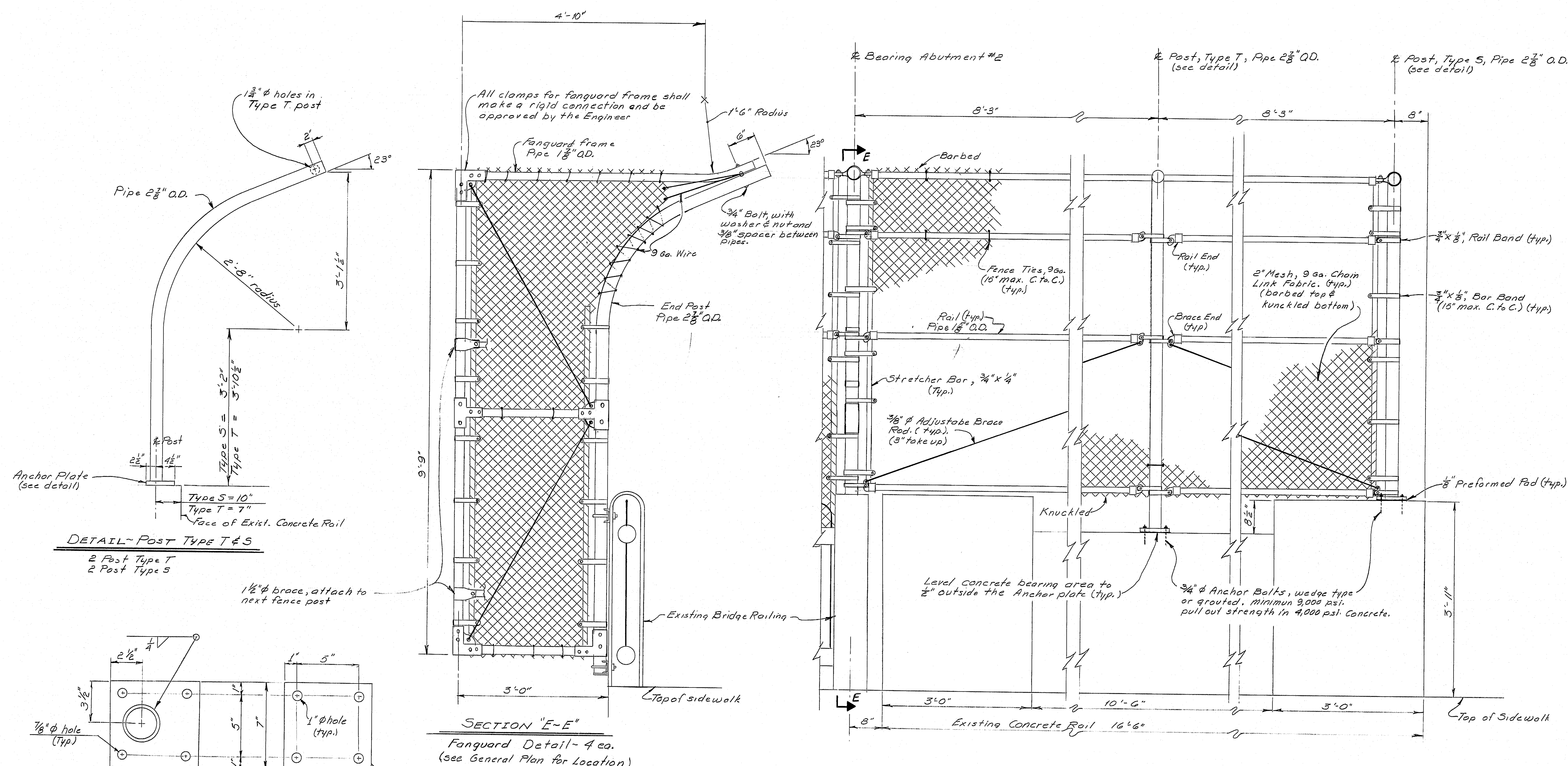


F.R.W.A. PROJ. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	F-028-1(22)	9	10



SIDEWALK BARRIER FENCE ELEVATION ON EXISTING CONCRETE RAIL
(Upstream side shown downstream side similar)

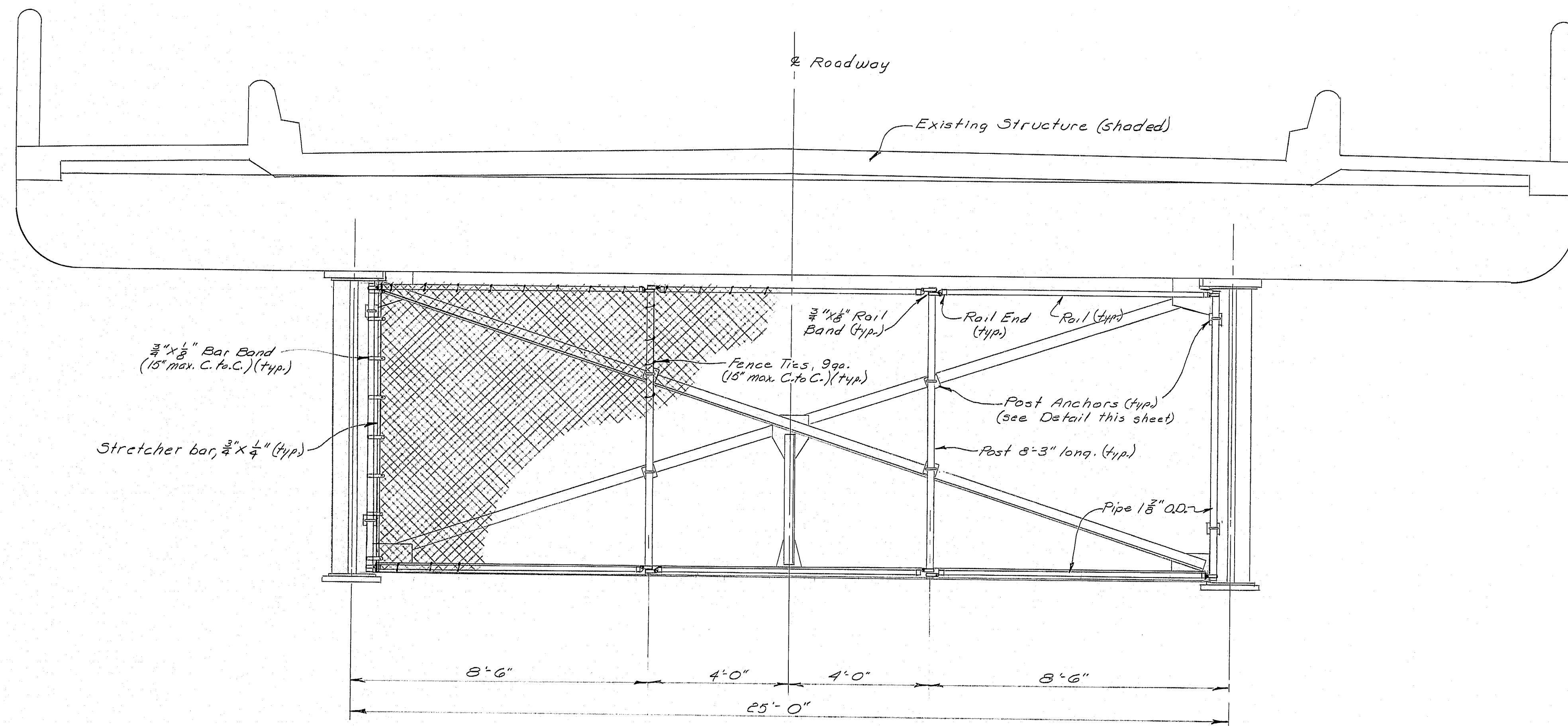
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
AUGUSTA MEMORIAL BRIDGE
Installation of
BARRIER FENCE
CITY OF AUGUSTA
KENNEBEC COUNTY
SIDEWALK BARRIER FENCE over
EXISTING CONCRETE RAIL
SHEET 4 OF 7 AUGUSTA, MAINE

R93-159

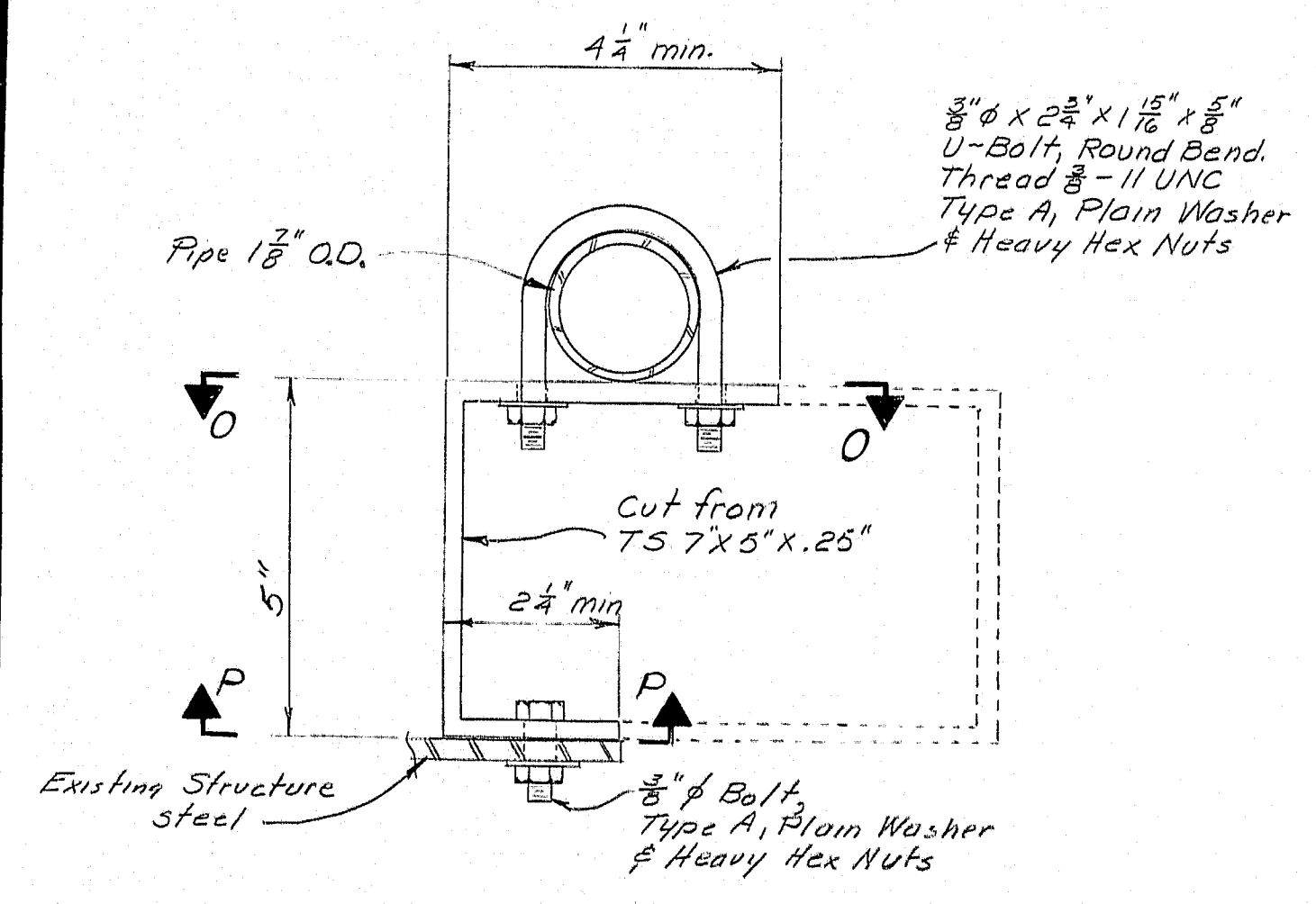
PROJECT DESIGN ENGINEER	DATE
DESIGN-DETAILED	6/22
CHECKED	LAW
REVISIONS	
FIELD CHANGES	

BRIDGE 44-132-2710

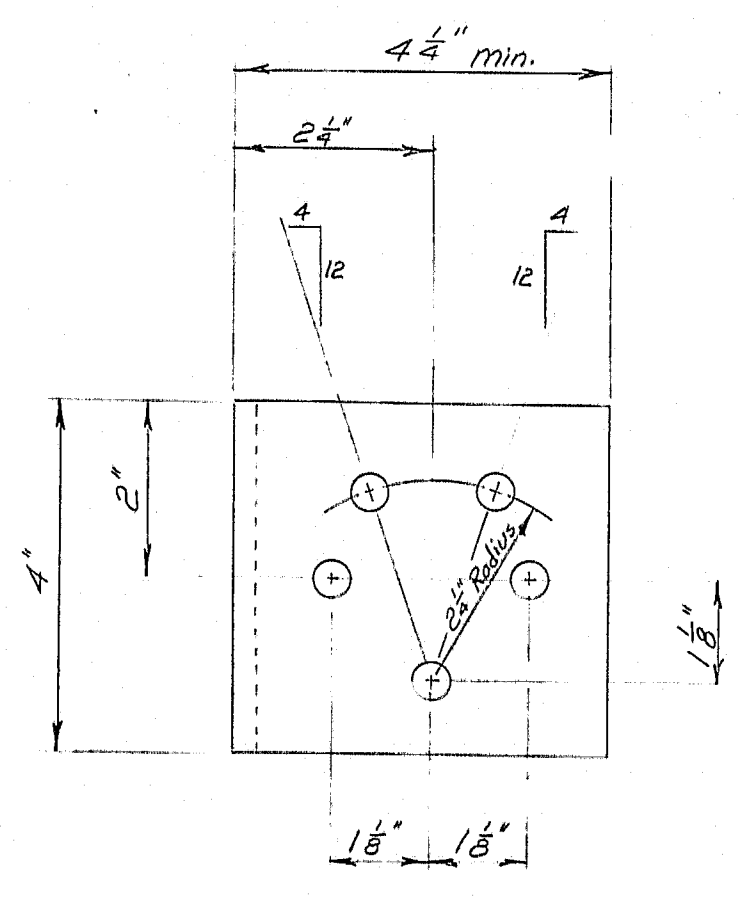
F.R.D. DES. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	FORB-1(20)	5	10



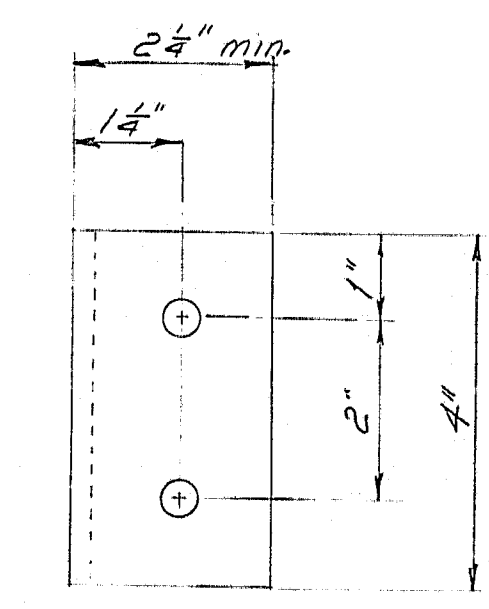
GIRDER BARRIER FENCE-ELEVATION
 Girder Barrier Fence shall be installed on abutment #2 side of first girder cross frame 25'± from abutment #2.



POST ANCHOR DETAIL



SECTION 'O-O'



SECTION 'P-P'

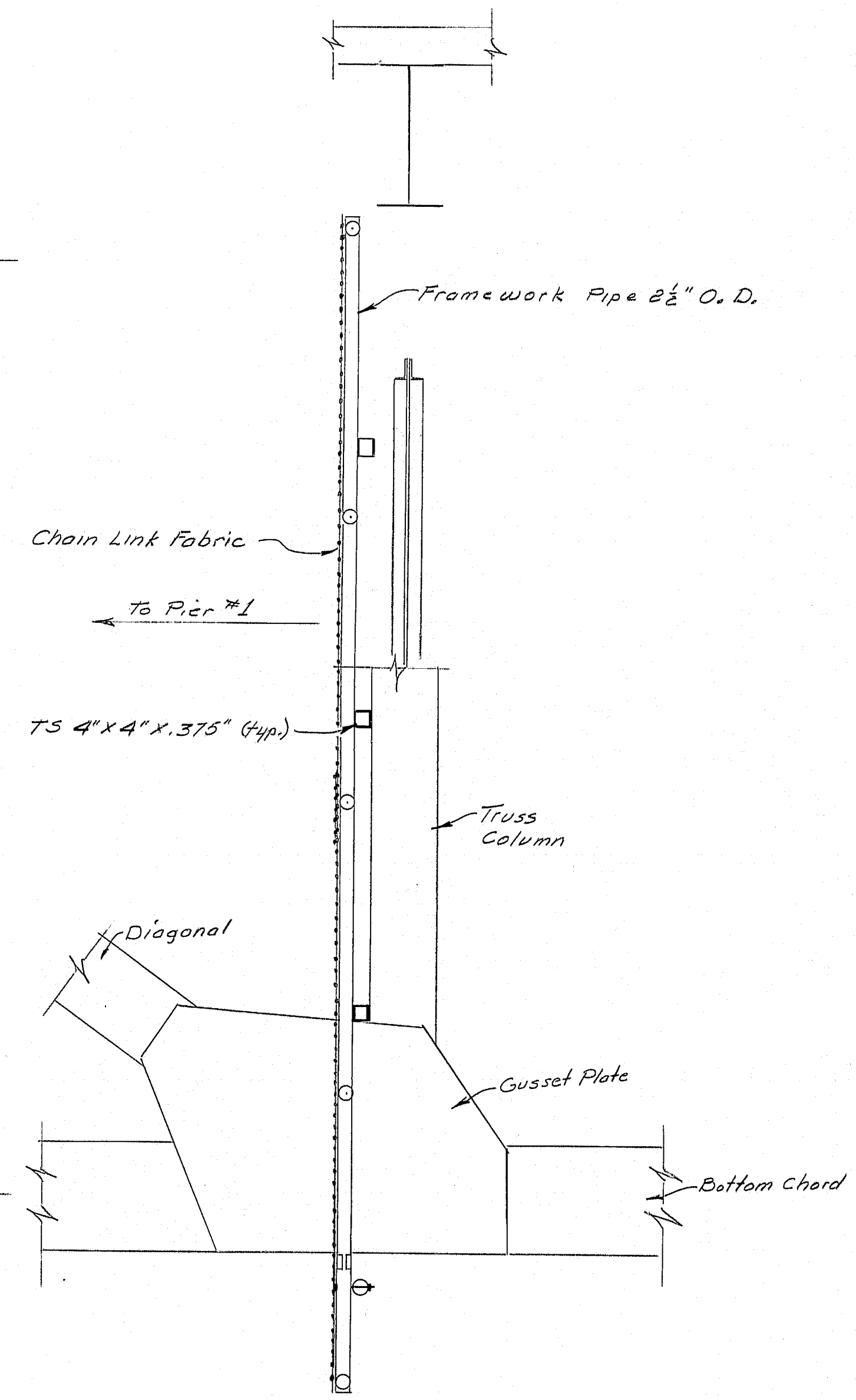
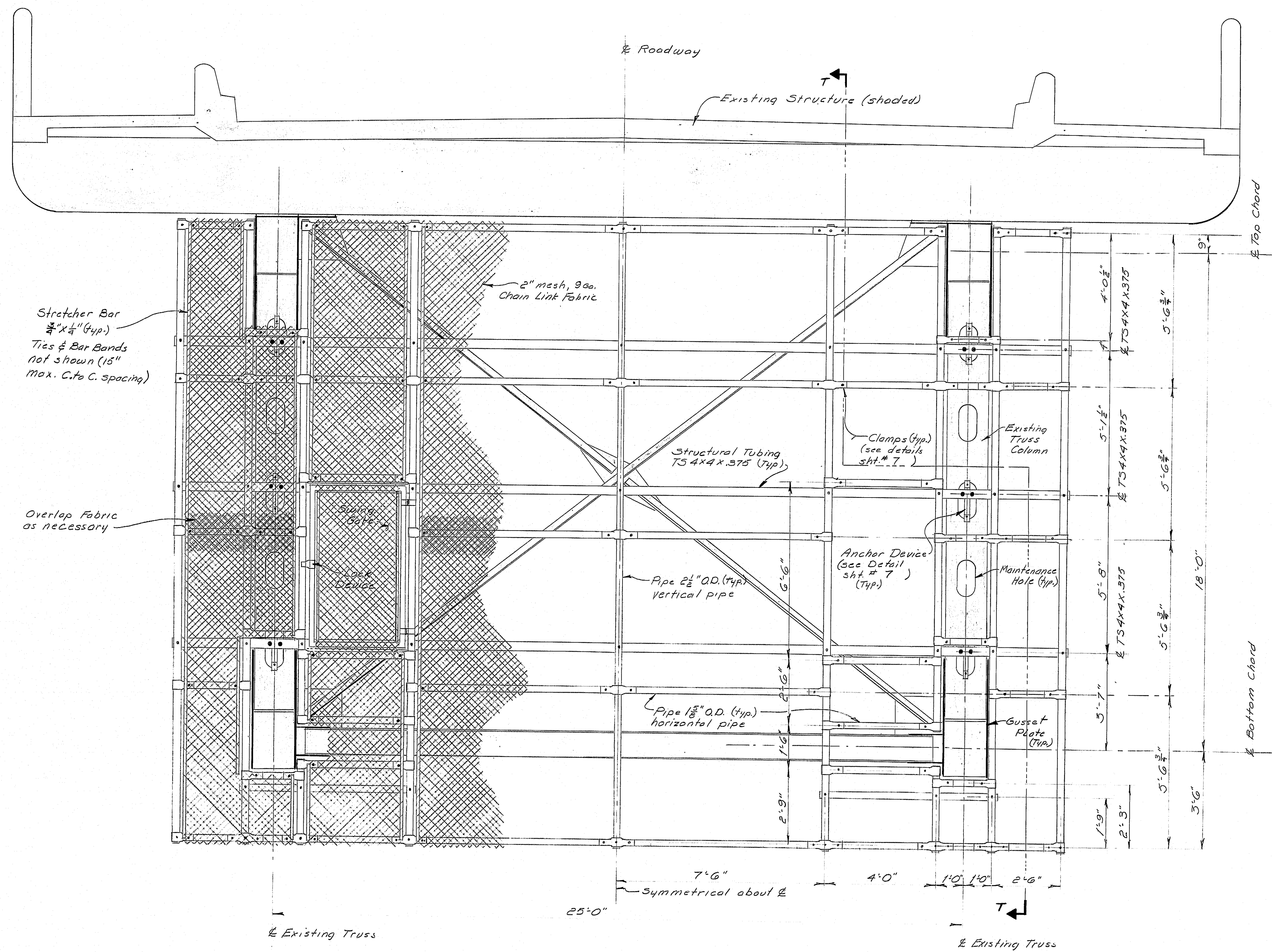
PROJECT DESIGN ENGINEER	BY	DATE
DESIGN DETAIL	LAW	6/22
CHECKED		
REVISIONS		
FIELD CHANGES		

BRUNING 44-132-45710

R93-160

STATE OF MAINE
 DEPARTMENT OF TRANSPORTATION
 AUGUSTA MEMORIAL BRIDGE
 Installation of
 BARRIER FENCE
 CITY OF AUGUSTA
 KENNEBEC COUNTY
 GIRDER BARRIER FENCE
 SHEET 5 OF 7 AUGUSTA, MAINE

F.R.W.A. P.D. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	F-028-1120	6	10



TRUSS BARRIER FENCE - ELEVATION

SECTION "T-T"

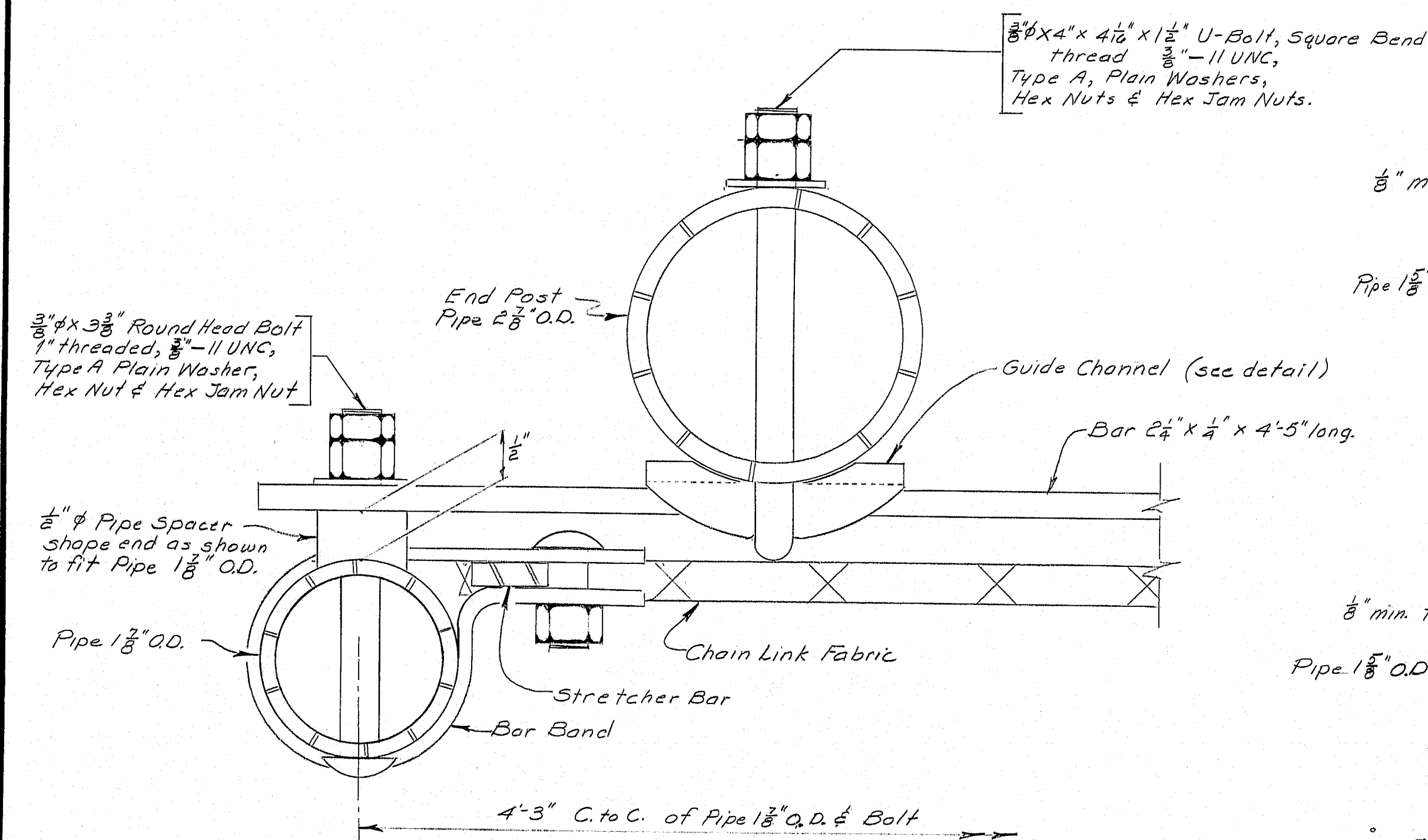
PROJECT DESIGN ENGINEER	BY	DATE
DESIGN - DETAILED	LAW	7/72
CHECKED		
REVISIONS		
FIELD CHANGES		

BRWING 44-132-45710

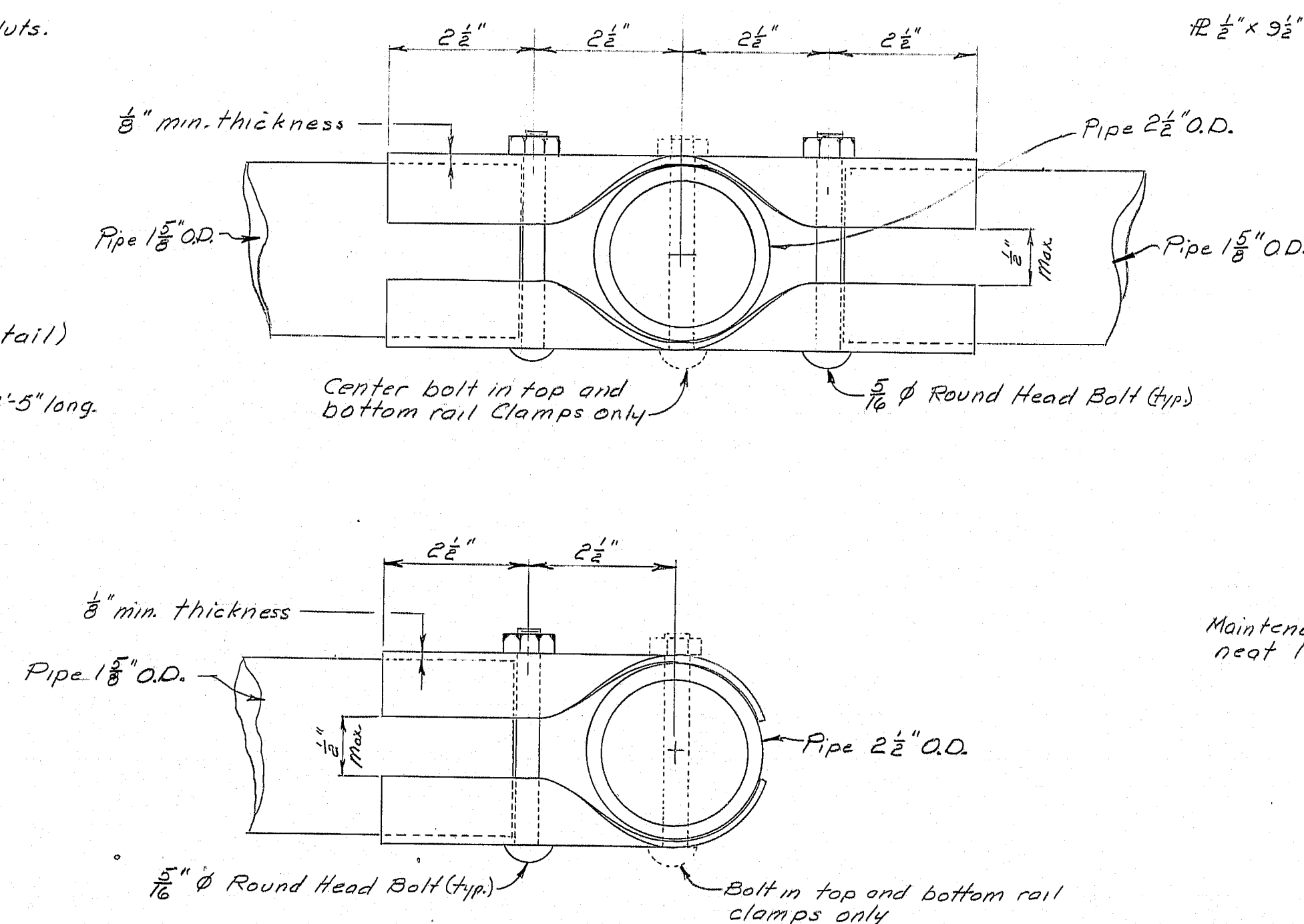
R93-161

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
AUGUSTA MEMORIAL BRIDGE
Installation of
BARRIER FENCE
CITY OF AUGUSTA
KENNEBEC COUNTY
TRUSS BARRIER FENCE
SHEET 6 OF 7 AUGUSTA, MAINE

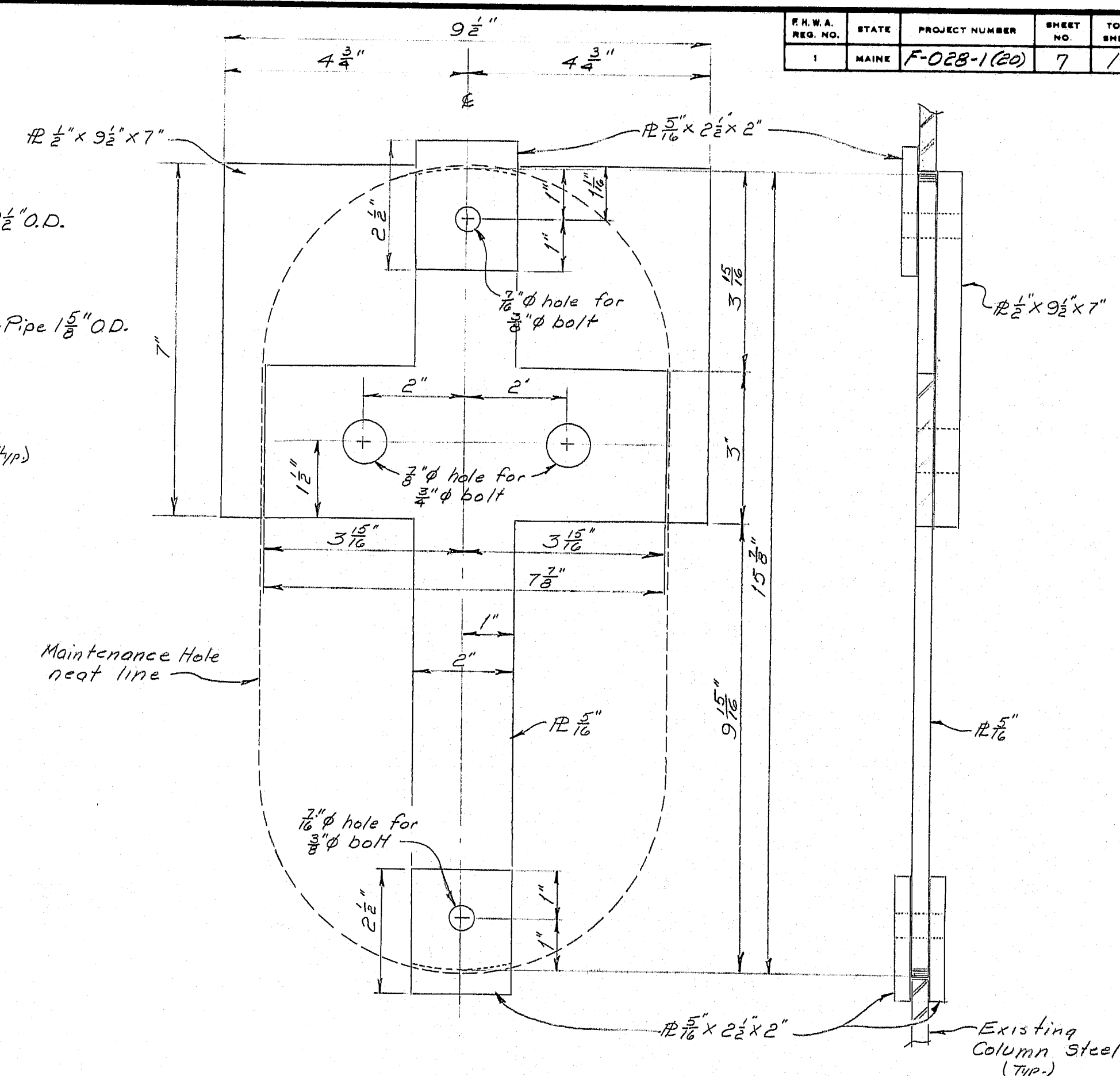
F.R.N.A. REV. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	F-028-1(20)	7	10



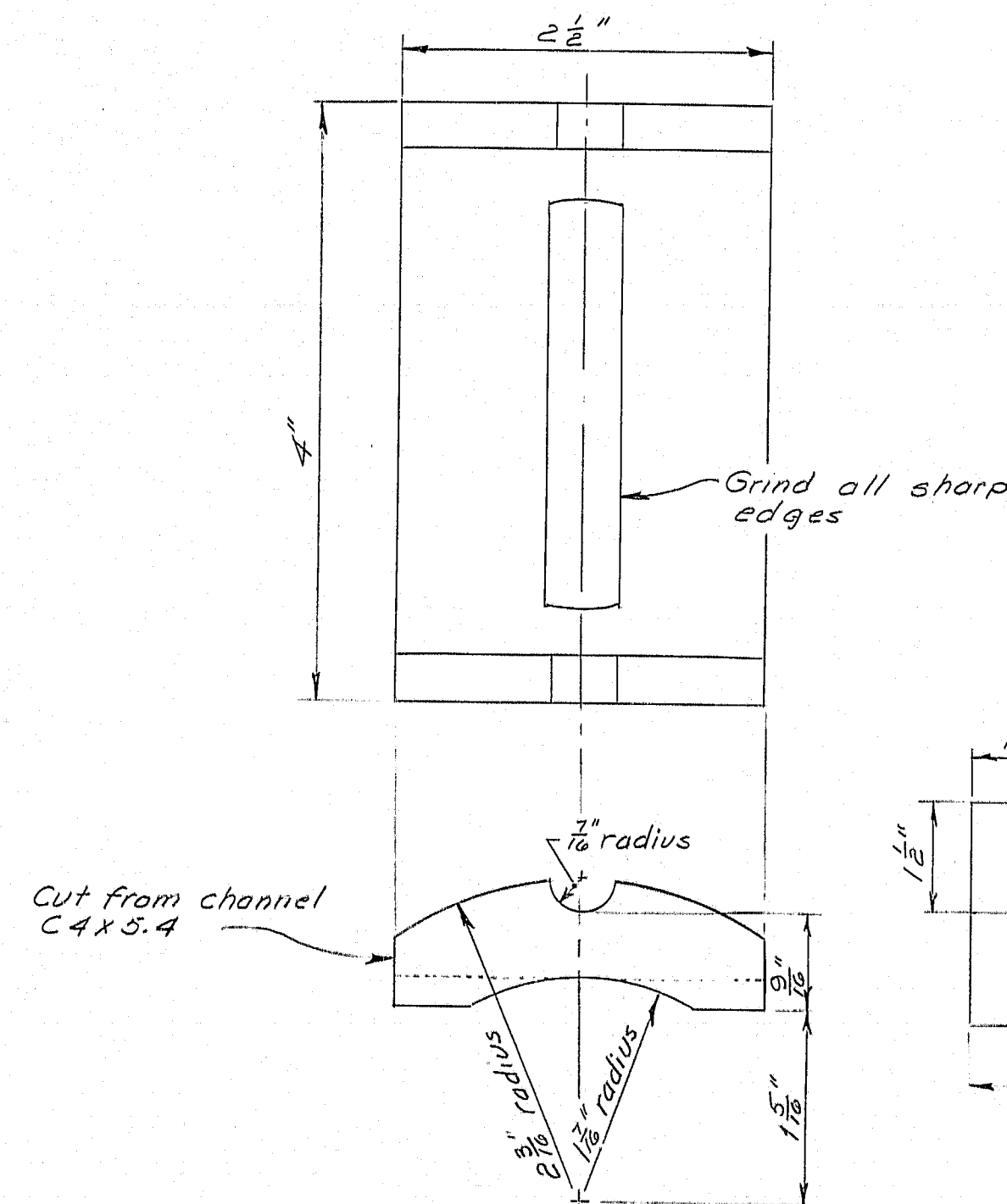
SECTION S-S
(For Expansion Assembly)



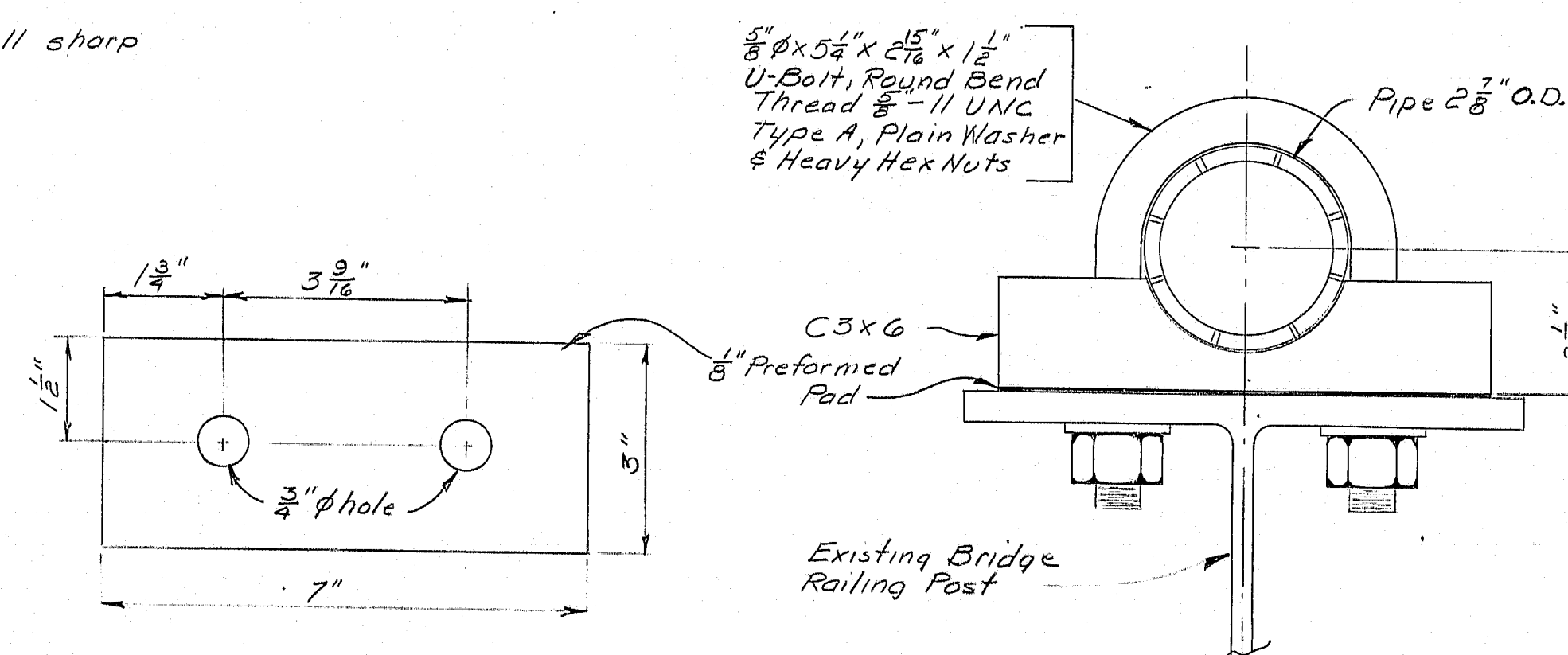
CLAMP DETAILS
(For Truss Barrier Fence)



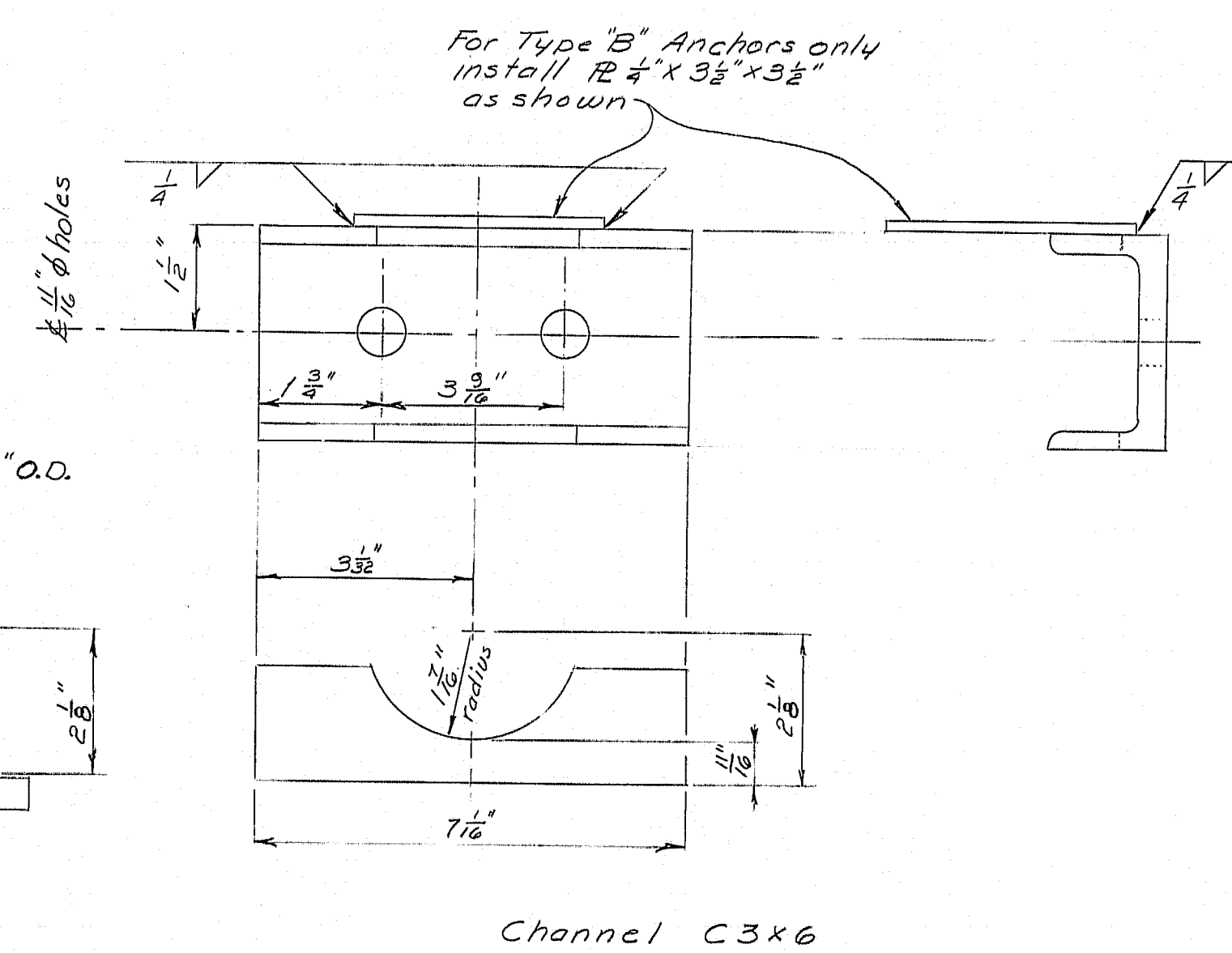
ANCHOR DEVICE DETAILS
(For Truss Barrier Fence)



GUIDE CHANNEL DETAIL
(For Expansion Assembly)



FENCE ANCHOR DETAILS
(For Sidewalk Barrier Fence)

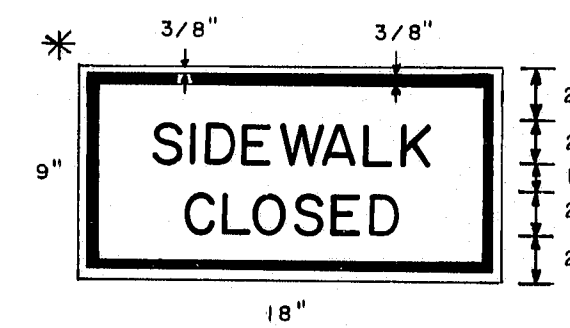


PROJECT DESIGN ENGINEER	DATE
DESIGN - DETAILED	2/22
CHECKED	
FIELD CHANGES	

STATE OF MAINE DEPARTMENT OF TRANSPORTATION
AUGUSTA MEMORIAL BRIDGE Installation of BARRIER FENCE
CITY OF AUGUSTA KENNEBEC COUNTY
MISCELLANEOUS DETAILS
SHEET 7 OF 7 AUGUSTA, MAINE

R93-162

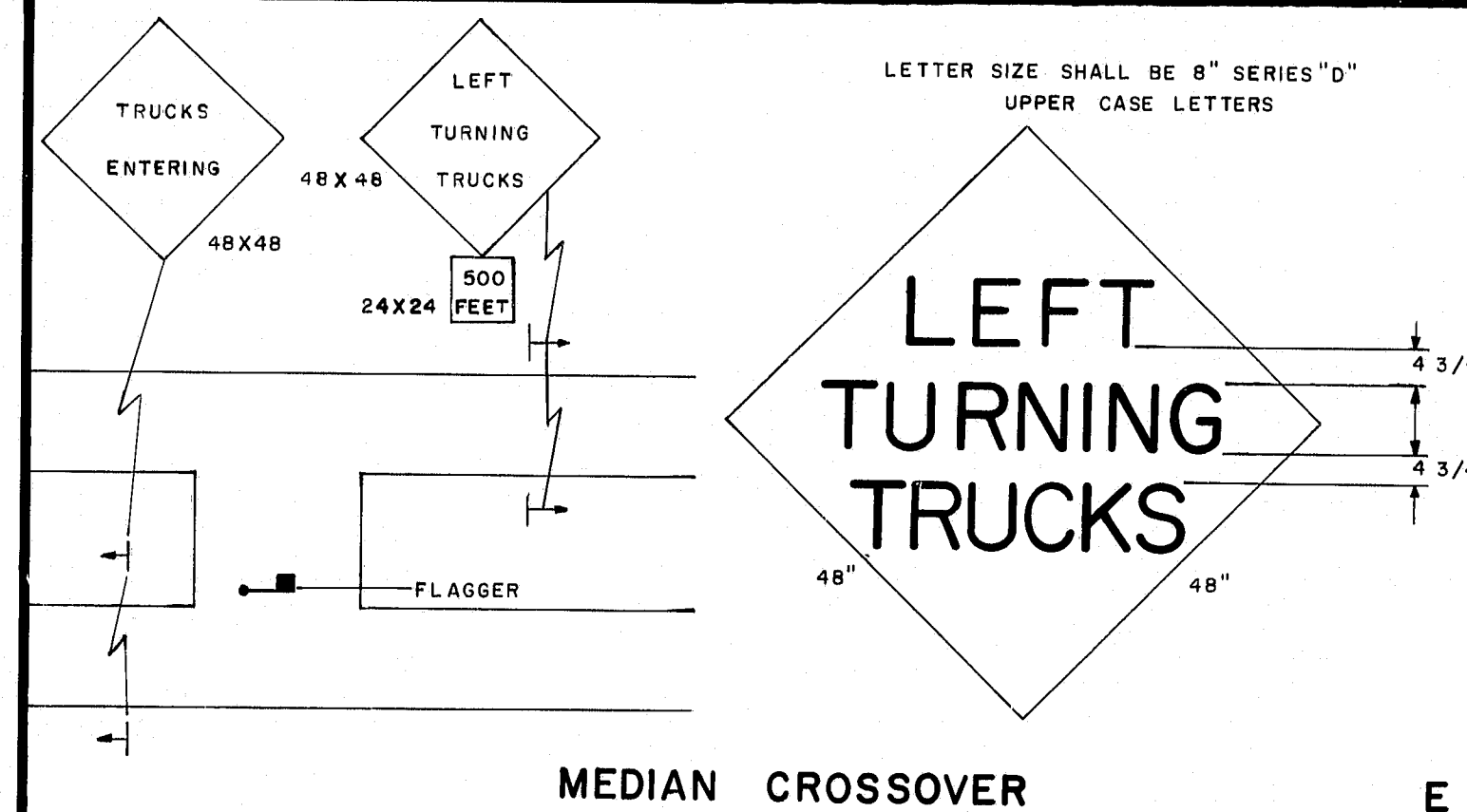
A diagram of a rectangular sign with a double border. The sign contains the text "SIDEWALK CLOSED USE OTHER SIDE" in four lines. Dimensions are indicated: the overall width is 18" and the overall height is 15". Mounting holes are shown at the top with a center-to-center distance of 3 7/8" and a hole diameter of 1/2". On the right side, a vertical dimension line shows the following segments from top to bottom: 2" (to top hole), 2" (to text), 1" (between text lines), 2" (to text), 1" (between text lines), 2" (to text), 1" (between text lines), 2" (to text), and 2" (to bottom edge).



This diagram illustrates a work area setup on a street. A central rectangular area is labeled "WORK AREA" and "TYPE I BARRICADES". This area is flanked by "ALTERNATE SIDEWALK" paths. "CHANNELIZING DEVICES AS REQ." are shown at the top and bottom of the work area. Pedestrian paths are indicated on the left and right sides, labeled "PEDESTRIANS PASS AT OWN RISK". Dimensions of 18' x 15' are shown for the pedestrian paths. The street is labeled "STREET SIDE" and "HOUSE SIDE".

Diagram of a rectangular sign with the text "PEDESTRIANS PASS AT OWN RISK" and a right-pointing arrow. The sign is labeled "SERIES C LETTER". Dimensions are provided for the sign and its components:

- Overall width: 18"
- Overall height: 15"
- Top mounting holes: 3/8" from the top edge, 3/8" apart.
- Right side mounting holes: 2 1/2" from the top edge, 2" apart, 2" apart, 1 1/2" from the bottom edge.
- Arrow dimensions: 3/4" from the left edge to the start of the arrow, 2" for the arrow body, and 3" for the arrow tail.
- Callouts: "REMOVABLE" points to the arrow body, and "ARROW" points to the arrow tail.



1

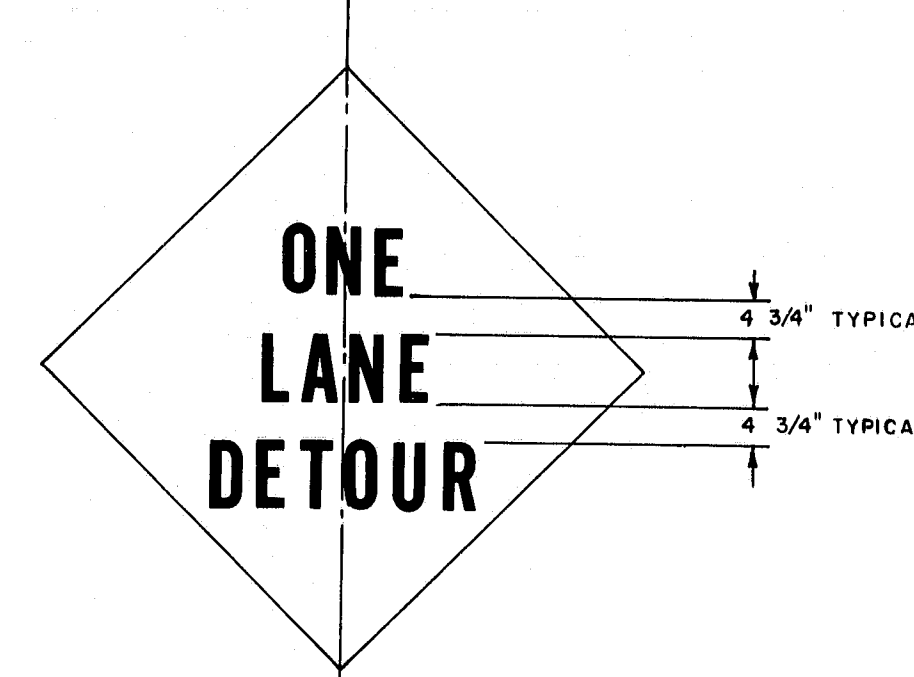
CHANNELIZING DEVICES TO DEFINE VEHICLE WAY

ROADSIDE RECOVERY AREA
NO PARKING

VEHICLE WAY

PARKED VEHICLES MUST BE MARKED PER SPECIAL PROVISIONS

PROJECT LIMITS

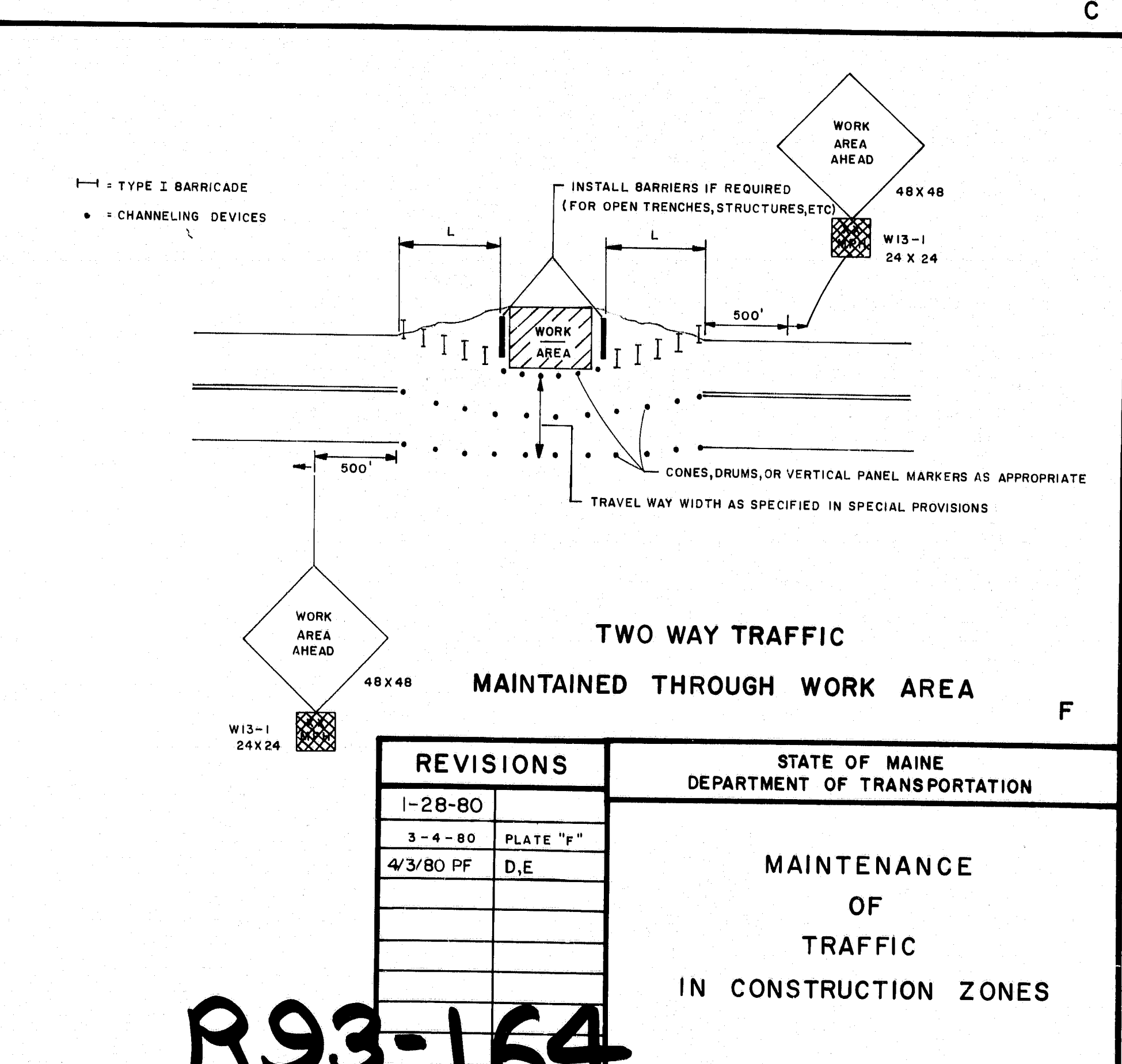
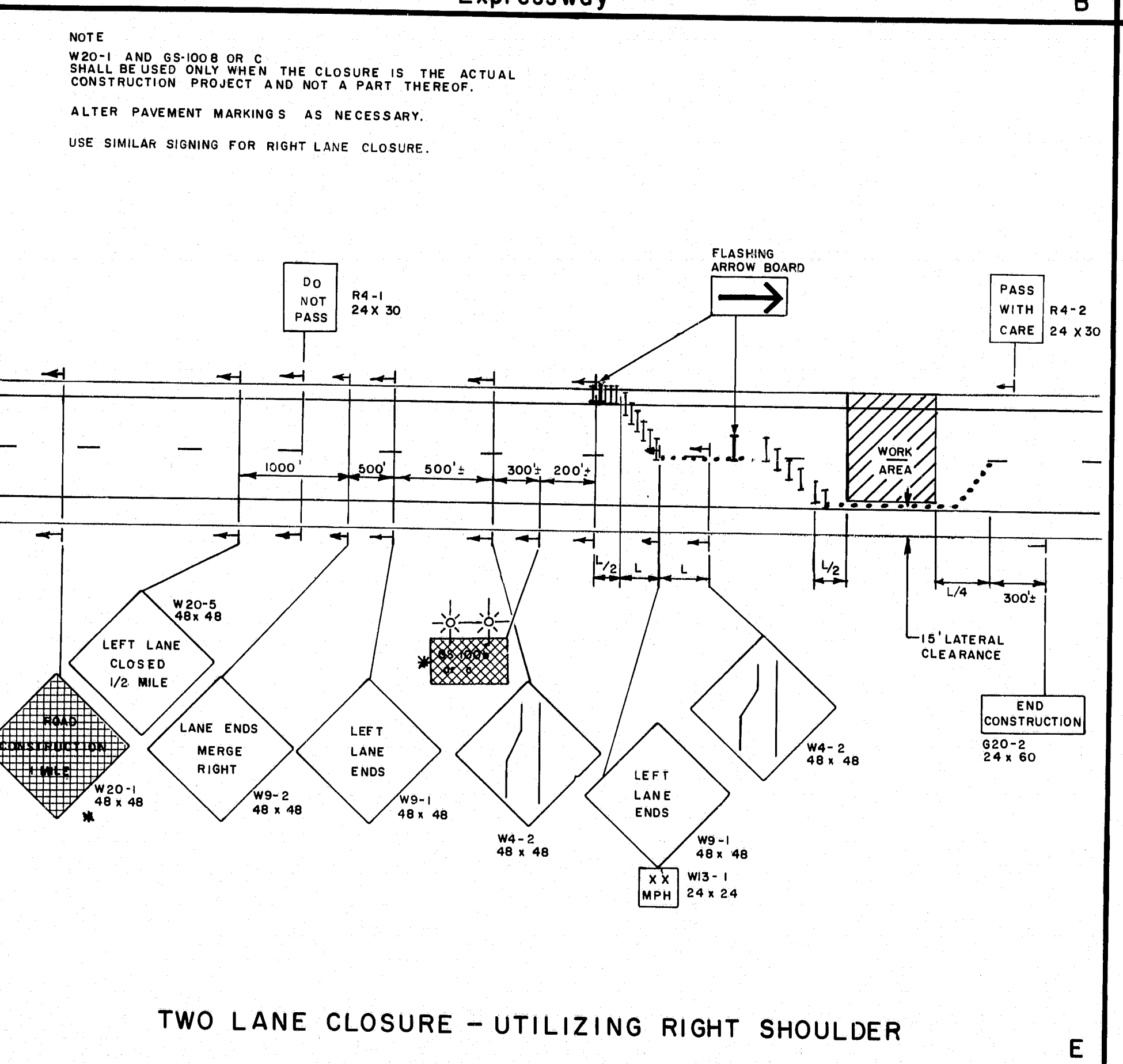
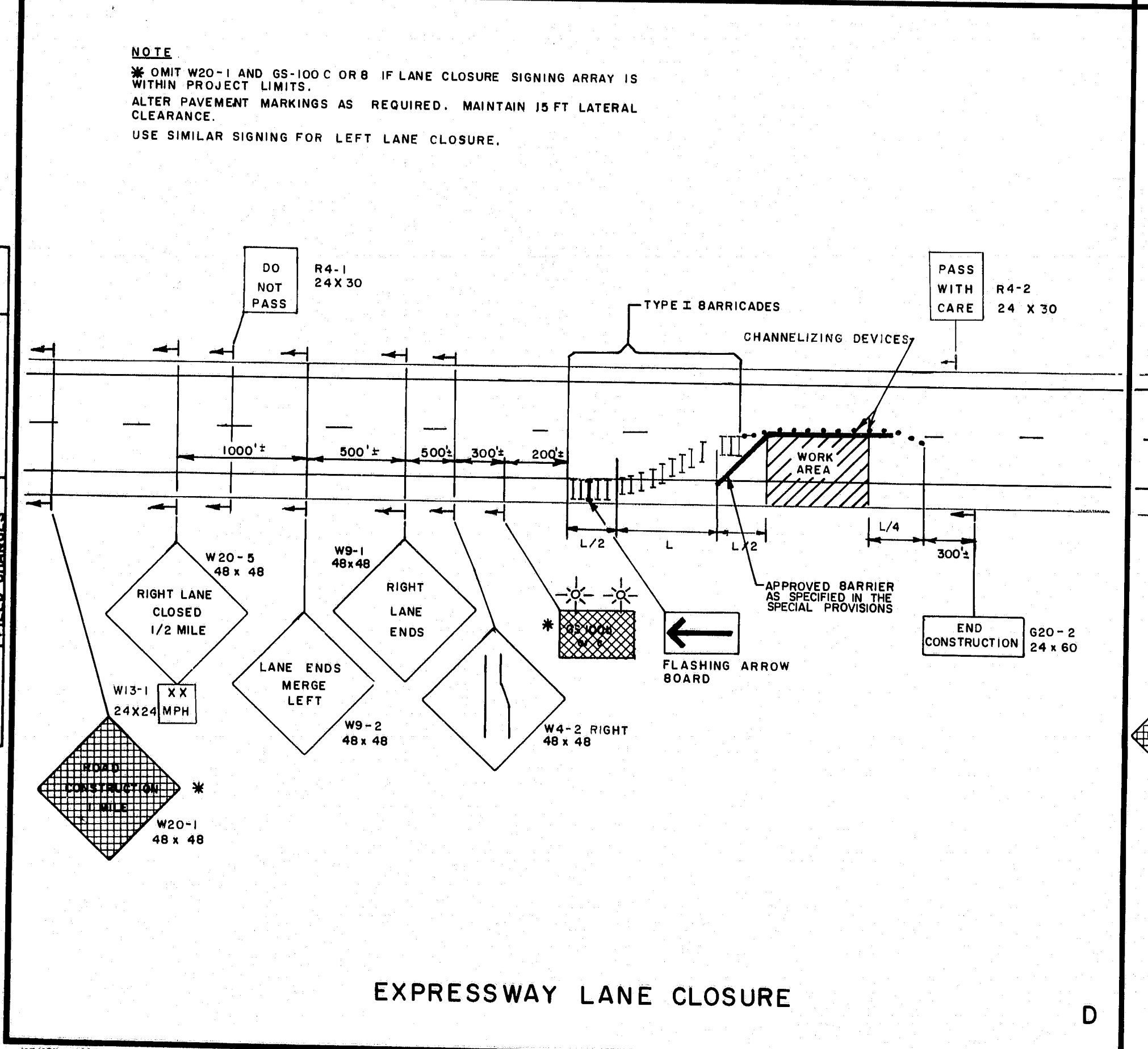
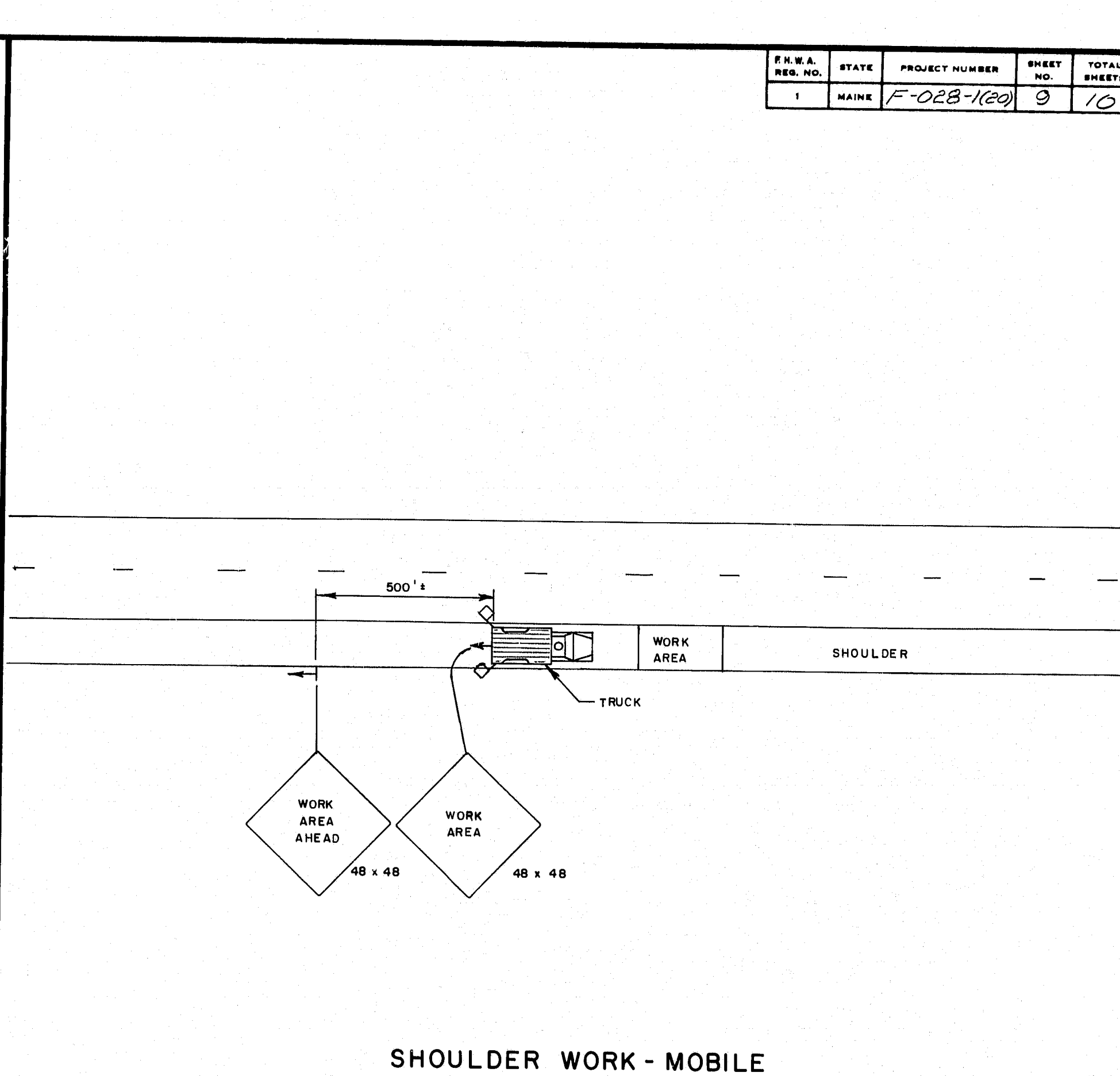
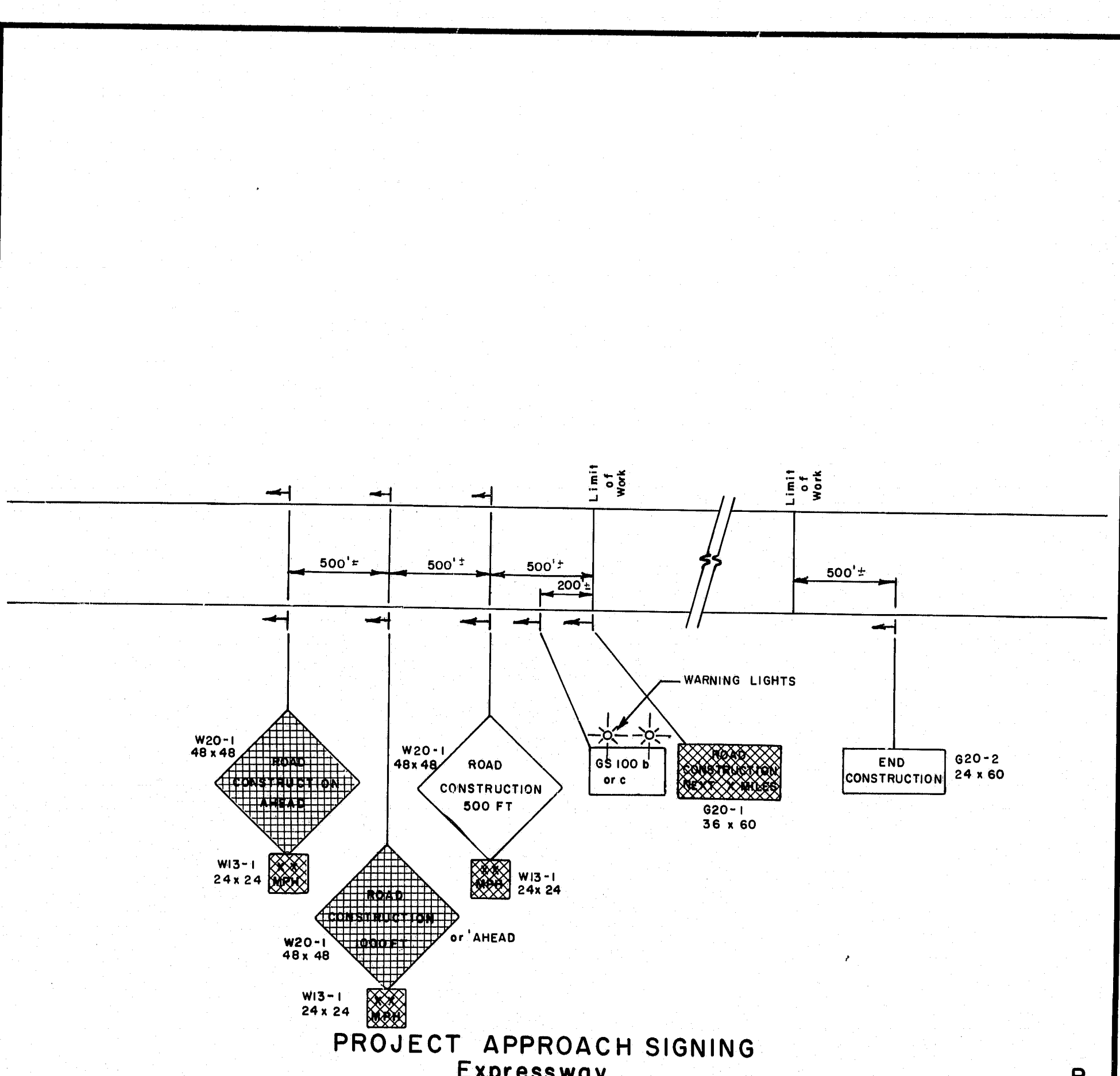
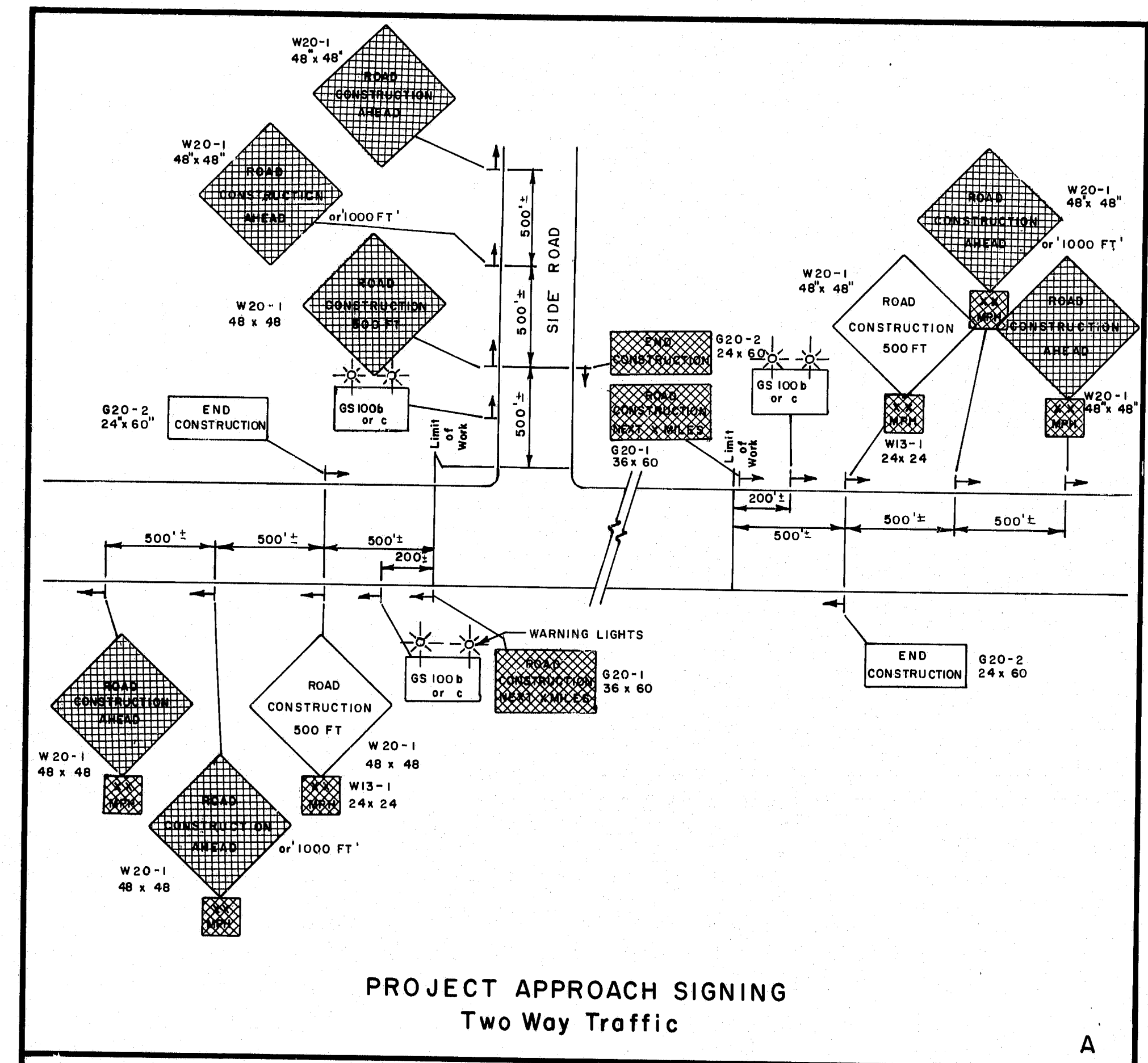


- 1

[illegible]

SHEET 1 OF 3 AUGUSTA, MAINE

F.R.M.A. REV. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	F-028-1(2)	9	10



NOTE
* OMIT W20-1 AND GS-100C OR B IF LANE CLOSURE SIGNING ARRAY IS WITHIN PROJECT LIMITS.
* ALTER PAVEMENT MARKINGS AS REQUIRED. MAINTAIN 15 FT LATERAL CLEARANCE.
* USE SIMILAR SIGNING FOR LEFT LANE CLOSURE.

NOTE
W20-1 AND GS-100C OR B SHALL BE USED ONLY WHEN THE CLOSURE IS THE ACTUAL CONSTRUCTION PROJECT AND NOT A PART THEREOF.
* ALTER PAVEMENT MARKINGS AS NECESSARY.
* USE SIMILAR SIGNING FOR RIGHT LANE CLOSURE.

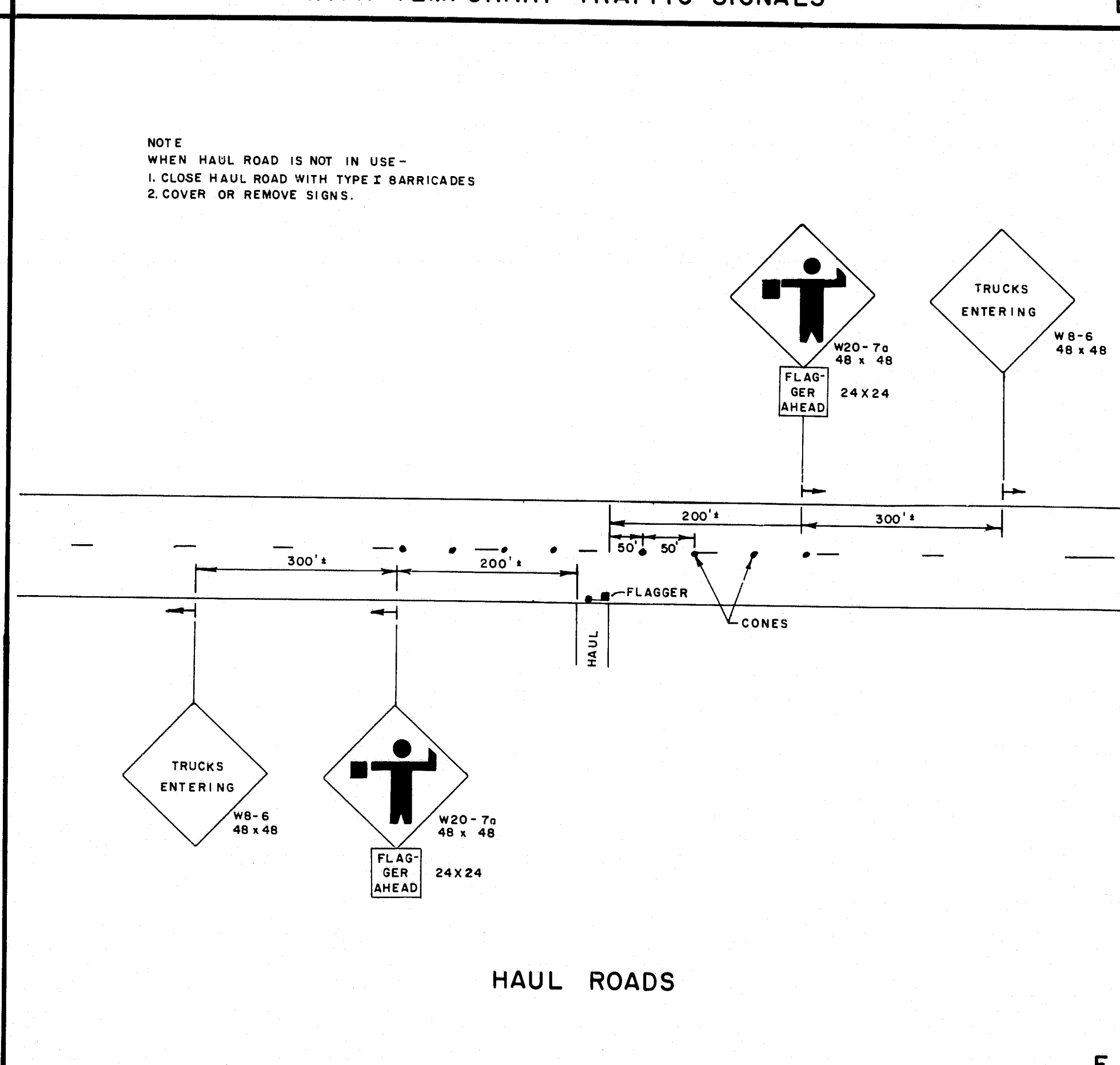
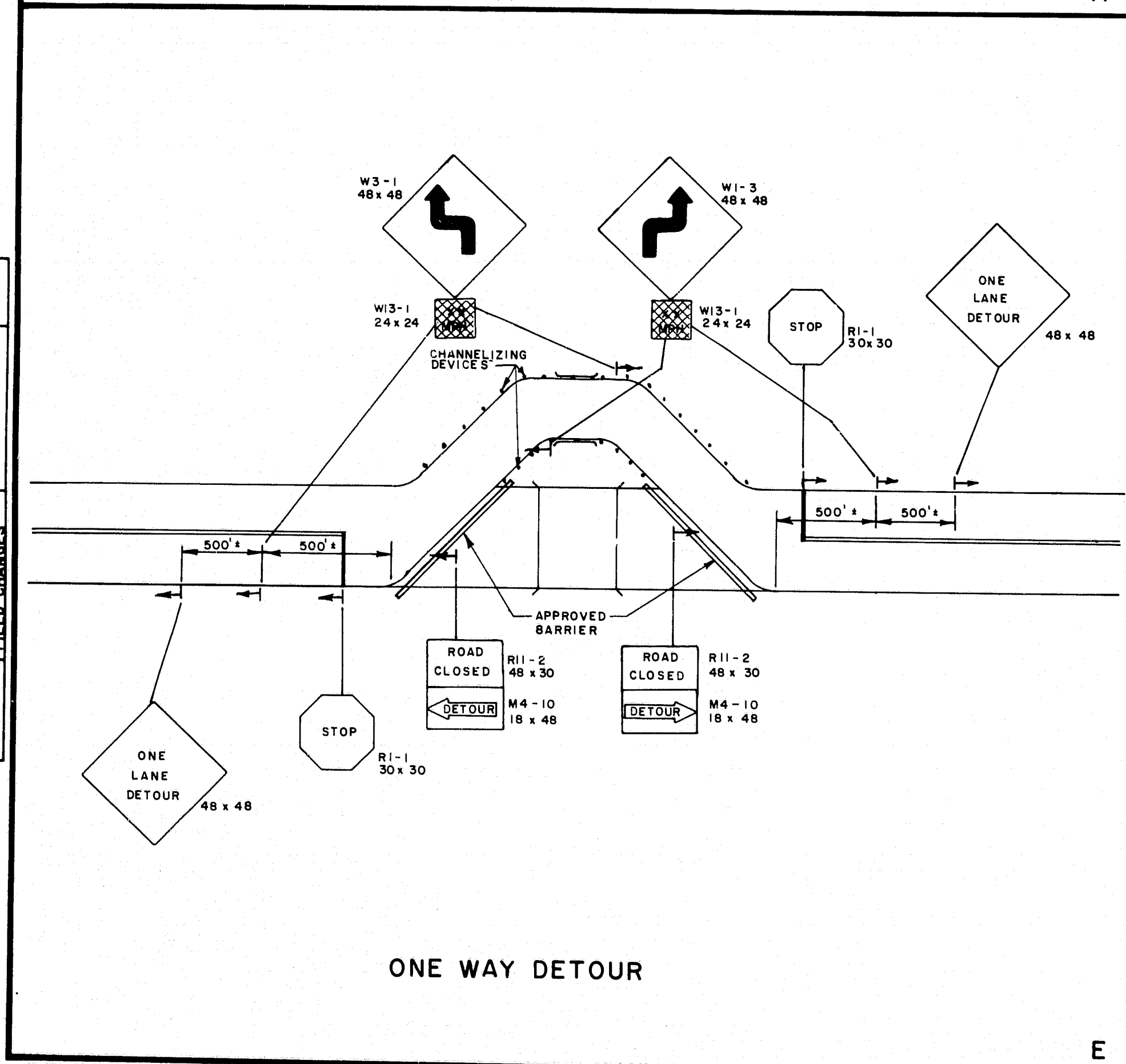
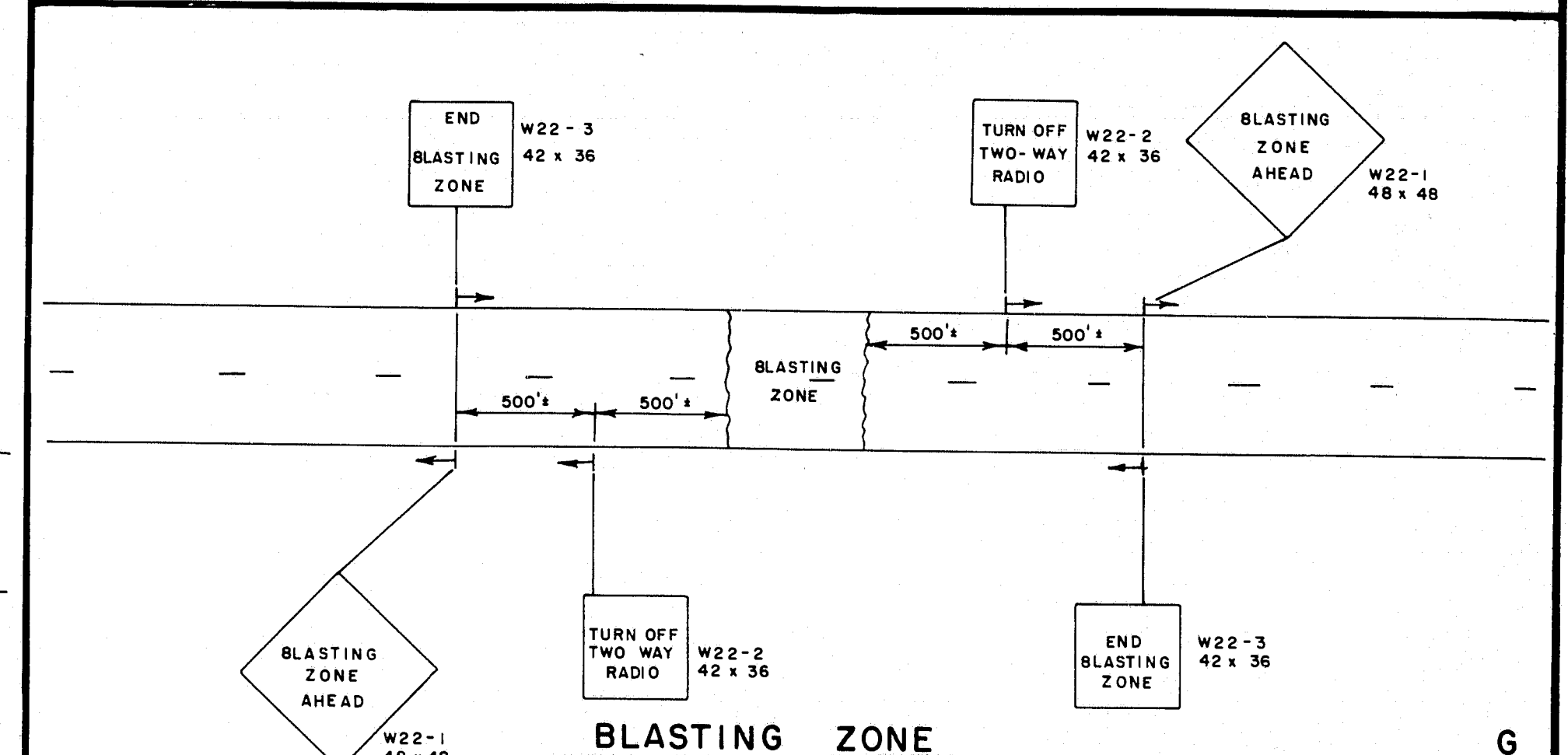
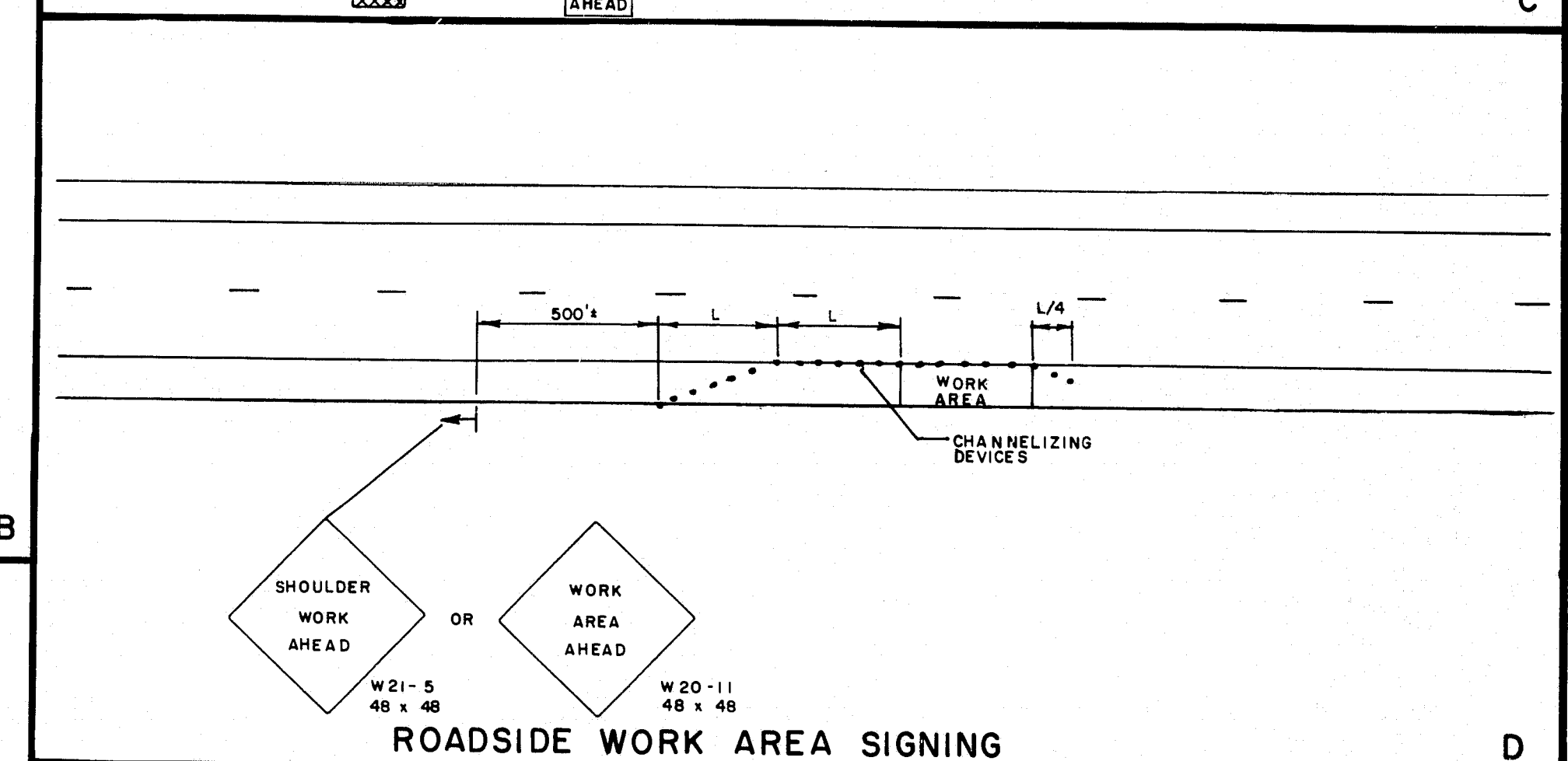
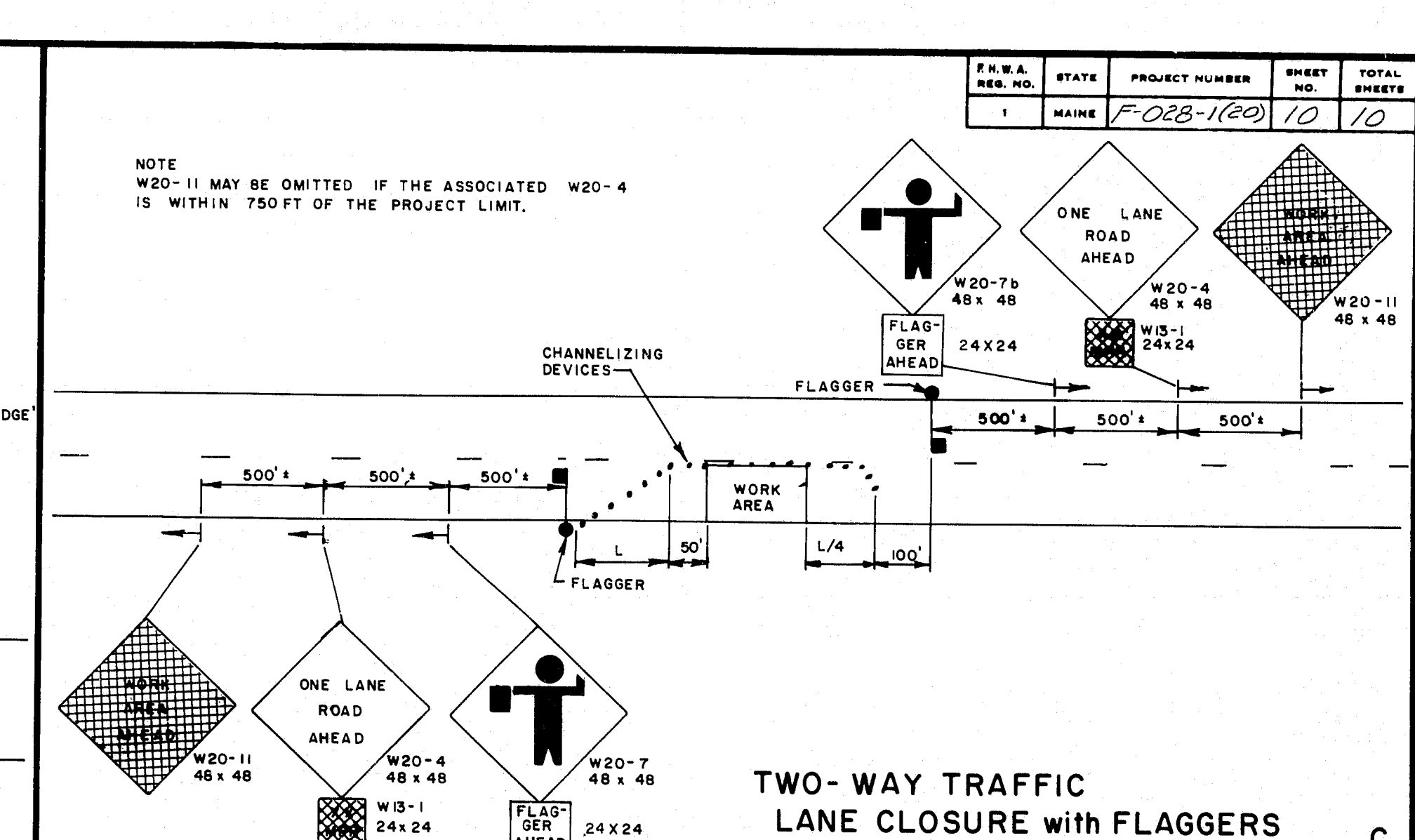
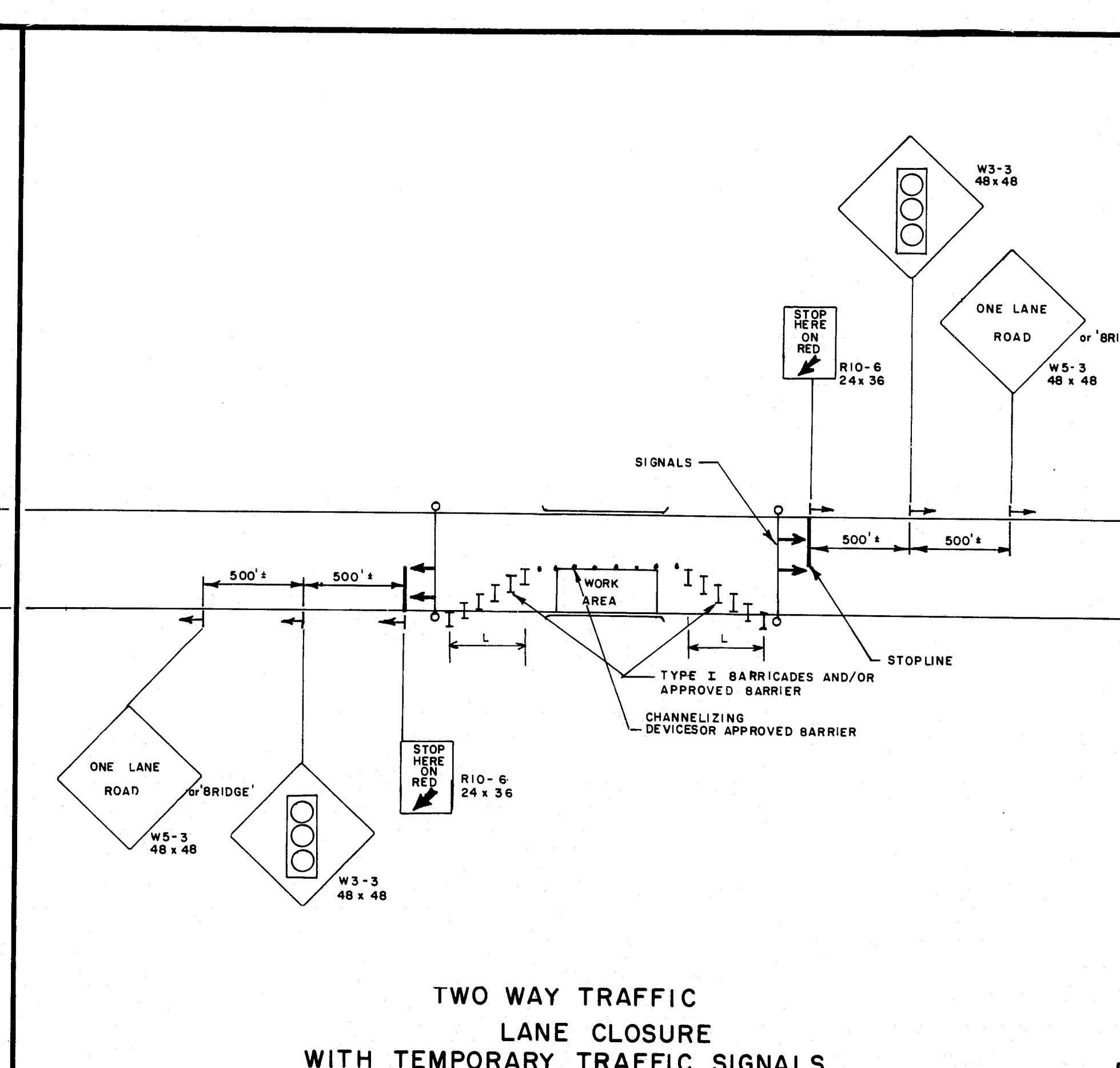
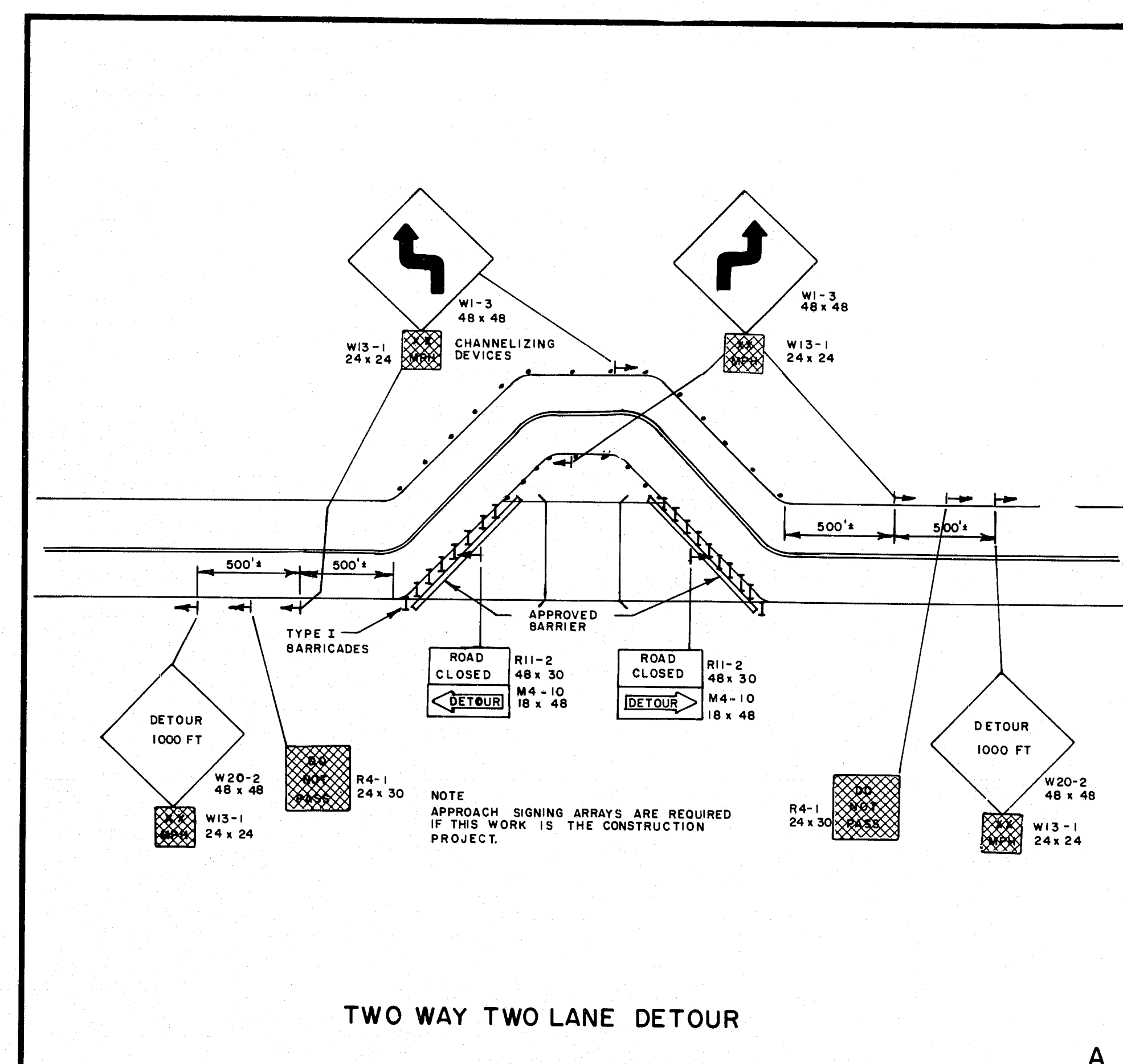
INSTALL BARRIERS IF REQUIRED (FOR OPEN TRENCHES, STRUCTURES, ETC.)
CONES, DRUMS, OR VERTICAL PANEL MARKERS AS APPROPRIATE
TRAVEL WAY WIDTH AS SPECIFIED IN SPECIAL PROVISIONS

REVISIONS
1-28-80
3-4-80 PLATE "F"
4/3/80 PF D,E

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

MAINTENANCE
OF
TRAFFIC
IN CONSTRUCTION ZONES

R93-164



PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN - DETAILED		
	CHECKED		
	REVISIONS		
	FIELD CHANGES		

REVISIONS		STATE OF MAINE DEPARTMENT OF TRANSPORTATION
4/3/80 PF	B, C, D	MAINTENANCE OF TRAFFIC IN CONSTRUCTION ZONES

3-165

SHEET 3 OF 3 AUGUSTA, MAINE JULY, 1978

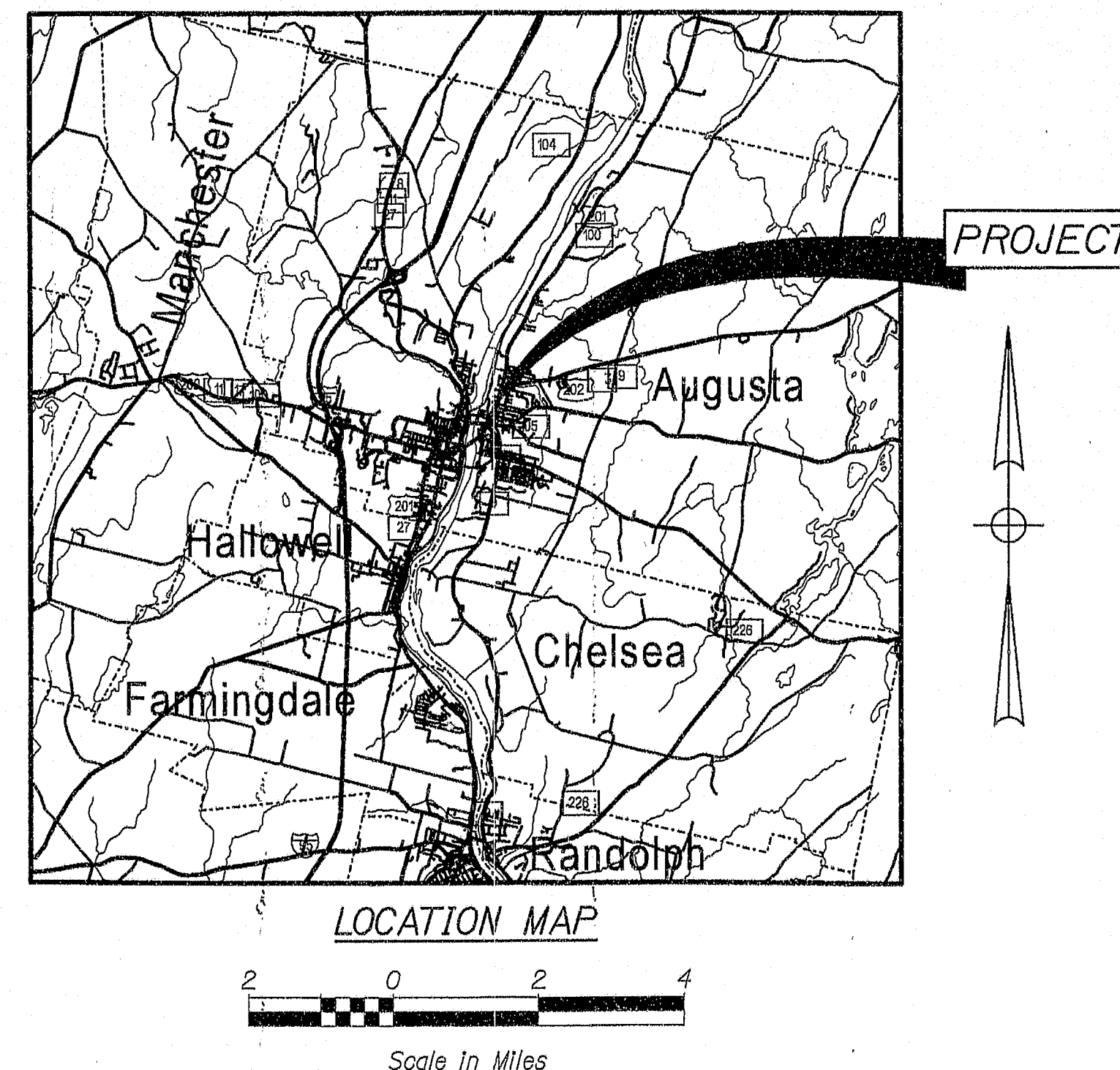
R93-165

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION



CITY OF AUGUSTA
KENNEBEC COUNTY
MEMORIAL BRIDGE
OVER
KENNEBEC RIVER
US ROUTE 201 & 202, ROUTE 100

PROJECT No. BH-9327(100)X
PROJECT LENGTH .44 mi.
DECK REPLACEMENT
BRIDGE NO. 5196



SPECIFICATIONS

DESIGN: AASHTO Standard Specifications for
Highway Bridges, 17th Edition 2002.

DESIGN LOADING

Live Load HS - 20

TRAFFIC DATA

Current (2005) AADT 24780
Future (2025) AADT 28735
DHV - % of AADT 9
Design Hour Volume 2586
% Heavy Trucks (AADT) 4
% Heavy Trucks (DHV) 3
Directional Distribution (DHV) 50
18 kip Equivalent P 2.0 1074
18 kip Equivalent P 2.5 1024
Design Speed (mph) 35

MATERIALS

Concrete (Unless noted otherwise) Class "LP"
Concrete f'c = 5075 psi
Reinforcing Steel ASTM A615, Grade 60
Structural Steel: ASTM A709, Grade 36
..... Unless Noted Otherwise
High Strength Bolts ASTM A325, Type 1, Galv.
Steel Grid Grade 50

BASIC DESIGN STRESSES

Concrete f'c = 5,075 psi
Reinforcing Steel fy = 60,000 psi
Structural Steel:
ASTM A 709, Grade 50 Fy = 50,000 psi
ASTM A 709, Grade 36 Fy = 36,000 psi
ASTM A 325 Fu = 120,000 psi

UTILITIES

Central Maine Power Company
Maine Central Railroad
Verizon
Adelphia

MAINTENANCE OF TRAFFIC

Maintain two lanes, two-way traffic during peak hours and one lane
closure during off peak hours (nights and weekends). Ref. Special Provisions.

Close Bridge and install signs as directed to complete the "B" portion
of the Work, Ref. Special Provisions.

LIST OF DRAWINGS

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Abutment No. 2 Details	8 - 9
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Bearing Replacement	11
New Stringer Plan	12
New Stringer Details	13
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Superstructure Details	17
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Typical Girder Floor Beam	20
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Steel Grid Details	23
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Trough Details Pier No. 6	26
Superstructure Expansion Joints - Pier No. 6	27
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STATE OF MAINE DEPARTMENT OF TRANSPORTATION	APPROVED <i>[Signature]</i> COMMISSIONER CHIEF ENGINEER	DATE 3/18/05 03/08/05
STATE OF MAINE CITY OF AUGUSTA MEMORIAL BRIDGE TITLE SHEET		
SHEET NUMBER 1 OF 46		

134-223

ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	QUANTITY	UNIT
107.51	PROSECUTION OF WORK INITIAL SCHEDULE	1	LS
107.53	PROSECUTION OF WORK BI-WEEKLY SCHEDULE	26	EA
202.10	REM EXIST SUPERSTRS PROP CONTR (3000 CY)	1	LS
202.17	REMOVE EXIST. STRUCTURAL CONCRETE (60 CY)	1	LS
202.203	PAVEMENT BUTT JOINTS	1300	SY
203.20	COMMON EXCAVATION	50	CY
203.25	GRANULAR BORROW	50	CY
304.10	AGGR SUBB COURSE - GRAVEL	50	CY
403.208	HOT MIX ASPHALT 12.5 MM - NOMINAL MAXIMUM SIZE SURFACE	100	TON
403.209	HOT MIX ASPHALT 9.5 MM - NOM. MAX. SIZE (SWKS. DRV. INCLD)	30	TON
403.210	HOT MIX ASPHALT 9.5 MM - NOMINAL MAXIMUM SIZE	700	TON
403.213	HOT MIX ASPHALT 12.5 MM - NOMINAL MAXIMUM SIZE BASE	100	TON
403.324	MODIFIED BITUMINOUS CONCRETE SURFACE COURSE 9.5 MM	700	TON
409.15	BITUMINOUS TACK COAT APPLIED	600	GAL
502.219	STRUCTURAL CONCRETE ABUT & RET WALL (50 CY)	1	LS
502.49	STRUCT.CONC. CURBS AND SW (500 CY)	1	LS
503.12	REINF. STEEL FAB & DEL	100000	LB
503.13	REINF. STEEL PLACING	100000	LB
504.701	STRUCTURAL STEEL FAB. AND DEL., ROLLED (263000 lbs)	1	LS
504.71	STRUCTURAL STEEL ERECTION (263000 lbs)	1	LS
504.73	REMOVE, MODIFY, AND RESET EXISTING STRUCTURAL STEEL	1	LS
504.8182	MODIFIED WELDED DECK DRAIN	1	LS
504.84	TRUSS PIN REPLACEMENT	1	LS
505.08	SHEAR CONNECTORS (115000 EA)	1	LS
507.0841	STEEL PIPE HAND RAIL (4200 LF)	1	LS
508.14	HIGH PERFORMANCE WATERPROOFING MEMBRANE(7900 SY)	1	LS
515.21	PROT. COAT FOR CONC. SURF. (114,700SY w/conc. w.s. 6800SY w/o)	1	LS
518.51	REPAIR OF UPWARD FACING SURFACES	80	SF
518.60	REPAIR OF VERTICAL SURFACES < 7.9 IN	2300	SF
520.22	EXPANSION DEVICE - COMPRESSION SEAL	1	EA
521.23	EXPANSION DEVICE - FINGER JOINT	3	EA
521.32	FABRIC TROUGH - FINGER JOINT	3	EA
523.52	BEARING INSTALLATION	10	EA
523.5402	LAMINATED ELASTOMERIC BEARINGS - EXPANSION	10	EA
524.40	PROTECTIVE SHIELD	1	LS
526.51	PRECAST CONCRETE BARRIER RAILING (4300 LF)	1	LS
530.02	PREFABRICATED DECK PANELS	102200	SF
606.17	GUARDRAIL TYPE 3b - SINGLE RAIL	112.5	LF
606.1722	BRIDGE TRANSITION TYPE II	2	EA
606.265	TERMINAL END SINGLE RAIL - GALVANIZED	1	EA
606.35	GUARDRAIL DELINEATOR POSTS	6	EA
606.76	MODIFIED ECCENTRIC LOADER TERMINAL	1	EA
607.441	CHAIN LINK SAFETY FENCE (4200 LF)	1	LS
608.26	DETECTABLE WARNING DEVICES	16	SF
609.19	VERTICAL CURB-TYPE 2	58	LF
609.20	VERTICAL CURB-CIRCULAR-TYPE 2	10	LF
609.247	TERMINAL CURB-TYPE 2-TFT.	3	EA
609.38	RESET CURB TYPE I	100	LF
610.08	PLAIN RIPRAP	141	CY
613.319	EROSION CONTROL BLANKET	282	SY
619.1401	EROSION CONTROL MIX	120	CY
620.58	EROSION CONTROL GEOTEXTILE	100	SY
626.21	METALLIC CONDUIT	5000	LF
627.711	WHITE OR YELLOW PAVEMENT MARKING LINE - PLAN QUANTITY	7100	LF
629.05	HAND LABOR, STRAIGHT TIME	200	HR
634.160	HIGHWAY LIGHTING	1	LS
638.01	EMBEDDED WORK IN STRUCTURES	1	LS
639.18	FIELD OFFICE TYPE A	1	EA
643.71	TRAFFIC SIGNAL MODIFICATIONS: CONY ST. - WILLOW ST.	1	LS
643.71	TRAFFIC SIGNAL MODIFICATION: BRIDGE ST. - WATER ST.	1	LS
643.71	TRAFFIC SIGNAL MODIFICATION: STATE ST. - BRIDGE ST.	1	LS
643.71	TRAFFIC SIGNAL MODIFICATION: STATE ST. - WINTHROP ST.	1	LS
643.90	TEMP. INTERCONNECT WIRE BETWEEN: WILLOW ST. & WINTHROP ST.	1	LS
652.39	WORKZONE TRAFFIC CONTROL	1	LS
652.41	CHANGEABLE MESSAGE SIGN	4	EA
652.70	TEMPORARY INTERSECTION MODIFICATIONS	1	LS
659.10	MOBILIZATION	1	LS
660.21	ON-THE-JOB TRAINING	5000	HR

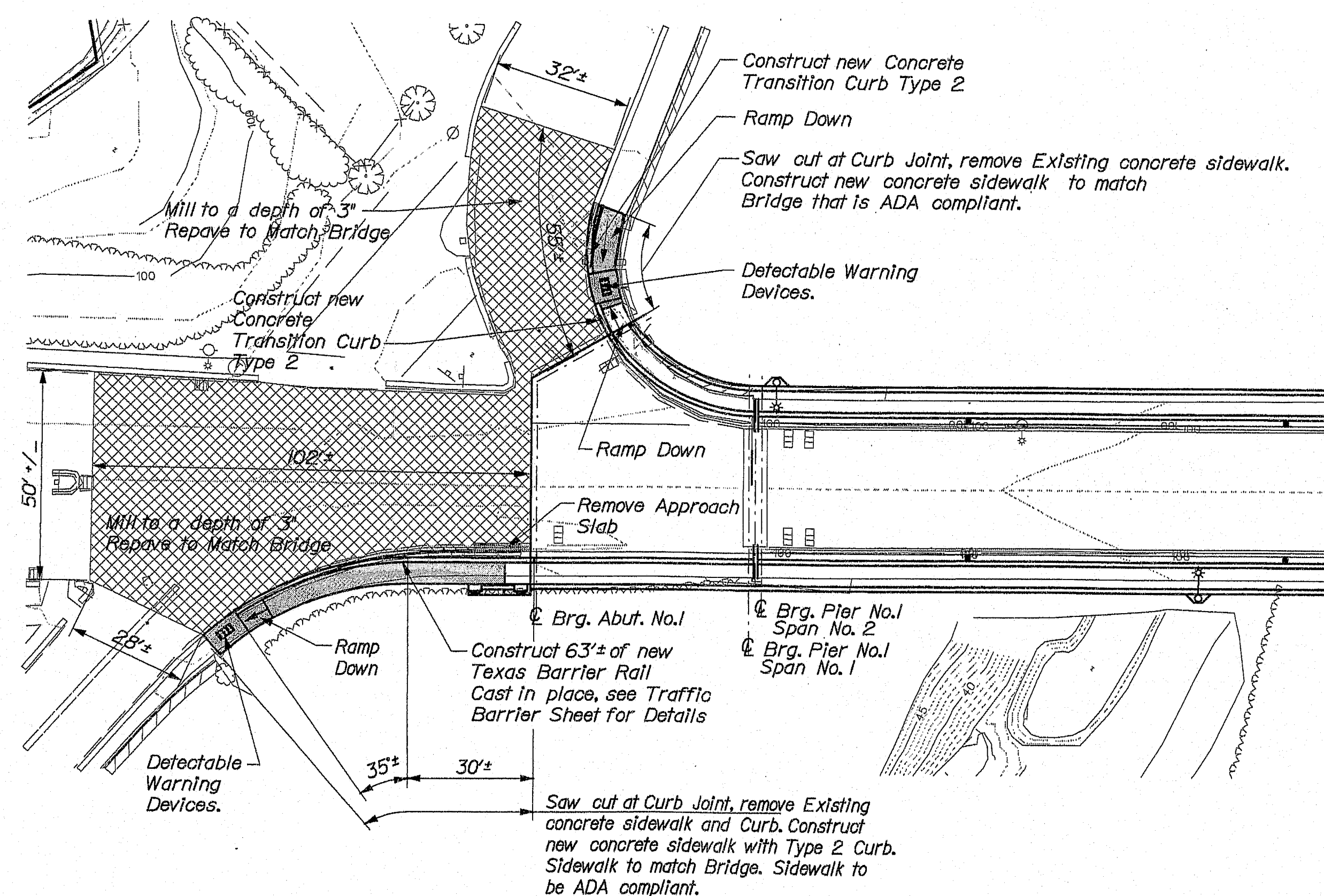
GENERAL CONSTRUCTION NOTES

- All Utility Facilities shall be adjusted by the respective Utilities unless otherwise noted.
- For Easements, Construction Limits, and Right-Of-Way Lines, refer to Right of Way Plan sheets.
- During construction, the Road will be closed to Traffic the time period required to complete the B Portion of the Work.
- Two Guardrail Delineator posts shall be installed at each leading Guardrail End and one at each trailing Guardrail End.
- Extended-use Erosion Control Blanket, Seeded Gutters, Riprap Downspouts, and other Gutters lined with Stone Ditch protection shall be constructed after Paving and Shoulder work is completed, where it is apparent that Runoff will cause continual Erosion. Payment will be made under appropriate Contract Items.
- Protective Coating for Concrete Surfaces shall be applied to the following areas:
All exposed Surfaces of Concrete Curbs and Sidewalks,
Fascia down to Drip Notch,
Concrete Wearing Surfaces,
Concrete Traffic Railing,
Top of Abutment Backwalls and to 1' below the top of Backwalls on the back side.
All exposed surfaces of Pier No. 5 down to 1'-0" below the ground line.
- Erosion Control Mix shall be substituted in those areas normally receiving Loam and seed as directed by the Resident. Placement shall be in accordance with Standard Specification 619, Mulch. Payment will be made under Item 619.1401 Erosion Control Mix.
- Bidders and Contractors may obtain a copy of the existing bridge plans by contacting the Project Manager. The plans are reproductions of the original drawings as prepared for the construction of the bridge. It is very unlikely that the plans will show any construction field changes or any alterations, which may have been made to the bridge during its life span.
- The Contractor should note that the signs shown on the Detour Area Plan and In-Town Detour Plan, with the exception of the changeable message signs, and with the exception of specific modifications required and detailed on the temporary Traffic Control for Bridge Closure sheet, have been made and will be erected and maintained throughout the bridge closure by the Maine Department of Transportation. The Contractor must notify the Department a minimum of one month prior to the desired closure period with the exact time and date of the closure, to allow sufficient time for the Department to erect the signs.
- The Contractor will be responsible for making the temporary changes required to the downtown area as detailed on the Temporary Traffic Control for Bridge Closure Plan. The Contractor will also be responsible for returning the downtown area to its exact current configuration. Payment for making these modifications and returning the downtown area to its current configuration shall be paid under item no. 652.70, Temporary Intersection Modifications.
- The Paint on the existing bridge is Lead Based. The top flanges of the stringers are coated with lead paint. This paint will need to be removed in the immediate area where shear studs are to be welded, and in all other areas where the Contractor is required to work on the existing steel. The Contractor is responsible for removing this paint in accordance with all applicable regulations and special provisions. There will be no separate payment for this work. The cost shall be considered incidental to the work requiring the paint removal.
- Single lane closures with two way traffic controlled with flaggers shall be allowed during off-peak hours as defined within the special provisions.
- The Contractor has the the option to choose a single wearing surface option for the final wearing surface on the bridge structure. The wearing surface options are as follows:
a) Integral concrete wearing surface: must be placed at the same time the 1/2" filled grid deck is filled and shall be finished to an elevation 1 inch above the top of the grid. No separate payment shall be made for this wearing surface, but all labor, equipment, and materials shall be considered incidental to item number 530.02, prefabricated deck panels. Should this be the contractors preferred option for a wearing course, item numbers 508.14, 403.210, 403.324 shall be unnecessary and will not be required or paid for.
b) Should the contractor opt to use a high performance membrane with a 1 1/2 inch bituminous wearing course the grid shall be flush filled with class LP concrete as specified in section 530 of the special provisions, the membrane will be paid for under item number 508.14, high-performance membrane waterproofing, the bituminous wearing course shall be paid for under item number 403.210, and item number 403.324 will not be required or paid for.
c) Should the contractor opt to use a 1 1/2 inch Roshphalt 50 wearing course the grid shall be flush filled with class LP concrete as specified in section 530 of the special provisions, the pavement will be paid for under item number 403.324, and item numbers 508.14 and 403.210 will not be required or paid for.
- Existing Superstructure - Property of the Contractor shall include all deck and Barrier Concrete, All structural steel fascia channels with the exception of those in span 1, Removal of all connection angles, intermediate channel diaphragms at rail post locations except those in span #1, and removal of all steel pedestrian railing.

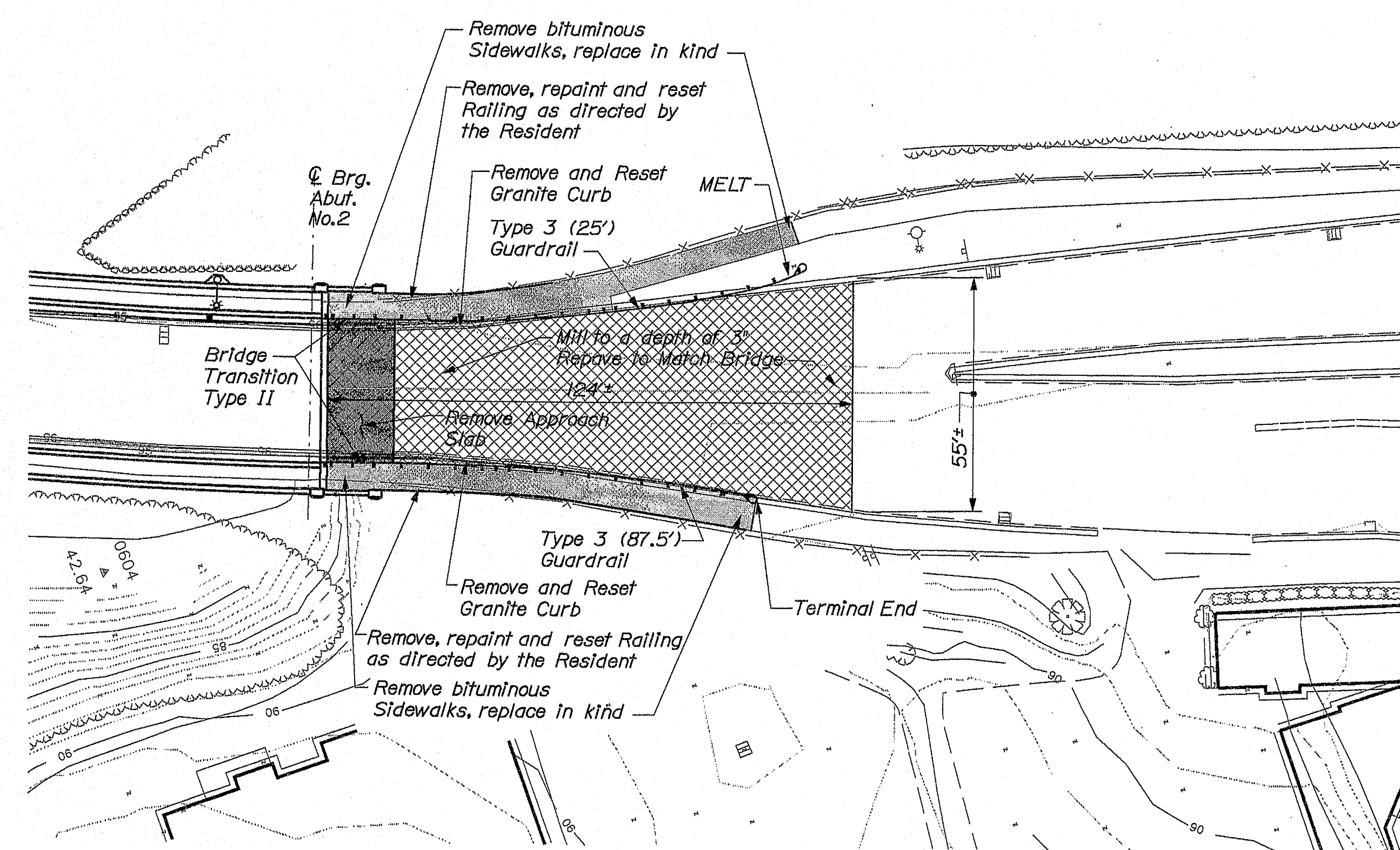
- Remove Existing Concrete shall include all abutment concrete to be removed as detailed on the pertinent abutment sheets, as well as all approach slab concrete on the East end and that portion of the approach slab that is to be removed on the West end as shown in the plan set, all concrete traffic barrier on the approaches, and all sidewalk to be removed on the approaches.
- Rip Rap placed below drain downspouts shall have a thickness of 18" and plan dimensions of 7"x7" approximately. All Rip Rap shall be underlain with non-woven erosion control geotextile. Payment for riprap shall be considered payment for stockpiling & rehandling of all excavated material required for the installation of the Rip Rap, and all regrading of existing ground to form a neat appearance, shaped to drain, as directed by the Resident.
- All girder splicing shown on the Girder Splicing sheet, and all work required to complete the girder splicing as described within the special provisions and depicted within the plan set including fabrication, delivery and erection of all materials incorporated into the work, and all consumables, labor, and equipment required in the process of performing the girder splicing shall be paid for under item no. 504.73, Remove, Modify, and Reset existing structural steel.
- Apply Sika Lo-Mod 32, or approved equal, to grid fill concrete within 1'-0" of the face of the curb and directly underneath the sidewalk, immediately prior to the placement of sidewalk concrete.
- Maine General Medical Center has some concern with the proximity of their ventilation equipment to the bridge. The contractor shall be especially prudent to work with the hospital and to ensure that adequate dust control is performed such that dust from construction related activities does not impact conditions inside the hospital.
- All work described on the Fixed Pin Support Plan, Fixed Pin Support Details, and Truss Strengthening sheets shall be considered to be paid for under item number 504.84, Truss Pin Replacement. This price shall include all work described within this plan set including fabrication, delivery, materials, labor, and consumables required to successfully complete the work described on the Fixed Pin Support Plan, Fixed Pin Support Details, and Truss Strengthening sheets.
- Top of Wings above Roadway Surface shown on Sheets 6 and 9 shall be given a Rubbed Finish as per Standard Specification.

STATE OF MAINE		DEPARTMENT OF TRANSPORTATION	
MEMORIAL BRIDGE		CITY OF AUGUSTA	
KENNEBEC RIVER		KENNEBEC COUNTY	
ESTIMATED QUANTITIES		SHEET NUMBER	
BH-9327(100)X		2	
BRIDGE NO. 5196		PIN 9327.10	
BRIDGE PLANS		DATE	
SIGNATURE		P.E. NUMBER	
DATE		DATE	

134-224



WEST APPROACH



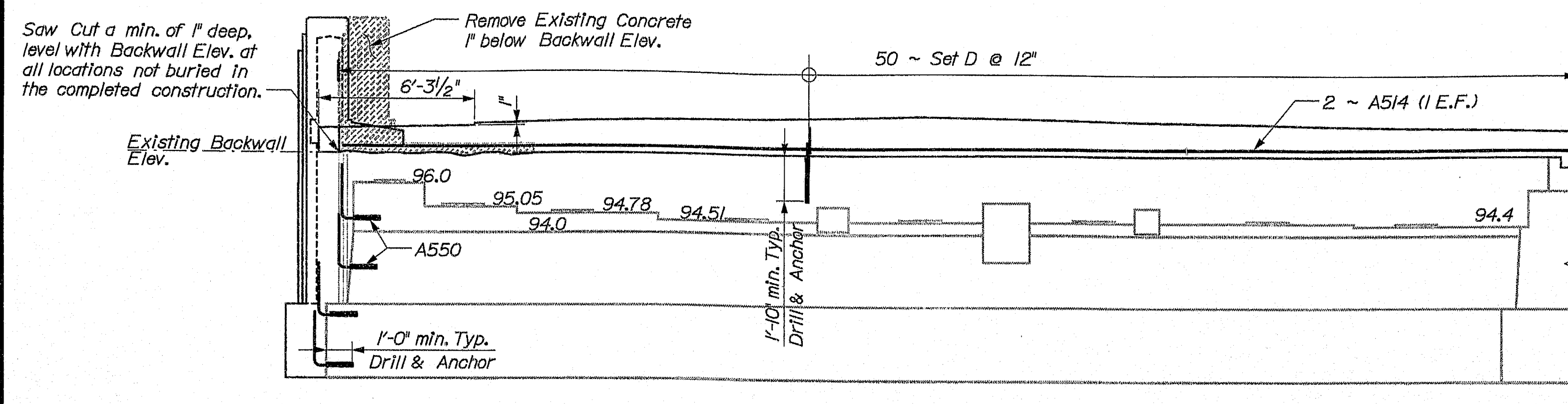
EAST APPROACH

NOTE:
Remove, Repaint and Reset Railing to
be Incidental to 507.0841, Steel Pipe
Hand Rail.

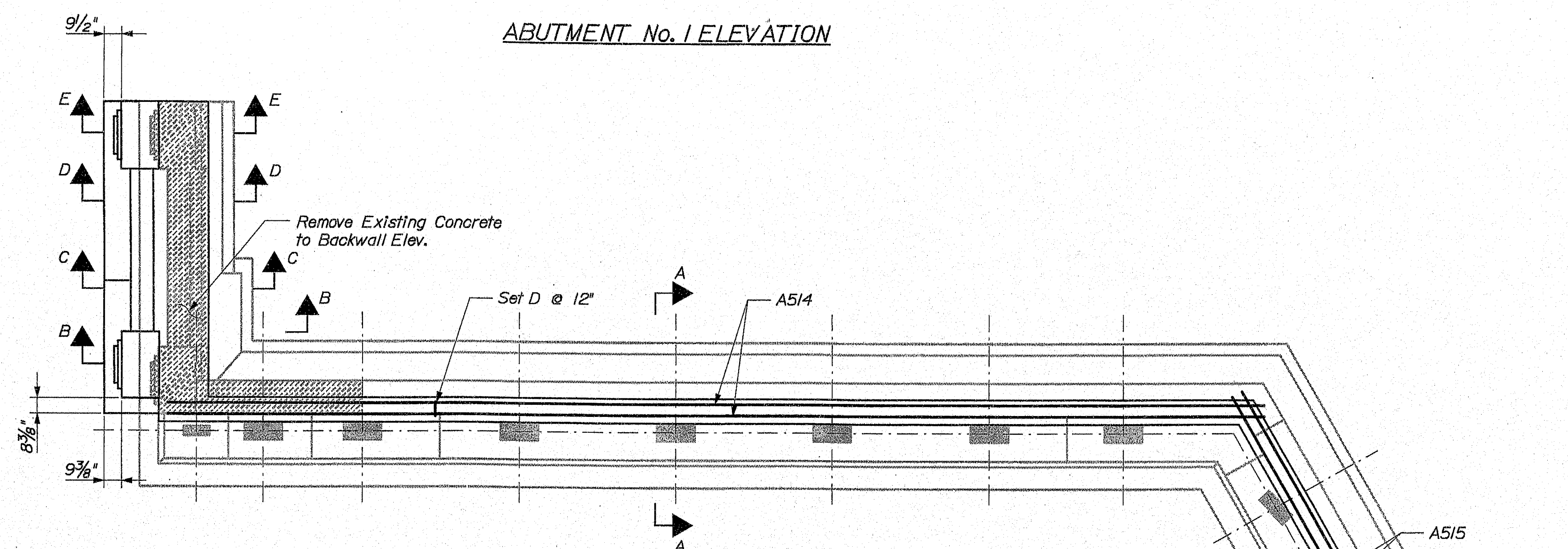
134-225

MEMORIAL BRIDGE						STATE OF MAINE	
KENNEBEC RIVER						DEPARTMENT OF TRANSPORTATION	
CITY OF AUGUSTA KENNEBEC COUNTY							
GENERAL PLAN						BH-9327(100)X	
SHEET NUMBER 3 OF 46						BRIDGE NO. 5196 PIN 9327-10 BRIDGE PLANS	
FROM MANAGER		WLF	BY	DATE			
DESIGN-Detailed	DMS		RMC	2/23/05	SIGNATURE		
CHECKED-REVIEWED	ETC		RKC				
DESIGNED-Detailed	DMS		BAN		P.E. NUMBER		
DESIGNED-Detailed	DMS						
REVISED 1							
REVISED 2							
REVISED 3							
REVISED 4					DATE		

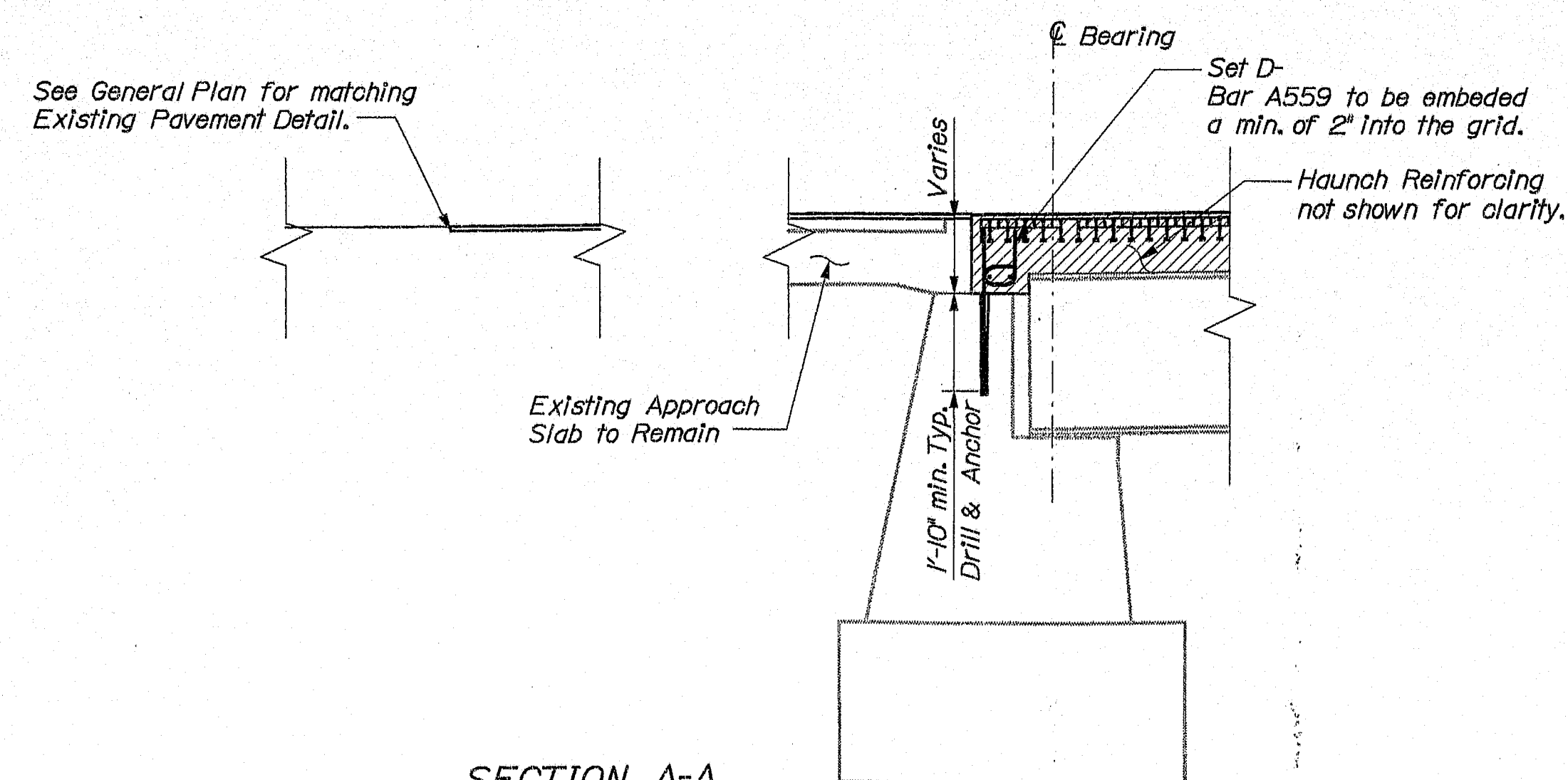
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ABUTMENT No. 1 ELEVATION



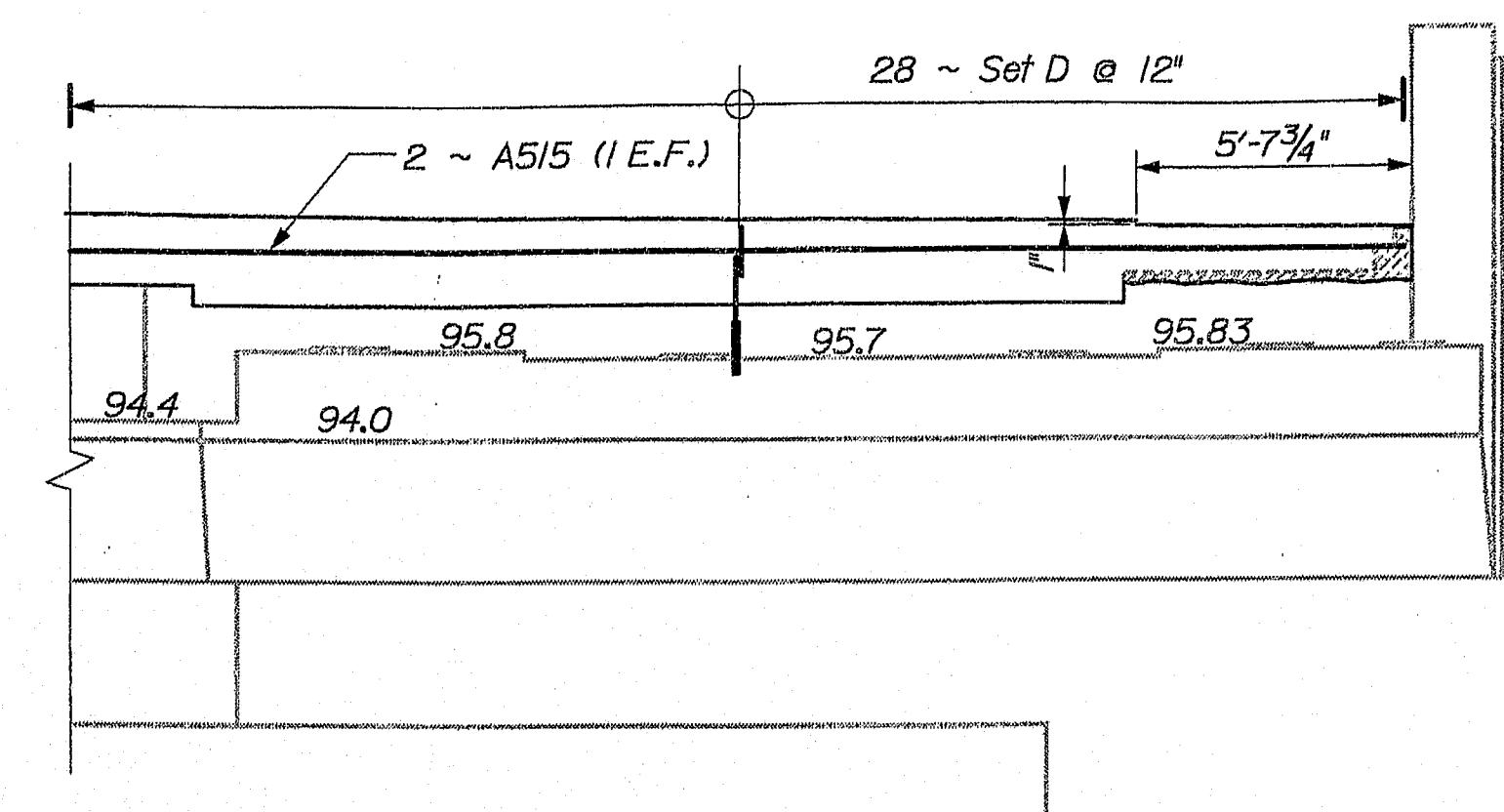
ABUTMENT No. 1 PLAN



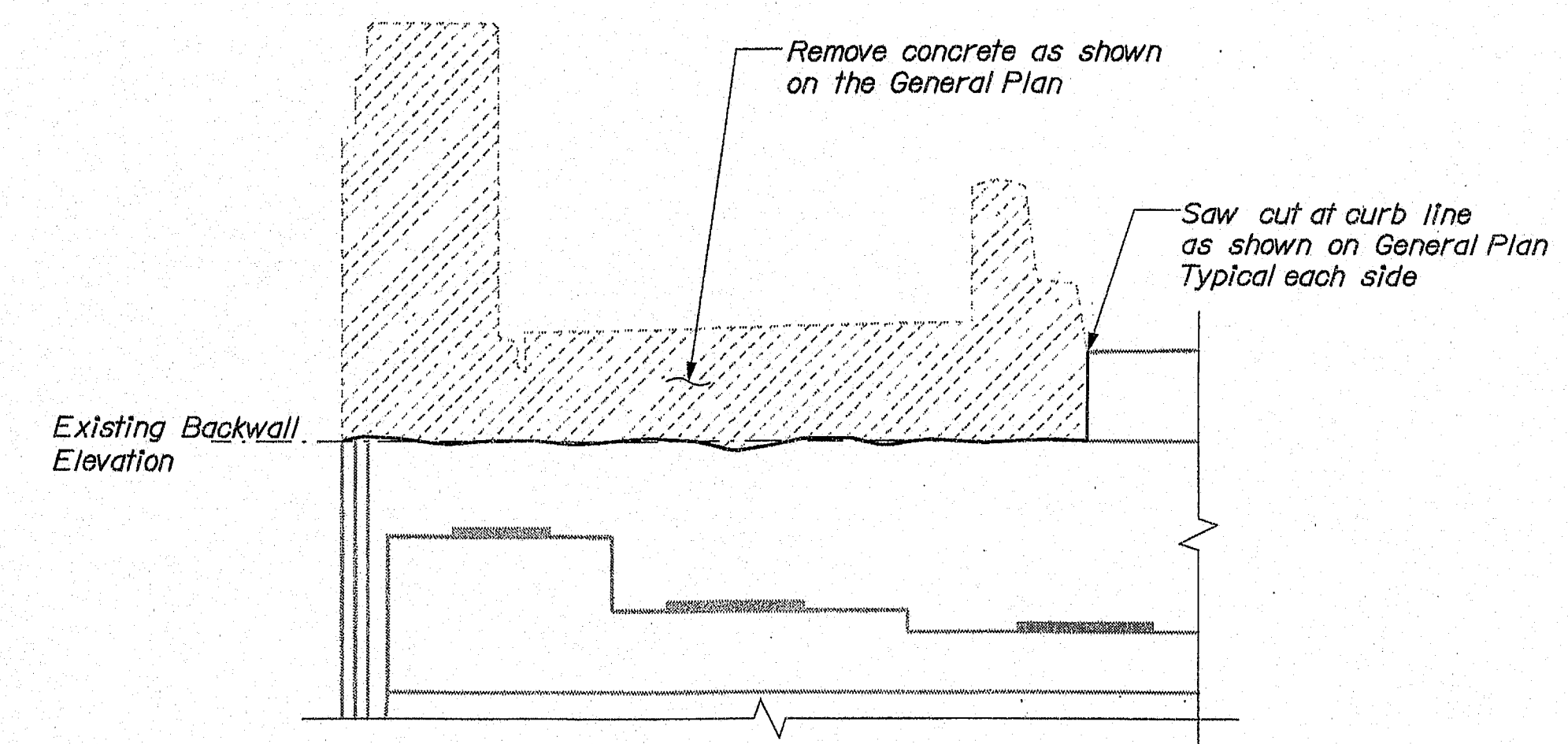
SECTION A-A

APPROACH SLAB & TYP. ABUT. SECTION DETAIL

NOTE:
For Set D components refer
to Abut. No. 1 Detail sheet.



ABUTMENT No. 1 ELEVATION



LIMITS OF CONCRETE REMOVAL AT ABUTMENT No. I BACKWALL

TYP. DOWNSTREAM

ABUTMENT NOTES

1. *Reinforcing Steel shall have 2" cover unless otherwise noted.*
2. *Cover Joints In accordance with Standard Detail 502(OI).*
3. *Excavation required to construct widened Footing and Abutment Wings shall not be paid for directly, but will be considered incidental to related Concrete Items.*
4. *Abutments, Wings, and their Footings shall be backfilled with Granular Borrow.*
5. *All Drill and Anchoring will be 1'-0" min. Embedment unless other wise noted.*
6. *Protective Coating for Concrete surfaces shall be applied to the top of Abutment Backwalls and to 1' below the top of the Backwalls on the backsides.*
7. *A minimum of 18" of Granular Borrow shall be placed In front of the Wings and shaped to direct water away from the Foundation Structure as directed by the Resident. 1'-0" of Rip Rap shall be placed over the disturbed area and shaped to drain and present a neat and orderly appearance. Payment for Granular Borrow and Rip Rap shall be made under appropriate Items.*
8. *Neoprene at Abutment No. 2, shall be either Polychloroprene or Natural Polyisoprene of 50±5 Shore A Durometer Hardness, and shall conform to the requirements of Div. 2, Section 18.2 of the AASHTO Standard Specifications for Highways and Bridges. Neoprene will not be paid for directly, but shall be considered incidental to related Contract Items.*

134-226

SHEET NUMBER										STATE OF MAINE															
MEMORIAL BRIDGE KENNEBEC RIVER CITY OF AUGUSTA KENNEBEC COUNTY										PROJ. MANAGER		WLF		BY		DATE		DEPARTMENT OF TRANSPORTATION							
										DESIGN-DETAILED		ETC		DMS		2/2/2008								SIGNATURE	
ABUTMENT No. 1										DESIGN-DETAILED2				RRC				BH-9327(100)X							
										REVISIONS 1				EWI										P.E. NUMBER	
										REVISIONS 2															
										REVISIONS 3															
										REVISIONS 4															
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																		PIN		9327.10					
																				BRIDGE PLANS					

4

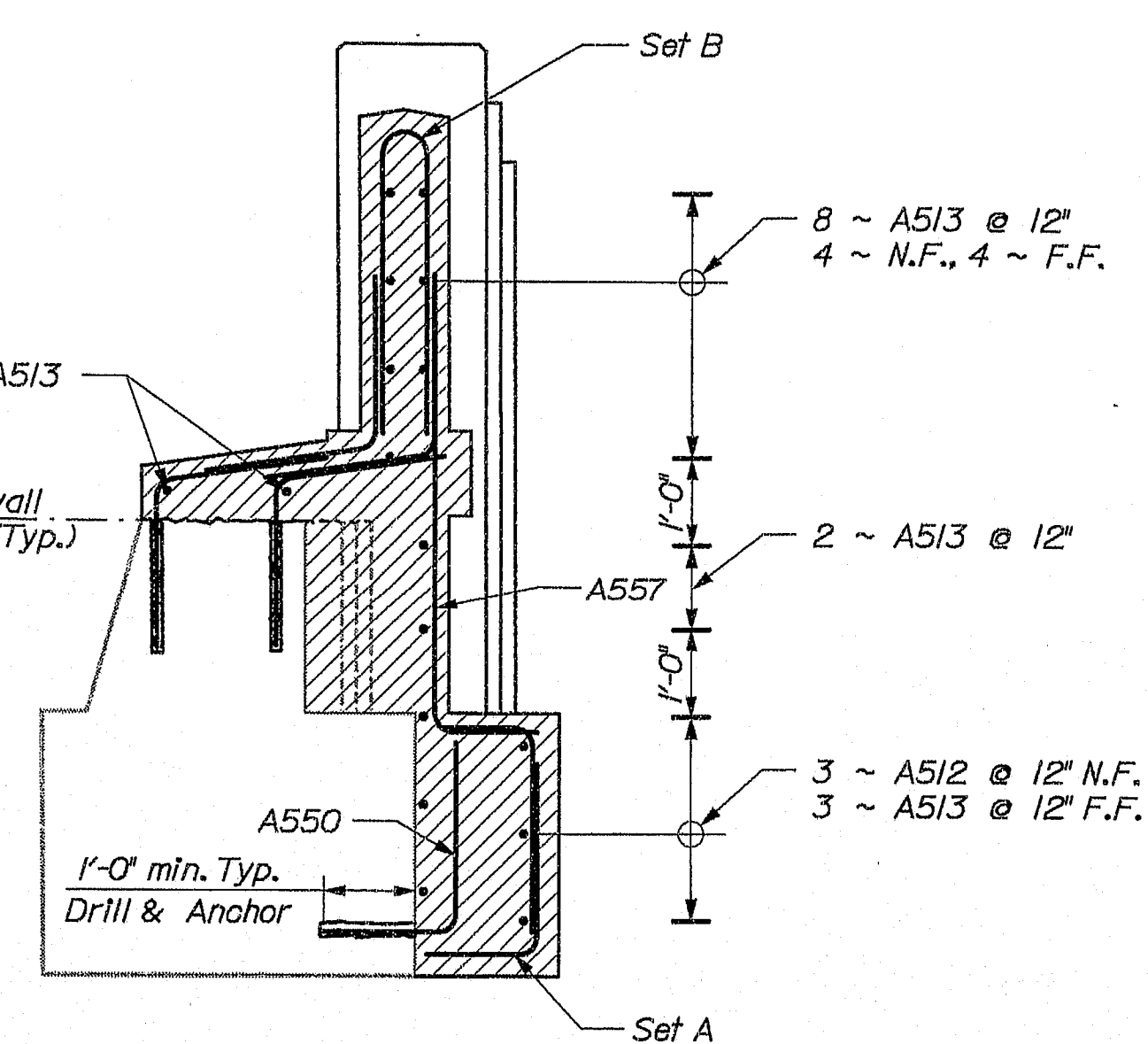
OF 46

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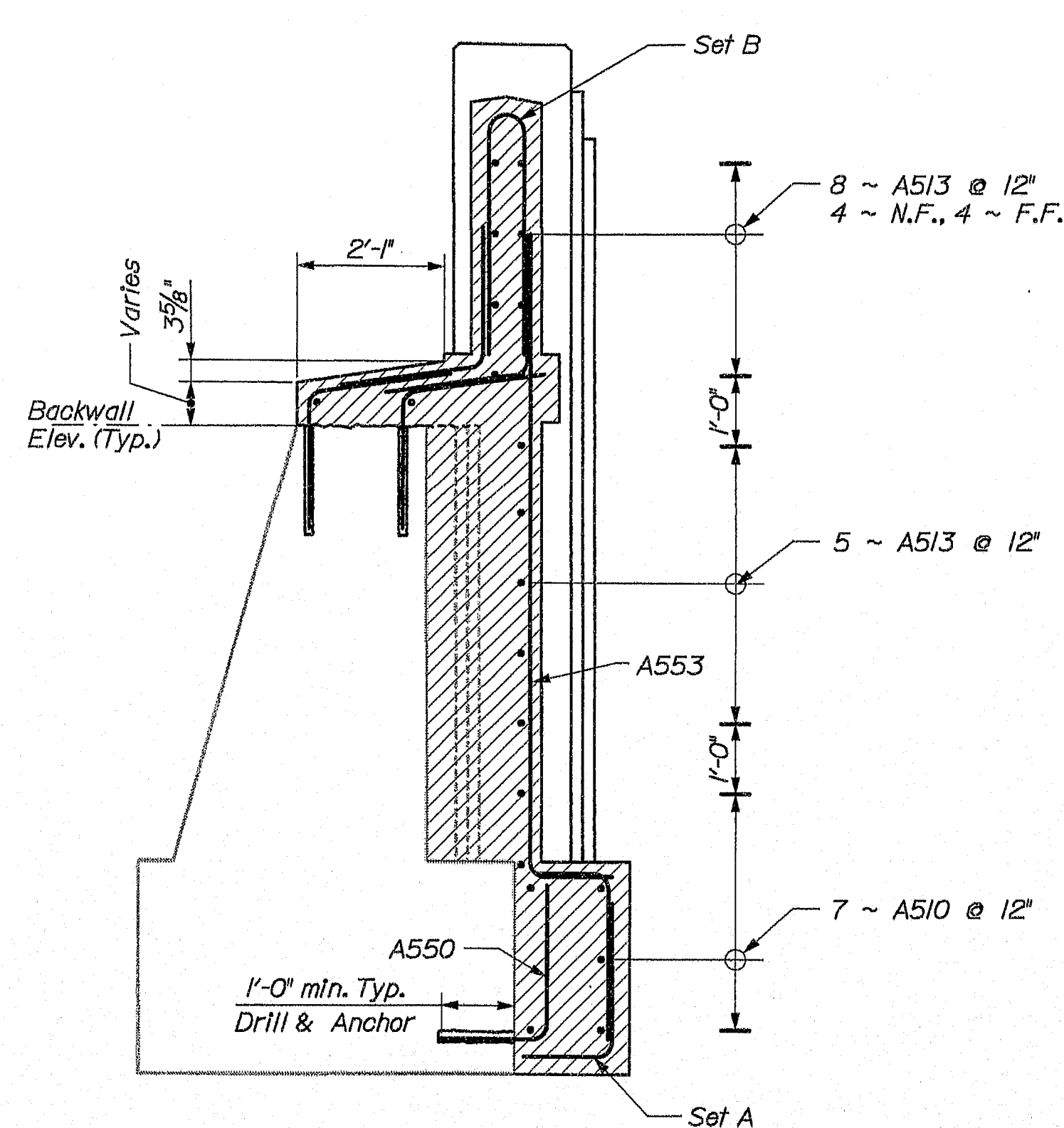
Date: 3/3/2005

Username: david.sullivan

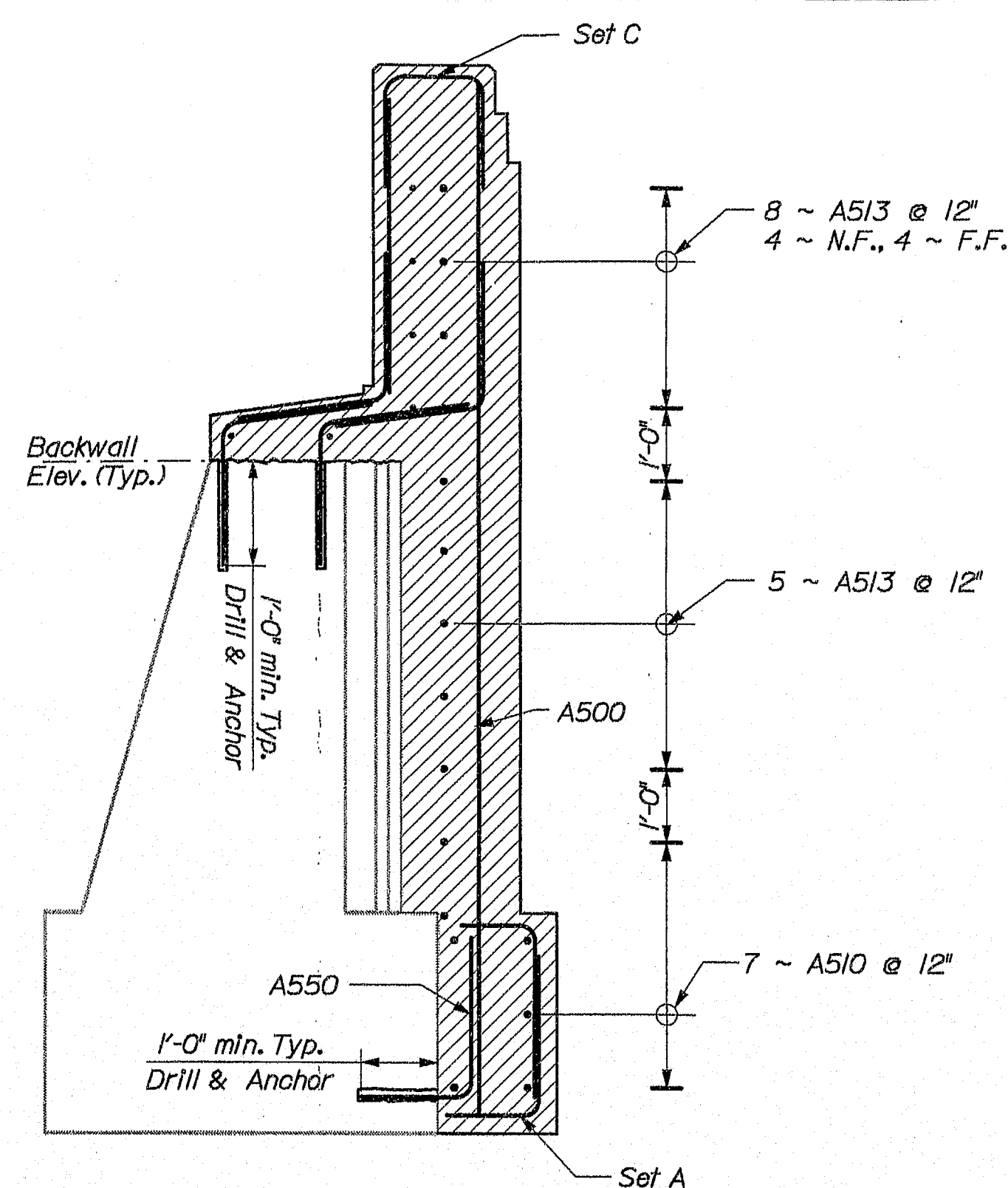
Division: BRIDGE



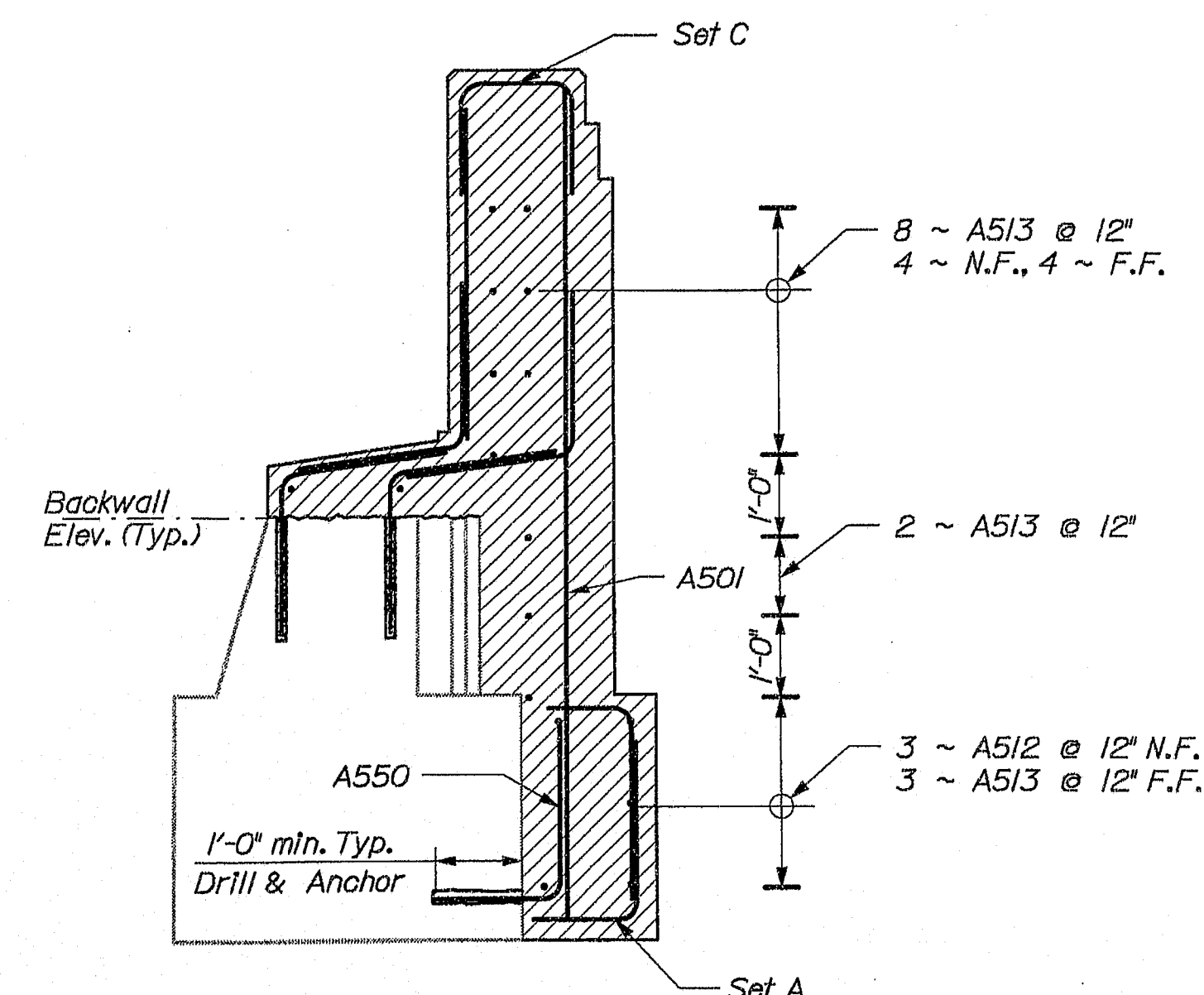
SECTION D-D



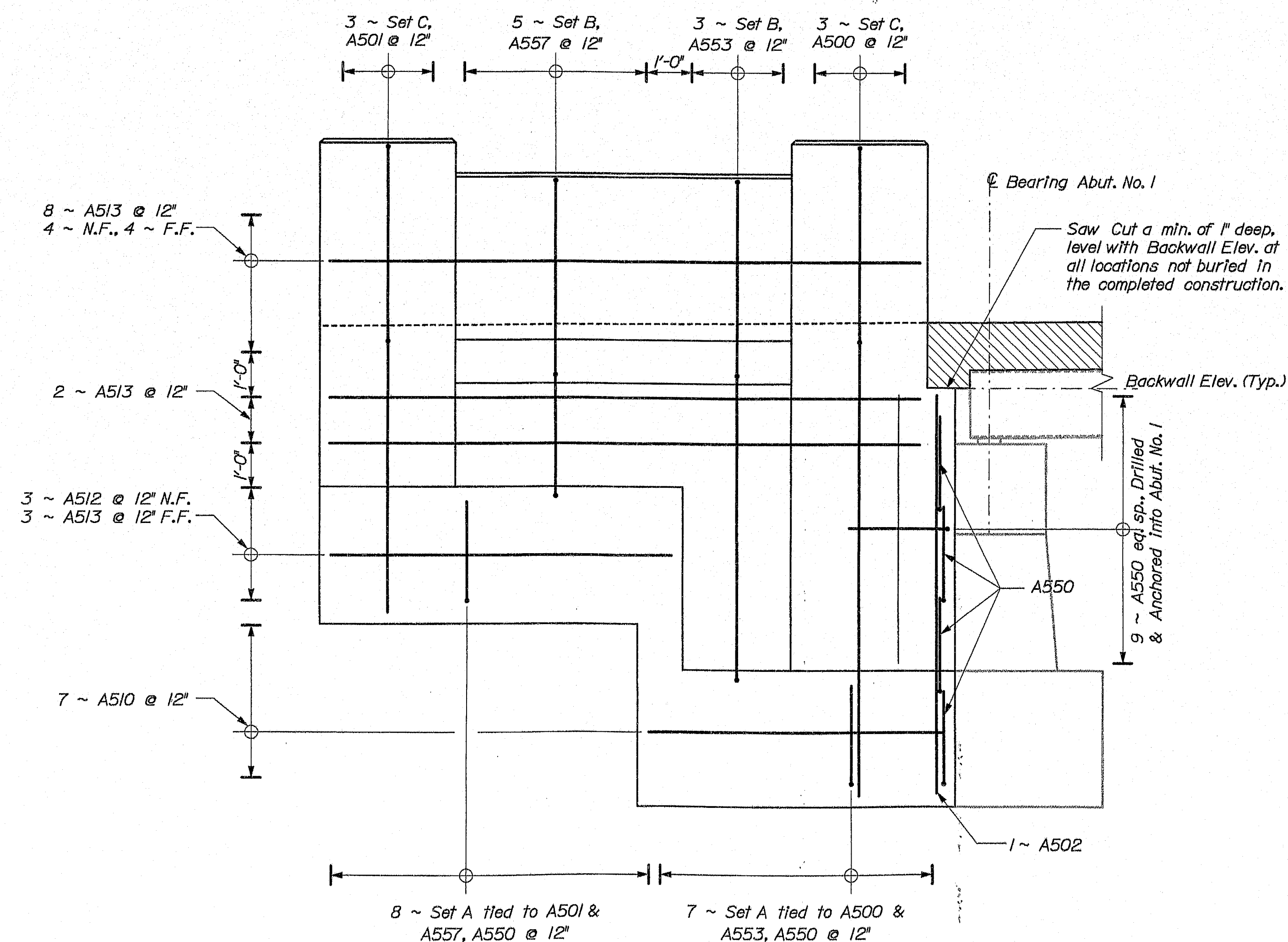
SECTION C-C



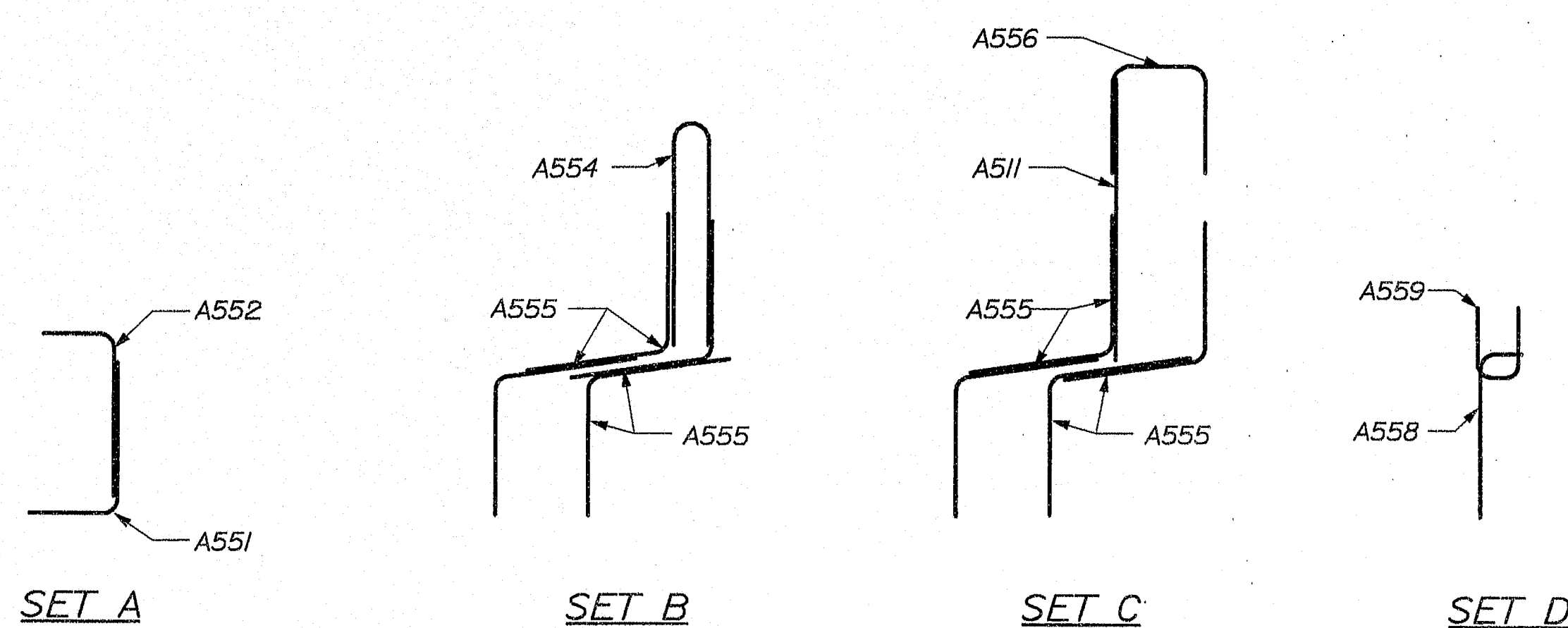
SECTION B-B



SECTION E-E

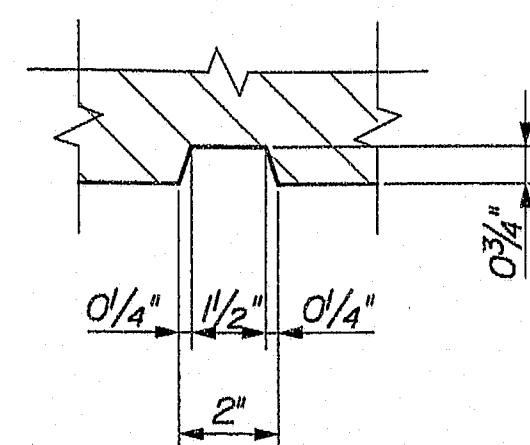
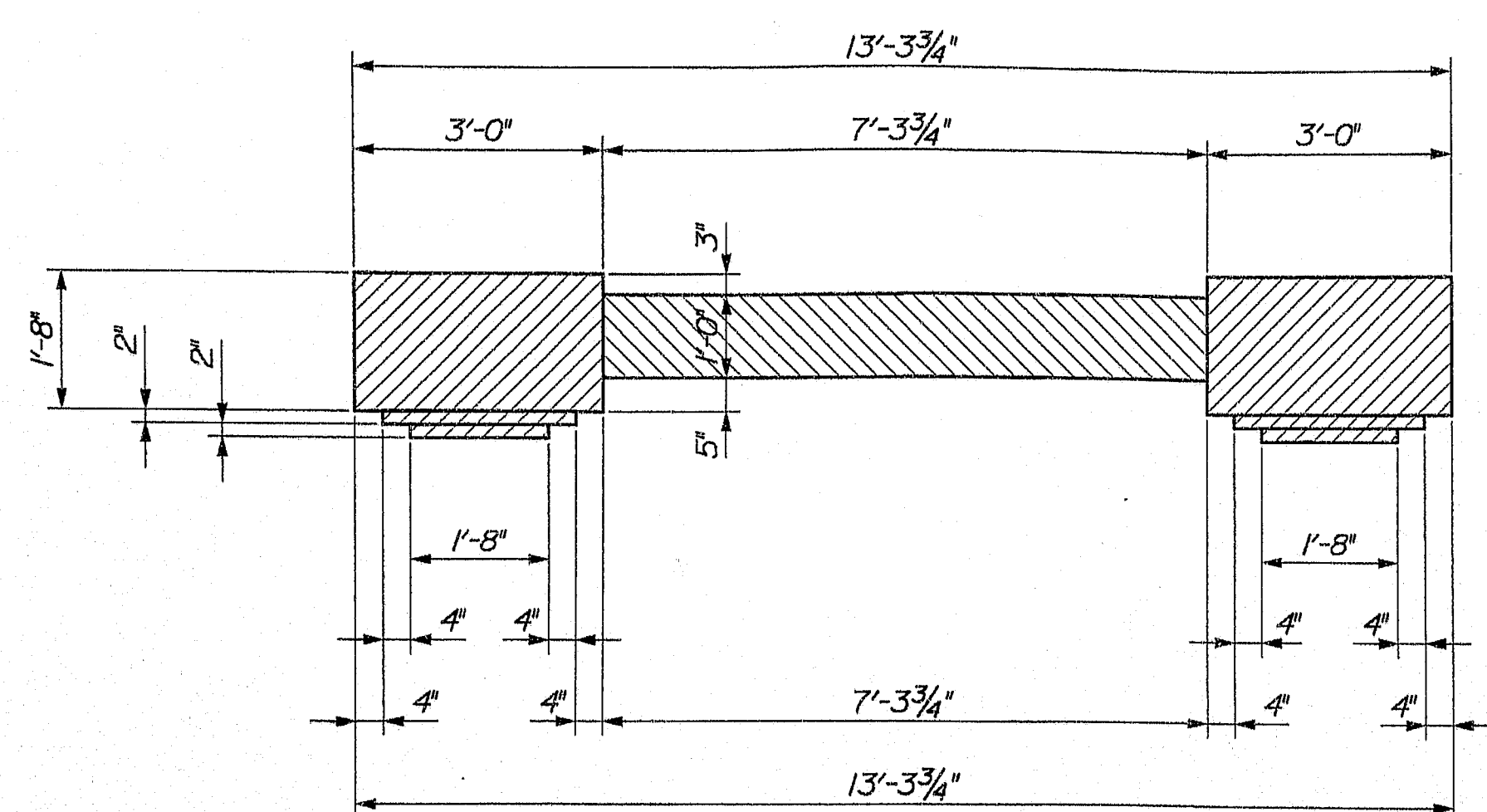


ABUTMENT No. 1 WING ELEVATION

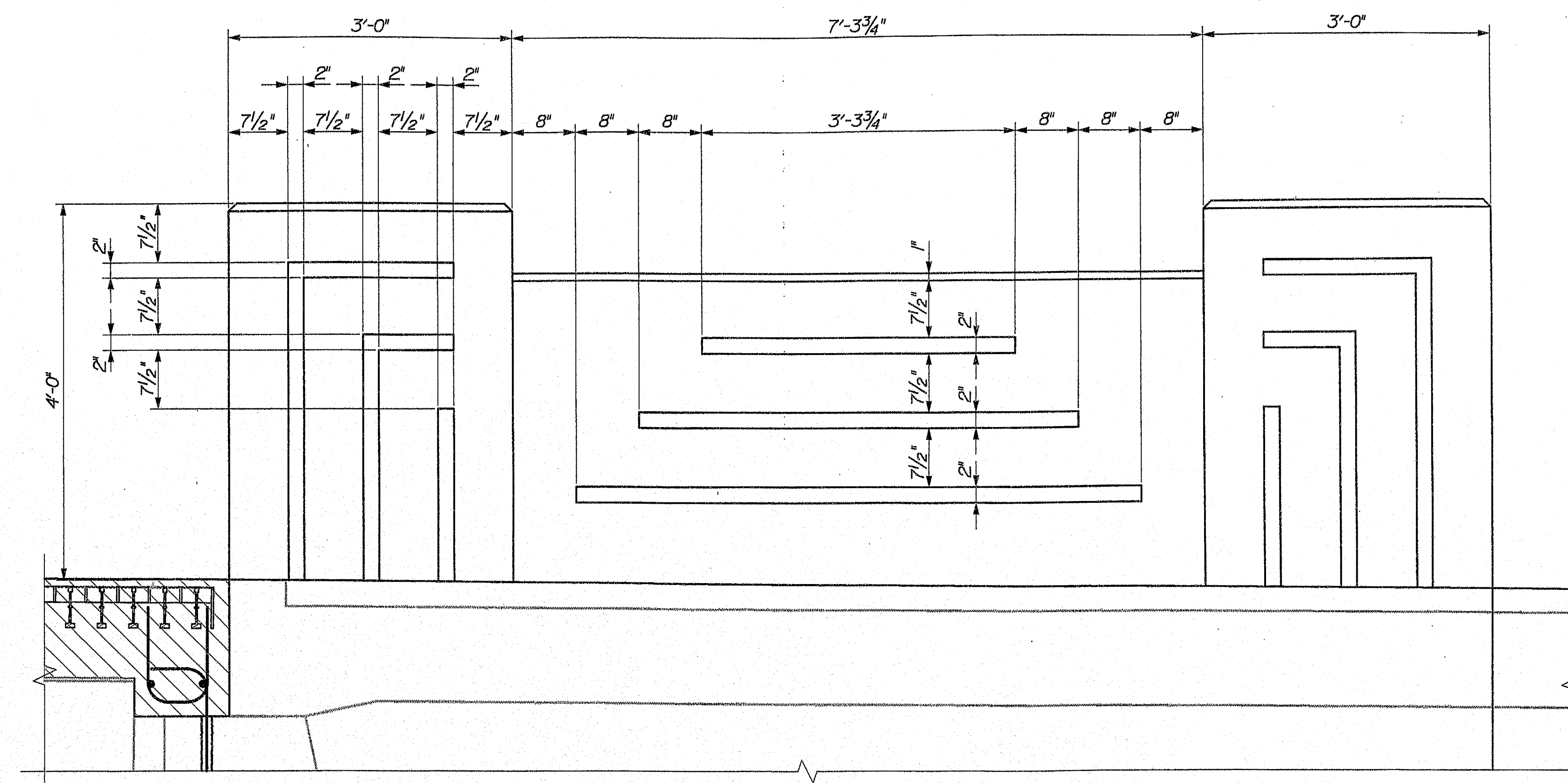
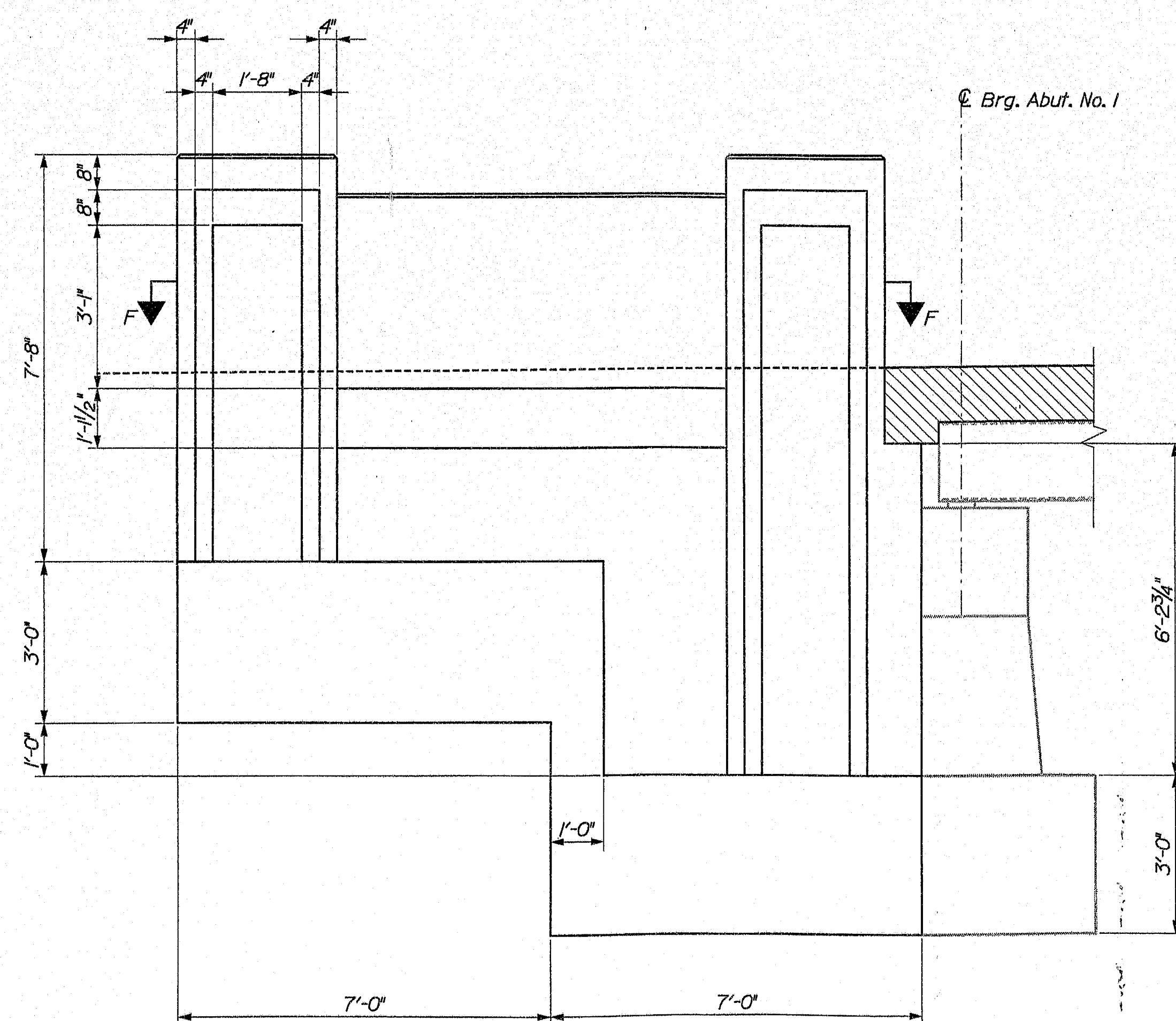
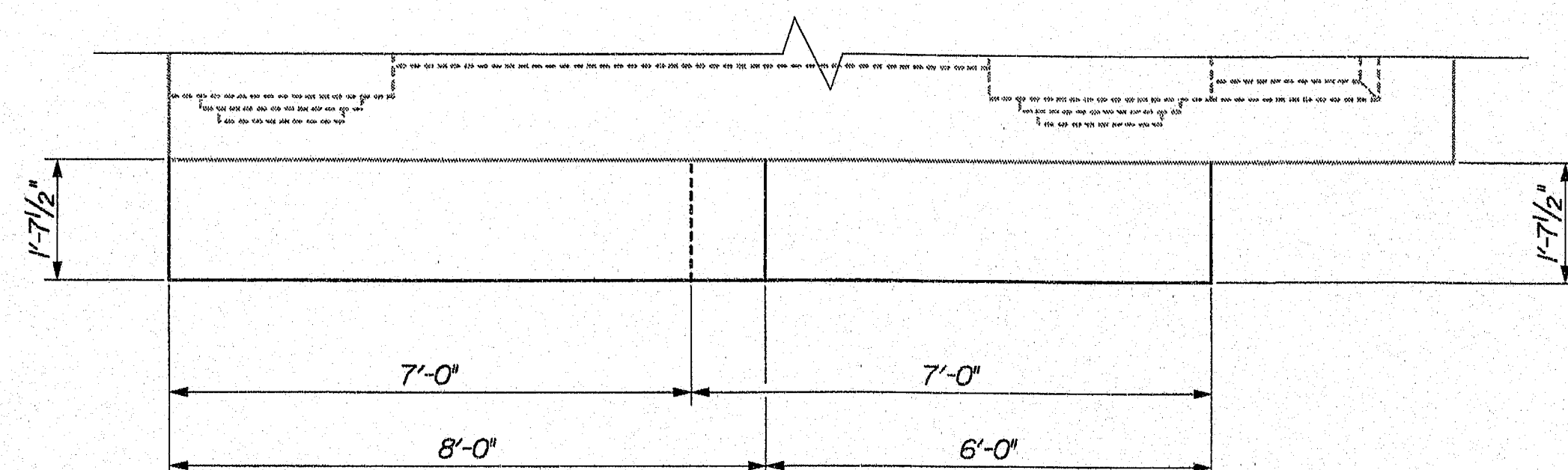


REBAR SETS	
Set A	1-A551, 1-A552
Set B	1-A554, 4-A555
Set C	1-A556, 1-A557, 4-A558
Set D	1-A558, 1-A559

STATE OF MAINE		DEPARTMENT OF TRANSPORTATION	
MEMORIAL BRIDGE		KENNEBEC RIVER	
CITY OF AUGUSTA		KENNEBEC COUNTY	
ABUTMENT No. 1 DETAILS		SHEET NUMBER	
134-227		5	
OF 46		BRIDGE NO. 5166	
PIN		9327.10	
BRIDGE PLANS		BH-9327(100)X	
SIGNATURE		P.E. NUMBER	
DATE		FIELD CHANGES	
BY		DATE	
DESIGNED		2/23/05	
CHECKED			
DESIGNED-DETAILS			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			

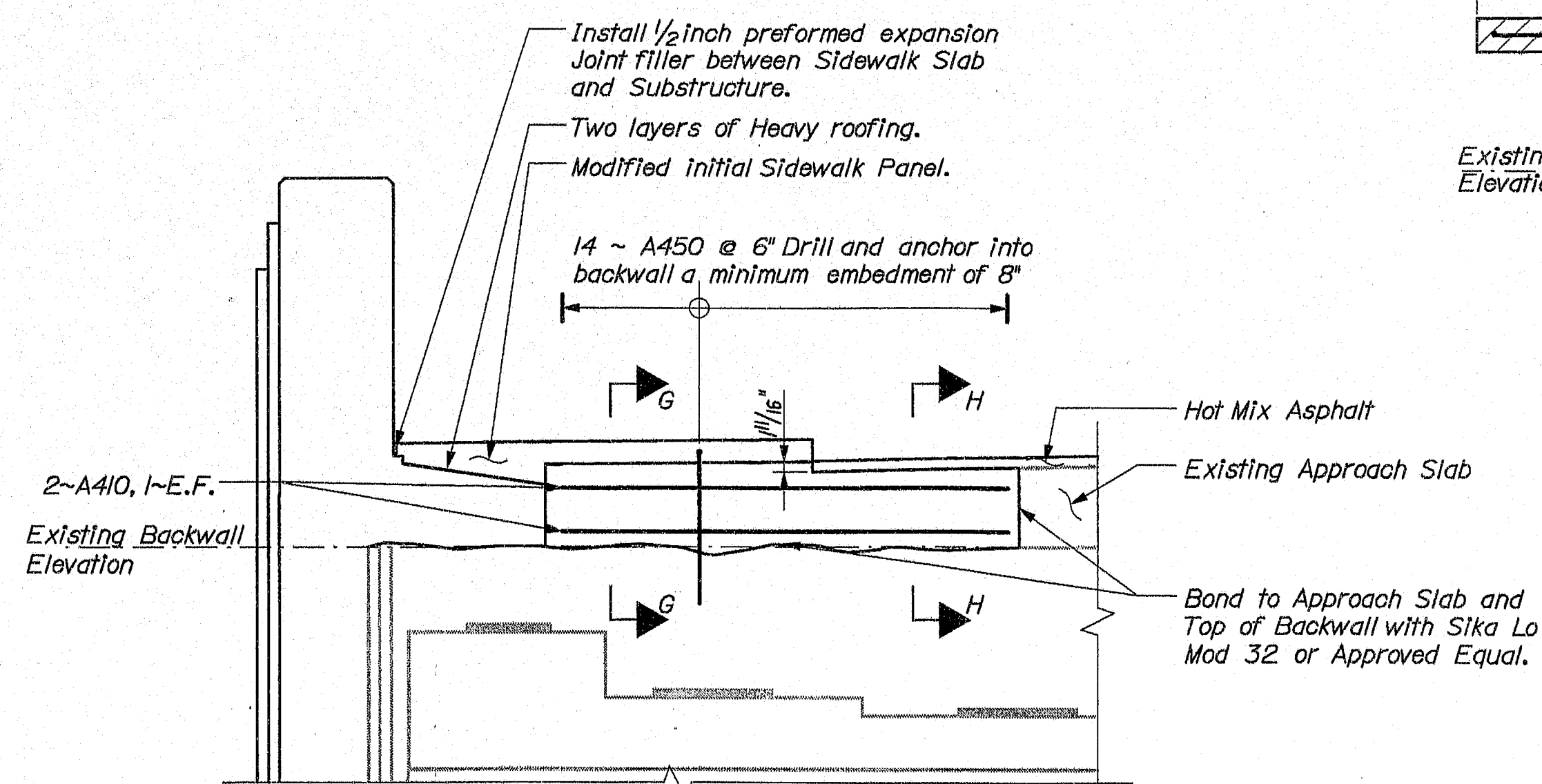


GROOVE DETAIL
Typ. Abut. No. 1 & 2

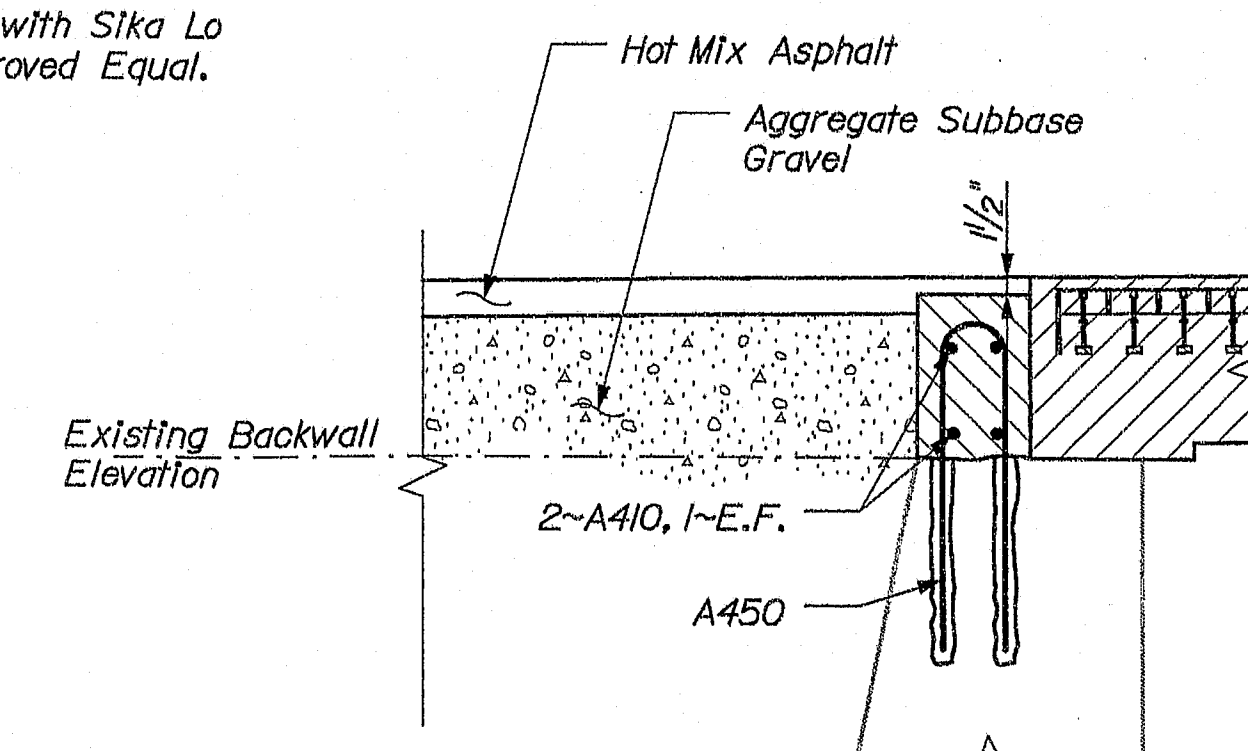
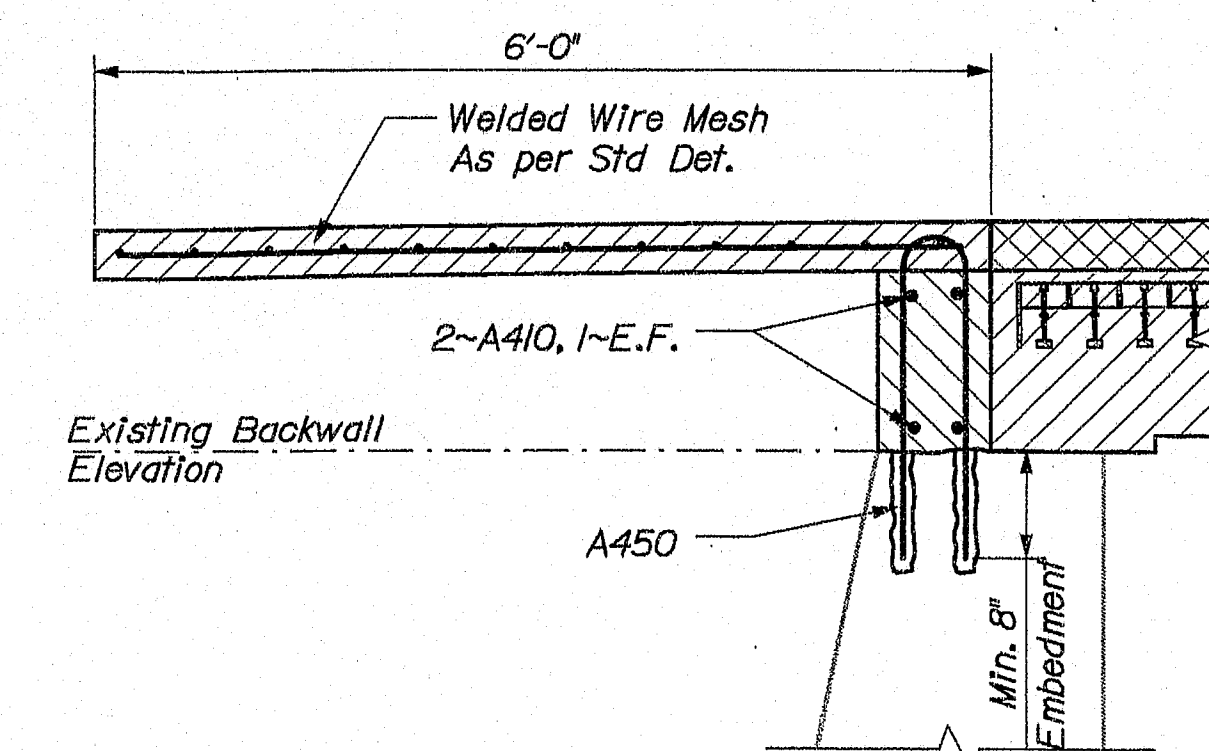


GROOVE PLAN

TRAVEL SIDE ELEVATION
OF CONCRETE POST AND RAIL

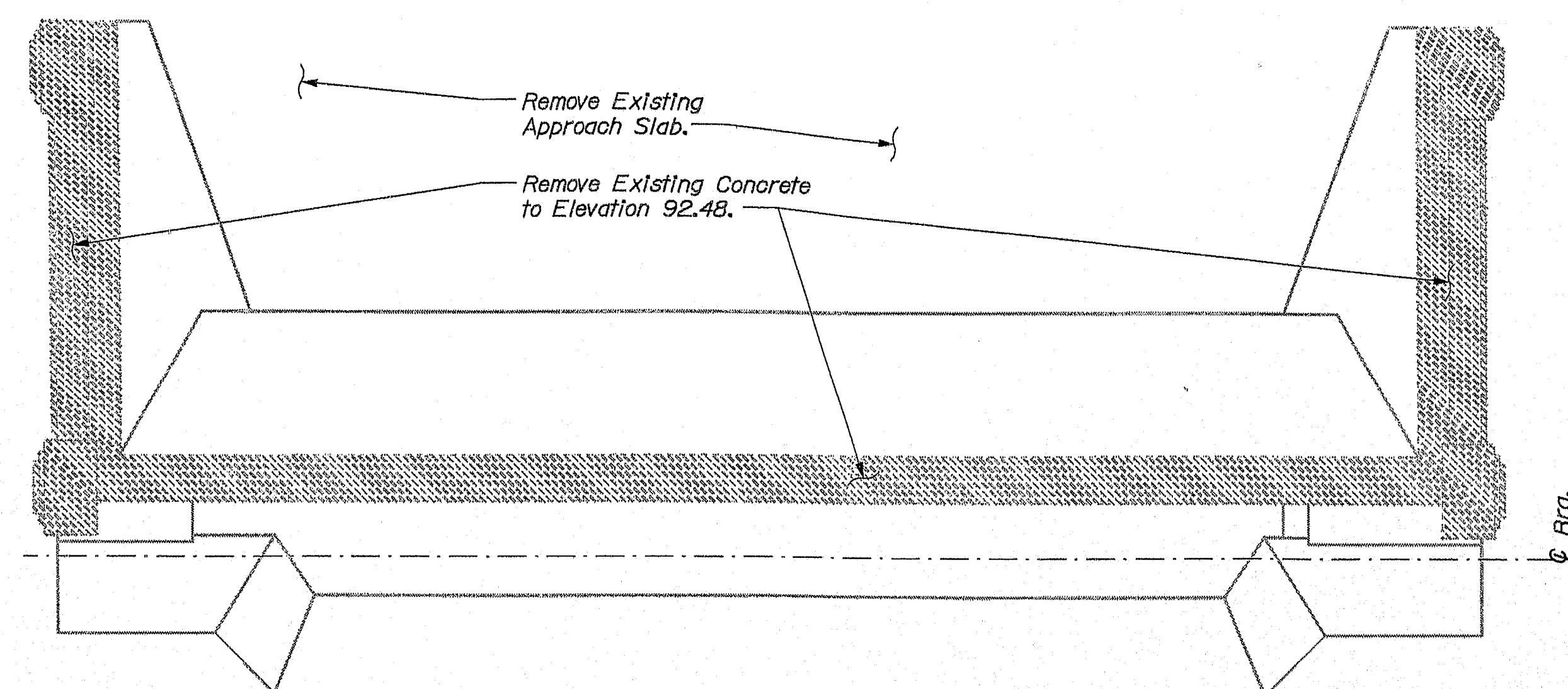


BACKWALL MODIFICATIONS AT ABUT #1
TYPICAL UPSTREAM AND DOWNSTREAM.
DOWNSTREAM SHOWN.

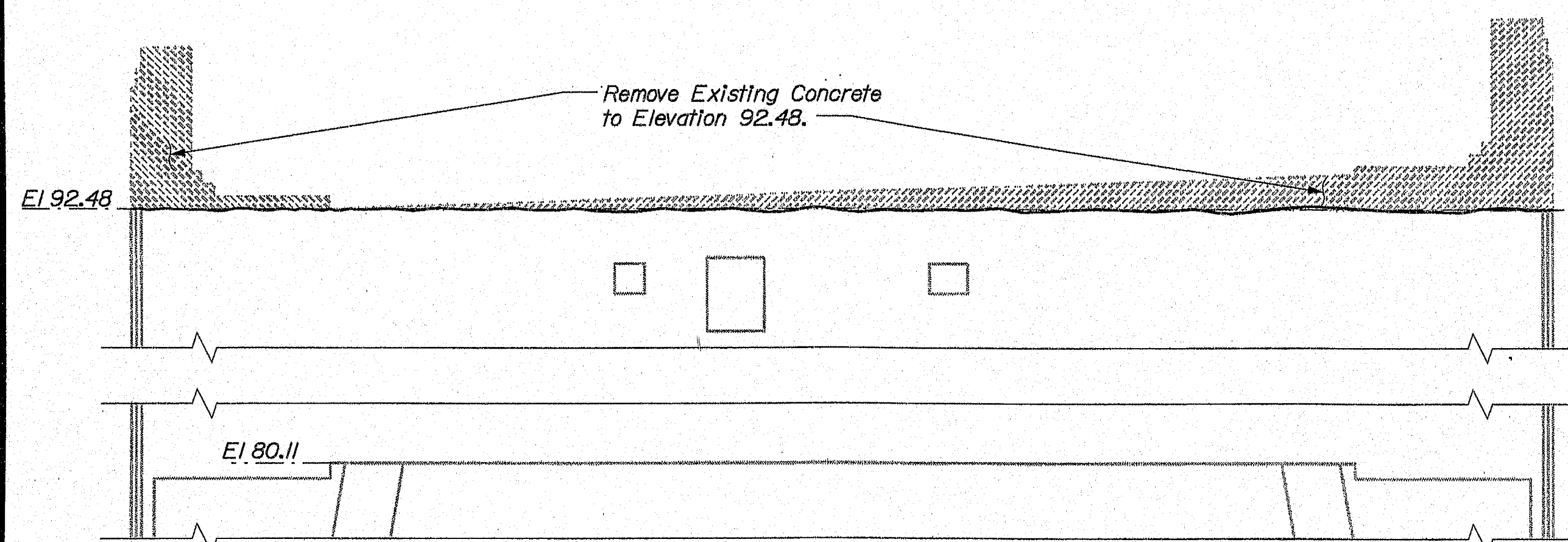


SECTION H-H 134-228

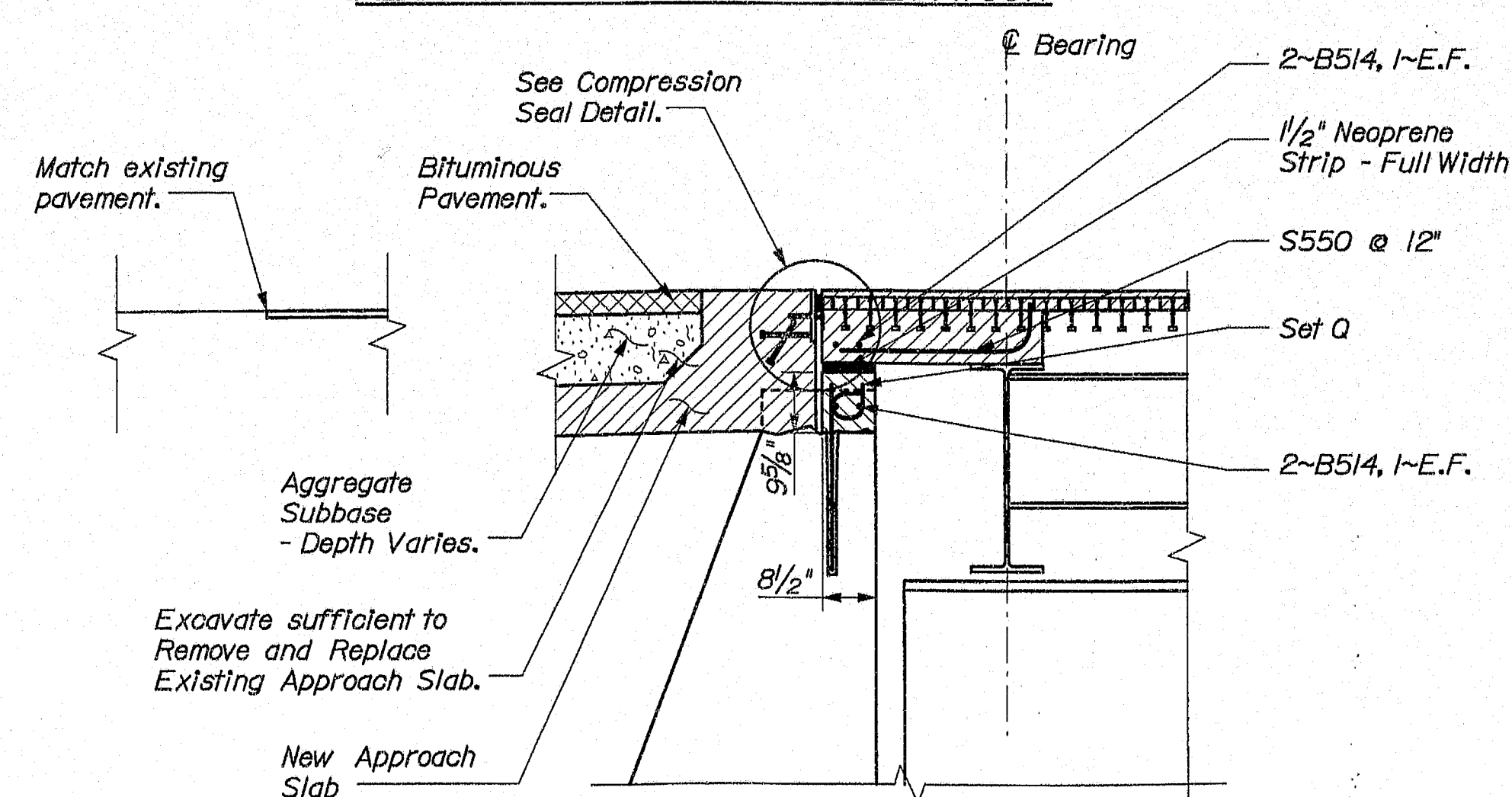
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ABUT. No. 2 EXISTING PLAN



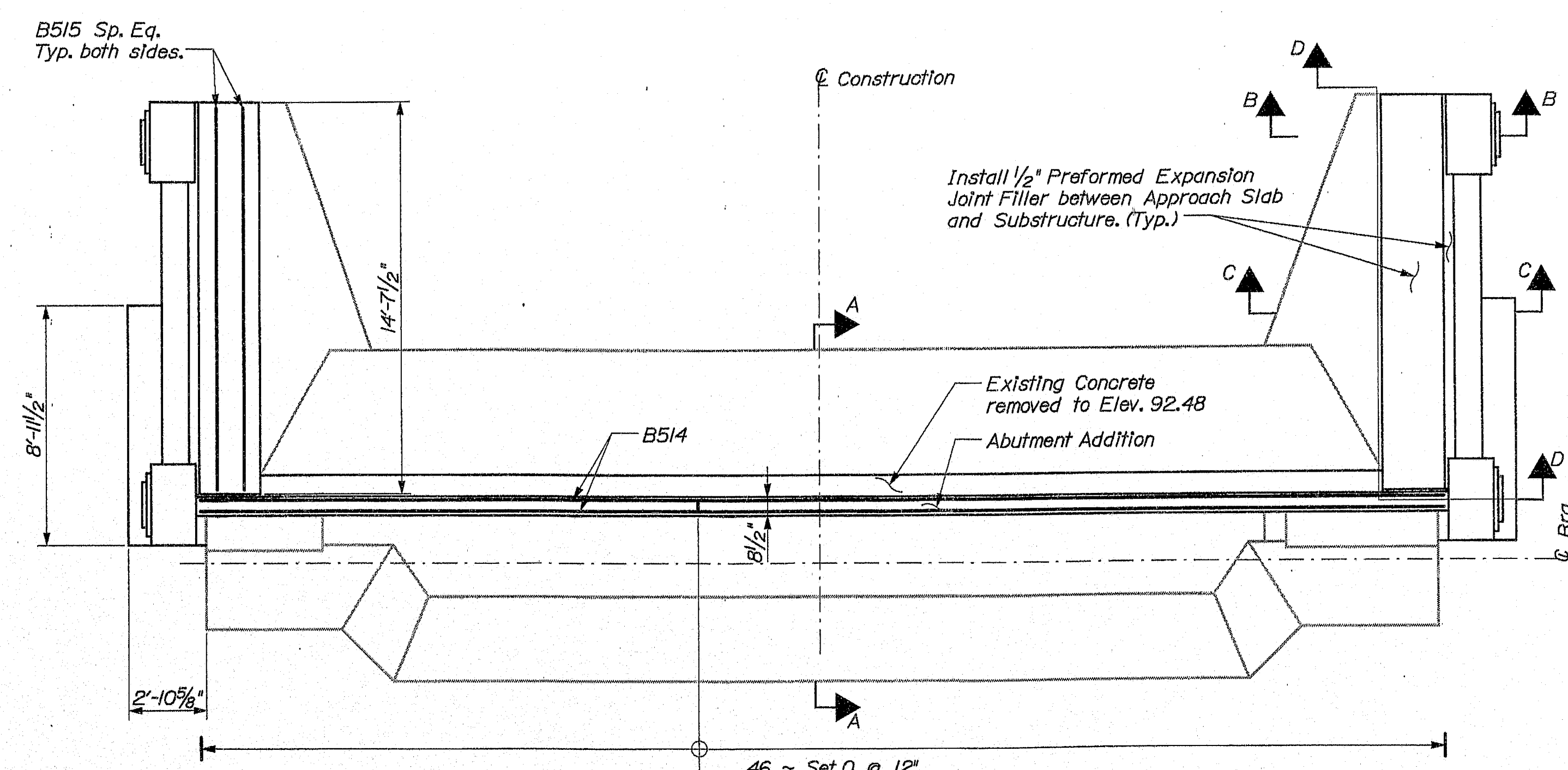
ABUT. No. 2 EXISTING ELEVATION



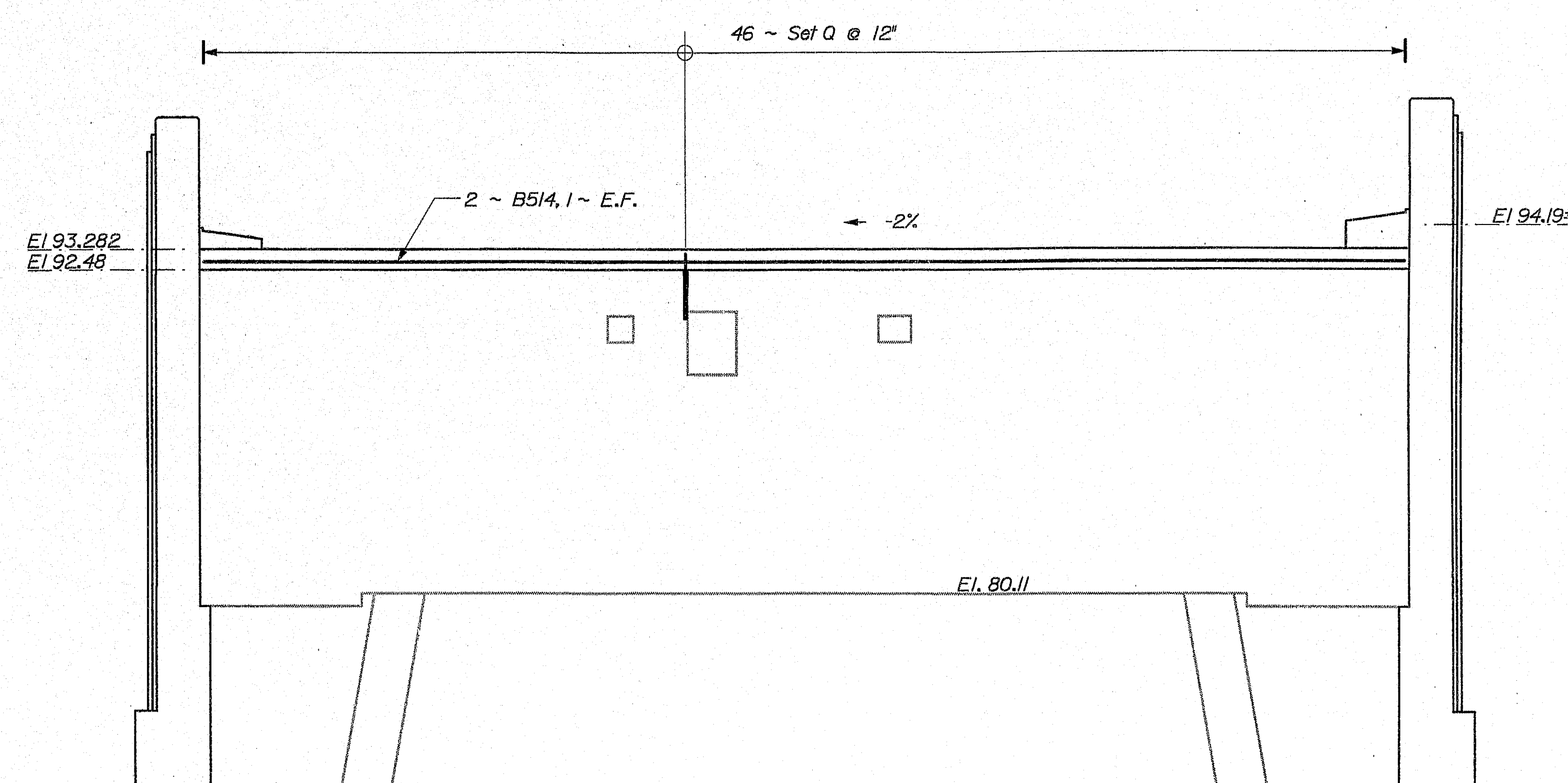
SECTION A-A

TYP. ABUT. No. 2 SECTION DETAIL
& APPROACH SLAB

NOTE:
For Set D components refer to Abut. No. 1 Detail sheet.
See Abutment No. 2 Details for Approach Slab Details.



ABUT. No. 2 PLAN

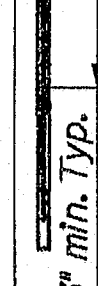
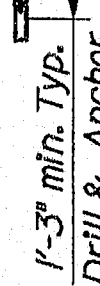
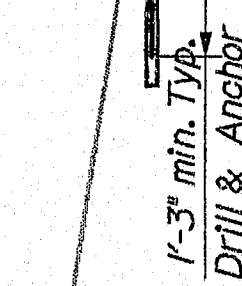


ABUT. No. 2 ELEVATION

SHEET NUMBER 2	MEMORIAL BRIDGE KENNEBEC RIVER CITY OF AUGUSTA KENNEBEC COUNTY	PRJ. MANAGER		WLF	BY	DATE
		DESIGN DETAILER	ETC	DWS		
		CHECKS-REVIEW		ENC		2/23/05
		DESIGN DETAILER		ENC		
ABUTMENT No. 2	REVISIONS 1	DESIGN DETAILER				
		REVISIONS 2				
		REVISIONS 3				
		REVISIONS 4				
STATE OF MAINE		SIGNATURE				
DEPARTMENT OF TRANSPORTATION		P.E. NUMBER				
BH-9327(100)X		DATE				
BRIDGE NO. 5196		PIN				
9327.10		BRIDGE PLANS				



22" min. Typ.
Vary overlap as
required to provide
min. cover.



8 ~ B501 Eq. Sp.
Field Cut to Length



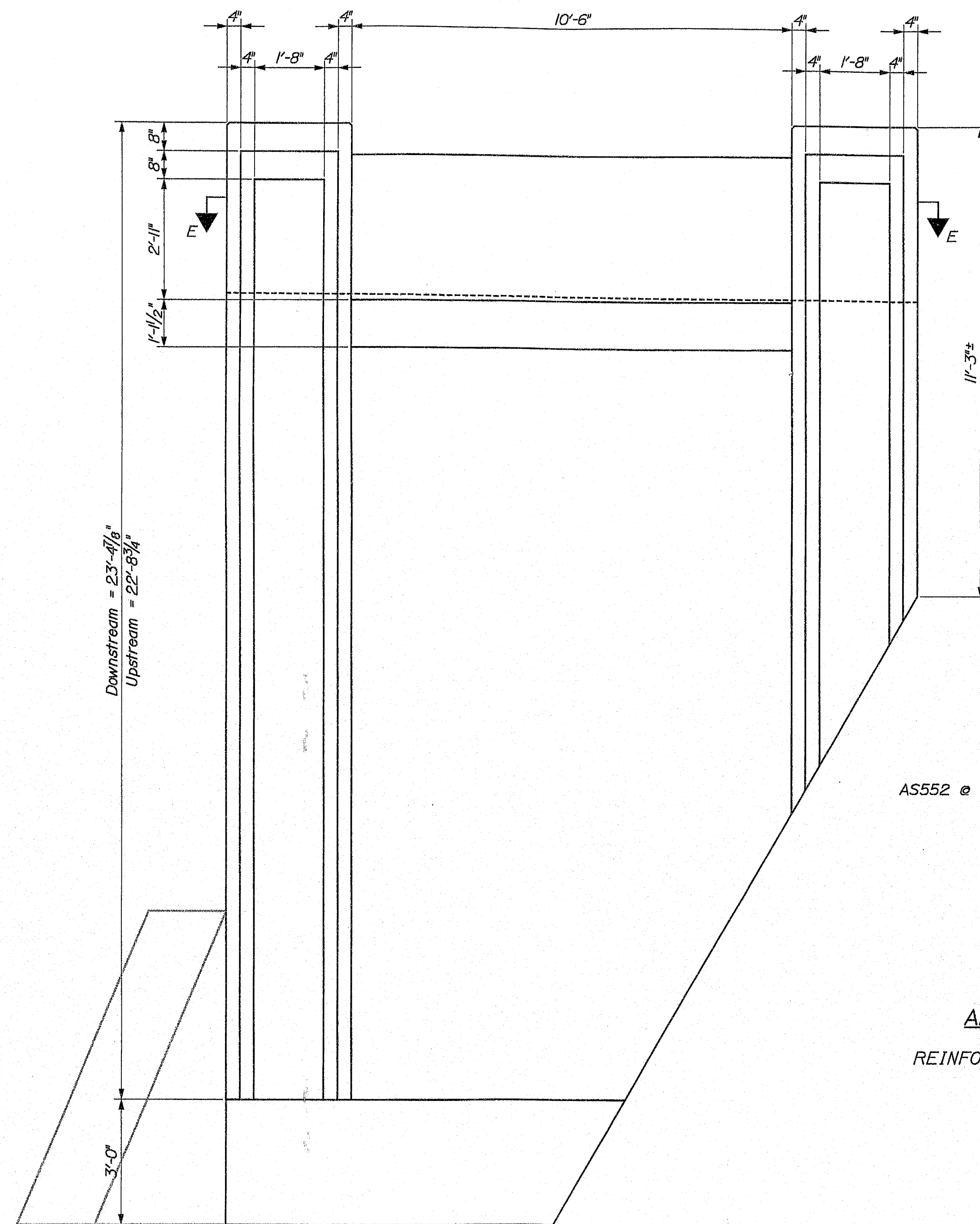
134-230

B559—

B558—

Set N	I-B554, I-B513, I-B556, 4-B555
Set O	I-B500, I-B557, I-B511
Set P	I-B551, I-B552, I-B553
Set Q	I-B558, I-B559

8		SHEET NUMBER	MEMORIAL BRIDGE KENNEBEC RIVER CITY OF AUGUSTA KENNEBEC COUNTY		PROJ. MANAGER		WLF	BY	DATE	STATE OF MAINE DEPARTMENT OF TRANSPORTATION	
					DESIGN-DETAILED CHECKED-REVIEWED DESIGN-DETAILED2 DESIGN-DETAILED3 REVISIONS 1 REVISIONS 2 REVISIONS 3 REVISIONS 4 FIELD CHANGES	ETG RCC RCC B/C B/C B/C B/C B/C					
OF 46			ABUTMENT No. 2 DETAILS							SIGNATURE	BH-9327(100)X
										P.E. NUMBER	
										DATE	PIN 9327-10
										BRIDGE NO. 5196	BRIDGE PLANS

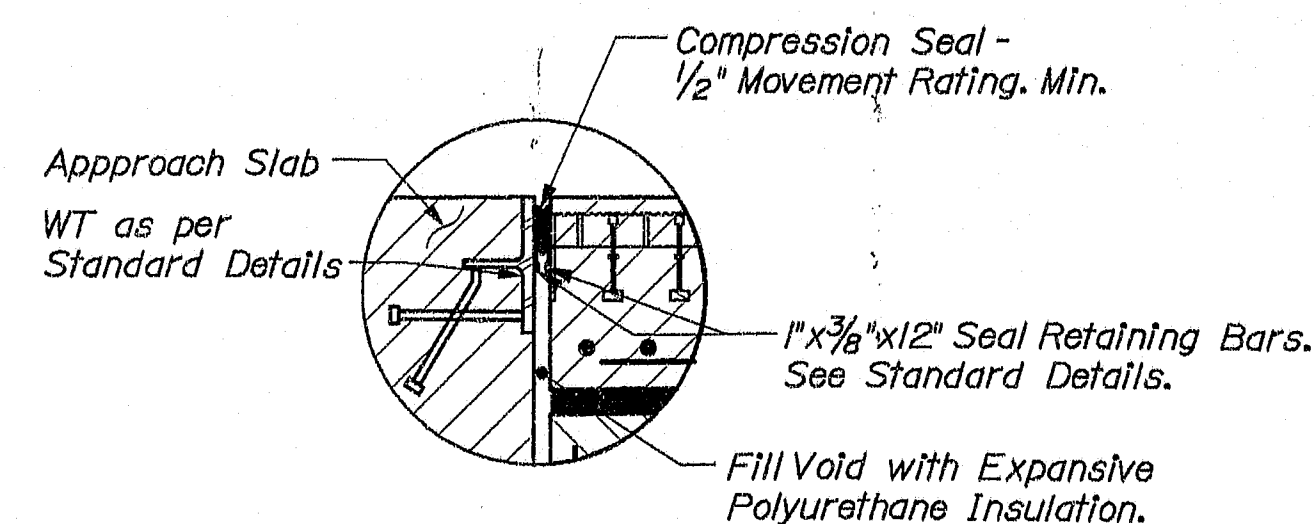


ABUT. No. 2 WING WALL ELEVATION
DOWNSTREAM SIDE SHOWN.
UPSTREAM SIDE OPPOSITE HAND EXCEPT AS NOTED.

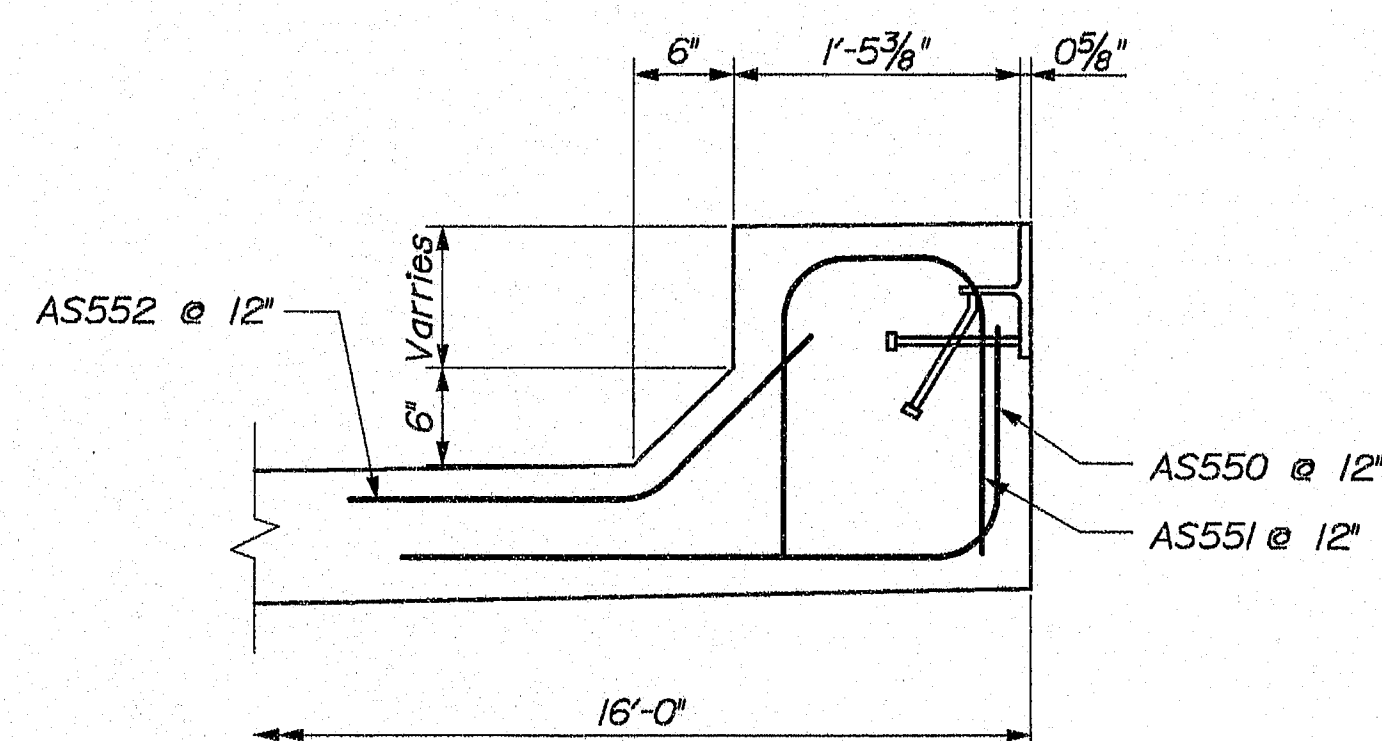
ABUTMENT No. 2

APPROACH SLAB NOTES:

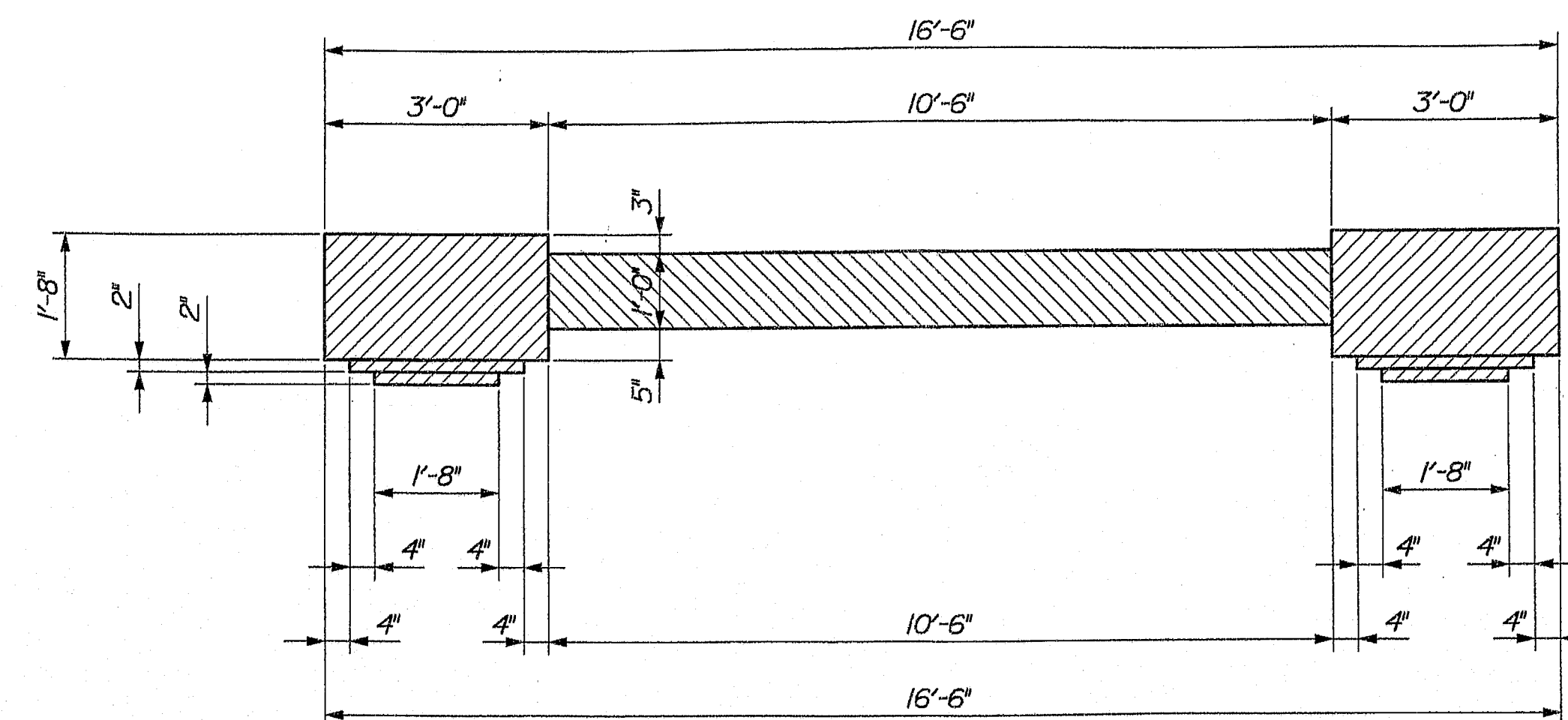
1. Approach Slab is to extend to within $\frac{1}{2}$ " of Inside face of new Wings.
2. Length and Pitch of Approach Slab shall be as per Standard Details.



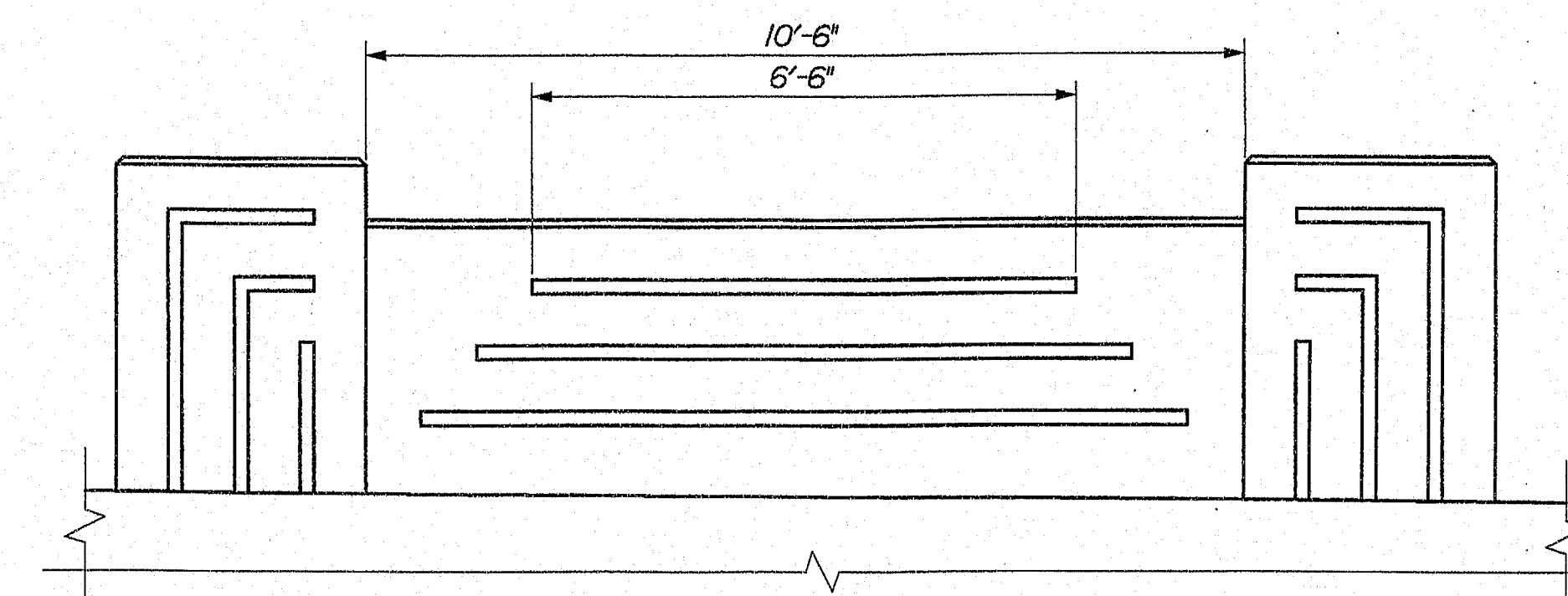
COMPRESSION SEAL DETAIL



APPROACH SLAB DETAIL
REINFORCING SHOWN IN STANDARD DETAILS
NOT SHOWN FOR CLARITY.

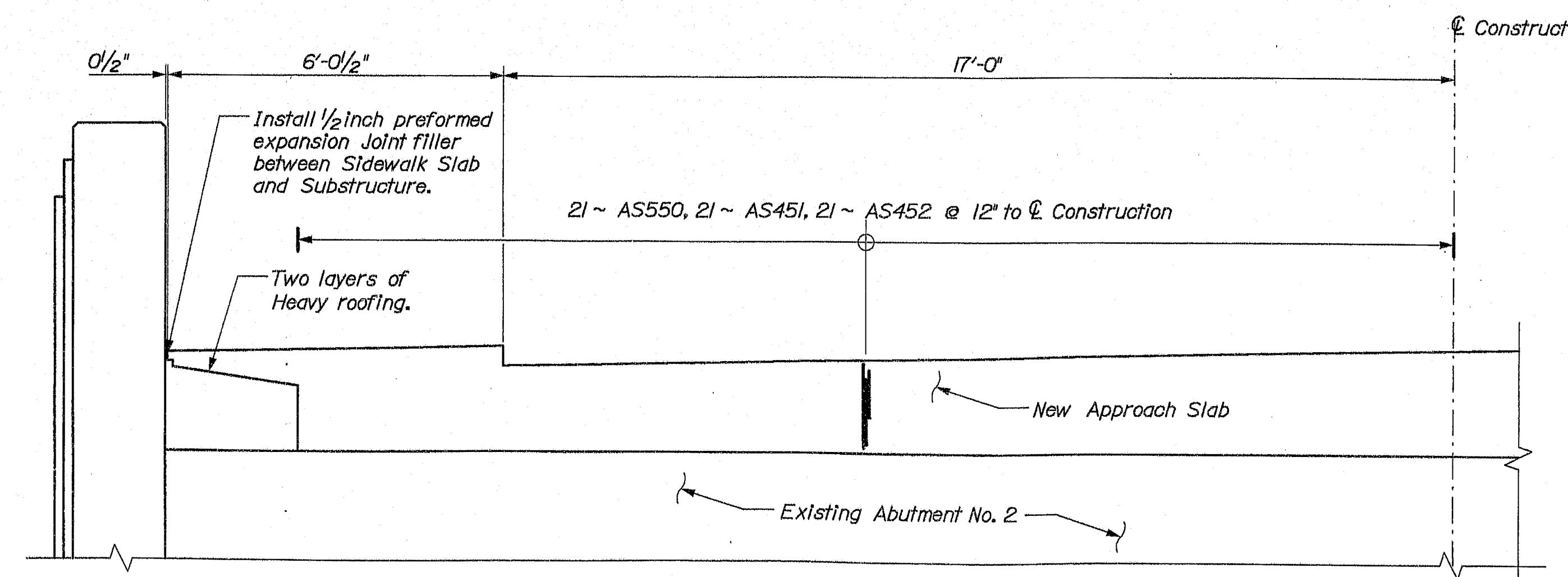


SECTION E-E



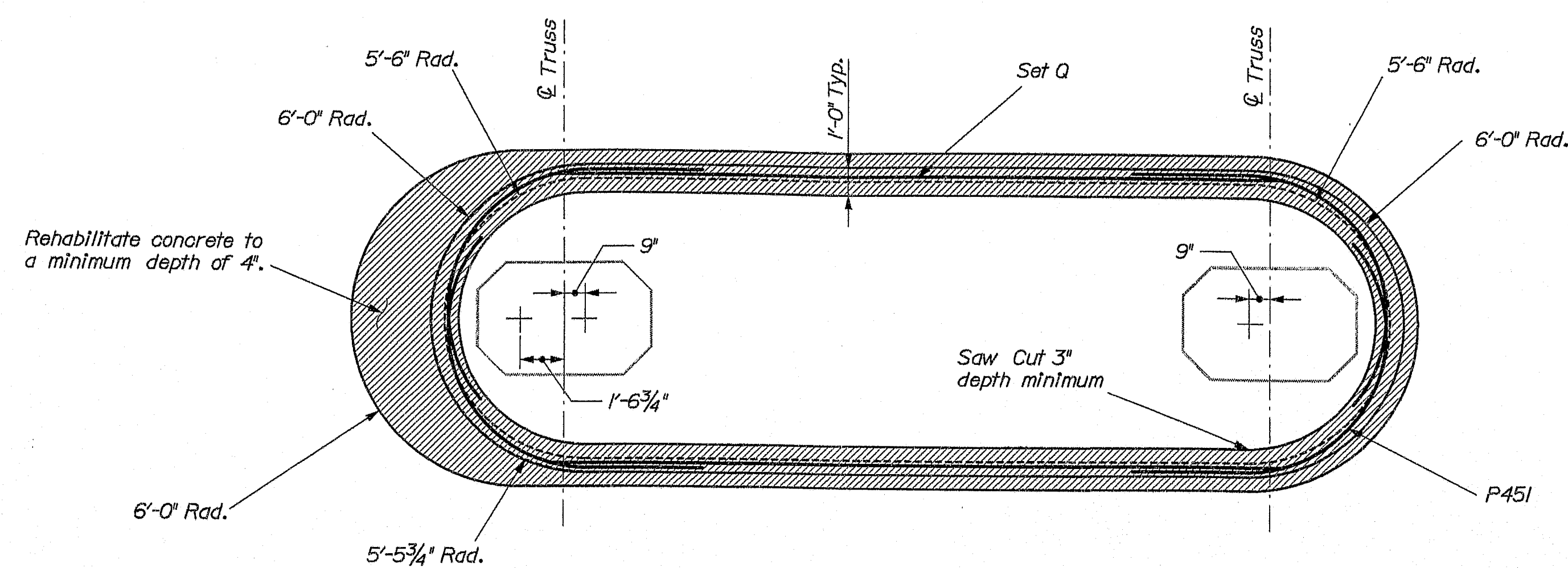
GROOVE PLAN

TRAVEL SIDE ELEVATION OF CONCRETE POST AND RAIL.
UPSTREAM SIDE SHOWN, DOWNSTREAM SIDE OPPOSITE HAND.
ALL DIMENSIONS SIMILAR TO GROOVE PLAN FOR ABUTMENT No. 1 EXCEPT AS NOTED.

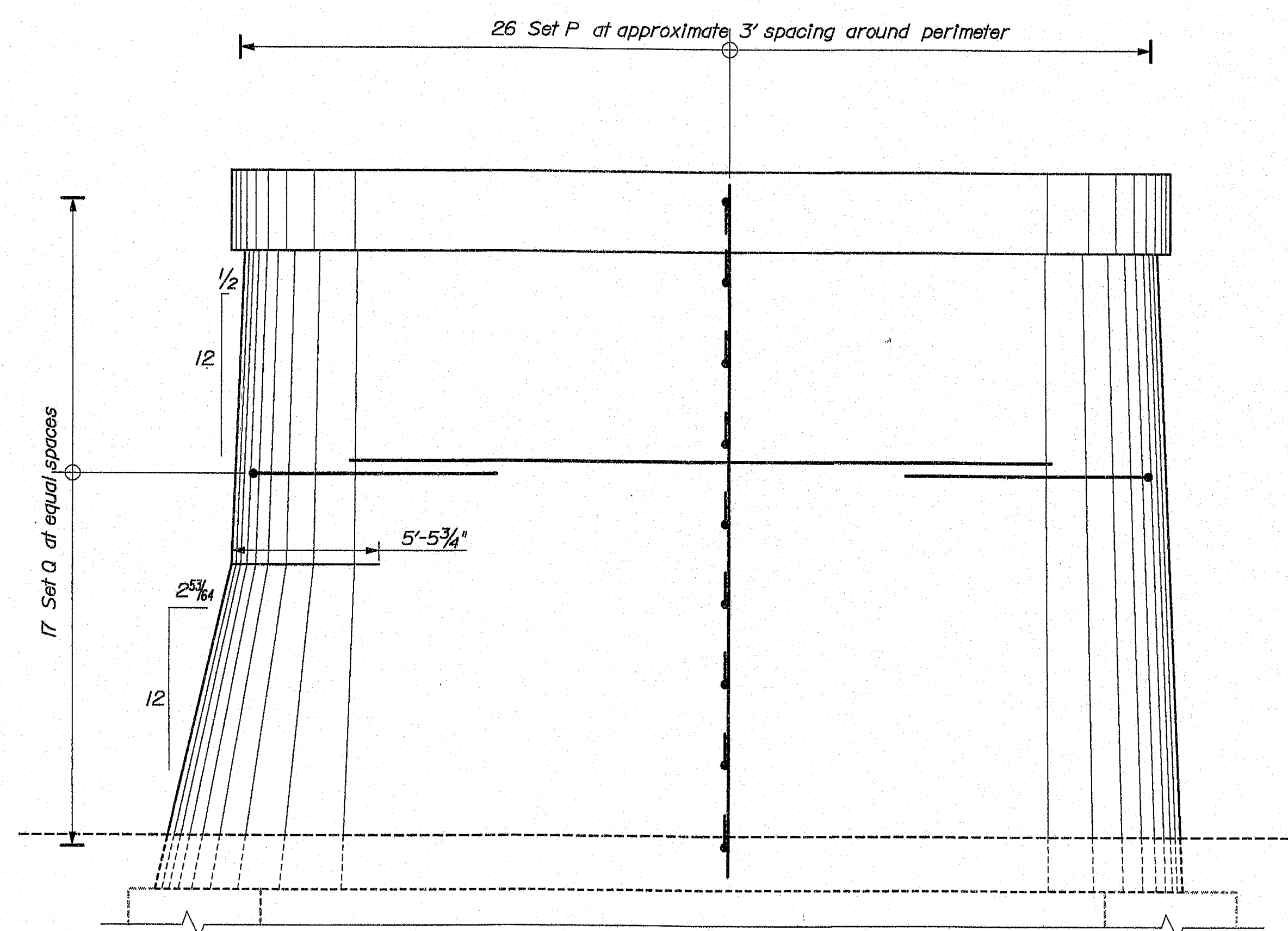


APPROACH SLAB ELEVATION
SYMMETRICAL ABOUT C CONSTRUCTION

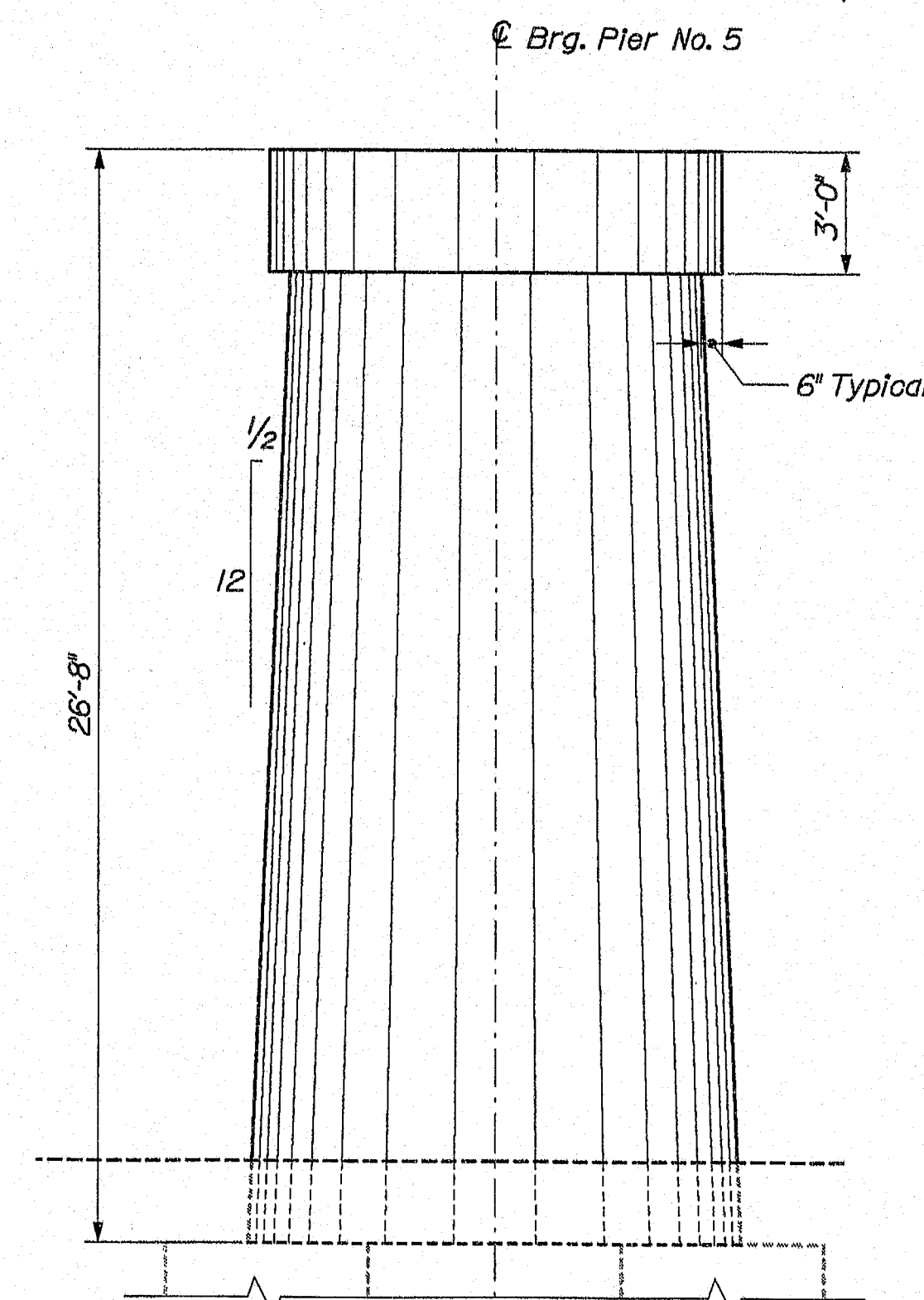
STATE OF MAINE		DEPARTMENT OF TRANSPORTATION		BH-9327(100)X		BRIDGE NO. 5196		PIN 9327.10		BRIDGE PLANS	
MEMORIAL BRIDGE		KENNEBEC RIVER		CITY OF AUGUSTA		KENNEBEC COUNTY		ABUTMENT No. 2 DETAILS		SHEET NUMBER	
9		OF 46		134-231							



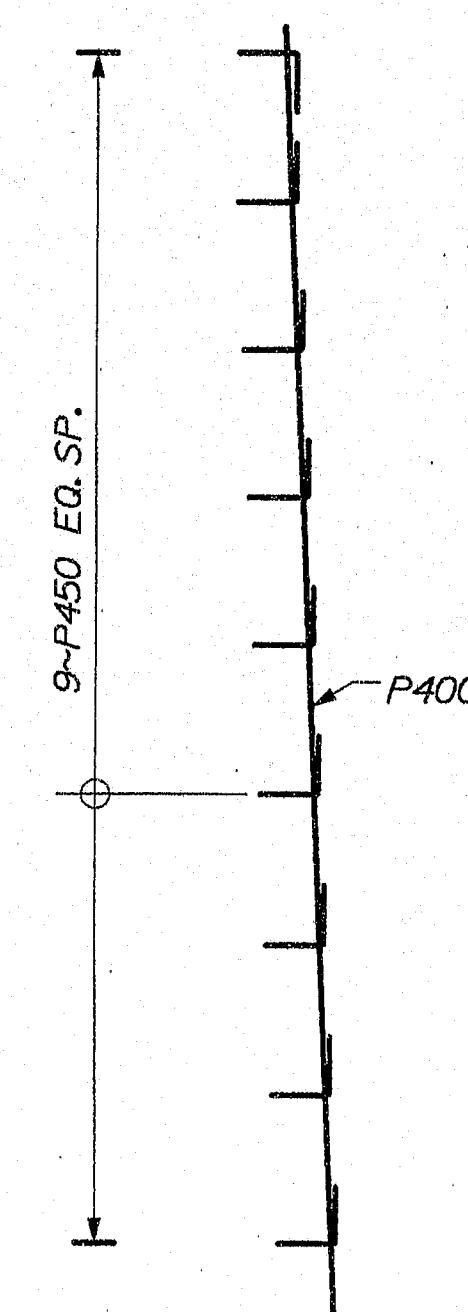
PIER NO. 5 PLAN



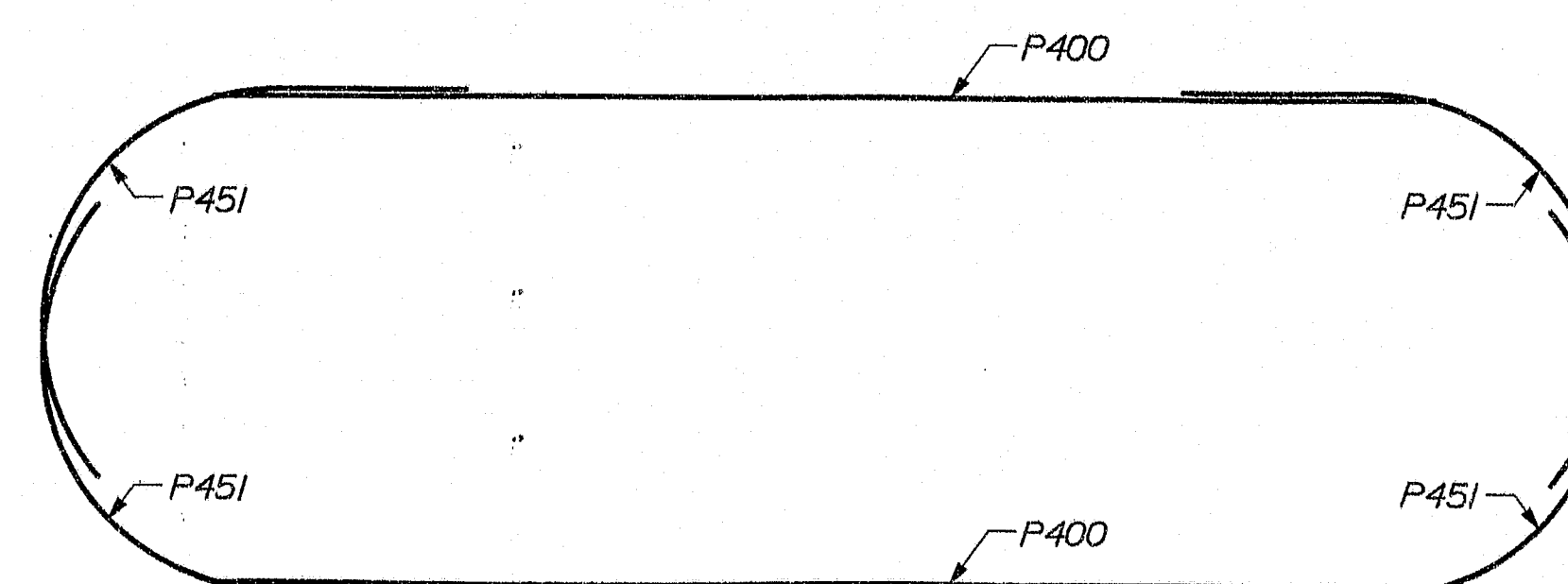
PIER NO. 5 ELEVATION



PIER NO. 5 RIGHT SIDE VIEW



SET P



SET Q

PIER NO. 5 REHAB PROCEDURE / NOTES

1. Saw out a neat, straight line in the top of the concrete pier to a depth of 3", 1'-0" from the top corner of the concrete bearing surface.
2. Remove the concrete to a depth of 4" over exposed surfaces within 10' of horizontal and within 10' of the vertical surfaces.
3. Remove concrete over the all exposed surfaces within 15' of vertical to a minimum depth of 4" measured perpendicular to the face of concrete to the elevation of the top of the footing. Contractor shall be careful not to excavate concrete to the existing reinforcing steel over more than 20% of the surface area of the existing pier at one time. It should be noted that while location of existing reinforcement may vary from that shown on plans, the existing plans indicate 6 inches of cover to reinforcement.
4. Drill and anchor 234 P450 bars with 1'-0" embedment min. and place reinforcing steel with a minimum cover of 2 inches in accordance with standard specification section 503.
5. Cast new concrete to the exact lines and grade of the original pier and in accordance with all applicable specifications
6. New Concrete for the Jacket shall be class LP.
7. Forms may be removed when concrete Jacket has reached a minimum strength of 3000 psi as demonstrated by cylinders cured with the concrete Jacket, or once the curing period is over. Should the forms be removed prior to the full 7 day curing period is completed, defects shall be repaired immediately and an approved curing compound shall be applied in accordance with standard specification 502.10 subsection D.
8. It is anticipated that the contractor may need to modify the P450 bars in the field
9. Protective coating of concrete surfaces must be applied over all exposed surfaces of the pier down to 1'-0" below the ground line, and in accordance with applicable standard specifications. This work must be completed prior to the onset of winter.

SHEET NUMBER										STATE OF MAINE							
MEMORIAL BRIDGE KENNEBEC RIVER CITY OF AUGUSTA KENNEBEC COUNTY PIER NO. 5 REHABILITATION										DEPARTMENT OF TRANSPORTATION							
										PROJ. MANAGER		WLF		BY		DATE	
										DESIGN-DETAILED		ETC.		ONS		RKC	
										CHECKED-REVIEWED						2/2/05	
										DESIGN-DETAILED2						RKC	
										SIGNATURE							
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										PIN 9327.10							
										BRIDGE PLANS							

10

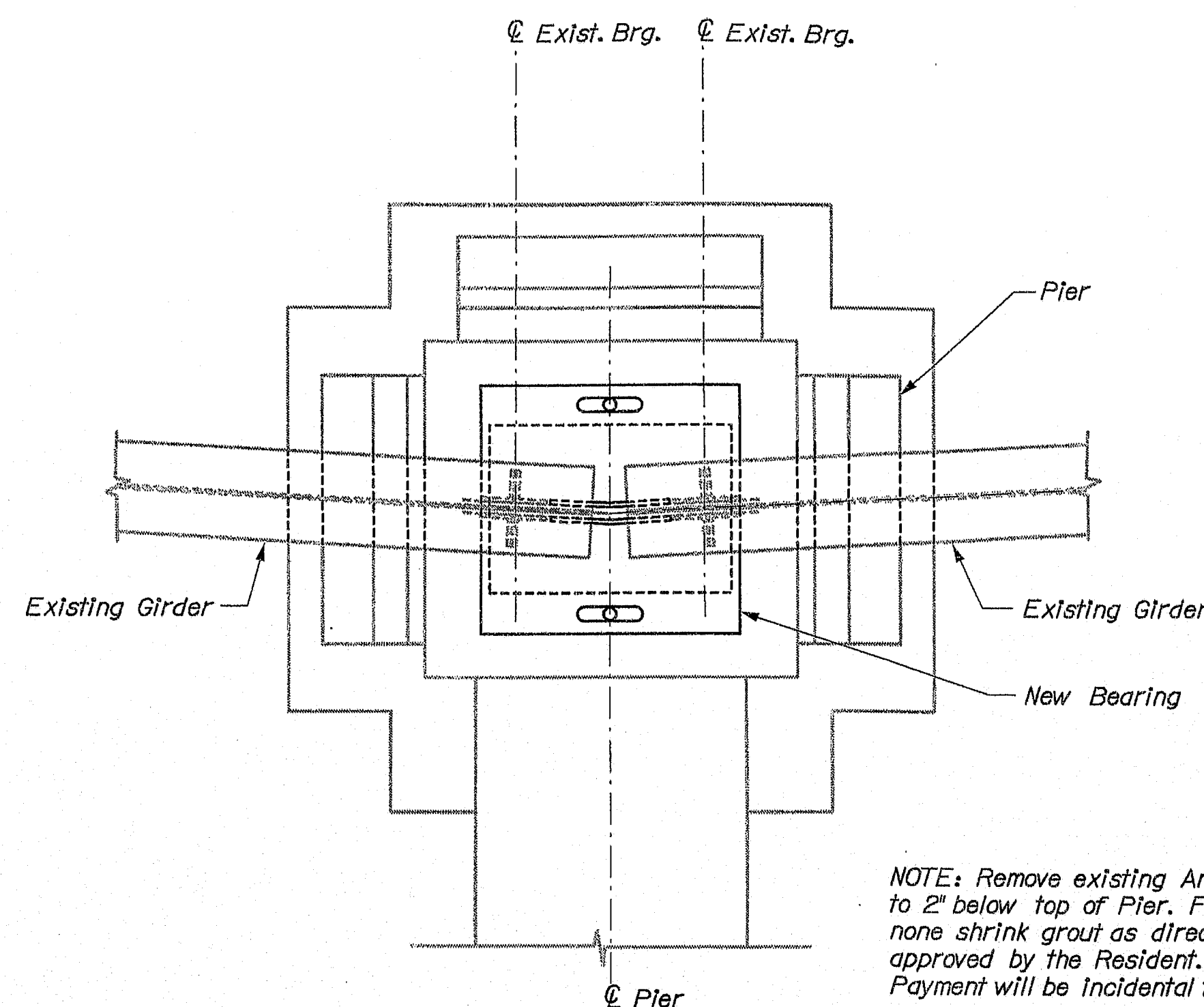
OF 46

Date: 3/3/2005

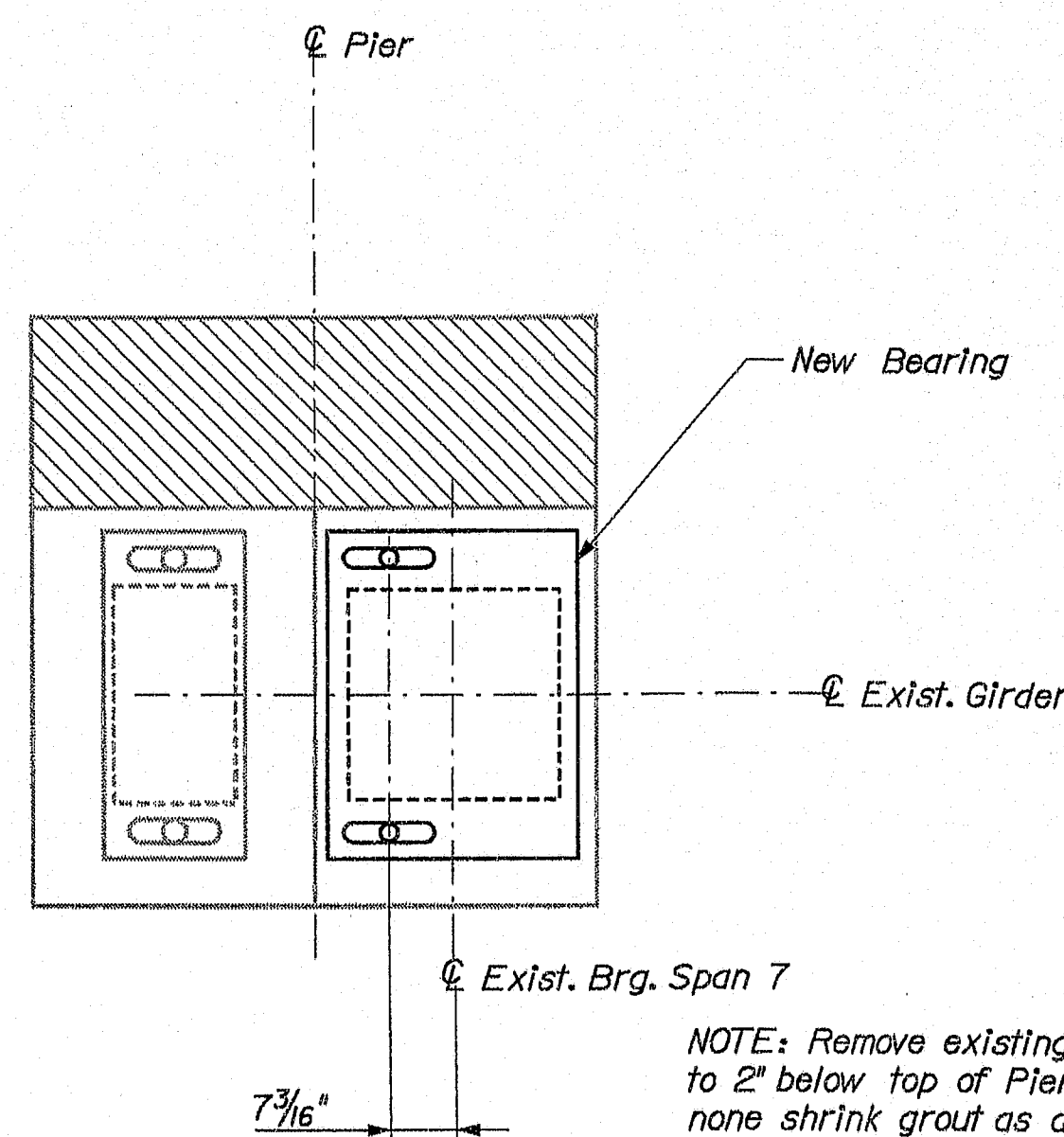
Username: david.sullivan

Division: BRIDGE

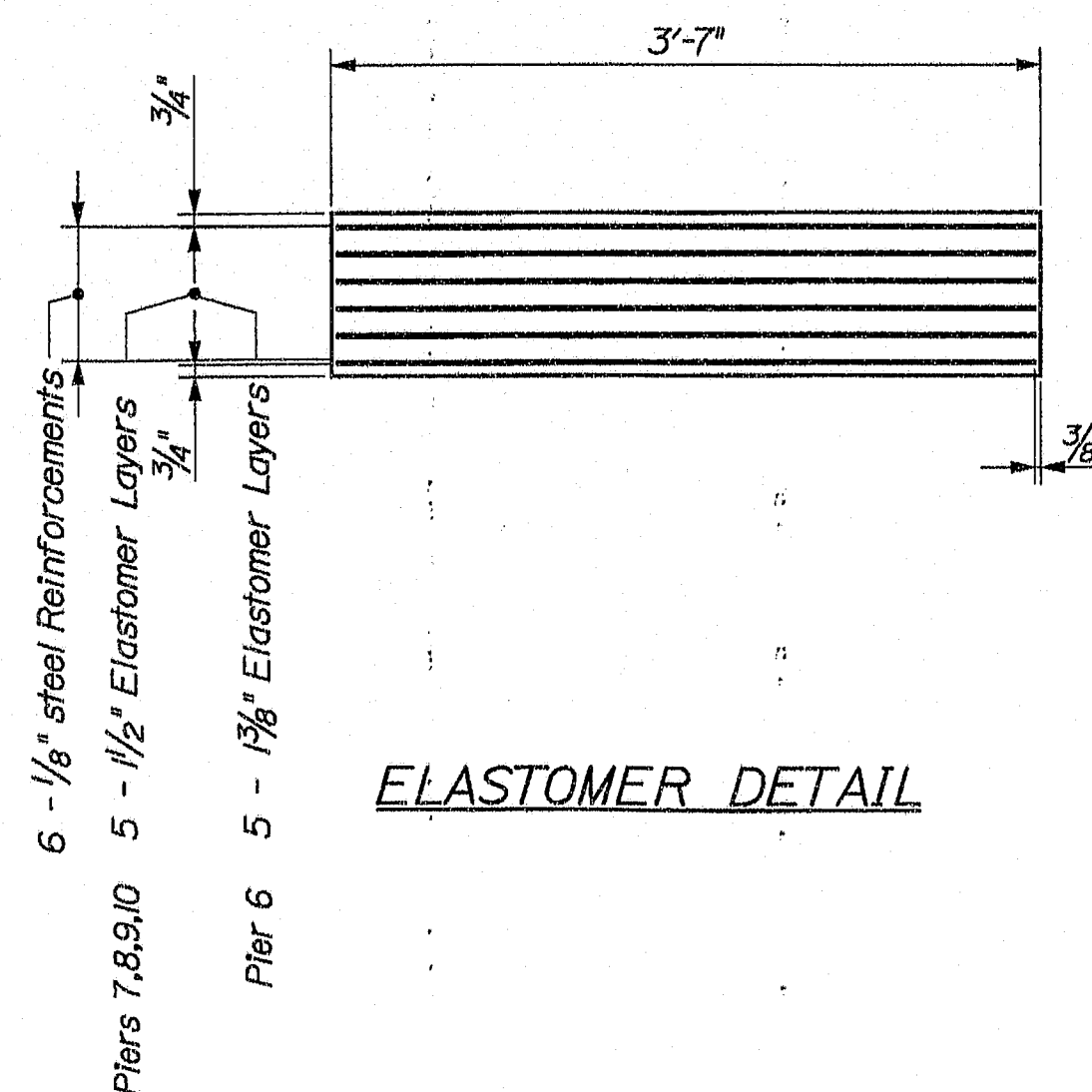
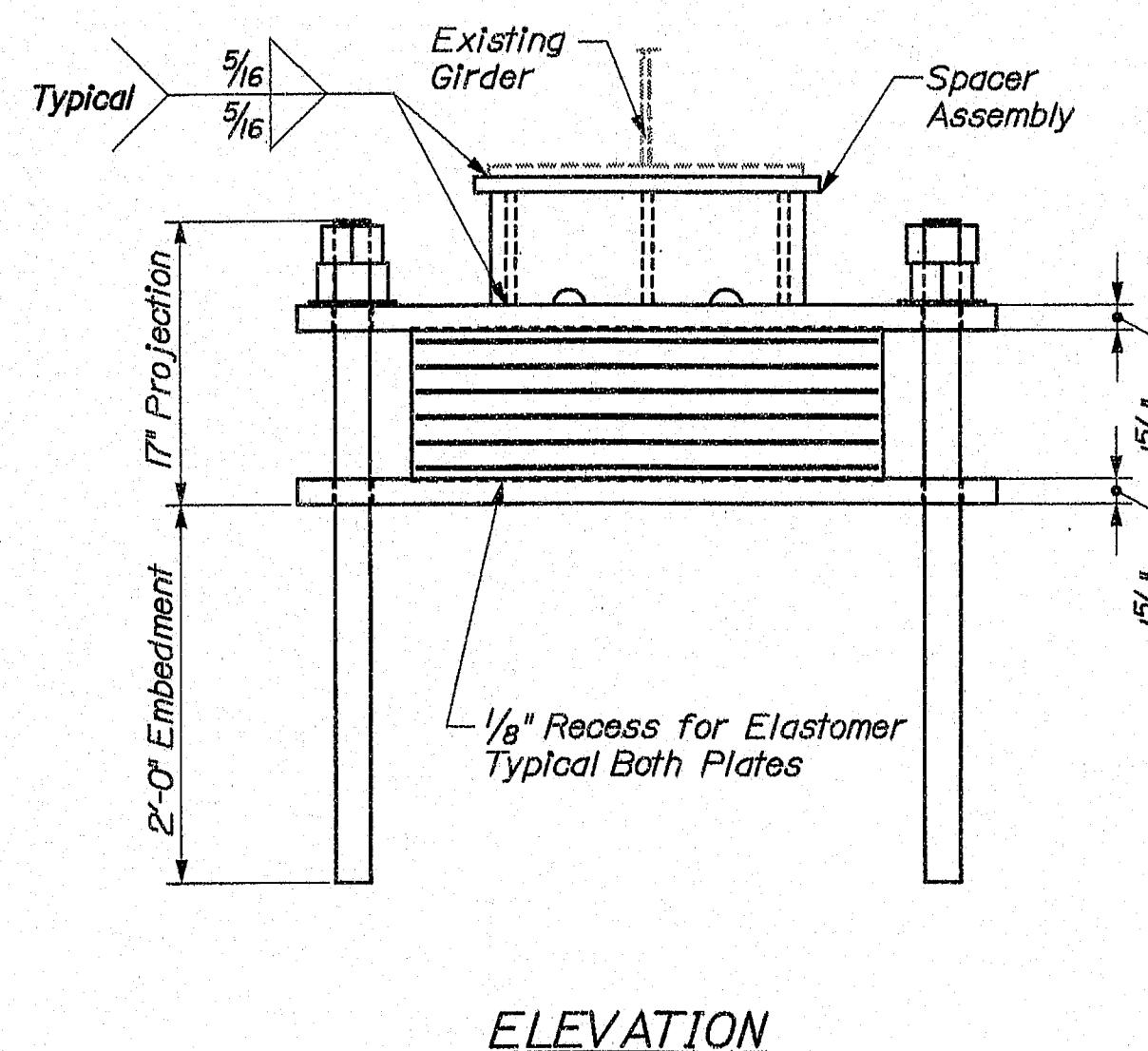
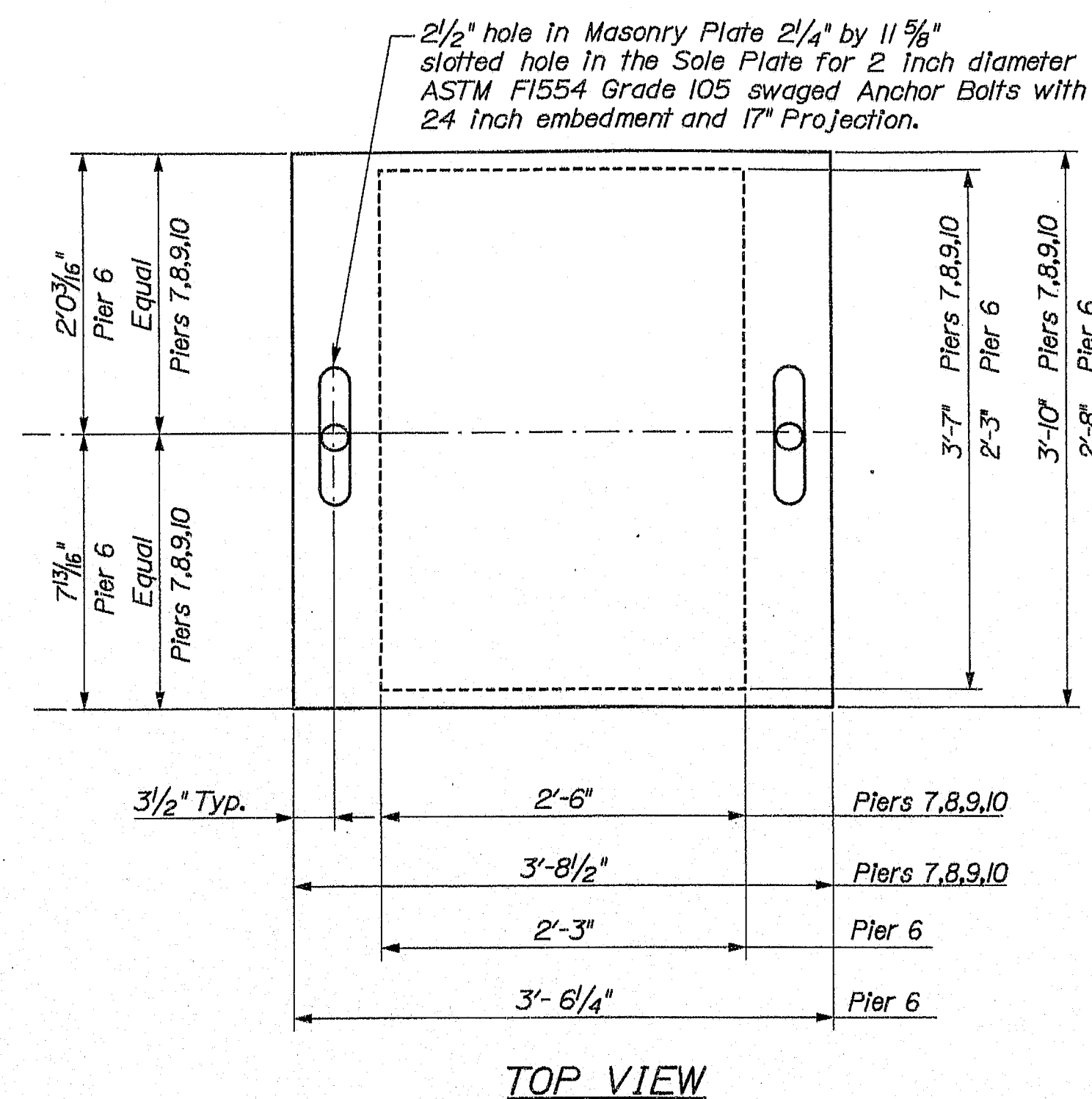
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BEARING REPLACEMENT PLAN
Upstream Pier shown, Downstream Pier Similar
Piers 7, 8, 9 & 10

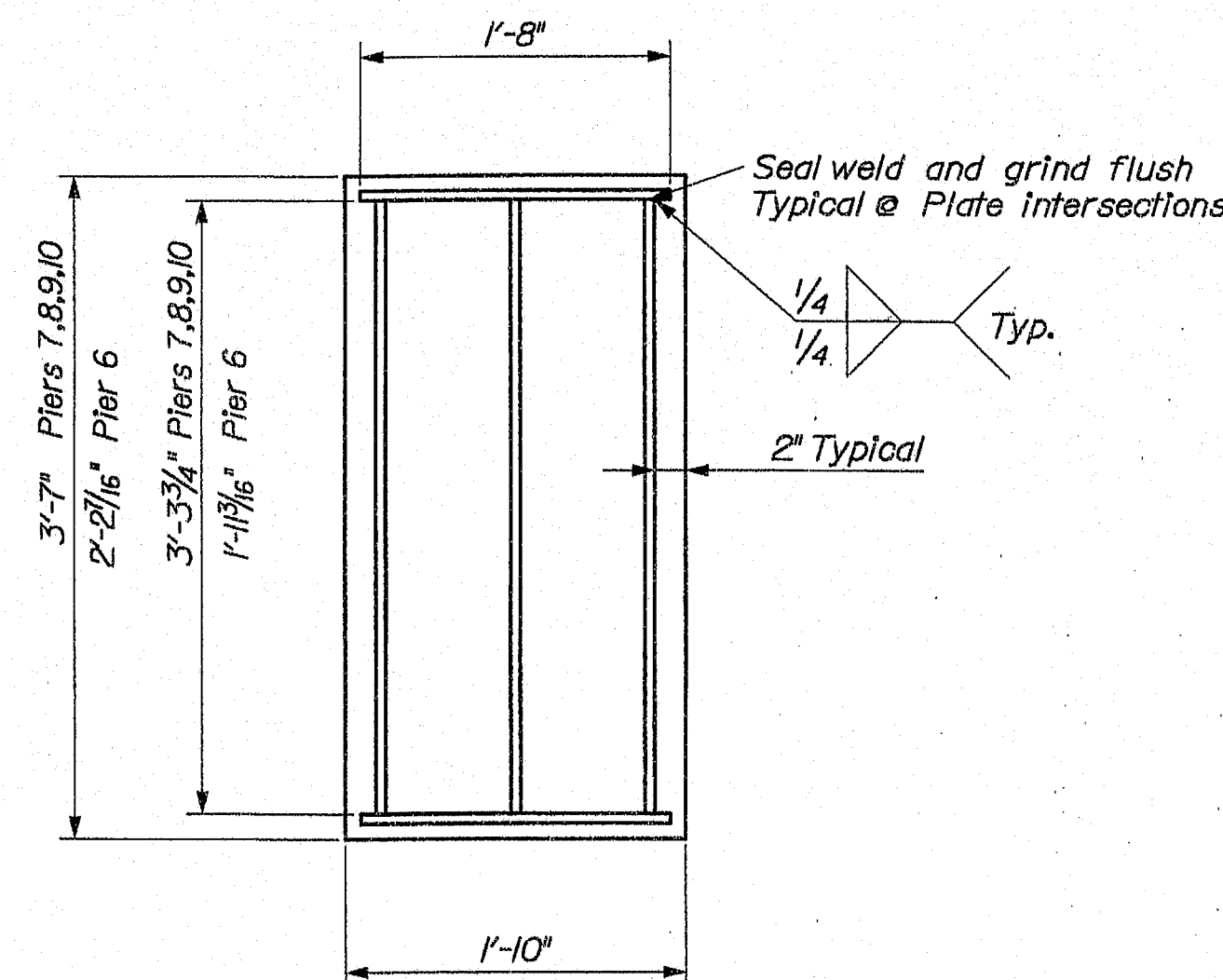
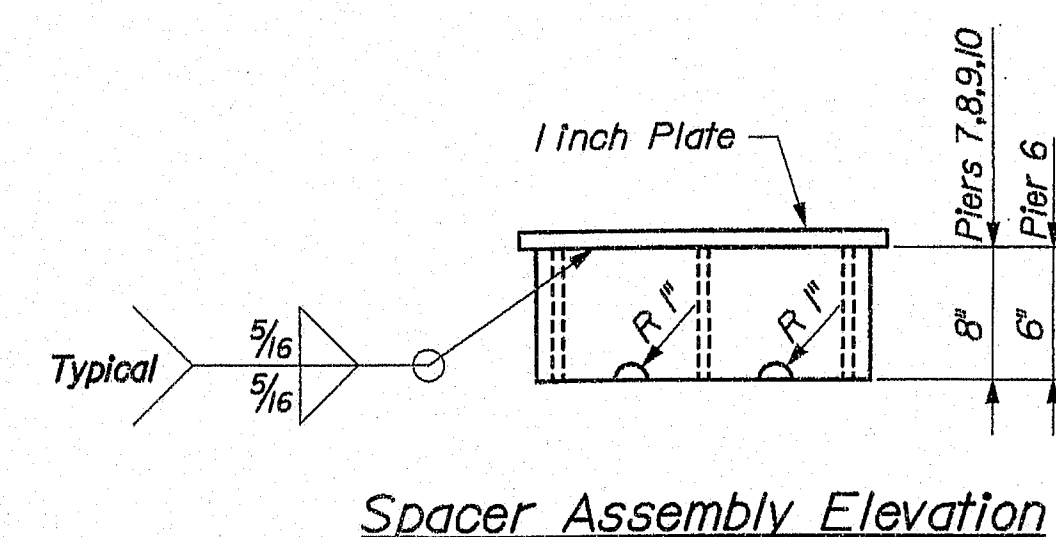


BEARING REPLACEMENT PLAN PIER 6
Upstream Pier shown, Downstream Pier Similar



Elastomeric Bearing Notes

1. Masonry and Sole Plates to be hot dipped galvanized in accordance with ASTM A123
2. All hardware to be Galvanized in accordance with ASTM A153
3. Install a 6" diameter by 1/4" thick plate washer with a 2-1/4 inch diameter hole at each anchor bolt location.
4. Install 2 heavy hex nuts on each anchor bolt. Install nuts only snug tight, disrupt threads once installation is complete.
5. The shear modulus shall be between 100 and 130 psi
6. Vulcanizing elastomer to Steel Plates shall be done during the primary mold process.
7. Bearings shall be covered during transit.
8. The Masonry Plate and Sole Plate shall meet the requirements of ASTM A36.
9. The Bearings are designed so that the Bearings may be installed when the Ambient Air Temperature is within the range of 30°F and 60°F.
10. The lane over the girder line on which the bearings are being installed shall be closed to traffic during the time the girders are supported on jacks.



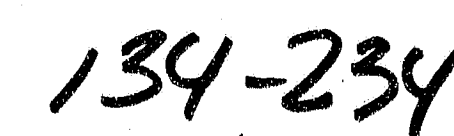
Spacer Assembly Bottom View

Spacer Assembly Notes

1. All Plates in spacer assembly are 5/16" Unless Noted Otherwise
2. All Plates in spacer assembly are ASTM A36 Steel
3. Spacer assembly is to be Galvanized in accordance with ASTM A123
4. Non Destructive Examination of welds will be 100% Visual Testing (VT).

STATE OF MAINE		DEPARTMENT OF TRANSPORTATION		BH-9327(100)X		BRIDGE NO. 5198		PIN 9327.10		BRIDGE PLANS	
MEMORIAL BRIDGE		KENNEBEC RIVER		CITY OF AUGUSTA		KENNEBEC COUNTY		BEARING REPLACEMENT		SHEET NUMBER	
DATE		BY		WFL		DESIGN-REVIEWED		CHECKED-REVIEWED		11	
SIGNATURE		P.E. NUMBER		DATE		FIELD CHANGES		OF 46		134-233	

Filename: ... \msta\012...New_Stringer_Plan.dgn

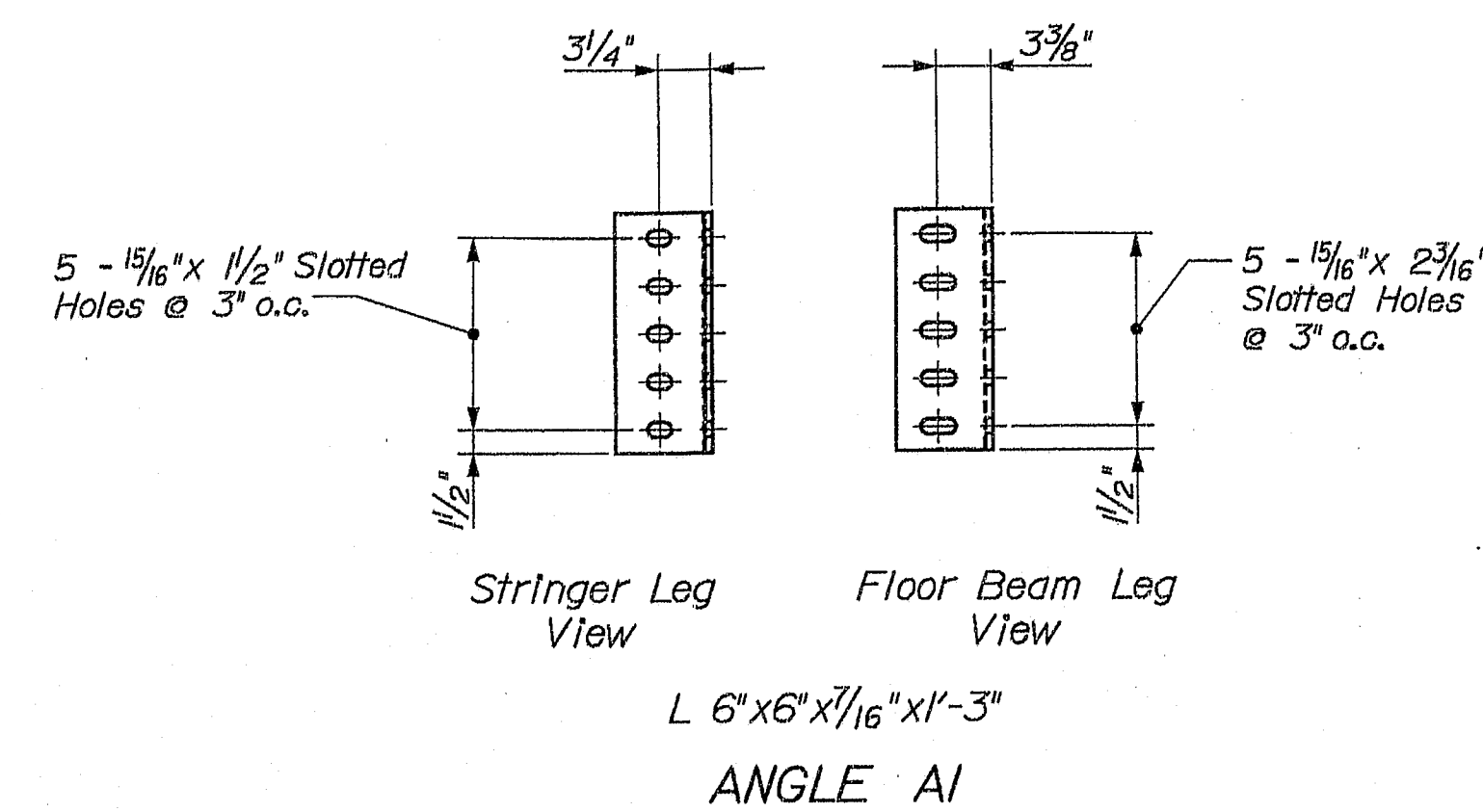
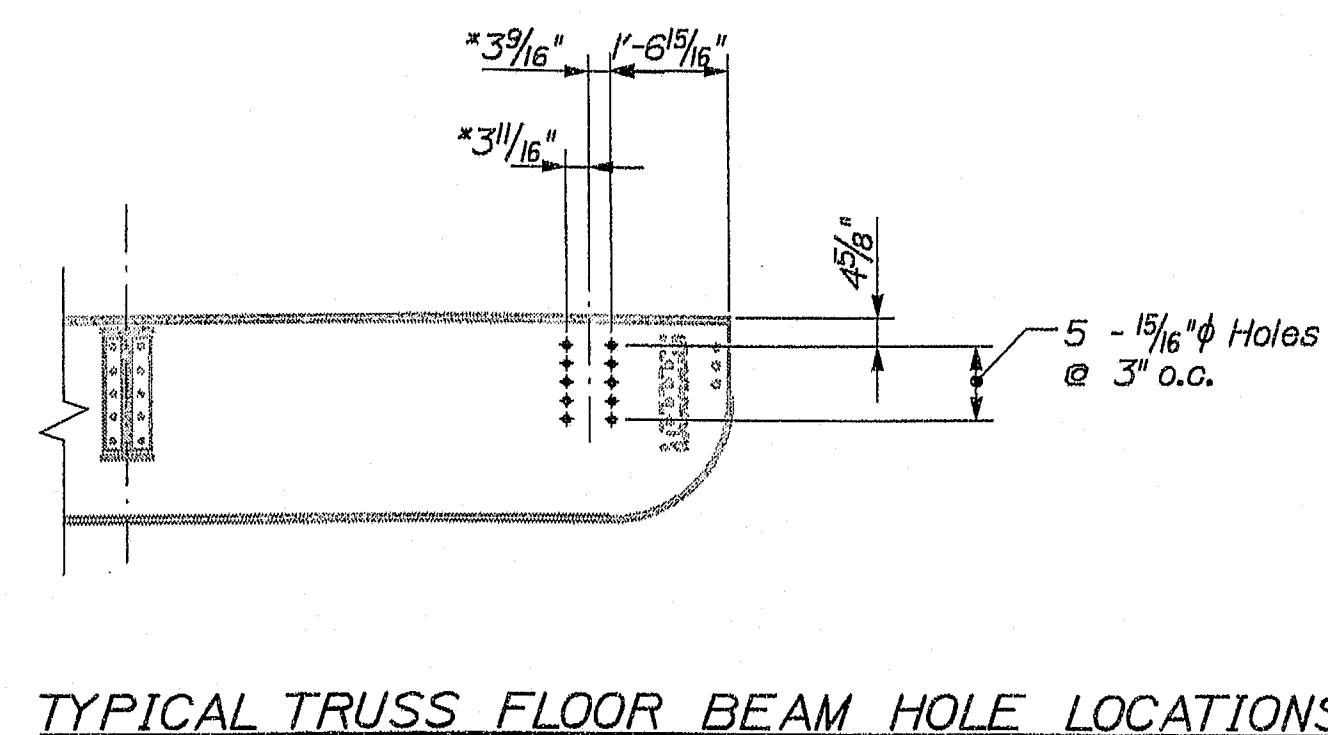
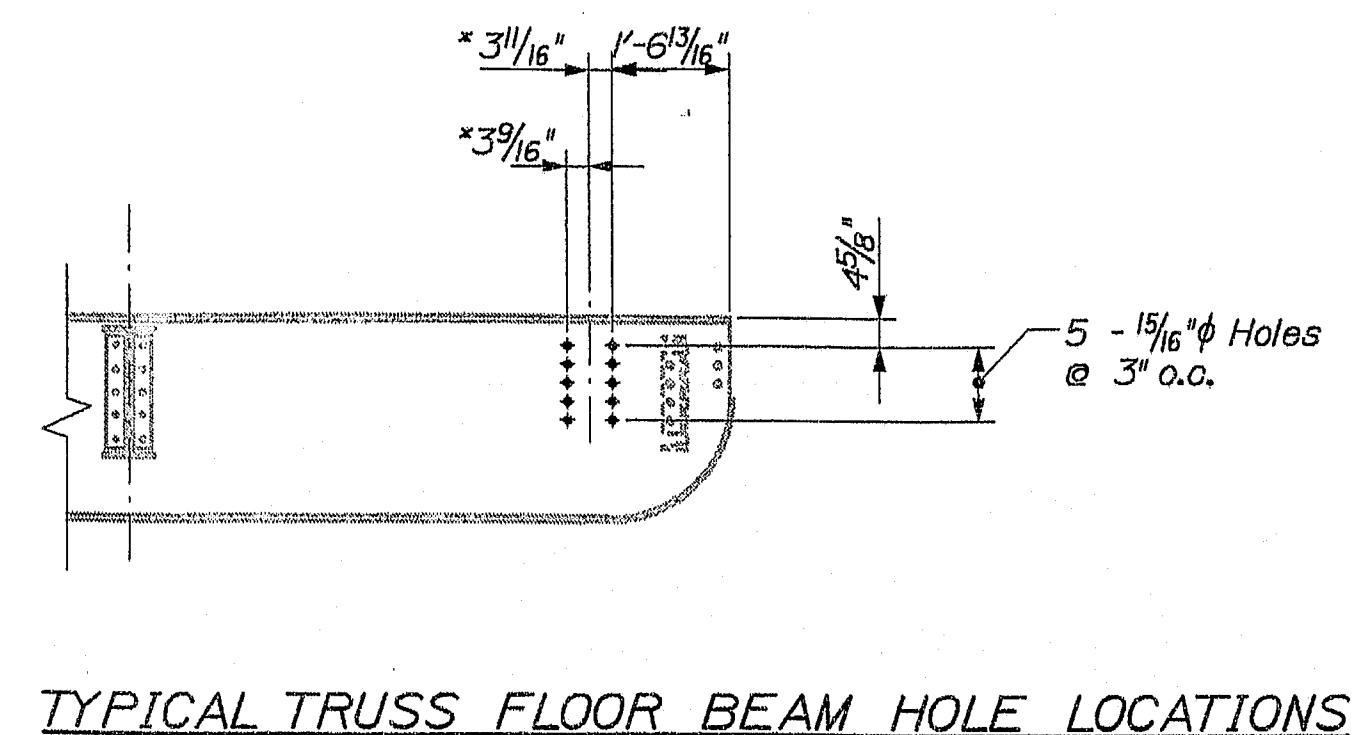
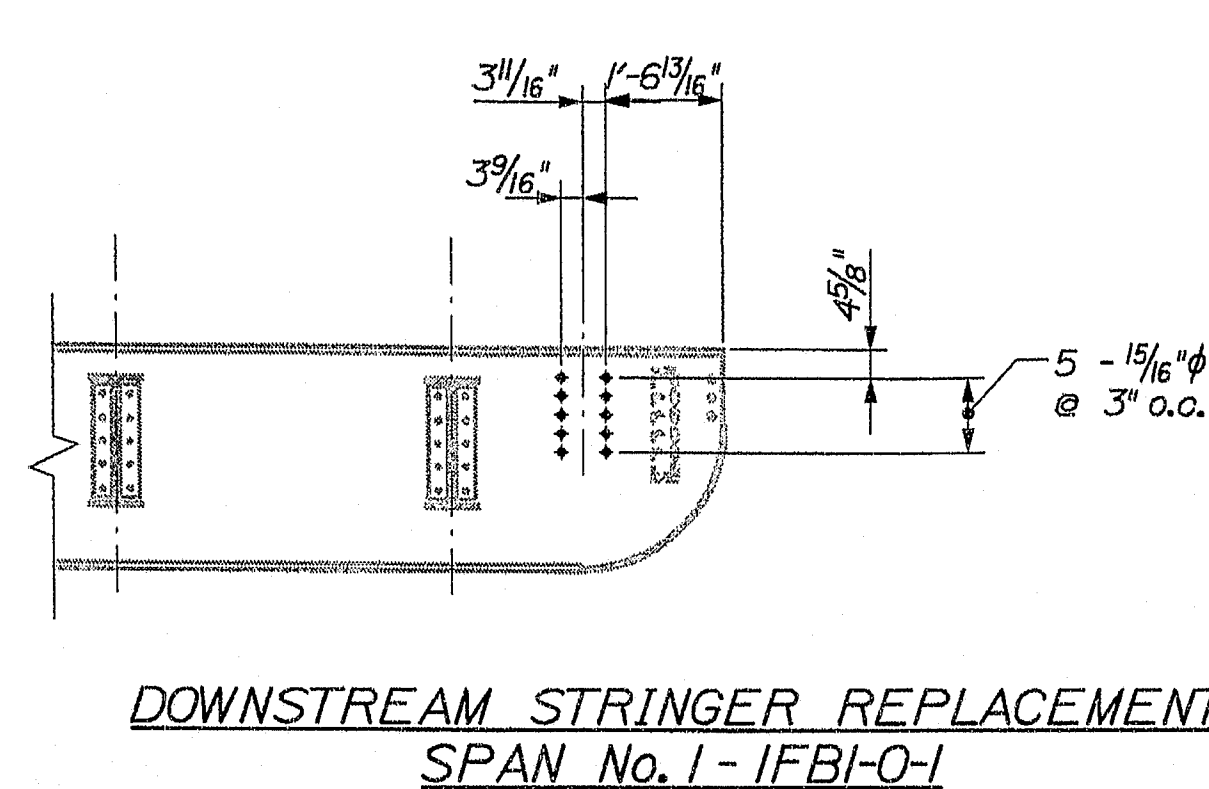


Date: 3/3/2005

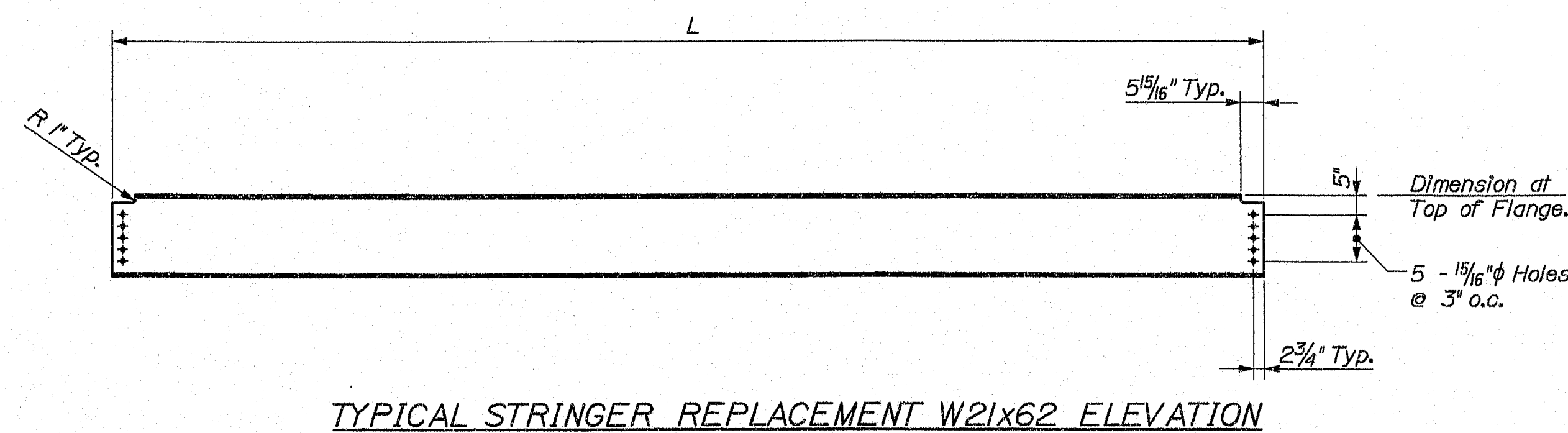
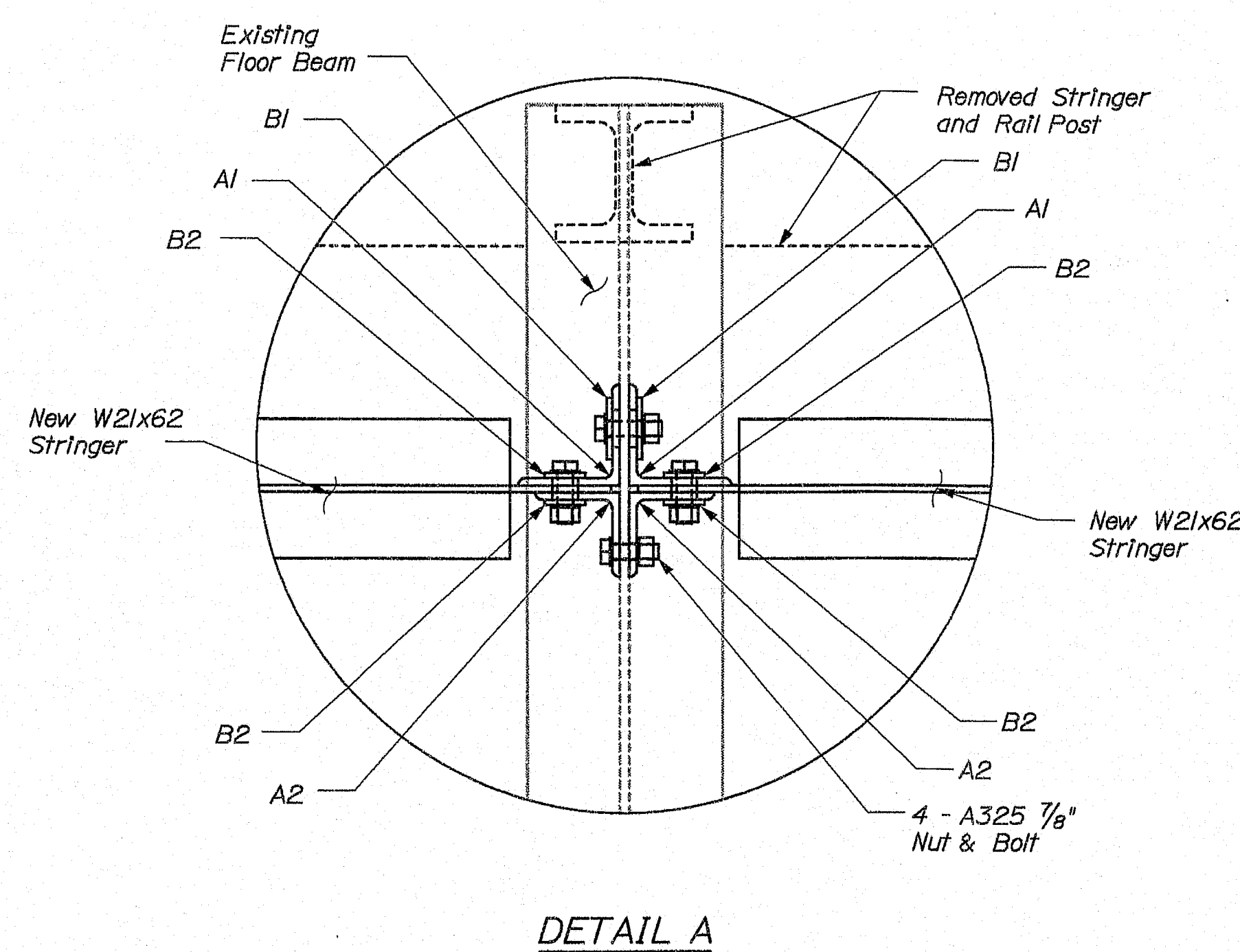
Username: david.sullivan

Division: BRIDGE

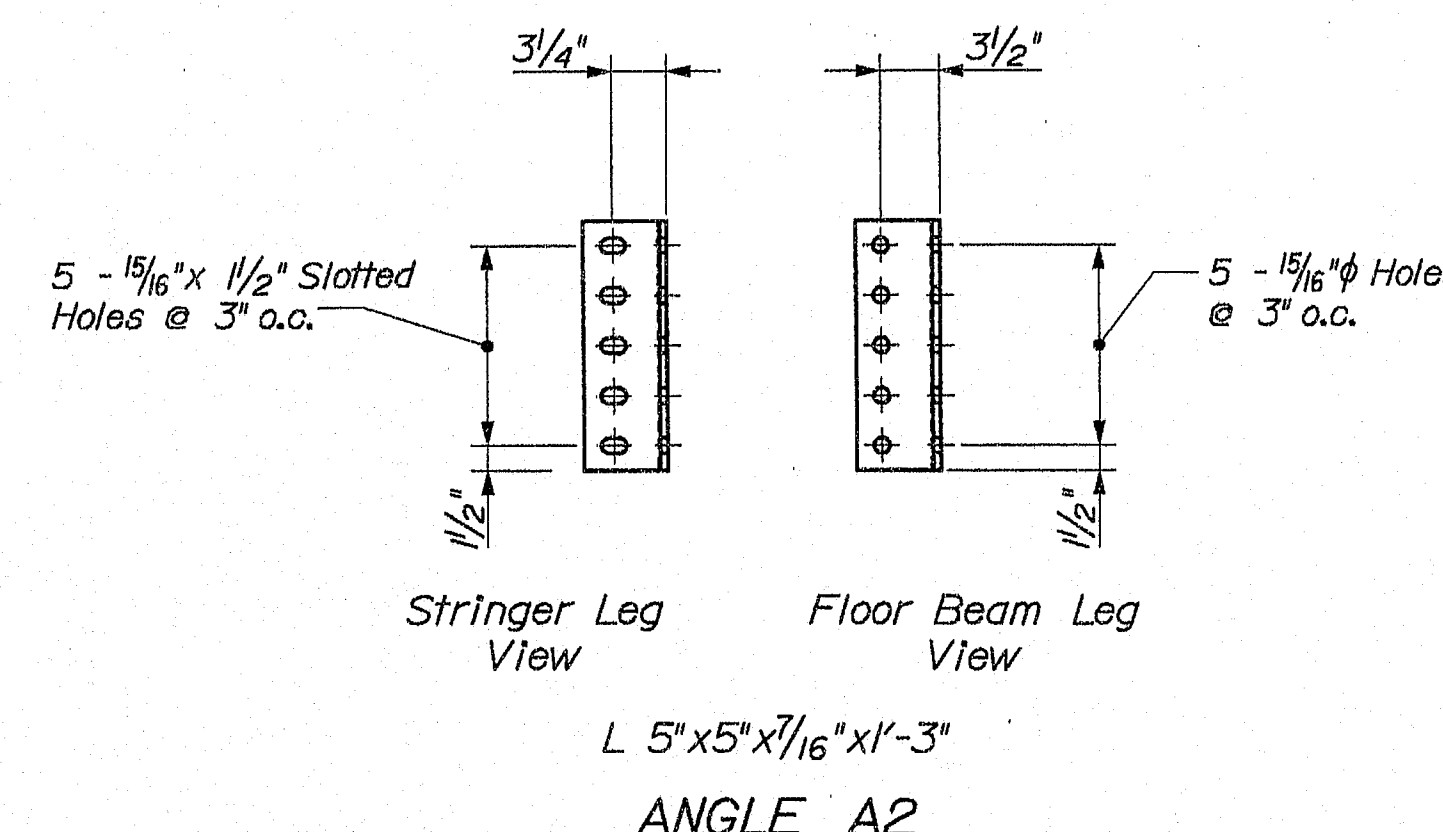
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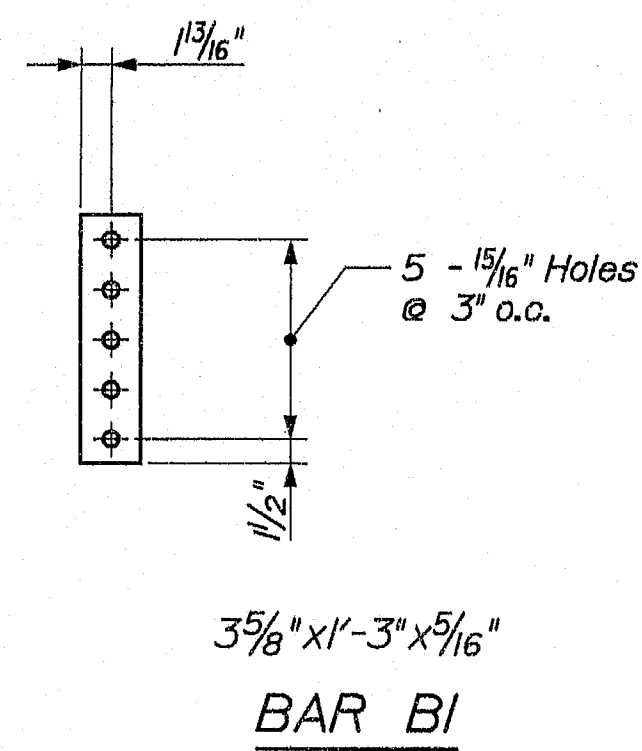
TWO PER NEW W21X62 STRINGER, ONE EACH END AND ON OPPOSITE SIDES.



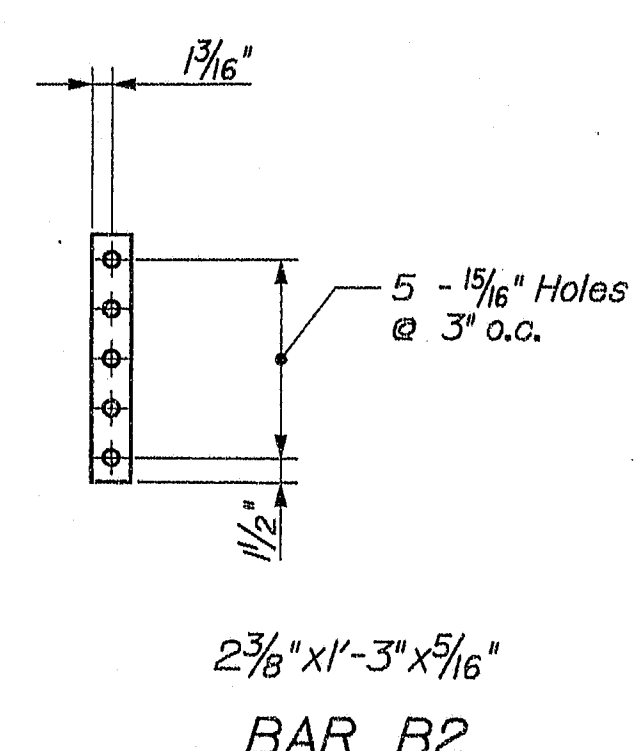
STRINGER REPLACEMENT LENGTHS		
Dim. L	Length	Quantity
S1	24'-10 3/8"	100
S2	23'-3 3/8"	6
S3	23'-4 3/8"	8
S4	23'-1 1/8"	2
S5	22'-5 1/4"	25
S6	23'-3 3/4"	25



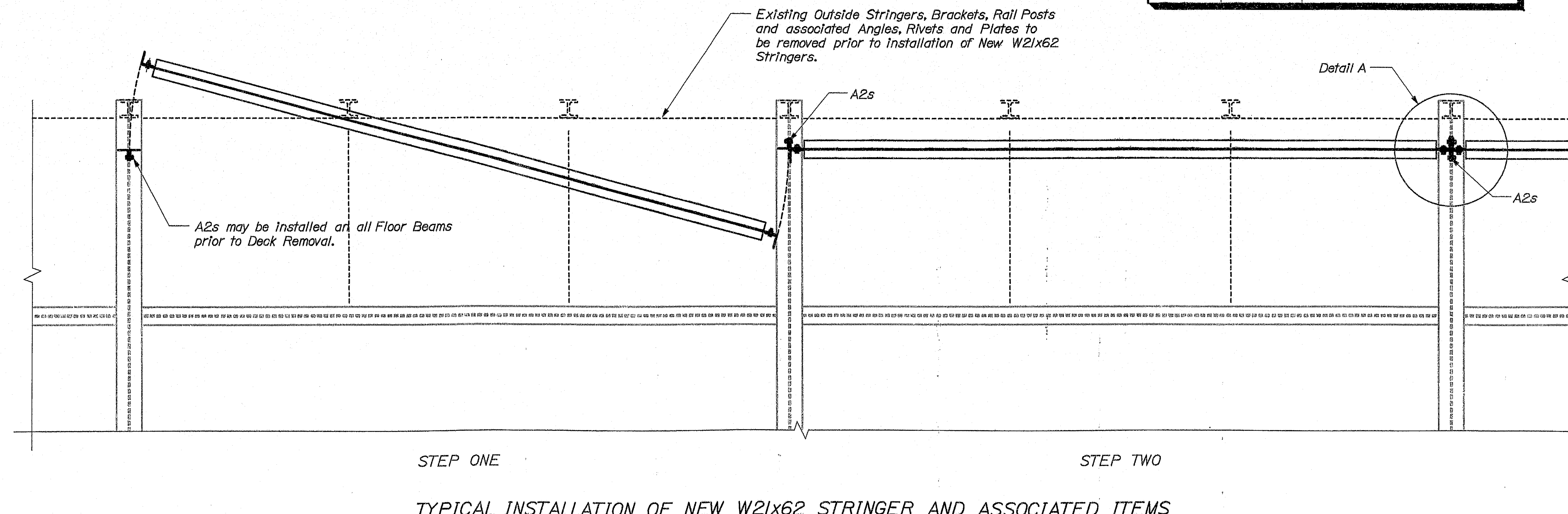
TWO PER NEW W21X62 STRINGER, SEE FLOOR BEAM DETAIL FOR LOCATION.



ONE BAR FOR EACH A1. SEE DETAIL A.



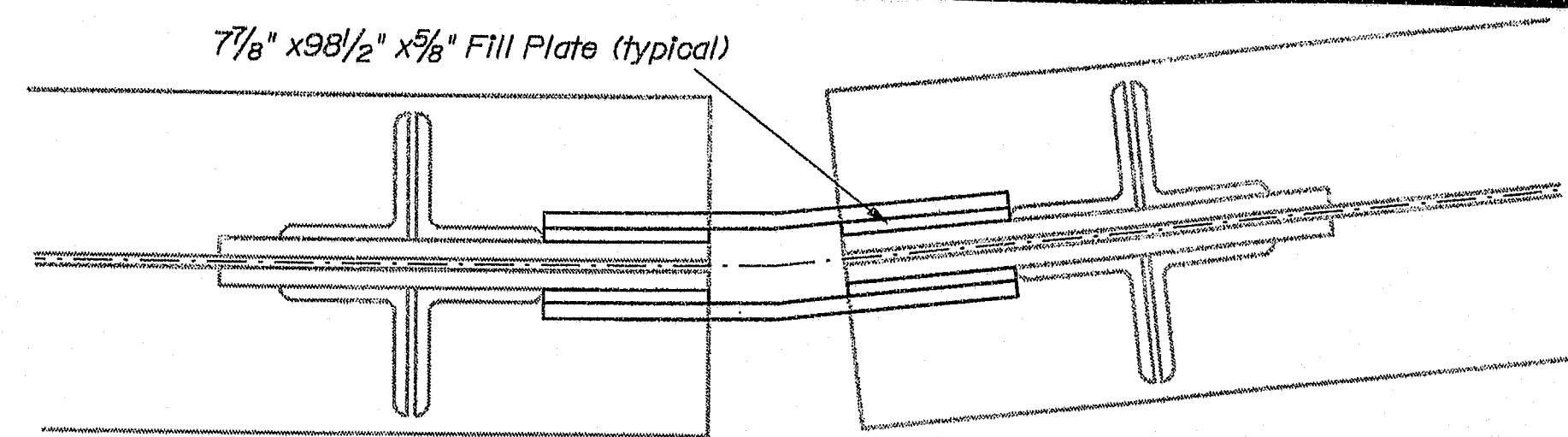
ONE BAR FOR EACH A1 AND A2. SEE DETAIL A.



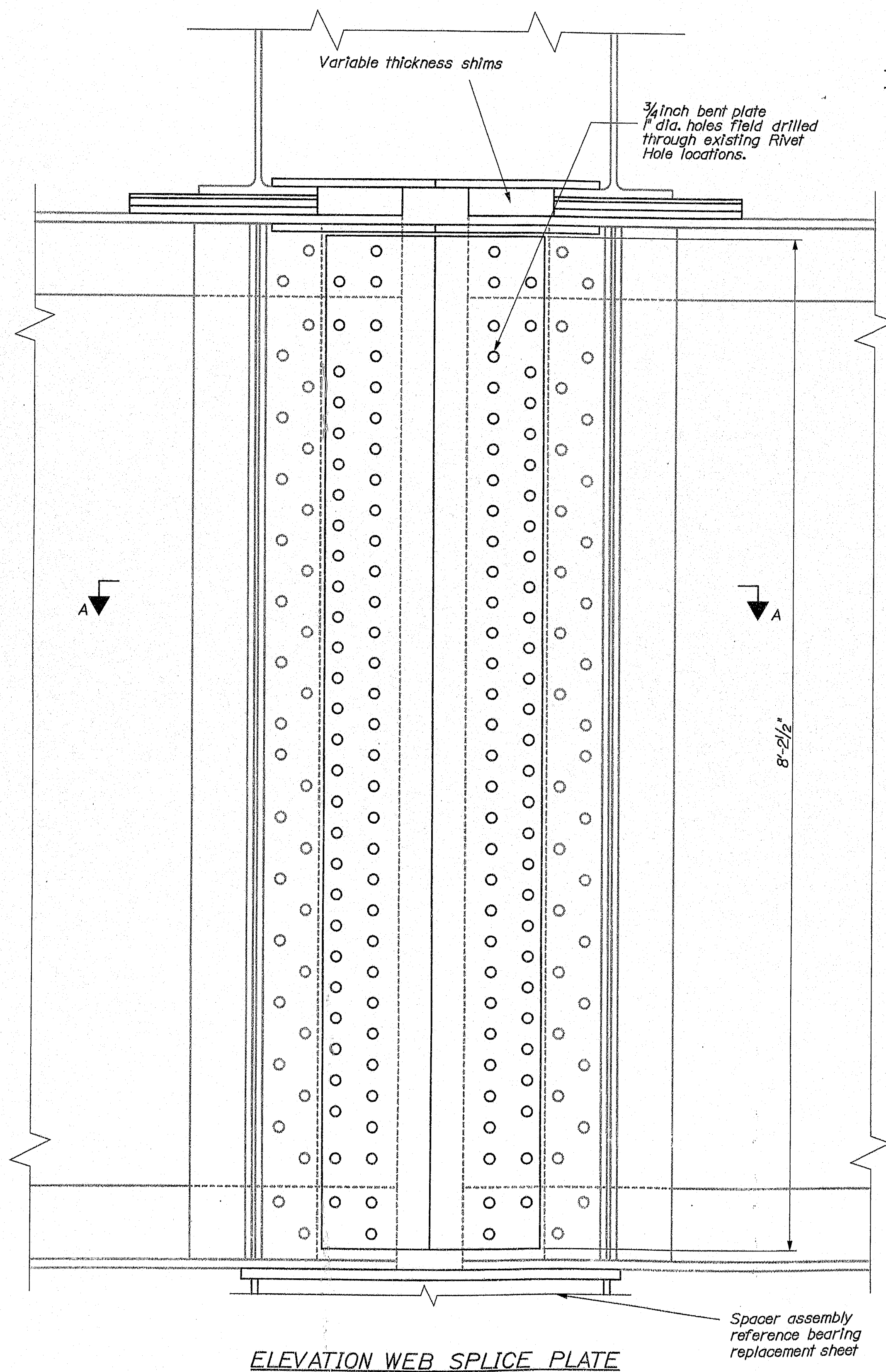
NOTE:
Use A325 Galv. 7/8" UNO Bolts and Nuts.

STATE OF MAINE		BRIDGE PLANS	
DEPARTMENT OF TRANSPORTATION		PIN 9327.10	
BH-9327(100)X		BRIDGE NO. 5196	
DATE	BY	DATE	BY
2/23/05	DMS		
	RIC		
	RAM		
SIGNATURE		P.E. NUMBER	
DATE		DATE	
FIELD CHANGES		FIELD CHANGES	
MEMORIAL BRIDGE		NEW STRINGER DETAILS	
KENNEBEC RIVER			
CITY OF AUGUSTA			
KENNEBEC COUNTY			
SHEET NUMBER		13	
		OF 46	

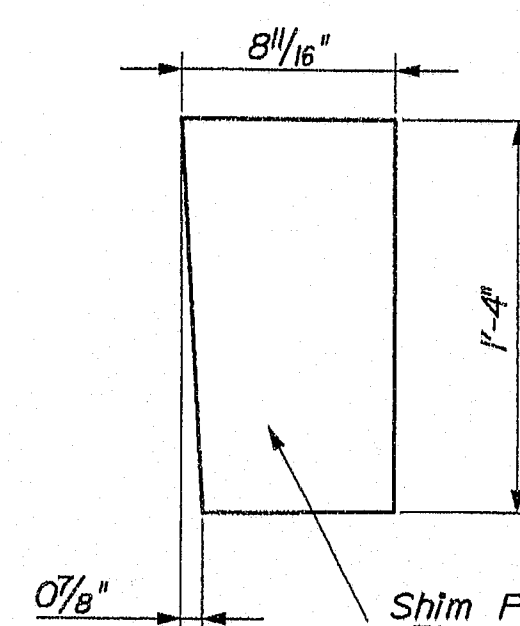
134-235



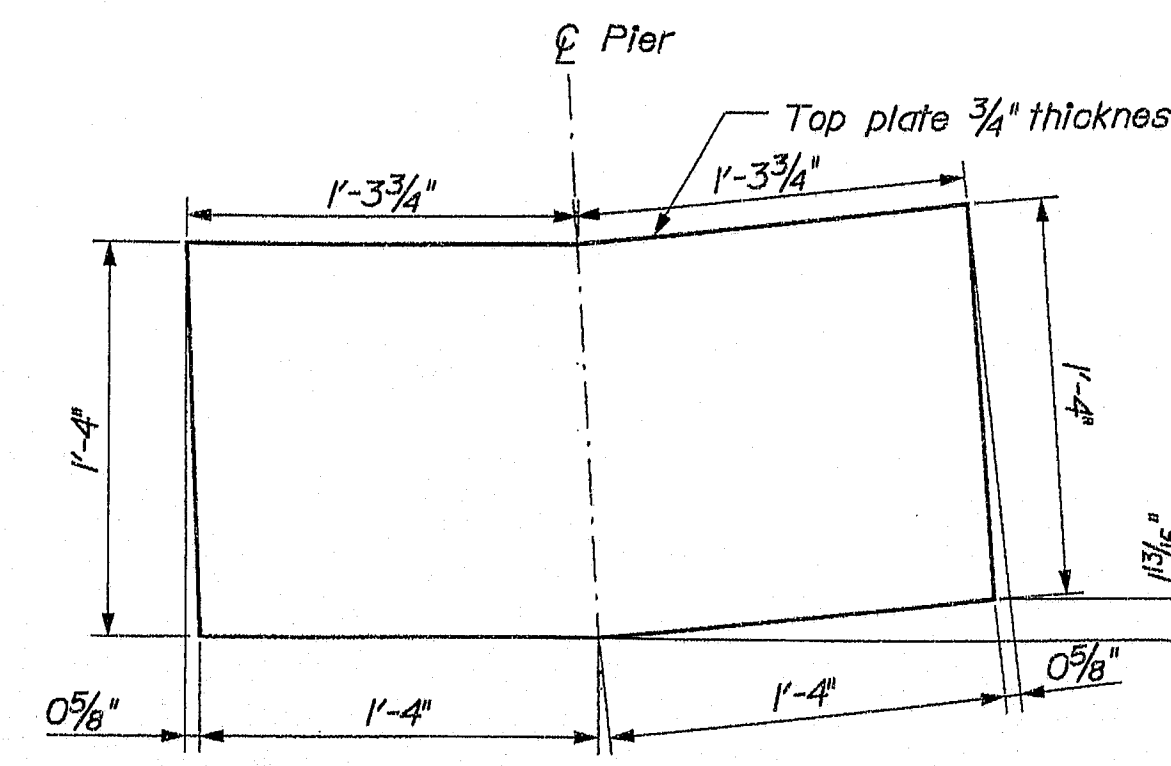
SECTION A-A



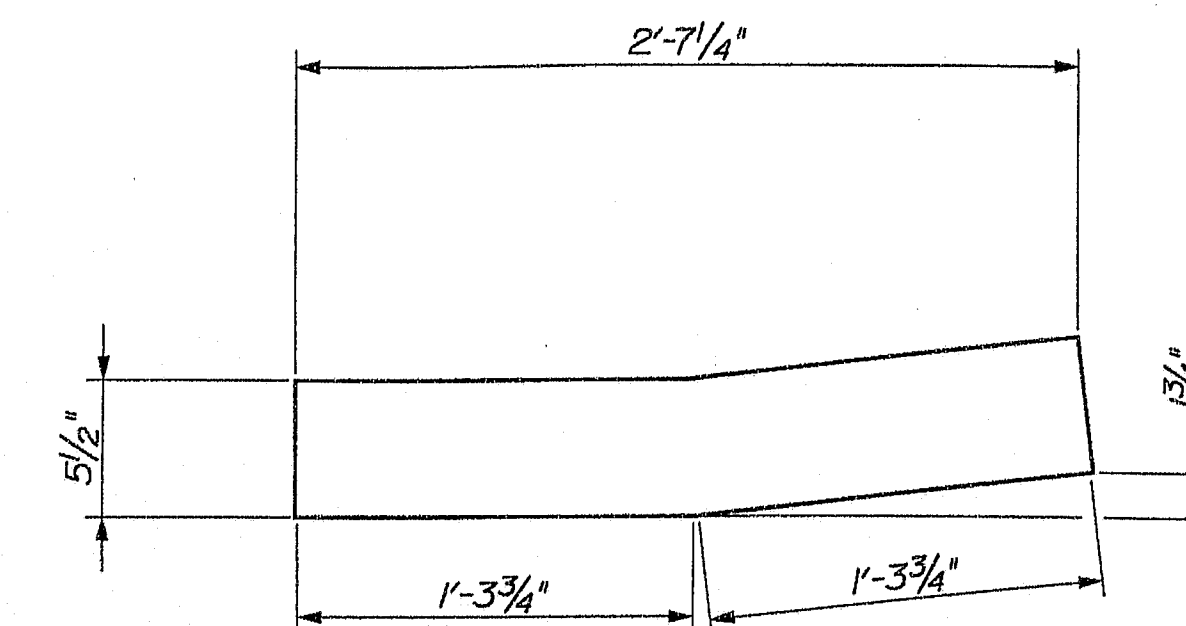
ELEVATION WEB SPLICE PLATE



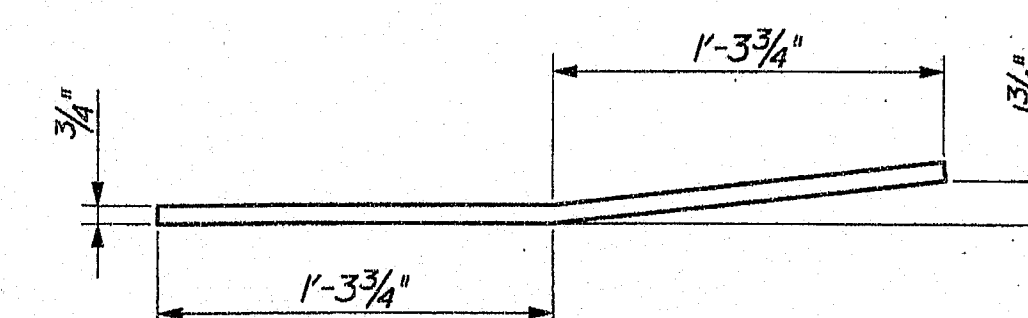
TOP GIRDER OUTSIDE SHIM PLATES



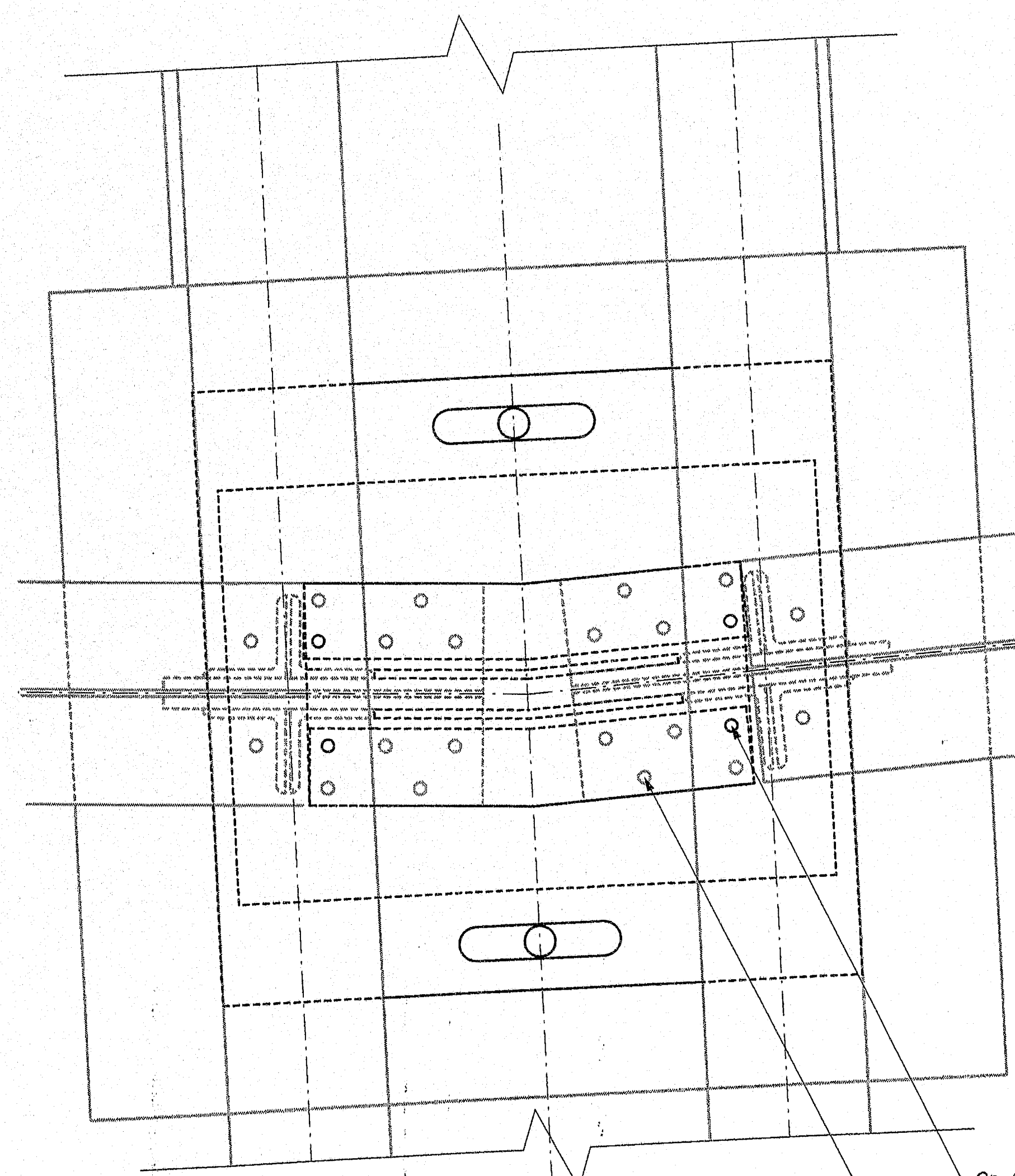
TOP GIRDER OUTSIDE SPLICE PLATE



TOP GIRDER INSIDE SPLICE PLATE
TWO REQUIRED PER SPLICE



PLAN WEB SPLICE PLATE



PLAN VIEW OF GIRDER SPLICE

Pier seven downstream girders shown upstream similar
(Typical @ Piers 7,8,9,10)

NOTES

1. All steel shall be painted in accordance with special provision 506. Areas within 8" of each vertical edge of the web splice and within 12 inches of the flange splice plate shall be considered to be faying surfaces or within 3" of the bolt hole for coating purposes.
2. All steel for use as splice plates shall be astm a36 grade.
3. All bends required in web splice shall be made cold.
4. Contractors attention should be brought to the fact that all paint on the existing structure is lead based.
5. All paint on the existing steel which is between faying surfaces of the splices shall be removed and disposed of in accordance with all applicable regulations. No direct payment shall be made for this work, but it shall be considered incidental to item *504.73 remove, modify, and reset structural steel.
6. All holes 1" diameter unless noted otherwise.
7. All fasteners shall be 7/8" diameter a325 bolts with a hardened washer under both the bolt head and nut.
8. All new steel exposed in the final assembly and all existing steel where the Contractor's operations have compromised the existing coating shall be intermediate and top coated in the field.
9. All holes to be field drilled and all splicing work shall be done and progress in accordance with the provisions of special provision 504.

On Girders where there would be only four existing rivet hole locations penetrating the new splice plate Drill a fifth hole 3" from all other holes and maintaining 1/4" minimum edge distance.

Remove existing rivets and use holes as template as per S.P. 504

STATE OF MAINE		DEPARTMENT OF TRANSPORTATION		BH-9327(100)X		BRIDGE NO. 5196		PIN 9327.10		BRIDGE PLANS	
MEMORIAL BRIDGE		KENNEBEC RIVER		CITY OF AUGUSTA		KENNEBEC COUNTY		GIRDER SPICING		SHEET NUMBER	
DESIGN-DRAWN		CHECKED-REVIEWED		DESIGN-DRAWN		CHECKED-REVIEWED		DESIGN-DRAWN		CHECKED-REVIEWED	
DATE		BY		DATE		BY		DATE		BY	
2/2/2005		DMS		2/2/2005		DMS		2/2/2005		DMS	
SIGNATURE		SIGNATURE		SIGNATURE		SIGNATURE		SIGNATURE		SIGNATURE	
P.E. NUMBER		P.E. NUMBER		P.E. NUMBER		P.E. NUMBER		P.E. NUMBER		P.E. NUMBER	
DATE		DATE		DATE		DATE		DATE		DATE	

134-236

14

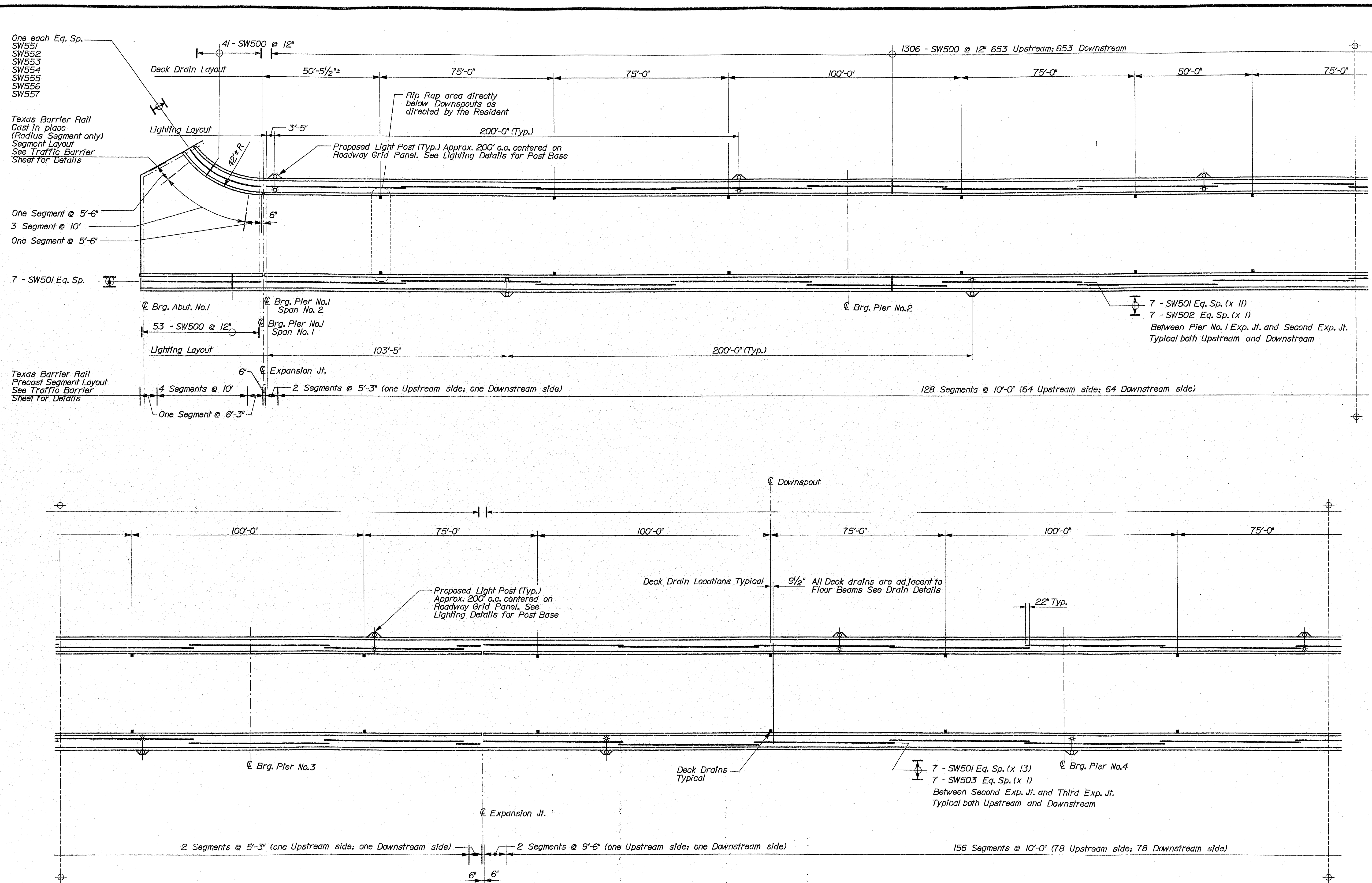
OF 46

Date: 3/3/2005

Username: david.sullivan

Division: BRIDGE

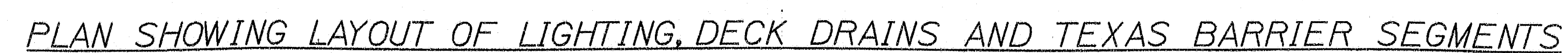
Filename: ... \015_Superstructure_Plan1.dgn



PLAN SHOWING LAYOUT OF LIGHTING, DECK DRAINS AND TEXAS BARRIER SEGMENTS

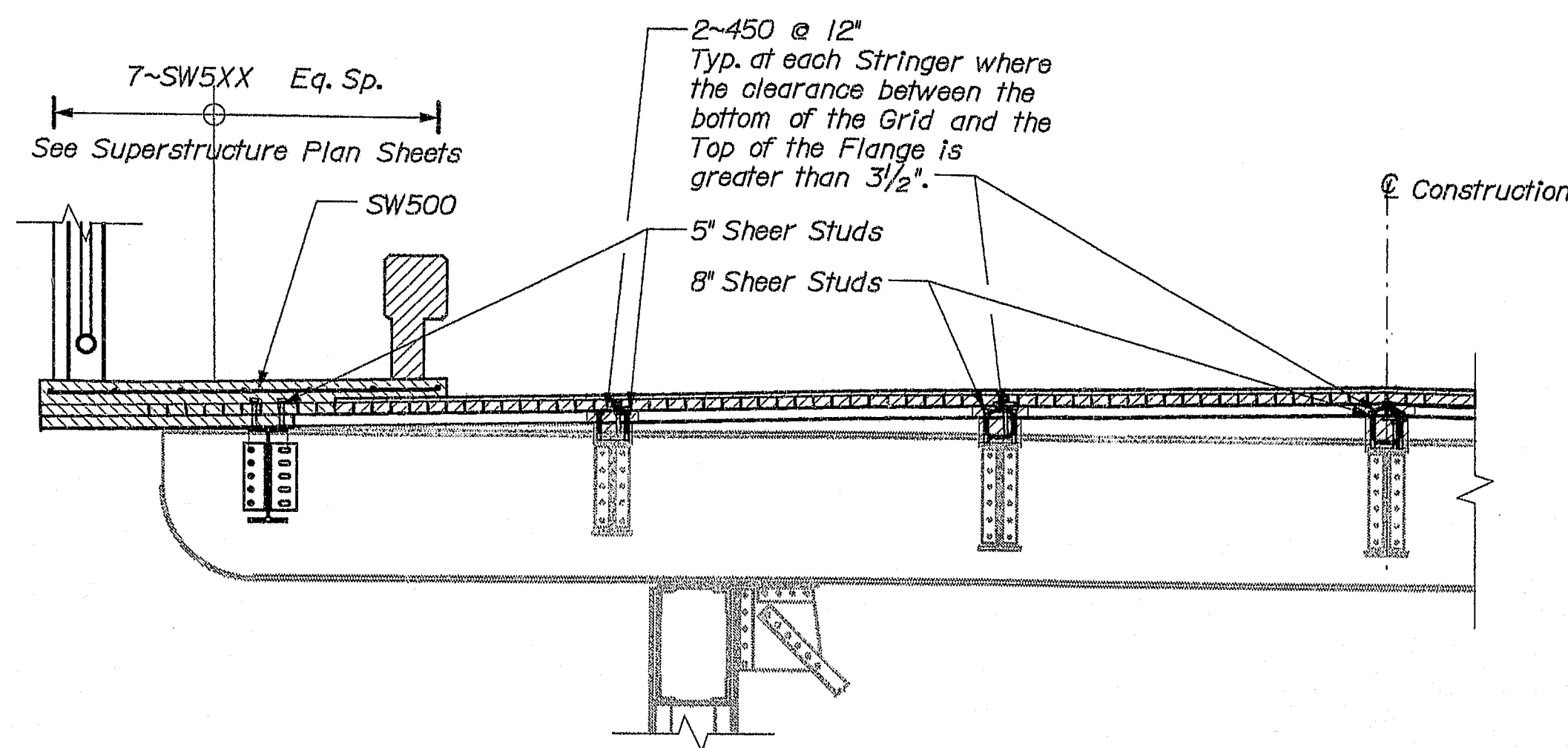
STATE OF MAINE		DEPARTMENT OF TRANSPORTATION		BH-9327(100)X		BRIDGE NO. 5186		PIN 9327.10		BRIDGE PLANS	
MEMORIAL BRIDGE		KENNEBEC RIVER		CITY OF AUGUSTA		KENNEBEC COUNTY		SUPERSTRUCTURE PLAN		SHEET NUMBER	
15		OF 46		134-237							

Filename: ... \016_Superstructure_Plan2.dgn

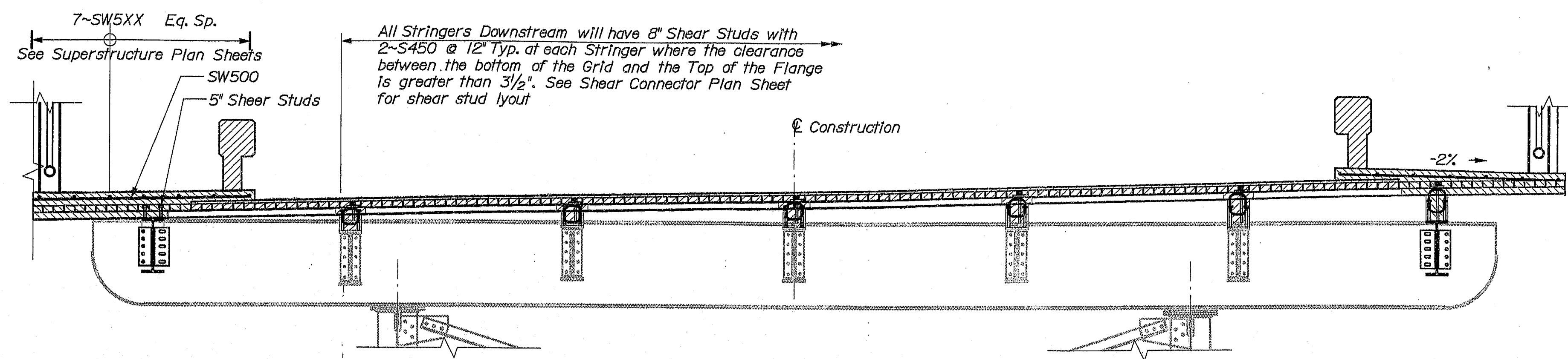


134-238

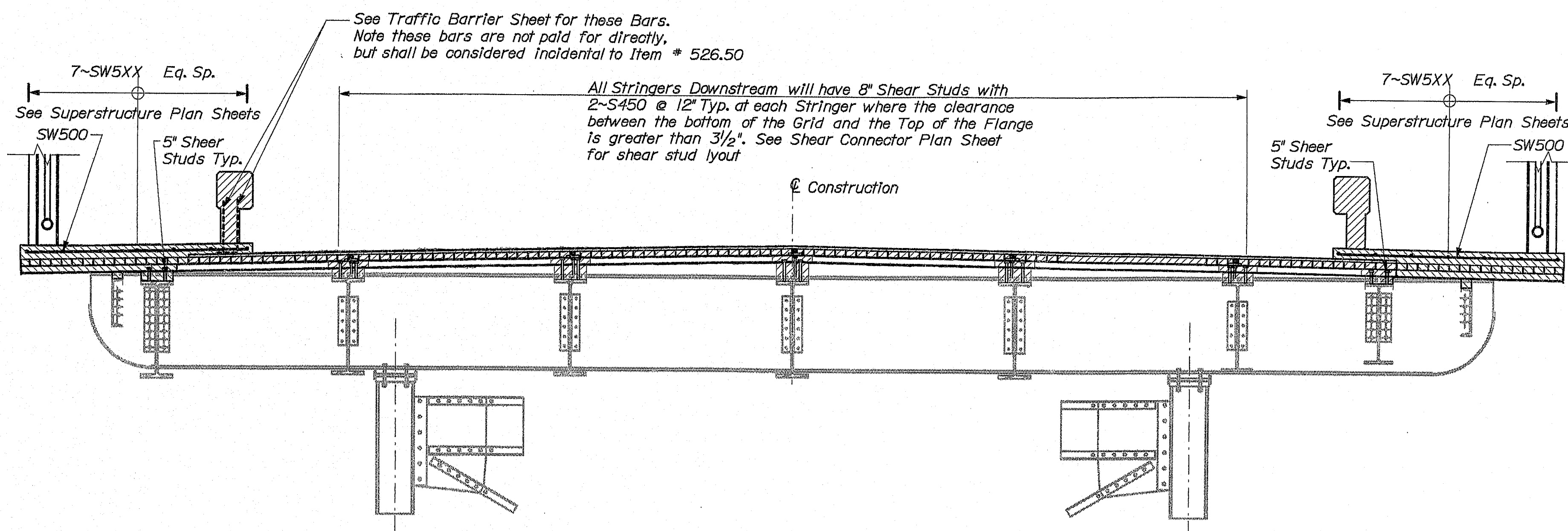
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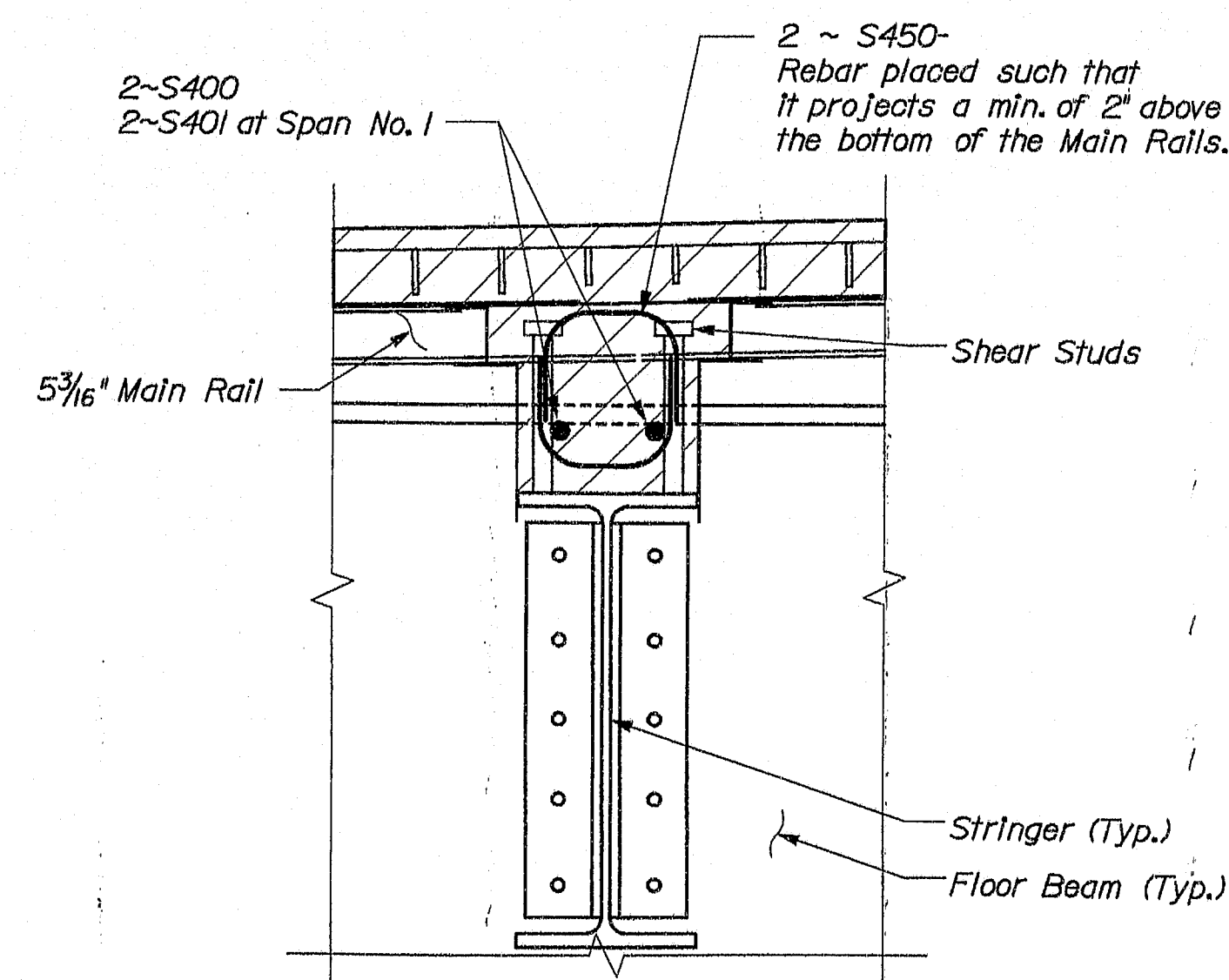
TRUSS SECTION HAUNCH LAYOUT
SYMMETRICAL ABOUT ϕ CONSTRUCTION



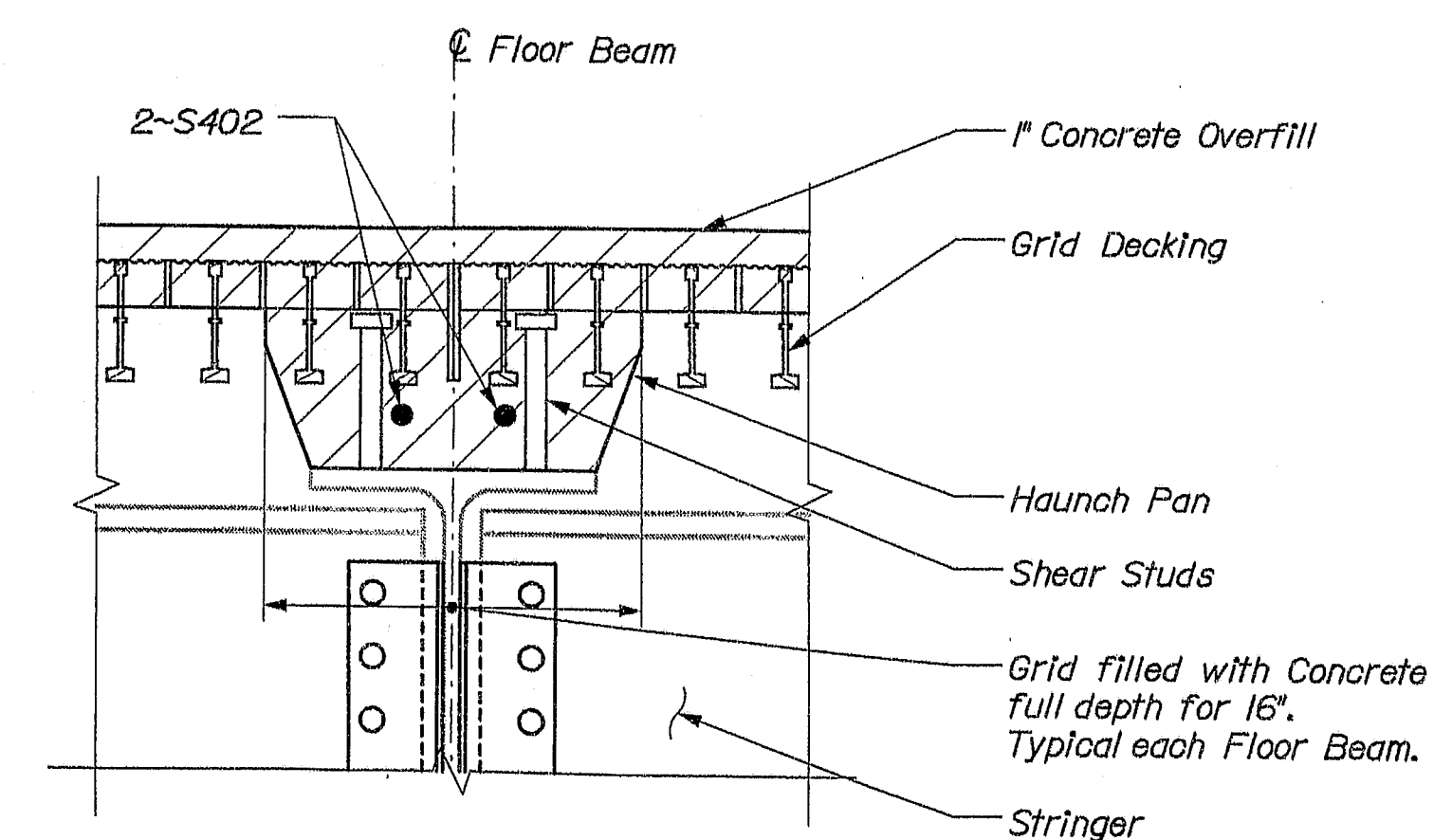
GIRDER SECTION HAUNCH LAYOUT
REBAR REMOVED FOR CLARITY



SPAN No. 1 SECTION HAUNCH LAYOUT
REBAR REMOVED FOR CLARITY



TYPICAL HAUNCH DETAIL



TYPICAL FLOOR BEAM HAUNCH DETAIL

NOTE:
Rebar to be Cut to Length in the Field.

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STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
BH-9327(100)X
BRIDGE NO. 5195
PIN 9327.10
BRIDGE PLANS

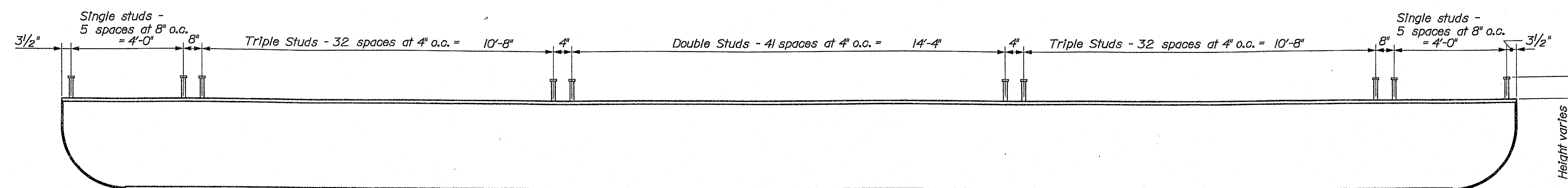
DATE	BY	WLF	ETC	INS	RC	RC	BLN	DATE	SIGNATURE	P.E. NUMBER
2/23/05										

MEMORIAL BRIDGE
KENNEBEC RIVER
CITY OF AUGUSTA KENNEBEC COUNTY
SUPERSTRUCTURE DETAILS

SHEET NUMBER

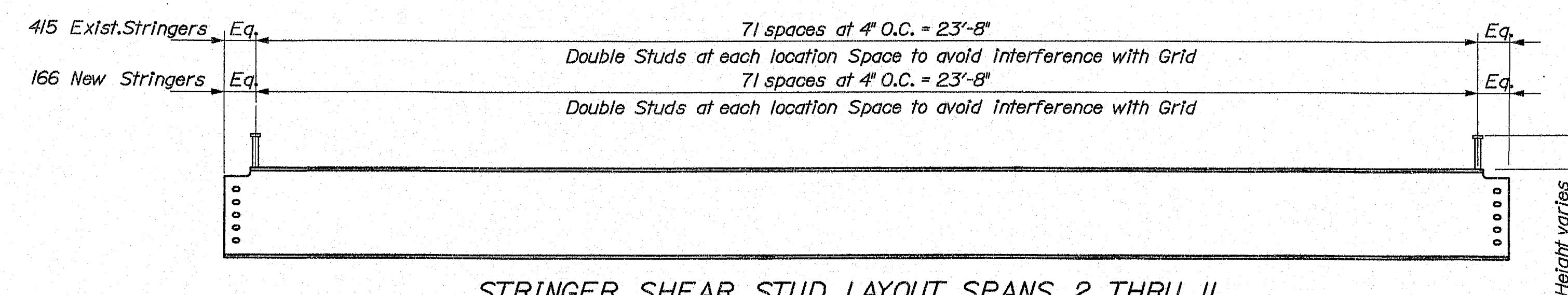
17

OF 46



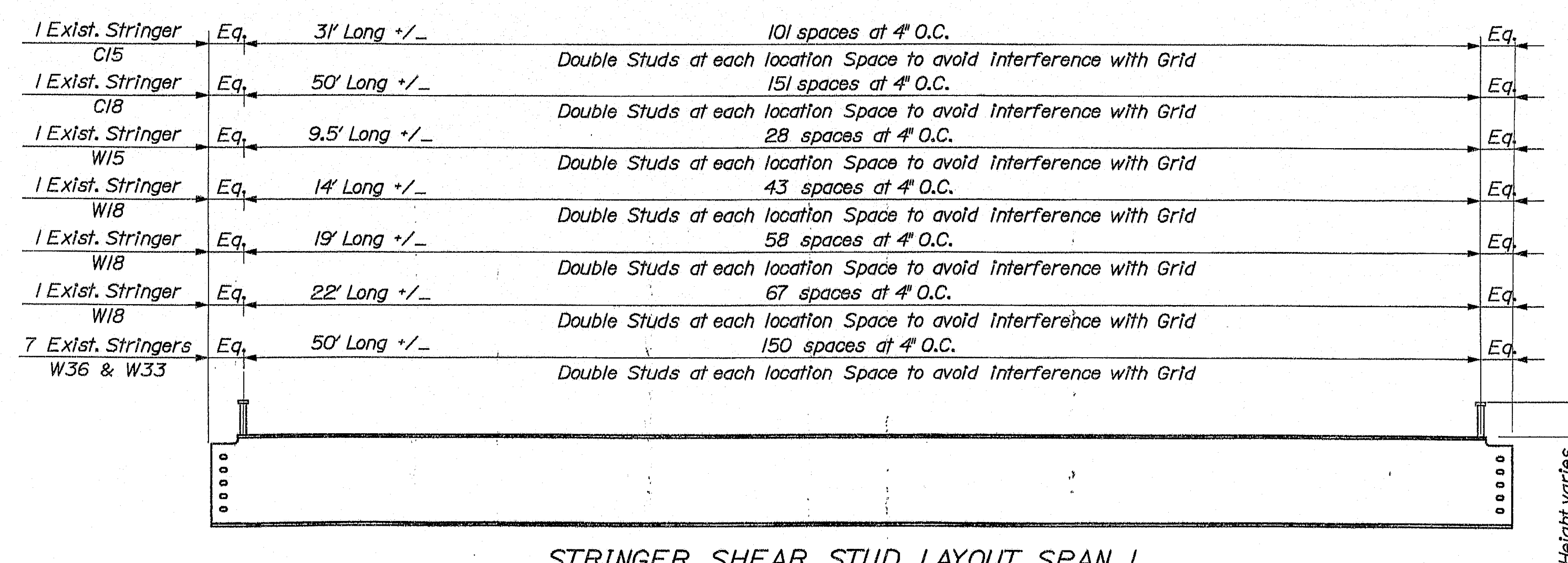
FLOOR BEAM SHEAR STUD LAYOUT

93 Floor Beams (existing) to receive 294 studs each = 27,342 Total
Stud Height varies See Superstructure Details Sheet for requirements



STRINGER SHEAR STUD LAYOUT SPANS 2 THRU 11

581 Stringers (new and exist.) to receive 83,664 studs Total
Stud Height varies See Superstructure Details Sheet for requirements



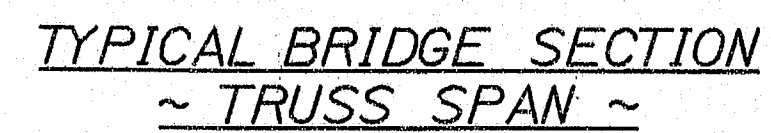
STRINGER SHEAR STUD LAYOUT SPAN 1

13 Stringers (exist.) to receive 3,022 studs Total
Stud Height varies See Superstructure Details Sheet for requirements

[illegible]

134-240

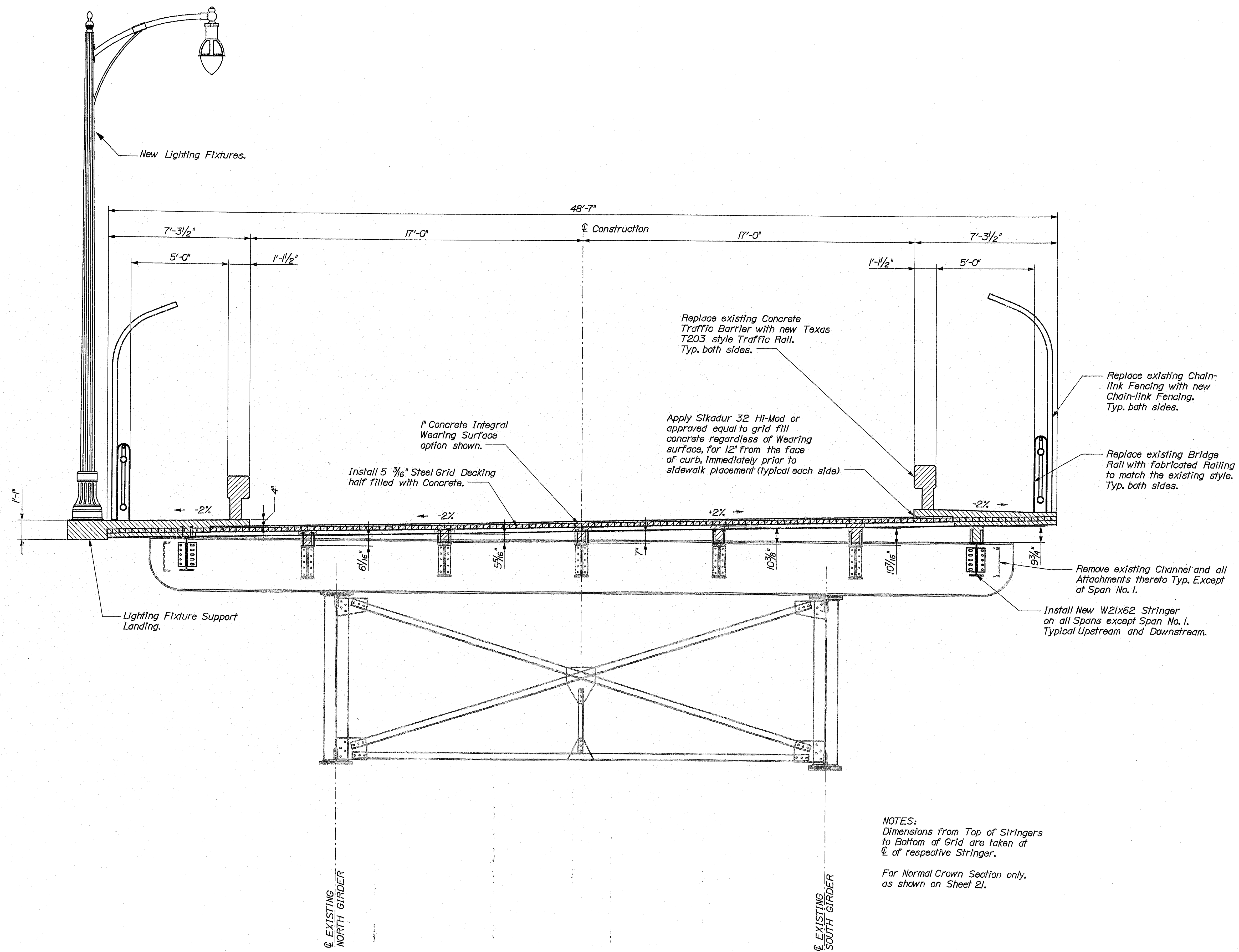
Filename: ... \019_Typical_Truss_Floor_Floor_Beam.dgn



*For Normal Crown Section only,
as shown on Sheet 21.*

OF 46

134-241



NOTES:
Dimensions from Top of Stringers
to Bottom of Grid are taken at
C of respective Stringer.

For Normal Crown Section only,
as shown on Sheet 21.

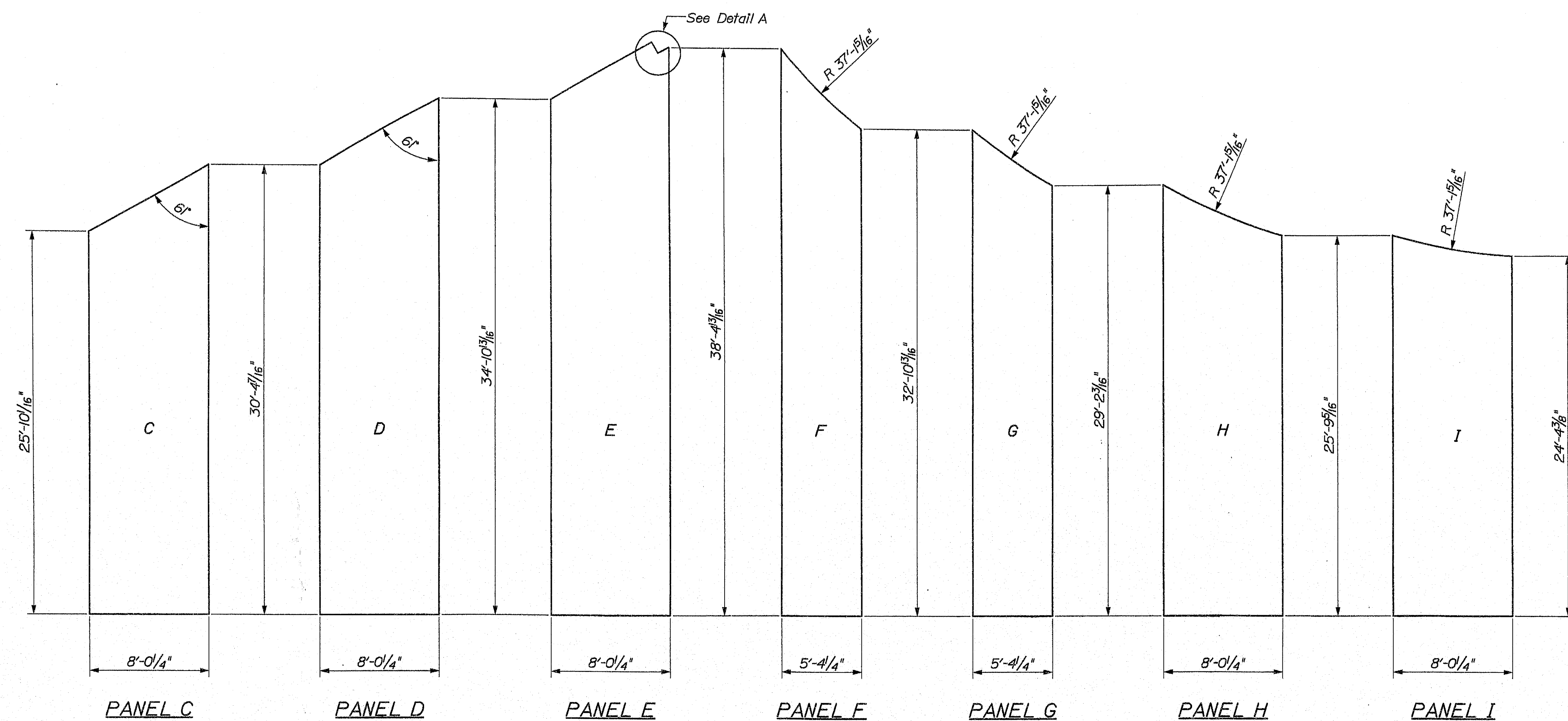
TYPICAL BRIDGE SECTION
~ GIRDER SPAN ~

134-242

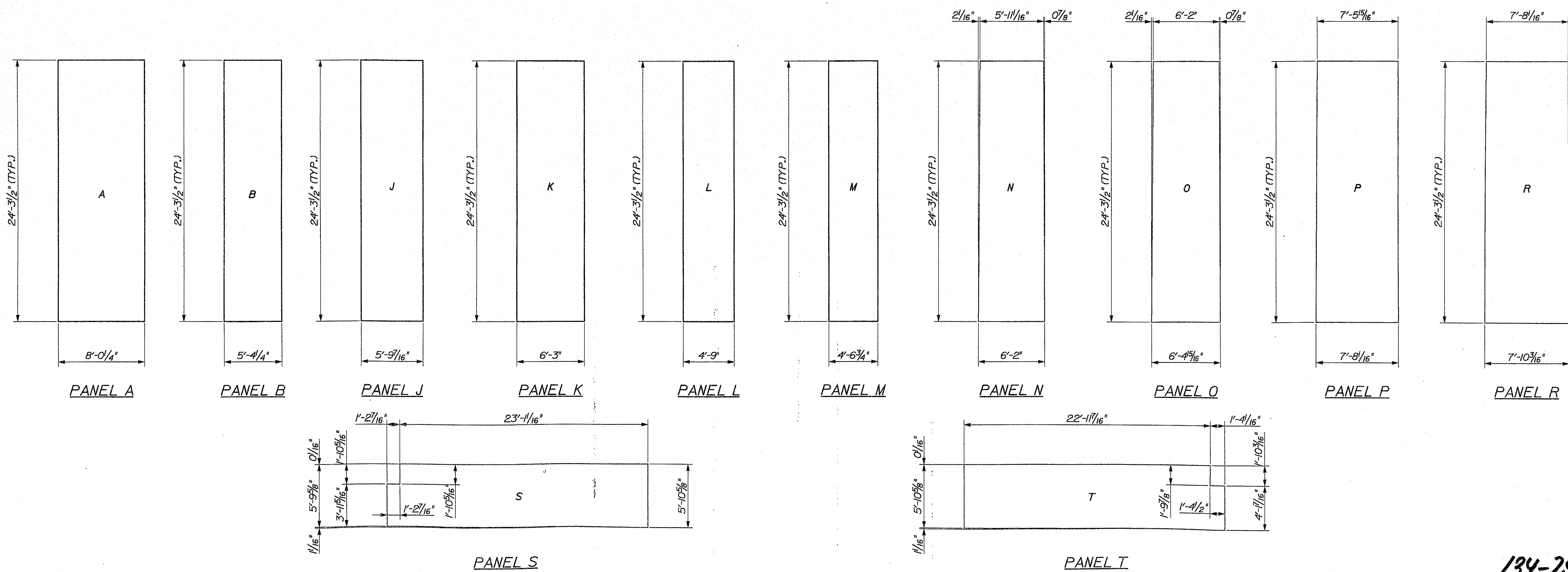
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Filename: ... \msta\021_Deck_Panel_Layout.dgn

21 OF 46	SHEET NUMBER		MEMORIAL BRIDGE KENNEBEC RIVER CITY OF AUGUSTA KENNEBEC COUNTY		PROJ. MANAGER DESIGN-DETAILED CHECKED-REVIEWED DESIGN-DETAILED02 DESIGN-DETAILED02 REVISIONS 1 REVISIONS 2 REVISIONS 3 REVISIONS 4 FIELD CHANGES		WLF DMS RRC RRC BMJ	BY RRC RRC RRC BMJ	DATE 2/23/05	STATE OF MAINE DEPARTMENT OF TRANSPORTATION BH-9327(100)X	
			DECK PANEL LAYOUT							P.E. NUMBER DATE	
										PIN 9327-10 BRIDGE NO. 5196 BRIDGE PLANS	

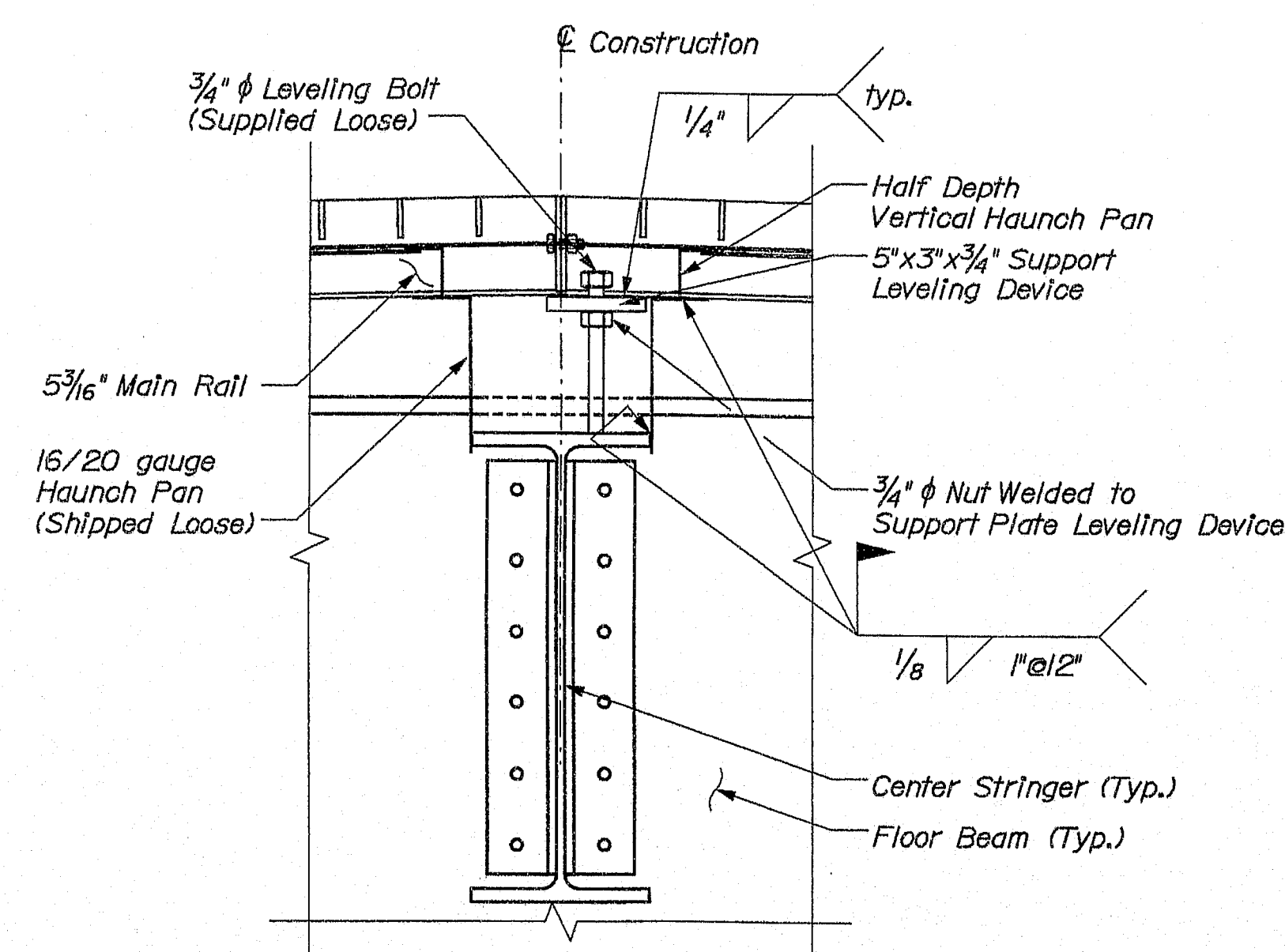


Panel	Size	Quantity
A	8'-1/4" x 24'-3 1/2"	5
B	5'-4 1/4" x 24'-3 1/2"	2
C	See Detail Sheet	1
D	See Detail Sheet	1
E	See Detail Sheet	1
F	See Detail Sheet	1
G	See Detail Sheet	1
H	See Detail Sheet	1
I	See Detail Sheet	1
J	5'-8 7/16" x 24'-3 1/2"	2
K	6'-3" x 24'-3 1/2"	456
L	4'-9" x 24'-3 1/2"	4
M	4'-6 3/4" x 24'-3 1/2"	2
N	See Detail Sheet	1
O	See Detail Sheet	1
P	See Detail Sheet	78
R	See Detail Sheet	78
S	See Detail Sheet	1
T	See Detail Sheet	1

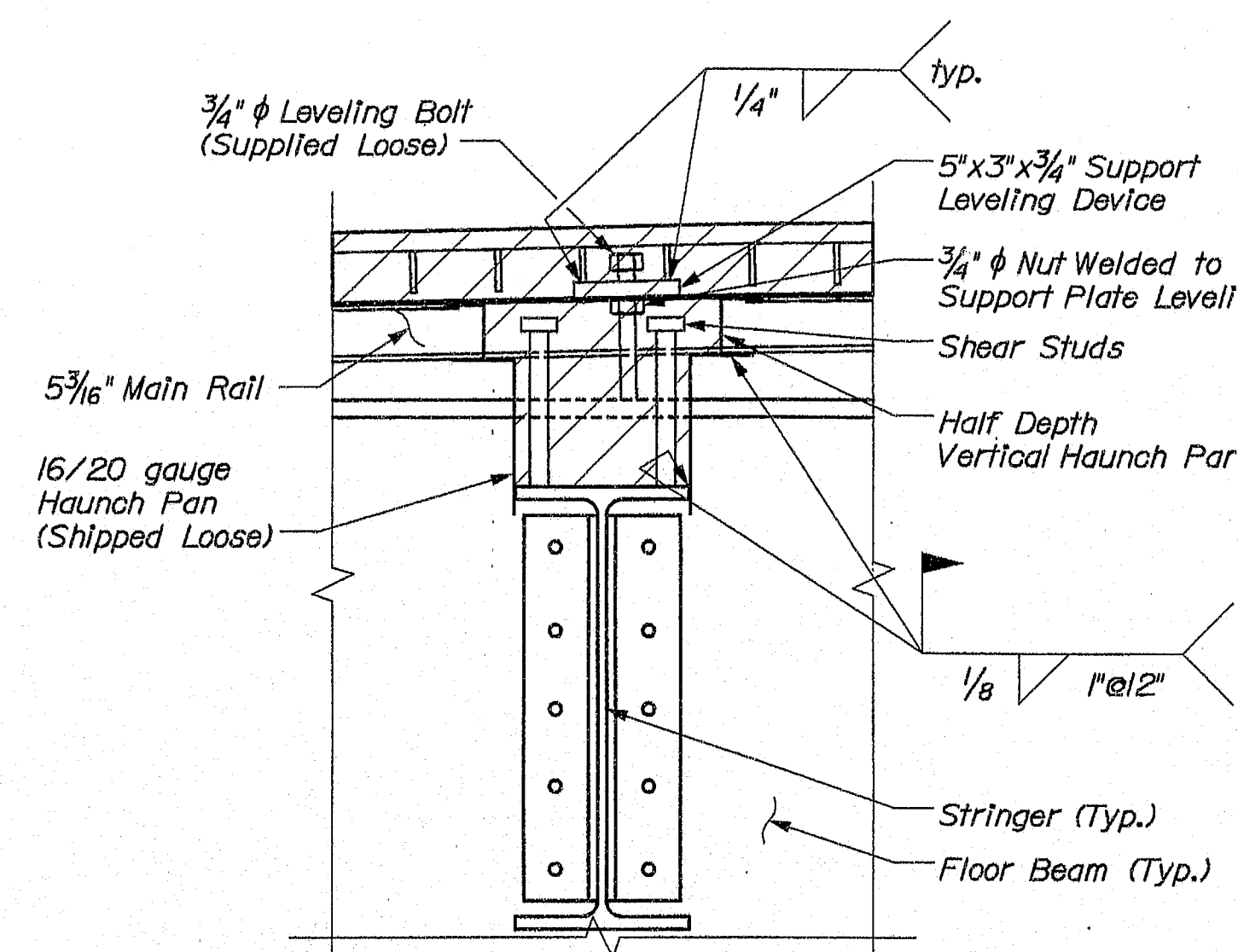


STATE OF MAINE DEPARTMENT OF TRANSPORTATION		BH-9327(100)X	
BRIDGE NO. 5106		PIN	9327.10
BRIDGE PLANS			
MEMORIAL BRIDGE KENNEBEC RIVER CITY OF AUGUSTA KENNEBEC COUNTY		DECK PANEL DETAILS	
SHEET NUMBER		22	
		OF 46	

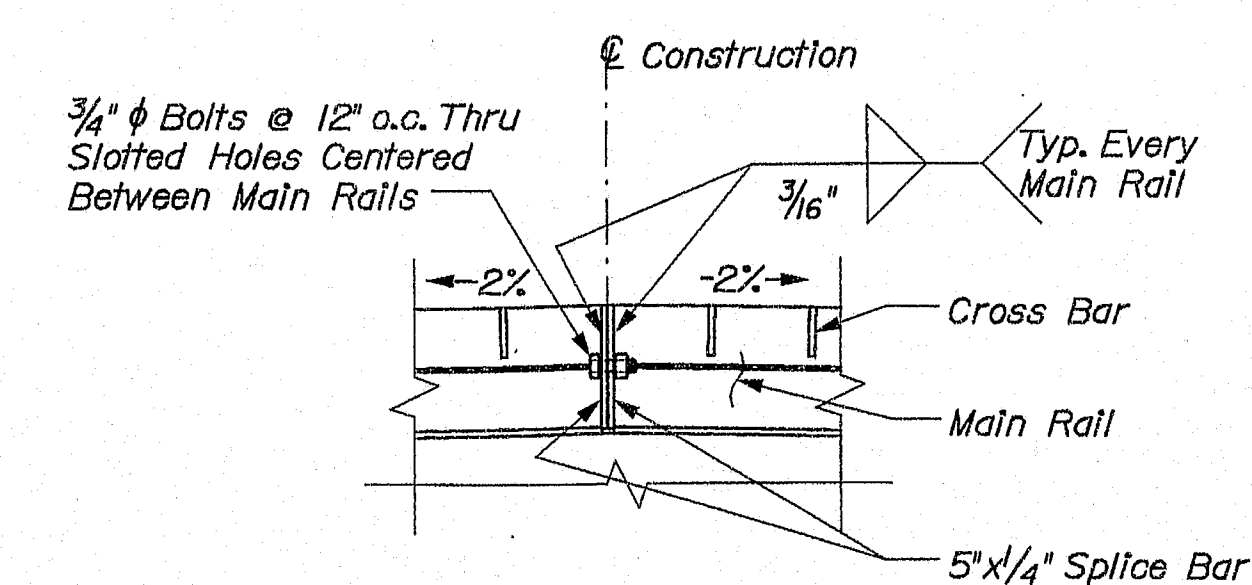
134-244



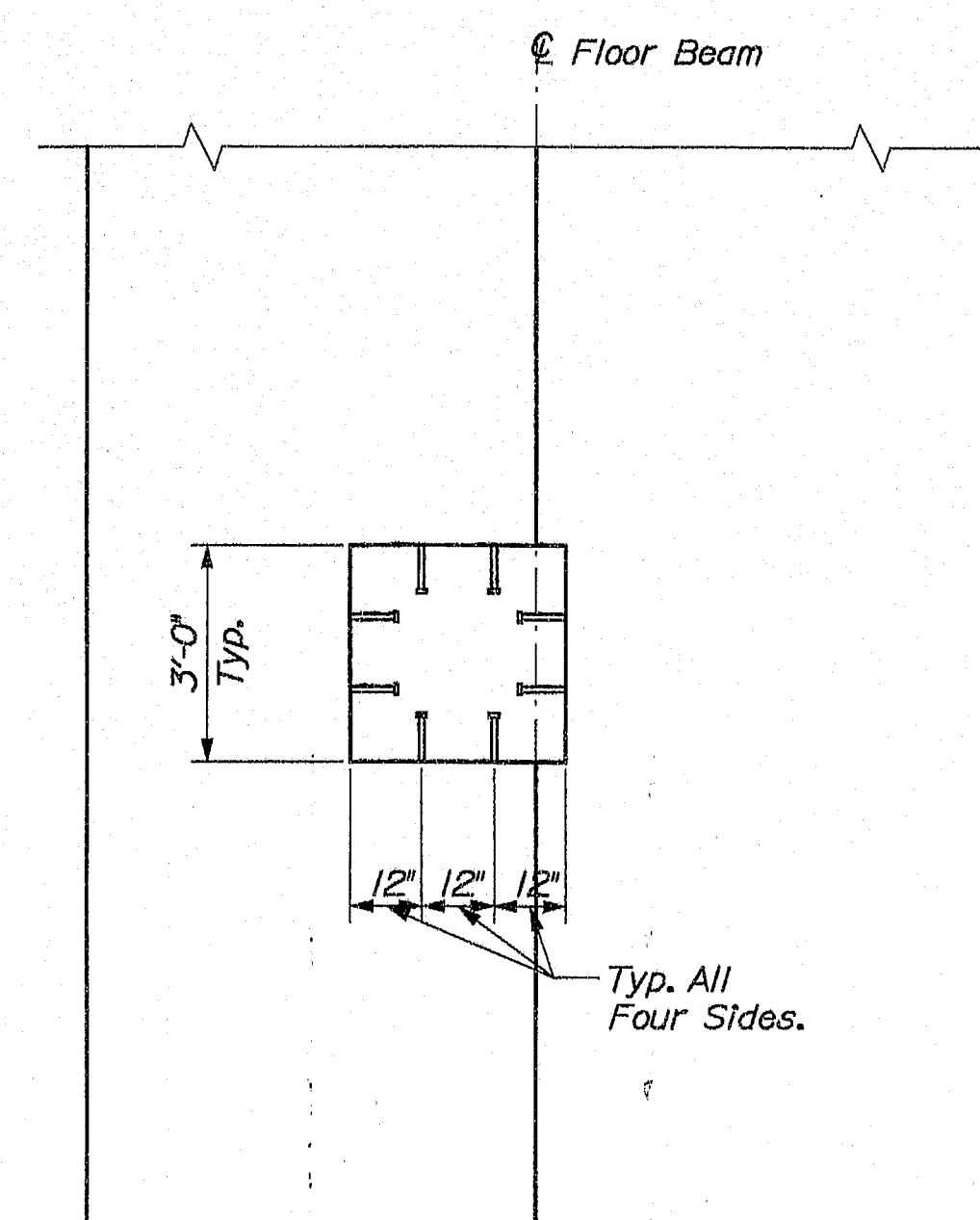
TYPICAL CENTER STRINGER
LEVELING DEVICE DETAIL
Shear Studs and Rebar not shown for Clarity



TYPICAL STRINGER
LEVELING DEVICE DETAIL

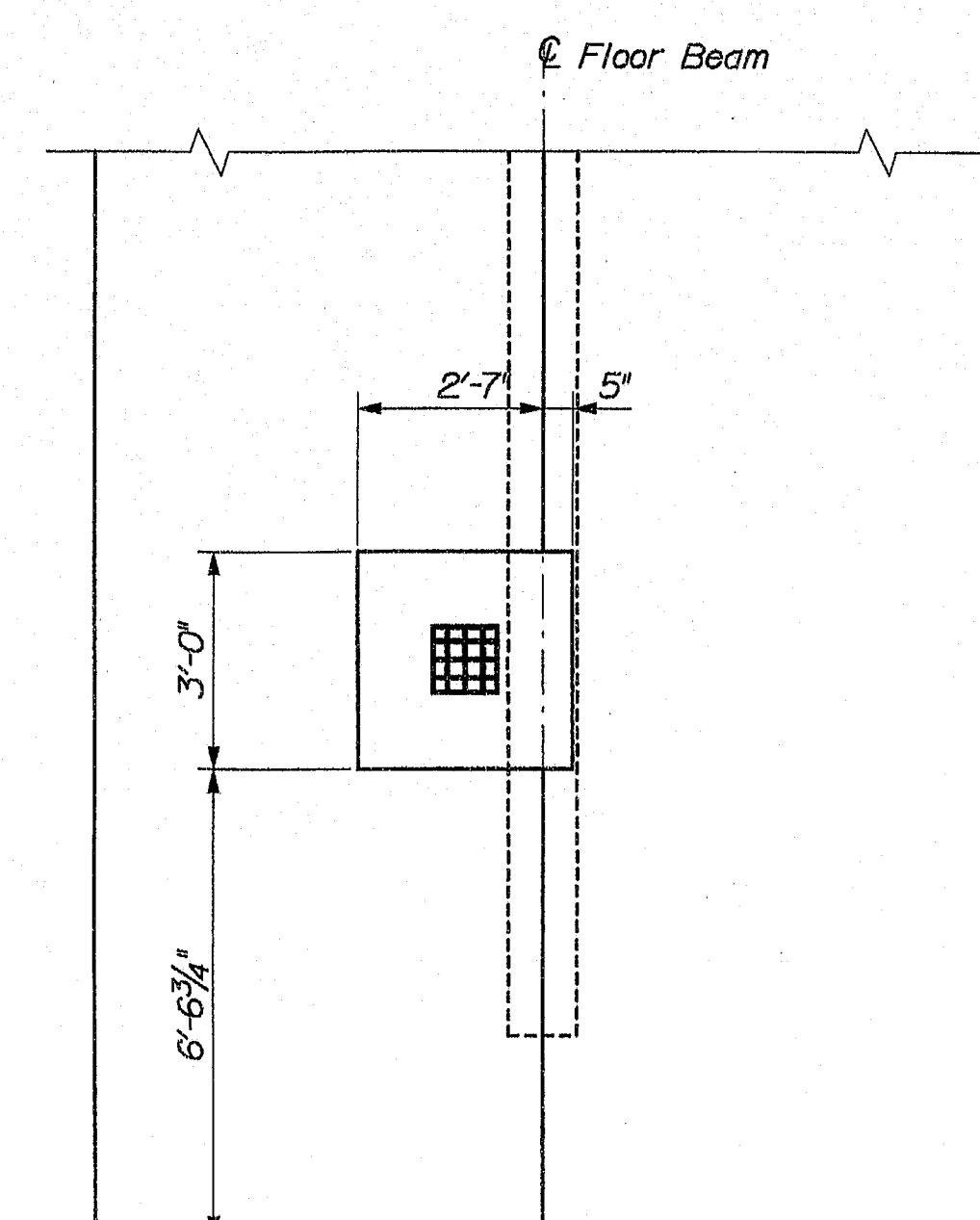


GRID CONNECTION DETAIL



STUD LOCATIONS
FOR DRAIN CUT OUT

*Typical at All Drain Locations.
Generic Panels Shown.*



PANEL CUT OUT FOR DRAINS

Typical at All Drain Locations.
Generic Panels Shown.

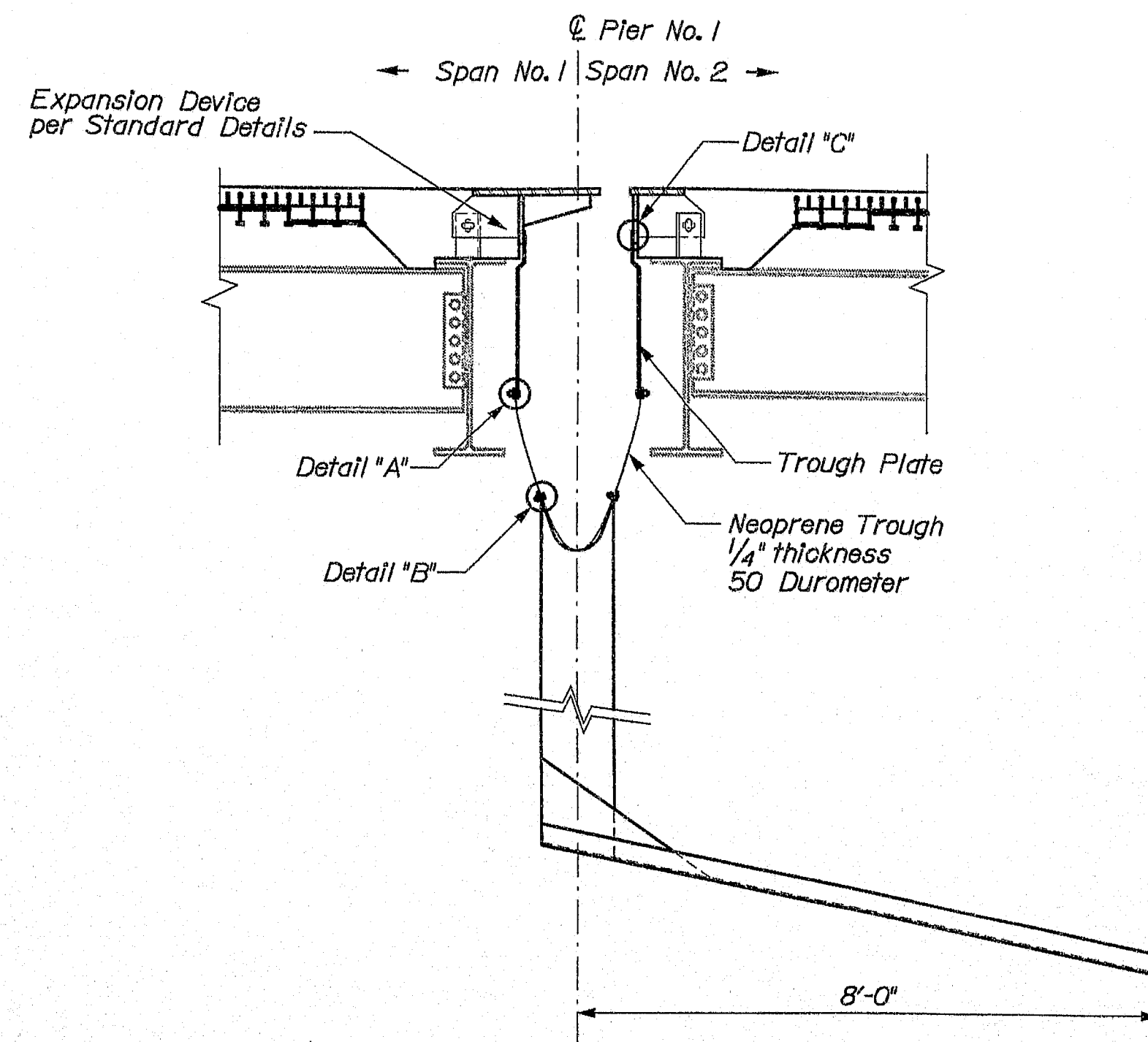
23		SHEET NUMBER	MEMORIAL BRIDGE KENNEBEC RIVER CITY OF AUGUSTA KENNEBEC COUNTY		FROM: MANAGER		WLF		BY		DATE		STATE OF MAINE	
					DESIGN-DETAILED		ETC		DMS		2/23/05		DEPARTMENT OF TRANSPORTATION	
OF 46					CHECKED-REVIEWED		____		____		____		SIGNATURE	
					DESIGNED-DETAILED2		____		____		____		P.E. NUMBER	
					DESIGNED-DETAILED3		____		____		____		DATE	
					REVISIONS 1		____		____		____			
					REVISIONS 2		____		____		____			
					REVISIONS 3		____		____		____		BRIDGE NO. 5196	
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					FIELD CHANGES		____		____		____		BRIDGE PLANS	

Date: 3/3/2005

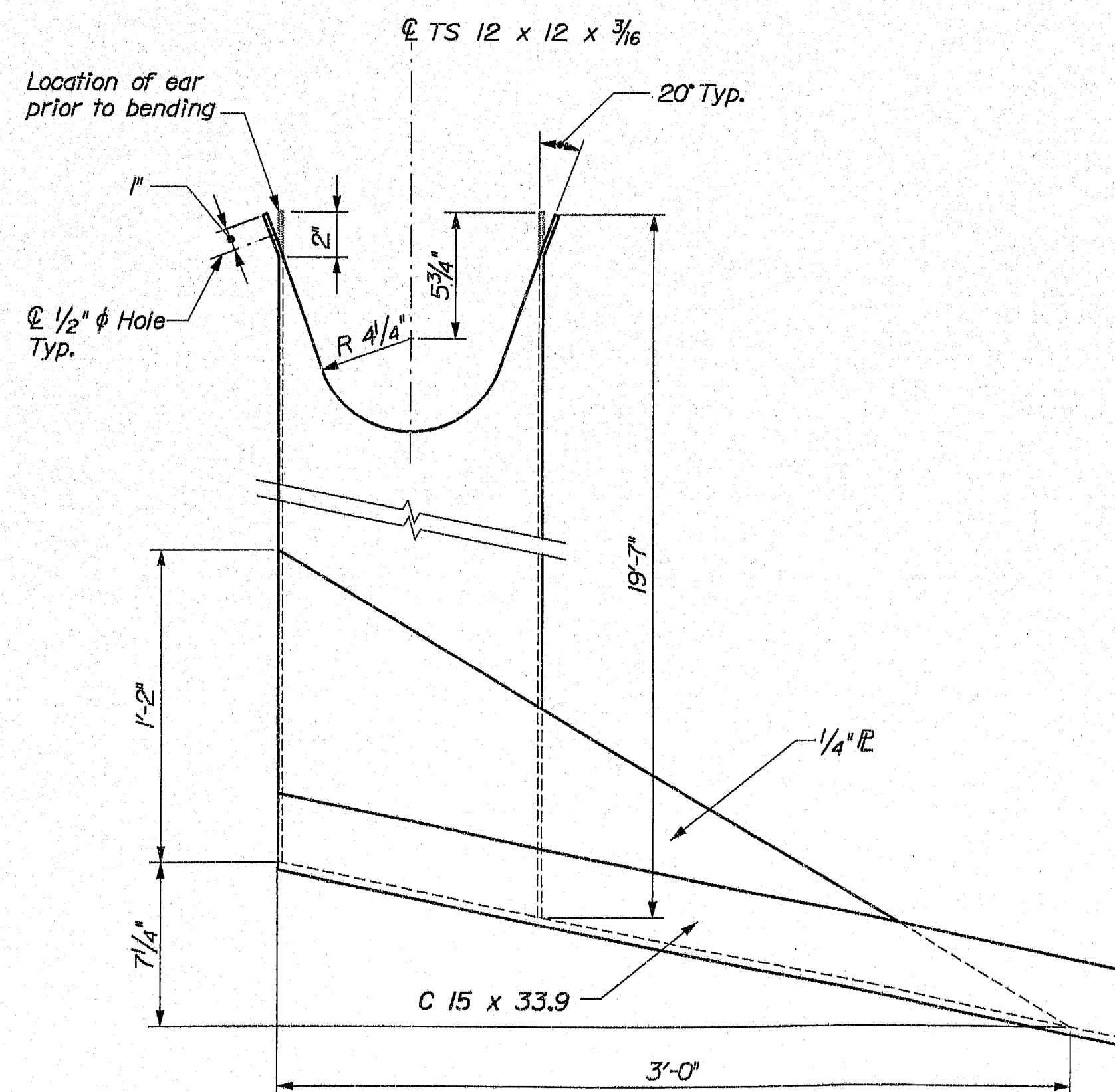
Username: david.sullivan

Division: BRIDGE

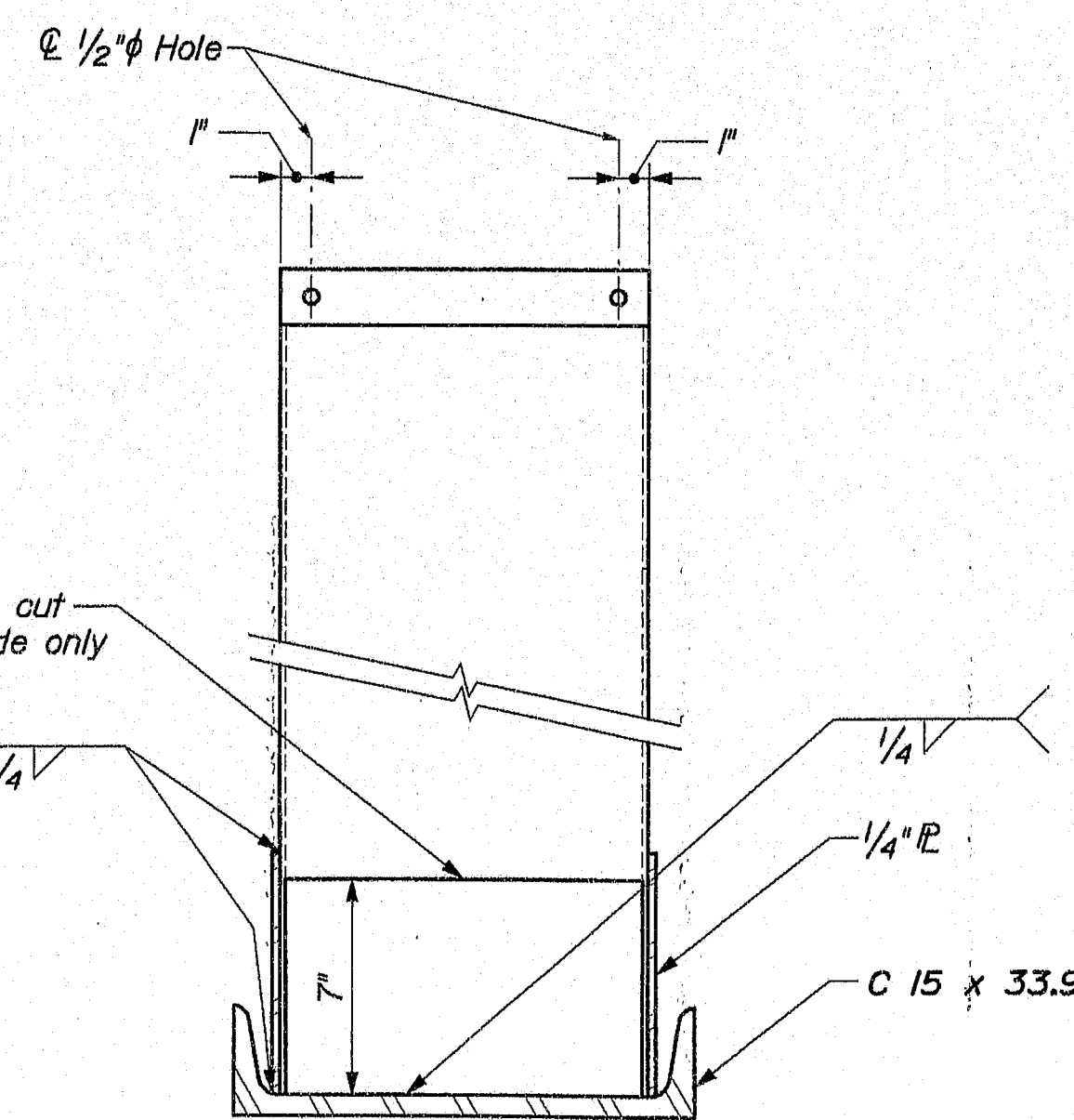
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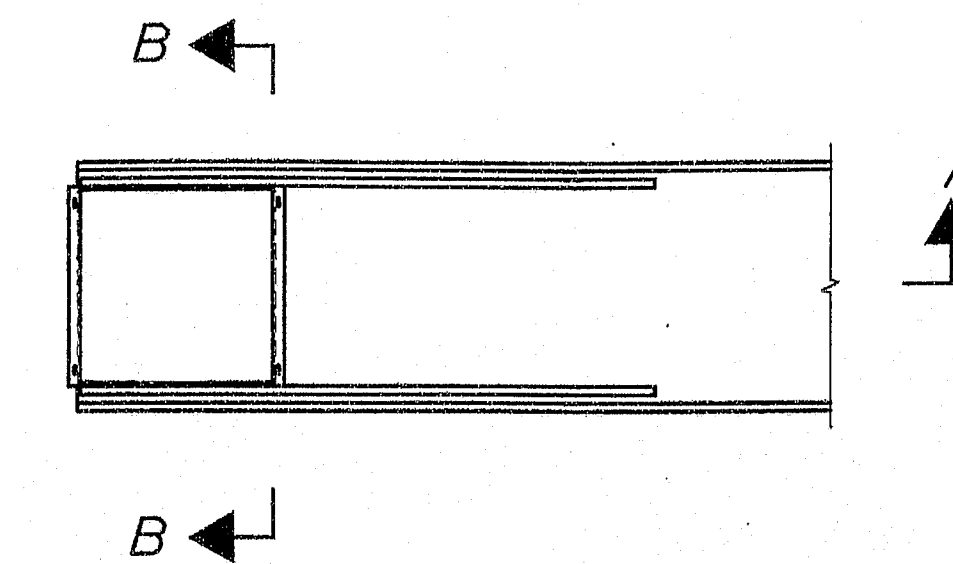
TROUGH AND DOWNSPOUT DETAIL
See sheet "Trough Details-Link" for Trough and Trough Plate details



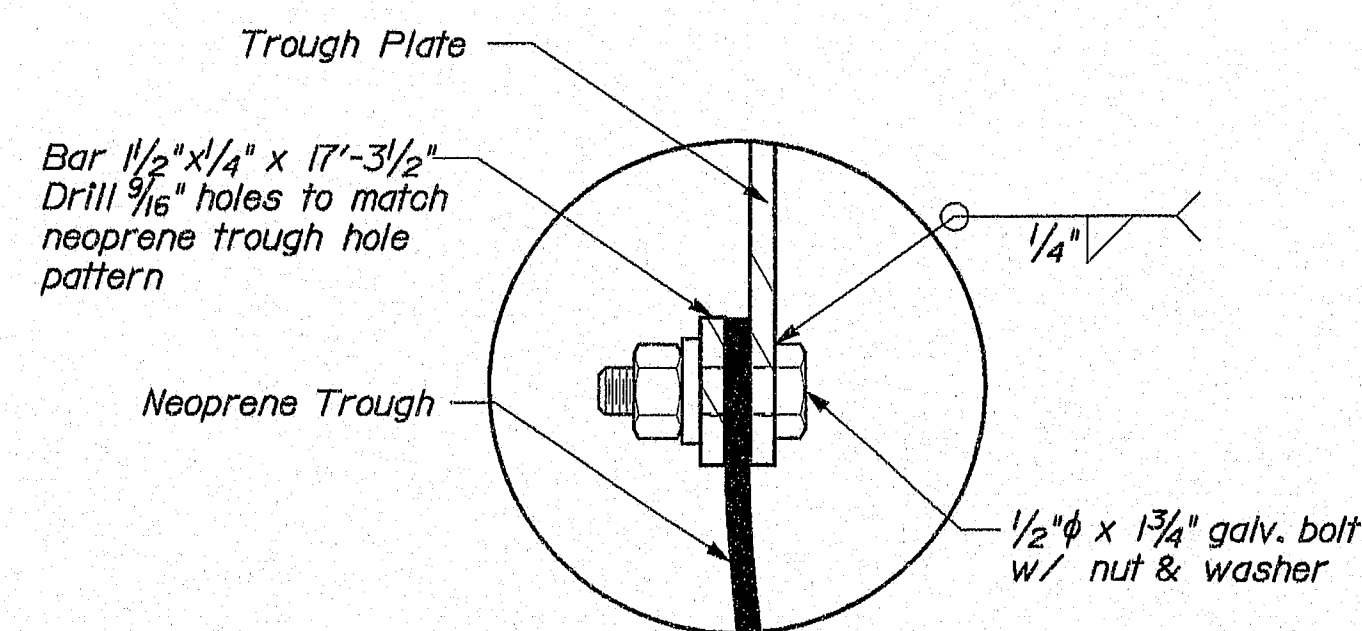
SECTION A-A



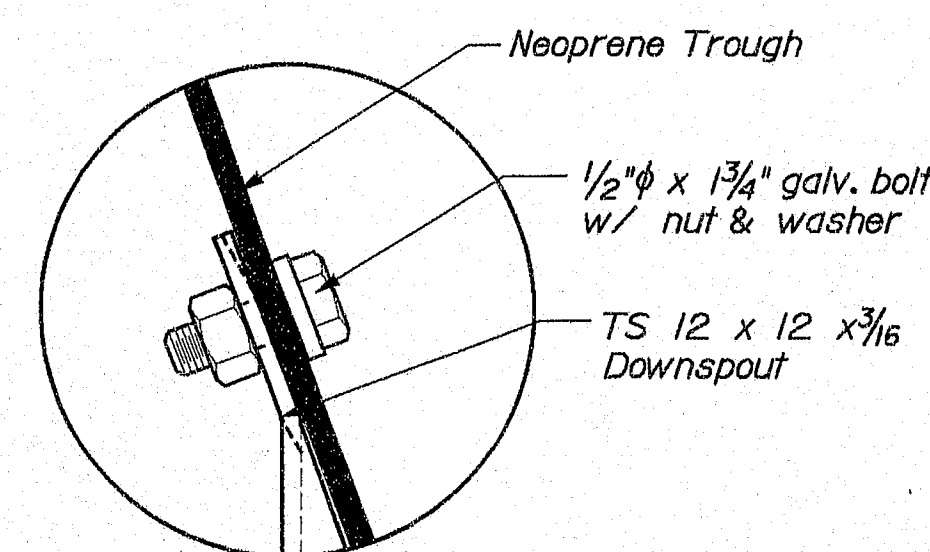
SECTION B-B



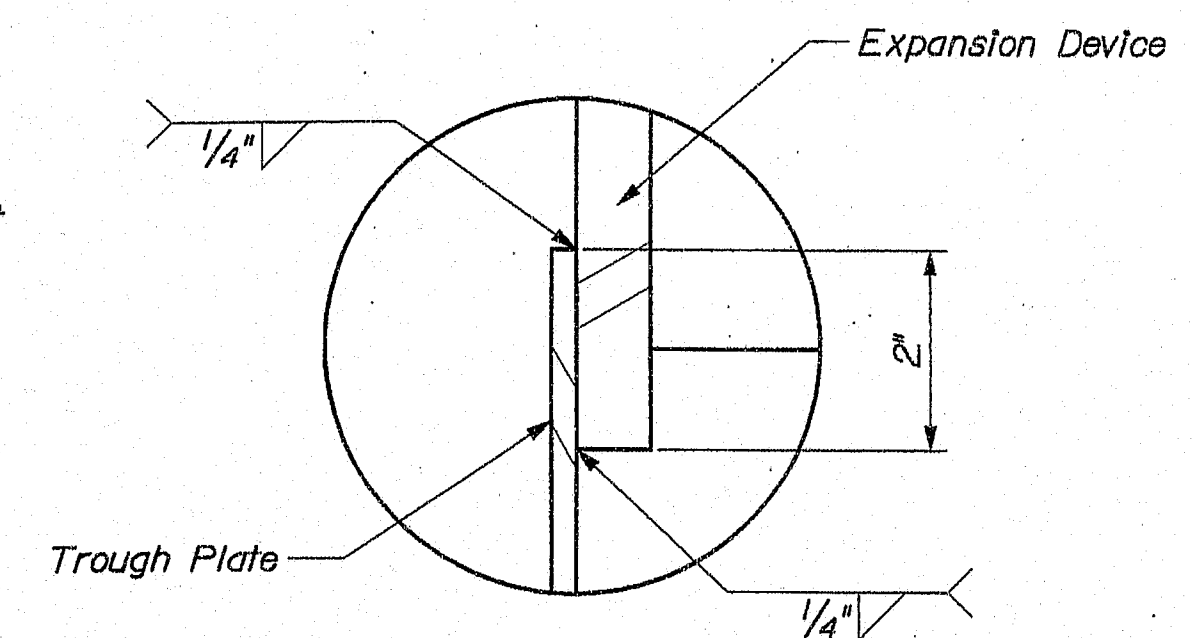
DOWNSPOUT PLAN - PIER NO. 1



DETAIL "A"



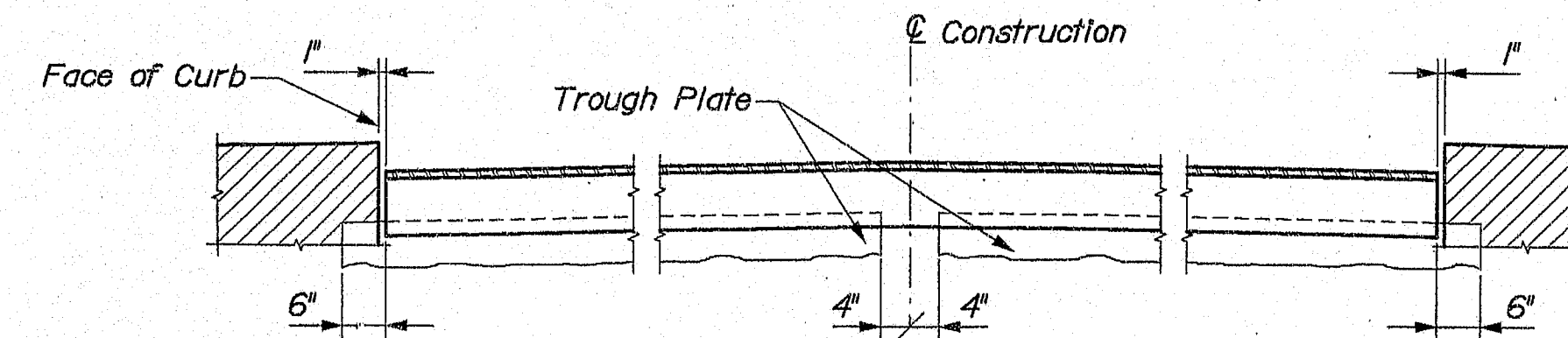
DETAIL "B"



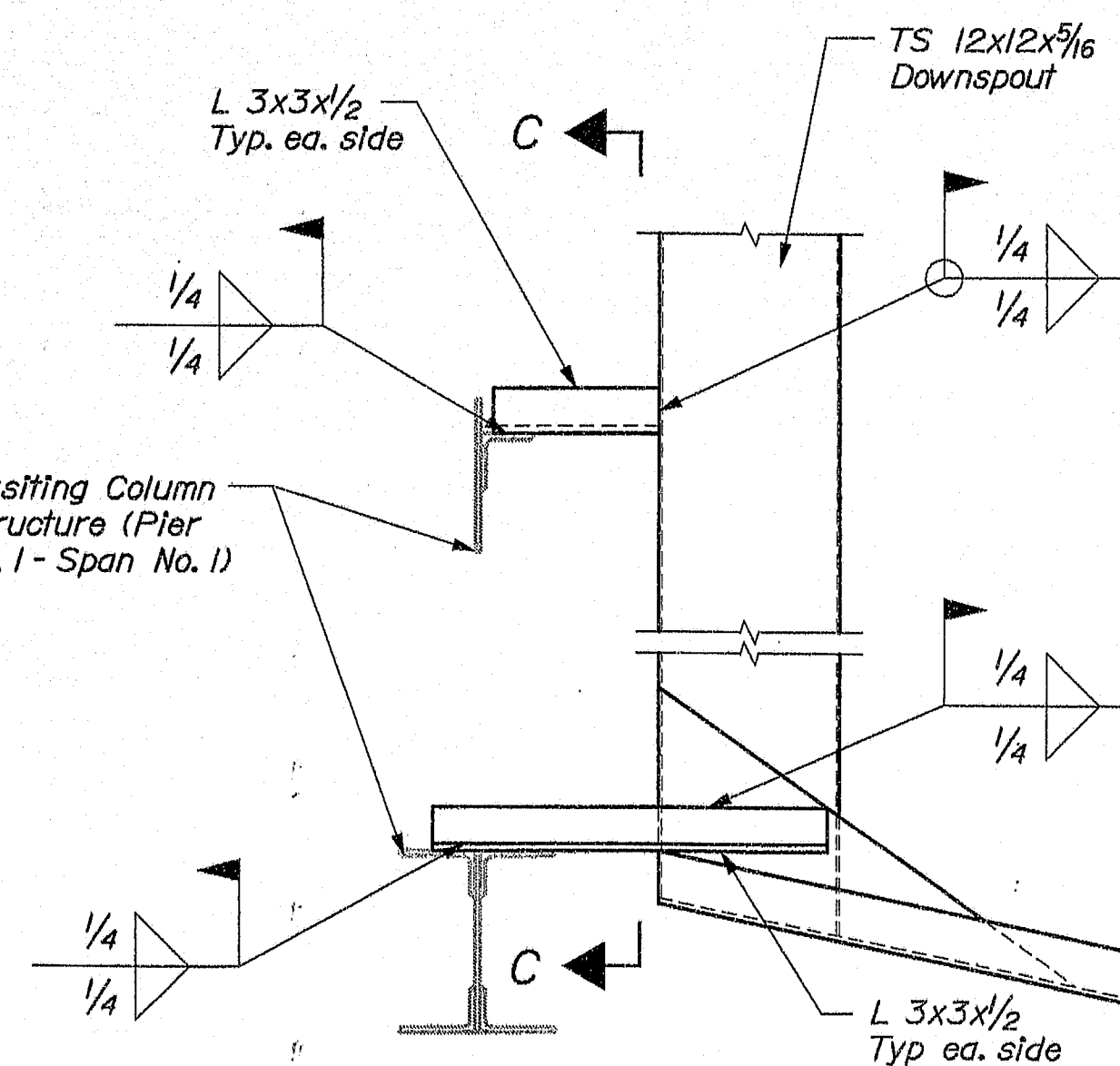
DETAIL "C"

FIELD WELDING NOTES

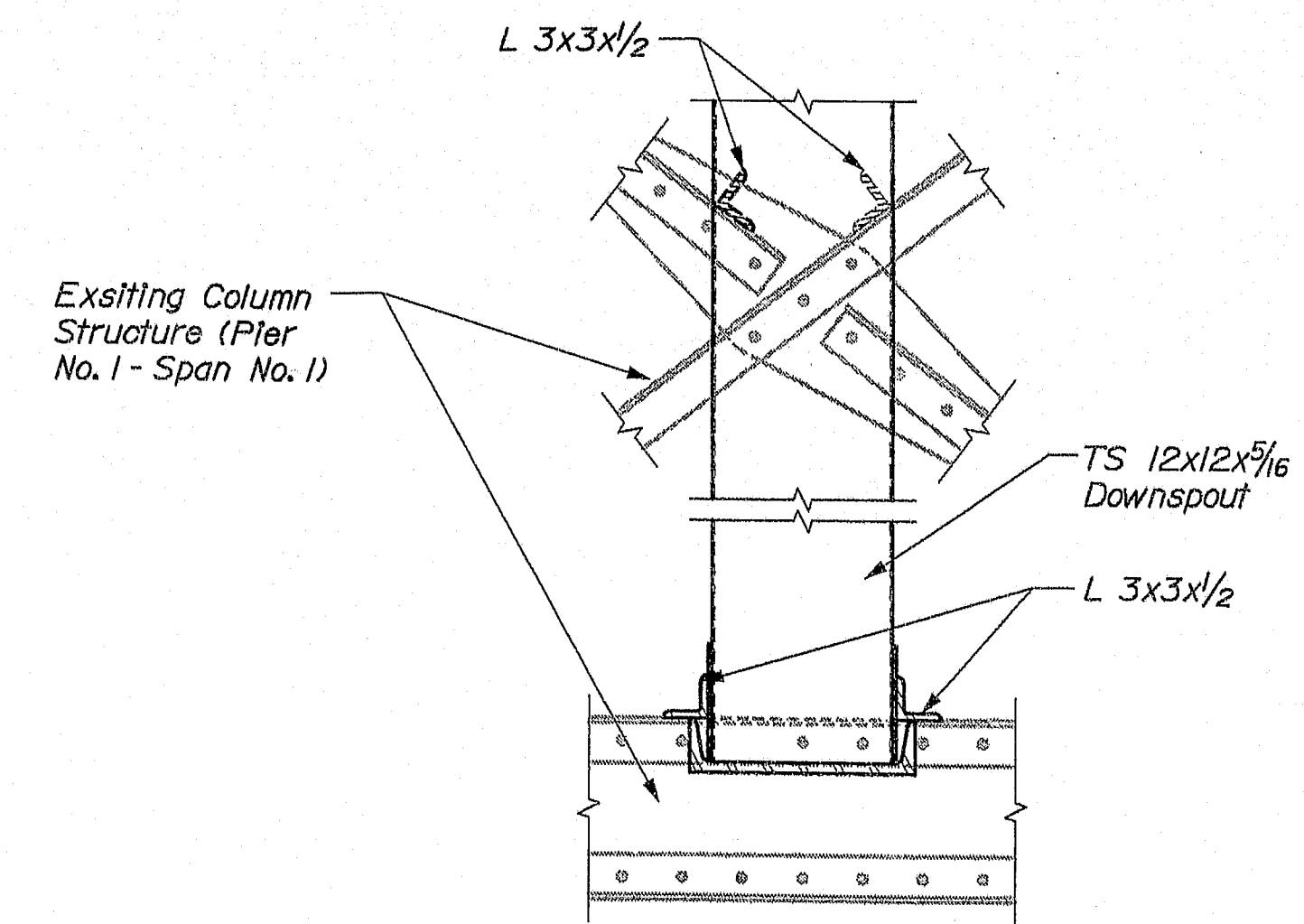
1. Remove galvanizing in areas where field welding is required.
2. Coat all field welds with two coats of zinc-rich paint (cold-galv)
3. Top-coat areas of existing steel where existing steel coating was compromised to match existing color.



PARTIAL EXPANSION JOINT ELEVATION



DOWNSPOUT CONNECTION



SECTION C-C

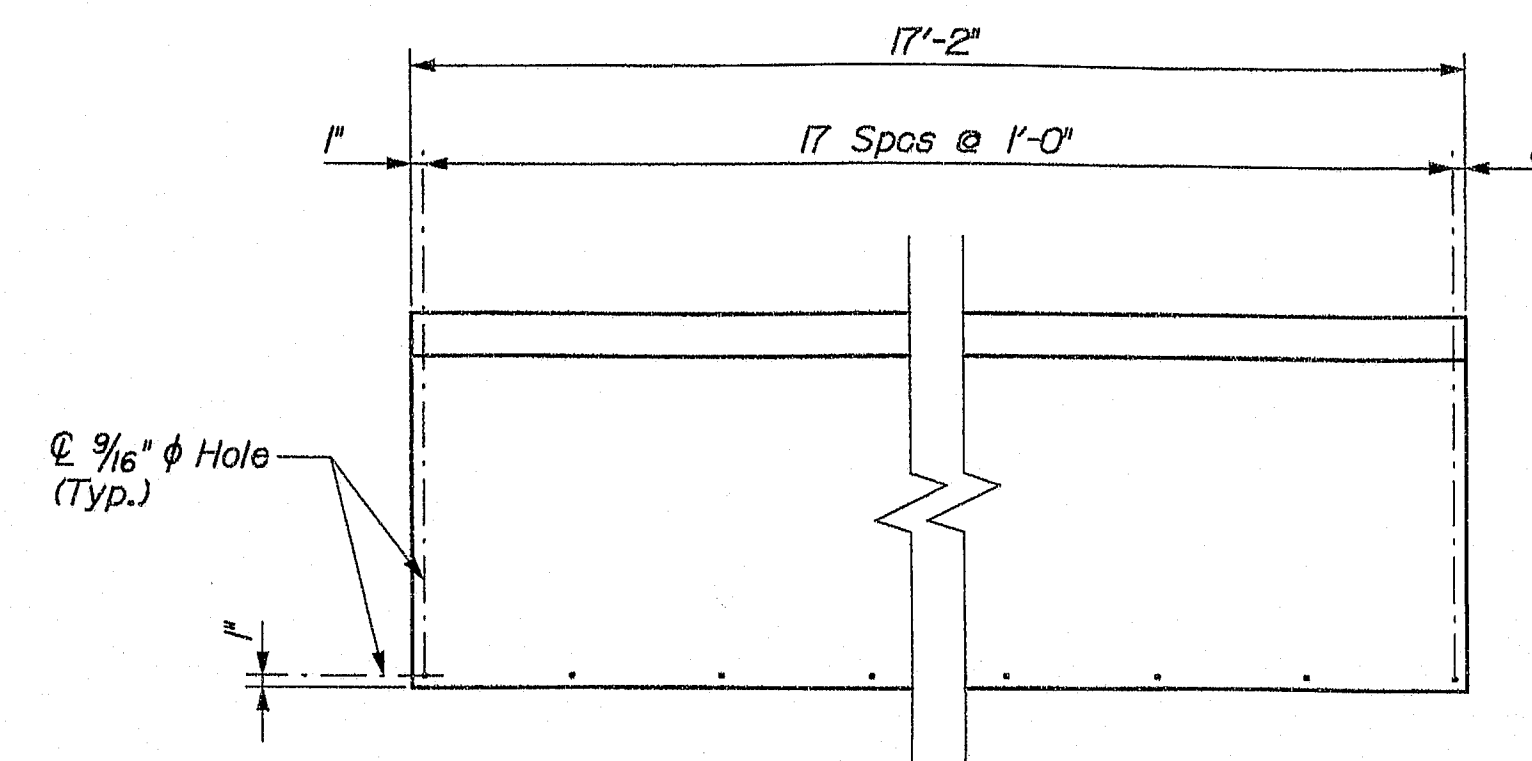
STATE OF MAINE		DEPARTMENT OF TRANSPORTATION		BH-9327(100)X		BRIDGE NO. 5106		PIN 9327.10		BRIDGE PLANS	
PROJECT MANAGER	DATE	BY	W/F	ETC	SIGNATURE	P.E. NUMBER	DATE				
DESIGNED	2/23/05	DMS									
CHECKED		ENC									
DESIGNED		ENC									
DESIGNED		ENC									
REVISIONS 1											
REVISIONS 2											
REVISIONS 3											
REVISIONS 4											
FIELD CHANGES											
MEMORIAL BRIDGE						TROUGH DETAILS PIER NO. 1					
KENNEBEC RIVER											
CITY OF AUGUSTA											
KENNEBEC COUNTY											
SHEET NUMBER						24					
						OF 46					

134-246

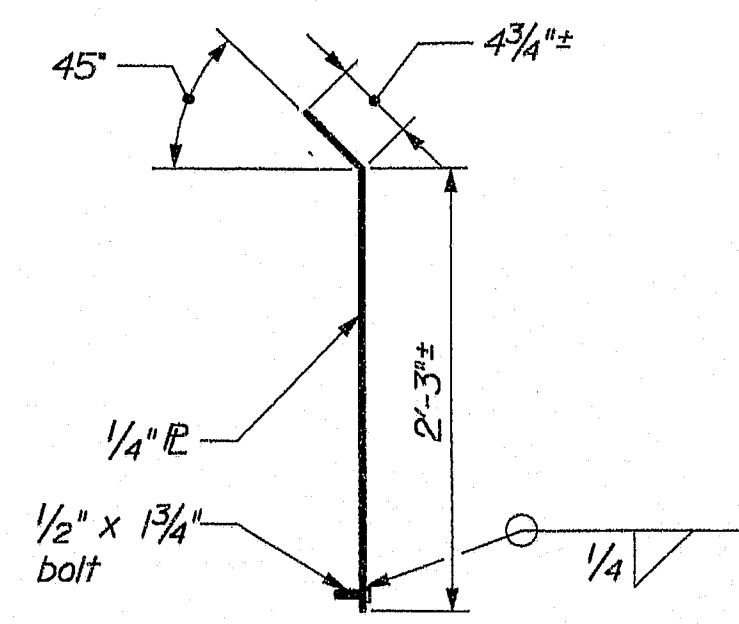
Filename: ...1027_Superstructure_Expansion_Joint_Detail.dwg

Username: david.sullivan

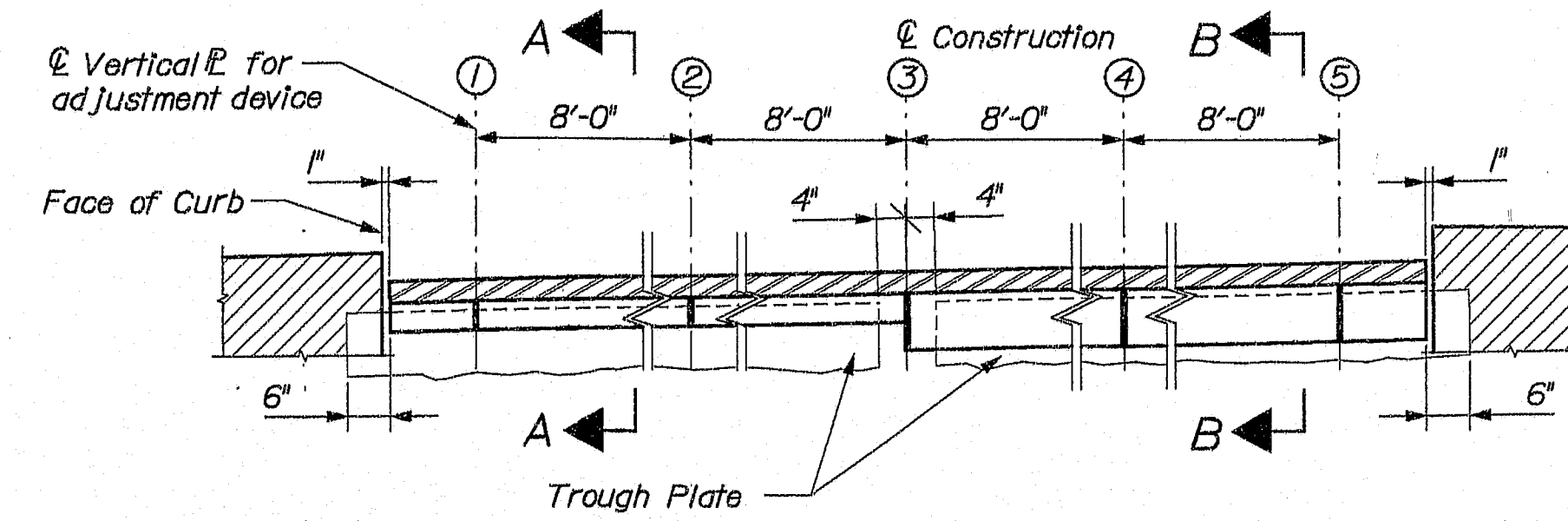
Date: 3/3/2005



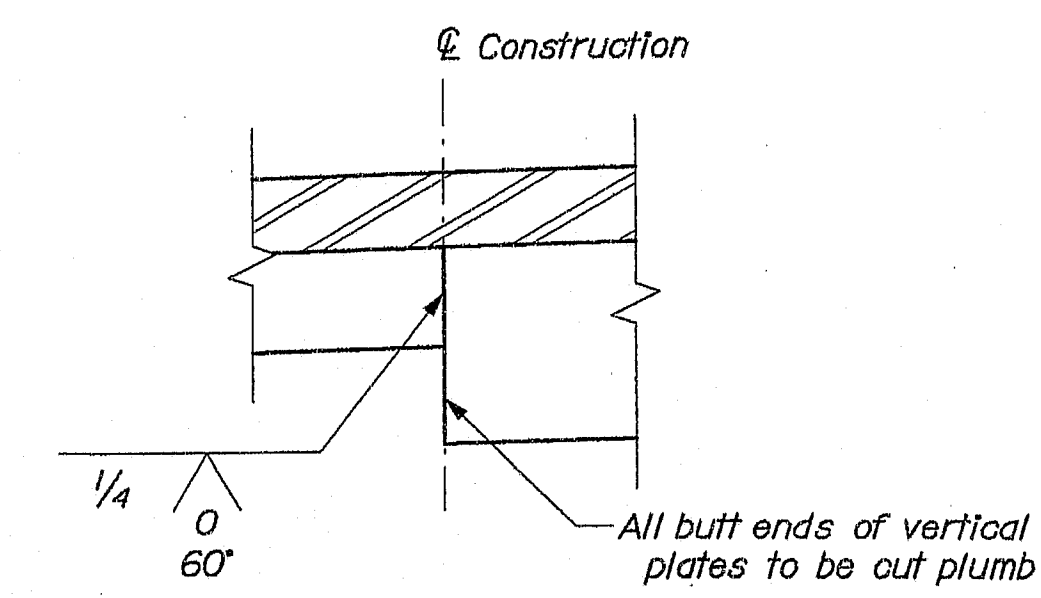
TROUGH PLATE ELEVATION



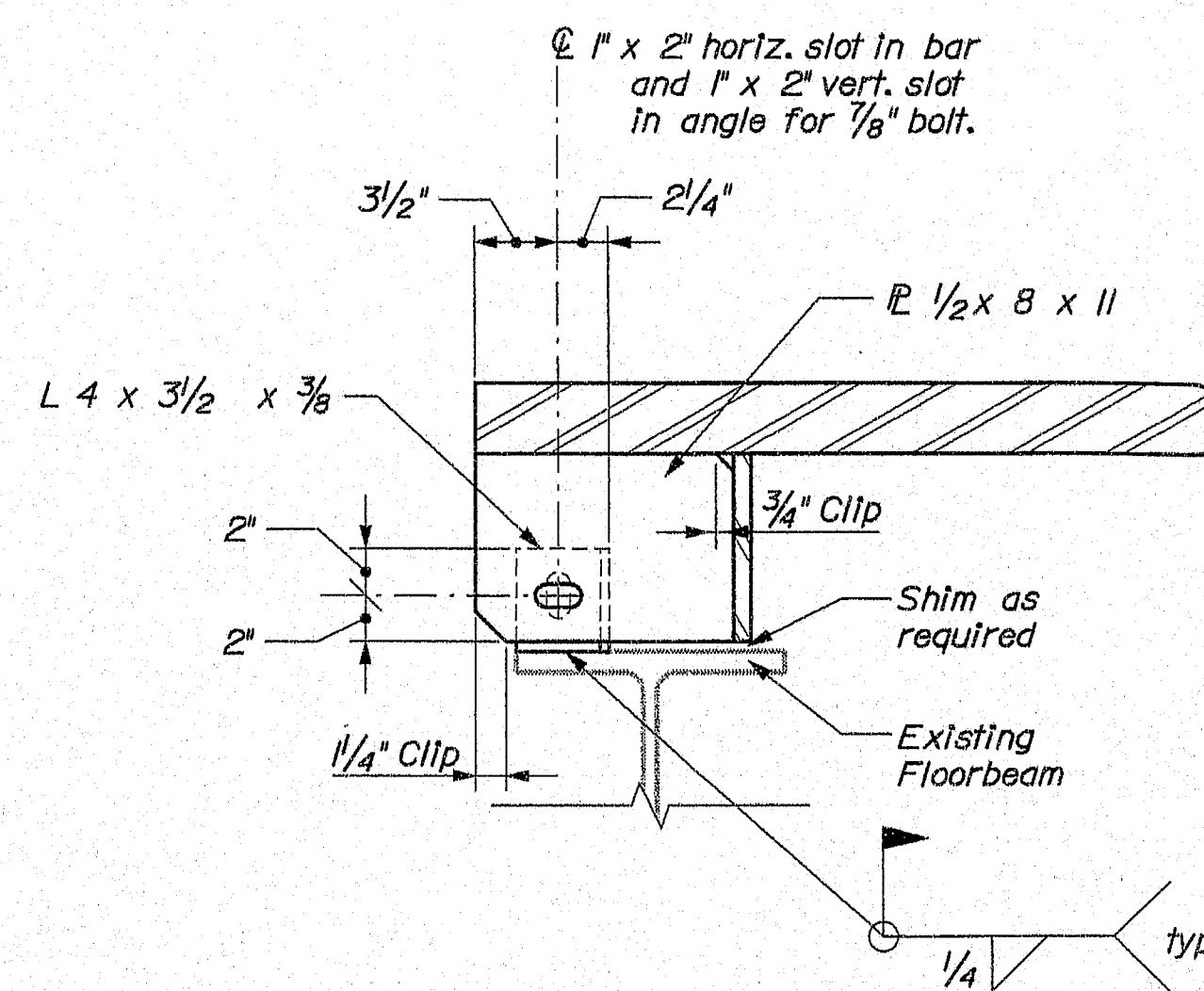
TROUGH PLATE SECTION



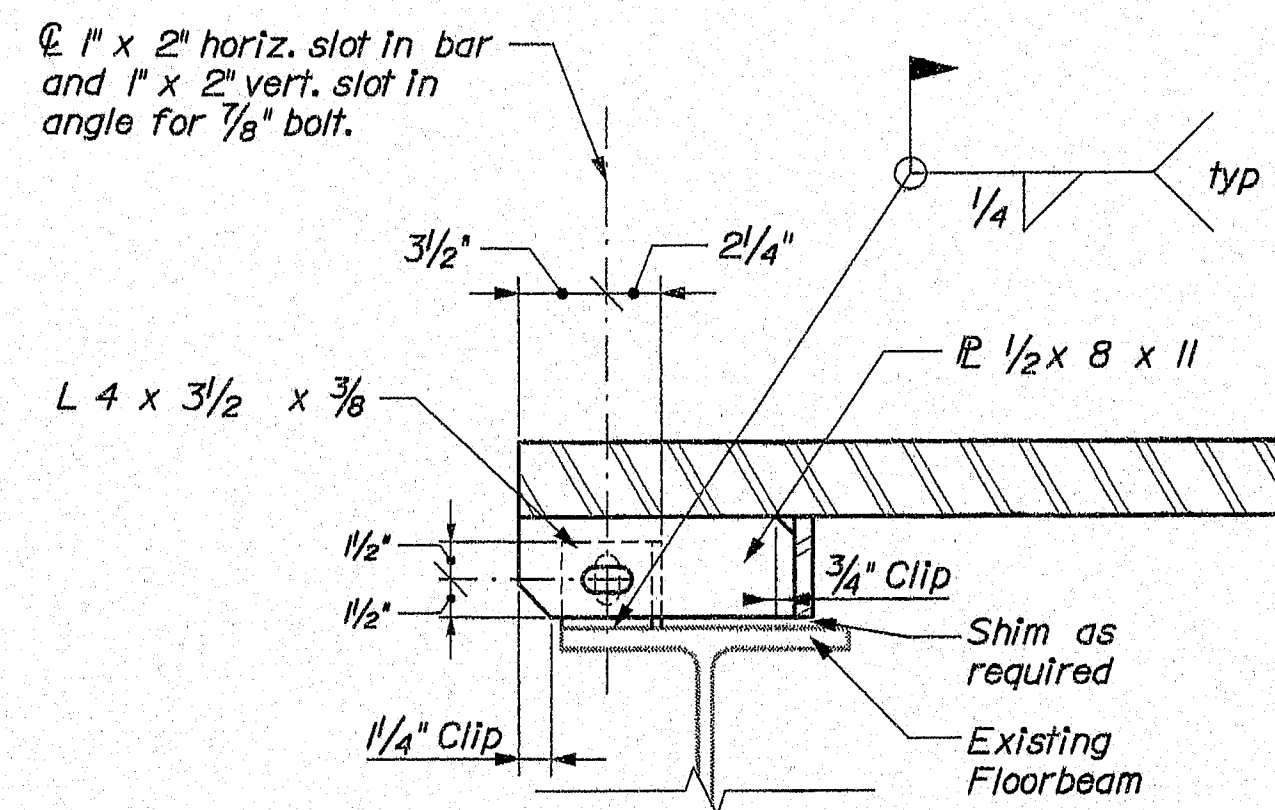
PARTIAL EXPANSION JOINT ELEVATION



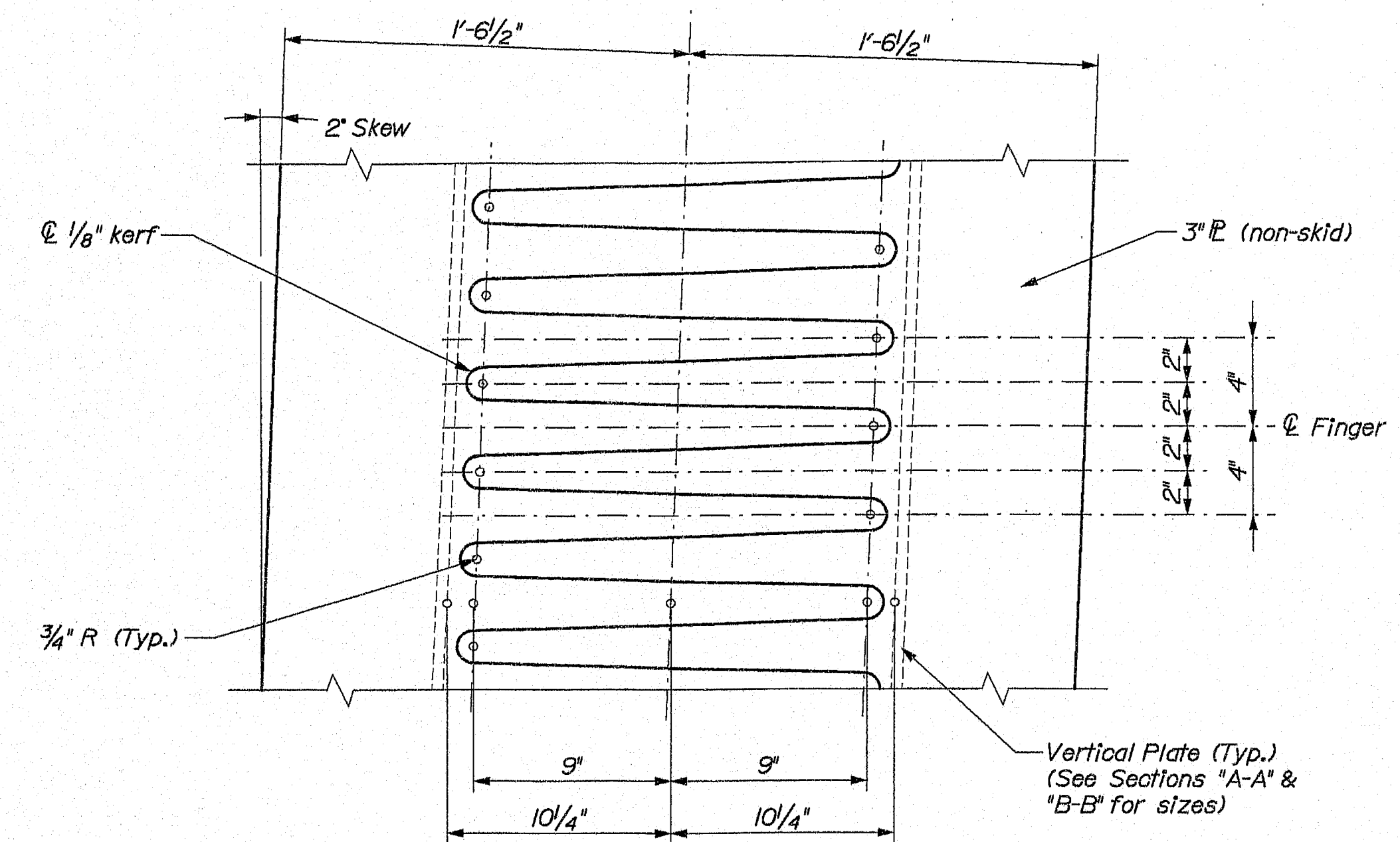
WELD DETAIL AT CONSTRUCTION
Vertical plate for adjustment device omitted for clarity



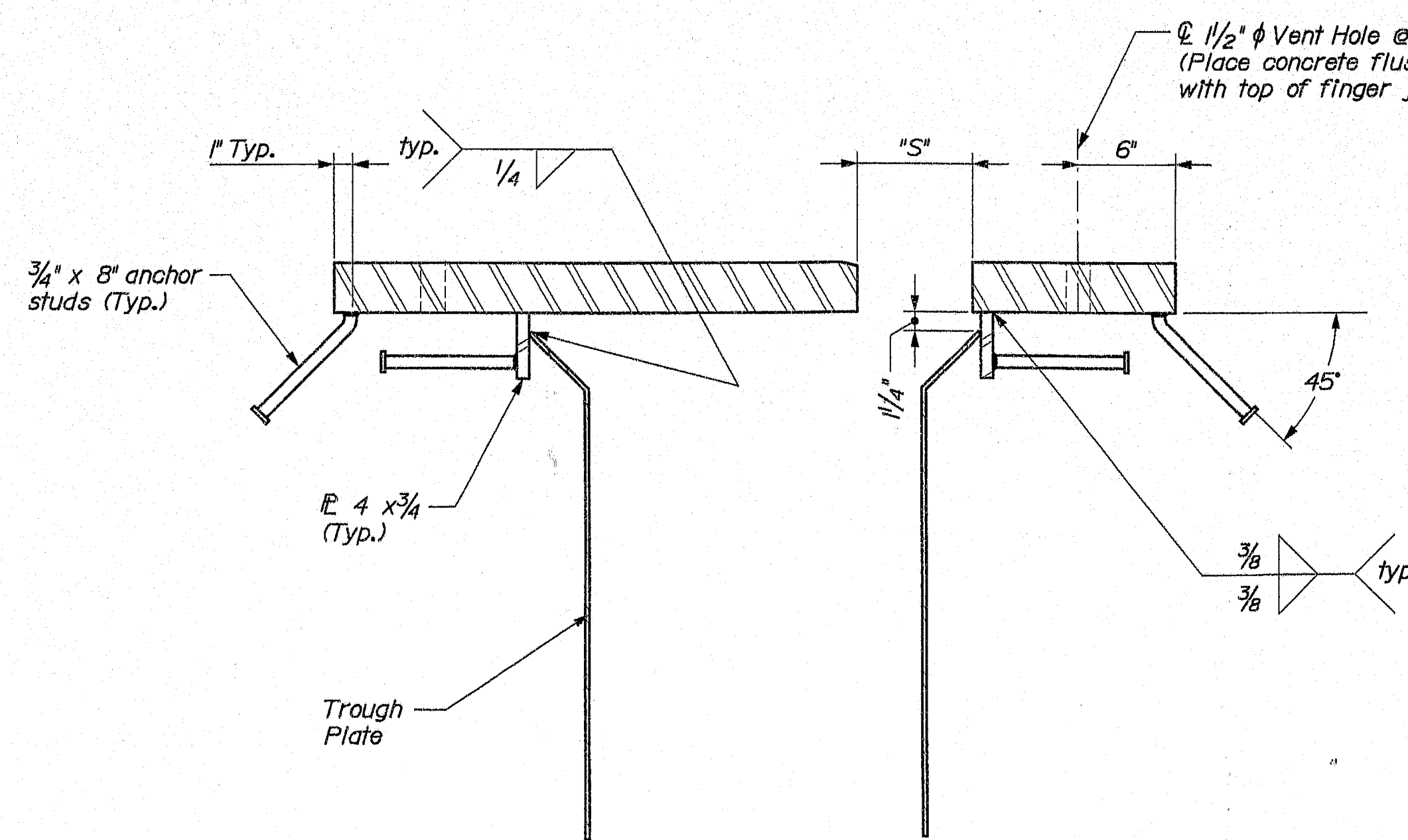
ADJUSTMENT DEVICE
Device at location 3 shown.
Locations 4 & 5 similar



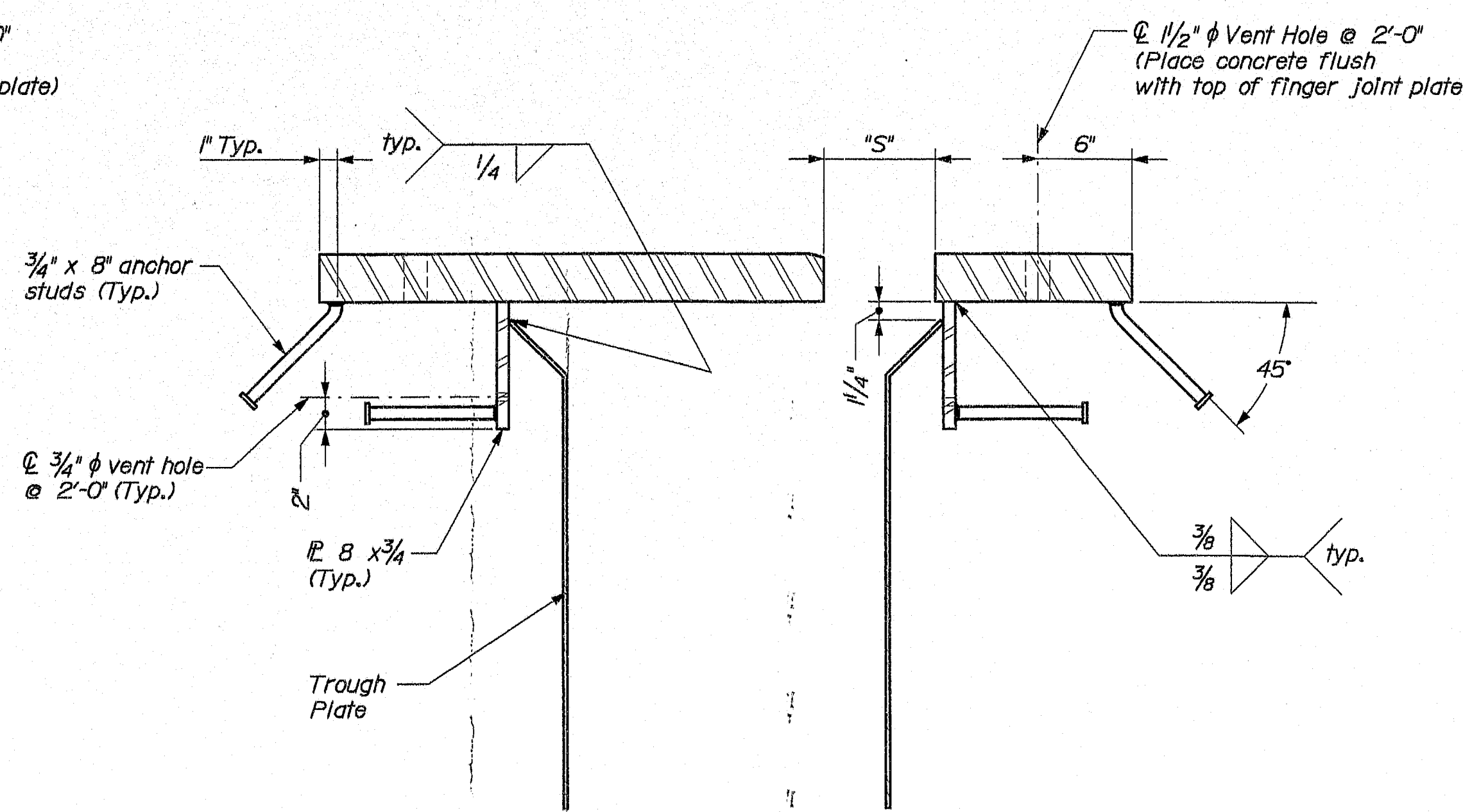
ADJUSTMENT DEVICE
Device at location 1 shown.
Locations 2 similar



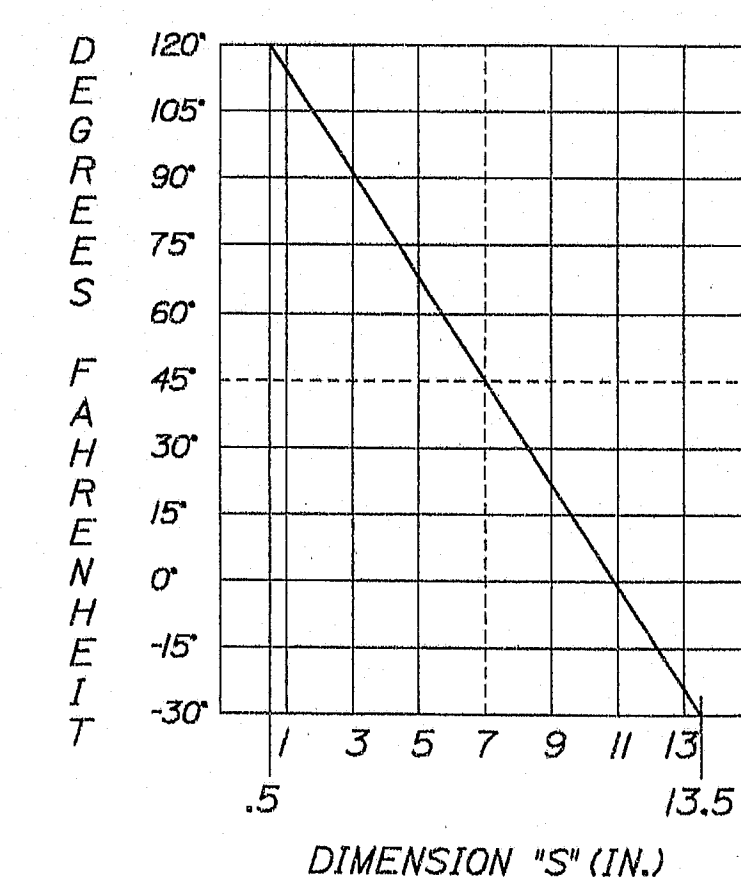
FINGER DETAIL



EXPANSION JOINT SECTION A-A



EXPANSION JOINT SECTION B-B



EXPANSION JOINT ADJUSTMENT CHART

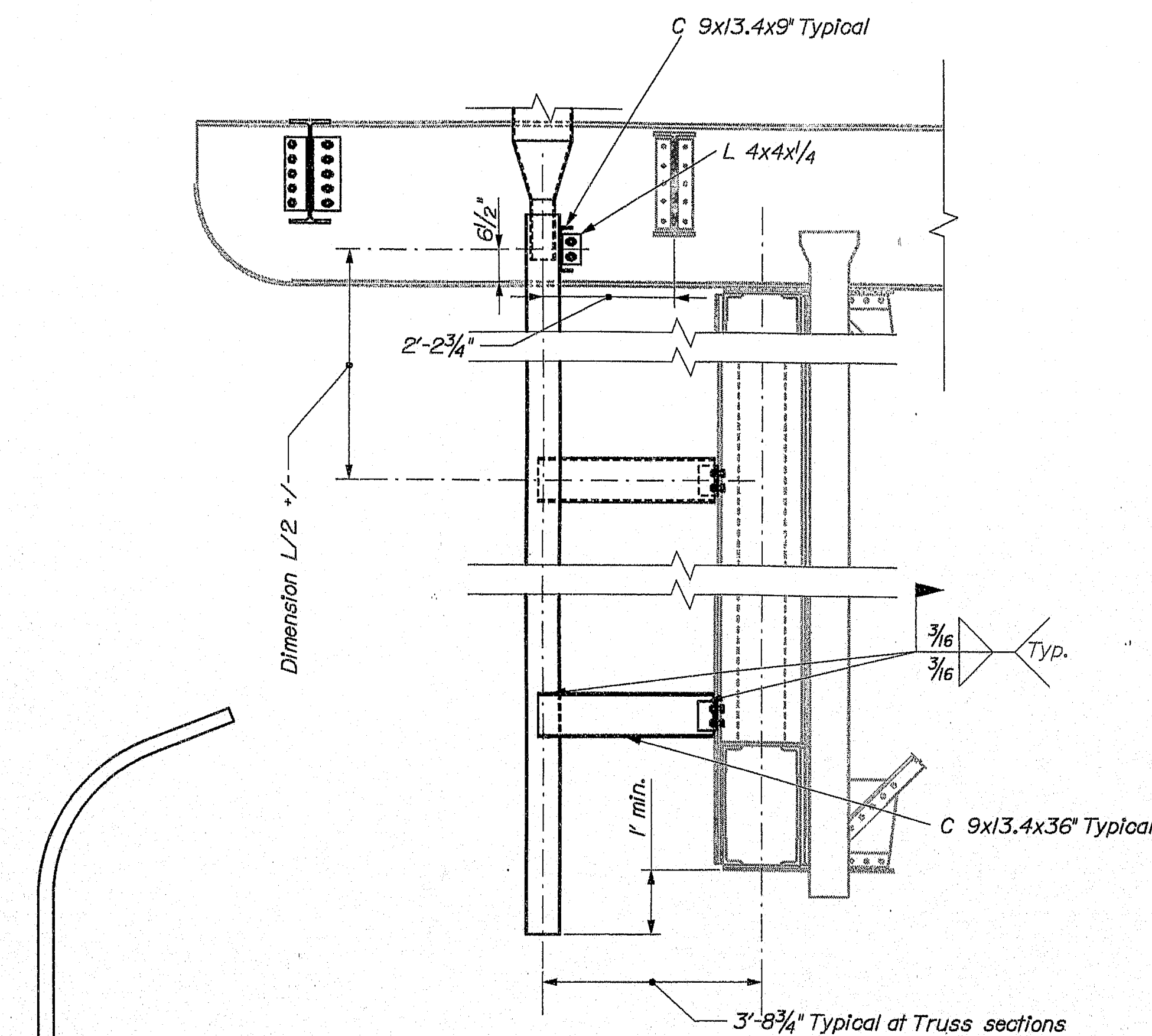
STATE OF MAINE		DEPARTMENT OF TRANSPORTATION		BH-9327(100)X	
MEMORIAL BRIDGE		KENNEBEC RIVER		CITY OF AUGUSTA KENNEBEC COUNTY	
SUPERSTRUCTURE EXPANSION JOINTS - PIER NO. 6		SHEET NUMBER		27	
		OF 46			
PROJ. MANAGER	WLF	BY	DATE	SIGNATURE	P.L. NUMBER
DESIGNED	ETC	NS	2/23/05		
CHECKED	REVIEWED	NS			
DESIGNED	REVIEWED	NS			
DESIGNED	REVIEWED	NS			
REVISIONS 1					
REVISIONS 2					
REVISIONS 3					
REVISIONS 4					
FIELD CHANGES					

Date: 3/3/2005

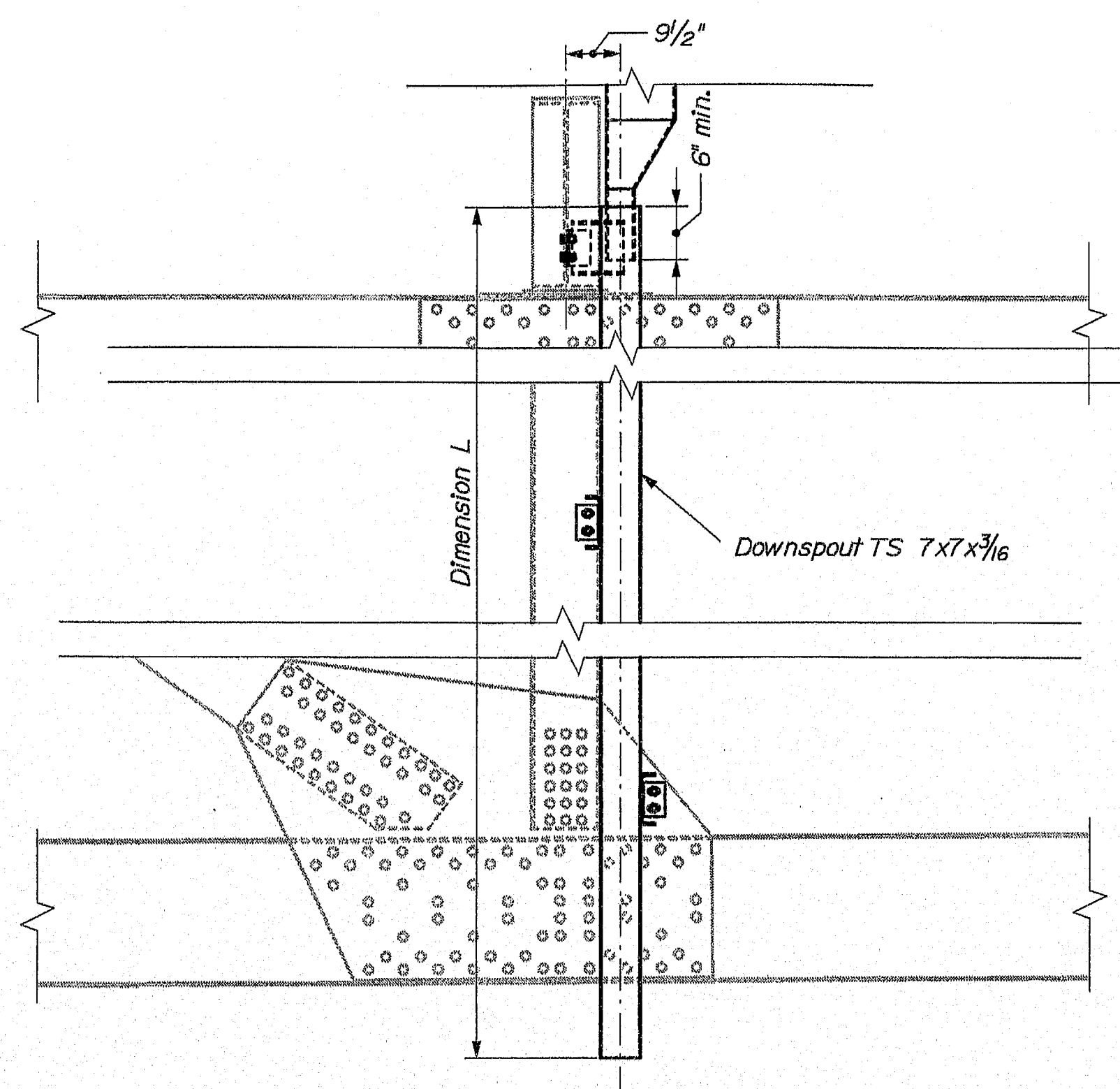
Username: david.sullivan

Division: BRIDGE

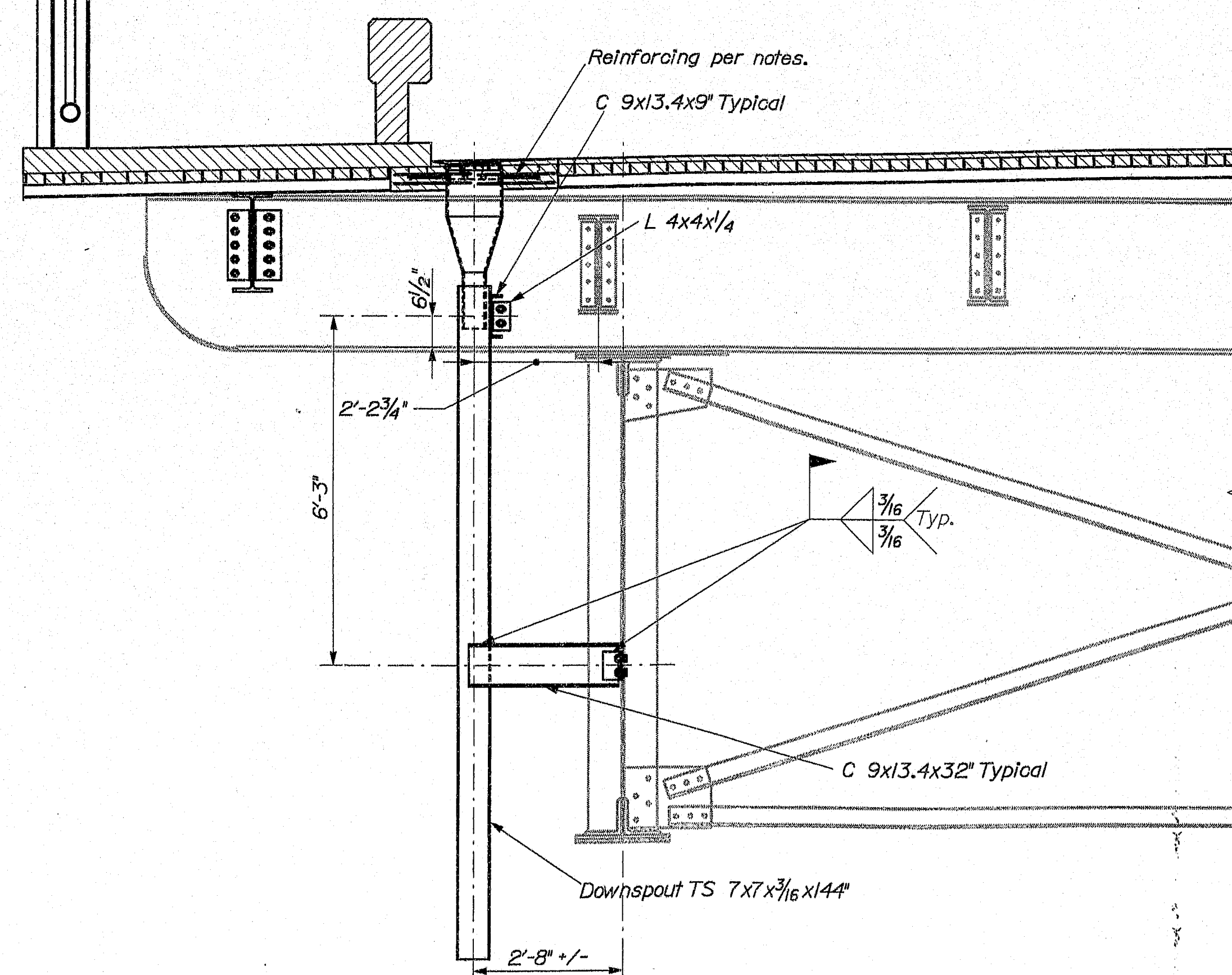
Filename: ... \msta\029_Drain_Details.dgn



TRUSS DRAIN LOCATION TRANSVERSE SECTION

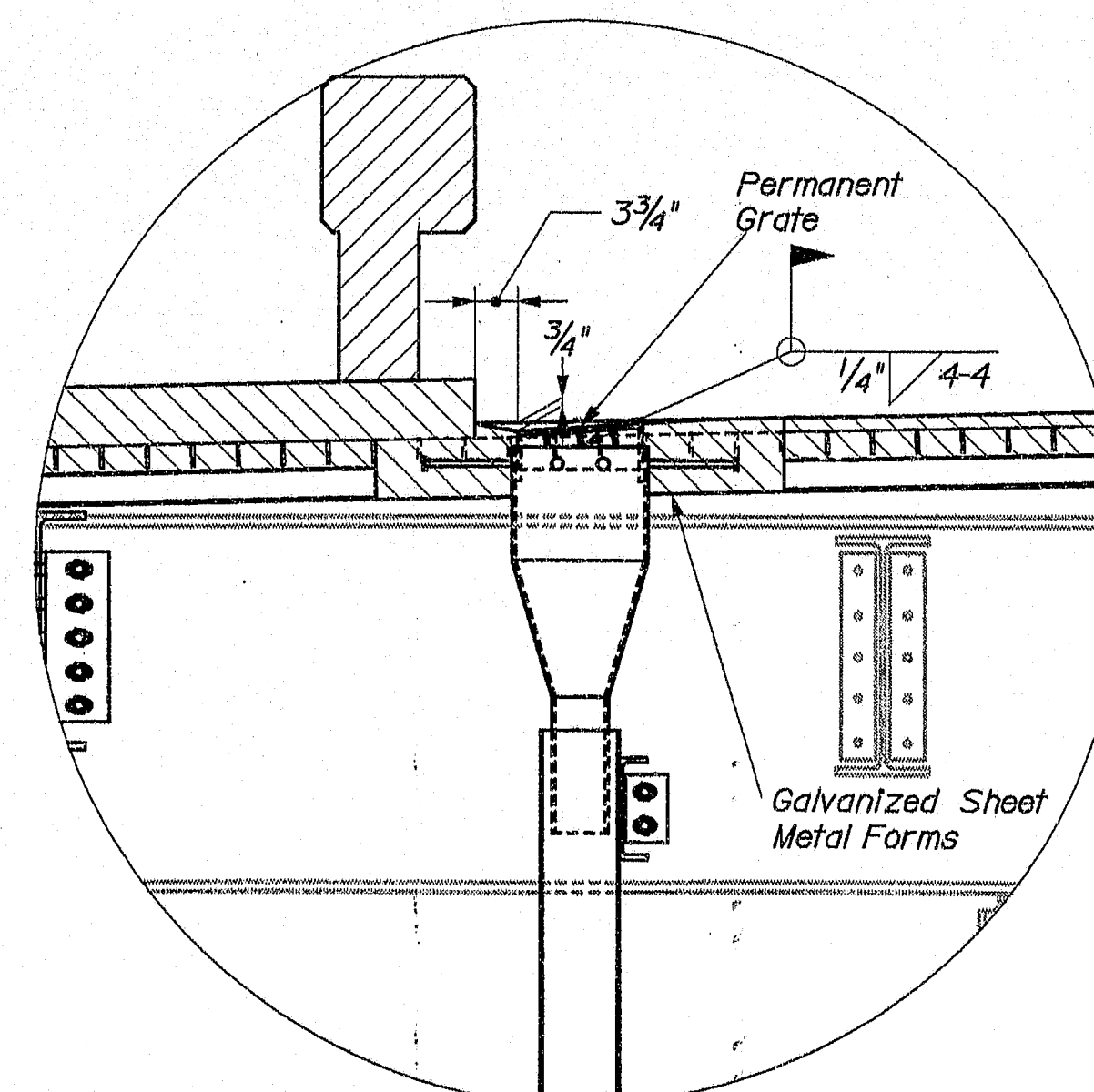


TRUSS DRAIN LOCATION ELEVATION

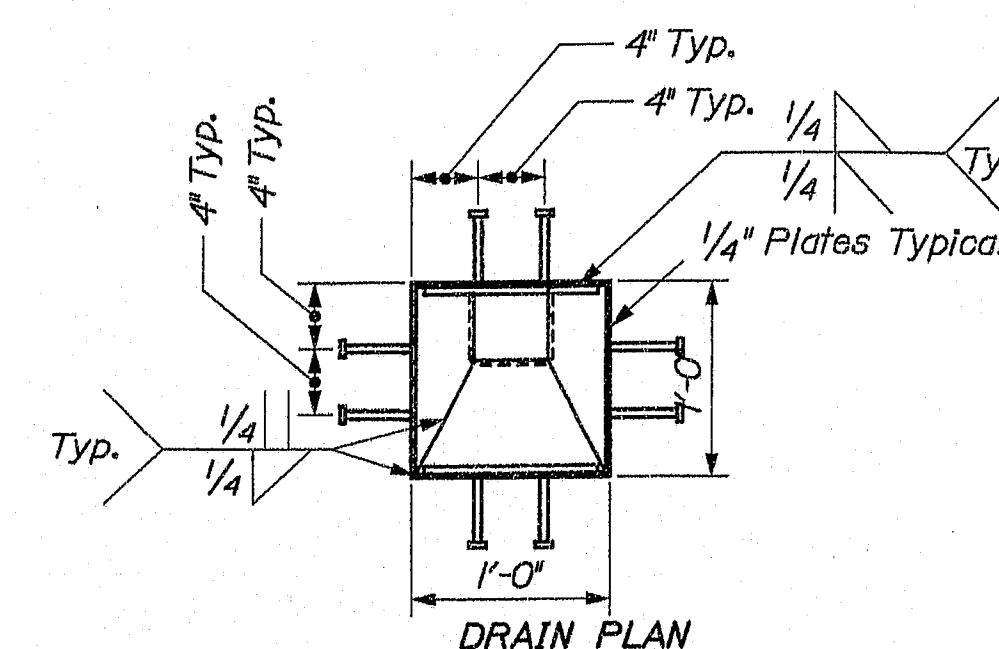


GIRDER DRAIN LOCATION TRANSVERSE SECTION

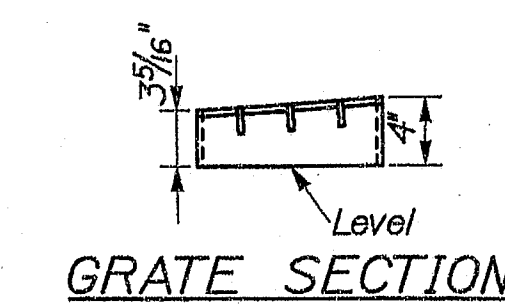
DRAIN	LENGTH -"L"	NO. REQ'D	COMMENTS
Drain D-1	22'-11"	3	These are the first and last set of drains on the Truss.
Drain D-2	25'-6"	8	Approximately 25' from a pin hanger on the suspended span
Drain D-3	39'-3"	8	Approximately 50' from a pin hanger on the Anchor or cantilevered span
Drain D-4	37'-1"	8	Approximately 50' from the piers on the Anchor spans
Drain D-5	23'-10"	8	Located toward the midspan of the two anchor spans
Drain D-6	12'-0"	9	Located on the girder spans



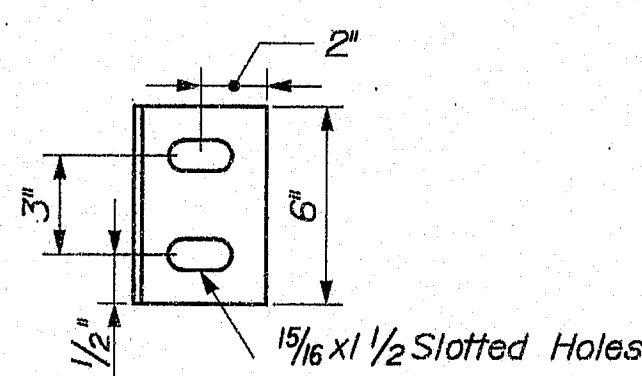
DRAIN INSTALLATION DETAILS
Reinforcing not shown for clarity



DRAIN DETAILS



GRATE PLAN



CONNECTION ANGLE DETAIL

NOTES

- Each bridge drain consists of one collector with two grates and one downspout with associated connection angles and standoff brackets as well as all galvanized metal formwork required for the 3'x3' bondout, and 8 - #5 bars as required under note #9. The cost of fabrication, delivery, and installation of each bridge drain including topcoat and touch up shall be considered incidental to prefabricated deck panels.
- Materials shall conform to Subsection 711.04 of the standard specifications.
- Grating shall be a commercial heavy-duty grating with 1 1/2"x3/16" bearing bars and 3/8" phi cross bars.
- Bolted connections shall be made using A325 7/8" phi bolts. Holes required in existing members shall be drilled to 1 1/8" phi.
- The exact location of the drains may be varied slightly to accommodate the spacing of the main bearing bars in the decking grid.
- Remove galvanizing as necessary prior to field welding the permanent grate.
- Coat all field welds with an approved zinc-rich paint after welding.
- All drain downspouts shall be topcoated to match the color of the existing bridge after galvanizing in accordance with special provision section 506. All standoff brackets, connection angles, grate, and drains may remain galvanized, with no topcoat.
- Install 8 #5 bars 1'-11" long at each drain location. Bars are to be installed 2 at each corner at 45° to the drain centerline.
- The two drain downspouts located approximately 25 ft. either side of pier no. 9, that pier immediately West of Arsenal street, shall be fitted with diversion channels as indicated on the pier no. 9 Drainage Details Sheet. These downspouts must be modified in accordance with the details shown on the Pier no. 9 Drainage Details Sheet.

STATE OF MAINE	DATE	BY	WLF	PROJ. MANAGER	DESIGN-DETAILED	CHECKED-REVIEWED	DATE	SIGNATURE	P.L. NUMBER	DATE
DEPARTMENT OF TRANSPORTATION	2/23/05	RRC	RRC	ETC	DESIGN-DETAILED	DESIGN-DETAILED	2/23/05			
BH-9327(100)X		BN	BN		REVISIONS 1	REVISIONS 2				
					REVISIONS 3	REVISIONS 4				
					FIELD CHANGES					
MEMORIAL BRIDGE	CITY OF AUGUSTA				KENNEBEC RIVER		KENNEBEC COUNTY		DRAIN DETAILS	
SHEET NUMBER								29		
OF 46								134-251		

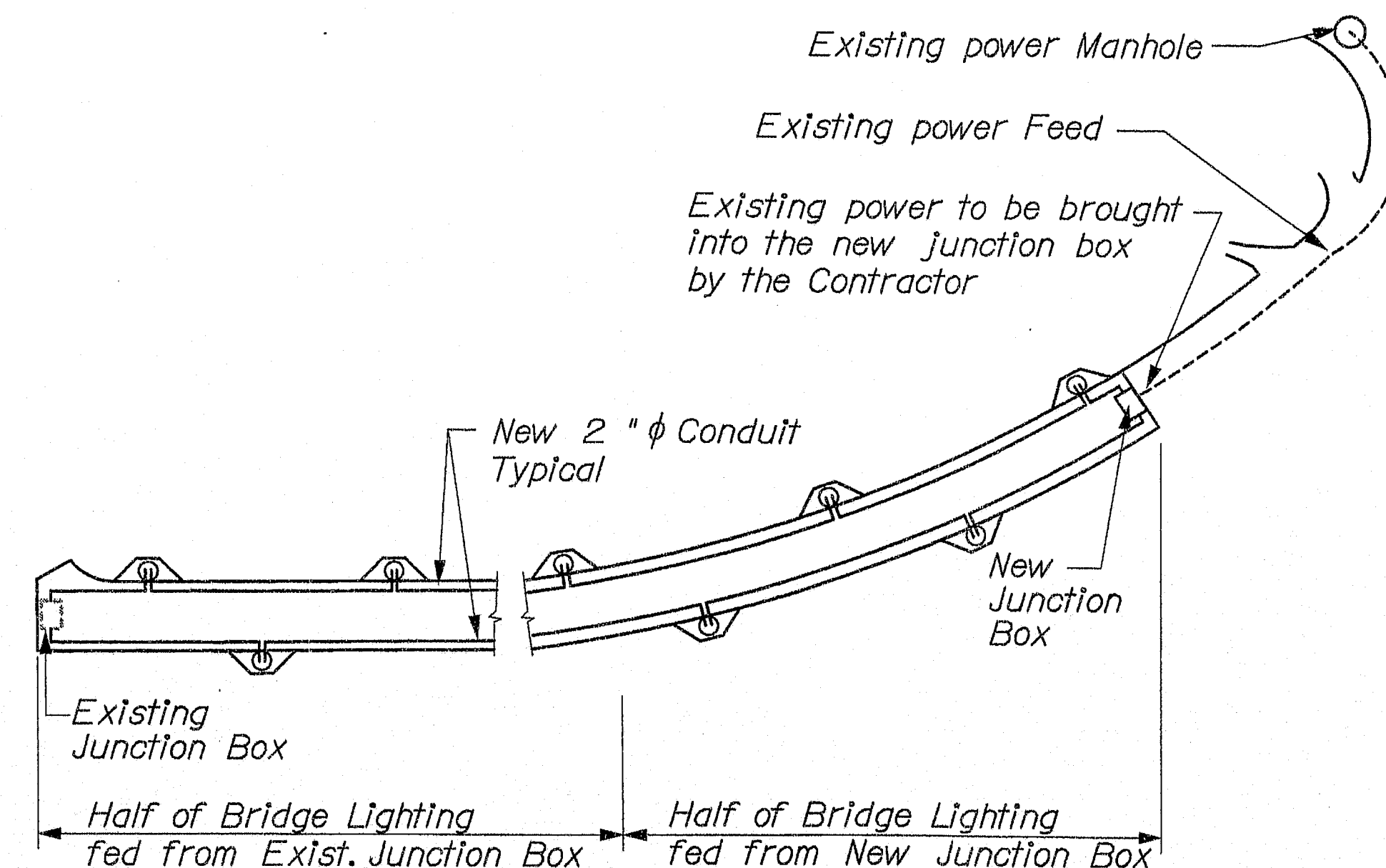
BRIDGE NO. 5198
PIN 9327.10
BRIDGE PLANS

Date: 3/3/2005

Username: david.sullivan

Division: BRIDGE

Filename: ... \msta\030_Lighting_Details.dgn



PLAN

GENERAL NOTES - HIGHWAY LIGHTING, AUGUSTA, MEMORIAL BRIDGE

1. INSTALL LIGHTING ON THE BRIDGE STRUCTURE.

2. LUMINAIRES SHALL BE KING LUMINAIRE, K804-EGD-III-250-MH-240-PL, IES CUTOFF OPTICS, IES TYPE 3 DISTRIBUTION, GLASS REFRACTOR, 250 WATT, METAL HALIDE, IES TEST NO. K83- 7792. IES. THE PLANS WERE DESIGNED WITH THIS FIXTURE. IF DIFFERENT LUMINAIRES ARE PROPOSED THE CONTRACTOR MUST DEMONSTRATE THAT THE PROPOSED LUMINAIRES WILL MEET OR EXCEED DESIGN LIGHT LEVELS.

3. THE LUMINAIRES SHALL BE 30 FEET ABOVE THE ROADWAY. THE POLES SHALL BE OR SIMILAR TO KING LUMINAIRE, CATALOG NO. KMFF C/W KSBIG WITH 6 FOOT ARM, KASIS. EACH POLE SHALL BE EQUIPPED WITH A VIBRATION DAMPENER. POLES MAY BE EITHER GALVANIZED STEEL OR ALUMINUM OR A COMBINATION THEREOF.

4. ALL WORK SHALL CONFORM TO THE STANDARD SPECIFICATIONS, STANDARD DETAILS AND SUPPLEMENTALS THERETO.

5. THE NEW LIGHTING SHALL BE POWERED FROM THE EXISTING SERVICES. SPLICE INTO EXISTING WIRING OR RUN NEW WIRE TO EXISTING SERVICES. INSTALL JUNCTION BOXES IF NECESSARY.

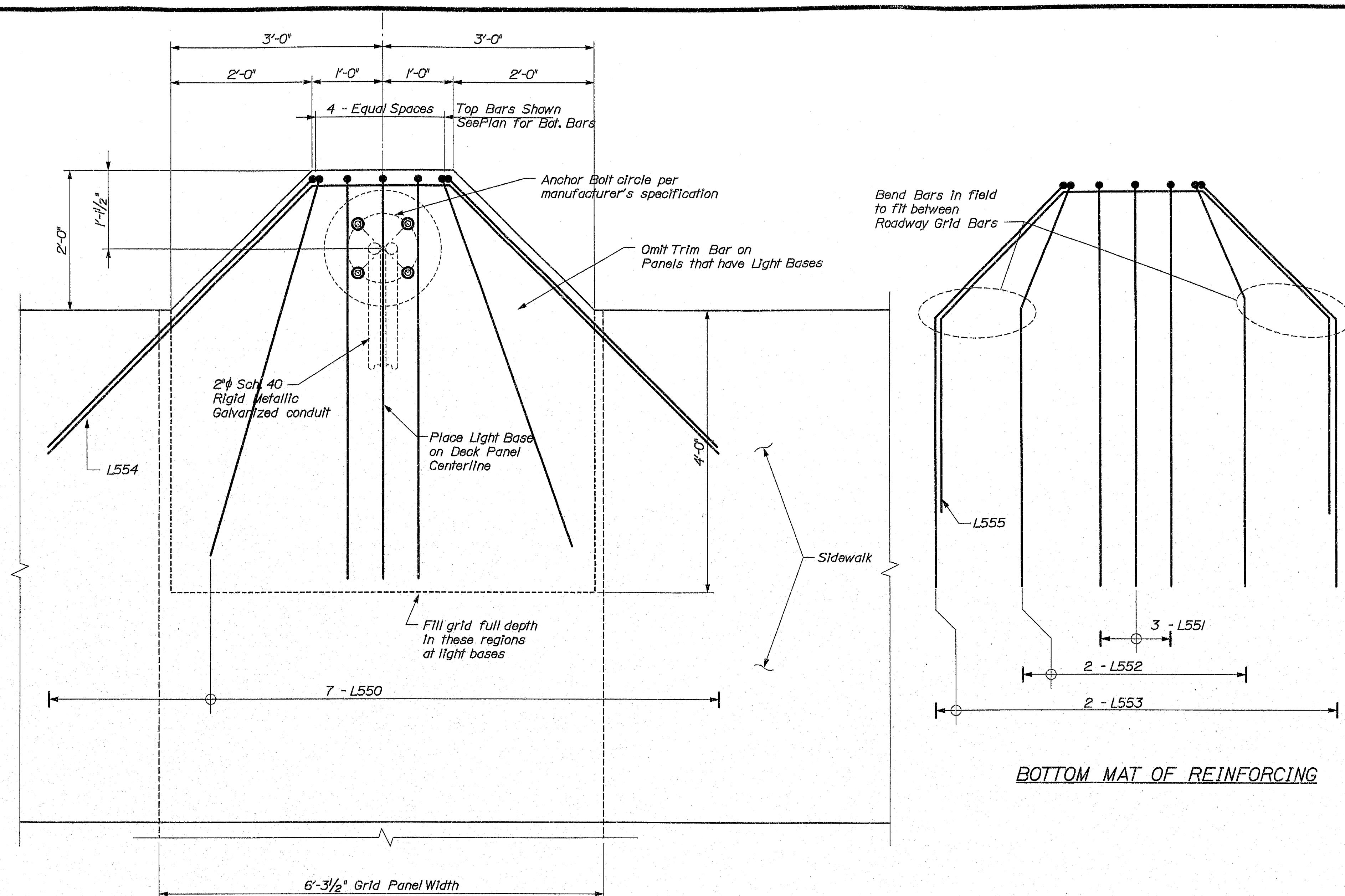
6. INSTALL 2 INCH METALIC CONDUIT IN THE BRIDGE STRUCTURE. INSTALL APPROPRIATE EXPANSION DEVICES.

7. ITEM NO. 634.160 SHALL INCLUDE THE POLES, CROSSARMS, LUMINAIRES AND ALL INCIDENTALS FOR A FUNCTIONING SYSTEM.

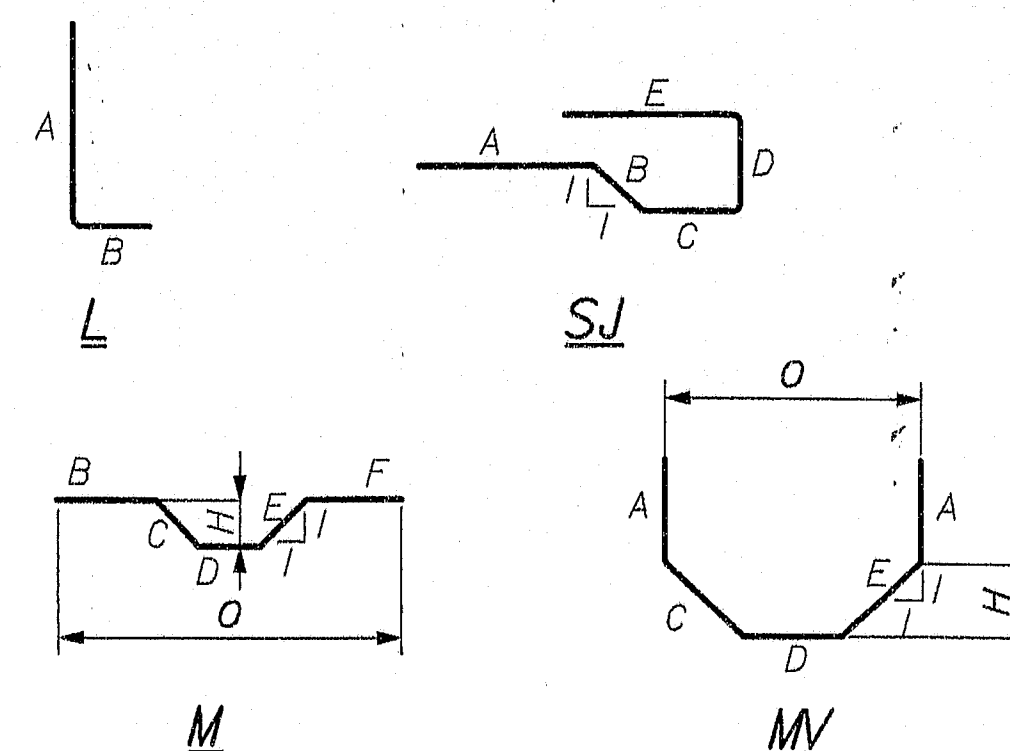
BENT BARS											
MARK	QTY.	LENGTH	TYPE	A	B	C	D	E	H	O	LOCATION
L550	147	6'-5"	L	9"	5'-8"	-	-	-	-	-	Lightpost Corbel
L551	63	6'-6"	SJ	3'-11 1/2"	2 1/8"	1'-7 1/2"	9"	-	-	-	Lightpost Corbel
L552	42	7'-2 1/2"	SJ	3'-10"	2 1/8"	2'-5 1/2"	9"	-	-	-	Lightpost Corbel
L553	42	6'-6 1/2"	SJ	3'-7"	2 1/8"	1'-8 1/2"	9"	-	-	-	Lightpost Corbel
L554	21	12'-7"	M	-	-	5'-4 1/2"	1'-10"	5'-4 1/2"	3'-9 1/2"	-	Lightpost Corbel
L555	21	12'-7"	MV	2'-9"	-	2'-7 1/2"	1'-10"	2'-7 1/2"	1'-10 1/2"	5'-7 1/2"	Lightpost Corbel

LIGHT POST BASE REINFORCING STEEL SCHEDULE

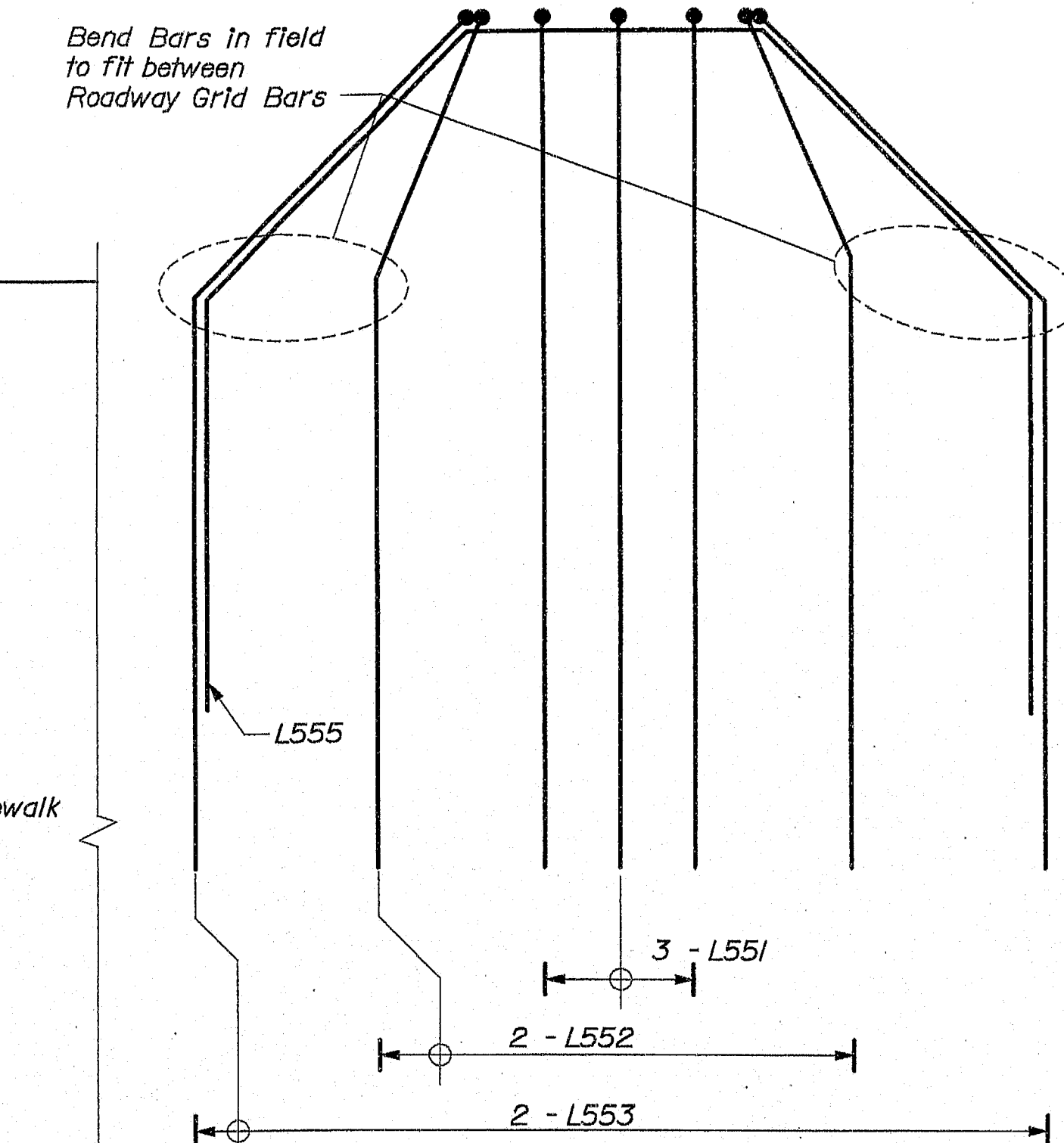
Reinforcing will be paid under Items 503.12 and 503.13



PLAN LIGHT POST BASE



SECTION THROUGH LIGHT POST BASE



BOTTOM MAT OF REINFORCING

STATE OF MAINE DEPARTMENT OF TRANSPORTATION BH-9327(100)X	DATE 2/23/05	BY DMS	WLF ETC	PROJ. MANAGER DESIGN-REVIEWED CHECKED-REVIEWED DESIGN-REVIEWED DESIGN-REVIEWED REVISIONS 1 REVISIONS 2 REVISIONS 3 FIELD CHANGES	SIGNATURE P.E. NUMBER DATE
CITY OF AUGUSTA KENNEBEC COUNTY LIGHTING DETAILS	SHEET NUMBER 30 OF 46				

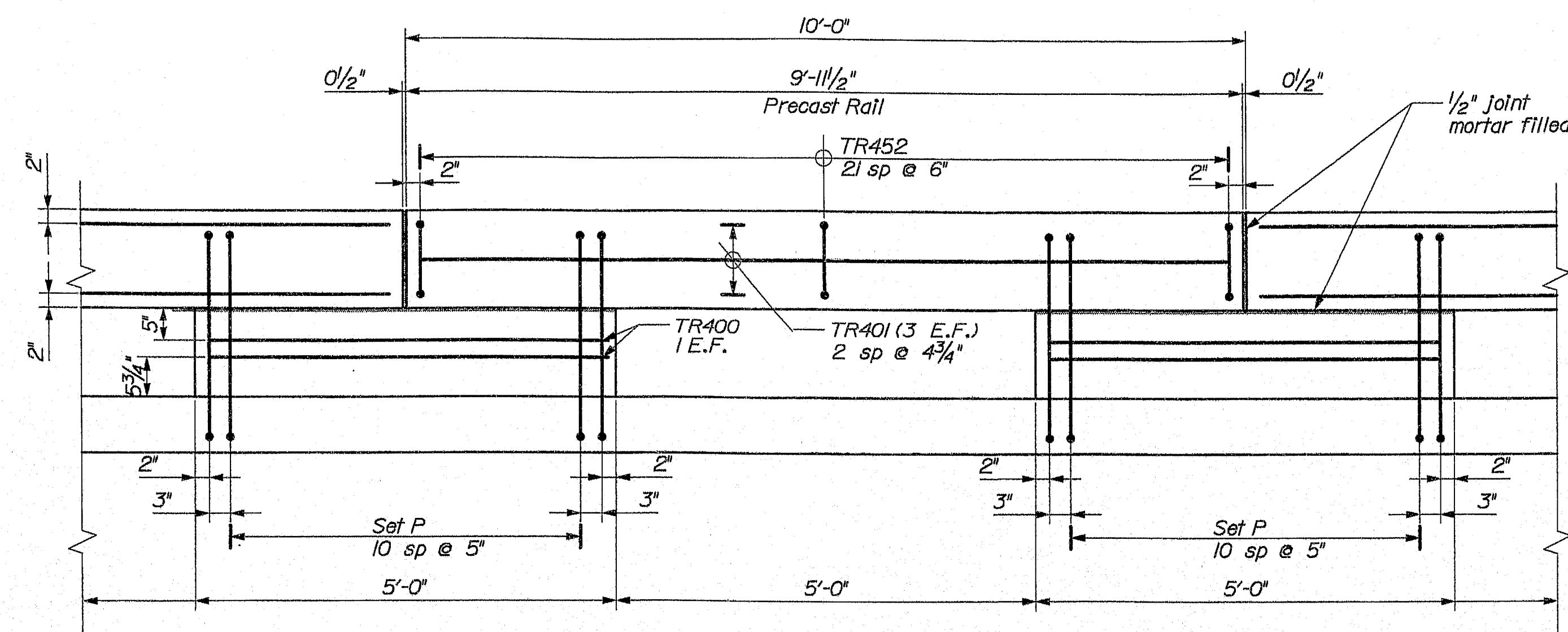
134-252

Date: 3/3/2005

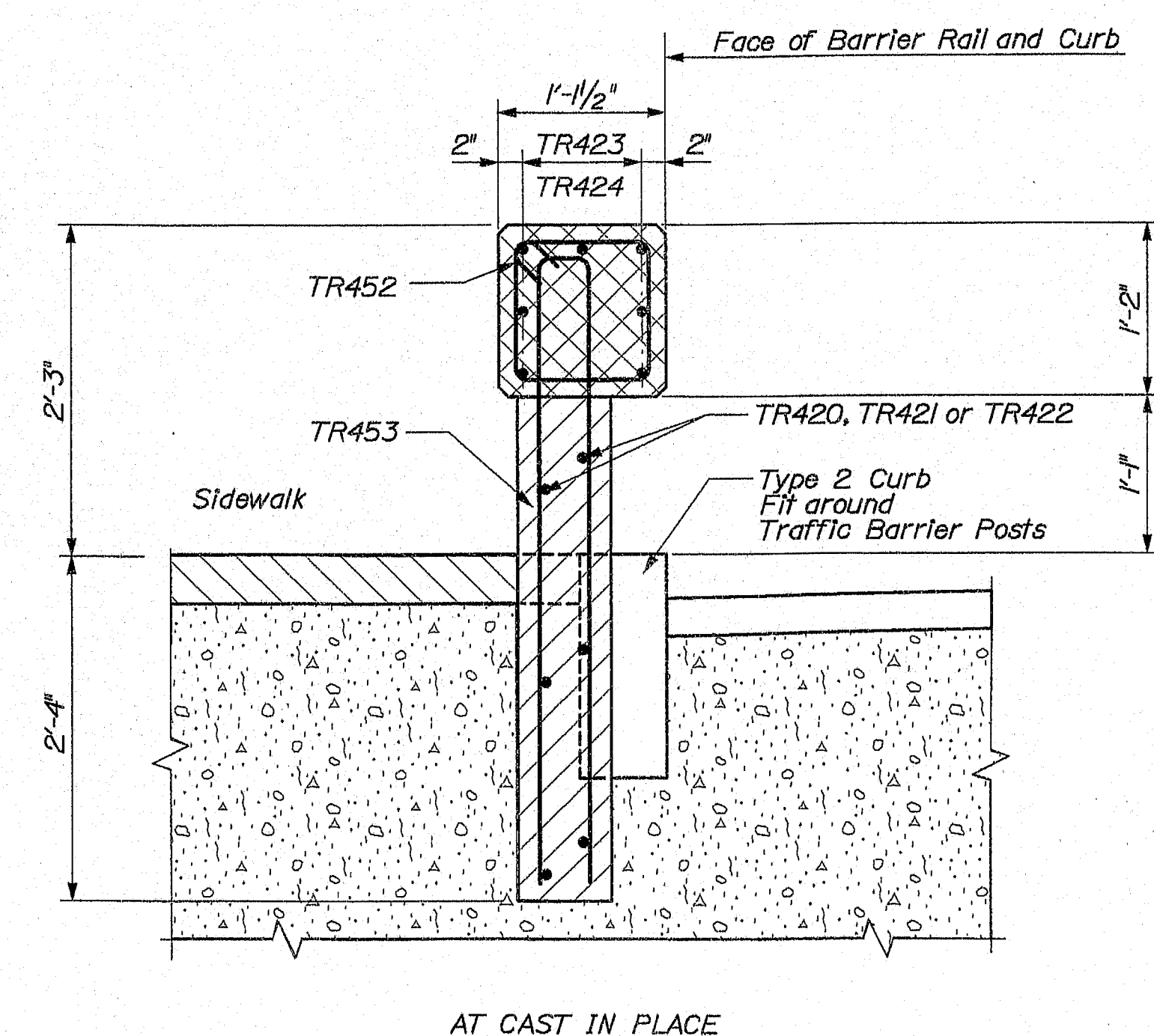
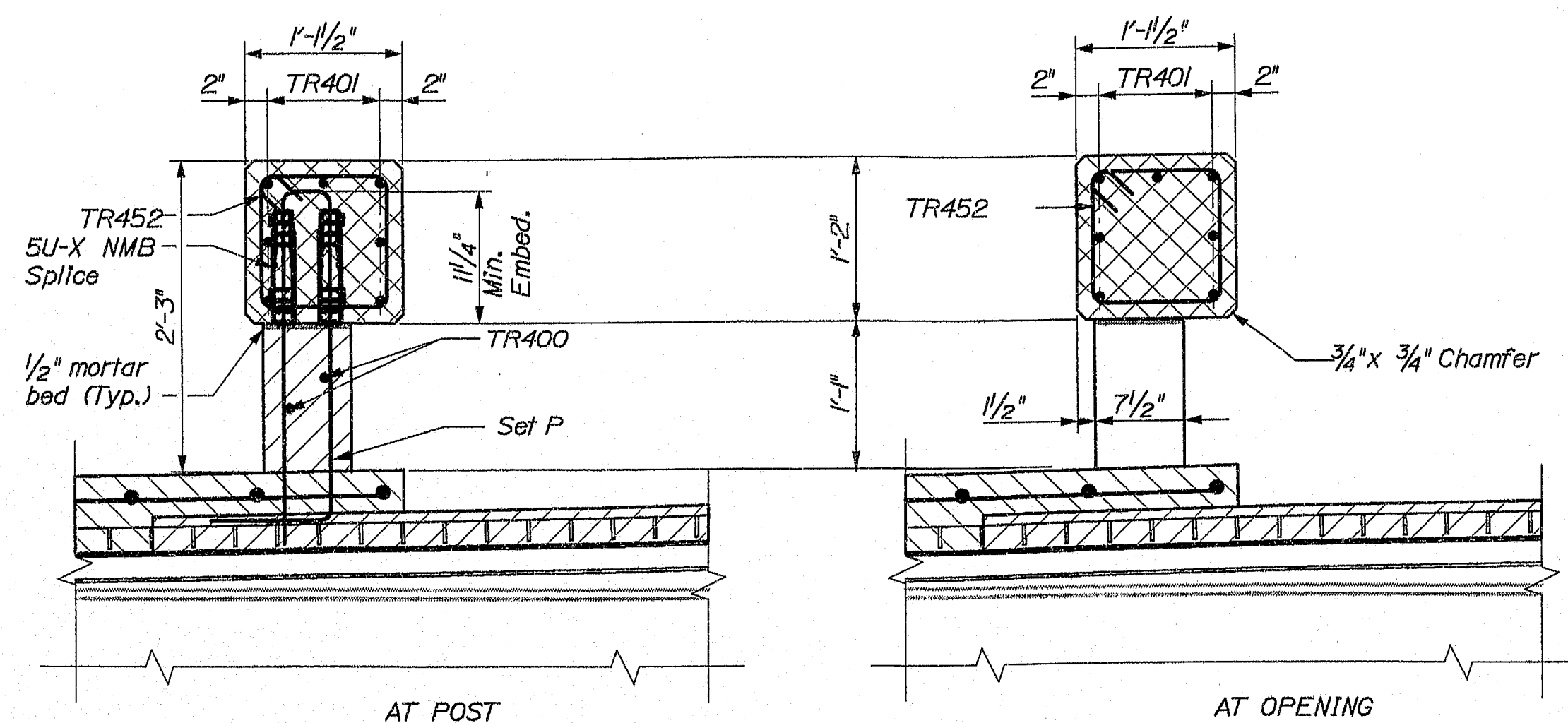
Username: david.sullivan

Division: BRIDGE

Filename: ...msta031_Traffic_Barrier.dgn



ELEVATION SHOWING TYPICAL REINFORCING PLACEMENT
Precast shown, Cast In Place similar (except for "Set P", use TR453 for Cast In Place)

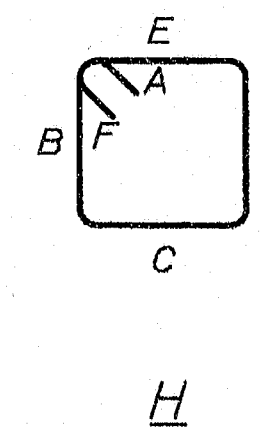
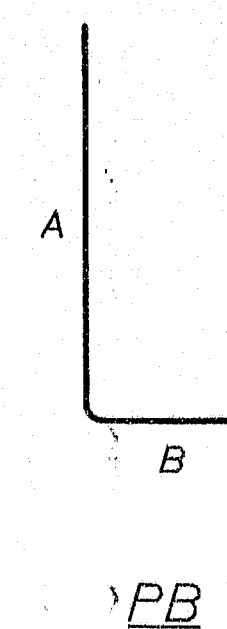
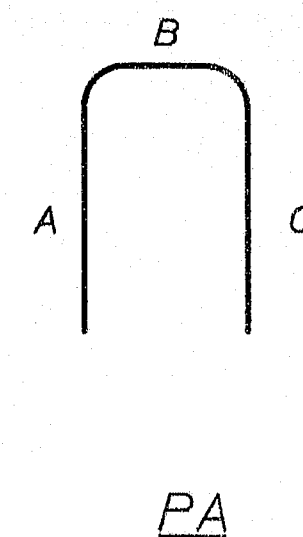
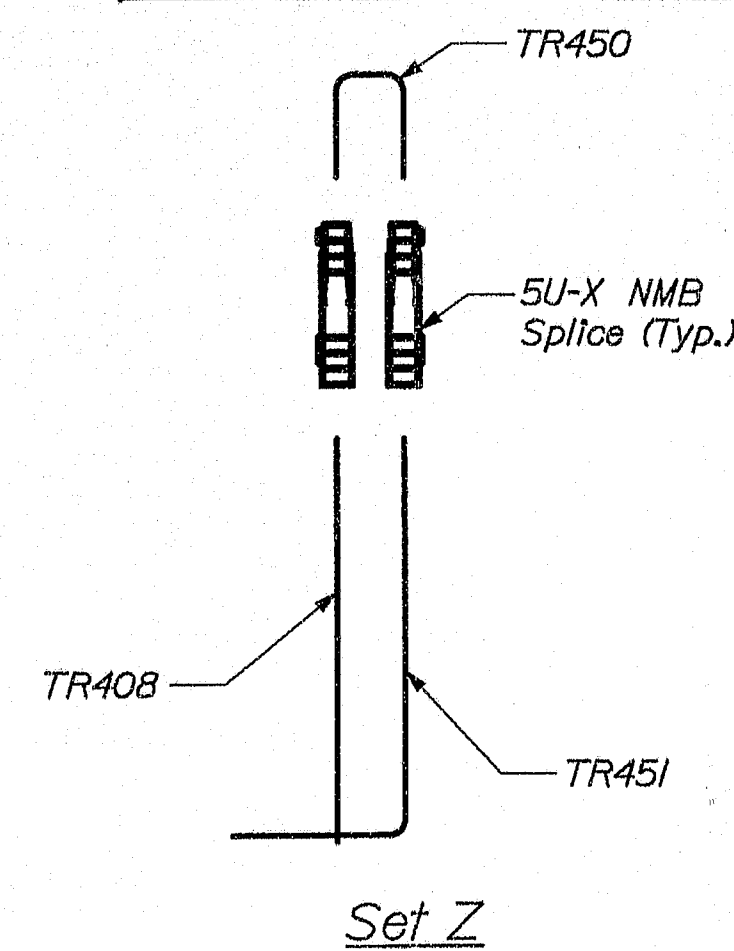


SECTIONS THRU RAIL

BARRIER NOTES:

1. Precast Concrete Barrier is comprised of the following parts: concrete parapet, cast in place concrete posts, all reinforcing shown, including that embedded in the filled grid; these are considered Paid for under work item No. 526.51.
2. All steel components, except reinforcing, shall be hot dipped galvanized unless otherwise shown on plans.
3. Chamfer all exposed corners, 3/4" chamfer.
4. All reinforcing shall be Grade 60.
5. Face of rail and parapet shall be vertical. Openings shall have end faces perpendicular to adjacent roadway grade.
6. All grout tubes for NMB Couplers shall be to the sidewalk face of rail.

TRAFFIC RAIL BARS														LOCATION
MARK	QTY.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	
TR400	822	4'-8"												post longitudinal (5'-0")
TR401	2 863	9'-8"												rail longitudinal (10'-0")
TR402	28	9'-2"												rail longitudinal (9'-6")
TR403	14	5'-11"												rail longitudinal (6'-3")
TR404	14	5'-3"												rail longitudinal (5'-7 1/2")
TR405	14	5'-2"												rail longitudinal (5'-6")
TR406	14	5'-0"												rail longitudinal (5'-4 1/2")
TR407	28	4'-11"												rail longitudinal (5'-3")
TR408	5 525	2'-0"												post vertical
TR409	24	2'-2"												post longitudinal (2'-6")
TR420	12	4'-8"												post longitudinal (5'-0")
TR421	2	5'-11"												post longitudinal (5'-5")
TR422	2	2'-2"												post longitudinal (2'-6")
TR423	7	40'-0"												rail longitudinal (cip)
TR424	7	35'-0"												rail longitudinal (cip)
TR450	5 525	6'-5"	PA	0'-6"	0'-4"	0'-6"								post reinforcement
TR451	5 525	1'-9 1/2"	PB	1'-10 1/2"	0'-11"									post reinforcement
TR452	9 333	3'-10"	H	0'-3"	0'-10"	0'-10"	0'-10"	0'-10"	0'-3"					rail stirrup (9 174 precast; 159 cip)
TR453	99	6'-7"	PA	2'-7"	0'-6"	2'-7"								post vertical (cip)



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
BH-9327(100)X
BRIDGE NO. 6196
PIN 9327.10
BRIDGE PLANS

DATE: 2/2/05
BY: DNS
WLF: RNC
EITC: RNC
DESIGN-DETAILED: RNC
DESIGN-DETAILED2: RNC
DESIGN-DETAILED3: RNC
REVISIONS: 1
REVISIONS 2
REVISIONS 3
REVISIONS 4
FIELD CHANGES

MEMORIAL BRIDGE
KENNEBEC RIVER
CITY OF AUGUSTA KENNEBEC COUNTY
TRAFFIC BARRIER

SHEET NUMBER

31

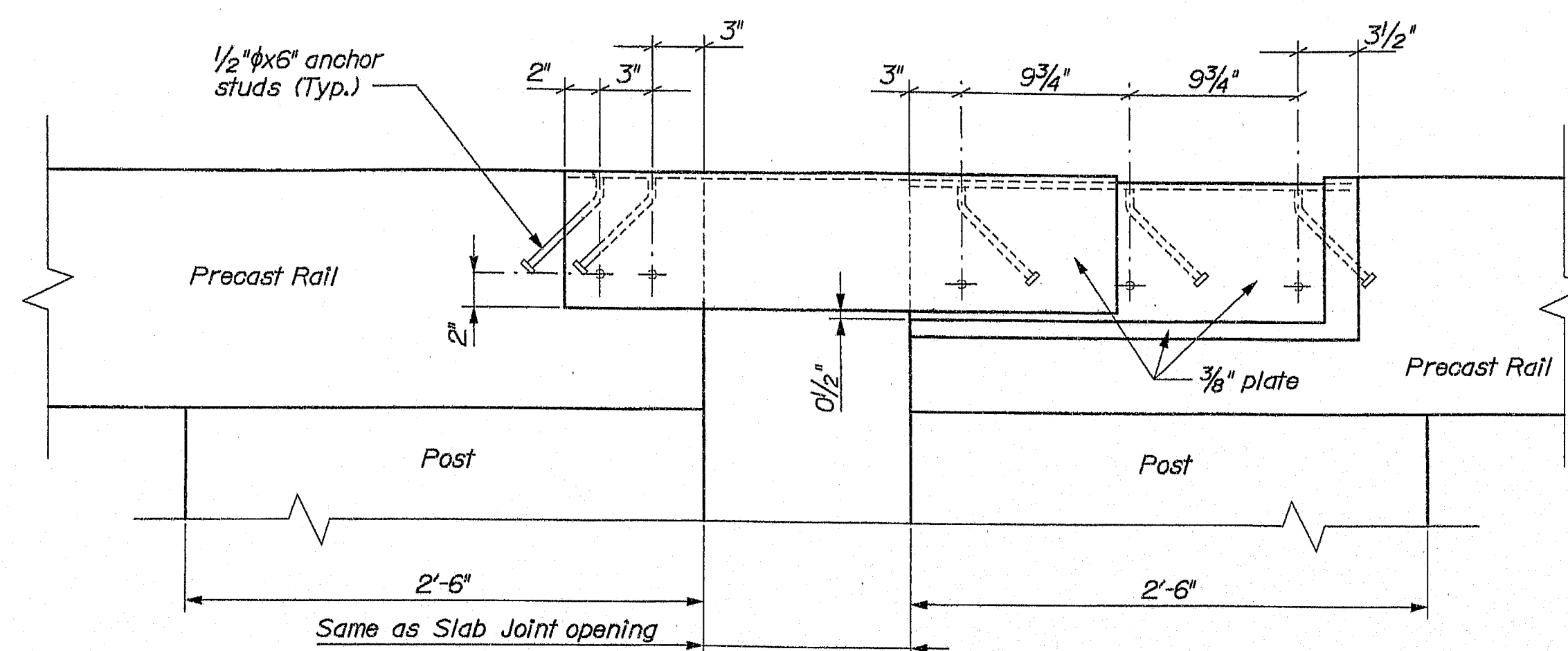
OF 46

134-253

Date: 3/3/2005

Username: david.sullivan

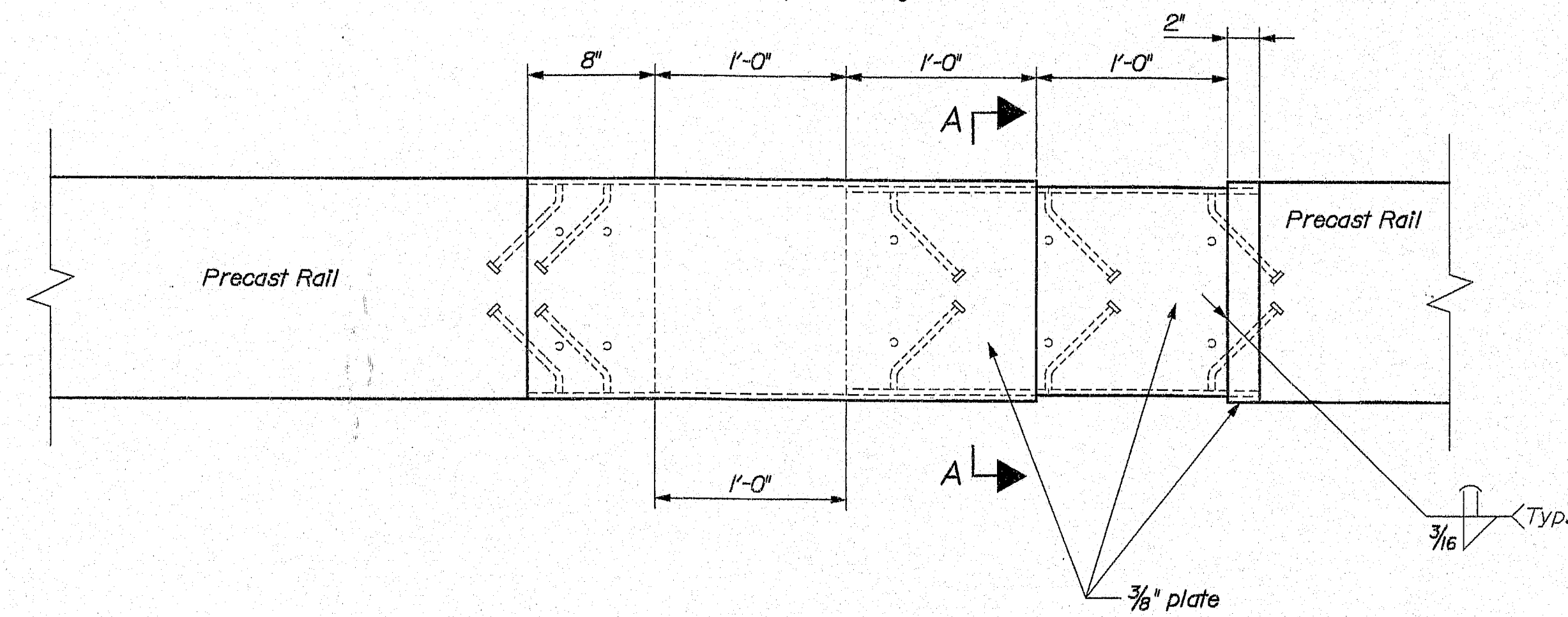
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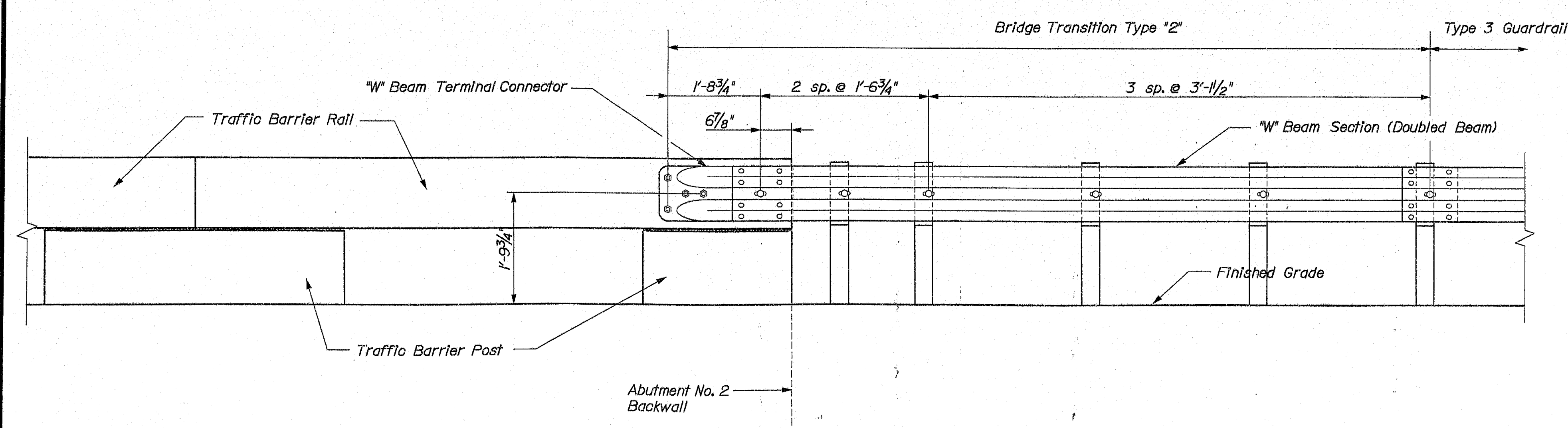
Post note - If Rail segment is = 8'-0" combine with adjacent post such that no opening between posts within an expansion length is less than 3'-0".

Expansion Joint - See Chart on Superstructure Expansion Joint Sheet for setting dimensions. All Three expansion joints are using this configuration for the Traffic Barrier Rail expansion joint (that is they all will have 12" of movement whether or not they need it)

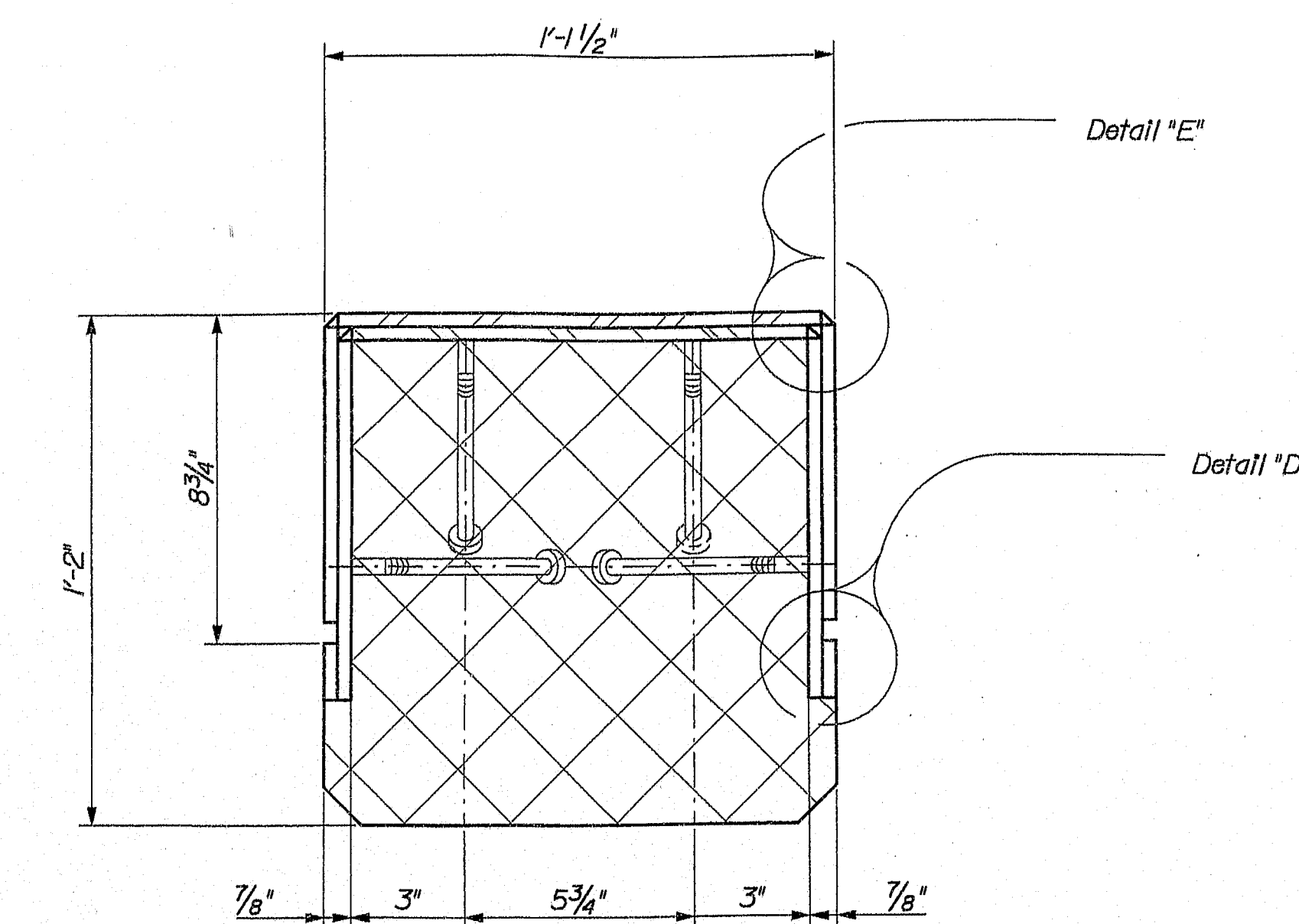
EXPANSION JOINT ELEVATION
(typical for each expansion joint)



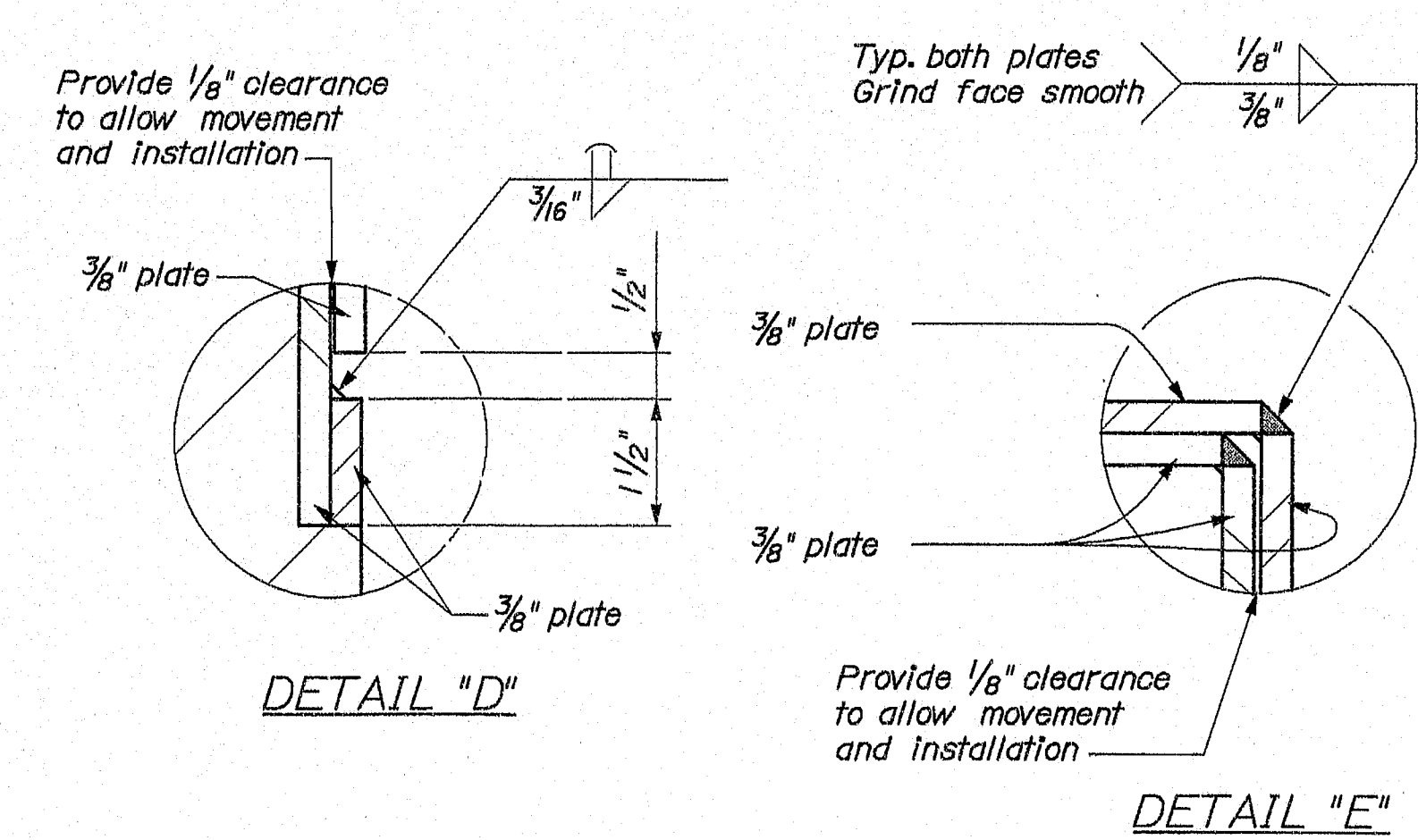
EXPANSION JOINT PLAN



BRIDGE TRANSITION TYPE "2"
(at Abut. 2 only)

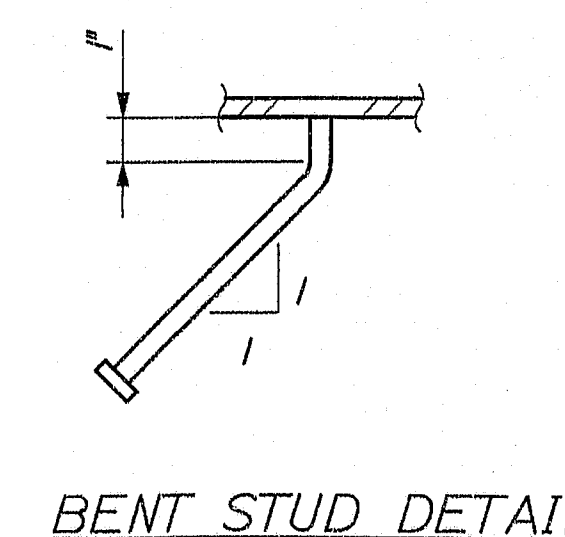


SECTION A-A



DETAIL "D"

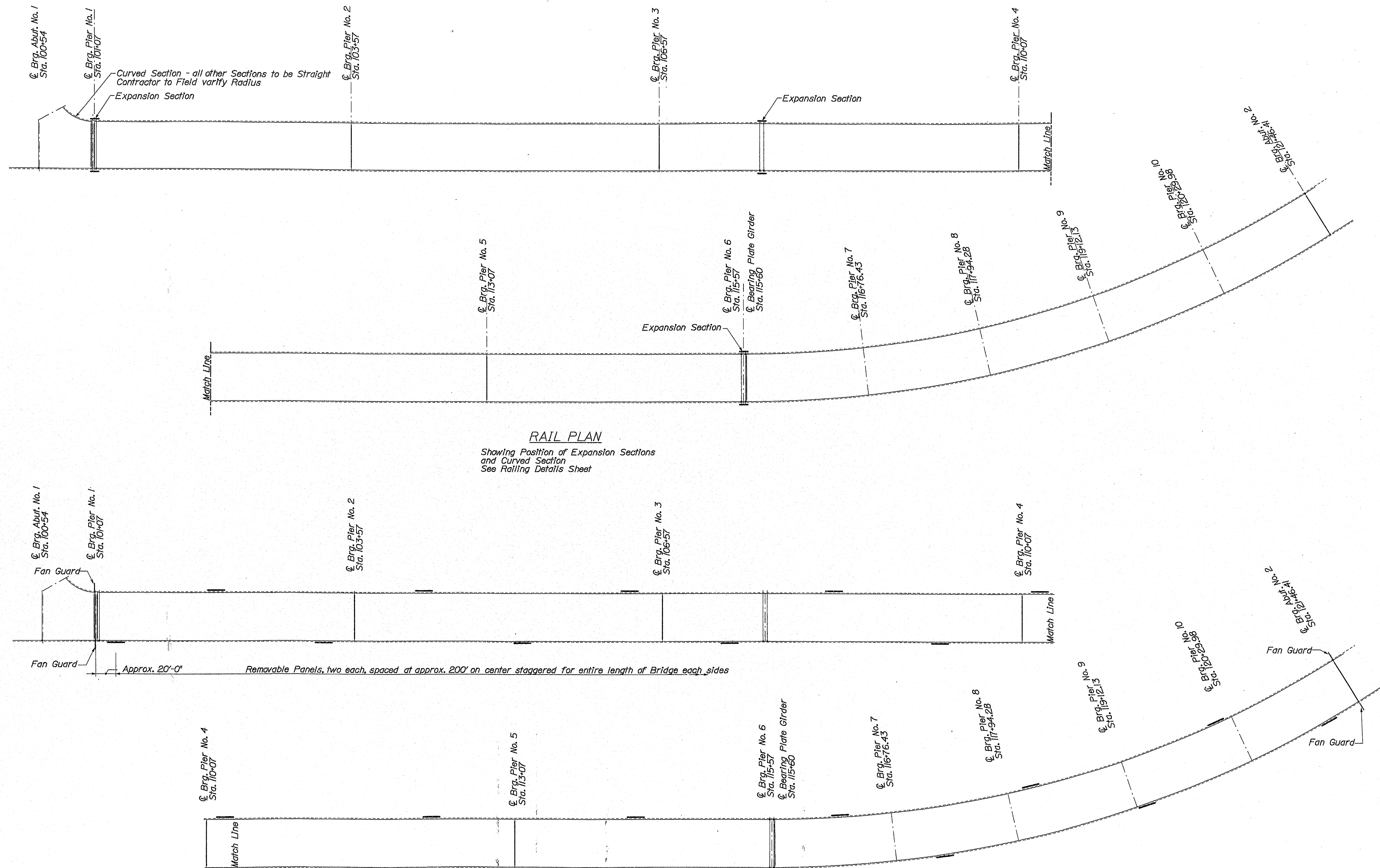
DETAIL "E"



BENT STUD DETAIL

STATE OF MAINE		DEPARTMENT OF TRANSPORTATION		BH-9327(100)X		BRIDGE NO. 5196		PIN 9327.10		BRIDGE PLANS	
MEMORIAL BRIDGE		KENNEBEC RIVER		CITY OF AUGUSTA		KENNEBEC COUNTY		TRAFFIC BARRIER		EXPANSION DETAILS	
PROJ. MANAGER		DESIGN-REVIEWED		CHECKED-REVIEWED		DESIGN-REVIEWED		DESIGN-REVIEWED		DESIGN-REVIEWED	
BY		DATE		DATE		DATE		DATE		DATE	
WLF		DMS		RRC		RRC		RRC		RRC	
ETC		2/23/05		2/23/05		2/23/05		2/23/05		2/23/05	
SIGNATURE		SIGNATURE		SIGNATURE		SIGNATURE		SIGNATURE		SIGNATURE	
P.E. NUMBER		P.E. NUMBER		P.E. NUMBER		P.E. NUMBER		P.E. NUMBER		P.E. NUMBER	
DATE		DATE		DATE		DATE		DATE		DATE	
FIELD CHANGES		FIELD CHANGES		FIELD CHANGES		FIELD CHANGES		FIELD CHANGES		FIELD CHANGES	
SHEET NUMBER		32		32		32		32		32	
OF 46		OF 46		OF 46		OF 46		OF 46		OF 46	

134-254



RAIL PLAN
Showing Position of Expansion Sections
and Curved Section
See Railing Details Sheet

SAFETY FENCE PLAN
Showing Position of Maintenance Access Panels.
They are removable panels (2 each) at a max. of
approx. 100' spacing both sides of Bridge.
Also shown are the position of the Bridge and Fan Guards.
See Safety Fence Details Sheet

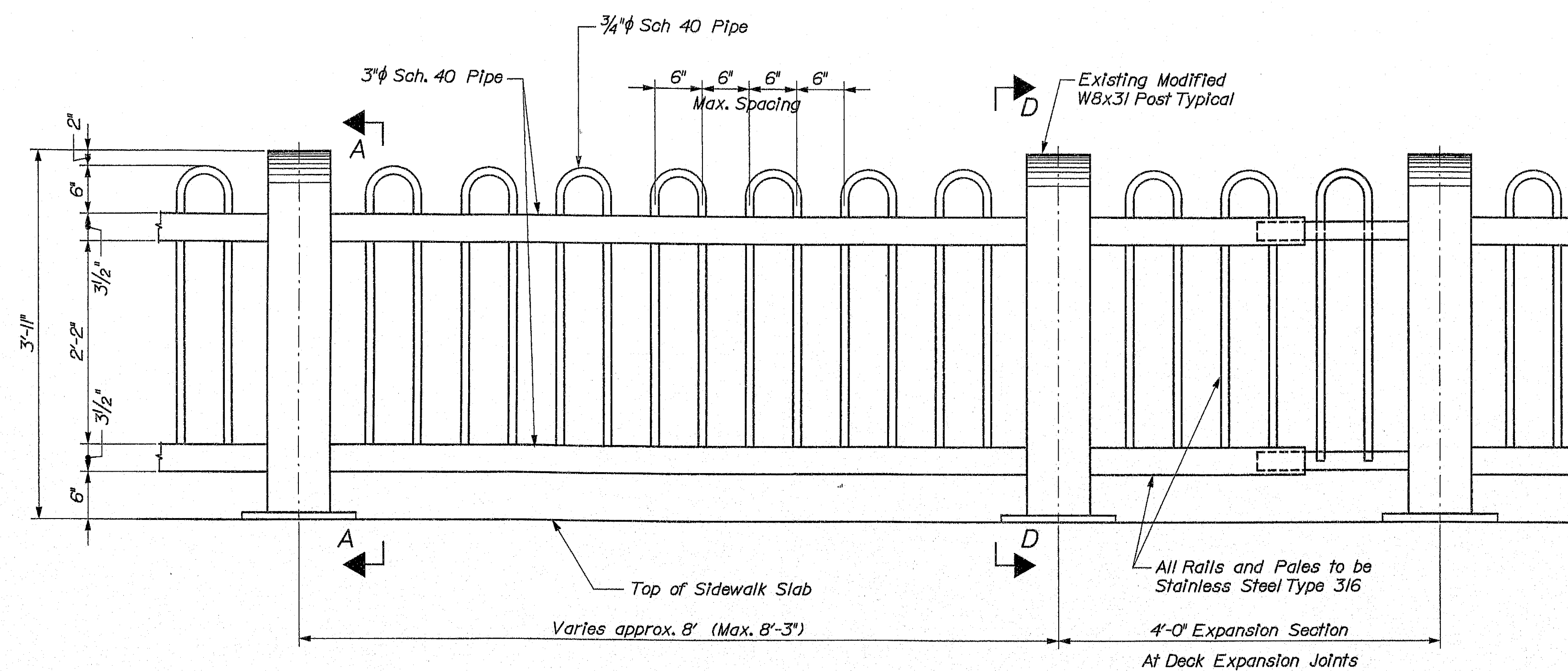
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
BH-9327(100)X
BRIDGE NO. 5186
PIN 9327.10
BRIDGE PLANS

PROJ. MANAGER	DESIGN-REVIEWED	DESIGN-REVIEWED	DESIGN-REVIEWED	DESIGN-REVIEWED	DATE	BY	W/F	INS	SIGNATURE
	CHECKED-REVIEWED	CHECKED-REVIEWED	CHECKED-REVIEWED	CHECKED-REVIEWED	2/2/2005				
	DESIGN-REVIEWED	DESIGN-REVIEWED	DESIGN-REVIEWED	DESIGN-REVIEWED					
	DESIGN-REVIEWED	DESIGN-REVIEWED	DESIGN-REVIEWED	DESIGN-REVIEWED					
	DESIGN-REVIEWED	DESIGN-REVIEWED	DESIGN-REVIEWED	DESIGN-REVIEWED					
	DESIGN-REVIEWED	DESIGN-REVIEWED	DESIGN-REVIEWED	DESIGN-REVIEWED					
	DESIGN-REVIEWED	DESIGN-REVIEWED	DESIGN-REVIEWED	DESIGN-REVIEWED					
	DESIGN-REVIEWED	DESIGN-REVIEWED	DESIGN-REVIEWED	DESIGN-REVIEWED					
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	DESIGN-REVIEWED	DESIGN-REVIEWED	DESIGN-REVIEWED	DESIGN-REVIEWED					

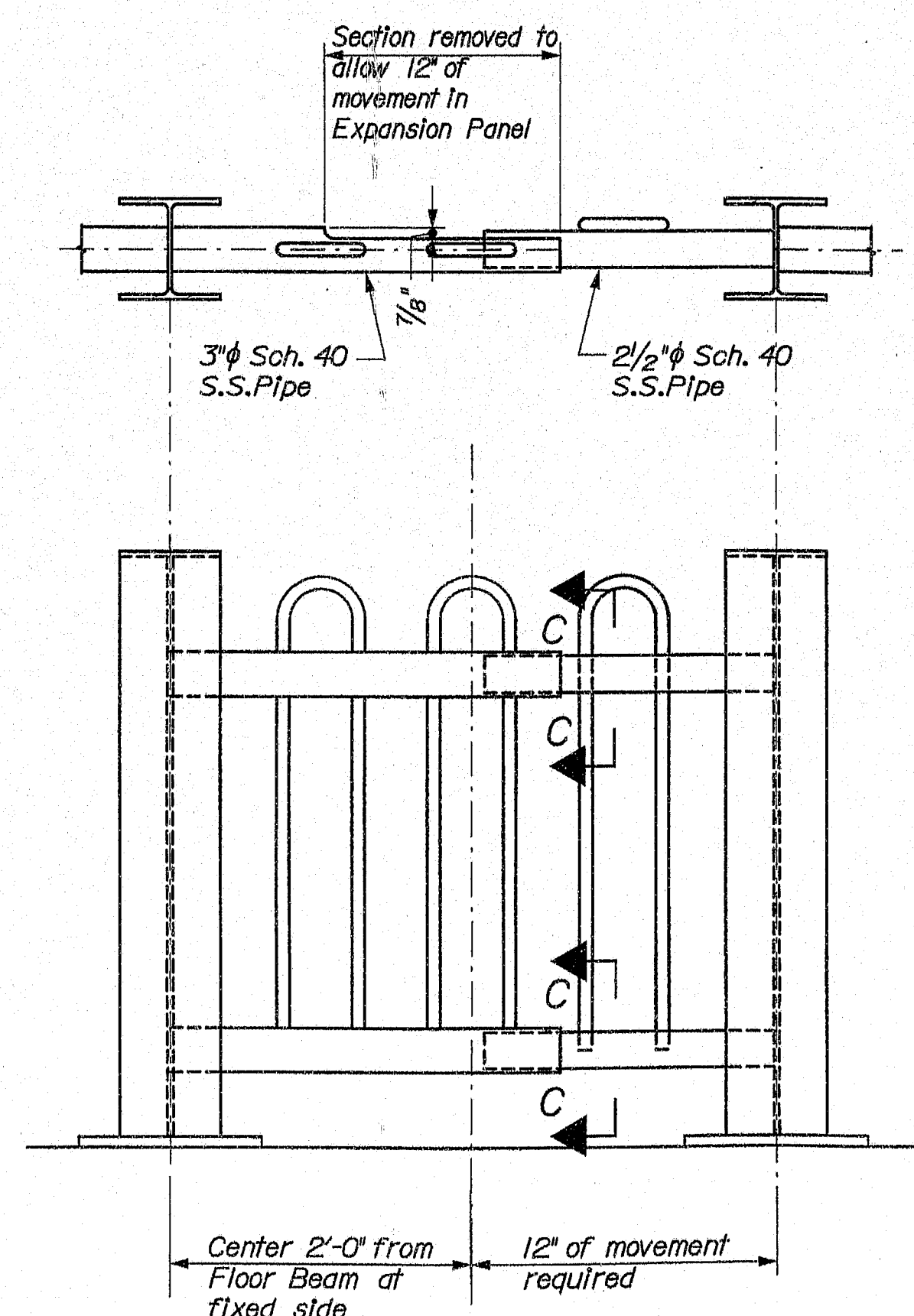
MEMORIAL BRIDGE
KENNEBEC RIVER
CITY OF AUGUSTA KENNEBEC COUNTY
RAIL AND SAFETY FENCE PLANS

SHEET NUMBER
33
OF 46

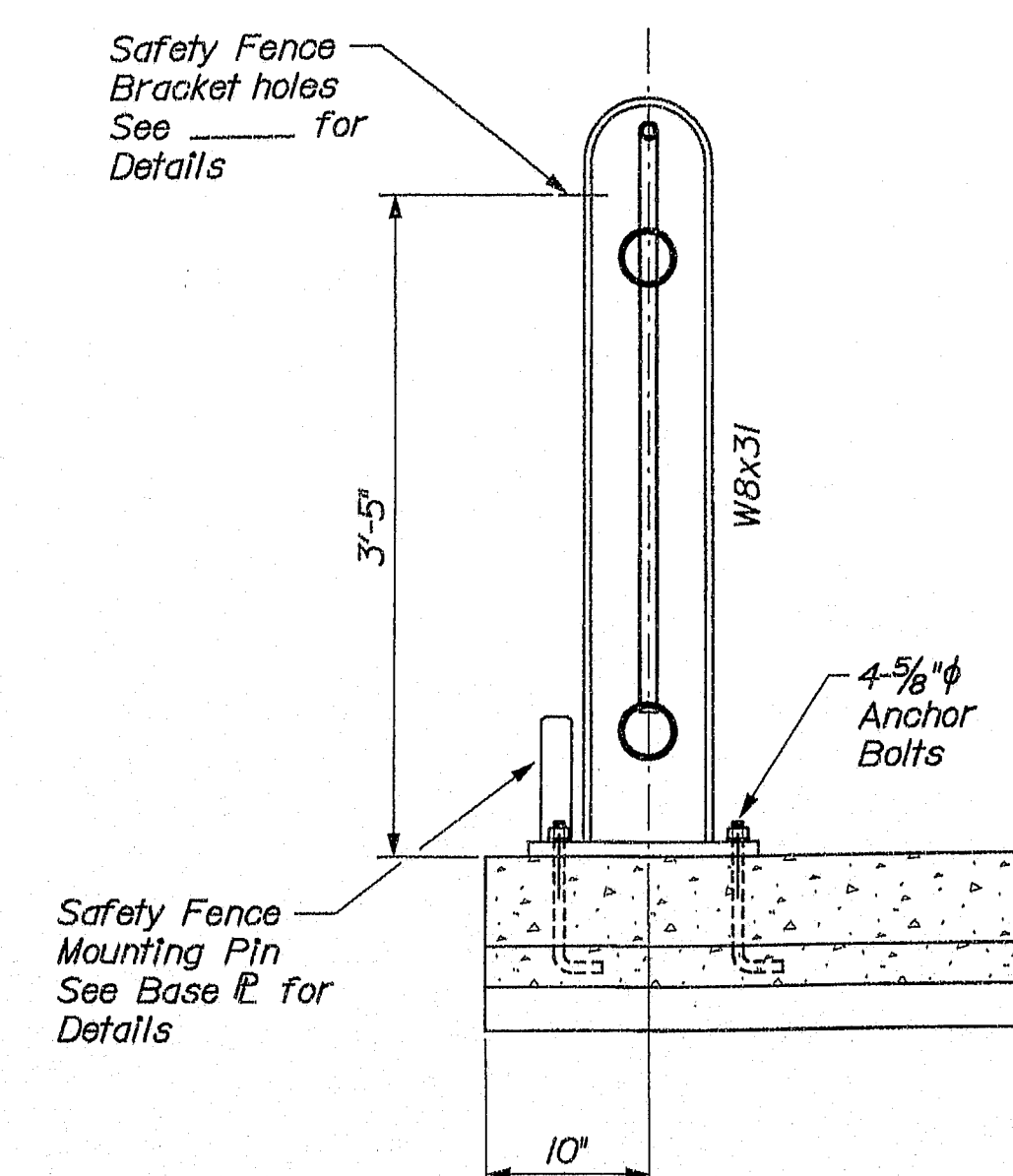
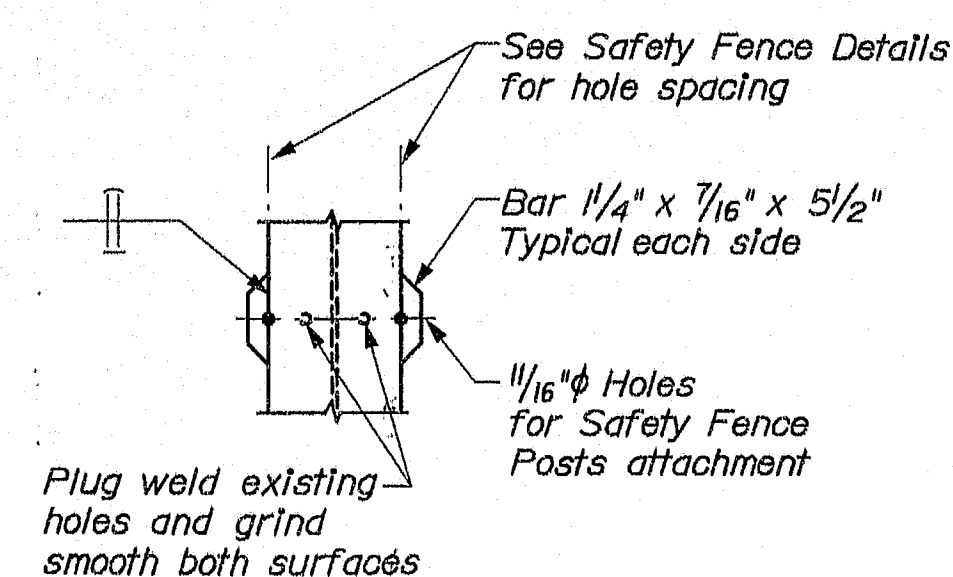
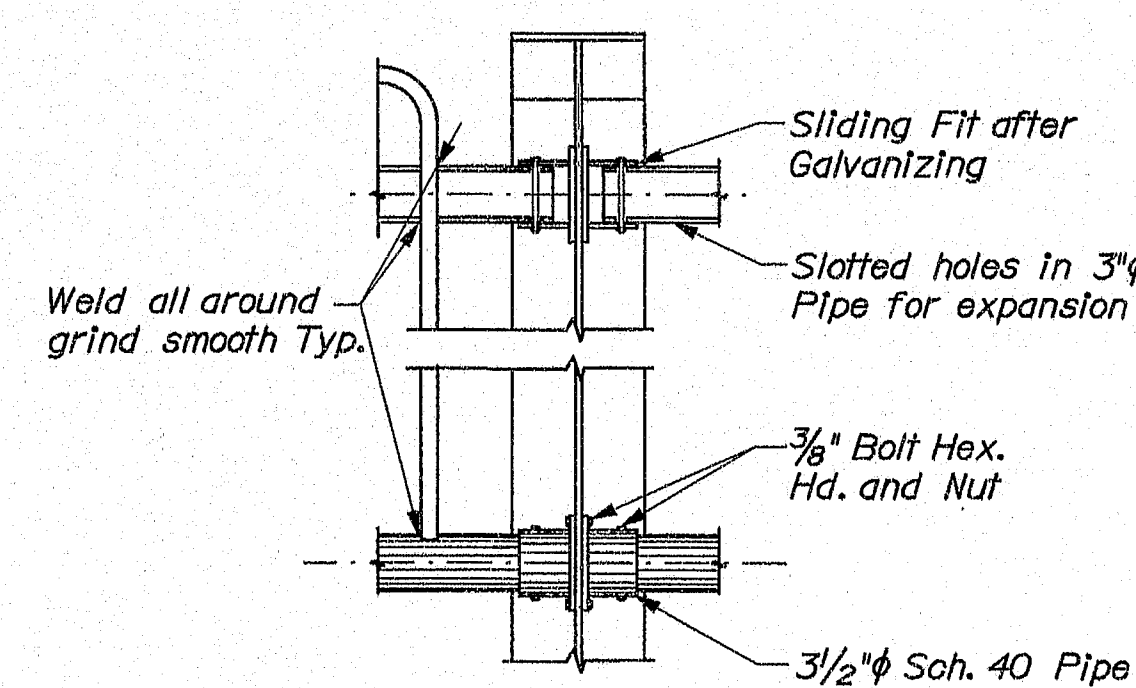
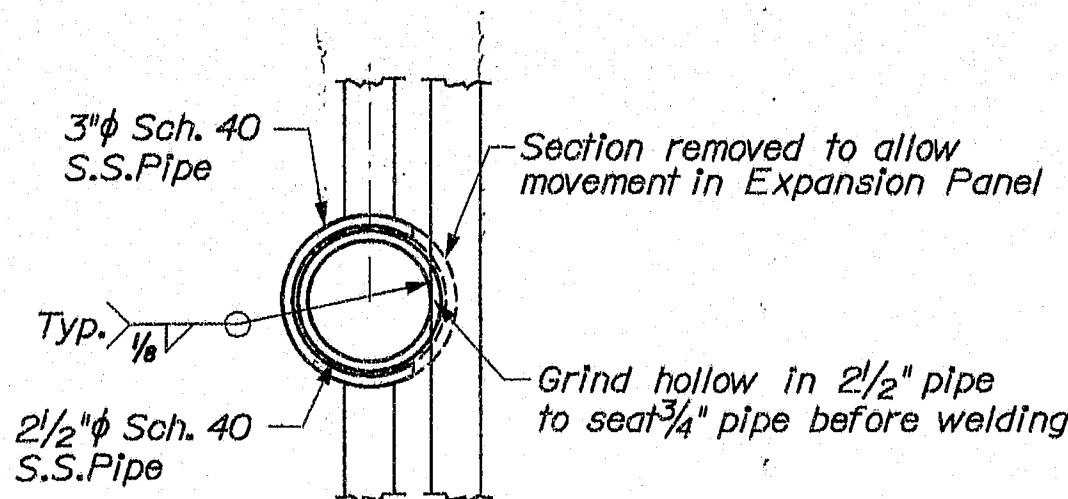
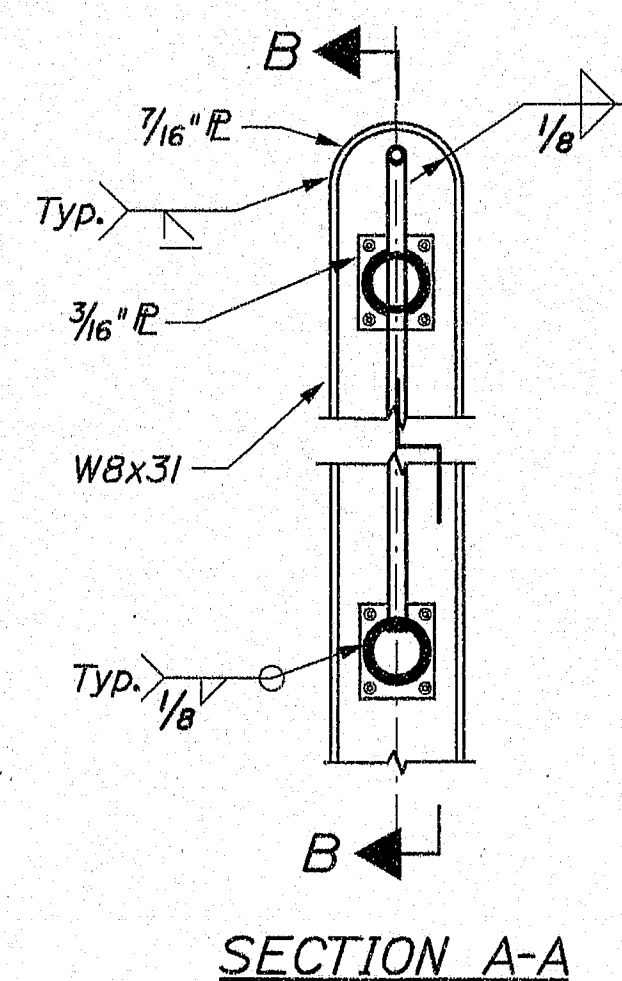
134-255



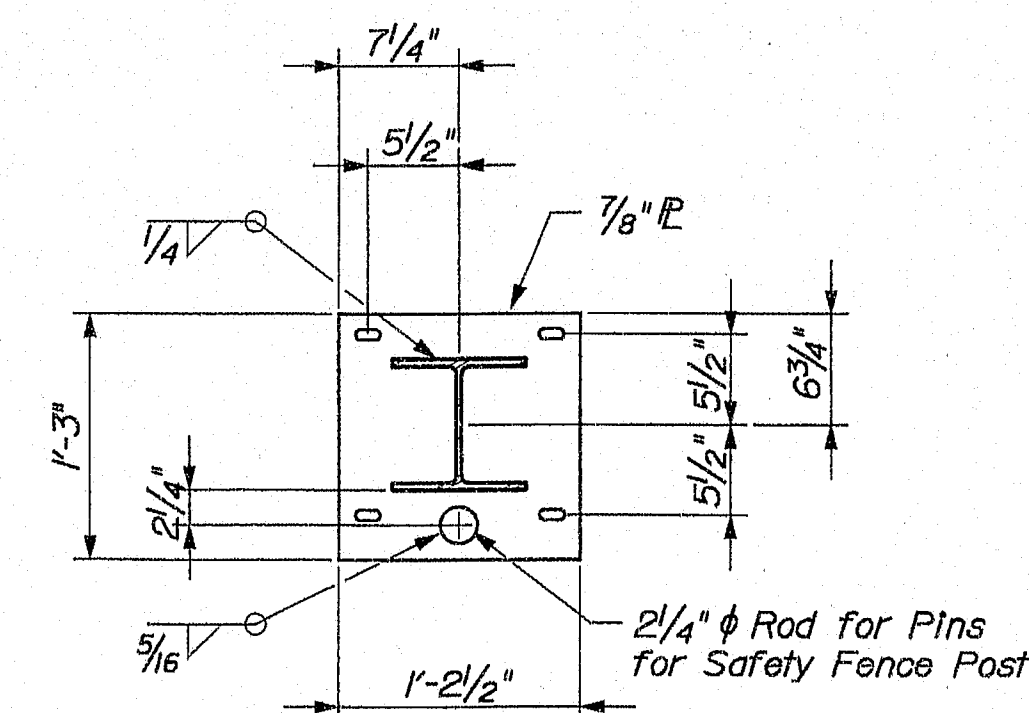
All rail sections to be straight except as noted on Rail and Safety Plan. All post and pales to be vertical. All rail posts to be set normal to C. All rail connections to be sliding fit after galvanizing. Railings sections to be Stainless Steel Type 316 at Expansion sections only.



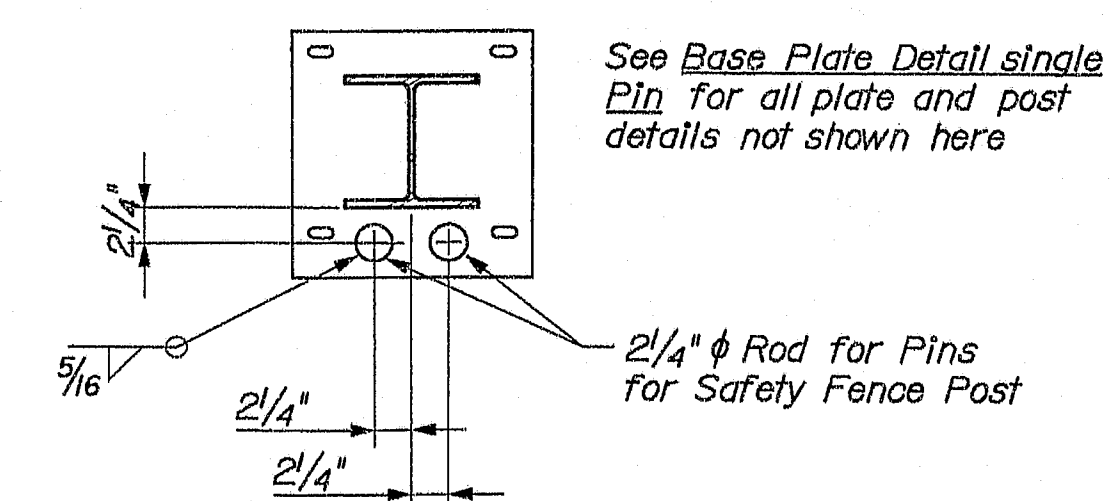
EXPANSION PANEL ELEVATION
All Rails and Pales to be
Stainless Steel Type 316



It is anticipated that the existing Pedestrian rail posts can be modified for reuse for the new rail system. Any existing posts that can not be reused and any posts that are needed to make up the total for the new rails system shall be the exact size and fabrication as the existing posts.



Single Safety Fence Post pin shown



BASE PLATE DETAIL with DOUBLE PIN
Double Safety Fence Post pins shown
See Safety Fence Plan for Number of Double Pin Bases

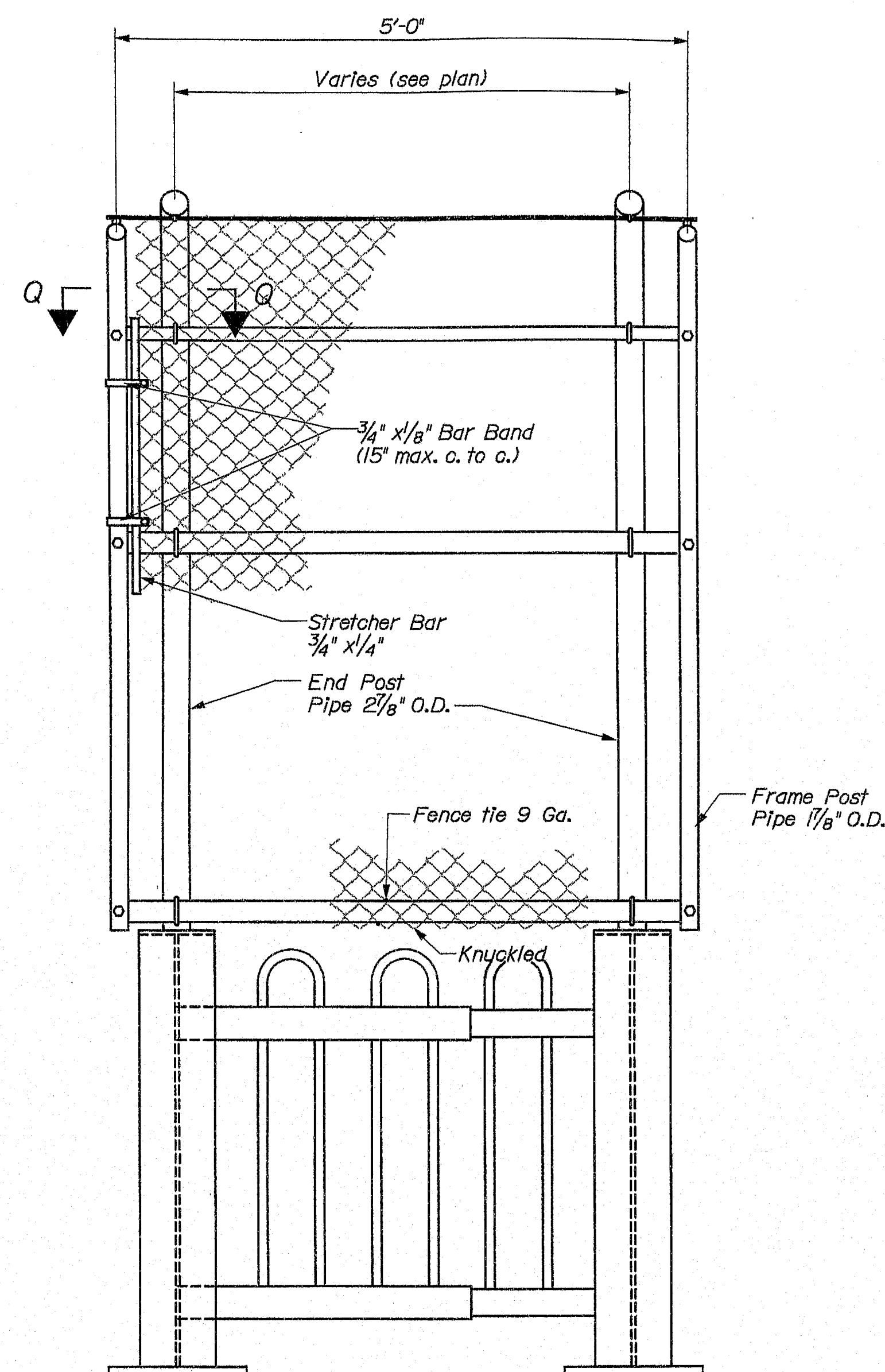
SHEET NUMBER	MEMORIAL BRIDGE KENNEBEC RIVER CITY OF AUGUSTA KENNEBEC COUNTY	PROJ. MANAGER		WLF	BY	DATE
		DESIGN-INITIALED	ETC	DMS		
34	RAILING DETAILS	CHECKED-REVIEWED		RIC		SIGNATURE
		LESSON-RETAILED2		RIC	2/23/05	
		DESIGN-RETAILED3		BAN		P.E. NUMBER
		REVISIONS 1				DATE
		REVISIONS 2				
		REVISIONS 3				
		REVISIONS 4				
		REVISIONS 5				
		REVISIONS 6				
		REVISIONS 7				
STATE OF MAINE		BRIDGE NO. 5196				
DEPARTMENT OF TRANSPORTATION		PIN 9327-10				
BH-9327(100)X		BRIDGE PLANS				

Date: 3/3/2005

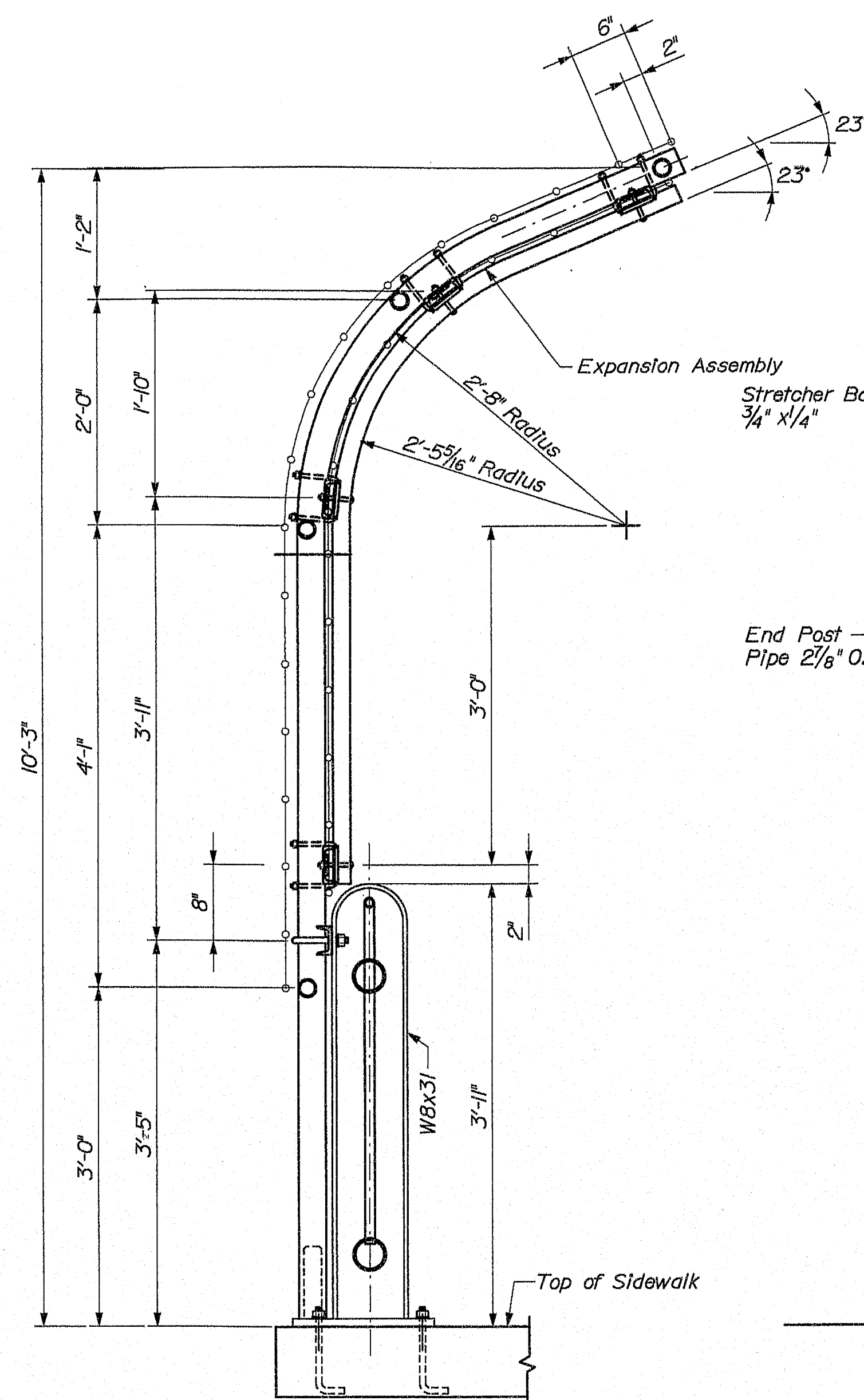
Username: david.sullivan

Division: BRIDGE

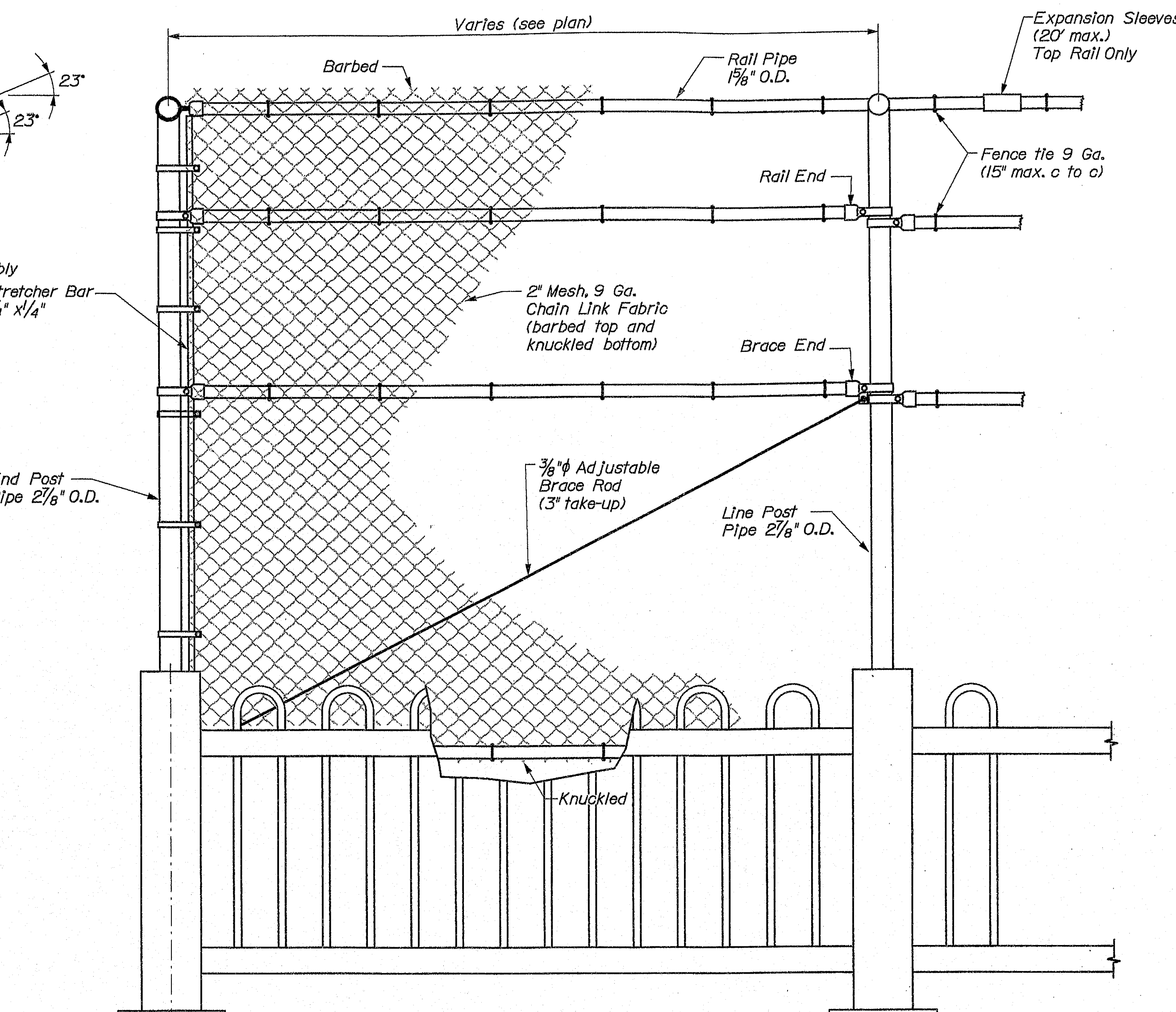
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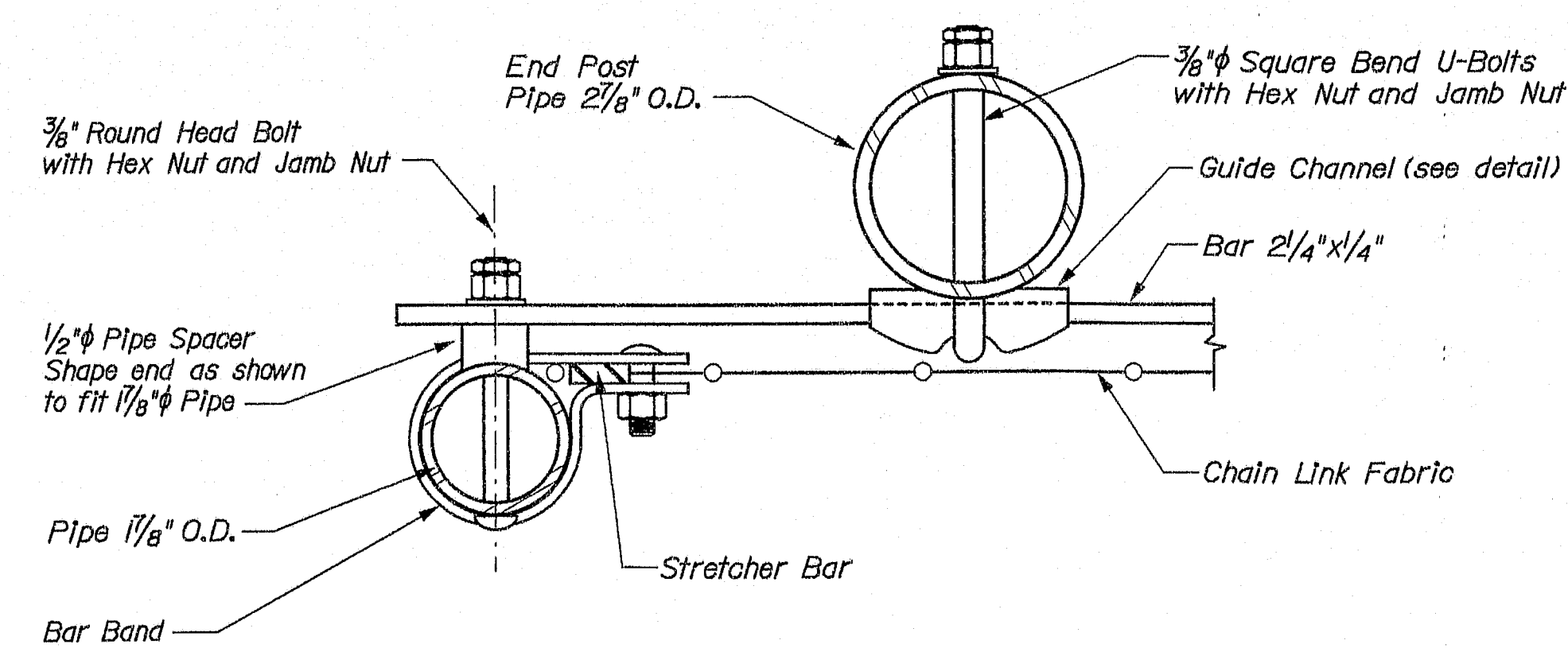
ELEVATION EXPANSION ASSEMBLY
(6 each ~ Install at Expansion Joints
see Rail and Safety Fence Plan Sheet for Location)



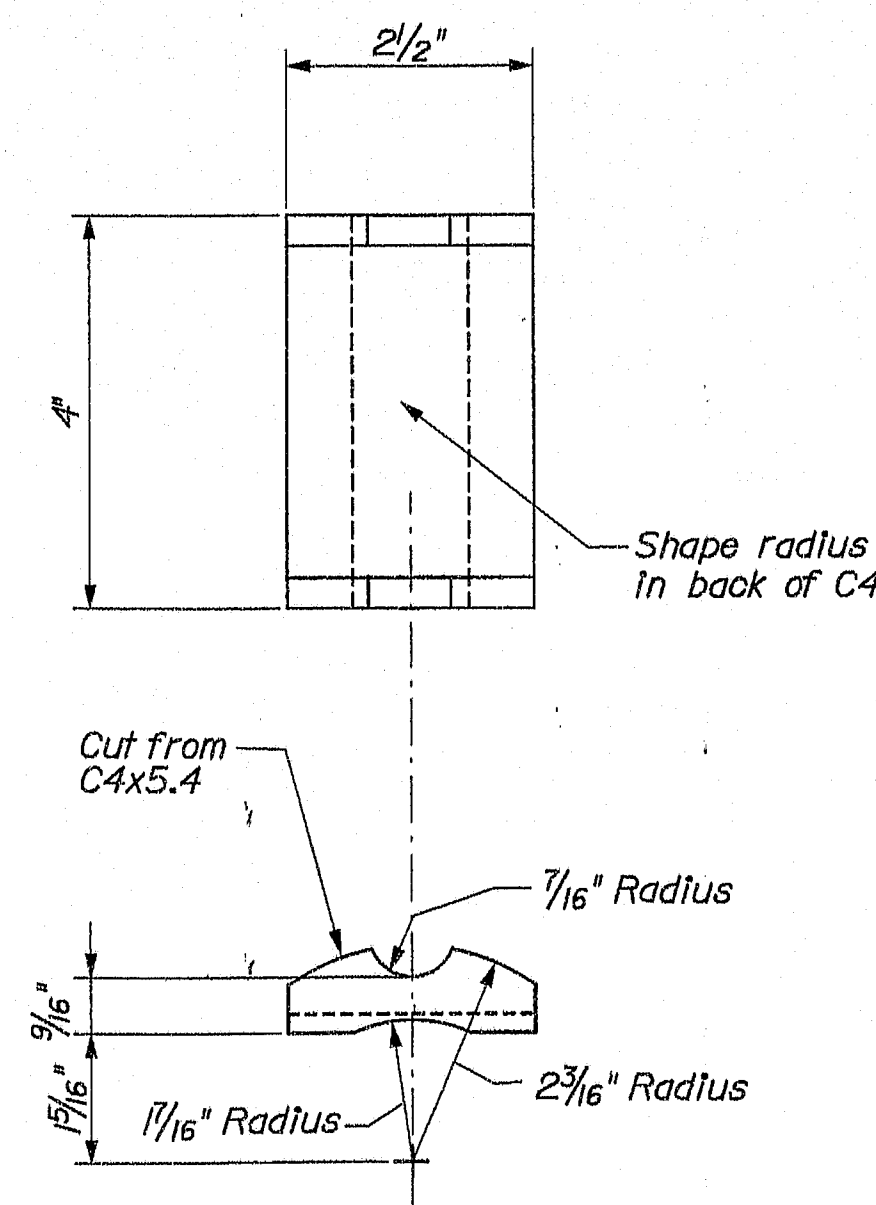
SECTION



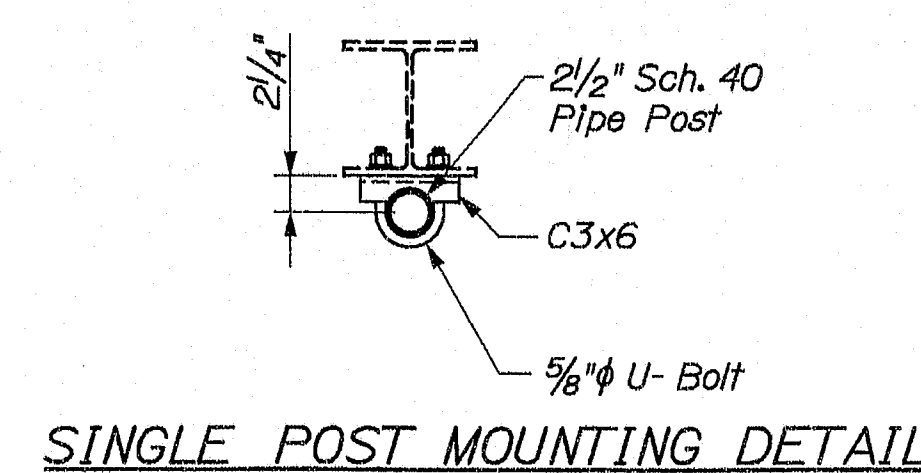
SIDEWALK SAFETY FENCE ELEVATION
(See Safety Fence Details Sheet for Maintenance Panel Details and Location)



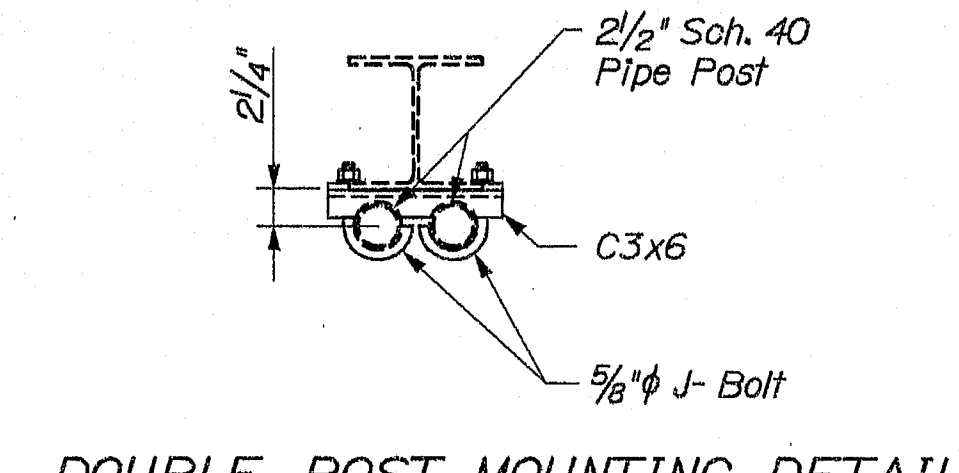
SECTION Q-Q
(for Expansion Assembly)
6\"/>



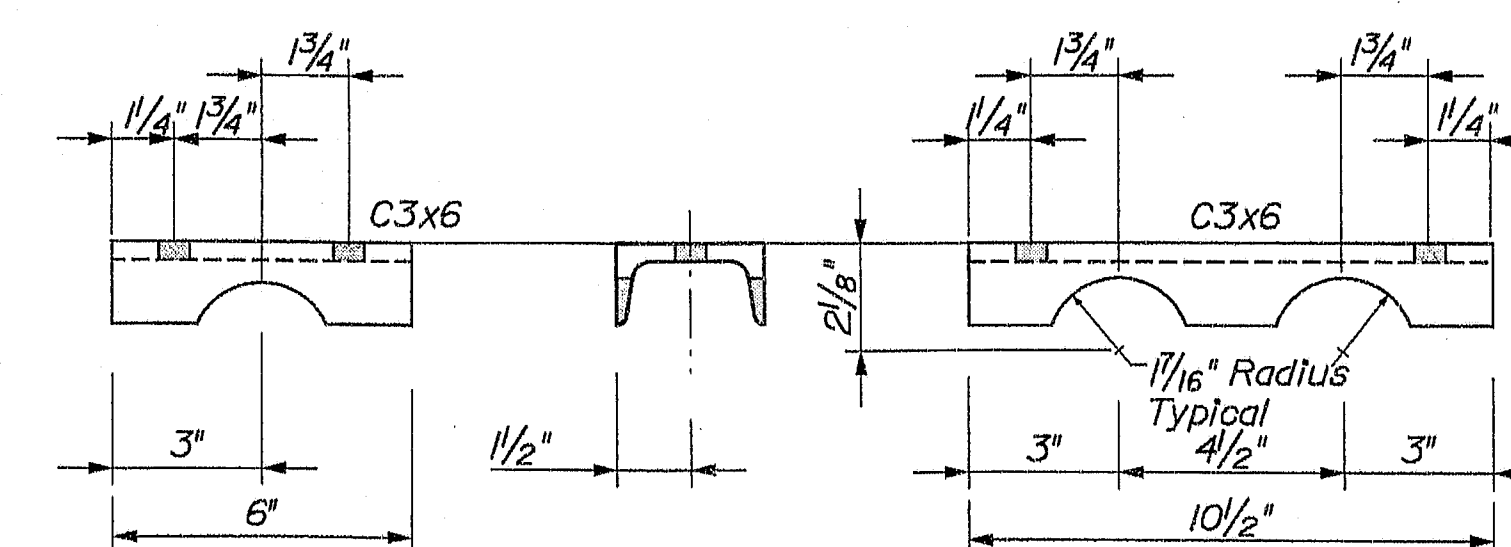
GUIDE CHANNEL DETAIL
(For Expansion Assembly)



SINGLE POST MOUNTING DETAIL



DOUBLE POST MOUNTING DETAIL

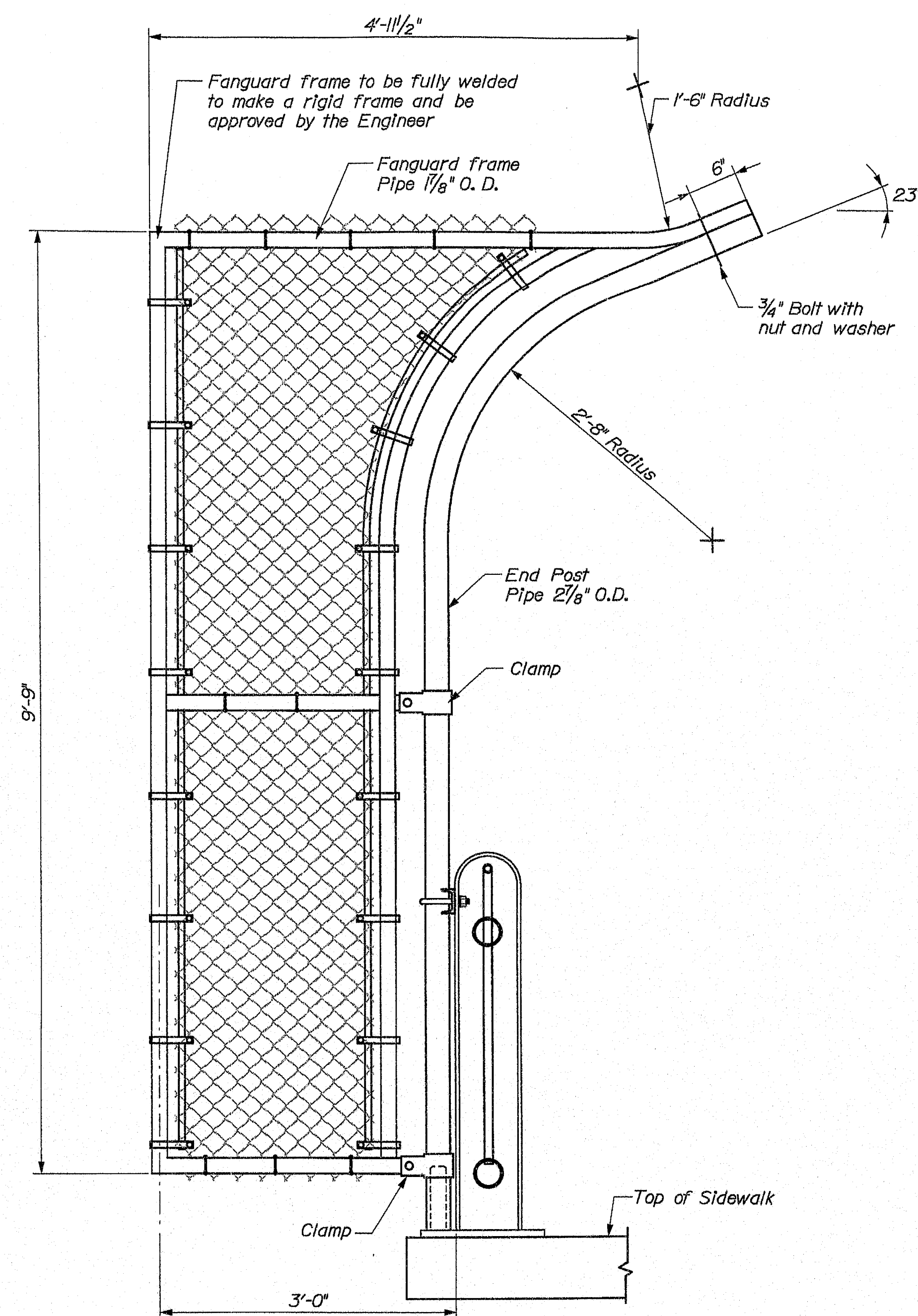


SAFETY FENCE ATTACHING HARDWARE DETAILS

STATE OF MAINE		DEPARTMENT OF TRANSPORTATION		BRIDGE NO. 5186		PIN 9327.10		BRIDGE PLANS	
MEMORIAL BRIDGE		KENNEBEC RIVER		CITY OF AUGUSTA		KENNEBEC COUNTY		SAFETY FENCE CONNECTIONS	
BH-9327(100)X		SIGNATURE		P.E. NUMBER		DATE		SHEET NUMBER	
7/23/05		7/23/05		7/23/05		7/23/05		35	
7/23/05		7/23/05		7/23/05		7/23/05		OF 46	

134-257

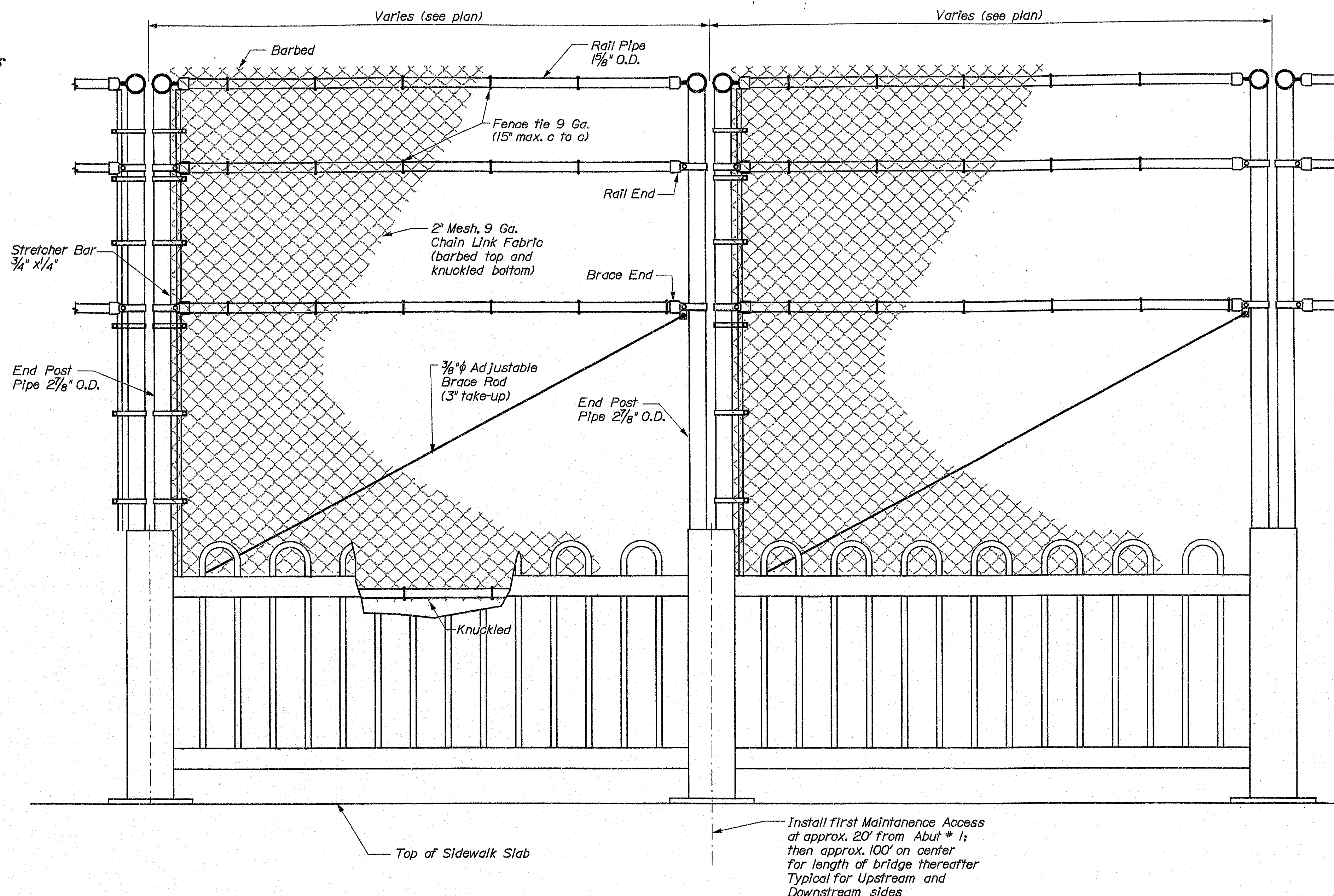
Filename: ...1036_Safety_Fence_Details.dgn Division: BRIDGE Username: david.sullivan Date: 3/3/2005



FANGUARD ELEVATION

Fanguard Detail (4 Required)
All materials to be the same
as Safety Fence except as noted

NOTE: Payment for Fanguard shall be included
in the Lump Sum payment for
Item 607.441 Sidewalk Barrier Fence



MAINTENANCE ACCESS REMOVABLE PANEL

2 Panels at each maintenance access location

STATE OF MAINE		DEPARTMENT OF TRANSPORTATION	
BH-9327(100)X		BRIDGE NO. 5198	
PIN 9327.10		BRIDGE PLANS	
MEMORIAL BRIDGE		KENNEBEC RIVER	
CITY OF AUGUSTA		KENNEBEC COUNTY	
SAFETY FENCE DETAILS		SHEET NUMBER	
36		OF 46	

134-258

Date: 3/13/2005

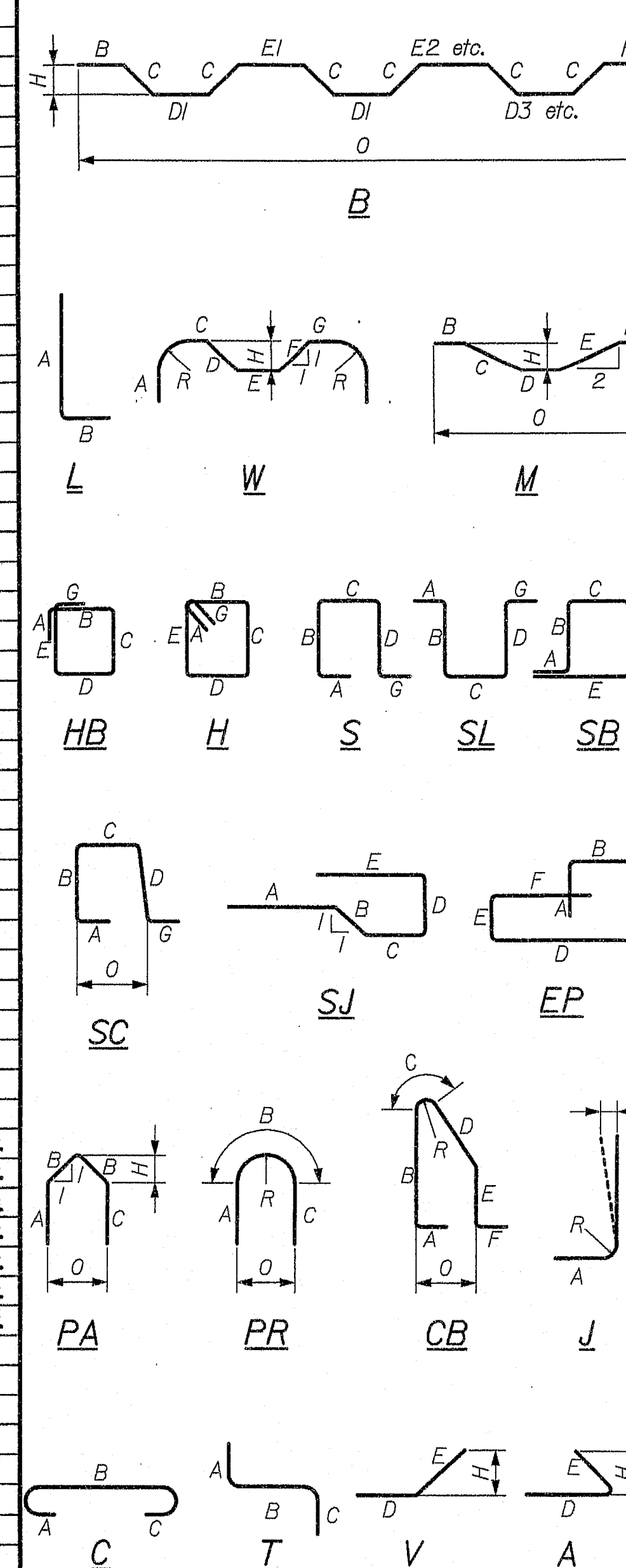
Username: david.sullivan

Division: BRIDGE

Filename: ...\\10\\bridge\\msta\\037_Rebar.dgn

STRAIGHT BARS							BENT BARS																
MARK	QTY.	LENGTH	LOCATION	MARK	QTY.	LENGTH	LOCATION	MARK	QTY.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION	
Abutment #1							Abutment No. 1																
A 410	4	6'-6"	Transverse Backwall					A 450	14	4'-7"	PR	1'-11 1/2"	8"	1'-11 1/2"							5"	2 1/2"	Abut. to Backwall
A 500	3	14'-2"	Vertical Dowel Foot					A 550	28	3'-8"	L	2'-2"	1'-6"										Abut. to Footing Dowel
A 501	3	10'-2"	Vertical in Post					A 551	15	3'-5"	L	2'-2"	1'-3"										Set A - Footing
A 502	1	8'-9"	Vertical at Saw Cut					A 552	15	3'-4"	L	2'-4"	1'-0"										Set A - Footing
A 510	7	6'-6"	Transverse Backwall					A 553	3	1'-4"	L	9'-2"	1'-2"										Vert. Wall Tied to Sets A&B
A 511	6	4'-0"	Vertical in Post					A 554	8	7'-11 1/2"	PR	3'-2"	9 1/2"	3'-2"						6"	3"		Set B - Roll
A 512	3	7'-6"	Horizontal in Footing					A 555	56	4'-0"	J	2'-0"		2'-0"					3'		2 1/2"		Sets B&C
A 513	13	13'-0"	Horizontal in Wall					A 556	6	4'-4"	S		1'-6"	1'-4"	1'-6"								Set C - Posts
A 514	2	49'-0"	Transverse in Abut 1					A 557	5	6'-5"	L	5'-3"	1'-2"										Vert. Wall Tied to Sets A&B
A 515	2	27'-0"	Transverse in Abut 1					A 558	78	2'-11"	L	2'-4"	7"										Longitudinal Abut 1
								A 559	78	2'-7"	S		1'-0"	7"	1'-0"								Longitudinal Abut 1
Abutment #2							Abutment No. 2																
B 500	12	25'-9"	Vertical Dowel Footing					B 550	18	4'-2"	L	2'-8"	1'-6"										Abut. to Footing Dowel
B 501	16	9'-0"	Horizontal Wing Wall					B 551	18	3'-8"	L	2'-2"	1'-6"										Set P - Footing
B 510	12	4'-2"	Vertical in Post					B 552	18	2'-4"	L	1'-2"	1'-2"										Set P - Footing
B 511	16	9'-0"	Horizontal Wing Wall					B 553	18	6'-3"	L	5'-0"	1'-3"										Set P - Footing
B 512	60	9'-0"	Horizontal Wing Wall					B 554	34	3'-4"	L	2'-2"	1'-2"										Set N
B 513	34	20'-0"	Vertical Wing Wall					B 555	136	5'-6"	J	2'-0"		3'-6"					3'		2 1/2"		Set N
B 514	4	45'-10"	Transverse in Abut. 2					B 556	34	7'-1"	PR	3'-2"	9"	3'-2"						6"	3"		Set N
B 515	4	14'-3"	Longitudinal Wing Wall					B 557	12	4'-4"	S		1'-6"	1'-4"	1'-6"								Set O
Pier No. 5							Pier No. 5																
P 400	60	26'-0"	Horizontal and Vertical					B 558	46	2'-9"	L	2'-4"	5"										Longitudinal Abut 2
								B 559	46	1'-4"	S		5 1/2"	5"	5 1/2"								Longitudinal Abut 2
Superstructure							Superstructure																
S 400	840	23'-5"	Long. Along Stringers					P 450	234	15'-3"	CB		4'-0"	11'-3"							5'-0"		Horizontal Perimeter
S 401	28	49'-0"	Span No. 1 Stringers					P 451	68	2'-4"	L	1'-2"	1'-2"										vertical Perimeter
S 402	126	27'-0"	Trans. Along Flr. Bm.					Superstructure															
S 403	60	35'-8"	Trans. Sup. Elv. Flr. Bm.					S 450	20832	1'-4"	S		5"	6"	5"								Transverse on Stringers
Sidewalk							Sidewalk																
SW500	4191	6'-11"	Transverse					S 550	46	3'-2"	L	2'-6"	7 1/2"										At Abut 2 Grid End Casting
SW501	308	60'-0"	Longitudinal					SW551	1	40'-5"	PR		40'-5"							38'-10 3/4"	41'-8 1/2"		Sidewalk Upstream side at Gage St.
SW502	7	12'-0"	Longitudinal					SW552	1	39'-3"	PR		39'-3"							37'-9"	40'-6 1/2"		Sidewalk Upstream side at Gage St.
SW503	7	46'-0"	Longitudinal					SW553	1	38'-0 1/2"	PR		38'-0 1/2"							36'-7"	39'-4 3/8"		Sidewalk Upstream side at Gage St.
SW504	7	23'-0"	Longitudinal					SW554	1	36'-10"	PR		36'-10"							35'-5"	38'-2 3/4"		Sidewalk Upstream side at Gage St.
								SW555	1	35'-7 1/2"	PR		35'-7 1/2"							34'-3"	37'-0 7/8"		Sidewalk Upstream side at Gage St.
								SW556	1	34'-5"	PR		34'-5"							33'-1"	35'-10 7/8"		Sidewalk Upstream side at Gage St.
								SW557	1	33'-2"	PR		33'-2"							31'-11"	34'-9"		Sidewalk Upstream side at Gage St.
Approach Slab							Approach Slab																
AS 550	42	4'-2"	L	3'-0"	1'-2"			AS 551	42	4'-0"	S		1'-6"	1'-0"	1'-6"								Long. Approach Slab
AS 551	42	4'-0"	S					AS 552	42	2'-8"	V				1'-6"	1'-2"				10"			Long. Approach Slab

TYPE - BENDING DIAGRAMS



All dimensions are out-to-out of bar.

Bending details and hooks shall conform to the recommendations of the current revision of ACI Standard 315 and ACI Standard 318.

Reinforcing Bar: ASTM A615/A615M, Grade 60

GENERAL NOTES

- The first two digits following the letter(s) of the mark indicate the size of the bar:
Mark 'A502' = bar size #5
Mark 'P805' = bar size #8
Mark 'S650' = bar size #6
- For reinforcement details for bridge mounted light bases, the Contractor is directed to the Lighting Details sheet. Bars on the Lighting details sheet are to be paid for under item numbers 503.12 & 503.13. For reinforcement details for the traffic railing the Contractor is directed to the Traffic Barrier sheets. Bars on the Traffic Barrier sheets are to be paid for under item numbers 503.12 & 503.13.

134-259

STATE OF MAINE DEPARTMENT OF TRANSPORTATION BH-9327(100)X	PIN 9327.10	BRIDGE NO. 5186
REINFORCING STEEL SCHEDULE		
CITY OF AUGUSTA KENNEBEC COUNTY		
SHEET NUMBER 37 OF 46		

Filename: ...\\040_Truss Strengthening.dgn

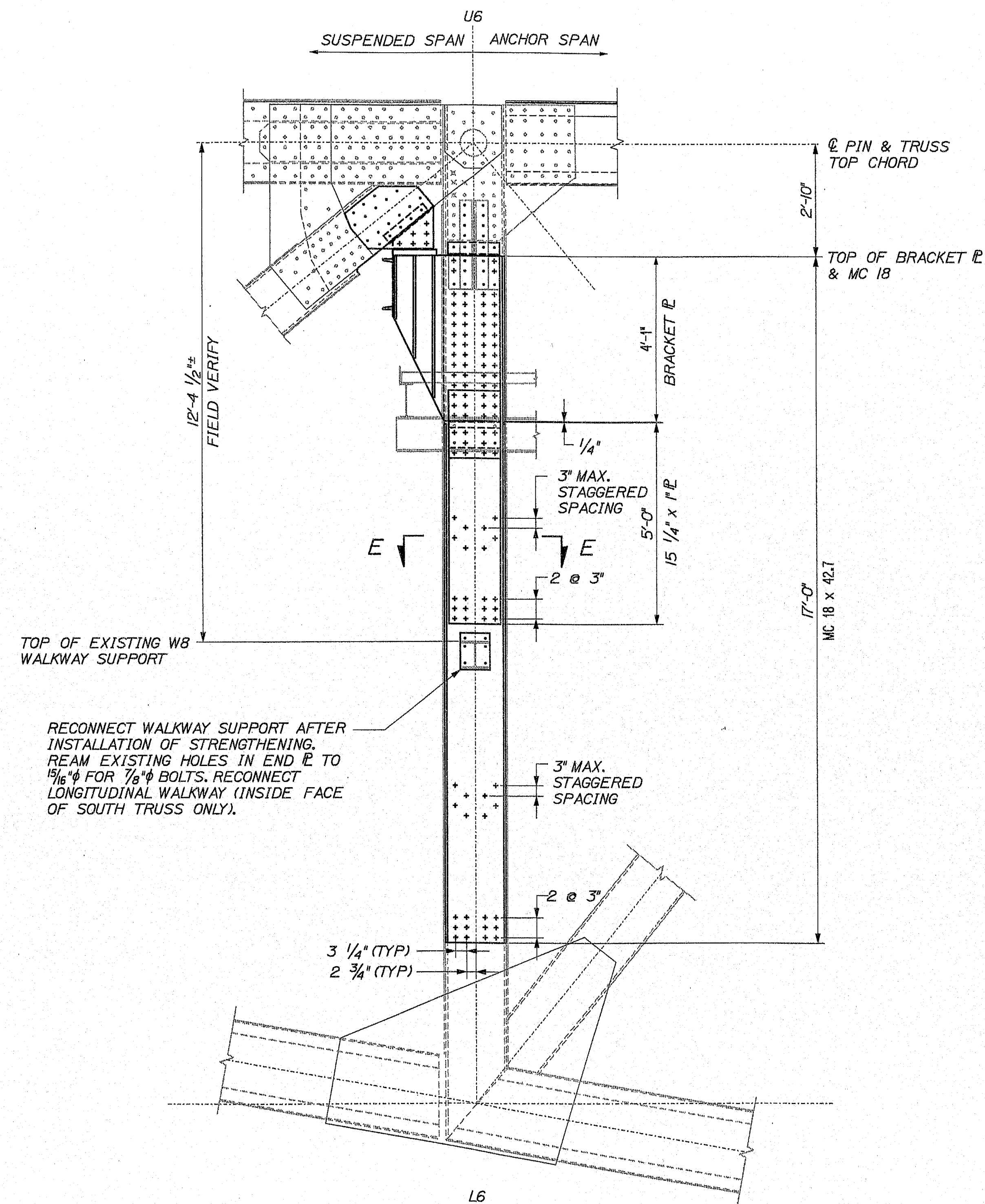
Username: david.sullivan

Division: BRIDGE

Date: 3/3/2005

NOTES:

1. STRENGTHENING APPLIES TO BOTH FACES OF MEMBER, EXCEPT AS NOTED.
2. NORTH TRUSS SHOWN, SOUTH TRUSS SIMILAR.

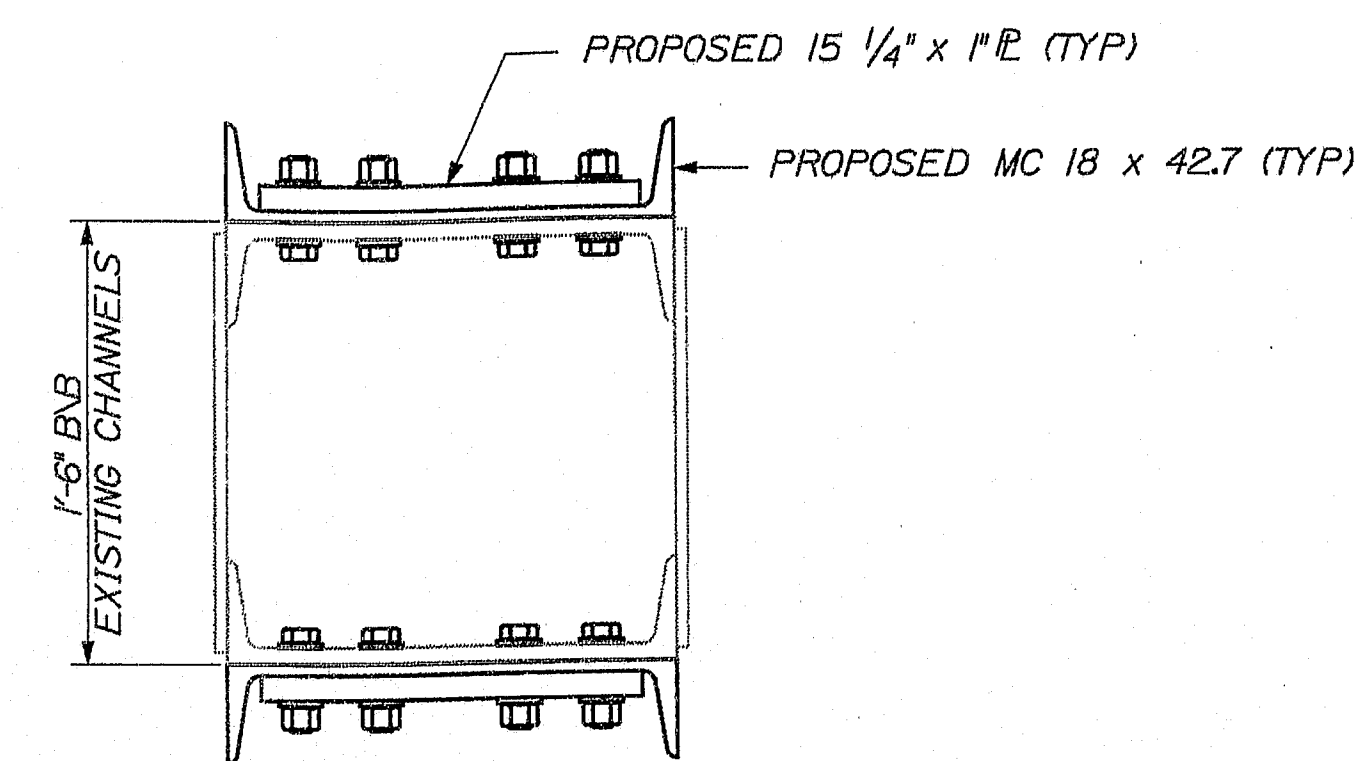


PROPOSED TRUSS STRENGTHENING
SCALE: 1/2" = 1'-0"

U6-L6 - SPAN 2 NORTH TRUSS (INSIDE FACE) SHOWN
U32-L32 - SPAN 4 OPPOSITE AND SIMILAR
U52-L52 - SPAN 6 OPPOSITE

LEGEND

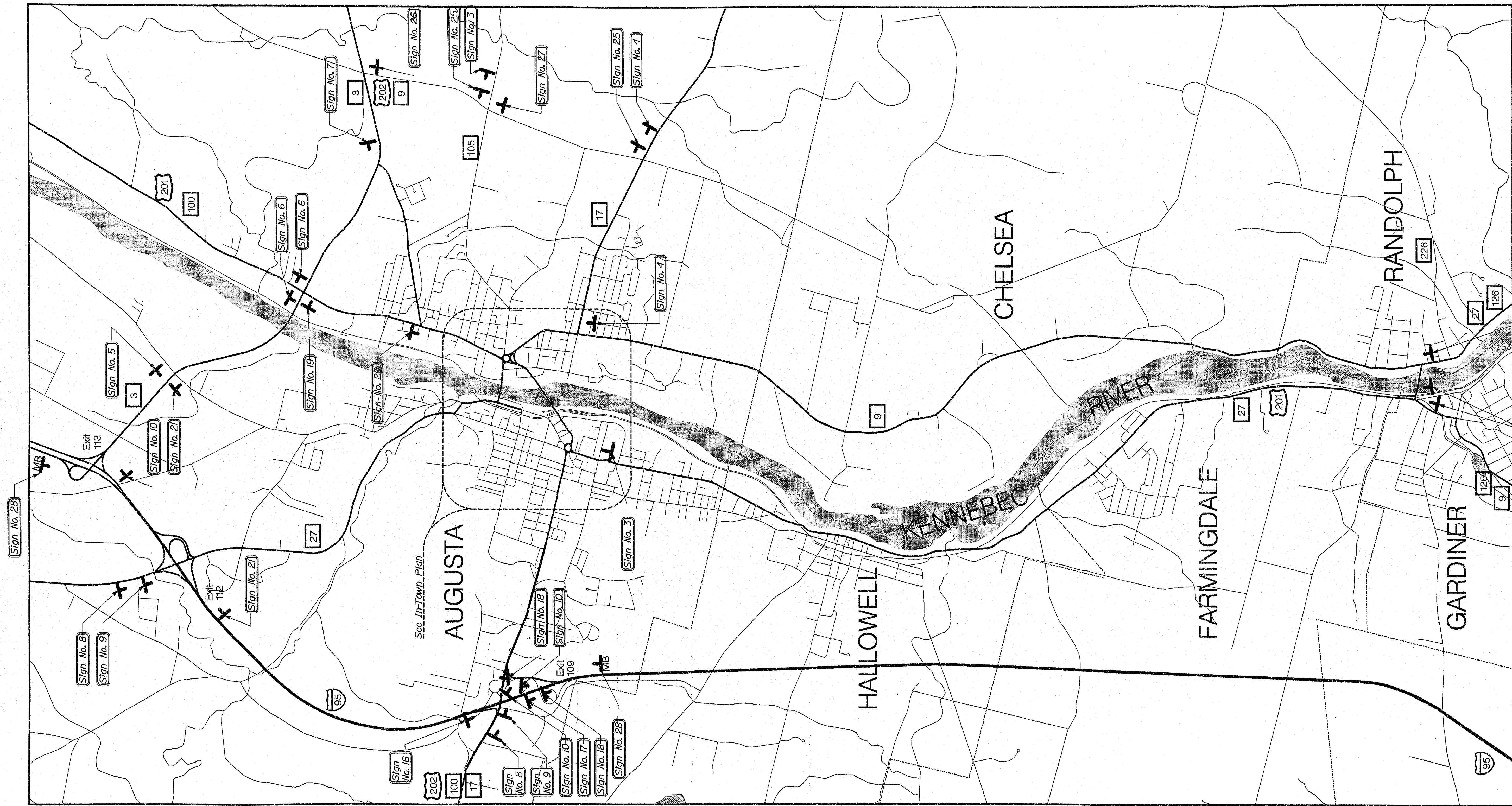
- EXISTING RIVET TO REMAIN
- RIVET REMOVAL AND INSTALL 7/8" BOLT IN EXISTING HOLE
- ✕ EXISTING COUNTERSUNK RIVET TO REMAIN
- + NEW 7/8" BOLT IN 1 1/8" HOLE



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

STATE OF MAINE DEPARTMENT OF TRANSPORTATION BH-3327(100)X	SIGNATURE		DATE		
	P.E. NUMBER		DATE		
	PIN		BRIDGE PLANS		
MEMORIAL BRIDGE	PIN 9327.10		9327.10		
TRUSS STRENGTHENING					
SHEET NUMBER					
40					
OF 46					

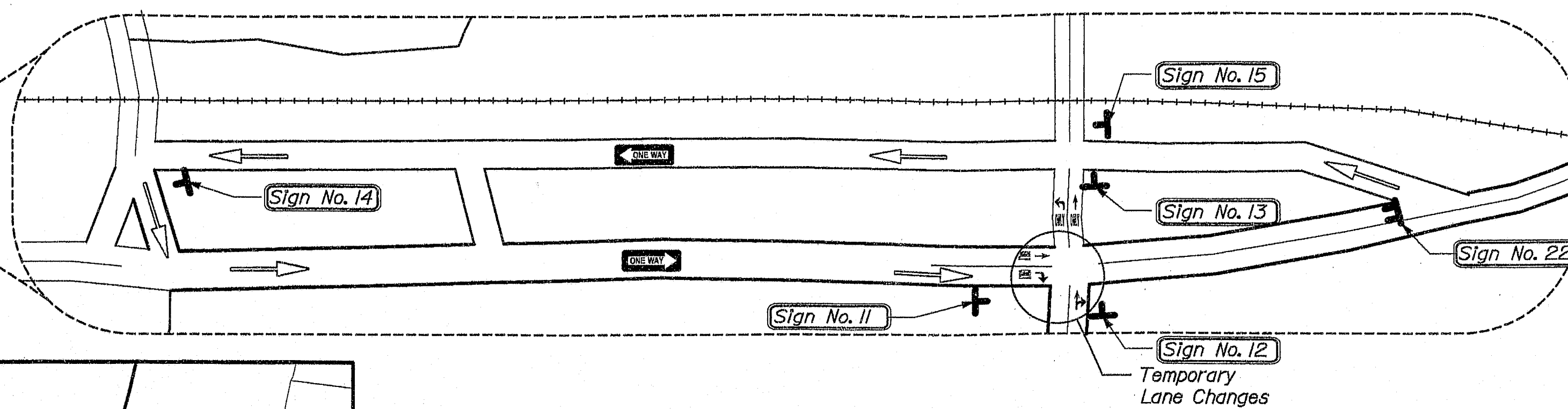
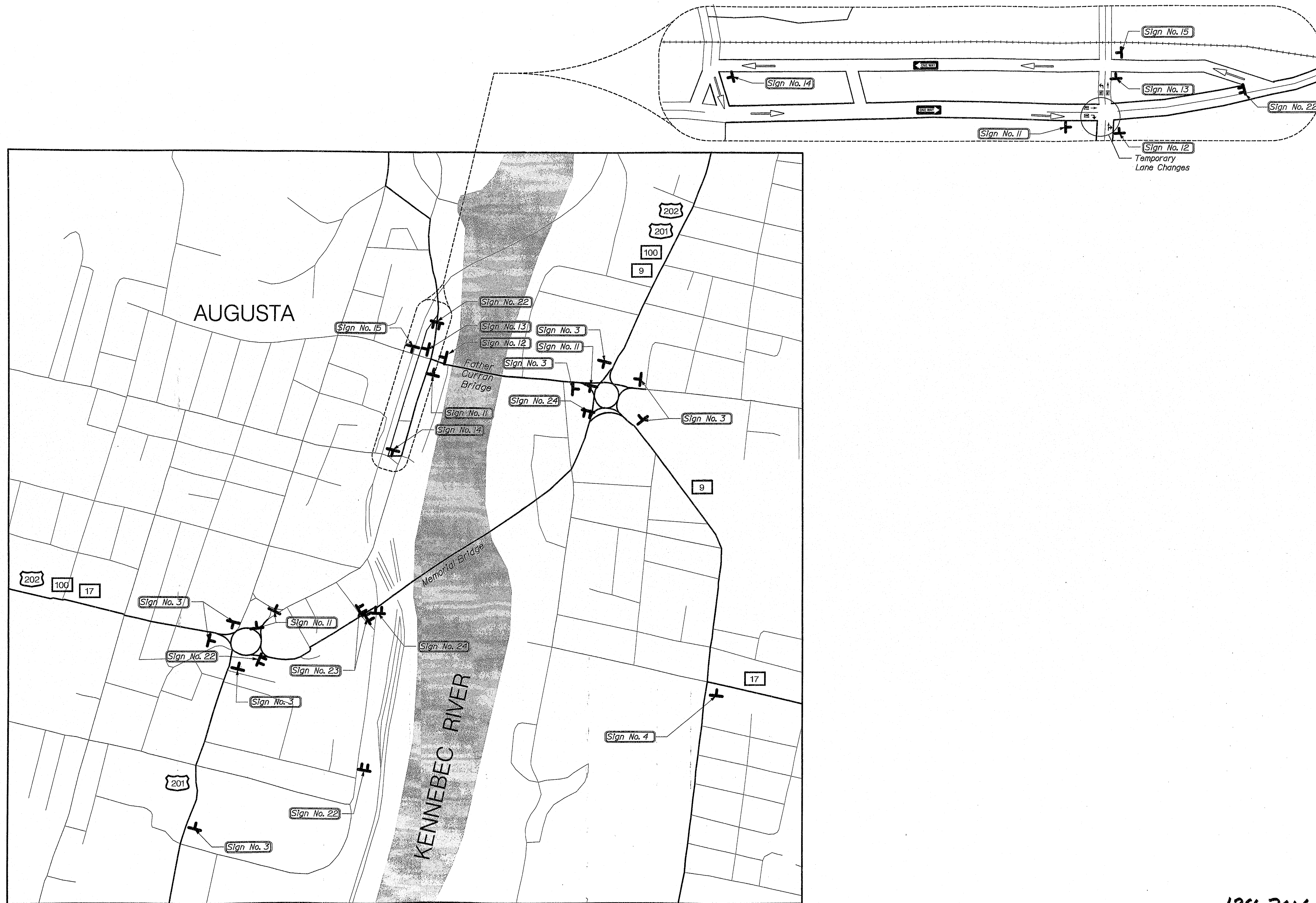
134-262
Lichtenstein
Consulting Engineers



NOTE:
Message Boards that
are to be moved are
not shown.

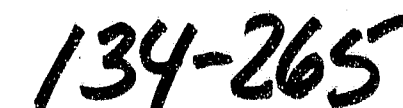
134-263

STATE OF MAINE		DEPARTMENT OF TRANSPORTATION	
CITY OF AUGUSTA KENNEBEC COUNTY		BH-9327(100)X	
DETOUR AREA PLAN		BRIDGE NO. 5186	PIN 9327.10
SHEET NUMBER		BRIDGE PLANS	
41		46	
PROJECT MANAGER	DATE	BY	DATE
DESIGN-REVIEWED	ETC	DMS	2/23/05
CHECKED-REVIEWED		RCC	
DESIGN-REVIEWED		BSN	
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

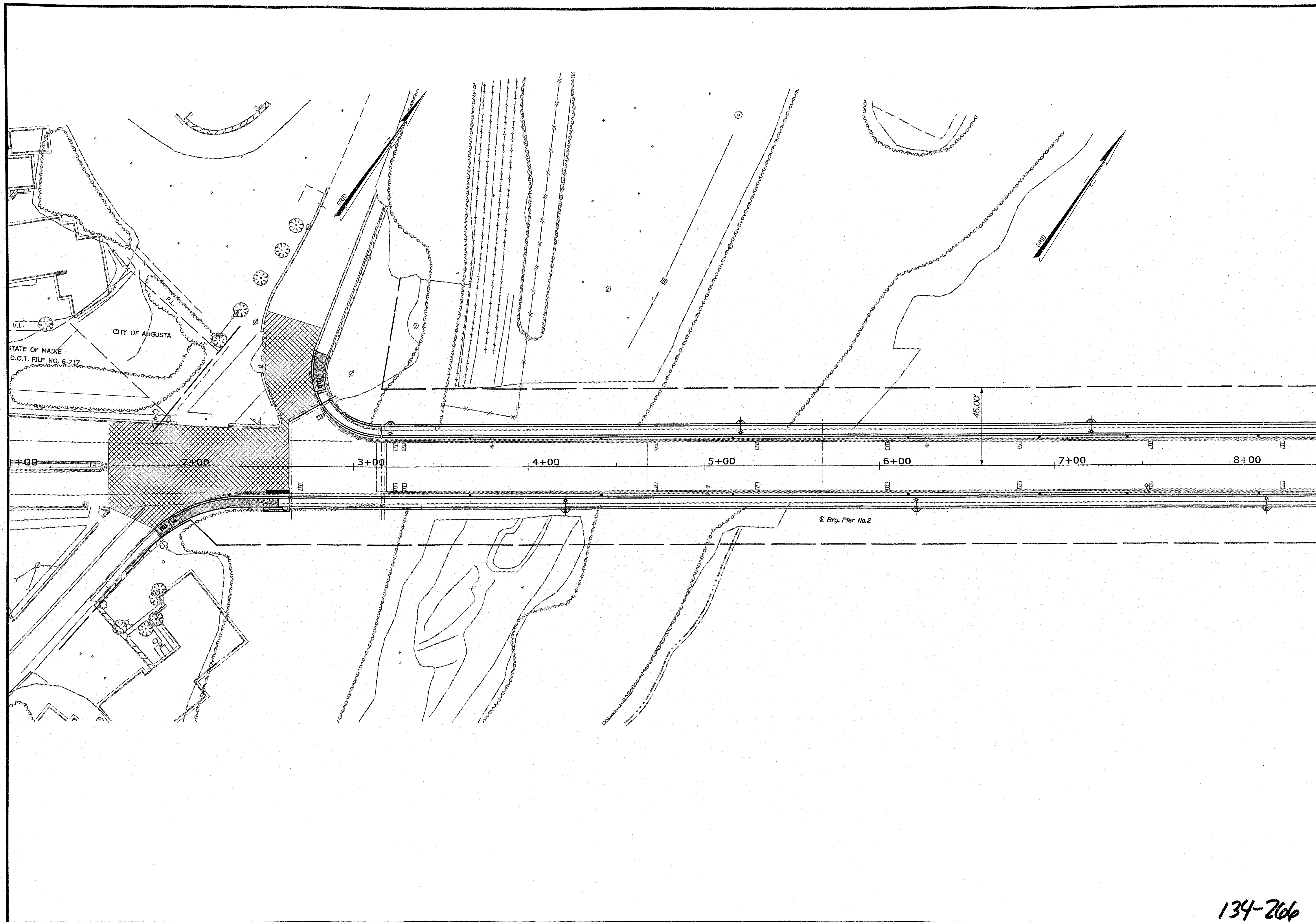


STATE OF MAINE DEPARTMENT OF TRANSPORTATION		BH-9327(100)X	
BRIDGE NO. 5196		PIN	9327.10
BRIDGE PLANS			
MEMORIAL BRIDGE KENNEBEC RIVER CITY OF AUGUSTA KENNEBEC COUNTY		IN-TOWN DETOUR PLAN	
SHEET NUMBER		42	
OF 46			
PROJ. MANAGER	WLF	BY	DATE
DESIGN-REVIEWED	ETC	DMS	2/23/05
CHECKED-REVIEWED		RCC	
DESIGN-REVIEWED		RCC	
DESIGN-REVIEWED		BAN	
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FELD CHANGES			
SIGNATURE		P.E. NUMBER	
DATE		DATE	

134-264

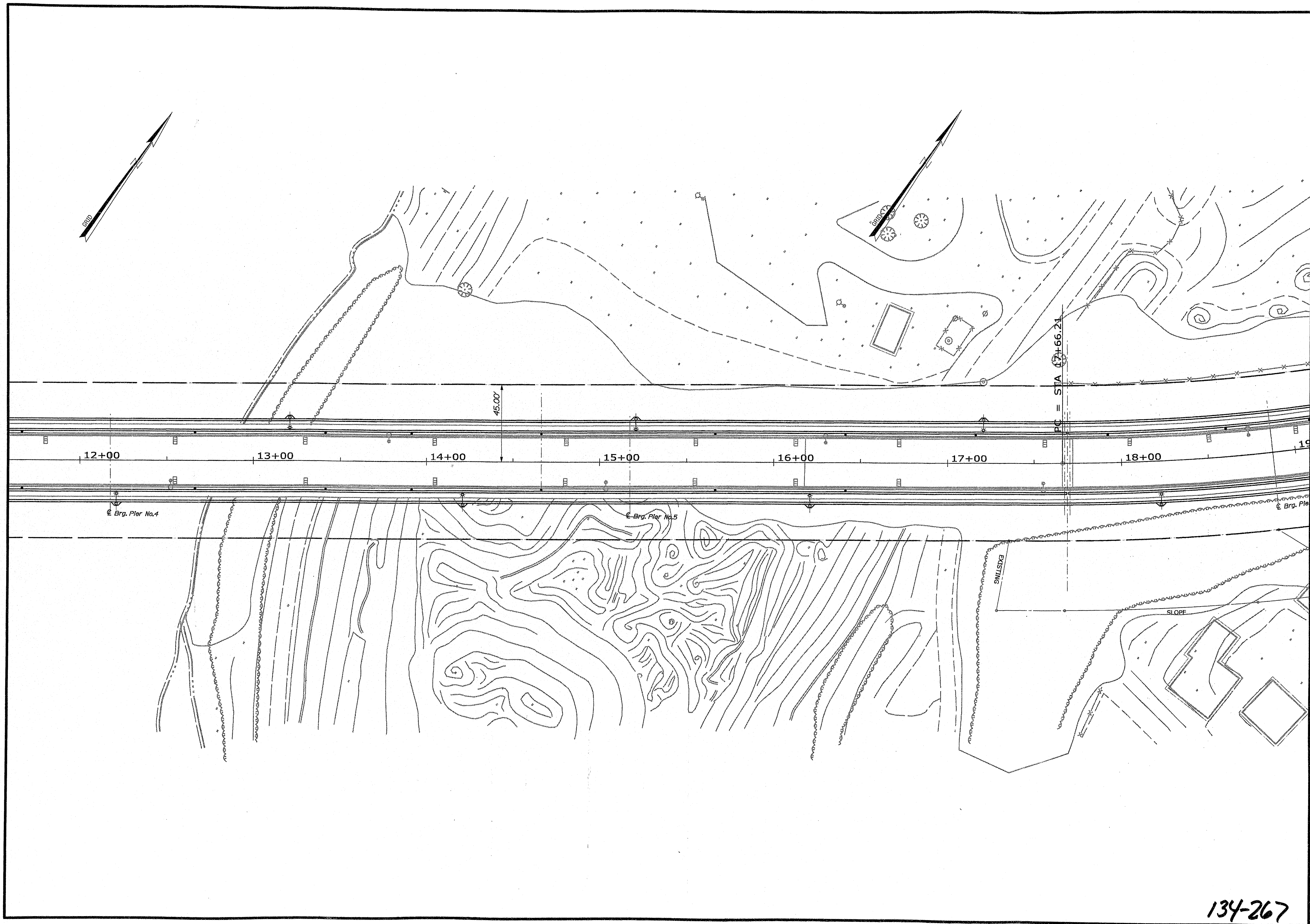


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134-266

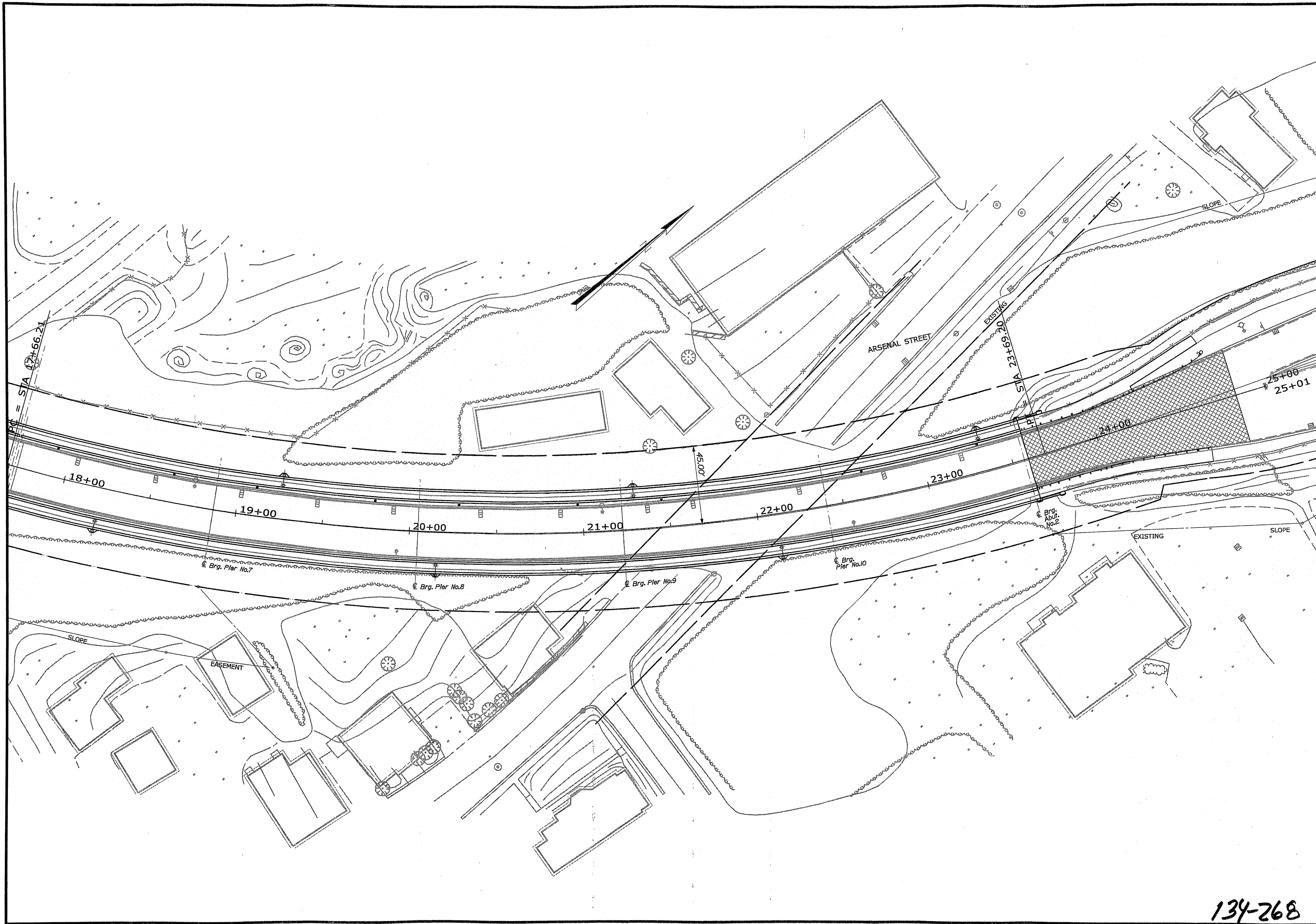
SHEET NUMBER										STATE OF MAINE DEPARTMENT OF TRANSPORTATION BH-9327(100)X									
MEMORIAL BRIDGE KENNEBEC RIVER CITY OF AUGUSTA KENNEBEC COUNTY RIGHT OF WAY PLAN										FROIL MANAGER		WLF		BY		DATE		SIGNATURE P.E. NUMBER DATE	
										DESIGN-DETAILED		ETC		DMS		2/23/05			
										CHECKED-REVIEWED				RRC					
										DESIGN-DETAILS		E02		BCN					
										REVISIONS 1									
										REVISIONS 2									
REVISIONS 3																			
REVISIONS 4																			
FIELD CHANGES																			
44										BRIDGE NO. 5196 PIN 9327.10 BRIDGE PLANS									
OF 46																			



SHEET NUMBER		STATE OF MAINE	
45		DEPARTMENT OF TRANSPORTATION	
OF 46		BH-9327(100)X	
134-267		BRIDGE NO. 6199	
		PIN 9327.10	
		BRIDGE PLANS	

PROJ. MANAGER	WLF	BY	DATE
DESIGN-DETAILED	ETC	DMS	2/23/05
CHECKED-REVIEWED	RC	RC	
DESIGN-DETAILED	2	RC	
DESIGN-DETAILED	3	RC	
REVISIONS 1		P.E. NUMBER	
REVISIONS 2		DATE	
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

MEMORIAL BRIDGE
KENNEBEC RIVER
CITY OF AUGUSTA KENNEBEC COUNTY
RIGHT OF WAY PLAN



STATE OF MAINE DEPARTMENT OF TRANSPORTATION		MEMORIAL BRIDGE KENNEBEC RIVER CITY OF AUGUSTA KENNEBEC COUNTY		SHEET NUMBER 46 OF 46	
BH-9327(100)X		RIGHT OF WAY PLAN			
BRIDGE NO. 5196		PIN 9327.10		BRIDGE PLANS	
PROJ. MANAGER	WLF	BY	DATE	SIGNATURE	P.E. NUMBER
DESIGN-DETAILED	ETC	DMS	2/23/05		
CHECKED-REVIEWED		RAC			
DESIGN-DETAILED		RAC			
DESIGN-DETAILED		BLN			
REVISIONS 1					
REVISIONS 2					
REVISIONS 3					
REVISIONS 4					
FIELD CHANGES					

134-268