



CITY OF PHILADELPHIA

February 18, 2021

Rosemary Chiavetta, Secretary
Pennsylvania Public Utility Commission
400 North Street
Harrisburg, PA 17120

RE: A-2019-3013783

Dear Secretary Chiavetta,

Attached for filing please find enclosed City Exhibit 4 in the above-captioned matter, the 1960 plans for the subject bridge, which the Honorable Judge Heep gave leave to file on or before February 19, 2021.

Very Truly Yours,

A handwritten signature in black ink, appearing to read "J. C. Kellett".

James C. Kellett
Deputy City Solicitor

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Application of CSX Transportation, Inc. for	:	Docket No. A-2019-3013783
Approval of the Abolition of the Crossing	:	
(DOT 140 634 G) where Cemetery Avenue	:	Electronically Filed
Crosses above grade the tracks of CSX	:	
Transportation, Inc. located in the City of	:	
Philadelphia, Philadelphia County,	:	
Pennsylvania, and the allocation of cost	:	
Thereeto.		

CERTIFICATE OF SERVICE

I hereby certify that I have this day served a true copy of the foregoing letter and aforementioned exhibit, dated February 18, 2021, upon the parties listed below, in accordance with the requirements of 52 Pa. Code §1.54.

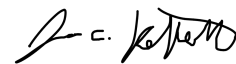
SERVICE BY ELECTRONIC MAIL ONLY

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Public Utility Commission
Bureau of Investigation and Enforcement
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karost@pa.gov

Honorable Darlene Heep
Administrative Law Judge
801 Market Street
Suite 4063
Philadelphia, PA 19107
dheep@pa.gov



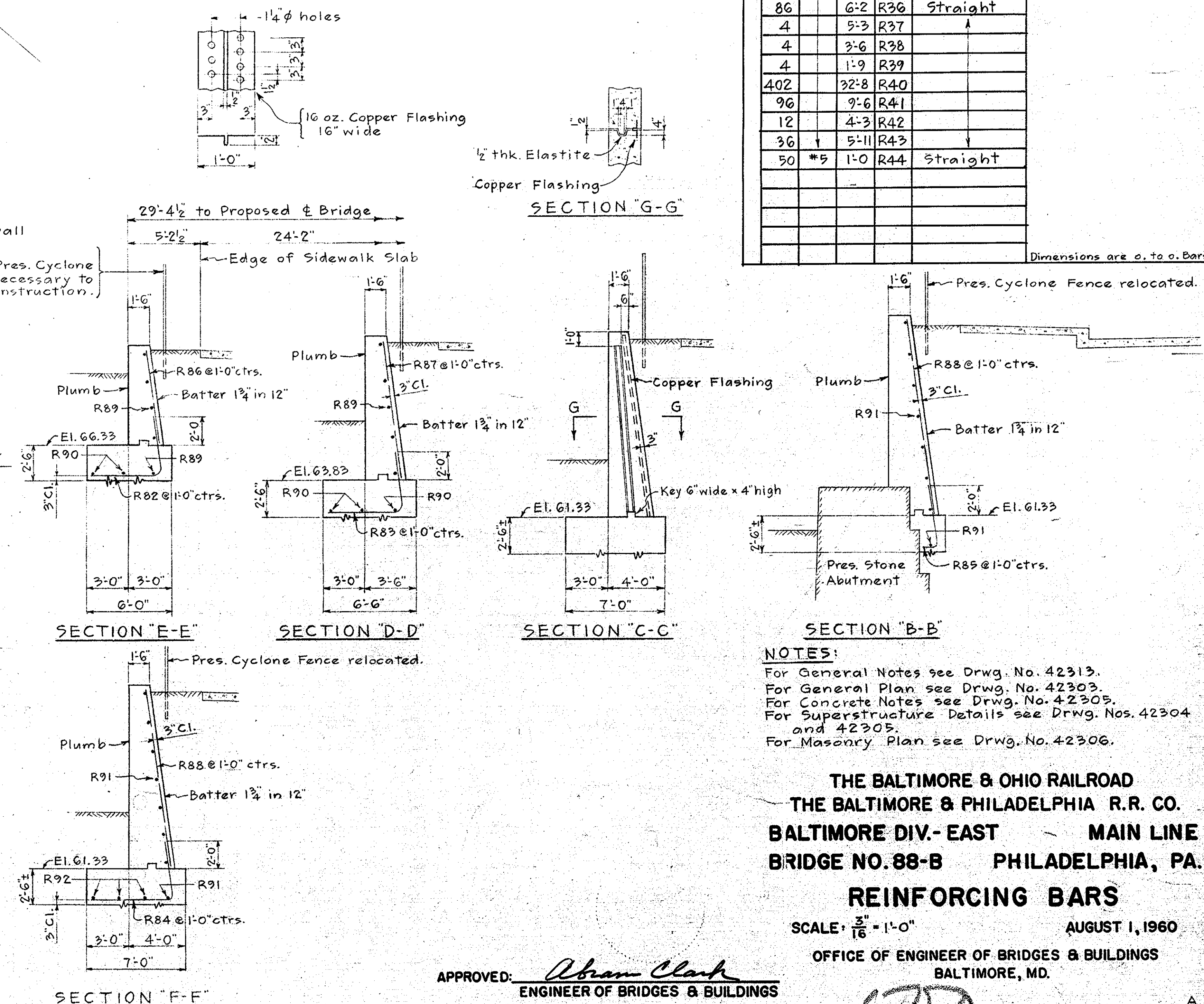
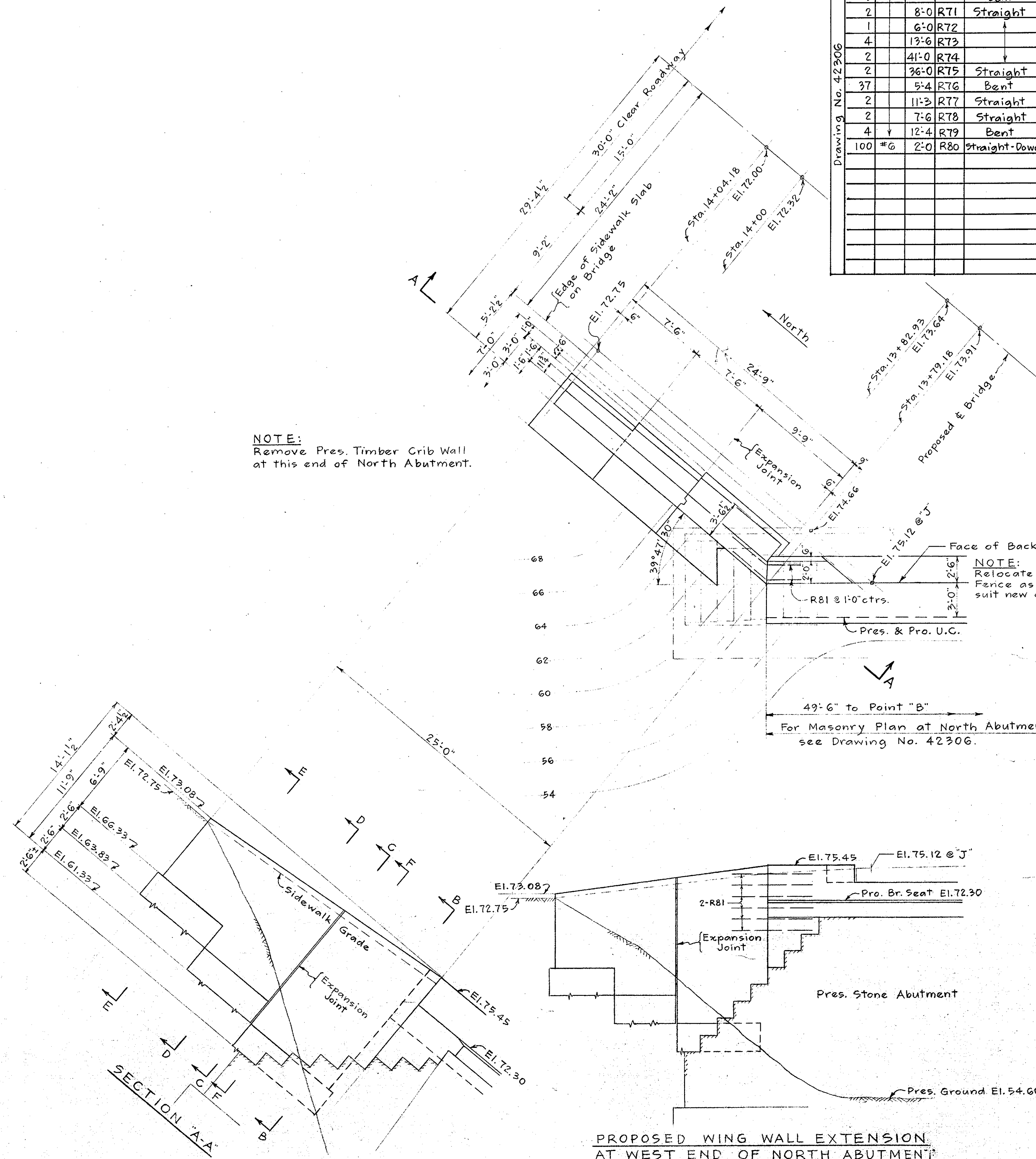
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City of Philadelphia Law Dept
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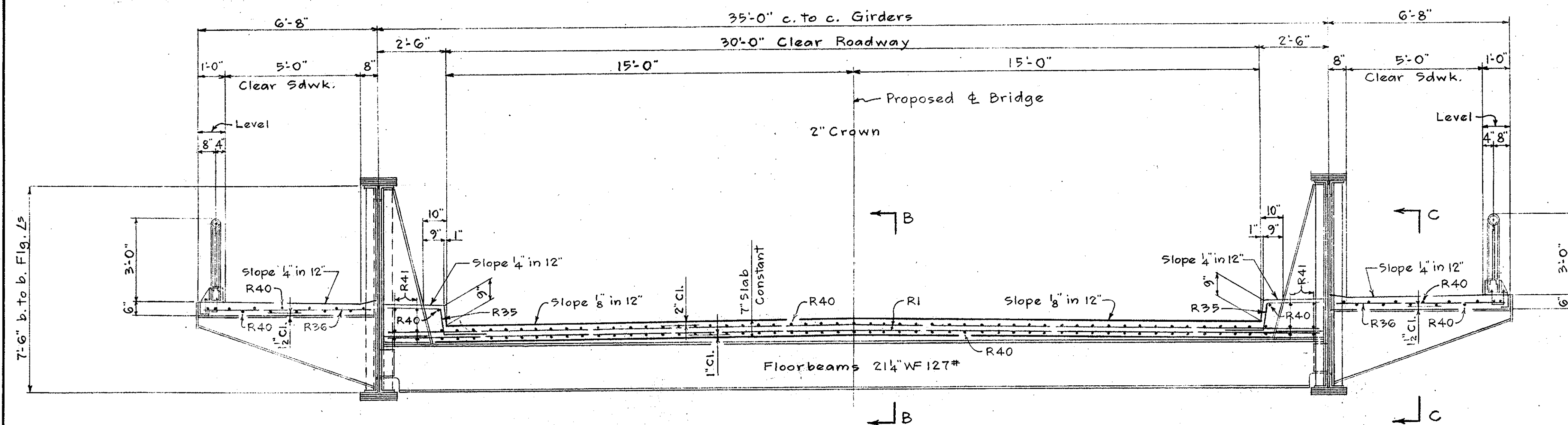
CITY EXHIBIT 4

BILL OF REINFORCING BARS - SOUTH ABUTMENT					
No.	Size	Lgth.	Mk.	Remarks	Bending Diagram
27	#6	32'-4"	R59	Straight	
2	#6	7'-9"	R61	do	
1	#6	9'-9"	R62	Straight	
4	#6	15'-4"	R63	Bent	
1	#6	4'-11"	R64	Straight	
6	#6	11'-6"	R65	Bent	
2	#6	7'-7"	R66	do	
13	#6	11'-6"	R67	do	
12	#6	12'-4"	R68	do	
2	#6	8'-5"	R69	do	
5	#6	16'-4"	R70	Bent	
2	#6	8'-0"	R71	Straight	
1	#6	6'-0"	R72	do	
4	#6	13'-6"	R73	do	
2	#6	41'-0"	R74	do	
2	#6	36'-0"	R75	Straight	
37	#6	5'-4"	R76	Bent	
2	#6	11'-3"	R77	Straight	
2	#6	7'-6"	R78	Straight	
4	#6	12'-4"	R79	Bent	
100	#6	2'-0"	R80	Straight-Dowels	

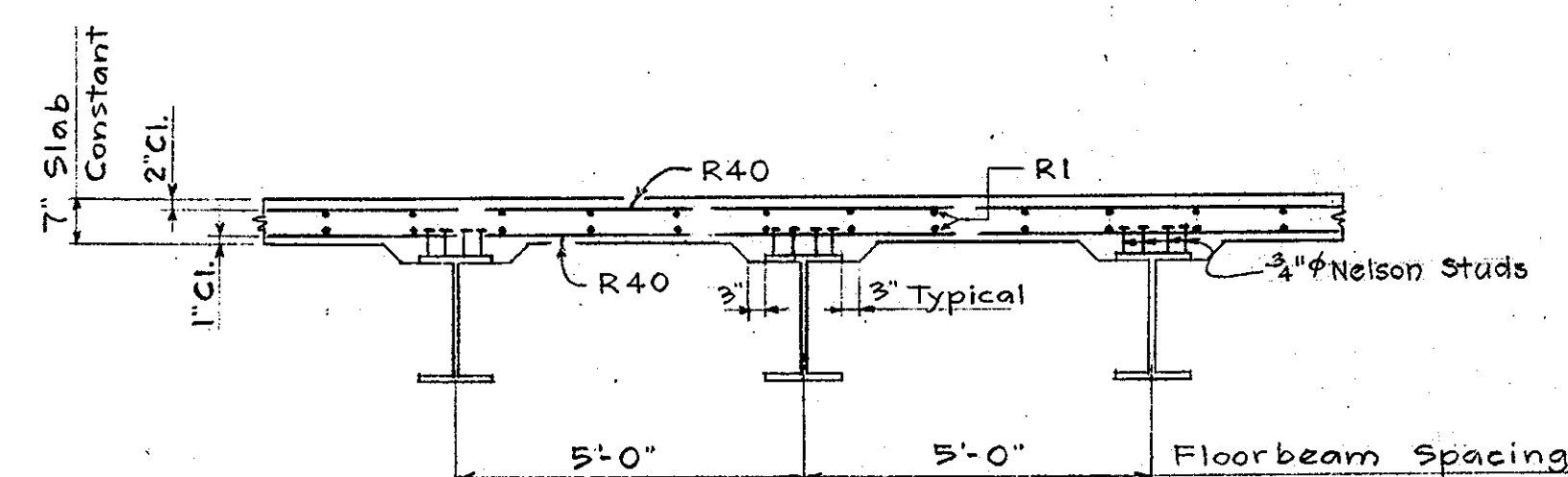
BILL OF REINFORCING BARS - NORTH ABUTMENT					
No.	Size	Lgth.	Mk.	Remarks	Bending Diagram
3	#6	13'-8"	R50	Bent	
1	#6	4'-0"	R51	Straight	
19	#6	10'-8"	R52	Straight	
2	#6	6'-9"	R53	Bent	
2	#6	12'-6"	R54	Straight	
15	#6	12'-0"	R55	Bent	
2	#6	8'-1"	R56	Bent	
1	#6	7'-0"	R57	Straight	
1	#6	5'-0"	R58	do	
25	#6	22'-4"	R59	Straight	
5	#6	16'-2"	R60	Bent	
2	#6	7'-9"	R61	Straight	
1	#6	9'-9"	R62	Straight	
120	#6	2'-0"	R80	Straight-Dowels	
12	#6	8'-0"	R81	Bent	
7	#6	9'-3"	R82	do	
8	#6	9'-8"	R83	do	
5	#6	10'-2"	R84	do	
5	#6	7'-3"	R85	Bent	
7	#6	6'-6"	R86	Straight	
8	#6	9'-9"	R87	do	
10	#6	12'-11"	R88	do	
5	#6	14'-0"	R89	do	
5	#6	7'-0"	R90	do	
8	#6	8'-9"	R91	do	
3	#6	3'-0"	R92	Straight	

BILL OF REINFORCING BARS - SUPERSTRUCTURE					
No.	Size	Lgth.	Mk.	Remarks	Bending Diagram
84	#5	34'-6"	R1	Straight	
4	#5	33'-6"	R2	do	
4	#5	32'-6"	R3	do	
4	#5	31'-5"	R4	do	
4	#5	30'-5"	R5	do	
4	#5	29'-4"	R6	do	
4	#5	28'-4"	R7	do	
4	#5	27'-3"	R8	do	
4	#5	26'-3"	R9	do	
4	#5	25'-2"	R10	do	
4	#5	24'-2"	R11	do	
4	#5	23'-1"	R12	do	
4	#5	22'-1"	R13	do	
4	#5	21'-0"	R14	do	
4	#5	20'-0"	R15	do	
4	#5	18'-11"	R16	do	
4	#5	17'-11"	R17	do	
4	#5	16'-10"	R18	do	
4	#5	15'-10"	R19	do	
4	#5	14'-9"	R20	do	
4	#5	13'-9"	R21	do	
4	#5	12'-8"	R22	do	
4	#5	11'-8"	R23	do	
4	#5	10'-7"	R24	do	
4	#5	9'-7"	R25	do	
4	#5	8'-6"	R26	do	
4	#5	7'-6"	R27	do	
4	#5	6'-5"	R28	do	
4	#5	5'-5"	R29	do	
4	#5	4'-4"	R30	do	
4	#5	3'-4"	R31	do	
4	#5	2'-3"	R32	do	
4	#5	1'-3"	R33	do	
12	#5	7'-3"	R34	Straight	
69	#5	5'-0"	R35	Bent	
86	#5	6'-2"	R36	Straight	
4	#5	5'-3"	R37	do	
4	#5	3'-6"	R38	do	
4	#5	1'-9"	R39	do	
402	#5	22'-8"	R40	do	
96	#5	9'-6"	R41	do	
12	#5	4'-3"	R42	do	
36	#5	5'-11"	R43	do	
50	#5	1'-0"	R44	Straight	

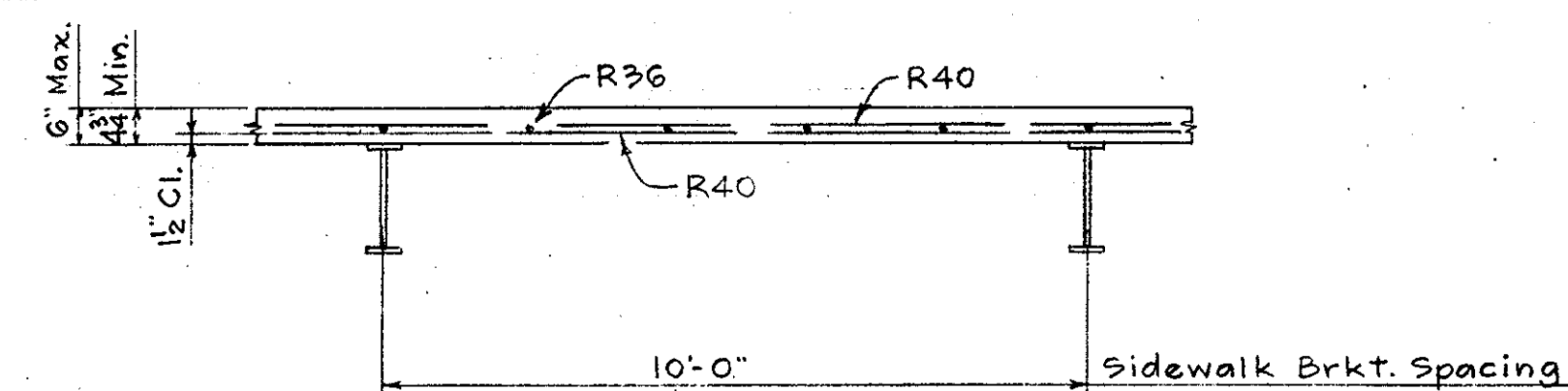




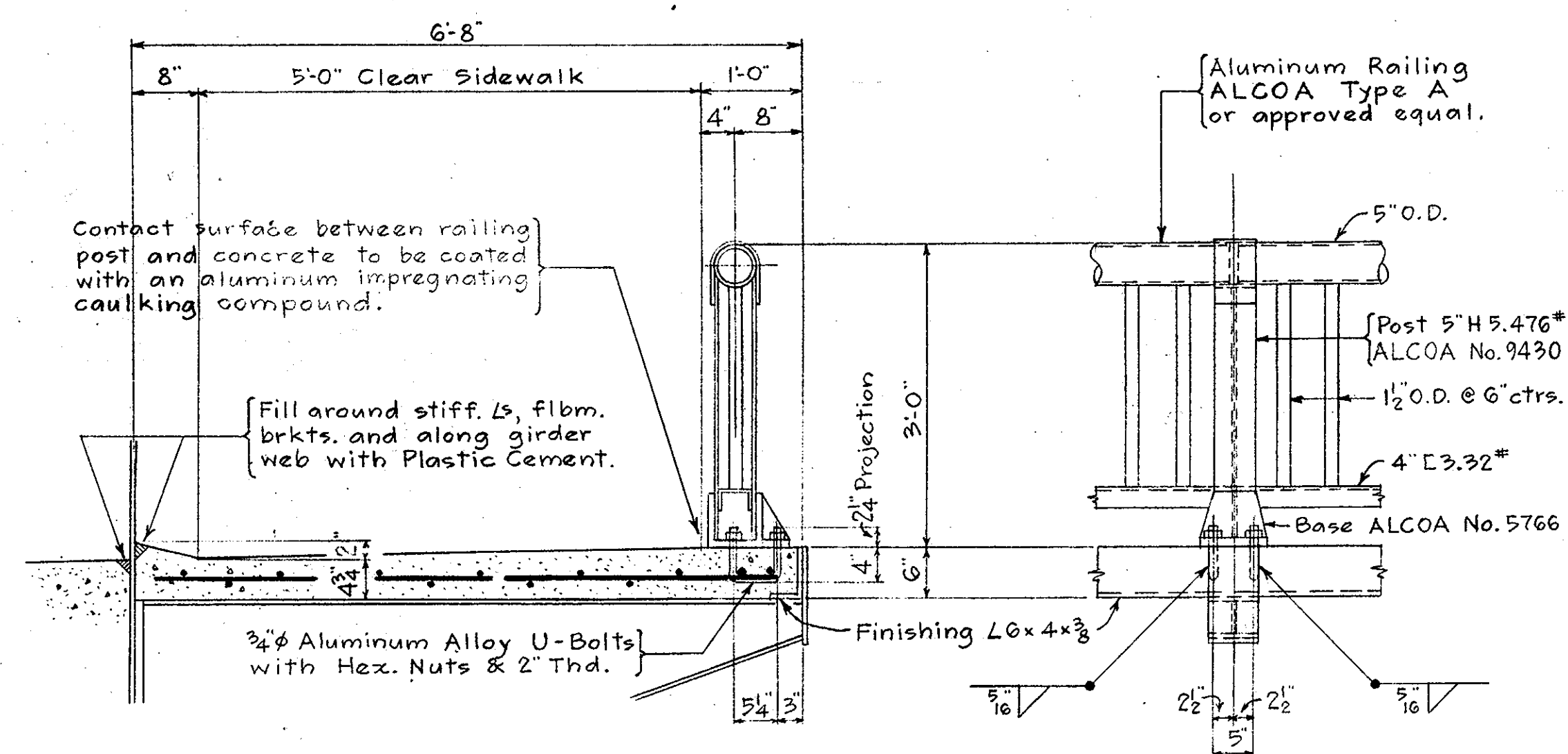
SECTION A-A



SECTION B-B
(Showing Roadway Slab Reinforcing Bars)

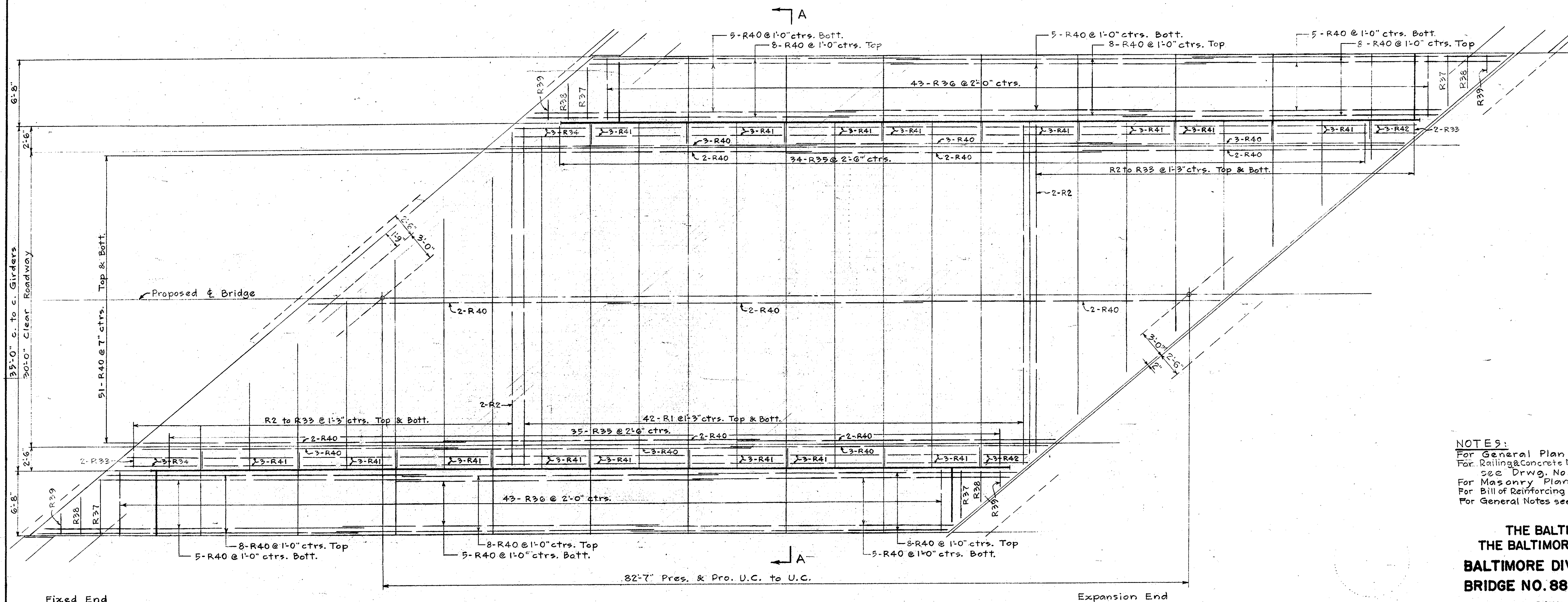


SECTION C-C
(Showing Sidewalk Slab Reinforcing Bars)



NOTE:
Finishing L6x4x3/8 to be field welded to sidewalk brackets as shown.

TYPICAL DETAILS AT SIDEWALK AND RAILING



SLAB REINFORCING PLAN

NOTES:
For General Plan see Drwg. No. 42303.
For Railing & Concrete Notes & Superstructure Details see Drwg. No. 42305.
For Masonry Plan see Drwg. No. 42306.
For Bill of Reinforcing Bars see Drwg. No. 42307.
For General Notes see Drwg. No. 42313.

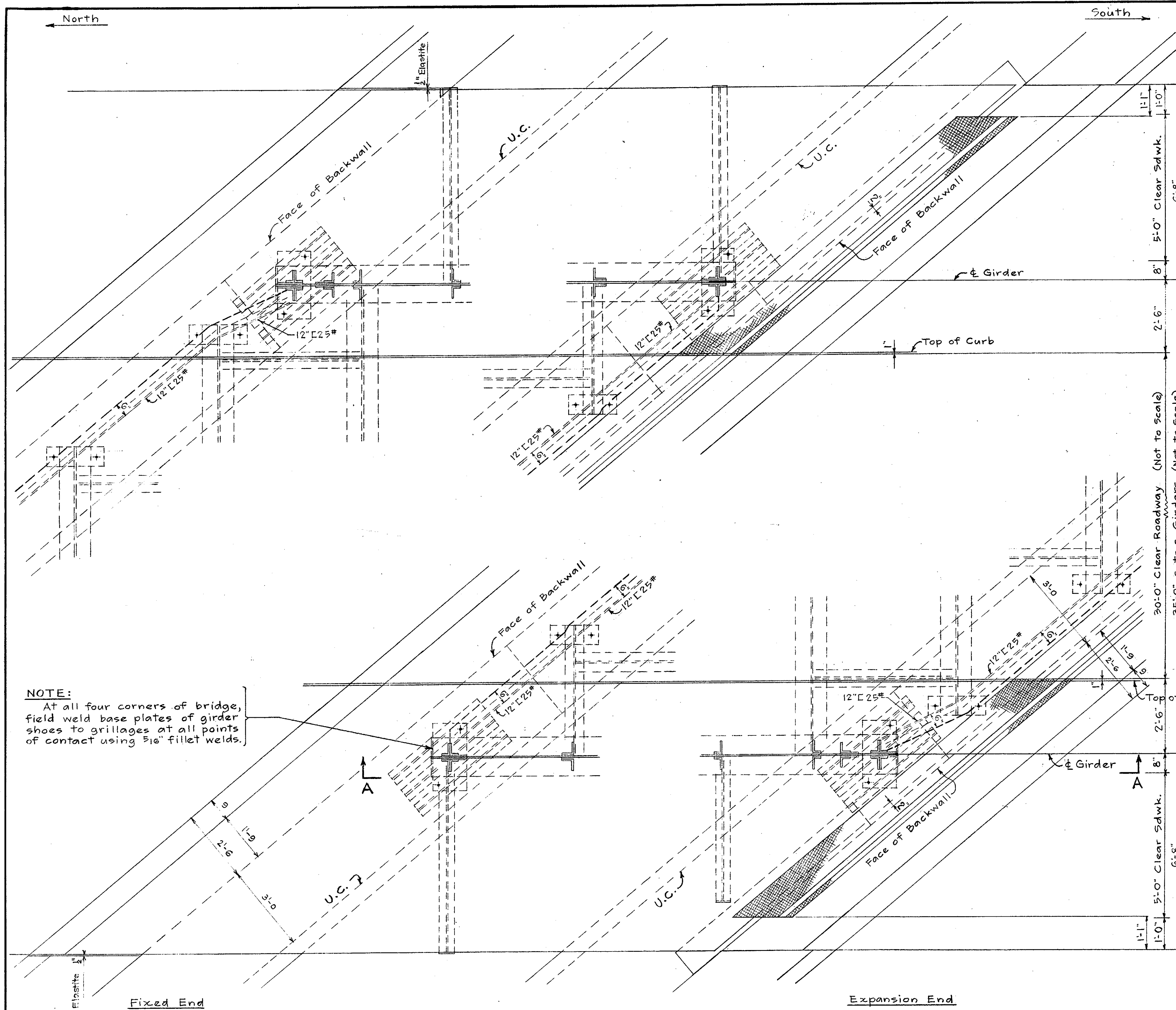
THE BALTIMORE & OHIO RAILROAD
THE BALTIMORE & PHILADELPHIA R.R. CO.
BALTIMORE DIV.- EAST MAIN LINE
BRIDGE NO. 88-B PHILADELPHIA, PA.
SUPERSTRUCTURE DETAILS

SCALE: 3/16" & 3/8" = 1'-0"
AUGUST 2, 1960
OFFICE OF ENGINEER OF BRIDGES & BUILDINGS
BALTIMORE, MD.

APPROVED: *Abraham Clark*
ENGINEER OF BRIDGES & BUILDINGS

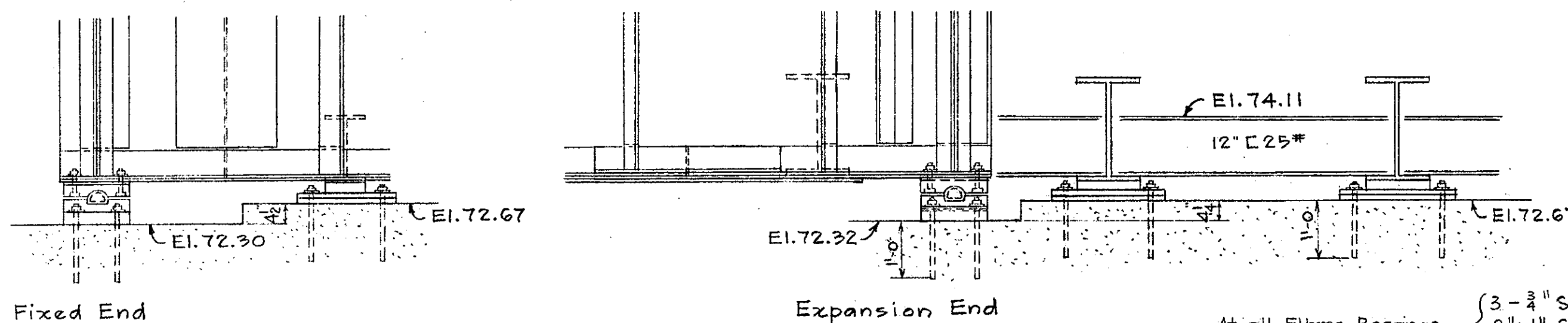
DRAWING No. 42304

R.D.S.
V.G.G. 8-19-60

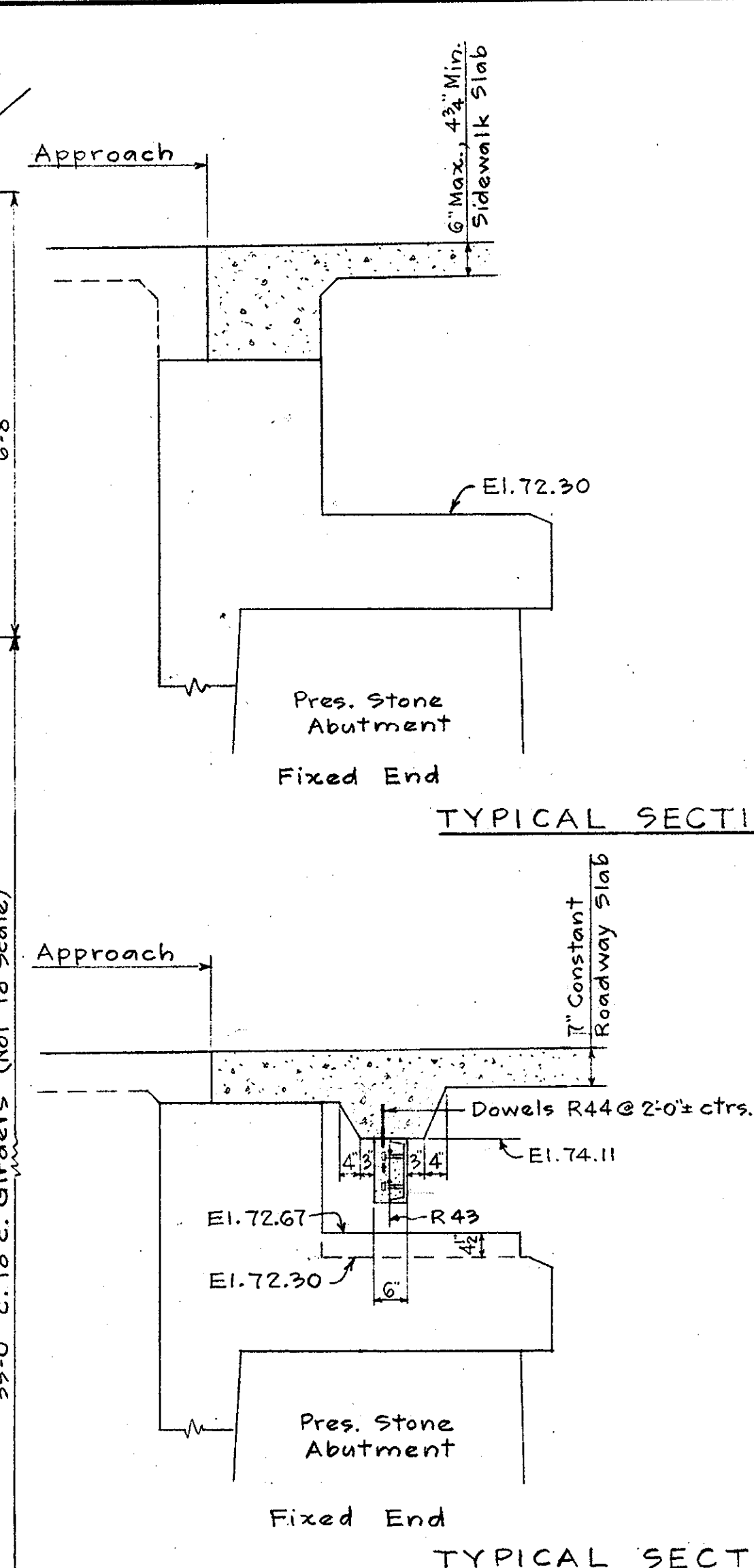


NOTE:
At all four corners of bridge, field weld base plates of girder shoes to grillages at all points of contact using 5/16" fillet welds.

PLAN VIEW AT ENDS OF BRIDGE

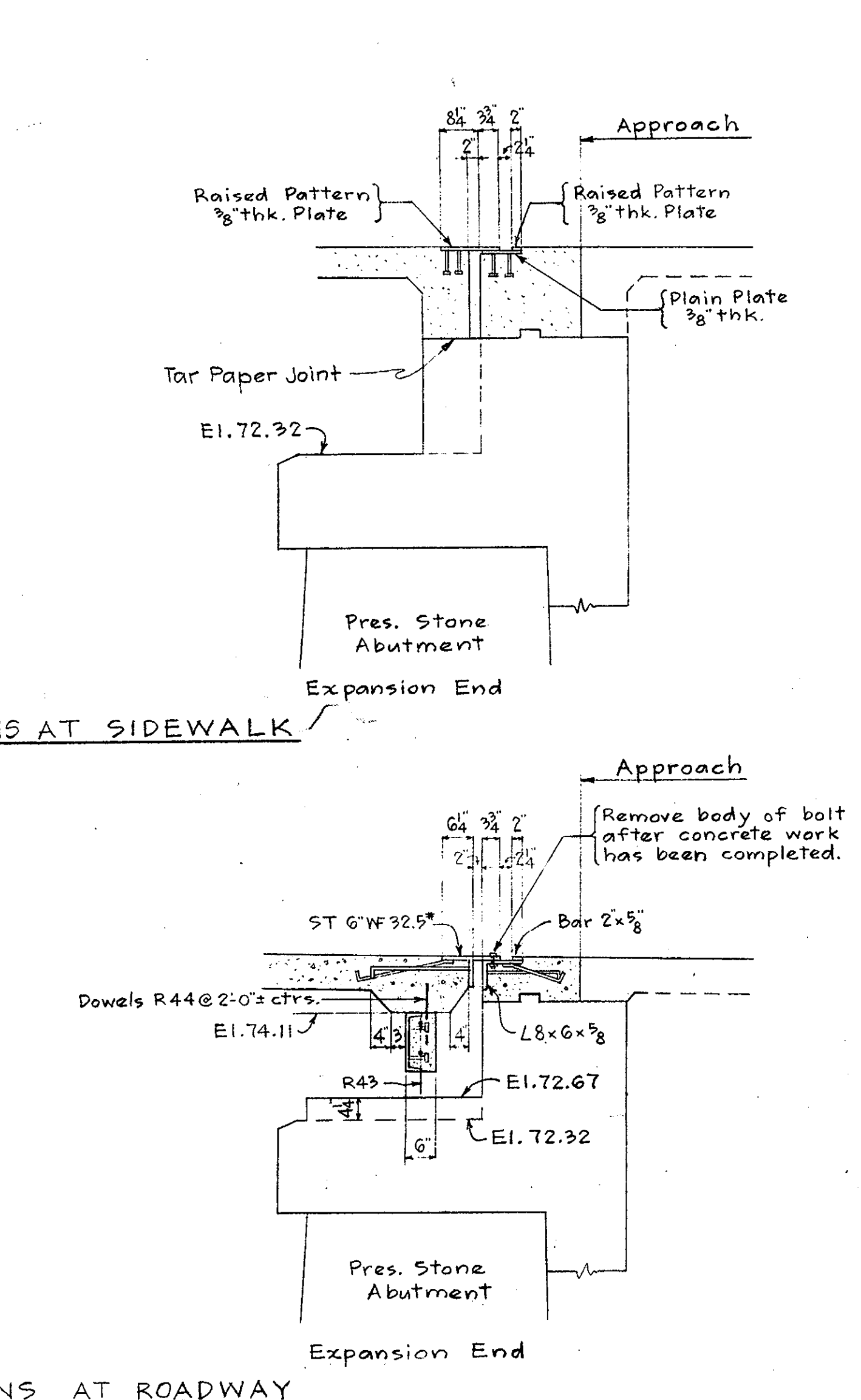


PART SECTION "A-A"
(Showing Girder and Floorbeam Bearings)



NOTES:
All exposed edges of concrete to be chamfered 1/4" x 1/4" unless noted.
All exposed surfaces of concrete to have a smooth, dense and hard finish.
Surfaces of contact between old masonry and new concrete to be thoroughly cleaned and wetted before placing new concrete. New concrete to be thoroughly bonded to old masonry with #6 Dowels R20 placed 1'-0" min. into old masonry. One dowel to each 4 sq. ft. of common surface. Grout dowels in place.
Made in accordance with Situation Plan, Bridge No. 88-B, Philadelphia, Pa., dated June 22, 1960 Drawing No. R.E. 540 from Office of Regional Engineer, Baltimore, Md. Also made in accordance with Cross Sections dated 6-13-60 from Office of Regional Engineer, Baltimore, Md.
For General Plan see Drwg. No. 42303.
For Superstructure Details see Drwg. No. 42304.
For Masonry Plan see Drwg. No. 42306.
For General Notes see Drawing No. 42313.
For Bill of Reinforcing Bars see Drawing No. 42307.

NOTES:
Live Load: H20-S16-44
Specifications
Design: AASHTO dated 1957
Concrete to be in accordance with B.&O. R.R. Co. "Standard Specifications for Concrete, Plain and Reinforced" Revised July 1, 1955. Concrete to be Class "B".
Billet Steel Bars for Concrete Reinforcement: ASTM A15-58T, Deformed, Intermediate Grade.
Aluminum Alloy Pipe: ASTM B241-58T, Alloy GS 11A, Condition TG.
Aluminum Alloy Extruded Tube: ASTM B235-58T, Alloy GS 11A, Condition TG.
Aluminum Alloy Permanent Mold Castings: ASTM B108-58T, Alloy GS 70A, Condition TG.
Aluminum Alloy Sheet and Plate: ASTM B209-58T, Alloy GS 11A, Condition TG.
Aluminum Alloy Rivets shall conform to Military Specifications MIL-R-1150 A, grade F.
Aluminum Alloy Washers: ASTM B209-58T, Alloy GS 11A, Condition TG.
Aluminum Alloy Rolled Shapes, Rods and Bars: ASTM B211-58T, Alloy GS 11A, Condition TG.
Aluminum Alloy Extrusions: ASTM B221-58T, Alloy GS 11A, Condition TG.
Aluminum Alloy Bolts, Nuts and Set Screws: ASTM B211-58T, Alloy GS 11A, Condition TG. The finished bolts and nuts shall be supplied in the T4 temper and shall be given an anodic coating at least 0.0002 in. in thickness and chromate sealed.



THE BALTIMORE & OHIO RAILROAD
THE BALTIMORE & PHILADELPHIA R.R. CO.
BALTIMORE DIV.-EAST MAIN LINE
BRIDGE NO. 88-B PHILADELPHIA, PA.
SUPERSTRUCTURE DETAILS

SCALE: 1/2" = 1'-0" AUGUST 1, 1960

OFFICE OF ENGINEER OF BRIDGES & BUILDINGS
BALTIMORE, MD.

APPROVED: *Abram Clark*
ENGINEER OF BRIDGES & BUILDINGS

DRAWING No. 42305

Notes:
For General Plan see Drawing No. 42303.
For General Notes and Bill of Material for Shoes and Anchor Bolts see Drawing No. 42313.
For Bill of Material for Expansion Dams see Drawing No. 42314.

LIST OF DRAWINGS

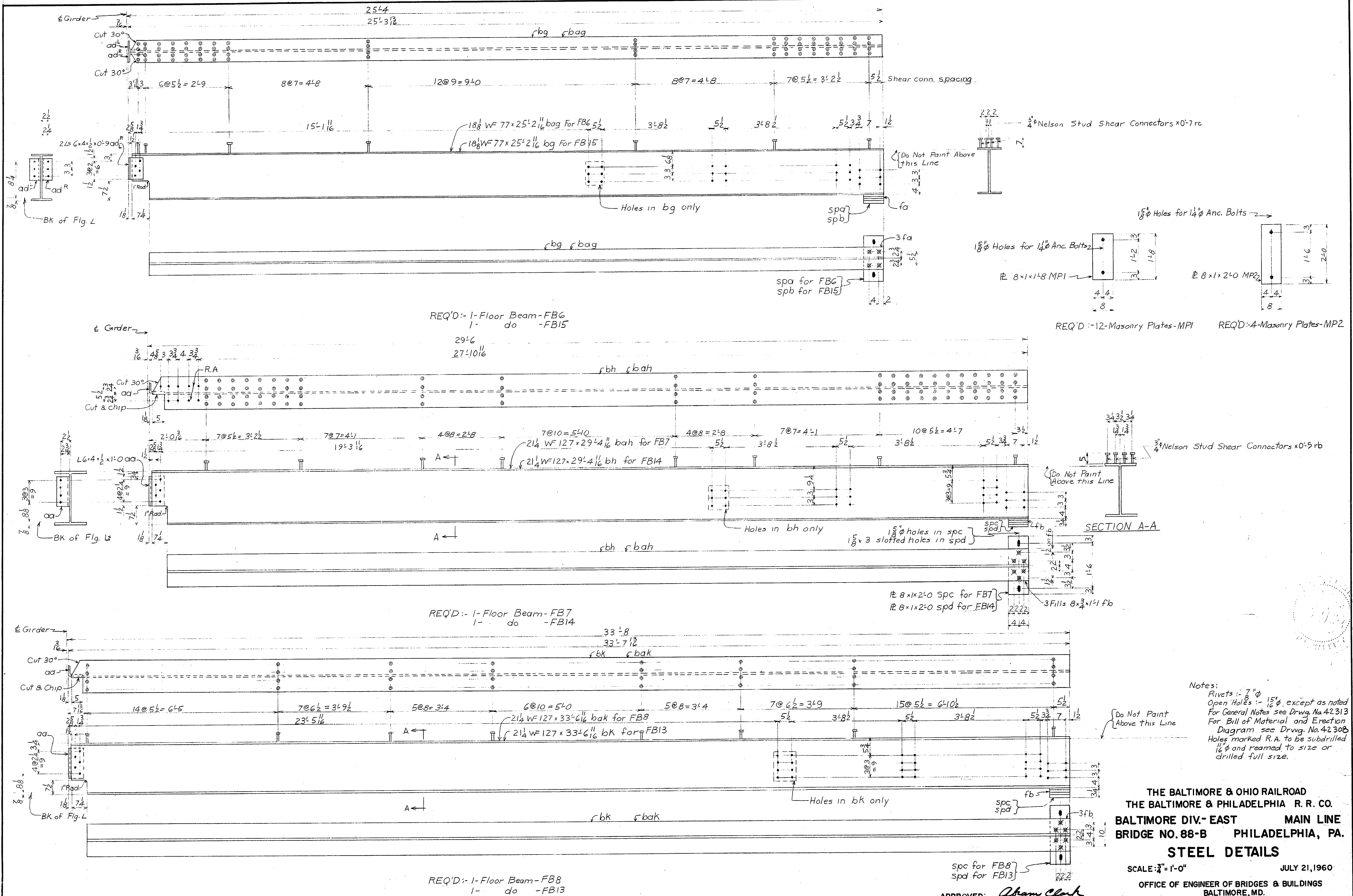
42308 - Steel Details - This Drawing
42309 - do - Floorbeams, Masonry Plates
42310 - do - Floorbeams
42311 - do - Floorbeams
42312 - do - Brackets, Struts, Etc.
42313 - Shoes
42314 - Expansion Dams

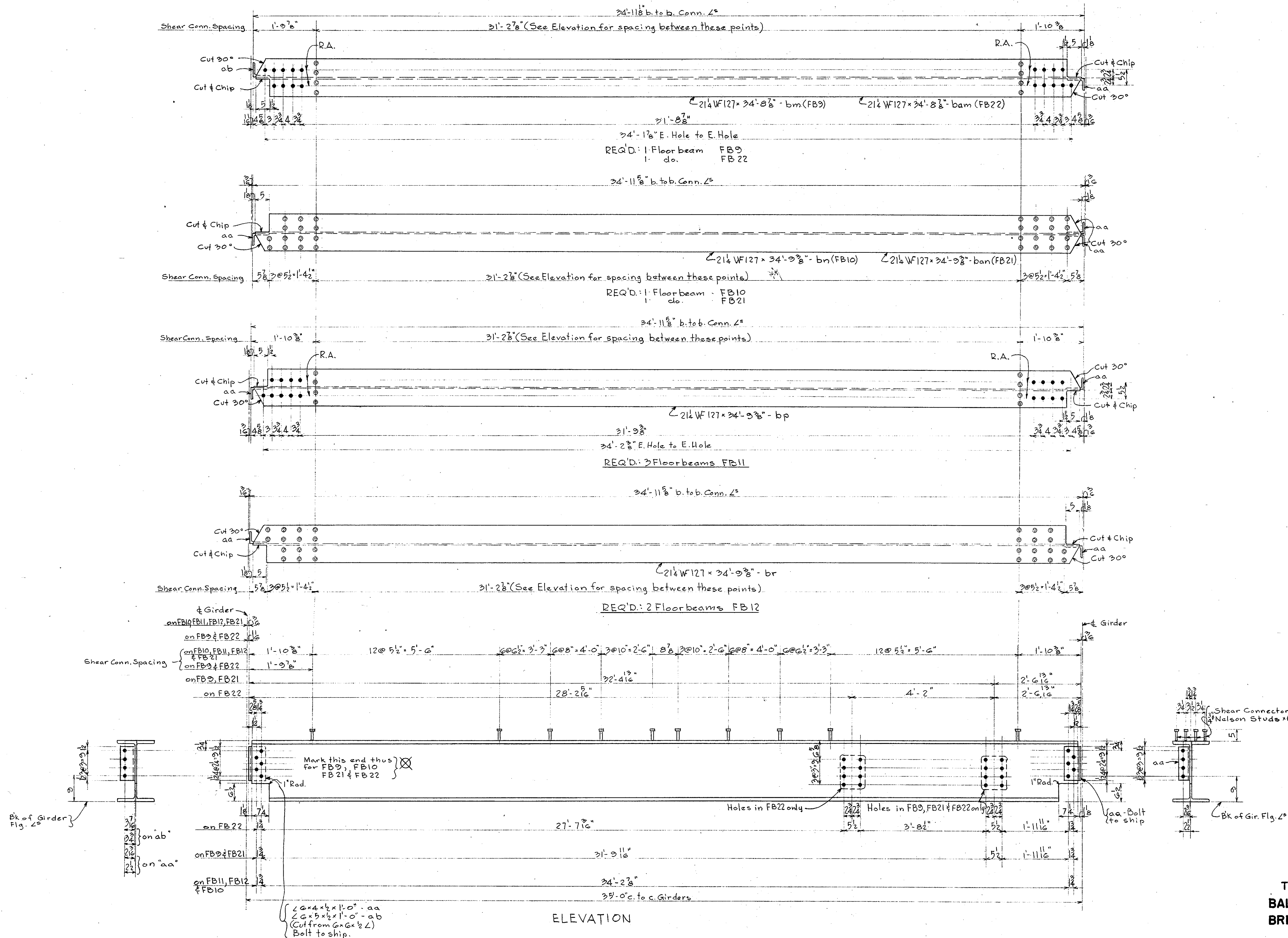
LIST OF FIELD RIVETS									
ERECTOR'S LIST					SHIPPING LIST				
No.	DIA.	HD.	GR.	LTH.	LOCATION	No.	DIA.	HD.	LTH.
8	7/8"	Butt	1/8"	3	FB9 to P3 & Girder Web	530	7/8"	Butt	2 3/4"
136	1/2"	1/8"	2 1/2"	2 1/2"	Fl. Bms. to Girder Web	460	1/2"	1/8"	2 1/2"
20	1/2"	1/8"	3	2 1/2"	FB7-14, FB21-22 to stiff. Ls	30	1/2"	1/8"	2 1/2"
16	1/2"	1/8"	3	2 1/2"	FB3, 5, 16 & 18 to stiff. Ls	80	1/2"	1/8"	2 1/2"
4	1/2"	1/8"	14	2 1/2"	FB1 & 20 to stiff. Ls	70	1/2"	1/8"	2 1/2"
10	1/2"	1/8"	3 1/2"	3 1/2"	Conn. Ls to 21 1/4 WF 127 Fl. Bms.	270	1/2"	1/8"	3 1/2"
16	1/2"	1/8"	3 1/2"	3 1/2"	Conn. Ls to 18 1/2 WF 77 Fl. Bms.	40	1/2"	1/8"	3 1/2"
4	1/2"	1/8"	3	3 1/2"	Conn. Ls to 14 WF 53 Fl. Bms.	40	1/2"	1/8"	3 1/2"
18	1/2"	1/8"	2 1/2"	2 1/2"	BR1 to Fl. Bms.				
36	1/2"	1/8"	2 1/2"	2 1/2"	BR2 to Fl. Bms.				
108	1/2"	1/8"	3	2 1/2"	BR3 to Fl. Bms.				
204	1/2"	1/8"	2 1/2"	2 1/2"	Fl. Bm. Brackets to stiff. Ls				
18	1/2"	1/8"	2 1/2"	2 1/2"	Fl. Bm. Brackets to stiff. Ls				
14	1/2"	1/8"	3 1/2"	3 1/2"	B2 & 3 to end stiff. Ls				
194	1/2"	1/8"	2 1/2"	2 1/2"	B1, 4-7 to stiff. Ls				
18	1/2"	1/8"	2 1/2"	2 1/2"	D1 to FB1 & 2				
48	1/2"	1/8"	2 1/2"	2 1/2"	D1 & 2 to FB3-6				
38	1/2"	1/8"	2 1/2"	2 1/2"	D2-4 to FB7-9				
12	1/2"	1/8"	2 1/2"	2 1/2"	D1 to FB19 & 20				
6	1/2"	1/8"	2 1/2"	2 1/2"	D1 to FB19 & 20				
48	1/2"	1/8"	2 1/2"	2 1/2"	D1 & 2 to FB15-18				
24	1/2"	1/8"	2 1/2"	2 1/2"	D1 & 2 to FB15-18 & D2				
46	1/2"	1/8"	2 1/2"	2 1/2"	D2-5 to FB13, 14, 21 & 22				
22	1/2"	1/8"	2 1/2"	2 1/2"	D2 & 4 to FB13, 14, 22 & D3, 4 & 5				
18	1/2"	1/8"	2 1/2"	2 1/2"	S1 to FB1, 2, 19 & 20				
48	1/2"	1/8"	2 1/2"	2 1/2"	S1 to FB3-6, 15-18				
18	1/2"	1/8"	2 1/2"	2 1/2"	S1 to FB7, 8, 13 & 14				
6	1/2"	1/8"	2 1/2"	2 1/2"	S2 to FB1 & 20				
12	1/2"	1/8"	2 1/2"	2 1/2"	S2 & 3 to end stiff. Ls				
6	1/2"	1/8"	2 1/2"	2 1/2"	S3 to FB8 & FB13				

BILL OF MATERIAL (cont'd)									
SHOP BILL					SHIPPING BILL				
No.	DESCRIPTION	FT.	INS.	MK.	No.	DESCRIPTION	FT.	INS.	MK.
1	27 3/4" x 3/8"	27	3 1/2"	FA4	1	Finishing Angle	FA4		
11	2 1/2" Nelson Studs	0	4	ra					
1	2 1/2" x 4 1/2"	30	8 1/2"	FA5	1	Finishing Angle	FA5		
15	2 1/2" Nelson Studs	0	4	ra					
2	2 1/2" x 4 1/2"	6	3 1/2"	pd					
2	2 1/2" x 4 1/2"	6	5 1/2"	pe					
2	2 1/2" x 4 1/2"	1	4 1/2"	aad	2	Floorbeam Brackets	BR1		
2	2 1/2" x 4 1/2"	1	9 1/2"	aad					
4	2 1/2" x 20 3/4"	5	11 1/2"	pf					
4	2 1/2" x 6 1/2"	6	1 1/2"	pg					
4	2 1/2" x 4 1/2"	1	8 1/2"	aaf	4	Floorbeam Brackets	BR2		
4	2 1/2" x 4 1/2"	1	3 1/2"	aag					
12	2 1/2" x 19 1/2"	5	7 1/2"	ph					
12	2 1/2" x 6 1/2"	5	9 1/2"	pk					
12	2 1/2" x 4 1/2"	1	2 1/2"	aah	12	Floorbeam Brackets	BR3		
12	2 1/2" x 4 1/2"	1	7 1/2"	aak					
1	21 1/4 WF 127	34	9 3/8"	ban					
3	2 1/2" Nelson Studs	0	5	rb					
1	21 1/4 WF 127	34	8 3/8"	ban					
1	2 1/2" Nelson Studs	0	5	rb					
1	21 1/4 WF 127	34	8 3/8"	ban					
1	2 1/2" Nelson Studs	0	5	rb					
14	12 E 25	6	2 1/2"	caa					
14	Bent 2 1/2" x 3/8"	0	10	pah					
14	Bent 2 1/2" x 3/8"	0	9 1/2"	pap					
168	2 1/2" Nelson Studs	0	4	ra	14	Struts	S1		
2	12 E 25	5	1 1/2"	cab					
2	Bent 2 1/2" x 3/8"	0	9 1/2"	pas					
2	Bent 2 1/2" x 3/8"	0	11 1/2"	pat	2	Struts	S2		
20	2 1/2" Nelson Studs	0	4	ra					
2	12 E 25	2	5 1/2"	cac					
2	Bent 2 1/2" x 3/8"	0	10 1/2"	pav					
2	Bent 2 1/2" x 3/8"	0	8 1/2"	paw	2	Struts	S3		
8	2 1/2" Nelson Studs	0	4	ra					

BILL OF MATERIAL									
SHOP BILL					SHIPPING BILL				
No.	DESCRIPTION	FT.	INS.	MK.	No.	DESCRIPTION	FT.	INS.	MK.
1	14 WF 53	4	4 1/2"	ba					
1	2 1/2" x 4 1/2"	0	5 1/2"	ac					
3	Fills 8 x 3/4"	0	9	fa	1	Floor Beam	FB1		
1	2 1/2" x 4 1/2"	1	8	spa					
1	14 WF 53	8	6 1/2"	bb					
2	2 1/2" x 4 1/2"	0	5 1/2"	ac					
3	Fills 8 x 3/4"	0	9	fa	1	Floor Beam	FB2		
1	2 1/2" x 4 1/2"	1	8	spa					
1	18 1/2 WF 77	12	8 1/2"	bac					
1	2 1/2" x 4 1/2"	0	9	ad					
3	Fills 8 x 3/4"	0	9	fa	1	Floor Beam	FB3		
1	2 1/2" x 4 1/2"	1	8	spa					
1	18 1/2 WF 77	16	10 1/2"	bad					
2	2 1/2" x 4 1/2"	0	9	ad					
3	Fills 8 x 3/4"	0	9	fa	1	Floor Beam	FB4		
1	2 1/2" x 4 1/2"	1	8	spa					
1	18 1/2 WF 77	21	0 1/2"	baf					
1	2 1/2" x 4 1/2"	0	9	ad					
3	Fills 8 x 3/4"	0	9	fa	1	Floor Beam	FB5		
1	2 1/2" x 4 1/2"	1	8	spa					
1	18 1/2 WF 77	25	2 1/2"	bag					
2	2 1/2" x 4 1/2"	0	9	ad					
3	Fills 8 x 3/4"	0	9	fa	1	Floor Beam	FB6		
1	2 1/2" x 4 1/2"	1	8	spa					
172	2 1/2" Nelson Studs	0	7	rc					
1	21 1/4 WF 127	29	4 1/2"	bah					
1	2 1/2" x 4 1/2"	1	0	aa					
1	2 1/2" x 4 1/2"	1	0	aa					
1	2 1/2" x 4 1/2"	2	0	spc					
188	2 1/2" Nelson Studs	0	5	rb					
1	21 1/4 WF 127	33	6 1/2"	bak					
1	2 1/2" x 4 1/2"	1	0	aa					
3	Fills 8 x 3/4"	0	9	fb	1	Floor Beam	FB8		
1	2 1/2" x 4 1/2"	1	0	spc					
240	2 1/2" Nelson Studs	0	4	rb					
1	21 1/4 WF 127	34	8 3/8"	bm					
1	2 1/2" x 4 1/2"	1	0	aa					
1	2 1/2" x 4 1/2"	1	0	ad					
224	2 1/2" Nelson Studs	0	4	rb					
1	21 1/4 WF 127	34	9 3/8"	bn					
3	2 1/2" Nelson Studs	0	5	rb					
3	21 1/4 WF 127	34	9 3/8"	bp					
6	2 1/2" Nelson Studs	0	5	rb					
224	2 1/2" Nelson Studs	0	4	rb					
2	21 1/4 WF 127	34	9 3/8"	br					
4	2 1/2" Nelson Studs	0	5	rb					
244	2 1/2" Nelson Studs	0	4	rb					
1	21 1/4 WF 127	33	6 1/2"	bk					
1	2 1/2" x 4 1/2"	1	0	aa					
3	Fills 8 x 3/4"	0	9	fb					
1	2 1/2" x 4 1/2"	2	0	spc					
240	2 1/2" Nelson Studs	0	4	rb					
1	21 1/4 WF 127	29	4 1/2"	bh					
1	2 1/2" x 4 1/2"	1	0	aa					
3	Fills 8 x 3/4"	0	9	fb					
1	2 1/2" x 4 1/2"	1	0	spc					
188	2 1/2" Nelson Studs	0	5	rb					
1	18 1/2 WF 77	25	2 1/2"	bg					
2	2 1/2" x 4 1/2"	0	9	ad					
3	Fills 8 x 3/4"	0	9	fa					
1	2 1/2" x 4 1/2"	1	8	spa					
172	2 1/2" Nelson Studs	0	7	rc					
1	18 1/2 WF 77	21	0 1/2"	ba					
1	2 1/2" x 4 1/2"	0	9	ad					
3	Fills 8 x 3/4"	0	9	fa					
1	2 1/2" x 4 1/2"	1	8	spa					

BILL OF MATERIAL (cont'd)									
DWG NO	SHOP BILL					SHIPPING BILL			
	No.	DESCRIPTION	Ft.	INS.	Mk.	No.	DESCRIPTION	Mk.	
42311	1	18 1/2 WF 77	16	10 1/2	bd				
	2	Ls			ad ^R				
	3	Fills			fa	1	Floor Beam	FB17	
	1	PL			spb				
	1	18 1/2 WF 77	12	8 1/2	bc				
	1	L			ad ^R				
	3	Fills			fa	1	Floor Beam	FB18	
	1				spb				
	1	WF Beam			bb				
	2	Ls			ac				
	3	Fills			fa	1	Floor Beam	FB19	
	1	PL			spb				
42309	1	WF Beam			ba				
	1	L			ac				
	3	Fills			fa	1	Floor Beam	FB20	
	1	PL			spb				
	12	PL's 8x1	1	8	MP1	12	Masonry Plates	MP1	
	4	PL's 8x1	2	0	MP2	4	Masonry Plates	MP2	
	5	12 WF 45	4	10	bs	5	Diaphragms	D1	
	20	Ls 4x3 1/2 x 3/8	0	9	aab				
	12	12 WF 45	4	9 3/4	bt	12	Diaphragms	D2	
	48	Ls			aab				
	1	16 1/2 WF 45	4	9 3/4	bu				
	2	Ls			aab	1	Diaphragm	D3	
42312	2	Ls 4x3 1/2 x 3/8	1	0	aac				
	5	16 1/2 WF 45	4	9 3/4	bv	5	Diaphragms	D4	
	20	Ls			aac				
	1	WF Beams			bv				
	4	Ls			aac				
	13	PL's 2G 3/4 x 3/8	6	6 5/8	px				
	13	PL's 6x 3/8	6	6 5/8	pw				
	13	PL's 6x 3/8	0	11 1/2	pt	13	Sidewalk Brackets B11 ^{2R}		
	13	PL's 6x 3/8	6	9 3/4	py				
	1	PL 6x 3/8	6	5 5/8	pv				
	1	PL 22 1/4 x 3/8	6	5 5/8	pm				
	1	PL 6x 3/8	6	7 1/4	pp	1	Sidewalk Bracket B2		
1	PL			pt					
1	PL			pv					
1	PL 2G 3/8	6	5 5/8	pn					
1	PL 6x 3/8	6	8 1/2	ps	1	Sidewalk Bracket B3			
1	PL			pt					
1	PL			pw					
1	PL 23 1/4 x 3/8	6	6 5/8	pae					
1	PL 6x 3/8	6	9	pag	1	Sidewalk Bracket B4			
1	PL			pt					
1	PL			pw					
1	PL 2G 1/4 x 3/8	6	6 5/8	paf					
1	PL 6x 3/8	6	9 3/8	pac	1	Sidewalk Bracket B5			
1	PL			pt					
1	PL's 6x 3/8	4	10 5/8	paa					
1	PL's 2G 1/4 x 3/8	4	10 5/8	pab					
1	PL's 6x 3/8	5	1	pac	1	Sidewalk Brackets B6			
1	PL's 6x 3/8	0	11 1/4	pad					
2	PL's 6x 3/8	6	6 5/8	pak					
2	PL's 2G 1/4 x 3/8	6	6 5/8	pam					
2	PL's 6x 3/8	6	9 1/4	pan	2	Sidewalk Brackets B7			
2	PL's			pt					
1	LG 4x 3/8	39	8	FA1	1	Finishing Angle	FA1		
16	3/4 φ Nelson Studs	0	4	ra					
2	Ls 6x4 x 3/8	29	11 1/2	FA2	2	Finishing Angles	FA2		
24	3/4 φ Nelson Studs			ra					
1	LG 4x 3/8	24	3	FA3	1	Finishing Angle	FA3		
10	3/4 φ Nelson Studs			ra					





NOTES:
 Rivets: 7/8" φ
 Open Holes: 1 1/2" φ
 For General Notes see Drwg. No. 42313
 For Bill of Material and Erection Diagram
 see Drwg. No. 42308
 Holes marked "R.A." to be subdrilled 1 1/2" φ and
 reamed to size, or drilled full size.

THE BALTIMORE & OHIO RAILROAD
 THE BALTIMORE & PHILADELPHIA R.R. CO.
 BALTIMORE DIV.- EAST MAIN LINE
 BRIDGE NO. 88-B PHILADELPHIA, PA.
 STEEL DETAILS

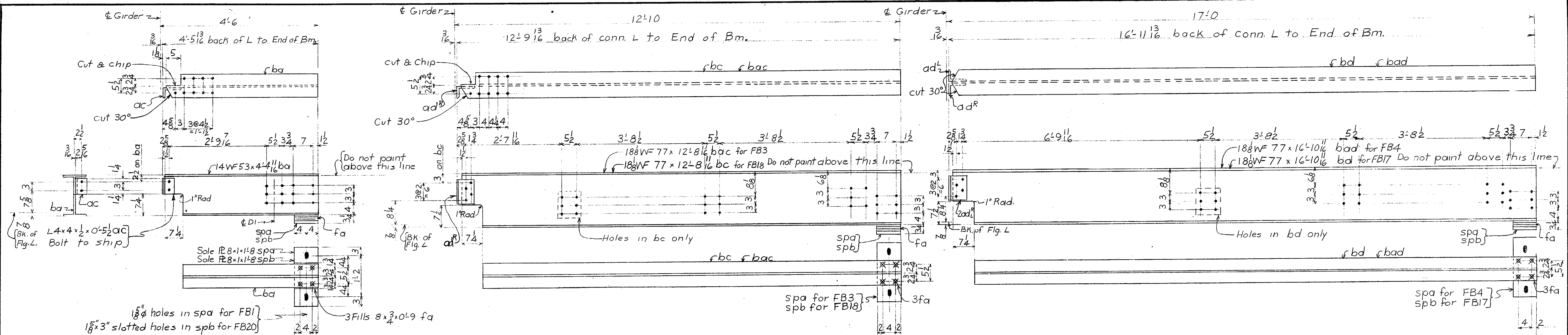
SCALE: 3/4" = 1'-0" JULY 21, 1960

OFFICE OF ENGINEER OF BRIDGES & BUILDINGS
 BALTIMORE, MD.

APPROVED: *Abraham Clark*
 ENGINEER OF BRIDGES & BUILDINGS

DRAWING NO. 42310

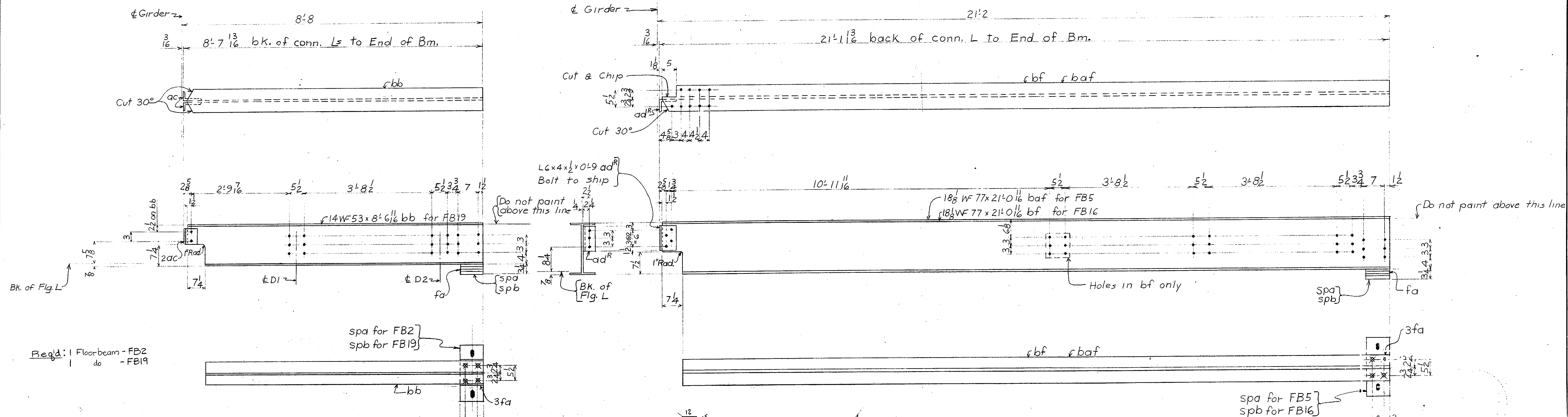
O.W.E.



REQ'D:- 1- Floor Beam-FB1
1- do -FB20

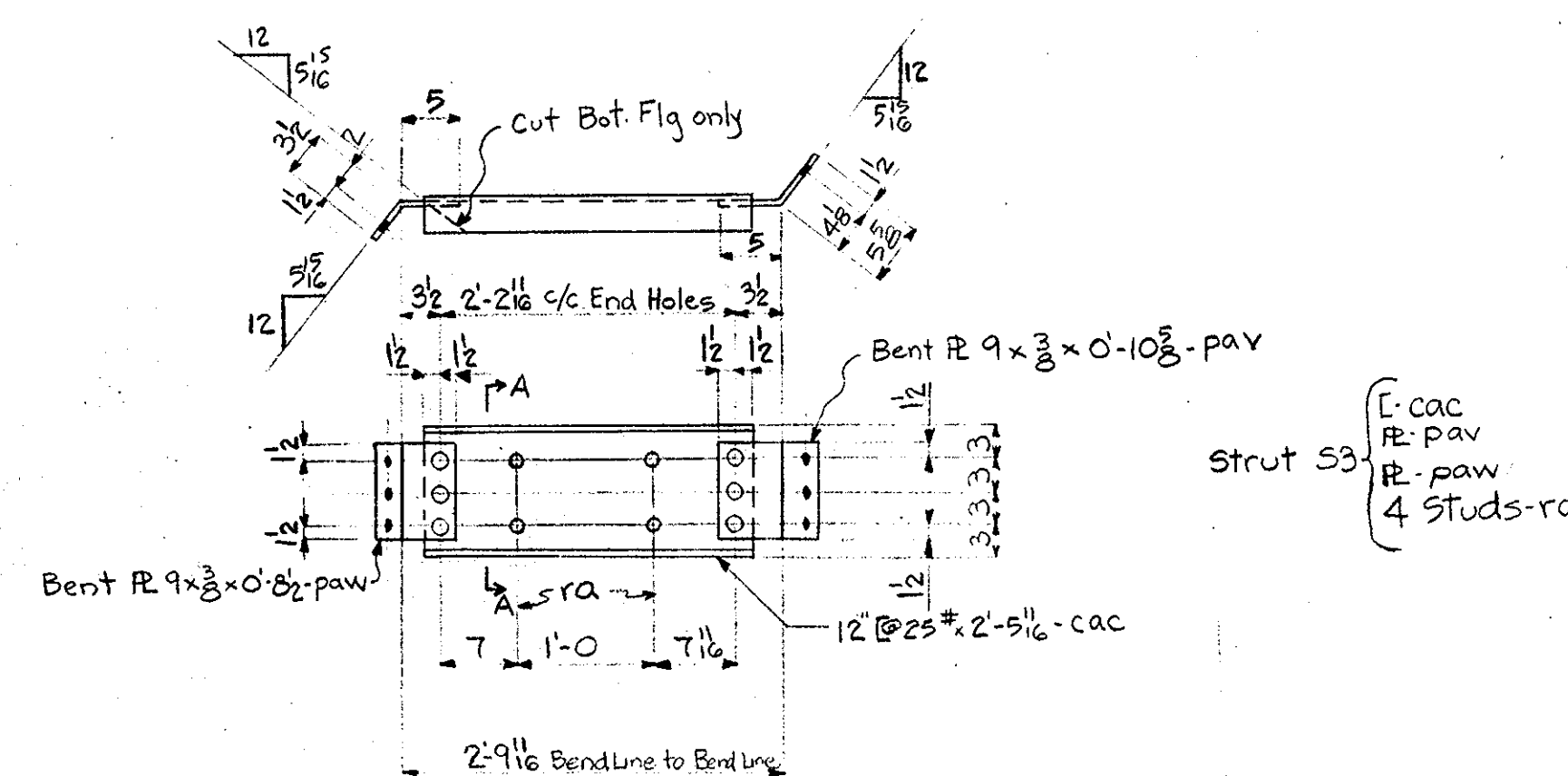
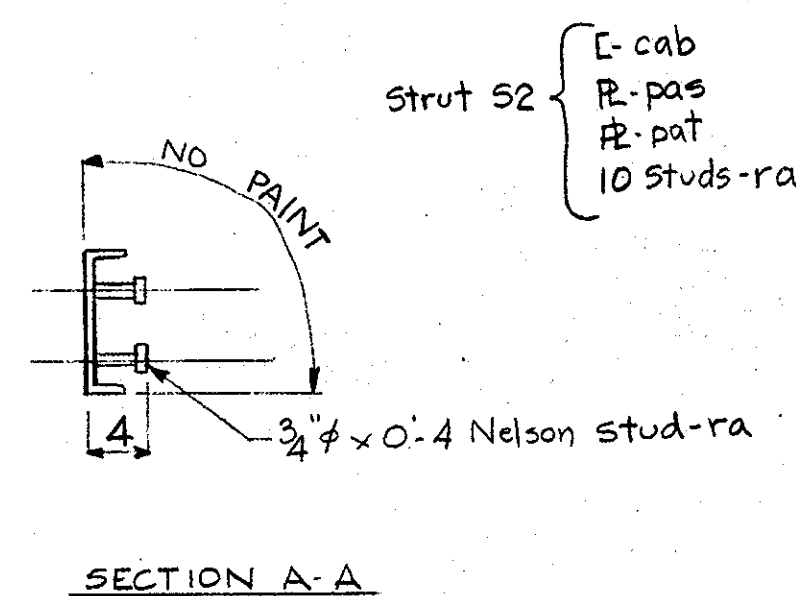
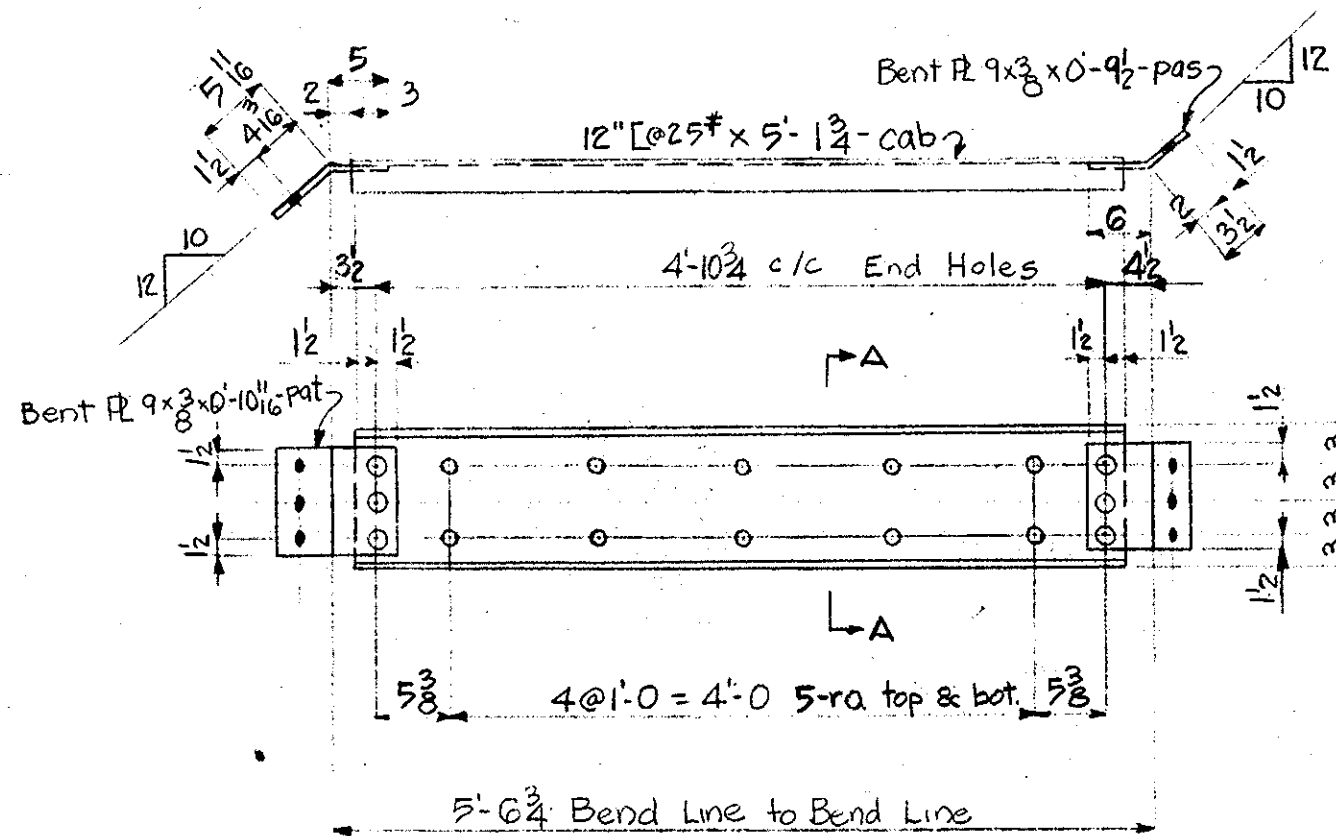
REQ'D:- 1- Floor Beam-FB3
1- do -FB18

REQ'D:- 1- Floor Beam-FB4
1- do -FB17



Req'd: 1 Floorbeam-FB2
do -FB19

Req'd: 1 Floorbeam-FB5
1 do -FB16
2 struts -S2
2 do -S3



NOTES:
Rivets-7/8"
Open Holes-1/2" except as noted
For General Notes, see Drwg.
No. 42313.
For Bill of Material and Erection
Diagram, See Drwg. No. 42308.

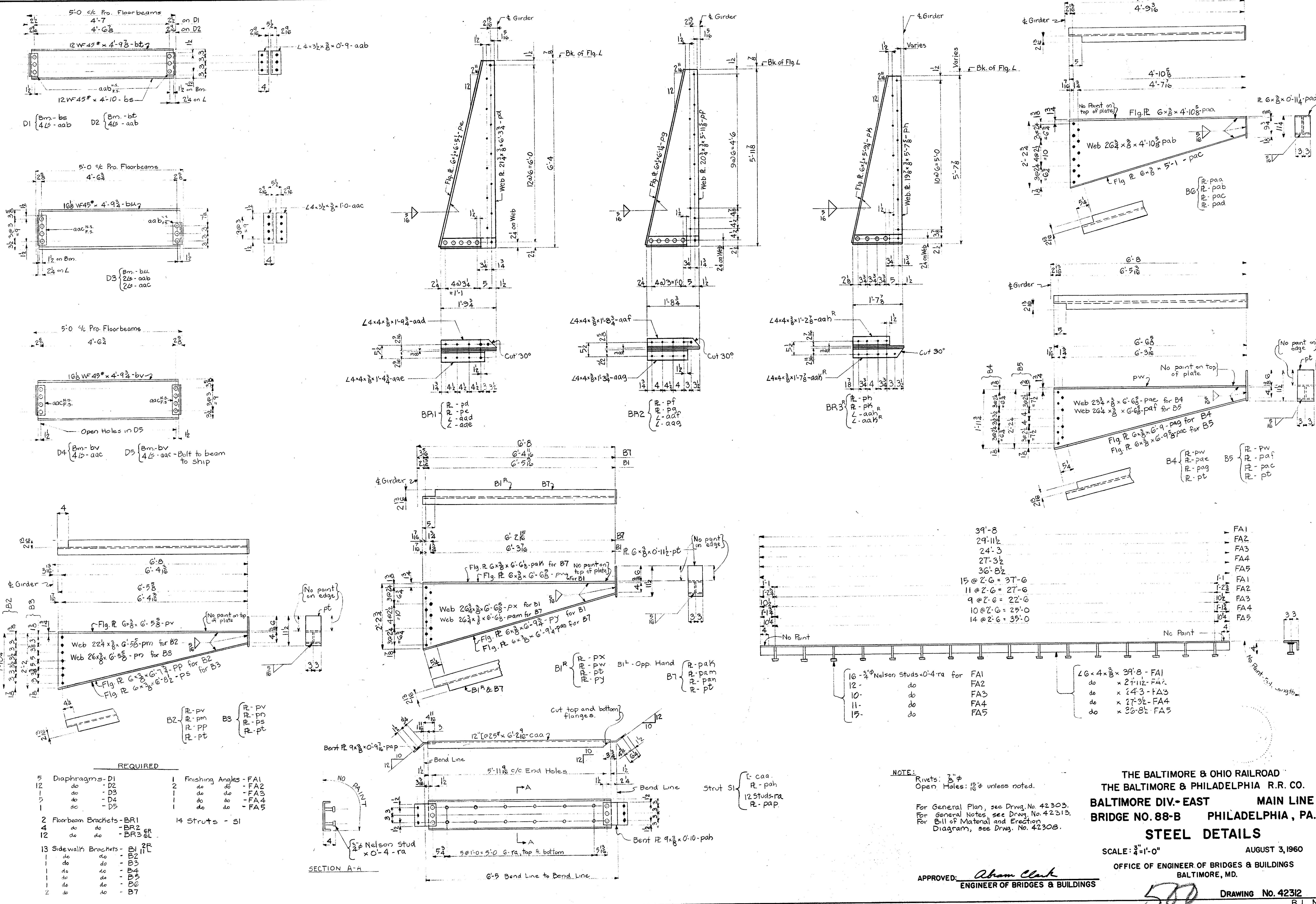
THE BALTIMORE & OHIO RAILROAD
THE BALTIMORE & PHILADELPHIA R. R. CO.
BALTIMORE DIV.- EAST MAIN LINE
BRIDGE NO. 88-B PHILADELPHIA, PA.
STEEL DETAILS

SCALE: 3/4"=1'-0"
JULY 21, 1960
OFFICE OF ENGINEER OF BRIDGES & BUILDINGS
BALTIMORE, MD.

APPROVED: *Abraham Clark*
ENGINEER OF BRIDGES & BUILDINGS

DRAWING NO. 42311

E.P.R.
V.G.G. 8-19-60



NOTE:
Rivets: 3/4"
Open Holes: 1 1/8" unless noted.

For General Plan, see Drwg. No. 42303.
For General Notes, see Drwg. No. 42313.
For Bill of Material and Erection Diagram, see Drwg. No. 42308.

THE BALTIMORE & OHIO RAILROAD
THE BALTIMORE & PHILADELPHIA R.R. CO.
BALTIMORE DIV.-EAST MAIN LINE
BRIDGE NO. 88-B PHILADELPHIA, PA.
STEEL DETAILS

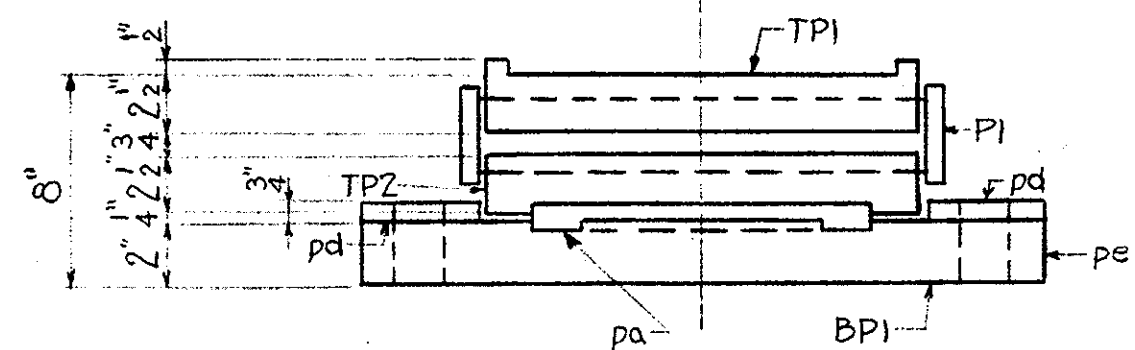
SCALE: 3/4"=1'-0" AUGUST 3, 1960

OFFICE OF ENGINEER OF BRIDGES & BUILDINGS
BALTIMORE, MD.

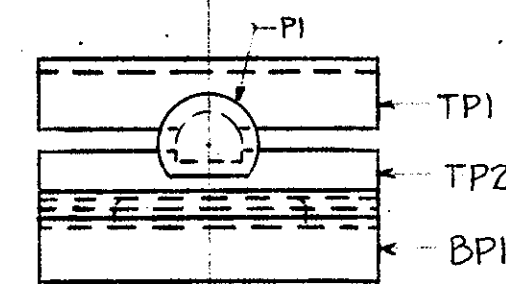
APPROVED: *Abraham Clark*
ENGINEER OF BRIDGES & BUILDINGS

DRAWING NO. 42312
R.L.M.
V.G.G. 8-19-60

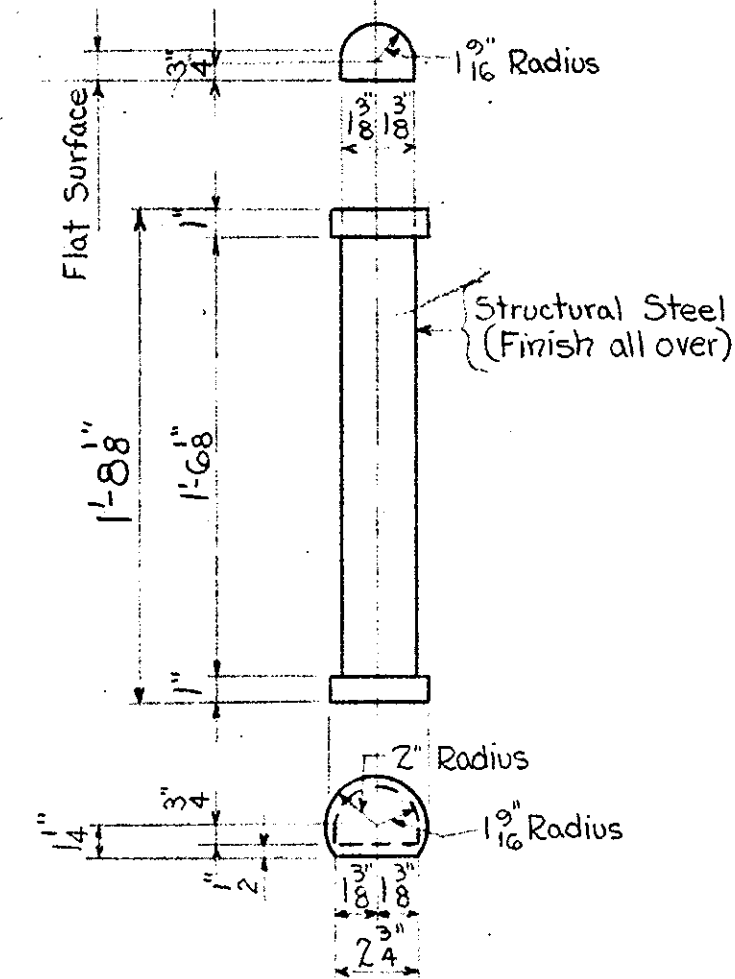
NOTE: The $2\frac{3}{4}$ " flat side and flat edges of pin must be smooth and true to dimensions. In fitting the pins into TP2 and BP2 care must be taken to obtain a good bearing of flat side of pin on the grooves in TP2 and BP2. Pins to be fitted tight in shop.



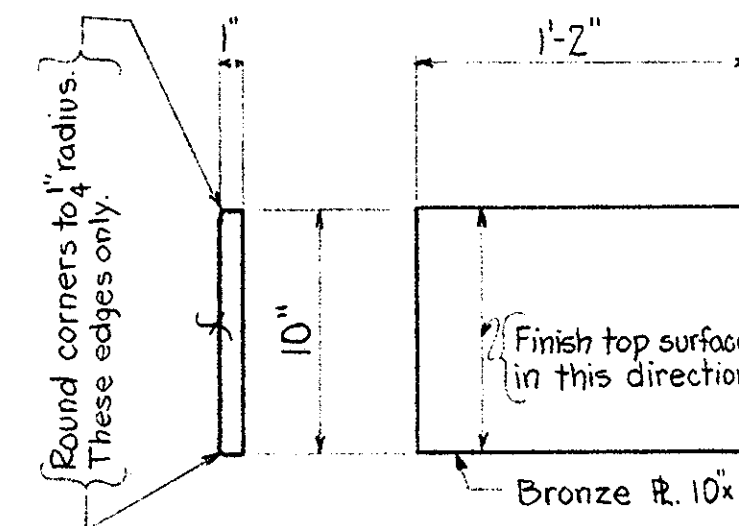
END VIEW



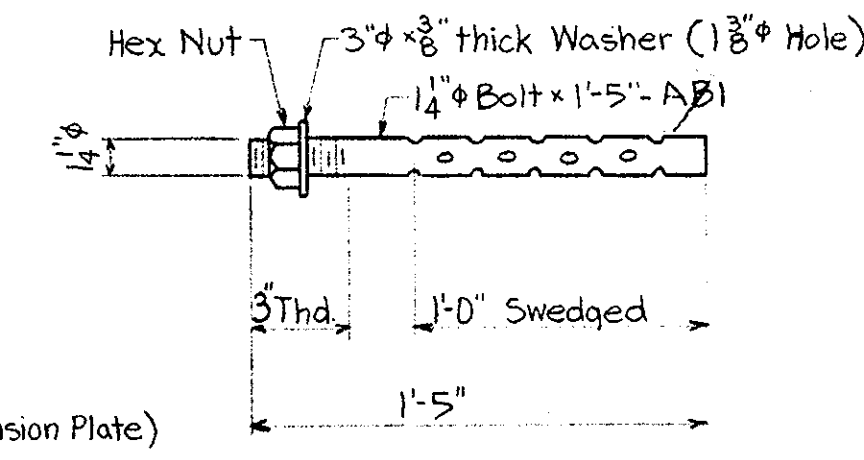
ELEVATION



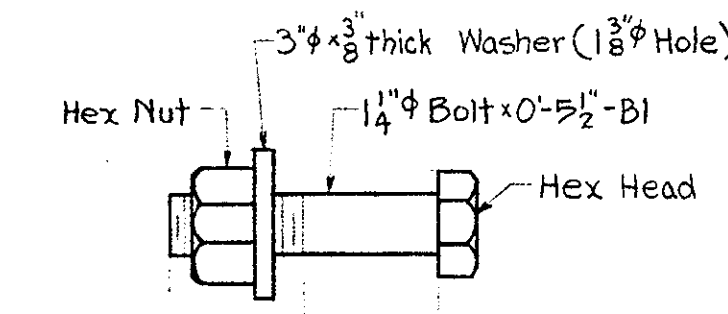
REQ'D: 4 PINS-PI



BRONZE PLATE-pa

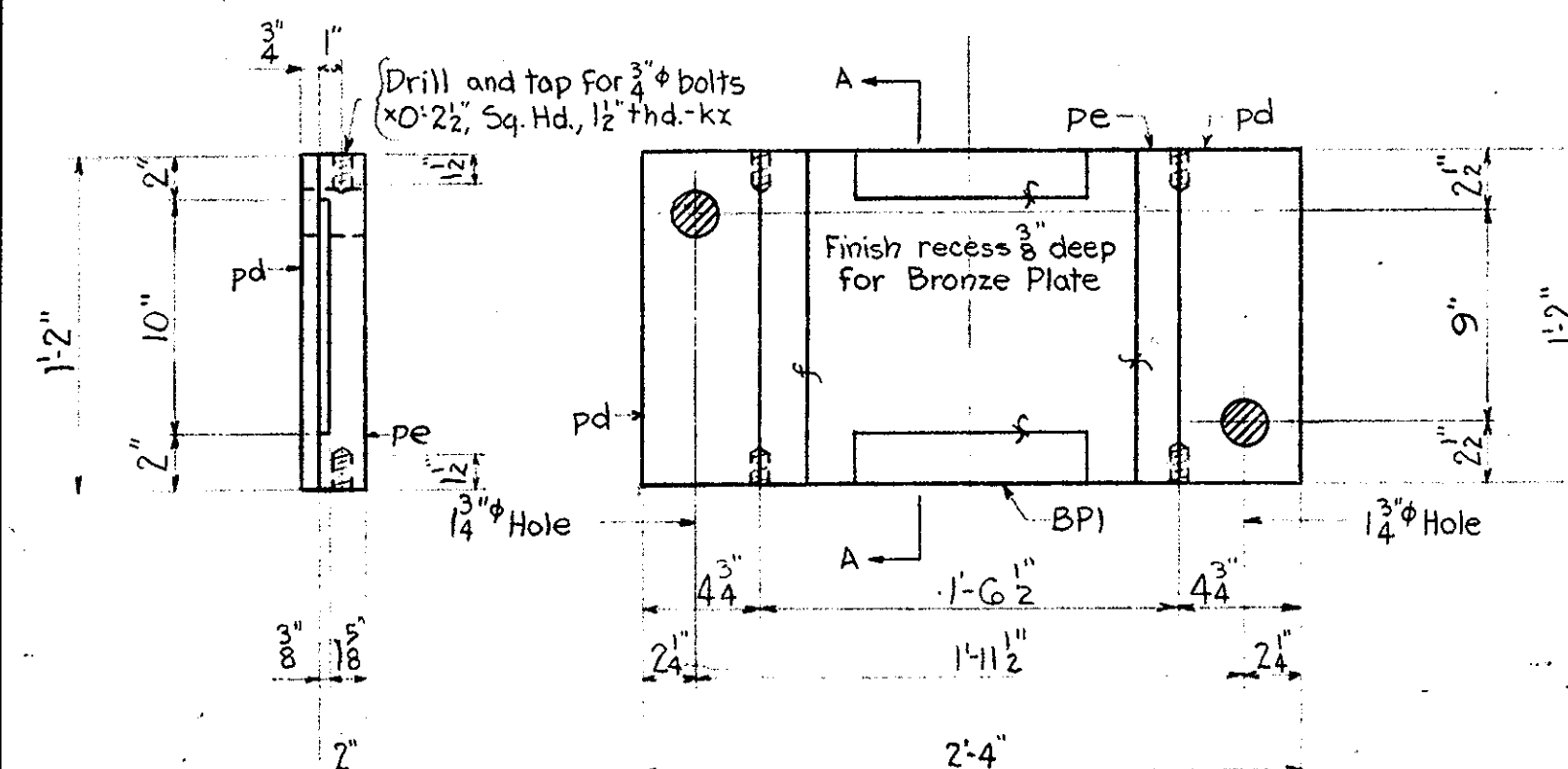


REQ'D: 40 ANCHOR BOLTS-ABI

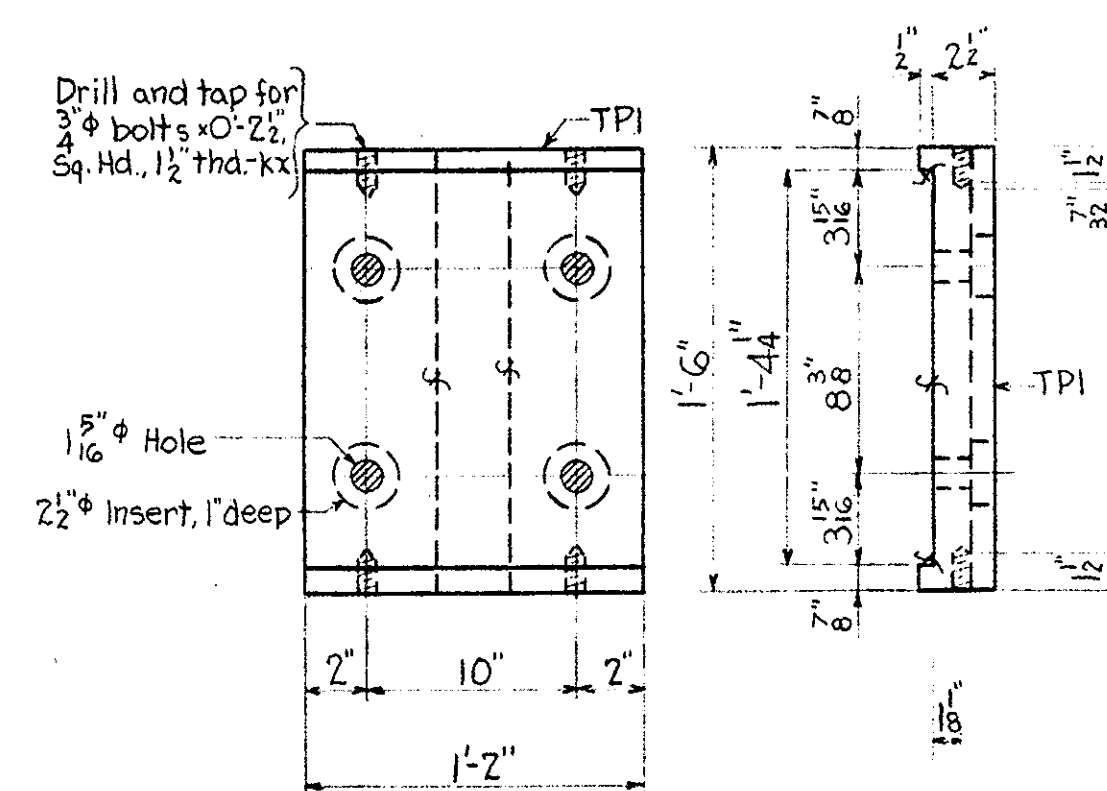


REQ'D: 16 SHOE BOLTS-BI

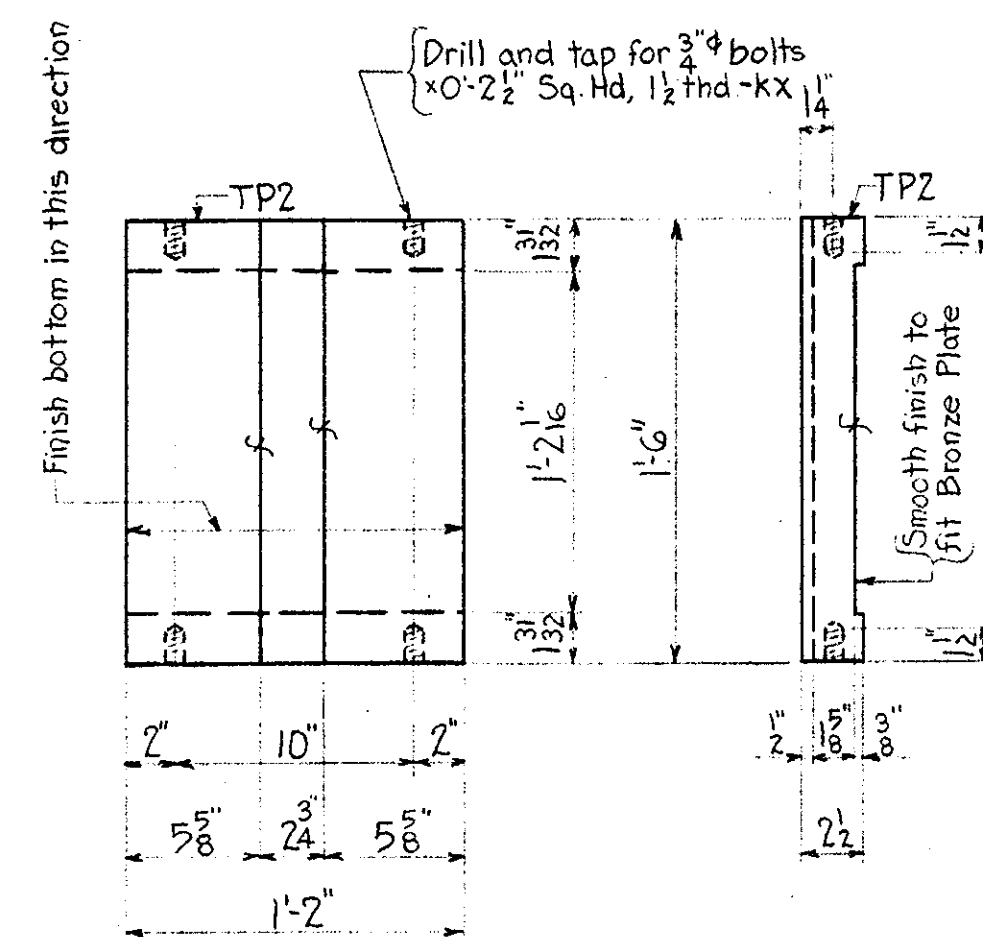
NOTE: Lifting Bolts to be furnished with shoes.



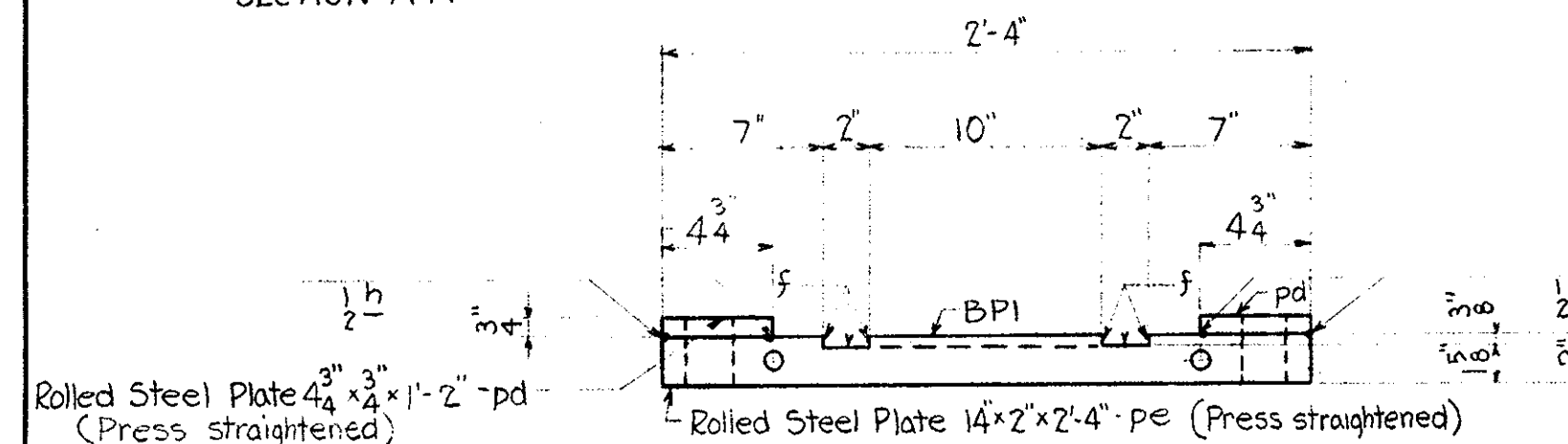
SECTION A-A



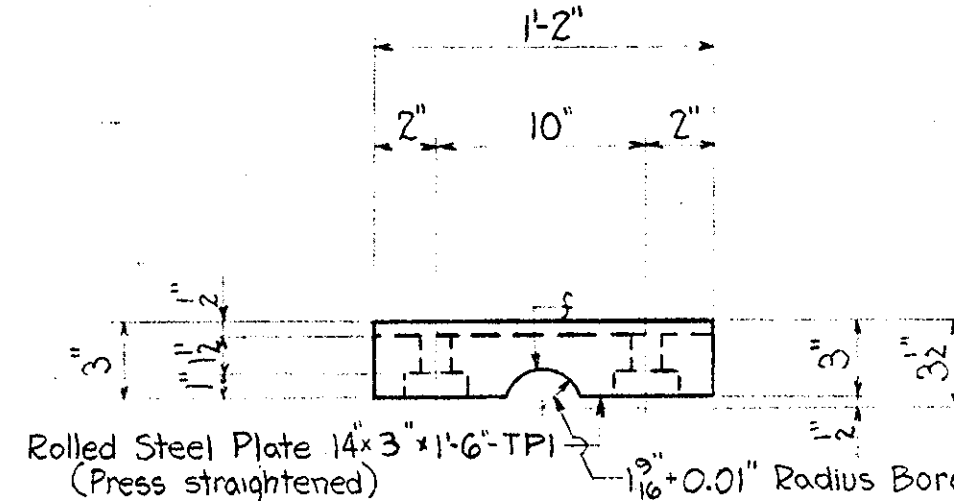
REQ'D: 2 TOP PLATES-TP1



REQ'D: 2 TOP PLATES-TP2



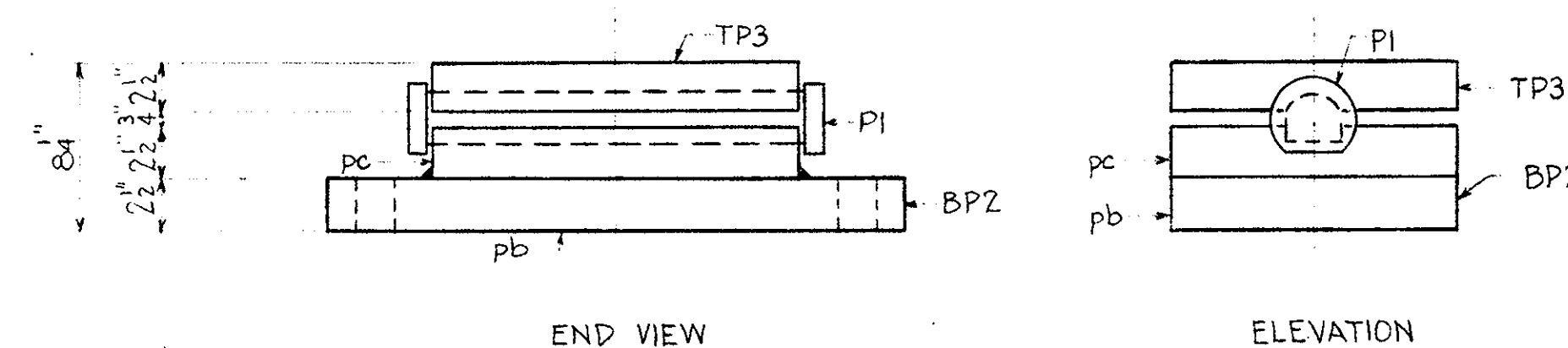
REQ'D: 2 BASE PLATES-BP1



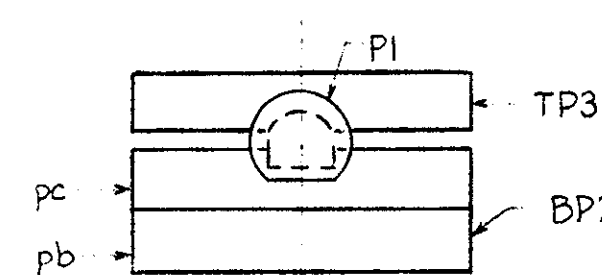
REQ'D: 2 TOP PLATES-TP1

EXPANSION SHOE

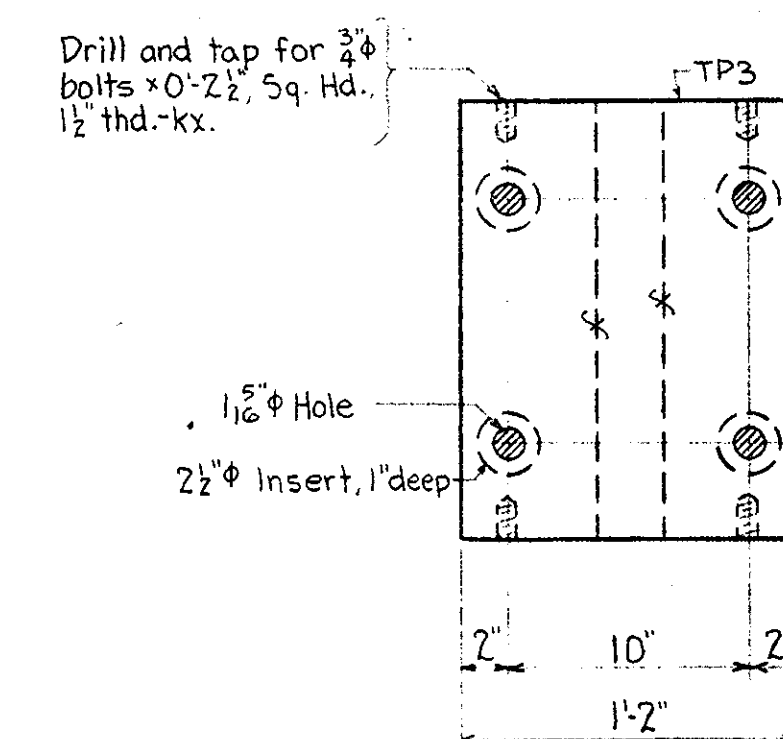
NOTE: Bronze plates to be flat, smooth and true to dimensions, and to be press fitted into recesses in base plates in the shop, care being taken to obtain good bearing on bottom of recesses. Base plate assemblies to be shipped so that bronze plates are held in place and finished surfaces protected against damage. If cast bronze plates are used, they must be finished on the top surface in the direction of movement and finished on the bottom surface.



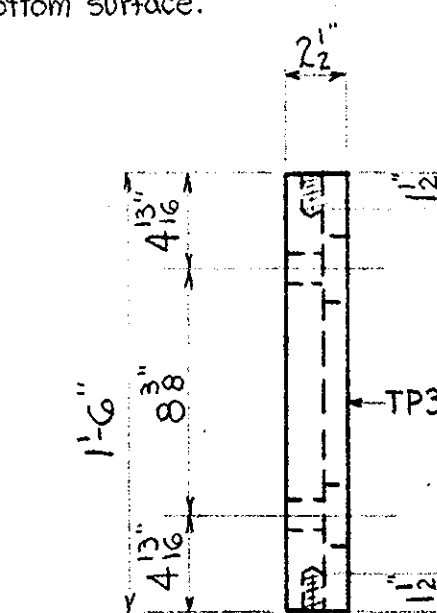
END VIEW



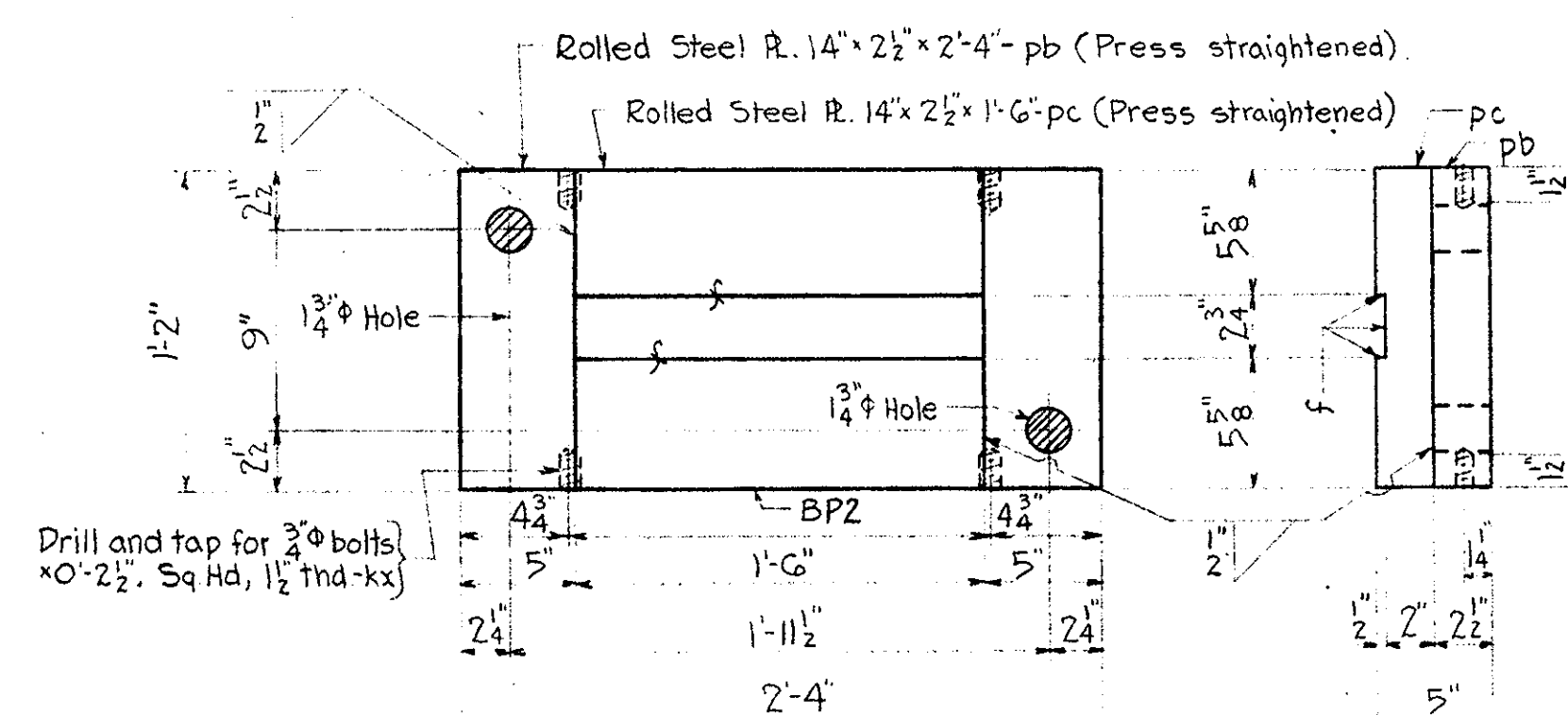
ELEVATION



REQ'D: 2 TOP PLATES-TP3



REQ'D: 2 TOP PLATES-TP3



REQ'D: 2 BASE PLATES-BP2

FIXED SHOE

SHOP BILL					SHIPPING BILL		
No.	DESCRIPTION	Ft.	INS.	Mk.	No.	DESCRIPTION	Mk.
4	R's 4 3/4 x 3/4	1	2	pd	2	Base Plates	BP1
2	R's 14 x 2	2	4	pe	2	Top Plates	TP1
8	3/4" Bolts	0	2 1/2	kx	2	Base Plates	BP2
2	Pins 10 x 1	1	2	pa	2	Top Plates	TP2
2	Pins 14 x 3	1	6	TP1	2	Base Plates	BP1
8	3/4" Bolts	0	2 1/2	kx	2	Top Plates	TP2
4	Pins	1	8	PI	4	Pins	PI
2	R's 14 x 2 1/2	1	6	TP2	2	Top Plates	TP2
8	3/4" Bolts	0	2 1/2	kx	2	Base Plates	BP2
2	R's 14 x 2 1/2	2	4	pb	2	Base Plates	BP2
8	3/4" Bolts	0	2 1/2	kx	2	Top Plates	TP3
2	R's 14 x 2 1/2	1	6	pc	2	Base Plates	BP2
40	1/4" Bolts	1	5	ABI	40	Anchor Bolts	ABI
16	1/4" Bolts	0	5 1/2	BI	16	Shoe Bolts	BI
2	R's 14 x 2 1/2	1	6	TP3	2	Top Plates	TP3
8	3/4" Bolts	0	2 1/2	kx	2	Top Plates	TP3

GENERAL NOTES

Live Load: H20-S16-44
 Specifications:
 Design: AASHTO dated 1957.
 B&O.R.R. System "General Specifications for Steel Railway Bridges-1922."
 Paragraphs 1-7 incl., 257-268 incl., and 275-281 incl. are to apply.
 Workmanship to be in accordance with A.R.E.A. "Specifications for Steel Railway Bridges-1960". Holes for rivets may be punched full size unless otherwise noted on the plans.
 O.H. Structural Steel: A.S.T.M. A7-58T.
 Rivet Steel: A.S.T.M. A141-58
 Bronze Plates: Rolled: A.S.T.M. B100-58 Alloy No. 1; Cast: A.S.T.M. B22-52 Alloy B.
 Bronze plates shall be Lubrite Expansion Plates with Trepanned Inserts, as manufactured by Merriman Bros. Inc. Boston, Mass. or equal, to provide for complete self lubrication with 1/8" movement of shoes.
 Welding: American Welding Society Specifications for "Welded Highway and Railway Bridges-1956". The electric arc process and coated electrodes shall be used. Sequence of welding to be arranged to reduce shrinkage and residual stresses to a minimum.
 Rivets: 3/4" Open Holes: 1 1/8" unless noted.
 Shop Paint: One coat of red lead paint in accordance with B.O.R.R. Co. Specification 979, Stock W-121. Steel in contact with concrete not to be painted. Keep paint and painted markings away from surfaces to be welded. Bronze Plate not to be painted. Coat surfaces of pins, pin holes and recesses for bronze plate in bottom of lower expansion shoe plate TP2 with white lead and tallow.
 Field Paint for Steel: Two coats in accordance with B.O.R.R. Co. "Specifications for Field Painting of Structural Steel" dated April, 1955. Final Field Coat Black.
 Made in accordance with Situation Plan, Bridge No. 88-B, Philadelphia, Pa., dated June 22, 1960. Drawing No. R.E. 540 from Office of Regional Engineer, Baltimore, Md. Also made in accordance with Cross Sections, dated 6-12-60, from Office of Regional Engineer, Baltimore, Md.
 Where Nelson Studs are called for on the drawings they shall be Nelson Granular Flux-Filled Studs, as manufactured by the Nelson Stud Welding Division, Lorain, Ohio, and shall be automatically end welded to the steel. All stud welds shall be made in accordance with recommendations of the Nelson Stud Welding Division.

Note: For Erection Diagram see Drawing No. 42308.

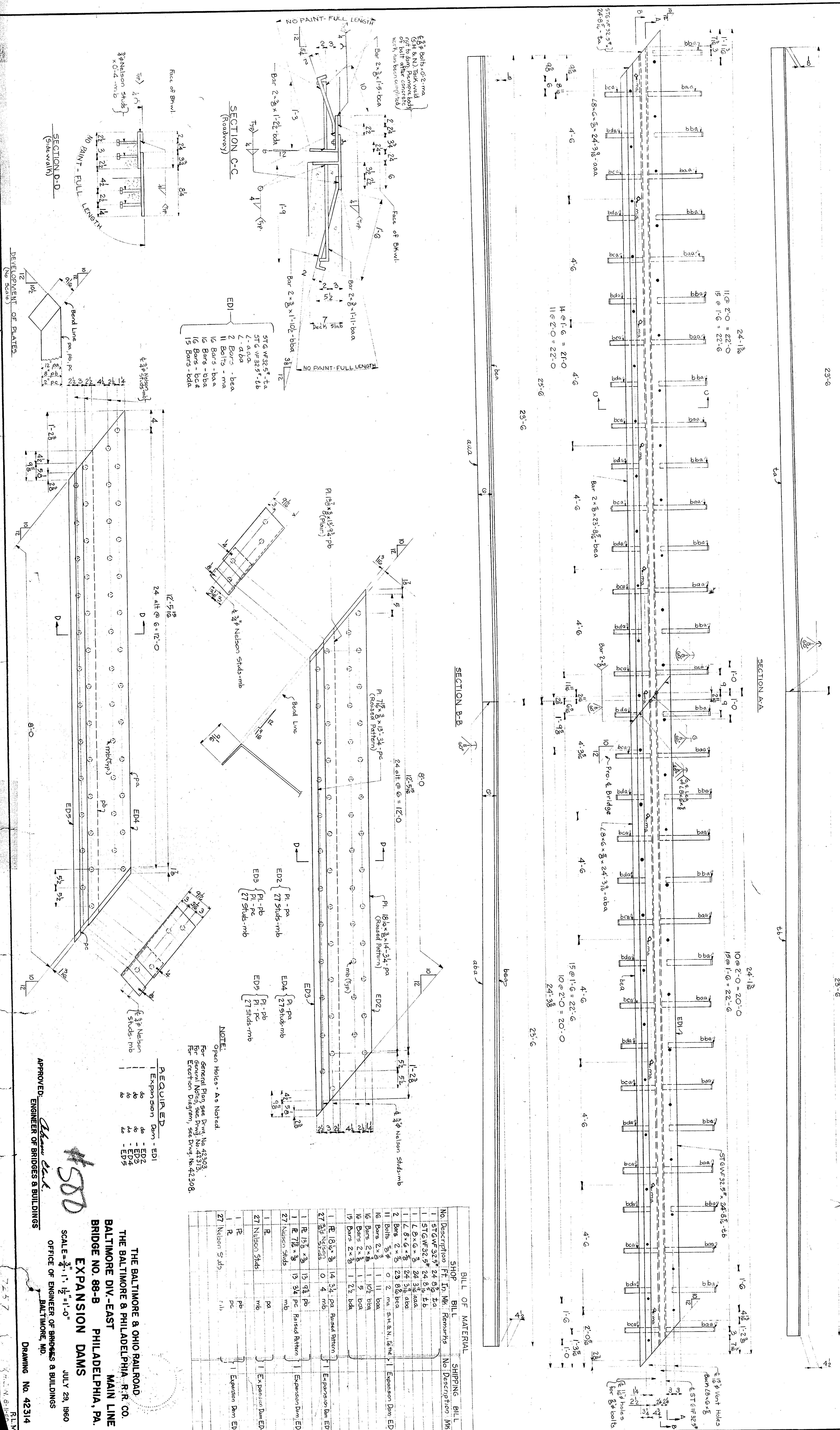
THE BALTIMORE & OHIO RAILROAD
 THE BALTIMORE & PHILADELPHIA R.R. CO.
 BALTIMORE DIV.- EAST MAIN LINE
 BRIDGE NO. 88-B PHILADELPHIA, PA.
 SHOES

SCALE: 1 1/2" = 1'-0"
 JULY 18, 1960
 OFFICE OF ENGINEER OF BRIDGES & BUILDINGS
 BALTIMORE, MD.

APPROVED: *Abraham Clark*
 ENGINEER OF BRIDGES & BUILDINGS

DRAWING NO. 42313

R.L.S.
 V.G.G. 8-19-60



NOTES:

Specifications:

B.O.R.R. System "General Specifications for Steel Railway Bridges - 1922. Paragraphs 1-7 incl., 257-268 incl., and 275-281 incl. are to apply.
Workmanship to be in accordance with A.R.E.A. "Specifications for Steel Railway Bridges - 1960"; however, holes may be punched full size unless otherwise shown on the plans.
O.H. Structural Steel: A.S.T.M. A7-58T.
Rivet Steel: A.S.T.M. A141-58

Rivets: $\frac{7}{8}$ " Open Holes: $\frac{1}{8}$ " unless noted.

Shop Paint: New Material: One coat of red lead paint in accordance with B.O.R.R. Co. Specifications 979, Stock W-121.
Grillages and Shims not to be painted except as noted.
Present Girder to be cleaned of all rust, dirt and loose paint and spot painted with one coat of red lead paint.

Parts of present material in contact with new material to be thoroughly cleaned of all rust, dirt and loose paint and given one coat of paint before placing new material.

Present material shown by light lines.

New material shown by heavy lines.

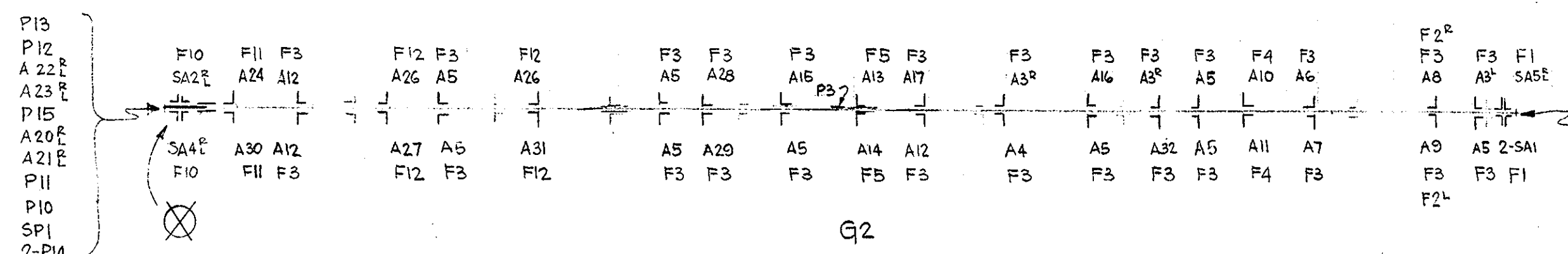
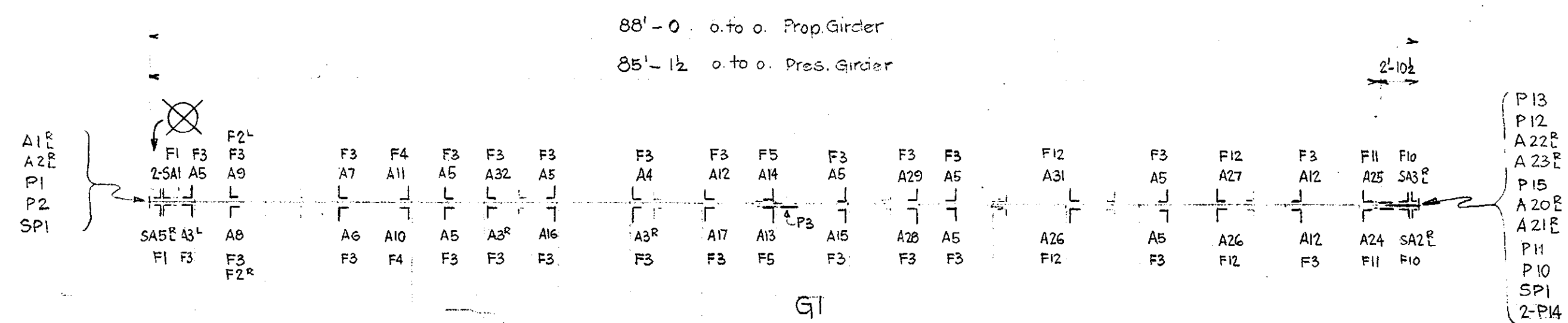
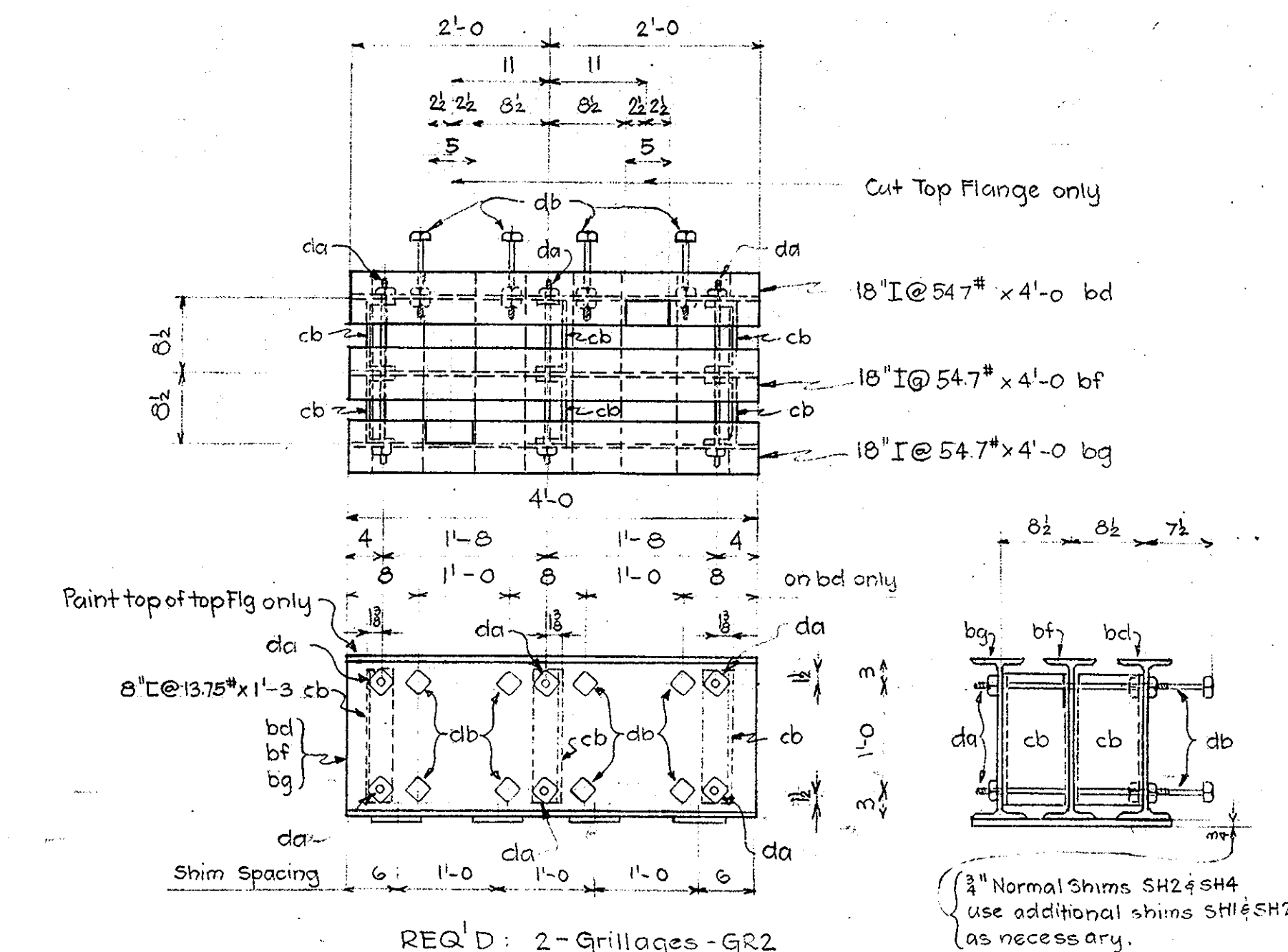
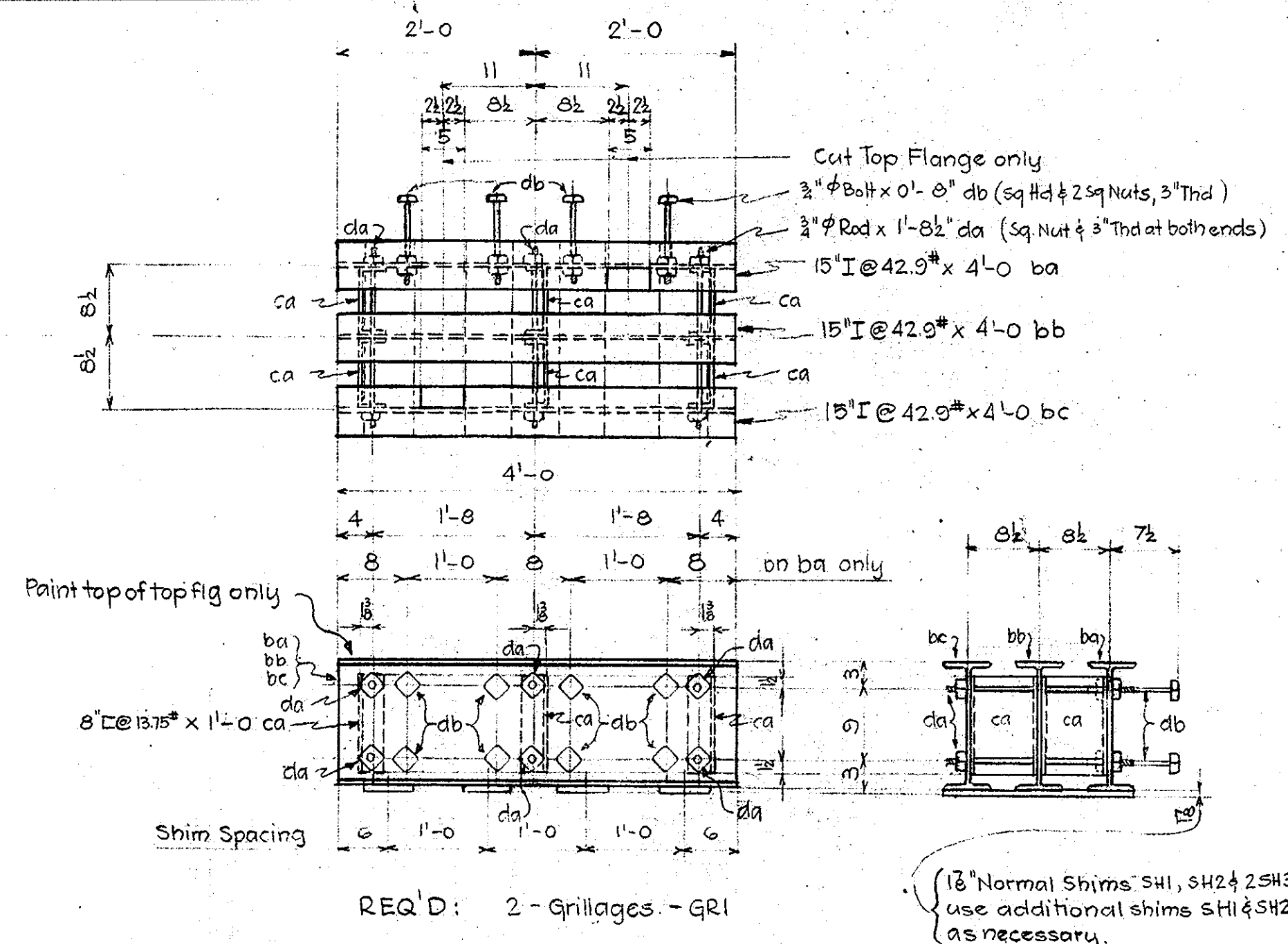
Holes shown thus $\odot$ match present rivet spacing.

Holes shown thus $\bullet$ in present material to be drilled in present material to match holes in new material.

For Detail of Girders see Drawings No 42316 & 42317

For Erection Diagram see Drawing No 42308

For Location of Grillages see Drawing No 42306



SHOP ASSEMBLY DIAGRAM

NOTE: 2nd Hand Girders 85'-12" long from Br # 71/15, Buffalo Div., B & O Branch, Bennezzette, Pa. (Fort Pitt Bridge Works Contract No C 947, Sheet No 1) are now stored at Cumbo, W.Va. Present bracket plates, parts of floorbeams and lateral plates now attached to the girders to be removed and open holes filled with rivets.

Lifting Weight of One Girder = 24 Tons.

BILL OF MATERIAL

SHOP BILL					SHIPPING BILL				
No	DESCRIPTION	FT	INS	MK	REMARKS	No	DESCRIPTION	MK	
2	15" I @ 42.9#	4	0	ba					
2	do	4	0	bb					
2	do	4	0	bc					
12	8" C @ 13.75#	1	0	ca					
16	Bolts $\frac{3}{4}$ "	0	8	db	Sq Hd & 2 Sq Nuts, 3" Thd				
12	Rods $\frac{3}{4}$ "	1	0	da	Sq Hd & 3" Thd both ends				
24	Shims 6 x 8	1	11	SH1	Plain	24	Shims	SH1	
32	Shims 6 x 4	1	11	SH2	do	32	Shims	SH2	
16	Shims 6 x 3	1	11	SH3	do	16	Shims	SH3	
8	Shims 6 x 2	1	11	SH4	do	8	Shims	SH4	
2	18" I @ 54.7#	4	0	bd					
2	do	4	0	bf					
2	do	4	0	bg					
12	8" C @ 13.75#	1	3	ca	db Sq Hd & 2 Sq Nuts, 3" Thd				
16	Bolts				da Sq Hd & 3" Thd both ends				
12	Rods								

SHOP BILL					SHIPPING BILL				
No	DESCRIPTION	FT	INS	MK	REMARKS	No	DESCRIPTION	MK	
1	2nd Hand Girder	85	12	G1	from Br # 71/15				
1	2nd Hand Girder	85	12	G2	from Br # 71/15				
4	15" I @ 42.9#	7	4	SA1	Grind ends to fit web				
4	15" I @ 42.9#	7	4	SA2	do				
2	15" I @ 42.9#	7	4	SA3	do				
4	15" I @ 42.9#	5	3	SA4	do				
4	15" I @ 42.9#	3	3	SA5	do				
6	15" I @ 42.9#	7	4	SA6	Grind ends to fit web				
2	15" I @ 42.9#	7	4	SA7	do				
2	15" I @ 42.9#	7	4	SA8	Grind ends to fit web				
2	15" I @ 42.9#	7	4	SA9	do				
2	15" I @ 42.9#	7	4	SA10	Grind ends to fit web				
2	15" I @ 42.9#	7	4	SA11	do				
2	15" I @ 42.9#	7	4	SA12	do				
2	15" I @ 42.9#	7	4	SA13	Cut from 5 x 5 x 8 L				
2	15" I @ 42.9#	7	4	SA14	do				
2	15" I @ 42.9#	7	4	SA15	Grind ends to fit web				
2	15" I @ 42.9#	7	4	SA16	do				
2	15" I @ 42.9#	7	4	SA17	do				
4	15" I @ 42.9#	3	0	SA18	Cut from 6 x 6 x 8 L				
4	15" I @ 42.9#	3	2	SA19	do				
4	15" I @ 42.9#	7	0	SA20	Grind ends to fit web				
4	15" I @ 42.9#	2	10	SA21	do				
2	15" I @ 42.9#	7	4	SA22	Grind ends to fit web				
1	15" I @ 42.9#	7	4	SA23	do				
4	15" I @ 42.9#	7	4	SA24	do				
4	15" I @ 42.9#	7	4	SA25	do				
4	15" I @ 42.9#	7	4	SA26	do				
2	15" I @ 42.9#	7	4	SA27	do				
2	15" I @ 42.9#	7	4	SA28	do				
2	15" I @ 42.9#	7	4	SA29	do				
4	Fills 10 x 8	6	5	F1					
4	Fills 3 x 1/2	6	11	F2	Grind top to fit 6 x 6 x 8 L				
4	Fills 3 x 1/2	6	5	F3					
4	Fills 4 x 3	6	5	F4					
4	Fills 4 x 3	6	5	F5					
4	Fills 10 x 8	6	5	F10					
4	Fills 5 x 8	6	5	F11					
8	Fills 3 x 3	6	5	F12					
2	Rs 16 x 8	5	3	P1					
2	Rs 16 x 8	5	3	P2					
2	Rs 6 x 2	1	0	P3					
2	Rs 16 x 8	5	7	P10					
2	Rs 16 x 8	7	0	P11					
2	Rs 16 x 8	2	10	P12					
2	Rs 16 x 8	6	0	P13					
4	Rs 21 x 8	6	5	P14					
2	Web Rs 24 x 8	7	5	P15					
4	Rs 16 x 8	1	2	SP1					
2	15" I @ 42.9#	7	4	SA4	Grind ends to fit web				
1	15" I @ 42.9#	7	4	SA30	do				
2	15" I @ 42.9#	7	4	SA31	do				
2	15" I @ 42.9#	7	4	SA32	do				
4	15" I @ 42.9#	7	4	SA33	do				

THE BALTIMORE & OHIO RAILROAD
THE BALTIMORE & PHILADELPHIA R.R. CO.
BALTIMORE DIV.- EAST MAIN LINE
BRIDGE NO. 88-B PHILADELPHIA, PA.
STEEL DETAILS

SCALE: $\frac{3}{4}$ " = 1'-0"

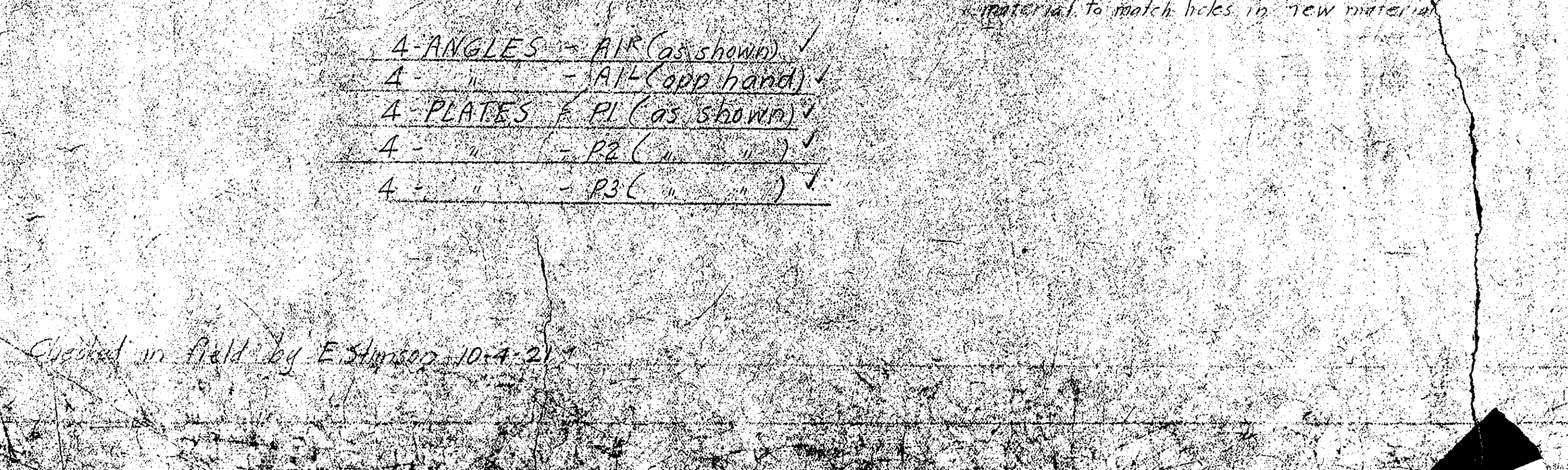
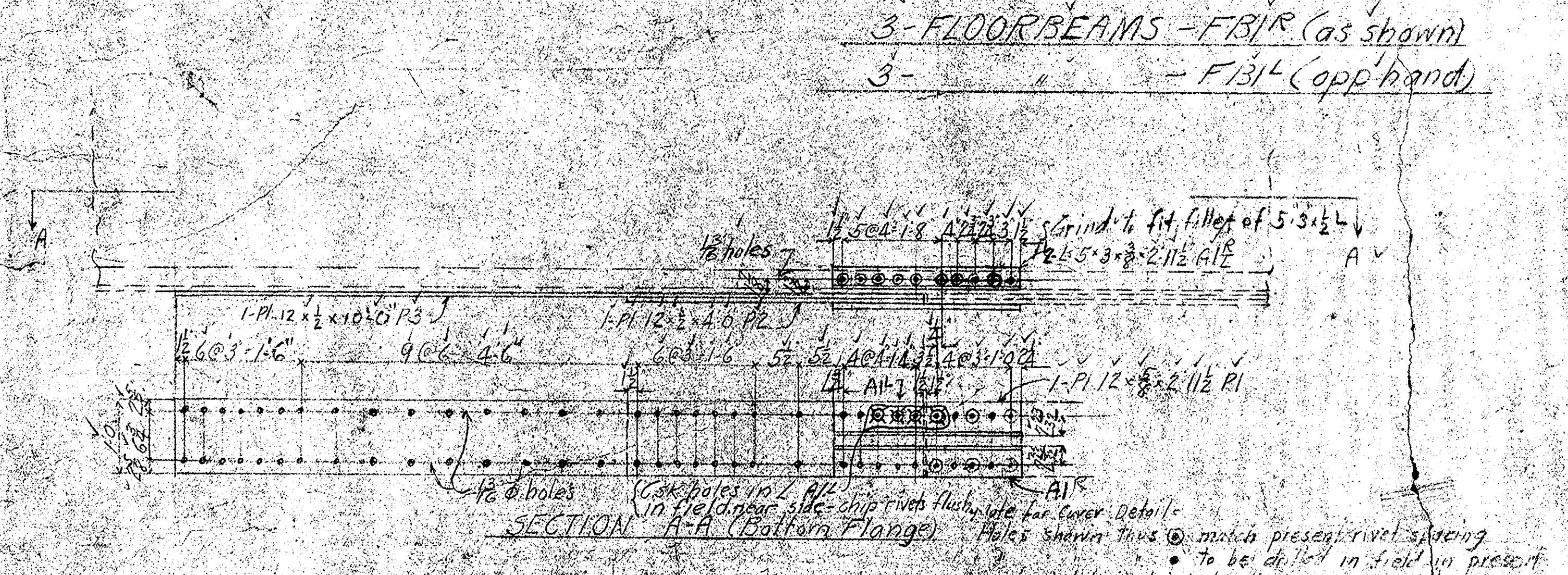
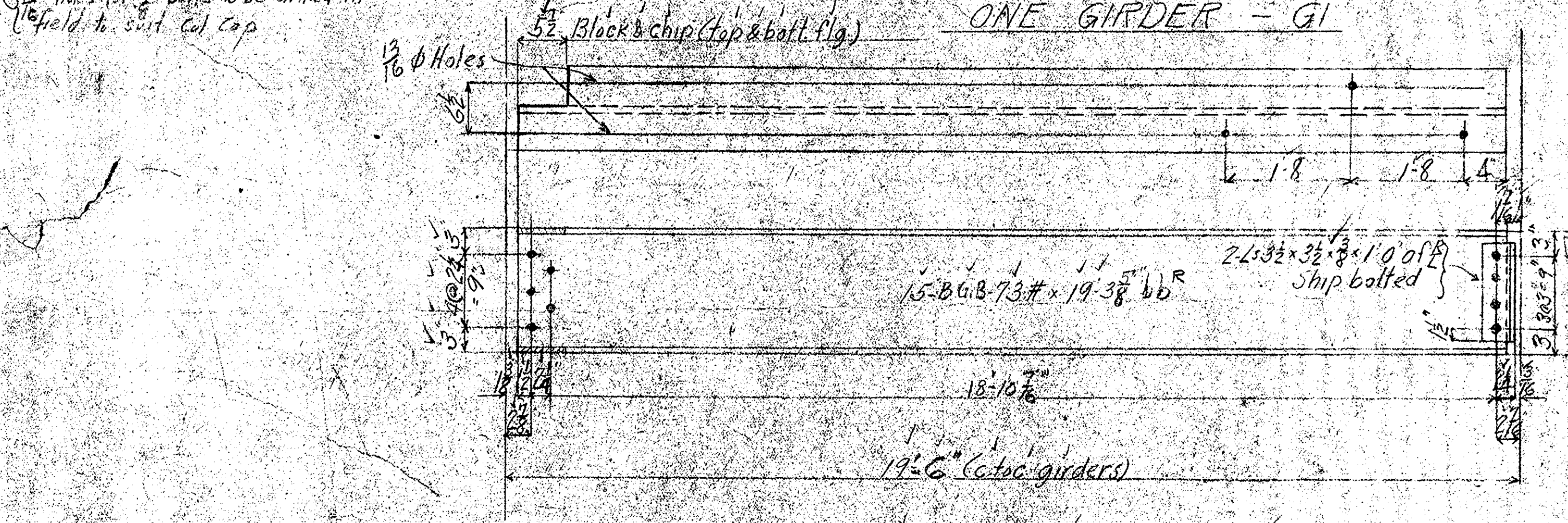
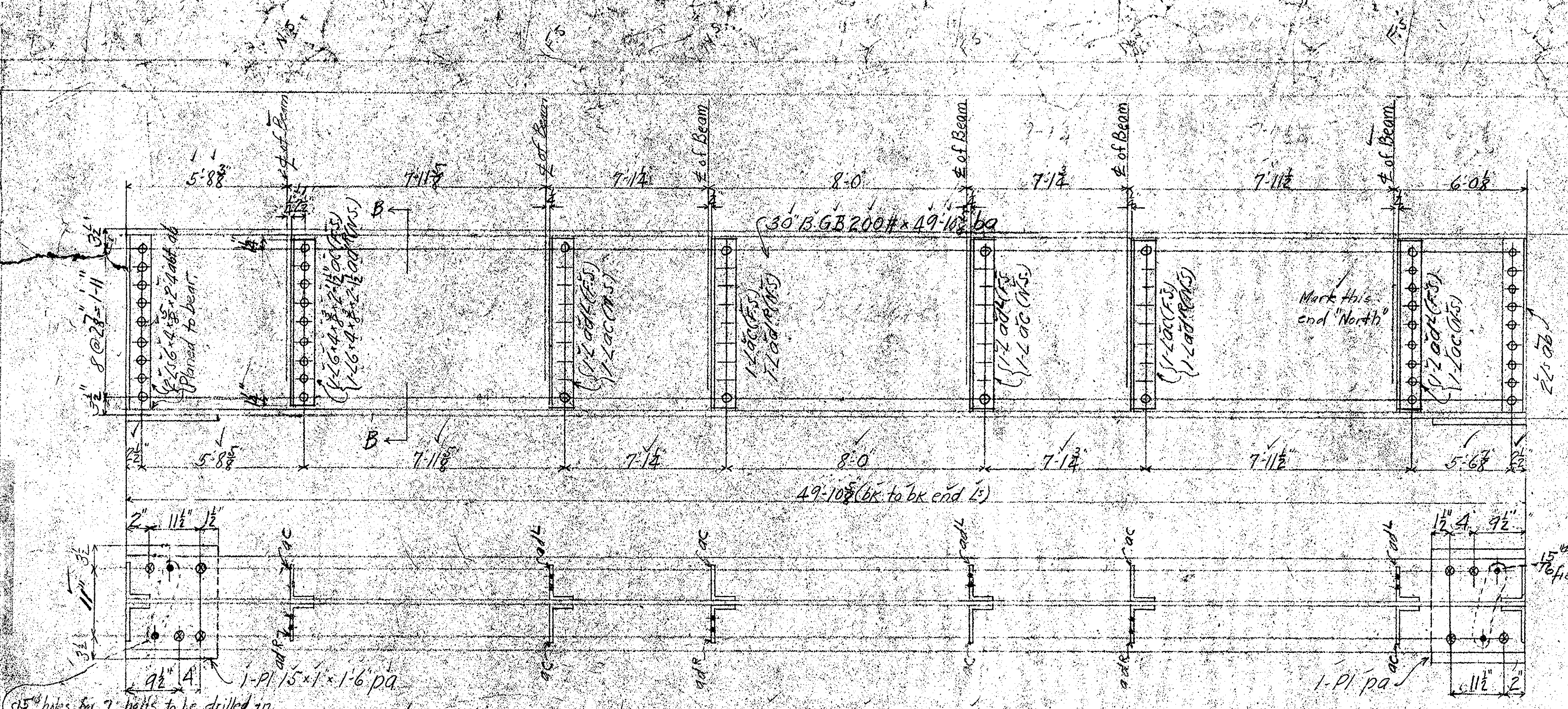
JULY 22, 1960

OFFICE OF ENGINEER OF BRIDGES & BUILDINGS
BALTIMORE, MD.

APPROVED: *Abraham Clark*
ENGINEER OF BRIDGES & BUILDINGS

DRAWING NO. 42315

W.J.S.



BILL OF MATERIAL									
SHOP BILL					SHIPPING BILL				
No.	Description	Length	Width	Remarks	No.	Description	Length	Width	Remarks
1	30 B.G.B. 200# x 49' 10 1/2" B.G.	49' 10 1/2"	30"		1	Girder	49' 10 1/2"	30"	GI
2	15 B.G.B. 200# x 19' 3 1/2" B.G.	19' 3 1/2"	15"		2	Floorbeams	19' 3 1/2"	15"	FB1R
3	15 B.G.B. 200# x 19' 3 1/2" B.G.	19' 3 1/2"	15"		3	Floorbeams	19' 3 1/2"	15"	FB1L
4	15 B.G.B. 200# x 19' 3 1/2" B.G.	19' 3 1/2"	15"		4	Bolts 3/4" x 8"	19' 3 1/2"	15"	B3
5	15 B.G.B. 200# x 19' 3 1/2" B.G.	19' 3 1/2"	15"		5	Bolts 3/4" x 8"	19' 3 1/2"	15"	B4
6	15 B.G.B. 200# x 19' 3 1/2" B.G.	19' 3 1/2"	15"		6	Bolts 3/4" x 8"	19' 3 1/2"	15"	B5
7	15 B.G.B. 200# x 19' 3 1/2" B.G.	19' 3 1/2"	15"		7	Bolts 3/4" x 8"	19' 3 1/2"	15"	B6
8	15 B.G.B. 200# x 19' 3 1/2" B.G.	19' 3 1/2"	15"		8	Bolts 3/4" x 8"	19' 3 1/2"	15"	B7
9	15 B.G.B. 200# x 19' 3 1/2" B.G.	19' 3 1/2"	15"		9	Bolts 3/4" x 8"	19' 3 1/2"	15"	B8
10	15 B.G.B. 200# x 19' 3 1/2" B.G.	19' 3 1/2"	15"		10	Bolts 3/4" x 8"	19' 3 1/2"	15"	B9

LIST OF FIELD RIVETS									
SHOP LIST					SHIPPING LIST				
No.	Qty	Size	Location	Remarks	No.	Qty	Size	Location	Remarks
1	30	3/4"	Floorbeams to GI		1	30	3/4"	Floorbeams to GI	
2	15	3/4"	" to present girders		2	15	3/4"	" to present girders	
3	15	3/4"	" to present girders		3	15	3/4"	" to present girders	
4	15	3/4"	" to present girders		4	15	3/4"	" to present girders	
5	15	3/4"	" to present girders		5	15	3/4"	" to present girders	
6	15	3/4"	" to present girders		6	15	3/4"	" to present girders	
7	15	3/4"	" to present girders		7	15	3/4"	" to present girders	
8	15	3/4"	" to present girders		8	15	3/4"	" to present girders	
9	15	3/4"	" to present girders		9	15	3/4"	" to present girders	
10	15	3/4"	" to present girders		10	15	3/4"	" to present girders	

GENERAL NOTES
 New Material - O.H. Structural Steel
 Specifications - B. & O. R.R. dated 1904
 Rivets - 3/4"
 Open Holes - 1 1/2" unless noted
 Paint - One coat in shop
 Parts of present material in contact with new material to be thoroughly cleaned of all rust dirt etc. and given one coat of paint before placing new material
 For Gen. Plan and Erection Diag. See Dwg #18545-A

BRIDGE KNOWN
 DOWN BY R.R.
 TO BE REBUILT

#500
 Cent.

THE BALTIMORE & OHIO RAILROAD
 THE BALTIMORE & PHILA. RAILROAD CO
 PHILADELPHIA DIV. MAIN LINE

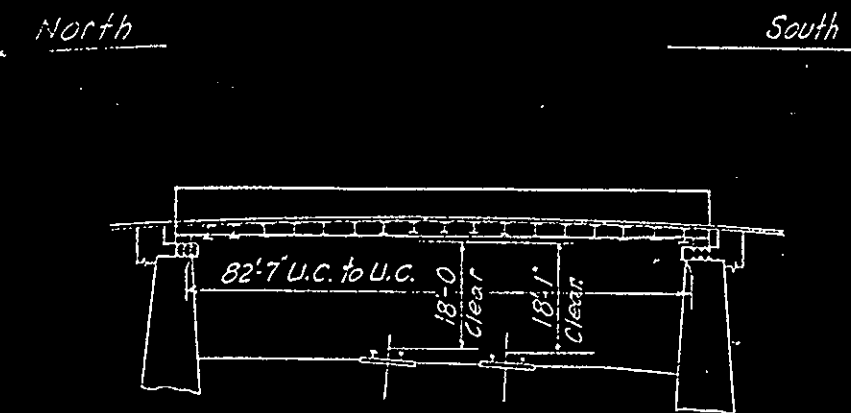
BRIDGE NO. 88B
 DETAILS OF REPAIRS

Approved *[Signature]*
 Engineer of Bridges

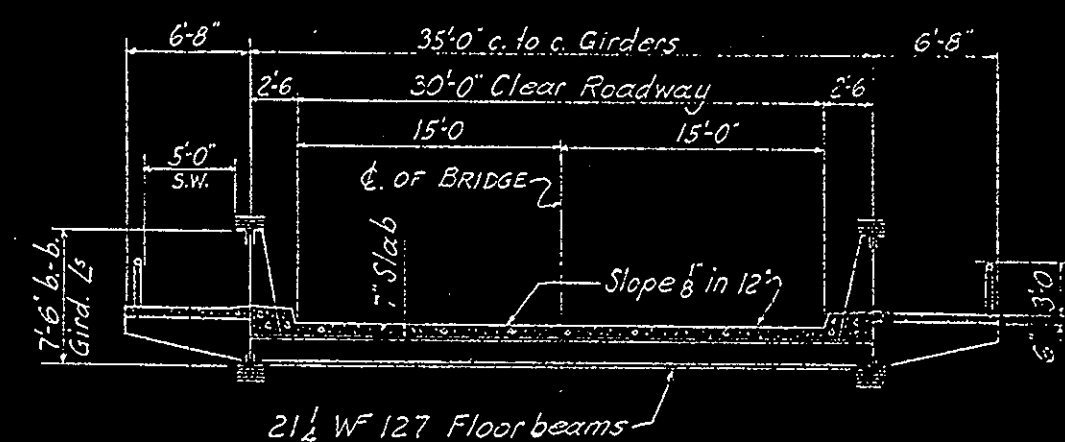
Scale 1"=10'
 Office of Engineer of Bridges
 Baltimore, Md.

Drawing No. 18544-A

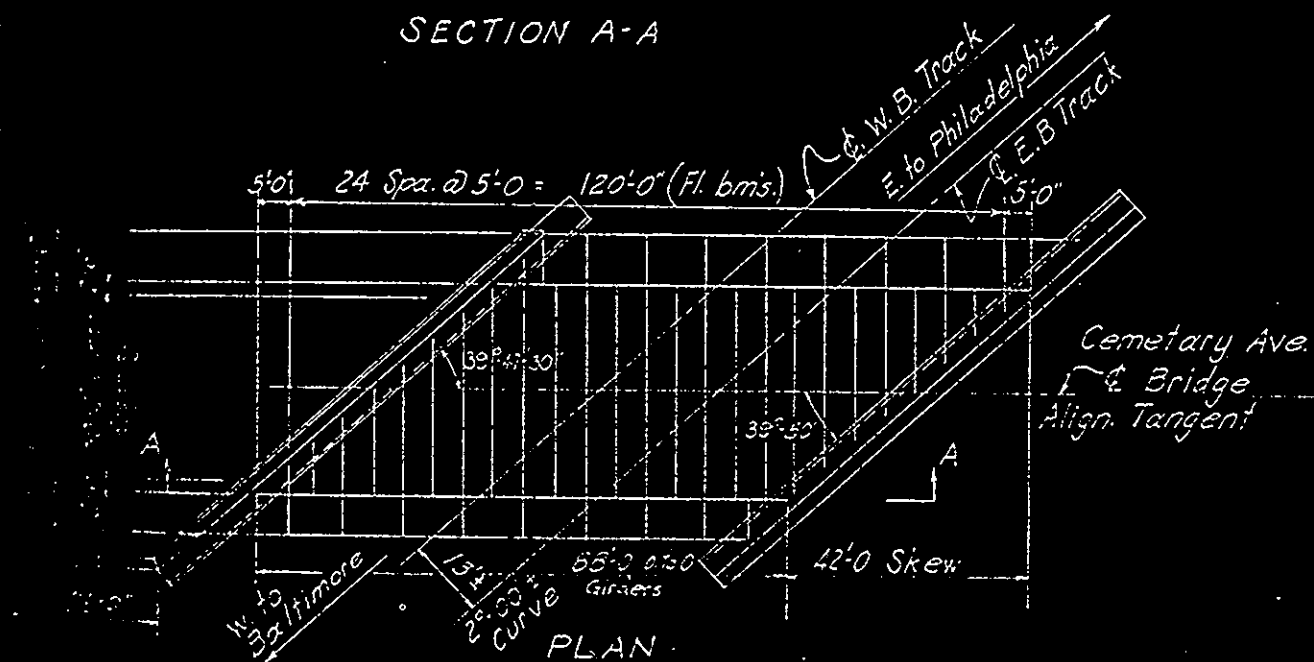
500



SECTION A-A



TYPICAL SECTION



PLAN

REMARKS: Girders 2nd. Hol. from Br. #7115 Buffalo Div.
B. & O. Branch, Bennezetette, Pa. Fabricated 1904.

CEMETERY AVE.

LOCATION	Philadelphia, Pa.	STRUCTURE	Highway Bridge	THE BALTIMORE & OHIO R. R. SYSTEM
TRACKING	B. & O. R.R.	BUILT	1856 Substructure	DIVISION
FILE SECTION	V.8.1 (S-16)	MATERIAL	1901 Superstructure	SALTIMORE #500
FILE STATION	264 + 80.96		Steel & Concrete	BRIDGE No. 885 BRANCH M.L.
ALIGNMENT	Tangent	OWNER	B. & O.	SCALE: $32' \pm 32' = 1'-0"$ DATE 12-14-61
FILE NO.	7257	AGREEMENT FILE		OFFICE OF ENGINEER OF BRIDGES & BUILDINGS BALTIMORE, MD.