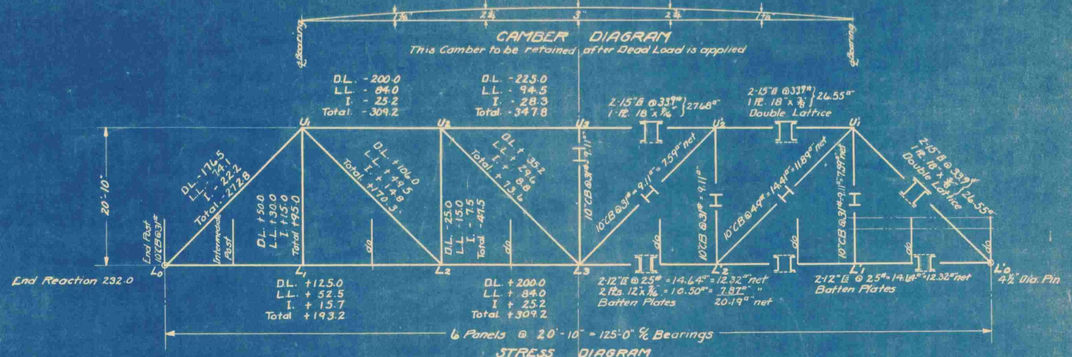
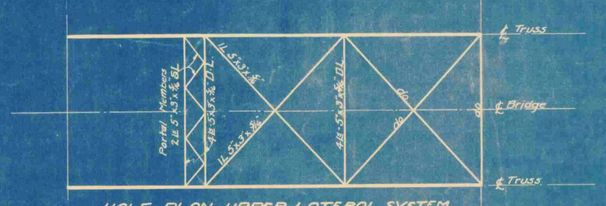
CAMBER DIAGRAM

This Camber to be retained after Dead Load is applied



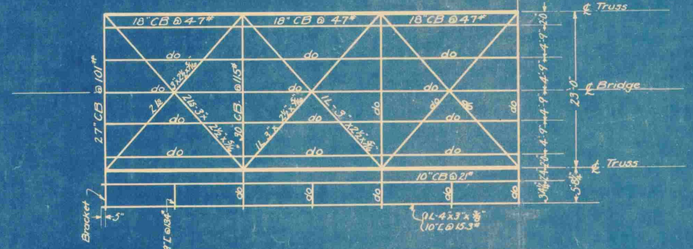
STRESS DIAGRAM

Stresses expressed in Kips; Moments in thousands of Inch Pounds



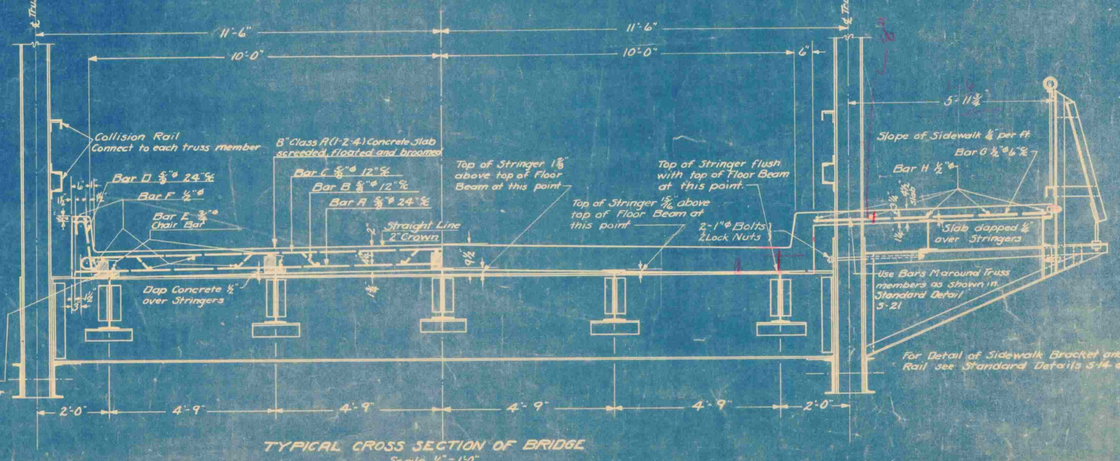
HALF PLAN-UPPER LATERAL SYSTEM

MOMENTS	STRINGERS	FLOOR BEAMS
D.L	378.0	2102.4
L.L	594.0	2152.8
I	177.6	645.8
Total	1149.6	4901.0
Mod. Regd	711.9	306.4



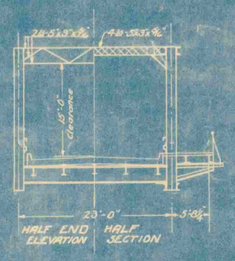
HALF PLAN-FLOOR AND LOWER LATERAL SYSTEM

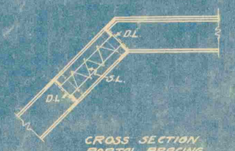
Hang diagonals at intersection from web of center stringer



TYPICAL CROSS SECTION OF BRIDGE

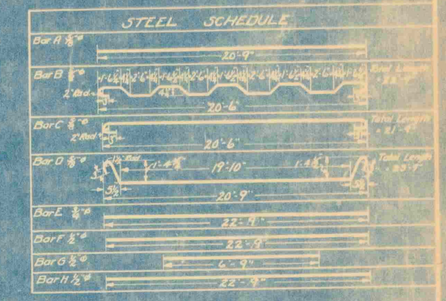
Scale ½" = 1'-0"





CROSS SECTION PORTAL BRACING

STEEL SCHEDULE



-NOTES-

FLOOR DESIGNED FOR-
Dead Load- Roadway- Concrete 100# per Cu. Ft. + Weight of Steel + Paving 4" @ 12# per Ft.
Sidewalk - Concrete 50# per Cu. Ft. + Weight of Steel
Live Load- Roadway- 2 15 Ton Trucks- 13'-0" ℄ wheels, 4'-0" ℄ axles, 8000# on 1 axle, 32000# on rear axles.
Sidewalk - 80# per Sq. Ft.
Impact - 30% of Live Load

TRUSS DESIGNED FOR-
Dead Load- Steel 800#+Concrete 1600#=2400# per linear foot of Truss
Live Load- Roadway- 730# + Sidewalk 250#=1000# per linear foot of Truss or 1 15 Ton Truck
Impact - 30% for Uniform Load - 50% for Truck Load

Rivets - ⅞"@ Gussets ⅜ except at L0 and U1 use ½

SPECIFICATIONS-
Standard Road and Bridge Specifications-Vermont Department of Highways, 1926.

Use Standard Details 3-2(where A=15', B=2'-9⅜", C=9⅜"(C=8")),3-3,3-4,3-10, 3-11(where 2 or more spans are used),3-12,3-13,3-14,3-16,3-18,3-21.

STEEL SUPERSTRUCTURE
125'-0" ℄ BEARINGS
20' ROADWAY
2 H-15

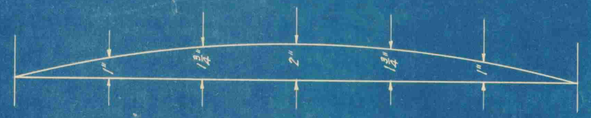
CORRECT:- M. L. Wardwell
BRIDGE ENGINEER

THIS SHEET USED FOR-

ESTIMATED QUANTITIES-(ONE SPAN)

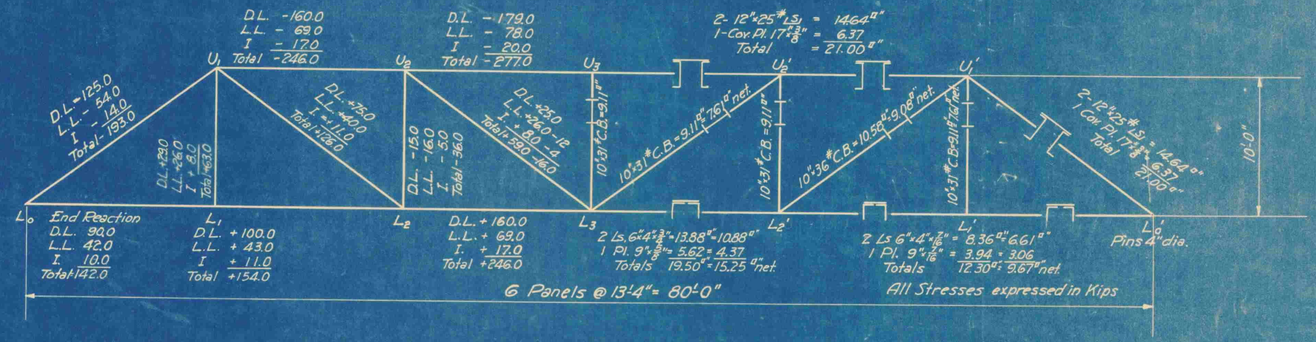
Structural Steel	162,000	Lbs.
Reinforcing Steel	14,800	Lbs.
Concrete - Class A(1-2-4)	84	Cu. Yds.

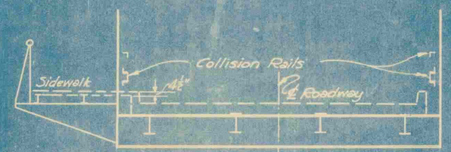
Surveyed by
Designed by A.D. Bishop
Drawn by A.F.F.
Traced by A.F.F.
Checked by M. L. Wardwell
Series 5B20 No. 12.5-2 Sheet 3 of 13 Sheets



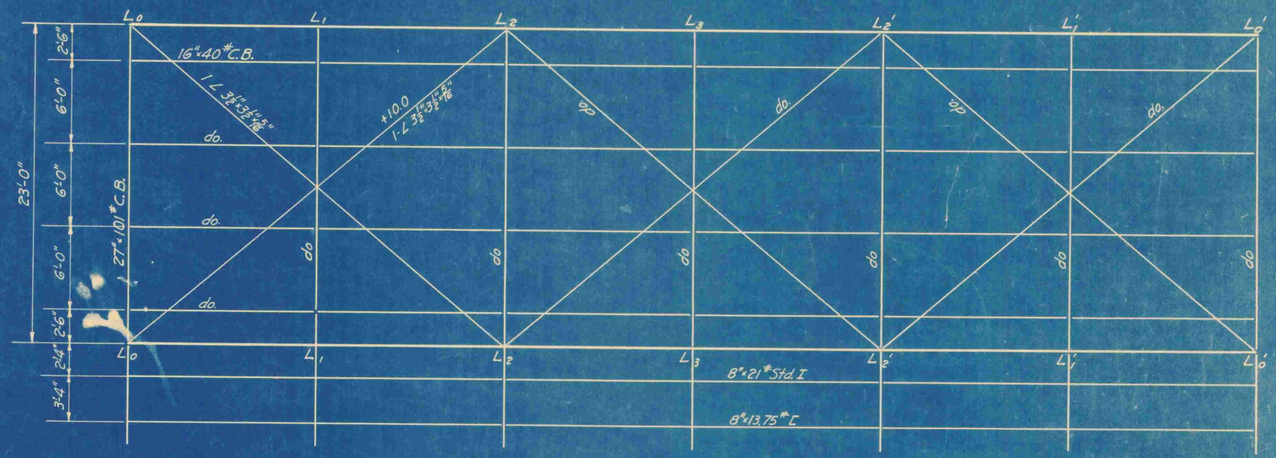
CAMBER DIAGRAM

This camber to be retained after dead load is applied





SECTION



FLOOR AND LOWER LATERAL SYSTEM

Note: Laterals turned down to pass under floorbeams and clamped to floorbeams at intersection.

FLOOR BEAMS		
	Moment	Shear
D.L.	= 1,356,000 inch pds.	20,000 pds.
L.L.	= 1,997,000 " "	26,000 "
I. 30%	= 599,000 " "	8,000 "
Totals	= 3,952,000 " "	54,000 "

STRINGERS		
	Moment	Shear
D.L.	= 213,000 inch pds.	3,000 pds.
L.L.	= 612,000 " "	19,000 "
I. 30%	= 184,000 " "	6,000 "
Totals	= 1,009,000 " "	25,000 "

NOTES

Floor Designed for

Dead Load – 8" concrete slab +25# paving allowance + weight of steel.

Live Load – Roadway – 2-15 Ton Trucks, 14'-0" c. to c. axles, 6'-0" c.-c. wheels, 85% of load on rear axle.

Impact – Stringers-30%, Floor Beams 30%, End Floor Beams – 35%

Truss Designed for

Dead Load – Concrete floor and paving 1680# + Steel 570# = 2250# per lin. foot.

Live Load – Two lanes – H-15-A.A.S.H.O. Spec. 1927

Impact = $\frac{L+250}{10L+500}$ where L = aggregate loaded length.

Gusset Plates 7/8" at Lo – 3/8" elsewhere.

Rivets 7/8" dia.

Specifications

Standard specifications for steel highway bridges, U.S.D.A. Bulletin No. 1259, shall apply to all workmanship and materials as referred to in Vermont Standard Road and Bridge Specifications, 1926

References

For this bridge use the following standard details and types shown on sheet S B-1:

Standard details Nos. S-1, S-8, S-10, S-12, S-13, S-14, S-15, S-16, S-18, & S-21.

When bridge consists of more than one span, use standard detail S-11 at piers.

Note:- For Dorr Bridge only, use S-1 where "a" = 1'-5" B = 2'-9" D = 10" C = 5'-0" instead of S-1 as noted and use S-5 & S-6 instead of S-6.

STEEL SUPERSTRUCTURE

80'-0" c/c BEARINGS
20' ROADWAY
5' SIDEWALK
2 H-15

CORRECT:

BRIDGE ENGINEER

THIS SHEET USED FOR:	ESTIMATED QUANTITIES FOR ONE SPAN	
DORR BRIDGE-RUTLAND	Structural Steel	83000 Lbs.
	Roadway and Sidewalk Slabs (Class A-1: 2:4) Concrete	56 Cu.Yd.
	Reinforcing Steel	9400 Lbs.

Surveyed by
Designed by L. H. Shoemaker
Drawn by W.G.H.
Traced by W.G.H.
Checked by
Series SB 20 No. 80 Filed
Sheet 4 of 13 Sheets

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
9	VT				

DETAIL AT SUPPORT
Fixed End Shown

STANDARD DETAIL 5-1

Diaphragm extended as end post for rail
Crown of roadway slab
Top of floor beam
3 layers of 12 to 14 ounce duck, laid in red lead, according to U.S.D.A. Bulletin 1259, Div. II, Sec. I, Par. 45.
Cope where depth of end floor beam requires for clearance for pin nut.
A = 1'-2" Spans to 100'
A = 1'-5" Spans over 100'
B = 2'-9"
C = 4'-9" Spans to 100'
C = 5'-0" Spans over 100'
D = 10'-0"

FIXED PEDESTAL
Use for Spans from 100 Ft. up

STANDARD DETAIL 5-5

Mill
SADDLE
Cast Steel
PEDESTAL
Use with or without Saddle.
A = 1'-5"
4 1⅛" ø fox bolts as detailed in 5-6

EXPANSION PEDESTAL
Use for Spans from 100 Ft. to 200 Ft.

STANDARD DETAIL 5-6

Mill
SADDLE
Cast Steel
PEDESTAL
Use with or without Saddle.
1⅛" dia. sq. head bolt and washer
Finish
4-1½" ø fox bolts
⅛" CLEARANCE BETWEEN BOLT HEAD & WASHER
A = 1'-5"
B = 2'-6"
℄ of Anchor Bolts
Square heads

ROADWAY EXPANSION JOINT BETWEEN SPANS
See Standard Detail 5-18 for dimensions L1 and L2

STANDARD DETAIL 5-11

Clear Roadway
Rivets countersunk & chipped
7x3½x⅞x⅞ for roadway
4x3½x⅞x⅞ for sidewalks
⅝" Standard Floor Plate
Bend plate and top angles to fit crown of roadway.
Stagger Rivets
Top of Sidewalk Stringers or Floor Beam
Field Rivets
Bottom of Expansion Curb flush with top of Floor Beam
SECTION A
FOR TWO FIXED ENDS use Bar N1, ⅝" ø, 4'-0" long, 9" ℄ in Roadway. Bar N2, ½" ø, 4'-0" long, 6" ℄ in Sidewalks. Make Curb and Slab continuous. ℄ End Floor Beam
Expansion End
E = 2'-0"
Expansion End or Fixed End
For Expansion End - Expansion Plate (E-7) x ⅜ x 1'-9" ; 4 Lb 7x3½x⅜x1'-9" for 20' Roadway
Expansion Plate (E-7) x ⅜ x 1'-7" ; 4 Lb 7x3½x⅜x1'-7" for 18' Roadway
Expansion Plate (E-7) x ⅜ x L2 ; 4 Lb 4x3½x⅜x L1 for Sidewalks

DETAIL AT SUPPORT
Expansion End Shown

STANDARD DETAIL 5-2

Diaphragm extended as end post for rail
Crown of roadway slab
Top of floor beam
End Elevation similar to Detail 5-1
3 layers of 12 to 14 ounce duck, laid in red lead according to U.S.D.A. Bulletin 1259, Div. II, Sec. I, Par. 45
A = 1'-2" Spans to 100'
A = 1'-5" Spans over 100'
B = 2'-9"
C = 4'-9" Spans to 100'
C = 5'-0" Spans over 100'
D = 10'-0"

ROLLER EXPANSION PEDESTAL
Use for Spans of 200 Ft. and over

STANDARD DETAIL 5-7

Mill
SADDLE
Cast Steel
PEDESTAL
Use with or without Saddle
To bear on pin
A = 1'-5"
B = 2'-6"
4-1⅞" ø Fox Bolts
Standard Rollers
℄ of Anchor Bolts
Alternate construction at option of Contractor

DRAINAGE DETAIL

STANDARD DETAIL 5-12

Top of drain pipe 1" below roadway surface
Standard 4" Galvanized Pipe, bottom to be flush with bottom of curbs, supported by strap to stringer. Drains shall be set at each side of roadway, not closer than 4' to floor beams, and spaced not closer than 15' o.c. nor farther apart than 25' o.c.
Suggestion for Pipe Strap "A"
Pipe Strap "A"
⅝ bolts
2'-0" Radius
Depression at this point
Steel Troweled Surface
Curb
PAINT IN FIELD AS REQUIRED UNDER 5-21
CURB DRAIN BLOCK

EXPANSION PEDESTAL

⅛" CLEARANCE BETWEEN BOLT HEAD & WASHER
Cast Steel
Finish
2-1⅛" ø fox Bolts and Washer
A = 1'-2"
For use with Saddles, where required, as shown in 5-5 and 5-6. Use for Spans up to 100 Ft.

DETAIL OF COLLISION RAIL AND INTERMEDIATE POST

STANDARD DETAIL 5-13

2-4"x4"x⅜"x L2 and 1 Filler Plate
4"C" x 8.2#
2-3"x3"x⅜" L2
"a" varies so that inside face of channel will clear End Post. Cover plate ⅜".
Notch rail channel flanges to fit.
2-1" ø Bolts
Back of angle flush with Web Members
⅜" Plate
ALTERNATE CONNECTION
Connect to each Truss Member for Collision Rail End Post extend Truss End Diaphragm.
End Post
See Standard Details Nos. 1 to 3
Posts to divide bridge panels equally.
8" Radius
CHANNEL RAIL
8" Radius flush with back of Post
3"x3"x⅜" L2 to top of channel L
TOP RAIL END DETAILS FOR RAILS

FIXED PEDESTAL
For use with Saddles, where required, as shown in 5-5 and 5-6. Use for Spans up to 100 Ft.

STANDARD DETAIL 5-8

Cast Steel
A = 1'-2"
2-1⅛" ø Fox Bolts as detailed above

APRON PLATE FOR BRIDGE FLOOR SLAB
Use for Spans of 150 Feet and over at Expansion End. See 5-10 for Fixed End.

STANDARD DETAIL 5-9

Rivets countersunk and chipped
End of Bridge Floor Slab
Grade
Bend Plate and Angle to crown
⅜"x8"x2'-0" for 20' Roadway
⅜"x8"x1'-9" for 18' Roadway
4"x3½"x⅜" L2 for Sidewalks
Top of Sidewalk Stringers or Floor Beam
Field Rivets
Mtd. Floor Plate
Construction bolt holes
4" Max. Rivets Staggered
F = 1'-3"
F is measured at right angles to Floor Beam
(F-1") x ⅜ x 2'-0" for 20' Roadway
(F-1") x ⅜ x 1'-9" for 18' Roadway
(F-1") x ⅜" L as shown in 5-18 for Sidewalks
7"x3½"x⅜" L bent to crown
2'-0" long for 20' Roadway
1'-9" long for 18' Roadway
(L1-13") long for Sidewalks see 5-18)
2"x⅛" "Strap Anchors, 2'-0" ℄ staggered, riveted or welded to 7"x3½" L. Rivets in horizontal leg of angle countersunk and chipped, top side.

DETAIL OF SIDEWALK RAIL AND INTERMEDIATE POST

STANDARD DETAIL 5-14

3" Pipe @ 10.3#
Spacers and Connectors
⅜" Clear Space
2"x⅜" Flat
⅝" bars, 5" ℄
L2 Truss
Edge of Cover Plate
Sidewalk clear width = W
5½"x4"x⅜" Strap
2 L 2½"x2½"x⅜" x W+5¾"-1¼"
1¼"
5" ℄ arbs
31'-0"
18 gauge
Clip angle 2½"x2½" Slotted holes for ⅝" bolts 4"x3½"x⅜" L continuous
1¼" bolts and washers
1" bolt
2" Max.
L 2½"x2½"x⅜" x 1'-0"
Slotted hole
Sidewalk

APRON PLATE FOR BRIDGE FLOOR SLAB
Use for Spans up to 150 Ft. at Expansion End. Use for all Spans at Fixed End.

STANDARD DETAIL 5-10

Plate (F-1") x ⅜ x L1
Angle 4"x3½"x⅜" L (L1-13") detailed similar to roadway Slab
Top of Slab
4"
Sidewalk Stringer
⅝" ø Bolts 12" ℄
5"
F = 1'-3"
Measured at right angles to Floor Beam
℄ of S.W. Bracket
Construction bolt holes
Plate (F-1'-4") x ⅜ x 2'-0" for 20' Roadway
(F-1'-4") x ⅜ x 1'-9" for 18' Roadway
Plates bolted to floor beam End of Bridge Slab
⅞" or ⅞" ø bolts, 12" ℄
4"x3½"x⅜" L 2'-0" long for 20' Road
1'-9" long for 18' Road
Ft. Exp. End only
2"x⅛" Strap Anchors 2'-0" ℄ staggered, rivetted or welded to 4"x3½" L. Rivets in horizontal leg of angle countersunk and chipped top side
Ballast Wall
F measured at right angles to End Floor Beam
FOR SIDEWALK
See 5-18 for dimension L1
FOR ROADWAY

ALTERNATE BATTER POST DETAIL AT SUPPORT
When Rail Post is not required

STANDARD DETAIL 5-4

Diaphragm
Not less than two lines of rivets above top of Floor Beam

INTERMEDIATE SIDEWALK RAIL SUPPORT

Bar Q ½" ø
Sidewalk slope = ¼" per foot
Bar P ½" ø 6'-6"
Slab dapped ½"
For Bars M see Standard Notes
⅝" holes for Rail Post bolts
1'-2"
3"x2½"x⅜" L
6"x3½"x⅜" L
L1
L2
See Structural Steel Sheet 5-14
2 L 3½"x3½"x⅜" each side
⅜" Web Plate
L bolts, diameter as required by design.
Alternate position of Channels
Varies
See Superstructure Sheet

Note: Sidewalk Reinforcement as shown except when detailed otherwise on Structural Steel. For "F" see Structural Sheet.

SIDEWALK BRACKET

STANDARD DETAIL 5-15

ROADWAY EXPANSION JOINT BETWEEN SPANS
See Standard Detail 5-18 for dimensions L1 and L2

STANDARD DETAIL 5-11

Clear Roadway
Rivets countersunk & chipped
7x3½x⅞x⅞ for roadway
4x3½x⅞x⅞ for sidewalks
⅝" Standard Floor Plate
Bend plate and top angles to fit crown of roadway.
Stagger Rivets
Top of Sidewalk Stringers or Floor Beam
Field Rivets
Bottom of Expansion Curb flush with top of Floor Beam
SECTION A
FOR TWO FIXED ENDS use Bar N1, ⅝" ø, 4'-0" long, 9" ℄ in Roadway. Bar N2, ½" ø, 4'-0" long, 6" ℄ in Sidewalks. Make Curb and Slab continuous. ℄ End Floor Beam
Expansion End
E = 2'-0"
Expansion End or Fixed End
For Expansion End - Expansion Plate (E-7) x ⅜ x 1'-9" ; 4 Lb 7x3½x⅜x1'-9" for 20' Roadway
Expansion Plate (E-7) x ⅜ x 1'-7" ; 4 Lb 7x3½x⅜x1'-7" for 18' Roadway
Expansion Plate (E-7) x ⅜ x L2 ; 4 Lb 4x3½x⅜x L1 for Sidewalks

TRANSVERSE SECTION OF TYPICAL ROADWAY SLAB-4 STRINGERS
Section symmetrical about ℄. Bars continuous across full width of Slab, for 16' Roadway use chairs shown in Standard Detail 5-19

STANDARD DETAIL 5-15

a overall
a' overall
10'-0" for 20' Roadway
9'-0" for 18' Roadway
8'-0" for 16' Roadway
4'-9" for 20' Roadway
4'-3" for 18' Roadway
3'-6" for 16' Roadway
4.59' for 20' Roadway
℄ of Roadway
Bar F
2% Crown
1½% Road
Drip bead
Bar C
Bar B
Bar A and D
Bar E (⅜" ø Chair Bar)
Slab dapped ½" at high side
Top of Floor Beam
Interior Stringers capped to permit dapping of concrete slab ½" at high side.
Outside Stringers flush tops with Floor Beam
Chair E1
Chair E2
Use concrete chairs E1 and E2 on top of Stringers under E bars
Crown 2" in 20' + 18' Rdy. 1½" in 16' Rdy.
Omit these bars F for 16' Roadway
(Class A(1-2-4) Concrete Roadway surface to screeded, floated and broomed finish.
20' for 18' + 20' Rdy. 9" for 16' Rdy.
1'-6" for 20' Rdy. 1'-3" for 18' Rdy. 1'-0" for 16' Rdy.
NOTE: B bars occur alone. C bars paired with A bars alternate with C bars paired with D bars.
Bars spaced B, CA, B, CD, B, CA etc.

ESTIMATED QUANTITIES			
For Lin. Foot of Bridge for Road Width	20'	18'	16'
Concrete Class A (1-2-4)	0.592 C.Y.	0.541 C.Y.	0.440 C.Y.
Reinforcing Steel, incl. 10% Lap for Bars	100 lbs.	94 lbs.	83 lbs.

REINFORCING BAR SCHEDULES

Bar Mark	Size	Spacing	Type	FOR 20' ROADWAY (F = 8½") Bar Detail Dimensions a	b	c	d	e	f	g	h	r	Bar Length	FOR 18' ROADWAY (F = 8½") Bar Detail Dimensions a	b	c	d	e	f	g	h	r	Bar Length	FOR 16' ROADWAY (F = 8") Bar Detail Dimensions a	b	c	d	e	f	g	h	r	Bar Length
A	⅝" ø	12"		20'-0"									20'-1"	18'-0"										18'-1"	16'-0"								16'-1"
B	⅝" ø	12"		5'-6"	2'-6"	1'-6"	1'-6"	1'-6"	2'-6"	2'-6"	2'-6"	2'-2"	20'-9"	5'-6"	2'-6"	1'-6"	1'-6"	1'-6"	2'-6"	2'-6"	2'-6"	2'-2"	18'-9"	5'-6"	2'-6"	1'-6"	1'-6"	1'-6"	2'-6"	2'-6"	2'-6"	2'-2"	16'-9"
C	⅝" ø	12"		20'-6"								2'-2"	20'-9"	18'-6"								2'-2"	18'-9"	16'-6"							2'-2"	16'-9"
D	⅝" ø	12"		20'-6"								2'-2"	20'-9"	18'-6"								2'-2"	18'-9"	16'-6"							2'-2"	16'-9"
E	⅝" ø	24"		20'-1"								1'-2"	20'-3"	18'-1"								1'-2"	18'-3"	16'-1"							1'-2"	16'-3"
F	⅝" ø	24"		19'-6"									19'-7"	17'-6"									17'-7"	15'-6"								15'-7"
Special Reinforcing Steel													100 lbs.										94 lbs.									83 lbs.
Special Reinforcing Steel													100 lbs.										94 lbs.									83 lbs.

TRANSVERSE SECTION OF TYPICAL ROADWAY SLAB-5 STRINGERS
Section symmetrical about ℄. Bars continuous across full width of Slab

STANDARD DETAIL 5-19

Bar C
Bar B
Bar A and D
Bar E (⅜" ø Chair Bar)
Slab dapped ½" on high side
Outside Stringers flush tops with Floor Beam
Interior Stringers capped to permit dapping of concrete slab ½" at high side.
Note: D bars occur alone. C bars paired with B bars alternate with C bars paired with D bars.
Bars spaced B, CA, B, CD, B, CA etc.
Top of Floor Beam
Chair E3
Chair E4
Use concrete chairs E3 and E4 on top of Stringers under E bars

REINFORCING BAR SCHEDULE				FOR 20' ROADWAY (F = 8") Bar Detail Dimensions a	b	c	d	e	f	g	h	r	Bar Length
A	⅝" ø	24"					20'-1"						20'-1"
B	⅝" ø	12"		5'-6"	2'-6"	1'-6"	1'-6"	1'-6"	2'-6"	2'-6"	2'-6"	2'-2"	20'-9"
C	⅝" ø	12"						20'-6"				2'-2"	21'-9"
D	⅝" ø	24"						19'-6"					19'-7"
Special Reinforcing Steel													100 lbs.
Special Reinforcing Steel													100 lbs.

GENERAL NOTES

Materials and workmanship shall conform to the Standard Road and Bridge Specifications of the Vermont Department of Highways, 1924.

The lump sum price for furnishing, fabricating, erecting and painting structural steel work shall include all work and materials shown on the Structural Steel Sheets and called for by reference to Sheet 5B-1 except concrete and reinforcing steel. Drainage pipes and supports shall be included in contract price for "Structural Steel."

Painting: One shop coat of approved red lead and oil. One field coat of approved red lead and oil. One finish coat of standard white guard mill paint tinted to a light grey. No paint shall be used until approved by the Engineer.

All exposed edges of concrete shall be chamfered four diameters of chamfer shall be ¾".

In pouring sidewalk slabs clearance shall be maintained around web members of trusses as shown in diagram. Furnish extra bars M.

All reinforcing steel shall be deformed bars, unless otherwise noted, of structural or intermediate grade. Reinforcing steel shall conform to the Standard Specifications for Billet Steel Concrete Reinforcement Bars of the American Society for Testing Materials, Serial Designation A 15-14.

Concrete poured at air temperatures lower than 40°F shall conform to the "Revised Specifications for Concreting in Cold Weather of the Vermont Department of Highways".

Steel Sections afterwards to those billed may be furnished at the option of the Contractor if approved in writing by the Engineer.

All dimensions given on this sheet (5B-1) are typical and shall apply unless otherwise noted on Steel Superstructure Sheet.

STANDARD NOTES 5-21

For Construction Joints and Score Marks see Sheet 5B-2.

STANDARD DETAIL 5-16

CONCRETE ROADWAY SLAB AT SKEW END
End Detail of Bars M same as Bars B of Standard Slab

STANDARD DETAIL 5-17

℄ of Truss
Reference point
℄ of Stringers
8" or 9½" Roadway Slab
℄ of Bridge
Bars C and K 6" from this line
Bars E and M 12" from this line
℄ of Floor Beams
Steel Slab
Truss
See Standard Detail 5-15 for Truss

TYPICAL DETAILS FOR STEEL BRIDGES
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

CORRECT
A. D. Bishop
BRIDGE ENGINEER

Designed by M. L. W.
Drawn by R. F. T.
Traced by R. F. T. 4/24/28 5/24/28. 5-29 added 5B-1 rev.
Checked by M. L. Woodruff 5/24/28.
Series 5B No. 1 Filed
Sheet of Sheets

OK-6013

INDEX OF SHEETS

SHEET 1 PLAN AND PROFILE
2 TYPICAL SECTION OF IMPROVEMENT 24' GRAVEL
3-4 STEEL SUPERSTRUCTURE DETAILS SB 20-125-1-5'SW / SB 20- 80-1-5'SW
5 TYPICAL DETAILS FOR STEEL BRIDGES
6-9 ABUTMENT AND PIER DETAILS
10-12 CROSS SECTIONS
13 STANDARD STRUCTURES S19

GRAVEL SURFACE COURSE REQUIRED

Estimated Quantity 270 Cu.Yds.

CHANNEL EXCAVATION REQUIRED

Estimated Quantity 1850 Cu.Yds.

All material above Elevation 524.00 between Abutment No.1 and edge of both Otter and East Creeks shall be excavated and classed as Channel Excavation, except the removal of present masonry abutment to Elev. 524.00 which shall be paid for as Structure Excavation — — — — — — —

All suitable stone excavated in pier and Abutment No.1 shall be used for bank protection against possible scour around new abutments and pier and as directed by the engineer in the field, and shall be paid for ONLY under the item of Structure Excavation.

BEGINNING OF PROJECT STA. 2+50

CURVE NO. 1
Δ = 12°-47'
D = 8°
T = 80.2
L = 159.8
E = 4.5
R = 636.7

CABLE GUARD RAIL REQUIRED

	LEFT	
Sta. 3+00 to	5+40	240 Lin.Ft.
" 7+50 "	8+14	64 " "
	RIGHT	
Sta. 4+12 to	5+40	128 Lin.Ft.
" 7+50 "	8+14	64 " "
TOTAL		496 LIN.FT.

END OF PROJECT STA. 8+17.1

RIP RAP FOR BANK PROTECTION REQUIRED ON LEFT 4+75 TO 5+10 —
ESTIMATED QUANTITY 50 Cu.Yds.

PROFILE OF BRIDGE
SCALE 30'-1"
DORR BRIDGE - RUTLAND, VT.

SUMMARY OF QUANTITIES

			FINAL
Common Excavation including Borrow	~~76~~	Cu.Yds.	253
Channel Excavation	850	" "	593
Structure Excavation	~~1185~~	" "	1704
Gravel Surface Course	~~270~~	" "	106
Concrete Class A (1-2-4)	~~140~~	" "	136.9
" B (1-2½-5)	~~767~~	" "	710.7
Reinforcing Steel	~~37,065~~	Lbs.	36,813
Steel Superstructure (245000)	Lump Sum		
Timber Piling	~~6885~~	Lin.Ft.	3,088
Rip Rap for bank protection	~~50~~	Cu.Yds.	39
Cable Guard Rail	~~496~~	Lin.Ft.	521

F.A. 43A

CREEK ROAD

CORRECT:
G. B. [signature]
Bridge Engineer

APPROVED: 5/17/28
[signature]
Chief Engineer

RUTLAND, VT.
DORR BRIDGE OVER OTTER CREEK

District No. 3
Bridge No. 102 [illegible]

Scales (Horiz. 1"=100' / Vert. 1"=10')

Sheet No. 1

FED. ROAD DIST. NO.	STATE	F.A. NO.	SHEET NO.	TOTAL SHEETS
1	VT.	43A	6	13

Wings shortened on ℄ sheeting coming in.
Down-stream wing shortened 0.6
Up- " " " 4.6

CAST STEEL PILE SHOE FOR 6" TO 8" TIPS

Stamps of Wisconsin Steel Works, Milwaukee, Wis. Illustration from Handbook & Catalogue

IF JETTING IS NECESSARY, TWO WATER JETS SHOULD BE USED WITH A WATER PRESSURE OF AT LEAST 150 TO 200 LBS., PER SQUARE INCH, FROM 70 BEAR-PATTON TYPE WITH A 6" DIAMETER INTAKE PIPE AND A 4" DIAMETER OUTLET PIPE. THE JET PIPE TO BE ABOUT 2" IN DIAMETER, NOZZLE TO BE CIRCULAR IN SECTION OF ½" TO ⅝" IN DIAMETER.

UNIT PRICE BID FOR WOODEN PILES SHALL INCLUDE JETTING IF NECESSARY AND FURNISHING AND PLACING PILE SHOES.

PILE SHOES AS PER SKETCH TO BE USED AS DIRECTED BY THE ENGINEER.

PILES TO BE DRIVEN TO A 15 TON BEARING VALUE.

PILES ASSUMED AT 35' LENGTH FOR ESTIMATING PURPOSES ONLY.

PILING PLAN
DOWNSTREAM HALF

PILING PLAN
UPSTREAM HALF

BORING LEFT OF 41+97

ELEV. TOP GROUND 522

CLEAN SAND
FINE SAND
COARSE & FINE SAND
GRAVEL
FINE SAND & CLAY
SAND & GRAVEL
GRAVEL & CLAY - HARD PAN

THE STATE ASSUMES NO RESPONSIBILITY FOR THE LOCATION OR NATURE OF THE MATERIALS SHOWN IN BORINGS.

ITEM STRUCTURE EXCAVATION BELOW INCLUDES REMOVAL OF PRESENT MASONRY ABUTMENT TO EL. 524. ALL SUITABLE STONE EXCAVATED FROM PRESENT MASONRY ABUTMENT SHALL BE USED AS PROTECTION AGAINST SCOUR AROUND NEW PIERS AND ABUTMENTS AS SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER, AND SHALL BE PAID FOR ONLY UNDER THE ITEM STRUCTURE EXCAVATION.

MATERIAL BETWEEN THIS ABUTMENT AND EDGE OF STREAM TO BE EXCAVATED TO ELEV. 524.00 AND CLASSED AS CHANNEL EXCAVATION

4" WEEP HOLES NOT MORE THAN 10'-0" AND NOT MORE THAN 1'-0" ABOVE GROUND LINE

FOR REINFORCING IN THIS ABUTMENT SEE SHEET NO. 6

1½" PREMOULDED EXPANSION MATERIAL

PROVIDING AND PLACING 1½" PREMOULDED EXPANSION MATERIAL IN BOTH ABUTMENTS TO BE INCLUDED IN THE UNIT PRICE BID FOR CLASS B (1-2½-5) CONCRETE.

TO RUTLAND

TO HYDE

BATTER 2 IN 12

BATTER 3 IN 12

BATTER 1 IN 12

℄ BEARING

BRIDGE SEAT EL. 531.58

STA. 5+41

℄ ABUTMENT

APPROXIMATE GROUND LINE

1'0" COPING

FIRST TIMBER (PROTECTION ASSUMED 3'0" DEEP)

OTTER CREEK FLOW

EL. 537.56 — EL. 537.42 — EL. 535.75 — EL. 535.75 — EL. 531.17 — EL. 530.58 — EL. 531.58 — EL. 524.00 — EL. 516.58 — EL. 515.08 — EL. 512.08

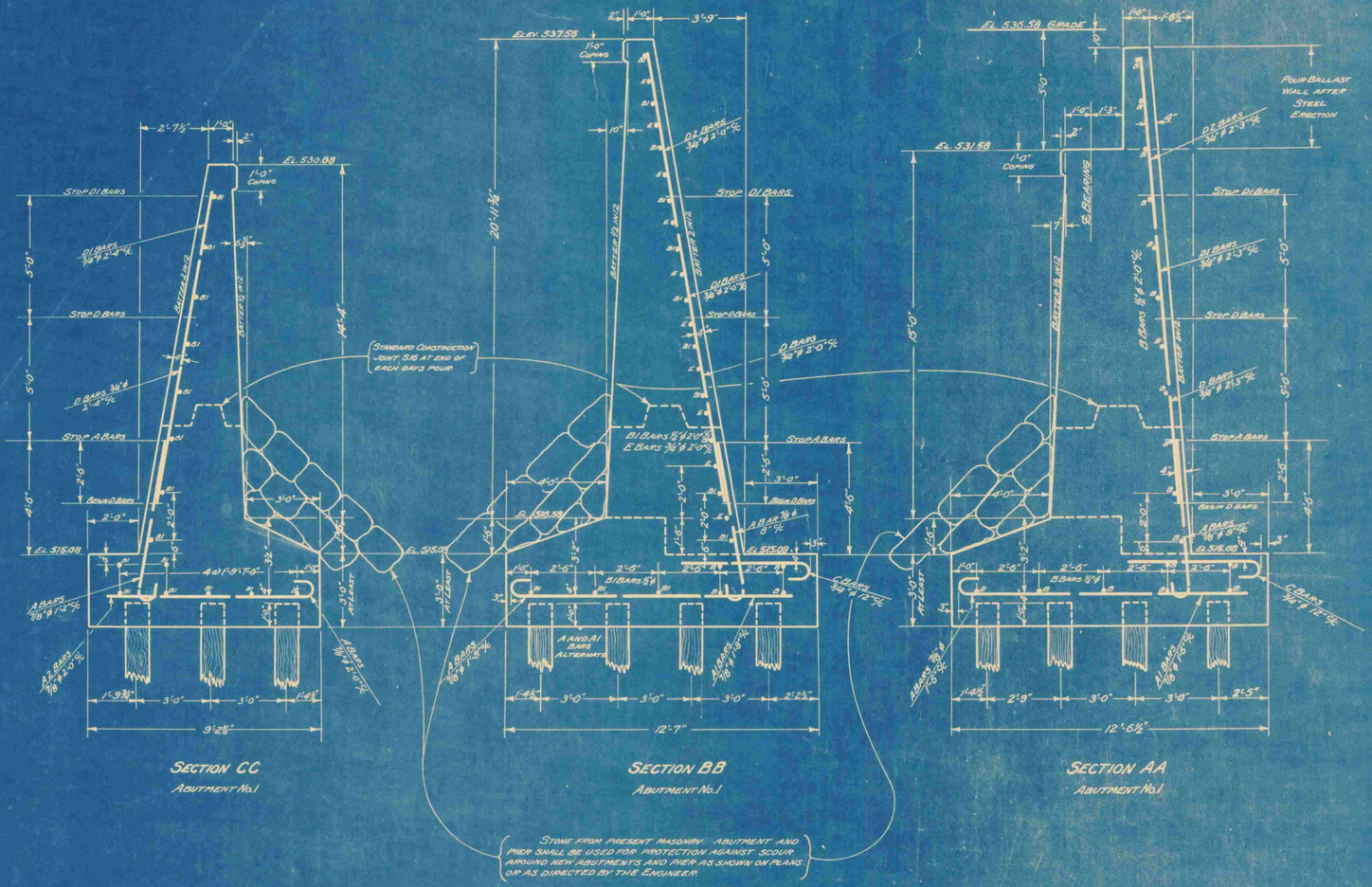
ABUTMENT No. 1 – APPROX. QUANTITIES

STRUCTURE EXCAVATION	953 600	CU. YDS.
CLASS B (1-2½-5) CONCRETE	270.5 315	CU. YDS.
REINFORCING STEEL	6615 6300	LBS.
TIMBER PILING	2090 2010	LIN. FT.

EAST ABUTMENT No. 1
DOPP BRIDGE OVER OTTER CREEK
RUTLAND, VT.

Surveyed by R. H. Royce
Designed by H. P. Rudigan
Drawn by H. P. Rudigan
Traced by J. C. Larsen Jr.
Checked by W. J. H.
Series 3 No. 102 Filed 303
Sheet 6 of 13 Sheets

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

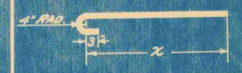


Section DD is similar to Section BB except for height and batter dimensions. Abutment No.1.

Section EE is similar to Section CC except for height and batter dimensions. Abutment No.1.

Note:
Corresponding Sections of Abutment No.2 - Sheet No.7 - similar to these shown for Abutment No.1. Scheme of Reinforcement same, — height and total amount of batters different.

Reinforcing Steel Details



Bar	Size	x	Total Length
A	7/8" ϕ	6'-6"	7'-9"
A1	7/8" ϕ	11'-0"	12'-3"
A2	7/8" ϕ	8'-0"	9'-3"
C	3/4" ϕ	5'-0"	6'-3"

Bar	Size	Length
B	1/2" ϕ	16'-6" (Spliced 40 Diam.)
B1	Do	18'-0"
D	3/4" ϕ	7'-6"
D1	Do	12'-6"
D2	Do	18'-0"
E	Do	5'-0"

Abutment Details
Dorr Bridge
over
Otter Creek
Rutland. Vt.

Surveyed by R.H. Royce
Designed by H.P. Redigan
Drawn by H.P. Redigan
Traced by F.C. Larsen Jr.
Checked by W.G.H.
Series 3 No. 102 Filed 333
Sheet 7 of 13 Sheets

FED. ROAD DIST. NO. | STATE | FAP ROUTE NO. | SHEET NO. | TOTAL SHEETS
VT. | 49A

NOTES FOR ABUTMENTS NOS. 1 & 2.

COST OF LABOR AND MATERIAL FOR THE INSTALLATION OF 3" WEEP HOLES WILL BE INCLUDED IN UNIT PRICE BID FOR CLASS B 1-2½-5 CONCRETE.

ALL EXPOSED EDGES SHALL BE CHAMFERED 1" WHICH DIMENSION SHALL BE THE TOTAL LENGTH ACROSS THE FINISHED CHAMFER.

THE LENGTH, ANGLE AND HEIGHT OF WINGS MAY BE DETERMINED OR CHANGED BY THE ENGINEER.

ANY SUITABLE STRUCTURE EXCAVATION USED BY THE CONTRACTOR FOR ANY PURPOSE OTHER THAN FOR BACKFILL OR APPROACH FILL SHALL BE REPLACED BY AN EQUIVALENT QUANTITY OF BORROW BY THE CONTRACTOR AT HIS OWN EXPENSE, UNLESS SAME IS ORDERED WASTED BY THE ENGINEER.

ALL WORK AND MATERIAL SHALL CONFORM TO THE STANDARD ROAD AND BRIDGE SPECIFICATIONS OF THE VERMONT DEPARTMENT OF HIGHWAYS, 1926.

THE ELEVATION OF THE FOOTINGS MAY BE CHANGED BY THE ENGINEER TO MEET FOUNDATION REQUIREMENTS FOUND IN THE FIELD.

PLAN
SCALE ⅜" = 1'-0"

ELEVATION
SCALE ⅜" = 1'-0"

PILING PLAN
DOWNSTREAM HALF
SCALE ¼" = 1'-0"

PILING PLAN
UPSTREAM HALF
SCALE ¼" = 1'-0"

FOR DETAIL OF CAST STEEL PILE SHOE SEE SHEET No. 8

PILES ASSUMED AT 25'-0" LENGTH FOR ESTIMATING PURPOSES ONLY. THE STATE ASSUMES NO RESPONSIBILITY FOR LOCATION OR NATURE OF MATERIALS FOUND IN BORINGS.

COARSE GRAVEL - VERY HARD TO PENETRATE.

FOR REINFORCING IN THIS ABUTMENT SEE SHEET No. 6

WALL ABOVE FOOTING MADE 6' SHORTER
FOOTING MADE 7' SHORTER

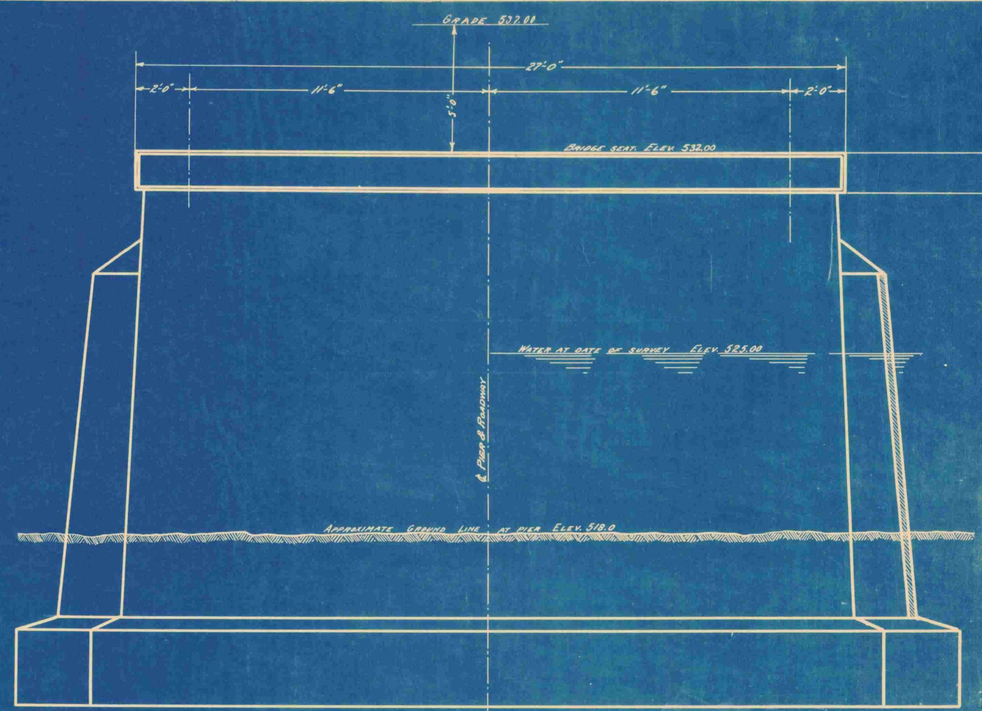
APPROXIMATE QUANTITIES - ABUTMENT No. 2

STRUCTURE EXCAVATION	495	500 Cu. Yds.
CLASS B (1-2½-5) CONCRETE	496	520 Cu. Yds.
REINFORCING STEEL	496	6420 Lbs.
TIMBER PILING		2275 Lin. Ft.

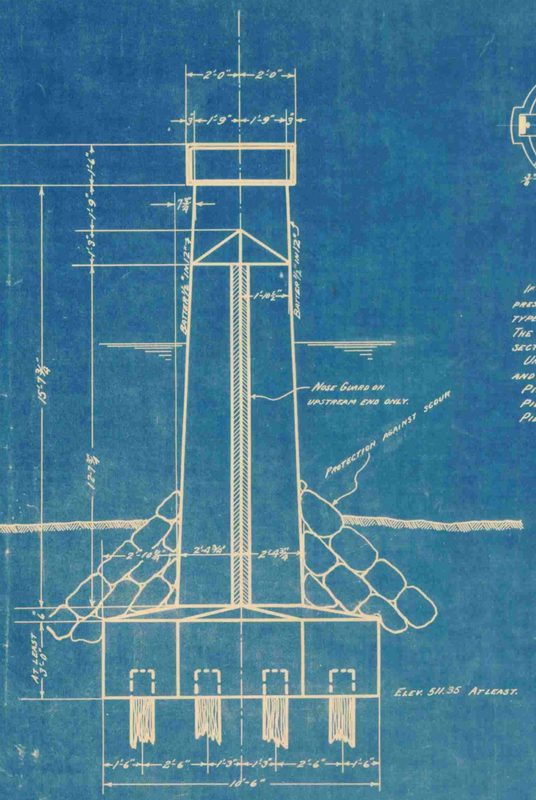
ABUTMENT No. 2 WEST
DORR BRIDGE
OVER
OTTER CREEK
RUTLAND, VT.

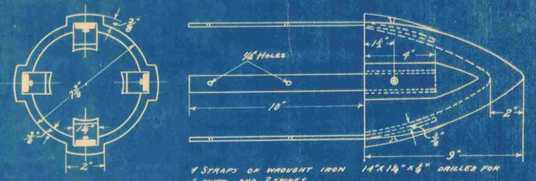
Surveyed by R.H. ROYCE
Designed by H.P. RADIGAN
Drawn by H.P. RADIGAN
Traced by W.G. BARRETT
Checked by [illegible]
Series 3 No. 102 Filed 303
Sheet 5 of 13 Sheets

FA 431 9 13



ELEVATION
SCALE 3/8"=1'-0"





4 STRAPS OF WROUGHT IRON 1 1/4" X 1/4" X 4" DRILLED FOR 1 RIVET AND 2 SCREWS.

CAST STEEL PILE SHOE FOR 6" TO 8" TIPS.
SCALE 1/4"=1"

IF JETTING IS NECESSARY, TWO WATER JETS SHOULD BE USED WITH A WATER PRESSURE OF AT LEAST 150 TO 200 LBS. PER SQUARE INCH. PUMP TO BE OF PISTON TYPE WITH A 6" DIAMETER INTAKE PIPE AND A 4" DIAMETER OUTLET PIPE. THE JET PIPE TO BE ABOUT 2" IN DIAMETER, NOZZLE TO BE CIRCULAR IN SECTION OF 1/2" TO 3/4" IN DIAMETER.

UNIT PRICE BID FOR WOODEN PILES SHALL INCLUDE JETTING IF NECESSARY AND FURNISHING AND PLACING PILE SHOES.

PILE SHOES AS PER SKETCH TO BE USED AS DIRECTED BY ENGINEER.

PILES ASSUMED AT 40'-0" FOR ESTIMATING PURPOSES ONLY.

PILES TO BE DRIVEN TO A 15 TON BEARING VALUE.

NOTES:-

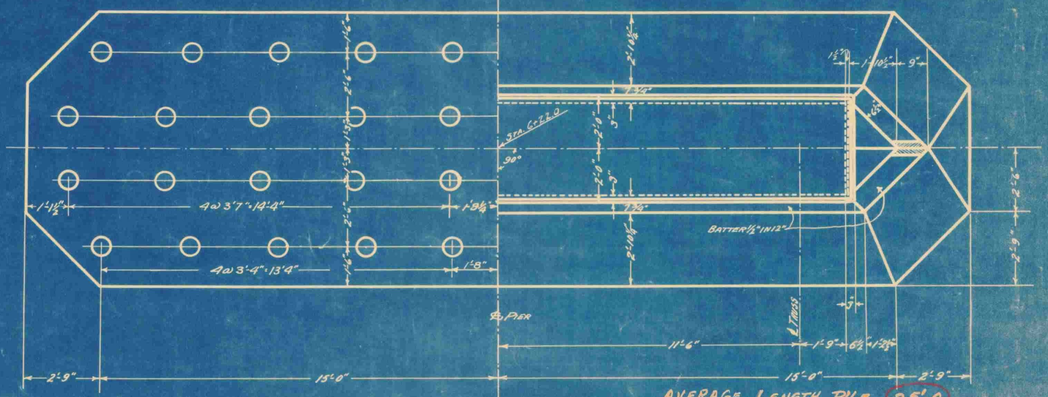
ALL EXPOSED EDGES SHALL BE CHAMFERED 1" WHICH DIMENSION SHALL BE THE TOTAL LENGTH ACROSS THE FINISHED CHAMFER.

ANY SUITABLE STRUCTURE EXCAVATION USED BY THE CONTRACTOR FOR ANY PURPOSE OTHER THAN FOR BACK FILL OR APPROACH FILL SHALL BE REPLACED BY AN EQUIVALENT QUANTITY OF BORROW BY THE CONTRACTOR AT HIS OWN EXPENSE UNLESS SAME IS ORDERED WASTED BY THE ENGINEER.

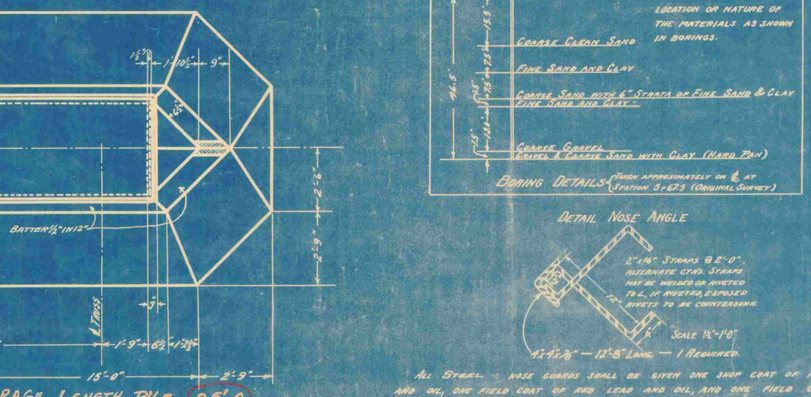
ALL WORK AND MATERIAL SHALL CONFORM TO THE STANDARD ROAD AND BRIDGE SPECIFICATIONS OF THE VERMONT DEPARTMENT OF HIGHWAYS 1926.

THE ELEVATIONS OF THE FOOTINGS MAY BE CHANGED BY THE ENGINEER TO MEET FOUNDATION REQUIREMENTS FOUND IN THE FIELD.

ITEM OF "STRUCTURE EXCAVATION," BELOW INCLUDES REMOVAL OF PRESENT MASONRY PIER TO STREAM BED ELEVATION. ALL SUITABLE STONE EXCAVATED FROM PRESENT MASONRY PIER SHALL BE USED AS PROTECTION AGAINST SCOUR AROUND NEW PIER AND ABUTMENTS AS SHOWN ON PLAN OR AS DIRECTED BY ENGINEER, AND SHALL BE PAID FOR ONLY UNDER THE ITEM OF STRUCTURE EXCAVATION.



HALF FOOTING PLAN
SYMMETRICAL ABOUT ℄
SCALE 3/8"=1'-0"

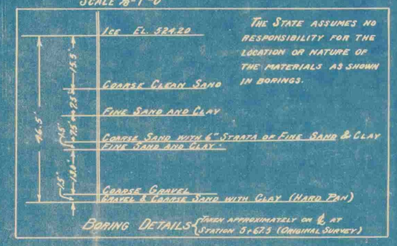


HALF PLAN
SYMMETRICAL ABOUT ℄

OTTER CREEK FLOW

AVERAGE LENGTH PILE 25'.0

UPSTREAM ELEVATION
SCALE 3/8"=1'-0"



THE STATE ASSUMES NO RESPONSIBILITY FOR THE LOCATION OR NATURE OF THE MATERIALS AS SHOWN IN BORINGS.

BORING DETAILS (TAKEN APPROXIMATELY ON ℄ AT STATION 5+67.5 (ORIGINAL SURVEY))

DETAIL NOSE ANGLE

4 L's 4"x3 1/2" — 12'-8" LONG. — 1 REQUIRED.

ALL STEEL NOSE GUARDS SHALL BE GIVEN ONE SHOP COAT OF RED LEAD AND OIL, ONE FIELD COAT OF RED LEAD AND OIL, AND ONE FIELD COAT OF GRAPHITE PAINT.

ALL WORK AND MATERIAL FOR FURNISHING AND PLACING NOSE GUARDS WILL BE PAID FOR UNDER UNIT PRICE BID FOR REINFORCING STEEL.

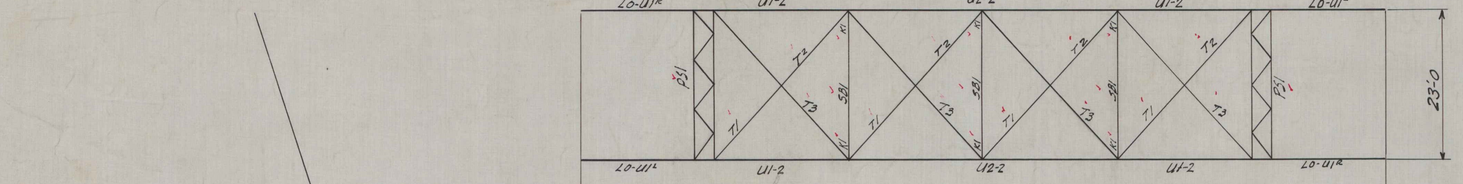
PIER BUILT ACCORDING TO PLAN

PIER DETAILS
DORR BRIDGE
OVER
OTTER CREEK
RUTLAND, VT.

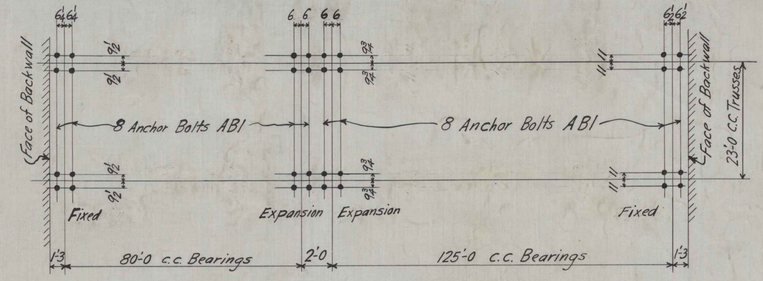
ESTIMATED QUANTITIES

STRUCTURE EXCAVATION	~~826~~	CU. YDS.
CLASS B (1-2½-5) CONCRETE	120	CU. YDS.
TIMBER PILING	798	~~1000~~ LIN. FT.
REINFORCING STEEL		~~LBS.~~ LBS.

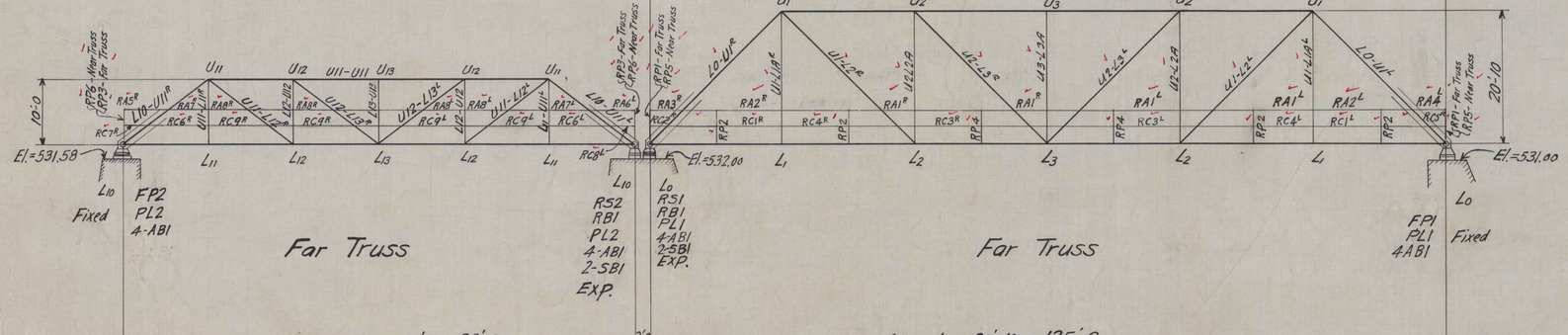
Surveyed by A.H.ROYCE
Designed by A.P.HADIGAN
Drawn by A.P.HADIGAN
Traced by W.F.BARRETT
Checked by [illegible]
Series 3 No. 1902 Filed 3-03
Sheet 9 of 12 Sheets



Top Chord Bracing



Anchor Bolt Plan



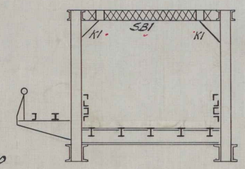
Far Truss

Far Truss

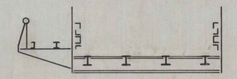
6 panels @ 13'-4 = 80'-0

2'0

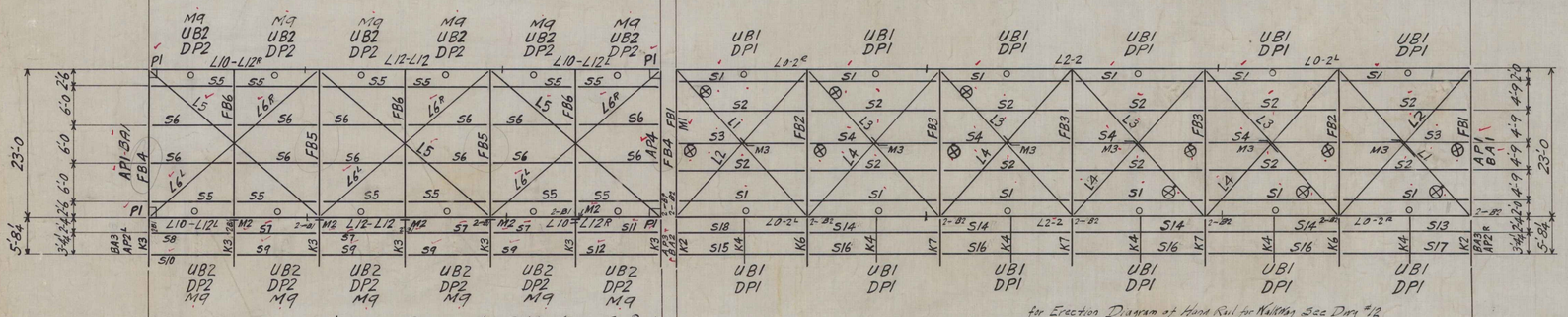
6 panels @ 20'-10 = 125'-0



Cross Section at U_2L_2 & U_3L_3



Cross Section at $U_{12}L_{12}$ & $U_{13}L_{13}$

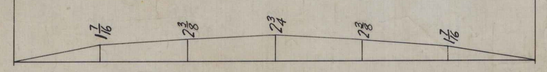


Bottom Chord Bracing & Floor

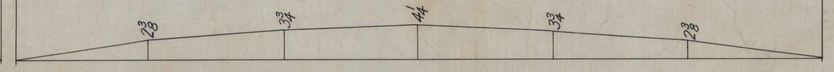
for Erection Diagram of Hand Rail for Walkway See Dwg 10

Bottom Chord Bracing & Floor

for Erection Diagram of Hand Rail for Walkway See Dwg #12



Camber Diagram
Bottom Chord



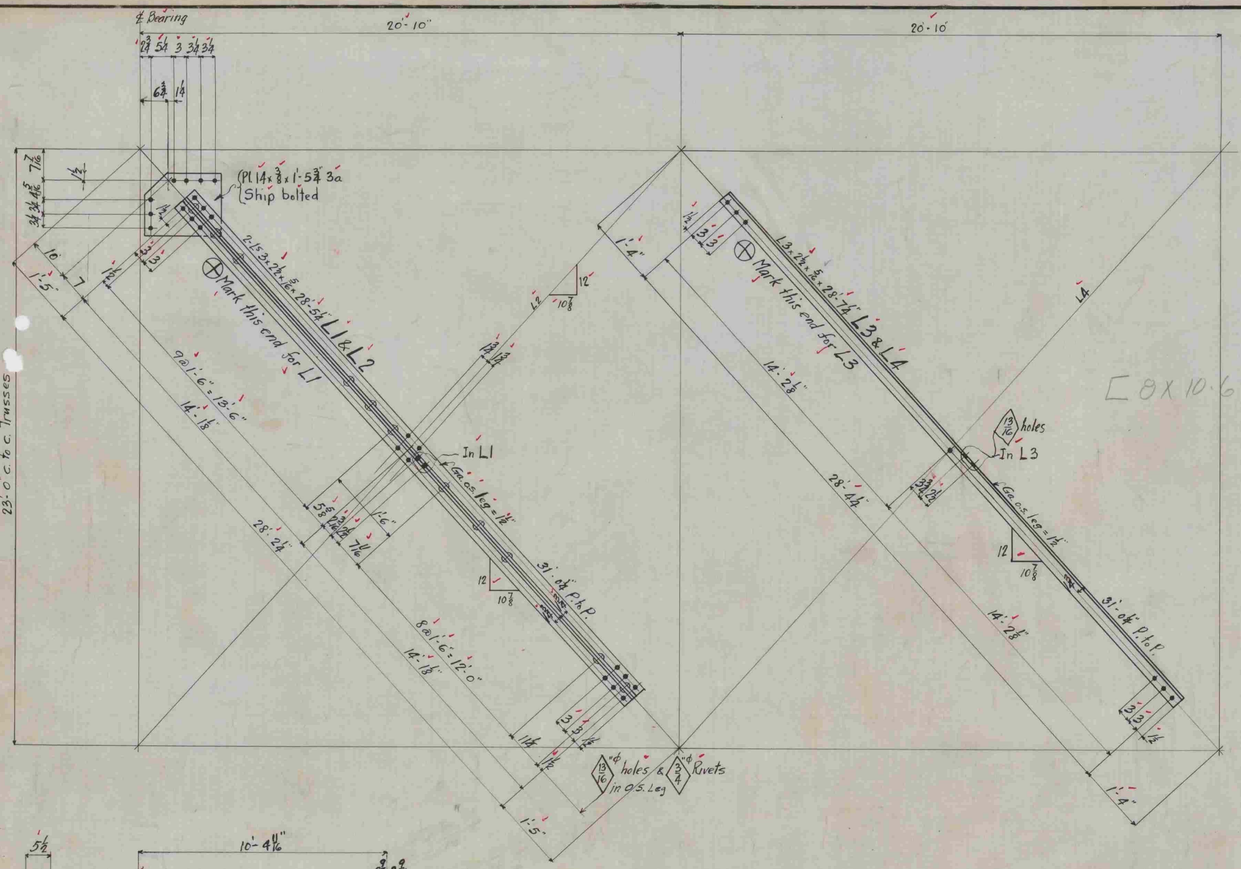
Camber Diagram
Bottom Chord

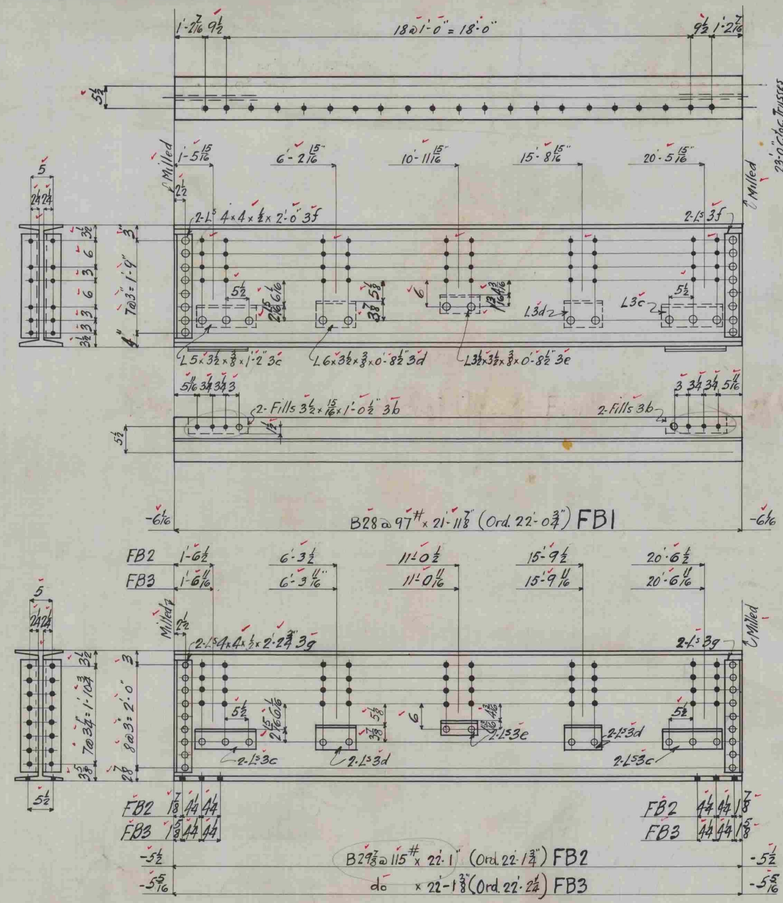
FRP 43-4

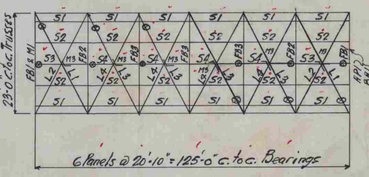
BETHLEHEM STEEL COMPANY				
Fabrication and Erection Dept.			BETHLEHEM, PA.	
DETAIL OF Erection Diagram & Anchor Bolt Plan				
STRUCTURE Dorr Bridge, Rutland, Vermont.				
CUSTOMER Sanders Eng. Co., 102 Exchange St. Portland, Me.				
SHOP PAINT				
RIVETS OPEN HOLES UNLESS NOTED				
DRAWN BY	DATE	CHECKED BY	DATE	SQUAD
WTS	6-26-28	PEM	6-1-28	Warren

SUPERSEDES	No.	DATE	BY	DESCRIPTION

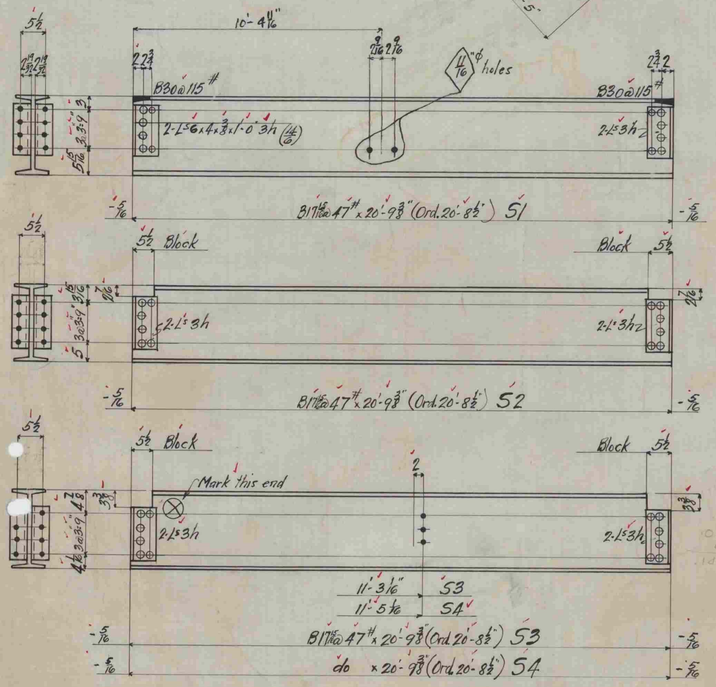
FILE F7762 CONT. E E3055 DWG. E1

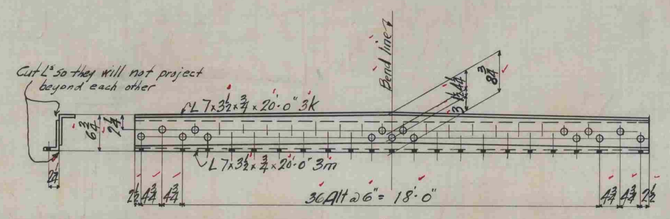




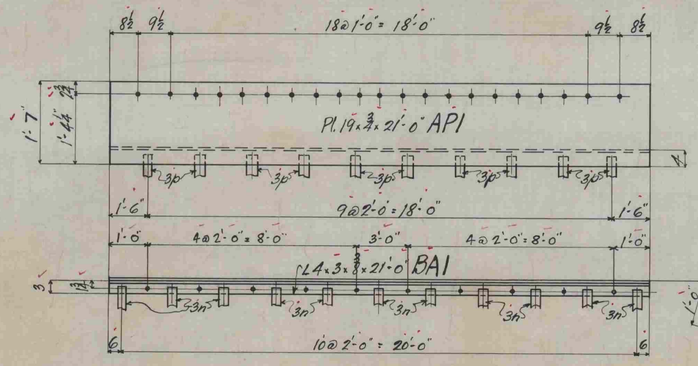


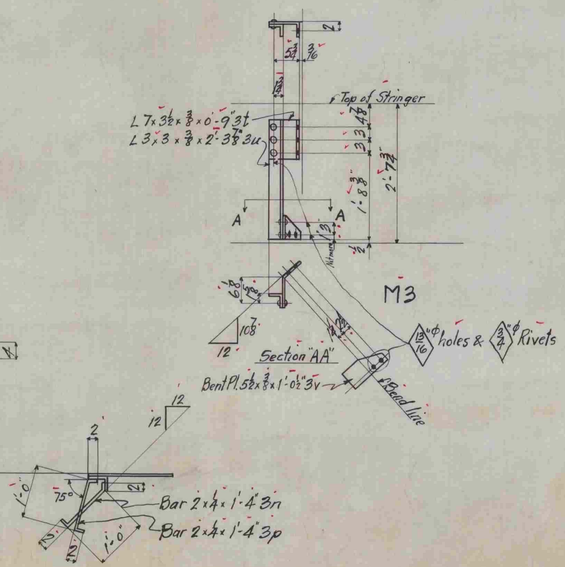
Specifications :- Std. Spec. for Steel Highway Bridges
U.S. Dept. of Agriculture - Dept. Bulletin #1259
Rivets 7/8" ϕ - Open holes 15/16" ϕ
Holes in material ¾" thick or less may be punched full size.
Holes in material more than ¾" thick shall be sub-punched & reamed or drilled from the solid.
Truss members shall be assembled in the shop and holes for field connections reamed or drilled while assembled and the members match marked.
Floor beam and Stringer connections to be sub punched and reamed to a metal templet not less than 1" thick or reamed while assembled.
Field connections for Laterals, Sway bracing and Railing punched full size.
Shop Paint :- One coat of approved red lead and oil.





M1





Required List		
2	– Laterals –	L1
2	– do –	L2
4	– do –	L3
4	– do –	L4
2	– Floor Beams –	FB1
2	– do –	FB2
3	– do –	FB3
12	– Stringers –	S1
12	– do –	S2
2	– do –	S3
4	– do –	S4
2	– Apron Plates –	AP1
2	– Bearing Angles –	BA1
One	– Curb Angle –	M1
6	– Hangers –	M3

BETHLEHEM STEEL COMPANY
Fabrication and Erection Dept. BETHLEHEM, PA.

DETAIL OF Laterals, Floor Beams & Stringers
STRUCTURE Barr Bridge, Rutland Vt.
CUSTOMER Sanders Eng. Co. Inc. Portland Me.

SHOP PAINT See Note
RIVETS 7/8" ϕ OPEN HOLES 15/16" ϕ UNLESS NOTED

DRAWN BY	DATE	CHECKED BY	DATE	SQUAD
A.M.S.	6-27-28	REM	7-18-28	Warren

REVISIONS	No.	DATE	BY	DESCRIPTION
	R1	8-21-28	A.M.S.	Holes in S1 changed.

FILE F7762 CONT. EE3055 DWG. 3

Adv. Bill #3b#13

Half Plan. Upper Lateral System.

Required List.

4	Top Laterals.	T1
4	do	T2
4	do	T3
3	Sway Braces	SB1
2	Portal do.	PS1
6	Brackets	K1

Specifications - St'd Spec for Steel Highway Bridges.
U.S Dept of Agriculture Dept. Bulletin #1259
Rivets ⅞ Open Holes 15/16 except noted.
Holes in material ¾ or less in thickness may be punched full size
Holes in material more than ¾" thick shall be subpunched and reamed or drilled from solid.
Truss members shall be assembled in the shop and holes for field connections shall reamed or drilled while so assembled and the members match marked.
Floor beam and stringer connections to be subpunched and reamed to a metal templet not less than 1" thick or reamed while assembled.
Field connections for laterals and sway bracing punched full size
Shop Paint - One Coat of Dutch Boy Red Lead.

BETHLEHEM STEEL COMPANY
Fabrication and Erection Dept. BETHLEHEM, PA.

DETAIL OF Portals, Laterals, Sway Braces.
STRUCTURE Dorr Bridge, Rutland Vermont.
CUSTOMER Sanders Engineering Co. Inc. Porland Me.

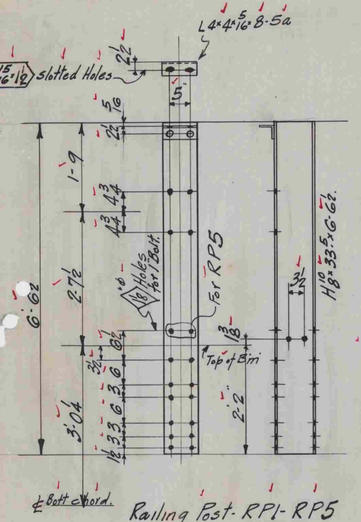
SHOP PAINT See Note
RIVETS ⅞ φ OPEN HOLES 15/16 φ UNLESS NOTED

DRAWN BY	DATE	CHECKED BY	DATE	SQUAD
A.D.S.	6/27/28	R.E.M.	7-16-28	Warrens

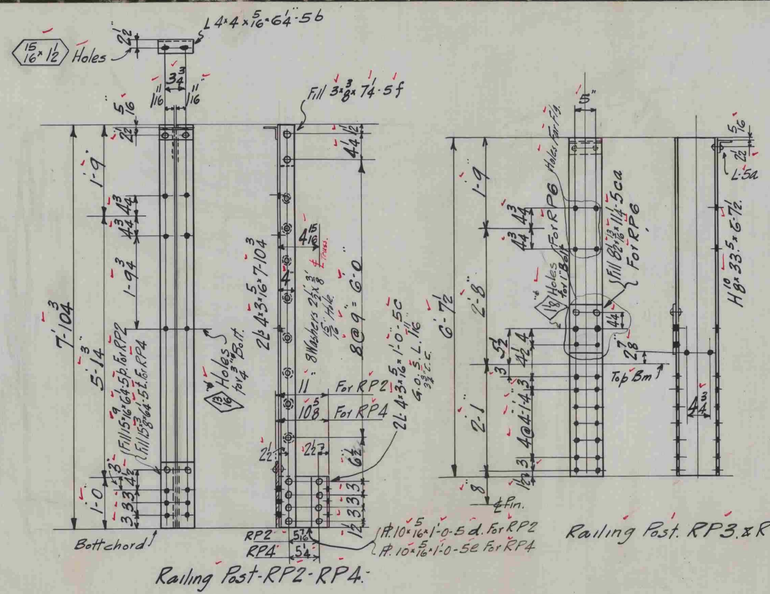
REVISIONS

No.	DATE	BY	DESCRIPTION

F 7762 E.F 3055 DWG. 4

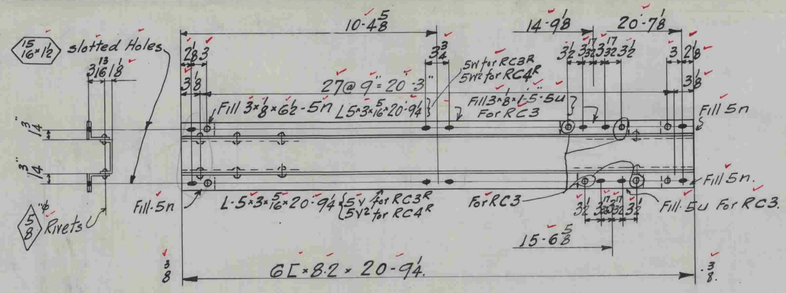


Railing Post. RP1 - RP5

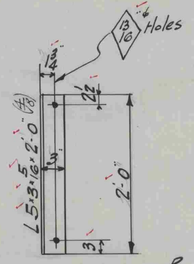


Railing Post. RP2 - RP4.

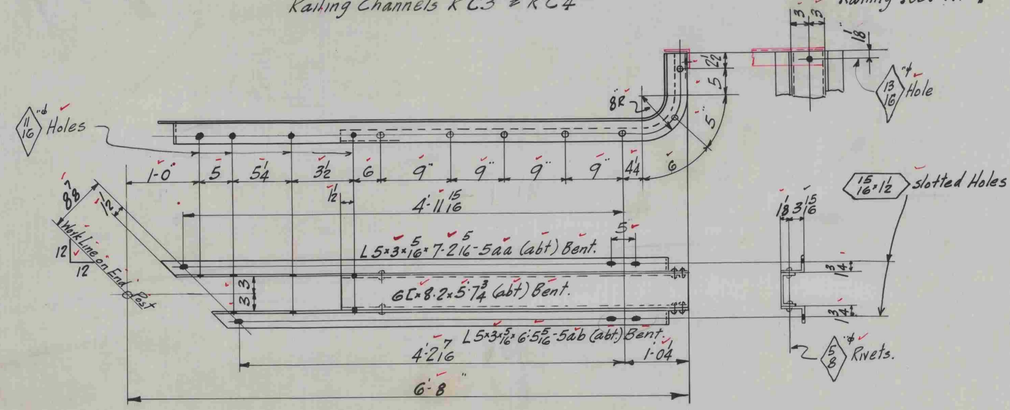
Railing Post. RP3 x RP6.



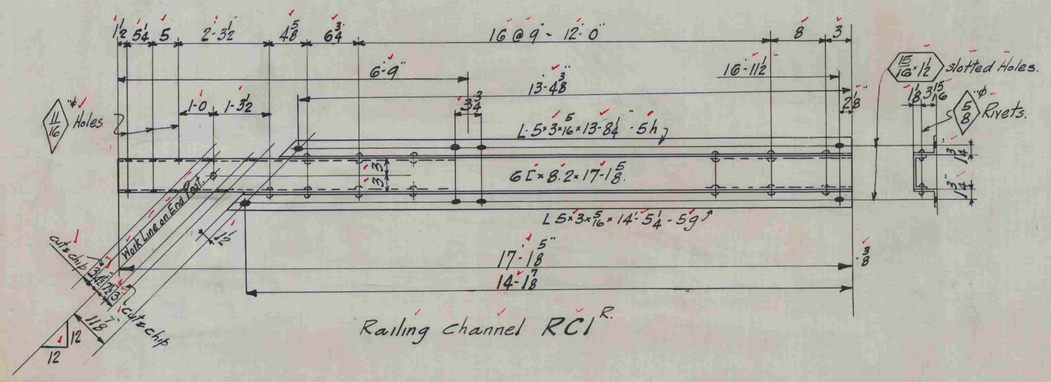
Railing Channels RC3R - RC4R



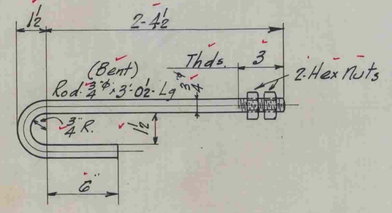
Railing Post RP7R.



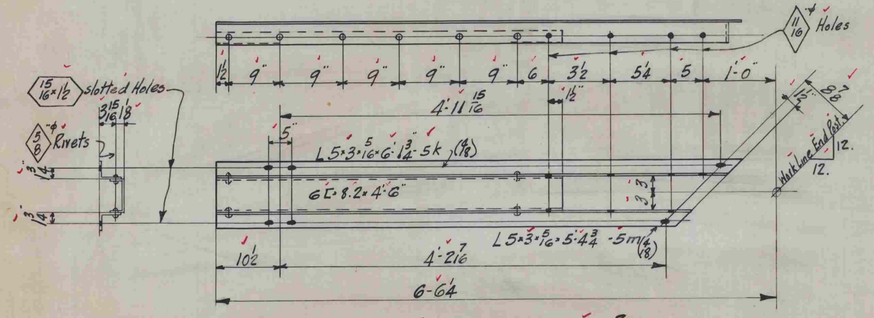
Railing Channel RC5R.



Railing Channel RC1R.



Hook Bolt - HBl.



Railing Channel RC2R.

Required List.

2	Railing Post.	RP1
8	do	RP2
2	do	RP3
4	do	RP4
2	Railing Channels	RC1R
2	do	RC1L
one	do	RC2R
one	do	RC2L
2	do	RC3R
2	do	RC3L
2	do	RC4R
2	do	RC4L
one	do	RC5R
one	do	RC5L
24	Hook Bolt.	HBl.
2	Railing Post	RP5
2	do	RP6
2	do	RP7R
2	do	RP7L

Specifications:- Std. Spec for Steel Highway Bridges
U.S. Dept of Agriculture - Dept Bulletin #1259.
Rivets 7/8" unless Noted — Open Holes 15/16" unless Noted.
Holes in material 3/4" thick or less may be punched full size
Shop Paint:- One Coat Red Lead & Oil.

Adv Bill #9

BETHLEHEM STEEL COMPANY
Fabrication and Erection Dept. BETHLEHEM, PA.

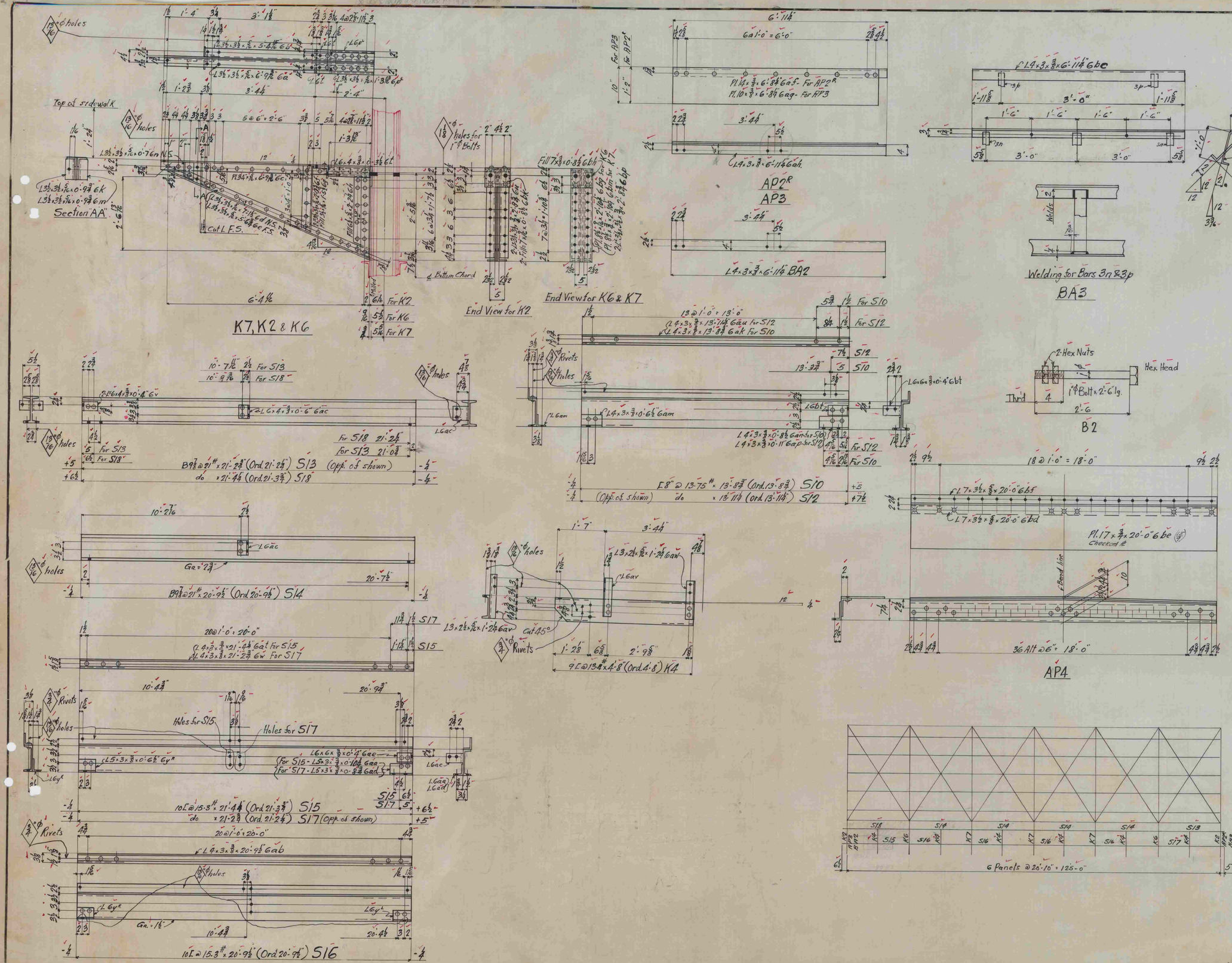
DETAIL OF Handrailing & Posts.
STRUCTURE Dorr Bridge Rutland Vt.
CUSTOMER Sanders Eng Co Inc. Portland. Me.

SHOP PAINT —
RIVETS OPEN HOLES UNLESS NOTED

DRAWN BY	DATE	CHECKED BY	DATE	SQUAD
GSO	7/2/23	REM	7-18-23	Warners

REVISIONS	No.	DATE	BY	DESCRIPTION

FILE-F7762 CONT.-EE3055 DWG. 5.



Specifications :- Std. Spec. for Steel Highway Bridges U.S. Dept. of Agriculture - Dept Bulletin #1259
Rivets 7/8"ϕ - Open holes 15/16"ϕ
Holes in material 3/4" thick or less may be punched full size
Holes in material more than 3/4" thick shall be sub-punched & reamed or drilled from the solid.
Truss members shall be assembled in the shop and holes for field connections reamed or drilled while assembled and the members match marked.
Floor beam and Stringer connections to be sub-punched and reamed to a metal templet not less than 1" thick or reamed while assembled.
Field connections for Laterals, Sway bracing and Railing, punched full size.
Shop Paint:- One coat of approved red lead and oil.

Required List

2	Sidewalk Brackets	K2
6	do	K4
2	do	K6
14	Bolts	B2
One	Stringer	S10
One	do	S12
One	do Opp. of shown	S13
4	do	S14
One	do	S15
4	do	S16
One	do Opp. of shown	S17
One	do	S18
One	Apron Plate	AP2R
One	do	AP2L
One	do	AP3
One	do	AP4
One	Bearing Angle	BA2
2	do	BA3
3	Sidewalk Brackets	K7

BETHLEHEM STEEL COMPANY

Fabrication and Erection Dept. BETHLEHEM, PA.

DETAIL OF Sidewalk Brackets, Stringers & Apron Pls.
STRUCTURE Dorr Bridge, Rutland Vt.
CUSTOMER Sanders Eng. Co. Inc. Portland Me.

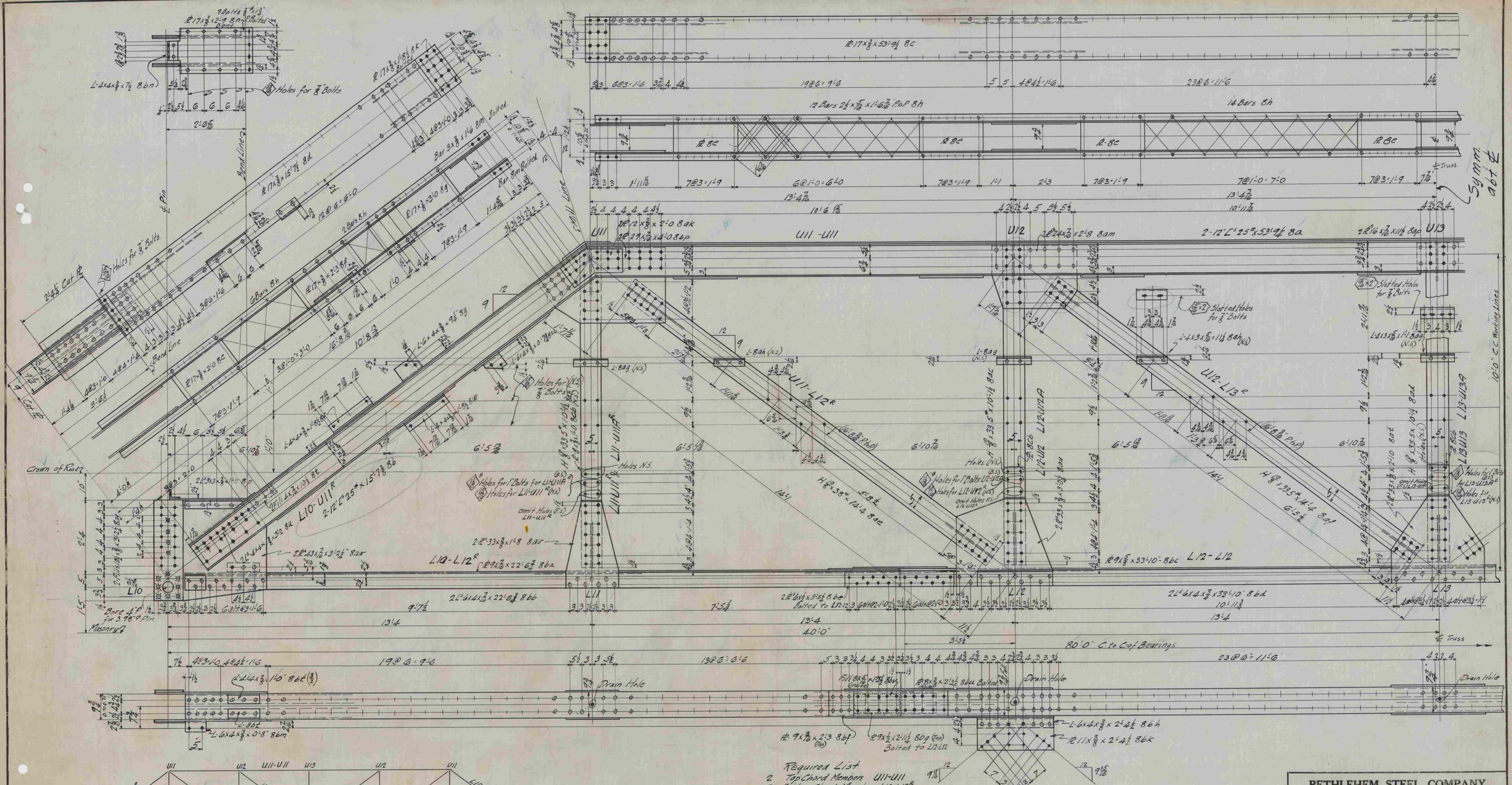
SHOP PAINT See note
RIVETS 7/8"ϕ OPEN HOLES 15/16"ϕ UNLESS NOTED

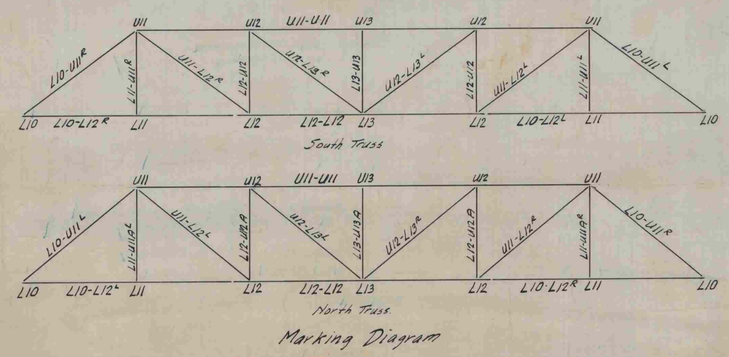
DRAWN BY	DATE	CHECKED BY	DATE	SQUAD
A.M.S.	7-6-28	R.E.M.	7-7-28	Warren

REVISIONS No.	DATE	BY	DESCRIPTION

Adv. Bills #7 & 8

FILE F 7762 CONT. EE 3055 DWG. 6

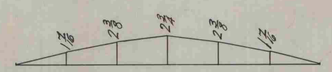




South Truss

North Truss

Marking Diagram



Camber Diagram

Required List

2	Top Chord Members	U11-U11
2	Bottom Chord Members	L10-L12R
2	do	L10-L12L
2	do	L12-L12
2	End Diagonals	L10-U11R
2	do	L10-U11L
2	Int. Diagonals	U11-L12R
2	do	U11-L12L
2	do	U12-L13R
2	do	U12-L13L
one	Post	L11-U11R
one	do	L11-U11L
one	do	L11-U11AR
one	do	L11-U11AL
2	do	L12-U12
2	do	L12-U12A
one	do	L13-U13
one	do	L13-U13A

Notes:-

Specifications:- Standard Spec. for Steel Highway Bridges U.S. Dept. of Agriculture, Dept. Bulletin #1259

Rivets 7/8" ⌀ Open Holes 15/16" unless noted.

Holes in material 3/4" thick or less may be punched full size.

Holes in material more than 3/4" thick shall be sub-punched and reamed or drilled from solid.

Truss members shall be assembled in Shop and holes for field connections reamed or drilled while assembled, and the members match marked.

Floor Beams and Stringer Connections to be subpunched and reamed to a metal templet not less than 1" thick or reamed while assembled.

Field connections for laterals, sway bracing and railing punched full size.

Shop Paint:- One Coat of approved Red Lead & Oil

Adv. Bill #5814

BETHLEHEM STEEL COMPANY

Fabrication and Erection Dept. BETHLEHEM, PA.

DETAIL OF Poney Truss 80'-0" ℄ ℄ Bearings.

STRUCTURE Dorr Bridge, Rutland, Vermont.

CUSTOMER Sanders Engineering Co. Portland, Me.

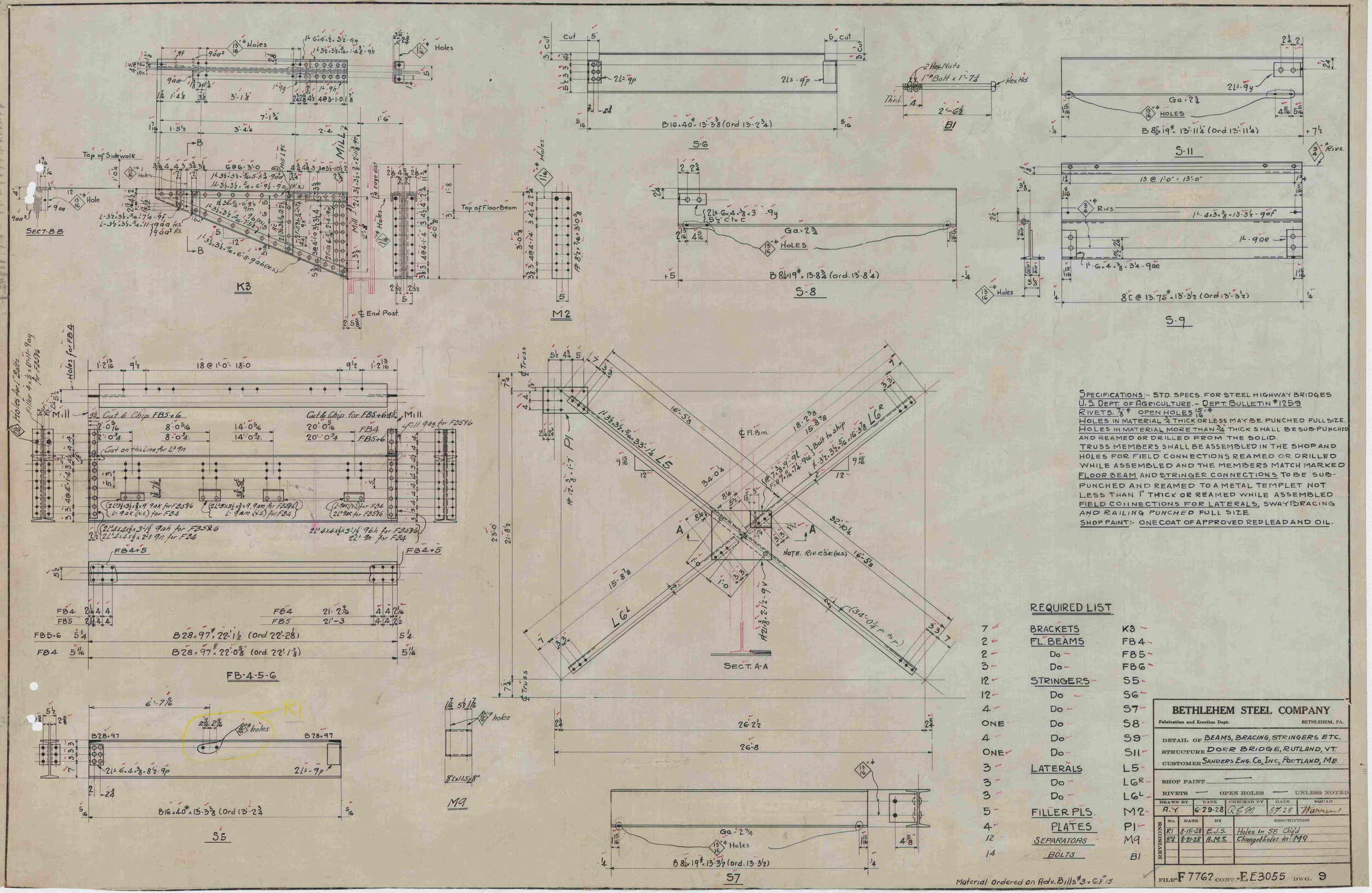
SHOP PAINT See note

RIVETS ~ OPEN HOLES ~ UNLESS NOTED

DRAWN BY	DATE	CHECKED BY	DATE	SQUAD
R.E.M.	6-27-28	Pipes	7/19/28	Warren

REVISIONS No.	DATE	BY	DESCRIPTION

FILE-F7762 CONT.-EE3055 DWG. 8



SPECIFICATIONS:- STD. SPECS. FOR STEEL HIGHWAY BRIDGES
U.S. DEPT. OF AGRICULTURE. - DEPT. BULLETIN #1259
RIVETS. ⅞" ϕ OPEN HOLES 15/16" ϕ
HOLES IN MATERIAL ¾ THICK OR LESS MAY BE PUNCHED FULL SIZE.
HOLES IN MATERIAL MORE THAN ¾ THICK SHALL BE SUB-PUNCHED AND REAMED OR DRILLED FROM THE SOLID.
TRUSS MEMBERS SHALL BE ASSEMBLED IN THE SHOP AND HOLES FOR FIELD CONNECTIONS REAMED OR DRILLED WHILE ASSEMBLED AND THE MEMBERS MATCH MARKED
FLOOR BEAM AND STRINGER CONNECTIONS TO BE SUB-PUNCHED AND REAMED TO A METAL TEMPLET NOT LESS THAN 1" THICK OR REAMED WHILE ASSEMBLED
FIELD CONNECTIONS FOR LATERALS, SWAY BRACING AND RAILING PUNCHED FULL SIZE
SHOP PAINT:- ONE COAT OF APPROVED RED LEAD AND OIL.

REQUIRED LIST

7	BRACKETS	K3
2	FL. BEAMS	FB4
2	Do	FB5
3	Do	FB6
12	STRINGERS	S5
12	Do	S6
4	Do	S7
ONE	Do	S8
4	Do	S9
ONE	Do	S11
3	LATERALS	L5
3	Do	L6R
3	Do	L6L
5	FILLER PLS.	M2
4	PLATES	P1
12	SEPARATORS	M9
14	BOLTS	B1

Material Ordered on Adv. Bills #3 + 6 & 15

BETHLEHEM STEEL COMPANY
Fabrication and Erection Dept. BETHLEHEM, PA.

DETAIL OF BEAMS, BRACING, STRINGERS ETC.
STRUCTURE DORR BRIDGE, RUTLAND, VT.
CUSTOMER SANDERS ENG. CO., INC., PORTLAND, ME.

SHOP PAINT ——
RIVETS — OPEN HOLES — UNLESS NOTED

DRAWN BY	DATE	CHECKED BY	DATE	SQUAD
A.Y.	6-29-28	R.E.M.	8-7-28	Warren

REVISIONS No.	DATE	BY	DESCRIPTION
R1	8-15-28	E.J.S.	Holes in S5 Chg'd
R2	8-21-28	A.M.S.	Changed holes in M9

FILE F 7762 CONT. E E3055 DWG. 9