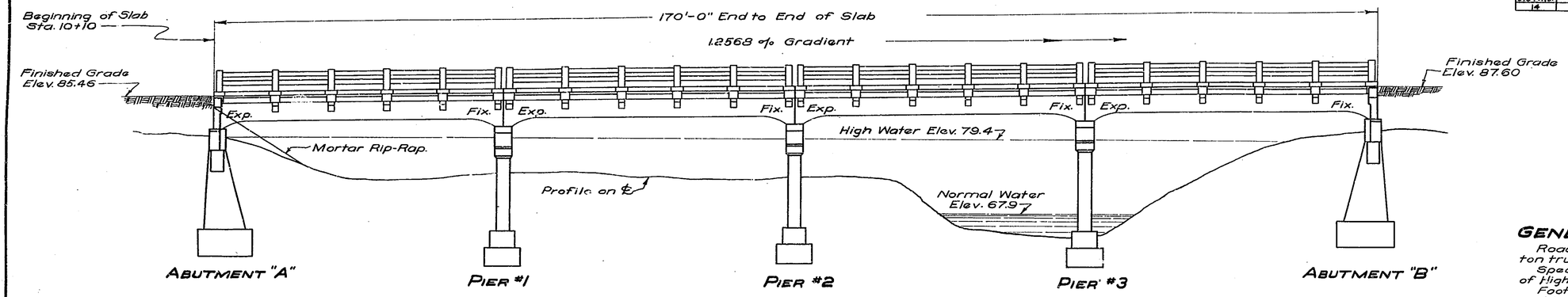
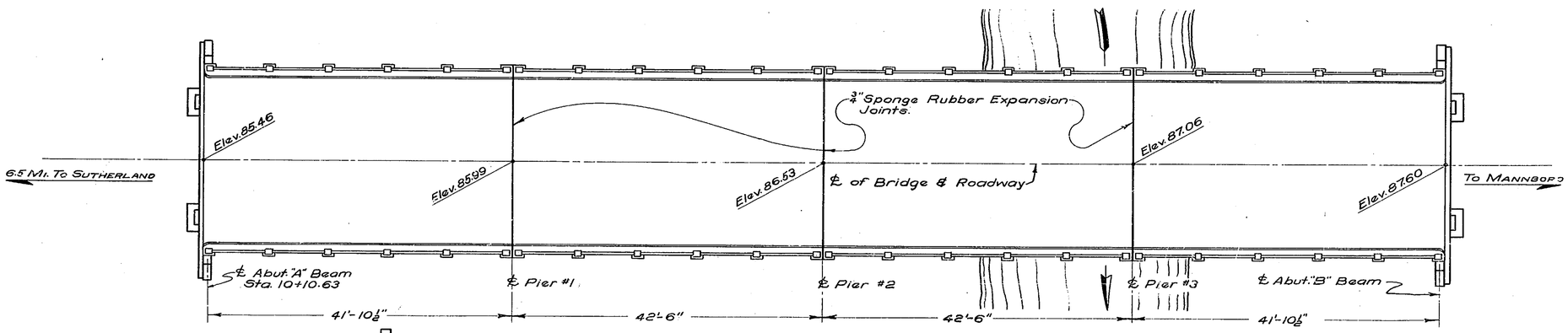
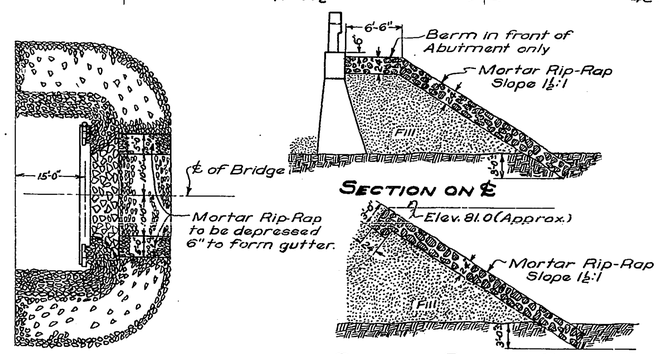
FED. ROAD DIST. NO.	STATE	B.R.R. ROUTE NO.	B.R.R. PROJ. NO.	STATE ROUTE NO.	STATE PROJ. NO.	SHEET NO.	TOTAL SHEETS
14	VA.			38	1231	1	2



SIDE ELEVATION



PLAN



SECTION ON ℄

SECTION BEYOND BERM

DETAILS OF MORTAR RIP-RAP ABUTMENT "A"

ESTIMATED QUANTITIES

	Conc. Cu. Yds. Class "A"		Reinf. Steel Pounds	Excav. Cu. Yds. "A"	Excav. Cu. Yds. "B"	Mortar Rip-Rap Sq. Yds.
Superstructure	235.8		60,845			
Abut. "A" Neat:-	~~207~~	18.7	2,515			
" "A" Foot:-	~~101~~	6.9		~~39~~ 30	~~32~~ 20	~~165~~ 175.9
Pier #1:-	~~193~~	18.3	2,555	~~19~~ 20	~~30~~ 16	
Pier #2:-	~~193~~	19.0	2,555	~~18~~ 19	~~28~~ 18	
Pier #3:-	~~202~~	19.2	2,645		~~21~~ 17	
Abut. "B" Neat:-		20.1	2,515			
" "B" Foot:-	~~107~~	11.8		~~59~~ 36	~~39~~ 25	
Totals:-	~~3550~~	347.8	73,630	125	~~140~~ 96	~~165~~ 175.9

GENERAL NOTE:-

Roadway 24 Ft. clear. Capacity 15 ton trucks.

Specifications:- Virginia Department of Highways; Bridge Specifications, 1932.

Footings shall extend to firm material and foundations shall be approved by the Engineer.

To provide for variations in elevations of foundations, adjustments shall be made in stems of Piers and footings of Abutments.

All concrete shall be Class "A".

Excavation above elevation 68.00 shall be classified as A, below as "B".

For further details of Superstructure, see Standard Plan RC-24-40.

B.M. Nail in side of 8" Pine, 60 Ft. Rt. Sta. 12+08, Elev. 79.88.

COMMONWEALTH OF VIRGINIA

DEPARTMENT OF HIGHWAYS

PROPOSED BRIDGE

OVER NAMOZINE CREEK - 6.5 MI. FROM SUTHERLAND

STA. 10+95 - RT. 38 - PROJ. 1231 - AMELIA & DINWIDDIE CO'S

4 - 40'-0" REINFORCED CONCRETE BEAM SPANS

RICHMOND, VA.

708

RECOMMENDED FOR APPROVAL:- M. L. P. Gladden
BRIDGE ENGINEER

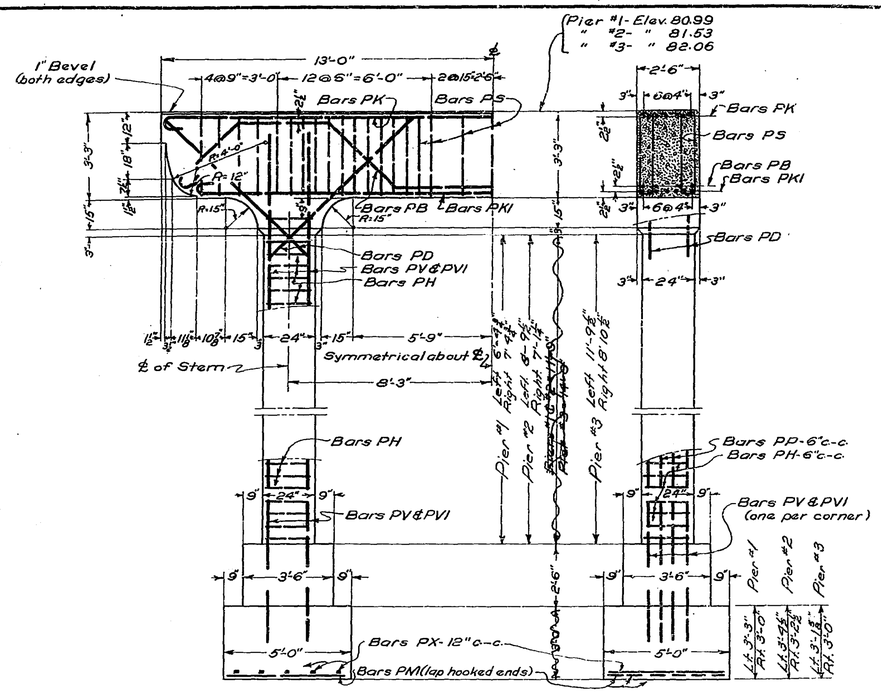
APPROVED:- C. S. Mullen
CHIEF ENGINEER

DRAWN BY:- E.B.L.
TRACED BY:- S.B.L.
CHECKED BY:- C.C.R.

Rev. Oct. 4, 1939
JULY, 19, 1939
SCALE:- 1" = 1'-0"

LXXIX-4
SHEET 1 OF 2

FED. ROAD DIST. NO.	STATE	B.P.R. ROUTE NO.	B.P.R. PROJ. NO.	STATE ROUTE NO.	STATE PROJ. NO.	SHEET NO.	TOTAL SHEETS
14	VA.			38	1231	4A	4

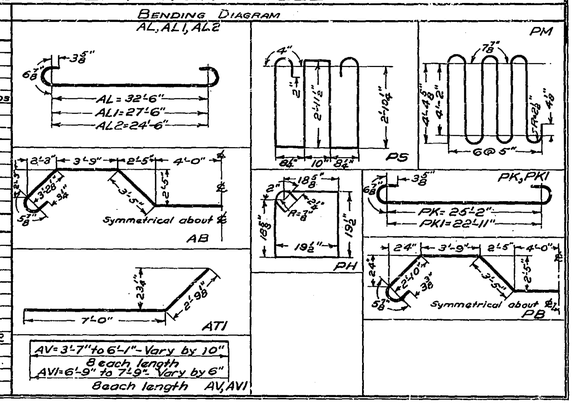


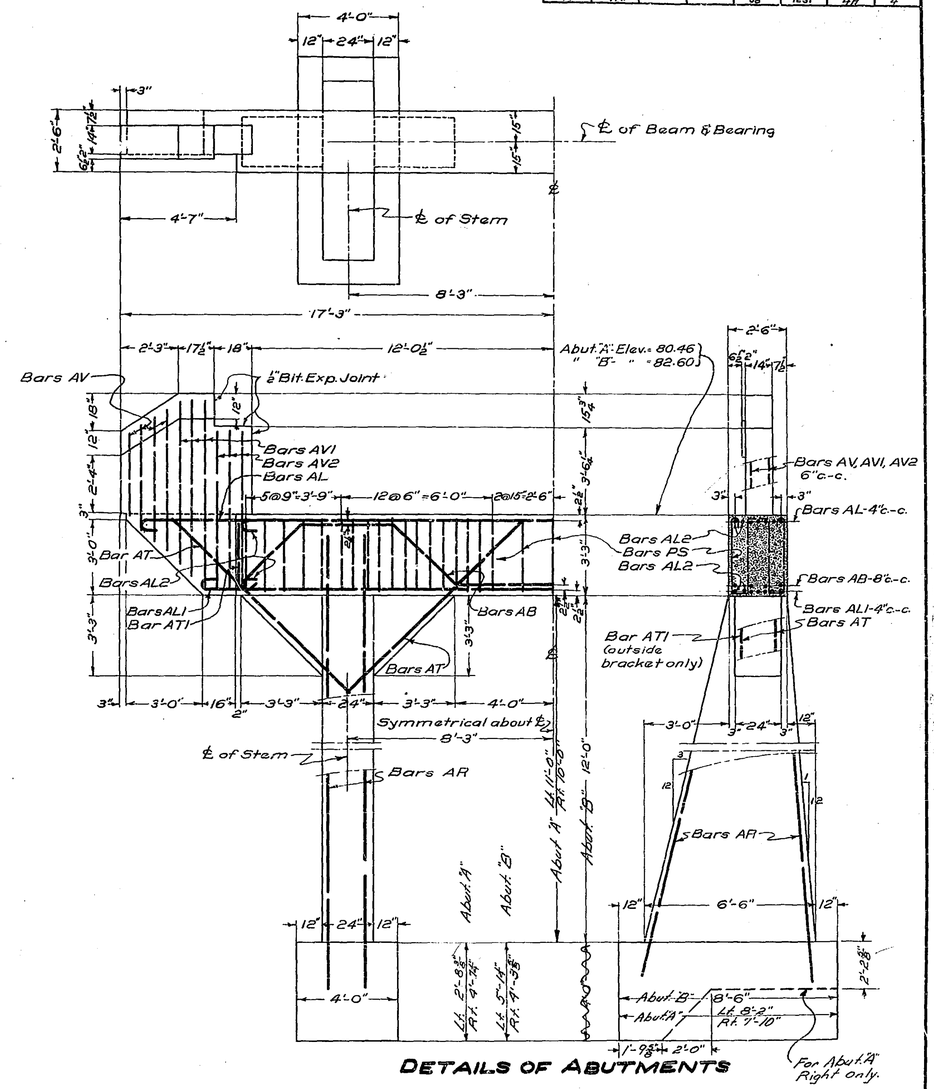
DETAILS OF PIERS

SCHEDULE OF REINFORCING STEEL

MARK	SIZE	No.	LENGTH		LOCATION
ABUTMENTS					
AL	7/8" ⌀	10	34'-3"	Bent	Beams
AL1	7/8" ⌀	10	29'-3"	"	"
AL2	7/8" ⌀	8	26'-3"	"	"
AB	3/4" ⌀	8	30'-2"	"	"
PS	1/2" ⌀	78	14'-7"	"	Beam Stirrups
AV	1/2" ⌀	32	3'-7" to 6'-1"	Str.	Wing Walls
AV1	1/2" ⌀	24	6'-9" to 7'-9"	"	" "
AV2	1/2" ⌀	24	6'-5"	"	" "
AT	1" ⌀	12	11'-0"	"	Brackets
AT1	1" ⌀	4	9'-9"	Bent	"
AR	1" ⌀	16	18'-0"	Str.	Stems
PIERS					
PK	7/8" ⌀	21	26'-11"	Bent	Beams
PK1	7/8" ⌀	21	24'-8"	"	"
PB	3/4" ⌀	12	29'-6"	"	"
PX	1/2" ⌀	30	4'-6"	Str.	Footings
PM	1/2" ⌀	12	29'-6"	Bent	"
PH	1/2" ⌀	156	7'-0"	"	Stems
PD	1" ⌀	24	7'-9"	Str.	Brackets
PP	1" ⌀	24	9'-0"	"	Stems
PV	1" ⌀	16	19'-6"	"	" Piers 1 & 2
PV1	1" ⌀	8	22'-6"	"	" Pier 3
PS	1/2" ⌀	111	14'-7"	Bent	B'm Stirrups

BENDING DIAGRAM





DETAILS OF ABUTMENTS

NAMOZINE CREEK BRIDGE
SUBSTRUCTURE DETAILS AND STEEL SCHEDULE

VIRGINIA DEPARTMENT OF HIGHWAYS
OFFICE OF THE BRIDGE ENGINEER
RICHMOND, VIRGINIA JULY 1939.

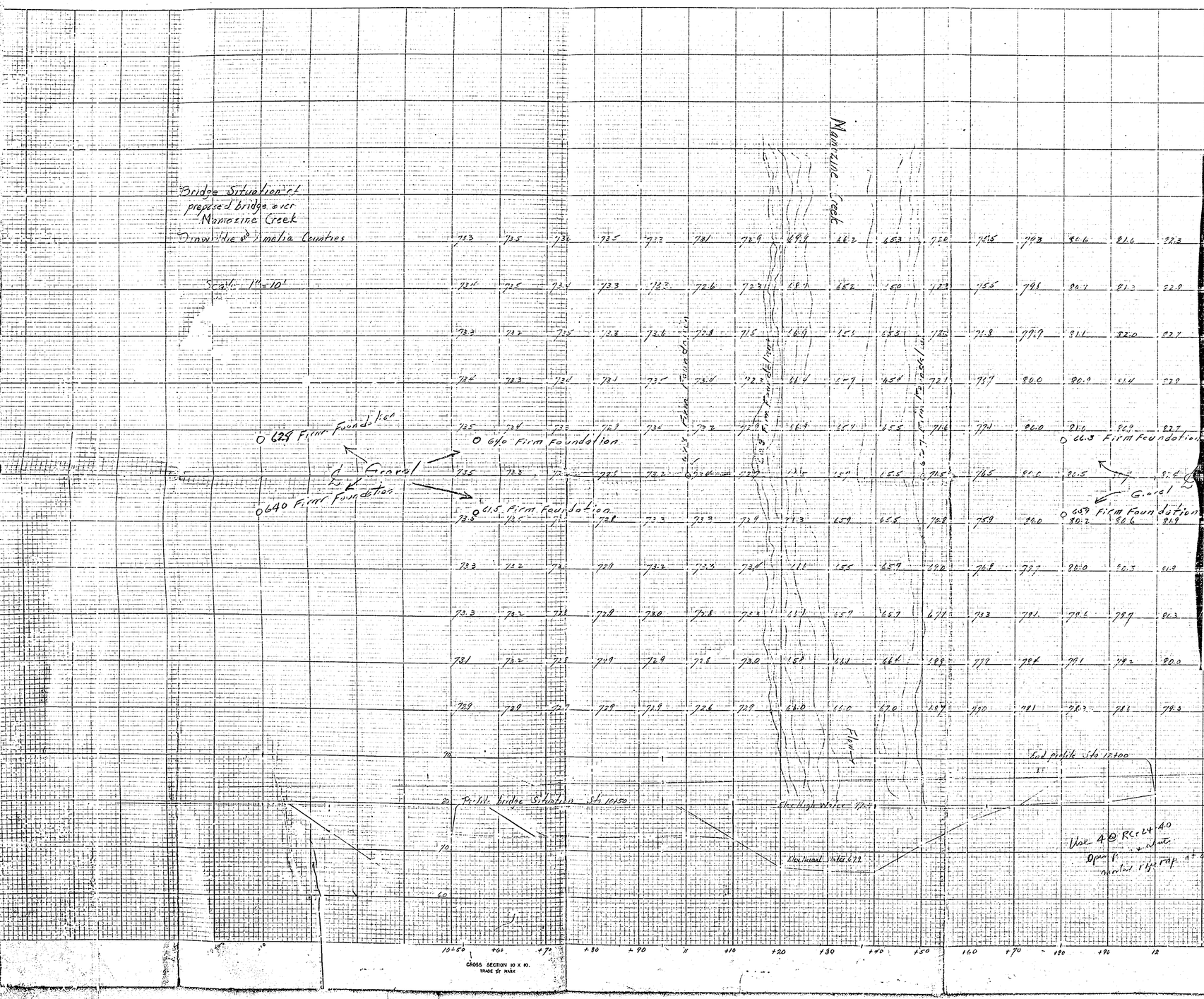
DRAWN BY:- Y. & L.
TRACED BY:- Y. & L.
CHECKED BY:- C.C.B.

Rev. Oct. 4, 1939
SCALE:- 3/8" = 1'-0"

2f of 2

LXXIX-4
SHEET ~~2 of 2~~

79-04-02F



Commonwealth of Virginia

STATE HIGHWAY COMMISSION

Data required for design of bridge over Namozine Creek near Southerland approximately 4 miles from Southerland on N&W Railroad, 56" Gauge, Route 38 Proj. 1238 County, Surveyed by H.G. Pope, Date Dec 1938

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, nothing material encountered. Unless on solid rock, foundations in and near stream should extend below liability of scour, and not less than 4 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 bridge seats with particular care. Was present in place at time of extreme high water?

Has it been washed out? No

STREAM DATA.

Depth of water 7.0" Date

Information U.S. Weather

Elev. of water 67.2 Elev. extreme low water 47.0

Current at high water 3.0 M.P.H.

Character of drift and ice

Does it show scour?

Bed consists mainly of—Mud, Silt, Clay, ~~Small Stones, Large Stones, Soft Bed Rock, Hard Rock~~

Are there dams within ¼ mile None

6. GENERAL INFORMATION.

Is bridge on State or County Road System? State

Source of funds F.A.S.

Is bridge part of adjacent road work? Yes

7. LOCAL MATERIALS.

Are following materials available locally?

1. Sand No Haul Quality
   Is screening necessary? Washing?
2. Gravel No Haul Quantity
   Is screening necessary? Washing?
3. Stone No Haul Quality
   Is stone suitable for cement rubble masonry?
4. Timber for piling Yes Falsework
   Species Diameter above ground swell
5. Dimension Lumber Haul Price
6. Material for approaches Yes
   Price per cubic yard in place not pr. pt.
7. Rock for rip-rap No Haul
   Price per cubic yard in place

8. RECOMMENDATIONS.

Depth for firm foundation

Should footings extend to solid rock? Yes

Will piling be necessary? No

Length of bridge 48 Roadway 24 Capacity H-15

Minimum length of channel span

Elevation of bridge seat above high water

Type of structure Steel Beam Span

Estimate 9. REMARKS.

Area of drainage basin 300 Sq. Mi. 54

Source of information Geology

Character of drainage basin Rolling

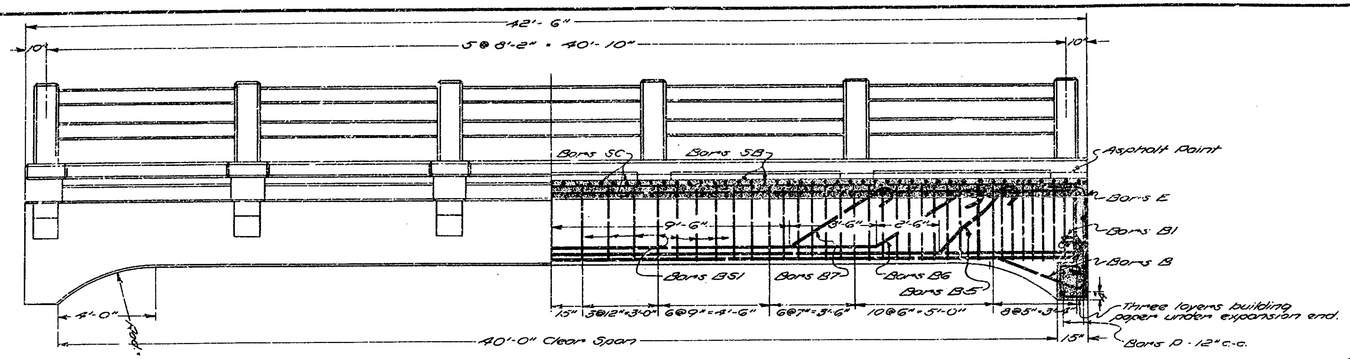
Wooded, or open land 75% Wooded

H.G. Pope Chief Resid.

Approved

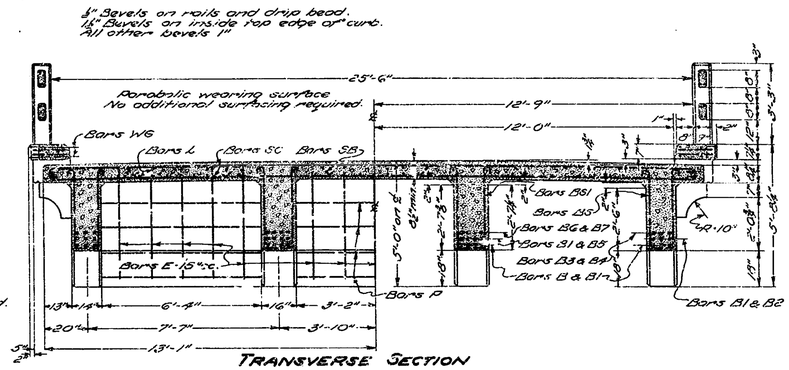
79-04

3 of 3



HALF SIDE ELEVATION

INTERIOR BEAM STEEL

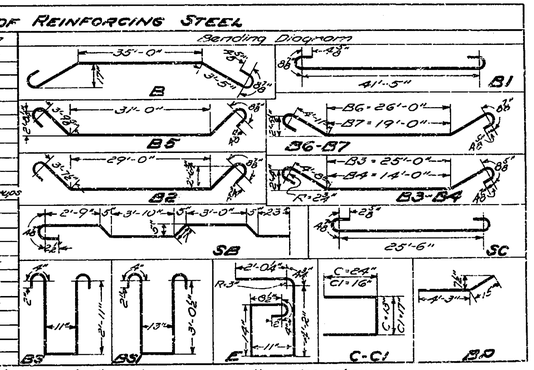


TRANSVERSE SECTION

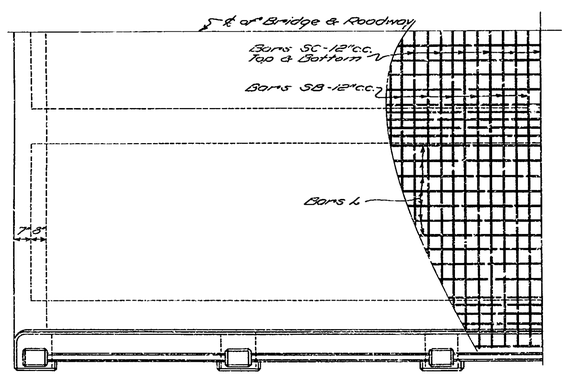
SCHEDULE OF REINFORCING STEEL

Mark	Size	No.	Length		Location
B	1 1/8" ϕ	6	44'-1"	Bent	Beams
B1	1 1/8" ϕ	16	43'-9"	"	"
B2	1 1/8" ϕ	2	38'-6"	"	"
B3	1 1/8" ϕ	4	36'-7"	"	"
E2	1" ϕ	2	25'-7"	"	"
B5	1 1/8" ϕ	4	40'-10"	"	"
B6	1 1/8" ϕ	4	38'-1"	"	"
B7	1 1/8" ϕ	4	31'-1"	"	"
SB	5/8" ϕ	42	27'-8"	"	Slab
SC	5/8" ϕ	86	26'-9"	"	"
AS	5/8" ϕ	102	7'-8"	"	Beam Stirrups
B51	5/8" ϕ	138	8'-1"	"	" "
BP	5/8" ϕ	48	5'-6"	"	Posts
C	5/8" ϕ	24	5'-0"	"	Slab
C1	5/8" ϕ	24	4'-0"	"	Curb
E	5/8" ϕ	30	9'-9"	"	End Walls
D	5/8" ϕ	12	23'-6"	Stirr.	" "
L	5/8" ϕ	46	42'-0"	"	Slab
R	5/8" ϕ	80	7'-7"	"	Rails
W6	3/4" ϕ	8	42'-0"	"	Curb

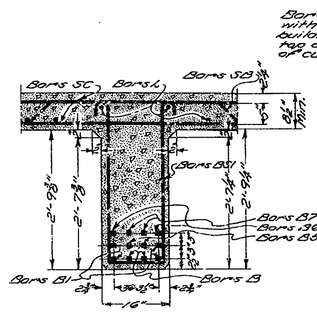
Bending Diagram



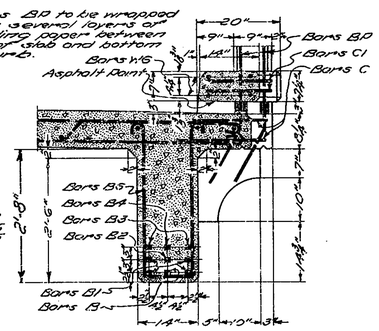
All bends to be with a radius of 2 1/2 diameters unless otherwise shown.



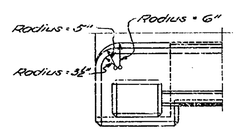
QUARTER PLAN
SHOWING SLAB REINFORCEMENT



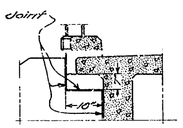
INTERIOR BEAM



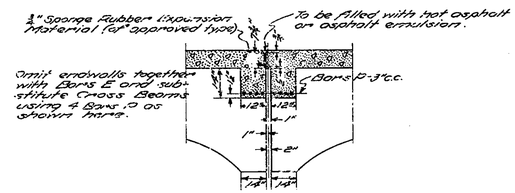
EXTERIOR BEAM



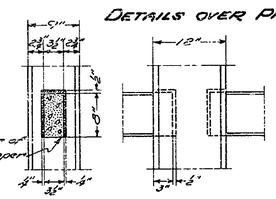
DETAILS OF CURB
To be used at ends of bridge only.



BRACKET CHANGE
OVER ABUTMENTS



DETAILS OVER PIERS



CORK RAIL
EXPANSION BOX

MATERIAL FOR ONE BOX
1-pc. 4"x3 1/2"x1/4" - Top
2-pc. 4 1/2"x1 1/2"x1/4" - Sides
1-pc. 3 1/2"x1 1/2"x1/4" - End.

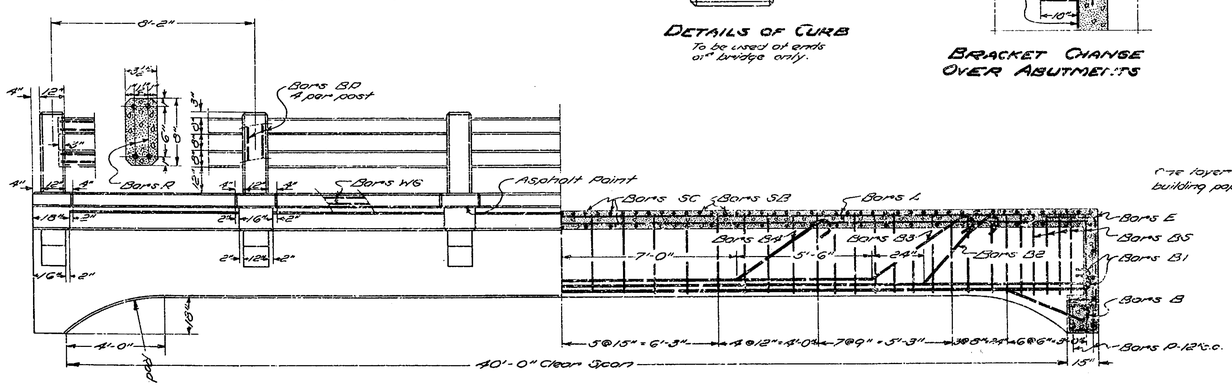
Fasten together with 6-d flat-head nails.
Place cork expansion box on each end of all rail sections before casting in place.
Trim projecting ends of box after removal of forms.

QUANTITIES

	With Endwalls		Without Endwalls	
Reinforcing Steel	15,495.	Pounds	15,170.	Pounds
Class A Concrete	61.5	Cu. Yds.	58.1	Cu. Yds.

GENERAL NOTE:

This bridge is designed and is to be constructed in accordance with the Specifications:- Virginia Department of Highways; Bridge Specifications.



PART SIDE ELEVATION

HALF LONGITUDINAL SECTION SHOWING
REINFORCEMENT IN EXTERIOR BEAM

STANDARD
REINFORCED CONCRETE BRIDGE
40 FEET CLEAR SPAN
24 FT. CLEAR ROADWAY

Obsolete

SCALE:- 3/8" & 3/4" = 1'-0"

RECOMMENDED FOR APPROVAL:- [signature]
BRIDGE ENGINEER

APPROVED:- [signature]
CHIEF ENGINEER

VIRGINIA DEPARTMENT OF HIGHWAYS
OFFICE OF THE BRIDGE ENGINEER
AUGUST 1939 RICHMOND, VA.

Drawn By: R.M.N.
Traced By: R.M.N.
Checked By: J.M.C.

Revised - Oct. 10 - 1937
Revised - Nov. 23 - 1938.

RC-24-40