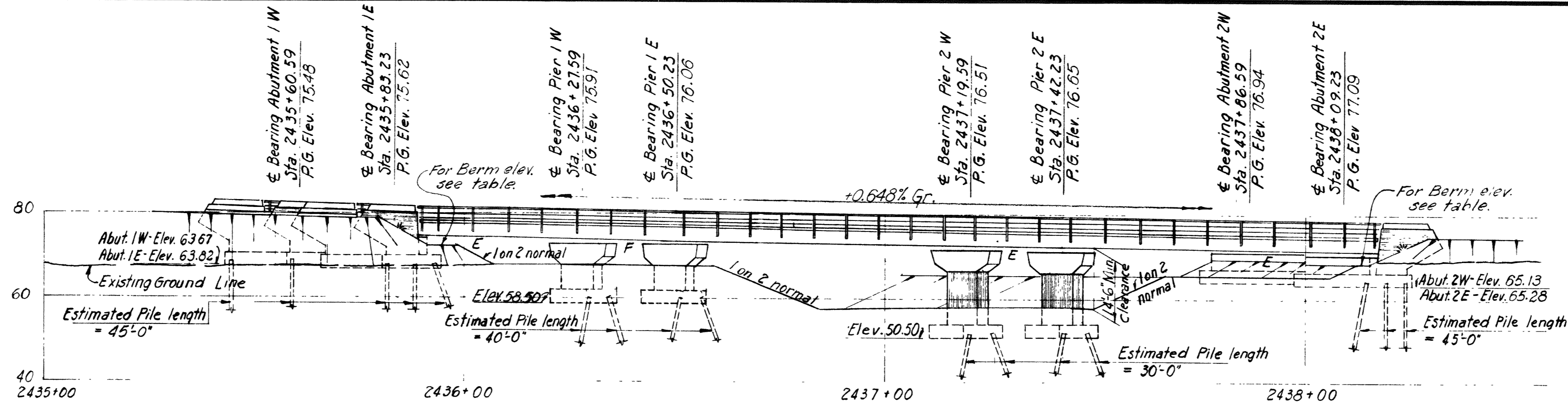


BERM ELEVATION		
Location		Elevation
West Bridge	Abut. 1	68.67
	Abut. 2	70.13
East Bridge	Abut. 1	68.82
	Abut. 2	70.28

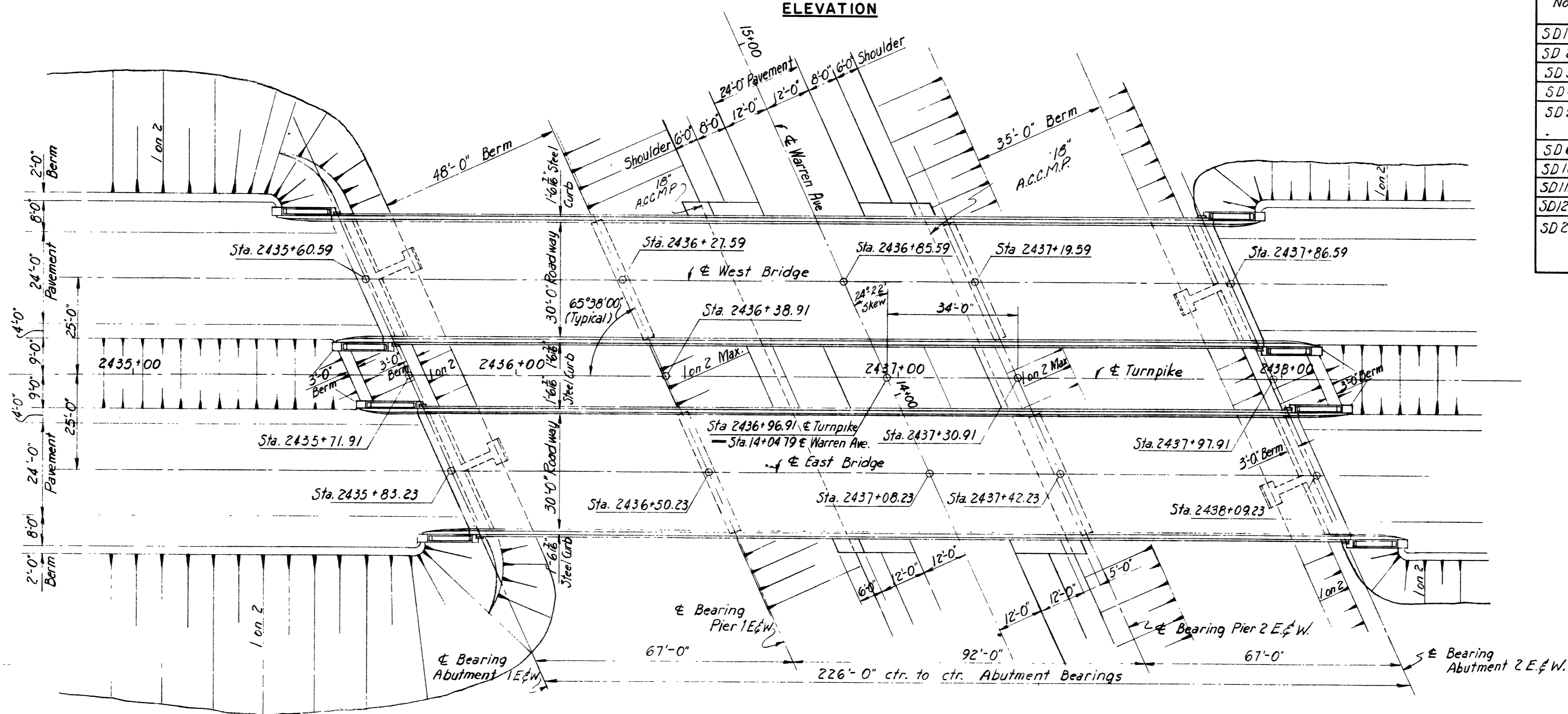


**REFERENCES**

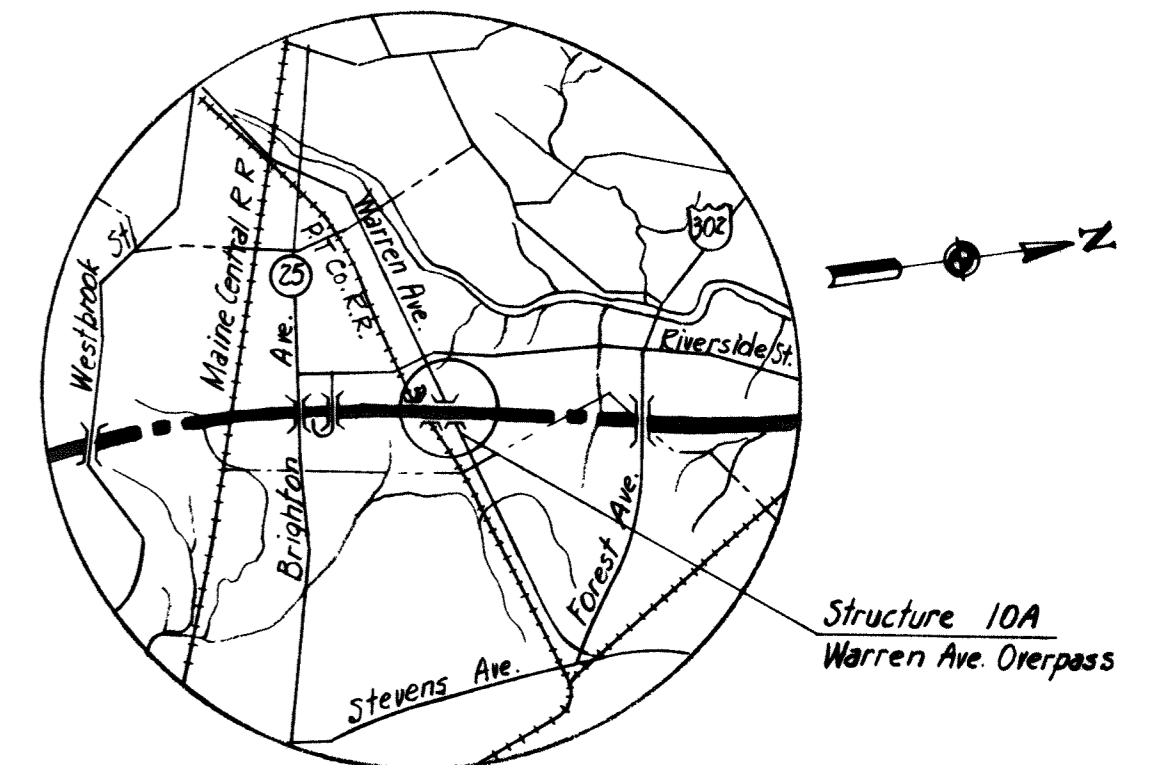
Dwg. No.	Title	Superstructure			
		Substr. Con-tractor	Steel Fabricator	Steel Erector	Floor Con'tor
SD1A	Standard Abutment Details	✓	✓	✓	✓
SD 2	Standard Pier Details	✓	✓	✓	✓
SD3	Abutment Drainage Details	✓			
SD4	Standard Pile Details	✓			
SD5	Standard Handrail, Bearing Devices and Miscellaneous Details	✓	✓	✓	✓
SD6	Standard Diaphragm Details		✓	✓	
SD10	Standard Type 'A' Splices for 36 WF Beams		✓	✓	
SD11A	Type 'X' and 'Y' Expansion Joints	✓	✓	✓	✓
SD12A	Type 'Z' Expansion Joint	✓	✓	✓	✓
SD20	Standard Bridge Floor Cross-Section, Steel Curb, Handrail and Diaphragms. 30 FT Roadway	✓	✓	✓	✓

**GENERAL NOTES**

Design Specification: AASHTO (1953) with minor modifications  
 Design Live Load: H 20-S16  
 Max. Pile Loads:  
 Abutment 1 and 2 = 31.9 tons  
 Pier 1 = 53.8 tons  
 Pier 2 = 58.0 tons



**VICINITY MAP**  
Scale: 1"=1 mile



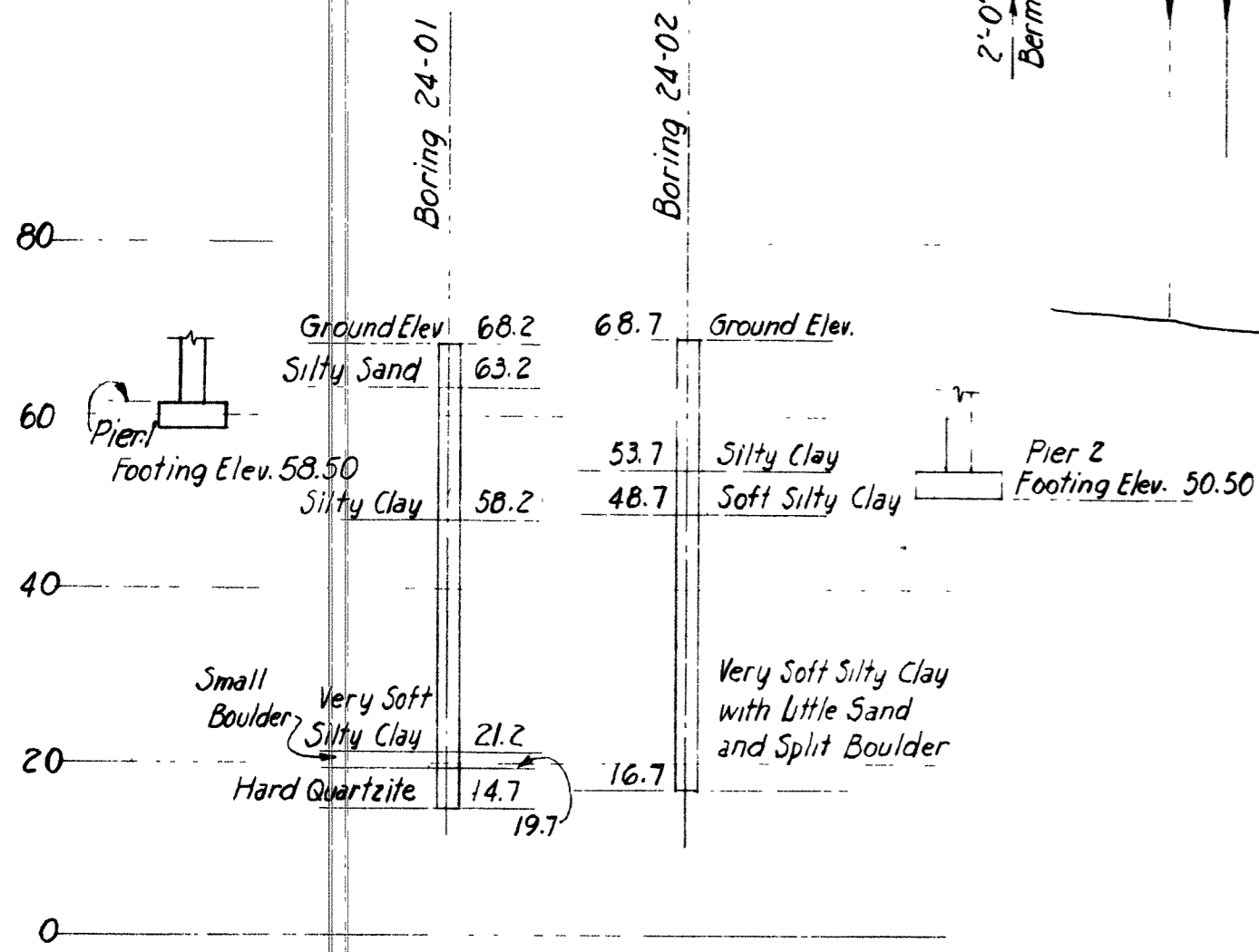
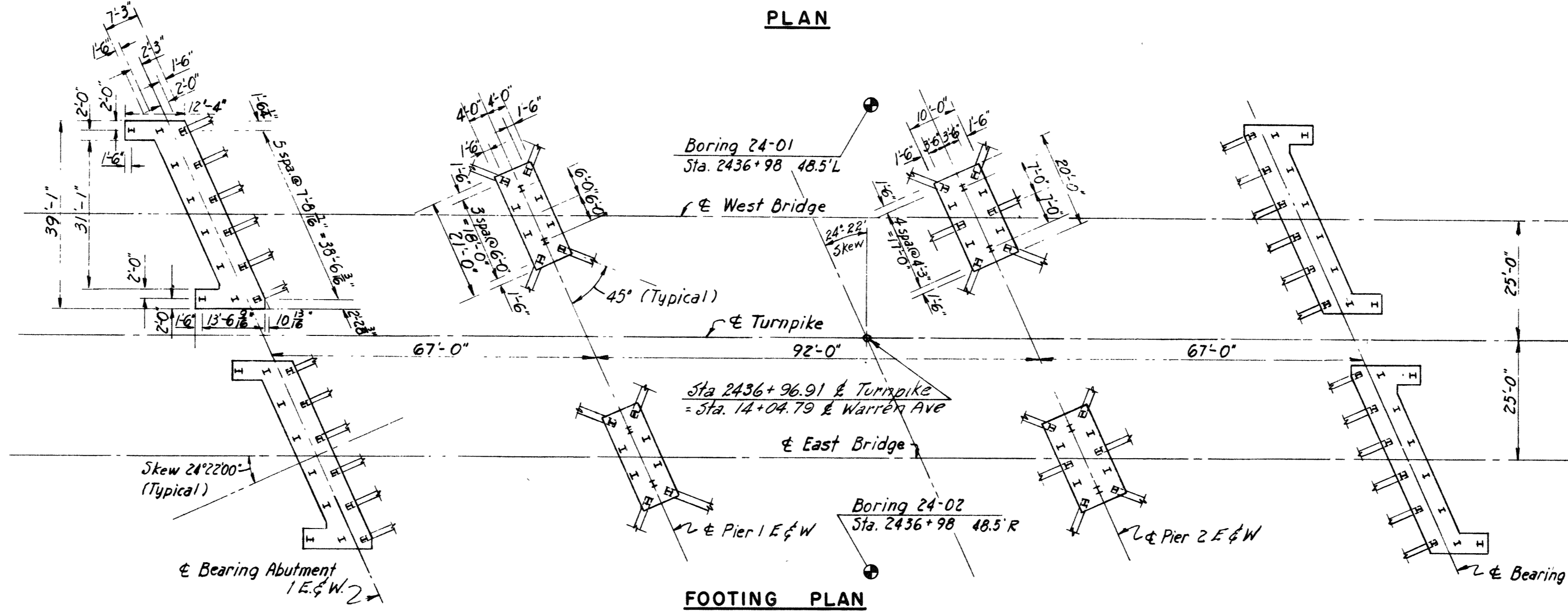
Notes:  
 Footing Plans for East and West Bridges are identical.  
 Abutment 1 is similar to Abutment 2 by rotation.  
 Piles for all abutments are 10BP42 Sections.  
 Piles for all piers are 12BP53 Sections.  
 Abutment Drainage is the same as shown on Std. Dwg. No. 3 except for the apron. For Apron detail, see Sheet 10A.02.03

**MAINE TURNPIKE AUTHORITY**  
**MAINE TURNPIKE**  
**SECTION 2 — PORTLAND TO AUGUSTA**

STRUCTURE NO. 10A TURNPIKE OVER WARREN AVENUE  
 STA. 2436 + 96.91  
**GENERAL PLAN AND ELEVATION**

HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS  
 NEW YORK KANSAS CITY

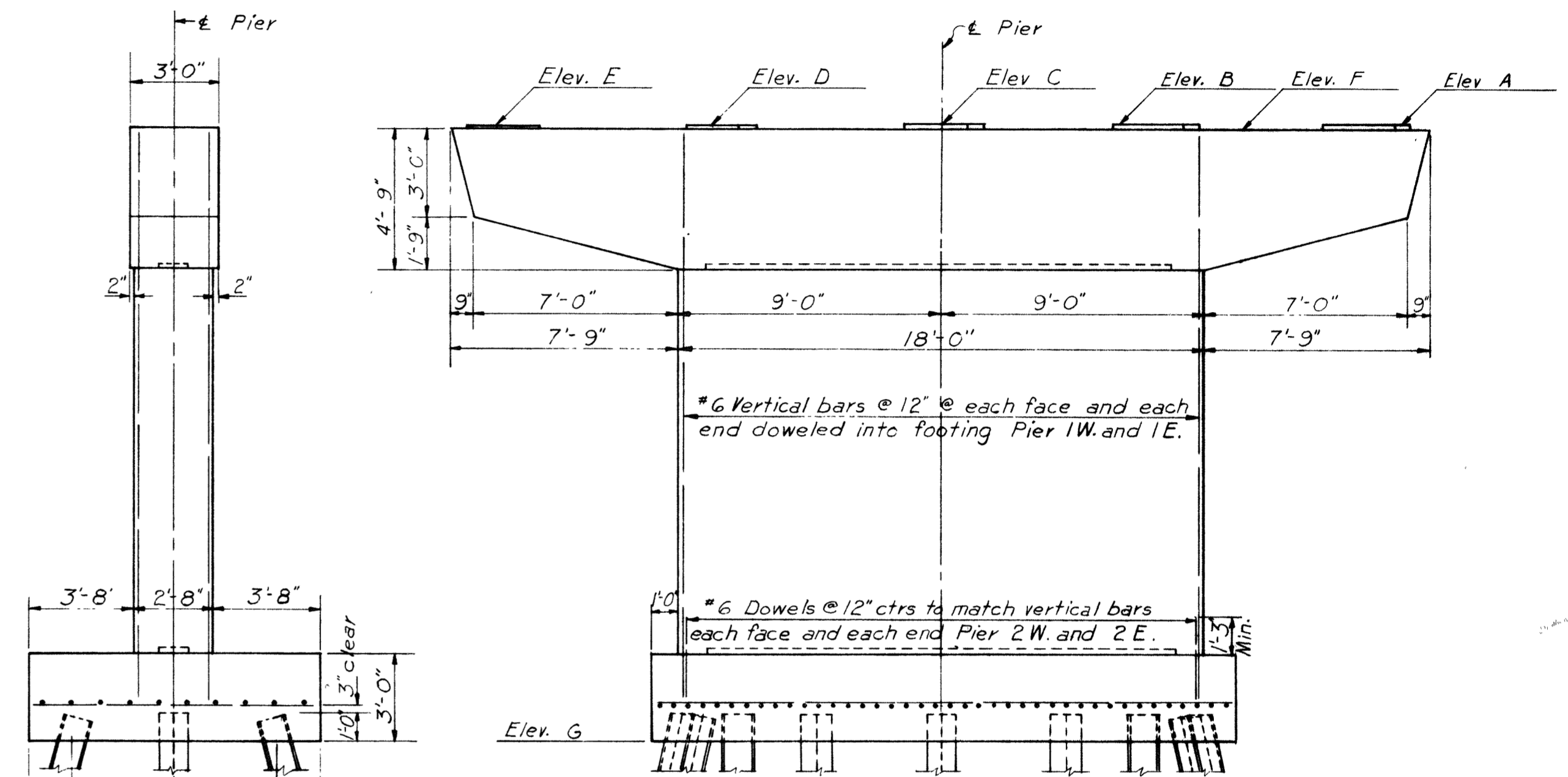
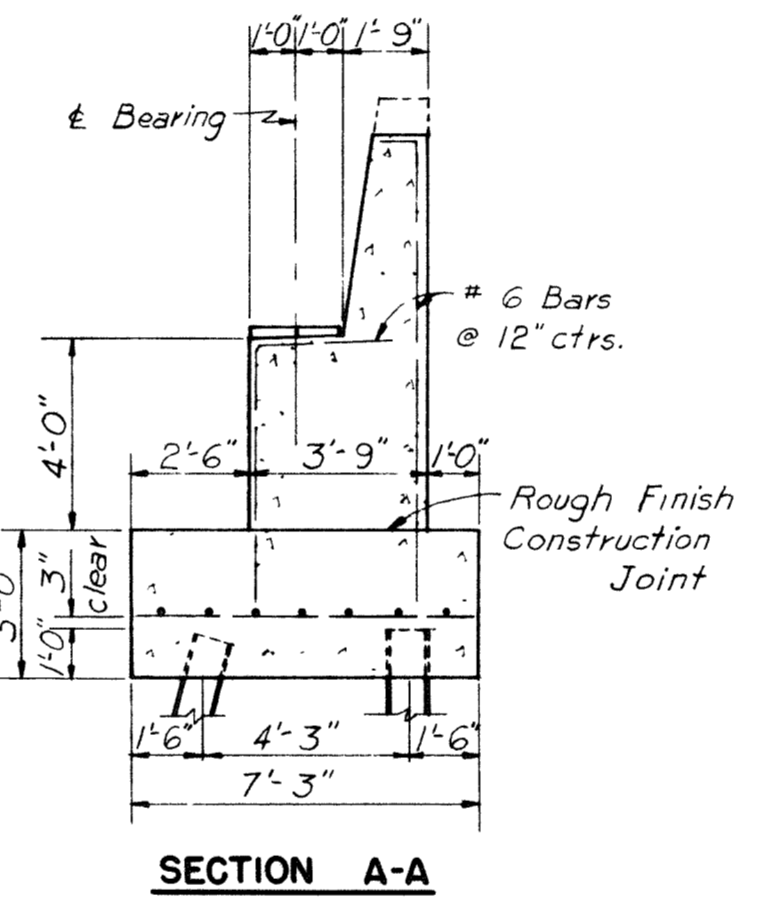
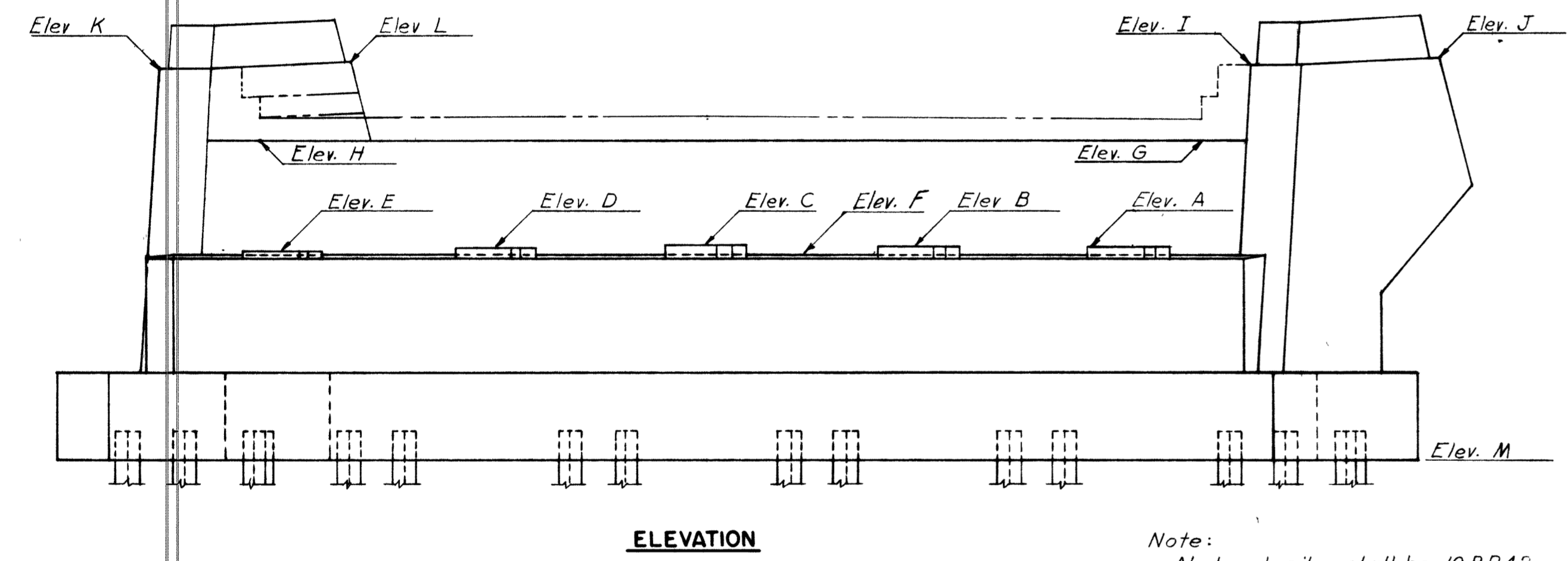
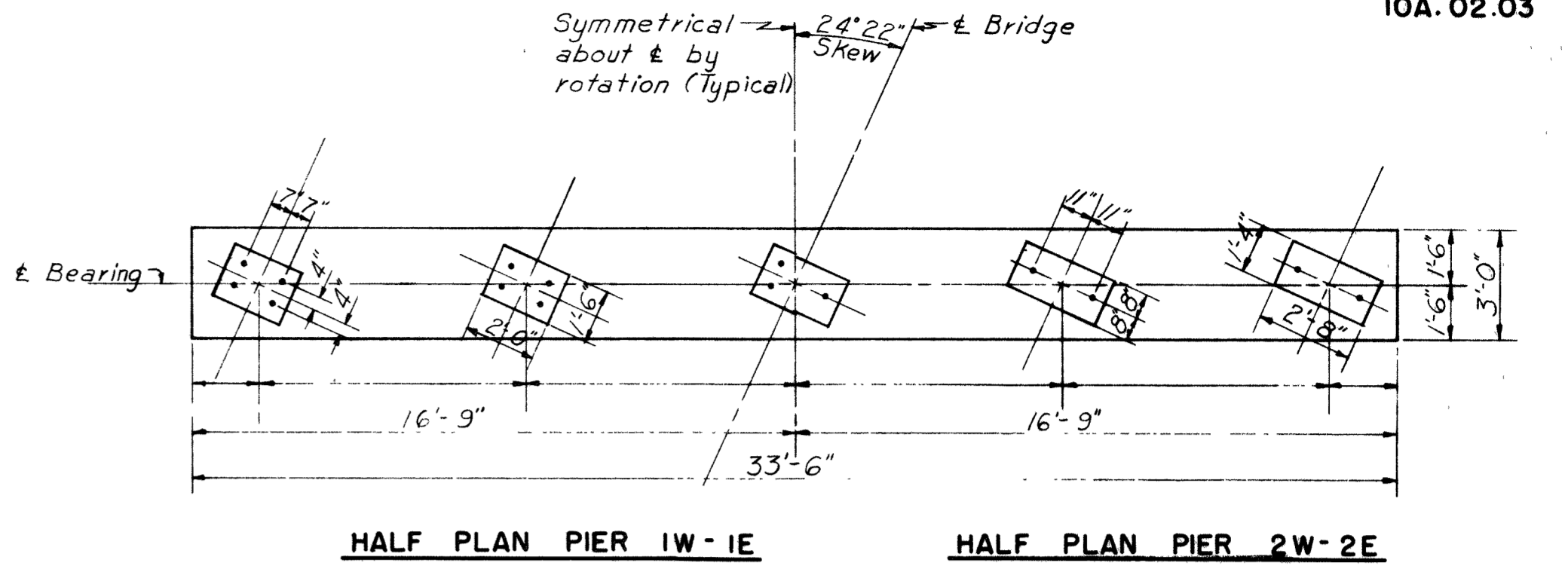
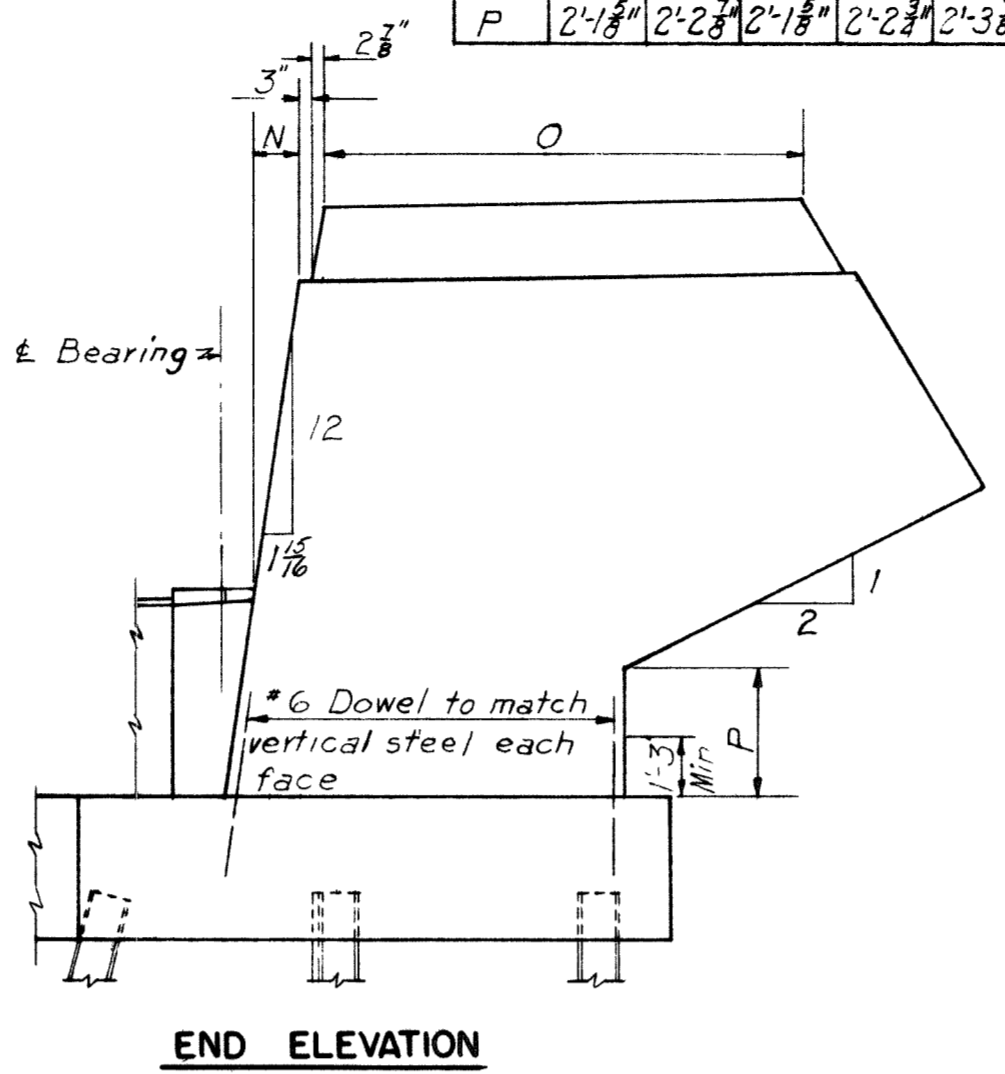
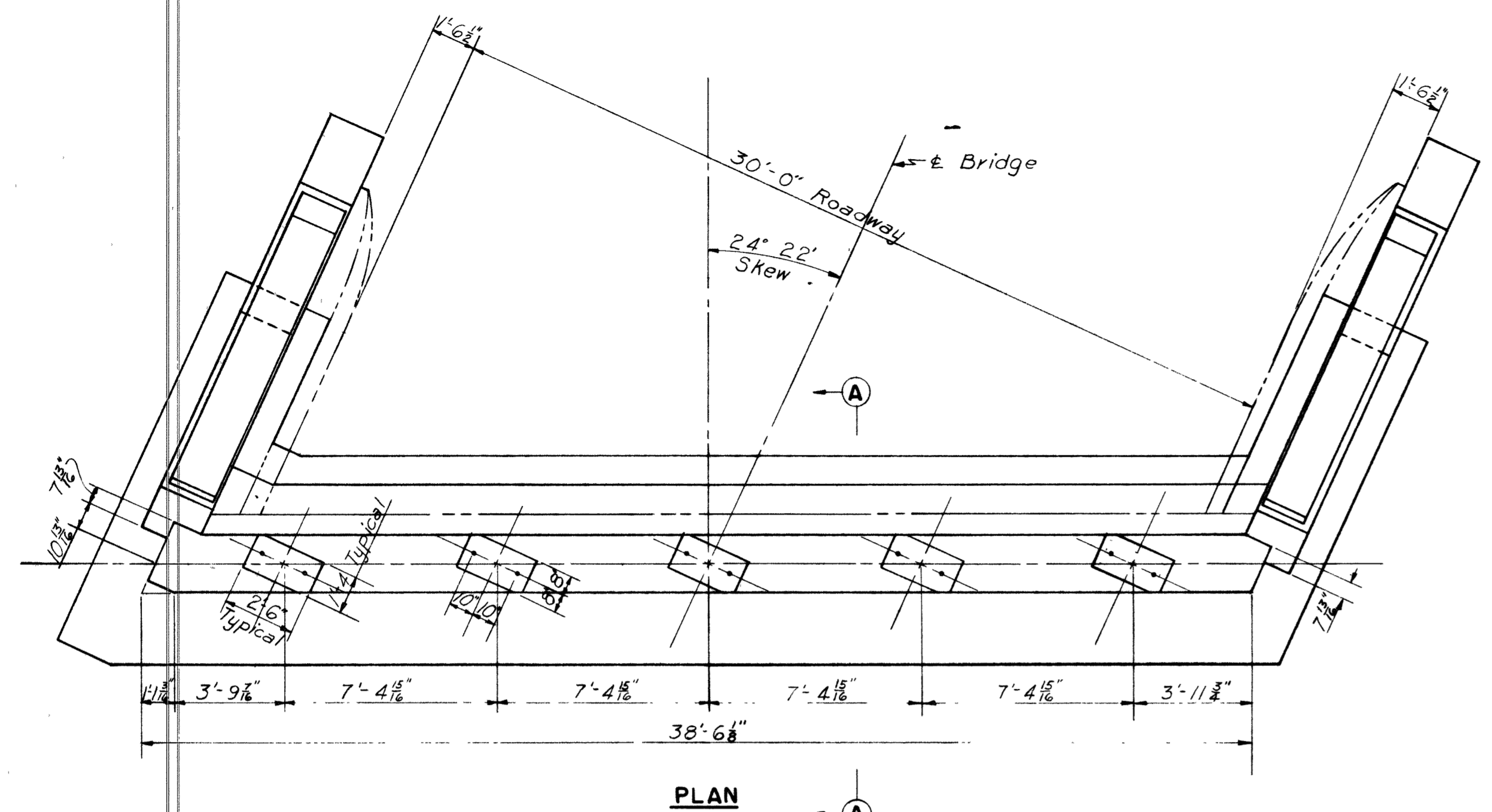
SCALE: 1"=20'-0"  
 CONTRACT NO. \_\_\_\_\_  
 SHEET NO. 62 OF 322



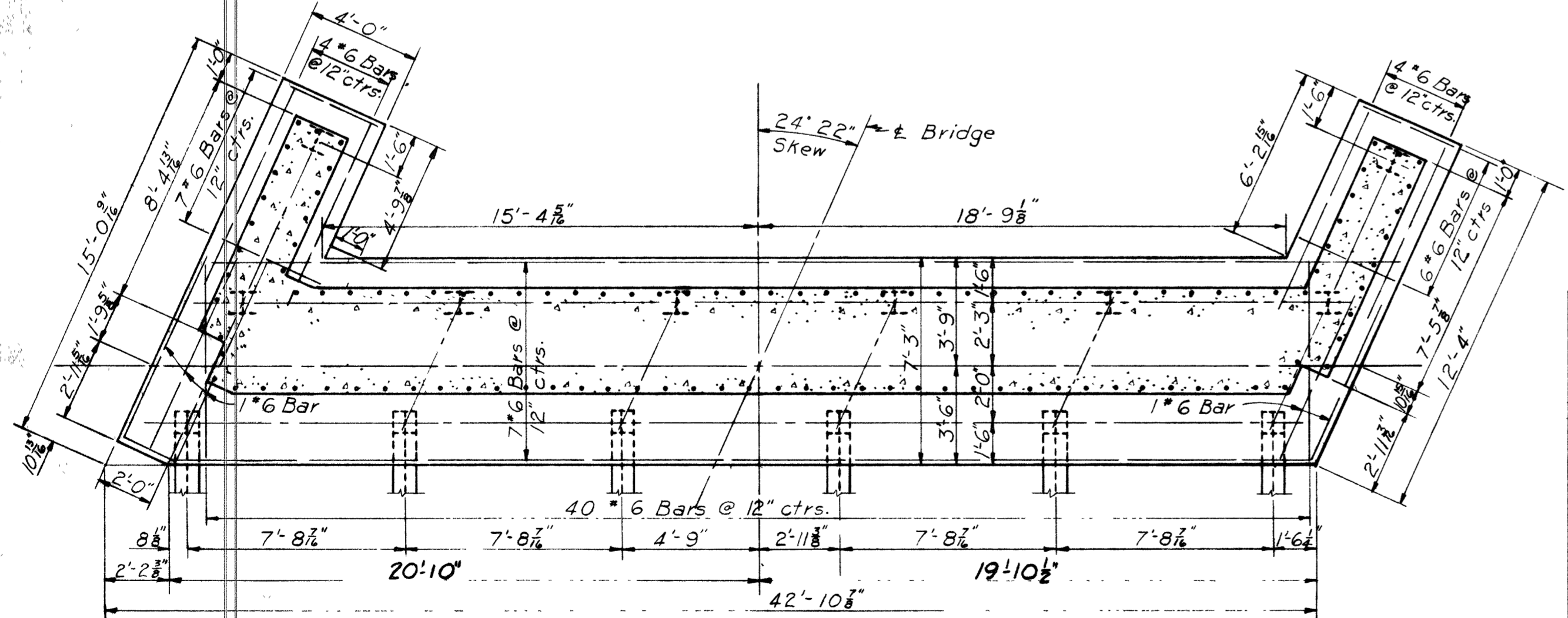
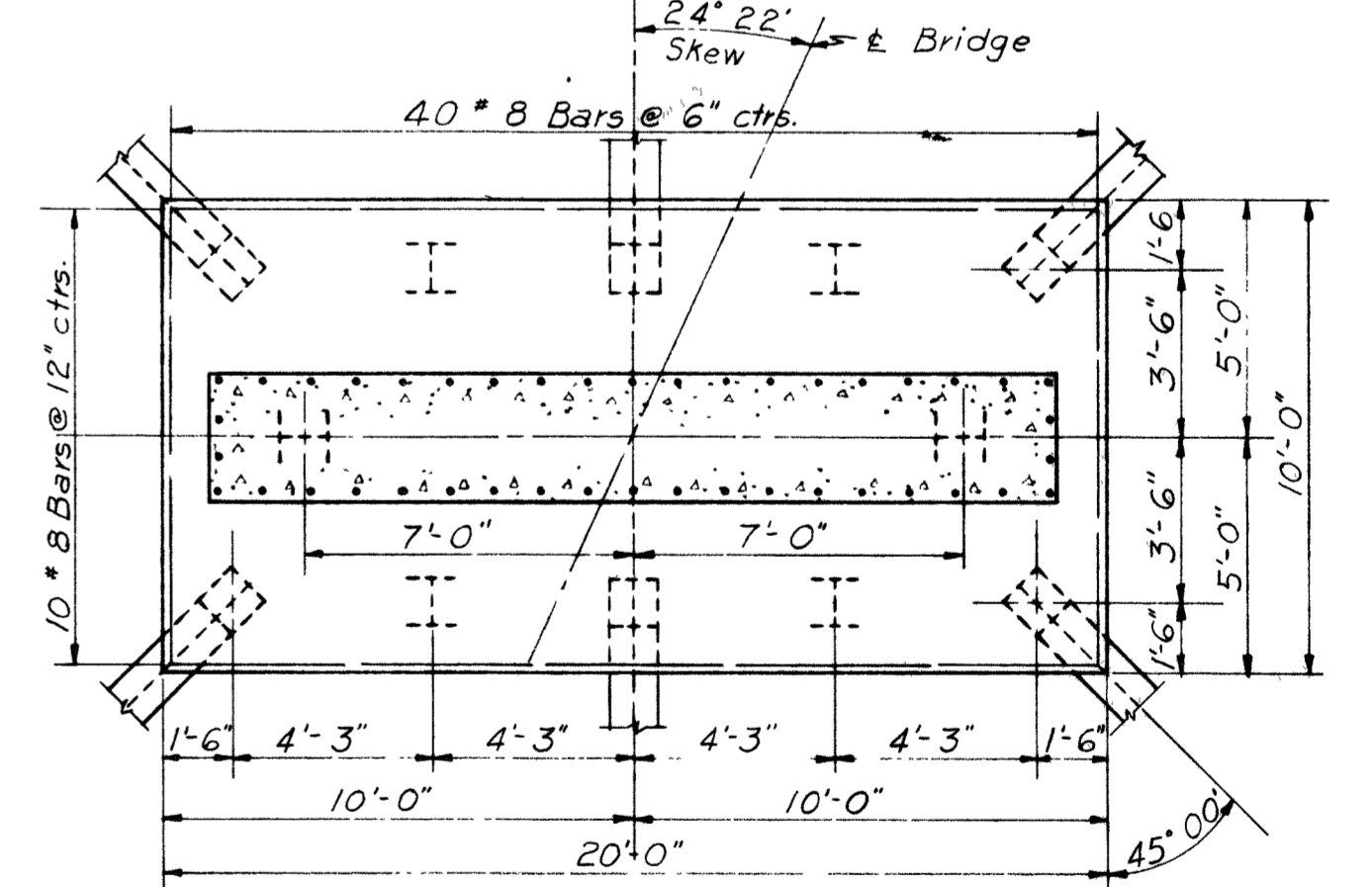
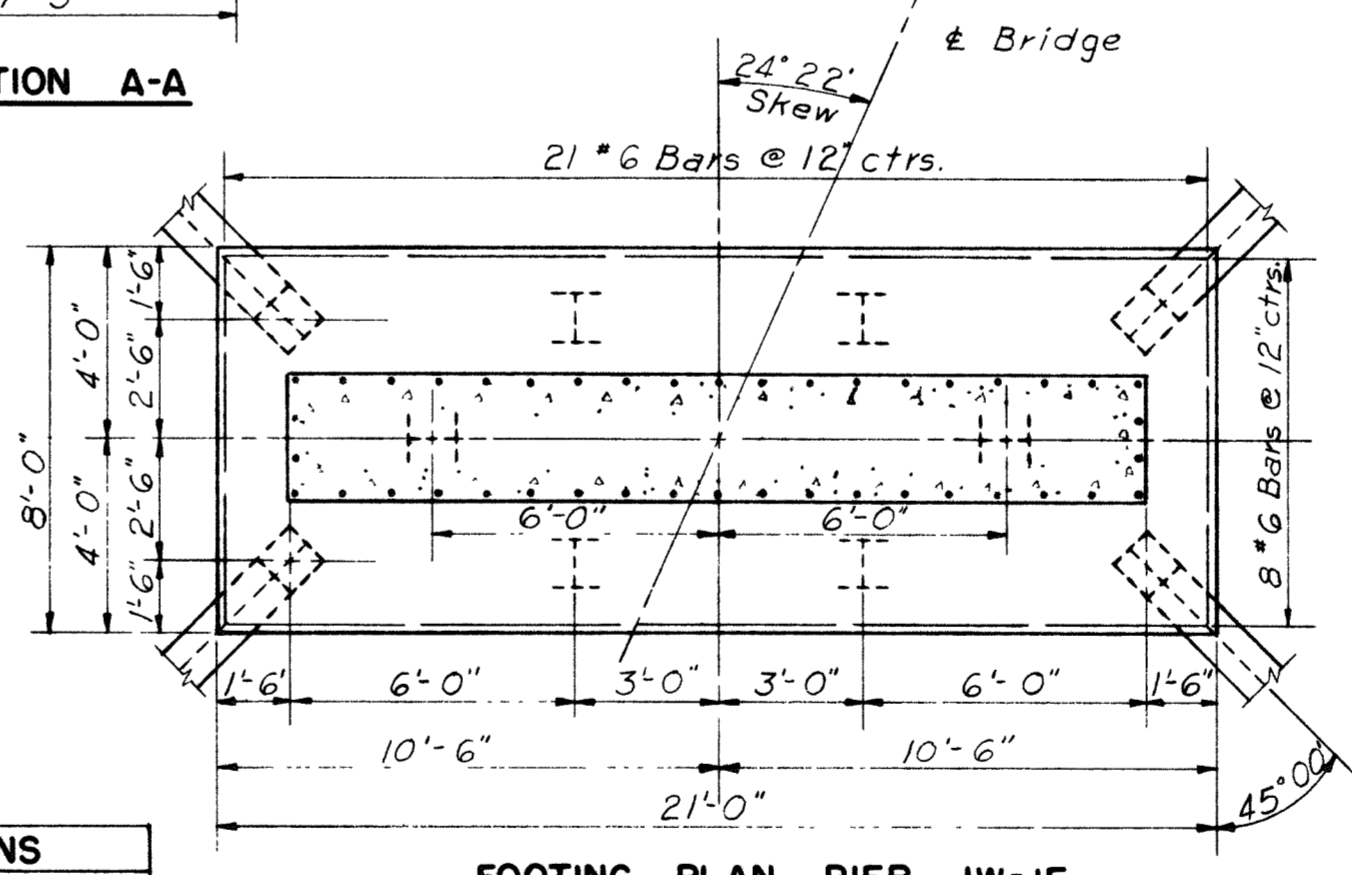
**DRAWING 10A.01.03**

MADE	BY	DATE	TRACED	CHECKED	IN CHARGE OF	NO.	REVISION	BY	DATE
	R. K.	3-29-54		CGP	I. D. S. K.				
			2				As-Built Elevations due to grade change	DNL	4-12-54

ABUTMENT DIMENSIONS							
	Abut. 1-W	Abut. 1-E	Abut. 2-W	Abut. 2-E			
Dimen.	W. Wing	E. Wing	W. Wing	E. Wing	W. Wing	E. Wing	W. Wing
N	1'-0 3/4"	1'-0 3/4"	1'-0 3/4"	1'-0 3/4"	1'-0 3/4"	1'-0 3/4"	1'-0 3/4"
O	10'-0 3/4"	10'-0 3/4"	10'-0 3/4"	10'-0 3/4"	10'-0 3/4"	10'-0 3/4"	10'-0 3/4"
P	2'-4 3/4"	2'-2 3/4"	2'-1 3/4"	2'-3 3/4"	2'-5"	2'-3 3/4"	2'-4 3/4"

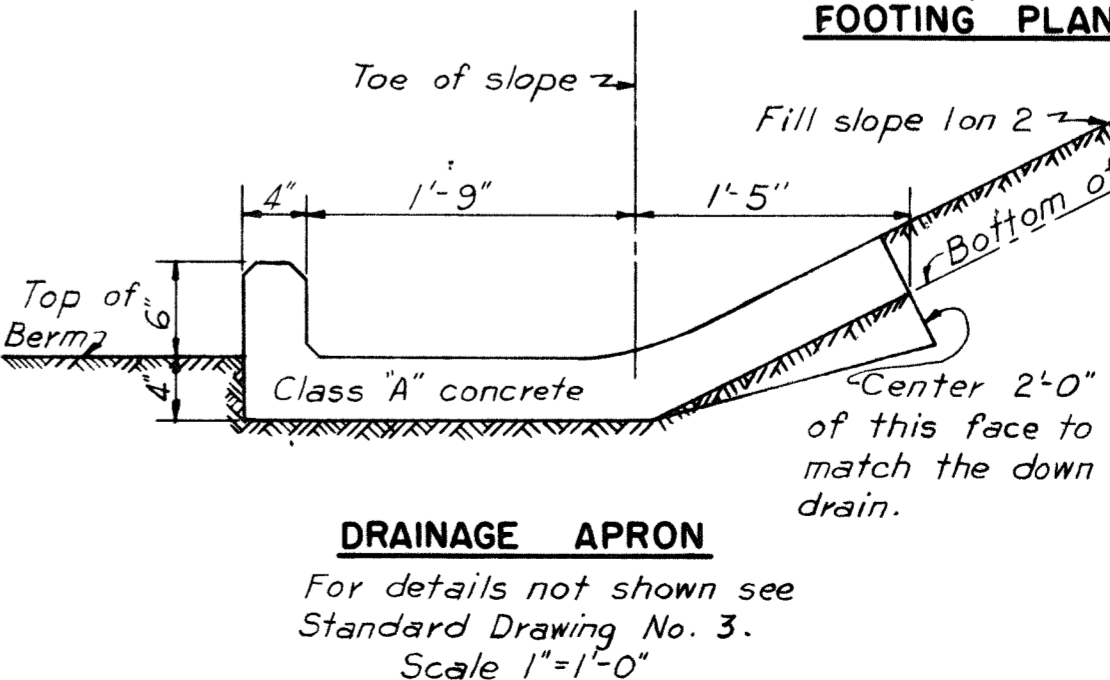


Note:  
Pier piles shall be 12BP53.  
All batters shall be 3" per foot.



ABUTMENT ELEVATIONS				
	West Bridge	East Bridge		
Elev. Abut 1	Abut 2	Abut 1	Abut 2	
A	70.84	72.38	70.98	72.53
B	70.93	72.43	71.07	72.58
C	71.02	72.49	71.16	72.63
D	70.97	72.39	71.11	72.54
E	70.92	72.30	71.06	72.45
F	70.75	72.22	70.90	72.37
G	74.64	76.22	74.78	76.37
H	74.73	76.12	74.88	76.27
I	77.13	78.72	77.28	78.87
J	77.06	78.60	77.21	78.94
K	77.23	78.63	77.37	78.77
L	77.16	78.70	77.30	78.65
M	63.67	65.13	63.82	65.28

PIER ELEVATIONS				
	West Bridge	East Bridge		
Elev. Pier 1	Pier 2	Pier 1	Pier 2	
A	71.23	71.53	71.38	71.68
B	71.23	71.58	71.43	71.73
C	71.37	71.67	71.52	71.82
D	71.32	71.62	71.47	71.77
E	71.31	71.61	71.46	71.76
F	71.21	71.51	71.36	71.66
G	58.50	50.50	58.50	50.50



DRAWING 10A.02.03			
BY	DATE	REVISION	BY
BY	DATE	4	As-Built
MADE	LWL	3-29-54	3
TRACED			2
CHECKED	DHL	3-30-54	1
IN CHARGE OF	I.D.S.K.	No.	REVISION

ABUTMENT 1-W  
Abutment 1-E is similar  
Abutment 2-W and 2-E  
similar but opposite hand.

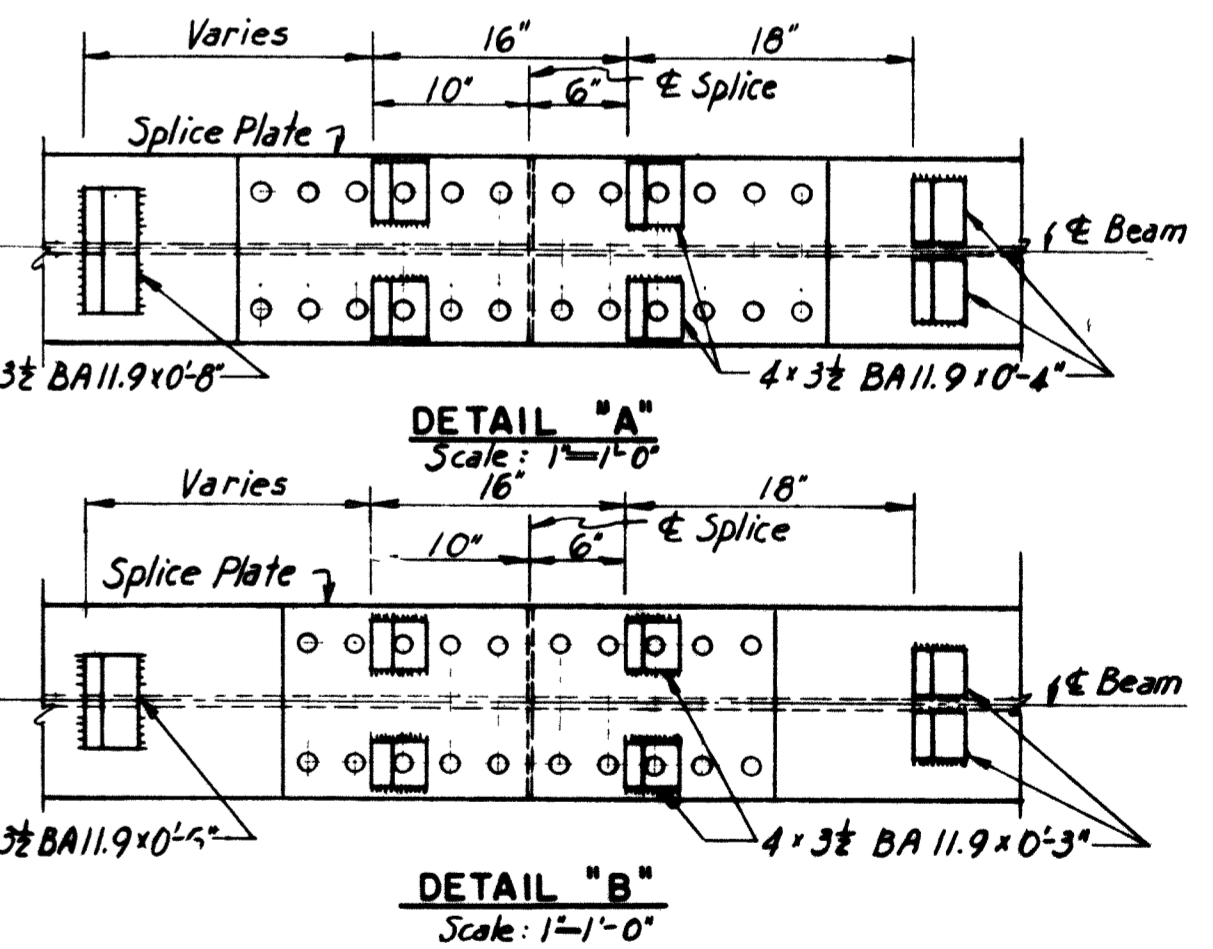
MAINE TURNPIKE AUTHORITY  
MAINE TURNPIKE  
SECTION 2 - PORTLAND TO AUGUSTA  
STRUCTURE NO. 10A TURNPIKE OVER  
WARREN AVENUE  
STA. 2436+96.91  
ABUTMENTS AND PIERS  
HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS  
NEW YORK KANSAS CITY  
SCALE: 1" = 1'-0" except as shown  
CONTRACT NO. \_\_\_\_\_  
SHEET NO. 70 OF 382

Location	"J"	"K"	"L"
West Bridge			
Abut. 1	75.40	75.60	75.49
Pier 1	75.84	76.04	75.92
Pier 2	76.43	76.63	76.52
Abut. 2	76.87	77.07	76.95
East Bridge			
Abut. 1	75.55	75.75	75.64
Pier 1	75.98	76.18	76.07
Pier 2	76.58	76.78	76.67
Abut. 2	77.01	77.21	77.10

Notes:  
 East Bridge shown, West Bridge is identical except for elevations and location.  
 Elevations shown are to top of finished roadway.  
 Use 6" Bridge Floor with 2" bituminous wearing surface (Composite design) as shown on Std. Dwg. No. 20  
 Bars shown are additional reinforcing steel which is to be placed between the normal bars.  
 Numbers in circles indicate pouring sequence and direction.

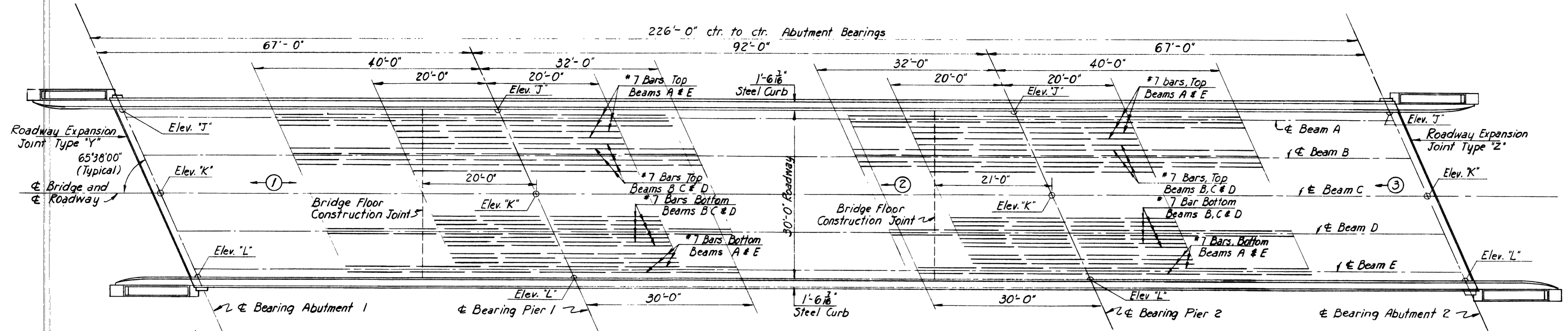
Location	"M"	"N"	"P"	"Q"	"R"
West Bridge					
Abut. 1	74.63	74.72	74.81	74.78	74.71
Pier 1	75.06	75.15	75.24	75.19	75.14
Pier 2	75.86	75.75	75.84	75.79	75.74
Abut. 2	76.09	76.18	76.27	76.22	76.17
East Bridge					
Abut. 1	74.78	74.87	74.96	74.91	74.86
Pier 1	75.21	75.30	75.39	75.34	75.29
Pier 2	75.81	75.90	75.99	75.94	75.87
Abut. 2	76.24	76.33	76.42	76.37	76.32

Notes:  
 Elevations shown are to top of beam flange.  
 Diaphragms are marked thus "B", "D" and "E". Curb Brackets are marked thus "H". For details see Std. Dwg. No. 20.

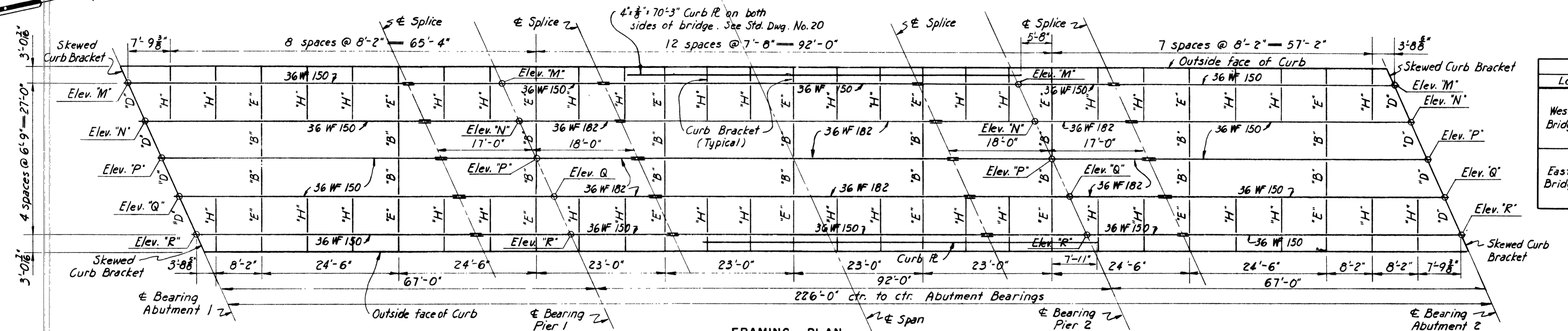


Notes:  
 All bearing stiffeners at point of support are 2L 7x4 1/2.  
 Bevel at ends of beams is with respect to beam axis.  
 All shear lugs are single shear lugs unless noted otherwise. For details see Std. Dwg. No. 5

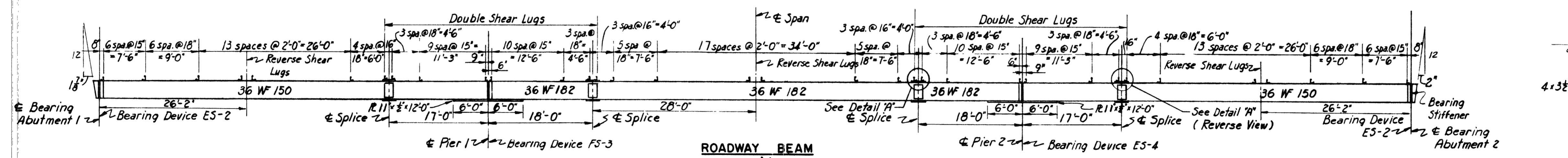
MAINE TURNPIKE AUTHORITY  
**MAINE TURNPIKE**  
 SECTION 2 — PORTLAND TO AUGUSTA  
 STRUCTURE NO. 10A TURNPIKE OVER WARREN AVENUE  
 STA. 2436+96.91  
 SUPERSTRUCTURE  
 HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS  
 NEW YORK KANSAS CITY  
 SCALE: As shown  
 CONTRACT NO. \_\_\_\_\_  
 SHEET NO. 71 OF 322



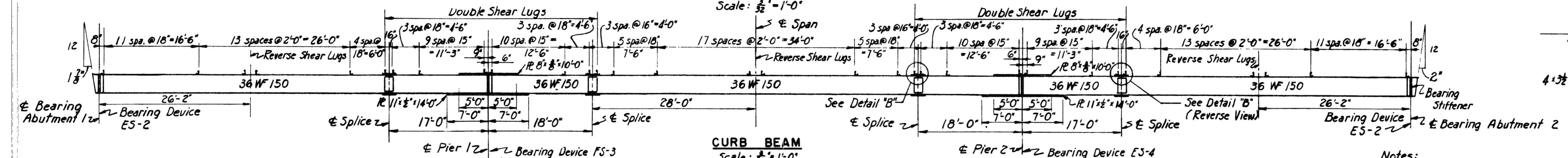
FLOOR PLAN  
 Scale: 3/8" = 1'-0"



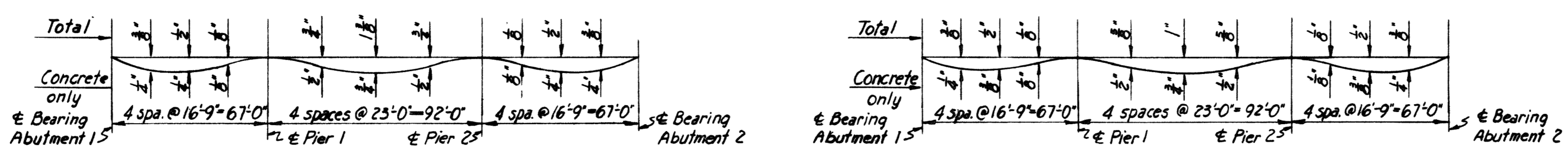
FRAMING PLAN  
 Scale: 3/8" = 1'-0"



ROADWAY BEAM  
 Scale: 3/8" = 1'-0"



CURB BEAM  
 Scale: 3/8" = 1'-0"



DEAD LOAD DEFLECTION DIAGRAM  
 No Scale

DRAWING 10A.03.03

MADE	BY	DATE	TRACED	CHECKED	IN CHARGE OF
	R.K.	3-25-54		C.G.P.	I.D.S.K.
			2		
			1		

# MAINE TURNPIKE AUTHORITY

## MAINE TURNPIKE

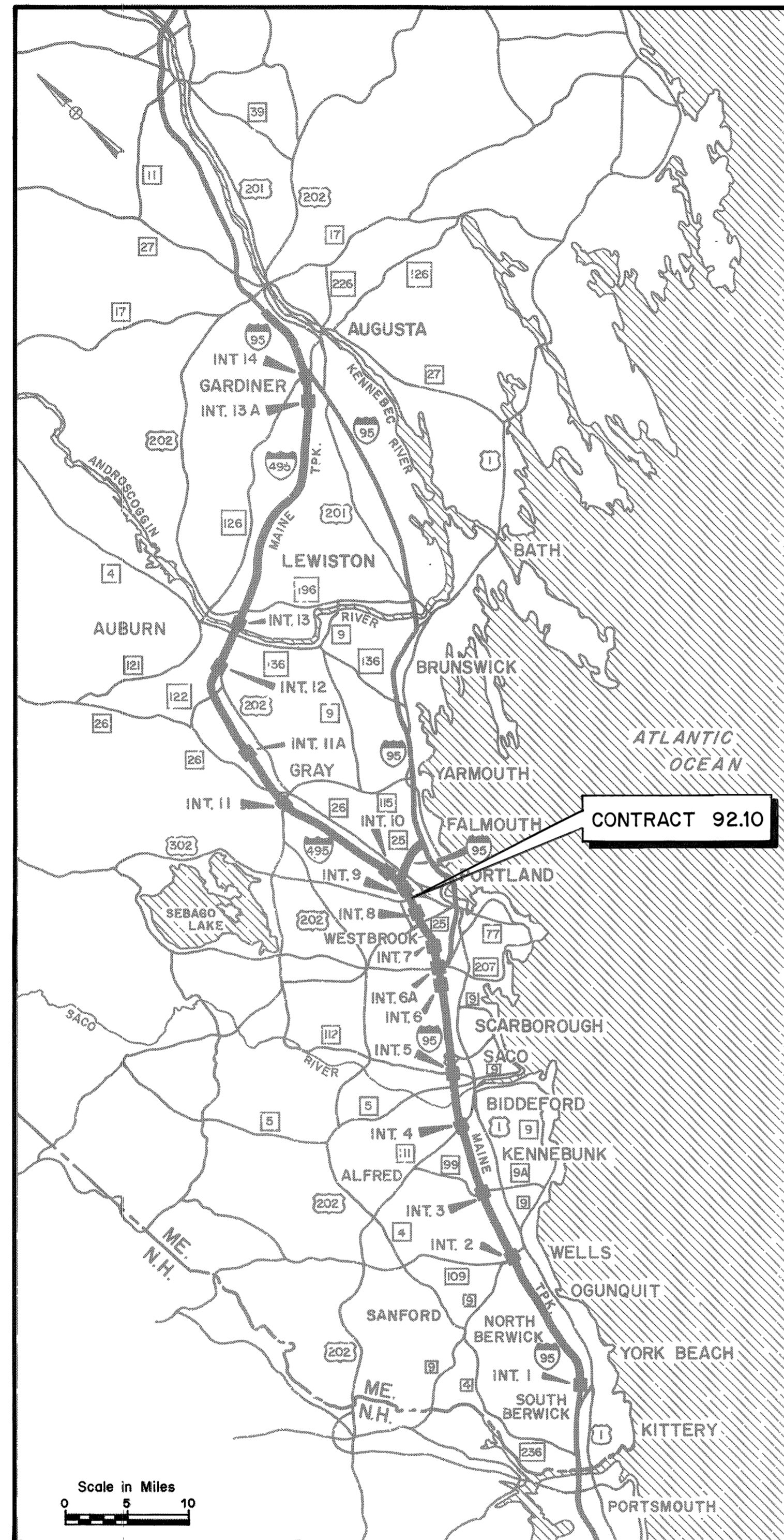


ROBERT K. PACIOS, CHAIRMAN  
 JULIAN R. COLES, VICE CHAIRMAN  
 PETER W. DANTON, SECRETARY TREASURER  
 DANIEL J. CALLAHAN, MEMBER  
 DANA F. CONNORS, MEMBER EX-OFFICIO  
 PAUL E. VIOLETTE, EXECUTIVE DIRECTOR

### INDEX OF SHEETS

- 1 TITLE SHEET
- 2 ESTIMATED QUANTITIES AND GENERAL NOTES
- 3 TYPICAL SECTION AND EROSION CONTROL DETAILS
- 4 HIGHWAY STANDARD DETAILS
- 5-10 BRIDGE STANDARD DETAILS
- 11 MISCELLANEOUS HIGHWAY DETAILS
- 12-26 BRIDGE PLANS
- 27 SITE PLAN
- 28-29 TRAFFIC DETOUR I AND II
- 30 TRAFFIC CONTROL
- 31-32 CROSS SECTIONS

TOTAL SHEETS = 32

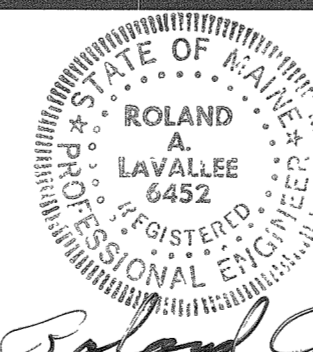


### LOCATION MAP

STATE OF MAINE  
 DEPARTMENT OF TRANSPORTATION

COMMISSIONER \_\_\_\_\_ DATE \_\_\_\_\_  
 BUREAU DIRECTOR AND CHIEF ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_

**HNTB** HOWARD NEEDLES TAMMEN & BERGENDOFF  
 ARCHITECTS ENGINEERS PLANNERS



*Roland A. Lavallee*  
 ROLAND A. LAVALLEE P.E.  
 PROJECT MANAGER  
 DATE 3/17/72

APPROVED:

MAINE TURNPIKE AUTHORITY

CHAIRMAN \_\_\_\_\_  
 EXECUTIVE DIRECTOR \_\_\_\_\_  
 DATE \_\_\_\_\_

**ESTIMATED QUANTITIES**

ITEM	DESCRIPTION	QUANTITY	UNIT
202.10	REMOVING EXISTING SUPERSTRUCTURE - PROPERTY OF THE CONTRACTOR	1	LS
202.12	REMOVING EXISTING STRUCTURAL CONCRETE	44	CY
202.13	REMOVING EXISTING RAILING - RETAINED BY AUTHORITY	916	LF
202.14	REMOVING EXISTING RAILING - PROPERTY OF CONTRACTOR	916	LF
202.20	PROTECTIVE SHIELD	2,010	SY
202.202	REMOVING PAVEMENT SURFACE	1,500	SY
203.20	COMMON EXCAVATION	1,051	CY
203.25	GRANULAR BORROW	430	CY
206.082	STRUCTURAL EARTH EXCAVATION - MAJOR STRUCTURES	260	CY
206.10	STRUCTURAL EARTH EXAVATION - PIERS	200	CY
304.10	AGGREGATE SUBBASE COURSE - GRAVEL	870	CY
401.10	SAWING BITUMINOUS CONCRETE	700	LF
403.07	HOT BITUMINOUS PAVEMENT, GRADING B	151	TONS
403.08	HOT BITUMINOUS PAVEMENT, GRADING C	525	TONS
403.10	HOT BITUMINOUS PAVEMENT, GRADING D	45	TONS
409.15	BITUMINOUS TACK COAT, APPLIED	38	GAL
421.01	PRECAST CONCRETE DOWNSPOUT	144	LF
501.212	STEEL H-BEAM PILES 42 LB./FT.	540	LF
501.214	STEEL H-BEAM PILES 53 LB./FT.	420	LF
502.21	STRUCTURAL CONCRETE ABUTMENTS & RETAINING WALLS	114	CY
502.23	STRUCTURAL CONCRETE PIERS	124	CY
502.26	STRUCTURAL CONCRETE ROADWAY AND SIDEWALK SLABS ON STEEL BRIDGES	1	LS
502.4712	SILICA FUME ADDITIVE	2300	LBS
502.48	PIER PREPARATION	260	SF
502.50	BRIDGE DECK REPAIR	14	CY
502.60	BACKWALL REPAIR - SURFACE REPAIR - SECTION II	10	SF
502.62	ABUTMENT AND BRIDGE SEAT REPAIR - SECTION II	15	SF
502.63	PIER REPAIR	40	SF
502.71	PATCHROC 10-60	10	EA
			(50 LB. BAG)
503.12	REINFORCING STEEL, FABRICATED AND DELIVERED	13,516	LBS
503.13	REINFORCING STEEL, PLACING	13,516	LBS
503.14	EPOXY - COATED REINFORCING STEEL, FABRICATED AND DELIVERED	204,809	LBS
503.15	EPOXY - COATED REINFORCING STEEL, PLACING	204,809	LBS
504.701	STRUCTURAL STEEL FABRICATED & DELIVERED, ROLLED (89,800 LBS GRADE 36, 1,800 LBS, GRADE 50)	1	LS
504.71	STRUCTURAL STEEL ERECTION (91,600 LBS)	1	LS
504.72	STEEL BEAM MODIFICATIONS	6,440	LBS
504.73	STRUCTURAL STEEL REPAIRS	400	LBS
505.08	SHEAR CONNECTORS	1	LS
506.30	SHOP COATING OF STRUCTURAL STEEL	1	LS
506.31	FIELD REPAIR OF DAMAGED COATING	1	LS
507.092	ALUMINUM BRIDGE RAILING, 2 BAR	994	LF
508.13	MEMBRANE WATERPROOFING	1	LS
514.06	CURING BOX FOR CONCRETE CYLINDERS	1	EA
515.20	PROTECTIVE COATING FOR CONCRETE SURFACES	484	SY
515.22	THOROSEAL COATING FOR CONCRETE SURFACES	400	SY
520.221	EXPANSION DEVICE EXTENSION - COMPRESSION SEAL	4	EA
527.101	TEMPORARY IMPACT ATTENUATOR SYSTEM	1	LS
603.159	12 INCH CULVERT PIPE OPTION III	10	LF
606.174	GUARDRAIL ATTACHMENT - TYPE A	6	EA
606.371	GUARDRAIL REMOVE AND STACK, SINGLE RAIL	108	LF
606.372	GUARDRAIL REMOVE AND STACK, DOUBLE RAIL	54	LF
606.381	GUARDRAIL REMOVE AND RESET, SINGLE RAIL	520	LF
606.382	GUARDRAIL REMOVE AND RESET, DOUBLE RAIL	800	LF
606.48	SINGLE GALVANIZED STEEL POST	10	EA
609.131	VERTICAL BRIDGE CURB - TYPE IA	100	LF
609.132	VERTICAL BRIDGE CURB - TYPE IB	912	LF
613.319	TEMP. EROSION CONTROL BLANKET	665	SY
615.07	LOAM	110	CY
618.14	SEEDING METHOD NUMBER 2	9	UNIT
618.25	APPLIED WATER	10	MG
619.12	MULCH	9	UNIT
619.14	TEMPORARY MULCH	9	UNIT
627.671	REMOVING PAINTED PAVEMENT MARKINGS	7,100	LF
627.70	4 INCH YELLOW TEMPORARY PAVEMENT MARKINGS - TAPE	8,050	LF
627.71	4 INCH WHITE TEMPORARY PAVEMENT MARKINGS - TAPE	8,650	LF
629.05	HAND LABOR, STRAIGHT TIME	50	MH
631.172	TRUCK-LARGE (INCLUDING OPERATOR)	25	HR
631.12	ALL PURPOSE EXCAVATOR (INCLUDING OPERATOR)	25	HR
631.22	FRONT END LOADER (INCLUDING OPERATOR)	25	HR
639.18	FIELD OFFICE TYPE A	1	EA
645.107	REMOVE AND RESET WARNING SIGNS	4	EA
645.302	DEMOUNTABLE REFLECTORIZED DELINEATOR, DOUBLE	20	EA
652.30	FLASHING ARROW BOARD	2	EA
652.33	DRUM	205	EA
652.35	CONSTRUCTION SIGNS	520	SF
652.361	MAINTENANCE OF TRAFFIC CONTROL DEVICES	1	LS
652.38	FLAGGERS	40	MH
656.50	BALED HAY IN PLACE	215	EA
656.632	30 INCH TEMPORARY SILT FENCE	540	LF
663.05	TEMPORARY CONCRETE BARRIER	2,320	LF
663.06	RESETTING TEMPORARY CONCRETE BARRIER	3,560	LF

**GENERAL NOTES**

- UNSUITABLE EXCAVATED MATERIAL SHALL BE REMOVED FROM THE SITE.
- SEEDING AND LOAMING SHALL CONFORM TO SECTION 618 METHOD 2 AND SECTION 615 OF THE STANDARD SPECIFICATIONS, RESPECTIVELY AND SHALL BE APPLIED TO ALL SLOPES.
- MULCH SHALL BE APPLIED IN AREAS SEEDED BY SEEDING METHOD NO. 2.
- LOAM DEPTHS UNDER SEEDING METHOD NO. 2 ARE 2" AND ARE NOMINAL.
- ALL NECESSARY PAVEMENT CUTTING SHALL BE SAWCUT AND DONE IN SUCH A MANNER AS TO LEAVE A CLEAN VERTICAL FACE.
- WHERE HOT BITUMINOUS PAVEMENT GRADING "C" IS TO MEET EXISTING PAVEMENT A BUTT JOINT WILL BE REQUIRED - SEE PAVEMENT DETAILS.
- CLEARING LIMITS SHALL BE 10 FEET OUTSIDE AND PARALLEL TO THE CONSTRUCTION SLOPE LIMIT LINE OR AS DIRECTED BY THE ENGINEER.
- PAYMENT FOR REMOVAL OF THE ENDS OF EXISTING PIPE TO BE REPLACED, IF REQUIRED, SHALL BE CONSIDERED INCIDENTAL TO THE VARIOUS DRAINAGE ITEMS AND NO SEPARATE PAYMENT SHALL BE MADE THEREFORE.
- REQUIRED EROSION AND SEDIMENTATION CONTROL SHOWN ON THE PLAN IS APPROXIMATE ONLY. ACTUAL TYPE AND LOCATION FOR HAY BALES AND SILT FENCE SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.
- WASTE MATERIALS SHALL BE DISPOSED OF OFF THE PROJECT SITE, IN ACCORDANCE WITH THE CHAPTER 404, DEPARTMENT OF ENVIRONMENTAL PROTECTION SOLID WASTE MANAGEMENT RULES.
- REMOVING, STORING, AND RESETING EXISTING SIGNS WITHIN THE LIMITS OF THE PROPOSED TRAFFIC CROSSOVERS WILL NOT BE MEASURED FOR PAYMENT AND WILL BE CONSIDERED INCIDENTAL TO ITEM 652.361.

**SUMMARY OF EXCAVATION AND BORROW**

COMMON EXCAVATION FOR ESTIMATE

COMMON EXCAVATION	915
EXISTING PAVEMENT REMOVED	34
GRUBBING IN FILL	102

TOTAL COMMON EXCAVATION 1,051

FILL FOR BORROW CALCULATIONS

COMMON FILL	93
GRUBBING IN FILL	102

TOTAL FILL 195

AVAILABLE COMMON EXCAVATION FOR BORROW CALCULATIONS

(1) TOTAL COMMON EXCAVATION 1,051

DEDUCTIONS:	
EXISTING PAVEMENT REMOVED	34
GRUBBING IN FILL	102

(2) TOTAL DEDUCTIONS: 136

TOTAL COMMON EXCAVATION (1) MINUS (2) 915

(3) AVAILABLE STRUCTURAL EARTH EXCAVATION 460

TOTAL AVAILABLE NON-ROCK EXCAVATION 1,375

COMPUTATION OF COMMON BORROW FOR ESTIMATE

TOTAL FILL 195

TOTAL AVAILABLE NON-ROCK EXCAV. 1,375 x 0.85 =

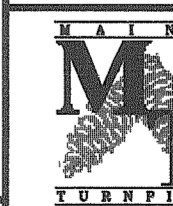
TOTAL AVAILABLE EXCAVATION 1,169

TOTAL FILL MINUS TOTAL AVAILABLE EXCAVATION 974

TOTAL COMMON BORROW 0

WASTE 974

Maine Turnpike Authority  
**Maine Turnpike**



BRIDGE DECK REPLACEMENT  
WARREN AVENUE  
ESTIMATED QUANTITIES  
AND GENERAL NOTES

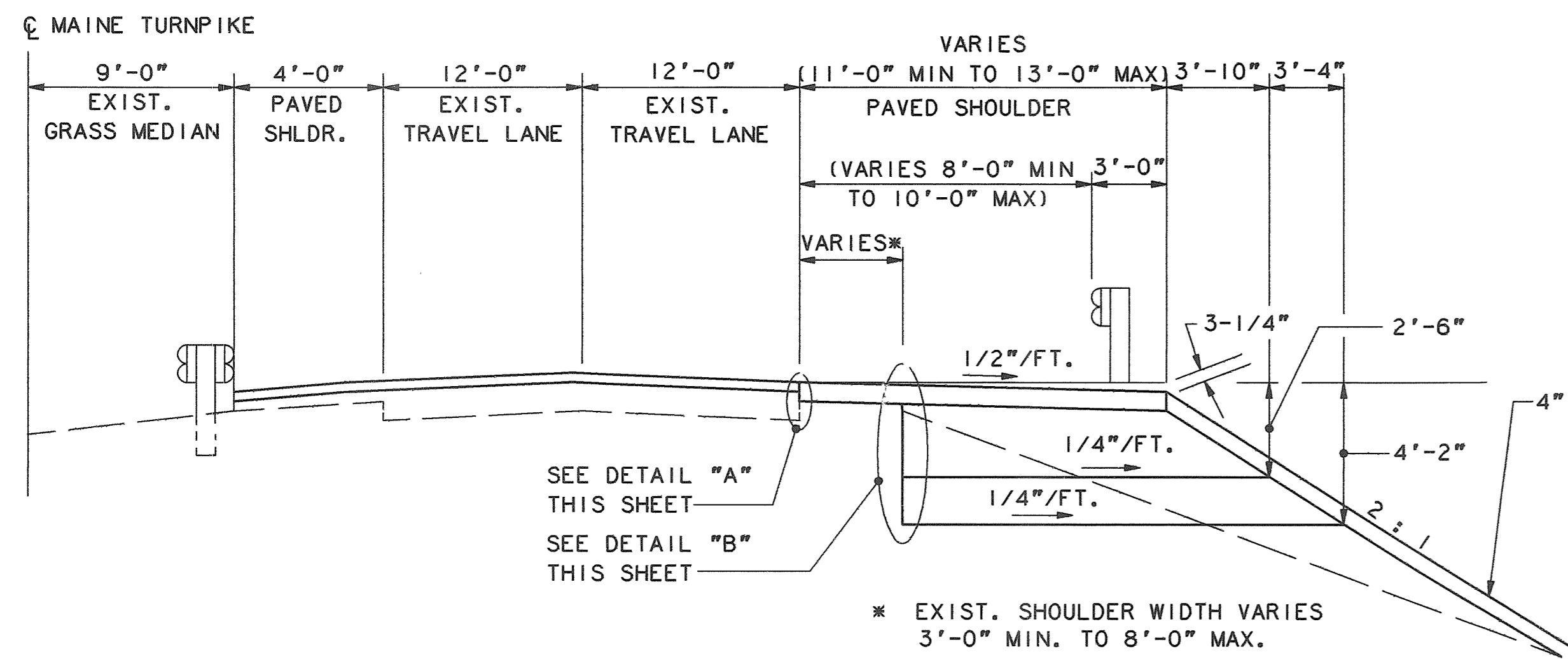


HOWARD NEEDLES TAMMEN & BERGENDOFF  
ARCHITECTS ENGINEERS PLANNERS

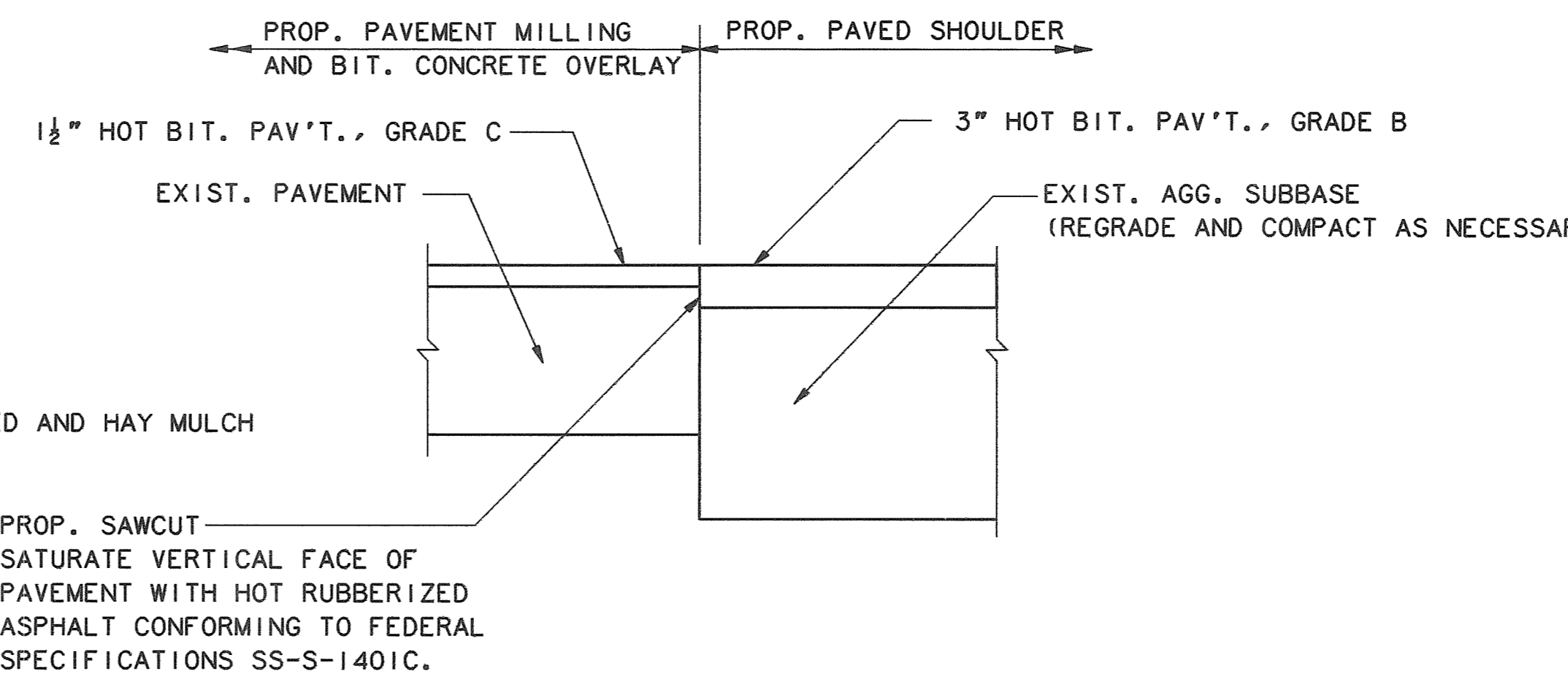
No.	Revision	By	Date	In Charge Of:
		Designed	JFC 2/92	
		Drawn	SV 2/92	
		Checked	BJB 2/92	
				RAL

Contract 92.10

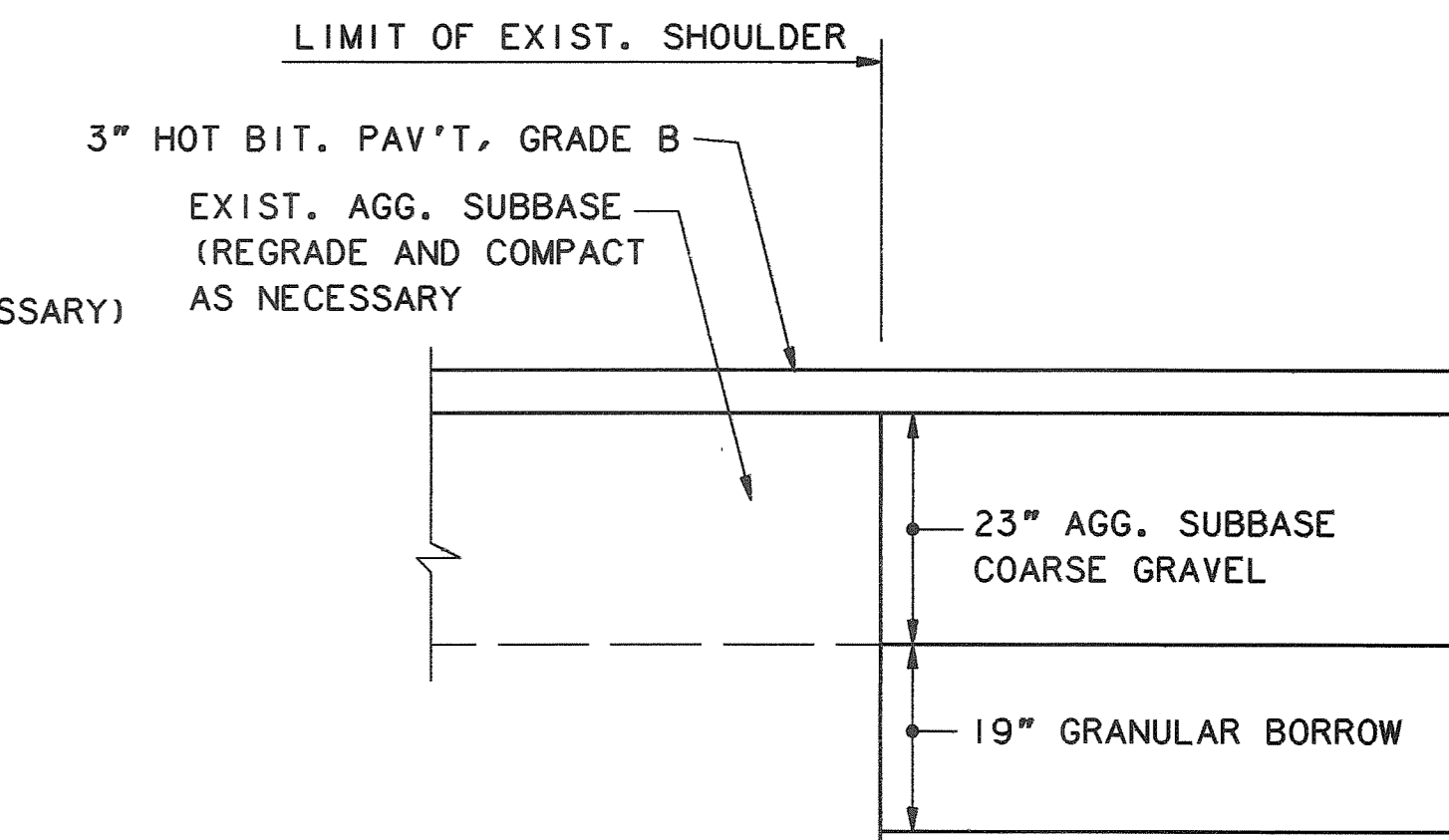
Sheet No. 2 of 32



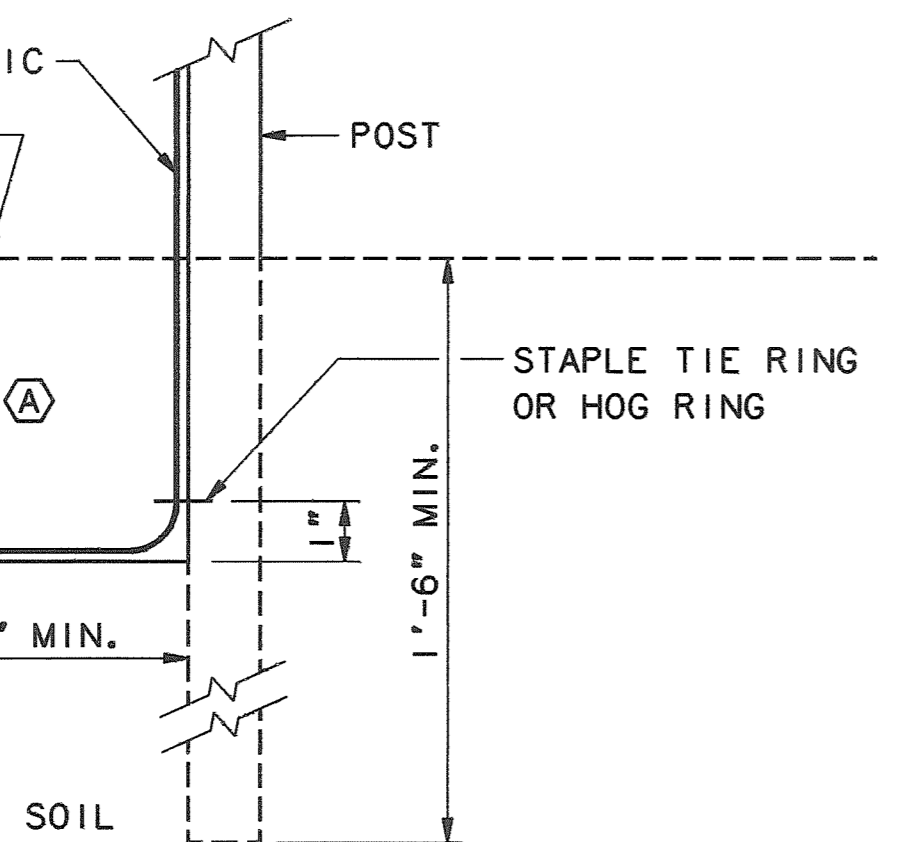
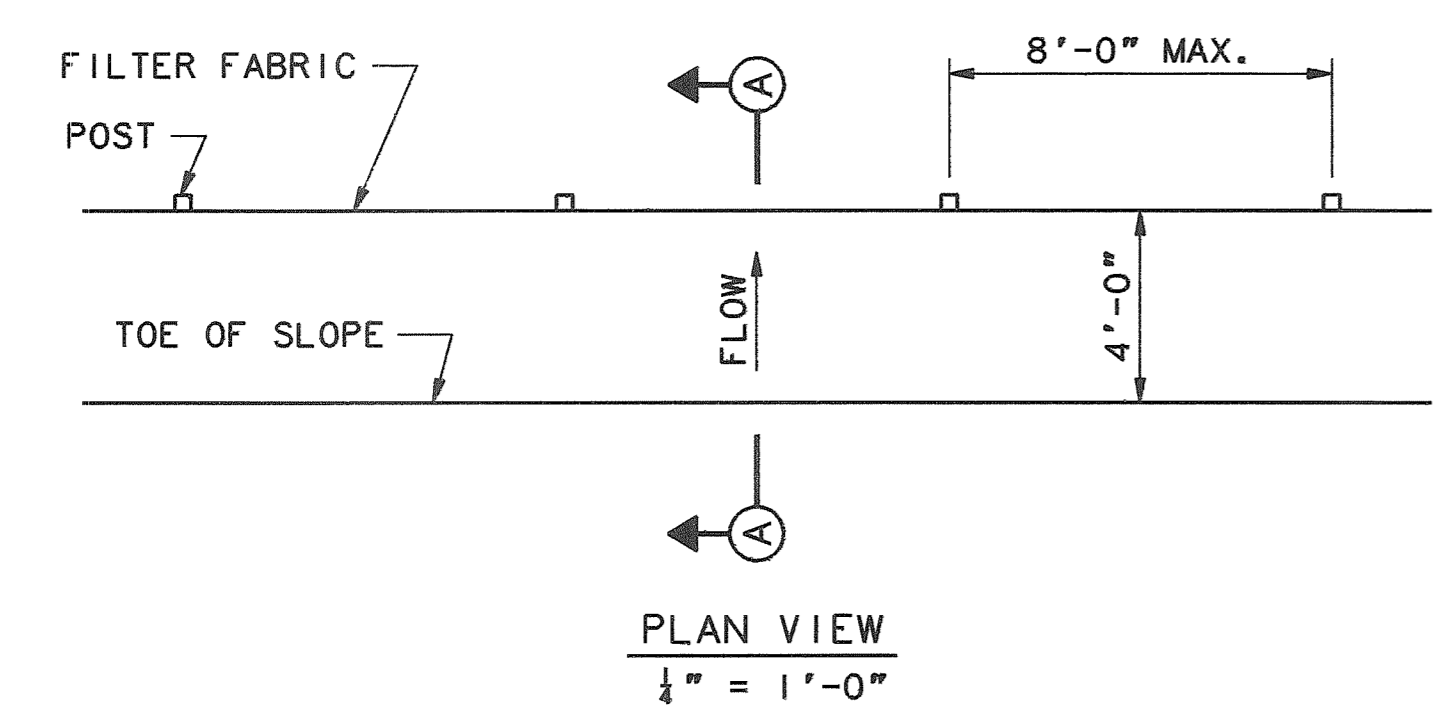
TYPICAL SECTION  
N.T.S.



DETAIL "A"  
N.T.S.

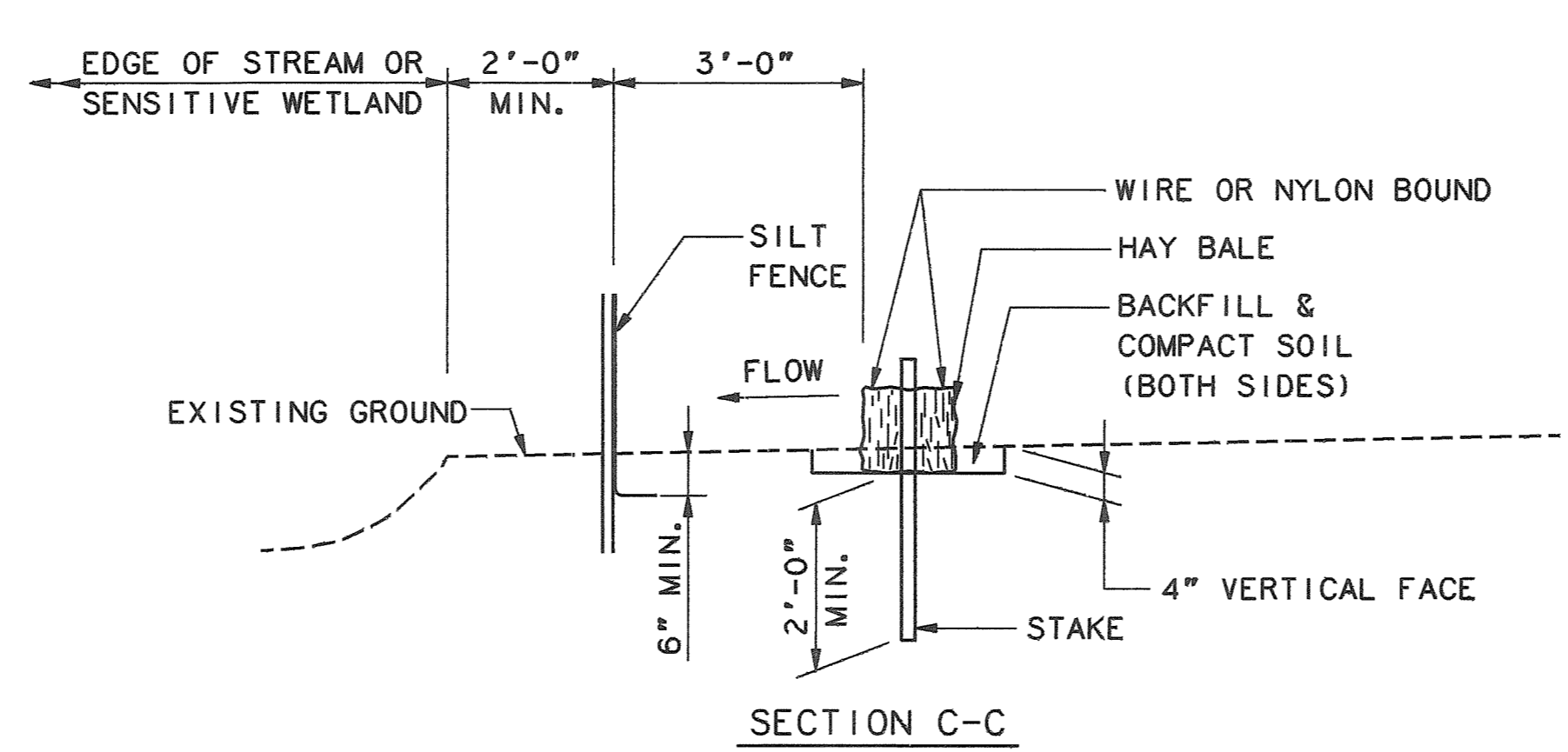
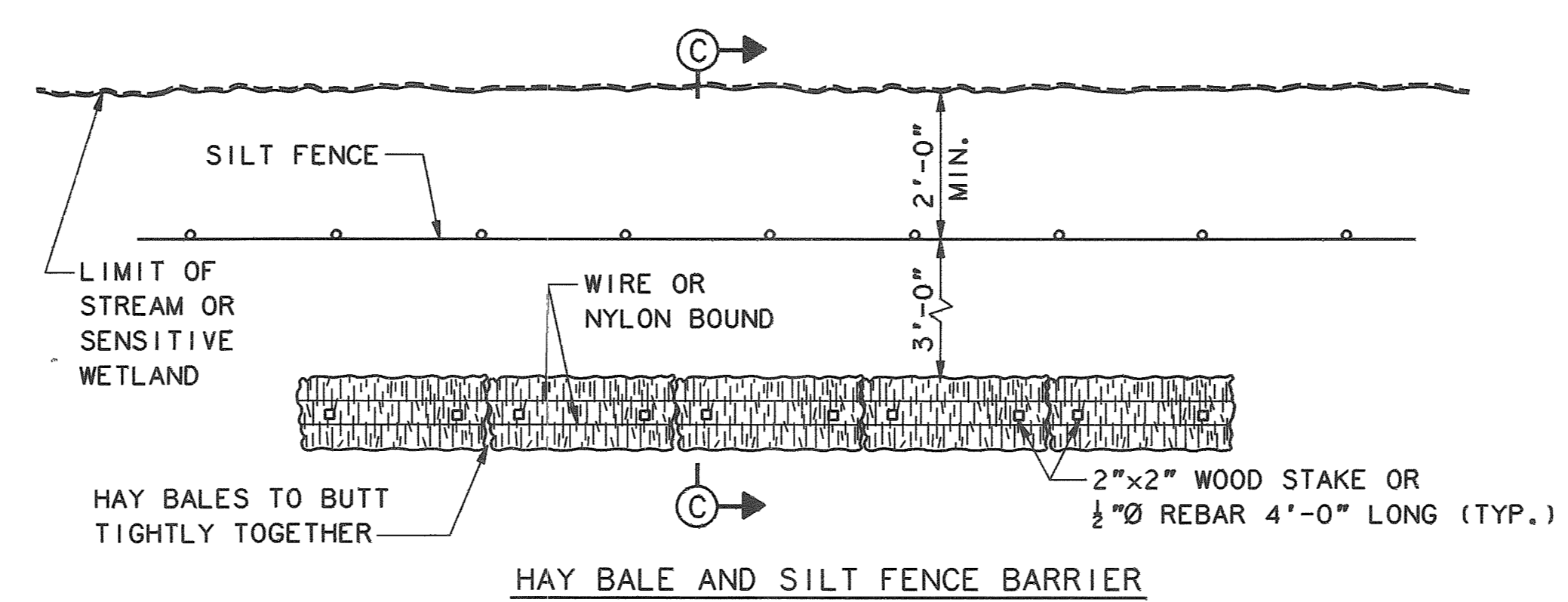


DETAIL "B"  
N.T.S.



SILT FENCE

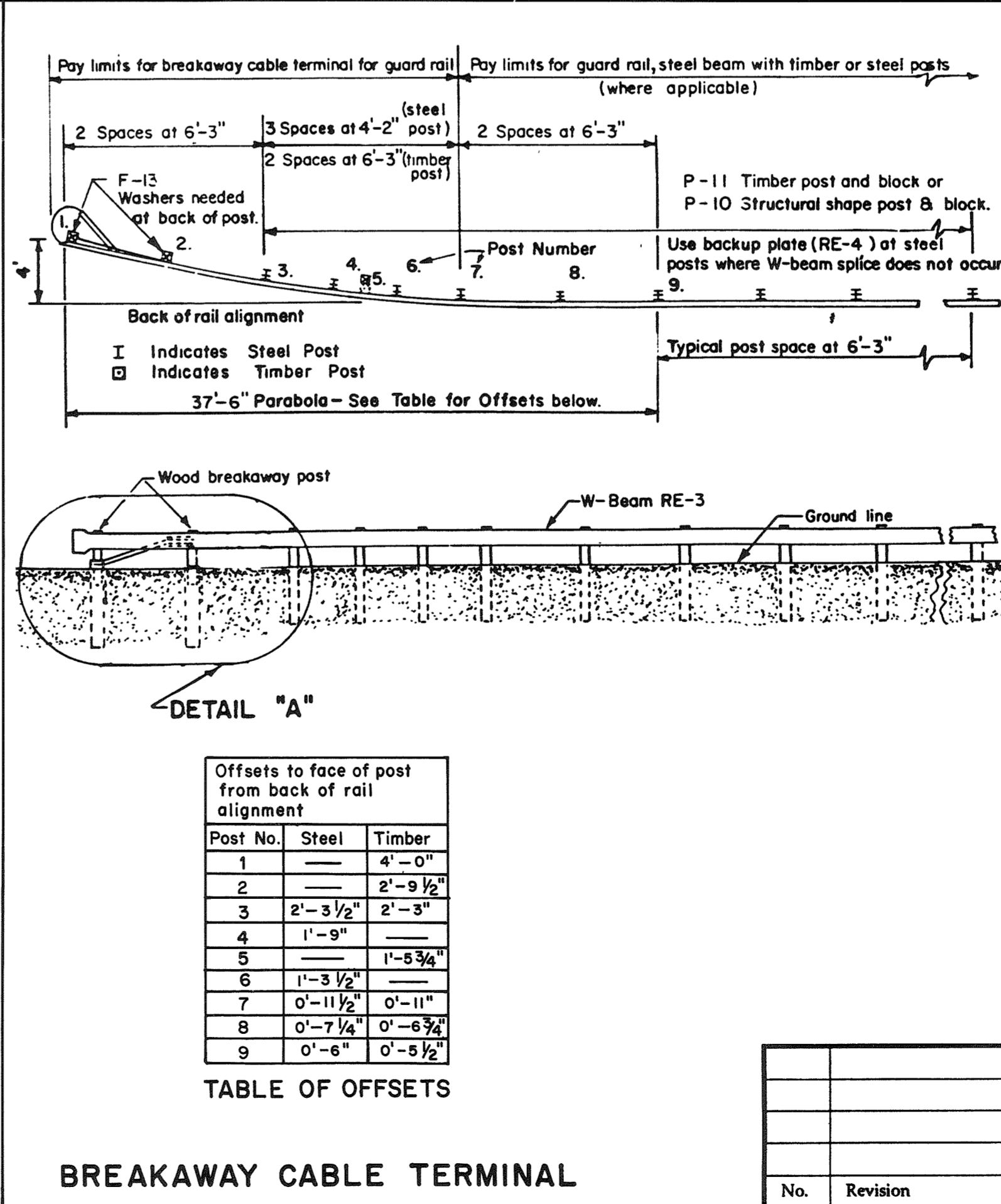
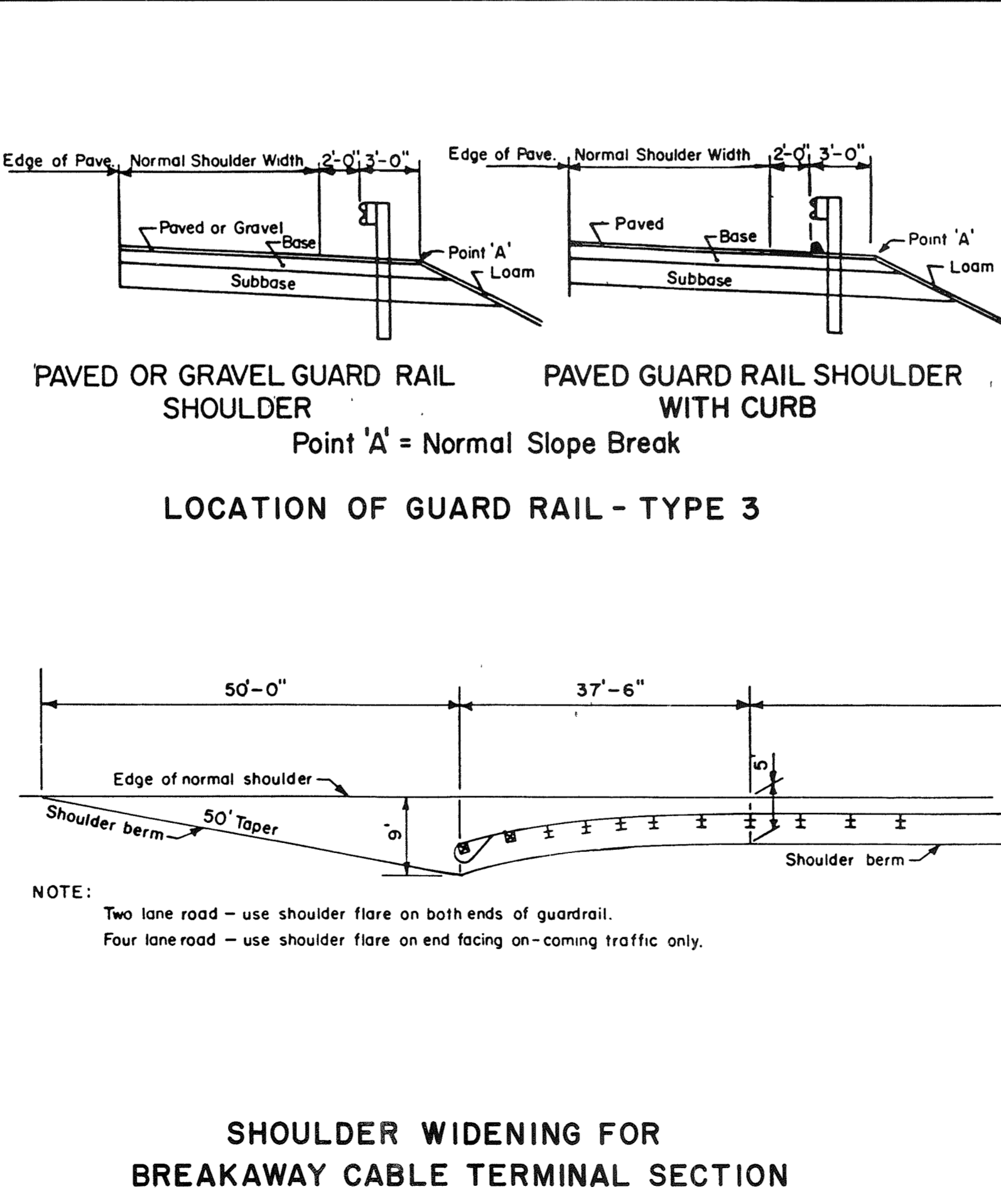
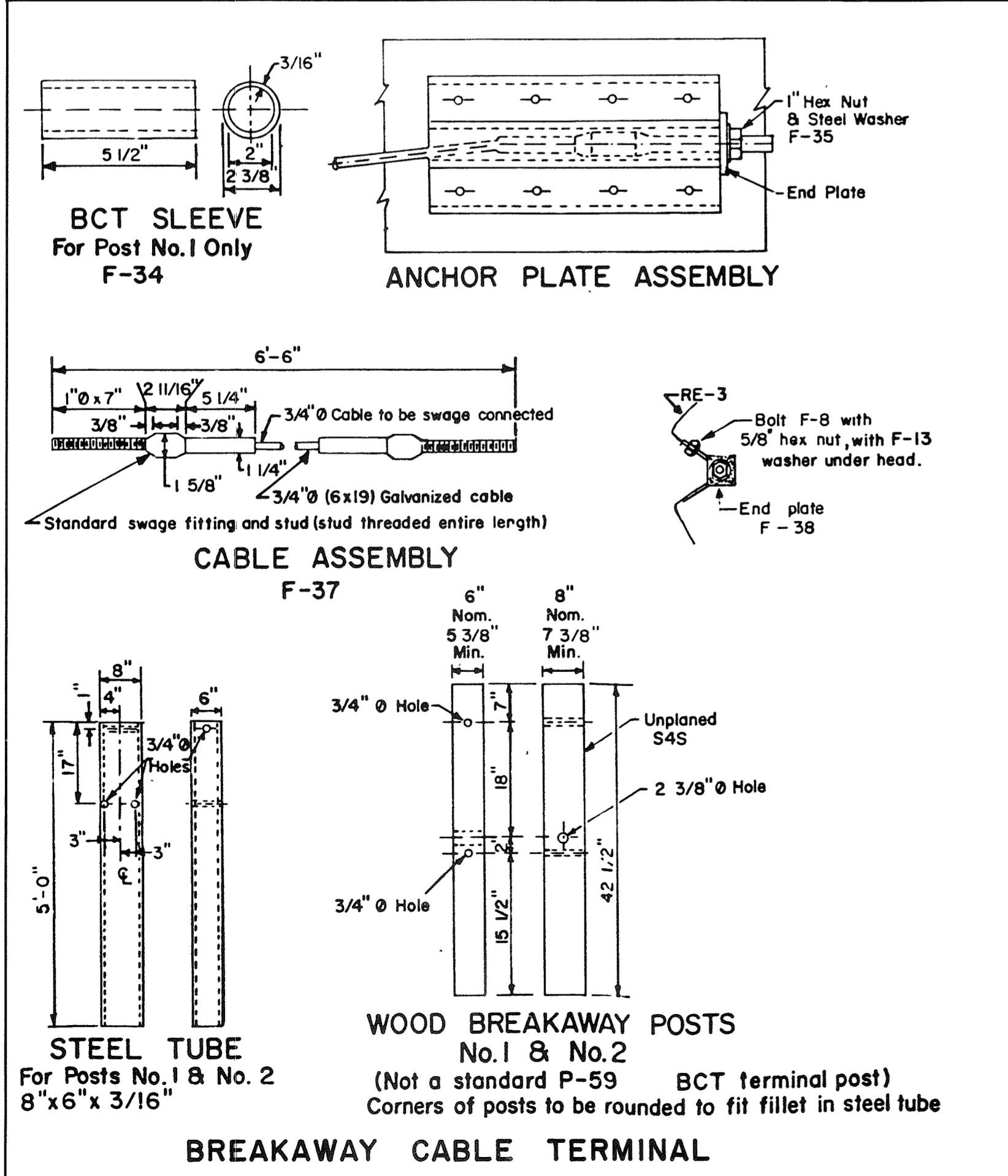
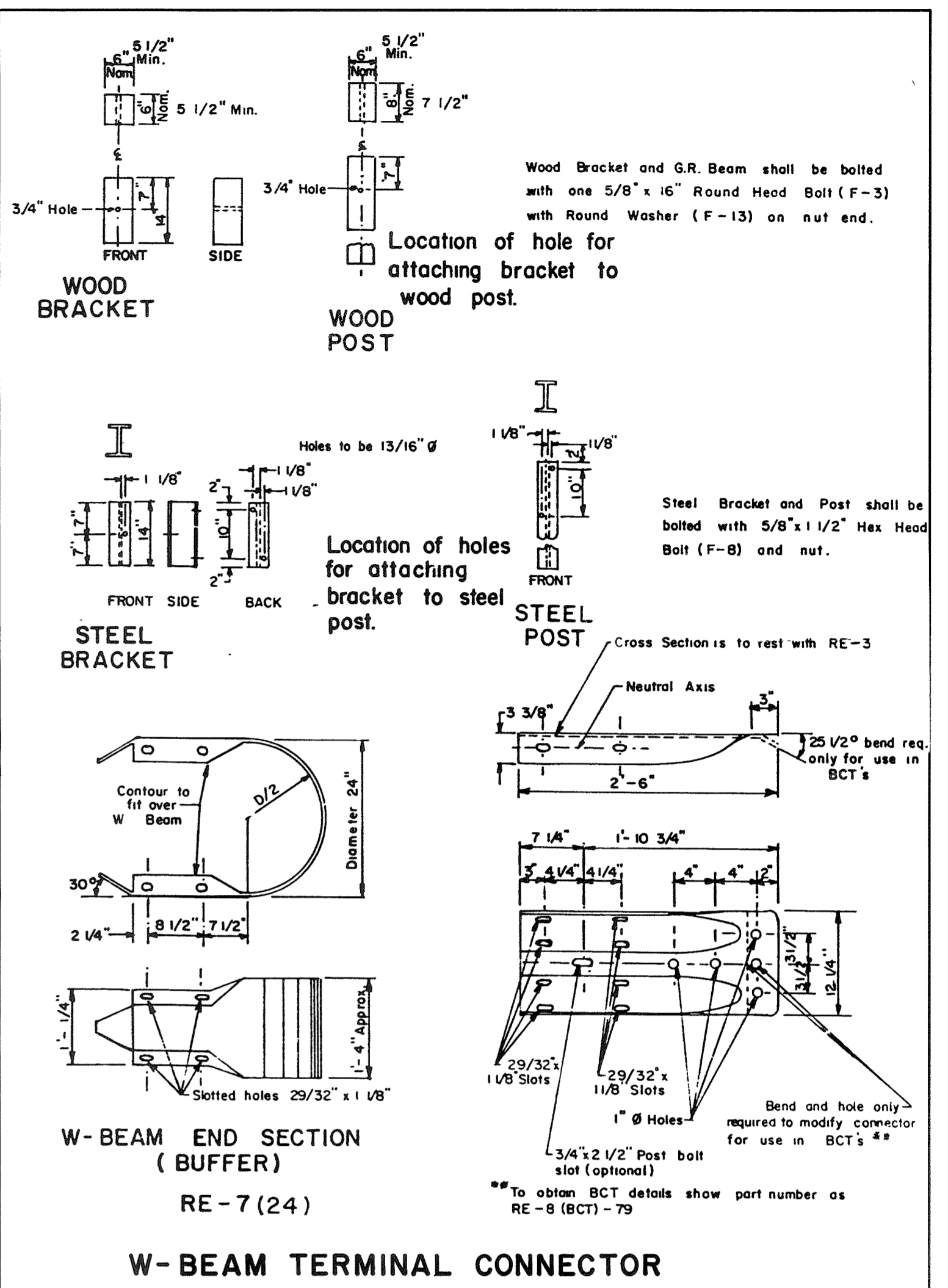
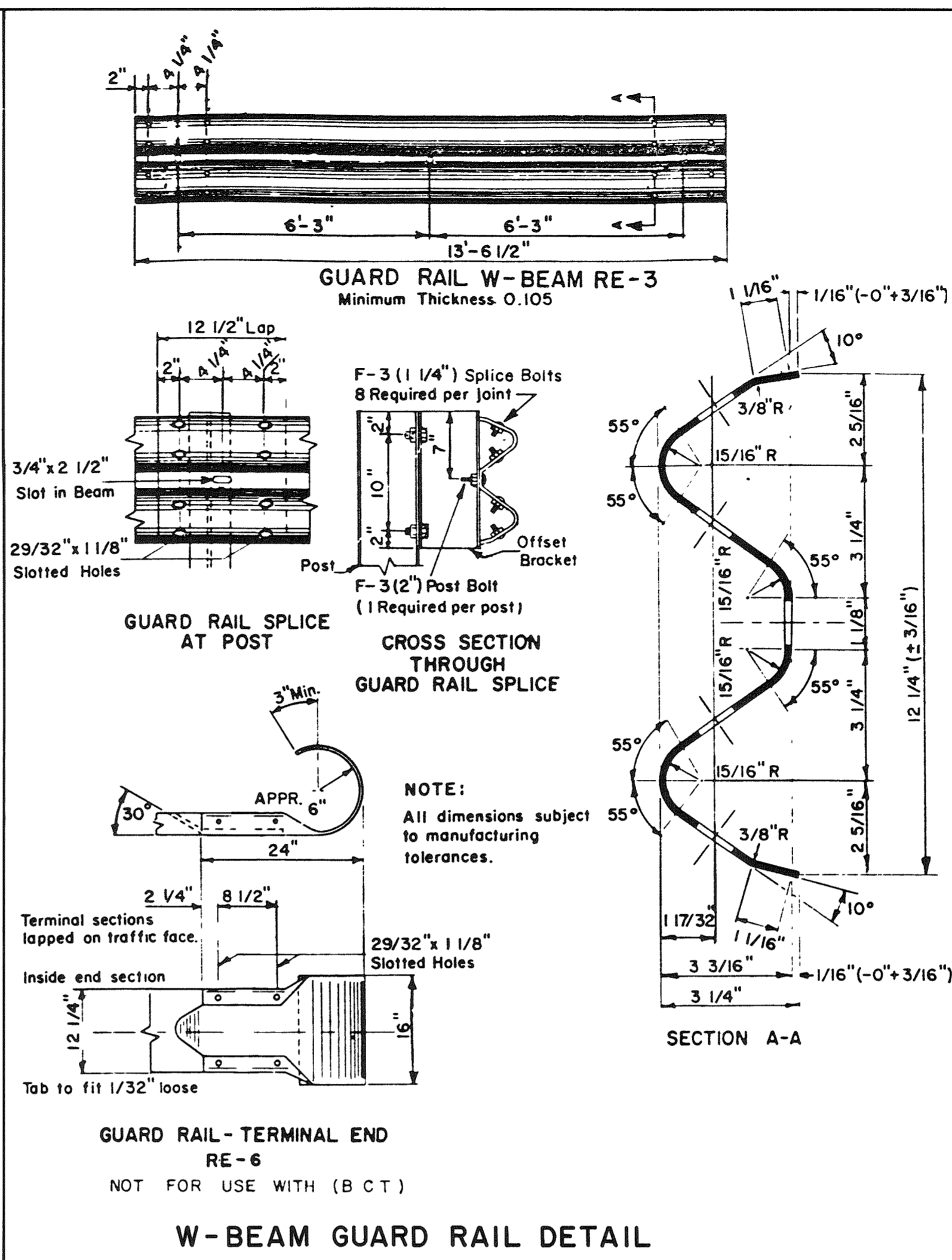
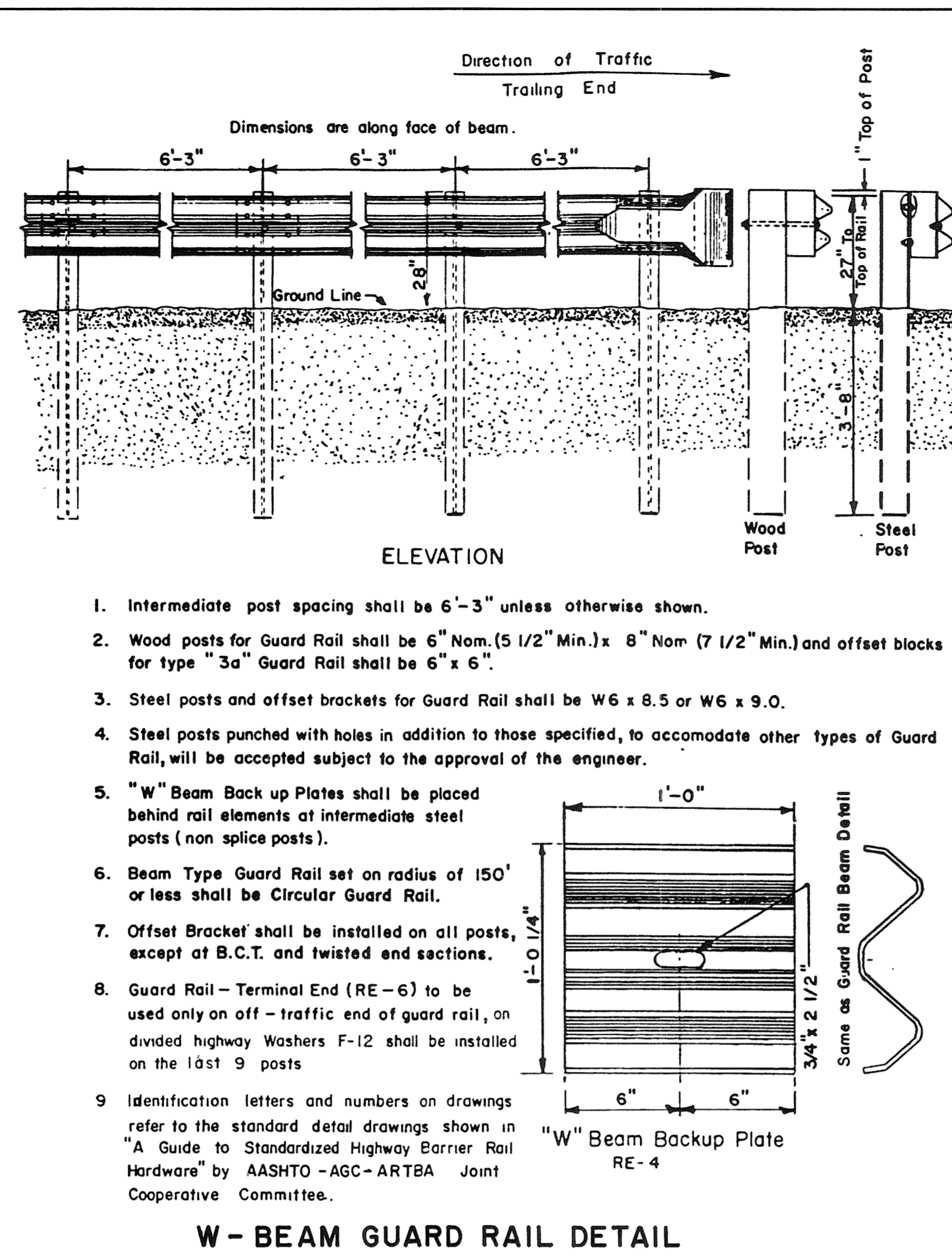
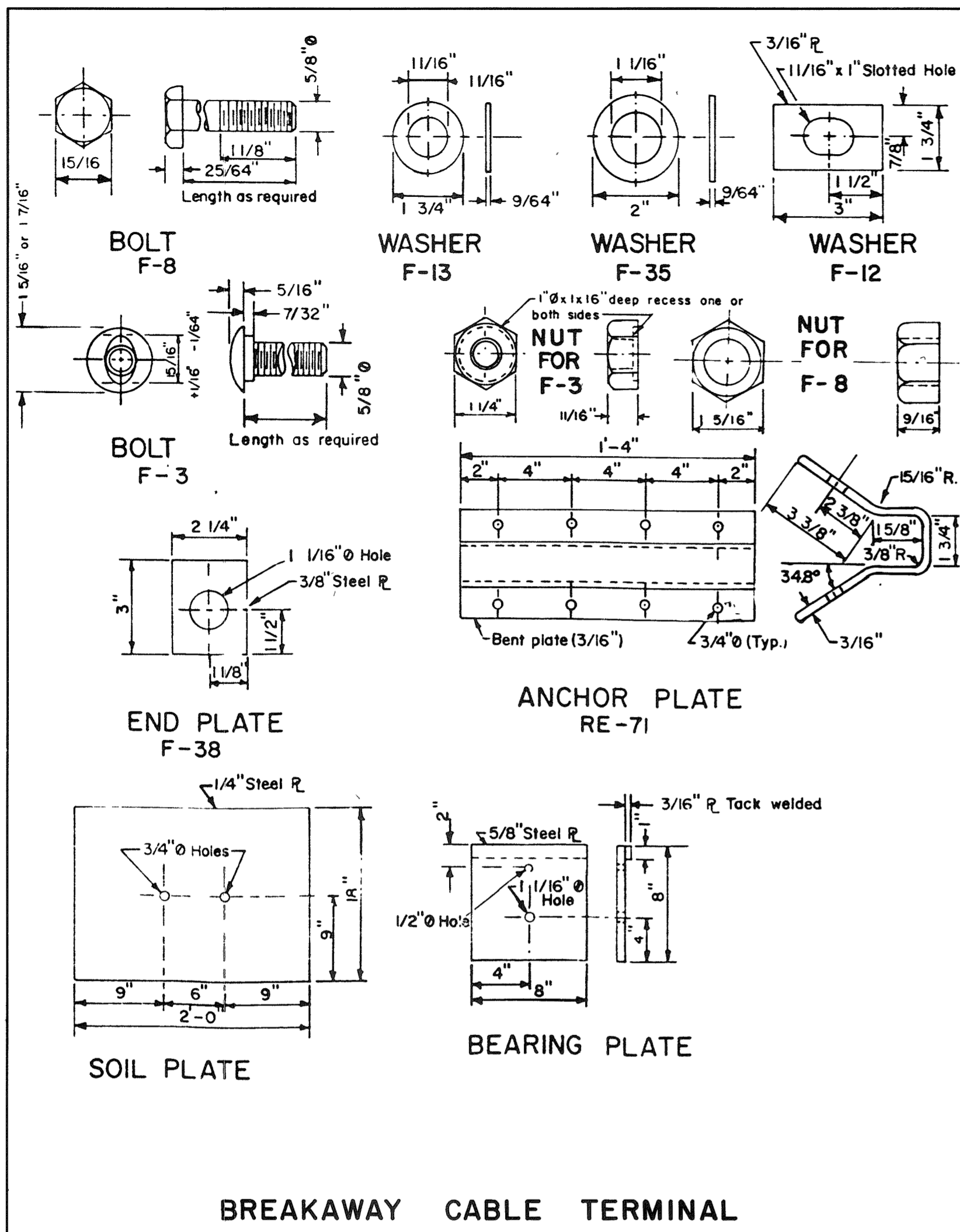
- (A) = 1. EXCAVATE FOR FENCE
- 2. INSTALL FENCE
- 3. BACKFILL AND COMPACT SOIL



DOUBLE LAYER OF PROTECTION  
HAY BALE AND SILT FENCE BARRIER  
1/4" = 1'-0"

Maine Turnpike Authority  
**Maine Turnpike**  
 BRIDGE DECK REPLACEMENT  
 WARREN AVENUE  
 TYPICAL SECTIONS &  
 EROSION CONTROL DETAILS  
 HNTB  
 HOWARD NEEDLES TAMMEN & BERGENDOFF  
 ARCHITECTS ENGINEERS PLANNERS  
 Contract 92.10  
 Sheet No. 3 of 32

No.	Revision	By	Date	In Charge Of:
		Designed	JFC 1/92	
		Drawn	LS 1/92	
		Checked	RJD 1/92	
		In Charge Of:		RAL



THESE DETAILS COPIED FROM MAINE DEPARTMENT OF TRANSPORTATION STANDARD DETAILS SHEETS.

**Maine Turnpike Authority**  
**Maine Turnpike**

**STANDARD DETAILS**  
**TYPE 3 GUARD RAIL**  
**BREAKAWAY CABLE TERMINAL**

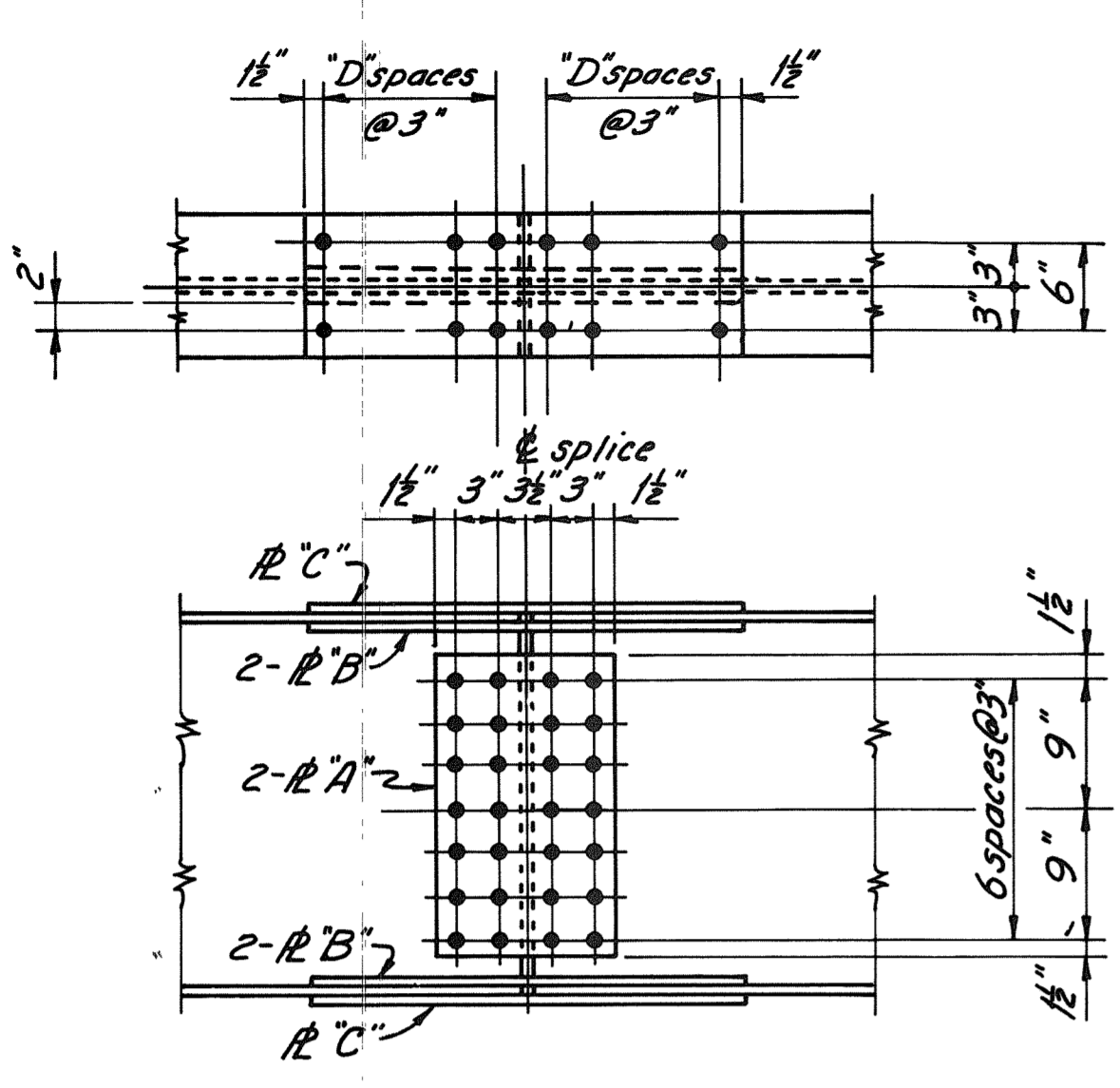
Contract 92.10 Sheet No. 4 of 32

DESIGNED BY: \_\_\_\_\_  
DRAWN BY: \_\_\_\_\_  
CHECKED BY: \_\_\_\_\_  
IN CHARGE OF: \_\_\_\_\_

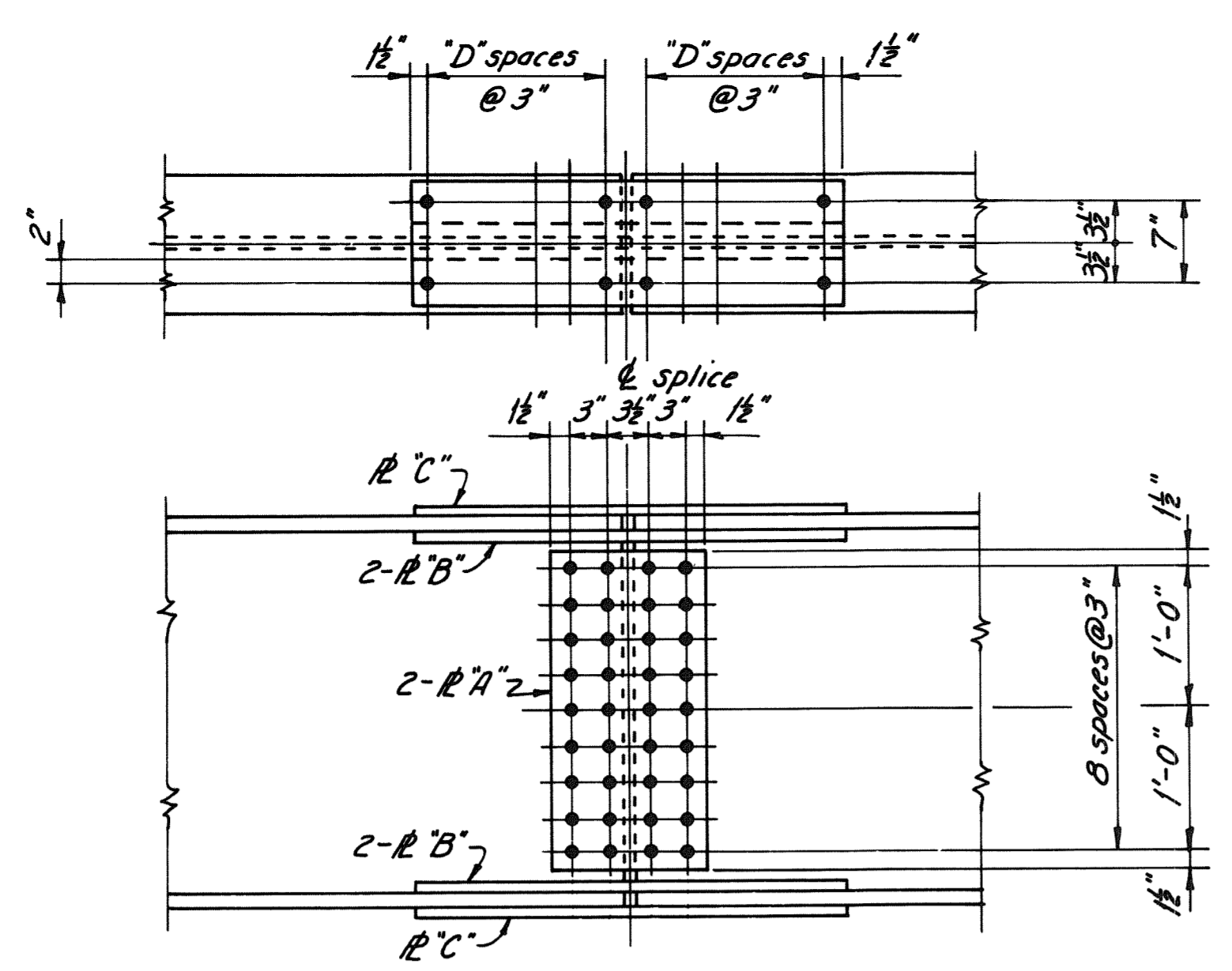
HOWARD NEEDLES TAMMEN & BERENDORFF ARCHITECTS ENGINEERS PLANNERS



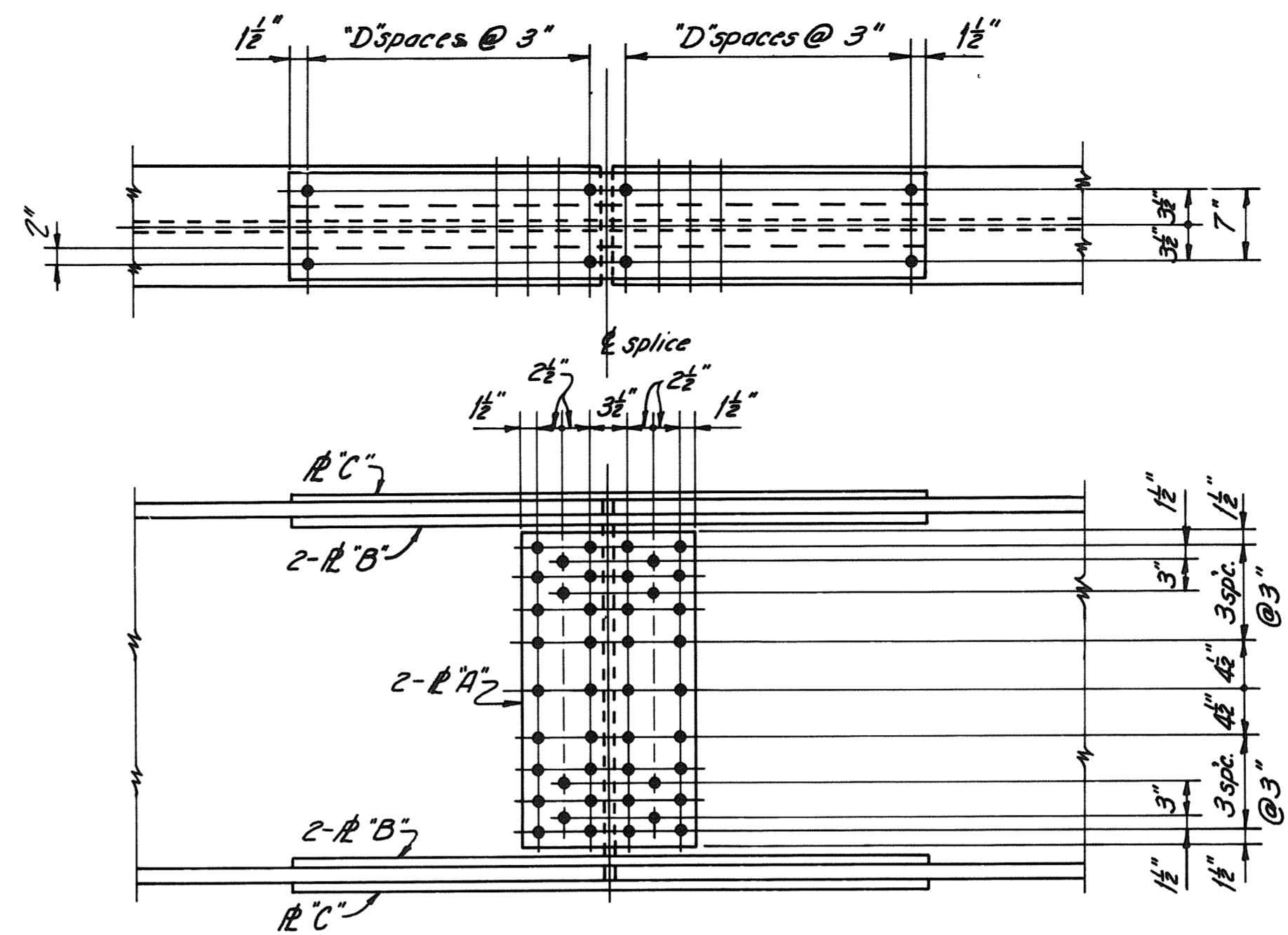




**W27 x 84, 94, 102, 114**



**W33 x 118, 130, 141, 152**

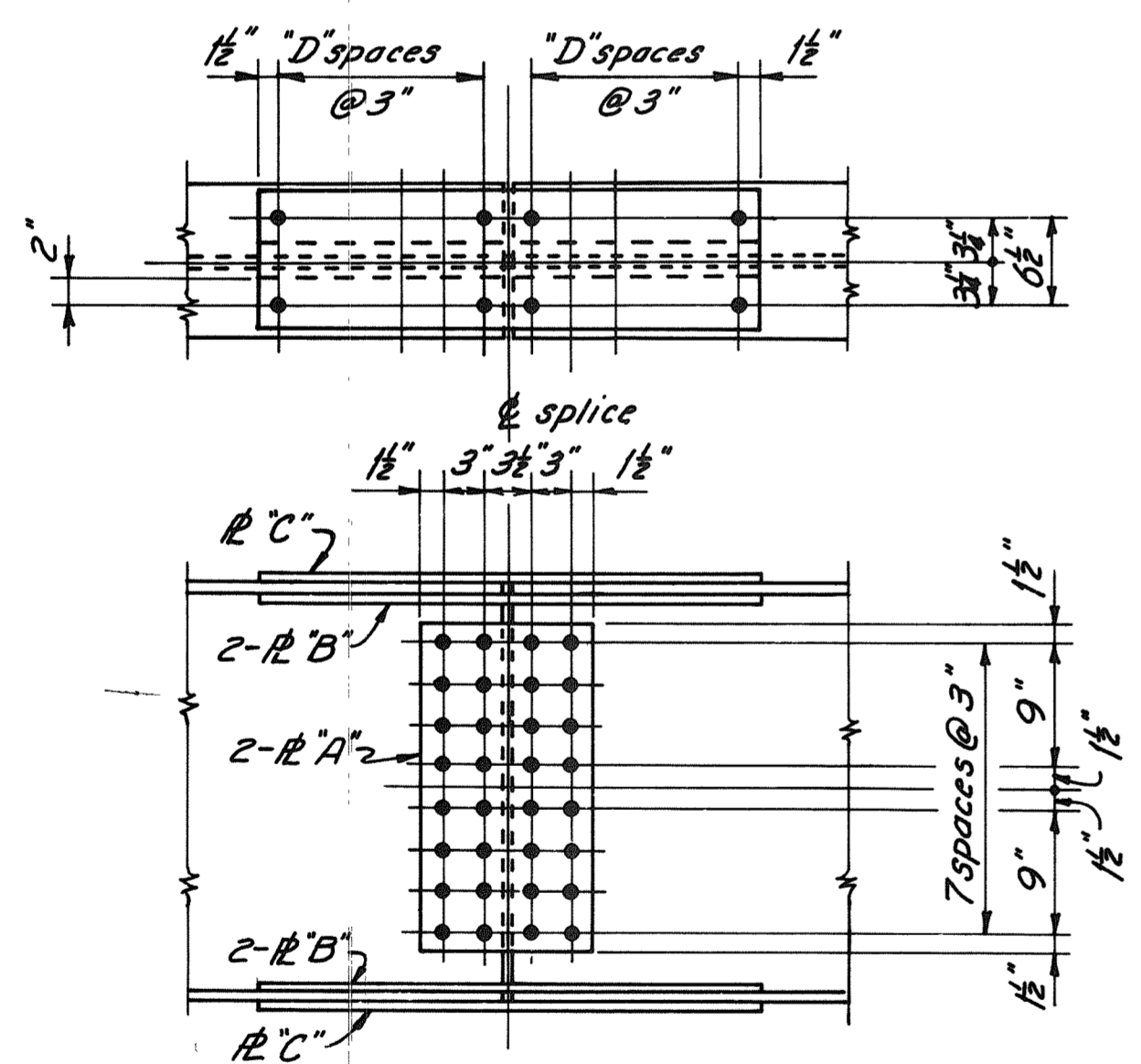


**W36 x 182, 194, 210**

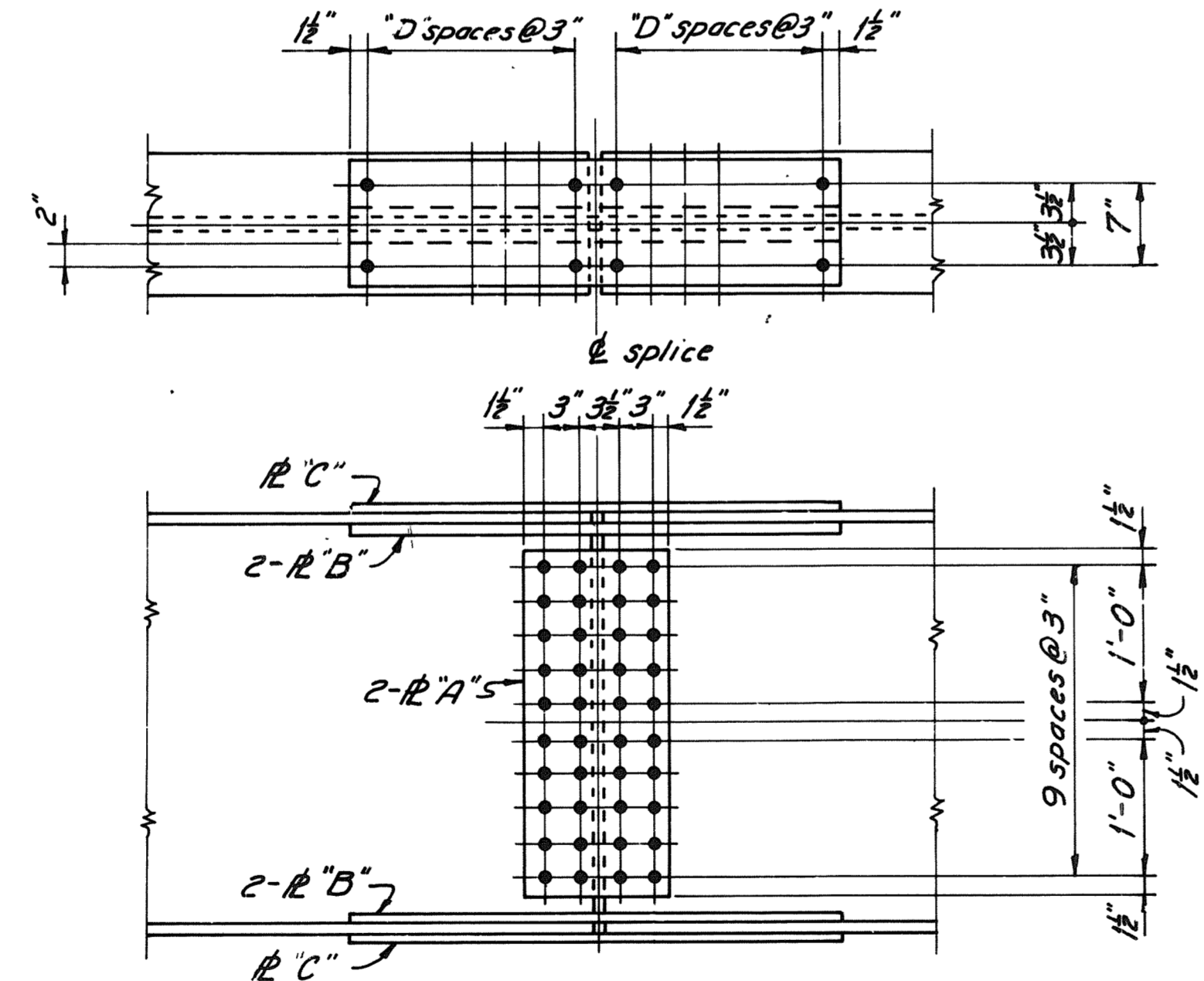
SPLICE PLATES AND FLANGE HOLES				
BEAM	PLATE A	PLATE B	PLATE C	"D"
W 27 x 84	12 1/2" x 1/2"	4" x 1/2"	10" x 1/2"	3
x 94	12 1/2" x 1/2"	4" x 1/2"	10" x 1/2"	3
x 102	12 1/2" x 1/2"	4" x 1/2"	10" x 1/2"	3
x 114	12 1/2" x 1/2"	4" x 1/2"	10" x 1/2"	4
W 30 x 99	12 1/2" x 1/2"	4" x 1/2"	10" x 1/2"	3
x 108	12 1/2" x 1/2"	4" x 1/2"	10" x 1/2"	3
x 116	12 1/2" x 1/2"	4" x 1/2"	10" x 1/2"	3
x 124	12 1/2" x 1/2"	4" x 1/2"	10" x 1/2"	4
x 132	12 1/2" x 1/2"	4" x 1/2"	10" x 1/2"	4
W 33 x 118	12 1/2" x 1/2"	4" x 1/2"	11" x 1/2"	3
x 130	12 1/2" x 1/2"	4" x 1/2"	11" x 1/2"	4
x 141	12 1/2" x 1/2"	4" x 1/2"	11" x 1/2"	4
x 152	12 1/2" x 1/2"	4" x 1/2"	11" x 1/2"	5
W 36 x 135	12 1/2" x 1/2"	4" x 1/2"	11" x 1/2"	4
x 150	12 1/2" x 1/2"	4" x 1/2"	11" x 1/2"	5
x 160	12 1/2" x 1/2"	4" x 1/2"	11" x 1/2"	5
x 170	12 1/2" x 1/2"	4" x 1/2"	11" x 1/2"	6
x 182	16 1/2" x 1/2"	4" x 1"	11" x 1/2"	6
x 194	16 1/2" x 1/2"	4" x 1 1/8"	11" x 1/2"	6
x 210	16 1/2" x 1/2"	4" x 1 1/8"	11" x 1/2"	7
x 230	16 1/2" x 1/2"	6" x 1"	16" x 1/2"	9
x 245	16 1/2" x 1/2"	6" x 1"	16" x 1/2"	9
x 260	16 1/2" x 1/2"	6" x 1 1/8"	16" x 1/2"	11
x 280	16 1/2" x 1/2"	6" x 1 1/8"	16" x 1/2"	11
x 300	16 1/2" x 1/2"	6" x 1 1/2"	16" x 1/2"	13

**GENERAL NOTES**

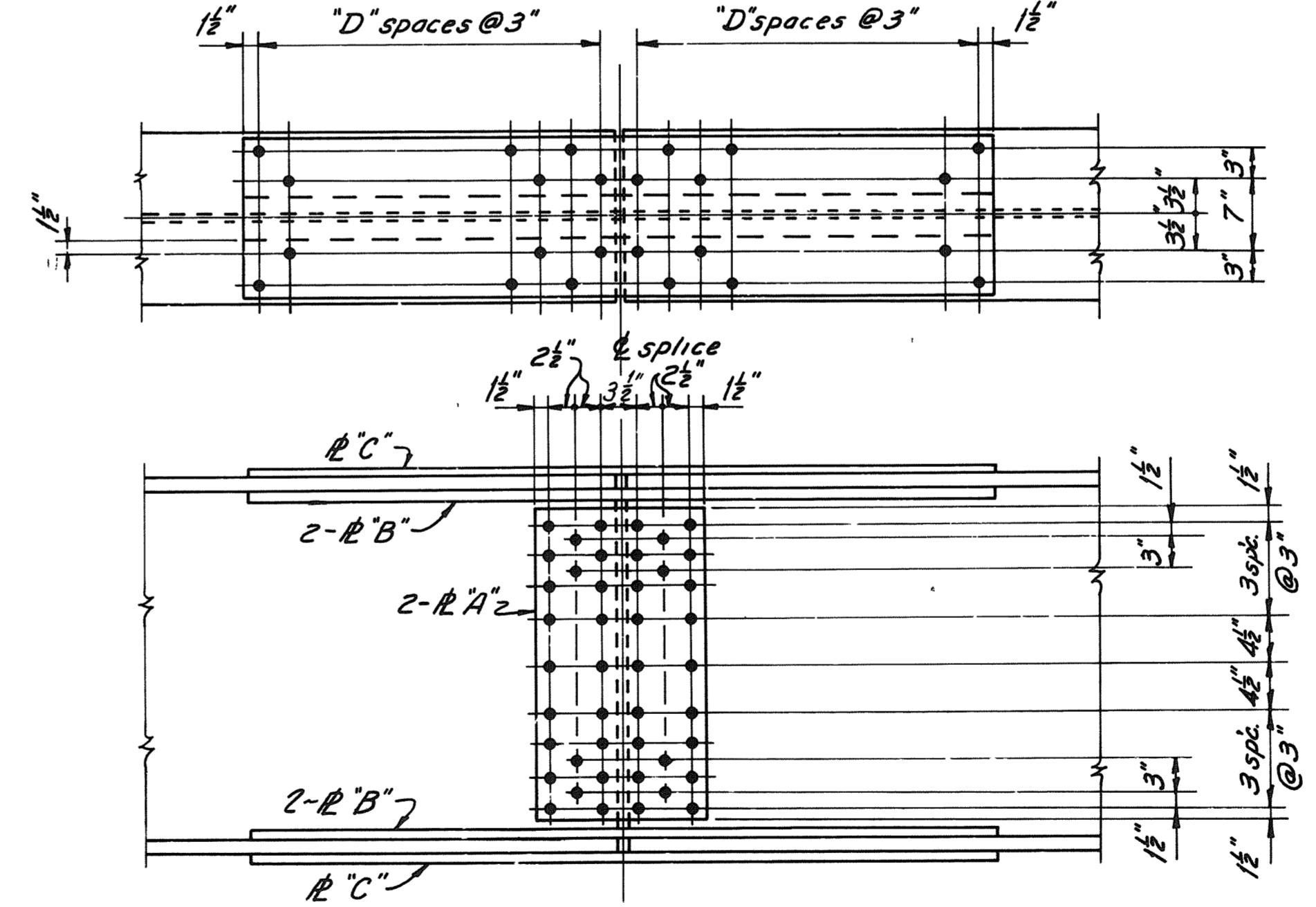
- 1.) Splice connections shall be made with 7/8" Ø ASTM A325 high tensile strength bolts. Holes shall be 15/16" Ø.
- 2.) Web and flange filler plates shall be used as required when splicing beams of different sizes. Filler plates of 1/16" or less in thickness are not required.
- 3.) If beams of different sizes are to be spliced, use splice details shown for the smaller of the beams being spliced unless otherwise directed by design drawings.
- 4.) For material specifications and details not shown, refer to design drawings.
- 5.) If there is a conflict between this standard detail and the design drawings, the requirements of the design drawings shall be followed.



**W30 x 99, 108, 116, 124, 132**



**W36 x 135, 150, 160, 170**



**W36 x 230, 245, 260, 280, 300**

PROJECT DESIGN ENGINEER	DATE
DESIGN - DETAILED	
CHECKED	
REVISIONS	
FIELD CHANGES	

**PLANS**

REVISIONS	APPROVED	
	Me.DOT	FHWA
Description	FEB. 1989	MAR. 16, 1989
Original Plan		

STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION

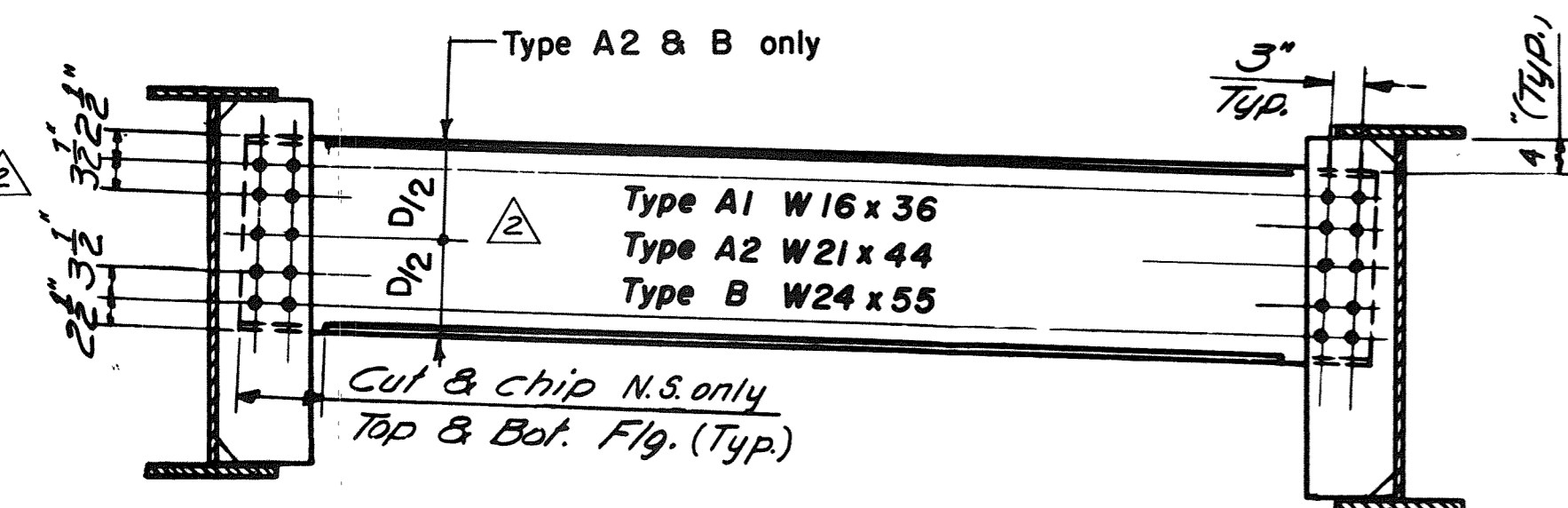
MAINE TURNPIKE  
**STANDARD DETAILS**  
BD III - 89

**BEAM SPLICES**  
ROLLED BEAMS

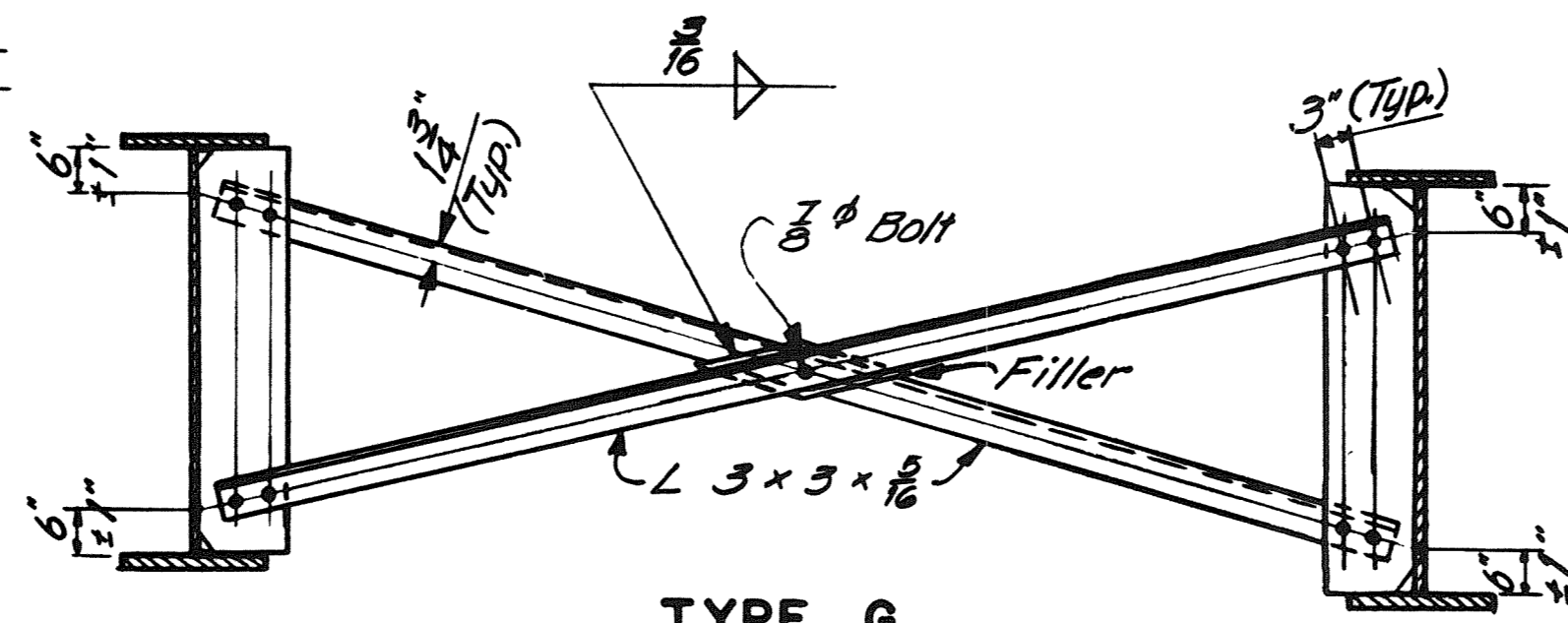
SHEET OF Feb. 1989

### FABRICATION NOTES

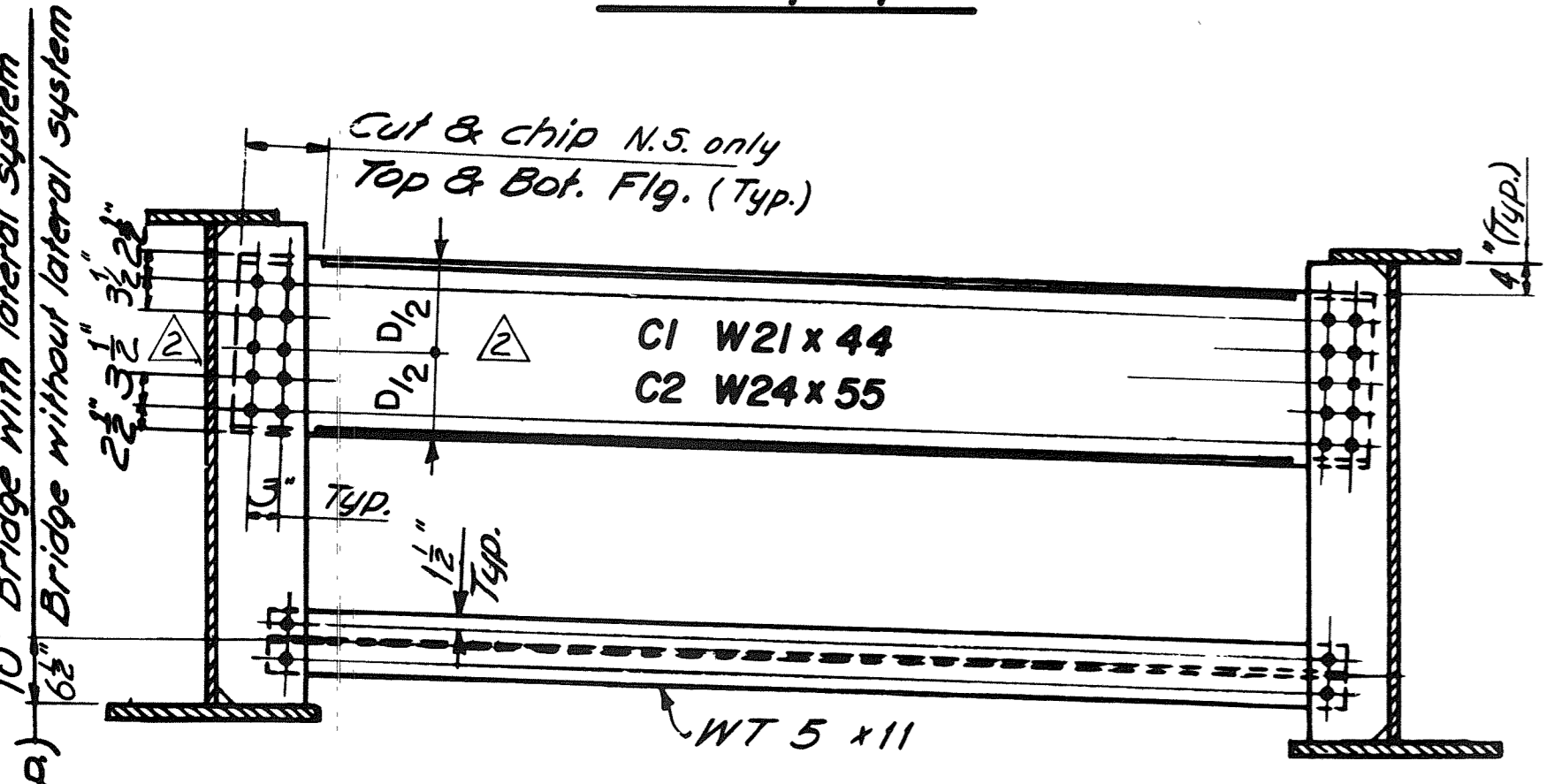
- 1.) All bolts shall be  $\frac{7}{8}$ " H.S. Bolts. Hole sizes for bolts shall conform to Section 504.23 of the Standard Specifications, and edge-distances shall be  $\frac{1}{2}$ " min. unless otherwise shown.
- 2.) Connection plates and gusset plates shall have a minimum thickness of  $\frac{3}{8}$ " and shall have sufficient width to provide erection clearance. Connection plates shall have a minimum width of 7". For all stiffeners and bent connection plates, the plate thickness will be given on the design drawings.
- 3.) Depending on the skew-angle, stiffeners and connection plates shall be welded to the web plates with either fillet welds or a single bevel groove weld. Fillet welds shall be the minimum size specified by the AWS Structural Welding Code D1.1, table 2.7, unless otherwise shown on the design drawings. Fit-up shall meet the requirements of AWS D11, Art 3.3, Assembly.
- 4.) All stiffeners and connection plates shall extend to both the top and bottom flanges and shall be welded to the flanges with a fillet weld on both sides of the plate, except as indicated by note 5 and/or 6. Fillet weld size shall be as specified under note 3.
- 5.) Connection plates and stiffeners used as connection plates shall be connected to flanges in tension and stress reversal areas with the "Tension-Flange Connection" detail. All other stiffeners shall fit within  $\frac{1}{16}$ " (tight fit) at flanges in tension and stress reversal areas and shall not be welded.
- 6.) Bearing stiffeners through  $\frac{3}{4}$  inch thick shall be connected to the bottom flange with a full penetration groove weld. Bearing stiffeners over  $\frac{3}{4}$  inch thick shall be connected to the bottom flange with a full penetration double bevel groove weld or shall be machined to have full bearing, at the option of the contractor.
- 7.) All fillet welds which connect stiffeners or connection plates to either a flange or web plate, shall be started and stopped approximately  $\frac{1}{2}$  inch from the ends or edges of the plate.
- 8.) Bolt tension-flange connection plate to flange before welding stiffener or diaphragm connection plate to it.
- 9.) All dimensions shown as "±" are variable in order to allow a series of crossframes to have the same slopes and/or dimensions.
- 10.) For unpainted applications all steel for diaphragms and crossframes shall be A.S.T.M.-A588. For bridges specified to be painted the steel for diaphragms and connection plates shall be A.S.T.M.-A36, except other steel classifications may be used subject to the approval of the Engineer.
- 11.) Use only those items called for on the design drawings. In case of conflict between these standard details and design drawings, the design drawings shall be followed.



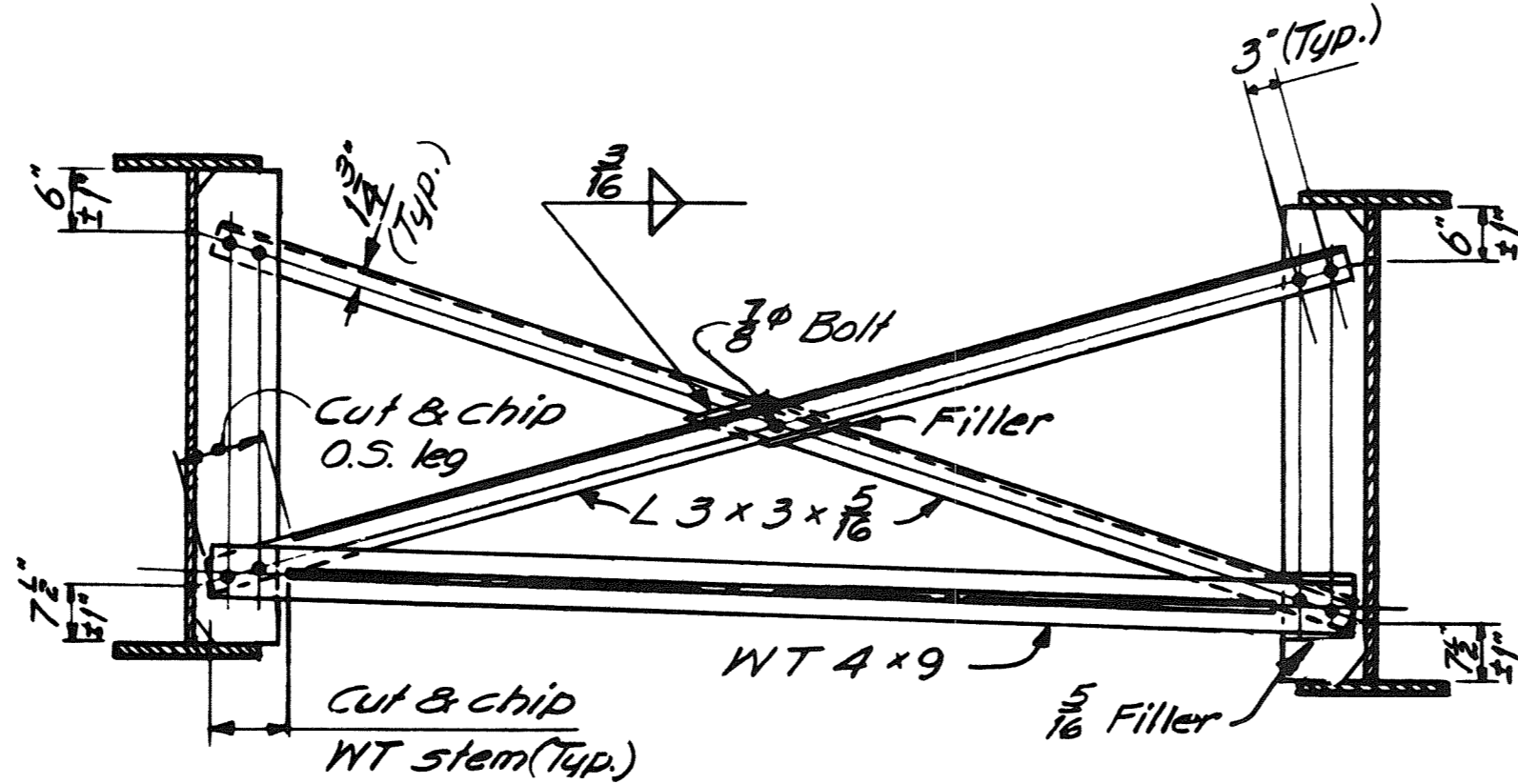
**TYPE A1, A2, & B**



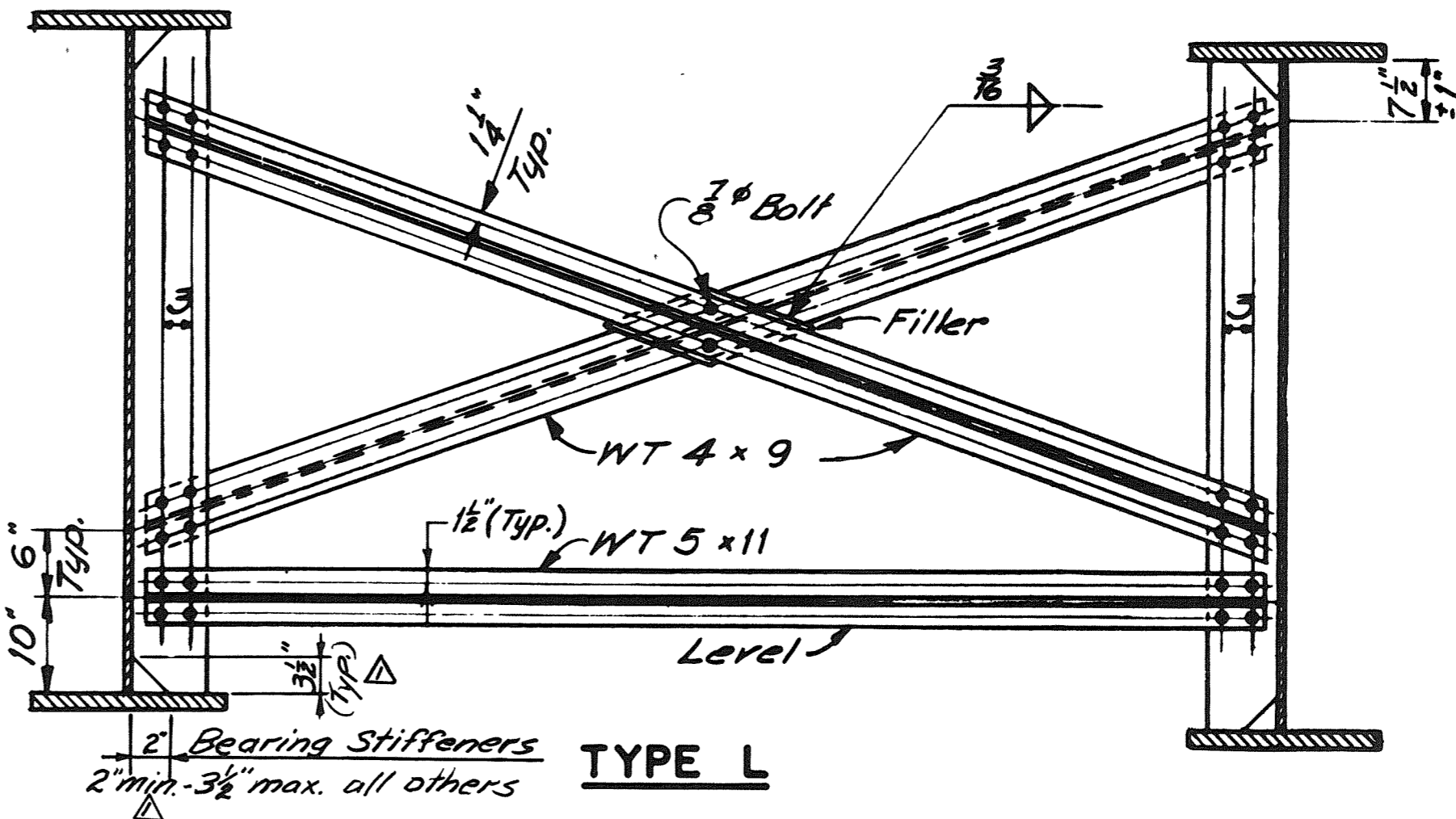
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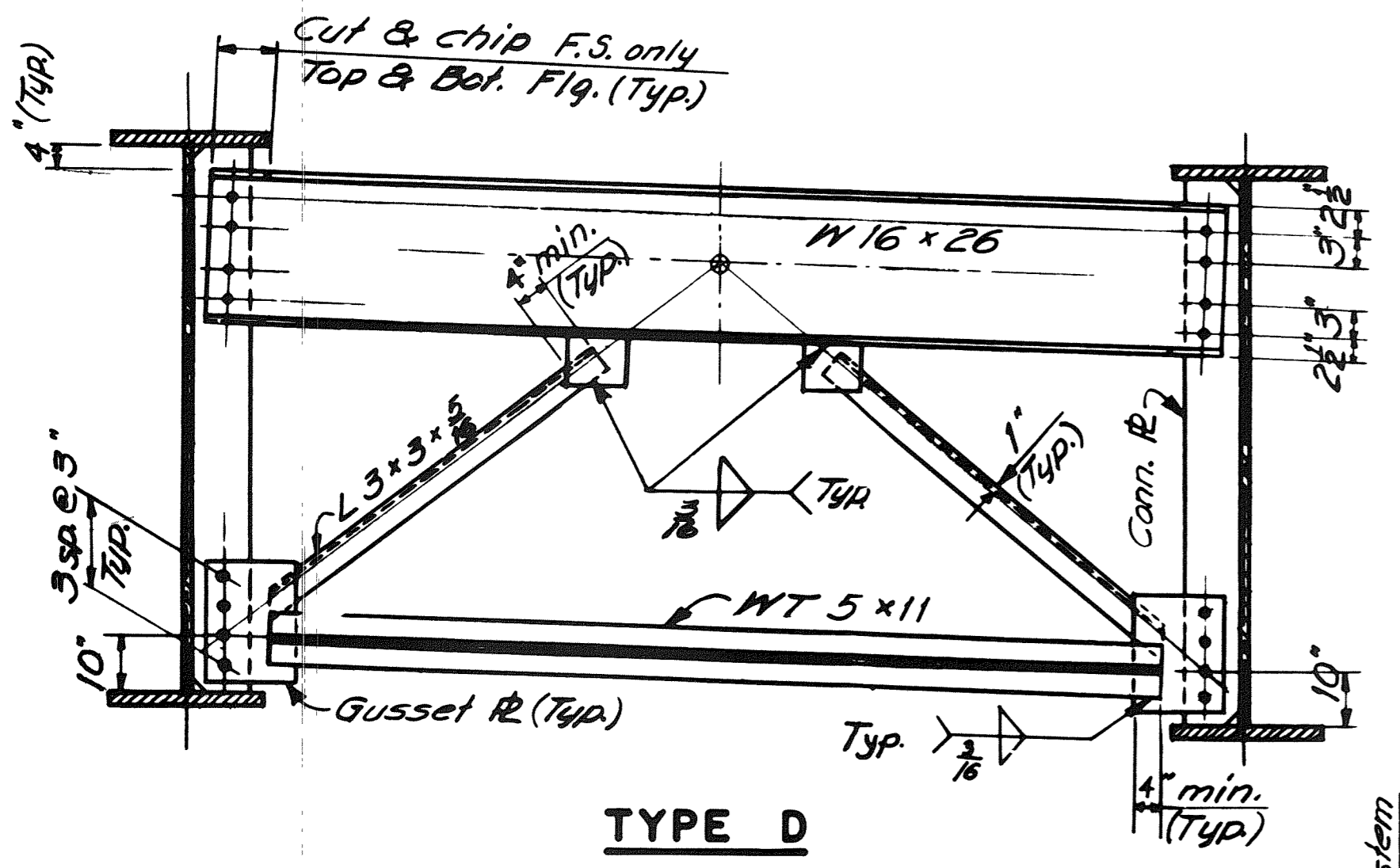
**TYPE C1 & C2**



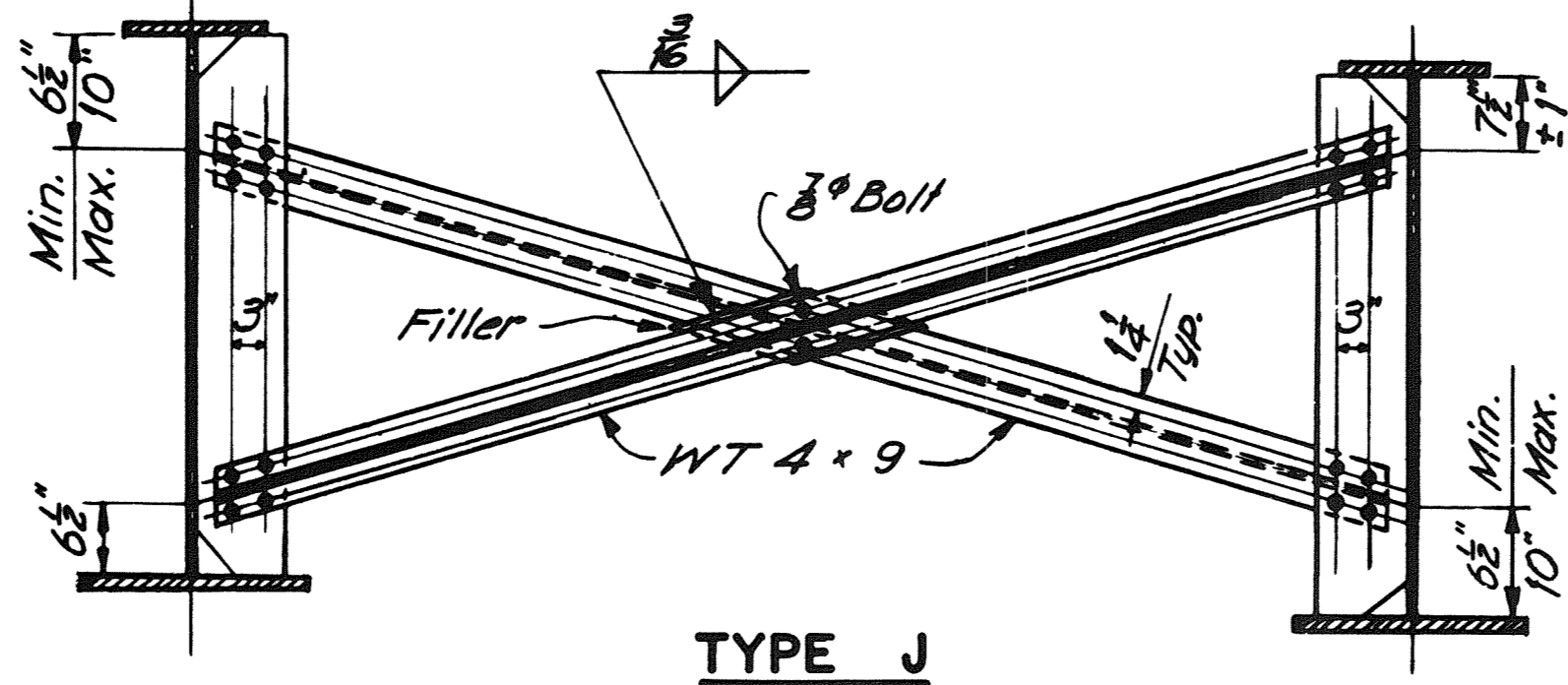
**TYPE H**



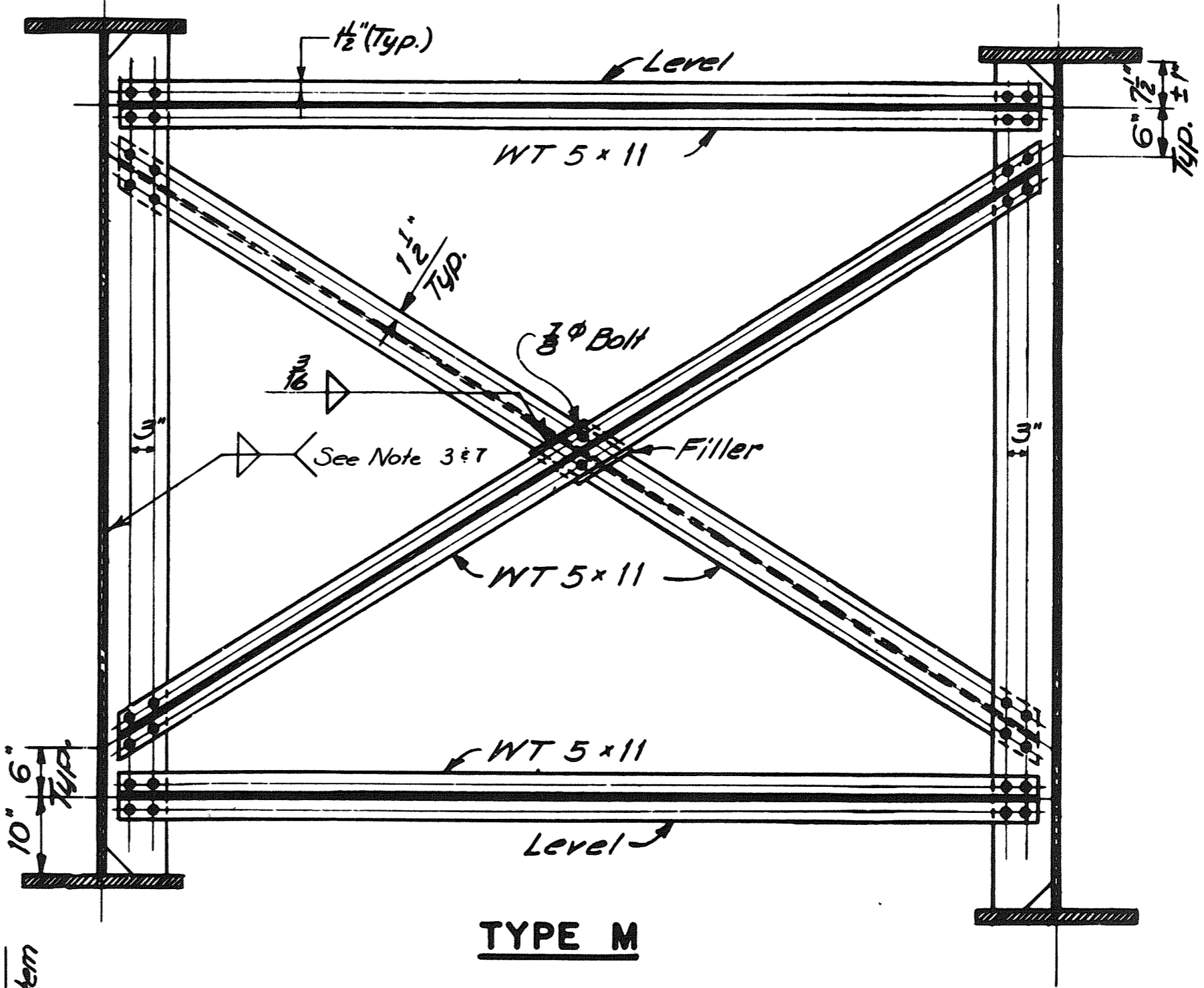
**TYPE L**



**TYPE D**

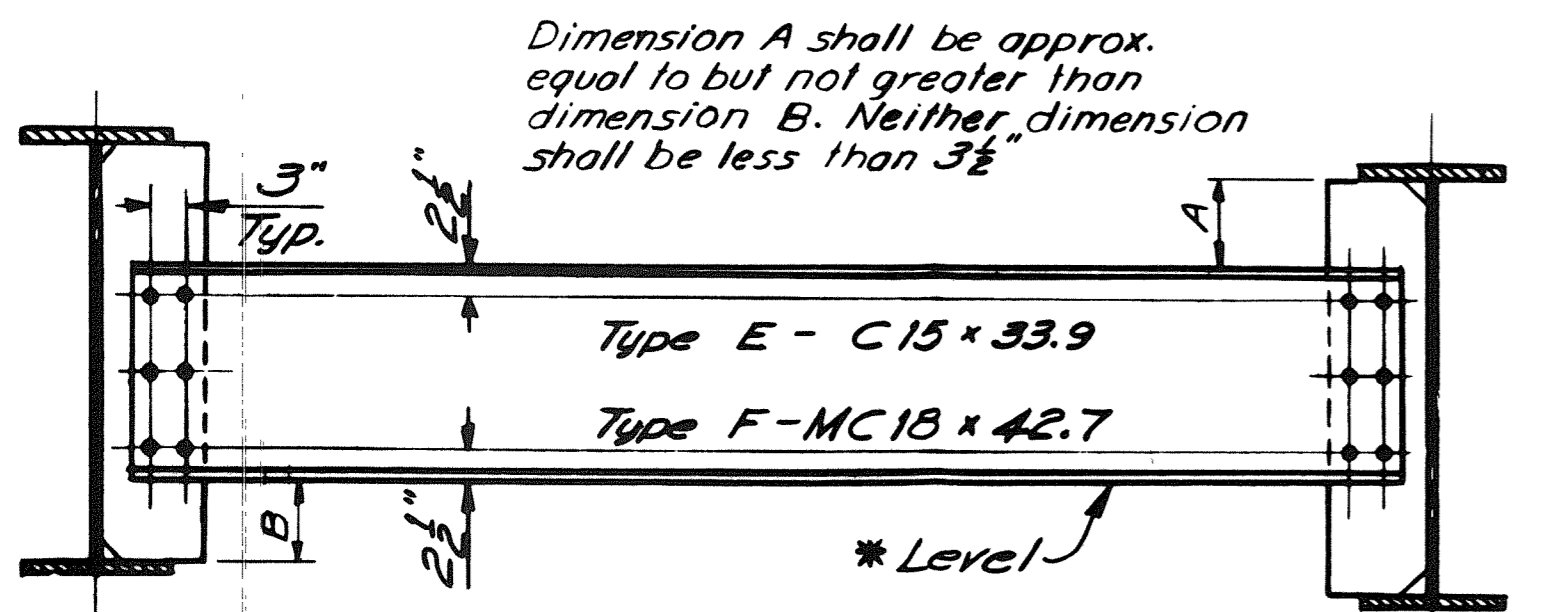


**TYPE J**



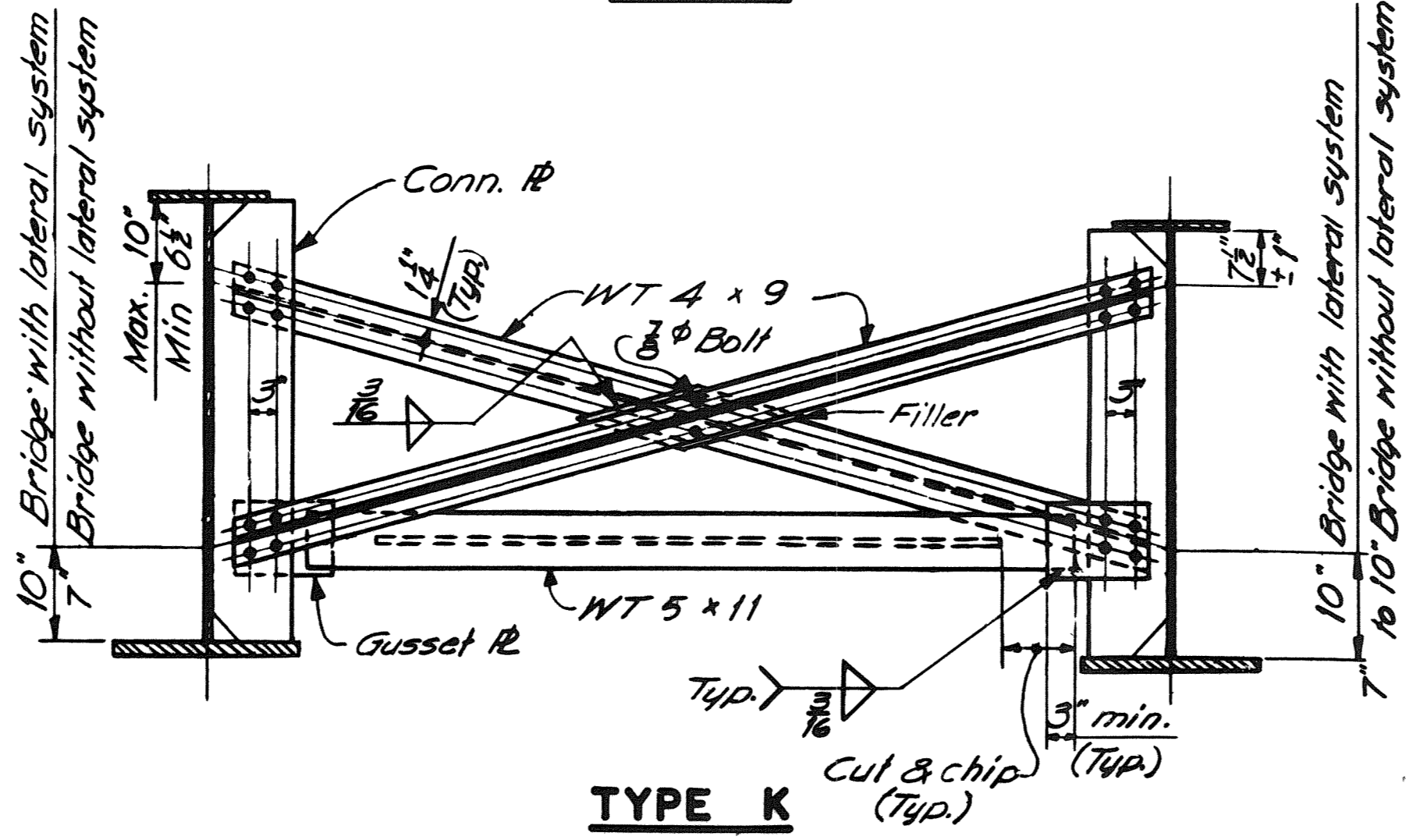
**TYPE M**

DESIGN - DETAILED	DATE
CHECKED	
REVISIONS	
FIELD CHANGE	
<b>PLANS</b>	

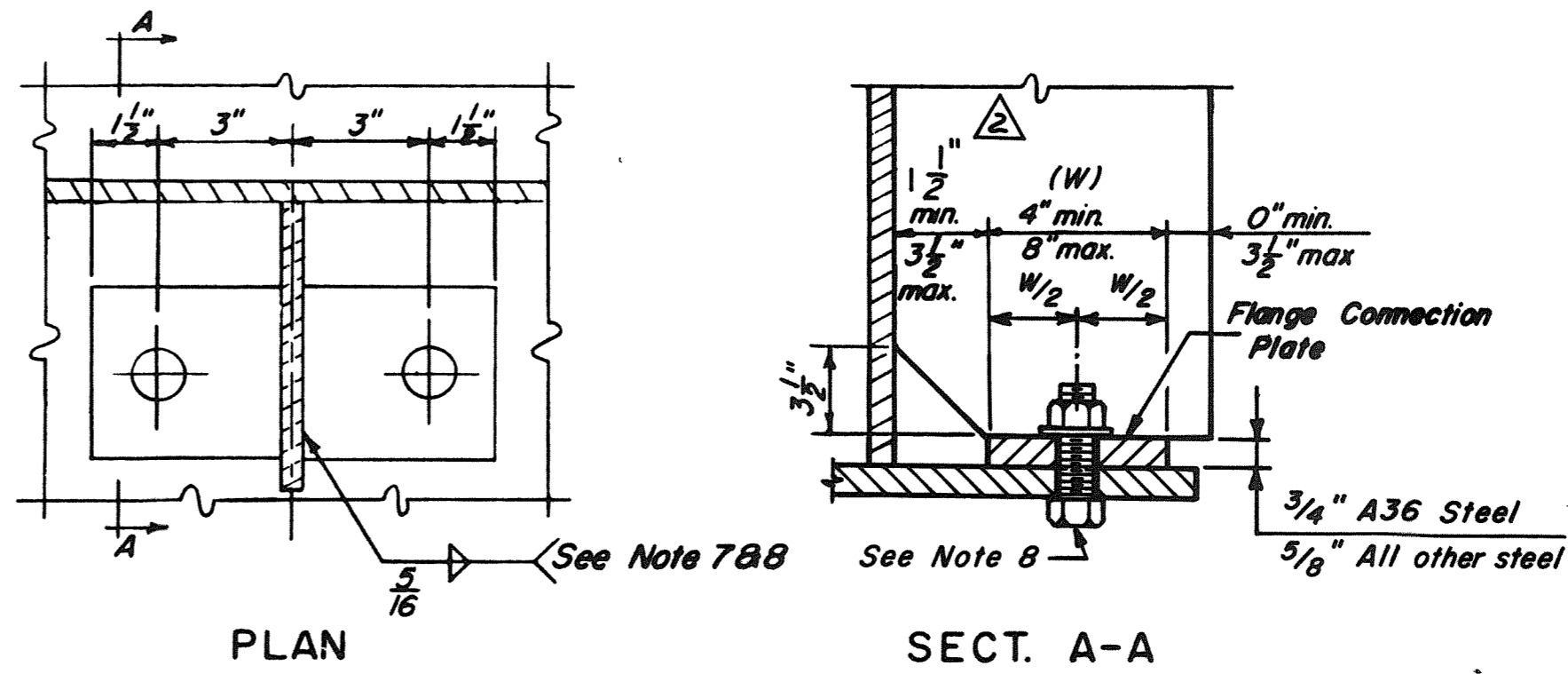


\* may be sloped to meet the  $3\frac{1}{2}$ " min. from flange to channel

**TYPE E & F**



**TYPE K**



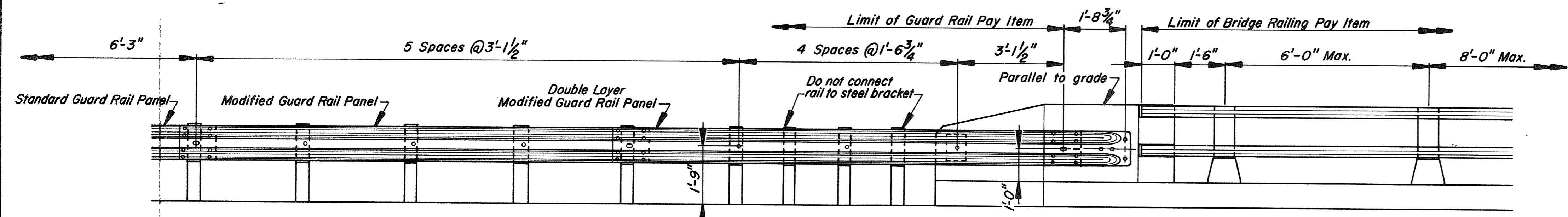
**TENSION-FLANGE CONNECTION**

REVISIONS	APPROVED	
	Description	Me.DOT
Original Plan	FEB. 1989	MAR. 16, 1989
Connection Clip	SEP. 1989	
Revision	OCT. 1990	

STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION

MAINE TURNPIKE  
STANDARD DETAILS  
BD 112 - 89  
DIAPHRAGMS & CROSSFRAMES

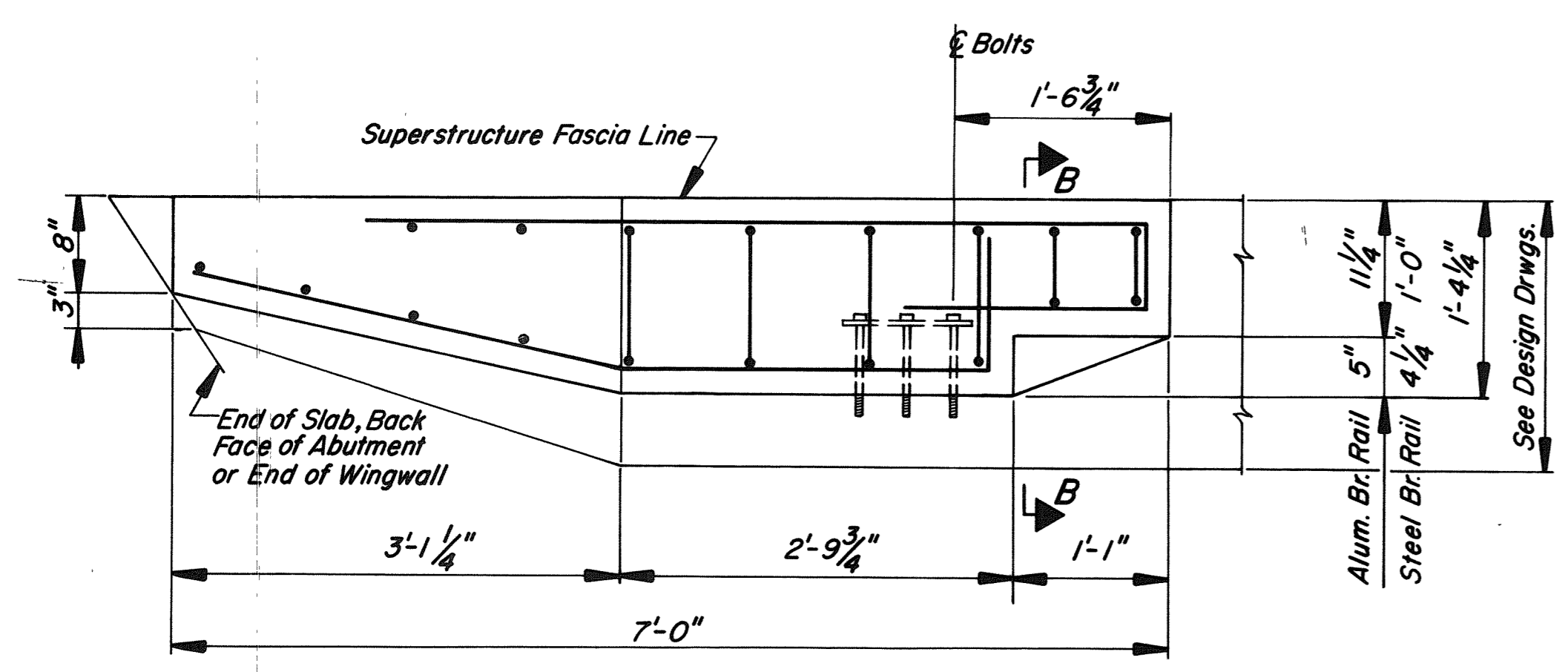
SHEET OF Feb. 1989



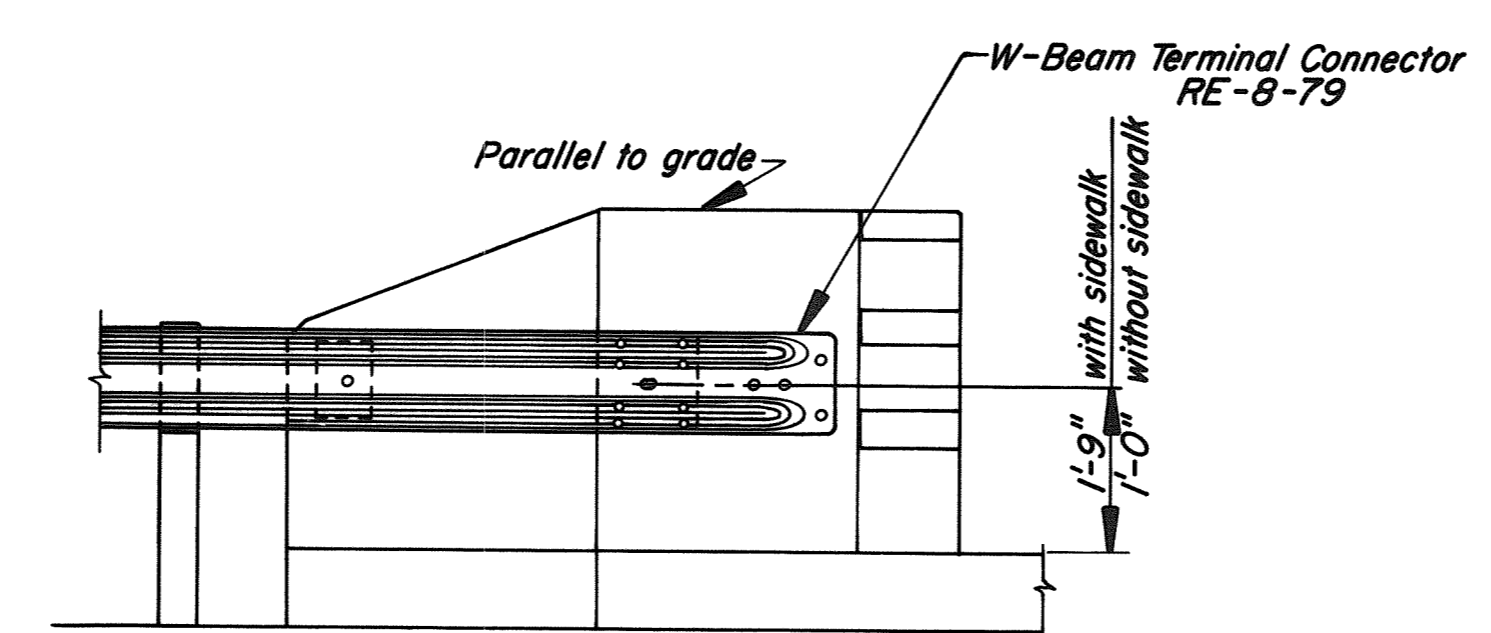
**ELEVATION WITH RAILING**  
2-Bar Bridge Rail (Aluminum or Steel)

**NOTES**

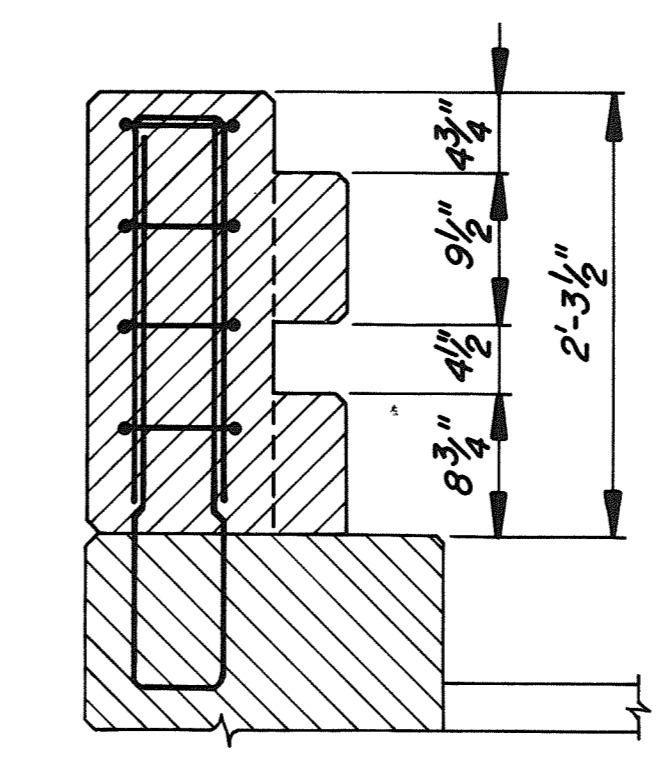
- For locations of End Posts on the structure, see Design Drawings.
- At times, an End Post Wing may be cantilevered for all or part of its length. For details, see Design Drawings.
- If an End Post Wing is cantilevered, bars EP405 are to be omitted as needed.
- When End Post Wing is cantilevered more than 2'-0", all #5 bars shall be replaced by #7 bars.
- Nuts and washers for 7/8" anchor bolts shall be incidental to Guard Rail Pay Items. Nuts shall conform to A.S.T.M. A563, Grade DH, galvanized in accordance with A.S.T.M. A153, or Grade C3, plain.
- Additional holes in the Modified Guard Rail Panel may be made by drilling, punching or any other method that produces a neat, clean hole of the required size. Burning of holes will not be allowed.
- Spacer Tube shall conform to the requirements of A.S.T.M. A53, galvanized, Grade B Type E or S. Hex bolt and nut on spacer tube shall conform to A.S.T.M. A307. Payment for spacer tube, bolt and nut shall be incidental to the Guard Rail pay item.
- Reinforcing Steel shall have 2" min. concrete cover.
- After installation of Guard Rail is complete, upset the thread on the anchor bolts in three places around each bolt, at the junction of the nut and the exposed thread, with a center punch or similar tool.
- Terminal Connector Anchorage shall be incidental to the applicable concrete pay item.
- End Post shall be constructed normal to grade unless otherwise shown on Design Drawings.
- All accessories (posts, bolts, nuts etc.) shall be as detailed for Standard Type 3 Guard Rail, except as otherwise detailed.
- If there is a conflict between this Standard Detail and the Design Drawings, the requirements of the Design Drawings shall be followed.
- Concrete shall be Class A with a silica fume additive.



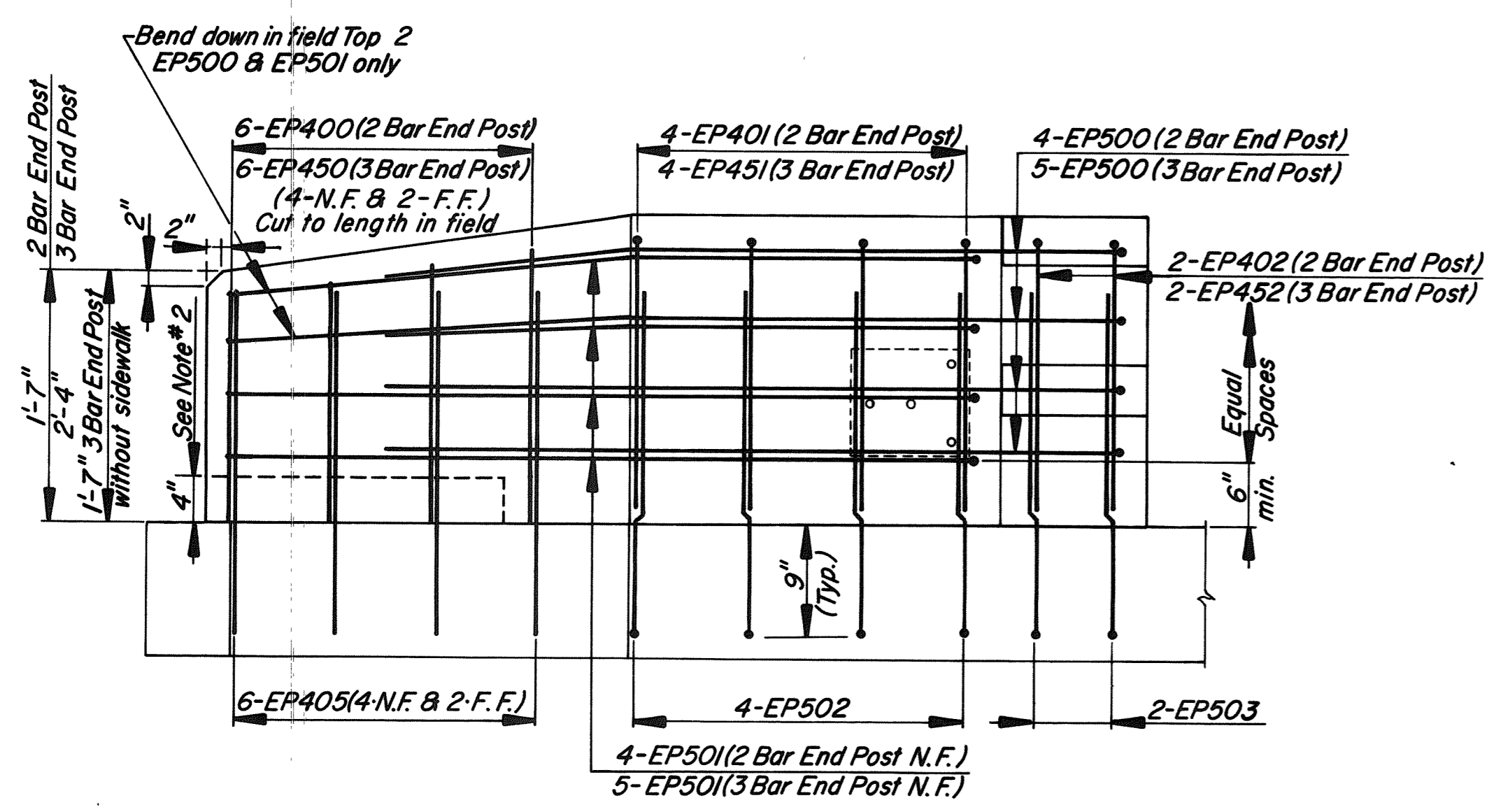
**PLAN**



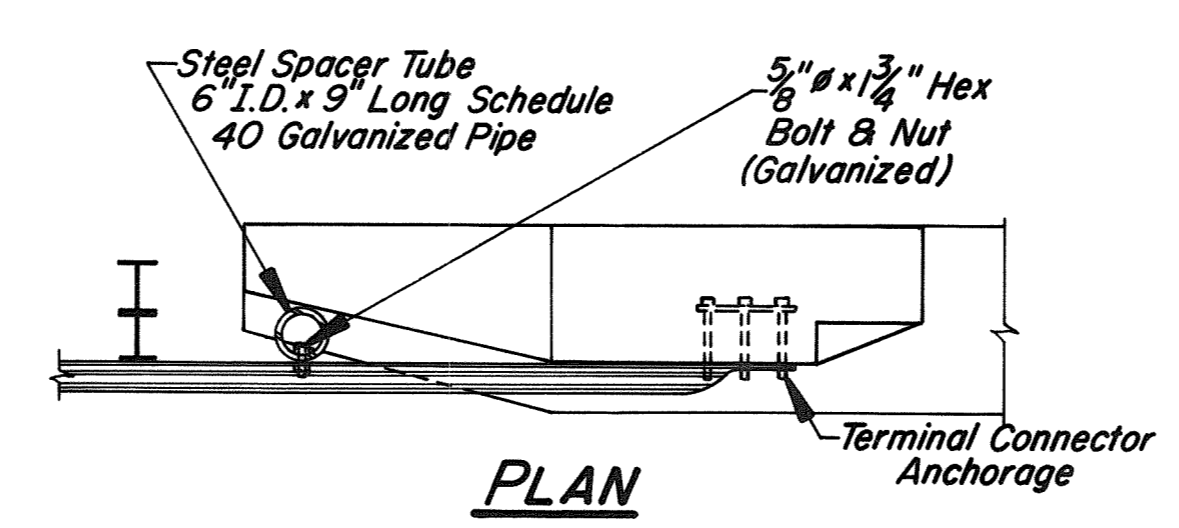
**ELEVATION**  
3-Bar Bridge Rail (Aluminum or Steel)



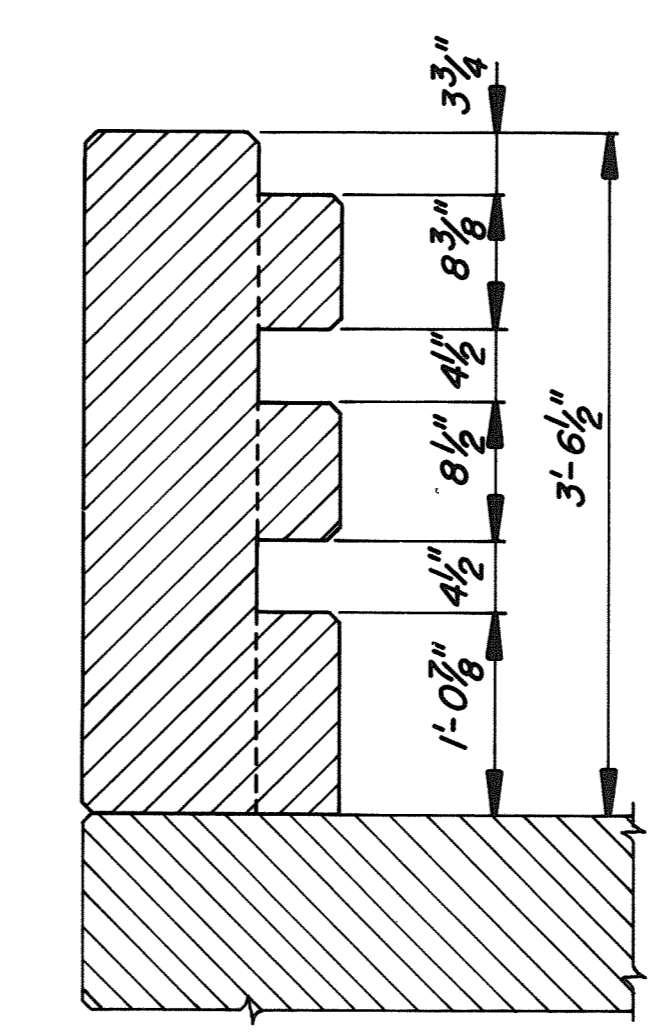
**SECTION B-B**  
2-Bar Bridge Rail (Aluminum or Steel)



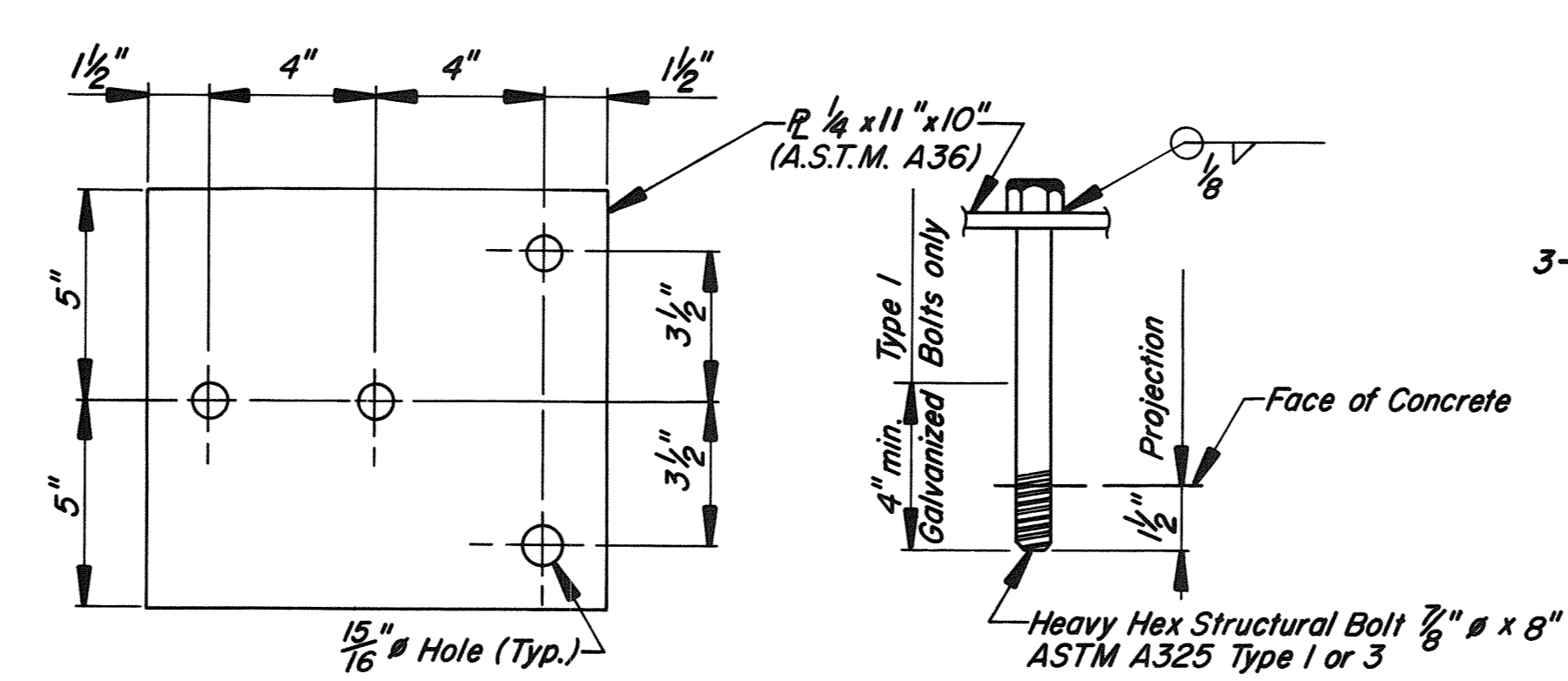
**ELEVATION**



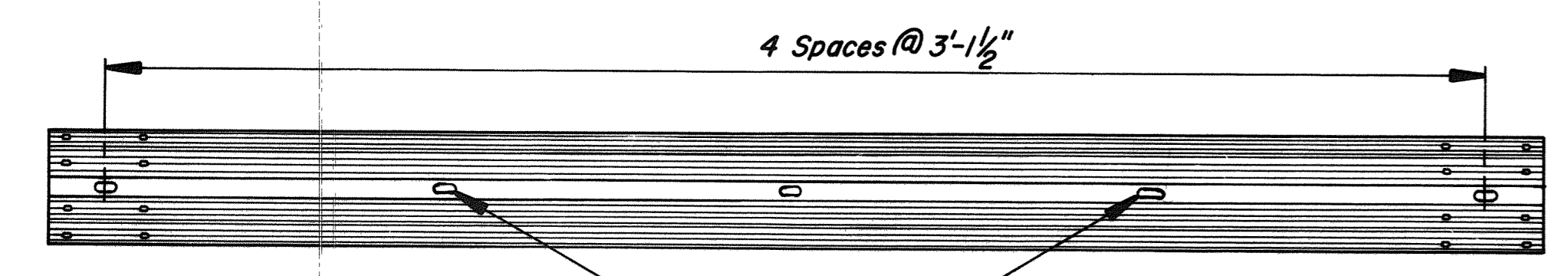
**PLAN**



**SECTION B-B**  
3-Bar Bridge Rail (Aluminum or Steel)



**TERMINAL CONNECTOR ANCHORAGE**



**MODIFIED GUARD RAIL PANEL**  
RE-3 - (4 @ 3'-1 1/2" = 12'-6") - 73

PROJECT DESIGN ENGINEER	DATE
DESIGN - DETAILED	6-88
CHECKED	
REVISIONS	
FIELD CHANGES	
<b>PLANS</b>	

REVISIONS	DATE
Revision	DEC.89
Revision	OCT.90

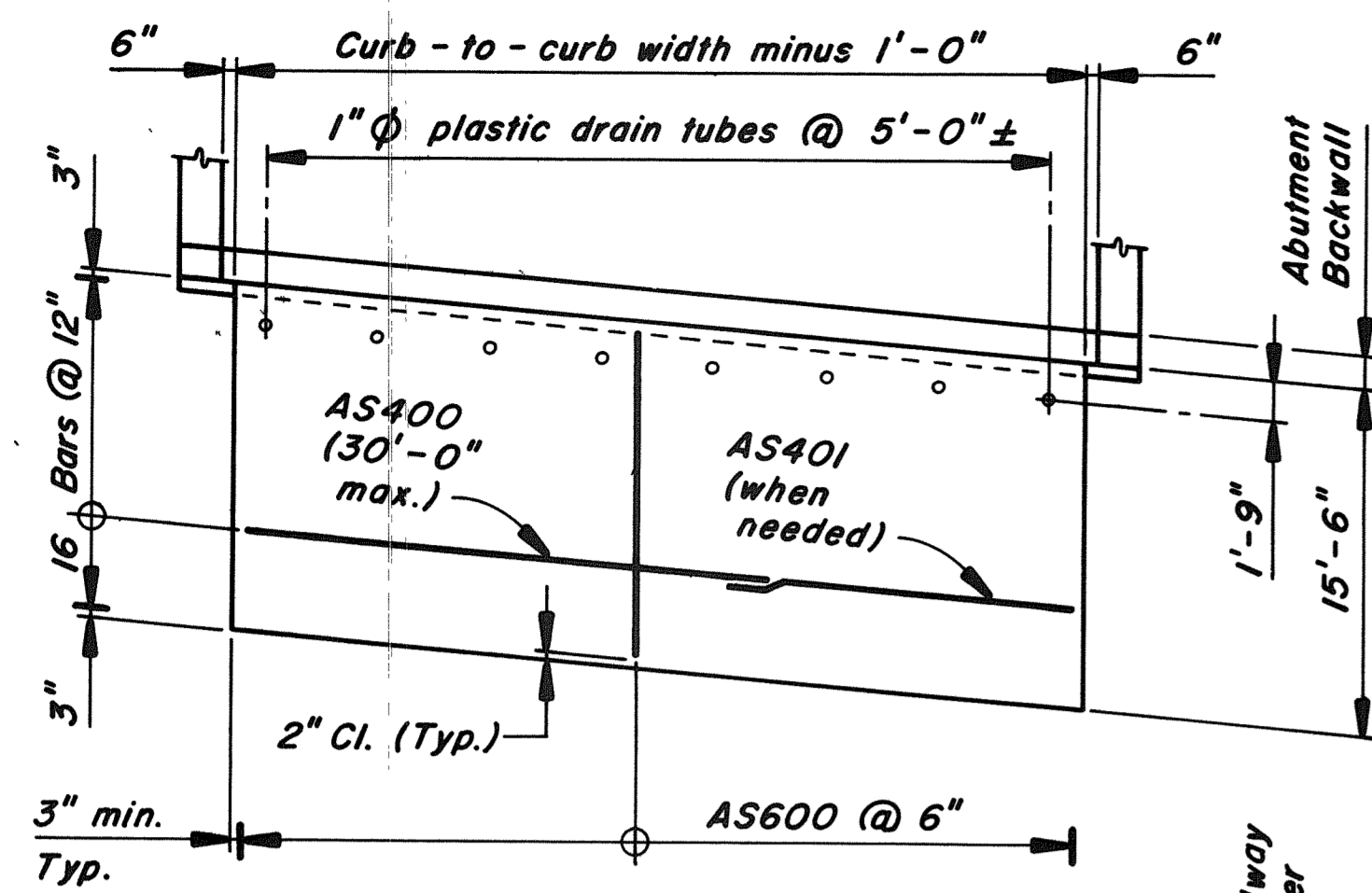
STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION

**MAINE TURNPIKE**  
**STANDARD DETAILS**  
BD 201 - 89

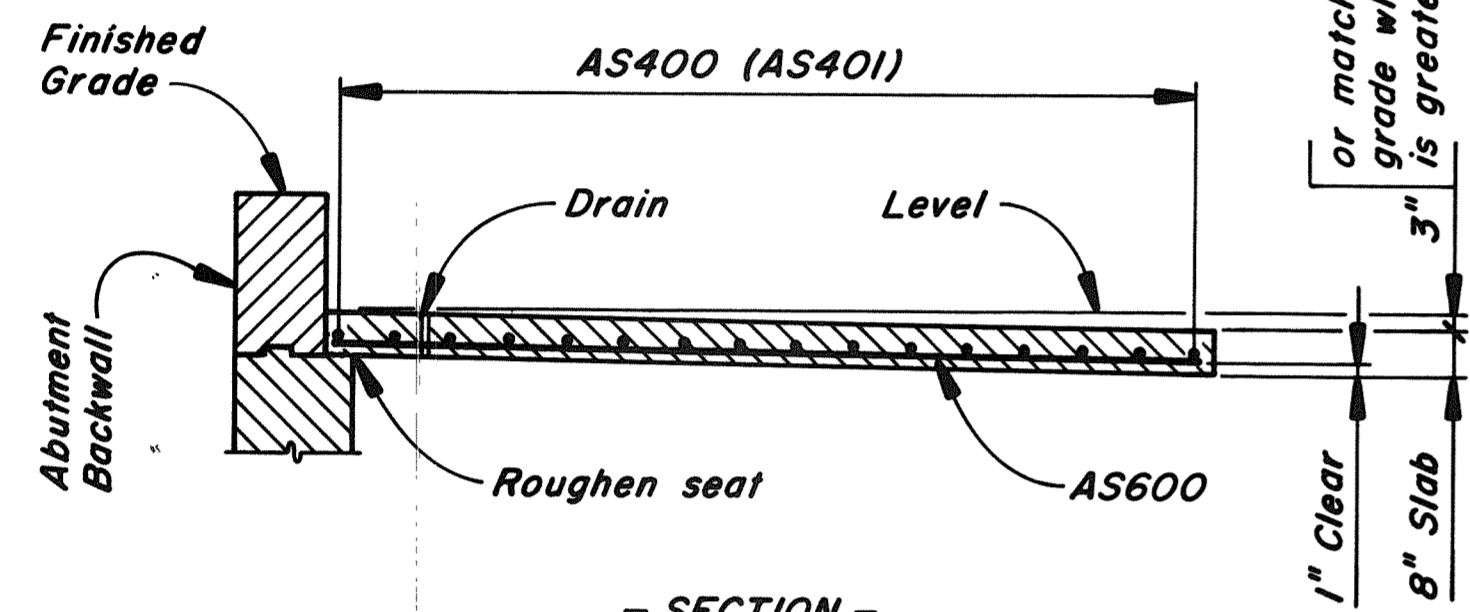
**CONCRETE END POSTS**

SHEET OF Feb 1989



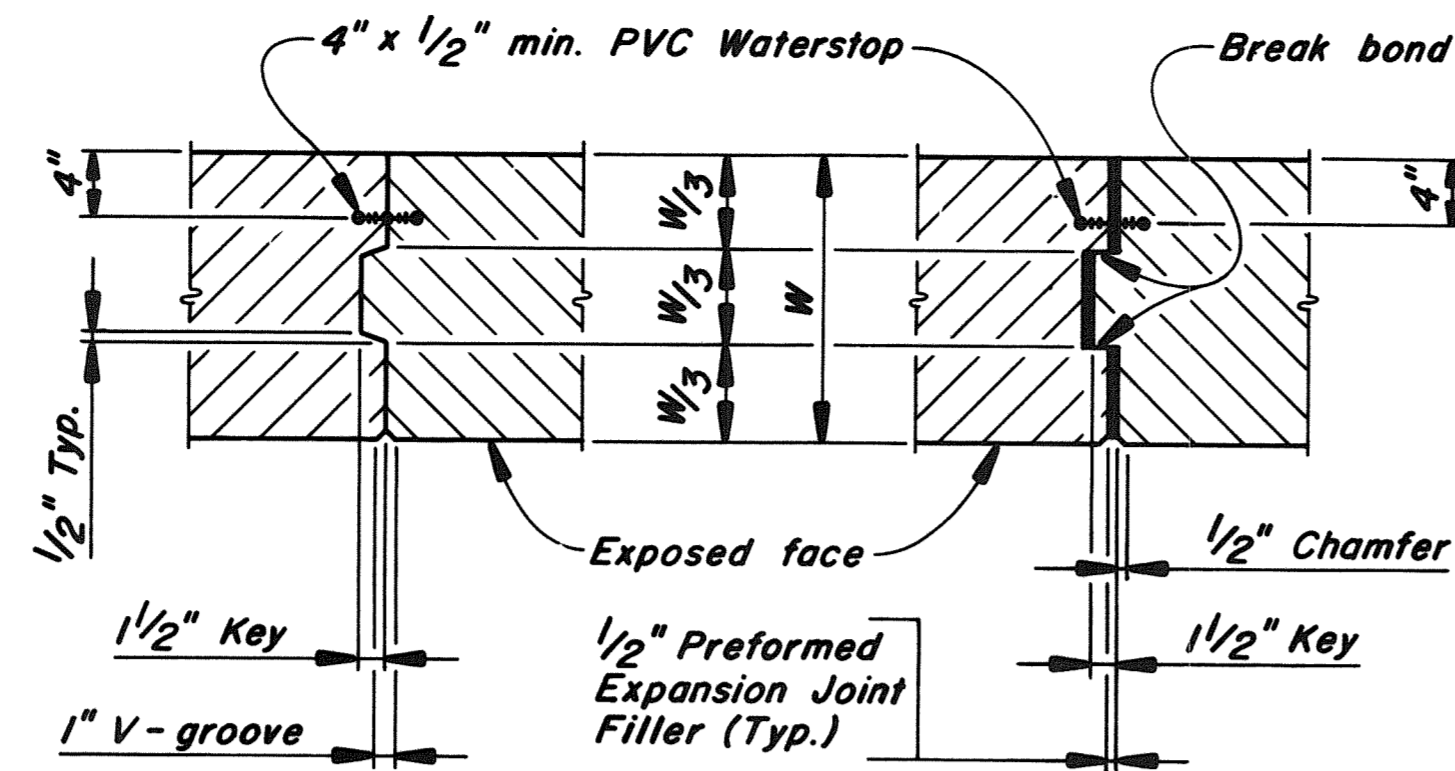


- PLAN -



- SECTION -

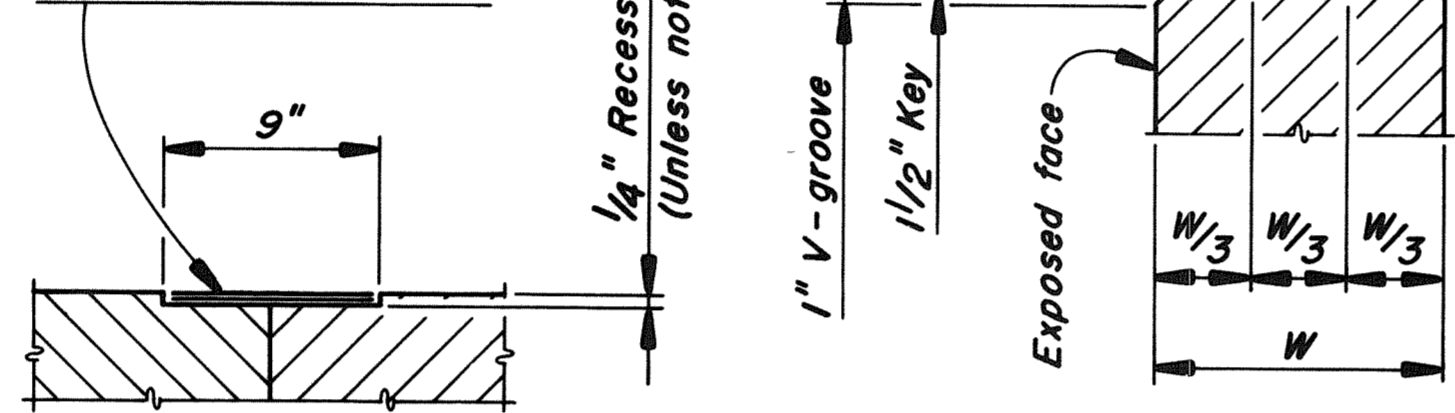
**APPROACH SLAB**



-VERTICAL CONSTRUCTION OR CONTRACTION JOINT-

-VERTICAL EXPANSION JOINT-

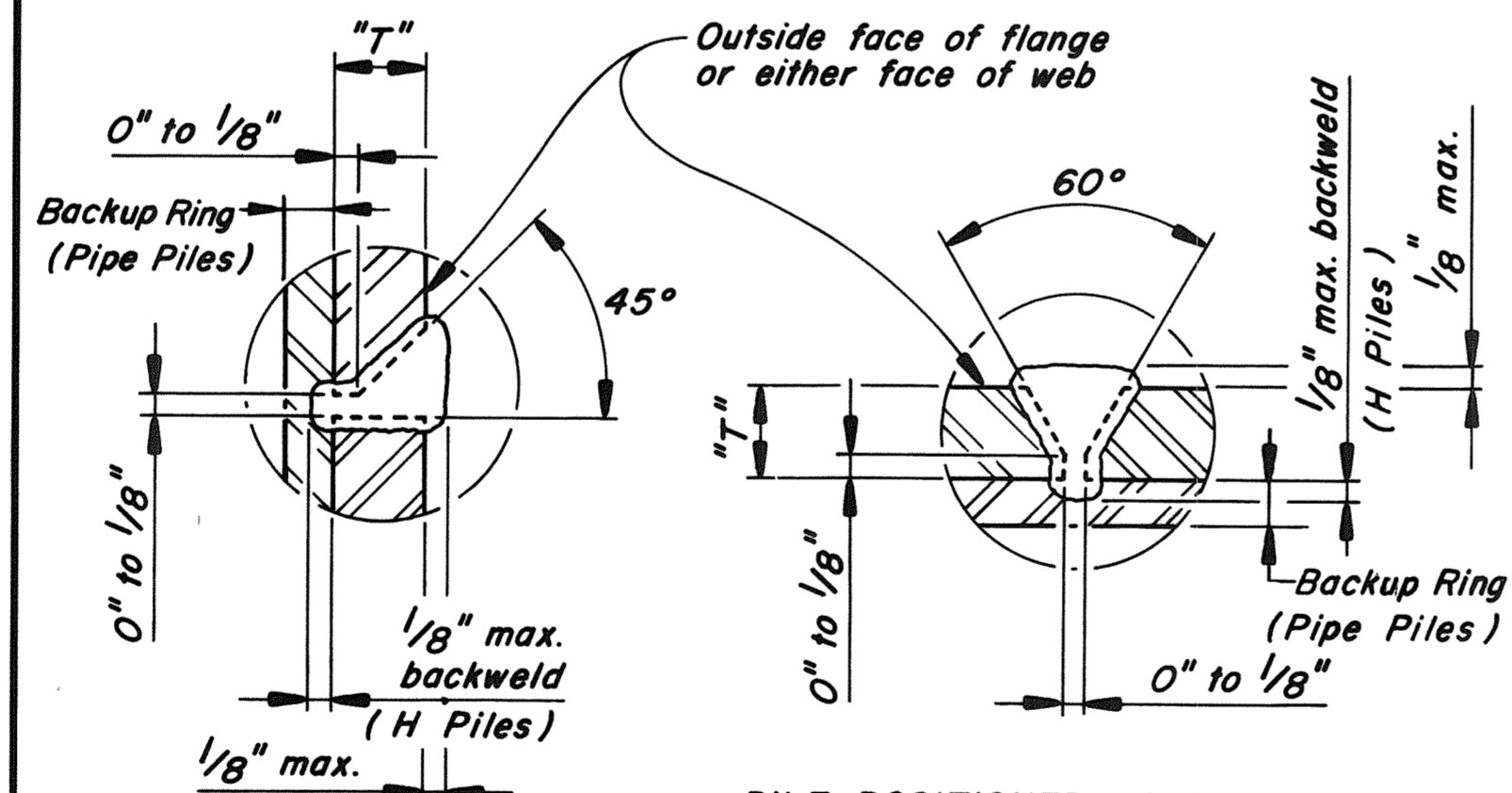
Apply two layers of heavy roofing felt. Coat the concrete and each layer with plastic roofing cement.



- JOINT COVER -

-HORIZONTAL CONSTRUCTION JOINT-

**CONCRETE JOINT DETAILS**



-PILE POSITIONED VERTICALLY-

-PILE POSITIONED HORIZONTALLY-

NOTES:

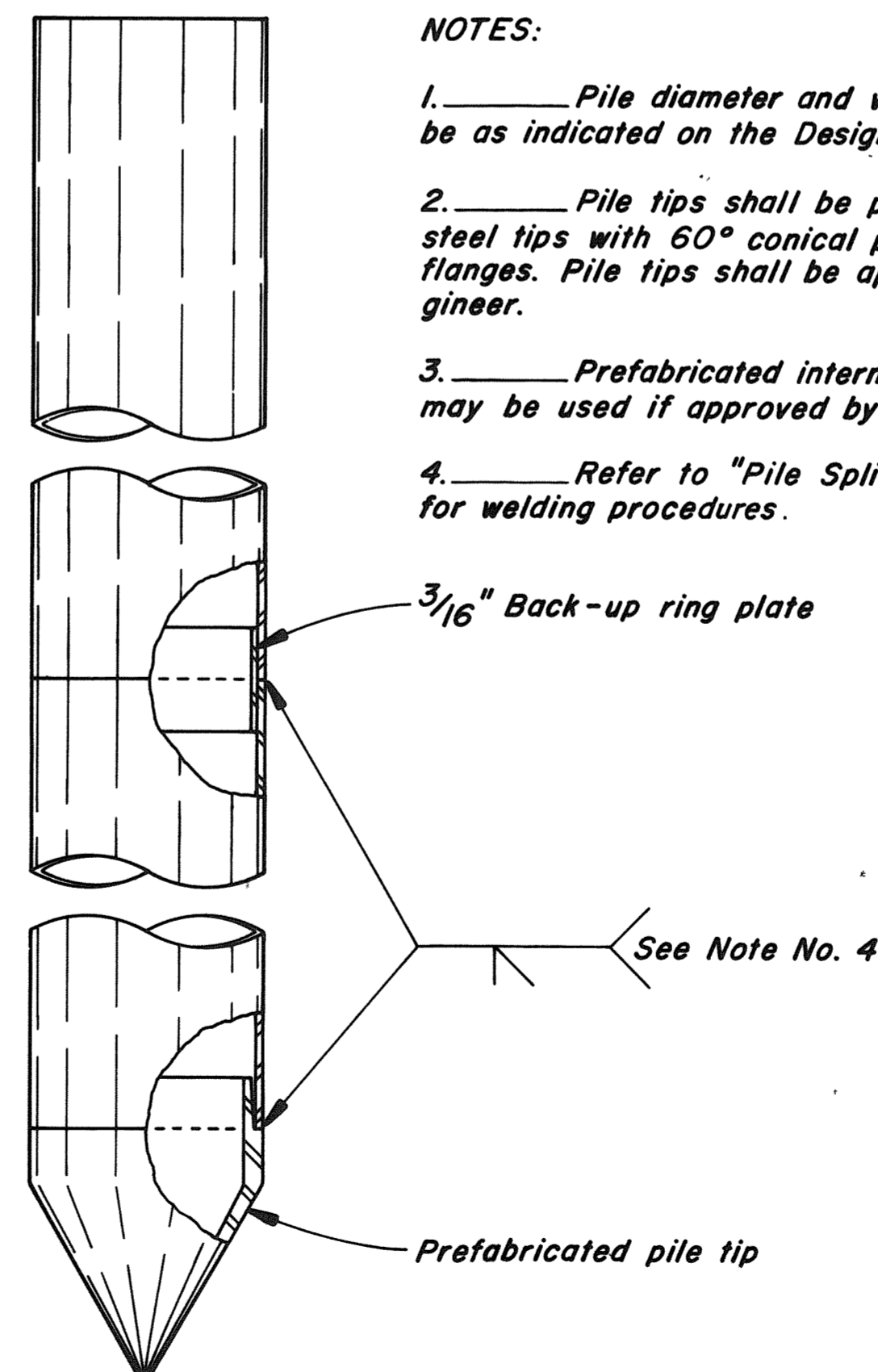
- All cutting shall be done with the use of a mechanical guide.
- Gouge root before welding second side. (H Piles).
- Use Manual Shielded-Arc Process and 6010 or 6011 electrodes, unless a different process has been approved by the Engineer.
- Electrodes shall be dry when used, in accordance with the provisions of A.W.S. Spec. DI.1, as amended by AASHTO.

Base Metal Thickness "T"	Min. Number of Passes
3/8, 7/16	3
1/2, 9/16, 5/8	4
11/16, 3/4, 13/16	5

**PILE SPLICE**

NOTES:

- Pile diameter and wall thickness shall be as indicated on the Design Drawings.
- Pile tips shall be prefabricated cast steel tips with 60° conical points and internal flanges. Pile tips shall be approved by the Engineer.
- Prefabricated internal splicer sleeves may be used if approved by the Engineer.
- Refer to "Pile Splice" details at left for welding procedures.



**PIPE PILES**

**GENERAL NOTE:**  
In case of conflict between these Standard Details and the Design Drawings, the requirements of the Design Drawings shall be followed.

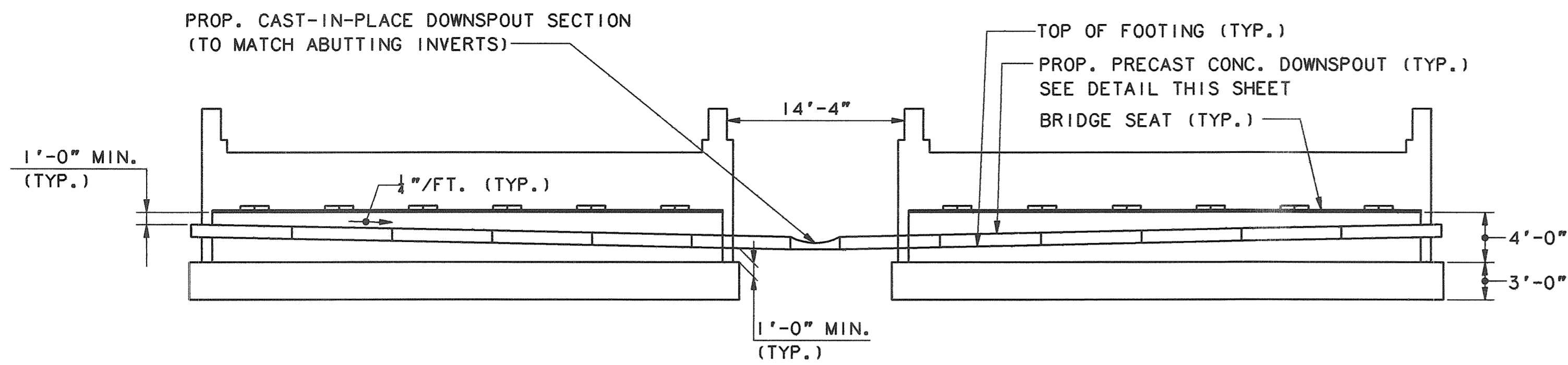
REVISIONS	APPROVED	
	Me.DOT	FHWA
Original Plan	FEB. 1989	MAR. 16, 1989
Δ Delete Pile Tip Details	OCT. 1990	

STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION

**MAINE TURNPIKE  
STANDARD DETAILS**  
BD 501 - 89

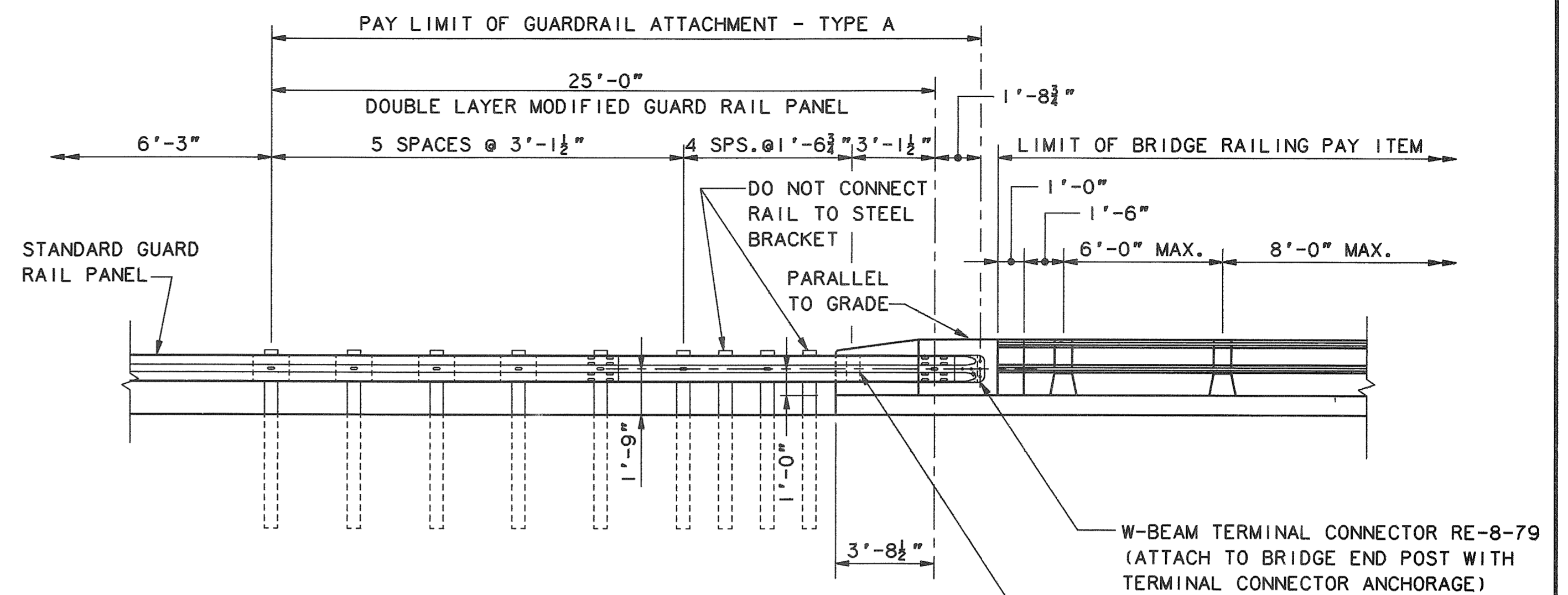
**SUBSTRUCTURE DETAILS**  
APPROACH SLAB  
CONCRETE JOINT DETAILS  
PILE SPLICE · PIPE PILES

PROJECT DESIGN ENGINEER	BY	DATE
DESIGN - DETAILED		
CHECKED		
REVISIONS		
FIELD CHANGES		
<b>PLANS</b>		



**DOWNSPOUT AT SOUTH BRIDGE ABUTMENT**

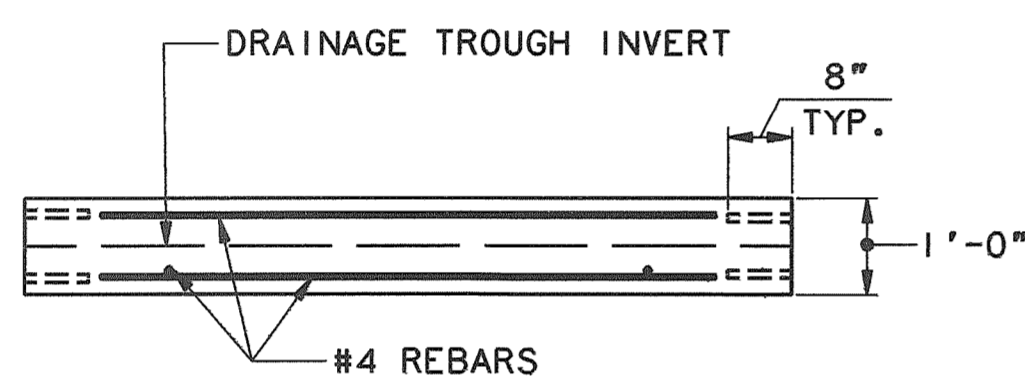
$\frac{1}{8}'' = 1'-0''$



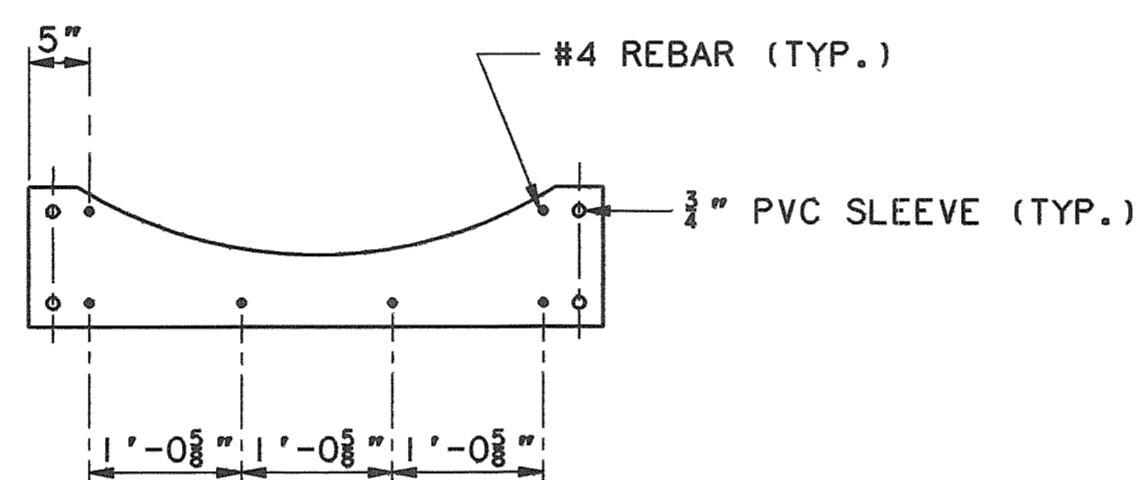
**GUARDRAIL ATTACHMENT - TYPE A  
(TO BRIDGE END POST)**

$\frac{1}{4}'' = 1'-0''$

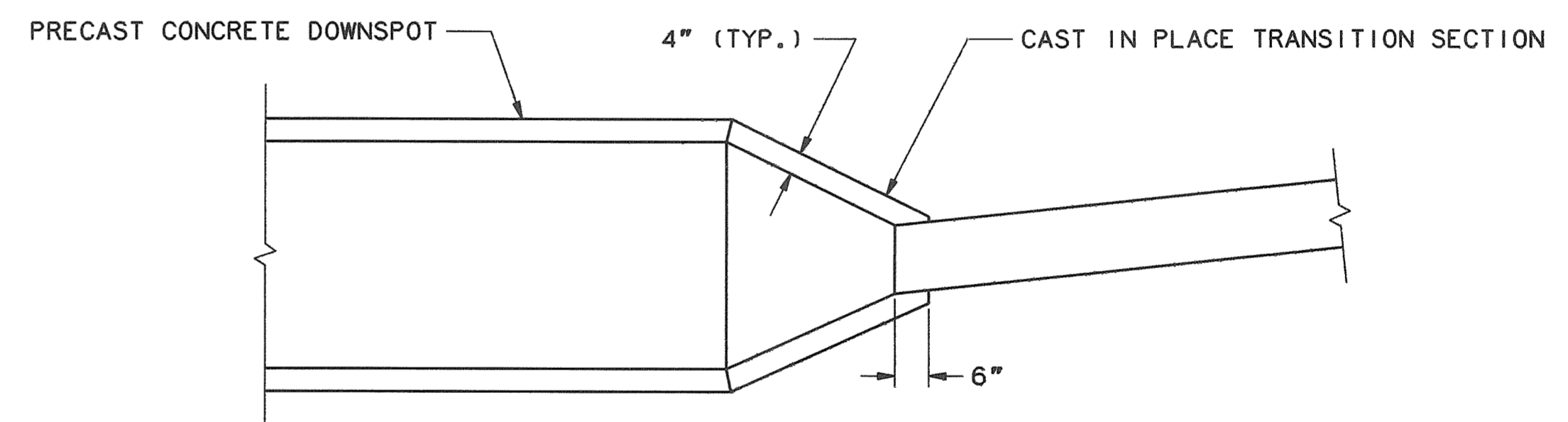
NOTE: FOR ADDITIONAL GUARDRAIL DETAILS  
SEE STANDARD DETAIL BD-201-89



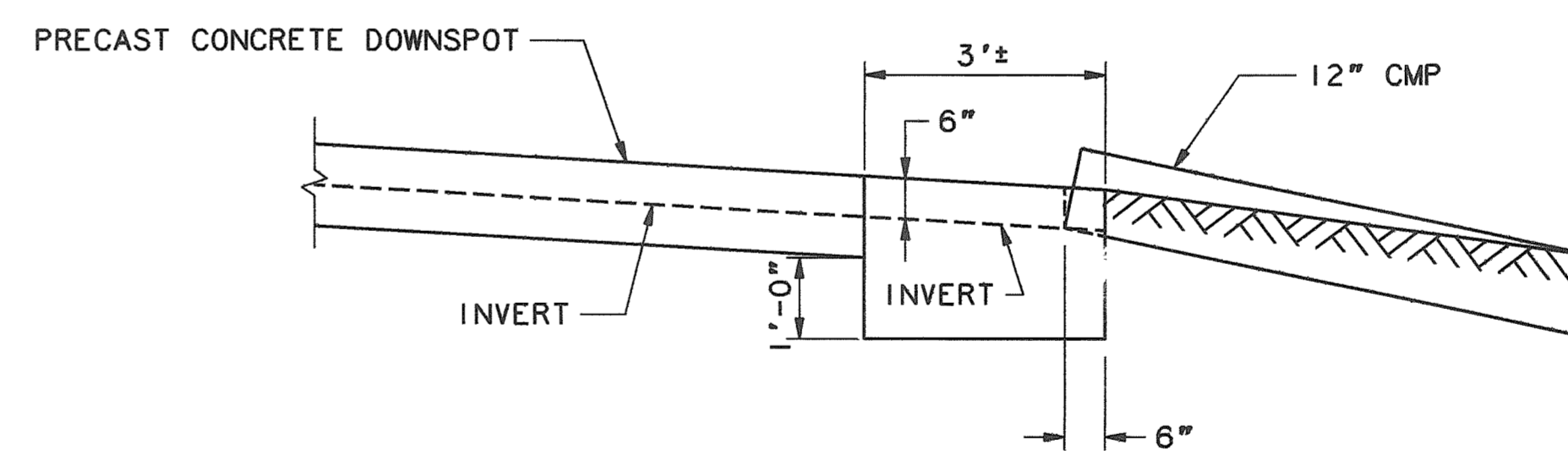
**PROFILE ELEVATION**



**END VIEW**



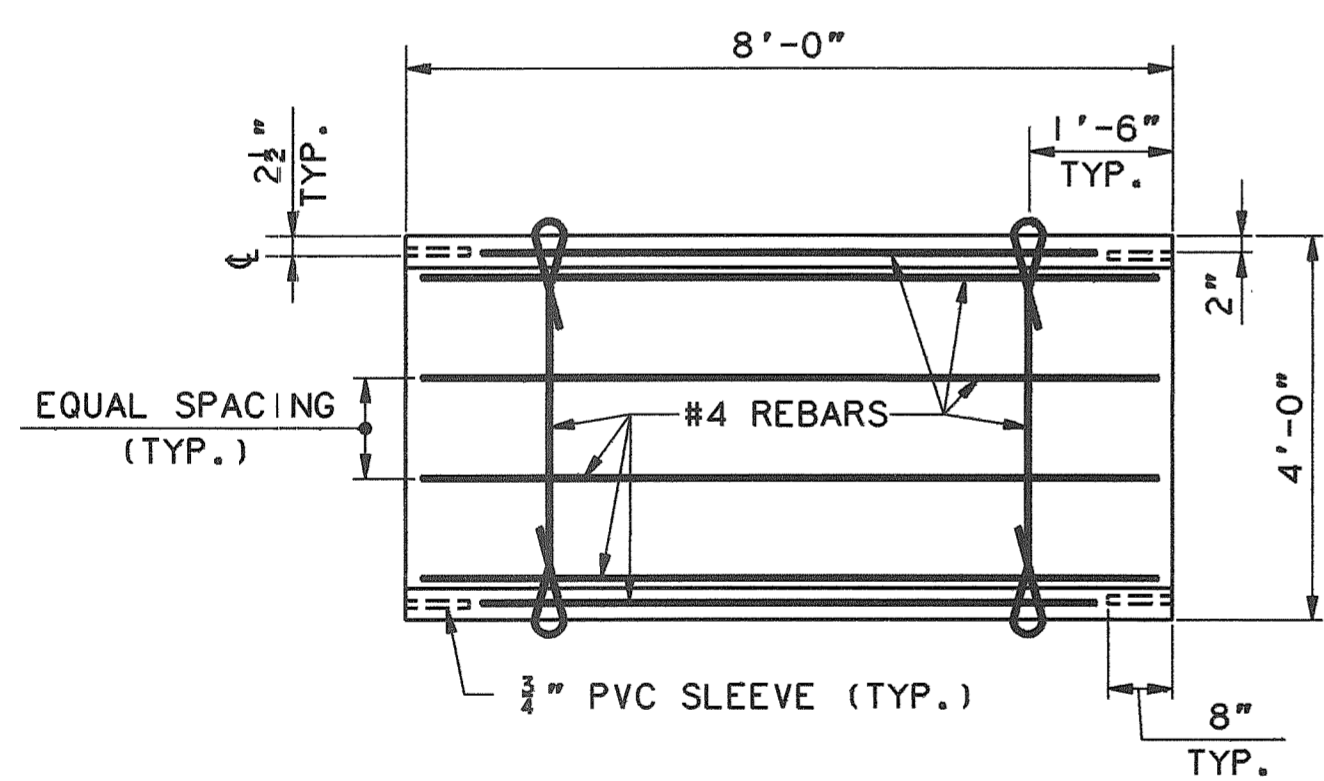
**PLAN**



**ELEVATION**

**CAST IN-PLACE CONCRETE TRANSITION SECTION  
(MDOT - CLASS AA CONCRETE)**

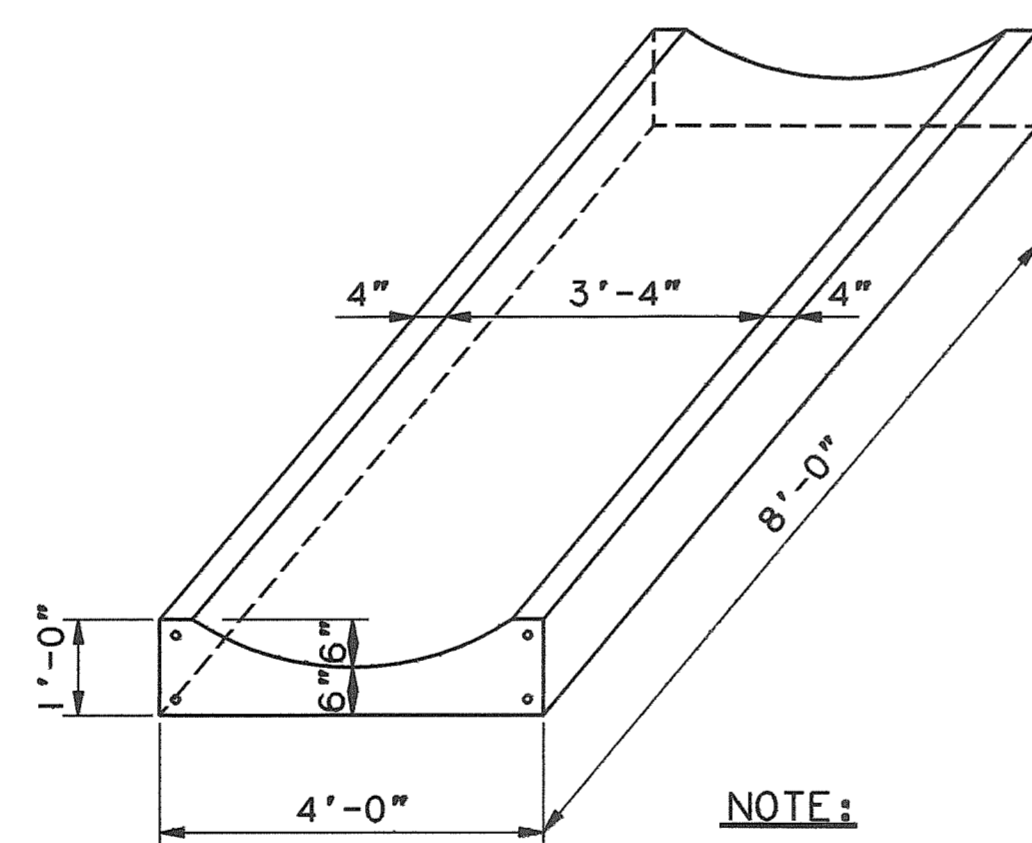
$\frac{1}{2}'' = 1'-0''$



**TOP VIEW**

**PRECAST CONCRETE DOWNSPOUT  
(MDOT - CLASS AA CONCRETE)**

NOT TO SCALE



**NOTE:**

BOND DOWELS (REBARS) & END SURFACES OF  
DOWNSPOUT WITH SIKADUR LO-MOD GEL.  
REBAR USED AS DOWELS SHALL BE EPOXY COATED.

ALL REBARS 2" (TYP.) CLEARANCE.  
ALL REBARS SHALL BE EPOXY COATED (TYP.).

DOWELS SHALL BE 14" LONG #5 BARS.

Maine Turnpike Authority  
**Maine Turnpike**

BRIDGE DECK REPLACEMENT  
WARREN AVENUE  
MISC. HIGHWAY DETAILS

**HNTB** HOWARD NEEDLES TAMMEN & BERGENDOFF  
ARCHITECTS ENGINEERS PLANNERS

Contract 92.10 Sheet No. 11 of 32

By	Date
Designed JFC	1/92
Drawn LS	1/92
Checked BJB	1/92
In Charge Of: RAL	

**SPECIFICATIONS**

**DESIGN**

AASHTO Standard Specifications For Highway Bridges 1989  
And Interim Specifications.

**CONTRACT**

State of Maine, Department of Transportation Standard Specifications, Highways  
And Bridges, Revision of October 1990.

**DESIGN LOADING**

**LIVE LOAD**

HS20 500,000 Cycles

**FOUNDATIONS**

Abutments - HP10x42  
Pier - HP12x53

**MATERIALS**

**CONCRETE**

Superstructure Slab Concrete Shall Be Class AAA.  
All Other Concrete Shall Be Class A.

**REINFORCING STEEL**

ASTM-A615 Grade 60. (Epoxy Coated And Non-Epoxy  
Coated Bars. See Reinforcing Schedules).

**STRUCTURAL STEEL**

Bearing Shoes-See Standard Details BD 101-89  
High Strength Bolts To Be ASTM A325.  
All Other Structural Steel Shall Be ASTM A709,  
Grade 36.

**BASIC ALLOWABLE STRESSES**

**CONCRETE**

$f_c = 1,800$  psi  $n=8$  (Superstructure Slab)  
 $f_c = 1,600$  psi  $n=8$  (All Other)

**REINFORCING STEEL**

$f_b = 24,000$  psi

**STRUCTURAL STEEL**

A709 Grade 36,  $f_b = 20,000$  psi  
A709 Grade 50,  $f_b = 27,000$  psi

**GENERAL NOTES**

- Reinforcing Steel To Have A Clear Cover Of 2", Unless Otherwise Specified.
- Chamfer All Exposed Edges 1" Unless Otherwise Noted.
- Plans of Existing Bridges Are Available At The Authority's Office At 430  
Riverside St., Portland, Maine.
- Shielding Required During Concrete Removal Shall Not Project Below The  
Bottom Flanges Of The Stringers. The Estimated Quantity Of Shielding Is The  
Minimum Required And Is Based On The Following Limits:
  - Normal To  $\phi$  Bridge: As Shown On Plans
  - Parallel To  $\phi$  Bridge: Abutment To Abutment
- The Authority's Personnel Will Profile The Tops Of All Stringers Before The  
Form Work Is Started And Supply The Contractor With Final Bottom Of Slab  
Elevations.

**SUPERSTRUCTURE NOTES**

- All Brush Curb, End Post And Top Pour Of Wingwall Concrete  
Shall Contain A Silica Fume Additive.
- Longitudinal Reinforcement Shown In Deck Plan Is  
Symmetrical About  $\phi$  Bridge.
- Mortar For Bedding And For Joints In The Granite Curb Shall  
Contain A Non-shrink Additive.
- The Superstructure Slab Concrete Shall Be Placed  
In One Continuous Operation And Shall Be Kept Plastic  
One Complete Span Behind The Span Being Placed.
- If The Slab Placement Has To Be Terminated, The Termination  
Point Must Be At The Points Indicated In The Placement  
Details, Shown On The Superstructure Detail Sheet.
- Adjust Reinforcing Steel To Fit Around The Scuppers In A Manner  
Approved By The Engineer. Do Not Cut Transverse Re-steel.
- Depress 1"  $\phi$  Drains  $\frac{3}{8}$ " Below Top Of Slab. Do Not Cover  
Drains With Membrane. Provide 23 Gauge Galvanized Screens ( $\frac{1}{8}$ " Mesh)  
Over Drains.
- Seal Membrane At Deck Joints, Along Curb, And All Drains.  
Allow  $\frac{1}{4}$ " For Thickness.
- Locate Scupper In Field To Discharge Into Drainage Trough.  
For Scupper Details, See Sheet 22.
- Protective Coating For Concrete Surfaces Shall Be Used At The  
Following Areas: Top Of Concrete Curb, Fascia, Down To Drip  
Notch, And All Exposed Concrete Surfaces On The End Posts.

ITEM NO.	DESCRIPTION	QUANTITY		UNIT
		NB	SB	
202.10	Removing Existing Superstructure - Property of Contractor (765 SY Each Deck)*	ONE		LS
202.12	Removing Existing Structural Concrete	22	22	CY
202.13	Removing Existing Railing - Retained By Authority	458	458	LF
202.14	Removing Existing Railing - Property Of Contractor	458	458	LF
202.20	Protective Shield	1005	1005	SY
203.25	Granular Borrow	40	40	CY
206.082	Structural Earth Excavation - Major Structures	130	130	CY
206.10	Structural Earth Excavation - Piers	105	95	CY
403.08	Hot Bituminous Pavement, Grading C	90	90	Ton
501.212	Steel H-Beam Piles 42 Lb./Ft.	270	270	LF
501.214	Steel H-Beam Piles 53 Lb./Ft.	210	210	LF
502.21	Structural Concrete Abutments & Retaining Walls	57	57	CY
502.23	Structural Concrete Piers	62	62	CY
502.26	Structural Concrete Roadway & Sidewalk Slabs On Steel Bridges (267 CY Each Deck)*	ONE		LS
502.4712	Silica Fume Additive	1150	1150	Lbs.
502.48	Pier Preparation	120	140	SF
502.60	Backwall Repair - Surface Repair - Section II	5	5	SF
502.62	Abutment and Bridge Seat Repair - Section II	0	15	SF
502.63	Pier Repairs	10	30	SF
503.12	Reinforcing Steel, Fabricated And Delivered	6763	6753	Lbs.
503.13	Reinforcing Steel, Placing	6763	6753	Lbs.
503.14	Epoxy-Coated Reinforcing Steel, Fabricated & Delivered	102412	102397	Lbs.
503.15	Epoxy-Coated Reinforcing Steel, Placing	102412	102397	Lbs.
504.701	Structural Steel Fabricated & Delivered, Rolled (44900 Lbs,Grade 36 Ea.Deck, 900 Lbs,Grade 50 Ea.Deck)*	ONE		LS
504.71	Structural Steel Erection (45800 Lbs. Each Deck)*	ONE		LS
504.72	Steel Beam Modifications	3220	3220	Lbs.
504.73	Structural Steel Repairs	200	200	Lbs.
505.08	Shear Connectors (434 Units Each Deck)*	ONE		LS
506.30	Shop Coating Of Structural Steel (23 Ton Each Deck)*	ONE		LS
506.31	Field Repair Of Damaged Coating (2 Ton Each Deck)*	ONE		LS
507.092	Aluminum Bridge Railing, 2 Bar	497	497	LF
508.13	Membrane Waterproofing (965 SY Each Deck)*	ONE		LS
514.06	Curing Box For Concrete Cylinders	ONE		Each
515.20	Protective Coating for Concrete Surfaces	242	242	SY
515.22	Thoroseal Coating for Concrete Surfaces	200	200	SY
520.221	Expansion Device Extension - Compression Seal	2	2	Each
609.131	Vertical Bridge Curb - Type IA	50	50	LF
609.132	Vertical Bridge Curb - Type IB	456	456	LF

\* Quantities For Estimating Purposes Only

INDEX OF DRAWINGS	
SHEET NO.	TITLE
12	INDEX, QUANTITIES, AND NOTES
13	GENERAL PLAN AND FOOTING PLAN
14	ABUTMENT DETAILS I
15	ABUTMENT DETAILS II
16	ABUTMENT JOINT DETAILS I
17	ABUTMENT JOINT DETAILS II
18	PIER DETAILS
19	FRAMING PLAN
20	STRUCTURAL STEEL DETAILS
21	SUPERSTRUCTURE DETAILS
22	MISCELLANOUS DETAILS
23	REINFORCING SCHEDULE I
24	REINFORCING SCHEDULE II
25	REINFORCING SCHEDULE III
26	REINFORCING SCHEDULE IV

STANDARD DETAIL SHEETS	
SHEET NO	TITLE
BD 101-89	BEARING PEDESTALS
BD 111-89	BEAM SPLICES: ROLLED BEAMS
BD 112-89	DIAPHRAGMS & CROSSFRAMES
BD 201-89	CONCRETE END POSTS
BD 401-89	ALUMINUM BRIDGE RAILING: 2 BAR
BD 501-89	SUBSTRUCTURE DETAILS

Maine Turnpike Authority  
**Maine Turnpike**

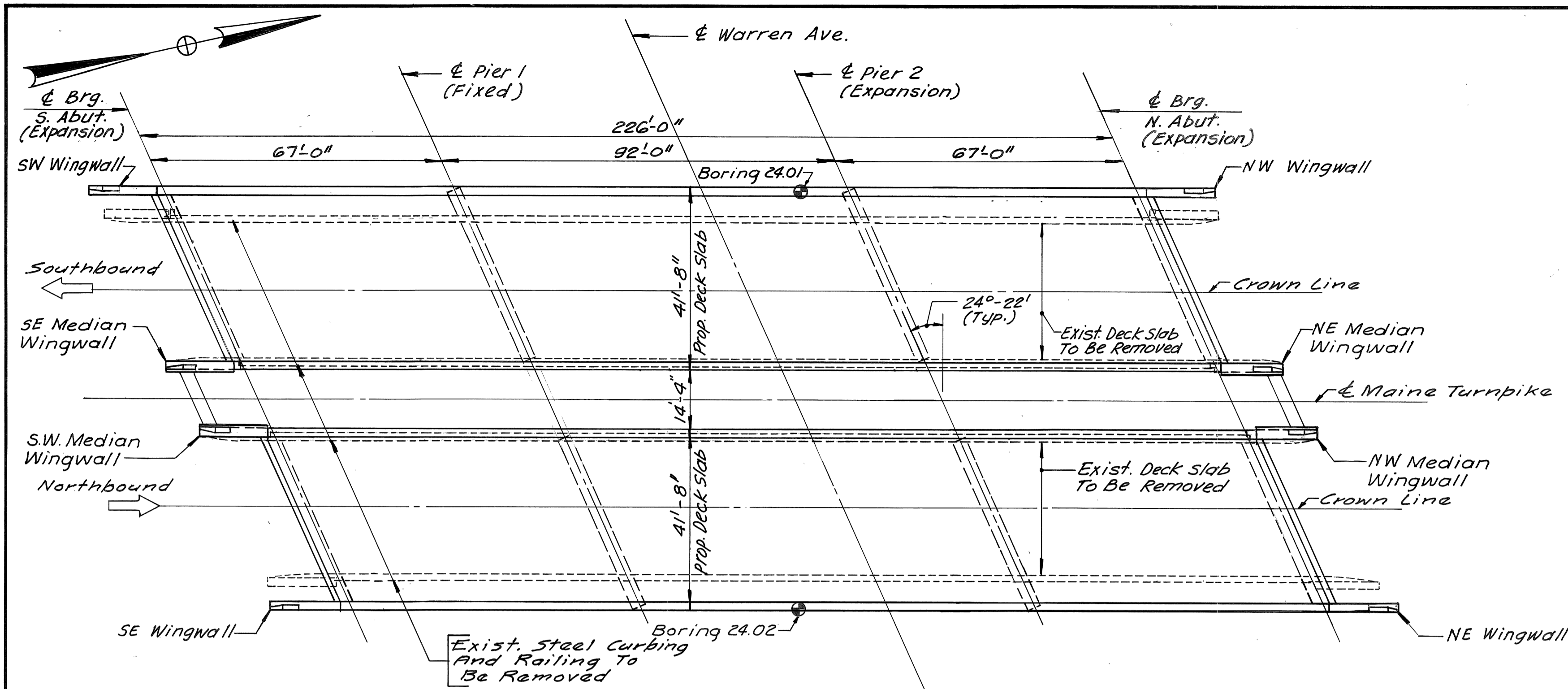
**WARREN AVENUE**  
INDEX,  
QUANTITIES, AND  
NOTES

**HNTB** HOWARD NEEDLES TAMMEN & BERGENOFF  
ARCHITECTS ENGINEERS PLANNERS

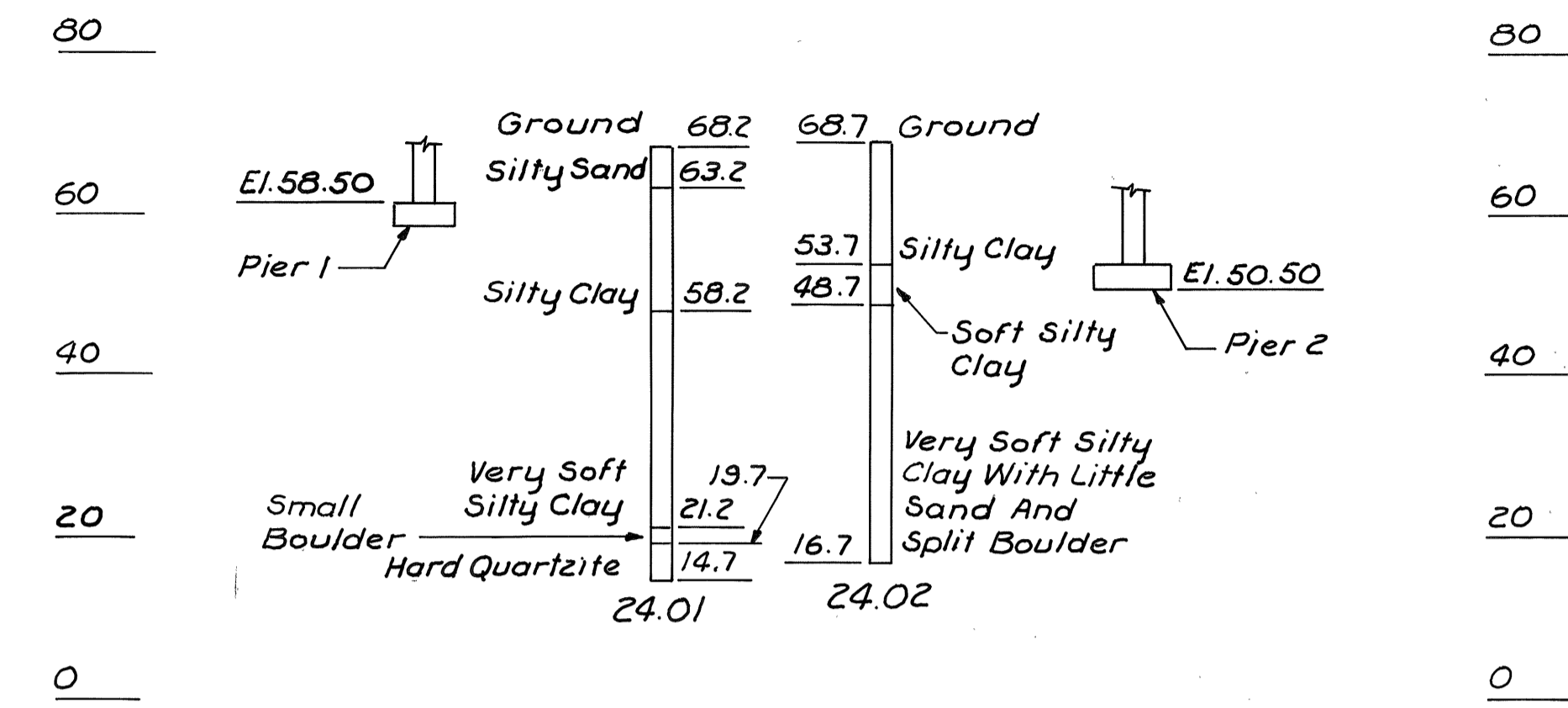
Contract 92.10 Sheet No. 12 of 32

By	Date
Designed SHR	11/91
Drawn LS	11/91
Checked IS	12/91
In Charge Of: RAL	

GENERATED 13 APR 92 10:01:20



**PLAN**  
1" = 20'



**BORING LOG**

**LEGEND**

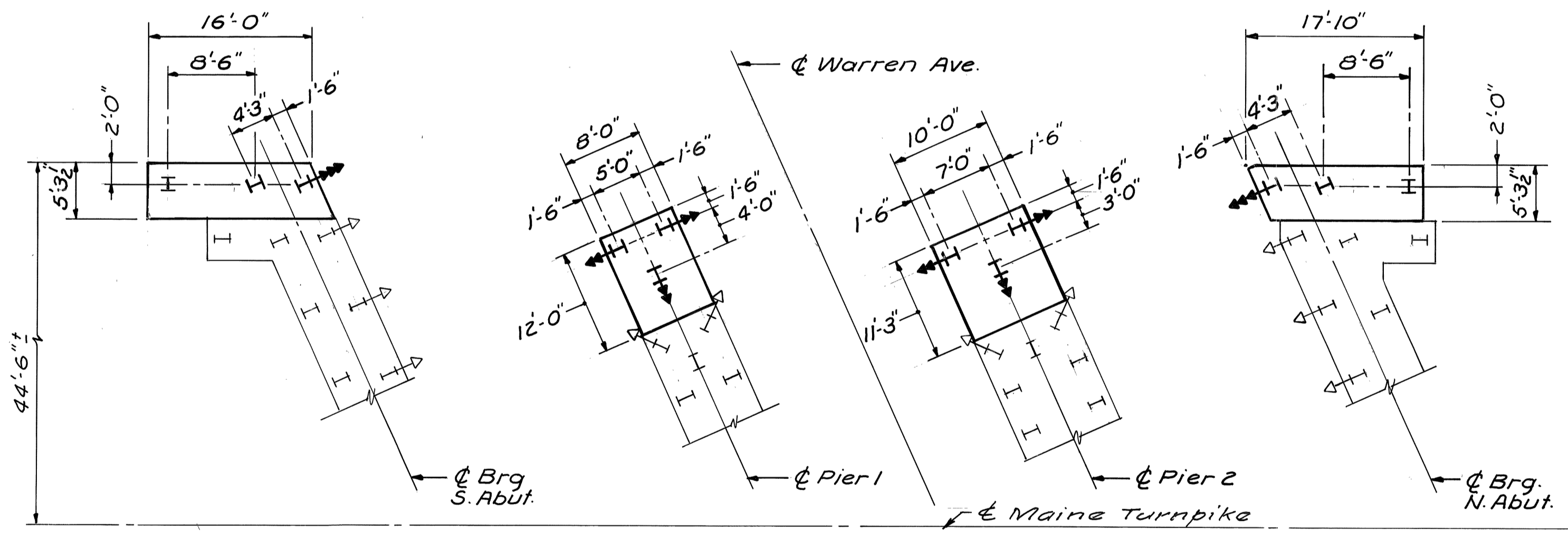
- H Existing Pile (Vertical)
- H Existing Pile (Batter 3"/Ft.)
- H Proposed Pile HPI0x42 (Vertical)
- H Proposed Pile HPI2x53 (Batter 2"/Ft.)
- H Proposed Pile HPI0x42 (Batter 3"/Ft.)
- ⊙ Existing Boring

**BORING NOTES**

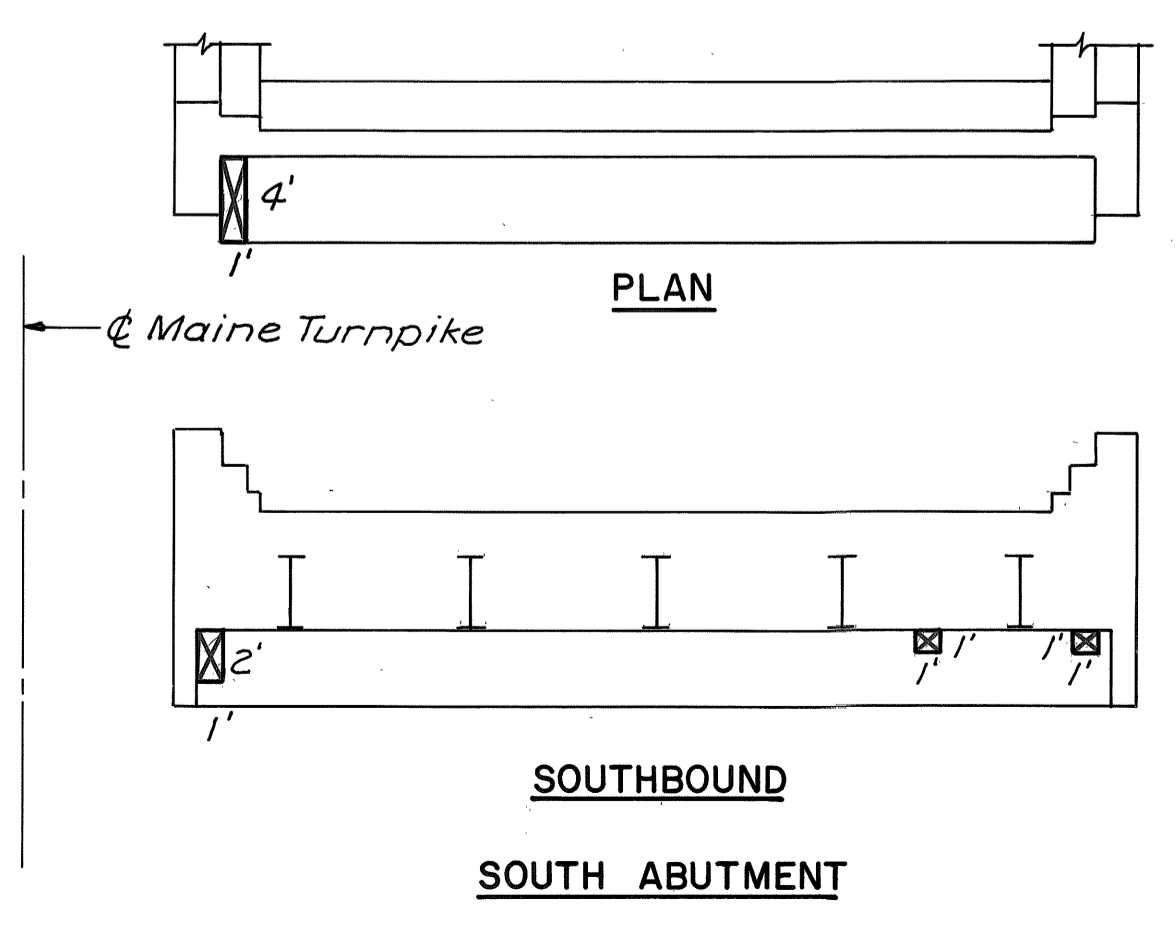
1. The Borings Shown Were Taken For Original Construction. The Borings Were Taken For Design Purposes And Show Conditions At The Boring Locations Only. They Do Not Necessarily Show The Nature Of Materials To Be Encountered During Construction.
2. Datum Correction: Based On 1991 Survey Information, Add 22.8 Ft. To Elevations Shown On Boring Log.
3. Estimated Pile Lengths Are Taken From The Original Construction Drawings And Are Not Guaranteed.

ESTIMATED PILE LENGTHS *	
South Abutment	45'
Pier 1	40'
Pier 2	30'
North Abutment	45'

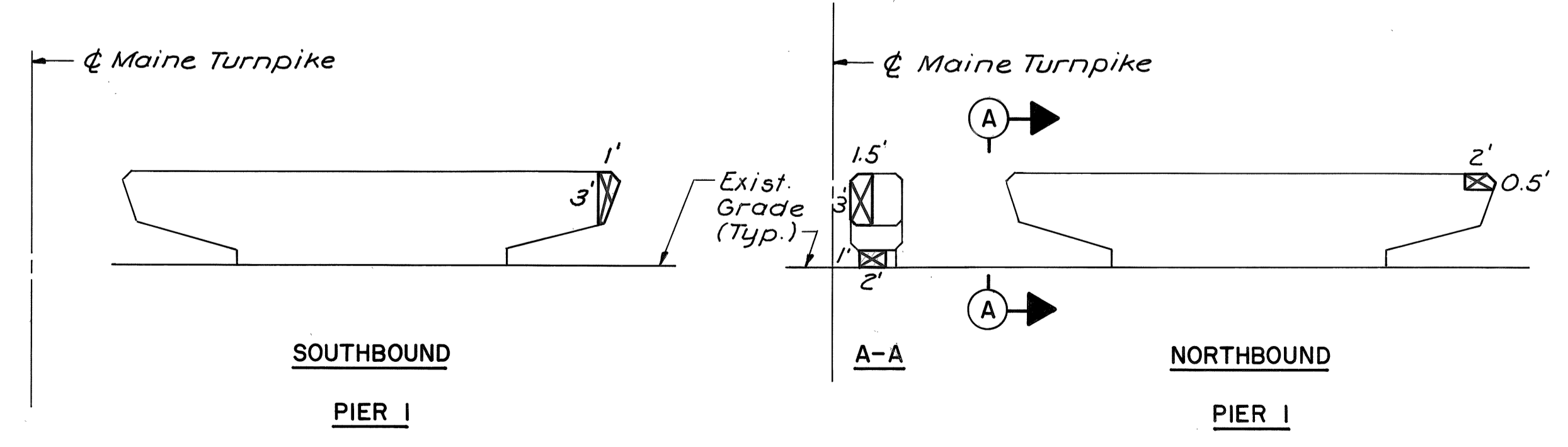
\* See Note 3



**PARTIAL FOOTING PLAN**  
SOUTHBOUND FOOTINGS SHOWN, NORTHBOUND SIMILAR  
1" = 10'

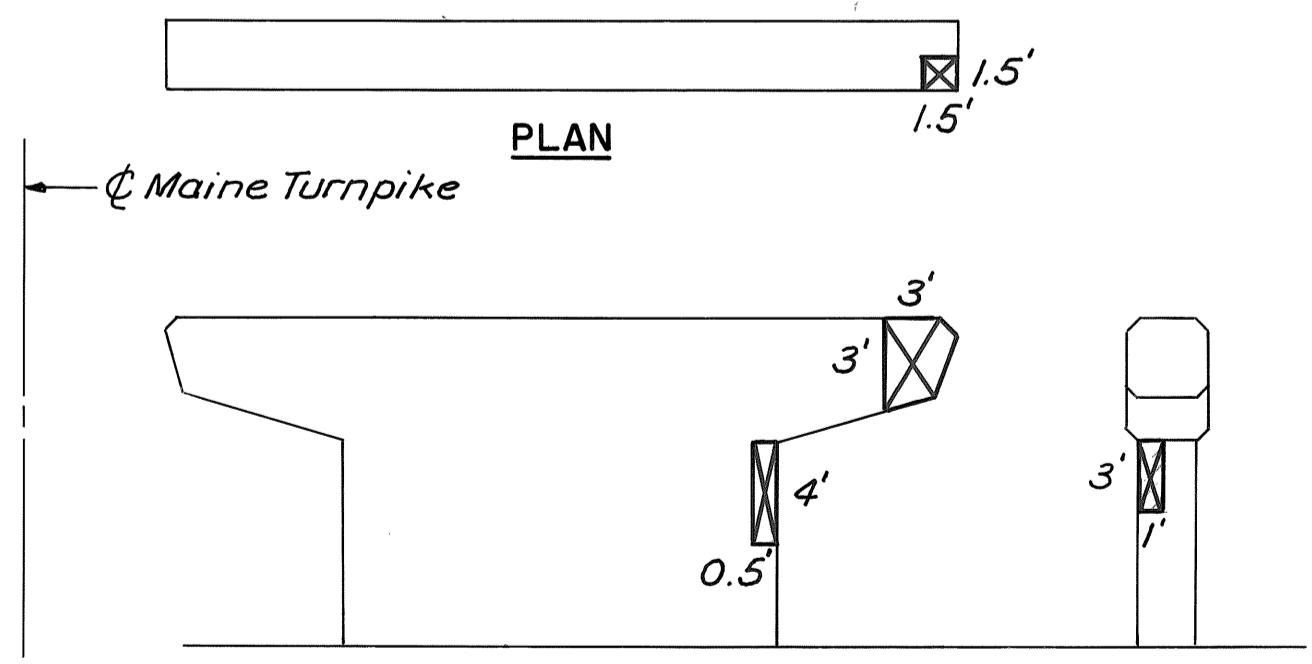


**SOUTHBOUND**  
**SOUTH ABUTMENT**



**SOUTHBOUND**  
**PIER 1**

**NORTHBOUND**  
**PIER 1**



**SOUTHBOUND**  
**PIER 2**

**SUBSTRUCTURE REPAIRS**  
**TO EXISTING STRUCTURE**  
No Scale

No.	Revision	By:	Date:

Maine Turnpike Authority  
**Maine Turnpike**

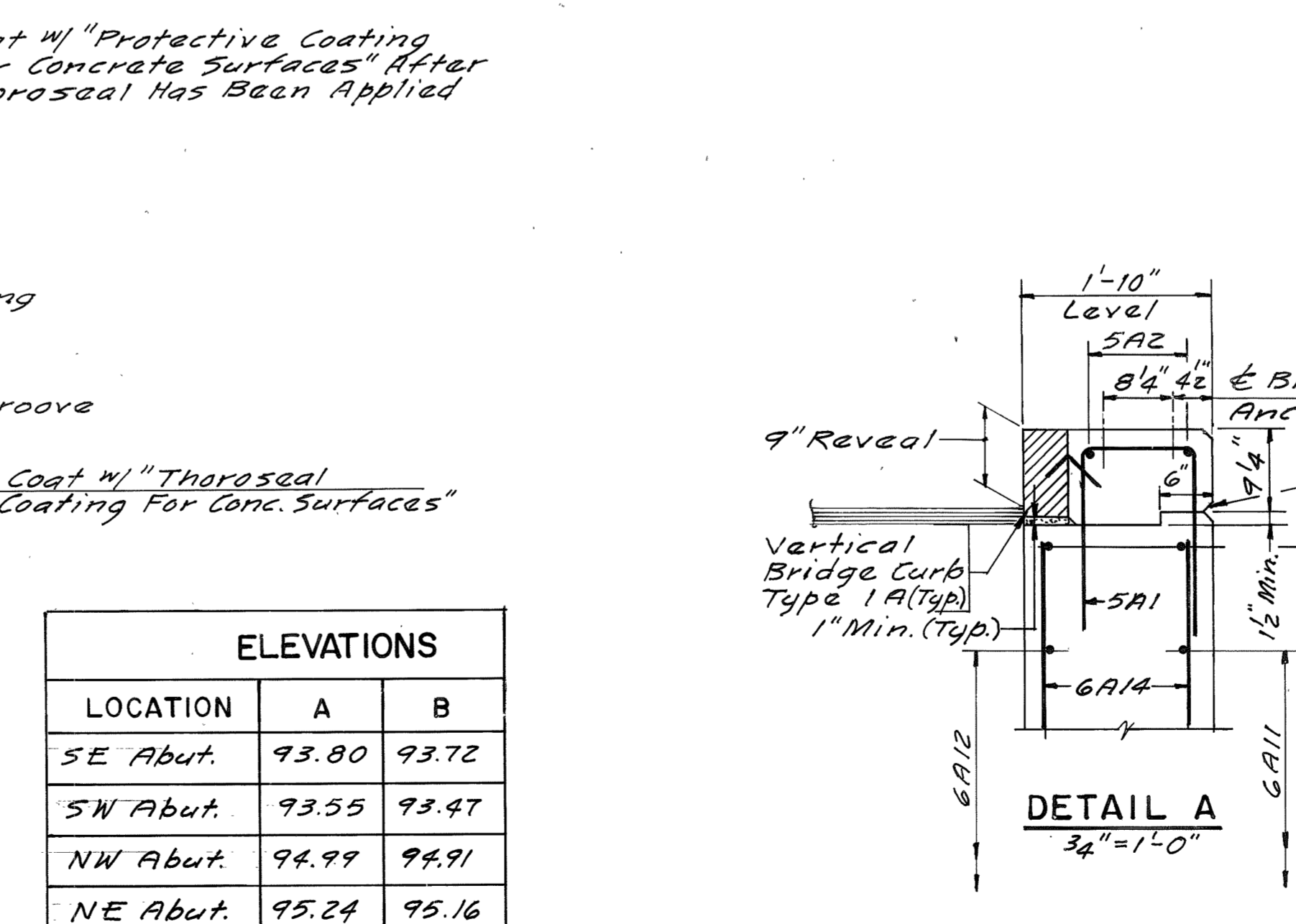
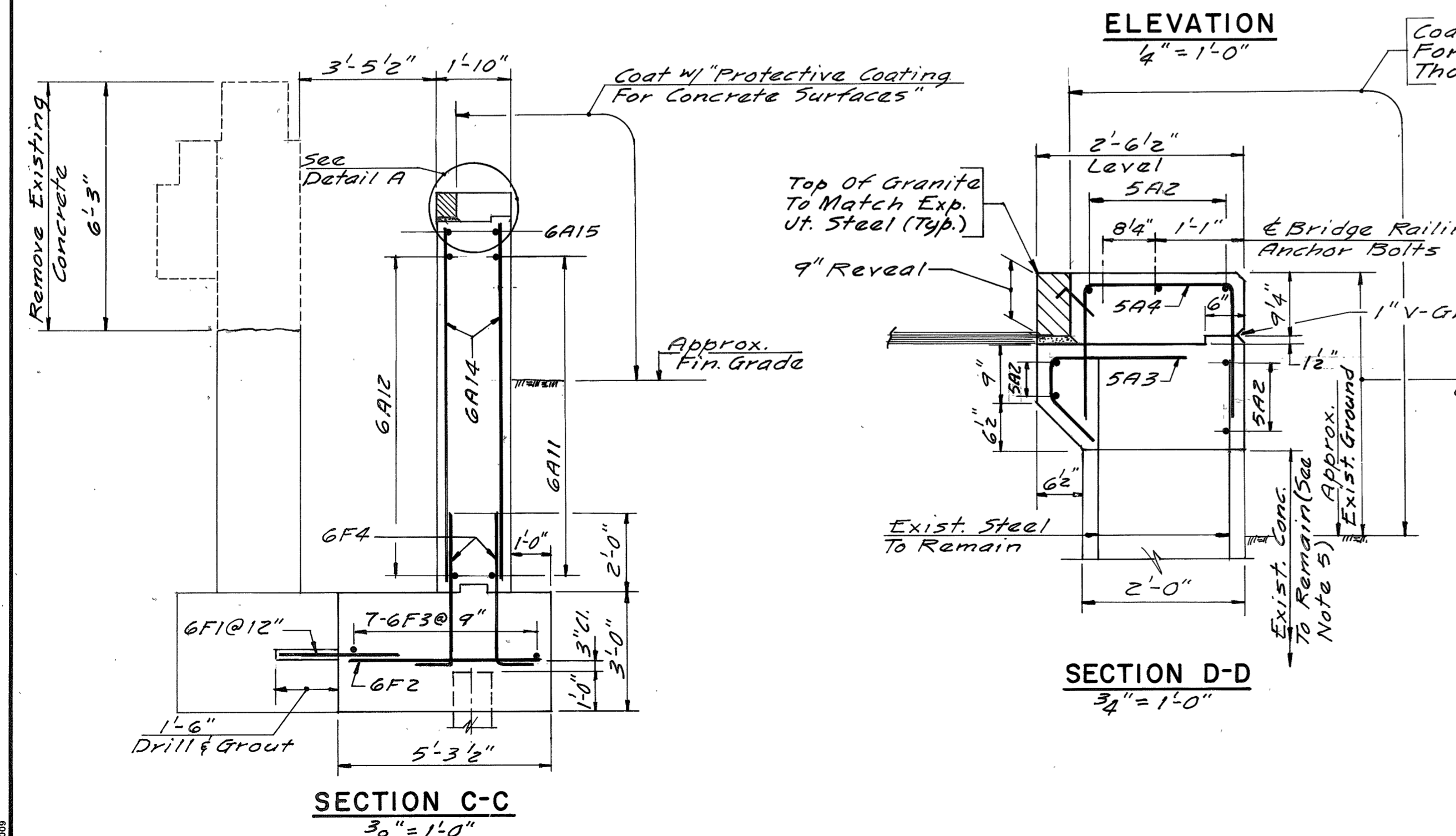
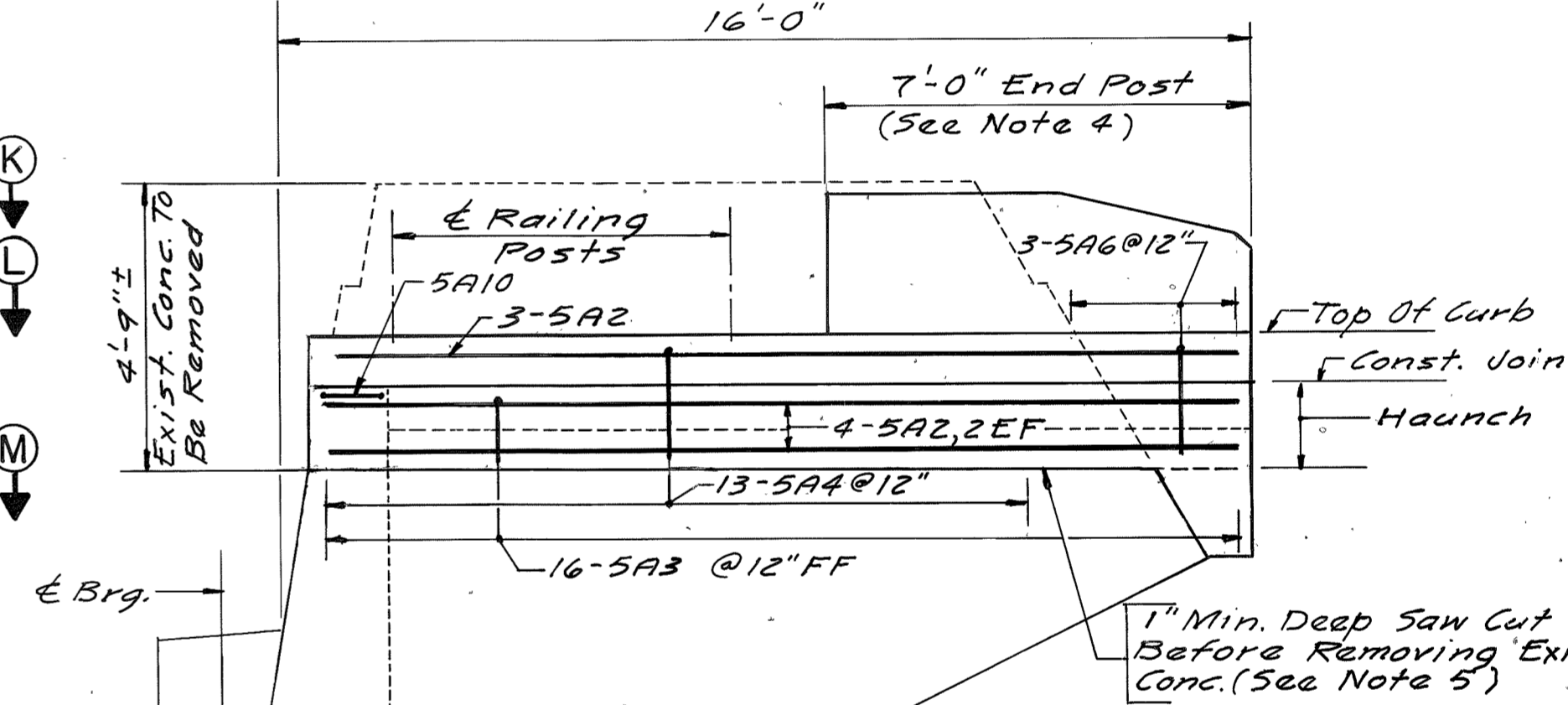
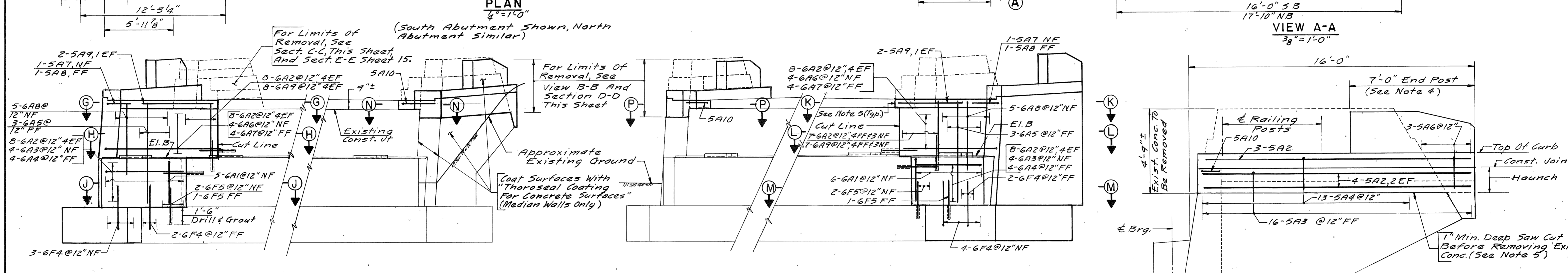
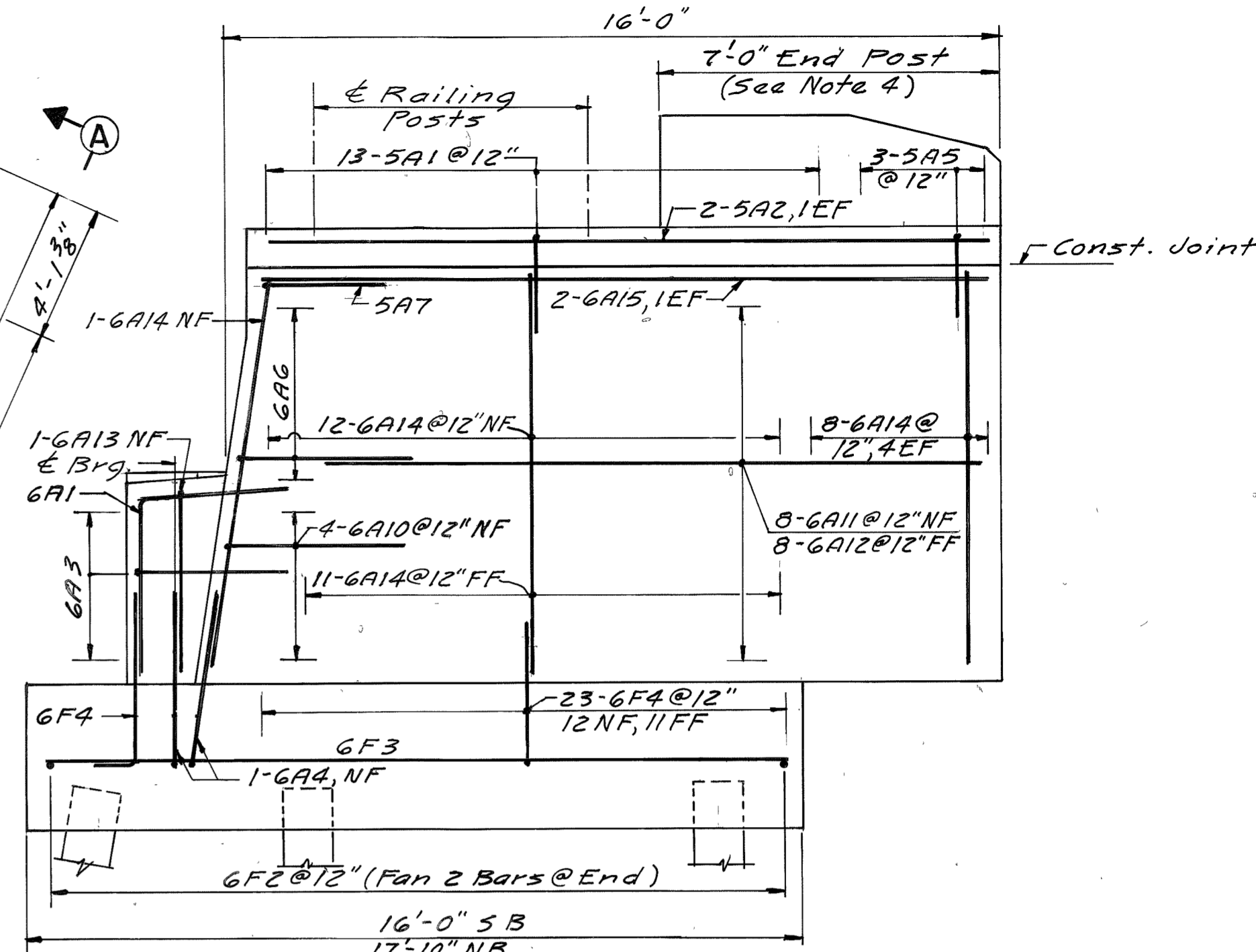
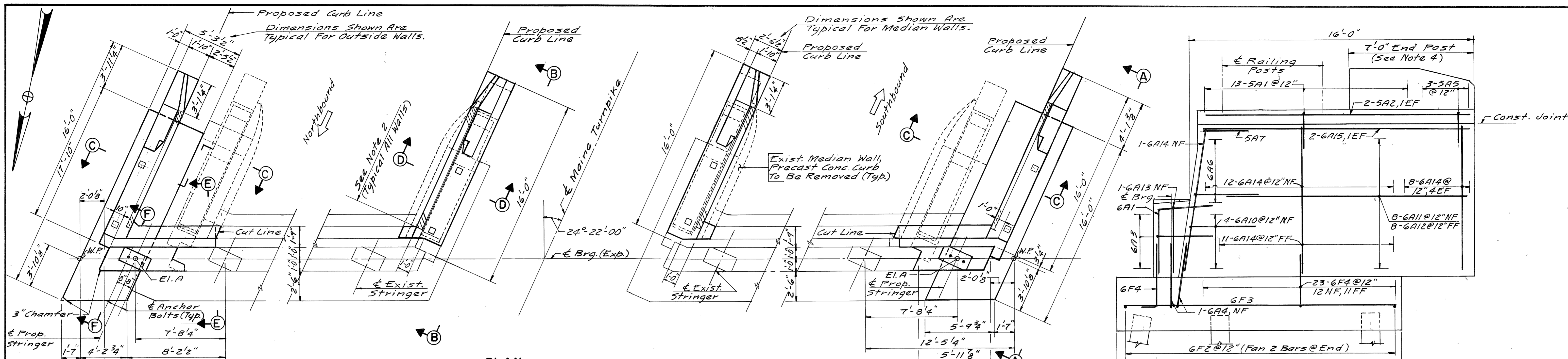
**WARREN AVENUE**  
GENERAL PLAN  
& FOOTING PLAN

**HNTB** HOWARD NEEDLES TAMMEN & BERGENDOFF  
ARCHITECTS ENGINEERS PLANNERS

Contract 92.10      Sheet No. 13 of 32

Designed: 1.5.10/91  
Drawn: C.S.L. 11/91  
Checked: S.H.R. 1/92  
In charge of: R.P.L.





ELEVATIONS		
LOCATION	A	B
SE Abut.	93.80	93.72
SW Abut.	93.55	93.47
NW Abut.	94.99	94.91
NE Abut.	95.24	95.16

- NOTES**
- Top Of Walks To Be Constructed Parallel To Roadway.
  - For Limit Of Granite Curb, See Sheet 16.
  - For Sections E-E, F-F, G-G, H-H, J-J, K-K, L-L, M-M, N-N & P-P, See Sheet 15.
  - For End Post Reinforcing, See Standard Detail BD 201-89.
  - Cut And Clean Exist. Reinf. Steel To Provide A Min. 12" Lap With Prop. Reinf. The Contractor Will Be Required To Dowel Into Exist. Concrete Where, As Determined By The Engineer, The Exist. Steel Is Unsuftable Or Missing. The Work Involved In Drilling And Grouting Will Be Considered Incidental.

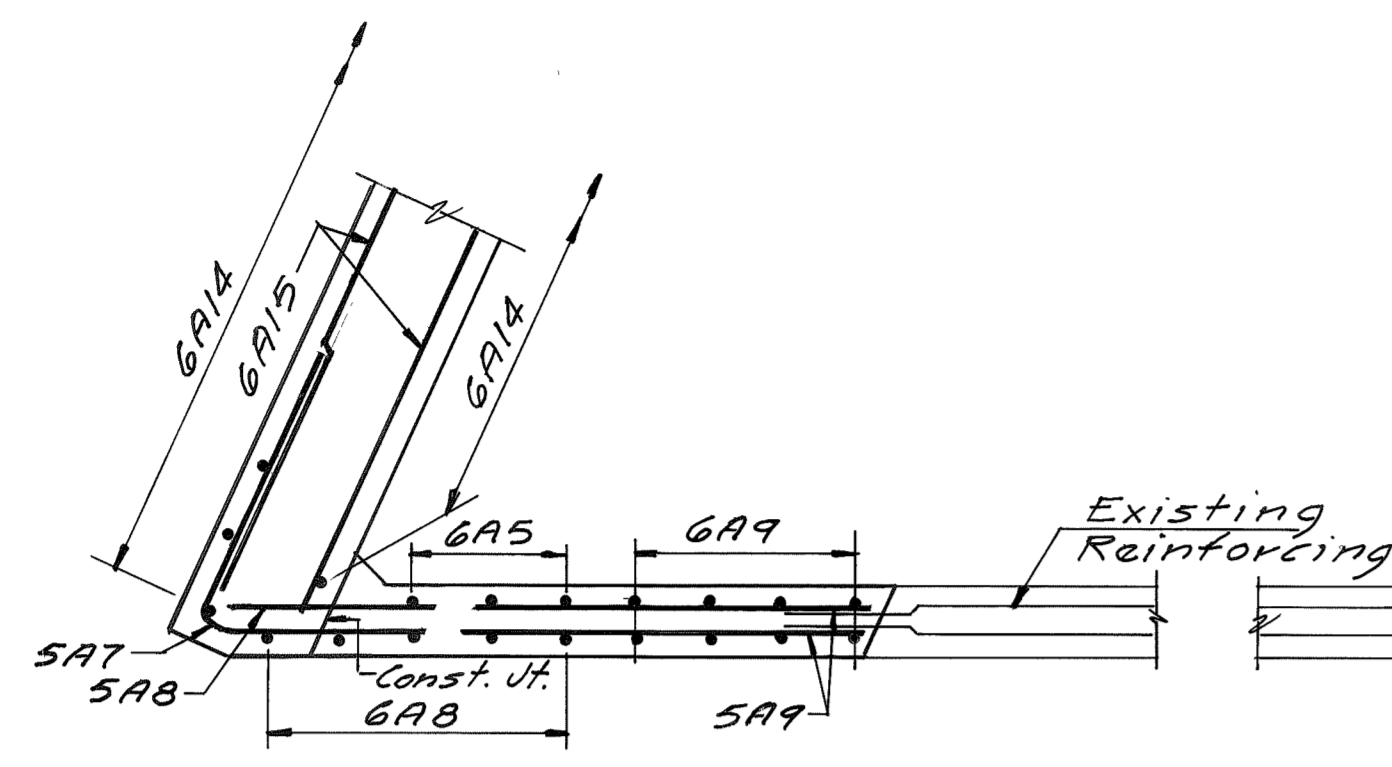
Maine Turnpike Authority  
**Maine Turnpike**

**WARREN AVENUE**  
ABUTMENT DETAILS I

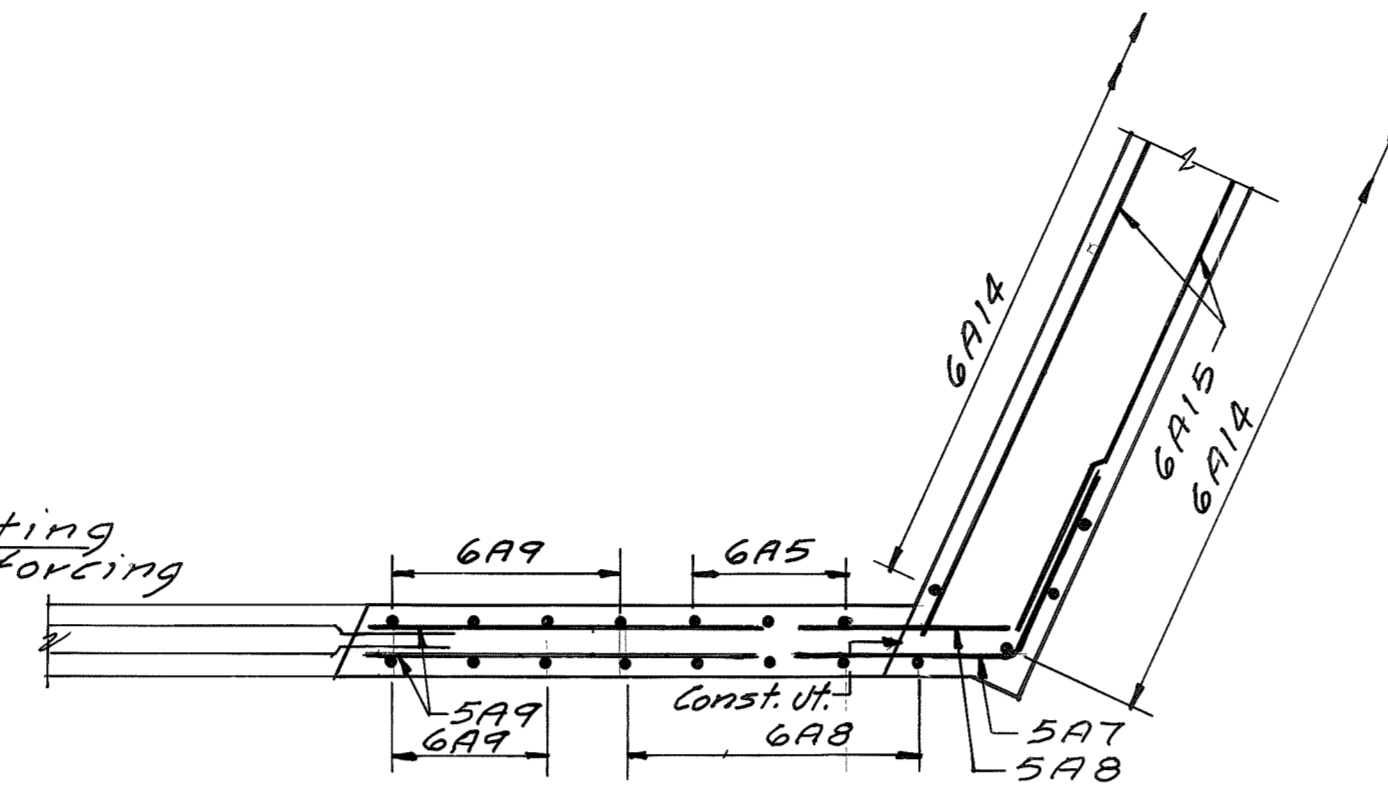
**HNTB** HOWARD NEEDLES TAMMEN & BERGENDOORF ARCHITECTS ENGINEERS PLANNERS

Contract 92.10      Sheet No. 14 of 32

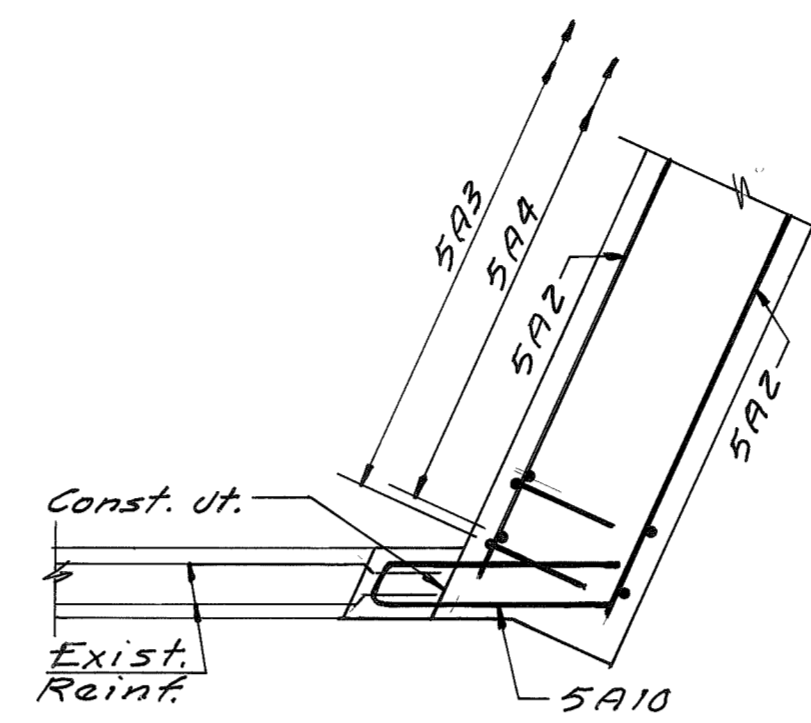
By: Date:	R.J.R./11-91
Designed:	R.J.R./11-91
Drawn:	C.F.L./11-91
Checked:	R.A.L./12-91
In charge of:	R.A.L.



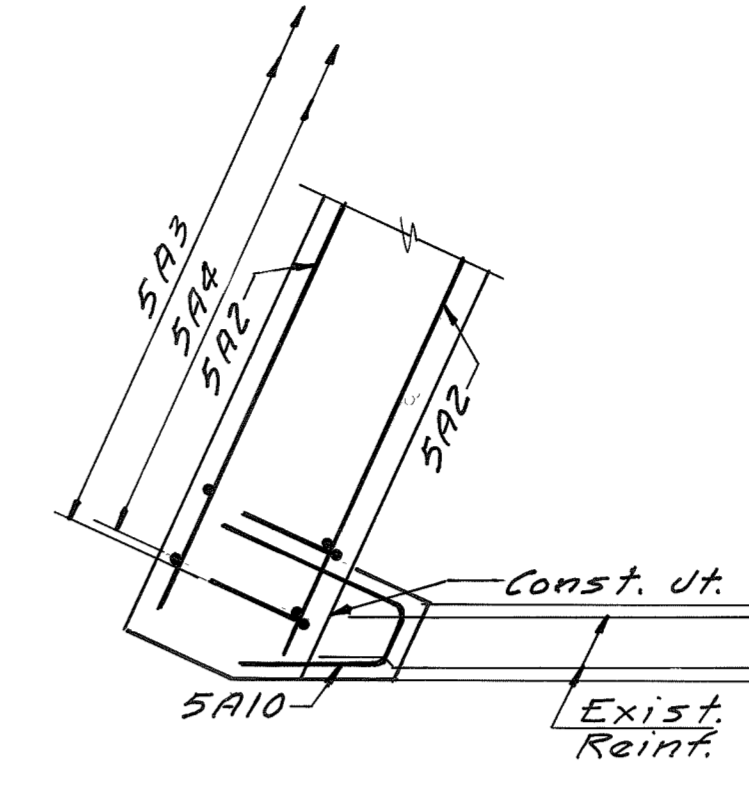
**SECTION G-G**  
3/8"=1'-0"



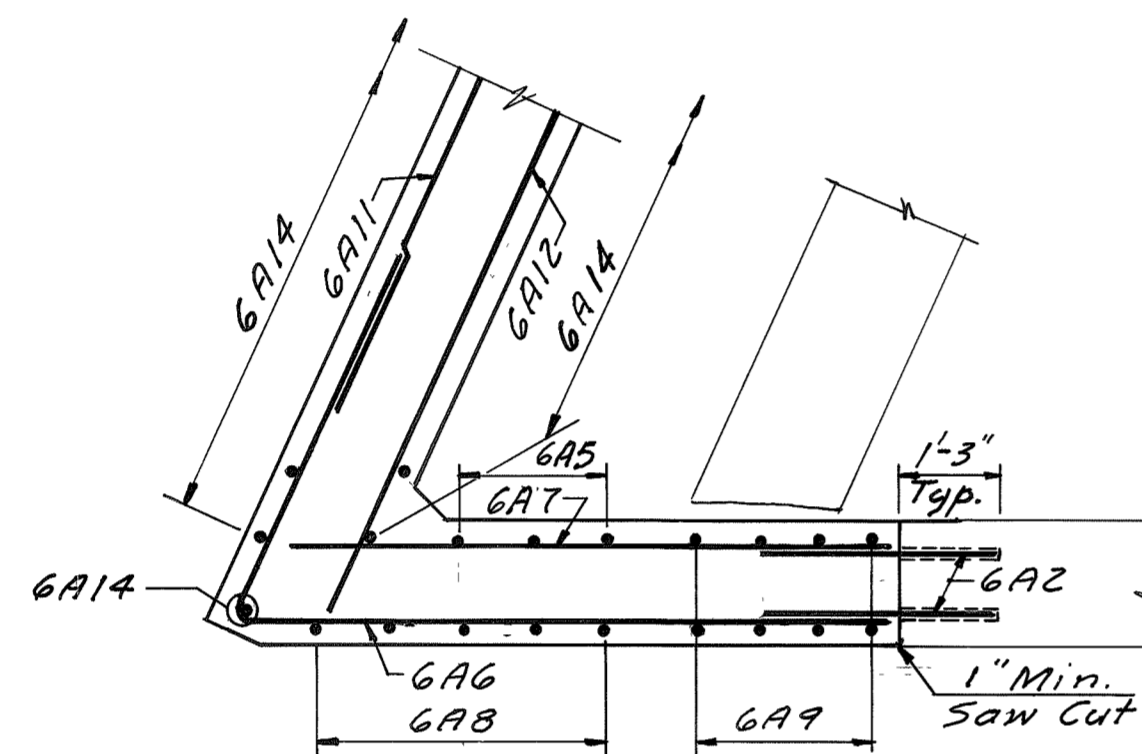
**SECTION K-K**  
3/8"=1'-0"



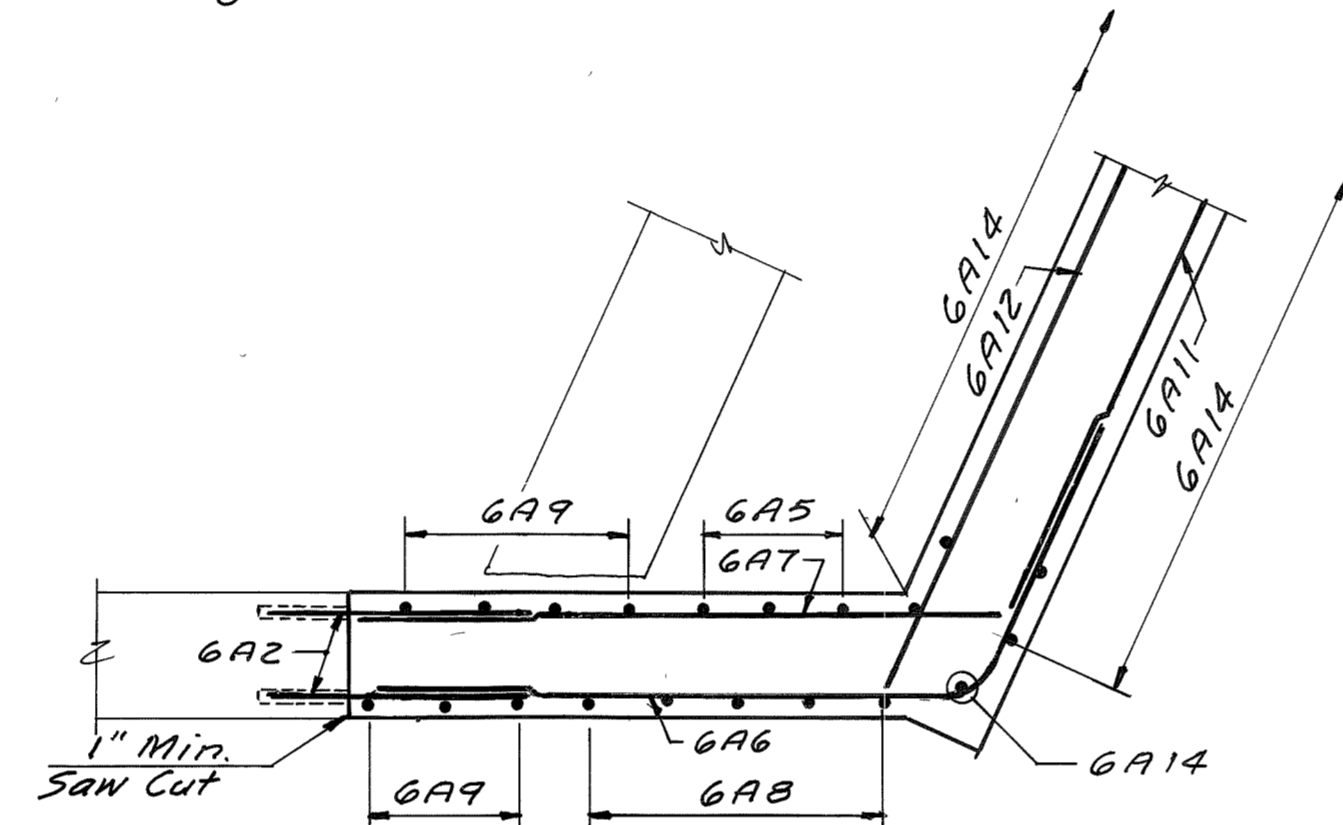
**SECTION N-N**  
3/8"=1'-0"



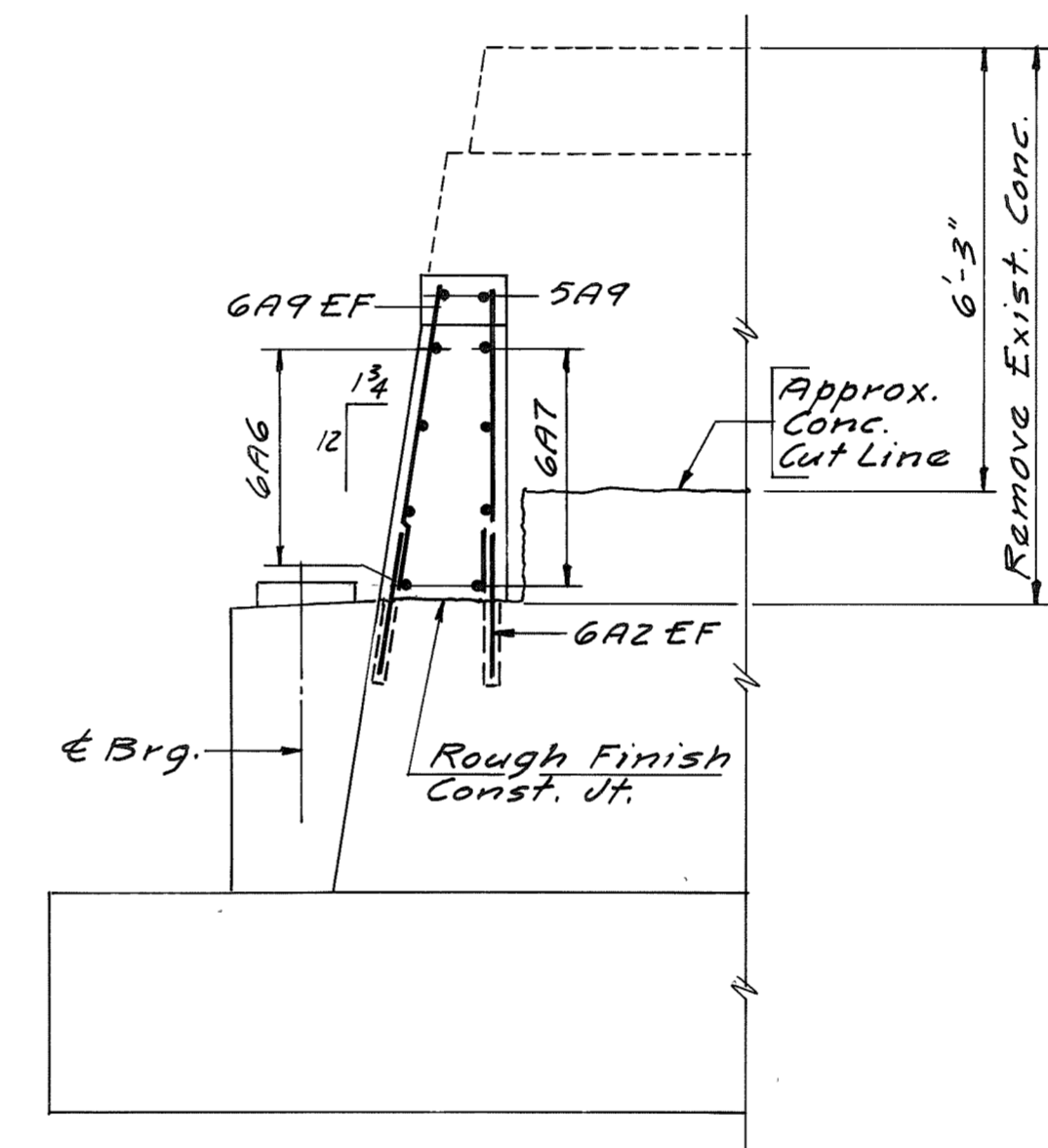
**SECTION P-P**  
3/8"=1'-0"



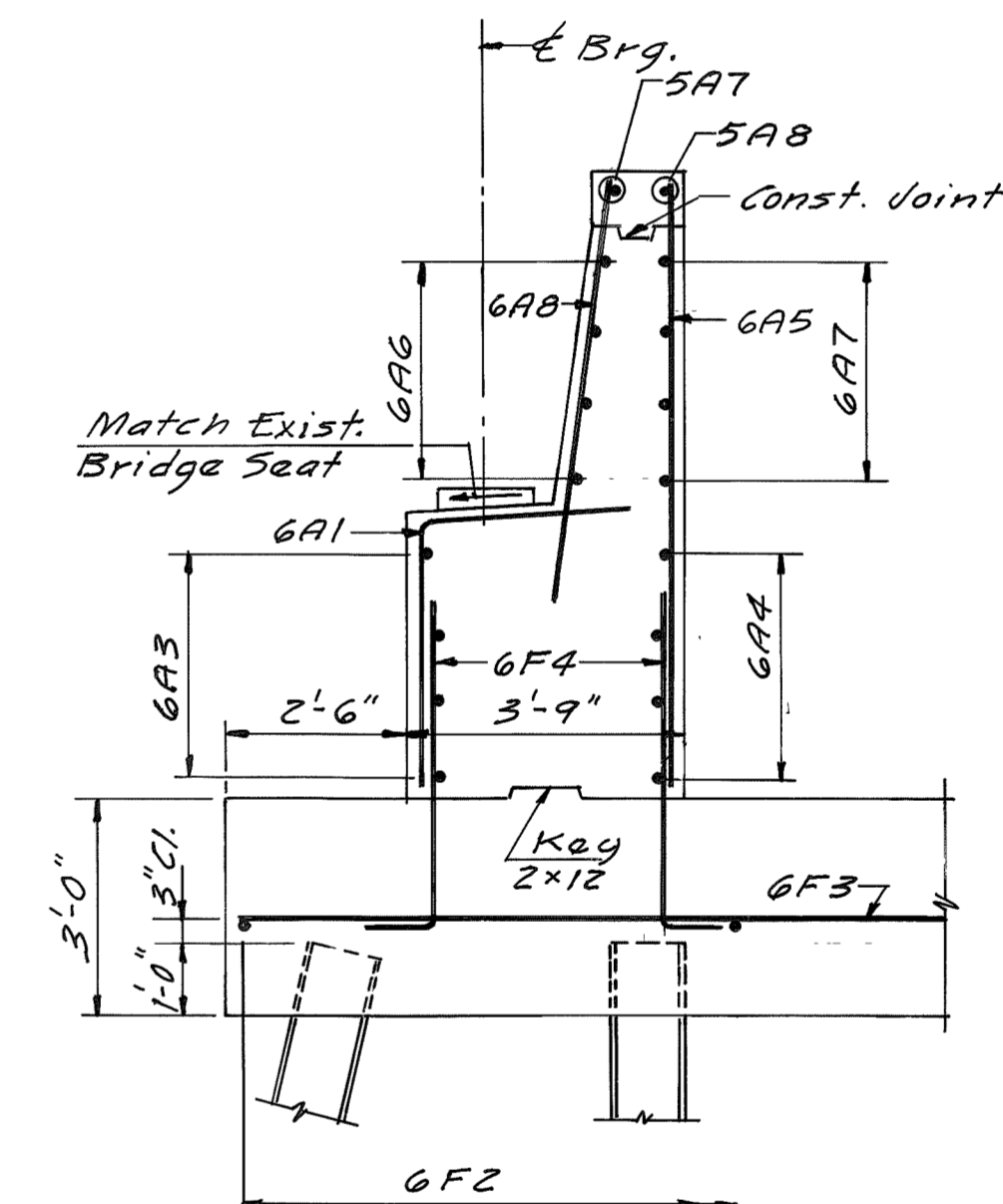
**SECTION H-H**  
3/8"=1'-0"



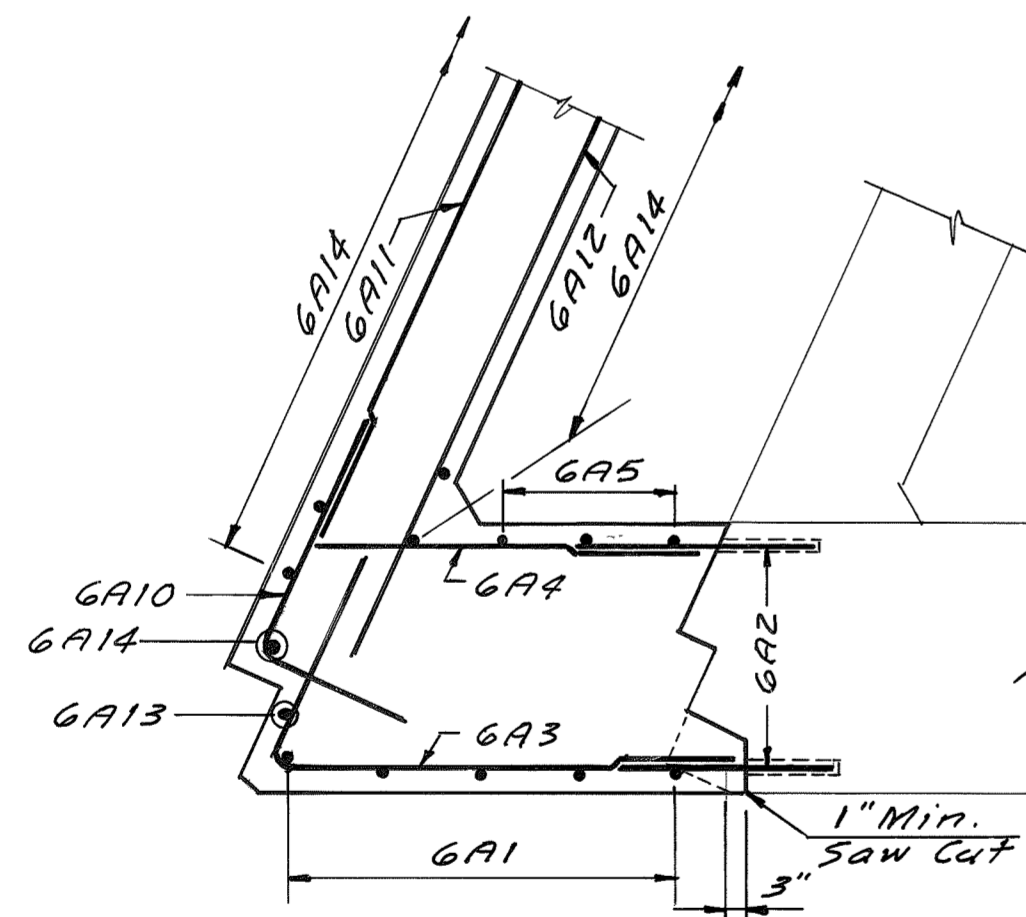
**SECTION L-L**  
3/8"=1'-0"



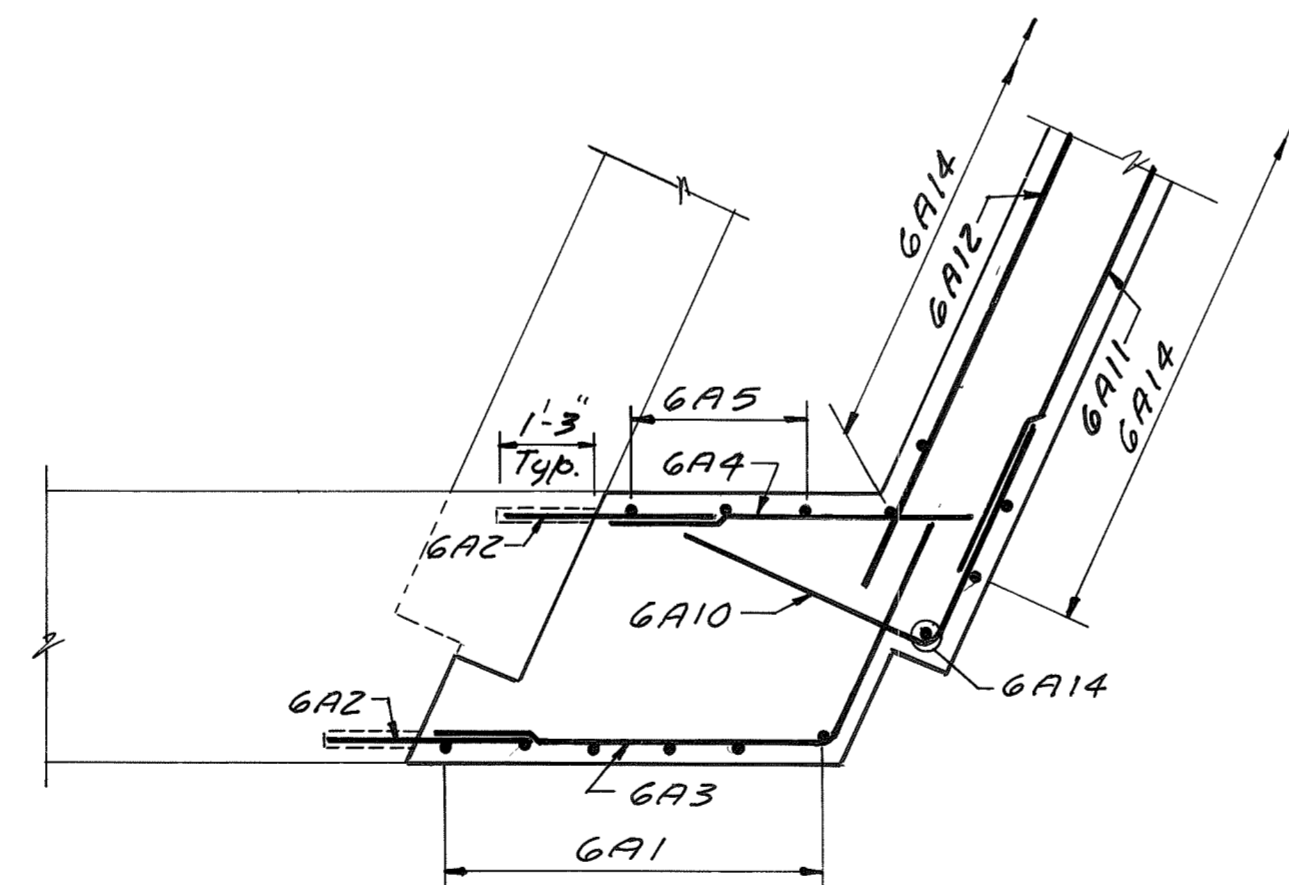
**SECTION E-E**  
3/8"=1'-0"



**SECTION F-F**  
3/8"=1'-0"



**SECTION J-J**  
3/8"=1'-0"



**SECTION M-M**  
3/8"=1'-0"

**NOTE**  
For Locations of Sections E-E Through P-P, See Sheet 14.

Maine Turnpike Authority  
**Maine Turnpike**  
WARREN AVENUE  
ABUTMENT DETAILS II



ARCHITECTS ENGINEERS PLANNERS

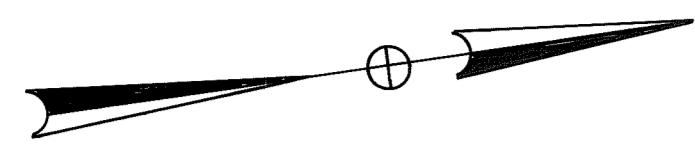
**HNTB** HOWARD NEEDLES TAMMEN & BERGENDOFF ARCHITECTS ENGINEERS PLANNERS

By:	Date:
Designed	RJR/12-91
Drawn	CSL/12-91
Checked	RAL/1-92
In charge of	R.A.L.

Contract 92.10

Sheet No. 15 of 32

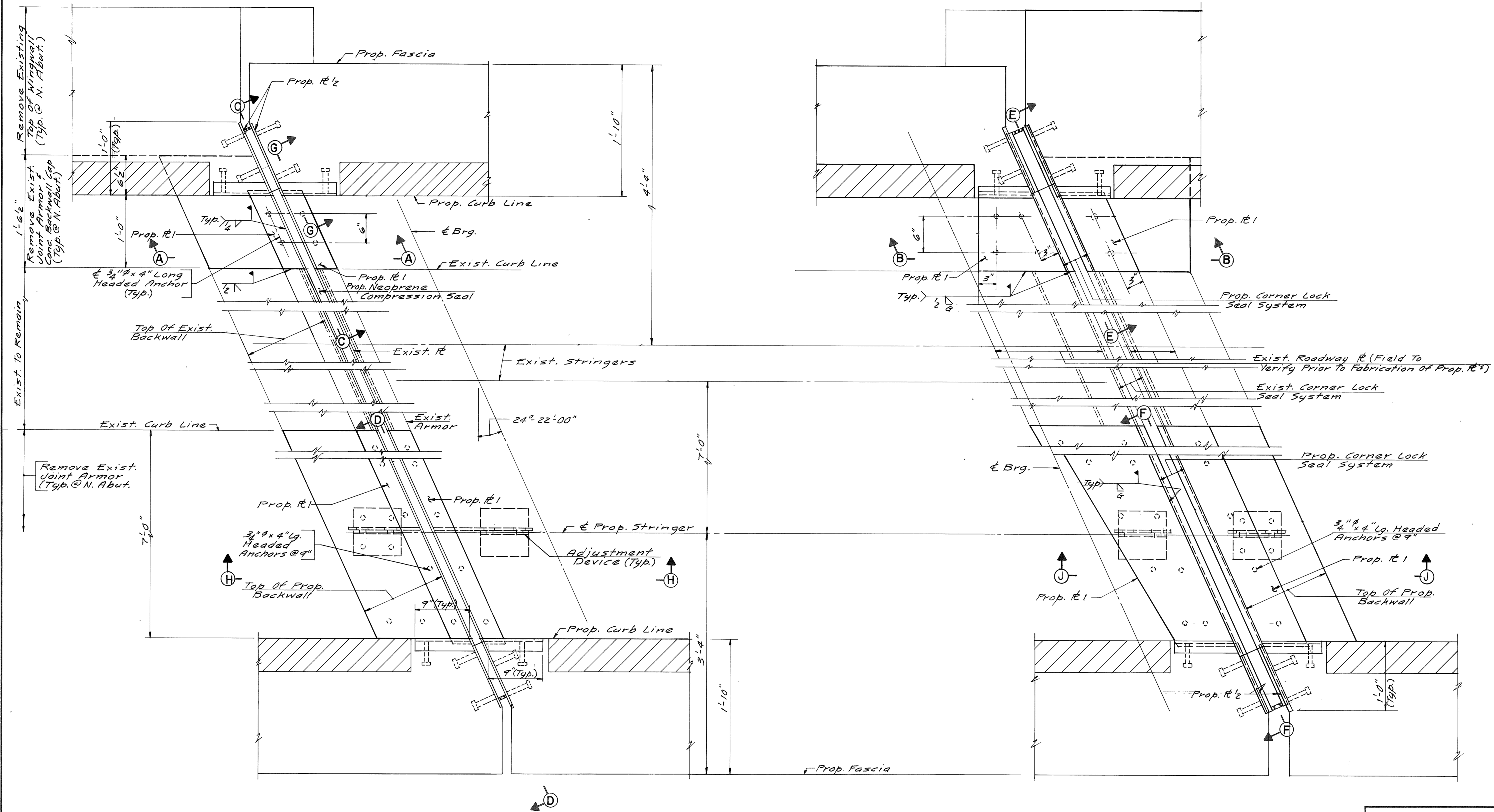
No.	Revision	By:	Date:
-----	----------	-----	-------



← Maine Turnpike

**NOTES**

1. For Sections A-A, B-B, C-C, D-D, E-E, F-F, G-G, H-H And U-U, See Sh. 17



**SOUTH ABUTMENT**

**PLAN  
ABUTMENT JOINT DETAILS  
1/2" = 1'-0"**

**NORTH ABUTMENT**

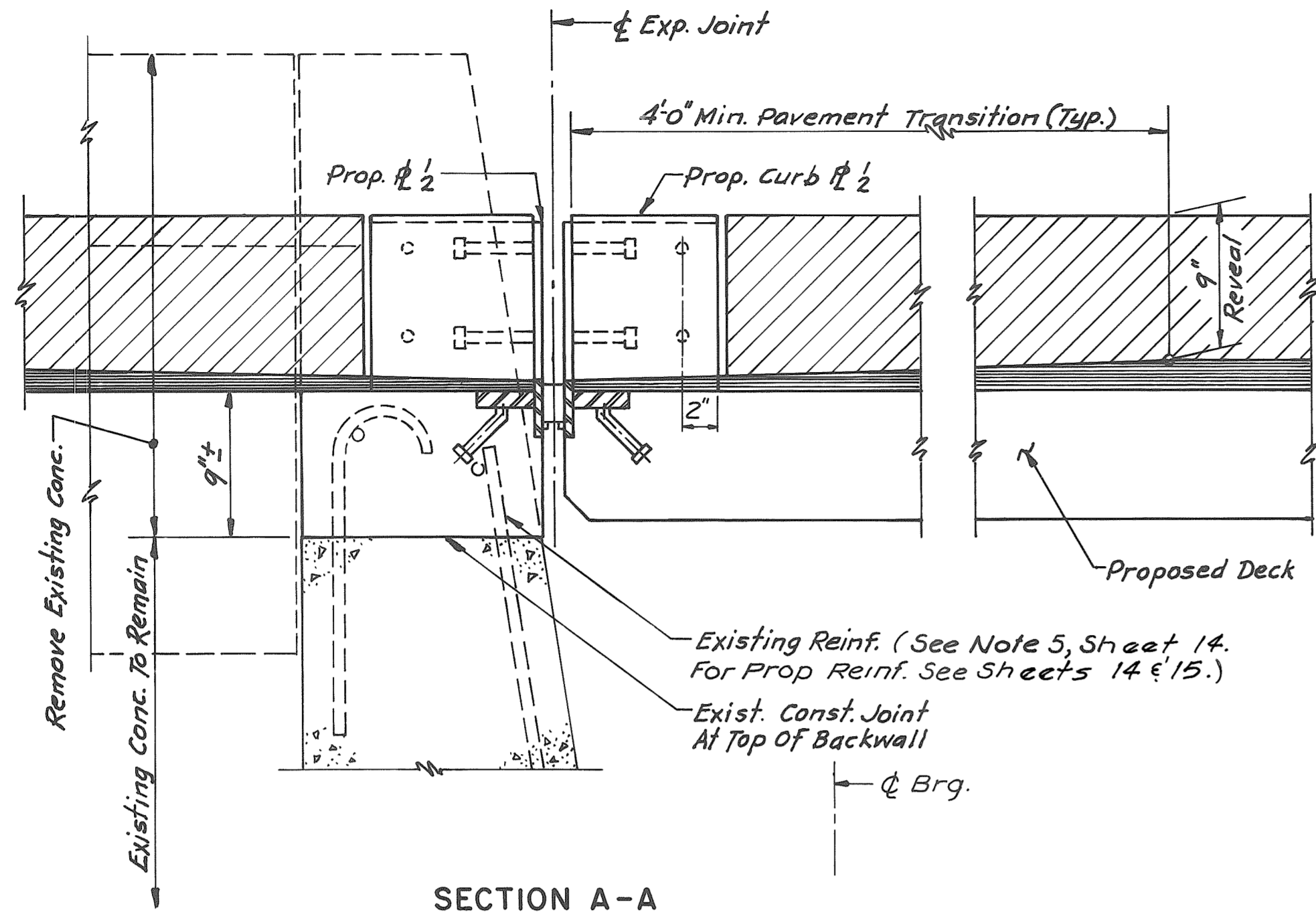
Maine Turnpike Authority  
**Maine Turnpike**  
 WARREN AVENUE  
 ABUTMENT JOINT DETAILS I

Designed	By Date	S.H.R. 11-91	
Drawn		C.S.L. 11-91	
Checked		R.A.L. 12-91	
In charge of		R.A.L.	

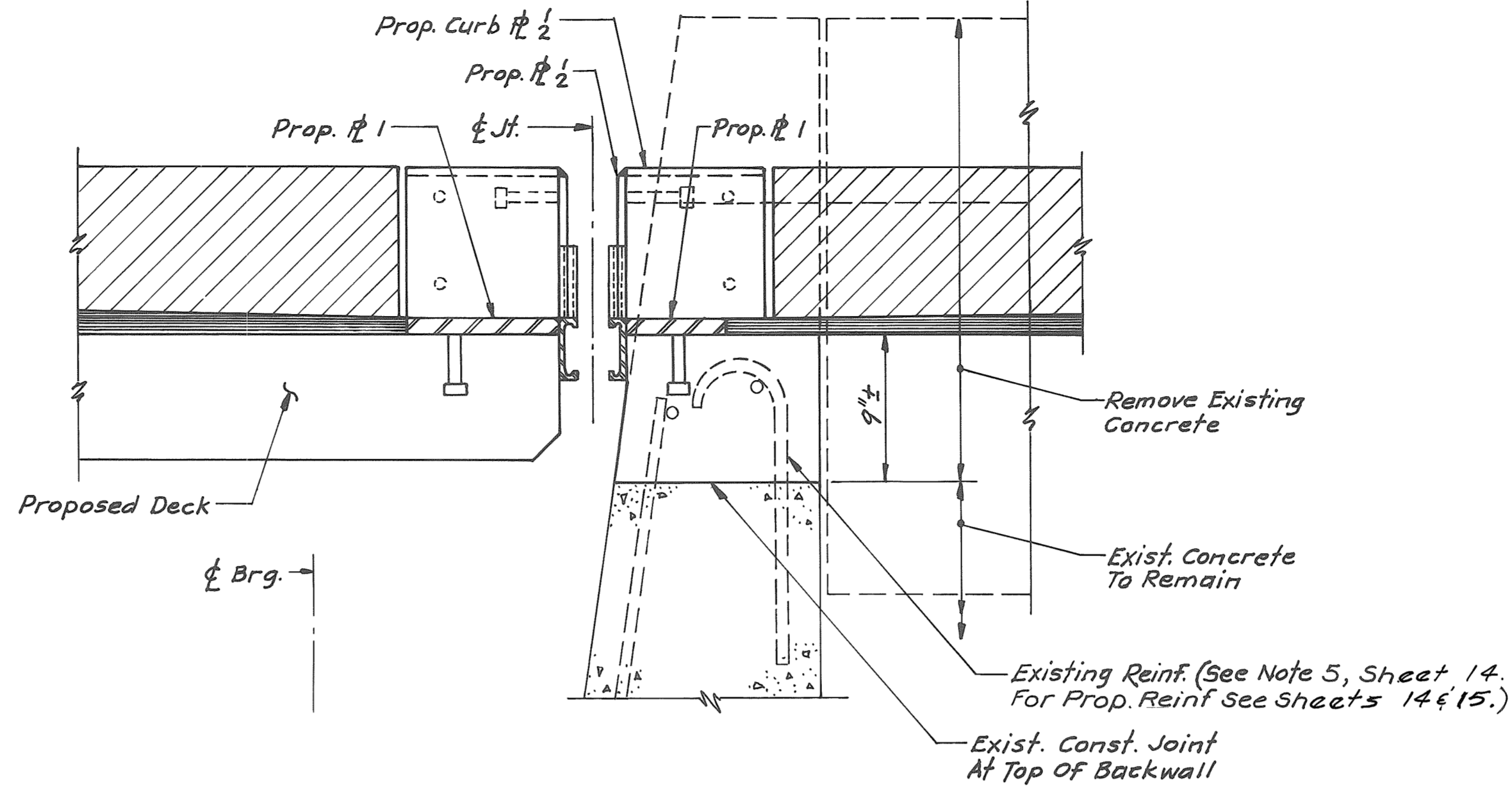
Contract **92.10** Sheet No. **16** of **32**

**HNTB** HOWARD NEEDLES TAMMEN & BERGENDOFF  
 ARCHITECTS ENGINEERS PLANNERS

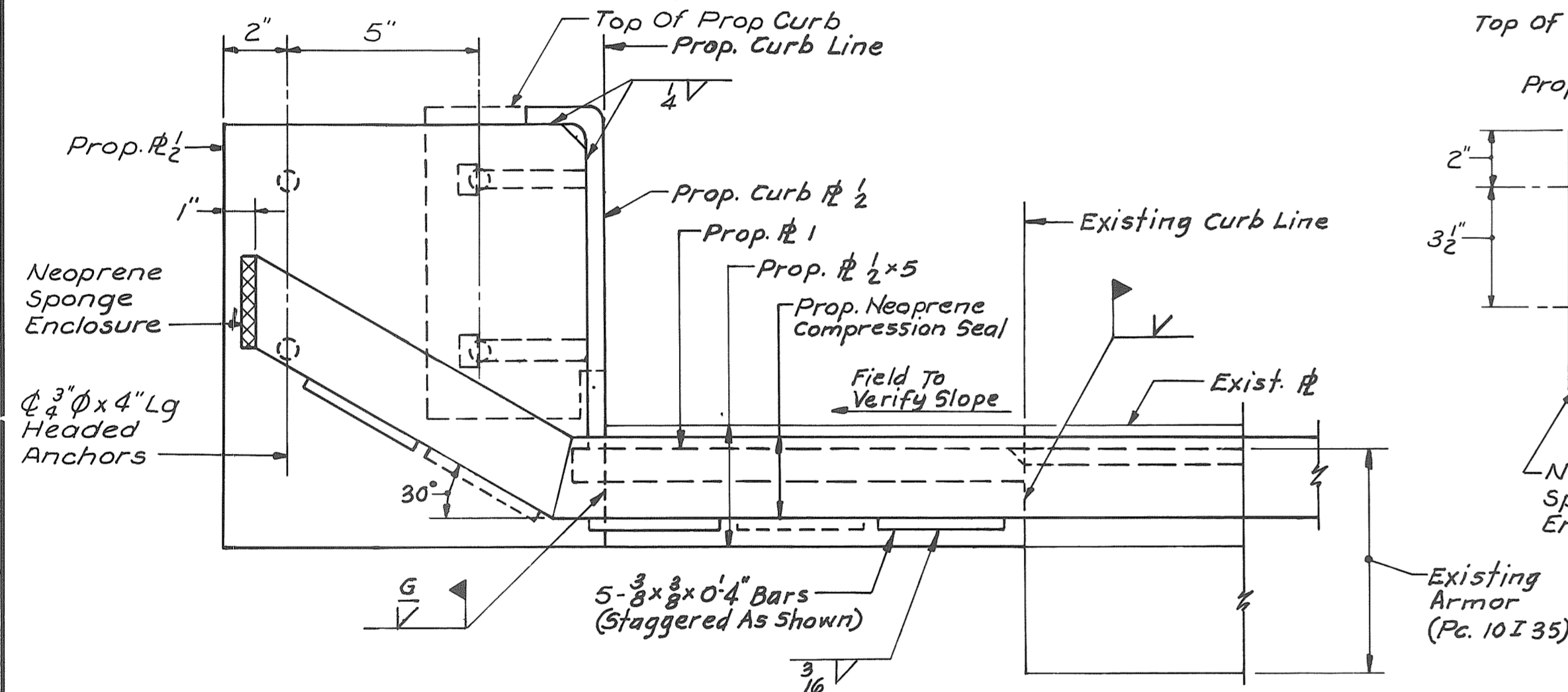
16-0009



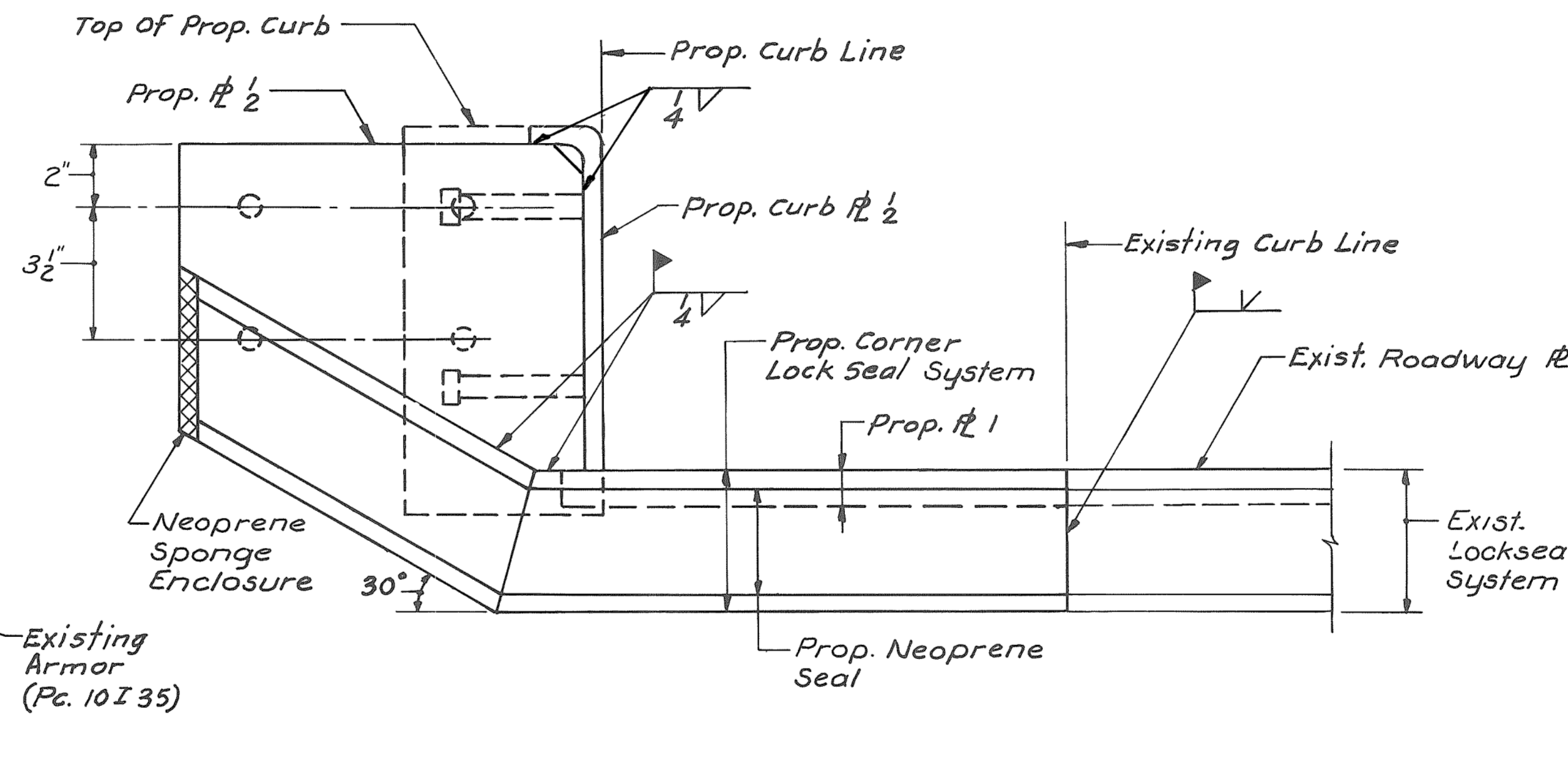
**SECTION A-A**  
1/2" = 1'-0"



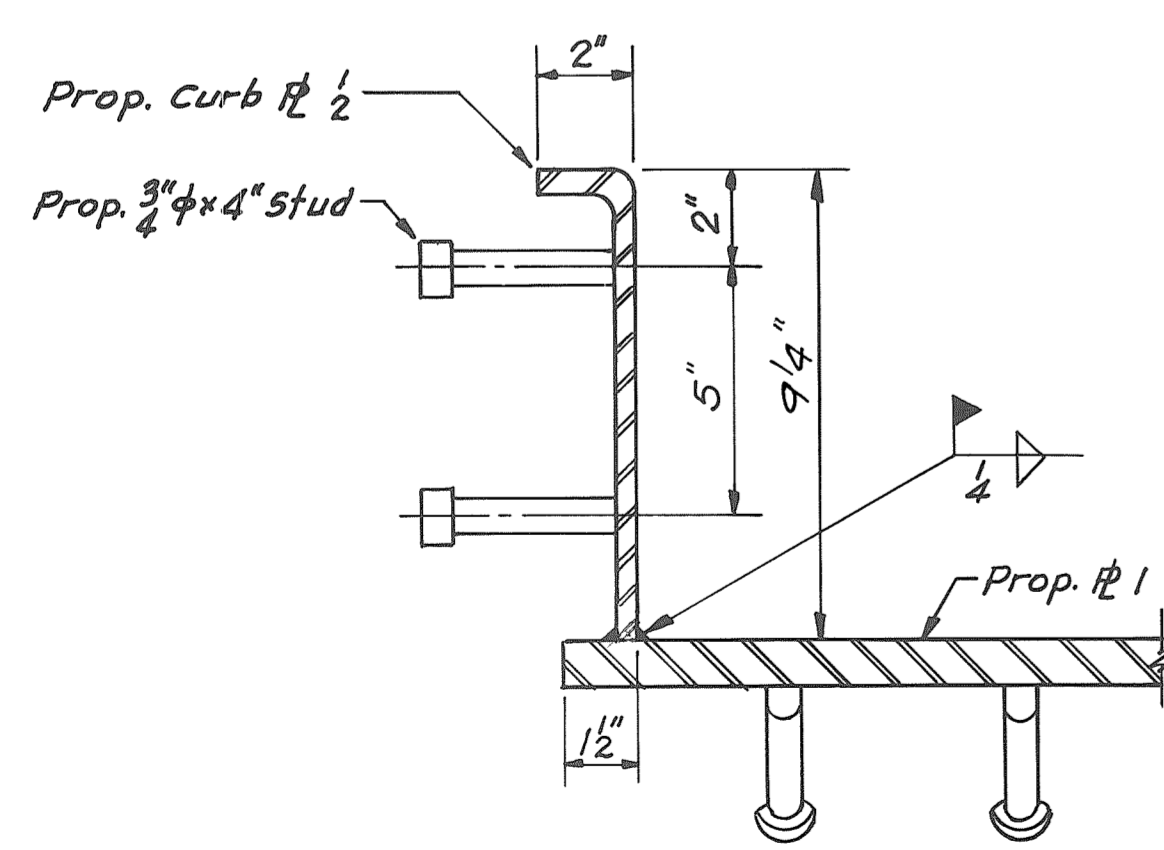
**SECTION B-B**  
1/2" = 1'-0"



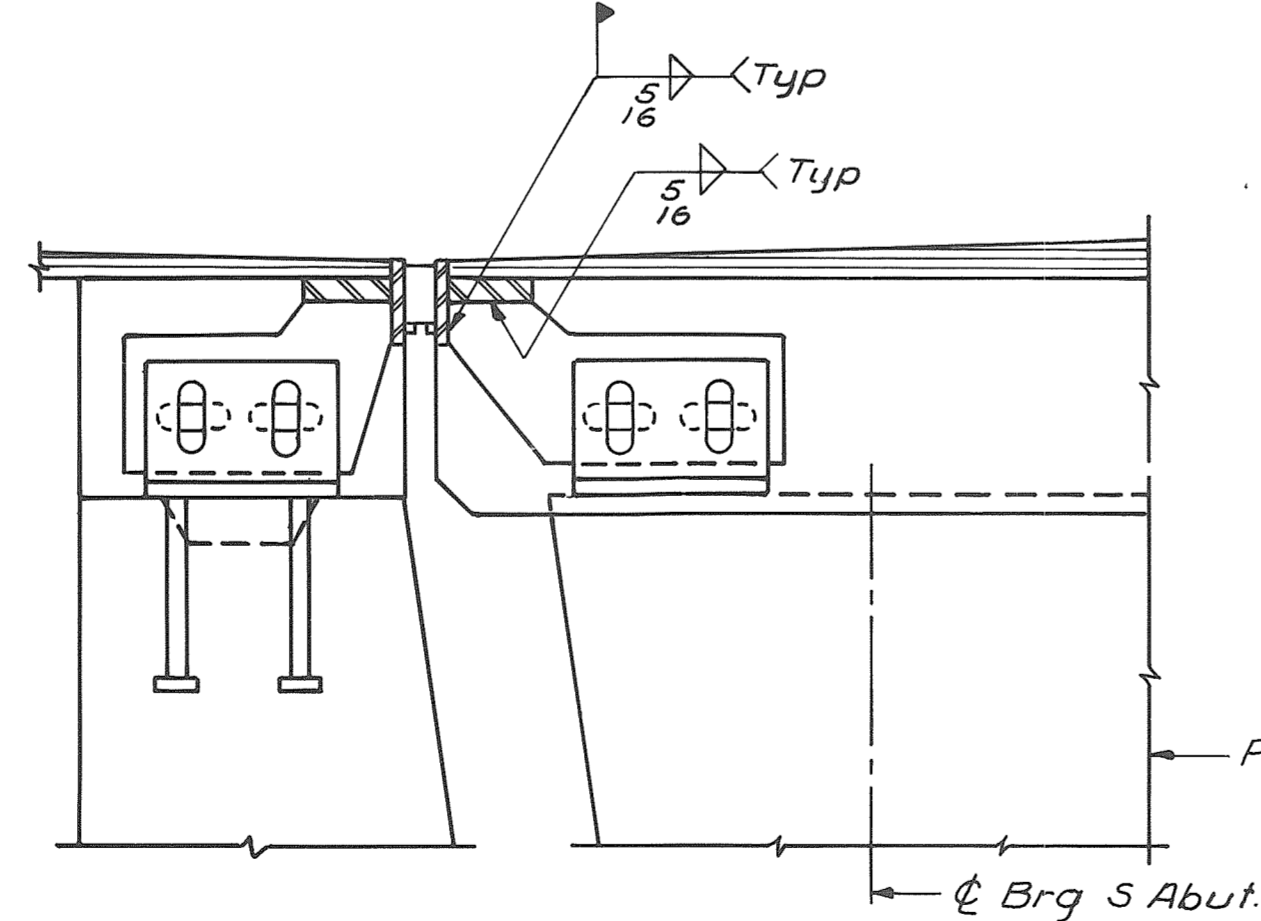
**SECTION C-C (SHOWN)**  
**SECTION D-D (SIMILAR)**  
3" = 1'-0"



**SECTION E-E (SHOWN)**  
**SECTION F-F (SIMILAR)**  
3" = 1'-0"

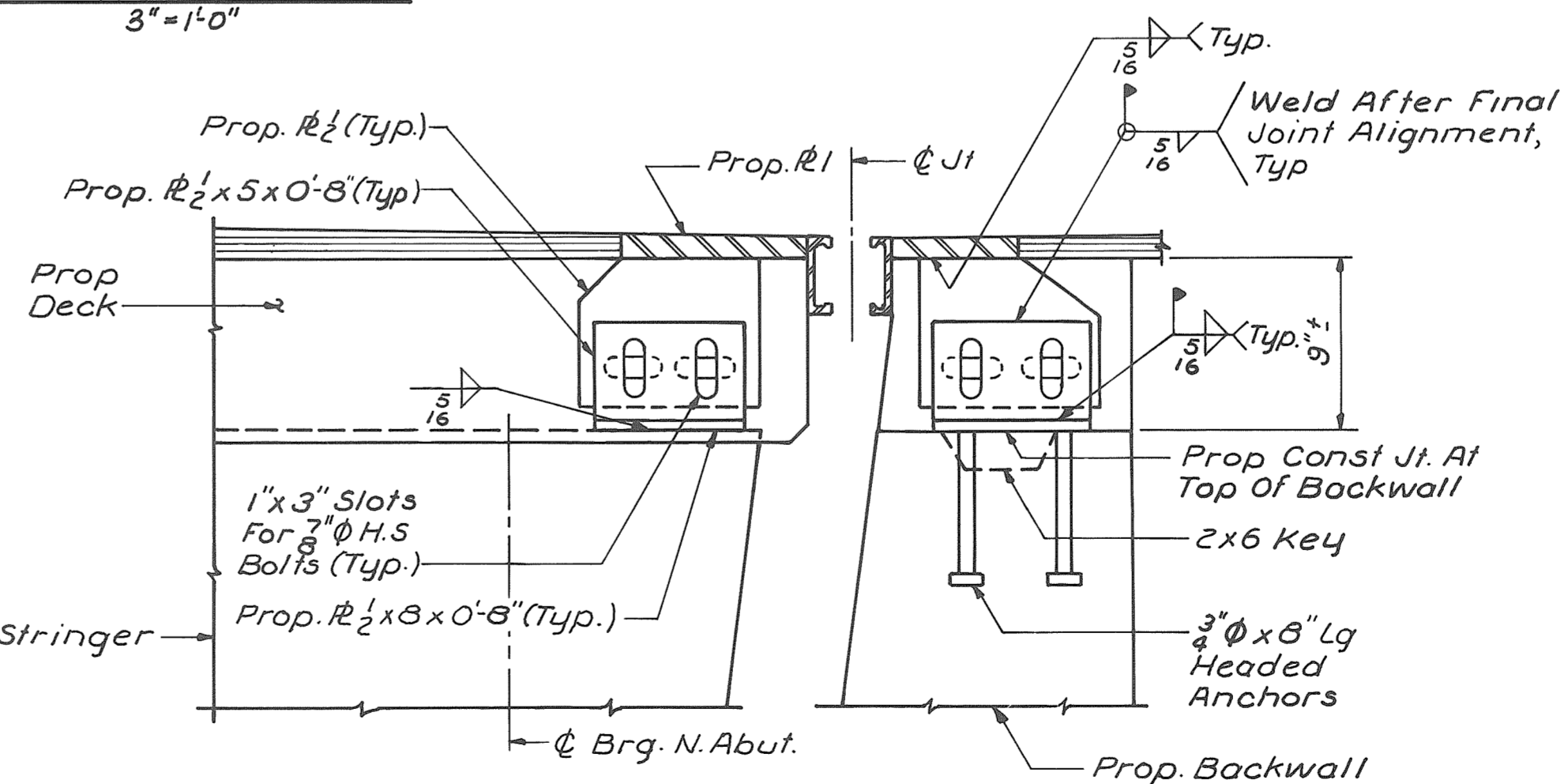


**SECTION G-G**  
(Typical @ Curb #s)  
3" = 1'-0"



**SECTION H-H**  
(Similar To Section J-I)

**ADJUSTMENT DEVICE DETAILS**  
1/2" = 1'-0"



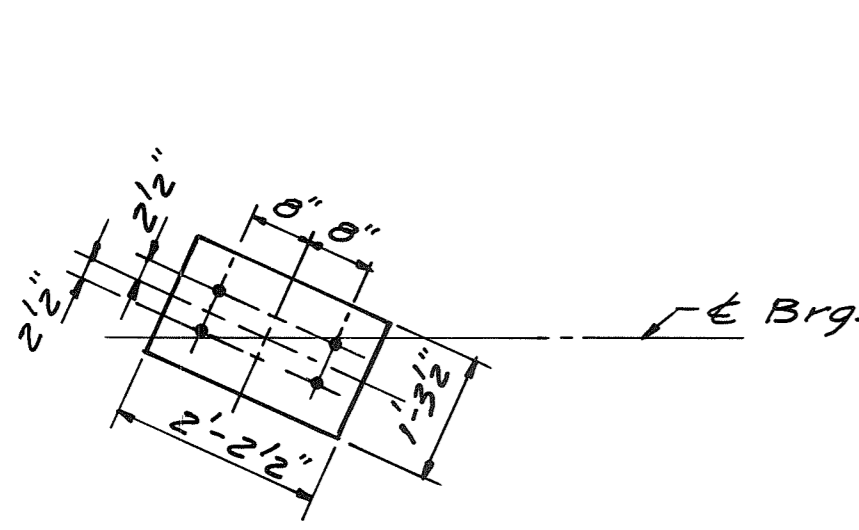
**SECTION J-J**

**NOTES**

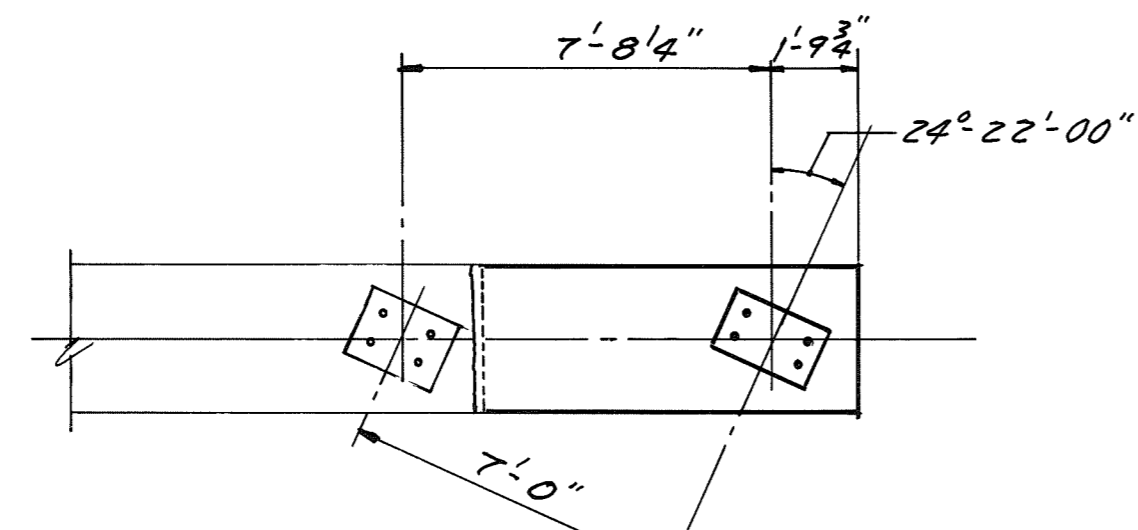
1. For Location Of Sections A-A, B-B, C-C, D-D, E-E, F-F, G-G, H-H, And J-J, See Sh. 16.

Maine Turnpike Authority <b>Maine Turnpike</b>	
<b>WARREN AVENUE</b> ABUTMENT JOINT DETAILS II	
<b>MT</b> TURNPIKE	HOWARD NEEDLES TAMMEN & BERGENDOFF ARCHITECTS ENGINEERS PLANNERS
Contract 92.10	Sheet No. 17 of 32

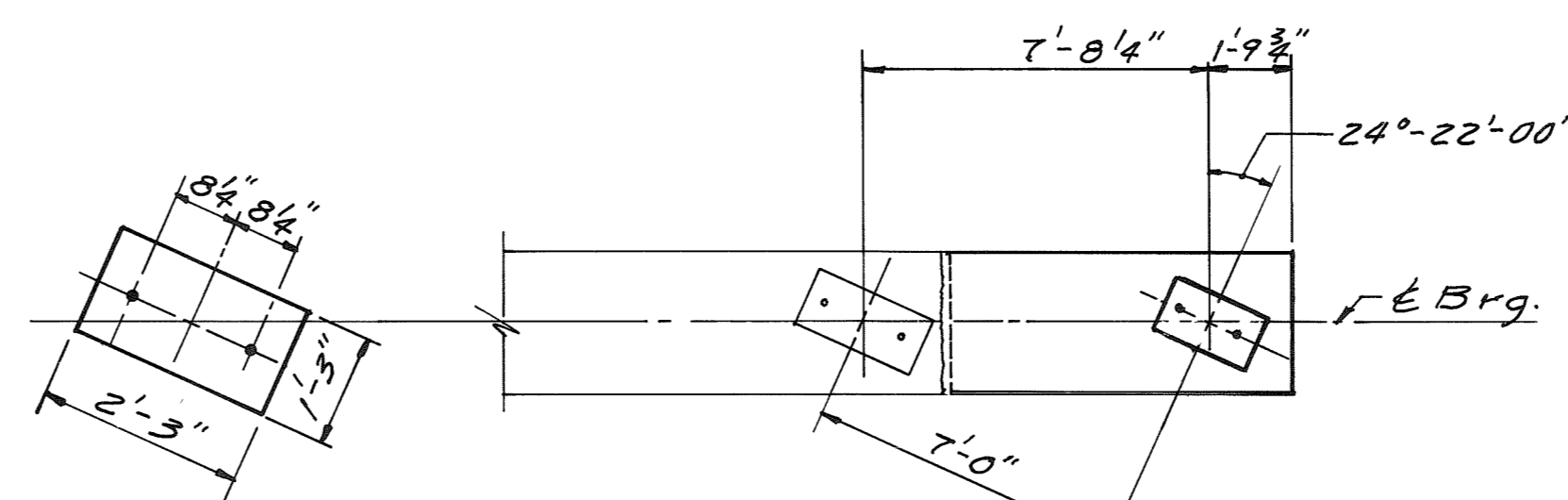
By	Date
Designed	S.H.R. 10-91
Drawn	R.D.F. 10-91
Checked	R.A.L. 10-91
In charge of	R.A.L.



**CONCRETE PAD**  
(Anchor Bolt Locations)  
1/4" = 1'-0"

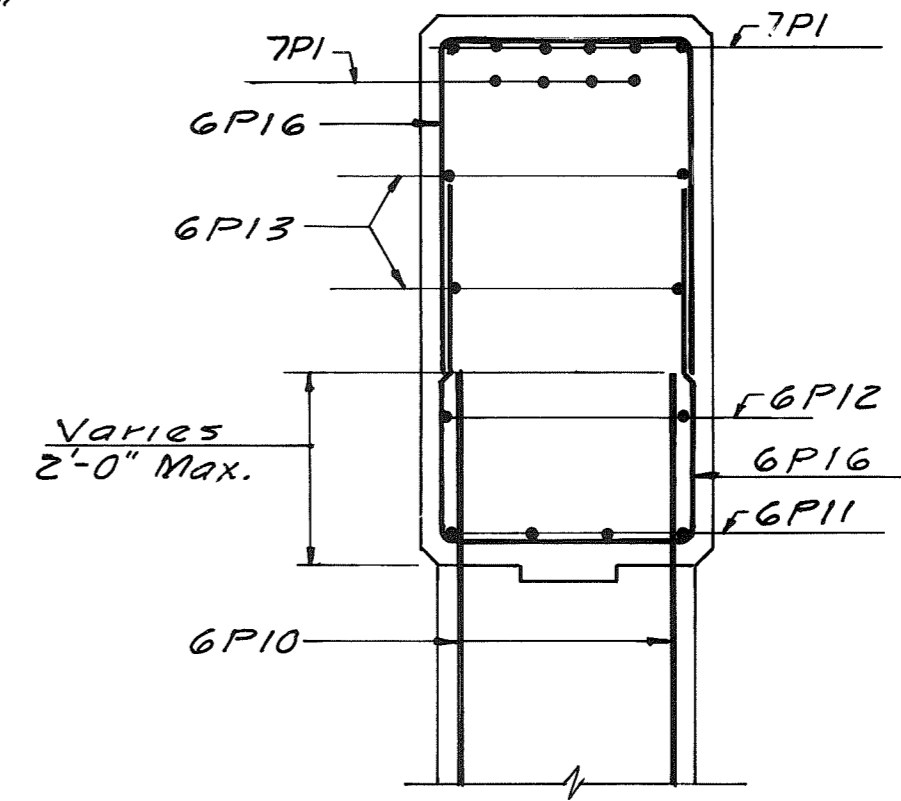


**PIER I EXTENSION**  
1/4" = 1'-0"

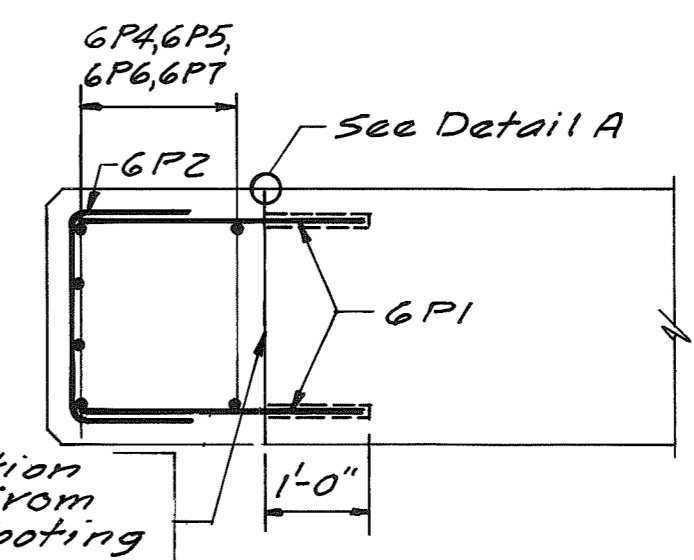


**CONCRETE PAD**  
(Anchor Bolt Locations)  
1/4" = 1'-0"

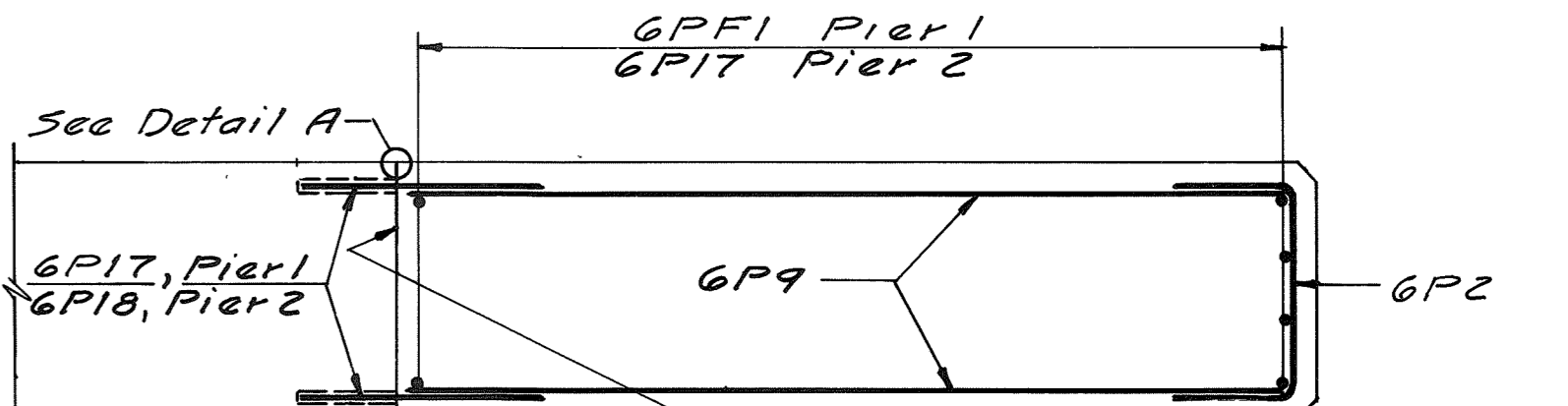
**PIER 2 EXTENSION**  
1/4" = 1'-0"



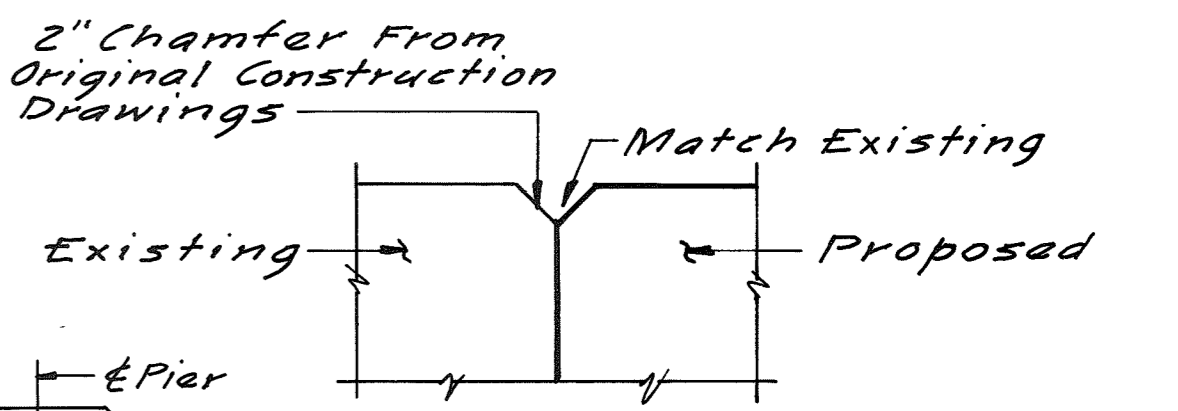
**SECTION E-E**  
1/2" = 1'-0"



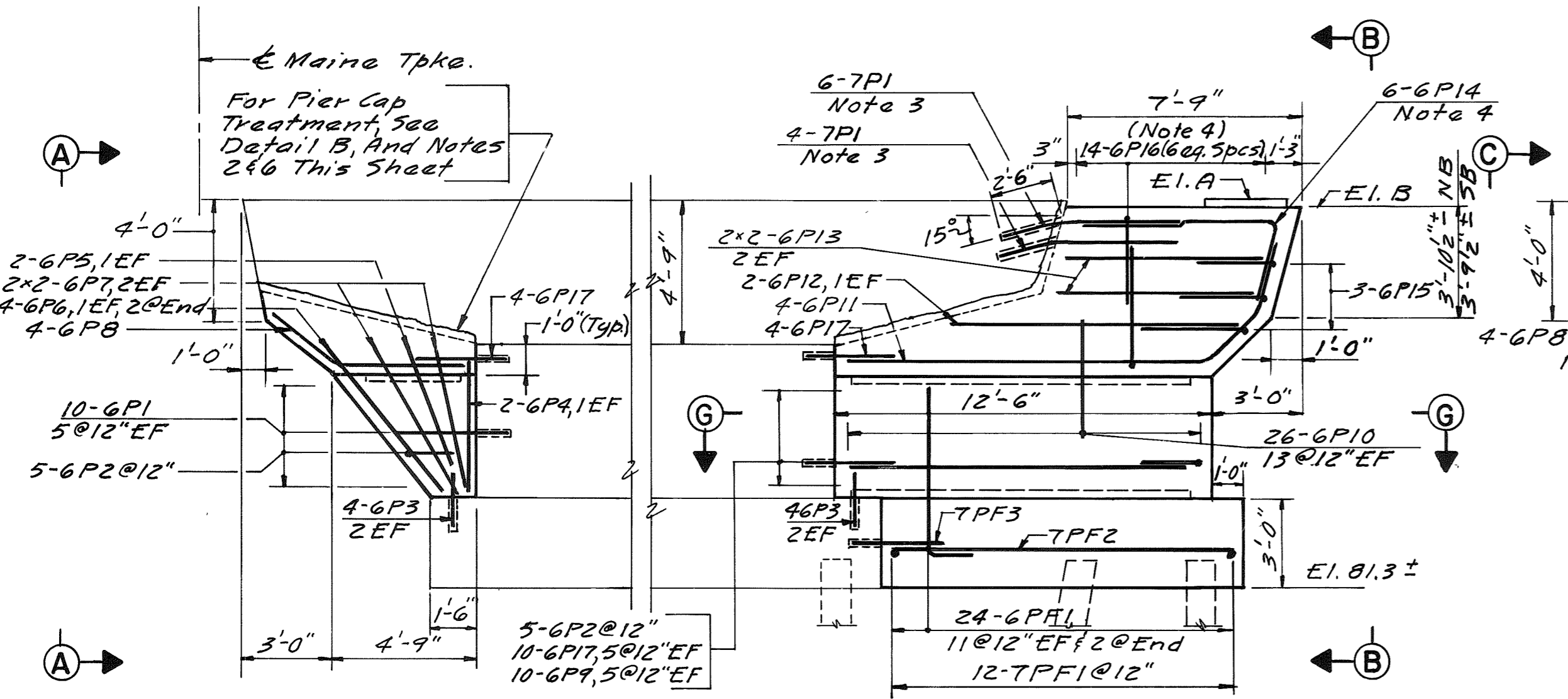
**SECTION F-F**  
1/2" = 1'-0"



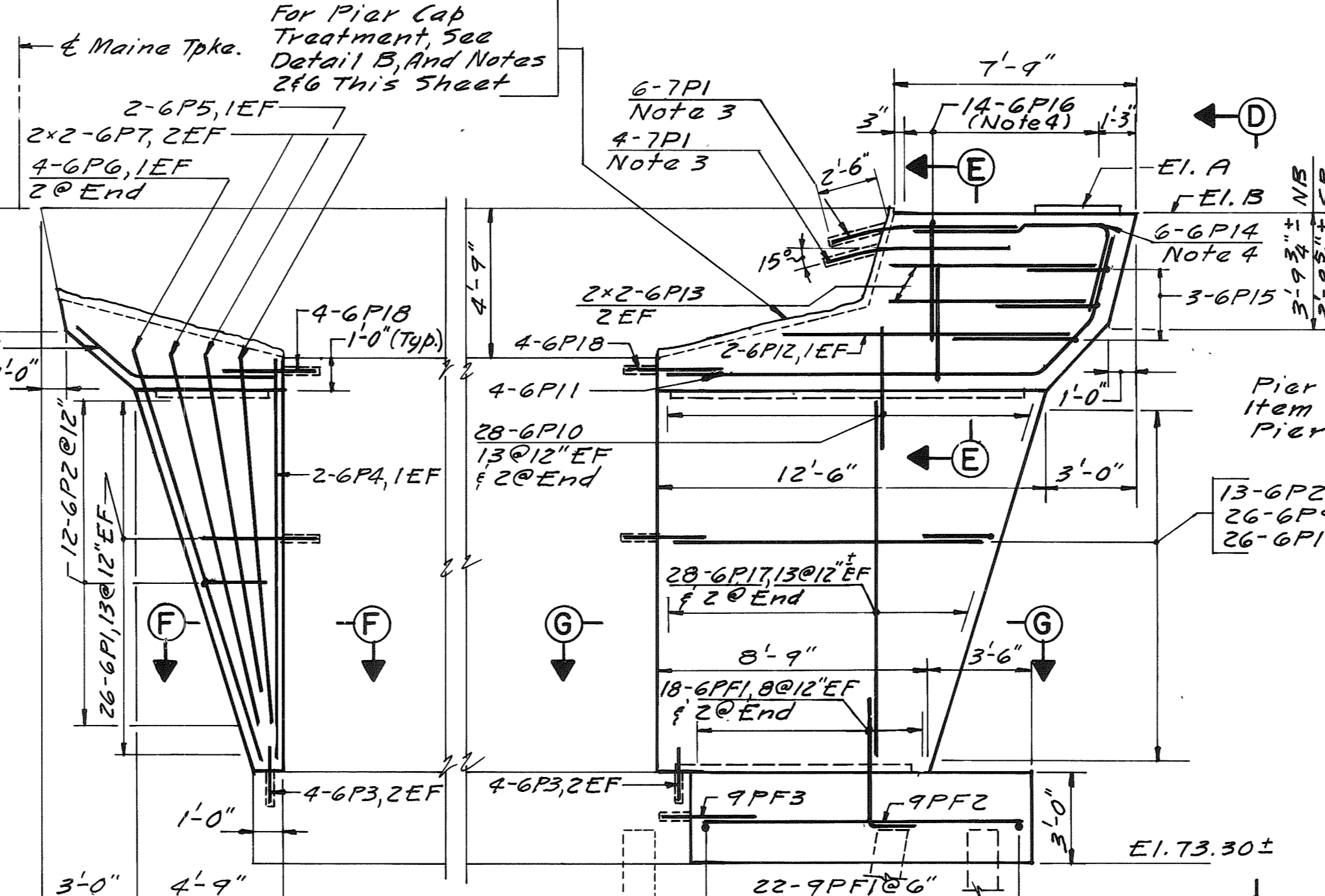
**SECTION G-G**  
1/2" = 1'-0"



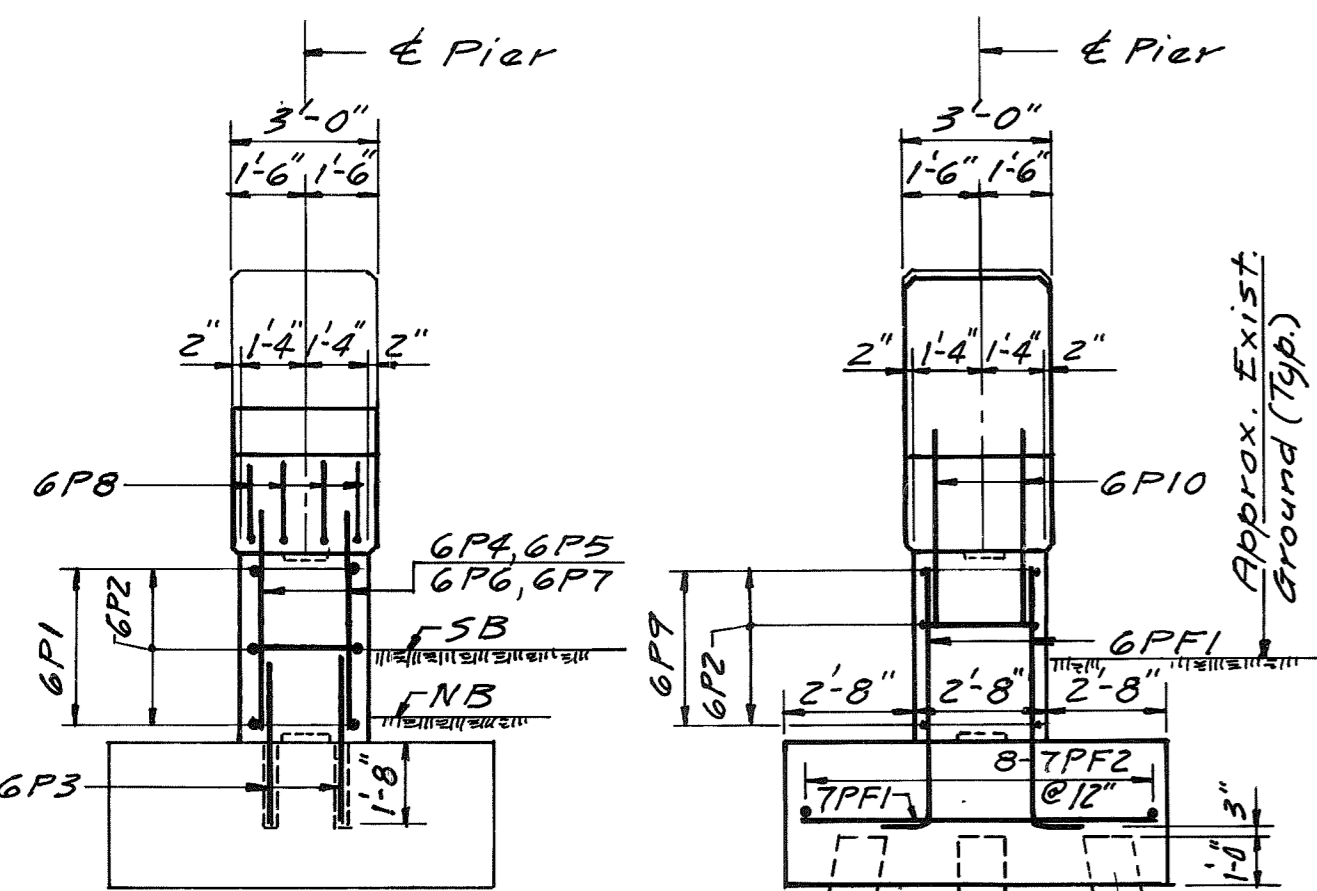
**DETAIL A**  
No Scale



**ELEVATION PIER I NORTHBOUND**  
PIER I SOUTHBOUND SIMILAR  
1/4" = 1'-0"

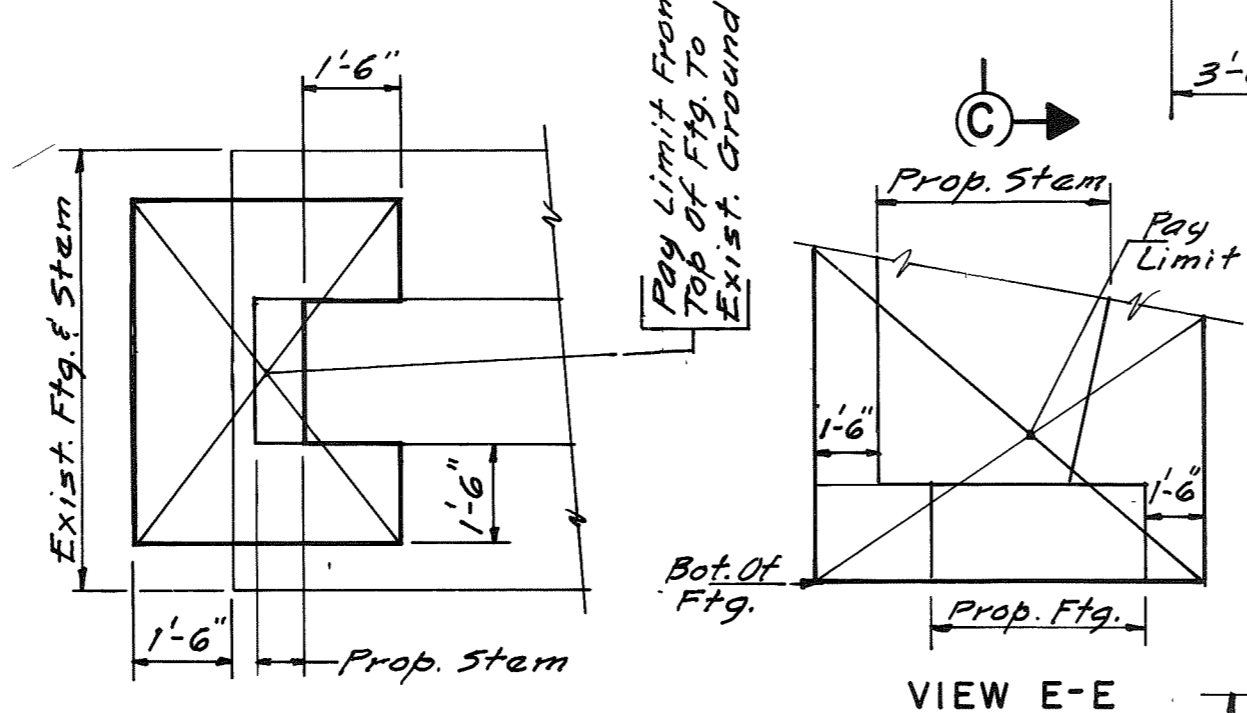


**ELEVATION PIER 2 NORTHBOUND**  
PIER 2 SOUTHBOUND SIMILAR  
1/4" = 1'-0"



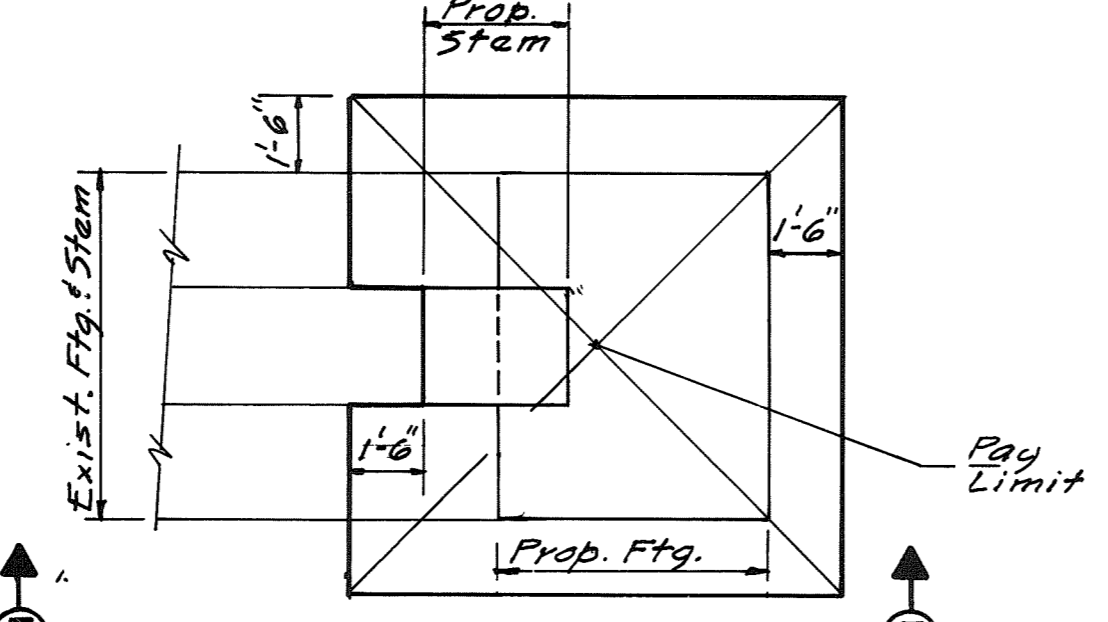
**VIEW A-A**  
1/4" = 1'-0"

**VIEW B-B**  
1/4" = 1'-0"



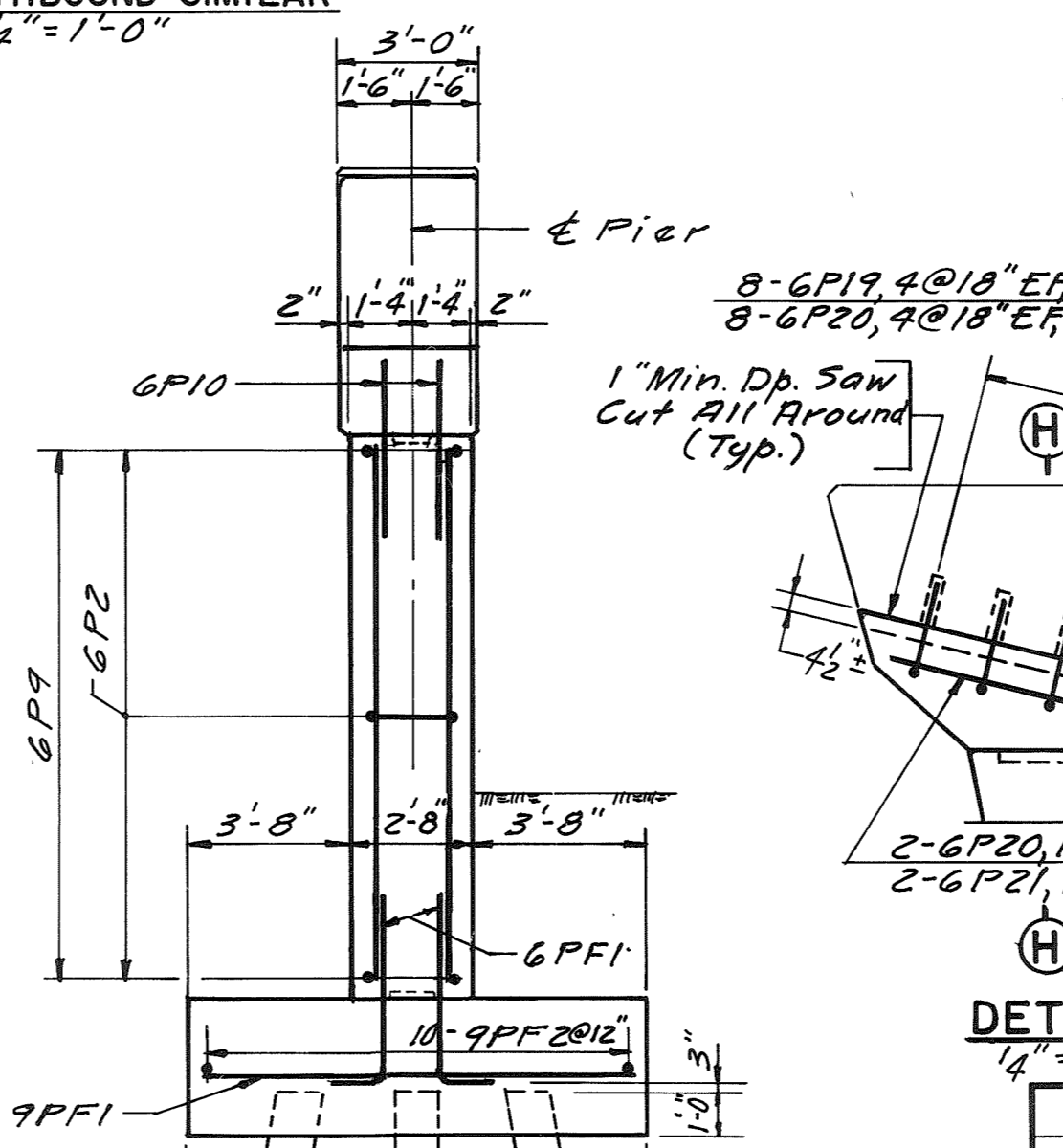
**PLAN-MEDIAN END**

**VIEW E-E**

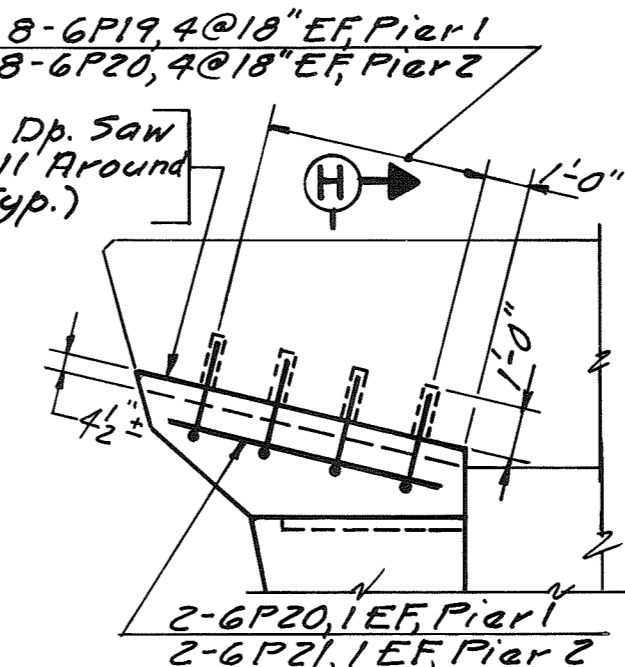


**PLAN-FASCIA END**  
PAY LIMITS (Item 206.10)  
No Scale

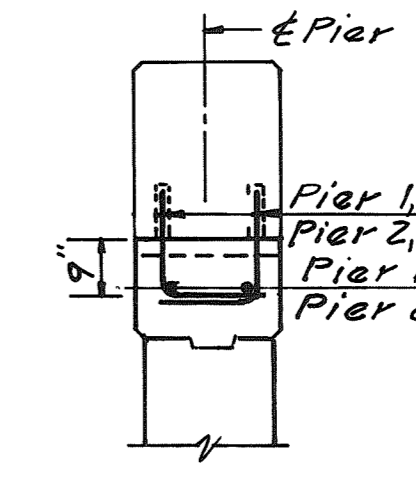
**VIEW C-C**  
1/4" = 1'-0"



**VIEW D-D**  
1/4" = 1'-0"



**DETAIL B**  
1/4" = 1'-0"



**SECTION H-H**  
1/4" = 1'-0"

ELEVATIONS		
LOCATION	A	B
Pier 1 NB	94.08	94.04
Pier 2 NB	94.29	94.25
Pier 1 SB	93.82	93.76
Pier 2 SB	94.06	94.02

- NOTES**
- Two Inch Chamfer On All Exposed Edges.
  - Remove Existing Concrete To A Plane One Inch Below The Deepest Existing Reinf. Steel Or To Sound Concrete Whichever Is Greater.
  - Drill And Grout Bars 7P1 To Clear Exposed Reinforcing Steel And Existing Bearing Shoes Anchor Bolts.
  - Set Bars 6P14 & 6P16 To Clear Prop. Bearing Shoe Anchor Bolts.
  - Reinforcing Bars Doweled Into The Existing Pier Cap Shall Be Grouted In Place With An Epoxy Grout A Non-Shrink Cementitious Grout Shall Be Used On All Other Dowels.
  - The Surface Of The Excavated Area And The Exposed Reinforcing Steel Shall Be Jam Blasted Free Of Dust, Loose Particles, Rust And Other Foreign Material.
  - Paint The Entire Pier With Thoroseal, From The Ground Line Up, Except The Top Surface Of The Pier Cap.

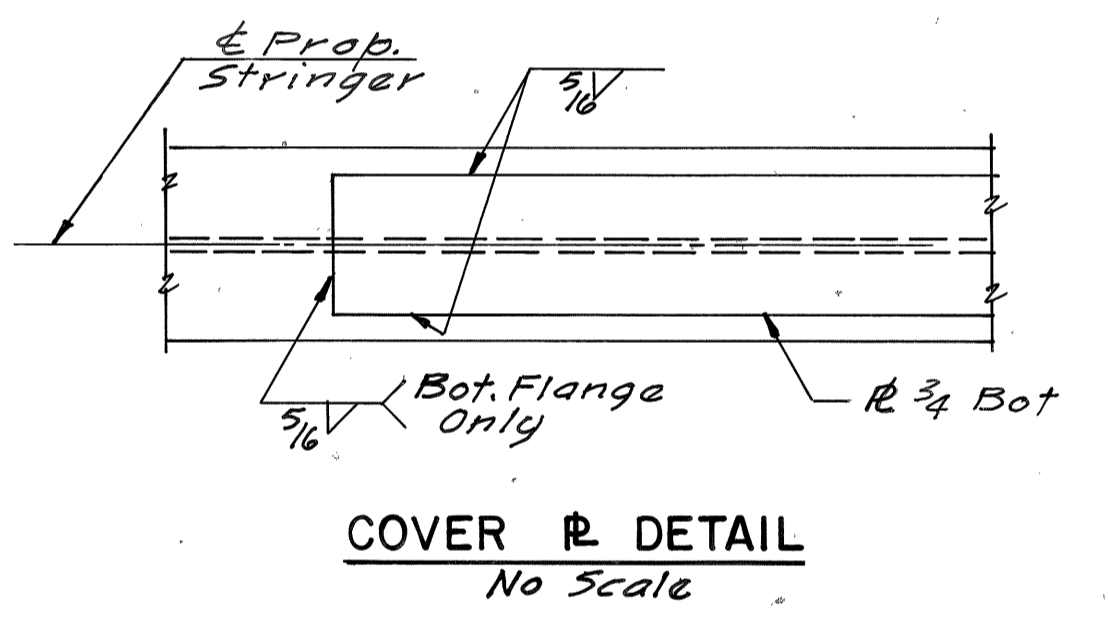
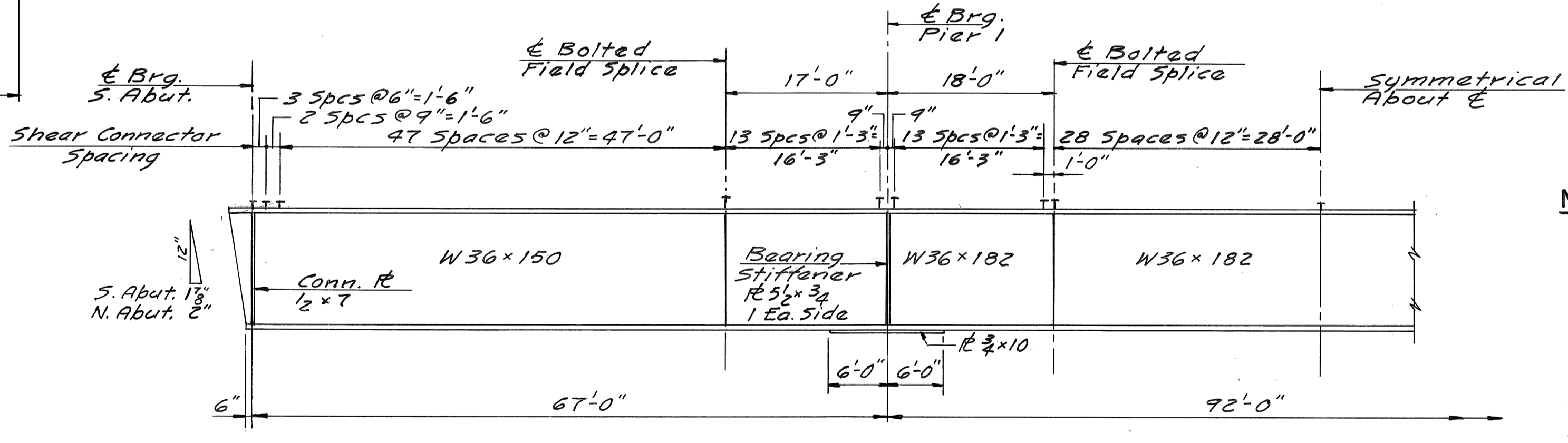
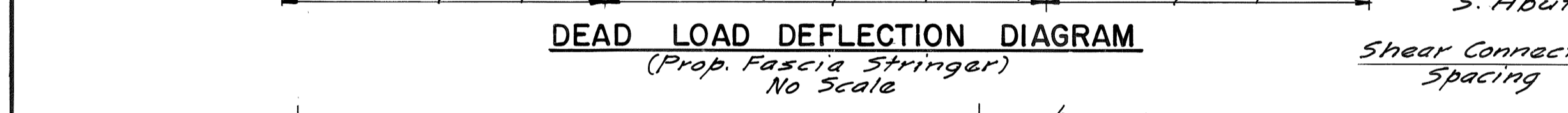
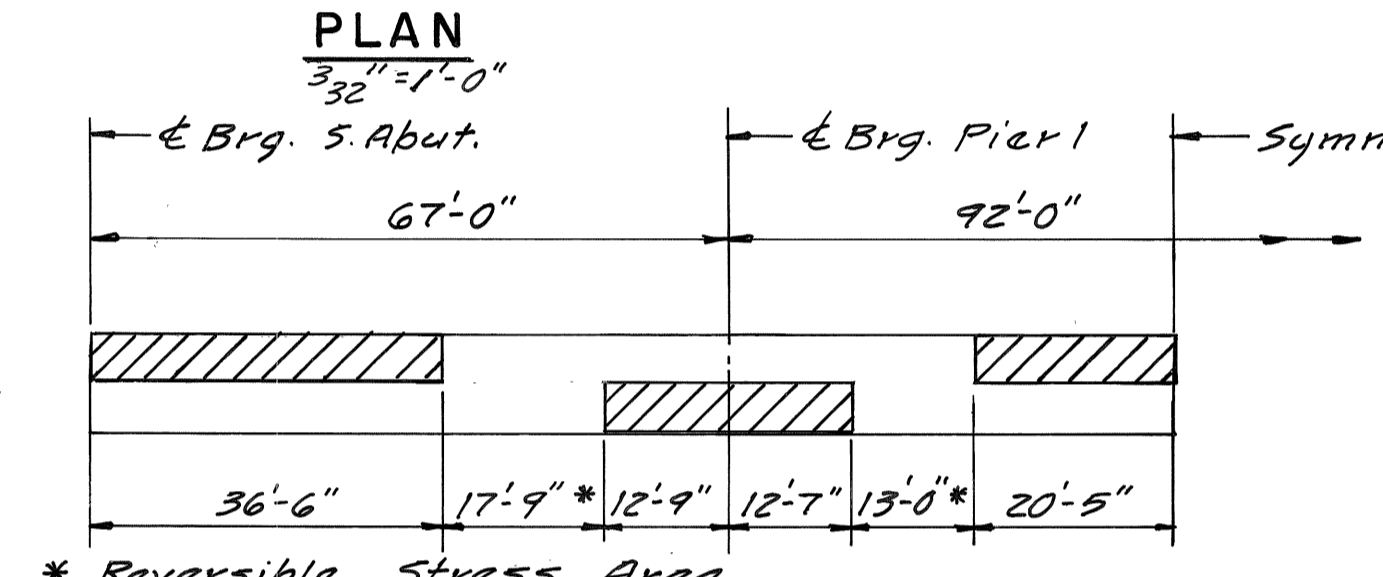
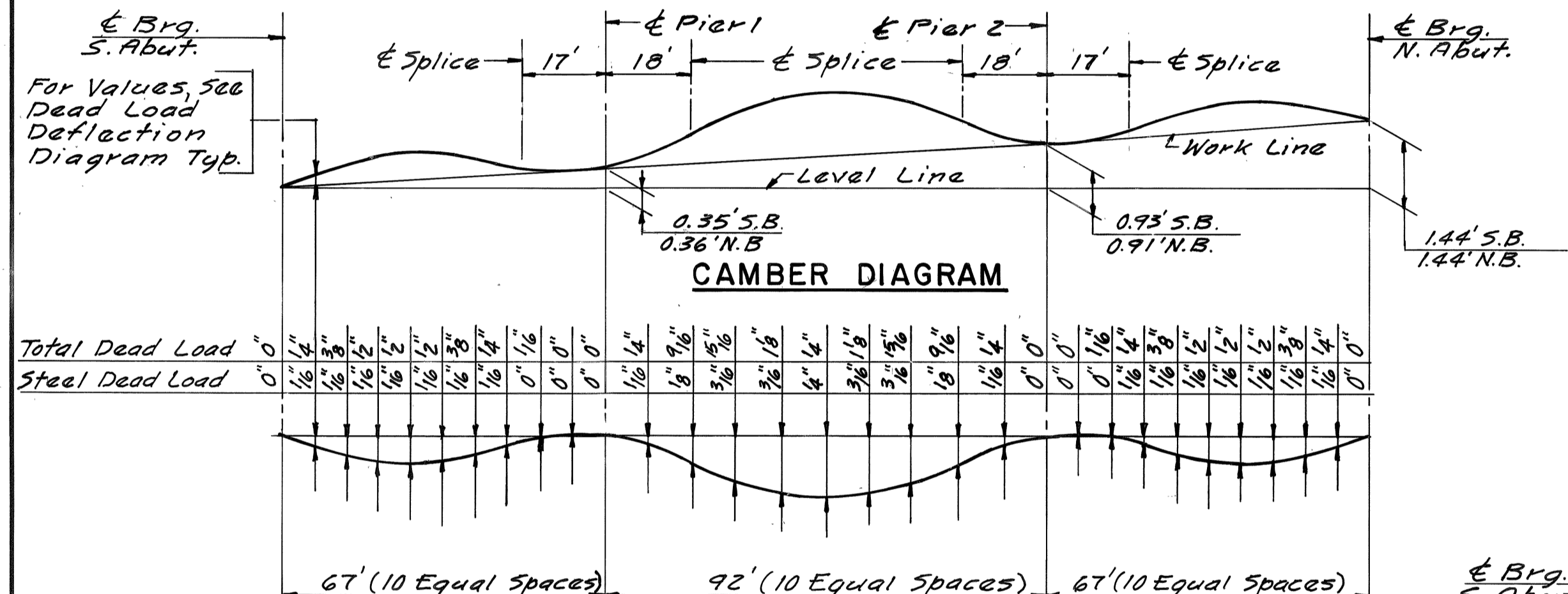
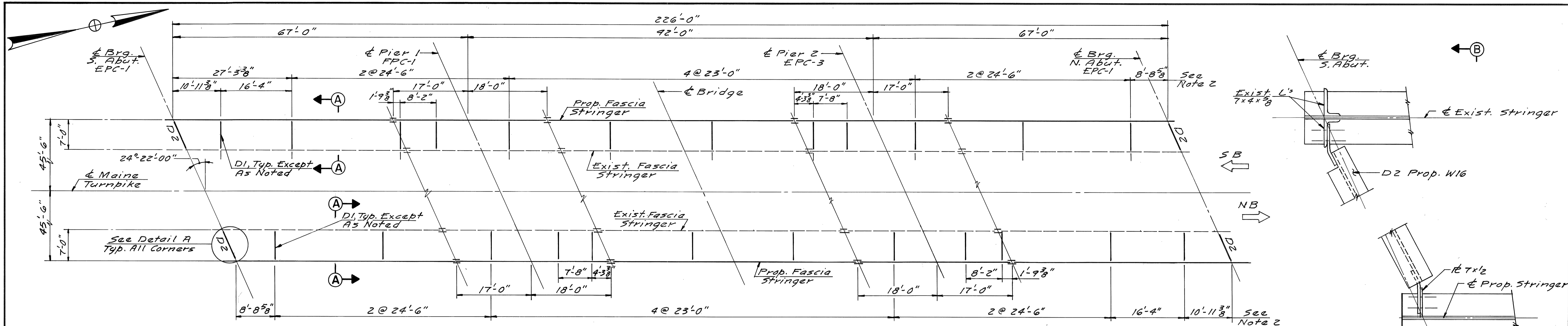
Maine Turnpike Authority  
**Maine Turnpike**

**WARREN AVENUE**  
PIER DETAILS

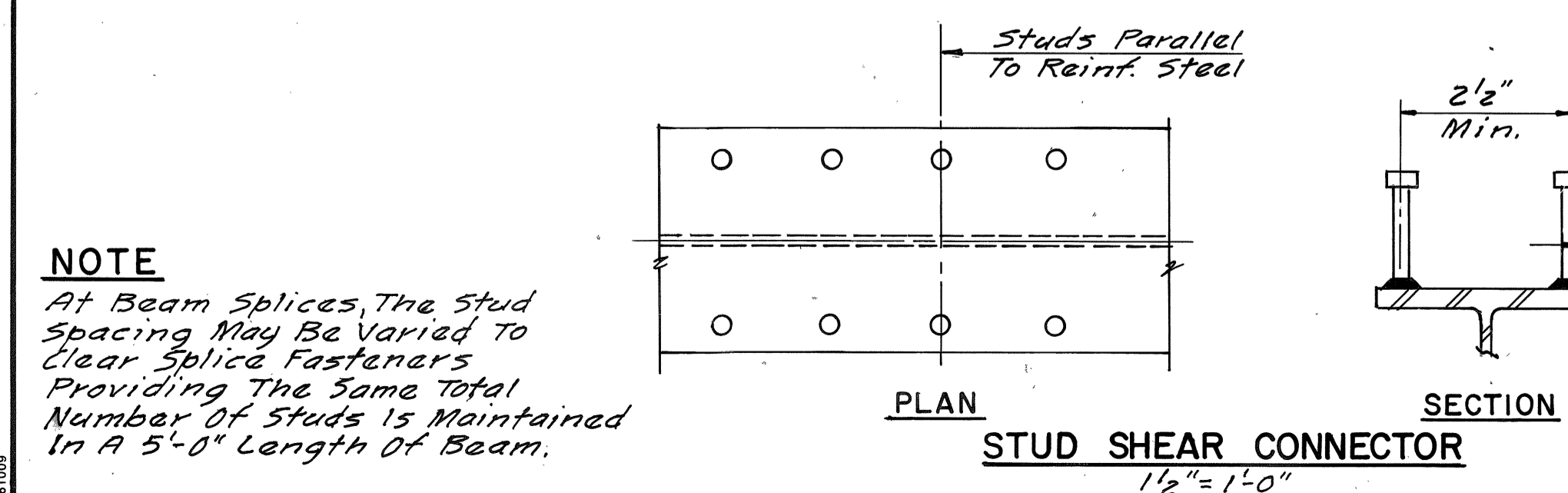
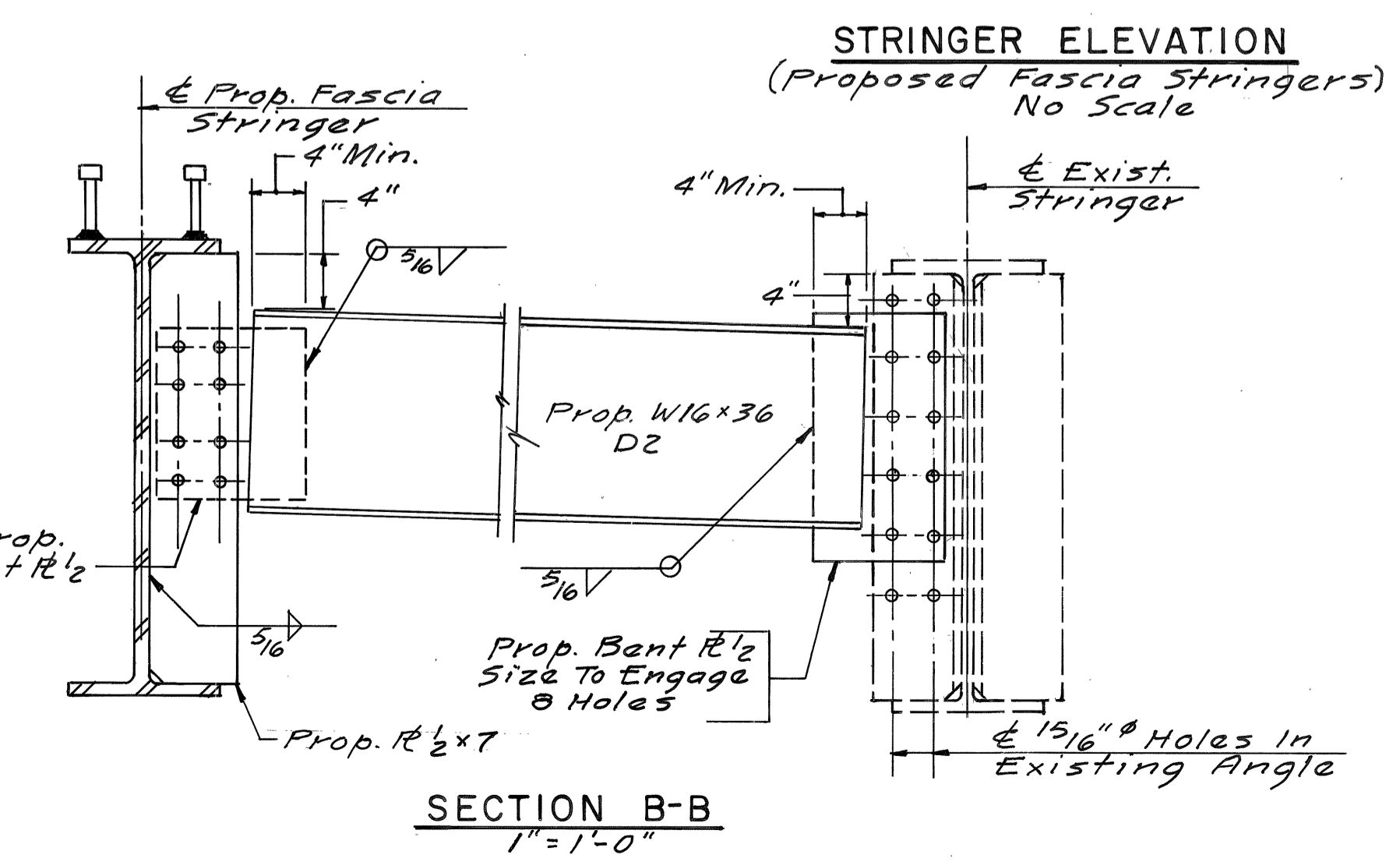
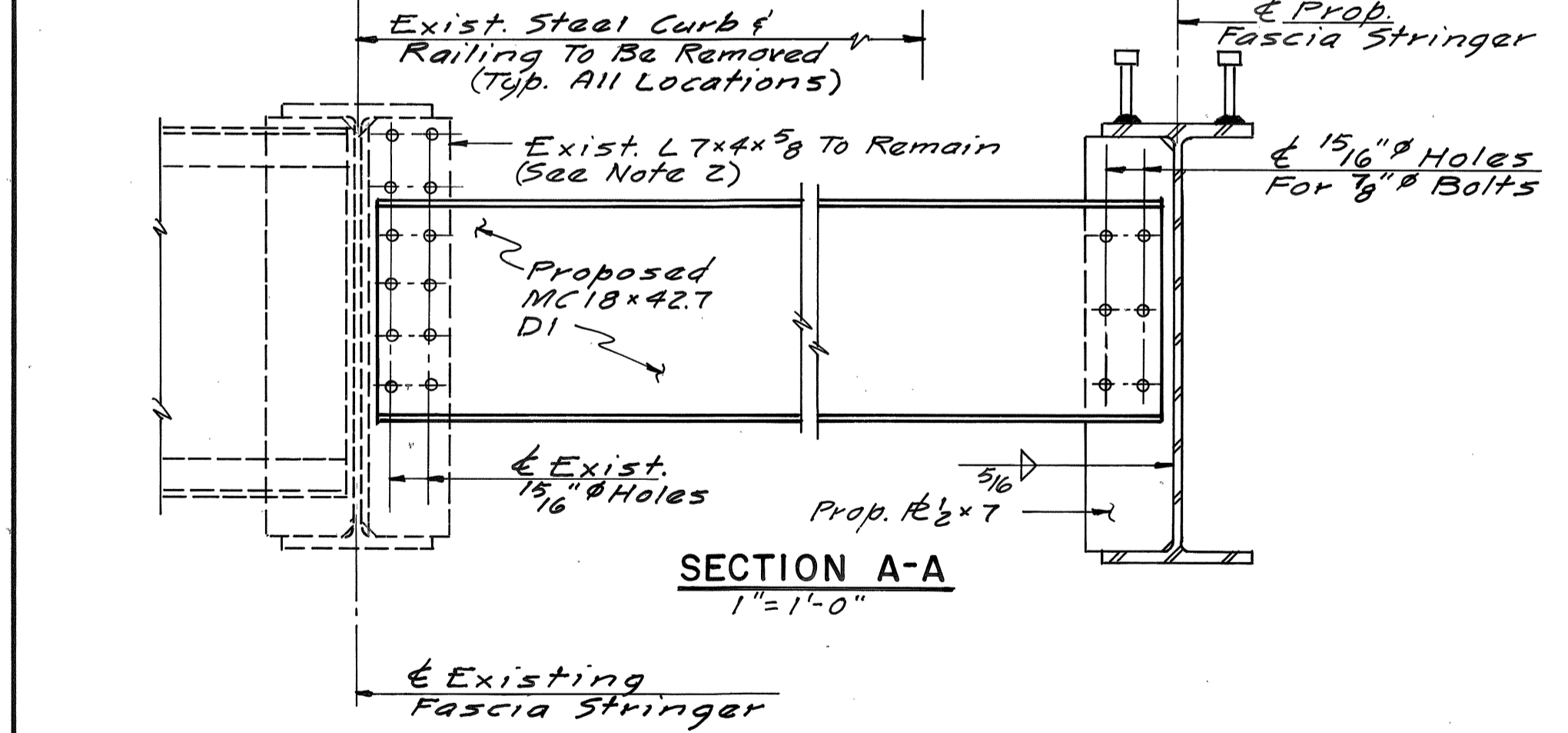
Contract 92.10

Sheet No. 18 of 32

No.	Revision	By:	Date:
		Designed	1.5.11-97
		Drawn	C.S.L. 11-97
		Checked	S.H.R. 12-97
		In charge of:	R.A.L.



- NOTES**
1. Field Measure Location Existing Holes In L7x4. Locate Proposed DI To Engage 8 Holes Shown. The Fabricator Has The Option Of Providing 12" Plate As Shown In Section B-B This Sheet.
  2. Diaphragm Spacing And Holes In L7x4 Is As Shown On The Original Construction Drawings And Is Not Guaranteed, Verify By Field Measurement.
  3. See BD-111-89 For Bolted Splice Details.
  4. See BD-112-89 For Diaphragm Details.



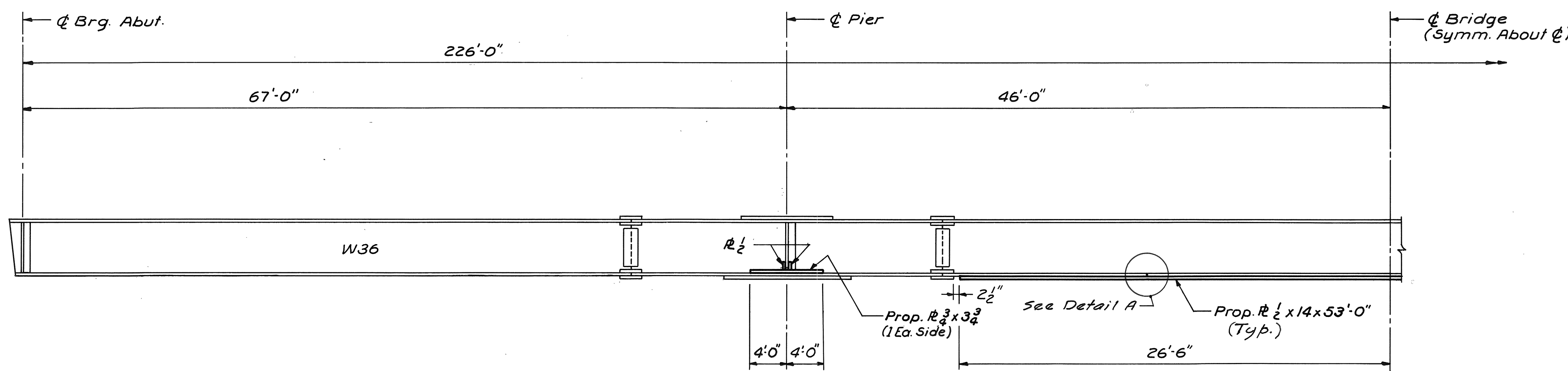
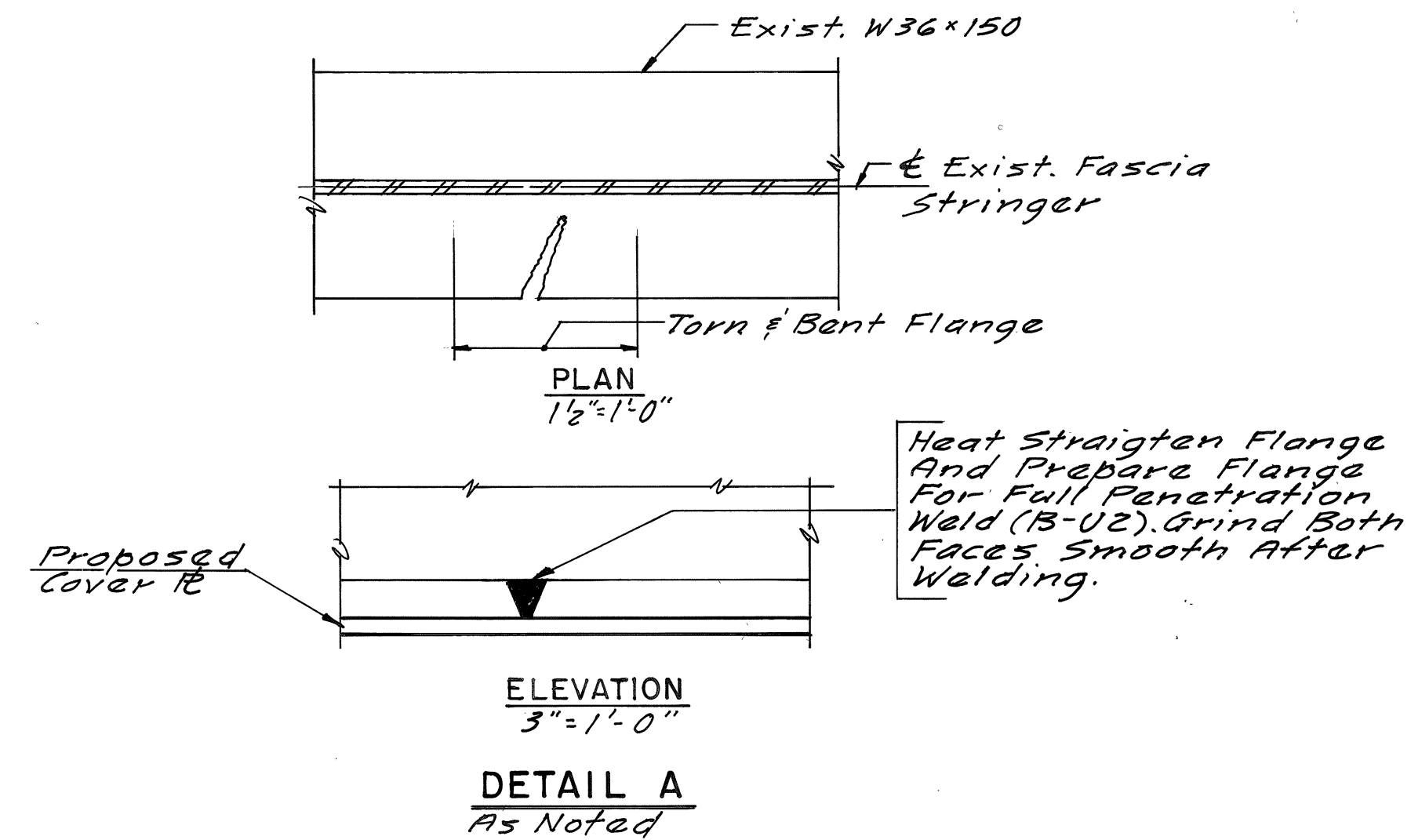
**NOTE**  
At Beam Splices, The Stud Spacing May Be Varied To Clear Splice Fasteners Providing The Same Total Number Of Studs Is Maintained In A 5'-0" Length Of Beam.

Maine Turnpike Authority  
**Maine Turnpike**  
 WARREN AVENUE  
 FRAMING PLAN

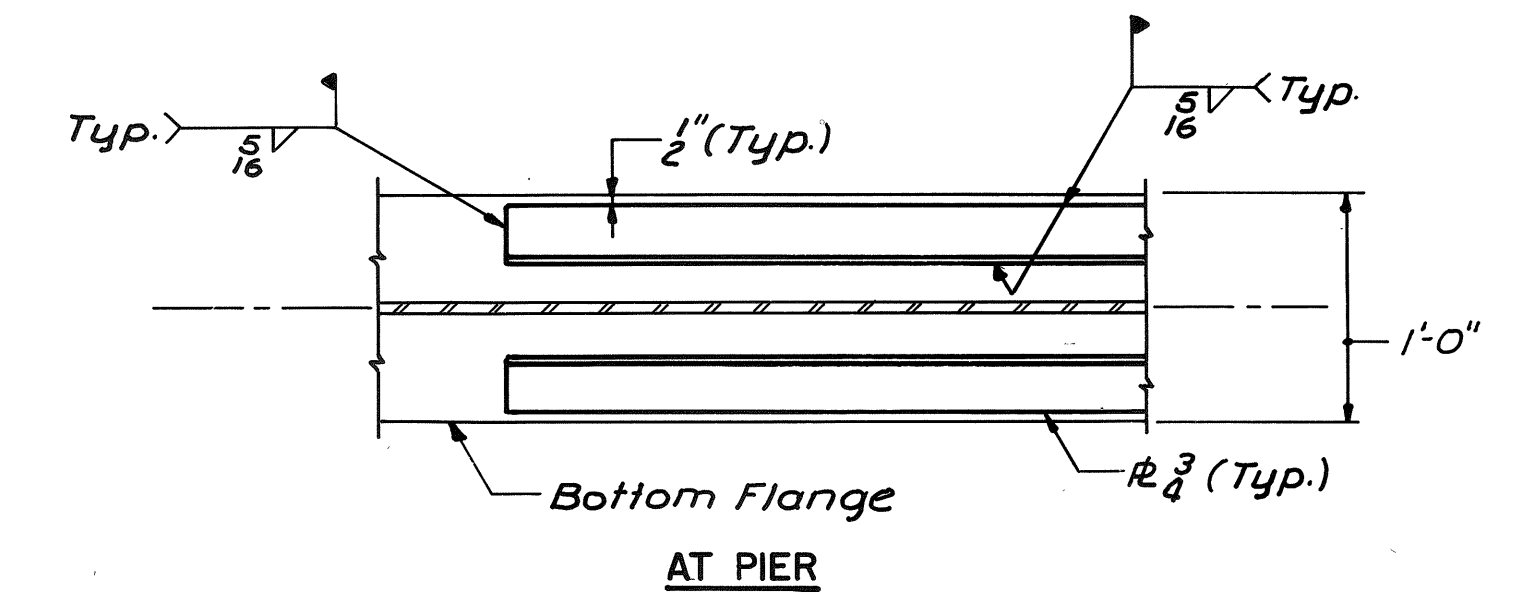
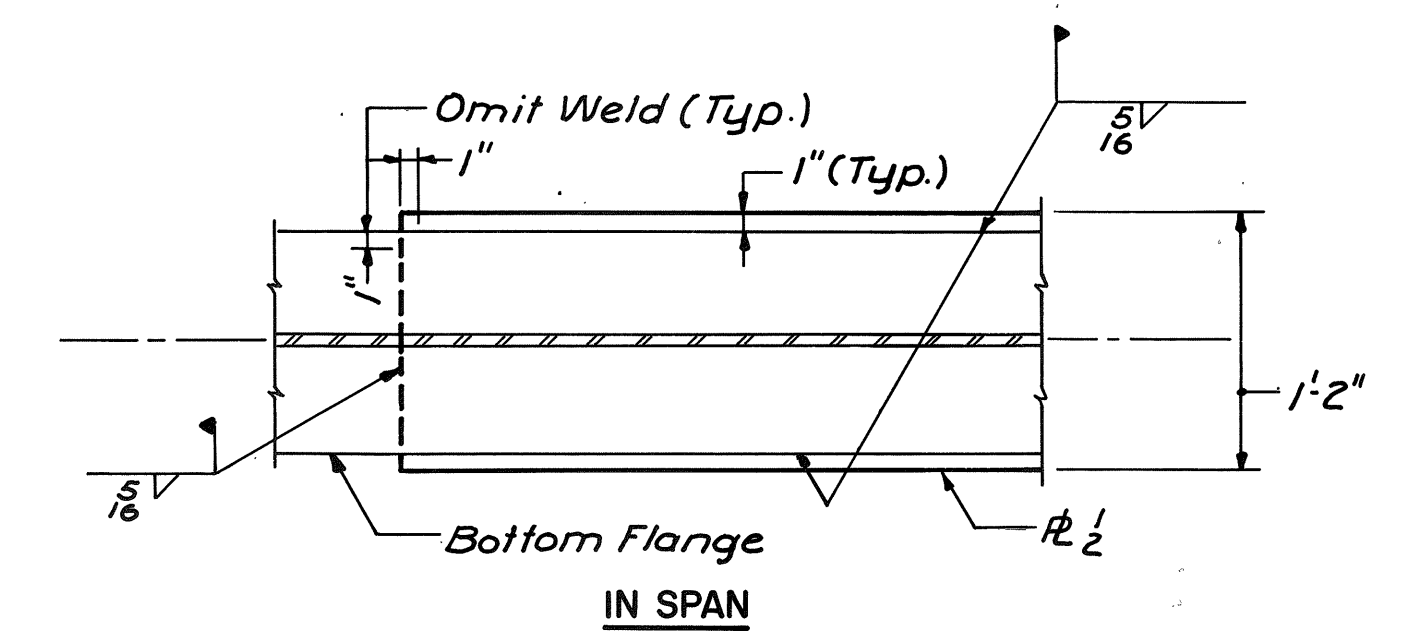
**HNTB** HOWARD NEEDLES TAMMEN & BERGENDOFF ARCHITECTS ENGINEERS PLANNERS

Designed	By: Date:	1.5.11-91
Drawn	C.S.L. 12-91	
Checked	R.U.R. 12-91	
In charge of:	R.A.L.	

Contract 92.10 Sheet No. 19 of 32



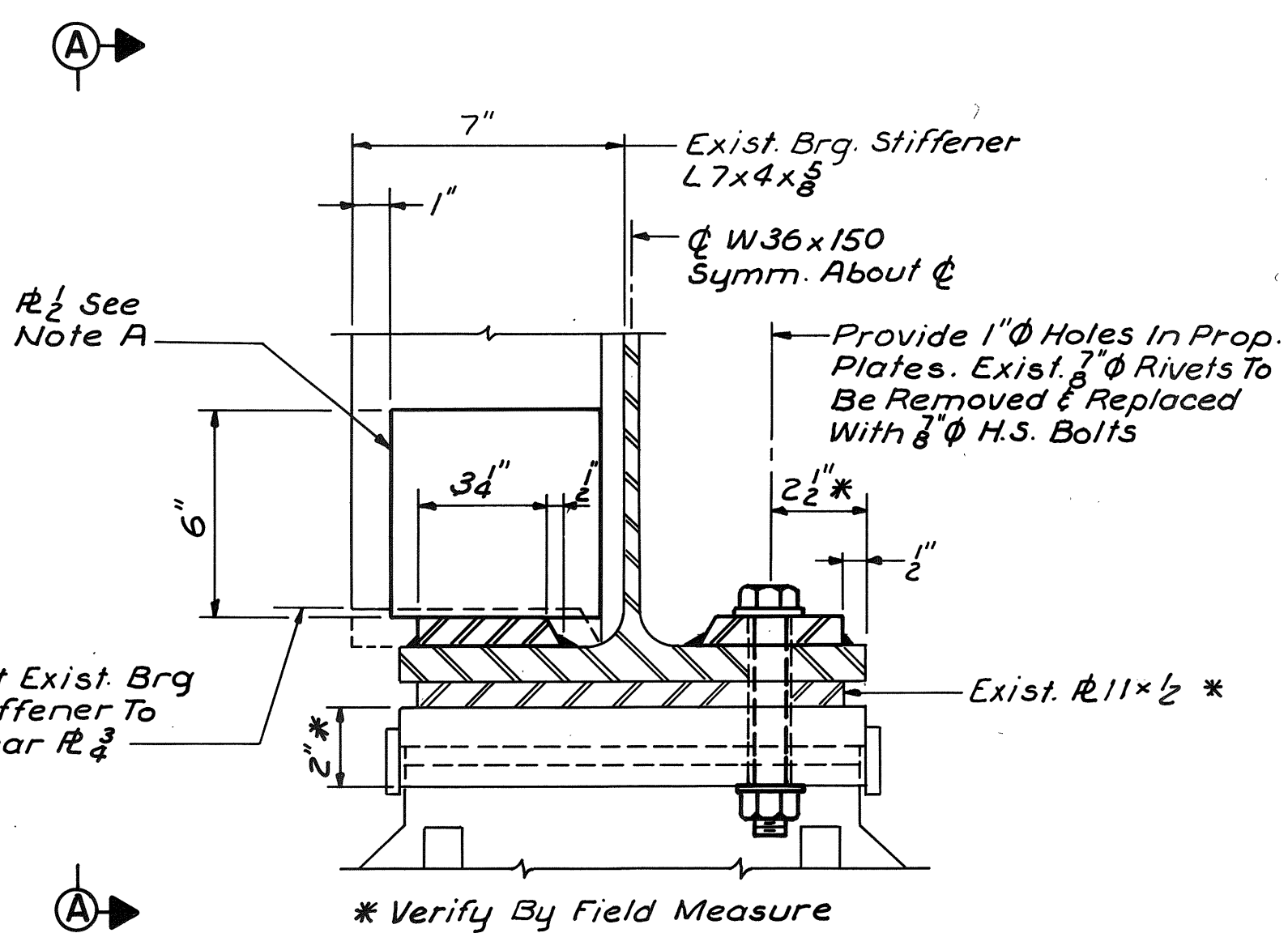
**STRINGER ELEVATION**  
EXISTING FASCIA STRINGER  
(4 Locations)  
No Scale



**COVER PLATE DETAILS**  
No Scale

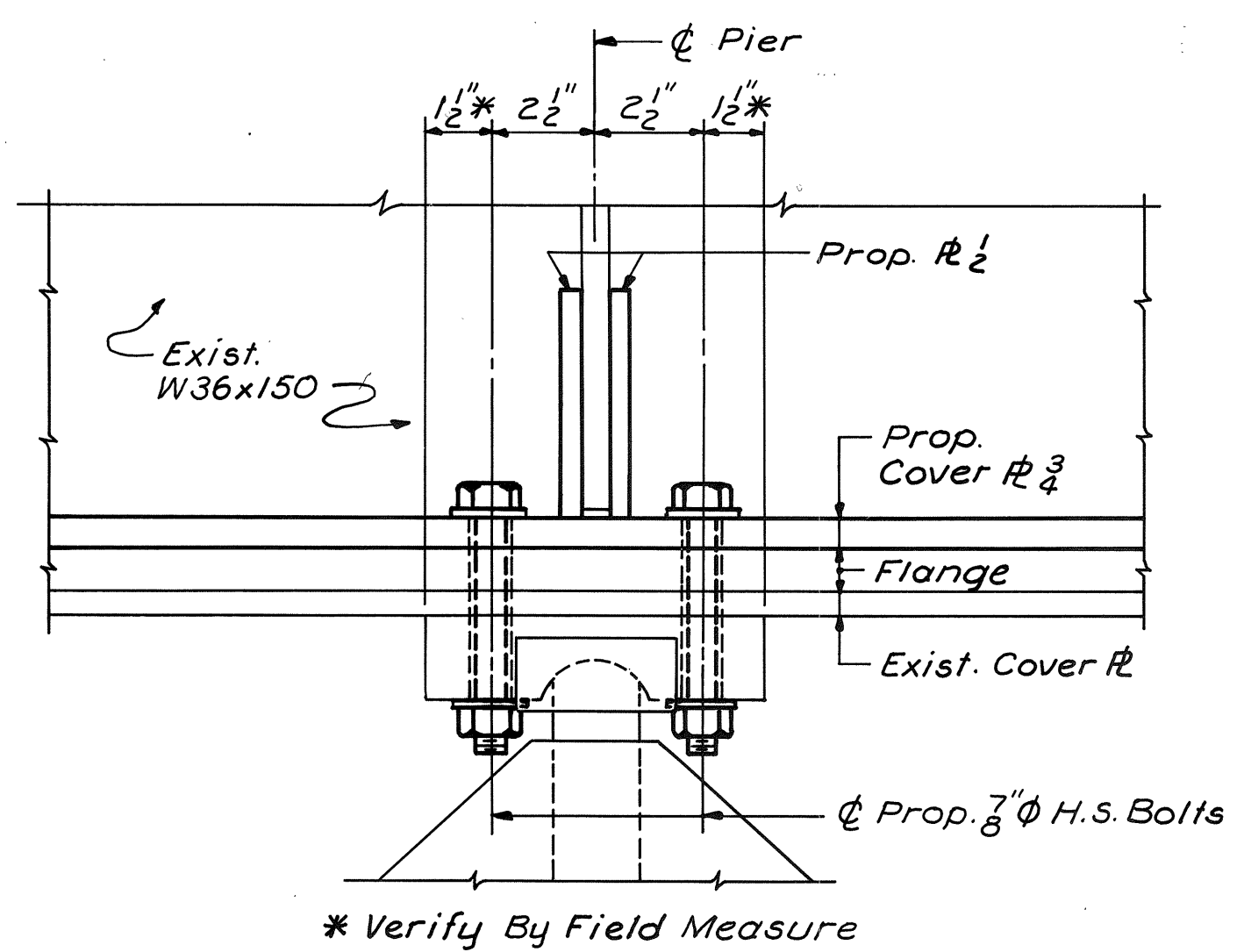
**Note**  
Exist. Bulb Angle  
Shear Connectors  
Are Not Shown

- NOTES**
1. All Proposed Plates To Conform To ASTM A709 Grade 36.
  2. Proposed Cover Plates Shall Be Welded To Existing Beams After The Slab And Brackets Have Been Removed And Before The Forms Are In Place. The Contractors Attention Is Directed To The Need To Remove And Replace The Shielding.

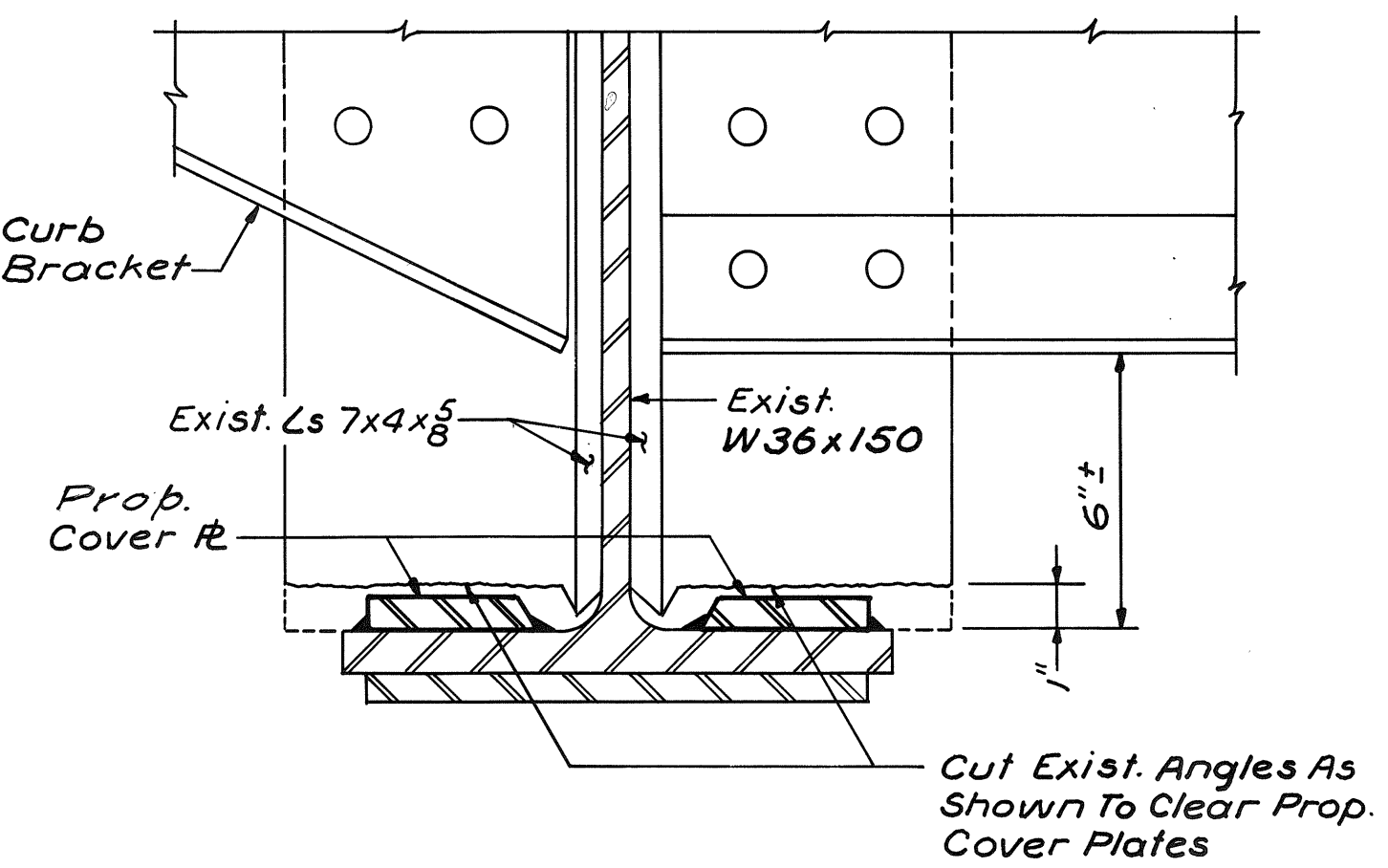


**Note A**  
Provide 1/2" Plates As Shown On Each Side Of The Outstanding Leg Of All Bearing Stiffeners At The Piers. Grind To Fit L7x4. Fillet Radius And Weld With 5/16" Fillet On Three Sides. Mill To Bear On R 3/4 At Bottom.

**DETAIL AT PIER**  
3" = 1'-0"



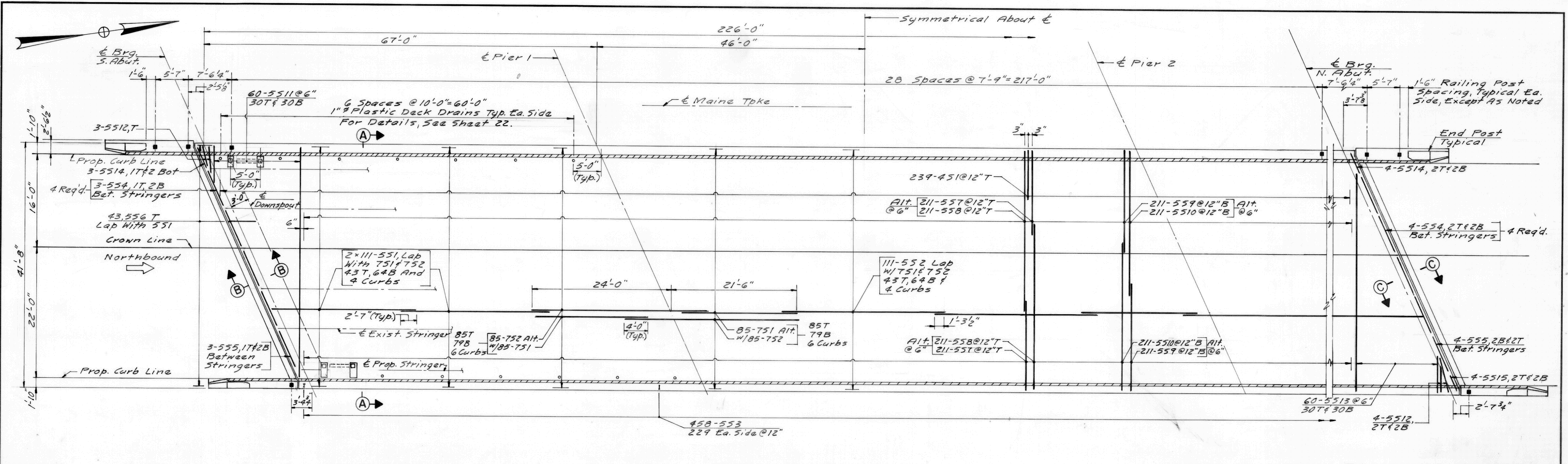
**ELEVATION A-A**  
3" = 1'-0"



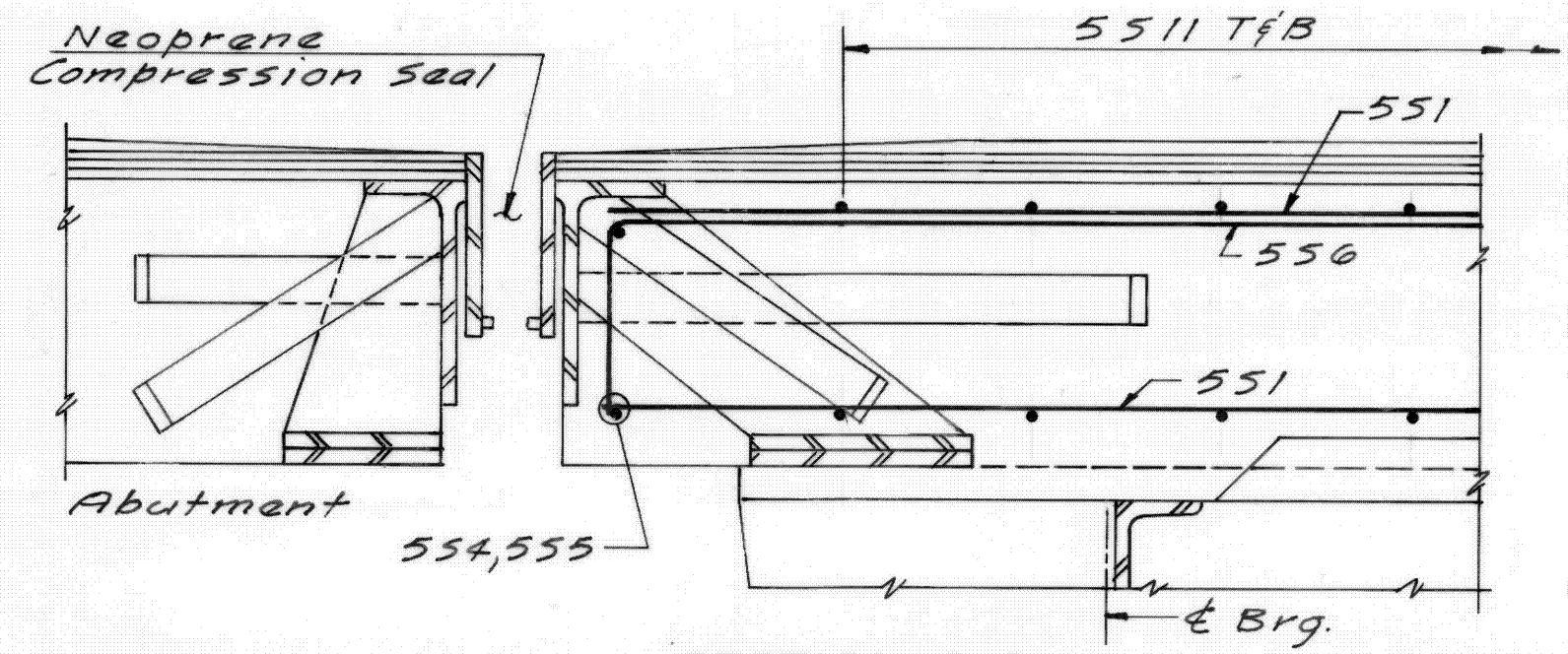
**DETAIL AT DIAPHRAGM AND CURB BRACKET**  
3" = 1'-0"

Maine Turnpike Authority <b>Maine Turnpike</b>		WARREN AVENUE STRUCTURAL STEEL DETAILS	
		HOWARD NEEDLES TAMMEN & BERGENDOFF ARCHITECTS ENGINEERS PLANNERS	
Contract 92.10		Sheet No. 20 of 32	
By: Date:	Designed: J.S. 11-91	By: Date:	In charge of: R.A.L.
	Drawn: R.D.F. 11-91		
	Checked: R.D.R. 12-91		

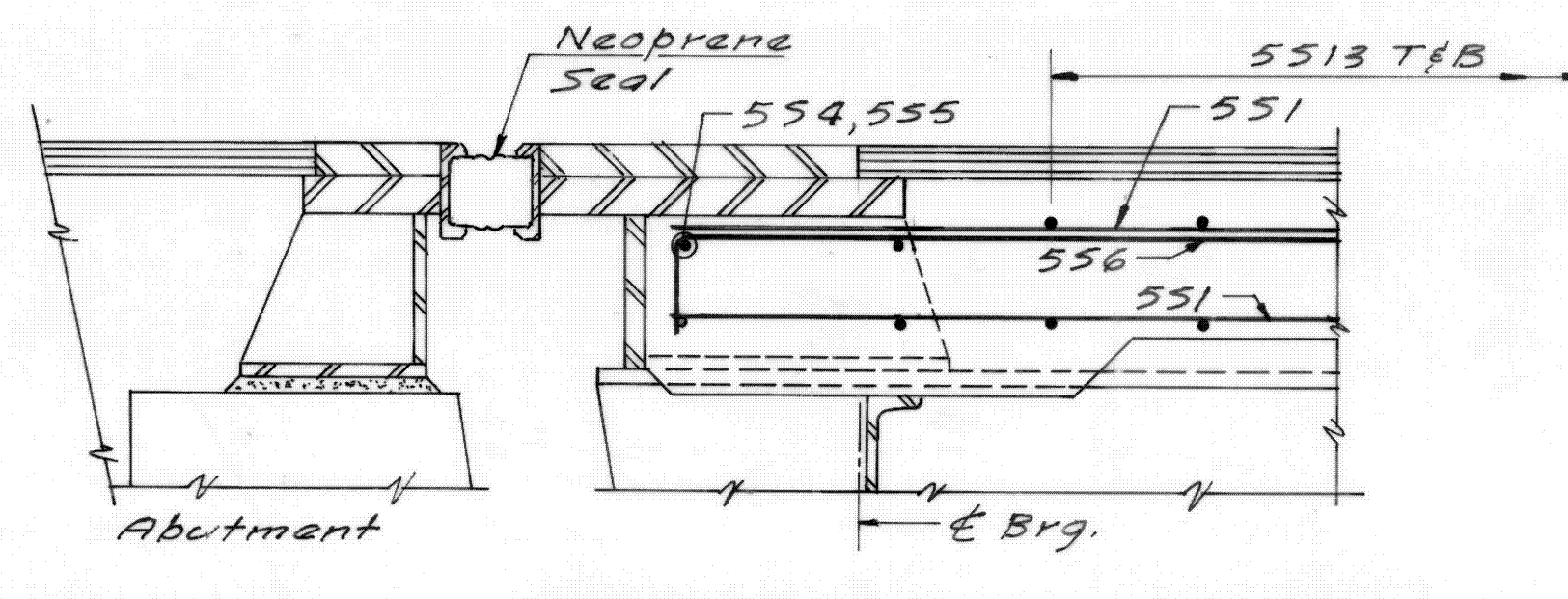
No.	Revision	By:	Date:



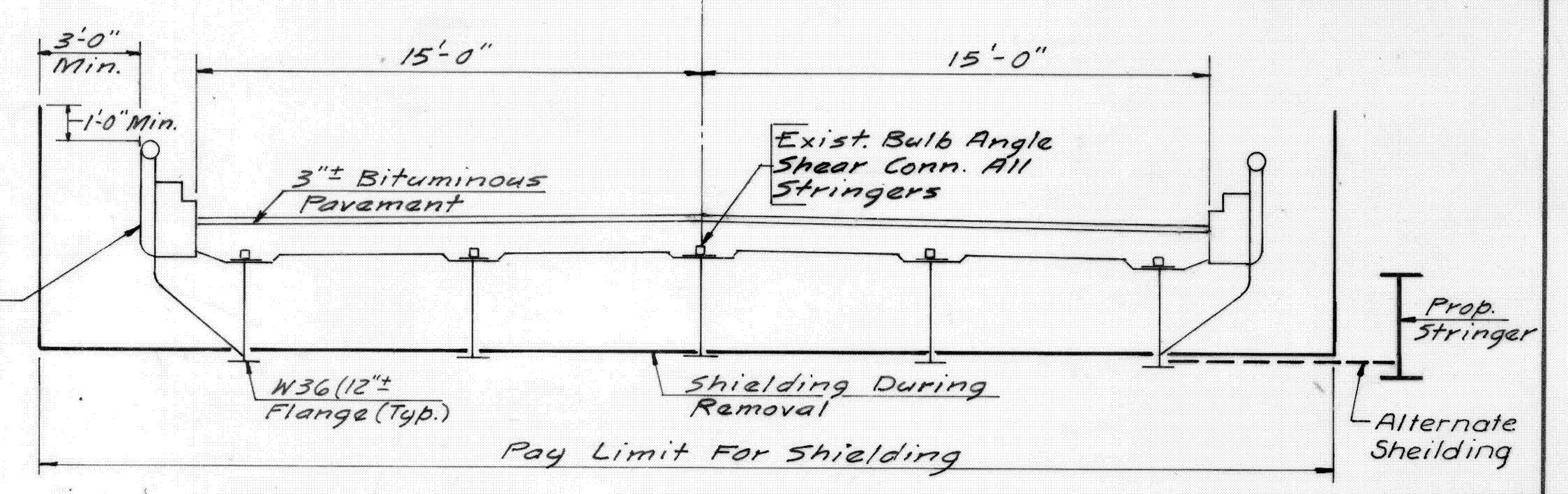
**PARTIAL DECK PLAN**  
(NB Shown, SB Similar)  
1/8" = 1'-0"



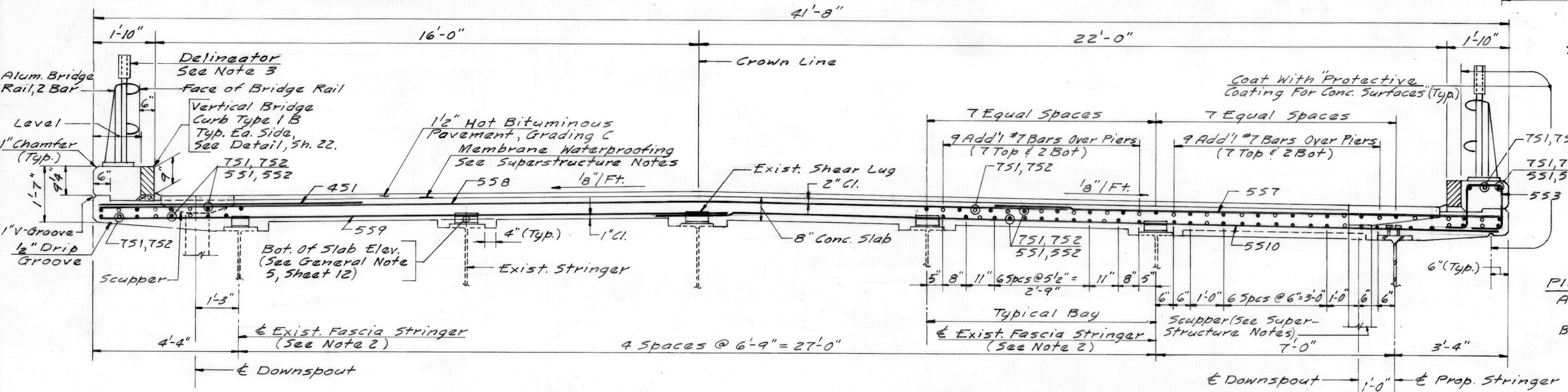
**SECTION B-B**  
2" = 1'-0"



**SECTION C-C**  
1/2" = 1'-0"



**EXISTING DECK REMOVAL**  
No Scale



**SECTION A-A**  
1/2" = 1'-0"

**DECK PLACEMENT DETAILS**  
No Scale

**Placement Notes**  
A = Termination Points When Placement Starts At South Abutment.  
B = Termination Points When Placement Starts At North Abutment.

- NOTES**
1. For Superstructure Notes, See Sheet 12.
  2. For Modifications To Existing Fascia Stringers, See Sheet 20.
  3. Delinicators Shall Not Exceed A 60 Foot Spacing On The Bridge. Delinicators Shall Be A White Reflective Sheeting Type II Placed On Both Sides Of The Bridge. (Highway Item)

Maine Turnpike Authority  
**Maine Turnpike**

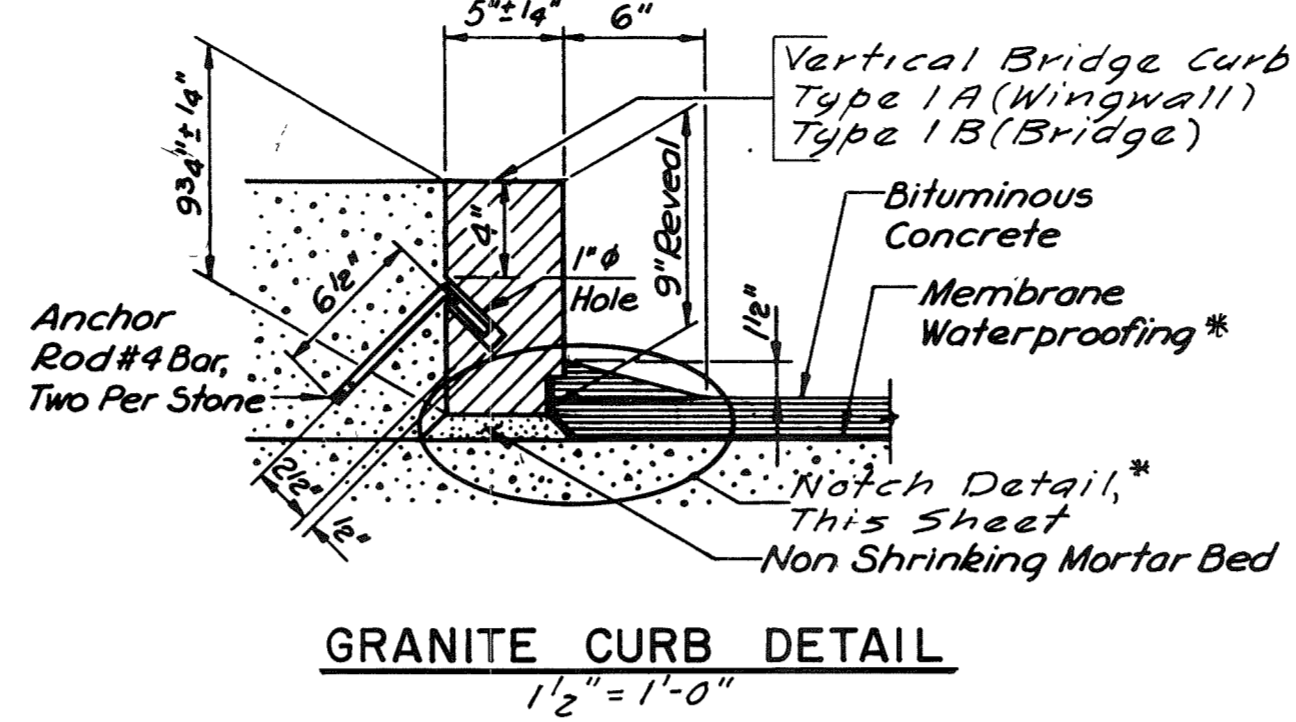
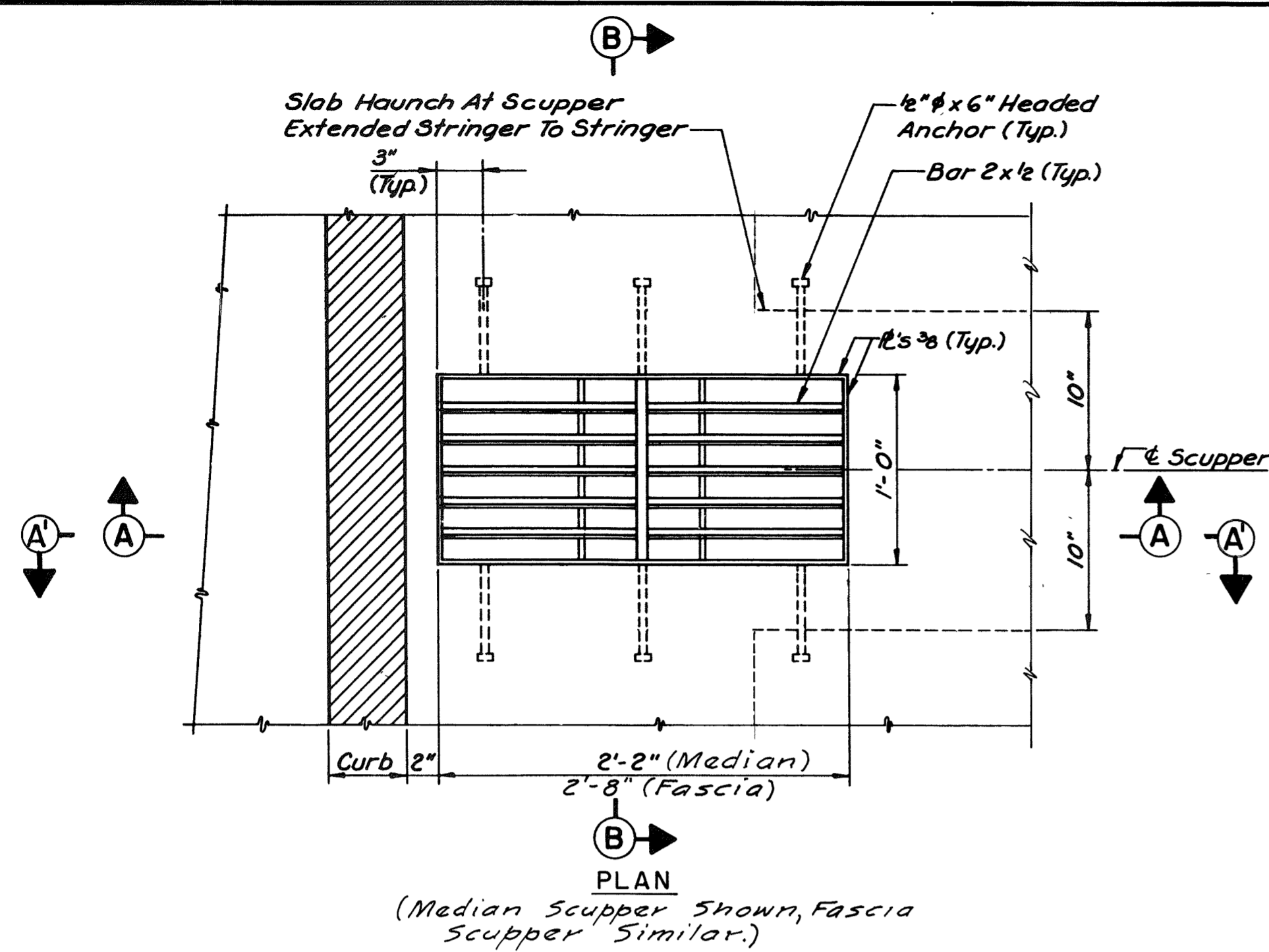
**WARREN AVENUE**  
SUPERSTRUCTURE DETAILS

**HNTB** HOWARD NEEDLES TAMMEN & BERGENDOFF ARCHITECTS ENGINEERS PLANNERS

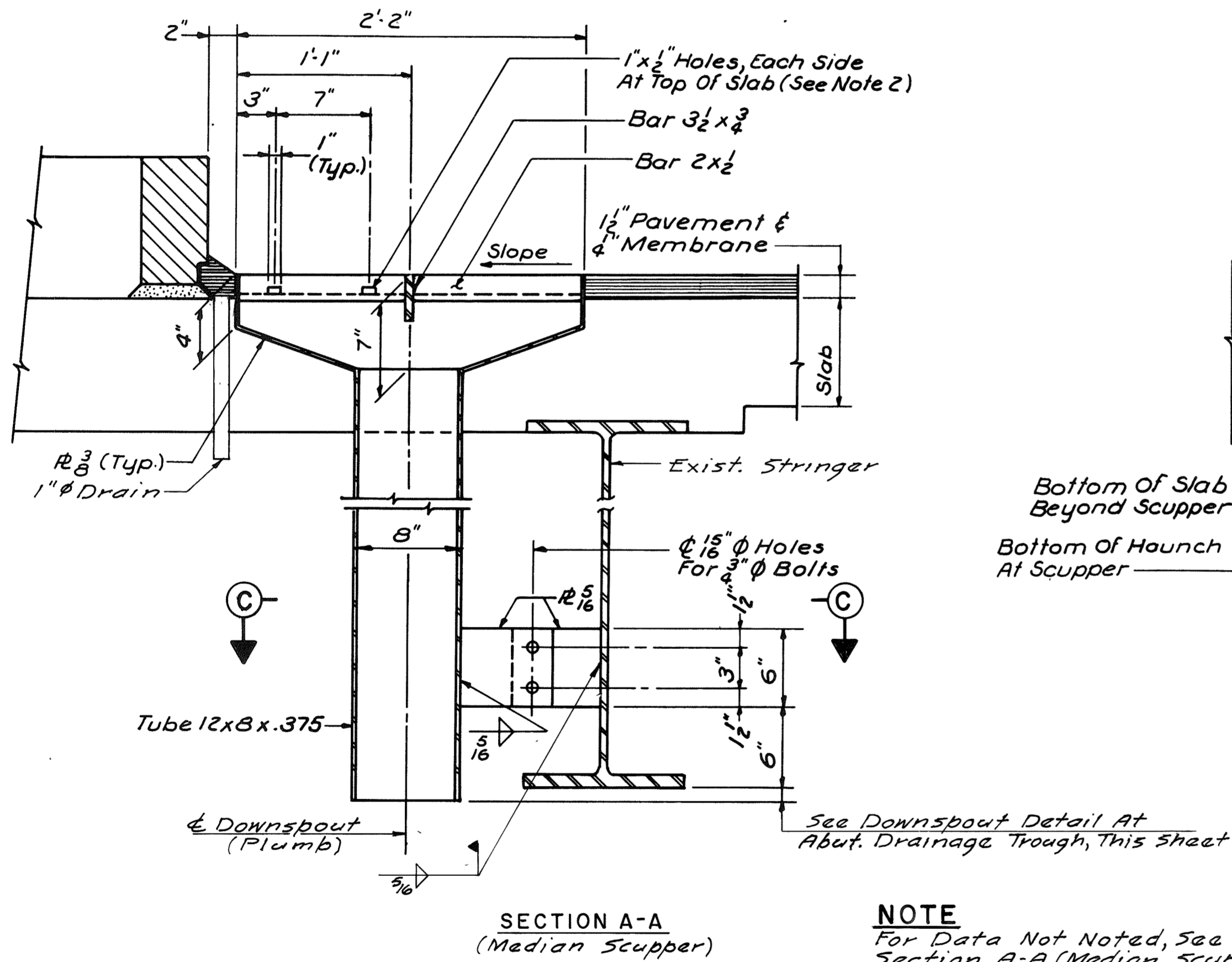
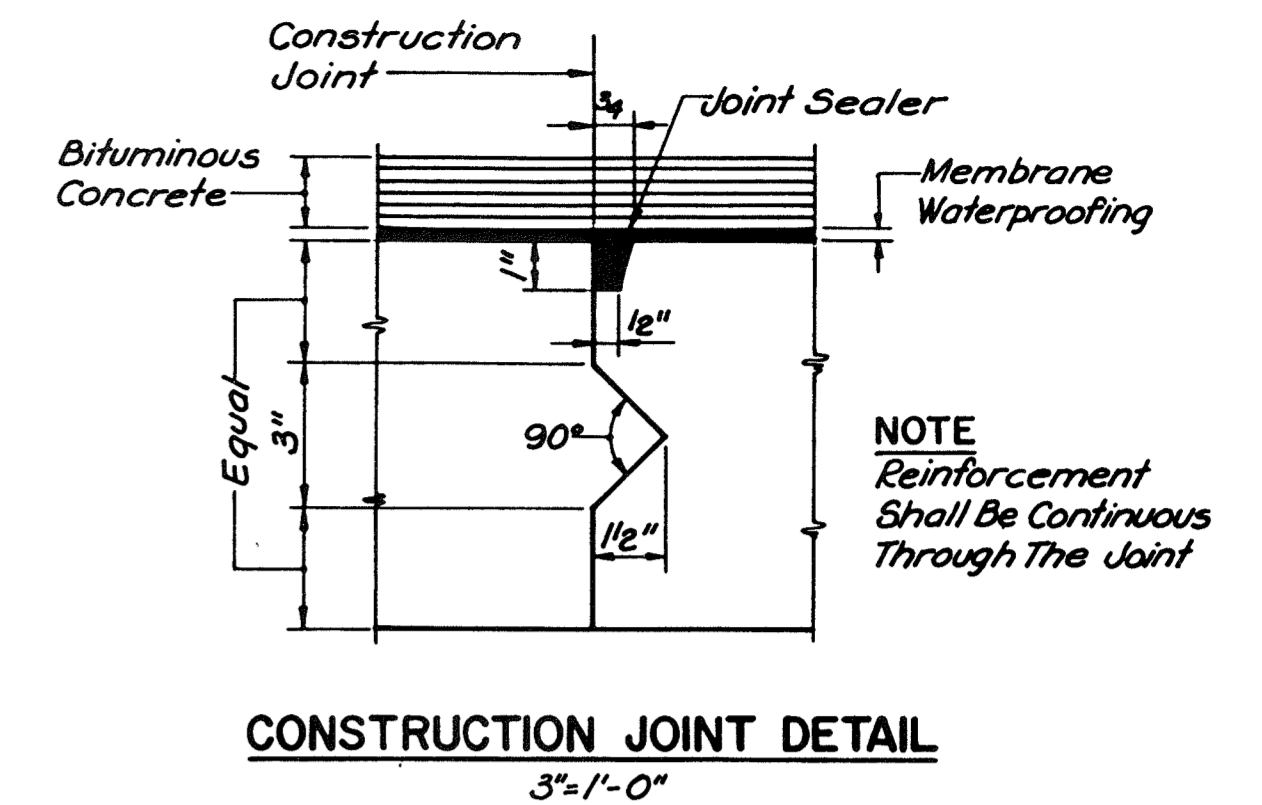
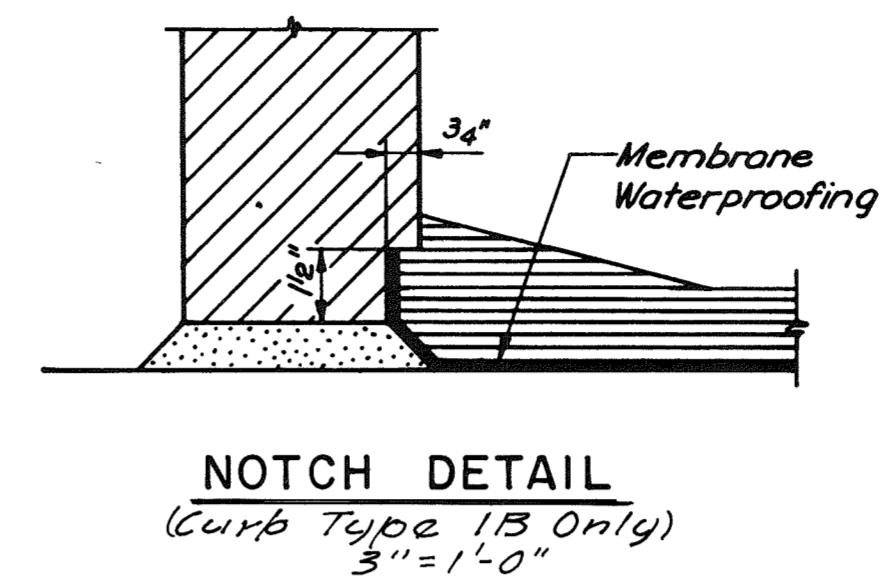
Contract 92.10 Sheet No. 21 of 32

By: Date:	R.A.L. 11-91
Designed:	R.A.L. 11-91
Drawn:	C.S.L. 11-91
Checked:	R.A.L. 12-91
In charge of:	R.A.L.

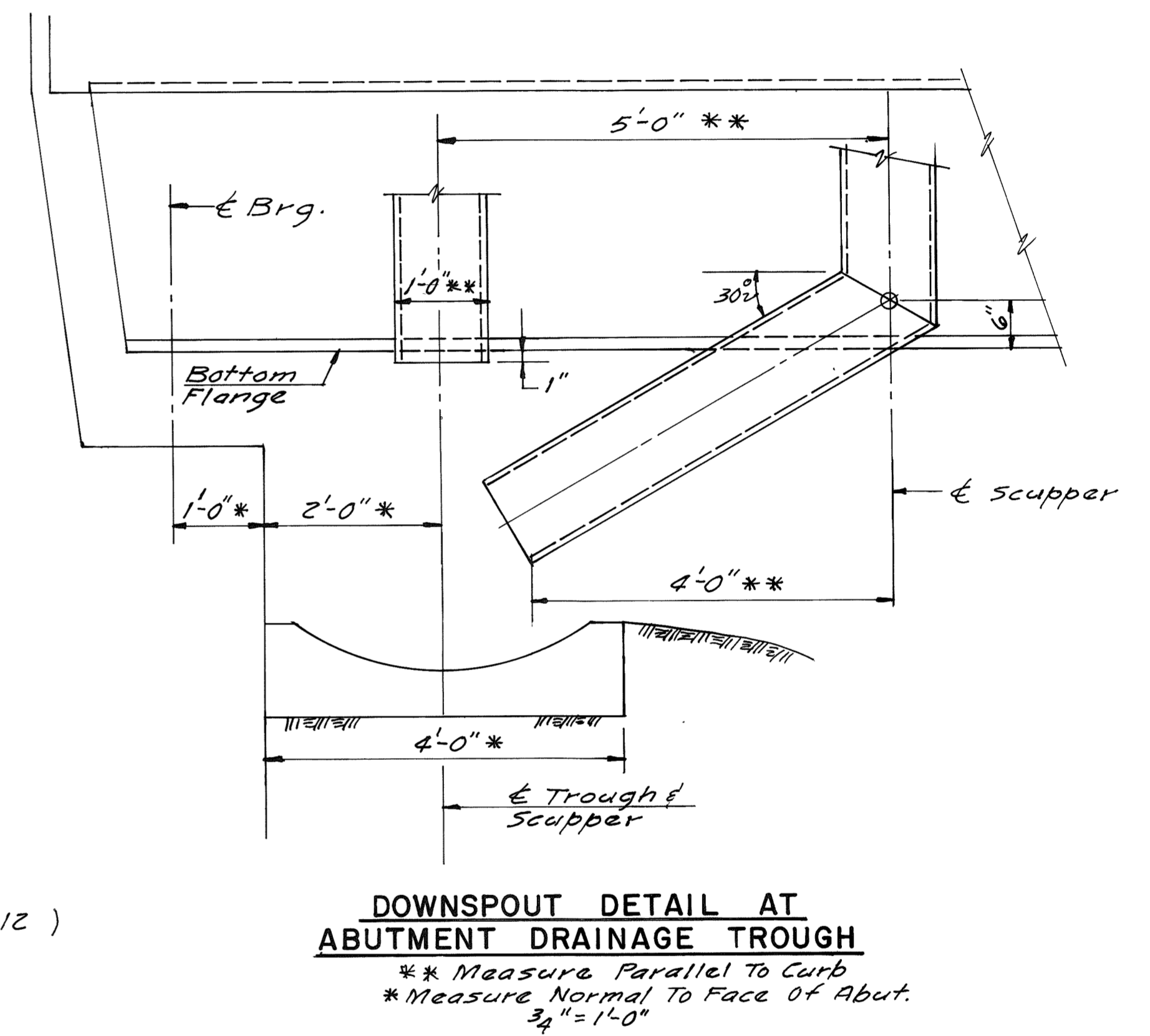
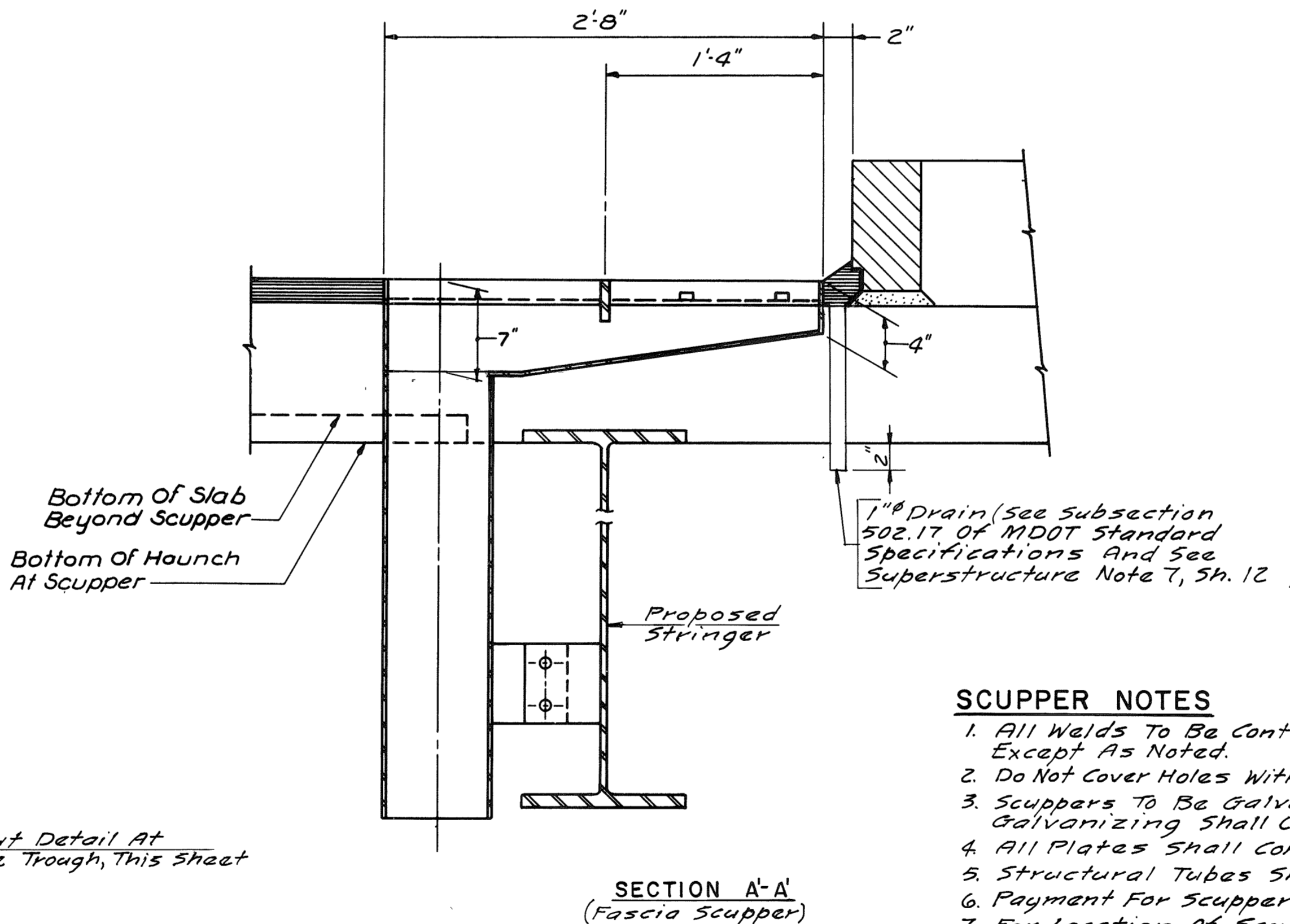




\* Note  
Membrane Waterproofing And Notch  
Not Required At Wingwall (Curb Type 1A)

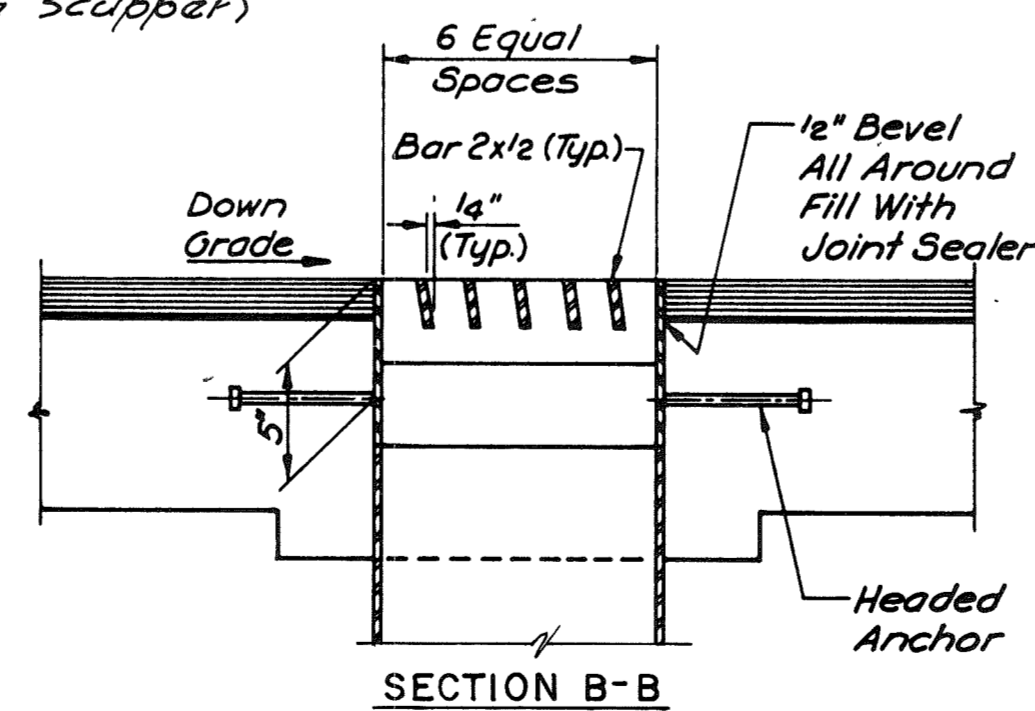
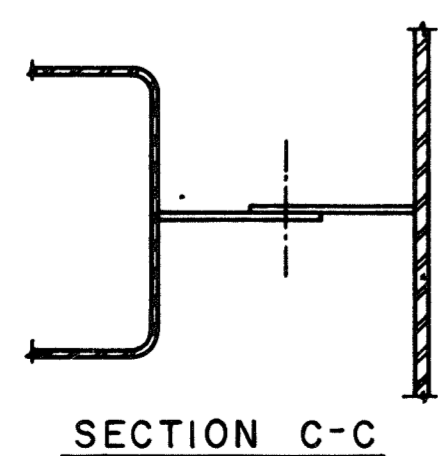


NOTE  
For Data Not Noted, See  
Section A-A (Median Scupper)



**SCUPPER NOTES**

1. All Welds To Be Continuous 1/4" Fillet Welds  
Except As Noted.
2. Do Not Cover Holes With Membrane Waterproofing.
3. Scuppers To Be Galvanized After Fabrication.  
Galvanizing Shall Conform To A.S.T.M. A153.
4. All Plates Shall Conform To A.S.T.M. A709 Grade 36.
5. Structural Tubes Shall Conform To A.S.T.M. A501.
6. Payment For Scuppers Incidental To Contract Items.
7. For Location Of Scuppers And 1" # Drains, See  
Superstructure Details, Sheet 21.



**SCUPPER DETAILS**  
1 1/2" = 1'-0"

Maine Turnpike Authority <b>Maine Turnpike</b>		WARREN AVENUE MISCELLANEOUS DETAILS	
HOWARD NEEDLES TAMMEN & BERGENDOFF ARCHITECTS ENGINEERS PLANNERS		Contract 92.10 Sheet No. 22 of 32	
By: Date:	Designed: S.H.R. 12-91	Checked: R.A.L. 12-91	In charge of: R.A.L.
Drawn: R.D.F. 12-91			
No. Revision	By: Date:		

MARK	SIZE	NO.	LENGTH	TYPE	DIMENSIONS				INCR.	LOCATION AND REMARKS
					A	B	C	D		
SOUTH ABUTMENT - SOUTHBOUND FOOTING										
6F1	6	13	3'-0"	Str.						Ftg. - Horz. Dowels
6F2	6	19	4'-10"	Str.						Ftg. - Trans.
6F3	6	7	15'-8" to 17'-8"	Str.					4"	Ftg. - Long. (1 Grp. of 7)
* 6F4	6	31	4'-5"	118	3'-9"	8"				Ftg. - Vert. Dowels
* 6F5	6	3	3'-0"	Str.						Ftg. - Vert. Dowels



MARK	SIZE	NO.	LENGTH	TYPE	DIMENSIONS				INCR.	LOCATION AND REMARKS
					A	B	C	D		
SOUTH ABUTMENT - SOUTHBOUND STEM AND BACKWALL										
* 5A1	5	13	4'-8"	101	1'-2"	1'-9"				Wingwall - Curb Dowels
* 5A2	5	9	14'-9"	Str.						Wingwall - Curb
* 5A3	5	16	2'-11"	109	6"	1'-9"	5 1/2"	8"		Wingwall - Curb Haunch
* 5A4	5	13	5'-4"	101	1'-10"	1'-9"				Wingwall - Curb
* 5A5	5	3	4'-3" to 4'-10"	101	9" to 1'-4"	1'-9"			3 1/2"	Wingwall - Fascia (1 Grp. of 3)
* 5A6	5	3	4'-11" to 5'-6"	101	1'-5" to 2'-0"	1'-9"			3 1/2"	Wingwall - Median (1 Grp. of 3)
* 5A7	5	1	6'-5"	119	2'-5"	4'-0"	1'-8"			Top of Backwall
* 5A8	5	1	2'-6"	Str.						Top of Backwall
* 5A9	5	2	5'-9"	Str.						Top of Backwall
* 5A10	5	1	5'-10"	109	10"	3'-0"	10"	2'-0"		Top of Backwall
* 6A1	6	6	6'-10"	119	3'-10"	3'-0"	1 1/2"			Abut. Stem - Vert.
* 6A2	6	23	3'-3"	Str.						Abut. Stem - Dowels
* 6A3	6	4	8'-9"	119	5'-9"	3'-0"	1'-3"			Abut. Stem - Horz.
* 6A4	6	4	5'-6"	Str.						Abut. Stem - Horz.
* 6A5	6	3	8'-6"	Str.						Abut. Stem - Vert.
* 6A6	6	4	12'-6"	119	8'-6"	4'-0"	1'-8"			Abut. Stem - Horz.
* 6A7	6	4	9'-3"	Str.						Abut. Stem - Horz.
* 6A8	6	5	5'-6"	Str.						Abut. Stem - Vert.
* 6A9	6	7	4'-6"	Str.						Abut. Stem - Vert.
* 6A10	6	4	6'-0"	118	4'-0"	2'-0"				Abut. Stem - Horz.
* 6A11	6	8	13'-6" to 14'-8"	Str.					2"	Abut. Stem - Horz. (1 Grp. of 8)
* 6A12	6	8	15'-6"	Str.						Abut. Stem - Horz.
* 6A13	6	1	3'-10"	Str.						Abut. Stem - Vert.
* 6A14	6	32	8'-3"	Str.						Wingwall Stem - Vert.
* 6A15	6	2	14'-8"	Str.						Wingwall Stem - Horz.

MARK	SIZE	NO.	LENGTH	TYPE	DIMENSIONS				INCR.	LOCATION AND REMARKS
					A	B	C	D		
SOUTH ABUTMENT - NORTHBOUND FOOTING										
6F1	6	15	3'-0"	Str.						Ftg. - Horz. Dowels
6F2	6	18	4'-10"	Str.						Ftg. - Trans.
6F3	6	7	15'-1" to 17'-1"	Str.					4"	Ftg. - Long. (1 Grp. of 7)
* 6F4	6	30	4'-5"	118	3'-9"	8"				Ftg. - Vert. Dowels
* 6F5	6	3	3'-0"	Str.						Ftg. - Vert. Dowels

MARK	SIZE	NO.	LENGTH	TYPE	DIMENSIONS				INCR.	LOCATION AND REMARKS
					A	B	C	D		
SOUTH ABUTMENT - NORTHBOUND STEM AND BACKWALL										
* 5A1	5	13	4'-8"	101	1'-2"	1'-9"				Wingwall - Curb Dowels
* 5A2	5	9	14'-9"	Str.						Wingwall - Curb
* 5A3	5	16	2'-11"	109	6"	1'-9"	5 1/2"	8"		Wingwall - Curb Haunch
* 5A4	5	13	5'-4"	101	1'-10"	1'-9"				Wingwall - Curb
* 5A5	5	3	4'-3" to 4'-10"	101	9" to 1'-4"	1'-9"			3 1/2"	Wingwall - Fascia (1 Grp. of 3)
* 5A6	5	3	4'-11" to 5'-6"	101	1'-5" to 2'-0"	1'-9"			3 1/2"	Wingwall - Median (1 Grp. of 3)
* 5A7	5	1	7'-1"	109	8"	4'-0"	2'-2 1/2"	2'-5"		Top of Backwall
* 5A8	5	1	2'-6"	Str.						Top of Backwall
* 5A9	5	2	5'-9"	Str.						Top of Backwall
* 5A10	5	1	6'-11"	106	3'-0"	3'-0"	10"	11"		Top of Backwall
* 6A1	6	5	6'-10"	119	3'-10"	3'-0"	1 1/2"			Abut. Stem - Vert.
* 6A2	6	24	3'-3"	Str.						Abut. Stem - Dowels
* 6A3	6	4	9'-9"	111	6'-9"	3'-0"	1'-3"			Abut. Stem - Horz.
* 6A4	6	4	5'-6"	Str.						Abut. Stem - Horz.
* 6A5	6	3	8'-6"	Str.						Abut. Stem - Vert.
* 6A6	6	4	13'-3"	109	8"	4'-0"	7'-9 3/4"	8'-7"		Abut. Stem - Horz.
* 6A7	6	4	8'-10"	Str.						Abut. Stem - Horz.
* 6A8	6	5	5'-6"	Str.						Abut. Stem - Vert.
* 6A9	6	8	4'-6"	Str.						Abut. Stem - Vert.
* 6A10	6	4	6'-0"	118	4'-0"	2'-0"				Wingwall Stem - Horz.
* 6A11	6	8	13'-6" to 14'-8"	Str.					2"	Wingwall Stem - Horz. (1 Grp. of 8)
* 6A12	6	8	14'-6"	Str.						Wingwall Stem - Horz.
* 6A13	6	1	3'-10"	Str.						Abut. Stem - Vert.
* 6A14	6	32	8'-3"	Str.						Wingwall Stem - Vert.
* 6A15	6	2	14'-8"	Str.						Wingwall Stem - Horz.

**REINFORCING NOTES**

- \* - Denotes Reinforcing Steel To Be Epoxy Coated.
- For End Post Reinforcing Layout, See Standard Detail Sheet BD 201-89.

Maine Turnpike Authority <b>Maine Turnpike</b>	
	<b>WARREN AVENUE</b> REINFORCING SCHEDULE I
	HOWARD NEEDLES TAMMEN & BERGENOFF ARCHITECTS ENGINEERS PLANNERS
Contract 92.10	Sheet No. <u>23</u> of <u>32</u>

No.	Revision	By	Date	In Charge Of:
				RAL

2

MARK	SIZE	NO.	LENGTH	TYPE	DIMENSIONS				INCR.	LOCATION AND REMARKS
					A	B	C	D		
NORTH ABUTMENT - SOUTHBOUND FOOTING										
6F1	6	15	3'-0"	Str.						Ftg. - Horz. Dowels
6F2	6	18	4'-10"	Str.						Ftg. - Trans.
6F3	6	7	15'-1" to 17'-1"	Str.					4"	Ftg. - Long. (1 Grp. of 7)
* 6F4	6	30	4'-5"	118	3'-9"	8"				Ftg. - Vert. Dowels
* 6F5	6	3	3'-0"	Str.						Ftg. - Vert. Dowels

MARK	SIZE	NO.	LENGTH	TYPE	DIMENSIONS				INCR.	LOCATION AND REMARKS
					A	B	C	D		
NORTH ABUTMENT - NORTHBOUND FOOTING										
6F1	6	13	3'-0"	Str.						Ftg. - Horz. Dowels
6F2	6	19	4'-10"	Str.						Ftg. - Trans.
6F3	6	7	15'-8" to 17'-8"	Str.					4"	Ftg. - Long. (1 Grp. of 7)
* 6F4	6	31	4'-5"	118	3'-9"	8"				Ftg. - Vert. Dowels
* 6F5	6	3	3'-0"	Str.						Ftg. - Vert. Dowels

MARK	SIZE	NO.	LENGTH	TYPE	DIMENSIONS				INCR.	LOCATION AND REMARKS
					A	B	C	D		
NORTH ABUTMENT - SOUTHBOUND STEM AND BACKWALL										
* 5A1	5	13	4'-8"	101	1'-2"	1'-9"				Wingwall - Curb Dowels
* 5A2	5	9	14'-9"	Str.						Wingwall - Curb
* 5A3	5	16	2'-11"	109	6"	1'-9"	5 1/2"	8"		Wingwall - Curb Haunch
* 5A4	5	13	5'-4"	101	1'-0"	1'-9"				Wingwall - Curb
* 5A5	5	3	4'-3" to 4'-10"	101	9" to 1'-4"	1'-9"			3 1/2"	Wingwall - Fascia (1 Grp. of 3)
* 5A6	5	3	4'-11" to 5'-6"	101	1'-5" to 2'-0"	1'-9"			3 1/2"	Wingwall - Median (1 Grp. of 3)
* 5A7	5	1	7'-1"	109	8"	4'-0"	2'- 2 1/2"	2'-5"		Top of Backwall
* 5A8	5	1	2'-6"	Str.						Top of Backwall
* 5A9	5	2	5'-9"	Str.						Top of Backwall
* 5A10	5	1	6'-11"	106	3'-0"	3'-0"	10"	11"		Top of Backwall
* 6A1	6	5	6'-10"	119	3'-10"	3'-0"	1 1/2"			Abut. Stem - Vert.
* 6A2	6	24	3'-3"	Str.						Abut. Stem - Dowels
* 6A3	6	4	9'-9"	111	6'-9"	3'-0"	1'-3"			Abut. Stem - Horz.
* 6A4	6	4	5'-6"	Str.						Abut. Stem - Horz.
* 6A5	6	3	8'-4"	Str.						Abut. Stem - Vert.
* 6A6	6	4	13'-3"	109	8"	4'-0"	7'-9 3/4"	8'-7"		Abut. Stem - Horz.
* 6A7	6	4	8'-10"	Str.						Abut. Stem - Horz.
* 6A8	6	5	5'-6"	Str.						Abut. Stem - Vert.
* 6A9	6	8	4'-6"	Str.						Abut. Stem - Vert.
* 6A10	6	4	6'-0"	118	4'-0"	2'-0"				Wingwall Stem - Horz.
* 6A11	6	8	13'-6" to 14'-8"	Str.					2"	Wingwall Stem - Horz. (1 Grp. of 8)
* 6A12	6	8	14'-6"	Str.						Wingwall Stem - Horz.
* 6A13	6	1	3'-10"	Str.						Abut. Stem - Vert.
* 6A14	6	32	8'-3"	Str.						Wingwall Stem - Vert.
* 6A15	6	2	14'-8"	Str.						Wingwall Stem - Horz.

MARK	SIZE	NO.	LENGTH	TYPE	DIMENSIONS				INCR.	LOCATION AND REMARKS
					A	B	C	D		
NORTH ABUTMENT - NORTHBOUND STEM AND BACKWALL										
* 5A1	5	13	4'-8"	101	1'-2"	1'-9"				Wingwall - Curb Dowels
* 5A2	5	9	14'-9"	Str.						Wingwall - Curb
* 5A3	5	16	2'-11"	109	6"	1'-9"	5 1/2"	8"		Wingwall - Curb Haunch
* 5A4	5	13	5'-4"	101	1'-10"	1'-9"				Wingwall - Curb
* 5A5	5	3	4'-3" to 4'-10"	101	9" to 1'-4"	1'-9"			3 1/2"	Wingwall - Fascia (1 Grp. of 3)
* 5A6	5	3	4'-11" to 5'-6"	101	1'-5" to 2'-0"	1'-9"			3 1/2"	Wingwall - Median (1 Grp. of 3)
* 5A7	5	1	6'-5"	119	2'-5"	4'-0"	1'-8"			Top of Backwall
* 5A8	5	1	2'-6"	Str.						Top of Backwall
* 5A9	5	2	5'-9"	Str.						Top of Backwall
* 5A10	5	1	5'-10"	109	10"	3'-0"	10"	2'-0"		Top of Backwall
* 6A1	6	6	6'-10"	119	3'-10"	3'-0"	1 1/2"			Abut. Stem - Vert.
* 6A2	6	23	3'-3"	Str.						Abut. Stem - Dowels
* 6A3	6	4	8'-9"	119	5'-9"	3'-0"	1'-3"			Abut. Stem - Horz.
* 6A4	6	4	5'-6"	Str.						Abut. Stem - Horz.
* 6A5	6	3	8'-9"	Str.						Abut. Stem - Vert.
* 6A6	6	4	12'-6"	119	8'-6"	4'-0"	1'-8"			Abut. Stem - Horz.
* 6A7	6	4	9'-3"	Str.						Abut. Stem - Horz.
* 6A8	6	5	5'-6"	Str.						Abut. Stem - Vert.
* 6A9	6	7	4'-6"	Str.						Abut. Stem - Vert.
* 6A10	6	4	6'-0"	118	4'-0"	2'-0"				Abut. Stem - Horz.
* 6A11	6	8	13'-6" to 14'-8"	Str.					2"	Abut. Stem - Horz. (1 Grp. of 8)
* 6A12	6	8	15'-6"	Str.						Abut. Stem - Horz.
* 6A13	6	1	3'-10"	Str.						Abut. Stem - Vert.
* 6A14	6	32	8'-6"	Str.						Wingwall Stem - Vert.
* 6A15	6	2	14'-8"	Str.						Wingwall Stem - Horz.

MARK	SIZE	NO.	LENGTH	TYPE	DIMENSIONS				INCR.	LOCATION AND REMARKS
					A	B	C	D		
END POSTS (SEE NOTE 2)										
*EP400	4	48	2'-0"	Str.						Vert.
*EP401	4	32	4'-11"	102	11"	2'-0"	2'-0"			Vert.
*EP402	4	16	4'-6"	102	6"	2'-0"	2'-0"			Vert.
*EP405	4	48	2'-0"	Str.						Vert. Dowels
*EP500	5	32	7'-10"	102	7"	1'-9"	5'-6"			Horz.
*EP501	5	32	6'-8"	109	2'-7"	1'-0"	3'- 0 1/8"	3'-1"		Horz.
*EP502	5	32	5'-3"	102	11"	2'-2"	2'-2"			Vert. Dowels
*EP503	5	16	4'-10"	102	6"	2'-2"	2'-2"			Vert. Dowels

Maine Turnpike Authority  
**Maine Turnpike**

**WARREN AVENUE**  
REINFORCING SCHEDULE II

**HNTB**

HOWARD NEEDLES TAMMEN & BERGENDOFF  
ARCHITECTS ENGINEERS PLANNERS

Contract 92.10

Sheet No. **24** of **32**

No.	Revision	By	Date	In Charge Of:

MARK	SIZE	NO.	LENGTH	TYPE	DIMENSIONS				INCR.	LOCATION AND REMARKS
					A	B	C	D		
PIER 1 - SOUTHBOUND FOOTING										
6PF1	6	24	6'-8"	107	1'-0"		5'-8"			Dowels
7PF1	7	12	7'-6"	Str.						Ftg. Trans.
7PF2	7	8	11'-6"	Str.						Ftg. Long.
7PF3	7	8	3'-6"	Str.						Dowels

MARK	SIZE	NO.	LENGTH	TYPE	DIMENSIONS				INCR.	LOCATION AND REMARKS
					A	B	C	D		
PIER 1 - SOUTHBOUND STEM AND CAP										
6P1	6	10	2'-4" to 5'-6"	Str.					9 1/2"	Horz. Stem Dowels
6P2	6	10	4'-10"	101	2'-4"	1'-3"				Horz. Stem
6P3	6	8	3'-4"	Str.						Vert. Stem Dowel
6P4	6	2	4'-10"	Str.						Vert. Stem
6P5	6	2	4'-6"	Str.						Vert. Stem
6P6	6	4	6'-2"	Str.						Vert. Stem
6P7	6	4	5'-2"	Str.						Vert. Stem
6P8	6	4	6'-7"	104	4'-4"	2'-3"	1'-6"			Cap Bot.
6P9	6	10	12'-0"	Str.						Horz. Stem
6P10	6	28	3'-8"	Str.						Vert. Stem
6P11	6	4	17'-1"	116	12'-1"	2'-6"	1'-6"	2'-6"		Cap Bot.
6P12	6	2	10'-6"	Str.						Cap Sides
6P13	6	4	7'-5"	Str.						Cap Sides
6P14	6	6	9'-10"	111	7'-4"	2'-6"	7"			Cap Top
6P15	6	3	5'-8"	101	2'-8"	1'-6"				Cap Ends
6P16	6	14	9'-8"	101	2'-8"	3'-6"				Stirrups
6P17	6	18	2'-8"	Str.						Horz. Stem Dowel
6P18										Not Issued
6P19	6	16	4'-0"	107		2'-3"	1'-9"			Pier Cap
6P20	6	4	6'-0"	Str.						Pier Cap
7P1	7	10	7'-0"	104	4'-6"	2'-6"	8"			Cap Top Dowel

MARK	SIZE	NO.	LENGTH	TYPE	DIMENSIONS				INCR.	LOCATION AND REMARKS
					A	B	C	D		
PIER 1 - NORTHBOUND FOOTING										
6PF1	6	24	6'-8"	107	1'-0"		5'-8"			Dowels
7PF1	7	12	7'-6"	Str.						Ftg. Trans.
7PF2	7	8	11'-6"	Str.						Ftg. Long.
7PF3	7	8	3'-6"	Str.						Dowels

MARK	SIZE	NO.	LENGTH	TYPE	DIMENSIONS				INCR.	LOCATION AND REMARKS
					A	B	C	D		
PIER 1 - NORTHBOUND STEM AND CAP										
6P1	6	10	2'-4" to 5'-6"	Str.					9 1/2"	Horz. Stem Dowels
6P2	6	10	4'-10"	101	2'-4"	1'-3"				Horz. Stem
6P3	6	8	3'-4"	Str.						Vert. Stem Dowel
6P4	6	2	4'-10"	Str.						Vert. Stem
6P5	6	2	4'-6"	Str.						Vert. Stem
6P6	6	4	6'-2"	Str.						Vert. Stem
6P7	6	4	5'-2"	Str.						Vert. Stem
6P8	6	4	6'-7"	104	4'-4"	2'-3"	1'-6"			Cap Bot.
6P9	6	10	12'-0"	Str.						Horz. Stem
6P10	6	28	3'-8"	Str.						Vert. Stem
6P11	6	4	17'-1"	116	12'-1"	2'-6"	1'-6"	2'-6"		Cap Bot.
6P12	6	2	10'-6"	Str.						Cap Sides
6P13	6	4	7'-5"	Str.						Cap Sides
6P14	6	6	9'-10"	111	7'-4"	2'-6"	7"			Cap Top
6P15	6	3	5'-8"	101	2'-8"	1'-6"				Cap Ends
6P16	6	14	9'-8"	101	2'-8"	3'-6"				Stirrups
6P17	6	18	2'-8"	Str.						Horz. Stem Dowel
6P18										Not Issued
6P19	6	16	4'-0"	107		2'-3"	1'-9"			Pier Cap
6P20	6	4	6'-0"	Str.						Pier Cap
7P1	7	10	7'-0"	104	4'-6"	2'-6"	8"			Cap Top Dowel

MARK	SIZE	NO.	LENGTH	TYPE	DIMENSIONS				INCR.	LOCATION AND REMARKS
					A	B	C	D		
PIER 2 - SOUTHBOUND FOOTING										
6PF1	6	18	5'-3"	107	1'-0"		4'-3"			Dowels
9PF1	9	22	9'-6"	Str.						Ftg. Trans.
9PF2	9	10	10'-9"	Str.						Ftg. Long.
9PF3	9	10	5'-0"	Str.						Dowels

MARK	SIZE	NO.	LENGTH	TYPE	DIMENSIONS				INCR.	LOCATION AND REMARKS
					A	B	C	D		
PIER 2 - SOUTHBOUND STEM AND CAP										
6P1	6	26	1'-10" to 5'-6"	Str.					3 5/8"	Horz. Stem Dowel
6P2	6	25	4'-6"	101	2'-4"	1'-1"				Horz. Stem End
6P3	6	6	3'-4"	Str.						Vert. Stem Dowels
6P4	6	2	13'-1"	Str.						Vert. Stem
6P5	6	2	9'-0"	Str.						Vert. Stem
6P6	6	4	14'-0"	Str.						Vert. Stem
6P7	6	4	11'-6"	Str.						Vert. Stem
6P8	6	4	6'-7"	104	4'-4"	2'-3"	1'-6"			Cap Bot.
6P9	6	26	8'-6" to 12'-2"	Str.					3 5/8"	Horz. Stem
6P10	6	28	3'-8"	Str.						Vert. Stem
6P11	6	4	17'-1"	116	12'-1"	2'-6"	1'-6"	2'-6"		Cap Bot.
6P12	6	2	10'-6"	Str.						Cap Side
6P13	6	4	7'-5"	Str.						Cap Side
6P14	6	6	9'-10"	111	7'-4"	2'-6"	7"			Cap Top
6P15	6	3	5'-8"	101	2'-8"	1'-6"				Cap Ends
6P16	6	14	9'-8"	101	2'-8"	3'-6"				Stirrups
6P17	6	28	12'-3"	Str.						Vert. Stem
6P18	6	34	2'-8"	Str.						Horz. Stem Dowel
6P19										Not Issued
6P20	6	16	4'-0"	107		2'-3"	1'-9"			Pier Cap
6P21	6	4	6'-0"	Str.						Pier Cap
7P1	7	10	7'-0"	104	4'-6"	2'-6"	8"			Cap Top Dowel

MARK	SIZE	NO.	LENGTH	TYPE	DIMENSIONS				INCR.	LOCATION AND REMARKS
					A	B	C	D		
PIER 2 - NORTHBOUND FOOTING										
6PF1	6	18	5'-3"	107	1'-0"		4'-3"			Dowels
9PF1	9	22	9'-6"	Str.						Ftg. Trans.
9PF2	9	10	10'-9"	Str.						Ftg. Long.
9PF3	9	10	5'-0"	Str.						Dowels

Maine Turnpike Authority  
**Maine Turnpike**

**WARREN AVENUE**  
REINFORCING SCHEDULE III

**HNTB** HOWARD NEEDLES TAMMEN & BERGENDOFF  
ARCHITECTS ENGINEERS PLANNERS

Contract 92.10      Sheet No. 25 of 32

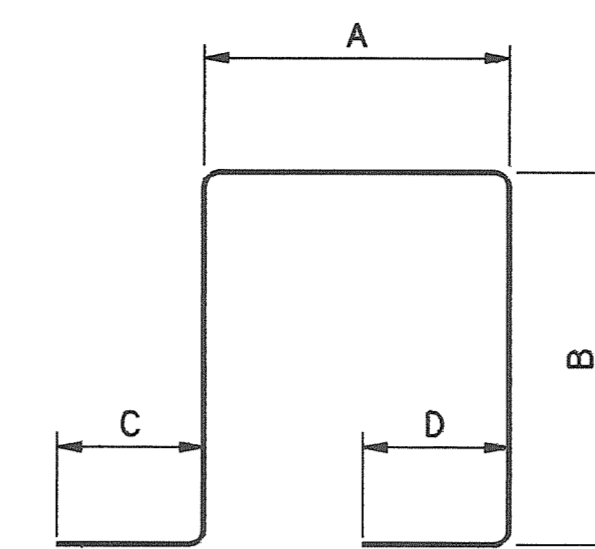
No.	Revision	By	Date	In Charge Of:
				RAL

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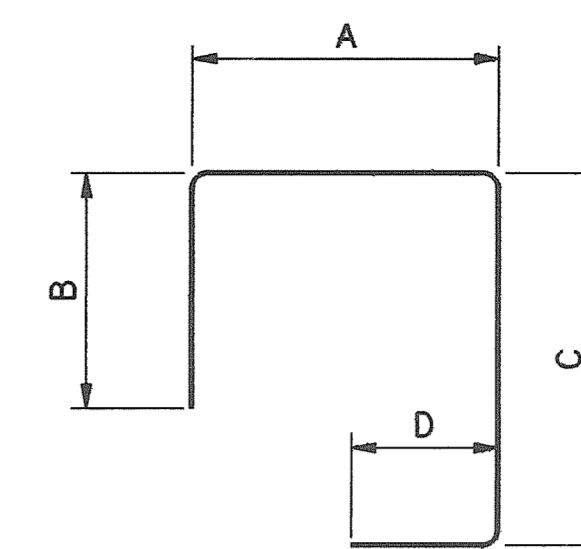
MARK	SIZE	NO.	LENGTH	TYPE	DIMENSIONS				INCR.	LOCATION AND REMARKS
					A	B	C	D		
PIER 2 - NORTHBOUND STEM AND CAP										
6P1	6	26	1'-10" to 5'-6"	Str.					3 5/8"	Horz. Stem Dowel
6P2	6	25	4'-6"	101	2'-4"	1'-1"				Horz. Stem End
6P3	6	8	3'-4"	Str.						Vert. Stem Dowels
6P4	6	2	13'-1"	Str.						Vert. Stem
6P5	6	2	9'-0"	Str.						Vert. Stem
6P6	6	4	14'-0"	Str.						Vert. Stem
6P7	6	4	11'-6"	Str.						Vert. Stem
6P8	6	4	6'-7"	104	4'-4"	2'-3"	1'-6"			Cap Bot.
6P9	6	26	8'-6" to 12'-2"	Str.					3 5/8"	Horz. Stem
6P10	6	28	3'-8"	Str.						Vert. Stem
6P11	6	4	17'-1"	116	12'-1"	2'-6"	1'-6"	2'-6"		Cap Bot.
6P12	6	2	10'-6"	Str.						Cap Side
6P13	6	4	7'-5"	Str.						Cap Side
6P14	6	6	9'-10"	111	7'-4"	2'-6"	7"			Cap Top
6P15	6	3	5'-8"	101	2'-8"	1'-6"				Cap Ends
6P16	6	14	9'-8"	101	2'-8"	3'-6"				Stirrups
6P17	6	28	12'-3"	Str.						Vert. Stem
6P18	6	34	2'-8"	Str.						Horz. Stem Dowel
6P19										Not Issued
6P20	6	16	4'-0"	107		2'-3"	1'-9"			Pier Cap
6P21	6	4	6'-0"	Str.						Pier Cap
7P1	7	10	7'-0"	104	4'-6"	2'-6"	8"			Cap Top Dowel

MARK	SIZE	NO.	LENGTH	TYPE	DIMENSIONS				INCR.	LOCATION AND REMARKS
					A	B	C	D		
DECK SLAB - SOUTHBOUND										
* 4S1	4	239	7'-6"	Str.						Trans. - Top
* 5S1	5	444	25'-0"	Str.						Long. T & B
* 5S2	5	222	28'-6"	Str.						Long. T & B
* 5S3	5	458	5'-3"	101	1'-1"	1'-3"	10"	10"		Curb Dowels
* 5S4	5	28	7'-3"	Str.						Trans. At Abut.
* 5S5	5	7	7'-6"	Str.						Trans. At Abut.
* 5S6	5	86	4'-6"	118	4'-0"	6"				Long. At Abut.
* 5S7	5	422	15'-0"	Str.						Trans. - Top
* 5S8	5	422	28'-4"	Str.						Trans. - Top
* 5S9	5	422	18'-4"	Str.						Trans. - Bot.
* 5S10	5	422	25'-0"	Str.						Trans. Bot.
* 5S11	5	60	7'-0" to 38'-5"	Str.					1'-1"	Trans. - T & B (2 Grps. of 30)
* 5S12	5	7	7'-6"	Str.						Trans. - T & B
* 5S13	5	60	6'-7" to 37'-0"	Str.					1'-1"	Trans. - T & B (2 Grps. of 30)
* 5S14	5	7	4'-6"	Str.						Trans. - Top
* 5S15	5	4	3'-2"	Str.						Trans. - T & B
* 7S1	7	340	19'-6"	Str.						Long. - Over Piers
* 7S2	7	340	30'-0"	Str.						Long. - Over Piers

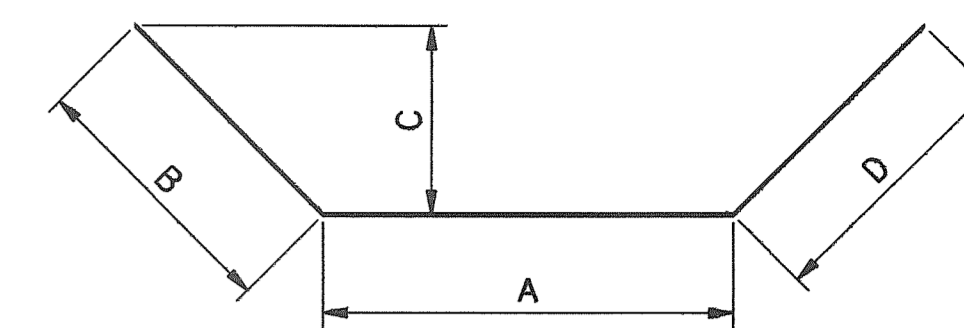
MARK	SIZE	NO.	LENGTH	TYPE	DIMENSIONS				INCR.	LOCATION AND REMARKS
					A	B	C	D		
DECK SLAB - NORTHBOUND										
* 4S1	4	239	7'-6"	Str.						Trans. - Top
* 5S1	5	444	25'-0"	Str.						Long. T & B
* 5S2	5	222	28'-6"	Str.						Long. T & B
* 5S3	5	458	5'-3"	101	1'-1"	1'-3"	10"	10"		Curb Dowels
* 5S4	5	28	7'-3"	Str.						Trans. At Abut.
* 5S5	5	7	7'-6"	Str.						Trans. At Abut.
* 5S6	5	86	4'-6"	118	4'-0"	6"				Long. At Abut.
* 5S7	5	422	15'-0"	Str.						Trans. - Top
* 5S8	5	422	28'-4"	Str.						Trans. - Top
* 5S9	5	422	18'-4"	Str.						Trans. - Bot.
* 5S10	5	422	25'-0"	Str.						Trans. Bot.
* 5S11	5	60	7'-0" to 38'-5"	Str.					1'-1"	Trans. - T & B (2 Grps. of 30)
* 5S12	5	7	7'-6"	Str.						Trans. - T & B
* 5S13	5	60	6'-7" to 37'-0"	Str.					1'-1"	Trans. - T & B (2 Grps. of 30)
* 5S14	5	7	4'-6"	Str.						Trans. - Top
* 5S15	5	4	3'-2"	Str.						Trans. - T & B
* 7S1	7	340	19'-6"	Str.						Long. - Over Piers
* 7S2	7	340	30'-0"	Str.						Long. - Over Piers



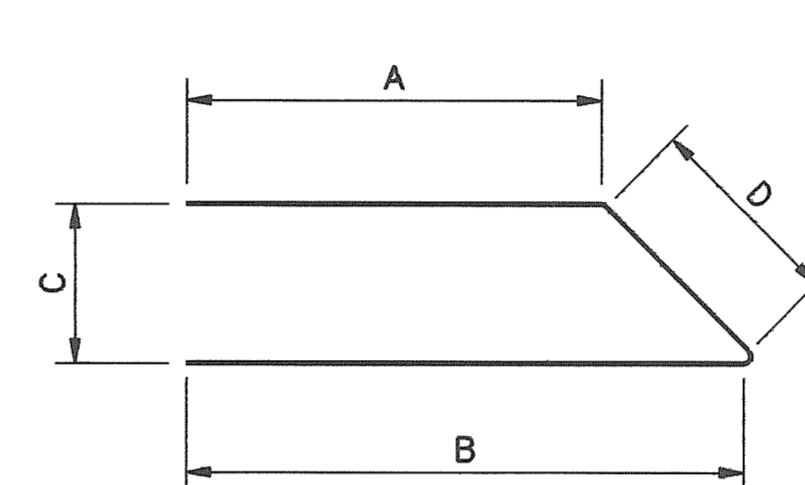
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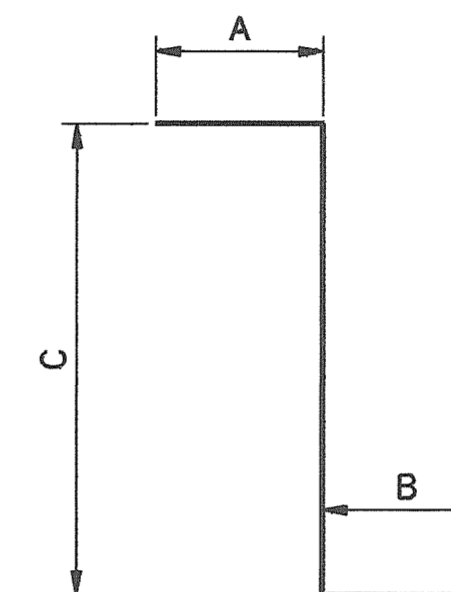
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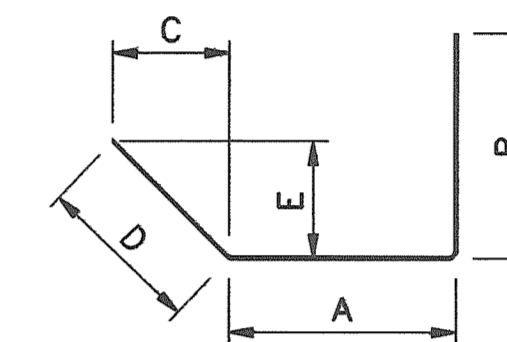
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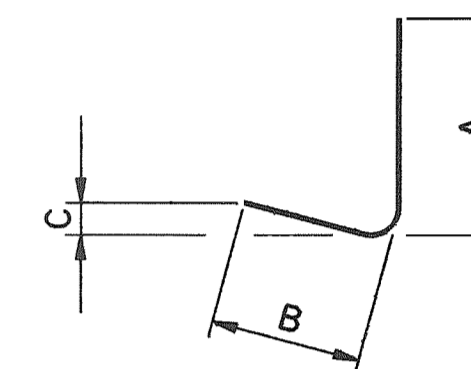
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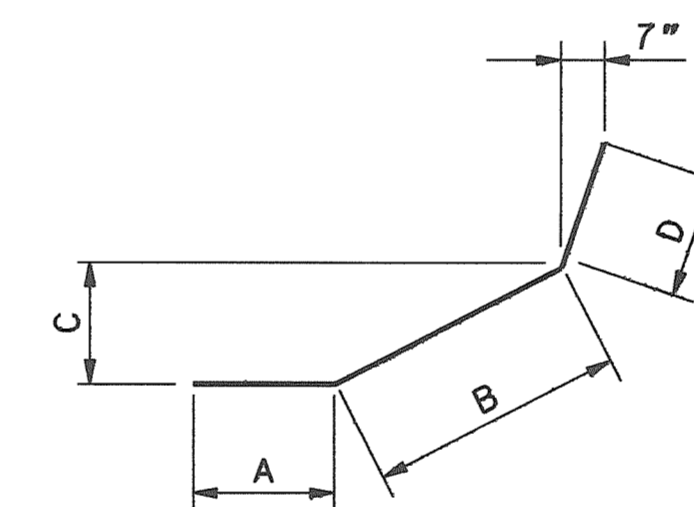
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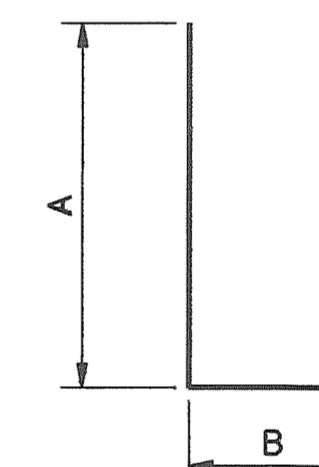
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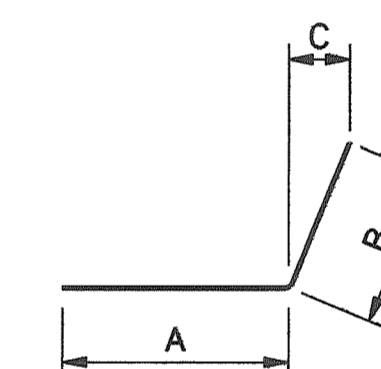
TYPE 111



TYPE 116



TYPE 118



TYPE 119

Maine Turnpike Authority  
**Maine Turnpike**

WARREN AVENUE  
 REINFORCING SCHEDULE IV

**HNTB** HOWARD NEEDLES TAMMEN & BERGENDOFF  
 ARCHITECTS ENGINEERS PLANNERS

Contract 92.10      Sheet No. 26 of 32

By	Date
Designed IS	1/92
Drawn BDH	1/92
Checked RAL	1/92
In Charge Of: RAL	

ITEM 202.202 REMOVING PAVEMENT SURFACE	SY
STA. 2435+22 TO STA. 2435+85 RT	187
STA. 2434+97 TO STA. 2435+68 LT	175
STA. 2438+7 TO STA. 2438+73 RT	187
STA. 2437+87 TO STA. 2438+49 LT	175
Entire Northbound Bridge Deck	<u>767</u>
TOTAL	1491

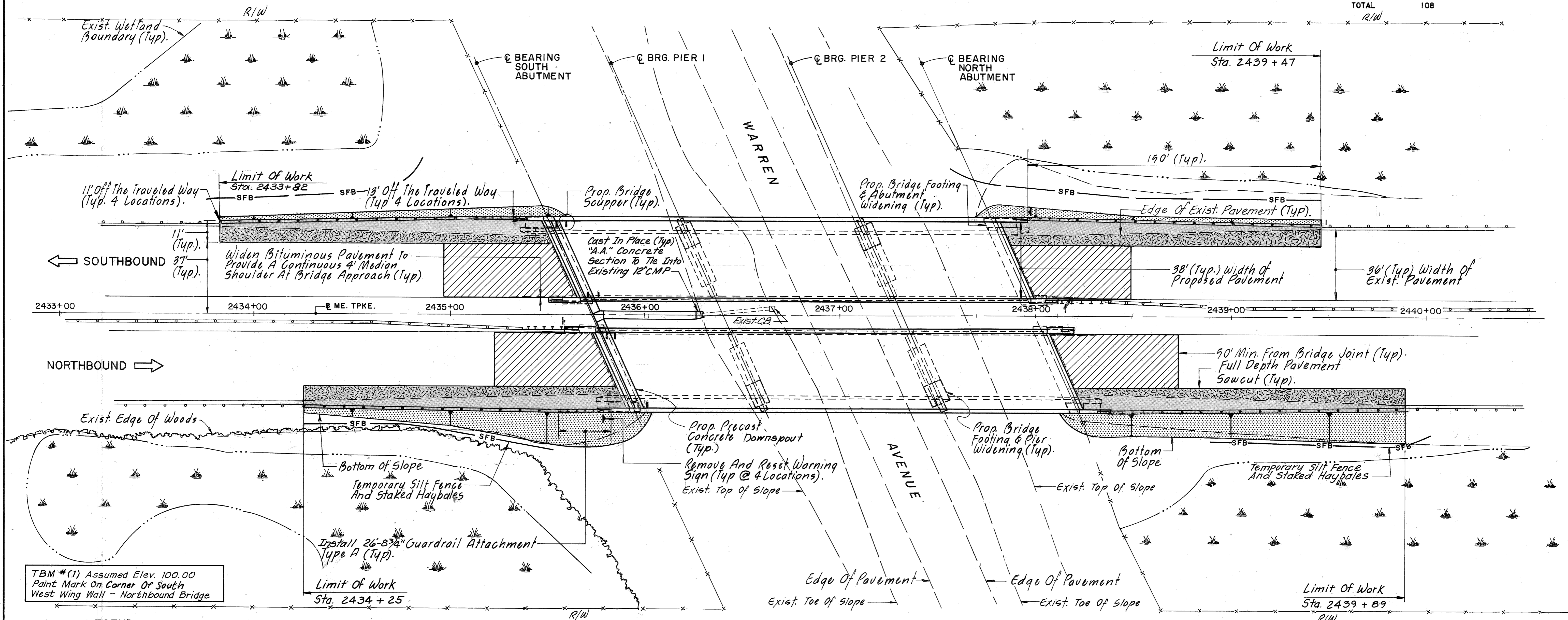
ITEM 421.01 PRECAST CONCRETE DOWNSPOUT	LF
STA. 2435+75 2' RT TO STA. 2436 47' RT	48
STA. 2435+52 2' LT TO STA. 2435+75 47 LT	48
STA. 2435+78 TO STA. 2436+26 L	48
TOTAL	<u>144</u>

ITEM 401.10 SAWING BITUMINOUS CONCRETE	LF
STA. 2434+25 TO STA. 2435+85 RT	160
STA. 2434+25 (37' RT TO 45' LT)	8
STA. 2433+82 TO STA. 2435+52 LT	170
STA. 2433+82 (37' RT TO 45' LT)	8
STA. 2438+19 TO STA. 2439+89 RT	170
STA. 2439+89 (37' RT TO 45' LT)	8
STA. 2437+87 TO STA. 2439+47 LT	160
STA. 2439+47 (37' RT TO 45' LT)	8
TOTAL	<u>692</u>

ITEM 606.174 GUARDRAIL ATTACHMENT - TYPE A	EA
STA. 2435+55 47' RT TO BRIDGE END POST	1
STA. 2435+12 12' LT TO BRIDGE END POST	1
STA. 2435+38 9' RT TO BRIDGE END POST	1
BRIDGE END POST TO STA. 2438+59 47' RT	1
BRIDGE END POST TO STA. 2438+16 47' LT	1
BRIDGE END POST TO STA. 2438+35 9' LT	1
TOTAL	<u>6</u>

ITEM 606.371 GUARDRAIL REMOVE AND STACK, SINGLE RAIL	LF
STA. 2435+55 42' RT TO BRIDGE END POST	27
STA. 2435+12 12' LT TO BRIDGE END POST	27
BRIDGE END POST TO STA. 2438+59 42' RT	27
BRIDGE END POST TO STA. 2438+16 42' RT	27
TOTAL	<u>108</u>



TBM # (1) Assumed Elev. 100.00  
Paint Mark On Corner Of South  
West Wing Wall - Northbound Bridge

**LEGEND**

- PAVEMENT MILLING AND 1/2" BITUMINOUS CONCRETE OVERLAY
- BITUMINOUS CONCRETE PAVEMENT REMOVAL
- 3" BITUMINOUS CONCRETE PAVEMENT
- EXISTING SINGLE RAIL GUARDRAIL
- GUARD RAIL ATTACHMENT TYPE "A" (REMOVE AND STACK EXISTING GUARD RAIL)
- TEMPORARY EROSION CONTROL BLANKET

- REMOVE AND RESET SINGLE RAIL GUARD RAIL
- EXISTING DOUBLE RAIL GUARD RAIL
- SFB - SILT FENCE AND HAY BALES

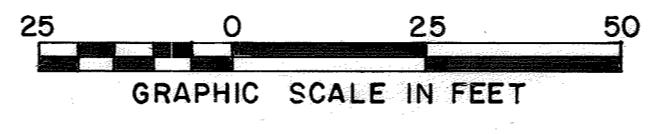
ITEM 613.319 TEMPORARY EROSION CONTROL BLANKET	S.Y.
STA. 2433+82 LT. TO STA. 2435+59 LT.	86
STA. 2434+25 RT. TO STA. 2436+02 RT.	215
STA. 2437+70 LT. TO STA. 2439+47 LT.	82
STA. 2438+11 RT. TO STA. 2439+89 RT.	272
TOTAL	<u>655</u>

ITEM 606.372 GUARDRAIL REMOVE AND STACK, DOUBLE RAIL	LF
STA. 2435+38 9' RT TO BRIDGE END POST	27
BRIDGE END POST TO STA. 2438+35 9' LT	27
TOTAL	<u>54</u>

ITEM 606.381 GUARDRAIL REMOVE AND RESET, SINGLE RAIL	LF
REMOVE STA. 2434+25 45' RT. TO STA. 2435+55 42 RT	130
RESET STA. 2434+25 45' RT TO STA. 2435+55 45 RT	130
REMOVE STA. 2433+82 45' LT TO STA. 2435+12 42 LT	130
RESET STA. 2433+82 45' LT TO STA. 2435+12 45 LT	130
REMOVE STA. 2438+59 42' RT TO STA. 2439+89 45' RT	130
RESET STA. 2438+59 45' RT TO STA. 2439+89 45' RT	130
REMOVE STA. 2438+16 42' LT TO STA. 2439+46 45' RT	130
RESET STA. 2438+16 45' LT TO STA. 2439+46 45' RT	130
TOTAL	<u>520</u>

ITEM 656.50 BALED HAY IN PLACE	EA
STA. 2434+25 57' RT TO STA. 2435+50 70' RT	50
STA. 2433+82 60' LT TO STA. 2434+80 90' LT	43
STA. 2438+90 65' RT TO STA. 2440+05 60' RT	46
STA. 2437+57 75' LT TO STA. 2439+47 60' LT	76
TOTAL	<u>215</u>

ITEM 656.632 30 INCH SILT FENCE	LF
STA. 2434+25 57' RT TO STA. 2435+50 70' RT	125
STA. 2433+82 60' LT TO STA. 2434+90 80' LT	108
STA. 2438+90 65' RT TO STA. 2440+05 60' RT	115
STA. 2437+57 75' LT TO STA. 2439+47 60' LT	190
TOTAL	<u>538</u>



No.	Revision	By:	Date:
		JFC	12/91
		HJS	1/92
		BJB	1/92
		RAL	

Maine Turnpike Authority  
**Maine Turnpike**

BRIDGE DECK REPLACEMENT  
WARREN AVENUE  
SITE PLAN

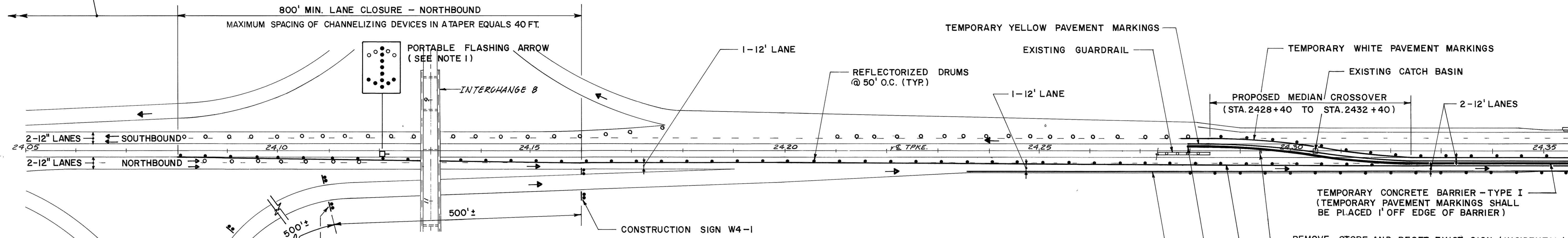
**HNTB** HOWARD NEEDLES TAMMEN & BERGENDOFF  
ARCHITECTS ENGINEERS PLANNERS

Contract 92.10      Sheet No. 27 of 32

ITEM 606.382 GUARDRAIL REMOVE AND RESET, DOUBLE RAIL	LF
STA. 2428+40 TO STA. 2432+40	400
STA. 2440+00 TO STA. 2444+00	400
<b>TOTAL</b>	<b>800</b>

ITEM 663.05 TEMPORARY CONCRETE BARRIER	LF
STA. 2428 TO STA. 2444+50	1650
STA. 2437+80 TO STA. 2443+30	550
<b>TOTAL</b>	<b>2200</b>

CURVE DATA FOR DETOUR						
ROADWAY	R	Δ	T	PC	PRC	PT
SOUTHBOUND	1500'	9°-07'-46"	119.76	2432+80	2432+40	2428+00



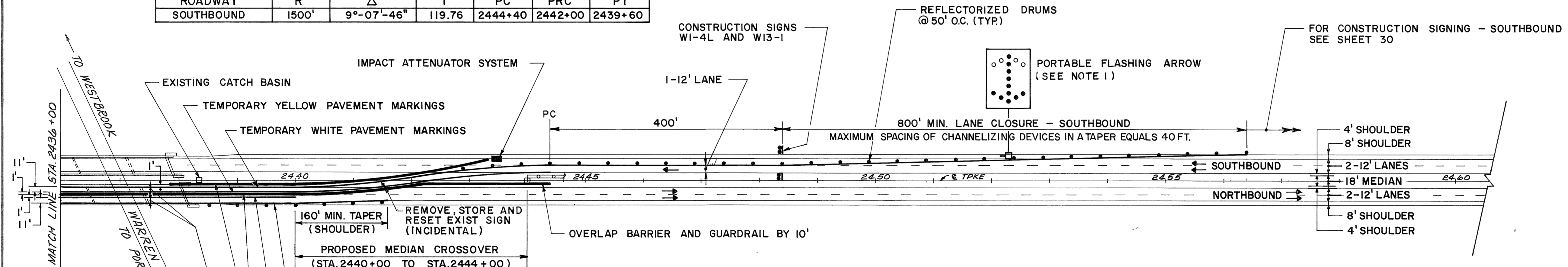
ITEM 627.70 4" YELLOW TEMPORARY PAVEMENT MARKINGS - TAPE	LF
PHASE I	
STA. 2408 TO STA. 2440 NB	3200
STA. 2428 TO STA. 2444+50 SB	1650
<b>TOTAL</b>	<b>4850</b>

ITEM 627.71 4" WHITE TEMPORARY PAVEMENT MARKINGS - TAPE	LF
PHASE I	
STA. 2423+50 TO STA. 2441+60 NB	1810
STA. 2428+00 TO STA. 2456+50 SB	2850
<b>TOTAL</b>	<b>4660</b>

ITEM 627.671 REMOVING PAINTED PAVEMENT MARKINGS	LF
PHASE I	
STA. 2427+75 TO 2429+00 SB skip	32
STA. 2443+00 TO STA. 2449+50 SB skip	163
STA. 2428 TO STA. 2430 SB LEFT	200
STA. 2442 TO STA. 2444+50 SB LEFT	250
STA. 2423+50 TO STA. 2435+75 NB RT	1225
STA. 2438 TO STA. 2441+80 NB RT	380
STA. 2414 TO STA. 2435+75 NB Skip	544
STA. 2438 TO STA. 2442 NB Skip	100
STA. 2430 TO STA. 2435+75 NB LT	575
STA. 2438 TO STA. 2442 NB LT	400
<b>TOTAL</b>	<b>3869</b>

ITEM 652.23 DRUM	EA
PHASE I	
STA. 2408 TO STA. 2432	52
STA. 2428 TO STA. 2435+50	16
STA. 2428+50 TO STA. 2435	14
STA. 2438+50 TO STA. 2441+50	7
STA. 2442+80 TO STA. 2456+50	32
<b>TOTAL</b>	<b>121</b>

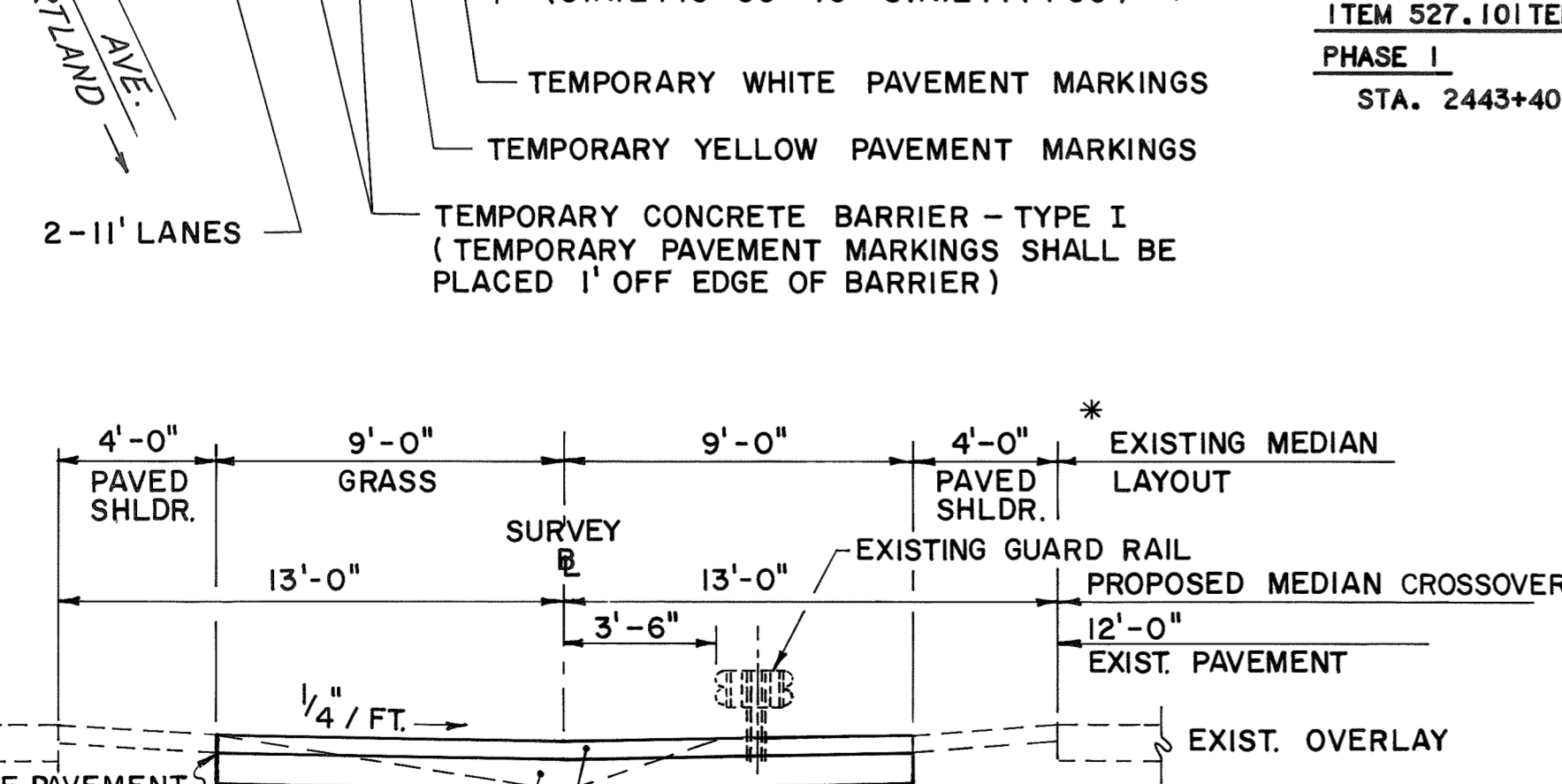
CURVE DATA FOR DETOUR						
ROADWAY	R	Δ	T	PC	PRC	PT
SOUTHBOUND	1500'	9°-07'-46"	119.76	2444+40	2442+00	2439+60



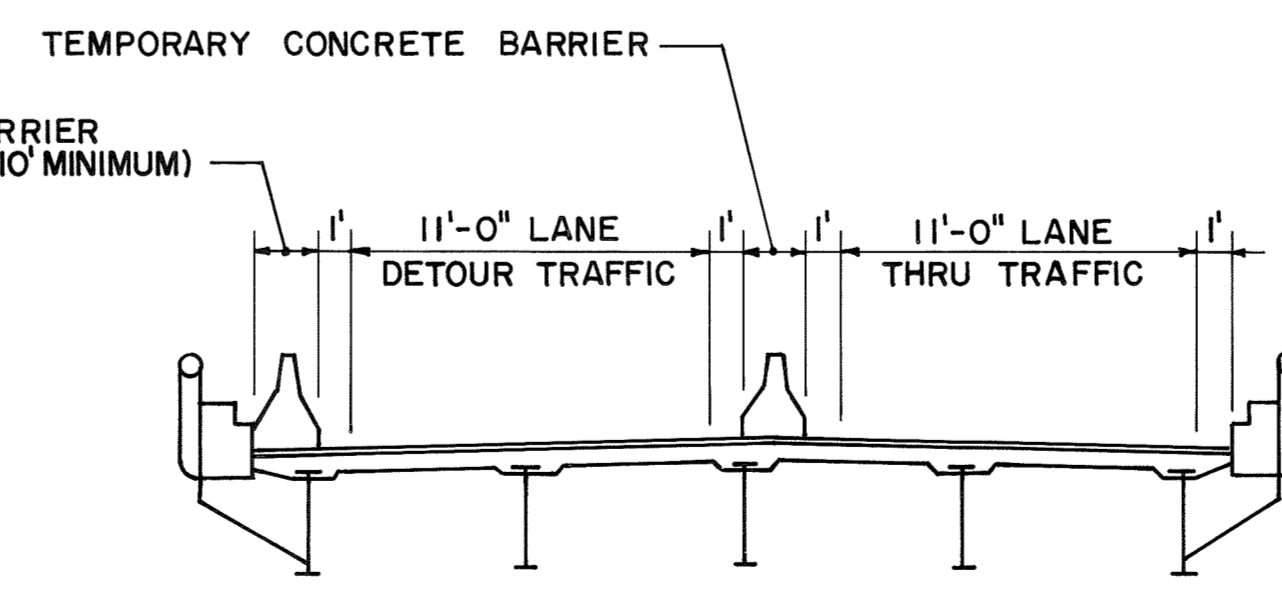
ITEM 527.101 TEMPORARY IMPACT ATTENUATOR SYSTEM	LS
PHASE I	
STA. 2443+40 SB	1

ITEM 652.30 FLASHING ARROW BOARD	EA
PHASE I	
STA. 2412 5' RT AND STA. 2452+20 40' LT	2

**NOTE:**  
 1. THE CONTRACTOR SHALL NOTE THAT OTHER ADJACENT TURNPIKE BRIDGE PROJECTS MAY BE IN PROGRESS DURING CONSTRUCTION OF THE WARREN AVENUE BRIDGE PROJECT. THE PLACEMENT OF SIGNS AND OTHER TRAFFIC CONTROL DEVICES WILL BE DEPENDENT ON THE ADJACENT BRIDGE PROJECTS. THE CONTRACTOR SHALL RESTRICT TRAFFIC TO ONE 12' LANE NORTHBOUND AND SOUTHBOUND WITH DRUMS @ 50' SPACING FROM STA. 2408+00 AS SHOWN. ALL PLACEMENT OF TRAFFIC CONTROL DEVICES AND COORDINATION WITH OTHER TURNPIKE BRIDGE PROJECT SHALL BE APPROVED BY THE ENGINEER. ADDITIONAL DRUMS SHALL BE PAID FOR UNDER ITEM 652.33



**TYPICAL SECTION - MEDIAN CROSSOVER**  
 NOT TO SCALE



**TYPICAL SECTION THRU BRIDGE**  
 NOT TO SCALE

**LEGEND**

- TEMPORARY PAVEMENT MARKINGS
- TEMPORARY CONCRETE BARRIER
- REFLECTORIZED DRUMS
- IMPACT ATTENUATOR SYSTEM
- PORTABLE FLASHING ARROW
- ▢ CONSTRUCTION SIGN
- DIRECTION OF TRAFFIC
- REFLECTORIZED DRUMS @ 50'-0" O.C. FOR SINGLE LANE RESTRICTION SEE NOTE 1

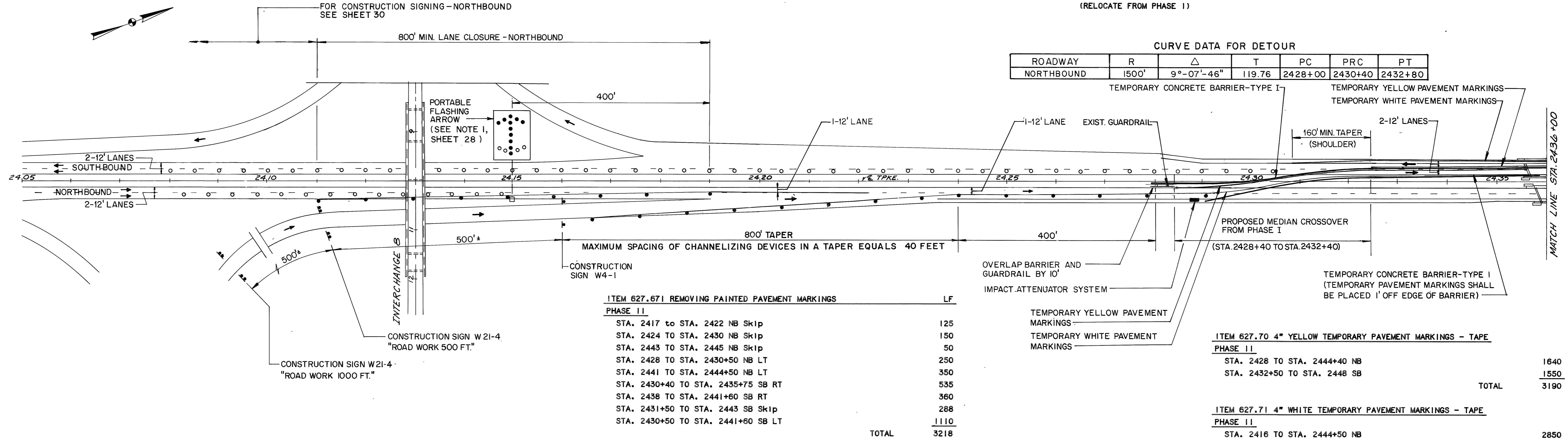
By:	Date:
Designed	JFC 1/92
Drawn	JLS 1/92
Checked	BJB 1/92
In charge of	RAL

Maine Turnpike Authority <b>Maine Turnpike</b>	
BRIDGE DECK REPLACEMENT <b>WARREN AVENUE</b> TRAFFIC DETOUR-PHASE I	
HOWARD NEEDLES TAMMEN & BERGENDOFF ARCHITECTS ENGINEERS PLANNERS	
Contract 92.10	Sheet No. 28 of 32

16 00000  
 WAREPEACE

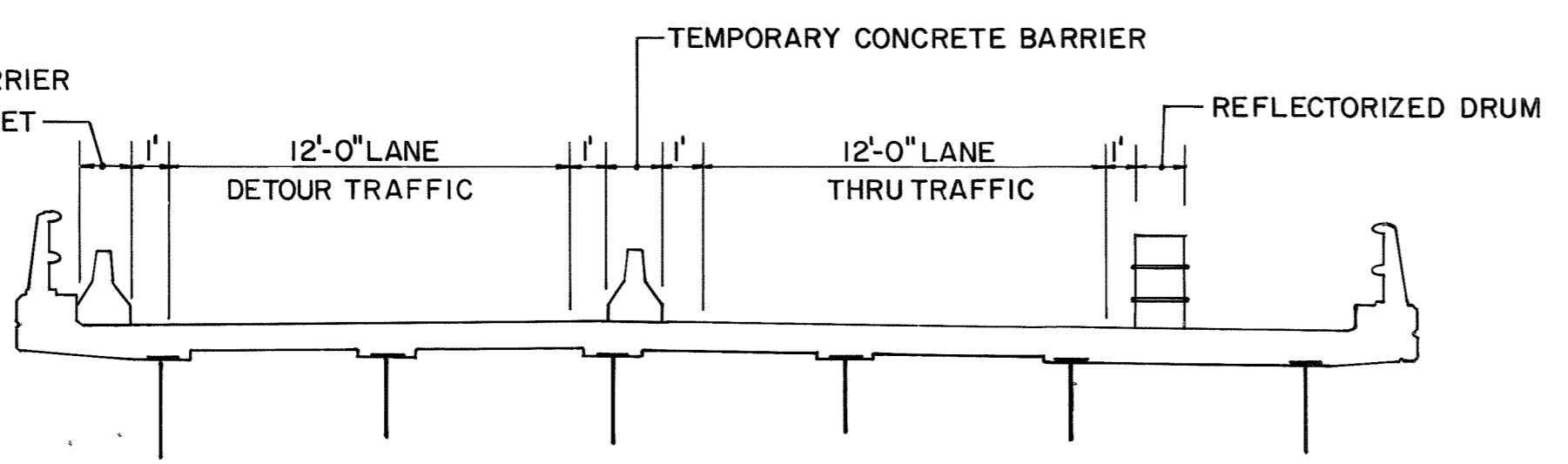
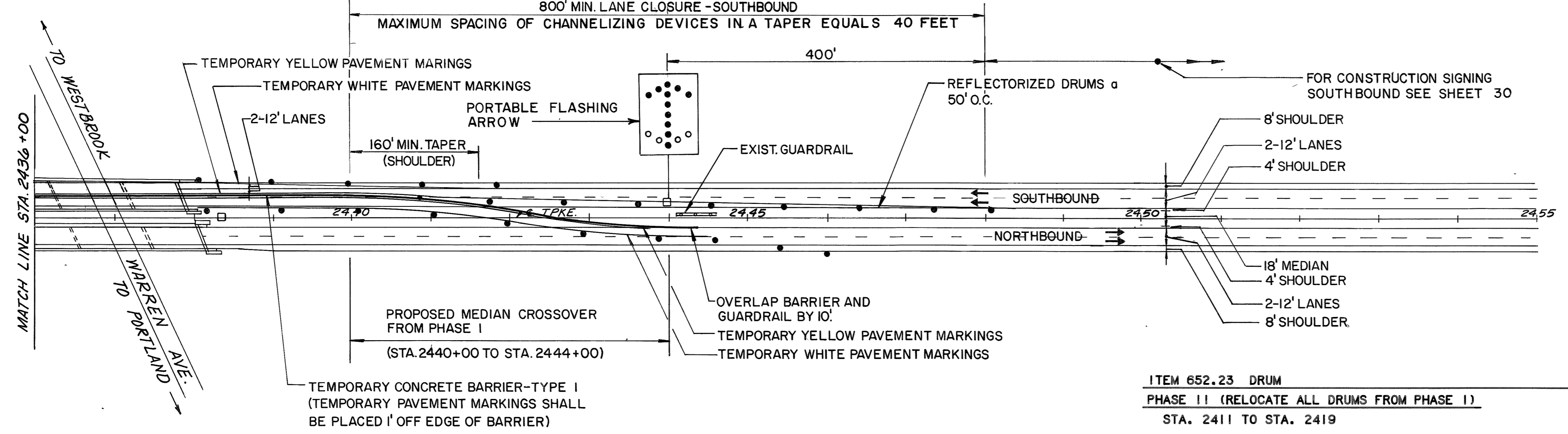
ITEM 527.101 TEMPORARY IMPACT ATTENUATOR SYSTEM  
 PHASE II  
 STA. 2428+90 NB (RELOCATE FROM PHASE I)

ITEM 652.30 FLASHING ARROW BOARD  
 PHASE II  
 STA. 2415 40' RT AND STA. 2444 20' LT  
 (RELOCATE FROM PHASE I)



CURVE DATA FOR DETOUR

ROADWAY	R	Δ	T	PC	PRC	PT
NORTHBOUND	1500'	9°-07'-46"	119.76	2439+60	2442+00	2444+40



NOTES:  
 I. FOR GENERAL NOTES SEE SHEET 28.

- LEGEND
- TEMPORARY PAVEMENT MARKINGS
  - TEMPORARY CONCRETE BARRIER
  - REFLECTORIZED DRUMS
  - IMPACT ATTENUATOR SYSTEM
  - PORTABLE FLASHING ARROW
  - CONSTRUCTION SIGN
  - DIRECTION OF TRAFFIC
  - REFLECTORIZED DRUMS @ 50'-0" O.C. FOR SINGLE LANE RESTRICTION SEE NOTE 1, SHEET 28.

Maine Turnpike Authority  
**Maine Turnpike**

BRIDGE DECK REPLACEMENT  
 WARREN AVENUE  
 TRAFFIC DETOUR- PHASE II

MT  
 TURNPIKE

HNTB HOWARD NEEDLES TAMMEN & BERGENDOFF ARCHITECTS ENGINEERS PLANNERS

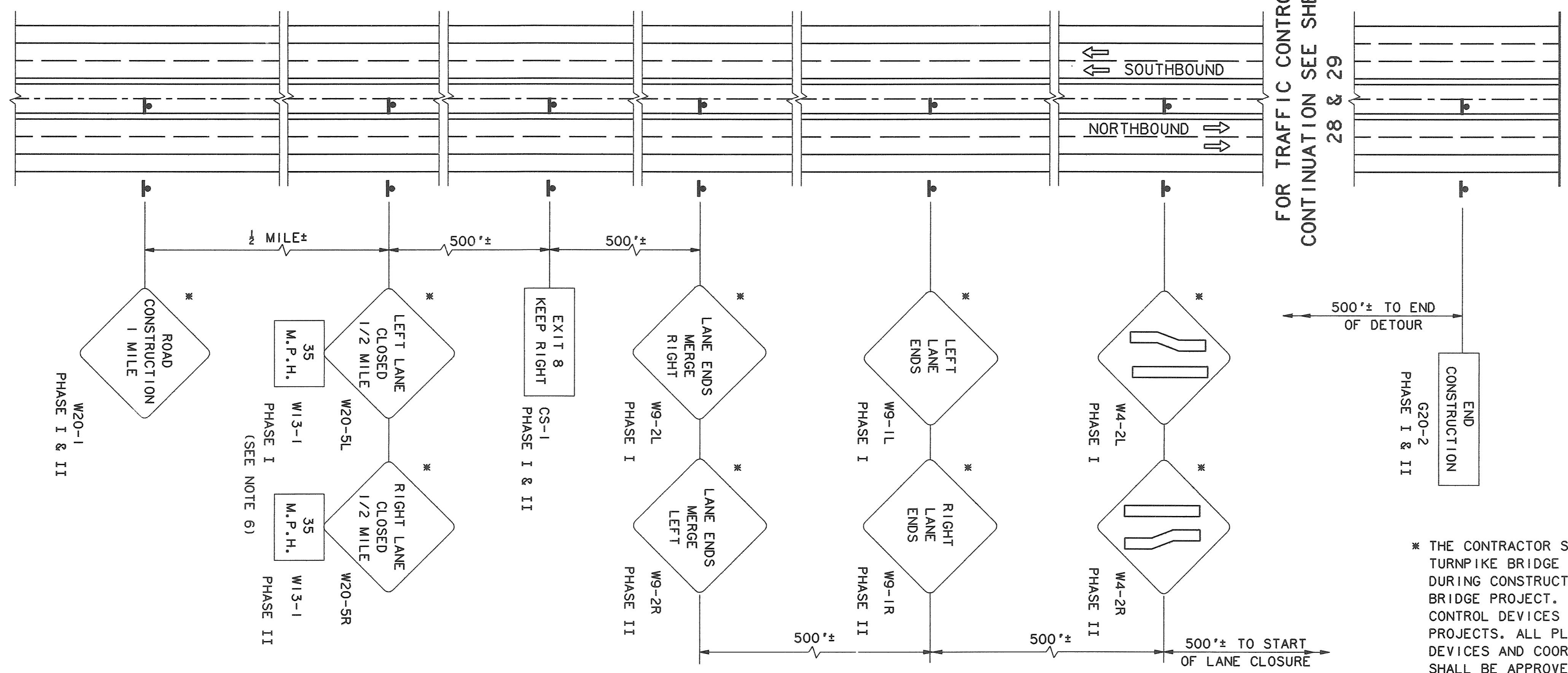
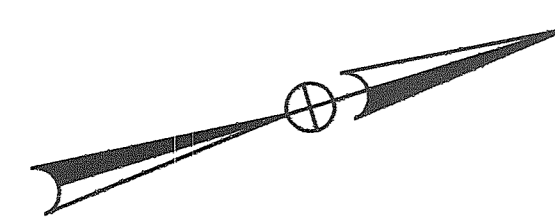
Designed	JFC	1/92
Drawn	JLS	1/92
Checked	BJB	1/92
In charge of:	RAL	

Contract 92.10

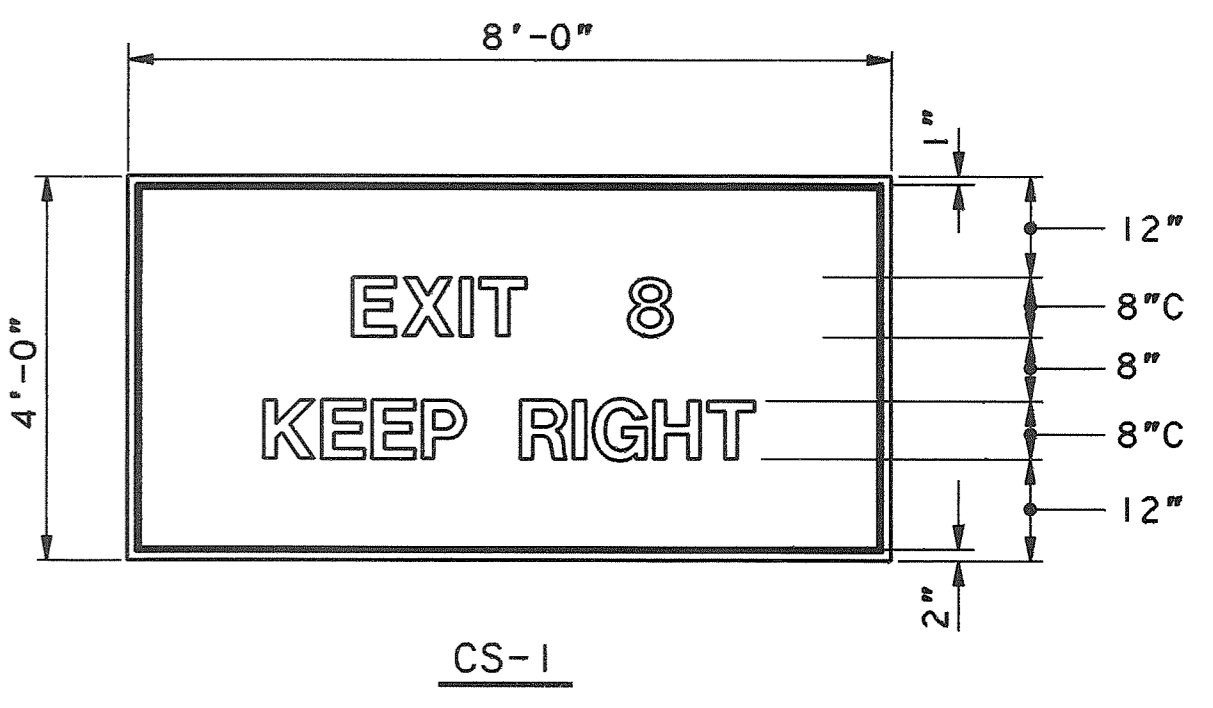
Sheet No. 29 of 32



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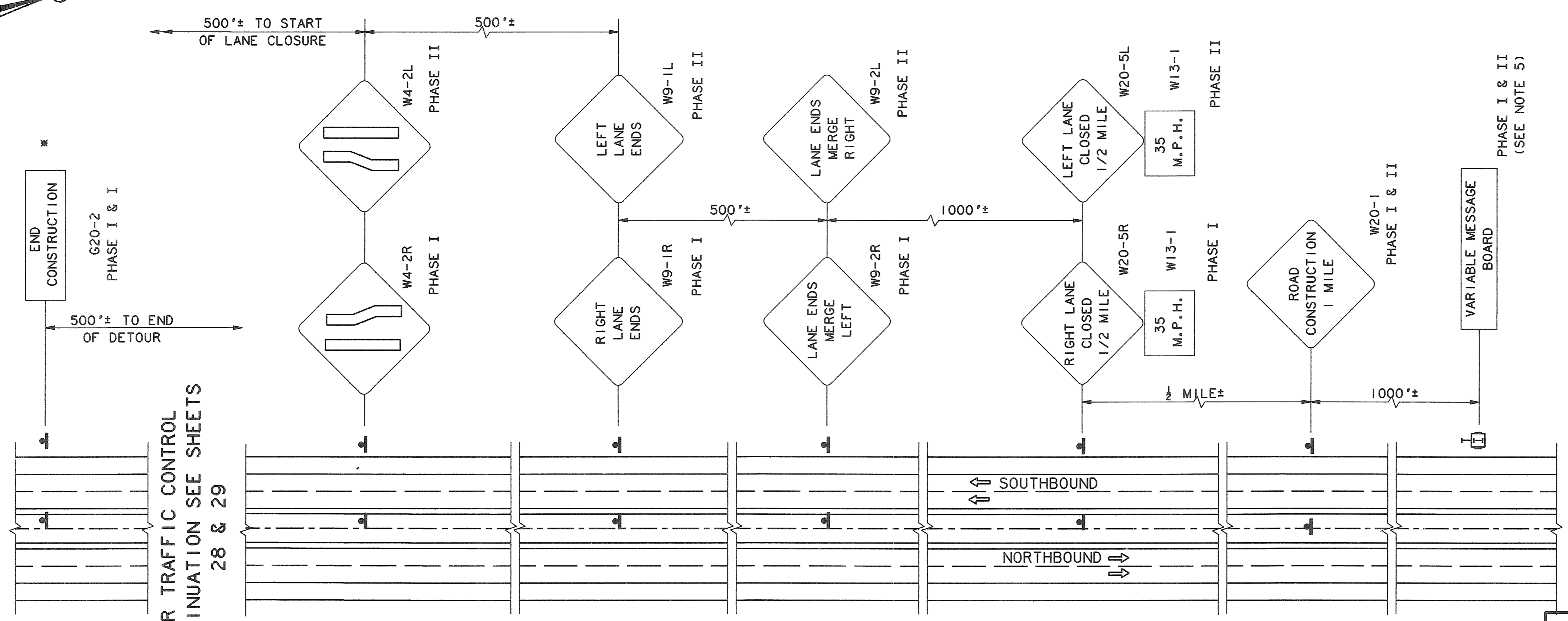
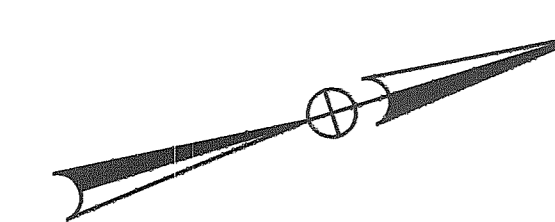
PLAN - SOUTHERLY SIDE OF TRAFFIC DETOURS



\* THE CONTRACTOR SHALL NOTE THAT OTHER ADJACENT TURNPIKE BRIDGE PROJECTS MAY BE IN PROGRESS DURING CONSTRUCTION OF THE WARREN AVENUE BRIDGE PROJECT. THE PLACEMENT OF SIGNS AND OTHER TRAFFIC CONTROL DEVICES WILL BE DEPENDENT ON THE ADJACENT BRIDGE PROJECTS. ALL PLACEMENT OF TRAFFIC CONTROL DEVICES AND COORDINATION WITH OTHER TURNPIKE BRIDGE PROJECTS SHALL BE APPROVED BY THE ENGINEER. ADDITIONAL DRUMS SHALL BE PAID FOR UNDER ITEM 652.33.

GENERAL NOTES

1. SIGNING SHALL BE ERECTED ON BOTH SIDES OF THE ROADWAY UNLESS SHOWN OTHERWISE.
2. FLAGMEN SHALL BE USED AS DESIGNATED BY THE ENGINEER.
3. THE AUTHORITY SHALL FURNISH THE VARIABLE MESSAGE SIGN AND TEMPORARY CONCRETE BARRIER. ALL OTHER TRAFFIC CONTROL DEVICES, INCLUDING REFLECTORIZED SIGNS, VARIABLE MESSAGE SIGNS, DRUMS, CONES AND PORTABLE FLASHING ARROWS SHALL BE FURNISHED BY THE AUTHORITY, SEE SPECIFICATIONS.
4. THE LOCATION & SEQUENCE OF SIGNS SHOWN IS APPROXIMATE. ACTUAL LOCATIONS & SEQUENCE SHALL BE APPROVED IN THE FIELD BY THE ENGINEER.
5. THE VARIABLE MESSAGE BOARD SHALL ALTERNATE THE TEXT "CAUTION ROAD WORK" AND "NEXT 4 MILES".
6. ALL SIGNS SHALL HAVE OPAQUE BLACK LEGENDS WITH ORANGE REFLECTORIZED BACKGROUNDS.




PLAN - NORTHERLY SIDE OF TRAFFIC DETOURS

FOR TRAFFIC CONTROL CONTINUATION SEE SHEETS 28 & 29

FOR TRAFFIC CONTROL CONTINUATION SEE SHEETS 28 & 29

No.	Revision	By	Date	In Charge Of:

Maine Turnpike Authority <b>Maine Turnpike</b>	
 <b>HNTB</b>	BRIDGE DECK REPLACEMENT WARREN AVENUE <b>TRAFFIC CONTROL</b>
	HOWARD NEEDLES TAMMEN & BERGENOFF ARCHITECTS ENGINEERS PLANNERS
Contract 92.9	Sheet No. 30 of 32