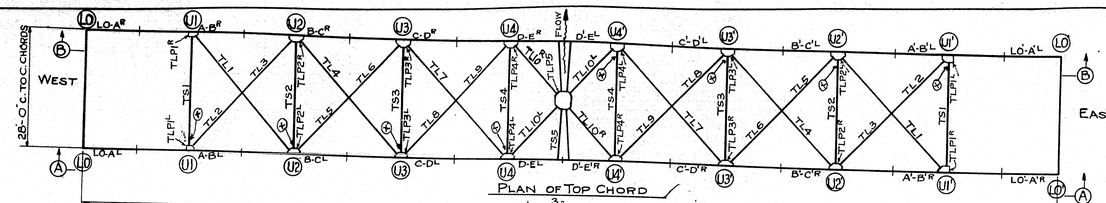
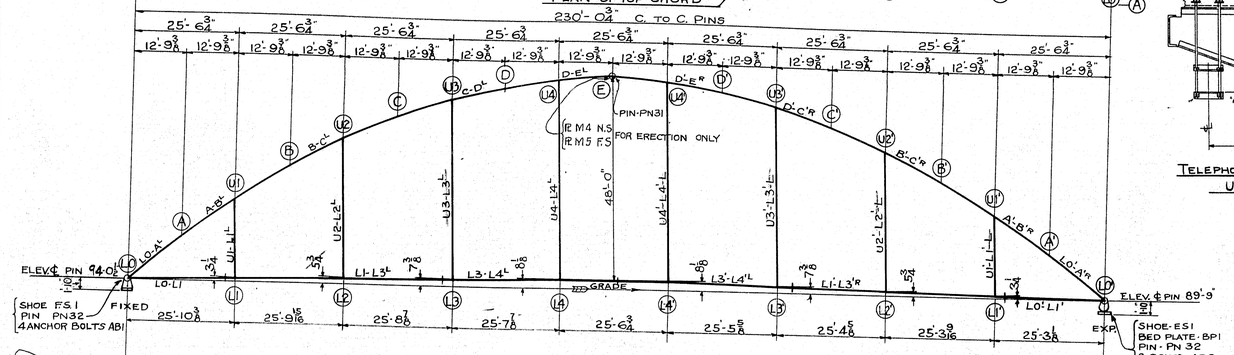
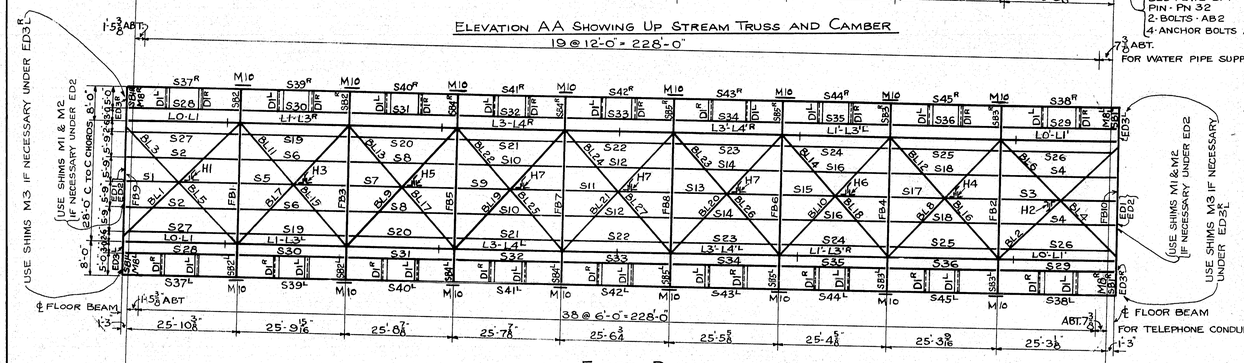


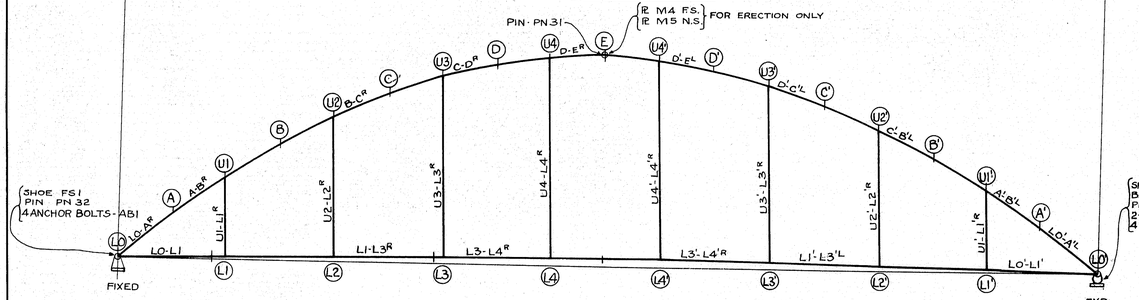


ELEVATION AA SHOWING UP STREAM TRUSS AND CAMBER

19 @ 12'-0" = 228'-0"

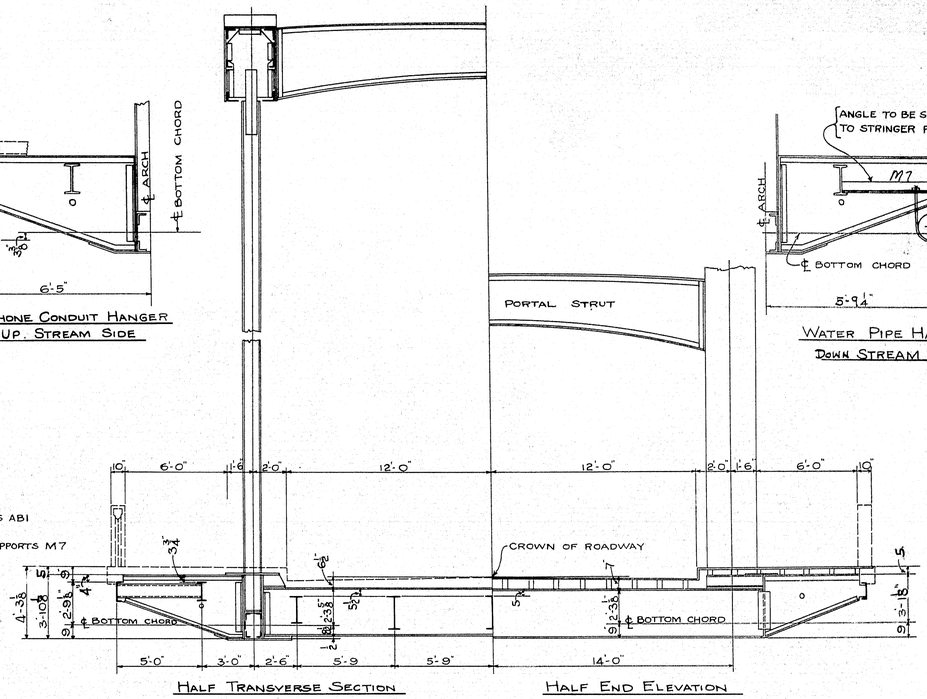


FLOOR PLAN

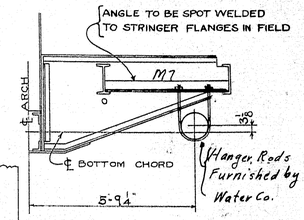


SECTION B B SHOWING DOWN STREAM TRUSS

TELEPHONE CONDUIT HANGER UP. STREAM SIDE

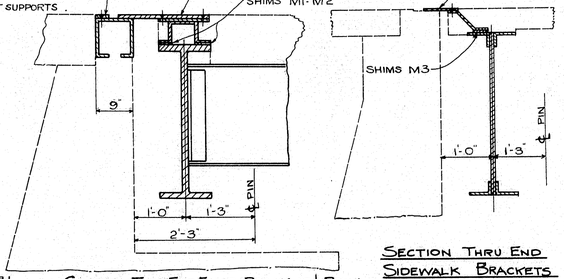


HALF TRANSVERSE SECTION



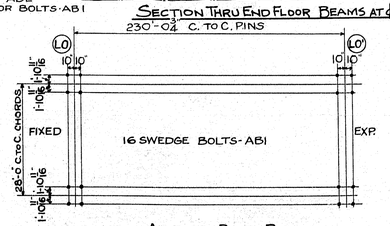
WATER PIPE HANGER DOWN STREAM SIDE

HALF END ELEVATION



SECTION THRU END SIDEWALK BRACKETS

SECTION THRU END FLOOR BEAMS AT ℄ RDWY.



ANCHOR BOLT PLAN

NOTE

FIELD CONNECTIONS TO BE RIVETED EXCEPT EXPANSION DAMS TO FLOOR BEAMS AND SIDEWALK BRACKETS TO BE BOLTED

TRUSSES TO BE ASSEMBLED IN SHOP AND MAIN FIELD CONNECTIONS REAMED

TRUSSES TO BE MATCHED MARKED SEE MATCH MARKING DIAGRAM E2

INDEX OF DRAWINGS

SH. No.	DESCRIPTION
E1	ERECTION DIAGRAM & CAMBER DIAGRAM
E2	MATCH MARKING DIAGRAM
1	CASTING, PINS & ANCHOR BOLTS
2	TOP CHORD
3	do.
4	do.
5	do.
6	do.
7	TOP CHORD STRUTS
8	TOP CHORD DIAGONALS
9	do do
10	BOTTOM CHORDS
11	do
12	BOTTOM CHORD DIAGONALS & STRINGERS
13	do do do & HANGERS
14	FLOOR BEAMS & SIDEWALK BRACKETS
15	EXP. DAM, PIPE HANGERS & SIDEWALK STRINGERS.

RIVETS

OPEN HOLES

PAINT

PITTSBURGH-DES MOINES STEEL CO.

PITTSBURGH, PA. DES MOINES, IA.

MORSE BRIDGE-ANDROSCOGGIN RIVER

RUMFORD, OXFORD CO.

MAINE HIGHWAY COMM.

MADE W.B. SHEET No. E1

TRACED W.H.

CHECKED W.B.H. CONTRACT No. E 250

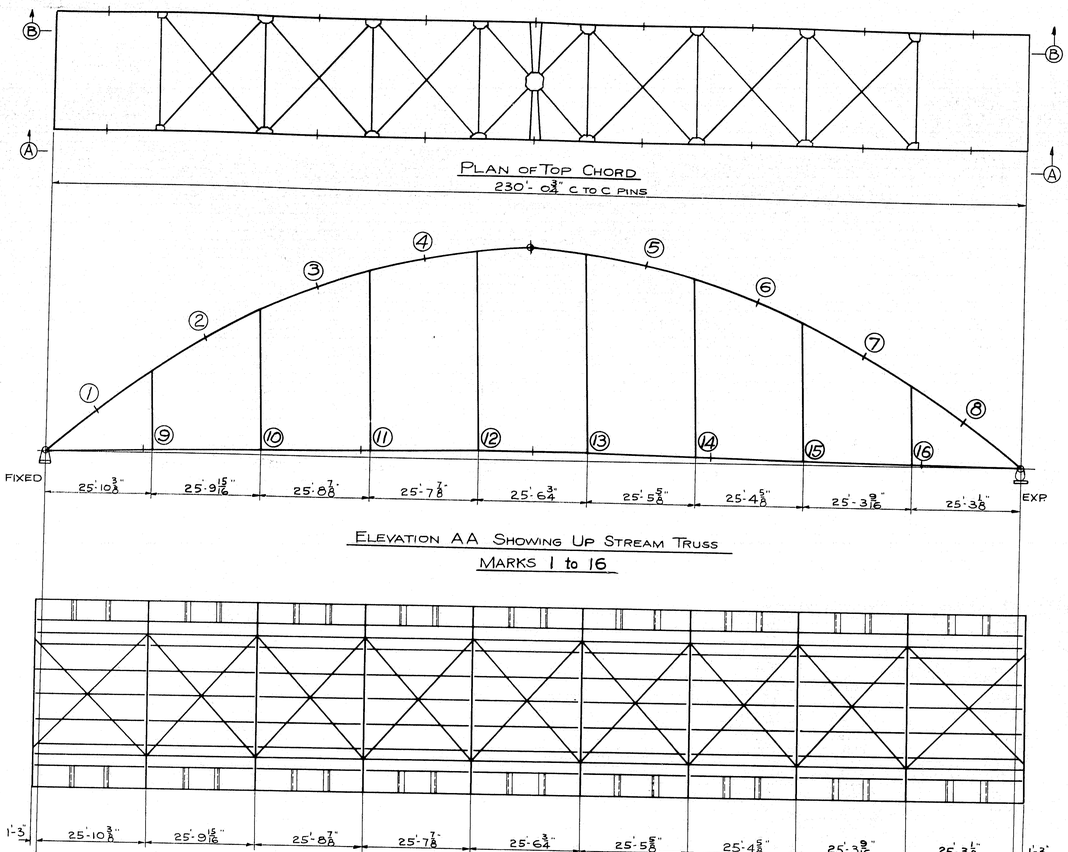
REVISED 4-25-35

ARKWRIGHT TRACING CLOTH E. K. ELLIOTT CO. PITTSBURGH, PA.

12

32-178

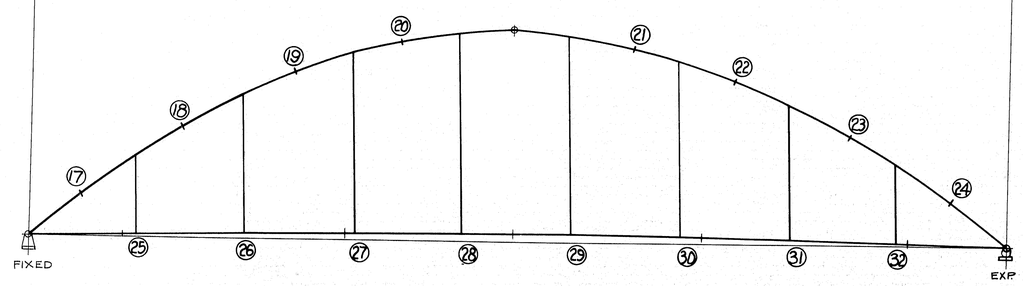
0 1 2 3 4 5 INCHES



PLAN OF TOP CHORD
230'- 0 3/4" C TO C PINS

ELEVATION AA SHOWING UP STREAM TRUSS
MARKS 1 to 16

FLOOR PLAN



SECTION BB SHOWING DOWN STREAM TRUSS

MATCH MARKING DIAGRAM
MARKS 17 to 32

RIVET

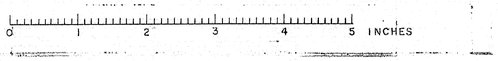
OPEN HOLES

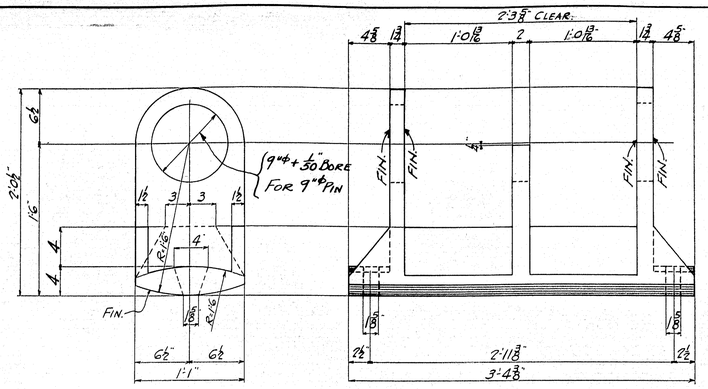
PAINT
MATCH MARKING DIAGRAM

PITTSBURGH-DES MOINES STEEL CO.
PITTSBURGH, PA. DES MOINES, IA.
MORSE BRIDGE-ANDROSCOGGIN RIVER
RUMFORD, OXFORD CO.
MAINE HIGHWAY COMM.
MADE W.B. SHEET No. E2
TRACED W.H.
CHECKED W.I.H. CONTRACT No. E250
REVISED

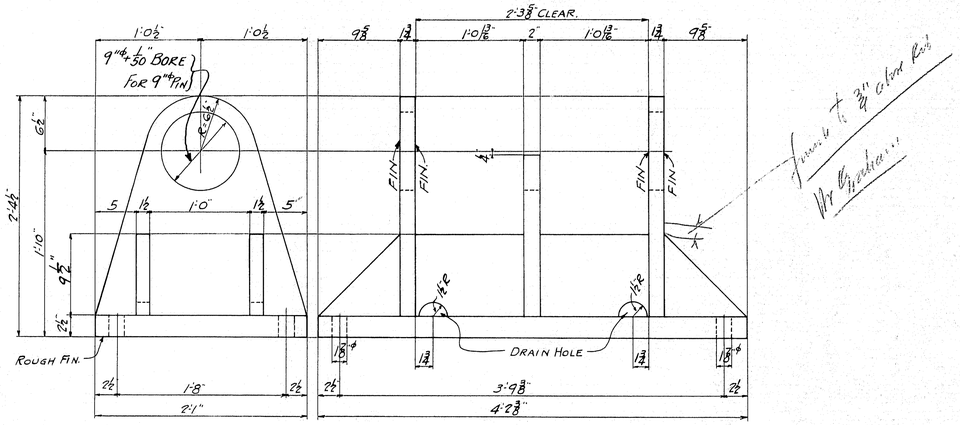
ARKWRIGHT TRACING CLOTH E. K. ELLIOTT CO., PITTSBURGH, PA.

32-179

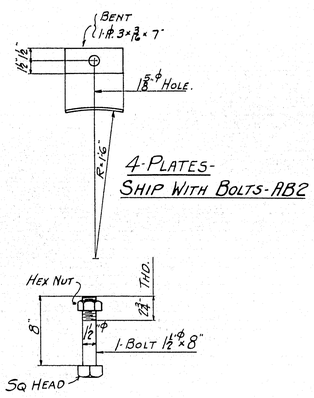




2-CAST STEEL EXP. SHOES ES1
PATT. No. PD732

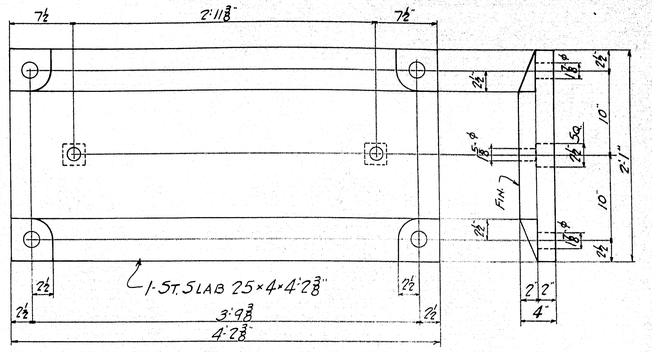


2-CAST STEEL FIXED SHOES FS1
PATT. No. P.D. 731

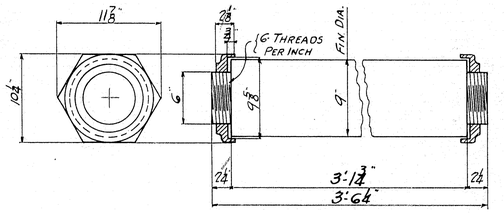


4-PLATES-
SHIP WITH BOLTS-AB2

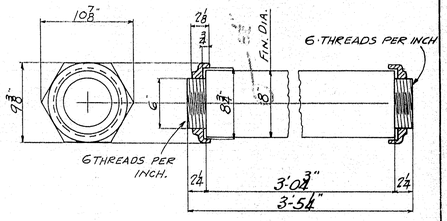
4 BOLTS-AB2



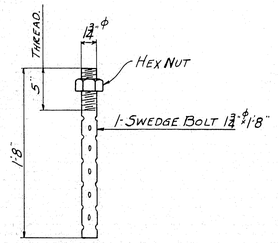
2-STEEL BED PLATES BP1.



4-PINS-P1
8-STD. LOMAS NUTS-PN32



2-PINS P2
4-STD. LOMAS NUTS-PN31



16-SWEDGE BOLTS-AB1

2-PILOT NUTS FOR 8"ϕ PIN
2- " " " 9"ϕ PIN
2-DRIVING NUTS FOR 8"ϕ PIN
2- " " " 9"ϕ PIN

12 PCS.-12 OR 14 OZ. DUCK-2'-1" × 4'-4" LG.

NOTE
SHOP PAINTING- ONE COAT RED LEAD, MACHINE FIN. SURFACES ONE COAT WHITE LEAD AND TALLOW.

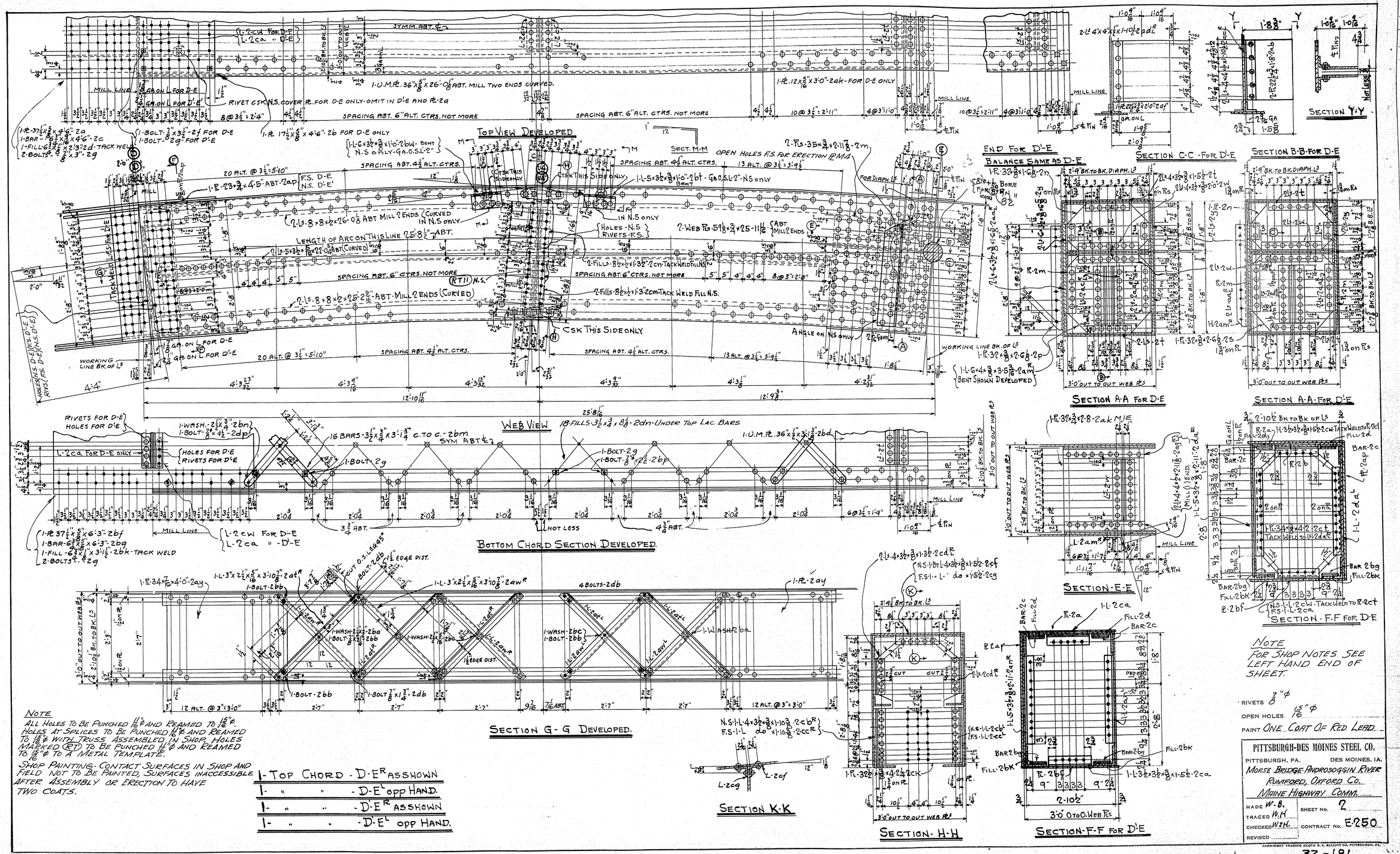
RIVETS
OPEN HOLES
PAINT

PITTSBURGH-DES MOINES STEEL CO.
PITTSBURGH, PA. DES MOINES, IA.
MORSE BRIDGE, ANDROSCOGGIN RIVER
RUMFORD, OXFORD CO.
MAINE HIGHWAY COMM.
MADE J.C.P. SHEET No. 1
TRACED C.W.B.
CHECKED W.J.H. CONTRACT No. E-250
REVISED

ARKWRIGHT TRACING CLOTH B. K. ELLIOTT CO. PITTSBURGH, PA.

32-180

0 1 2 3 4 5 INCHES


TOP VIEW DEVELOPED
WEB VIEW
BOTTOM CHORD SECTION DEVELOPED
SECTION G-G DEVELOPED
SECTION K-K
SECTION H-H
SECTION E-E
SECTION F-F FOR D-E
SECTION A-A FOR D-E
SECTION B-B FOR D-E
SECTION C-C FOR D-E
SECTION Y-Y
END FOR D-E
BALANCE SAME AS D-E
SECTION A-A FOR D-E
SECTION F-F FOR D-E
SYM M. ABT. ℄
SPACING ABT. 6" ALT. CTRS. NOT MORE
SPACING ABT. 4½" ALT. CTRS.
CSK THIS SIDE ONLY
WORKING LINE BK. OF L5
RIVETS FOR D-E
HOLES FOR D-E
RIVETS FOR D-E
HOLES FOR D'E
MILL LINE
NOTE
ALL HOLES TO BE PUNCHED 11/16" ∅ AND REAMED TO 15/16" ∅.
HOLES AT SPLICES TO BE PUNCHED 13/16" ∅ AND REAMED TO 15/16" ∅ WITH TRUSS ASSEMBLED IN SHOP. HOLES MARKED (RT) TO BE PUNCHED 11/16" ∅ AND REAMED TO 15/16" ∅ TO A METAL TEMPLATE.
SHOP PAINTING - CONTACT SURFACES IN SHOP AND FIELD NOT TO BE PAINTED, SURFACES INACCESSIBLE AFTER ASSEMBLY OR ERECTION TO HAVE TWO COATS.
1 - TOP CHORD - D-E R AS SHOWN
1 - " " - D-E L OPP HAND.
1 - " " - D-E R AS SHOWN
1 - " " - D-E L OPP HAND.
NOTE
FOR SHOP NOTES SEE LEFT HAND END OF SHEET.
RIVETS 7/8" ∅
OPEN HOLES 15/16" ∅
PAINT ONE COAT OF RED LEAD.
PITTSBURGH-DES MOINES STEEL CO.
PITTSBURGH, PA. DES MOINES, IA.
MORSE BRIDGE: ANDROSCOGGIN RIVER
RUMFORD, OXFORD CO.,
MAINE HIGHWAY COMM.
MADE W.B.
TRACED W.H.
CHECKED W.H.
REVISED
SHEET NO. 2
CONTRACT NO. E-250
32-181

TOP VIEW DEVELOPED

WEB VIEW

SECTION E E

SECT. F

SECTION AA FOR C-D

SECTION BB " C'-D'

SECTION AA · FOR C'-D'

SECTION BB " C-D.

BOTTOM CHORD (DEVELOPED)

SECTION GG (DEVELOPED)

1- TOP CHORD C D^R AS SHOWN
1- " " C-D^L OPP. HAND
1- " " C'-D^R AS SHOWN
1- " " C'-D^L OPP. HAND

NOTE

ALL HOLES TO BE PUNCHED 11/16" ϕ AND REAMED TO 15/16" ϕ HOLES AT SPLICES TO BE PUNCHED 11/16" ϕ AND REAMED TO 15/16" ϕ WITH TRUSS ASSEMBLED IN SHOP. HOLES MARKED (RT) TO BE PUNCHED 11/16" ϕ AND REAMED TO 15/16" ϕ TO A METAL TEMPLATE.

SHOP PAINTING - CONTACT SURFACES IN SHOP AND FIELD. NOT TO BE PAINTED. SURFACES INACCESSIBLE AFTER ASSEMBLY OR ERECTION TO HAVE TWO COATS.

RIVETS 7/8" ϕ
OPEN HOLES 15/16" ϕ
PAINT ONE COAT OF RED LEAD

PITTSBURGH-DES MOINES STEEL CO.
PITTSBURGH, PA. DES MOINES, IA.
MORSE BRIDGE, ANDROSCOGGIN RIVER
RUMFORD, OXFORD CO.
MAINE HIGHWAY COMM.

MADE J.C.P.
TRACED W.H.
CHECKED H.S.H.
REVISED
SHEET No. 3
CONTRACT No. E 250

ARKWRIGHT TRADING CLOTH B. K. ELLIOTT CO. PITTSBURGH, PA.

32-182

0 1 2 3 4 5 INCHES

TOP VIEW - DEVELOPED

WEB VIEW

BOTTOM CHORD SECTION DEVELOPED

SECTION CC DEVELOPED

SECTION FF

SECTION DD

SECTION A A FOR B-C

SECTION B B FOR B-C

SECTION AA FOR B-C

SECTION BB FOR B'-C'

1-	TOP CHORD -	B-C^R AS SHOWN
1-	" "	- B-C^L OPP HAND
1-	" "	- B'-C'^R AS SHOWN
1-	" "	- B'-C'^L OPP HAND

NOTE

ALL HOLES TO BE PUNCHED 11/16" ϕ AND REAMED TO 15/16" ϕ HOLES AT SPLICES TO BE PUNCHED 11/16" ϕ AND REAMED TO 15/16" ϕ WITH TRUSS ASSEMBLED IN SHOP. HOLES MARKED (RD) TO BE PUNCHED 13/16" ϕ AND REAMED TO 15/16" ϕ TO A METAL TEMPLATE.

RIVET B

OPEN HOLES 15/16" ϕ

PAINT ONE COAT OF RED LEAD

SHOP PAINTING: CONTACT SURFACES IN SHOP AND FIELD NOT TO BE PAINTED. SURFACES INACCESSIBLE AFTER ASSEMBLY OR ERECTION TO HAVE TWO COATS.

PITTSBURGH-DES MOINES STEEL CO.

PITTSBURGH, PA. DES MOINES, IA.

MORSE BRIDGE, ANDROSCOGGIN RIVER

RUMFORD, OXFORD CO.

MAINE HIGHWAY COMM.

MADE W.B.

TRACED W.H.

CHECKED W.O.H.

REVISED

SHEET No. 4

CONTRACT No. E 250

ARKWRIGHT TRACING CLOTH D. K. ELLIOTT CO. PITTSBURGH, PA.

32-183

TOP VIEW DEVELOPED

WEB VIEW

BOTTOM CHORD SECTION DEVELOPED

SECTION Ⓒ Ⓒ DEVELOPED

SECTION Ⓐ Ⓐ FOR A-B AND A'-B'

SECTION Ⓑ Ⓑ FOR A-B ONLY

SECTION Ⓓ Ⓓ

SECTION Ⓔ Ⓔ

SECTION Ⓕ Ⓕ

SECTION Ⓑ Ⓑ FOR A'-B' ONLY

1-TOP CHORD - A-B^R AS SHOWN
1- " " - A-B^L OPP. HAND
1- " " - A'-B'^{R} AS SHOWN
1- " " - A'-B'^{L} OPP. HAND

NOTE
ALL HOLES TO BE PUNCHED 11/16 AND REAMED TO 15/16 ϕ HOLES AT SPLICES TO BE PUNCHED 15/16 ϕ AND REAMED TO 15/16 ϕ WITH TRUSS ASSEMBLED IN SHOP. HOLES MARKED (RD) TO BE PUNCHED 15/16 ϕ AND REAMED TO 15/16 ϕ TO A METAL TEMPLATE.
SHOP PAINTING - CONTACT SURFACES IN SHOP AND FIELD NOT TO BE PAINTED, SURFACES INACCESSIBLE AFTER ASSEMBLY OR ERECTION TO HAVE TWO COATS.

RIVET: 7/8" ϕ
OPEN HOLES 15/16" ϕ
PAINT ONE COAT OF RED LEAD.

PITTSBURGH-DES MOINES STEEL CO.
PITTSBURGH, PA. DES MOINES, IA.
MORSE BRIDGE, ANDROSCOGGIN RIVER.
RUMFORD, OXFORD CO.
MAINE HIGHWAY COMM.
MADE W.B SHEET No. 5
TRACED G.A.G.
CHECKED W.J.H CONTRACT No. E250
REVISED

ARKWRIGHT TRACING CLOTH H.K. ELLIOTT CO. PITTSBURGH, PA.

32-184

0 1 2 3 4 5 INCHES

SECTION DD DEVELOPED

SECTION CC

SECTION EE

SECTION FF

SECTION KK

TOP VIEW DEVELOPED

WEB VIEW

BOTTOM CHORD SECTION DEVELOPED

SECTION BB DEVELOPED

SECTION MM

SECTION NN

SECTION PP

SECTION AA

1- TOP CHORD - LO-A^{R} AS SHOWN
1- " " - LO-A^{L} OPP. HAND
1- " " - LO'-A'^{R} AS SHOWN
1- " " - LO'-A'^{L} OPP. HAND

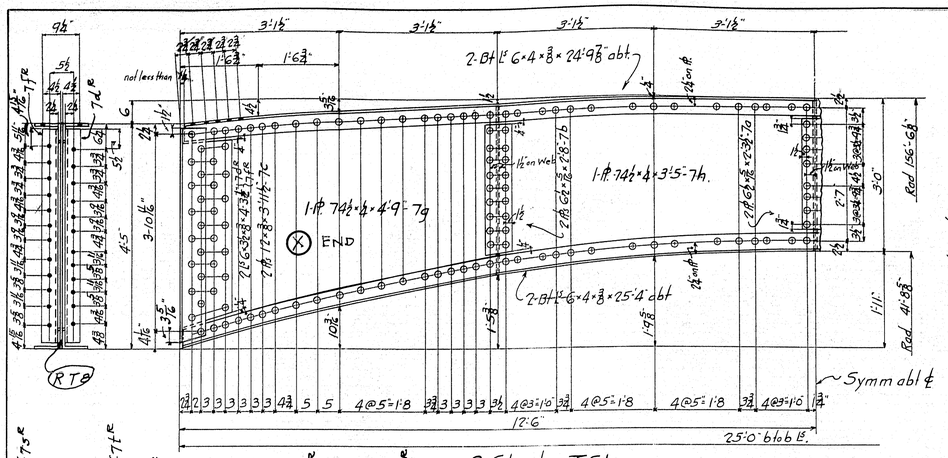
NOTE
ALL HOLES TO BE PUNCHED $\frac{11}{16}$" AND REAMED TO $\frac{15}{16}$" Ø
HOLES AT SPLICES TO BE PUNCHED $\frac{11}{16}$" Ø AND REAMED TO $\frac{15}{16}$" Ø WITH TRUSS ASSEMBLED IN SHOP
Holes marked (RT) to be punched $\frac{1}{16}$" Ø + reamed to $\frac{15}{16}$" Ø to a metal Templet
SHOP PAINTING - CONTACT SURFACES IN SHOP AND FIELD NOT TO BE PAINTED. SURFACES INACCESSIBLE AFTER ASSEMBLY OR ERECTION TO HAVE TWO COATS.

RIVETS $\frac{7}{8}$" Ø
OPEN HOLES $\frac{15}{16}$" Ø
PAINT ONE COAT OF RED LEAD

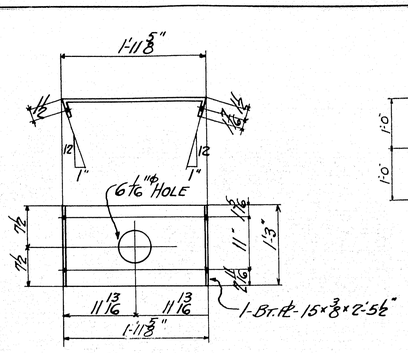
PITTSBURGH-DES MOINES STEEL CO.
PITTSBURGH, PA. DES MOINES, IA.
MORSE BRIDGE-ANDROSCOGGIN RIVER
RUMFORD, OXFORD CO.
MAINE HIGHWAY COMM.
MADE W.B. SHEET NO. 6
TRACED W.H.
CHECKED W.J.H. CONTRACT NO. E-250
REVISED

ARKWRIGHT TRACING CLOTH D. K. ELLIOTT CO. PITTSBURGH, PA.

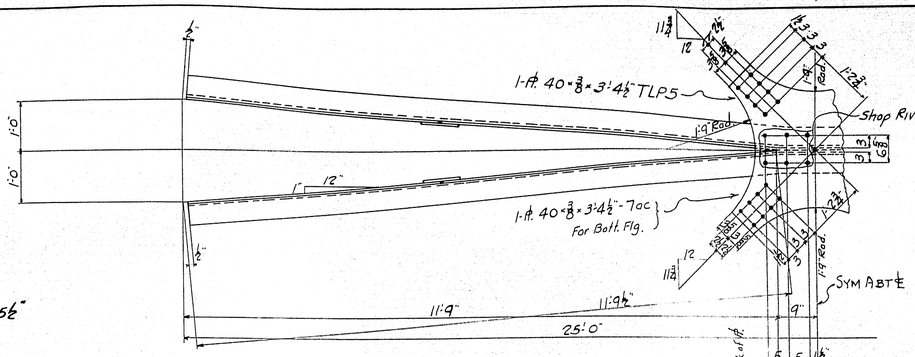
32-185

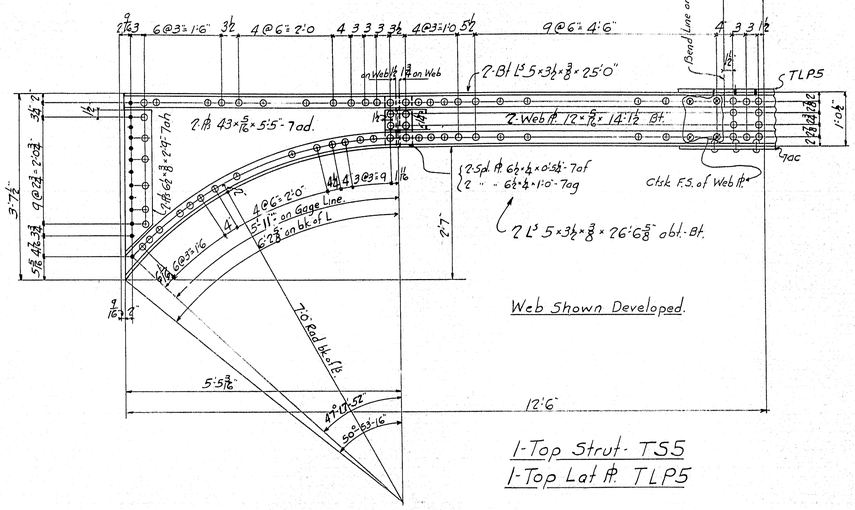


2-Struts-TS1.

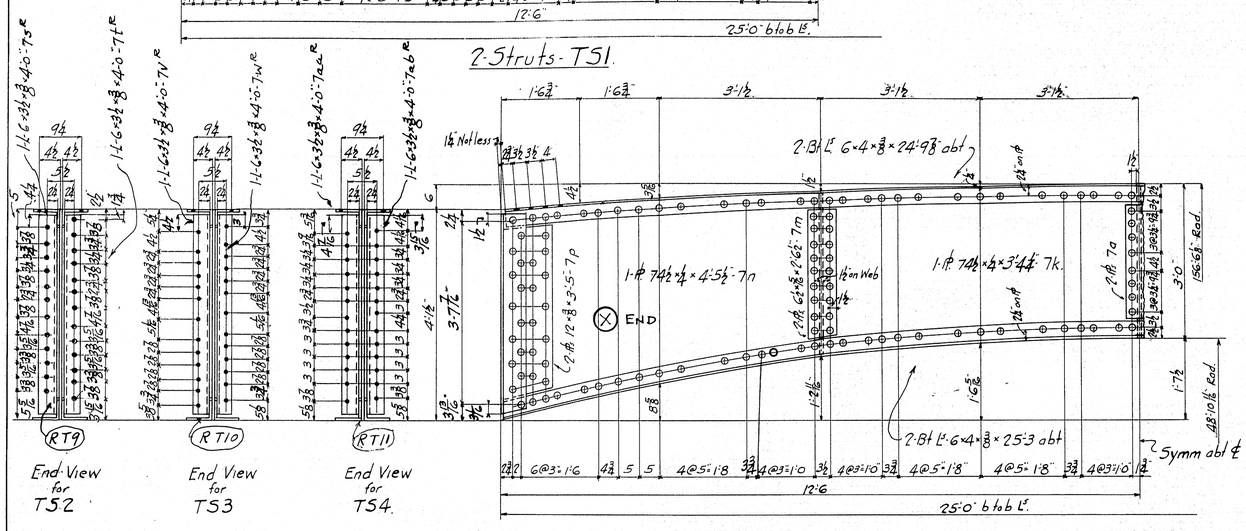


2-PLATES-M5

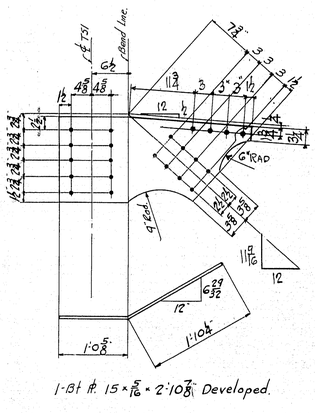




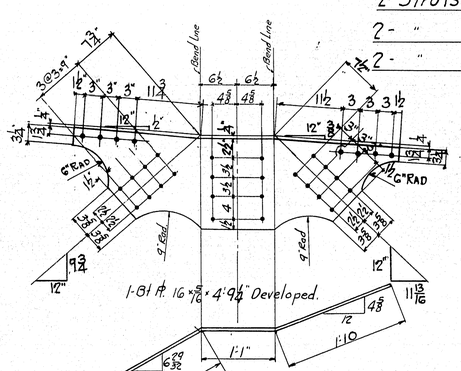
1-Top Strut-TS5
1-Top Lat Pl. TLP5



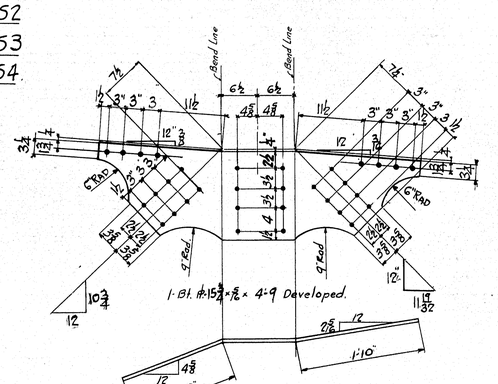
2-Struts-TS2
2- " TS3
2- " TS4.



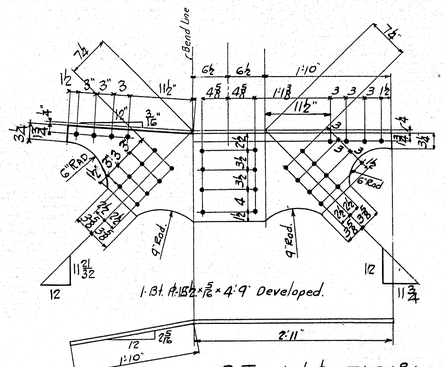
2-Top Lateral Pls. TLP1R (as shown)
2- " " " TLP1L (opp hand)



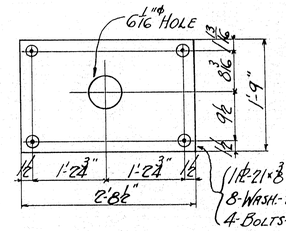
2-Top Lat Pls. TLP2R (as shown)
2 " " " TLP2L (opp hand)



2-Top Lat Pls. TLP3R (as shown)
2- " " " TLP3L (opp hand)



2-Top Lat Pls. TLP4R (as shown)
2- " " " TLP4L (opp hand).



2-PLATES-M4

NOTE

HOLES MARKED (RT) TO BE PUNCHED 1 1/16" ℄ AND REAMED TO 15/16" ℄ TO A METAL TEMPLATE.
SHOP PAINTING - CONTACT SURFACES IN SHOP AND FIELD NOT TO BE PAINTED

RIVET 7/8" ℄
OPEN HOLES 15/16" ℄
PAINT. ONE COAT OF RED LEAD

PITTSBURGH-DES MOINES STEEL CO.
PITTSBURGH, PA. DES MOINES, IA.
MORSE BRIDGE, ANDROSCOGGIN RIVER
RUMFORD, OXFORD CO.
MAINE HIGHWAY COMM.

MADE
TRACED
CHECKED PWB
REVISED
SHEET NO. 7
CONTRACT NO. E-750

AUKWRIGHT TRACING CLOTH W. K. ELLIOTT CO. PITTSBURGH, PA.

32-186

0 1 2 3 4 5 INCHES

- 2-TOP LATERALS-TL1 -
- 2-TOP LATERALS-TL2 -
- 2-TOP LATERALS-TL3 -

- 2-TOP LATERALS-TL4 -
- 2-TOP LATERALS-TL5 -
- 2-TOP LATERALS-TL6 -

- SECTION-A-A -

- SECTION-B-B -

- SECTION-C-C -

- SECTION-D-D -

- SECTION-E-E -

- SECTION-F-F -

NOTE
HOLES MARKED (RT) TO BE PUNCHED 1/16" Φ AND REAMED TO 15/16" Φ TO A METAL TEMPLATE
SHOP PAINTING - CONTACT SURFACES IN SHOP AND FIELD NOT TO BE PAINTED

RIVET 7/8" Φ
OPEN HOLES 15/16" Φ
PAINT ONE COAT OF RED LEAD

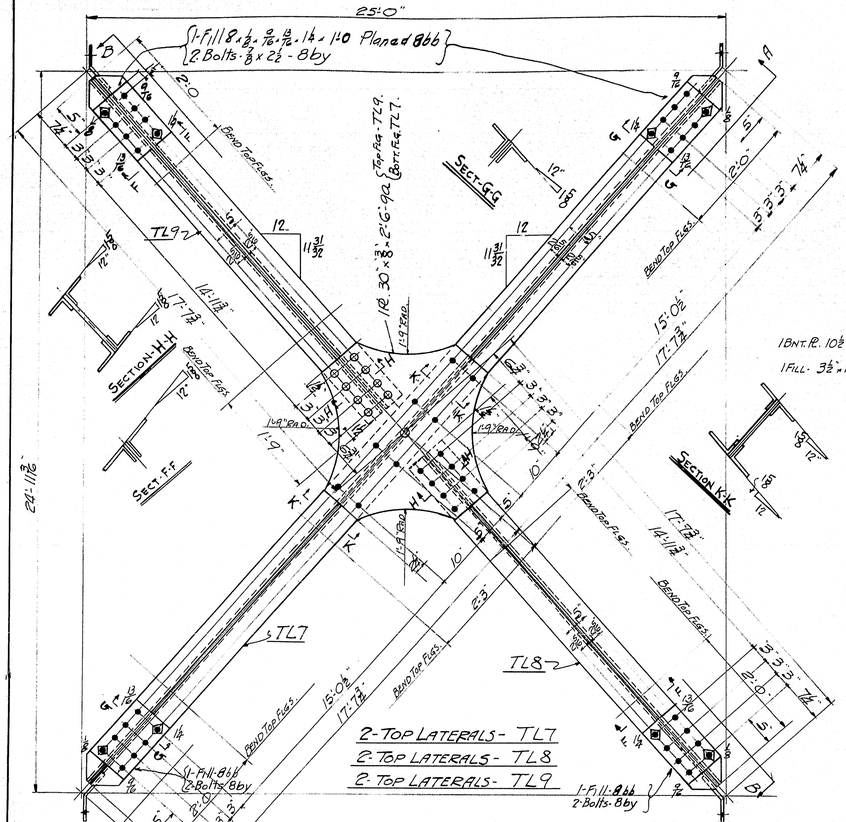
PITTSBURGH-DES MOINES STEEL CO.
PITTSBURGH, PA. DES MOINES, IA.
MORSE BRIDGE-ANDROSCOGGIN RIVER
RUMFORD, OXFORD CO.
MAINE HIGHWAY COMM.

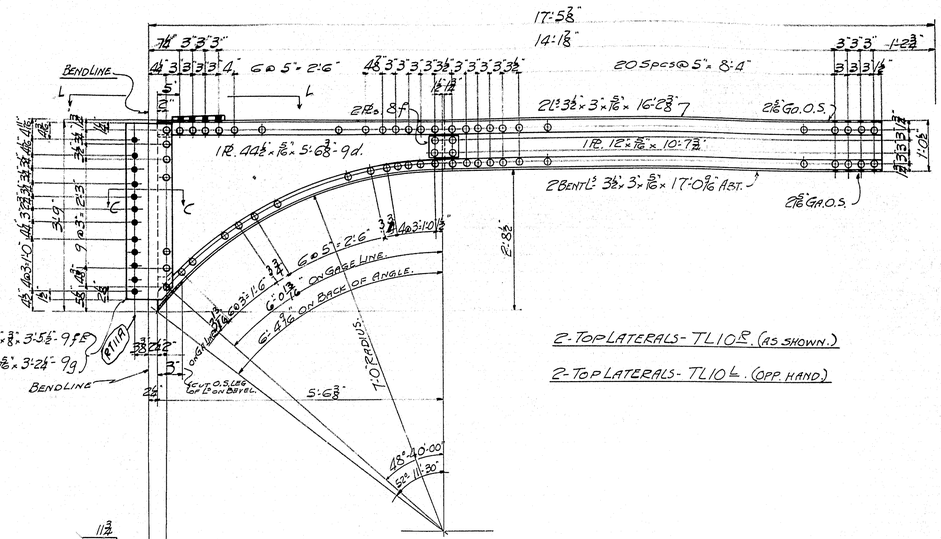
MADE
TRACED
CHECKED P.W.O.
REVISED
SHEET No. 8
CONTRACT No. E250

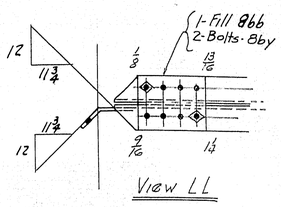
ARKWRIGHT TRACING CLOTH R.K. ELLIOTT CO. PITTSBURGH, PA.

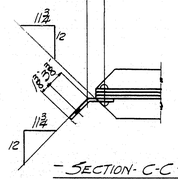
32-187

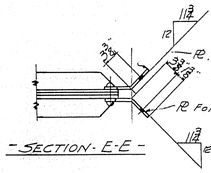
0 1 2 3 4 5 INCHES











NOTE
HOLES MARKED (RT) TO BE PUNCHED 13/16" AND REAMED TO 15/16" TO A METAL TEMPLATE.
SHOP PAINTING - CONTACT SURFACES IN SHOP AND FIELD NOT TO BE PAINTED.

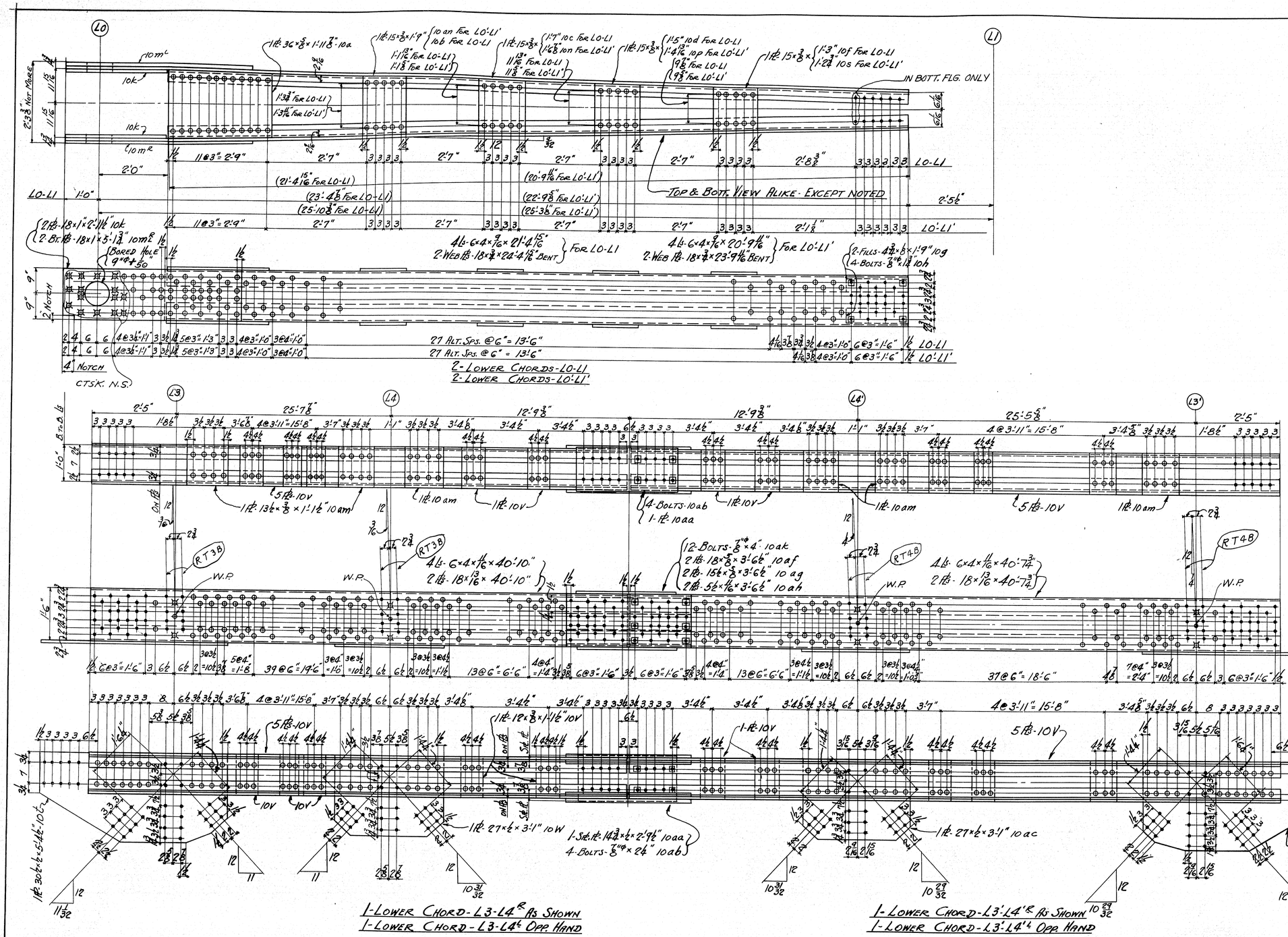
RIVET 7/8" ϕ
OPEN HOLES 15/16" ϕ
PAINT ONE COAT OF RED LEAD

PITTSBURGH-DES MOINES STEEL CO.
PITTSBURGH, PA. DES MOINES, IA.
MORSE BRIDGE, ANDROSCOGGIN RIVER
RUMFORD, OXFORD CO.
MAINE HIGHWAY COMM.
MADE W.J.H. SHEET NO 9
TRACED RCT
CHECKED PWB CONTRACT No. E 250.
REVISED

ARKWRIGHT TRACING CLOTH R.K. ELLIOTT CO. PITTSBURGH, PA.

32-188

0 1 2 3 4 5 INCHES



NOTE

HOLES AT SPLICES AND PANEL POINTS TO BE PUNCHED 13/16"Φ AND REAMED TO 15/16"Φ WITH TRUSS ASSEMBLED IN SHOP.

HOLES MARKED (RT) TO BE PUNCHED 11/16"Φ AND REAMED TO 15/16"Φ TO METAL TEMPLATE.

MATERIAL OVER ¾" THICK TO BE PUNCHED 11/16"Φ AND REAMED TO 15/16"Φ.

SHOP PAINTING - CONTACT SURFACES IN SHOP & FIELD NOT TO BE PAINTED. SURFACES INACCESSIBLE AFTER ASSEMBLY OR ERECTION TO HAVE TWO COATS.

RIVETS ⅞"Φ
OPEN HOLES 15/16"Φ
PAINT ONE COAT OF RED LEAD

PITTSBURGH-DES MOINES STEEL CO.
PITTSBURGH, PA. DES MOINES, IA.
NORSE BRIDGE, ANDROSCOGGIN RIVER
RUMFORD, OXFORD CO.
MAINE HIGHWAY COMM.
MADE W.J.H.
TRACED N.M.K.
CHECKED W.B.
REVISED
SHEET No. 10
CONTRACT No. E250

ARKWRIGHT TRADING CLOTH D.K. ELLIOTT CO. PITTSBURGH, PA.

1-Sht. PL 14½"×½"×2'-9½" 11a
4-Bolts-⅞"×2¼" 10ab

11 PL 13½"×⅜"×1'-1½" 10am

5 PL 8" 10V

L1

L2

L3

1-Sht. PL 14½"×½"×2'-9½" 10aa
2-Bolts-10ab

2-Sht. PLS-18"×⅜"×3'-6½" 11b
2-Sht. PLS-15½"×⅜"×3'-6½" 11c
2-Sht. PLS-5½"×½"×3'-6½" 11d

10-Bolts-⅞"×4"-10ak.

4 PLS-6"×4"×½"×5'-1'-6⅞"
2-Web PLS-18"×13/16"×5'-1'-6⅞" } FOR L1-L3

4 PLS-6"×4"×½"×50'-7 1/16"
2-Web PLS-18"×13/16"×50'-7 1/16" } FOR L1'-L3'

2-Sht. PLS-18"×⅜"×3'-6½" 10af
2-Sht. PLS-15½"×⅜"×3'-6½" 10ag
2-Sht. PLS-5½"×½"×3'-6½" 10ah
10-Bolts-10ak

RT18

RT28

FOR L1-L3

FOR L1'-L3'

W.P

BEND LINE

40 ALT. SPS. @6" = 20'-0"

38 ALT. SPS. @6" = 19'-0"

34 ALT. SPS. @6" = 17'-0"

32 ALT. SPS. @6" = 16'-0"

1 PL 36"×½"×6'-1½" } 11s FOR L1-L3
11t FOR L1'-L3'

1 PL 33"×½"×3'-11½" } 11V FOR L1-L3
11W FOR L1'-L3'

1-Lower Chord-L1-L3^R As Shown
1-Lower Chord-L1-L3^L Opp. Hand
1-Lower Chord-L1'-L3'^R As Shown
1-Lower Chord-L1'-L3'^L Opp. Hand

11 3/32 FOR L1-L3
10 27/32 FOR L1'-L3'

11 3/32 FOR L1-L3
10⅞ FOR L1'-L3'

NOTE
HOLES AT SPLICES AND PANEL POINTS TO BE PUNCHED 1 1/16" ϕ AND REAMED TO 1⅛" ϕ WITH TRUSS ASSEMBLED IN SHOP.

HOLES MARKED (RT) TO BE PUNCHED 1" ϕ AND REAMED TO 15/16" ϕ TO METAL TEMPLATE.

MATERIAL OVER ¾" THICK TO BE PUNCHED 1 1/16" ϕ AND REAMED TO 15/16" ϕ.

SHOP PAINTING - CONTACT SURFACES IN SHOP & FIELD NOT TO BE PAINTED. SURFACES INACCESSIBLE AFTER ASSEMBLY OR ERECTION TO HAVE TWO COATS.

RIVETS ⅞" ϕ
OPEN HOLES 15/16" ϕ
PAINT ONE COAT OF RED LEAD

PITTSBURGH-DES MOINES STEEL CO.
PITTSBURGH, PA. DES MOINES, IA.
MORSE BRIDGE-ANDROSCOGGIN RIVER.
RUMFORD, OXFORD CO.
MAINE HIGHWAY COMM.

MADE W.J.H
TRACED W.M.K.
CHECKED W.B.
REVISED

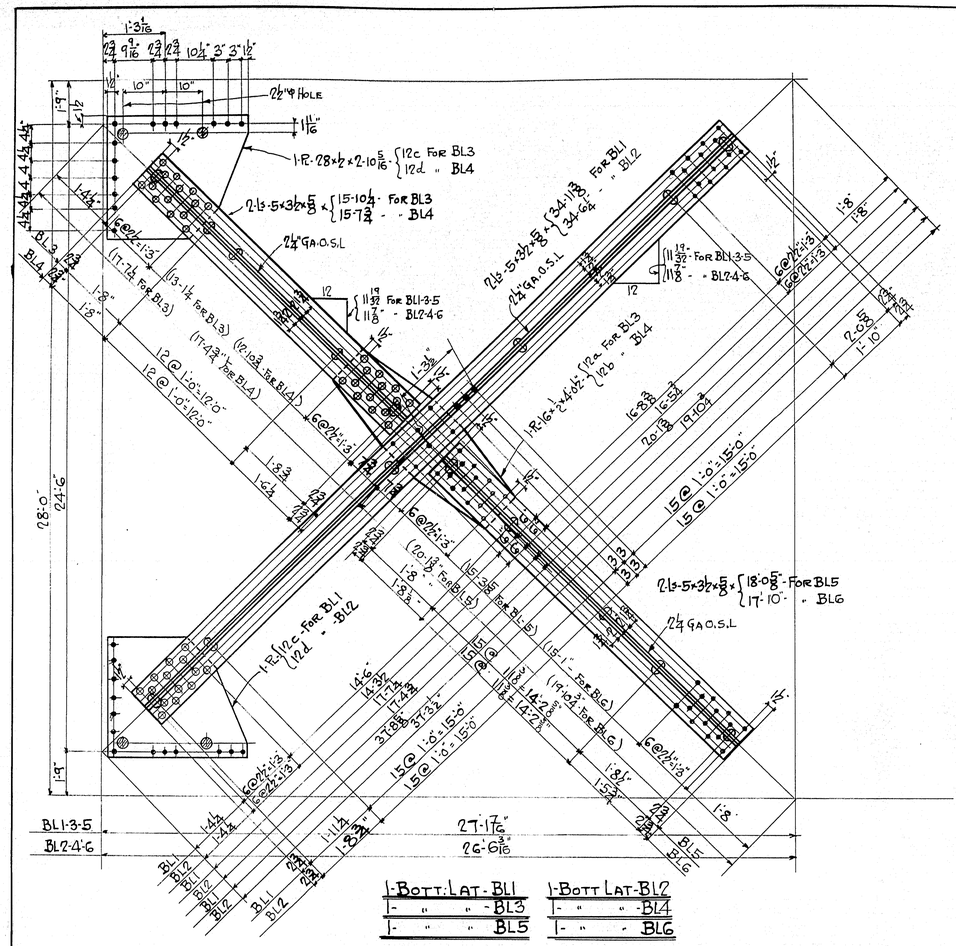
SHEET No. 11
CONTRACT No. E250

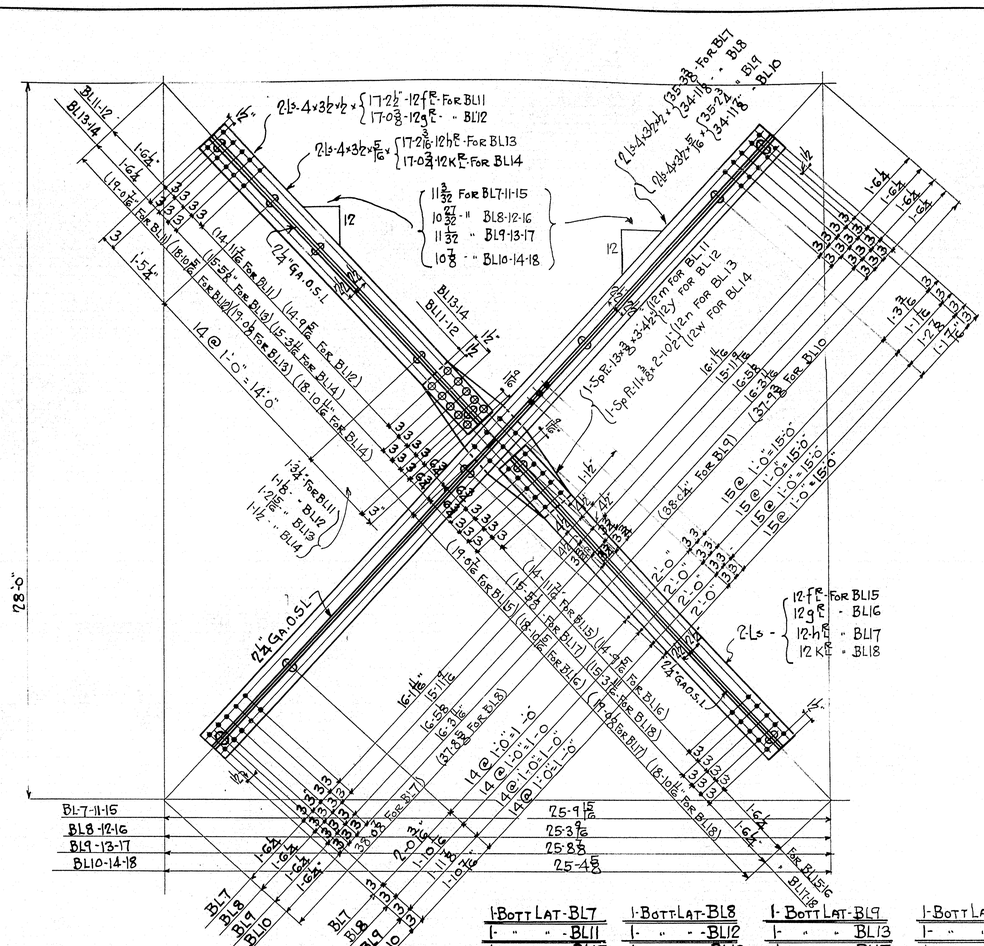
ARKWRIGHT TRACING CLOTH: S. K. ELLIOTT CO. PITTSBURGH, PA.

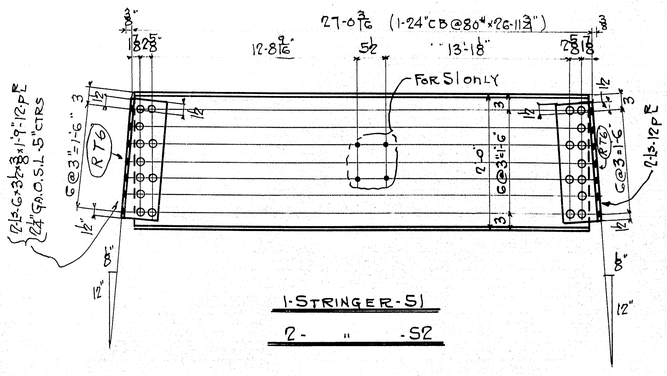
4

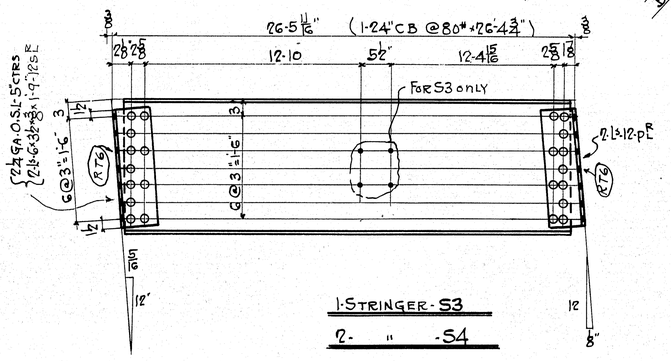
32-190

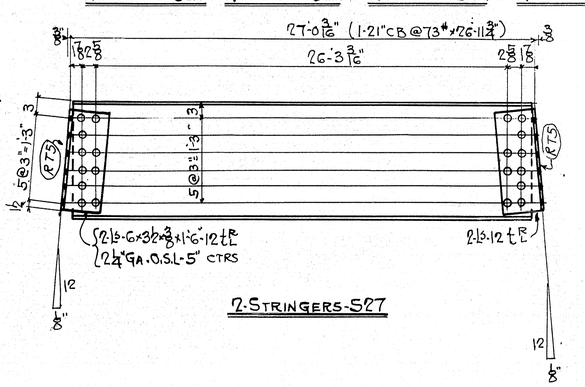
0 1 2 3 4 5 INCHES











NOTE

HOLES MARKED (RT) TO BE PUNCHED 11/16ϕ AND REAMED TO 18/16ϕ TO METAL TEMPLATE

SHOP PAINTING- CONTACT SURFACES IN SHOP & FIELD NOT TO BE PAINTED

RIVETS 7/8ϕ

OPEN HOLES 15/16ϕ

PAINT ONE COAT OF RED LEAD

PITTSBURGH-DES MOINES STEEL CO.

PITTSBURGH, PA. DES MOINES, IA.

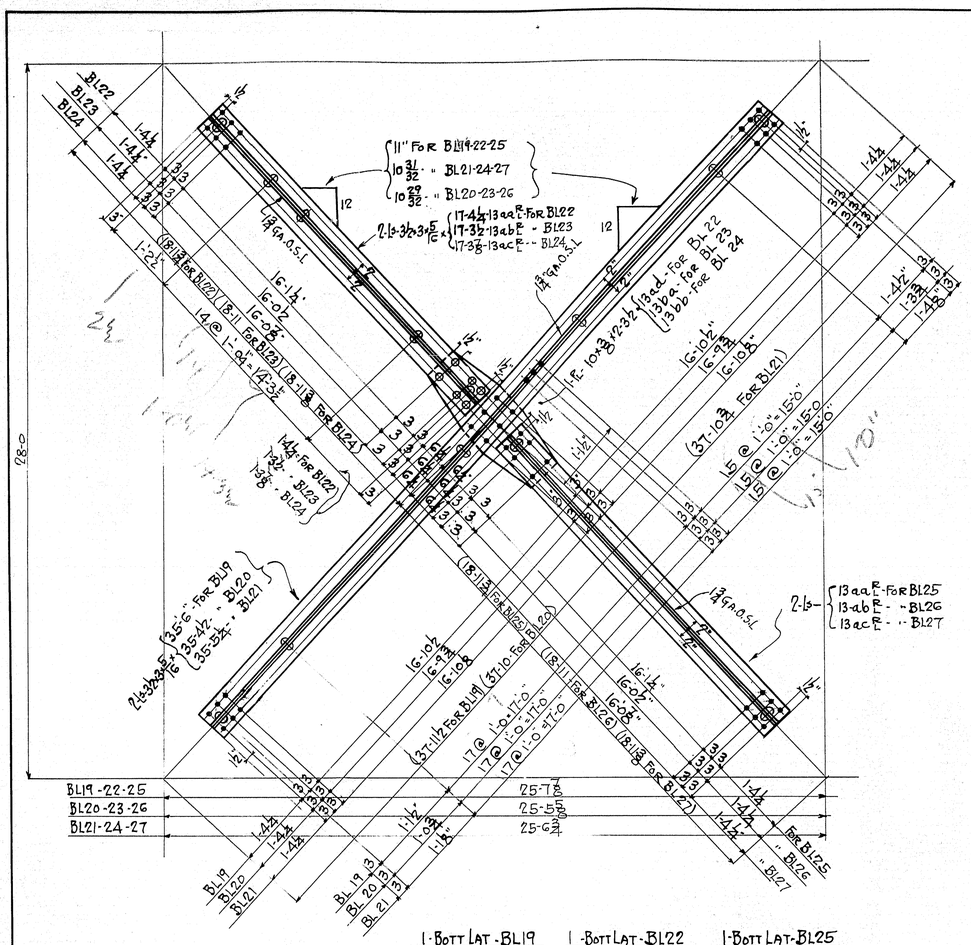
MORSE BRIDGE, ANDROSCOGGIN RIVER
RUMFORD, OXFORD CO.
MAINE HIGHWAY COMM.

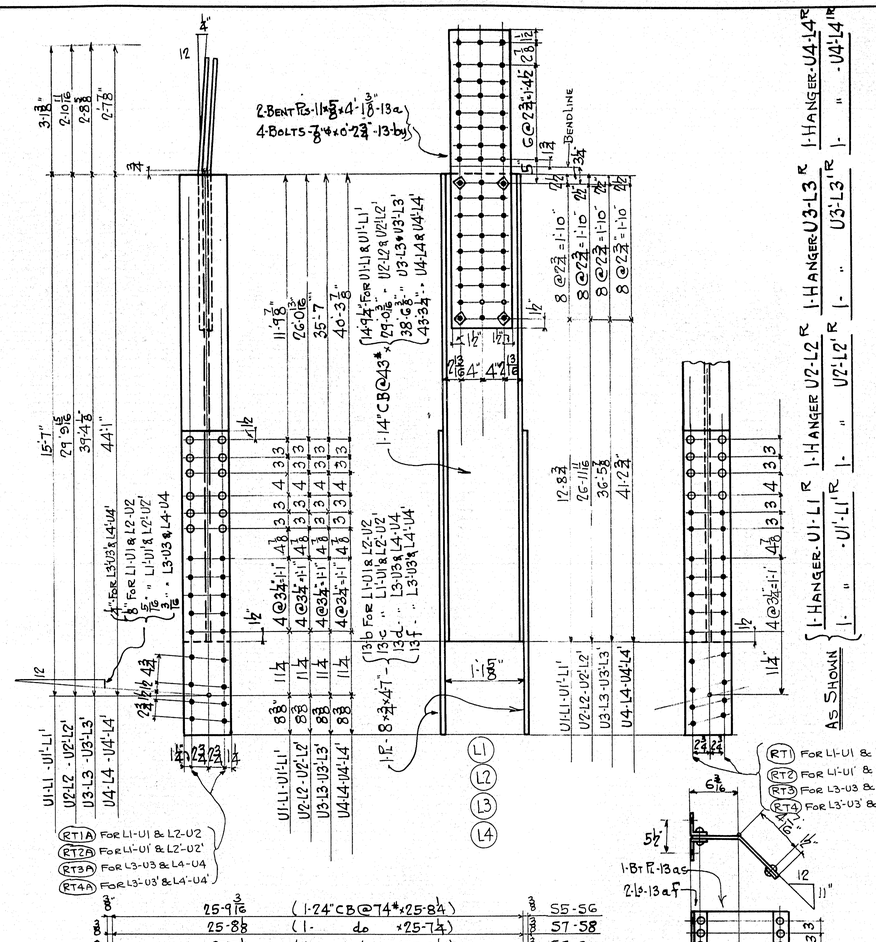
MADE WJH	SHEET No. 12
TRACED F	
CHECKED WB	CONTRACT No. E250
REVISED	

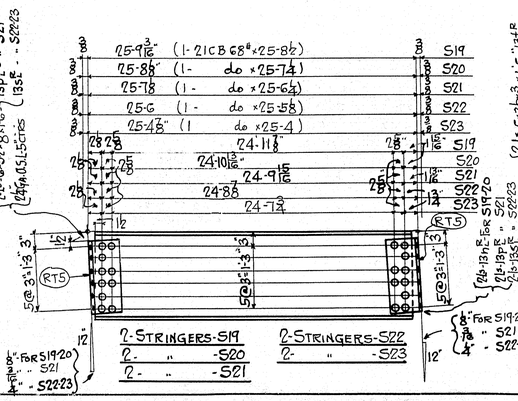
ARMSTRONG TRACING CLOTH H.K. ELLIOTT CO. PITTSBURGH, PA.

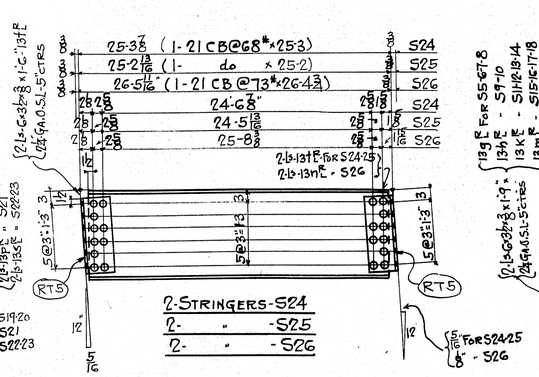
32-191

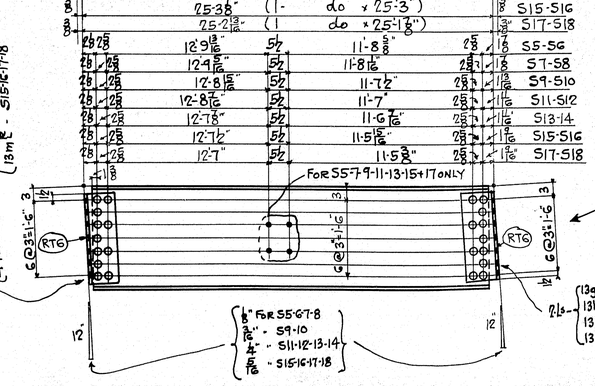
0 1 2 3 4 5 INCHES











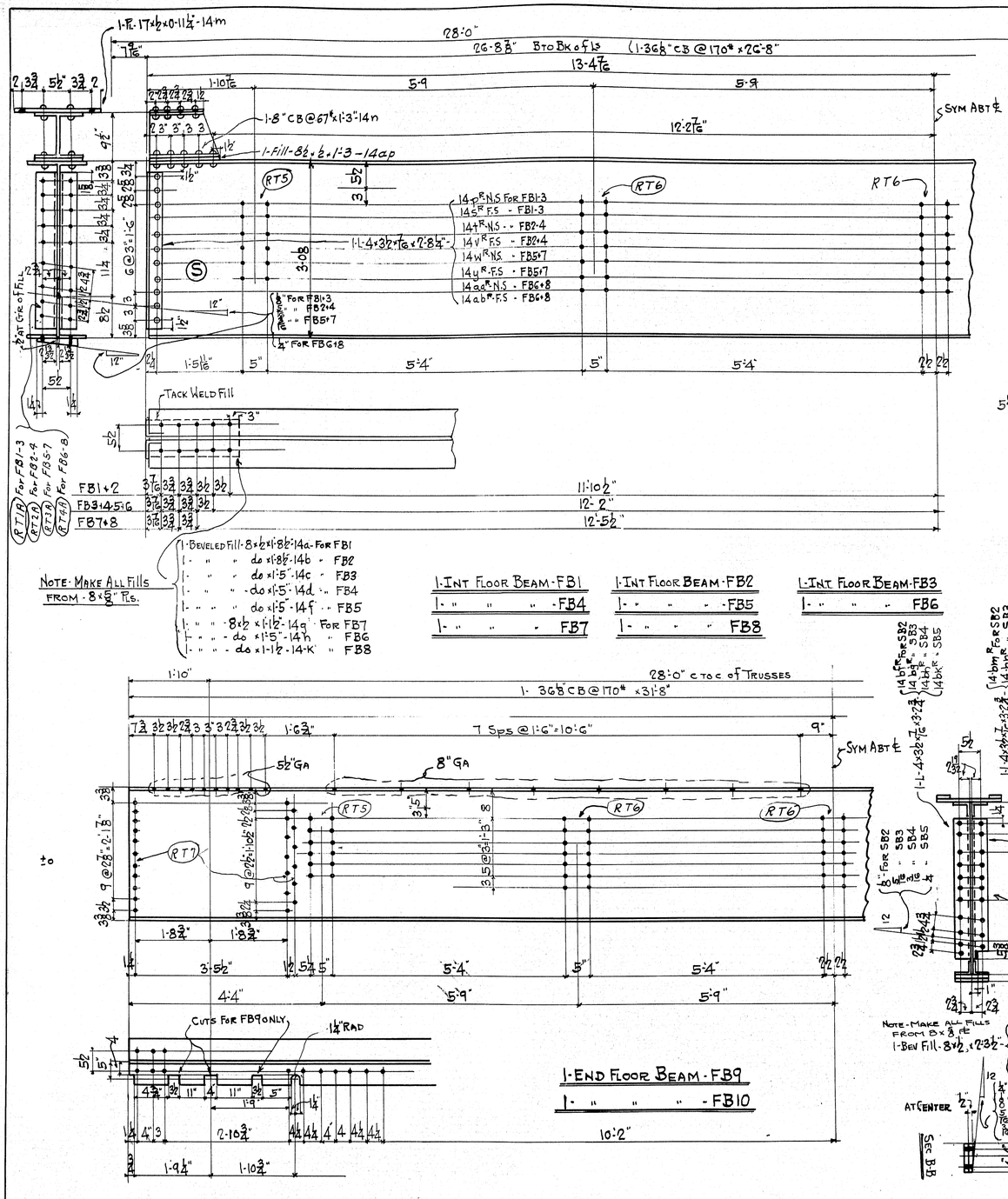
NOTE
HOLES MARKED (RT) TO BE PUNCHED 11/16" AND REAMED TO 15/16" TO METAL TEMPLATE
HOLE IN BOTTOM OF TRUSS HANGERS TO BE PUNCHED 11/16" AND REAMED TO 15/16" WITH TRUSS ASSEMBLED IN SHOP
SHOP PAINTING - CONTACT SURFACES IN SHOP & FIELD NOT TO BE PAINTED

RIVETS ⅞" ø
OPEN HOLES 15/16"
PAINT ONE COAT OF RED LEAD

PITTSBURGH-DES MOINES STEEL CO.
PITTSBURGH, PA. DES MOINES, IA.
MORSE BRIDGE, ANDROSCOGGIN RIVER
RUMFORD, OXFORD CO.
MAINE HIGHWAY COMM.
MADE W.J.H.
TRACED B.F.
CHECKED H.B.
REVISED
SHEET NO. 13
CONTRACT NO. E250

0 1 2 3 4 5 INCHES

32-192


28'-0" c to c of Trusses
26'-8 3/8" B to B of Fs
13'-4 7/16"
5'-9"
12'-2 7/16"
SYM ABT ℄
RT5
RT6
RT7
RT7A
RT7B
14 p^R N.S for FB1-3
14 s^R F.S - FB1-3
14 t^R N.S - " FB2-4
14 v^R F.S - " FB2-4
14 w^R N.S - " FB5-7
14 y^R F.S - " FB5-7
14 aa^R N.S - FB6-8
14 ab^R F.S - FB6-8
TACK WELD FILL
FB1+2
FB3+4+5+6
FB7+8
11'-10 1/2"
12'-2"
12'-5 1/2"
1-Beveled Fill-8x1/2x1'-8 1/2"-14a - For FB1
1- " " do x1'-8 1/2"-14b " FB2
1- " " do x1'-5"-14c " FB3
1- " " do x1'-5"-14d " FB4
1- " " do x1'-5"-14f " FB5
1- " " 8x1/2 x1'-1 1/2"-14g " For FB7
1- " " do x1'-5"-14h " FB6
1- " " do x1-1/2-14-K " FB8
NOTE: MAKE ALL FILLS FROM 8"x 5/16" PL.
1-Int Floor Beam-FB1
1- " " " -FB4
1- " " " -FB7
1-Int Floor Beam-FB2
1- " " " -FB5
1- " " " FB8
1-Int Floor Beam-FB3
1- " " " FB6
1-End Floor Beam-FB9
1- " " " -FB10
10'-2"
CUTS FOR FB9 ONLY
1-1/2" RAD
Sect-A-A
1-Fill-8x1/2x0'-8'-14a s
1-10"CB@33#x3'-4"-14an
2'-2"
5'-2"
2-Supports M8^R as shown.
2- " -M8^L opp Hand.
2-Side Walk Brackets-SB1^R as shown
2- " " -SB1^L opp Hand.
1-Bar-4x1/2x3'-2 5/8-14bp
7'-11 1/2"
5'-11 3/16"
1-L-4x3 1/2x5/16x7'-3 1/4
1-R-45 3/4x5/16x7'-3 1/4
1-S 14.14ak
1-S 15.14ak
2-Fills-3x5/16x2'-4 7/8-14ag
2-Bolts-7/8"ø x 2'-4-14ah
2-Bolts 7/8x2 1/2-14cb
Fill-14aw
1-Bt PL-8x1/2x3'-6 1/2" x 14at
1-Fill - 8x1x0'-6" - 14av
1- " -8x15/16x0'-6" - 14aw
Bend Line on PL
4-Bolts 7/8x3-14ca
Bend Line on LS
6-4 5/8"
7'-3 15/16"
2'-4 7/16"
Section C-C
R-af
Fill-ag
Fill-ag
NOTE
Holes marked (RT) to be punched 1 1/16" ø and reamed to 15/16" ø to metal template.
Shop Painting - Contact surfaces in shop & field not to be painted.
2-Side Walk Brackets-SB2^R as shown
2- " " -SB3^R " "
2- " " -SB4^R " "
2- " " -SB5^R " "
2- " " -SB2^L opp Hand.
2- " " -SB3^L " "
2- " " -SB4^L " "
2- " " -SB5^L " "
Rivets 7/8" ø
Open Holes 15/16" ø
Paint One Coat of Red Lead
PITTSBURGH-DES MOINES STEEL CO.
PITTSBURGH, PA. DES MOINES, IA.
Morse Bridge-Androscoggin River
Rumford, Oxford Co.
Maine Highway Comm.
Made W.J.H.
Traced B.F.
Checked W.B
Revised
Sheet No. 14
Contract No E?50
32-193
0 1 2 3 4 5 INCHES

8-Bars-3×½×2'-7"-15a-Bent
8-Csk. Slot Hd. Mach. Screws-½"ø×2"Lg.(U.S.S.)
Symm. About ℄
1-Bar-3×¾×23'-11½"
2-Part End Dams-ED1
1-Chkd. Fl. Pl. 22"×¾×23'-11½" (Non-Skid Type)
16-Csk. Slot Hd. Mach. Screws-½"ø×2"Lg. U.S.S.
1-Bar-3×½×1'-0"-15p
Bar-15n Bar-15m Bar-15k Bar-15g Bar-15f Bar-15d Bar-15c Bar-15b
23'-11½"
2-Part End Dams-ED2
1-Bt. Chkd. Fl. Pl. ½×8×4'-11-3¾" (Non-Skid Type)
7-Csk. Slot Hd. Mach. Screws-½"ø×1"Lg.(U.S.S.)
Cut 1'-0¼"
Bar-15af Bar-15ad Bar-15ac Bar-15ab Bar-15aa Bar-15y Bar-15w
10'-6"
9⅞"
1'-7"
1-Bt. Bar-3×½×11'-3"-Abt.
⅝"ø Holes Csk. N.S. in Chkd. Fl. ℄
Tap for ½"ø Mach. Screws in Bars (U.S.S.)
⅝"ø Holes for Bar-15af
" " " -15ad
" " " -15ac
" " " -15ab
" " " -15aa
" " " -15y
" " " -15w
2-Part End Dams-ED3R As Shown
2- " " " -ED3L Opp Hand
1℄-3½×4×3½"-15aw-Galvanized
1-Hex. Nut
1-Fill-2⅜×1⅝×3½"-15bd Weld
2-Hex. Nuts
1-Bev. Fill-2¼×1⅝×3½"-15bf Weld
1L-5×3½×⅜×4'-10¼"-15bb
2'-1¼" 1'-7½" 1'-6½"
4'-10¼"
20-Hangers-M7
Rods & Nuts to be Furnished by Water Company.
39-Hangers-M6
Not Furnished
Shim-3×4×3½" for M1
" -3×6×3½" for M2
64-Shims-M1
128- " -M2
Shim-3×6×3"
56-Shims-M3
9"ø Holes
Enlarged Sec. A-A
Enlarged Sec. B-B
Bar-15p
1-Bt. Bar-3×½×1'-0"
⅝"ø Holes
1'-7½" for Bar-15b
1'-7¼" " " -15c
1'-6¾" " " -15d
1'-6¼" " " -15f
1'-5¾" " " -15g
1'-5½" " " -15k
1'-4¾" " " -15m
1'-4¼" " " -15n
Weld to ℄-15p
⅝ For Bar-15b
⅞ " " -15c
⅞ " " -15d
⅞ " " -15f
⅞ " " -15g
⅞ " " -15k
⅞ " " -15m
⅞ " " -15n
⅝"ø Holes Csk. N.S. in Chkd. Fl. ℄
Tap for ½"ø Mach. Screws in Bar-15p (U.S.S.)
16-Plates-M10
1-Pl. 8⅝×½×1'-2½
2-Part End Dams-ED3R As Shown
2- " " " -ED3L Opp Hand
1L-3½×3½×⅜×10"-15bb
1-Bev. Fill-2¼×1⅝×3½"-15bf Weld
1L-5×3½×⅜×4'-10¼"-15bb
1-Bev. Fill-2¼×1⅝×3½"-15bf Weld
2'-1¼" 1'-7½" 1'-6½"
C. Hex. Nuts
⅝"ø Holes
4'-10¼"
18-Diaphragms-D1R As Shown
18- " -D1L Opp Hand
1L-3½×3½×⅝×10"-15bw℄ for S30-31-32
2-L⅝ 15ak℄ for S33-34
Gage as/leg 2⅞"
1L-3½×3½×⅝×9"-15am
Ga. O.S.L. 2¼"
1L-3½×3½×⅝×10½"-15an℄
Ga. O.S.L. 2¼"
4'-6 11/16"
4'-11⅞" (1-12"C.B.25#×4'-10¼")
2-L⅝ 15ak℄
2-L⅝ 3½×3½×⅝×1'-0"-15by℄ Gage as/leg 2⅞"
2-Steingers-S30
2- " -S31
2- " -S32
2- " -S33
2- " -S34
2-Steingers-S35
2- " -S36
Note
Contact surfaces in shop and field not to be painted.
2L-3½×3½×⅜×1'-0"-15ag℄
⅞"ø Gage as/leg 2⅜"
27'-0⅝" (1-16"C.B.36#×26'-11½")
9'-0" 9'-0⅝" 9'-0" 8'-7⅞" 9'-4⅛" 8'-7⅞"
2-Stringers-S28
26'-6¼" (1-16"C.B.36#×26'-5")
8'-10⅜" 8'-10" 8'-10⅜" 8'-5⅞" 9'-2⅛" 8'-6"
2-L-3½×3½×⅜×1'-0"-15ak℄
2⅜" Ga. O.S.L. 4¾" Ctrs.
2-Stringers-S29
1-15℄ 40"×27'-10½"
10⅞" 9'-0⅜" 9'-0⅝" 8'-11⅝" 1'-1⅛" 8'-7⅛" 9'-4⅜" 8'-7⅛"
1-Stringer-S37R As Shown
1- " -S37L Opp Hand
1-15℄ 40"×27'-3¾"
8'-10⅛" 8'-10" 8'-10⅝" 9⅞" 8'-5⅞" 9'-2½" 8'-5⅞" 1'-0"
1-Stringer-S38R As Shown
1- " -S38L Opp Hand
25'-9⅛" (1-16CB36#×25'-8¾") ⅜ for S30
25'-8½" (1-16CB36#×25'-7⅞") " S31
25'-7½" (1- " ×25'-6⅝") " S32
25'-6⅜" (1- " ×25'-5½") " S33
25'-5¼" (1- " ×25'-4⅝") " S34
8'-7⅛" 8'-7⅛" 8'-7⅛" " S30
8'-6⅞" 8'-7⅛" 8'-6⅞" " S31
8'-6½" 8'-6½" 8'-6½" " S32
8'-6" 8'-6⅜" 8'-6" " S33
8'-5⅝" 8'-6" 8'-5⅝" " S34
2¼ 8'-2⅞" 8'-11⅝" 1⅞ 8'-2⅝" 1⅞ " S30
2¼ 8'-2½" 8'-11¼" 1⅞ 8'-2⅝" 1⅞ " S31
2¼ 8'-2" 8'-11" 1⅞ 8'-2⅜" 1⅞ " S32
2¼ 8'-1½" 8'-10⅞" 1⅞ 8'-1⅞" 1⅞ " S33
2¼ 8'-5⅝" 8'-1½" 1⅞ 8'-6" 1⅞ " S34
½" for S30-31-32
⅛ for S30-31
1/16 for S32
3/16 for S33-34
⅛ for S30-31
1/16 for S32
¼ for S33-34
25'-4¼" (1-16 CB 36#×25'-3½") ⅜ for S35
25'-3⅛" (1 " ×25'-2½") " S36
8'-5⅜" 8'-5½" 8'-5⅜" " S35
8'-5⅛" 8'-5⅛" 8'-5⅛" " S36
2¼ 8'-0⅞" 8'-10" 8'-1¼" 1⅛ " S35
2¼ 8'-0⅛" 8'-9⅛" 8'-0⅛" 1⅛ " S36
1-15℄ 33.9#×25'-9⅛" ⅜ for S39
1- " " ×25'-8¾" ½" S40
1- " " ×25'-7⅜" ½" S41
1- " " ×25'-6¼" ½" S42
1- " " ×25'-5⅛" 9/16" S43
1- " " ×25'-4⅛" ½" S44
1- " " ×25'-3⅛" 9/16" S45
8'-6 13/16" 8'-7⅛" 8'-6⅝" " S39
8'-6 9/16" 8'-7¼" 8'-6 9/16" " S40
8'-6 3/16" 8'-6½" 8'-6 3/16" " S41
8'-5 15/16" 8'-6⅜" 8'-5 15/16" " S42
8'-5⅝" 8'-6" 8'-5⅝" " S43
8'-5 5/16" 8'-5½" 8'-5 5/16" " S44
8'-5" 8'-5 1/16" 8'-5 1/16" " S45
2⅝ 8'-2¼" 8'-11 15/16" 2⅞ 8'-2 7/16" 2⅞ " S39
2⅝ 8'-1 13/16" 8'-11⅞" 2⅞ 8'-2" 2⅞ " S40
2⅝ 8'-1 7/16" 8'-11" 2⅞ 8'-1⅝" 2⅞ " S41
2⅝ 8'-1⅛" 8'-10⅜" 2⅞ 8'-1⅛" 2⅞ " S42
2⅝ 8'-5 5/16" 8'-1⅝" 2⅞ 8'-5⅞" 2⅞ " S43
2⅝ 8'-0 9/16" 8'-10" 2⅞ 8'-0⅝" 2⅞ " S44
2⅝ 8'-0¼" 8'-9 9/16" 2⅞ 8'-0 3/16" 2⅞ " S45
3" for S39-40-41
2 15/16 for S42-43-44-45
3" for S39-40-41
3 1/16 for S42-43-44-45
1-Fill 4×⅜×1'-2½"-15cy Tack Weld to S39 only
⅛ for S39-40
1/16 " S41
¼ " S42-43
5/16 " S44-45
1-Fill 4×⅜×1'-2½"-15cw Tack Weld to S45 only
1-Stringer S39R As Shown 1-Stringer S39L Opp Hand
1- " S40R " " 1- " S40L " "
1- " S41R " " 1- " S41L " "
1- " S42R " " 1- " S42L " "
1- " S43R " " 1- " S43L " "
1- " S44R " " 1- " S44L " "
1- " S45R " " 1- " S45L " "
Rivets ⅞"ø
Open Holes 15/16"ø
Paint: One Coat Red Lead
PITTSBURGH-DES MOINES STEEL CO.
PITTSBURGH, PA. DES MOINES, IA.
Morse Bridge-Androscoggin River
Rumford, Oxford Co.
Maine Highway Comm.
Made V.V.B. Sheet No. 15
Traced W.H.
Checked W.J.H. Contract No. E 250
Revised 4/25/35
Ankwright Tracing Cloth O. K. Elliott Co. Pittsburgh, Pa.
32-194
0 1 2 3 4 5 Inches

Fed. Road Dist. No.	State	U.S.W.P.F.R. Proj. No.	Fiscal Year	Sheet No.	Total Sheets
9	Maine	1			8

STATE OF MAINE
STATE HIGHWAY COMMISSION

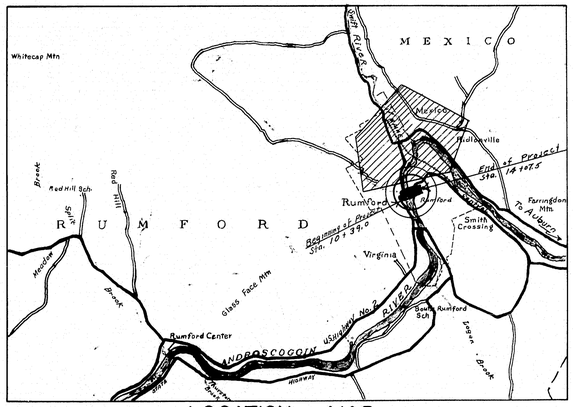
PLAN AND PROFILE
STATE HIGHWAY P.E.O-99 SPUR
MORSE BRIDGE
OVER
ANDROSCOGGIN RIVER
RUMFORD
OXFORD COUNTY
U.S.W.P.F.R. PROJECT NO. 1
TOTAL LENGTH .0698 MILES

CONVENTIONAL SIGNS

State or National Line		Survey Line	
County Line		Culvert	
Town Line		Drop Inlet	
Unfenced Property		Trolley Pole	
Fence		Power Pole	
Right of Way Line		Tel. Pole	
Traveled Way		Marsh	
Railroad		Trees	
Retaining Wall		Stone Wall	

INDEX OF SHEETS

Sheet No. 1	Survey
Sheet No. 2	Addition Abut # 1
Sheet No. 3	Pier # 1
Sheet No. 4	New Abut # 2
Sheet No. 5	Superstructure
Sheet No. 6	Lighting Details
Sheet No. 7-8	Structural Steel Details



LOCATION MAP
TRACED FROM U.S.G.S. RUMFORD SHEET
SCALE ~~1/62500~~

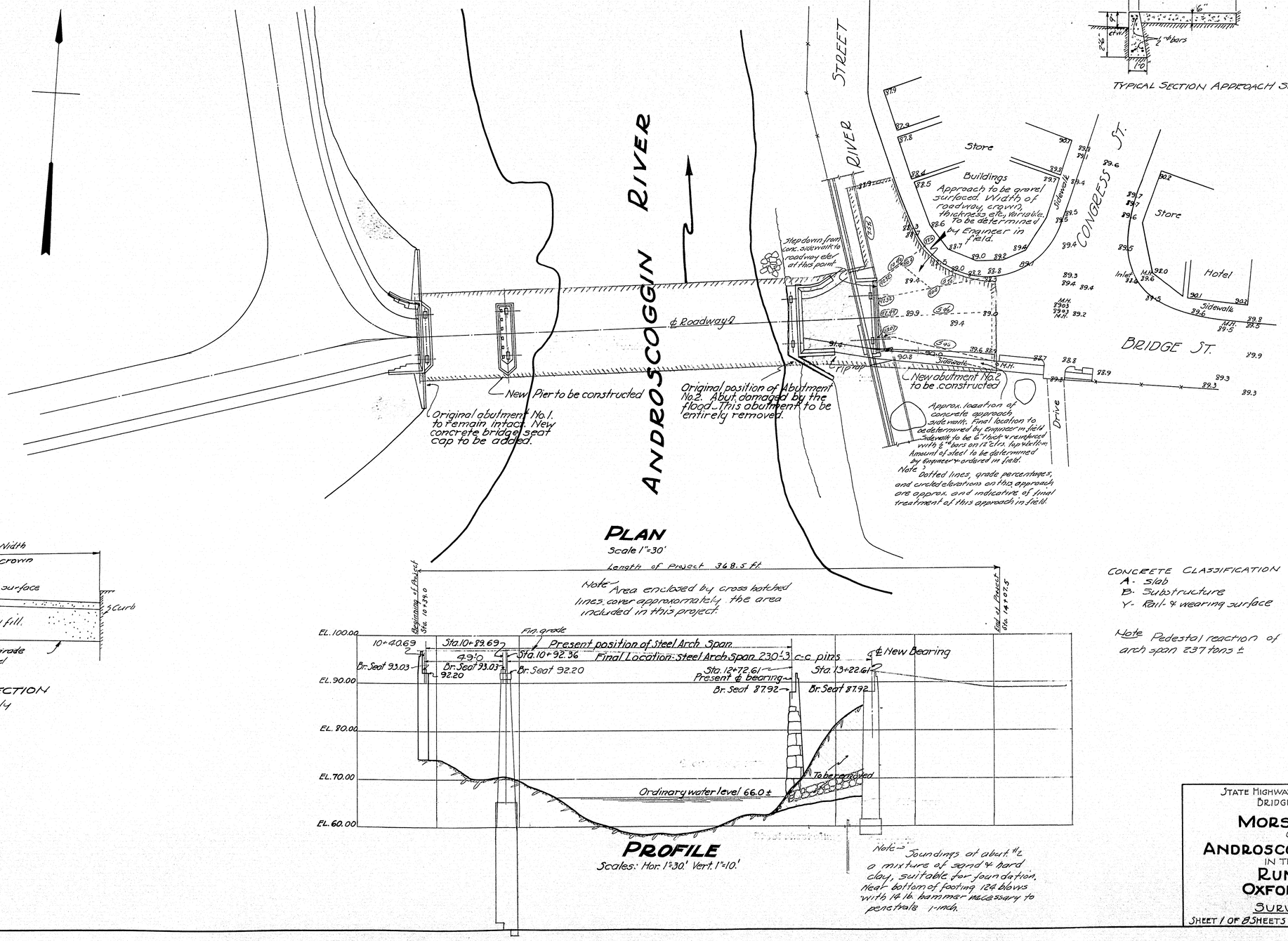
APPROVED:
MAINE STATE HIGHWAY COMMISSION
Paul E. Thurston
CHAIRMAN
[redacted]
[redacted]
CHIEF ENGINEER.

APPROVED:
U. S. BUREAU OF PUBLIC ROADS
[redacted]
DISTRICT ENGINEER
[redacted]
CHIEF ENGINEER
[redacted]
DIRECTOR.

28-150

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

0 1 2 3 4 5 INCHES



PLAN

Scale 1"=30'

Length of Project 368.5 ft.

Note → Area enclosed by cross hatched lines, cover approximately the area included in this project.

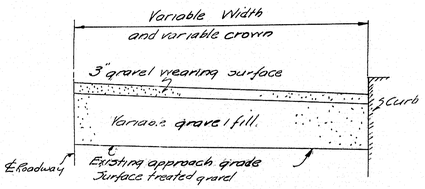
Beginning of Project Sta. 10+39.0

End of Project Sta. 14+07.5

PROFILE

Scales: Hor. 1"=30' Vert. 1"=10'

Note → Soundings at abut. #2 a mixture of sand & hard clay, suitable for foundation. Heat bottom of footing 124 blows with 14 lb. hammer necessary to penetrate 1-inch.



APPROACH SECTION

East approach only

CONCRETE CLASSIFICATION

A - Slab

B - Substructure

Y - Rail & wearing surface

Note → Pedestal reaction of arch span 237 tons ±

TOWN 09-36
BRIDGE 2575

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

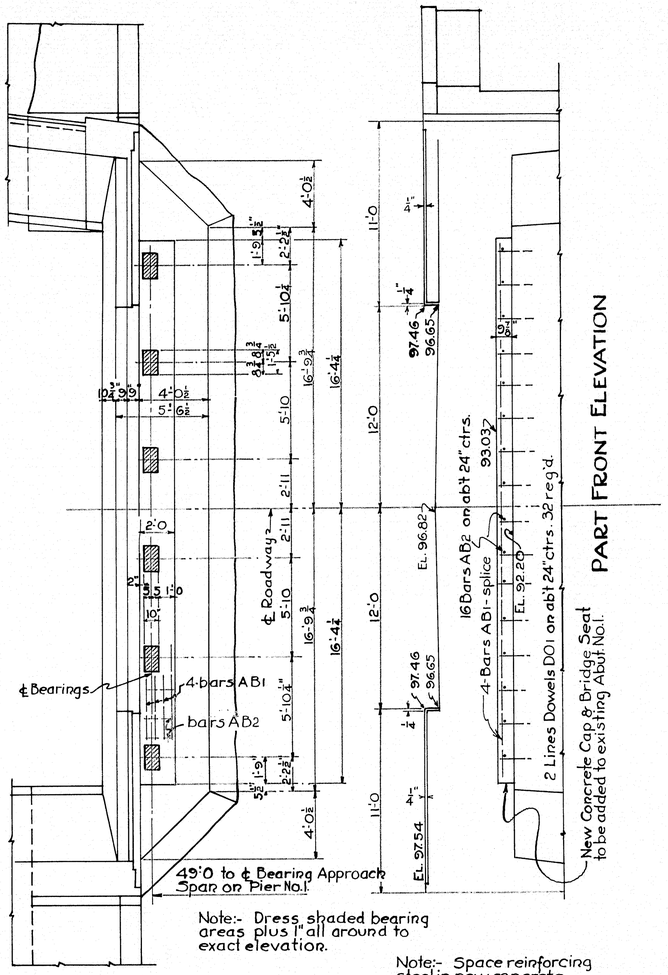
MORSE BRIDGE
OVER
ANDROSCOGGIN RIVER
IN THE TOWN OF
RUMFORD
OXFORD COUNTY

SURVEY PLAN

SHEET 1 OF 8 SHEETS AUGUSTA ME. MAY 1936

28-151

0 1 2 3 4 5 INCHES



PART FRONT ELEVATION

Note:- Dress shaded bearing areas plus 1" all around to exact elevation.

Note:- Space reinforcing steel in new concrete cap so as not to interfere with anchor bolts.

PART PLAN

Drawn by V.E.
Traced by C.T.S.
Checked by C.L.P.

Town 09-36
Bridge 2585

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

MORSE BRIDGE
OVER
ANDROSCOGGIN RIVER
IN THE TOWN OF
RUMFORD
OXFORD COUNTY

ADDITION TO ABUTMENT No.1.

SHEET 2 OF 8 SHEETS AUGUSTA ME MAY 1936.

28-152

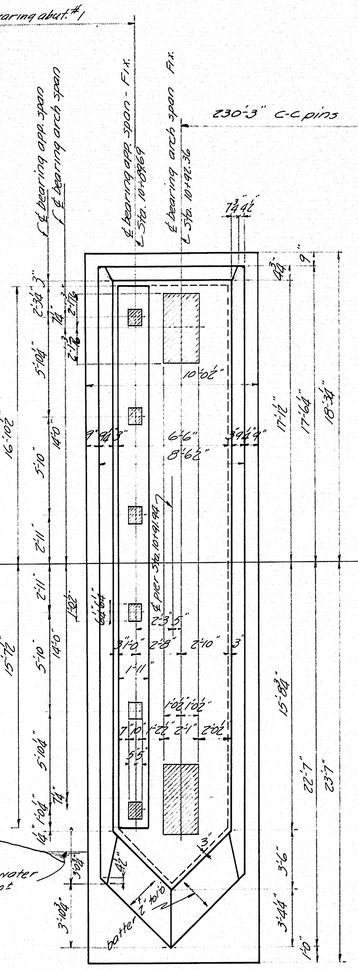
0 1 2 3 4 5 INCHES

SOUNDINGS May 28-36

Scale 1/8" = 1'-0" All elevations shown are ledge

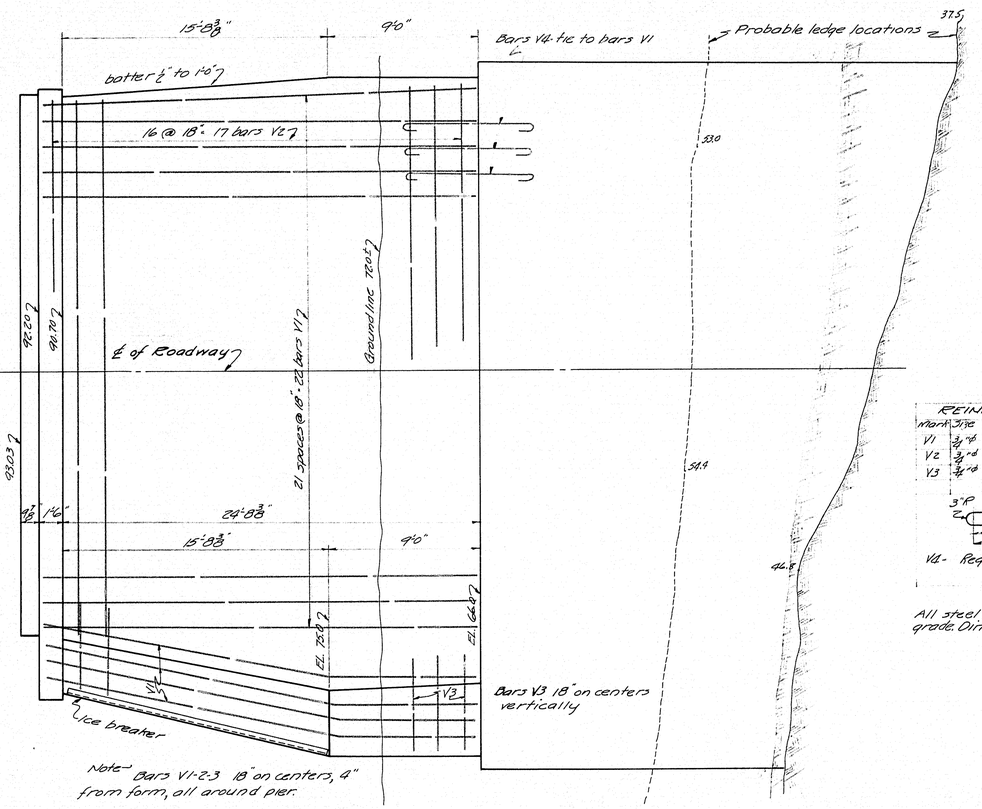
PROFILE SHOWING LOCATION OF PROPOSED PIER

Scale 1/8" = 1'-0"



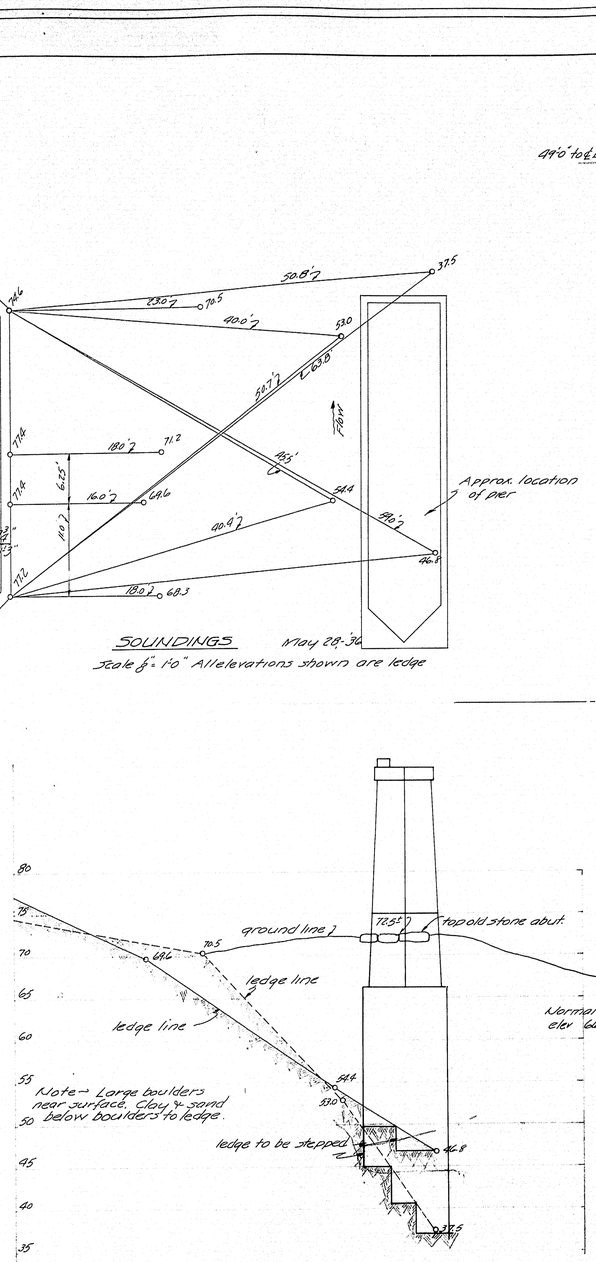
PLAN

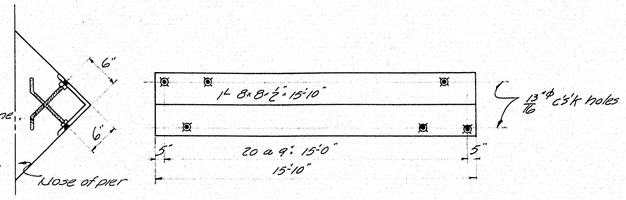
Dress shaded bearing areas plus one inch all around to exact elevation.



Note— Bars V1-2-3 18" on centers, 4" from form, all around pier.

SIDE ELEVATION





1- ICE BREAKER

REINFORCING STEEL				
Mark	Size	No	Length	Remarks
V1	¾" sq	110	14'6"	Pier-Vertical steel
V2	¾" sq	68	20'0"	" Horizontal
V3	¾" sq	17	12'0"	Bend to fit pier nose

V4 - Reqd 55 - ¾" sq Length 9'7"

All steel to be plain bars, structural grade. Dimensions are to ℄ of bars.

Town 09-36
Bridge 2585

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

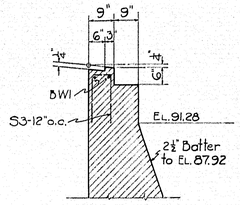
MORSE BRIDGE
over
ANDROSCOGGIN RIVER
in the town of
RUMFORD
OXFORD COUNTY
PIER No. 1.

Sheet 3 of 8 Augusta Me. July, 1936.

28-153

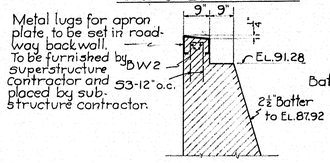
0 1 2 3 4 5 INCHES

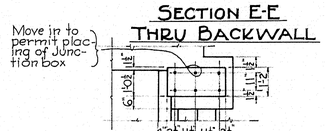
SECTION D-D THRU BACKWALL



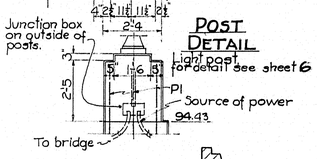
SECTION E-E THRU BACKWALL

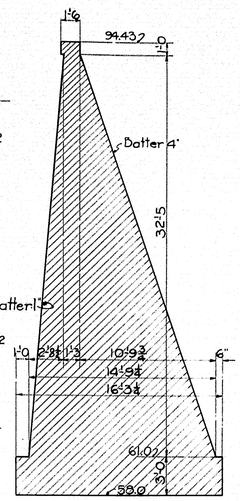
Metal lugs for apron plate, to be set in roadway backwall. To be furnished by superstructure contractor and placed by sub-structure contractor.



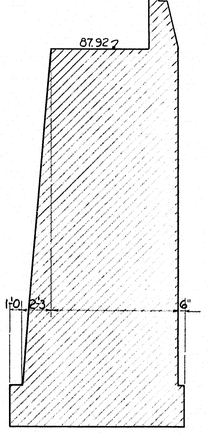


POST DETAIL



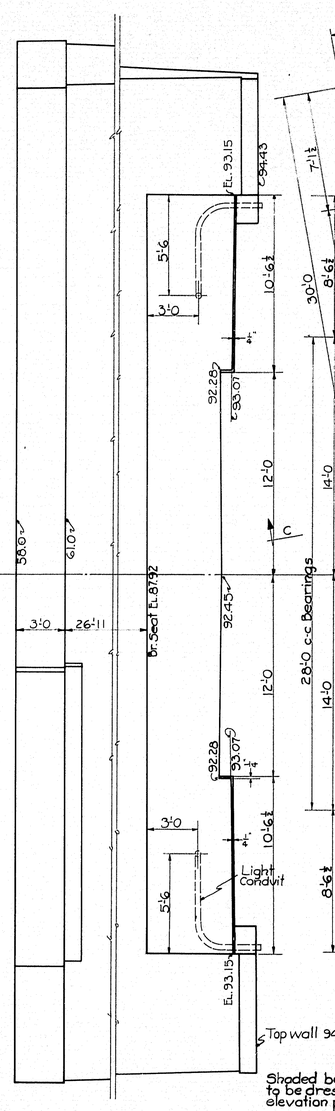


VIEW A-A

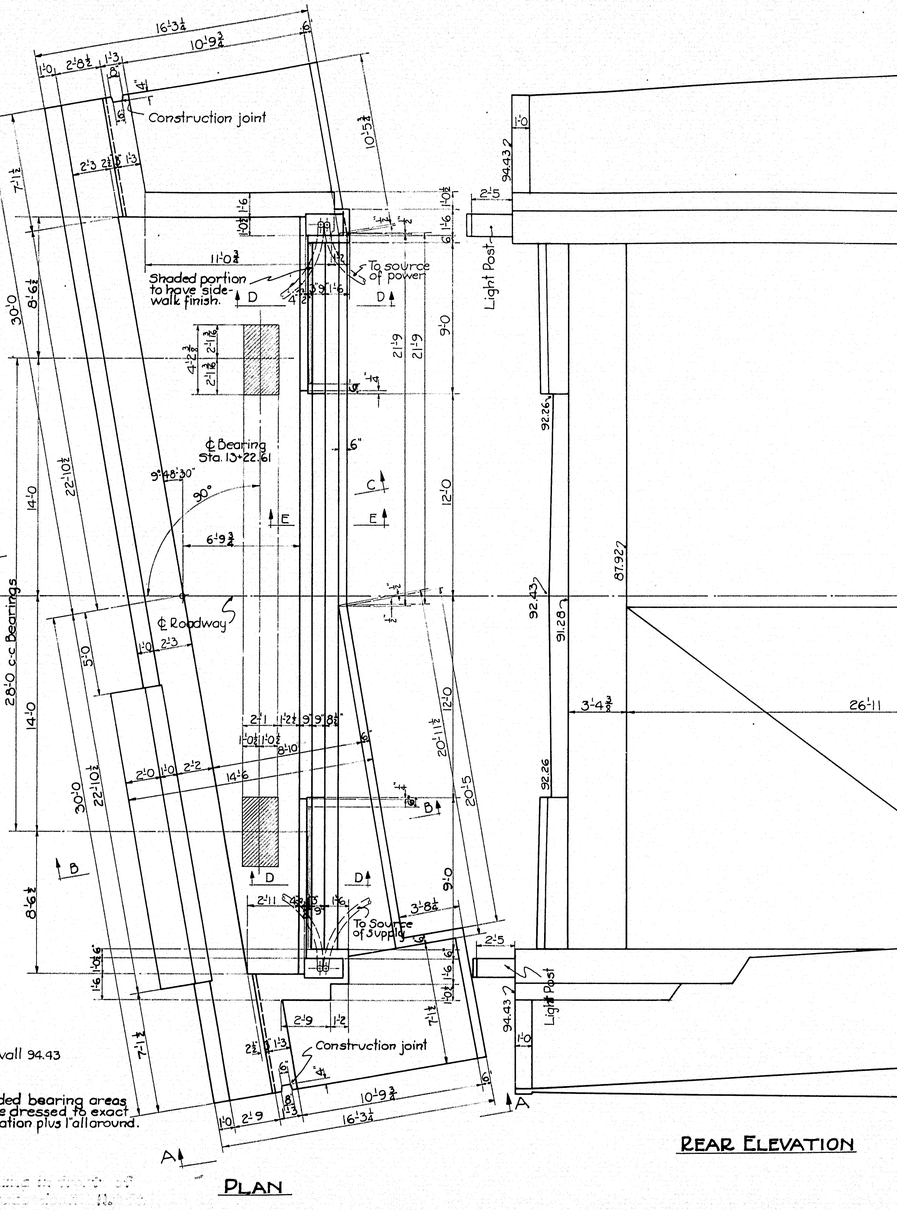


SECTION C-C

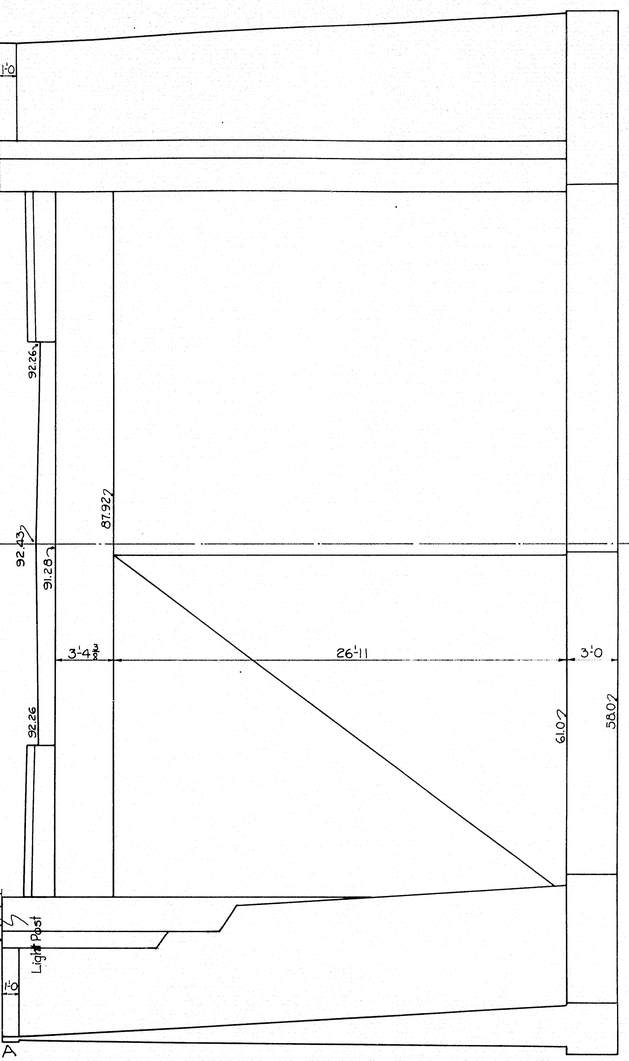
SECTION B-B



FRONT ELEVATION



PLAN



REAR ELEVATION

Drawn by V.E.
Traced by I.D.
Checked by C.L.P.

Town 09-36
Bridge 2585

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

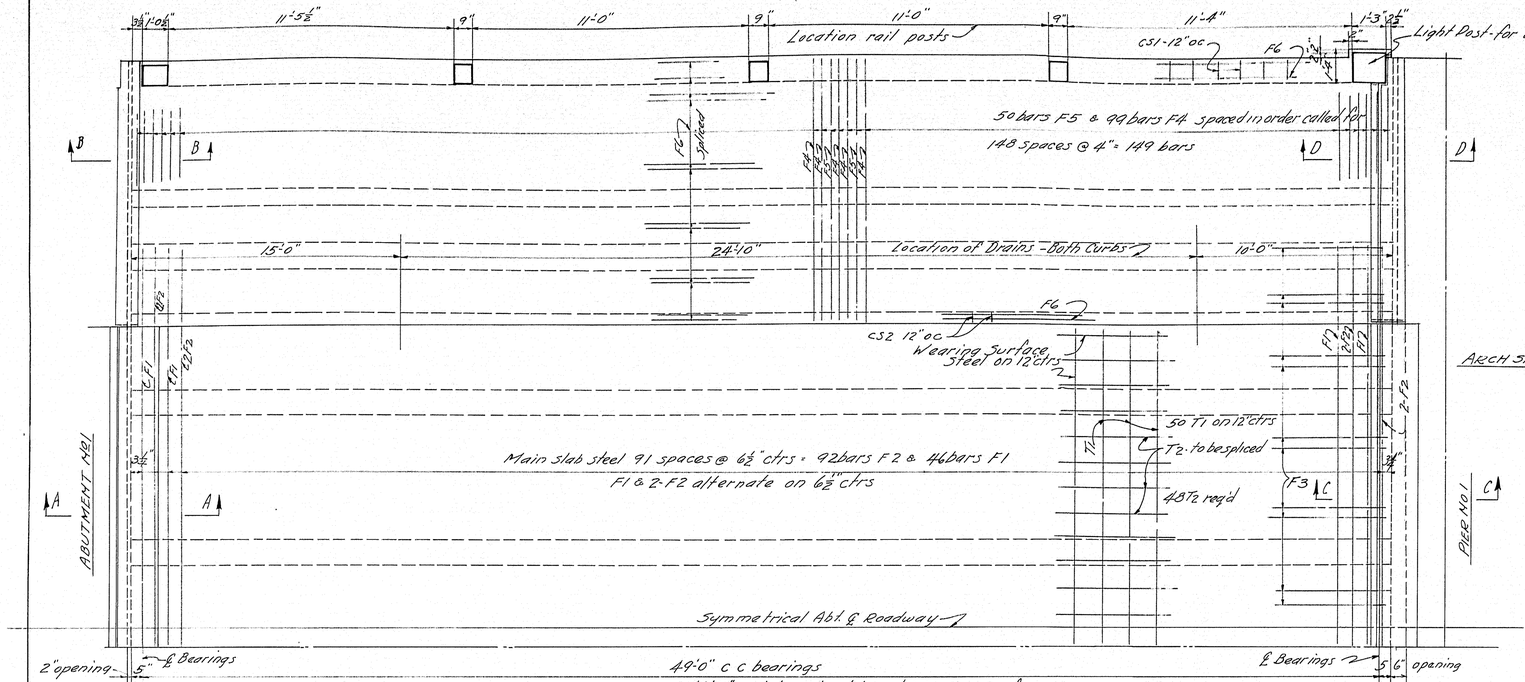
MORSE BRIDGE
OVER
ANDROSCOGGIN RIVER
IN THE TOWN OF
RUMFORD
OXFORD COUNTY

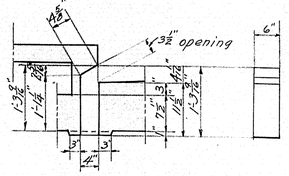
NEW ABUTMENT NO. 2

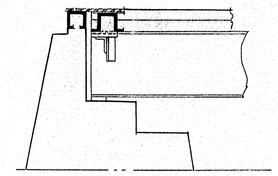
SHEET 2 OF 3 SHEETS AUGUSTA ME. MAY 1936

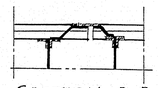
28-154

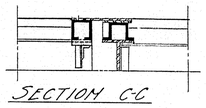
0 1 2 3 4 5 INCHES

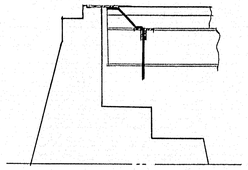


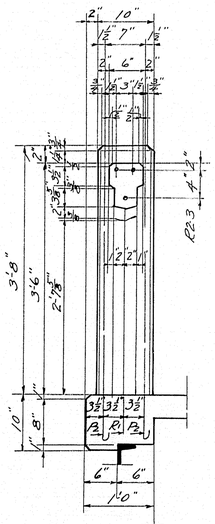



SECTION-A-A


SECTION D-D

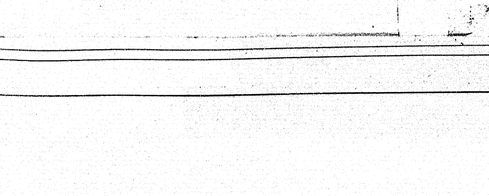

SECTION C-C


SECTION - B-B


SECTION E-E

All steel to be plain bars, structural grade. Dimensions are to center line of bars.

STEEL SCHEDULE



Mark	Size	No	Length	Location	Mark	Size	No	Length	Location
F1	⅞" ▭	46	33'-11½"	Slab	CS2	½" ⌀	100	3'-0"	Curb
FA	½" ⌀	198	11'-10½"	S.W. Slab	S3	½" ⌀	A2	3'-6	Abut #2
CS1	½" ⌀	100	3'-1"	Misc'lg					
A81	⅜" ⌀	8	17'-0"	Abut #1	T1	⅞" ⌀	50	23'-10	W. Surface
A82	⅜" ⌀	16	1'-9"	"	T2	⅞" ⌀	48	26'-3"	"
D01	⅜" ⌀	32	1'-6"	"	F5	½" ⌀	100	10'-3"	Sidewalk
~~F2~~	~~⅞" ⌀~~	~~92~~	~~3'-6~~	~~Right End~~	F6	½" ⌀	56	26'-3"	"
~~F2~~	~~⅞" ⌀~~	~~46~~	~~4'-6~~	~~Abutment~~	F2	⅞" ⌀	92	29'-4"	Roadway
BW1	½" ⌀	4	10'-6"	Abut #2	F3	⅜" ⌀	90	26'-3"	"
BW2	½" ⌀	4	13'-0"		D2	⅝" ⌀	16	1'-0"	Light Post
R1	⅜" ⌀	80	31'-1"	rail					
R2	⅜" ⌀	12	71'-2½"	"					
R3	⅜" ⌀	6	71'-6½"	"					
R4	⅜" ⌀	6	11'-8"						

Bent Bars
Straight Bars
P1 = 3'-3"
P2 = 3'-11"
P1 - ¾" ⌀ Reqd 12 - Length 4'-3½"
P2 - ¾" ⌀ Reqd 40 Length 4'-11"

Rail Notes
Post and vertical rail steel to be set in sidewalk. Build rail forms and set in position. Break the bond at points "C" & "D" by placing there, at the proper time, one thickness of roofing. When rail forms are removed, wrap ends of rails for 6" with two thicknesses of roofing and build posts. Rails to extend into posts 1½". When post forms are removed cut away all exposed felt. Chamfer all exposed edges of concrete ½" unless otherwise indicated.

TOWN 09-36
BRIDGE 2585

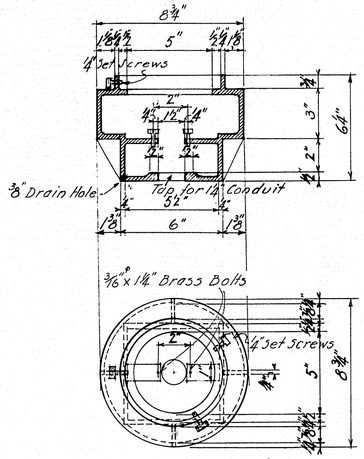
STATE HIGHWAY COMMISSION
BRIDGE DIVISION

MORSE BRIDGE
OVER
ANDROSCOGGIN RIVER
IN THE TOWN OF
RUMFORD
OXFORD COUNTY
SUPERSTRUCTURE

SHEET 5 OF 8 SHEETS AUGUSTA ME. MAY 1936

28-155

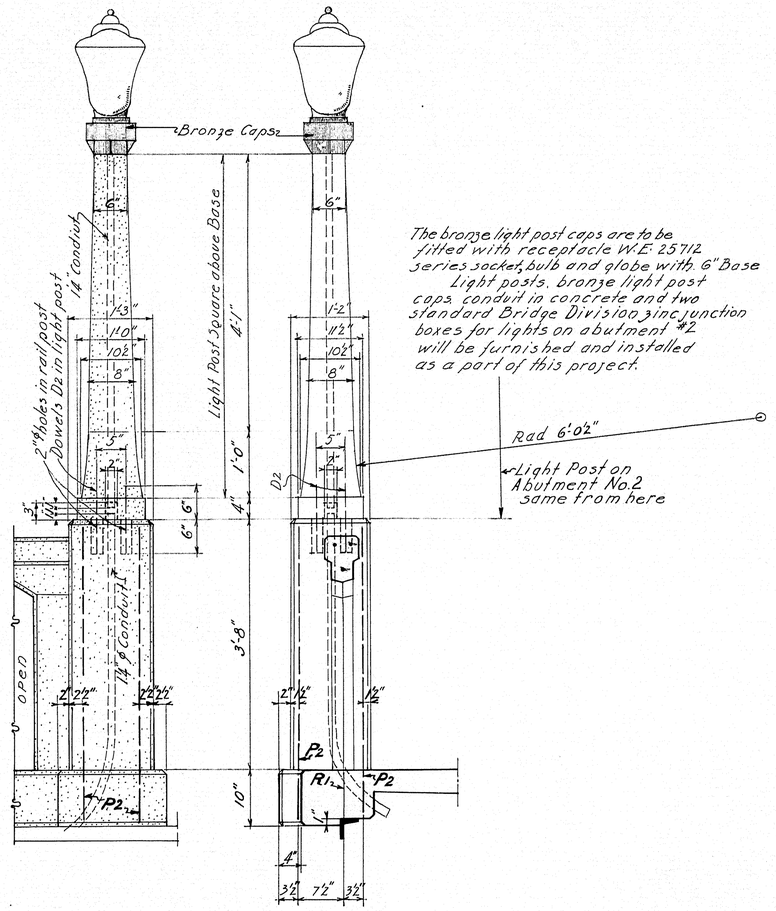
0 1 2 3 4 5 INCHES



DETAIL

BRONZE LIGHT POST CAP

4 Required



LIGHT POSTS

2 Req'd - Abut No 2
2 " Approach span

DESIGNED
TRACED C.T.S
CHECKED C.L.P

Town 09:36
Bridge 2585

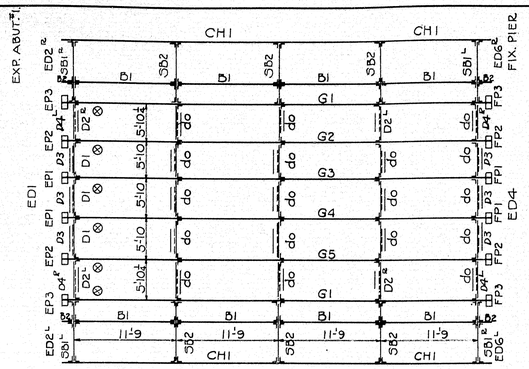
STATE HIGHWAY COMMISSION
BRIDGE DIVISION

MORSE BRIDGE
OVER
ANDROSCOGGIN RIVER
IN THE TOWN OF
RUMFORD
OXFORD COUNTY

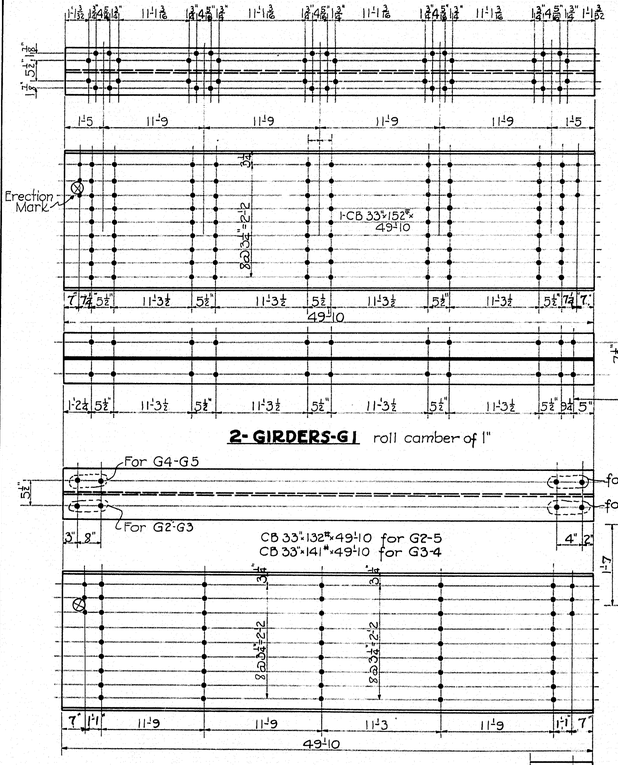
LIGHTING DETAILS
SHEET 6 OF 8 SHEETS AUGUSTA ME. MAY 1936

28-156

0 1 2 3 4 5 INCHES

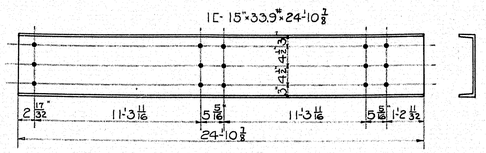


ERECTION DIAGRAM

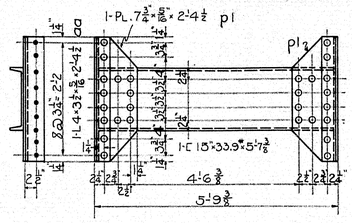


2-GIRDERS-G1 roll camber of 1"

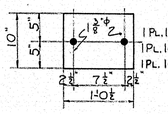
1-GIRDER	G2	Roll camber of 1"
1- do	G3	
1- do	G4	
1- do	G5	



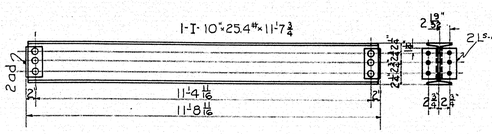
4-CH1



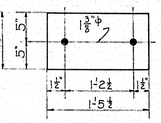
15-DIAPHRAGMS-D1



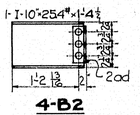
2-FP1
2-FP2
2-FP3



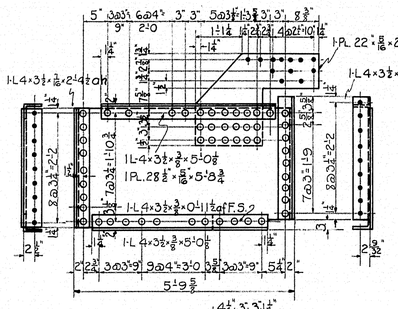
8-B1



2-EP1
2-EP2
2-EP3

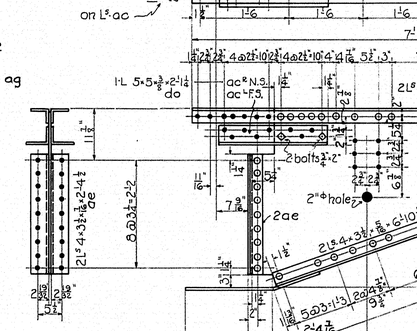


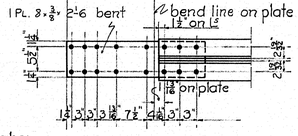
4-B2



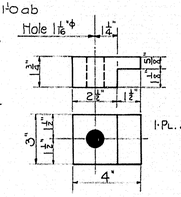
Note: End diaphragms and brackets to be riveted to G-1 before stringer is placed in position.

5-DIAPHRAGMS-D2R as shown
5 " D2L opp hand

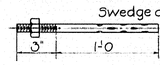




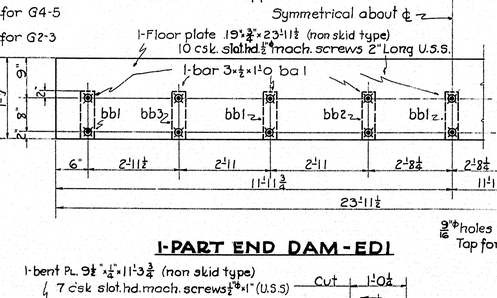
6-SIDEWALK BRACKETS-SB2
2 " " SB1R as shown
2 " " SB1L opp hand

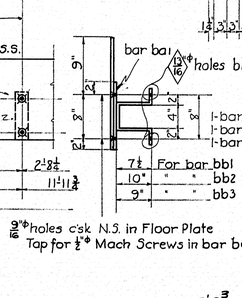


12-CLIPS-CP1
for EP1-2-3

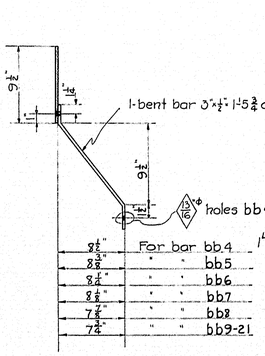


24-AB1 2-each for EP1-2-3 & EP1-2-3

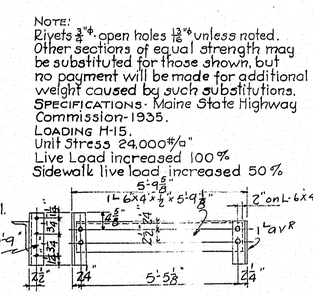




SIDEWALK BRACKETS

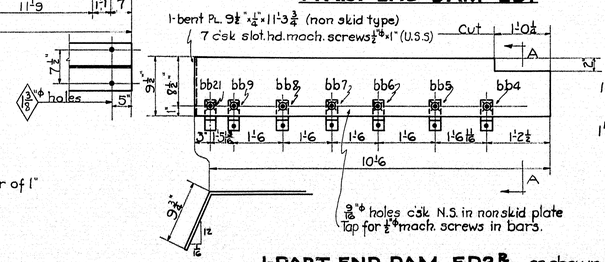


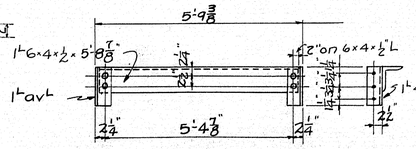
SECTION A-A



2-DIAPHRAGMS D4R as shown
2 do D4L opp hand

Town 09-36
Bridge 2585





6-DIAPHRAGMS - D3

1-PART END DAM-ED1

1-PART END DAM ED2R as shown
1- do ED2L opp hand

NOTE:
Rivets ¾"ϕ open holes 13/16"ϕ unless noted.
Other sections of equal strength may be substituted for those shown, but no payment will be made for additional weight caused by such substitutions.
SPECIFICATIONS- Maine State Highway Commission-1935.
LOADING H-15.
Unit Stress 24,000#/a"
Live Load increased 100%
Sidewalk live load increased 50%

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

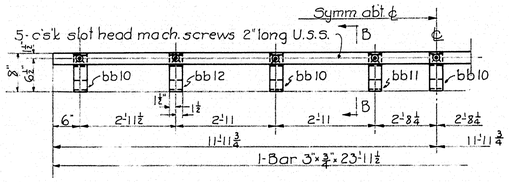
MORSE BRIDGE
OVER
ANDROSCOGGIN RIVER
IN THE TOWN OF
RUMFORD
OXFORD COUNTY

STRUCTURAL STEEL DETAILS

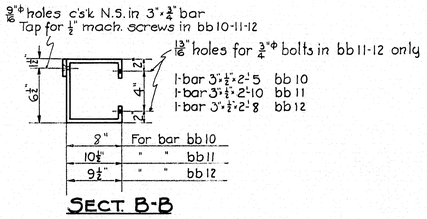
SHEET 7 OF 8 SHEETS AUGUSTA ME. MAY 1936.

Drawn by V.E.
Traced by H.C.
Checked by C.A.P.

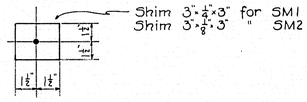
28-157



1-PART END DAM ED4

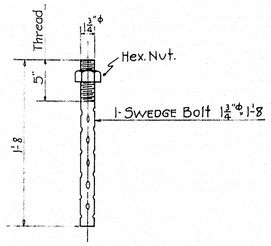


SECT. B-B

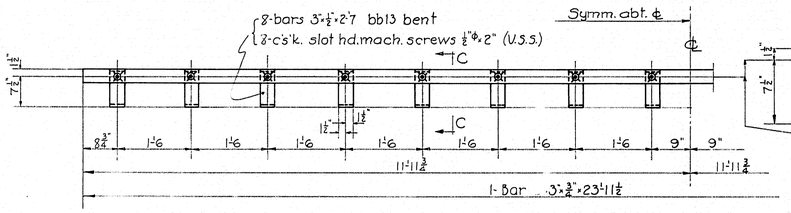


16 SHIMS SM1
80 SHIMS SM2

Shims to be used for obtaining proper position of expansion dams.

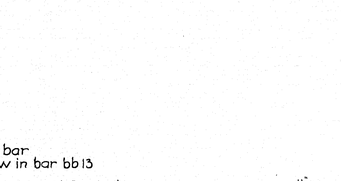


16-SWEDGE BOLTS
ARCH SPAN

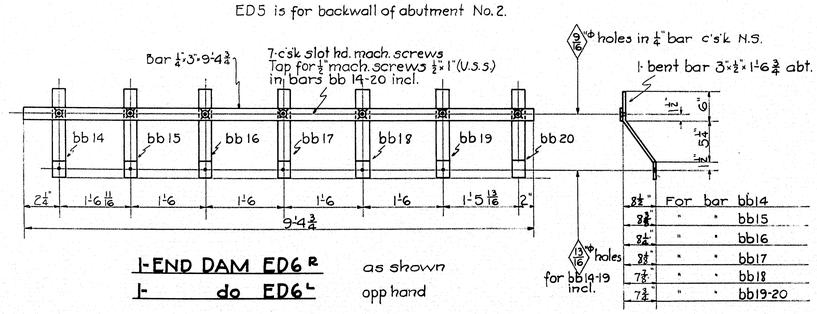


1-PART END DAM ED5

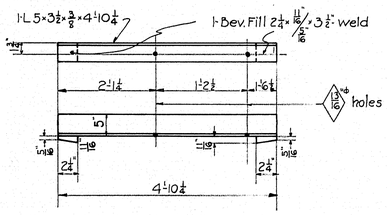
ED5 is for backwall of abutment No. 2.



SECT. A-A

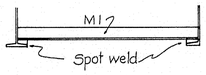


1-END DAM ED6 R as shown
1- do ED6 L opp hand



5-HANGERS M1

Hangers to be on abt. 12'0 ctrs under down stream sidewalk. To be spot welded to sidewalk stringers.



Note to Contractor:
All sidewalk plates and floor plates on arch span to be reused.

Care should be taken to protect these plates during moving of arch span and subsequent work. All end dams to be bolted with ¾"Φ bolts hex. nuts.

Note:
Rivets ¾"Φ open holes 13/16"Φ unless noted.
Other sections of equal strength may be substituted for those shown, but no payment will be made for additional weight caused by such substitutions.
SPECIFICATIONS:- Maine State Highway Commission-1933.
LOADING H-15
Unit Stress 24,000#/□"
Live Load increased 100%
Sidewalk live load increased 50%

Drawn by V.E.
Traced by T.B.
Checked by C.L.P.

TOWN 09-36
BRIDGE 2585

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

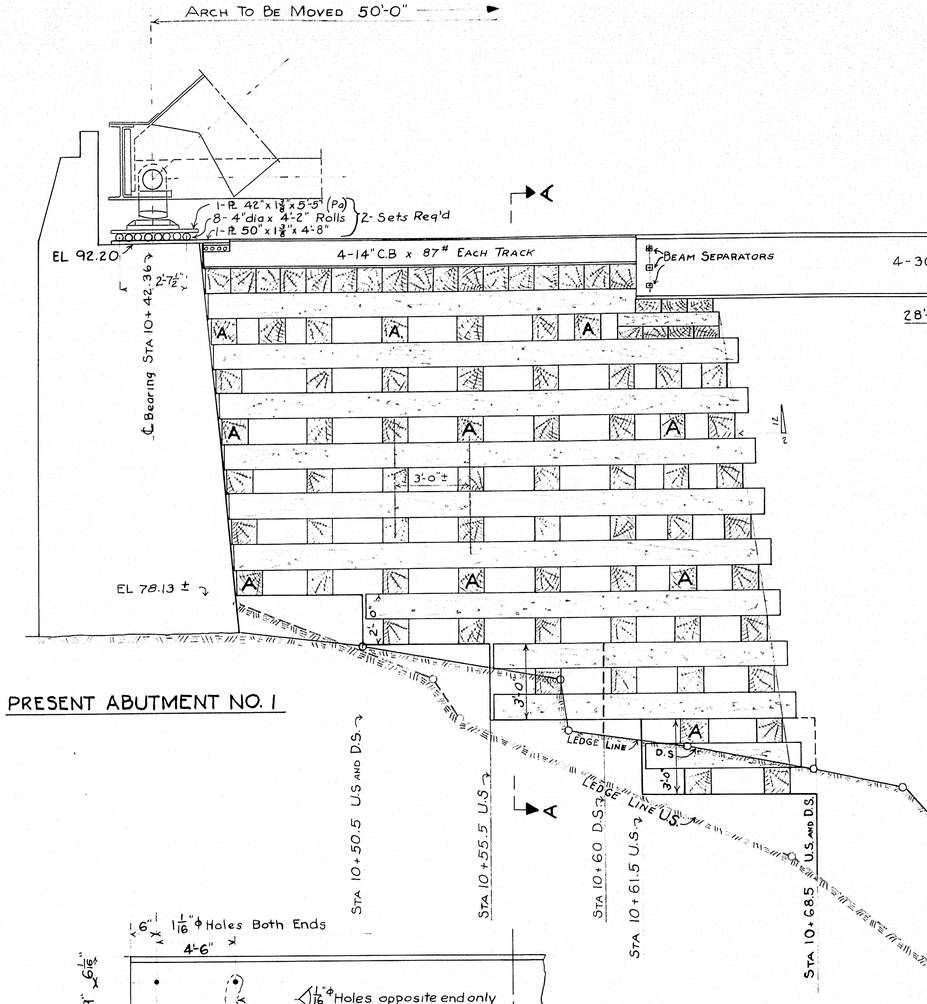
MORSE BRIDGE
OVER
ANDROSCOGGIN RIVER
IN THE TOWN OF
RUMFORD
OXFORD COUNTY

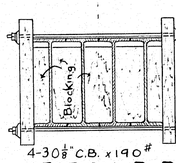
STRUCTURAL STEEL DETAILS

SHEET 8 OF 8 SHEETS AUGUSTA ME. MAY 1936.

28-158

0 1 2 3 4 5 INCHES



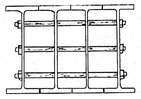


SECTION B-B

U.S. AND D.S. THE SAME

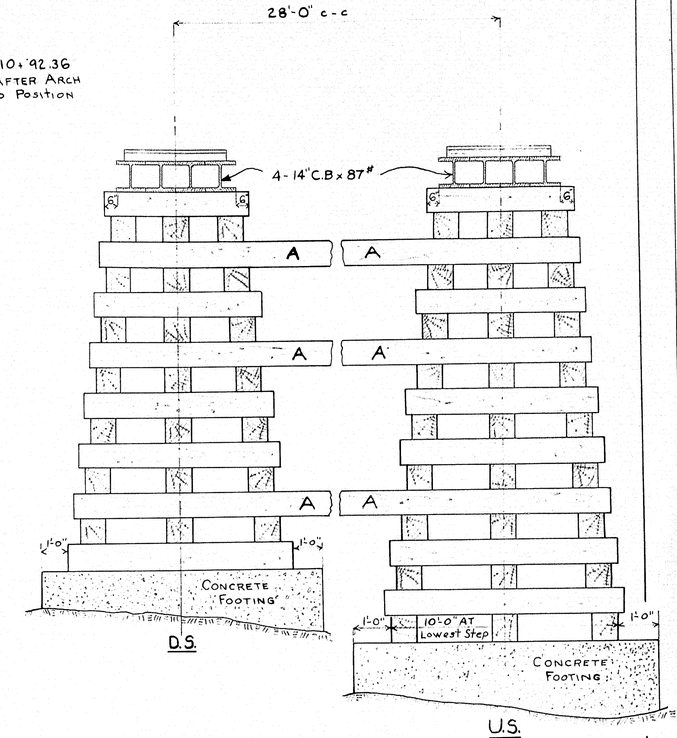
TIE-ROD DETAILS

1"ϕ Rods threaded both ends - Cast Washers.
6"x6" Oak Timbers
NOTE ~ Similar details for 4-14" C.B. 87# Beams.
NOTE ~ These ties are to be placed at intervals of 8'-0" to 10'-0" and are to be moved when they interfere with the rolls



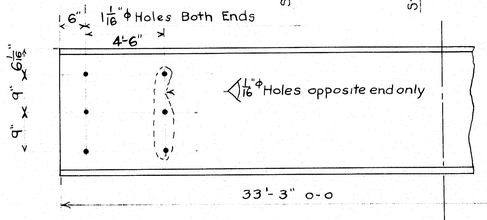
BEAM SEPARATORS

18-1"ϕ x 4'-6" rods threaded 4" both ends
54-1" dia. x 1'-2¼" pipe
36-Square Nuts

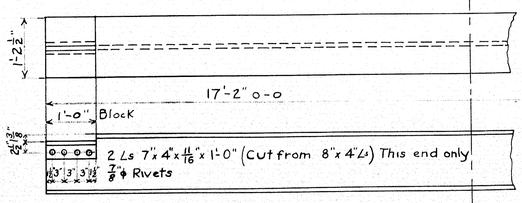


SECTION A-A

NOTE - All timber blocking to be hardwood - Oak - Maple - Birch
All main blocking to be 12"x12"



8-30⅛" C.B. x 190# x 33'-3"



8-14" C.B. x 87# x 17'-2"

NEW PIER

CONTRACTORS
WYMAN AND SIMPSON, INC.
WATERVILLE, MAINE
PROPOSED FALSEWORK DETAILS (WEST END)
FOR MOVING
MORSE BRIDGE
OVER
ANDROSCOGGIN RIVER
IN THE TOWN OF
RUMFORD - ANDROSCOGGIN CO.
SHEET 1 OF 3
Nov. 1936

28-159

PLAN HAMILTON
TRACED McEACHERN

0 1 2 3 4 5 INCHES

ARCH TO BE MOVED 50'-0"

℄ PRESENT ℄ BEARING STA 12+72.61

℄ PRESENT BACKWALL TO BE REMOVED

1-PL 42" x 1⅜" x 5'-5" (Pa)
8- 4" dia. x 4'-2" Rolls
1- PL 50" x 1⅜ x 7'-5"
} 2-Sets Req'd.

NOTE- SEE SHEET 1 for Tie-rod details

NOTE – GIRDERS TO BE BURNED OFF AT THIS POINT AFTER ARCH IS MOVED INTO POSITION THEN THE REMAINING PORTION OF ABUTMENT CONCRETE IS TO BE PLACED

℄ BEARING 13+22.61

EL 87.92
EL 87.47
EL 86.30

BEAM SEPARATORS

2'-7½"

4-14"CB x 87# EACH TRACK

4-14"CB x 87#. EACH TRACK

CONCRETE FOOTING

2'-0"

2'-0"

CONCRETE FOOTING

3'-6"
11" 10" 10" 11"

2½"
2'-6"
5'-5"
2'-6"
2½"

1⅞" Φ Holes

PL 42" x 1⅜" x 5'-5" (Pa

PRESENT ABUTMENT NO. 2.

PL-Pa - 42" x 1⅜" x 5'-5" - 4 REQD

NEW ABUTMENT NO. 2.

℄ BEARING 2

28'-0" c-c.

4-14"CB x 87#

A

A

A

1'-0"

1'-0"

SECTION A-A

1'-2½"

B1 (4@ 16'-10") (4@ 30'-0") B2

1'-0" Block

2½" 2½"

2-Ls 7" x 4" x 11/16 x 1'-0" (Cut from 8" x 4" Ls)
This end only

4-14"CB x 87# x 16'-10" (B1)
4-14"CB x 87# x 30'-0" (B2)

16'-10" B3
30'-0" B4
6" 2'-0" One end only
1⅛" Φ Holes

2½"
9"

4-14"CB x 87# x 16'-10" (B3)
4-14"CB x 87# x 30'-0" (B4)

B2 B3
B1 B4
B2 B3
B1 B4

TRACK LAYOUT

BEAM SEPARATORS
8 - 1" Φ x 4'-0" rods threaded 4" both ends
24 - 1" dia. x 1'-2" pipe
16" - Square Nuts

NOTE- All timber blocking to be hardwood
OAK - MAPLE - BIRCH
All main blocking to be 12" x 12"

CONTRACTOR'S
WYMAN AND SIMPSON, INC.
WATERVILLE, MAINE
PROPOSED FALSEWORK DETAILS (EAST END)
FOR MOVING
MORSE BRIDGE
OVER
ANDROSCOGGIN RIVER
IN THE TOWN OF
RUMFORD-ANDROSCOGGIN CO.
SHEET 2 OF 3 Nov. 1936

Plan-Hamilton
Traced-McEachern

28-160

0 1 2 3 4 5 INCHES

DIAPHRAGMS E

ASSEMBLY BEAMS D

HOLES 1⅛" ⌀

L H 2'-0" 6'-6" 8" × 2'-0" 4 WANTED

8'-2"

1'-0" 1'-0" 2'-3½" 11⅛" 2'-3¼" 7¼"

36"

1'-11"

~NOTE~
THIS BLOCKING IS ONLY NECESSARY AT WEST ABUTMENT. AT EAST ABUTMENT ALL BLOCKING RESTS DIRECTLY ON BRIDGE SEAT.

5'-6" 5'-6"

9½" 9½"

TEMPORARY CONCRETE FOOTING, DOWELLED INTO LEDGE

1¼" ANCHOR BOLTS SET INTO LEDGE

~CONSTRUCTION NOTES~
ALL CONCRETE SUPERSTRUCTURE AT END OF END PANELS TO BE REMOVED. END SIDEWALK BRACKETS TO BE REMOVED. SIDEWALK STRINGERS TO BE CUT, AND SLABS SUPPORTED EXTERNALLY

8'-2"

7¼" 2'-3¼" 11⅛" 2'-3½" 8" 1'-0" 1'-0"

℄ OF PIN

1'-7"

9½" 9½"

EYE BAR

SLEEVE NUT

EYE BAR

SLEEVE NUT

SECTION THRU PIN

ALL STRUCTURAL STEEL TO BE INTERMEDIATE GRADE
ALL TIMBER BLOCKING TO BE HARDWOOD - OAK - MAPLE - BIRCH

* 2 STD CAST WASHERS EACH
△ RODS THREADED ONE END AND FITTED WITH NUT.

5½" 5½" 1'-1½" 5½" 5½"

8" 9½" 9½" 8"

2'-11"

BEAMS A
8 - B 10", 100*, 2'-11"

5½" 5½" 1'-1½" 5½" 5½"

8" 1'-7" 8"

2'-11"

BEAMS B
4 - B 10", 100*, 2'-11"

BOLT LIST

MARK	SIZE	NO.	LENGTH	LOCATION
B1	⅞	36	0'-3"	C TO A (C16 B)
B2	"	36	0'-2"	LB TO E
B3	"	128	0'-2"	E TO D
B4	1"	20	3'-5"	ITM. COL. M
B5	1"	30	2'-4"	" " K
B6	1¼"	12	3'-6"	ANC. BOLTS A
B7	1¼"	6	3'-8"	ANGLES H
B8	1¼"	6		

3'-3⅜"

3" ⌀ HOLES ⅛" TOLERANCE

1'-7¾"

5⅜" 1'-0⅜" 1'-0⅜" 5⅜"

3'-0"

BEAMS D
12 B 14", 193*, 3'-0"

⅜" PL. ⅜" FILLET WELD

1'-5"

3'-0"

PL. 17 × ⅜ × 3'-0"
8 PLATES F

1½" ON ℄ 1½"

3⅜" 3⅜"

1'-11⅝"

12⅜" 9½" 2½"

2'-4⅜" b.b ls.
[12", 25*, 2'-2⅜"
2 Ls 4" 3½" ⅜ × 1'-0"
16 DIAPHRAGMS E

⅜" PL. ⅜" FILLET WELD

9" DIA. +⅛ TOLERANCE

9" DIA. +⅛ TOLERANCE

1'-5" 8½" 8½" 7½" 8" 7½" 4½" 8½" 1'-5"

PL. 17 × 1½" × 7'-9"

8½" 3¼" 4½" 4½" 3¼" 8½"

6'-4"

8 EYE BARS

1'-0" 2½" 5½" 1'-1½" 5½" 2½"

2'-3½"

PL. 12 × ½ × 2'-3½"
8 PLATES G

5'-3"

5½"

COLD ROLLED STEEL

4 PINS

10'-2½"

1'-7"

9½" 9½"

6'-4"

1'-0" 2½" 1'-8" 2'-3½" 11⅛" 8'-2"

5½" 3@3⅜"=9" 10'-3" 3@3⅜" 1'-1⅛"

BEAMS C
8 - B 27", 114", 13'-1⅞"

8'-3" 10'-2½" 1'-7" 8'-3"

5½" 5½" 15½" 5½" 1'-1½" 5½" 5½"

9'-9"

13'-1⅞"

⅜" PL. ⅜" FILLET WELDS

1'-1⅛" 10⅜"

BORE AND TAP TO FIT 6" ⌀ 6 THREADS PER INCH AM. BR. CO. STD

5⅛" 2⅛" 2⅛"

SLEEVE NUT REQUIRED

ALL OPEN HOLES 15/16" ⌀ UNLESS NOTED.

PL. 6 PL. 6 PL. 6

ASSEMBLY BEAMS C

0 1 2 3 4 5 INCHES

ALLOWABLE STRESSES
STEEL: TENSION & BENDING = 24000 #/□"
BEARING ON TIMBER 500 #/□"
WEB BUCKLING $f_b = \frac{18000}{1 + \frac{1}{3000}\left(\frac{d}{t}\right)^2}$
NOT TO EXCEED 15000 #/□"

DESIGN COMPUTATIONS
70 TON JACKS

BEAM A

70T = 140000#

19'

70000# 70000#

M = 70000 . 95" = 665000"# S = 27.8
B10"x100# d = 11.12" t = .685"
$f_b = \frac{18000}{1 + \frac{1}{3000}\left(\frac{111.12}{.685}\right)^2} = 11500$ #/□"
ALLOWABLE END REACTION
11500 . .685 (14 + 11.12/4) = 132000 LBS.
ALLOWABLE CENTER LOAD
11500 . 2 . .695 (11 + 11.12/4) = 260000#
ALLOWABLE END SHEAR = 92000#

Use B 10", 100#

BEAM B

125000 125000

125000 125000

19'

ALLOWABLE END REALTION = 132000#
Use B 10"x100#

BEAM C

140000 70000 70000

93333 EACH

3'-1" 2'-5" 2'-3½" 1'-7"

MAX. MOM. AT 0 - 6 = 21300" S = 269.0
B 27-114 d = 27.28" t = .57" S = 299.2
$f_b = \frac{18000}{1 + \frac{1}{3000}\left(\frac{27.28}{.570}\right)^2} = 10200$

ALLOWABLE END REACTION
10200 . .570 (58 - 27.28/4) = 376000#
ALLOWABLE END SHEAR 188000

EYE BARS
JACK LOAD EACH = 280000# NET AREA = 11.7□"
Use 8", 1½" = 12.0□" NET

PIN
3⅞" 3⅜" 2⅞" 2'-5" 2'-5"
M = 186700 . 3.375 = 1760000"#
9" ⌀ PIN GOOD FOR 1932, 4.00"#
186700 186700

BEAM D
196666

19"

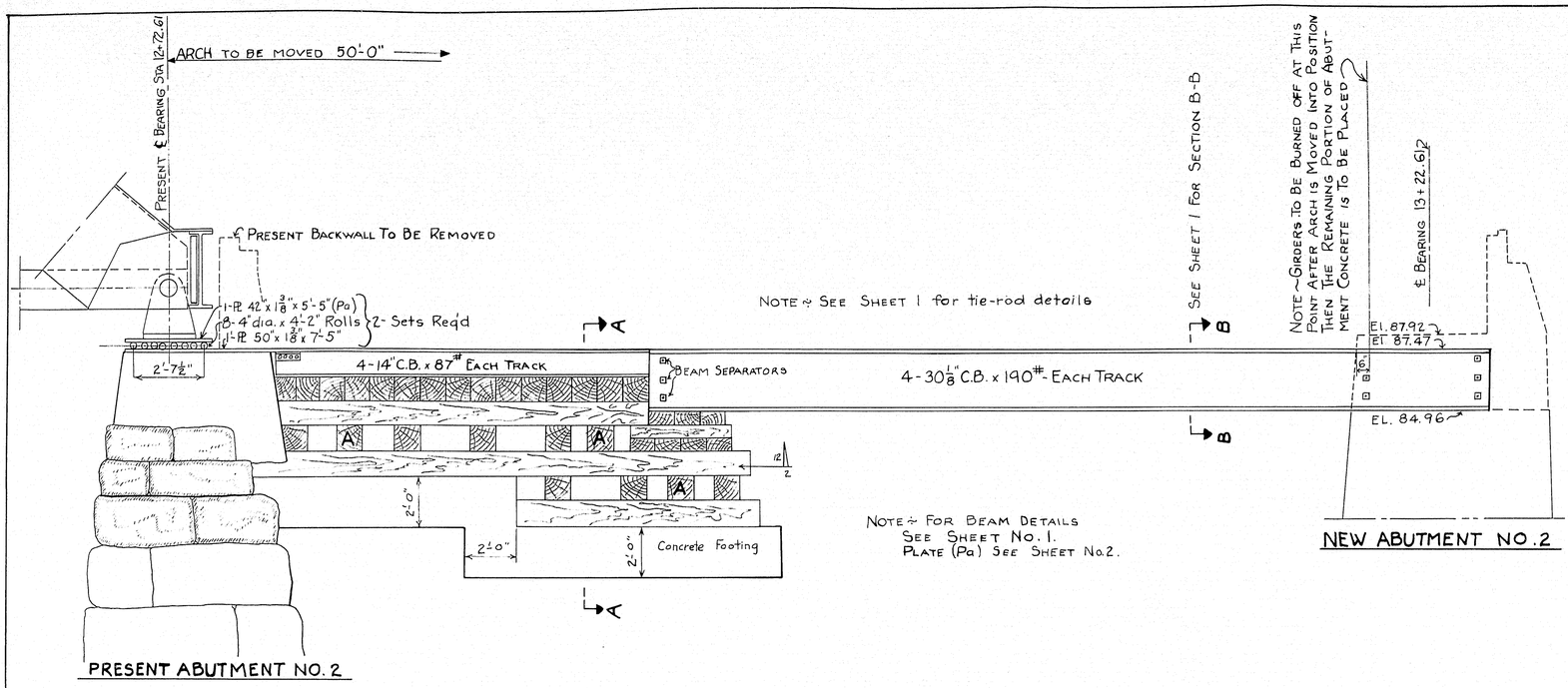
93333 93333

M = 93333 . 9.5 = 880000"#
S = 36.9
B 14 . 193 S = 310
$f_b = \frac{18000}{1 + \frac{1}{3000}\left(\frac{12.50}{.855}\right)^2} = 16400$ 15000 MAX.

ALLOWABLE END REACTION
R = 15000 . .89 (10 + 12.50/4) = 186000
ALLOWABLE CENTER LOAD
2 . 15000 . .89 (4.5 + 12.50/4) = 222000#
Use B 14", 193#

WYMAN & SIMPSON, INC.
WATERVILLE - ME.
PROPOSED METHOD OF SUPPORTING
MORSE BRIDGE
OVER THE
ANDROSCOGGIN RIVER
IN THE TOWN OF
RUMFORD - OXFORD - CO.
SHEET NO. 3 OF 3 NOV. 1936

28-161



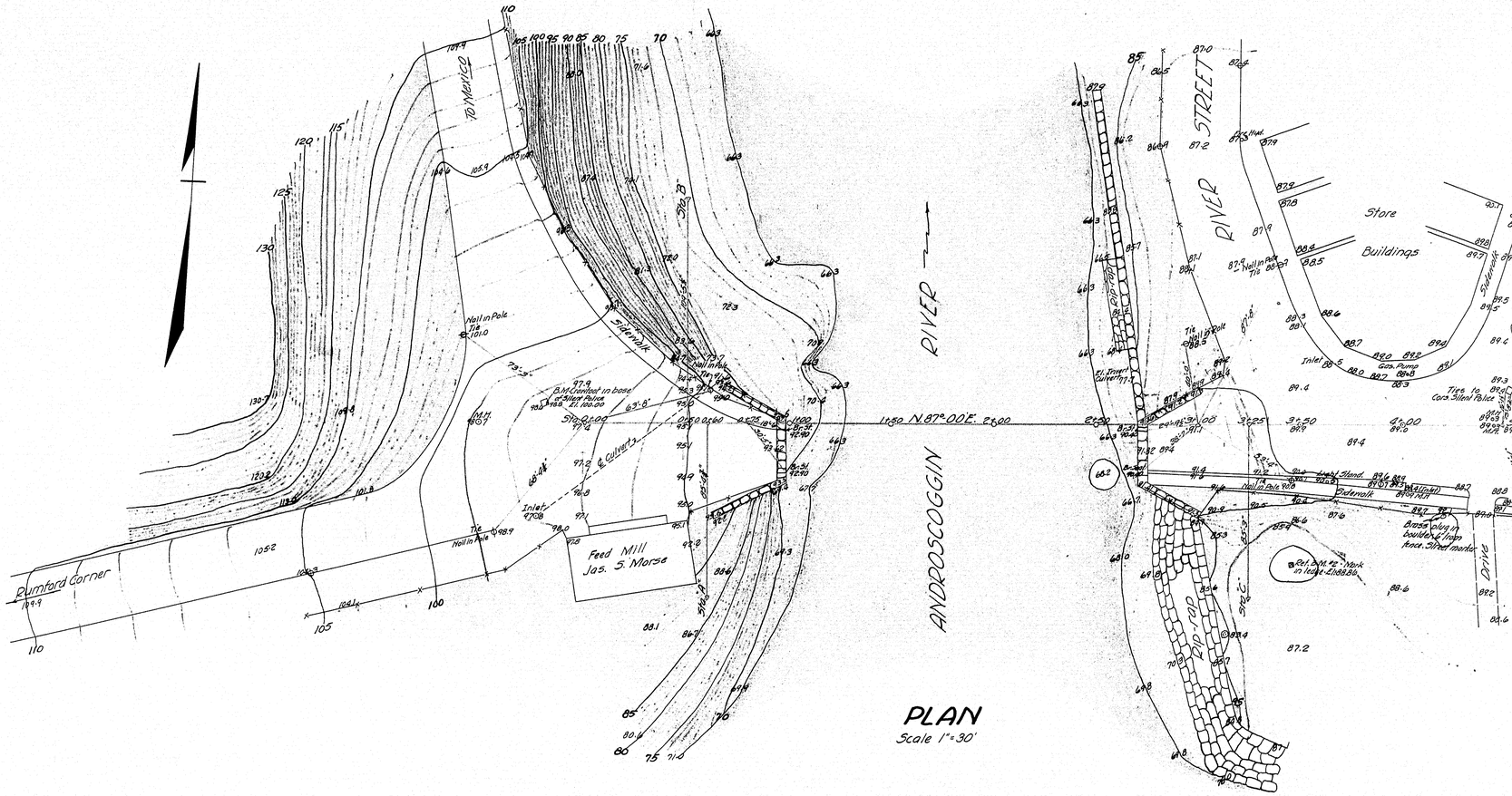
NOTE ~ All timber blocking to be hardwood - Oak-Maple-Birch
All main blocking to be 12" x 12"

PLAN HAMILTON
TRACED J.E.M.

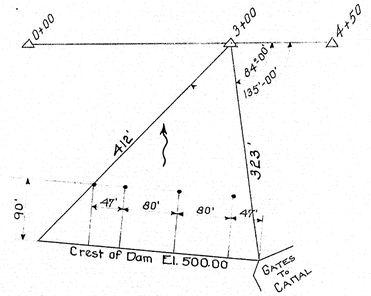
CONTRACTORS
WYMAN AND SIMPSON, INC.
WATERVILLE, MAINE
SHOWING CHANGE IN METHOD OF SUPPORTING SPAN ON EAST END - SUPPLEMENTING SHEET 2.
FOR MOVING
MORSE BRIDGE
OVER
ANDROSCOGGIN RIVER
IN THE TOWN OF
RUMFORD-ANDROSCOGGIN Co.
SHEET 3a OF 3 JAN. 1937

28-162

0 1 2 3 4 5 INCHES

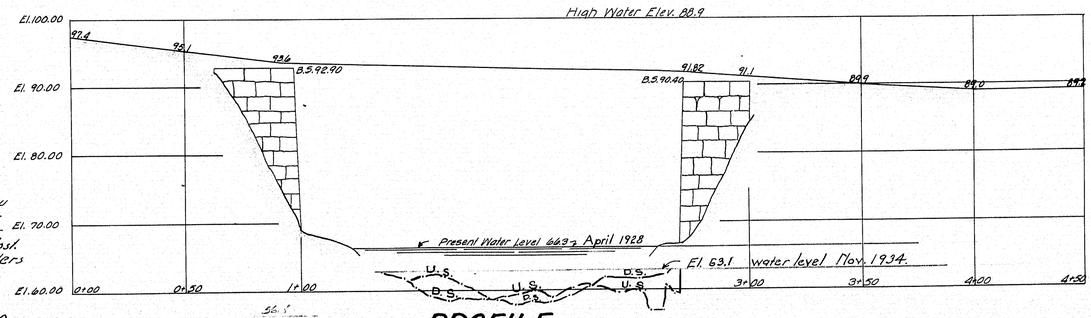


PLAN
Scale 1"=30'



LOCATION OF POWER CO. BORINGS 90' BELOW MIDDLE DAM.

NOTE:-
Level Tie-In to Power Co Datum. - Add 414.57 to Bridge Division datum.
High water drift age at Elev. 495.3



PROFILE
Scales: H-1"=30', V-1"=10'

-NOTES-

DRAINAGE AREA - 2090 SQ. MILS.

SUBSTRUCTURE: Coursed Rubble masonry abutments in good condition. Retaining walls of uncoursed rubble masonry.

SUPERSTRUCTURE: Two steel trusses. Two inch planking on sidewalks. Three inch planking on roadway. 12" water main carried under bridge at the center line.

STREAM BED: Covered with rocks and boulders, with possibility of ledge foundation.

CLEAR SPAN: 185'-11"

FOUNDATION SOUNDINGS & INFORMATION: (Nov. 1934)

Sounding at toe of slope at 81' left of Sta. 0+18 penetrated 2'6 to ledge at El. 80.1. Sounding at 10' in front of footing of East (No.2) Abut. penetrated thru firm deposit of fine sand from stream bed at El. 57.0 to ledge or boulder, probably ledge, El. 29.7 at a slow, practically uniform rate without encountering more boulders. Rod not withdrawn because portion of equipment was lost. Unable to make sounding in front of West (No.1) Abut. because of boulders on stream bed.

Mr. Ulric Metevier, who built stone retaining wall extending downstream from face of East (No.2) Abut., reported that this wall rested upon firm fine gray sand; that bottom of it was deeper than bottom of Abut.; that his foremen who had direct charge of work, told him that wall was 9' deeper than Abut. (bottom of Abut. at about El. 61.0.); and that Mr. Mixer told him to cease digging deeper into the sand for foundation.

at points on island.

SURVEY-H.L.P. 4-1928
PLAN-W.B.F.

MAINE HIGHWAY COMMISSION
BRIDGE DIVISION

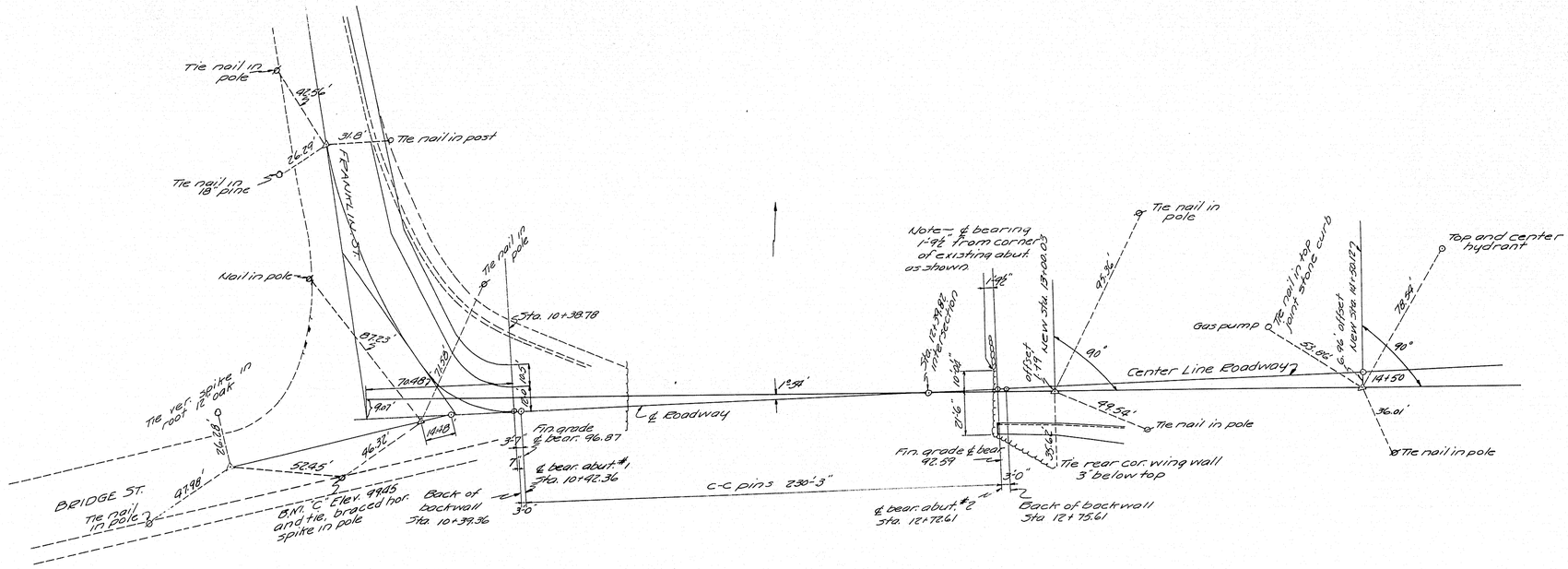
MORSE BRIDGE
OVER
ANDROSCOGGIN RIVER
IN THE TOWN OF
RUMFORD, OXFORD COUNTY

SURVEY PLAN

SHEET 1 OF 15 AUGUSTA, ME. JUNE 6, 1928.

28-163

0 1 2 3 4 5 INCHES



GENERAL LAYOUT

Scale 1" = 30'

Plan by: DOF
Checked by:

Town 09-36
Bridge 2585

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

MORSE BRIDGE

over

ANDROSCOGGIN RIVER

in the town of

RUMFORD

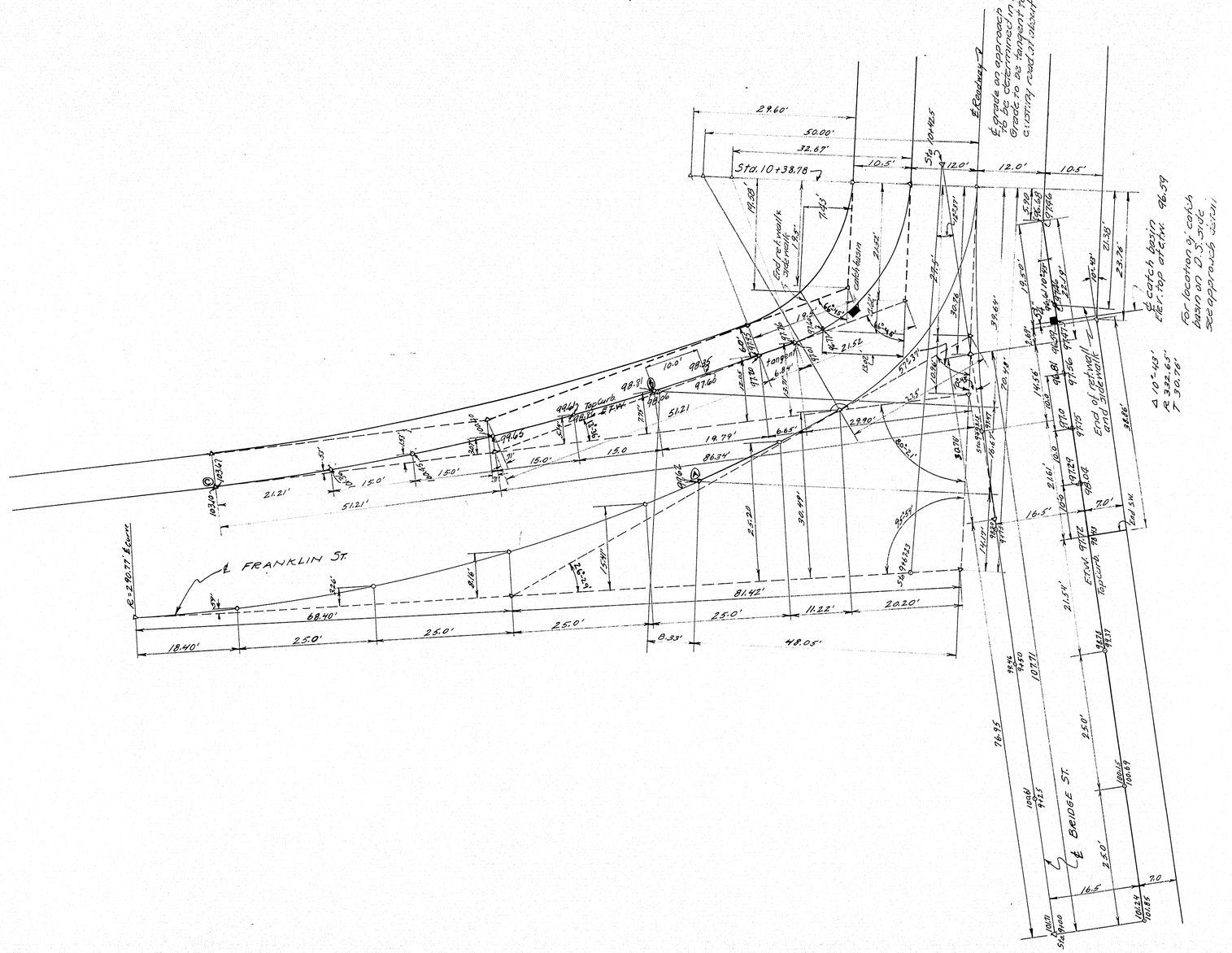
OXFORD COUNTY

GENERAL LAYOUT

Sheet 2 of 15 Augusta, Me. Jan 1935

28-164

0 1 2 3 4 5 INCHES



DRAWN - G.B. E. 13
TRACED - C.Z.

0 1 2 3 4 5 INCHES

Town 09-36
Bridge 2585

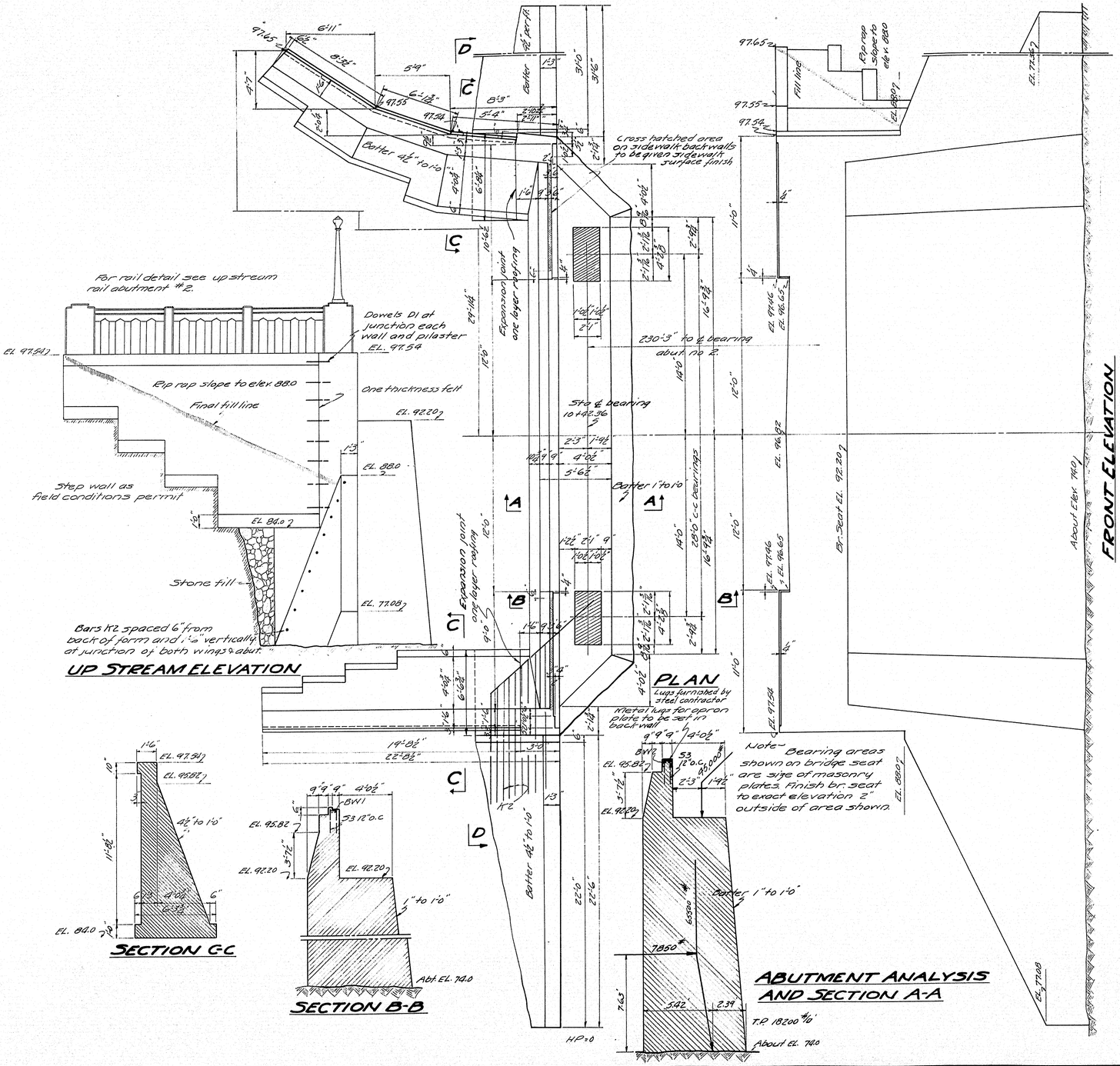
STATE HIGHWAY COMMISSION
BRIDGE DIVISION

MORSE BRIDGE
OVER
ANDROSCOGGIN RIVER
IN THE TOWN OF
RUMFORD-OXFORD CO., ME.

LAYOUT OF WEST APPROACH

SHEET 3 OF 15 AUGUSTA, ME. JAN 1935

28-165



UP STREAM ELEVATION

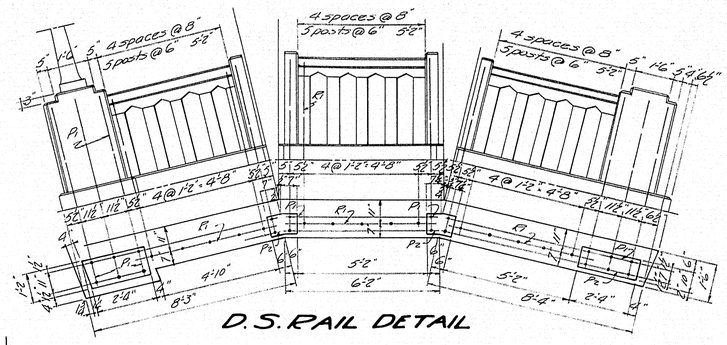
PLAN

SECTION C-C

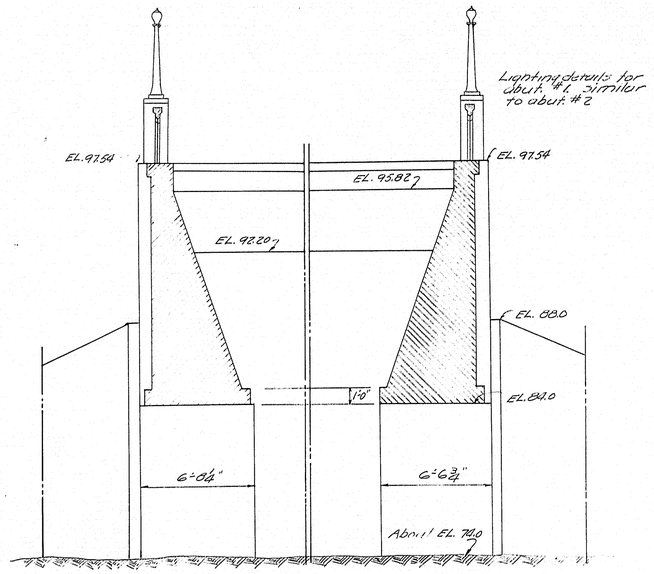
SECTION B-B

ABUTMENT ANALYSIS AND SECTION A-A

FRONT ELEVATION



D.S. RAIL DETAIL



REAR VIEW D-D

Town 09-36
Bridge 2585

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

MORSE BRIDGE
over
ANDROSCOGGIN RIVER
in the town of
RUMFORD
OXFORD COUNTY

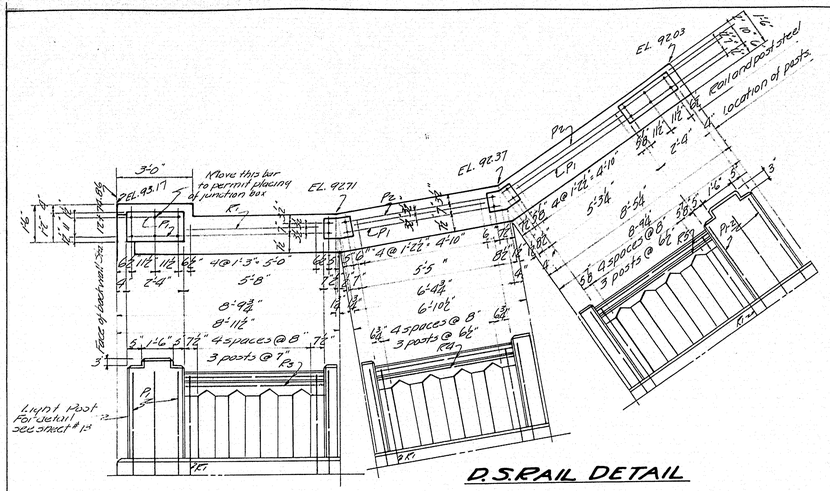
DETAIL ABUTMENT NO. 1

Sheet 9 of 15 Augusta, Me. Jan., 1935.

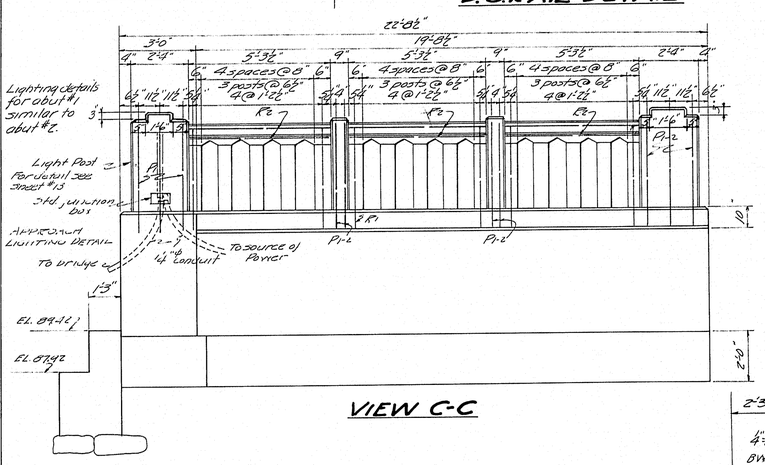
28-166

Plan by WE
Checked by GB-LB

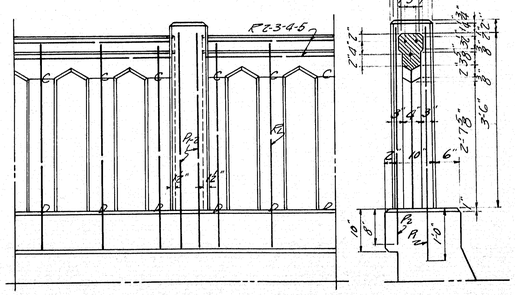
0 1 2 3 4 5 INCHES



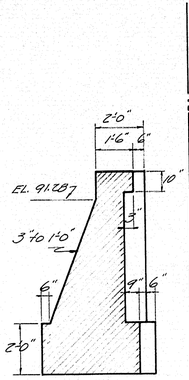
D.S. RAIL DETAIL



VIEW C-C

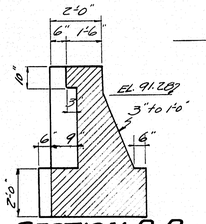


TYPICAL RAIL DETAIL



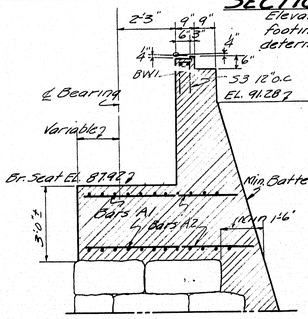
SECTION G-G

Elevation of footing to be determined in field



SECTION D-D

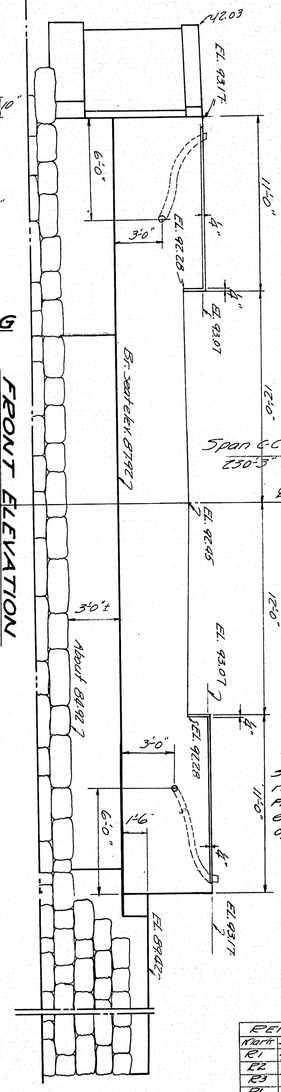
Elevation of footing to be determined in field



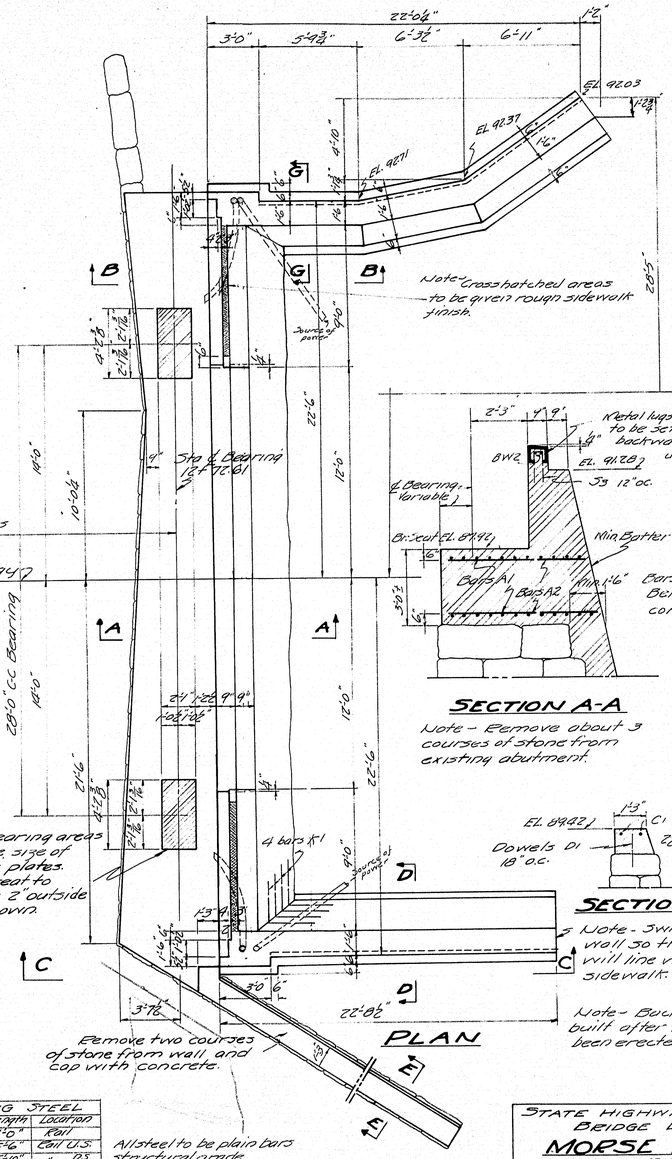
SECTION B-B

RAIL NOTE.

Post and vertical rail steel to be set in curb. Build rail forms and set in position. Break the bond at points "c" and "d" by placing there one thickness of roofing felt at the proper time. When rail forms are removed, cast posts. Rail to project into posts 1½". Wrap the ends 6" of each rail with two thicknesses of roofing felt. After post forms are removed cut away all exposed felt. Chamfer all exposed edges of concrete ¾" unless otherwise indicated.



FRONT ELEVATION



PLAN

SECTION A-A

Note - Remove about 3 courses of stone from existing abutment.

SECTION E-E

Note - Swing end of wall so that new work will line with existing sidewalk.

Note - Backwall to be built after the steel has been erected.

REINFORCING STEEL				
Mark	Size	No.	Length	Location
R1	⅝"ø	60	4'-0"	Rail
R2	"	18	3'-6"	Rail D.S.
R3	"	3	5'-10"	" D.S.
P1	⅝"ø	32	4'-6"	Posts
P2	"	28	4'-2"	"
A2	"	20	6'-0"	Abut. Cap
A1	"	46	13'-0"	" "
C1	½"ø	2	18'-0"	Wall "
D1	⅝"ø	36	1'-6"	" "
R4	⅝"ø	3	5'-7"	Rail D.S.
R5	"	3	5'-3"	" "
K1	⅝"ø	8	8'-0"	Abut. wings

1½" S3 Length 3'-6" Reqd 84

Mark	Size	No.	Length	Location
BW1	½"ø	8	8'-6"	Sidewalls Abut. & Wall
BW2	"	8	13'-0"	Abut. & Wall
R6	⅝"ø	9	5'-4"	Rail D.S.
K2	¾"ø	18	12'-0"	Abut #1

All steel to be plain bars structural grade. Dimensions are to ℄ of bars.

Note - "Bars K" to be spaced 6" from back form at junction of abut. and each return wall. Bend in field to fit form.

Holes in back walls for water pipe and telephone to be determined

Town 09-36
Bridge 2585

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

MORSE BRIDGE
over
ANDROSCOGGIN RIVER
in the town of
RUMFORD
OXFORD COUNTY

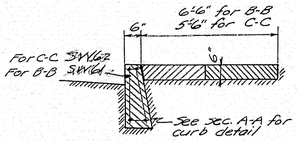
DETAIL ABUTMENT NO. 2.

Sheet 5 of 15 Augusta, Me. Jan. 1935

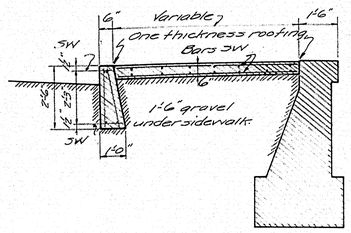
28-167

Plan by W.E.
Checked by —

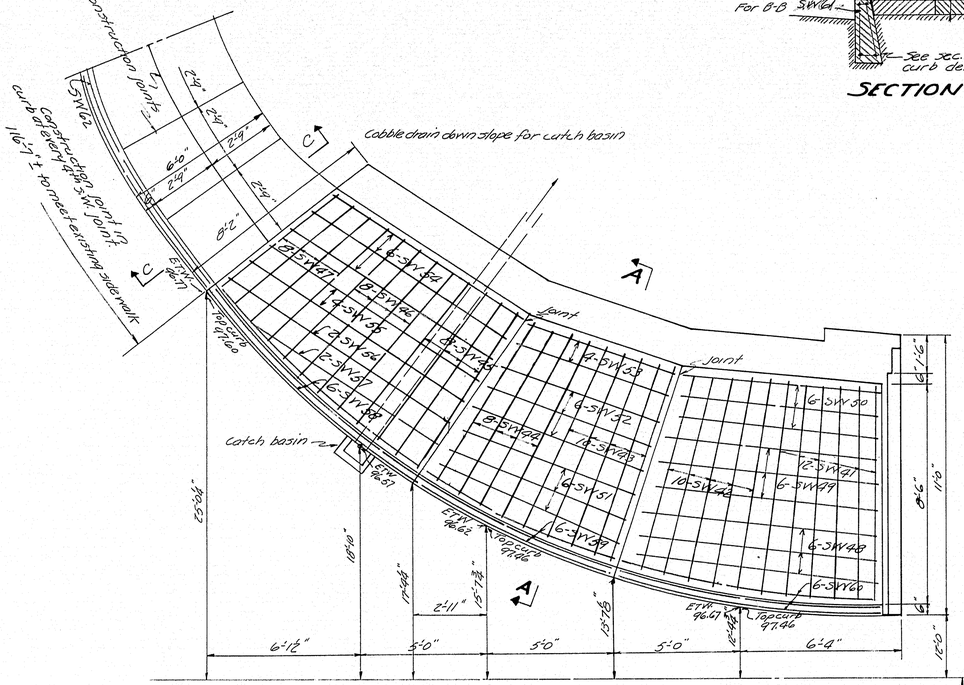
0 1 2 3 4 5 INCHES

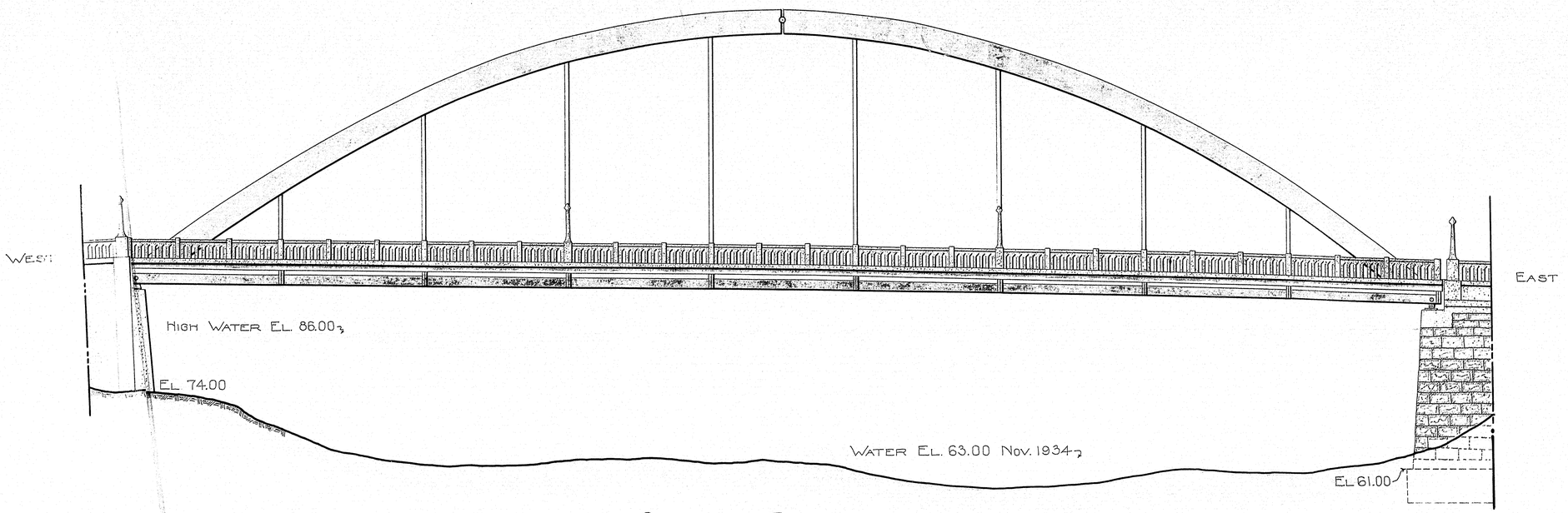


SECTION B-B C-C

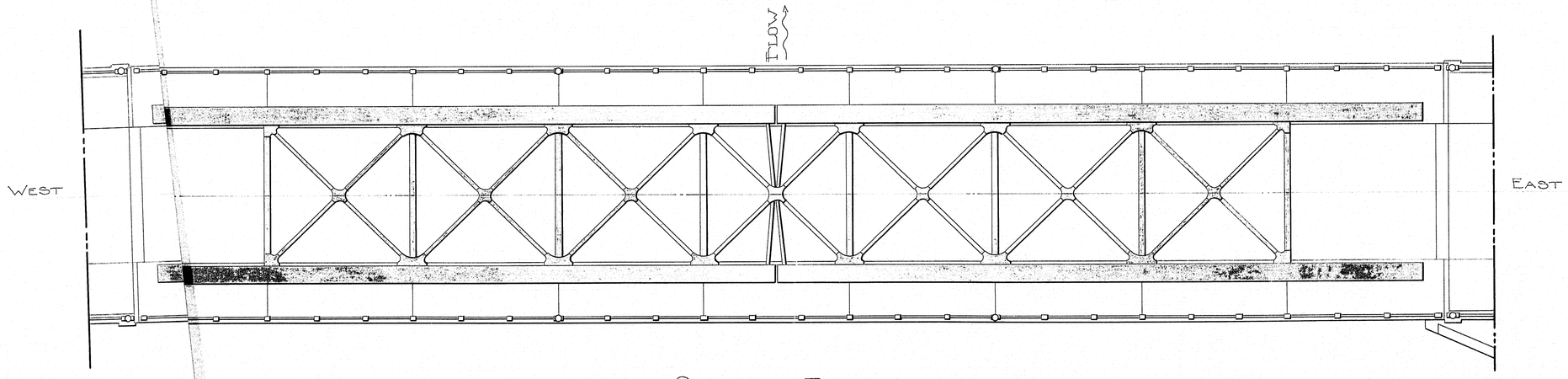


TYPICAL SECTION A-A





General Elevation



General Plan

Scales H. + V. = 1" = 10'

Drawn by ~ Hamilton
Traced by ~ "
Checked by ~

Town 09-36
Bridge. 2585

State Highway Commission
Bridge Division

Morse Bridge
Over
Androscoggin River
In the Town of
Rumford-Oxford Co.

General Layout

Sheet 7 of 15 Augusta, Maine Jan., 1935

28-169

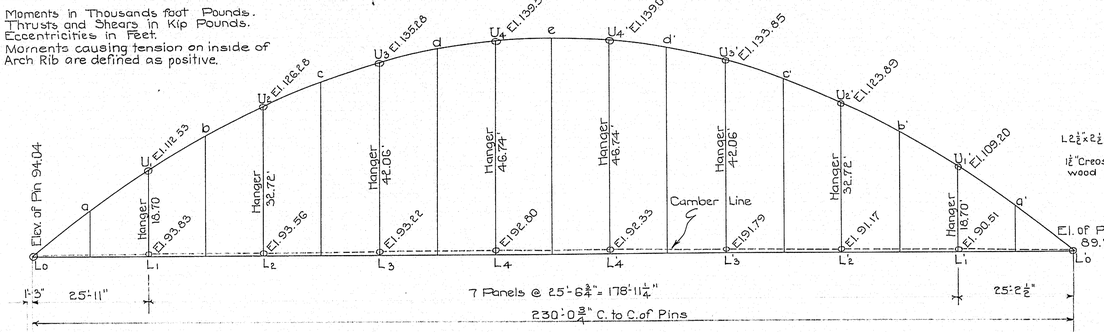
0 1 2 3 4 5 Inches

Parabolic Three-Hinged Steel Arch with Bottom Chord

Origin at Left Hand Hinge (L_0); $y = \frac{2CRx - Rx^2}{C^2}$; $C = \frac{1}{2}$ Span, R = Rise

Point	Ordinate	Max. Positive Combination				Max. Negative Combination			
		Moment	Normal H	E	Shear	Moment	Normal H	E	Shear
L_0	0"	0	1068.0	0	48.0	0	1068.0	0.	48.0
a	10'-0 3/8"								
U_1	18'-11 5/8"	2483.0	874.0	2.84	134.0	1665.0	951.0	1.75	8.0
b	26'-8 5/8"								
U_2	33'-2 1/2"	3382.0	786.0	4.31	101.0	2261.0	897.0	2.52	47.0
c	36'-8 1/2"								
U_3	42'-8 3/4"	2884.0	724.0	3.99	67.0	1759.0	850.0	2.19	90.0
d	45'-7 3/8"								
U_4	47'-4 3/8"	1431.0	734.0	1.83	52.0	535.0	760.0	0.41	112.0
e	48'-0"	0	850.0	0	0	0	850.0	0	0

Moments in Thousands Foot Pounds.
Thrusts and Shears in Kip Pounds.
Eccentricities in Feet.
Moments causing tension on inside of Arch Rib are defined as positive.



Loading - H-15

All Live Load Stresses Increased 100%
All Sidewalk and Wind Stresses Increased 50%
Wind taken as 50% on 1½ time the projected area as seen in side elevation
Dead Load 6880 #/' or Bridge

Unit Stresses

Tension and Flexure 24,000 #/"

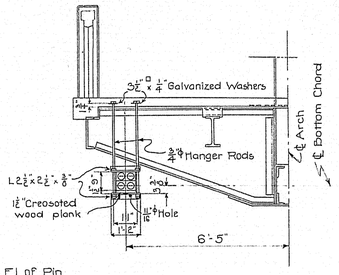
Compression $P = \frac{24{,}000}{1 + \frac{\left(\frac{l}{r}\right)^2}{13{,}500}}$

Not to exceed value $\frac{l}{r} = 40$

Impact on Vehicular Live Load $I = \frac{50}{L + 125}$

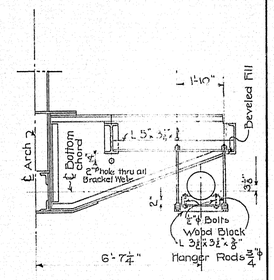
Sidewalk Live Load = $40 + \frac{3000}{L}$, $\frac{40}{50}$

All materials and details in accordance with State Highway Commissions (Maine) Specifications for Steel Bridges.
General reaming shall be required in arch rib
All field connections for main members shall be sub punched 1/16 and reamed to 1/8
All joints in arch rib shall be milled.



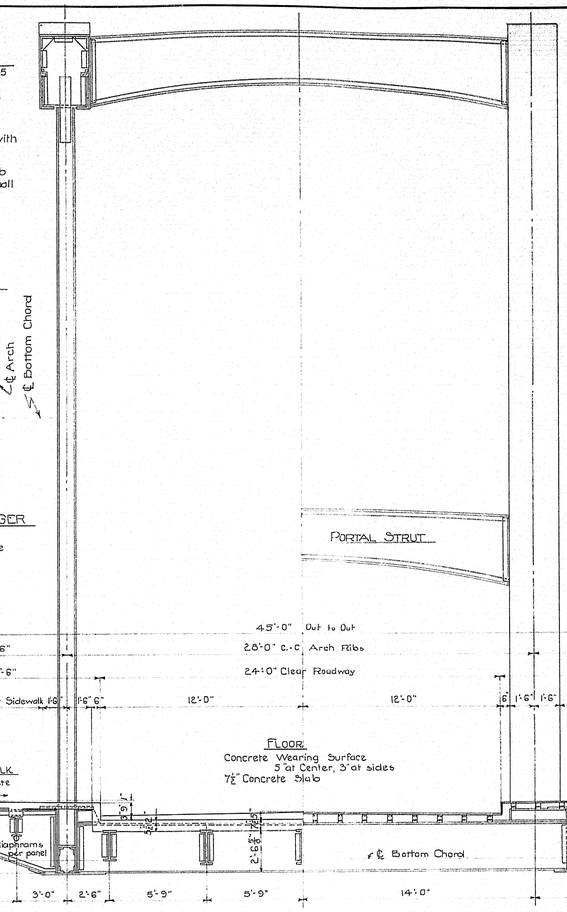
Telephone Conduit Hanger

Telephone conduit hangers to be spaced about 6'-0" ctrs.



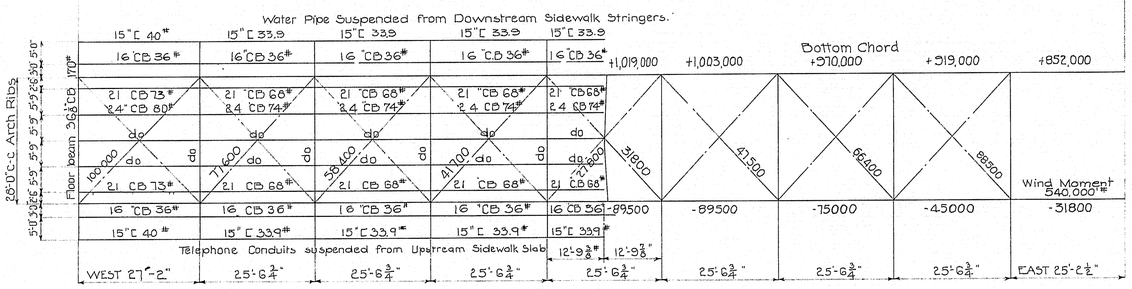
Water Pipe Hanger

Water pipe hangers to be spaced at 12'-0" ctrs.
L 3" x 3½" x ⅜" to be spot welded to stringer flanges



Half Transverse Section ~ Upstream

Half End Elevation ~ Downstream



Bottom Lateral and Floor Systems

Top Lateral System

Roadway Stringers - End Panels

Interior

Slab	539	D.L.M.	981 x 27.17 x 27.17 x 1.5 = 1,086,300 #"
W.S.	362	L.L.M.	6000 x 13.585 x 12 x 5.75/4.5 = 1,249,500
Beam	86	Impact	.329 = 411,100
	987	100%	= 1,660,600
			3,407,500 #"

S = 183.7 Use 24" CB 80# S = 185.8

Exterior

Slab	363	D.L.M.	761 x 27.17 x 27.17 x 1.5 = 842,700 #"
W.S.	142	L.L.M.	6000 x 13.585 x 12 x 5.75/4.5 = 808,000
Curb	75	Imp.	.329 = 265,800
S.W.	113	100%	= 1,073,800
Beam	66	S.W. Live	250 x 27.17 x 27.17 x 1.5 = 276,800
	761	50%	= 138,400
			2,405,500

S = 141.9 Use 21" CB 73 # S = 150.7

Roadway Stringers - Intermediate Panels

Interior

Slab	539	D.L.M.	975 x 25.56 x 25.56 x 1.5 = 955,500 #"
W.S.	362	L.L.M.	6000 x 12.78 x 12 x 5.75/4.5 = 1,175,800
Beam	74	Impact	.332 = 390,400
	975	100%	= 1,566,200
			4,087,900 #"

S = 170.3 Use 24" CB 74# S = 170.4

Exterior

Slab	363	D.L.M.	761 x 25.56 x 25.56 x 1.5 = 745,800 #"
W.S.	142	L.L.M.	6000 x 12.78 x 12 x 5.75/4.5 = 760,100
Curb	75	Impact	.332 = 252,400
S.W.	113	100%	= 1012, 300
Beam	66	S.W. Live	250 x 25.56 x 25.56 x 1.5 = 245,000
	761	50%	= 122,500
			3,138,300 #"

S = 130.8 Use 21" CB 68# S = 139.9

Sidewalk Stringer - End Panels

Interior

Slab	2.65	Mom. = 1120 x 27.17 x 27.17 x 1.5 = 1,240,200 #"
Water Pipe	80	
Beam	42	27.17/2.0 x 12 = 16.30 "
Live Load	475	
50%	238	Req'd S = 51.6 Req'd I = 51.6 x 8.15 = 420.5
	1120	Use 16" CB 36# S = 56.3 I = 446.3

Exterior

Slab	150	Mom. = 881 x 27.17 x 27.17 x 1.5 = 975 500 #"
Fascia	69	
Water Pipe	120	Req'd S = 40.6 27.17 x 12 = 16.30
Beam	35	Req'd I = 40.6 x 8.15 = 330.8 2.0
Rail	135	
Live Load	248	Use 15"℄ @ 40# S = 46.2 ; I = 346.3
50%	124	
	881	

Sidewalk Stringers - Intermediate Panels

Interior

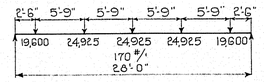
Slab	2.65	Mom. 1116 x 25.56 x 25.56 x 1.5 = 1,093,600 #"
Water Pipe	80	
Beam	56	25.56/2.0 x 12 = 15.336"
Live Load	475	
50%	238	Req'd S = 45.6 Req'd I = 7.668 x 45.6 = 349.7
	1116	Use 16" CB 36# S = 56.3 I = 446.3

Exterior

Slab	150	Mom. 880 x 25.56 x 25.56 x 1.5 = 862,400 #"
Fascia	69	
Water Pipe	120	Req'd S = 25.9
Beam	34	Req'd I = 7.668 x 35.9 = 275.8
Rail	135	
Live Load	248	Use 15"℄ 33.9# S = 41.7 I = 312.6
50%	124	
	880	

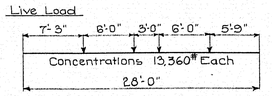
Floorbeams

Dead Load



RL (Concentrations) = 56,988

Live Load

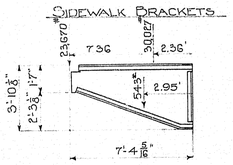


RL = (5.75 + 11.75 + 14.75 + 20.75) / 26.00 = 25,283

D.L.M.
Concentrations (56,988 x 14.00 - 19,600 x 11.5 - 24,925 x 5.75) 12 = 5,149,400 #"
Uniform 170 x 28.00 x 28.00 x 1.5 = 199,900
L.L.M. (25,283 x 13.25 = 13,357 x 6.00) 12 = 3,058,300
Impact 284 = 886,600
100% = 3,926,900
9,203,100 #"

S = 550.1 Use 36 3/8" CB 170# S = 579.1

Sidewalk Brackets



Mom. = 30,027 x 2.36 + 23.670 x 7.36 + 54.3 x 2.95 = 246,308 = 2,955,700 #"
S = 122.2
Use Web Pl. 24 x ⅜"
4 Ls 4 x 3½ x 13/16"
S = 300

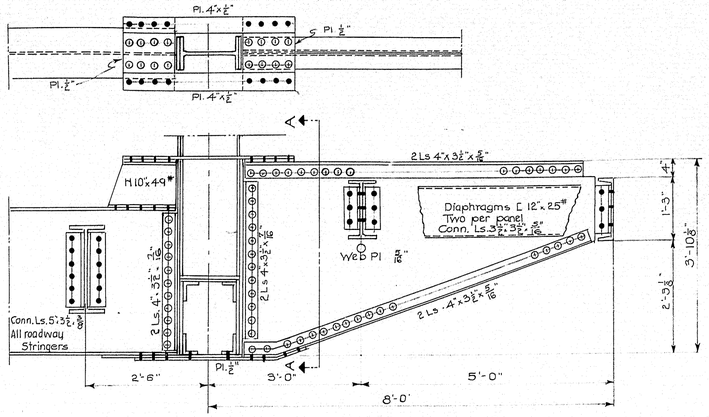
Town	09-36
Bridge	2585

State Highway Commission
Bridge Division
Morse Bridge
Over
Androscoggin River
In the Town of
Rumford, Oxford Co.
Stress Sheet
Sheet 8 of 15 Augusta, Me. Jan. 1935.

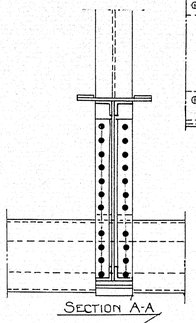
28-170

Design ~ G. Braadon
Plan ~ C. Partridge
Traced ~ Hamilton
Checked ~ Fuller

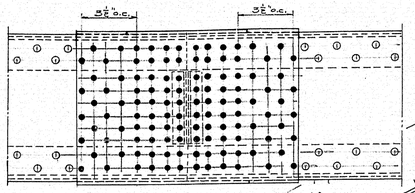
0 1 2 3 4 5 INCHES



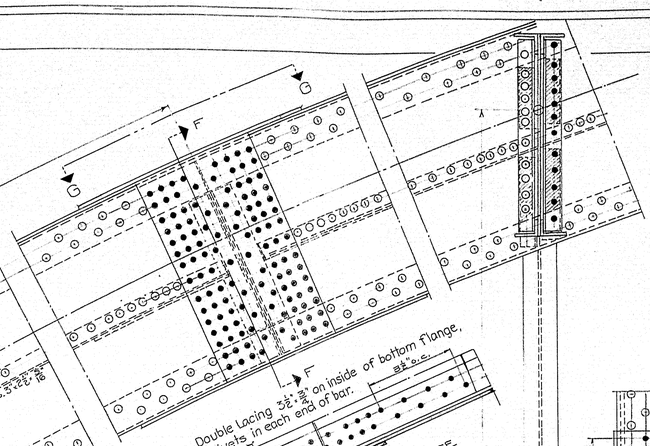
INTERMEDIATE SIDEWALK BRACKET CONNECTION



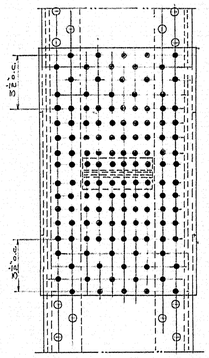
SECTION A-A



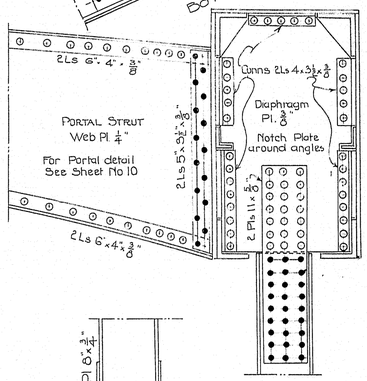
SECTION D-D



PART SECTION BOTTOM FLANGE SPLICE



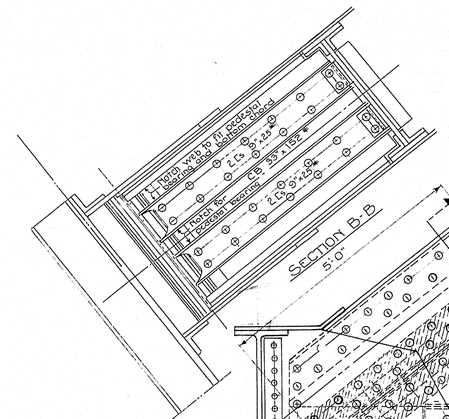
SECTION G-G



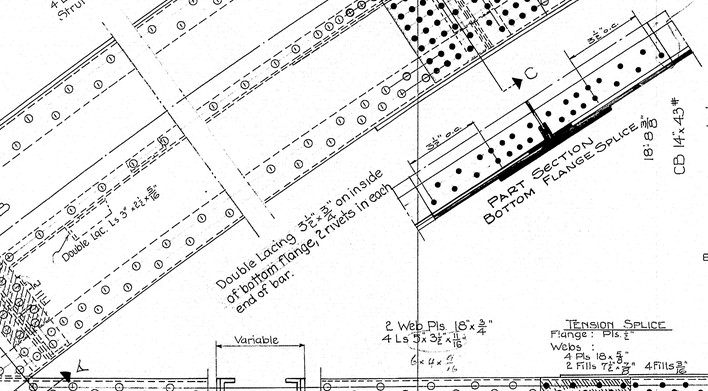
SECTION E-E
Typical Diaphragm at hanger

NOTE: All Hangers Plumb CB 14.43#

All open holes 15/16" unless noted.
All rivets ⅞"



SECTION B-B


Rib Section
Cov Pl 36"x ½"
2 Web Pls 52"x ⅜"
4 Ls 6"x 6"x ⅝"
Strut 2 Ls 5"x 3½"x 5/16"
Double Lac. Ls 3"x 2½"x 5/16"
Double Lacing 3½"x ⅜" on inside of bottom flange, 2 rivets in each end of bar.
Pl. 18"x ⅜"
Pl. 18"x ⅜"
Pl. 18"x ⅜"

Rib Section
Cov. Pl. 36" × 5/16"
2 Web Pls. 52" × 3/8"
4 Ls. 8" × 8" × 13/16"
Strut Ls. 2 Ls 5" × 3 1/2" × 5/16"

U2 U3 U4

Double Lac. L 5" × 2 1/2" × 5/16"

Splice same as Section C-C and Section D-D Sheet No. 7
Double Lacing 3 1/2" × 1/4" on inside of bottom flange, 2 rivets in each bar.

For Section at hangers See Section E-E Sheet No. 7

Splice same as Section F-F and Section G-G Sheet No. 7
Double Lacing 3 1/2" × 1/4" on inside of bottom flange
2 rivets in each end of bar.

Slop Pl. 7" × 7/16"

SECTION D-D

All hangers are plumb

Dotted lines indicate outline of concrete superstructure

Splice Pl. 2

CB 10" × 33" d = 9 3/4"

1/4 Pl.

2 Ls. 4" × 3 1/2" × 5/16"

Web Pl. 2" × 7/16"

L 5" × 3 1/2" × 7/16"

L 3 1/2" × 3 1/2" × 3/8"

2 Pls.

PNO

2 Ls. 4" × 3 1/2" × 7/16"

Pl. 1/2" × 7"

3'-0" 5'-0"

SECTION C-C

1'-7"

1'-4"

1'-5"

2'-3 5/8"

3'-10 3/8"

4'-2 0 3/4"

℄ of Rib 2

Face of backwall 2

Pl. 3/8" × 3 1/2" Fill

For sidewalk apron pl. connections See Sheet No. 11

10"

1'-0"

1'-3"

Pl. 3/8" × 3 1/2" Fill

℄ of Pin 2

END SIDEWALK BRACKET

46'-8 7/8"

Symmetrical about ℄ except as noted 2

CB 14'-4 3/8"

CB 14'-4 3/8"

CB 14'-4 3/8"

For details of top lateral connections see Sheet No. 10

For details of lower lateral connections see Sheet No. 9

Tension Splice
Same as shown Sheet No. 7

2 Web Pls. 18" × 13/16"
4 Ls. 5" × 3 1/2" × 7/8"

2 Web Pls. 18" × 13/16"
4 Ls. 5" × 3 1/2" × 7/8"

Tension Splice
Same as shown on Sheet No. 7

Pl. 12" × 5/16" to cover gap. Fasten on one side only.

A A

B B

Center Strut Pin

1'-0" 1'-0"

Diaphragm Web Pl. 3/4" 4 Ls. 4" × 4" × 1/2"

Jaw Pl. Pl. 3/4" 2 Ls 4" × 4" × 1/2"

Jaw Pls. 2 Pls. 3/4" 2 Ls. 4" × 4" × 1/2"

PNO

SECTION B-B

8" pin extends through section

Center Strut Web Pl. 1/4"
Fl. Ls. 11 L 5" × 3 1/2" × 3/8"

Diaphragm Web Pl. 3/8" 8 Ls 4" × 3 1/2" × 7/16"

Diaphragm Web Pl. 3/8" 8 Ls 4" × 3 1/2" × 7/16"

PNO

Inside bearing Pls. 3/4"

SECTION A-A
Note interlocking jaw plates to prevent lateral movement on pin.

0 1 2 3 4 5 INCHES

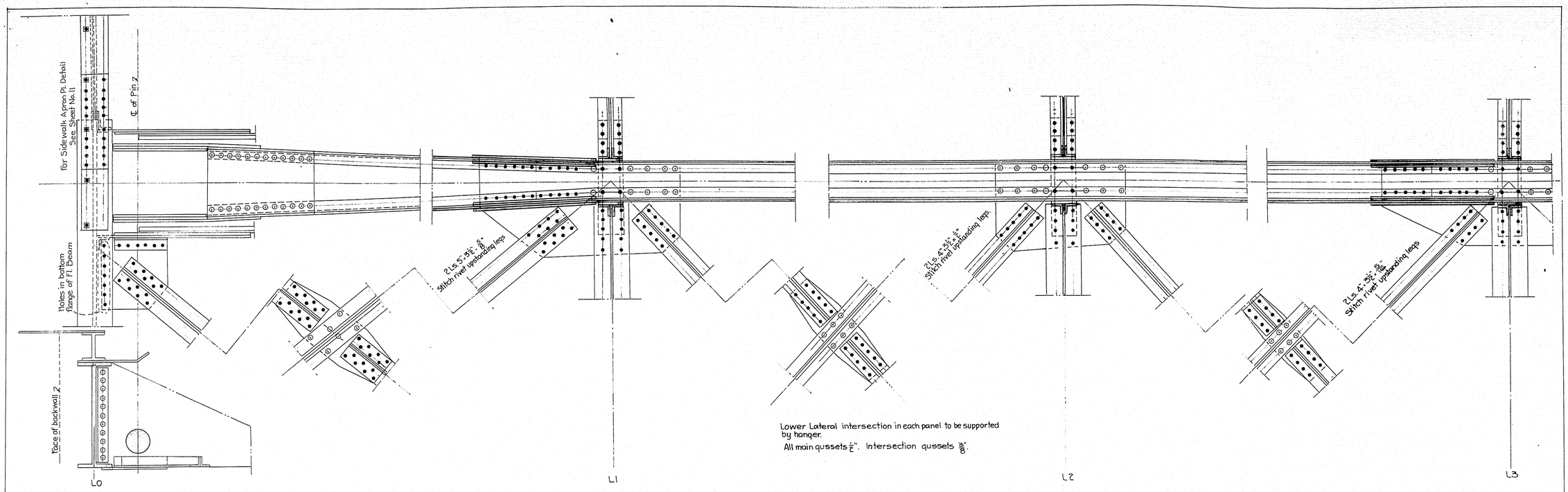
Rivets: 7/8" ⌀
Open Holes: 15/16" ⌀ except as noted.

TOWN 09-36
Bridge 2585

STATE HIGHWAY COMMISSION
BRIDGE DIVISION
MORSE BRIDGE
OVER
ANDROSCOGGIN RIVER
IN THE TOWN OF
RUMFORD, OXFORD CO.
STEEL DETAILS
Sheet 8 of 15 Augusta, Me. Jan. 1935

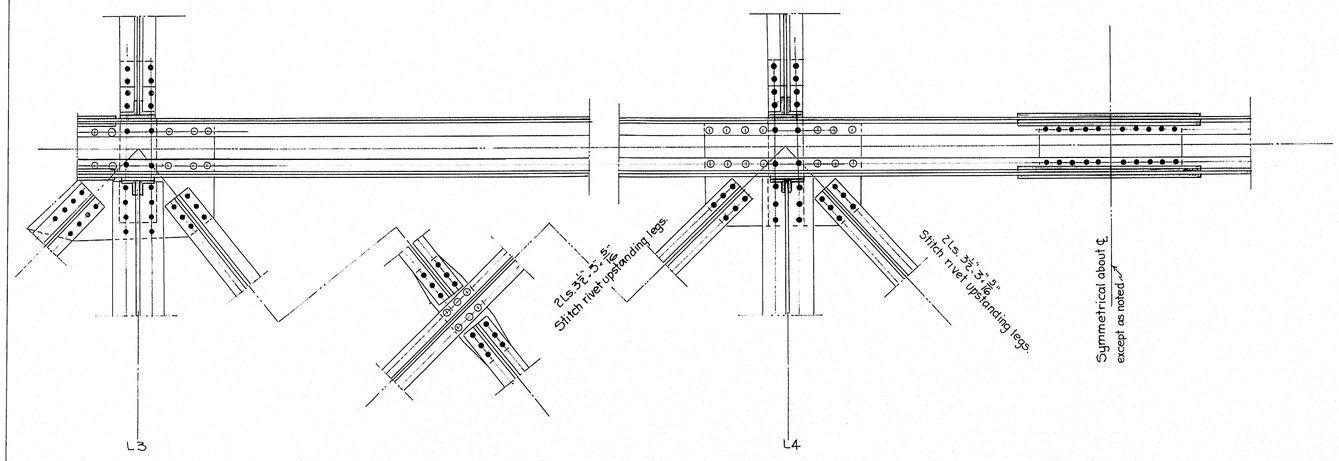
28-172

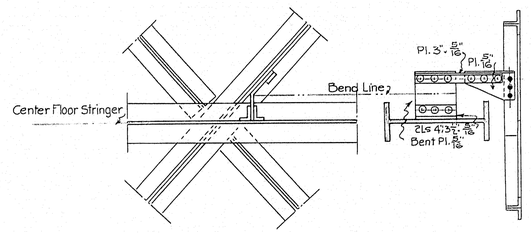
Design: G.B.
Check: [illegible]



Lower Lateral intersection in each panel to be supported by hanger.

All main gussets ½". Intersection gussets ⅜".





LOWER LATERAL HANGER

All rivets ⅞" ϕ open holes 15/16" unless noted.

DESIGN: G.B.
CHECK:

Town 09-36
Bridge 2585

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

MORSE BRIDGE
OVER
ANDROSCOGGIN RIVER
IN THE TOWN OF
RUMFORD, OXFORD CO.

LOWER LATERAL DETAILS
Sheet 11 of 15 Augusta Me. Jan. 1935

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ELEVATION OF RIB

PLAN

ELEVATION OF TOP LATERAL

ELEVATION CENTER DIAGONAL

ELEVATION CENTER STRUT

ELEVATION TOP STRUTS

Top laterals in panels U0-U1 and U15-U16 will be similar to those shown in panel U1-U2 except that members will be made up of 4 - 3½ x 3 x 5/16" with 3/4" legs outstanding and 12 x 5/16" web plate.

Struts at U0, U15 and U16 are same as strut at U1 except for elevation and depth.

Bend outstanding legs of angles into plane of gusset plate.

Bend Line

Roadway ℄ 7

Transverse ℄

28'0" c-c Arch Ribs

Design: G.B.
Check:

Town	09-36
Bridge	2585

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

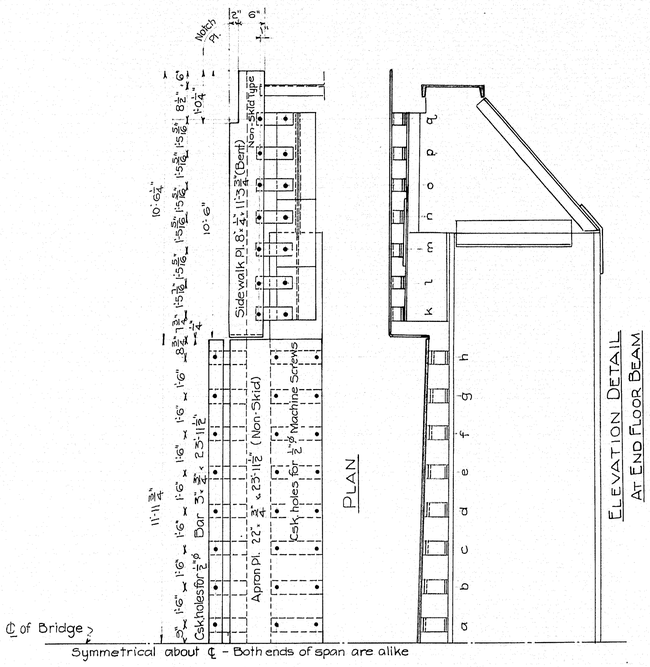
MORSE BRIDGE
OVER
ANDROSCOGGIN RIVER
IN THE TOWN OF
RUMFORD, OXFORD CO.

TOP LATERAL SYSTEM

Sheet 12 of 15 Augusta, Me. Jan. 1935.

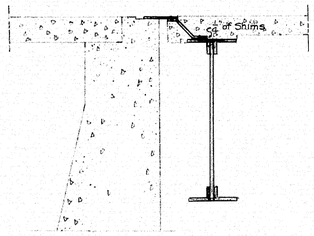
28-174

0 1 2 3 4 5 INCHES

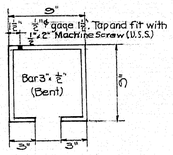


PLAN

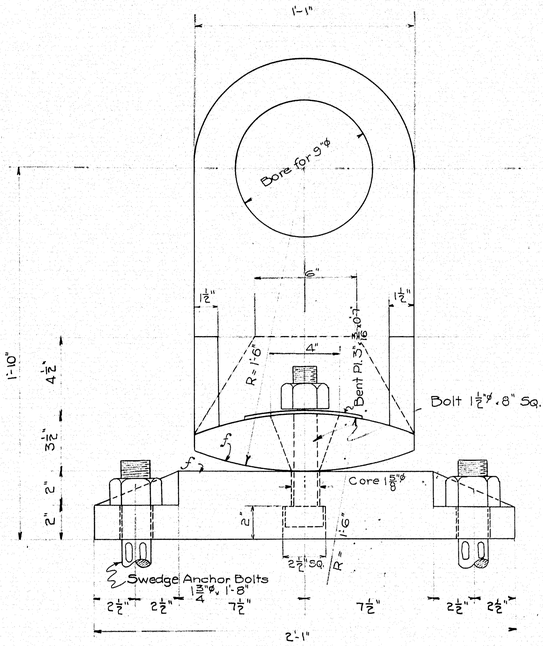
ELEVATION DETAIL
AT END FLOOR BEAM

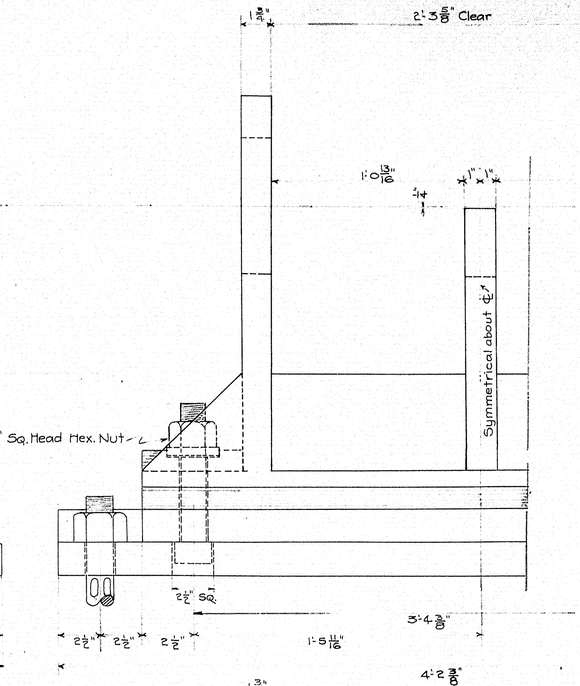


TYPICAL SECTION THRU
SIDEWALK & BACKWALL

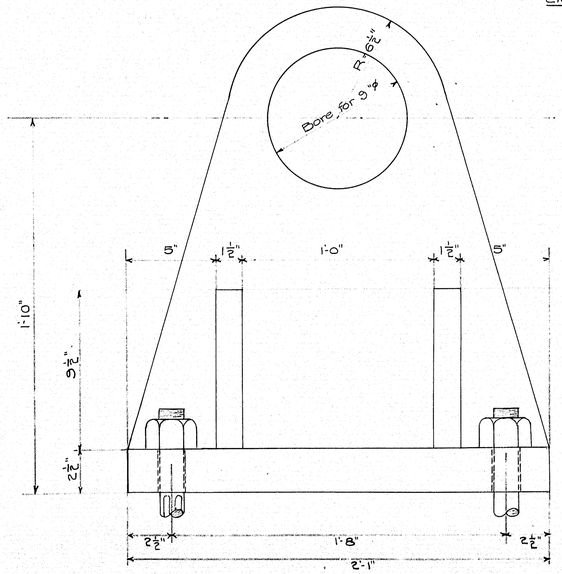


Backwall Lugs.
32 Required.

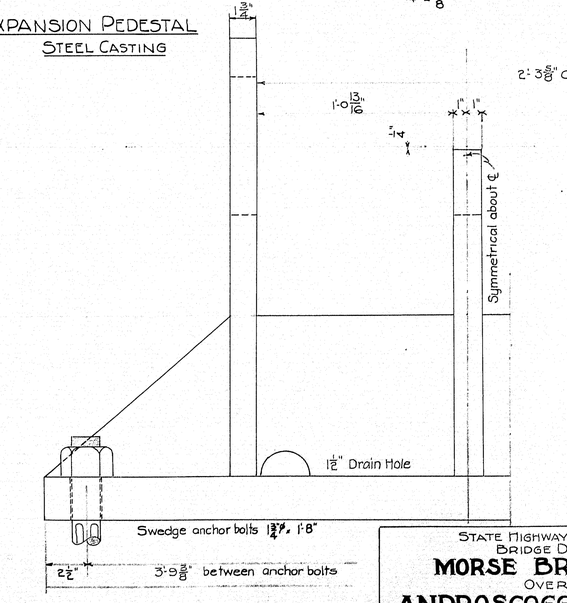


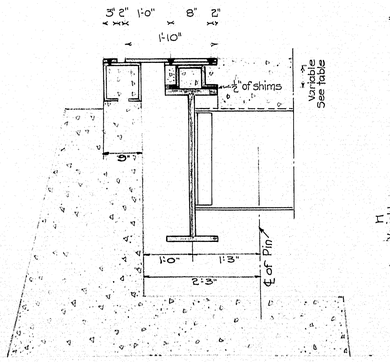


EXPANSION PEDESTAL
STEEL CASTING



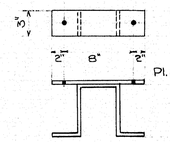
FIXED PEDESTAL
STEEL CASTING





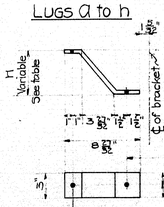
SECTION AT ℄ OF ROADWAY

½"ø holes tapped and fitted with
Machine screws ½" x 2" (U.S.S.) Top Pl. only.
Bottom holes 13/16"ø for ⅞"ø bolts.



Mark	Height H
a	5"
b	4½"
c	4"
d	4"
e	4"
f	3½"
g	3"
h	3"

Lugs a to h



Lugs k to q

Mark	Height H
k	3"
l	3½"
m	3"
n	3"
o	4"
p	4½"
q	4½"

Field bolt to end bracket
⅞"ø bolts

Tap and fit with Machine Screw
2½"ø, 1" (U.S.S.)

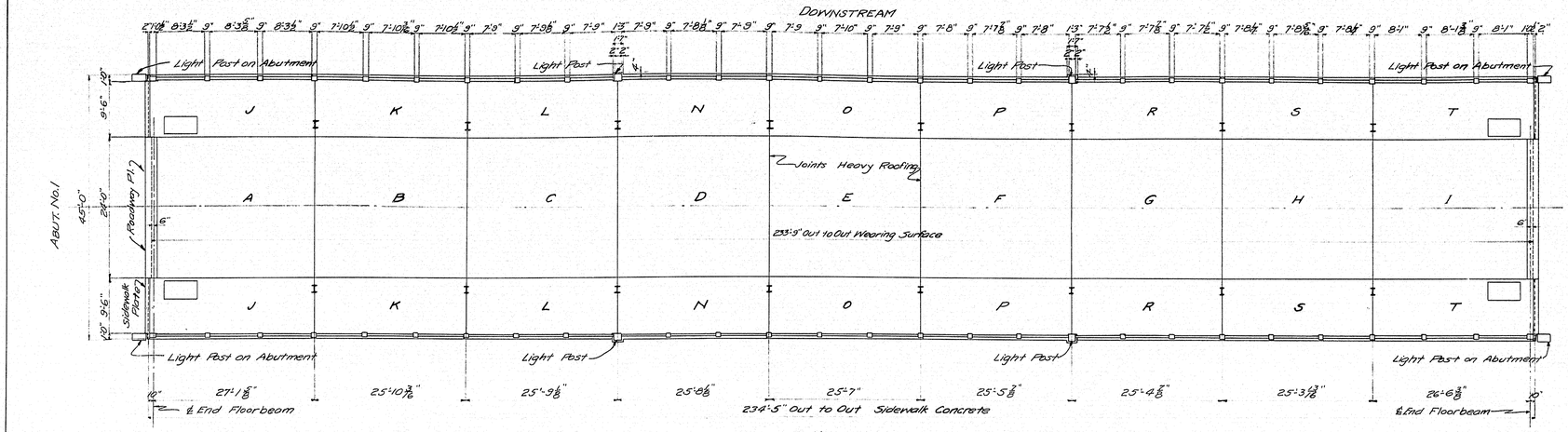
0 1 2 3 4 5 INCHES

Design: G.D.
Check:

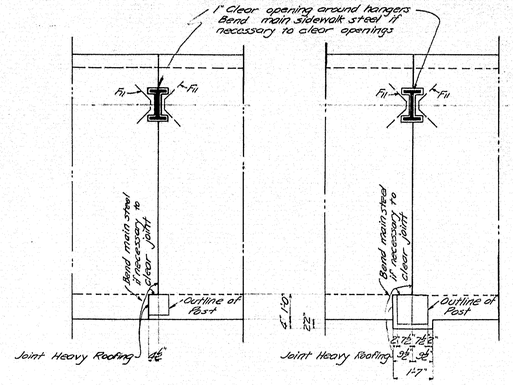
Town 09-36
Bridge 2585

STATE HIGHWAY COMMISSION
BRIDGE DIVISION
MORSE BRIDGE
OVER
ANDROSCOGGIN RIVER
IN THE TOWN OF
RUMFORD-OXFORD CO., ME.
PEDESTAL & APRON PLATES
SHEET 13 OF 15 AUGUSTA, ME. JAN. 1935

28-175



PLAN



PLAN SIDEWALK BRACKETS AT REGULAR POSTS

PLAN SIDEWALK BRACKETS AT LIGHT POSTS

Bend Fii Bars in Field.

ROADWAY SLAB STEEL

Panel A
24 Fi - 48 Fz - 20 F3

Panel B
23 Fi - 46 Fz - 20 F4

Panel C
23 Fi - 46 Fz - 20 F5

Panel D
23 Fi - 46 Fz - 20 F6

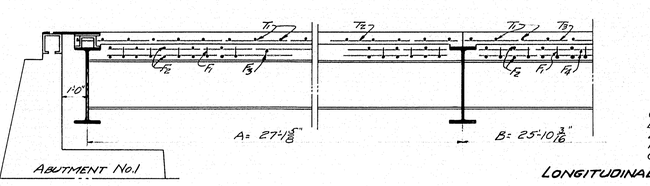
Panel E
23 Fi - 46 Fz - 20 F7

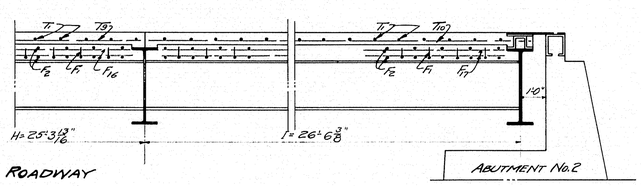
Panel F
23 Fi - 46 Fz - 20 F8

Panel G
22 Fi - 46 Fz - 20 F9

Panel H
22 Fi - 46 Fz - 20 F10

Panel J
23 Fi - 48 Fz - 20 F11





C= 25'-9 1/8"
D= 25'-8 1/8"
E= 25'-7"
F= 25'-5 3/8"
G= 25'-4 5/8"

LONGITUDINAL SECTION - ROADWAY

SIDEWALK SLAB STEEL

Panel J
56 Fe - 28 F7 - 28 F8
28 S1 - 28 S2

Panel K
51 Fe - 25 F7 - 28 F8
26 S1 - 26 S2

Panel L
50 Fe - 25 F7 - 28 F8
26 S1 - 26 S2

Panel N
50 Fe - 25 F7 - 28 F8
26 S1 - 26 S2

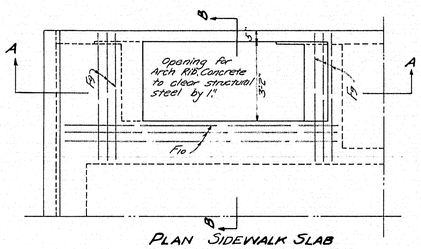
Panel O
50 Fe - 25 F7 - 28 F8
26 S1 - 26 S2

Panel P
50 Fe - 25 F7 - 28 F8
26 S1 - 26 S2

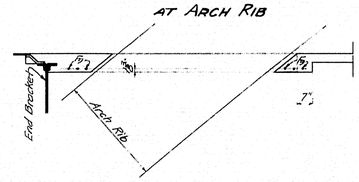
Panel R
50 Fe - 25 F7 - 28 F8
26 S1 - 26 S2

Panel S
50 Fe - 25 F7 - 28 F8
26 S1 - 26 S2

Panel T
53 Fe - 27 F7 - 28 F8
27 S1 - 27 S2



PLAN SIDEWALK SLAB AT ARCH RIB



SECTION A-A

In reinforcing sidewalk slab around arch Fio no regular reinforcing will be omitted but it will be set 1½" from surface of concrete.

WEARING SURFACE STEEL

Panel A
28 Ti - 24 T2

Panel B
26 Ti - 24 T3

Panel C
26 Ti - 24 T4

Panel D
26 Ti - 24 T5

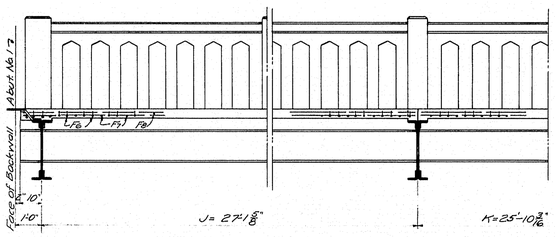
Panel E
26 Ti - 24 T6

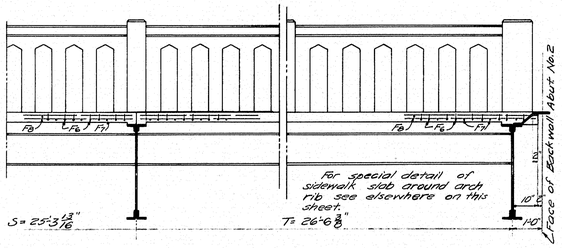
Panel F
26 Ti - 24 T7

Panel G
26 Ti - 24 T8

Panel H
26 Ti - 24 T9

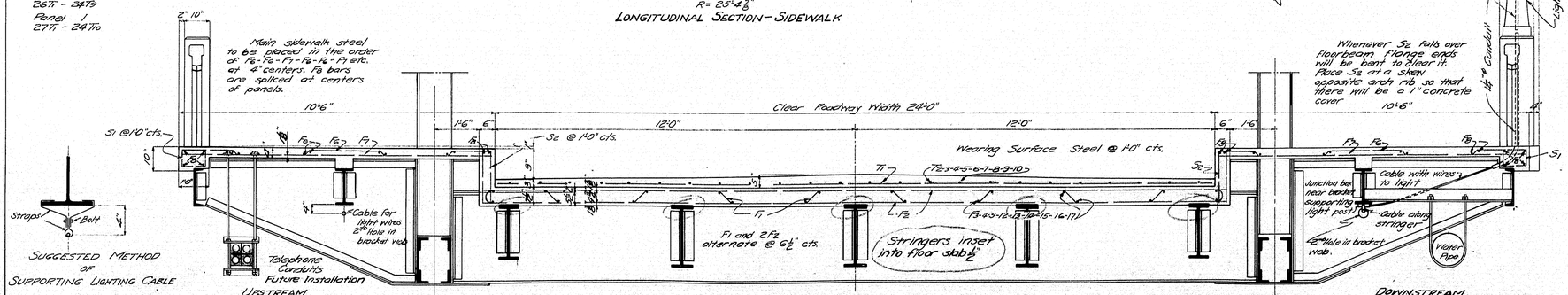
Panel I
27 Ti - 24 T10





L= 25'-9 1/8"
M= 25'-8 1/8"
O= 25'-7"
P= 25'-5 3/8"
R= 25'-4 5/8"

LONGITUDINAL SECTION - SIDEWALK



TRANSVERSE SECTION

Revised (Inset Roadway Stringers) 6-3-35

Town 03-36
Bridge 2585

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

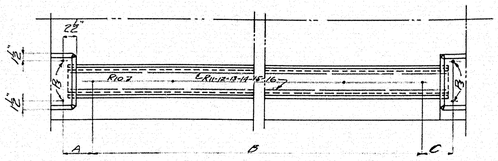
MORSE BRIDGE
over
ANDROSCOGGIN RIVER
in the town of
RUMFORD
OXFORD COUNTY
FLOOR

Sheet 14 of 15 Augusta, Me., Jan. 1935

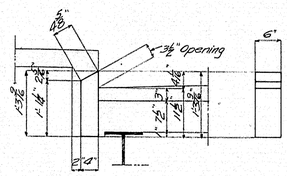
28-176

CLP

0 1 2 3 4 5 INCHES



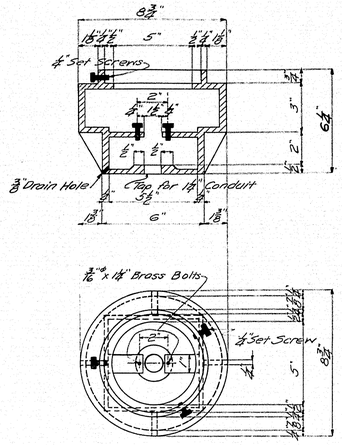
Clear Rail Panel	A	B	C
8'-3½"	5"	7 Spaces @ 1'-1½" = 7'-10½"	5"
8'-3⅝"	5⅛"	7 " @ 1'-1½" = 7'-10½"	5⅛"
7'-10⅝"	6¼"	6 " @ 1'-1½" = 7'-3"	6¼"
7'-10⅞"	6⅜"	6 " @ 1'-2" = 7'-0"	6½"
7'-9"	5⅞"	6 " @ 1'-2¼" = 7'-3"	5⅞"
8'-6⅝"	6¾"	7 Spaces @ 1'-1½" = 7'-3"	5⅞"
8'-3⅝"	5⅞"	6 " @ 1'-2¼" = 7'-3"	5⅞"
7'-10⅝"	6¼"	6 " @ 1'-2" = 7'-0"	6½"
7'-10⅞"	6⅜"	6 " @ 1'-2" = 7'-0"	6½"
8'-1"	6"	6 " @ 1'-2" = 7'-0"	6"
8'-1⅛"	6¼"	6 " @ 1'-2" = 7'-0"	6½"
7'-10⅝"	6¼"	6 Spaces @ 1'-2" = 7'-0"	6½"
8'-1"	6"	6 " @ 1'-2" = 7'-0"	6"
8'-1⅛"	6¼"	6 " @ 1'-3" = 7'-6"	6½"



METAL DRAIN FORMS

22 GAGE GALVANIZED METAL

18 Reqd - One at center of each panel both sides of roadway.

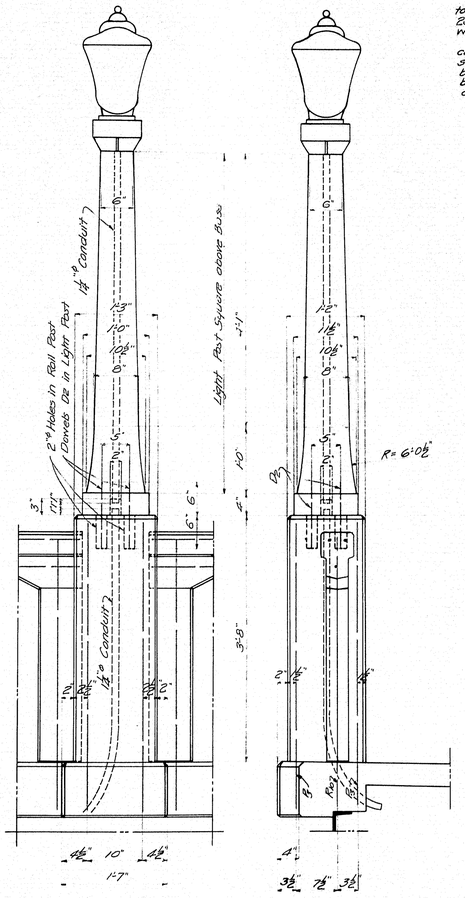


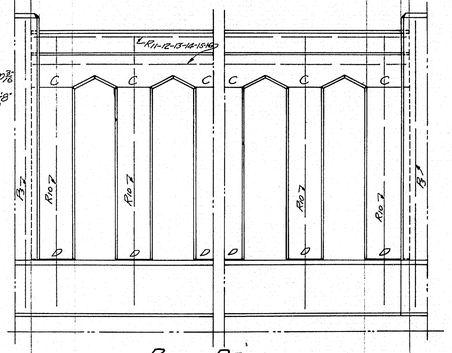
BRONZE LIGHT POST CAP

8 REQUIRED

The bronze light post caps are to be fitted with receptacle W.E. 25.712 series socket, bulb and globe with E" base.

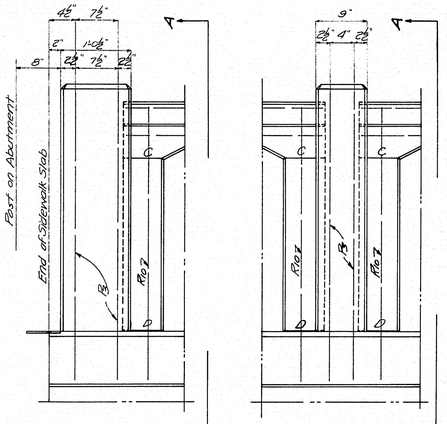
Light posts, bronze light post caps, conduit in concrete and four standard Bridge Division zinc junction boxes for lights on abutments will be furnished and installed as a part of this project.





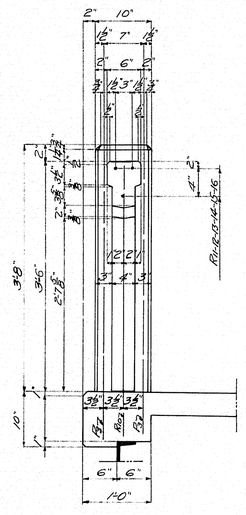
RAIL DETAILS

Post and vertical rail steel to be set in sidewalk. Build rail forms and set in position. Break the bond at points "C" and "D" by placing there, at the proper time, one thickness of roofing. When rail forms are removed wrap ends of rails for 6" with two thicknesses of roofing and build posts. Rails to extend into posts 1½". When post forms are removed cut away all exposed felt. Chamfer all exposed edges of concrete ½" unless otherwise indicated.



POST AT END BRACKET

INTERMEDIATE POST

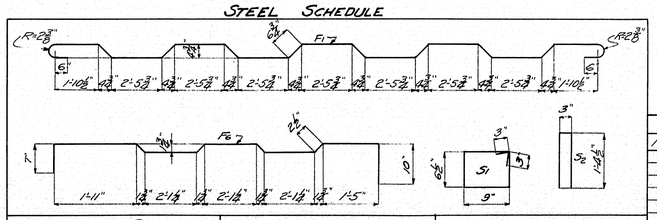


SECTION A-A

LIGHT POST

4 Reqd - Superstructure
4 " - Abutments

STEEL SCHEDULE



BENT BARS				STRAIGHT BARS				STRAIGHT BARS			
Mark	Size	No.	Length	Mark	Size	No.	Length	Mark	Size	No.	Length
F1	⅜"ø	206	27'-10⅜"	F2	⅜"ø	418	24'-8"	F9	⅜"ø	24	3'-0"
F6	⅜"ø	920	11'-10⅜"	F5	½"ø	20	26'-0"	F10	⅜"ø	12	10'-0"
S1	½"ø	474	3'-1"	F4	½"ø	20	24'-9"	F11	½"ø	32	2'-6"
S2	½"ø	474	3'-0"	F5	½"ø	20	24'-8"	D2	½"ø	32	1'-0"
				F7	½"ø	460	10'-3"	T3	⅜"ø	24	25'-5"
				F8	½"ø	304	14'-6"	T6	⅜"ø	24	25'-4"

STRAIGHT BARS			
Mark	Size	No.	Length
T1	⅜"ø	237	23'-10"
T2	⅜"ø	24	27'-8"
T3	⅜"ø	24	25'-7"
T4	⅜"ø	24	25'-6"
P3	½"ø	224	4'-2"
R10	⅜"ø	304	3'-11"
R11	⅜"ø	18	8'-5½"
R12	½"ø	24	6'-0"
R13	½"ø	42	7'-1"
R14	½"ø	48	7'-10"
R15	⅜"ø	12	7'-9½"
R16	⅜"ø	18	8'-3"
T7	⅜"ø	24	25'-3"
T8	⅜"ø	24	25'-2"

All steel to be plain rounds, structural grade. All steel dimensions are to centers of bars.

STRAIGHT BARS			
Mark	Size	No.	Length
T5	⅜"ø	24	25'-0"
T10	⅜"ø	24	26'-9"
P12	½"ø	20	24'-7"
P13	½"ø	20	24'-6"
P14	½"ø	20	24'-5"
P15	½"ø	20	24'-3"
P16	½"ø	20	24'-1"
P17	½"ø	20	25'-4"

Town 09-36
Bridge 2585

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

MORSE BRIDGE
over
ANDROSCOGGIN RIVER
in the town of
RUMFORD
OXFORD COUNTY

RAIL - LIGHTS

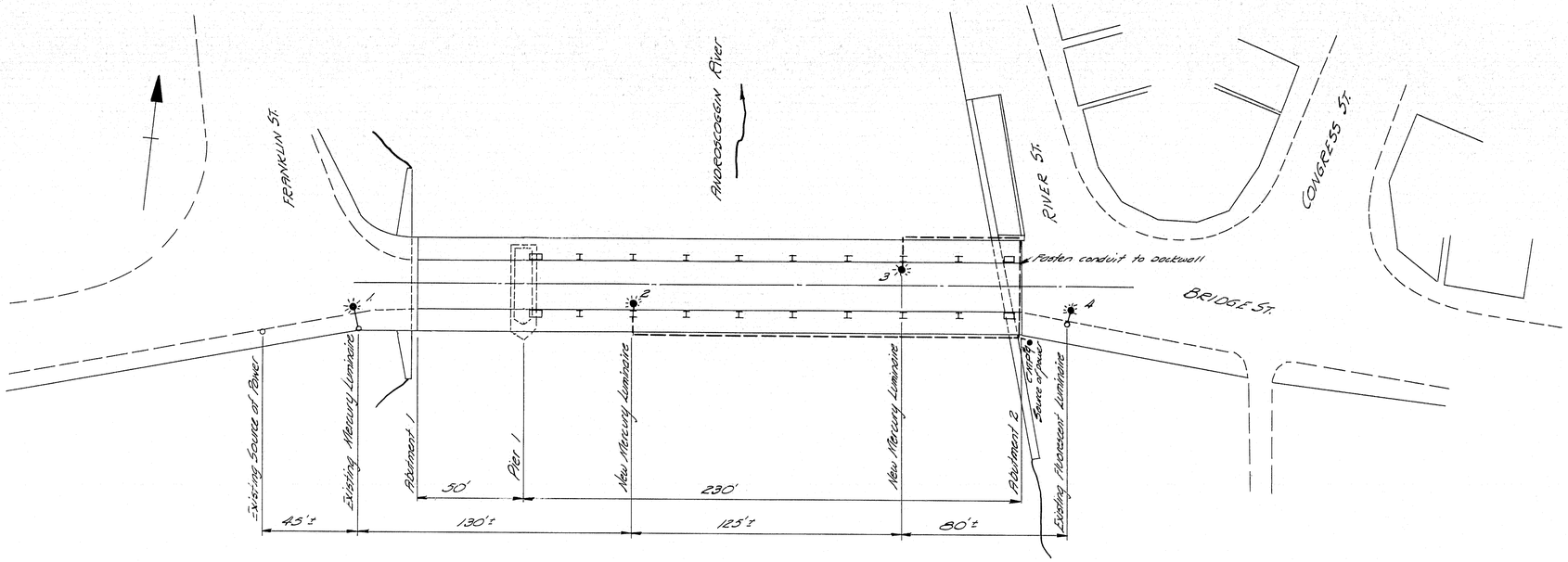
Sheet 15 of 15 Augusta, Me., Jan. 1935

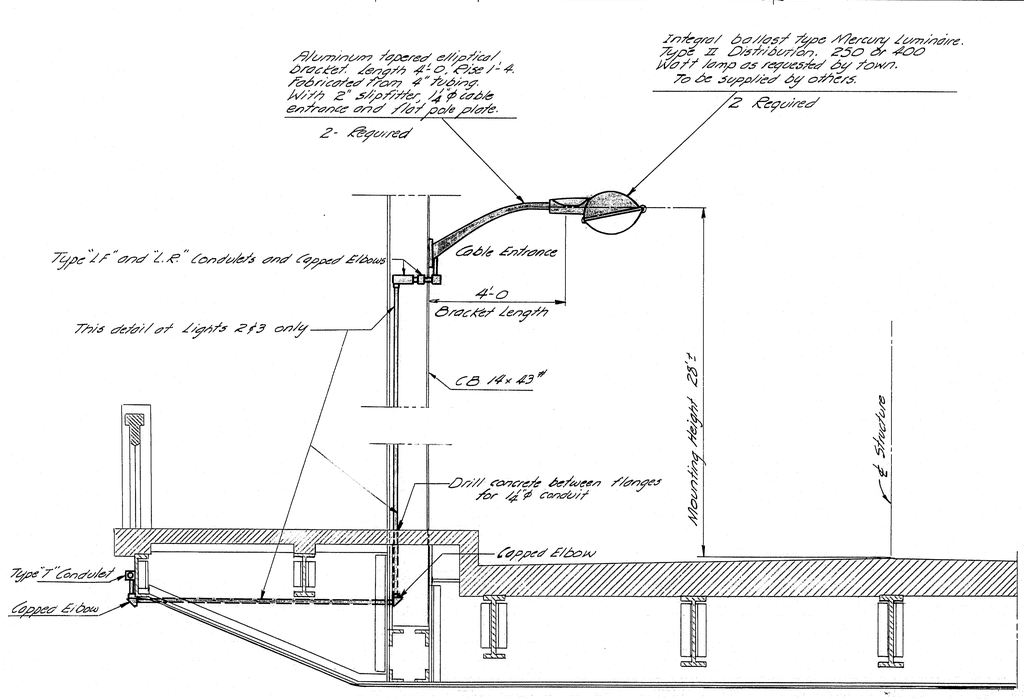
28-177

C.L.P.

0 1 2 3 4 5 INCHES

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE			





DETAIL AT LIGHTS 2 and 3

GENERAL NOTES

Conduit shall be 1¼ϕ rigid plastic polyvinyl chloride (Standard wall) or galvanized wrought iron. Plastic conduit shall be joined by cemented couplings. Other connections shall be IPS adapters.

Pole riser shall conform to Central Maine Power Co. standards. When plastic conduit is used as a pole riser it shall be protected by a suitable U-cable guard.

Conduits shall be clamped every 5'-0 maximum, using galvanized malleable one-hole pipe clamps and threaded studs or galvanized bolts, nuts and lockwashers.

Conduit between pole and Span 1 shall be clamped to outside face of retaining wall by means of lead sleeve galvanized expansion bolts.

If metal conduit is used all threads shall be treated.

Provision shall be made for conduit expansion. Type "AX" or equal expansion fitting shall be installed in each conduit run except pole riser conduit.

Underground metal conduit shall be painted with 2 coats of red lead.

Metal boxes and other fittings shall have a protective coating of galvanizing or cadmium plating.

A No. 12 galvanized steel pull wire shall be installed in all conduits and ducts. Permanent wires will be installed by others.

Brackets shall be attached to suspenders with galvanized hex head bolts, nuts and lockwashers.

Fittings shown on plans are the minimum number required any others necessary shall be furnished to complete a suitable conduit system.

C. E. CO., NO. 379 40927

DESIGN – MURRELL	BRIDGE NO. 2585
TRACE – "	SURVEY –
CHECK –	PLOT –

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

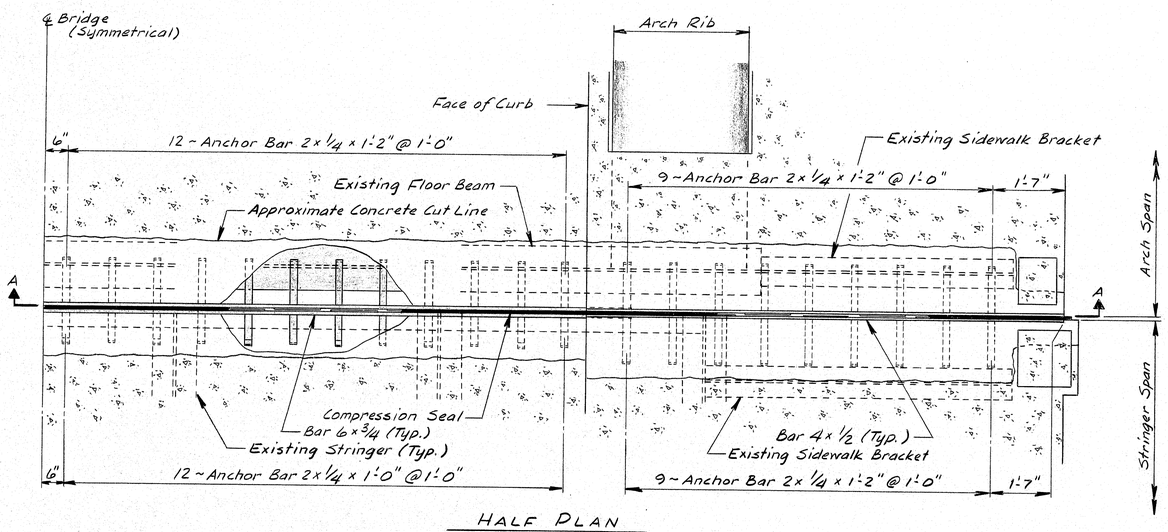
MORSE BRIDGE
OVER
ANDROSCOGGIN RIVER
IN THE TOWN OF
RUMFORD
OXFORD COUNTY

LIGHTING SYSTEM

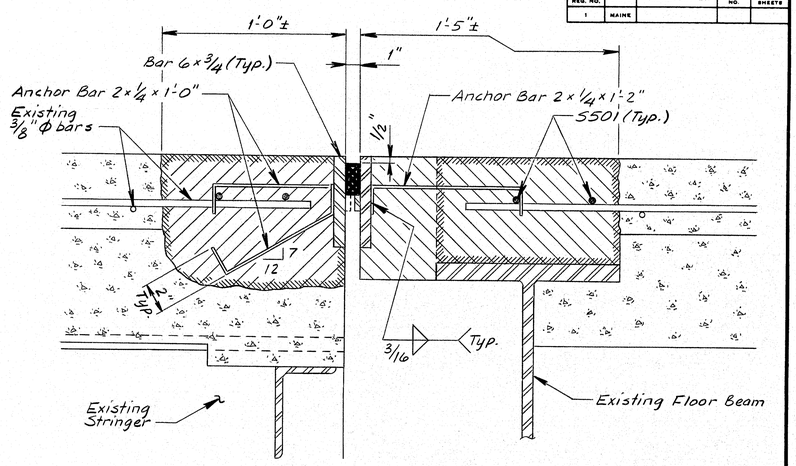
SHEET 1 OF 1 AUGUSTA, MAINE MAY 1959

77-112

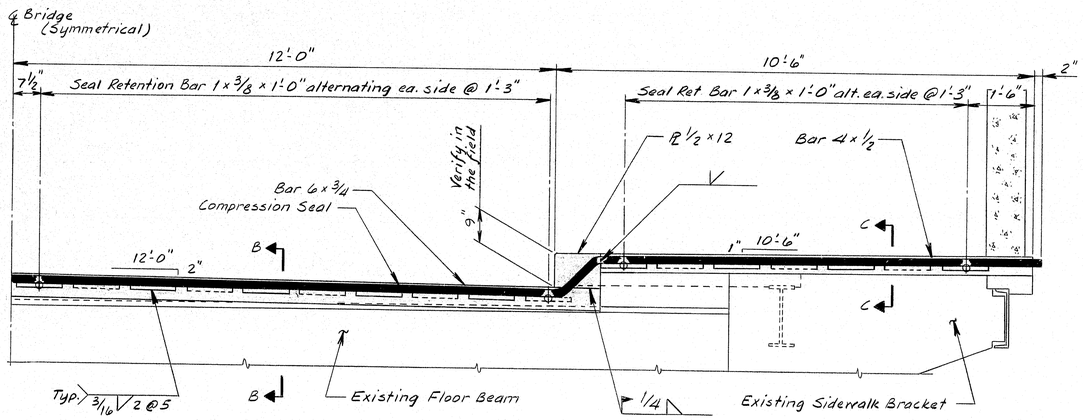
0 1 2 3 4 5 INCHES



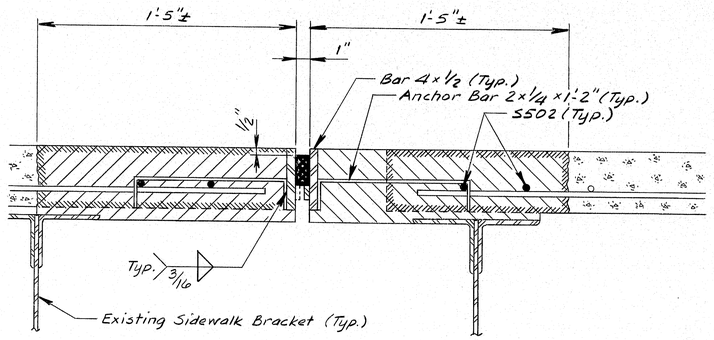
HALF PLAN



SECTION B-B



SECTION A-A



SECTION C-C

REINFORCING STEEL				
Mark	Size	Qty.	Length	Location
S500	#5	60	1'-2"	Backwall Dowels
S501	#5	16	12'-0"	Roadway
S502	#5	20	9'-0"	Sidewalk

SYMBOLS

- New Concrete (Plan or Elevation)
- New Concrete (Section)
- Existing Concrete (To remain)
- Existing Concrete (To be removed)

PROJECT DESIGN ENGINEER	BY	DATE
DESIGN - DETAILED	WLG	D. Dameron Dec '86
CHECKED		BMS 1-87
REVISIONS		
FIELD CHANGES		

PLANS

BRUNING 44-132-65710-1

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE			

100-396

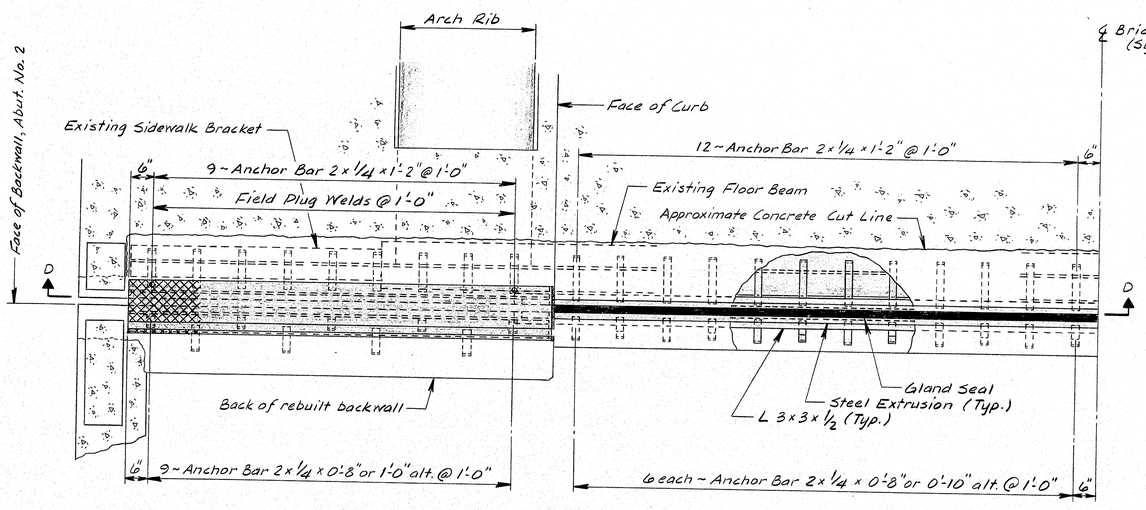
Bridge No. 2585

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

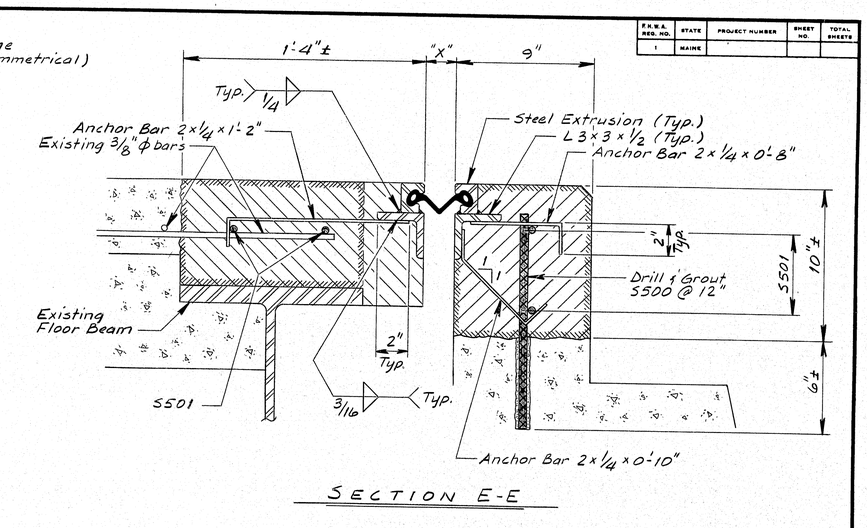
MORSE BRIDGE
OVER
ANDROSCOGGIN RIVER
IN THE TOWN OF
RUMFORD
OXFORD COUNTY

PIER COMPRESSION SEAL

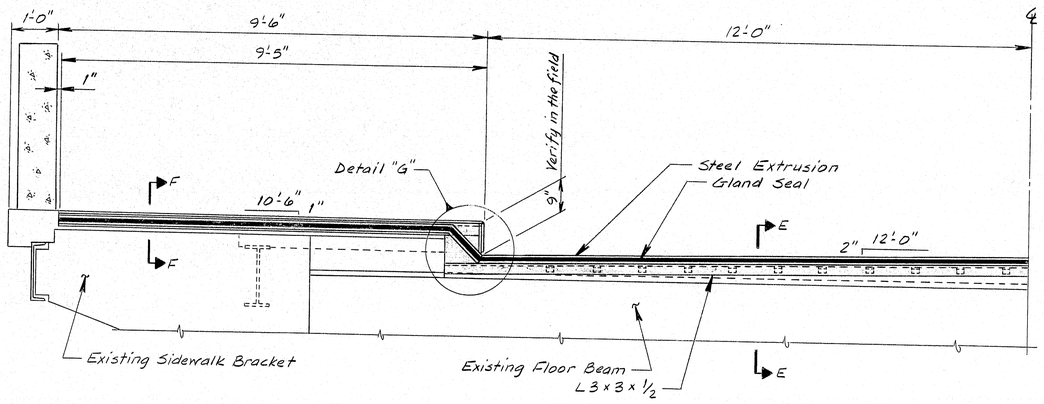
SHEET 1 OF 3 AUGUSTA, MAINE



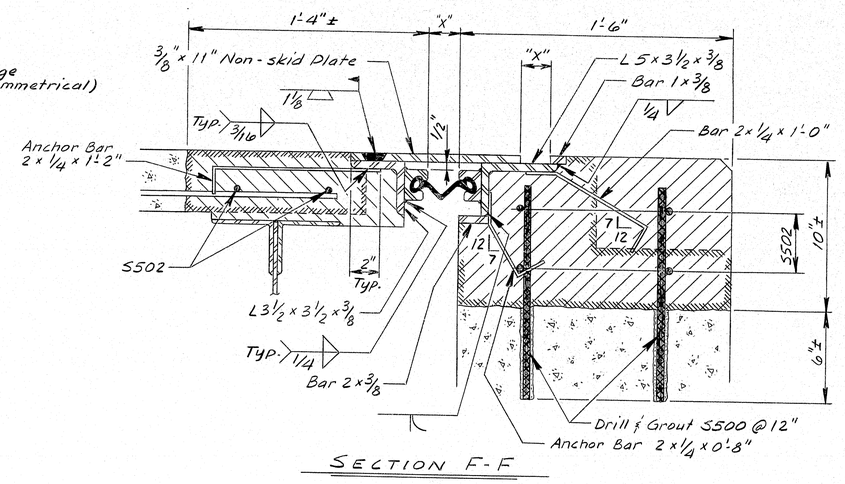
HALF PLAN



SECTION E-E



SECTION D-D



SECTION F-F

GLAND SEAL SETTING TABLE											
Temperature (°F)	120	105	90	75	60	45	30	15	0	-15	-30
Dimension "X"	1/2"	13/16"	1 1/8"	1 3/8"	1 11/16"	2"	2 5/16"	2 5/8"	2 7/8"	3 3/16"	3 1/2"

PROJECT DESIGN ENGINEER	BY	DATE
PLANS		
DESIGN - DETAILED	WLA	Dec. '86
CHECKED	D Damren	Jan. '87
REVISIONS	RAS	
FIELD CHANGES		

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE			

Bridge No. 2585

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

MORSE BRIDGE OVER ANDROSCOGGIN RIVER IN THE TOWN OF RUMFORD OXFORD COUNTY

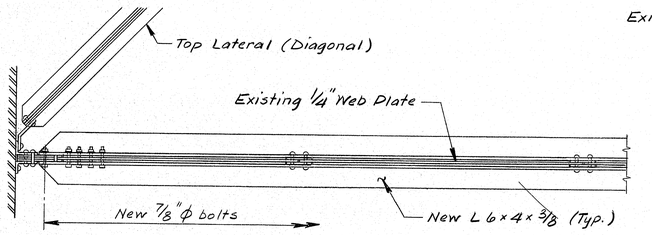
ABUTMENT NO. 2 GLAND SEAL

SHEET 2 OF 3 AUGUSTA, MAINE

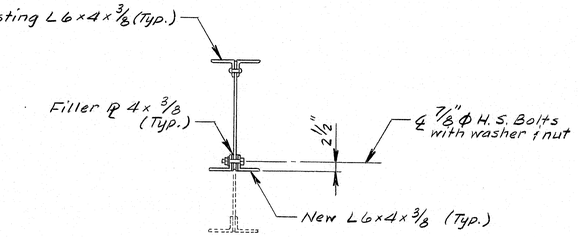
100-397

BRUNING 44-132-45710-1

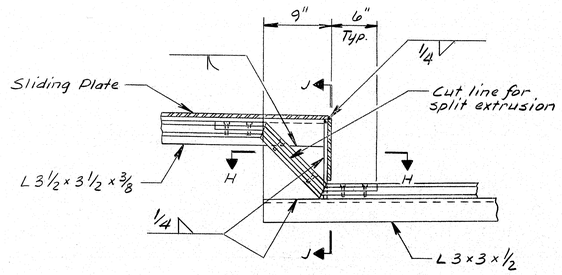
F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE			



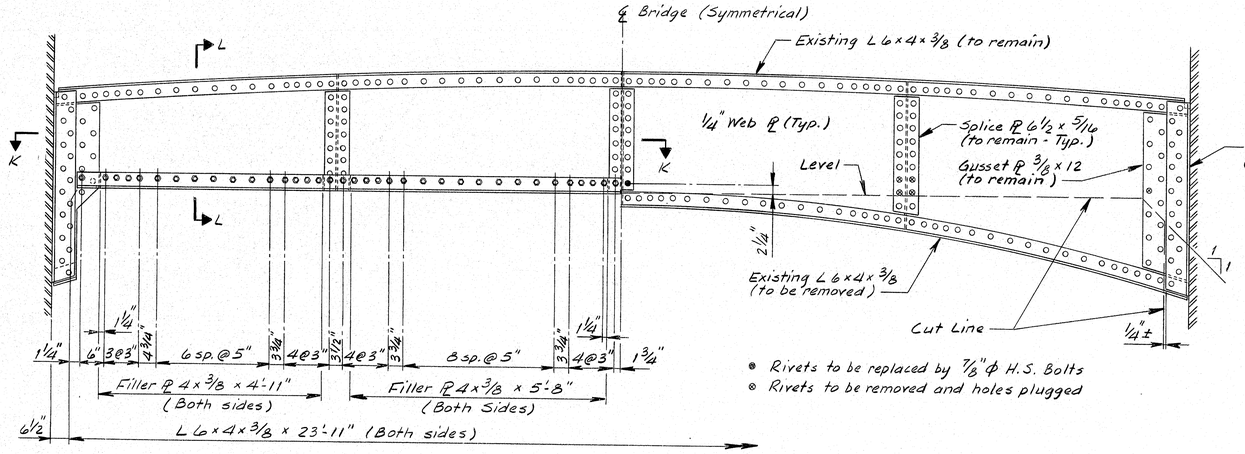
SECTION K-K



SECTION L-L



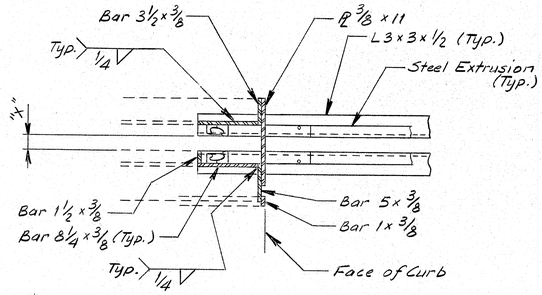
DETAIL "G"



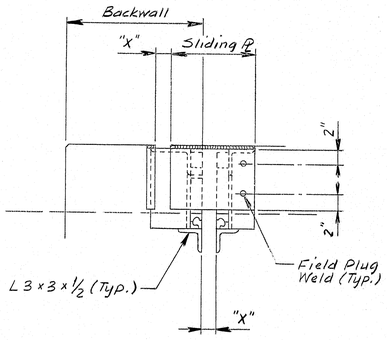
* Rivets to be replaced by 7/8" ϕ H.S. Bolts
* Rivets to be removed and holes plugged

ELEVATION OF PORTAL STRUT

(Typical both ends of bridge)



SECTION H-H



VIEW J-J

NOTES

1. The Compression Seal shall be Watson-Bowman f Acme WJ-162 or WA-175, or D.S. Brown H1625.
2. The Gland Seal shall be Watson-Bowman f Acme S400.
3. Reinforcing steel shall have two inches minimum cover.
4. All steel shall be A36. The steel shall be completely painted except those areas embedded in concrete. Holes for 7/8" ϕ bolts shall be 15/16" ϕ. Anchor bars may be replaced by 1/2" ϕ studs of the same embedment length as the bar. Bolts shall be ASTM A325.
5. Existing rivets shall be removed where interfering with the new angles. Any vacant holes shall be filled with weld material.
6. The existing joint armor at the pier and at Abutment No. 2 shall be completely removed.

PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN - DETAILED	N.L.S.	12 Bowman Dec. 86
	CHECKED		
	REVISIONS FOR FIELD CHANGES	BRS 1-87	

BRUNING 44-132 45710-1

100-398

Bridge No. 2585

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

MORSE BRIDGE
OVER
ANDROSCOGGIN RIVER
IN THE TOWN OF
RUMFORD
OXFORD COUNTY

GLAND SEAL DETAILS
PORTAL STRUT MODIFICATIONS

SHEET 3 OF 3 AUGUSTA, MAINE

METRIC	1. All dimensions are in millimeters unless otherwise noted. 2. All elevations and stations are in meters.	F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
		1	MAINE	BH-8975(00)X	1	11

008975.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

MORSE BRIDGE
OVER
ANDROSCOGGIN RIVER
IN THE TOWN OF
RUMFORD
OXFORD COUNTY

PROJECT NO. BH-8975(00)X
PROJECT LENGTH .880 km
DECK AND SIDEWALK REPLACEMENT
BRIDGE NO. 2585

SPECIFICATIONS

DESIGN: Load Factor Design per AASHTO Standard Specifications for Highway Bridges 1996, and all supplements thereto.

CONTRACT: State of Maine, Department of Transportation, Standard Specifications, Highways and Bridges, Revision of April 1995.

STANDARD DETAILS: State of Maine, Department of Transportation, Standard Details, Highways and Bridges, April 1997.

DESIGN LOADING

Live Load ..... MS 18

TRAFFIC DATA

Current (1999) AADT	2730
Future (2019) AADT	10480
DHV - % of AADT	9
Design Hour Volume	943
% Heavy Trucks (AADT)	9
% Heavy Trucks (DHV)	10
Directional Distribution (DHV)	50
80 kN Equivalent P 2.0	916
80 kN Equivalent P 2.5	899
Design Speed (km/h)	40

MATERIALS

Concrete - Curbs, Sidewalks, Railing	Class "LP"
Concrete - All Others	Class "A"
Reinforcing Steel	ASTM A 615/A 615M, Grade 420
Structural Steel:	
All Material (except as noted)	ASTM A 709/A 709M, Grade 345W
High Strength Bolts	ASTM A 325M, Type 3

BASIC DESIGN STRESSES

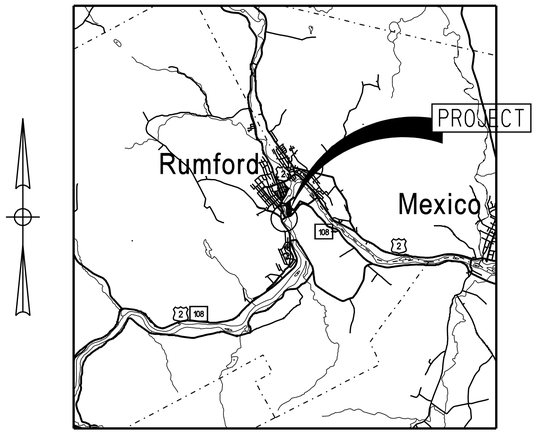
Concrete	f 'c = 30 MPa
Reinforcing Steel	f y = 420 MPa
Structural Steel:	
ASTM A 709/A 709M, Grade 345W	F y = 345 MPa
ASTM A 709/A 709M, Grade 250	F y = 250 MPa
ASTM A 325M	F y = 170 MPa

UTILITIES

Central Maine Power Company	Bell Atlantic
Rumford Water District	Adelphia
Rumford-Mexico Sewer District	

MAINTENANCE OF TRAFFIC

Bridge will be closed to traffic during rehabilitation of the superstructure and must be open to traffic by third week of June for a summer festival. A posted detour route will be established.



LOCATION MAP

2 0 2 4

Scale in Kilometers

LIST OF DRAWINGS

Title Sheet	1
Quantities & Notes	2
Peir #1 Rehab	3
Abutment #1 Slab-Over Details	4
Superstructure Plan Approach Span	5
Superstructure Plan Main Span	6
Drain Detail	7
Expansion Seal Details	8
Concrete Railing Details	9
Approach Railing Details	10
Reinforcing Steel Schedule	11

NOTES

All work contemplated under this contract shall be governed by and in conformity with the Standard Specifications (Revision of April 1995), the Standard Details (April 1997), and supplementals thereto, except as modified on the plans and in the Special Provisions.

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

A Bridge Deck Evaluation Report of the existing bridge is available for the Contractor's reference at the Bridge Design office in Augusta. The report contains visual inspection information and deck core data of the bridge. There is no assurance that the information or core data are a true representation of the entire deck.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

APPROVED:

COMMISSIONER _____ DATE _____

CHIEF ENGINEER _____ DATE _____

UNITED STATES
DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
REGION 1

APPROVED:

DIVISION ADMINISTRATOR _____ DATE _____

Filename: ...\00\BRIDGE\MSTA\008975\BRIDGE Date: 12/30/2013
Username: David.Sullivan

METRIC	1. All dimensions are in millimeters unless otherwise noted. 2. All elevations and stations are in meters.	F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
		1	MAINE	BH-8975(00)X	2	11

008975.00

ESTIMATED QUANTITIES

ITEM NO.	DESCRIPTION	QUANTITY	UNIT
202.10	REM EXIST SUPERSTRS PROP CONTR (252 m²)	1	LS
202.17	REM EXIST STRUCT CONC (4 m³)	1	LS
203.20	COMMON EXCAVATION	14	M3
203.24	COMMON BORROW	2	M3
304.10	AGGR SUBB COURSE - GRAVEL	9.5	M3
403.208	HOT MIX ASPHALT 12.5 MM	3	MG
403.209	HOT MIX ASPHALT 9.5 MM	124	MG
409.15	BITUMINOUS TACK COAT APPLIED	100	L
502.21	STR CONC ABUT & RET WALL	3.5	M3
502.26	STR CONC RD&SW SLAB ON ST BR (185 m²)	1	LS
503.12	REINF STEEL, FAB & DEL	20000	KG
503.13	REINF STEEL, PLACING	20000	KG
505.08	SHEAR CONNECTORS (2,580 EA.)	1	LS
506.17	SURF PREP OF EX STR STEEL	1	LS
506.18	CONTAINMENT AND POLLUTION CONTROL	1	LS
506.191	DISPOSAL OF SPECIAL WASTE MATERIAL	1	LS
507.08	BRIDGE RAILING	120	M
508.14	HIGH PERFORMANCE WATERPROOFING MEMBRANE (638 m²)	1	LS
511.07	COFFERDAM:	1	LS
515.21	PROTECTIVE COAT FOR CONC SUR (764 m)	1	LS
518.21	REHAB STR CONC SUBSTR	171	M2
520.21	EXPANSION DEVICE - GLAND SEAL	1	EA
520.22	EXPANSION DEVICE - COMPRESSION SEAL	1	EA
526.301	TEMPORARY CONC BARRIER TYPE I (20 m)	1	LS
629.05	HAND LABOR, STRAIGHT TIME	40	MH
631.12	ALL-PURPOSE EXC (INC OPERATOR)	20	HR
631.171	TRUCK-SMALL (INC OPERATOR)	20	HR
631.36	FOREMAN	20	MH
639.19	FIELD OFFICE TYPE B	1	EA
652.31	TYPE I BARRICADE	8	EA
652.312	TYPE III BARRICADE	4	EA
652.33	DRUM	20	EA
652.34	CONE	10	EA
652.35	CONSTRUCTION SIGNS	20	M2
652.361	MAINT OF TRAFF CONTROL DEV (130 CD)	1	LS
656.75	TEMP. SOIL EROSION AND WATER POLLUTION	1	LS
659.10	MOBILIZATION	1	LS
830.10	WATER MAIN REPLACEMENT	1	LS

GENERAL CONSTRUCTION NOTES

1. Dimensions and Elevations shown on the plans shall be field verified prior to construction.
2. The Anchoring Material shall be one of the Products listed on the Maine Department of Transportation list of Prequalified Type III Anchoring Materials. Installation shall be in conformance with the Manufacture's recommendations. The Unconfined Pullout shall be 108 kN
3. Reinforcing Steel shall have a minimum cover of 50 mm unless otherwise indicated.
4. No separate Payment will be made for Drilling and Anchoring Reinforcing Steel in the Existing Abutment # 1, but will be considered Incidental to Related Contract Item
5. Removal of the Existing Structural Concrete Bridge Deck, including the Bituminous Wearing Surface, Bridge Railing and all Incidentals will be paid under item 202.10.
6. Removal of the Existing Structural Concrete on Abutment #1, including the Bridge Railing and all Incidentals will be paid for under Item 202.17. Any Damage the Existing Abutment and Wings remaining in place shall be Repaired at the Contractor's Expense.
7. Contractor's Attention is Drawn to the Existing Plans for the Location of the Existing Superstructure Beams. Extreme Caution shall be used during the removal of the Existing Deck to Prevent Damaging the Existing Structural Steel. Any and all damage done to the Existing Structural Steel during Construction shall be repaired in a manner approved by the Project Manager & Contractor's Ex pence.
8. All utility facilities shall be adjusted by the respective utilities unless otherwise noted.
9. During construction, the bridge will be closed to traffic for a time period specified in the Special Provisions.
10. Do not excavate for Aggregate Subbase Course where existing material is suitable as determined by the Engineer.
11. Protective coating for concrete surfaces shall be applied to the following areas:
    - All exposed surfaces of concrete curbs and sidewalks.
    - Fascia down to drip notch.
    - All exposed surfaces of concrete transition barriers.
    - Concrete wearing surfaces.
    - Concrete barrier railing.
    - Top of abutment backwalls and to 300 mm below the top of backwalls on the back side.
12. All Work shall be done in Accordance with the Maine Department of Transportation's Best Management Practices for Erosion Control and Sediment Control, November, 1999.
13. All Materials, Labor and Inccidentals nescessary for Construction of Bridge Railing and Posts shall be paid for under item 507.08

PROJECT DESIGN ENGINEER	BY	DATE
DESIGN-DETAILED	HEC	
CHECKED	DMS	
REVISIONS		
FIELD CHANGES		

PLANS

BRIDGE NO. 2585

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

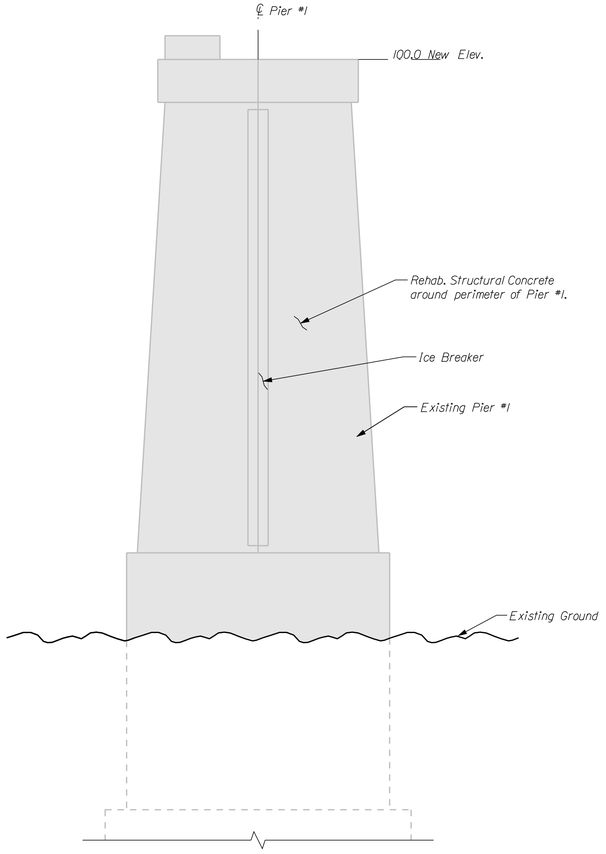
MORSE BRIDGE
OVER
ANDROSCOGGIN RIVER
IN THE TOWN OF
RUMFORD
OXFORD COUNTY

Estimated Quantities

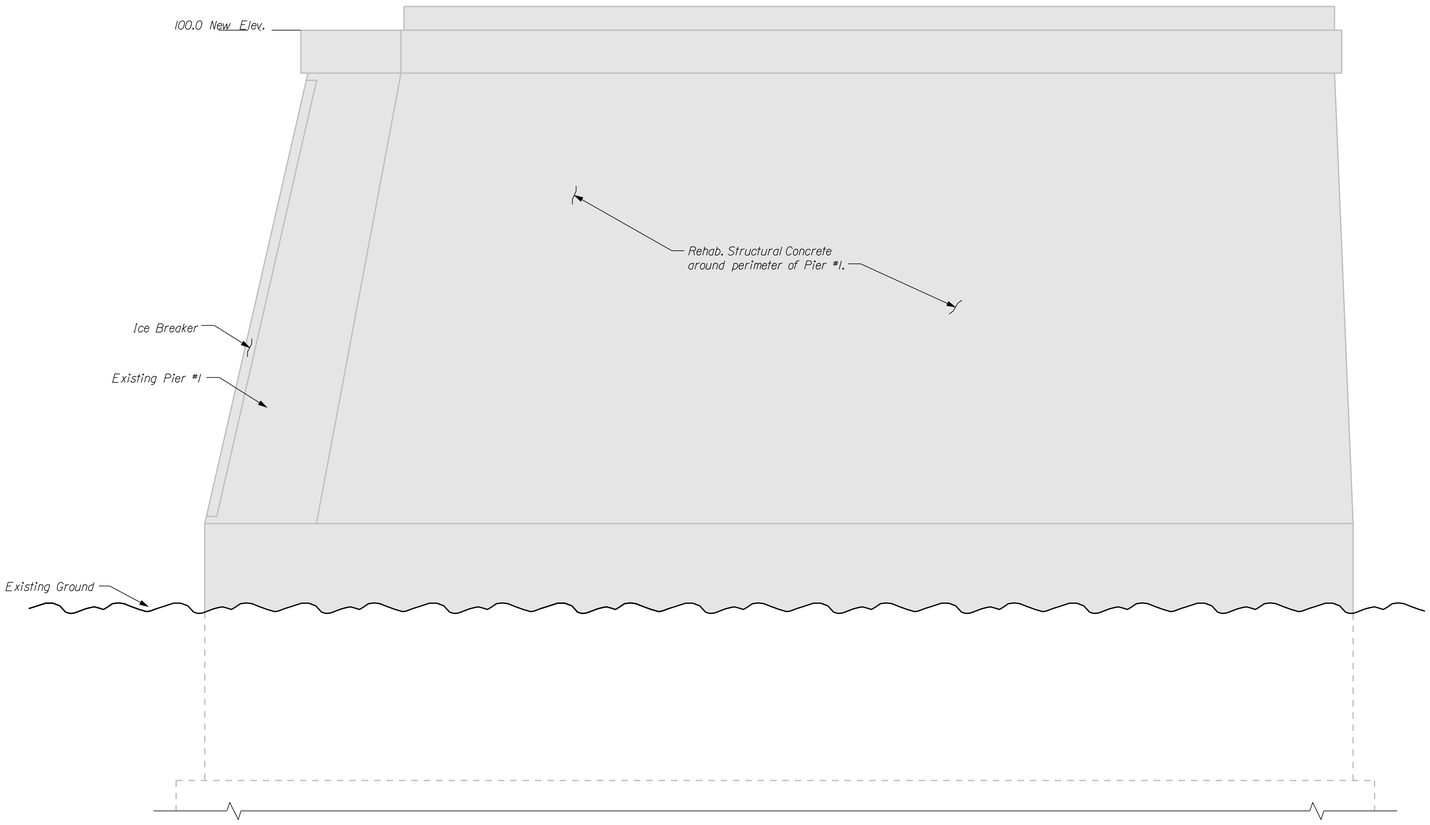
SHEET OF AUGUSTA, MAINE

Filename: ...\bridge\msta\002_Estimate.dgn Division: BRIDGE Username: David.Sullivan Date:12/30/2013

METRIC	1. All dimensions are in millimeters unless otherwise noted. 2. All elevations and stations are in meters.	F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
		1	MAINE	BH-8975(00)X	3	11
				008975.00		



Pier #1 Up Stream Elevation



Pier #1 Side Elevation

BRIDGE NO. 2585

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

MORSE BRIDGE
OVER
ANDROSCOGGIN RIVER
IN THE TOWN OF
RUMFORD
OXFORD COUNTY

Pier #1 Rehab Details

SHEET OF AUGUSTA, MAINE

PROJECT DESIGN ENGINEER		BY	DATE
	DESIGN-DETAILED	HEC	
PLANS	CHECKED	DMS	
	REVISIONS		
	FIELD CHANGES		

Filename: ...\bridge\msto\003_Pier1Rehab.dgn Division: BRIDGE Username: David.Sullivan Date:12/30/2013

METRIC	1. All dimensions are in millimeters unless otherwise noted. 2. All elevations and stations are in meters.	F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
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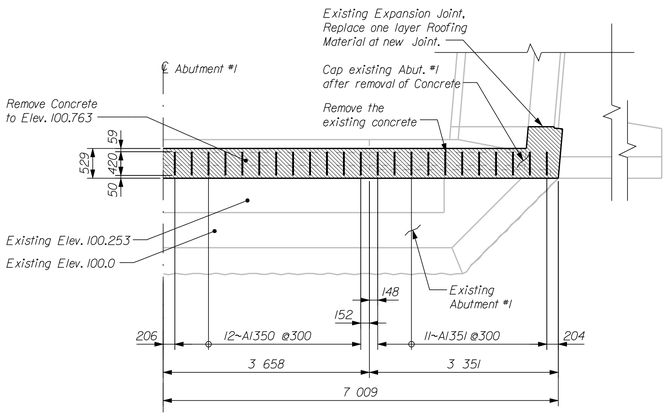
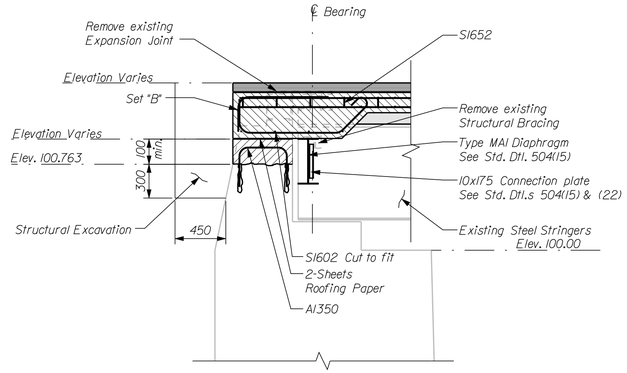
				008975.00		



Half Plan Abut. #1

Symetrical about Abutment Centerline of Construction.

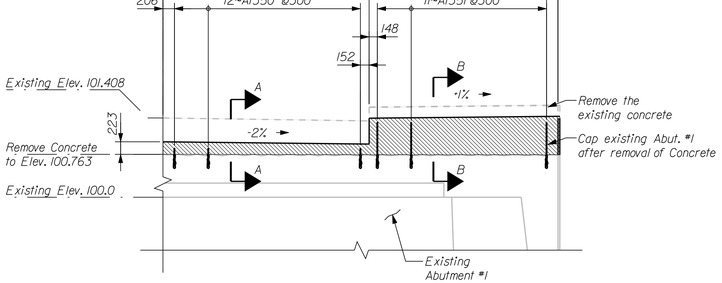


Section A-A

Slab-Over Abut. #1

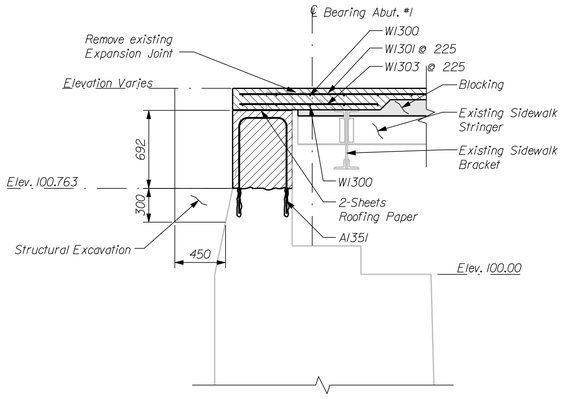
SLAB-OVER NOTES

1. Reinforcing steel shall have 50 mm cover unless otherwise indicated.
2. Cover construction and contraction joints on the back with two layers of heavy roofing or membrane waterproofing.
3. Projection lengths for all dowels shall be in accordance with Section 503.07 of the Standard Specifications.
4. All Abutment dimensions are approximate and are based on available survey data and plans of the existing bridge and are to be field verified.



Half Elev. Abut. #1

Symetrical about Abutment Centerline of Construction.



Section B-B

Slab-Over Abut. #1

PROJECT DESIGN ENGINEER	BY	DATE
DESIGN-DETAILED	HEC	
CHECKED	DMS	
REVISIONS		
FIELD CHANGES		

PLANS

Filename: ...\mst0\004_abut1SlabOver.dgn Division: BRIDGE Username: David.Sullivan Date:12/30/2013

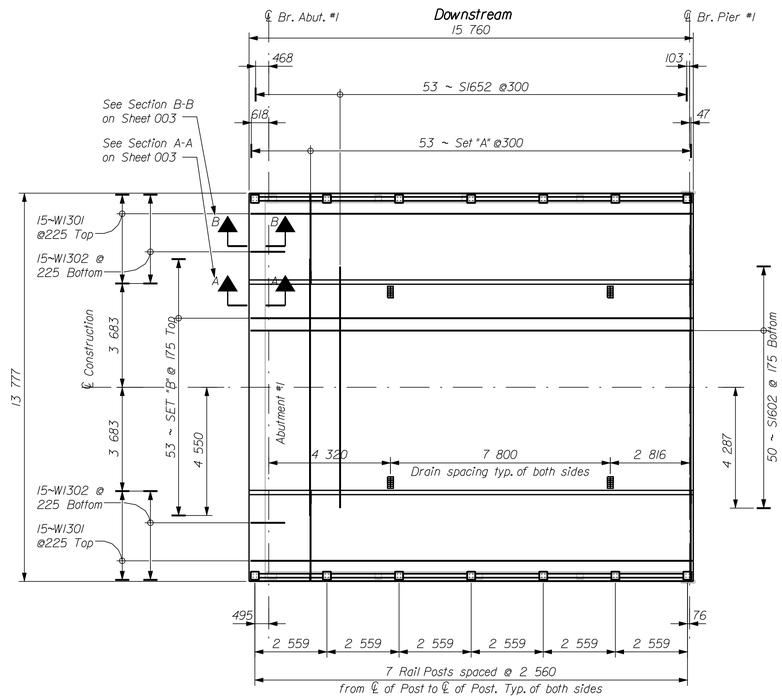
BRIDGE NO. 2585

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

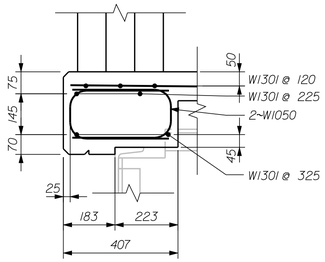
MORSE BRIDGE
OVER
ANDROSCOGGIN RIVER
IN THE TOWN OF
RUMFORD
OXFORD COUNTY

Abut. #1 Slab-Over Dtl.

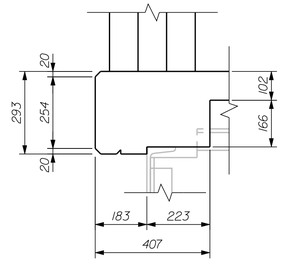
SHEET OF AUGUSTA, MAINE



Superstructure Approach Span



Typical Fascia Detail Approach Span
Rebar Layout



Typical Fascia Detail Approach Span
Dimensions

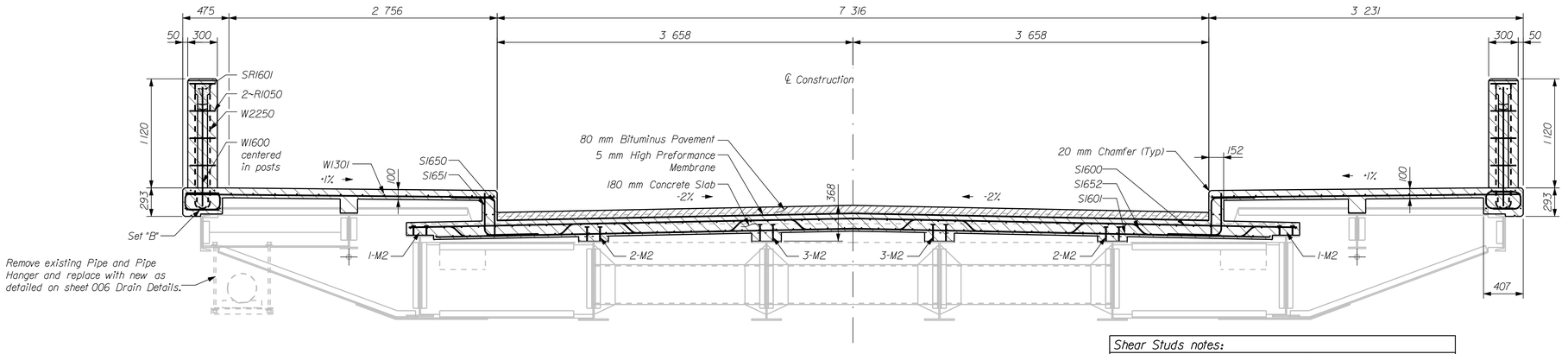
METRIC	1. All dimensions are in millimeters unless otherwise noted. 2. All elevations and stations are in meters.	F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
		1	MAINE	BH-8975(00)X	5	11

008975.00

SUPERSTRUCTURE NOTES

1. Form a 15 mm Drip Notch as shown in the Standard Detail 502(2).
2. Reinforcing steel shall have a minimum cover of 50 mm unless otherwise noted.
3. Adjust reinforcing steel to fit around the Bridge Drains, Arch Ribs, and Hangers in a manner approved by the Engineer. Do not cut transverse reinforcing bars.
4. At Abutment #1, for the Slab-Over addition, trim the transvers Rebar that is called for to fit different Slab configuration.
5. The superstructure slab concrete for each span shall be placed continuously and shall be kept plastic until the entire span has been placed.
6. Unless the superstructure slab concrete is placed in one continuous operation, the initial placement shall start at a simply supported end of the deck slab and shall terminate at the completion of a positive moment section. Successive placements shall proceed from the end of the previous placement, terminate at the completion of a positive moment section, and include two or more spans. The placement sequence of the superstructure slab concrete shall be approved by the Engineer.
7. Concrete in a placement shall be kept plastic one complete span behind the span being placed. A minimum of five days shall elapse between successive partial placements.
8. The formwork and its supports, over the full width of the structural slab, shall remain in place until a minimum of 48 hours has elapsed after placement of the final section of the slab, after which, removal of formwork for sections meeting the requirements for form removal of Section 502, Structural Concrete, of the Standard Specifications, may proceed.
9. Feild cut and/or bend rebar around Bridge Drains, Arch Rib openings, and Hangers.
10. The seals to be furnished shall have a minimum Movement Rating of:
    Pier Number 1 = 13
    Abutment Number 2 = 72
11. The seals shall be approved by the Engineer prior to fabrication of the joint armor.

Rebar Set Table	
Set #	Components of Set
A	2~2-W1050, 2~W1300, 2~S1650, 2~S1651, S1600, S1601
B	S1653, S1654, 2~S1602
C	2~R1050
D	2-W1051, W1303, S1655, 2~S1656, 2-S1603
E	2~W1051, W1303, S1655



Transverse Section - Proposed Approach Span

Shear Studs notes:

45 Shear Studs starting 175 mm from ℄ of Abutment #1 Bearing to ℄ bearing of Pier #1. 2~Shear Studs 175 mm from ℄ of Abutment #1 to end of West side of Approach Span

1-M2 Double Studs @ 350 Longitudinal on Approach Span Stringers height of studs = 100 mm

2-M2 Double Studs @ 350 Longitudinal on Approach Span Stringer, height of studs = 150 mm

3-M2 Double Studs @ 350 Longitudinal on Approach Span Stringer, height of studs = 175 mm

BRIDGE NO. 2585

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

MORSE BRIDGE
OVER
ANDROSCOGGIN RIVER
IN THE TOWN OF
RUMFORD
OXFORD COUNTY
Superstructure Plan
Approach Span

SHEET OF AUGUSTA, MAINE

PROJECT DESIGN ENGINEER	BY	DATE
DESIGN-DETAILED	HEC	
CHECKED	DMS	
REVISIONS		
FIELD CHANGES		

PLANS

Filename: ...\mst0\005_supapproach.dgn Username: David.Sullivan Date:12/30/2013 Division: BRIDGE

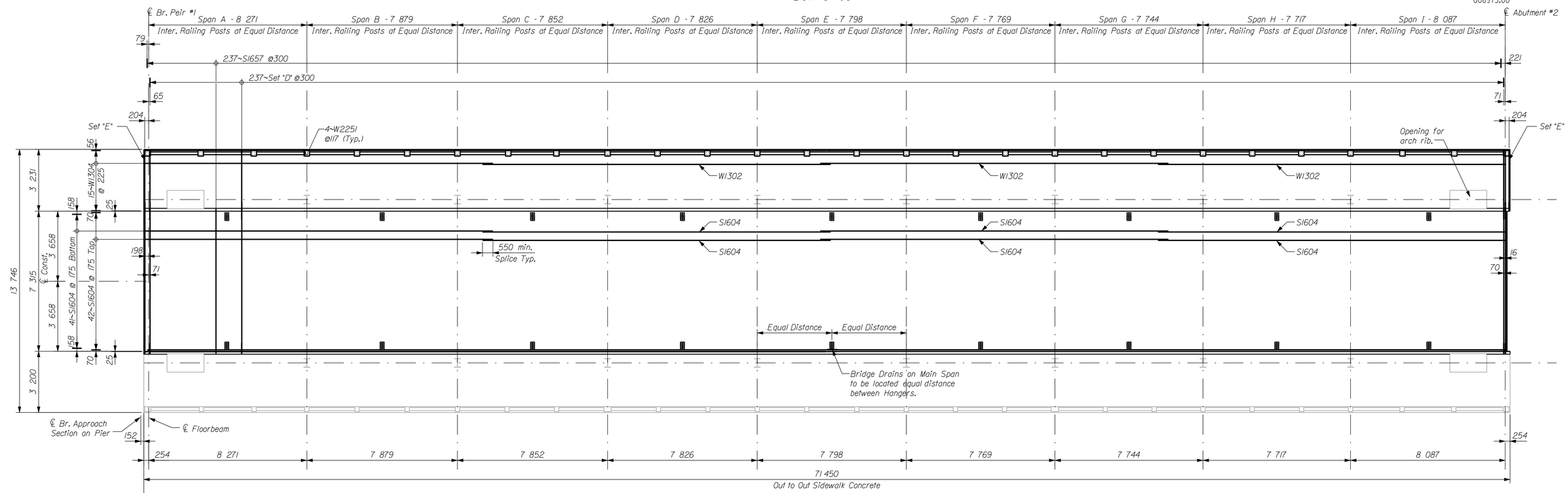
METRIC

1. All dimensions are in millimeters unless otherwise noted.
2. All elevations and stations are in meters.

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BH-8975(00)X	6	11

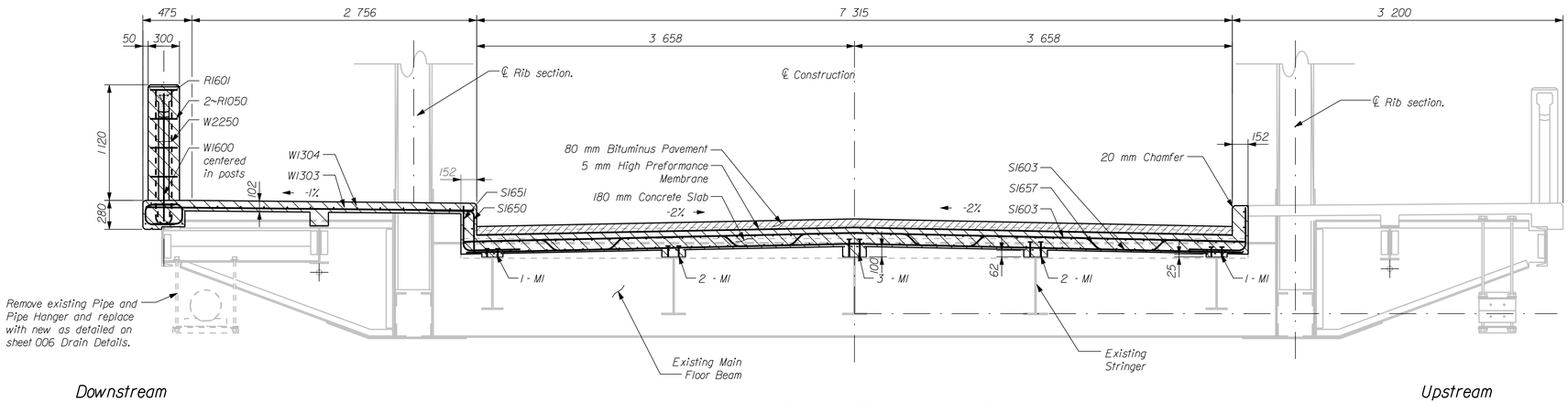
008975.00

Downstream

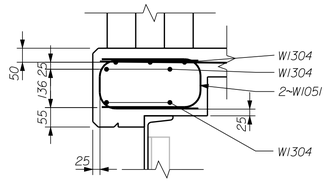


Upstream

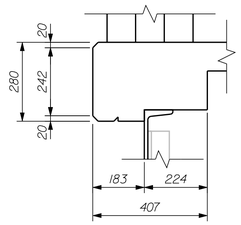
Superstructure Main Span



Transverse Section - Proposed Main Span



Typical Fascia Detail Main Span Rebar Layout



Typical Fascia Detail Main Span; Dimensions

Rebar Set Table	
Set #	Components of Set
A	2~2-WI050, 2~WI300, 2~SI650, 2~SI651, SI600, SI601
B	SI653, SI654, 2~SI602
C	2~RI050
D	2-WI051, WI303, SI655, 2~SI656, 2-SI603
E	2~WI051, WI303, SI655

Shear Studs notes:

204 Shear Studs starting 175 mm from ℄ of Bearing Pier #1 to ℄ Bearing of Abutment #2.

1-MI Double Studs @ 350 Longitudinal on Approach Span Stringers height of studs = 100 mm

2-MI Double Studs @ 350 Longitudinal on Approach Span Stringer, height of studs = 150 mm

3-MI Double Studs @ 350 Longitudinal on Approach Span Stringer, height of studs = 175 mm

BRIDGE NO. 2585

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

MORSE BRIDGE
OVER
ANDROSCOGGIN RIVER
IN THE TOWN OF
RUMFORD
OXFORD COUNTY

Superstructure Plan Main Span

SHEET OF

AUGUSTA, MAINE

PROJECT DESIGN ENGINEER | DESIGN-DETAILED | CHECKED | REVISIONS | FIELD CHANGES
BY | HEC | DMS
DATE
PLANS

Filename: ...\mst\V006_supplanmain.dgn Division: BRIDGE Username: David.Sullivan Date:12/30/2013

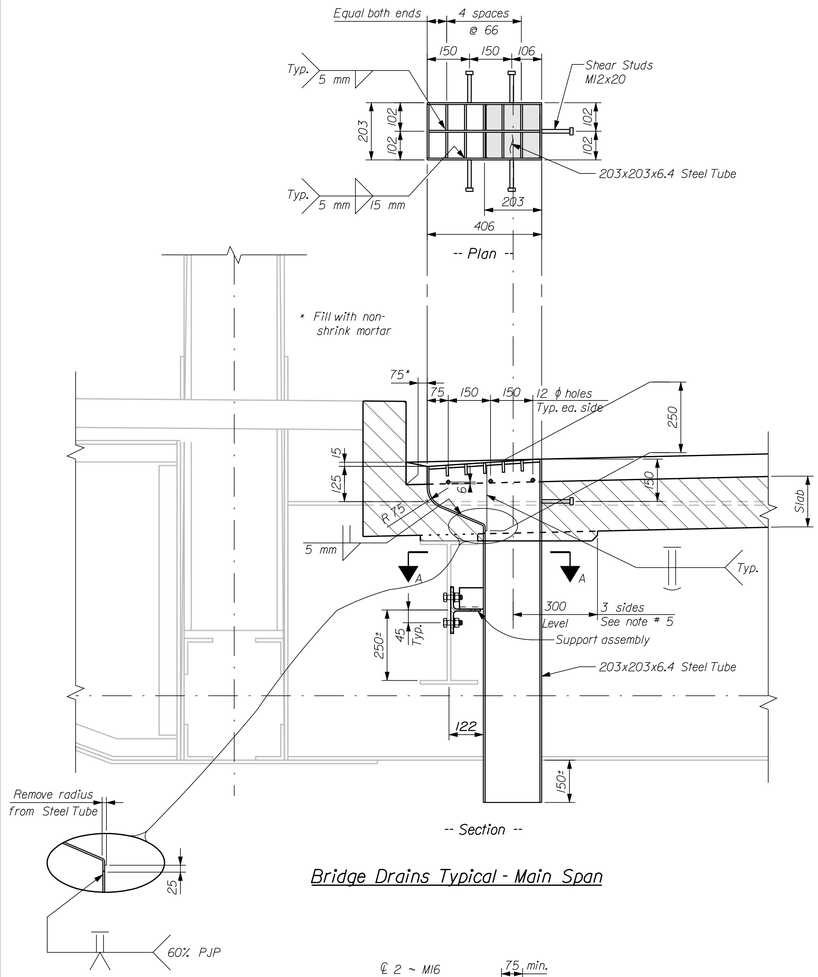
Filename: ...\bridge\mslo\007_deldrains.dgn Division: BRIDGE Username: David.Sullivan Date:12/30/2013

PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN-DETAILED	DMS	
	CHECKED	HEC	
	REVISIONS		
	FIELD CHANGES		

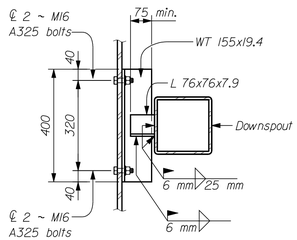
METRIC 1. All dimensions are in millimeters unless otherwise noted.
2. All elevations and stations are in meters.

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BH-8975(00)X	7	11

008975.00



Bridge Drains Typical - Main Span



-- SECTION A - A --

NOTES:

1. All Plates shall be 6 mm thick and shall conform to ASTM A36.

2. The downspout shall be a TS 203x203x6.4 conforming to ASTM A500.

3. Grating shall be a commercial heavy - duty grating with 38 x 8 mm bearing bars and 10 mm ϕ cross bars.

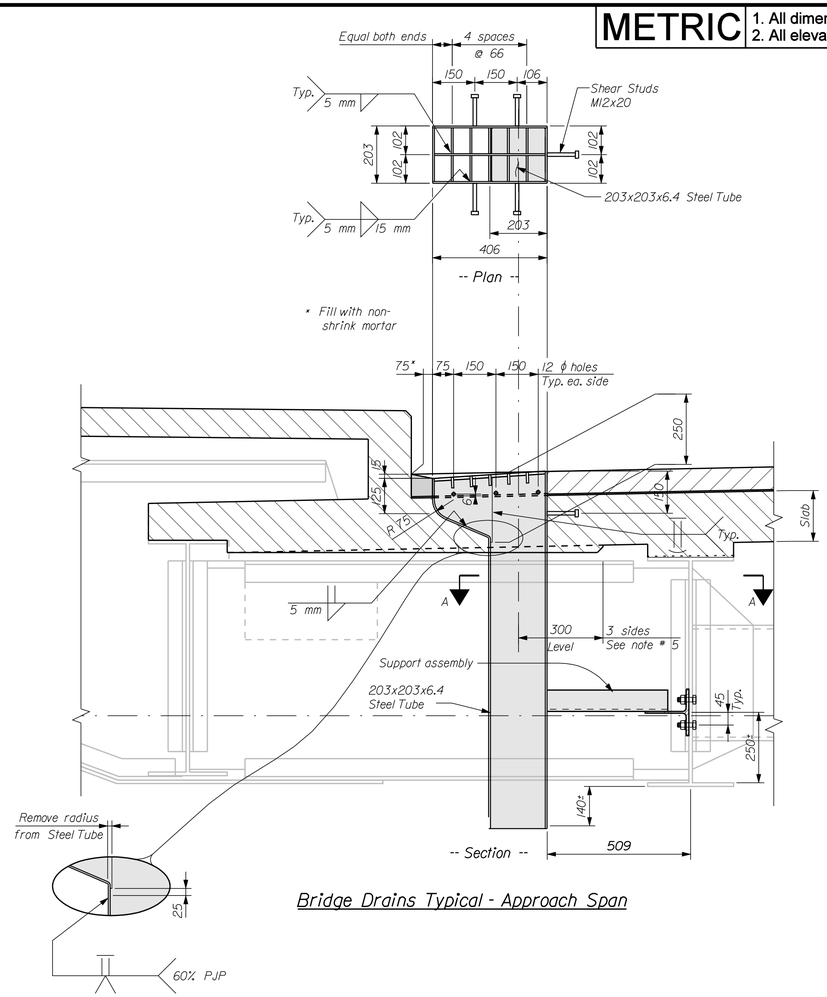
4. The 12 mm ϕ holes are not required when a concrete wearing surface is specified.

5. If the minimum thickness of concrete below the drain is 50 mm or less, the concrete haunch shall be added as shown.

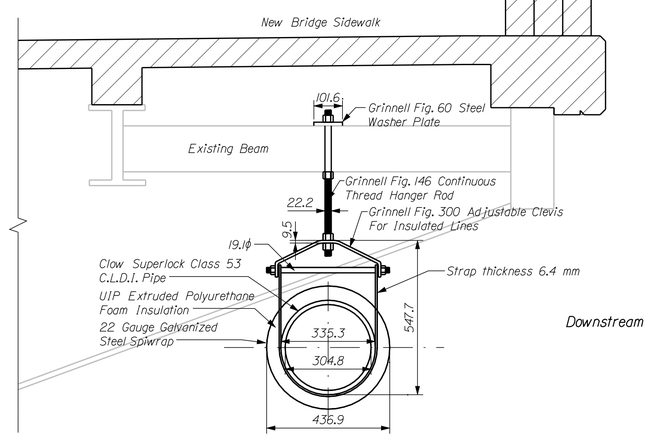
6. Payment and direction for bridge drains will be as specified under Subsection 502.17 and 502.19 of the Standard Specifications, or Special Provisions.

7. Shear Studs welded to top flange of beams may need to be bent out of the way should an interference with Bridge Drain occur.

8. For Details not shown refer to Std. Dtl. Book, Rev. April '97



Bridge Drains Typical - Approach Span



Pipe Hanger Detail

BRIDGE NO. 2585

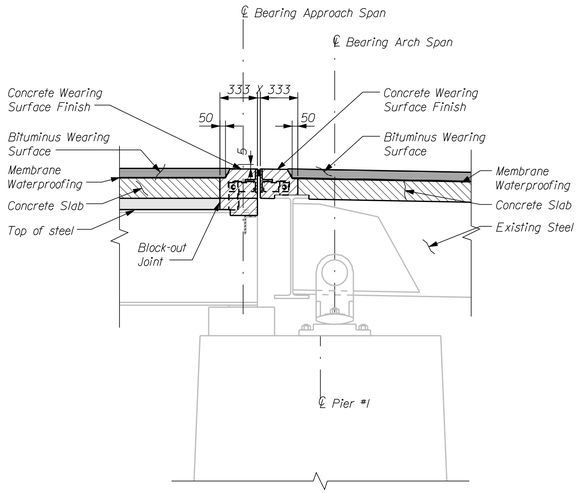
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

MORSE BRIDGE
OVER
ANDROSCOGGIN RIVER
IN THE TOWN OF
RUMFORD
OXFORD COUNTY

Bridge Drain Details

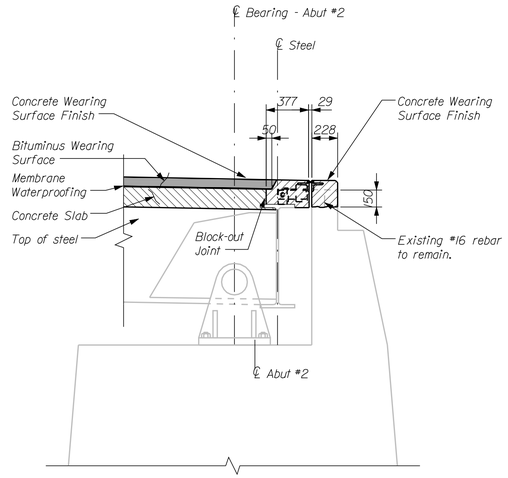
SHEET OF AUGUSTA, MAINE

METRIC	1. All dimensions are in millimeters unless otherwise noted. 2. All elevations and stations are in meters.	F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
		1	MAINE	BH-8975(00)X	8	11
				008975.00		



Pier #1 Compression Seal Detail

Note:
See Standard Details 520
for more details



Abut #2 Gland Seal Detail

Note:
See Standard Details 520
for more details

BRIDGE NO. 2585

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

MORSE BRIDGE
OVER
ANDROSCOGGIN RIVER
IN THE TOWN OF
RUMFORD
OXFORD COUNTY

Seal Details

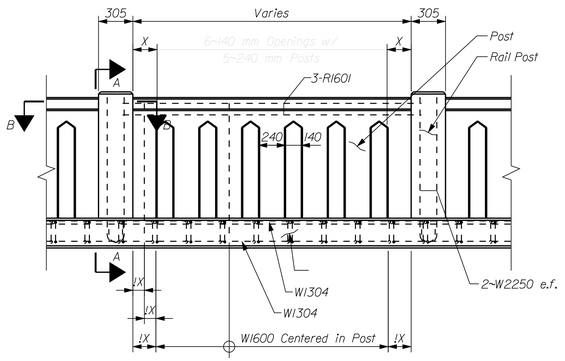
SHEET OF AUGUSTA, MAINE

PROJECT DESIGN ENGINEER	HEC	BY	DMS	DATE
DESIGN-DETAILED				
CHECKED				
REVISIONS				
FIELD CHANGES				

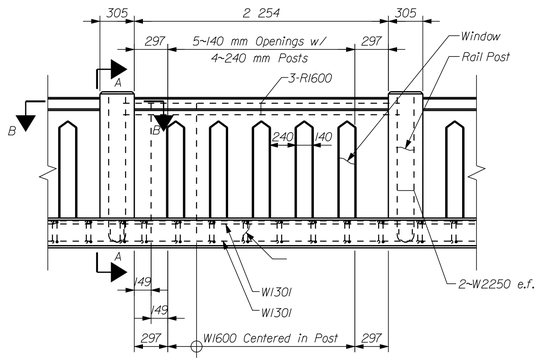
PLANS

Filename: ...\00\bridge\msta\008_Seals.dgn Username: David.Sullivan Date:12/30/2013 Division: BRIDGE

METRIC	1. All dimensions are in millimeters unless otherwise noted. 2. All elevations and stations are in meters.	F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
		1	MAINE	BH-8975(00)X	9	11
				008975.00		

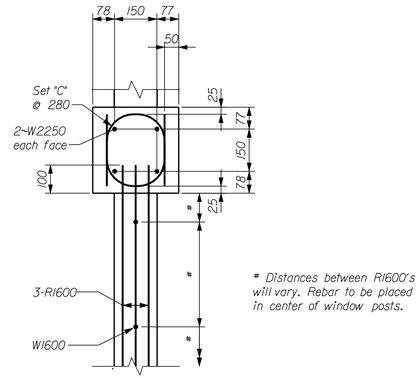


Typical Rail Detail Main Span



Typical Rail Detail Approach Span

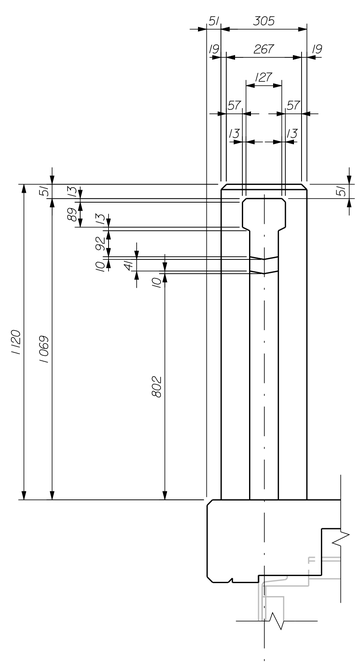
X = Equal distance on either side of Section
!X = Centered in Post, distance varies between Sections



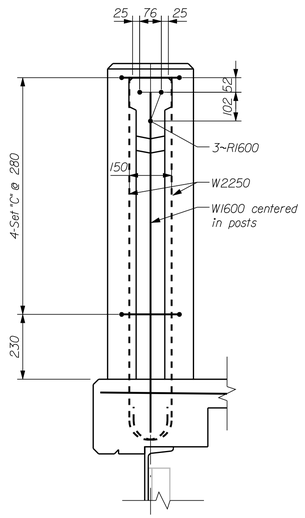
 # Distances between RI600's will vary. Rebar to be placed in center of window posts.

Typical Rail Post Section B-B

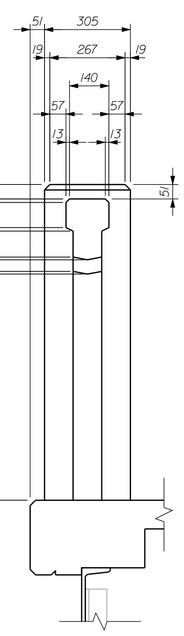
Typical Rail Post Approach Span
Section A-A
Rebar Layout



Typical Rail Post Approach Span
Section A-A
Dimensions



Typical Rail Post Main Span
Section A-A
Rebar Layout



Typical Rail Post Main Span;
Section A-A
Dimensions

PROJECT DESIGN ENGINEER	XXX	BY	DATE
DESIGN-DETAILED	XXX	XXX	XXX
CHECKED	XXX		XXX
REVISIONS	XXX		XXX
FIELD CHANGES	XXX		XXX

PLANS

Filename: ...\bridge\mrsto\009_Sheet.dgn Username: David.Sullivan Date: 12/30/2013

BRIDGE NO. 2585

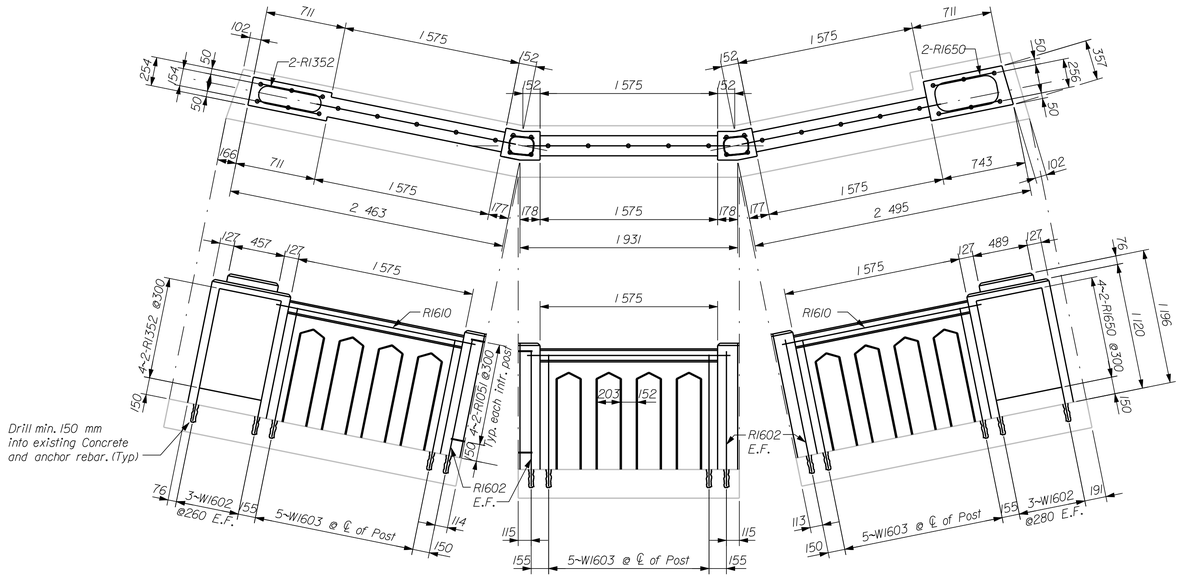
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

MORSE BRIDGE
OVER
ANDROSCOGGIN RIVER
IN THE TOWN OF
RUMFORD
OXFORD COUNTY

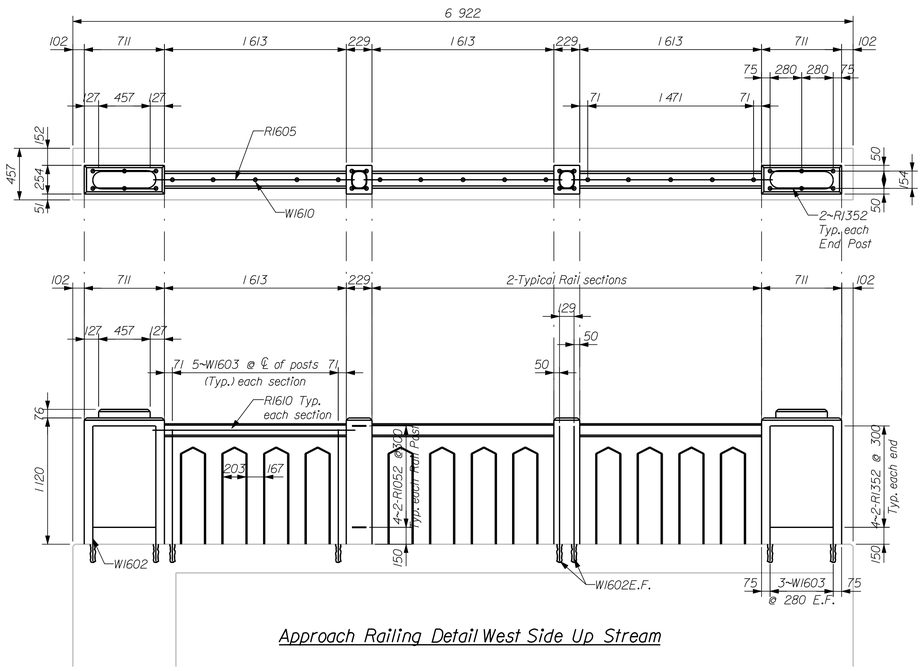
Concrete Railing Details

SHEET OF AUGUSTA, MAINE

METRIC	1. All dimensions are in millimeters unless otherwise noted. 2. All elevations and stations are in meters.	F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
		1	MAINE	BH-8975(00)X	10	11
				008975.00		



Approach Railing Detail West Side Down Stream



Approach Railing Detail West Side Up Stream

Legend
EF = Each Face

PROJECT DESIGN ENGINEER		BY	DATE
	DESIGN-DETAILED	HEC	
	CHECKED	DMS	
PLANS	REVISIONS		
	FIELD CHANGES		

BRIDGE NO. 2585

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

MORSE BRIDGE
OVER
ANDROSCOGGIN RIVER
IN THE TOWN OF
RUMFORD
OXFORD COUNTY

Approach Rail Detail

SHEET OF AUGUSTA, MAINE

Filename: ...\msta\010_raildetaprooch.dgn Division: BRIDGE Username: David.Sullivan Date:12/30/2013

REINFORCING STEEL SCHEDULE

METRIC 1. All dimensions are in millimeters unless otherwise noted.
2. All elevations and stations are in meters.

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BH-8975(00)X	11	11

008975.00

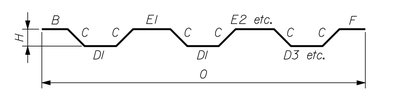
STRAIGHT BARS

MARK	QTY.	LENGTH	LOCATION	MARK	QTY.	LENGTH	LOCATION
Superstructure Approach Span				*Approach Railing*			
S1600	53	9 130	Transverse, Top	W1602	46	1 200	Vert./Rail Post Ends
S1601	53	8 580	Transverse, Bottom	W1603	30	1 170	Vert./Post
S1602	111	15 680	Longitudinal, Top & Btm.	R1610	6	1 800	Longitudinal/Rail
Sidewalk Approach Span							
W1300	106	3 180	Transverse				
W1301	40	15 680	Longitudinal				
W1302	30	1 230	Longitudinal				
W1600	72	1 210	Vertical/Post				
Sidewalk Approach Span							
R1600	36	2 455	Longitudinal/Rail				
Superstructure Main Span							
S1603	474	7 520	Transverse, Top & Btm.				
S1604	348	18 210	Longitudinal, Top & Btm.				
Sidewalk Main Span							
W1303	237	3 180	Transverse				
W1304	80	18 210	Longitudinal				
W1601	189	1 210	Vertical/Post				
Sidewalk Main Span							
			Span A				
R1601	9	2 570	Longitudal/Rail				
			Span B				
R1602	9	2 420	Longitudal/Rail				
			Span C				
R1603	9	2 450	Longitudal/Rail				
			Span D				
R1604	9	2 400	Longitudal/Rail				
			Span E				
R1605	9	2 400	Longitudal/Rail				
			Span F				
R1606	9	2 380	Longitudal/Rail				
			Span G				
R1607	9	2 380	Longitudal/Rail				
			Span H				
R1608	9	2 370	Longitudal/Rail				
			Span I				
R1609	9	2 500	Longitudal/Rail				
MARK	QTY.	LENGTH	LOCATION	MARK	QTY.	LENGTH	LOCATION

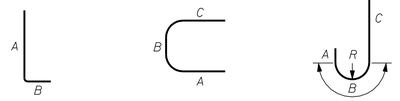
BENT BARS

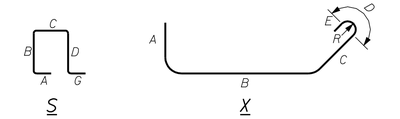
MARK	QTY.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION
Abutment #1 - Approach Span Slab-Over														
A1350	24	1 120	SC	350	420	350								Long./ Abut#1 to Slab
A1351	22	2 120	SC	850	420	850								Long./ Abut#1 to Sidewalk
Superstructure Approach Span														
S1650	106	850	L	420	400									Traverse/Sidewalk to Curb
S1651	106	985	L	435	550									Trans./Curb to Sidewalk
S1652	53	9 580	B		450	150	1 000	540	450		105	9 130		Trans./Slab
S1653	53	1 100	L	800	300									Slab-Over, End of Slab
S1654	53	1 740	X	300	890	320	156	75					50	Slab-Over, End of Slab
Sidewalk Approach Span														
W1050	212	870	SC	350	170	350								Trans./Fascia
W2250	56	1 480	J	50	210	1 220							90	Vertical/Rail Post
Railing Approach Span														
R1050	112	715	SC	255	205	255								Longitudinal/Rail Post
Superstructure Main Span														
S1655	237	850	L	450	400									Trans./Sidewalk to Curb
S1656	474	985	L	435	550									Trans./Curb to Travelway
S1657	237	7 920	B		780	150	535	1 000	780		105	7 572		Trans. Slab
Sidewalk Main Span														
W1051	474	870	SC	350	170	350								Trans.Fascia
W2250	112	1 480	J	50	210	1 220							90	Vertical/Rail Post
Railing Main Span														
R1050	224	715	SC	255	205	255								Longitudinal/Rail Post
Approach Railing														
R1051	16	585	SC	215	155	215								Longitudinal/Rail Post
R1052	16	410	SC	130	150	130								Longitudinal/Rail Post
R1352	24	1 270	SC	560	150	560								Longitudinal/End Rail Post
R1650	16	1 355	SC	550	255	550								Longitudinal/End Rail Post
MARK	QTY.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION

TYPE - BENDING DIAGRAMS



B





All dimensions are out-to-out of bar.

Bending details and hooks shall conform to the recommendations of the current revision of ACI Standard 318.

Reinforcing Bar: ASTM A615/A615M, Grade 420

GENERAL NOTES

1. The first two digits following the letter(s) of the mark indicate the size ofthe bar:

   Mark "A1602" = bar size #16
   Mark "P2501" = bar size #25
   Mark "S1950" = bar size #19

2. Each crank bar, Type B, may be replaced by two (2) straight bars (one top and one bottom) of the same bar size as the crank bar. Payment in either case shall be based on crank bars as schedule on the plans.

Set "A" Rebar Layout

Rebar Set Table	
Set #	Components of Set
A	2-2-W1050, 2-W1300, 2-S1650, 2-S1651, S1600, S1601
B	S1653, S1654, 2-S1602
C	2-R1050
D	2-W1051, W1303, S1655, 2-S1656, 2-S1603
E	2-W1051, W1303, S1655

Set "D" Rebar Layout

BRIDGE NO. 2585

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

MORSE BRIDGE
OVER
ANDROSCOGGIN RIVER
IN THE TOWN OF
RUMFORD
OXFORD COUNTY
Reinforcing Steel Schedule

SHEET OF AUGUSTA, MAINE

PROJECT DESIGN ENGINEER — PLANS

	BY	DATE
DESIGN-DETAILED	HEC	
CHECKED	DMS	
REVISIONS		
FIELD CHANGES		

Filename: ...\00\bridge\mslo\011_rebor.dgn Division: BRIDGE Username: David.Sullivan Date:12/30/2013