

F.R.E.L. REV. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	7A-95-7100	16	20

# INDEX OF SHEETS

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Bridge Details . . . . .	2
Miscellaneous Details . . . . .	3
Reinforcing Steel Schedule . . . . .	4
BD201 Concrete End Posts . . . . .	5

# SPECIFICATIONS

DESIGN: Load Factor Design per AASHTO Standard Specifications for Highway Bridges 1989.

CONTRACT: State of Maine, Department of Transportation Standard Specifications, Highways and Bridges, Revisions of Oct., 1990.

# DESIGN LOADING

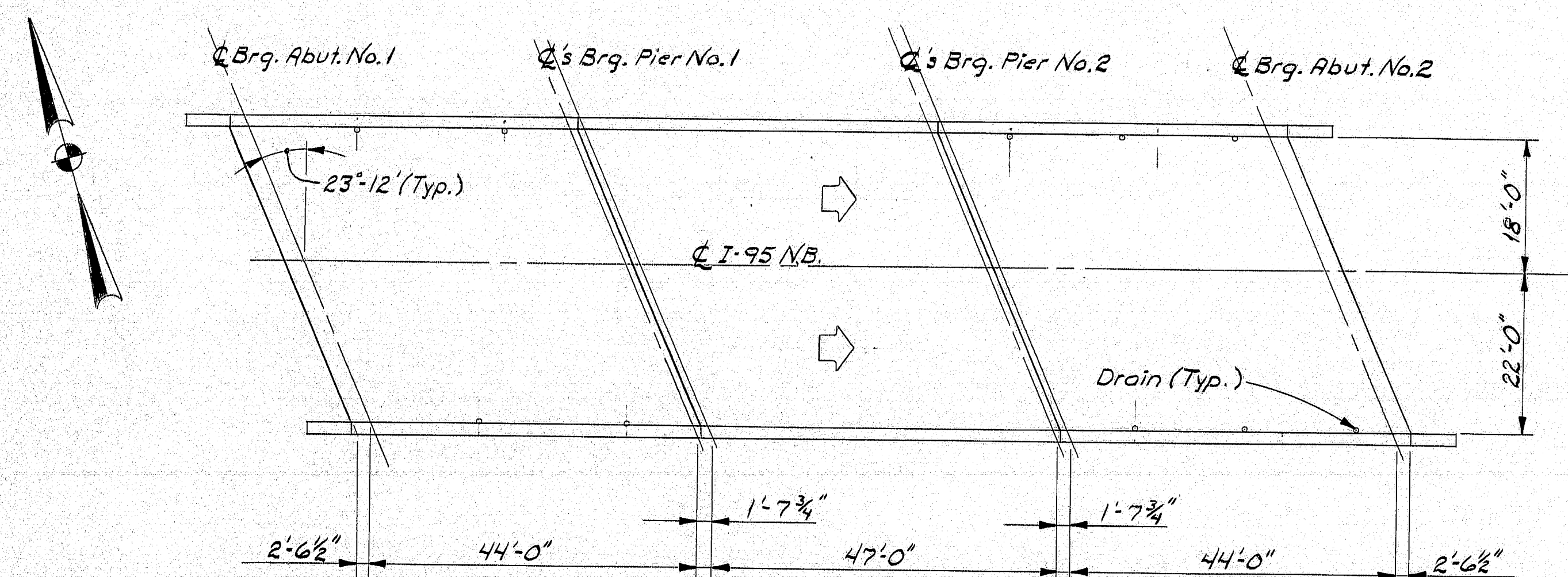
Live Load (Existing): HS20

# MAINTENANCE OF TRAFFIC

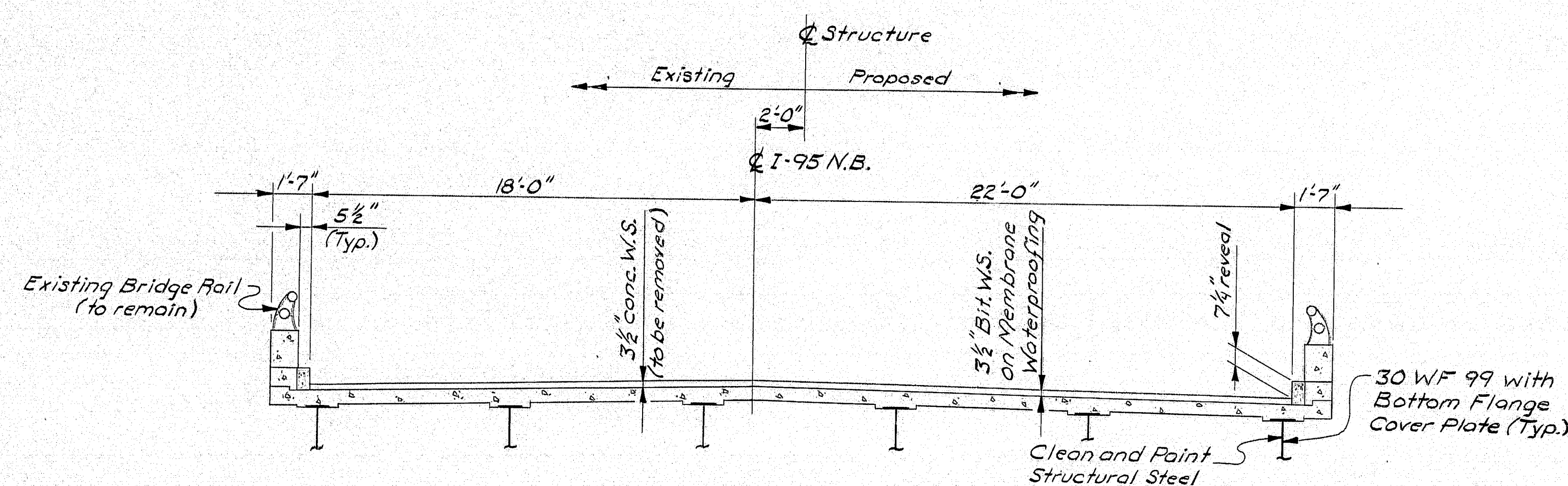
Maintain one 12' minimum lane of traffic during construction.

# SCOPE OF WORK

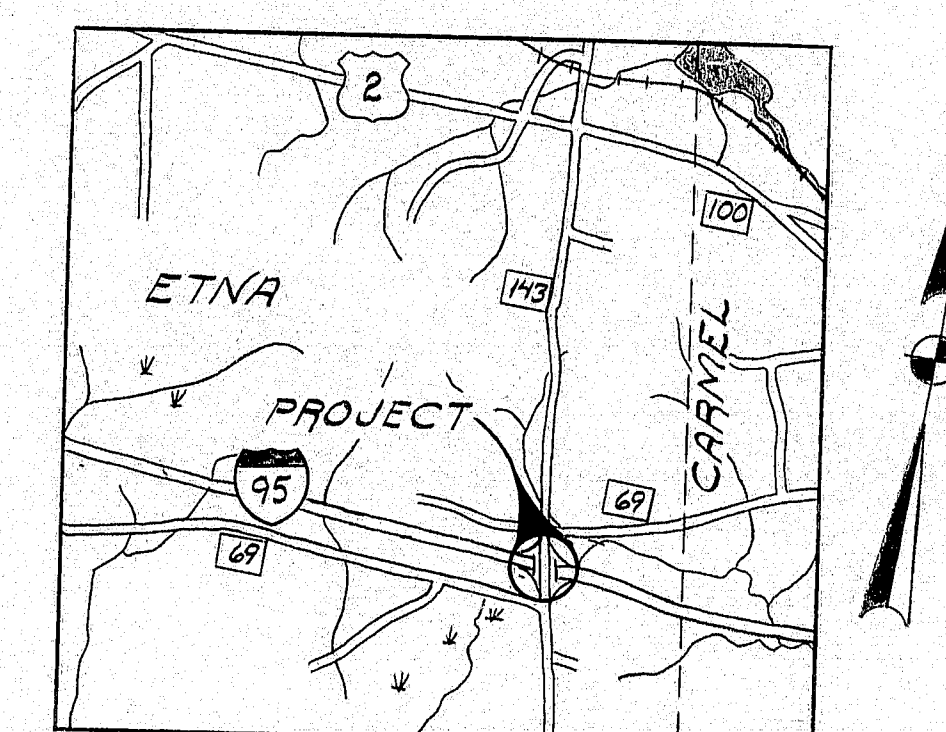
Remove existing black conc. W.S. Repair top of deck concrete where needed. Replace existing wearing surface with new 3 1/2" bituminous waterproofing. Clean on new membrane waterproofing. Clean and paint structural steel. Repair pier cap on southern end of westerly pier. Modify leading and trailing ends of existing bridge rail with new concrete end posts on the leading end and terminal connectors on the trailing end.



I-95 OVER ROUTE 143



TYPICAL BRIDGE SECTION



LOCATION MAP

NOTE: Plans of the existing bridge are available for the Contractor's reference at the Bridge Design Office in Augusta. The plans are reproductions of original drawings and it is very unlikely that the plans will show any construction field changes or any alterations which may have been made to the bridge during its life span.

# TRAFFIC DATA

AADT 1991 . . . . .	7010
AADT 2001 . . . . .	9110
DHV . . . . .	1184
T% . . . . .	16
D% . . . . .	100
18 Hip Eq. P2.5 . . . . .	907

102-257

Bridge No. 5962

STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION

I-95 N.B. OVER ROUTE 143

ETNA

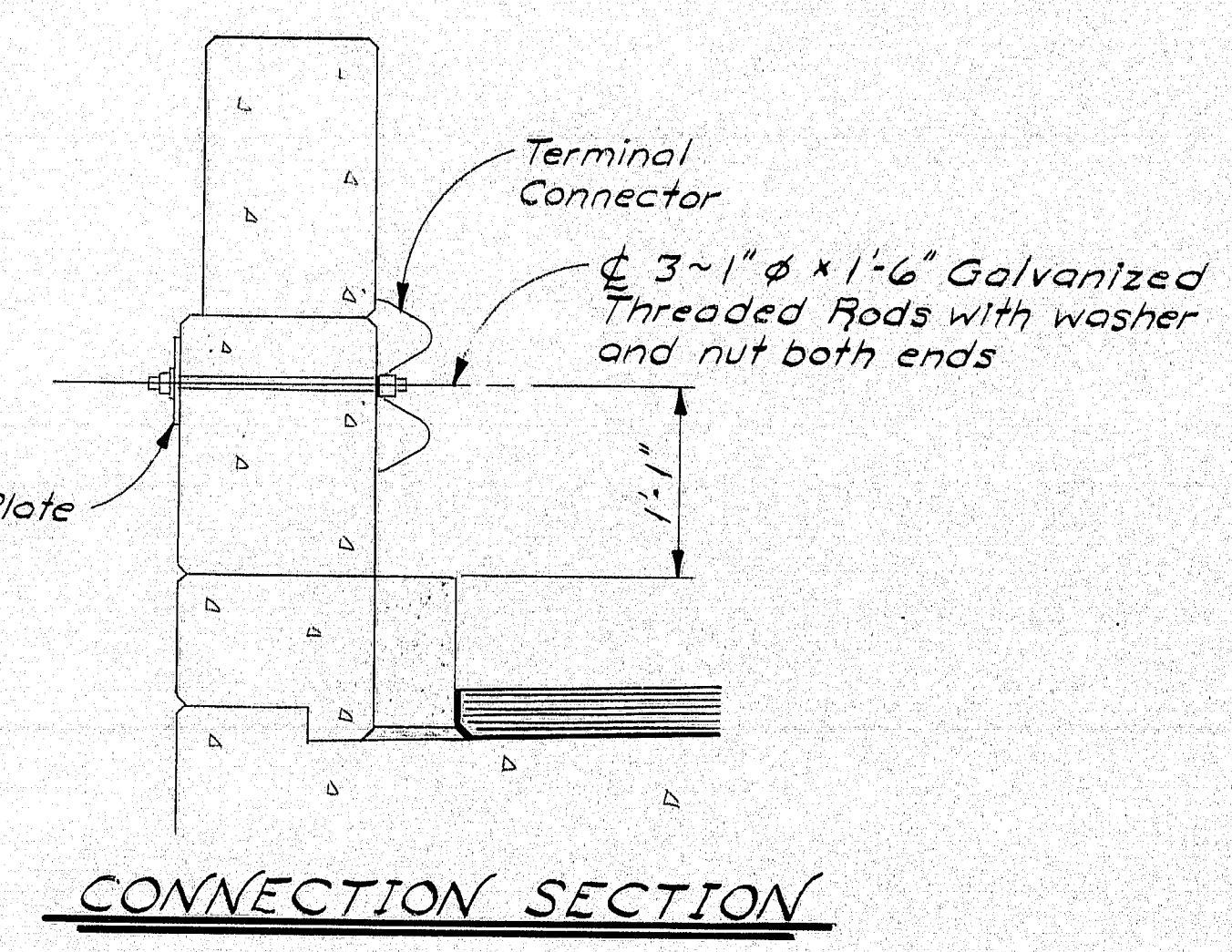
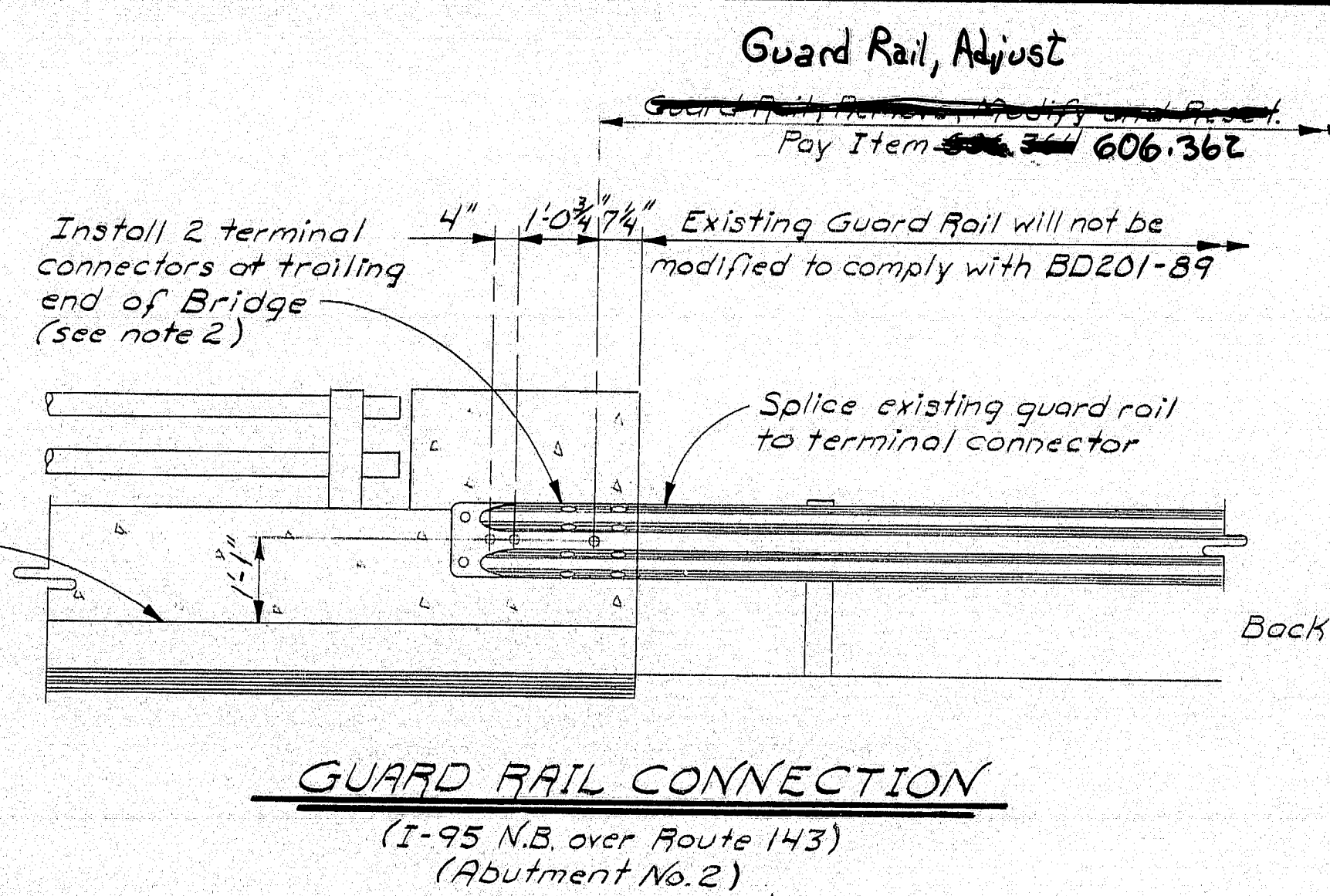
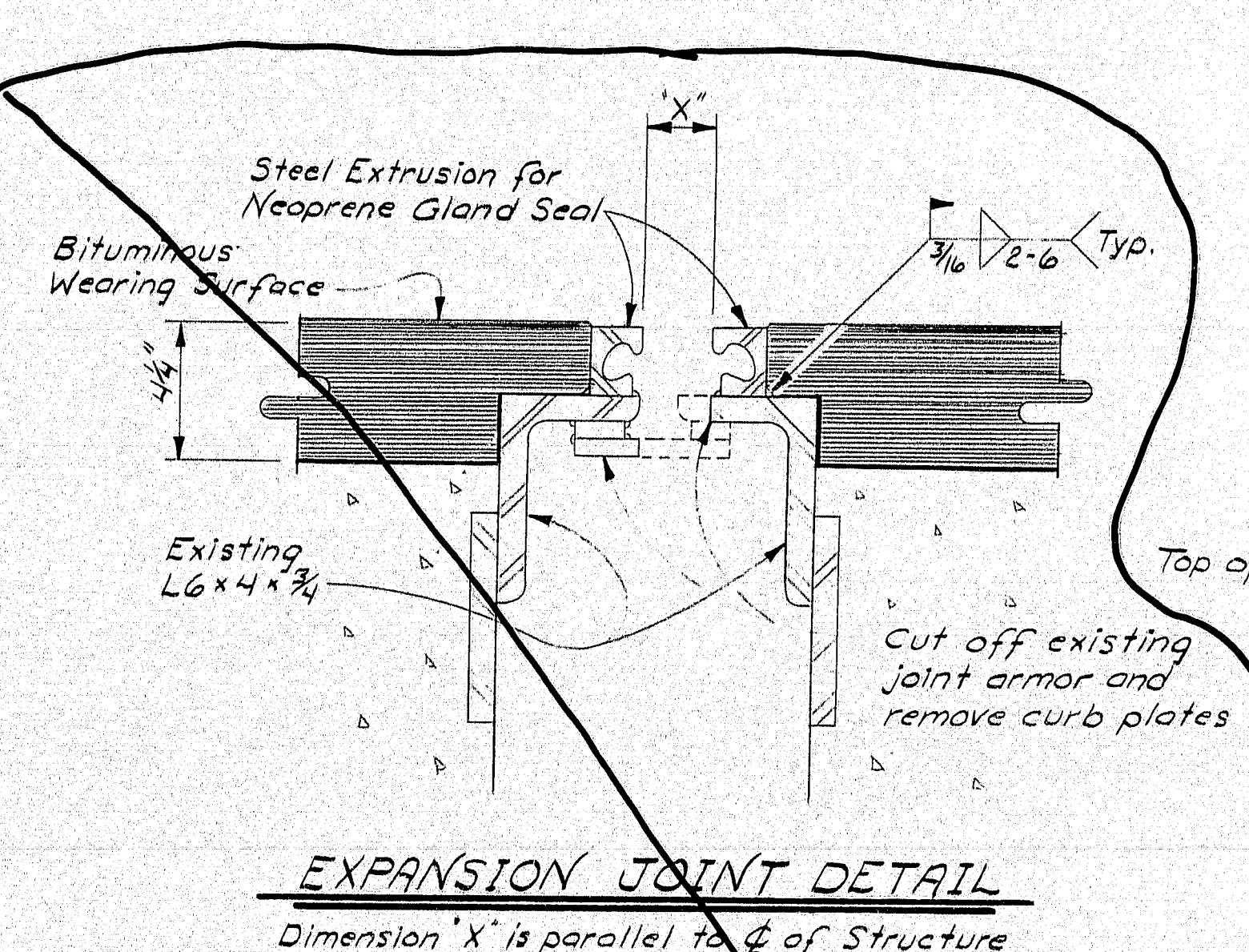
GENERAL PLAN

SHEET 1 OF 5 AUGUSTA, MAINE

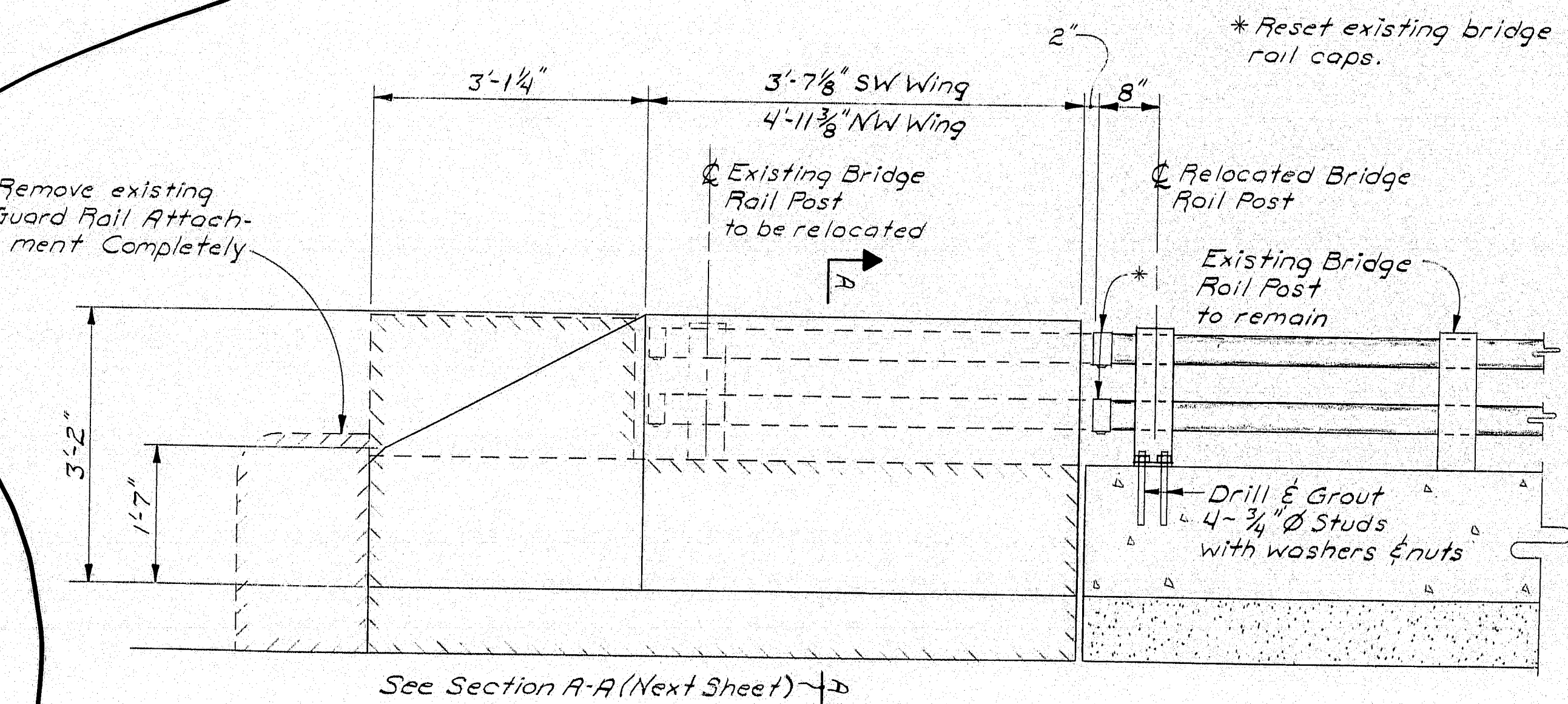
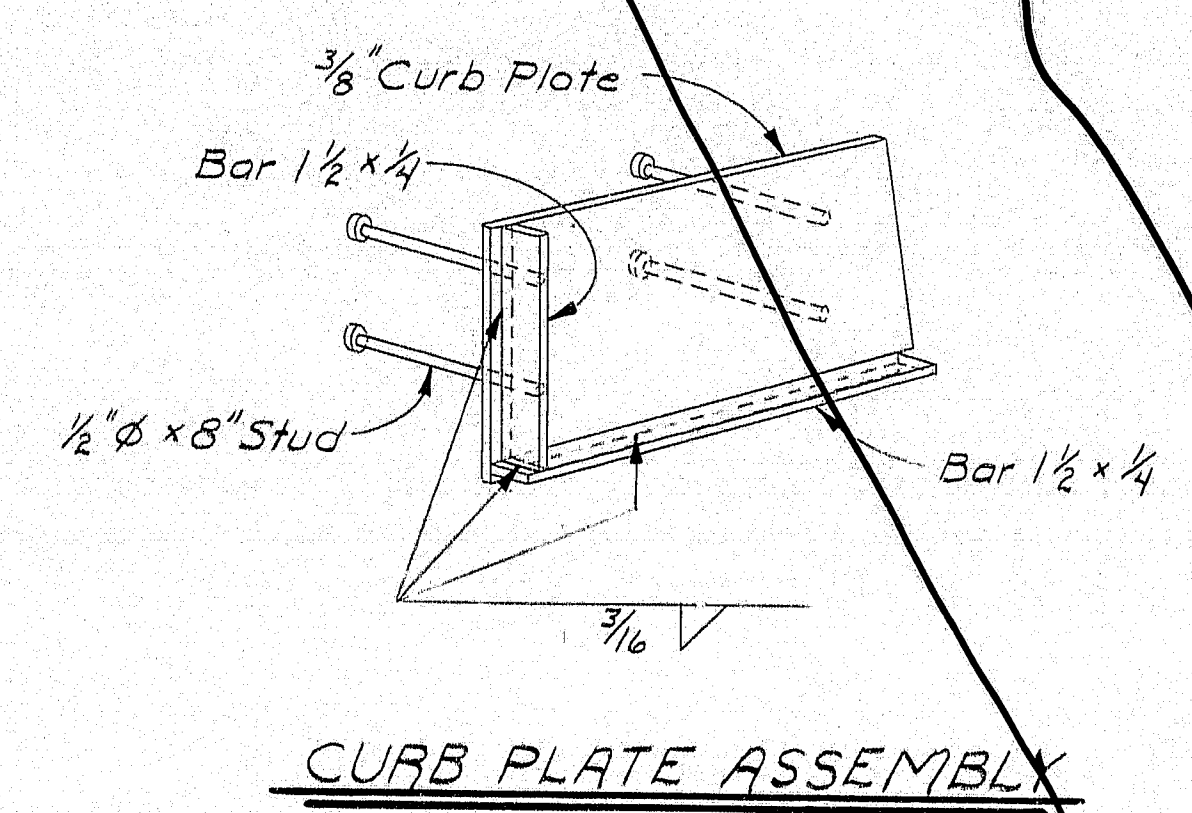
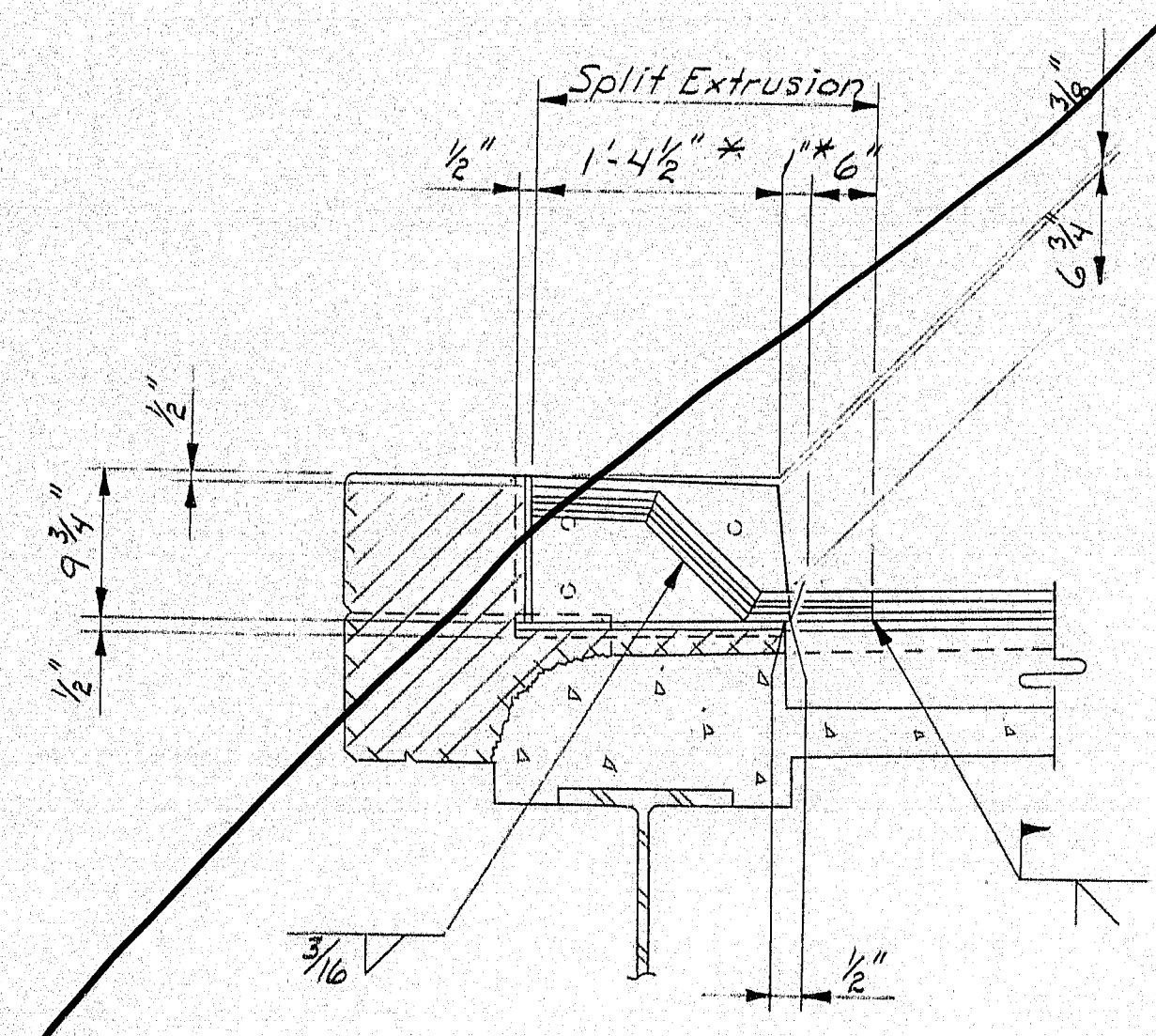
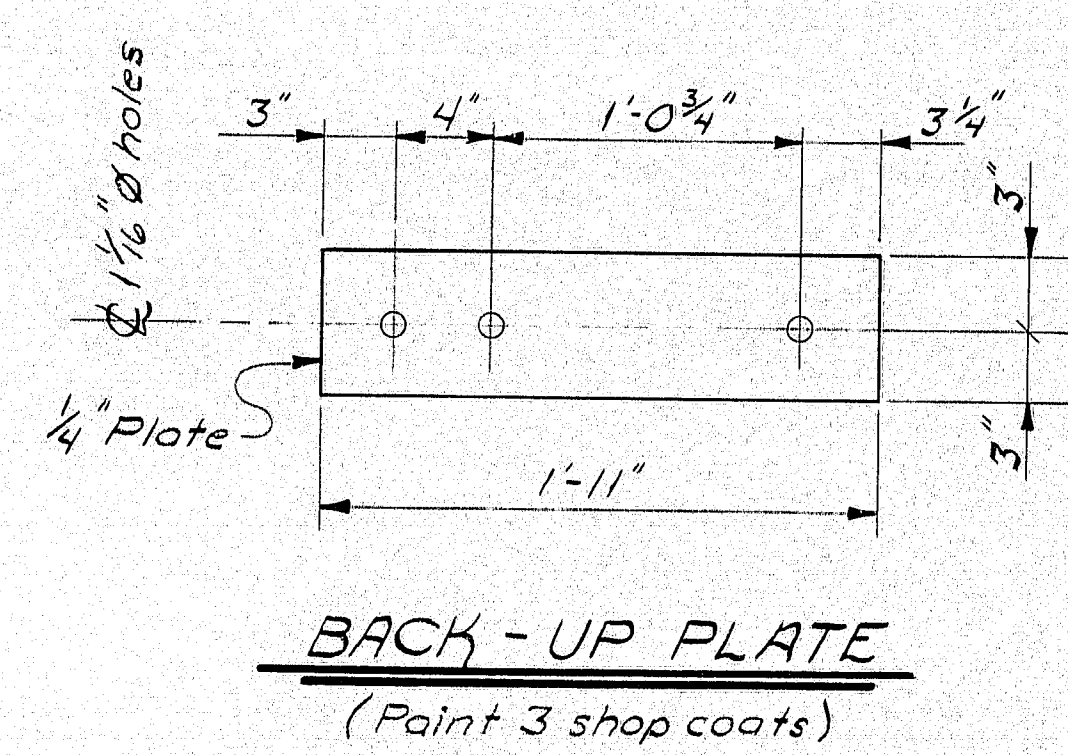
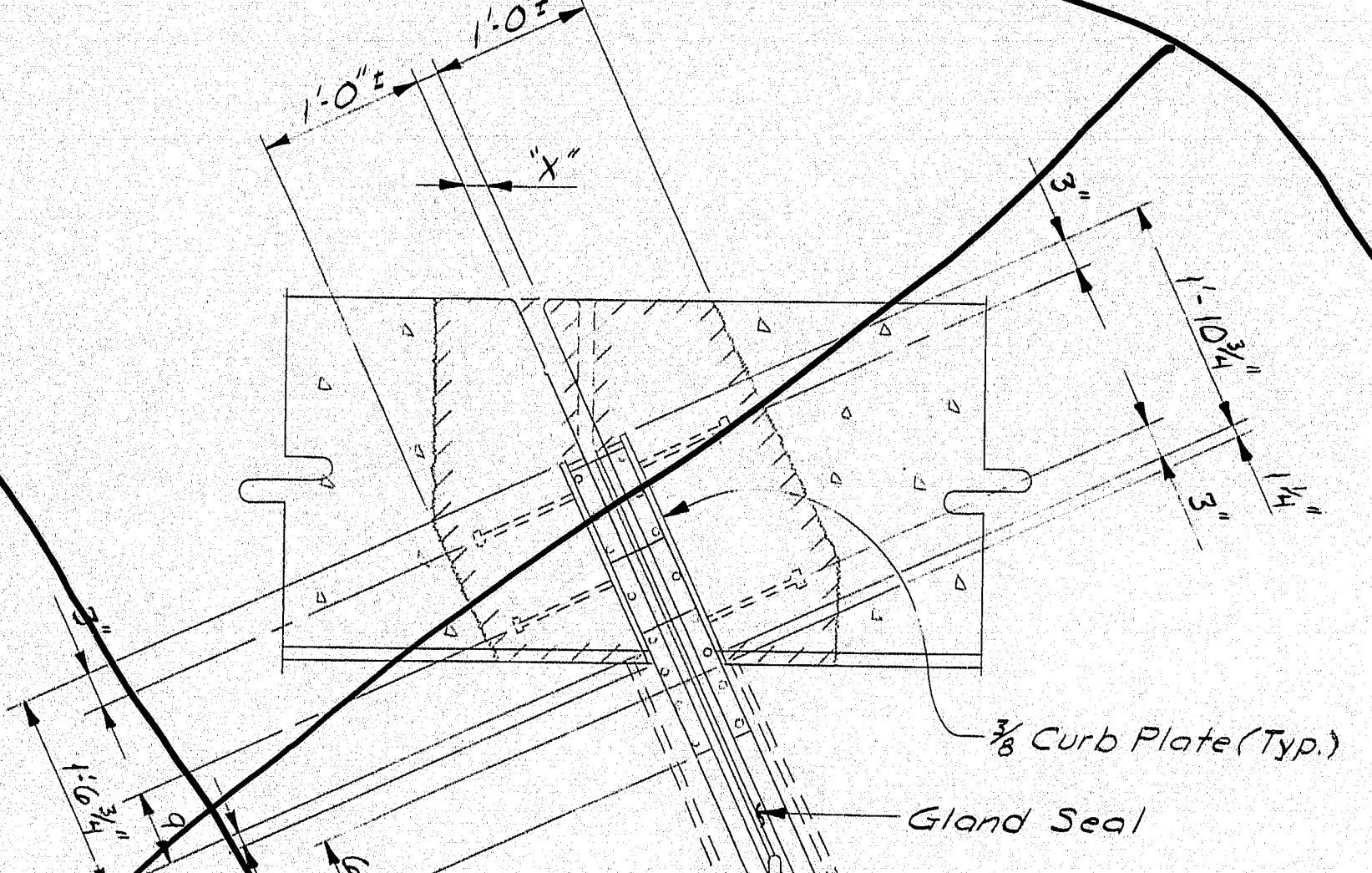
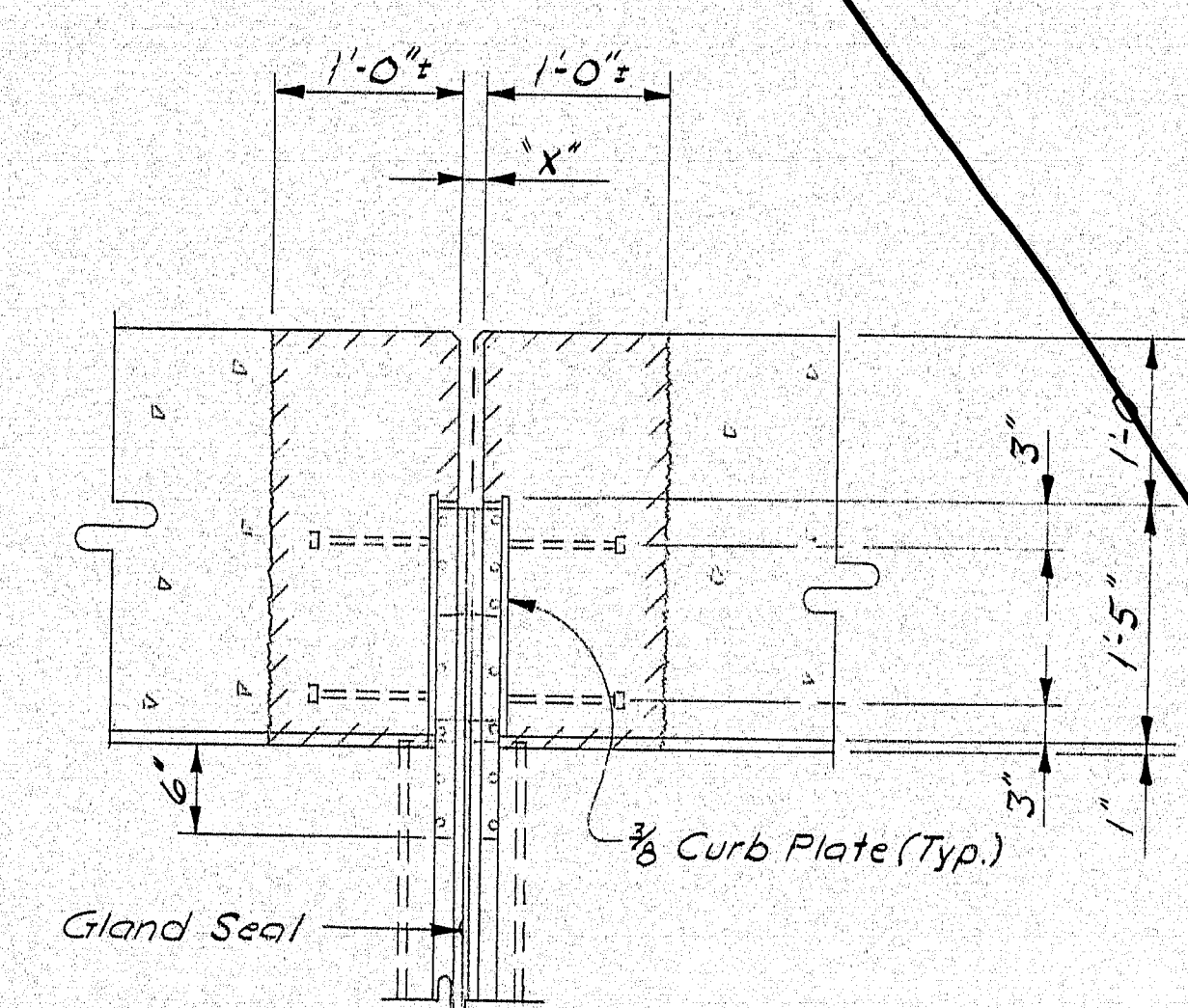
PROJECT DESIGN ENGINEER	DATE
DESIGN - DETAILED	7/90
CHECKED	SYA
REVISIONS	
FIELD CHANGES	
PLANS	

BRUNING 42710.1





- CONSTRUCTION NOTES**
- Any damage caused by drilling holes for the Terminal Connector anchorage shall be repaired at the Contractor's expense.
  - Payment for the Terminal Connectors, including installation, will be considered incidental to the Guard Rail Pay Items, (at the trailing end only).
  - Removal of the existing concrete wearing surface will be paid for under Item No. 202.17, Removing Existing Structural Concrete.
  - Protective Coating for Concrete Surfaces shall be applied to the following areas:  
a. All exposed surfaces of new concrete end posts.  
b. Front face, top, and fascia down to drip notch of existing concrete curbs to remain.  
c. All exposed surfaces of existing concrete end posts and parapets to remain.
  - Resetting of the aluminum posts and rail end caps, including materials and labor to install new anchor studs will be considered incidental to Item 202.1301.
  - Anchor bolts for bridge railing shall be drilled and grouted in accordance with Special Provision Section 507.
  - From BD201 substitute reinforcing bars EP502's for EP503's and substitute EP451's for EP452's.
  - Removal of existing rail parapets and guard rail attachments will be paid for under Item No. 202.12B. Cutting and sealing of exposed reinforcing steel will be considered incidental to this item.



**GLAND SETTING TABLE**

	MCRR No.1	MCRR No.2	River No.1	River No.2
120	1 1/8"	1 3/8"	1 1/4"	1 1/8"
105	1 3/4"	1 1/2"	1 1/8"	1 1/4"
90	1 1/8"	1 3/8"	1 1/8"	1 1/8"
75	1 1/8"	1 1/8"	1 1/8"	1 1/8"
60	1 1/8"	1 1/8"	1 1/8"	1 1/8"
45	2"	2"	2"	2"
30	2 1/8"	2 1/8"	2 1/8"	2 1/8"
15	2 1/8"	2 1/8"	2 1/8"	2 1/8"
0	2 3/8"	2 3/8"	2 3/8"	2 3/8"
-15	2 1/4"	2 1/8"	2 1/8"	2 1/8"
-30	2 3/8"	2 3/8"	2 3/8"	2 3/8"

TEMPERATURE (°F)

DIMENSION "X"

STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION

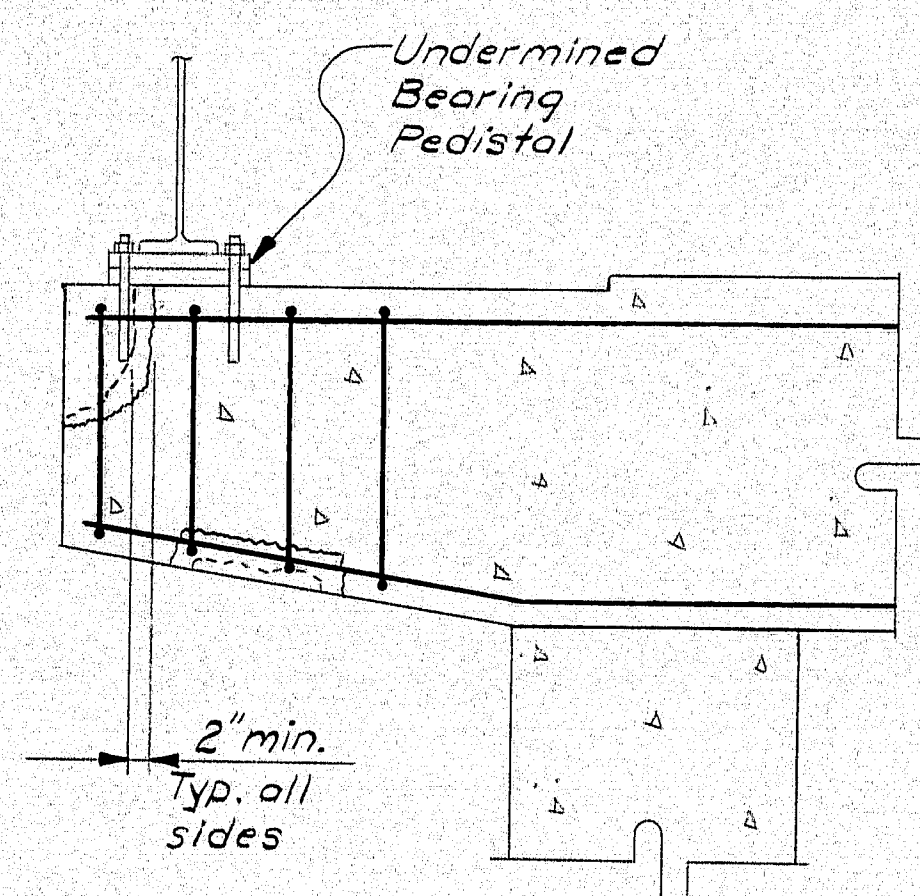
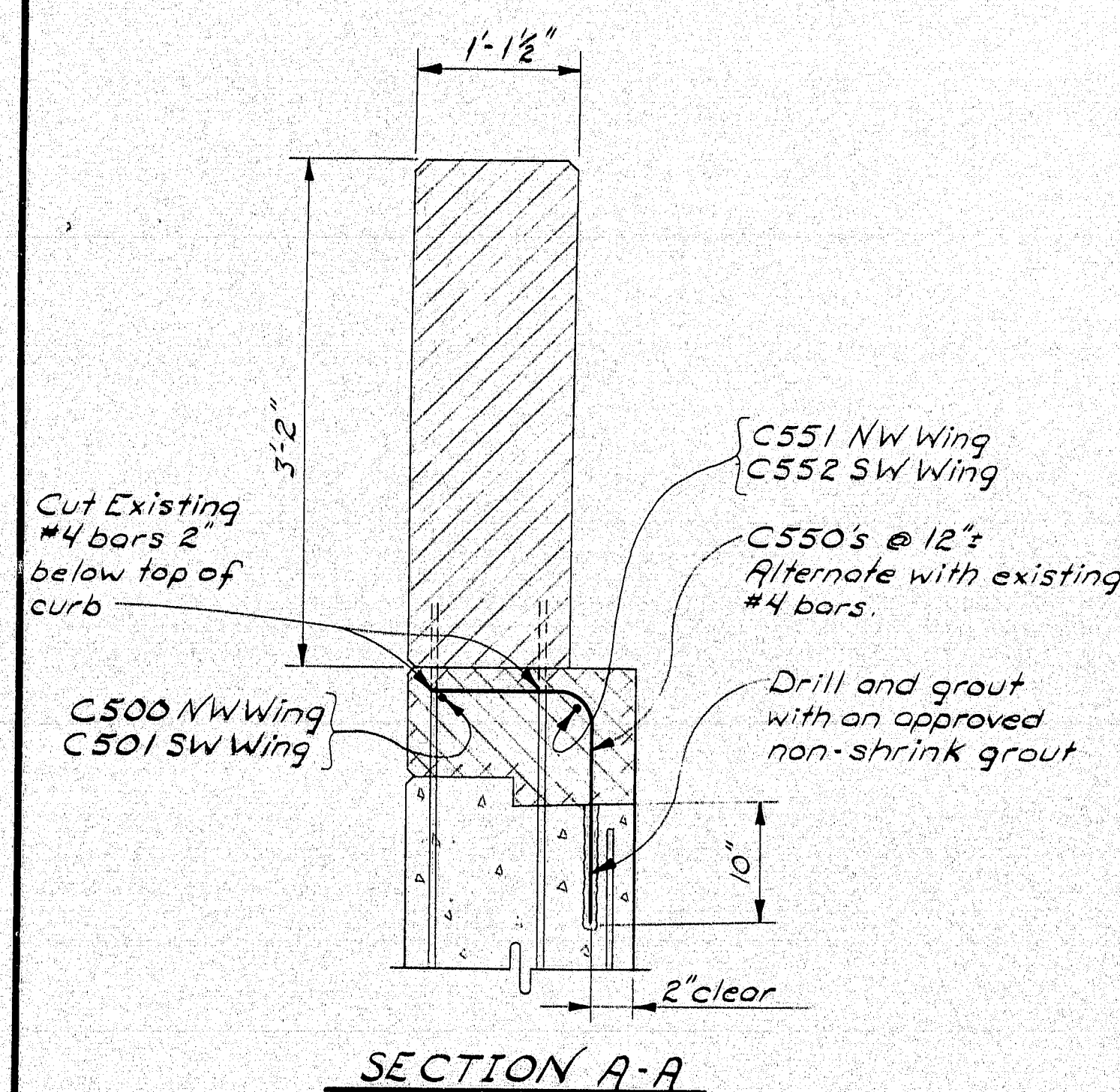
INTERSTATE 95 N.B. over MCRR  
INTERSTATE 95 N.B. over  
E. BRANCH SEBASTICOOK RIVER  
NEWPORT  
INTERSTATE 95 N.B. over RTE. 143  
ETNA  
BRIDGE DETAILS  
SHEET 2 OF 5 AUGUSTA, MAINE

102-258



PROJECT DESIGN ENGINEER	DATE
DESIGN - DETAILED	1/1/90
CHECKED	SP4 1/2/90
REVISIONS	
FIELD CHANGES	

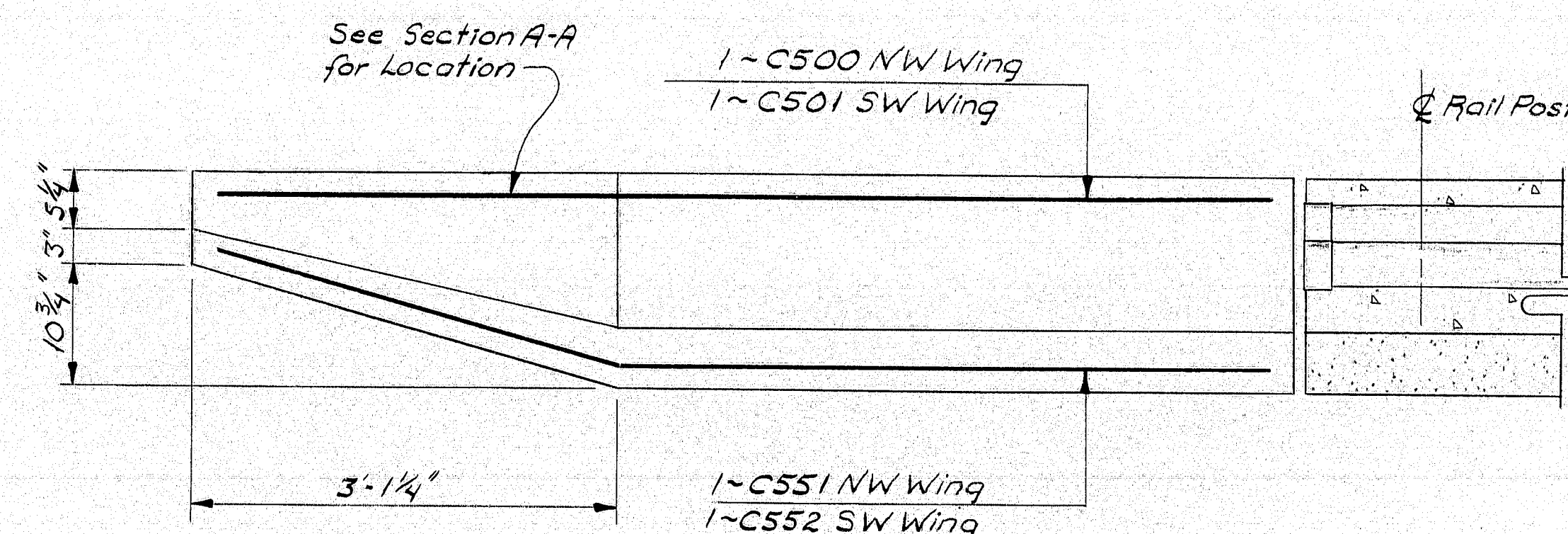
BRWING 45710-1



**PIER CAP REPAIR**  
(I-95 NB. over Rte. 143  
So. End of W. Pier)

**CONSTRUCTION NOTES (cont.)**

9. Payment for the construction of concrete and posts shall be made under Item 606.173, Bridge Connection, Anchorage systems, terminal connectors, attachment of terminal connectors, and cleaning of existing reinforcing steel to remain, will be considered incidental to this item. Reinforcing steel will be paid for under the appropriate Reinforcing Steel Items.
10. The superstructure shall be supported by a method approved by the Engineer before removing deteriorated concrete from the pier cap bearing area. The exact method of repair shall be as directed by the Engineer. Payment will be made under the provisions of Subsection 104.03, Extra Work.
11. The top surface of the existing concrete slabs shall be repaired as directed by the Engineer. Payment will be made under the appropriate Item No. 518.30 and 518.31.
12. Depress the Bituminous Wearing Surface around the existing bridge drains as directed by the Engineer.
13. Payment for drilling and grouting of reinforcing steel will be considered incidental to Item No. 503.13 Reinforcing Steel, Placing.
14. The embankment in the area of the removed guard rail attachment shall be backfilled with granular borrow, loamed, and seeded to match original slopes as directed by the Engineer. Materials and labor to complete the work shall be incidental to Item 202.128.
15. Reinforcing steel shall have two inches cover unless otherwise indicated.
16. All work shall be done behind temporary concrete barrier.
17. All curb concrete shall be Class A with a silica fume additive. Payment will be incidental to Item 606.173.
18. Modifications to guardrail for conformance with Standard Details on BD201-89, including materials and labor, will be considered incidental to Item 606.364.
19. From BD201-89 substitute reinforcing bars EP600's for EP400's, EP502's, and EP503's.



**CURB PLAN**  
(I-95 over Rte. 143)

**LEGEND**

- Existing Concrete (to remain)
- Existing Concrete (to be removed)
- New Concrete (in section)
- Steel (in section)
- Granite

102-259

STATE OF MAINE DEPARTMENT OF TRANSPORTATION
<del>INTERSTATE 95 NB. over MACRA</del>
<del>INTERSTATE 95 NB. over</del>
<del>E-BRANCH SEBASTICOOK RIVER</del>
<del>NEWPORT</del>
INTERSTATE 95 NB. over Rte. 143
ETNA
MISCELLANEOUS DETAILS
SHEET 3 OF 5 AUGUSTA, MAINE



# REINFORCING STEEL SCHEDULE

STRAIGHT BARS								BENT BARS																								
MARK	NO.	LENGTH	LOCATION	MARK	NO.	LENGTH	LOCATION	MARK	NO.	LENGTH	LOCATION	MARK	NO.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION						
I-95 N.B. over RTE. 143 (SW Wing End Post)																I-95 NB over RTE. 143 (SW Wing End Post)																
EP450	6	2'-11"	Vertical									EP451	6	6'-4 1/2"	S	O	2'-10"	0'-8 1/2"	2'-10"				O				Vertical					
EP405	6	1'-9"	Dowels																													
(NW Wing End Post)																EP500 5 8'-0 1/2" S O 5'-6" 0'-9 1/2" 1'-9" O O 0'-8" Horizontal																
EP450	6	2'-11"	Vertical									EP501	5	6'-6"	SU	O	3'-1"	3'-5"	O	O							"					
EP405	6	1'-9"	Dowels									EP502	6	4'-2 1/2"	S	O	1'-9"	0'-8 1/2"	1'-9"				O				Vertical					
																(NW Wing End Post)																
																EP451 7 6'-4 1/2" S O 2'-10" 0'-8 1/2" 2'-10" O 0'-8" Vertical																
CURBS																EP500 5 9'-0 1/2" S O 6'-6" 0'-9 1/2" 1'-9" O 0'-8" Horizontal																
C500	1	7'-10"	Horizontal									EP501	5	7'-10"	SU	O	3'-1"	4'-9"	O	O							"					
C501	1	6'-6"	"									EP502	6	4'-2 1/2"	S	O	1'-9"	0'-8 1/2"	1'-9"				O				Vertical					
																CURBS																
																C550 13 2'-10" L 1'-3" 1'-7" Vertical																
																C551 1 7'-9" V 4'-9" 3'-0" 0'-10" NW Curb, Horiz																
																C552 1 6'-5" V 3'-5" 3'-0" 0'-10" SW Curb, Horiz																

FHWA REG. NO.	STATE MAINE	PROJECT NUMBER 179-95-7100	SHEET NO. 19	TOTAL SHEETS 20
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**TYPE-BENDING DIAGRAMS**

All dimensions are out to out of reinf. bar  
Bending details and hooks shall conform to the recommendations of the current revision of ACI Standard 318.  $\Delta$   
Reinforcing Bar: ASTM A615 Grade 60

**GENERAL NOTES**

- First digit(s) following the letter of the Mark indicates size of reinf. bar.  
Mark (A 502) bar size - #5  
Mark (P 1001) bar size - #10  
Mark (S 603) bar size - #6
- Each truss bar, Type B, may be replaced by two (2) straight bars (one top & one bottom) of the same bar size as the truss bar. Payment in either case shall be based on truss bars as scheduled on plans.

**102-260**  
 $\Delta$  New Bent Bar Type SJ  
 $\Delta$  Revised ACI Standard

REVISIONS	DATE
STATE OF MAINE DEPARTMENT OF TRANSPORTATION	

I-95 N.B. over ROUTE 143

ETNA

REINFORCING STEEL SCHEDULE  
SHEET 4 OF 5 AUGUSTA, MAINE

PLANS  
DESIGN - DETAIL  
CHECKED  
REVISIONS  
FIELD CHANGES

DATE  
11/90

BY  
SFA