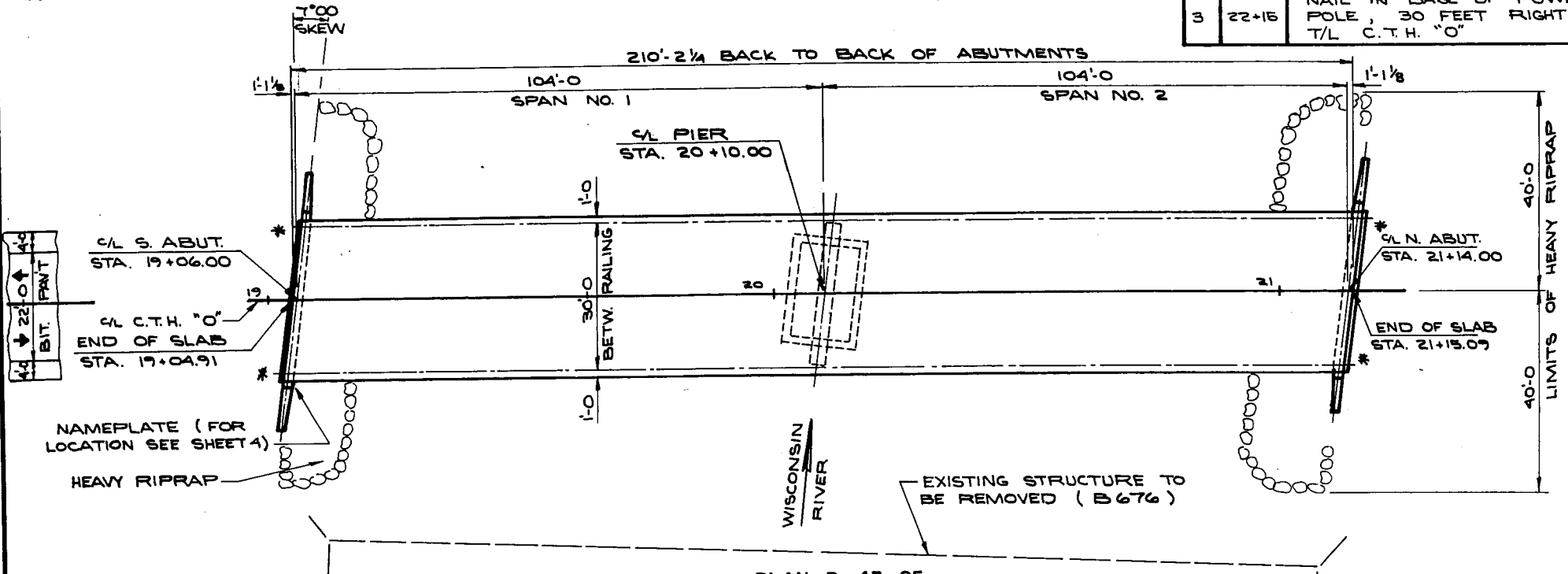


STATE PROJECT NUMBER	SHEET NO.
9460-1-70	8

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEVATION
2	18+60	NAIL IN BASE OF POWER POLE, 30 FEET RIGHT OF T/L C.T.H. "O"	1607.29
3	22+15	NAIL IN BASE OF POWER POLE, 30 FEET RIGHT OF T/L C.T.H. "O"	1608.32

\* ANCHOR ASSEMBLY FOR STEEL PLATE BEAM GUARD RAILING. (FOR DETAILS SEE SHT. 9)



PLAN B-43-25  
(2 SPAN 54" PRESTRESSED GIRDERS)

LIST OF DRAWINGS

1. GENERAL PLAN \_\_\_\_\_ X 60401
2. CROSS SECTION & QUANTITIES \_\_\_\_\_ X 60402
3. SUBSURFACE EXPLORATION \_\_\_\_\_ X 60403
4. SOUTH & NORTH ABUTMENTS \_\_\_\_\_ X 60404
5. PIER \_\_\_\_\_ X 60405
6. 54" PRESTRESSED GIRDER DETAILS \_\_\_\_\_ X 60406
7. SUPERSTRUCTURE \_\_\_\_\_ X 60407
8. SUPERSTRUCTURE DETAILS \_\_\_\_\_ X 60408
9. TUBULAR RAILING, TYPE 'F' \_\_\_\_\_ X 60409

DESIGN DATA

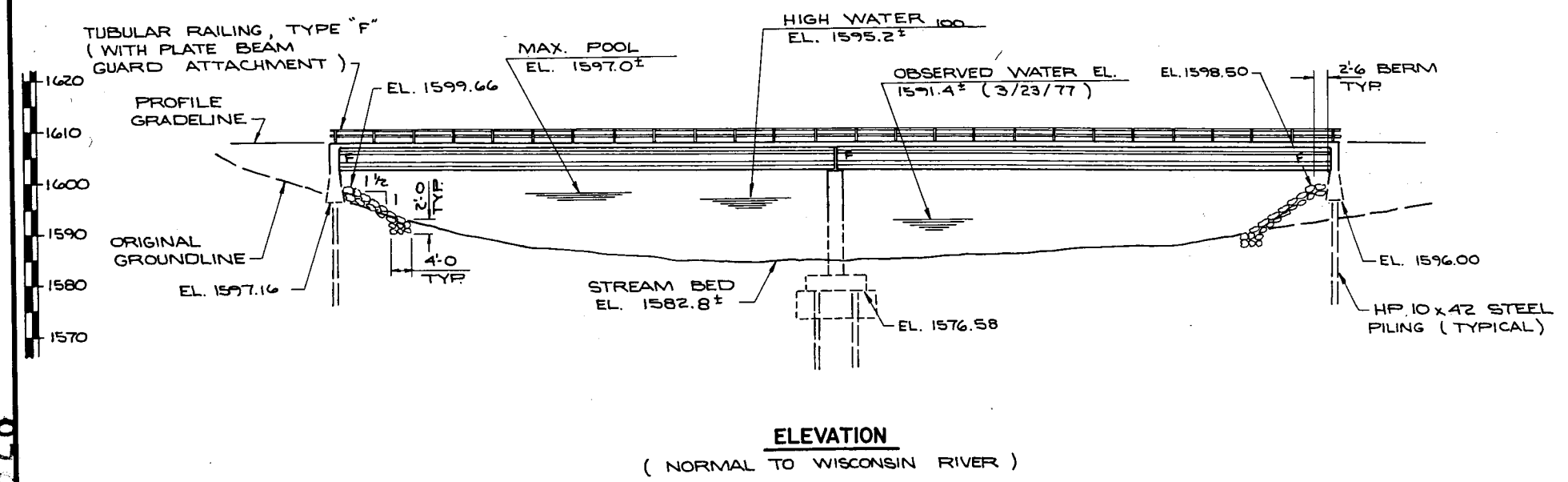
**LIVE LOAD**  
 DESIGN RATING \_\_\_\_\_ HS 20  
 INVENTORY RATING \_\_\_\_\_ HS 24  
 OPERATIONAL RATING \_\_\_\_\_ HS 41  
 STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 LBS. PER SQ. FT.

**ALLOWABLE DESIGN STRESSES**  
 CONCRETE MASONRY \_\_\_\_\_  
 SLAB \_\_\_\_\_  $f'_c = 4000$  psi  
 ALL OTHER \_\_\_\_\_  $f'_c = 3500$  psi  
 HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60 \_\_\_\_\_  $f_y = 60000$  psi  
 54" PRESTRESSED GIRDERS \_\_\_\_\_  
 CONCRETE MASONRY \_\_\_\_\_  $f'_c = 6000$  psi  
 STRANDS - 1/2" DIA. WITH AN ULTIMATE TENSILE STRENGTH OF \_\_\_\_\_  $f_t = 270000$  psi

**FOUNDATION DATA**  
 ABUTMENTS TO BE SUPPORTED ON HP 10 x 42 STEEL PILING DRIVEN TO A MINIMUM BEARING VALUE OF 55 TONS PER PILE. ESTIMATE PILE LENGTH 80'-0" AT S. ABUT. AND 80'-0" AT N. ABUT.  
 PIER TO BE SUPPORTED ON HP 10 x 42 STEEL PILING DRIVEN TO A MINIMUM BEARING VALUE OF 55 TONS PER PILE. ESTIMATE PILE LENGTH 60'-0" AT PIER.

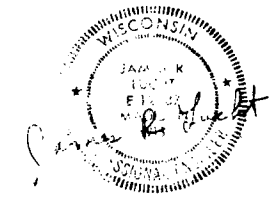
**HYDRAULIC DATA (100 YEAR FREQUENCY)**  
 $Q_{100}$  \_\_\_\_\_ 3600 cfs  
 DRAINAGE AREA \_\_\_\_\_ 590 SQ. MI.  
 VELOCITY \_\_\_\_\_ 2.0 fps  
 WATERWAY AREA \_\_\_\_\_ 1690 SQ. FT.  
 BACKWATER (ABOVE NATURAL CONDITIONS) \_\_\_\_\_ 0.0 FT.  
 HIGH WATER 100 ELEVATION \_\_\_\_\_ 1595.2 ±

**TRAFFIC DATA**  
 A. D. T. (1978) \_\_\_\_\_ 495  
 A. D. T. (1998) \_\_\_\_\_ 860  
 DESIGN SPEED \_\_\_\_\_ 50 MPH

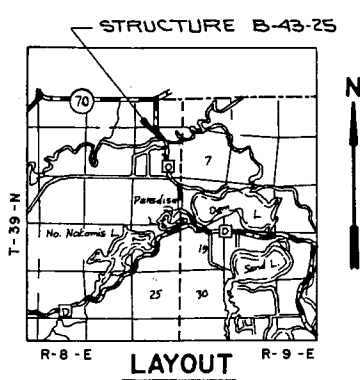


ELEVATION  
(NORMAL TO WISCONSIN RIVER)

MAP # A3526 ✓  
 DATE 8-19-2019  
 BY SC  
 ONEIDA CO. SURVEYOR'S OFFICE



PLANS PREPARED BY WESTBROOK ASSOCIATES, INC. CONSULTING ENGINEERS PLAIN, WISCONSIN



No.	Date	Revision	By

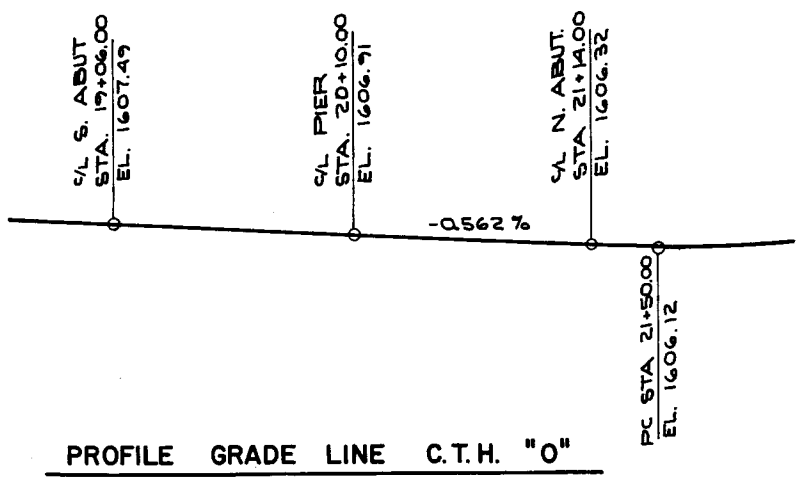
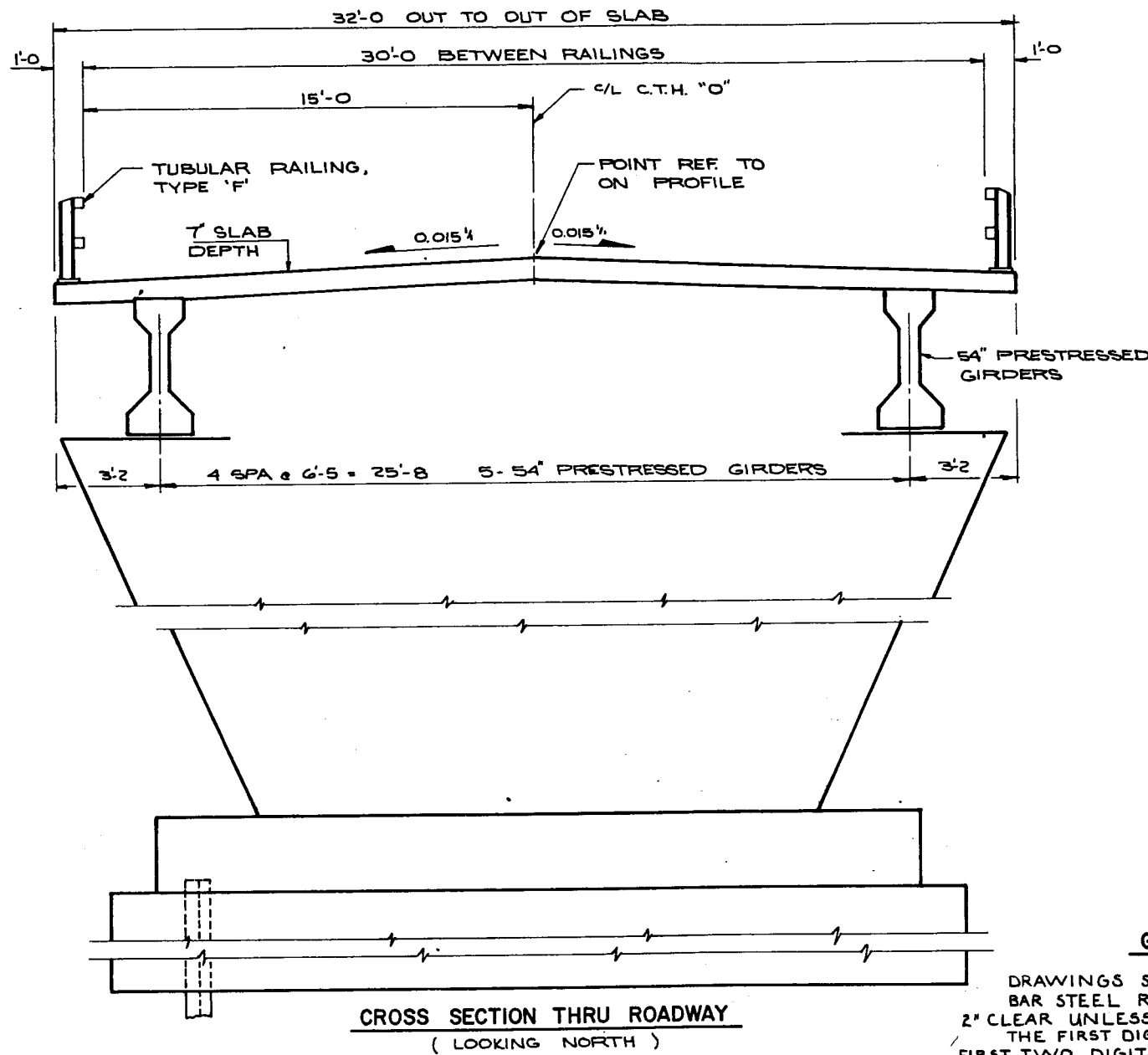
STATE OF WISCONSIN  
 DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS

**STRUCTURE B-43-25**  
 C.T.H. "O" OVER WISCONSIN RIVER

County	ONEIDA	Town	NEWBOLD
Design Spec.	A.A.S.H.T.O. 1973 INTERIMS	Load	HS 20
Designed By	JRL	Drawn By	JRL
Checked By	SHL	Checked By	SHL

Approved: W.A. Kline Chief Bridge Engineer Date: 9-12-78

GENERAL PLAN SHEET 1 OF 9 X 60401

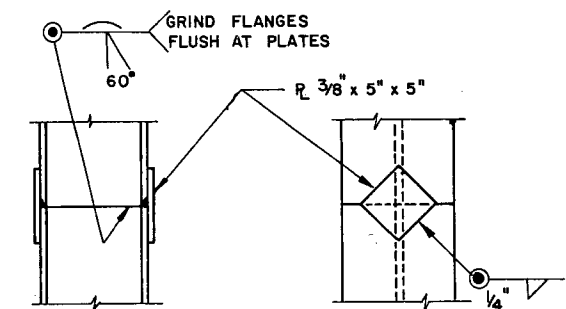


TOTAL ESTIMATED QUANTITIES

BID ITEMS	UNIT	S. ABUT.	PIER	N. ABUT.	SUPER	TOTAL
REMOVING OLD BRIDGE, STATION 20+05	L.S.					1.
EXCAVATION FOR STRUCTURES, BRIDGES B-43-25	L.S.					1.
COFFERDAM	L.S.					1.
CONCRETE MASONRY, BRIDGES	C.Y.	27.9	88.2	27.9	180.0	324.
CONCRETE MASONRY, SEAL	C.Y.		93.			93.
PRESTRESSED GIRDER, I TYPE, 54-INCH	L.F.				1044.	1044.
HIGH STRENGTH BAR STEEL REINFORCEMENT, BRIDGES	LB	1540	5920.	1540.	45700.	54700.
STRUCTURAL CARBON STEEL	LB				345.	345.
BEARING PADS, ELASTOMERIC	S.F.				36.	36.
STEEL PILING, DELIVERED AND DRIVEN, HP 10 INCH 42 POUND.	L.F.	560.	1260.	560.		2380.
TUBULAR RAILING, TYPE F, STRUCTURE B-43-25	L.S.					1.
HEAVY RIPRAP	C.Y.	125.		130.		255.
NON-BID ITEMS						
FILLER	SIZE					1/2" 84"
POLYVINYL CHLORIDE WATERSTOP	L.F.	44.		44.		88.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.  
 BAR STEEL REINFORCEMENT SHALL BE IMBEDDED 2" CLEAR UNLESS SHOWN OR NOTED OTHERWISE.  
 THE FIRST DIGIT OF A 3 DIGIT MARK OR THE FIRST TWO DIGITS OF A 4 DIGIT MARK SIGNIFIES THE BAR SIZE.  
 THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH HEAVY RIPRAP TO THE EXTENT SHOWN ON THE FRONT SHEET AND IN THE ABUTMENT DETAILS OR AS DIRECTED BY THE ENGINEER.  
 FILLER SHALL CONFORM TO A.A.S.H.T.O. DESIGNATION MISS TYPE I, II OR III OR A.A.S.H.T.O. DESIGNATION M213.  
 ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.  
 UPPER LIMITS OF "EXCAVATION FOR STRUCTURES" AT THE PIER SHALL BE THE ORIGINAL GROUND LINE.



PILE SPLICE DETAIL

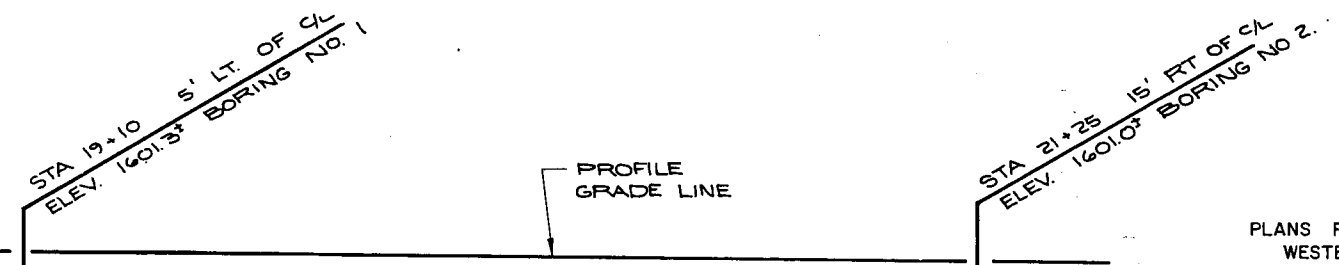
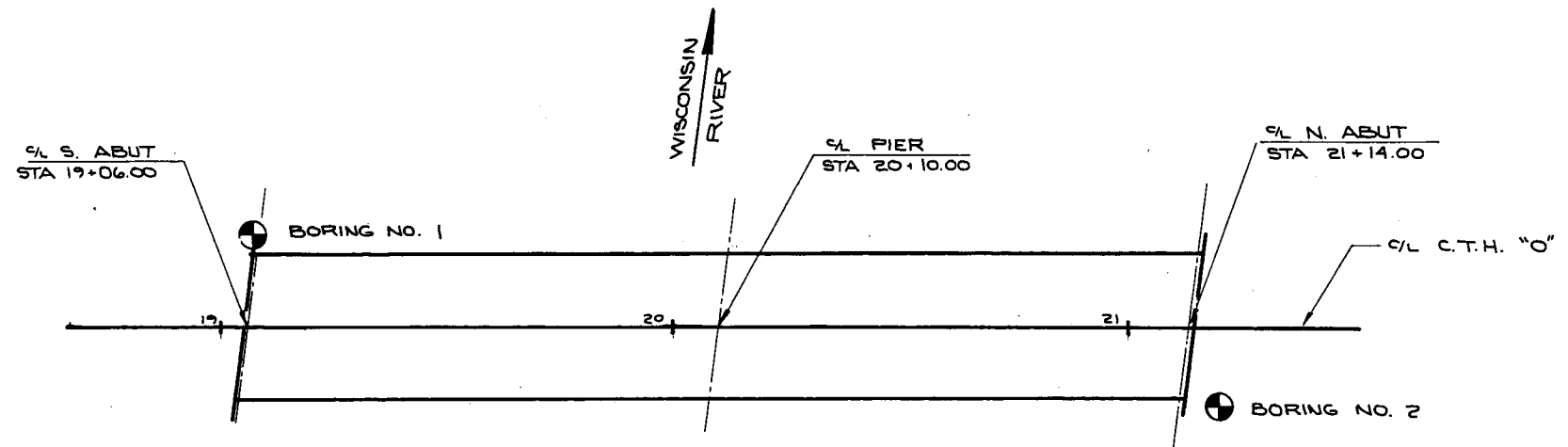
PLANS PREPARED BY WESTBROOK ASSOCIATES, INC. CONSULTING ENGINEERS PLAIN, WISCONSIN

No.	Date	Revision	By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
<b>STRUCTURE B-43-25</b>			
Const. Spec.	1975	Drawn By JRL	Plans Checked SHL
<b>CROSS SECTION &amp; QUANTITIES</b>			SHEET 2 OF 9 X 60402

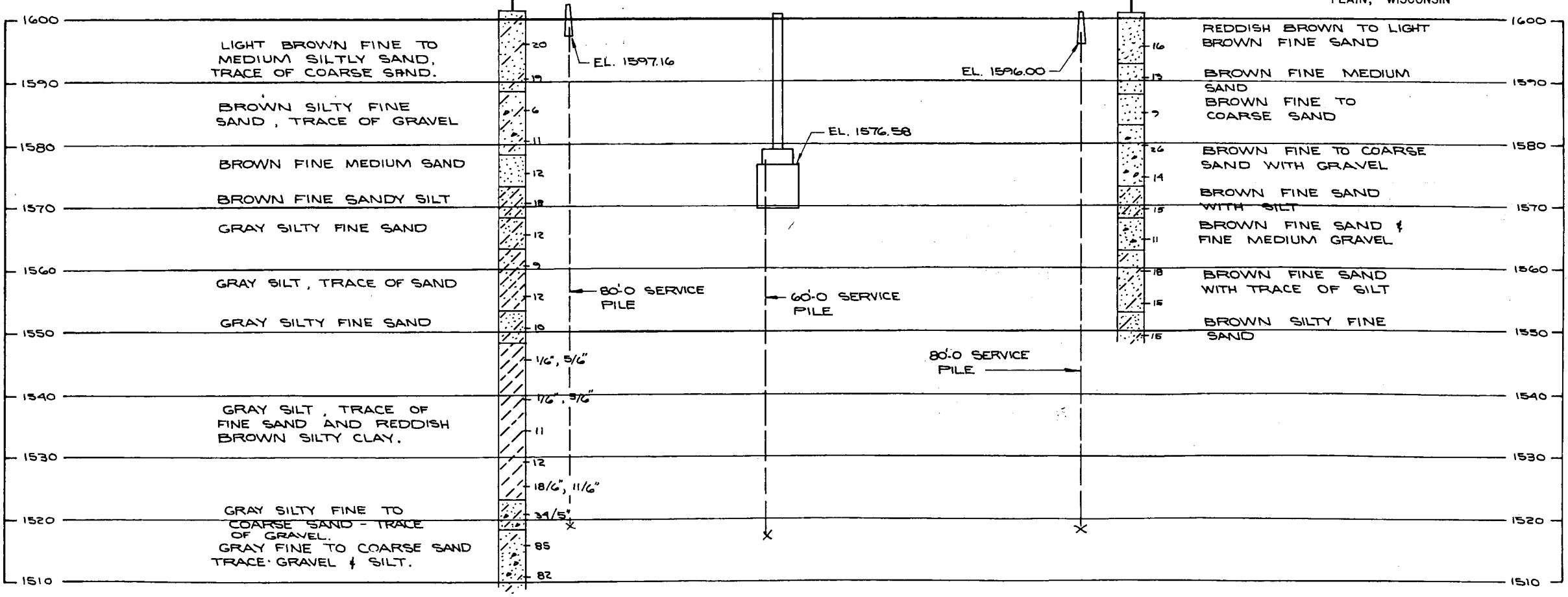
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SOIL BORINGS PERFORMED BY :  
 SOIL TESTING SERVICES OF WISCONSIN, INC.  
 GREEN BAY, WISCONSIN  
 SOIL BORINGS PERFORMED ON :  
 SEPTEMBER 7, 1977

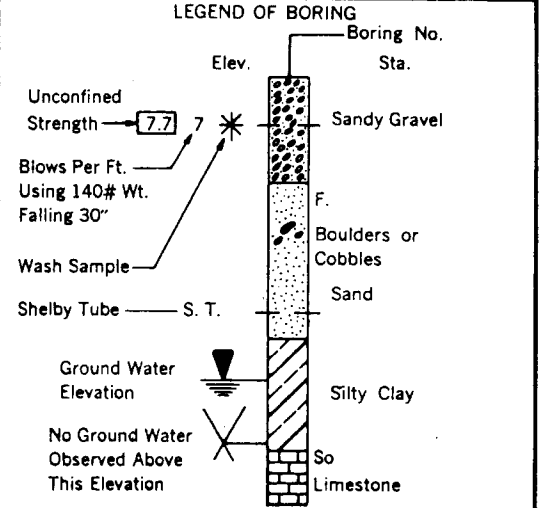
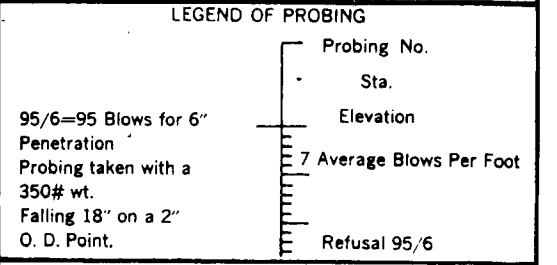


PLANS PREPARED BY  
 WESTBROOK ASSOCIATES, INC.  
 CONSULTING ENGINEERS  
 PLAIN, WISCONSIN



STATE PROJECT NUMBER	SHEET NO.
9460-1-70	8.2

ABBREVIATIONS		
F — Fine	M — Medium	C — Coarse
Ws — Weathered	So — Sound	
MATERIAL SYMBOLS		
Topsoil	Silt	Sandstone
Sand	Peat	Limestone
Gravel	Clay	Igneous Rock



Unless otherwise specified, the blows per foot at the locations indicated are based on driving a 2" O. D. x 1.4" I. D. split spoon sampler with a 140# hammer having a free fall of 30". The blow count is taken in undisturbed soil immediately below a cased or open hole eliminating side friction on the drive pipe.

**SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION**

To obtain relative data concerning the character of material in and upon which the foundation might be built, borings and/or soundings were made at points approximately as indicated on this drawing. The data presented herein represents the findings of the subsurface explorations made. However, because the depths investigated are limited and the area of the borings and/or soundings is very small in relation to the entire area, the Division of Highways does not warrant conditions below the depths investigated or that the classification of material encountered in these investigations is necessarily typical of the entire site.

No.	Date	Revision	By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
<b>STRUCTURE B-43-25</b>			
Const. Spec.	1975	Drawn By	JRL
Plans Checked	SHL		
<b>SUBSURFACE EXPLORATION</b>			SHEET 3 OF 9
X 60403			

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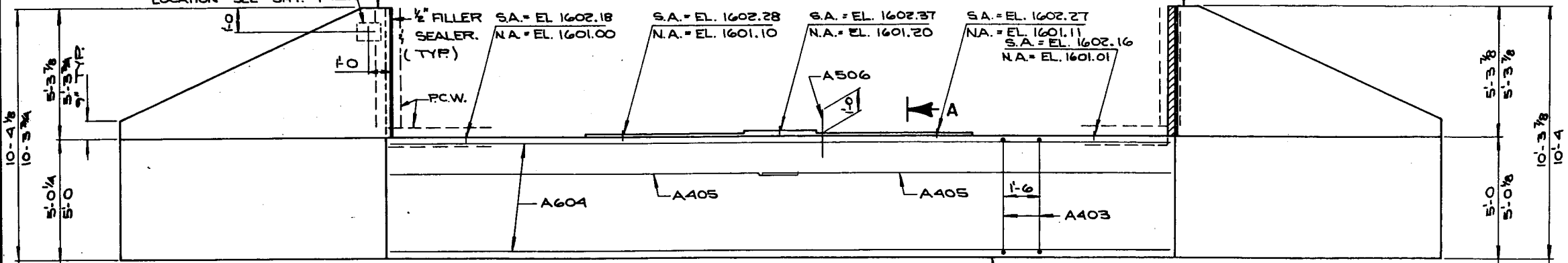
3526

S.A. = EL. 1607.50  
N.A. = EL. 1606.31  
NAME PLATE - FOR WING  
LOCATION SEE SHT. 1

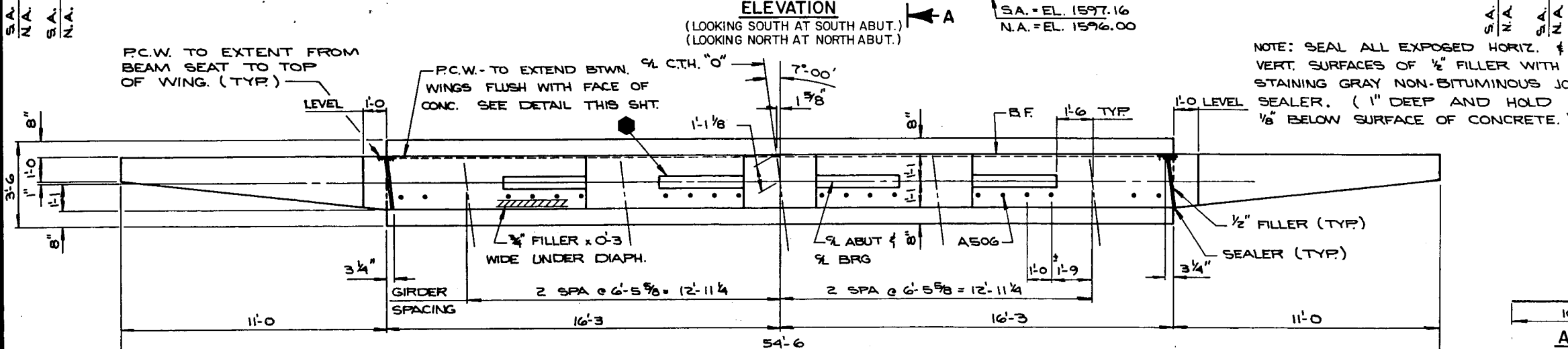
NOTE: "A506" BARS MAY BE PLACED AFTER ABUT.  
CONCRETE IS POURED BUT PRIOR TO ITS INITIAL  
SET. IMBED BAR 1'-0".

S.A. = EL. 1607.48  
N.A. = EL. 1606.33

STATE PROJECT NUMBER	SHEET NO.
9460-1-70	8,3



**ELEVATION**  
(LOOKING SOUTH AT SOUTH ABUT.)  
(LOOKING NORTH AT NORTH ABUT.)

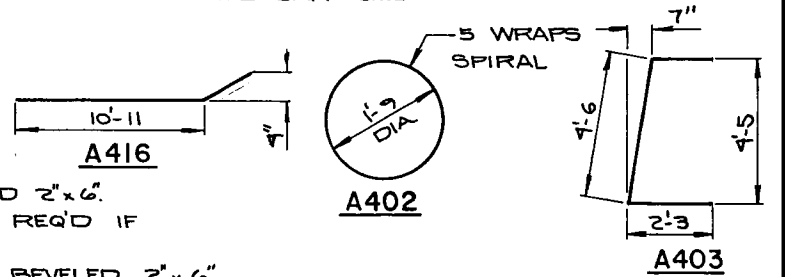


**ABUTMENT PLAN**

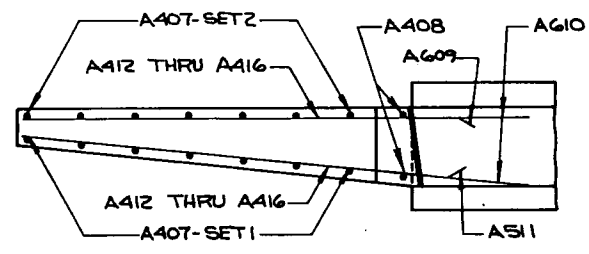
**BILL OF BARS (2 ABUTS.) 3080 LBS.**

MARK	NO.	LENGTH	BENT	CUT. DIA.	LOCATION
A401	28	2'-3"			BODY - AT FILES
A402	14	28'-0"	X		" - " - "
A403	88	8'-3"	X		" - VERTICAL
A604	12	32'-2"			" - HORIZONTAL
A405	24	16'-10"			" - "
A506	40	2'-0"			" - VERT. - DOWELS
A407	28	15'-0"	X		WINGS - " - FF & BF
A408	8	9'-11"			" - " - " & "
A609	20	12'-7"			" - HORIZ. - BF
A610	8	14'-1"			" - " - " & "
AS11	20	12'-4"			" - " - " & "
A412	8	10'-8"			" - " - " & BF
A413	8	8'-10"			" - " - " & "
A414	8	6'-2"			" - " - " & "
A415	8	3'-9"			" - " - " & "
A416	8	11'-8"	X		" - " - " & "

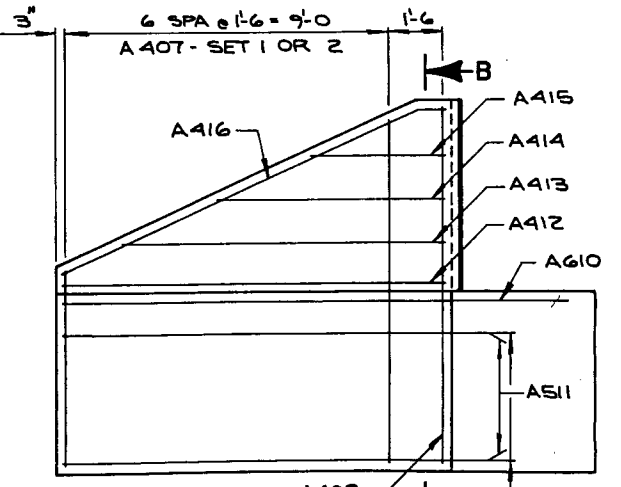
ALL BAR DIMENSIONS ARE OUT TO OUT.  
THE FIRST DIGIT OF A BAR MARK SIGNIFIES  
THE BAR SIZE



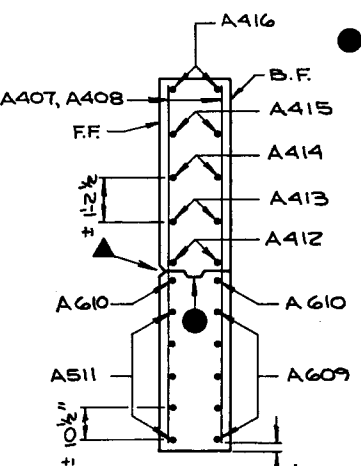
- KEYED CONST. JT. - FORMED BY SURF., BEVELED 2" x 6"
- 3/4" V GROOVE ON F.F. OF WING WALL. NOT REQ'D IF OPT. CONST. JT. IS NOT USED.
- OPT. KEYED CONST. JT. - FORMED BY SURF., BEVELED 2" x 6"



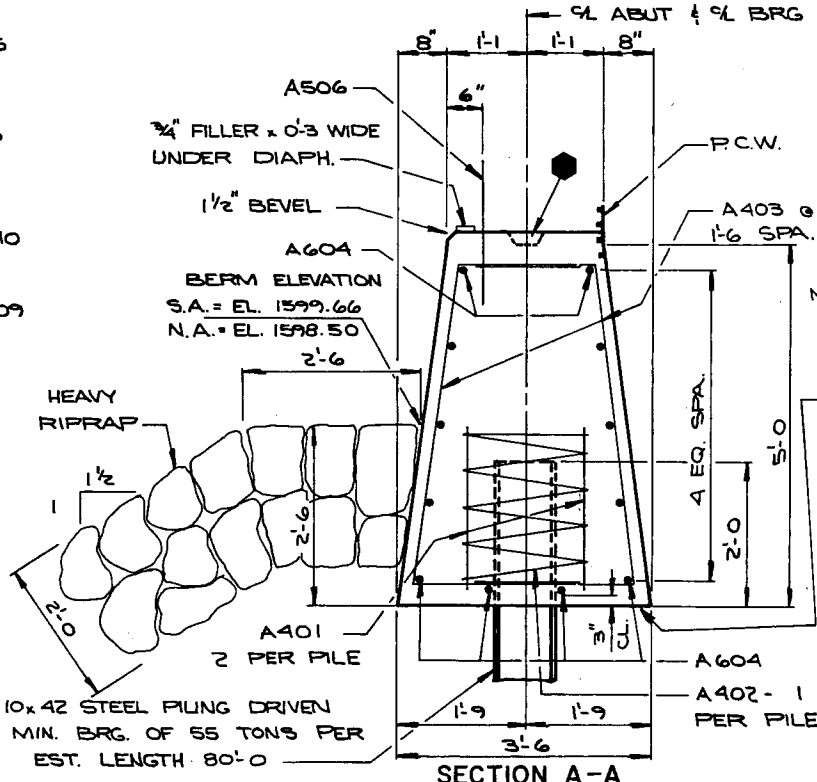
**WING PLAN**



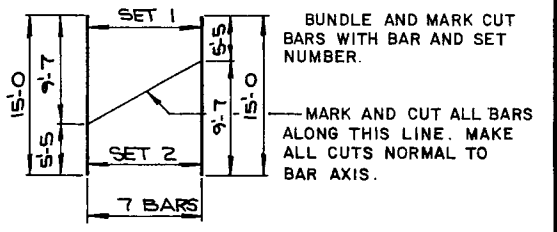
**WING ELEVATION**



**SECTION B-B**



**SECTION A-A**

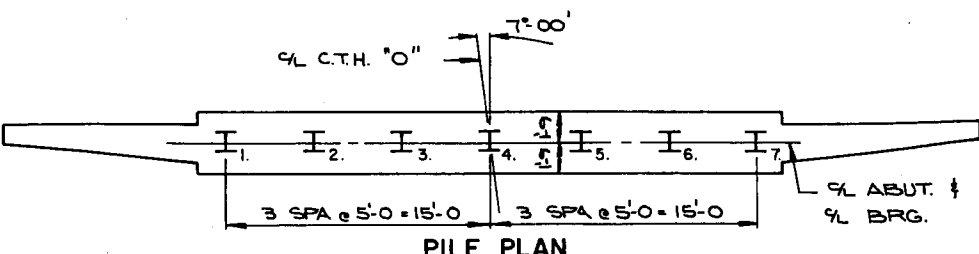


**CUTTING DIAGRAM A407**

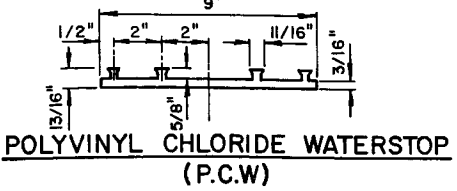
NOTE:  
B.F. DENOTES BACK FACE OF ABUTMENT  
F.F. DENOTES FRONT FACE OF ABUTMENT

NOTE: ALL HORIZONTAL BARS  
NOT LABELLED ARE A405  
FOR PILE SPLICE DETAIL  
SEE SHEET 2.

EXCAVATE TO BOT. OF S. ABUT.  
AND FILL TO BOT. OF N. ABUT.  
PRIOR TO DRIVING FILES.



**PILE PLAN**



**POLYVINYL CHLORIDE WATERSTOP (P.C.W.)**

HP 10x42 STEEL PILING DRIVEN  
TO A MIN. BRG. OF 55 TONS PER  
PILE. EST. LENGTH 80'-0"

No.	Date	Revision	By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
<b>STRUCTURE B-43-25</b>			
Const. Spec. 1975	Drawn By JRL	Plans Checked SHL	
SOUTH AND NORTH ABUTMENTS			SHEET 4 OF 9 X 60404

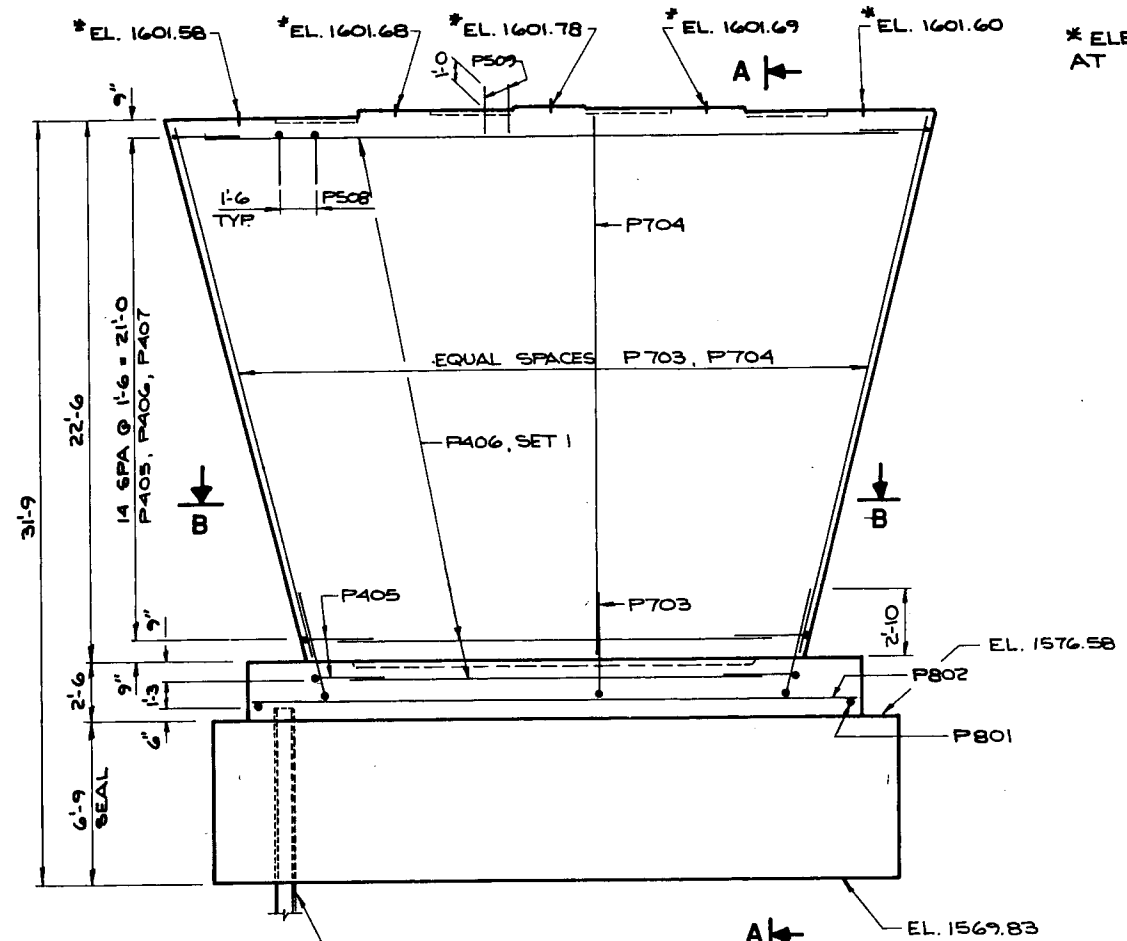
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Form E-B-1-69 3526

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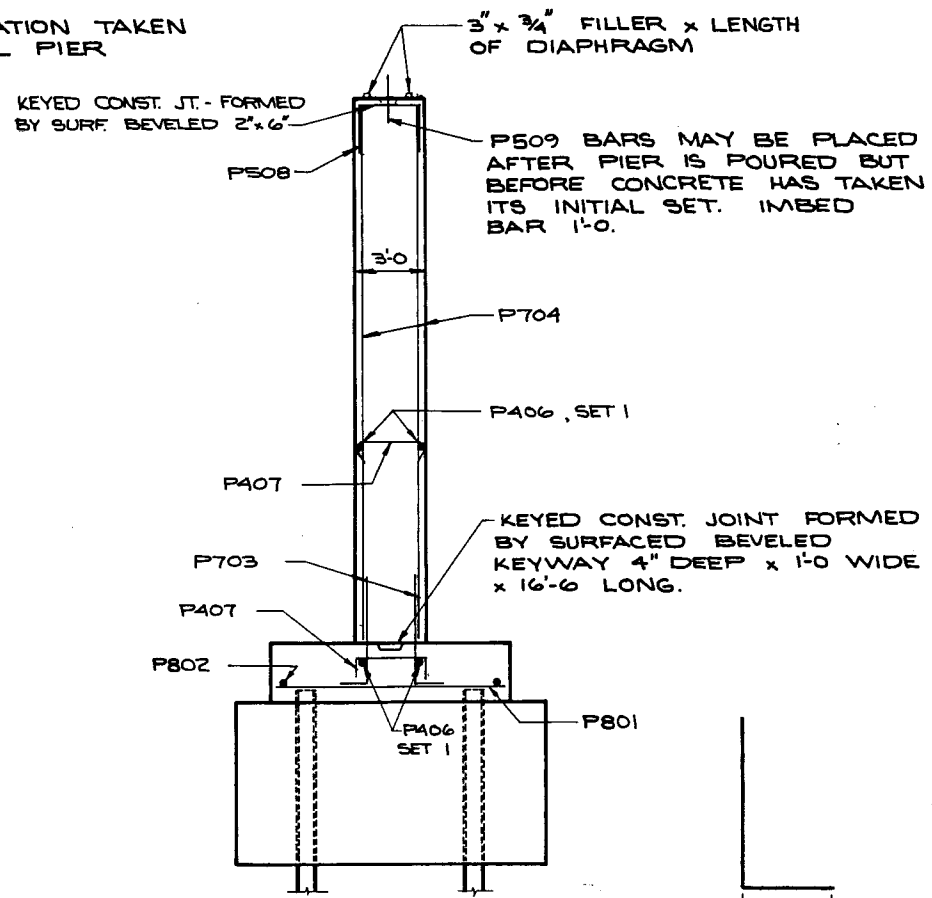
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STATE PROJECT NUMBER	SHEET NO.
9460-1-70	8.4



HP 10x42 STEEL PILES  
DRIVEN TO 55 TON/PILE MIN.  
BEARING CAPACITY. EST.  
LENGTH = 60'-0"

**ELEVATION**  
(LOOKING NORTH)

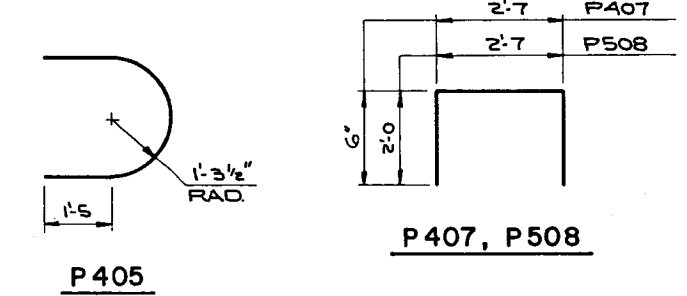


**SECTION "A"**

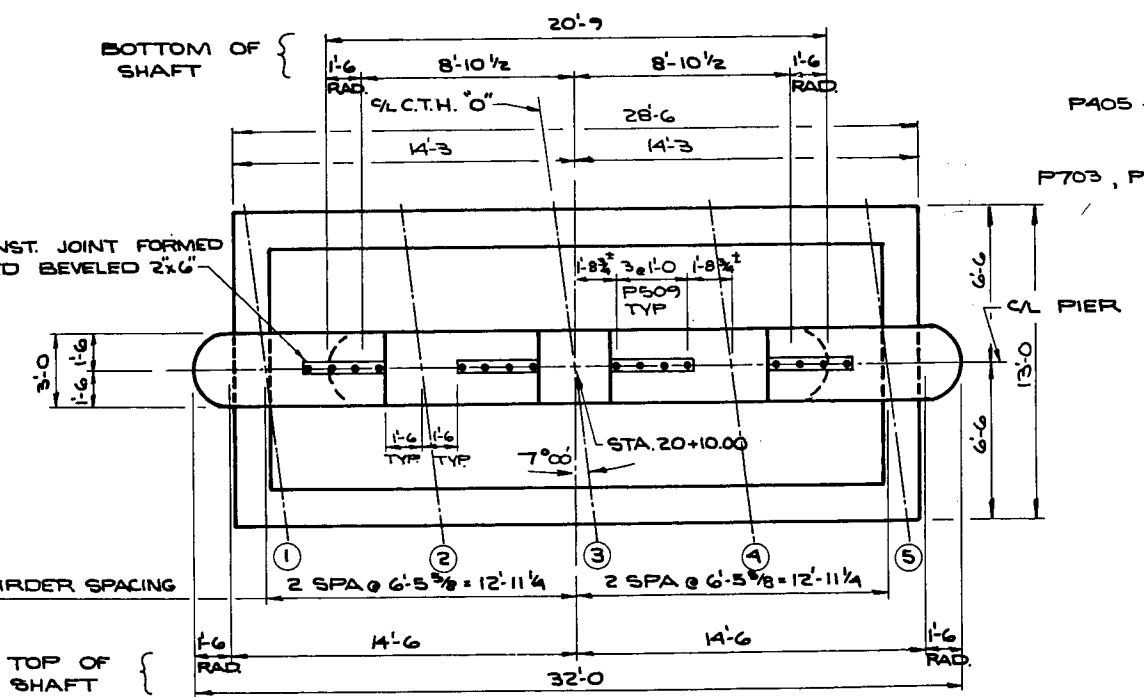
**BILL OF BARS 5920 LBS.**

MARK	NO. REQ'D	LENGTH	BENT	CUT. DIA.	LOCATION
P801	34	9'-8"			FOOTING
P802	10	25'-2"			"
P703	48	6'-4"	X		" - DOWELS
P704	48	22'-3"			SHAFT - VERTICAL
P405	32	6'-10"	X		FOOTING & SHAFT - HORIZONTAL
P406	16	45'-11"	X		" " " "
P407	336	3'-5"	X		" " " - TIES
P508	20	6'-4"	X		SHAFT - TOP
P509	16	2'-0"			" - DOWELS

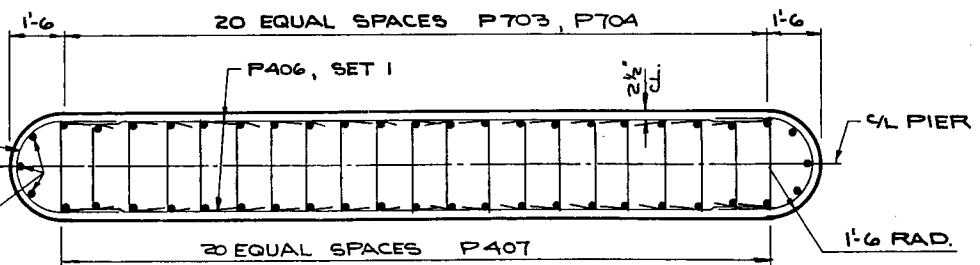
ALL BAR DIMENSIONS ARE OUT TO OUT.  
THE FIRST DIGIT OF A BAR MARK SIGNIFIES  
THE BAR SIZE.



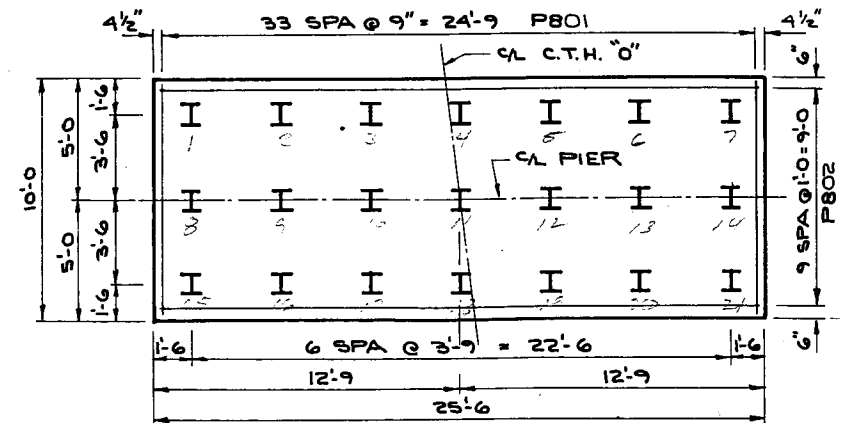
**CUTTING DIAGRAM - P406**



**PLAN**



**SECTION "B"**



**FOOTING LAYOUT**

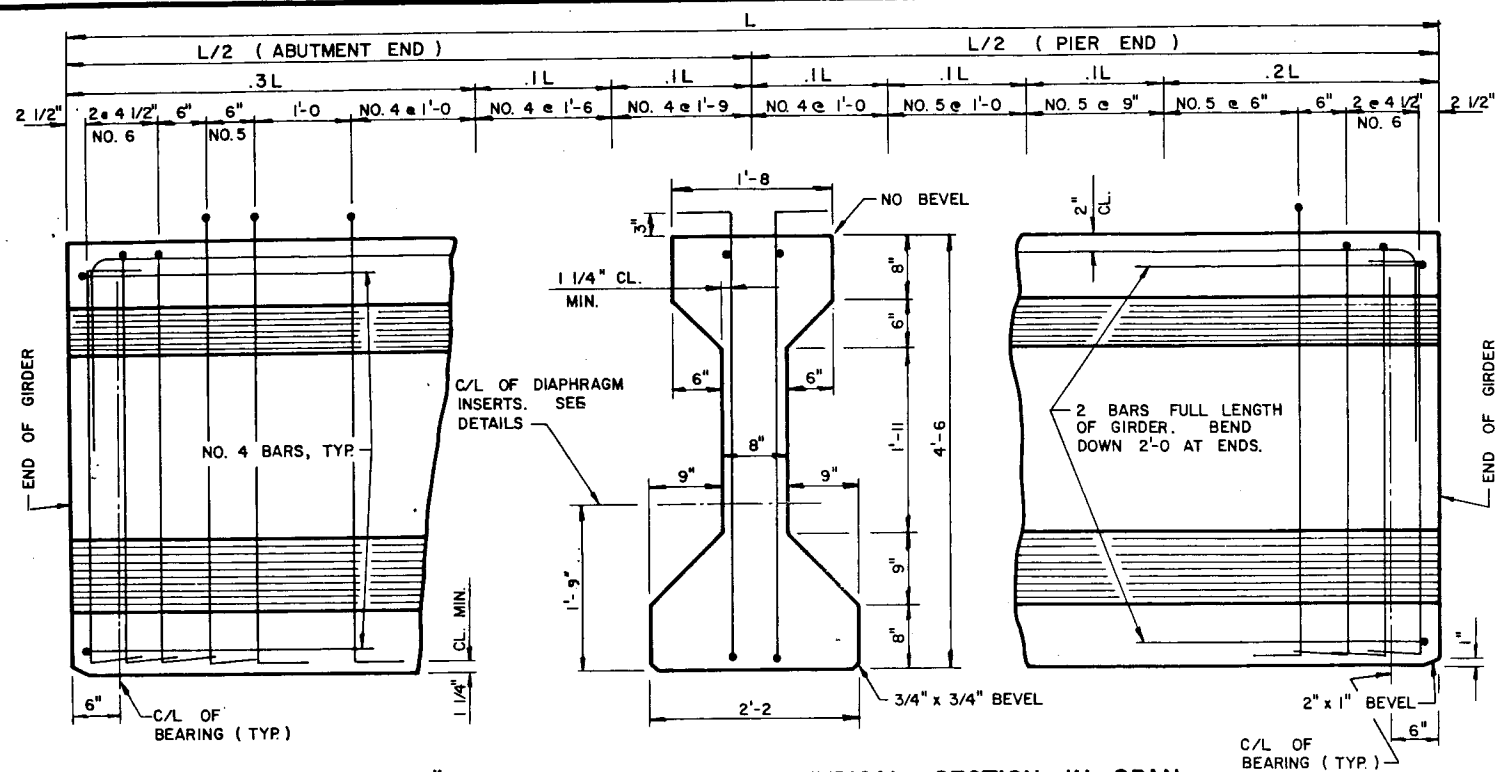
NOTE: FOR PILE SPLICE  
SEE DETAIL SHT. 2

PLANS PREPARED BY  
WESTBROOK ASSOCIATES, INC.  
CONSULTING ENGINEERS  
PLAIN, WISCONSIN

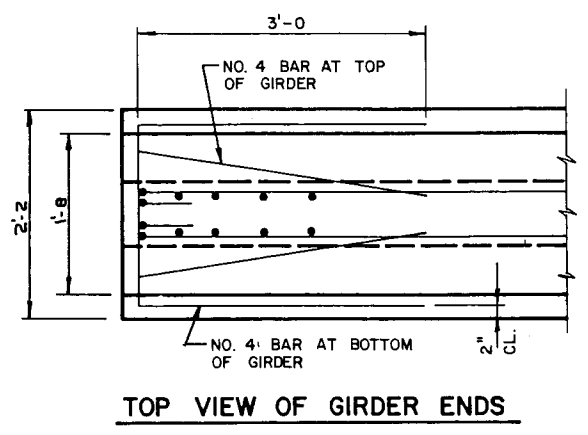
No.	Date	Revision	By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
<b>STRUCTURE B-43-25</b>			
Const. Spec.	1975	Drawn By	JRL
		Plans Checked	SHL
<b>PIER</b>			SHEET 5 OF 9
			X 60405

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54" GIRDER - SIDE VIEW & TYPICAL SECTION IN SPAN



TOP VIEW OF GIRDER ENDS

**GENERAL NOTES**

TOP OF GIRDERS TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY FOR BONDING TO THE SLAB.

THE GIRDER MANUFACTURER SHALL PROVIDE A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS. THE DETAILS OF THE LIFTING DEVICE USED SHALL BE SUBMITTED FOR APPROVAL.

ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN. PRESTRESSING STRANDS SHALL HAVE AN ULTIMATE STRENGTH OF 270,000 psi AND SHALL BE FLUSH WITH THE ENDS OF THE GIRDERS.

INSERTS SHALL BE PLACED ON 4" CENTERS SYMMETRICALLY ABOUT THE C/L OF DIAPHRAGMS IN SPANS.

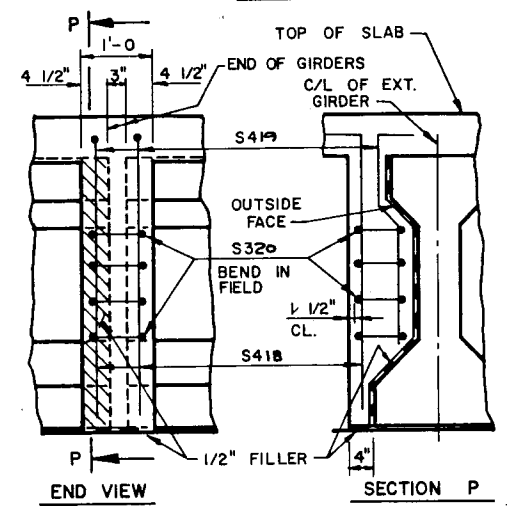
ALL STIRRUPS SHALL BE IN PAIRS AND THE SPACING SHOWN IN "SIDE VIEW" IS MAXIMUM. THE LOCATION SHALL BE SHOWN IN THE SHOP DRAWINGS.

BEND EACH END OF NO. 4 AND NO. 5 STIRRUPS 6" AND NO. 6 STIRRUPS 6 1/2".

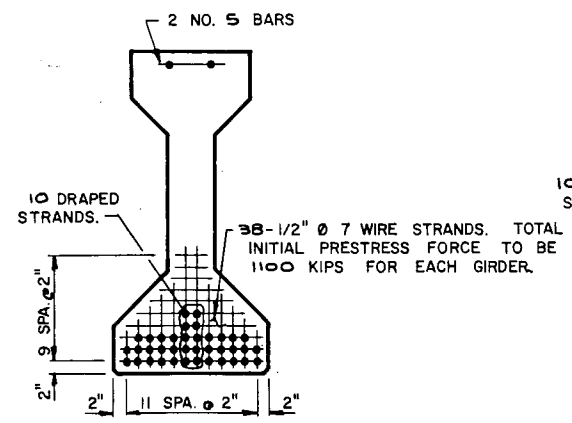
ENDS OF STRANDS SHALL BE PAINTED WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (THIS APPLIES ONLY TO THOSE ENDS OF GIRDERS THAT ARE FINALLY EXPOSED.)

TOP LONGITUDINAL BARS IN GIRDER MAY BE SPLICED BY USING 48 BAR DIAMETER LAPS. PLACE ONE LAP AT C/L OF GIRDER IF LENGTH IS < 70'-0". PLACE LAPS AT THE 1/3 RD. POINTS OF GIRDER IF LENGTH IS ≥ 70'-0".

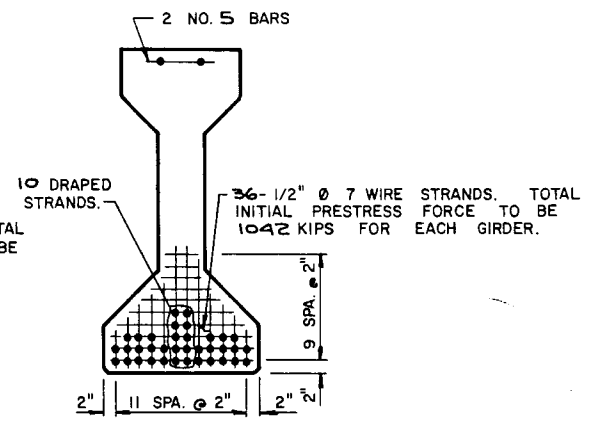
ALL NON-PRESTRESSED BAR STEEL REINFORCEMENT SHALL BE GRADE 60.



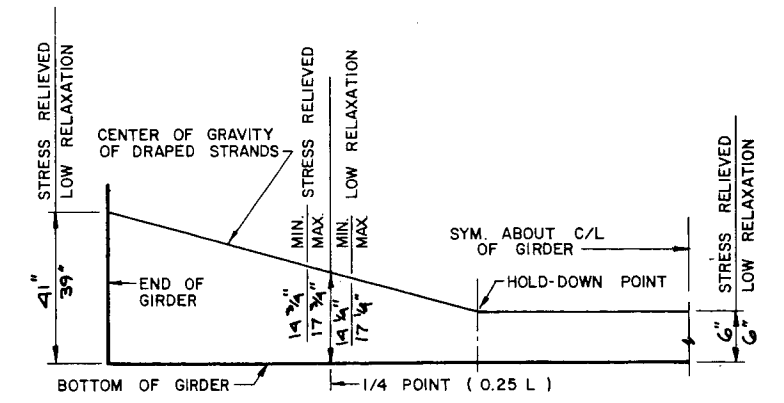
PILASTER DETAIL AT PIERS



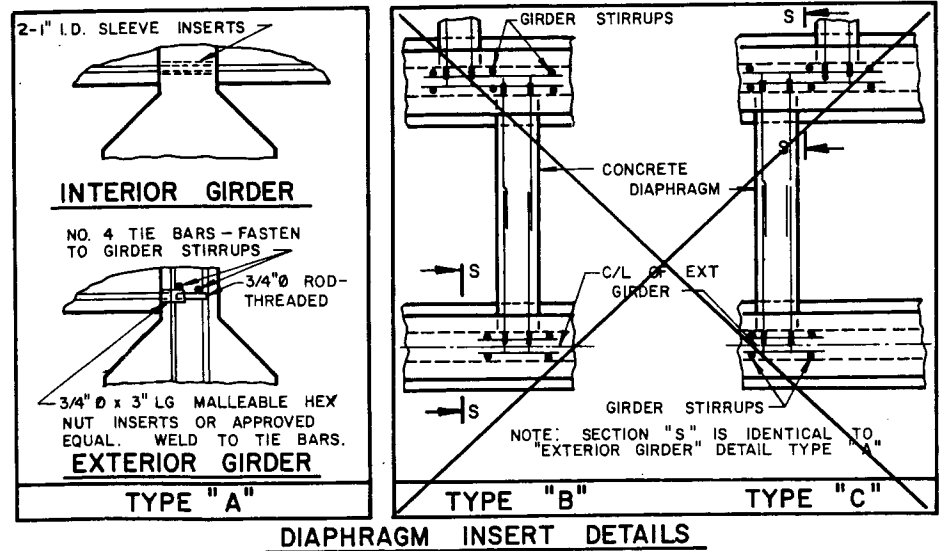
SECTION THRU GIRDER AT C/L OF SPAN (STRESS RELIEVED STRANDS)



SECTION THRU GIRDER AT C/L OF SPAN (LOW RELAXATION STRANDS)



DRAPED STRAND PROFILE



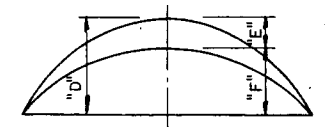
DIAPHRAGM INSERT DETAILS

\* MINIMUM CYLINDER STRENGTH OF CONCRETE AT TIME OF TRANSFER OF PRESTRESS FORCE.

\*\* DATA SHOWN IS THEORETICAL AND MAY VARY WITH CONCRETE STRENGTH, VARIABLE PRESTRESS CONDITIONS AND PRESTRESS LOSSES.

■ STRESS RELIEVED STRANDS  
▲ LOW RELAXATION STRANDS

GIRDER DATA			
54" PRESTRESSED GIRDER REQUIRED			
	SPAN 1	SPAN 2	SPAN
GIRDER LENGTH "L" REQUIRED	104'-4 1/2"	104'-4 1/2"	
f'ci (psi) *	STRESS RELIEVED STRANDS	4800	4800
	LOW RELAXATION STRANDS	4800	4800
DEFLECTION DATA **	PRESTRESSED CAMBER "D"	1 3/8" ▲ 1 1/2"	1 3/8" ▲ 1 1/2"
	DEAD LOAD DEFLECTION "E"	1 1/8"	1 1/8"
	RESIDUAL CAMBER "F"	1/2" ▲ 3/8"	1/2" ▲ 3/8"
USE DIAPHRAGM INSERT DETAIL TYPE "A"			

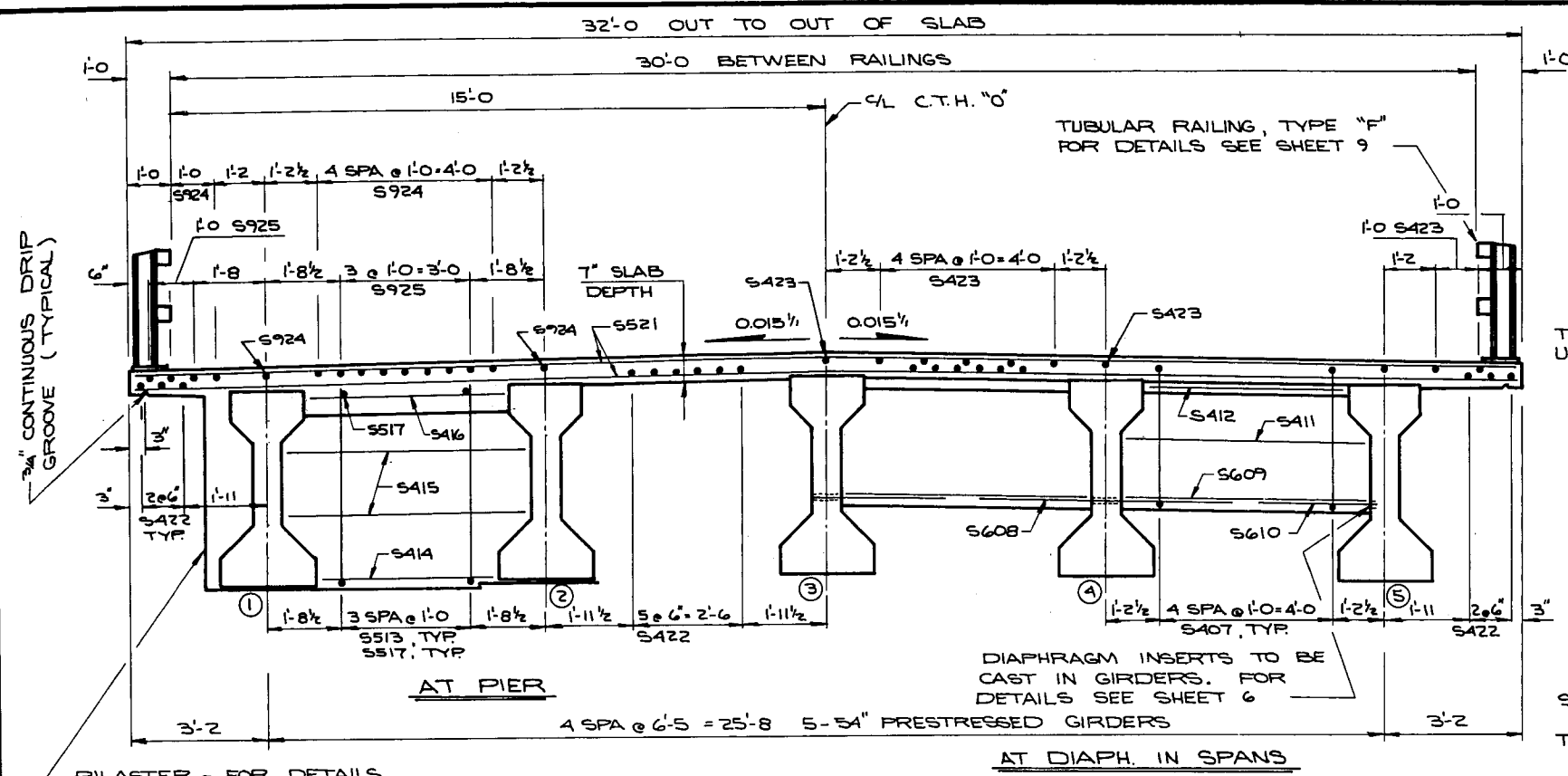


No.	Date	Revision	By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-43-25			
Const. Spec.	1975	Drawn By	JRL
		Plans Checked	SHL
54" PRESTRESSED GIRDER DETAILS			SHEET 6 OF 9
			X 60406

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STATE PROJECT NUMBER	SHEET NO.
9460-1-70	8.6



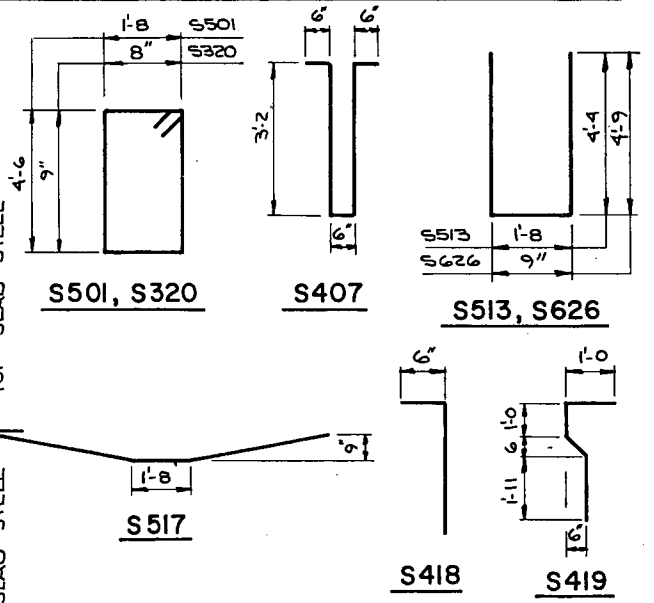
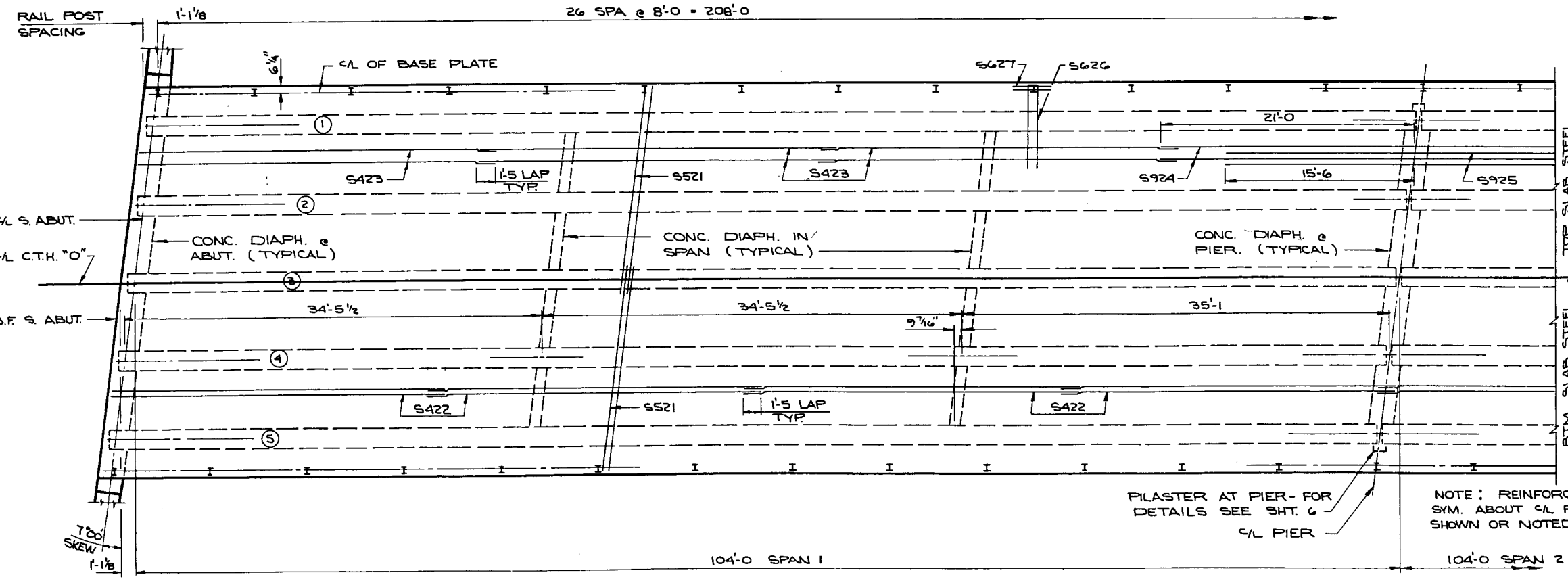
PLACE S521 BARS PARALLEL TO CENTERLINE OF SUBSTRUCTURE UNITS.

THE FIRST DIGIT OF A BAR MARK SIGNIFIES THE BAR SIZE. ALL BAR DIMENSIONS ARE OUT TO OUT. # PLAIN BAR - THREAD ONE END 3" \* FOR LOCATION OF S626 & S627 BARS SEE SHT. 9

**BILL OF BARS 45700 LBS.**

MARK	NO. REQD	LENGTH	BENT	LOCATION
S501	40	12'-10"	X	DIAPH. AT ABUT. - STIRRUP
S402	20	16'-8"		" " " - HORIZ.
S403	8	3'-11"		" " " - " "
S404	4	1'-9"		" " " - " "
S405	16	5'-5"		" " " - " "
S406	8	2'-6"		" " " - " "
S407	80	7'-6"	X	" " IN SPAN - STIRRUP
S608	24	6'-0"		" " " - HORIZ.
S609	32	5'-6"		" " " - " "
S610	16	2'-11"		" " " - " "
S411	32	5'-5"		" " " - " "
S412	32	4'-5"		" " " - " "
S513	16	10'-5"	X	" " AT PIER - STIRRUP
S414	8	3'-11"		" " " - HORIZ.
S415	16	5'-5"		" " " - " "
S416	24	4'-5"		" " " - " "
S517	16	7'-8"	X	" " " - LONGIT.
S418	4	5'-0"	X	FILASTER AT PIER
S419	4	4'-5"	X	" " " - " "
S320	8	3'-4"	X	" " " - " "
S521	832	31'-10"		SLAB - TRANSVERSE - TOP & BOTTOM
S422	240	27'-6"		" - LONGITUDINAL - BOTTOM
S423	174	29'-5"		" - " - TOP
S924	29	42'-0"		" - " - " "
S925	20	31'-0"		" - " - " "
S626	54	10'-0"	X	" - AT RAIL POST
S627	108	4'-0"		" - " - " "

**CROSS SECTION THRU ROADWAY**  
(LOOKING NORTH)



FILASTER AT PIER - FOR DETAILS SEE SHT. 6

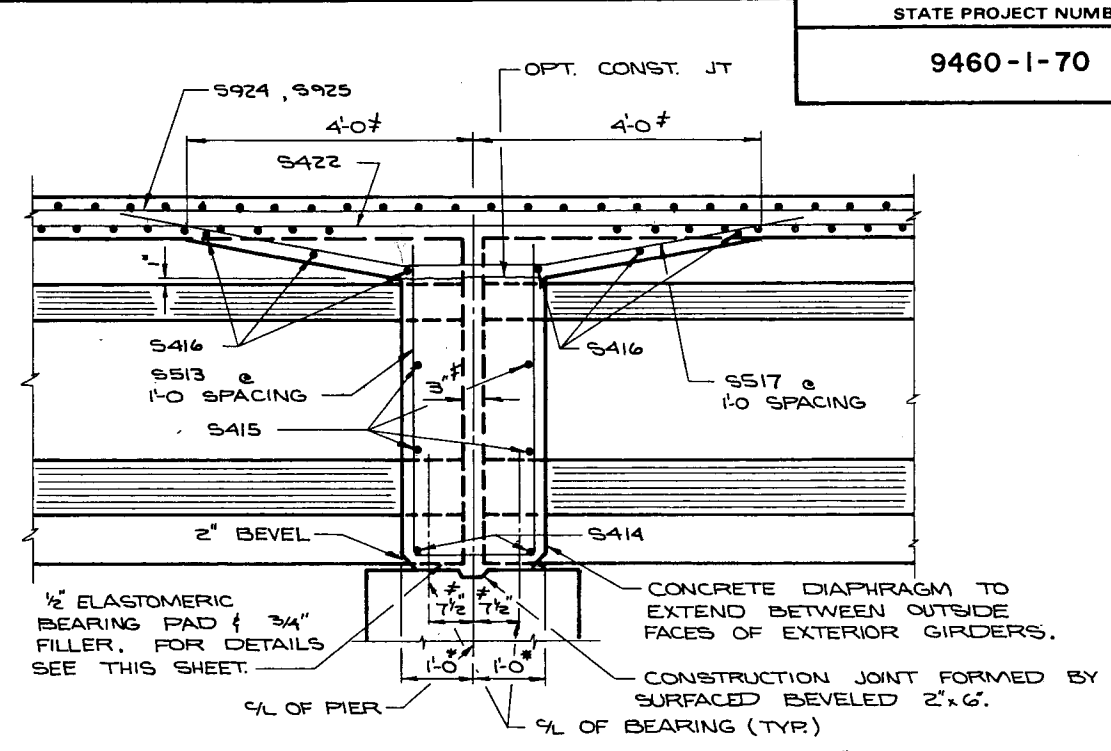
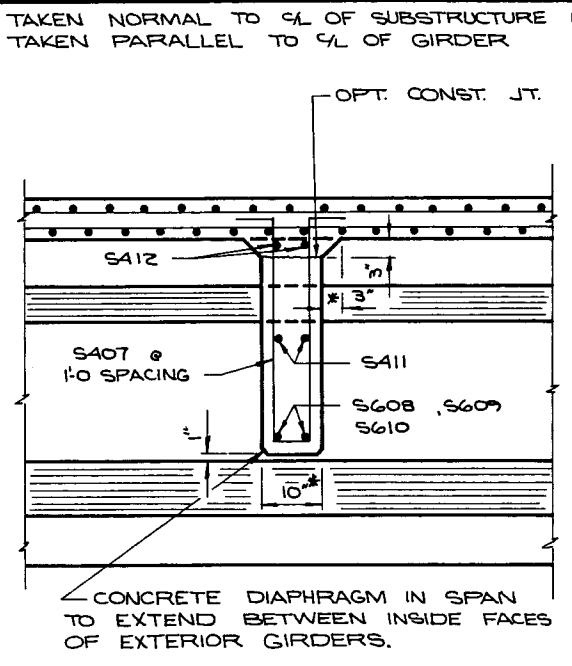
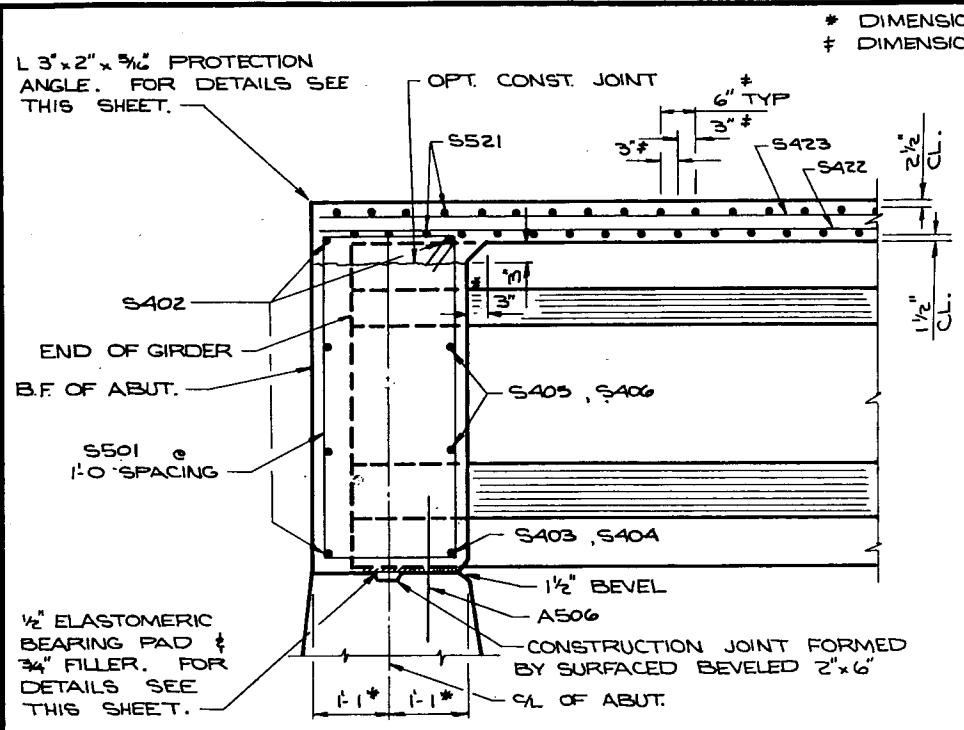
NOTE: REINFORCEMENT IS SYM. ABOUT C/L PIER UNLESS SHOWN OR NOTED OTHERWISE.

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STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
<b>STRUCTURE B-43-25</b>			
Const. Spec.	1975	Drawn By	JRL
		Plans Checked	SHL
SUPERSTRUCTURE			SHEET 7 OF 9
			X 60407

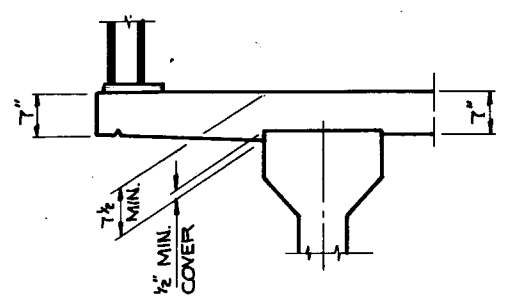
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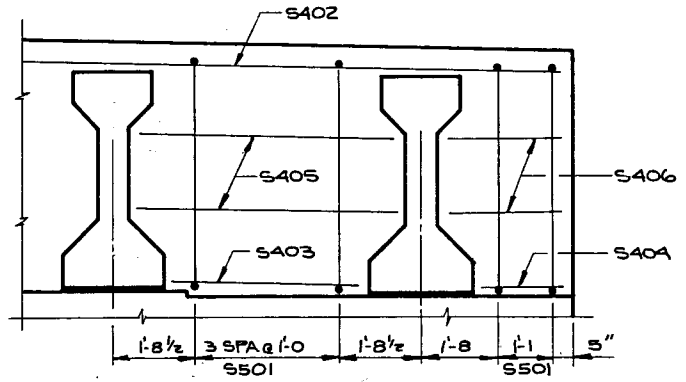
STATE PROJECT NUMBER	SHEET NO.
9460-1-70	8.7



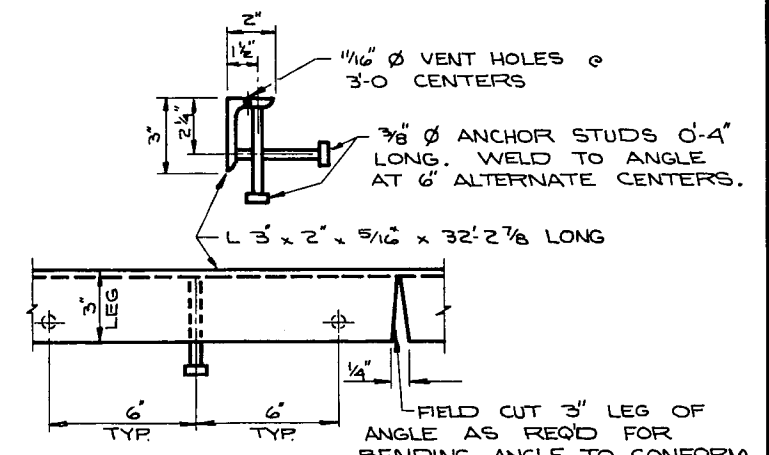
PART LONGITUDINAL SECTION



SLAB FORMING AT EXT. GIRDER

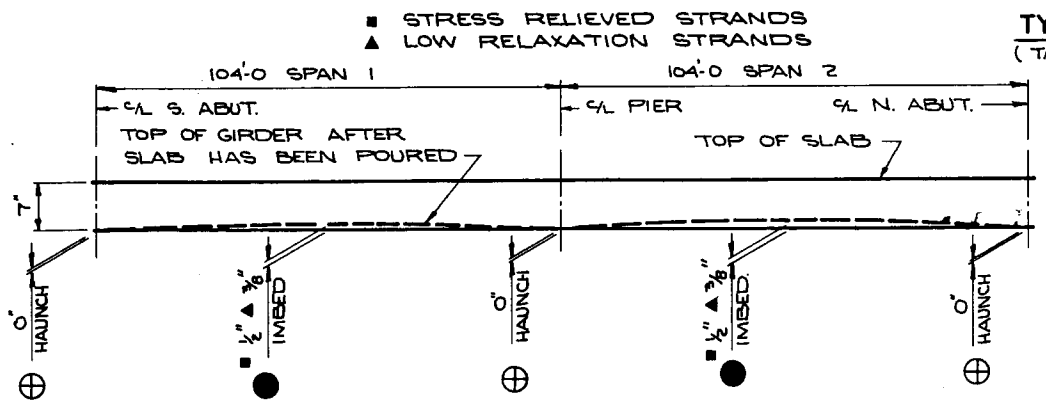


TYPICAL SECTION AT ABUTMENT (TAKEN NORMAL TO C/L OF GIRDERS)

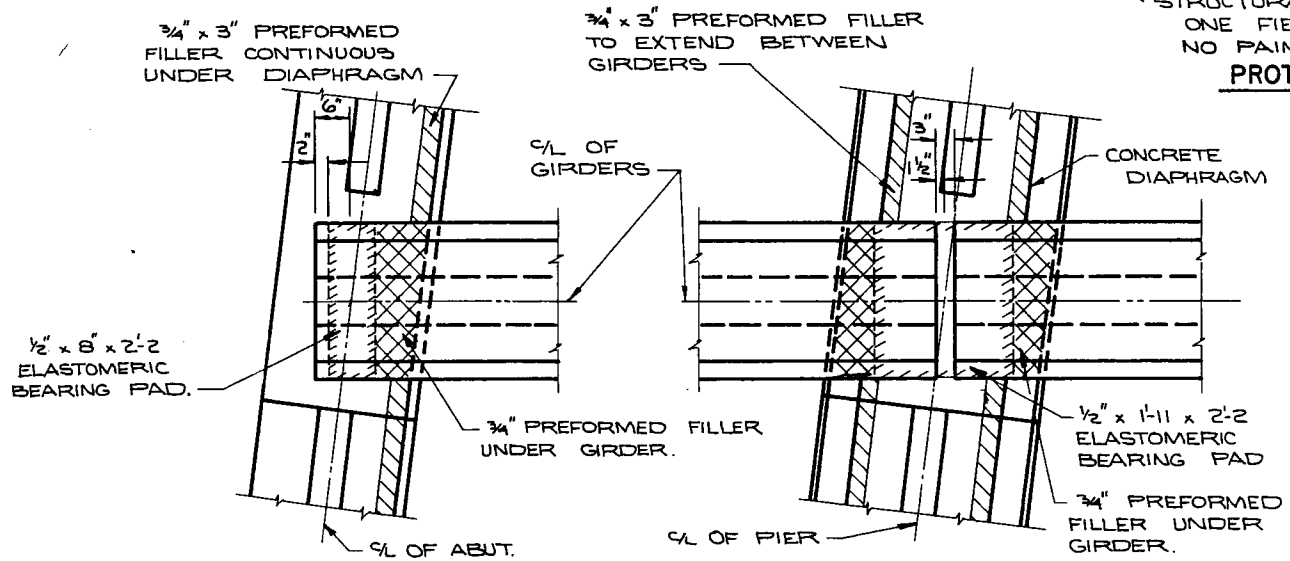


NOTE: ANGLE AND STUDS TO BE PAID FOR AS "STRUCTURAL CARBON STEEL." ONE FIELD SPICE SHALL BE PERMITTED. NO PAINTING REQUIRED FOR ANGLE.

**PROTECTION ANGLE**



SLAB FORMING DIAGRAM



BEARING PAD DETAILS

● TO COMPENSATE FOR VARIATIONS IN PRESTRESS CAMBER AND OTHER MINOR CONSTRUCTION DISCREPANCIES THE IMBEDMENT OF THE GIRDER INTO THE SLAB MAY BE VARIED WITH A MAXIMUM IMBEDMENT OF 1 1/2" ALLOWABLE AND THE SLAB HELD TO PLAN THICKNESS.

⊕ IF VARIATIONS IN PRESTRESS CAMBER AND OTHER CONSTRUCTION DISCREPANCIES ARE OF SUCH A MAGNITUDE THAT THE MAXIMUM ALLOWABLE IMBEDMENT AS NOTED ABOVE WILL BE EXCEEDED, THESE DIMENSIONS SHALL BE REVISED. THE 1 1/2" MAXIMUM IMBEDMENT AND THE PLAN SLAB THICKNESS SHALL BE HELD WHILE THE GRADE LINE WILL BE REVISED.

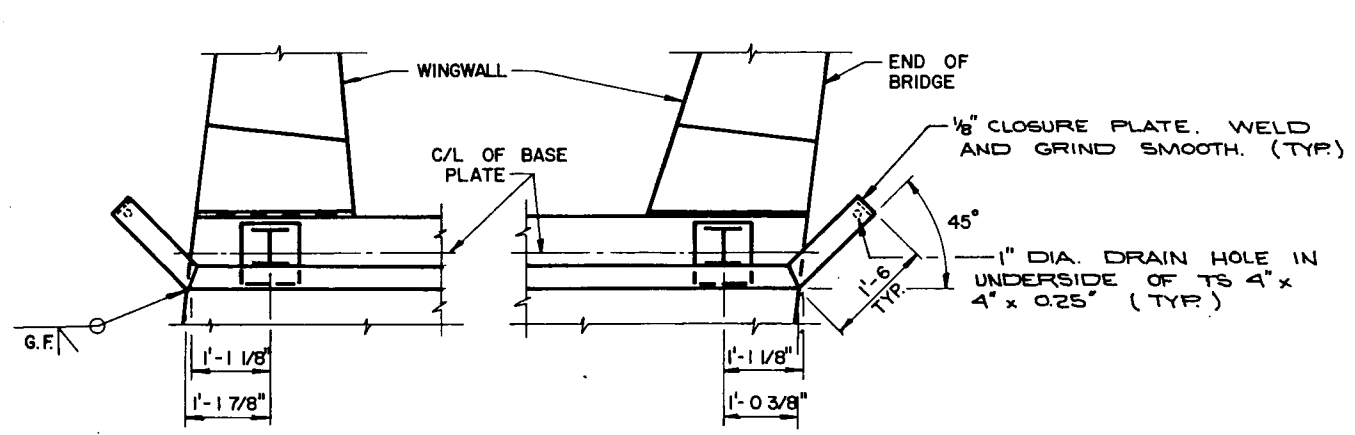
No.	Date	Revision	By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
<b>STRUCTURE B-43-25</b>			
Const. Spec.	1975	Drawn By	JRL
		Plans Checked	SHL
SUPERSTRUCTURE DETAILS			SHEET 8 OF 9
			X 60408



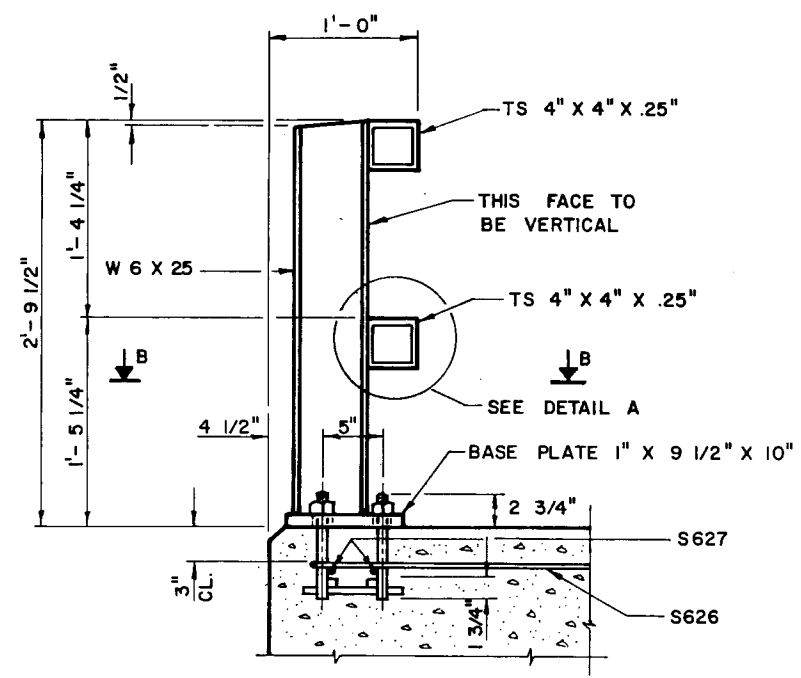
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STATE PROJECT NUMBER	SHEET NO.
9460-1-70	8.8



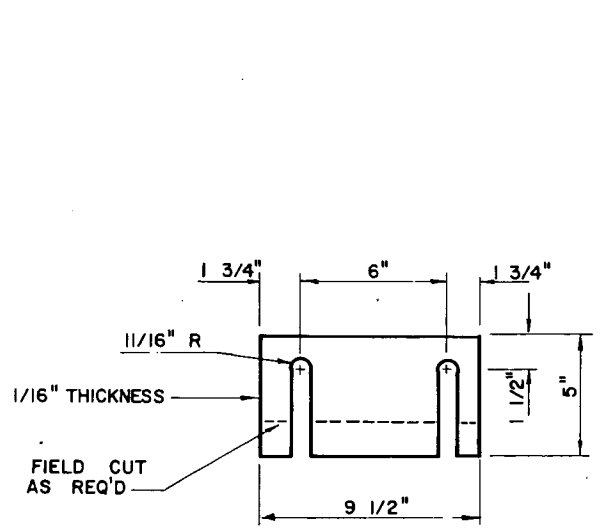
END DETAILS FOR WINGS



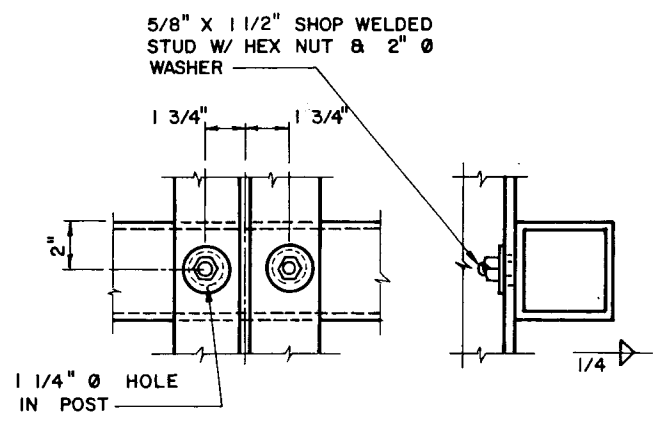
SECTION THRU RAILING

GENERAL NOTES

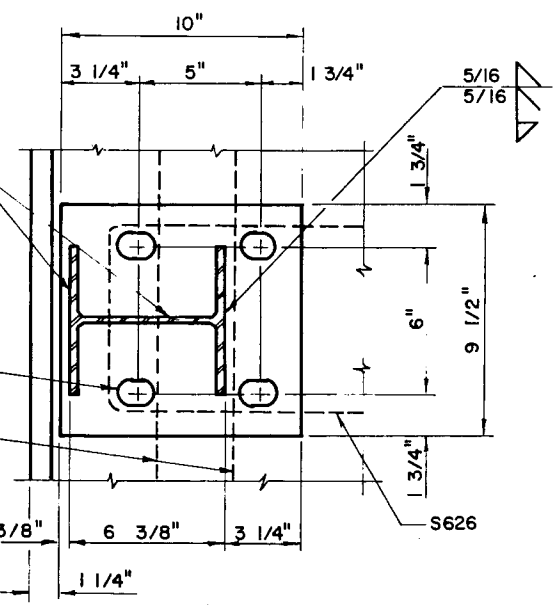
- BID ITEM SHALL BE 'TUBULAR RAILING, TYPE F'.
- POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.
- RAILING SHALL BE 4 x 4 x .25 STRUCTURAL TUBING CONFORMING TO A.S.T.M. DESIGNATION A36.
- ANCHOR BOLTS SHALL BE 7/8" DIA. NOMINAL CONFORMING TO A.S.T.M. A449 WITH 3" THREAD & HIGH-STRENGTH NUTS & WASHERS.
- CALK EXPOSED OPENINGS BETWEEN SHIMS.
- POST, BASE PLATES AND SHIMS SHALL BE MADE FROM MATERIAL CONFORMING TO A.S.T.M. DESIGNATION A36. CUT BOTTOM OF POST TO MATCH CROSS SLOPE OF ROADWAY. PLACE POST NORMAL TO GRADE LINE.
- PLACE ANCHOR BOLTS NORMAL TO BASE PLATE.
- ALL MEMBERS, INCLUDING UPPER 4" OF ANCHOR BOLTS, SHALL BE GALVANIZED AFTER FABRICATION.
- BEAM GUARD ATTACHMENT MAY BE WELDED TO RAILS AND RAILS MAY BE WELDED TO POSTS.
- FILL POST ANCHOR BOLT HOLES WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.
- STEEL SHIMS SHALL BE USED UNDER POSTS WHERE REQUIRED FOR ALIGNMENT.
- RAILING SHALL BE FABRICATED IN 2 OR 3 PANEL LENGTHS.



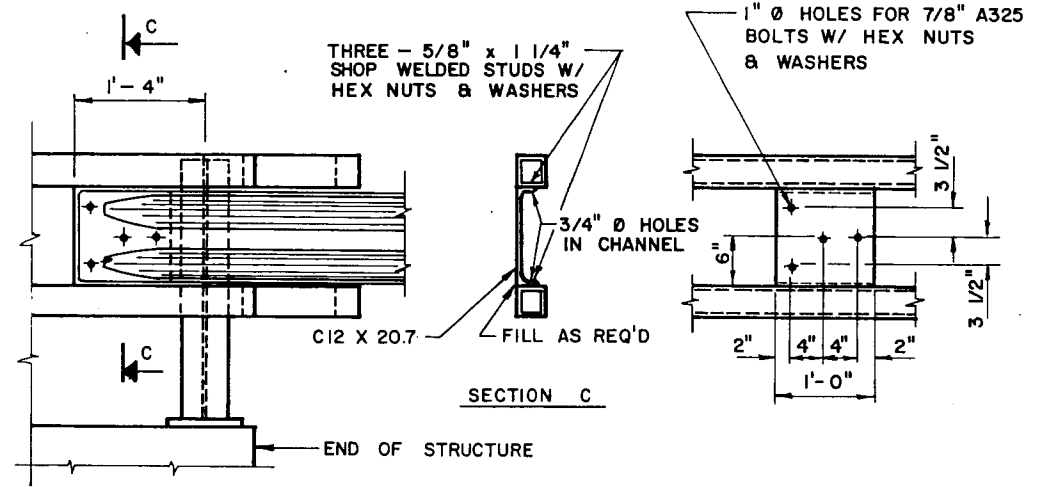
SHIM PLATE DETAIL ( 4 PER POST )



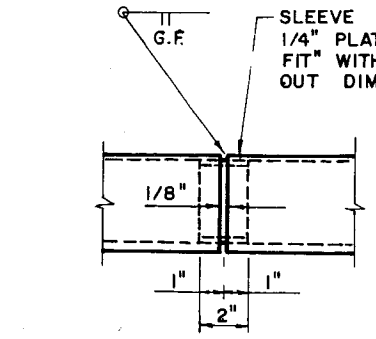
DETAIL A



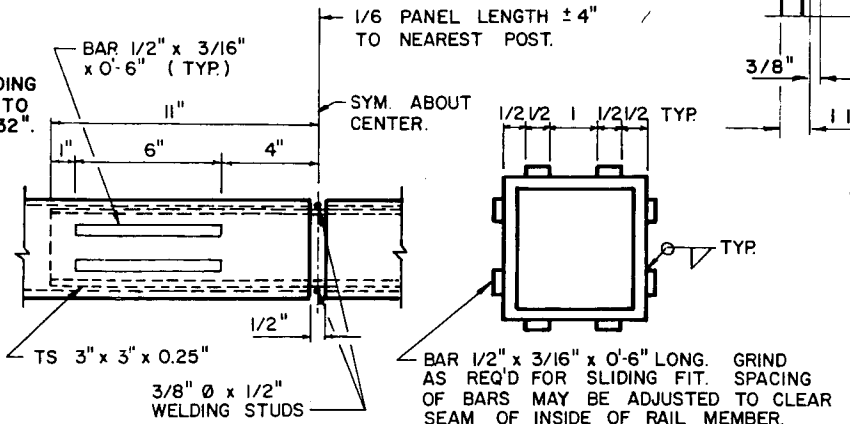
SECTION B



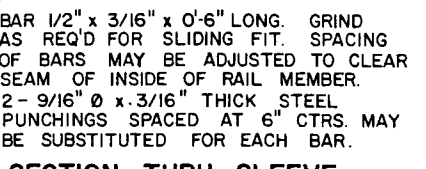
DETAIL AT END POST ( BEAM GUARD RAIL ATTACHMENT )



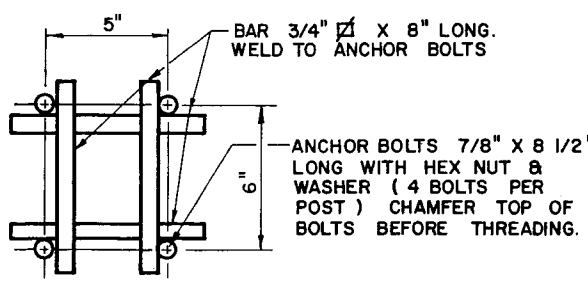
SHOP RAIL SPLICE DETAIL



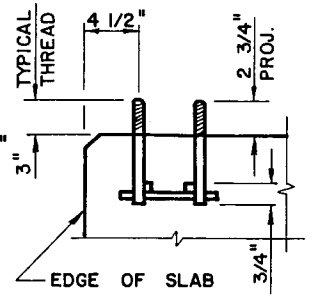
FIELD ERECTION JOINT DETAIL



SECTION THRU SLEEVE



ANCHOR BOLT DETAILS



PLANS PREPARED BY: WESTBROOK ASSOCIATES, INC. CONSULTING ENGINEERS PLAIN, WISCONSIN

No.	Date	Revision	By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-43-25			
Const. 1975	Drawn By JRL	Plans Checked SHL	
TUBULAR RAILING TYPE "F"			SHEET 9 OF 9
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