

# CITY of NEWARK, OHIO

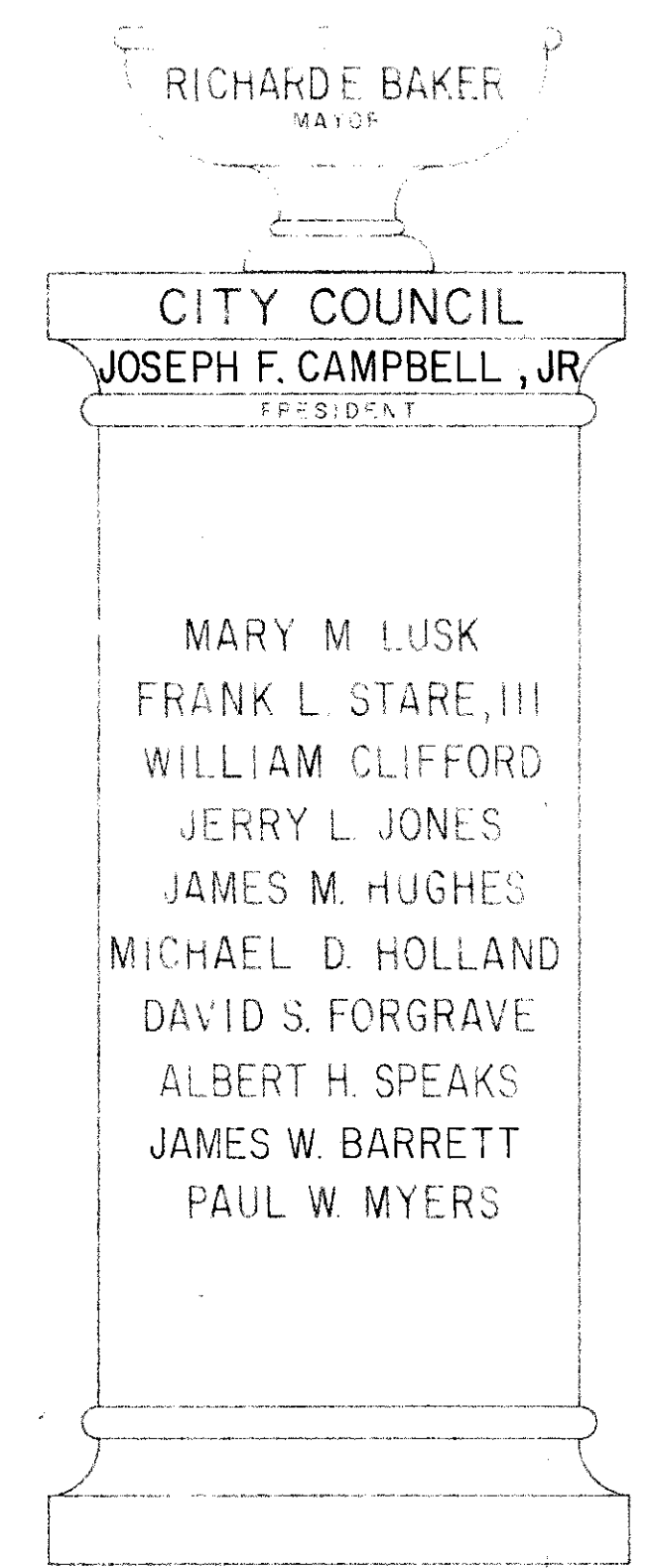
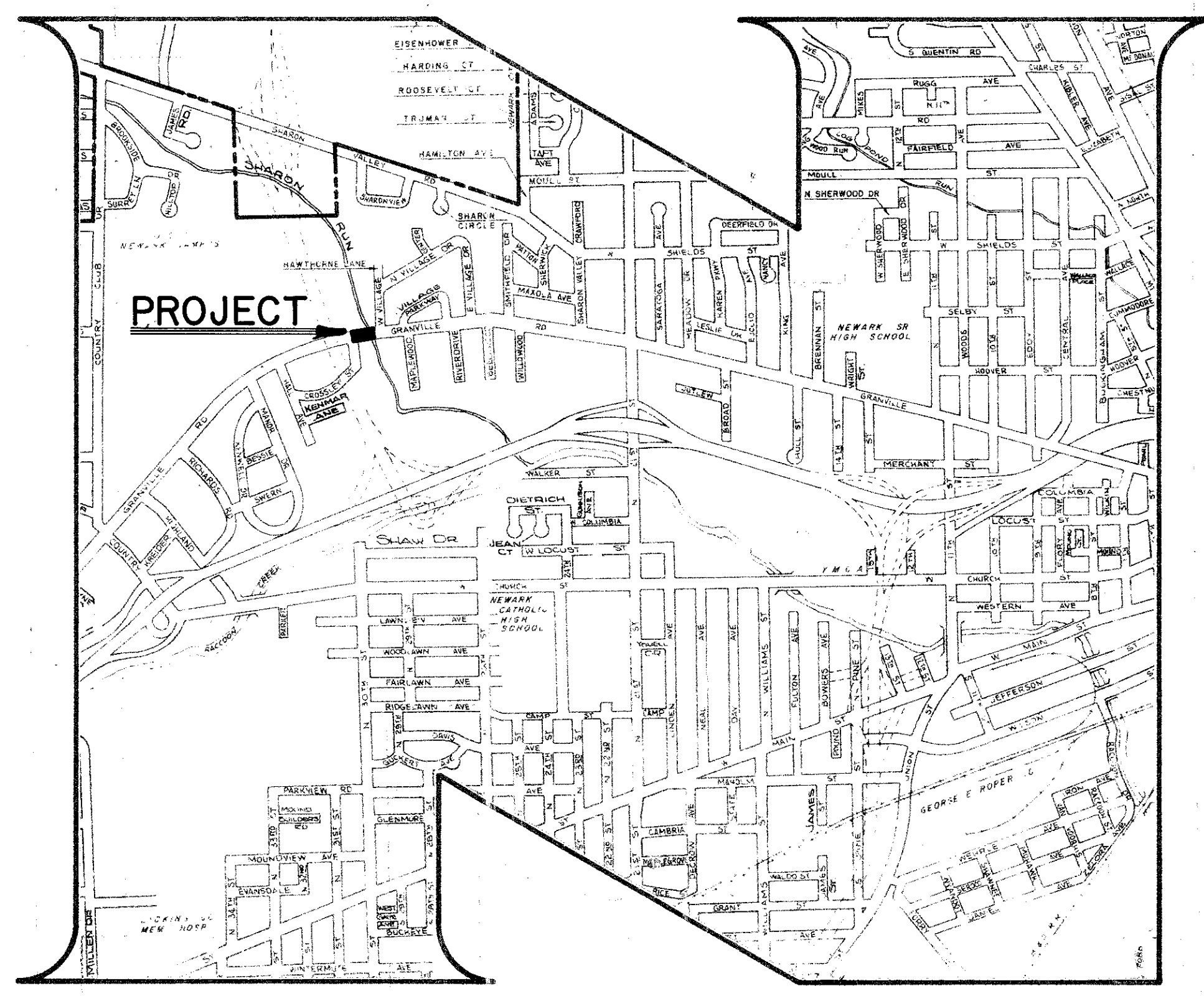
## GRANVILLE RD. — BRIDGE —

1/11

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LINE DATA  
 BEGIN PROJECT STA. 0+00  
 END PROJECT STA. 4+50  
 TOTAL PROJECT LENGTH = 450.00 LIN. FT.



I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE CONSTRUCTION OF THIS IMPROVEMENT WILL REQUIRE THE CLOSING OF THE STREET TO TRAFFIC.

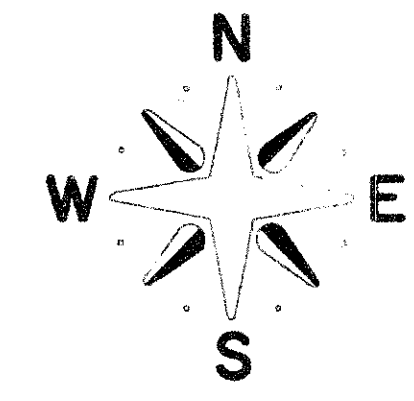
APPROVED Richard E. Baker  
RICHARD E. BAKER MAYOR  
 DATE 6-28-79

APPROVED William S. Moore  
WILLIAM S. MOORE DIR. OF PUB. SERVICE  
 DATE 6-28-79

APPROVED S.V. Jackson, Jr. P.E.  
S.V. JACKSON, JR. ENGINEER  
 DATE 6-28-79

APPROVED O.R. Starr  
O.R. STARR DIR. OF PUB. SAFETY  
 DATE 6-28-79

ESTIMATE OF QUANTITIES			
ITEM	TOTAL	UNIT	DESCRIPTION
SEE SHEET 2			



CITY OF NEWARK STANDARD CONST. DRAWINGS		
600-2	CURB INLET	
1000-0	BARRICADE BARRELS	
ODOT STANDARD DRAWINGS		
GR-2B	GUARDRAIL TYPE 5	12-6-76
GR-3	BRIDGE TERMINAL ASSYS.	"
GR-4	ANCHOR ASSY.	"

WE, THE UNDERSIGNED, HEREBY CERTIFY THAT WE DID SUPERVISE THE PREPARATION OF THESE PLANS .....  
 THIS 28<sup>th</sup> DAY OF June, 1979.  
S.V. Jackson, Jr. P.E.  
S.V. JACKSON, JR. REG. ENG. 38945  
H.L. Brown  
H.L. BROWN REG. ENG. 13936

PLANS PREPARED BY  
 CITY OF NEWARK  
 DIVISION OF ENGINEERING

2381-1

2381-1

GENERAL NOTES:

**PRIVATE PROPERTY:** The Contractor shall confine his operations to the right-of-way as indicated. The Contractor will be responsible for any damages resulting by virtue of his work or carelessness outside the above limits.

**LEGAL RELATIONS & RESPONSIBILITY:** The Contractor shall keep fully informed of all Federal, State, and Local laws, ordinances, and regulations and all orders and decrees of authorities having any jurisdiction or authority, which in any manner affect those engaged or employed on the work, or which in any way affect the conduct of the work. He shall at all times observe and comply with all such laws, ordinances, regulations, orders, and decrees; and shall protect and indemnify the City and its representatives against any claim or liability arising from or based on the violation of any such law, ordinance, regulation, order, or decree, whether by himself or his employees.

The Contractor agrees that in the hiring of employees for the performance of work under this contract or any subcontractor hereunder, no Contractor or Subcontractor, nor any person acting on behalf of such Contractor or Subcontractor, shall, by reason of race, creed, or color, discriminate against any citizen of the United States in the employment of labor or workers, who is qualified and available to perform the work the employment relates to.

That no Contractor, Subcontractor, nor any person on his behalf shall, in any manner, discriminate against or intimidate any employee hired for the performance of work under this contract on account of sex, race, creed, or color.

The Contractor will be responsible for initiating, maintaining, and supervising all safety precautions and programs to conform with the safety and health regulations for construction as issued by the Department of Labor Occupational Safety & Health Administration.

**UNDERGROUND UTILITIES:** The locations of the underground utilities shown on the plans have been obtained by diligent field checks and searches of available records. It is believed that they are essentially correct, but the City of Newark does not guarantee their accuracy or completeness.

**UTILITIES:** The following utilities are within the limits of this project.

Electric: Ohio Power Company, 65 East Main Street, Newark, Ohio.

Telephone: Newark Telephone Company, 66 North Fourth Street, Newark, Ohio

Sanitary & Water: City of Newark, Ohio.

Gas: National Gas & Oil Corporation, 1500 Granville Road, Newark, Ohio.

Columbia Gas of Ohio, Inc., 135 West Church Street, Newark, Ohio.

Cable T. V.: Tower Cable Company, Inc., 105 North 11th Street, Newark, Ohio.

Any damage to utilities will be cured at Contractor's expense.

**CONTRACTOR COOPERATION:** The Contractor for this structure shall note that other contractors working for the City and for the U. S. Army Corps may well be working in the same area. He shall at all times endeavor to cooperate with these other contractors so that the Log Pond Run Diversion Channel Project can be completed with the least amount of difficulty and delay. In particular, he should note the water and sewer line relocation work called for in the plans and be cognizant of the utility's needs with respect to installations on the new structure.

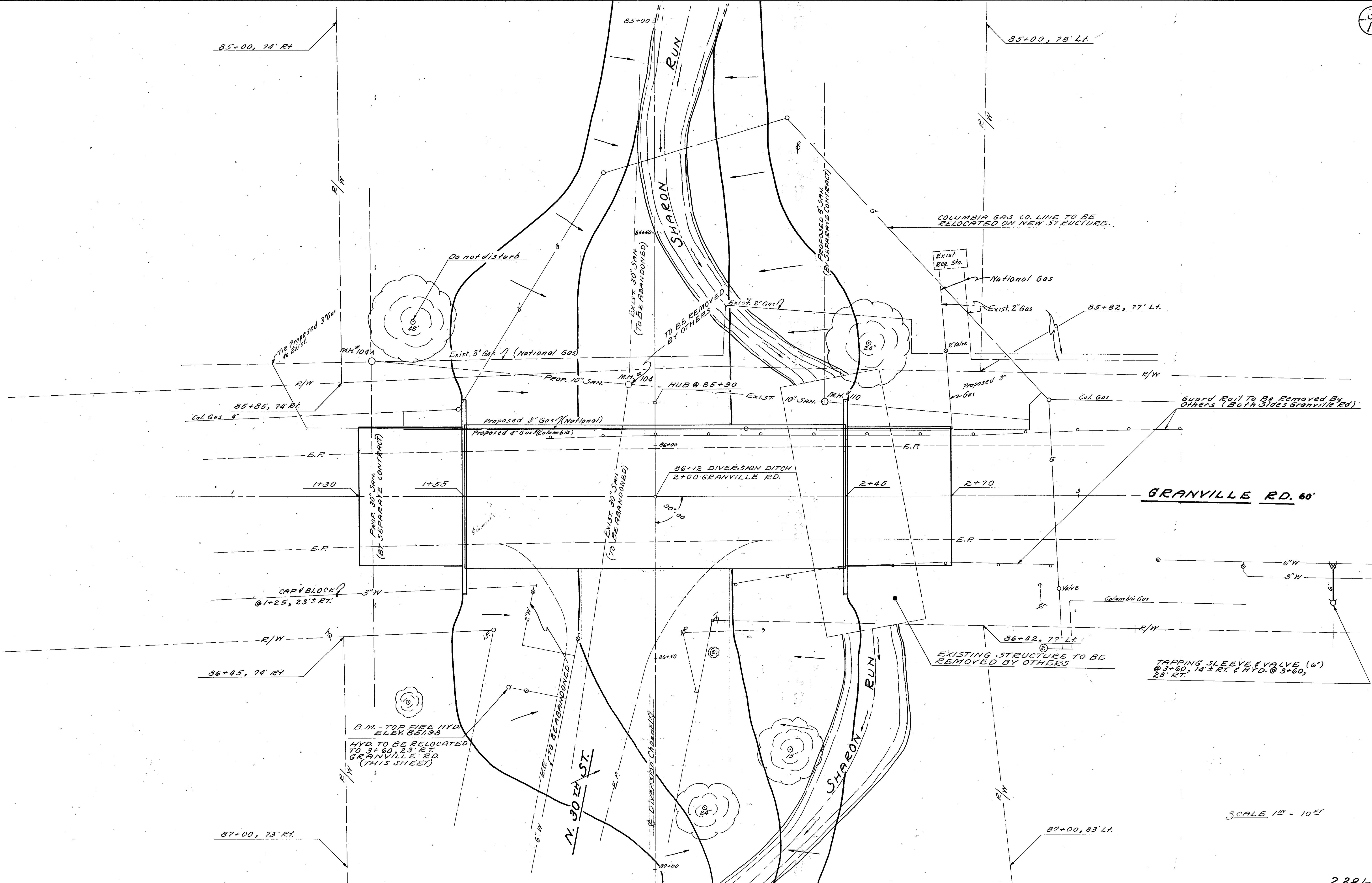
**STRUCTURAL STEEL:** All structural steel used in the construction of this project shall be per ASTM A-36. In addition all steel to be installed above the top of the pile caps shall be galvanized per ASTM 123. All cutting, bending, welding, drilling, and other fabricating shall be completed prior to the galvanizing. Structural steel to be installed below the top of the caps, excluding the caps and piles, shall be shop painted. See painting in proposal for additional requirements.

**FASTENERS:** All bolts throughout the entire bridge structure shall be high-strength steel bolts per ASTM A 325. Further, all bolts shall be galvanized and furnished with galvanized washers and nuts. Unless otherwise noted in the plans, all bolts shall be 7/8"  $\phi$  with length determined by Specification 513.15.

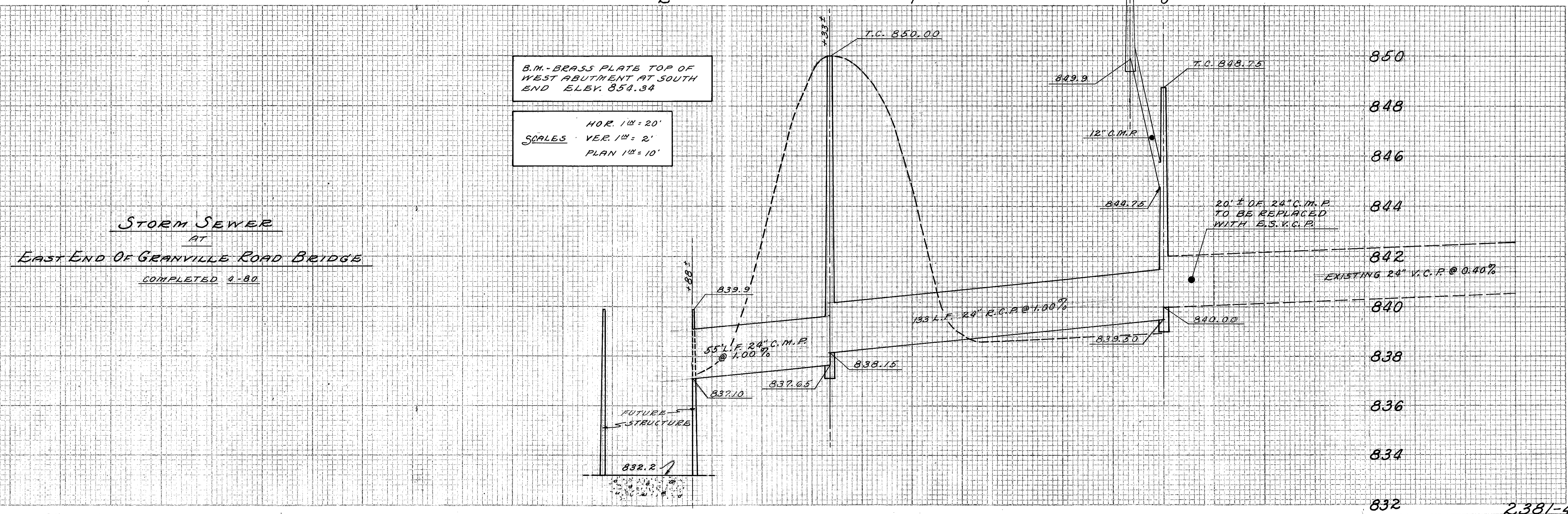
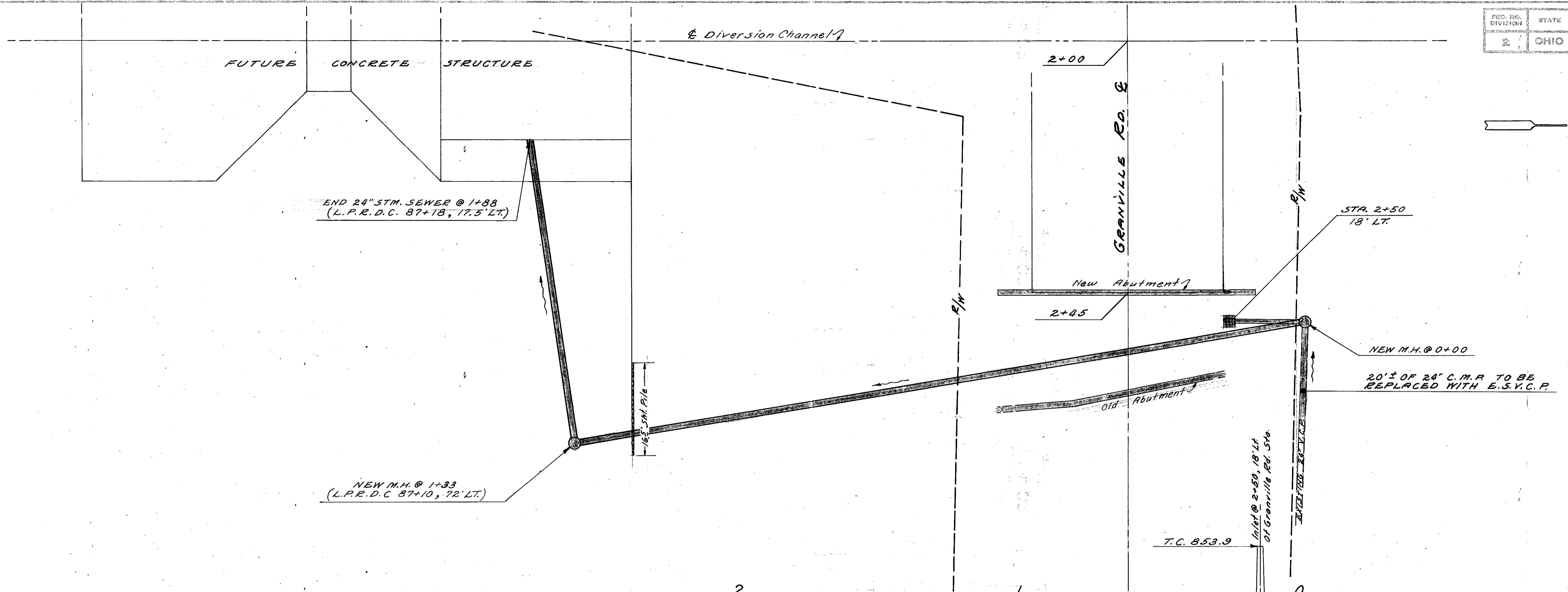
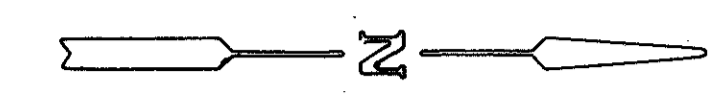
**TESTING:** The City at its discretion and expense may require all or part of the items of work to be tested in accordance with the standard practices of THE OHIO DEPARTMENT OF TRANSPORTATION to insure the quality of the product. The results of such tests shall be binding on both the Owner and Contractor. In the event various items do not meet specification requirements, the Contractor shall replace or repair such items at his expense, including the cost of testing for those items so replaced as directed by the Engineer.

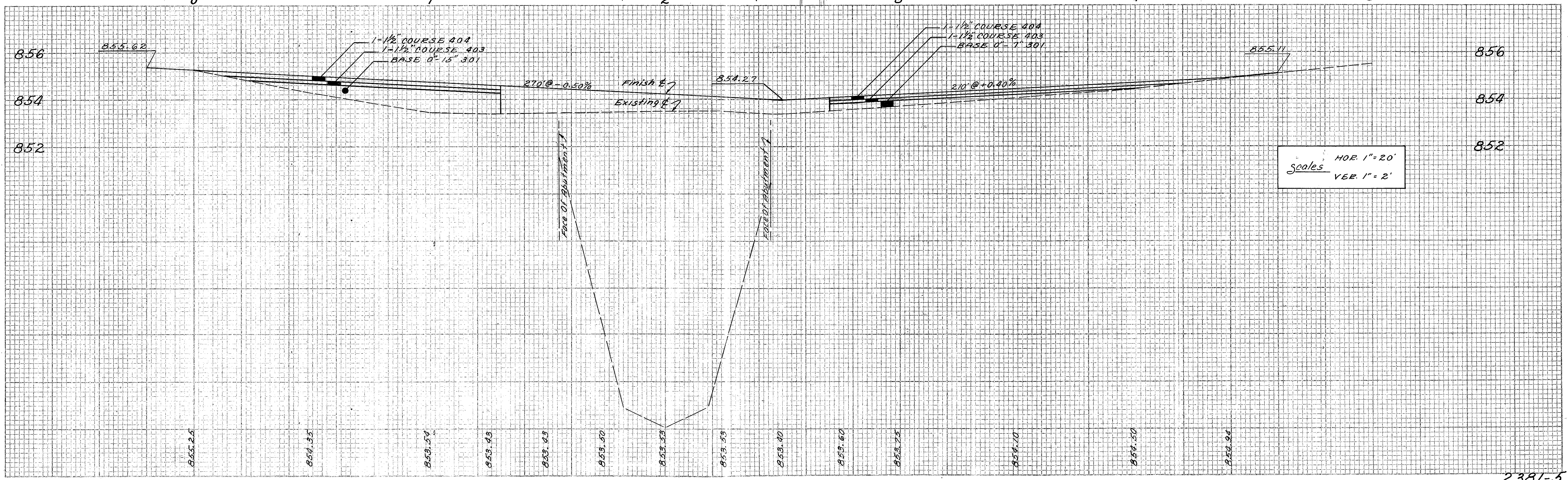
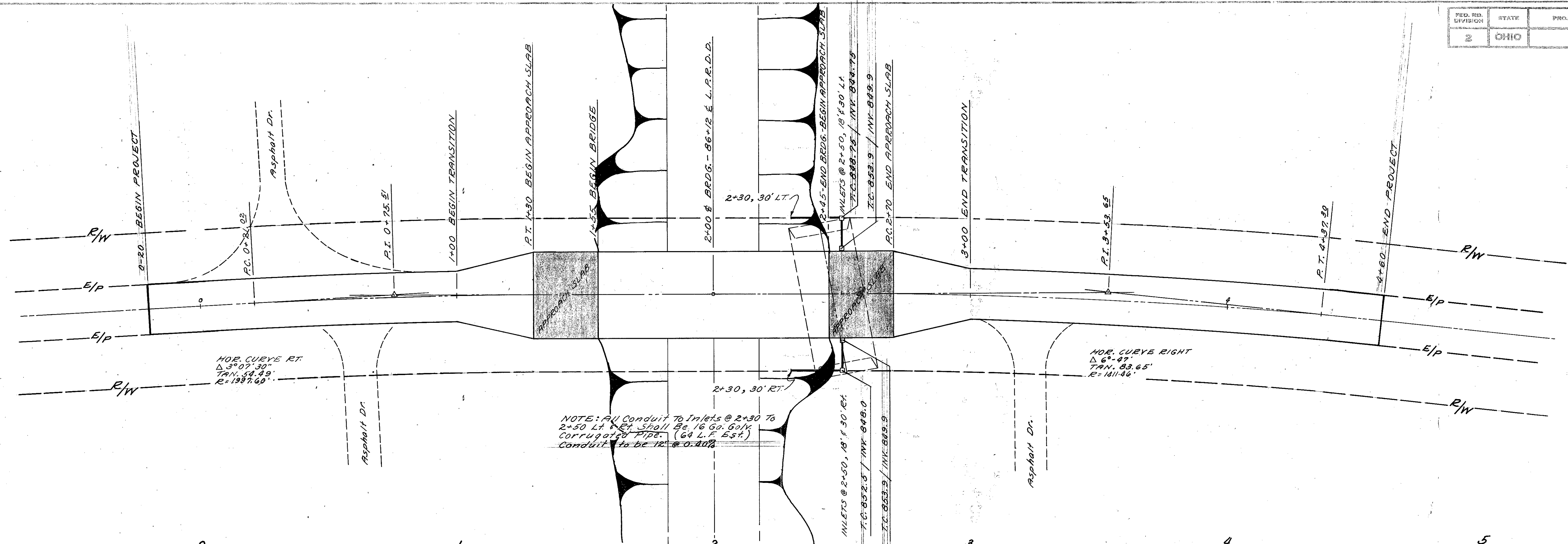
ESTIMATE OF QUANTITIES

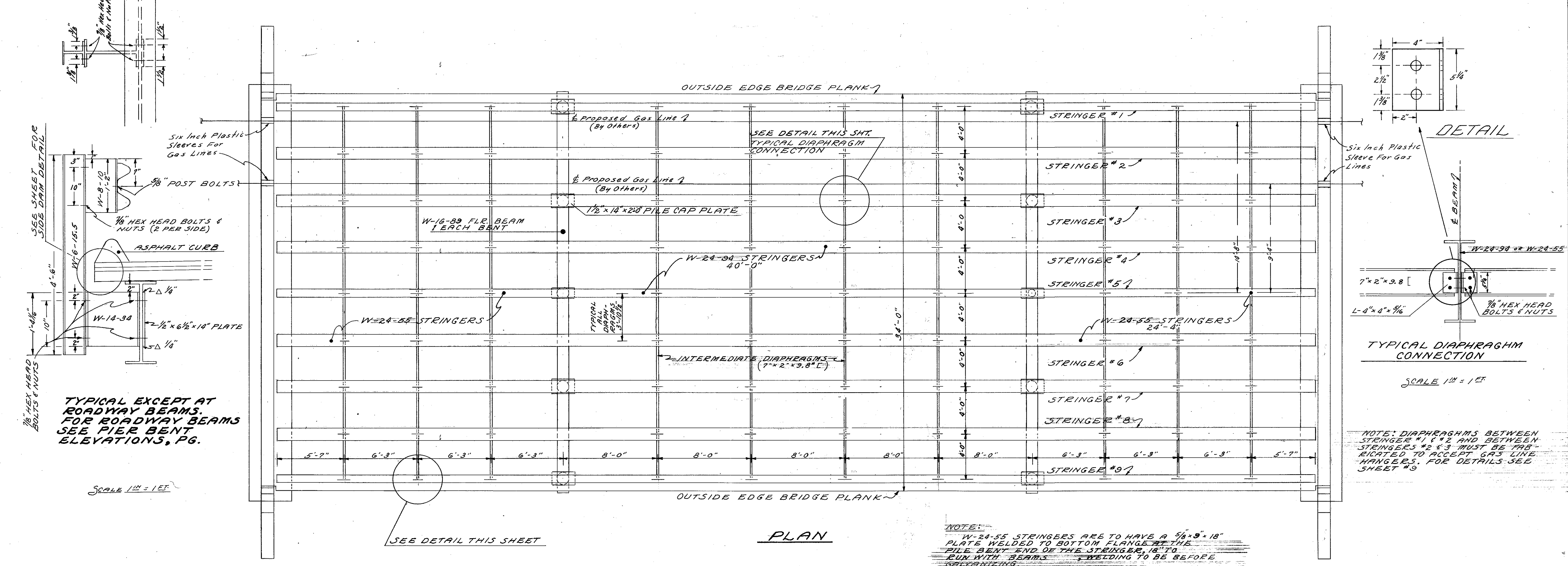
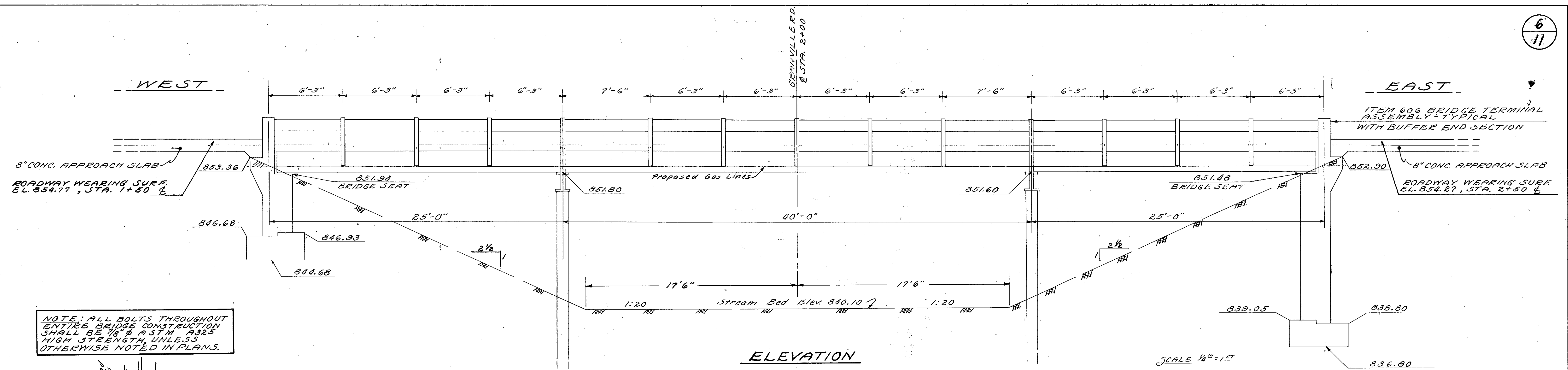
ITEM	TOTAL	UNIT	DESCRIPTION
201	Lump	L.S.	Clearing & Grubbing
202	1100	S.Y.	Pavement Removed
203	43	C.Y.	Embankment
203	1188	S.Y.	Subgrade Compaction
301	340	Ton	Bituminous Aggregate Base
403	195	Ton	Asphalt Concrete
404	195	Ton	Asphalt Concrete (Modified)
408	360	Gal.	Bituminous Prime Coat RC-250, RC-70, RT-2, & RT-3
503	4321	C.Y.	Channel Excavation and Embankment
503	45	C.Y.	Unclassified Excavation
505	Lump	L.S.	Test Pile
507	480	L.F.	12" $\phi$ Cast-in-Place Reinforcing Concrete Piles
509	6061	Pound	Reinforcing Steel
511	28.5	C.Y.	Class C Concrete Footings
511	78	C.Y.	Class C Concrete, Abutments Above Footings
512	106.5	C.Y.	Waterproofing of Concrete (Per Proposal Note) (Add Mixture)
513	Lump	L.S.	Structural Steel (Galvanized)
514	Lump	L.S.	Field Painting of Structural Steel (Per Proposal Note)
516	34	L.F.	Expansion Joint (Per Proposal Note)
517	180	L.F.	Bridge Railing per Plan
Spec.	3060	S.F.	3" x 9" x 3/8" Galv. Corr. Metal Deck w/End & Side Dams
603	64	L.F.	12" = 16 Gauge, Galvanized, Corrugated Metal Pipe
604	4	Each	Inlet
609	220	L.F.	Asphalt Concrete, Extruded 6" Curb
611	2	S.Y.	Reinforced Concrete Approach Slab T=8"
614	Lump	L.S.	Maintaining Traffic
616	5	M Gals.	Water (Dust Control)
616	4	Ton	Calcium Chloride (Dust Control)
619	Lump	L.S.	Project Field Office (Per Proposal Note)
619	Lump	L.S.	Construction Layout Staking (Per Proposal Note)
653	250	C.Y.	Topsoil Furnished & Placed (Per Proposal Note)
659	1500	S.Y.	Seeding and Mulching (Per Proposal Note)
659	0.2	Ton	Commercial Fertilizer 12-12-12
Spec.	Lump	L.S.	Premium for Contract Performance Bond
Spec.	8	Each	Traffic Barricade Barrels Type 1 Per Std. Drwg. 1000-2
Spec.	Lump	L.S.	Special Deck Sealer (Per Proposal Note)

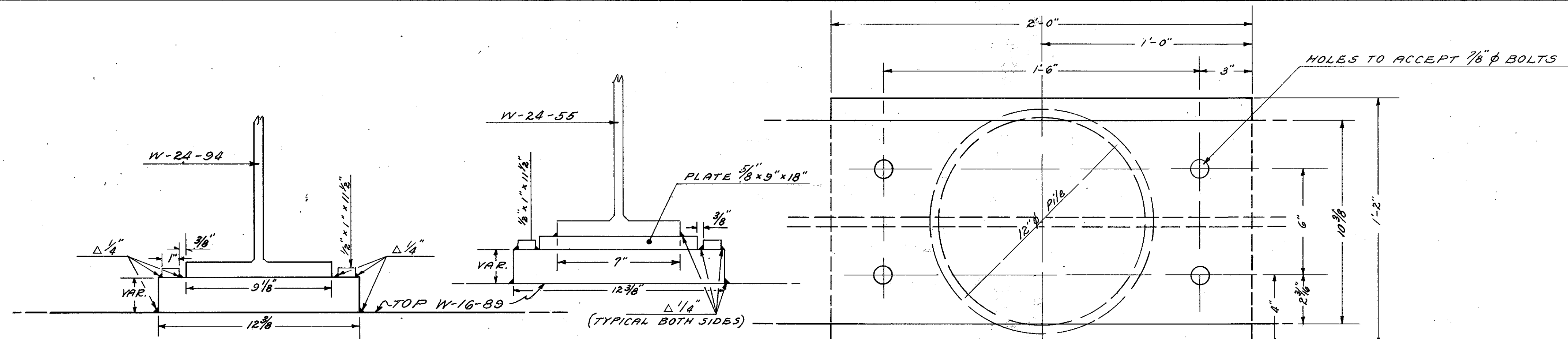


SCALE 1" = 10'

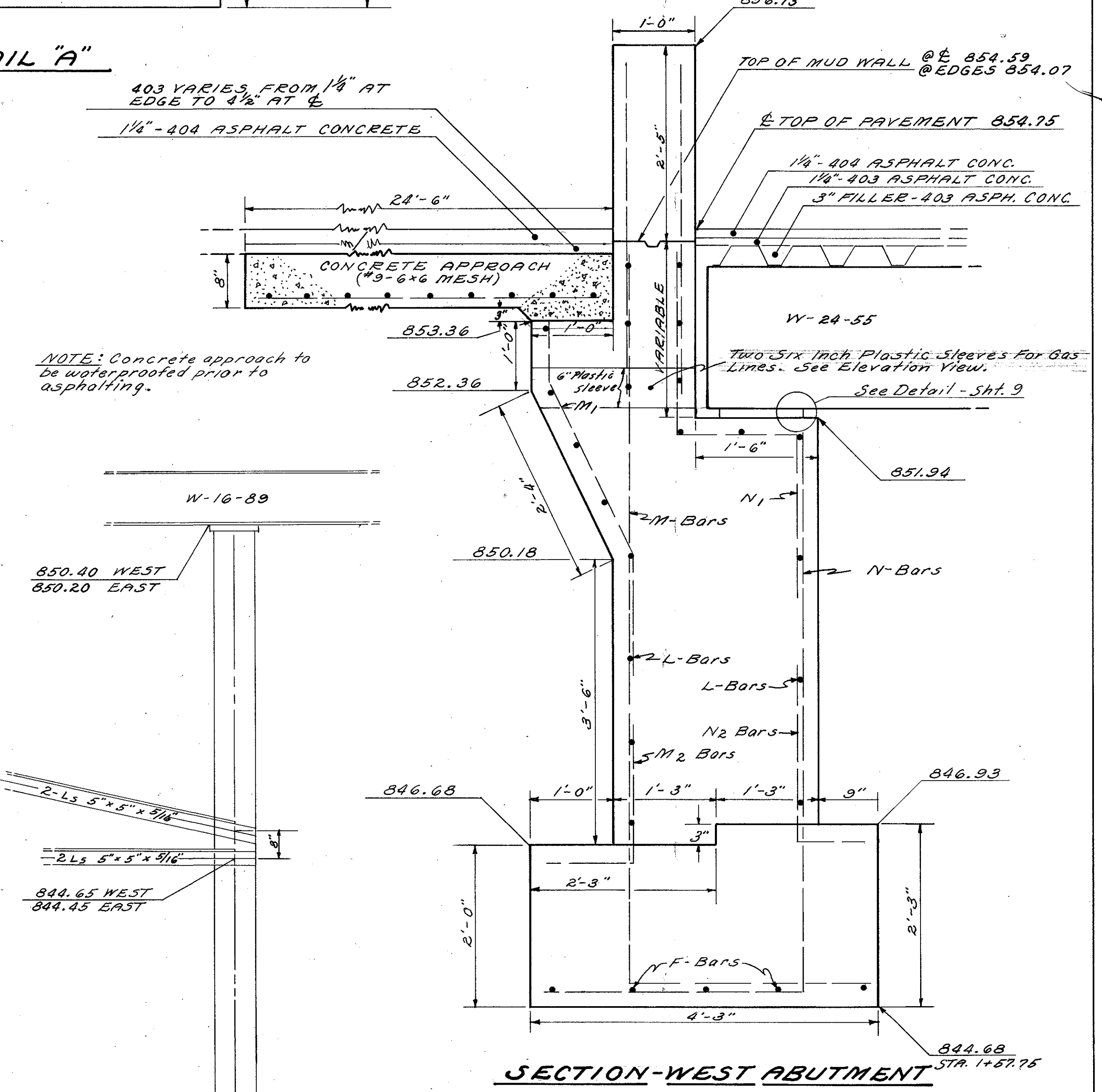
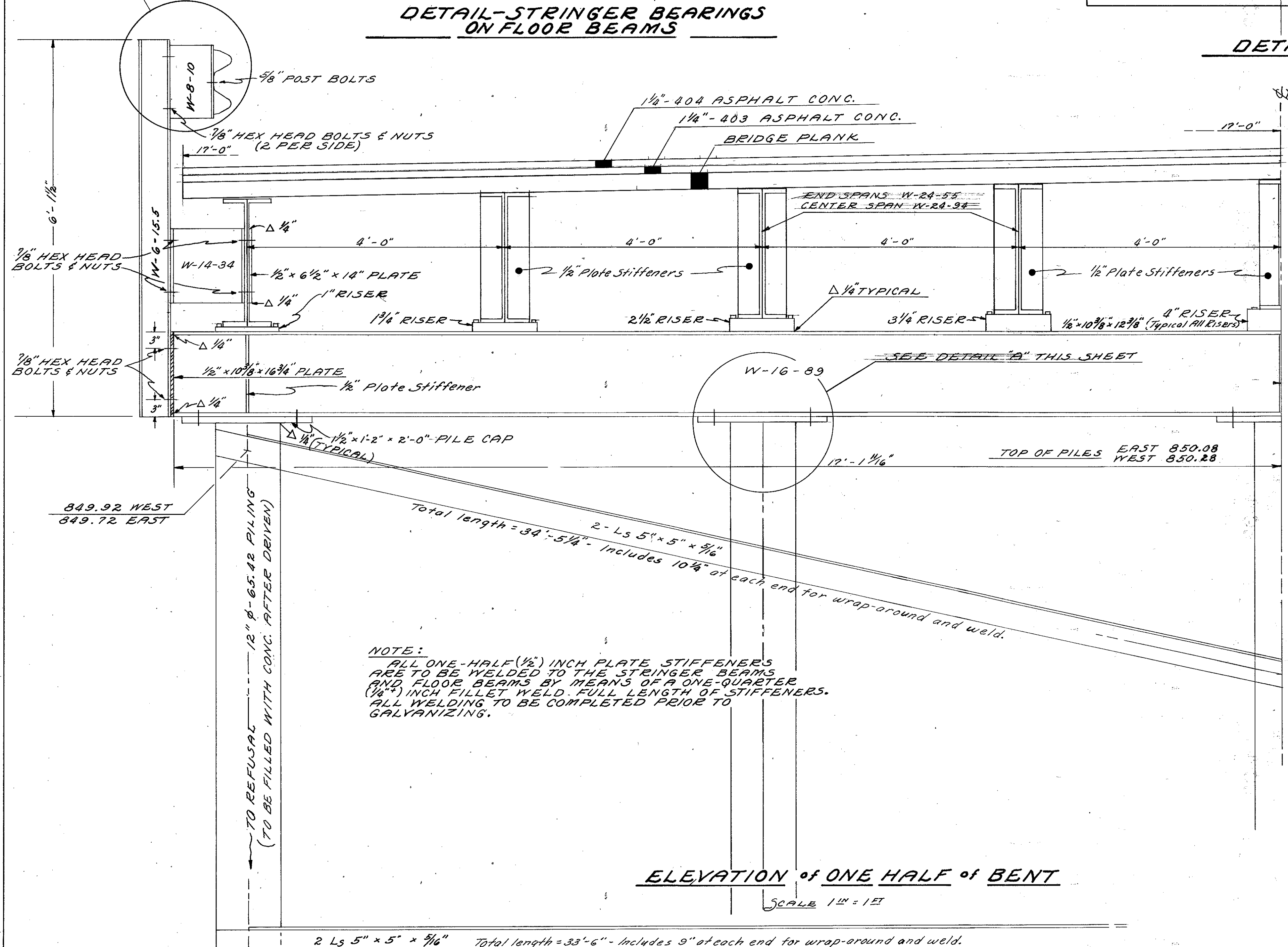




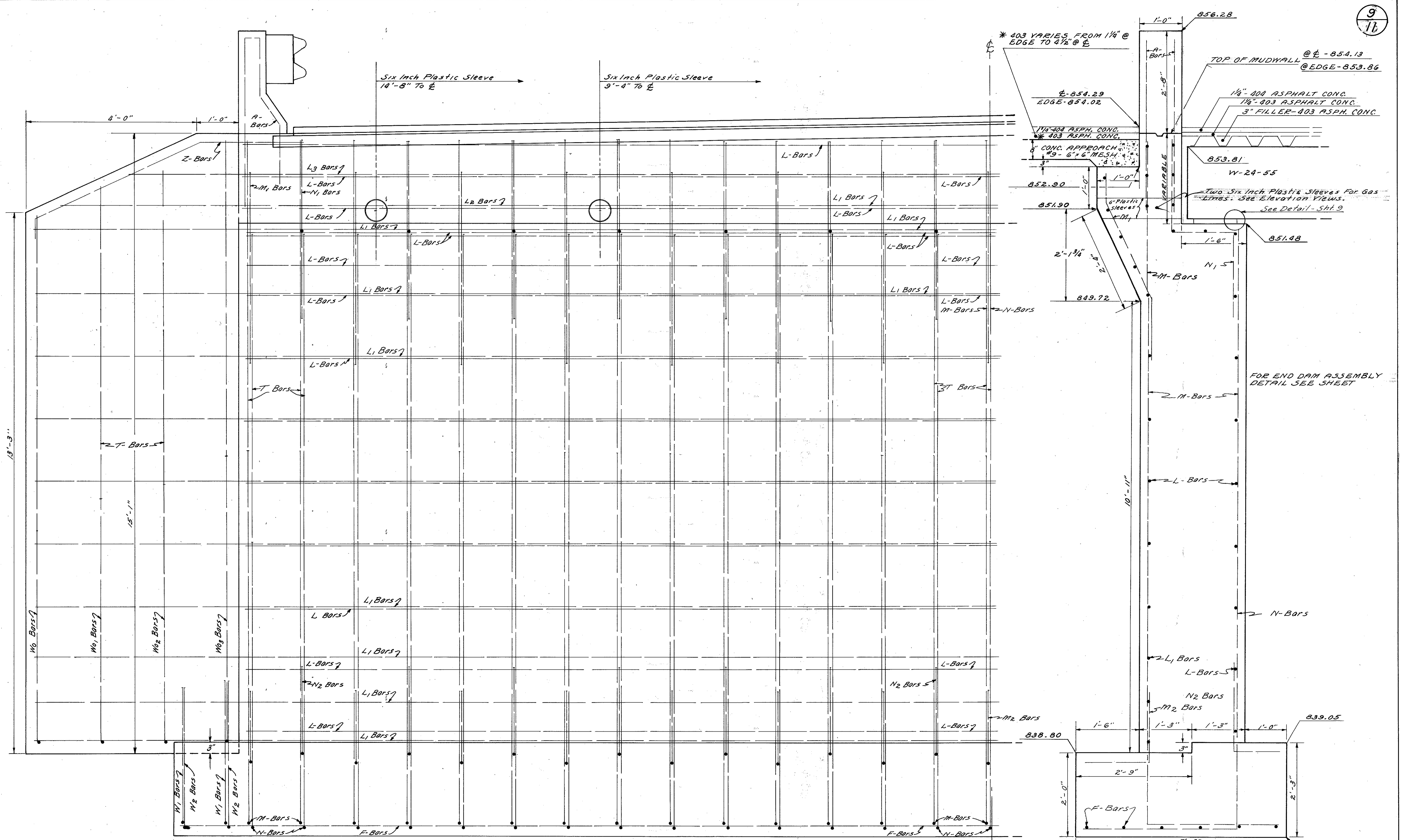




FOR END DAM ASSEMBLY DETAIL, SEE SHEET







ELEVATION - EAST ABUTMENT - WING WALL

SCALE 1/4" = 1'-0"

EAST ABUTMENT SECTION

836.80  
STR. 2+42

EAST ABUTMENT ELEV. & SECTION

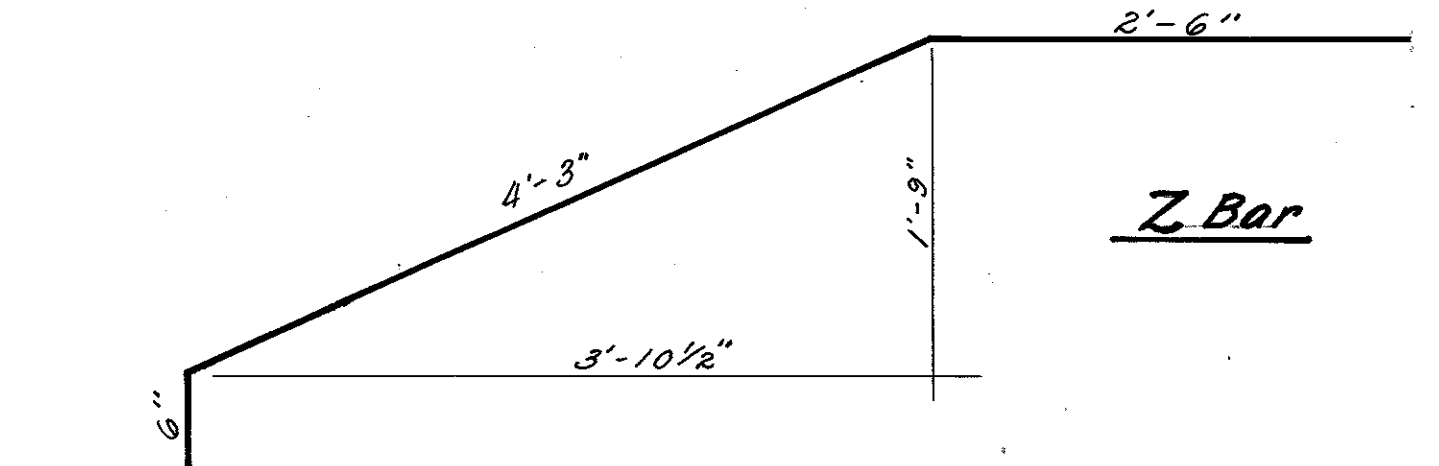
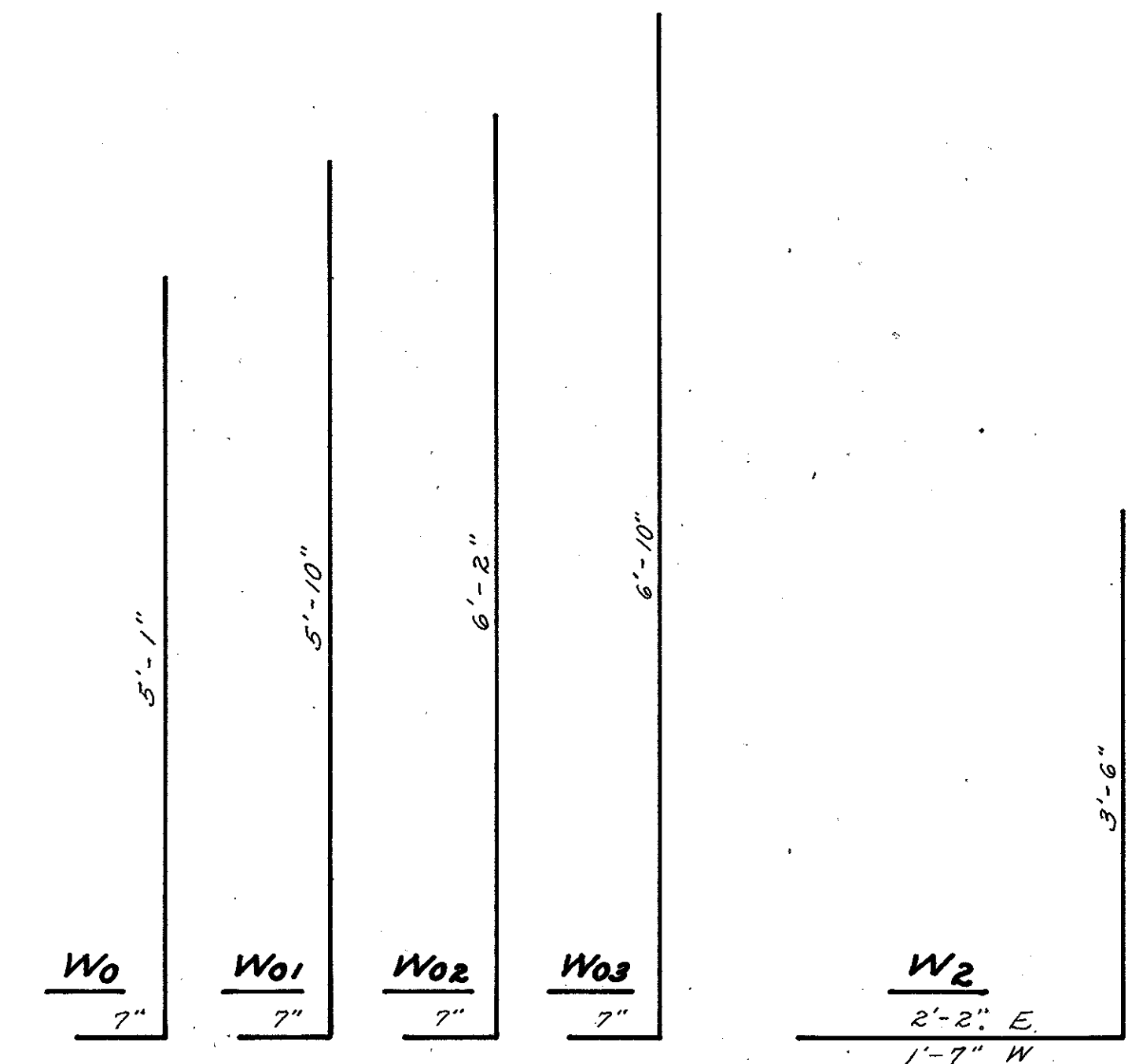
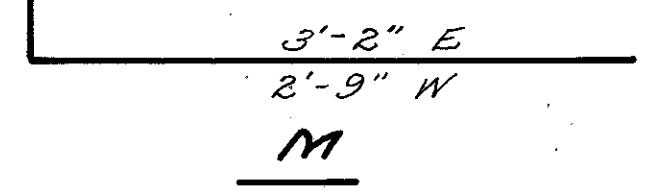
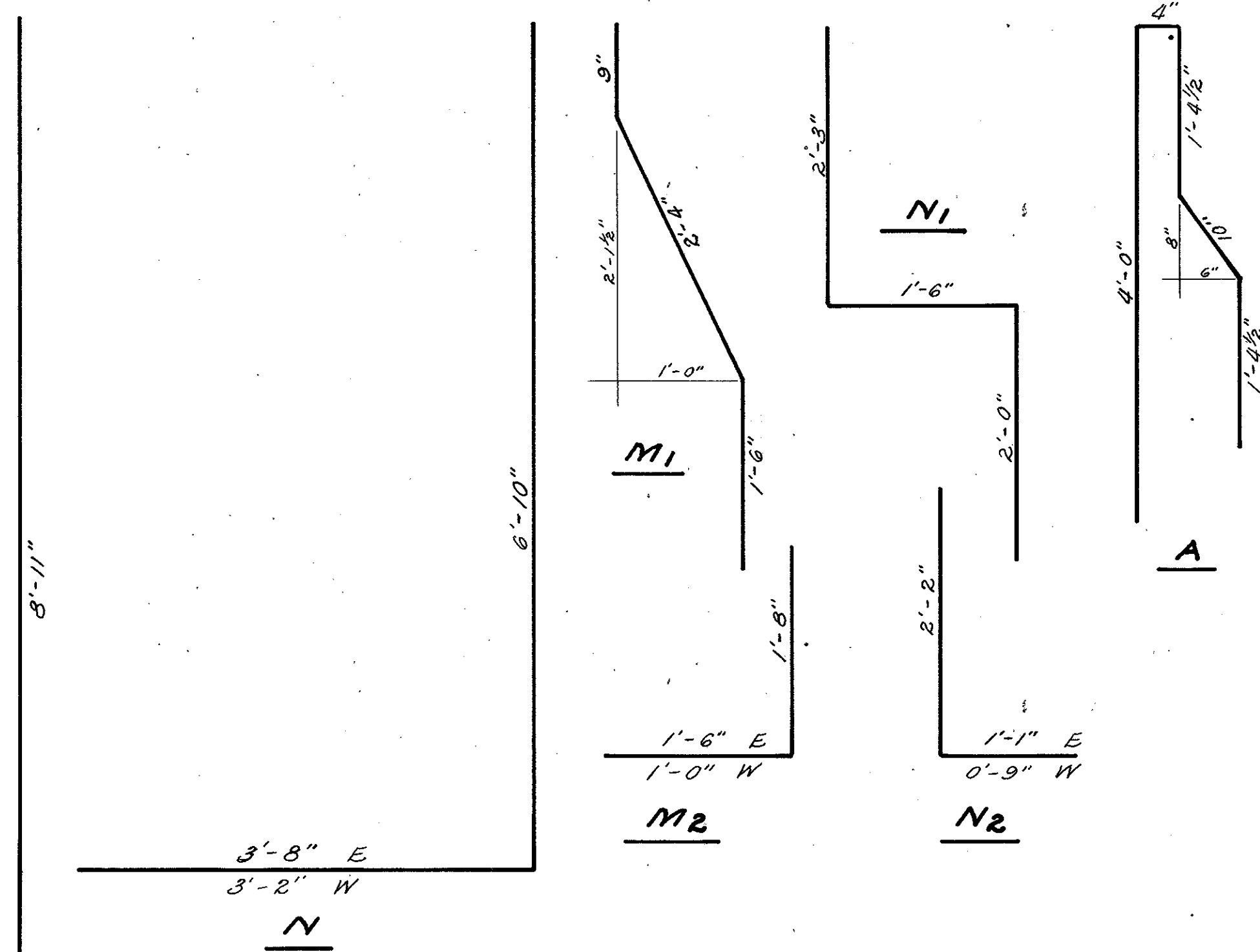
2381-9

STEEL LIST

MARK	SIZE	SHAPE	Nº	LENGTH	WEIGHT
A	5	BENT	8	7'-11"	66.08
F	8	STRAIGHT	11	38'-5"	1128.40
L	5	STRAIGHT	27	35'-3"	392.68
L1	5	STRAIGHT	15	45'-4"	709.19
L2	5	STRAIGHT	4	40'-10"	170.34
L3	5	STRAIGHT	4	24'-2"	100.80
M	5	BENT	*58	12'-1" / 11'-8"	718.36
M1	5	BENT	30	4'-7"	142.68
M2	5	BENT	**30	3'-2" / 2'-8"	91.63
N	5	BENT	*58	10'-6" / 10'-0"	620.06
N1	5	BENT	28	5'-9"	167.92
N2	5	BENT	***28	3'-3" / 2'-11"	90.01
W1	5	BENT	**8	6'-8" / 6'-3"	53.91
W2	5	BENT	**8	5'-8" / 5'-1"	44.85
W0	5	BENT	8	5'-8"	47.31
W01	5	BENT	8	6'-5"	53.57
W02	5	BENT	8	7'-0"	58.41
W03	5	BENT	8	7'-5"	61.91
Z	5	BENT	8	7'-3"	60.50
T	5	STRAIGHT	74	8'-10"	681.52

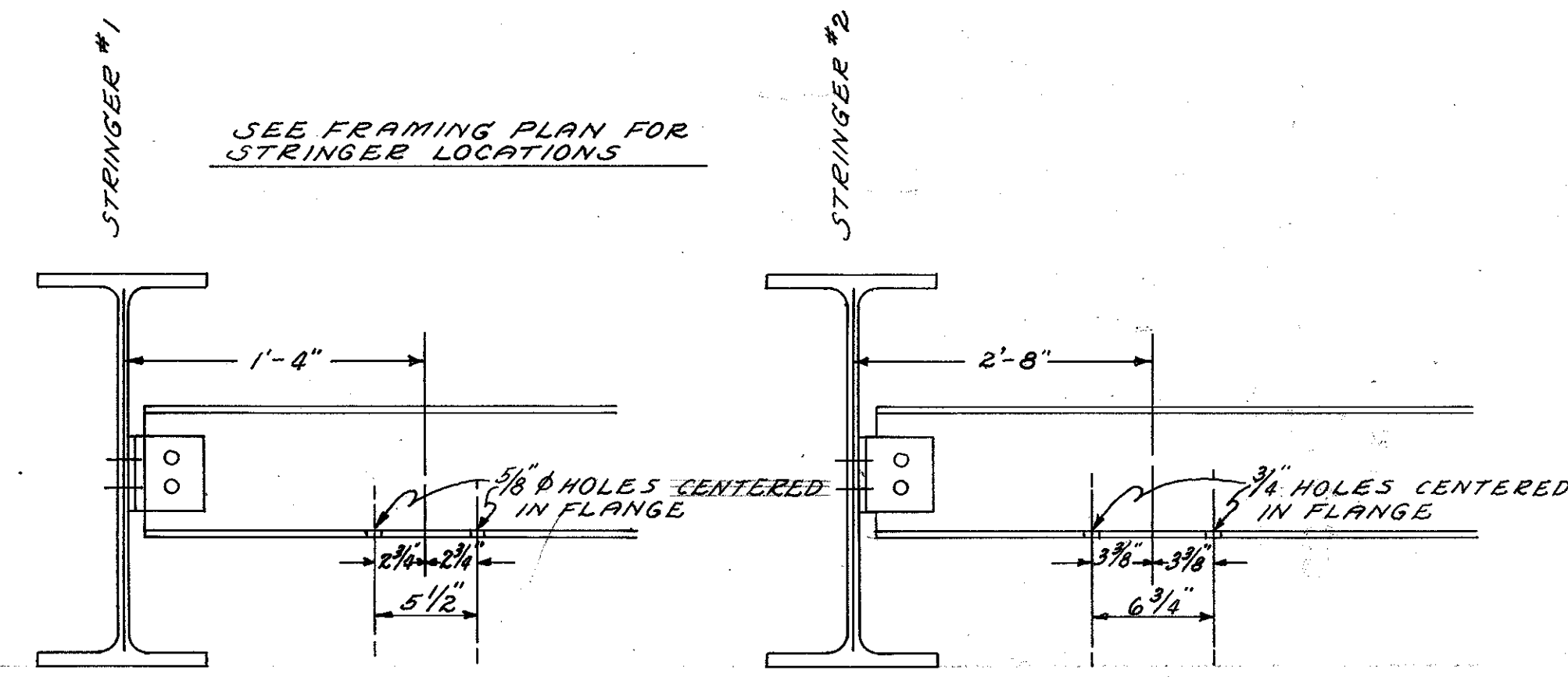
TOTAL POUNDS - 6060.23

\* 29 Each Size  
\*\* 4 Each Size  
\*\*\* 15 Each Size  
\*\*\*\* 14 Each Size



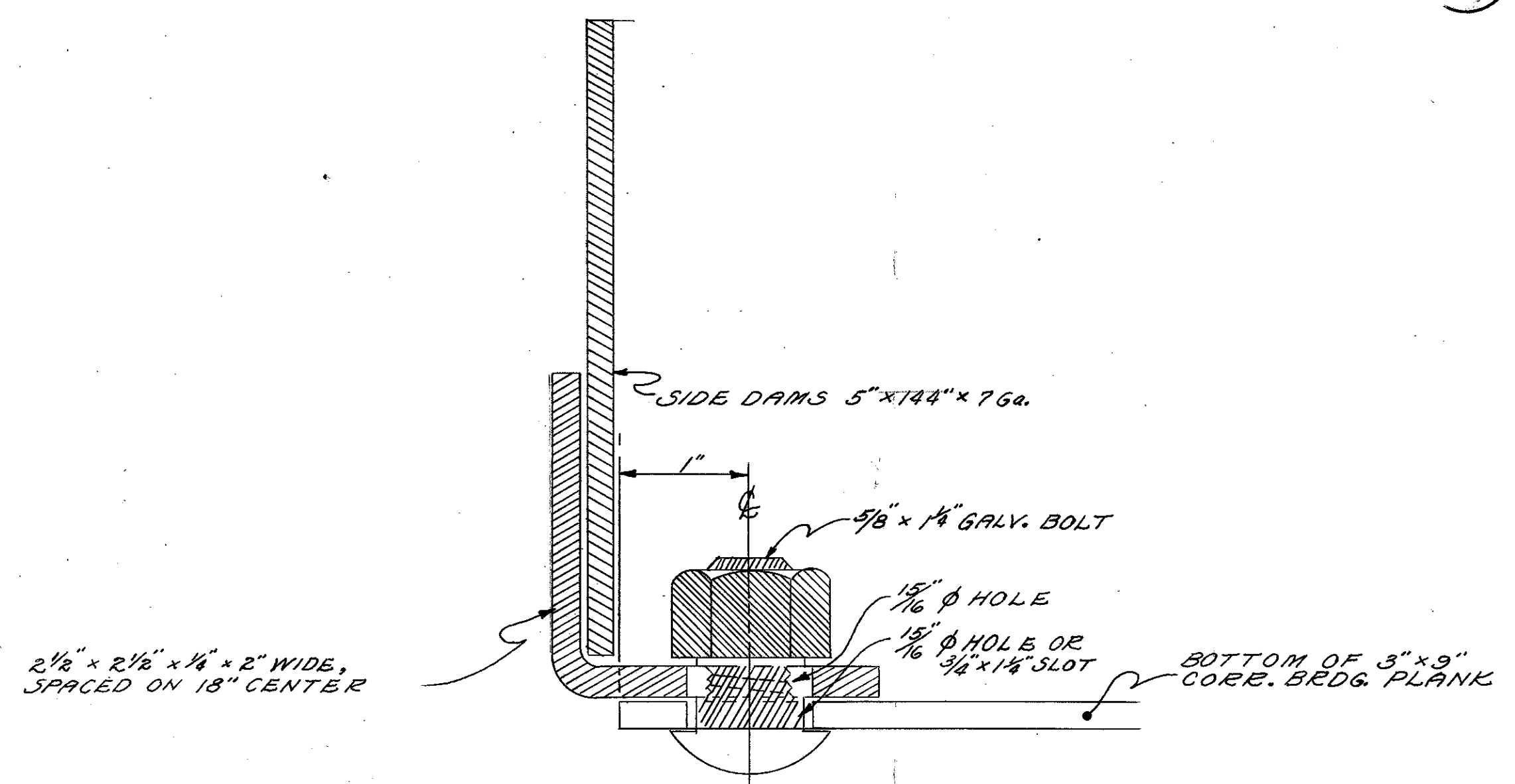
SCALE 1/4" = 1'-0"

SEE FRAMING PLAN FOR STRINGER LOCATIONS



HOLE LOCATIONS FOR GAS PIPE HANGERS  
(HANGERS BY OTHERS)

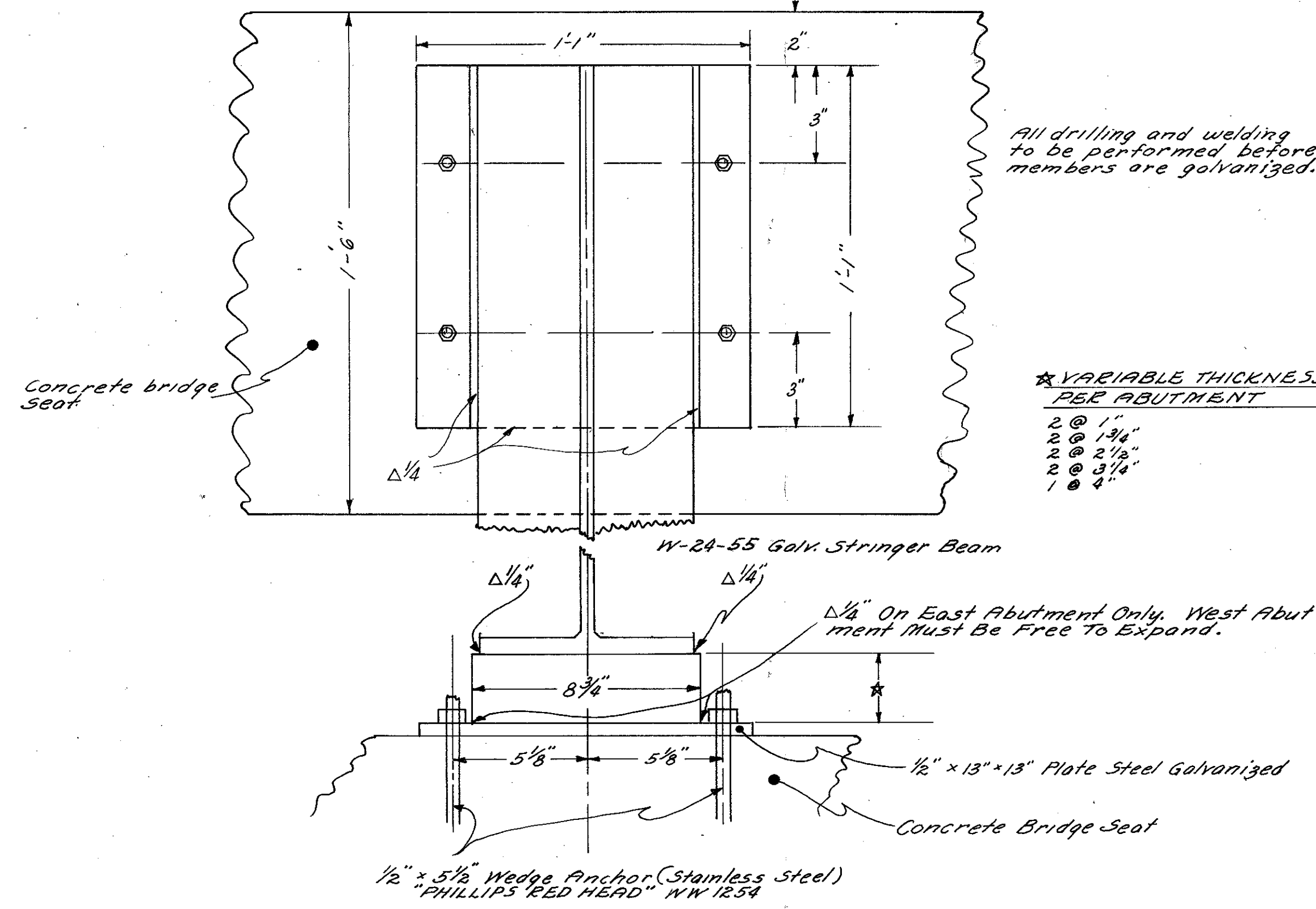
NOTE: IN THE EAST ABUTMENT, THE VERTICALS OF BARS "M" AND "N" AND "W0", "W01", "W02", AND "W03" SHALL HAVE AN ADDITIONAL STRAIGHT SECTION, 3'-10" IN LENGTH (INCLUDES 17" FOR SPLICE) ADDED TO THEIR HEIGHT. THESE ARE CALLED "T-BARS" IN TABLE.



SIDE DAM DETAIL

2 1/2" x 2 1/2" x 1/4" x 2" WIDE, SPACED ON 18" CENTER

All drilling and welding to be performed before members are galvanized.



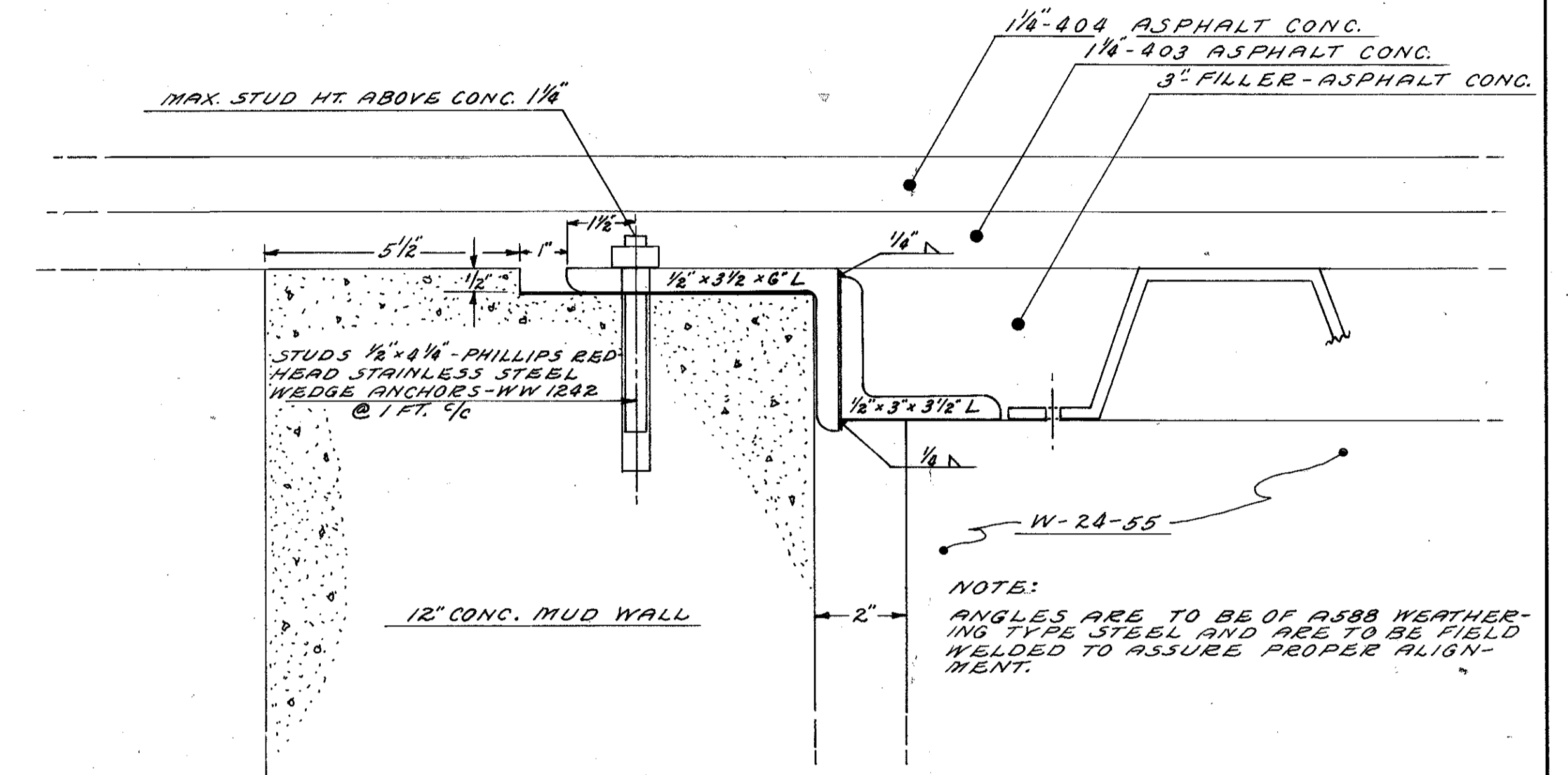
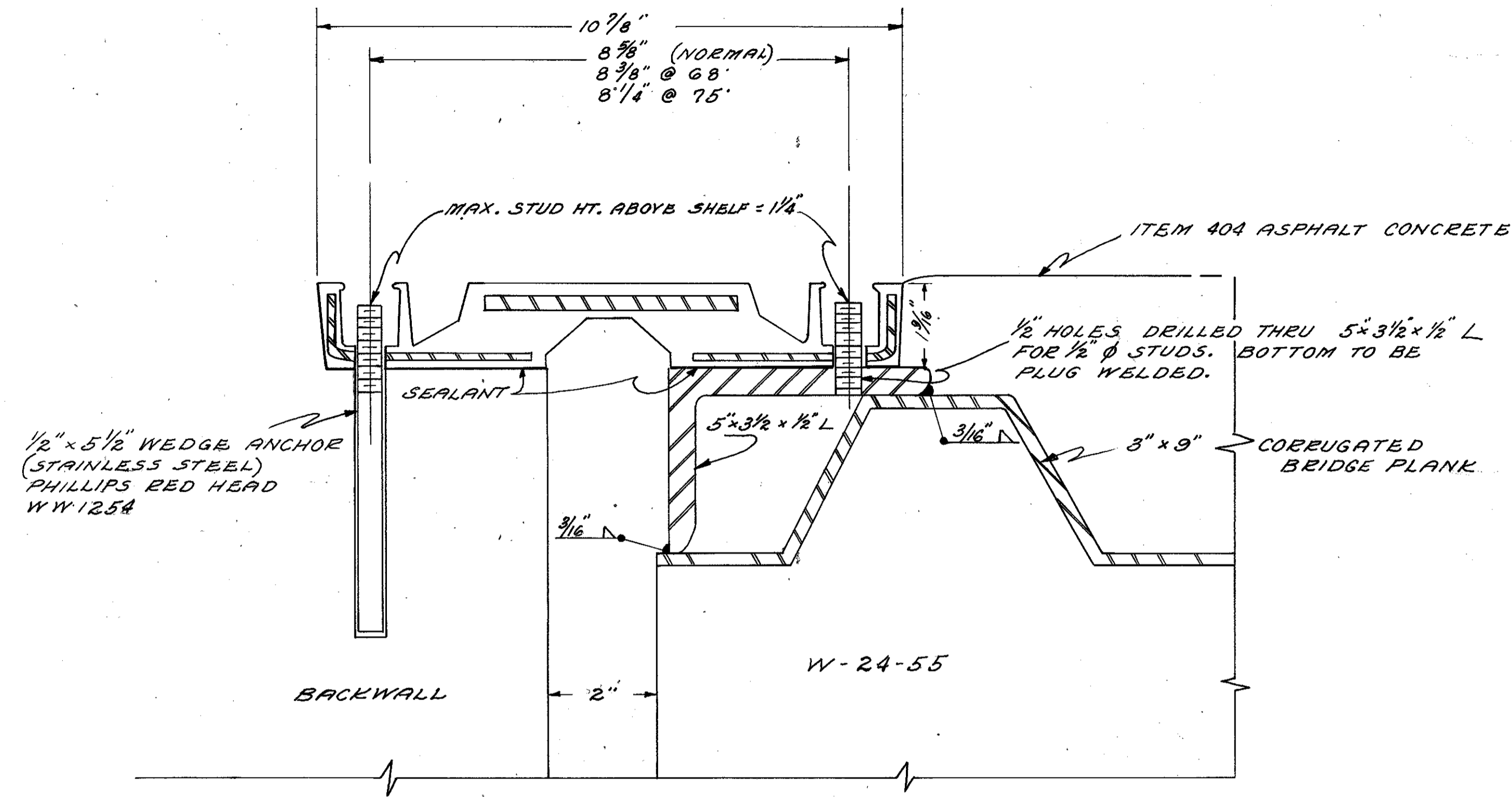
DETAIL - STRINGER BEARINGS ON ABUTMENTS

NO SCALE

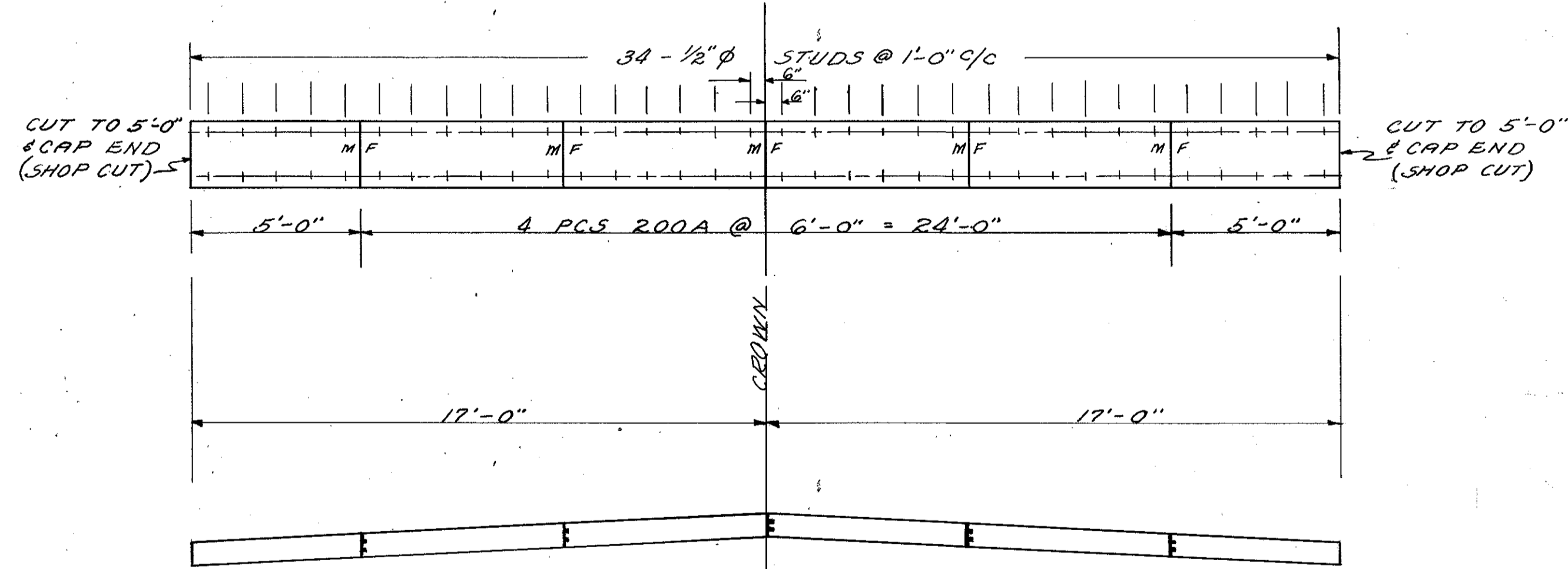
WEST ABUTMENT

END DAM DETAILS

EAST ABUTMENT

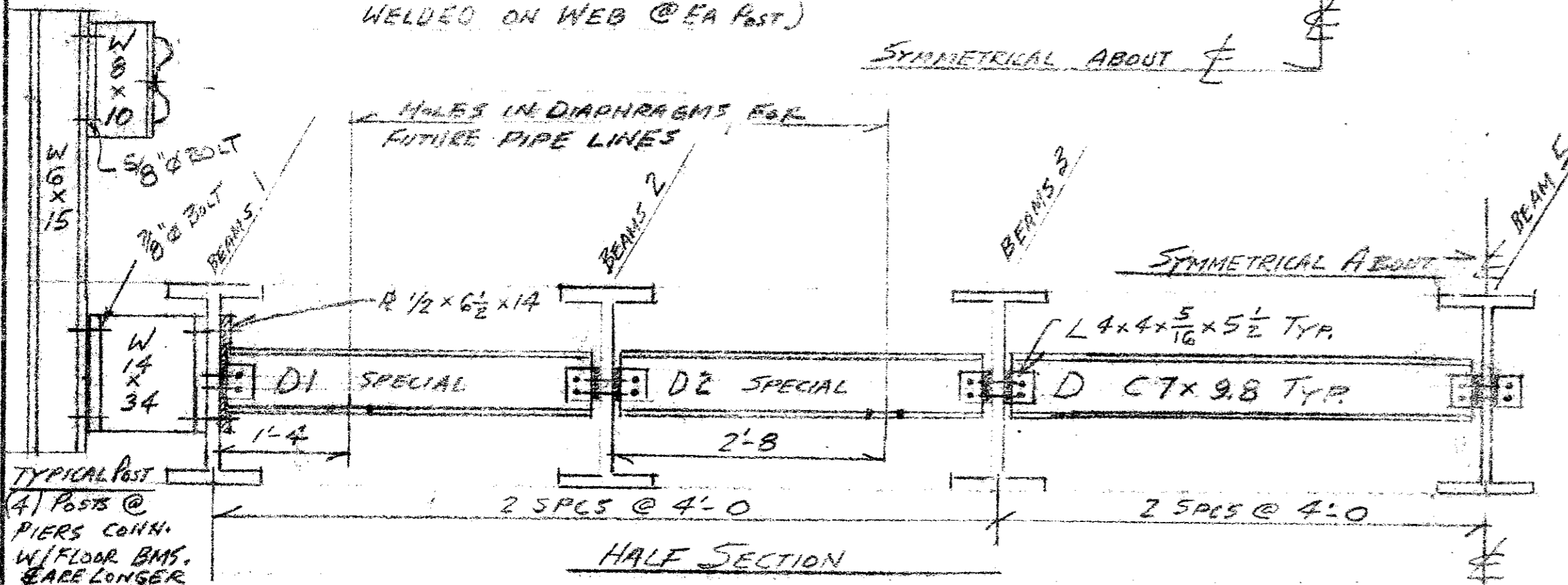
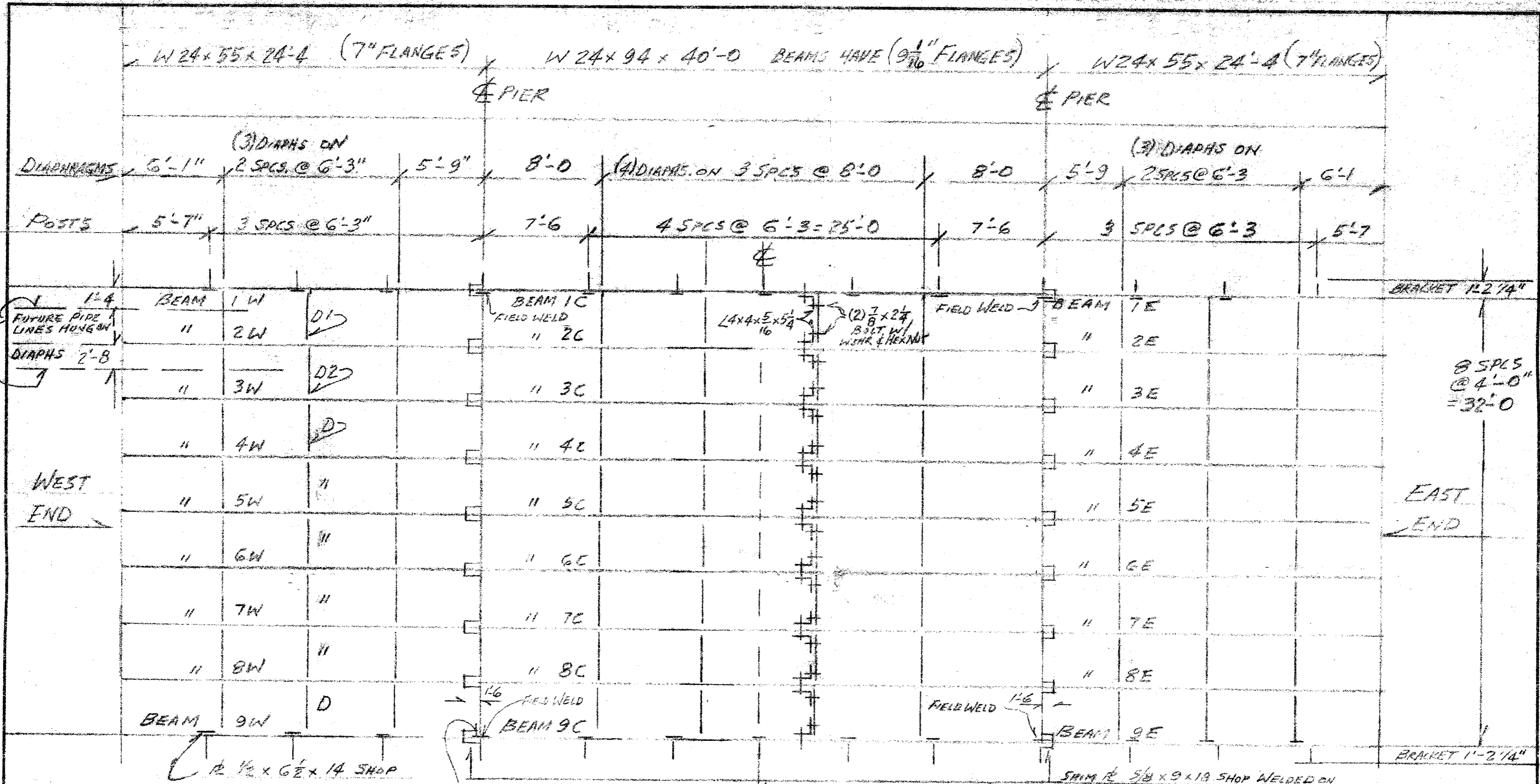


SCALE 3/8" = 1'



TRANSFLEX 200A EXPANSION JOINT SEAL

NOTE:  
THE TRANSFLEX 200A EXPANSION JOINT SEAL IS MANUFACTURED BY GENERAL TIRE AND IS TO BE INSTALLED PER THE MANUFACTURERS INSTRUCTIONS.



FASTENERS REQD. FOR FRAME ASTM A325 GALV.  
 ALL ARE 7/8 BOLT W/ WASHER & HEX NUT (EXCEPT AS NOTED)  
 7/8 x 2 1/4 FOR DIAPHRAGMS (FOR BOLT 50) + 4% = 520  
 7/8 x 2 1/4 " BRACKET TO POST (26 x 3) + 4% = 108  
 7/8 x 3 " BRACKETS TO BEAMS (26 x 4) + 4% = 105  
 5/8 x 2 1/4 FOR BOLSTER TO POST (26 x 8) + 4% = 108  
 SEE SHOP DRAWINGS SD-1 THRU D-4 FOR DETAILS OF PARTS

CITY OF NEWARK, OHIO GRANVILLE ROAD BRIDGE  
 ERECTION PLAN  
 CONTR. V.O. MENUEZ & SONS, INC.

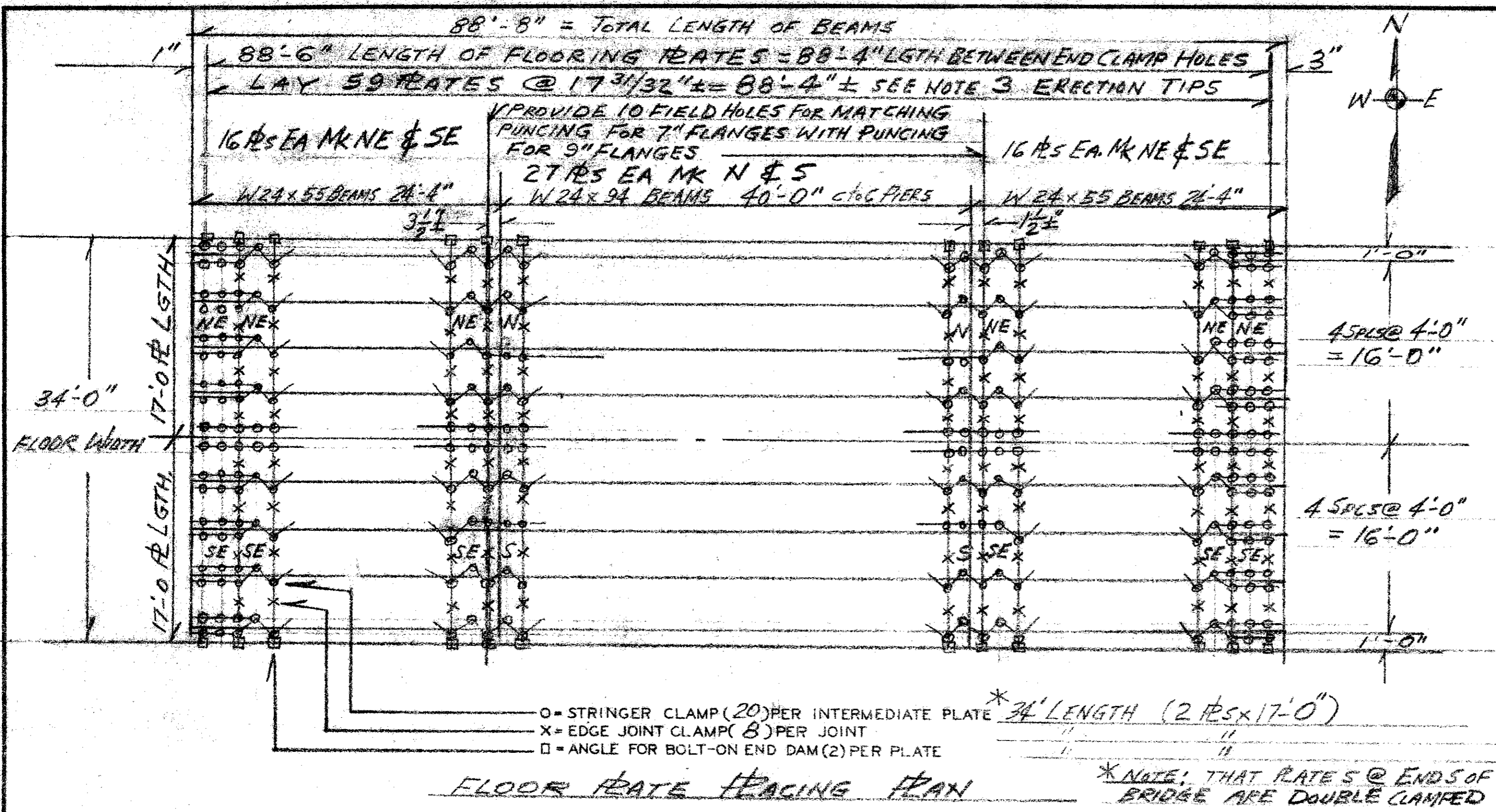
W-M PO 9103 USF 1315-S E-1

UNITED STEEL FABRICATORS, INC.

DRAWN	CHECKED	SHEET NO.
		OF
DATE		JOB NO.

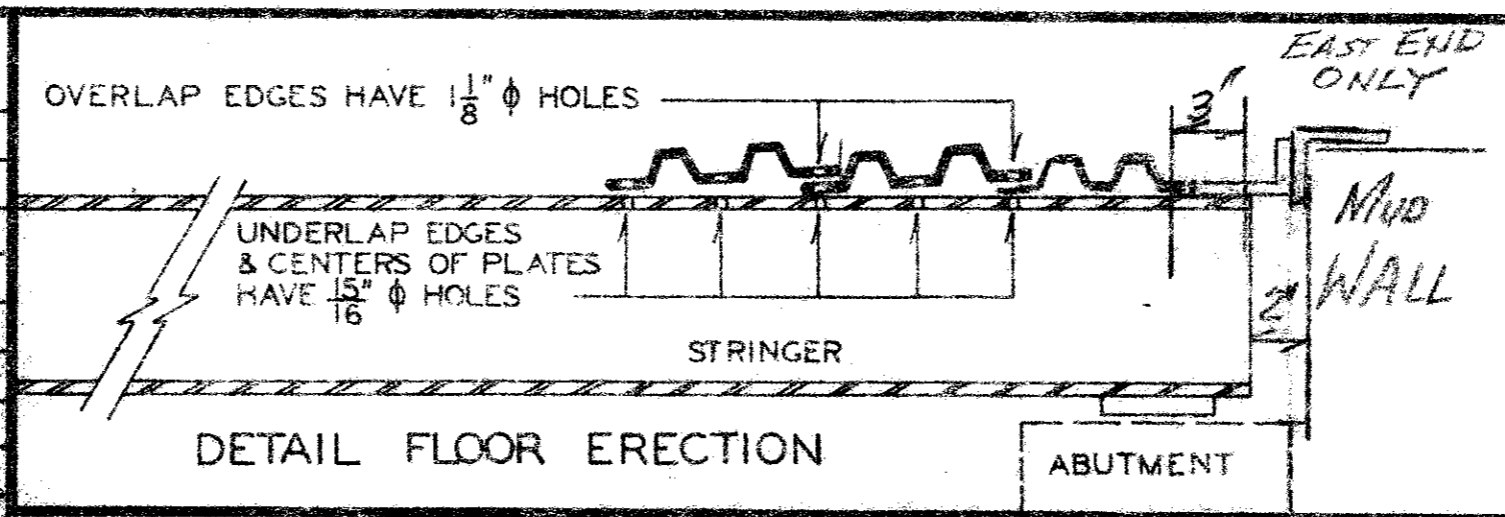
DESCRIPTION	BY	DATE	DESCRIPTION	BY	DATE	NO.	TO	DATE	NO.	TO
REVISIONS										
PRINTS ISSUED										

SIDNEY, OHIO



- ### ERECTION TIPS
- ADVANCE PLANNING**  
Study this drawing and standard references before starting the work.
  - STOCKPILING MATERIALS**  
Check your USF materials when received. Store like parts together and as close to the work site as possible. Do not mix USF materials with other materials on the job.
  - PLACING THE FLOOR PLATES**  
Carefully field check the length of the area to be floored with USF flooring and compare with the placing plan. Then establish sufficient intermediate check marks on the outside stringers to insure that you will end up as planned. (STD. 18" PLATES CAN BE LAID APPROX. 3/16" PLUS OR MINUS.) This tolerance can be used to correct minor variations in length, if necessary. Be sure you lay the first plate square with the bridge centerline and in proper relation with the stringers. Then lay the rest of the plates parallel to the first. Keep the plate ends to a straight line as you lay them.
  - USE PROPER TOOLS**  
For speedy low cost erection on clamp attached floors use power driven wrenches or ratchet wrenches.
  - FASTENING END PLATES**  
Insure your work by giving special attention to the fastening of the plates at the ends of the spans where impact is greatest. On clamp attached floors, extra clamps are furnished for double clamping the plates at the ends of the spans. Be sure to use all extra clamps.
  - STANDARD REFERENCES**
- | Drawing No. | Description              | Quantity | Checked |
|-------------|--------------------------|----------|---------|
| D 12-04 (1) | 3x9 Plate Typical        |          | ✓       |
| D 12-04 (2) | 3x9 Plate Weld Attached  |          |         |
| D 12-04 (3) | 3x9 Plate Stud Attached  |          |         |
| D 12-04 (4) | 3x9 Plate Clamp Attached |          | ✓       |
| Manual      | 2x6 Flooring             |          |         |
- \*NOTE: THAT PLATES @ ENDS OF BRIDGE ARE DOUBLE CLAMPED

FLOOR ACCESSORIES	PART NO.	CLAMPS			END DAMS		WELD STUDS	TOTALS
		STRINGER	EDGE	JOINT	BOLT ON	LOOSE		
Clamp Angle For Flange		1275	500	126				
Clamp Angle For 208 7/8 Flange	14-353	1275					1275	
Boits, Hex Head 3/4 x 2			500	126			626	
Boits, Hex Head 3/4 x 3		1275					1275	
Washer, Round Flat 3/4		1275	500				1775	
Washer, Lock 3/4								
Nut, Hex 3/4		1275	500	126			1901	
End Dam Angle 2 1/2 x 2 1/2 x 1/2 x 1 1/2	14-314			126			126	
End Dam Pl. 3 1/2 x 7 Ga. x 12'-0"	14-315			16			16	
Bolt, Oval Neck 5/8 x 1 1/2	98-1801							
Nut, Hex 5/8	98-1803							
Stud, Weld 1/2 x 1 3/4 w/Ferrule	98-3042							
Washer, 2 x 2 x 1/4 w/9/16 Hole	14-317G							
Washer, 1 1/2 x 1 1/2 x 1/4 w/9/16 Hole	14-316G							
Washer, Round Flat 1/2								
Nut, Hex 1/2								



FLOOR PLATES		GAUGE	CORRUGATION	COATING
		5/16	3x9	GALV.
QTY.	MARK	DESCRIPTION		
32	33112-SE	FLOOR PLS. 18" x 17'-0" FOR END SPANS		
32	-NE	" " 18" x 17'-0" " " "		
27	-S	" " 18" x 17'-0" " CENTER SPAN		
27	-N	" " 18" x 17'-0" " " "		

GUARD RAIL		TYPE	GA.	COATING
QUANTITY				
L.F.		Pcs. x 12'-6"		
Pcs.	Terminals			
Pcs.	Post			
Pcs.	5/8 x	Post Bolts		
Pcs.	5/8 x	Post Bolts		
Pcs.	5/8 x 1 1/2	Splice Bolts		
Pcs.	5/8	Hex Nuts		
Pcs.	5/8	Round Washers		
SHEET PILING		TYPE	GA.	COATING

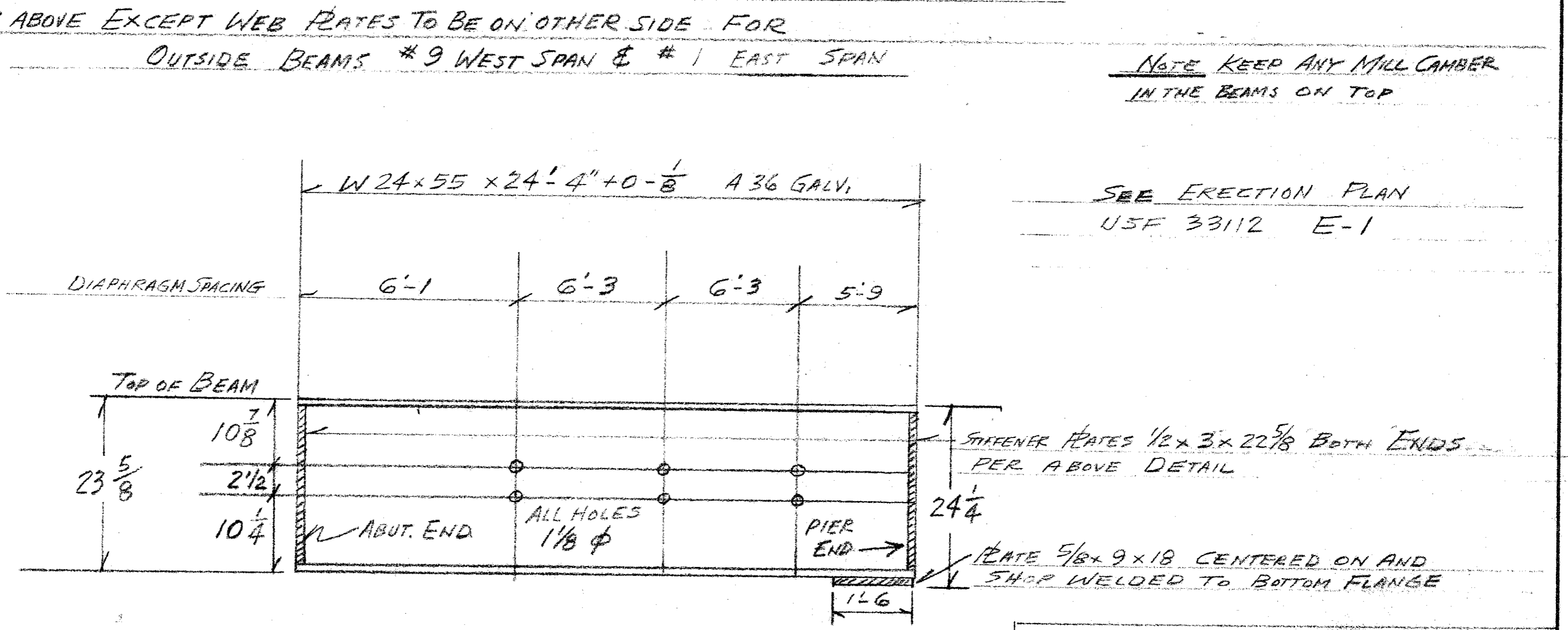
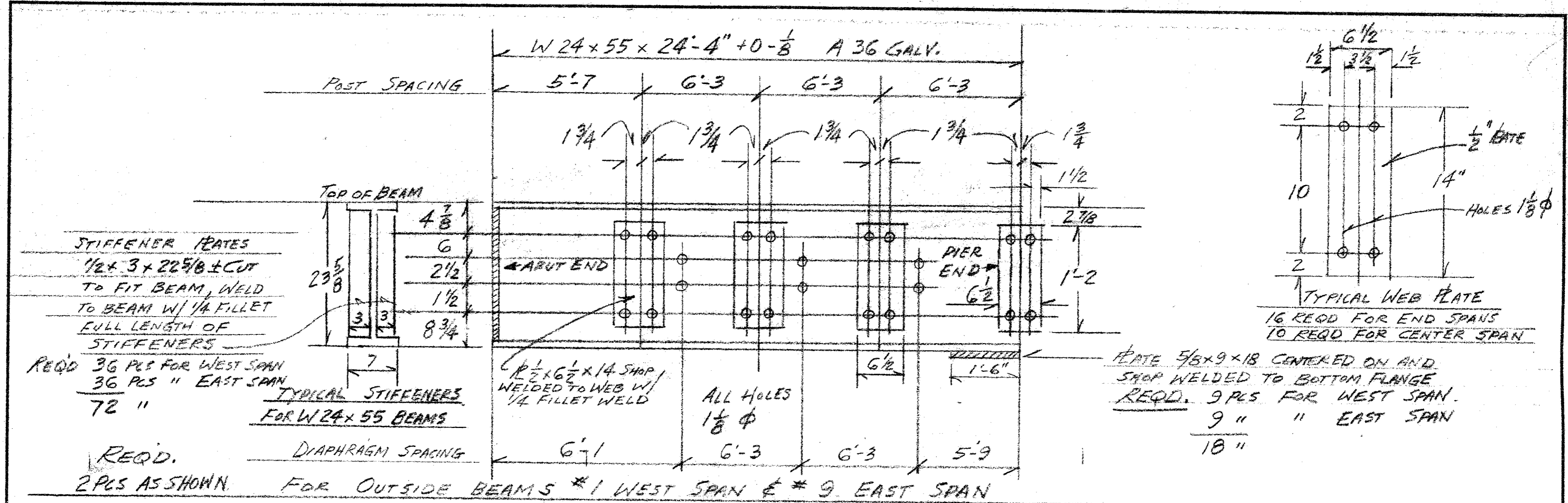
WELDING SHALL BE IN ACCORDANCE WITH U.S.F. STANDARDS

**UNITED STEEL FABRICATORS, INC.**  
 SIDNEY, OHIO

STRUCTURAL PLATE FLOORING FOR:  
 CITY OF NEWARK, OHIO GRANVILLE RD.  
 BRIDGE OVER SHARON RUN  
 CONTR. W.D. MENUEZ & SONS, INC.  
 WHITAKER-MERRELL CO. RD. 9103

DATE: \_\_\_\_\_ REVISION: \_\_\_\_\_

DRAWN BY: G  
 CHECKED BY: AS  
 SCALE: NONE  
 ORDER NO: 40-33112  
 DWG NO: 33112 E-2

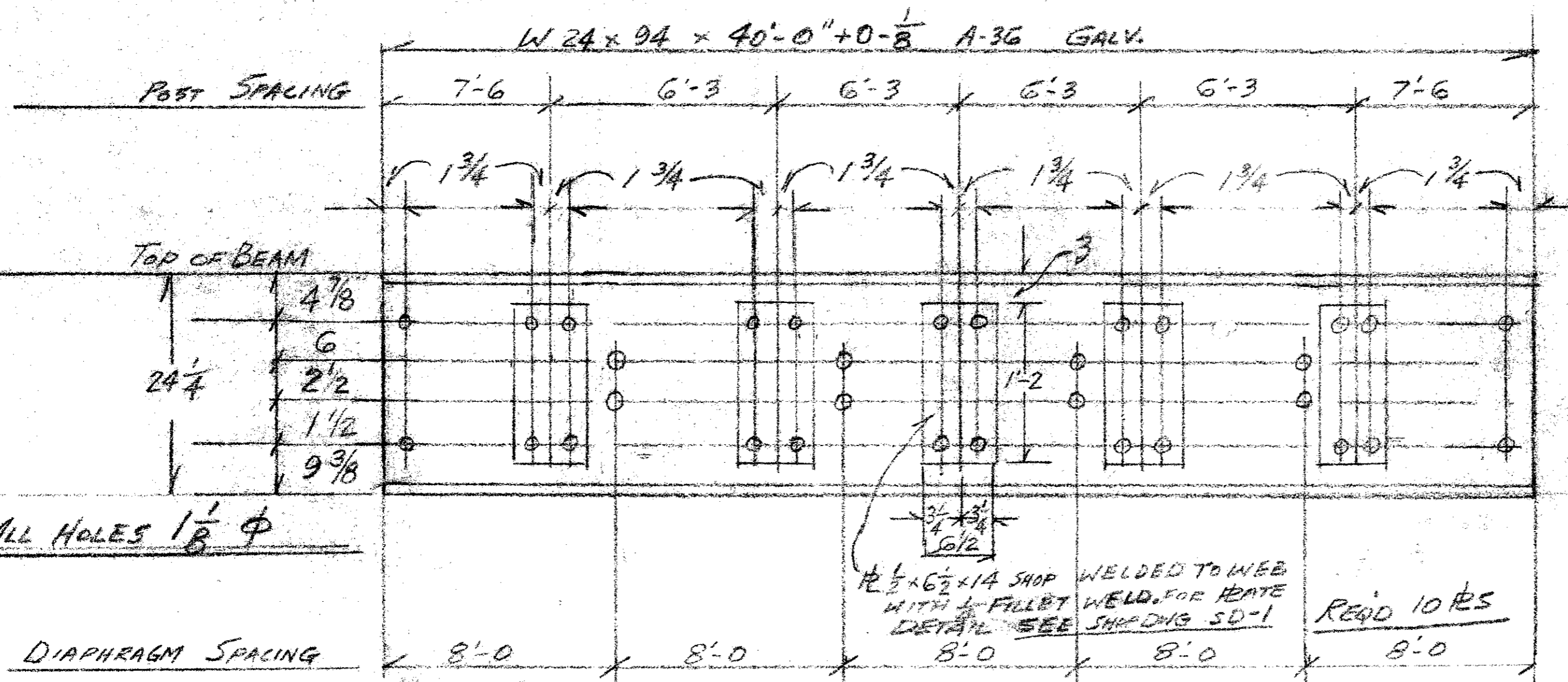


REQD 14 PCS FOR BEAMS 2 THRU 8 FOR WEST SPAN (7 BEAMS)  
BEAMS 2 THRU 8 FOR EAST SPAN (7 BEAMS)

CITY OF NEWARK, OHIO GRANVILLE ROAD BRIDGE  
END SPANS BEAM DETAILS  
CONTR. V. O. MENEZES & SONS, INC  
W-M PO 9103 USF 1315-S 5D-1

DESCRIPTION		BY	DATE	DESCRIPTION		BY	DATE	NO.	TO	DATE	NO.	TO
REVISIONS												
PRINTS ISSUED												

**UNITED STEEL FABRICATORS, INC.**  
DRAWN: G  
CHECKED: G  
DATE: 1-14-80  
JOB NO.

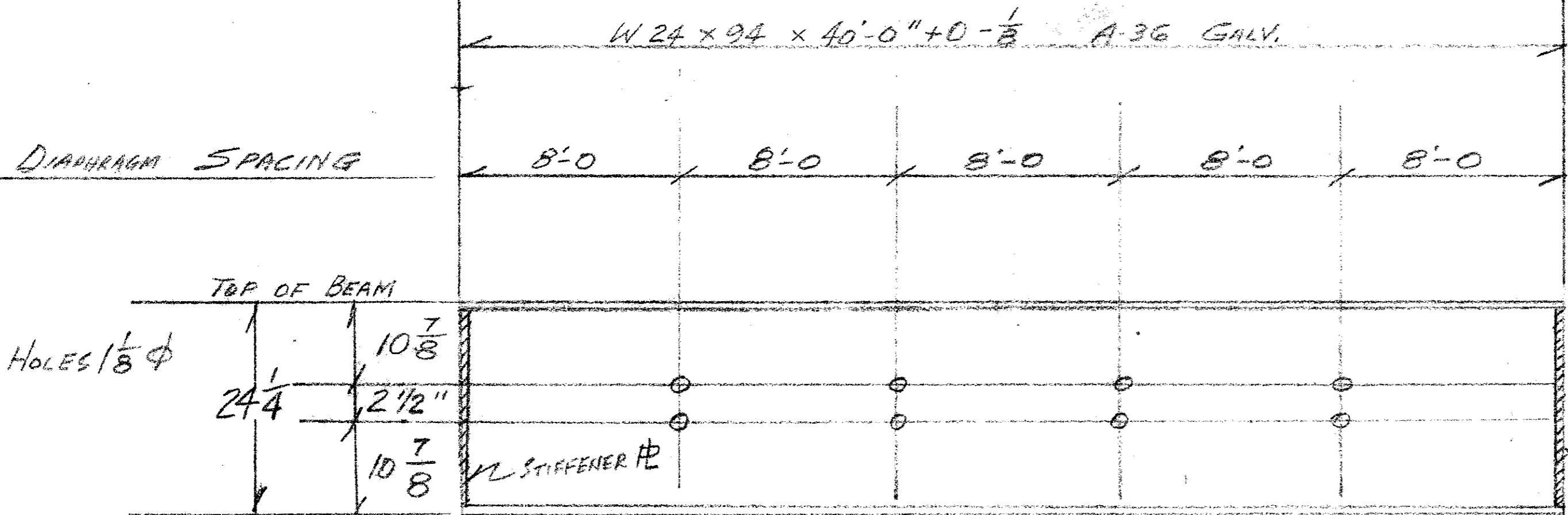


REQD 1 PC. OUTSIDE BEAM #1 FOR CENTER SPAN AS SHOWN ABOVE

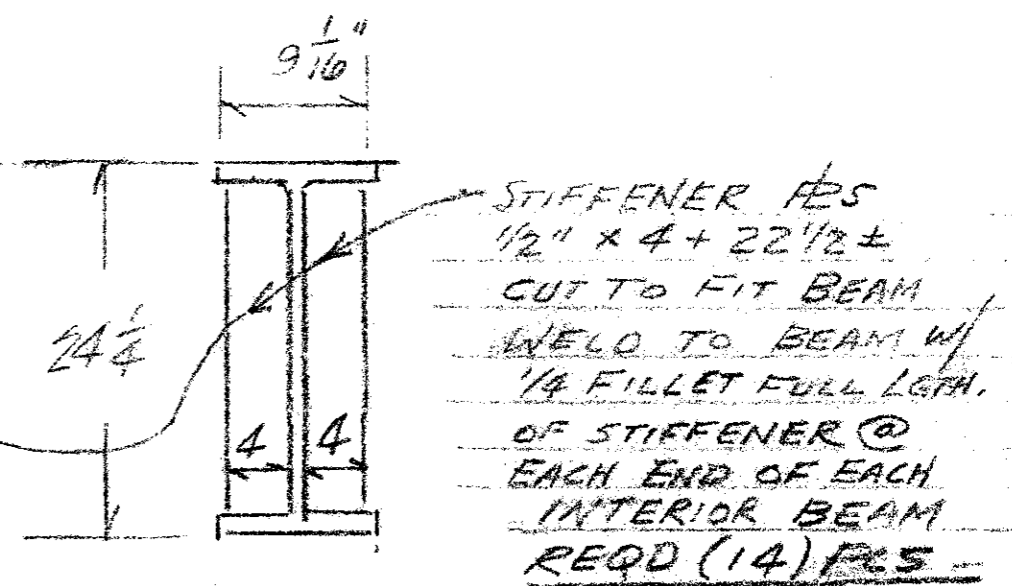
REQD 1 PC. OUTSIDE BEAM #9 " " " SAME EXCEPT 1/2 x 6 1/2 x 14 PLS ARE TO BE WELDED ON OTHER SIDE OF THE WEB

NOTE KEEP ANY MILL CAMBER IN THE BEAMS ON TOP

SEE ERECTION PLAN USE 33112 E-1



REQD (7) Pcs INTERIOR BEAMS (2 THRU 8) FOR CENTER SPAN



STIFFENER PLS 1/2" x 4 + 22 1/2 ± CUT TO FIT BEAM WELD TO BEAM W/ 1/4" FILLET FULL LGTH. OF STIFFENER @ EACH END OF EACH INTERIOR BEAM REQD (14) PLS -

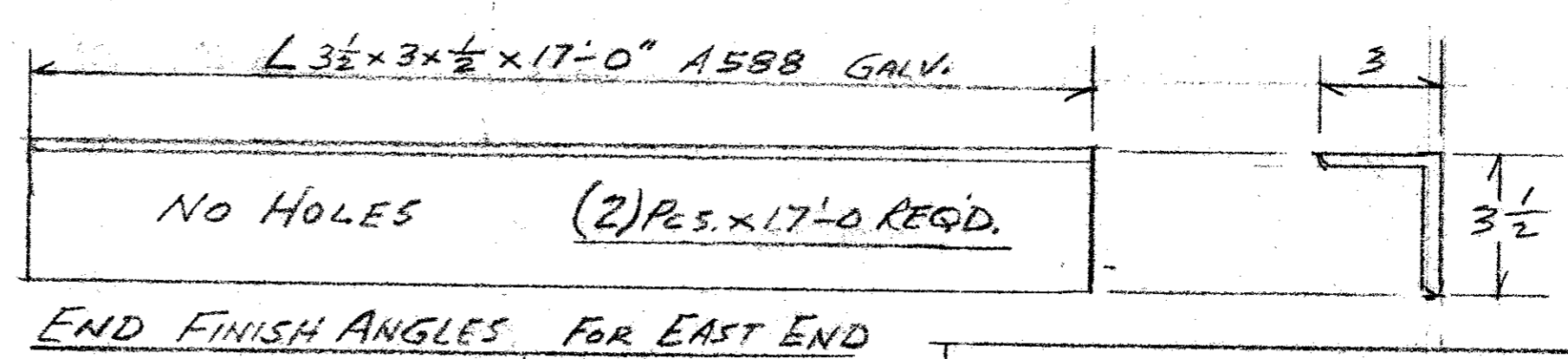
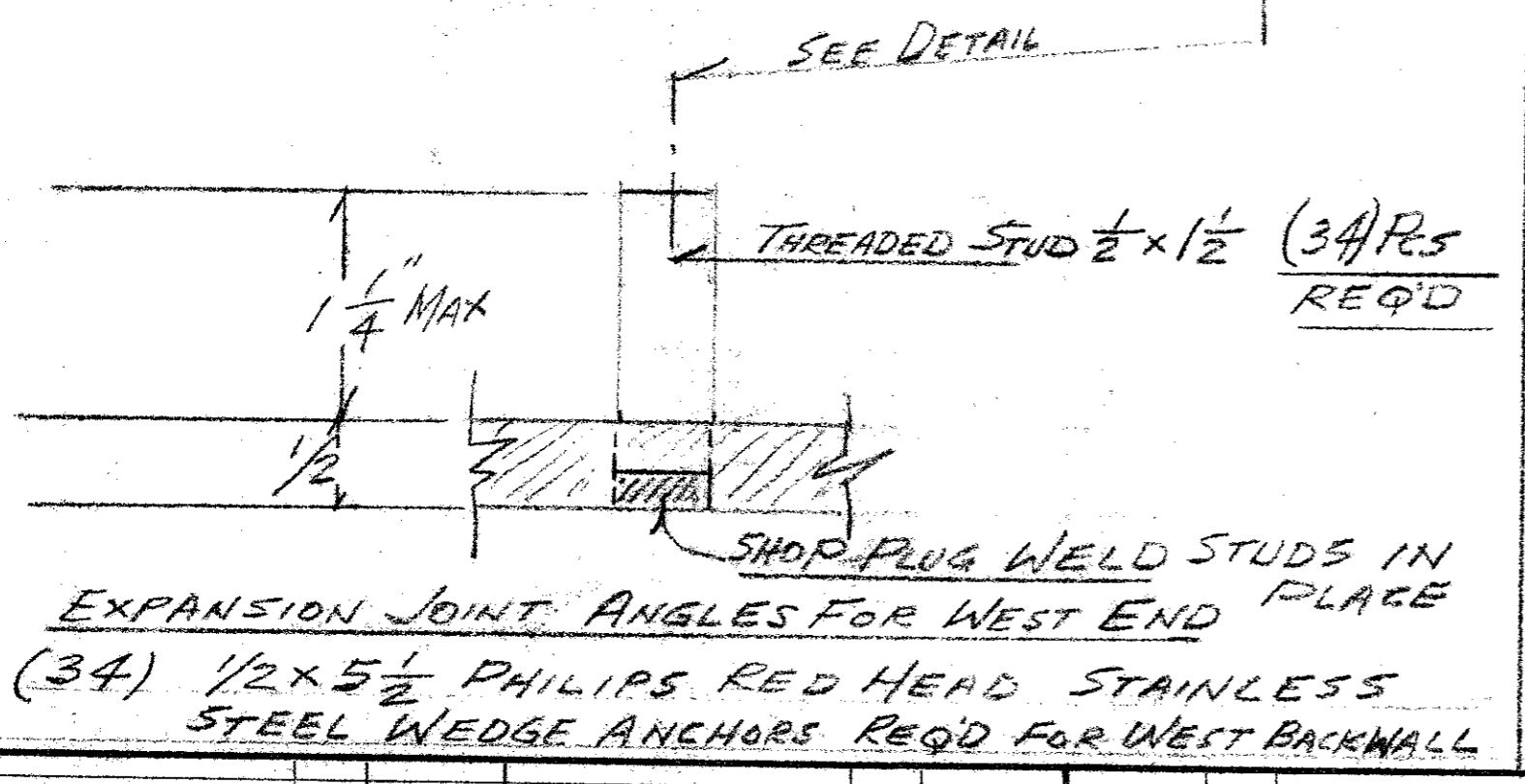
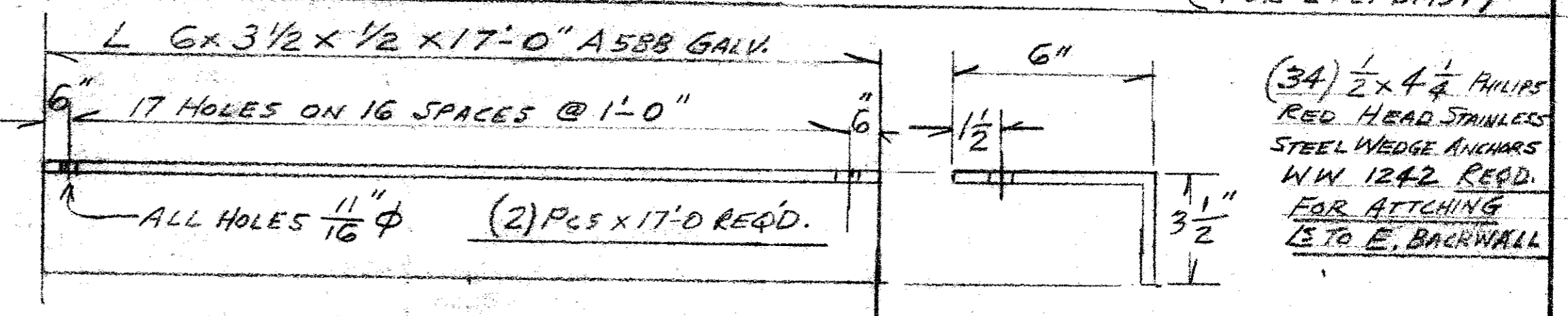
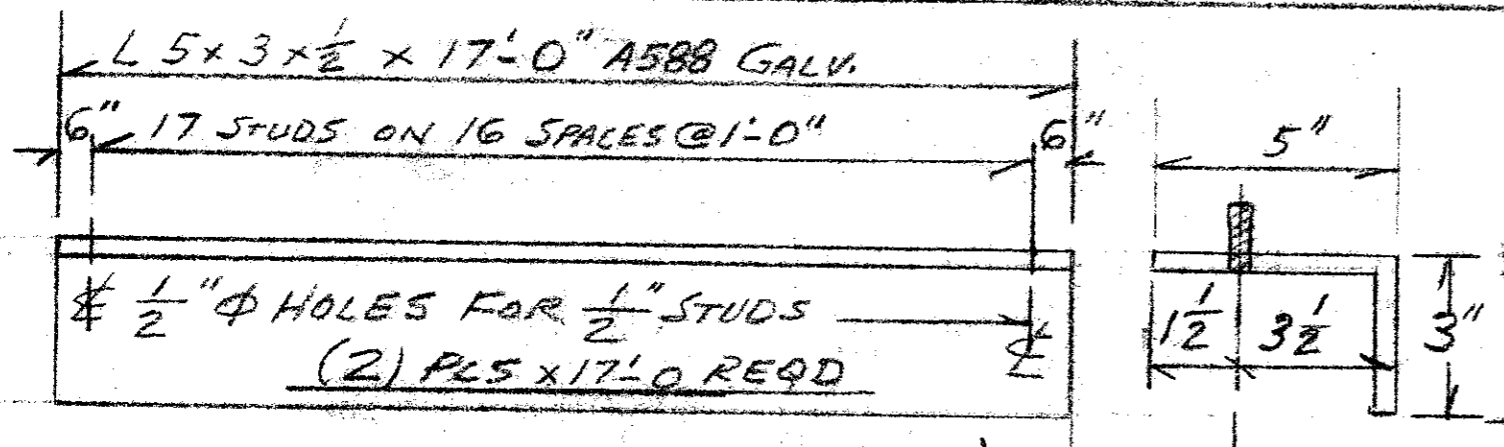
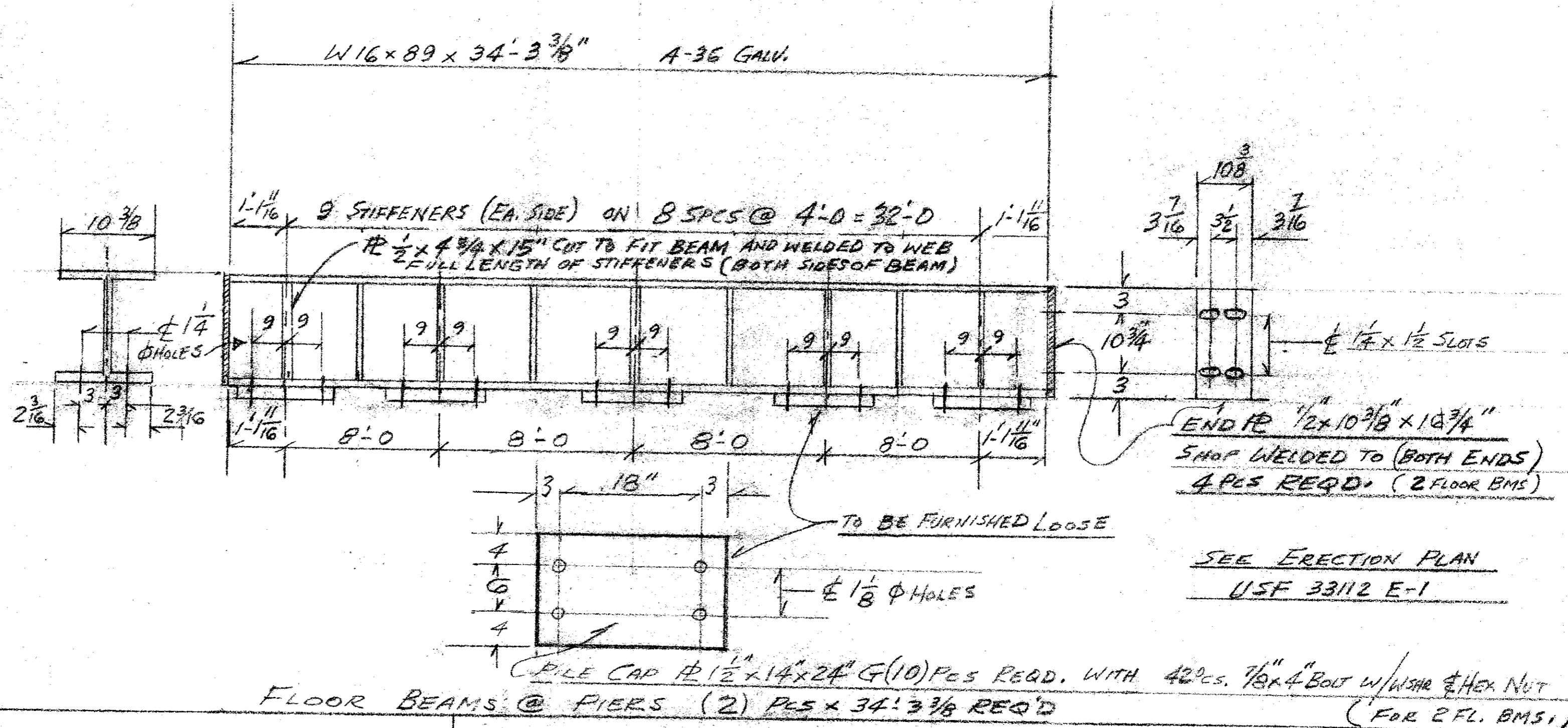
CITY OF NEWARK, OHIO GRANVILLE ROAD BRIDGE CENTER SPAN BEAM DETAILS CONTR. V. O. MENUEZ & SONS, INC.

W-M P.O. 9103 USE 1315-S SD-2

DESCRIPTION	BY	DATE	DESCRIPTION	BY	DATE	NO.	TO	DATE	NO.	TO
REVISIONS										
PRINTS ISSUED										

UNITED STEEL FABRICATORS, INC.  
SIDNEY, OHIO

DRAWN G CHECKED G SHEET NO. OF JOB NO. DATE 1-15-80

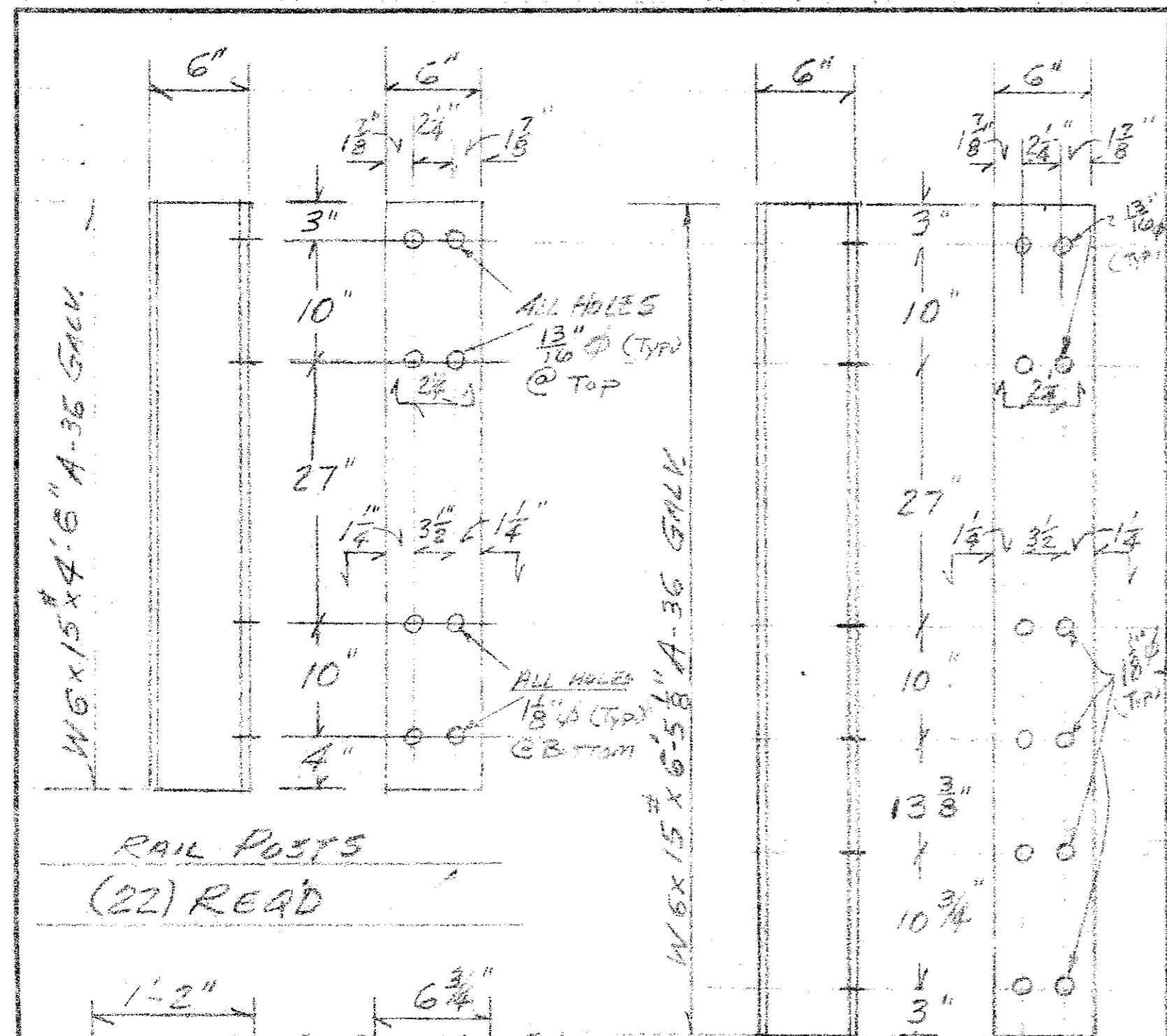


CITY OF NEWARK, OHIO GRANVILLE ROAD BRIDGE  
DETAIL 5 - FLOOR BEAMS @ PIERS,  
END FINISH ANGLES  
CONTR. V. O. MENEZES & SONS, INC.  
WM P.O. 9103 USF 1315-550-3

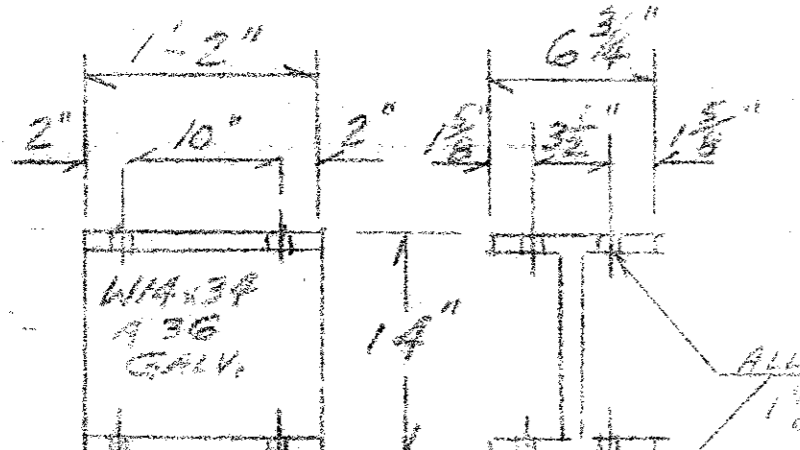
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REVISIONS										
PRINTS ISSUED										

**UNITED STEEL FABRICATORS, INC.**  
SIDNEY, OHIO

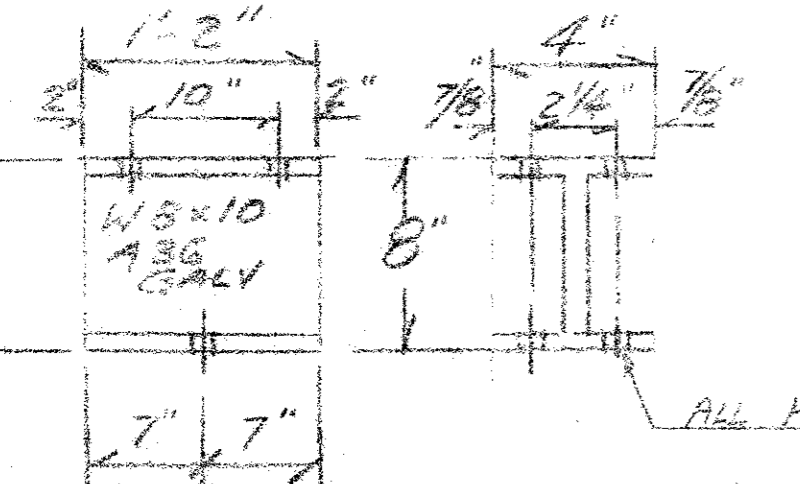
DRAWN	CHECKED	SHEET NO.
		OF
DATE	JOB NO.	



RAIL POSTS  
(22) REQ'D

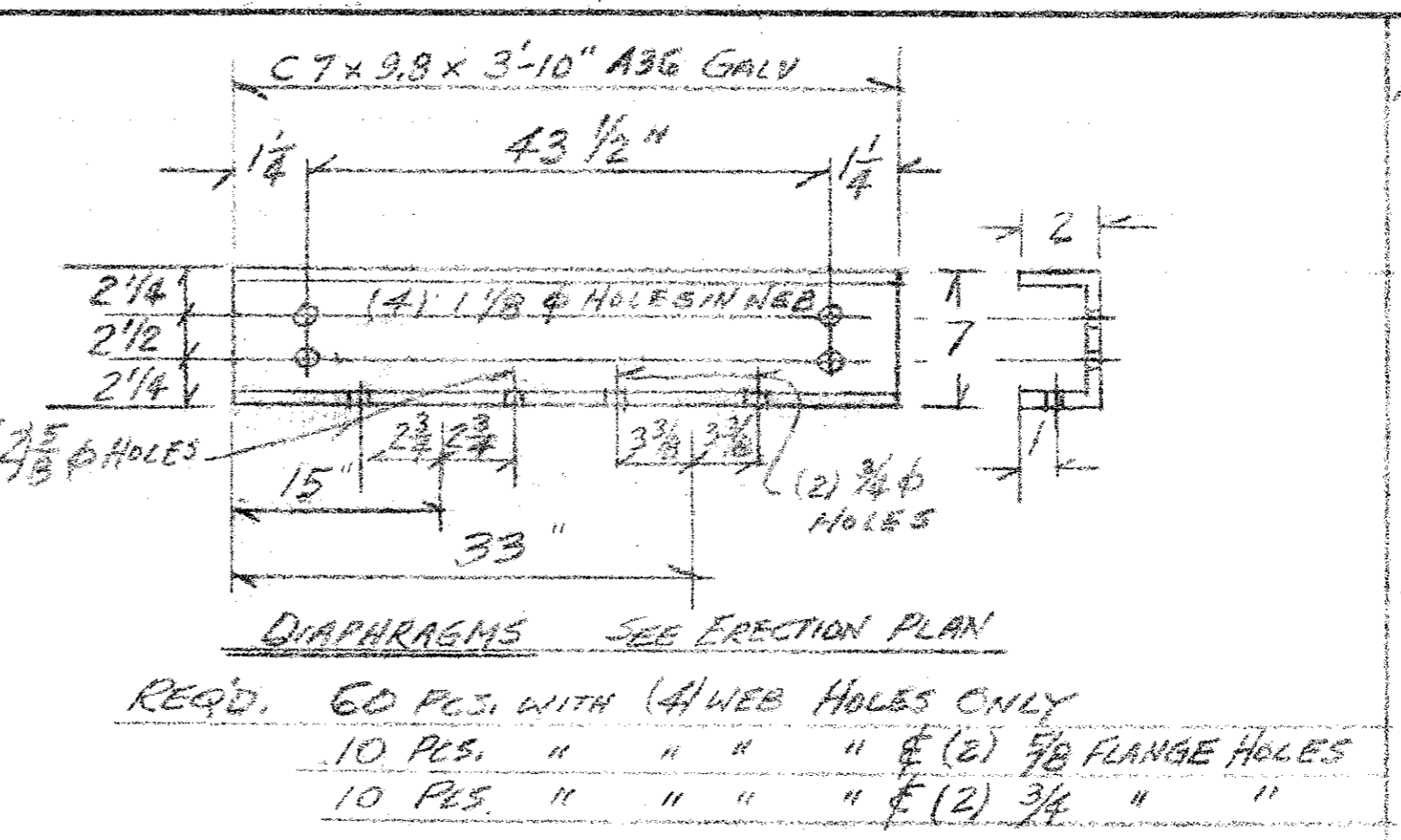


POST BRACKETS (26) REQ'D

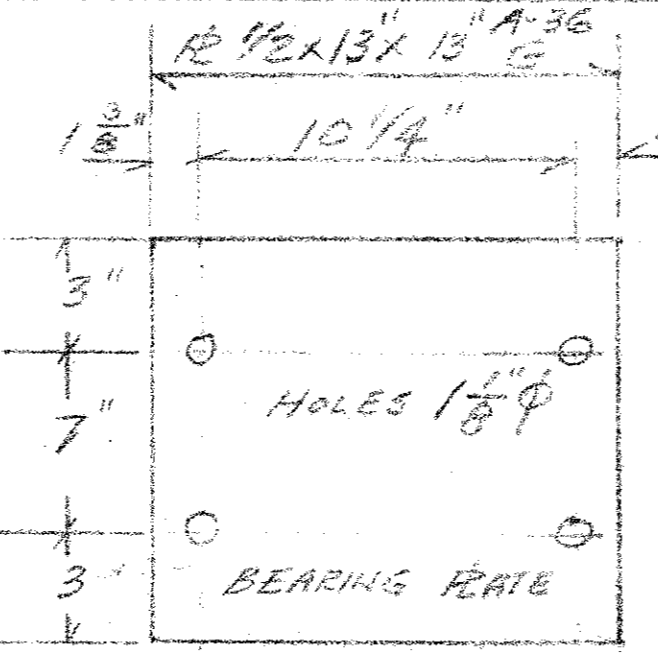
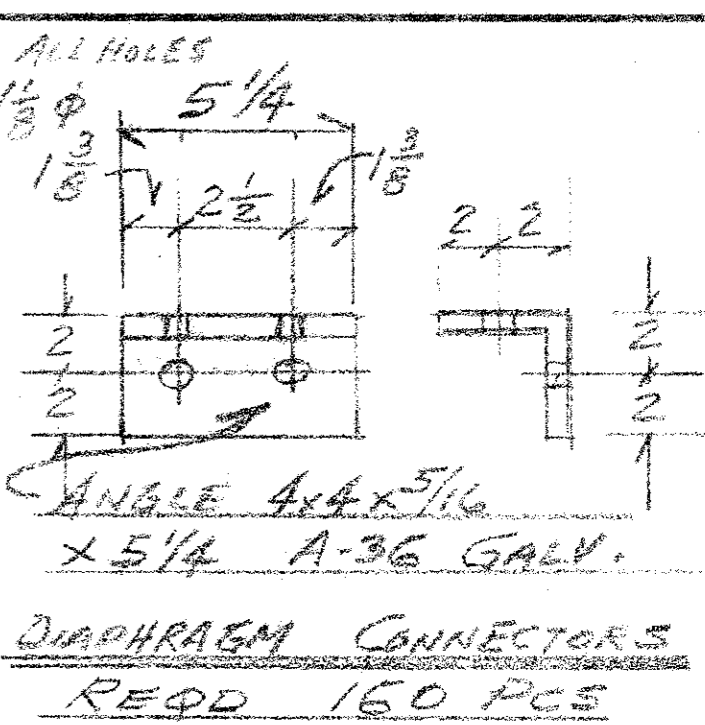


POST BOLSTERS (26) REQ'D

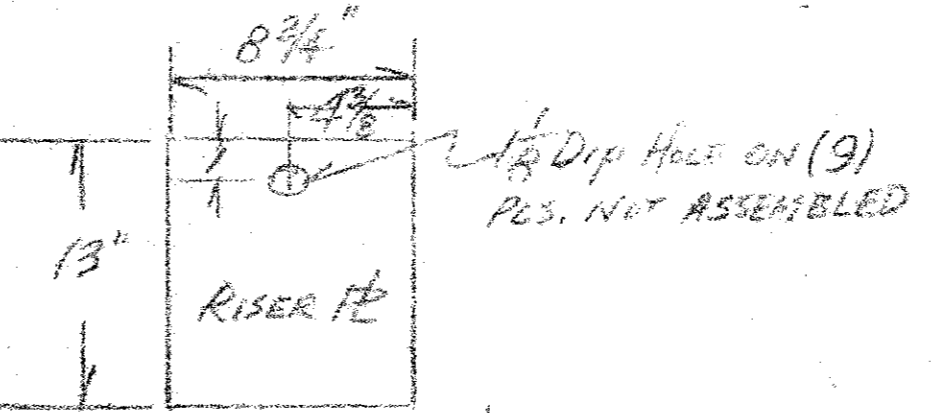
PIPING - CROSS FRAME MEMBERS: (8) REQ'D  
 4 - ANGLE 5" X 5" X 5/16" @ 34'-5 1/4"  
 4 - ANGLE 5" X 5" X 5/16" @ 33'-6"



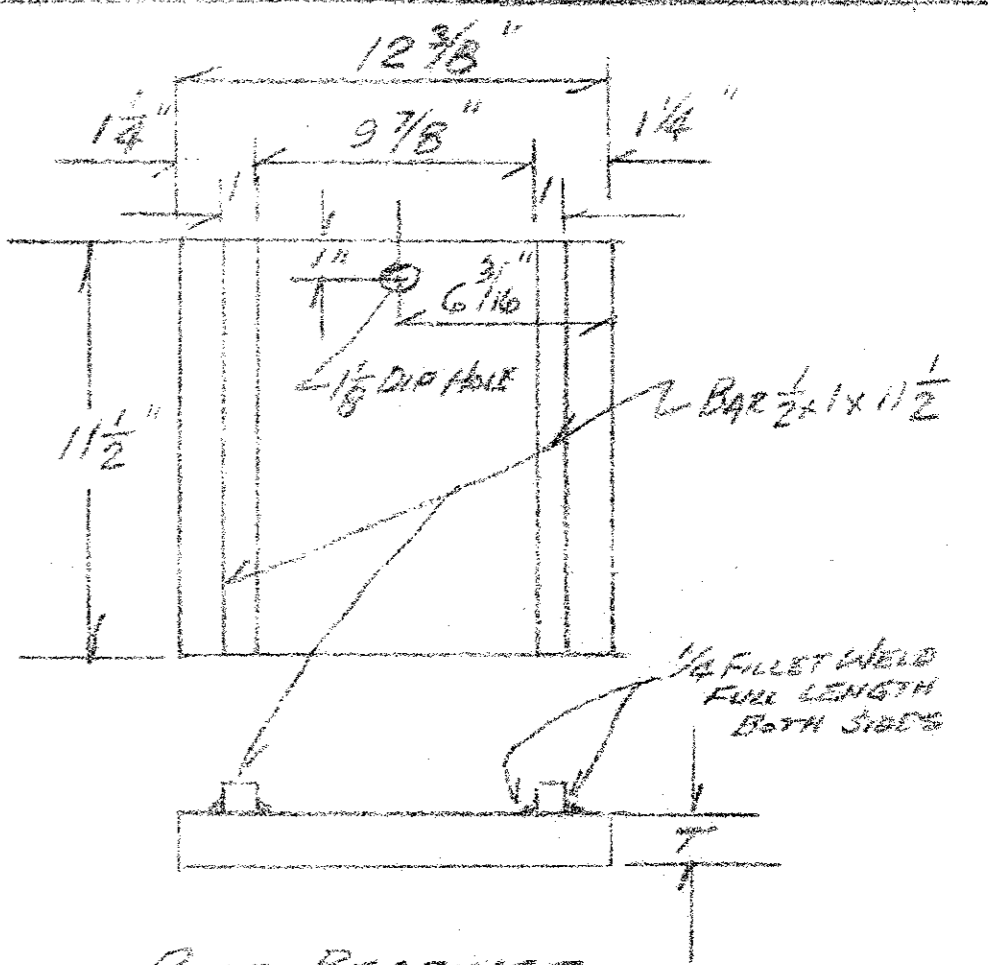
REQ'D. 60 PCS WITH (4) WEB HOLES ONLY  
 10 PCS. " " " (2) 5/8" FLANGE HOLES  
 10 PCS. " " " (2) 3/4" "



REQ'D 18 PCS FOR (2) ABUTMENTS



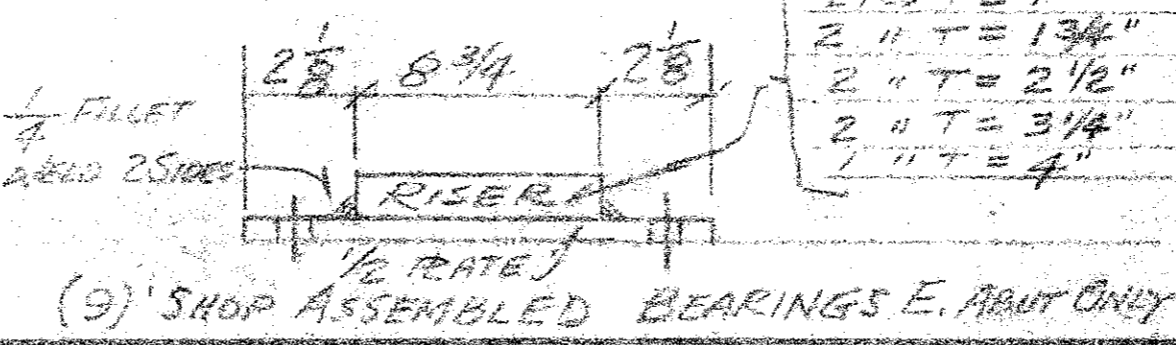
RISERS  
 REQ'D FOR 2 ABUTMENTS  
 4 PCS T=1"  
 4 " T=1 3/4"  
 4 " T=2 1/2"  
 4 " T=3 1/4"  
 2 " T=4"



PIER BEARINGS

REQ'D FOR 2 PIERS  
 4 PCS T=1"  
 4 " T=1 3/4"  
 4 " T=2 1/2"  
 4 " T=3 1/4"  
 2 " T=4"

REQ'D FOR BEARING PLATES PLS. 1/2" x 5 1/2"  
 (72) PCS 1/2" x 5 1/2" (STAINLESS STEEL) WEDGE ANCHORS PHILIPS RED HEAD NW 1254



(9) SHOP ASSEMBLED BEARINGS E. ABUT ONLY

CITY OF NEWARK, OHIO GRANVILLE RD. BRIDGE  
 DETAILS POSTS, BRACKETS & BOLSTERS  
 DIAPHRAGMS & ANGLE CONNECTORS  
 BEARINGS FOR ABUTMENTS & PIERS  
 CONTR. V.O. MENNER & SONS, INC.  
 W.-M. P.O. 9103 USF 1315-S-SD-4

NO.	DATE	BY	DESCRIPTION	NO.	DATE	BY	DESCRIPTION

UNITED STEEL FABRICATORS INC.  
 SIDNEY, OHIO

DRAWN	CHECKED	SHEET NO.
DATE		
		JOB NO.