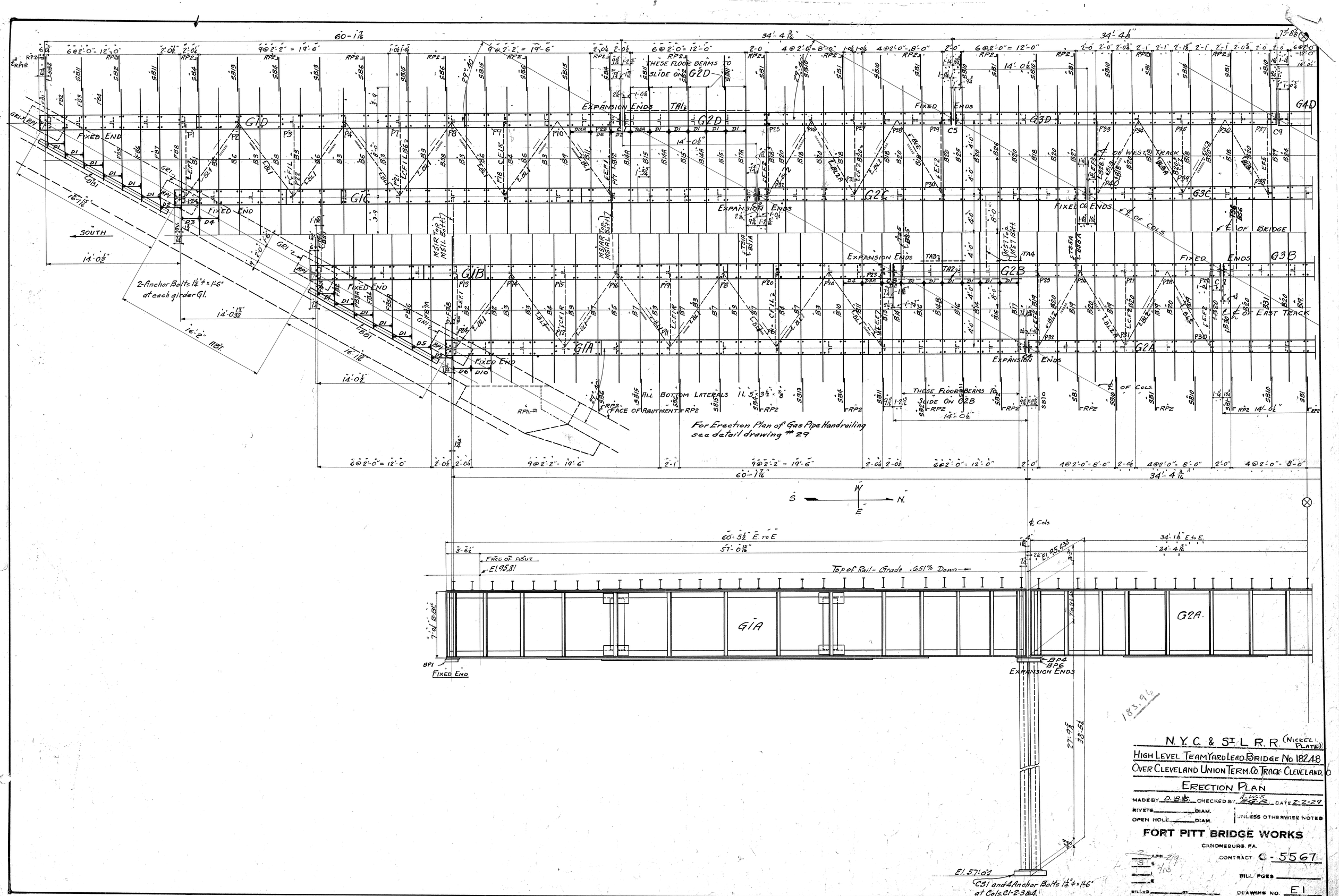


N. Y. C. & St. L. R. R. (Nickel Plate)

High Level Team Yard Lead Bridge No. 18248

Over Cleveland Union Term. Co. Track - Cleveland, O.

Erection Plan

MADE BY D.B.S. CHECKED BY A.W.S. E.G.R. DATE 2-2-29

RIVETS _____ DIAM.

OPEN HOLE _____ DIAM.

UNLESS OTHERWISE NOTED

FORT PITT BRIDGE WORKS

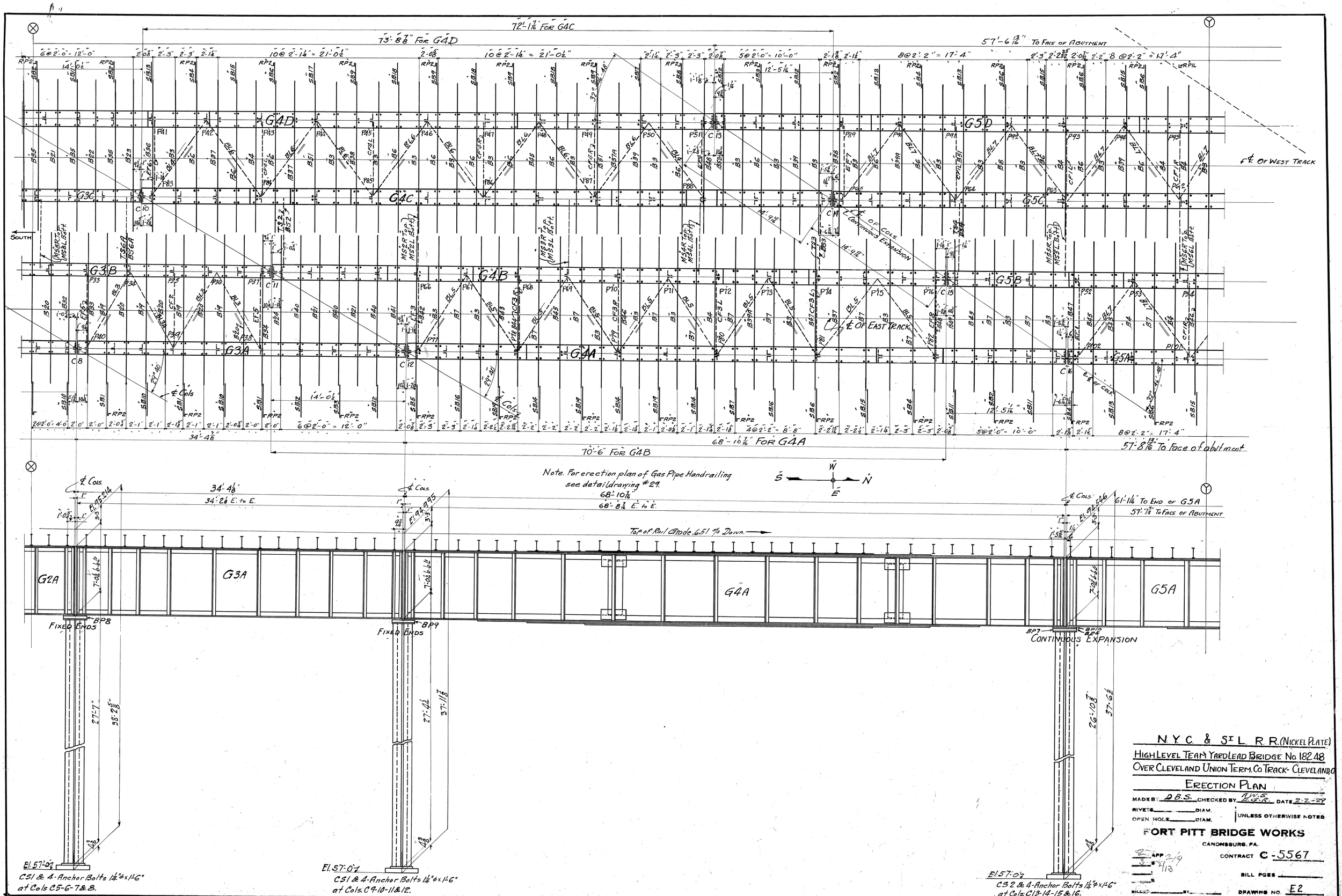
CANONSBURG, PA.

CONTRACT C-5567

BILL PGES _____

DRAWING NO. E1

DBS NS 183-96-291



N.Y.C. & St L. R.R. (Nickel Plate)

High Level Team Yard Lead Bridge No. 182.48

Over Cleveland Union Term. Co. Track - Cleveland, O.

Erection Plan

MADE BY D.B.S. CHECKED BY A.W.S. E.G.R. DATE 2-2-29

RIVETS ____ DIAM.

OPEN HOLE ____ DIAM.

UNLESS OTHERWISE NOTED

FORT PITT BRIDGE WORKS

CANONSBURG, PA.

2 APP 2/9

3 S 2/13

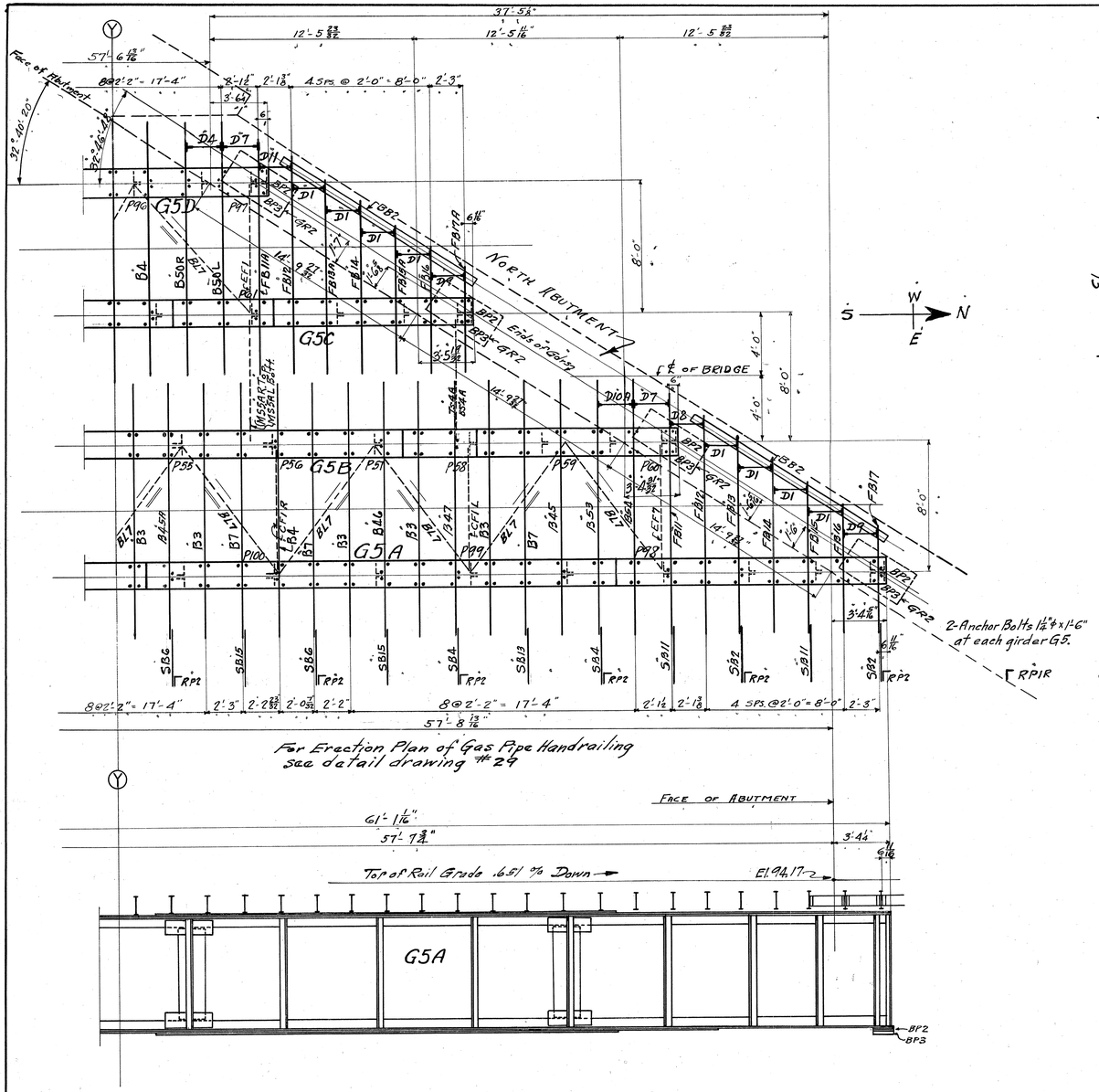
CONTRACT C-5567

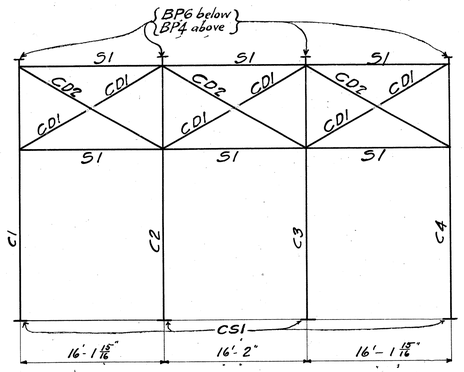
BILL PGES ____

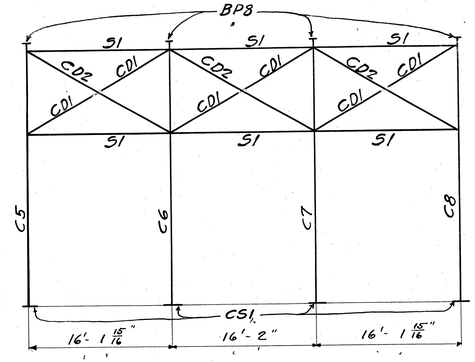
BILLED ____ BY ____

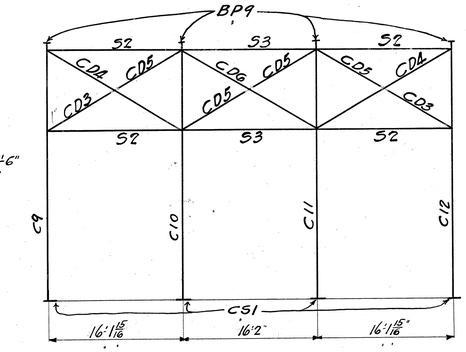
DRAWING NO. E2

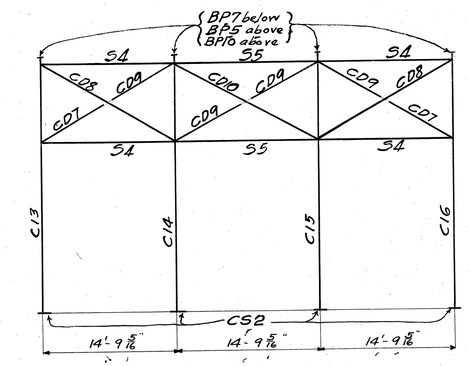
D.B.S. NS 183-96-29











N. Y. C. & St L. R.R. (Nickel Plate)
High Level Team Yard Lead Bridge No. 182.48
Over Cleveland Union Term. Co. Track - Cleveland, O.
Erection Plans

MADE BY D.B.S. CHECKED BY A.W.S. E.G.R. DATE 2-2-22
RIVETS ____ DIAM. | UNLESS OTHERWISE NOTED.
OPEN HOLES ____ DIAM.

FORT PITT BRIDGE WORKS
CANONSBURG, PA.

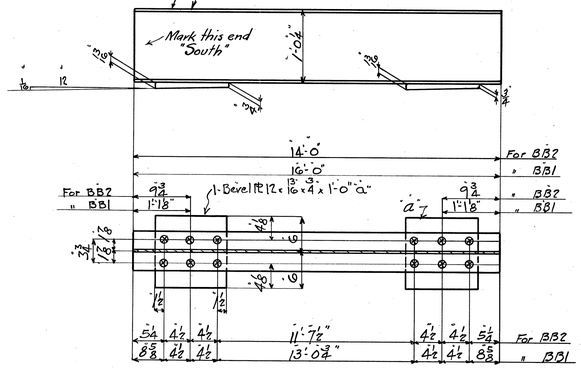
APP 2/9
S 2/13
I
E
BILLED ____ BY ____

CONTRACT C-5567
BILL PAGES ____
DRAWING NO. E3

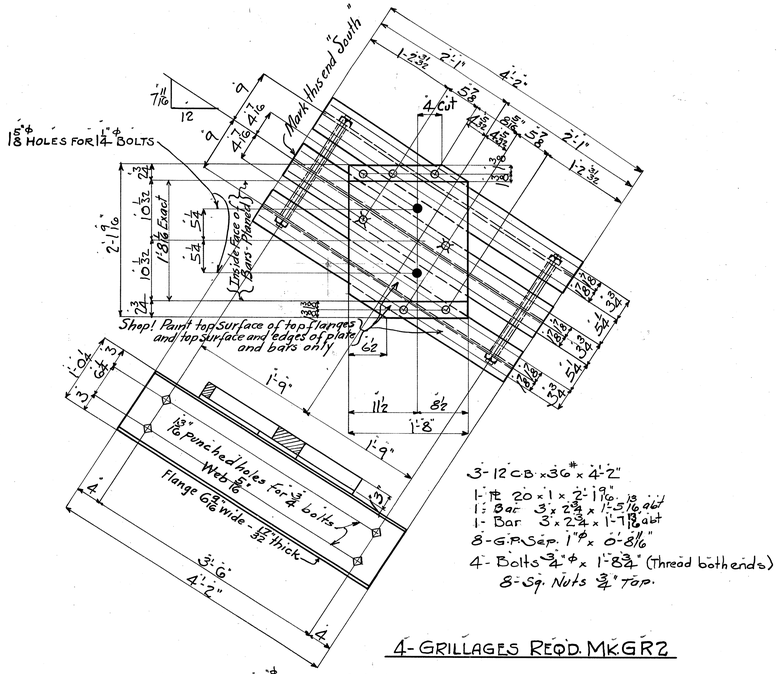
D.B.S.
NS 183-96-2

Shop! Paint top surface of top flange only

{ 1-12"C.B.x36#x 16'-0" For BB1
{ 1- do x 14'-0" " BB2

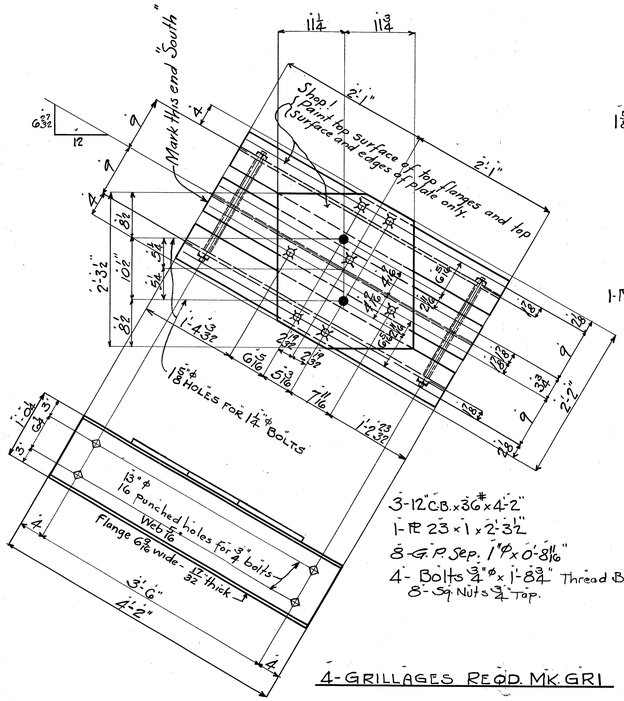


2-BOLSTER BEAMS REQD. MK BB1
2- " " " " BB2



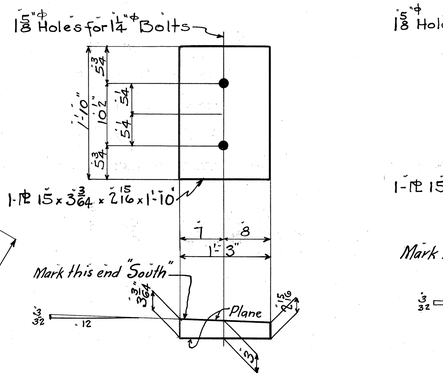
3-12 CB x 36# x 4'-2"
1-Pl 20"x 1"x 2'-1 9/16"
1-Bar 3"x 2 3/4"x 1'-5 13/16" abt
1-Bar 3"x 2 3/4"x 1'-7 15/16" abt
8-G.P.Sep. 1"ϕ x 0'-8 1/16"
4-Bolts 3/4"ϕ x 1'-8 1/2" (Thread both ends)
8-Sq. Nuts 3/4" Top.

4-GRILLAGES REQD. MK GR2

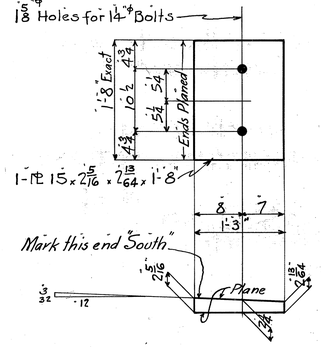


3-12"CB.x36#x4'-2"
1-Pl 23"x 1"x 2'-3 1/2"
8-G.P.Sep. 1"ϕ x 0'-8 1/16"
4-Bolts 3/4"ϕ x 1'-8 3/4" Thread Both Ends.
8-Sq Nuts 3/4" Top.

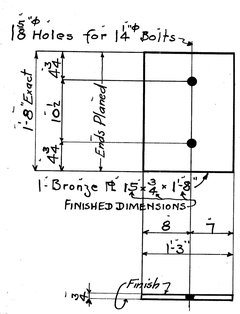
4-GRILLAGES REQD. MK GR1



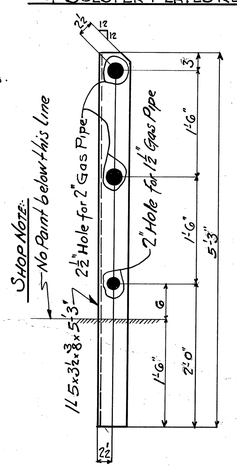
4-BOLSTER PLATES REQD MK BP1



4-BOLSTER PLATES REQD. MK BP3



4-BRONZE PLATES REQD. MK BP2 { BRONZE TO BE CLASS B OF THE STD SPECIFICATIONS OF THE A.S.T.M. SERIAL DESIGNATION B22-21



2-RAILING POSTS REQD AS SHOWN MK RP1R
2- " " " OPP HAND " RP1L

GENERAL NOTE

SPECIFICATIONS. N.Y.C. LINES FOR STEEL RAILROAD BRIDGES OF 1917
RIVETS 7/8" DIAM.
HOLES FOR 7/8 RIVETS IN METAL OVER 3/4" THICK TO BE DRILLED 15/16" EXCEPT AS NOTED.
ALL OTHER HOLES FOR 7/8 RIVETS TO BE PUNCHED 13/16" (NO REAMING REQUIRED)
SHOP PAINT. ONE COAT N.Y.C. STD. RED LEAD. (SEE NOTES ON DETAILS FOR PARTS WHICH ARE TO BE PAINTED.)
MACHINE FINISHED SURFACES TO BE COATED WITH HEAVY LUBRICATING GREASE.

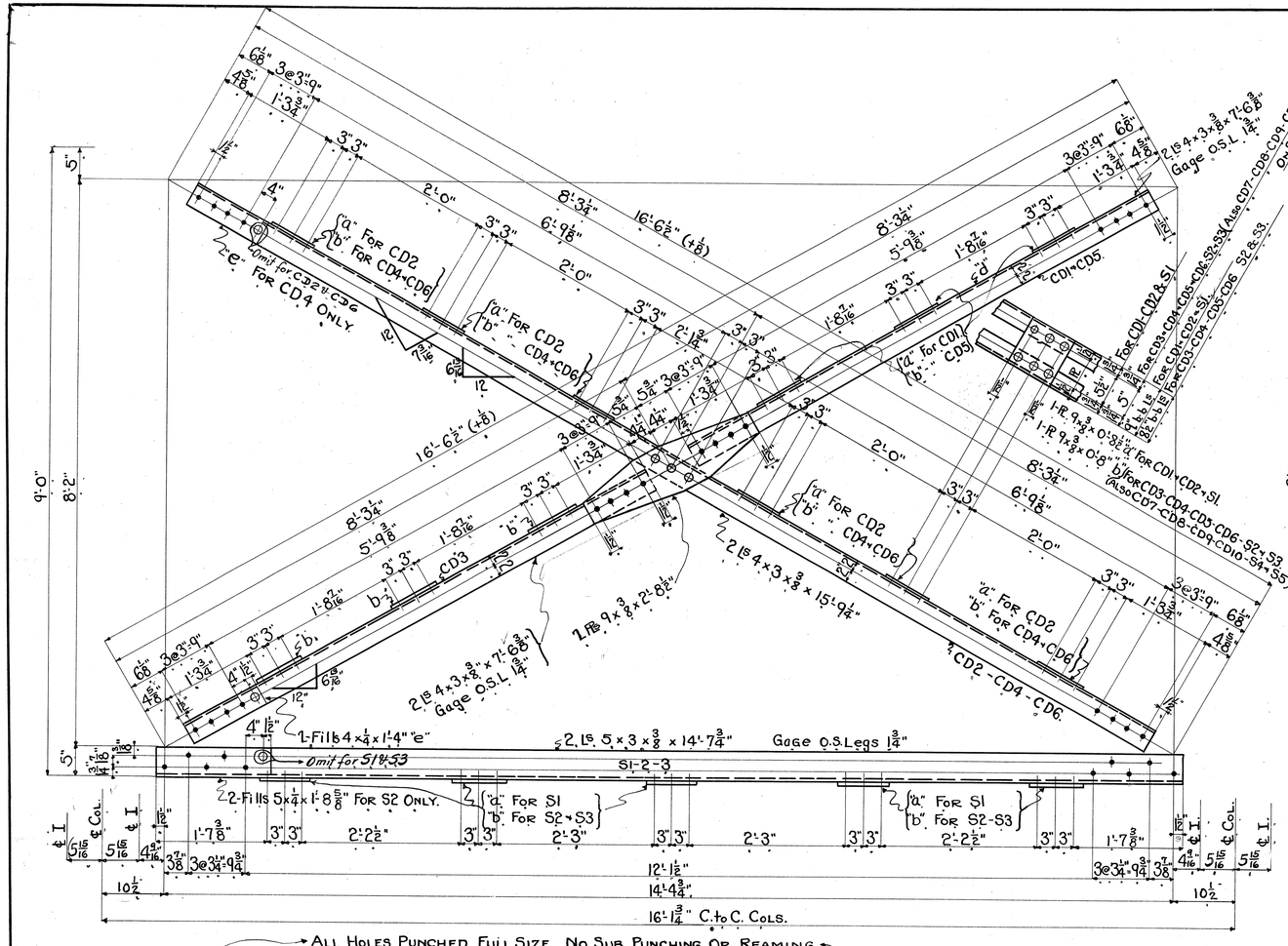
N.Y.C. & ST. L. R.R. (NICKEL PLATE)
HIGH LEVEL TEAM YARD LEAD BRIDGE No 182.48
OVER CLEVELAND UNION TERM. CO. TRACKS. CLEV. OHIO
DETAIL OF BOLSTER BEAMS - GRILLAGE - ETC
MADE BY E.L.M's CHECKED BY [illegible] DATE 11/21/28
RIVETS DIAM. OPEN HOLE DIAM. | UNLESS OTHERWISE NOTED

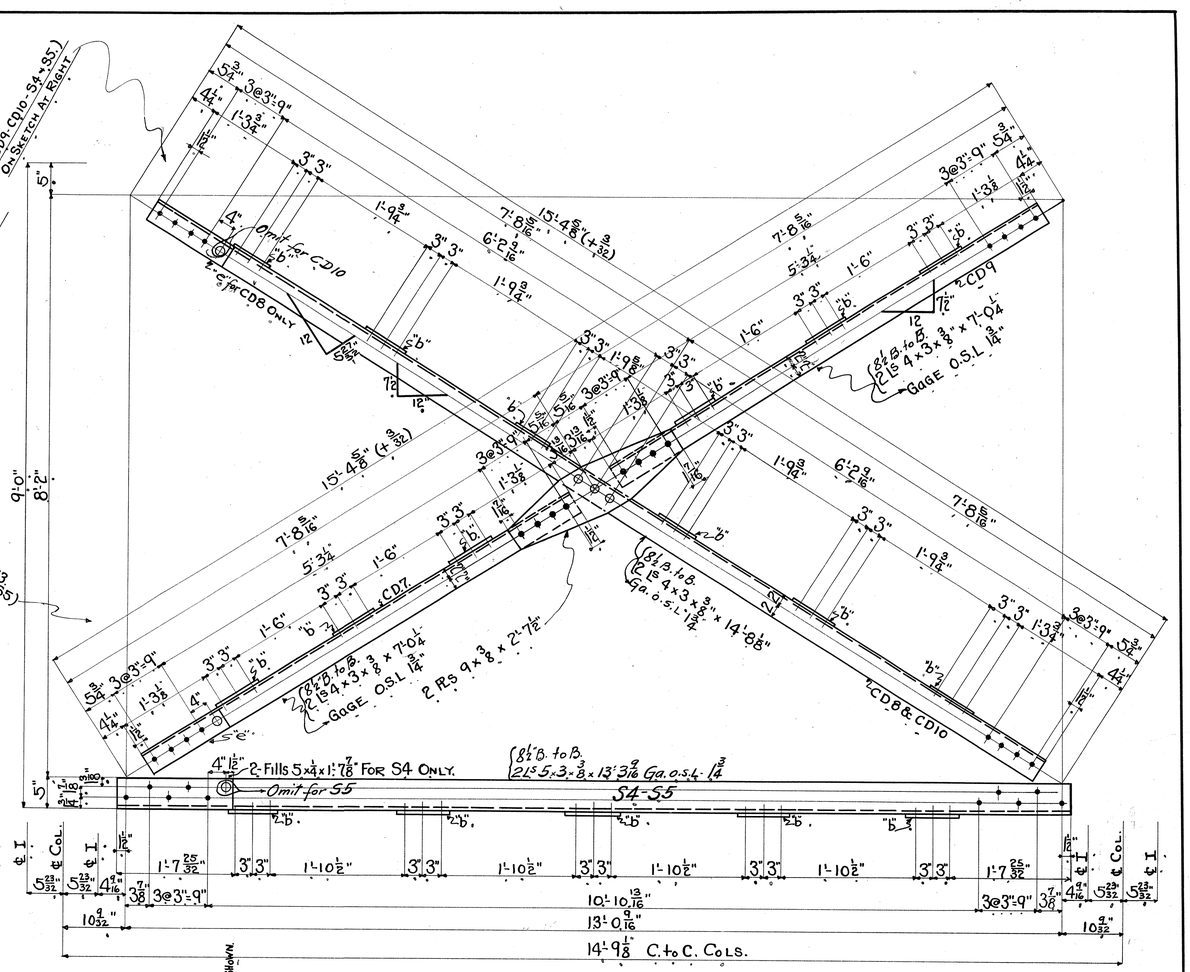
FORT PITT BRIDGE WORKS
CANONSBURG, PA.

APP [illegible]
CONTRACT C - 5567
BILL PGES 2
DRAWING NO. 1
BILLED BY

NS 183-96-291

ViewBB For C1-C2-C3 and C4
ViewBB For C5-C6-C7 and C8
ViewBB For C9-C10-C11 and C12
ViewBB For C13-C14-C15 and C16
1-Pl. 26 × 7/8 × 2'-8" Planed both sides from 1"
1-Pl. 22 × 7/8 × 2'-8" Planed both sides from 1"
3" × 4 1/2" Holes for Grout
1 1/16" ø Holes for 1" bolts
Mark this end of Cap Pl. "North" for C2 & C3
Mark this end of Cap Pl. "North" for C10 & C11
1-L 6 × 3 1/2 × 5/8 × 1'-0"
1-Pl. 16 × 3/8 × 1'-4 5/8" "b" For C2-C3-C4, C6-C7-C8-C10-C11 and C12
1-Pl. 16 × 3/8 × 1'-3 7/8" "a" For C14-C15 and C16
Omit Pl. for C1-C5-C9 and C13
Omit for C1-C5-C9 and C13
1-Bent Pl. 12 × 3/8 × 1'-9"
For all Bent Pls.
FACE "A"
FACES "D" and "B"
FACE "C"
SECTION A-A
Top of Masonry to top of Cap Pl.
Elev. Top of Masonry 57'-0" (Bott. of Slab)
O. to O. of Finished Col.
Milled Length
MILL
Face "C" same as Face "A" for each respective column except as shown and noted.
Base Material
1-Pl. 25 × 7/8 × 2'-2 1/2" C1 to C9 incl & C12
1-Pl. 26 × 7/8 × 2'-2 1/2" C10-C11
1-Pl. 25 × 7/8 × 2'-3 1/2" C13-C16
1-Pl. 26 × 7/8 × 2'-3 1/2" C14-C15
4 Ls 6 × 3 1/2 × 5/8 × 1'-0"
Plane both sides from 1"
1 5/8" ø Holes for 1 1/4" ø Anchor Bolts
MAIN MATERIAL
2-CBs. -12" @ 120# × 27'-7 3/8" For C1
2- " -12" @ 140# × 27'-6 1/4" " C2
2- " " " " × 27'-5 1/8" " C3
2- " -12" @ 120# × 27'-4" " C4
2- " -12" @ 110# × 27'-5 1/2" " C5
2- " " " " × 27'-4 3/8" " C6
2- " " " " × 27'-3 1/4" " C7
2- " " " " × 27'-2 1/8" " C8
2- " -12" @ 140# × 27'-2 1/2" " C9
2- " -12" @ 150# × 27'-1 3/8" " C10
2- " " " " × 27'-0 1/4" " C11
2- " -12" @ 140# × 26'-11 1/8" " C12
2- " " " " × 26'-8" " C13
2- " -12" @ 150# × 26'-7" " C14
2- " " " " × 26'-6" " C15
2- " -12" @ 140# × 26'-5" " C16
1-Column Reqd. Mk. C1 … C16
No Paint except for assembling
Washer 3" ø × 3/8 - 1 5/16" hole
Hex Nut
1 1/4" ø × 1'-6" Swedged
3" Thd.
80 Anchor Bolts {64 for Columns, 16 for Girders}
1-Slab 40 × 4 3/8 × 3'-4" Plane Top from 4 1/2"
1 5/8" ø Holes for 1 1/4" ø Bolts
Mark near side "Top"
℄ Slab to be scribed on top of slab in shop
℄ Pier to be scribed on top of slab in shop
12-Column Slabs Reqd. Mk. CS1
4- " " " CS2
No Paint
SPECIFICATIONS—N. Y. C. LINES FOR STEEL RAILROAD BRIDGES OF 1917.
SHOP AND FIELD RIVETS—7/8" DIAM.
HOLES FOR SHOP RIVETS IN METAL 3/4" THICK AND UNDER TO BE PUNCHED 11-16" DIAM AND REAMED TO 15-16" DIAM.
HOLES FOR SHOP RIVETS IN METAL OVER 3/4" THICK TO BE DRILLED 11-16" AND REAMED TO 15-16" DIAM.
HOLES FOR FIELD RIVETS IN METAL 3-4 THICK AND UNDER TO BE PUNCHED 11-16" AND REAMED TO 15-16" EXCEPT AS NOTED.
HOLES FOR FIELD RIVETS IN METAL OVER 3/4" THICK TO BE DRILLED 11-16" AND REAMED TO 15-16" DIAM.
HOLES IN LATERAL PLATES [illegible] TO BE PUNCHED 15-16".
SHEARED EDGES OF MATERIAL OVER 1/4" IN THICKNESS AND CARRYING CALCULATED STRESS SHALL BE PLANED TO A DEPTH OF 3-16".
SHOP PAINT—N. Y. C. STANDARD RED LEAD.
SURFACES IN CONTACT TO RECEIVE ONE COAT OF PAINT ON EACH SURFACE BEFORE ASSEMBLING.
MACHINE FINISHED SURFACES TO BE COATED WITH HEAVY LUBRICATING GREASE.
ALL OTHER SURFACES TO RECEIVE ONE COAT OF PAINT, EXCEPT THOSE IN CONTACT WITH CONCRETE WHICH ARE NOT TO BE PAINTED. (SEE NOTES ON DETAILS).
ERECTION MARKS TO BE PLACED ON PAINTED SURFACES.
MEMBERS WEIGHING OVER 5 TONS SHALL HAVE THE WEIGHT MARKED THEREON.
except in lat. pls.
No other paint.
N.Y.C. and St.L.R.R. (Nickel Plate)
High Level Team Yard Lead Bridge No 182.48
Over Cleveland Union Term. Co. Tracks. Cleveland O.
Details of Columns C1 to C16 incl.
MADE BY R.E.S. CHECKED BY DATE 12-20-28
RIVETS DIAM.
OPEN HOLE DIAM.
UNLESS OTHERWISE NOTED
FORT PITT BRIDGE WORKS
CANONSBURG, PA.
CONTRACT C-5567
BILL PGES 12-13
DRAWING NO. 2
H.M. NS 183-96-291





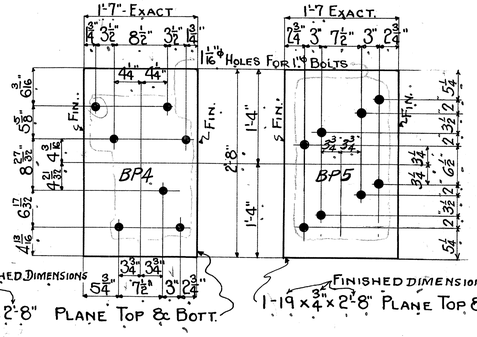
ALL HOLES PUNCHED FULL SIZE. NO SUB PUNCHING OR REAMING.

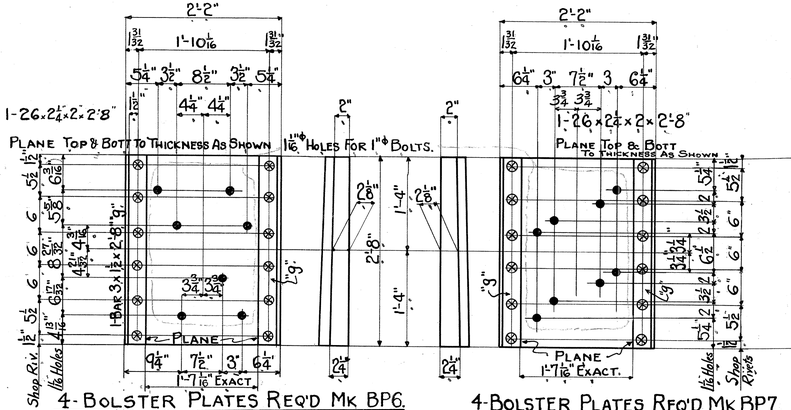
12 - COLUMN DIAGONALS REQ'D MK CD1.	
6 - " " " " CD2.	
2 - " " " " CD3.	
2 " " " " CD4.	No Paint except for assembling
4 " " " " CD5.	
1 " " " " CD6.	

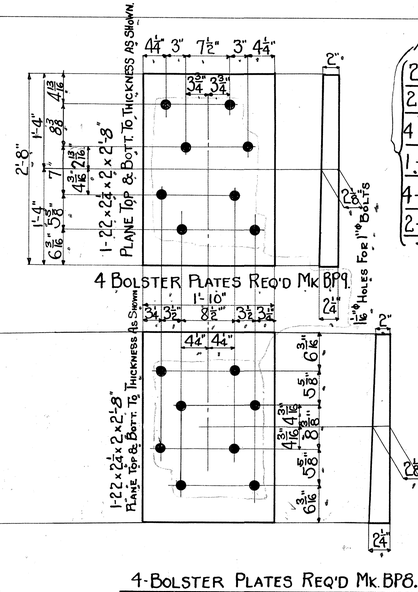
12 - STRUTS REQ'D MK. S1.	
4 - " " " S2.	No Paint except for assembling
2 - " " " S3.	

ALL HOLES PUNCHED FULL SIZE-NO SUB-PUNCHING OR REAMING.

2 - COLUMN DIAGONALS REQ'D MK CD7.	
2 - " " " CD8.	
4 - " " " CD9.	No Paint except for assembling.
1 - " " " CD10.	
4 - STRUTS REQ'D MK S4.	
2 - " " " S5.	







4 - BRONZE PLATES REQ'D MK. BP4. 4 BRONZE PLATES REQ'D MK. BP5.

BRONZE TO BE CLASS "B" OF THE STANDARD SPECIFICATIONS OF THE A.S.T.M, SERIAL DESIGNATION B22-21.

4 - BOLSTER PLATES REQ'D MK BP6.

4 - BOLSTER PLATES REQ'D MK BP7.

4 - BOLSTER PLATES REQ'D MK BP8.

4 BOLSTER PLATES REQ'D MK BP9.

END VIEWS FOR BP6+BP7.

— General Note —

Spec. - N.Y.C. Lines for Steel R.R. Bridges of 1917.
Shop & Field Rivets ⅞ diam.
Holes for Shop & field rivets in metal over ¾" thick to be drilled 1 1/16 and reamed to 1 5/16 except where noted otherwise.
Holes for Shop & field rivets in metal less than ¾" thick to be punched 1 5/16 except where noted otherwise.
Shop Paint - N.Y.C. Std. Red Lead - Surfaces in contact to receive one coat on each surface before assembling. Machine finished surfaces to be coated with heavy lubricating grease. All other surfaces to receive one coat (except as noted)

N.Y.C. & St. L. R.R. (NICKEL PLATE)

HIGH LEVEL TEAM YARD LEAD - BRIDGE N° 182.48

OVER CLEVELAND UNION TERM. CO. TRACKS - CLEVELAND, O.

DETAIL OF BRACING & BOLSTER PLATES

MADE BY R.F.S. CHECKED BY CWLS. DATE 12-24-28

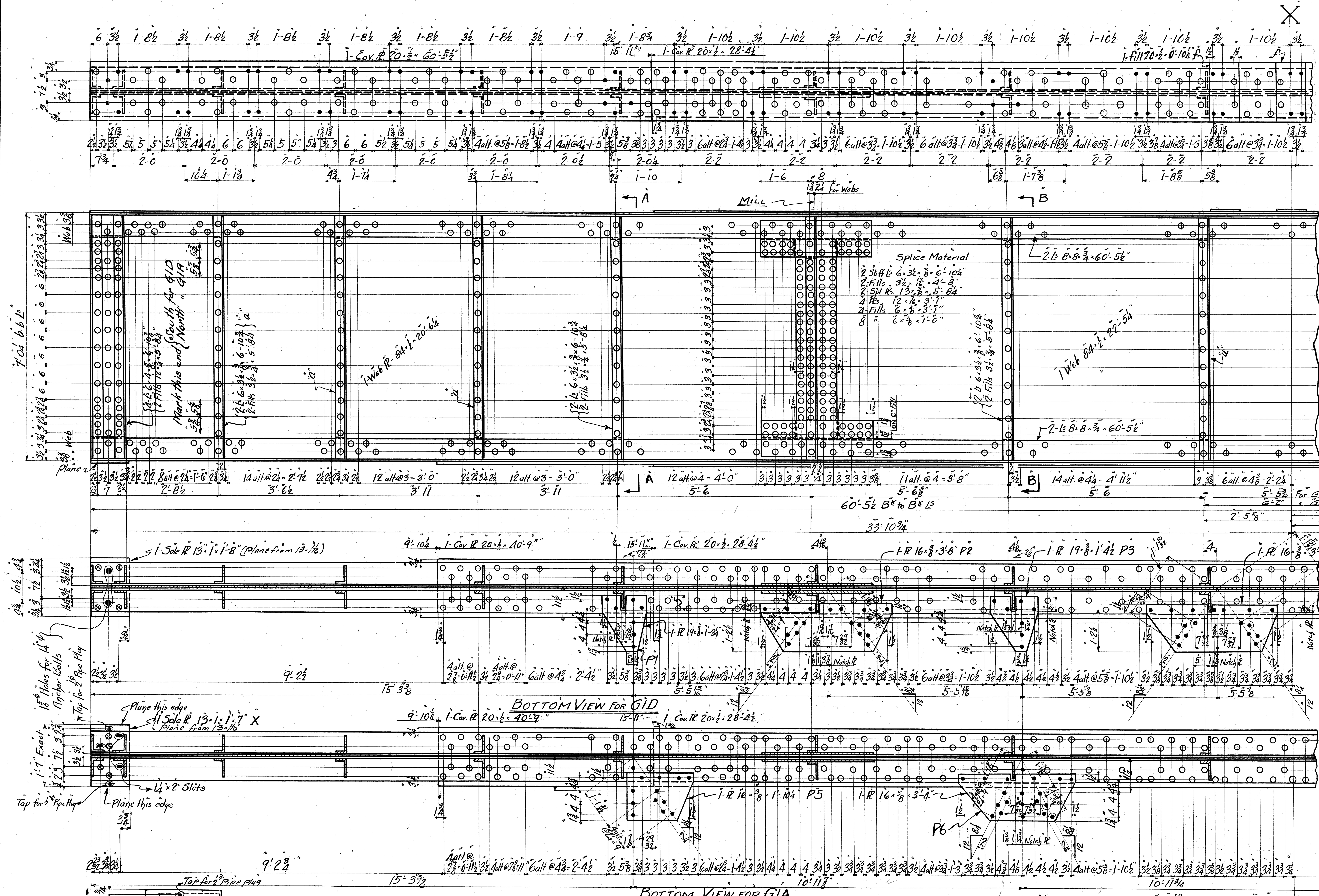
RIVETS ____ DIAM. | UNLESS OTHERWISE NOTED
OPEN HOLE ____ DIAM.

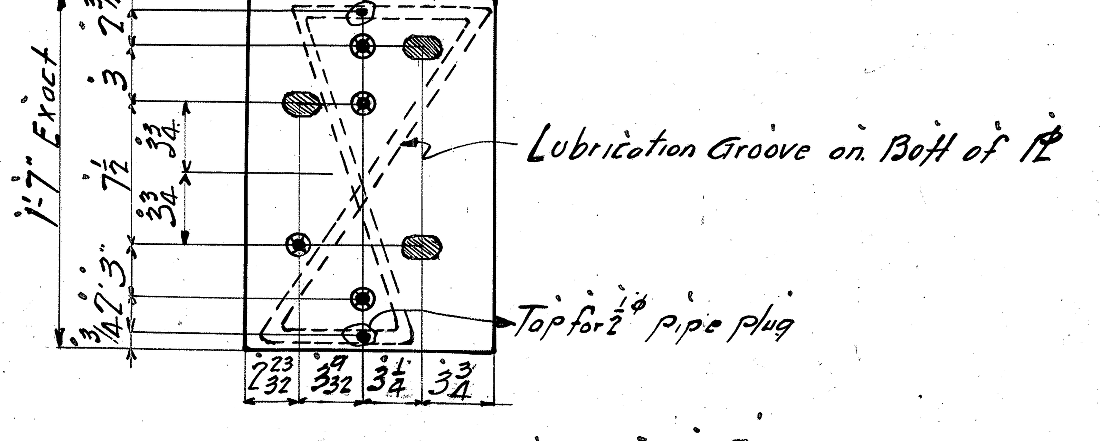
FORT PITT BRIDGE WORKS

CANONSBURG, PA.

APP'D 1/16
CONTRACT C - 5567.
BILL PGES 14-15
BILLED ____ BY ____
DRAWING NO. 3

NS 183-96-291





ENLARGED DETAIL OF Pl X
Showing Lubrication Groove

1-GIRDER REQD Mk G1D
1- " " " G1A

1-Lateral Plate Req'd Mk P1 ✓
1- " " " " P2 ✓
1- " " " " P3 ✓
1- " " " " P4 ✓
1- " " " " P5 ✓
1- " " " " P6 ✓

NOTE-
This dwg. to be used in Conjunction with dwg. No. 5
Line X-X corresponds to Line X-X on dwg No. 5
For Sections A-A & B-B see dwg. No. 5

Note to Shop!
Holes in top flange of girder, for beam connections, to be reamed out to a template which will fit the beams.

SPECIFICATIONS—N. Y. C. LINES FOR STEEL RAILROAD BRIDGES OF 1917.
SHOP AND FIELD RIVETS—7/8" DIAM.
HOLES FOR SHOP RIVETS IN METAL 3/4" THICK AND UNDER TO BE PUNCHED 11-16" DIAM AND REAMED TO 15-16" DIAM.
HOLES FOR SHOP RIVETS IN METAL OVER 3/4" THICK TO BE DRILLED 11-16" AND REAMED TO 15-16" DIAM.
HOLES FOR FIELD RIVETS IN METAL 3-4 THICK AND UNDER TO BE PUNCHED 11-16" AND REAMED TO 15-16" EXCEPT AS NOTED.
HOLES FOR FIELD RIVETS IN METAL OVER 3/4" THICK TO BE DRILLED 11-16" AND REAMED TO 15-16" DIAM.
HOLES IN LATERAL PLATES AND OUTLEGS OF STIFFENER ANGLES TO BE PUNCHED 15-16".
SHEARED EDGES OF MATERIAL OVER 1/2" IN THICKNESS AND CARRYING CALCULATED STRESS SHALL BE PLANED TO A DEPTH OF 3-16".
SHOP PAINT—N. Y. C. STANDARD RED LEAD.
SURFACES IN CONTACT TO RECEIVE ONE COAT OF PAINT ON EACH SURFACE BEFORE ASSEMBLING.
MACHINE FINISHED SURFACES TO BE COATED WITH HEAVY LUBRICATING GREASE.
ALL OTHER SURFACES TO RECEIVE ONE COAT OF PAINT, EXCEPT THOSE IN CONTACT WITH CONCRETE WHICH ARE NOT TO BE PAINTED. (SEE NOTES ON DETAILS).
ERECTION MARKS TO BE PLACED ON PAINTED SURFACES.
MEMBERS WEIGHING OVER 5 TONS SHALL HAVE THE WEIGHT MARKED THEREON.

N.Y.C. & St. L. R.R. (NICKEL PLATE)
HIGH LEVEL TEAM YARD LEAD BRIDGE No. 182.48
OVER CLEVELAND UNION TERM. Co. TRACK - CLEVELAND, O.
DETAILS OF GIRDERS G1D & G1A

MADE BY L.D.R. CHECKED BY E.G.R. DATE 12-21-28
RIVETS See DIAM. | UNLESS OTHERWISE NOTED.
OPEN HOLES Note DIAM.

FORT PITT BRIDGE WORKS
CANONSBURG, PA

APP
CONTRACT C-5567
BILL PAGES 3-4-5
BILLED 12-31-28 BY D.B.S.
DRAWING NO. 4

D.B.S. NS 183-96-291

Omit for GIA

Omit for GID

1-Fill 20-½-0-9⅞

1-Fill 20-½-0-10

1-Fill 20-½-0-10¼

2-Fills 20-½-1-0⅝

2-Fills 20-½-0-11

2-Fills 20-½-0-11⅛

2-Fills 20-½-0-10½

1-Fill 20-½-0-10¼

1-Fill 20-½-0-10

7 spaces @ 1'-10½" = 12'-10½"

6 spaces @ 1'-10½" = 10'-7½"

5 spaces @ 1'-10½" = 8'-9½"

4 spaces @ 1'-10½" = 7'-1½"

3 spaces @ 1'-10½" = 5'-3½"

6 spaces @ 1'-8¾" = 9'-11"

7 spaces @ 1'-10½" = 12'-10½"

6 spaces @ 1'-10½" = 10'-7½"

5 spaces @ 1'-10½" = 8'-9½"

4 spaces @ 1'-10½" = 7'-1½"

3 spaces @ 1'-10½" = 5'-3½"

6 spaces @ 1'-8¾" = 9'-11"

Mill

For Web

1'-7⅞"

6⅝"

1'-9"

5"

1'-4"

10"

1'-0"

SPLICE MATL.

2 Stiff Lrs 6"×3½"×⅜"×6'-10¾"

2 fills 3½"×13/16"×4'-8"

2 Spl Pls 13"×⅜"×5'-8½"

4 Pls 12"×7/16"×3'-1"

4 fills 6"×⅜"×3'-1"

8 " 6"×⅜"×1'-0"

Omit for GID

2 Lrs 6"×3½"×⅜"×6'-10¾"

2 Fills 3½"×¾"×5'-8½"

For GIA

For GID

2 Lrs 6"×3½"×⅜"×6'-10¾"

2 fills 3½"×¾"×5'-8½"

Omit for GIA

1 Web PL ⅜"×4'-2"×17'-6"

2 Lrs 6"×3½"×⅜"×6'-10¾"

2 fills 3½"×¾"×5'-8½"

7'-0¼" b.b. P

6'-10" b.b. C.F. Pls

7'-0¼" b.b. P

Web

6 spaces @ 2'-8" = 2'-2⅜"

7 alt @ 4⅜ = 2'-4⅞"

11 alt @ 4" = 3'-8"

10 alt @ 4" = 3'-4"

15 alt @ 3" = 3'-9"

4'-5⅞"

16 alt @ 2⅛" = 3'-0"

3'-11"

8 alt @ 2⅛" = 1'-6"

2'-0⅛"

7"

33'-10¾"

26'-6¾"

60'-5½" Bk to Bk Pls

For GID

" GIA

3'-0⅝"

3'-3⅜"

4⅞"

9'-10¼"

Placed from 13-1/16

1 Sole PL 13"×1"×1'-7"

Plane this edge

Tap for ½¢ Pipe Plug

Notch PL

P7

P8

P9

P10

P11

P12

1-PL 19"×⅜"×1'-2½"

1-PL 16"×⅜"×3'-2"

1-PL 14"×⅜"×1'-2½"

1¼"×2 Slots P23

3'-2⅝"

1'-7¾"

1'-0"

1'-2⅜"

Plane this edge

Tap for ½¢ Pipe Plug

Placed from 13-1/16

1 Sole PL 13"×1"×1'-8"

7"

6

Notch PL

1-PL 16"×⅜"×2'-7½"

1-PL 16"×⅜"×2'-11½"

18 ¢ Holes for 1¼" Anch. Bolts P24

7'-7⅝"

10'-11¾"

3'-2½"

10'-11⅞"

1'-2⅜"

7'-9½"

BOTTOM VIEW FOR GID

BOTTOM VIEW FOR GIA

X

X

1-Lateral Plate Reqd Mk P7

1 " " " " P8

1 " " " " P9

1 " " " " P10

1 " " " " P11

1 " " " " P12

NOTE

- This dwg to be used in conjunction with dwg No 4.
- Line X-X on this dwg corresponds to Line X-X on dwg No 4.

Note to Shop!
Holes in top flange of girder, for beam connections, to be reamed out to a template which will fit the beams.

Omit holes for P23

Cut on dotted lines for P23

1-PL 20"×⅞"×1'-5"

2-LATERAL PLATES REQ'D MK P23

2 " " " " P24

Tap for ½¢ Pipe Plug

Lubrication Groove on Bott of Rl.

Tap for ½¢ Pipe Plug

Enlarged detail of Rl "X"
Showing Lubrication Groove.

4½

¾ Ga

SECTION C-C

" D-D

SECTION A-A

" B-B

SPECIFICATIONS—N. Y. C. LINES FOR STEEL RAILROAD BRIDGES OF 1917.
SHOP AND FIELD RIVETS—⅞" DIAM.
HOLES FOR SHOP RIVETS IN METAL ¾" THICK AND UNDER TO BE PUNCHED 11-16" DIAM AND REAMED TO 15-16" DIAM.
HOLES FOR SHOP RIVETS IN METAL OVER ¾" THICK TO BE DRILLED 11-16" AND REAMED TO 15-16" DIAM.
HOLES FOR FIELD RIVETS IN METAL ¾ THICK AND UNDER TO BE PUNCHED 11-16" AND REAMED TO 15-16" EXCEPT AS NOTED.
HOLES FOR FIELD RIVETS IN METAL OVER ¾" THICK TO BE DRILLED 11-16" AND REAMED TO 15-16" DIAM.
HOLES IN LATERAL PLATES AND OUTLEGS OF STIFFENER ANGLES TO BE PUNCHED 15-16".
SHEARED EDGES OF MATERIAL OVER ¾" IN THICKNESS AND CARRYING CALCULATED STRESS SHALL BE PLANED TO A DEPTH OF 3-16".
SHOP PAINT—N. Y. C. STANDARD RED LEAD.
SURFACES IN CONTACT TO RECEIVE ONE COAT OF PAINT ON EACH SURFACE BEFORE ASSEMBLING.
MACHINE FINISHED SURFACES TO BE COATED WITH HEAVY LUBRICATING GREASE.
ALL OTHER SURFACES TO RECEIVE ONE COAT OF PAINT, EXCEPT THOSE IN CONTACT WITH CONCRETE WHICH ARE NOT TO BE PAINTED. (SEE NOTES ON DETAILS).
ERECTION MARKS TO BE PLACED ON PAINTED SURFACES.
MEMBERS WEIGHING OVER 5 TONS SHALL HAVE THE WEIGHT MARKED THEREON.

N. Y. C. & St. L. R. R. (NICKEL PLATE)
HIGH LEVEL TEAM YARD LEAD BRIDGE No 18248
OVER CLEVELAND UNION TERM. CO. TRACK - CLEVELAND, O.
DETAILS OF GIRDER GID & GIA

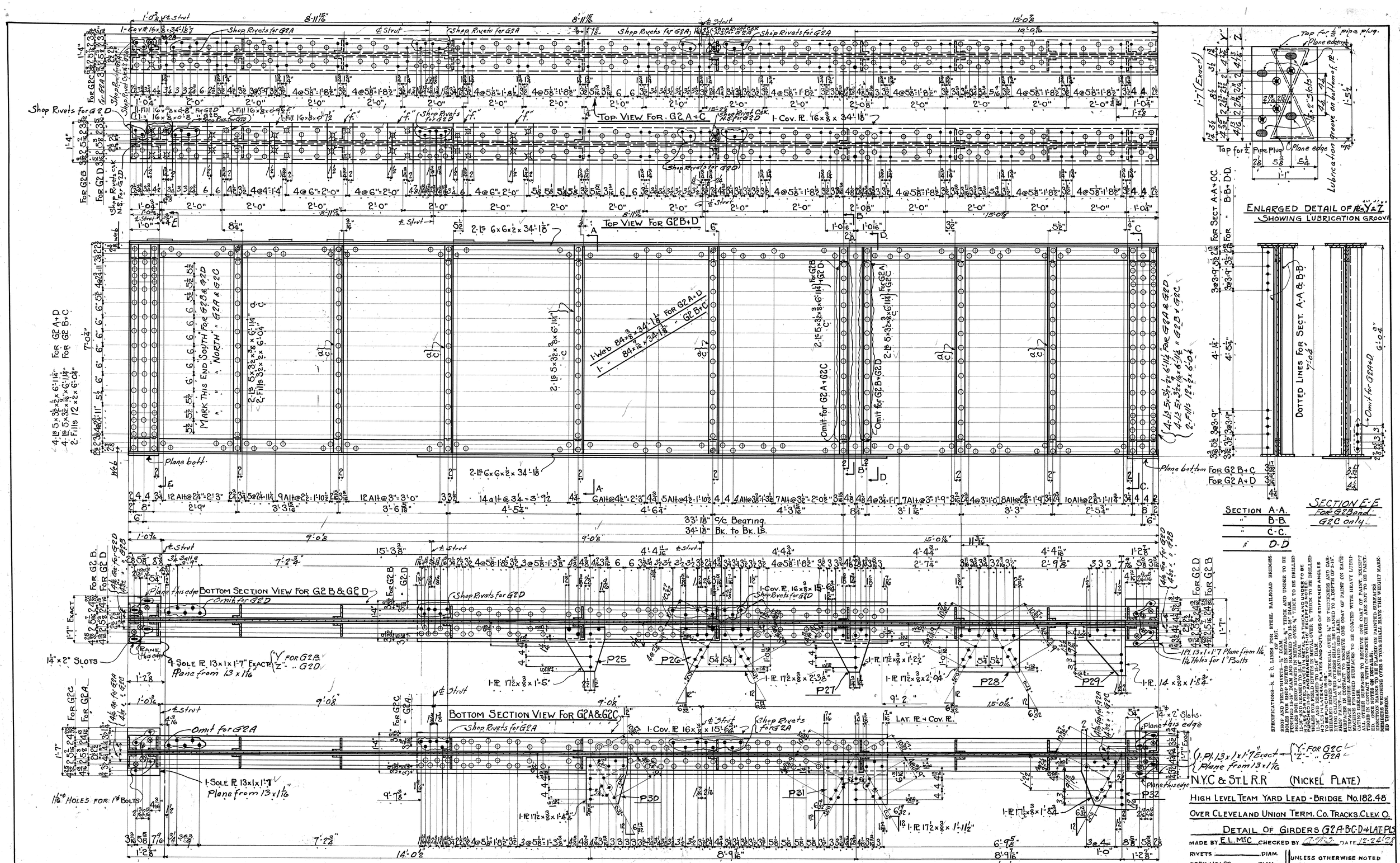
MADE BY L.D.R. CHECKED BY E.G.R. DATE 12-28-28
RIVETS See DIAM. | UNLESS OTHERWISE NOTED.
OPEN HOLES Note DIAM.

FORT PITT BRIDGE WORKS
CANONSBURG, PA

W APP 12/5
F S 1/30
E R
BILLED 12-31-28 BY D.B.S.

CONTRACT C-5567
BILL PAGES 3-4-5
DRAWING No 5

D.B.S.
NS 183-96-29



2-Lateral Plate Req'd. Mk P25	2-Lateral Plate Req'd Mk P29
2- " " " " P26	2- " " " " P30
2- " " " " P27	2- " " " " P31
2- " " " " P28	2- " " " " P32

1-Girder Req'd Mk. G2 A.
1- " " " G2 B.
1- " " " G2 C.
1- " " " G2 D.

Note to Shop!
Holes in top flange of girders, for beam connections, to be reamed out to a template which will fit the beams.

SPECIFICATIONS—N. Y. C. LINES FOR STEEL RAILROAD BRIDGES OF 1917.

SHOP AND FIELD RIVETS—¾" DIAM.
HOLES FOR SHOP RIVETS IN METAL ¾" THICK AND UNDER TO BE PUNCHED 11-16" DIAM. AND REAMED TO 15-16" DIAM.
HOLES FOR SHOP RIVETS IN METAL OVER ¾" THICK TO BE DRILLED 11-16" AND REAMED TO 15-16" DIAM.
HOLES FOR FIELD RIVETS IN METAL 3-4 THICK AND UNDER TO BE PUNCHED 11-16" AND REAMED TO 15-16" EXCEPT AS NOTED.
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SHEARED EDGES OF MATERIAL OVER ½" IN THICKNESS AND CARRYING CALCULATED STRESS SHALL BE PLANED TO A DEPTH OF 3-16".
SHOP PAINT—N. Y. C. STANDARD RED LEAD.
SURFACES IN CONTACT TO RECEIVE ONE COAT OF PAINT ON EACH SURFACE BEFORE ASSEMBLING.
MACHINE FINISHED SURFACES TO BE COATED WITH HEAVY LUBRICATING GREASE.
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ERECTION MARKS TO BE PLACED ON PAINTED SURFACES.
MEMBERS WEIGHING OVER 5 TONS SHALL HAVE THE WEIGHT MARKED THEREON.

N.Y.C & St.L R.R (Nickel Plate)

High Level Team Yard Lead - Bridge No. 182.48
Over Cleveland Union Term. Co. Tracks. Clev. O.

Detail of Girders G2A-B-C-D & Lat. Pls

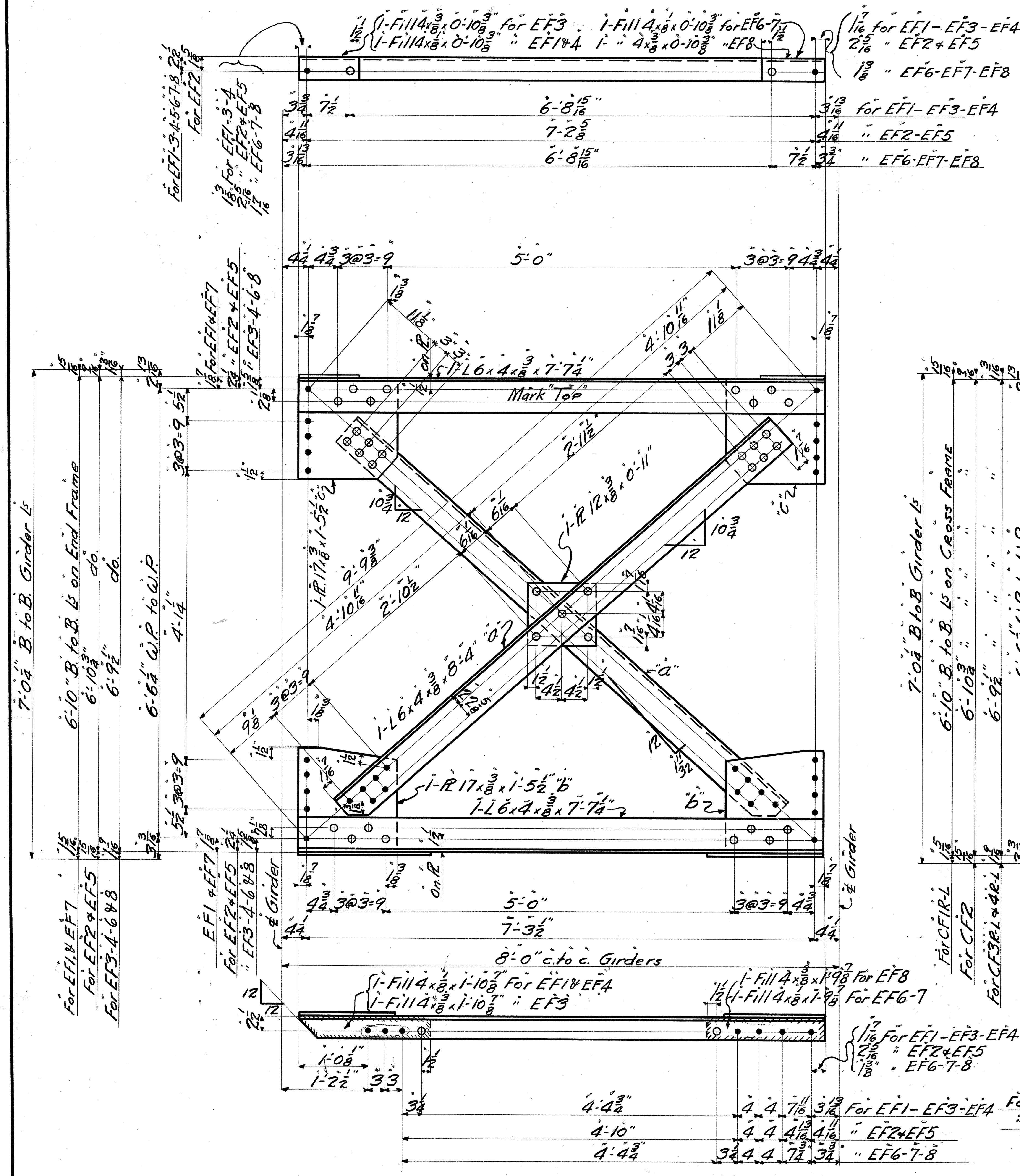
Made by E.L. McC Checked by A.W.S. Date 12-24-28
Rivets ____ Diam.
Open Holes ____ Diam.
Unless otherwise noted

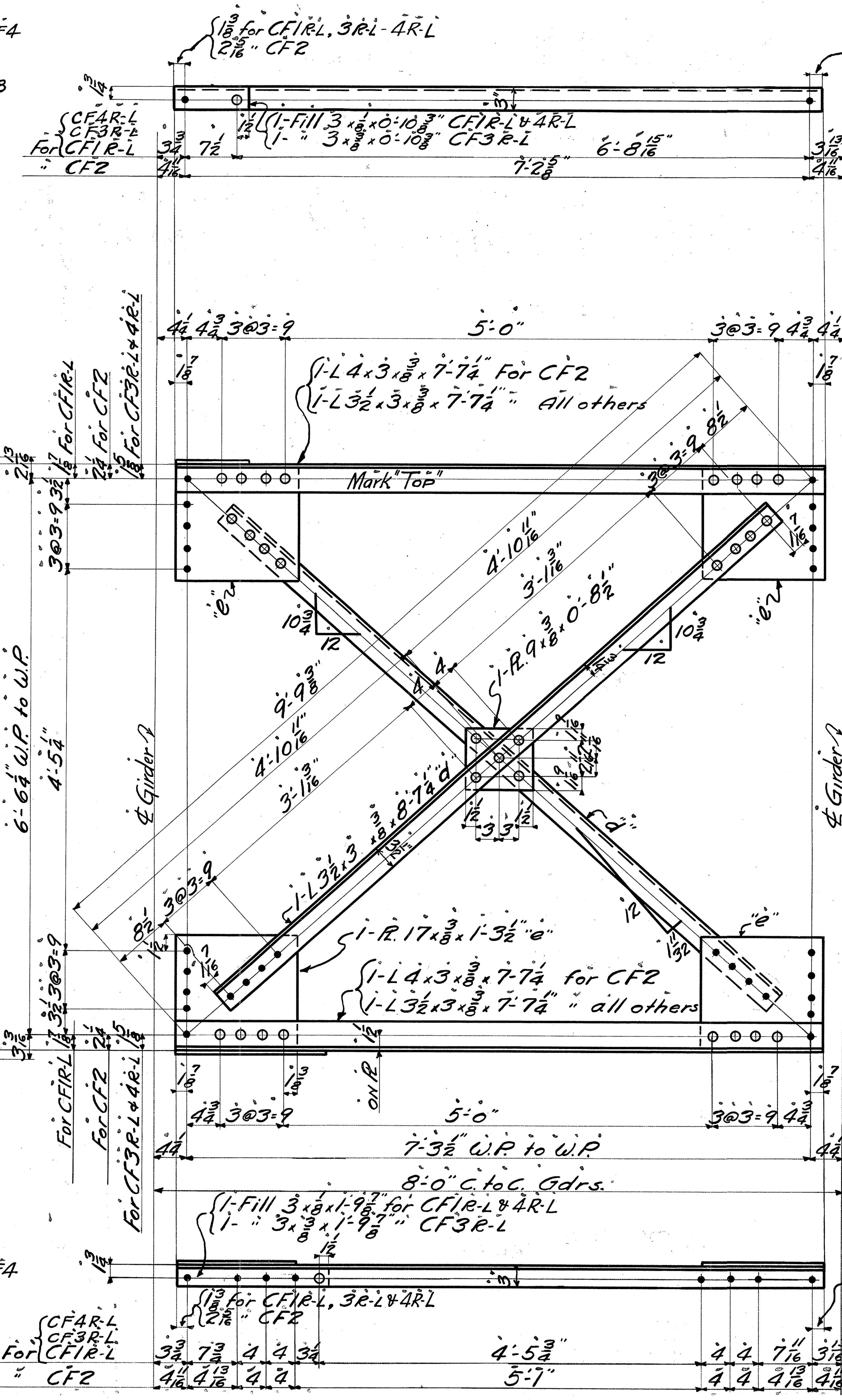
FORT PITT BRIDGE WORKS
Canonsburg, Pa.

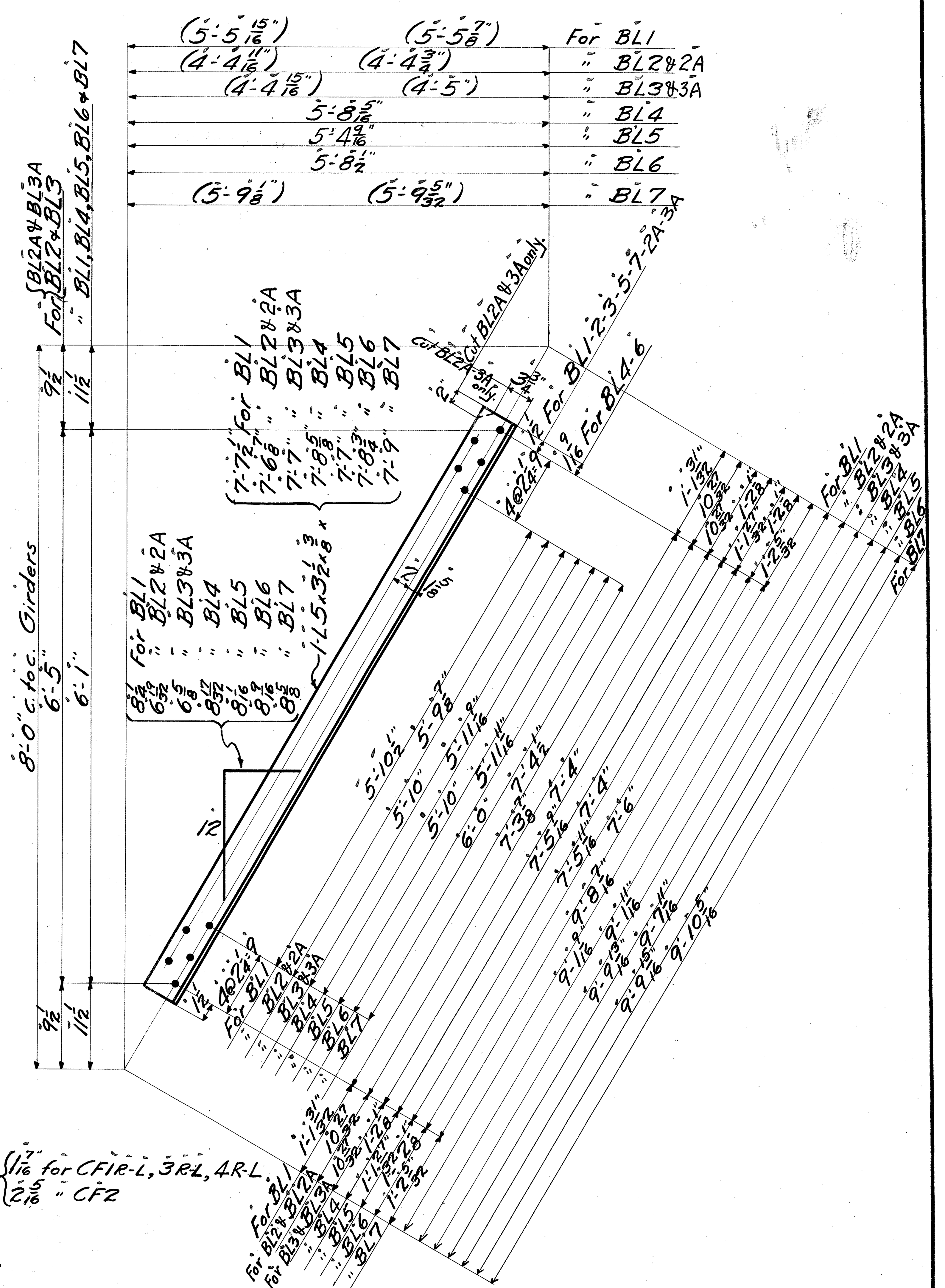
Contract C-5567
Bill Pages 8-9
Drawing No. 6
R.G.P.

Billed ____ By ____

NS 183-96-29







16-	BOTTOM LATERALS	REQ'D.		MK.	BL1
6-	"	"	"	"	BL2
6-	"	"	"	"	BL3
2-	"	"	"	"	BL4
10-	"	"	"	"	BL5
8-	"	"	"	"	BL6
16-	"	"	"	"	BL7
2-	"	"	"	"	BL2A
2-	"	"	"	"	BL3A

BL3, BL4, BL5 — Alike

Bolt together for Shipment

4-	END FRAMES	REQ'D.	AS SHOWN	MK.	EF1
4-	"	"	"	"	EF2
1-	"	"	"	"	EF3
1-	"	"	AS SHOWN	"	EF4
4-	"	"	AS SHOWN	"	EF5
1-	"	"	"	"	EF6
4-	"	"	"	"	EF7
1-	"	"	"	"	EF8

Bolt together for Shipment

6-	CROSS FRAMES	REQ'D.	AS SHOWN	MK.	CF1R
6-	"	"	OPP. HAND	"	CF1L
4-	"	"	AS SHOWN	"	CF2
2-	"	"	"	"	CF3R
2-	"	"	OPP. HAND	"	CF3L
2-	"	"	AS SHOWN	"	CF4R
2-	"	"	OPP. HAND	"	CF4L

General Note

Spec. - N.Y.C. Lines for Steel R.R. Bridges of 1917.
Shop & Field Rivets 7/8 diam.
Holes for shop & field rivets punched 15/16" diam.
Shop Paint - N.Y.C. Std. Red Lead
Surfaces in contact to receive one coat on each surface before assembling.
All other surfaces to receive one coat.
Erection marks to be placed on painted surfaces.

N.Y.C. & ST. L. R.R. (NICKEL PLATE)

HIGH LEVEL TEAM YARD LEAD - BRIDGE Nº 182.48

OVER CLEVELAND UNION TERM. CO. TRACKS - CLEVELAND, O.

Detail of Cross Frames & Bottom Laterals

MADE BY L.D.R. CHECKED BY E.G.R. DATE 1-23-29

RIVETS ______ DIAM. | OPEN HOLES ______ DIAM. || UNLESS OTHERWISE NOTED

FORT PITT BRIDGE WORKS

CANONSBURG, PA.

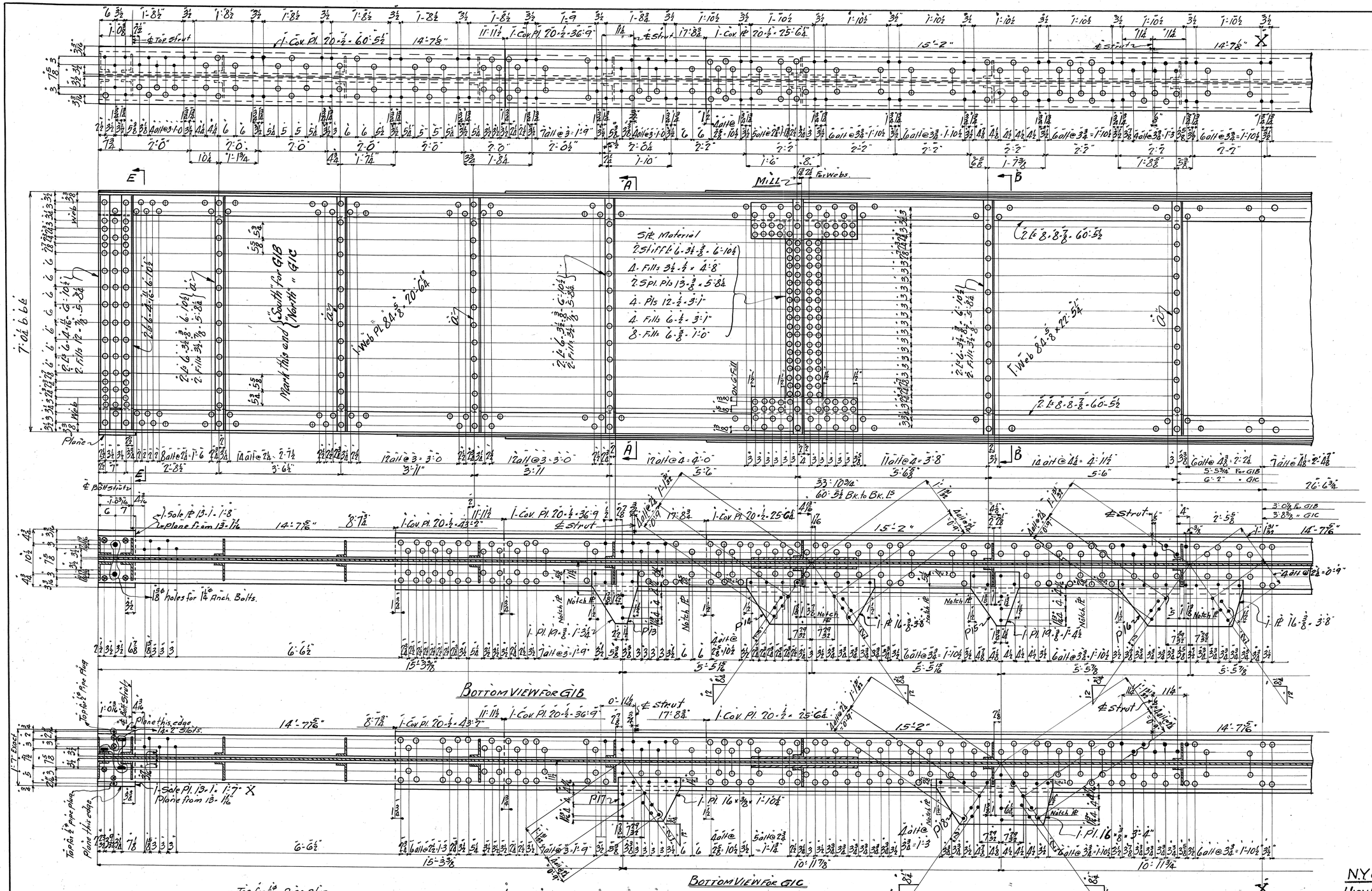
APP. / S / I / E — CONTRACT C-5567

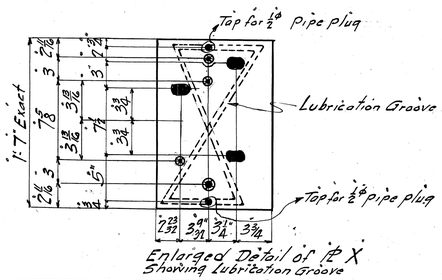
BILL PAGES 30-31

BILLED ____ BY ____ DRAWING NO. 7

Traced by W.N.P.

NS-183-96-29





Enlarged Detail of PL X
Showing Lubrication Groove

1-GIRDER REQD MK G1B
1 " " " G1C
1-LATERAL PLATE REQD MK P13
1- " " " " P14
1- " " " " P15
1- " " " " P16
1- " " " " P17
1- " " " " P18

SPECIFICATIONS—N. Y. C. LINES FOR STEEL RAILROAD BRIDGES OF 1917.
SHOP AND FIELD RIVETS—¾" DIAM.
HOLES FOR SHOP RIVETS IN METAL ¾" THICK AND UNDER TO BE PUNCHED 11-16" DIAM AND REAMED TO 15-16" DIAM.
HOLES FOR SHOP RIVETS IN METAL OVER ¾" THICK TO BE DRILLED 11-16" AND REAMED TO 15-16" DIAM.
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MEMBERS WEIGHING OVER 5 TONS SHALL HAVE THE WEIGHT MARKED THEREON.

Note:-
- This dwg to be used in conjunction with dwg No 9
- Line X-X corresponds to Line X-X on dwg No 9
- For Sections A-A + B-B see dwg No 9

Note to Shop!
Holes in top flange of girders, for beam connections, to be reamed out to a template which will fit the beams.

N.Y.C. & ST. L. R.R. (NICKEL PLATE)
HIGH LEVEL TEAM YARD LEAD BRIDGE No. 182.48
OVER CLEVELAND UNION TERM. CO. TRACKS CLEVELAND, O.
Details of Girders G1B + G1C + Lat. Pls. P13 to P18

MADE BY L.D.R. CHECKED BY E.G.R. DATE 12-26-28
RIVETS See DIAM. | UNLESS OTHERWISE NOTED
OPEN HOLES Note DIAM.

FORT PITT BRIDGE WORKS
CANONSBURG, PA.

APP.
CONTRACT C-5567
BILL PAGES 6-7
BILLED 12-31-28 BY D.B.S.
DRAWING NO 8
LD.R

NS 183-96-291

Omit these Stiffeners for G1C

Omit these Stiffeners for G1B

5 Pl. Material
2-Stiffs L 6 x 3½ x ⅜ x G-10½
4-Fills 3½ x ½ - 4'-8
2-Sp. Pls 13 x ⅜ - 5'-8¼
4-Pls 12 x ½ x 3'-1"
4-Fills G x ½ - 3'-1"
8 " G x ⅜ x 1'-0"

Omit for G1B

Omit for G1C

2-Fills 3½ x ⅞ - 5'-8¼ For G1C

For G1C

For G1B

For Web Mill

Plane

Plane this edge

Top for ½" Pipe plug

1-Sole Pl. 13 x 1-1/16 Exact

Plane from 13 - 1/16

1-Sole Pl. 13 x 1 x 1'-8"

18 - 1¼" holes for 1¼" Anch. Bolts

1-Lateral Plate Reqd Mk P19

1 " " " " P20

1 " " " " P21

1 " " " " P22

Bottom View for G1B

Bottom View for G1C

Section C-C
" D-D

Section A-A
" B-B
" E-E

For Sect E-E only

Lubrication Groove on Batt of Pt

Tap for ½" Pipe plug

Enlarged Detail of Pt "X"
Showing Lubrication Groove

Note:-
- This dwg to be used in conjunction with dwg No 8
- Line X-X corresponds to Line X-X on dwg No 8

Note to Shop!
Holes in top flanges of girders, for beam connections, to be reamed out to a template which will fit the beams.

SPECIFICATIONS—N. Y. C. LINES FOR STEEL RAILROAD BRIDGES OF 1917.
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HOLES FOR SHOP RIVETS IN METAL OVER ¾" THICK TO BE DRILLED 11-16" AND REAMED TO 15-16" DIAM.
HOLES FOR FIELD RIVETS IN METAL 3/4 THICK AND UNDER TO BE PUNCHED 11-16" AND REAMED TO 15-16" EXCEPT AS NOTED.
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MEMBERS WEIGHING OVER 5 TONS SHALL HAVE THE WEIGHT MARKED THEREON.

N.Y.C. & ST.L. R.R. (NICKEL PLATE)
HIGH LEVEL TEAM YARD LEAD BRIDGE NO 182.48
OVER CLEVELAND UNION TERMCO TRACK CLEVELAND OHIO
Detail of Girders G1B & G1C & Lat Pls P19 to P22

MADE BY L.D.R. CHECKED BY E.G.R. DATE 12-27-28
RIVETS See DIAM. | UNLESS OTHERWISE NOTED
OPEN HOLES Note DIAM.

FORT PITT BRIDGE WORKS
CANONSBURG, PA.
CONTRACT C-5567
BILL PAGES 6-7
DRAWING NO 9
L.D.R.

APP. 1/30
BILLED 12-31-28 BY D.B.E.

NS 182-96-19

TOP VIEW FOR G3A & G3C

TOP VIEW FOR G3B & G3D

BOTTOM SECTION VIEW FOR G3B & G3D

BOTTOM SECTION VIEW FOR G3A & G3C

SECTION E-E FOR G3B & G3C only.

SECTION A-A
" B-B
" C-C
" D-D

These Lines dotted for Sections A-A & B-B

For G3B & C
For G3A & D

Omit for G3A & G3D

Omit for G3B & G3D

Omit for G3D

Omit for G3A

Omit for G3B & G3C

Mark this end South for G3B & G3D
" " North " G3A & G3C

Web 28

Plane E, A, B, C, D

1-Cov Pl 16 x 3/8 x 34'-2 3/8" for G3A & G3C

1-Cov Pl 16 x 3/8 x 34'-2 3/8" for G3B & G3D

2-L's 6 x 6 x 1/2 x 34'-2 3/8"

1-Web Pl 84 x 3/8 x 34'-2 3/8" for G3A & G3C

1-Web Pl 84 x 1/16 x 34'-2 3/8" " G3B & G3D

1-Cov Pl 16 x 3/8 x 15'-0 1/2"

1-Sole Pl 13 x 1 1/4 x 1'-7" Plane from 13 x 1 1/16

1-Sole Pl 13 x 1 x 1'-7" Plane from 13 x 1 1/16

1 1/16" ϕ Holes for 1" ϕ Bolts

Shop Rivets for G3A

Shop Rivets for G3D

Shop Rivets for G3C

Shop Rivet c&k N.S. for G3A

Shop Rivet c&k N.S. for G3D

1-Fill 16 x 4 x 0'-10 1/2" for G3A
1-" 16 x 8 x 0'-10 1/2" " G3C

1-Fill 16 x 4 x 0'-10 3/8" for G3A
1-" 16 x 8 x 0'-10 3/8" " G3C

1-Fill 16 x 4 x 0'-10" c.f. for G3A
1-" 16 x 8 x 0'-10" c.f. for G3C

1-Fill 16 x 4 x 1'-0 3/8" for G3A
1-" 16 x 8 x 1'-0 3/8" " G3C

1-Fill 16 x 4 x 1'-0" for G3A
1-" 16 x 8 x 1'-0" " G3C

1-Fill 16 x 8 x 1'-0" for G3C
1-" 16 x 4 x 1'-0" " G3A

1-Fill 16 x 4 x 1'-0 3/8" for G3A
1-" 16 x 8 x 1'-0 3/8" " G3C

1-Fill 16 x 4 x 1'-0 1/2" for G3A
1-" 16 x 8 x 1'-0 1/2" " G3C

1-Fill 16 x 4 x 1'-0 5/8" for G3A
1-" 16 x 8 x 1'-0 5/8" " G3C

1-Fill 16 x 4 x 1'-0 3/4" for G3A
1-" 16 x 8 x 1'-0 3/4" " G3C

1-Fill 16 x 4 x 1'-0 7/8" for G3A
1-" 16 x 8 x 1'-0 7/8" " G3C

1-Fill 16 x 4 x 1'-1" for G3A
1-" 16 x 8 x 1'-1" " G3C

1-Fill 16 x 4 x 1'-1 1/8" for G3A
1-" 16 x 8 x 1'-1 1/8" " G3C

1-Fill 16 x 4 x 1'-1 1/4" for G3A
1-" 16 x 8 x 1'-1 1/4" " G3C

1-Fill 16 x 4 x 1'-1 3/8" for G3A
1-" 16 x 8 x 1'-1 3/8" " G3C

1-Fill 16 x 4 x 1'-1 1/2" for G3A
1-" 16 x 8 x 1'-1 1/2" " G3C

1-Fill 16 x 4 x 1'-1 5/8" for G3A
1-" 16 x 8 x 1'-1 5/8" " G3C

1-Fill 16 x 4 x 1'-1 3/4" for G3A
1-" 16 x 8 x 1'-1 3/4" " G3C

1-Fill 16 x 4 x 1'-1 7/8" for G3A
1-" 16 x 8 x 1'-1 7/8" " G3C

1-Fill 16 x 4 x 1'-2" for G3A
1-" 16 x 8 x 1'-2" " G3C

1-Fill 16 x 4 x 1'-2 1/8" for G3A
1-" 16 x 8 x 1'-2 1/8" " G3C

1-Fill 16 x 4 x 1'-2 1/4" for G3A
1-" 16 x 8 x 1'-2 1/4" " G3C

1-Fill 16 x 4 x 1'-2 3/8" for G3A
1-" 16 x 8 x 1'-2 3/8" " G3C

1-Fill 16 x 4 x 1'-2 1/2" for G3A
1-" 16 x 8 x 1'-2 1/2" " G3C

1-Fill 16 x 4 x 1'-2 5/8" for G3A
1-" 16 x 8 x 1'-2 5/8" " G3C

1-Fill 16 x 4 x 1'-2 3/4" for G3A
1-" 16 x 8 x 1'-2 3/4" " G3C

1-Fill 16 x 4 x 1'-2 7/8" for G3A
1-" 16 x 8 x 1'-2 7/8" " G3C

1-Fill 16 x 4 x 1'-3" for G3A
1-" 16 x 8 x 1'-3" " G3C

1-Fill 16 x 4 x 1'-3 1/8" for G3A
1-" 16 x 8 x 1'-3 1/8" " G3C

1-Fill 16 x 4 x 1'-3 1/4" for G3A
1-" 16 x 8 x 1'-3 1/4" " G3C

1-Fill 16 x 4 x 1'-3 3/8" for G3A
1-" 16 x 8 x 1'-3 3/8" " G3C

1-Fill 16 x 4 x 1'-3 1/2" for G3A
1-" 16 x 8 x 1'-3 1/2" " G3C

1-Fill 16 x 4 x 1'-3 5/8" for G3A
1-" 16 x 8 x 1'-3 5/8" " G3C

1-Fill 16 x 4 x 1'-3 3/4" for G3A
1-" 16 x 8 x 1'-3 3/4" " G3C

1-Fill 16 x 4 x 1'-3 7/8" for G3A
1-" 16 x 8 x 1'-3 7/8" " G3C

1-Fill 16 x 4 x 1'-4" for G3A
1-" 16 x 8 x 1'-4" " G3C

1-Fill 16 x 4 x 1'-4 1/8" for G3A
1-" 16 x 8 x 1'-4 1/8" " G3C

1-Fill 16 x 4 x 1'-4 1/4" for G3A
1-" 16 x 8 x 1'-4 1/4" " G3C

1-Fill 16 x 4 x 1'-4 3/8" for G3A
1-" 16 x 8 x 1'-4 3/8" " G3C

1-Fill 16 x 4 x 1'-4 1/2" for G3A
1-" 16 x 8 x 1'-4 1/2" " G3C

1-Fill 16 x 4 x 1'-4 5/8" for G3A
1-" 16 x 8 x 1'-4 5/8" " G3C

1-Fill 16 x 4 x 1'-4 3/4" for G3A
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1-" 16 x 8 x 3'-7 1/4" " G3C

1-Fill 16 x 4 x 3'-7 3/8" for G3A
1-" 16 x 8 x 3'-7 3/8" " G3C

1-Fill 16 x 4 x 3'-7 1/2" for G3A
1-" 16 x 8 x 3'-7 1/2" " G3C

1-Fill 16 x 4 x 3'-7 5/8" for G3A
1-" 16 x 8 x 3'-7 5/8" " G3C

1-Fill 16 x 4 x 3'-7 3/4" for G3A
1-" 16 x 8 x 3'-7 3/4" " G3C

1-Fill 16 x 4 x 3'-7 7/8" for G3A
1-" 16 x 8 x 3'-7 7/8" " G3C

1-Fill 16 x 4 x 3'-8" for G3A
1-" 16 x 8 x 3'-8" " G3C

1-Fill 16 x 4 x 3'-8 1/8" for G3A
1-" 16 x 8 x 3'-8 1/8" " G3C

1-Fill 16 x 4 x 3'-8 1/4" for G3A
1-" 16 x 8 x 3'-8 1/4" " G3C

1-Fill 16 x 4 x 3'-8 3/8" for G3A
1-" 16 x 8 x 3'-8 3/8" " G3C

1-Fill 16 x 4 x 3'-8 1/2" for G3A
1-" 16 x 8 x 3'-8 1/2" " G3C

1-Fill 16 x 4 x 3'-8 5/8" for G3A
1-" 16 x 8 x 3'-8 5/8" " G3C

1-Fill 16 x 4 x 3'-8 3/4" for G3A
1-" 16 x 8 x 3'-8 3/4" " G3C

1-Fill 16 x 4 x 3'-8 7/8" for G3A
1-" 16 x 8 x 3'-8 7/8" " G3C

1-Fill 16 x 4 x 3'-9" for G3A
1-" 16 x 8 x 3'-9" " G3C

1-Fill 16 x 4 x 3'-9 1/8" for G3A
1-" 16 x 8 x 3'-9 1/8" " G3C

1-Fill 16 x 4 x 3'-9 1/4" for G3A
1-" 16 x 8 x 3'-9 1/4" " G3C

1-Fill 16 x 4 x 3'-9 3/8" for G3A
1-" 16 x 8 x 3'-9 3/8" " G3C

1-Fill 16 x 4 x 3'-9 1/2" for G3A
1-" 16 x 8 x 3'-9 1/2" " G3C

1-Fill 16 x 4 x 3'-9 5/8" for G3A
1-" 16 x 8 x 3'-9 5/8" " G3C

1-Fill 16 x 4 x 3'-9 3/4" for G3A
1-" 16 x 8 x 3'-9 3/4" " G3C

1-Fill 16 x 4 x 3'-9 7/8" for G3A
1-" 16 x 8 x 3'-9 7/8" " G3C

1-Fill 16 x 4 x 3'-10" for G3A
1-" 16 x 8 x 3'-10" " G3C

1-Fill 16 x 4 x 3'-10 1/8" for G3A
1-" 16 x 8 x 3'-10 1/8" " G3C

1-Fill 16 x 4 x 3'-10 1/4" for G3A
1-" 16 x 8 x 3'-10 1/4" " G3C

1-Fill 16 x 4 x 3'-10 3/8" for G3A
1-" 16 x 8 x 3'-10 3/8" " G3C

1-Fill 16 x 4 x 3'-10 1/2" for G3A
1-" 16 x 8 x 3'-10 1/2" " G3C

1-Fill 16 x 4 x 3'-10 5/8" for G3A
1-" 16 x 8 x 3'-10 5/8" " G3C

1-Fill 16 x 4 x 3'-10 3/4" for G3A
1-" 16 x 8 x 3'-10 3/4" " G3C

1-Fill 16 x 4 x 3'-10 7/8" for G3A
1-" 16 x 8 x 3'-10 7/8" " G3C

1-Fill 16 x 4 x 3'-11" for G3A
1-" 16 x 8 x 3'-11" " G3C

1-Fill 16 x 4 x 3'-11 1/8" for G3A
1-" 16 x 8 x 3'-11 1/8" " G3C

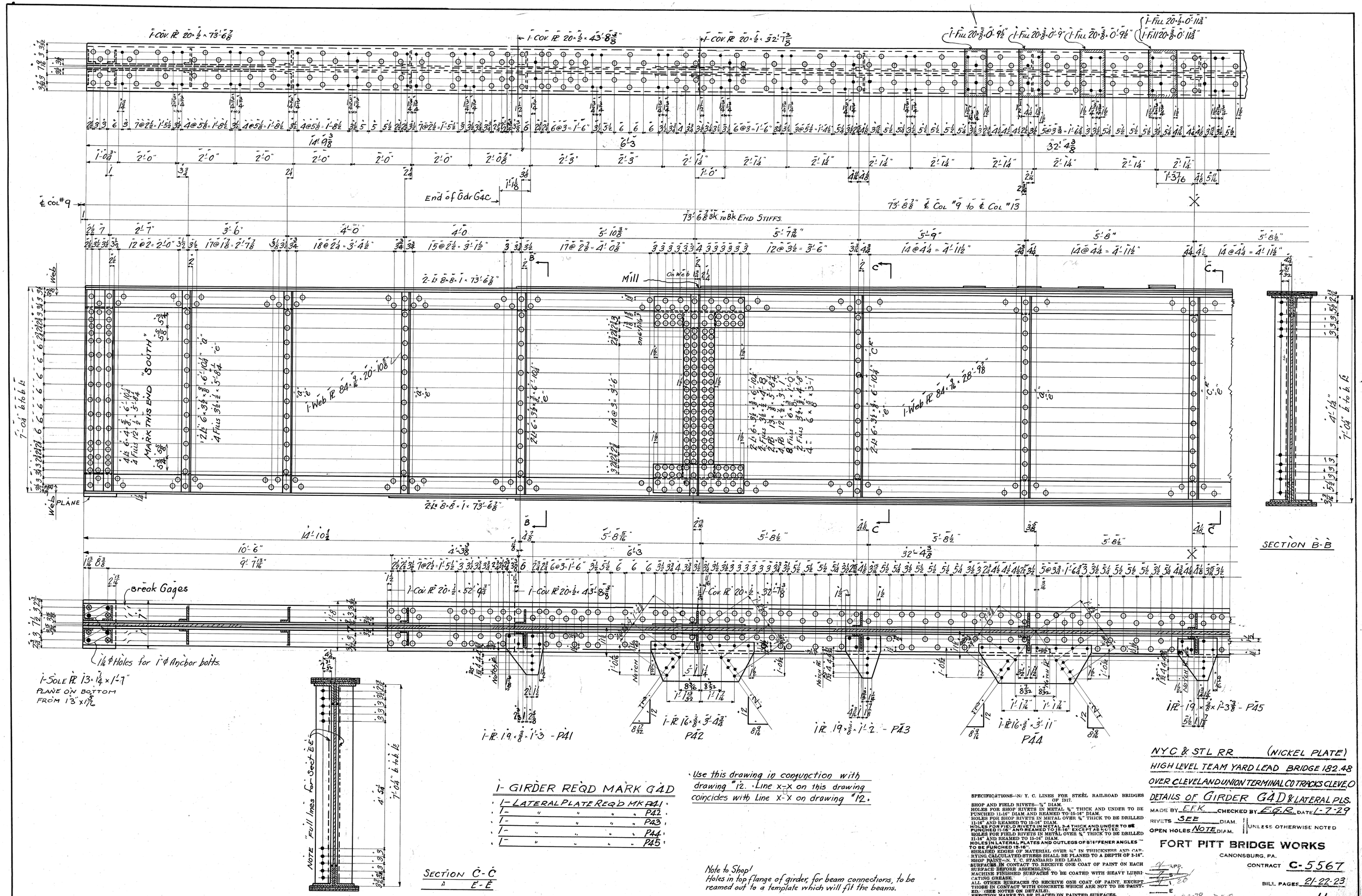
1-Fill 16 x 4 x 3'-11 1/4" for G3A
1-" 16 x 8 x 3'-11 1/4" " G3C

1-Fill 16 x 4 x 3'-11 3/8" for G3A
1-" 16 x 8 x 3'-11 3/8" " G3C

1-Fill 16 x 4 x 3'-11 1/2" for G3A
1-" 16 x 8 x 3'-11 1/2" " G3C

1-Fill 16 x 4 x 3'-11 5/8" for G3A
1-" 16 x 8 x 3'-11 5/8" " G3C

1-Fill 16 x 4 x 3'-11 3/4" for G3A
1-" 16 x 8 x 3'-11 3/4"



1- GIRDER REQD MARK G4D

1- LATERAL PLATE REQ'D MK P41
1- " " " " P42
1- " " " " P43
1- " " " " P44
1- " " " " P45

Use this drawing in conjunction with drawing #12. Line X-X on this drawing coincides with Line X-X on drawing #12.

Note to Shop!
Holes in top flange of girder, for beam connections, to be reamed out to a template which will fit the beams.

SPECIFICATIONS—N. Y. C. LINES FOR STEEL RAILROAD BRIDGES OF 1917.
SHOP AND FIELD RIVETS—⅞" DIAM.
HOLES FOR SHOP RIVETS IN METAL ¾" THICK AND UNDER TO BE PUNCHED 11-16" DIAM AND REAMED TO 15-16" DIAM.
HOLES FOR SHOP RIVETS IN METAL OVER ¾" THICK TO BE DRILLED 11-16" AND REAMED TO 15-16" DIAM.
HOLES FOR FIELD RIVETS IN METAL 3-4 THICK AND UNDER TO BE PUNCHED 11-16" AND REAMED TO 15-16" EXCEPT AS NOTED.
HOLES FOR FIELD RIVETS IN METAL OVER ¾" THICK TO BE DRILLED 11-16" AND REAMED TO 15-16" DIAM.
HOLES IN LATERAL PLATES AND OUTLEGS OF STIFFENER ANGLES TO BE PUNCHED 15-16".
SHEARED EDGES OF MATERIAL OVER ½" IN THICKNESS AND CARRYING CALCULATED STRESS SHALL BE PLANED TO A DEPTH OF 3-16".
SHOP PAINT—N. Y. C. STANDARD RED LEAD.
SURFACES IN CONTACT TO RECEIVE ONE COAT OF PAINT ON EACH SURFACE BEFORE ASSEMBLING.
MACHINE FINISHED SURFACES TO BE COATED WITH HEAVY LUBRICATING GREASE.
ALL OTHER SURFACES TO RECEIVE ONE COAT OF PAINT, EXCEPT THOSE IN CONTACT WITH CONCRETE WHICH ARE NOT TO BE PAINTED. (SEE NOTES ON DETAILS).
ERECTION MARKS TO BE PLACED ON PAINTED SURFACES.
MEMBERS WEIGHING OVER 5 TONS SHALL HAVE THE WEIGHT MARKED THEREON.

NYC & STL RR (NICKEL PLATE)
HIGH LEVEL TEAM YARD LEAD BRIDGE 182.48
OVER CLEVELAND UNION TERMINAL CO TRACKS CLEVE, O
DETAILS OF GIRDER G4D & LATERAL PLS.

MADE BY E.F.K. CHECKED BY E.G.R. DATE 1-7-29
RIVETS SEE DIAM.
OPEN HOLES NOTE DIAM.
UNLESS OTHERWISE NOTED

FORT PITT BRIDGE WORKS
CANONSBURG, PA.

CONTRACT C-5567
BILL PAGES 21-22-23
DRAWING NO 11
BILLED 1-24-29 BY J.J.A.

NS 183-96-291

1-Fill 20-½ × 1'-0"
1-Fill 20-⅜ × 1'-0"
1-Fill 20-½ × 0'-10¾"
1-Fill 20-⅜ × 0'-10¾"
1-Fill 20-½ × 0'-9½"
1-Fill 20-⅜ × 0'-9½"
"g"
"f"
1-Fill 20-½ × 0'-10½"
1-Fill 20-⅜ × 0'-10½"
Cov. Pl.
1-Fill 20-¾ × 1'-9"
1-Fill 20-⅝ × 1'-9"
Cov Pl
"h'"
1-Fill 20-¾ × 0'-9½"
2-Fills 20-¾ × 0'-9½"
1-Fill 20-⅝ × 0'-9½"
1-Fill 20-¾ × 0'-8⅜"
"h"
1-Fill 20-¾ × 0'-9"
32'-4⅜"
4'-10"
15'-4⅛"
73'-8⅝" ℄ to ℄ Col's.
73'-6⅜" bk to bk Lt's
℄ Col. #13
5'-8½"
6'-4¾"
5'-7⅞"
5'-9½"
4'-3⅛"
4'-0"
3'-3"
14@4¼" = 4'-11½"
12@4¼" = 4'-3"
14@3¼" = 3'-9½"
20@3" = 5'-0"
14@2½" = 2'-11"
19@2" = 3'-2"
16@2" = 2'-8"
Cl Web 2½ 1⅛
M III
D
E
A
Cl Web
14@3" = 3'-6"
5 Stiff ℓs 6"×3½"×⅜"×6'-10¼"
4 ℓs 12"×3½"×⅜"×5'-8½"
2 ℓs 13"×3½"×⅜"×4'-8"
2 Fills 6"×3½"×⅜"×1'-0"
8 Fills 6"×3½"×⅜"×3'-1"
1-Web PL 84-⅛"×⅜"×23'-10⅜"
C.L
C.G
4 ℓs 6"×4"×⅜"×6'-10¼"
4 Fills 12"×4"×⅜"×5'-8½"
Web
7'-04" B to B
4'-7¼"
4'-5¼"
2 Gage
Section A-A
Section D-D
1¼"-2" Slotted holes
1¼" ϕ drilled holes for 1⅛" ϕ turned bolts
break gages
1-PL 16"×⅜"×3'-8⅝" - P46
1-PL 19"×⅜"×1'-3¾" P47
1-PL 16"×⅜"×3'-8½" P48
1-PL 19"×⅜"×1'-1½" - P49
1-PL 16"×⅜"×3'-1¾" - P50
1-PL 20"×⅜"×1'-5" - P51

1	- Lateral Plate Reqd Mk			P46
1	-	"	"	P47
1	-	"	"	P48
1	-	"	"	P49
1	-	"	"	P50
1	-	"	"	P51

Use this drawing in conjunction with drawing "11. -Line X-X on this drawing coincides with Line X-X on drawing #11.

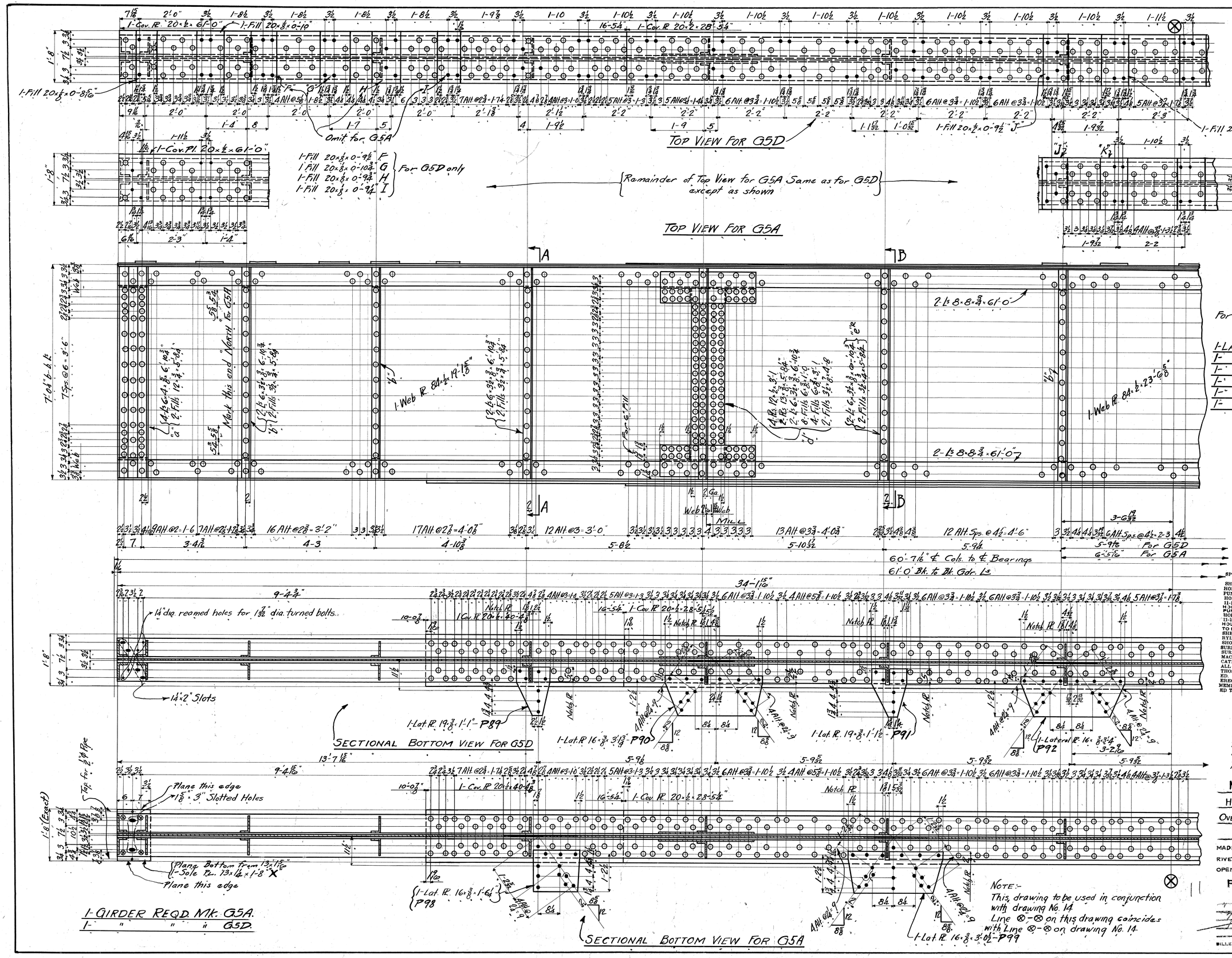
Note to Shop!
Holes in top flange of girder, for beam connections, to be reamed out to a template which will fit the beams.

SPECIFICATIONS—N. Y. C. LINES FOR STEEL RAILROAD BRIDGES OF 1917.
SHOP AND FIELD RIVETS—⅞" DIAM.
HOLES FOR SHOP RIVETS IN METAL ¾" THICK AND UNDER TO BE PUNCHED 11-16" DIAM. AND REAMED TO 15-16" DIAM.
HOLES FOR SHOP RIVETS IN METAL OVER ¾" THICK TO BE DRILLED 11-16" AND REAMED TO 15-16" DIAM.
HOLES FOR FIELD RIVETS IN METAL ¾ THICK AND UNDER TO BE PUNCHED 11-16" AND REAMED TO 15-16" EXCEPT AS NOTED.
HOLES FOR FIELD RIVETS IN METAL OVER ¾" THICK TO BE DRILLED 11-16" AND REAMED TO 15-16" DIAM.
HOLES IN LATERAL PLATES AND OUTLEGS OF STIFFENER ANGLES TO BE PUNCHED 15-16".
SHEARED EDGES OF MATERIAL OVER ½" IN THICKNESS AND CARRYING CALCULATED STRESS SHALL BE PLANED TO A DEPTH OF 3-16".
SHOP PAINT—N. Y. C. STANDARD RED LEAD.
SURFACES IN CONTACT TO RECEIVE ONE COAT OF PAINT ON EACH SURFACE BEFORE ASSEMBLING.
MACHINE FINISHED SURFACES TO BE COATED WITH HEAVY LUBRICATING GREASE.
ALL OTHER SURFACES TO RECEIVE ONE COAT OF PAINT, EXCEPT THOSE IN CONTACT WITH CONCRETE WHICH ARE NOT TO BE PAINTED. (SEE NOTES ON DETAILS).
ERECTION MARKS TO BE PLACED ON PAINTED SURFACES.
MEMBERS WEIGHING OVER 5 TONS SHALL HAVE THE WEIGHT MARKED THEREON.

NYC & ST L R.R. (NICKEL PLATE)
HIGH LEVEL TEAM YARD LEAD BRIDGE 182.48
OVER CLEVELAND UNION TERMINAL CO. TRACKS CLEVELAND
DETAILS OF GIRDER G4D & LATERAL PL
MADE BY E.F.K. CHECKED BY E.G.R. DATE 1-8-29
RIVETS See DIAM. | UNLESS OTHERWISE NOTED
OPEN HOLES Note DIAM.

FORT PITT BRIDGE WORKS
CANONSBURG, PA.
CONTRACT C-5567
BILL PAGES 21-22-23
DRAWING NO. 12
APP. 4 2/15/29
5 1/30
BILLED 1-24-29 BY

D.B.D.
NS 183-96-291



SPECIFICATIONS—N. Y. C. LINES FOR STEEL RAILROAD BRIDGES OF 1917.
SHOP AND FIELD RIVETS—7/8" DIAM.
HOLES FOR SHOP RIVETS IN METAL 3/4" THICK AND UNDER TO BE PUNCHED 11-16" DIAM AND REAMED TO 15-16" DIAM.
HOLES FOR SHOP RIVETS IN METAL OVER 3/4" THICK TO BE DRILLED 11-16" AND REAMED TO 15-16" DIAM.
HOLES FOR FIELD RIVETS IN METAL 3-4 THICK AND UNDER TO BE PUNCHED 11-16" AND REAMED TO 15-16" EXCEPT AS NOTED.
HOLES FOR FIELD RIVETS IN METAL OVER 3/4" THICK TO BE DRILLED 11-16" AND REAMED TO 15-16" DIAM.
HOLES IN LATERAL PLATES AND OUTLEGS OF STIFFENER ANGLES TO BE PUNCHED 15-16".
SHEARED EDGES OF MATERIAL OVER 1/2" IN THICKNESS AND CARRYING CALCULATED STRESS SHALL BE PLANED TO A DEPTH OF 3-16".
SHOP PAINT—N. Y. C. STANDARD RED LEAD.
SURFACES IN CONTACT TO RECEIVE ONE COAT OF PAINT ON EACH SURFACE BEFORE ASSEMBLING.
MACHINE FINISHED SURFACES TO BE COATED WITH HEAVY LUBRICATING GREASE.
ALL OTHER SURFACES TO RECEIVE ONE COAT OF PAINT, EXCEPT THOSE IN CONTACT WITH CONCRETE WHICH ARE NOT TO BE PAINTED. (SEE NOTES ON DETAILS).
ERECTION MARKS TO BE PLACED ON PAINTED SURFACES.
MEMBERS WEIGHING OVER 5 TONS SHALL HAVE THE WEIGHT MARKED THEREON.

Note to Shop!
Holes in top flanges of girders, for beam connections, to be reamed out to atemplate which will fit the beams.

NOTE:-
This drawing to be used in conjunction with drawing No. 14
Line ⊗-⊗ on this drawing coincides with Line ⊗-⊗ on drawing No. 14

N.Y.C. & St. L. R.R. (NICKEL PLATE)
HIGH LEVEL TEAM YARD LEAD—BRIDGE No. 182.48
OVER CLEVELAND UNION TERM. CO. TRACK—CLEVELAND, O.
DETAILS OF GIRDERS G5D & G5A

MADE BY Schade 12/18/28 CHECKED BY A.W.S. DATE 12-27-28
RIVETS _____ DIAM.
OPEN HOLES _____ DIAM.
UNLESS OTHERWISE NOTED

FORT PITT BRIDGE WORKS
CANONSBURG, PA.

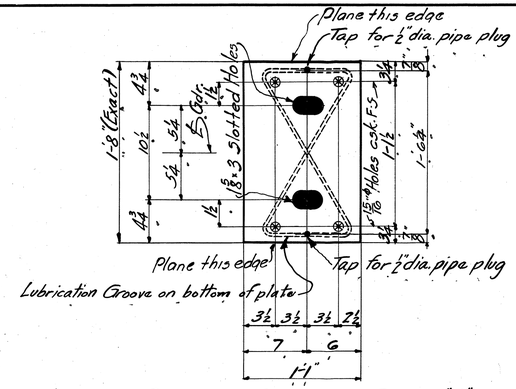
CONTRACT C-5567
BILL PAGES 16-17-18
BILLED 1-24-29 BY R.G.P.
DRAWING NO 13

NS D.B.S. 183-96-29

TOP VIEW FOR G5D.

Remainder of Top View for G5A Same as for G5D

TOP VIEW FOR G5A



ENLARGED DETAIL OF PLATE "X" SHOWING LUBRICATION GROOVE.

SECTION A-A.
" B-B.
" C-C.
" D-D.

1-LATERAL PLATE REQ'D. MK P93.
1- " " " " P94.
1- " " " " P95.
1- " " " " P96.
1- " " " " P97.
1- " " " " P100.
1- " " " " P101.
1- " " " " P102.

SECTIONAL BOTTOM VIEW FOR G5D

SECTIONAL BOTTOM VIEW FOR G5A

NOTE:-
This drawing to be used in conjunction with drawing No. 13.
Line ⊗ ⊗ on this drawing coincides with Line ⊗ ⊗ on drawing No. 13.

Note to Shop!
Holes in top flanges of girders, for beam connections, to be reamed out to a template which will fit the beams.

SPECIFICATIONS—N. Y. C. LINES FOR STEEL RAILROAD BRIDGES OF 1917.
SHOP AND FIELD RIVETS—⅞" DIAM.
HOLES FOR SHOP RIVETS IN METAL ⅝" THICK AND UNDER TO BE PUNCHED 11-16" DIAM AND REAMED TO 15-16" DIAM.
HOLES FOR SHOP RIVETS IN METAL OVER ⅝" THICK TO BE DRILLED 11-16" AND REAMED TO 15-16" DIAM.
HOLES FOR FIELD RIVETS IN METAL 3-4 THICK AND UNDER TO BE PUNCHED 11-16" AND REAMED TO 15-16" EXCEPT AS NOTED.
HOLES FOR FIELD RIVETS IN METAL OVER ¾" THICK TO BE DRILLED 11-16" AND REAMED TO 15-16" DIAM.
HOLES IN LATERAL PLATES AND OUTLEGS OF STIFFENER ANGLES TO BE PUNCHED 15-16".
SHEARED EDGES OF MATERIAL OVER ½" IN THICKNESS AND CARRYING CALCULATED STRESS SHALL BE PLANED TO A DEPTH OF 3-16".
SHOP PAINT—N. Y. C. STANDARD RED LEAD.
SURFACES IN CONTACT TO RECEIVE ONE COAT OF PAINT ON EACH SURFACE BEFORE ASSEMBLING.
MACHINE FINISHED SURFACES TO BE COATED WITH HEAVY LUBRICATING GREASE.
ALL OTHER SURFACES TO RECEIVE ONE COAT OF PAINT, EXCEPT THOSE IN CONTACT WITH CONCRETE WHICH ARE NOT TO BE PAINTED. (SEE NOTES ON DETAILS).
ERECTION MARKS TO BE PLACED ON PAINTED SURFACES.
MEMBERS WEIGHING OVER 5 TONS SHALL HAVE THE WEIGHT MARKED THEREON.

N.Y.C. & St. L.R.R. (NICKEL PLATE)
HIGH LEVEL TEAM YARD LEAD BRIDGE No. 182.48
OVER CLEVELAND UNION TERM. CO. TRACK-CLEVELAND, O.
DETAILS OF GIRDERS G5D & G5A.

MADE BY Schade CHECKED BY W.H.S. DATE 12-29-28
RIVETS ____ DIAM. | UNLESS OTHERWISE NOTED
OPEN HOLES ____ DIAM.

FORT PITT BRIDGE WORKS
CANONSBURG, PA.
CONTRACT C-5567
BILL PAGES 16-17-18
DRAWING NO. 14
BILLED 1-24-29 BY E.G.P.

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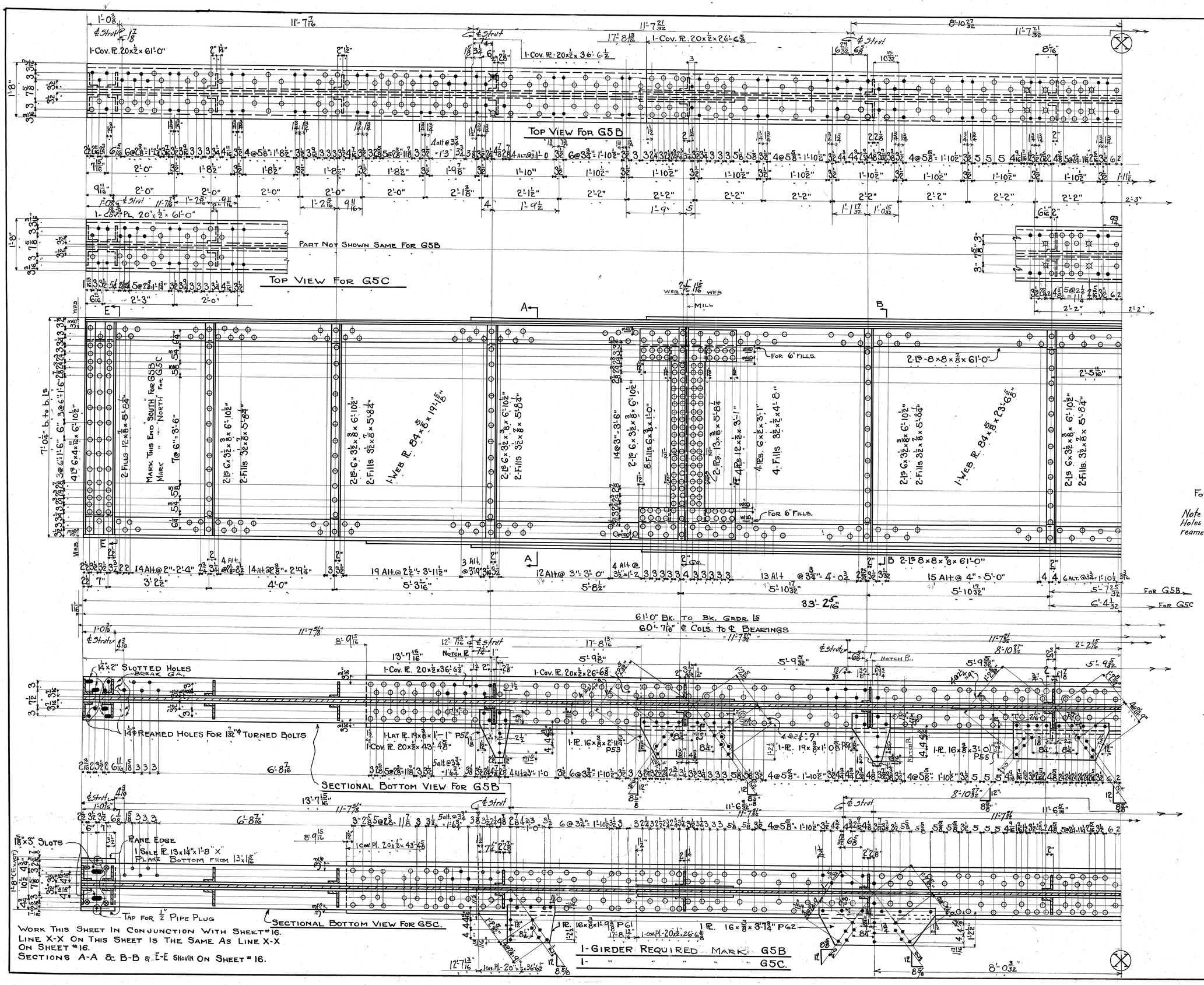


WORK THIS SHEET IN CONJUNCTION WITH SHEET #16.
LINE X-X ON THIS SHEET IS THE SAME AS LINE X-X ON SHEET #16.
SECTIONS A-A & B-B & E-E SHOWN ON SHEET #16.

FOR SECS. A-A, B-B & E-E SEE DWG. No. 16.

Note to Shop!
Holes in top flange of girders, for beam connections, to be reamed out to a template which will fit the beams

1	LATERAL	PLATE	REQD.	MK.	P52
1	"	"	"	"	P53
1	"	"	"	"	P54
1	"	"	"	"	P55
1	"	"	"	"	P61
1	"	"	"	"	P62

SPECIFICATIONS—N. Y. C. LINES FOR STEEL RAILROAD BRIDGES OF 1917.
SHOP AND FIELD RIVETS—7/8" DIAM.
HOLES FOR SHOP RIVETS IN METAL 3/4" THICK AND UNDER TO BE PUNCHED 11-16" DIAM AND REAMED TO 15-16" DIAM.
HOLES FOR SHOP RIVETS IN METAL OVER 3/4" THICK TO BE DRILLED 11-16" AND REAMED TO 15-16" DIAM.
HOLES FOR FIELD RIVETS IN METAL 3-4 THICK AND UNDER TO BE PUNCHED 11-16" AND REAMED TO 15-16" EXCEPT AS NOTED.
HOLES FOR FIELD RIVETS IN METAL OVER 3/4" THICK TO BE DRILLED 11-16" AND REAMED TO 15-16" DIAM.
HOLES IN LATERAL PLATES AND OUTLEGS OF STAFFENER ANGLES TO BE PUNCHED 15-16".
SHEARED EDGES OF MATERIAL OVER 1/4" IN THICKNESS AND CARRYING CALCULATED STRESS SHALL BE PLANED TO A DEPTH OF 3-16".
SHOP PAINT—N. Y. C. STANDARD RED LEAD.
SURFACES IN CONTACT TO RECEIVE ONE COAT OF PAINT ON EACH SURFACE BEFORE ASSEMBLING.
MACHINE FINISHED SURFACES TO BE COATED WITH HEAVY LUBRICATING GREASE.
ALL OTHER SURFACES TO RECEIVE ONE COAT OF PAINT, EXCEPT THOSE IN CONTACT WITH CONCRETE WHICH ARE NOT TO BE PAINTED. (SEE NOTES ON DETAILS).
ERECTION MARKS TO BE PLACED ON PAINTED SURFACES.
MEMBERS WEIGHING OVER 5 TONS SHALL HAVE THE WEIGHT MARKED THEREON.

N.Y.C. & ST. L.R.R. (NICKEL PLATE)
HIGH LEVEL TEAM YARD LEAD BRIDGE No 182.48
OVER CLEVELAND UNION TERM. CO. TRACKS. CLEVELAND O.

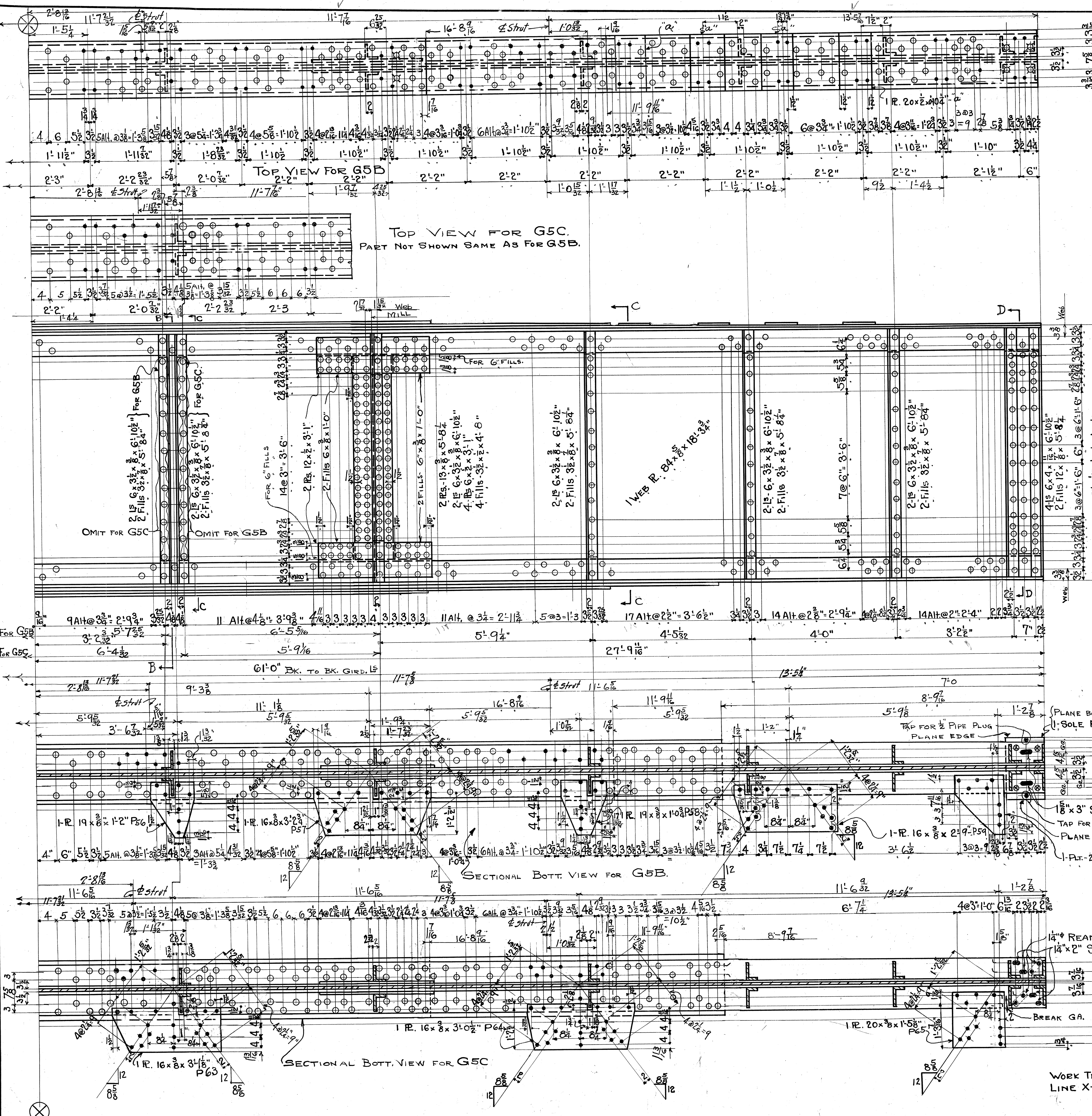
GIRDERS G5B & G5C. & LAT. PLS

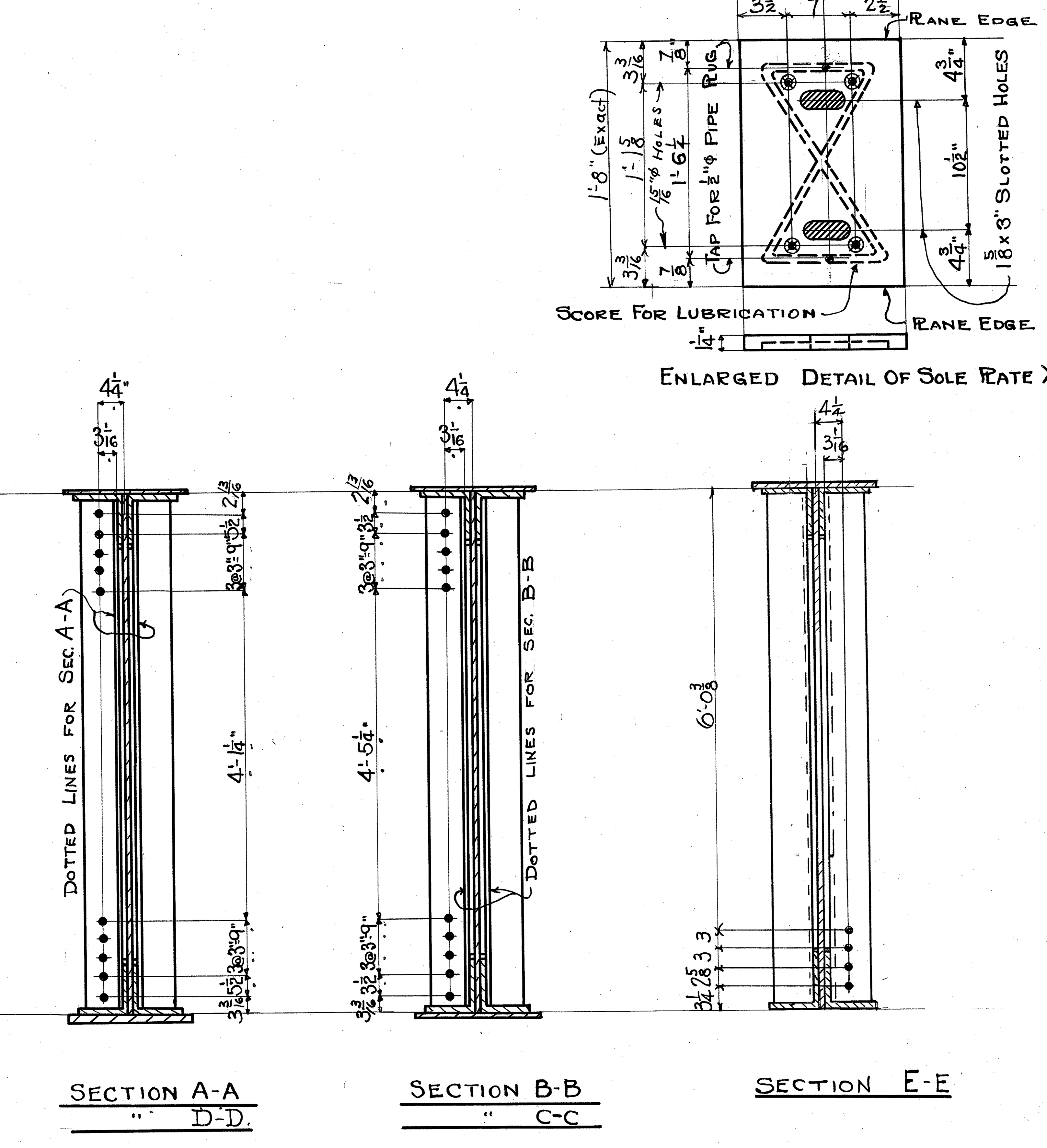
MADE BY A.G.K. 12/27/28 CHECKED BY A.W.S. DATE 1-8-29
RIVETS _____ DIAM. | UNLESS OTHERWISE NOTED
OPEN HOLES _____ DIAM.

FORT PITT BRIDGE WORKS
CANONSBURG, PA.

CONTRACT C-5567
BILL PAGES 19-20
BILLED 1-24-29 BY R.G.P.
DRAWING NO 15

R.G.P.





1 LATERAL PLATE REQ'D. MK.				P56
1	"	"	"	P57
1	"	"	"	P58
1	"	"	"	P59
1	"	"	"	P60
1	"	"	"	P63
1	"	"	"	P64
1	"	"	"	P65

Note to Shop!
Holes in top flange of girders, for beam connections, to be reamed out to a template which will fit the beams.

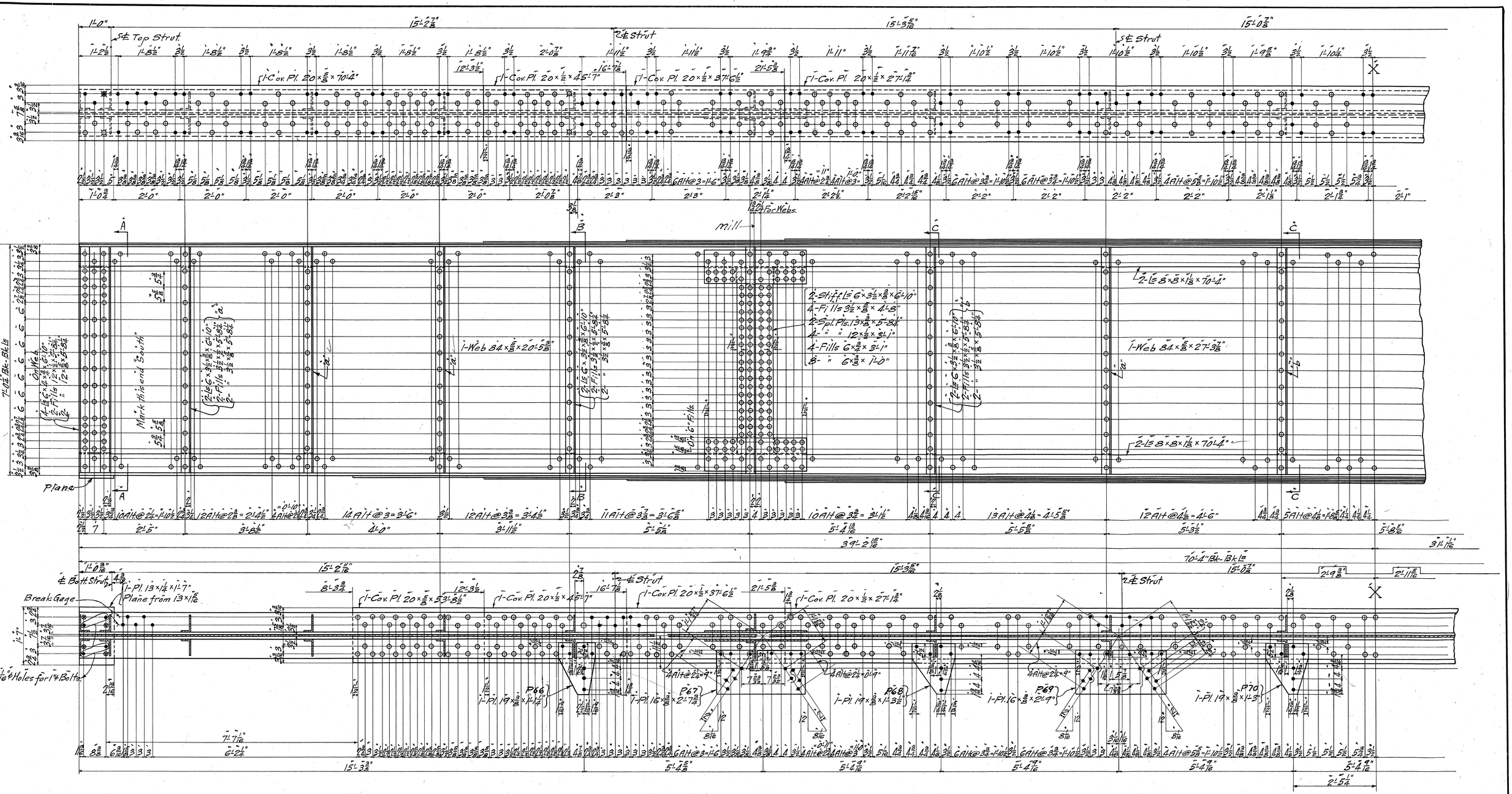
SPECIFICATIONS—N. Y. C. LINES FOR STEEL RAILROAD BRIDGES OF 1917.
SHOP AND FIELD RIVETS—7/8" DIAM.
HOLES FOR SHOP RIVETS IN METAL 3/4" THICK AND UNDER TO BE PUNCHED 11-16" DIAM AND REAMED TO 15-16" DIAM.
HOLES FOR SHOP RIVETS IN METAL OVER 3/4" THICK TO BE DRILLED 11-16" AND REAMED TO 15-16" DIAM.
HOLES FOR FIELD RIVETS IN METAL 3-4 THICK AND UNDER TO BE PUNCHED 11-16" AND REAMED TO 15-16" EXCEPT AS NOTED.
HOLES FOR FIELD RIVETS IN METAL OVER 3/4" THICK TO BE DRILLED 11-16" AND REAMED TO 15-16" DIAM.
HOLES IN LATERAL PLATES AND OUTLEGS OF STIFFENER ANGLES TO BE PUNCHED 15-16".
SHEARED EDGES OF MATERIAL OVER 1/4" IN THICKNESS AND CARRYING CALCULATED STRESS SHALL BE PLANED TO A DEPTH OF 3-16".
SHOP PAINT—N. Y. C. STANDARD RED LEAD.
SURFACES IN CONTACT TO RECEIVE ONE COAT OF PAINT ON EACH SURFACE BEFORE ASSEMBLING.
MACHINE FINISHED SURFACES TO BE COATED WITH HEAVY LUBRICATING GREASE.
ALL OTHER SURFACES TO RECEIVE ONE COAT OF PAINT, EXCEPT THOSE IN CONTACT WITH CONCRETE WHICH ARE NOT TO BE PAINTED. (SEE NOTES ON DETAILS).
ERECTION MARKS TO BE PLACED ON PAINTED SURFACES.
MEMBERS WEIGHING OVER 5 TONS SHALL HAVE THE WEIGHT MARKED THEREON.

WORK THIS SHEET IN CONJUNCTION WITH SHEET #15
LINE X-X ON THIS SHEET IS THE SAME AS LINE X-X ON SH. #15

N.Y.C. & ST. L. R.R. (NICKEL PLATE)
HIGH LEVEL TEAM YARD LEAD - BRIDGE No. 182.48
OVER CLEVELAND UNION TERM. CO. TRACKS. CLEVELAND, O.
GIRDERS G5B & G5C & LAT. P/S
MADE BY A.G.K. CHECKED BY [illegible] DATE 1-8-29
RIVETS ______ DIAM. | UNLESS OTHERWISE NOTED
OPEN HOLES ______ DIAM.

FORT PITT BRIDGE WORKS
CANONSBURG, PA.
CONTRACT C-5567
APP. [illegible]
BILL PAGES 19-20
BILLED 1-24-29 BY R.G.P.
DRAWING NO. 16
B.&P.

NS183-96-291



1-	GIRDER	REQ'D. MK.	G4B.
1-	LATERAL PLATE	REQ'D. MK.	P66
1-	"	"	REQ'D. MK. P67
1-	"	"	REQ'D. MK. P68
1-	"	"	REQ'D. MK. P69
1-	"	"	REQ'D. MK. P70

Note.

1. This drawing to be used in conjunction with drawing #18. Line X-X on this drawing corresponds to line X-X on drawing #18.

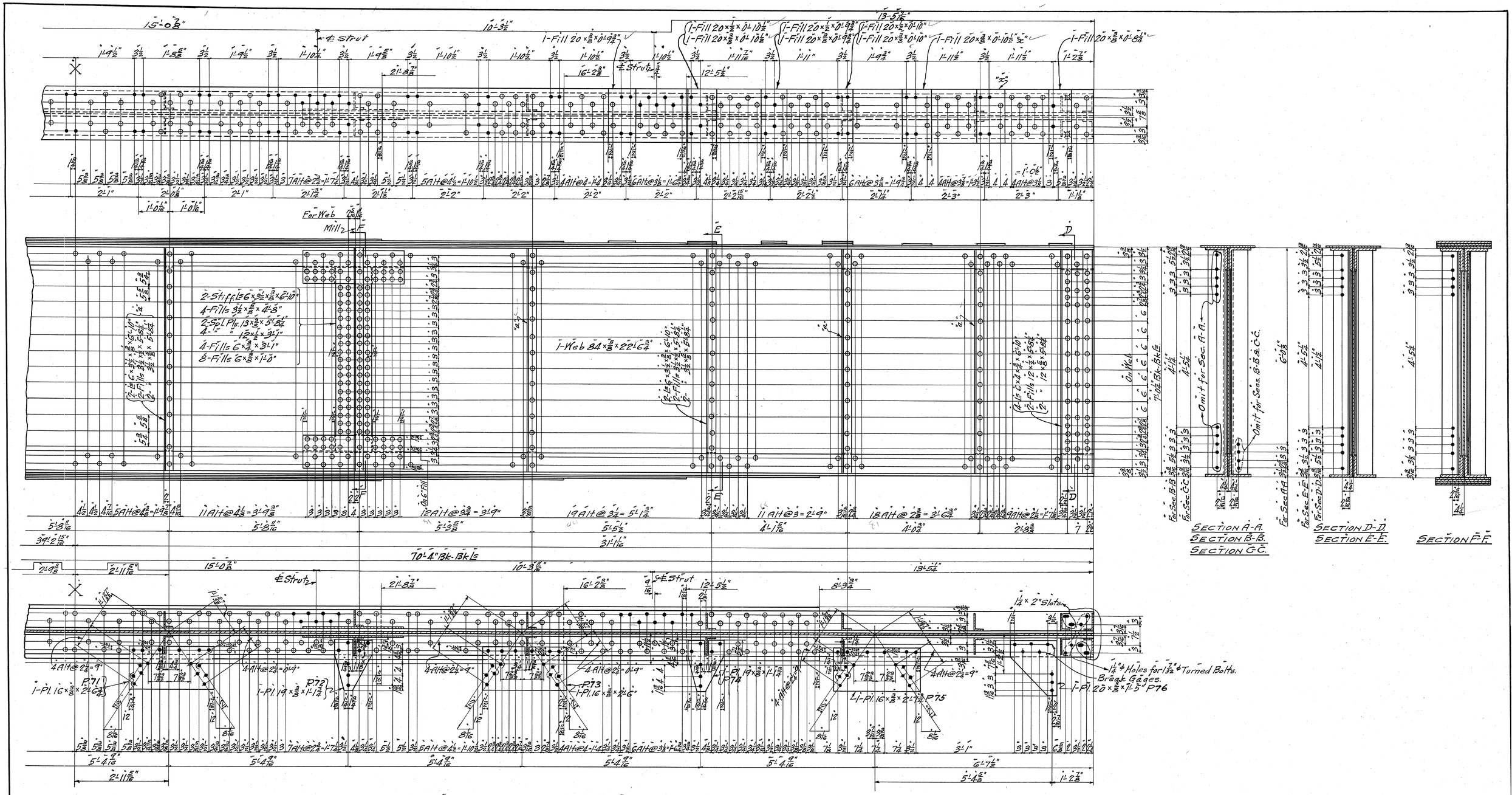
Note to Shop!
All holes in top flange of girder for beam connections, to be reamed out to a template which will fit the beams.

SPECIFICATIONS—N. Y. C. LINES FOR STEEL RAILROAD BRIDGES OF 1917.
SHOP AND FIELD RIVETS—¾" DIAM.
HOLES FOR SHOP RIVETS IN METAL ⅝" THICK AND UNDER TO BE PUNCHED 13-16" DIAM AND REAMED TO 15-16" DIAM.
HOLES FOR SHOP RIVETS IN METAL OVER ⅝" THICK TO BE DRILLED 13-16" AND REAMED TO 15-16" DIAM.
HOLES FOR FIELD RIVETS IN METAL ⅜" THICK AND UNDER TO BE PUNCHED 11-16" AND REAMED TO 13-16" EXCEPT AS NOTED.
HOLES FOR FIELD RIVETS IN METAL OVER ⅜" THICK TO BE DRILLED 11-16" AND REAMED TO 13-16" DIAM.
HOLES IN LATERAL PLATES AND OUTLEGS OF STIFFENER ANGLES TO BE PUNCHED 13-16".
SHEARED EDGES OF MATERIAL OVER ½" IN THICKNESS AND CARRYING CALCULATED STRESS SHALL BE PLANED TO A DEPTH OF ⅛".
SHOP PAINT—N. Y. C. STANDARD RED LEAD.
SURFACES IN CONTACT TO RECEIVE ONE COAT OF PAINT ON EACH SURFACE BEFORE ASSEMBLING.
MACHINE FINISHED SURFACES TO BE COATED WITH HEAVY LUBRICATING GREASE.
ALL OTHER SURFACES TO RECEIVE ONE COAT OF PAINT. EXCEPT THOSE IN CONTACT WITH CONCRETE WHICH ARE NOT TO BE PAINTED. (SEE NOTES ON DETAILS).
ERECTION MARKS TO BE PLACED ON PAINTED SURFACES.
MEMBERS WEIGHING OVER 5 TONS SHALL HAVE THE WEIGHT MARKED THEREON.

N.Y.C. & St.L.R.R. (NICKEL PLATE)
HIGH LEVEL TEAM YARD LEAD.-BRIDGE No. 182 A.B.
OVER CLEVELAND UNION TERM. CO. TRACKS. CLEV., O.
G4B
DETAILS OF GIRDER & LATERAL PLATES.
MADE BY J.R.S. CHECKED BY E.G.R. DATE 1-1-29
RIVETS SEE DIAM. | UNLESS OTHERWISE NOTED
OPEN HOLES NOTE DIAM.

FORT PITT BRIDGE WORKS
CANONSBURG, PA.
CONTRACT C-5567
BILL PAGES 24-25
DRAWING NO. 17
APP. 1/12
BILLED 1-24-29
J.R.S.

NS 183-96-791



1-LATERAL PLATE REQ'D. MK. P71.
1- " " REQ'D. MK. P72.
1- " " REQ'D. MK. P73.
1- " " REQ'D. MK. P74.
1- " " REQ'D. MK. P75.
1- " " REQ'D. MK. P76.

Note.
This drawing to be used in conjunction with drawing #17. Line X-X on this drawing corresponds with line X-X on drawing #17.

Note to Shop!
All holes in top flange of girder, for beam connections, to be reamed out to a template which will fit the beams.

SPECIFICATIONS N. Y. C. LINES FOR STEEL RAILROAD BRIDGES OF 1917.
SHOP AND FIELD RIVETS—3/4" DIAM.
HOLES FOR SHOP RIVETS IN METAL 3/4" THICK AND UNDER TO BE PUNCHED 11-16" DIAM AND REAMED TO 15-16" DIAM.
HOLES FOR SHOP RIVETS IN METAL OVER 3/4" THICK TO BE DRILLED 11-16" AND REAMED TO 15-16" DIAM.
HOLES FOR FIELD RIVETS IN METAL 3-4 THICK AND UNDER TO BE PUNCHED 11-16" AND REAMED TO 15-16" EXCEPT AS NOTED.
HOLES FOR FIELD RIVETS IN METAL OVER 3/4" THICK TO BE DRILLED 11-16" AND REAMED TO 15-16" DIAM.
HOLES IN LATERAL PLATES AND OUTLEGS OF STIFFENER ANGLES TO BE PUNCHED 15-16".
SHEARED EDGES OF MATERIAL OVER 1/2" IN THICKNESS AND CARRYING CALCULATED STRESS SHALL BE PLANED TO A DEPTH OF 3-16".
SHOP PAINT—N. Y. C. STANDARD RED LEAD.
SURFACES IN CONTACT TO RECEIVE ONE COAT OF PAINT ON EACH SURFACE BEFORE ASSEMBLING.
MACHINE FINISHED SURFACES TO BE COATED WITH HEAVY LUBRICATING GREASE.
ALL OTHER SURFACES TO RECEIVE ONE COAT OF PAINT EXCEPT THOSE IN CONTACT WITH CONCRETE WHICH ARE NOT TO BE PAINTED. (SEE NOTES ON DETAILS).
ERECTION MARKS TO BE PLACED ON PAINTED SURFACES.
MEMBERS WEIGHING OVER 5 TONS SHALL HAVE THE WEIGHT MARKED THEREON.

N.Y.C. & ST. L. R.R. (NICKEL PLATE)
HIGH LEVEL TEAM YARD LEAD-BRIDGE No. 182.48
OVER CLEVELAND UNION TERM. CO. TRACKS. CLEV., O.
DETAILS OF GIRDER, G4B & LATERAL PLATES.

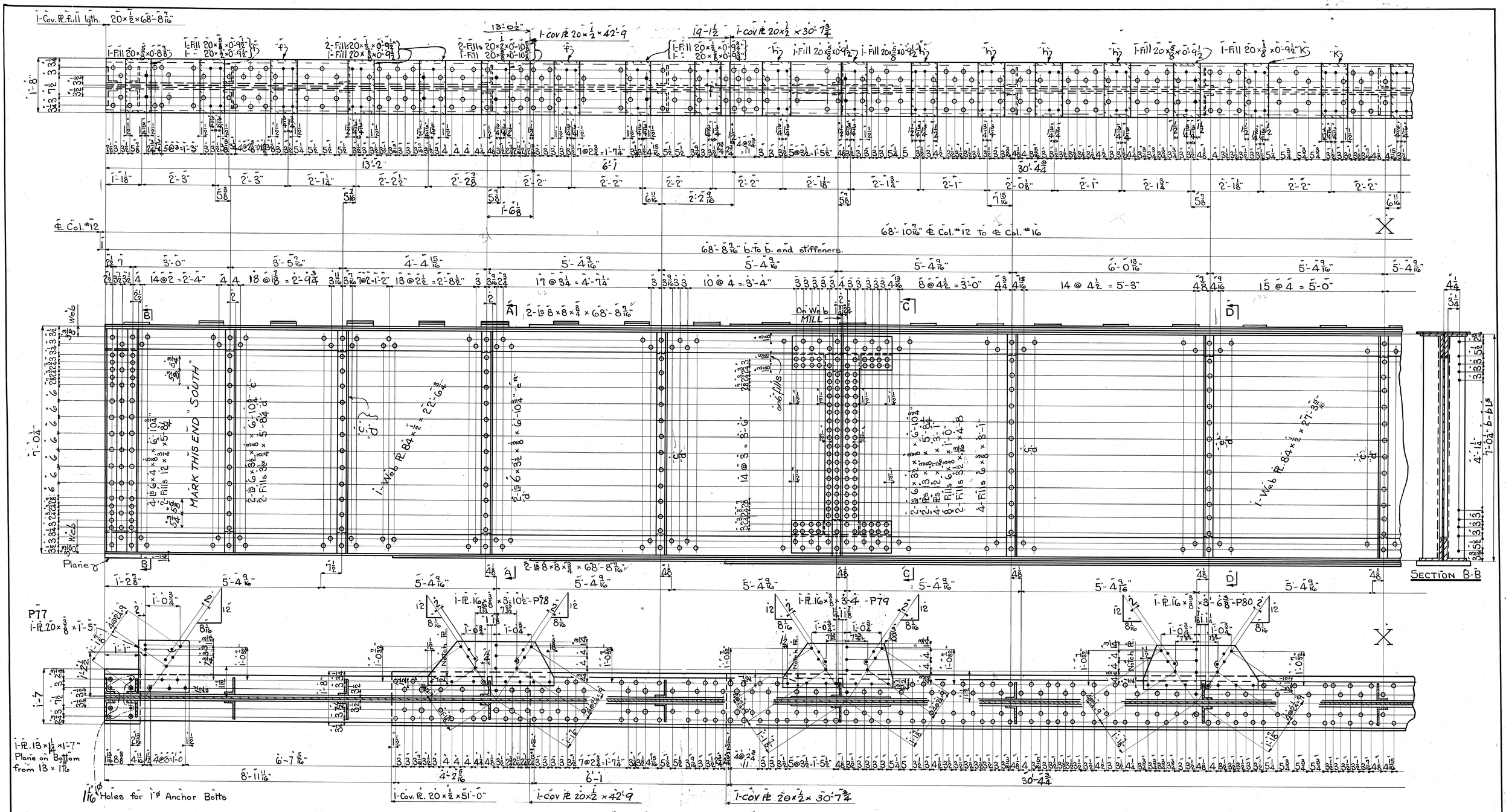
MADE BY J.R.S. CHECKED BY E.G.R. DATE 1-2-29
RIVETS SEE DIAM
OPEN HOLES NOTE DIAM
UNLESS OTHERWISE NOTED

FORT PITT BRIDGE WORKS
CANONSBURG, PA.

CONTRACT C-5567
BILL PAGES 24-25
DRAWING NO 18. J.R.S.

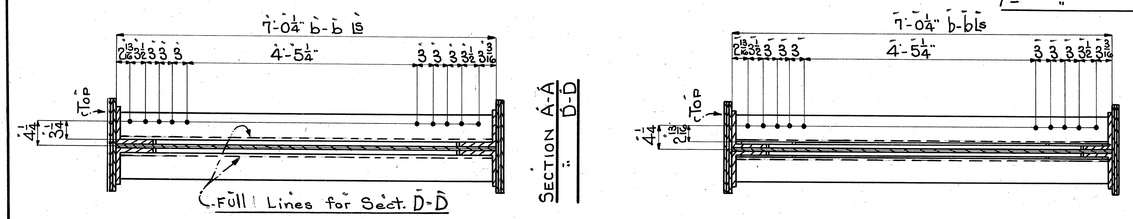
APP. 1/12
BILLED 1-24-29

NS 183-96-291



1-GIRDER REQ'D. MK. G4A
1-LATERAL PLATE REQ'D MK P77
1- " " " " P78
1- " " " " P79
1- " " " " P80

NOTE:
This drawing to be used in conjunction with drawing #20. Line X-X on this drawing coincides with Line X-X on drawing #20.



Note to Shop!
All holes in top flange of girder, for beam connections, to be reamed out to a template which will fit the beams.

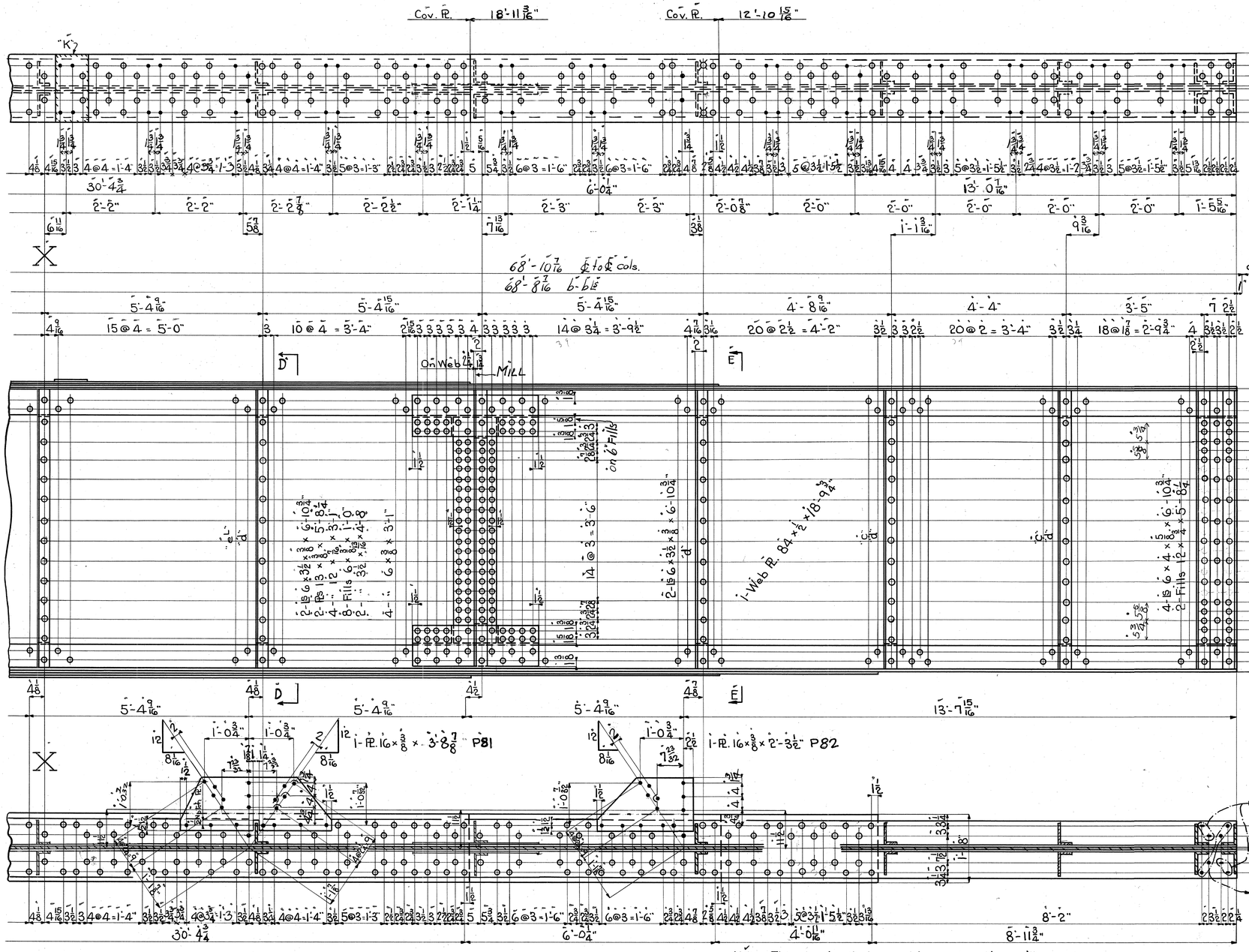
SPECIFICATIONS—N. Y. C. LINES FOR STEEL RAILROAD BRIDGES OF 1917.
SHOP AND FIELD RIVETS—⅞" DIAM.
HOLES FOR SHOP RIVETS IN METAL ¾" THICK AND UNDER TO BE PUNCHED 11-16" DIAM AND REAMED TO 15-16" DIAM.
HOLES FOR SHOP RIVETS IN METAL OVER ¾" THICK TO BE DRILLED 11-16" AND REAMED TO 15-16" DIAM.
HOLES FOR FIELD RIVETS IN METAL 3-4 THICK AND UNDER TO BE PUNCHED 11-16" AND REAMED TO 15-16" EXCEPT AS NOTED.
HOLES FOR FIELD RIVETS IN METAL OVER ¾" THICK TO BE DRILLED 11-16" AND REAMED TO 15-16" DIAM.
HOLES IN LATERAL PLATES AND OUTLEGS OF STIFFENER ANGLES TO BE PUNCHED 15-16".
SHEARED EDGES OF MATERIAL OVER ½" IN THICKNESS AND CARRYING CALCULATED STRESS SHALL BE PLANED TO A DEPTH OF 3-16".
SHOP PAINT—N. Y. C. STANDARD RED LEAD.
SURFACES IN CONTACT TO RECEIVE ONE COAT OF PAINT ON EACH SURFACE BEFORE ASSEMBLING.
MACHINE FINISHED SURFACES TO BE COATED WITH HEAVY LUBRICATING GREASE.
ALL OTHER SURFACES TO RECEIVE ONE COAT OF PAINT, EXCEPT THOSE IN CONTACT WITH CONCRETE WHICH ARE NOT TO BE PAINTED. (SEE NOTES ON DETAILS).
ERECTION MARKS TO BE PLACED ON PAINTED SURFACES.
MEMBERS WEIGHING OVER 5 TONS SHALL HAVE THE WEIGHT MARKED THEREON.

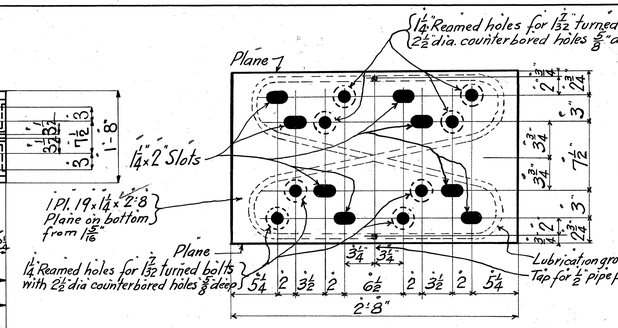
N. Y. C. and St. L. R. R. (NICKEL PLATE)
HIGH LEVEL TEAM YARD LEAD BRIDGE No. 182.48
OVER CLEVELAND UNION TERM. CO. TRACK - CLEVELAND O.
GIRDER G4A & LAT PLS

MADE BY E.F.K. CHECKED BY E.G.R. DATE 1-16-29
RIVETS See DIAM. | UNLESS OTHERWISE NOTED
OPEN HOLES Note DIAM.

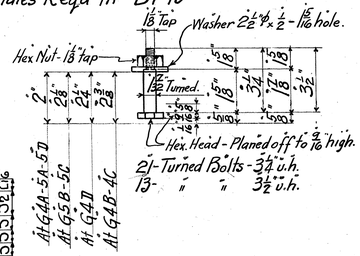
FORT PITT BRIDGE WORKS
CANONSBURG, PA.
CONTRACT C-5567
BILL PAGES 26-27
DRAWING NO 19
APP.
BILLED BY

H.M. NS 183-96-291





4- Bolster Plates Reqd Mk BP10



At G4A-5A-5D
At G5B-5C
At G4D
At G4B-4C

Note - This drawing to be used in conjunction with drawing # 19. Line X-X on this drawing coincides with Line X-X on drawing # 19.

1-LATERAL PL REQ'D MK P81
1- " " " " P82

Note to Shop!
All holes in top flange of girder, for beam connections, to be reamed out to a template which will fit the beams.

SPECIFICATIONS—N. Y. C. LINES FOR STEEL RAILROAD BRIDGES OF 1917.
SHOP AND FIELD RIVETS—7/8" DIAM.
HOLES FOR SHOP RIVETS IN METAL 3/4" THICK AND UNDER TO BE PUNCHED 11-16" DIAM AND REAMED TO 15-16" DIAM.
HOLES FOR SHOP RIVETS IN METAL OVER 3/4" THICK TO BE DRILLED 11-16" AND REAMED TO 15-16" DIAM.
HOLES FOR FIELD RIVETS IN METAL 3-4 THICK AND UNDER TO BE PUNCHED 11-16" AND REAMED TO 15-16" EXCEPT AS NOTED.
HOLES FOR FIELD RIVETS IN METAL OVER 3/4" THICK TO BE DRILLED 11-16" AND REAMED TO 15-16" DIAM.
HOLES IN LATERAL PLATES AND OUTLEGS OF STIFFENER ANGLES TO BE PUNCHED 13-16".
SHEARED EDGES OF MATERIAL OVER 1/2" IN THICKNESS AND CARRYING CALCULATED STRESS SHALL BE PLANED TO A DEPTH OF 3-16".
SHOP PAINT—N. Y. C. STANDARD RED LEAD.
SURFACES IN CONTACT TO RECEIVE ONE COAT OF PAINT ON EACH SURFACE BEFORE ASSEMBLING.
MACHINE FINISHED SURFACES TO BE COATED WITH HEAVY LUBRICATING GREASE.
ALL OTHER SURFACES TO RECEIVE ONE COAT OF PAINT, EXCEPT THOSE IN CONTACT WITH CONCRETE WHICH ARE NOT TO BE PAINTED. (SEE NOTES ON DETAILS).
ERECTION MARKS TO BE PLACED ON PAINTED SURFACES.
MEMBERS WEIGHING OVER 5 TONS SHALL HAVE THE WEIGHT PERMANENTLY MARKED ON.

N. Y. C. & St. L. R. R. (NICKEL PLATE)
HIGH LEVEL TEAM YARD LEAD BRIDGE No. 182.48
OVER CLEVELAND UNION TERM. CO. TRACK - CLEVELAND O.
GIRDER G4A & LAT. PLS.

MADE BY E.F.K. CHECKED BY E.G.R. DATE 1-17-29
RIVETS See DIAM. 7/8" UNLESS OTHERWISE NOTED
OPEN HOLES NOTE DIAM. 11/16"

FORT PITT BRIDGE WORKS
CANONSBURG, PA.
CONTRACT C-5567
APP. 1/23
BILL PAGES 26-27
BILLED BY
DRAWING NO 20

NS H.M. Co. 183-96-79

1-Cov. PL. 20×⅝×71'-11 7/16"

1-Fill 20×⅜×0'-8 3/4"

1-Fill 20×⅜×0'-9 1/2"

1-Fill 20×½×0'-9 1/2"

1-Cov. PL. 20×⅝×48'-9

1-Fill 20×¼×0'-9

1-Fill 20×¼×0'-9 1/2"

1-Cov. PL. 20×⅝×40'-7 7/8

1-Cov. PL. 20×½×27'-2 3/8

1'-8"

11'-3 7/8"

4'-1 3/4"

5'-10 1/4

26'-11 3/8

1'-1 1/8" | 2'-3" | 2'-3" | 2'-1 1/4" | 2'-1 1/4" | 2'-1 1/4" | 2'-1 1/4" | 2'-1 1/4" | 2'-1 1/4" | 2'-1 1/4" | 2'-1 1/4" | 2'-1 1/4" | 2'-1 1/4" | 2'-1 1/4" | 2'-0 5/8" | 2'-1 1/4" | 2'-1 1/4" | 2'-1 1/4"

8 3/8" | 4 11/16" | 1'-0 3/8" ℄ Strut | 3'-0 1/16" | 2 3/16" 2 3/16" | 1'-3 7/16" | 9 13/16" | 8 3/16" | 1'-4 7/16" | ℄ STRUT | 9 13/16" | 1'-3 1/16"

15'-0 1/2" | 15'-2 7/8" | 15'-3 5/16"

℄ of Col C/O

72'-1 7/16" C. to C. of bents

71'-11 7/8" Bk. to Bk. of Ls

2 3 3½ 4 | 3'-3" | 3'-6 1/8" | 4'-8 15/16" | 2 3 3½ | 5'-9" | 4 4¾ 4¼ | 5'-8" | 5'-8½" | 6'-4¾"

16 @ 2 = 2'-8" | 18 @ 2 = 3'-0" | 20 @ 2½ = 4'-2" | 18 @ 3⅜ = 5'-0¾" | 11 @ 4 = 5'-8" | 8 @ 4½ = 5'-0" | 14 @ 4½ = 5'-3"

2-Ls 8×8×⅞×71'-11 7/16"

on web MILL

on 6" Fill

A | B | C | F

1'-7" | 7'-0 4" b. to b. Ls | 4'-1 1/4" | 4'-5 1/4"

Full lines for Sec E-E | Full lines for Sec F-F

Mark this end "South"

4-L 6×4×⅜×6'-10"
2-Pls 12×⅝×5'-8 1/4"
2-Pls 12×½×5'-8 1/4"
2-L 5×3½×⅝×5'-8 1/4"

2-Pls 6×⅜×3'-10"
2-Fills 3½×⅜×5'-8 1/4"
2-" 3½×½×5'-8 1/4"

1-Web PL. 84×⅜×28'-10 5/16"

14 @ 3 = 3'-6"

2-Pls 6×⅜×3'-10"
2-Pls 13×⅜×5'-8 1/4"
4-Pls 12×½×5'-8 1/4"
4-Fills 3½×⅜×4'-8"
4'-" 6×3×1'-0"
6×3×⅜×3'-1"
6×3×½×3'-1"

1-Web PL. 84×⅜×28'-11 1/4"

Break goges

1-Pl. 20×⅜×1'-5" P83

{1-Pl. 16×⅜×3'-9 P84

1-Pl. 16×⅜×3'-9 3/4" P85

1-Pl. 16×⅜×3'-9 3/4" P86

1-Sole Pl. 13×¼×1'-7 PLANE ON BOTTOM FROM 13×1 5/16

7'-10 1/8" | 5'-5 3/4" | 4'-7 3/4" | 5'-10 1/4" | 26'-11 3/8"

1 1/16" Holes for 1" ℄ Anchor Bolts

1-Cov. PL. 20×⅜×5'6-6 1/2" | 1-Cov. PL. 20×⅝×48'-9 ℄ Strut | 1-Cov. PL. 20×⅝×40'-7 7/8 | 1-Cov. PL. 20×½×27'-2 3/8" | 10 7/16 ℄ Strut

15'-0 11/16" | 2'-11 7/8" | 15'-2 11/16" | 15'-3 5/16"

7'-0 1/4"

4'-5 1/4"

SECTION C-C

SECTION A-A
" E-E

SECTION B-B
" F-F

1-GIRDER REQ'D. MK. G4C
1- LATERAL PLATE REQ'D MK P83
1- P84
1- P85
1- P86

NOTE:
✓ This drawing to be used in conjunction with drawing # 22. ✓ Line X-X on this drawing coincides with Line X-X on drawing # 22. ✓

Note to Shop!
Holes in top flange of girder, for beam connections, to be reamed out to a template which will fit the beams.

SPECIFICATIONS—N. Y. C. LINES—FOR STEEL RAILROAD BRIDGES OF 1917.
SHOP AND FIELD RIVETS—⅞" DIAM.
HOLES FOR SHOP RIVETS IN METAL ⅝" THICK AND UNDER TO BE PUNCHED 11-16" DIAM AND REAMED TO 15-16" DIAM.
HOLES FOR SHOP RIVETS IN METAL OVER ⅝" THICK TO BE DRILLED 11-16" AND REAMED TO 15-16" DIAM.
HOLES FOR FIELD RIVETS IN METAL ⅝" THICK AND UNDER TO BE PUNCHED 11-16" AND REAMED TO 15-16" EXCEPT AS NOTED.
HOLES FOR FIELD RIVETS IN METAL OVER ⅝" THICK TO BE DRILLED 11-16" AND REAMED TO 15-16" DIAM.
HOLES IN LATERAL PLATES AND OUTLEGS OF STIFFENER ANGLES TO BE PUNCHED 15-16".
SHEARED EDGES OF MATERIAL OVER ½" IN THICKNESS EXCEPT CARRYING CALCULATED STRESS SHALL BE PLANED TO A DEPTH OF 3-16".
SHOP PAINT—N. Y. C. STANDARD RED LEAD.
SURFACES IN CONTACT TO RECEIVE ONE COAT OF PAINT ON EACH SURFACE BEFORE ASSEMBLING.
MACHINE FINISHED SURFACES TO BE COATED WITH HEAVY LUBRICATING GREASE.
ALL OTHER SURFACES TO RECEIVE ONE COAT OF PAINT, EXCEPT THOSE IN CONTACT WITH CONCRETE WHICH ARE NOT TO BE PAINTED. (SEE NOTES ON DETAILS).
ERECTION MARKS TO BE PLACED ON PAINTED SURFACES.
MEMBERS WEIGHING OVER 5 TONS SHALL HAVE THE WEIGHT MARKED THEREON.

N.Y.C. & St. L. R.R. (NICKEL PLATE)

HIGH LEVEL TEAM YARD LEAD BRIDGE No. 182.48

OVER CLEVELAND UNION TERM. CO. TRACK - CLEVELAND, O.

GIRDER G4C & LAT. PLS.

MADE BY E.F.K. CHECKED BY E.G.R. DATE 1-11-29

RIVETS See DIAM. | UNLESS OTHERWISE NOTED

OPEN HOLES Note DIAM.

FORT PITT BRIDGE WORKS

CANONSBURG, PA.

CONTRACT C-5567

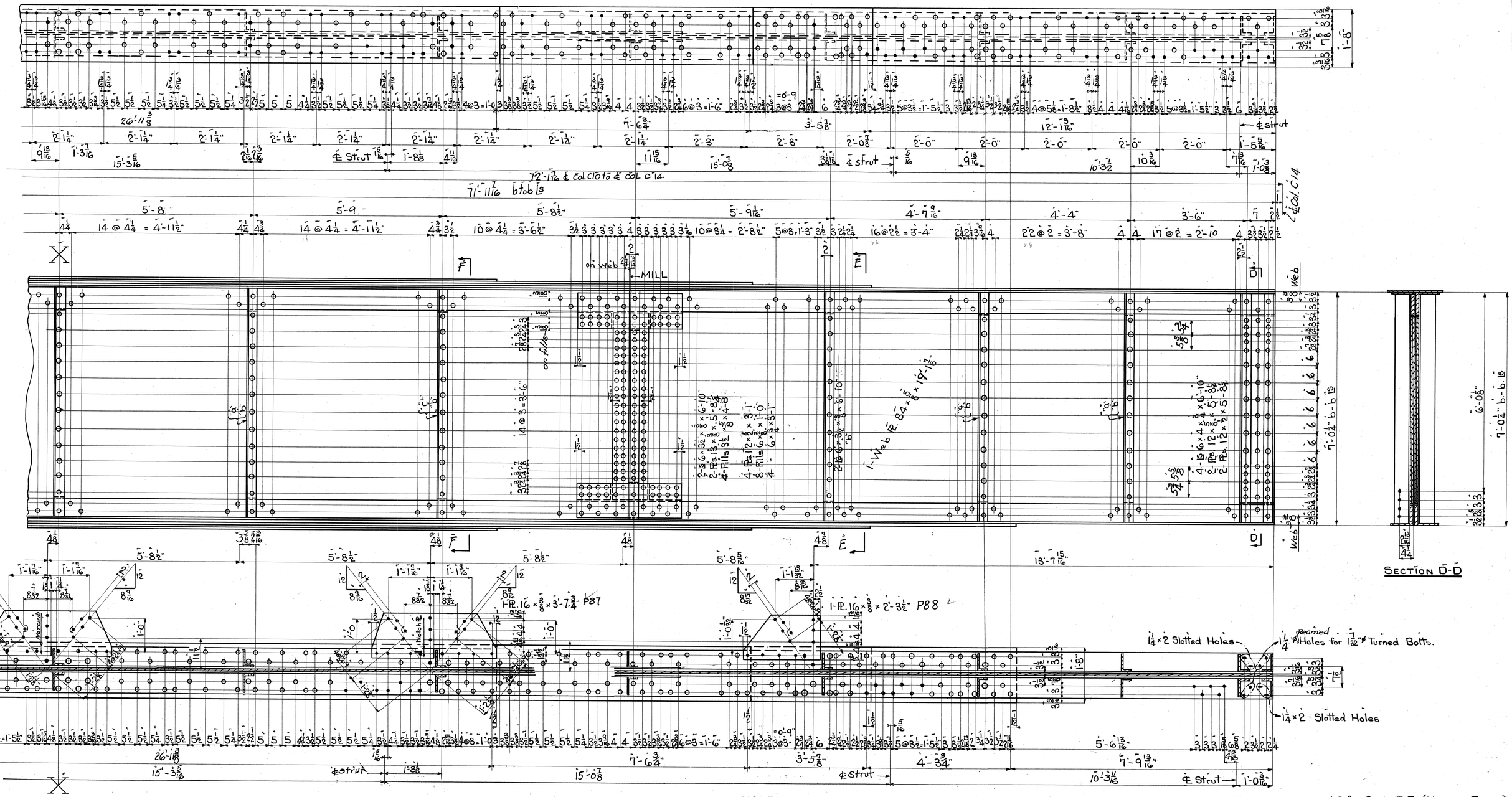
APP. 1/30

BILL PAGES 28-29

BILLED 1-24-29 BY

DRAWING NO. 21

H.M. NS 183-96-29



NOTE:-
This drawing to be used in conjunction with drawing #21. Line X-X on this drawing coincides with Line X-X on drawing #21.

1-LATERAL PLATE REQ'D. MK. P87 ✓
1- " " " " P88 ✓

Note to Shop!
Holes in top flange of girder, for beam connections, to be reamed out to a template which will fit the beams.

SPECIFICATIONS N. Y. C. LINES FOR STEEL RAILROAD BRIDGES OF 1917.
SHOP AND FIELD RIVETS—7/8" DIA.
HOLES FOR SHOP RIVETS IN METAL 7/8" THICK AND UNDER TO BE PUNCHED 11-16" DIAM AND REAMED TO 15-16" DIAM.
HOLES FOR SHOP RIVETS IN METAL OVER 7/8" THICK TO BE DRILLED 1 1/16" AND REAMED TO 15-16" DIAM.
HOLES FOR FIELD RIVETS IN METAL 3/4" THICK AND UNDER TO BE PUNCHED 11-16" AND REAMED TO 15-16" EXCEPT AS NOTED.
HOLES FOR FIELD RIVETS IN METAL OVER 7/8" THICK TO BE DRILLED 11-16" AND REAMED TO 15-16" DIAM.
HOLES IN LATERAL PLATES AND OUTLEGS OF STIFFENER ANGLES TO BE PUNCHED 15-16".
SHEARED EDGES OF MATERIAL OVER 3/4" IN THICKNESS AND CARRYING CALCULATED STRESS SHALL BE PLANED TO A DEPTH OF 3-16".
SHOP PAINT—N. Y. C. STANDARD RED LEAD.
SURFACES IN CONTACT TO RECEIVE ONE COAT OF PAINT ON EACH SURFACE BEFORE ASSEMBLING.
MACHINE FINISHED SURFACES TO BE COATED WITH HEAVY LUBRICATING GREASE.
ALL OTHER SURFACES TO RECEIVE ONE COAT OF PAINT, EXCEPT THOSE IN CONTACT WITH CONCRETE WHICH ARE NOT TO BE PAINTED. (SEE NOTES ON DETAILS).
ERECTION MARKS TO BE PLACED ON PAINTED SURFACES.
MEMBERS WEIGHING OVER 5 TONS SHALL HAVE THE WEIGHT MARKED THEREON.

N.Y.C.&St.L.R.R. (NICKEL PLATE)
HIGH LEVEL TEAM YARD LEAD BRIDGE No. 182.48
OVER CLEVELAND UNION TERM. CO. TRACK.-CLEVELAND, O.
GIRDER G4C & LAT. PLS.
MADE BY E.F.K. CHECKED BY E.G.R. DATE 1-12-29
RIVETS See DIAM. | UNLESS OTHERWISE NOTED
OPEN HOLES NOTE DIAM.

FORT PITT BRIDGE WORKS
CANONSBURG, PA.
CONTRACT C-5567
BILL PAGES 28-29
DRAWING NO 22
APP. 4/19
BILLED 1-24-29 BY

H.M. NS 183-96-29

61 - Railing Posts Req'd. Mk RP2.
14 - Side Walk Brackets Req'd. Mk. SB1.
11 — " " " " Mk. SB2.
2 — " " " " Mk. SB3.
11 — " " " " Mk. SB4.
1 — " " " " Mk. SB5.
13 — " " " " Mk. SB6.
1 — " " " " Mk. SB7.
1 — " " " " Mk. SB8.
4 — " " " " Mk. SB9.
3 — " " " " Mk. SB19.

2½" ϕ Hole for 2" ϕ Gas Pipe

RP21

2 - 2" ϕ Holes for 1½" ϕ Gas Pipes

1 - L 5 x 3½ x ⅜ x 4'-9½"

3'-3½"

3'-4¼"

2'-5½"

1 - L 3½ x 3½ x ⅜ x 2'-8½" for SB1.
2'-8⅜" " SB2.
2'-8¼" " SB3.
2'-7⅞" " SB4.
2'-7⅜" " SB5.
2'-7⅛" " SB6.
2'-7¼" " SB7.
2'-7" " SB8.
2'-6½" " SB9.
2'-6⅜" " SB19.

No Paint on Top Flg.

Pls. & L

1 - L 3½ x 3½ x ⅜ x 3'-5¼"

1 - Pl. 6 x ⅝ x 0'-6" C.

2 - Pl. 12 x ⅜ x 1'-1" (Cut Temp.)

1 - L 3½ x 3½ x ⅜ x 0'-7"a

1 - L 3½ x 3½ x ⅜ x 3'-7⅞" (Cut Temp.)

1 - Pl. 9 x ⅜ x 0'-11½"

No Paint.

Bk. Gdr. Le.

1 - L 3½ x 3½ x ⅜ x 1'-5 for SB1 & SB10.
1'-5⅛" for SB2 & SB11.
1'-5¼" " SB3 & SB12.
1'-5⅜" " SB4 & SB13.
1'-4⅞" " SB5.
1'-4⅝" " SB6 & SB15.
1'-4½" " SB7 & SB16.
1'-4⅜" " SB8 & SB17.
1'-4¼" " SB9 & SB18.
1'-3⅞" " SB19 & SB14.

11⅝	11½	11⅜	11	10⅞	10½	10⅜	10⅛	9⅞	9⅝	9½	9⅜	9⅛	9"
For SB1	For SB2	For SB3	For SB4	For SB5	For SB6	For SB7	For SB8	For SB9	For SB19				

⅜"	For SB1	1⅝"	For SB6.
½"	" SB2	2"	" SB7.
⅝"	" SB3	2¼"	" SB8.
¾"	" SB4	2½"	" SB9.
⅞"	" SB5	2⅝"	" SB19.

View B-B

1 - L 6 x ½ x 0'-7⅜" Bk.

2 - L Beam.

Block ¼ Not More

Section A-A.

1 - L 3½ x 3½ x ⅜ x

No Paint on Top Flg.

1 - Pl. 12 x ⅜ x 1'-0⅝" (Cut Temp.)

1 - L - L 3½ x 3½ x ⅜ x 3'-6⅞"

2 - L 7" x 3½ x 3'-9 7/16"

1 - Pl. 10 x ⅜ x 0'-10¼" (Cut Temp.)

No paint

Bk. of Gdr. Le.

2'-3½" for SB10.
2'-2⅞" " SB11.
2'-2⅜" " SB12.
2'-1⅞" " SB13.
2'-1⅜" " SB14.
2'-0¾" " SB15.
2'-0¼" " SB16.
1'-11¾" " SB17.
1'-11¼" " SB18.

11⅝	11½	11⅜	11	10⅞	10½	10⅜	10⅛	9⅞	9⅝
For SB10	For SB11	For SB12	For SB13	For SB14	For SB15	For SB16	For SB17	For SB18	

⅜"	For SB10.		
½"	" SB11.		
⅝"	" SB12.		
¾"	" SB13.		
⅞"	" SB14.		
1"	" SB15.		
1⅛"	" SB16.		
1¼"	" SB17.		
1⅜"	" SB18.		

14 - Side Walk Brackets Req'd. Mk. SB10.
1 - " " " " Mk. SB11.
4 - " " " " Mk. SB12.
8 - " " " " Mk. SB13.
3 - " " " " Mk. SB14.
12 - " " " " Mk. SB15.
2 - " " " " Mk. SB16.
2 - " " " " Mk. SB17.
3 - " " " " Mk. SB18.

For All Beams.
Paint these surfaces only.

For FB1 only

Omit cut for FB1A

Omit for FB1A

Block ¼ Not More

Bk. of Bracket L

5 Spcs @ 1'-0" = 5'-0"

Mark this end "East"

1 - 12" C.B @ 36# x 6'-9"

Omit for FB1A.

10 Spcs @ 6" = 5'-0"

1 - Floor Beam Req'd. Mk. FB1.
1 - " " " Mk. FB1A.

5 Spcs @ 1'-0" = 5'-0"

Mark this end "East"

1 - 12" C.B @ 36# x 7'-10½"

11 Spcs @ 6" = 5'-6"

Omit for FB11A

Omit cut for FB11A

Block ¾ Not More

Bk. of Bracket L.

1 - 12" C.B @ 36# x 14'-6"

Mark this end "East"

Omit for FB11A.

For FB11 1'-4 15/16"
For FB11A 12'-6 11/16"

Bottom View for FB11.

8'-0" C.C. Girders

Bottom View for FB11A.

1 - Floor Beam Req'd. Mk. FB11.
1 - " " " Mk. FB11A.

2 - Floor Beams Req'd. Mk FB2.

General Note.

Specifications N.Y.C. Lines for steel railroad bridges of 1917.
Shop and field rivets ⅞" diam.
Holes for shop and field rivets punched 15/16" ϕ.
Shop Paint. N.Y.C. Standard Red Lead.
Surfaces in contact to receive one coat of paint on each surface before assembling.

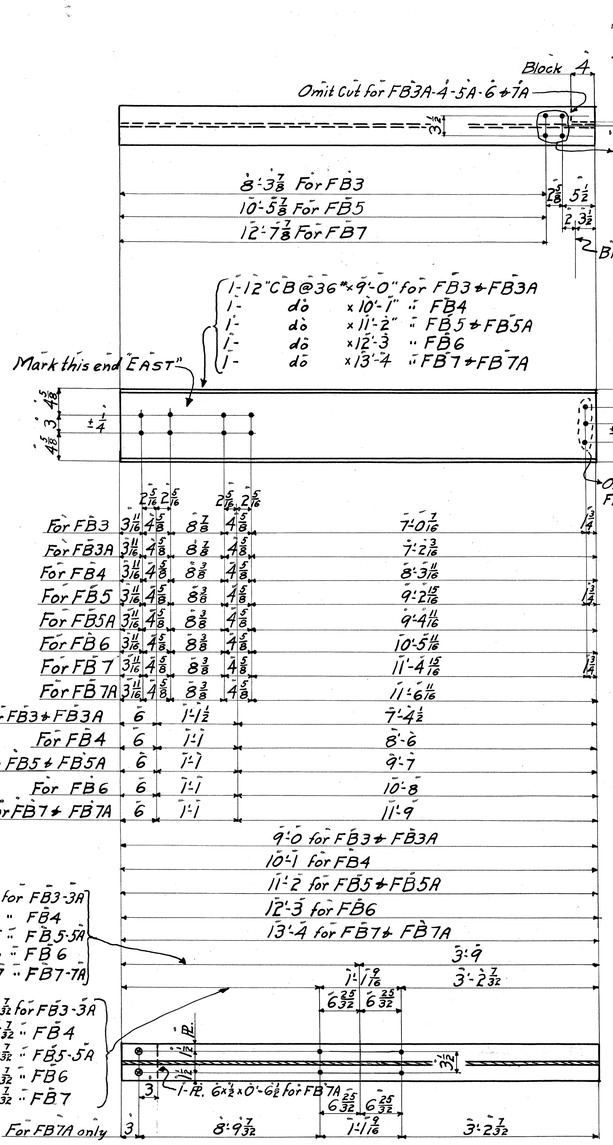
All other surfaces to receive one coat of paint, except those in contact with concrete, which are not to be painted. (See notes on details and sketch. Erection marks to be placed on painted surfaces on brackets.

N.Y.C. & St. L. R.R. (Nickel Plate)
High Level Team Yard Lead. Bridge No. 182.48.
Over Cleveland Union Terminal Co Tracks. Clev. O.

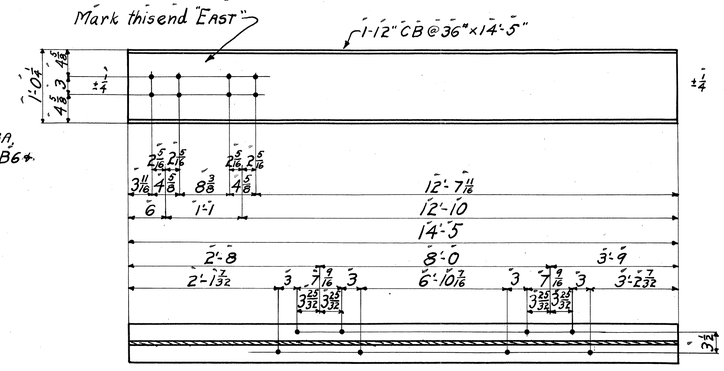
Details of Brackets, Posts & Floor Beams
Made by J.R.S. Checked by E.G.R. Date 1-28-29
Rivets See diam. | Unless otherwise noted
Open holes Note diam.

FORT PITT BRIDGE WORKS
Canonsburg, Pa.
Contract C-5567.
App. 4/11
2/12
Bill pages 32-33-34
Billed 2-4-29 by J.R.S.
Drawing No. 23 #23.

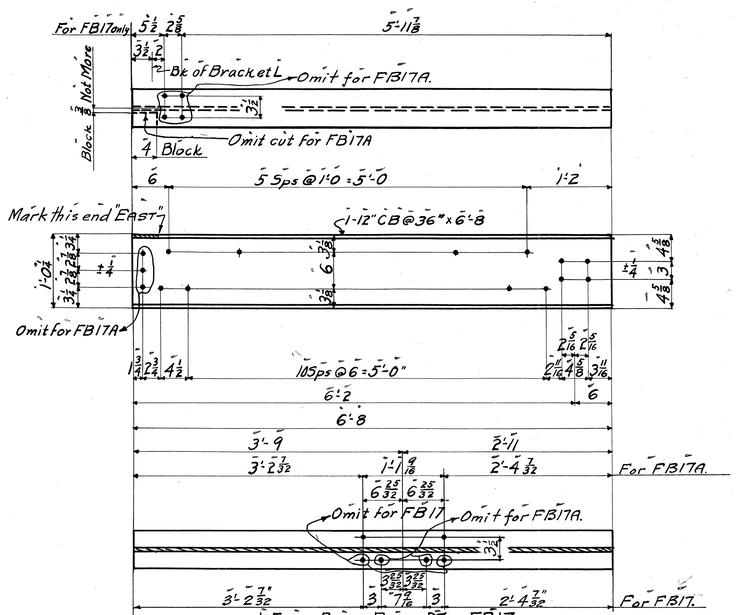
NS 183-96-791



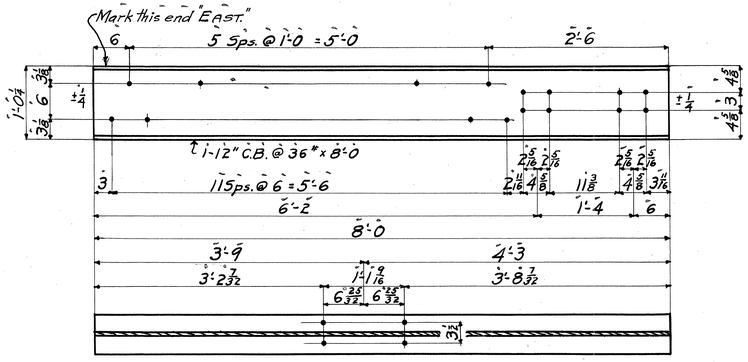
1-Floor Beam Req'd. Mk. FB3
1- " " " " FB3A
2- " Beams " " FB4
1- " Beam " " FB5
1- " " " " FB5A
2- " Beams " " FB6
1- " Beam " " FB7
1- " " " " FB7A



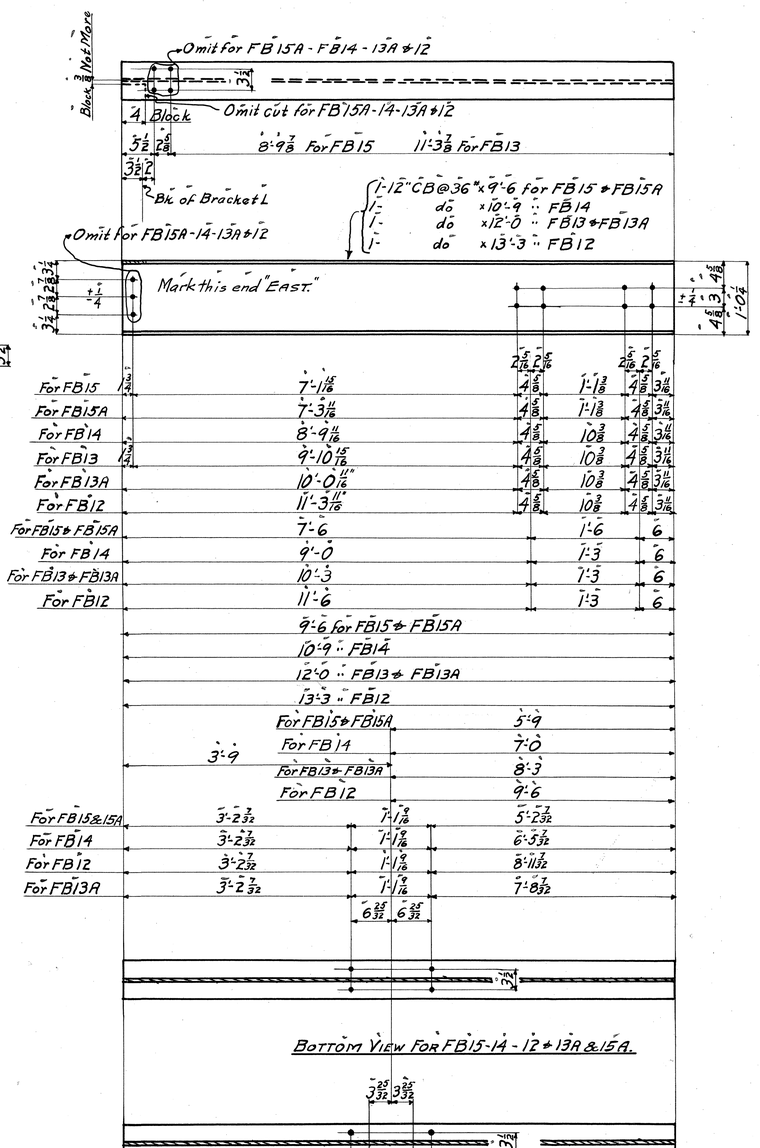
2-Floor Beams Req'd. Mk. FB8



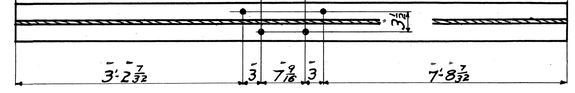
1-Floor Beam Req'd. Mk. FB17
1- " " " " FB17A



2-Floor Beams Req'd. Mk. FB16



Bottom View For FB15-14-12 & 13A & 15A.



Bottom View For FB13

2-Floor Beams Req'd. Mk. FB12
1- " Beam " " FB13
1- " " " " FB13A
2- " Beams " " FB14
1- " Beam " " FB15
1- " " " " FB15A

General Note.

- Specifications: N.Y.C. Lines for steel railroad bridges of 1917.
- Shop and field rivets ⅞" diam.
- Holes for shop and field rivets punched 15/16" diam.
- Shop Paint. N.Y.C. Std. Red Lead.
- Surfaces in contact to receive one coat of paint on each surface before assembling.
- All other surfaces to receive one coat of paint, except those in contact with concrete, which are not to be painted. (See sketch.)

N.Y.C. & St. L.R.R. (Nickel Plate)
High Level Team Yard Lead. Bridge No. 182.48.
Over Cleveland Union Terminal Co. Tracks. Clev. O.

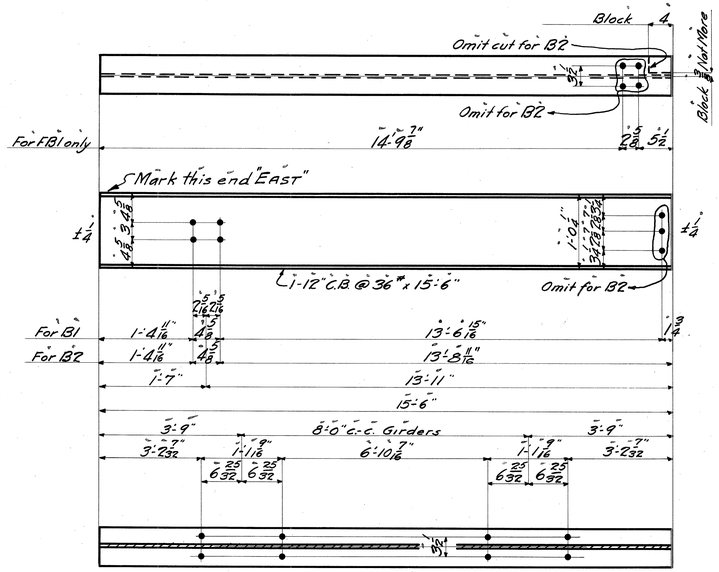
Details of Floor Beams.

MADE BY J.R.S. CHECKED BY E.G.R. DATE 1-29-29
RIVETS SEE DIAM. | UNLESS OTHERWISE NOTED
OPEN HOLES NOTE DIAM.

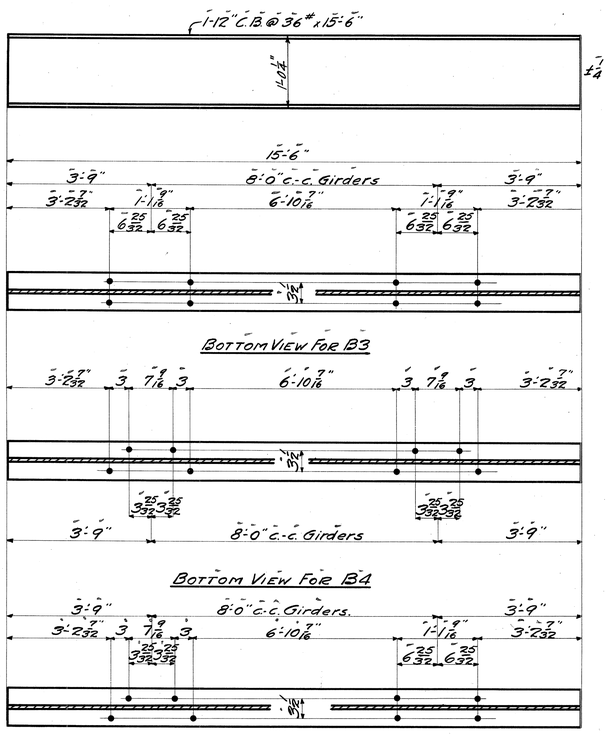
FORT PITT BRIDGE WORKS
CANONSBURG, PA.

APP'D 4/11
CONTRACT C-5567
BILL PAGES 35
BILLED J.R.S. BY 2-4-29
DRAWING NO 24

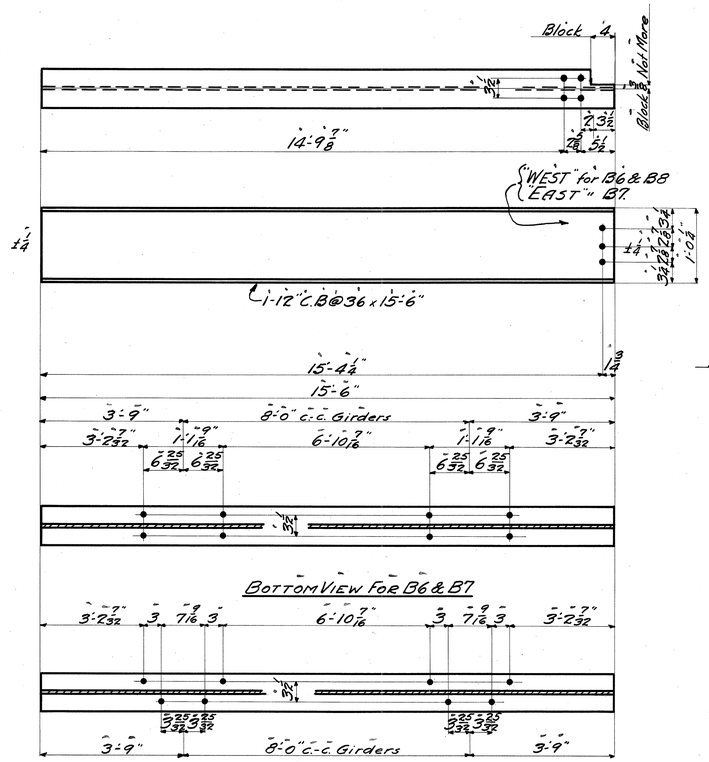
H.C.F.
NS 183-96-29



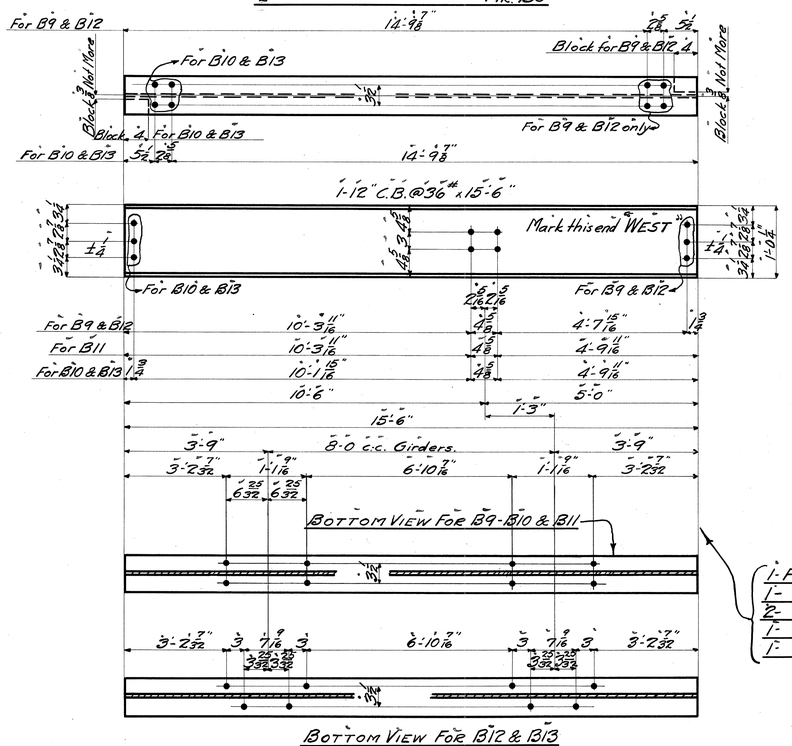
1-Floor Beam Req'd. Mk. B1
3- " Beams " Mk. B2



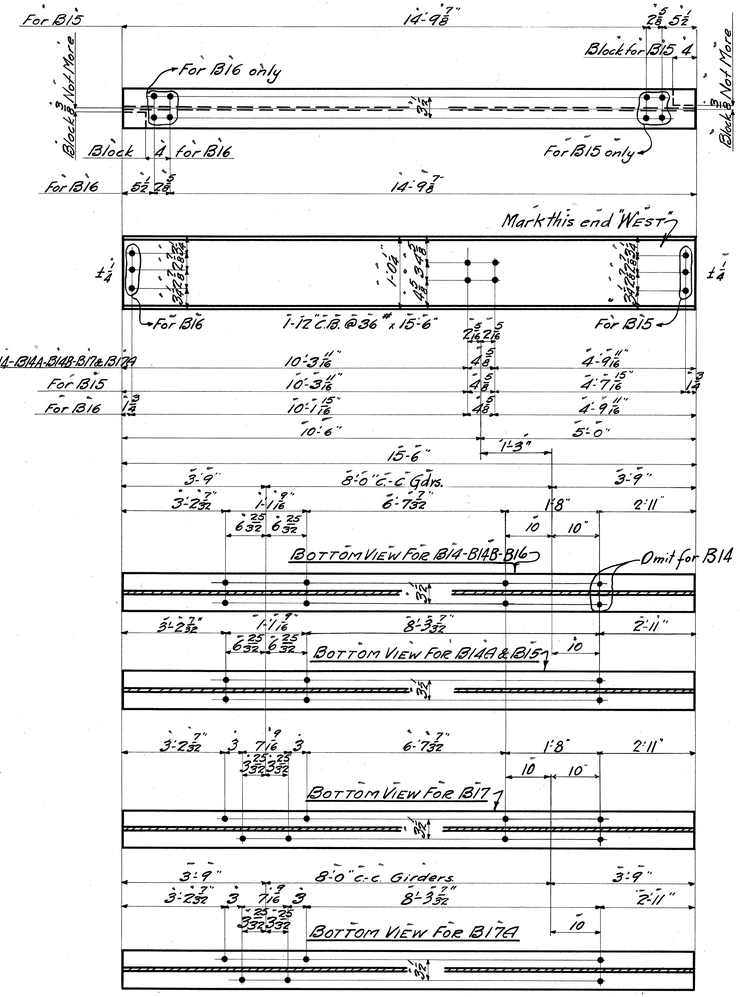
45-Floor Beams Req'd. Mk. B3
12- " " " Mk. B4
1- " " " Mk. B5



21-Floor Beams Req'd. Mk. B6
21- " " " Mk. B7
2- " " " Mk. B8
} Alike except for compass marks.



1-Floor Beam Req'd. Mk. B9
1- " Beam " Mk. B10
2- " Beams " Mk. B11
1- " Beam " Mk. B12
1- " " " Mk. B13



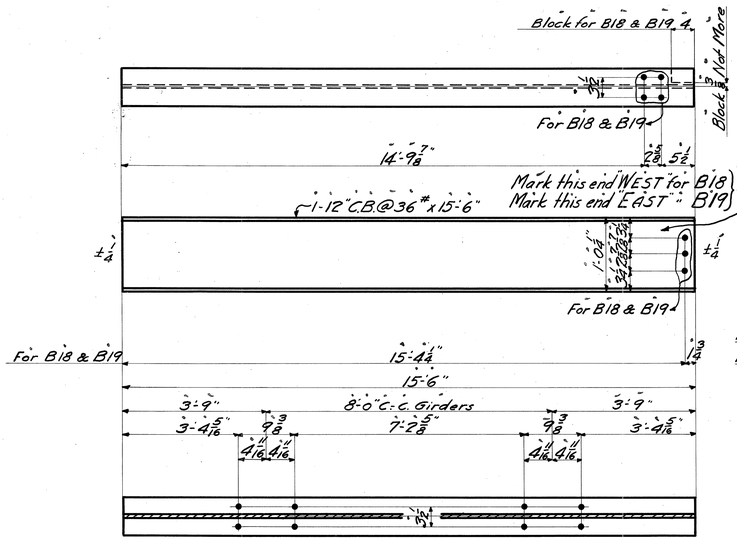
2- Floor Beams Req'd Mk. B14
3- " " " Mk. B14A
1- " " " Mk. B14B
3- " " " Mk. B15
3- " " " Mk. B16
1- " Beam " Mk. B17
1- " Beam " Mk. B17A

General Note.
Specifications: N.Y.C. Lines for steel railroad bridges of 1917.
Shop and field rivets 7/8" diam.
Holes for shop and field rivets punched 15/16" diam.
Shop Paint. N.Y.C. Std. Red Lead.
All surfaces to receive one coat of paint except those in contact with concrete which are not to be painted. (See sketch)

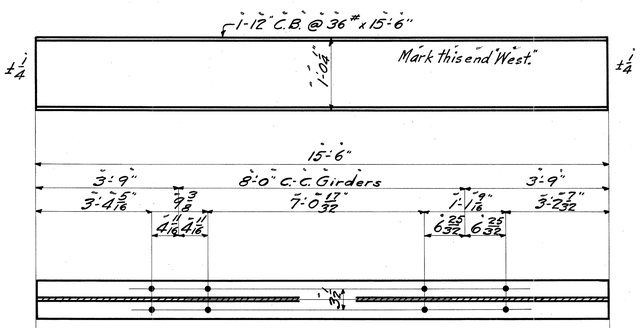
N.Y.C. & St.L.R.R. (Nickel Plate.)
High Level Team Yard Lead, Bridge No. 182.48.
Over Cleveland Union Terminal Co. Tracks, Cleve.
Details of Floor Beams.
MADE BY J.R.S. CHECKED BY E.G.R. DATE 1-31-29
RIVETS See DIAM. | UNLESS OTHERWISE NOTED
OPEN HOLES Note DIAM.

FORT PITT BRIDGE WORKS
CANONSBURG, PA.
CONTRACT C-5567
BILL PAGES 36
DRAWING NO 25
APPD
BILLED J.R.S. BY 2-4-29

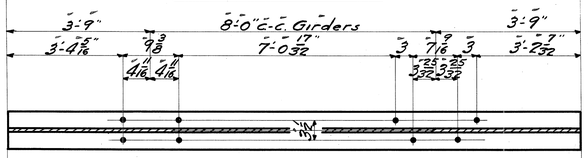
TRCD. BY W.N.P.
NS 183-96-79



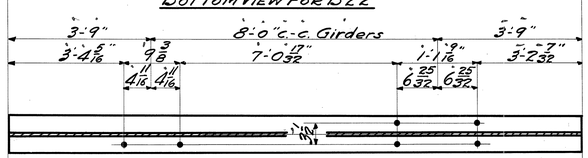
10-Floor Beams Req'd. Mk. B18
10- " " " Mk. B19
24- " " " Mk. B20
} Alike except for Compass Marks.



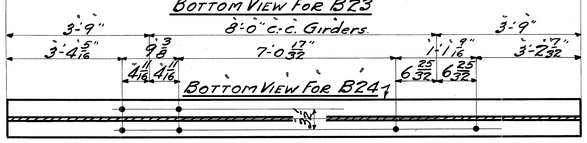
Bottom View For B21



Bottom View For B22

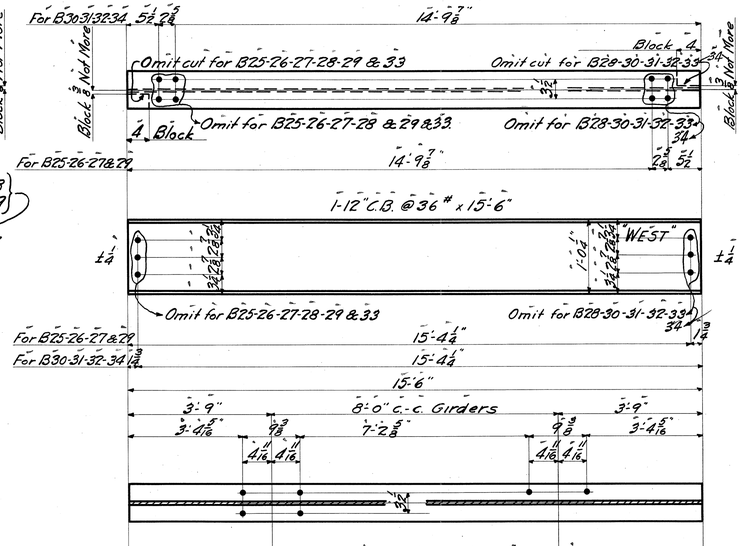


Bottom View For B23

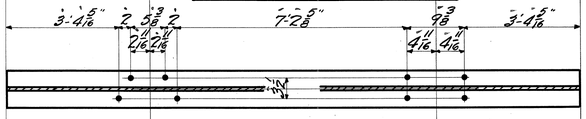


Bottom View For B24

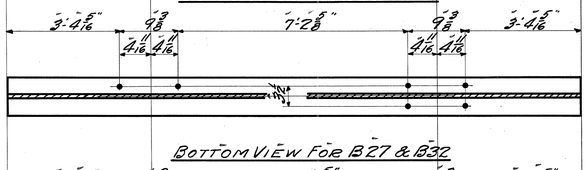
3-Floor Beams Req'd. Mk. B21
1- " Beam " Mk. B22
1- " " " Mk. B23
2- " Beams " Mk. B24



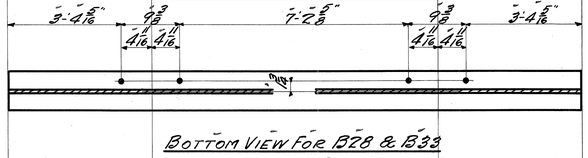
Bottom View For B25 & B30



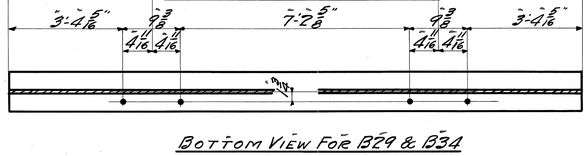
Bottom View For B26 & B31



Bottom View For B27 & B32

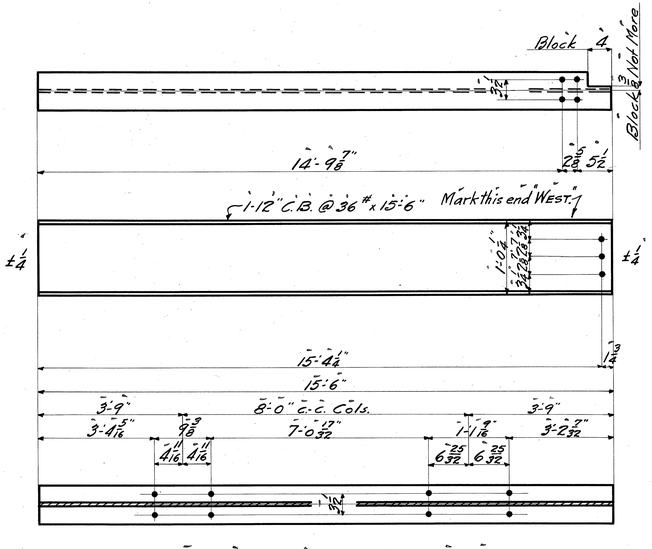


Bottom View For B28 & B33

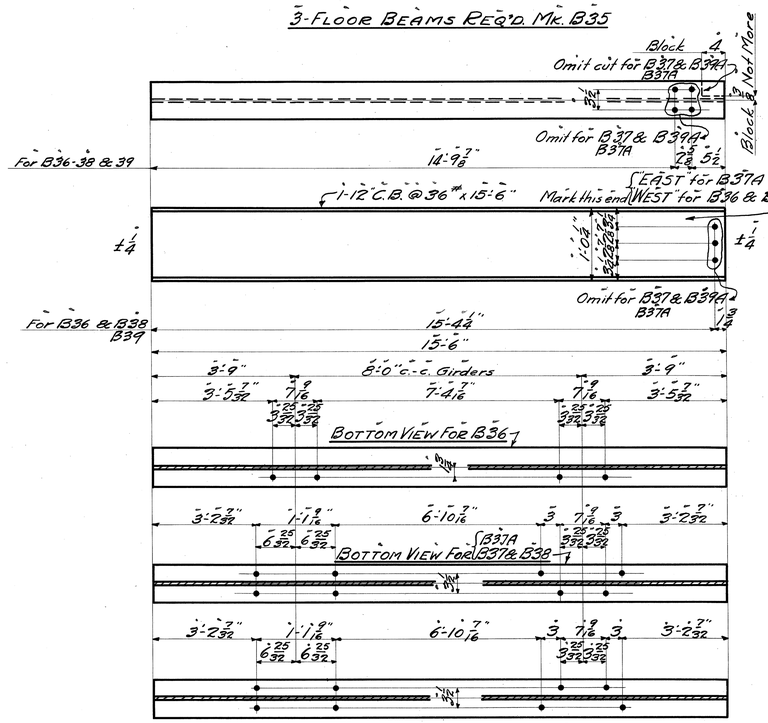


Bottom View For B29 & B34

1-Floor Beam Req'd. Mk. B25
1- " " " Mk. B26
1- " " " Mk. B27
1- " " " Mk. B28
1- " " " Mk. B29
1- " " " Mk. B30
1- " " " Mk. B31
1- " " " Mk. B32
1- " " " Mk. B33
1- " " " Mk. B34



3-Floor Beams Req'd. Mk. B35



Bottom View For B39 & B39A

1-Floor Beam Req'd. Mk. B36
3- " Beams " Mk. B37
1- " Beam " Mk. B37A
3- " Beams " Mk. B38
3- " " " Mk. B39
2- " " " Mk. B39A
} Alike except for Compass Marks.

General Note.

- Specifications: N.Y.C. Lines for steel railroad bridges of 1917.
- Shop and field rivets 7/8" diam.
- Holes for shop and field rivets punched 15/16" diam.
- Shop Paint. N.Y.C. Std. Red Lead.
- All surfaces to receive one coat of paint except those in contact with concrete which are not to be painted. (See sketch)

N.Y.C. & St.L.R.R. (Nickel Plate)

High Level Team Yard Lead. Bridge No. 182.48.

Over Cleveland Union Terminal Co. Tracks. Clev. O.

Details of Floor Beams.

MADE BY J.R.S. CHECKED BY E.G.R. DATE 2-1-29

RIVETS See DIAM. | UNLESS OTHERWISE NOTED

OPEN HOLES Note DIAM.

FORT PITT BRIDGE WORKS

CANONSBURG, PA.

CONTRACT C-5567

APP. 2/9/29

E 2/12

I

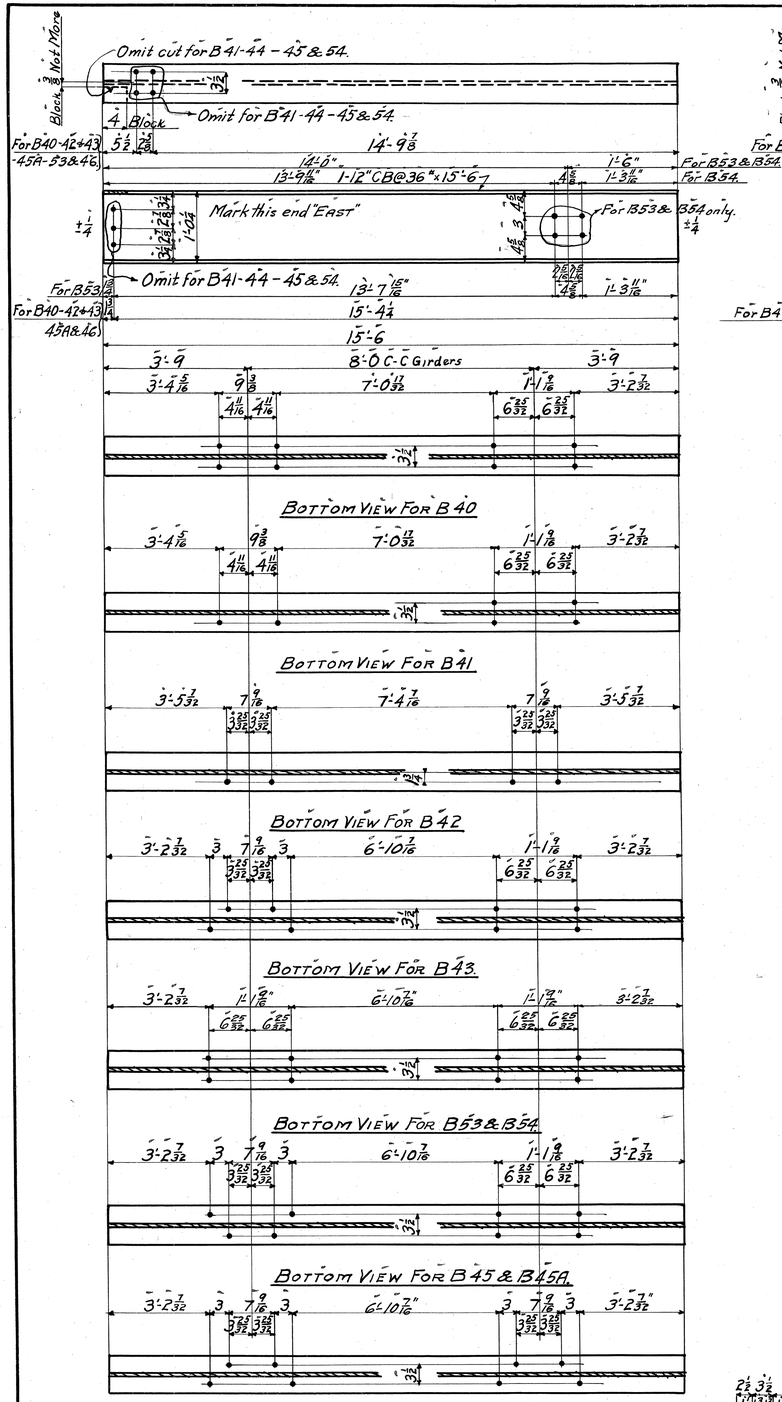
BILLED J.R.S. BY 2-4-29

BILL PAGES 37

DRAWING NO 26

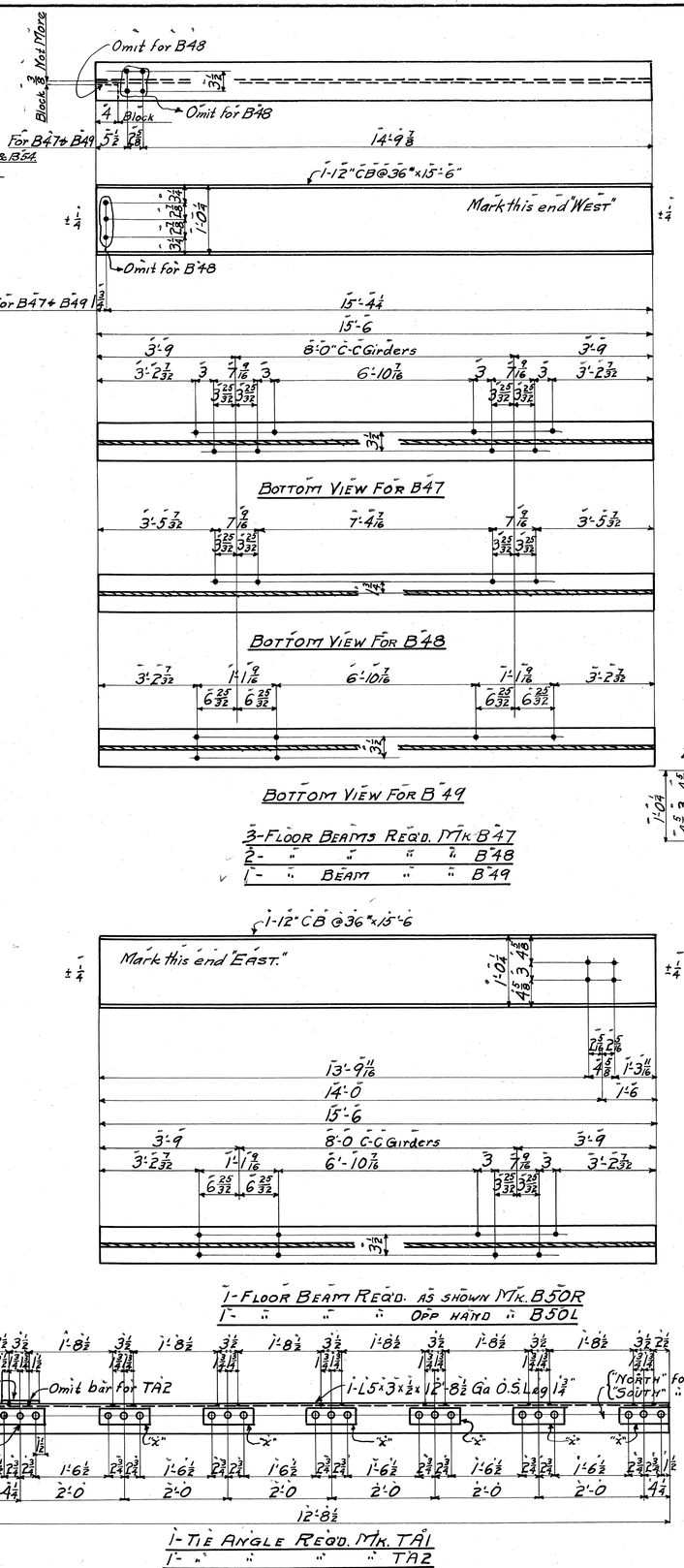
REC'D. BY W.N.R.

NS 183-96-25

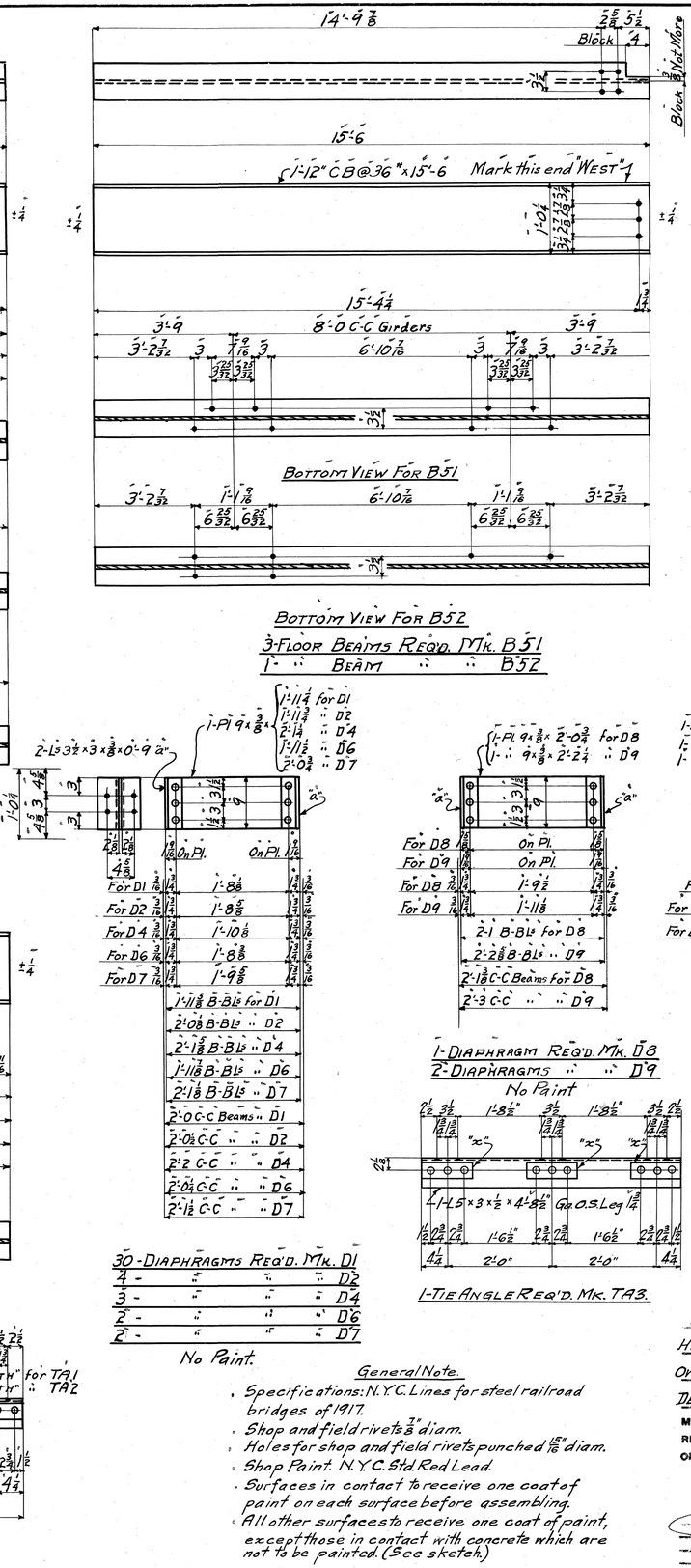


3-Floor Beams Req'd. Mk. B40

1-	"	Beam	B41
1-	"	"	B42
2-	"	Beams	B43
1-	"	Beam	B44
5-	"	Beams	B45
3-	"	"	B46
1-	"	"	B45A
1-	"	"	B53
1-	"	"	B54



3-Floor Beams Req'd. Mk. B47
2- " " " B48
1- " Beam " B49



Bottom View For B52

3-Floor Beams Req'd. Mk. B51
1- " " B52

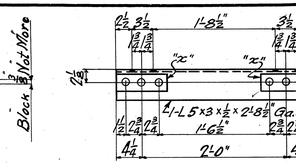
30-Diaphragms Req'd. Mk. D1

4-	"	"	D2
3-	"	"	D4
2-	"	"	D6
2-	"	"	D7

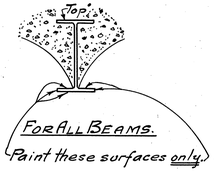
No Paint.

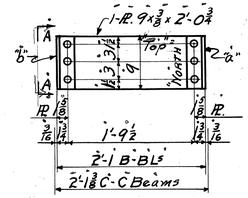
1-Diaphragm Req'd. Mk. D8
2-Diaphragms " " D9
No Paint

1-Tie Angle Req'd. Mk. TA3.

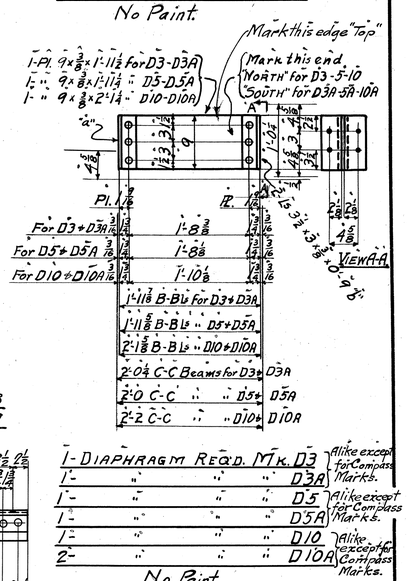


1-Tie Angle Req'd. Mk. TA4



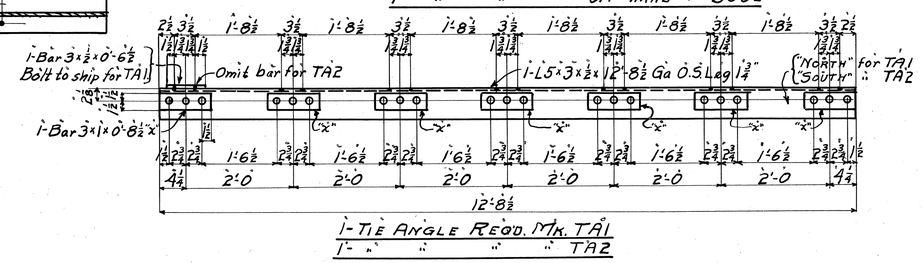


1-Diaphragm Req'd. Mk. D11
No Paint.



1-Diaphragm Req'd. Mk. D3
1- " " " D3A Alike except for Compass Marks.
1- " " " D5 Alike except for Compass Marks.
1- " " " D5A
1- " " " D10
2- " " " D10A Alike except for Compass Marks.

No Paint



1-Tie Angle Req'd. Mk. TA1
1- " " " TA2

General Note.

- Specifications: N.Y.C. Lines for steel railroad bridges of 1917.
- Shop and field rivets ⅞" diam.
- Holes for shop and field rivets punched 15/16" diam.
- Shop Paint. N.Y.C. Std. Red Lead.
- Surfaces in contact to receive one coat of paint on each surface before assembling.
- All other surfaces to receive one coat of paint, except those in contact with concrete which are not to be painted. (See sketch.)

N.Y.C. & St.L. RR. (Nickel Plate)

High Level Team Yard Lead. Bridge No. 182.48.

Over Cleveland Union Terminal Co. Tracks, Clev. O.

Details of Floor Beams, Diaphragms & Tie Angles

MADE BY JRS CHECKED BY E.G.R DATE 2-4-29

RIVETS See DIAM. | OPEN HOLES Note DIAM. | UNLESS OTHERWISE NOTED

FORT PITT BRIDGE WORKS
CANONSBURG, PA.

CONTRACT C-5567

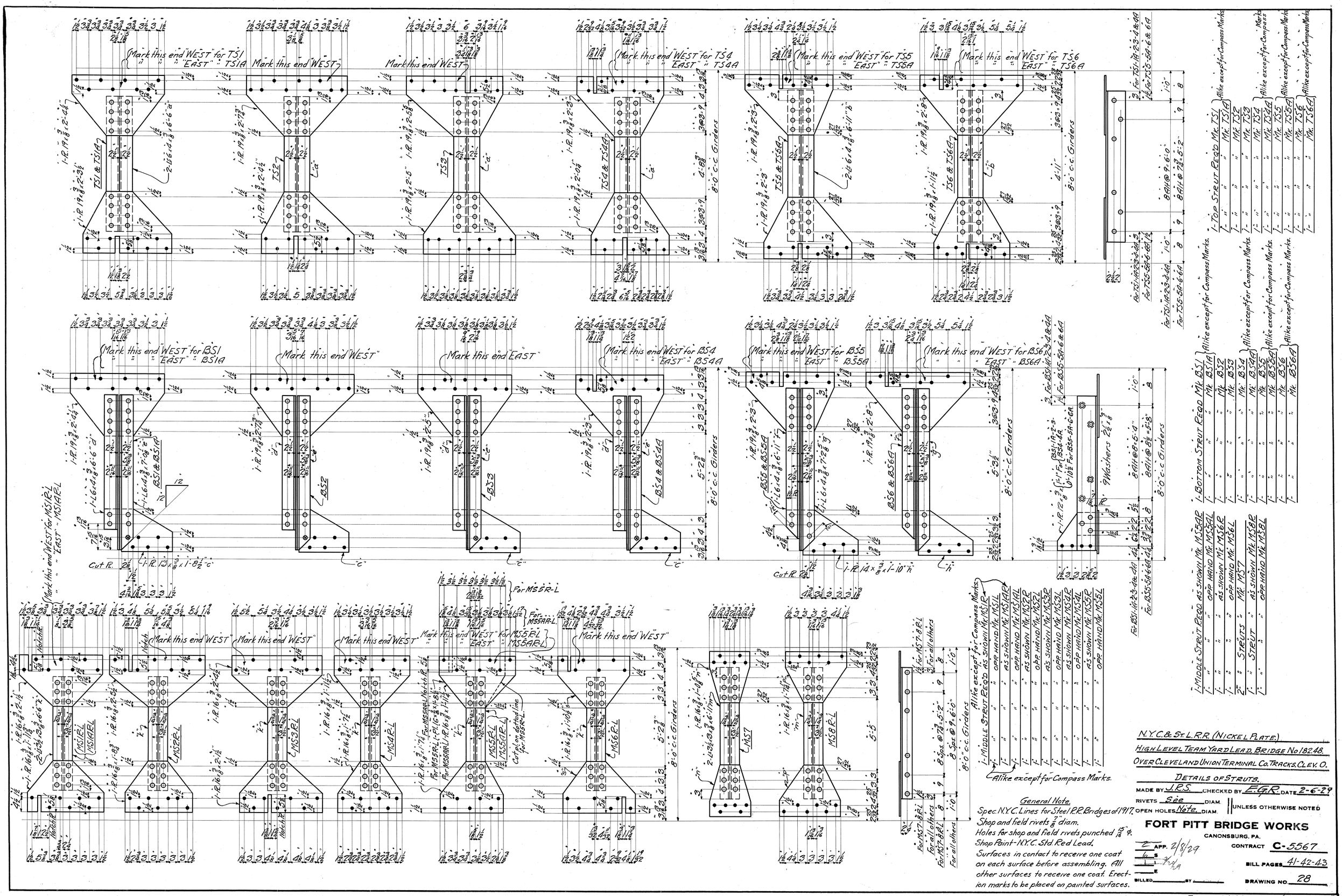
BILL PAGES 38-39-40

BILLED BY

DRAWING NO. 27.

H.C.F.

NS 183-96-15



N.Y.C. & St. L. R.R. (Nickel Plate)

High Level Team Yard Lead, Bridge No 182.48.

Over Cleveland Union Terminal Co. Tracks, Clev. O.

Details of Struts.

Made by J.R.S. Checked by E.G.R. Date 2-6-29

Rivets See Diam. Open Holes Note Diam. Unless otherwise noted

General Note.

Spec. N.Y.C. Lines for Steel R.R. Bridges of 1917.
Shop and field rivets 7/8" diam.
Holes for shop and field rivets punched 15/16" φ.
Shop Paint - N.Y.C. Std. Red Lead.
Surfaces in contact to receive one coat on each surface before assembling. All other surfaces to receive one coat. Erection marks to be placed on painted surfaces.

FORT PITT BRIDGE WORKS

CANONSBURG, PA.

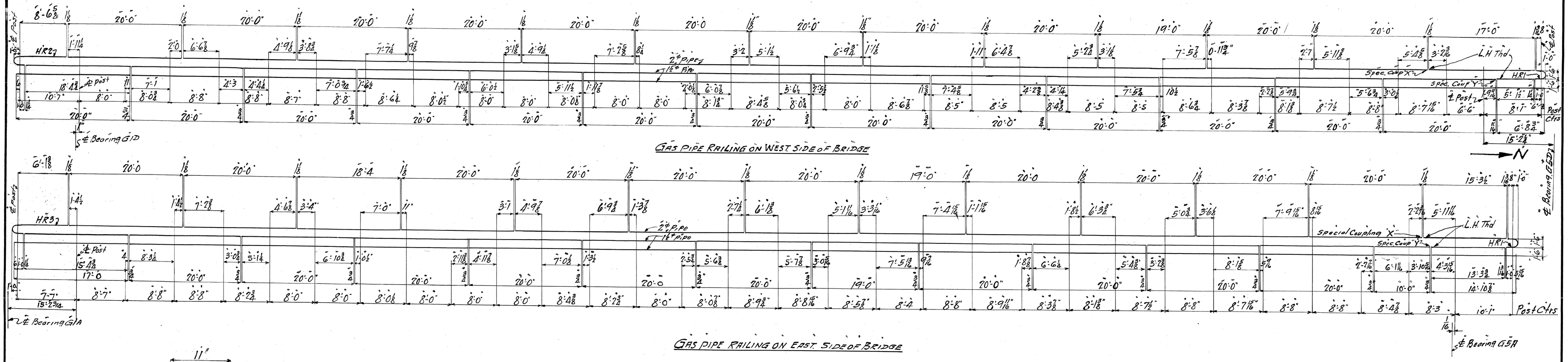
2 APP. 2/8/29
6 S
1 E
BILLED ____ BY ____

CONTRACT C-5567

BILL PAGES 41-42-43

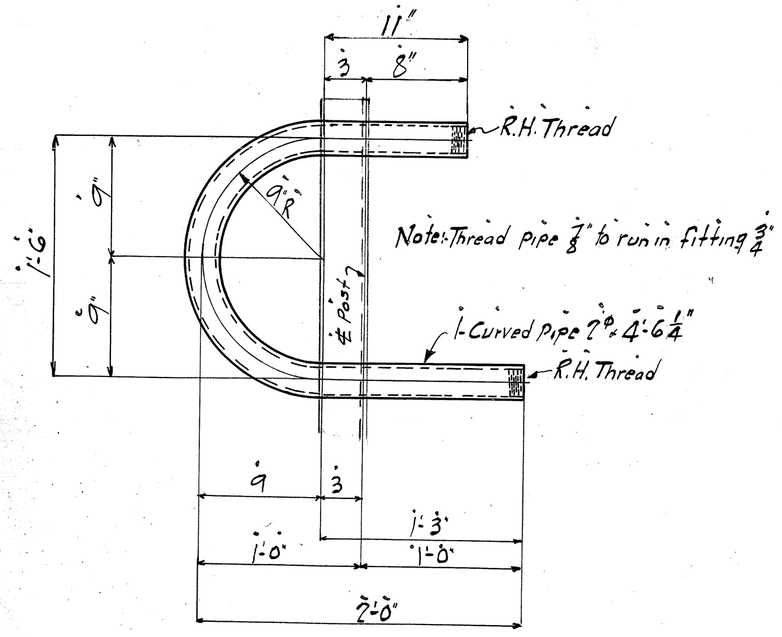
DRAWING NO. 28

Trcd. by W.N.P. NS 183-96-29

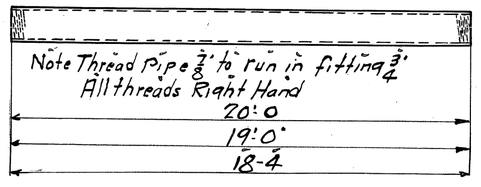


GAS PIPE RAILING ON WEST SIDE OF BRIDGE

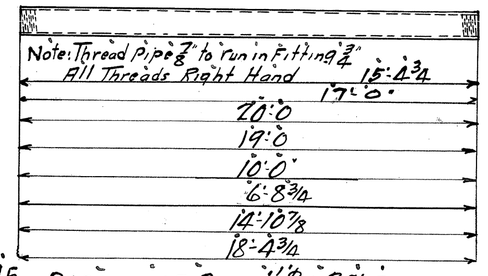
GAS PIPE RAILING ON EAST SIDE OF BRIDGE



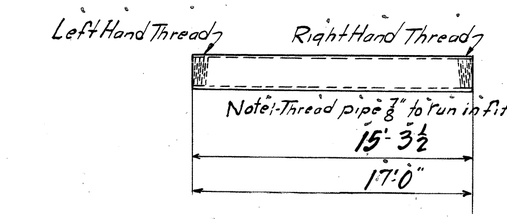
2-PIECES OF CURVED PIPE REQ'D MK HR1



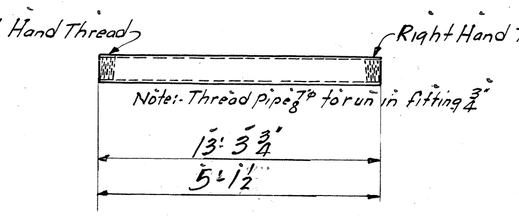
2-PIECES OF PIPE 2"ø × 20'-0
2- " " " 2"ø × 19'-0"
1- " " " 2"ø × 18'-4



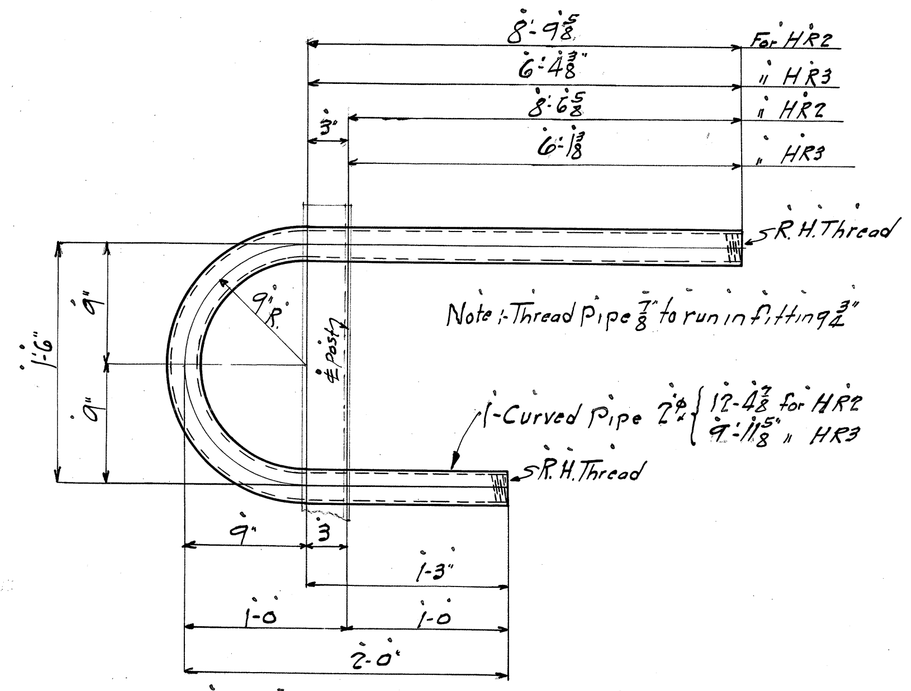
45-PIECES OF PIPE 1½"ø × 20'-0
2- " " " 1½"ø × 19'-0
2- " " " 1½"ø × 10'-0
1- " " " 1½"ø × 6'-8 3/4
1- " " " 1½"ø × 14'-10 7/8
1- " " " 1½"ø × 15'-4 3/4
1- " " " 1½"ø × 17'-0
1- " " " 1½"ø × 15'-4 3/4



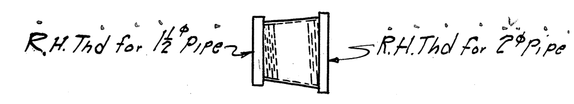
1-PIECE OF PIPE 2"ø × 15'-3 1/2
1- " " " 2"ø × 17'-0



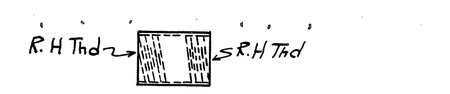
1-PIECE OF PIPE 1½"ø × 13'-3 3/4"
1- " " " 1½"ø × 5'-1½"



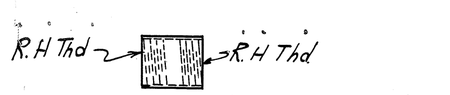
1-PIECE OF CURVED PIPE REQ'D MK HR2
1- " " " " " HR3



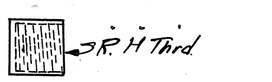
4-REDUCING COUPLINGS REQ'D



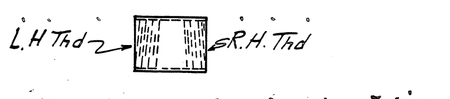
26-STD COUPLINGS REQ'D FOR 2"ø PIPE



50-STD COUPLINGS REQ'D FOR 1½"ø PIPE



4-STD. CAPS REQ'D FOR 1½"ø PIPE



2-SPECIAL COUPLINGS FOR 2"ø PIPE MK "X"

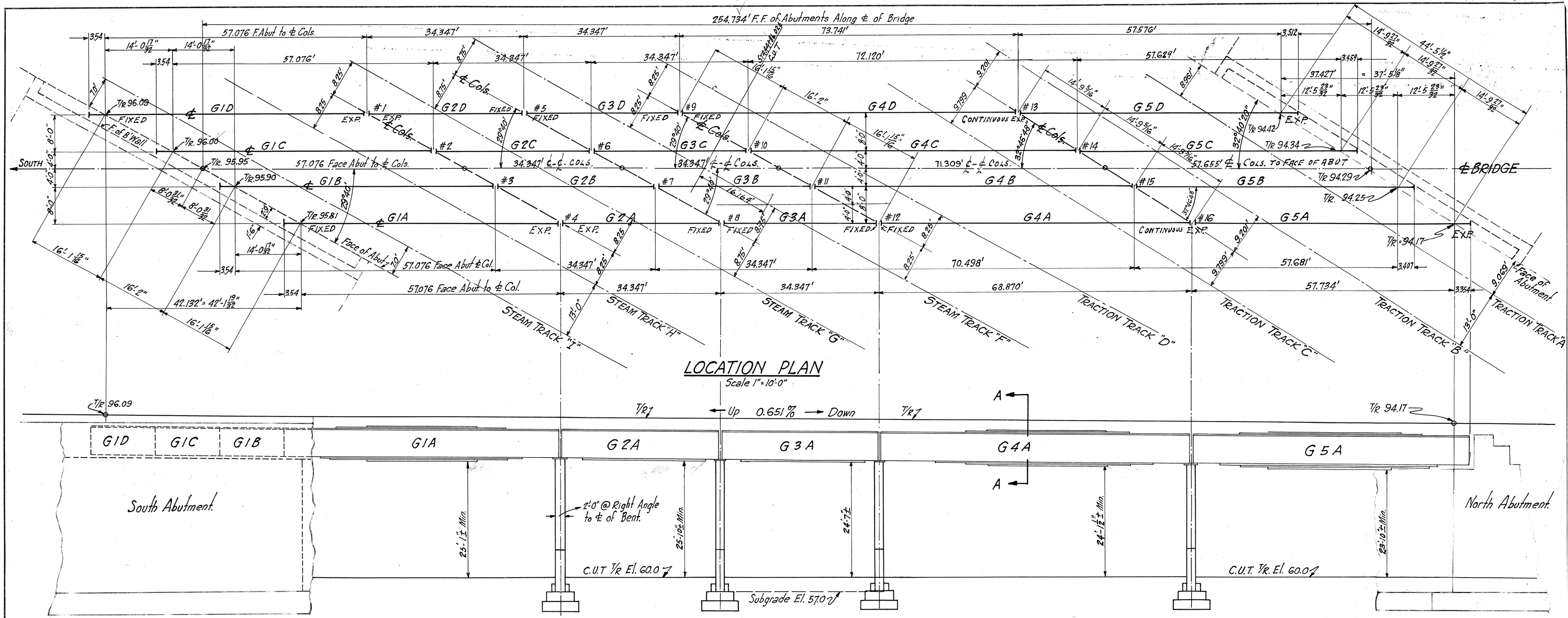
2-SPECIAL COUPLINGS REQ'D FOR 1½"ø PIPE MK "Y"

General Note.
Specifications:- N.Y.C. Lines for Steel Railroad Bridges of 1917.
Shop Paint:- N.Y.C. Standard Red Lead. (1 Coat)
All pipe:- Standard Gas Pipe

N.Y.C. & St.L. R.R. (NICKEL PLATE)
HIGH LEVEL TEAM YARD LEAD BRIDGE NO 182.48
OVER CLEVELAND UNION TERM. CO. TRACK CLEVELAND, O.
Erection Plan & Details of Handrailing
MADE BY L.D.R. CHECKED BY E.G.R. DATE 2-8-29
RIVETS ____ DIAM. | UNLESS OTHERWISE NOTED
OPEN HOLES ____ DIAM.

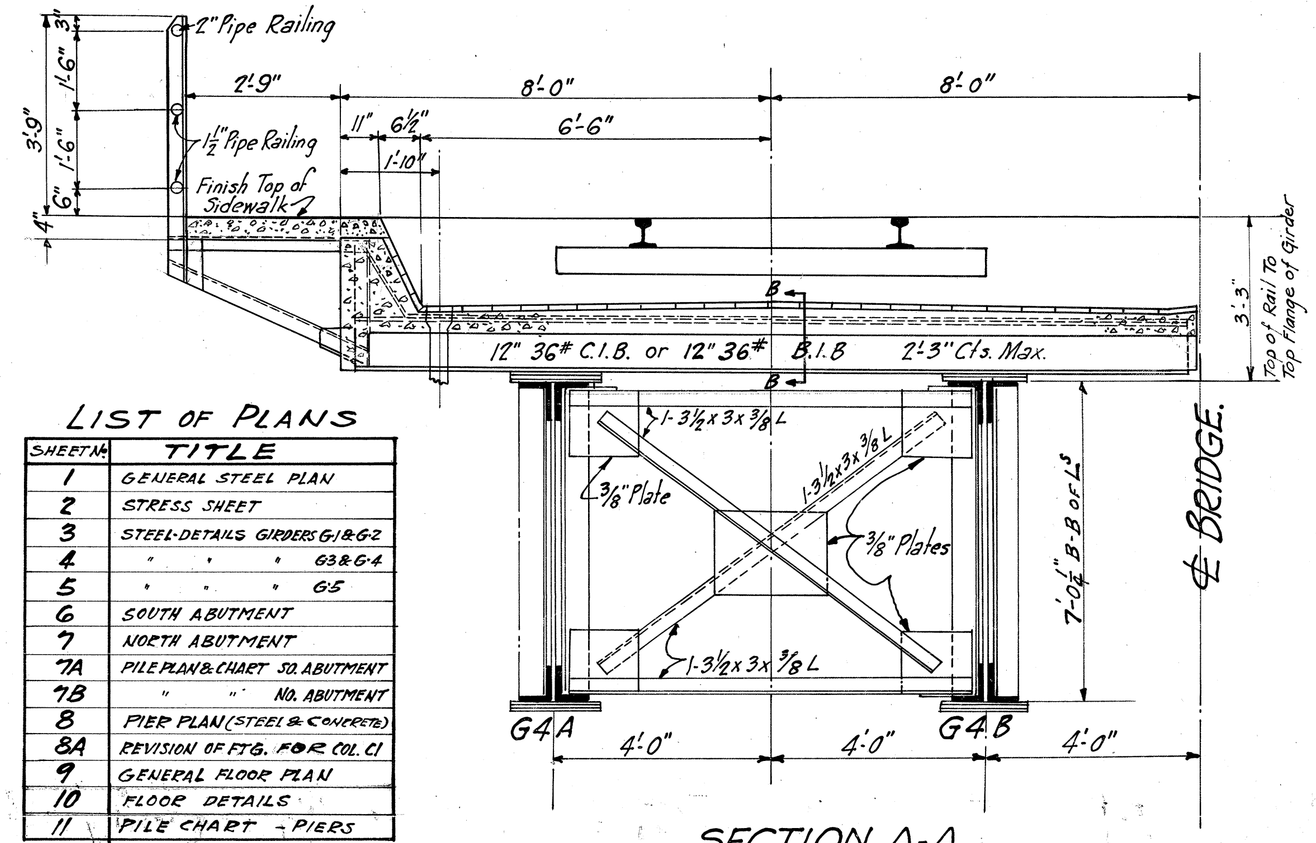
FORT PITT BRIDGE WORKS
CANONSBURG, PA.
APP. 2/9
CONTRACT C-5567
BILL PAGES 44
DRAWING NO. 29
BILLED ____ BY ____

NS 182.48 281



LOCATION PLAN
Scale 1"=10'-0"

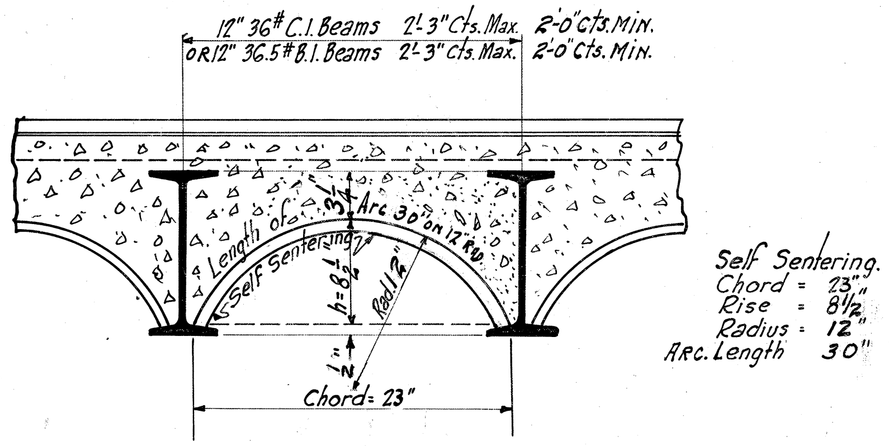
ELEVATION
Scale 1"=10'-0"



SECTION A-A
Scale ½"=1'-0"

LIST OF PLANS

SHEET No.	TITLE
1	GENERAL STEEL PLAN
2	STRESS SHEET
3	STEEL-DETAILS GIRDERS G1&G2
4	" " " G3&G4
5	" " " G5
6	SOUTH ABUTMENT
7	NORTH ABUTMENT
7A	PILE PLAN & CHART SO. ABUTMENT
7B	" " " NO. ABUTMENT
8	PIER PLAN (STEEL & CONCRETE)
8A	REVISION OF FTG. FOR COL. C1
9	GENERAL FLOOR PLAN
10	FLOOR DETAILS
11	PILE CHART - PIERS



Self Sentering.
Chord = 23"
Rise = 8½"
Radius = 12"
Arc. Length 30"

TYPICAL FLOOR SECTION B-B
Scale 1½"=1'-0"

NEW YORK CENTRAL LINES SPECIFICATIONS FOR STEEL RAILROAD BRIDGES OF 1917

DATE	REVISIONS	BY
12-12-30	List of Plans	P.M.
7/3/28	Relocation of Pier No 3, from 58	W.G.H.
5/22/28	Change Floor Beams.	F.M.S.
4/10/28	Correction	F.M.S.
3/16/28	C.U.T. Tracks	R.T.B

N. Y. C. & St L. R. R.
NICKEL PLATE DISTRICT
BRIDGE-NO- ~~182.48~~ 183.96
HIGH LEVEL TEAM YARD LEAD BRIDGE
OVER C.U.T. CLEVELAND-OHIO
GENERAL STEEL PLAN
OFFICE OF CHIEF ENGINEER CLEVELAND, O.

SCALE	DRAWN	TRACED	CHECKED
AS SHOWN	F.M.S.	W.G.H. 7-5-28	A.K.

DATE March 16 1928 | SHEET 1 OF 14 | No. ~~182.48 281~~

183-96-281

NEW YORK CENTRAL LINES SPECIFICATIONS FOR STEEL BRIDGES OF 1917

GIRDERS MARKED	G1A&D	G1B&C	G2A&D	G2B&C	G3A&D	G3B&C
END TO END	60'-6"	60'-6"	34'-0"	34'-0"	SAME AS G2A&D	SAME AS G2 B&C
C. TO C. BEARINGS (COMPUTATION ONLY)	59'-6"	59'-6"	33'-0"	33'-0"		
DEAD LOAD-DECK	3000#	2400#	3000#	2400#		
" " GIRDER	600#	600#	600#	600#		
TOTAL DEAD LOAD	3600#	3000#	3600#	3000#		
D.L. MOM.	1,590,000#	1,328,000#	490,000#	408,000#		
L.L. "	2,240,450	3,550,000	836,000	1,364,800		
IMP. "	1,120,225	1,775,000	418,600	682,400		
MOM.	4,950,675#	6,653,000#	1744,000#	2,455,200#		
D.L. END SHEAR	107,000#	89,250#	59,400#	48,700#		
L.L. " "	170,500	246,500	117,100	178,900		
IMP " "	85,250	123,250	58,600	89,450		
TOTAL END SHEAR	362,750#	459,000#	235,100#	317,050#		
SECTION MODULUS REQ'D.	3300	4435	1163	1625		
NET AREA OF WEB REQ'D	28.75"	34"	17.4"	23.5"		
WEB	84"x1/2	84"x5/8"	84"x3/8"	84"x7/16		
GROSS AREA.	42"	52.5"	31.5"	36.7"		
NET "	30"	37.5"	22.5"	26.25"		
END STIFF. BEARING AREA REQ'D	13.45"	17"	8.8"	11.75"		
END STIFFS 4 L's	6x4x5/8	6x4x1/16	5x3 1/2 x 7/16	5x3 1/2 x 5/16		
GROSS AREA	23.44"	25.6"	16"	17.88"		
LESS	7.50"	7.50	5.25"	5.25"		
NET AREA	15.94"	18.1"	10.75"	12.63"		
RIVETS IN END	362,750/11620	459,000/14790	235100/8860	317,050/10340		
STIFFENERS	31	31	27	32		
FILLERS 33 1/3%	11	11	9	12		
LENGTH	0	0	0	0		
TOTAL RIVETS REQ'D.	42	42	36	44		
INTERMEDIATE STIFFS.	2 L's 6x3 1/2 x 3/8	2 L's 6x3 1/2 x 3/8	2 L's 5x3 1/2 x 3/8	2 L's 5x3 1/2 x 3/8		
WEB SPL. FOR MOM.	19176/42 = 455	23970/42 = 570	(FORT PITT BRIDGE WORKS MAY SUBSTITUTE AS PER THEIR STANDARD SPLICE. PAGE B DATE 11-12-28)			
USE - PLATES	12x7/16	12x1/2				
G.I.	25600	29040				
I HOLES	5120	4840				
N.I.	20480	24200				
S.M. = I/c	455	570				
GROSS AREA	20"	24"				
LESS HOLES	4"	4"				
NET AREA	16"	20"				
RIVETS REQ'D.	18000x16/11820 = 25	18000x20/14790 = 25				
FILLER 1/3 x 33 1/3 LENGTH	3	3				
TOTAL RIVETS (EACH SIDE)	28	28				
WEB SPLICE FOR SHEAR	(84-16)1/2 (13500/11820)	(84-16)5/8 (13500/14790)				
RIVETS REQ'D (EACH SIDE)	39	39				
USE PLATES	68"x3/8"	68"x3/8"				

GIRDERS MARKED	G4D	G4C	G4B	G4A	G5D	G5C	G5B	G5A
END TO END	73'-4 3/16"	71'-9 3/8"	70'-1 7/8"	68'-6 3/8"	60'-10 1/8"	60'-10 3/4"	60'-11 3/8"	61'-0"
C. TO C. BEARINGS (COMPUTATION ONLY)	72'-4 3/16"	70'-9 3/8"	69'-1 7/8"	67'-6 3/8"	59'-10"	60'-0"	60'-0"	59'-10"
DEAD LOAD-DECK	3000#	2400#	2400#	3000#	3000#	2400#	2400#	3000#
" " GIRDER	650#	650#	650#	650#	600#	600#	600#	600#
TOTAL DEAD LOAD	3650#	3050#	3050#	3650#	3600#	3000#	3000#	3600#
D.L. MOM.	2,400,000'#	1,922,000'#	1,815,000'#	2,081,300#	1620,000'#	1,348,000'#	SAME AS G5C	SAME AS G5D
L.L. "	3,172,900	4,945,000	4,645,000	2,804,500	2,274,300	3,630,000		
IMP. "	1,586,450	2,472,000	2,322,500'	1,402,250#	1,113.650	1,815,000		
MOM.	7,159,350'#	9,339,000'#	8,782,500#	6,288,050#	5,007,950#	6,793,000'#		
D.L. END SHEAR	132,300#	108,300#	105225#	123,200#	108,000#	90,800#		
L.L. " "	199,600	271,300	270,000	187,500	171,500	247,500		
IMP " "	99,800	135,650	135,000	93,750	85,750	123,750		
TOTAL END SHEAR	431,700#	515,250#	510,225#	404,450#	365,250#	462,050#		
SECTION MODULUS REQ'D.	4772	6225	5850	4192	3308	4529		
NET AREA OF WEB REQ'D	32"	38.2"	37.8"	30"	27.00"	34.2"		
WEB	84"x7/16	84"x5/8	84"x5/8	84"x1/2	84"x1/2	84"x5/8		
GROSS AREA.	47.3"	52.5"	52.5"	42"	42"	52.5"		
NET "	33.8"	38.2"	38.2"	30"	30"	38.2"		
END STIFF. BEARING AREA REQ'D	15.94"	19.1"	19.1"	15"	13.6"	17.1"		
END STIFFS 4 L's	6"x4"x5/8"	6"x4"x3/4"	6"x4"x3/4"	6"x4"x5/8"	6"x4"x5/8"	6"x4"x11/16		
GROSS AREA	23.44"	27.76"	27.76"	23.44"	23.44"	25.6"		
LESS	7.50"	7.50"	7.50"	7.50"	7.50"	7.5"		
NET AREA	15.94"	20.26"	20.26"	15.94"	15.94"	18.1"		
RIVETS IN END	431,700/13 2900	515,250/14770	510,225/14770	404,450/11820	363,250/11620	462,050/14790		
STIFFENERS	33	35	35	35	31	31		
FILLERS 33 1/3%	11	12	12	12	11	11		
LENGTH	0	0	0	0	0	0		
TOTAL RIVETS REQ'D.	44	48	48	48	42	42		
INTERMEDIATE STIFFS.	2 L's 6x3 1/2 x 3/8	2 L's 6x3 1/2 x 3/8	SAME AS G4C	2 L's 6x3 1/2 x 3/8	SAME AS G4D	SAME AS G4C		
WEB SPL. FOR MOM.	21600/42 = 514	23970/42 = 570	"	19176/42 = 455	"	"		
USE - PLATES	12x1/2	12x1/2	"	12x7/16	"	"		
G.I.	27562	27562	"	25600	"	"		
I HOLES	3937	3937	"	5120	"	"		
N.I.	23625	23625	"	20480	"	"		
S.M. = I/c	580	580	"	455	"	"		
GROSS AREA	24.5"	29.5"	"	20"	"	"		
LESS HOLES	3.5"	3.5"	"	4"	"	"		
NET AREA	21.0"	21.0"	"	16"	"	"		
RIVETS REQ'D.	18000x21/14790 = 26	18000x21/14770 = 26	"	18000x16/11820 = 25	"	"		
FILLER 1/3 x 33 1/3 LENGTH	3	3	"	3	"	"		
TOTAL RIVETS (EACH SIDE)	30	30	"	28	"	"		
WEB SPLICE FOR SHEAR	(84-16)7/16 (13500/13808)	(84-16)5/8 (13500/14790)	"	(84-16)1/2 (13500/11820)	"	"		
RIVETS REQ'D (EACH SIDE)	39	39	"	39	"	"		
USE PLATES	68"x3/8"	68"x3/8"	"	68"x3/8"	"	"		

DESIGN OF GIRDERS.

GIRDER	SECTION	G.I.	N.I.	c	S.M.	R.M.
G1A&D	WEB 84"x1/2"	24696	19176			
G5A&D	4 L's 8"x8"x3/4"	72924	65641			
			84817	42.125	2060	3,090,000'#
	2 COV. PLS. 20"x7/16"	35900	32310			
			117127	42.625	2750	4,150,000'#
	2 COV. PLS. 20"x1/2"	30644	27580			
			144707	43.06	3350	5,025,000
G1B&C	WEB 84"x5/8"	30870	23970			
G5B&C	4 L's 8"x8"x7/8"	83651	75286			
			99256	42.125	2355	3.525.000'#
	2 COV. PLS. 20"x1/2"	35900	32310			
			131566	42.625	3080	4640,000'#
	2 COV. PLS. 20"x1/2"	36771	33090			
			164656	43.125	3810	5.720,000'#
	2 COV. PLS. 20"x1/2"	37631	33 698			
			198 524	43.625	4550	6.825,000'#
G2A&D	WEB 84"x3/8"	18522	14372			
G3A&D	4 L's 6x6x1/2"	37700	34428			
			48800	42.125	1163	1.745,000'#
	2 COV. PLS 16"x3/8"					
G2B&C	WEB 84"x 7/16	21609	16629			
G3B&C	4 L's 6x6x1/2"	37700	33930			
			50559	42.125	1200	1,800,000'#
	2 COV. PLS 16"x3/8"	21472	18 788			
			69347	42.5	1691	2,456 000'#

GIRDER	SECTION	G.I.	N.I.	c	S.M.	R.M.
G4A	WEB 84"x1/2"	24696	19176			
	4 L's 8"x8"x3/4"	72934	65641			
			84817	42.125	2060	3.090,000'#
	2 COV. PLS. 20"x1/2"	35900	32 910			
			117127	42.625	2750	4.150,000'#
	2 COV. PLS. 20"x1/2"	36771	33 310			
			150437	43.125	3490	5,220,000'#
	2 COV. PLS. 20"x1/2"	37631	33868			
			184305	43.625	4220	6,310,000'#
G4C	WEB 84"x5/8"	30870	23970			
	4 L's 8"x8"x1 1/8"	105950	95355			
			119325	42.125	2820	4,225,000'#
	2 COV. PLS. 20"x5/8"	45020	40518			
			159843	42.75	3730	5,590,000'#
	2 COV. PLS. 20"x5/8"	46366	41730			
			201573	43.375	4585	6,877,000'#
	2 COV. PLS. 20"x5/8"	47717	42946			
			244519	44	5550	8,325,000'#
	2 COV. PLS. 20"x1/2"	39166	35250			
			279769	44.375	6295	9,440,000'#
G4B	WEB 84"x5/8"	30870	23970			
	4 L's 8"x8"x1 1/8"	105950	95355			
			119325	42.125	2820	4,230,000#
	2 COV. PLS. 20"x5/8"	45020	40518			
			159843	42.75	3730	5,595,000'#
	2 COV. PLS. 20"x1/2"	36786	33108			
			192951	43.25	4450	6,675,000'#
	2 COV. PLS. 20"x1/2"	37846	34062			
			227013	43.75	5180	7,770,000'#
	2 COV. PLS. 20"x1/2"	38726	34854			
			261867	44.25	5875	8,812,500'#

GIRDER	SECTION	G.I.	N.I.	c	S.M.	R.M.
G4D	WEB 84"x 9/16	27783	21600			
	4 L's 8"x8"x1"	95190	85671			
			107271	42.125	2545	3,817,500'#
	2 COV. PLS 20"x1/2"	35900	32310			
			139581	42.625	3270	4,915,000'#
	2 COV. PLS 20"x1/2"	36771	33310			
			172891	43.125	4000	6,000,000'#
	2 COV. PLS 20"x1/2"	37631	33868			
			206759	43.625	4772	7,159,350'#

FLOOR BEAM DESIGN

	MOM	SHEAR
D.L.	2425	1400
L.L.	1,1025	6300
IMP	1,1025	6300
	24475'#	14000'#

S.M. REQ'D = 29440 x 12 / 18000 = 16.3

USE 12"-36# C.I. BEAMS S.M. 45.8
OR 12"-36# B.I. BEAMS S.M. 46
SPACED ABT. 2'-3" CTRS.

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GENERAL STEEL PLAN	SHEET	1
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NOTE— THE STRESSES FOR THE INSIDE GIRDERS (B&C) ARE COMPUTED FOR ECCENTRIC LIVE LOAD PLUS 50 PER CENT IMPACT DUE TO A CROSSOVER AT ANY LOCATION ON BRIDGE. FOR STRESSES AND COLUMN DESIGN SEE SHEET 2&8

DATE	REVISIONS	BY
12-12-28	Index	P.M.
11-28-28	SPLICE PLS	A.W.M.

N. Y. C. & ST. L. R. R.
NICKEL PLATE DISTRICT
BRIDGE NO. ~~182.48~~ 183.96
HIGH LEVEL TEAM YARD LEAD BRIDGE
OVER C.U.T. TRACKS CLEVELAND, O.
STRESS SHEET
OFFICE OF CHIEF ENGINEER CLEVELAND, O.

SCALE	DRAWN	TRACED	CHECKED
	A.W.M.	A.W.M. 7/21/28	G.H.E. 9/5/28

DATE JULY 19-28 SHEET 2 OF 14 No. ~~182.48-281~~ 183-96-281

1-028

12"-36# BETH. I OR CAR. BM. @ 2'-3" MAX. CTRS.

6@2'-0"=12'-0 | 2'-0 17/32"

SEE DETAIL

R17 | R3 | GRDT | FB1 | FB2 | FB3 | FB4 | FB5 | FB6 | FB7 | FB8

FIXED END | EXPANSION ENDS | FIXED ENDS

G1D | G2D | G1C | G2C | G1B | G2B | G1A | G2A

THESE FLOOR BEAMS TO SLIDE ON G2D

THESE FLOOR BEAMS TO SLIDE ON G2B

SOUTH

16'-11 7/16" | 14'-0 17/32" | 16'-2" ABT. | 14'-0 17/32" | 16'-11 7/16" | 14'-0 17/32"

9'-2 3/8" | 4'-0" | 8'-0" | 4'-0"

GRI | B81 | T1F | L1F | E1F | B1F | T2F | L2F | E2F | T3F | B3F | T2B | B2B | T3B

220°-40' | 24°-40' | FACE OF ABUTMENT

ALL BOTTOM LATERALS 1 L 5"x3 1/2"x 9/16"

℄ OF BRIDGE | ℄ OF EAST TRACK | ℄ OF WEST TRACK | ℄ OF COLS.

DETAIL OF BOLSTER PLATE B.P.1
℄ OF WEST TRACK — 4 REQ'D.

1'-3" | 1'-10" | 3" | 5/8" ℄ HOLES | 7" | 8" | 12" | 3/32" | 3" | 3/4" ℄ HOLES

ELEVATION AA SCALE 1/2"=1'-0"

12"CB@36# OR 12" B.I. @36# 16'-0" LG.

HORIZONTAL 13-9 3/4 PARALLEL TO FACE OF ABUTMENT.

4 L 3 1/2"x 9"x 9/16" 9"x 9/16" PL } DIAPHRAGMS

DETAIL OF BOLSTER BEAM B81
SCALE 3/4"=1'-0"

12"C.B.@36# OR 12"B.I.@36#

19'-9 3/4" | 16'-0" | 1'-1 1/8" | 1'-0 3/4" | 3/4"

DETAIL FB1 & FB2
SCALE-1/2"=1'-0"

2'-4 1/2" | 8@2'-0"=5'-0" | 12" | 3'-6 3/8" | HOLES FOR 1/2 REINF BARS | 6" | 1'-0" | 11@6"=5'-6" | 6'-9" FOR FB1

1'-1" | 1" | 1'-1" | HOLES FOR 1" BOLTS

SOLE ℄ SP3

60'-5 1/2" E. TO E. 1 COV. ℄ 20"x 1/2" FULL LENGTH FOR G1A-B-C&D

57'-0 1/8" | 12"G.I.@36# OR 12"B.I.@36#

34'-1 1/8" E TO E 1 COV. ℄ 16"x 3/8" FULL LENGTH | 34'-4 3/8" | 12"I@36# CAR OR BETH

℄ COLS. #1-2-3&4 | ℄ COLS. #5-#6-#7&#8

3'-6 1/2" | 6" | FACE OF ABUT. | 2 1/16" | 6" | 1 1/2"

GEN. NOTE- FLOOR BEAMS MUST BE LEVEL ACROSS GIRDERS, BUT NOT ALL LEVEL WITH RESPECT TO EACH OTHER. USE FILLERS AT ONE END OF FLOOR BEAMS WHEREVER VARYING THICKNESSES OF COVER PLATES MAKE IT NECESSARY.

7'-0 1/2" B.B.L.

4"x4"x 5/16" for G1A&B - G1B&C | 4"x6"x 11/16" " | INT. STIF. 6"x 5/16" | 10 1/2" or 12" Ins. for G1A&B - G1B&C 12 1/2" " - G2A&B - G2B&C 3/8" Sq. Ins. | 8"x8"x 3/4" Ls For G1A&D | 8"x8"x 7/8" Ls " G1B&C | 84"x 1/2" Web Pl. For G1A&D | 84"x 3/8" Web Pl. For G1B&C | For G3B-B | For G3B-C | 4 L 5"x3 1/2"x 7/16 for G1A&B | 4 L 5"x3 1/2"x 9/16 for G1B&C | INT. STIF. 5"x 1/2" | 6"x 6"x 1/2" Ls For G2A&B C&D | 84"x 3/8" Web Pl. For G2A &D | 84"x 7/16" Web Pl. For G2 B&C

BP1 | SP1 | SP2 | SP2 | SP3 | SP3

FIXED END | FIXED ENDS

1 Cov. Pl. Top & Bottom 20"x 1/2" x 25'-0" LG. For G1B&C
1 Cov. Pl. " " 20"x 1/2" x 28'-0" LG. " G1A&D
1 Cov. Pl. Bottom 20"x 1/2" x 40'-0 LG. " G1A&D
1 Cov. Pl. " " 20"x 1/2" x 43'-0 LG. " G1B&C
1 COV. ℄ TOP & BOTTOM 20"x 1/2" x 36'-0" FOR G1B&C. EXPANSION ENDS
1 Cov. Pl 16"x 3/8" - 15'-0" LG.

-ELEVATION-
SCALE 4"=1'-0"

℄ OF BEARING | 11 1/4" | 11 3/4" | 2'-1" | ℄ OF GRILLAGE | 2'-1" | ℄ OF GIRDERS 220°-40' | 3/4" BOLTS 1"G.P. SEPS | HOLES 1" | 5 1/2" | 4 1/2" | 2 3/4" | 17" | 3 1/2" | 6" | 9" | 9" | 4" | 2'-2" | 12"I@36# | BP1 | 4 | 3'-4 1/2" | 4'-1 1/2" | 3/4"

GRILLAGE GR1.
4 REQ'D.

NOTE: ALL GRILLAGES AND BOLSTER BEAMS AND OTHER STEEL SET IN CONCRETE MASONRY TO BE SHIPPED AS SOON AS POSSIBLE AFTER AWARD OF STEEL CONTRACT.

DETAIL OF SOLE ℄ SP1
4 REQUIRED
SCALE 1"=1'-0"

1'-8" | 4 3/4" | 10 1/2" | 4 3/4" | 15/16" Holes | 6" | 7"

SOLE ℄ SP2

1'-1" | 1" | 1'-7" | SCORE FOR LUBRICATION | 1/4"x 2 SLOTS | TAP FOR 1" PIPE PLUG

G1C-G4C&G5C
END FRAME
G1D-G4D&G5D
INTERMEDIATE FRAME
TYPICAL TRANSVERSE SECTIONS

4'-0" | 4'-0" | 4'-0" | 3'-9" | 15'-6" | 7'-9" | 7'-9" | 2'-0" | 2'-0" | 12" I @ 36# CAR OR BETH | 2 L 6"x 6"x 7/16 (T51) | ℄ OF BRIDGE | ALL GUSSET PLS. 3/8" THK | 2 L 6"x 4"x 3/8" (B51) | 6"x 4"x 3/8" L | 3 1/2"x 3"x 3/8" L | 3 1/2"x 3"x 3/8" L | 7'-0 1/4" B.B.L.

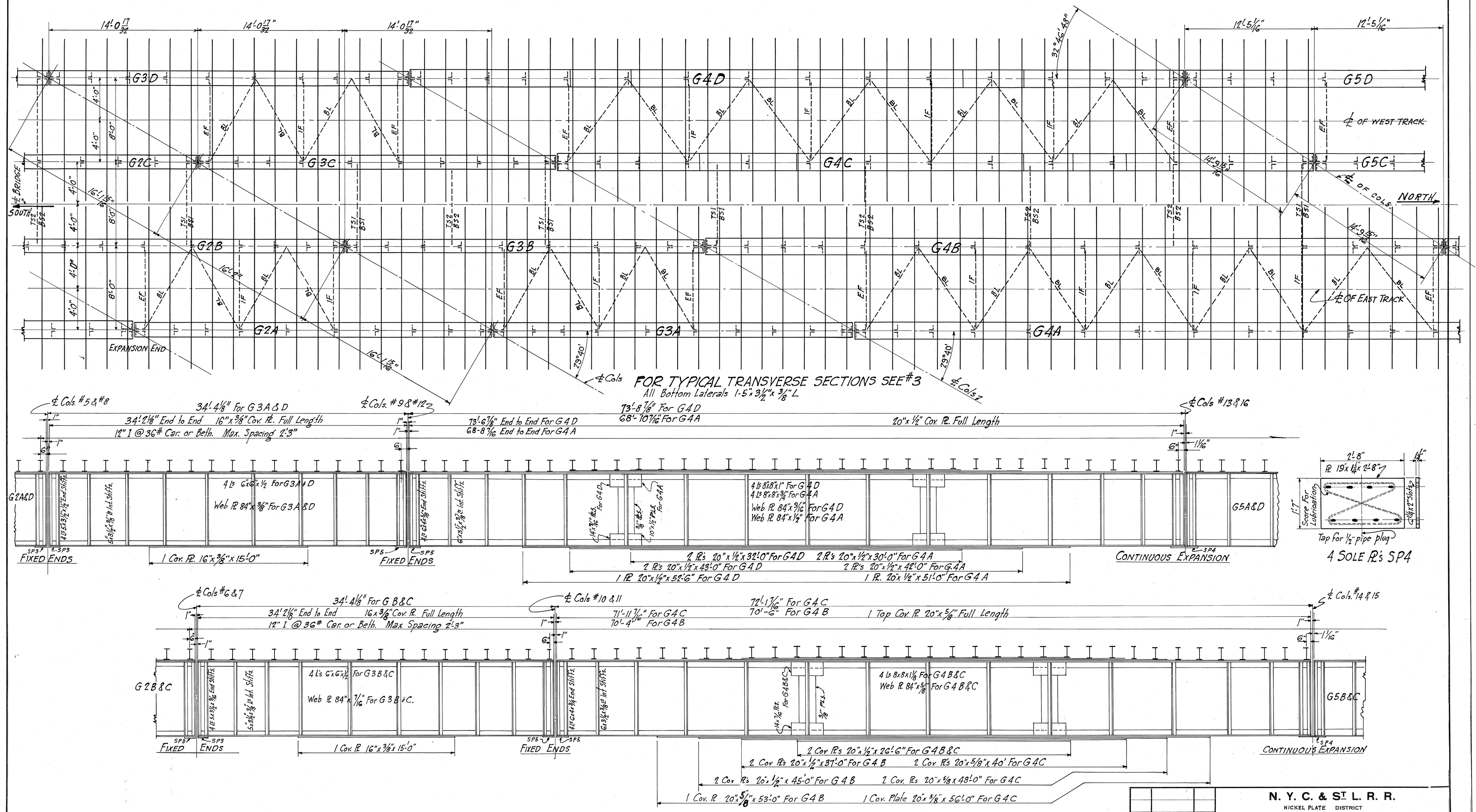
G2A-G3A
END FRAME
G2B-G3B
INTERMEDIATE FRAME
TYPICAL TRANSVERSE SECTIONS

3'-9" | 4'-0" | 4'-0" | 4'-0" | 15'-6" | 7'-6" | 7'-6" | 1'-6" | 1'-6" | 12" I @ 36# CAR. OR BETH. | 2 L 3 1/2"x 3"x 7/16 (T52) | 6"x 4"x 3/8" L | 3 1/2"x 3"x 3/8" L | ALL GUSSET PLS. 3/8" THK | 2 L 3 1/2"x 3"x 3/8" L (T52) | ℄ OF BRIDGE

			N. Y. C. & St L. R. R.
			DISTRICT
			BRIDGE-NO- 1828
			OVER C.U.T. TRACKS - CLEVELAND OHIO
			HIGH LEVEL TEAM YARD LEAD-WEST-OF-BROADWAY
			STEEL-DETAILS - GIRDERS - G-1 & G2
			OFFICE OF CHIEF ENGINEER — CLEVELAND, O.

DATE	REVISIONS	BY	SCALE	DRAWN	TRACED	CHECKED
11-1328	T51 & B51	A.W.M.	AS SHOWN	A.W.M. 7/25/28	A.W.M. & G.H.R.	A.W.M. 9/6/28
			DATE 8/27/28	SHEET 3 OF 14	No. ~~182-48-281~~	

183-96-281



N. Y. C. & St L. R. R.
NICKEL PLATE DISTRICT

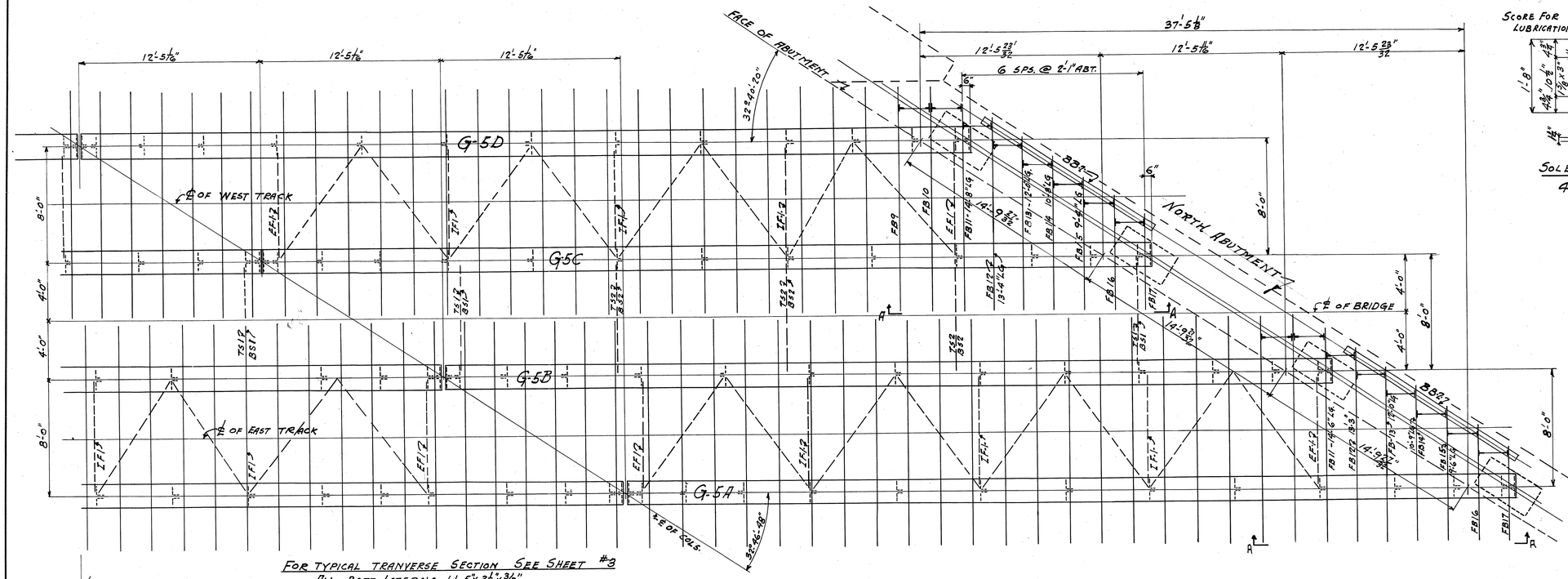
BRIDGE-NO- 182.48
OVER C.U.T. TRACKS - CLEVELAND O.
HIGH LEVEL TEAM YARD LEAD W. OF BROADWAY.
STEEL DETAILS - GIRDERS G3 & G4

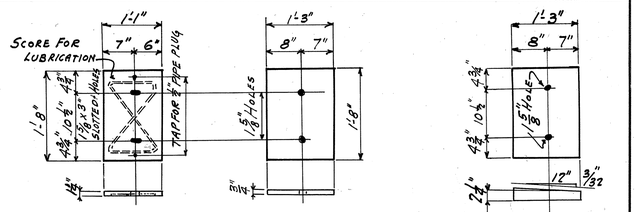
OFFICE OF CHIEF ENGINEER — CLEVELAND, O.

DATE	REVISIONS	BY	SCALE	DRAWN	TRACED	CHECKED
11-13-28	Cov. PL's G4B	A.W.M.	1/4 & 3/4" = 1'-0"	A.W.M.	[illegible]	A.W.M. 9-5-28

DATE 8-3-28 — SHEET 4 OF 14 — No. ~~182-48-281~~ 183-96-281

1-0.G.H.

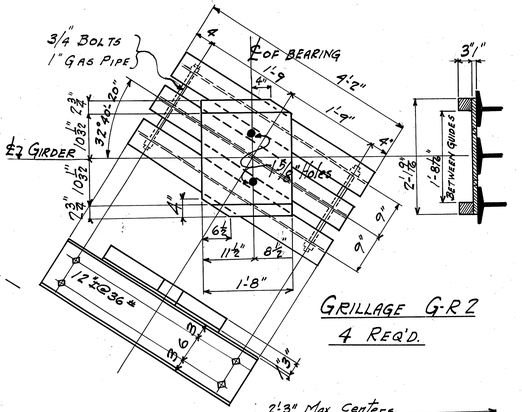




SOLE PLATE SPS
4 - REQ.D.

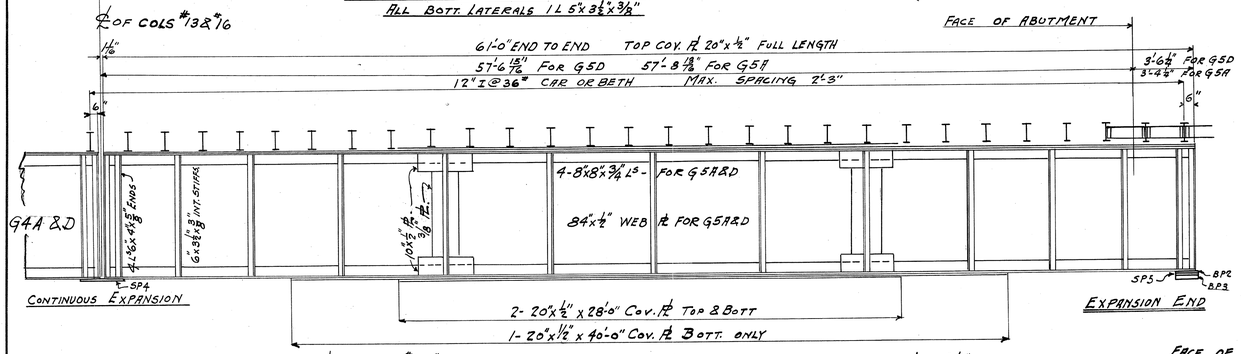
BRONZE PLATE BP2
4 - REQ.D.
TO BE MADE OF PHOS. BRONZE GRADE 'B' OR MANGANESE BRONZE OF EQUAL STRENGTH AND HARDNESS.

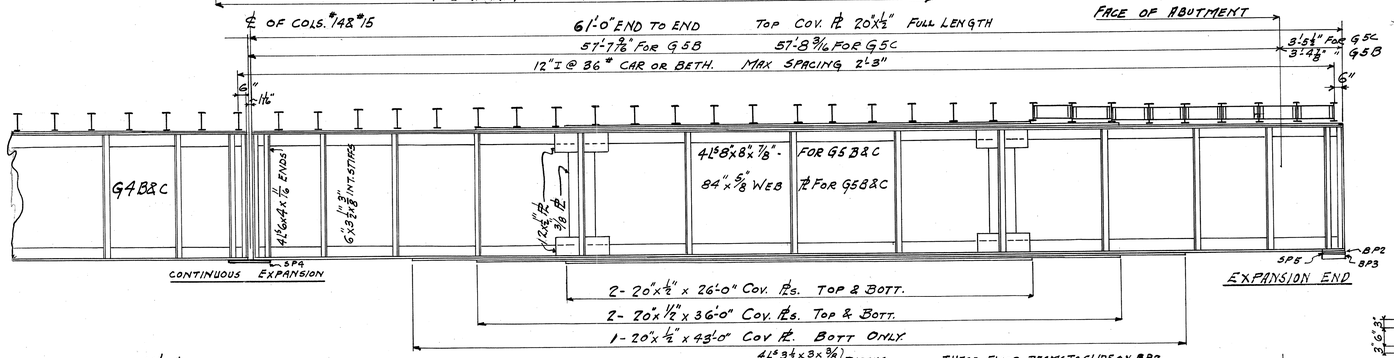
BOLSTER PLATE BP3
4 - REQ.D

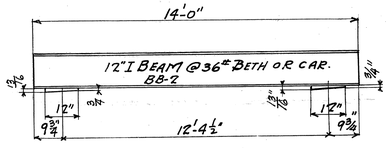


GRILLAGE G-R 2
4 REQ'D.

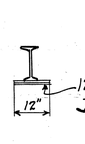
FOR TYPICAL TRANVERSE SECTION SEE SHEET #3
ALL BOTT. LATERALS 1 L 5"x3½"x⅜"

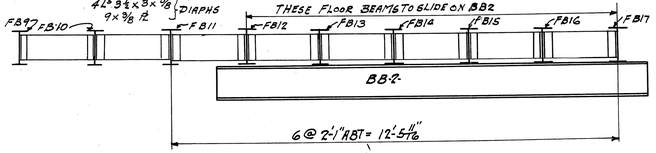




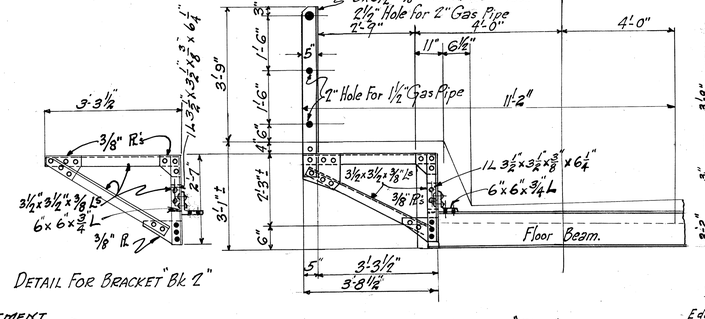


DETAIL OF BOLSTER BEAM BB-2- 2 REQ'D





ELEVATION "A-A"
Scale ½" = 1'-0"



DETAIL FOR BRACKET "Bk 2"

DETAIL FOR BRACKET "Bk 1"
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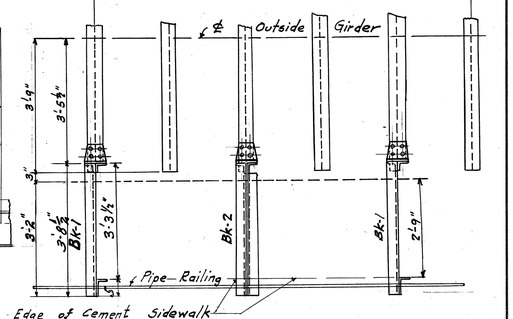
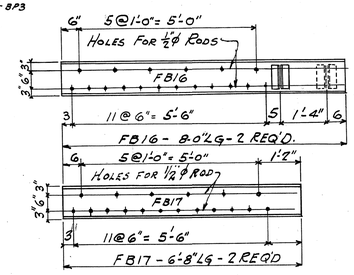


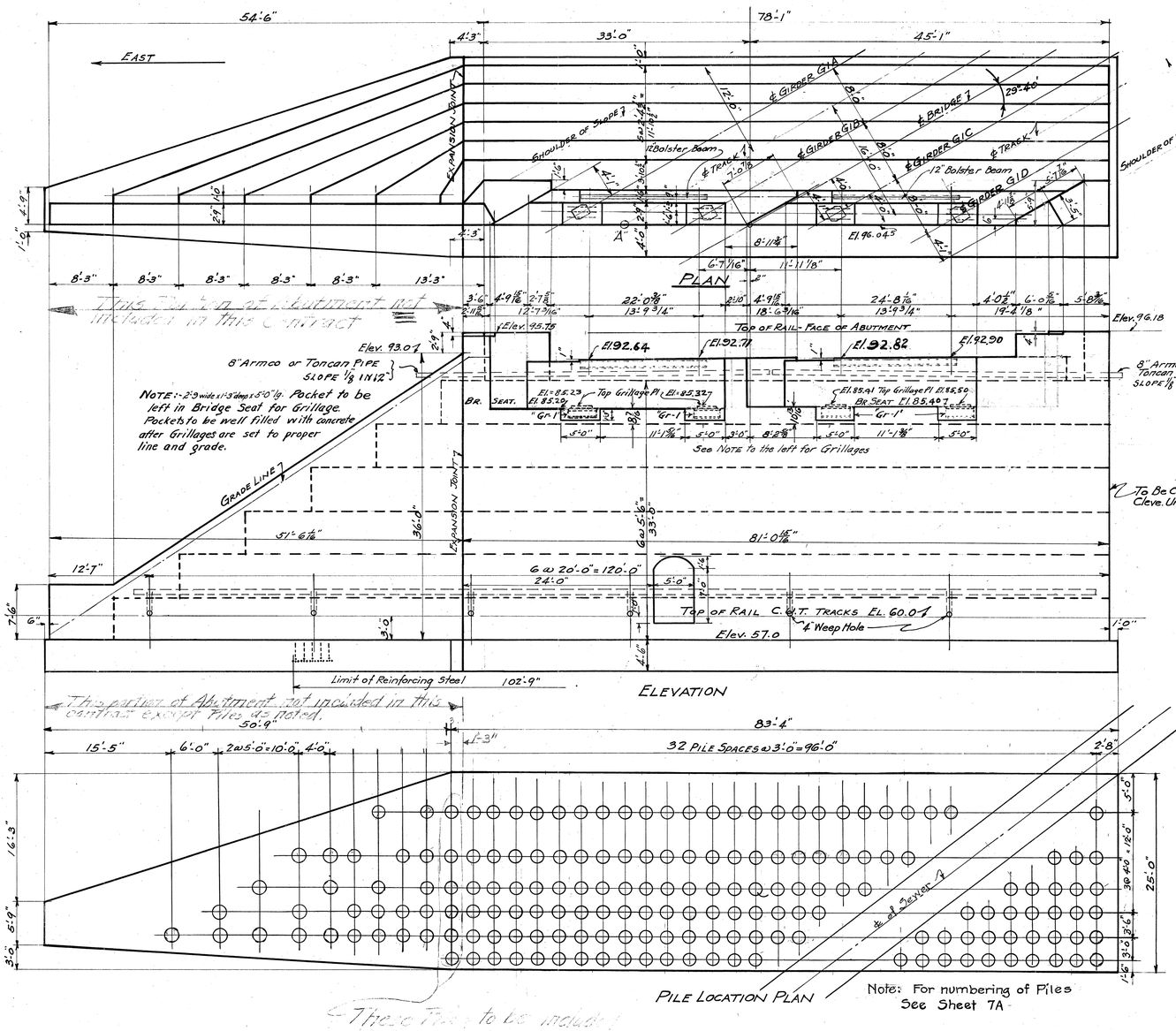
PLAN
Scale ½" = 1'-0"

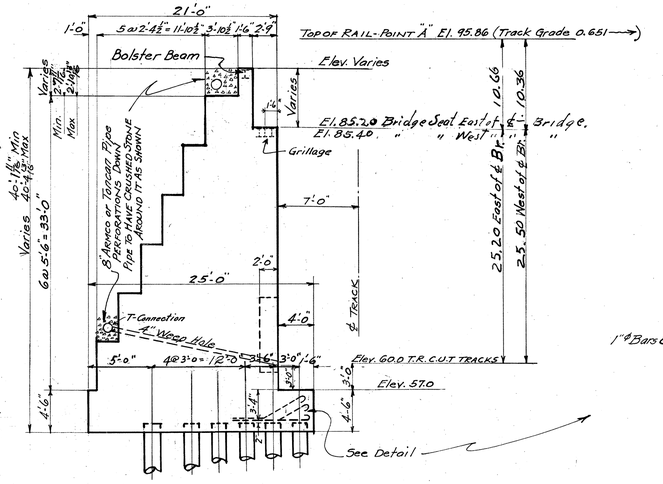


			N. Y. C. & St L. R. R.			
			NICKEL PLATE DISTRICT			
			BRIDGE NO- 182.48			
			OVER C.U.T. TRACKS - CLEVELAND-OHIO			
			HIGH LEVEL TEAM YARD LEAD-WEST OF BROADWAY			
			STEEL DETAILS GIRDERS G-5			
			OFFICE OF CHIEF ENGINEER CLEVELAND, O.			
11/13/28	TS1 & BS1 BRACKET DET.	A.W.M.	SCALE AS SHOWN	DRAWN A.W.M.	TRACED G.H.E. 8/24/28	CHECKED A.W.M. 9/6/28
DATE	REVISIONS	BY	DATE 8-8-28	SHEET 5 OF 14	No. ~~182-48 GB1~~	

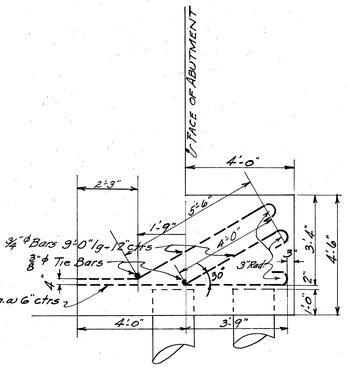
183-96-281

1-0.8.26

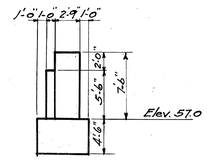




TYPICAL SECTION THRU ABUTMENT

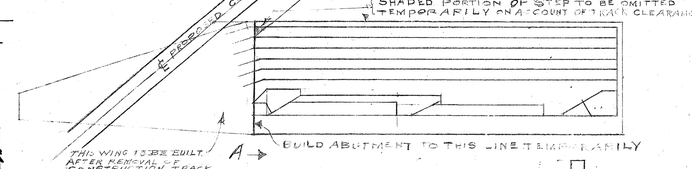


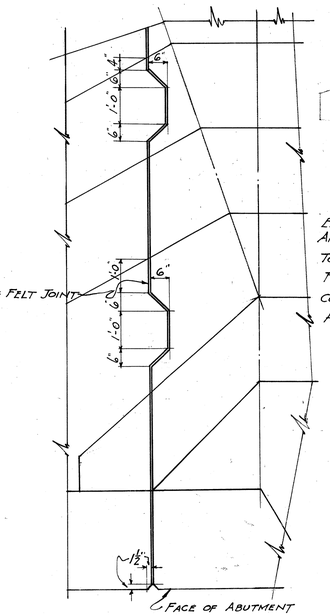
DETAIL OF REINFORCING STEEL



END VIEW OF WING WALL

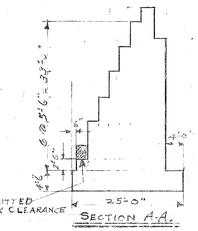
APPROX. QUANTITIES OF MATERIALS	Total	Initial Construct.	Final Construction
EXCAVATION	Cu. Yds ±		
CONCRETE	2205 CU. YDS ±	1766	439
CONCRETE PILES	5820 LIN. FT. ±	5190	630
REINFORCING STEEL	7710 LB. ±	6120	1590
EXPANSION JOINT	490 SQ. FT. ±	1705	490
8" ARMCO PIPE OR TONCAN	210 LIN. FT. ±	170	40



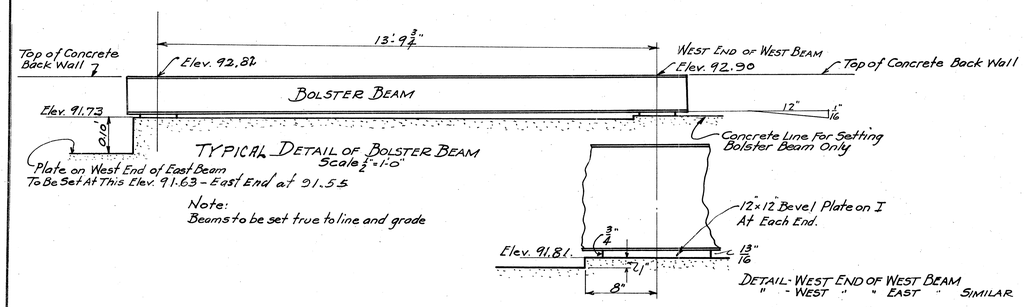


DETAIL OF EXPANSION JOINT
Scale 1/2"=1'-0"

Expansion Joint To Extend Thru The Full Height Of Footing And Neatwork. Key To Extend Thru Footing And Neatwork To Top of Wall Steps Indicated. Footing And Neatwork To Be Properly Keyed And Doweled. Construction Joints Are To Be Similar, Except Notch And Felt Are To Be Omitted.



NOTE:
Concrete to be 2000 lb. Strength, Water-Cement Ratio. Use 7 Gallons of Water Per Sack of Cement.
Concrete Piles to be 30 Feet Long made of 2000 lb. Concrete.
A.R.E.A. Specifications Vol. 28; Bull. 295. March 1927



DATE	REVISIONS	BY
12-12-27	Index Removed	R.M.
11-23-28	Dimensions & Quantities	L.A.O.
8-22-28	Elevations - Grillage Pockets & Wing Wall Ends	J.C.
5-16-28	Quantities of Materials	C.W.M.
3-26-28	Specifications	F.M.S.
3-14-28	Back Wall Revised	C.W.M.
2-27-28	Expansion Joint Added	C.W.M.

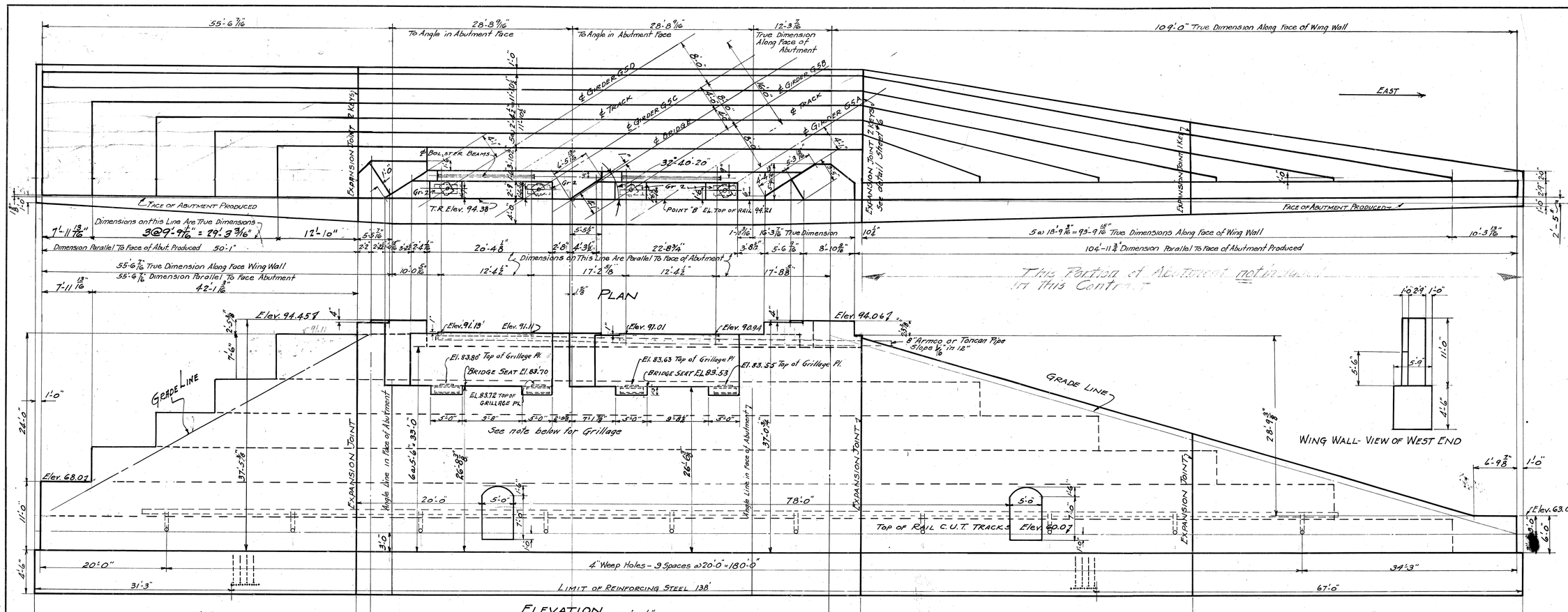
N. Y. C. & St L. R. R.
N. K. P DISTRICT
BRIDGE-NO- 182.48
OVER C.U.T. TRACKS CLEVELAND, O.
HIGH LEVEL TEAM YARD LEAD - WEST OF BROADWAY
SOUTH ABUTMENT
OFFICE OF CHIEF ENGINEER CLEVELAND, O.

SCALE	DRAWN	TRACED	CHECKED
1"=1'-0"	2-11-1928 C.W.M.	2-11-1928 - C.W.M.	2-21-1928 F.M.S.

DATE 2-21-1928 | SHEET 6 OF 14 | No. ~~182-48-281~~

183-96-281

1-0.8.R.



NOTE:- 2'-9" wide x 1'-3" deep x 5'-0" lg. Pocket to be left in Bridge Seat for Grillages. Pockets to be well filled with Concrete after Grillages are set to proper line and grade.

APPROX. QUANTITIES OF MATERIALS

	Total	Initial Construction	Final Construction
EXCAVATION	CU. YDS.		
CONCRETE	3479 CU. YDS. ±	2579	900
CONCRETE PILES	7110 LIN. FT. ±	7170	1230
REINFORCING STEEL	100990 LB. ±	[illegible]	2894
EXPANSION JOINT	1065 SQ. FT. ±	440	625
8" ARMCO PIPE OR TONCAN	270 LIN. FT. ±	190	80

INDEX

GENERAL STEEL PLAN	Sheet	1
STRESS SHEET	"	2
STEEL DETAILS G1-G2	"	3
" " G3-G4	"	4
" " G5	"	5
PILE PLAN & CHART - SO. ABUTMENT	"	7A
" " " NO. ABUTMENT	"	7B
PILE CHART " PIERS	"	11
SOUTH ABUTMENT	"	6
NORTH " (THIS SHEET)	"	7
PIER (Steel & Conc.)		8
FLOOR PLAN.	"	9
FLOOR DETAILS	"	10
REVISION OF FTG. FOR COL. C1	"	8A

NOTE:
Expansion Joints To Be Similar To Detail On Sheet 6.
Concrete To Be 2000 lb. Strength, Water-Cement Ratio. Use 7 Gallons of Water Per Sack Of Cement.
Concrete Piles To Be 30 Feet Long, Made of 2000 lb Concrete.

A.R.E.A. Specifications. Vol. 28-Bull. 295- March 1927.

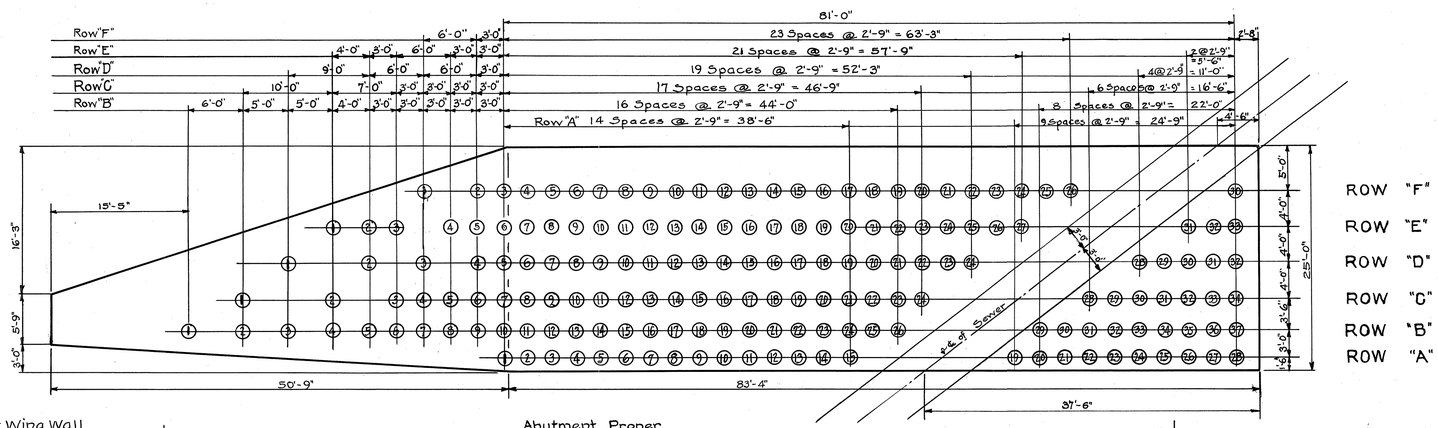
DATE	REVISIONS	BY
11-12-30	Index	P.M.
11/28/28	Rev. West Wing	G.H.P.
8-28-28	Elevs. For Change of Grade Angle in Wing as Revised	I.C.
6-5-28		H.A.E.
6-2-28	Abut. + Wing Walls Revised-Keys in Abut. Wing Wall (West) Revised-Quantities Added	C.W.M.
5-16-28		C.W.M.
4/17/28	Correction	F.M.S.
3/30/28	To Show Grillage on Seat	F.M.S.

N. Y. C. & St L. R. R.
N. K. P DISTRICT
BRIDGE NO- 182.48
OVER C.U.T. TRACKS CLEVELAND, O.
HIGH LEVEL TEAM YARD LEAD - WEST OF BROADWAY
NORTH ABUTMENT
OFFICE OF CHIEF ENGINEER CLEVELAND, O.

SCALE	DRAWN	TRACED	CHECKED
1"=1'-0" & 1"=10'-0"	2-23-1928 C.W.M.	2-24-1928 C.W.M.	3-28-1928 F.M.S.

DATE MAR. 20, 1928 SHEET 7 OF 14 No. ~~182-48-281~~ 183-96-281

5-6-3



Row "F"

Pile Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	30
Length of Pile in Feet	29.7	29.1	31.1	30.9	31.0	31.5	31.1	31.2	31.0	31.3	31.4	31.0	31.1	31.0	31.2	28.3	31.1	30.9	31.3	31.2	31.3	35.8	36.0	35.9	36.6	36.0	36.0
Number Blows last inch of Penetration	5	5	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	4	4	2	1	1
Penetration in inches, last blow = "S"	.20	.20	1.0	1.0	1.0	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50	.25	.25	.50	1.0	1.0
Safe Load per E-N Formula - Tons	50	50	14	14	14	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	43	43	25	14	14
Date Driven	4-22-29	4-22-29	1-23-29	1-23-29	1-23-29	1-22-29	1-21-29	1-21-29	1-21-29	1-21-29	1-18-29	1-18-29	1-17-29	1-17-29	1-14-29	1-14-29	1-10-29	1-9-29	1-9-29	1-9-29	1-9-29	1-9-29	1-8-29	1-7-29	1-7-29	12-28-28	12-27-28	12-27-28
Date Poured	4-22-29	4-22-29	1-23-29	1-23-29	1-23-29	1-22-29	1-21-29	1-21-29	1-21-29	1-21-29	1-18-29	1-18-29	1-17-29	1-17-29	1-14-29	1-14-29	1-10-29	1-9-29	1-9-29	1-9-29	1-9-29	1-9-29	1-8-29	1-7-29	1-7-29	12-28-28	12-27-28	12-27-28

Row "E"

Pile Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	31	32	33
Length of Pile in Feet	29.7	29.8	29.8	29.6	29.6	31.0	31.0	31.1	30.9	31.0	31.0	31.1	31.1	31.3	31.2	30.9	31.0	30.8	30.6	29.3	31.0	31.1	31.3	31.1	31.5	35.5	36.5	37.6	36.0	36.0
Number of Blows last inch of Penetration	6	5	5	5	5	1	1	1	1	2	2	2	2	2	1	2	2	2	2	2	2	2	2	2	2	2	3	2	1	1
Penetration in inches, last blow = "S"	.16	.20	.20	.20	.20	1.0	1.0	1.0	1.0	.50	.50	.50	.50	.50	1.0	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50	.33	.50	1.0	1.0
Safe Load per E-N Formula - Tons	57	50	50	50	50	14	14	14	14	25	25	25	25	25	14	25	25	25	25	25	25	25	25	25	25	25	35	25	14	14
Date Driven	4-19-29	4-22-29	4-22-29	4-23-29	4-23-29	1-23-29	1-23-29	1-23-29	1-23-29	1-22-29	1-21-29	1-21-29	1-21-29	1-18-29	1-18-29	1-17-29	1-17-29	1-14-29	1-14-29	1-10-29	1-9-29	1-9-29	1-9-29	1-9-29	1-9-29	1-8-29	12-28-28		12-28-28	12-27-28	12-27-28
Date Poured	4-19-29	4-22-29	4-22-29	4-23-29	4-23-29	1-23-29	1-23-29	1-23-29	1-23-29	1-22-29	1-21-29	1-21-29	1-21-29	1-18-29	1-18-29	1-17-29	1-17-29	1-14-29	1-14-29	1-10-29	1-9-29	1-9-29	1-9-29	1-9-29	1-9-29	1-8-29	12-28-28		12-28-28	12-27-28	12-27-28

Row "D"

Pile Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	28	29	30	31	32
Length of Pile in Feet	29.6	29.7	29.7	29.6	31.1	30.9	31.0	31.2	31.1	31.0	31.0	31.2	31.1	31.3	31.1	31.0	30.7	30.0	29.5	31.1	31.0	31.2	31.1	27.1	36.5	20.0	30.2	35.5	36.0
Number of Blows last inch of Penetration	5	5	6	5	2	1	2	2	2	2	2	2	1	1	2	2	2	2	2	2	2	2	2	4	2	Refusal	4	2	1
Penetration in inches, last blow = "S"	.20	.20	.16	.20	.50	1.0	.50	.50	.50	.50	.50	.50	1.0	1.0	.50	.50	.50	.50	.50	.50	.50	.50	.50	.25	.50		.25	.50	1.0
Safe Load per E-N Formula - Tons	50	50	57	50	25	14	25	25	25	25	25	25	14	14	25	25	25	25	25	25	25	25	25	43	25	85	43	25	14
Date Driven	4-19-29	4-21-29	4-23-29	4-23-29	1-22-29	1-23-29	1-23-29	1-22-29	1-22-29	1-21-29	1-21-29	1-19-29	1-18-29	1-18-29	1-17-29	1-17-29	1-15-29	1-17-29	1-10-29	1-9-29	1-9-29	1-9-29	1-9-29	1-9-29	12-29-28		12-28-28	12-28-28	12-28-28	12-27-28	12-27-28
Date Poured	4-19-29	4-22-29	4-23-29	4-23-29	1-22-29	1-23-28	1-23-29	1-22-29	1-22-29	1-21-29	1-21-29	1-19-29	1-18-29	1-18-29	1-17-29	1-17-29	1-15-29	1-17-29	1-10-29	1-9-29	1-9-29	1-9-29	1-9-29	1-9-29	12-29-28		12-28-28	12-28-28	12-28-28	12-27-28	12-27-28

Row "C"

Pile Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	28	29	30	31	32	33	34
Length of Pile in Feet	29.8	29.6	29.6	29.7	29.8	29.6	31.2	31.0	31.2	30.9	31.0	31.2	31.0	31.1	31.1	31.3	31.1	31.0	31.1	30.8	31.0	31.0	31.2	31.0	37.0	34.0	27.0	36.6	29.7	35.5	38.0
Number of Blows last inch of Penetration	5	5	5	5	5	5	1	2	1	2	2	2	2	2	2	2	1	2	2	2	2	2	2	2	3	4	3	4	2	1	
Penetration in inches, last blow = "S"	.20	.20	.20	.20	.20	.20	1.0	.50	1.0	.50	.50	.50	.50	.50	.50	.50	1.0	.50	.50	.50	.50	.50	.50	.50	.33	.25	.33	.25	.50	1.0	
Safe Load per E-N Formula - Tons	50	50	50	50	50	50	14	25	14	25	25	25	25	25	25	25	14	25	25	25	25	25	25	25	35	43	35	43	25	14	
Date Driven	4-19-29	4-22-29	4-22-29	4-22-29	4-23-29	4-23-29	1-23-29	1-22-29	1-23-29	1-23-29	1-22-29	1-22-29	1-21-29	1-21-29	1-19-29	1-19-29	1-18-29	1-17-29	1-17-29	1-15-29	1-12-29	1-11-29	1-9-29	1-9-29	1-8-29	12-31-28	12-29-28	12-28-28	12-28-28	12-27-28	12-27-28	
Date Poured	4-19-29	4-22-29	4-22-29	4-22-29	4-23-29	4-23-29	1-23-29	1-22-29	1-23-29	1-23-29	1-22-29	1-22-29	1-21-29	1-21-29	1-19-29	1-19-29	1-18-29	1-17-29	1-17-29	1-15-29	1-12-29	1-11-29	1-9-29	1-9-29	1-8-29	12-31-28	12-29-28	12-28-28	12-28-28	12-27-28	12-27-28	

Row "B"

Pile Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	29	30	31	32	33	34	35	36	37
Length of Pile in Feet	29.6	29.7	29.8	29.6	29.6	29.6	29.8	29.7	29.8	31.3	31.0	31.2	31.0	31.2	31.0	31.2	30.9	31.0	31.2	31.0	31.0	31.0	31.2	31.1	31.1	31.0	31.2	31.0	37.5	30.2	36.0	25.0	28.3	34.1	38.0
Number of Blows last inch of Penetration	5	5	5	5	6	5	5	5	5	1	2	7	2	2	2	2	2	2	2	2	2	2	2	2	2	2				4	3	4	4	4	1
Penetration in inches, last blow = "S"	.20	.20	.20	.20	.16	.20	.20	.20	.20	1.0	.50	.14	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50				.25	.33	.25	.25	.25	1.0
Safe Load per E-N Formula - Tons	50	50	50	50	57	50	50	50	50	14	25	62	25	25	25	25	25	25	25	25	25	25	25	25	25	25				43	35	43	43	43	14
Date Driven	4-19-29	4-22-29	4-22-29	4-22-29	4-23-29	4-23-29	4-23-29	4-23-29	4-23-29	1-23-29	1-22-29	1-23-29	1-23-29	1-22-29	1-22-29	1-22-29	1-21-29	1-21-29	1-19-29	1-19-29	1-17-29	1-17-29	1-17-29	1-17-29	1-11-29	1-11-29	1-11-29	1-11-29	1-8-29	1-8-29	1-8-29	12-31-28	12-28-28	12-29-28	12-28-28	12-28-28	12-27-28
Date Poured	4-19-29	4-22-29	4-22-29	4-22-29	4-23-29	4-23-29	4-23-29	4-23-29	4-23-29	1-23-29	1-22-29	1-23-29	1-23-29	1-22-29	1-22-29	1-21-29	1-21-29	1-19-29	1-19-29	1-17-29	1-17-29	1-17-29	1-17-29	1-11-29	1-11-29	1-11-29	1-11-29	1-8-29	1-8-29	1-8-29	12-31-28	12-28-28	12-29-28	12-28-28	12-28-28	12-27-28

Row "A"

Pile Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	19	20	21	22	23	24	25	26	27	28
Length of Pile in Feet	31.0	30.9	31.0	31.0	31.0	31.0	30.8	31.0	31.1	31.1	31.1	31.1	31.2	30.8	31.2	31.1	31.0	30.0	26.3	27.9	27.0	36.0	26.6	24.7	35.7
Number of Blows last inch of Penetration	2	2	2	2	2	2	2	2	2	2	2	2	2	2						3	4	3	4	4	1
Penetration in inches, last blow = "S"	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50						.33	.25	.33	.25	.25	1.0
Safe Load per E-N Formula - Tons	25	25	25	25	25	25	25	25	25	25	25	25	25	25						35	43	35	43	43	14
Date Driven	1-23-29	1-22-29	1-22-29	1-21-29	1-21-29	1-19-29	1-19-29	1-17-29	1-17-29	1-17-29	1-17-29	1-17-29	1-17-29	1-17-29	1-8-29	1-8-29	1-8-29	1-8-29	1-8-29	12-31-28	12-29-28	12-28-28	12-28-28	12-28-28	12-27-28	
Date Poured	1-23-29	1-22-29	1-22-29	1-21-29	1-21-29	1-19-29	1-19-29	1-17-29	1-17-29	1-17-29	1-17-29	1-17-29	1-17-29	1-17-29	1-8-29	1-8-29	1-8-29	1-8-29	1-8-29	12-31-28	12-29-28	12-28-28	12-28-28	12-28-28	12-27-28	

N. Y. C. & St L. R. R.
NICKEL PLATE DISTRICT
BRIDGE-NO- 182.48
OVER C.U.T. TRACKS CLEVELAND, OHIO.
HIGH LEVEL TEAM YARD LEAD-WEST of BROADWAY
PILE PLAN AND CHART -- SOUTH ABUTMENT
OFFICE OF CHIEF ENGINEER CLEVELAND

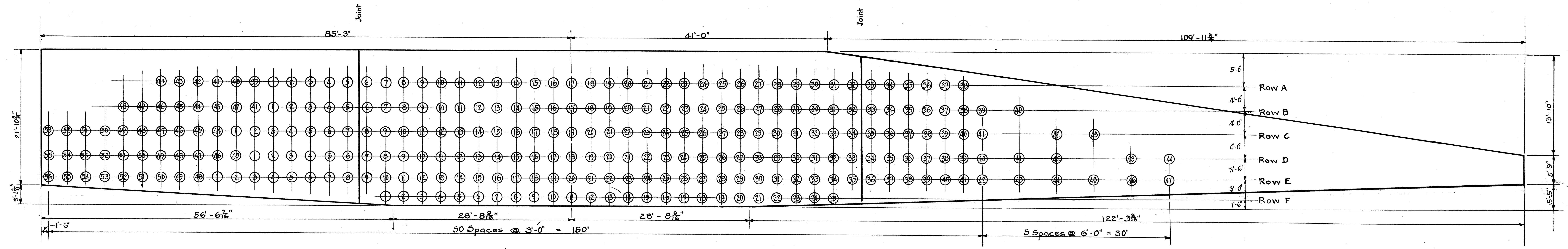
SCALE	DRAWN	TRACED	CHECKED
1/8" = 1'-0"	E.A.M.	E.A.M.	H.A.E.

DATE | REVISIONS | BY

DATE APR. 12, 1928 | SHEET 7A OF 14 | No. ~~182-48-28~~

183-96-2

Printed by B. K. Elliott Co. Imperial Tracing Cloth



Row A

Pile Number.	44	43	42	41	40	39	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38
Length of Pile in Feet.	30.8	31.7	31.3	32.0	32.5	33.3	34.6	33.3	33.2	33.9	34.5	33.2	30.7	31.0	31.1	31.1	31.0	31.9	31.7	32.7	32.6	32.5	32.4	32.5	32.6	32.5	32.2	32.4	32.4	33.0	32.4	33.5	34.2	33.9	33.5	33.4	34.1	32.0	28.7	30.0	25.0	25.0	24.9	25.0
Number Blows last inch of Penetration.	1	1	1	1	1	1	1	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	4	4	4	6	4	4	4
Penetration in inches, last blow ="S".	1	1	1	1	1	1	1	.5	.5	.5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.25	.25	.25	.16	.25	.25	.25
Safe Load per E-N Formula - Tons.	13.6	13.6	13.6	13.6	13.6	13.6	13.6	25.0	25.0	25.0	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	42.9	42.9	42.9	57	42.9	42.9	42.9
Date Driven.	12-22-28	12-21-28	12-21-28	12-20-28	12-20-28	12-19-28	12-19-28	12-18-28	12-18-28	12-18-28	12-18-28	12-15-28	12-14-28	12-13-28	12-13-28	12-13-28	12-13-28	12-12-28	12-12-28	12-11-28	12-11-28	12-11-28	12-10-28	12-10-28	12-10-28	12-9-28	12-9-28	12-6-28	12-6-28	12-5-28	12-5-28	12-4-28	12-4-28	12-1-28	12-1-28	11-27-28	11-27-28	11-24-28	11-24-28	3-8-29	3-11-29	3-11-29	3-11-29	3-11-29
Date Poured.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.

Row B

Pile Number.	48	47	46	45	44	43	42	41	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Length of Pile in Feet.	29.5	31.5	31.5	31.8	31.9	31.7	32.5	33.6	33.7	33.4	33.2	33.1	33.3	33.1	30.7	31.9	31.2	31.0	31.2	31.9	31.9	32.7	32.7	32.5	32.7	32.5	32.3	32.0	32.1	32.3	31.5	32.7	32.8	32.8	34.3	33.1	33.3	33.4	32.5	34.6	28.0	26.0	25.1	25.1	25.0	25.0	24.9	25.9
Number Blows last inch of Penetration.	2	1	1	1	1	1	1	1	2	2	1	1.5	1	1	1	1	1	1	1	1	1	1	1	1	2	1	2	2	2	2	1	2	2	2	2	2	1	2	2	3	4	5	5	6	4	4	4	5
Penetration in inches, last blow ="S".	.5	1	1	1	1	1	1	1	.5	.5	1	.66	1	1	1	1	1	1	1	1	1	1	1	1	.5	1	.5	.5	.5	.5	1	.5	.5	.5	.5	.5	1	.5	.5	.33	.25	.20	.20	.16	.25	.25	.25	.20
Safe Load per E-N Formula - Tons.	25.0	13.6	13.6	13.6	13.6	13.6	13.6	13.6	25.0	25.0	13.6	19.7	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	25.0	13.6	25.0	25.0	25.0	25.0	13.6	25.0	25.0	25.0	25.0	25.0	13.6	25.0	25.0	34.9	42.9	50	50	57	42.9	42.9	42.9	50
Date Driven.	12-21-28	12-21-28	12-21-28	12-21-28	12-20-28	12-20-28	12-20-28	12-19-28	12-19-28	12-18-28	12-18-28	12-18-28	12-18-28	12-15-28	12-14-28	12-13-28	12-13-28	12-13-28	12-13-28	12-12-28	12-12-28	12-11-28	12-11-28	12-11-28	12-10-28	12-10-28	12-10-28	12-9-28	12-9-28	12-7-28	12-5-28	12-5-28	12-5-28	12-4-28	12-3-28	12-1-28	11-28-28	11-27-28	11-27-28	11-26-28	11-24-28	3-9-29	3-9-29	3-11-29	3-11-29	3-12-29	3-12-29	3-14-29
Date Poured.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.

Row C

Pile Number.	53	52	51	50	49	48	47	46	45	44	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43
Length of Pile in Feet.	30.9	31.7	31.4	31.8	31.5	31.8	32.0	32.0	31.9	33.5	33.6	33.6	32.7	33.2	33.2	33.5	33.5	31.7	31.8	31.7	31.2	32.0	32.3	32.8	33.1	32.9	32.6	32.4	32.6	32.5	33.0	31.5	32.9	23.4	22.9	33.1	33.7	31.3	32.9	30.8	31.5	31.9	34.2	36.0	25.0	26.1	24.8	25.0	24.9	24.9	24.7	25.5	25.6
Number of Blows last inch of Penetration.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	4	6	5	4	5	4	4	5	5
Penetration in inches, last blow ="S"	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	.5	1	1	1	1	1	1	1	1	1	1	1	1	1	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.33	.25	.16	.20	.25	.20	.25	.25	.20	.20
Safe Load per E-N Formula - Tons.	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	25.0	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	34.9	42.9	57	43	42.9	50	42.9	42.9	50	50
Date Driven.	12-22-28	12-21-28	12-21-28	12-21-28	12-21-28	12-20-28	12-20-28	12-20-28	12-20-28	12-19-28	12-19-28	12-19-28	12-19-28	12-18-28	12-18-28	12-18-28	12-18-28	12-15-28	12-14-28	12-14-28	12-13-28	12-13-28	12-13-28	12-12-28	12-12-28	12-12-28	12-11-28	12-11-28	12-10-28	12-10-28	12-10-28	12-9-28	12-9-28	12-7-28	12-6-28	12-5-28	12-5-28	12-4-28	12-3-28	12-1-28	11-28-28	11-27-28	11-27-28	11-26-28	11-24-28	3-9-29	3-9-29	3-11-29	3-11-29	3-12-29	3-12-29	3-14-29	3-14-29
Date Poured.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.

Row D

Pile Number.	55	54	53	52	51	50	49	48	47	46	45	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
Length of Pile in Feet.	30.9	31.6	31.4	31.5	31.4	32.0	32.0	32.1	31.8	33.1	33.7	33.8	33.0	32.7	33.1	33.2	33.2	32.3	32.1	30.9	31.4	31.2	32.4	32.7	32.6	32.8	32.6	31.4	32.9	32.5	32.8	32.8	32.5	32.8	30.8	32.4	32.8	31.0	33.3	34.0	31.0	36.0	36.0	35.1	23.0	24.8	25.0	24.4	24.9	25.2	24.9	26.3	26.0	25.5	25.4
Number of Blows last inch of Penetration.	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	1	1	1	2	2	2	2	4	5	4	6	6	4	4	5	5	4	4
Penetration in inches, last blow = "S".	1	1	1	1	1	1	1	1	1	1	.5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	.5	.5	.5	.5	.5	.5	.5	1	1	1	.5	.5	.5	.5	.25	.20	.25	.16	16	.25	.25	.20	.20	.25	.25
Safe Load per E-N Formula - Tons.	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	25.0	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	25.0	25.0	25.0	25.0	25.0	25.0	25.0	13.6	13.6	13.6	25.0	25.0	25.0	25.0	42.9	50	42.9	57	57	42.9	42.9	50	50	42.9	42.9
Date Driven.	12-22-28	12-21-28	12-21-28	12-21-28	12-21-28	12-20-28	12-20-28	12-20-28	12-20-28	12-19-28	12-19-28	12-19-28	12-19-28	12-19-28	12-18-28	12-18-28	12-18-28	12-15-28	12-14-28	12-14-28	12-13-28	12-13-28	12-12-28	12-12-28	12-12-28	12-11-28	12-11-28	12-11-28	12-10-28	12-10-28	12-10-28	12-9-28	12-9-28	12-8-28	12-6-28	12-6-28	12-5-28	12-4-28	12-3-28	12-3-28	11-28-28	11-28-28	11-27-28	11-26-28	11-23-28	3-9-29	3-9-29	3-11-29	3-11-29	3-12-29	3-12-29	3-14-29	3-14-29	3-15-29	3-15-29
Date Poured.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.

Row E

Pile Number.	56	55	54	53	52	51	50	49	48	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
Length of Pile in Feet.	30.9	31.4	31.1	31.0	32.0	31.9	31.8	32.0	32.1	31.8	33.3	33.4	33.1	32.9	33.0	33.2	33.3	32.6	32.0	32.8	32.3	32.3	32.5	32.6	32.6	32.8	32.5	32.4	32.9	32.9	33.5	32.0	33.7	31.8	34.6	33.5	32.3	31.6	33.4	33.1	33.9	34.2	33.5	34.4	28.2	25.3	24.9	24.3	24.8	25.3	25.2	25.3	25.4	25.6	25.6	25.5
Number of Blows last inch of Penetration.	1	1	1	1	1	1	1	1	1	1	1	1	2	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	1	2	2	2	2	2	2	2	3	1	4	5	6	5	6	5	4	4	5	4	5	4
Penetration in inches, last blow ="S"	1	1	1	1	1	1	1	1	1	1	1	1	.5	1	.5	.5	1	1	1	1	1	1	1	1	1	1	1	1	.5	.5	.5	.5	.5	.5	1	.5	.5	.5	.5	.5	.5	.5	.33	1	.25	.20	16	.20	.16	.20	.25	.25	.20	.25	.20	.25
Safe Load per E-N Formula - Tons.	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	25.0	13.6	25.0	25.0	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	25.0	25.0	25.0	25.0	25.0	25.0	13.6	25.0	25.0	25.0	25.0	25.0	25.0	25.0	34.9	13.6	42.9	50	57	50	57	50	42.9	42.9	50	42.9	50	42.9
Date Driven.	12-22-28	12-21-28	12-21-28	12-21-28	12-20-28	12-20-28	12-20-28	12-20-28	12-20-28	12-19-28	12-19-28	12-19-28	12-19-28	12-19-28	12-18-28	12-18-28	12-18-28	12-15-28	12-14-28	12-14-28	12-13-28	12-13-28	12-13-28	12-12-28	12-12-28	12-12-28	12-11-28	12-11-28	12-10-28	12-10-28	12-10-28	12-9-28	12-9-28	12-8-28	12-6-28	12-6-28	12-5-28	12-4-28	12-3-28	12-3-28	11-28-28	11-28-28	11-26-28	11-26-28	11-23-28	3-9-29	3-9-29	3-11-29	3-11-29	3-12-29	3-12-29	3-14-29	3-14-29	3-14-29	3-14-29	3-15-29
Date Poured.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.

Row F

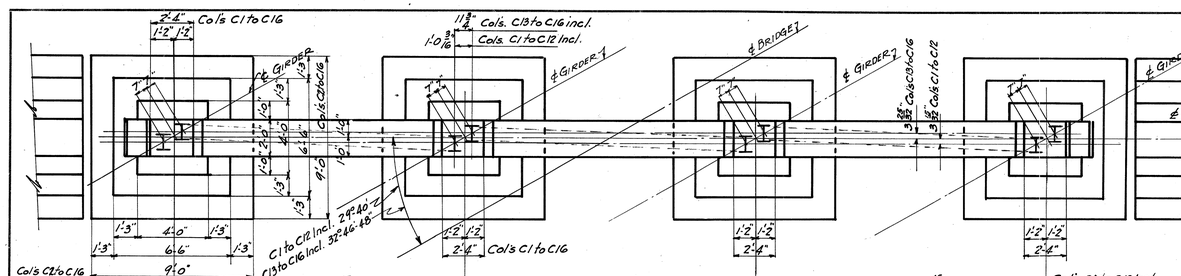
Pile Number.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Length of Pile in Feet.	36.0	35.8	35.8	36.7	36.7	35.3	35.3	35.2	35.3	35.1	34.6	34.7	34.0	33.0	32.6	32.2	33.0	33.6	31.5	31.2	30.8	32.6	33.2	32.9	30.9
Number of Blows last inch of Penetration.	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1.5
Penetration in inches, last blow = "S"	1	1	1	1	1	1	1	1	1	1	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	1	.66
Safe Load per E-N Formula - Tons	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	13.6	19.7
Date Driven.	12-14-28	12-14-28	12-13-28	12-13-28	12-12-28	12-12-28	12-12-28	12-12-28	12-11-28	12-11-28	12-10-28	12-10-28	12-10-28	12-9-28	12-8-28	12-8-28	12-6-28	12-6-28	12-4-28	12-4-28	12-3-28	12-3-28	11-28-28	11-28-28	11-26-28
Date Poured.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.

Note:
Concrete Piles to be 30 feet long and 40 Tons capacity. Made of 2000 lb concrete, Water-Cement Ratio Metho[d] A.R.E.A. Specifications, Volume 28, Bulletin 295, Dated March, 1927.

DATE	REVISIONS	BY

N. Y. C. & St. L. R. R.
NICKEL PLATE DISTRICT
BRIDGE-NO- 182.48
OVER C.U.T. TRACKS. CLEVELAND, OHIO.
HIGH LEVEL TEAM YARD LEAD - WEST OF BROADWA[Y]
PILE PLAN & CHART FOR NORTH ABUTMENT
OFFICE OF CHIEF ENGINEER CLEVELAND
DRAWN W.W.W. TRACED W.W.W. CHECKED
DATE 6-18-31 SHEET 7B OF 14 No. ~~182-48-281~~
183-96-28[illegible]

Printed by B. K. Elliott Co. Imperial Tracing Cloth



For Detail of Footing under Column C1 see Sheet 8A

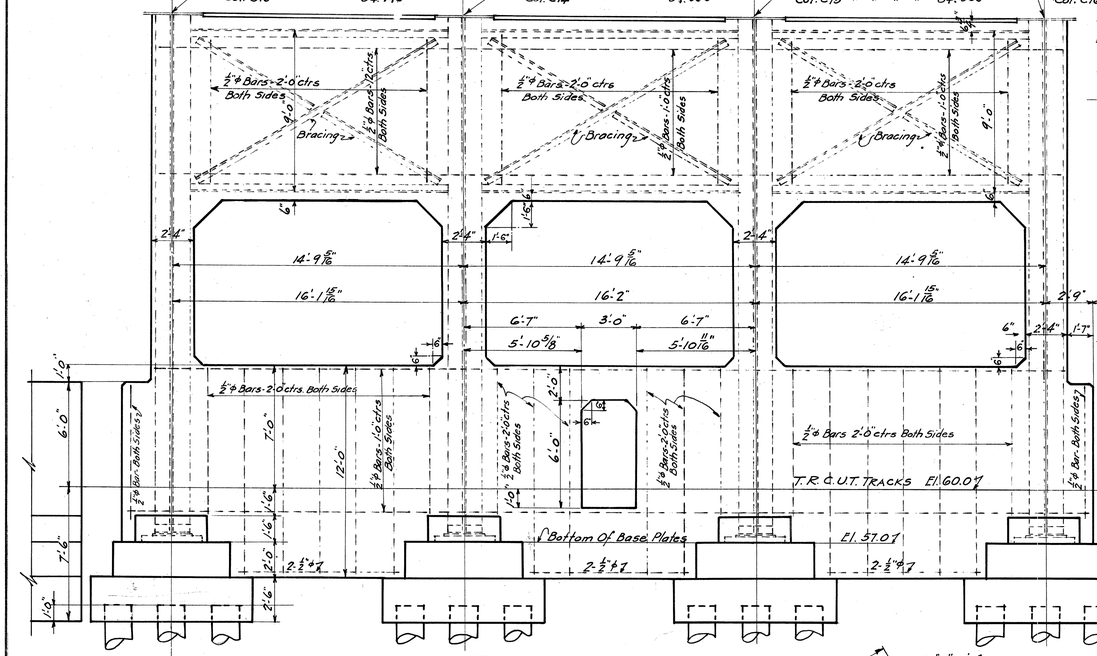
TYPICAL PIER PLAN

Col. C1 El. Top Cap Plate 85.125
Col. C5 " " " " 84.964
Col. C9 " " " " 84.720
Col. C13 " " " " 84.175

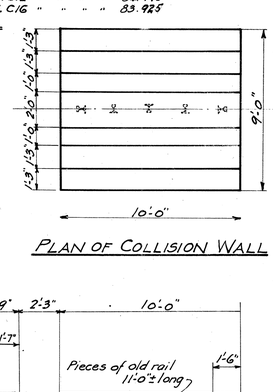
Col. C2 El. Top Cap Plate 85.035
Col. C6 " " " " 84.874
Col. C10 " " " " 84.629
Col. C14 " " " " 84.085

Col. C3 El. Top Cap Plate 84.939
Col. C7 " " " " 84.774
Col. C11 " " " " 84.530
Col. C15 " " " " 84.005

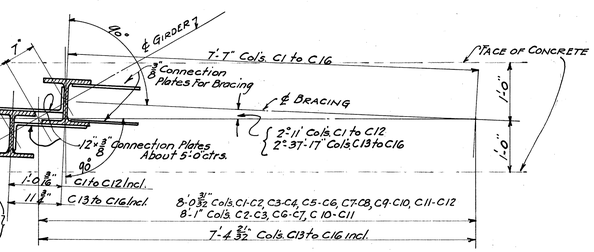
Col. C4 El. Top Cap Plate 84.848
Col. C8 " " " " 84.687
Col. C12 " " " " 84.443
Col. C16 " " " " 83.925



TYPICAL ELEVATION OF PIER
Scale 1/4"=1'-0"



PLAN OF COLLISION WALL



PLAN OF PIER COL'S
Scale 3/4"=1'-0"

COLUMN SCHEDULE

MARK	LENGTH	SIZE	LOAD
C1	27'-7 7/8"	2-12"×120#C.B.	820,000
C2	27'-6 1/4"	2-12"×140# "	920,000
C3	27'-5 1/8"	Do	Do.
C4	27'-4"	2-12"×120#C.B.	820,000
C5	27'-3 1/2"	2-12"×110#C.B.	575,000
C6	27'-4 3/8"	Do	685,000
C7	27'-3 1/4"	Do	Do
C8	27'-2 1/8"	Do	575,000
C9	27'-2 1/2"	2-12"×140#C.B.	780,000
C10	27'-1 3/8"	2-12"×150#C.B.	880,000
C11	27'-0 1/4"	Do	Do
C12	26'-11 1/8"	2-12"×140#C.B.	780,000
C13	26'-8"	2-12"×140#C.B.	932,000
C14	26'-7"	2-12"×150#C.B.	1,010,000
C15	26'-6"	Do	Do
C16	26'-5"	2-12"×140#C.B.	932,000

NOTE:
BETH. SHAPES OF EQUAL STRENGTH AND WEIGHT MAY BE USED.

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North "	" 7
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" " " No. Abutment	" 7B
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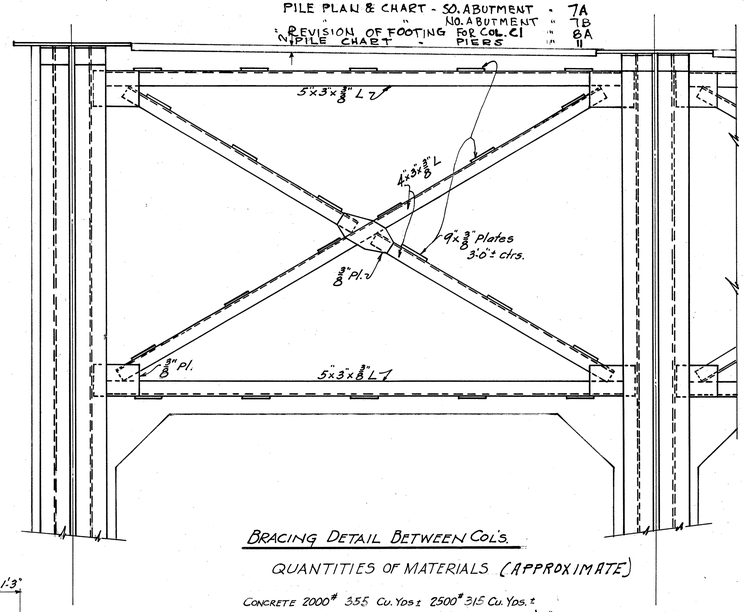
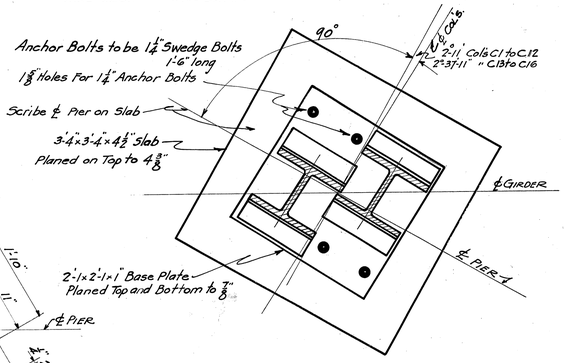


BRACING DETAIL BETWEEN COL'S.

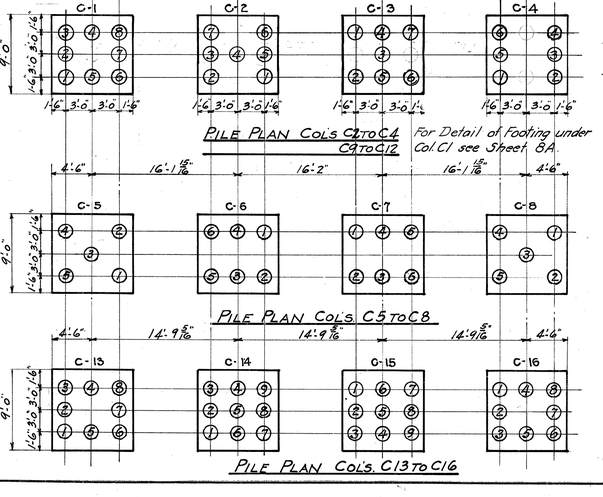
QUANTITIES OF MATERIALS (APPROXIMATE)

Concrete 2000# 355 Cu. Yds. ± 2500# 315 Cu. Yds. ±
Concrete Piles 3420 Lin. Ft. ± Av. Length 29'-0"
Reinforcing Steel 6840 Lbs. ±
Wire Mesh 6100 Sq. Ft. ±



TYPICAL COLUMN BASE DETAIL

NOTE:
Collision Walls, Pier Footings use 2000# Concrete; 6¾ Gals. Water per Sack of Cement
For Cols, Bracing and Pier Walls use 2500# Concrete; 6 Gals Water/Sack Cement
All Concrete to be Water-Cement Ratio Method - A.R.E.A. Specifications Vol. 28 - Bull. 295 March 1927
All Cols & Bracing to be wrapped with A.S.&W Co's Mesh Style 040.
Space under Cap and Cols. to be well Filled with Concrete.

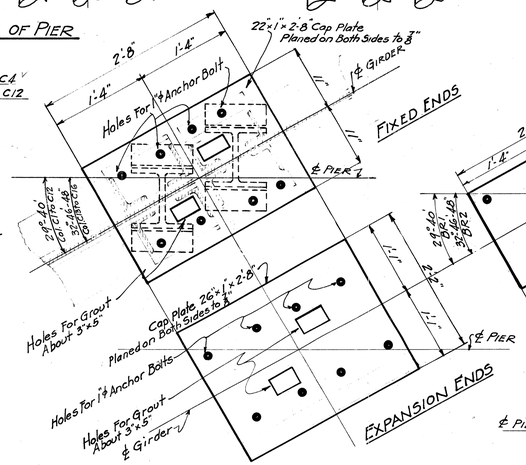


PILE PLAN COL'S C1 TO C4 C9 TO C12

For Detail of Footing under Col C1 see Sheet 8A

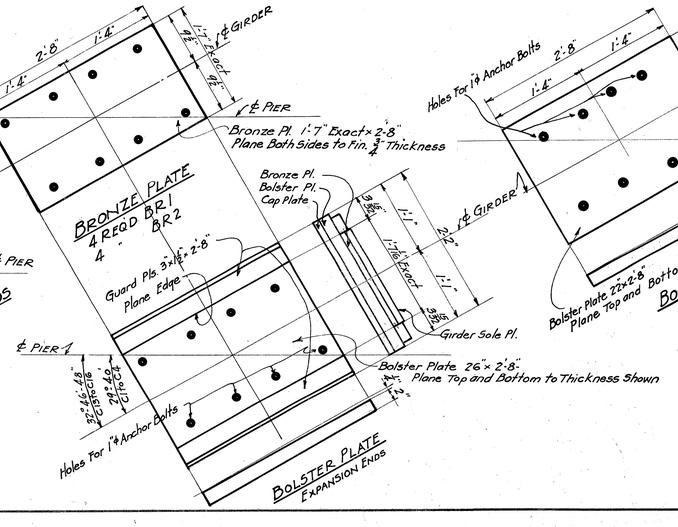
PILE PLAN COL'S C5 TO C8

PILE PLAN COL'S C13 TO C16

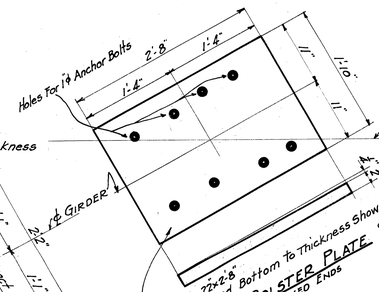


TYPICAL COLUMN CAP DETAIL

CAP DETAILED FOR C1 TO C12
" SIMILAR " C13 TO C16



TYPICAL CROSS SECTION



DATE	REVISIONS	BY
12-12-28	Index	R.M.
1-26-28	Footing under Col. C1	L.A.O.
11-1928	Cross Frame Distances from Top of Rail, Top of Cap & Relocation of Pier 5 from Sta.	A.W.M.
7-13-28	Pier 5 from Sta.	C.W.M.
5-16-28	Quantities and Note.	C.W.M.

N. Y. C. & St. L. R. R.
N.K.P. DISTRICT

BRIDGE-NO-182.48

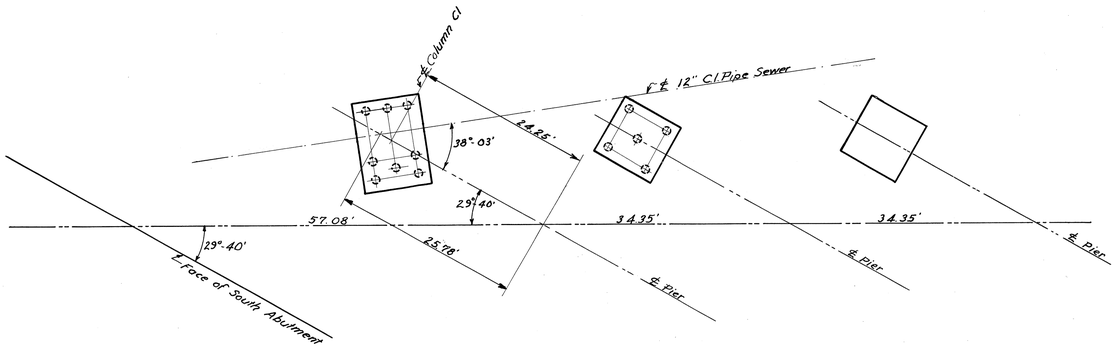
OVER C.U.T. TRACKS — CLEVELAND, OHIO
HIGH LEVEL TEAM YARD LEAD — WEST OF BROADWAY

PIER PLAN

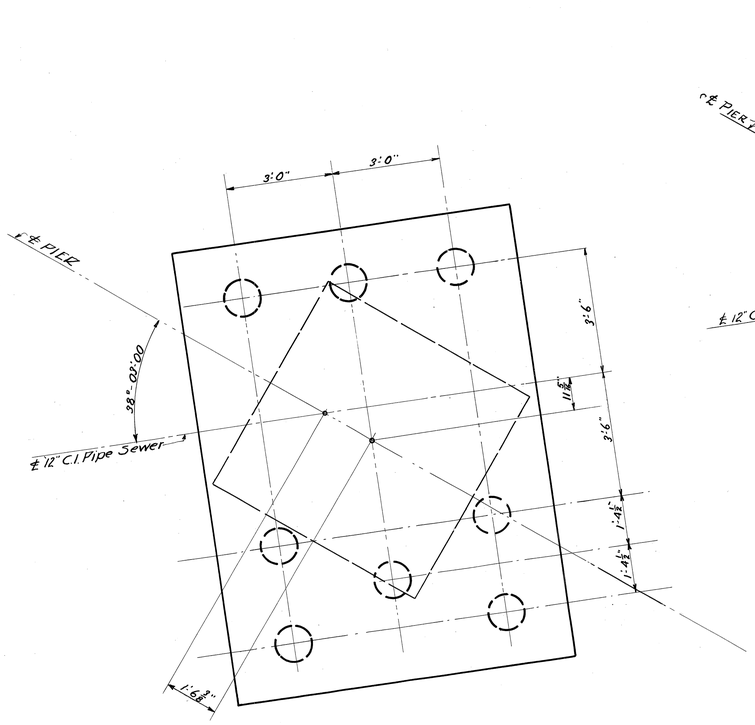
OFFICE OF CHIEF ENGINEER — CLEVELAND, O.

SCALE	DRAWN	TRACED	CHECKED
~~1-1-1-1-~~ 1"=1'-0"	C.W.M. 3-16-1928	C.W.M. 3-19-1928	F.M.S. 3-23-1928

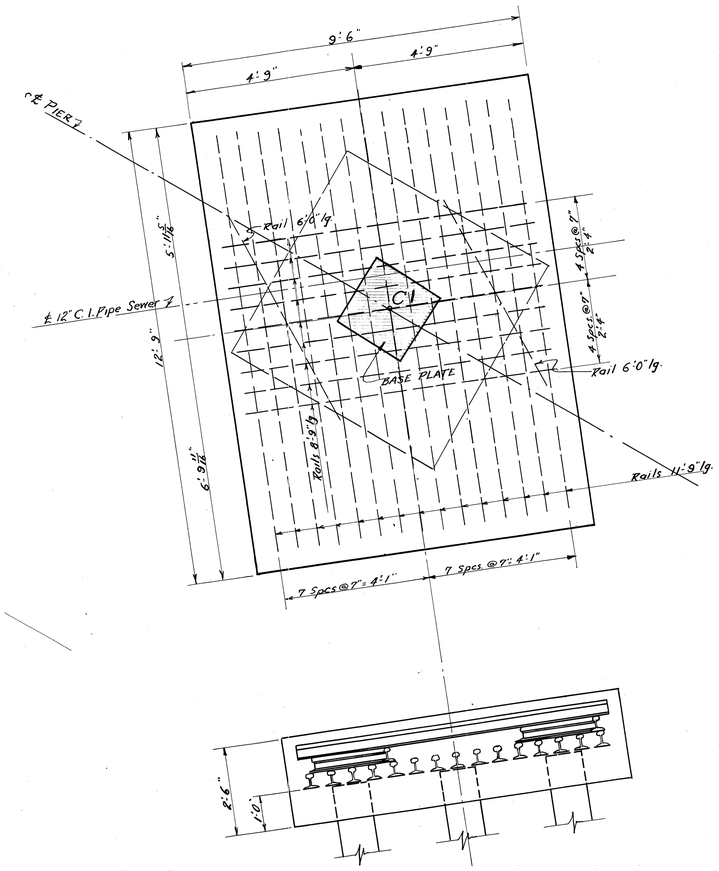
DATE MAR. 23-1928 | SHEET 8 OF 14 | No ~~182-48-281~~ 183-96-281



PLAN Scale 1"=10'



DETAIL SHOWING PILE SPACING AT C1
Scale ½"=1'-0"



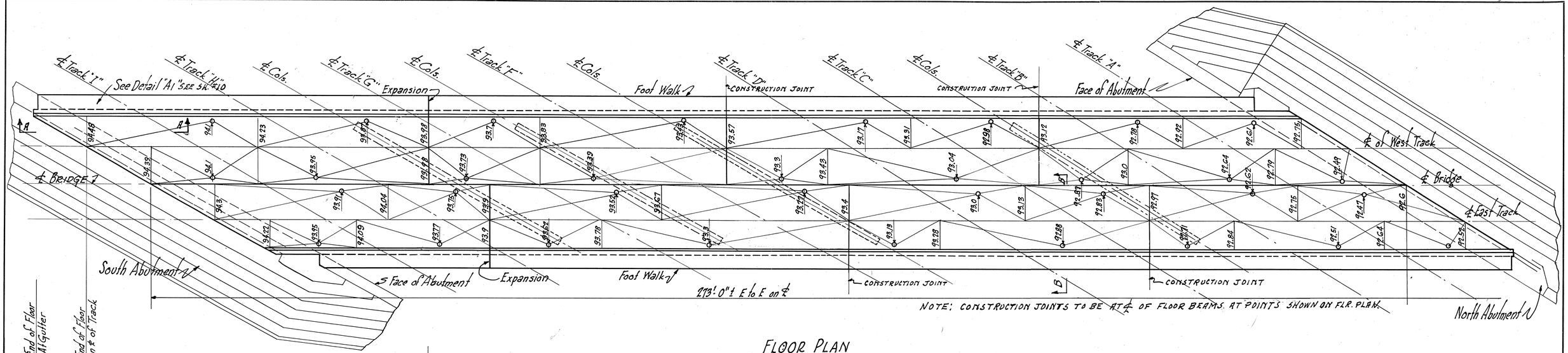
DETAIL SHOWING RAIL REINFORCING
Scale ½"=1'-0"

			N. Y. C. & St L. R. R.
			NICKEL PLATE DISTRICT
			BRIDGE-NO- 182.48
			OVER C.U.T. TRACKS CLEVELAND OHIO
			HIGH LEVEL TEAM YARD LEAD WEST OF BROADWAY
			REVISION OF FOOTING UNDER COL. C1
			DUE TO UNDERGROUND SEWER
			OFFICE OF CHIEF ENGINEER CLEVELAND, O
			SCALE: As Shown | DRAWN: L.A.O. 1/26/29 | TRACED: ML 2/17/29 | CHECKED:
DATE	REVISIONS	BY	DATE 1-26-29 | SHEET 8A OF 14 | No. ~~182-96-281~~

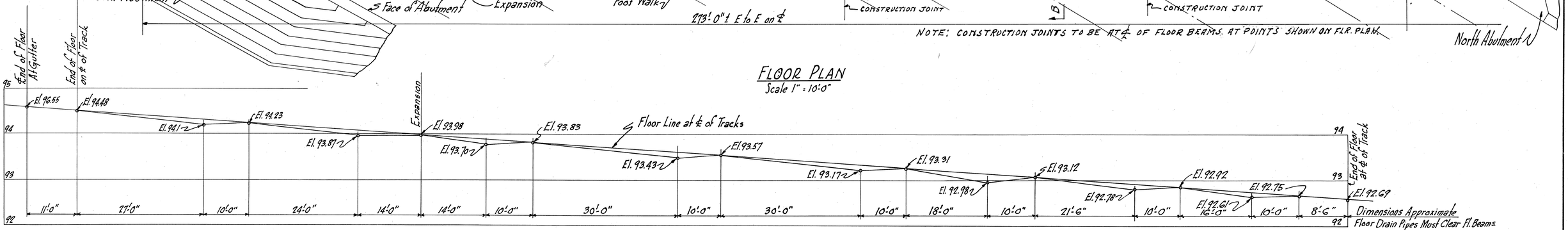
183-96-28

PRINTED ON "IMPERIAL" TRACING CLOTH K & E CO., N. Y.

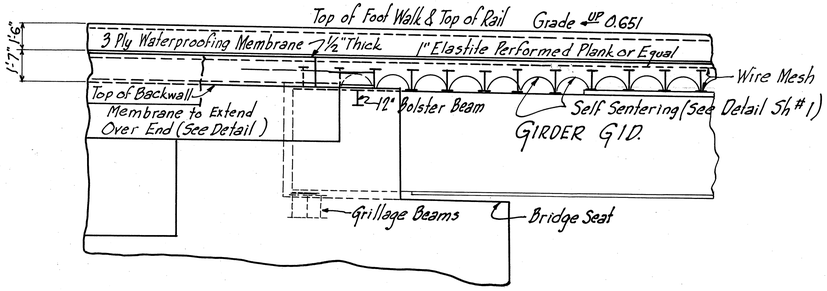
R.K.H



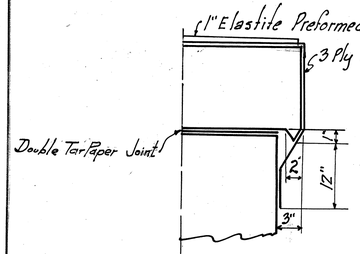
FLOOR PLAN
Scale 1" = 10'-0"



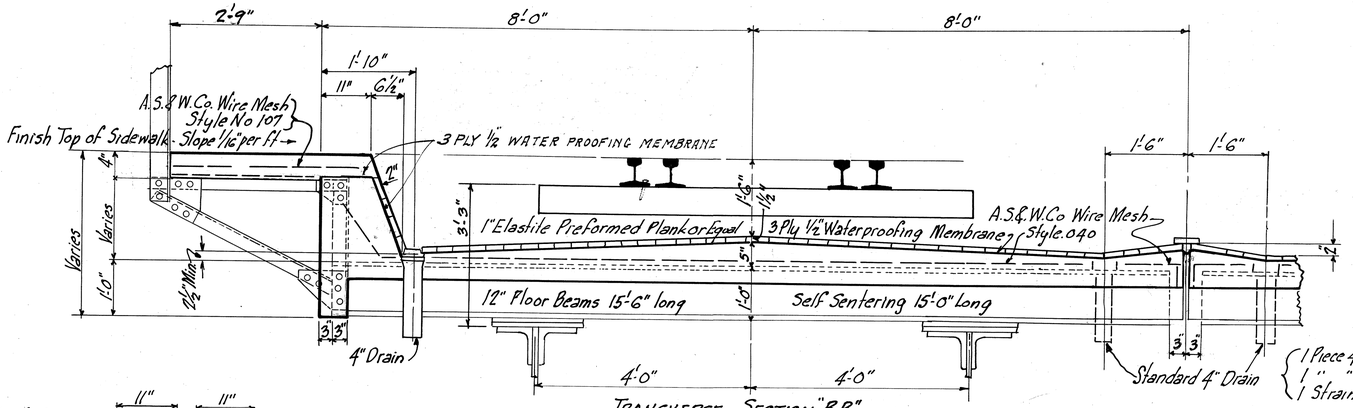
TYPICAL DRAINAGE PROFILE OF FLOOR
Dimensions Given Are For West Half Of West Track. For Other Dimensions See Floor Plan.



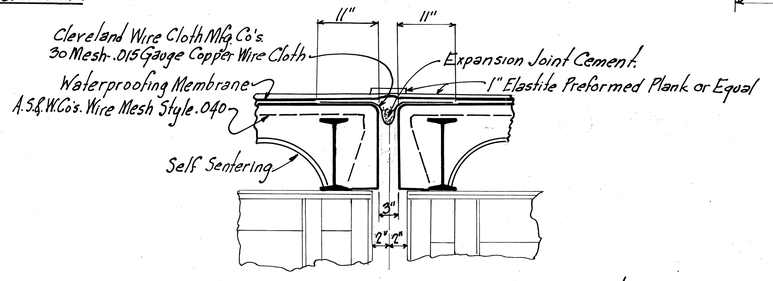
LONGITUDINAL SECTION "A"A"
Scale 1/4" = 1'-0"



DETAIL AT END OF FLOOR



TRANSVERSE SECTION "B-B"
Scale 3/4" = 1'-0"



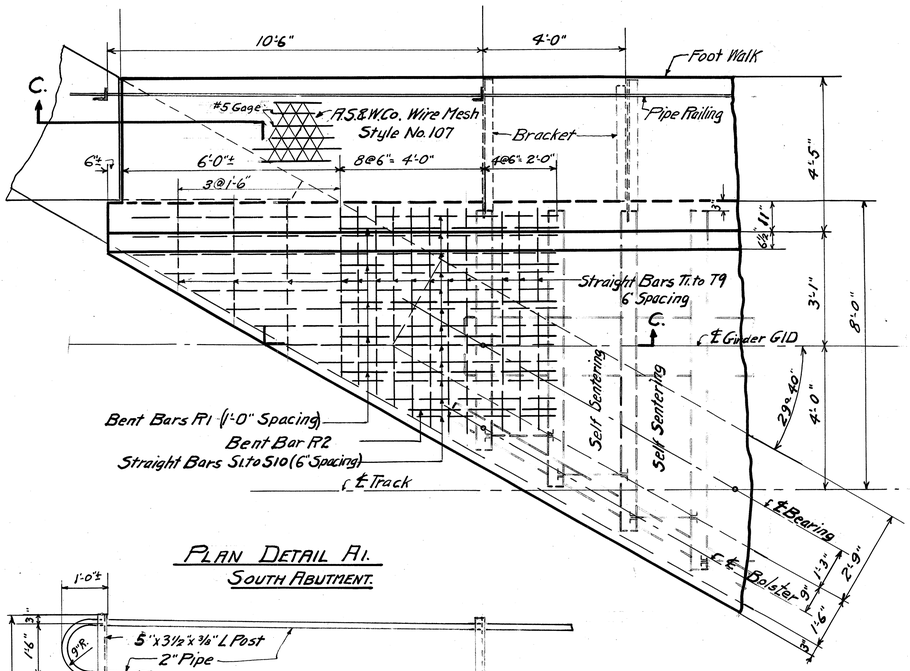
DETAIL OF TRANSVERSE FLOOR EXPANSION JOINT
Scale 1" = 1'-0"

Notes
See plan showing Floor Details, Sh. #10
For floor use 3000# Concrete.
All concrete to be Water Cement Ratio Method
A.R.E.A. Specifications. Vol. 28 Bull. 295 Mar. 1927.

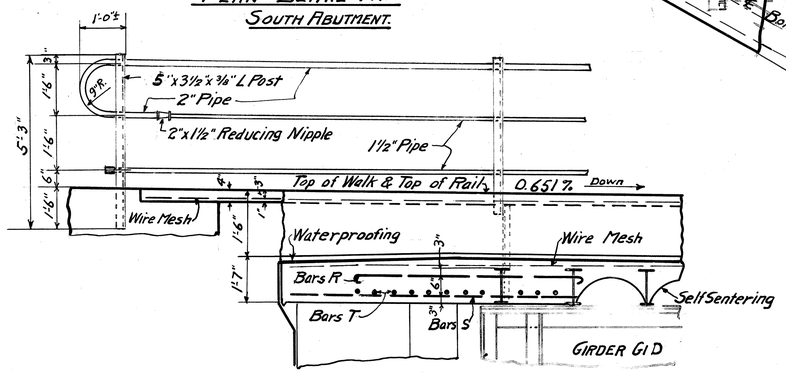
N. Y. C. & St L. R. R.
N.Y.C. DISTRICT
BRIDGE-NO- 182.48
OVER C.U.T. TRACKS. CLEVELAND, O.
HIGH LEVEL TEAM YARD LEAD. WEST OF BROADWAY
GENERAL FLOOR PLAN
OFFICE OF CHIEF ENGINEER CLEVELAND, O.

SCALE	DRAWN	TRACED	CHECKED
As Shown	A.W.M.	[illegible]	A.W.M. 9-6-28

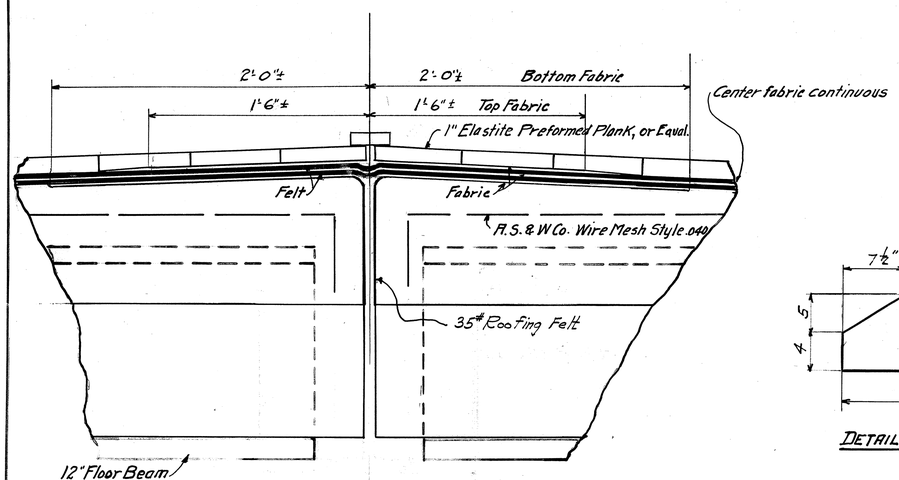
DATE | REVISIONS | BY
DATE 8-5-28 | SHEET 9 OF 14 | No. ~~182-48-281~~ 183-96-281



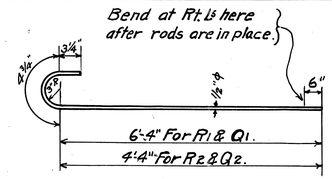
PLAN DETAIL A1.
SOUTH ABUTMENT.



SECTION "C.C."
REINFORCING FOR DETAIL A1 & A2 IS THE SAME.
SCALE ½"=1'-0"



DETAIL "C." LONGITUDINAL EXPANSION JOINT.
SCALE 3"=1'-0"



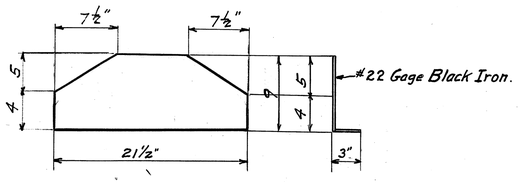
DETAIL FOR ½"ϕ REINFORCING RODS Q & R.

BAR LIST SOUTH END.

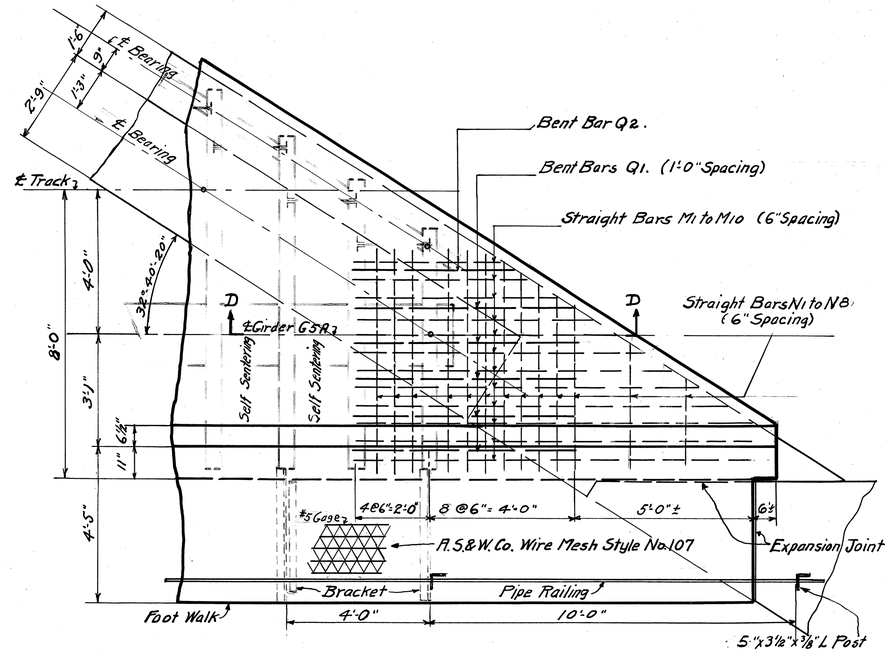
No. Pcs.	Mark	Kind	Size	Length	Total L'gth.	Wt. Per Ft.	Total Wt.
10	R1	Bent	½"ϕ	7'-0"	70'-0"	.668#	47#
2	R2	"	"	5'-0"	10'-0"	"	7#
2	S1	Straight	"	4'-2"	8'-4"	"	6#
2	S2	"	"	5'-1"	10'-2"	"	7#
2	S3	"	"	5'-11"	11'-10"	"	7#
2	S4	"	"	6'-10"	13'-8"	"	9#
2	S5	"	"	7'-8"	15'-4"	"	10#
2	S6	"	"	8'-7"	17'-2"	"	12#
2	S7	"	"	9'-5"	18'-10"	"	12#
2	S8	"	"	10'-4"	20'-8"	"	14#
2	S9	"	"	11'-2"	22'-4"	"	15#
6	S10	"	"	12'-0"	72'-0"	"	48#
2	T1	"	"	4'-9"	9'-6"	"	7#
2	T2	"	"	5'-0"	10'-0"	"	7#
2	T3	"	"	5'-3"	10'-6"	"	7#
2	T4	"	"	5'-6"	11'-0"	"	7#
2	T5	"	"	5'-9"	11'-6"	"	7#
12	T6	"	"	6'-0"	72'-0"	"	48#
2	T7	"	"	4'-0"	8'-0"	"	7#
2	T8	"	"	3'-2"	6'-4"	"	4#
2	T9	"	"	2'-4"	4'-8"	"	5#
					Total Weight		293#

BAR LIST NORTH END.

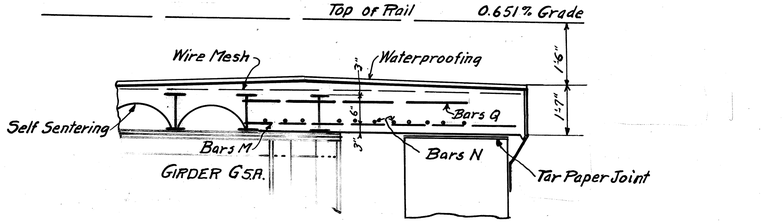
No. Pcs.	Mark	Kind	Size	Length	Total L'gth.	Wt. Per Ft.	Total Wt.
10	Q1	Bent	½"ϕ	6'-8"	66'-8"	.668	45#
2	Q2	"	"	5'-0"	10'-0"	"	7#
2	M1	Straight	"	4'-2"	8'-4"	"	6#
2	M2	"	"	4'-11"	9'-10"	"	7#
2	M3	"	"	5'-7"	11'-2"	"	7#
2	M4	"	"	6'-5"	12'-10"	"	8#
2	M5	"	"	7'-3"	14'-6"	"	10#
2	M6	"	"	8'-0"	16'-0"	"	11#
2	M7	"	"	8'-9"	17'-6"	"	12#
2	M8	"	"	9'-6"	19'-0"	"	13#
2	M9	"	"	10'-3"	20'-6"	"	14#
6	M10	"	"	11'-0"	66'-0"	"	45#
2	N1	"	"	4'-9"	9'-6"	"	7#
2	N2	"	"	5'-0"	10'-0"	"	7#
2	N3	"	"	5'-3"	10'-6"	"	7#
2	N4	"	"	5'-6"	11'-0"	"	7#
2	N5	"	"	5'-9"	11'-6"	"	7#
12	N6	"	"	6'-0"	72'-0"	"	48#
2	N7	"	"	1-3"	2'-6"	"	2#
2	N8	"	"	2-2"	4'-4"	"	3#
					Total Weight		275#



DETAIL OF BLACK IRON END SHEETS
SCALE 1½"=1'-0"



PLAN DETAIL B2.
NORTH ABUTMENT



SECTION "D.D."
REINFORCING FOR DETAIL B1 & B2 IS THE SAME.
SCALE ½"=1'-0"

BILL OF MATERIAL FOR FLOOR. (APPROXIMATE)

Concrete {3000# 5½ Gal. of Water per Sack of Cement.}	350 C.Y.±
Reinforcing Steel (See Bar List)	568 #±
Self Sentering {#26 Ga.-29"W.-12½"Rad. 23"Chord-7⅛"Rise-29°Arc.}	1575 Pcs.±
Waterproofing Membrane (3 Ply.)	10,000 ☐'±'
Elastite Preformed Plank (1")	8,800 ☐'±'
Wire Mesh (A.S.&W.Co.#.040)	8,800 ☐'±'
" " (A.S.&W.Co.#107)	3,000 ☐'±'
Copper Wire Cloth (30 Mesh-.015 Ga.)	70 ☐'±'
35# Roofing Felt	550 ☐'±'
Expansion Joint Cement	125 Gal.±
Tar Paper (Expansion Joints)	300 ☐'±'
Drains {4" C.I. Pipe 4" Long; 4" " " " With Bell-18" Long C.I. Strainer}	34 Ea.
End Sheets (See Detail)	265 Pcs±
Pipe Railing (See Detail A1)	540 Ft.±

Notes:
See General Floor Plan, Sh.# 9.
For floor use 3000# concrete. - 5.5 GALS. OF WATER PER SACK OF CEMENT.
All concrete to be Water Cement Ratio Method A.R.E.A. Specifications Vol. 28 Bull. 295 Mar. 1927.

N. Y. C. & St L. R. R.
N.K.P. DISTRICT
BRIDGE-NO- 182.48.
OVER C.U.T. TRACKS CLEVELAND, O.
HIGH LEVEL TEAM YARD LEAD WEST OF BROADWAY.
FLOOR DETAILS.
OFFICE OF CHIEF ENGINEER CLEVELAND, O.

Scale	Drawn	Traced	Checked
As Shown	4-9-28-C.E.R.	4-26-28-C.E.R.	A.W.M. 4-5-28

Date	Revisions	By

DATE 9-6-28 SHEET 10 OF 14 No. ~~182-18-281~~ 183-96-281

5-6-

PIER No1

LOCATION	FTG. FOR COL. C1								FTG. FOR COL. C2							FTG. FOR COL. C3							FTG. FOR COL. C4					
PILE NO.	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5	6
LENGTH OF PILE IN FEET	25.2	25.5	24.4	25.1	24.6	24.8	25.3	25.0	25.3	25.9	25.9	25.5	25.5	25.4	25.3	25.1	25.0	24.7	25.2	24.7	24.8	25.3	25.3	24.9	24.6	24.8	25.1	25.7
NO. OF BLOWS LAST INCH OF PENETRATION	1	2	1	1	1	1	1	1	1							1	1	1	2	2	2	2	2	2	1	1	1	1
PENETRATION LAST 10 BLOWS																												
PENETRATION IN INCHES LAST BLOW: S	1.0	.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0							1.0	1.0	1.0	.5	.5	.5	.5	.5	.5	1.0	1.0	1.0	1.0
SAFE LOAD PER E.N FORMULA (TONS)	14.0	25.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0							14.0	14.0	14.0	25.0	25.0	25.0	25.0	25.0	25.0	14.0	14.0	14.0	14.0
DATE DRIVEN	1-25-29	1-25-29	1-25-29	1-25-29	1-25-29	1-25-29	1-25-29	1-25-29	1-24-29	1-24-29	1-24-29	1-24-29	1-24-29	1-24-29	1-24-29	1-28-29	1-28-29	1-28-29	1-28-29	1-28-29	1-28-29	1-29-29	1-29-29	1-29-29	1-29-29	1-29-29	1-29-29	1-29-29	1-29-29
DIAMETER OF BUTT AT CUT-OFF (INCHES)																												
DATE POURED	1-25-29	1-25-29	1-25-29	1-25-29	1-25-29	1-25-29	1-25-29	1-25-29	1-24-29	1-24-29	1-24-29	1-24-29	1-24-29	1-24-29	1-24-29	1-28-29	1-28-29	1-28-29	1-28-29	1-28-29	1-28-29	1-29-29	1-29-29	1-29-29	1-29-29	1-29-29	1-29-29	1-29-29	1-29-29

PIER No2

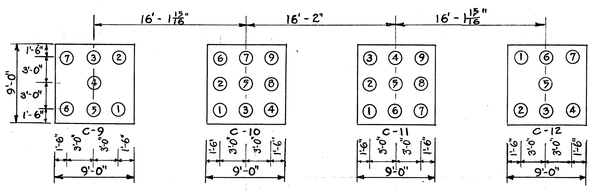
LOCATION	FTG. FOR COL. C5					FTG. FOR COL. C6						FTG. FOR COL. C7						FTG. FOR COL. C8				
PILE NO.	1	2	3	4	5	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5
LENGTH OF PILE IN FEET	25.1	25.5	25.2	29.9	28.7	25.1	30.2	31.3	28.7	29.7	29.6	29.5	30.0	30.0	30.1	29.8	30.0	25.0	25.1	25.5	24.7	25.0
NO. OF BLOWS LAST INCH OF PENETRATION	2	2	2	2	2	1	1	1	2	2	2	2	2	2	2	2	2	3	3	3	3	4
PENETRATION LAST 10 BLOWS																						
PENETRATION IN INCHES LAST BLOW: S	.5	.5	.5	.5	.5	1	1	1	.5	.5	.5	.5	.5	.5	.5	.5	.5	.33	.33	.33	.33	.25
SAFE LOAD PER E.N FORMULA (TONS)	25.0	25.0	25.0	25.0	25.0	14.0	14.0	14.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	34.9	34.9	34.9	34.9	42.9
DATE DRIVEN	1-30-29	1-30-29	1-30-29	1-31-29	1-31-29	1-29-29	1-29-29	1-30-29	1-30-29	1-30-29	1-30-29	1-31-29	1-31-29	1-31-29	1-31-29	1-31-29	1-31-29	2-4-29	2-4-29	2-4-29	2-4-29	2-4-29
DIAMETER OF BUTT AT CUT-OFF (INCHES)																						
DATE POURED	1-30-29	1-30-29	1-30-29	1-31-29	1-31-29	1-29-29	1-29-29	1-30-29	1-30-29	1-30-29	1-30-29	1-31-29	1-31-29	1-31-29	1-31-29	1-31-29	1-31-29	2-4-29	2-4-29	2-4-29	2-4-29	2-4-29

PIER No3

LOCATION	FTG. FOR COL. C9							FTG. FOR COL. C10									FTG. FOR COL. C11									FTG. FOR COL. 12						
PILE NO.	1	2	3	4	5	6	7	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7
LENGTH OF PILE IN FEET	30.1	29.5	29.7	29.8	29.7	25.1	25.0	27.0	26.5	25.5	25.6	16.5	25.6	11.0	25.5	26.0	24.5	24.7	24.9	24.8	24.7	24.8	24.5	18.5	24.8	24.7	24.8	23.5	18.9	19.8	24.8	24.7
NO. OF BLOWS LAST INCH OF PENETRATION	2	4	4	2	2	5	5	3	4	4	4	2	2	2	4	2		3	3	3	3	4	3	6	4	2	4	4				
PENETRATION LAST 10 BLOWS																																
PENETRATION IN INCHES LAST BLOW: S	.50	.25	.25	.25	.5	.20	.20	.33	.25	.25	.25	.50	.50	.50	.25	.50		.33	.33	.33	.33	.25	.33	.16	.25	.50	.25	.25				
SAFE LOAD PER E.N FORMULA (TONS)	25.0	42.9	42.9	42.9	25.0	50.0	50.0	34.9	42.9	42.9	42.9	25.0	25.0	25.0	42.9	25.0		34.9	34.9	34.9	34.9	42.9	34.9	51.7	42.9	25.0	42.9	42.9				
DATE DRIVEN	1-31-29	2-1-29	2-1-29	2-1-29	2-1-29	2-1-29	2-1-29	2-1-29	2-1-29	2-4-29	2-4-29	2-4-29	2-4-29	2-4-29	2-4-29	2-4-29	2-5-29	2-5-29	2-5-29	2-5-29	2-5-29	2-5-29	2-5-29	2-6-29	2-6-29	2-6-29	2-6-29	2-6-29	2-7-29	2-7-29	2-7-29	2-7-29	2-7-29
DIAMETER OF BUTT AT CUT-OFF (INCHES)																																
DATE POURED	1-31-29	2-1-29	2-1-29	2-1-29	2-1-29	2-1-29	2-1-29	2-1-29	2-1-29	2-4-29	2-4-29	2-4-29	2-4-29	2-4-29	2-4-29	2-4-29	2-5-29	2-5-29	2-5-29	2-5-29	2-5-29	2-5-29	2-5-29	2-6-29	2-6-29	2-6-29	2-6-29	2-6-29	2-7-29	2-7-29	2-7-29	2-7-29	2-7-29

PIER No4

LOCATION	FTG. FOR COL. 13								FTG. FOR COL. 14									FTG. FOR COL. 15									FTG. FOR COL. 16						
PILE NO.	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8
LENGTH OF PILE IN FEET	24.5	22.1	22.0	22.0	22.1	22.0	23.7	23.7	23.7	23.7	23.7	23.7	23.7	23.0	23.5	23.7	23.5	23.7	23.5	23.5	23.0	23.7	23.7	23.5	23.5	23.0	23.5	23.6	23.5	23.5	23.6	23.6	23.6	23.5
NO. OF BLOWS LAST INCH OF PENETRATION	3	3	4	3	3	4	2	2	4	4	2	2	4	3	3	3	4	3	3	3	4	2	2	3	3	3	3	3	2	2	2	2	2	2
PENETRATION LAST 10 BLOWS																																		
PENETRATION IN INCHES LAST BLOW: S	.33	.33	.25	.33	.33	.25	.50	.50	.25	.25	.50	.50	.25	.33	.33	.33	.25	.33	.33	.33	.25	.50	.50	.33	.33	.33	.33	.33	.50	.50	.50	.50	.50	.50
SAFE LOAD PER E.N FORMULA (TONS)	34.9	34.9	42.9	34.9	34.9	42.9	25.0	25.0	42.9	42.9	25.0	25.0	42.9	34.9	34.9	34.9	42.9	34.9	34.9	34.9	42.9	25.0	25.0	34.9	34.9	34.9	34.9	34.9	25.0	25.0	25.0	25.0	25.0	25.0
DATE DRIVEN	2-7-29	2-7-29	2-7-29	2-7-29	2-7-29	2-7-29	2-7-29	2-8-29	2-8-29	2-8-29	2-8-29	2-8-29	2-8-29	2-8-29	2-8-29	2-8-29	2-8-29	2-8-29	2-8-29	2-8-29	2-8-29	2-8-29	2-8-29	2-8-29	2-8-29	2-8-29	2-9-29	2-9-29	2-9-29	2-9-29	2-9-29	2-9-29	2-9-29	2-9-29
DIAMETER OF BUTT AT CUT-OFF (INCHES)																																		
DATE POURED	2-7-29	2-7-29	2-7-29	2-7-29	2-7-29	2-7-29	2-7-29	2-8-29	2-8-29	2-8-29	2-8-29	2-8-29	2-8-29	2-8-29	2-8-29	2-8-29	2-8-29	2-8-29	2-8-29	2-8-29	2-8-29	2-8-29	2-8-29	2-8-29	2-8-29	2-8-29	2-9-29	2-9-29	2-9-29	2-9-29	2-9-29	2-9-29	2-9-29	2-9-29



Note:-

The length of Piles shown above are actual lengths. Due to the fact that some piles were driven before the excavation was made, the Contractor was allowed 170 ft. which represents the cut-off after excavation was made. See Mr. Nales letters of June 25th & July 8, 1929.

Note: For numbering of Piles for Piers No's 1, 2 & 4 See Sheet # 8.

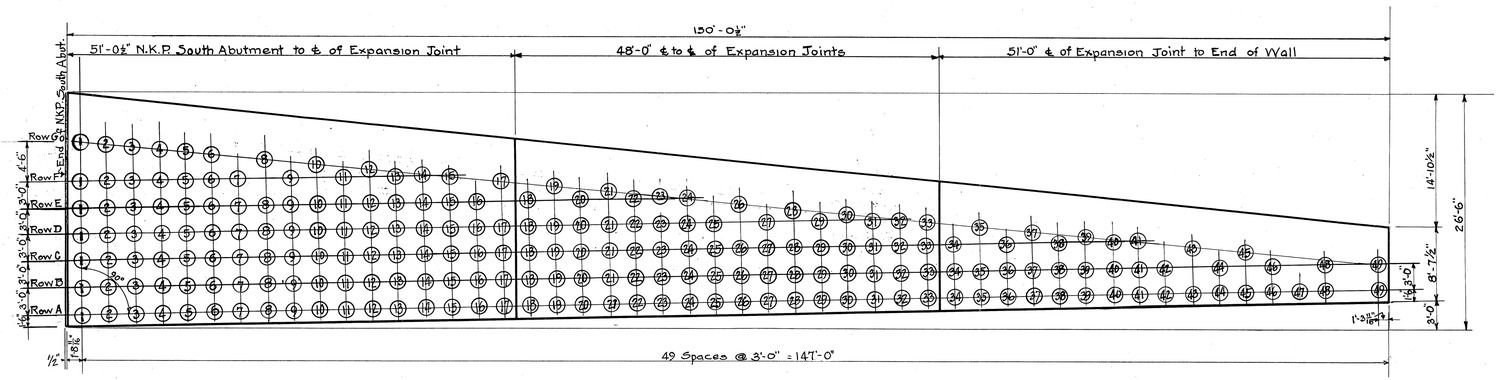
N. Y. C. & St L. R. R.
NICKEL PLATE DISTRICT
BRIDGE-NO- 182.48
HIGH LEVEL TEAM YARD LEAD BRIDGE OVER C.U.T.
CLEVELAND OHIO
PILE CHART - PIERS
OFFICE OF CHIEF ENGINEER CLEVELAND, O

SCALE	DRAWN	TRACED	CHECKED
-	R.M. 12-16-30	F.M. 12-16-30	

DATE | REVISIONS | BY

DATE 12-16-30 | SHEET 11 OF 14 | No. ~~182-48-281~~

183-96-281



Row G

Pile Number.	1	2	3	4	5	6	8	10	12	14	15	17	19	21	23	26	28	30	33	35	37	39	41	43	45
Length of Pile in Feet.	28.2	28.2	28.0	28.0	27.9	27.9	28.5	28.8	29.5	28.3	28.5	28.3	27.4	28.1	28.7	28.0	28.6	26.1	26.5	25.9	25.8	27.2		28.4	27.6
Number of Blows last inch of Penetration.	7	8	9	10	7	6	7	6	5	5	5	5	6	5	5	6	5	6	5	5	6	5		5	5
Penetration in inches last blow = "S"																									
Safe Load per E-N Formula. - Tons.	62	68	71	75	62	58	62	58	50	50	50	50	58	50	50	58	50	58	50	50	58	50		50	50
Date Driven.	3-19-29	3-19-29	3-20-29	3-20-29	3-21-29	3-22-29	3-23-29	3-25-29	3-26-29	3-27-29	3-28-29	3-29-29	3-29-29	4-1-29	4-2-29	4-3-29	4-4-29	4-4-29	4-5-29	4-9-29	4-9-29	4-10-29		4-13-29	4-17-29
Date Poured.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.		Do.	Do.

Row "C"

Row F

Pile Number.	1	2	3	4	5	6	7	9	11	13
Length of Pile in Feet.	28.0	28.0	27.9	27.5	27.6	28.0	21.5	28.9	28.1	28.6
Number of Blows last inch of Penetration.	9	9	6	10	9	8	8	7	5	6
Penetration in inches last blow = "S"										
Safe Load per E-N Formula. - Tons.	71	71	58	75	71	68	68	62	50	58
Date Driven.	3-19-29	3-19-29	3-20-29	3-20-29	3-22-29	3-22-29	3-23-29	3-25-29	3-26-29	3-27-29
Date Poured.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.

Row E

Pile Number.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	18	20	22	24
Length of Pile in Feet.	28.0	28.9	28.1	28.3	27.3	22.8	28.3	28.5	21.5	28.5	22.9	23.5	27.5	25.7	28.6	28.6	28.5	20.1	28.1	28.5
Number of Blows last inch of Penetration.	8	8	8	8	8	11	7	7	10	6	5	5	7	6	5	6	5	7	5	5
Penetration in inches last blow = "S"																				
Safe Load per E-N Formula. - Tons.	68	68	68	68	68	79	62	62	75	58	50	50	62	58	50	58	50	62	50	50
Date Driven.	3-19-29	3-19-29	3-20-29	3-20-29	3-22-29	3-22-29	3-23-29	3-23-29	3-25-29	3-25-29	3-26-29	3-26-29	3-27-29	3-27-29	3-28-29	3-28-29	3-29-29	4-3-29	4-3-29	4-3-29
Date Poured.																				Do.

Row D

Pile Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	27	29	31	32
Length of Pile in Feet	27.4	27.3	28.0	27.6	18.3	21.2	28.5	22.5	18.1	28.7	27.4	20.3	20.3	19.1	15.9	29.1	28.3	26.8	20.9	20.1	28.2	23.2	28.6	28.6	28.2	28.1	26.8	28.3	26.9
Number of Blows last inch of Penetration	6	10	7	7	9	11	6	7	10	6	6	6	7	7	8	5	6	7	8	8	5	6	5	5	5	5	5	5	5
Penetration in inches last blow = "S"																													
Safe Load per E-N Formula - Tons.	58	75	62	62	71	79	58	62	75	58	58	58	62	62	68	50	58	62	68	68	50	58	50	50	50	50	50	50	50
Date Driven	3-19-29	3-19-29	3-20-29	3-20-29	3-22-29	3-22-29	3-22-29	3-25-29	3-25-29	3-25-29	3-26-29	3-26-29	3-27-29	3-27-29	3-28-29	3-28-29	3-29-29	3-29-29	3-29-29	4-1-29	4-1-29	4-2-29	4-2-29	4-2-29	4-3-29	4-3-29	4-3-29	4-4-29	4-4-29	4-8-29
Date Poured	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.

Row C

Pile Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	36	38	40	41
Length of Pile in Feet	27.2	26.9	16.3	18.9	15.0	20.8	16.3	28.3	20.3	27.9	27.6	17.3	23.3	16.3	28.5	18.4	22.8	20.7	28.1	20.6	18.6	28.6	28.9	28.3	28.8	27.1	28.1	27.4	25.3	26.7	28.3	27.6	26.4	25.8	27.1	27.1	28.0	28.0
Number of Blows last inch of Penetration	5	6	12	12	10	11	9	6	9	6	7	8	6	9	5	6	8	8	5	8	8	5	5	6	5	6	5	5	6	6	5	5	5	6	5	5	5	5
Penetration in inches last blow = "S"																																						
Safe Load per E-N Formula - Tons.	50	58	83	83	75	79	71	58	71	58	62	68	58	71	50	58	68	68	50	68	68	50	50	58	50	58	50	50	58	58	50	50	50	58	50	50	50	50
Date Driven	3-20-29	3-20-29	3-21-29	3-21-29	3-21-29	3-22-29	3-22-29	3-25-29	3-25-29	3-26-29	3-26-29	3-27-29	3-27-29	3-27-29	3-28-29	3-28-29	3-29-29	3-29-29	3-29-29	4-1-29	4-1-29	4-2-29	4-2-29	4-2-29	4-2-29	4-3-29	4-3-29	4-3-29	4-4-29	4-4-29	4-4-29	4-5-29	4-5-29	4-5-29	4-9-29	4-9-29	4-9-29	4-9-29	4-10-29	4-10-29
Date Poured	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.

Row B

Pile Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	44	46	48	49
Length of Pile in Feet	27.6	27.0	22.3	18.3	13.9	19.8	17.1	28.5	28.4	28.1	20.3	17.8	28.3	28.5	21.5	27.6	28.1	28.5	28.5	28.3	28.5	28.6	28.6	28.3	28.3	27.2	27.2	28.0	27.4	27.2	27.6	26.8	26.2	26.6	27.5	27.6	26.0	27.0	27.1	28.1	28.6	28.4	26.2	28.1	26.7	22.7
Number of Blows last inch of Penetration	6	7	11	13	13	10	8	6	6	5	8	7	5	6	7	6	7	6	5	5	6	5	5	5	5	6	5	5	5	5	5	5	5	6	5	5	5	5	5	5	5	5	5	5	5	5
Penetration in inches last blow = "S"																																														
Safe Load per E-N Formula - Tons.	58	62	79	88	88	75	68	58	58	50	68	62	50	58	62	58	62	58	50	50	58	50	50	50	50	58	50	50	50	50	50	50	50	58	50	50	50	50	50	50	50	50	50	50	50	50
Date Driven	3-20-29	3-20-29	3-21-29	3-21-29	3-21-29	3-22-29	3-22-29	3-25-29	3-25-29	3-26-29	3-26-29	3-27-29	3-27-29	3-28-29	3-28-29	3-28-29	3-29-29	3-29-29	3-29-29	4-1-29	4-1-29	4-2-29	4-2-29	4-2-29	4-2-29	4-3-29	4-3-29	4-4-29	4-4-29	4-4-29	4-4-29	4-4-29	4-5-29	4-5-29	4-5-29	4-9-29	4-9-29	4-9-29	4-9-29	4-10-29	4-10-29	4-10-29	4-10-29	4-11-29	4-17-29	4-17-29	4-16-29	4-16-29
Date Poured	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.

Row A

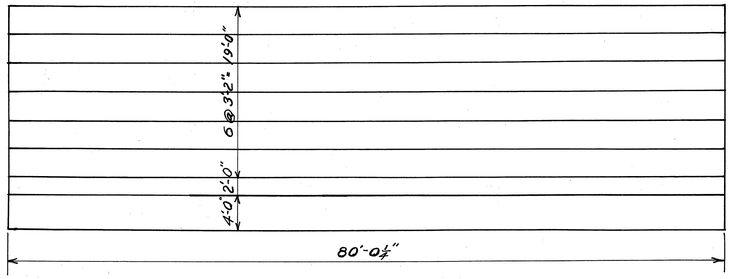
Pile Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49
Length of Pile in Feet	27.7	18.3	19.3	14.5	14.1	17.7	17.9	28.4	28.3	27.9	27.8	20.8	27.5	28.3	29.1	28.7	28.2	28.6	28.6	28.3	29.0	28.8	28.7	28.8	28.4	28.4	28.3	28.4	28.5	28.4	27.1	27.3	27.1	25.7	28.6	28.6	26.6	26.8	27.0	28.4	28.1	28.4	27.2	11.6	28.1	28.3	27.1	26.7	26.1
Number of Blows last inch of Penetration	7	12	12	12	11	8	9	6	5	5	6	7	5	6	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Penetration in inches last blow = "S"																																																	
Safe Load per E-N Formula - Tons.	62	83	83	83	79	68	71	58	50	50	58	62	50	58	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
Date Driven	3-20-29	3-20-29	3-21-29	3-21-29	3-21-29	3-22-29	3-22-29	3-25-29	3-25-29	3-26-29	3-26-29	3-27-29	3-27-29	3-28-29	3-28-29	3-28-29	3-28-29	3-29-29	4-1-29	4-1-29	4-2-29	4-2-29	4-2-29	4-2-29	4-2-29	4-3-29	4-3-29	4-3-29	4-4-29	4-4-29	4-4-29	4-5-29	4-5-29	4-9-29	4-9-29	4-9-29	4-9-29	4-10-29	4-10-29	4-10-29	4-10-29	4-10-29	4-11-29	4-13-29	4-17-29	4-17-29	4-16-29	4-16-29	4-16-29	4-16-29	4-16-29	4-16-29
Date Poured	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.

N. Y. C. & St L. R. R.
DISTRICT
BRIDGE-NO-183.96
OVER C.U.T. TRACKS CLEVELAND OH
HIGH LEVEL TEAM YARD LEAD-WEST OF BROADWA
PILE PLAN AND CHART SOUTH WEST WING WA
OFFICE OF CHIEF ENGINEER CLEVELAND

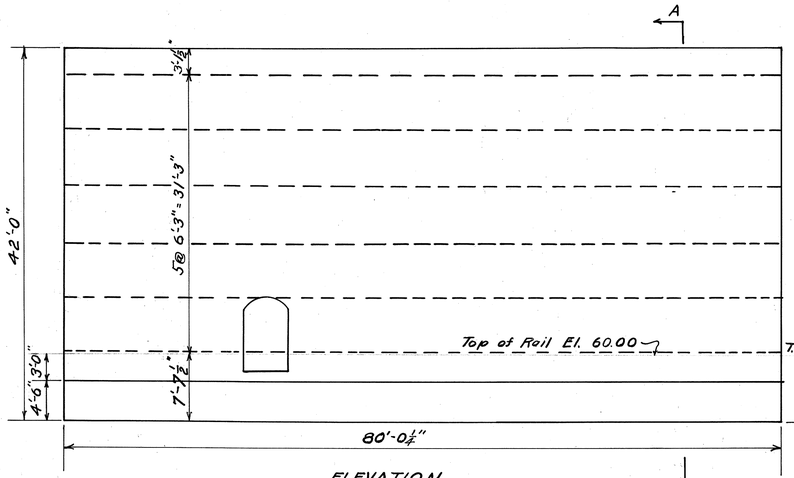
SCALE	DRAWN	TRACED	CHECKED
	W.W.W.	W.W.W.	

DATE | REVISIONS | BY | DATE JUNE 25-1931 | SHEET 12 OF | No. ~~182-48-281~~ 183-96-28

Printed by B. K. Elliott Co. Imperial Tracing Cloth



PLAN



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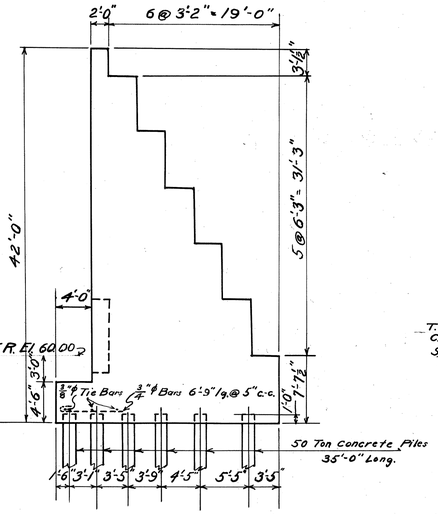
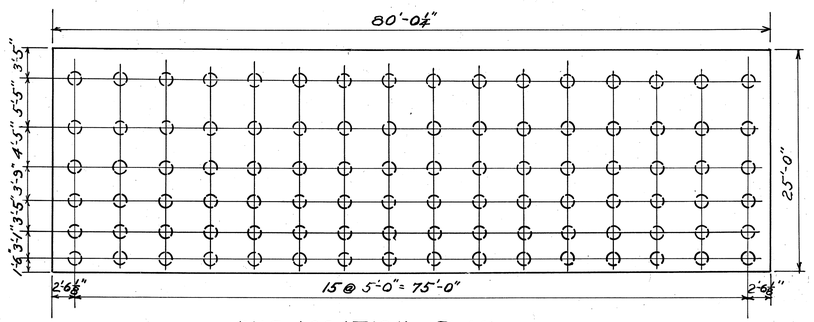


SECTION A-A

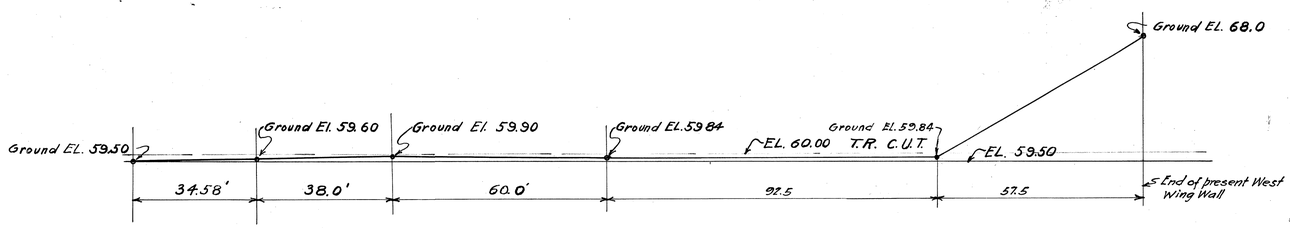


PILE LOCATION PLAN

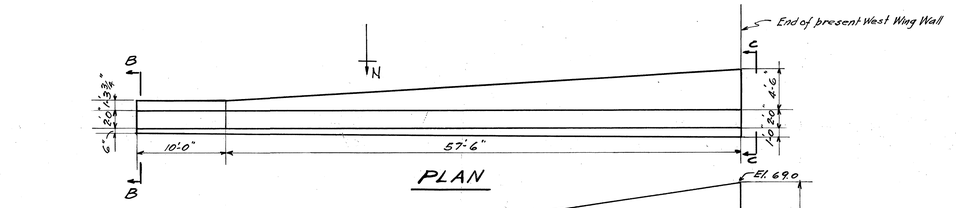
RETAINING WALL in place of NORTH ABUTMENT

QUANTITIES OF MATERIALS

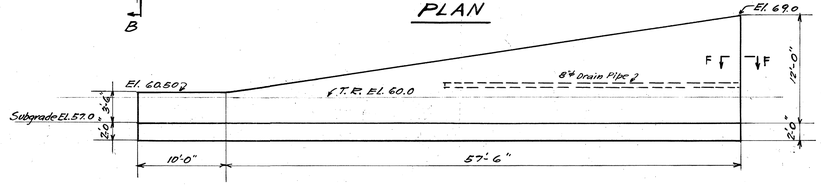
EXCAVATION	520.0 Cu Yds.
CONCRETE	1613.6 Cu. Yds.
CONCRETE PILES	3360.0 Lin. Ft.
REINFORCING STEEL	3067.0 Lbs.



ORIGINAL PROFILE ALONG EASEMENT LINE AT SOUTH ABUTMENT



PLAN



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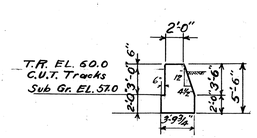
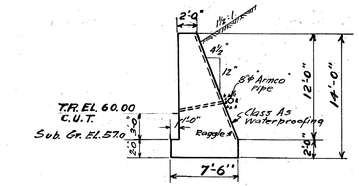


SECTION B-B

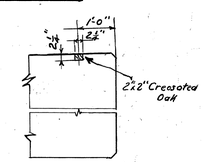


VIEW C-C

RETAINING WALL in place of SOUTH ABUTMENT AND WINGS

QUANTITIES OF MATERIALS

EXCAVATION	162 Cu. Yds.
CONCRETE	90 Cu. Yds.
2"x2" CREOSOTED OAK	13 Lin. Ft.
8" ARMCO PIPE	39 Lin. Ft.
As WATERPROOFING	649 Sq. Ft.



SECTION F-F

Note: This plan to be used for cost allocation between N.Y.C. & ST.L. R.R. and C.U.T. Co. for retaining walls in place of Bridge Abutments at this bridge.

N. Y. C. & St L. R. R.

NICKEL PLATE DISTRICT

BRIDGE NO- ~~182.48~~ 183.96

OVER C.U.T. TRACKS CLEVELAND, O

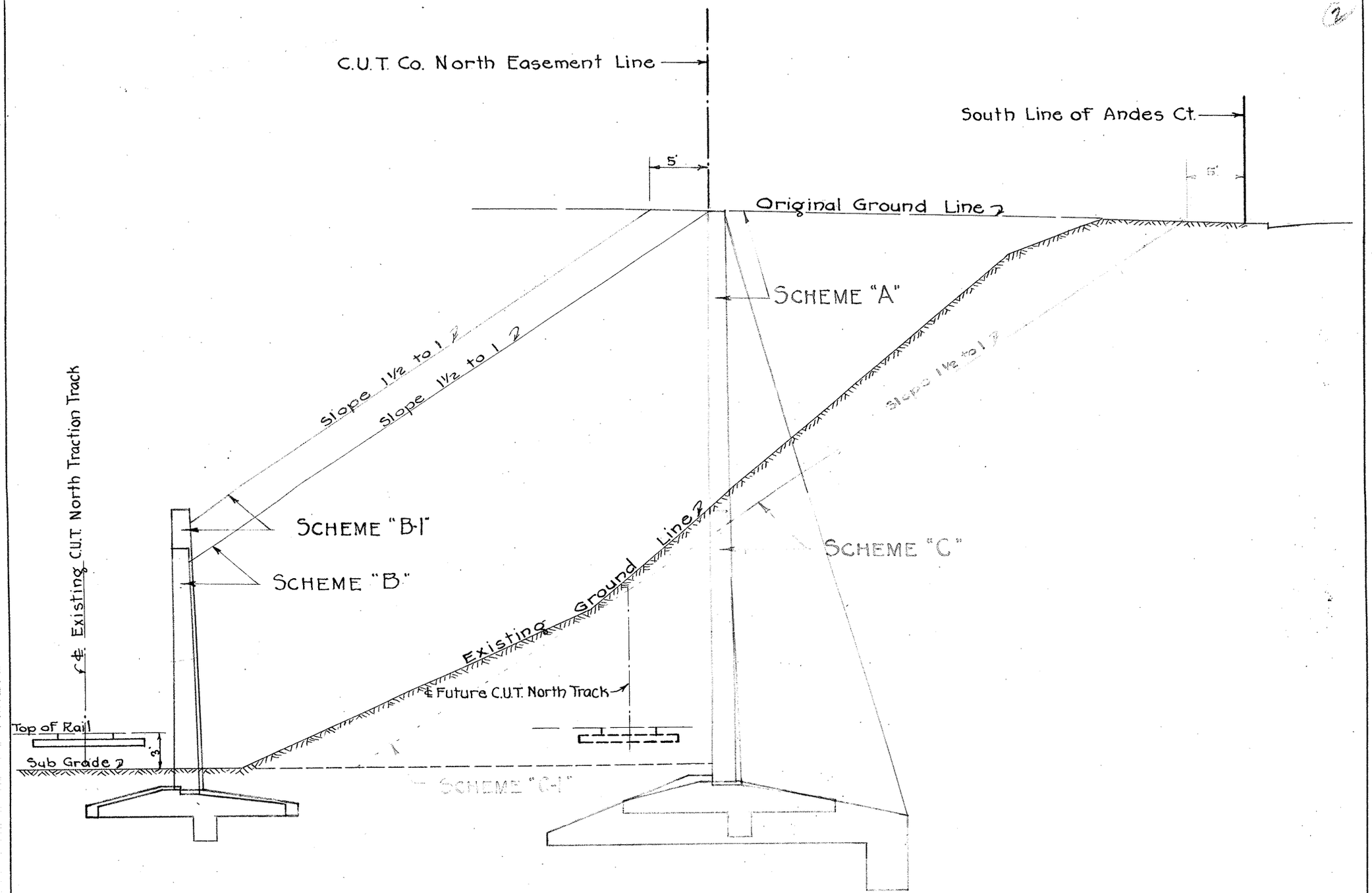
PLAN SHOWING RETAINING WALLS IN PLACE OF ABUTMENTS FOR PURPOSE OF COST ALLOCATION WITH C.U.T. C

OFFICE OF CHIEF ENGINEER CLEVELAND, O

DATE	REVISIONS	BY	SCALE	DRAWN	TRACED	CHECKED
11-15-30	Retaining Wall in place of South Abut. & Wings	P.M.	1"=1'-0" & 1"=20'-0"	12-28-29 P.M.	J.J.D. 8-13-30 ~~J.J.D.~~	

DATE JAN. 8 1930 | SHEET 1 OF 1 | No. ~~182-48-303~~

183-96-301



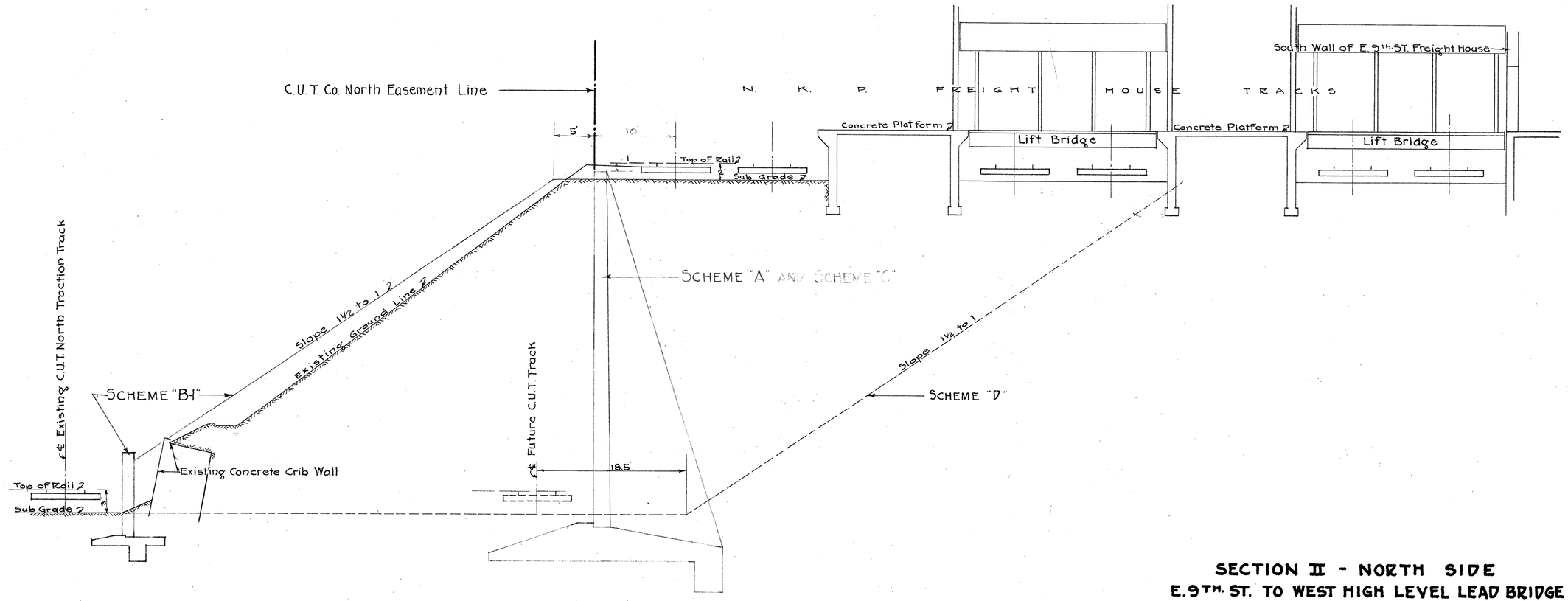
SECTION AT STA. 32+00

Scale 3/32" = 1'-0"

SECTION I - NORTH SIDE CENTRAL AVE. TO E. 9TH. ST.

Office of Engr. Asst. to the President

Aug. 1933

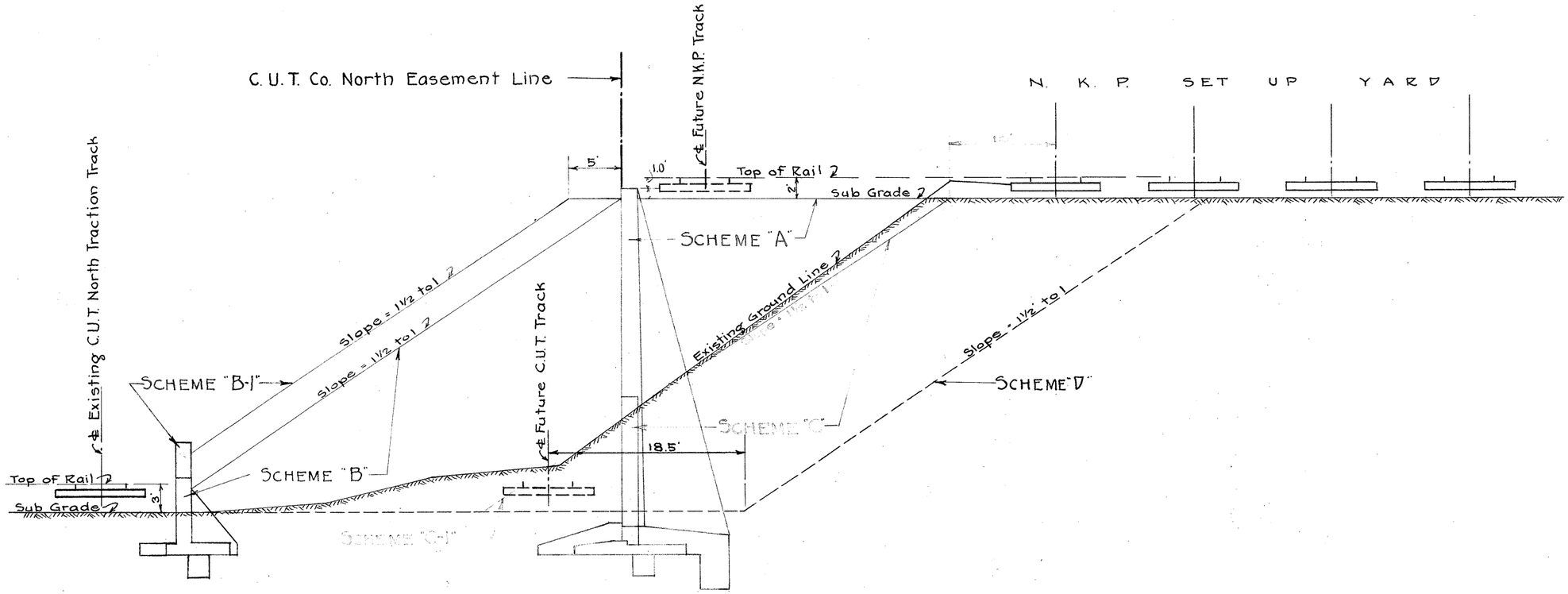


SECTION AT STA. 42+20

Scale 3/32" = 1'-0"

SECTION II - NORTH SIDE
E. 9TH. ST. TO WEST HIGH LEVEL LEAD BRIDGE

Office of Engr. Asst. to the President



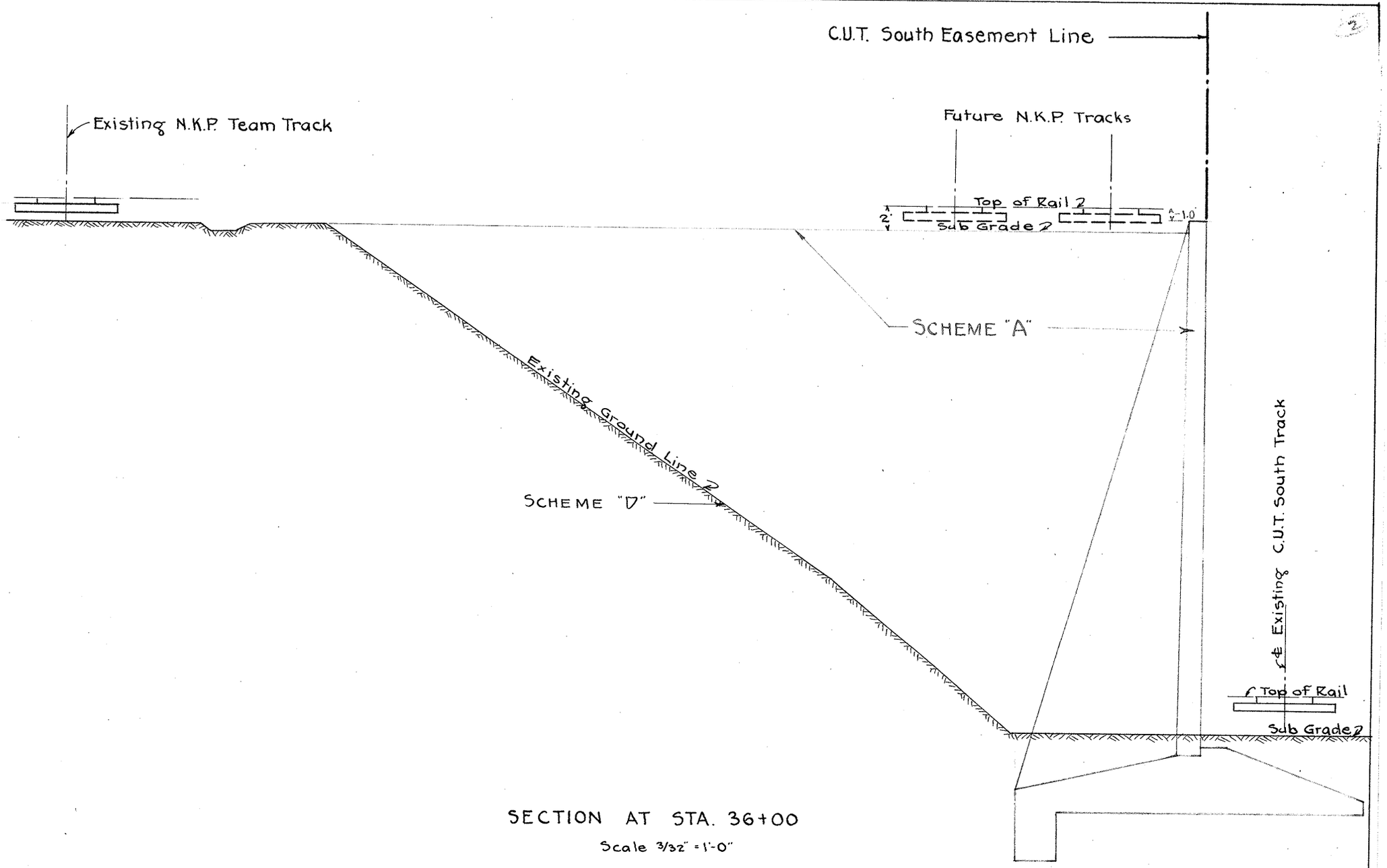
SECTION AT STA. 55+00

Scale 3/32" = 1'-0"

SECTION III - NORTH SIDE
WEST HIGH LEVEL LEAD BRIDGE TO BROADWAY

Office of Engr. Asst. to the President.

Aug 1933



SECTION AT STA. 36+00

Scale 3/32" = 1'-0"

SECTION IV - SOUTH SIDE
CENTRAL AVE. TO WEST HIGH LEVEL LEAD BR.

Office of Engr. Asst. to the President

No. 70 10M-4-26

Nickel Plate
N.Y.C. & St.L. R.R.
over C.U.T. Co. Trks.
Cleveland, O.

FORT PITT BRIDGE WORKS

Description Field Rivets & Bolts Bridge No. 182.48 Dwg. No.

Shipping Index	DESCRIPTION	Grip	FINISHED ORDER No. Pieces	Section	Length	MILL ORDER No. Pieces	Section	Wt. Ft.	Length	Item No.
	Itemized List		No.	Size	Length		Location			
	Bolts Hex Hds. Nuts {STD. 3×3 Wash.	6 5/8	2	1" ø	0'-8 1/4"	Gdr. G1B to Col. C3, G1C to C2				
	" " " " " "	6 1/2	2	"	0'-7 3/4"	" G1A to C4 & G1D to C1				
	" " " " " "	6	4	"	0'-7 1/4"	" G1B & C3, & G1C to C2				
	" " " " " "	5 7/8	4	"	0'-7 1/4"	" G1A to C4 & G1D to C1				
	" " " " " "	5 3/4	8	"	0'-7"	" G2A-B-C-D to C1, C1-23-4				
	" " " " " " {4-Std. Wash. 4-Spec. Wash.	5 5/8	8	"	0'-7"	" " " " " "				
	Bolts, Hex. Hds. Nut	4 3/8	16	"	0'-6"	" G2A-B-C-D & G3A-B-C-D to C5-6-7-8				
	" " " "	4 1/2	16	"	0'-5 3/4"	" " " " " "				
	" " " "	4 3/8	8	"	0'-6 1/4"	" G3A-B-C-D to Col. C9-10-11-12				
	" " " "	4 1/2	8	"	0'-6"	" " " " " "				
	" " " "	5 3/8	2	"	0'-7 1/4"	" G4D to Col. C9				
	" " " "	5 1/4	2	"	0'-6 3/4"	" " " " "				
	" " " "	6	4	"	0'-7 1/4"	" G4C & G4B to C10 & C11				
	" " " "	5 3/4	4	"	0'-6 3/4"	" " " " " "				
	" " " "	5 5/8	2	"	0'-7"	" G4A to Col. C12				
	" " " "	5	2	"	0'-6 3/4"	" " " " "				
	" " {2-Std. Wash. 2-Spec. "	6 3/8	4	"	0'-7 3/4"	" G4D to Col. C13				
	" " {4-Std. Wash 4-Spec. "	6 1/2	8	"	0'-7 3/4"	" G4C & G4B to Col. C14-15				
	" " {6-Std. Wash 6-Spec. "	6 1/8	12	"	0'-7 1/2"	" G4A to C16 & G5D, G5A to C13 & C16				
	" " " "	6 1/4	8	"	0'-7 1/2"	" G5C & G5B to C14 & 15 resp.				
	Turned Bolts		32	1 3/32" ø		BP10 to Gdrs. G4A & 5A-B-C-D Detailed on Drwg. #20				
	Rivets	1 13/16	48	3/4" ø	3 5/8	Struts S1 to Cols. C1 to Sinel.				
	" "	2 1/16	48	"	3 3/8	" S2-3-4-5 " " C9 to 16 incl.				
	" "	1	128	"	2 1/2	CD3-4 to CD7-8 to " S2 to C9-12, S4 to C13-16				
	" "	3/4	832	"	2 1/4	Col. Bracing Struts & Diags. to Cols. Connected Thru				
	" "	3/4	1112	"	2 1/4	Cross Frame Diags. to Pls. & Bott. Lat. to Pls.				
	" "	1 1/8	10	"	2 5/8	Lat. pl. P23 to G1D & P24 to G1A				
	" "	1 1/4	10	"	2 3/4	" " " " G1B & " " G1C				
	Washer's 15/16" 4 Holes Rivets	3/4	26	2 1/16 × 3/8		Cross Frames to Bot. Flg. G1-4-5 & C				
		3/4	168	3/4" ø	2 1/4	" " " Lat. pls.				

Continued on Page R2

NS 183-96-291

Made by E.G.A. Date 2-20-29 Rivets Order No. C-5567

Checked by Date Holes Page No. R1

S
B 2/26
I

Form No. 70 10M-4-26

FORT PITT BRIDGE WORKS

"Nickel Plate" Cleveland, O

Description Field Rivets Bridge No. 182.48 Dwg. No.

Shipping Index	DESCRIPTION		FINISHED ORDER No. Pieces	Section	Length	MILL ORDER No. Pieces	Section	Wt. Ft.	Length	Item No.
	Itemized List									
		Grip	No.	Size	Length		Location			
	Rivets @	7/8	78	7/8" ϕ	2 3/8	Cross Frames & Lat. Pls.				
	"	1/8	18	"	2 5/8	"	"	"	"	"
	"	3/4	548	"	2 1/4	"	"	"	Int. Stiff. Ls	
	"	1/8	136	"	2 5/8	"	"	"	"	"
	"	1	32	"	2 1/2	End	" EF1 to G1A&D, G5A&D			
	"	1 3/8	8	"	2 3/8	"	"	"	"	"
	"	1 3/4	4	"	3 1/2	"	"	"	"	"
	"	2 1/4	4	"	4	"	"	"	G1B&C, G5B&C	
	"	2 5/8	4	"	4 3/8	"	"	"	"	"
	"	1 3/4	4	"	3 1/2	"	" EF1 to G1A&D, G5A&D			
	"	2 5/8	4	"	3 3/8	"	"	"	"	"
	"	1 1/16	32	"	2 5/8	"	"	"	G1B&C, G5B&C	
	"	1 1/16	8	"	3 1/8	"	"	"	"	"
	"	1 3/4	4	"	3 1/2	"	"	"	"	"
	"	2 5/8	4	"	4 3/8	Cross Frame CF1 R/L to G1A-D				Bott. Flg.
	"	2 3/8	2	"	3 3/8	"	"	"	"	"
	"	2 1/4	4	"	4	"	"	"	"	Top Flg.
	"	1 3/4	2	"	3 1/2	"	"	"	"	"
	"	3/8	4	"	5	"	"	"	G1B&G1C	Bott. Flg.
	"	2 3/8	2	"	4 3/8	"	"	"	"	"
	"	2 3/4	4	"	4 1/2	"	"	"	"	Top Flg.
	"	2 1/4	2	"	4	"	"	"	"	"
	"	1 5/16	10	"	3 1/8	End	" EF2 to G2A-B-C-D			Top
	"	1 5/8	6	"	3 1/4	"	"	"	"	Bott.
	"	1/4	8	"	2 3/4	Cross Frame CF2	"	"	"	A&B
	"	1 5/8	8	"	3 1/4	"	"	"	"	"
	"	7/8	32	"	2 3/8	"	"	"	EF5 to G3B-G3A EF2 to G2B-G2A	
	"	1/4	8	"	2 3/4	"	"	"	"	"
	"	15/16	32	"	2 1/2	"	"	"	EF5 to G3B-G3C EF2 to G2B-G2C	
	"	1 15/16	8	"	2 3/8	"	"	"	"	"

Cont'd. on Page R3

NS 183-96-291

Made by E.G.R. Date 2-21-29 Rivets Order No. C-5567

Checked by Date Holes Page No. R2

Corrup

I S
B 3/16
I

Item 2 Shipping Mark 5 of 8 Bills

Form No. 70 10M-4-26

FORT PITT BRIDGE WORKS

"Nickel Plate" Cleveland, Ohio

Description Field Rivets Bridge No. 182.48 Dwg. No.

Shipping Index	DESCRIPTION		FINISHED ORDER			MILL ORDER				
	Itemized List		No. Pieces	Section	Length	No. Pieces	Section	Wt. Ft.	Length	Item No.
		Grip	No.	Size	Length		Location			
	Rivets ⊂	1	16	7/8"ϕ	2½	End Frame	EF3 to G4A EF4 to G4D			
	"	1⅜	4	"	2⅜	"	"	"	"	
	"	1⅝	16	"	2⅝	"	"	EF6 to G4C EF8 to G4B		
	"	1½	4	"	2⅝	"	"	"	"	"
	"	3/16	2	"	5	"	"	EF6 to G4C-G4D		
	"	2⅜	1	"	4⅝	"	"	"	"	G4D
	"	3/16	2	"	5⅛	"	"	EF4	"	G4D & G4C
	"	2⅜	1	"	5	"	"	"	"	G4C
	"	3/16	2	"	5⅛	"	"	EF3 to G4B & G4A		
	"	3	1	"	4⅞	"	"	"	"	G4B
	"	3/16	2	"	5	"	"	EF8 to G4B & G4A		
	"	2⅜	1	"	4⅝	"	"	"	"	G4A
	"	3	1	"	4⅞	Cross Frame	CF4L	R	to G4D	
	"	3⅜	3	"	5⅛	"	"	"	"	"
	"	3⅜	3	"	5⅛	"	"	CF4R	"	"
	"									
	"	2⅜	1	"	4⅝	"	"	"	"	"
	"	3	1	"	4⅞	"	"	CF4L	"	G4C
	"	3⅜	1	"	5	"	"	"	"	"
	"	3⅜	3	"	5⅛	"	"	"	"	"
	"	4¼	3	"	6⅛	"	"	"	"	"
	"	2½	1	"	4⅝	"	"	CF3L	"	G4B
	"	3/16	1	"	5⅛	"	"	"	"	"
	"	4	3	"	6	"	"	"	"	"
	"	4⅛	3	"	6⅛	"	"	"	"	"
	"	2⅜	1	"	4⅝	"	"	"	"	G4A
	"	3⅜	3	"	5⅛	"	"	"	"	"
	"	3⅜	1	"	5⅛	"	"	"	"	"
	"	4⅛	3	"	6⅛	"	"	"	"	"

Cont. on Page R4

NS 183 96-291

Made by EGR Date 2-21-29 Rivets Order No. C-5567

Checked by Date Holes Page No. R3

Holes

Form No. 70 10M-4-26

FORT PITT BRIDGE WORKS

"Nickel Plate" Cleveland, Ohio

Description Field Rivets Bridge No. 182.48 Dwg. No.

Shipping Index	DESCRIPTION		FINISHED ORDER No. Pieces	Section	Length	MILL ORDER No. Pieces	Section	Wt. Ft.	Length	Item No.
	Itemized List									
		Grip	No.	Size	Length		Location			
	Rivets	2 13/16	2	7/8"φ	4 5/8	Cross Frame CF1L R to G5A&D				
	"	2 1/8	2	"	3 7/8	" "	"	"	"	"
	"	2 5/16	2	"	4	" "	"	"	"	"
	"	2 5/8	4	"	4 3/8	" "	"	"	"	"
	"	3 5/16	2	"	5 1/4	" "	"	"	"	"
	"	2 1/4	2	"	4	" "	"	"	G5B&C	
	"	2 5/8	2	"	4 3/8	" "	"	"	"	"
	"	2 3/4	2		4 1/2					
	"	3 5/16	2	"	5 1/4	" "	"	"	"	"
	"	3 1/8	4	"	5	" "	"	"	"	"
	"	1 1/8	28	"	2 5/8	Bott. Lat. pls. to G1A-D, G5A-D & G4A				
	"	1 5/8	37	"	3 1/8	" " " "	"	"	"	
	"	2 1/8	83	"	3 7/8	" " " "	"	"	"	
	"	2 5/8	21	"	4 3/8	" " " "	G4A			
	"	1 1/4	24	"	2 3/4	" " " "	G5B & G5C / G1B & G1C			
	"	1 3/4	4	"	3 1/2	" " " "	"	"		
	"	2 1/4	30	"	4	" " " "	"	"		
	"	2 3/4	76	"	4 1/2	" " " "	"	"		
	"	1 1/4	102	"	2 3/4	" " " "	G2A-B-C-D & G3A-B-C-D			
	"	7/8	62	"	2 3/8	" " " "	"	"	"	"
	"	1 3/8	13	"	2 7/8	" " " "	G4D			
	"	1 7/8	4	"	3 5/8	" " " "	"			
	"	2 3/8	12	"	4 1/8	" " " "	"			
	"	2 7/8	29	"	4 5/8	" " " "	"			
	"	1 1/2	11	"	3 1/8	" " " "	G4B			
	"	2 1/8	3	"	3 7/8	" " " "	"			
	"	2 5/8	3	"	4 3/8	" " " "	"			
	"	3 1/8	10	"	5	" " " "	"			
	"	3 5/8	23	"	5 1/2	" " " "	"			
	"	1 1/2	5	"	3 1/8	" " " "	G4C			
	"	2 1/8	1	"	3 7/8	" " " "	"			

For Summary see Bill Page 45-45-47 final

Contd. on Page R5

NS 183-96-291

Made by E.G.R. Date 2-22-29 Rivets Order No. C-5567

Checked by Date Holes Page No. R4

Form No. 70 10M-4-26

FORT PITT BRIDGE WORKS

"Nickel Plate" Cleveland, Ohio

Description Field Rivets, Bridge No. 182.48 Dwg. No.

Shipping Index	DESCRIPTION		FINISHED ORDER No. Pieces	Section	Length	MILL ORDER No. Pieces	Section	Wt. Ft.	Length	Item No.
	Itemized List									
		Grip	No.	Size	Length		Location			
	Rivets ⊏	2 3/4	11	7/8"φ	4 1/2	Bott. Lat. pls. to G4C				
	"	3 7/8	25	"	5 3/4	" " " " "				
	"	1 7/16	8	"	3 1/8	Bott. Struts to G1B-C & G5B-C @ stiff. Ls				
	"	1 1/16	8	"	2 5/8	" " " "				"
	"	1 5/16	8	"	2 7/8	" " " G2B&C, G3B-C				
	"	15/16	8	"	2 1/2	" " " "				"
	"	1 1/2	4	"	3 1/8	" " " G4B&C				
	"	1 1/8	4	"	2 5/8	" " " " "				
	"	1 1/4	20	"	2 3/4	" " BS1-1A, 4, 4A to Gdrs				
	"	7/8	20	"	2 3/8	" " BS5-5A, 6-6A " "				
	"	1 1/2	10	"	3 1/8	" " BS2-3 " "				
	" csk. in field	2 1/4	2	"	3 1/8	Strut MS5 to G5B, MS5A to G5C				
	" ⊏	1 3/4	31	"	3 1/2	Struts to G1B&C; G5B&C				
	"	2 1/4	92	"	4	" " " "				
	"	2 5/16	7	"	4 1/8	" " " "				
	"	2 3/4	67	"	4 1/2	" " " "				
	"	2 13/16	16	"	4 5/8	" " " "				
	"	3 5/16	11	"	5 1/4	" " " "				
	" csk. in field	1 1/4	4	"	2	" " G2B-C, G3B-C				
	" " " "	1 3/8	3	"	2 1/4	" " " "				
	" ⊏	1 3/8	1	"	2 7/8	" " G3C				
	"	1 15/16	1	"	3 3/4	" " "				
	"	7/8	2	"	2 3/8	" " G3B&C				
	"	1 13/16	11	"	3 5/8	" " G2B-C, G3B-C				
	"	1 1/4	122	"	2 3/4	" " " "				
	" csk. in field	2 1/8	1	"	3	" " G4B				
	" ⊏	2 1/8	9	"	3 7/8	" " "				
	"	2 5/8	24	"	4 3/8	" " "				
	"	2 11/16	1	"	4 1/2	" " "				
	"	3 1/8	4	"	5	" " "				

For Summary see Bill Page 45-46-47 final

Contd. on Page R6 NS 183-96-291

Made by EGR Date 2-22-29 Rivets Order No. C-5567

Checked by Date Holes Page No. R5

S B I

Form No. 70 10M-4-26

FORT PITT BRIDGE WORKS

"Nickel Plate" Cleveland, Ohio.

Description Field Rivets Bridge No. 182.48 Dwg. No.

Shipping Index	DESCRIPTION		FINISHED ORDER No. Pieces	Section	Length	MILL ORDER No. Pieces	Section	Wt. Ft.	Length	Item No.
~	Itemized List ~									
		Grip	No	Size	Length		Location			
	Rivets ⟸	3 9/16	3	7/8"ø	5 1/2	Struts to G4B				
	"	3 5/8	25	"	5 1/2		"	"	"	
	"	4 3/16	3	"	6 1/4		"	"	"	
	"	2 1/8	16	"	3 7/8		"	"	G4C	
	"	2 11/16	4	"	4 1/2		"	"	"	
	"	2 3/4	14	"	4 1/2		"	"	"	
	"	3 3/8	2	"	5 1/4		"	"	"	
	"	3 9/16	2	"	5 1/2		"	"	"	
	"	3 7/8	24	"	5 3/4		"	"	"	
	"	3 15/16	2	"	6		"	"	"	
	"	4 7/16	4	"	6 5/8		"	"	"	
	"	1 13/16	128	"	3 5/8	Floorbeams to G1A&D, G5A&D, G4A				
	"	2 5/16	153	"	4 1/8		"	"	" "	"
	"	2 13/16	207	"	4 5/8		"	"	" "	"
	"	1 15/16	22	"	3 3/4		"	"	G5D	
	"	2 7/16	1	"	4 1/4		"	"		"
	"	2 15/16	20	"	4 7/8		"	"		"
	"	3 7/16	47	"	5 3/8		"	"		"
	"	1 15/16	109	"	3 3/4		"	"	G1B&C, G5B&C	
	"	2 7/16	136	"	4 1/4		"	"	"	"
	"	2 15/16	179	"	4 7/8		"	"	"	"
	"	1 7/16	389	"	3 1/8		"	"	G2A-B-C-D, G3A-B-C-D	
	"	2 1/16	2	"	3 7/8		" B41	"	G3A	
	"	1 11/16	24	"	3 1/2		"	"	" @ Fills	
	"	1 9/16	24	"	3 1/4		"	"	G3C "	"
	"	2 1/16	26	"	3 7/8		"	"	G4D	
	"	2 9/16	9	"	4 3/8		"	"	"	
	"	2 13/16	1	"	4 5/8		" B48	"	"	
	"	3 1/16	16	"	5		"	"	"	
	"	3 7/16	28	"	5 3/8		"	"	"	
	"	3 15/16	52	"	6	NS " 183.96 - " 291				

For Summary see Bill Page 45-46-47 final

Made by E.G.R. Date 2-23-29 Rivets Contd. on Page R7 Order No. C-5567

Checked by _____ Date _____ Holes _____ Page No. R6

S B I

Form No. 70 10M-4-26

FORT PITT BRIDGE WORKS

"Nickel Plate" Cleveland

Description Field Rivets. Bridge No. 182.48 Dwg. No. Ohio

Shipping Index	DESCRIPTION		FINISHED ORDER No. Pieces	Section	Length	MILL ORDER No. Pieces	Section	Wt. Ft.	Length	Item No.
	Itemized List									
		Grip	No.	Size	Length		Location			
	Rivets ⇐	$2\frac{5}{16}$	21	$\frac{7}{8}$" ϕ	$4\frac{1}{8}$	Floorbeams to G4B				
	"	$2\frac{11}{16}$	9	"	$4\frac{1}{2}$		"	"	"	
	"	$2\frac{13}{16}$	5	"	$4\frac{5}{8}$		"	"	"	
	"	$3\frac{3}{16}$	12	"	$5\frac{1}{8}$		"	"	"	
	"	$3\frac{5}{16}$	20	"	$5\frac{1}{4}$		"	"	"	
	"	$3\frac{13}{16}$	46	"	$5\frac{3}{4}$		"	"	"	
	"	$2\frac{5}{16}$	22	"	$4\frac{1}{8}$		"	"	G4C	
	"	$2\frac{11}{16}$	9	"	$4\frac{1}{2}$		"	"	"	
	"	$2\frac{15}{16}$	1	"	$4\frac{7}{8}$		" B4S	"	"	
	"	$3\frac{3}{16}$	14	"	$5\frac{1}{8}$		"	"	"	
	"	$3\frac{9}{16}$	27	"	$5\frac{1}{2}$		"	"	"	
	"	$4\frac{1}{16}$	48	"	$6\frac{1}{8}$		"	"	"	
	"	$1\frac{1}{16}$	360	"	$2\frac{5}{8}$	Sidewalk Brkts to Fl. Bms				
	"	$1\frac{1}{8}$	122	"	$2\frac{5}{8}$		"	"	" RP2	
	"	$1\frac{5}{16}$	480	"	$2\frac{7}{8}$		"	"	" Fl. Bms	
	"	$1\frac{9}{16}$	2	"	$3\frac{1}{4}$	Tie Angle TA1		"	"	"
	"	$1\frac{1}{16}$	36	"	$2\frac{5}{8}$	" " TA1-2-3-4		"	"	"
	"	$\frac{11}{16}$	256	"	$2\frac{1}{4}$	Diaphragms		"	"	"
	"	$1\frac{1}{16}$	80	"	$2\frac{5}{8}$		"	"	"	"

For Summary see Bill Page 45-46-47 final.

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Made by E.G.R. Date 2-25-29 Rivets _____ Order No. C-5567

Checked by _____ Date _____ Holes _____ Page No. R7 final

S B I

Form No. 70 10M-4-26

FORT PITT BRIDGE WORKS

"Nickel Plate," Cleveland, Ohio

Description Summary of Field Rivets, Bridge No. 182.48 Dwg. No.

Shipping Index	DESCRIPTION	FINISHED ORDER No. Pieces	Section	Length	MILL ORDER No. Pieces	Section	Wt. Ft.	Length	Item No.
	Summary = Itemized List + 15% abt.								
8	Rivets	8	7/8"φ	2"					
3360	"	3360	"	2 1/4					
225	"	225	"	2 3/8					
250	"	250	"	2 1/2					
980	"	980	"	2 5/8					
340	"	340	"	2 3/4					
600	"	600	"	2 7/8					
5	"	5	"	3					
535	"	535	"	3 1/8					
50	"	50	"	3 1/4					
85	"	85	"	3 1/2					
230	"	230	"	3 5/8					
155	"	155	"	3 3/4					
220	"	220	"	3 7/8					
155	"	155	"	4					
250	"	250	"	4 1/8					
160	"	160	"	4 1/4					
85	"	85	"	4 3/8					
230	"	230	"	4 1/2					
300	"	300	"	4 5/8					
230	"	230	"	4 7/8					
50	"	50	"	5					
35	"	35	"	5 1/8					
50	"	50	"	5 1/4					
90	"	90	"	5 3/8					
95	"	95	"	5 1/2					
115	"	115	"	5 3/4					
65	"	65	"	6					
55	"	55	"	6 1/8					
15	"	15	"	6 1/4					
7	"	7	"	6 5/8					

For Itemized List see Bill Pages R1 to R7 final incl.

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Made by E.G.R. Date 2-25-29 Rivets ____ Order No. C-5567

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FORT PITT BRIDGE WORKS

"Nickel Plate" Cleveland, Ohio.

Description Summary of Field Bolts, Bridge No. 182.48 Dwg. No.

Shipping Index	DESCRIPTION	FINISHED ORDER No. Pieces	FINISHED ORDER Section	FINISHED ORDER Length	MILL ORDER No. Pieces	MILL ORDER Section	MILL ORDER Wt. Ft.	MILL ORDER Length	MILL ORDER Item No.
	Summary = Itemized List + 5% abt.								
20	Bolts, Hex. Hd.	20	1"φ	0'-5 3/4" u.h.		Blank Bolt Stock Make in shop			
25	" " "	25	"	0'-6" "					
10	" " "	10	"	0'-6 1/4" "					
5	" " "	5	"	0'-6 1/2" "					
5	" " "	5	"	0'-6 3/4" "					
20	" " "	20	"	0'-7" "					
15	" " "	15	"	0'-7 1/4" "		Make in shop			
25	" " "	25	"	0'-7 1/2" "					
15	" " "	15	"	0'-7 3/4" "					
5	" " "	5	"	0'-8" "					
	Hex. Nuts	145	1" tap			Stock			
40	Washers, 1 1/16"φ hole	40	3"φ x 3/8"	Std.					S
20	Washers 1 1/2" Rad. 1 1/16"φ hole 1" cut	20	3"φ x 3/8	Special					S
30	Washers 15/16"φ hole	30	2 1/2"φ x 3/8	Std.					S

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Made by EGR Date 2-25-29 Rivets Order No. C-5567

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FORT PITT BRIDGE WORKS

"Nickel Plate" Cleveland, Ohio

Description Additional Field Rivets, Bridge No. 182.48 Dwg. No.

Shipping Index	DESCRIPTION	FINISHED ORDER No. Pieces	Section	Length	MILL ORDER No. Pieces	Section	Wt. Ft.	Length	Item No.
75	Rivets	75	7/8"φ	2 1/2					
15	"	15	"	2 7/8					
30	"	30	"	3 1/4					
10	"	10	"	4 1/8					
10	"	10	"	5 1/8					

For Itemized List See Pages R1-R7 incl.

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Made by [illegible] Date 3-13-29 Rivets Order No. C-5567

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