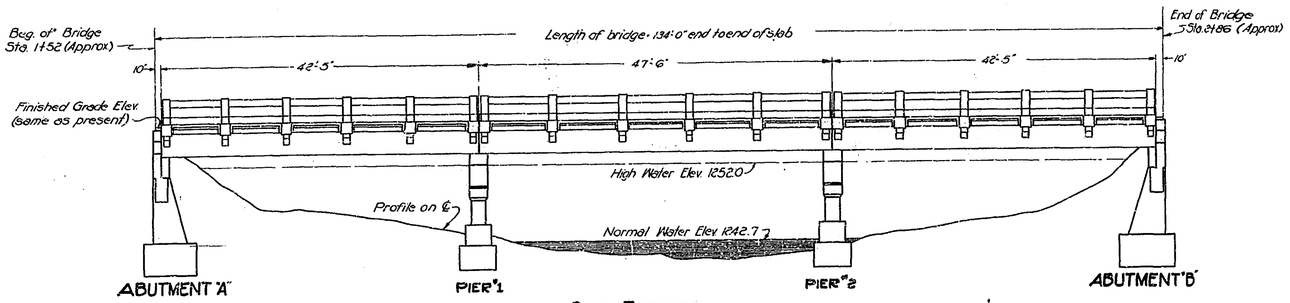
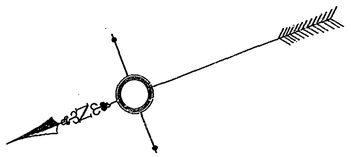
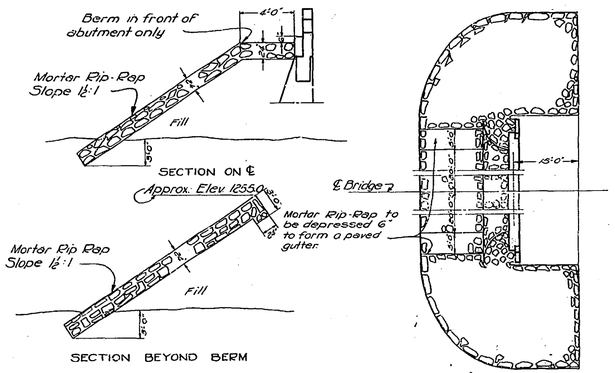
FED. RD. DIST. NO.	STATE	P.R.A. ROUTE NO.	P.R.A. PROJ. NO.	STATE ROUTE NO.	STATE PROJ. NO.	SHEET NO.	TOTAL SHEETS
14	VA.			23	428B#W	15	18



SIDE ELEVATION



PLAN



DETAILS OF MORTAR RIP-RAP AT ABUTS.

GENERAL NOTE

Roadway 44'-0" clear. Capacity, 15 ton trucks P.R.A.

Specifications:-

General:- Virginia Department of Highways Bridge Specifications, 1932

Concrete Material and Construction:- Virginia Department of Highways Road Specifications, 1938.

Design:- A.A.S.H.O. Specifications for Highway bridges H-20 loading.

All concrete shall be Class "A".

Footings shall rest on solid rock and foundations shall be approved by the Engineer.

To provide for variations in depths to foundations, adjustments shall be made in stems of Piers. For Abutments, adjustments shall be made in depths of footings, holding a min. of 24" and a max. of 5'-0". For a greater variation in abutments adjustments shall be made in stems, maintaining same batters and footing offsets as shown on plan.

Excavation above Elev. 1243.0 shall classified as "A", below, as "B".

After excavation and removal of old concrete is complete and before any new concrete is poured, old concrete shall be carefully measured so that final quantities may be accurately computed.

Cost of removal of old concrete shall be included in unit price bid for Class "A" concrete.

B.M.-"X" on N.E. corner Bridge Abutment 14 ft. Lt. Sta. 1+52, Elev. 1256.7.

Superstructure not built.

ESTIMATED QUANTITIES

	Concrete - Cu. yds Class "A"	Reinf. Steel Pounds	Excavation - Cu. yds "A"	Excavation - Cu. yds "B"	Mortar Rip-Rap Sq. yds
Superstructure	169.5	41,340			
Abutment "A" - Neat	14.2	1,550			208
" " - Foot	8.4		37	17	
Pier #1	18.7	1,920	5	15	
Pier #2	18.5	1,920	4	13	
Abutment "B" - Neat	14.2	1,550			177
" " - Foot	6.5		40	13	
Totals	250.0	48,280	86	58	405

DRAWN BY: W.G.G.-H.A.M.Jr.
TRACED BY: F.S.A.
CHECKED BY: J.M.L.

Superstructure has not been built.

Finals posted - Aug. 24, 1943
Date: Jan. 31, 1941
SCALE:- 1/8" = 1'-0"

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF HIGHWAYS
PROPOSED WIDENING OF BRIDGE
OVER BIG MOCCASIN CREEK - 1.5 MI. FROM GATE CITY
STA. 2+15 ROUTE 23 - PROJ. 428 SCOTT COUNTY
2 - 40'-0" & 1 - 45'-0" REINFORCED CONCRETE BEAM SPANS

RICHMOND, VIRGINIA

RECOMMENDED FOR APPROVAL [signature] BRIDGE ENGINEER

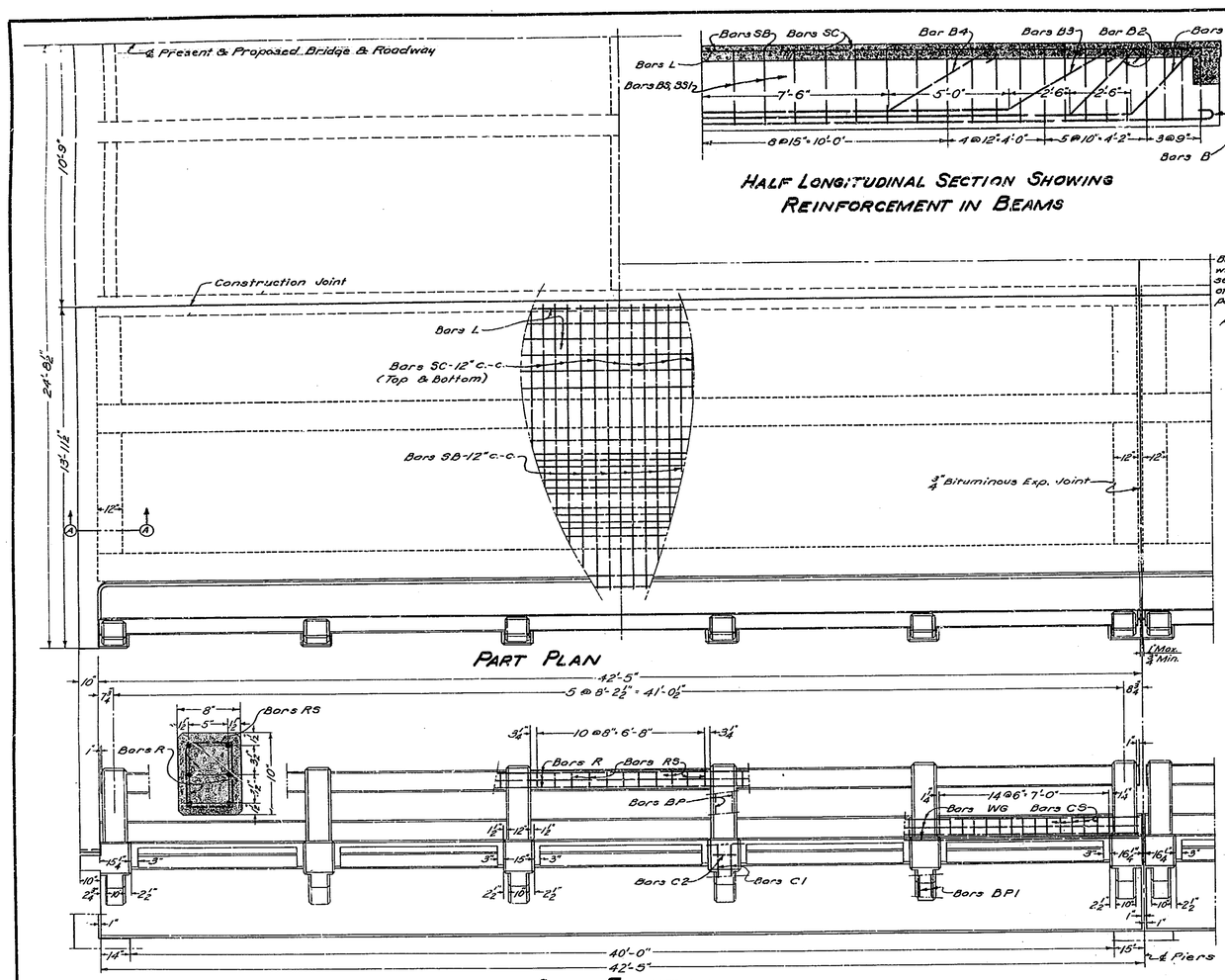
APPROVED [signature] CHIEF ENGINEER

LXXXVIII-5

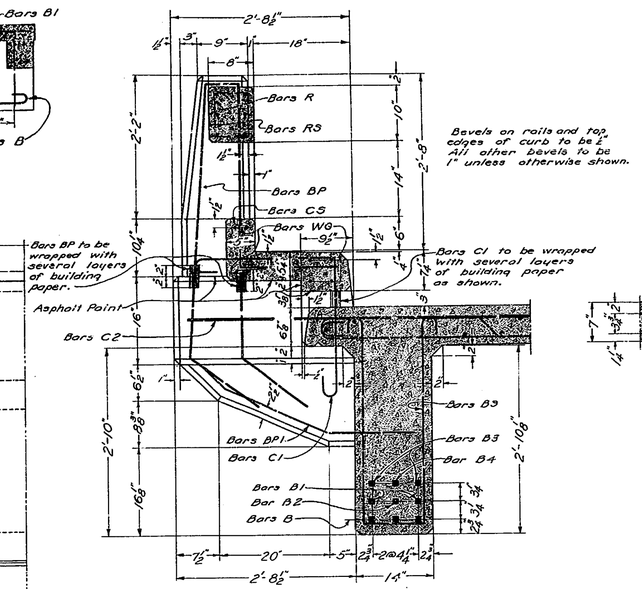
SHEET 1 of 4

8-05-01

Fed. Road Dist. No.	State	P. R. A. Route No.	P. R. A. Proj. No.	State Route No.	State Proj. No.	Sheet No.	Total Sheets
14	Va.			23	4288-W	15A	18

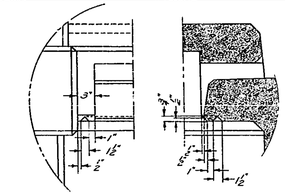


HALF LONGITUDINAL SECTION SHOWING REINFORCEMENT IN BEAMS

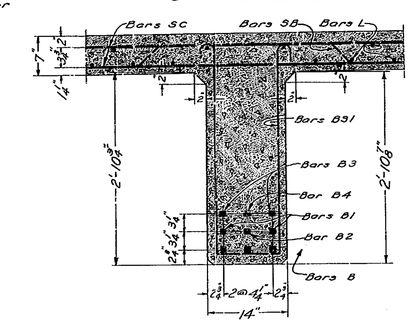


Bevels on rails and top edges of curb to be ½". All other bevels to be 1" unless otherwise shown.

EXTERIOR BEAM



DRIP BEAD DETAIL

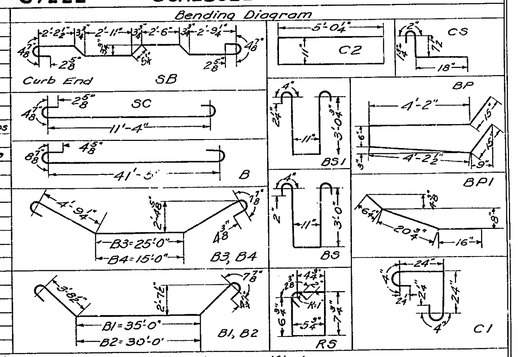


INTERIOR BEAM

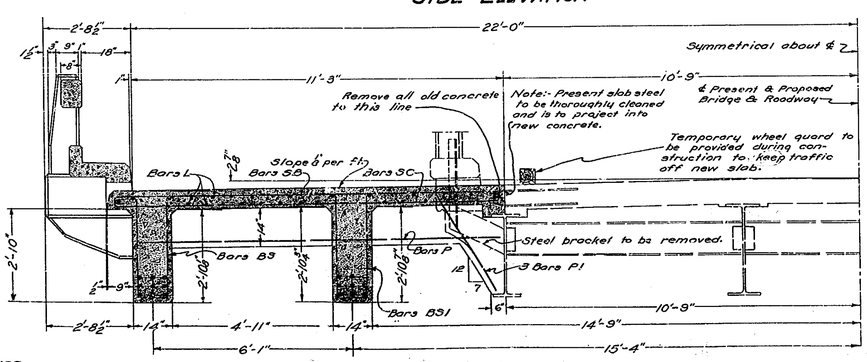
REINFORCING STEEL SCHEDULE

Mark	No.	Size	Length	Bent	Location
B	24	1¼" □	43'-8"	Bent	Beams
B1	16	1" □	44'-5"	"	"
B2	8	1" □	39'-5"	"	"
B3	16	1" □	36'-7"	"	"
B4	8	1" □	26'-7"	"	"
SC	344	5/8" ϕ	12'-7"	"	Slab
SB	168	5/8" ϕ	12'-11"	"	"
BS	164	½" □	7'-10"	"	Beam Stirrups
BS1	164	½" □	8'-0"	"	" "
P	32	½" □	10'-9"	Str.	Cross Beams
P1	24	½" □	3'-6"	"	" "
BP	48	5/8" ϕ	11'-3"	Bent.	Posts
BP1	48	½" □	3'-7"	"	Brackets
R	24	½" ϕ	41'-10"	Str.	Rails
WG	32	½" ϕ	42'-0"	"	Curbs
L	92	½" ϕ	42'-2"	"	Slab
C1	48	½" ϕ	5'-0"	Bent.	Curbs
C2	24	3/8" ϕ	10'-10"	"	Slab
CS	300	#4 ga.	2'-5"	"	Curbs
RS	220	#4 ga.	2'-9"	"	Rails

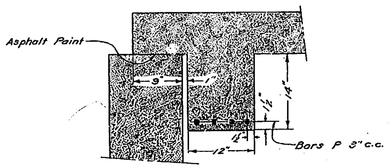
Bending Diagram



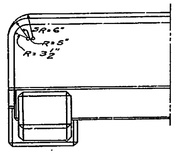
All bends to be made with a radius of 2½ diameters unless otherwise specified.



HALF TRANSVERSE SECTION



SECTION A-A



DETAIL OF CURB

To be used at end of bridge only.

BIG MOCCASIN CREEK BRIDGE
DETAILS OF SPANS "A" & "C"

Virginia Department of Highways
Office of the Bridge Engineer
Richmond, Va. January 31, 1942

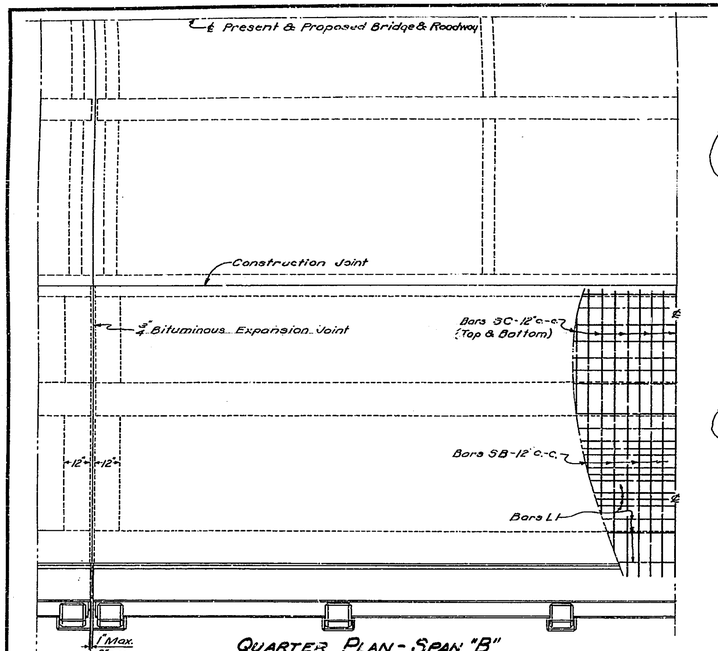
Drawn by WCC
Traced by OAL
Checked by J.M.C.

Scale: ⅜", ½" & 1"=1'-0"

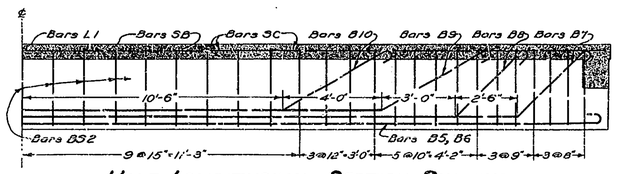
LXXXVIII-5
Sheet 2 of 4

LXXXVIII-5

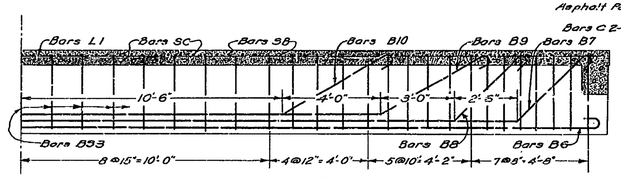
Fed. Road Dist. No.	State	R. R. A. Route No.	R. R. A. Proj. No.	State Route No.	State Proj. No.	Sheet No.	Total Sheets
14	Va.			23	428B⁴N¹	15B	18



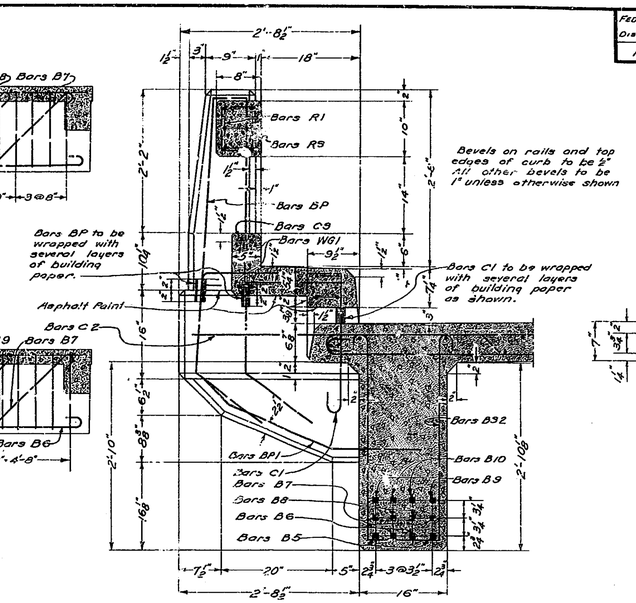
QUARTER PLAN - SPAN "B"



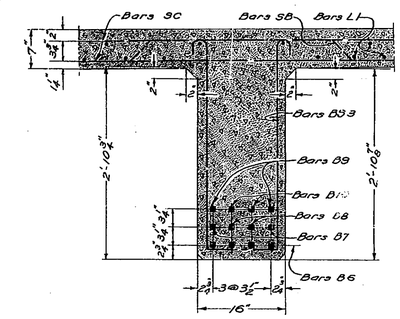
HALF LONGITUDINAL SECTION SHOWING REINFORCEMENT IN EXTERIOR BEAM



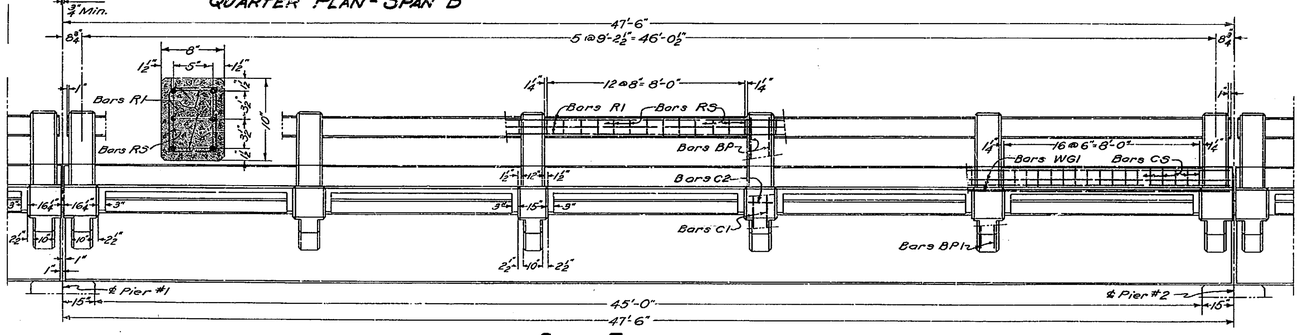
HALF LONGITUDINAL SECTION SHOWING REINFORCEMENT IN INTERIOR BEAM



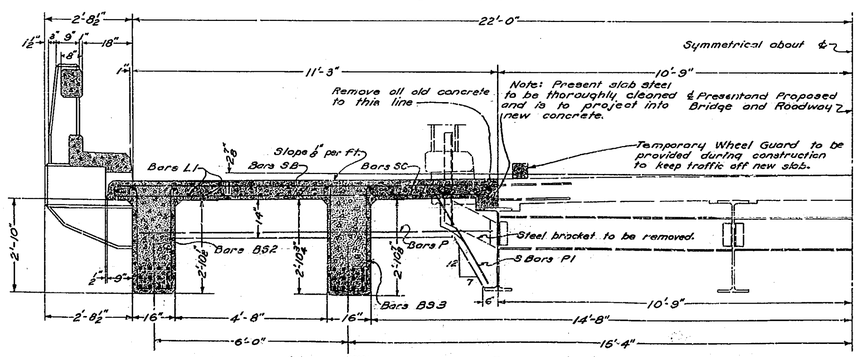
EXTERIOR BEAM



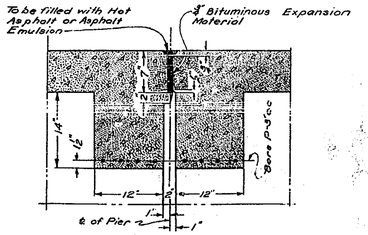
INTERIOR BEAM



SIDE ELEVATION



HALF TRANSVERSE SECTION

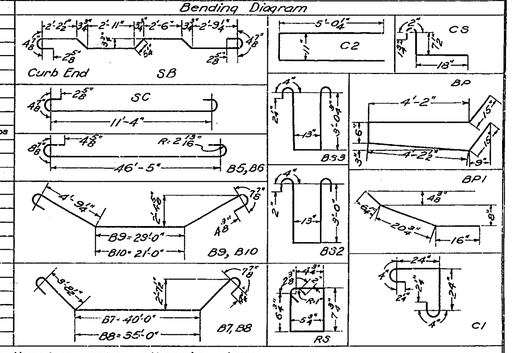


DETAILS OVER PIERS

REINFORCING STEEL SCHEDULE

Mark	No.	Size	Length		Location
B5	4	1 1/2" □	48'-8"	Bent	Beams
B6	12	1" □	48'-8"	"	"
B7	8	1" □	49'-5"	"	"
B8	8	1" □	44'-5"	"	"
B9	8	1" □	40'-7"	"	"
B10	8	1" □	32'-7"	"	"
3C	188	3/8" ϕ	12'-7"	"	Slab
3B	96	3/8" ϕ	12'-11"	"	"
B82	94	1/2" □	8'-0"	"	Beam Stirrups
B83	98	1/2" □	8'-2"	"	" "
P	16	1/2" □	10'-9"	Str.	Cross Beams
P1	12	1/2" □	3'-6"	"	" "
BP	24	3/8" ϕ	11'-5"	Bent	Posts
BP1	24	1/2" ϕ	3'-7"	"	Brackets
R1	12	1/2" ϕ	46'-10"	Str.	Rails
WG1	16	1/2" ϕ	47'-1"	"	Curbs
L1	46	1/2" ϕ	47'-9"	"	Slab
C1	24	1/2" ϕ	5'-0"	Bent	Curbs
C2	12	3/8" ϕ	10'-10"	"	Slab
CS	170	#4 ga.	2'-5"	"	Curbs
RS	130	#4 ga.	2'-9"	"	Rails

Bending Diagram



All bends to be made with a radius of 2 1/2 diameters unless otherwise shown.

Drawn by WCC
Traced by OAL
Checked by J.M.L.

BIG MOCCASIN CREEK BRIDGE
DETAILS OF SPAN "B"

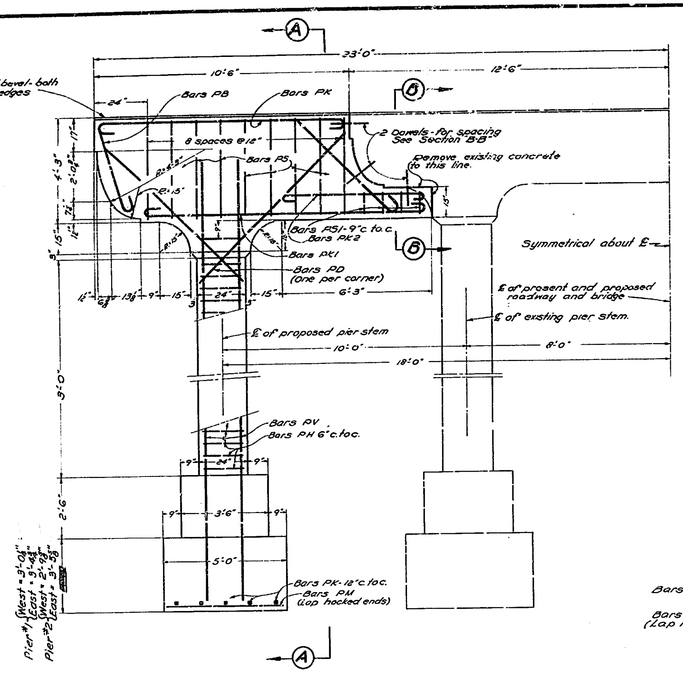
Virginia Department of Highways
Office of the Bridge Engineer
Richmond, Va. January 31, 1942

Scale: 3/8", 1/2" & 1" = 1'-0"

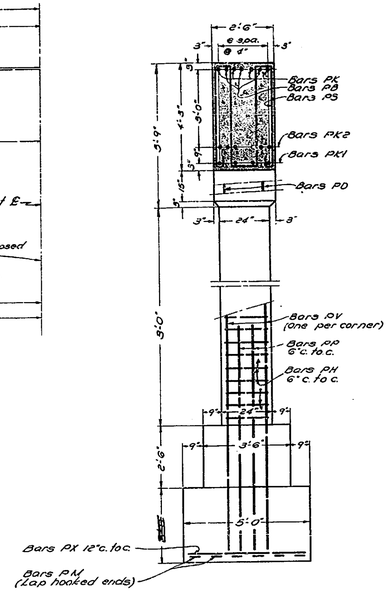
LXXXVIII-5
Sheet 3 of 4

0 3 5 8 10

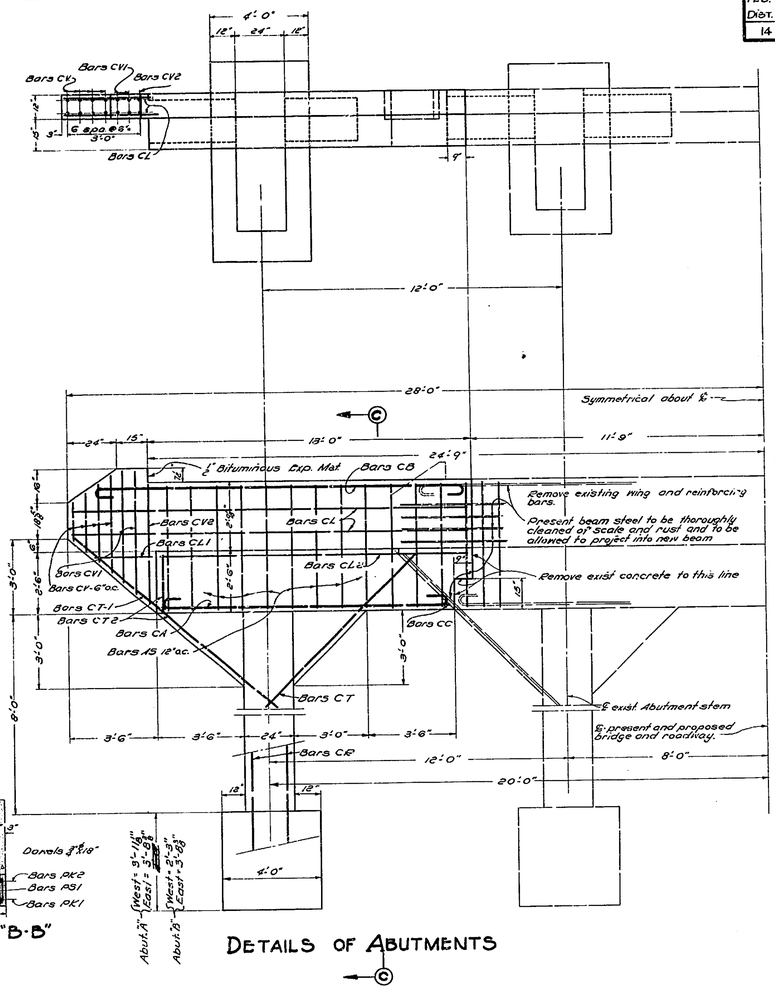
FED. RD. DIST. NO.	STATE	F.R.A. ROUTE NO.	F.R.A. PROJ. NO.	STATE ROUTE NO.	STATE PROJ. NO.	SHEET NO.	TOTAL SHEETS
14	VA.			23	428B1W	15 C	18



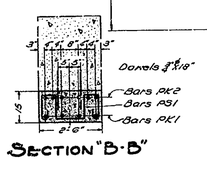
DETAILS OF PIERS



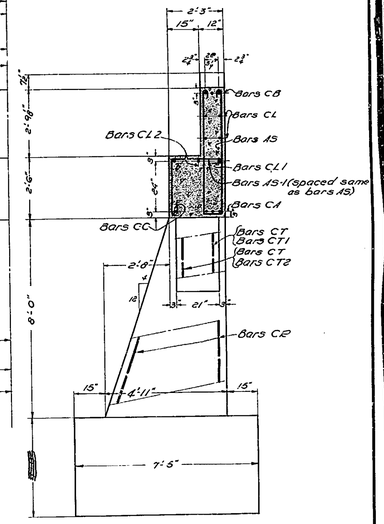
SECTION "A-A"



DETAILS OF ABUTMENTS



SECTION "B-B"



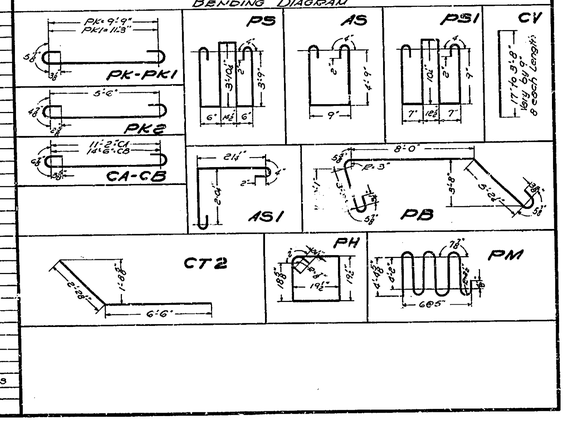
SECTION "C-C"

NOTE:-
Light dashed lines denotes old masonry in place. Heavy lines denotes proposed new masonry.

SCHEDULE OF REINFORCING STEEL

MARK	SIZE	NO.	LENGTH		LOCATIONS
PIERS					
PD	1" ⌀	16	7'-6"	Str.	Brackets
PV	1" ⌀	16	12'-8"	"	Stems
PP	1" ⌀	16	9'-0"	"	"
PB	7/8" ⌀	12	18'-5"	Bent	Beams
PK	1" ⌀	16	11'-8"	"	"
PK1	3/4" ⌀	16	12'-9"	"	"
PK2	3/4" ⌀	24	6'-9"	"	"
PS	1/2" ⌀	36	18'-2"	"	Beam Stirrups
PS-1	1/2" ⌀	16	6'-2"	"	" "
PX	1/2" ⌀	20	4'-6"	Str.	Footings
PM	1/2" ⌀	8	29'-6"	Bent	"
PH	1" ⌀	32	7'-0"	"	Stems
Dowels	3/4" ⌀	24	18"	Str.	Beams
ABUTMENTS					
CT	1" ⌀	8	9'-6"	Str.	Brackets
CT1	1" ⌀	4	11'-0"	"	"
CT2	1" ⌀	4	8'-8"	Bent	"
CP	1" ⌀	16	14'-0"	Str.	Stems
CL	1/2" ⌀	16	15'-11"	"	Beams
CL1	1/2" ⌀	4	15'-3"	"	"
CL2	1/2" ⌀	8	12'-5"	"	"
CA	3/4" ⌀	12	12'-11"	Bent	"
CB	3/4" ⌀	12	16'-3"	"	"
CC	3/4" ⌀	4	11'-8"	Str.	"
CV	1/2" ⌀	32	17'to3'-8"	"	Wings
CV1	1/2" ⌀	16	4'-2"&4'-9"	"	"
CV2	1/2" ⌀	8	4'-6"	"	"
AS	1/2" ⌀	48	11'-2"	Bent	Beam Stirrups
AS1	1/2" ⌀	48	4'-9"	"	" "

BENDING DIAGRAM



BIG MOCCASIN CREEK BRIDGE
SUBSTRUCTURE DETAILS

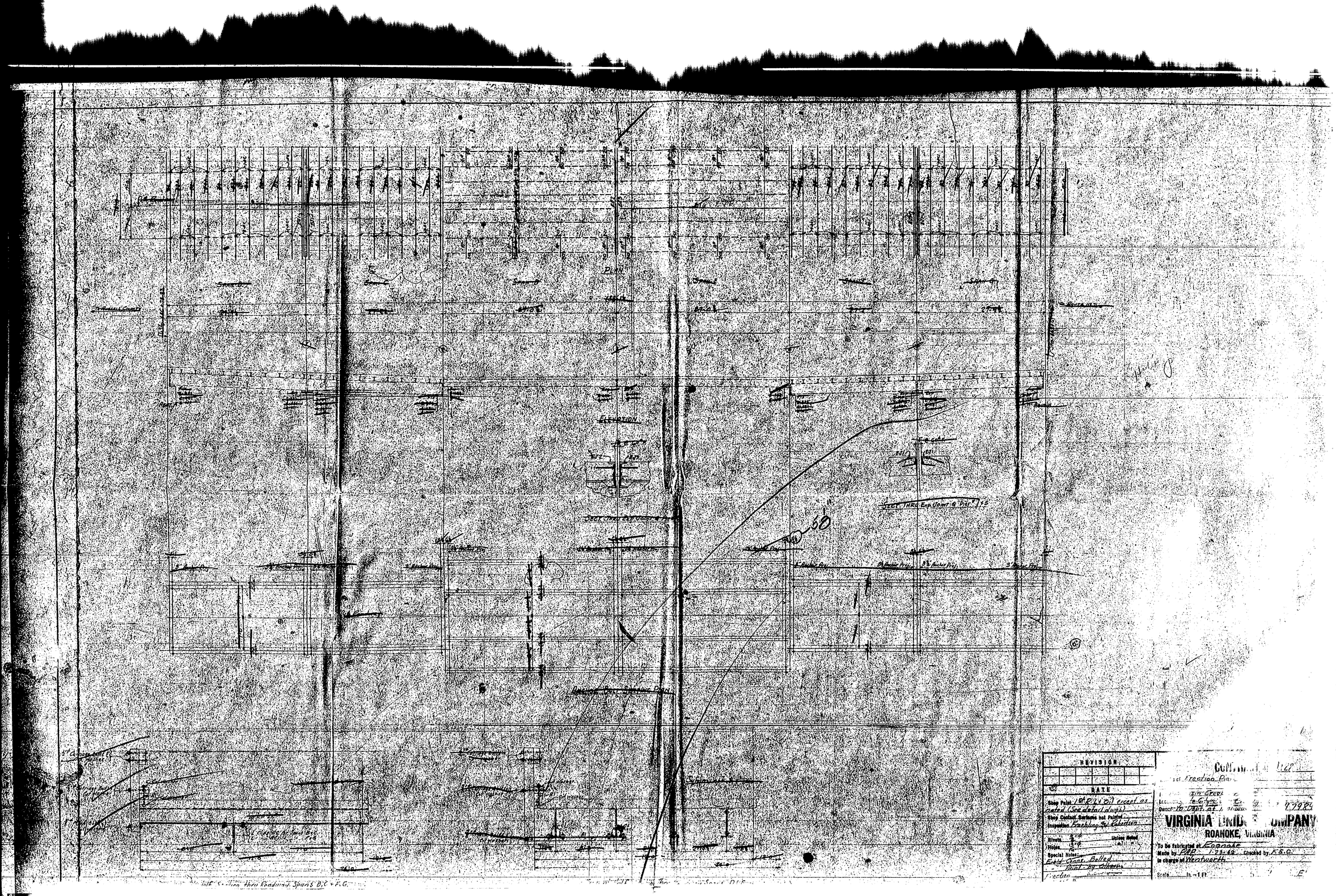
VIRGINIA DEPARTMENT OF HIGHWAYS
OFFICE OF THE BRIDGE ENGINEER
RICHMOND, VA. JAN. 1942

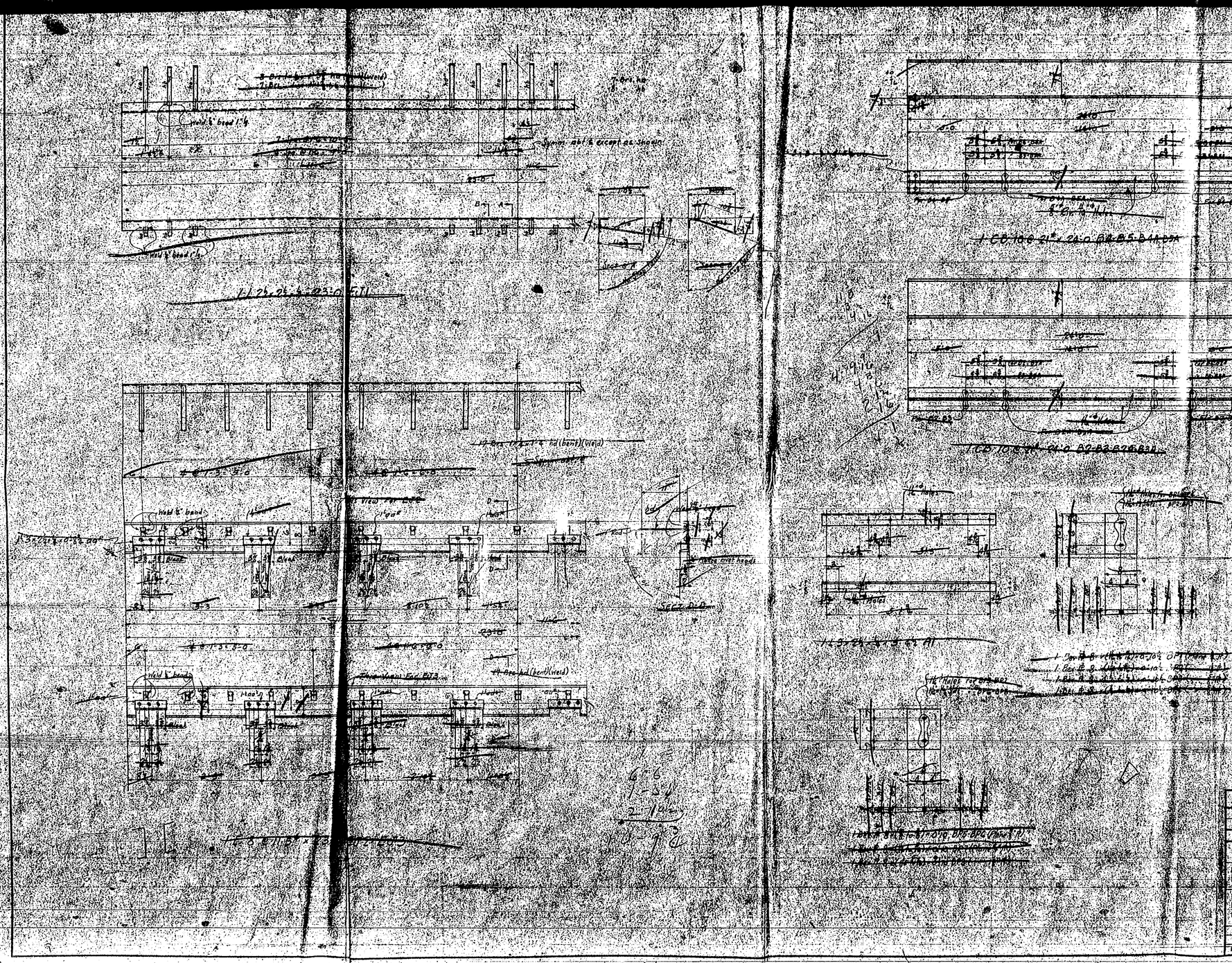
DRAWN BY: [illegible]
TRACED BY: [illegible]
CHECKED BY: [illegible]

Scale 3/8" = 1'-0"

4 of 4
LXXXVIII-5
SHEET 4 of 4

0-8-8-5-4-E


PLAN
ELEVATION
SECT. THRU EXP. JOINT @ PIER
ANCHOR BOLT SPACING PLAN
REVISION
DATE
Shop Paint 1st R.L. & Oil except as noted (See detail dwgs)
Shop Contact Surfaces not Painted
Inspection Frankling & Robertson
Rivets
Holes
Unless Noted
Special Notes:
Field Conns. Bolted
Paint by others
Fraction
CONTRACT
Fraction Pla
Owner To Dept. of
VIRGINIA BRIDGE COMPANY
ROANOKE, VIRGINIA
To be fabricated at Roanoke
Made by PAD 1-23-42 Checked by F.S.C.
In charge of Wentworth
Scale In. = 1 Ft.



Req'd

Make	Desc
4	
1	
1	
7	Beam
6	do
4	do
4	do
2	
2	
2	do
2	do
2	
2	
2	
2	
8	
8	
4	Beams
4	do
7	do
6	do

REVISION	
DATE	

Shop Paint 1st R.L. & Oil except as noted

Shop Contact Surfaces not Painted

Inspection Froehling & Robertson

Rivets 3/4" Unless Noted

Holes 3/4" Unless Noted

Special Notes:

Mat'l on S.B. #1

CONTRACT # 4128

Details of Exp Joints, Beams, Brg Pivots

For Moccasin Creek Bridge

Location Gate City, Scott County, Va.

Owner Va. Dept. of Highw

VIRGINIA BRIDGE COMPANY

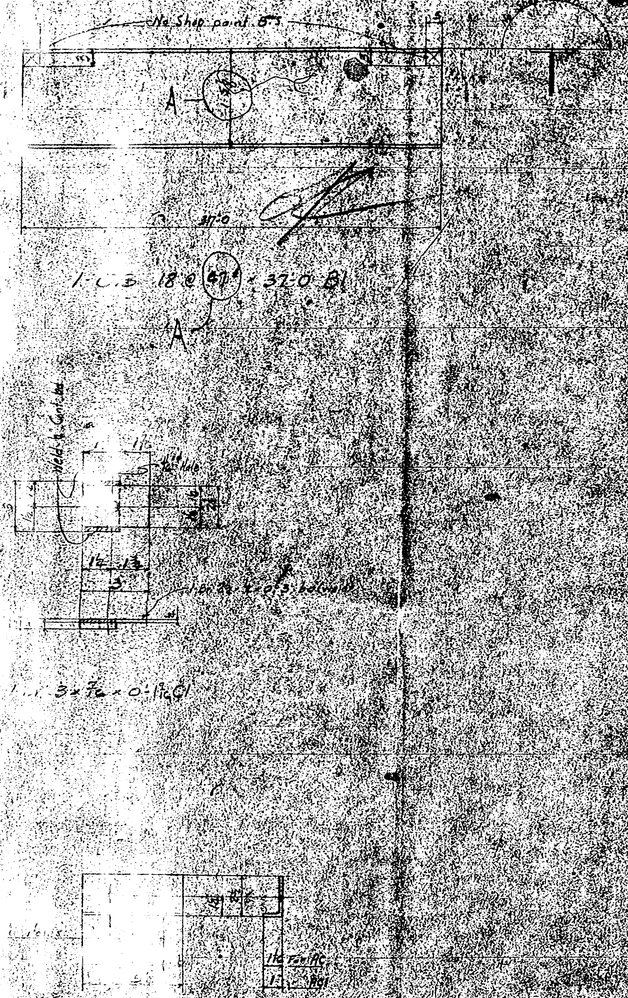
ROANOKE, VIRGINIA

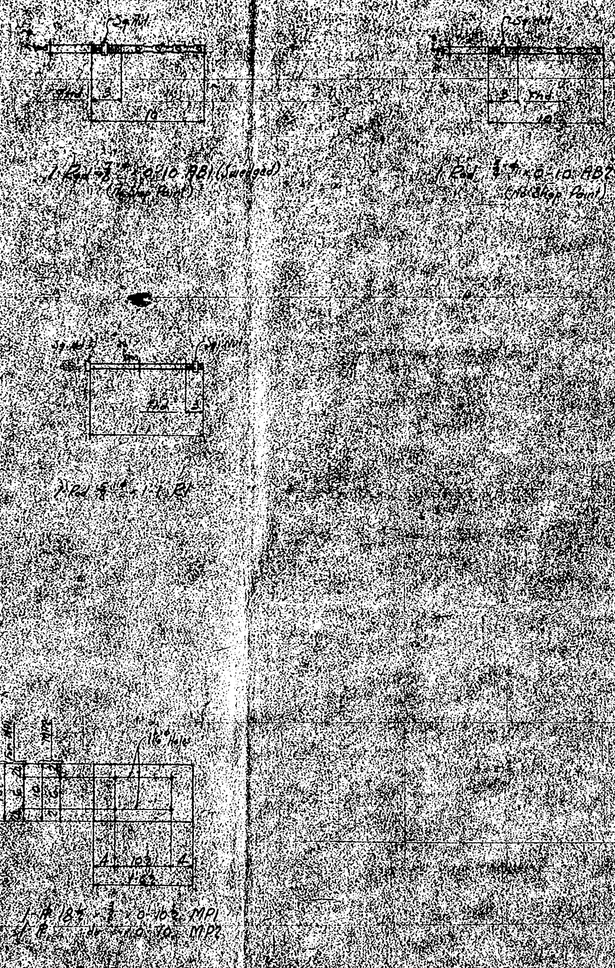
To be fabricated at Roanoke plant

Made by PAP Checked by F.S.C.

In charge of Wentworth

Scale In. = 1 Ft. Sheet No. 1 of 2





Req'd. List

Make	Description	Mark
1	Beam	B1
64	Clips	C1
48	Angles	AC
40	do	AC1
32	Anchor Bolts	AB1
140	Rods	R1
2	Masonry Pls	MP1
2	" "	MP2
32	Washers 2½" x 2½" x 0.151 x 1/16 Lock Wt	
53	Cut Bolts ¾" x 1½" do (Bolt Hd. Sq. Hd.)	
170	" ¾" x 0.10 do (" " ")	
110	Bolts ¾" x 0.17 (Sq. Hd.)	
200	Bolts do x 0.12 (" ")	
190	Bolts do x 0.22 (" ")	
170	Cut Washers for ¾" Bolts	
445	" ¾"	
32	Anchor Bolts	AB2
32	Washers 2½" x 2½" x 0.151 x 1/16 Lock Wt 2	
40	Bolts ¾" x 0.12 ¾" (Sq. Hd.)	

REVISION	

DATE

Shop Paint: C.R.I. & P. Co. Specs. or Approved Equal

Field Paint: Per Specs. or Equal

Erection Marks: Yes

Shop Marks: Yes

Weight: 12,000 lbs.

Weight Marks: Yes

Shipping Weight: 12,000 lbs.

Shipping Marks: Yes

Shipping Date: Aug. 1952

Shop Date: Sept. 1952

Erection Date: Sept. 1952

Sheet No. 1 of 2 Sheets

CONTRACT V 4128

Details of Beams, Reg'd. List, Anchors, etc.

For Montgomery Creek Bridge

Location: Cliffside, Grant County, Va.

Route: Va. Rte. 55 Westbound

VIRGINIA BRIDGE COMPANY

ROANOKE, VIRGINIA

Drawn by: L. Lacombe

Date: 8-8-52

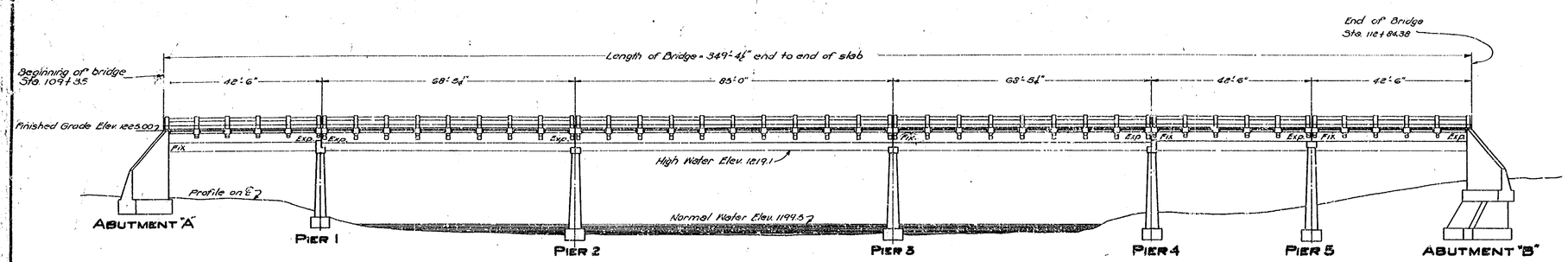
Checked by: F.S.K.

Traced by: J. Hartsoe

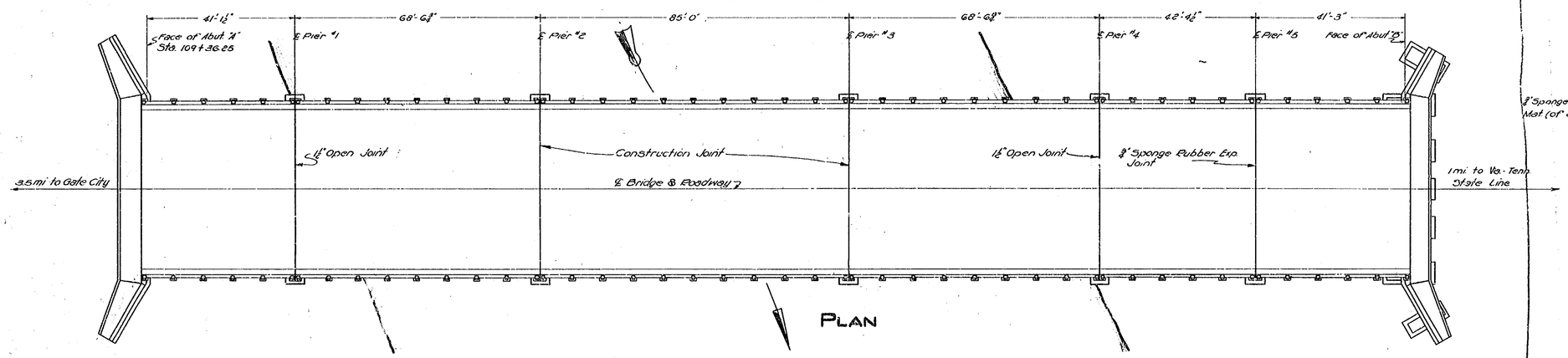
Scale: 1" = 1'-0"

Sheet No. 2 of 2 Sheets

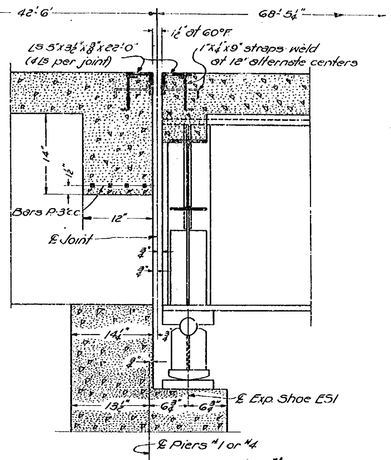
FED. RD. DIST. NO.	STATE	F.R.A. ROUTE NO.	F.R.A. PROJ. NO.	STATE ROUTE NO.	STATE PROJ. NO.	SHEET NO.	TOTAL SHEETS
14	VA			23	428B-1B	16	18



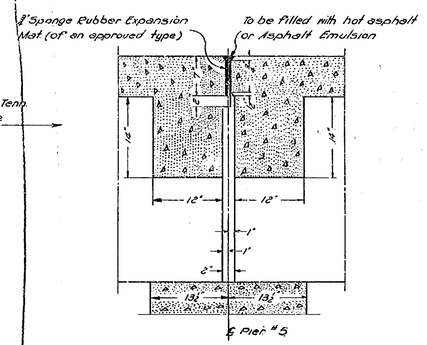
SIDE ELEVATION



PLAN



DETAILS OVER PIERS #1 & #4



DETAILS OVER PIER #5

GENERAL NOTES:

Roadway: 44'-0" clear - Capacity 15 ton trucks R.R.A.
Specifications:
General - Virginia Department of Highways, Bridge specifications 1932.
Concrete Materials and Construction - Virginia Department of Highways Road Specifications, 1938.
Design and Steel Construction - A.A.S.H.O. specifications for Highway Bridges, 1941, H-20 loading, structural steel stresses increased ⅓.

Superstructure: For further details of superstructure see Std. Plans. WC-44-40 and 3 SMS-44-86.
Concrete in Abutments shall be class "B" all other concrete shall be class "A".
Excavation above Elev. 1200.0 shall be classified as "A" below as "B".
Foundations:- Footings shall rest on solid rock and foundations shall be approved by the Engineer. To provide for variations in depths to foundations, adjustments shall be made in depths of footings, holding a min. depth of 24" and a max. of 5'-0". For greater variations in Piers adjustments shall be made in frame maintaining same batters and offsets as shown on plans. For greater variations in abutments notify office of the Bridge Engineer for redesign.
Quantities for items on which Lump sum Bids are asked are approximate only and are given for estimating purposes.
Structural steel embedded in concrete shall not be painted and shall be thoroughly cleaned before any concrete is poured.
B.M. - X on south end east concrete Abutments 50' Lt. sta. 109+06 (Orig) 70' Lt. Sta. 109+10 (Rev.) Elev. 1201.80.

ESTIMATED QUANTITIES

		Concrete Class "A"	Concrete Class "B"	Cu. yds	Reinf. Steel Pounds	Struct. Steel Pounds	Excavation "A"	Excavation "B"
Superstructure		558.6			132,275	308,000		
Abutment "A"	Neat			103.3				
" "A"	Foot			203.7			94	40
Pier #1	Neat	70.9			4,180			
" #1	Foot	34.7					74	37
Pier #2	Neat	89.9			4,550			
" #2	Foot	43.8						40
Pier #3	Neat	89.9			4,550			
" #3	Foot	28.3						25
Pier #4	Neat	95.5			4,710			
" #4	Foot	30.1					27	31
Pier #5	Neat	100.6			4,845			
" #5	Foot	45.4					12	15
Abutment "B"	Neat		130.1		305			
" "B"	Foot		182.2				303	164
Totals.		1,164.2	312.3	307.0	135,415	308,000	775	492

COMMONWEALTH OF VIRGINIA

DEPARTMENT OF HIGHWAYS

PROPOSED BRIDGE

OVER HOLSTON RIVER - 3.5 MI. FROM GATE CITY
STA. 111+10 - ROUTE 23 - PROJ. 428 - SCOTT COUNTY
3-40'-0" REINFORCED CONCRETE BEAM SPANS
2-68'-0" & 1-85'-0" STEEL BEAM SPANS
RICHMOND, VIRGINIA

1 of 3

RECOMMENDED FOR APPROVAL M. R. Glidden BRIDGE ENGINEER

APPROVED C. S. Mullen CHIEF ENGINEER

Final's Posted: Dec. 20, 1945.
Date: Jan. 26, 1942
SCALE: 1/8" = 1'-0"

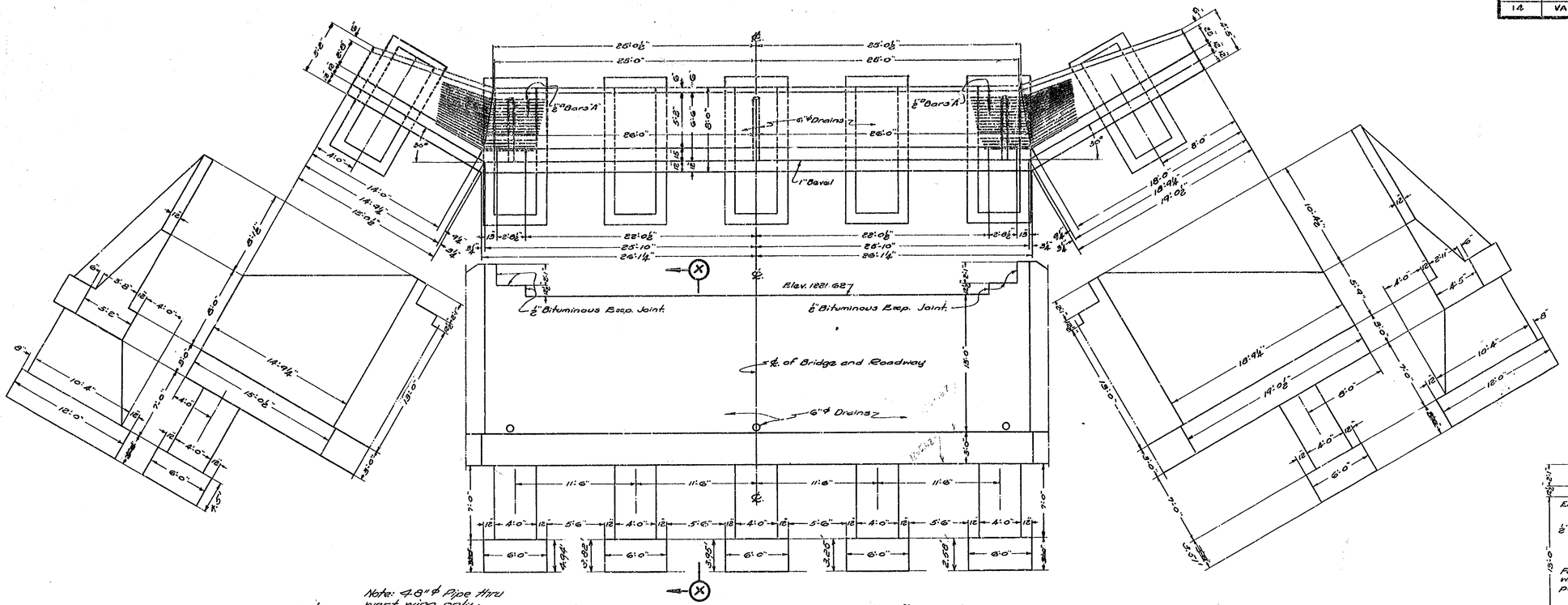
DRAWN BY: W.E.G.
TRACED BY: H.H.
CHECKED BY: J.M.G.

LXXXVIII-B
SHEET 1 of 3

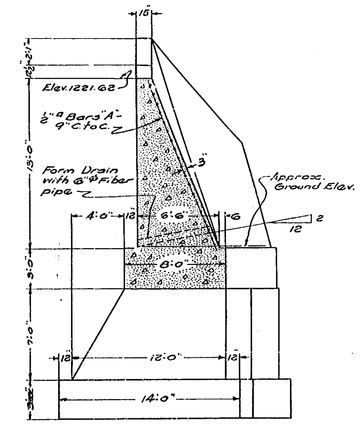
1 a

8-10-88

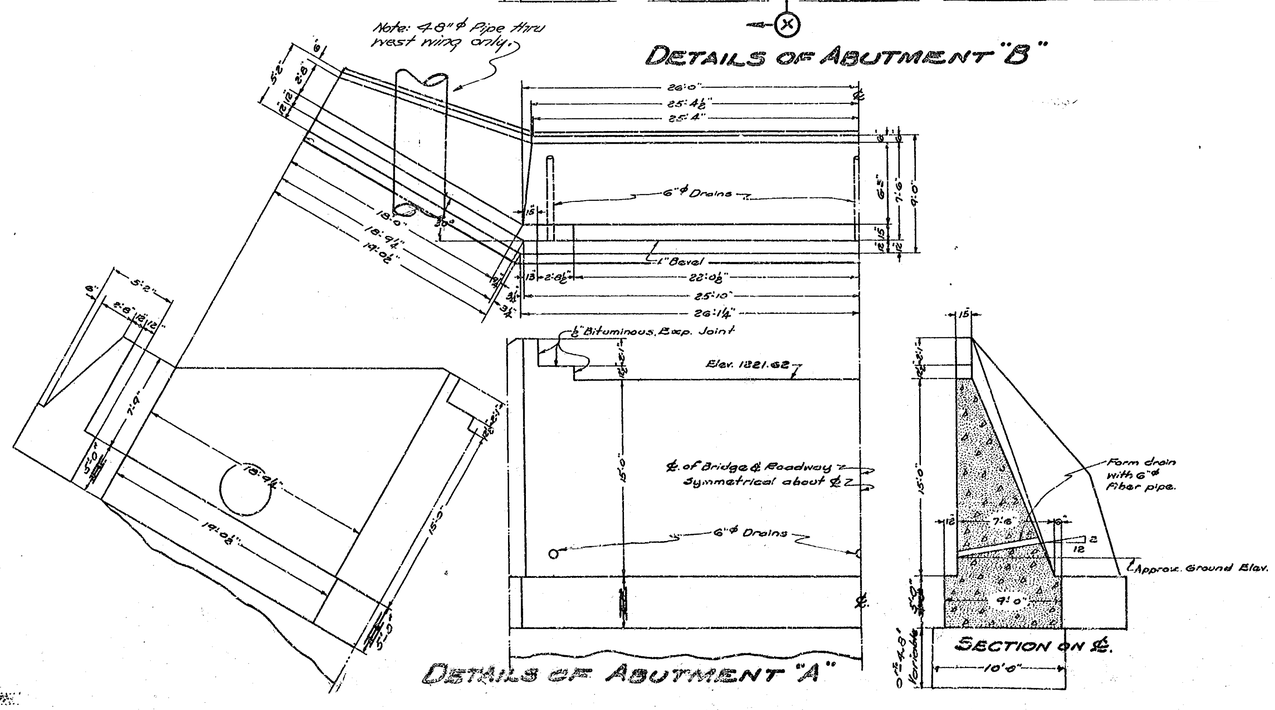
FED. ROAD DIST. NO.	STATE	R.R.A. ROUTE NO.	R.R.A. PROJ. NO.	STATE ROUTE NO.	STATE PROJ. NO.	SHEET NO.	TOTAL SHEETS
14	VA.			23	4288-12	16(a)	18



DETAILS OF ABUTMENT "B"



SECTION "X-X"



DETAILS OF ABUTMENT "A"

SECTION ON ℄.

2 of 3

HOLSTON RIVER BRIDGE

DETAILS OF ABUTMENTS

Virginia Department of Highways
Office of the Bridge Engineer
Richmond, Va. Jan. 1942.

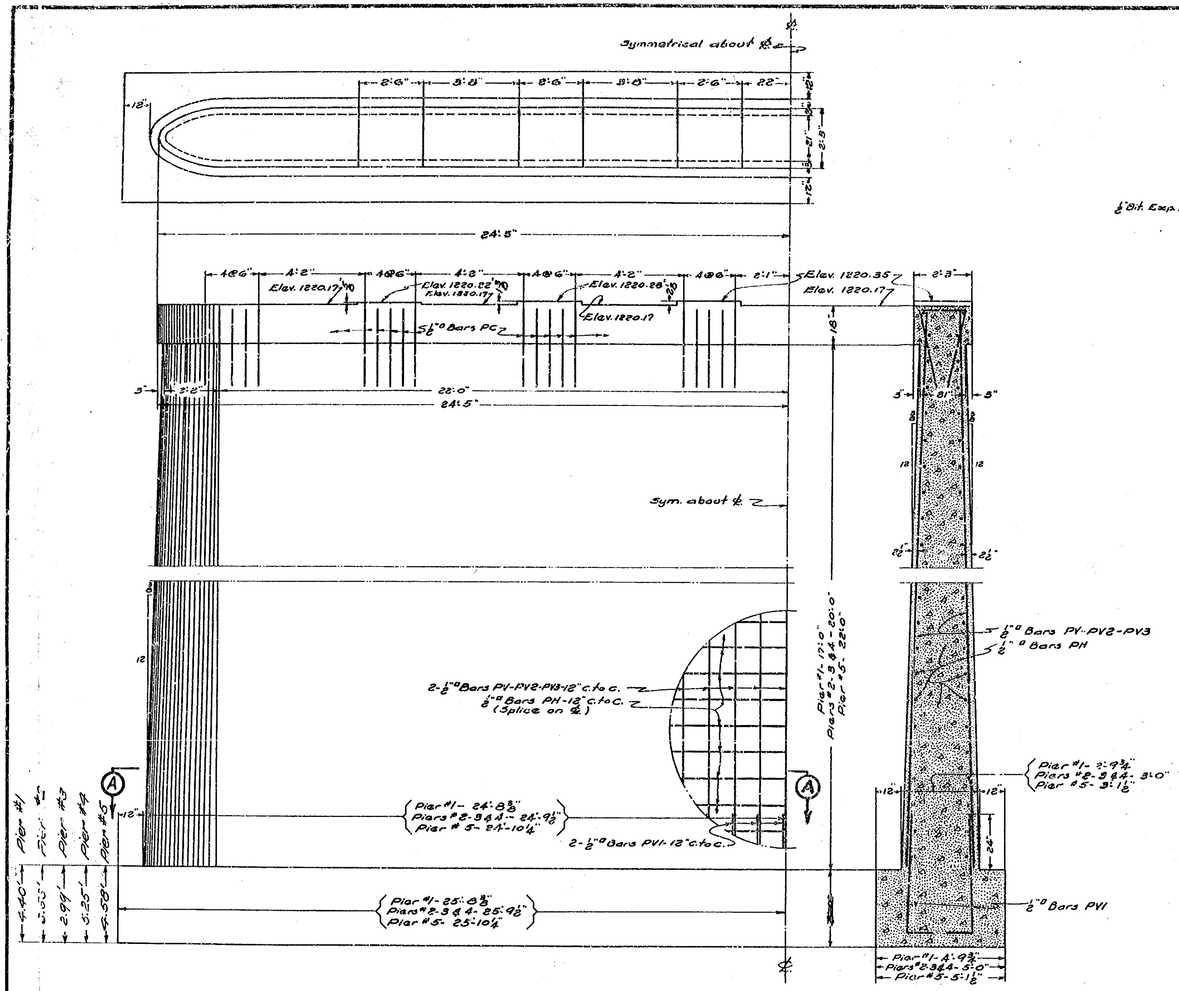
Drawn by:- W.C.C.
Traced by:- H.A.M.
Checked by:- J.H.C.

Scale:- 3/16" = 1'-0"

LXXXVIII-8
Sheet 2 of 3

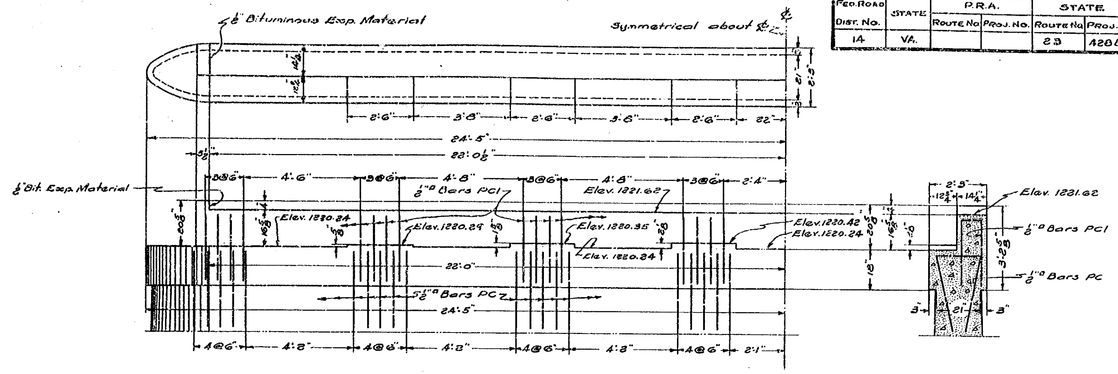
8-8-0-8-02

Fed. Road Dist. No.	State	P.R.A. Route No.	P.R.A. Proj. No.	State Route No.	State Proj. No.	Sheet No.	Total Sheets
14	VA.			23	428 B-12	16(b)	18



DETAILS OF PIERS #2 & #3

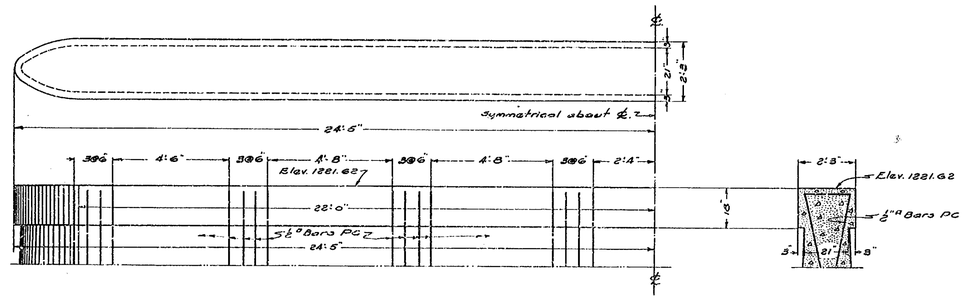
SECTION ON ℄.



DETAILS OF PIERS #1 & #4

Note:- For details and dimensions not shown see "Details of Piers #2 & #3" and "Details of Pier Nose."

SECTION ON ℄.



DETAILS OF PIER #5

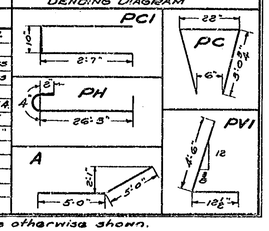
Note:- For details and dimensions not shown see "Details of Piers #2 & #3" and "Details of Pier Nose."

SECTION ON ℄.

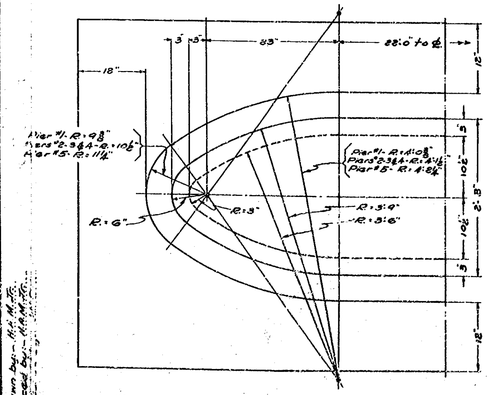
STEEL SCHEDULE

Mark	No.	Size	Length		Location
SUBSTRUCTURE					
PC1	64	½" ⌀	5'-11"	Bent.	Cap-Piers #1 & #4
PC	192	½" ⌀	7'-10"	Bent.	Cap-All Piers
PV1	500	½" ⌀	5'-6"	Bent.	Footing-All Piers
PH	436	½" ⌀	26'-9"	Bent.	Stems-All Piers
PV	100	½" ⌀	18'-4"	Str.	Stem-Pier #1
PV2	300	½" ⌀	21'-4"	Str.	Stem-Piers #2-3 & 4
PV3	100	½" ⌀	23'-4"	Str.	Stem-Pier #5
A	36	⅜" ⌀	10'-0"	Bent.	Corners-Abut. "B"

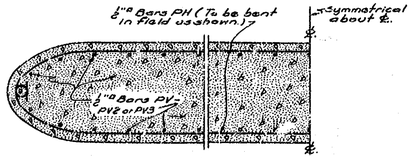
BENDING DIAGRAM



All bends to be with a radius 2½ diameters unless otherwise shown.



DETAILS OF PIER NOSE.



SECTION "A-A"

3f of 3

HOLSTON RIVER BRIDGE

DETAILS OF PIERS & STEEL SCHEDULE

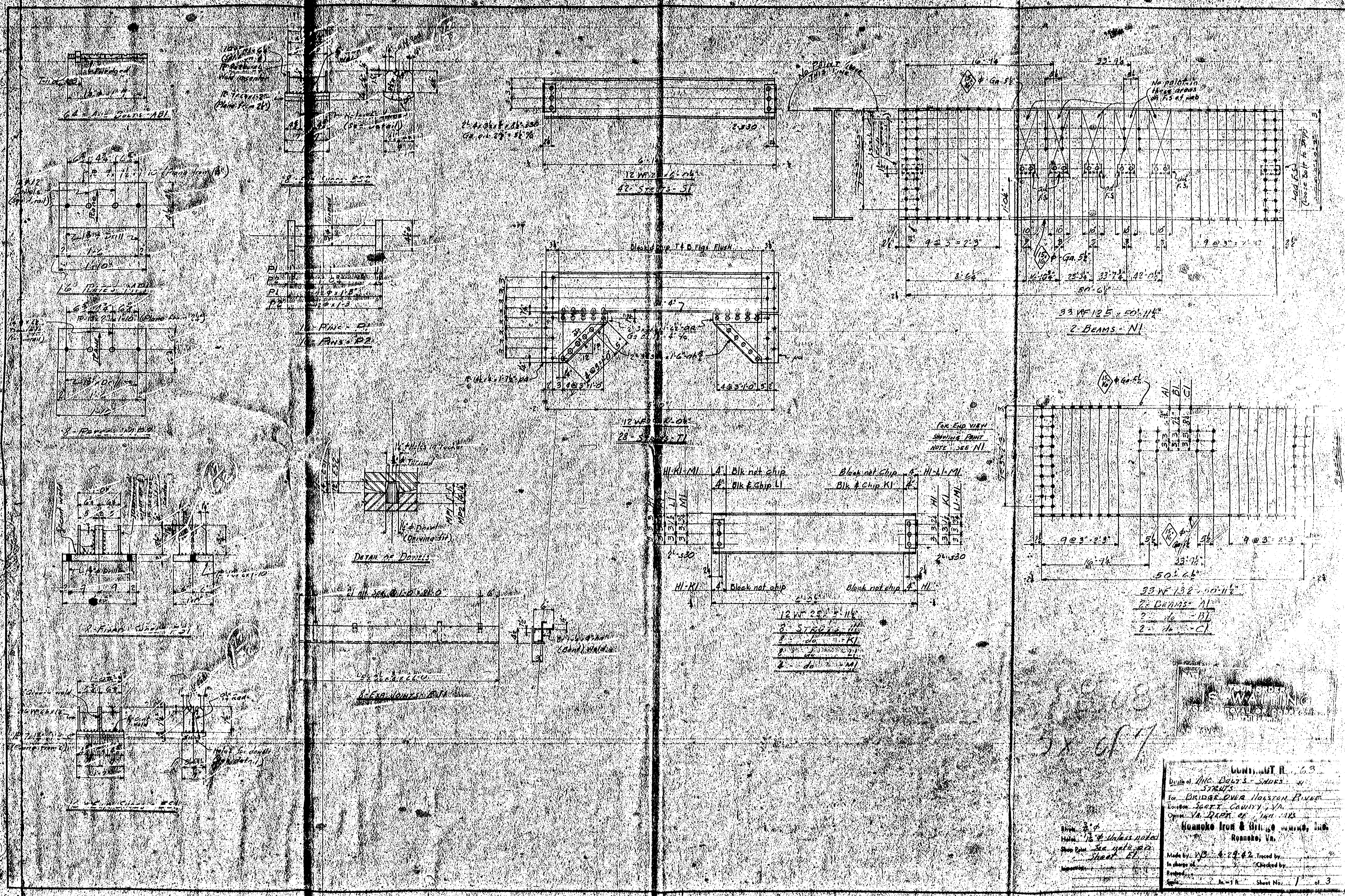
Virginia Department of Highways
Office of the Bridge Engineer
Richmond, Va. Jan. 1942.

Scales:- ⅜" & 1" = 1'-0"

LXXXVIII-8
Sheet 3 of 3

8-0-8-0-3 F

Anc. Bolts to project 3"
Anc. Bolts to project 26"
Anc. Bolts to project 26"
Anc. Bolts to project 3"
ANCHOR BOLT PLAN
ERECTION PLAN
PAINT NOTE -
One coat of red lead and oil per Va. Dept. Hwys. specs on all surfaces except as noted on details and below.
Contact surfaces not to be painted.
Machined finished surfaces to receive one shop coat of white lead and tallow applied hot.
For BRIDGE OVER HOLSTON RIVER
Location SCOTT COUNTY, VA.
Owner VA. DEPT. OF HIGHWAYS
Roanoke Iron & Bridge Works
Roanoke, Va.
Made by W.B. 4-18-42 Traced by
Checked by
Scale
Sheet No. E1 of E1
88-03
1 of 1

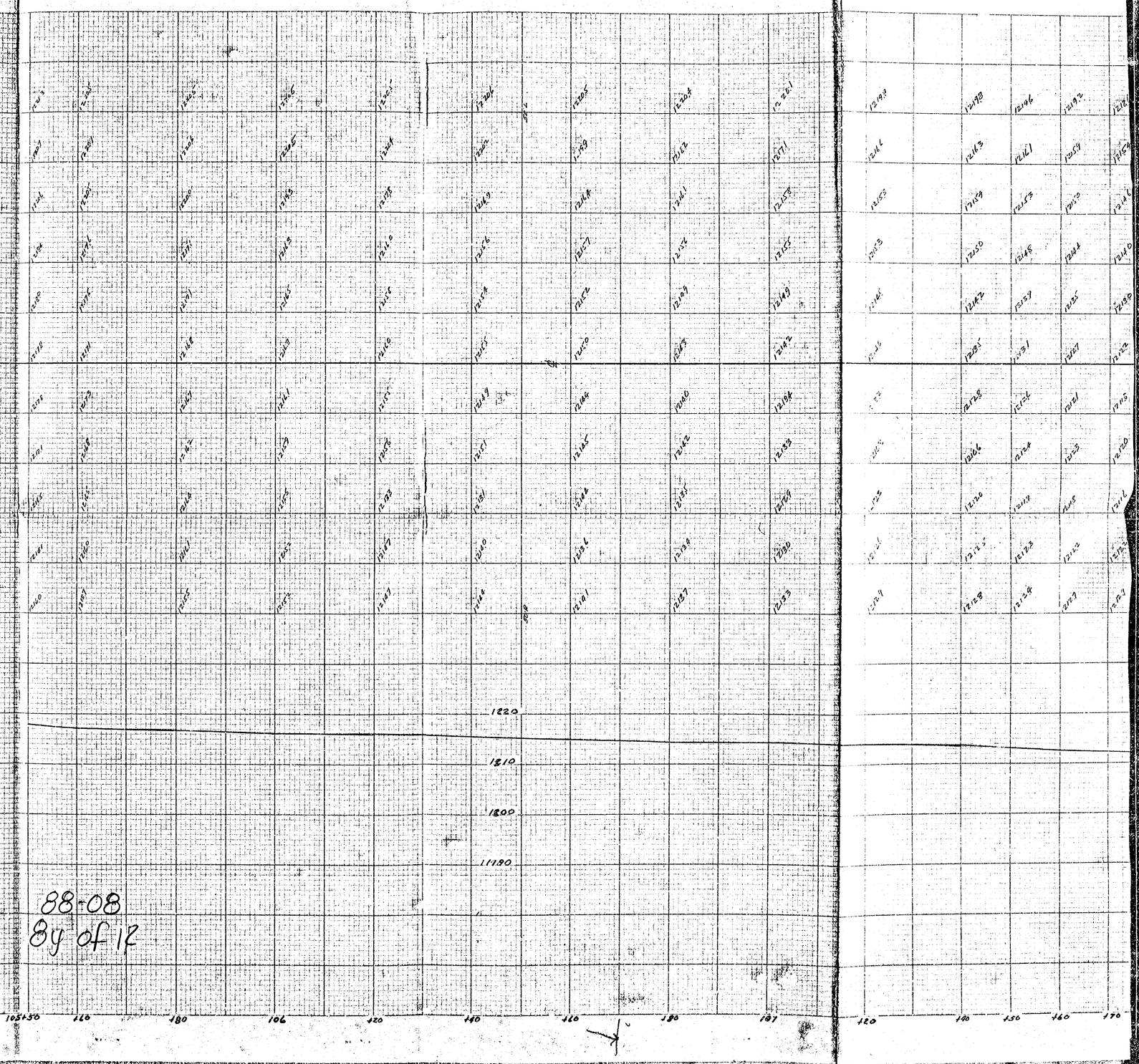

64 - Anc. Bolts - AB1
16 - Plates - AP1?
8 - Plates - MP2?
8 - Exp. Shoes - ES2
16 - Pins - P1
16 - Pins - P2
12 WF 27 x 6'-7¼"
42 - Struts - S1
No paint above this line
No paint in these areas on F.S. of web
33 WF 125 x 50'-11½"
2 - Beams - N1
Blocked chip T & B Flgs Flush
12 WF x 6'-0¾"
28 - Struts - T1
For end view showing paint note see N1
Detail of Dowels
8 - Fixed Shoes - FS1
8 - Exp. Joints - EJ1
Blk not chip
Blk & Chip L1
Block not Chip
Blk & Chip K1
12 WF 25 x 5'-11½"
8 - Struts - H1
8 - do - K1
8 - do - L1
4 - do - M1
33 WF 132 x 50'-11½"
2 - Beams - A1
2 - do - B1
2 - do - C1
CONTRACT R-63
Details of Anc. Bolts - Shoes - & Struts
For Bridge over Holston River
Location Scott County, Va.
Owner Va. Dept. of Highways
Roanoke Iron & Bridge Works, Inc.
Roanoke, Va.
Rivets ¾" ϕ
Holes 13/16" ϕ Unless noted
Shop Paint See note on Sheet E1
Made by WB 4-29-42
Sheet No. 1 of 3

No Paint in these Areas on F.S.
Timber Bolts
Section A-A
33 WF 125 x 33'-11½"
Top Flg same as A28
For Detail of Bott. Flg see A27
33 WF 137 x 33'-11½"
Section B-B
No Paint Above This Line
Unless noted
Made by
Checked by
Sheet No. 2 of 3

No Paint in these areas on F.S.
Section A-A
Section B-B
Field Rivets
Unless noted
See note on Sheet E1

ROUTE 23 PROJ. 428
BRIDGE SITUATION
SCOTT CO. BRISTOL DIST.

NOTE: BRIDGE SITUATION TAKEN ON LINE "R"
S.R. DENOTES SOLID ROCK



88-08
8y of 12

B. 21-8-20-25-3 M.

Commonwealth of Virginia

STATE HIGHWAY COMMISSION

Data required for design of bridge over Holston River near Gate City, Va approximately 4 miles from Gate City on Southern Railroad, Std. Gauge, Route 23 Proj. 428-Scott County, Surveyed by J.L. Parker, Date 5/19/39

1. GENERAL REMARKS.

Fill out all blanks carefully, giving information on all points and supplementary remarks on features not listed. High water and foundation conditions are especially important and should be thoroughly investigated. If bridge over navigable waters is contemplated, apply for further instructions.

2. PROFILE.

Plot profile on center line of roadway, including approach roads affected. Use natural scale, preferably 1" to 10', but not less than 1" to 20'. Sheet should be same size as this, or multiple thereof.

At actual location show section of test pits or soundings, noting material encountered. Unless on solid rock, foundations in and near stream should extend below liability of scour, and not less than 3 ft. below bed of stream. Soundings, or test pits should extend at least 6 ft. below bed. If present, locate and give character of solid rock.

Show present and proposed finished grades, noting elevation and gradients. Allowance should be made for distance between bridge seat and floor.

3. MAP.

Show present and proposed alignment of bridge and approaches as far as affected. Extend cross-sections 50 ft. each side center line, giving location and elevation of points. Show edge of water, islands, shoals, wooded land, other obstructions and direction of current at high and low water. Plot location of soundings, buildings, fences, etc. Establish and give elevation of bench mark. Reference center line and show meridian.

4. OLD BRIDGE.

Give length, layout and elevation of bridges near site. If old masonry can be used, give all dimensions and measure distances between abutments and about bridge seats with particular care. *What percentage bridge in place at time of extreme high water?*

Has a bridge ever been washed out?

5. STREAM DATA.

Elev. maximum high water 1219.5 *Date*

Source of information G.H.Aesque

Elev. normal water 1199.5 *Elev. extreme low water* 1198.5

Velocity of current at high water Swift

Amount and character of drift and ice None

Do banks or bed show scour? None

Bed of stream consists mainly of:—Mud, Silt, Clay, Sand, Gravel, Small Stones, Large Stones, Soft Solid Rock, Stratified Rock, Hard Rock Hard rock-Large stones

Location and condition of dams within ¼ mile None

6. GENERAL INFORMATION.

Is bridge on State or County Road System? State

Source of funds

Is bridge part of adjacent road work?

7. LOCAL MATERIALS.

Are following materials available locally?

1. *Sand* No *Haul* ..... *Quality* .....
   Is screening necessary? ..... *Washing?* .....
2. *Gravel* ..... *Haul* ..... *Quality* .....
   Is screening necessary? Yes *Washing?* .....
3. *Stone* Yes *Haul* 5 Mi. *Quality* Yes
   Is stone suitable for cement rubble masonry? Yes
4. *Timber for piling* ..... *Falsework* Yes
   Species Various *Diameter above ground swell* .....
5. *Dimension Lumber* Yes *Haul* ..... *Price* .....
6. *Material for approaches* Yes
   Price per cubic yard in place .....
7. *Rock for rip-rap* Yes *Haul* .....
   Price per cubic yard in place .....

8. RECOMMENDATIONS.

Depth for firm foundation From 2 to 15 feet

Should footings extend to solid rock? Yes

Will piles be necessary? Yes

Length of bridge 350 *Roadway* 30 Ft. *Capacity* .....

Minimum length of channel span 200 Ft.

Elevation of bridge seat above high water 5 Ft.

Type of structure .....

9. REMARKS.

Area of drainage basin 300 Sq. Miles

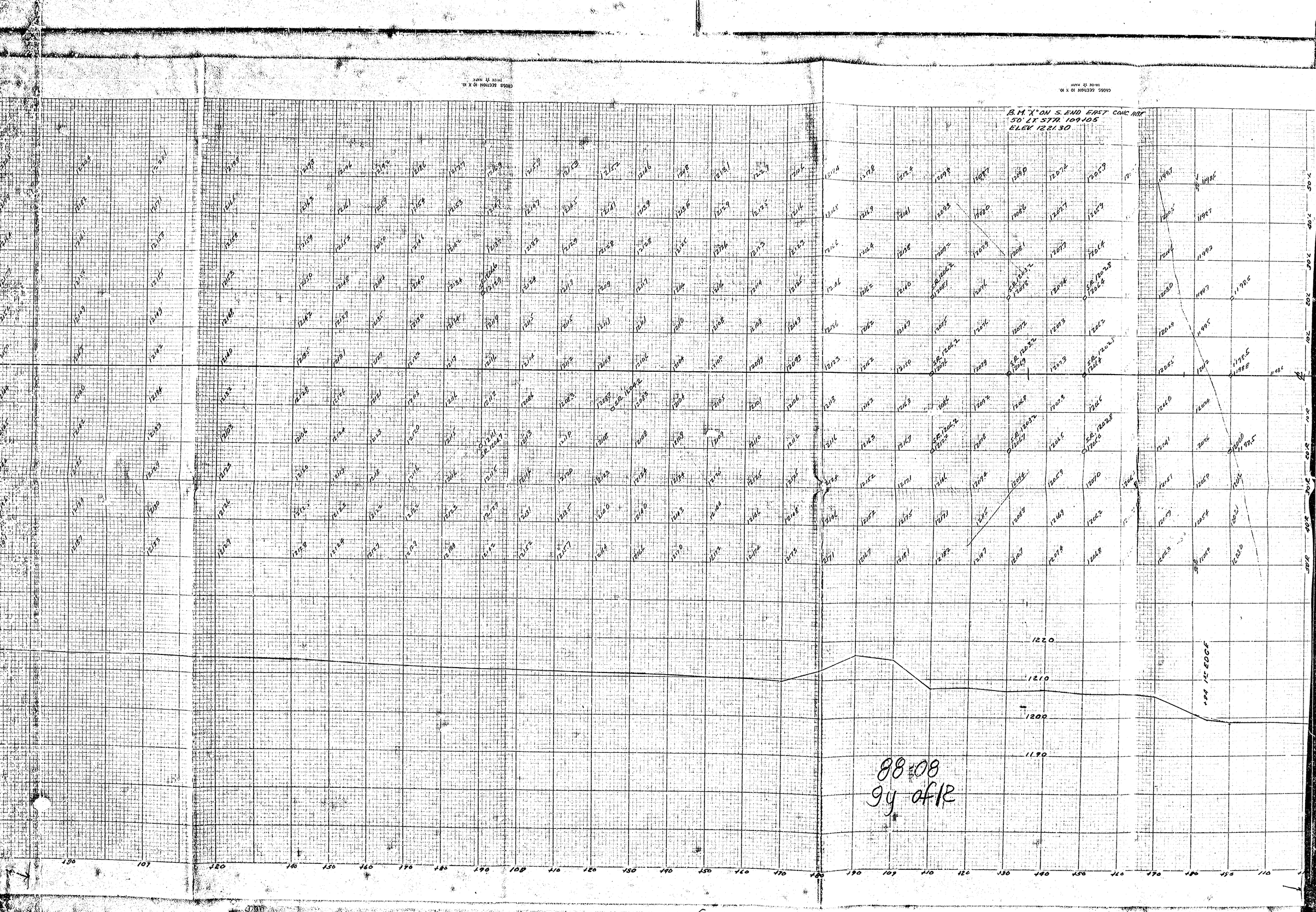
Source of information U.S.G.S. Map

Character of drainage basin Mountainous

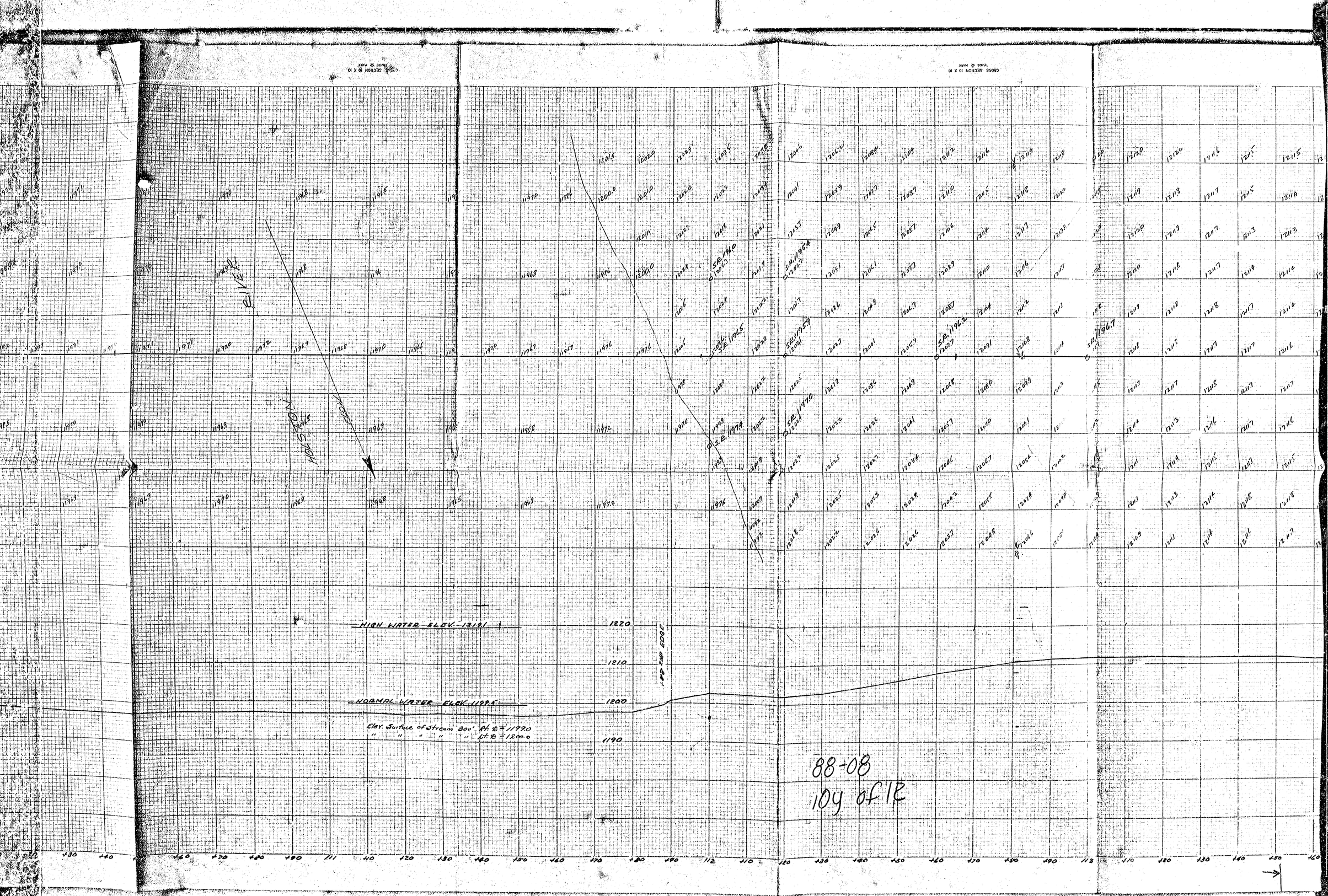
Wooded, or open land 60% open

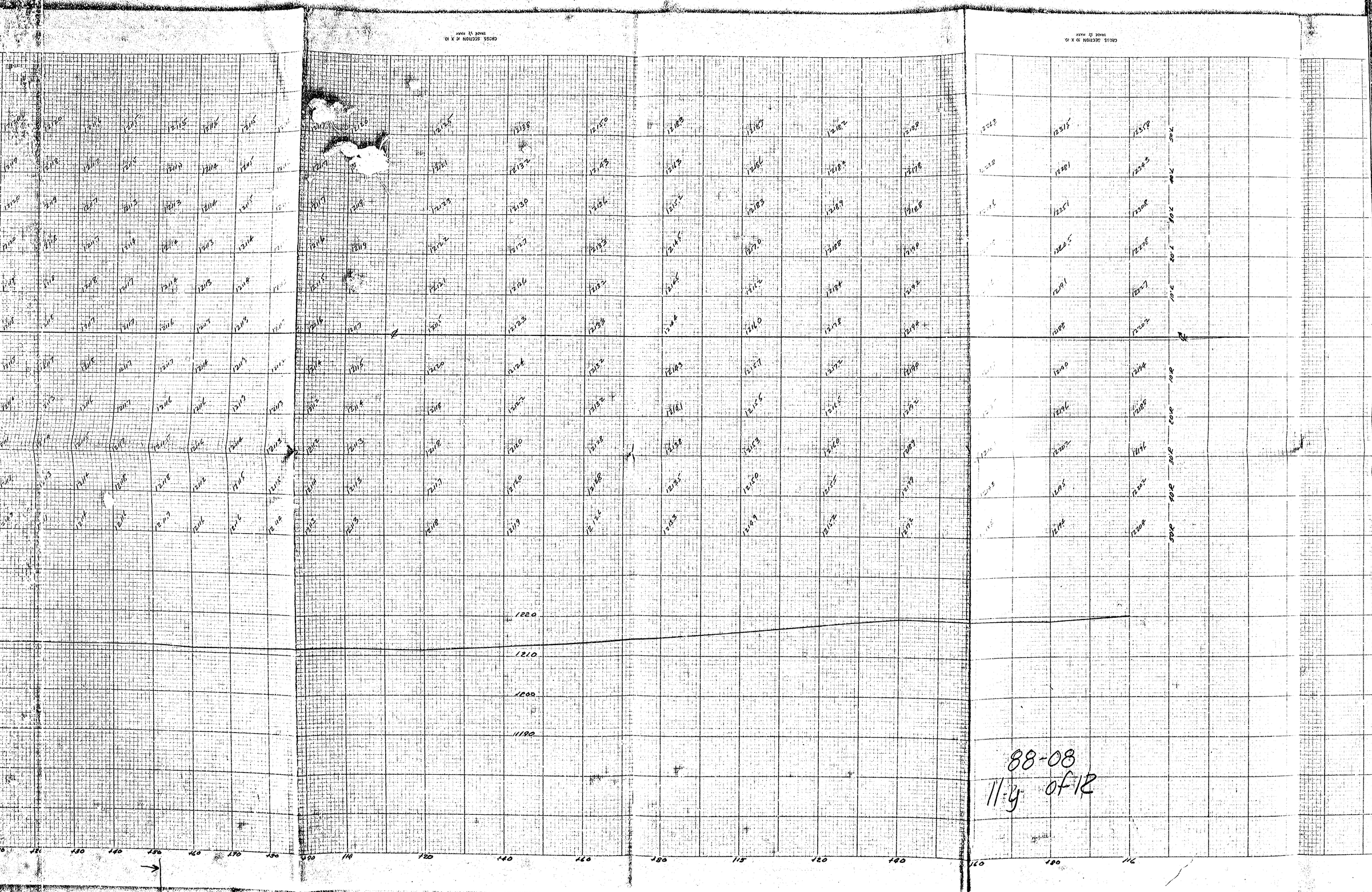
Chief of Party.

Approved


B.M. "X" ON S. END EAST CONC ABT
50' LT STA. 109+05
ELEV. 1221.30
1220
1210
1200
1190
+94 1st EDGE
88-08
9y of 12

88-08


CROSS SECTION 10 X 10
HIGH WATER ELEV. 1218.1
NORMAL WATER ELEV. 1198.5
Elev. Surface of Stream 300' Rt. ℄ = 1197.0
" " " " " Lt. ℄ = 1200.0
1220
1210
1200
1190
88-08
10y of 12

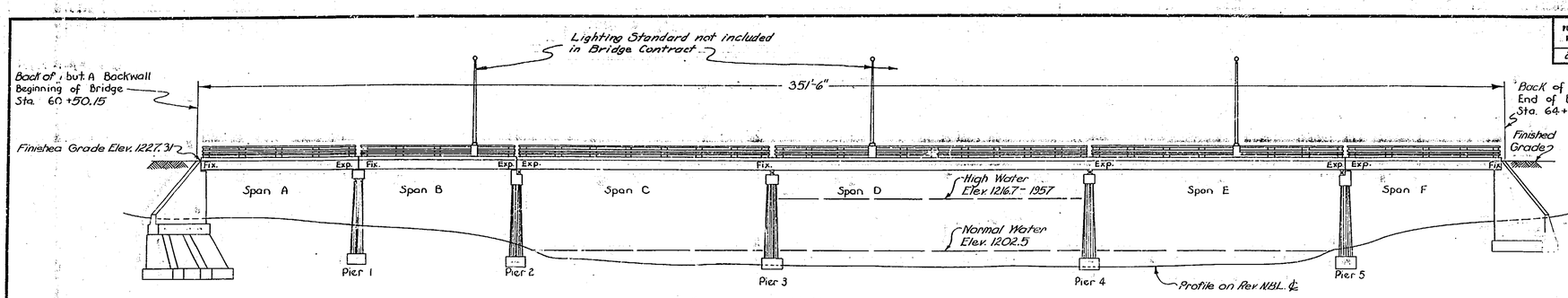

CROSS SECTION 10 X 10
TRACE 1/2 MAX
1220
1210
1200
1190
88-08
11-y of 12

88-08

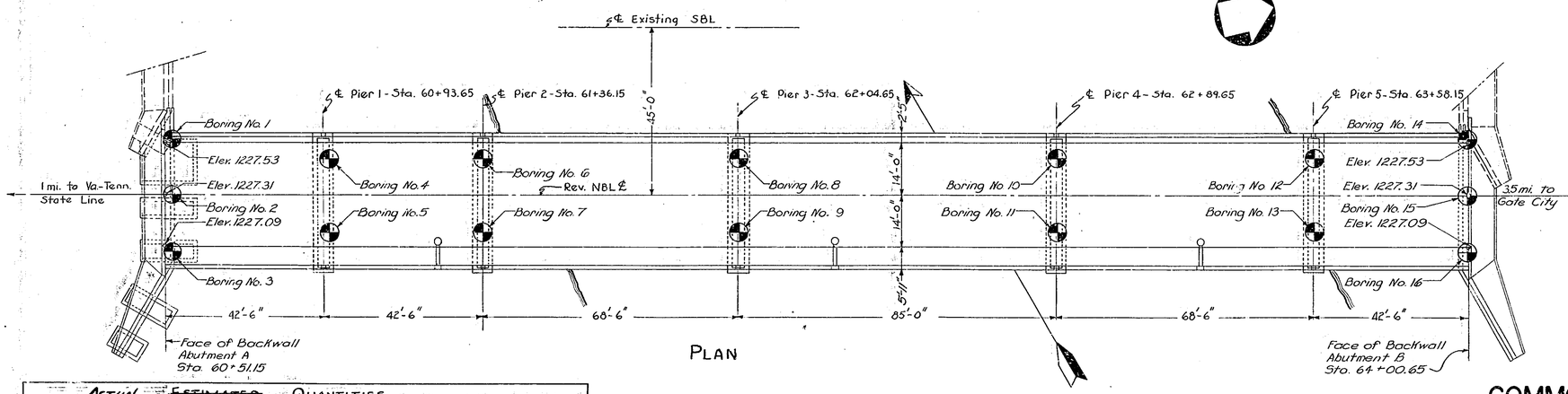
END CONN. WITH RT. 614
STA. 110+50
END CONN. WITH RT. 707
STA. 116+00
W. R. WILHELM
J. P. BRAY JR.
PRESENT RT. 29
WEST WEATHER ROAD
J. P. BRAY JR.
J. O. RESQUE
MRS. W. W. HENDERSON
S13°53'W
RIVER
NOLSTON
MRS. W. W. HENDERSON
RAY FUGATE
RAY FUGATE
PRESENT RT. 29
REV. "B"
Δ 7°56'R
D 2°00
T 198.6
L 394.7
R 2864.79
REV. "B"
WYE "AB"
P.C. 108+58.8
P.I. 108+90.0
P.T. 109+05.7
Δ 96°30'L
D S.R.
T 31.2
L 46.9
R 27.8
REV. "B"
WYE "CB"
P.C. 0+00 = 109+81.2
P.I. 0+31.2
P.T. 0+50.8 = 109+05.7 "AB"
Δ 83°30'R
D S.R.
T 31.2
L 50.8
R 35.0
REV. "B"
WYE "AB"
P.C. 113+82.0
P.I. 114+32.0
P.T. 114+60.5
Δ 90°00'L
D S.R.
T 50.0
L 78.5
R 50.0
REV. "B"
WYE "CB"
P.C. 0+00 = 114+82.0
P.I. 0+50
P.T. 0+78.5
Δ 90°00'R
D S.R.
T 50.0
L 78.5
R 50.0

88 08
12 of 12

FOR. RD. REGION	STATE	FEDERAL AID ROUTE	FEDERAL AID PROJECT	STATE ROUTE	STATE PROJECT	SHEET NO.	TOTAL SHEETS
2	Va.		F-064-1(18)	23	0023-084-101, B601	14(1)	36



SIDE ELEVATION



PLAN

GENERAL NOTE

Roadway: 28'-0" clear. 5'-0" sidewalk.

Capacity: HS 20-44 loading and B.P.R. modified loading for military vehicles.*

Specifications:

General-Virginia Department of Highways Road and Specifications, 1958.

Design-A.A.S.H.O. Standard Specifications for Highway Bridges, 1961. *

Supplemental-
- "Structural Backfill," date April 17, 1961.
- "Pads for Masonry Bearing Areas," revised March 3, 1961.
- "Curing Concrete", revised August 23, 1961.
- "Bridge Roadway Lighting System and Electrical Conduit System", revised July 31, 1963 *△
- "Structural Steel," revised Jan. 31, 1964 *
- "Concrete Joint Filler and Sealer," revised April 28, 1964 △

Specifications referred to on these plans are necessary to make these plans complete.

Concrete in Abutments and Piers shall be Class B(AE). All other concrete shall be class A(AE).

All bridge seat bearing areas shall be finished to truly level plane surfaces at the elevations shown.

Structural Steel shall conform to the Tentative Specification for Structural Steel, ASTM Designation: A 36-62T *

Footings shall rest on solid rock.

Structure excavation above Elev. 1203.0 shall be classified as "A", below, as "B".

Cost of crushed stone for abutment weep holes shall be included in unit price bid for Class B(AE) concrete.

B.M.: Chiseled "X" on Bridge Abutment, 26' Lt. Sta. 60+52 SBL Elev. 1227.18.

Rivets on high tensile strength bolts shall be ⅞" ϕ unless otherwise noted.

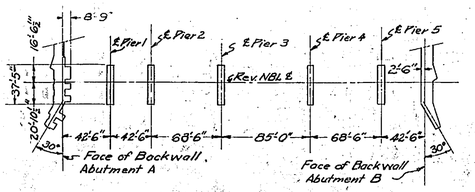
The Electrical Conduit System, only, shall be included in the Bridge Contract.

All reinforcing bar dimensions on the detailed drawings are to centers of bars except where otherwise noted.*

AS BUILT PLANS

ACTUAL ~~ESTIMATED~~ QUANTITIES	Concrete Cu. Yds. Class A(AE)	Concrete Cu. Yds. Class B(AE)	Reinf. Steel Pounds	Struct. Steel Pounds *	Structure Excav. C.Y. "A"	Structure Excav. C.Y. "B"
Superstructure	467.0	~~[illegible]~~ 104	148 ~~109,500~~ △	249,375		
Abutment "A"-Neat		264 ~~262.6~~	1,930			
"A"-Foot		53.0			323 ~~350~~	~~220~~ 20
Pier 1 - Neat		77.5	2,460			
Pier 1 - Foot		26.8 ~~22.5~~			83 ~~85~~	~~50~~ 56
Pier 2 - Neat		80.9 ~~80.1~~	2,910			
Pier 2 - Foot		26.1 ~~22.5~~			8 ~~71~~	~~60~~ 78
Pier 3 - Neat		77.2	2,500			
Pier 3 - Foot		25.6 ~~22.5~~				~~15~~ 29
Pier 4 - Neat		77.2	2,500			
Pier 4 - Foot		22.6 ~~22.6~~				~~15~~ 23
Pier 5 - Neat		80.1	2,910			
Pier 5 - Foot		27.1 ~~22.5~~			16 ~~6~~	~~65~~ 71
Abutment "B"-Neat		186.3	700			
"B"-Foot		67.8 ~~55.1~~			215 ~~200~~	10
Totals	467.0	1065.8 ~~1,16,410~~ △	~~116,410~~ △	249,375	~~662~~	~~425~~
		1,092.8	117,058		645	470

* Lump Sum
Quantities for items for which Lump Sum bids are asked are approximate and given only for estimating purposes.
Roadway Lighting System - Lump Sum.



SUBSTRUCTURE LAYOUT
Not to Scale

Finals By Bristol District Office - Aug. 24, 1966

Drawn by: MRB
Traced by: MRB
Checked by: E.J.H. & D.A.C. Jr.

△ Revised: June 22, 1964
* Revised: May 1, 1964
* Revised: April 1, 1964
Plans Completed: Dec. 11, 1961
Scale: 1/16" = 1'-0"

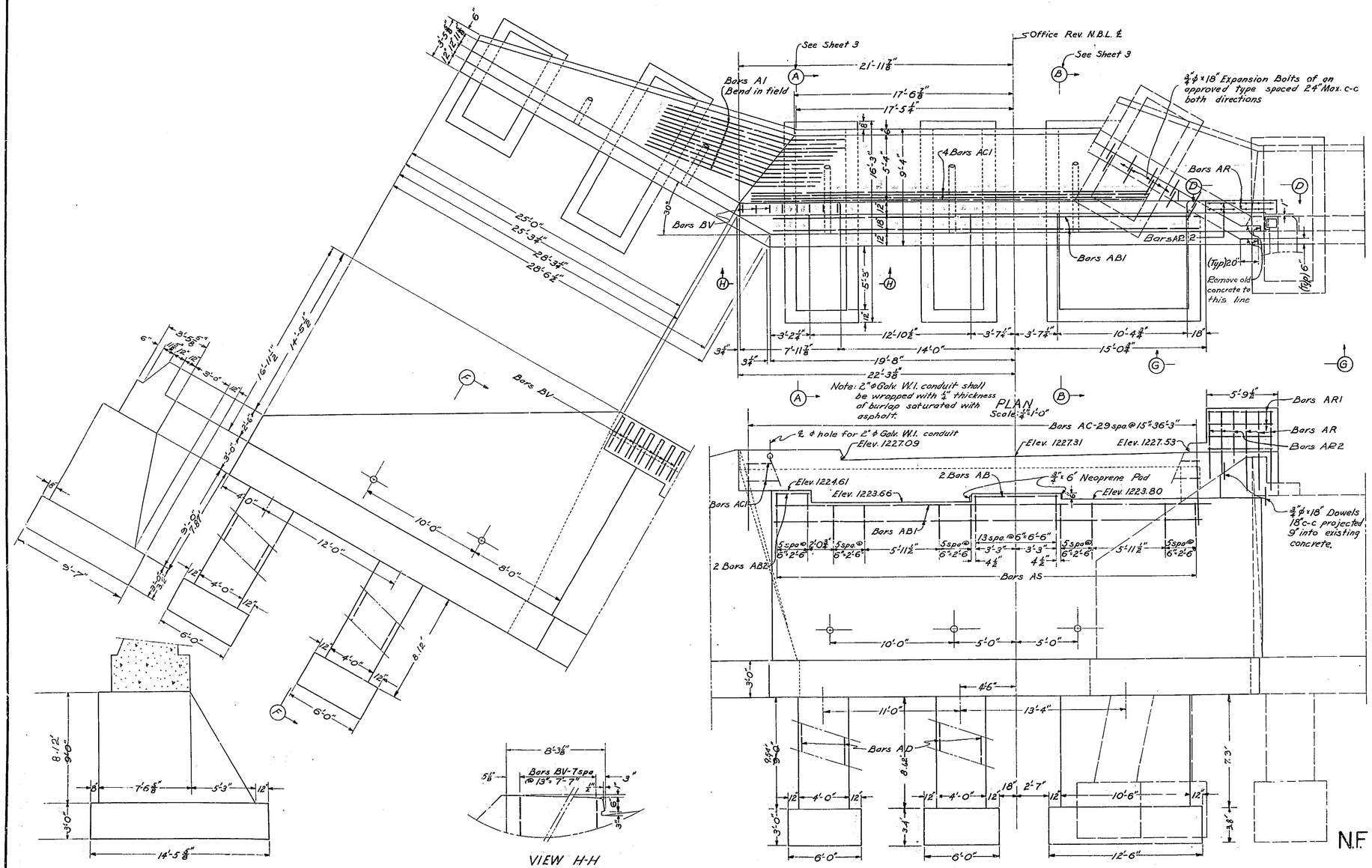
COMMONWEALTH OF VIRGINIA
DEPARTMENT OF HIGHWAYS
PROPOSED BRIDGE

N.F. HOLSTON RIVER BRIDGE- SCOTT COUNTY
3.5 MI. S. OF GATE CITY-PROJ. 0023-084-101, B601-STA. 62+25
2-69' & 1-85' CONTINUOUS STEEL BEAM SPANS
3-42' CONCRETE BEAM SPANS
Richmond, Virginia

Recommended for Approval: J. M. Clary — Bridge Engineer
Recommended for Approval: [illegible] 1-15-62 — Assistant Chief Engineer
Approved: [illegible] — Deputy Commissioner and Chief Engineer

CLXIII-8
Sheet 1 of 19

PUB. RD. REGION	STATE	FEDERAL AID ROUTE	FEDERAL AID PROJECT	STATE ROUTE	STATE PROJECT	SHEET NO.	TOTAL SHEETS
2	Va		F-04-1(18)	23	0023-084-101, B601	14 (2)	36



Drawn by: B.J.D.
Traced by: E.T.H.
Checked by: D.A.C. Jr

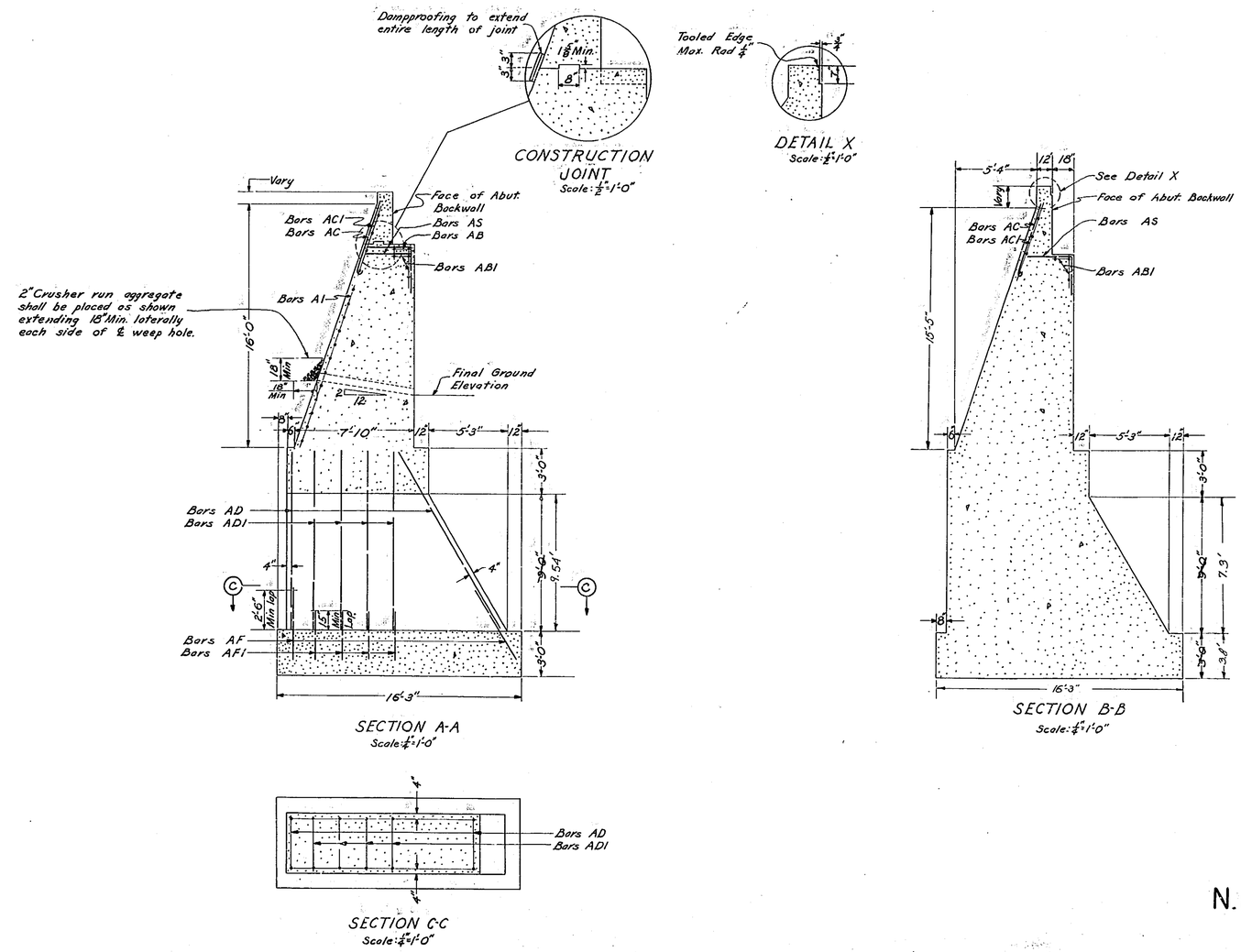
N.F. HOLSTON RIVER BRIDGE
ABUTMENT A

Virginia Department of Highways
Office of the Bridge Engineer
Richmond, Virginia. Dec. 1961

CLXIII-8
Sheet 2 of 19

1963-02

PUB. RD. REGION	STATE	FEDERAL AID ROUTE	FEDERAL AID PROJECT	STATE ROUTE	STATE PROJECT	SHEET NO.	TOTAL SHEETS
2	Va.		F-04-1(18)	23	0023-084-101, B601	14(3)	36



N.F. HOLSTON RIVER BRIDGE

DETAILS ABUTMENT A

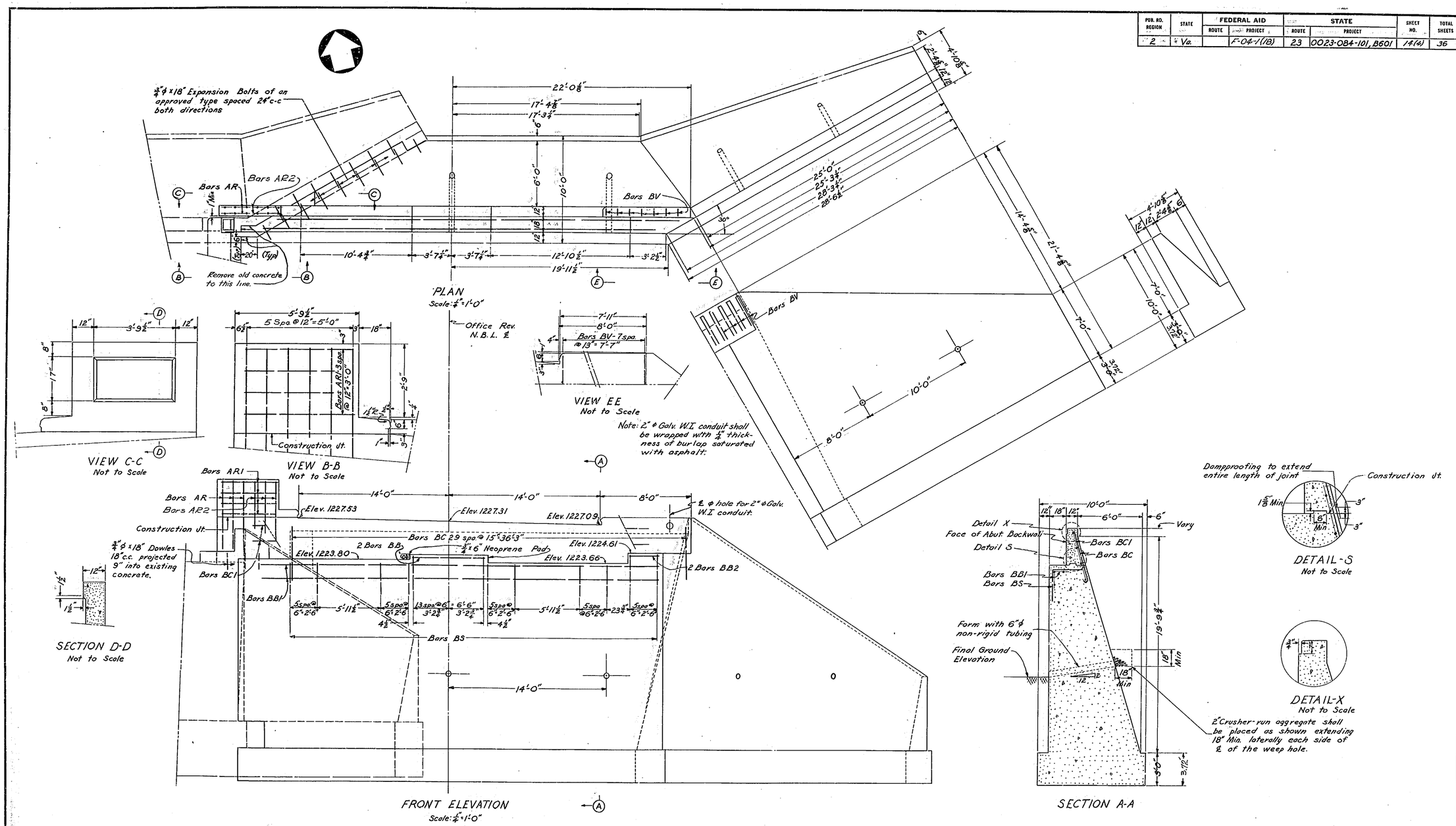
Virginia Department of Highways
Office of the Bridge Engineer
Richmond, Virginia Dec., 1961

Drawn by: RJD
Traced by: EH
Checked by: D.A.C. Jr.

CLXIII-8
Sheet 3 of 19

1 6 3-0 8 1 0 3

PUB. RD. REGION	STATE	FEDERAL AID ROUTE	FEDERAL AID PROJECT	STATE ROUTE	STATE PROJECT	SHEET NO.	TOTAL SHEETS
2	Va.		F-04-1(18)	23	0023-084-101, B601	14(4)	36



N.F. HOLSTON RIVER BRIDGE
ABUTMENT B

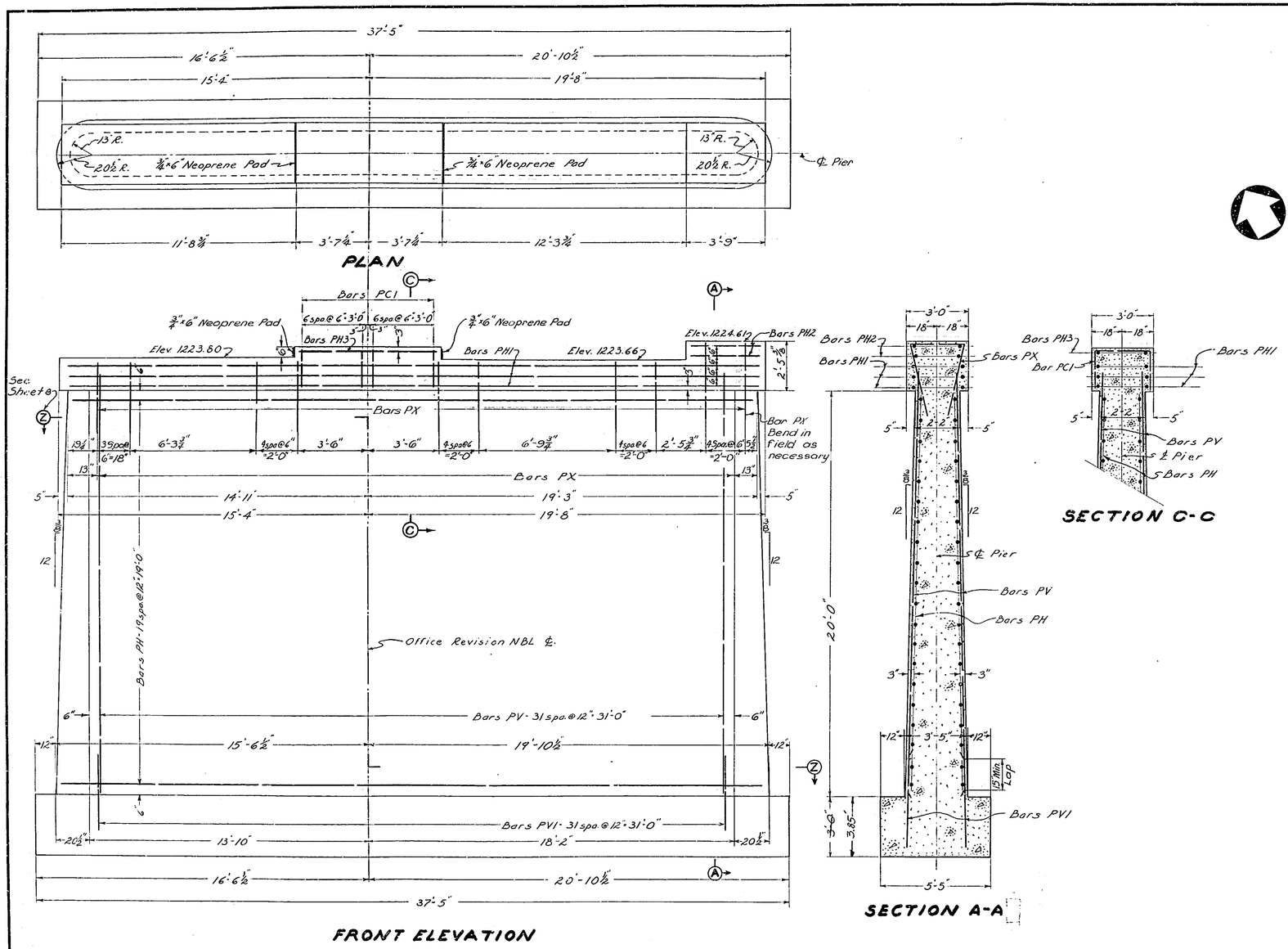
Virginia Department of Highways
Office of the Bridge Engineer
Richmond, Virginia, Dec., 1961

CLXIII-8
Sheet 4 of 19

Drawn by: R.J.D.
Traced by: E.T.H.
Checked by: D.A.C. Jr.

1 6 3-0 8 0 4

PUB. RD. REGION	STATE	FEDERAL AID ROUTE	FEDERAL AID PROJECT	STATE ROUTE	STATE PROJECT	SHEET NO.	TOTAL SHEETS
2	Va.		F-04-1(18)	23	0023-084-101, B601	14(5)	36



PLAN

FRONT ELEVATION

SECTION A-A

SECTION C-C

N.F. HOLSTON RIVER BRIDGE
PIER I

Virginia Department of Highways
Office of the Bridge Engineer
Richmond, Virginia Dec., 1961

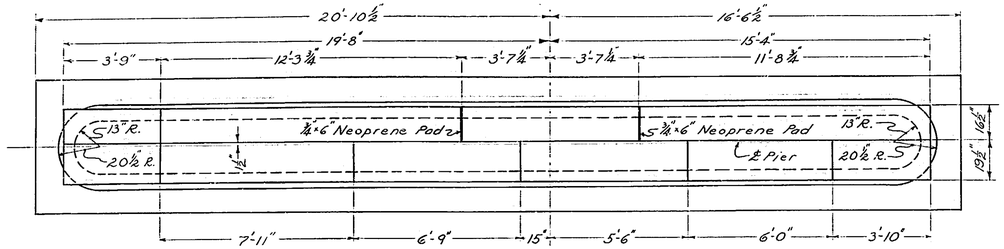
Scale: ⅜"=1'-0"

CLXIII-8
Sheet 5 of 19

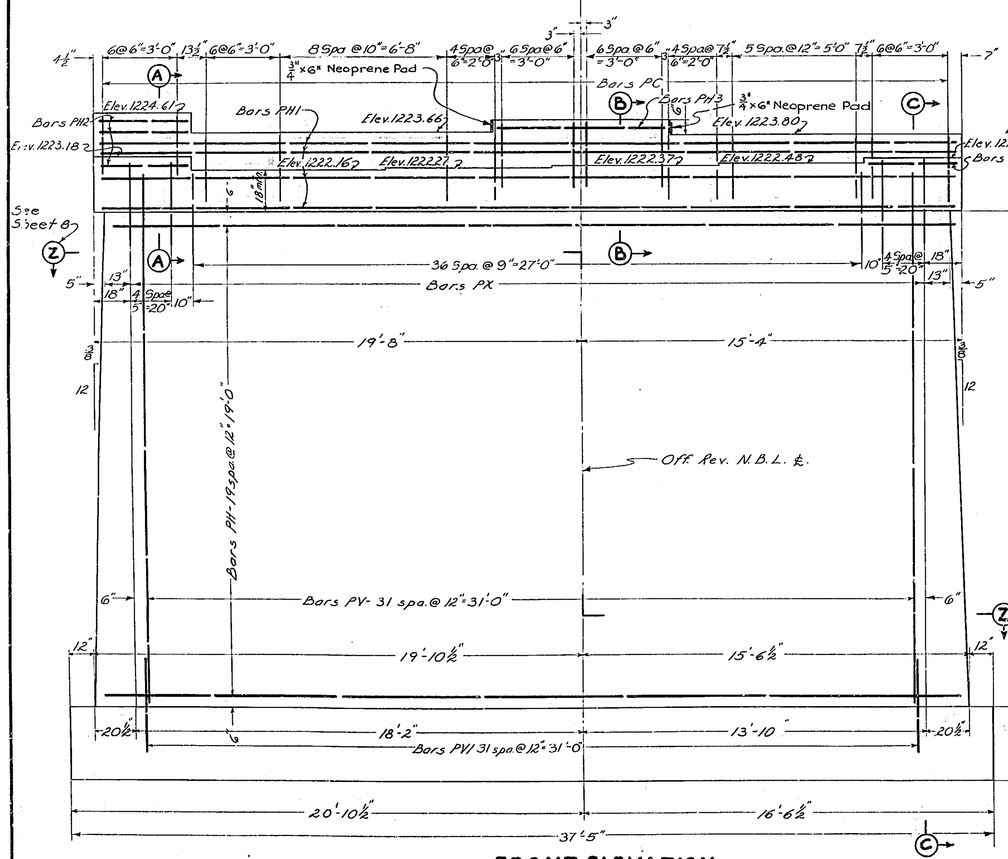
Drawn by: R.G.H.
Traced by: R.G.H.
Checked by: R.J.D.

1 6 3 - 0 8 - 0 5

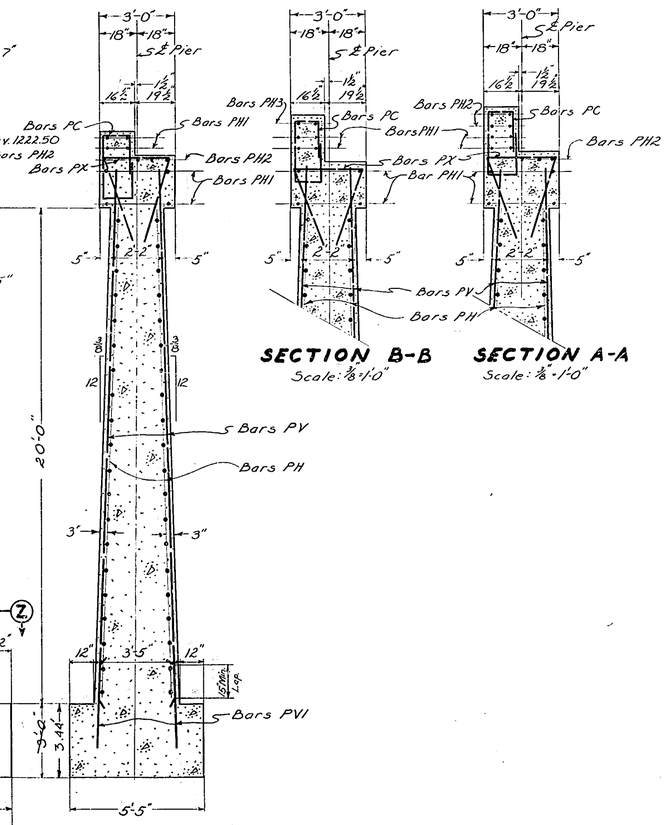
PUB. RD. REGION	STATE	FEDERAL AID ROUTE	FEDERAL AID PROJECT	STATE ROUTE	STATE PROJECT	SHEET NO.	TOTAL SHEETS
2	Va.	-	F-04-1(18)	23	0023-084-101, B601	14(6)	36



PLAN
Scale: ⅜"=1'-0"



FRONT ELEVATION
Scale: ⅜"=1'-0"



SECTION B-B
Scale: ⅜"=1'-0"

SECTION A-A
Scale: ⅜"=1'-0"

SECTION C-C
Scale: ⅜"=1'-0"

N.F. HOLSTON RIVER BRIDGE
PIER 2

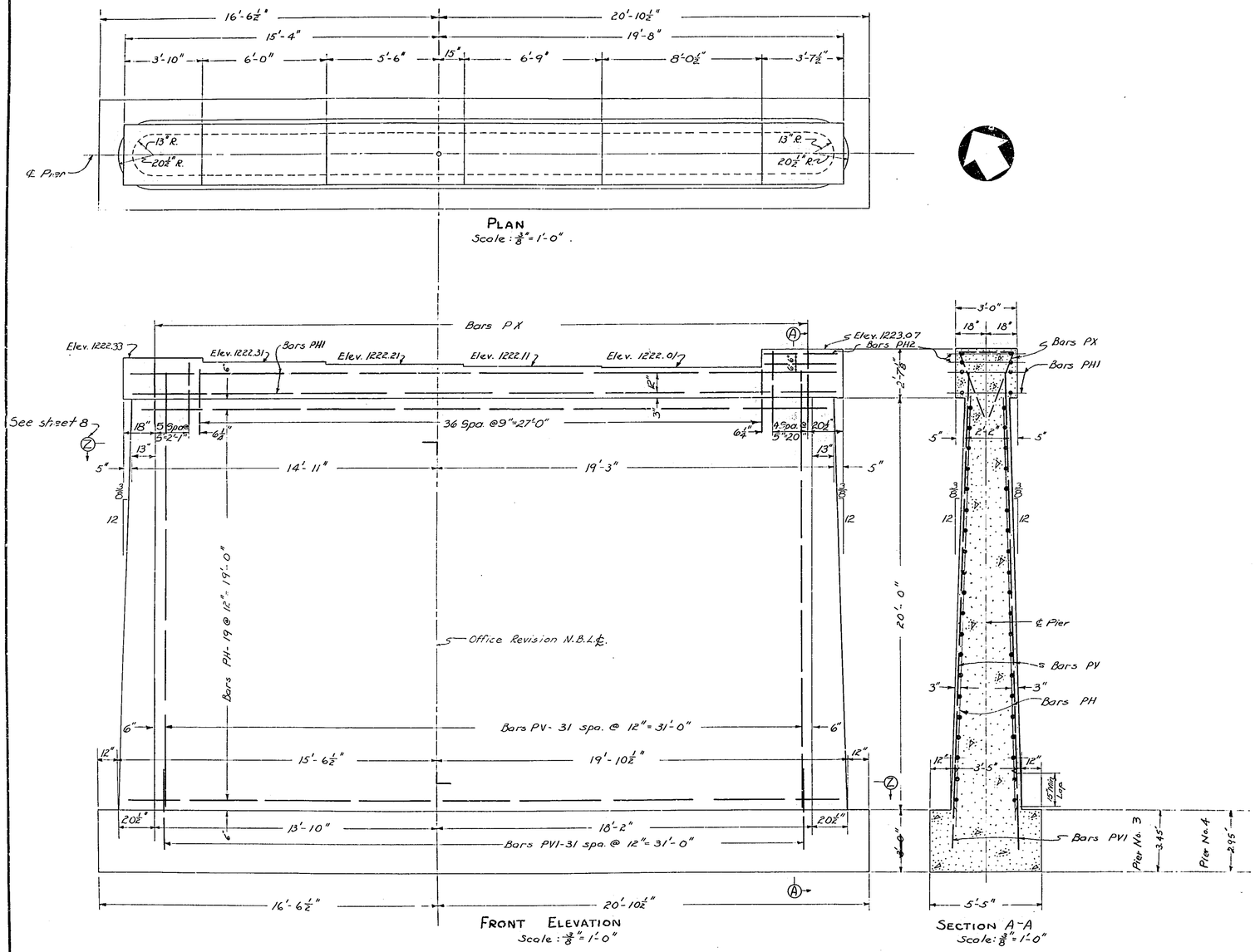
Virginia Department of Highways
Office of the Bridge Engineer
Richmond, Virginia Dec., 1961

Drawn by: R.G.H.
Traced by: R.G.H.
Checked by: R.O.D.

CL XIII-8
Sheet 6 of 19

0-3-8-6-11

PUB. RD. REGION	STATE	FEDERAL AID ROUTE	FEDERAL AID PROJECT	STATE ROUTE	STATE PROJECT	SHEET NO.	TOTAL SHEETS
2	Va.		F-04-1(18)	23	0023-084-101, B601	14(7)	36



PLAN
Scale: ⅜" = 1'-0".

FRONT ELEVATION
Scale: ⅜" = 1'-0"

SECTION A-A
Scale: ⅜" = 1'-0"

N.F. HOLSTON RIVER BRIDGE
PIERS 3 & 4

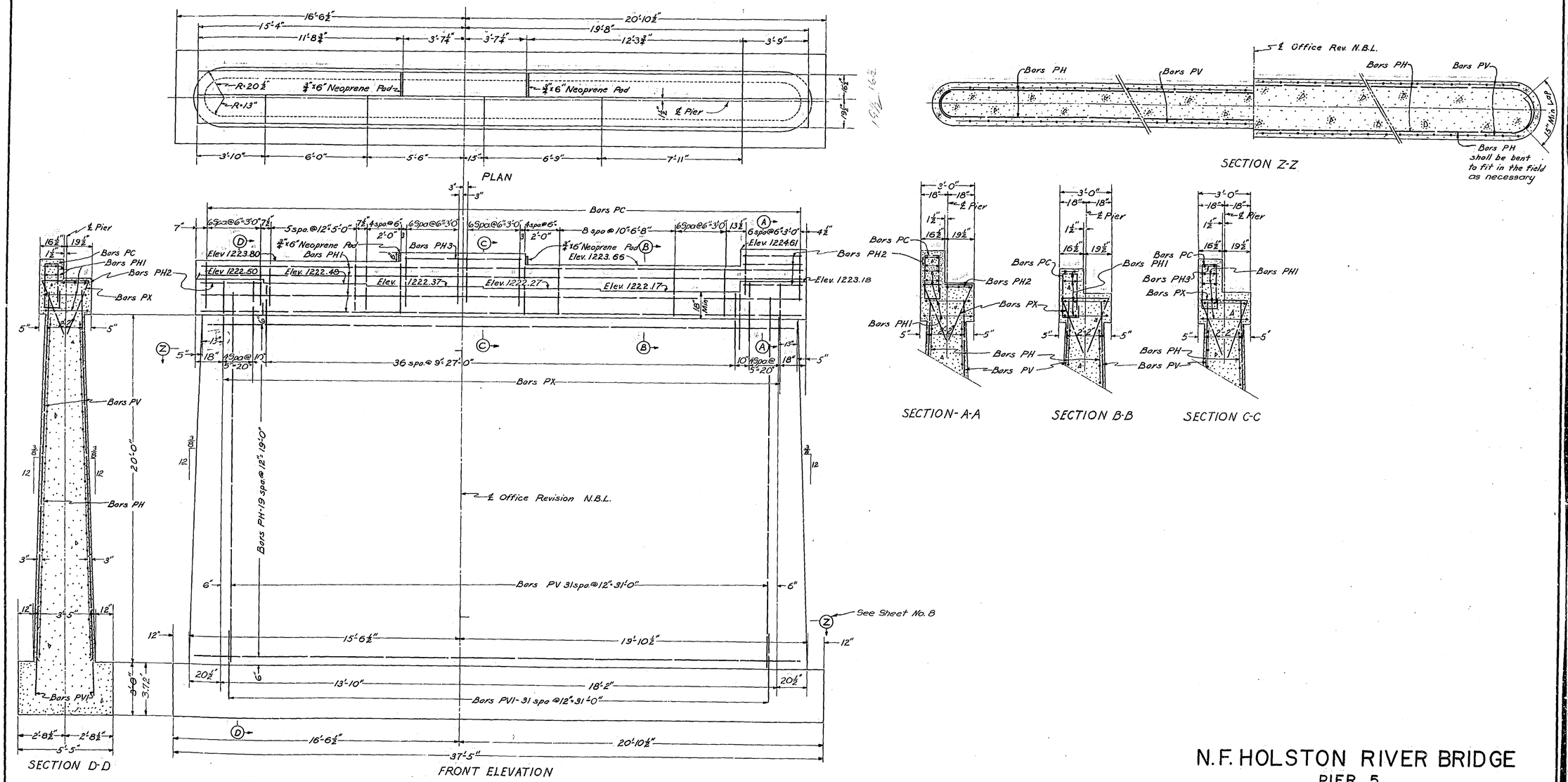
Virginia Department of Highways
Office of the Bridge Engineer
Richmond, Virginia Dec., 1961

Drawn by: R.G.H.
Traced by: [illegible]
Checked by: R.J.D.

CLXIII-8
Sheet 7 of 19

1 6 3 - 0 8 - 0 7

PUB. RD. REGION	STATE	FEDERAL AID ROUTE	FEDERAL AID PROJECT	STATE ROUTE	STATE PROJECT	SHEET NO.	TOTAL SHEETS
2	Va.		F-04-1(18)	23	0023-084-101,B601	14(8)	36



N.F. HOLSTON RIVER BRIDGE
PIER 5

Virginia Department of Highways
Office of the Bridge Engineer
Richmond, Virginia Dec., 1961

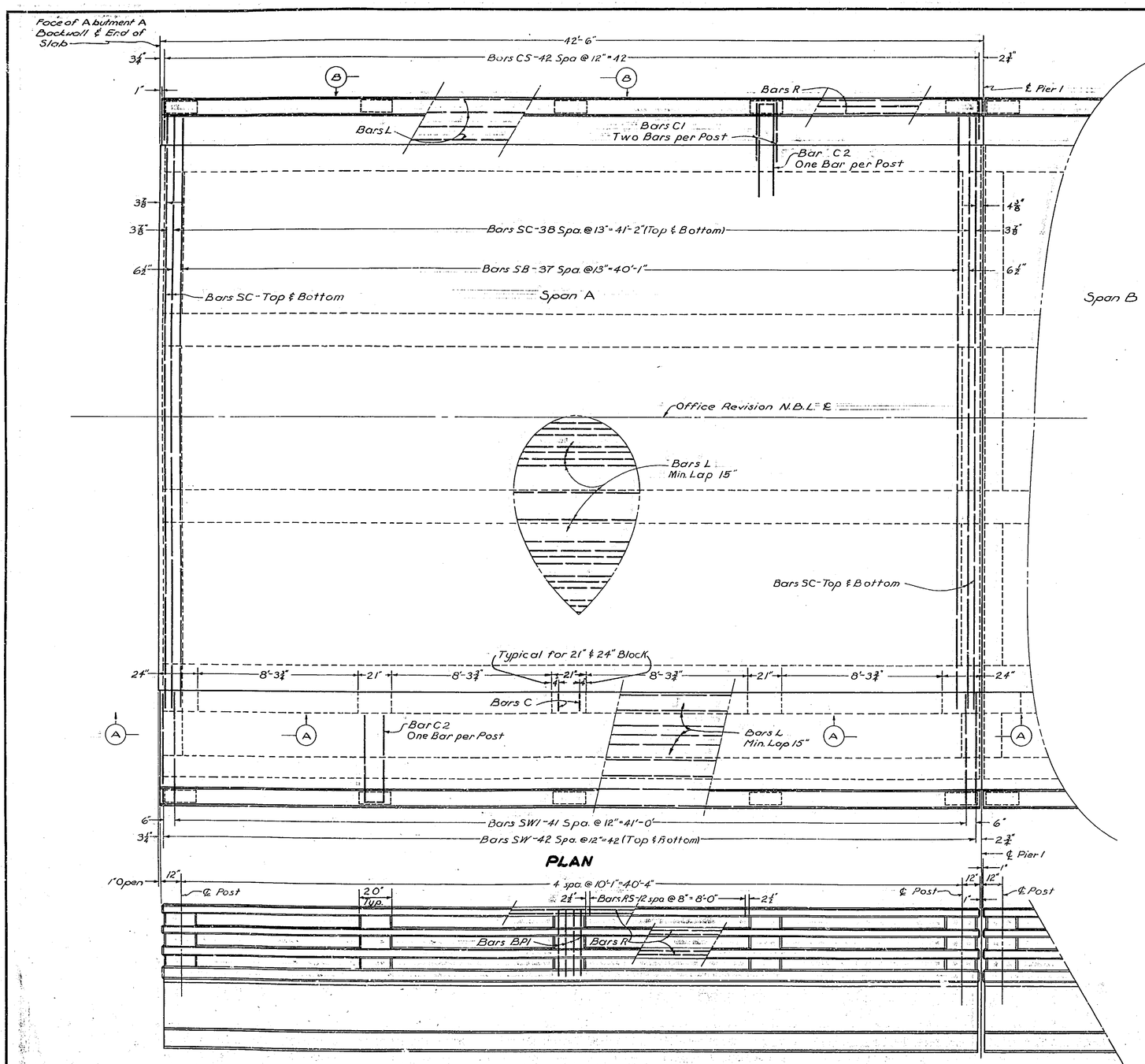
Drawn by: R.G.H.
Traced by: E.H.
Checked by: R.J.D.

Scale: 3/8" = 1'-0"

CLXIII-8
Sheet: 8 of 19

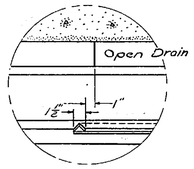
1 6 3-0 8

PUB. RD. REGION	STATE	FEDERAL AID ROUTE	FEDERAL AID PROJECT	STATE ROUTE	STATE PROJECT	SHEET NO.	TOTAL SHEETS
2	Va		F-04-1(18)	23	0023-084-101,B601	14(9)	36

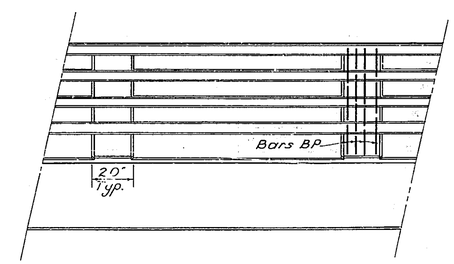


PLAN

SIDE ELEVATION
Sidewalk Side



SECTION A-A
Scale: 1½" = 1'-0"



VIEW B-B
Scale: ⅜" = 1'-0"
Curb Side.

N. F. HOLSTON RIVER BRIDGE

SUPERSTRUCTURE SPAN A

Virginia Department of Highways
Office of the Bridge Engineer
Richmond, Virginia Dec., 1961

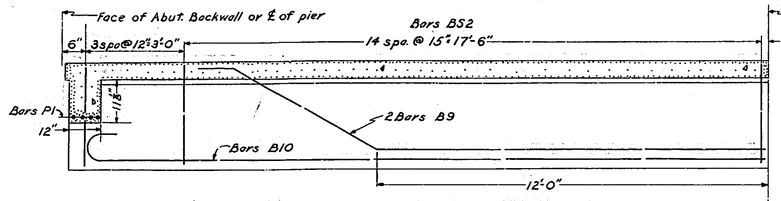
Scale: ⅜" = 1'-0"

Drawn by: J. G. G. M.
Traced by: R S N
Checked by: P. A. C. Jr.

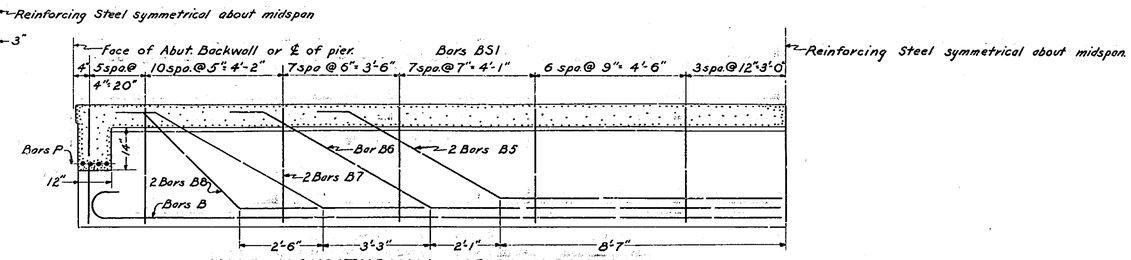
CLXIII-8
Sheet 9 of 19

1 6 3-0 8 0 9

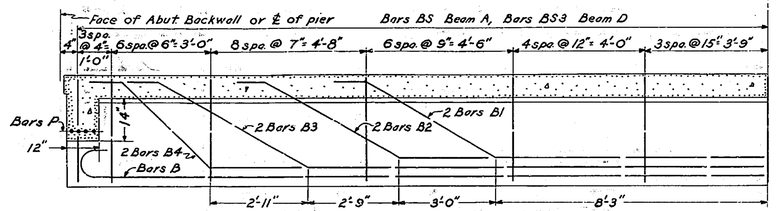
PUB. RD. REGION	STATE	FEDERAL AID ROUTE	FEDERAL AID PROJECT	STATE ROUTE	STATE PROJECT	SHEET NO.	TOTAL SHEETS
2	Va.		F-04-1(18)	23	0023-084-101-B601	14(10)	36



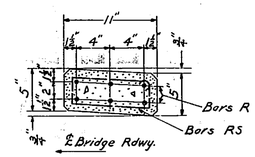
HALF LONGITUDINAL SECTION SHOWING REINFORCEMENT IN SIDEWALK BEAM E
Scale: 1/2" = 1'-0"



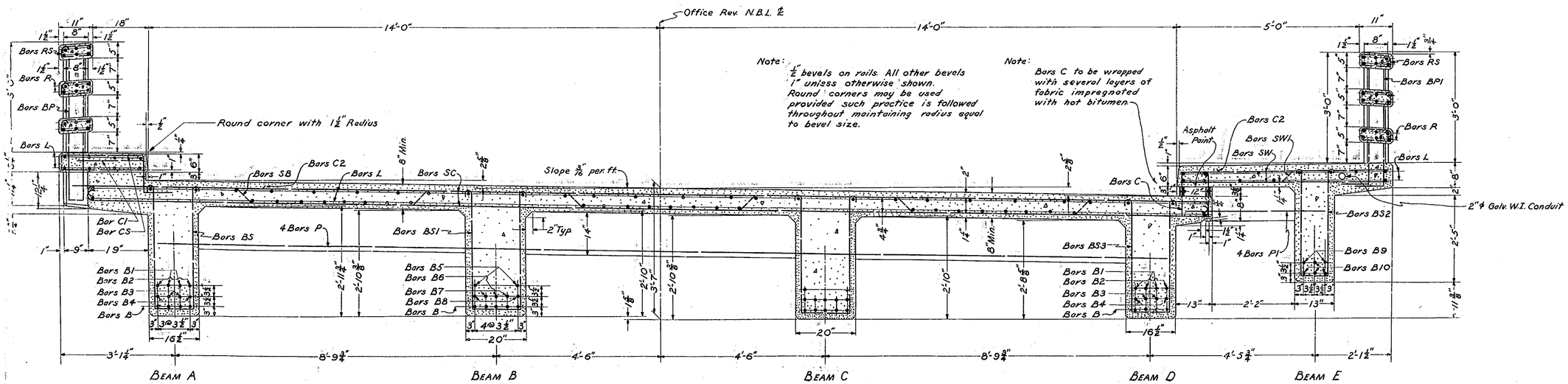
HALF LONGITUDINAL SECTION SHOWING REINFORCEMENT IN INTERIOR BEAMS B&C
Scale: 1/2" = 1'-0"



HALF LONGITUDINAL SECTION SHOWING REINFORCEMENT IN EXTERIOR BEAMS A&D
Scale: 1/2" = 1'-0"



SECTION THROUGH RAIL
Scale: 1 1/2" = 1'-0"



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

N.F. HOLSTON RIVER BRIDGE
SUPERSTRUCTURE SPANS A, B & F

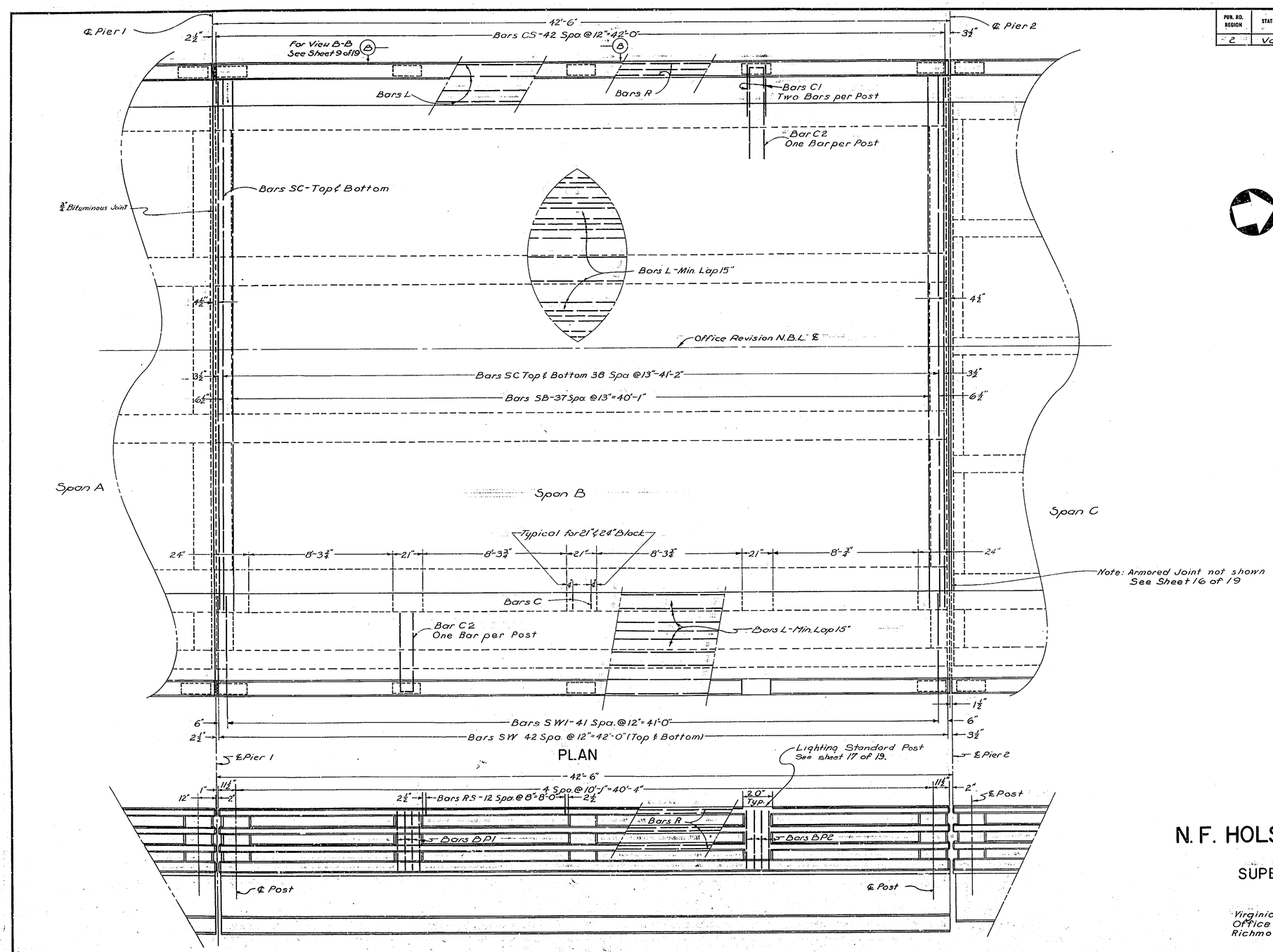
Virginia Department of Highways
Office of the Bridge Engineer
Richmond, Virginia Dec., 1961

Drawn by: R.G.H.
Traced by: E.H.
Checked by: P.A.C. Jr.

CLXIII-8
Sheet 10 of 19

1 6 3-0 8 1 0 1

PUB. RD. REGION	STATE	FEDERAL AID ROUTE	FEDERAL AID PROJECT	STATE ROUTE	STATE PROJECT	SHEET NO.	TOTAL SHEETS
2	Va.		F-04-1(18)	23	0023-084-101, B601	1.4(11)	36



Scale: 3/8" = 1'-0"

N. F. HOLSTON RIVER BRIDGE

SUPERSTRUCTURE SPAN B

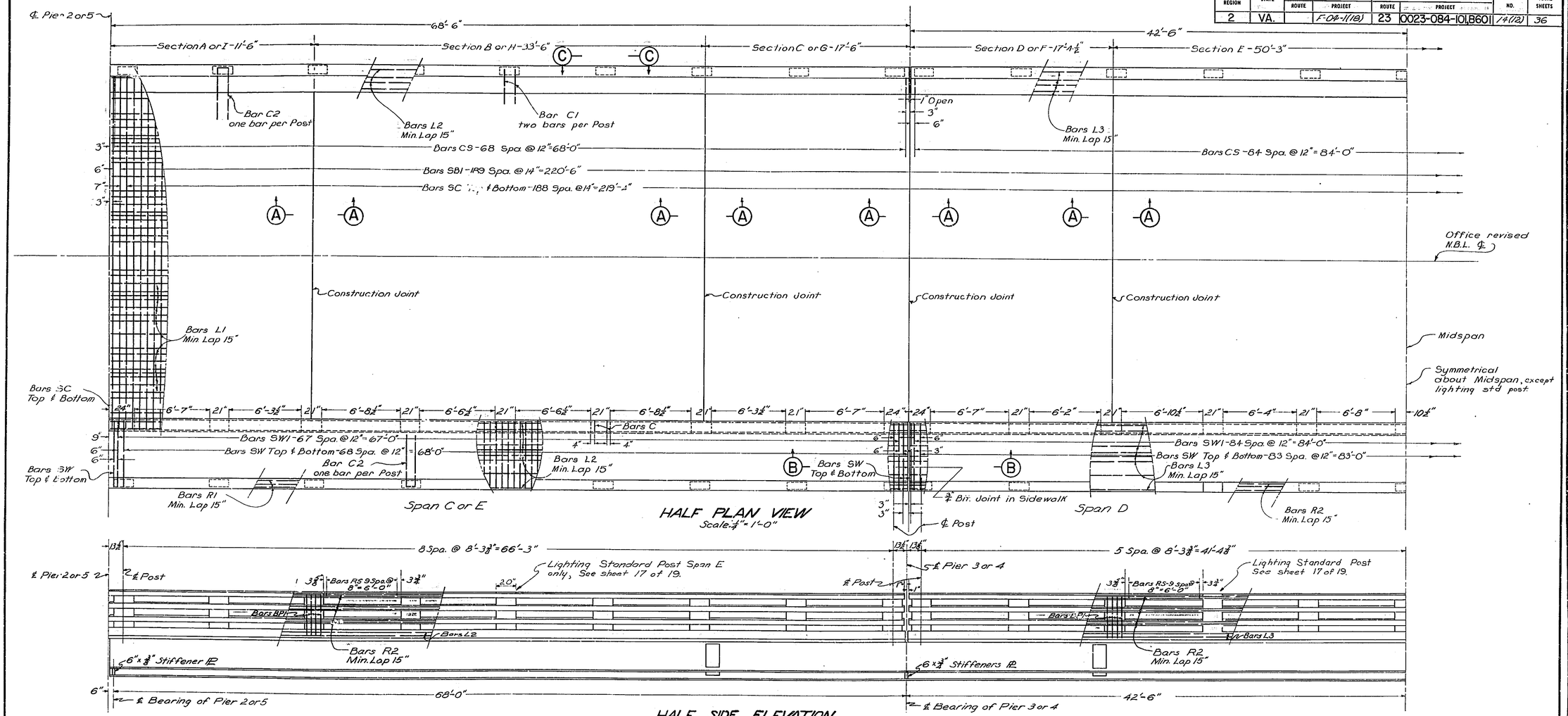
Virginia Department of Highways
Office of the Bridge Engineer
Richmond, Virginia Dec., 1961

Drawn by: J. G. G. M.
Traced by: RSN
Checked by: P.A.C. Jr.

CLXIII-8
Sheet 11 of 19

1 6 3-0 8 1 1

PUB. RD. REGION	STATE	FEDERAL AID ROUTE	FEDERAL AID PROJECT	STATE ROUTE	STATE PROJECT	SHEET NO.	TOTAL SHEETS
2	VA.		F-014-1(18)	23	0023-084-101,B601	14(12)	36



POURING SCHEDULE

Roadway Slab to be poured in the following order: Sections "E", "B", "H", "A", "I", "D", "F", "C" and "G"

N.F. HOLSTON RIVER BRIDGE

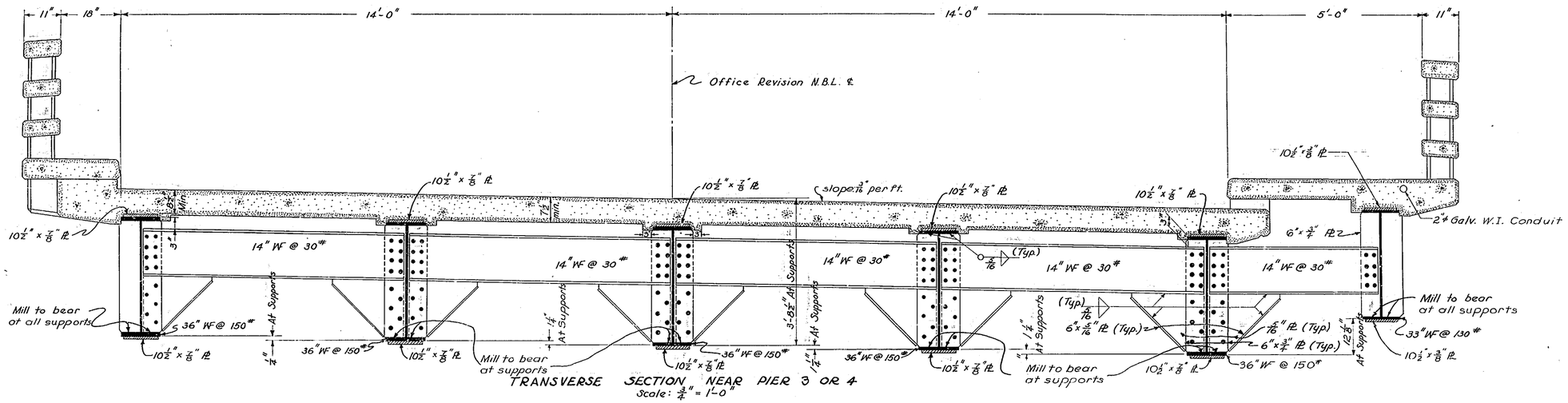
SUPERSTRUCTURE SPANS C, D & E

Virginia Department of Highways
Office of the Bridge Engineer
Richmond, Va. Dec., 1961

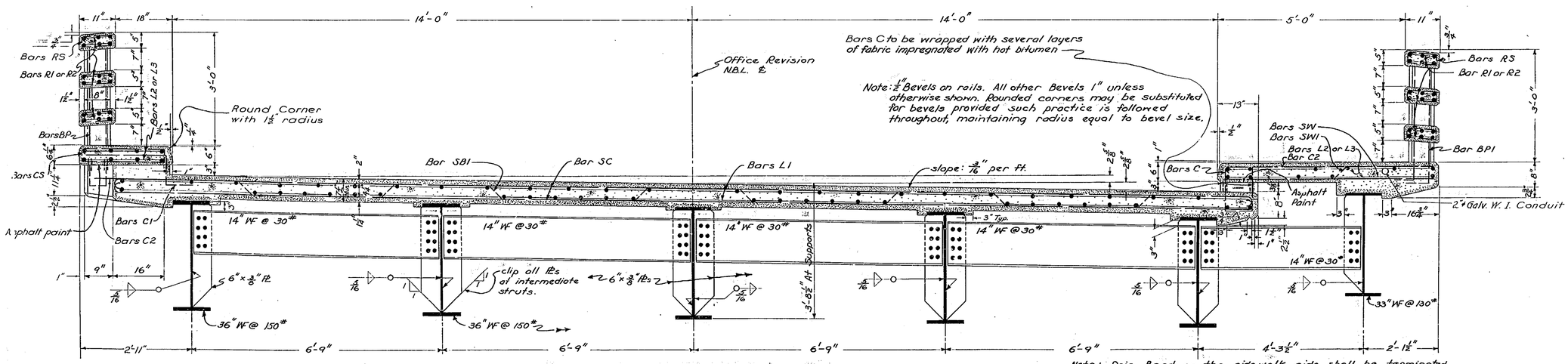
Drawn by: W.B.R. Jr.
Traced by: B.S.S.
Checked by: P.A.C. Jr.

CLXIII-8
Sheet 12 of 19

PUB. RD. REGION	STATE	FEDERAL AID ROUTE	FEDERAL AID PROJECT	STATE ROUTE	STATE PROJECT	SHEET NO.	TOTAL SHEETS
2	Va.		F-04-1(18)	23	0023-084-101, B601	14(13)	36



TRANSVERSE SECTION NEAR PIER 3 OR 4
Scale: ¾" = 1'-0"



Note: All field strut connections shall be made with ⅞" ϕ rivets or high tensile strength bolts with hardened washers.

TRANSVERSE SECTION THROUGH SPANS B, C or D
Scale: ¾" = 1'-0"

Note: Drip Bead on the sidewalk side shall be terminated 8" on each side of struts.

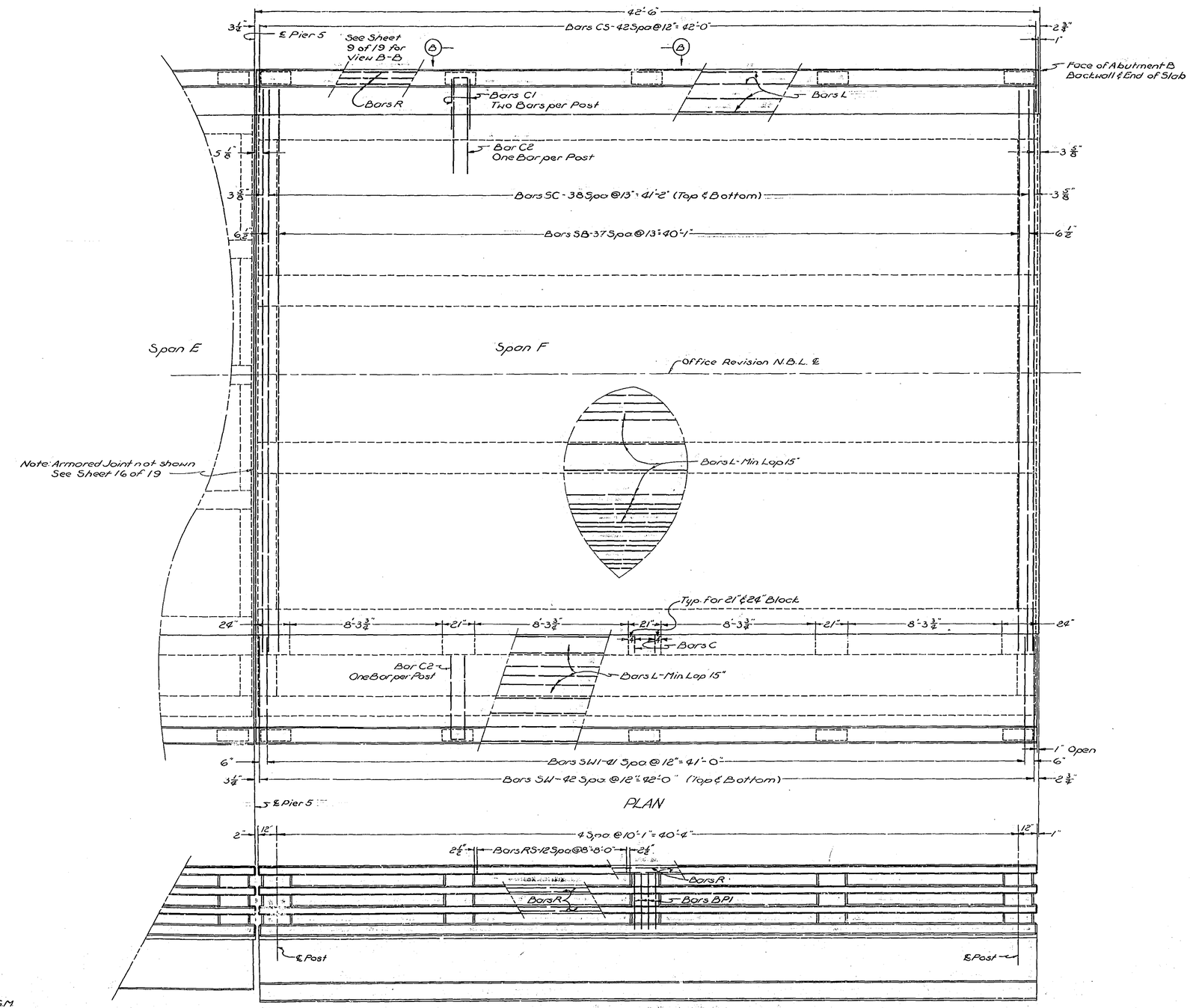
N.F. HOLSTON RIVER BRIDGE
SUPERSTRUCTURE SPANS C, D & E

Virginia Department of Highways
Office of the Bridge Engineer
Richmond, Va. Dec., 1961

CLXIII-8
Sheet 13 of 19

Drawn by: R.G.H.
Traced by: H.R.B.Jr.
Checked by: F.A.C. Jr

PUB. RD. REGION	STATE	FEDERAL AID ROUTE	FEDERAL AID PROJECT	STATE ROUTE	STATE PROJECT	SHEET NO.	TOTAL SHEETS
2	Va.		F-04-1(18)	23	0023-084-101,B601	14(14)	36



Drawn by: JGGM
Traced by: JGGM
Checked by: PAC

Scale: 3/8" = 1'-0"

N.F. HOLSTON RIVER BRIDGE

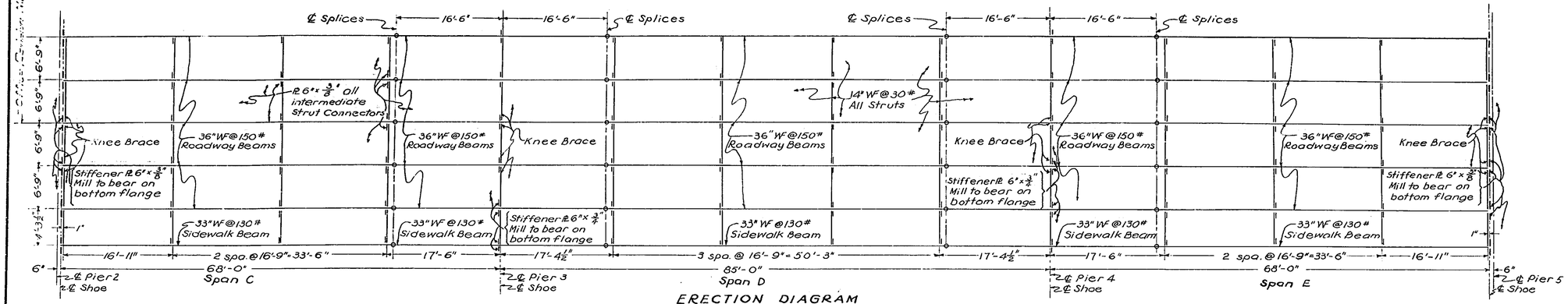
SUPERSTRUCTURE SPAN F

Virginia Department of Highways
Office of the Bridge Engineer
Richmond, Va. Dec., 1961

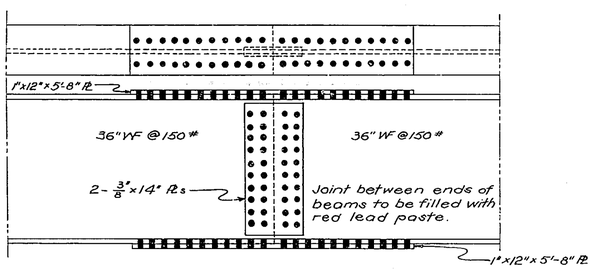
CLXIII-8
Sheet 14 of 19

1 4 1 6 3-0 8

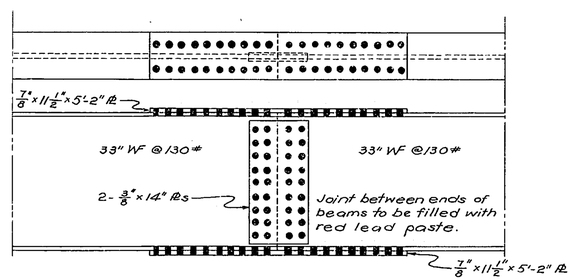
PUB. RD. REGION	STATE	FEDERAL AID ROUTE	FEDERAL AID PROJECT	STATE ROUTE	STATE PROJECT	SHEET NO.	TOTAL SHEETS
2	Va.		F-04-1(18)	23	0023-084-101, B601	14(15)	36



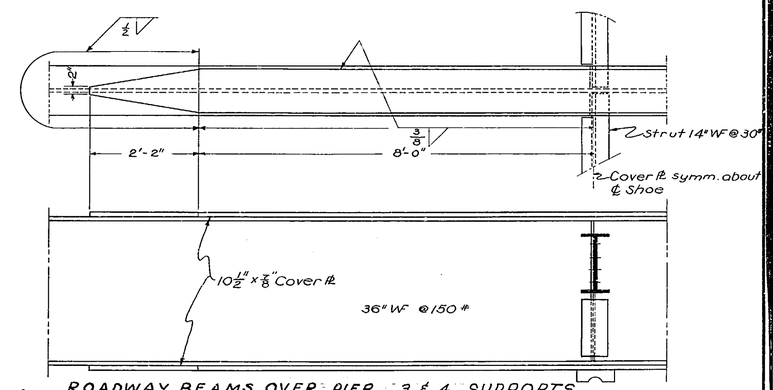
ERECTION DIAGRAM
Scale: 1/8" = 1'-0"



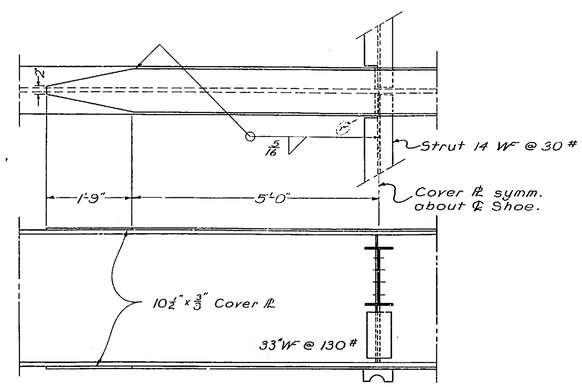
SPLICE FOR ROADWAY BEAMS
Scale: 3/4" = 1'-0"



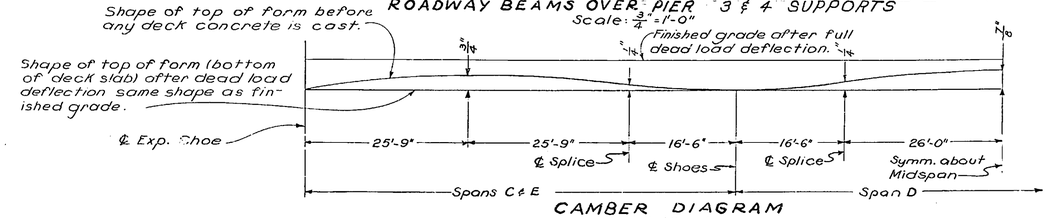
SPLICE FOR SIDEWALK BEAM
Scale: 3/4" = 1'-0"



ROADWAY BEAMS OVER PIER 3 & 4 SUPPORTS
Scale: 3/4" = 1'-0"



SIDEWALK BEAM OVER PIER 3 & 4 SUPPORTS
Scale: 3/4" = 1'-0"



CAMBER DIAGRAM
Not to Scale

Camber Diagram, as shown, provides correction for deflection due to full dead load. In fabricating steel, advantage shall be taken of any natural mill camber in beams. Field adjustment for camber shall be made by varying depth of concrete bolster between top of beam and bottom of slab.

N.F. HOLSTON RIVER BRIDGE

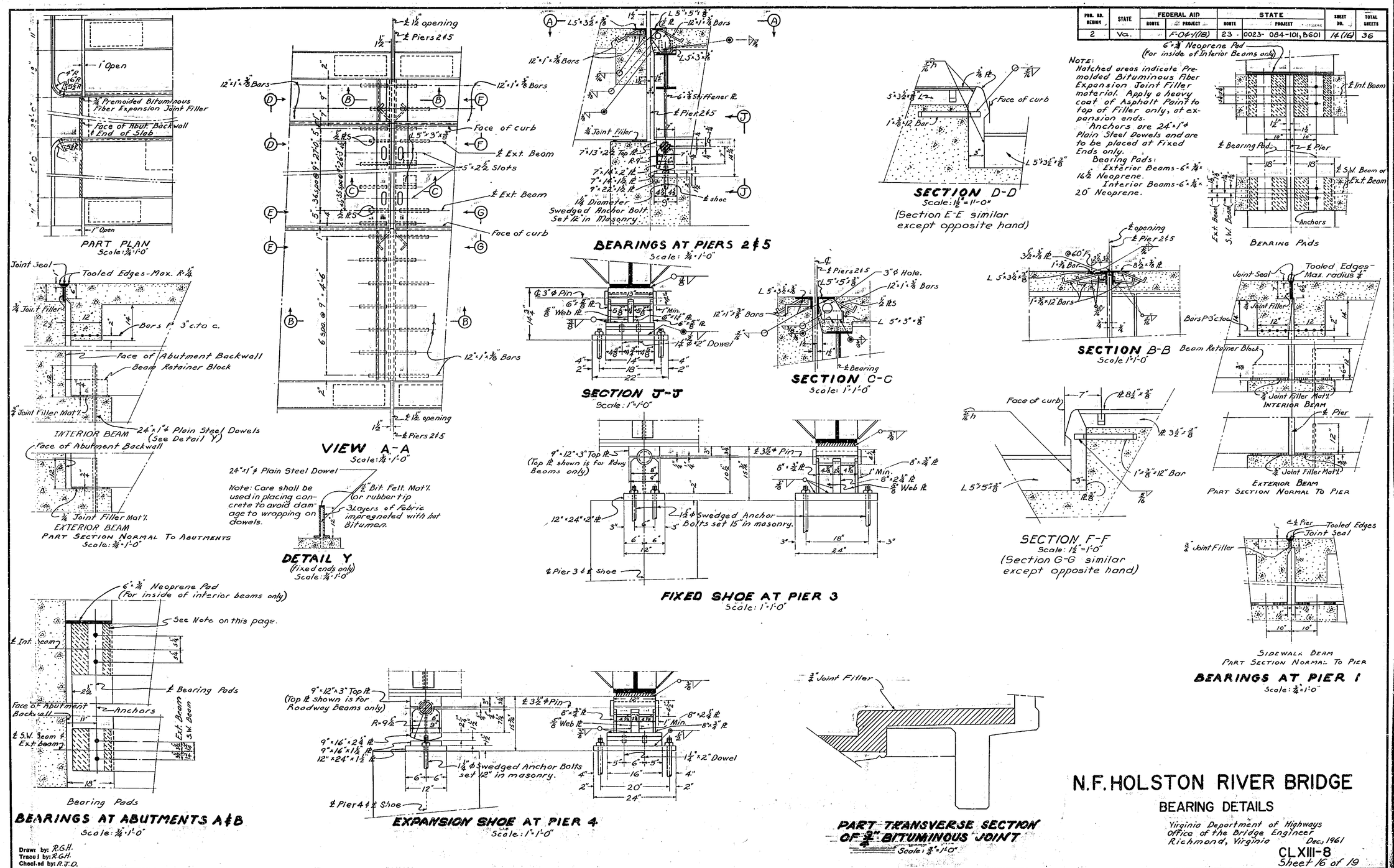
SUPERSTRUCTURE SPANS C, D & E

Virginia Department of Highways
Office of the Bridge Engineer
Richmond, Va. Dec., 1961

Drawn by: R.G.H.
Traced by: [illegible]
Checked by: P.A.C. Jr.

CLXIII-8
Sheet 15 of 19

PROJ. NO. REGION	STATE	FEDERAL AID ROUTE	FEDERAL AID PROJECT	STATE ROUTE	STATE PROJECT	SHEET NO.	TOTAL SHEETS
2	Va.		F-064-1(118)	23	0023-084-101, B601	14 (16)	36



Drawn by: R.G.H.
Traced by: R.G.H.
Checked by: R.J.D.

N.F. HOLSTON RIVER BRIDGE

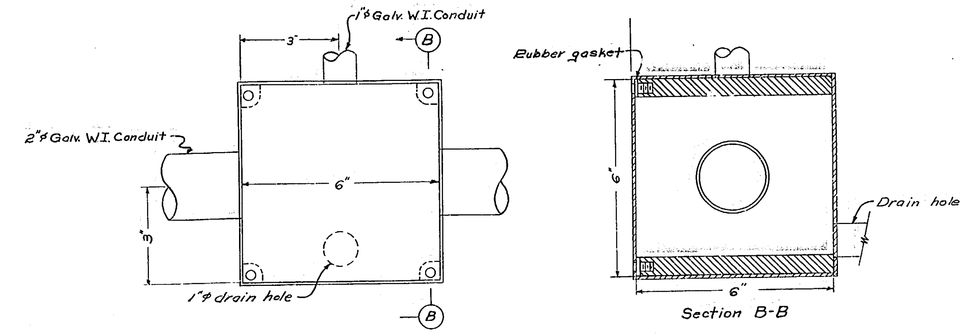
BEARING DETAILS

Virginia Department of Highways
Office of the Bridge Engineer
Richmond, Virginia Dec., 1961

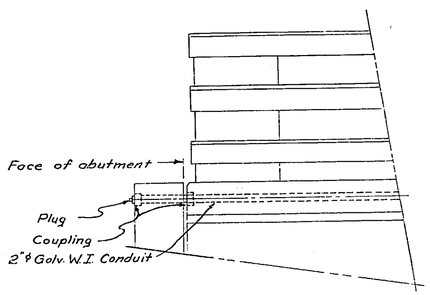
CLXIII-8
Sheet 16 of 19

3-0-8-6-1-6

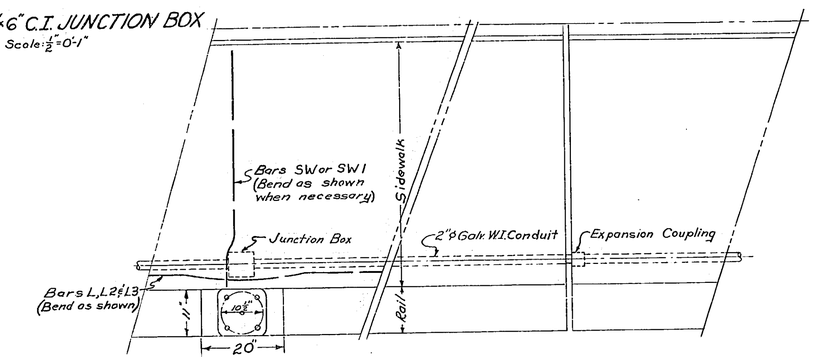
PUB. RD. REGION	STATE	FEDERAL AID ROUTE	FEDERAL AID PROJECT	STATE ROUTE	STATE PROJECT	SHEET NO.	TOTAL SHEETS
2	Va.		F-014-1(18)	23	0023-084-101, B601	14(17)	36



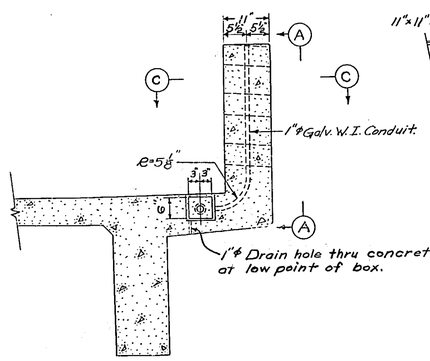
6"x 6"x 6" C.I. JUNCTION BOX
Scale: 1/2"=0'-1"



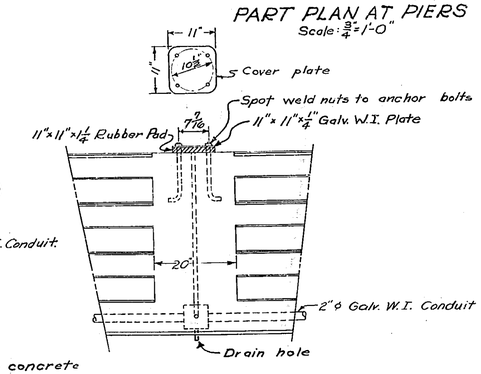
ABUTMENTS
Scale: 3/4"=1'-0"



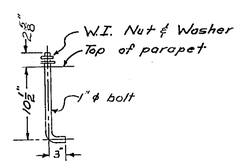
PART PLAN AT PIERS
Scale: 3/4"=1'-0"



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

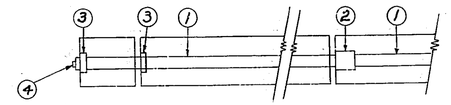


View A-A
Scale: 3/4"=1'-0"



ANCHOR BOLT
Scale: 1"=1'-0"

Note: For location of special Light Standard post see sheet 1.

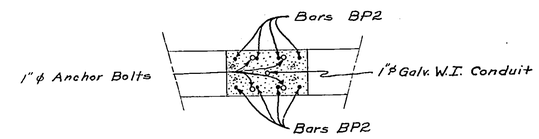


At Abutments At Pier 1,2, & 5

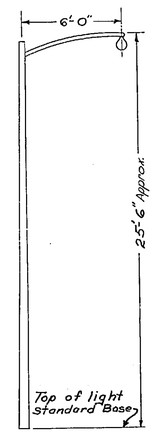
EXPANSION JOINT DETAILS OF CONDUIT
Not to Scale

LEGEND FOR EXPANSION JOINT DETAILS

1. 2"φ Galvanized W.I. Conduit.
2. 2"φ Metal expansion coupling to permit in and out movement of 1 1/2"
3. Coupling
4. Plug



Section C-C
Scale: 3/4"=1'-0"



Note: Luminaire shall be a 20,000 lumen-mercury vapor lamp with a Type III Distribution

ALUMINUM LIGHT STANDARD
Scale: 1/4"=1'-0"
Not Included in this contract

N.F. HOLSTON RIVER BRIDGE
PROVISION FOR FUTURE ROADWAY LIGHTING

Virginia Department of Highways
Office of the Bridge Engineer
Richmond, Virginia. Dec, 1961

Drawn by: R.T.D.
Traced by: R.G.H.
Checked by: D.A.C. Jr.

CLXIII-8
Sheet 17 of 19

PUR. RD. REGION	STATE	FEDERAL AID ROUTE	FEDERAL AID PROJECT	STATE ROUTE	STATE PROJECT	SHEET NO.	TOTAL SHEETS
2	VA.		F-04-1(18)	23	0023-084-101-B601	14(123)	36

✱ Should be 318

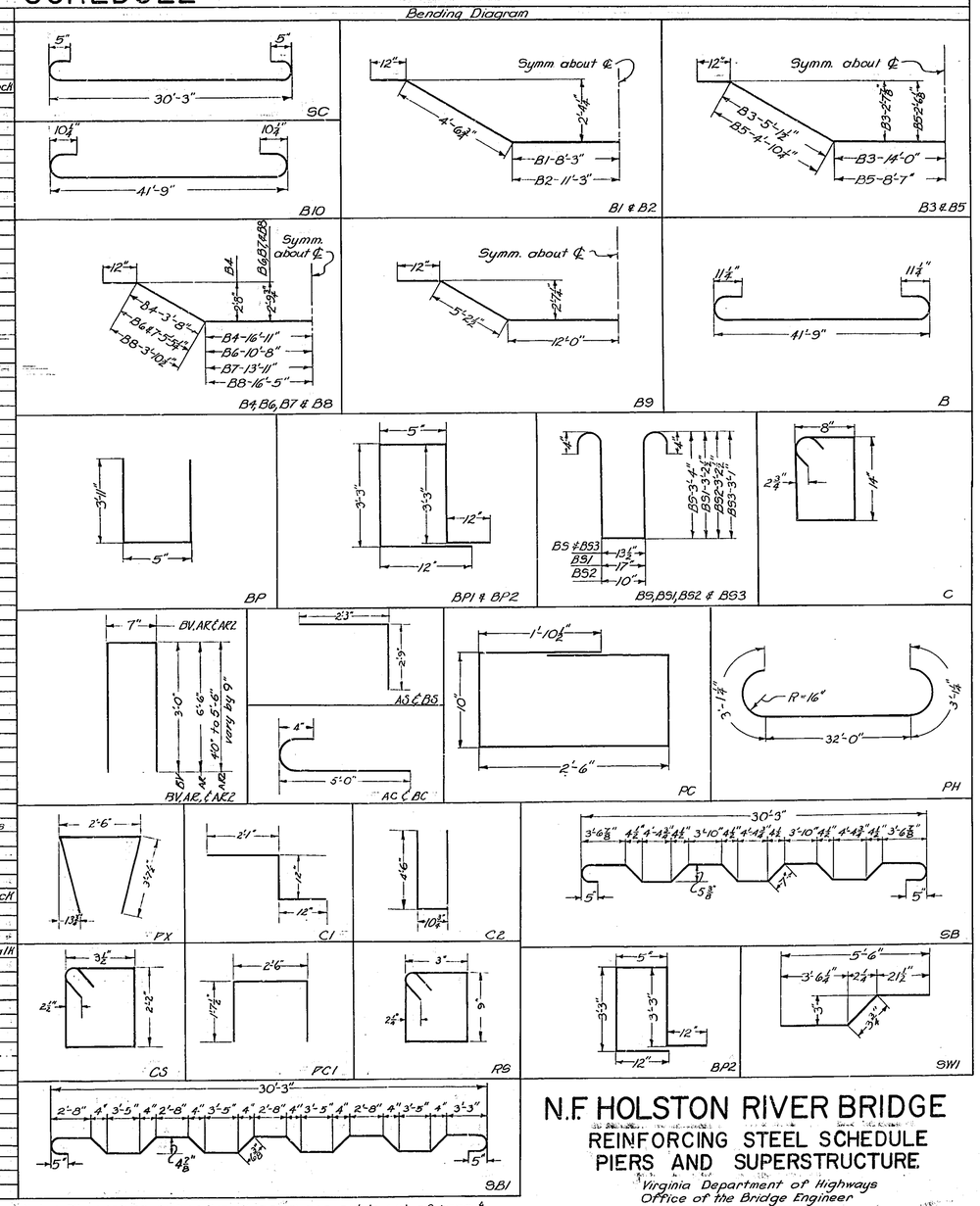
REINFORCING STEEL SCHEDULE

Mark	No.	Size	Length	Pin	Location
			Abutment A		
A1	12	#4	12'-6"	–	Wingwall
AB	2	#4	6'-8"	–	Retainer Block
AB1	3	#4	34'-6"	–	Bridge Seat
AB2	2	#4	2'-8" & 4'-6"	–	Bridge Seat
AC	30	#4	5'-5"	2" φ	Backwall
AC1	4	#4	32'-0"	–	Backwall
AS	44	#4	4'-6"	2" φ	Seat
AF	16	#8	5'-5"	–	Footing
AF1	32	#4	3'-3"	–	Footing
AD	16	#8	11'-9" & 14'-6"	–	Footing
AD1	32	#4	13'-3"	–	Footing
BW	8	#4	6'-5"	2" φ	Backwall
AR	6	#6	13'-3"	3" φ	Backwall
AR1	8	#4	5'-3"	–	Backwall
AR2	6	#6	8'-4" to 11'-4"	3" φ	Backwall
			Abutment B		
BB	2	#4	6'-8"	–	Retainer Block
BB1	3	#4	37'-0"	–	Bridge Seat
BB2	2	#4	2'-8" & 5'-3"	–	Bridge Seat
BC	30	#4	5'-5"	2" φ	Backwall
BC1	4	#4	36'-6"	–	Backwall
BS	44	#4	4'-6"	2" φ	Seat
BW	8	#4	6'-5"	2" φ	Backwall
BR	6	#6	13'-3"	3" φ	Backwall
BR1	8	#4	5'-3"	–	Backwall
BR2	6	#6	8'-4" to 11'-4"	3" φ	Backwall
			Pier 1		
PC1	14	#4	5'-10"	2" φ	Cap
PH	40	#4	38'-3"	3 1/2" φ	Stem
PH1	6	#4	34'-6"	–	Cap
PH2	4	#4	3'-4"	–	Cap
PH3	2	#4	6'-9"	–	Cap
PV	64	#4	21'-3"	–	Stem
PV1	64	#4	3'-9"	–	Footing
PX	24	#4	9'-7"	2" φ	Cap.
			Pier 2		
PC	60	#4	7'-7"	2" φ	Cap
PH	40	#4	38'-3"	3 1/2" φ	Stem
PH1	8	#4	34'-6"	–	Cap
PH2	10	#4	3'-4"	–	Cap
PH3	2	#4	6'-9"	–	Cap
PV	64	#4	21'-3"	–	Stem
PV1	64	#4	3'-9"	–	Footing
PX	47	#4	9'-7"	2" φ	Cap
			Pier 3		
PH	40	#4	38'-3"	3 1/2" φ	Stem
PH1	4	#4	34'-6"	–	Cap
PH2	4	#4	3'-4"	–	Cap
PV	64	#4	21'-3"	–	Stem
PV1	64	#4	3'-9"	–	Footing
PX	48	#4	9'-7"	2" φ	Cap
			Pier 4		
PH	40	#4	38'-3"	3 1/2" φ	Stem
PH1	4	#4	34'-6"	–	Cap
PH2	4	#4	3'-4"	–	Cap
PV	64	#4	21'-3"	–	Stem
PV1	64	#4	3'-9"	–	Footing
PX	48	#4	9'-7"	2" φ	Cap
			Pier 5		
PC	60	#4	7'-7"	2" φ	Cap
PH	40	#4	38'-3"	3 1/2" φ	Stem
PH1	8	#4	34'-6"	–	Cap
PH2	10	#4	3'-4"	–	Cap
PH3	2	#4	6'-9"	–	Cap
PV	64	#4	21'-3"	–	Stem
PV1	64	#4	3'-9"	–	Footing
PX	47	#4	9'-7"	2" φ	Cap

Mark	No.	Size	Length	Pin	Location
			Superstructure Span A		
B	18	#11	44'-6"	10" φ	Beams A,B,C, & D
B1	4	#8	27'-6"	8" φ	Beams A & D
B2	4	#8	33'-6"	8" φ	Beams A & D
B3	4	#9	40'-2"	9" φ	Beams A & D
B4	4	#10	42'-11"	10" φ	Beams A & D
B5	4	#11	28'-9"	9" φ	Beams B & C
B6	2	#11	34'-1"	10" φ	Beams B & C
B7	4	#11	40'-7"	10" φ	Beams B & C
B8	4	#11	42'-4"	10" φ	Beams B & C
B9	2	#8	36'-5"	8" φ	Sidewalk Beam
B10	4	#9	44'-3"	9" φ	" "
BP	20	#4	8'-1"	2" φ	Curb Posts
BP1	20	#4	8'-7"	2" φ	Sidewalk Post
BP2	8	#6	8'-7"	4 1/2" φ	Light Poets
BS	61	#4	8'-6"	2" φ	Beam A
BS1	154	#4	8'-6"	2" φ	Beams B & C
BS2	36	#4	7'-3"	2" φ	Beam E
BS3	61	#4	8'-0"	2" φ	Beam D
C	10	#4	4'-2"	2" φ	Sidewalk Curb Block
C1	10	#4	3'-11"	2" φ	Curb Block
C2	10	#6	9'-7"	4 1/2" φ	Curb & Sidewalk
C3	43	#3	5'-4"	1 3/4" φ	Curb
L	148	#4	21'-8"	–	Curb, Slab, & Sidewalk
P	8	#4	27'-6"	–	Struts
P1	8	#4	4'-0"	–	Sidewalk Struts
R	72	#4	21'-7"	–	Rails
R3	312	#4ga	2'-5"	1 3/4" φ	"
SB	38	#5	32'-8"	3 3/4" φ	Slab
SC	82	#5	31'-5"	3 3/4" φ	"
SW	86	#4	5'-6"	–	Sidewalk
SW1	42	#4	5'-7"	2" φ	Sidewalk
			Superstructure Span B		
B	18	#11	44'-6"	10" φ	Beams A,B,C, & D
B1	4	#8	27'-6"	8" φ	Beams A & D
B2	4	#8	33'-6"	8" φ	Beams A & D
B3	4	#9	40'-2"	9" φ	Beams A & D
B4	4	#10	42'-11"	10" φ	Beams A & D
B5	4	#11	28'-9"	9" φ	Beams B & C
B6	2	#11	34'-1"	10" φ	Beams B & C
B7	4	#11	40'-7"	10" φ	Beams B & C
B8	4	#11	42'-4"	10" φ	Beams B & C
B9	2	#8	36'-5"	8" φ	Sidewalk Beam
B10	4	#9	44'-3"	9" φ	" "
BP	20	#4	8'-1"	2" φ	Curb Posts
BP1	20	#4	8'-7"	2" φ	Sidewalk Posts
BP2	8	#6	8'-7"	4 1/2" φ	Light Poets
BS	61	#4	8'-6"	2" φ	Beam A
BS1	154	#4	8'-6"	2" φ	Beams B & C
BS2	36	#4	7'-3"	2" φ	Beam E
BS3	61	#4	8'-0"	2" φ	Beam D
C	10	#4	4'-2"	2" φ	Sidewalk Curb Block
C1	10	#4	3'-11"	2" φ	Curb Block
C2	10	#6	9'-7"	4 1/2" φ	Curb & Sidewalk
C3	43	#3	5'-4"	1 3/4" φ	Curb
L	148	#4	21'-8"	–	Curb, Slab, & Sidewalk
P	8	#4	27'-6"	–	Struts
P1	8	#4	4'-0"	–	Sidewalk Struts
R	72	#4	21'-7"	–	Rails
R3	312	#4ga	2'-5"	1 3/4" φ	"
SB	38	#5	32'-8"	3 3/4" φ	Slab
SC	82	#5	31'-5"	3 3/4" φ	"
SW	86	#4	5'-6"	–	Sidewalk
SW1	42	#4	5'-7"	2" φ	"

Mark	No.	Size	Length	Pin	Location
			Superstructure Span C, D, & E		
BP	116	#4	8'-1"	2" φ	Curb Post
BP1	108	#4	8'-7"	2" φ	Sidewalk Post
BP2	16	#6	8'-7"	4 1/2" φ	Light Post
C	58	#4	4'-2"	2" φ	Sidewalk Curb Block
C1	58	#4	3'-11"	2" φ	Curb Block
C2	58	#6	9'-7"	4 1/2" φ	Curb & Sidewalk
C3	223	#3	5'-4"	1 3/4" φ	Curb
L1*	294	#4	38'-0"	–	Slab
L2	76	#4	34'-8"	–	Curb & Sidewalk
L3	57	#4	29'-1"	–	Curb & Sidewalk
R1✱✱	144	#4	34'-8"	–	Rails
R2	108	#4	29'-1"	–	Rails
R3	1560	#4ga	2'-5"	1 3/4" φ	Rails
SB1	190	#5	33'-0"	3 3/4" φ	Slab
SC	382	#5	31'-5"	3 3/4" φ	Slab
SW	448	#4	5'-6"	–	Sidewalk
SW1	221	#4	5'-7"	2" φ	Sidewalk
C	10	#4			
C1	10	#4			
C2	10	#6			
C3	43	#3			
L	148	#4			
P	8	#4			
P1	8	#4			
R	72	#4			
R3	312	#4ga			
SB	38	#5			
SC	82	#5			
SW	86	#4			
SW1	42	#4			
✱✱ Actually Used:					
R1	172	#4	34'-8"		
Auth. by Res. Eng 7-22-65					Ref. Diary & Sk. BK

Bending Diagram



Note: Dimensions in bending diagram are out to out of bars.

Drawn by: R.G.H.
Traced by: R.S.K.
Checked by: P.A.C., R.J.D., & D.A.C. Jr.

N.F. HOLSTON RIVER BRIDGE

REINFORCING STEEL SCHEDULE PIERS AND SUPERSTRUCTURE

Virginia Department of Highways
Office of the Bridge Engineer
Richmond, Va. Dec., 1961

Revised: June 22, 1964

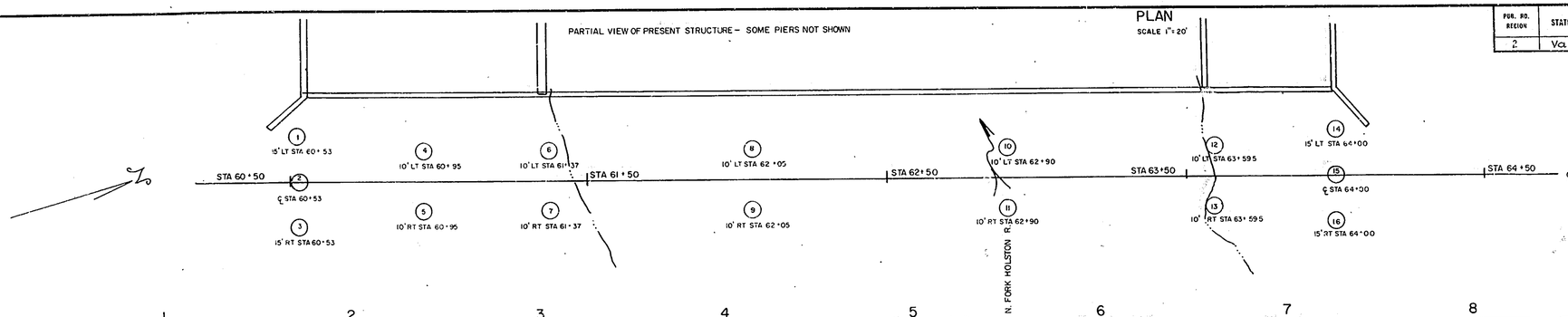
CLXIII-8
Sheet 18 of 19

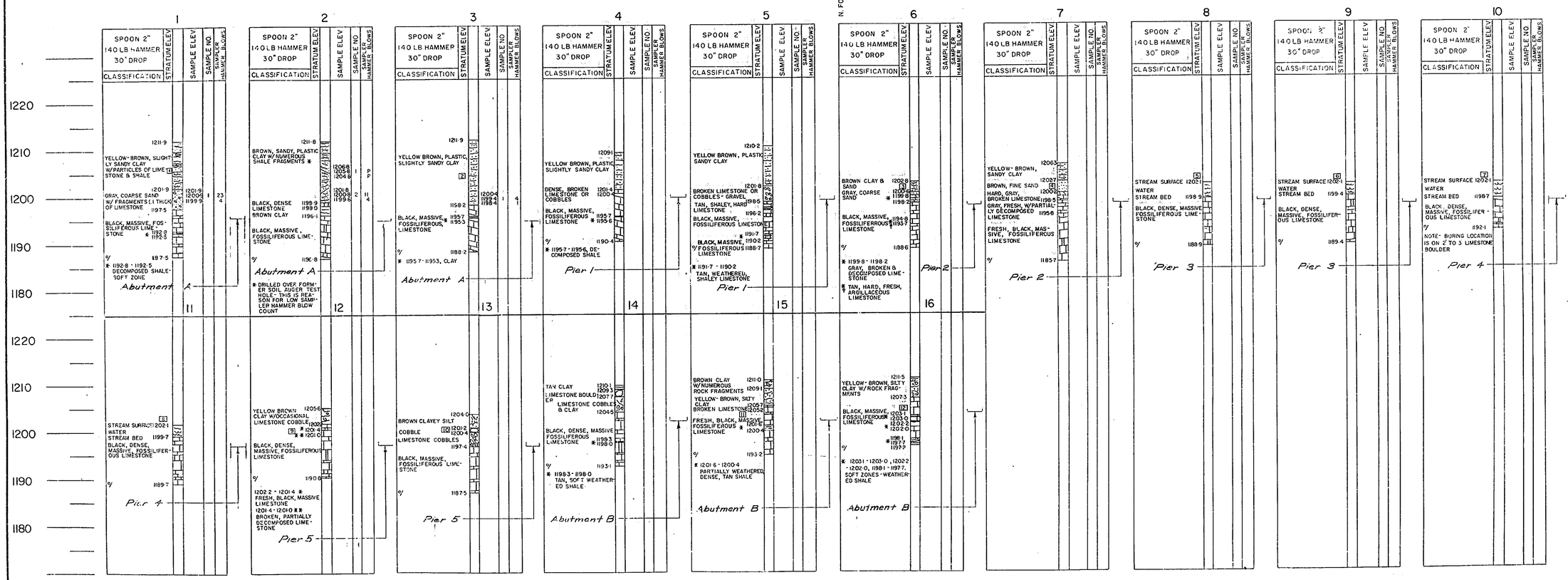
1-6-3-0-8

FED. RD. REGION	STATE	FEDERAL AID ROUTE	FEDERAL AID PROJECT	STATE ROUTE	STATE PROJECT	SHEET NO.	TOTAL SHEETS
2	Va		F-04-1(18)	23	0023-084-101, B601	14(19)	36

PLAN

SCALE 1" = 20'





GEOLOGIC SECTION

SCALE - 1" = 10'

P - PUSHED DRILL ROD

NOTE:

THE LOGS SHOWN ON THIS PLAN WERE TAKEN FROM FIELD NOTES THEY REPRESENT THE BEST INFORMATION AVAILABLE TO THE VIRGINIA DEPARTMENT OF HIGHWAYS

℄ ELEVATION AT BOTTOM OF DRILL HOLE

EQUIPMENT - DIAMOND CORE DRILL

☐ GROUND WATER ELEVATION

1	G W ELEV	1206.1	2	G W ELEV	1204.1	3	G W ELEV 1201.3
4	"	1201.6	5	"	1202.1	6	" 1202.1
7	"	1202.1	8	"	1202.1	9	" 1201.6
10	"	1201.6	11	"	1202.2	12	" 1203.5

60-92

SHEET 1 OF 1

VIRGINIA DEPARTMENT OF HIGHWAYS

ROUTE NO. 0023 STA. 60+53

PROJ. NO. 0023-084-101, B601

ENGINEERING GEOLOGY

DIVISION OF TESTS

RTE 0023 OVER N. FORK HOLSTON RIVER

SCOTT COUNTY

OCTOBER 11, 1960

Drawn by: CPJ
Traced by:
Checked by:

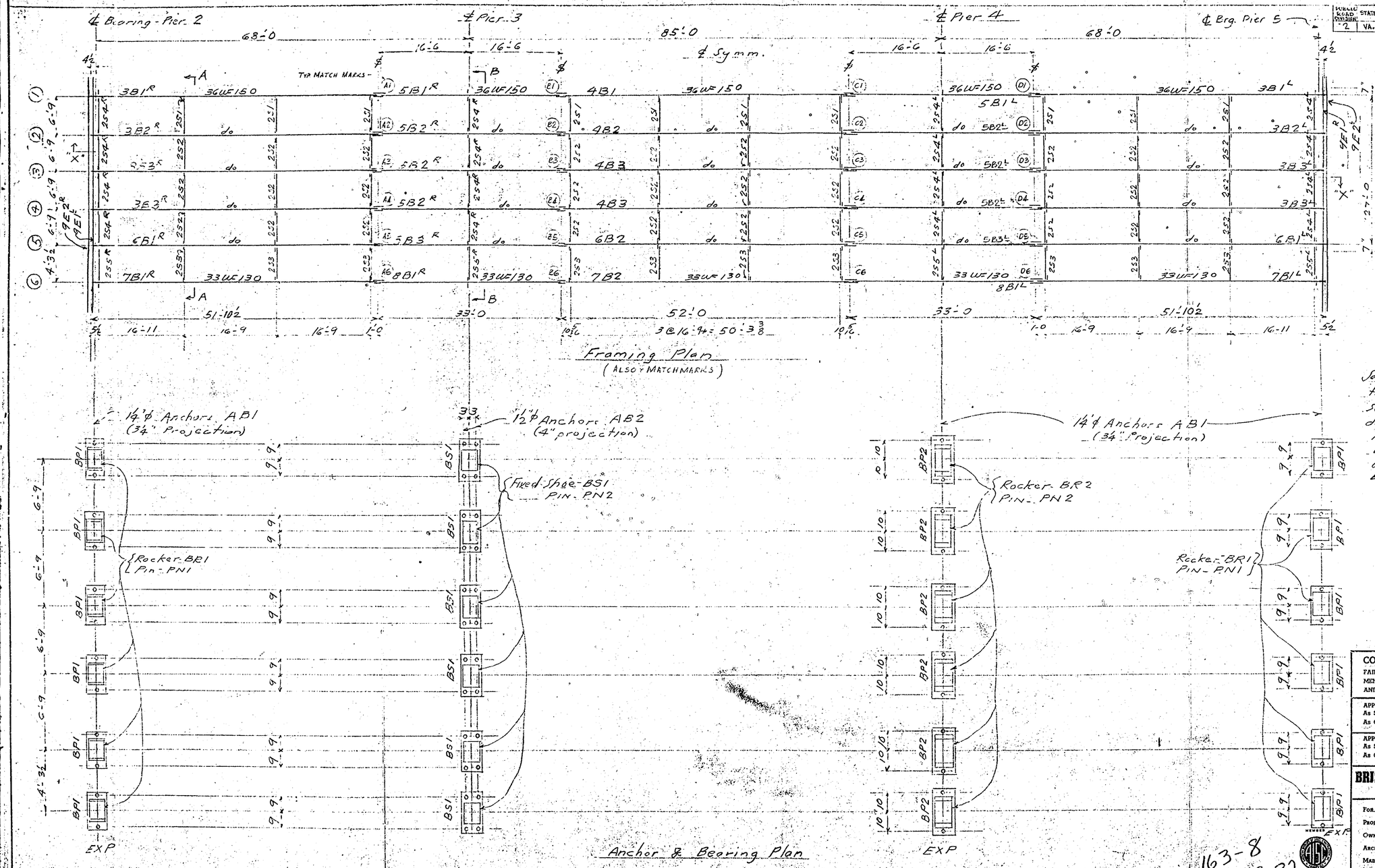
19 of 19

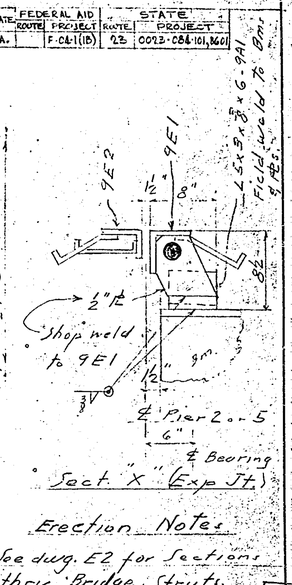
CLXIII-8

E 6 1

8 0-3 6 1

PUBLIC ROAD DIVISION	STATE	FEDERAL AID ROUTE	FEDERAL AID PROJECT	STATE ROUTE	STATE PROJECT
2	VA.		F-CA-1(18)	23	0023-084-101,B601





Erection Notes

See dwg. E2 for Sections thru Bridge Struts.
See dwg. E3 for Splice details.
All field Conn. Bolted with ⅞φ H.T. Bolts with one Hard Washer each bolt.

REVIEWED
Bridge Engineer

FOR CONSTRUCTION

163-8
20x of 32

CONTRACTOR PLEASE NOTE
FAILURE TO CHECK AND/OR APPROVE GENERAL MEASUREMENTS WILL NECESSITATE RESUBMITTING THIS DRAWING AND WILL RESULT IN DELAY.

APPROVED FOR DESIGN
As Shown
As Corrected
ARCHITECT

APPROVED FOR MEASUREMENTS
As Shown
As Corrected
CONTRACTOR

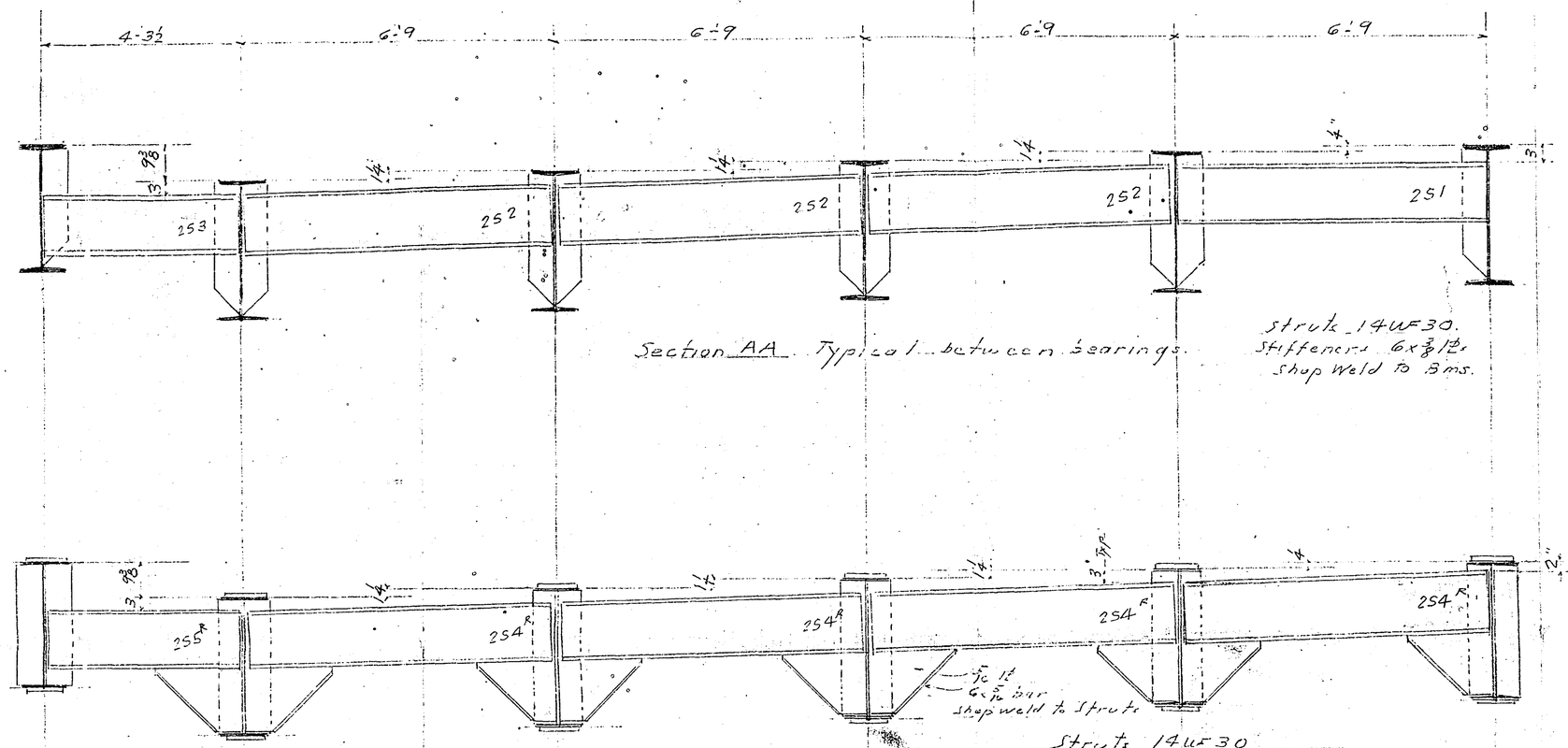
BRISTOL STEEL & IRON WORKS, INC.
BRISTOL, VIRGINIA

For B. G. Young & Sons. Scott County
Project Bridge over N.F. Holston Riv
Owner Va. Dept. of Highways
Archt. or Eng's do
Made FMM Revised
Checked FW
Field Checked
Shop Inspection
SHOP PLAN FILE

Holes
Rivets
Paint

Customer's Number	Contract	Sheet
J.R. DENNY	F1632	E1

1 6 3-0 8 0 2 0 X



REVIEWED

Bridge Engineer

FOR CONSTRUCTION

163-8
21x of 32

CONTRACTOR PLEASE NOTE

FAILURE TO CHECK AND/OR APPROVE GENERAL MEASUREMENTS WILL NECESSITATE RESUBMITTING THIS DRAWING AND WILL RESULT IN DELAY.

APPROVED FOR DESIGN
As Shown
As Corrected
ARCHITECT

APPROVED FOR MEASUREMENTS
As Shown
As Corrected
CONTRACTOR

BRISTOL STEEL & IRON WORKS, INC.
BRISTOL, VIRGINIA

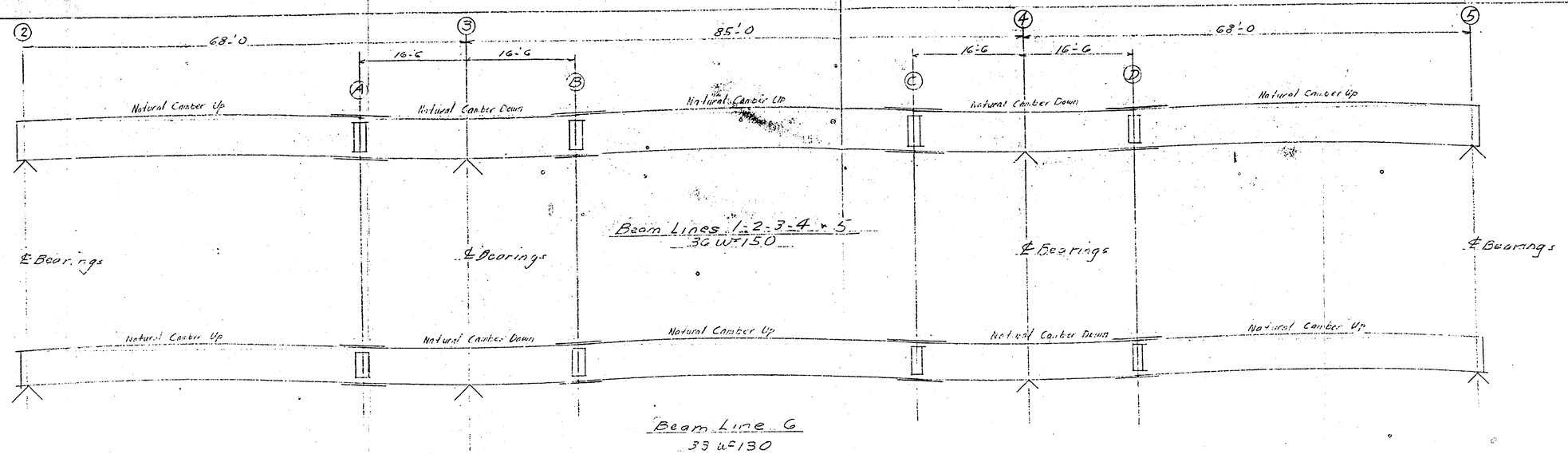
For B. G. Young & Son's.
Project Bridge over N.F. Holston River. Scott Co. Va.
Owner Va. Dept. of Highways
Archt. or Eng'r do
Made F.M.M. Revised
Checked EW "
Field Checked "
Shop Inspection "

SHOP PLAN FILE

Holes
Rivets
Paint

Customer's Number	Contract	Sheet
J.R. DENNY	F 1632	E2

1 6 3-0 8 1 2 1 X



Beam Lines 1-2-3-4 & 5
36 WF 150

Beam Line 6
33 WF 130

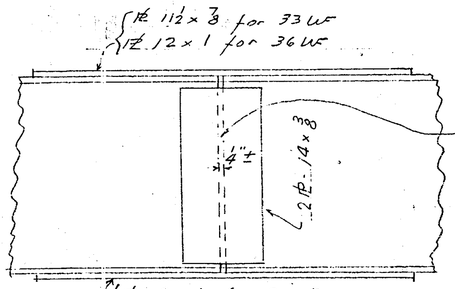
Blocking & Reaming Diagram

See Dwg. E1 for Beam lines, erection marks & match marks.

All Bms on same line to be at same elevation at bearings.

intersection at Bott of WF.

Reaming Notes
General reaming is not required. All holes for stringer field splices to be subpunched 1/4" small and reamed to size while stringers are assembled in shop and match marked.



Splice material

Erector Note
Joint between beam ends to be filled with red lead paste.

FOR CONSTRUCTION

REVIEWED
Bridge Engineer

CONTRACTOR PLEASE NOTE
FAILURE TO CHECK AND/OR APPROVE GENERAL MEASUREMENTS WILL NECESSITATE RESUBMITTING THIS DRAWING AND WILL RESULT IN DELAY.

APPROVED FOR DESIGN
As Shown
As Corrected — Architect

APPROVED FOR MEASUREMENTS
As Shown
As Corrected — Contractor

BRISTOL STEEL & IRON WORKS, INC.
BRISTOL, VIRGINIA

For R. G. Young & Sons
Project Bridge over N.F. Holston River - Scott Co. Va.
Owner Va. Dept. of Highways
Archt. or Eng'r do
Made FMM Revised
Checked EM
Field Checked
Shop Inspection
SHOP PLAN FILE

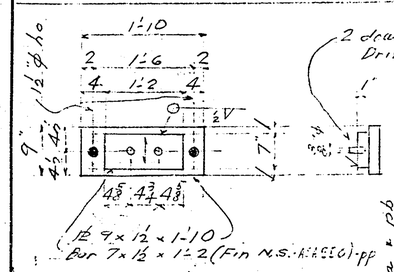
Holes
Rivets
Paint

Customer's Number	Contract	Sheet
J.R. Denny	F-1632	E3

Final

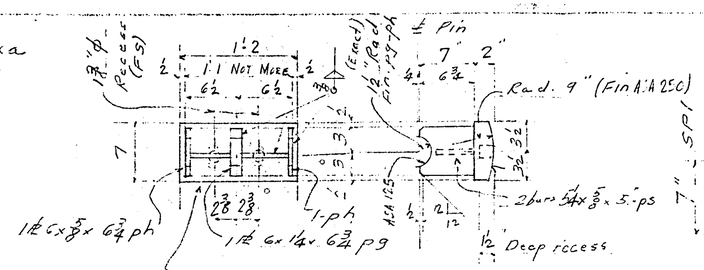
163-8
22x of 32

X 2 2 2 8-0-3-0-6

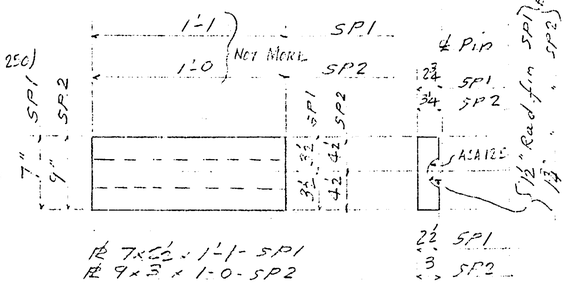


2 dowels 1/4ϕ x 2" (taper) x a
Driving fit into 7 x 1/2" bar
(See detail)

12 Bearings BP1

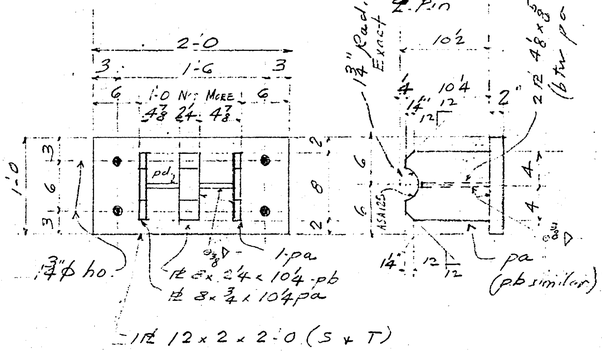


12 Bearing Rockers BR1

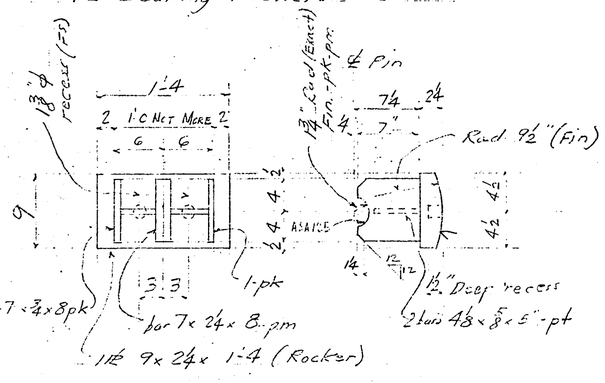


12 Sole Plates SP1
12 " " SP2 } No Paint

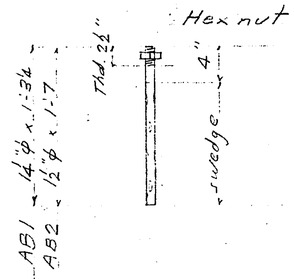
Ship Assembled to Beams



6 Fixed Shoes BS1

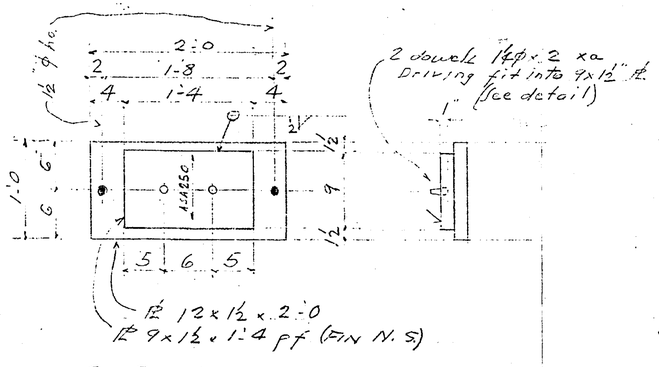


6 Bearing Rockers BR2
(weld same as BR1)

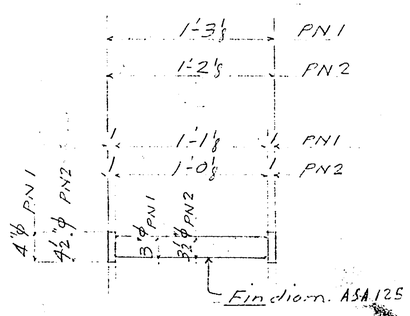


36 Anchors AB1
24 " AB2
Nut + rods Galvanized after Fab.
No Paint

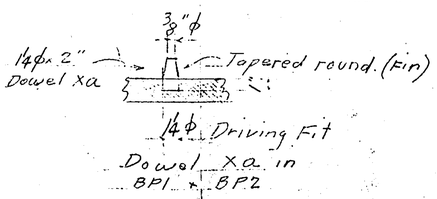
Ship Assembled to Beams



6 Bearings BP2



12 PINS PN1
12 " PN2



MATERIAL
A36 STEEL
E70XX ELECTRODES

Paint Note
Surfaces to be finished are to be coated with White Lead + Tallow applied Hot. (No paint)

Group	Ship Mark	Asm Mark	No Pcs	Section	Length Ft.	Length In.	Cut From	Unit Wgt	MO/ Sta.	Total Weight
		BP1	12	BEARINGS						
		pp	12	PL 7 x 1/2	1	2	7 x 1⅜			
			12	PL 9 x 1/2	1	10				
		xa	24	1/4ϕ	-	2				
			2'	Weld	42	0				
				paint						
		BP2	6	BEARINGS						
		pf	6	PL 7 x 1/2	1	4	9 x 1⅜			
			6	PL 12 x 1/2	2	0				
		xa	12	1/4ϕ	-	2				
			1/2"	weld	25	0				
				paint						
		BS1	6	FIXED SHOES						
			6	PL 12 x 2	2	0	12 x 2⅛			
		pa	12	PL 8 x 3/4	-	10¼				
		pb	6	PL 8 x 2¼	-	10¼				
		pd	12	PL 4⅛ x 5/8	-	8¼				
			3/8"	weld	96	0				
				paint						
		BR1	12	ROCKERS						
			12	bars 7 x 2	1	2	7 x 2⅛			
		pg	12	PL 6 x 1¼	-	6¾				
		ph	24	PL 6 x 5/8	-	6¾				
		ps	24	bars 5¼ x 5/8	-	5				
			3/8"	weld	60	0				
				paint						
		BR2	6	ROCKERS						
			6	PL 9 x 2¼	1	4	9 x 2⅜			
		pm	6	bars 7 x 2¼	-	8				
		pk	12	bars 7 x ¾	-	8				
		pt	12	bars 4⅛ x 5/8	-	5				
			3/8"	weld	30	0				
				paint						
		PN1	12	PINS						
		PN2	12	"						
			12	4" ϕ	1	3¼	1-34	PN1		
			12	4½" ϕ	1	2¼	1-24	PN2		
				galv. Anchors						
		AB1	36	1¼ϕ	1	3¼		Sketch		
		AB2	24	1½ϕ	1	7		do		
			36	1¼ Hex nut						
			24	1½ " "						
		SP1	12	PL 7 x 2½	1	1				
		SP2	12	PL 9 x 3	1	0				
				No Paint						

FOR CONSTRUCTION

BRISTOL STEEL & IRON WORKS, INC.
BRISTOL, VIRGINIA

For B.G. Young & Sons Scott County
Project Bridge over N.F. Holston R.
Owner Va. Dept. of Highways
Arch. or Eng'r do
Made FMM Revised
Checked EW "
Field Checked SHOP PLAN FILE
Shop Inspected "

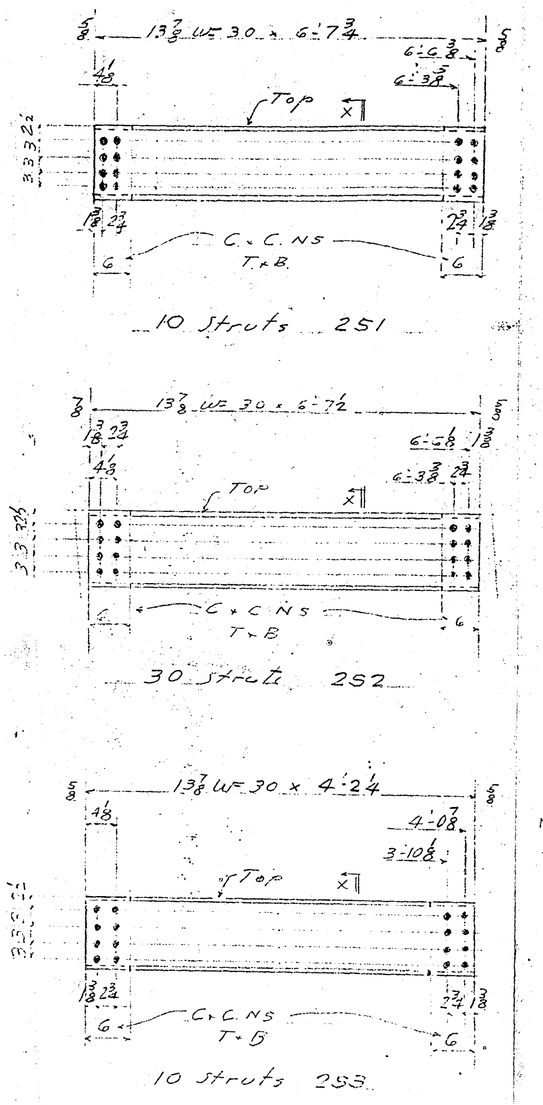
REVIEWED
Bridge Engineer
MEMBER

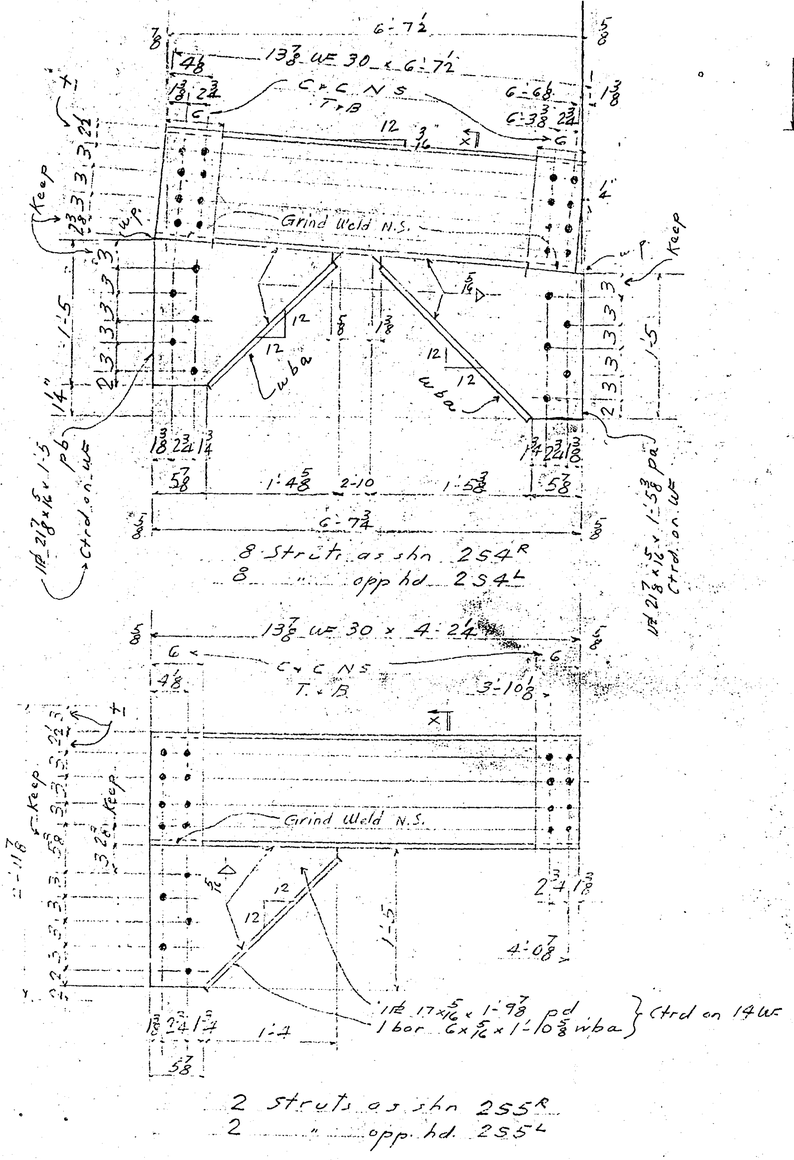
Holes Noted
Rivets None
Paint OSC (UN)
R/L 10-14-42

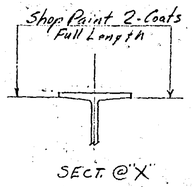
Customer's Number	Contract	Sheet
J.R. DENNY	F1632	1

163-8
23x of 32

23X
3-0
8
163







Group	Ship Mark	Assm Mark	No. Pc	Section	Length FT	Length IN	Cut From	Unit Wgt	No/STK	Total Weight
	251		10	STRUTS						
			10	14 WF 30	6	7 3/4	26-7			
				paint						
	252		30	STRUTS						
			30	14 WF 30	6	7 1/2	26-7			
				paint						
	253		10	STRUTS						
			10	14 WF 30	4	2 1/4	29-3 1/2			
				paint						
	255R		2	STRUTS						
	255L		2	"						
			4	14 WF 30	4	2 1/4	29-3 1/2			
		pd	4	PL 17 x 5/16	1	9 7/8				
		wba	4	bar 6 x 5/16	1	10 5/8				
				5/16 weld	30	0				
				paint						
	254R		8	STRUTS						
	254L		8	"						
			16	14 WF 30	6	7 1/2	26-7			
		pa	16	PL 21 7/8 x 5/16	1	5 3/8				
		pb	16	do	1	5				
		wba	32	bar 6 x 5/16	1	10 5/8				
				5/16" weld	120	0				
				paint						

MATERIAL
A36 STEEL
E70XX ELECTRODES

Ref. E1

FOR CONSTRUCTION

REVIEWED
Bridge Engineer

163-8
24x of 32

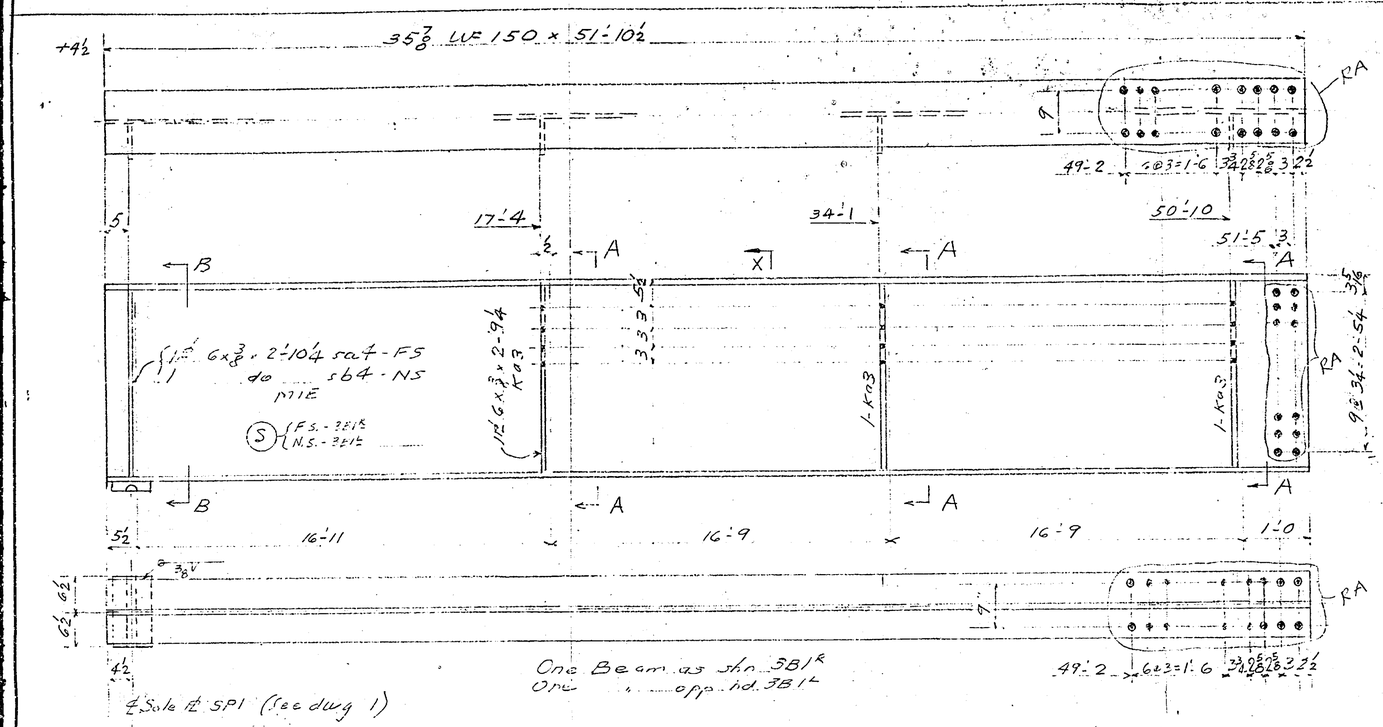
HOLES 15/16" ϕ UN
RIVETS None
PAINT 05C (UH)
Red Lead
Va. Spec's.

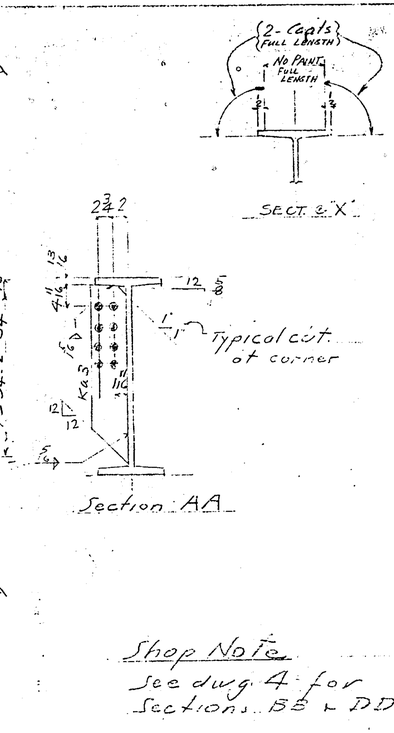
BRISTOL STEEL & IRON WORKS, INC.
BRISTOL, VIRGINIA

FOR B. G. Young & Sons Scott County
PROJECT Bridge over N.F. Holston River
OWNER Va. Dept. of Highways
ARCH. OR ENG'R. do
MADE FMM REVISED
CHECKED EJ
FIELD CHECKED
SHOP INSPECTED
SHOP PLAN FILE

CUSTOMER'S NUMBER	CONTRACT	SHEET
J. R. DENNY	F1632	2

1 6 3-0 8 2 4 X





Shop Note
See dwg 4 for Sections BB + DD

Group	Ship Mark	Assm Mark	No.	Section	Length FT	Length IN	Cut From	Unit Wgt.	Total Wgt.	Total Wgt.
	3B1	R	1	Beam						
	3B1	L	1	"						
			2	36 WF 150	51	10½	51-11			
		SP1	2	PL 7 x 2¼	1	1				
		Ka3	6	PL 6 x 3/8	2	9¼				
		Sb4	2	"	2	10¼			MIE	
		Sd4	2	"	2	10¼			MIE	
				3/8 weld	7	0				
				5/16 "	65	0				
				paint						
	3B2	R	1	Beams						
	3B2	L	1	"						
	3B3	R	2	"						
	3B3	L	2	"						
			6	36 WF 150	51	10½	51-11			
		SP1	6	PL 7 x 2¼	1	1				
		Ka3	6	PL 6 x 3/8	2	9¼				
		Kb3	18	"	2	9¼				
		Kd3	12	"	2	9¼				
		Sd4	6	"	2	10¼			MIE	
		Sf4	6	"	2	10¼			MIE	
				3/8 weld	190	0				
				5/16 "	300	0				
				paint						

FOR CONSTRUCTION

REVIEWED
Bridge Engineer

L.L. SC 10.1

163-8
25x of 32

Shop Reaming Note
See dwg 4

Shop Paint Note
Do not paint Contact surfaces.
Do not paint Fin. surface of Sole Pls.

One Beam as shown 3B2R
One " opp hand 3B2L
2 Beams as shown 3B3R
2 " opp hand 3B3L

Fabricate all beams with mill Camber, up.

Ref. E1
Mat'l. A36
E70XX ELECTRODES

MEMBER AISC

HOLES 15/16" UN
RIVETS None
PAINT OSC (UN) Red Lead Va. Spec's.

BRISTOL STEEL & IRON WORKS, INC.
BRISTOL, VIRGINIA

FOR B. G. Young & Sons Scott Co.
PROJECT Bridge over N.F. Holston
OWNER Va. Dept. of Highways
ARCH. OR ENG'R EW
MADE EWND REVISED
CHECKED EW
FIELD CHECKED
SHOP INSPECTED
SHOP PLAN FILE

CUSTOMER'S NUMBER	CONTRACT	SHEET
J. R. DENNY	F1632	3

25X

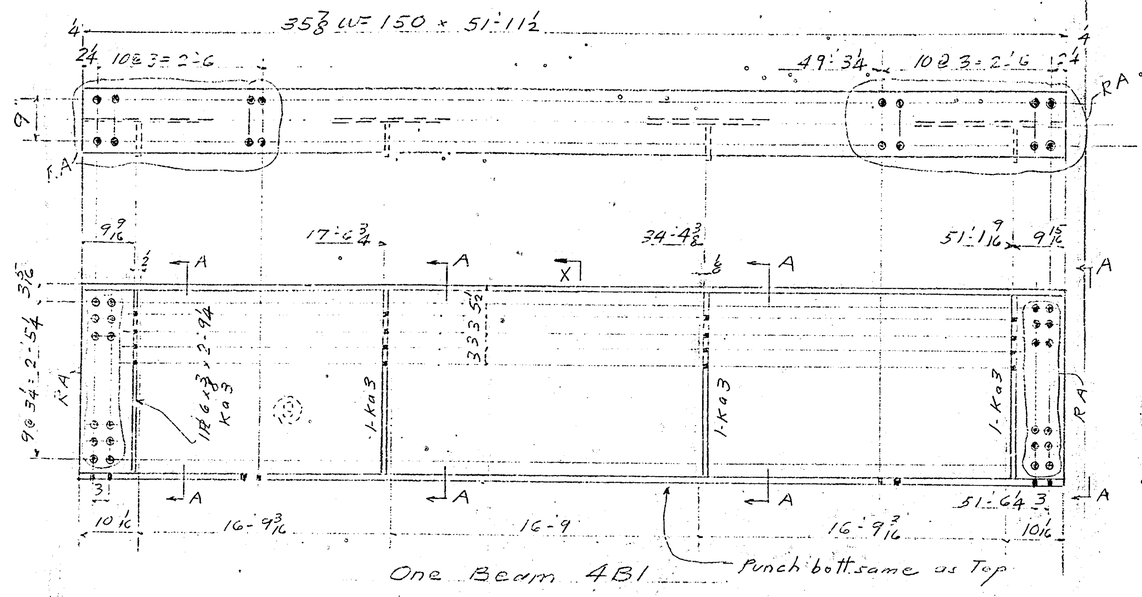
2

5

3-8-0

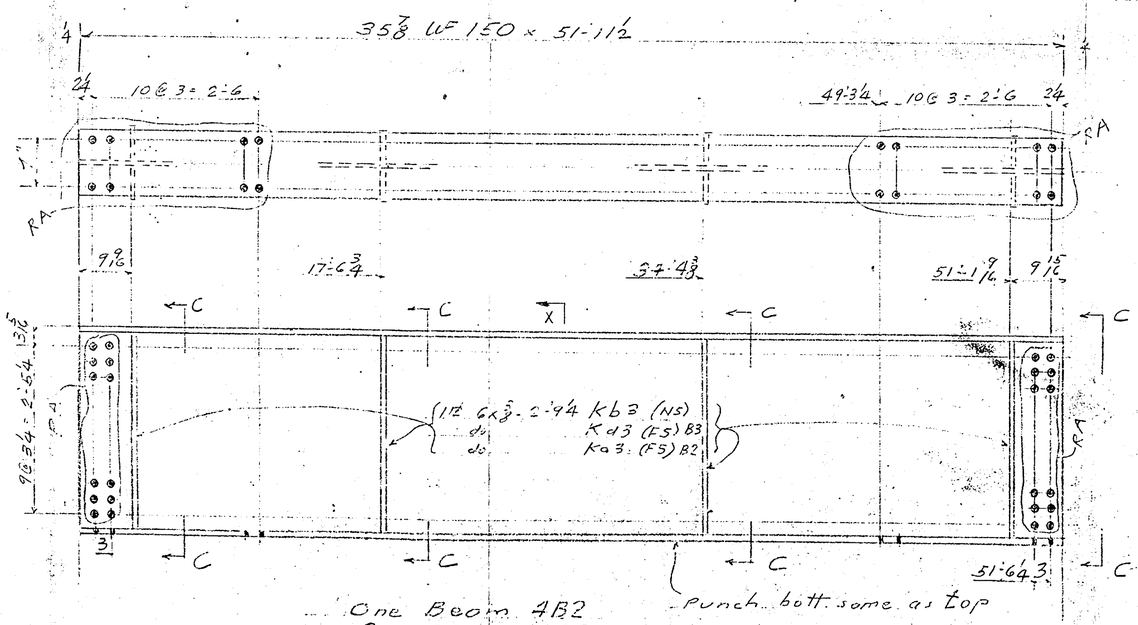
9

11



One Beam 4B1

Punch bott. same as Top

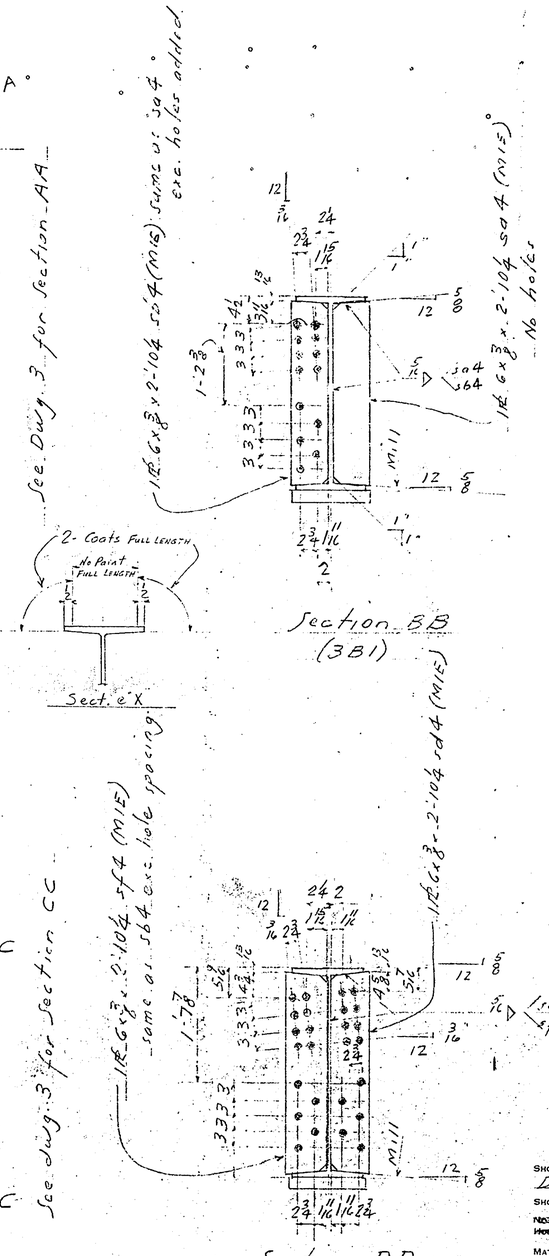


One Beam 4B2
2 Beams 4B3

Punch bott. same as top

Fabricate all beams with mill camber up

See Dwg. 3 for Section AA



See Dwg. 3 for Section CC

Division	Shipping Mark	Assm Mark	No Pcs	Section	Length Ft.	Length In.	Length Nom	Cut From	Unit Wgt	Total Weight
	4B1		1	Beam						
			1	36 WF 150	51	11½	52-0			
		Ka3	4	PL 6 × ⅜	2	9¼				
				5/16 weld	25	0				
				paint						
	4B2		1	Beam						
	4B3		2	"						
			3	36 WF 150	51	11½	52-0			
		Ka3	4	PL 6 × ⅜	2	9¼				
		Kb3	12	"	2	9¼				
		Kd3	8	"	2	9¼				
				5/16 weld	150	0				
				paint						

Shop Reaming Note

All holes marked RA are to be sub punched or sub drilled ¼ small and reamed to size while stringers are assembled in the shop. See Dwg. E3 for blocking diagram.

REVIEWED

Bridge Engineer

FOR CONSTRUCTION

E DWG. E1
Va. Spec's.
SHOP PAINT A.S.C. (U.N.) R.L.
Do not paint Top.
SHOP CONTACT SURFACES: No Paint
~~NO PAINT WITHIN 3" OF OPEN HOLES UNLESS MARKED "P"~~
MATERIAL A36
E70XX ELECTRODES
HOLES 15/16 PUN
RIVETS NONE

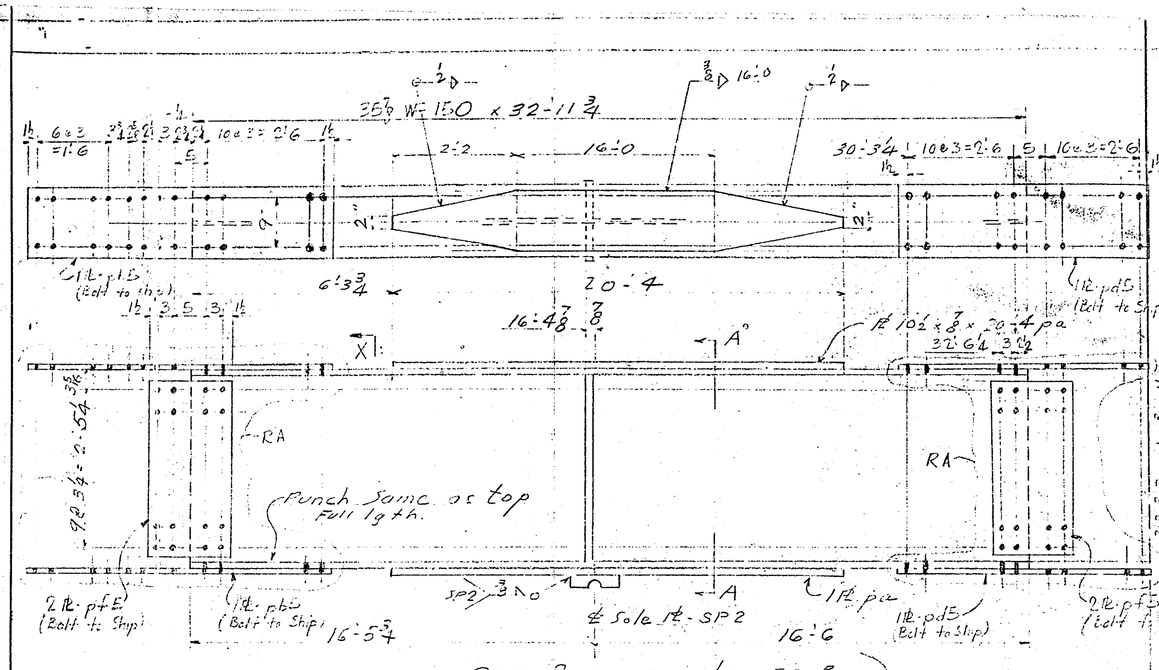
BRISTOL STEEL & IRON WORKS, INC.
BRISTOL, VIRGINIA

FOR B. G. Young & Sons County Scott
PROJECT Bridge over N.F. Holston
OWNER Va. Dept. of Highways River
ARCH. OR ENG'R. do.
MADE EMM REVISED
CHECKED EW "
FIELD CHECKED SHOP PLAN FILE
SHOP INSPECTED "

Customer's Number	Contract	Sheet
J. R. Denny	F1632	4

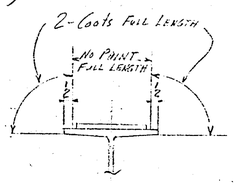
163-8
26X of 32

X 26 8-30-69

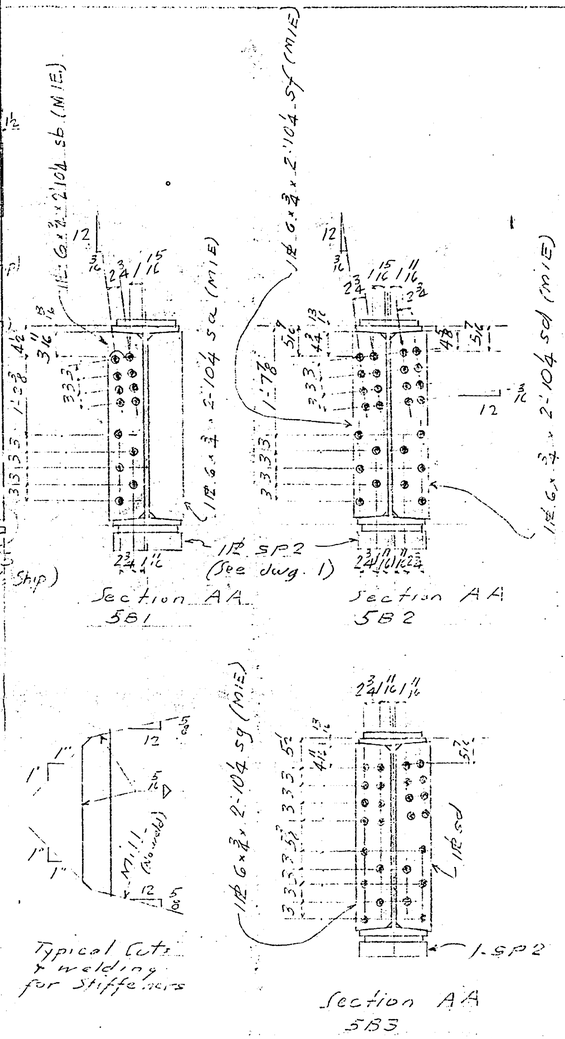


One Beam as shn. 5B1R
One " opp hd. 5B1L
3 Beams as shn. 5B2R
3 " opp hd. 5B2L
One Beam as shown 5B3R
One " opp. hd. 5B3L

Fabricate all beams with mill camber down



SECTION X



Typical Cuts & welding for Stiffeners

Shop Reaming Note: See dwg. 4

Do not paint fin. surface of SP2

Division	Group	Ship Mark	No. Req.	Section	Length Ft.	Length In.	No. Req.	Length	Cut From	Unit Total Weight
		5B1 R	1	Beams						
		5B1 L	1	"						
		5B2 R	3	"						
		5B2 L	3	"						
		5B3 R	1	"						
		5B3 L	1	"						
			10	36 WF 150	32	11¾		33-0½		
		sa	2	℔ 6 x ¾	2	10¼			M.E.	
		sb	2	"	2	10¼			M.E.	
		sd	8	"	2	10¼			M.E.	
		sf	6	"	2	10¼			M.E.	
		sg	2	"	2	10¼			M.E.	
		SP2	10	9 x 3	1	0			See Dwg. 1	
		pa	20	℔ 10½ x ⅜	20	4				
		pfE	20	℔ 12 x 1	5	8				
		pdE	20	"	5	8				
		pfS	40	℔ 14 x ½	2	8¼				
				⅜" weld	167	0				
				½" weld	667	0				
				¼" weld	150	0				
			120	⅜" x 1 S.B.					Tack tip	
				Paint						
				Total	38	8				

REVIEWED
Bridge Engineer

FOR CONSTRUCTION

E Dwg. E1 No. Specs.
Shop Paint. OSC Red Lead UN
Shop Contact Surfaces. No Paint.
~~No Paint Within 3" of Open Holes Unless Marked Approx.~~
Material. A36
E70XX Electrodes
Bolts ⅝" UN
Rivets. None

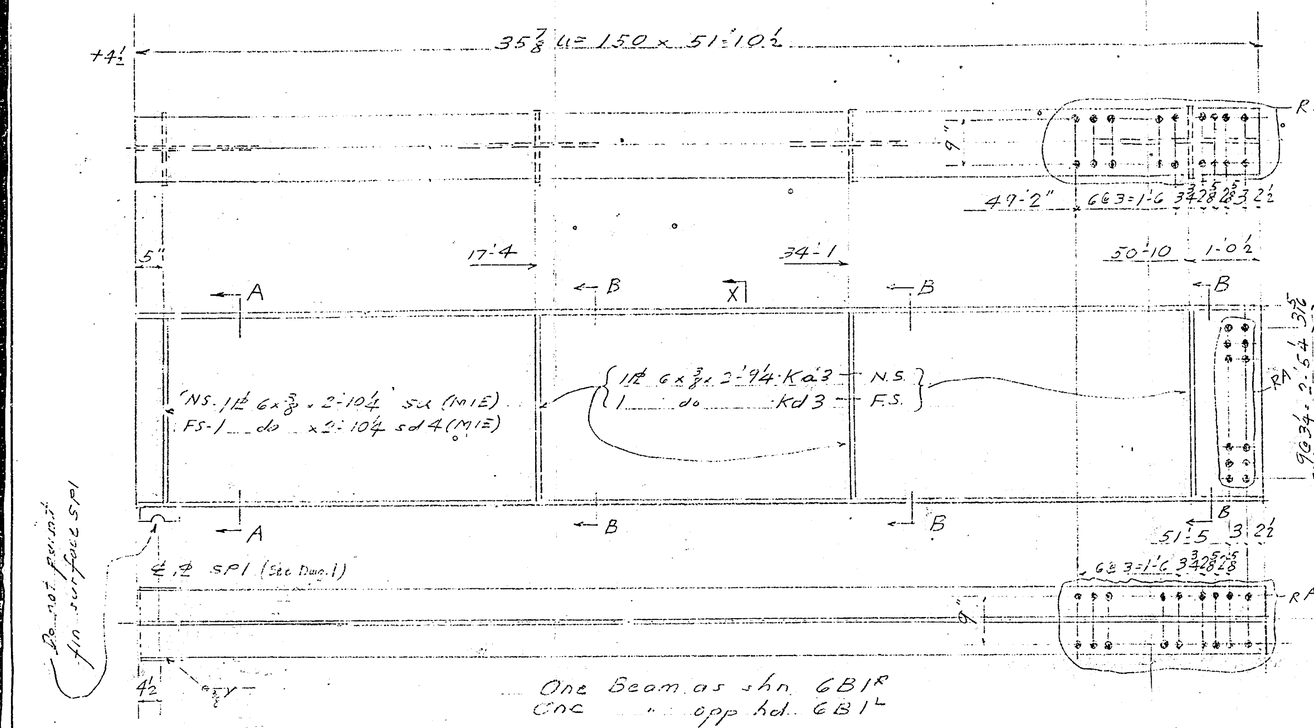
BRISTOL STEEL & IRON WORKS, INC.
BRISTOL, VIRGINIA

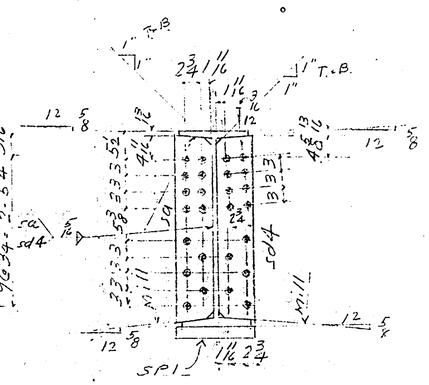
For. E. G. Young & Sons Scott County
Project. Bridge over N.F. Holston River
Owner. Va. Dept. of Highways
Arch. or Eng'r. c/o
Made. FMM Revised.
Checked. EW "
Field Checked. SHOP PLAN FILE
Shop Inspected. "

Customer's Number	Contract	Sheet
J.R. Denny	F1632	5

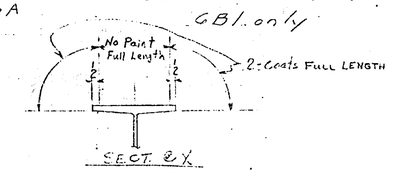
163-8
27x of 32

3-0-9

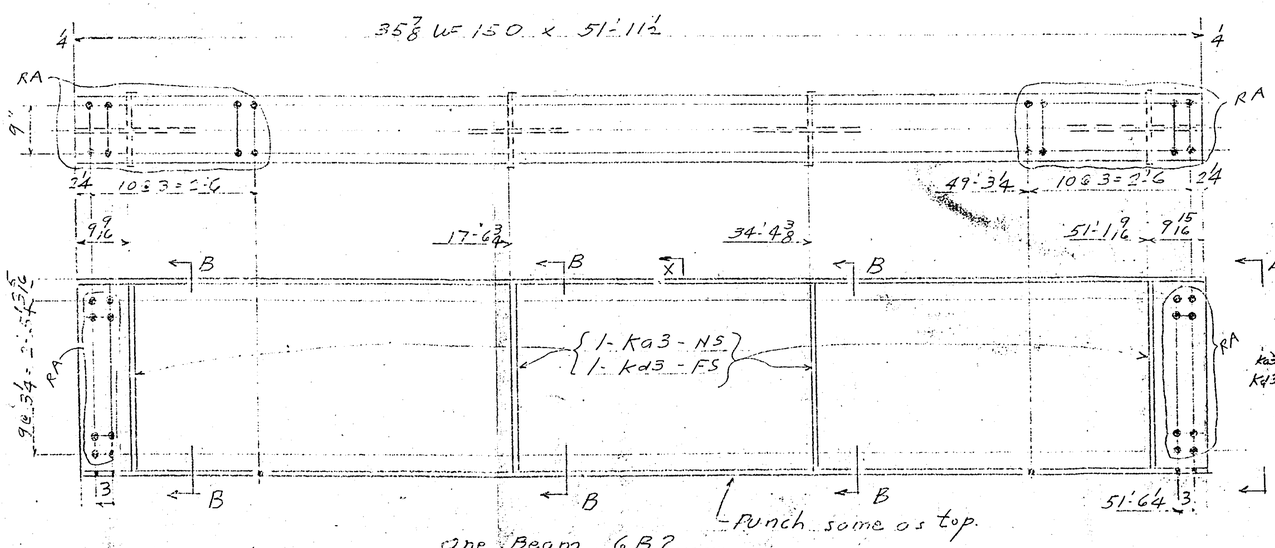




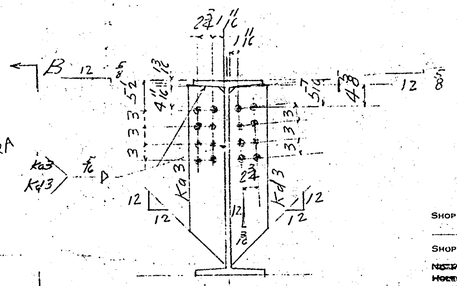
Section AA
GB1 only



SHOP REAMING NOTE
See dwg. 4



One Beam GB2



Section BB
GB1-GB2

All Beams to be fabricated with mill camber up.

Division	Group	Ship Mark	Assm. No. Mark	Pcs	Section	Length FT.	Length IN.	Length STK	Length	Cut From	Unit Weight	Total Weight
		GB1R		1	Beam							
		GB1L		1	"							
				2	36 WF 150	51	10 1/2		51-11			
			SP1	2	PL 7 x 2 1/2	1	1			See Dwg. 1		
			sa	2	PL 6 x 3/8	2	10 1/4			M.I.E.		
			sd4	2	"	2	10 1/4			M.I.E.		
			Ka3	6	"	2	9 1/4					
			Kd3	6	"	2	9 1/4					
					3/8 Weld	2	4					
					5/16 "	100	0					
					paint							
		GB2		1	Beam							
				1	36 WF 150	51	11 1/2		52-0 1/2			
			Ka3	4	PL 6 x 3/8	2	9 1/4					
			Kd3	4	"	2	9 1/4					
					5/16 weld	50	0					
					paint							

FOR CONSTRUCTION

REVIEWED
Bridge Engineer

E DWG. E1

SHOP PAINT: GSC Red Lead UN. No paint

SHOP CONTACT SURFACES: No paint

~~NO PAINT WITHIN 3" OF OPEN HOLES UNLESS MARKED "P"~~

MATERIAL: A36

E70XX ELECTRODES

MEMBER AISC

163-8

28x of 32 15' HOLES 13/16 UN.

RIVETS None

BRISTOL STEEL & IRON WORKS, INC.
BRISTOL, VIRGINIA

FOR B. G. Young & Sons Scott County

PROJECT Bridge Over N. F. Holston

OWNER Va. Dept. of Highways

ARCH. OR ENG'R do

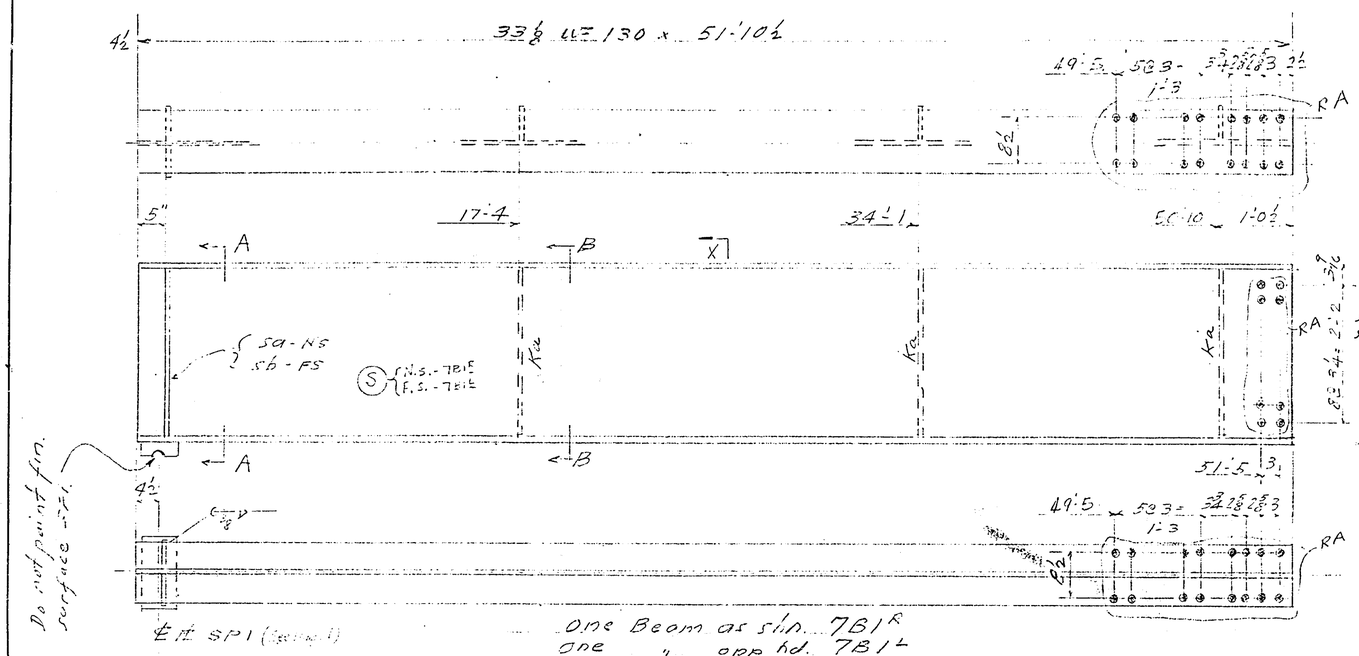
MADE FMM REVISED

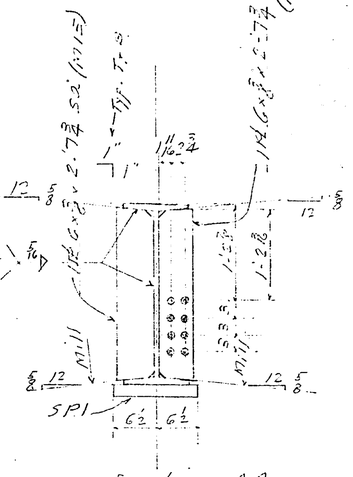
CHECKED EW "

FIELD CHECKED SHOP PLAN FILE

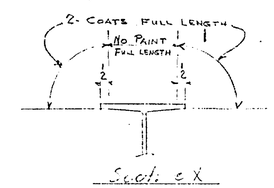
SHOP INSPECTED "

CUSTOMER'S NUMBER	CONTRACT	SHEET
J. R. DENNY	F1632	6

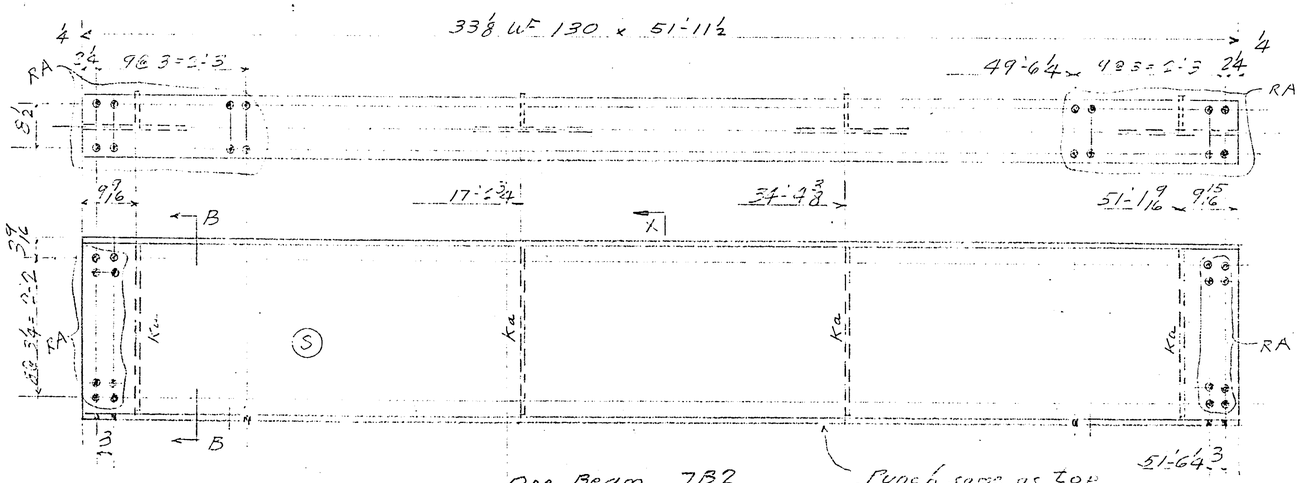


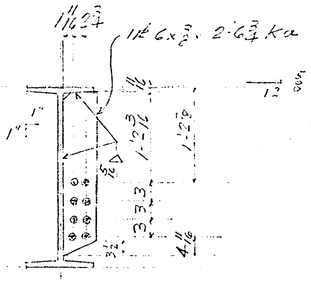


Section AA
7B1



Scal. ex





Section BB - Typ @ Ka
7B1 - 7B2

Division	Group	Piece Mark	Piece No	Section	Length Ft	Length Inches	Length	Cut From	Unit Wgt	Total Weight
		7B1R	1	Beam						
		7B1L	1	"						
			2	33 WF 130	51	10½	51-11			
		SP1	2	PL 7 x ⅜	1	1		See Dwg.		
		sa	2	PL 6 x ⅜	2	7¾		M.E.		
		sb	2	"	2	7¾		M.E.		
		Ka	6	"	2	6¾				
				⅜ weld	7	0				
				5/16 "	42	0				
				paint						
		7B2	1	Beam						
			1	33 WF 130	51	11½	52-0½			
			Ka 4	PL 6 x ⅜	2	6¾				
				5/16 weld	24	0				
				paint						

REVIEWED

Bridge Engineer

L.L = 51'-11"

FOR CONSTRUCTION

163-8
29x of 32

SHOP REAMING NOTE All holes marked RA to be subpunched or sub-drilled & reamed to full size assembled as shown on dwg E3.

Fabricate Beams with mill Camber up.

E Dwg. E1 Va. Specs.
SHOP PAINT CCC Red Lead (UN)
SHOP CONTACT SURFACES: No paint
NO PAINT WITHIN 3" OF OPEN ~~HOLES UNLESS MARKED "P"~~
MATERIAL: A36
EXXX ELECTRODES
MEMBER AISC
HOLES 15/16" UN.
RIVETS None

BRISTOL STEEL & IRON WORKS, INC.
BRISTOL, VIRGINIA

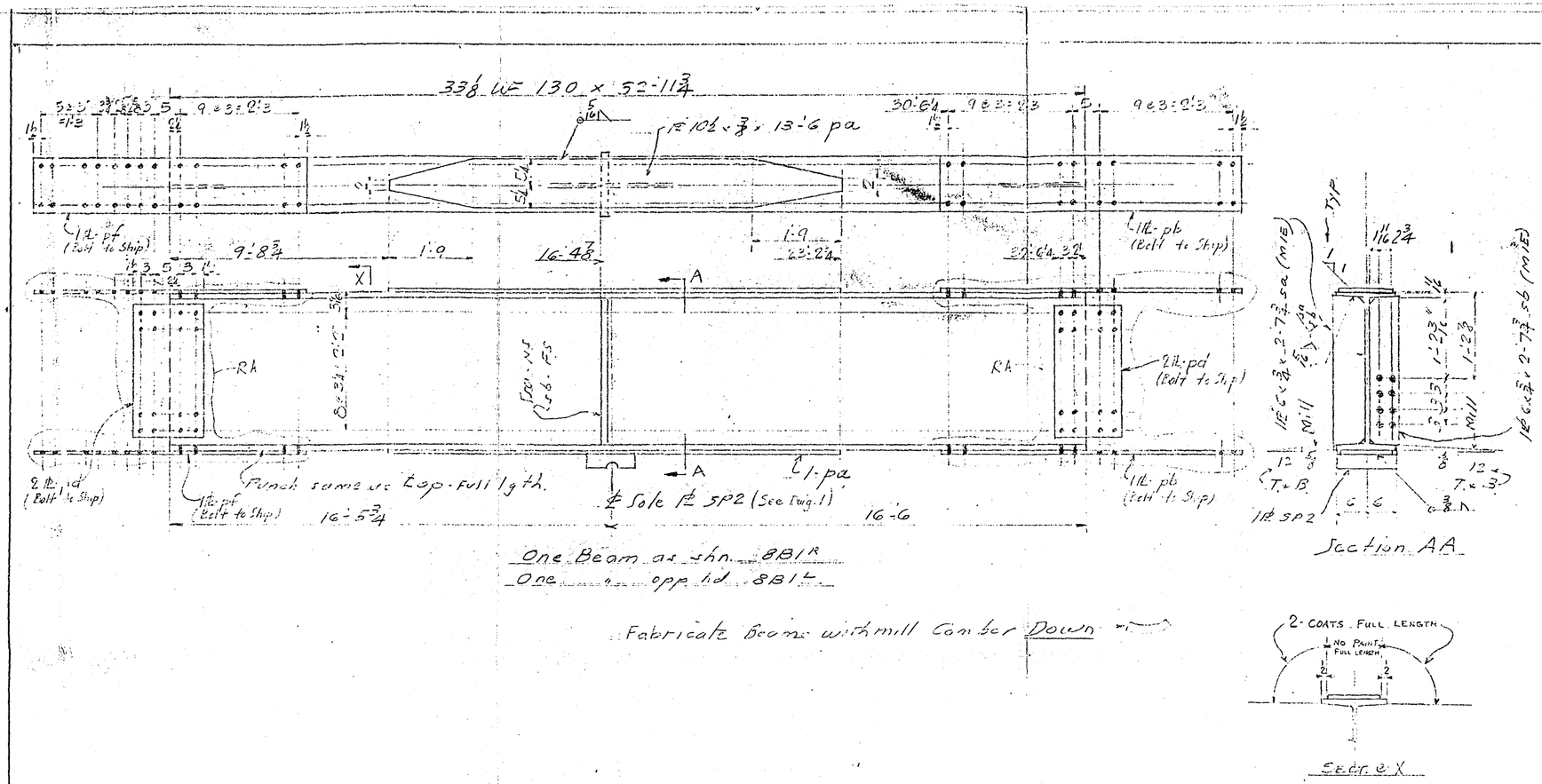
FOR P.G. Young & Sons Scott County
PROJECT Bridge over N.F. Holston
OWNER Va. Dept. of Highways River
ARCH. OR ENG'R
MADE FMM REVISED
CHECKED EW "
FIELD CHECKED " SHOP PLAN FILE
SHOP INSPECTED "

CUSTOMER'S NUMBER	CONTRACT	SHEET
J. R. DEHNT	F1632	7

X 62

3-0 8

9



Division	Group	Ship Mark	Assm Mark	No Pos	Section	Length Ft.	Length In.	Mo Stk	Length	Cut From	Unit Wgt	Total Weight
		8B1R		1	Beam							
		8B1L		1	"							
				2	33 WF 130	32	11¾		33-0½			
			SP2	2	PL 9x3	1	0			See Dwg. 1		
			sa	2	PL 6x¾	2	7¾			M.I.E.		
			sb	2	do	2	7¾			M.I.E.		
			pa	4	PL 10½x⅜	13	6					
			pb	4	PL 11½x⅞	5	2					
			pd	8	PL 11½x⅜	2	5¾					
			pf	4	PL 11½x⅞	5	2					
					⅜" Weld	7	0					
					5/16" Weld	132	0					
				24	⅞"d M.B.					to ship		
					Paint							

REVIEWED

Bridge Engineer

L.L. = 38.2

FOR CONSTRUCTION

Do not paint fin surface of SP2

SHOP REAMING NOTE
See dwg. 7.

E Dwg. E1

Shop Paint: OSL Red Lead UN Va. Specs.

Shop Contact Surfaces: No Paint

~~No Paint within 3" of Open~~
~~Holes Unless Marked "P"~~

Material: A36

E70XX Electrodes

163-8
30x of 32

Holes 15" UN
Rivets None

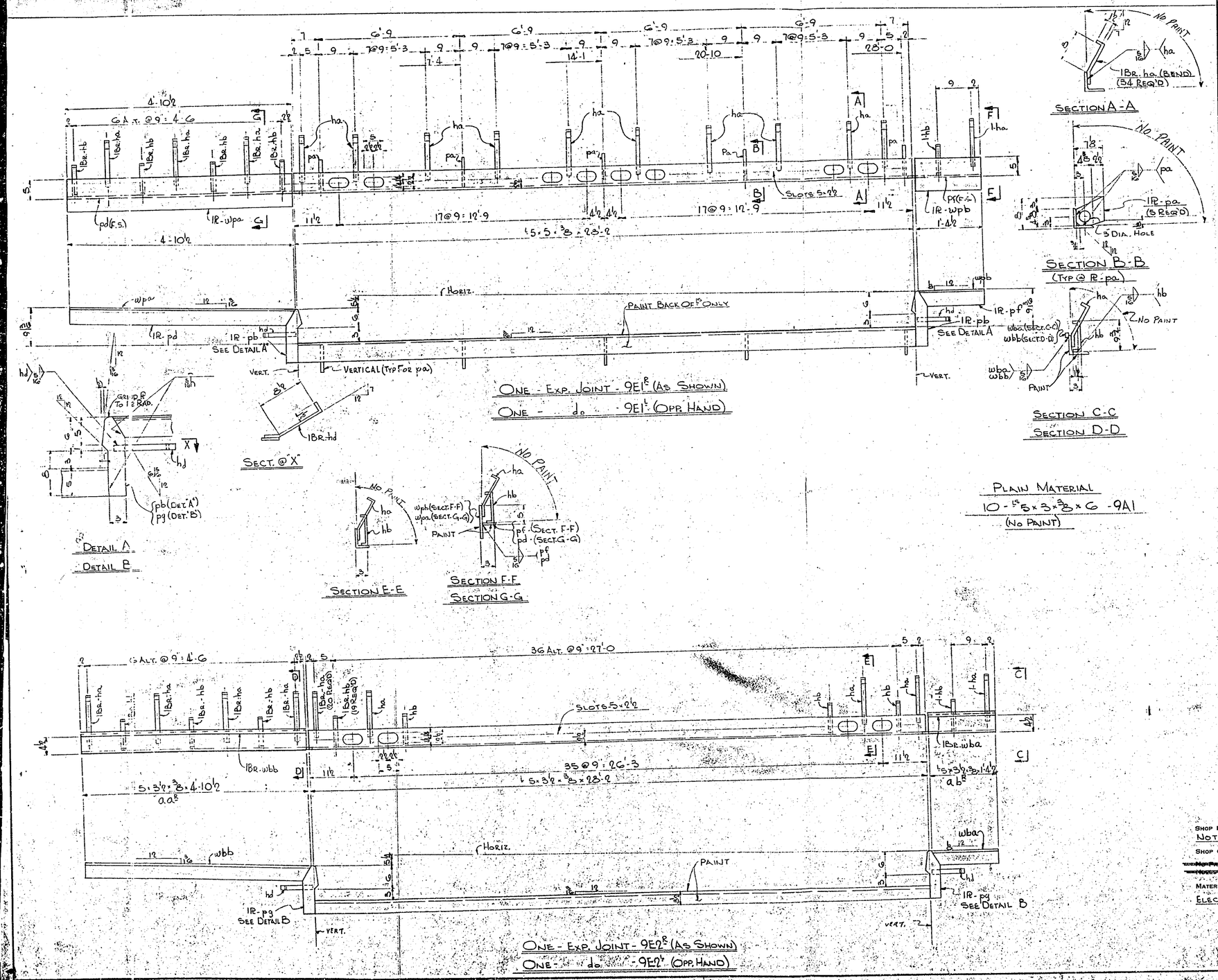
BRISTOL STEEL & IRON WORKS, INC.
BRISTOL, VIRGINIA

For E.G. Young & Sons Scott County
Project Bridge over N.F. Holston River
Owner Va. Dept. of Highways
Arch. or Eng'r. do
Made EMM Revised
Checked EJ
Field Checked
Shop Inspected

SHOP PLAN-FILE

Customer's Number	Contract	Sheet
J.R. DENNY	F1632	8

X 3 0 8 3-0 6



DIVISIONS	GROUP	SHIP MARK	ASS'M MARK	No. PCS.	SECTION	LENGTH FT.	LENGTH IN.	M.D. STK.	LENGTH	CUT FROM	UNIT WT.	TOTAL WEIGHT
		9E1R L		2	EXP. JOINTS							
				2	5 x 5 x 3/8	28	2					
			wpa	2	PL 8 1/2 x 3/8	4	10 1/2					
			wpb	2	PL do	1	4 1/2					
			pd	2	PL 3 1/2 x 3/8	4	10 1/2					
			pf	2	PL do	1	4 1/2					
			ha	76	BRS. 1 x 3/8	1	0			(BEND)		
			hb	10	do	1	0			(do)		
			hd	4	BRS. 1 x 3/8	1	0			(do)		
			pa	10	PL 7 1/8 x 1/2	-	7 5/8					
			pb	4	PL 4 x 3/8	1	2					
					5/16 WELD	76	0					
					PAINT							
		9E2R L		2	EXP. JOINTS							
				2	5 x 3 1/2 x 3/8	28	2					
			aaR L	2		4	10 1/2					
			abR L	2	do	1	4 1/2					
			wba	2	BRS. 1 x 3/8	1	4 1/2					
			wbb	2	do	4	10 1/2					
			ha	50	BRS. 1 x 3/8	1	0			(BEND)		
			hb	46		1	0			( )		
			hd	4	do	1	0			(do)		
			pg	4	PL 4 x 3/8	1	0 1/2					
					5/16 WELD							
					PAINT							
					PLAIN MATERIAL							
		9A1		10	5 x 3 x 3/8	-	6					
					(NO PAINT)							

FOR CONSTRUCTION

REVIEWED

Bridge Engineer

E DWG. E1

SHOP PAINT O.S.C. RED LEAD AS NOTED (PER VA. HWY. SPECS.)

SHOP CONTACT SURFACES NOT PAINTED

~~NO PAINT WITHIN 5" OF OPEN NOTED UNLESS MARKED "P"~~

MATERIAL A36

ELECTRODES: E70XX

163-8

31 x of 32

HOLES NOTED

RIVETS NONE

MEMBER AISC

BRISTOL STEEL & IRON WORKS, INC.
BRISTOL, VIRGINIA

FOR B.G. YOUNG & SONS

PROJECT BRIDGE OVER N.F. HOLSTON RIVER, SCOTT COUNTY

OWNER VA. DEPT. OF HIGHWAYS

ARCH. OR ENG'R. do

MADE JACOBS 11-17-64 REVISED

CHECKED EW

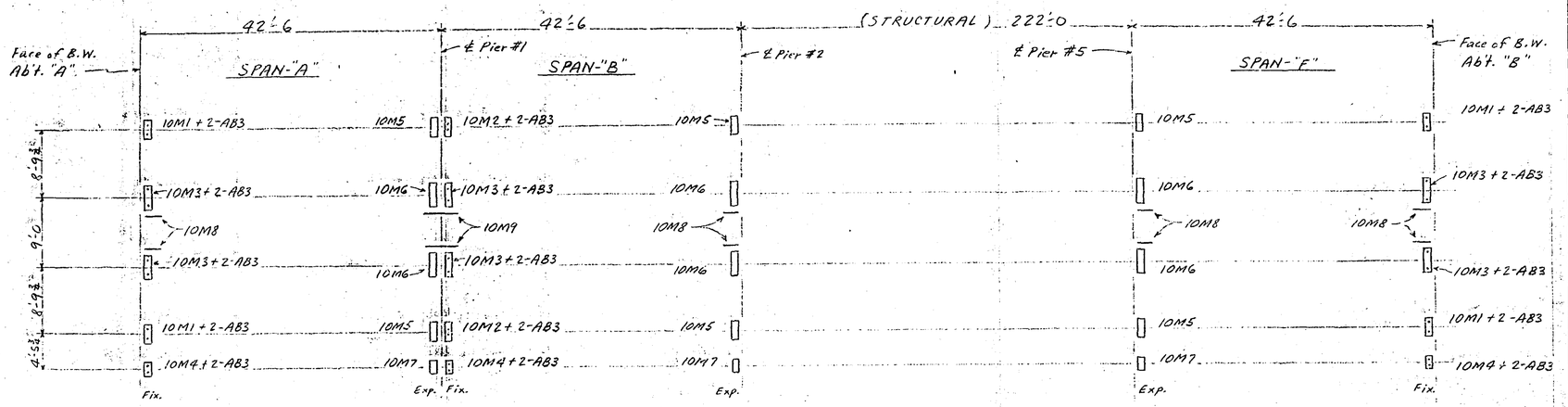
FIELD CHECKED

SHOP INSPECTED

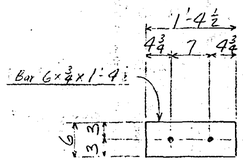
SHOP PLAN FILE

CUSTOMER'S NUMBER	CONTRACT	SHEET
J. R. DENNY	F-1632	9

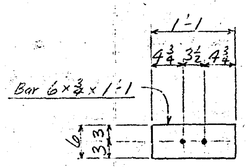
X 1 3 8 0 9 1



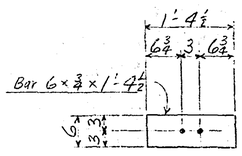
PLAN VIEW SHOWING NEOPRENE PADS & ANCHORS



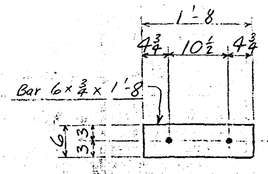
4-NEOPRENE PADS-10M1



3-NEOPRENE PADS-10M4



2-NEOPRENE PADS-10M2



6-NEOPRENE PADS-10M3

PLAIN MATERIAL

6-	NEOPRENE PADS	6×¾×1'-4½	10M5
6-	do	6×¾×1'-8	10M6
3-	do	6×¾×1'-1	10M7
8-	do	6×¾×1'-6	10M8
2-	do	6×¾×3'-0	10M9
30-	GALV. RODS	1"Φ×2'-0	AB3

DIVISIONS	GROUP	SHIP. MARK	ASS. M. MARK	NO. PCS.	SECTION	LENGTH FT.	LENGTH IN.	MO STK.	LENGTH	CUT FROM	UNIT WGT.	TOTAL WEIGHT
		10M1		4	NEOPRENE PADS							
		10M2		2								
		10M3		6								
		10M4		3	do							
				6	Bars 6×¾	1	4½			10M1-M2		
				6	Bars 6×¾	1	8			10M3		
				3	Bars 6×¾	1	1			10M4		
					PLAIN MATERIAL							
		10M5		6	NEOPRENE PADS							
		10M6		6								
		10M7		3								
		10M8		8								
		10M9		2	do							
				6	Bars 6×¾	1	4½			10M5		
				6	Bars -	1	8			10M6		
				3	Bars -	1	1			10M7		
				8	Bars -	1	6			10M8		
				2	Bars - do	3	0			10M9		
		AB3		30	Galv. Rods 1"Φ	2	0					

REVIEWED

Bridge Engineer

FOR CONSTRUCTION

ALL MAT'L - NEOPRENE
(Except Galvanized Rods)
NOTE: Neoprene shall be individually molded Pads per VA. DEPT. OF HWY. Specs.

E DWG.

SHOP PAINT NONE

~~SHOP CONTACT SURFACES~~

~~NO PAINT WITHIN 3" OF OPEN HOLES UNLESS MARKED "F"~~

MATERIAL NOTED

MEMBER

163-8
32z of 32

HOLES 1 5/16 Φ

RIVETS

BRISTOL STEEL & IRON WORKS, INC.
BRISTOL, VIRGINIA

FOR B.G. YOUNG & SONS, SCOTT COUNTY
PROJECT BRIDGE OVER N.F. HOLSTON RIVER
OWNER VA. DEPT. OF HIGHWAYS
ARCH. OR ENG'R. do
MADE E.V.G. 11/30/64 REVISED
CHECKED GML 11/30/64
FIELD CHECKED
SHOP INSPECTED

SHOP PLAN FILE

CUSTOMER'S NUMBER	CONTRACT	SHEET
J.R. DENNY	F-1632	10

(FINAL)

1 6 3-0 8 3 2 7