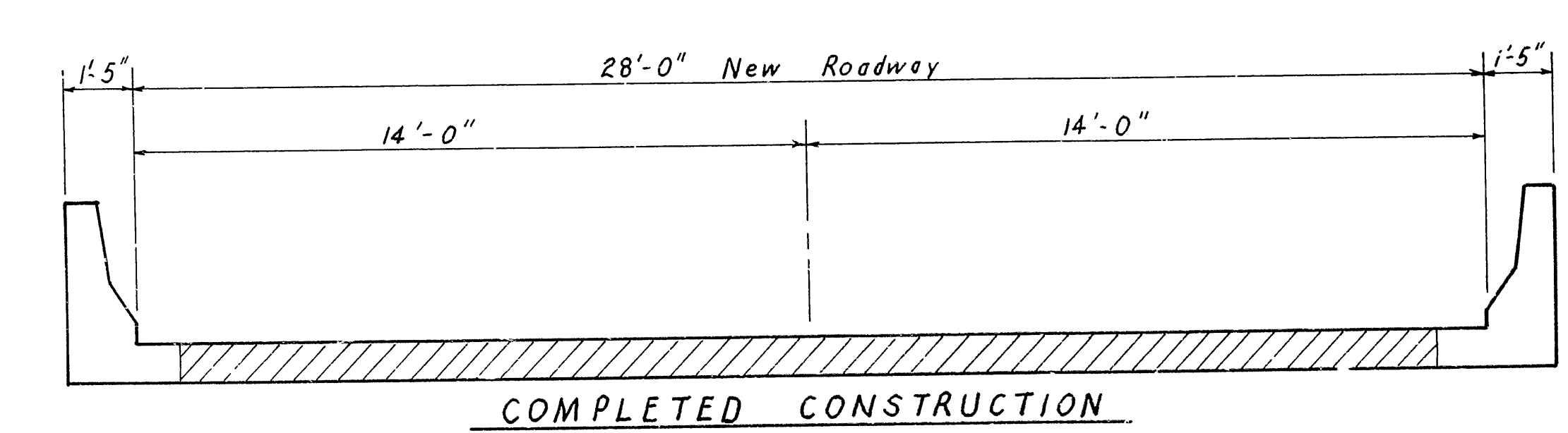
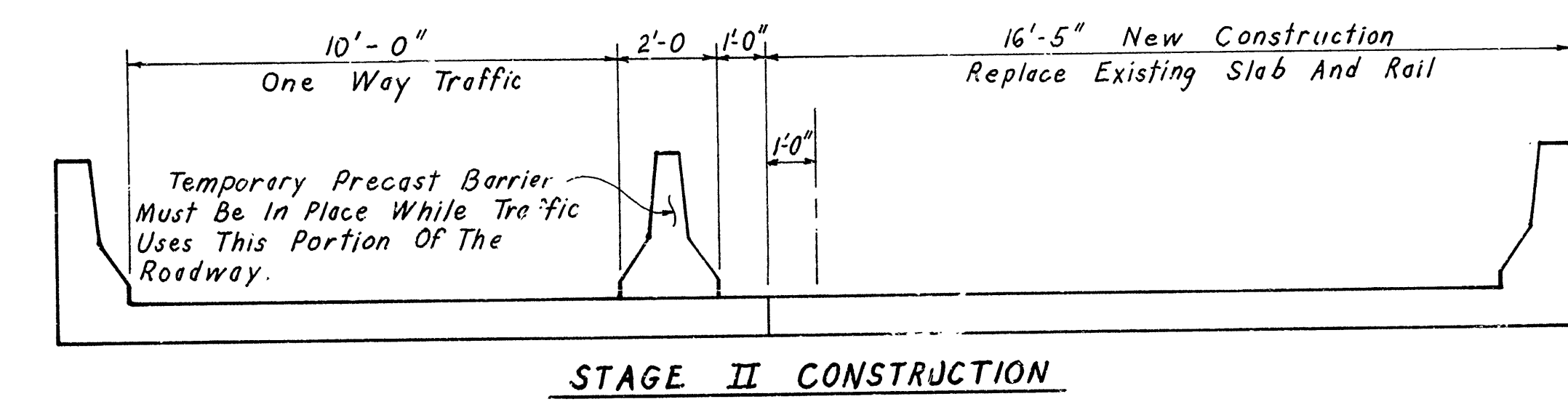
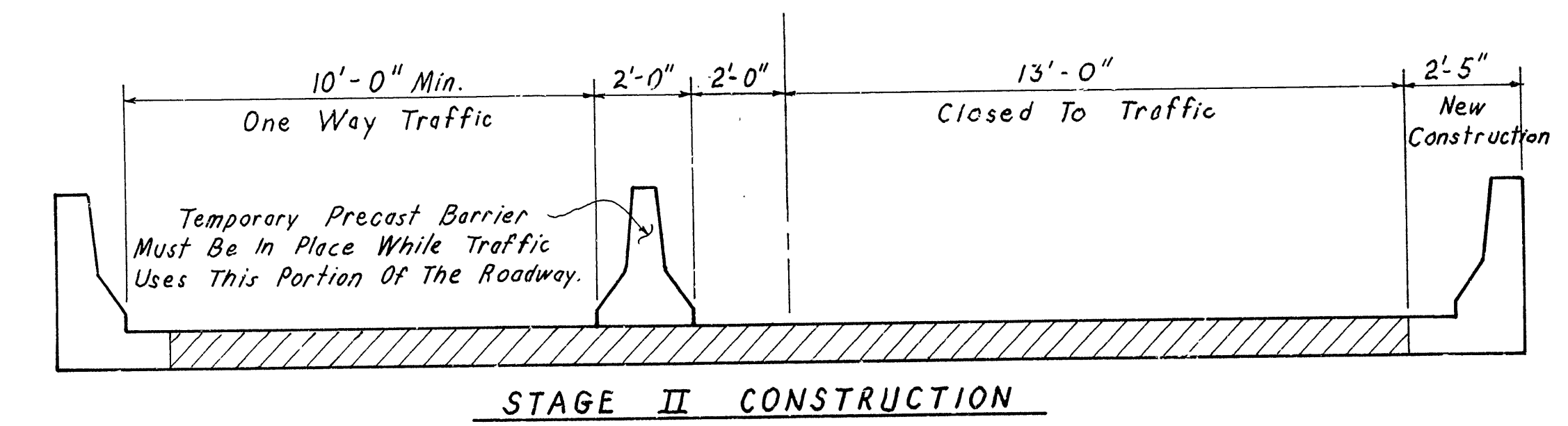
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	MISS. JOB NO.	SHEET NO.	TOTAL SHEETS
2-3-89	5-9-89			6	ARK.	85-0057-01-002-10		
				ARK. JOB NO.		110104	14	53
				2899R CONSTR. SEQ. 29547				



Shaded Area Indicates Existing Materials

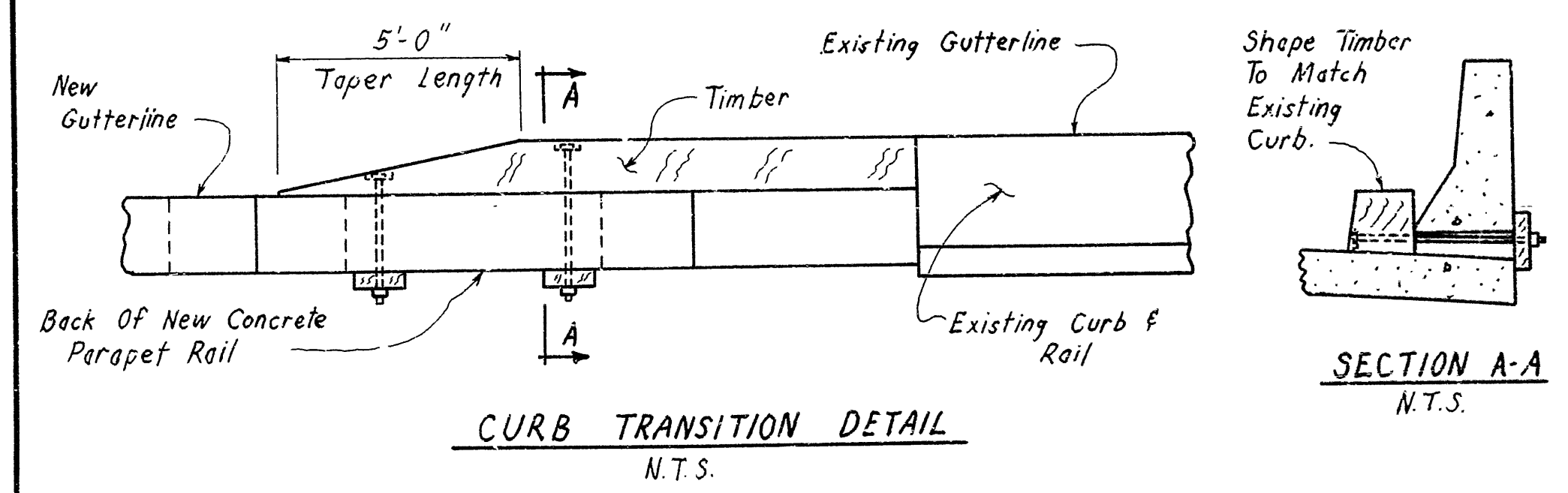


NOTE: Limited Space Is Available For Forms And Finishing Machine Support In STAGE I. The Contractor Shall Be Responsible For Providing A Suitable Forming System. See Detail A On Drwg. 29554



STAGE CONSTRUCTION SEQUENCE FOR TRUSS SPANS
(Looking Forward)

STAGE CONSTRUCTION SEQUENCE FOR APPROACH UNITS
(Looking Forward)



GENERAL NOTES

THE CONTRACTOR MAY ELECT TO WORK ON THE TRUSS OR APPROACH SPANS FIRST. IF THE APPROACH SPANS ARE WORKED ON FIRST, THE WORK ZONE SHALL EXTEND 250 FEET ONTO EACH END OF THE TRUSS. IF THE TRUSS SPANS ARE WORKED ON FIRST, THE WORK ZONE SHALL STOP 250 FEET FROM EACH END OF THE TRUSS.

IF THE CONTRACTOR ELECTS TO WORK ON THE APPROACH SPANS AT EACH END OF THE BRIDGE SIMULTANEOUSLY, THE COST OF THE TEMPORARY BARRIERS, SIGNALS, SIGNS, ETC., REQUIRED ABOVE THE AMOUNT REQUIRED FOR THE WEST APPROACH SPANS SHALL BE AT THE CONTRACTOR'S EXPENSE. CONSTRUCTION SHALL BE COMPLETED ON ONE SIDE OF THE ROADWAY FOR THE FULL LENGTH OF THE EAST OR WEST APPROACH SPANS BEFORE WORK BEGINS ON THE OPPOSITE SIDE. ONE WAY TRAFFIC SHALL BE MAINTAINED AS SHOWN AND AS SPECIFIED IN THE SPECIAL PROVISIONS.

THE CONTRACTOR SHALL PROVIDE AND INSTALL AN APPROVED DEVICE TO FORM A SMOOTH TRANSITION FROM THE NEW GUTTERLINE TO THE EXISTING GUTTERLINE. THE DEVICE SHALL BE IN PLACE WHEN TRAFFIC IS ALLOWED ADJACENT TO THE GUTTERLINE. ONE SUGGESTED DEVICE IS SHOWN AT THE LEFT.

ANY CONSTRUCTION JOINTS THE CONTRACTOR ELECTS TO MAKE WHEN POURING THE DECK ON THE TRUSS MUST BE MADE AT A CROSSBEAM. THE EXISTING ALUMINUM RAIL SHALL REMAIN ATTACHED TO THE RAIL POST AT THE CROSSBEAM IF TRAFFIC IS ALLOWED ON THE DECK.

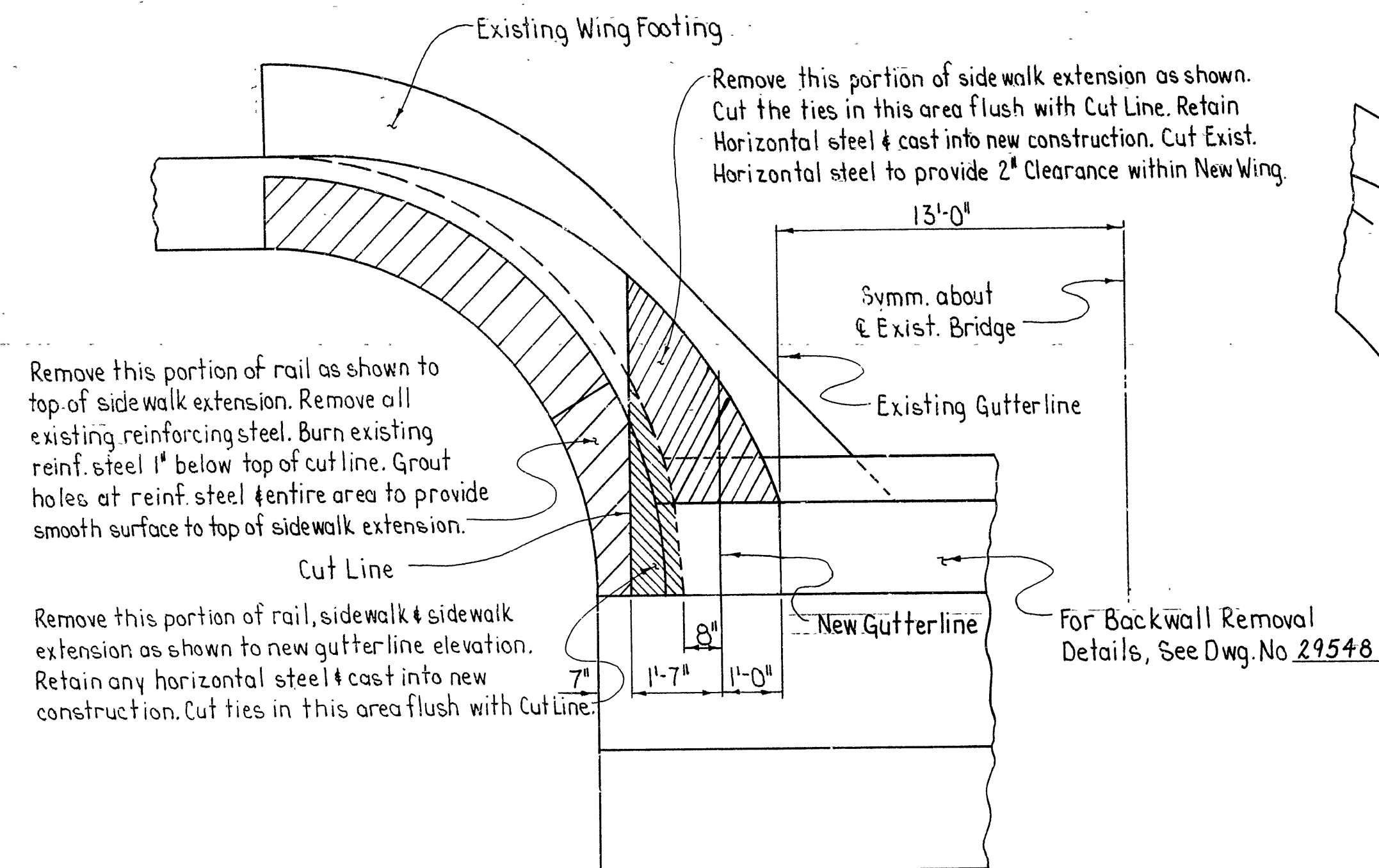
STAGE CONSTRUCTION SEQUENCE
HELENA BRIDGE DECK REHAB.
PHILLIPS COUNTY
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: MEC DATE: 1-24-86
CHECKED BY: CJE DATE: 1-19-88
DESIGNED BY: MEC DATE: 1-24-86
SCALE: 3/8" = 1'-0"

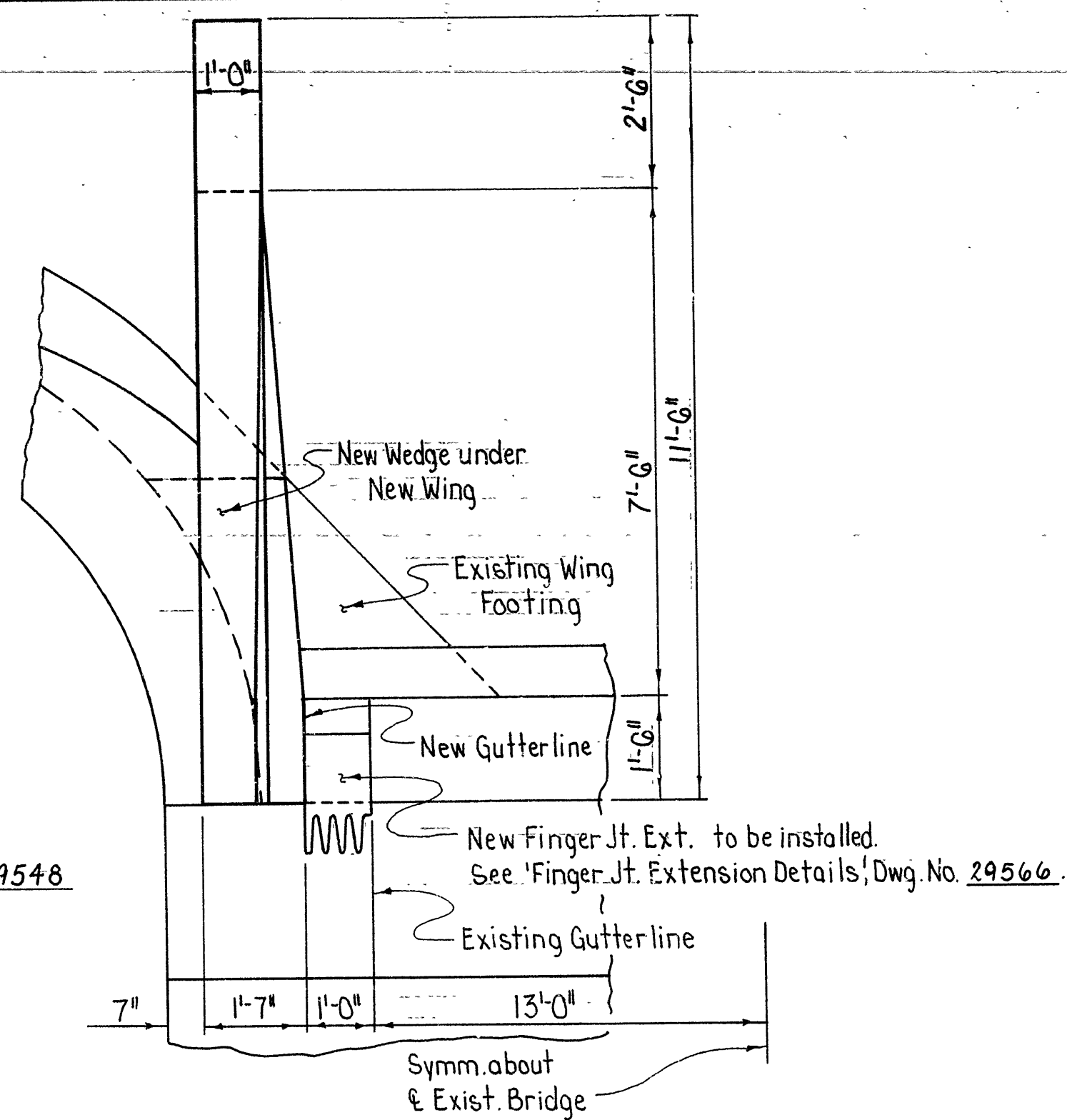
BRIDGE NO. 2899R DRAWING NO. 29547

Resal P. P. P.
BRIDGE ENGINEER

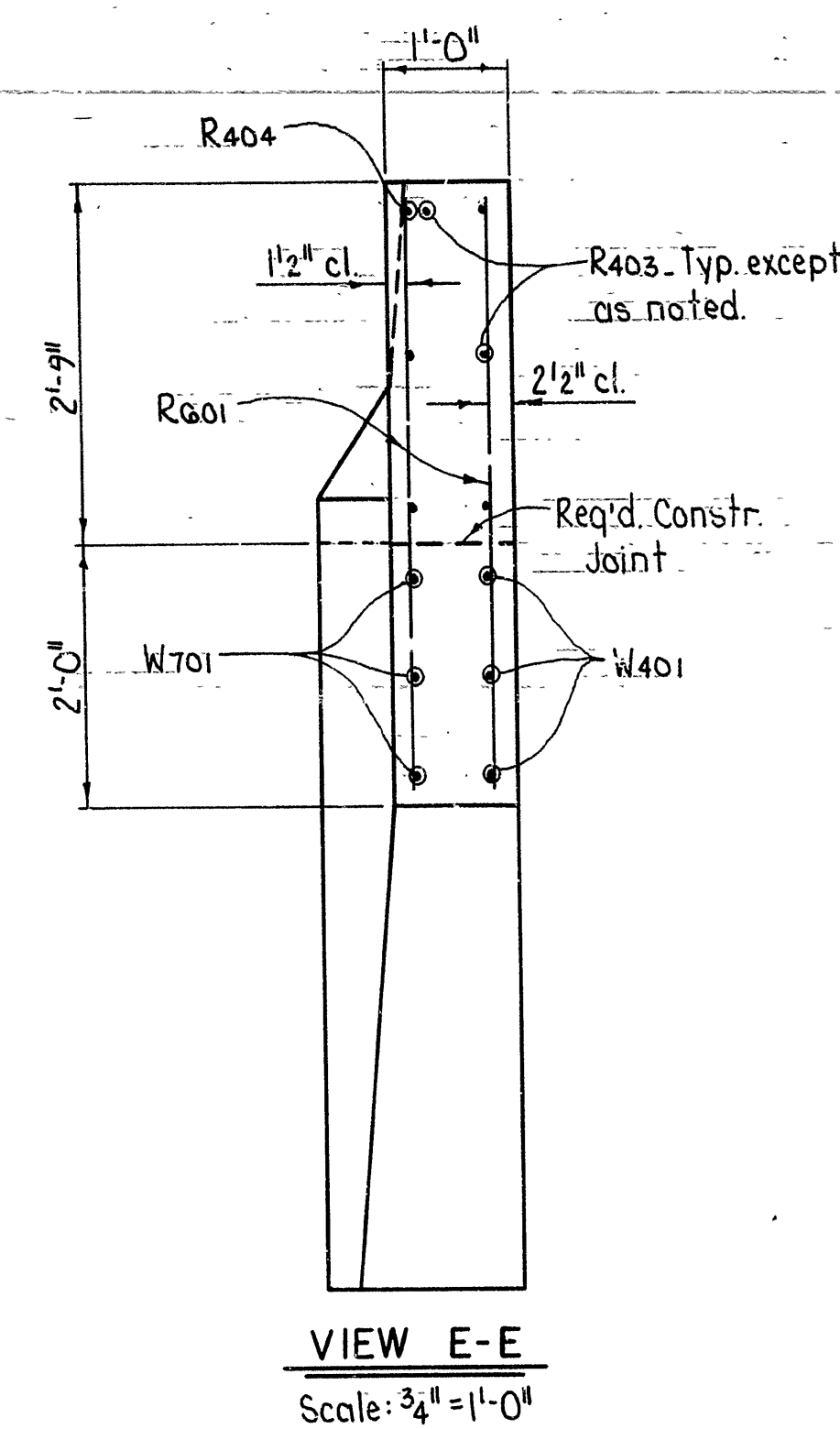
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2-3-89	6-1-89			6	ARK.	85-0057-01-002-10		
						ARK. JOB NO.	110104	16 53
2899R - WEST ABUTMENT- 29549								



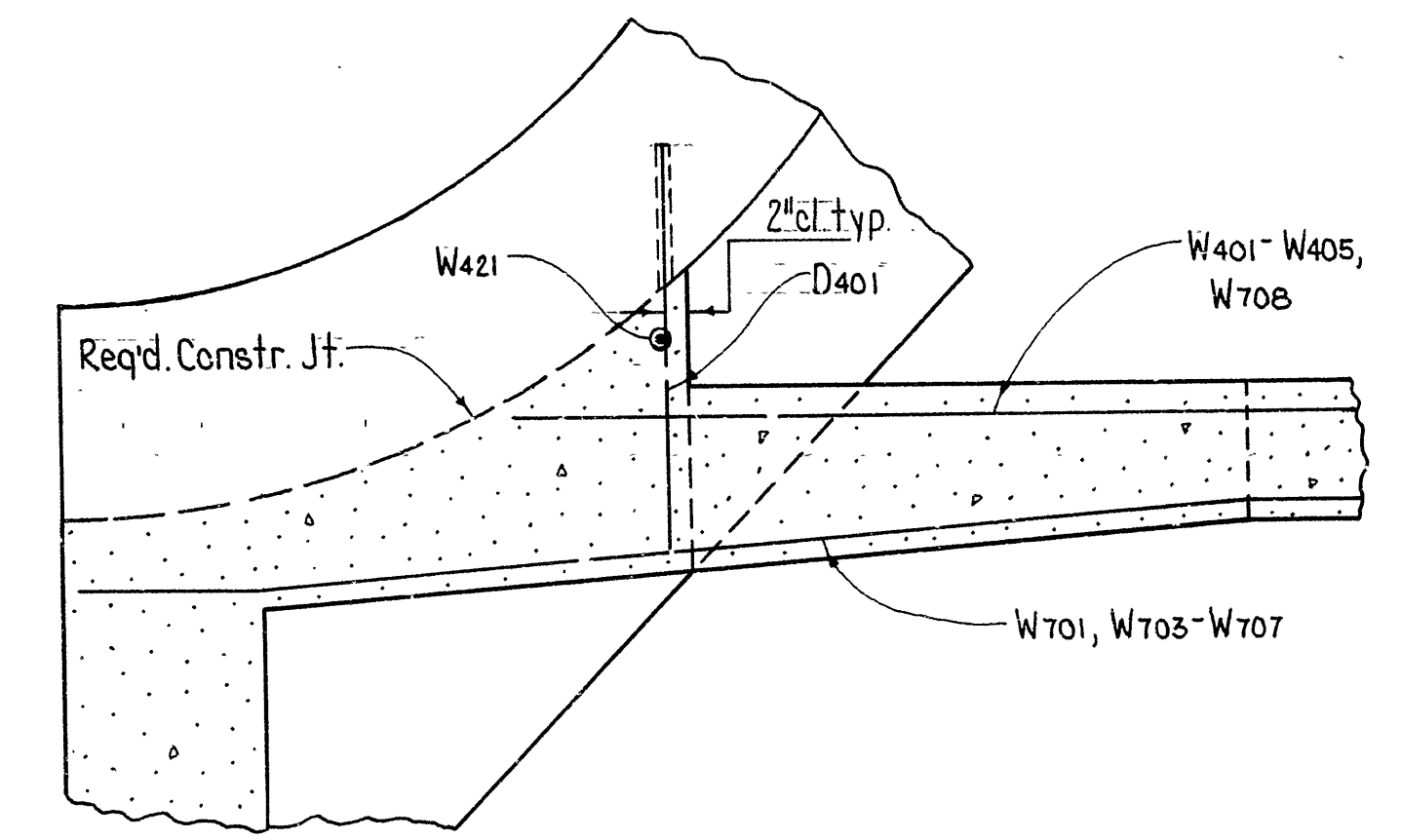
REMOVAL DETAILS AT WING
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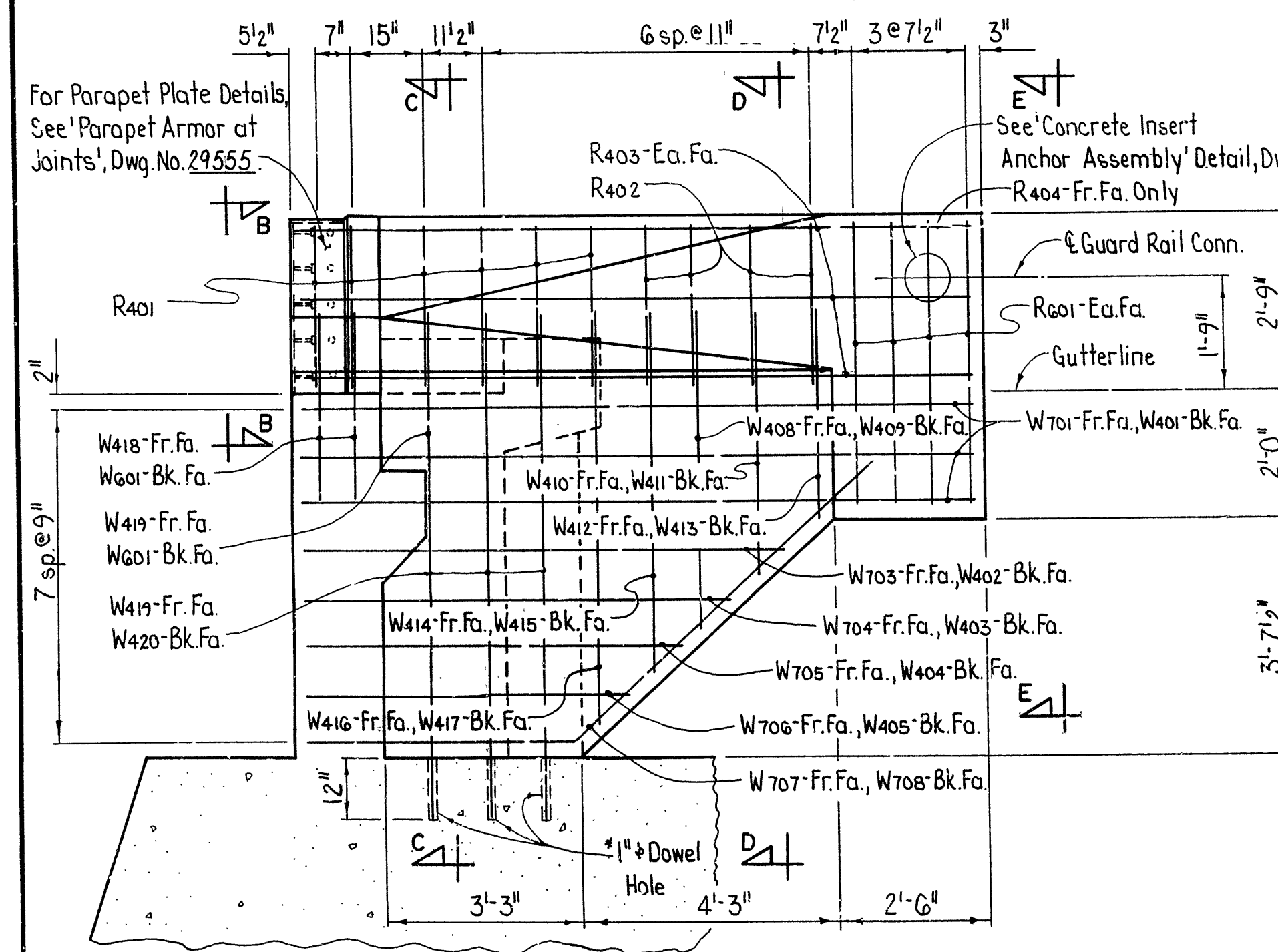
PLAN OF NEW WING
Scale: 1/2" = 1'-0"



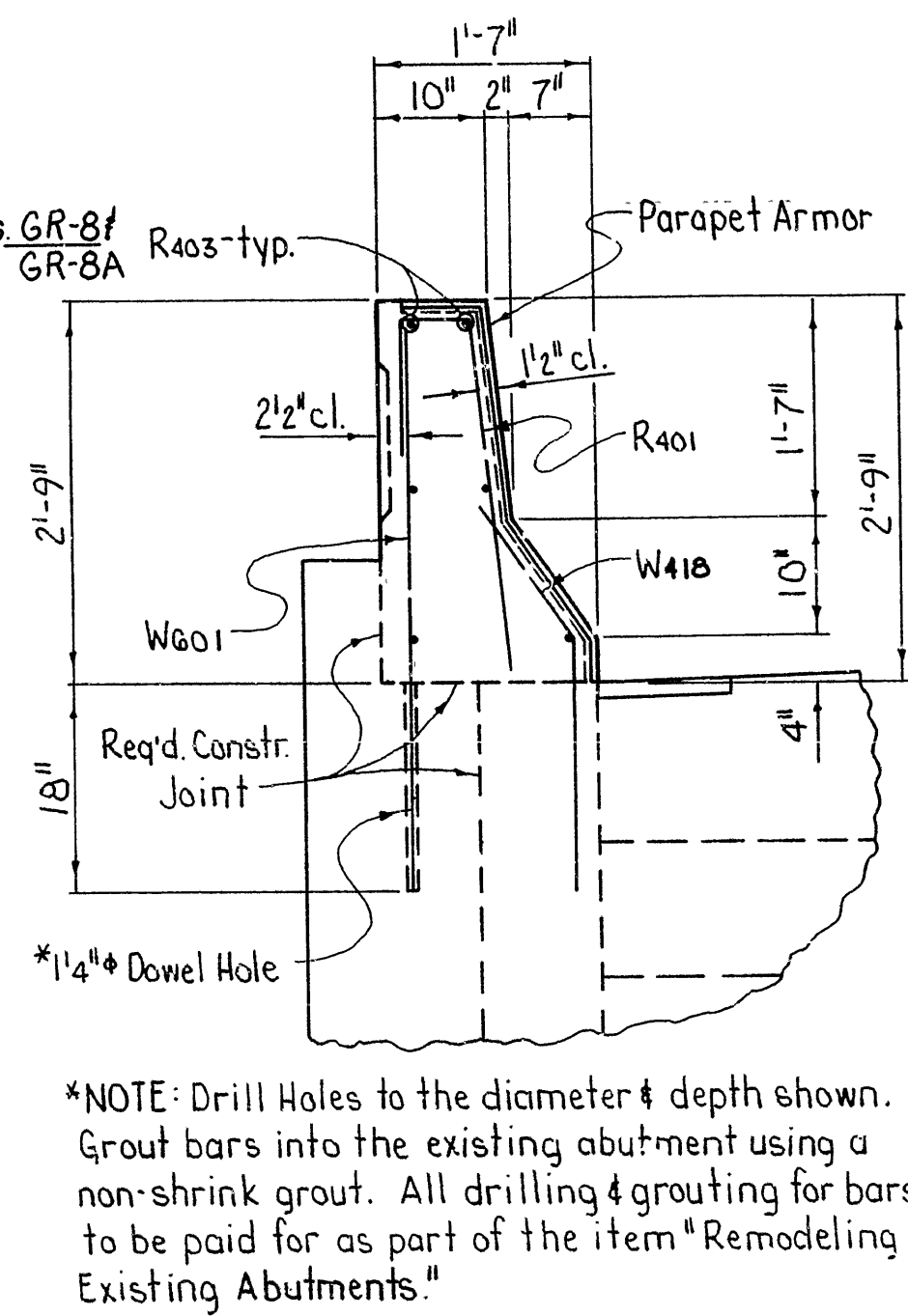
VIEW E-E
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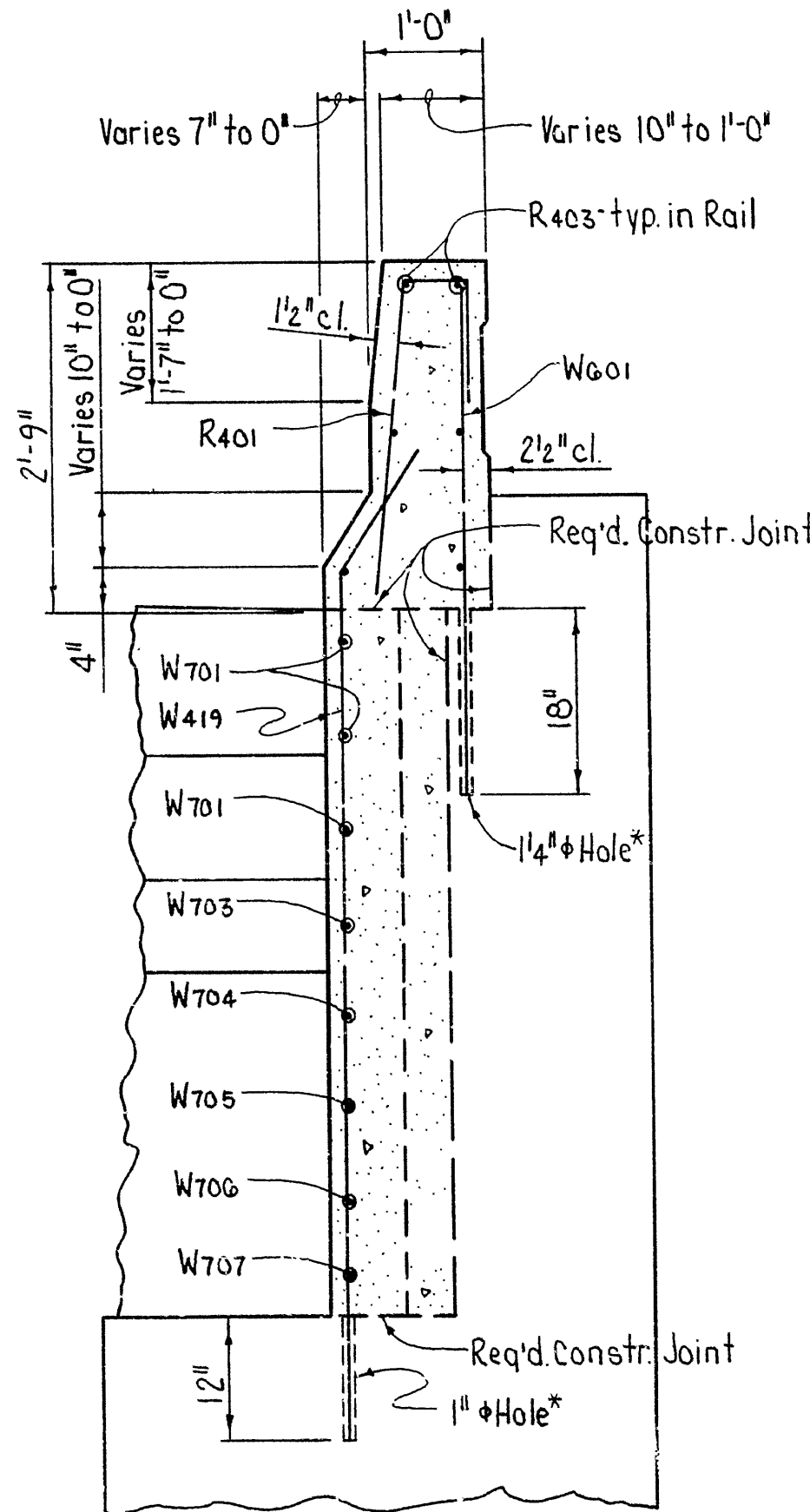
SECTION F-F
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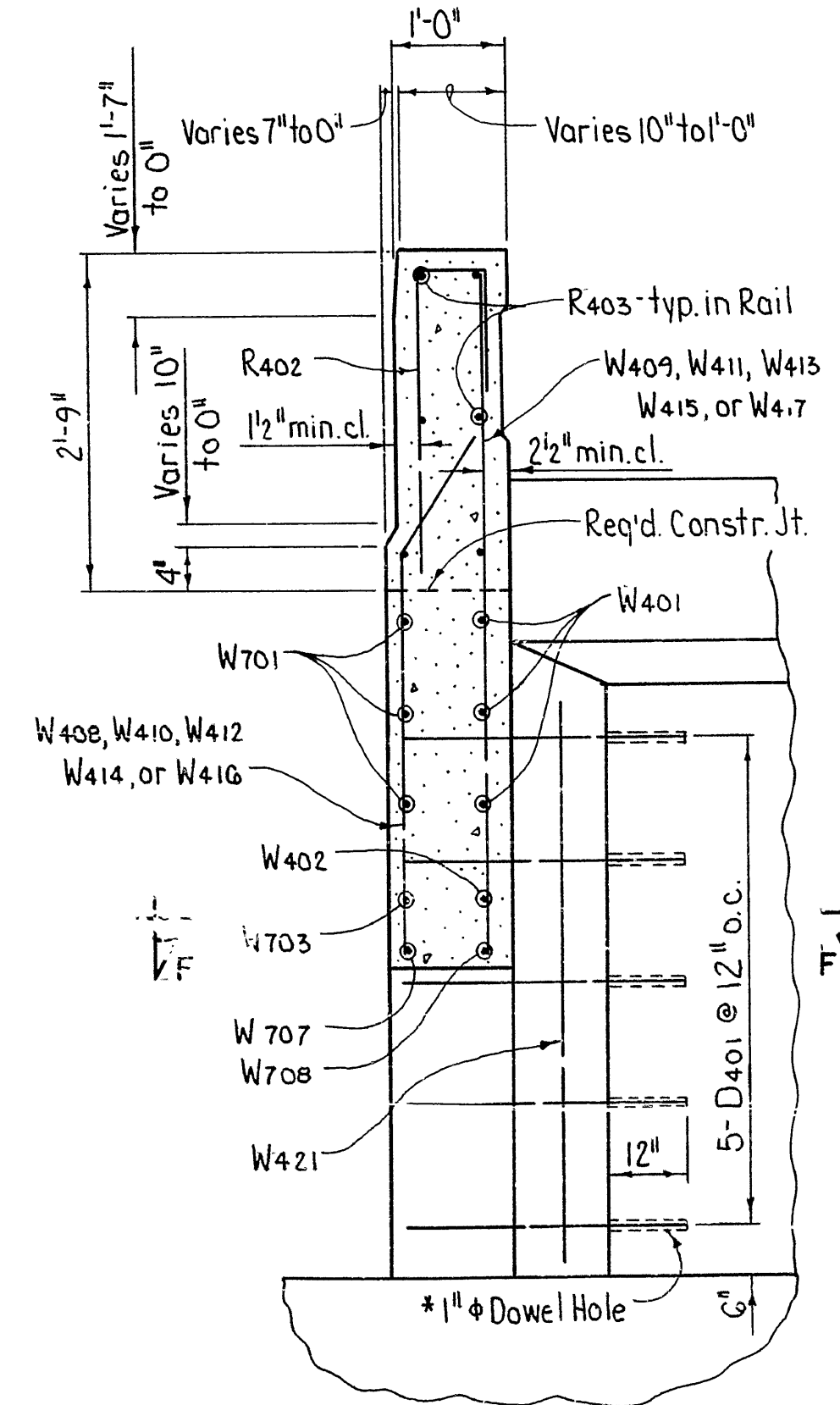
ELEVATION OF NEW WING
Scale: 1/2" = 1'-0"



VIEW B-B
Scale: 3/4" = 1'-0"



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

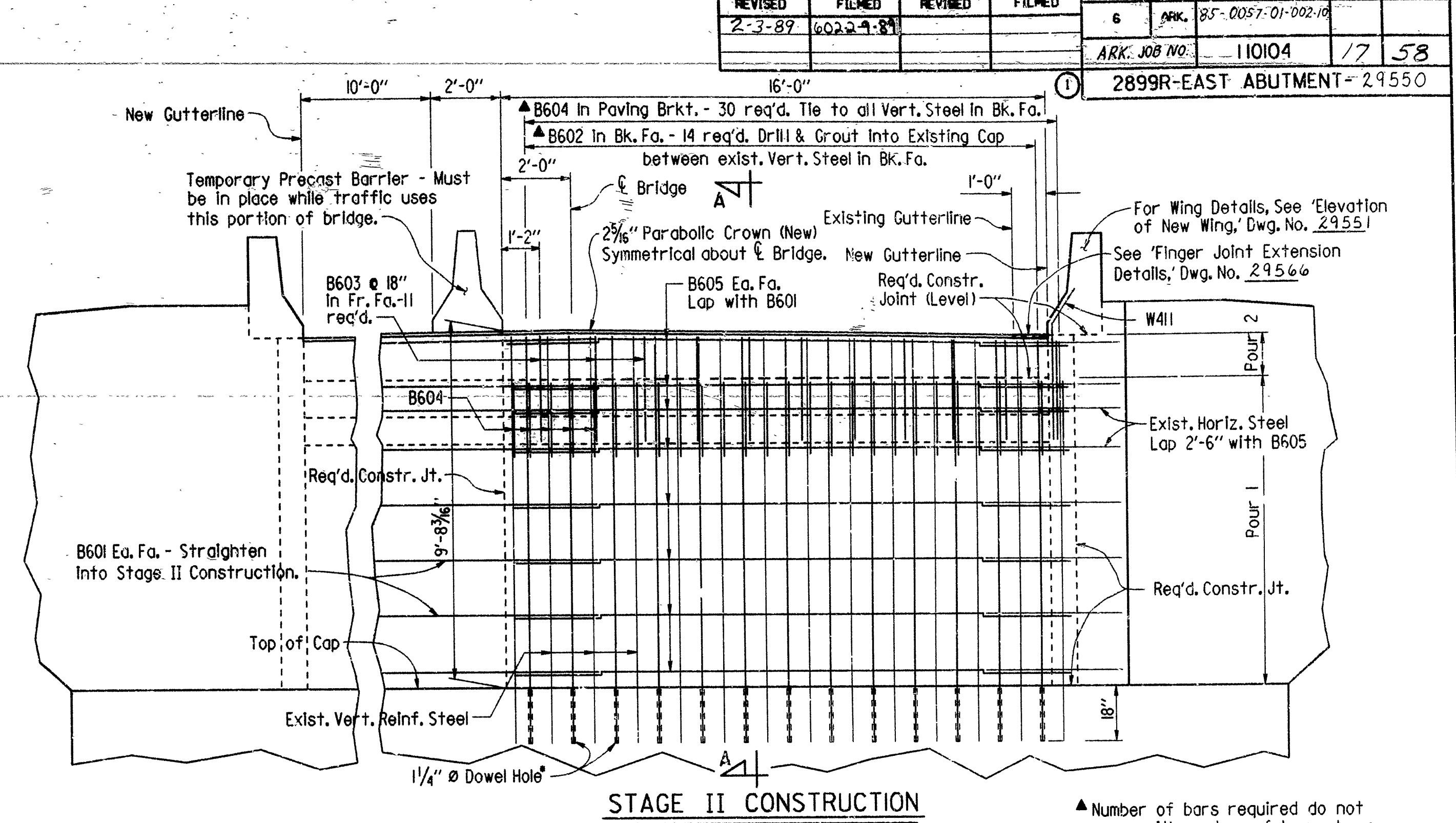
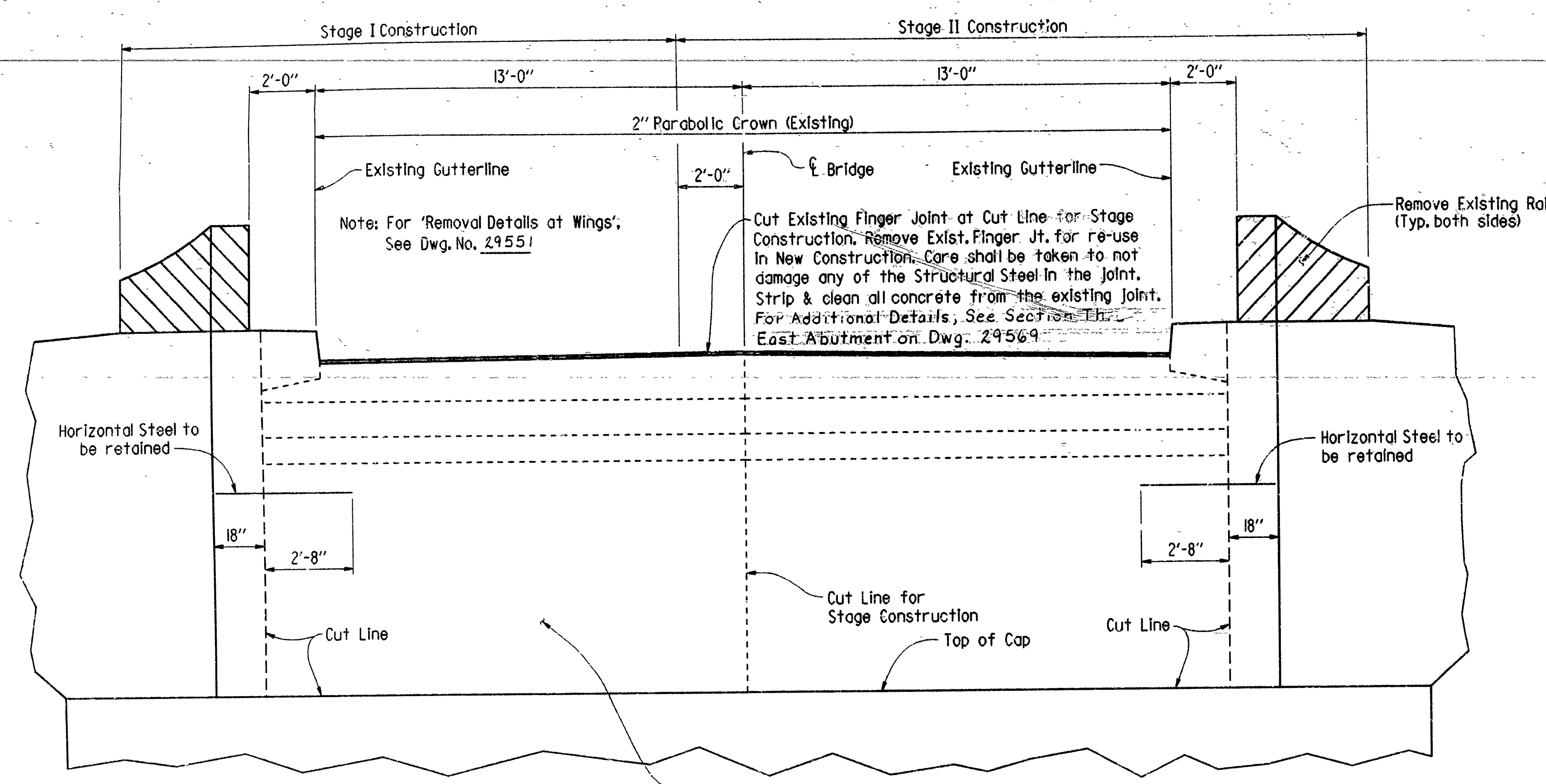


SECTION D-D
Scale: 3/4" = 1'-0"

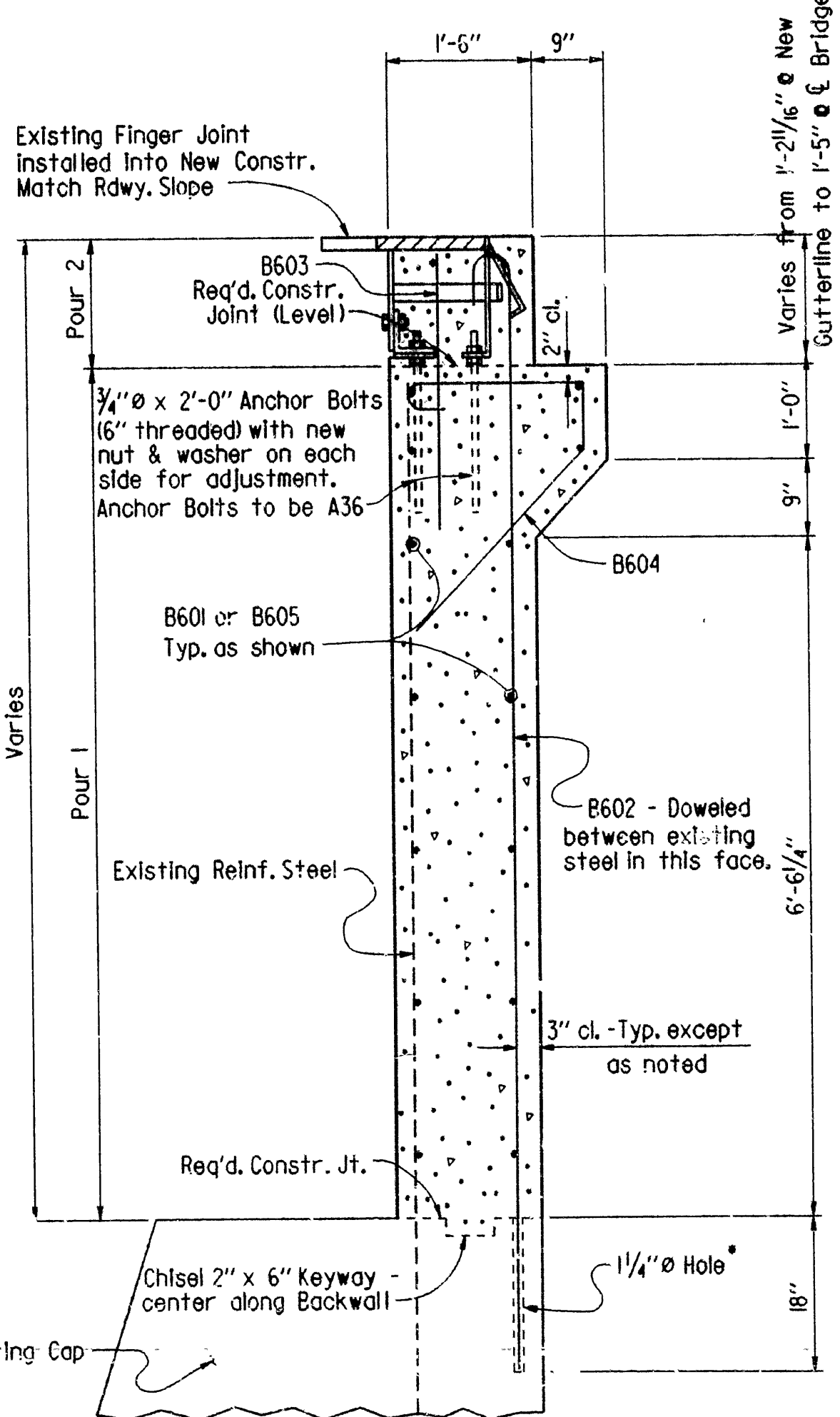
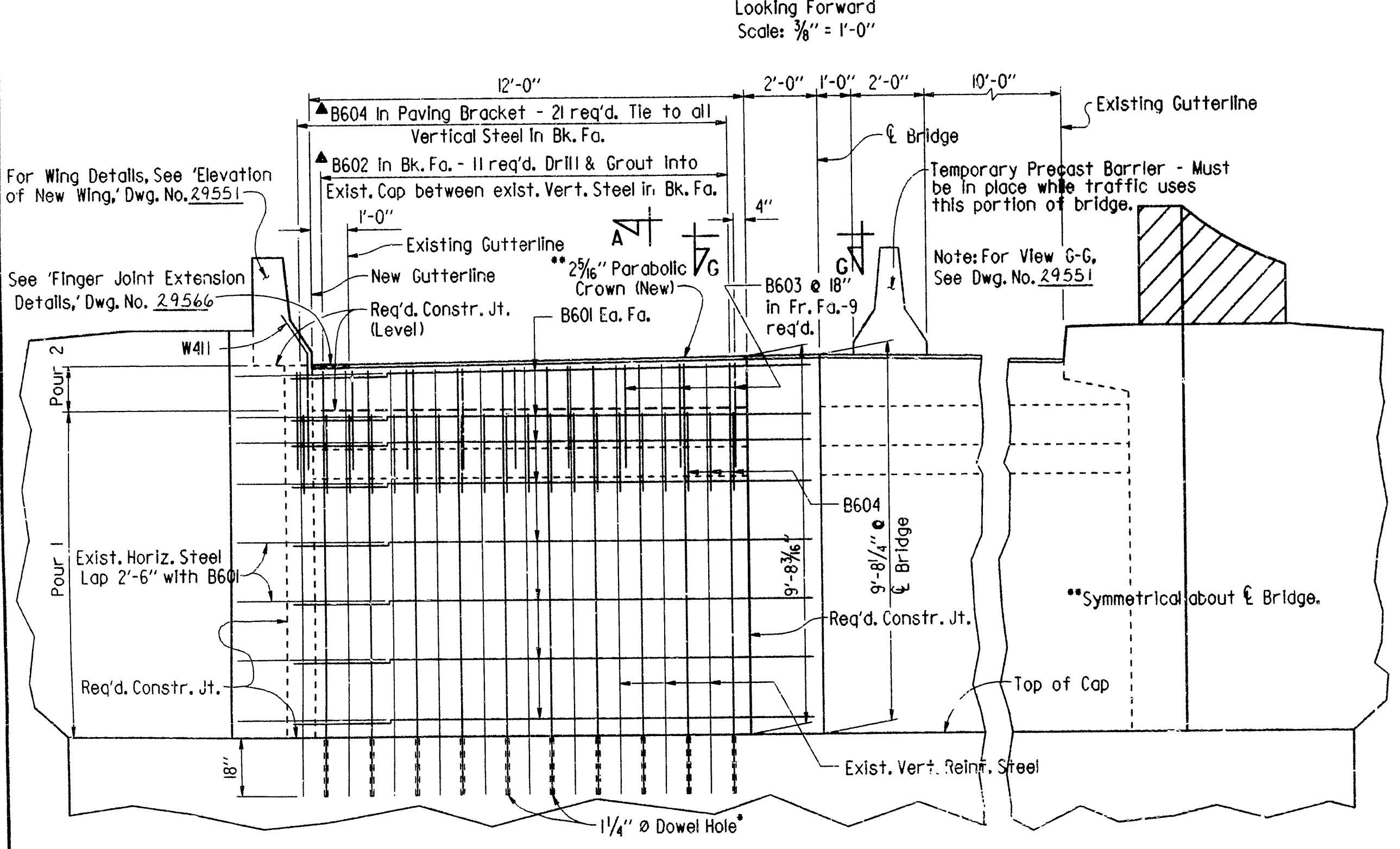
*NOTE: Drill Holes to the diameter & depth shown. Grout bars into the existing abutment using a non-shrink grout. All drilling & grouting for bars to be paid for as part of the item "Remodeling Existing Abutments."

SHEET 2 OF 2
DETAILS OF WEST ABUTMENT
HELENA BRIDGE
ROUTE 49 SEC. 11
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.
DRAWN BY: KDH DATE: OCT 87
CHECKED BY: C J F DATE: 12-17-87
DESIGNED BY: MEC DATE: 9-17-87
BRIDGE NO. 2899R DRAWING NO. 29549
SCALE: AS NOTED

DATE REVISED	DATE FILMED	GATE REVISED	DATE FILMED	FEEL ROAD DIST. NO.	STATE	MISS. JOB NO.	SHEET NO.	TOTAL SHEETS
2-3-87	6-22-91			6	ARK.	85-0057-01-002-10		
ARK. JOB NO. 110104							17	58
2899R-EAST ABUTMENT-29550								

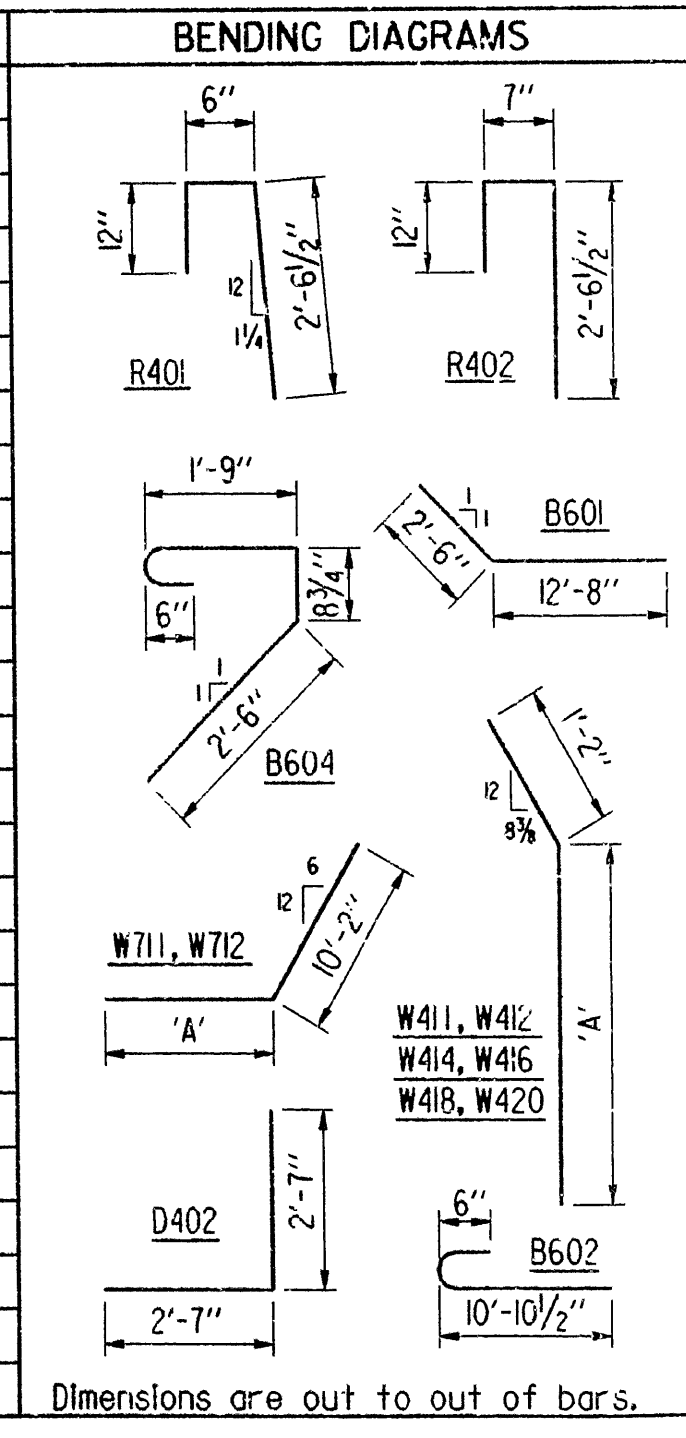


BACKWALL REMOVAL DETAILS



BAR LIST

MARK	NO. REQD.	LENGTH	'A'	P.D.	MARK	NO. REQD.	LENGTH	'A'	P.D.
R401	12	3'-11"		2"	W422	4	8'-8"		Str.
R402	8	4'-0"		2"	D401	10	3'-10"		Str.
R403	12	11'-2"		Str.	D402	8	5'-1"		3"
R404	2	2'-3"		Str.	B601	16	15'-2"		4 1/2"
W401	6	7'-3"		Str.	B602	25	11'-7"		4 1/2"
W402	2	4'-6"		Str.	B603	20	2'-9"		Str.
W403	2	4'-1"		Str.	B604	51	5'-6"		4 1/2"
W404	2	3'-9"		Str.	B605	16	16'-4"		Str.
W405	2	3'-4"		Str.	R601	16	4'-5"		Str.
W406	2	3'-0"		Str.	W601	8	4'-1"		Str.
W407	2	2'-7"		Str.					
W408	2	2'-3"		Str.					
W409	2	1'-10"		Str.	W701	6	11'-2"		Str.
W410	2	1'-6"		Str.	W702	2	8'-5"		Str.
W411	4	3'-2"	2'-0"	2"	W703	2	8'-0"		Str.
W412	8	12'-0"	10'-9 1/2"	2"	W704	2	7'-8"		Str.
W413	4	13'-1"		Str.	W705	2	7'-3"		Str.
W414	2	3'-7"	2'-5"	2"	W706	2	6'-11"		Str.
W415	2	4'-8"		Str.	W707	2	6'-6"		Str.
W416	2	5'-5"	4'-3"	2"	W708	2	6'-2"		Str.
W417	2	6'-6"		Str.	W709	2	5'-9"		Str.
W418	2	7'-3"	6'-1"	2"	W710	2	5'-5"		Str.
W419	2	8'-4"		Str.	W711	2	15'-0"	5'-0"	5 1/4"
W420	2	9'-1"	7'-11"	2"	W712	2	11'-3"	1'-3"	5 1/4"
W421	2	10'-2"		Str.					



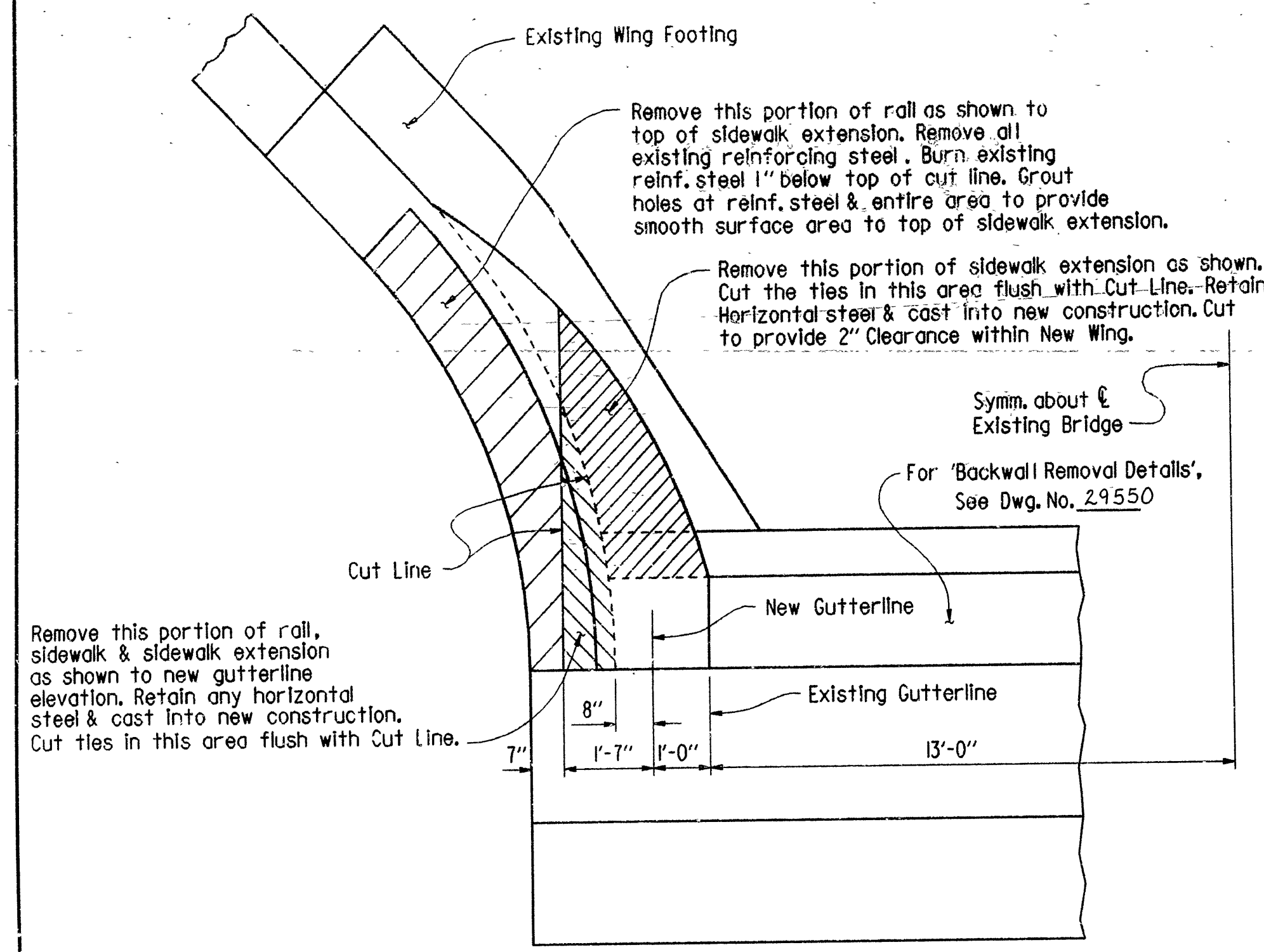
(A) B601 must be grade 40.

For Additional Details and 'GENERAL NOTES', See Dwg. No. 29552

SHEET 1 OF 2
DETAILS OF EAST ABUTMENT
HELENA BRIDGE
ROUTE 49 SEC. 11
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.
DRAWN BY: KDH DATE: 14 OCT 87
CHECKED BY: CJF DATE: 5 NOV 87 SCALE: AS NOTED
DESIGNED BY: MEC DATE: 9-17-87
BRIDGE NO. 2899R DRAWING NO. 29550

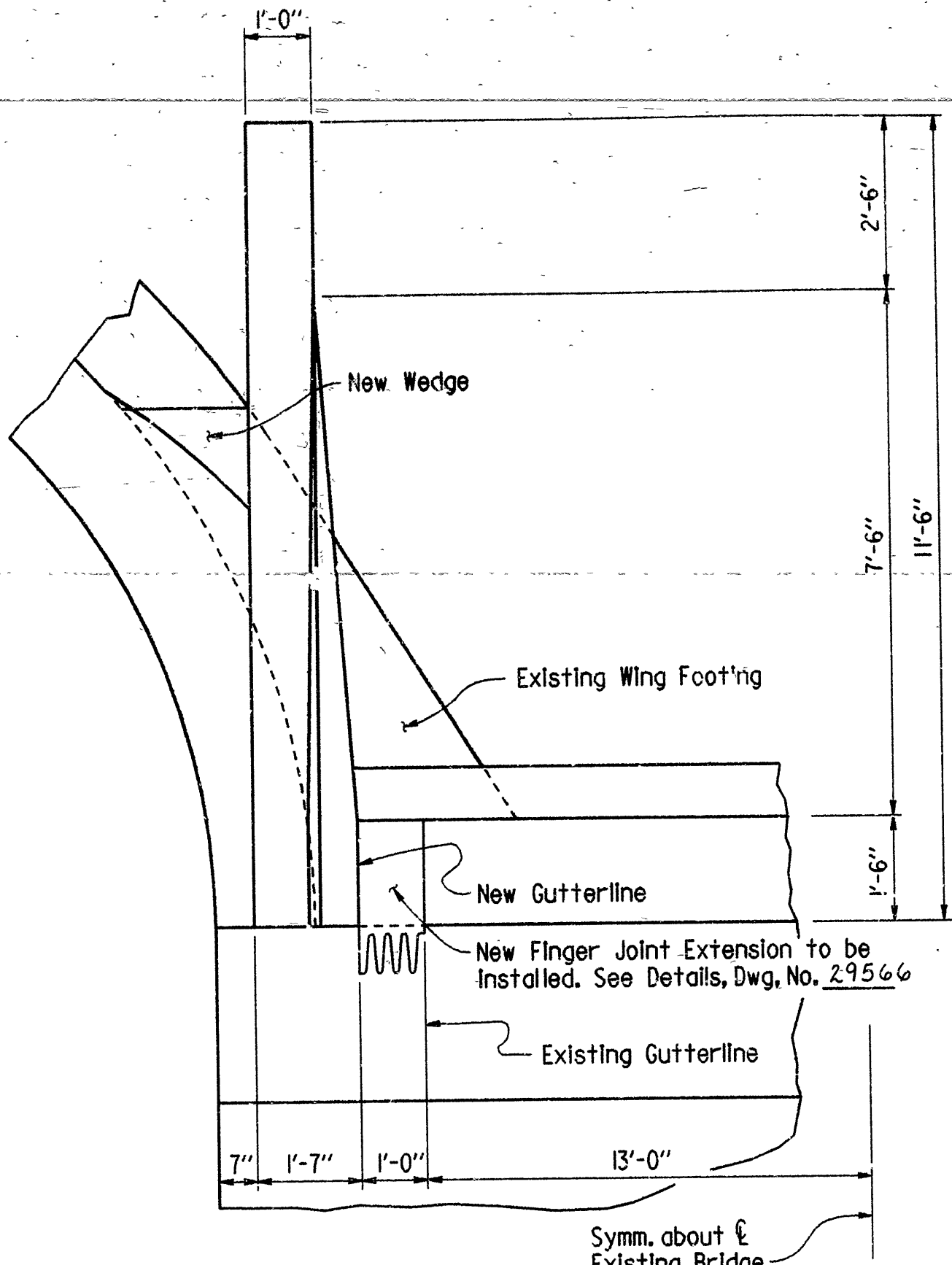
Paul Pinkerton
BRIDGE ENGINEER

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	MISS. JOB NO.	SHEET NO.	TOTAL SHEETS
2-3-89	6-3-89			6	ARK.	85-0057-01-002-10		
				ARK JOB NO.		110104	18	58
2899R-EAST ABUTMENT-29551								



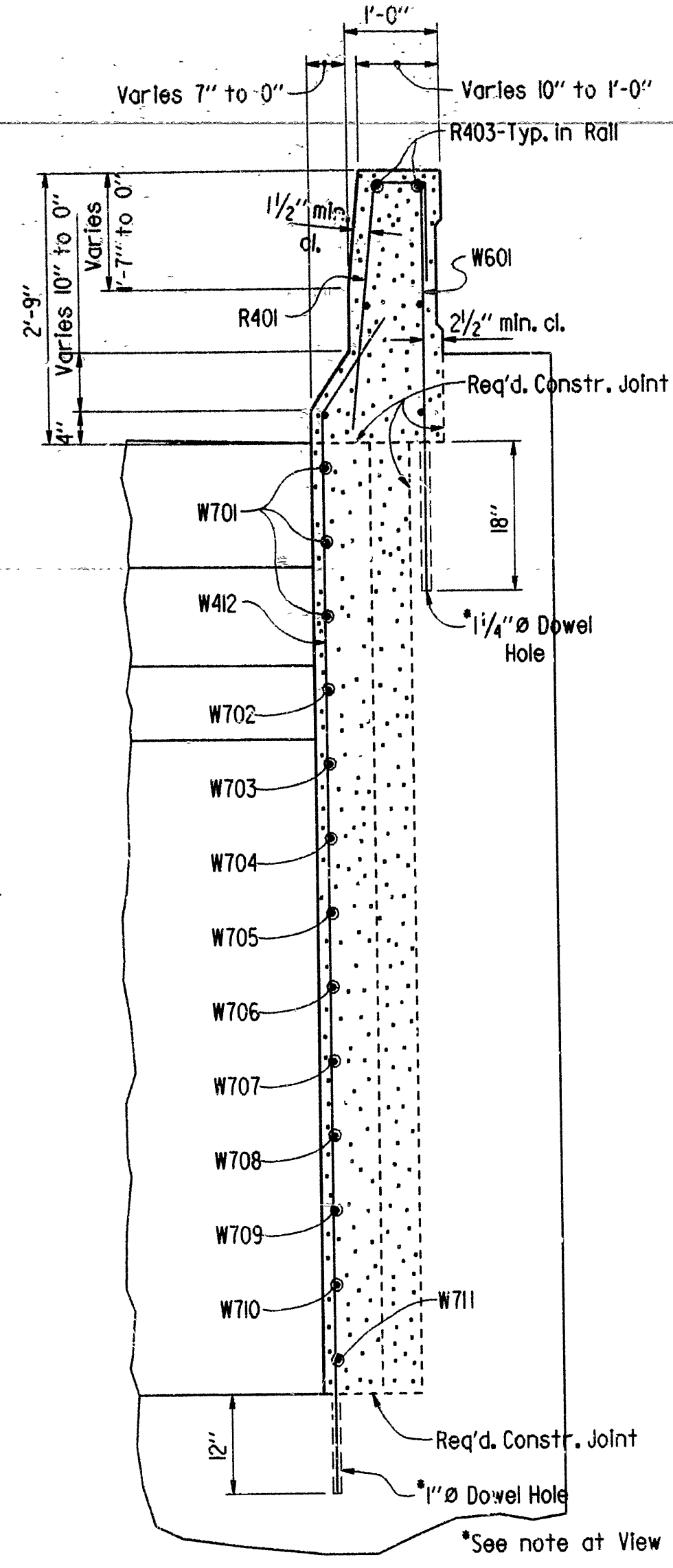
REMOVAL DETAILS AT WING

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



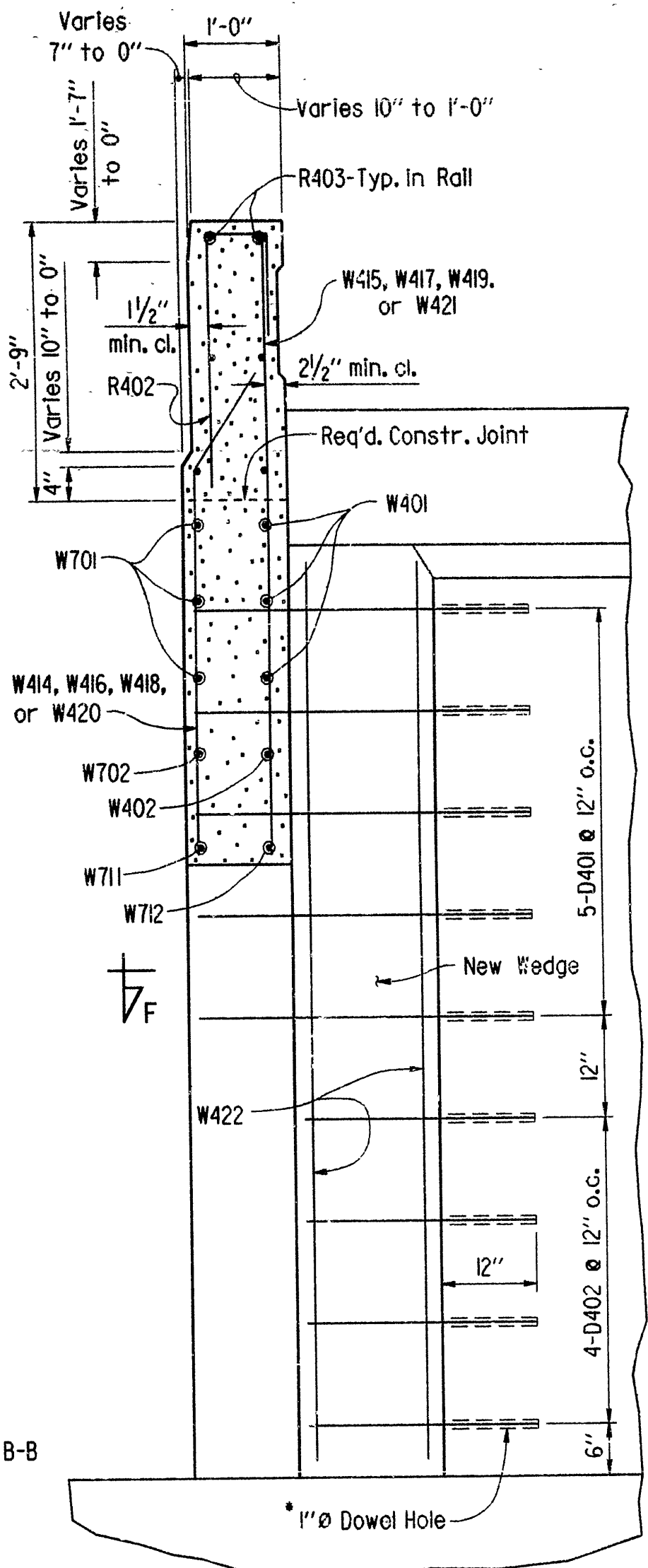
PLAN OF NEW WING

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



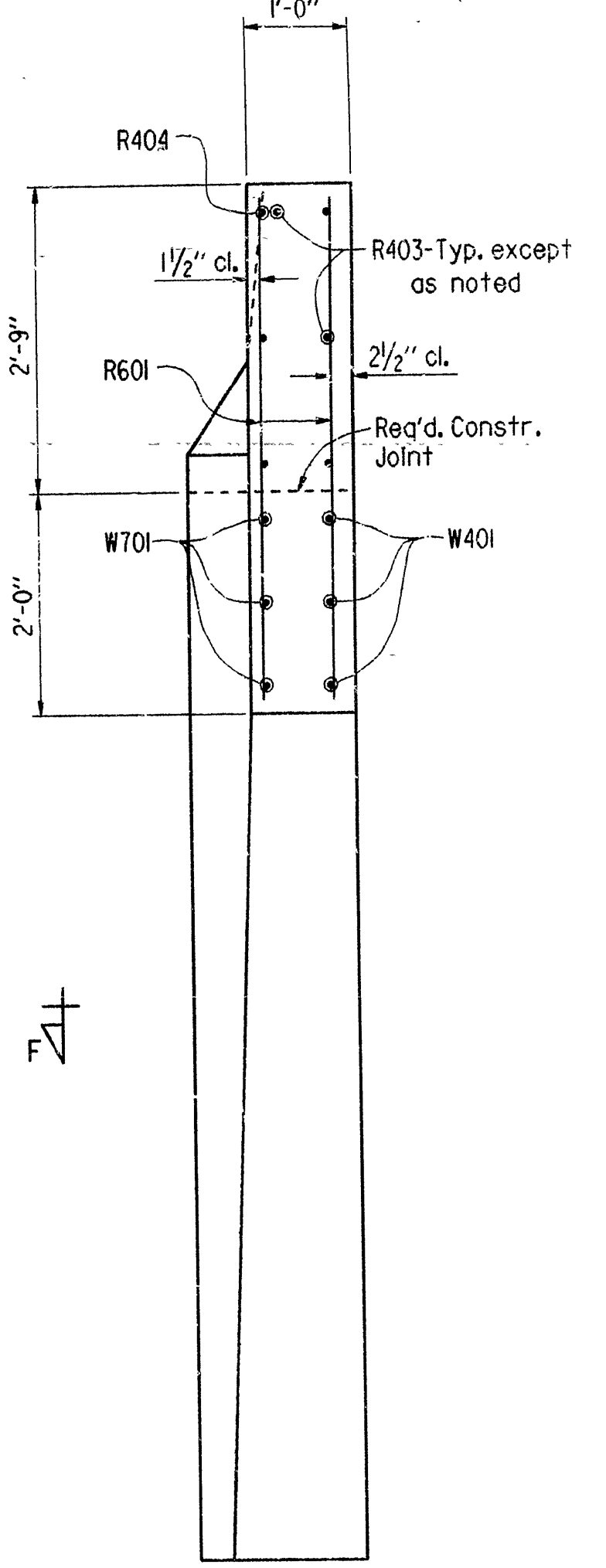
SECTION C-C

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



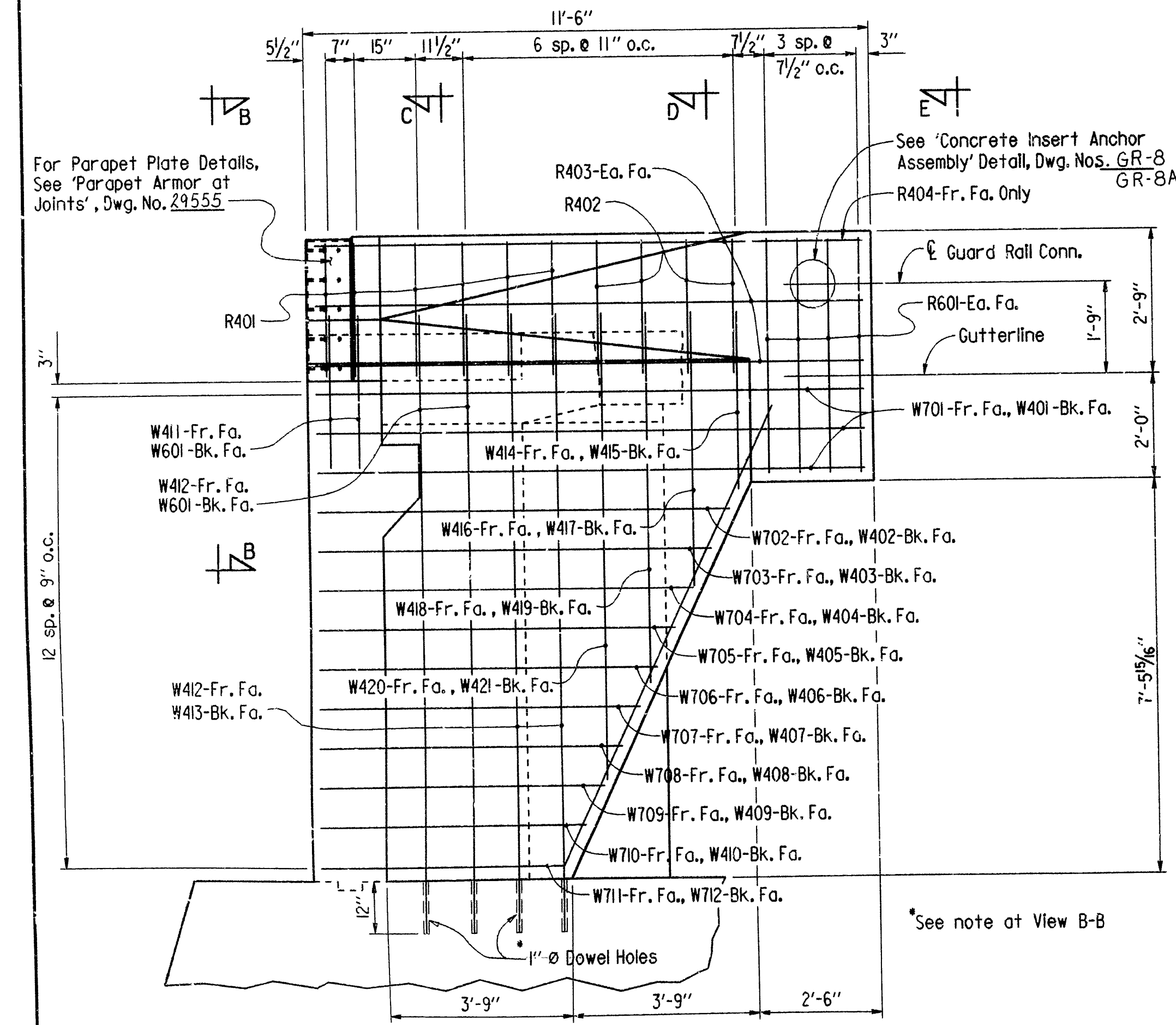
SECTION D-D

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



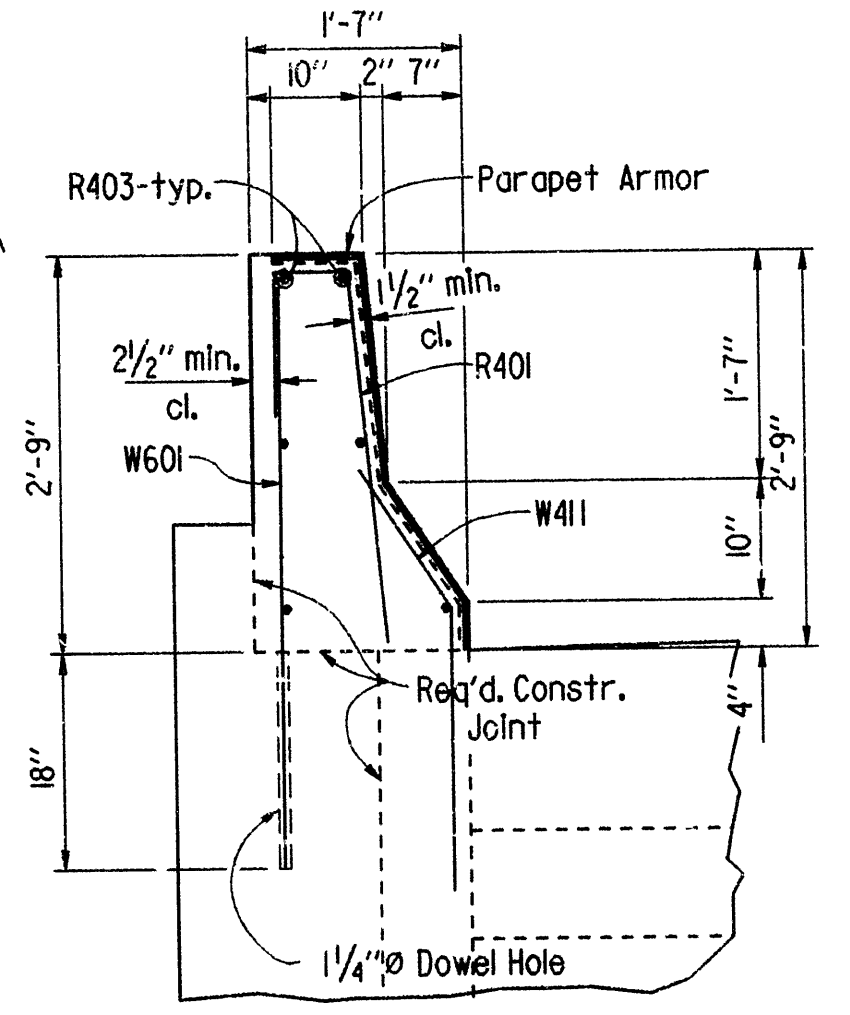
VIEW E-E

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



ELEVATION OF NEW WING

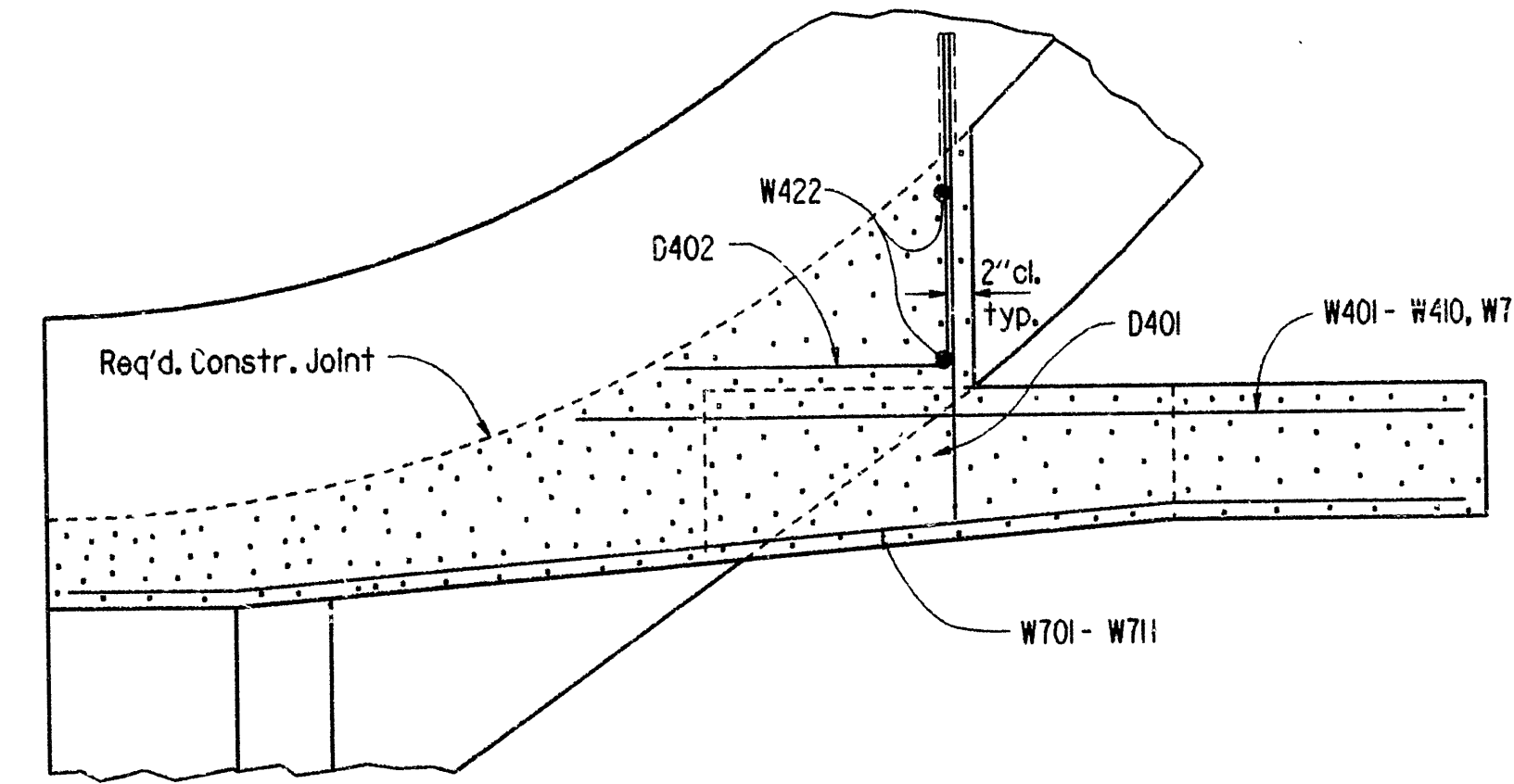
Scale: 1/2" = 1'-0"



VIEW B-B

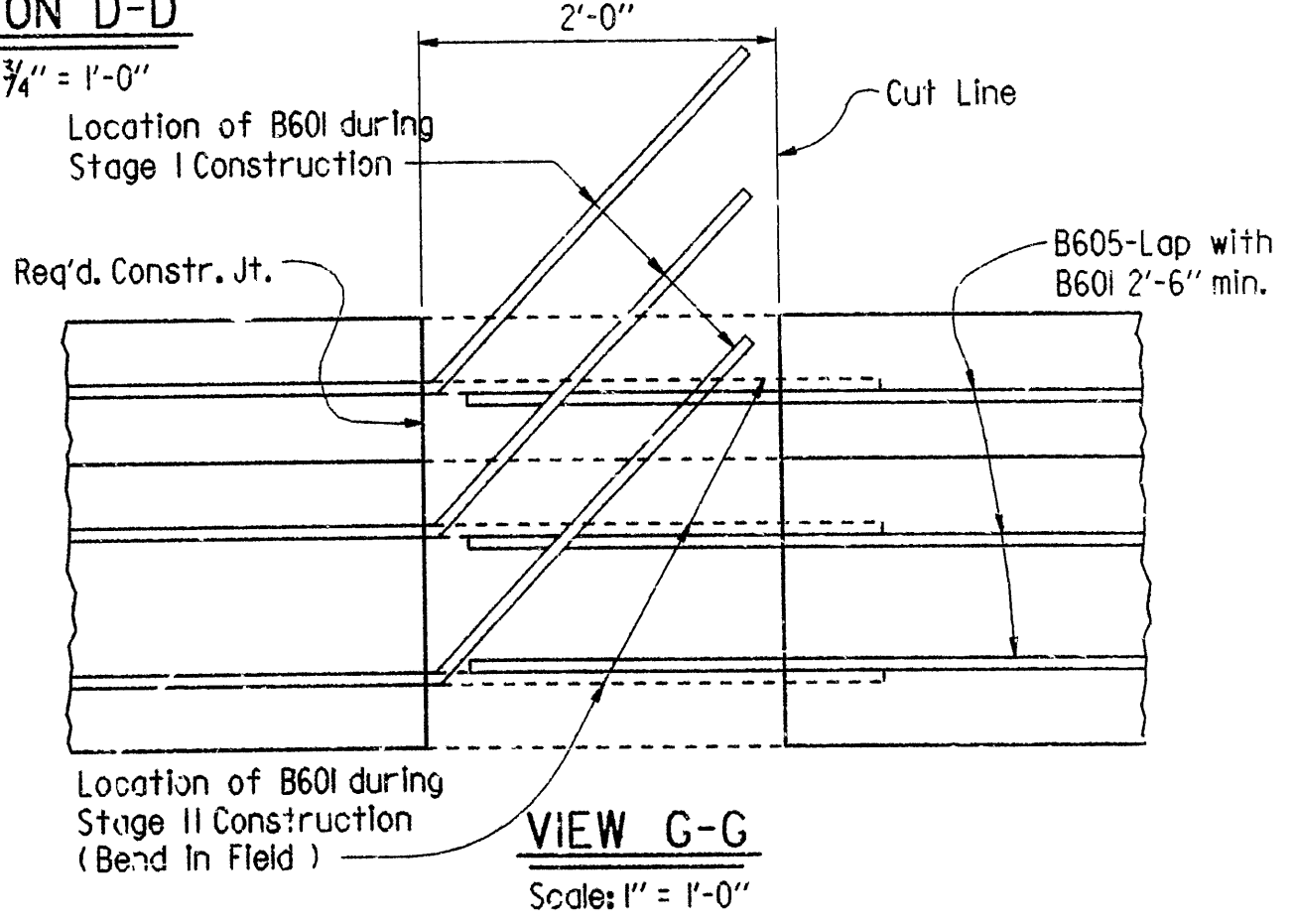
Scale: 3/4" = 1'-0"

NOTE: Drill holes to the diameter & depth shown. Grout bars into the existing abutment using a non-shrink grout. All drilling & grouting for bars to be paid for as part of the item 'Remodeling Existing Abutments.'



SECTION F-F

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



VIEW G-G

Scale: 1" = 1'-0"

SHEET 2 OF 2
DETAILS OF EAST ABUTMENT
HELENA BRIDGE
ROUTE 49 SEC. 11
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.
DRAWN BY: KDH DATE: OCT. 87
CHECKED BY: C.J.F. DATE: 11-6-87 SCALE: AS NOTED
DESIGNED BY: M.E.C. DATE: 9-17-87
BRIDGE NO. 2899R DRAWING NO. 29551

Place Type C Bridge Name Plate on Right Wing of West Abutment only.
Place approx. 1'-0" from front face of Backwall.

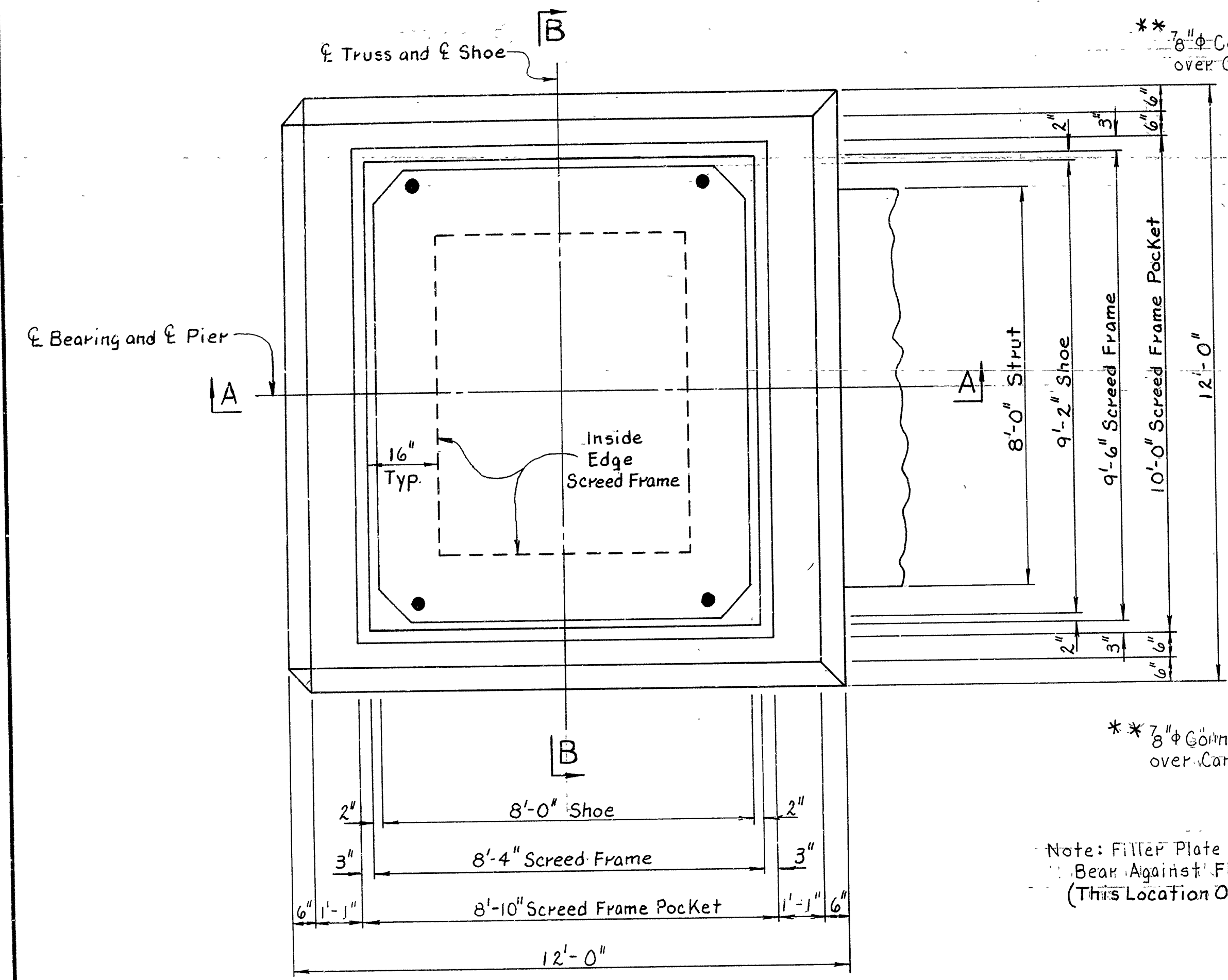
For Details of Guard Rail Connections and Concrete

Gutterline

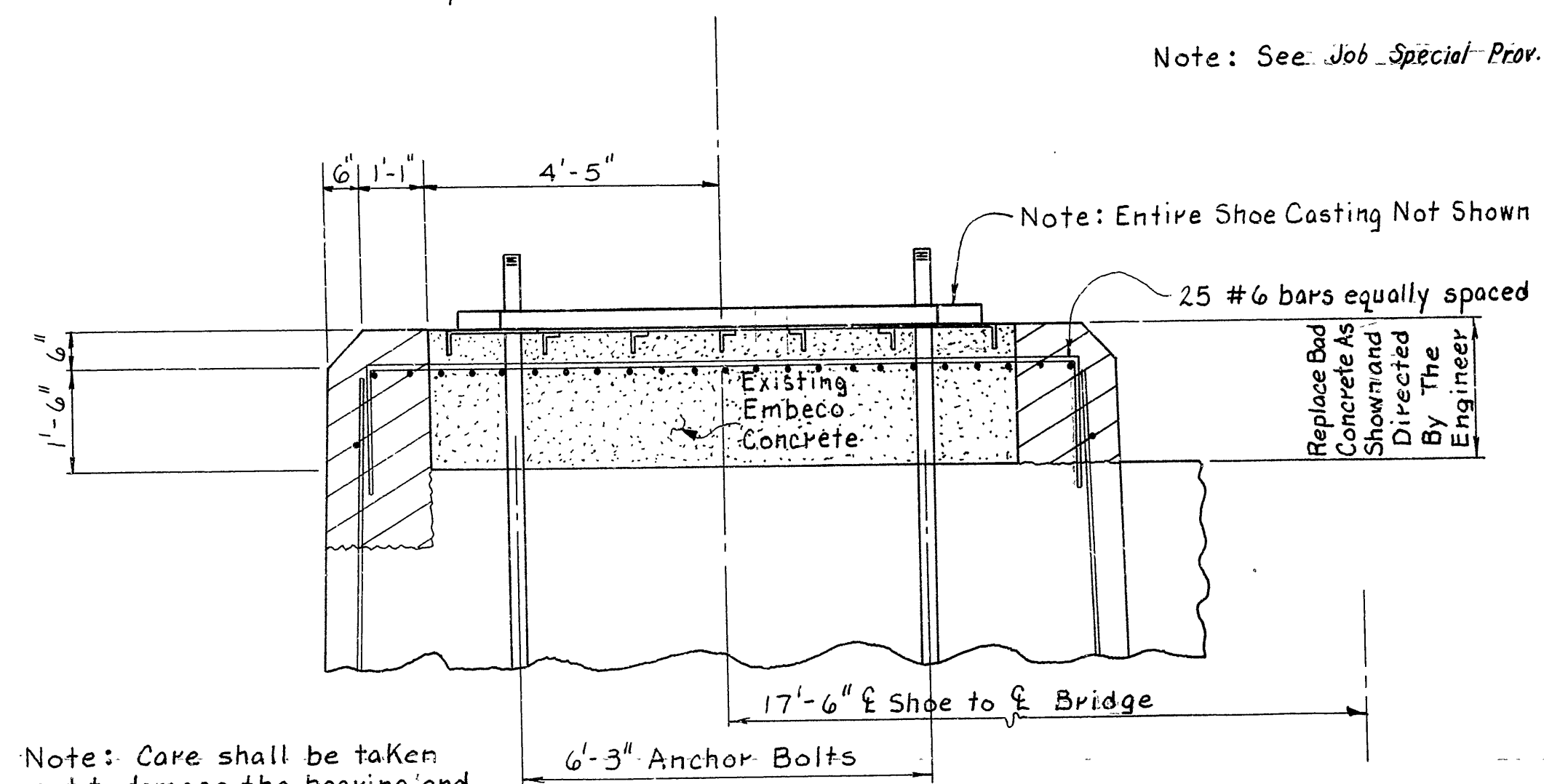
1'-9"

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	MISS. JOB NO.	SHEET NO.	TOTAL SHEETS
2-3-89	6-05-2-9-89			6	ARK.	85-0057-01-002-10		
				ARK. JOB NO.		H0104	20	58
				2899R MISC. DETAILS 29553				

** All new bolts to be 7/8" High Strength Bolts (ASTMA325)
Only the bolts that are countersunk are shown



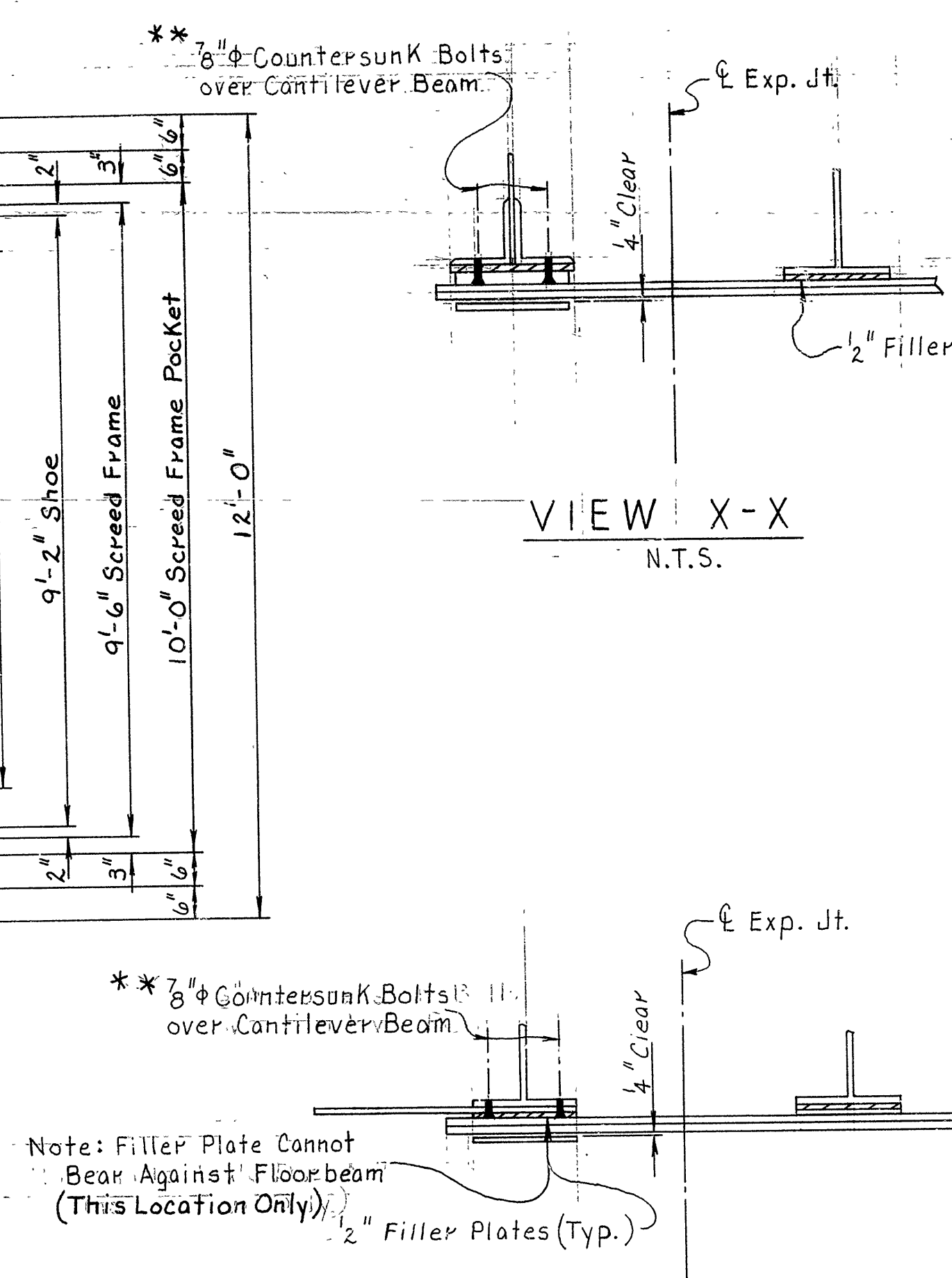
PLAN OF PEDESTAL REPAIR PIER 12
Symmetrical About Bridge



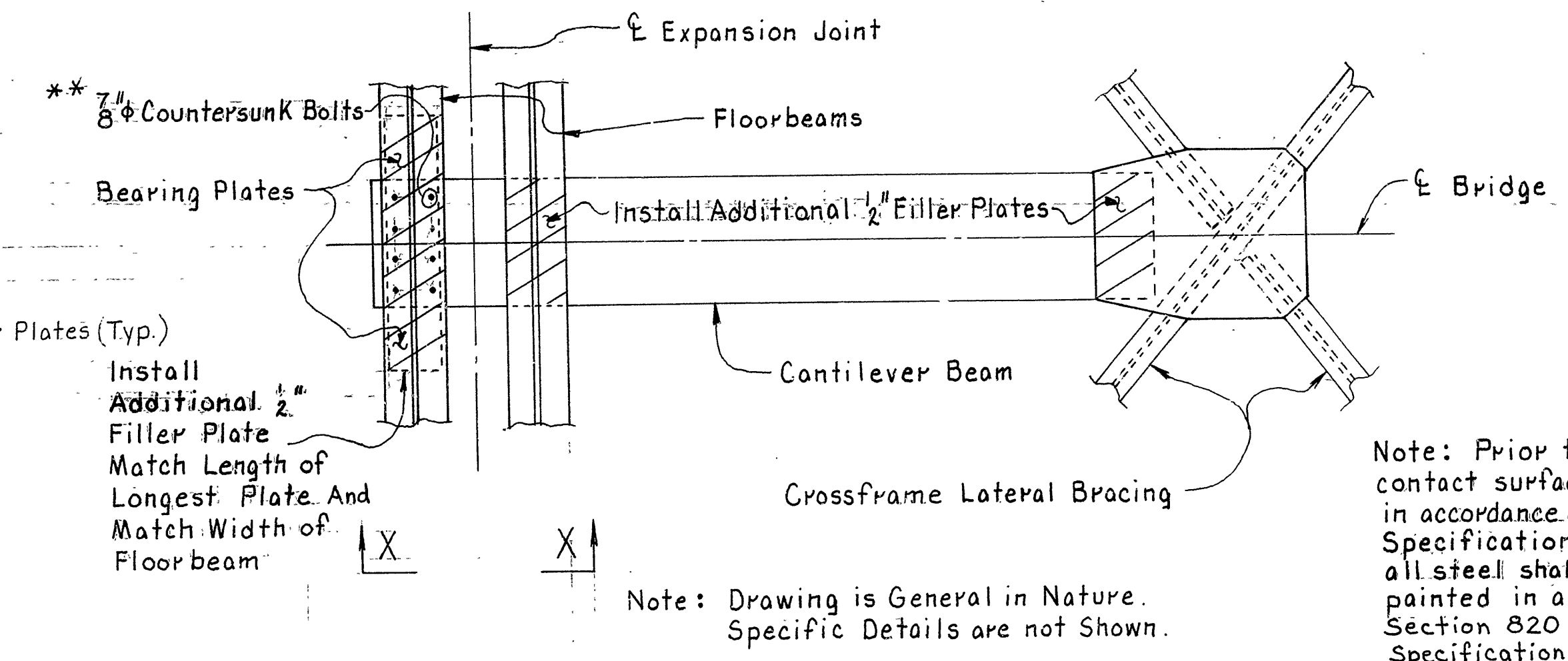
SECTION A-A

Note: Care shall be taken not to damage the bearing and the existing reinforcing steel.

Note: New Concrete shall be Class S ($f'_c = 3500$ p.s.i.)

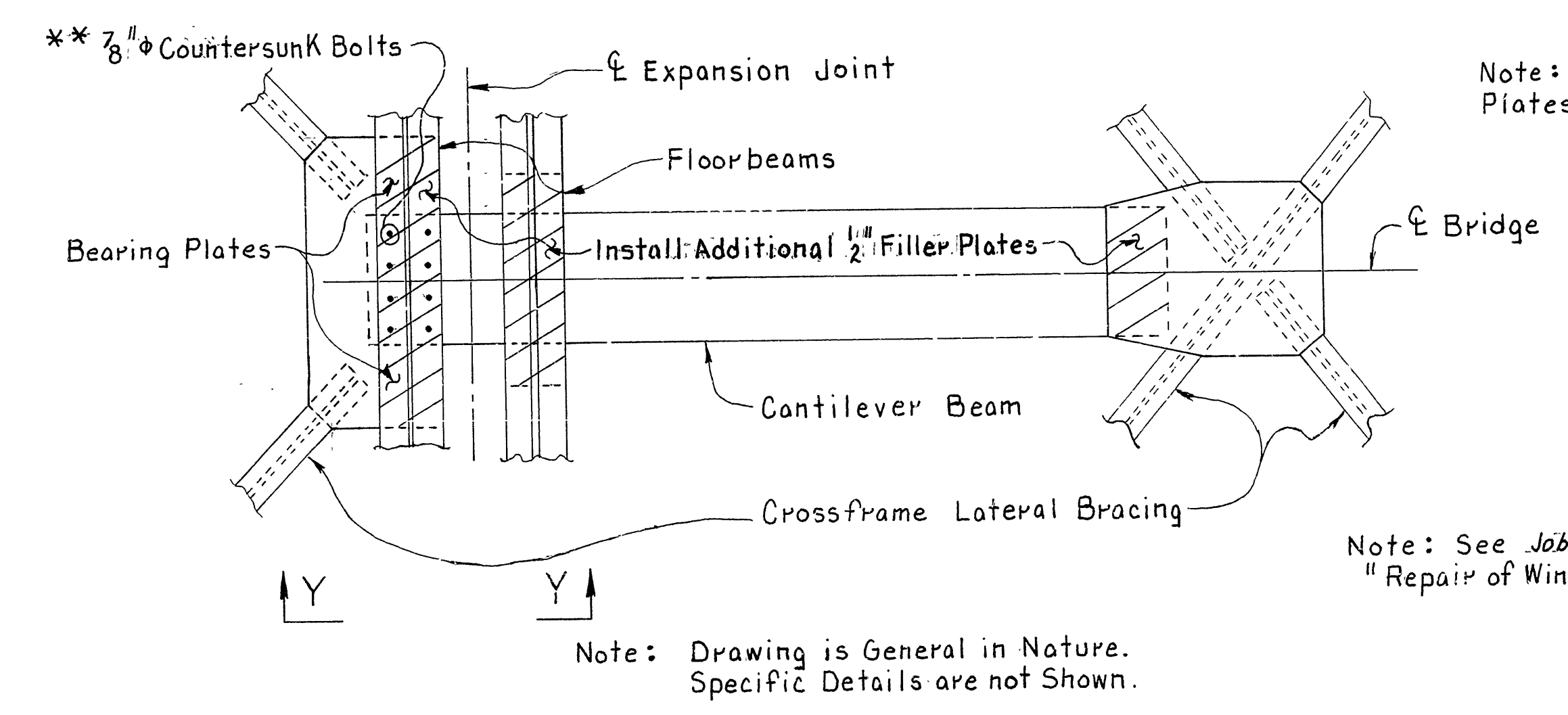


VIEW Y-Y
N.T.S.



WIND SHEAR DEVICE NEAR PIER 4
N.T.S.

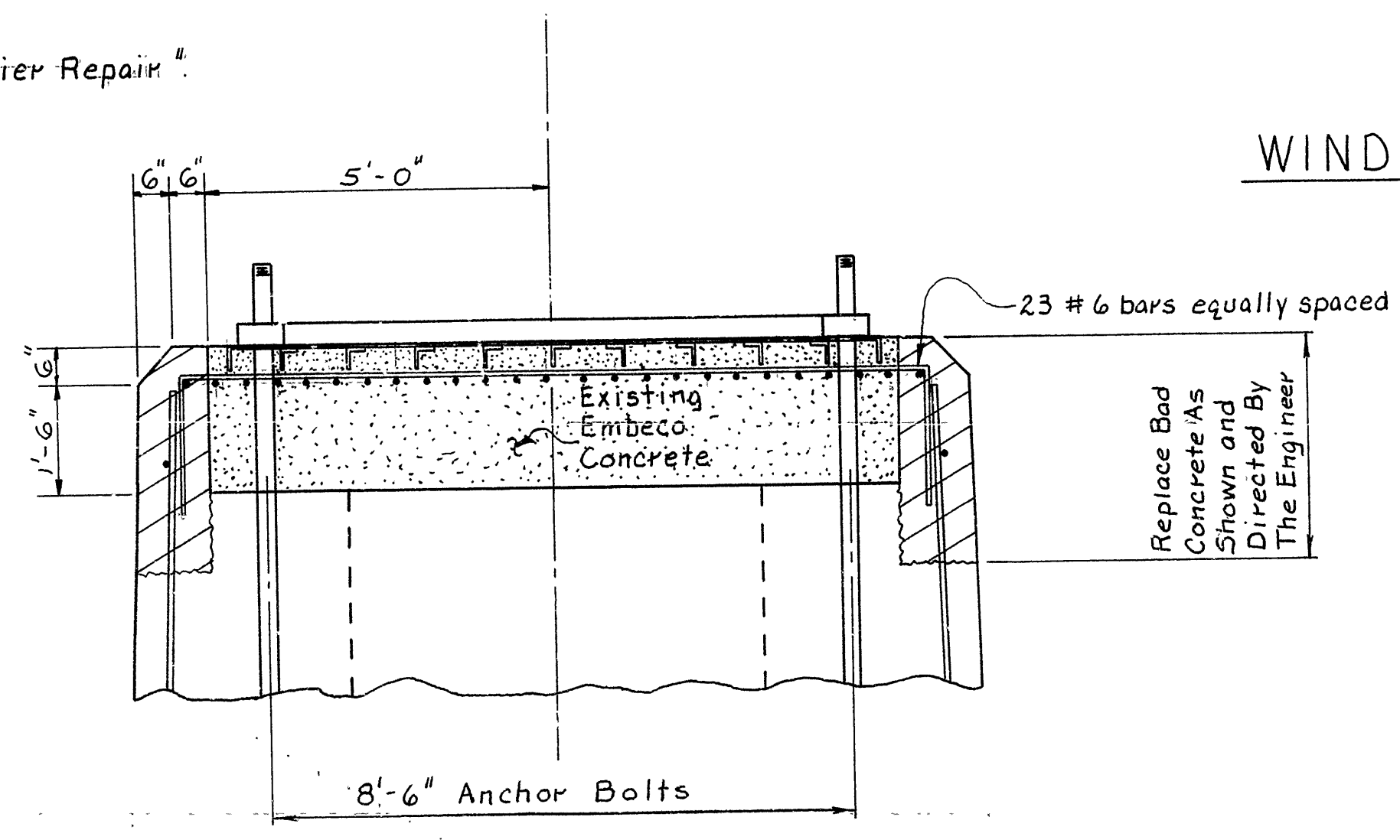
Note: Prior to reassembly, all contact surfaces shall be cleaned in accordance with the Standard Specifications. After assembly, all steel shall be cleaned and painted in accordance with Section 820 of the Standard Specifications.



WIND SHEAR DEVICE NEAR PIERS 7 AND 18
N.T.S.

Note: Additional 1/2" Filler Plates shall be A36.

Note: See Job Special Provision "Repair of Wind Shear Device".



SECTION B-B

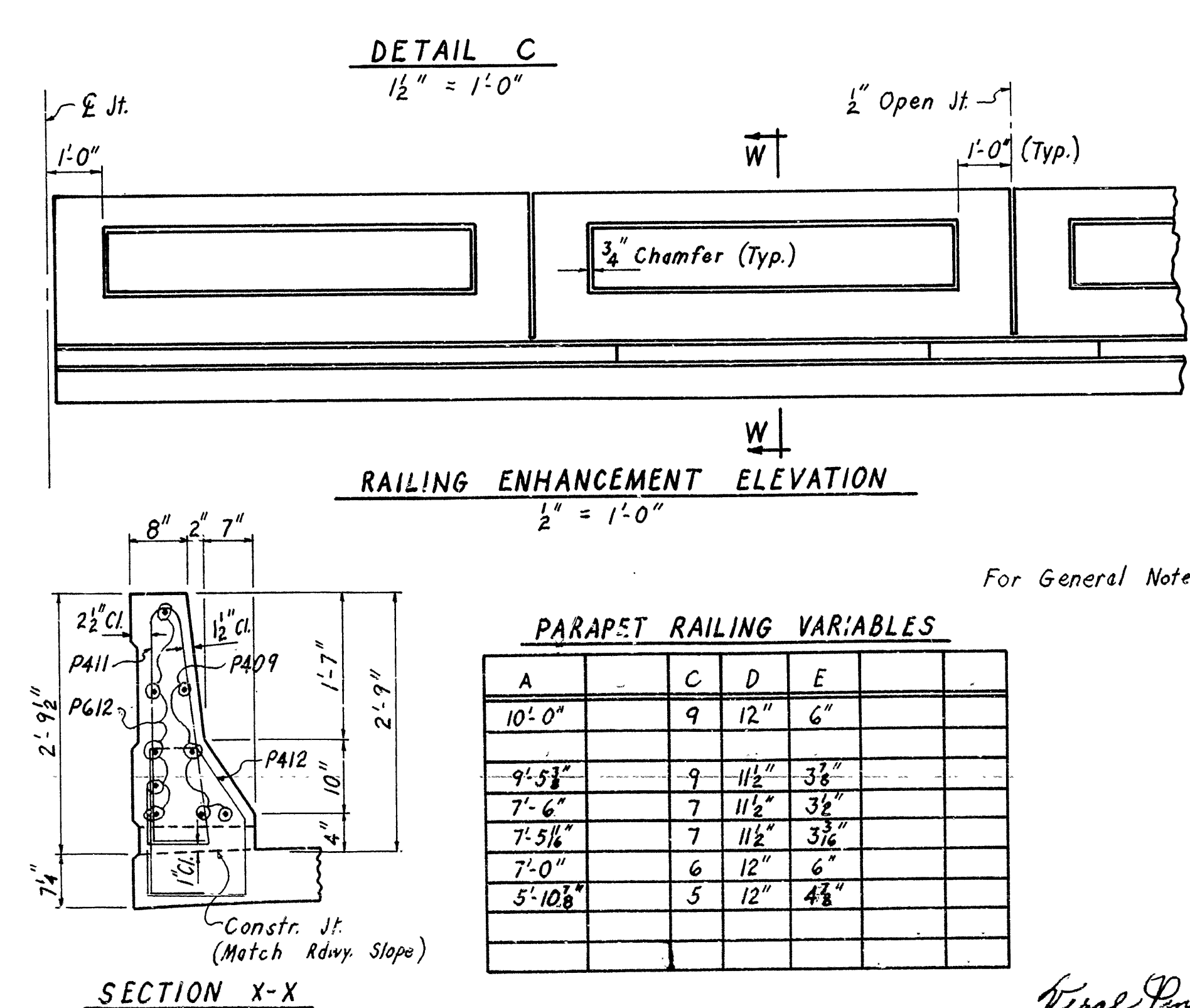
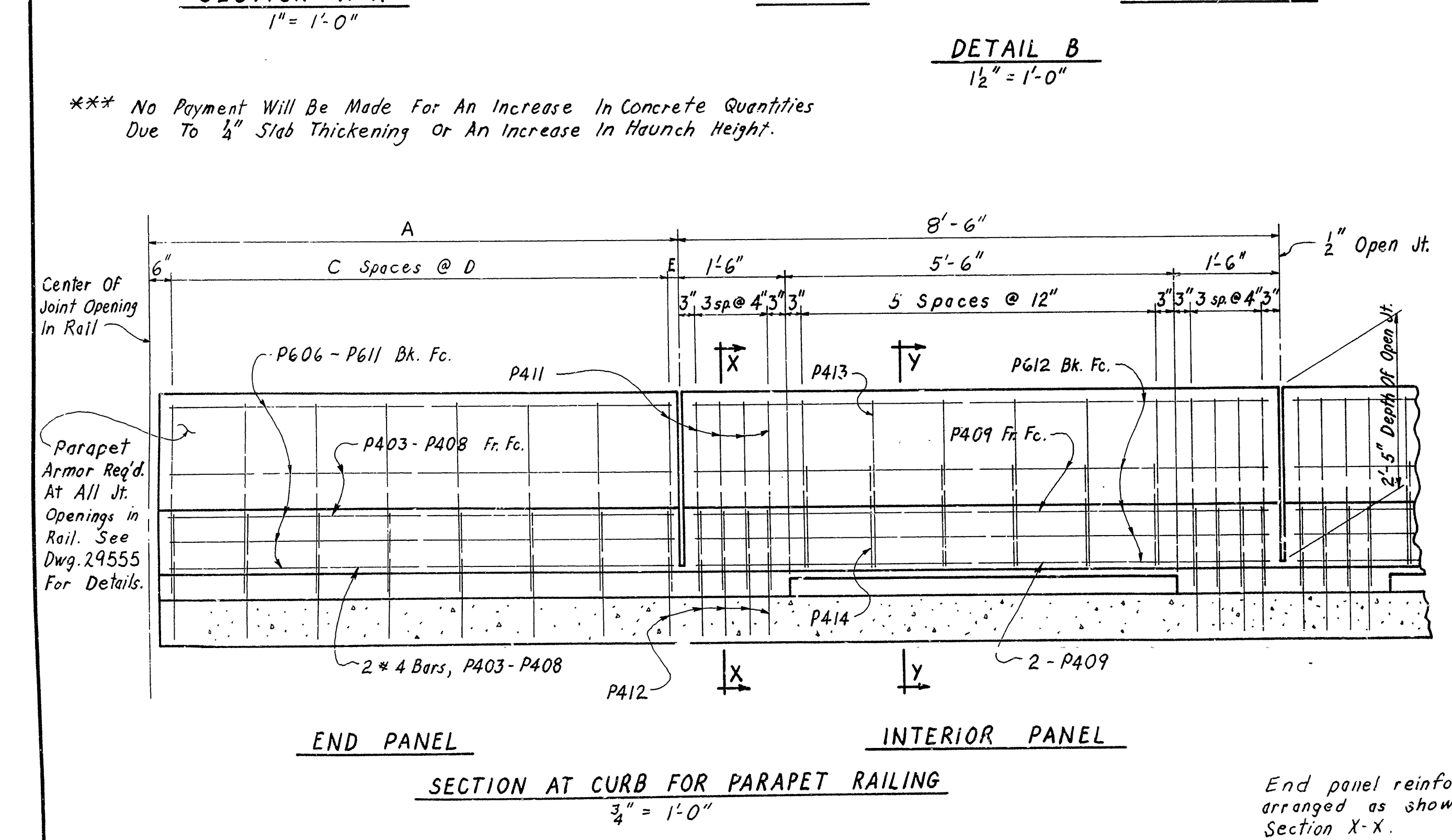
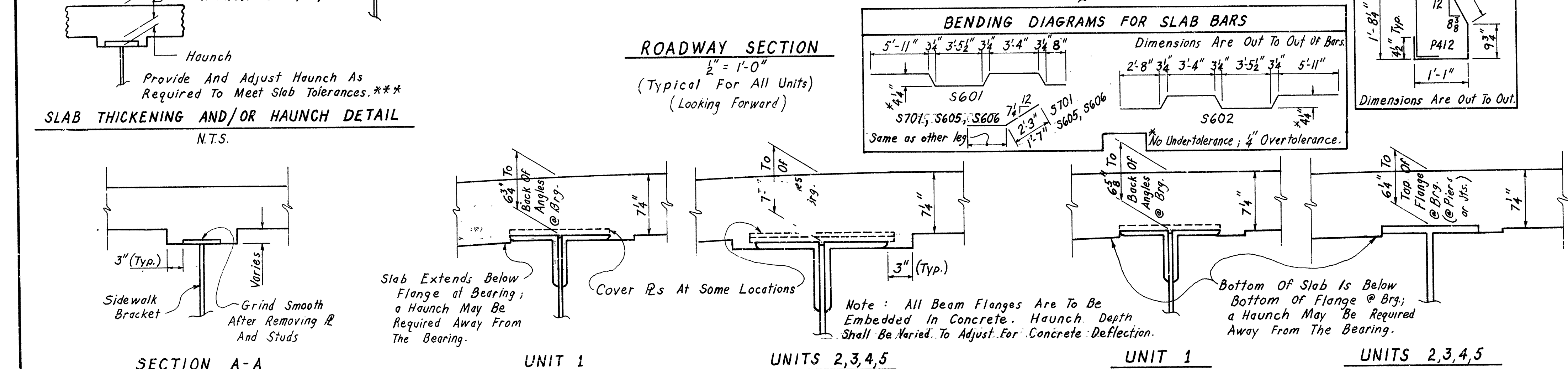
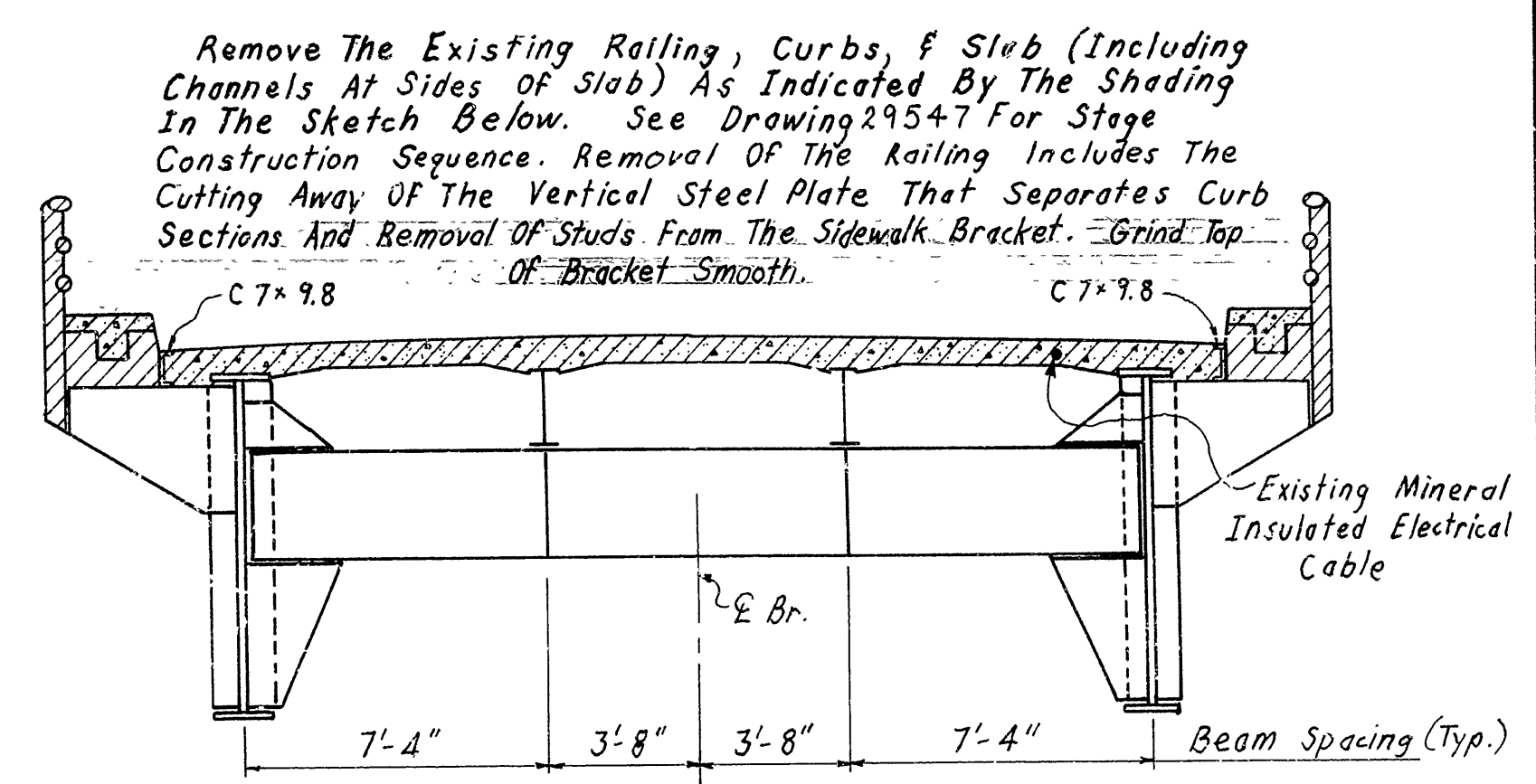
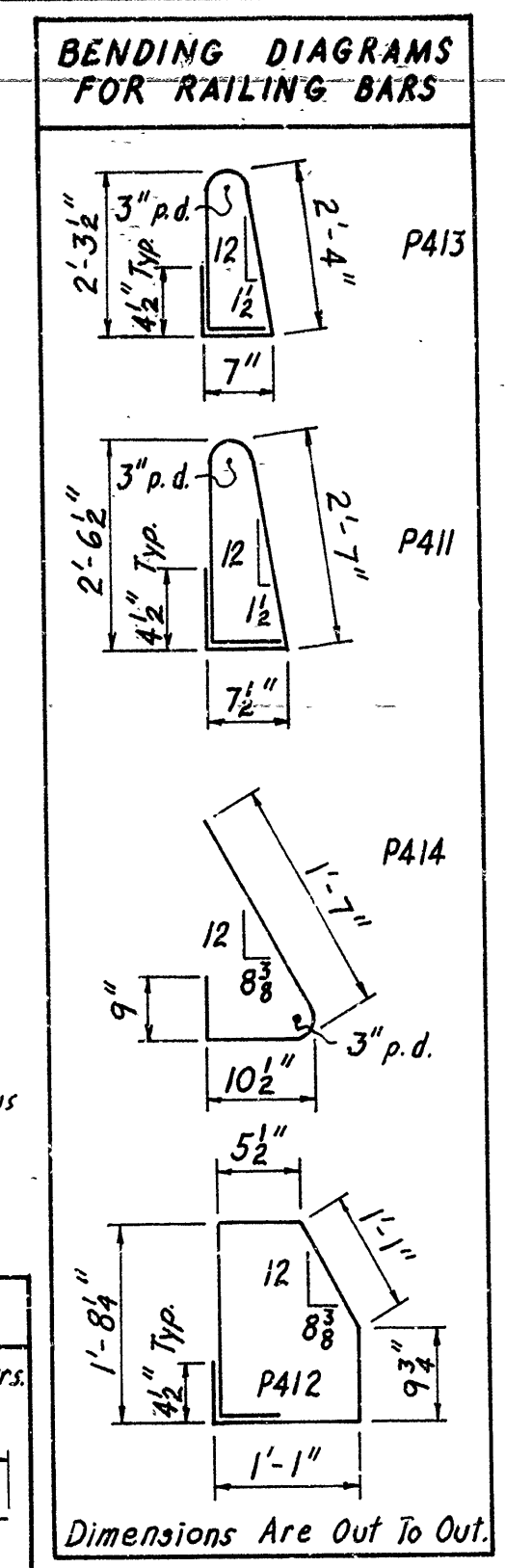
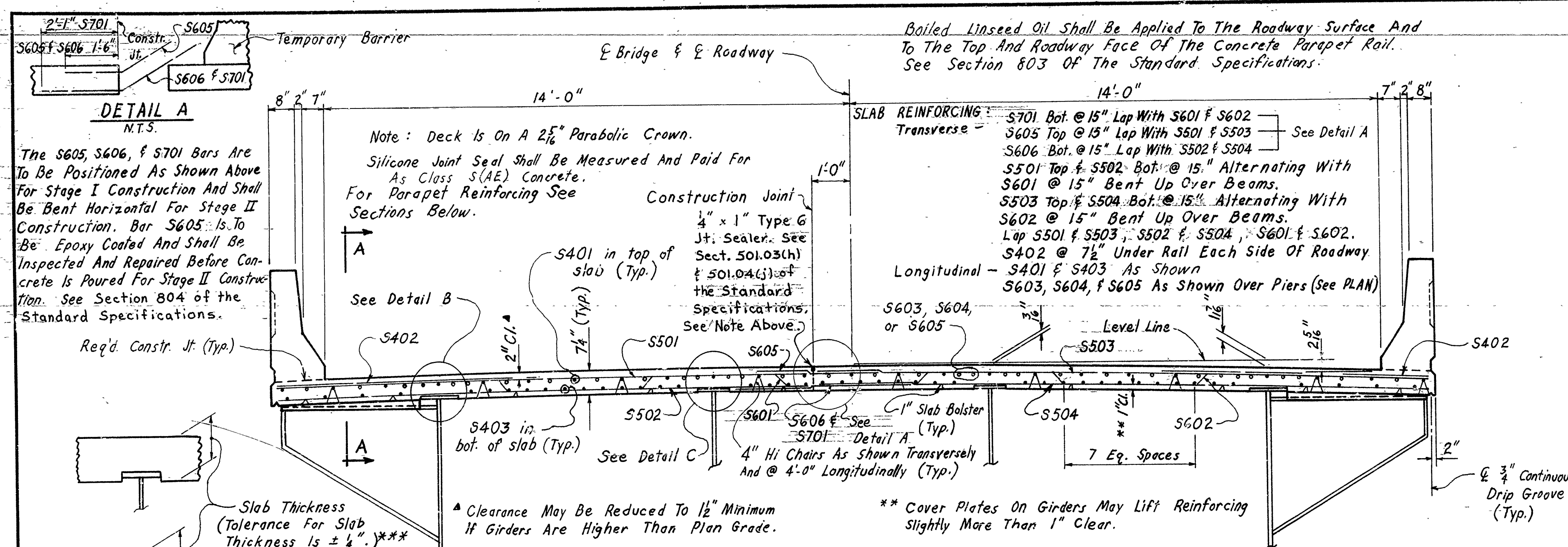
DETAILS OF PIER 12 AND WIND SHEAR DEVICE
HELENA BRIDGE

ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.
DRAWN BY: D.H.P. DATE: 10-28-87
CHECKED BY: C.J.F. DATE: 1-26-88
DESIGNED BY: D.H.P. DATE: 10-28-87
SCALE: 1/2" = 1'-0" or as shown
BRIDGE NO. 2899R DRAWING NO. 29553

Paul Pinkerton
BRIDGE ENGINEER

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	MISS. JOB NO.	SHEET NO.	TOTAL SHEETS
1-20-89	889-126-89			6	ARK.	85-0057-01-002-10		
2-3-89	606-29-89					ARK. JOB NO. 110104	21	58
				2899 R	SPANS	24554		



PARAPET RAILING VARIABLES

A	C	D	E
10'-0"	9	12"	6"
9'-5 $\frac{1}{2}$ "	9	11 $\frac{1}{2}$ "	3 $\frac{3}{4}$ "
7'-6"	7	11 $\frac{1}{2}$ "	3 $\frac{3}{4}$ "
7'-5 $\frac{1}{2}$ "	7	11 $\frac{1}{2}$ "	3 $\frac{3}{4}$ "
7'-0"	6	12"	6"
5'-10 $\frac{3}{8}$ "	5	12"	4 $\frac{1}{2}$ "

Studs shall be 5" long, granular flux filled, solid fluxed, or equal and automatically welded to plate. Studs and plate to be measured and paid for as "Structural Steel in Plate Girder Spans (A36)".

The surfaces of the $\frac{3}{8}$ " plates which will not be in contact with concrete shall receive two coats of paint in the shop. These coats shall be those specified as Shop Prime Coat and Finish Coat in Subsection 807.59.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	MISS. JOB NO.	SHEET NO.	TOTAL SHEETS
1-20-89	8-12-89			6	ARK.	85-0057-01-002-10		
2-3-89	6-2-89					ARK. JOB NO. 110104	22	58
				① 2899R		SPAN	29555	

UNIT 1 BAR LIST

Mark	No. Reg'd.	Length	Pin Dia.
S401	200	37'-8"	Str.
S402	922	7'-0"	Str.
S403	352	37'-8"	Str.
S501	232	14'-2"	Str.
S502	231	14'-2"	Str.
S503	232	16'-2"	Str.
S504	231	16'-2"	Str.
S601	230	14'-6"	4 1/2"
S602	230	16'-6"	4 1/2"
S603	96	34'-0"	Str.
P404	8	9'-6"	Str.
P405	8	9'-0"	Str.
P409	256	8'-1"	Str.
P411	552	6'-4"	2"
P412	552	5'-6"	2"
P413	384	5'-10"	2"
P414	384	3'-2"	2"
P607	10	9'-6"	Str.
P608	10	9'-0"	Str.
P612	320	8'-1"	Str.
S605	232	3'-2"	4 1/2"
S606	231	3'-2"	4 1/2"
S701	230	4'-6"	5 1/4"

See drawing 29554 for bending diagrams.

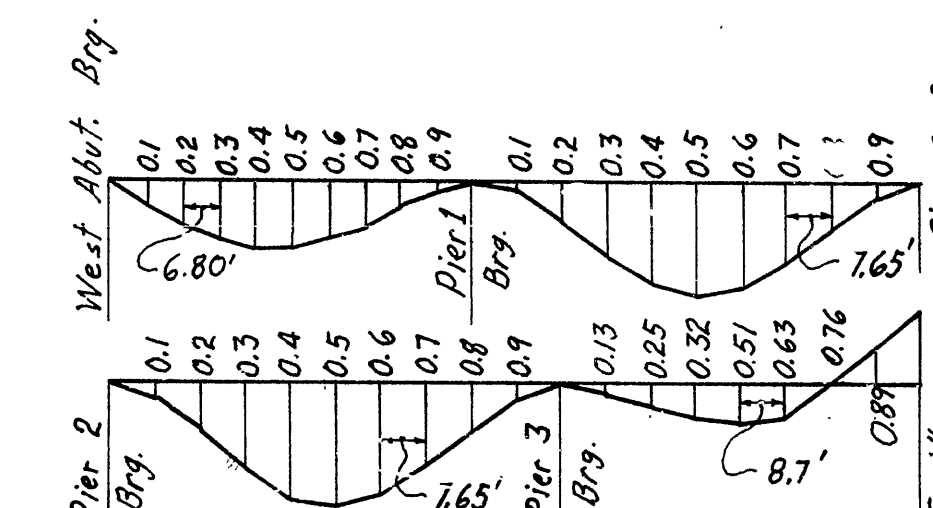
① These bars must be Grade 40.

4" x 1" Type 6 Jt. Sealer. See Sect. 501.03(h) & 501.04(j) of the Standard Specifications. If joints are to be sawed, they shall be sawed before any vehicular traffic is allowed on the slab. The joint is to be paid for as Class S(AE) concrete.

SLAB JOINT

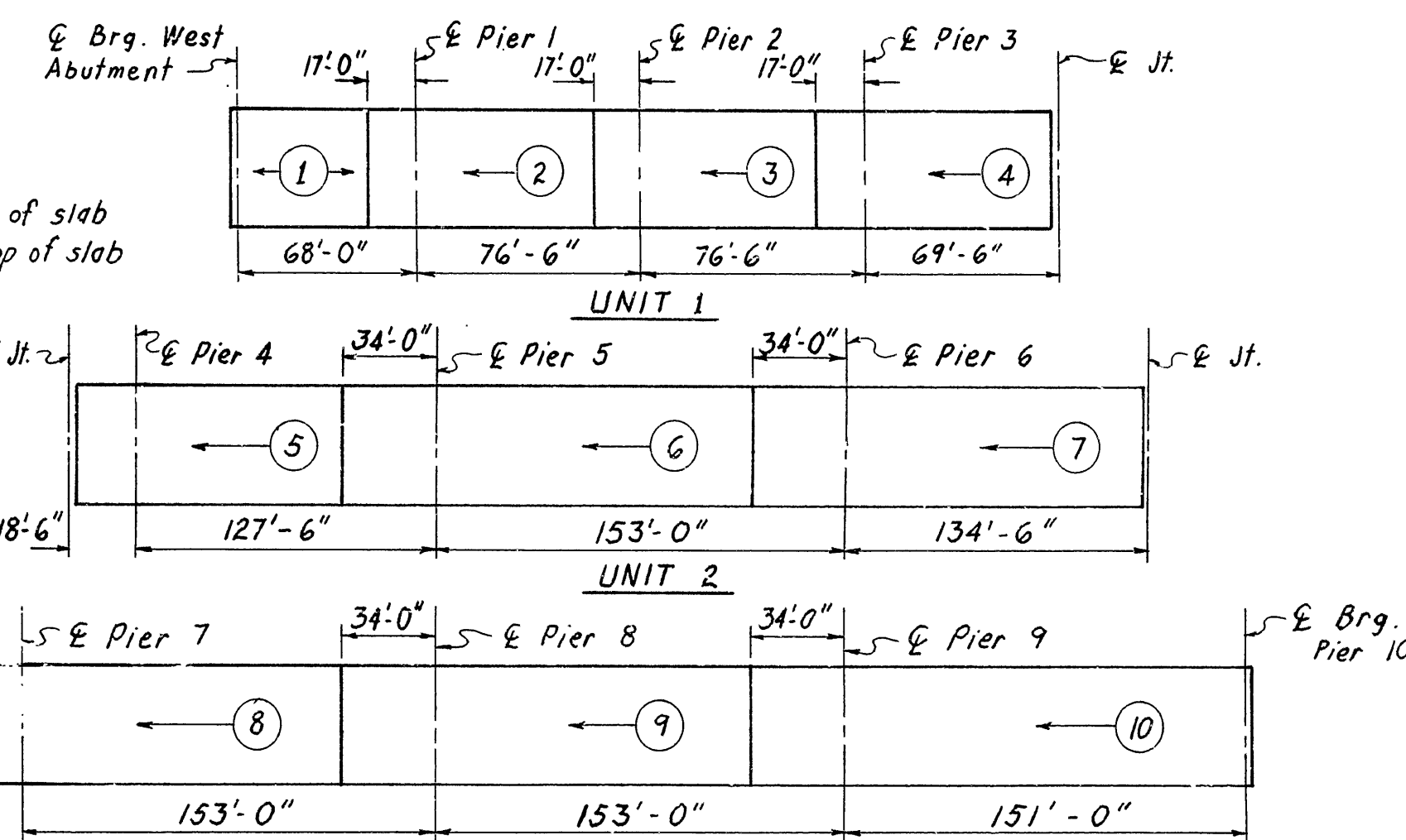
N. T. S.

* These bars are to be epoxy coated.



CONCRETE DEFLECTION DIAGRAM FOR UNIT 1

N. T. S.



SLAB POURING SEQUENCE FOR UNITS 1, 2, & 3

N. T. S.

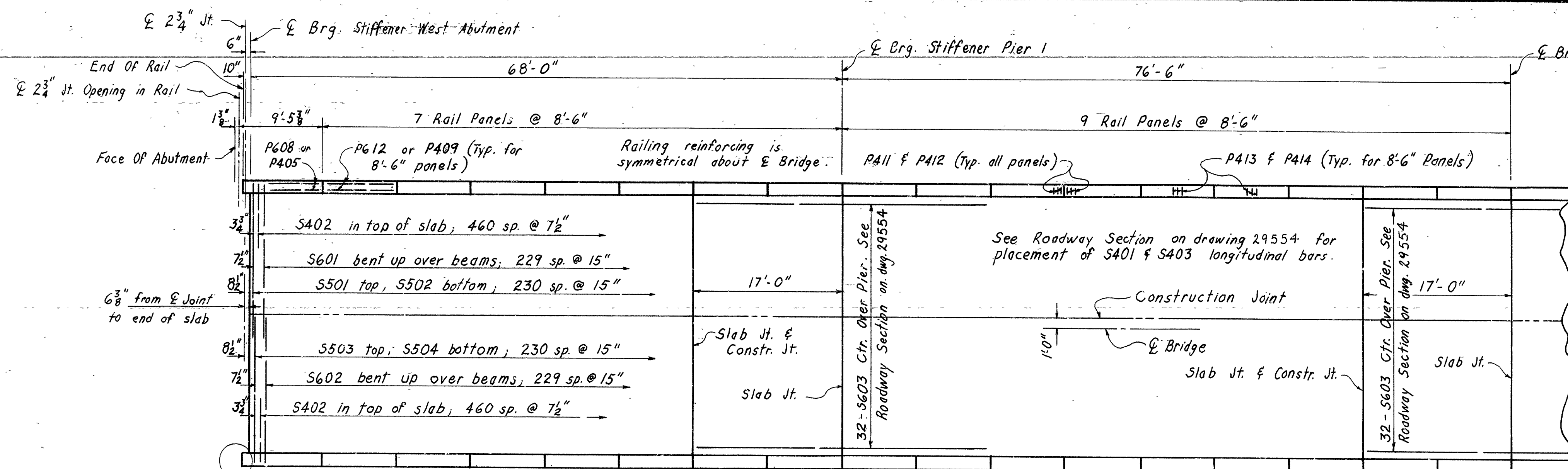
Pours Are To Be Made in Numerical Order in the Direction Indicated. 72 Hours Shall Elope Between Pours.

SHEET 2 OF 6
DETAILS OF APPROACH UNITS
HELENA BRIDGE
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: MEC DATE: 8-11-87
CHECKED BY: C.J.F. DATE: 12-17-87
DESIGNED BY: MEC DATE: 3-17-86
SCALE: As Noted

Verbal Pinkerton
BRIDGE ENGINEER

BRIDGE NO. 2899R DRAWING NO. 29555

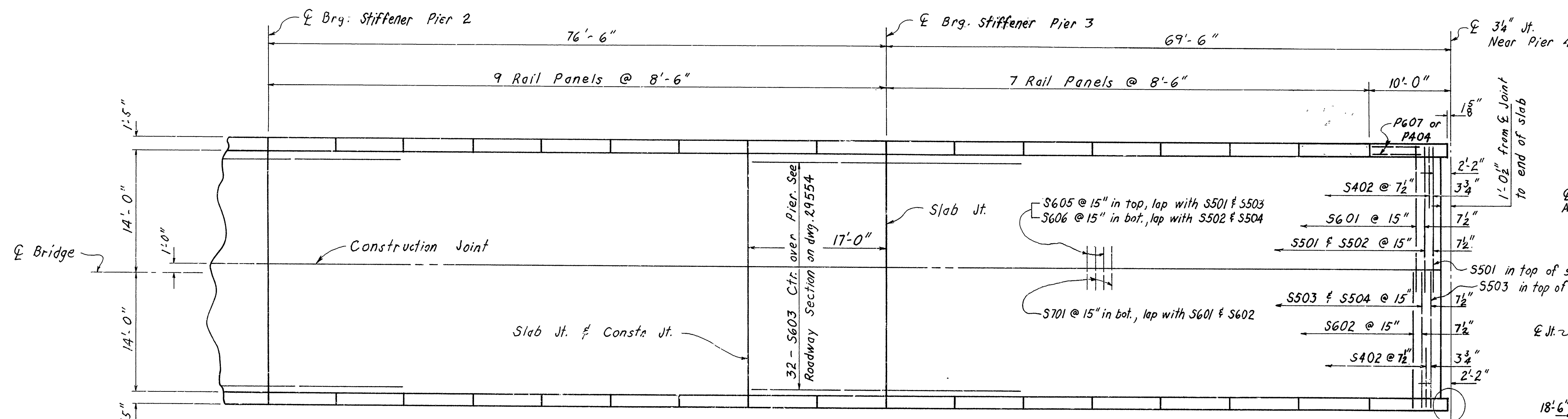


UNIT 1 HALF - PLAN

1" = 1'-0"

For Expansion Joint Details See Drwg. 29566-29568
For Parapet Details See Drwg. 29554
For General Notes See Drwg. 29546

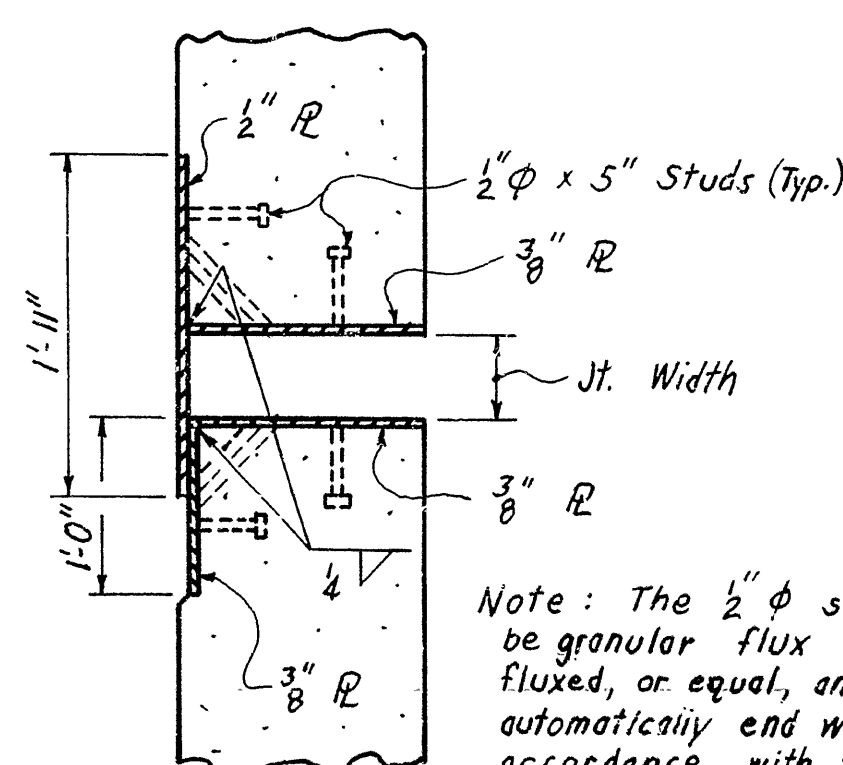
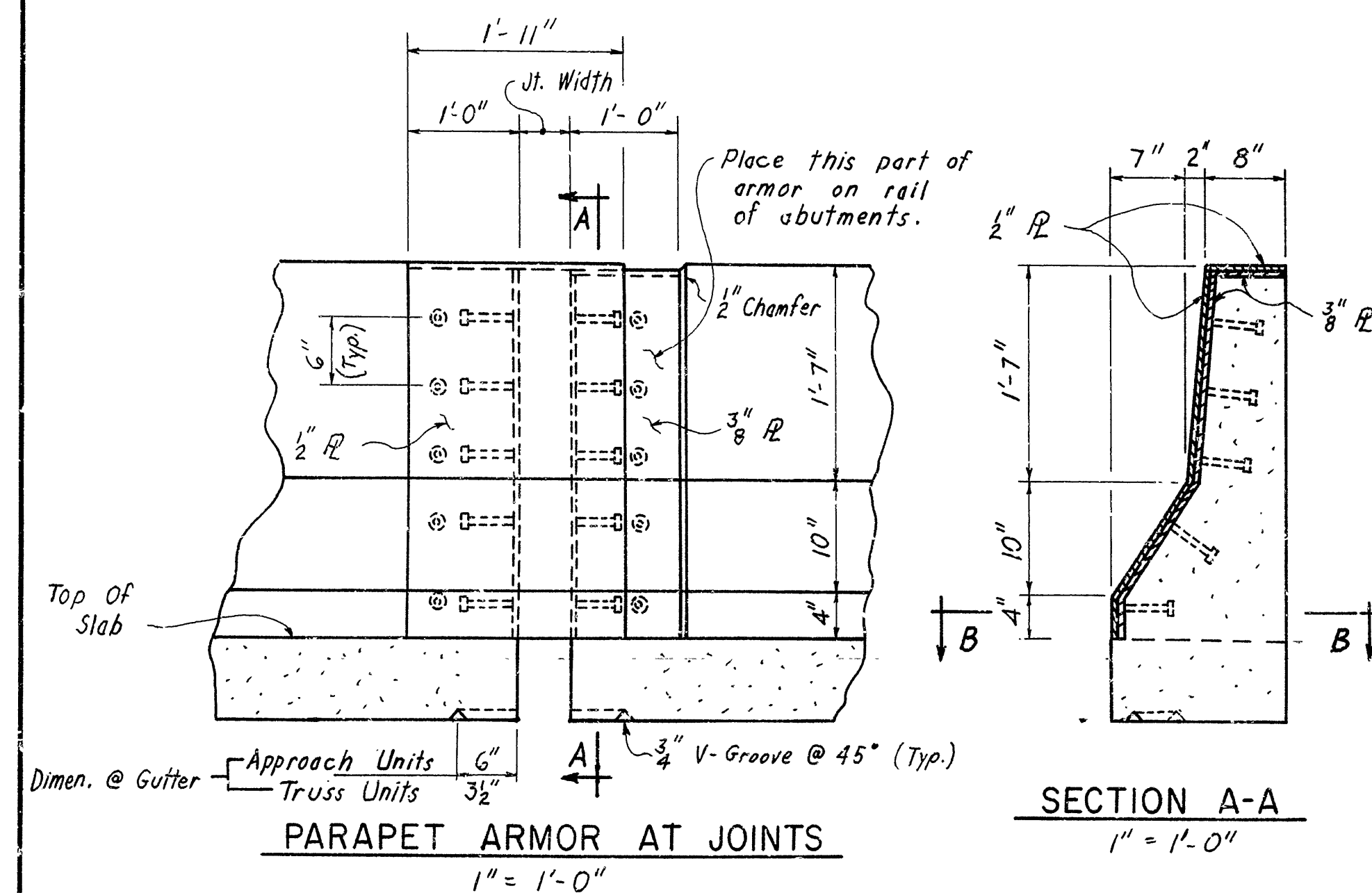
Horizontal Dimensions Are At Roadway Surface.



UNIT 1 HALF - PLAN

1" = 1'-0"

Parapet Armor (Typ.)
See Details Below.



SECTION B-B

1" = 1'-0"

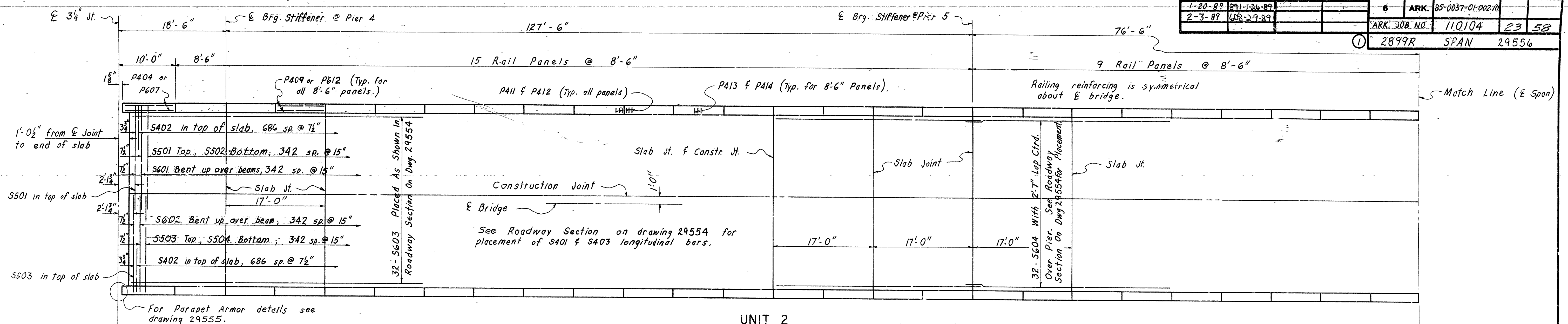
Note: The 1/2" φ studs shall be granular flux filled, solid fluxed, or equal, and shall be automatically end welded in accordance with the manufacturer's recommendations.

UNIT 1 CONCRETE DEFLECTIONS (IN.)

Span Point	Defl.	Span Point	Defl.
① Brg. Abut.	0	① Pier 2	0
0.1	0.13	0.1	0.08
0.2	0.24	0.2	0.27
0.3	0.32	0.3	0.46
0.4	0.36	0.4	0.60
0.5	0.36	0.5	0.65
0.6	0.31	0.6	0.59
0.7	0.24	0.7	0.44
0.8	0.14	0.8	0.25
0.9	0.06	0.9	0.08
① Pier 1	0	① Pier 7	0
0.1	0.05	0.1	0.05
0.2	0.21	0.2	0.12
0.3	0.39	0.3	0.19
0.4	0.54	0.4	0.20
0.5	0.59	0.5	0.13
0.6	0.55	0.6	0.00
0.7	0.42	0.7	-0.20
0.8	0.24	① Jt.	-0.38
0.9	0.08		
① Pier 2	0		

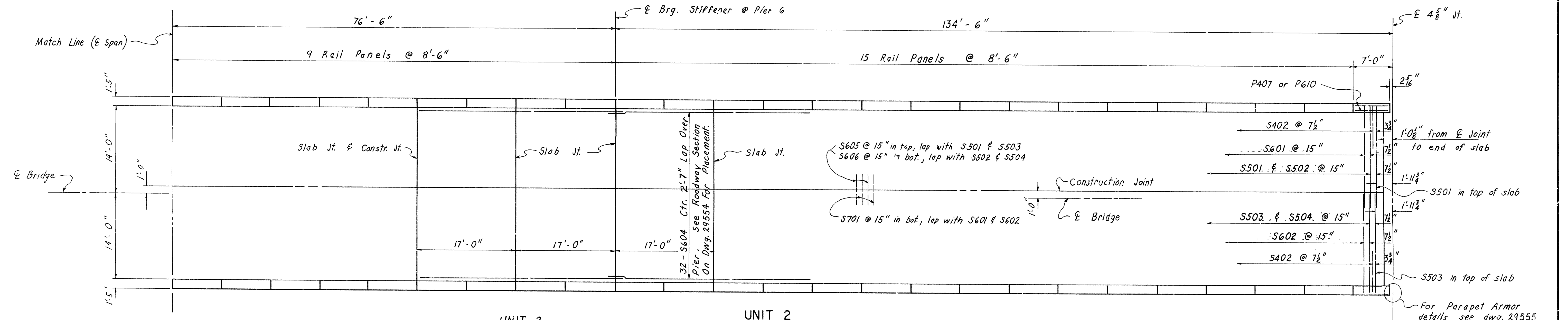
A Minus Sign (-) Indicates an Upward Deflection.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	MISS. JOB NO.	SHEET NO.	TOTAL SHEETS
1-20-89	8-1-89			6	ARK.	85-0057-01-00210		
2-3-89	6-29-89					ARK. JOB NO. 110104	23	58
				2899R	SPAN	29556		



UNIT 2
HALF - PLAN
1/8" = 1'-0"

For Parapet Details See Drwg. 29554
For Slab Joint Details See Drwg. 29555
For Slab Pouring Sequence See Drwg. 29555



UNIT 2
HALF - PLAN
1/8" = 1'-0"

For Expansion Joint Details See Drwg. 29566-29568
For General Notes See Drwg. 29546

Bars marked with an asterisk (*) are to be epoxy coated. Bars marked with (A) must be Grade 40.

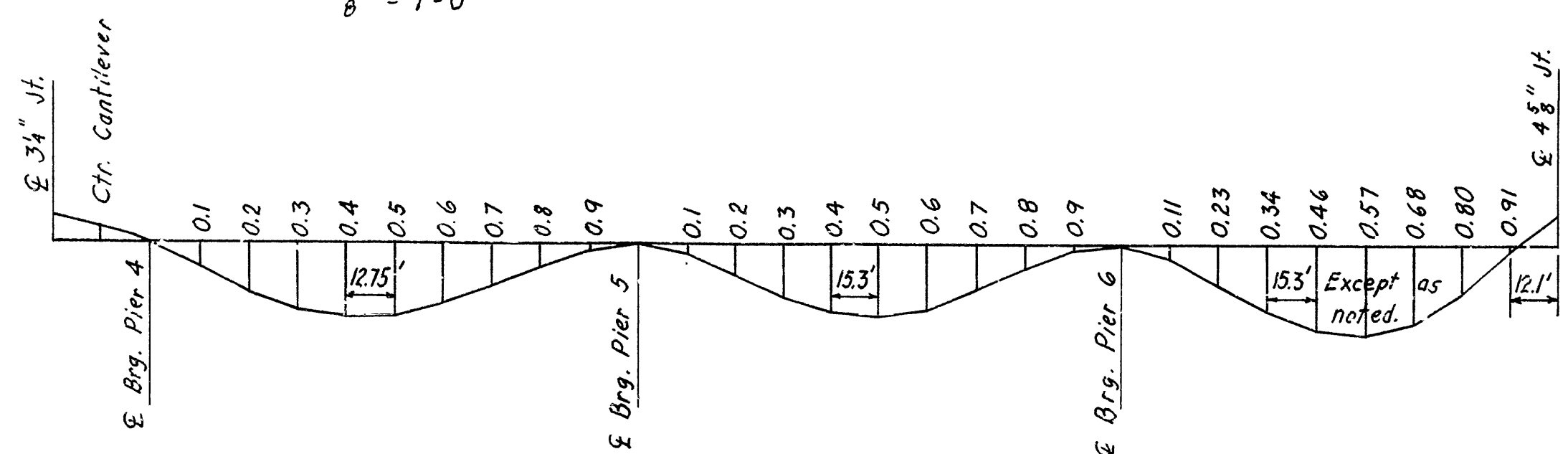
UNIT 2 BAR LIST

Mark	No. Req'd.	Length	Pin Dia.	Mark	No. Req'd.	Length	Pin Dia.
* S401	300	37'-6"	Str.	P404	8	9'-6"	Str.
* S402	1374	7'-0"	Str.	P407	8	6'-5"	Str.
S403	528	37'-6"	Str.	P409	392	8'-1"	Str.
* S501	345	14'-2"	Str.	S603	343	3'-2"	4 1/2"
* S502	343	14'-2"	Str.	P411	818	6'-4"	2"
* S503	345	16'-2"	Str.	P412	818	5'-6"	2"
S504	343	16'-2"	Str.	P413	588	5'-10"	2"
* S601	343	14'-6"	4 1/2"	P414	588	3'-2"	2"
* S602	343	16'-6"	4 1/2"	P607	10	9'-6"	Str.
* S603	32	50'-0"	Str.	P610	10	6'-5"	Str.
* S604	128	35'-0"	Str.	P612	490	8'-1"	Str.
* S605	345	3'-2"	4 1/2"	S701	343	4'-6"	5 1/4"

For bending diagrams see drwg. 29554

UNIT 2
CONCRETE DEFLECTIONS (IN.)

Span Point	Defl.	Span Point	Defl.
E 34" Jt.	-0.38	E Pier 5	0
Ctr. Cantilever	-0.20	0.1	0.12
E Pier 4	0	0.2	0.41
0.1	0.37	0.3	0.76
0.2	0.71	0.4	1.00
0.3	0.96	0.5	1.07
0.4	1.08	0.6	0.95
0.5	1.05	0.7	0.68
0.6	0.88	0.8	0.33
0.7	0.62	0.9	0.06
0.8	0.32	E Pier 6	0
0.9	0.09	0.11	0.19
E Pier 5	0	0.23	0.55
		0.34	0.95
		0.46	1.22
		0.57	1.30
		0.68	1.12
		0.80	0.70
		0.91	0.07
		E 4 5/8" Jt.	-0.44



CONCRETE DEFLECTION DIAGRAM FOR UNIT 2
N.T.S.

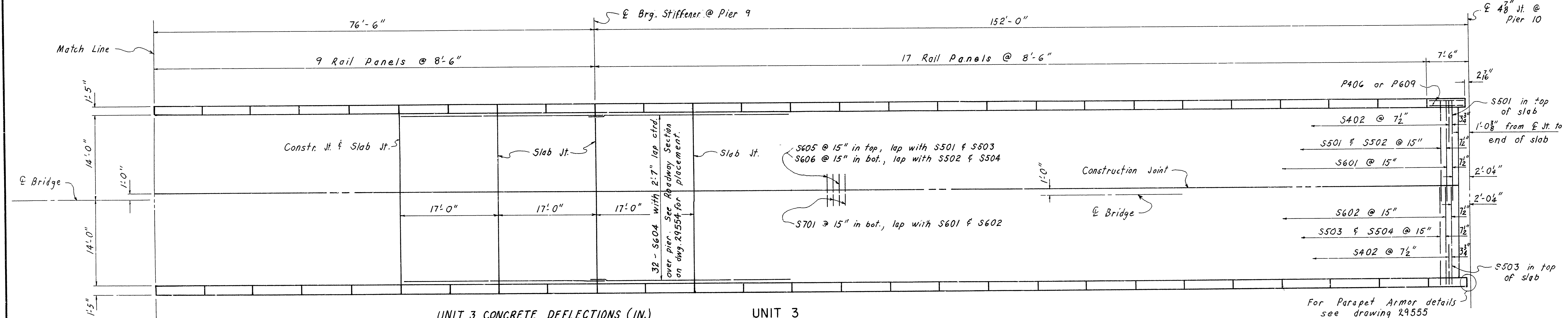
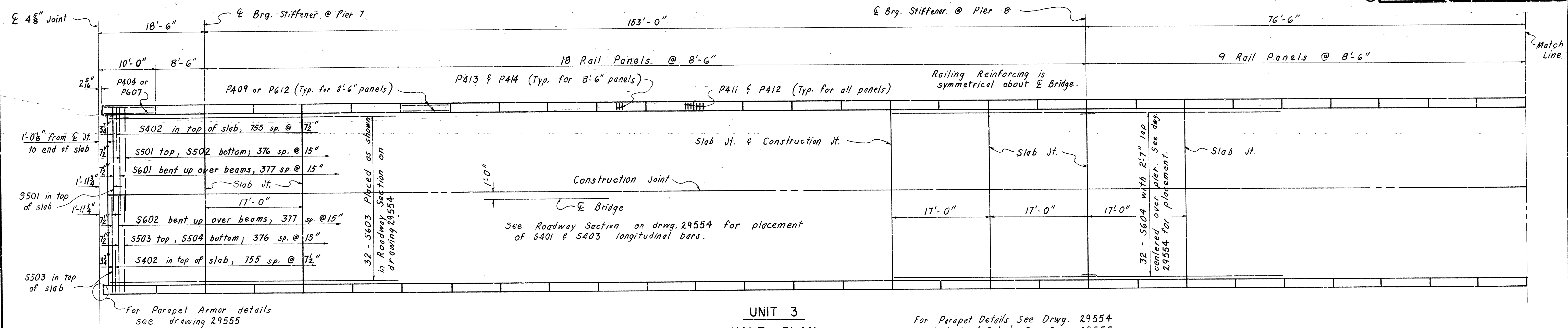
A Minus Sign (-) Indicates an Upward Deflection.

SHEET 3 OF 6
DETAILS OF APPROACH UNITS
HELENA BRIDGE
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: MLC DATE: 8-14-87
CHECKED BY: C.J.F. DATE: 12-17-87
DESIGNED BY: MLC DATE: 3-17-86

BRIDGE NO. 2399R DRAWING NO. 29556

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	MISS. JOB NO.	SHEET NO.	TOTAL SHEETS
1-20-89	89-1-20-89			6	ARK.	85-0057-01-002-10		
2-3-89	89-2-3-89					ARK. JOB NO.	110/04	24/58
				2899R		SPAN	29557	



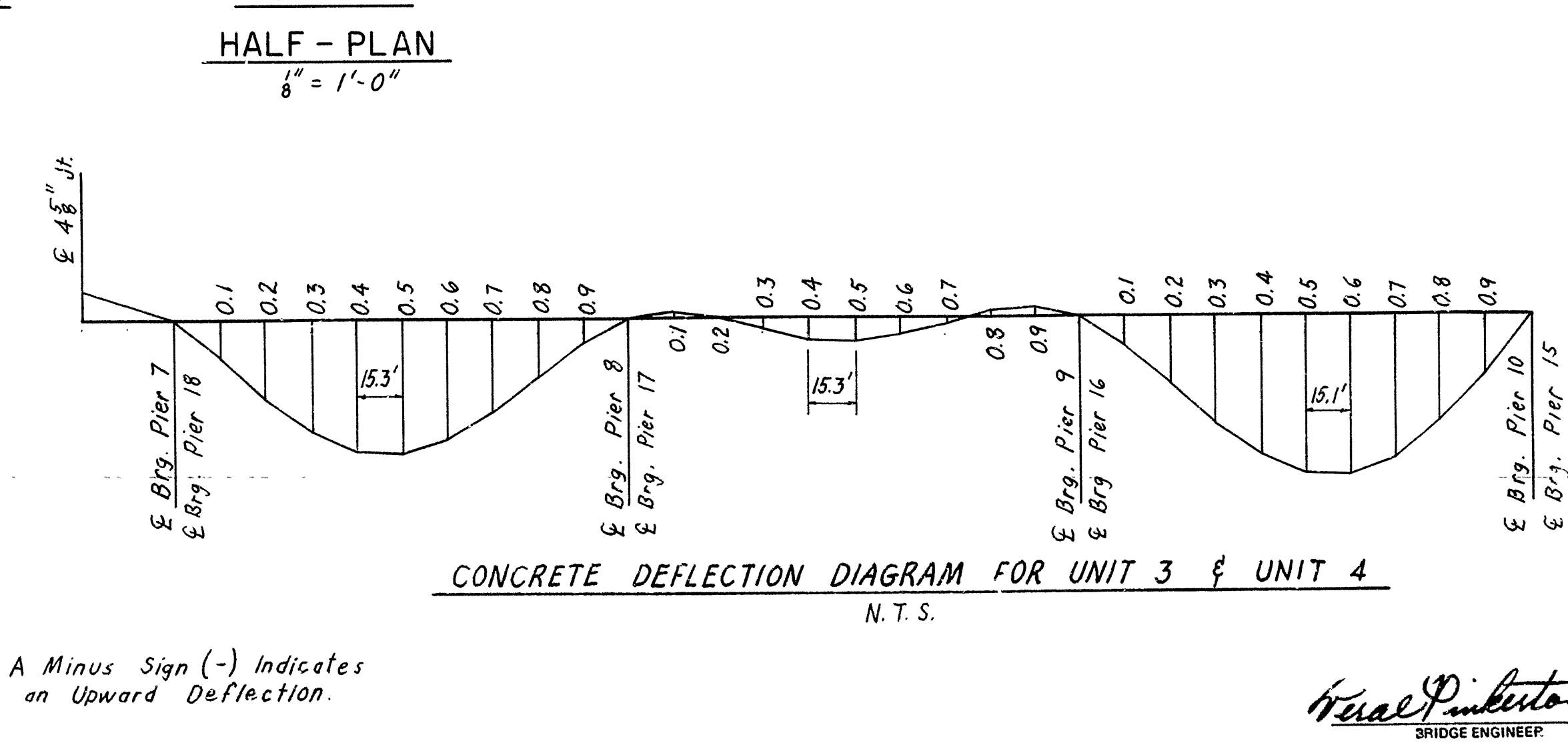
UNIT 3 BAR LIST

Mark	No. Req'd	Length	Pin Dia.	Mark	No. Req'd	Length	Pin Dia.
* S401	325	38'-1"	Str.	P404	8	9'-5"	Str.
* S402	1512	7'-0"	Str.	P406	8	6'-11"	Str.
* S403	572	38'-1"	Str.	P409	432	8'-1"	Str.
* S501	379	14'-2"	2 1/2"	P411	900	6'-4"	2"
* S502	377	14'-2"	2 1/2"	P412	900	5'-6"	2"
* S503	379	16'-2"	Str.	P413	648	5'-10"	2"
* S504	377	16'-2"	Str.	P414	648	3'-2"	2"
* S601	378	13'-6"	4 1/2"	P607	10	9'-5"	Str.
* S602	378	16'-6"	4 1/2"	P609	10	6'-11"	Str.
* S603	32	50'-0"	Str.	P612	540	8'-1"	Str.
* S604	128	35'-0"	Str.	S701 @	378	4'-6"	5 1/2"
* S605 @	379	3'-2"	4 1/2"				
* S606 @	377	3'-2"	4 1/2"				

For bending diagrams see drawing 29554

UNIT 3 CONCRETE DEFLECTIONS (IN.)

Span Point	Defl.	Span Point	Defl.
4 1/8" Jt.	-0.44	Pier 8	0
Pier 7	0	0.1	-0.11
0.1	0.59	0.2	-0.02
0.2	1.22	0.3	0.17
0.3	1.73	0.4	0.32
0.4	2.03	0.5	0.37
0.5	2.07	0.6	0.28
0.6	1.86	0.7	0.09
0.7	1.44	0.8	-0.10
0.8	0.89	0.9	-0.16
0.9	0.36	Pier 9	0
Pier 8	0	0.1	0.42
		0.2	-1.03
		0.3	1.66
		0.4	2.15
		0.5	2.44
		0.6	2.47
		0.7	2.20
		0.8	1.67
		0.9	0.92
		Pier 10	0



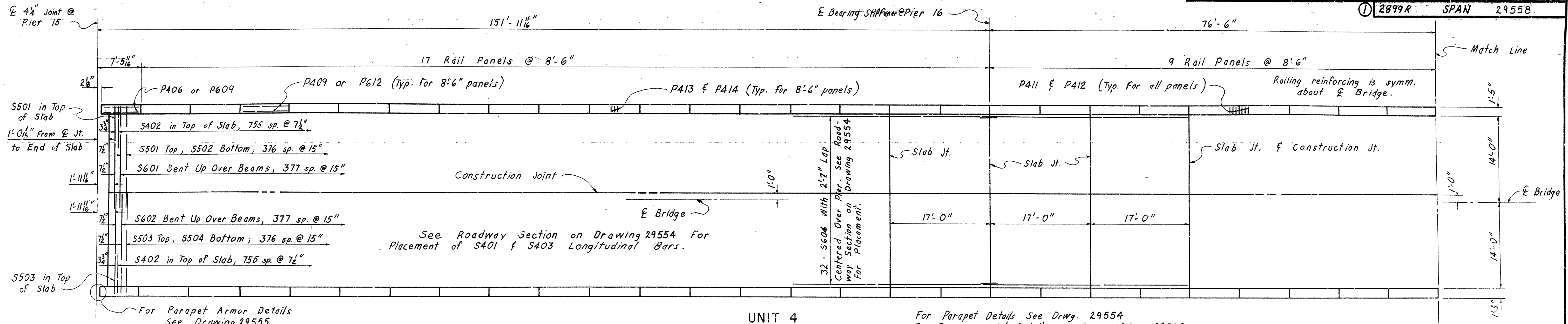
For Expansion Joint Details See Drwg 29566-29568
 For General Notes See Drwg 29546

SHEET 4 OF 6
 DETAILS OF APPROACH UNITS
 HELENA BRIDGE
 ROUTE SEC.
 ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.

DRAWN BY: MCC DATE: 8-19-87
 CHECKED BY: C.J.F. DATE: 12-17-87
 DESIGNED BY: MCC DATE: 3-17-86 SCALE: As Noted

BRIDGE NO. 2899R DRAWING NO. 29557

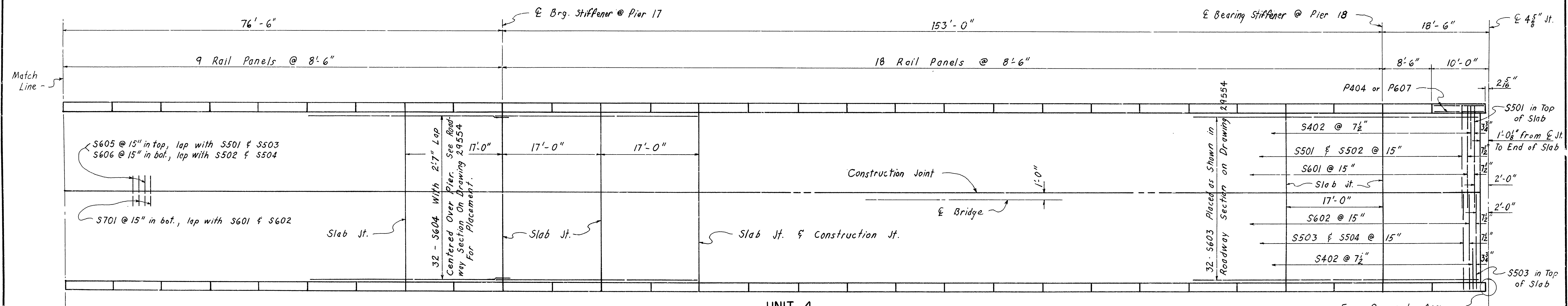
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	MISS. JOB NO.	SHEET NO.	TOTAL SHEETS
1-20-89	8-15-87			6	ARK.	85-0057-01-002-10		
2-3-89	6-10-89					ARK. JOB NO. 110104	25	58
				2899R	SPAN	29558		



UNIT 4
HALF - PLAN

For Parapet Details See Drwg. 29554
For Expansion Joint Details See Drwg. 29566-29568
For Slab Joint Details See Drwg. 29555
For General Notes See Drwg. 29546

Horizontal Dimensions Are At Roadway Surface.



UNIT 4
HALF - PLAN

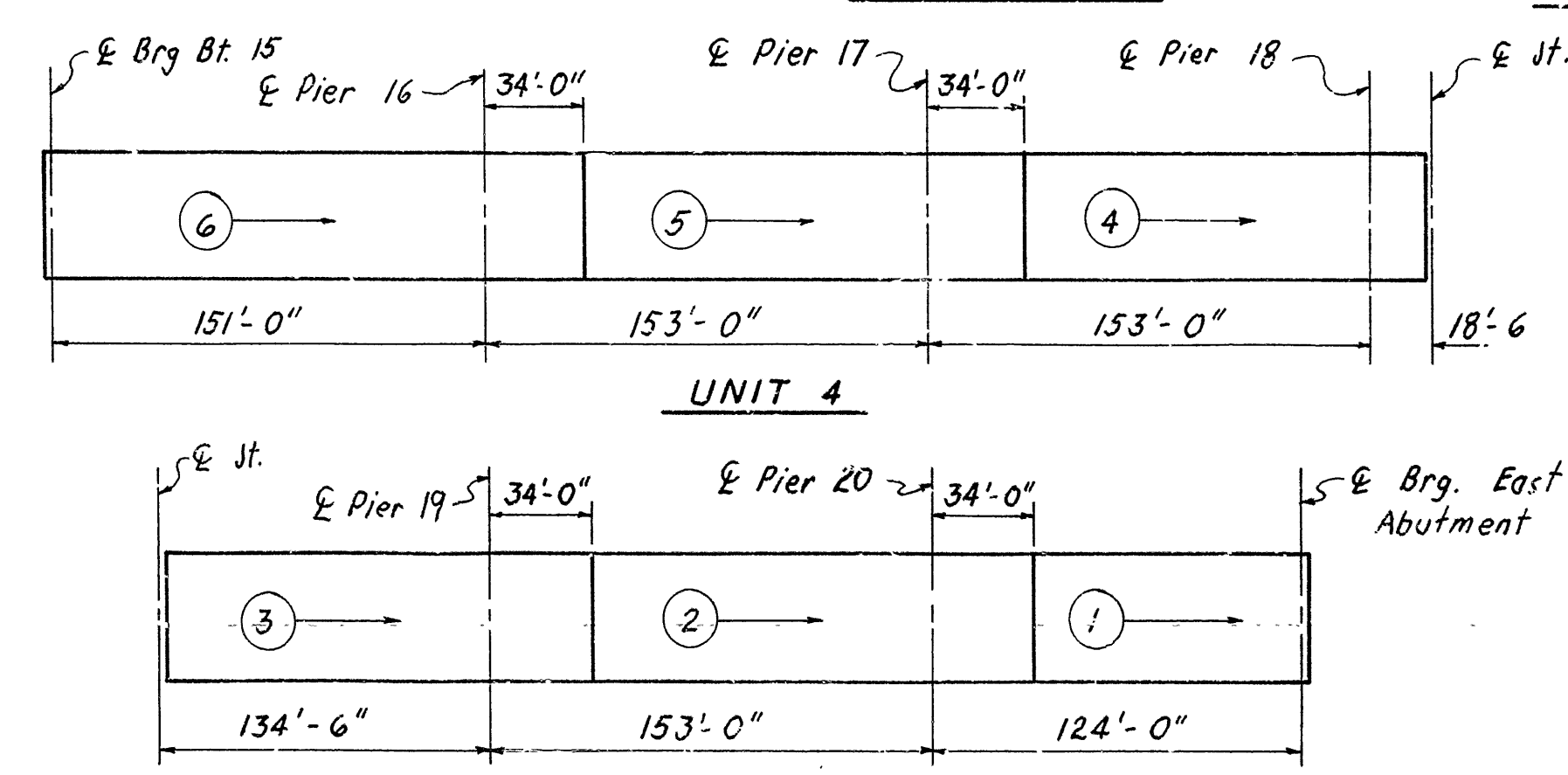
For Parapet Armor Details See Drwg. 29555

UNIT 4 BAR LIST

Mark	No. Req'd.	Length	Pin Dia.	Mark	No. Req'd.	Length	Pin Dia.
* S401	325	38'-1"	Str.	P404	8	9'-5"	Str.
* S402	1512	7'-0"	Str.	P406	8	6'-11"	Str.
* S403	572	38'-1"	Str.	P409	432	8'-1"	Str.
* S501	379	14'-2"	2 1/2"	P411	900	6'-4"	2"
* S502	377	14'-2"	2 1/2"	P412	900	5'-6"	2"
* S503	379	16'-2"	Str.	P413	648	5'-10"	2"
* S504	377	16'-2"	Str.	P414	648	3'-2"	2"
* S601	378	14'-6"	4 1/2"	P607	10	9'-5"	Str.
* S602	378	16'-6"	4 1/2"	P609	10	6'-11"	Str.
* S603	32	50'-0"	Str.	P612	540	8'-1"	Str.
* S604	128	35'-0"	Str.	S701	378	4'-6"	5 1/4"
* S605	379	3'-2"	4 1/2"				
* S606	377	3'-2"	4 1/2"				

Bars marked with an asterisk (*) are to be epoxy coated. Bars marked with @ must be Grade 40.

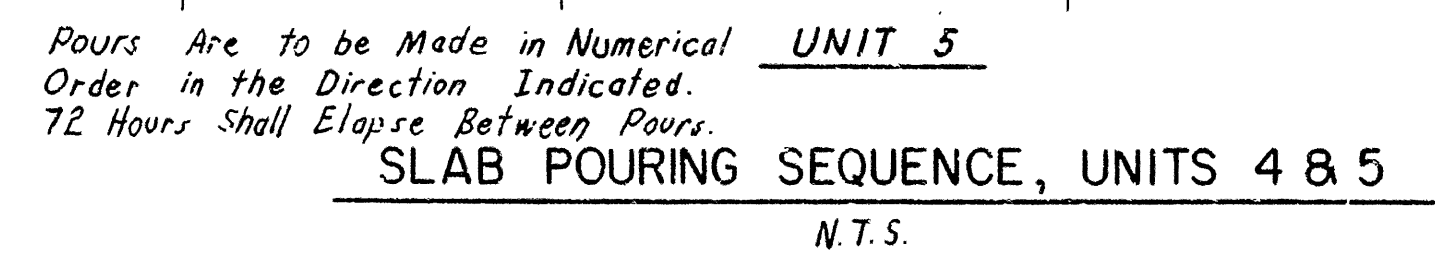
For bending diagrams see drawing 29554



UNIT 4 CONCRETE DEFLECTIONS (IN.)

A Minus Sign (-) Indicates an Upward Deflection.

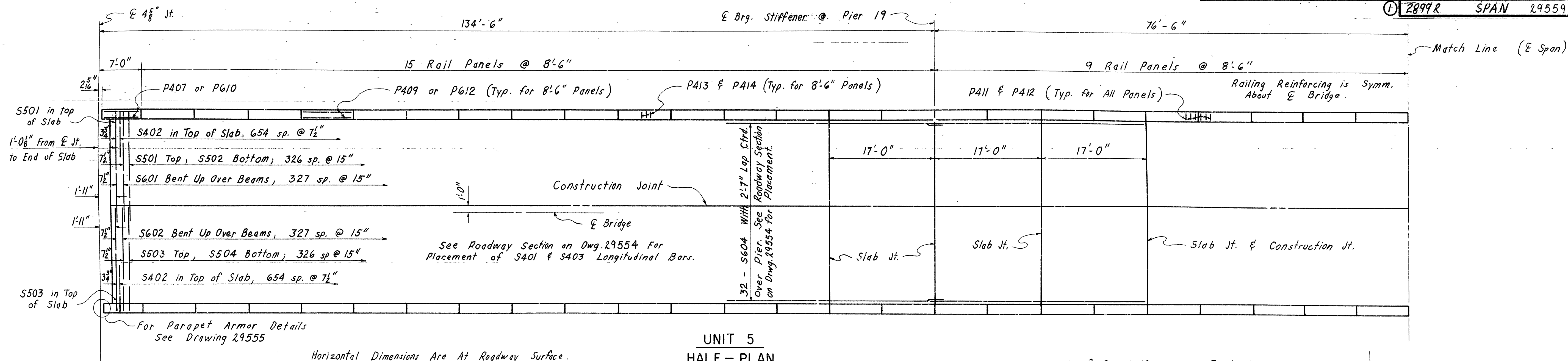
For Concrete Deflection Diagram See Drwg. 29557



UNIT 4
SLAB POURING SEQUENCE, UNITS 4 & 5

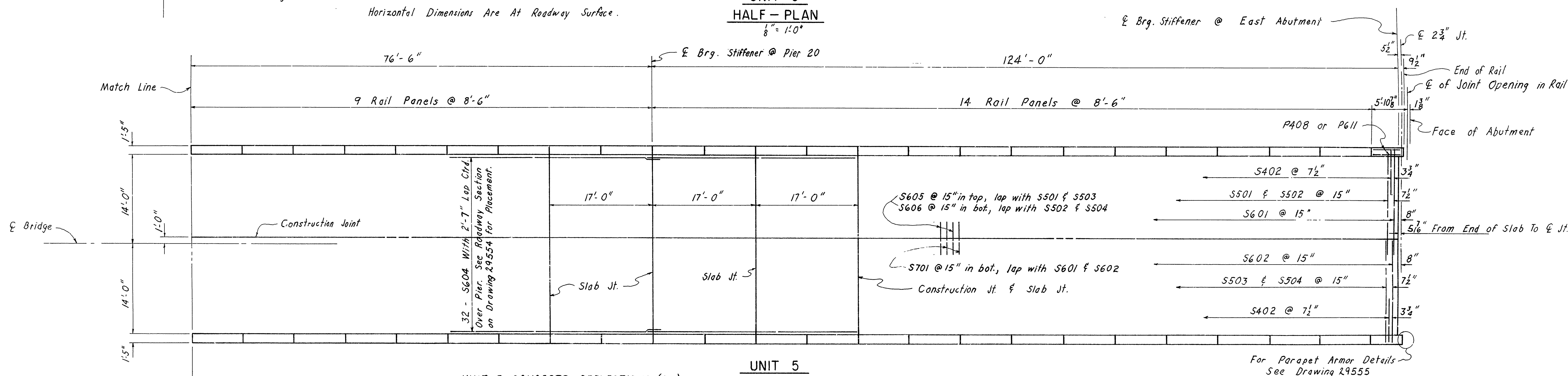
N.T.S.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	MISS. JOB NO.	SHEET NO.	TOTAL SHEETS
1-20-89	2-3-89	2-3-89	2-3-89	8	ARK.	85-0057-01-002-10		
						ARK. JOB NO.	110104	26
							SPAN	29559



Horizontal Dimensions Are At Roadway Surface.

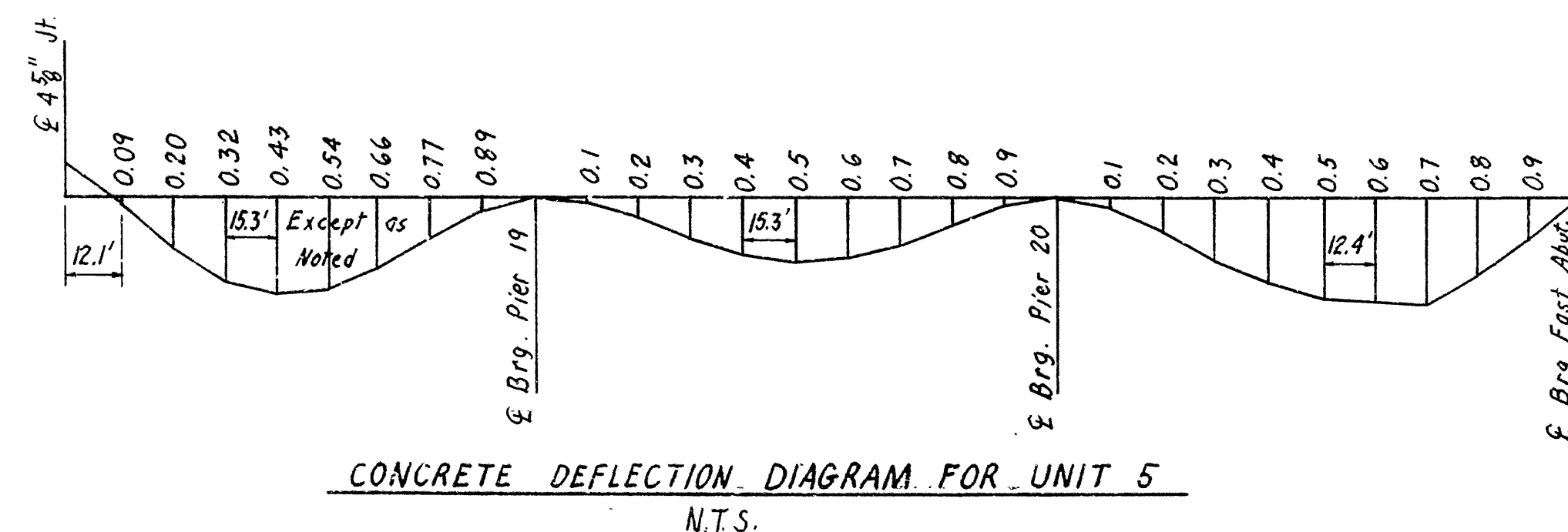
UNIT 5 HALF-PLAN 1/8" = 1'-0"



UNIT 5 CONCRETE DEFLECTIONS (IN.)

UNIT 5 HALF-PLAN 1/8" = 1'-0"

Span Point	Defl.	Span Point	Defl.
£ 4 1/8" Jt.	-0.44	£ Pier 20	0
0.09	0.07	0.1	0.12
0.20	0.70	0.2	0.42
0.32	1.12	0.3	0.81
0.43	1.30	0.4	1.14
0.54	1.22	0.5	1.37
0.66	0.95	0.6	1.40
0.77	0.55	0.7	1.44
0.89	0.19	0.8	1.07
£ Pier 19	0	0.9	0.56
0.1	0.05	£ Brg. East Abut.	0
0.2	0.26		
0.3	-0.54		
0.4	0.76		
0.5	0.86		
0.6	0.80		
0.7	0.61		
0.8	0.33		
0.9	0.10		
£ Pier 20	0		



A Minus Sign (-) Indicates an Upward Deflection.

UNIT 5 BAR LIST

Mark	No.	Length	Pin Dia.	Mark	No.	Length	Pin Dia.
* S401	275	38'-10"	Str.	P407	8	6'-5"	Str.
* S402	1310	7'-0"	Str.	P408	8	5'-5"	Str.
* S403	484	38'-10"	Str.	P409	376	8'-1"	Str.
* S501	328	14'-2"	2 1/2"	P411	778	6'-4"	2"
* S502	327	14'-2"	2 1/2"	P412	778	5'-6"	2"
* S503	328	16'-2"	Str.	P413	564	5'-10"	2"
* S504	327	16'-2"	Str.	P414	564	3'-2"	2"
* S601	328	14'-6"	4 1/2"	P610	10	6'-5"	Str.
* S602	328	16'-6"	4 1/2"	P611	10	5'-5"	Str.
* S604	128	35'-0"	Str.	P612	470	8'-1"	Str.
* S605	328	3'-2"	4 1/2"				
* S606	327	3'-2"	4 1/2"				
* S701	328	4'-6"	5 1/4"				

For Bending Diagrams See Drawing 29554.

For Parapet Details See Drwg. 29554
 For Slab Joint Details See Drwg. 29555
 For Expansion Joint Details See Drwg. 29566-29568
 For Slab Pouring Sequence See Drwg. 29558
 For General Notes See Drwg. 29546

SHEET 6 OF 6
 DETAILS OF APPROACH UNITS
 HELENA BRIDGE
 ROUTE SEC.

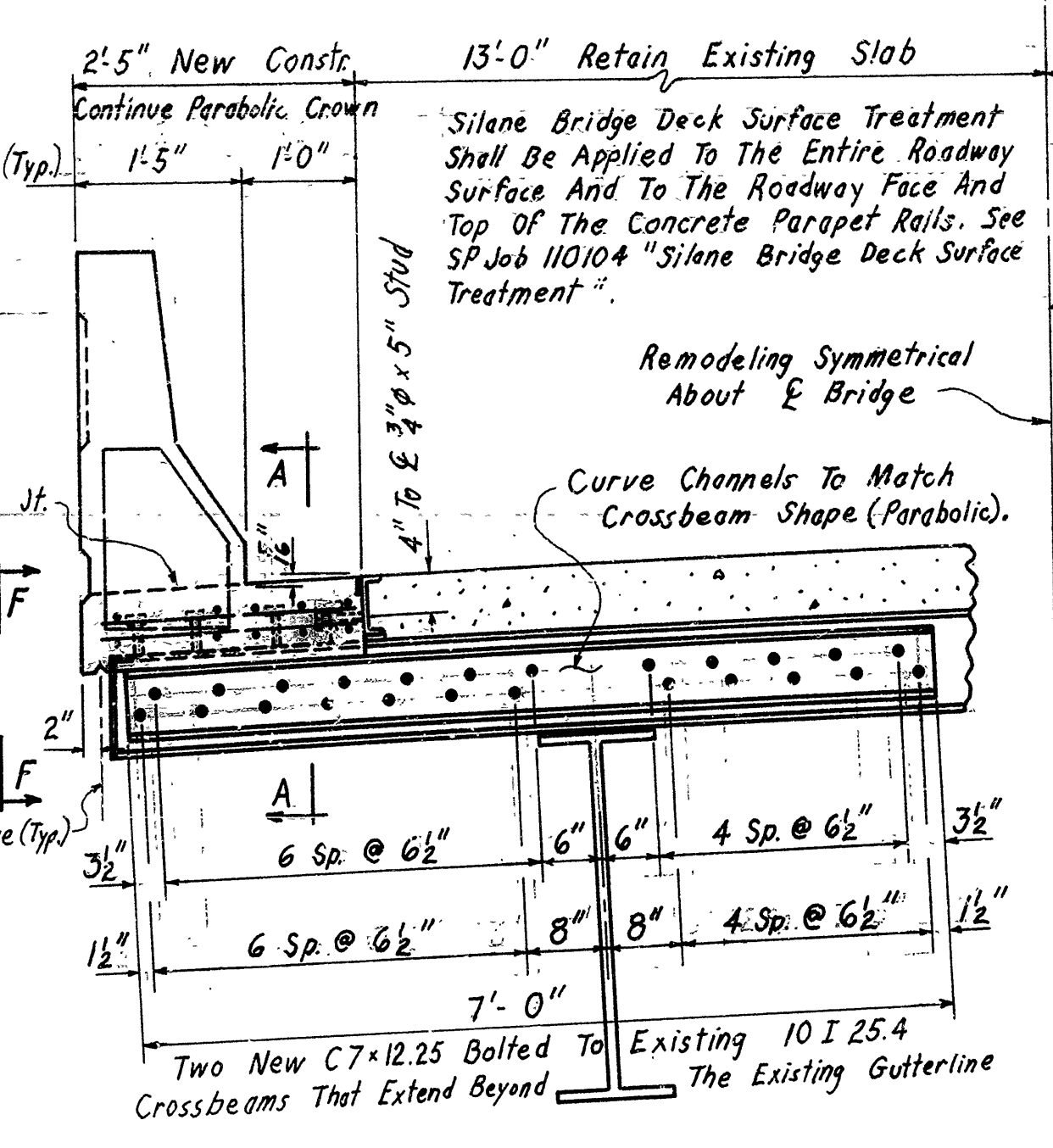
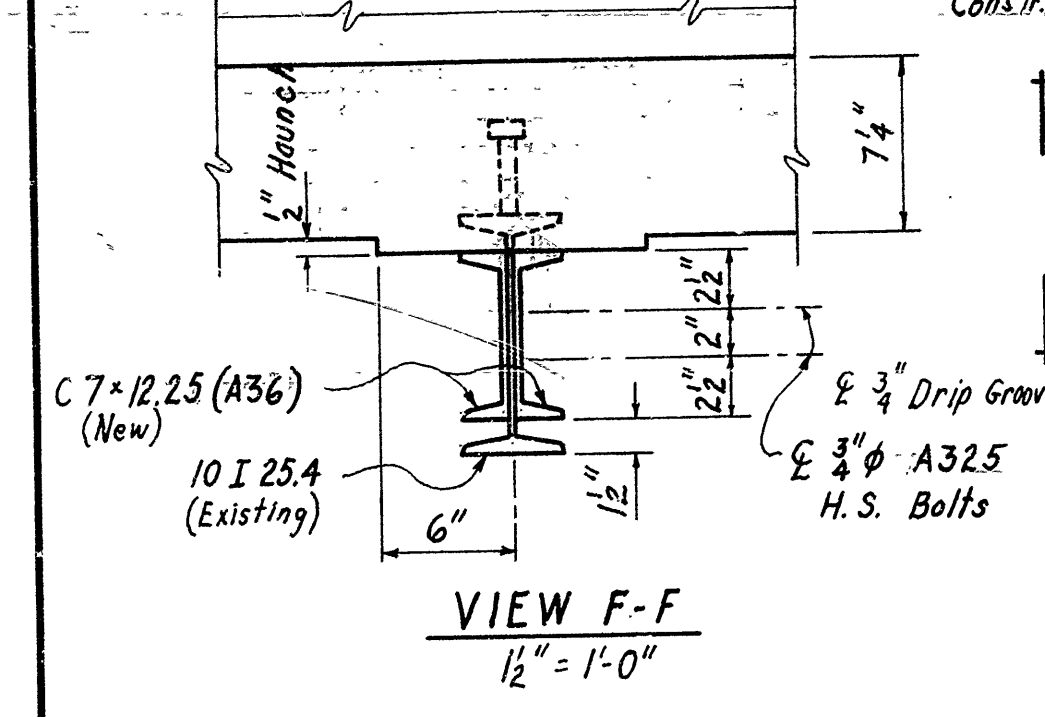
ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.

DRAWN BY: MEC DATE: 9-9-87
 CHECKED BY: C.J.F. DATE: 12-17-87
 DESIGNED BY: MEC DATE: 3-17-86
 SCALE: As Noted
 BRIDGE NO. 2899R DRAWING NO. 29559

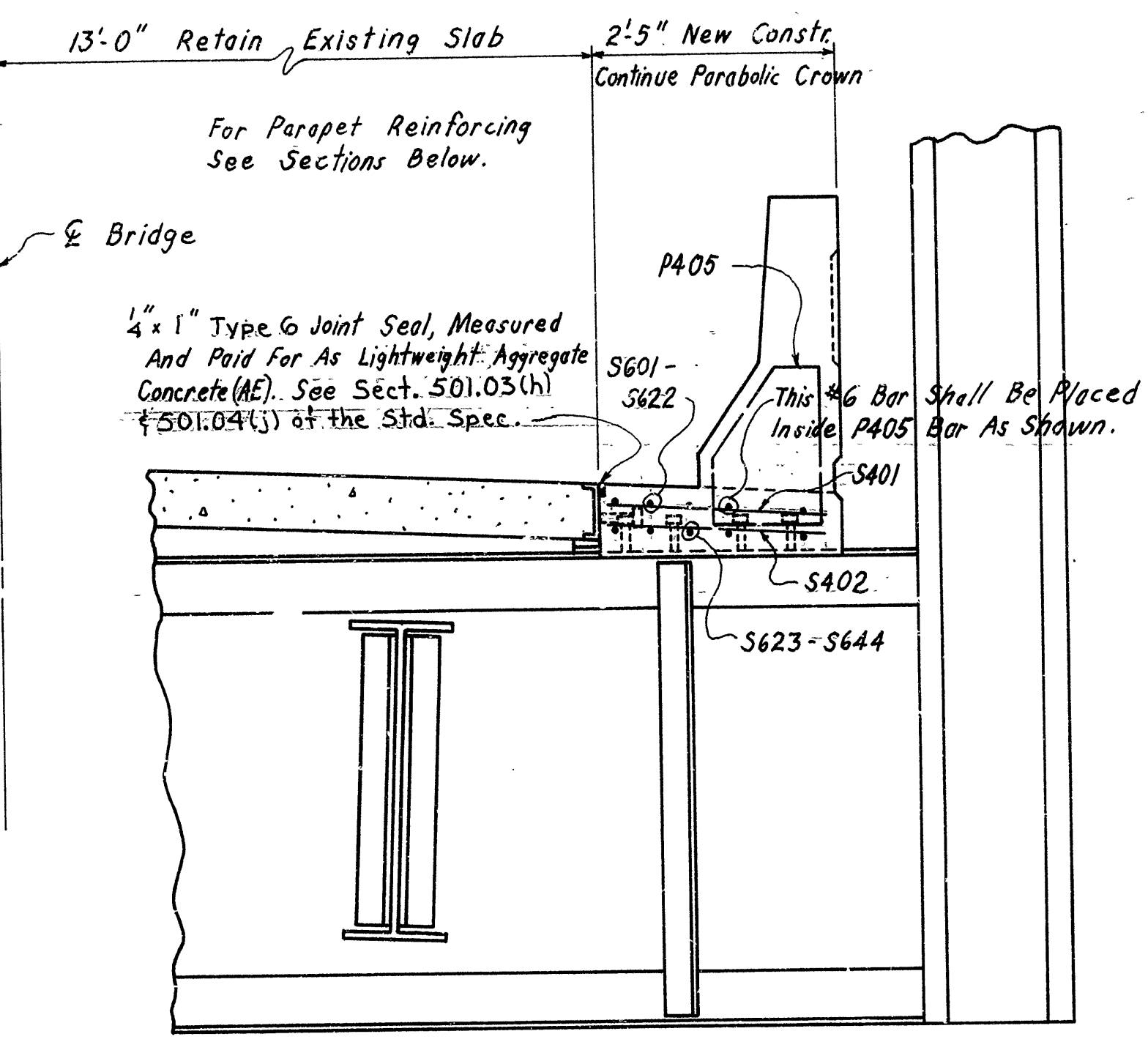
Paul Pinkerton
 BRIDGE ENGINEER

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	MISS. JOB NO.	SHEET NO.	TOTAL SHEETS
2-7-89	6-12-89			6	ARK.	85-0057-01-002-10		
						ARK. JOB NO. 110104	27	58
						2899R	SPANS	29560

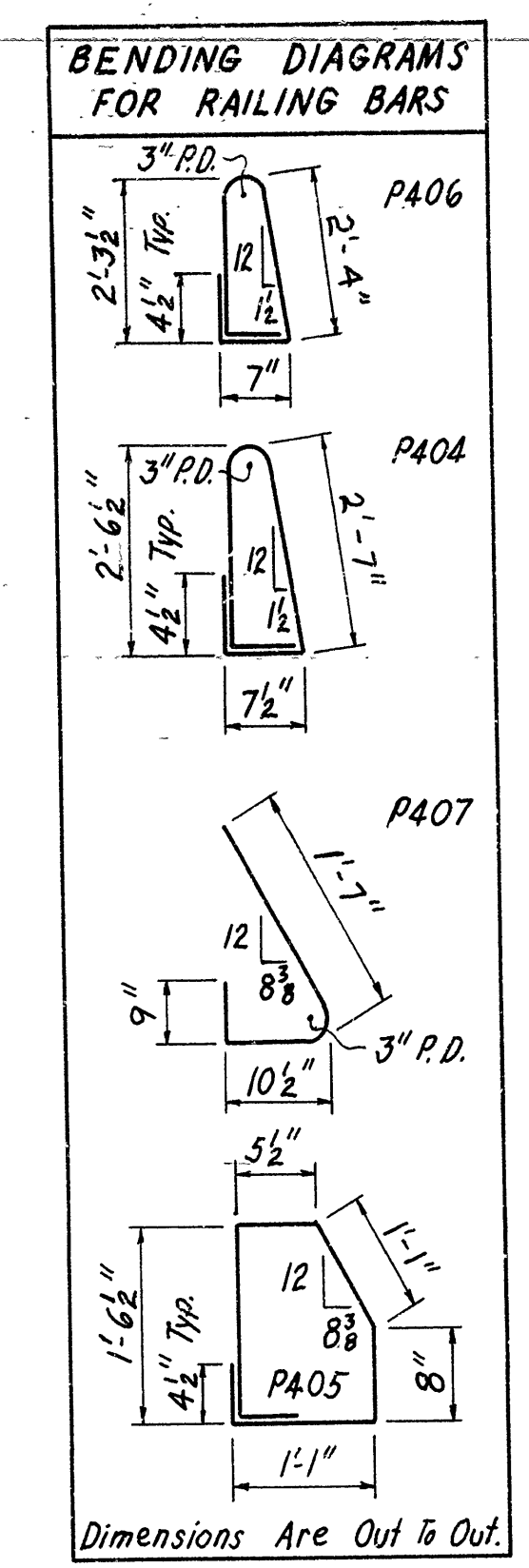
The Existing 10I25.4 (48" Flange Width) Crossbeams Which Extend Beyond The Existing Gutterline Require Strengthening By Field Drilling And Bolting Two 1x12x25 Channels To The Web As Shown. The Existing 8W35 (88" Flg. Width) And 10W39 (8" Flg. Width) Crossbeams, Which Are All Located Adjacent To Expansion Or Contraction Joints, Do Not Require The Addition Of Channels. Clean Contact Surfaces According To The Std. Spec. Paint Channels In Accordance With Section 820 Of The Standard Specifications. Bolts Shall Be 3/4" A325 High Strength With 13/16" Open Holes. Payment For Field Drilling Shall Be As Specified In Job Special Provision "Remodeling Existing Main River Spans".



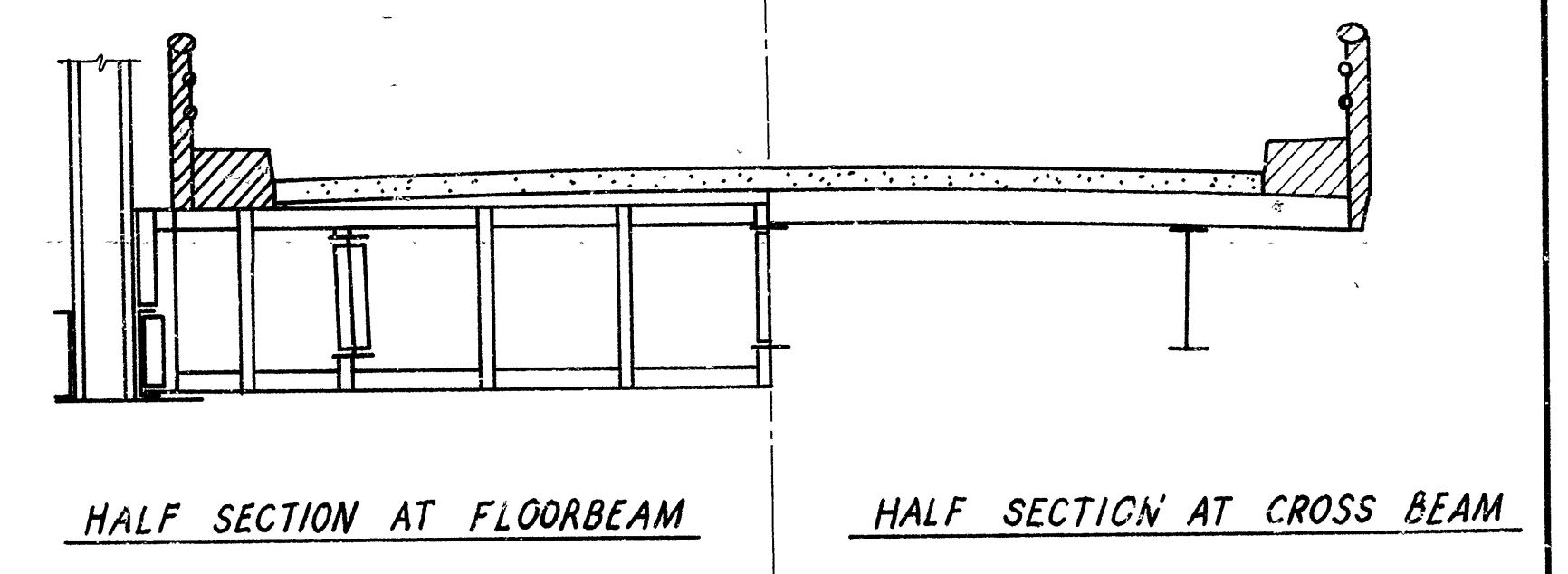
PARTIAL SECTION AT CROSSBEAM



PARTIAL SECTION AT FLOORBEAM



Dimensions Are Out To Out.



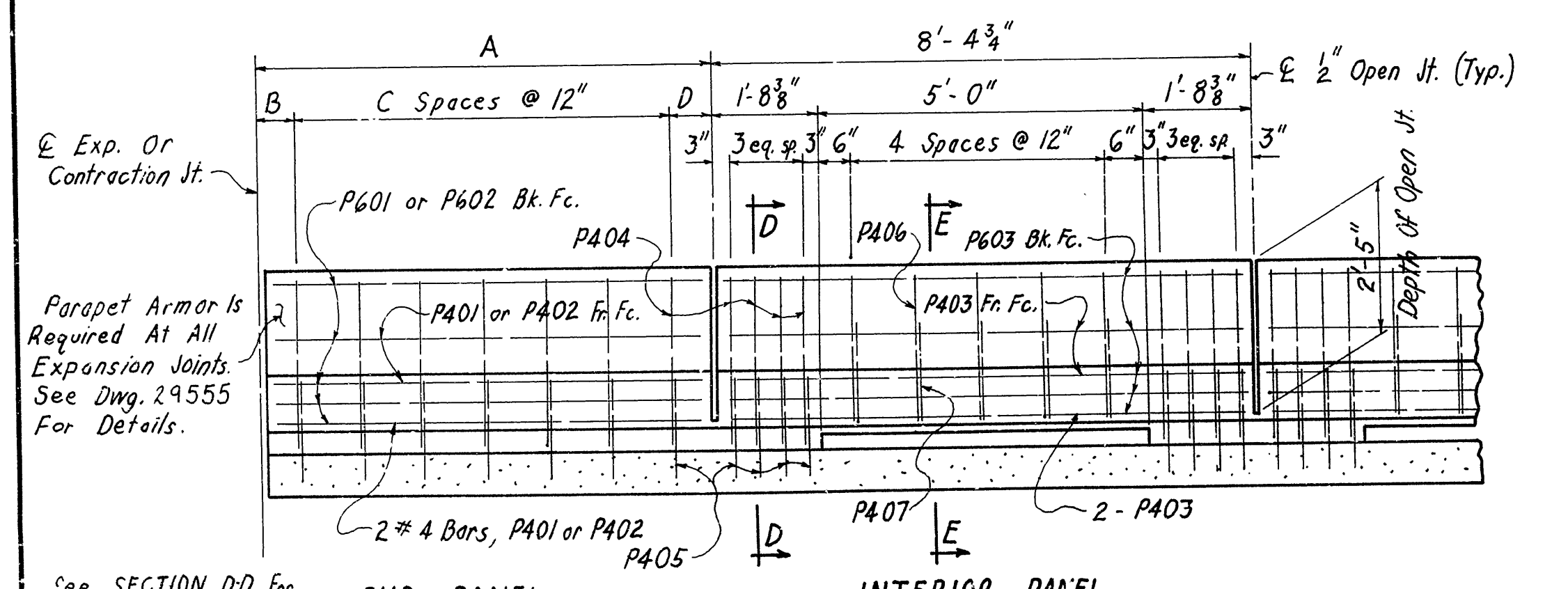
REMOVAL DETAIL FOR TRUSS SPANS

N.T.S.

Remove The Existing Railing And Curbs (The Cross Hatched Areas) Including The Vertical Steel Plates That Separate Curb Sections. The Top Surface Of The Floorbeam Or Cross Beam Shall Be Ground Smooth After Removal Of The Plate. The Plates Attached To The Floorbeams Over Piers 11, 12, 13, & 14 Are Not To Be Removed Completely. See The Detail Below. Remove Also The Existing Studs From Floorbeams And Crossbeams And Weld New Studs In Place As Shown In VIEW B-B.

PARAPET VARIABLES

A	B	C	D
9'-7 1/4"	5"	9	2 1/4"
9'-7"	5"	9	2"
9'-6 1/4"	4"	9	2 1/4"
9'-5 1/8"	4"	9	1 7/8"
7'-3 3/8"	7"	6	8 3/8"
7'-2 1/4"	7"	6	7 1/4"

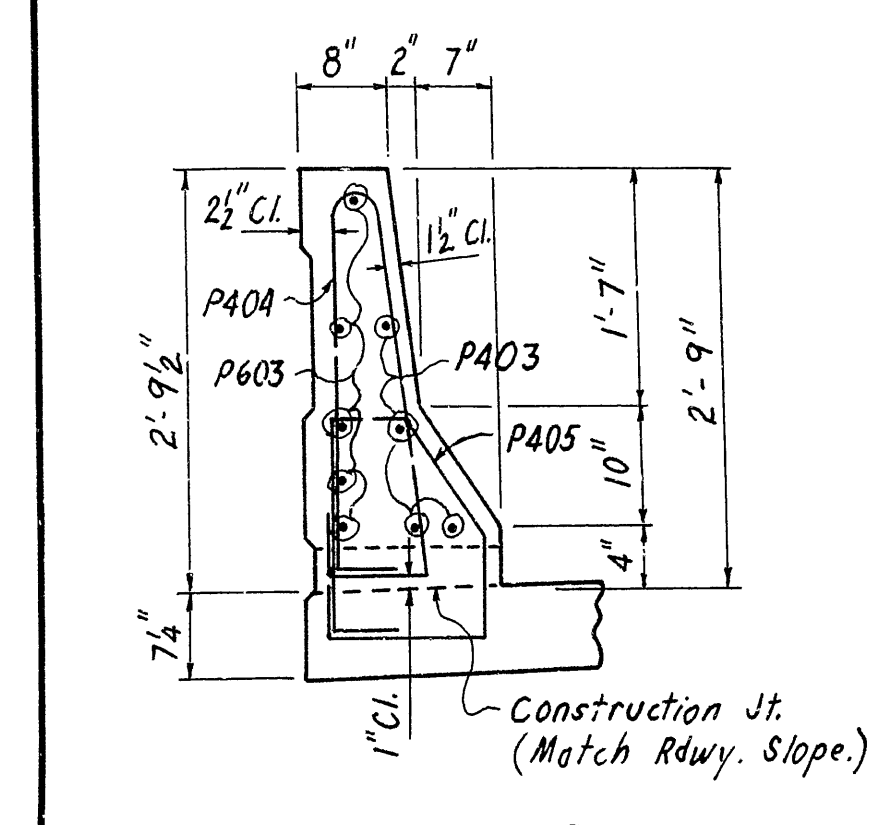


END PANEL

INTERIOR PANEL

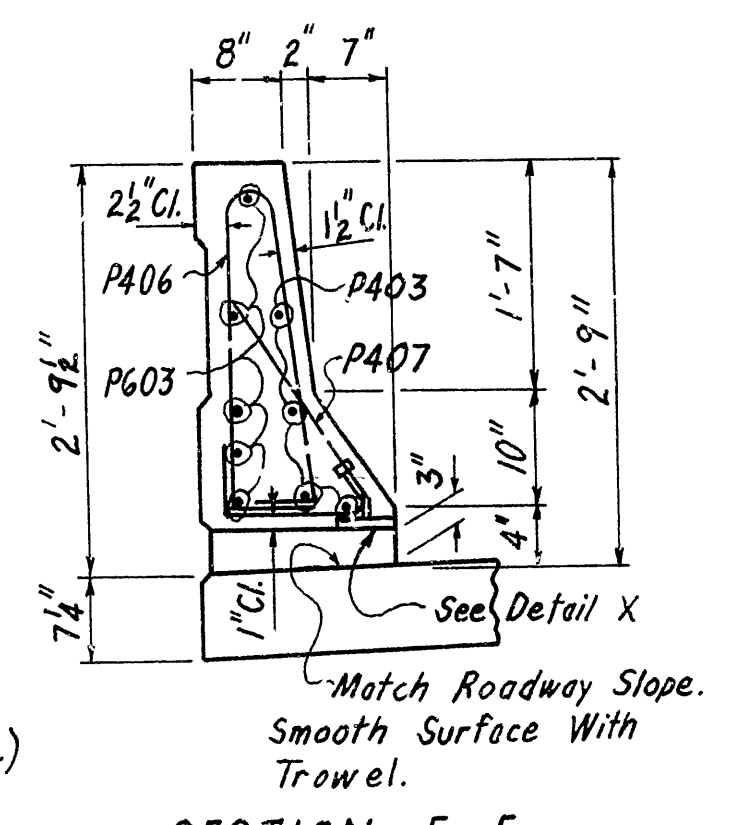
SECTION AT CURB FOR PARAPET RAILING

1/2" = 1'-0"



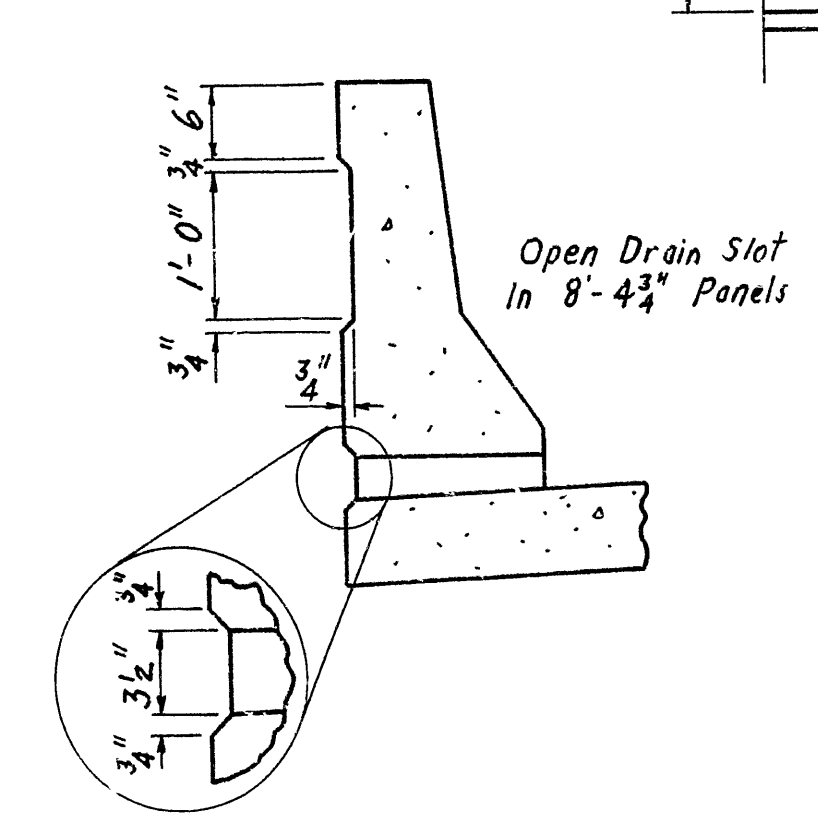
SECTION D-D

3/4" = 1'-0"



SECTION E-E

3/4" = 1'-0"

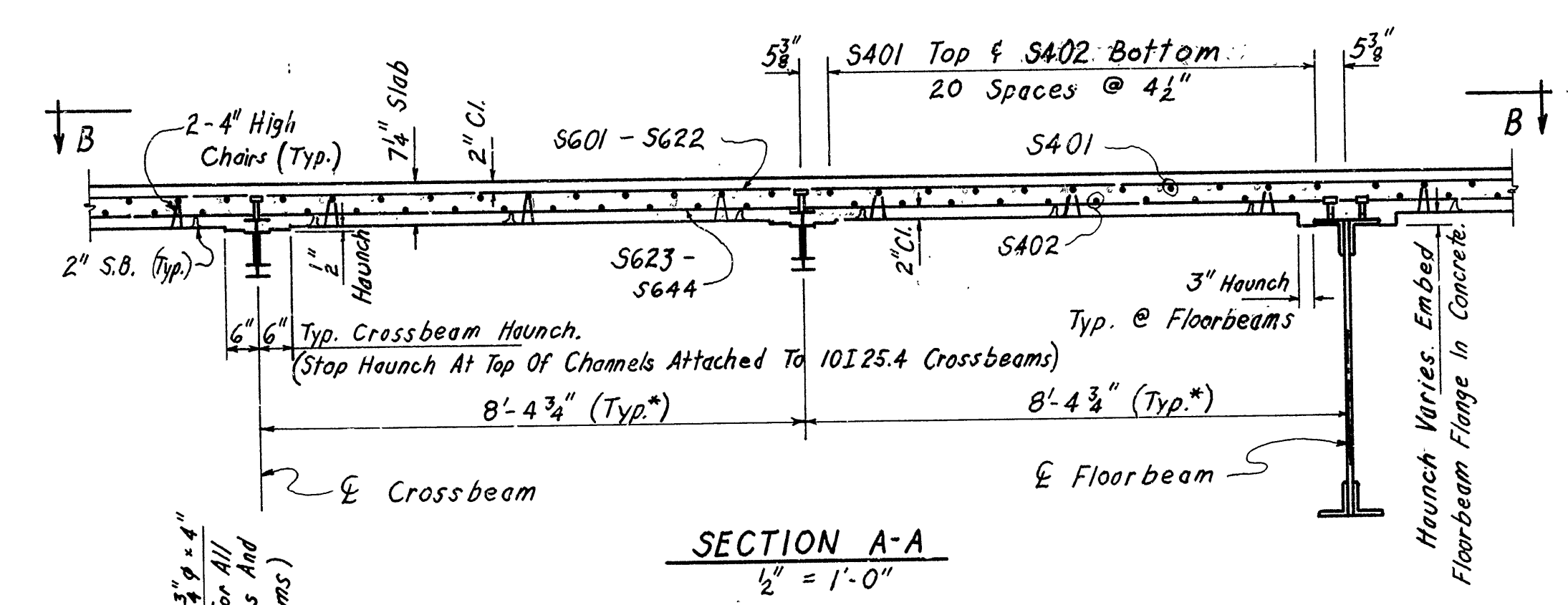


SECTION C-C

3/4" = 1'-0"

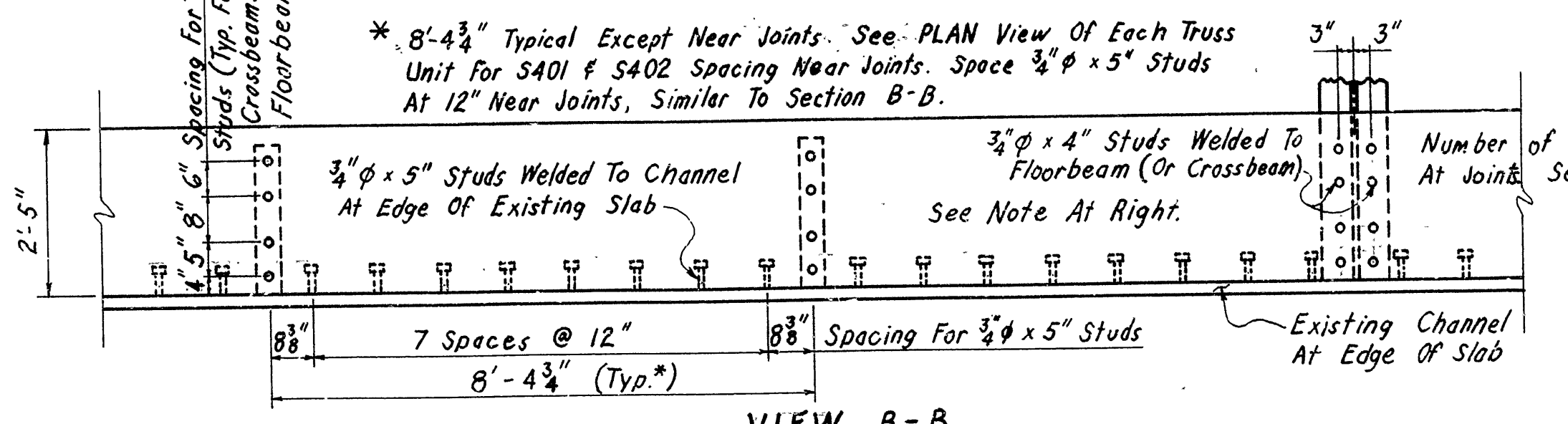
ROADWAY SECTION

3/4" = 1'-0"



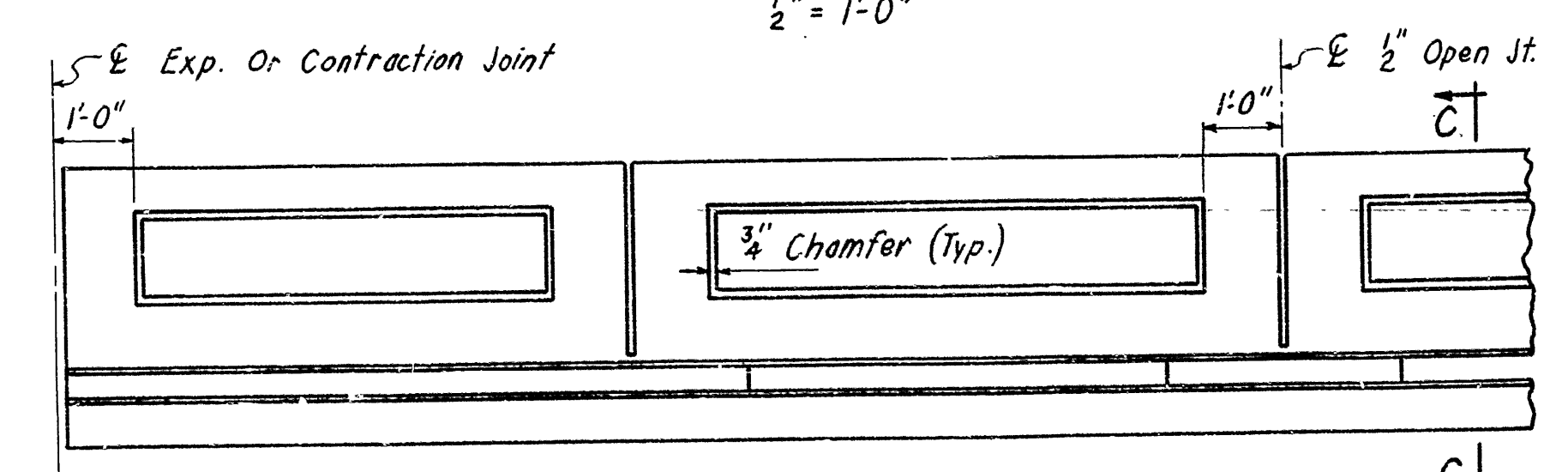
SECTION A-A

1/2" = 1'-0"



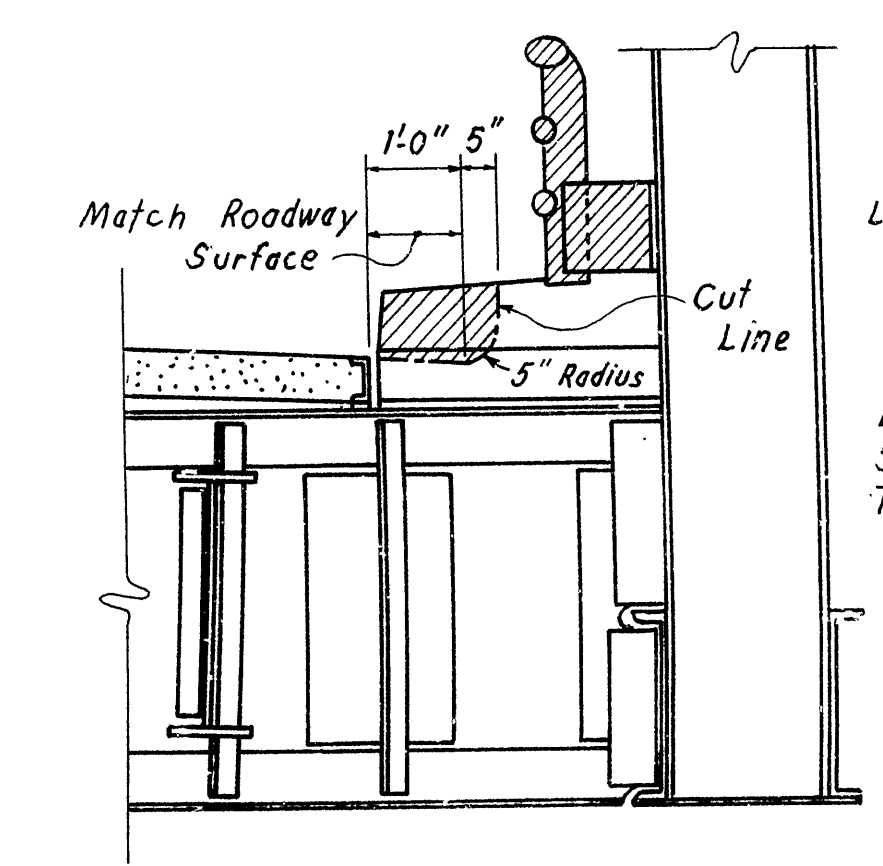
VIEW B-B

1/2" = 1'-0"



RAILING ENHANCEMENT ELEVATION

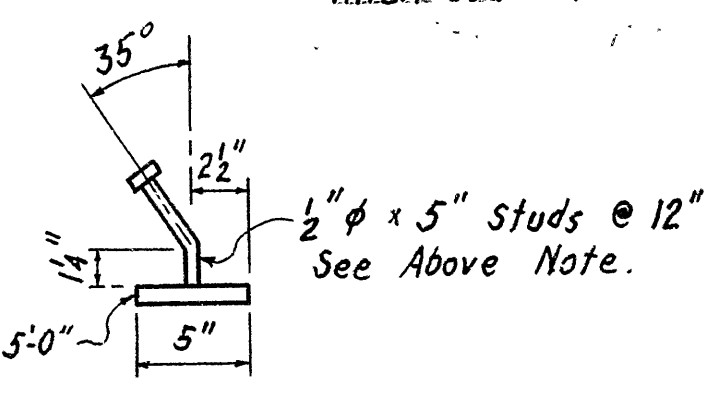
1/2" = 1'-0"



REMOVAL DETAIL AT PIERS 11, 12, 13, & 14

1/2" = 1'-0"

The 1/2" x 5" Studs Shown In Detail X And The 3/4" x 4" & 3/4" x 5" Studs Shown In VIEW B-B Shall Be Granular Flux Filled, Solid Fluxed, Or Equal And Automatically Welded. All Studs And The 3/4" x 5" Plates (Shown In Detail X) Shall Be Measured And Paid For As "Structural Steel In Truss Spans (A36)". The Surfaces Of The 3/4" x 5" Plates Which Will Not Be In Contact With Concrete Shall Receive Two Coats Of Paint In The Shop. These Coats Shall Be Those Specified As Shop Prime Coat And Finish Coat In Subsection 807.59.



DETAIL X

N.T.S.

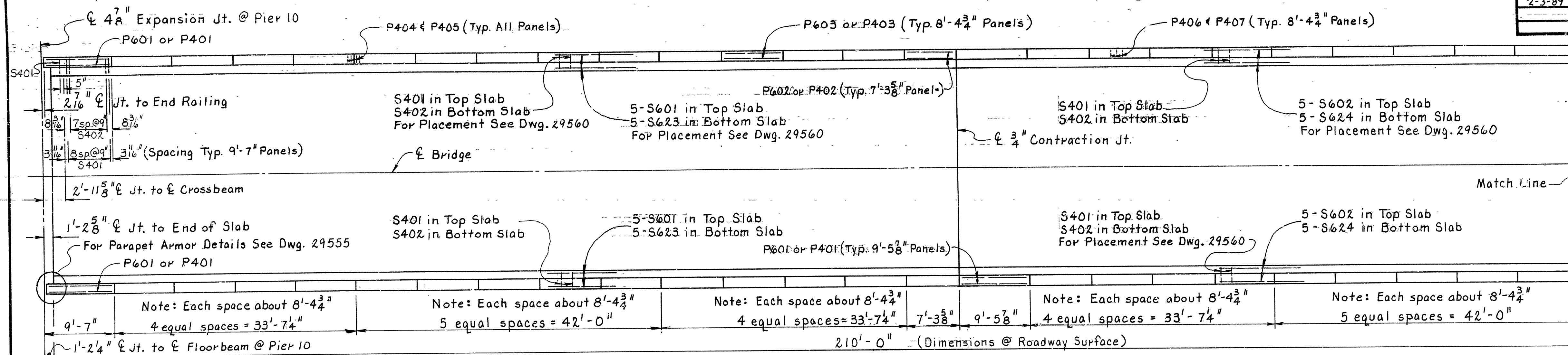
SHEET 1 OF 6
DETAILS OF TRUSS SPANS
HELENA BRIDGE
ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

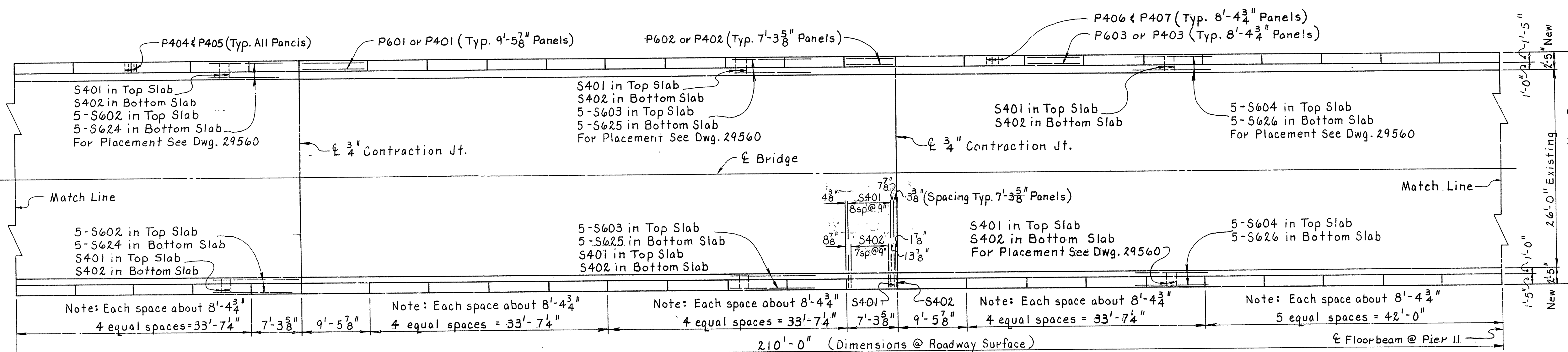
DRAWN BY: MCC DATE: 10-23-87
CHECKED BY: C.J.F. DATE: 12-17-87
DESIGNED BY: MCC DATE: 10-23-87
BRIDGE NO. 2899R DRAWING NO. 29560
SCALE: As Noted

BRIDGE ENGINEER

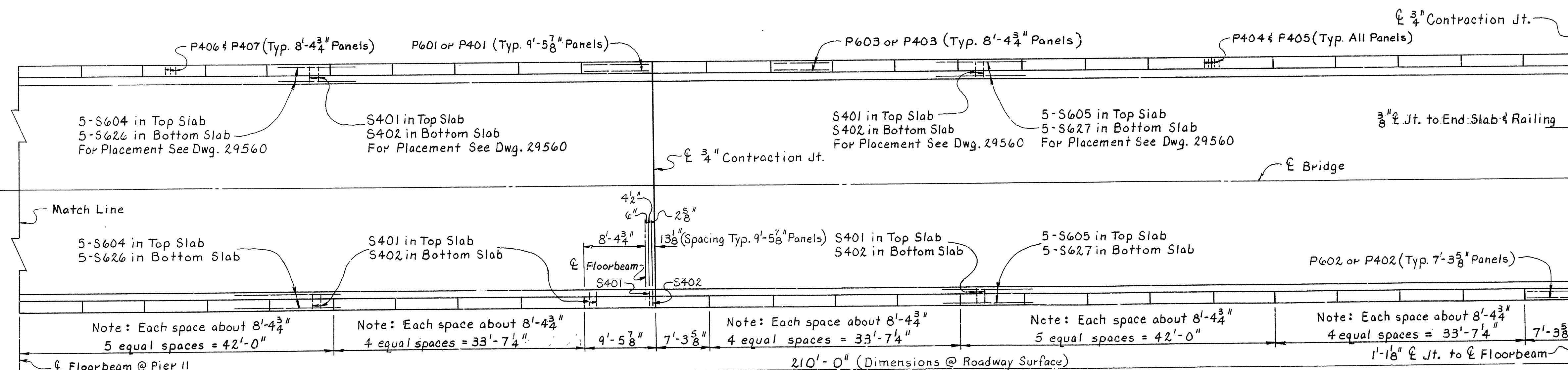
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	MISS. JOB NO.	SHEET NO.	TOTAL SHEETS
2-3-87	6-13-89			6	ARK.	85-0057-01-002-10		
						ARK. JOB NO.	110104	28 58
						2899R	TRUSS SPANS	29561



PART PLAN UNIT 1



PART PLAN UNIT 1



PART PLAN UNIT 1

UNIT 1 - BAR LIST

Epoxy Coating	Mark	No. Req'd.	Length	Pin Dia.
	P401	40	9'-0"	Str.
	P402	40	6'-8"	Str.
	P403	520	8'-0"	Str.
	P404	1210	6'-4"	
	P405	1210	5'-2"	2"
	P406	650	5'-10"	2"
	P407	650	3'-2"	2"
	P601	50	9'-0"	Str.
	P602	50	6'-8"	Str.
	P603	650	8'-0"	Str.
Coated	S401	1646	2'-2"	Str.
	S402	1494	2'-2"	Str.
Coated	S601	30	43'-3"	Str.
Coated	S602	30	43'-8"	Str.
Coated	S603	20	43'-2"	Str.
Coated	S604	40	44'-4"	Str.
Coated	S605	30	42'-11"	Str.
	S623	30	43'-3"	Str.
	S624	30	43'-8"	Str.
	S625	20	43'-2"	Str.
	S626	40	44'-4"	Str.
	S627	30	42'-11"	Str.

See Bending Diagrams on Dwg. 29560

For Parapet Details, See Dwg. 29560
For Expansion and Contraction Joint Details,
See Dwg. 29566 - 29568

SHEET 2 OF 6
DETAILS OF TRUSS SPANS
HELENA BRIDGE
ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: D.H.P. DATE: 10-13-87

CHECKED BY: C.J.F. DATE: 12-17-87

DESIGNED BY: M.E.C. DATE: 9-17-87

SCALE: 1/8" = 1'-0"

BRIDGE NO. 2899R

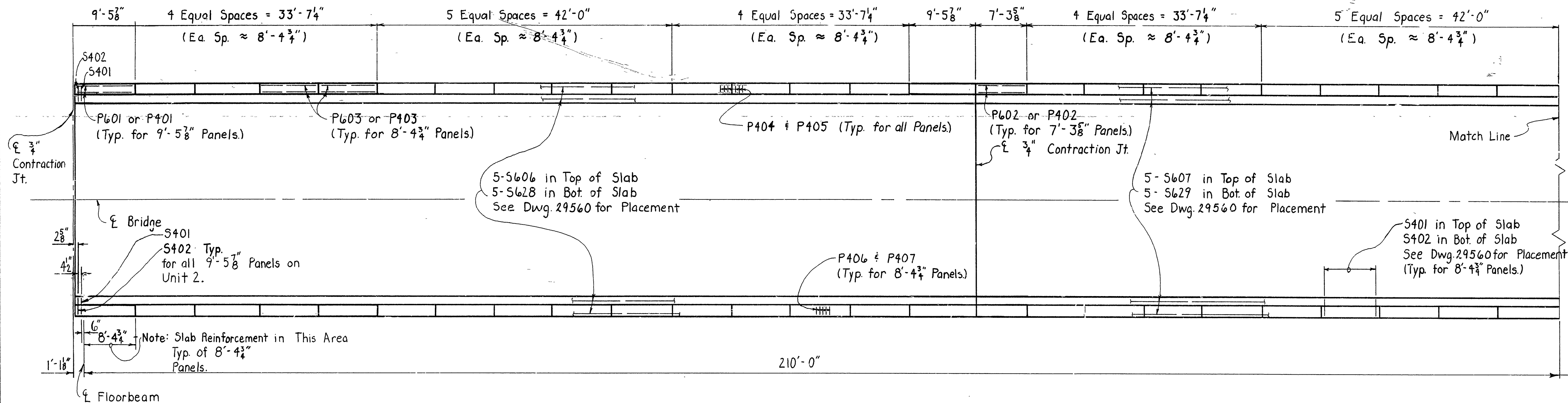
DRAWING NO. 29561

Visual Pinkerton
BRIDGE ENGINEER

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	MISS. JOB NO.	SHEET NO.	TOTAL SHEETS
2-3-89	6-14-89			6	ARK.	85-0057-01-00210		
						ARK. JOB NO.	110104	29 58

① 2899R TRUSS SPANS 24562

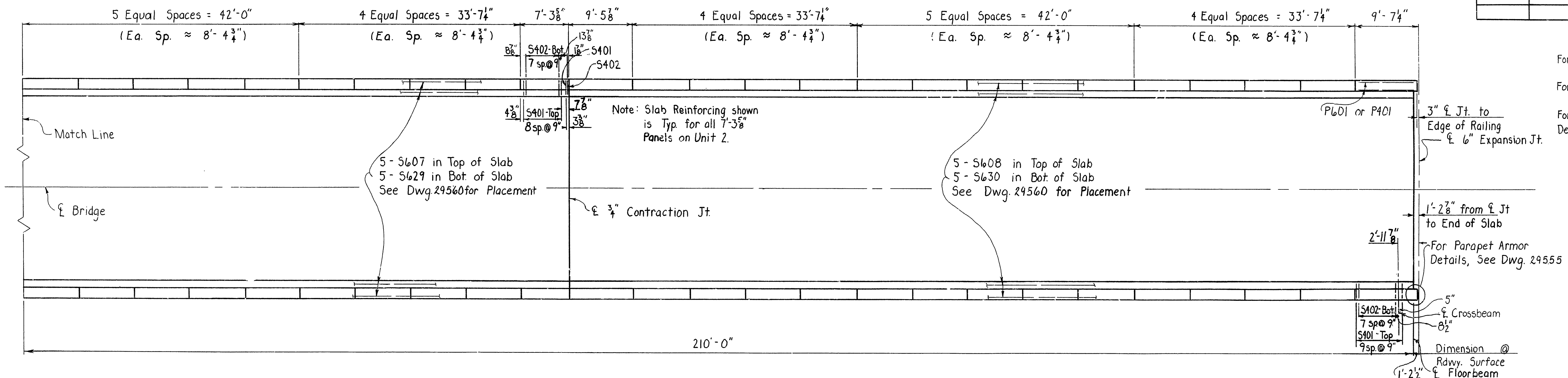
Note: Slab & Railing Reinforcing is Symm. about $\bar{C}$ Bridge.



PART PLAN - UNIT 2

UNIT 2 - BAR LIST

Epoxy Coating	Mark	No. Req'd	Length	Pin Dia.
	P401	32	9'-0"	Str.
	P402	16	6'-8"	Str.
	P403	352	8'-0"	Str.
	P404	812	6'-4"	2"
	P405	812	5'-2"	2"
	P406	440	5'-10"	2"
	P407	440	3'-2"	2"
	P601	40	9'-0"	Str.
	P602	20	6'-8"	Str.
	P603	440	8'-0"	Str.
Cont'd	S401	1100	2'-2"	Str.
	S402	998	2'-2"	Str.
Coated	S606	30	44'-4"	Str.
Coated	S607	30	56'-11"	Str.
Coated	S608	30	44'-4"	Str.
	S628	30	44'-4"	Str.
	S629	30	56'-11"	Str.
	S630	30	44'-4"	Str.



PART PLAN - UNIT 2

For Bending Diagrams, See Dwg. 29560

For Parapet Details, See Dwg. 29560

For Expansion & Contraction Jt. Details, See Dwg. 29566-29568

SHEET 3 OF 6
DETAILS OF TRUSS SPANS
HELENA BRIDGE
ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

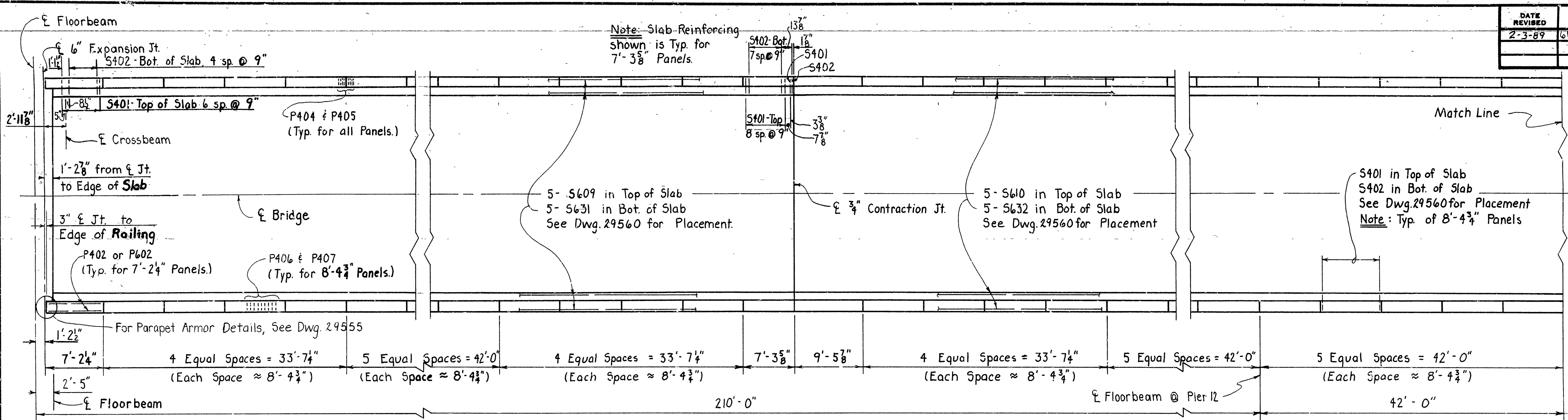
DRAWN BY: SML DATE: 10-13-87
CHECKED BY: C.J.F. DATE: 12-17-87
DESIGNED BY: M.E.C. DATE: 9-17-87

BRIDGE NO. 2899R DRAWING NO. 29562

Vernon Pinkerton
BRIDGE ENGINEER

SCALE: 1/8" = 1'-0"

DATE REVISION	DATE REVISION	DATE REVISION	DATE REVISION	FED. ROAD DIST. NO.	STATE	MISS. JOB NO.	SHEET NO.	TOTAL SHEETS
2-3-89	6-15-2-9-89			6	ARK.	85-0057-01-002-10	30	58
						ARK. JOB NO.	110104	29563
							2899 R	SPAN

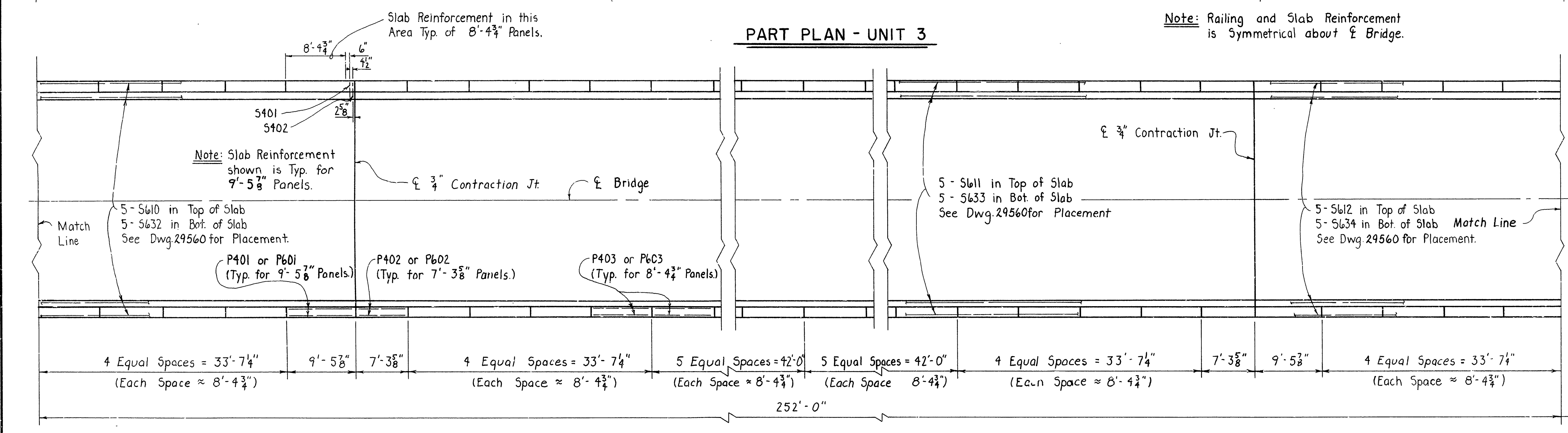


PART PLAN - UNIT 3

Note: Railing and Slab Reinforcement is Symmetrical about Bridge.

UNIT 3 - BAR LIST

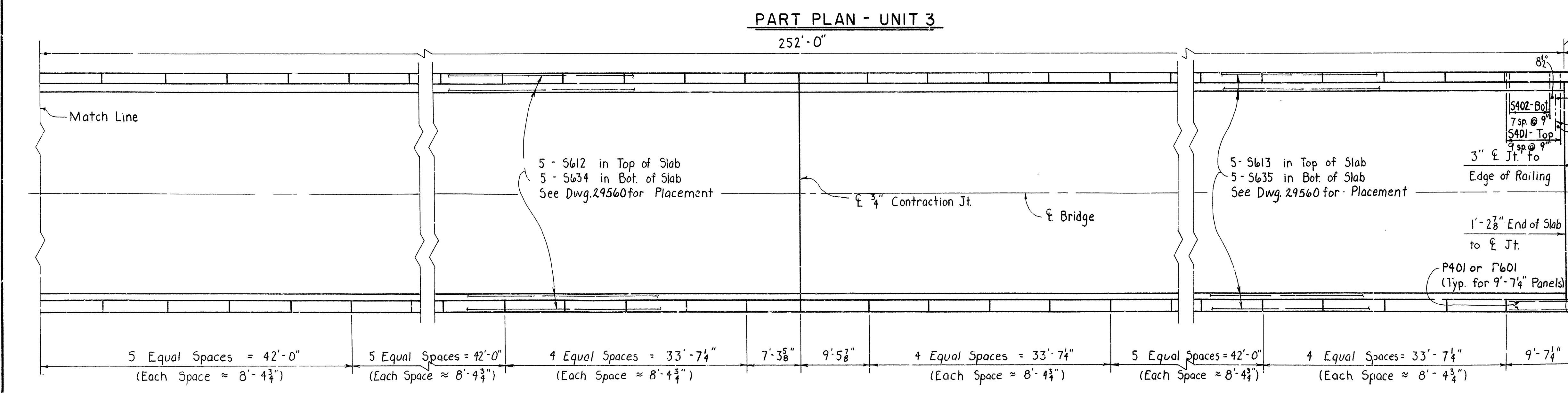
Epoxy Coating	Mark	No. Req'd.	Length	Pin Dia.
	P401	40	9'-0"	Str.
	P402	40	6'-8"	Str.
	P403	640	8'-0"	Str.
	P404	1450	6'-4"	2"
	P405	1450	5'-2"	2"
	P406	800	5'-10"	2"
	P407	800	3'-2"	2"
	P601	50	9'-0"	Str.
	P602	50	6'-8"	Str.
	P603	800	8'-0"	Str.
Coated	S401	1970	2'-2"	Str.
Coated	S402	1786	2'-2"	Str.
Coated	S609	30	42'-9"	Str.
Coated	S610	40	43'-8"	Str.
Coated	S611	30	56'-11"	Str.
Coated	S612	30	57'-7"	Str.
Coated	S613	30	44'-4"	Str.
	S631	30	42'-6"	Str.
	S632	40	43'-8"	Str.
	S633	30	56'-11"	Str.
	S634	30	57'-7"	Str.
	S635	30	44'-4"	Str.



PART PLAN - UNIT 3

Dimension @ Rdwy. Surface

For Parapet Details, See Dwg. 29560
For Contraction & Expansion Jt. Details, See Dwg. 29566-29568



PART PLAN - UNIT 3

Dimension @ Rdwy. Surface

For Parapet Armor Details, See Dwg. 29555

SHEET 4 OF 6
DETAILS OF TRUSS SPANS
HELENA BRIDGE
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: SML DATE: 10-15-87
CHECKED BY: C.J.F. DATE: 12-17-87
DESIGNED BY: MRC DATE: 7-17-87
BRIDGE NO. 2899R DRAWING NO. 29563
SCALE: 1/8" = 1'-0"

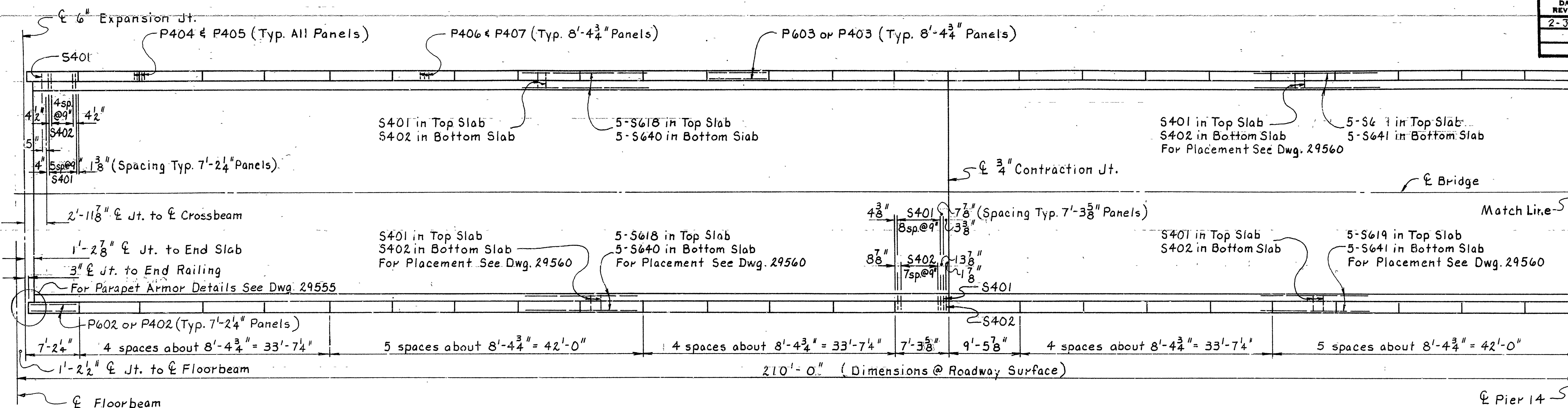
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	MISS. JOB NO.	SHEET NO.	TOTAL SHEETS
2-3-89	6-17-89			6	ARK.	65-0057-01-002-10		
						ARK. JOB NO.	110104	32 58
							2899 R TRUSS SPANS	29565

UNIT 5 - BAR LIST

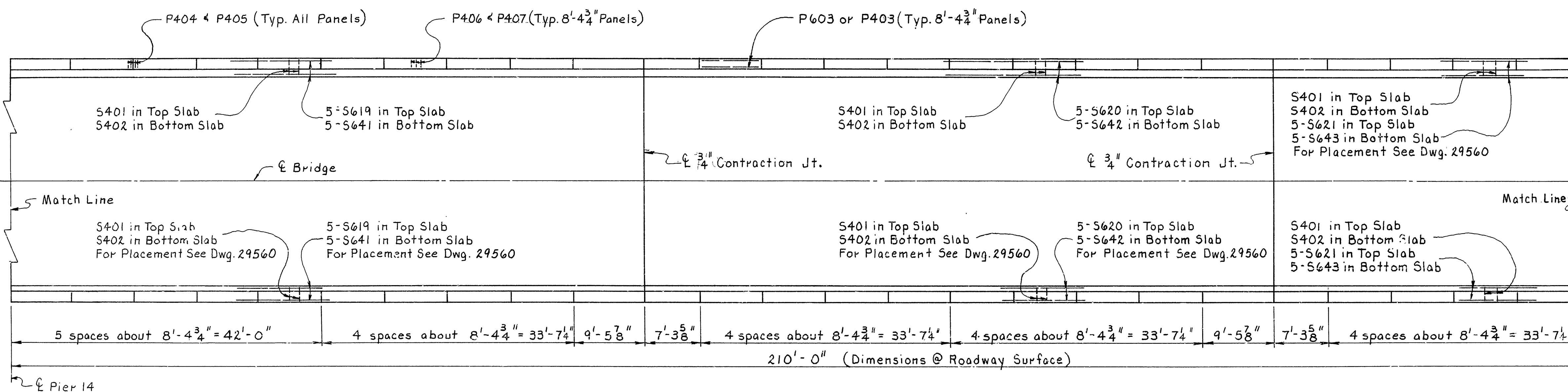
Epoxy Coating	Mark	No. Req'd.	Length	Pin Dia.
	P401	40	9'-0"	Str.
	P402	40	6'-8"	Str.
	P403	520	8'-0"	Str.
	P404	1210	6'-4"	2"
	P405	1210	5'-2"	2"
	P406	650	5'-10"	2"
	P407	650	3'-2"	2"
	P601	50	9'-0"	Str.
	P602	50	6'-8"	Str.
	P603	650	8'-0"	Str.
Coated	S401	1640	2'-2"	Str.
	S402	1486	2'-2"	Str.
Coated	S618	30	42'-9"	Str.
Coated	S619	40	44'-5"	Str.
Coated	S620	20	43'-2"	Str.
Coated	S621	30	43'-8"	Str.
Coated	S622	30	43'-7"	Str.
	S640	30	42'-9"	Str.
	S641	40	44'-5"	Str.
	S642	20	43'-2"	Str.
	S643	30	43'-8"	Str.
	S644	30	43'-7"	Str.

See Bending Diagrams on Dwg. 29560

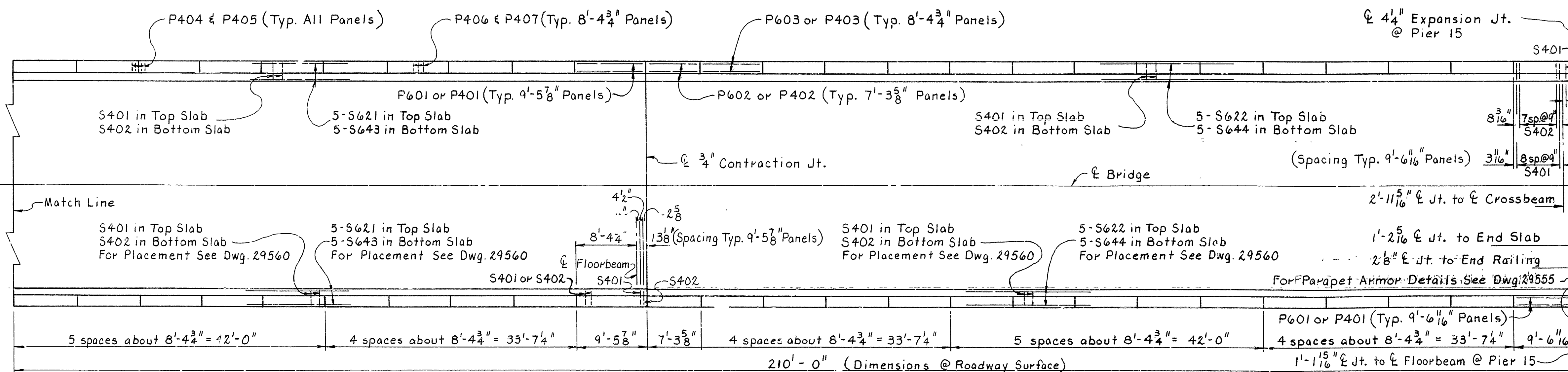
For Parapet Details, See Dwg. 29560
 For Expansion and Contraction Joint Details,
 See Dwg. 29566-29568



PART PLAN UNIT 5



PART PLAN UNIT 5



PART PLAN UNIT 5

SHEET 6 OF 6
 DETAILS OF TRUSS SPANS
 HELENA BRIDGE
 ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: D.H.P. DATE: 10-13-87

CHECKED BY: C.J.F. DATE: 12-17-87

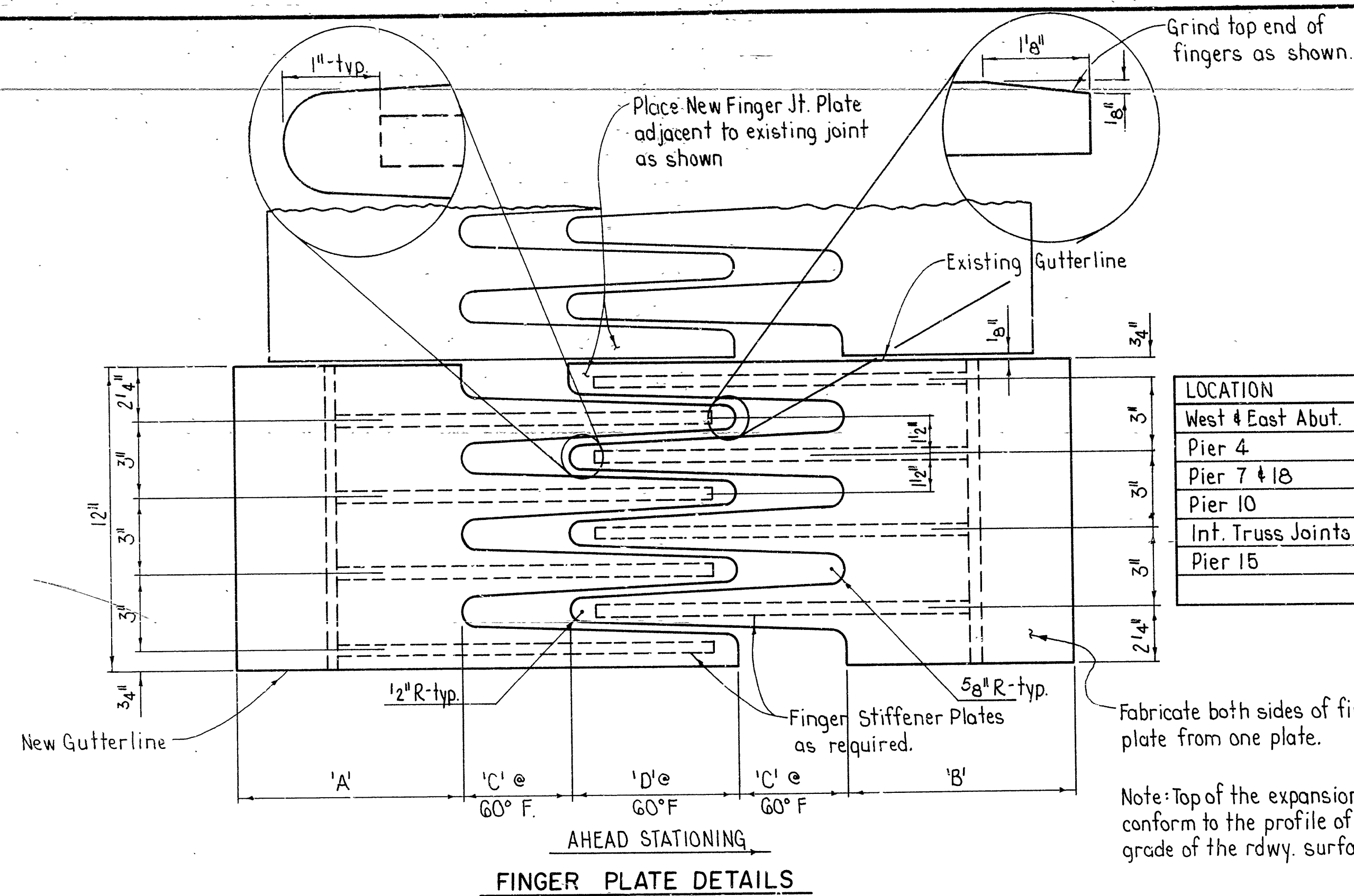
DESIGNED BY: MEC DATE: 9-17-87

SCALE: 1/8" = 1'-0"

BRIDGE NO. 2899 R DRAWING NO. 29565

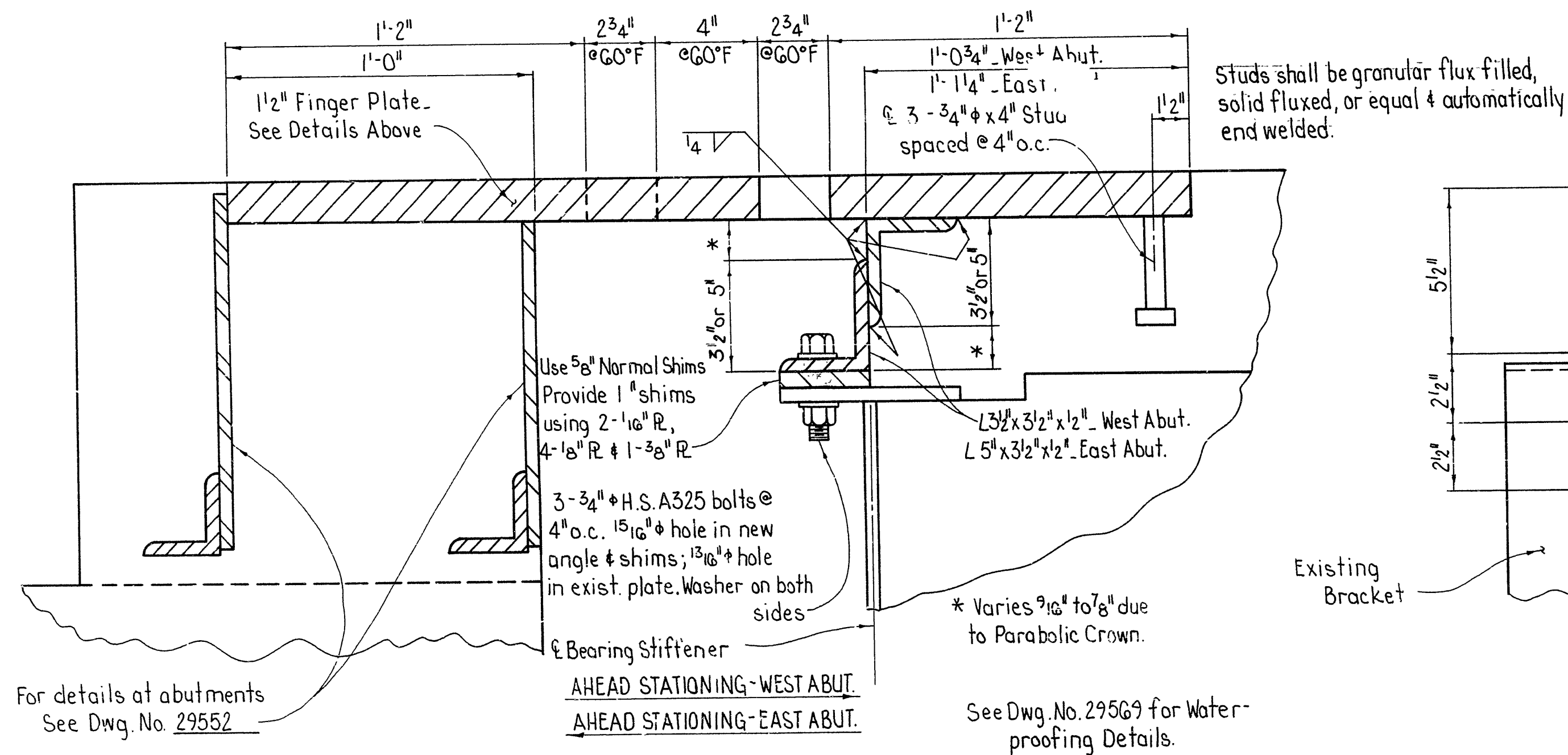
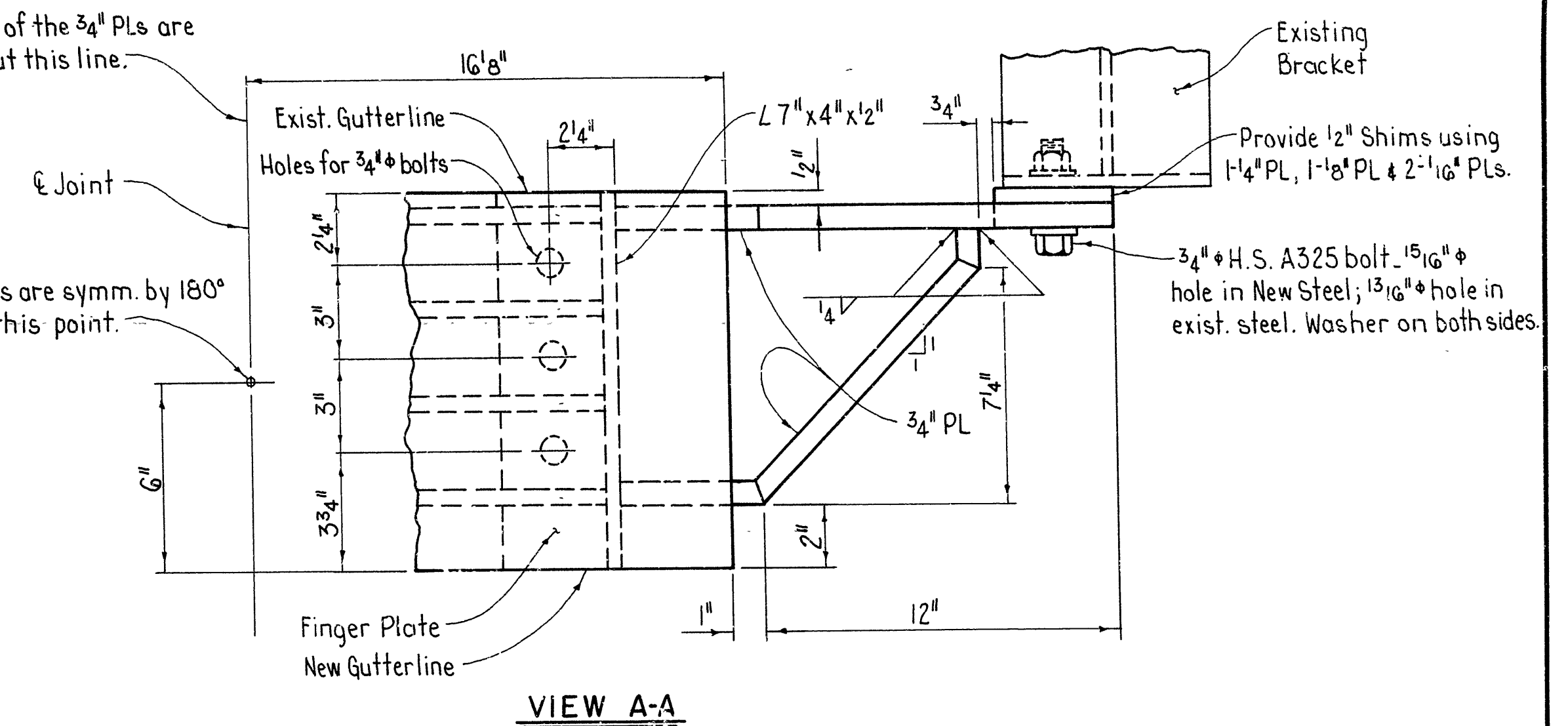
Paul Pinkerton
 BRIDGE ENGINEER

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	MISS. JOB NO.	SHEET NO.	TOTAL SHEETS
2-3-89	6-18-94			6	ARK.	85-0057-01-002-10		
						ARK. JOB NO.	110104	33 58
2899R - FINGER JOINTS - 29566								

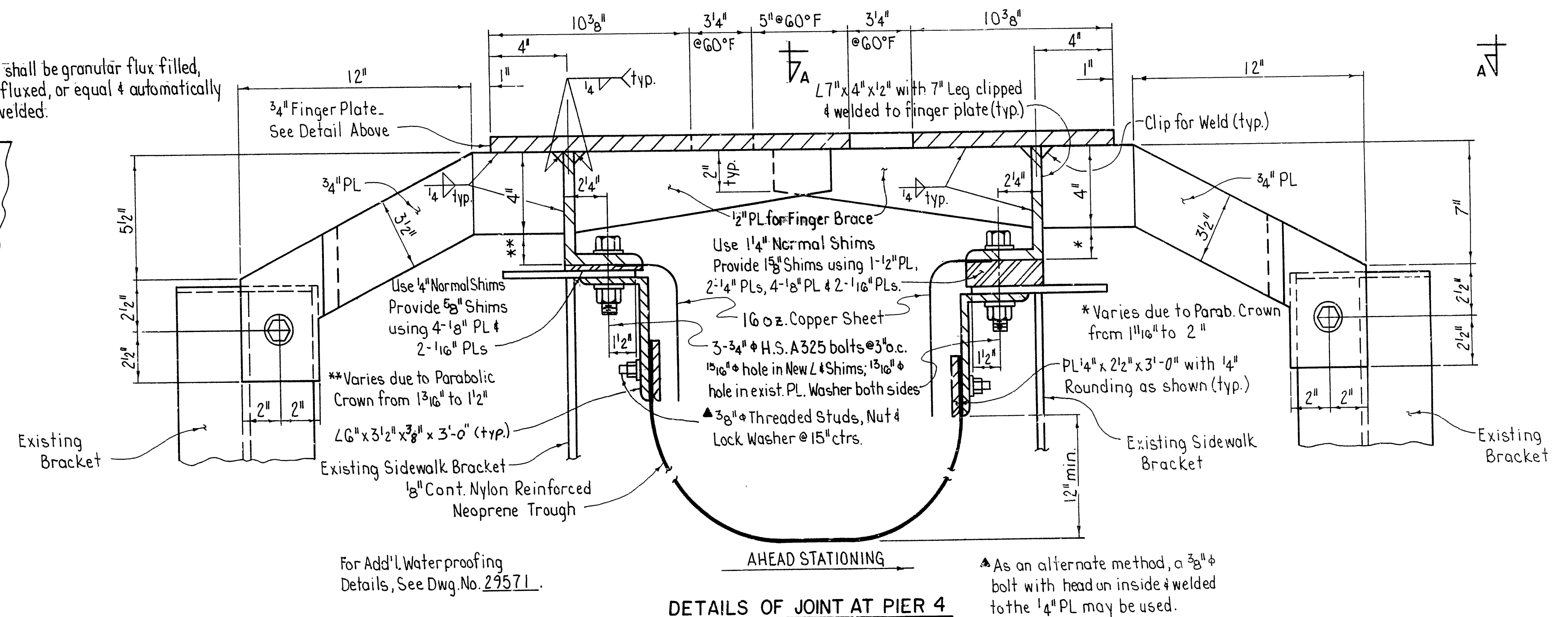


3/4" PLs & Connection of the 3/4" PLs are Opposite Hand about this line.

Holes for 3/4" bolts are symm. by 180° rotation about this point.



Studs shall be granular flux filled, solid fluxed, or equal & automatically end welded.



For 'GENERAL NOTES', See Dwg. No. 29546.

SHEET 1 OF 3
DETAILS OF FINGER JOINTS
HELENA BRIDGE
ROUTE 49 S.C. 11

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: KDH DATE: NOV 87
CHECKED BY: C.J.F. DATE: 1-19-88
DESIGNED BY: M.E.C. DATE: 7-17-87

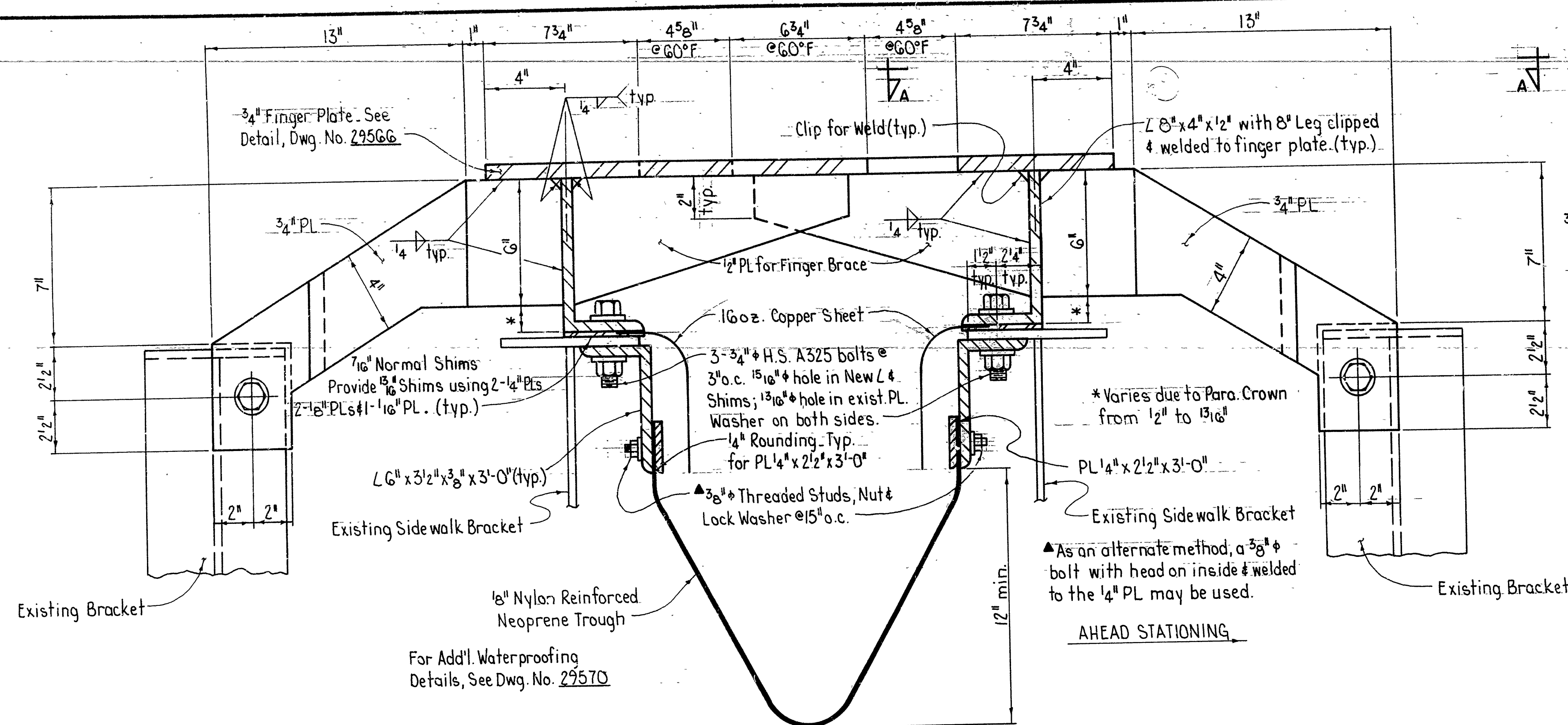
SCALE: 3" = 1'-0"

BRIDGE NO. 2899R

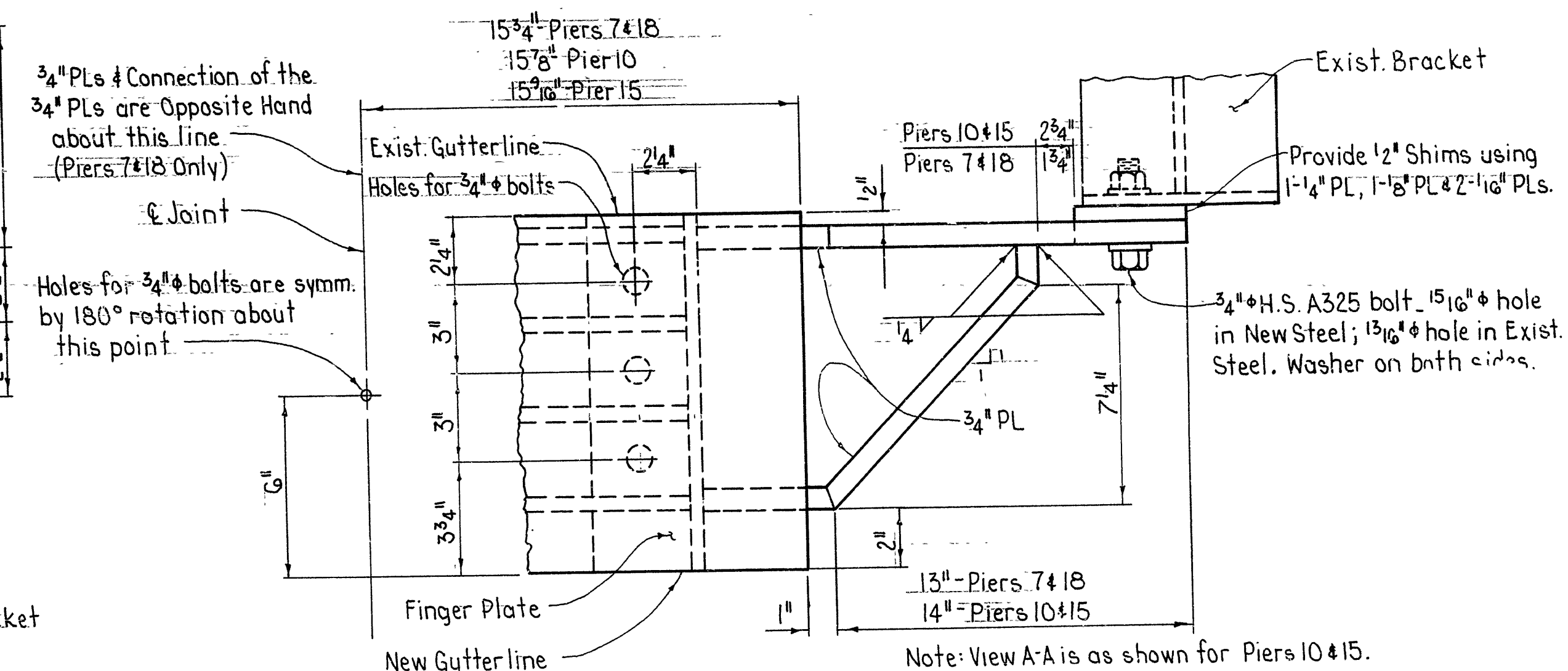
DRAWING NO. 29566

Verel Pinkerton
BRIDGE ENGINEER

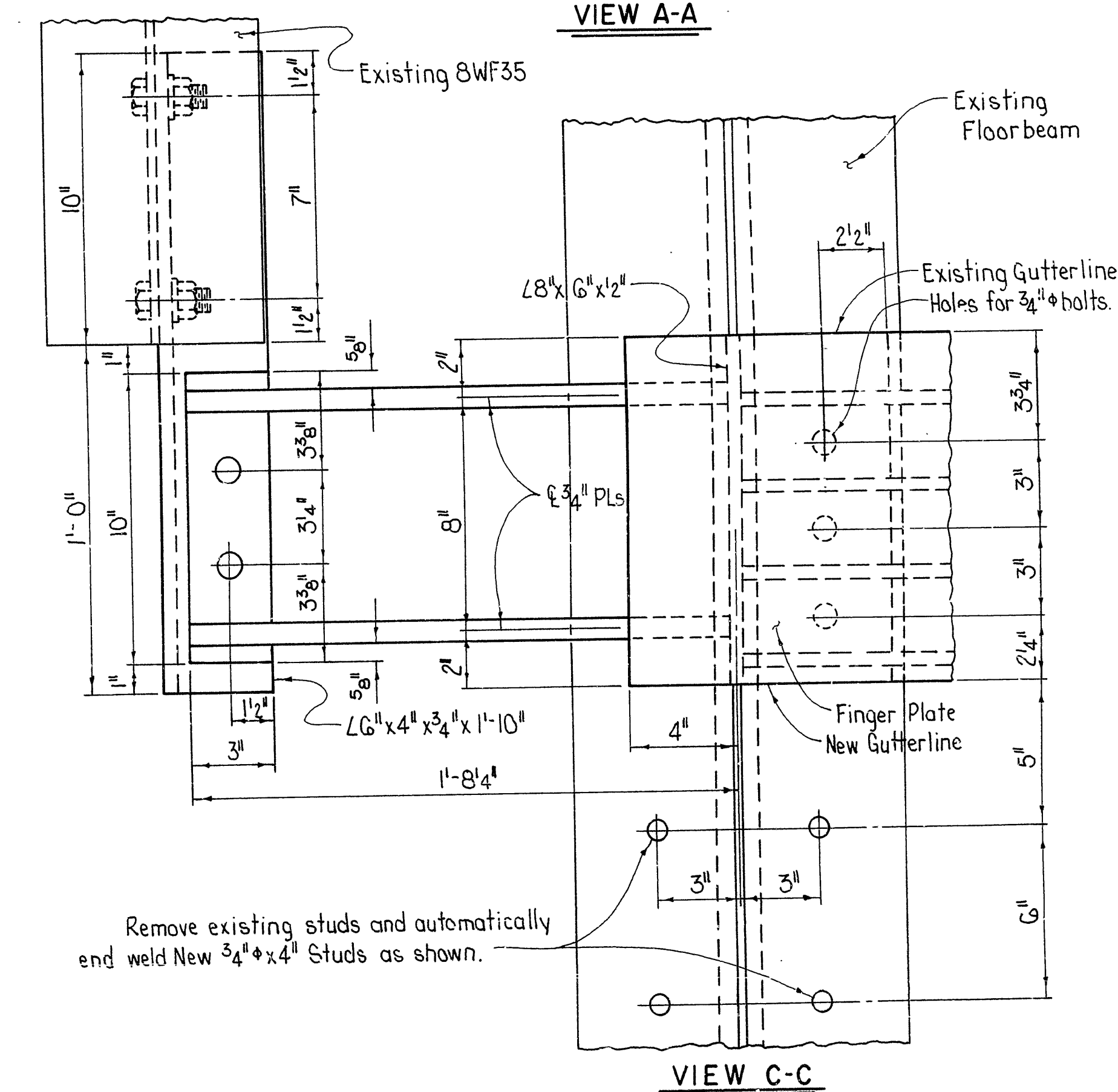
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	MISS. JOB NO.	SHEET NO.	TOTAL SHEETS
2-3-89	6-19-89			6	ARK.	85-0057-01-002-10		
				ARK. JOB NO.		110104	34	58
1 2899R - FINGER JOINTS - 29567								



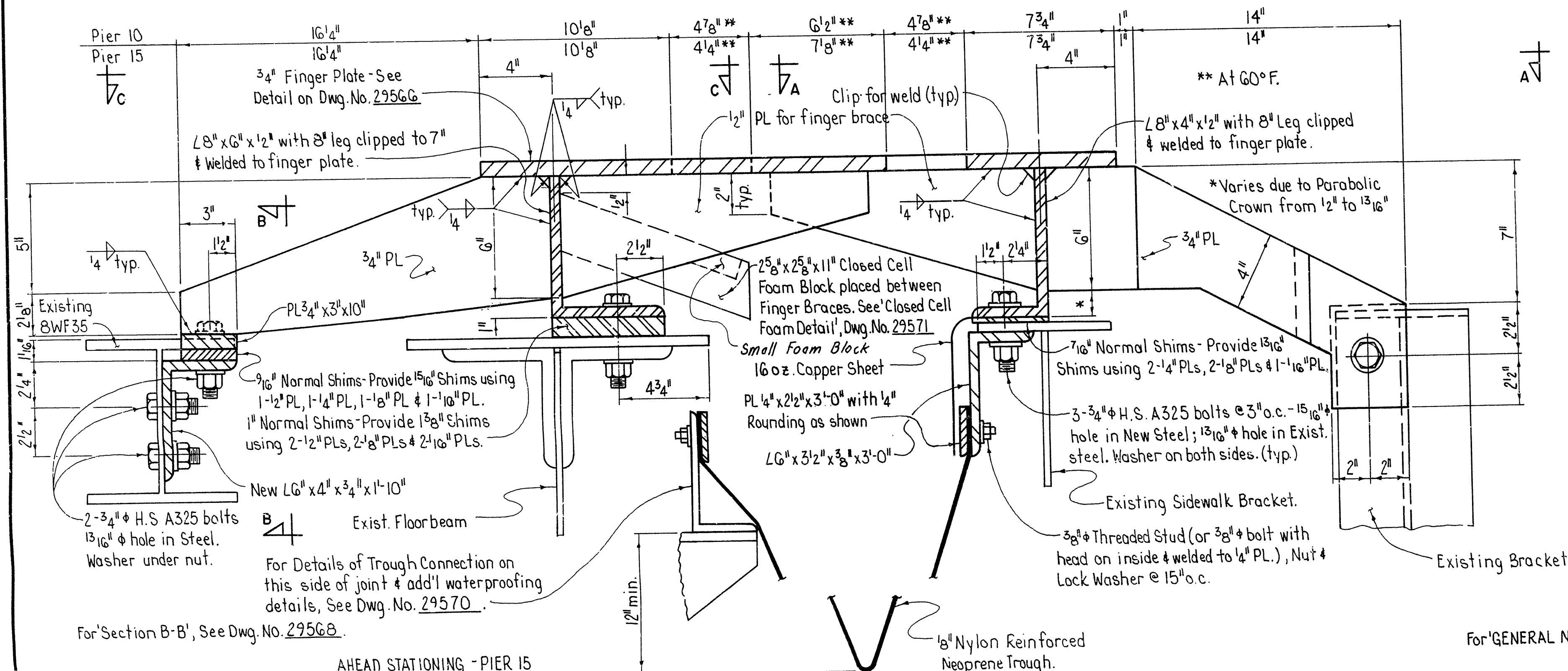
DETAILS OF JOINT AT PIERS 7 & 18



VIEW A-A



VIEW C-C



DETAILS OF JOINTS AT PIERS 10 & 15

For 'GENERAL NOTES', See Dwg. No. 29546.

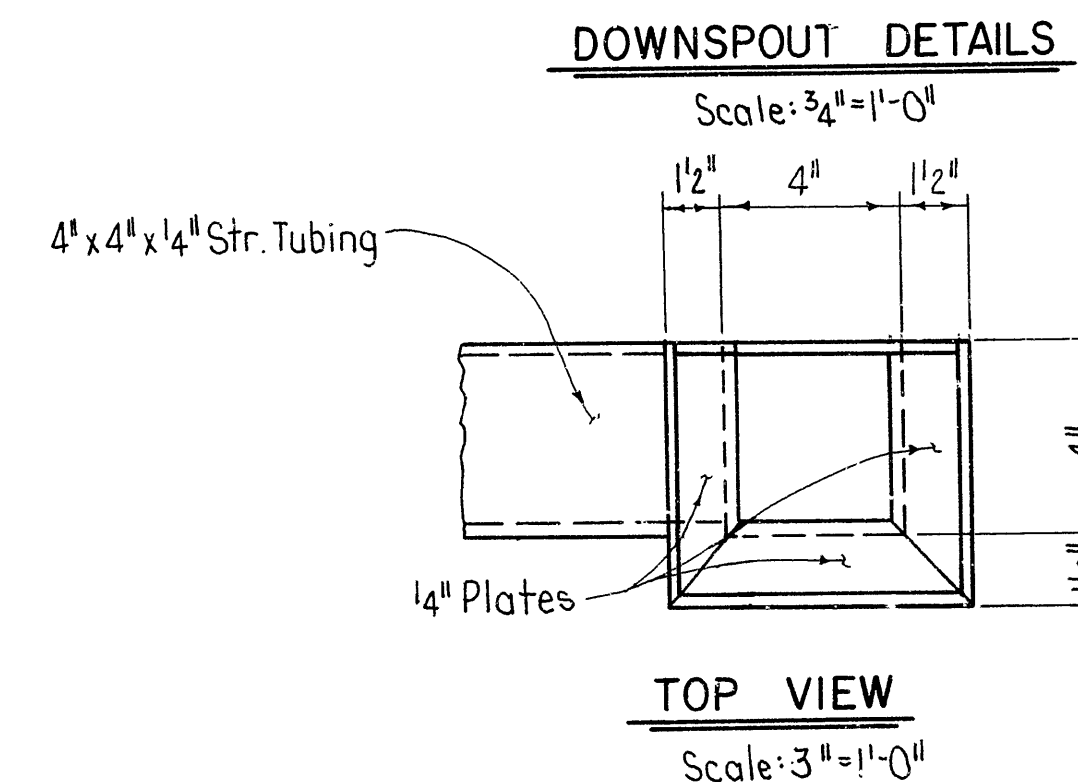
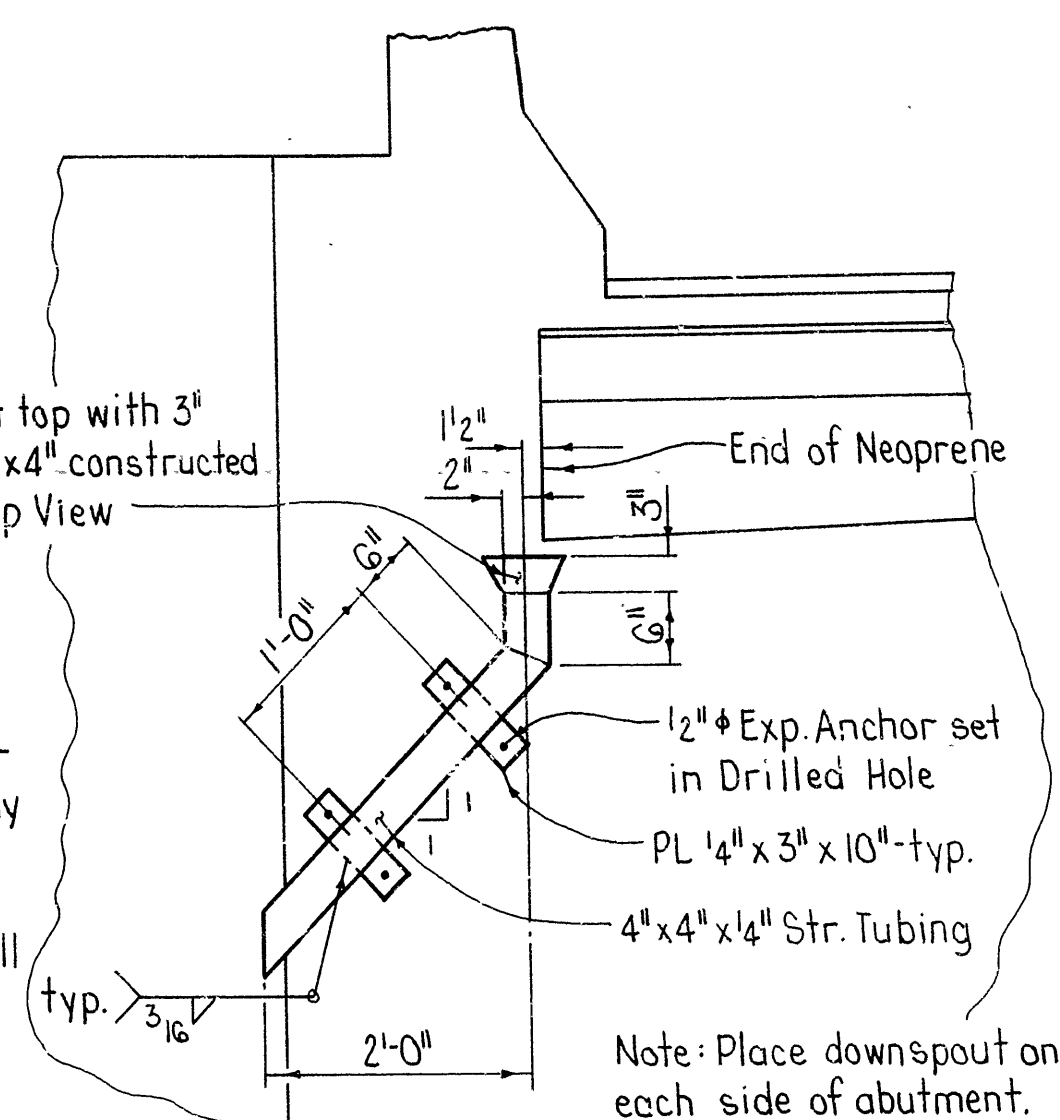
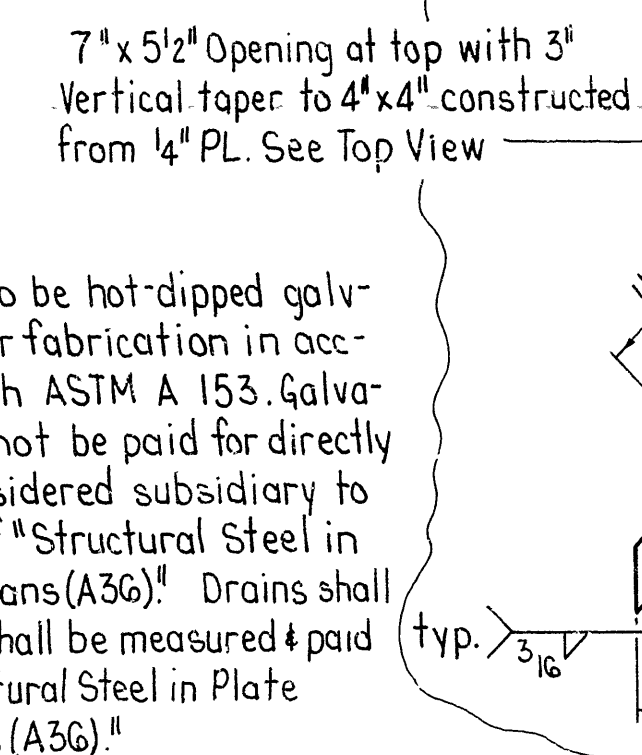
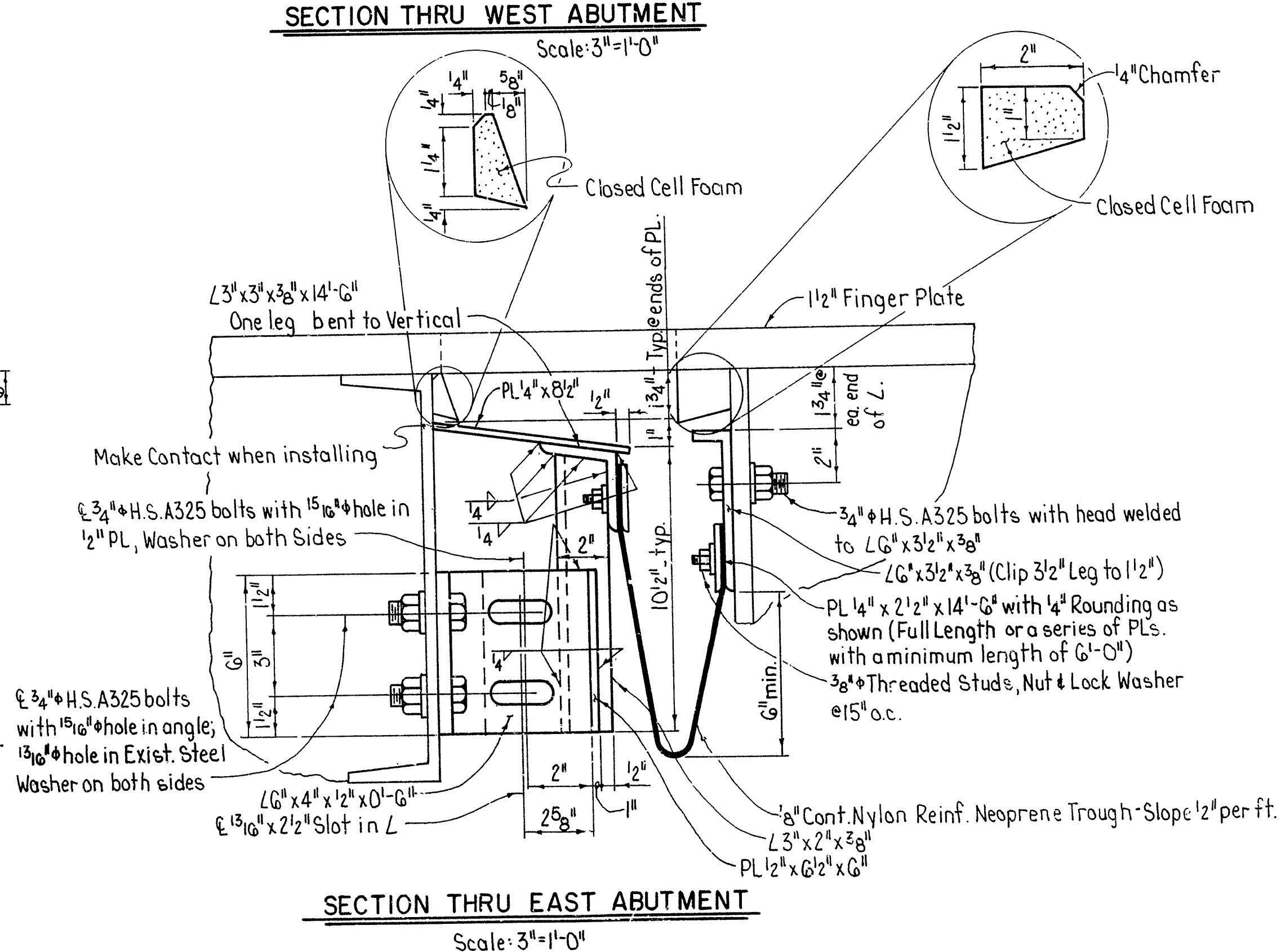
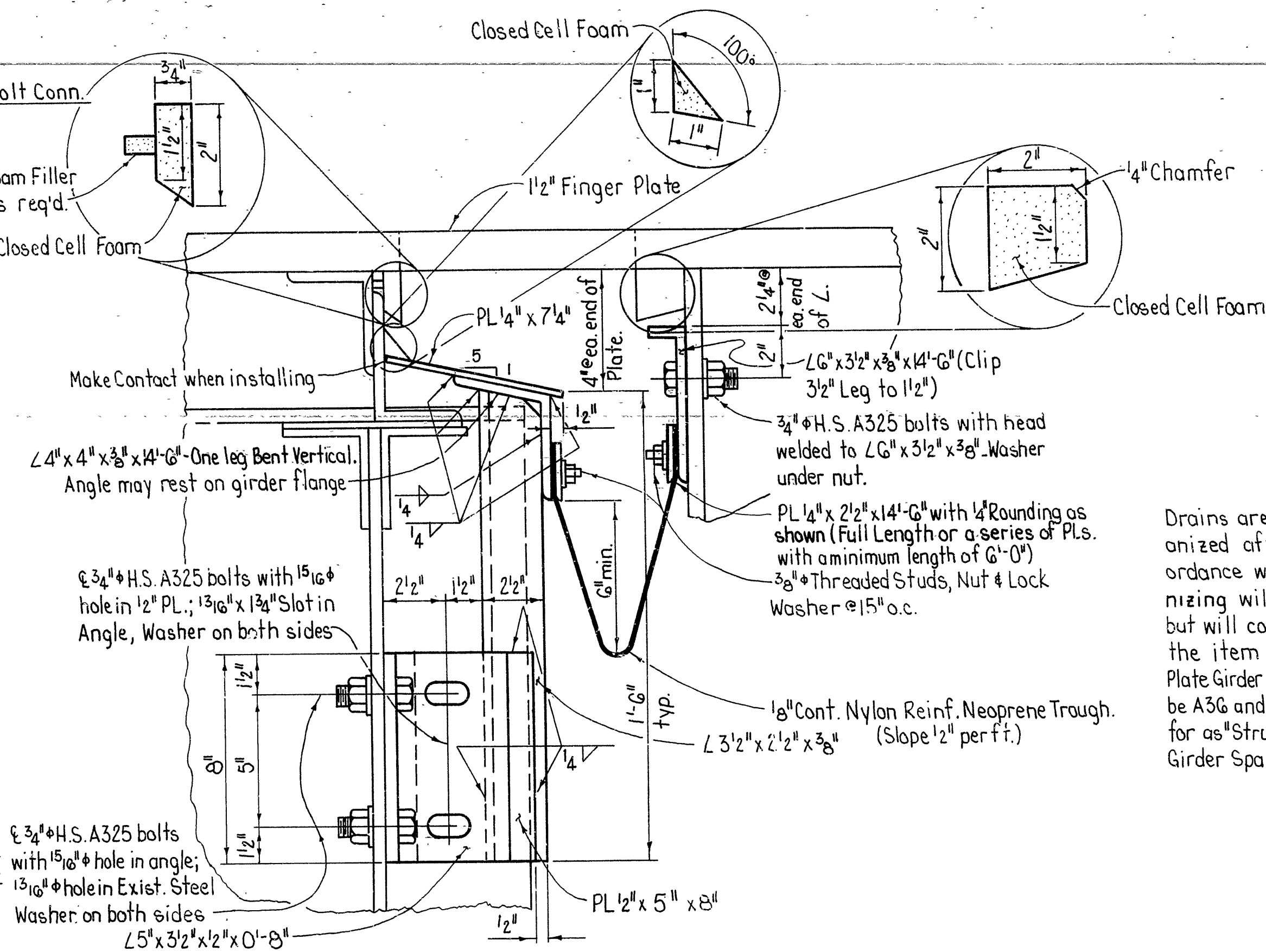
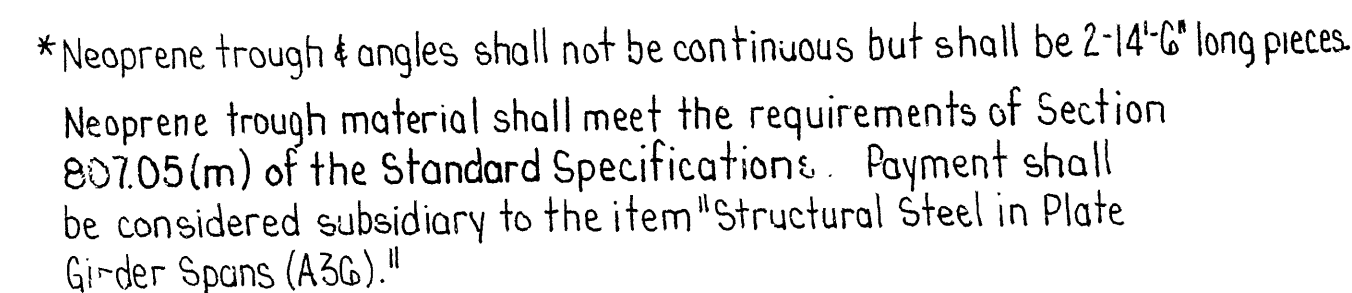
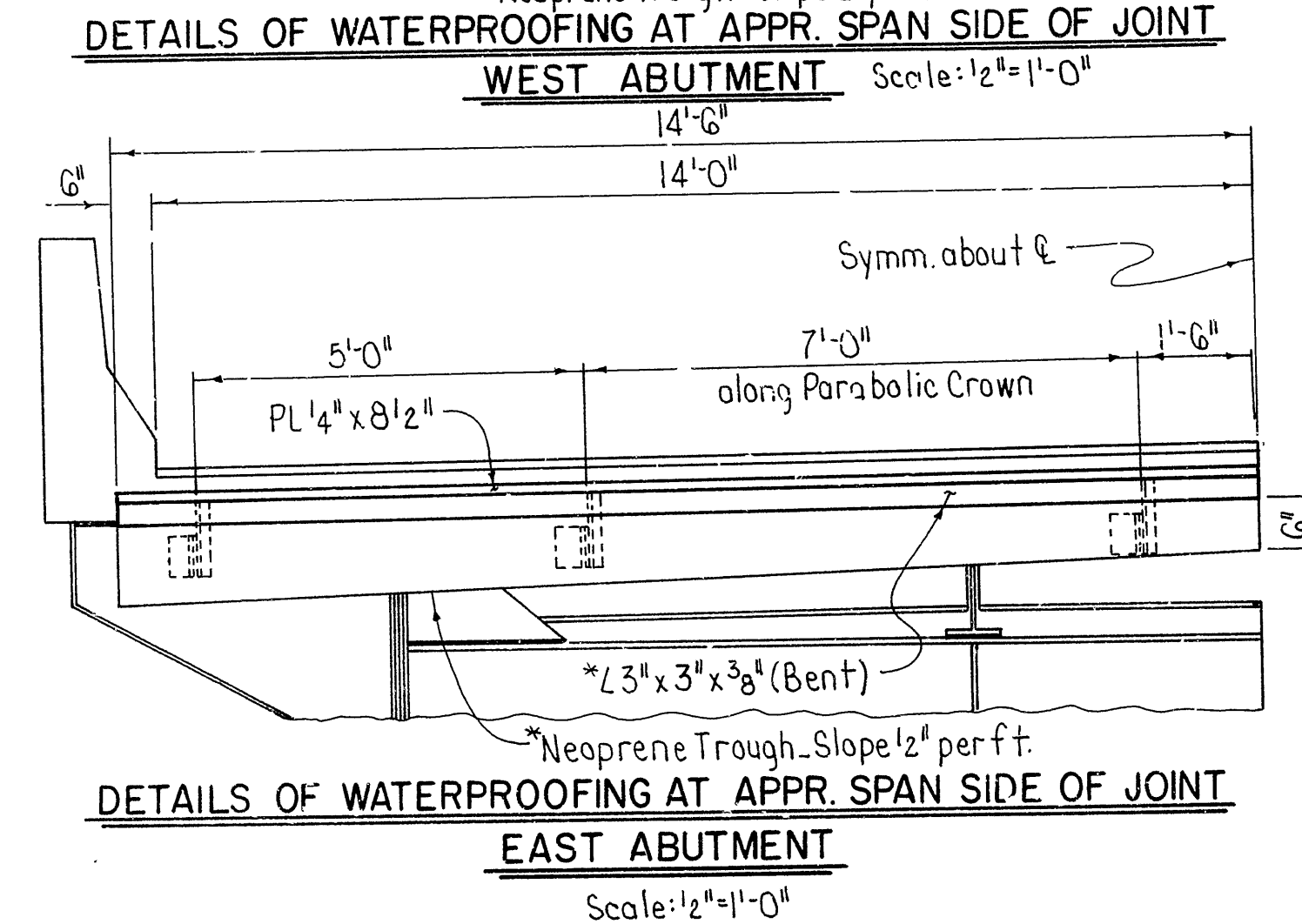
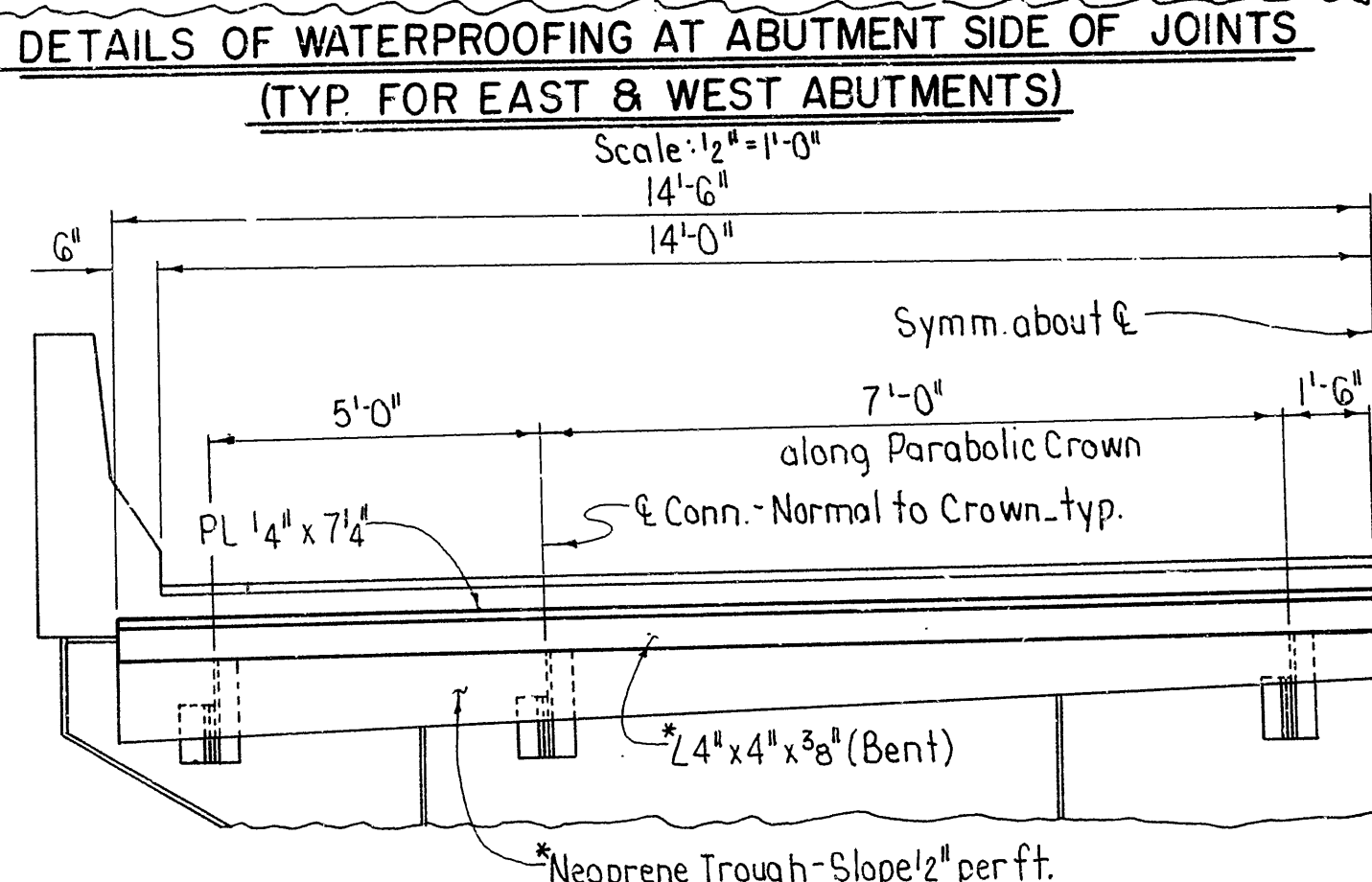
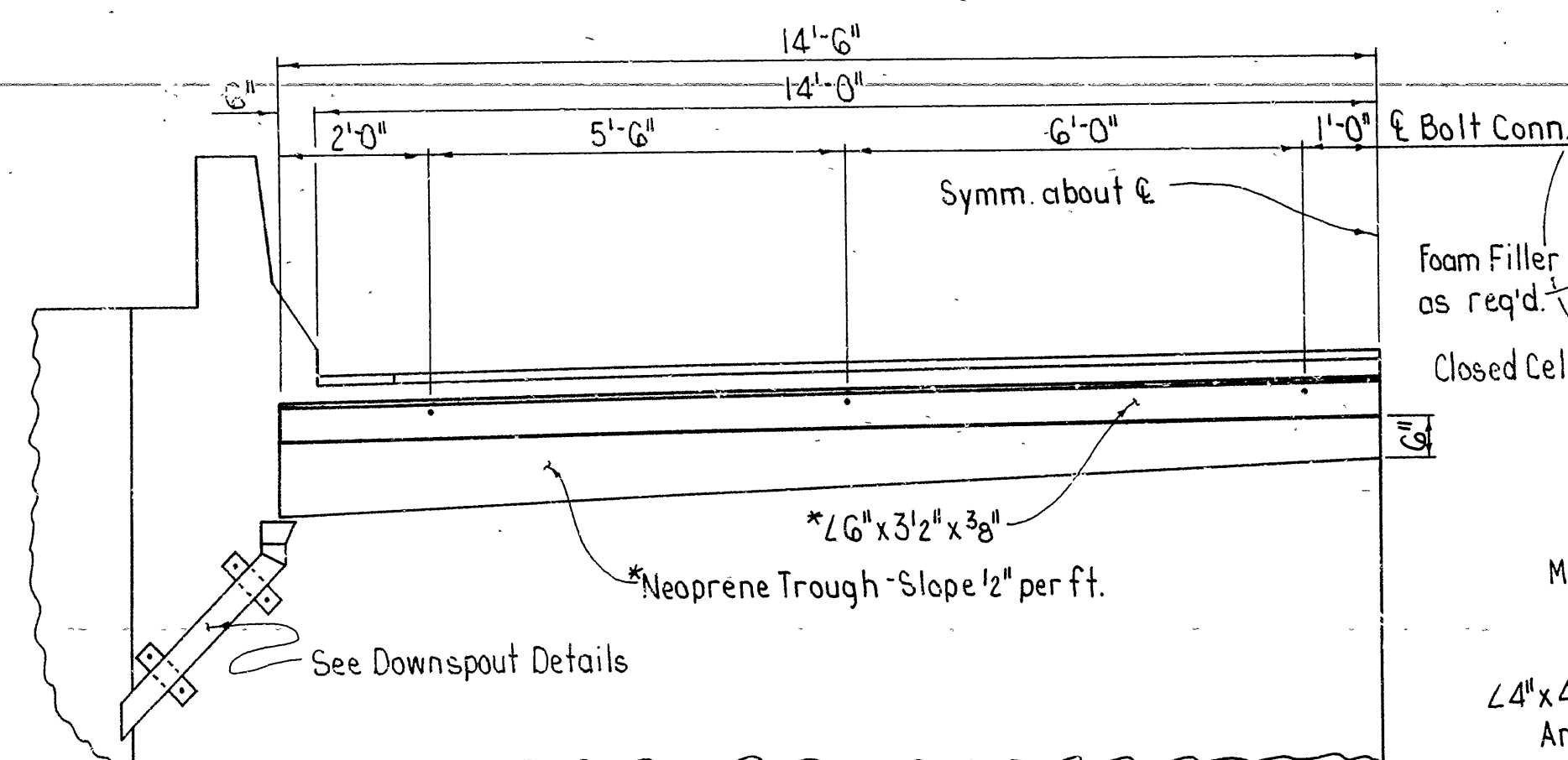
SHEET 2 OF 3
DETAILS OF FINGER JOINTS
HELENA BRIDGE
ROUTE 49 SEC. 11

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.
DRAWN BY: KDH DATE: 30 NOV 87
CHECKED BY: CJF DATE: 1-19-88 SCALE: 3" = 1'-0"
DESIGNED BY: MEC DATE: 2-17-87

BRIDGE NO. 2899R DRAWING NO. 29567

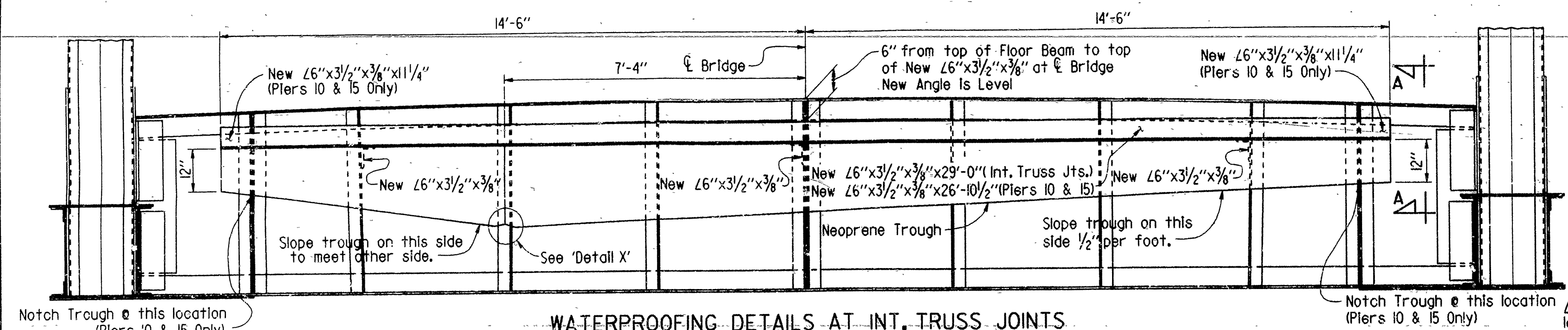
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	MISS. JOB NO.	SHEET NO.	TOTAL SHEETS
2-3-89	12-24-89			6	ARK.	85-0057-01-002-10		
				ARK JOB NO.	110104	36	58	



For 'GENERAL NOTES', See Dwg. No. 29546.

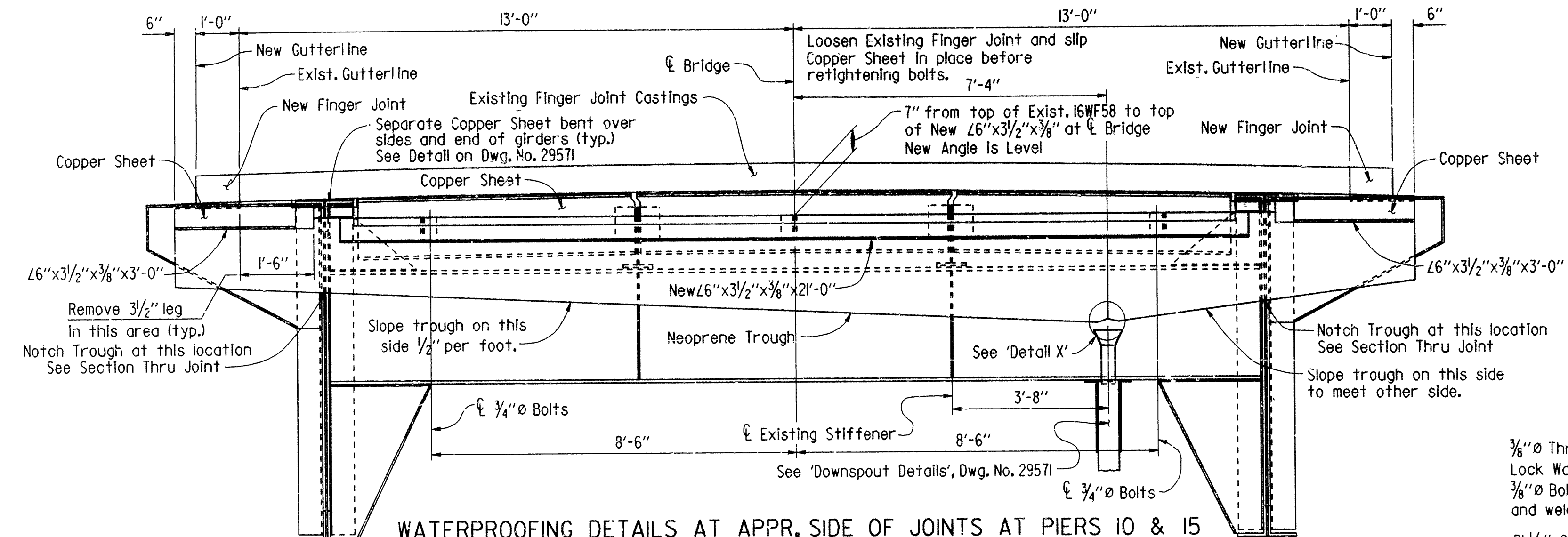
SHEET 1 OF 3
WATERPROOFING DETAILS
HELENA BRIDGE
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.
DRAWN BY: KDH DATE: JAN 88
CHECKED BY: C J F DATE: 1-19-88
DESIGNED BY: MLC DATE: 9-17-87
SCALE: AS NOTED
BRIDGE NO. 2899R DRAWING NO. 29569

DATE REVISION	DATE FILMED	DATE REVISION	DATE FILMED	FED. ROAD DIST. NO.	STATE	MISS. JOB NO.	SHEET NO.	TOTAL SHEETS
2-3-89	6-22-89	2-3-89	6-22-89	6	ARK.	85-0057-01-002-10		
5-31-89	6-22-89							
				ARK. JOB NO.	110104	37	58	
				2899R-WATERPROOFING-29570				



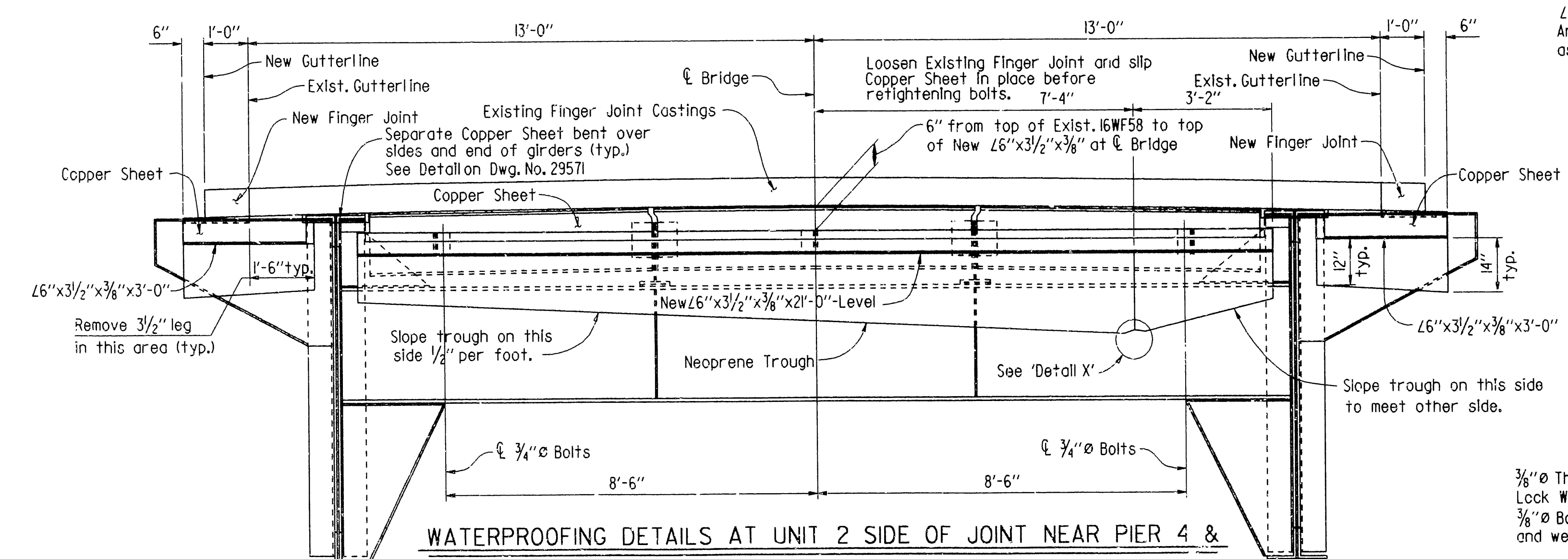
WATERPROOFING DETAILS AT INT. TRUSS JOINTS AND TRUSS SIDE OF JOINTS AT PIERS 10 & 15

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



WATERPROOFING DETAILS AT APPR. SIDE OF JOINTS AT PIERS 10 & 15

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

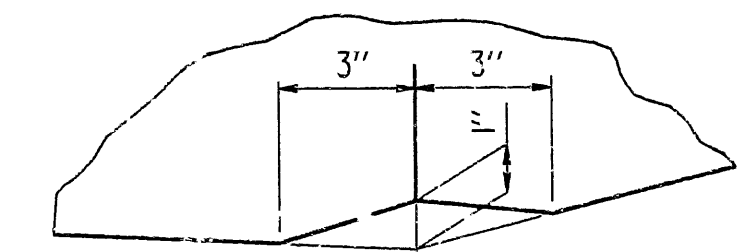


WATERPROOFING DETAILS AT UNIT 2 SIDE OF JOINT NEAR PIER 4 & EACH SIDE OF JOINT NEAR PIERS 7 & 18

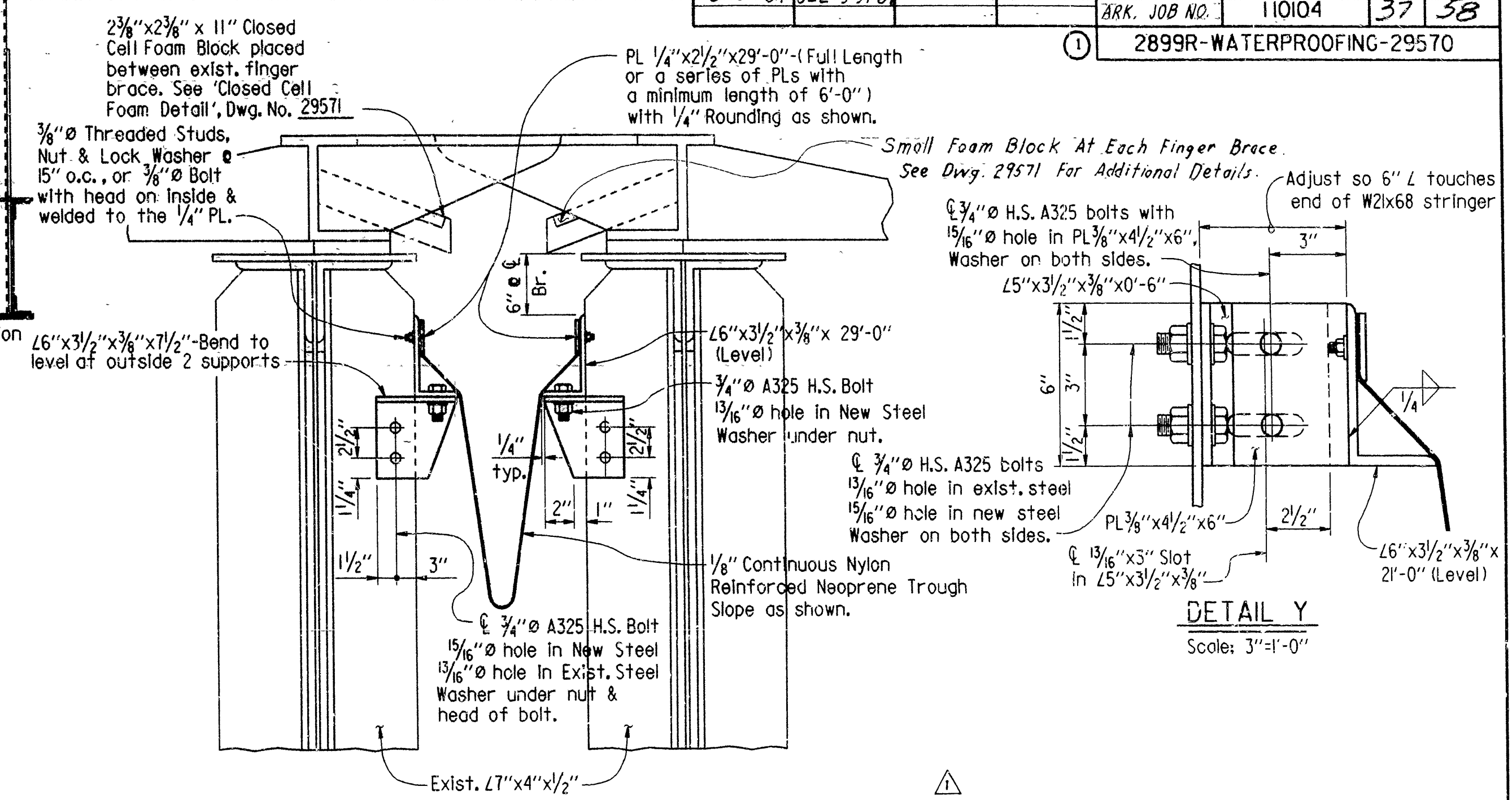
Scale: 1/2" = 1'-0"

Neoprene Trough Material to meet Section 807.05(m) of the Standard Specifications. Payment shall be considered subsidiary to the item 'Structural Steel in Plate Girder Spans (A36)'.

For Unit 1 Side of Joint and for Section Thru Joint Near Pier 4, See Dwg. No. 29571

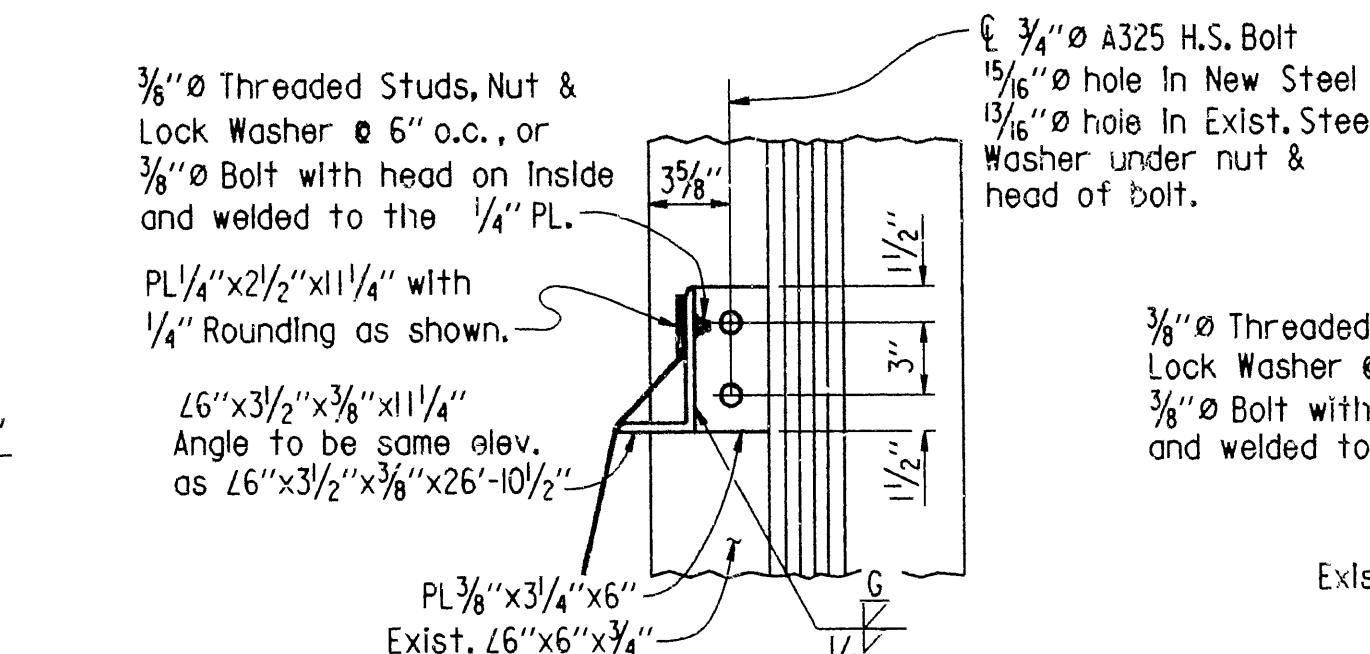


DETAIL X Scale: 3" = 1'-0"



SECTION THRU INT. TRUSS JOINTS (PANEL POINTS 25,43 & 59)

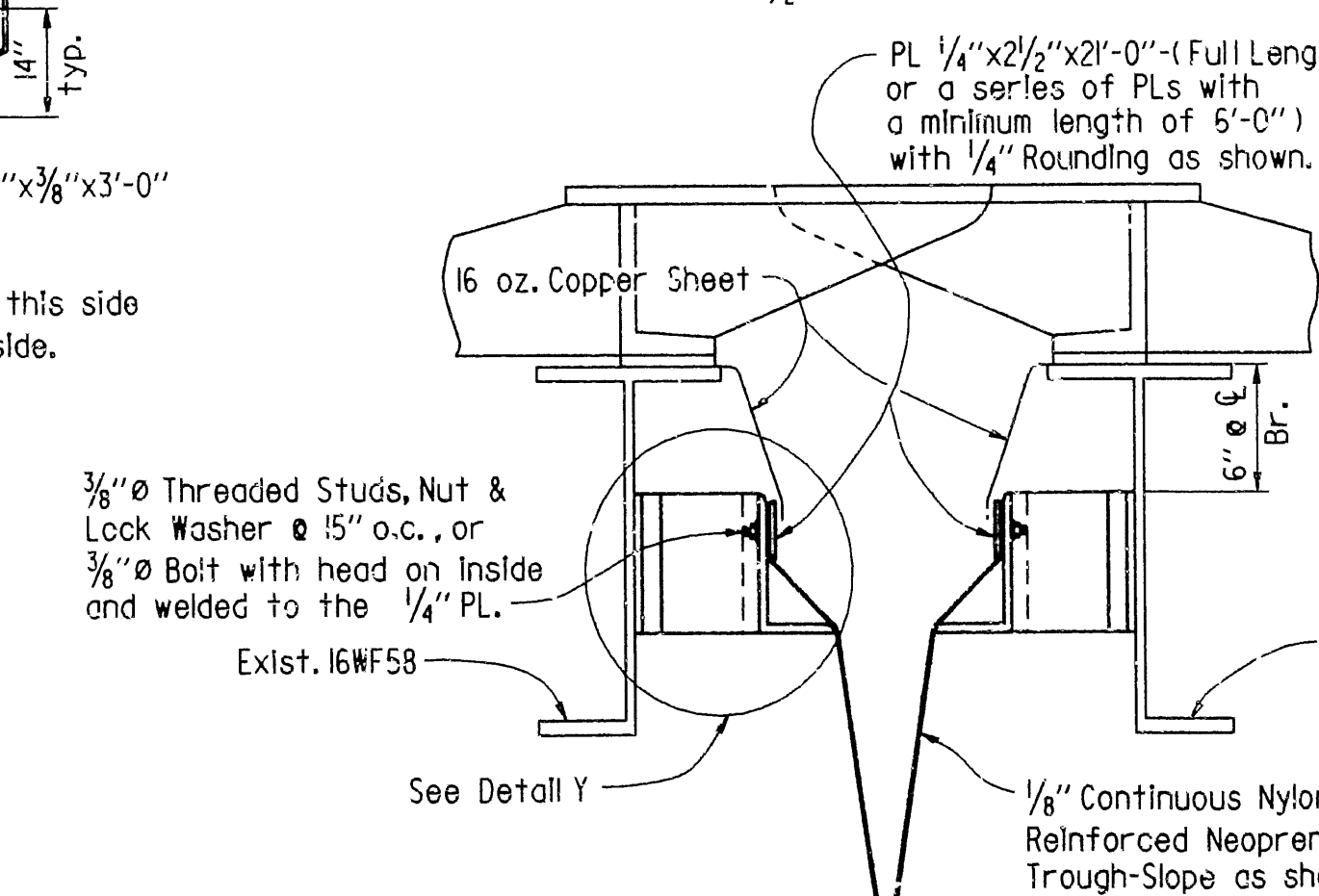
Scale: 1 1/2" = 1'-0"



SECTION A-A

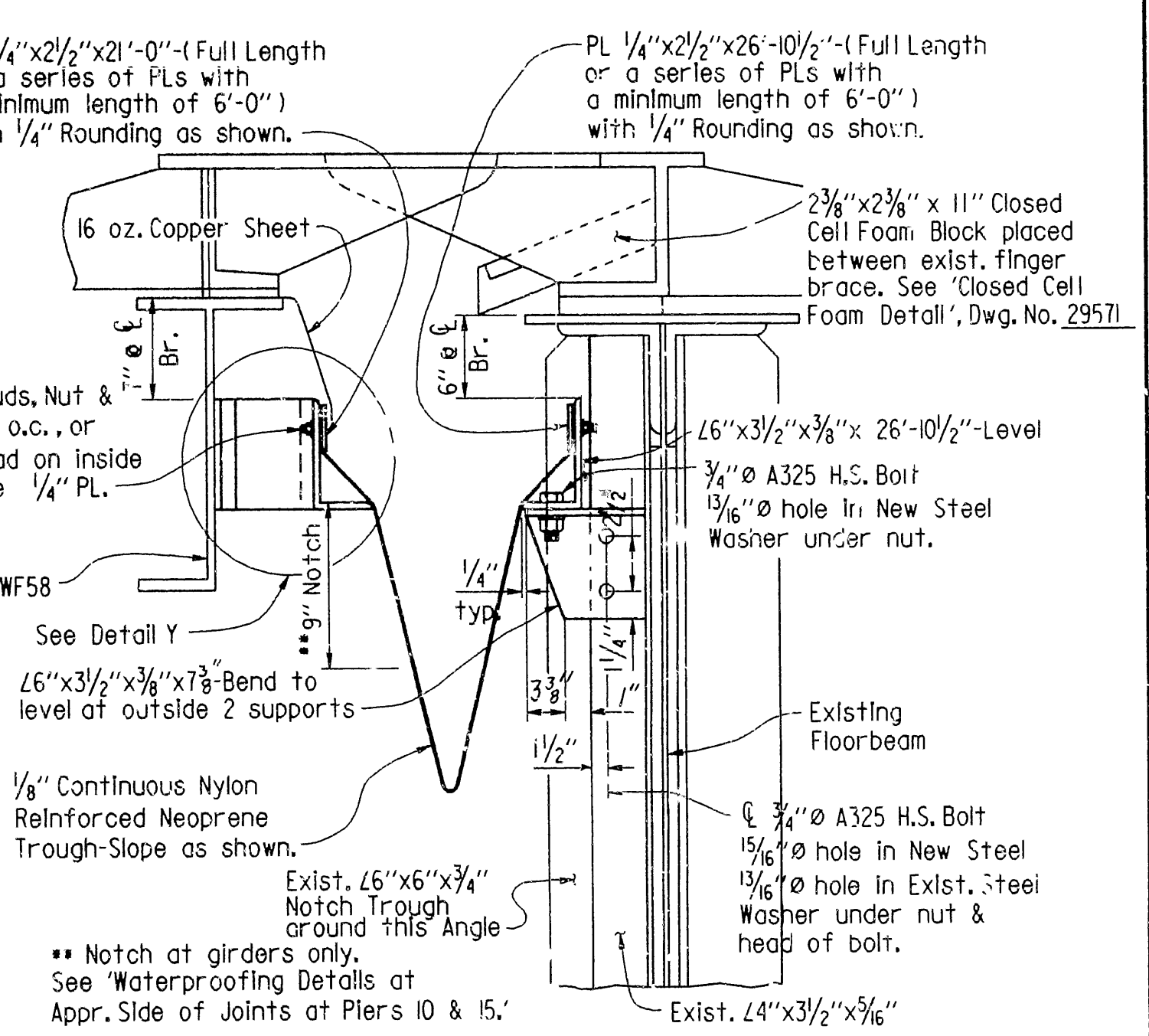
PIERS 10 & 15 ONLY-TYP. BOTH ENDS

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



SECTION THRU JOINTS NEAR PIERS 7 & 18

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

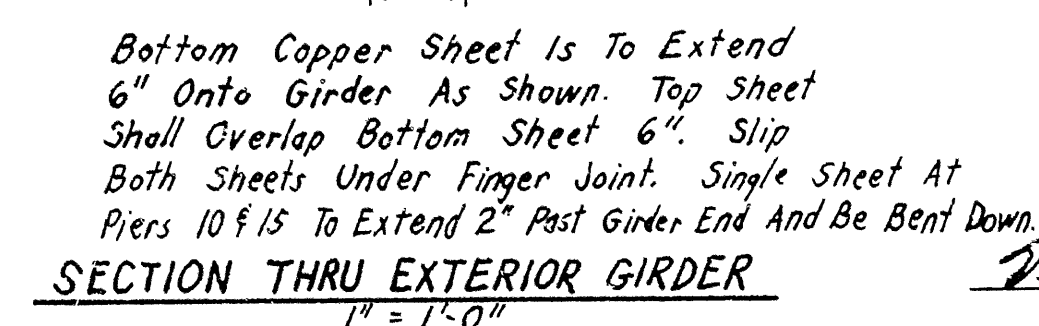
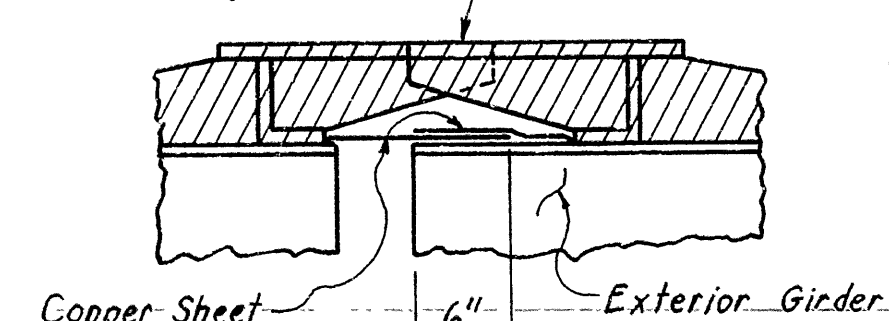
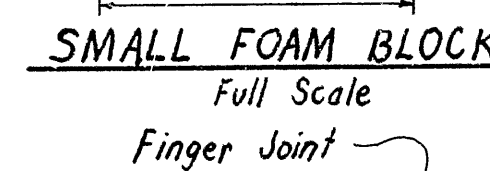
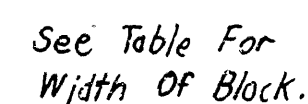
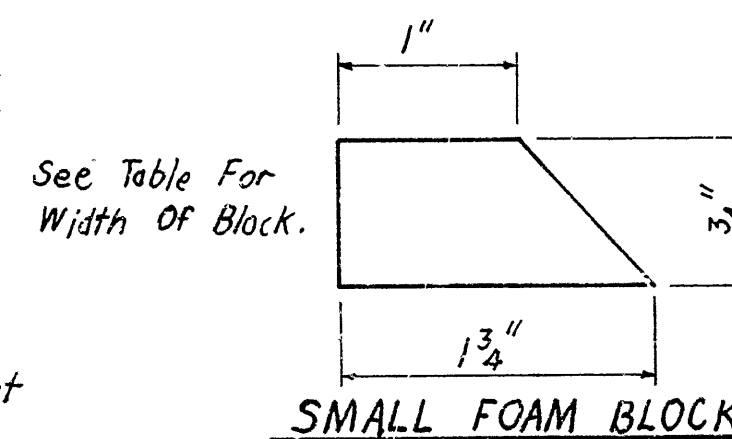
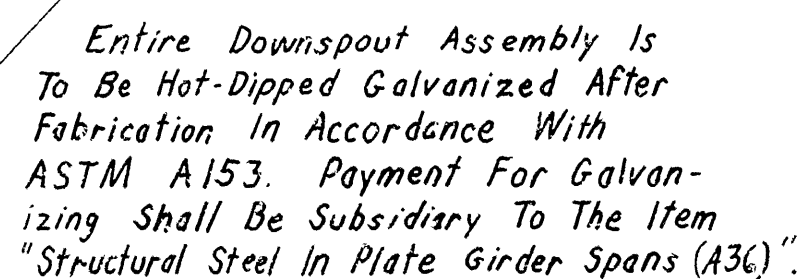
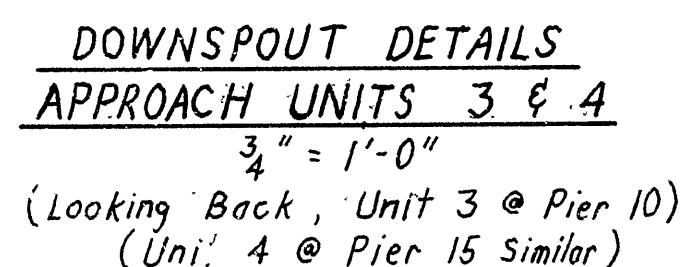
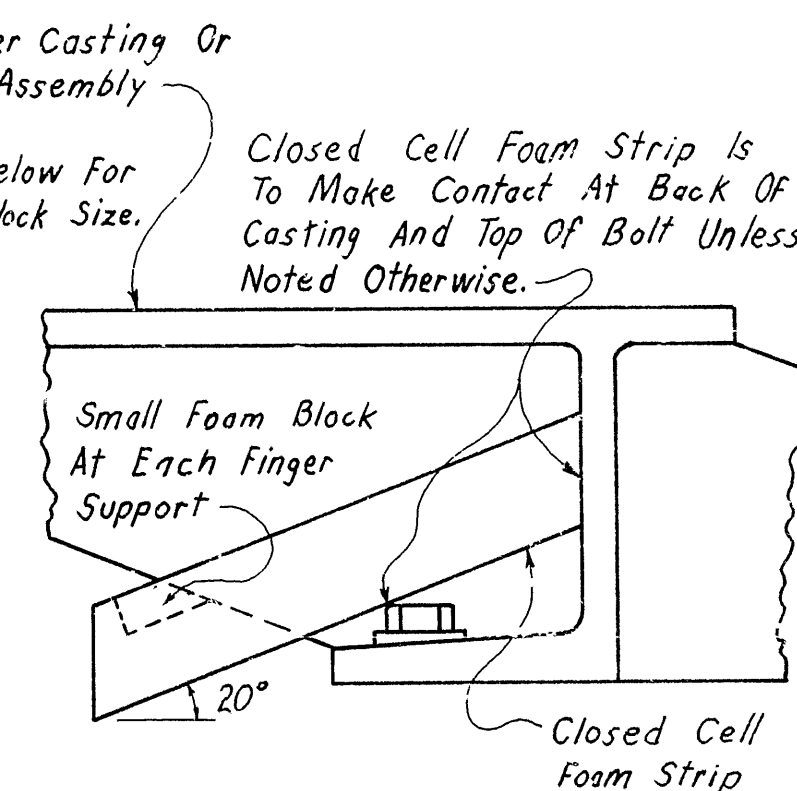
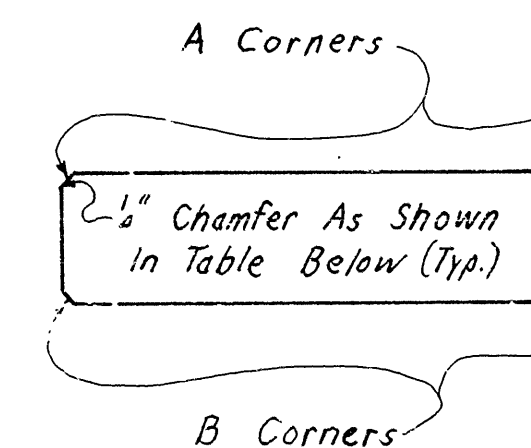
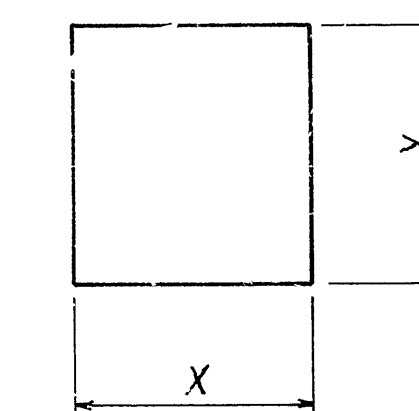
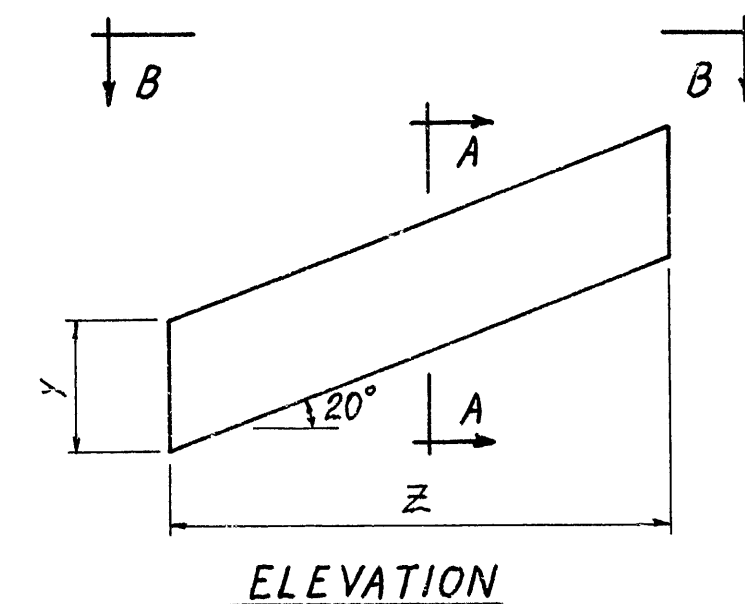
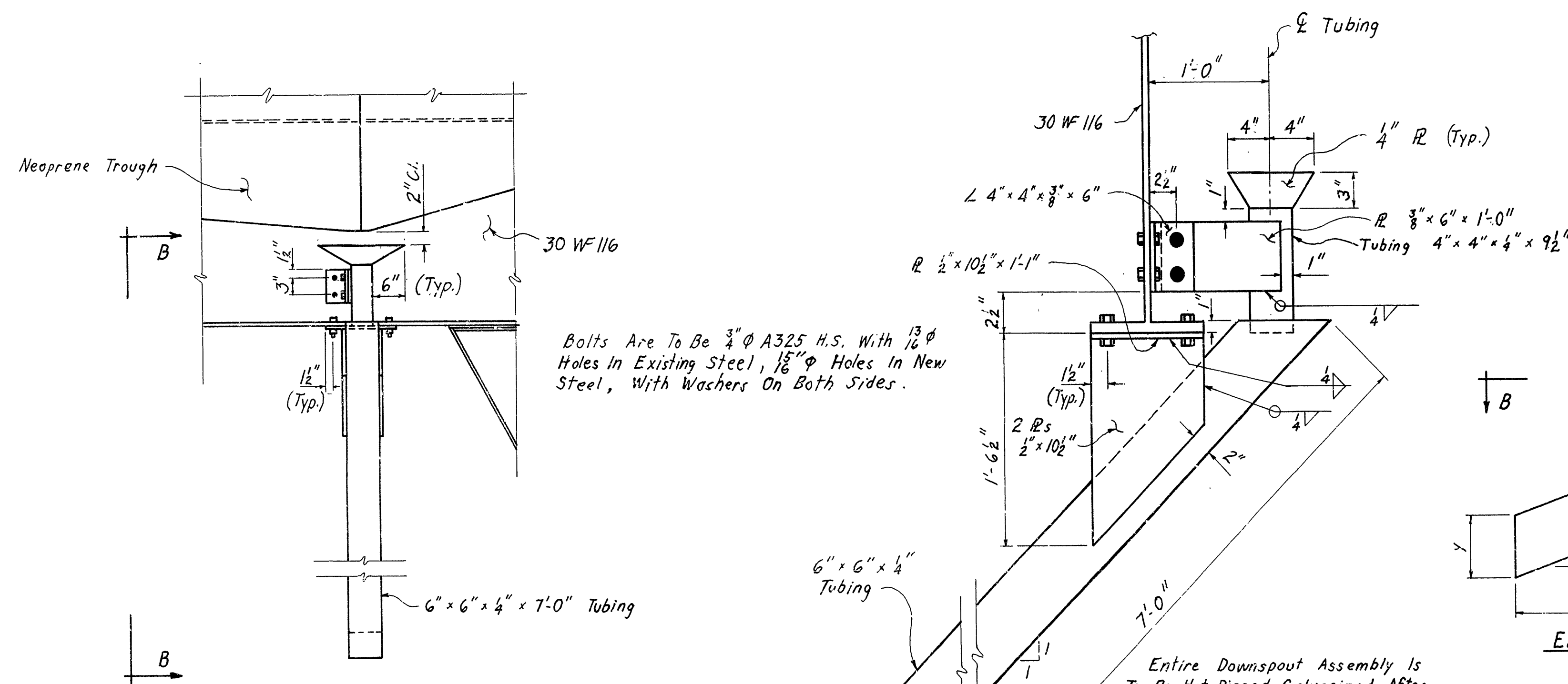
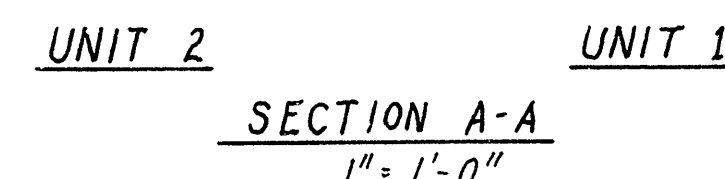
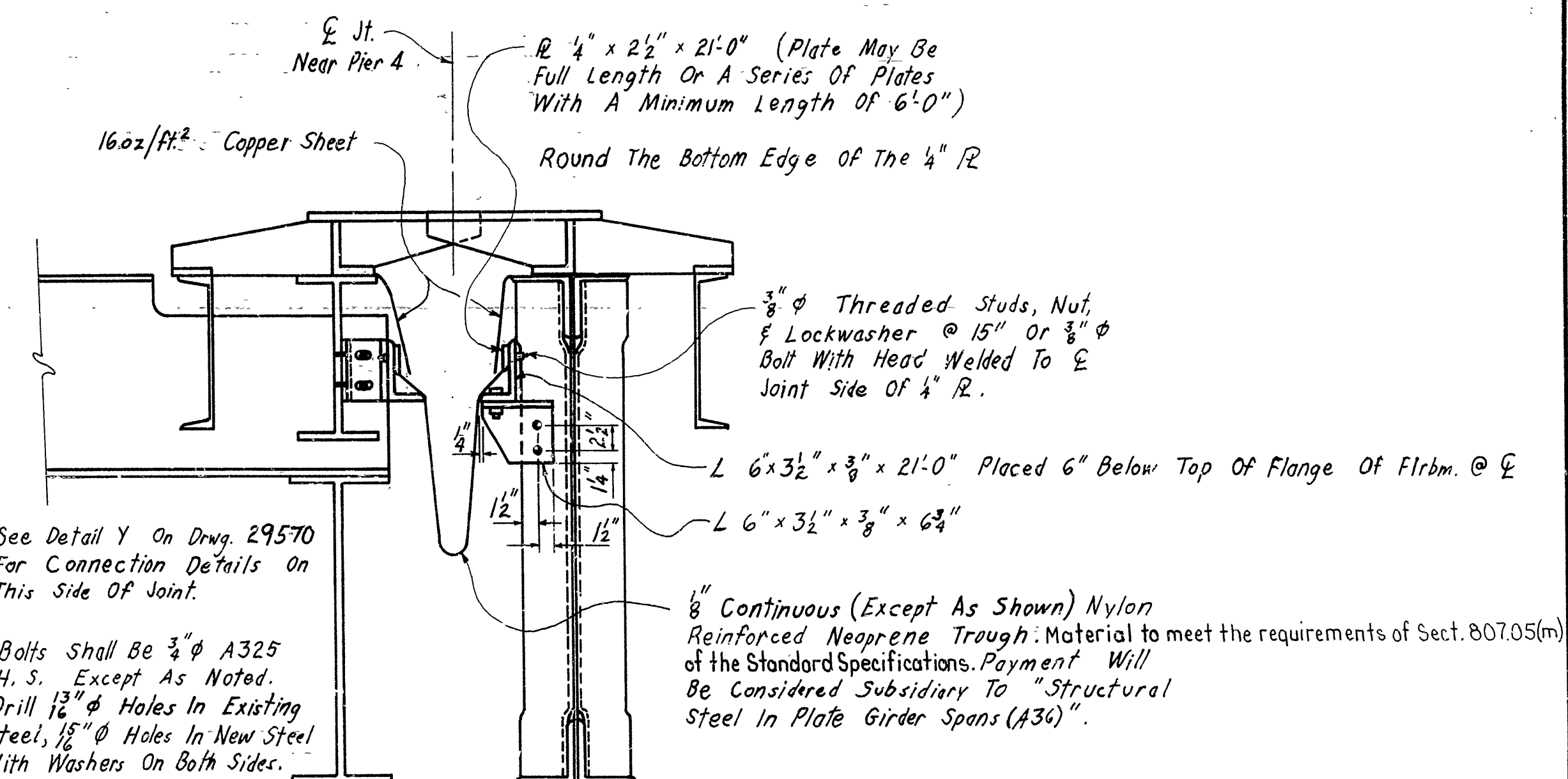
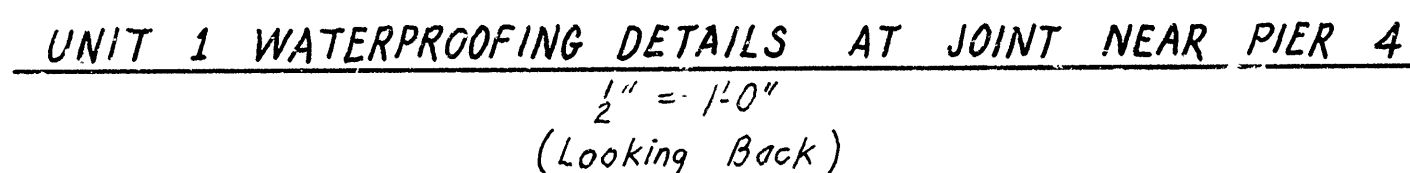


SECTION THRU JOINTS AT PIER 10 & 15

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

Revised: Detail Title 5-31-89, D.H.P. GENERAL NOTES: See Dwg. No. 29546.

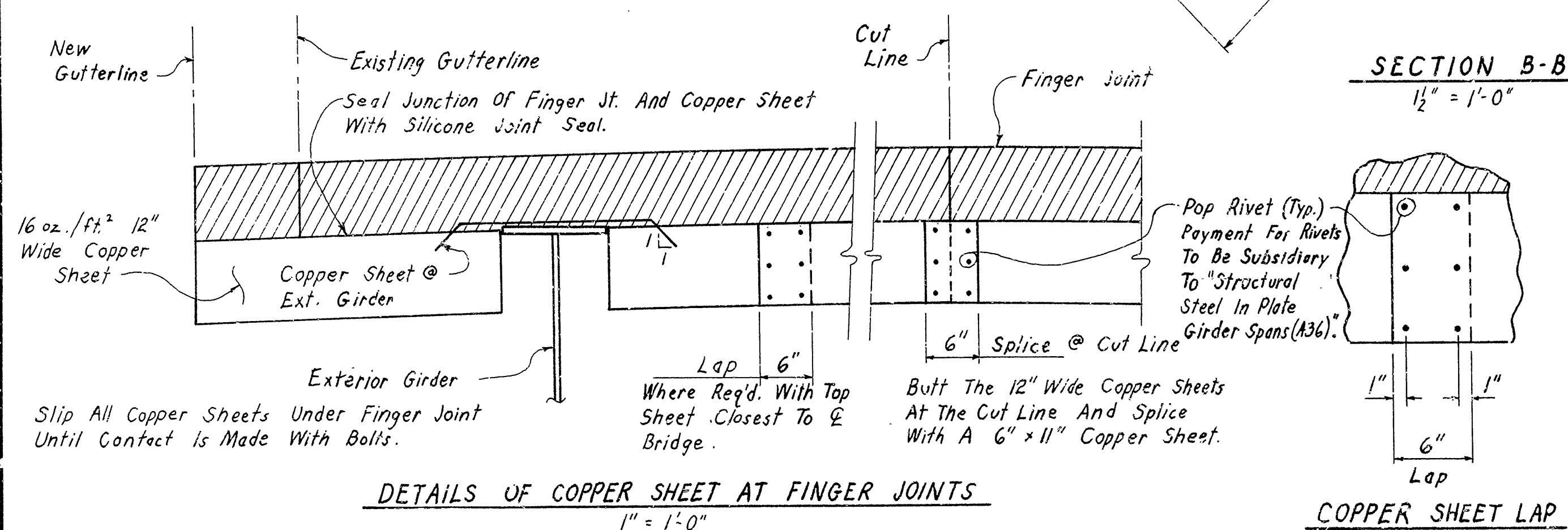
SHEET 2 OF 3
WATERPROOFING DETAILS
HELENA BRIDGE
ROUTE 49 SEC. 11
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.
DRAWN BY: KDH DATE: DEC 87
CHECKED BY: CJF DATE: 14 JAN 88 SCALE: AS NOTED
DESIGNED BY: MLC DATE: 9-17-87
BRIDGE NO. 2899R DRAWING NO. 29570



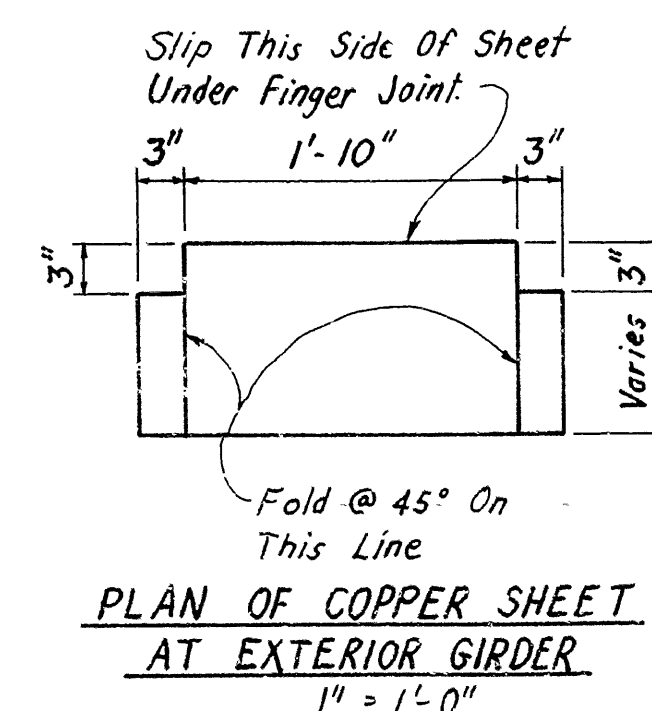
No. Reg'd.	X	Y	Z	Corners Chamfered	
824	2 3/8"	2 3/8"	11"	A, B	Existing Finger
16	2 1/2"	2 1/2"	11"	A, B	
48	2 5/8"	2 5/8"	11"	A, B	
8	2 3/8"	2 3/8"	11"	A Only	New Finger Jt.
8	1 1/2"	2 1/2"	11"	A Only	

SHEET 3 OF 3
WATERPROOFING DETAILS
HELENA BRIDGE
ROUTE SEC.
SAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: McC DATE: 1-11-88
CHECKED BY: CJF DATE: 1-22-88 SCALE: As Noted
DESIGNED BY: McC DATE: 1-11-88
BRIDGE NO. 2899R DRAWING NO. 2957I



NOTE: Copper Sheeting Is To Be Installed On Approach Units Only.

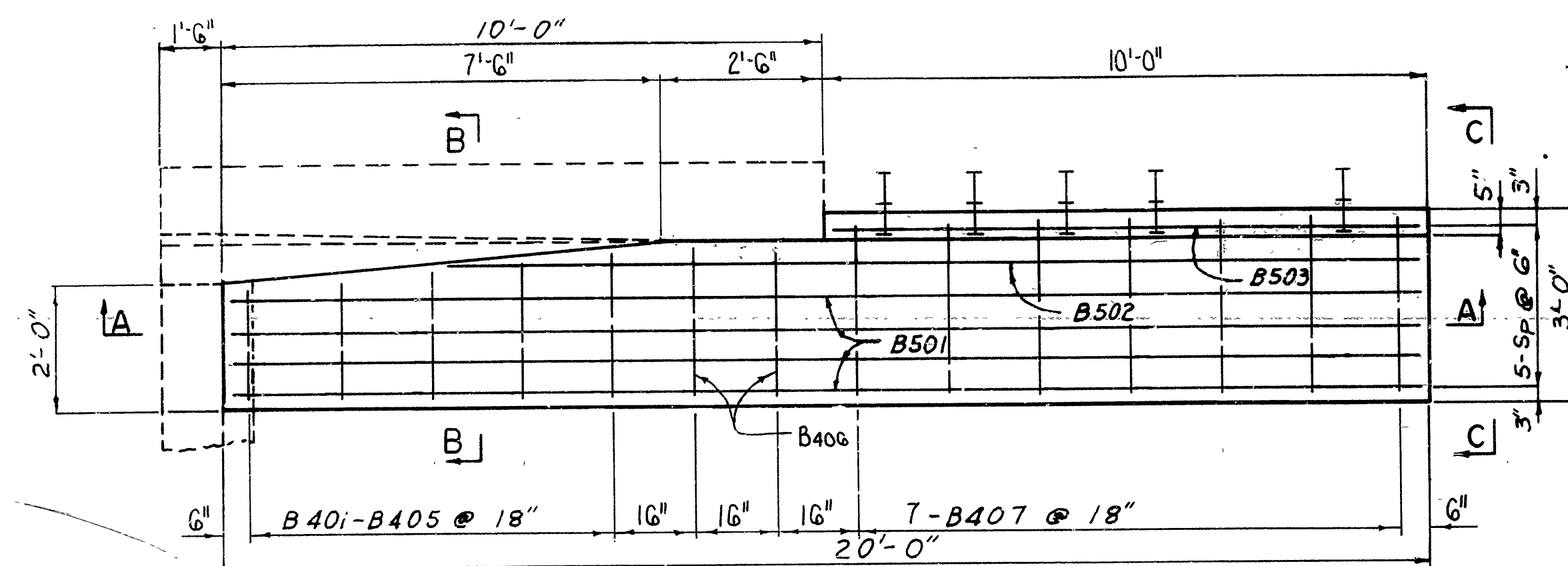


COPPER SHEET LAP
 $1\frac{1}{2}'' = 1'-0''$
 Splice Details Similar

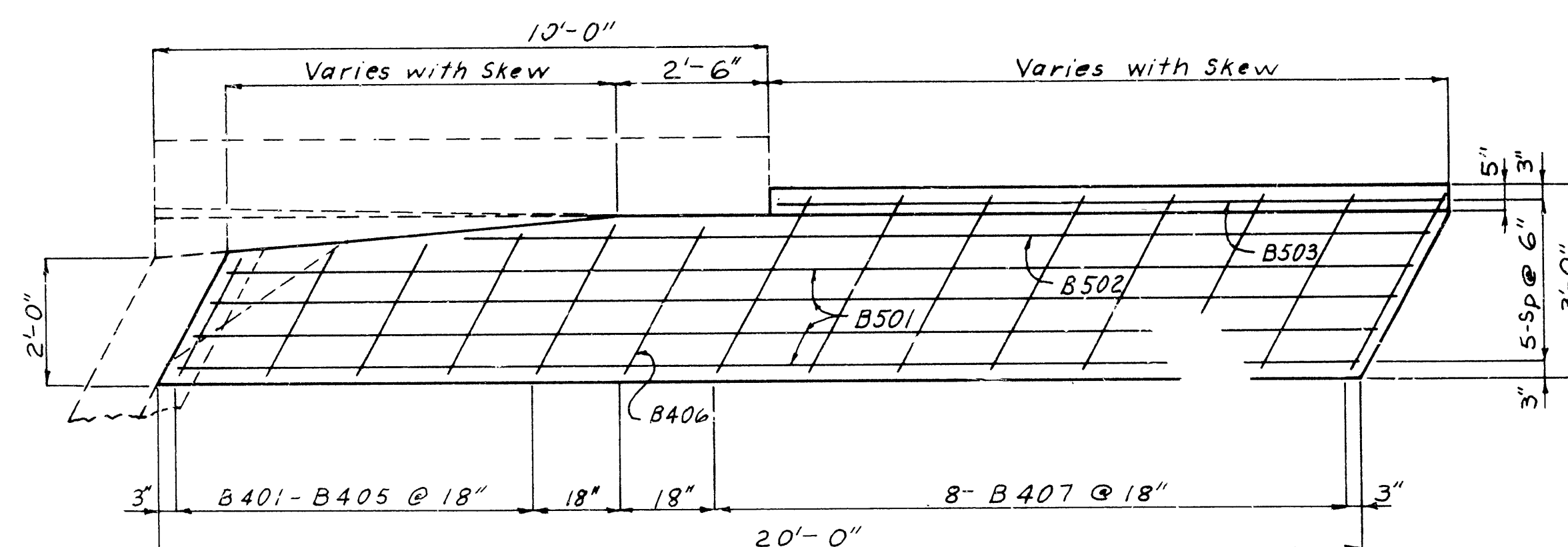
7 Down.
Veral Pinkerton
BRIDGE ENGINEER

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	PER. CHG. EXT. NO.	STATE	MISS. JOB NO.	SHEET NO.	TOTAL SHEETS
2-3-89	10-1-98			6	ARK.	85-0057-01-00210		
				ARK.	JOB NO.	110194	39	58

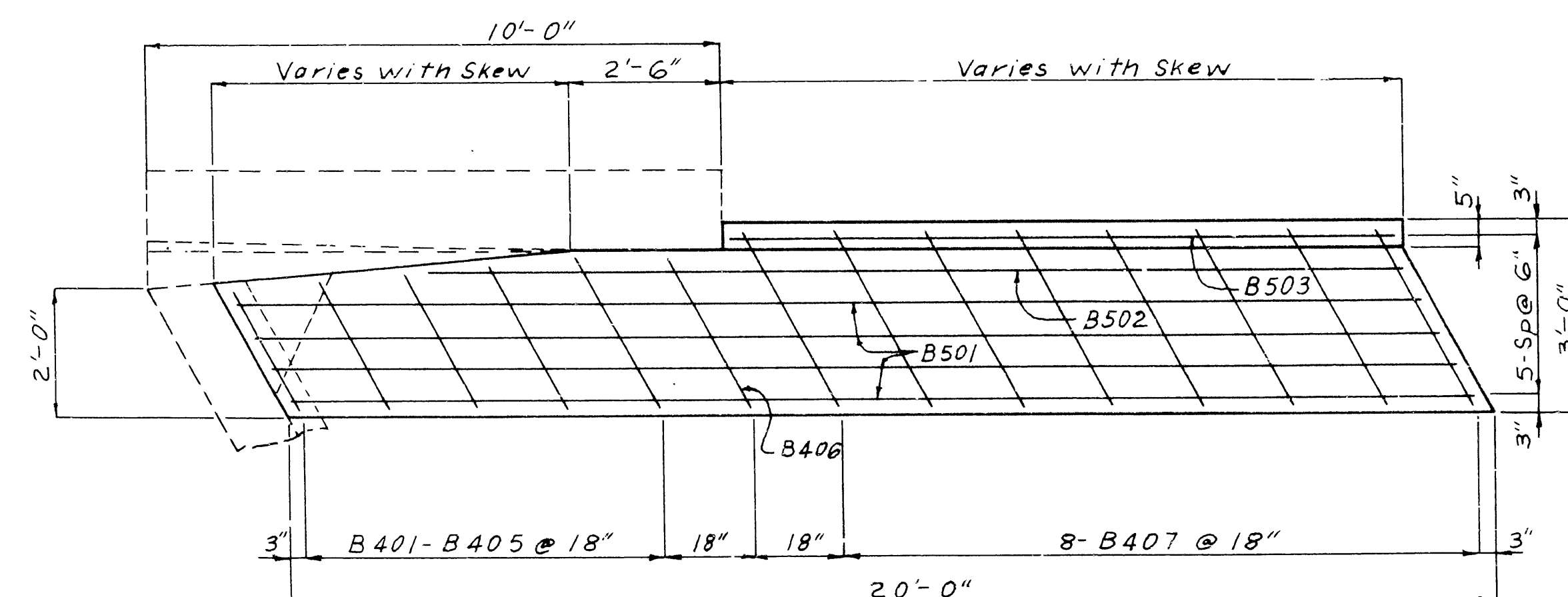
NOTE: FOR DETAILS OF GUARD RAIL, SEE DWG.NO. GR-8
AND GR-8A.



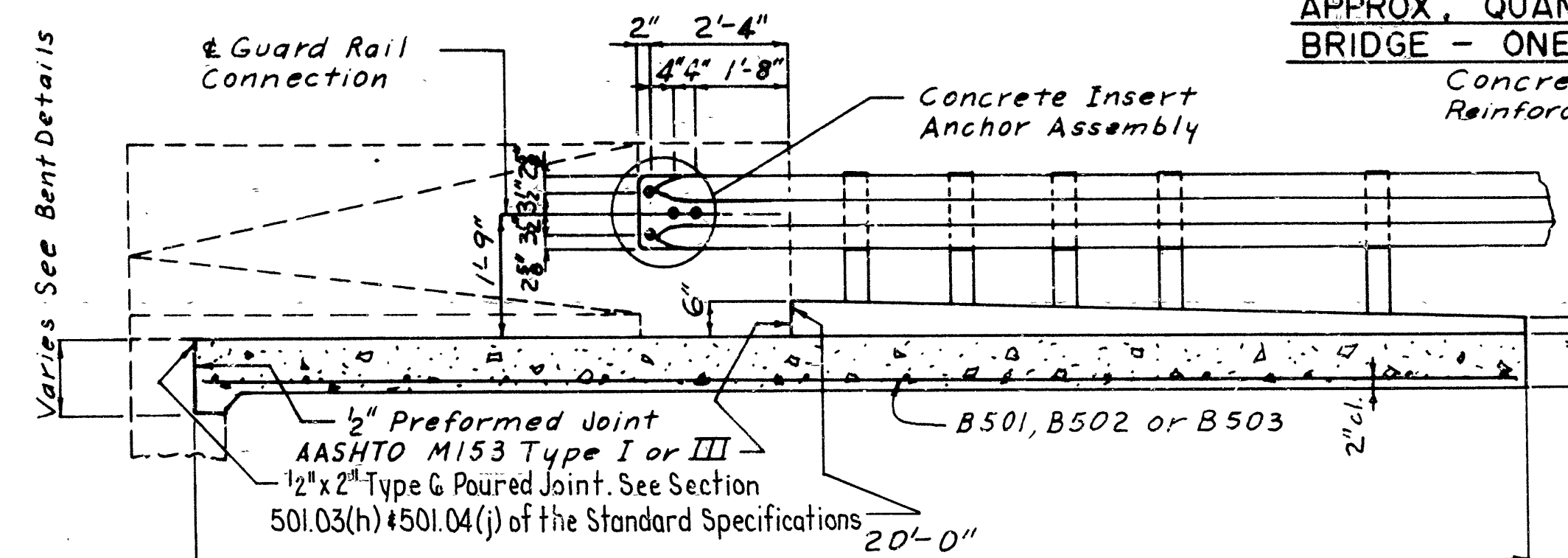
HALF PLAN OF APPROACH GUTTERS FOR SQUARE BRIDGE



HALF PLAN OF APPROACH GUTTERS FOR LEFT FORWARD SKEW BRIDGE



HALF PLAN OF APPROACH GUTTERS FOR RIGHT FORWARD SKEW BRIDGE

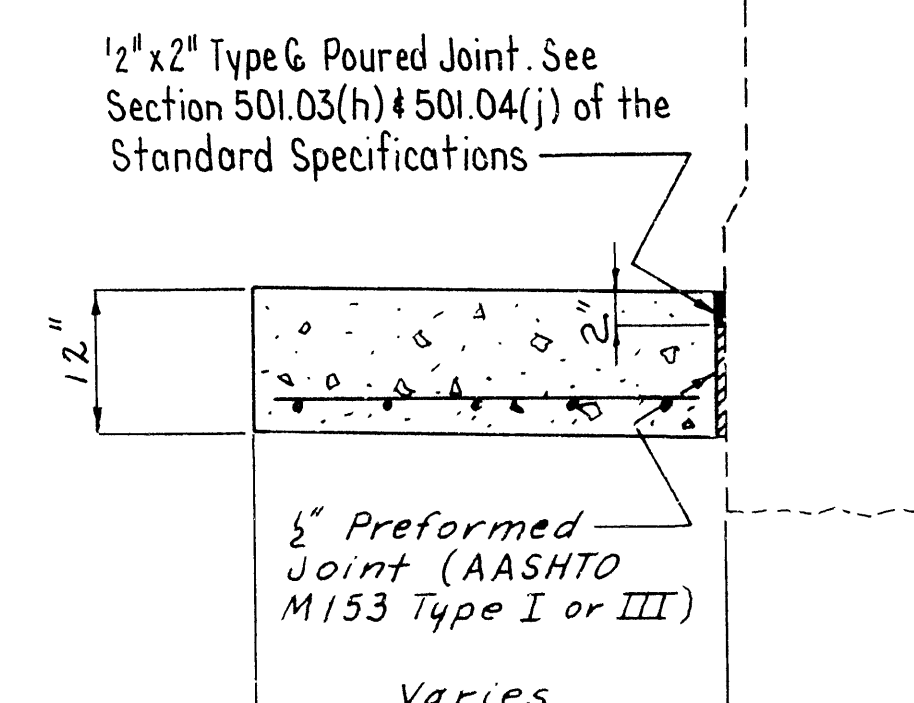


SECTION A - A

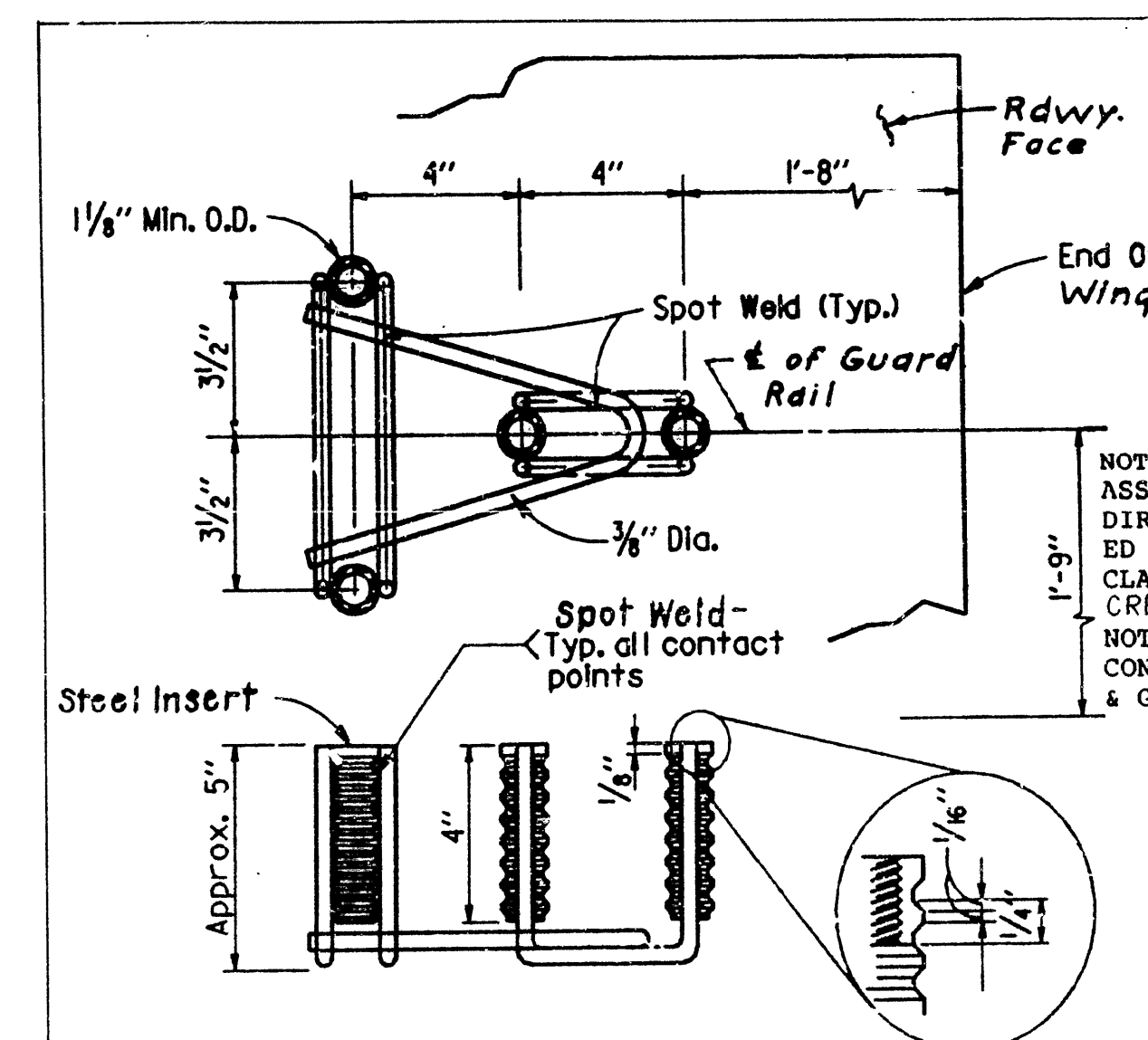
BAR LIST - ONE GUTTER

MARK	NO. REQ'D.	LENGTH
* B401	1	1'-9"
* B402	1	1'-10"
* B403	1	1'-11"
* B404	1	2'-1"
* B405	1	2'-2"
* B406	2	2'-3"
* B407	7	2'-8"
B501	4	1'-8"
* B502	1	16'-0"
* B503	1	9'-8"

* Bar lengths vary with skew, Lengths shown are for Square Bridge.



SECTION B - B
N.T.S.



MINIMUM CAPACITY OF GUARD RAIL ATTACHMENT BY CONCRETE INVERT ANCHOR ASSEMBLY OR OTHER MEANS SHALL BE 12,000 LBS. ULTIMATE SHEAR CAPACITY PER BOLT AND INSERT (48,000 LBS. PER ASSEMBLY). THERE SHALL BE A MINIMUM OF FOUR BOLTS PER ATTACHMENT LOCATED AS SHOWN. THE CONTRACTOR MAY USE THE INSERT ANCHOR ASSEMBLY SHOWN, OR ONE SIMILAR WHICH PROVIDES THE SAME FERRELL DEPTH AND THREAD LENGTH. THE CAPACITY OF THE INSERT ANCHOR ASSEMBLY SHALL BE CERTIFIED TO THE ENGINEER.

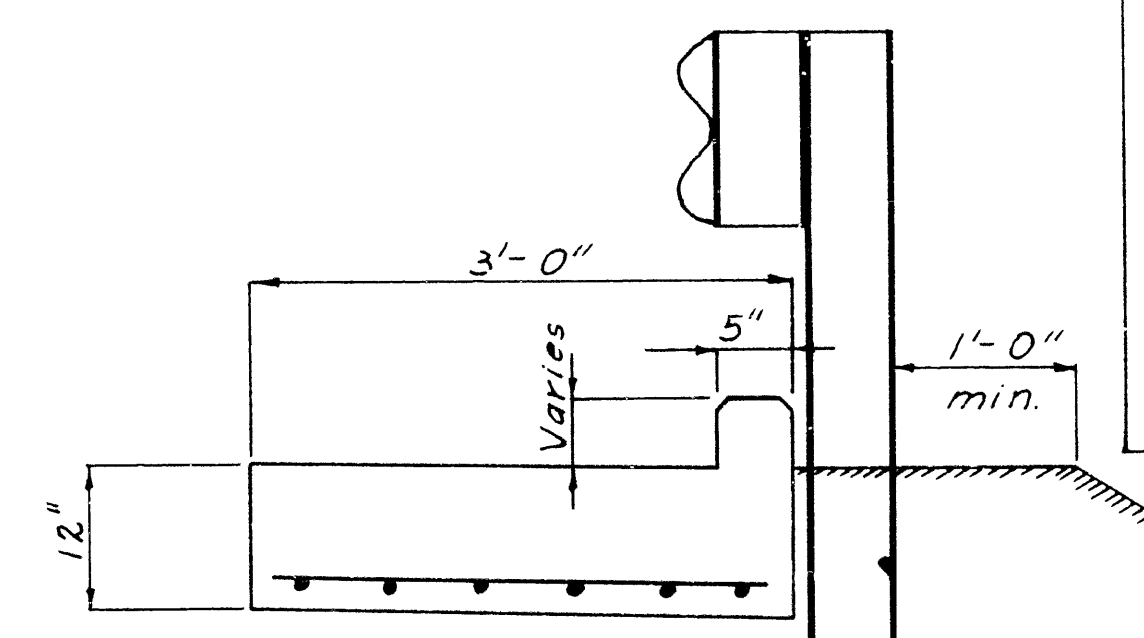
GUARD RAIL ATTACHMENT USING OTHER TYPES OF CONCRETE INSERTS WILL BE ALLOWED, PROVIDED IT MEETS THE MINIMUM CAPACITY SPECIFIED, THE CAPACITY IS CERTIFIED, AND APPROVAL IS OBTAINED FROM THE ENGINEER BEFORE USE.

THREADED STEEL INSERT WITH SOLID BOTTOM TAPPED TO A MINIMUM THREADED DEPTH OF 2½" FOR USE WITH 7/8" X 2½" HIGH STRENGTH HEX BOLTS AND TWO HARDENED STEEL WASHERS. SEE SECTION 807 OF THE STANDARD SPECIFICATIONS.

BOLTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A325 OR A449 AND SHALL BE THREADED FULL LENGTH. BOLTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153.

BOLTS SHALL BE INSTALLED IN ACCORDANCE WITH SUBSECTION 807.22(d) OF THE STANDARD SPECIFICATIONS.

CONCRETE INSERT ANCHOR ASSEMBLY
3" = 1'-0"



VIEW C - C
N.T.S.

APPROACH GUTTER NOTES

CONCRETE SHALL BE CLASS ~~S~~ OR CLASS S(AE) OR MIXTURE USE FOR PORTLAND CEMENT PAVEMENT.

REINFORCEMENT STEEL SHALL CONFORM TO ASTM A615 OR A617.

APPROACH GUTTERS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH BID FOR "APPROACH GUTTERS (TYPE A)", WHICH PRICE SHALL BE FULL COMPENSATION FOR FURNISHING MATERIAL INCLUDING CONCRETE, REINFORCING STEEL AND JOINT FILLERS, PLACEMENT AND COMPLETION OF BASE MATERIAL; FOR FORMS, MIXING, PLACING, CURING AND FINISHING; FOR EXCAVATION AND BACKFILL, AND FOR ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO COMPLETE THE WORK.

DETAILS OF APPROACH GUTTERS
HELENA BRIDGE
ROUTE 49 SEC. 11

ARKANSAS STATE HIGHWAY COMMISSION

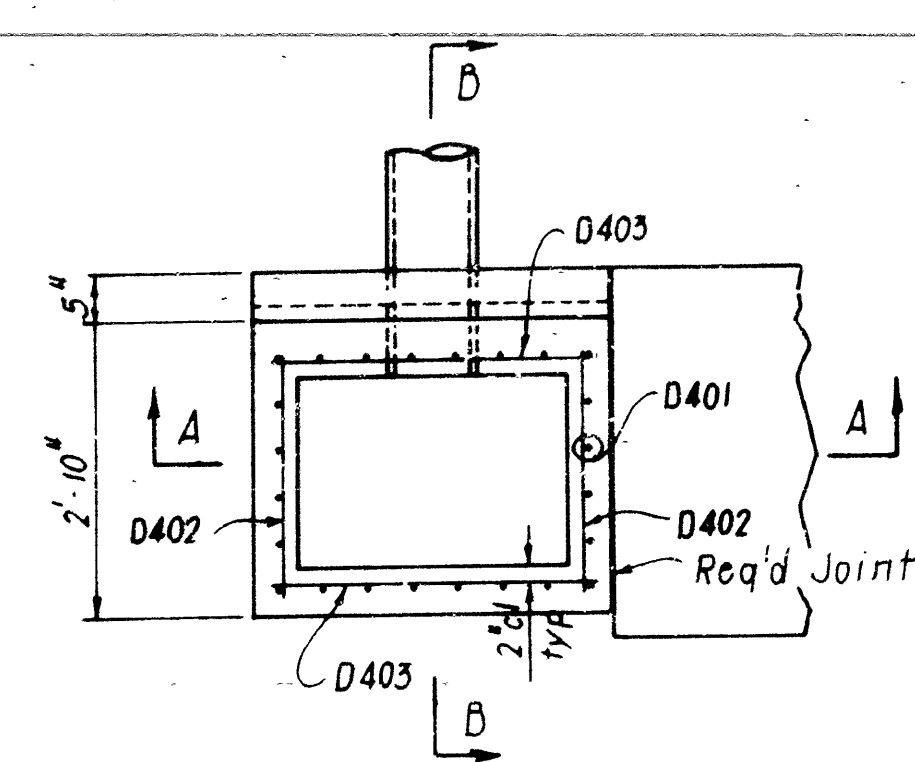
LITTLE ROCK, ARK

ENTRANCE DOOR, ANN.

DRAWN BY: KDH DATE: JAN. 88
CHECKED BY: D.H.P. DATE: 1-15-88 SCALE: 1/2" = 1'-0"
DESIGNED BY: C.P.B. DATE: 8-87

BRIDGE NO. 2899R DRAWING NO. 29572

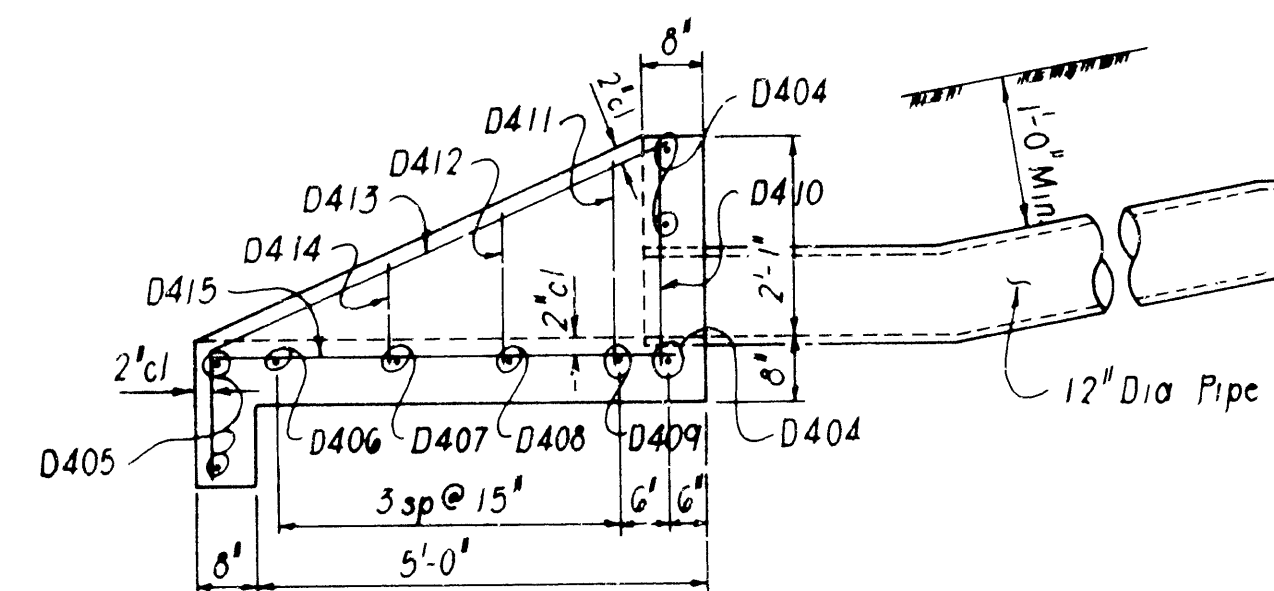
ARK. JOB NO.	110104	40	38
2899R - APPR. SLAB - 29573			



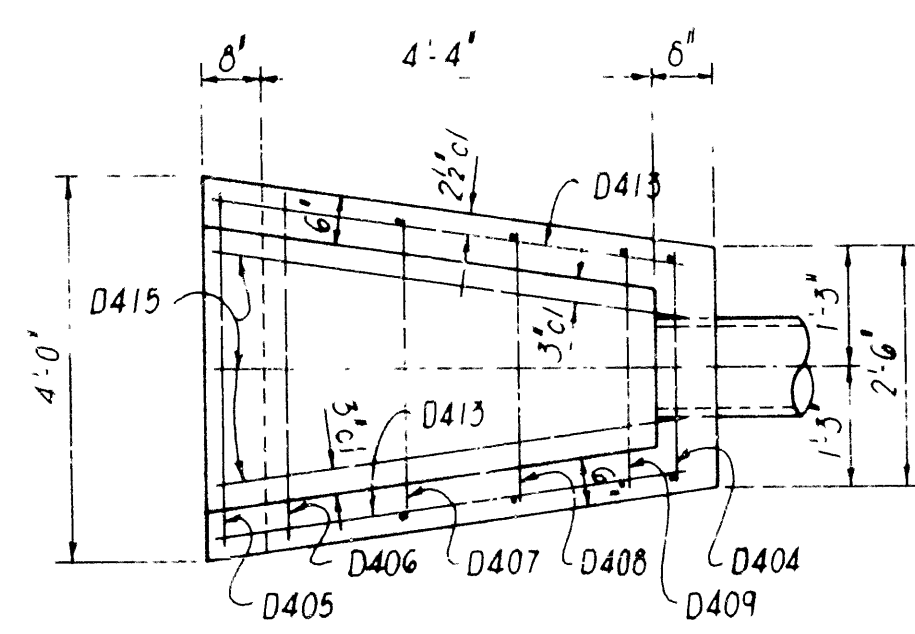
Note: Reqd. Joint around Drop Inlet to be 1/2" preformed Joint Filler (AASHTO M153 Type I or III & 1/2"x2" Type G Poured Jt. (See Section 501.03(h) & 501.04 (j) of the Standard Specifications)

PLAN OF DROP INLET

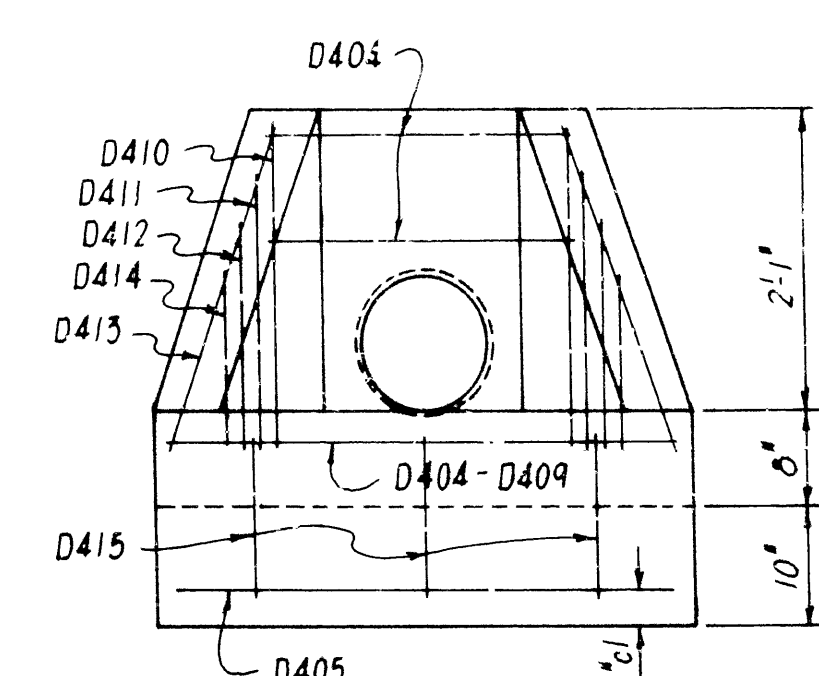
Note: Drop Inlet & Spillway are considered part of Approach Gutters (Type B2, B3, C2 or C3). Measurement & Payment will be in accordance with Section 504.



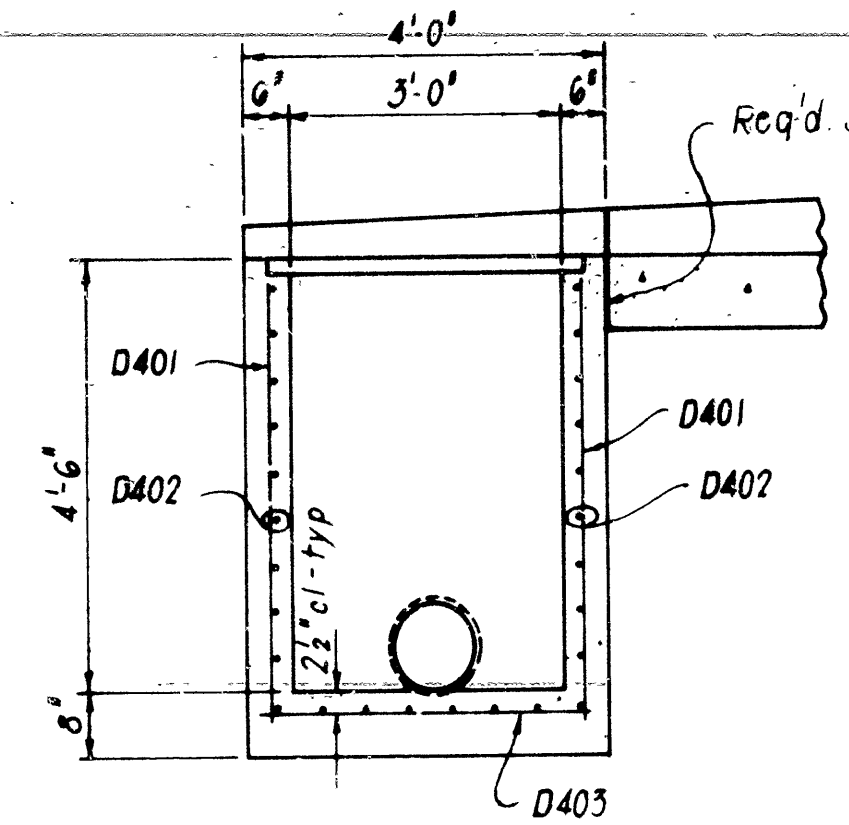
SIDE ELEVATION SPILLWAY OUTLET



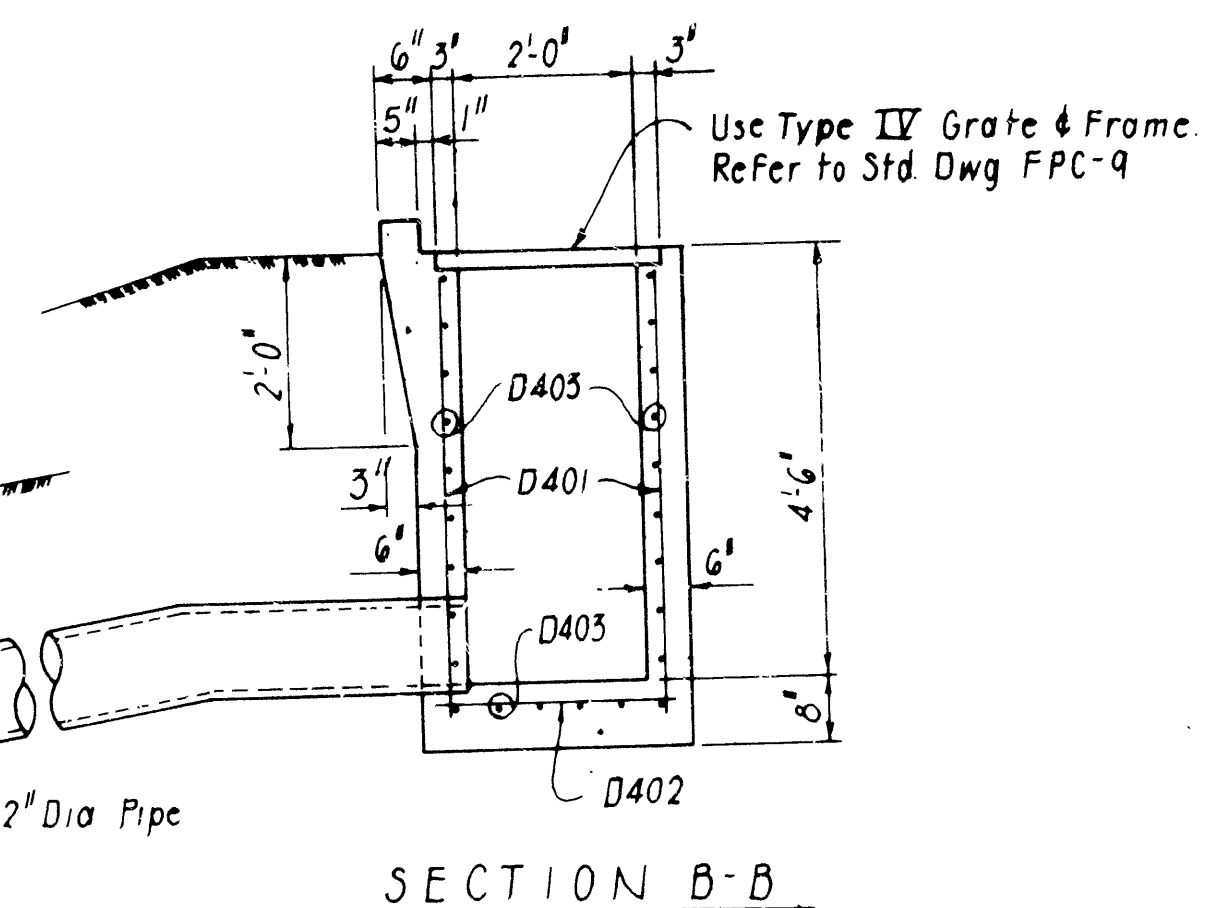
PLAN



FRONT ELEVATION.



SECTION A-A



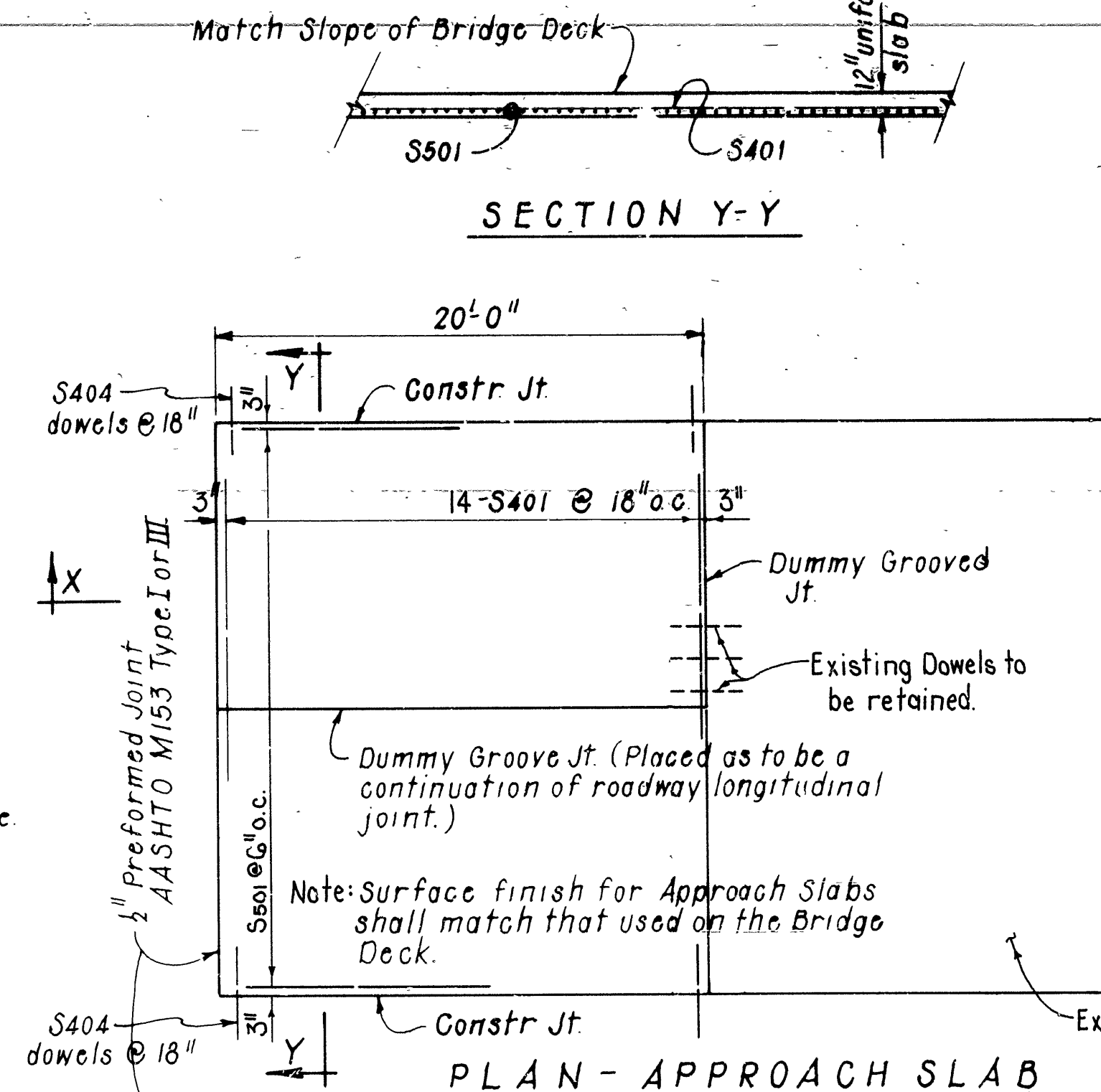
SECTION B-B

BAR LIST (ONE DROP INLET & SPILLWAY)

Mark	No. Req'd	Length	Bending Diagram
D401	24	4'-6"	
D402	26	2'-8"	
D403	24	3'-8"	
D404	3	2'-2"	
D405	2	3'-8"	
D406	1	3'-5"	
D407	1	3'-1"	
D408	1	2'-9"	
D409	1	2'-5"	
D410	2	2'-5"	
D411	2	2'-2"	
D412	2	1'-9"	
D413	2	5'-6"	
D414	2	1'-2"	
D415	3	6'-5"	

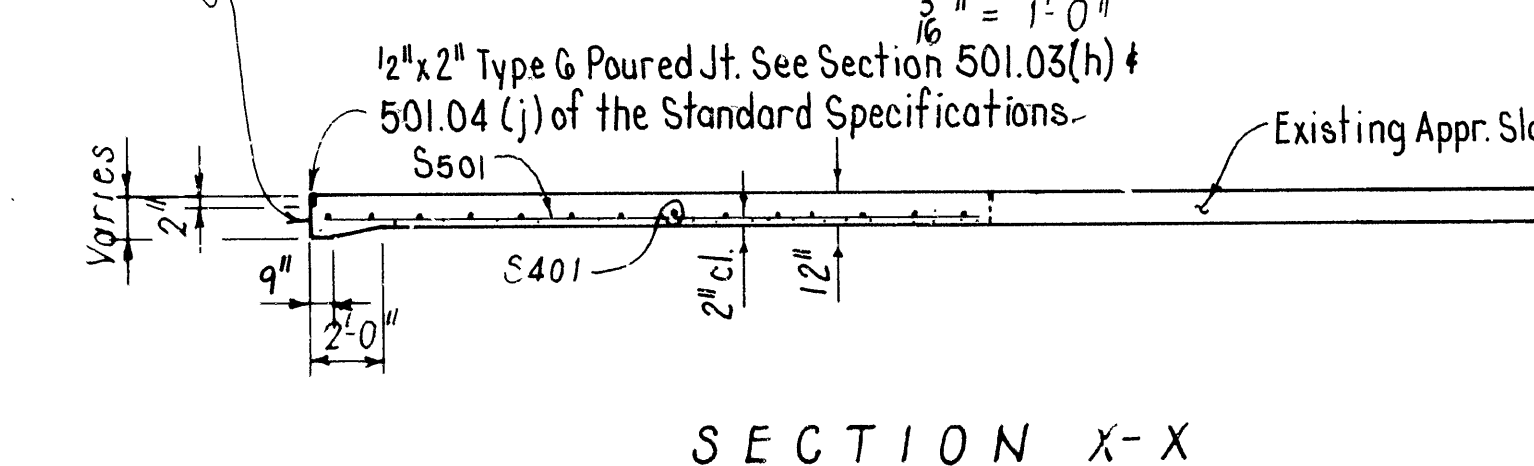
TABLE OF QUANTITIES FOR ONE SQUARE APPROACH SLAB

Slab Width	Concrete	Reinforcing Steel
15'-0"	21.43 cu yd	936 lb
24'-0"	18.22 cu yd	1262 lb
36'-0"	51.44 cu yd	3618 lb

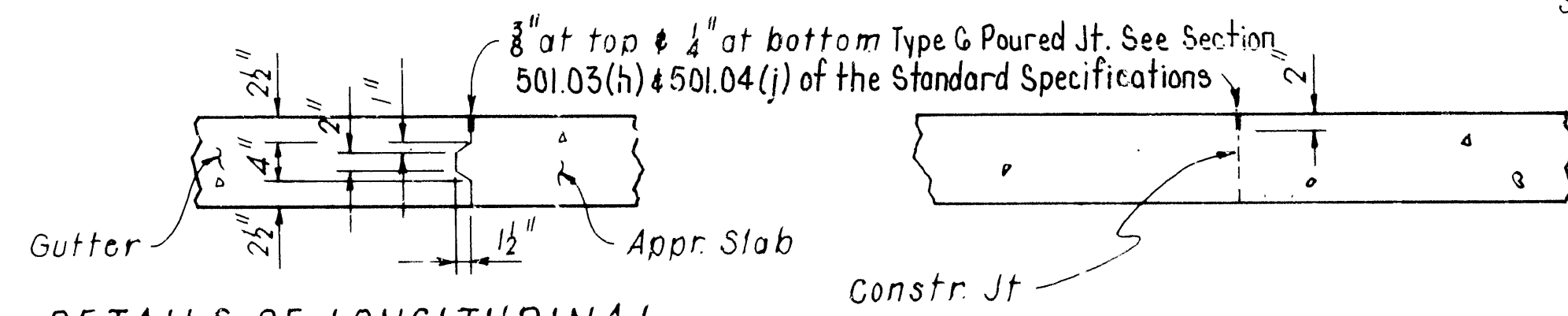


SECTION Y-Y

PLAN - APPROACH SLAB

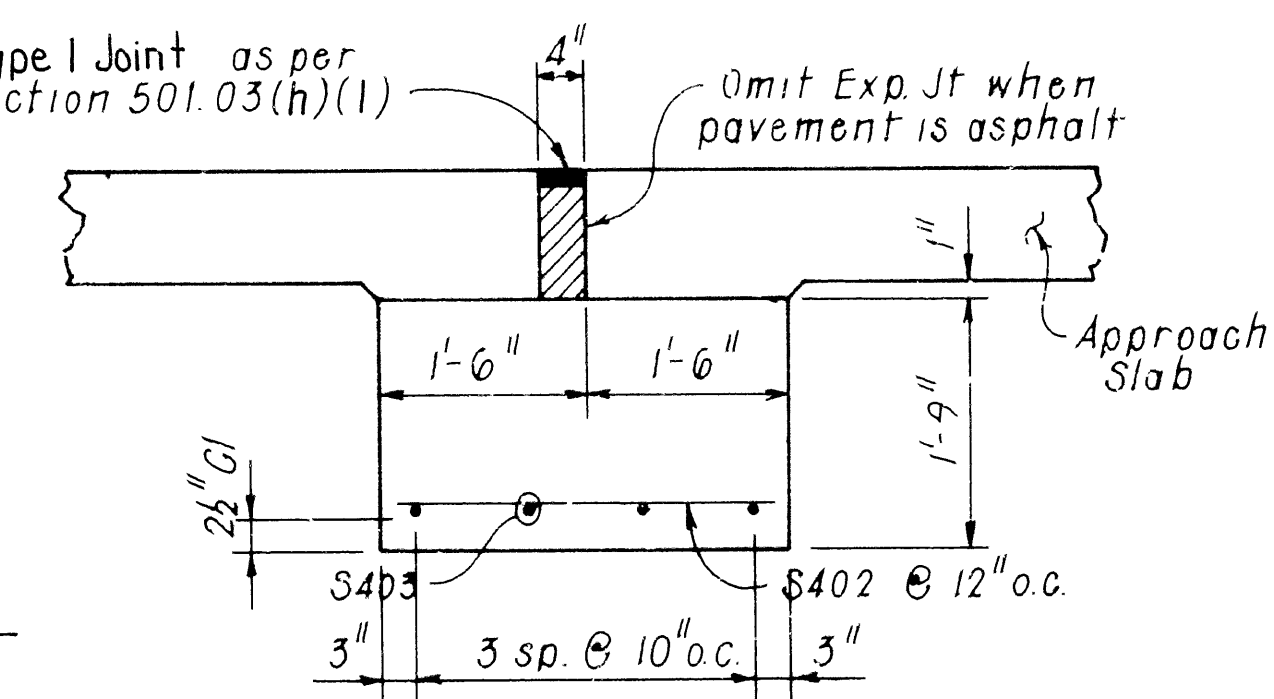


SECTION X-X



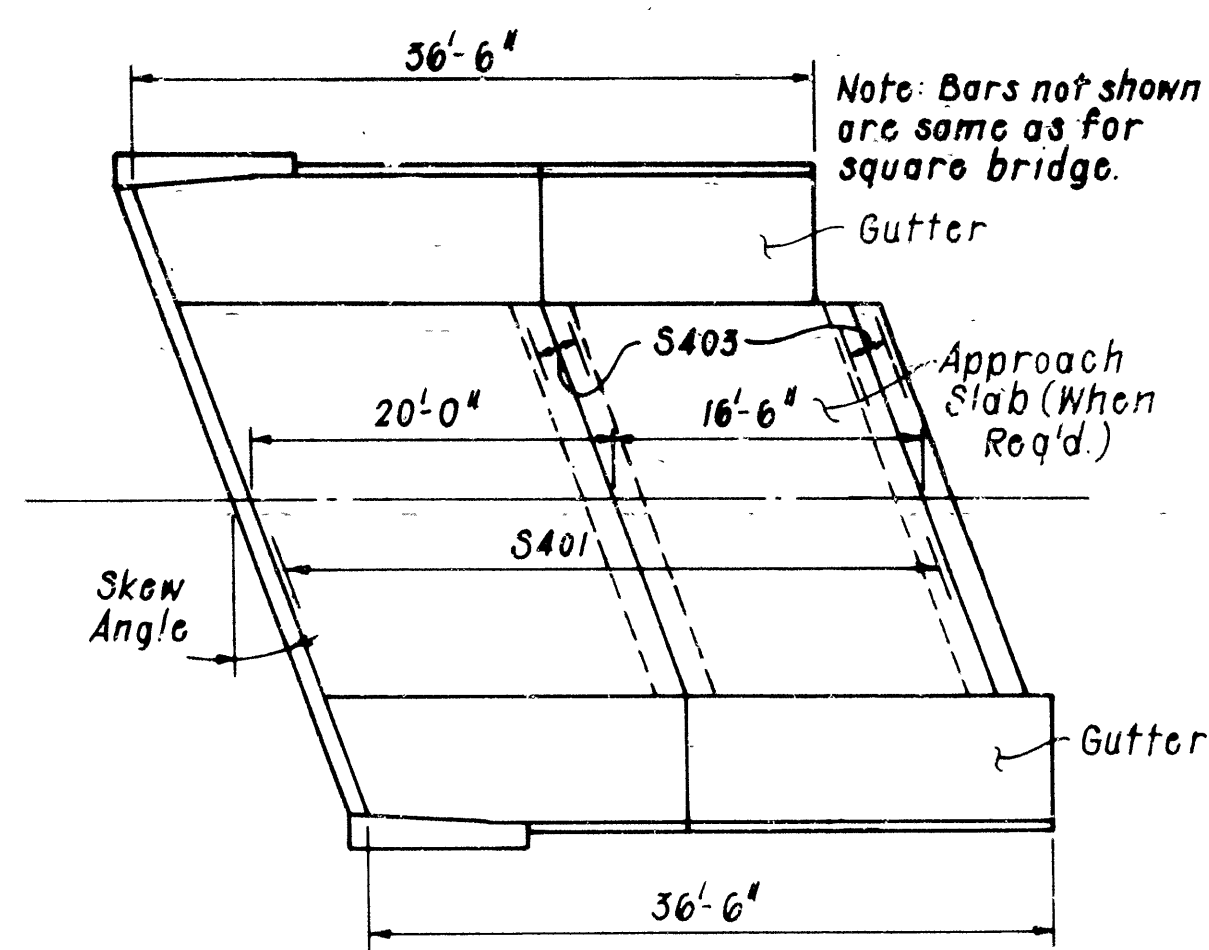
DETAILS OF LONGITUDINAL CONSTRUCTION JOINT

N.T.S.



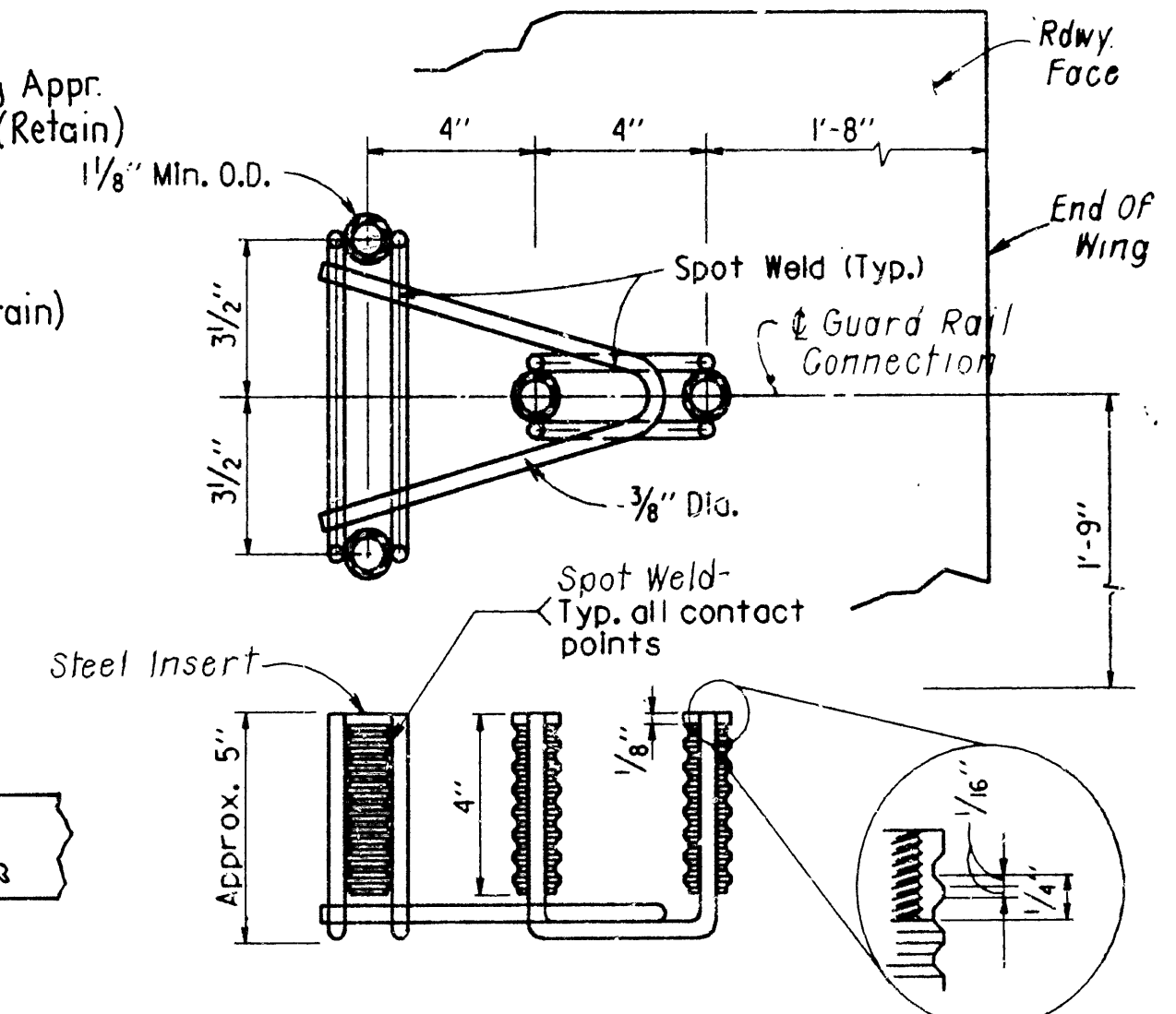
DETAILS OF SUPPORT AT EXPANSION JOINT

Note: Omit support at longitudinal dummy grooved joint. Material - completely fill joint to within 1" of pavement surface as per Subsection 501.03(f)(1).



SKETCH SHOWING TYPE C APPROACH FOR SKEWED BRIDGE

N.T.S.



DETAILS OF DUMMY GROOVED JOINT

3/4" = 1'-0"

GENERAL NOTES

CONCRETE SHALL BE CLASS S OR CLASS S(AE) OF MIXTURE USED FOR PORTLAND CEMENT CONCRETE PAVEMENT.
REINFORCEMENT STEEL SHALL CONFORM TO ASTM A615 OR A617, GRADE 60 (fy=60,000 psi)

Approach Slabs & Approach Gutters will be measured & paid for in accordance with Section 504 of the Standard Specifications.

CONCRETE INSERT ANCHOR ASSEMBLY

3" = 1'-0"

Note: This Drawing to be used with Dwg. No. 29572.

MINIMUM CAPACITY OF GUARD RAIL ATTACHMENT BY CONCRETE INSERT ANCHOR ASSEMBLY OR OTHER MEANS SHALL BE 12,000 LBS. ULTIMATE SHEAR CAPACITY PER BOLT AND INSERT (48,000 LBS. PER ASSEMBLY). THERE SHALL BE A MINIMUM OF FOUR BOLTS PER ATTACHMENT LOCATED AS SHOWN. THE CONTRACTOR MAY USE THE INSERT ANCHOR ASSEMBLY SHOWN, OR ONE SIMILAR WHICH PROVIDES THE SAME FERULE DEPTH AND THREAD LENGTH. THE CAPACITY OF THE INSERT ANCHOR ASSEMBLY SHALL BE CERTIFIED TO THE ENGINEER.

GUARD RAIL ATTACHMENT USING OTHER TYPES OF CONCRETE INSERTS WILL BE ALLOWED, PROVIDED IT MEETS THE MINIMUM CAPACITY SPECIFIED, THE CAPACITY IS CERTIFIED, AND APPROVAL IS OBTAINED FROM THE ENGINEER BEFORE USE.

THREADED STEEL INSERT WITH SOLID BOTTOM TAPPED TO A MINIMUM THREADED DEPTH OF 2 1/2" FOR USE WITH 3/4" X 2 1/2" HIGH STRENGTH HEX BOLTS AND TWO HARDENED STEEL WASHERS. SEE SECTION 607 OF THE STANDARD SPECIFICATIONS.

BOLTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A325 OR A449 AND SHALL BE THREADED FULL LENGTH. BOLTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153.

BOLTS SHALL BE INSTALLED IN ACCORDANCE WITH SUBSECTION 807.22(D) OF THE STANDARD SPECIFICATIONS.

DETAILS OF APPROACH SLABS

HELENA BRIDGE

ROUTE 49 SEC. 11

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DESIGNED BY: KDH DATE: JAN. 88
CHECKED BY: D.H.P. DATE: 1-15-88
REVIEWED BY: C.P.B. DATE: 8/87

BRIDGE NO. 2899R

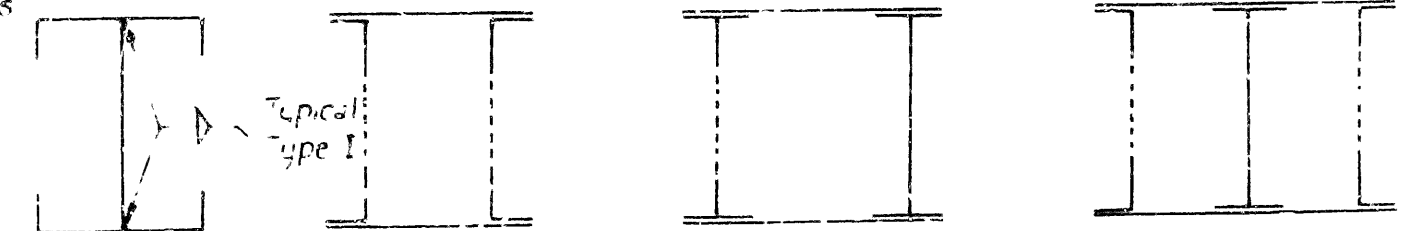
DRAWING NO. 29573

Karl P. Bortner
BRIDGE ENGINEER

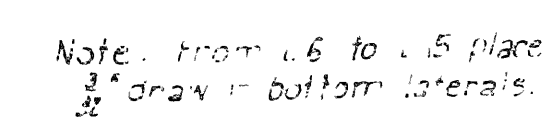
1

VERTICALS

- *₁ for reinforcement see details.
- *₂ Section varies see details.
- *₃ Width of web is determined by distance between gusset plates
- *₄ Actual unit stress derived from direct design stress
- *₅ L14-L15 governed by erection stress



TOP LATERALS

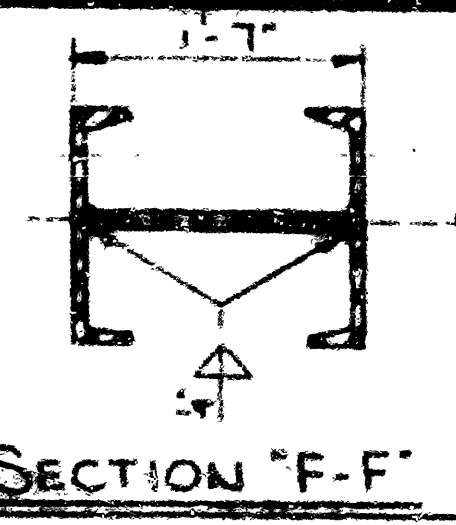


ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY DEPARTMENT
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS

RIVER BRIDGE SPANS 11 - 15
STRESS SHEET UNIT 1

SCALE (1" = 30') HOWARD, NEEDLES, TAMMEN & BERGENDOFF
 MADE _____ DATE _____ CONSULTING ENGINEERS
 PREP. AH DATE 6-24-56 KANSAS CITY CLEVELAND NEW YORK
 CHK. LLU DATE 11-3-56 984 SHEET-4.15

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FILE NO. REV. NO.	STATE	MISS. JOB NO.	PROJECT NO.	TOTAL SHEET
7-1-79	6-5-74-81			6	ARK.	85-0057-01-002.10		
						ARK. JOB NO.	110104	408 58
						2899R-MEMBER	M7-L7-29573B	



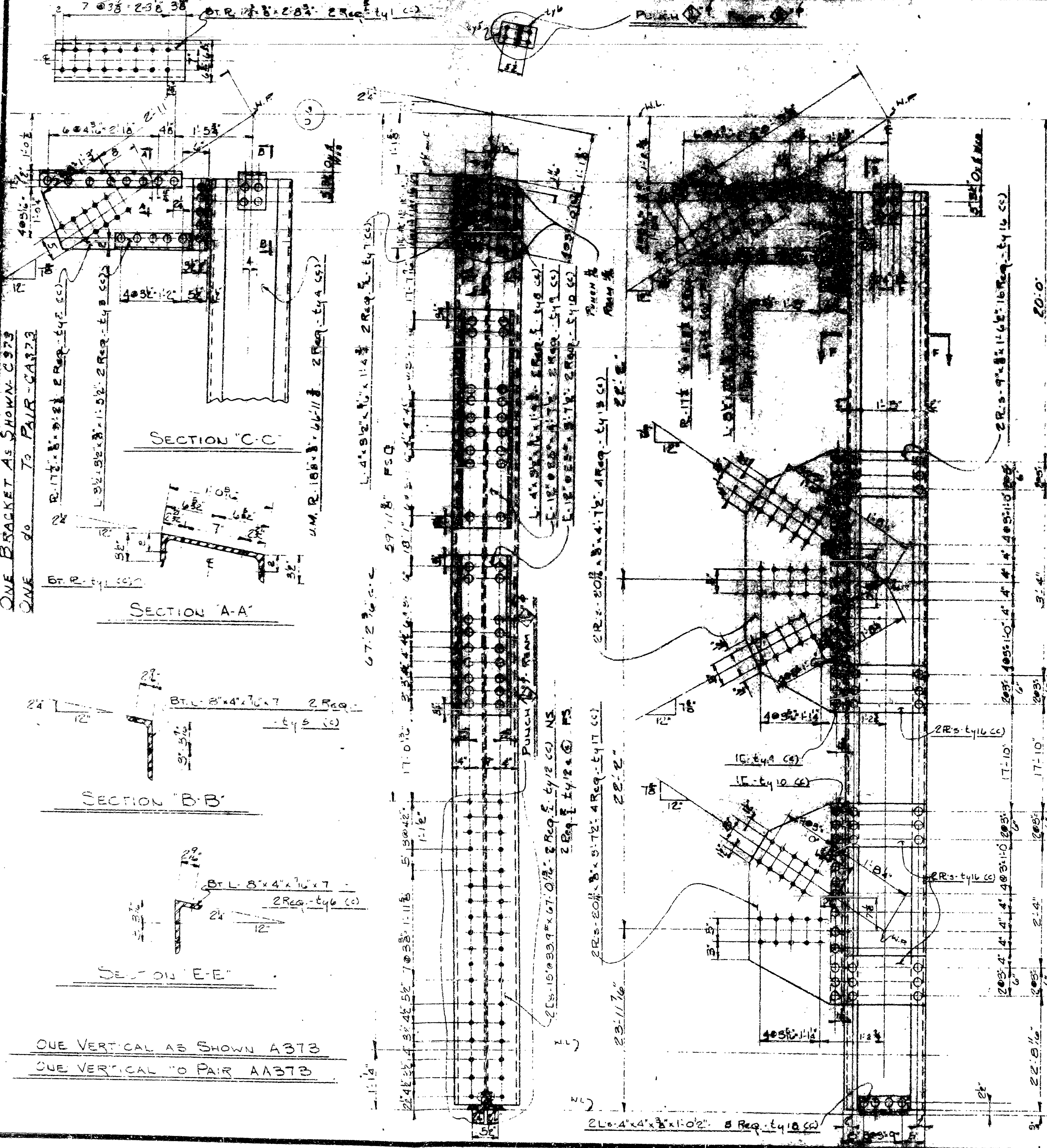
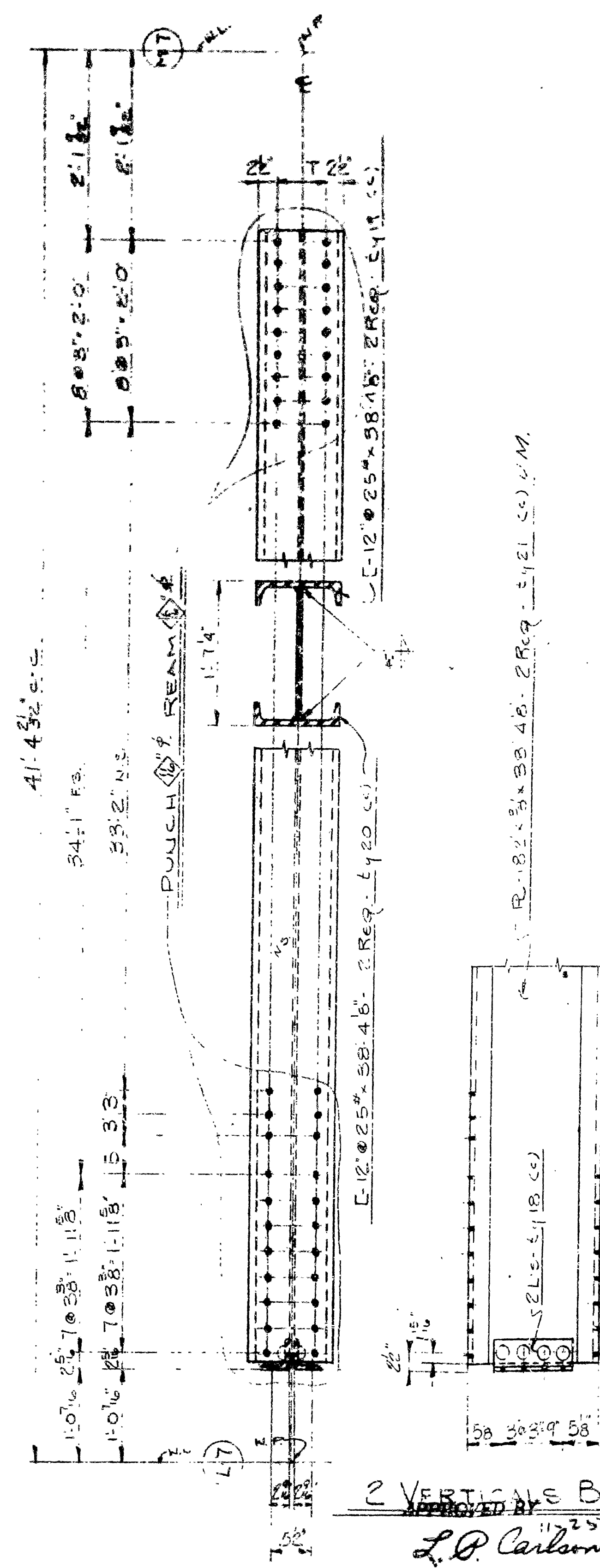
Vertical member M7-L7 (see dwg. for location) of the north truss has been damaged and is to be removed and replaced according to Special Provision "Removing And Replacing Member M7-L7". Member M7-L7 is labeled Vertical B373 on this original contract shop drawing. All dimensions are to be verified in the field prior to fabrication.

All structural steel shall conform to ASTM A36.

Bolts shall be 7/8" A325; holes shall be 1/8".

MEMBER M7-L7

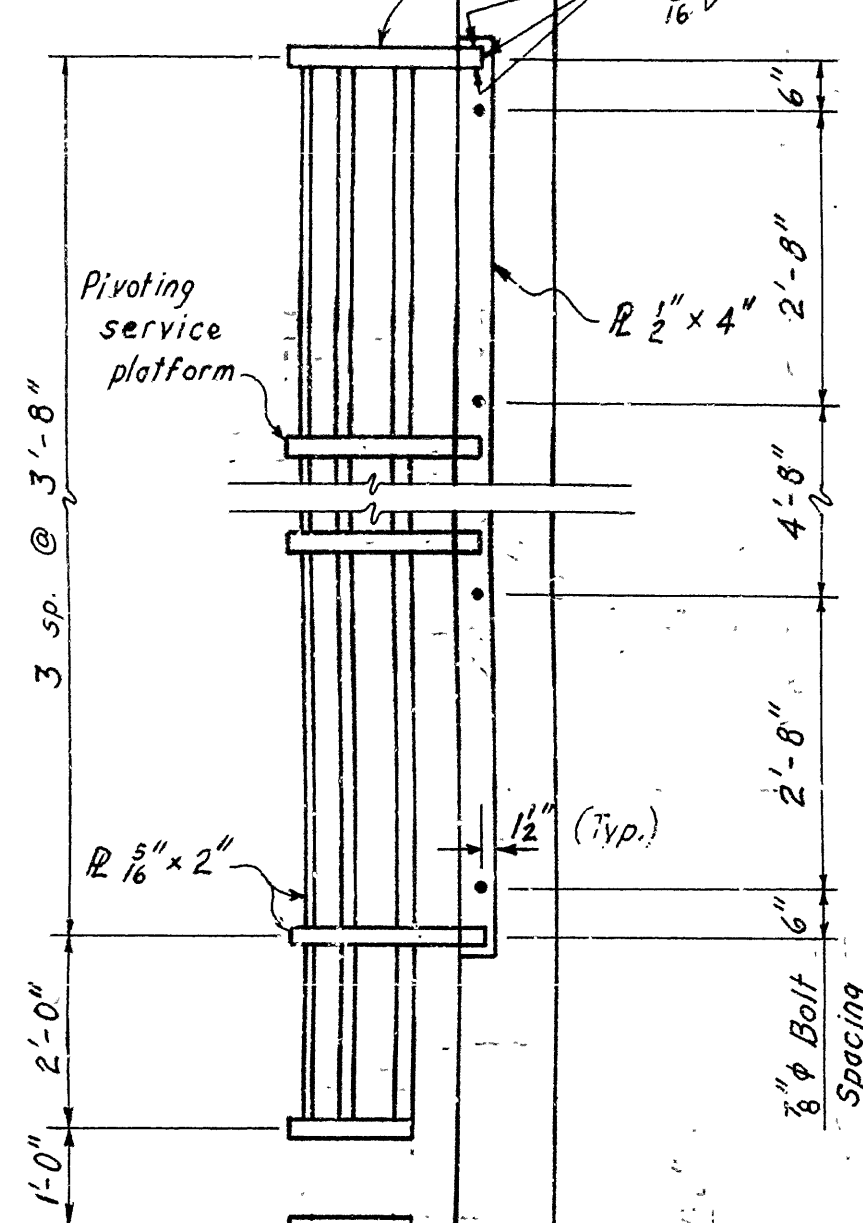
APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS	
GENERAL NOTES	
Rivets	7/8" except as noted
Holes	1/8" except as noted
End Distance	1 1/2" unless noted
Shop Paint	RED LEAD (ARK. STD.)
Contact Surfaces	NO PAINT
Shop Inspection by	
Field Connections	RIVET
Drawn by	KW 5-12-59
Checked by	12/K
Revisions	
ARKANSAS STATE HIGHWAY COMMISSION MISSISSIPPI STATE HIGHWAY COMMISSION	
MISSISSIPPI RIVER BRIDGE NEAR HELENA, ARKANSAS UNIT #1	
SOLD TO JOHN F. BEARLEY CONSTR. CO. CHICAGO, ILL. NO. 3	



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	MISS. JOB NO.	SHEET NO.	TOTAL SHEETS
5-4-89	7-25-89			6	ARK.	85-0057-01-002-10	40C	
2-22-90	2-26-90					ARK. JOB NO. 110104		

① 2879R SAFETY MODIFICATION 29573C

See "Overhead View Of Cage" detail.



Existing vertical truss member with 1/4 inch ladder rungs.

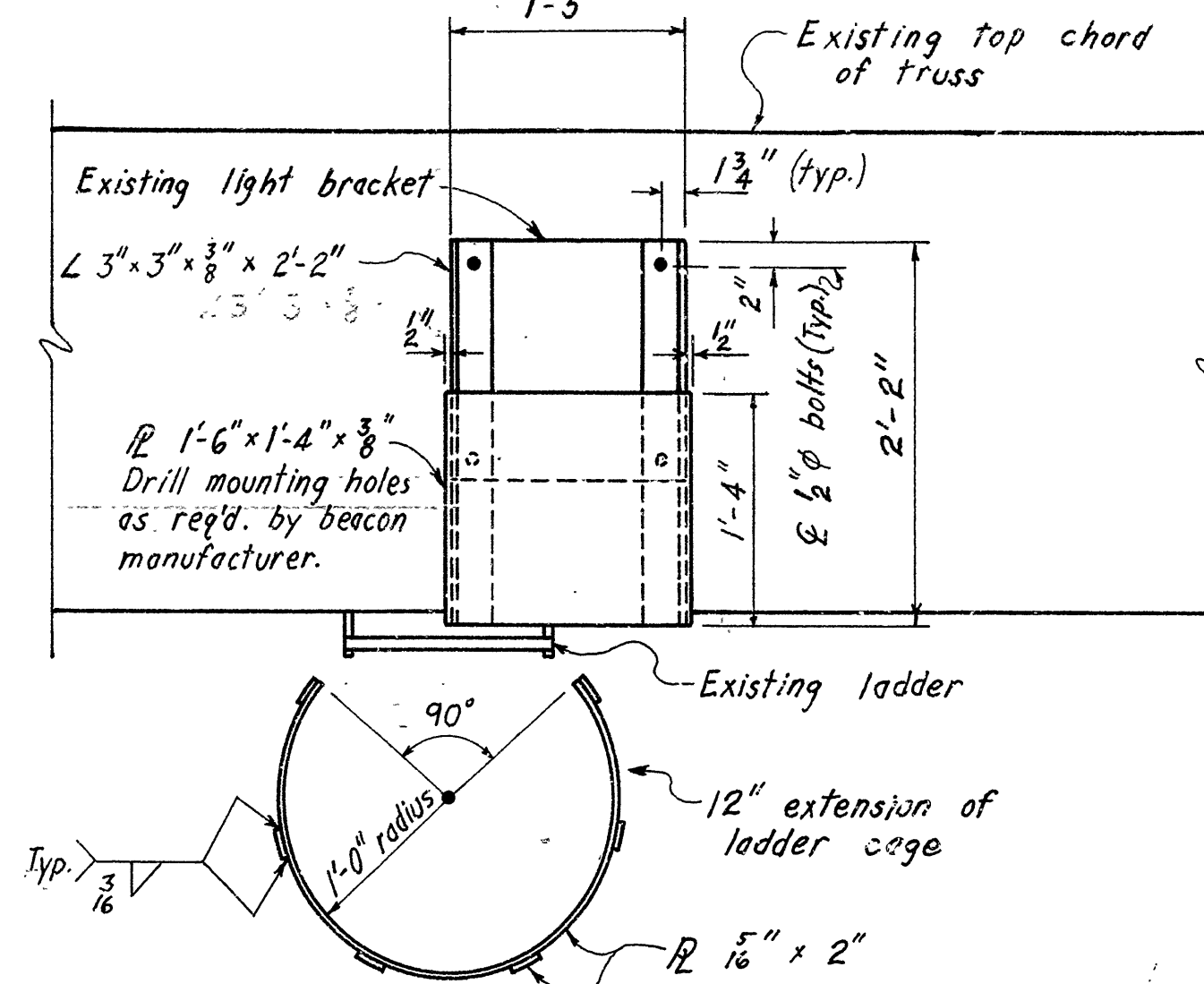
OVERHEAD VIEW OF CAGE

1" = 1'-0"

ELEVATION - PIVOTING SERVICE PLATFORM

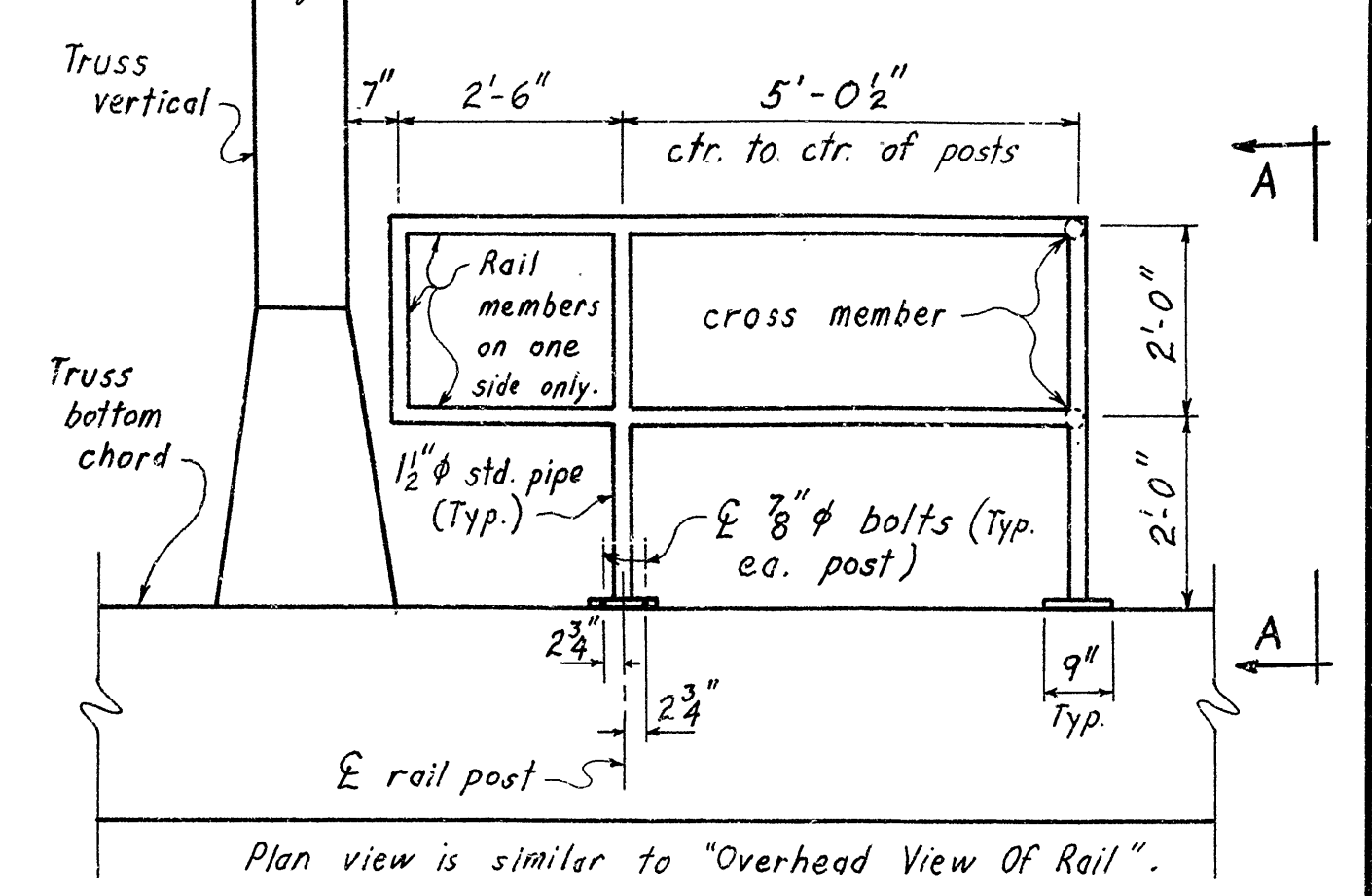
PLAN - PIVOTING SERVICE PLATFORM

1" = 1'-0"



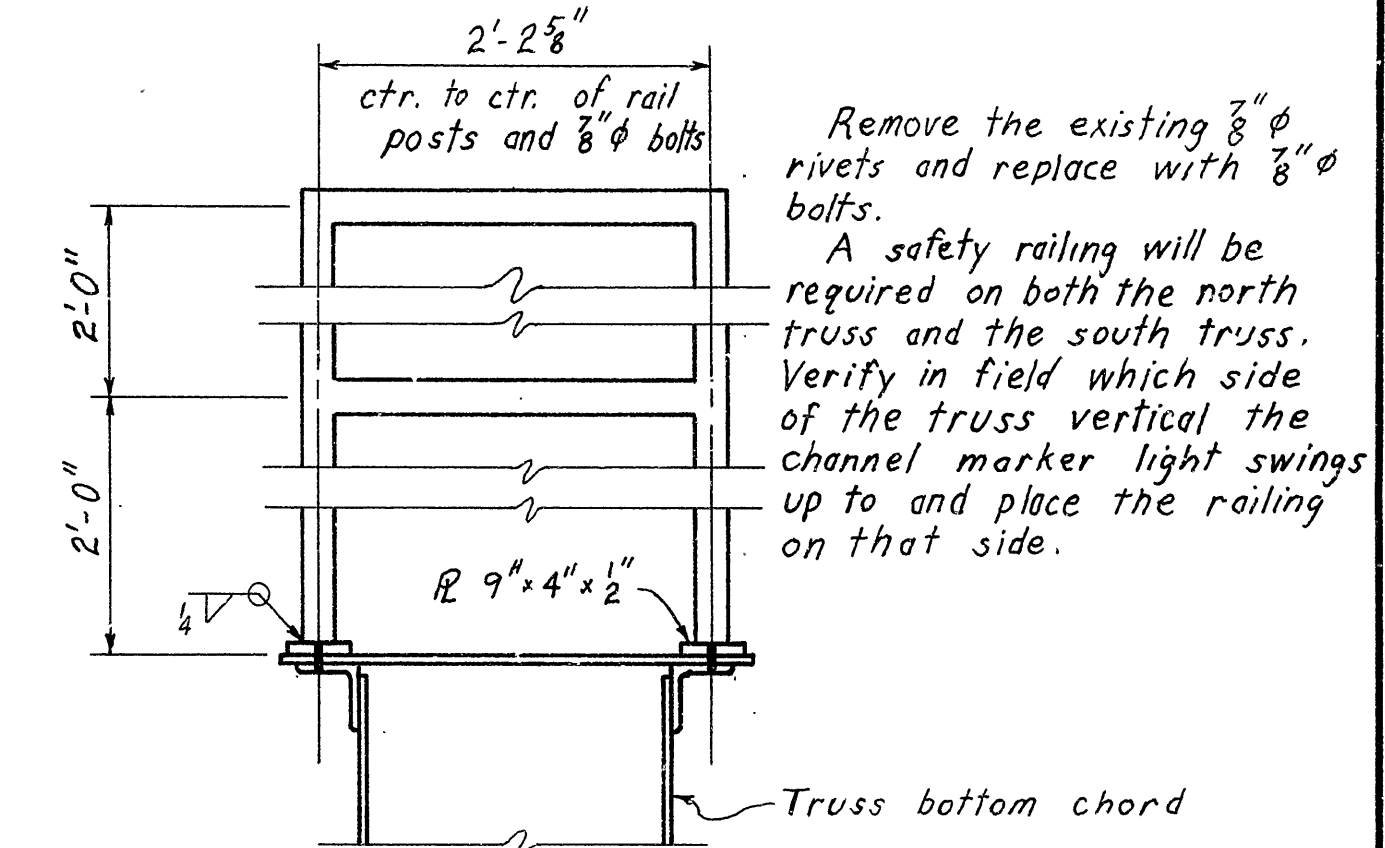
MODIFICATIONS TO AERIAL HAZARD WARNING BEACON MOUNTING BRACKET & LADDER CAGE

See drwg. E-1 & E-2. Aerial hazard warning beacons are designated with the symbol (A) on drwg. E-2. The purpose of these modifications is to allow servicing of the beacon without getting out of the ladder safety cage.



SAFETY RAILING AT CHANNEL MARKER LIGHTS

Two req'd. in truss Unit 3. See drawings E-1 & E-2.



SECTION A-A

1" = 1'-0"

GENERAL NOTES

All structural steel shall be ASTM A36 and shall conform to Section 807 of the Standard Specifications. All welding shall conform to Supplemental Specification 807-1. All bolts shall be ASTM A325 high strength except as noted. Bolt holes shall be 1/8 inch larger than the nominal diameter of the bolt. Pipe shall be ASTM A53, Grade B. Pipe rails shall be butted, capped and fully welded.

Where rivets are removed, ream holes as required for installation of 7/8 inch diameter bolts.

All structural steel shall be erected unpainted and then cleaned and painted as specified in Section 820 of the Standard Specifications.

Payment for cleaning and painting shall be made under the pay item "Cleaning and Painting Existing Structural Steel (Type II)".

All structural steel, pipe, stair treads and grating shall be paid for as specified in Job SP "SAFETY MODIFICATIONS" (total weight of above items is approximately 3050 lbs.).

SAFETY MODIFICATIONS
HELENA BRIDGE
ROUTE SEC.

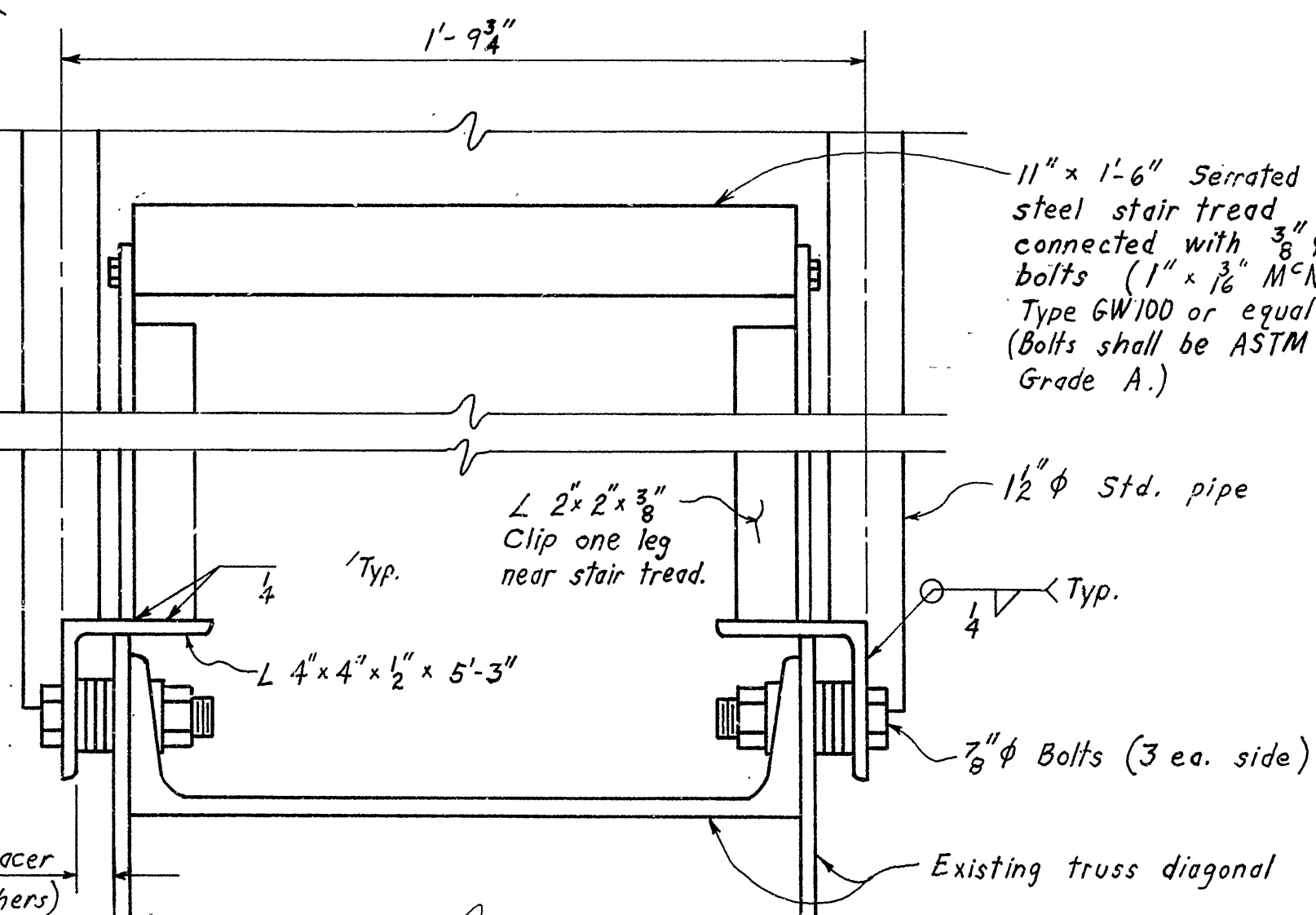
ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

BRIDGE NO. 2899R DRAWING NO. 29573C

SAFETY MODIFICATIONS AT MAIN CHANNEL LIGHTS

See drwg. E-1 and E-2. Main channel lights are designated with the symbols (D) & (B) on drwg. E-2. Two sets of modifications are required in truss Unit 2.

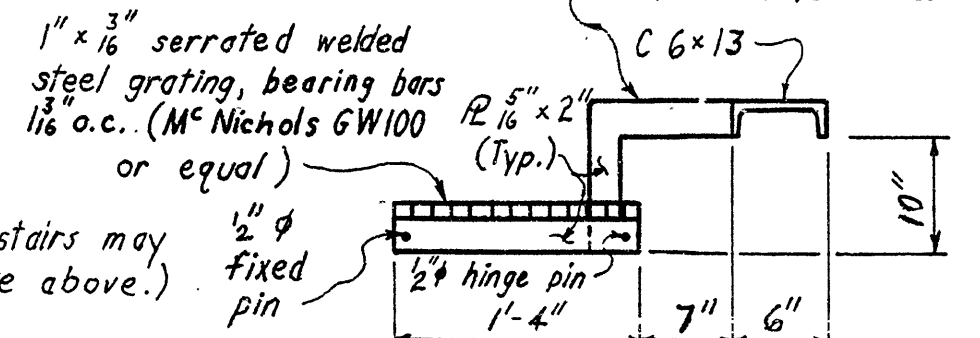


HANDRAIL AND STAIR CONNECTION DETAIL

3" = 1'-0"

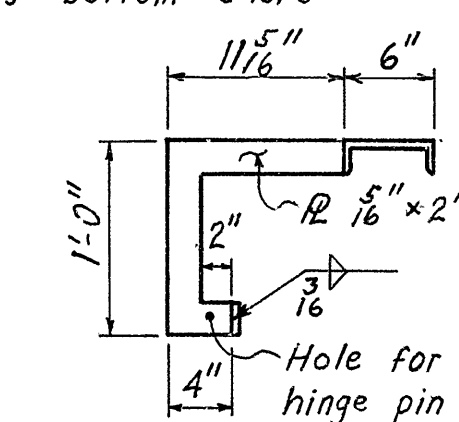
OVERHEAD VIEW OF RAIL

1/2" = 1'-0"



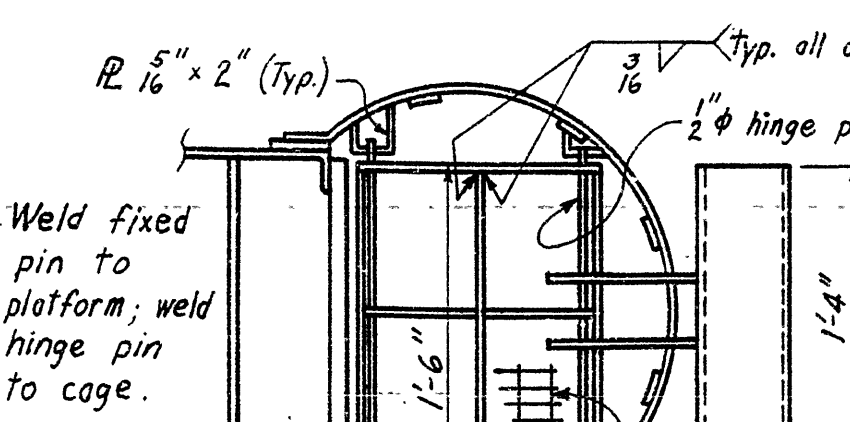
ELEVATION - PIVOTING SERVICE PLATFORM

1" = 1'-0"



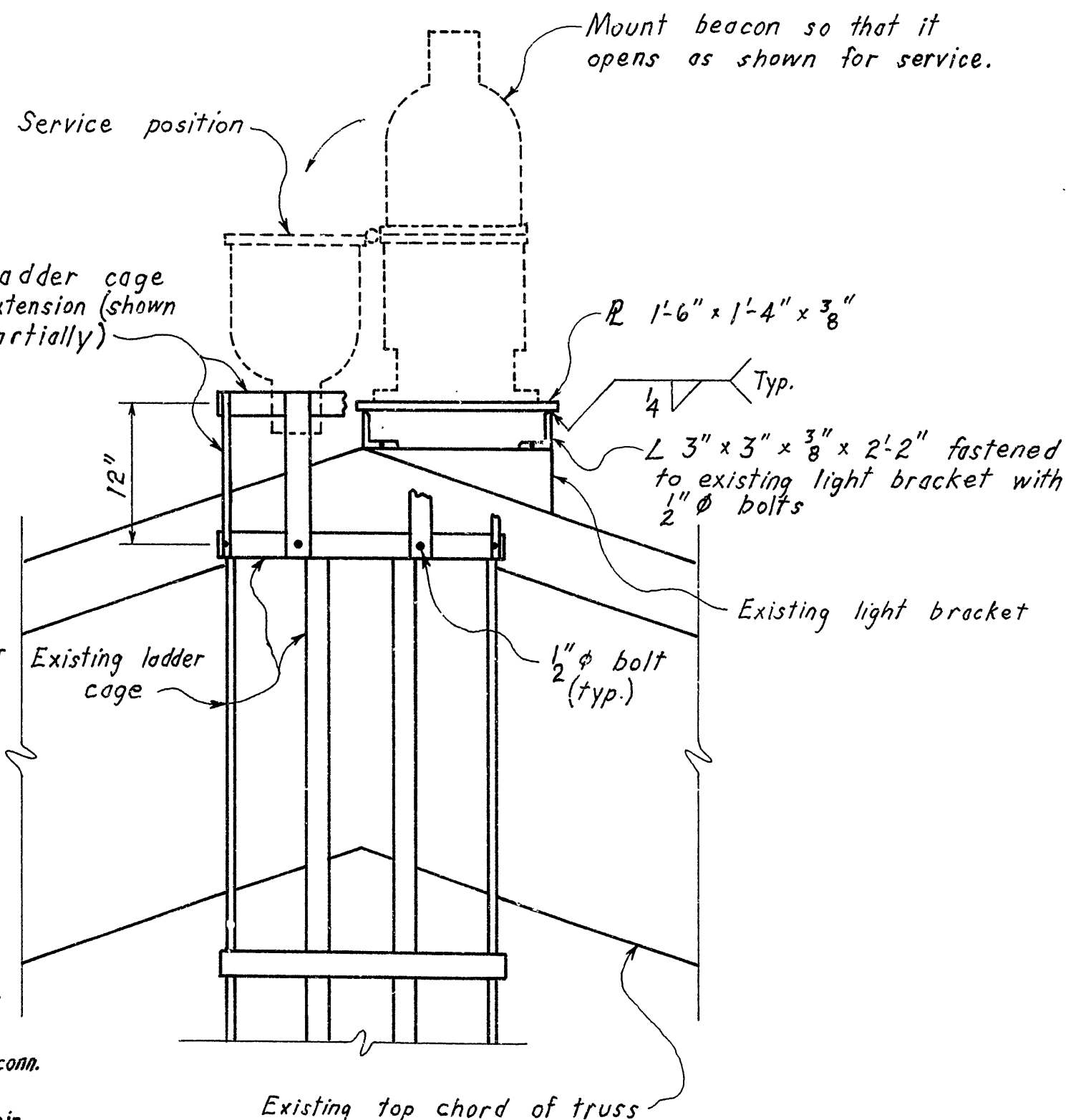
COUNTERWEIGHT ARM DETAIL

1" = 1'-0"



PLAN - PIVOTING SERVICE PLATFORM

1" = 1'-0"



MODIFICATIONS TO AERIAL HAZARD WARNING BEACON MOUNTING BRACKET & LADDER CAGE

The modifications are required at four locations. See drawings E-1 & E-2.

Revised Pivoting Service Platform Details 2-22-90 MEC

BRIDGE ENGINEER