TYPICAL SECTIONS

DOUBLE TACK COAT OF REFINED TAR ITEM NO. 29.

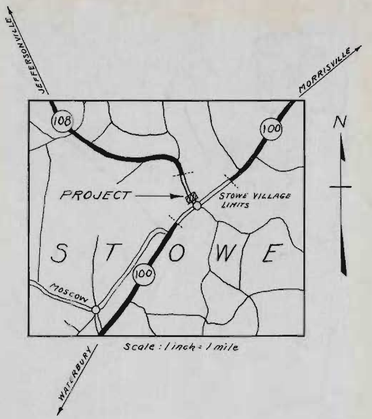
STOWE VILLAGE BRIDGE S.A. 4-1941

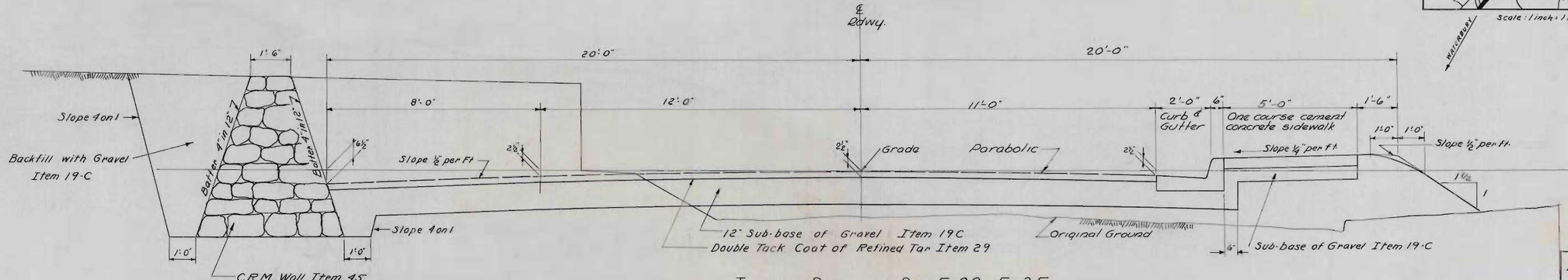
BEGINNING AT A POINT 211 FT. ON ROUTE 108 FROM THE INTERSECTION OF ROUTES 100 AND 108, AND EXTENDING IN A NORTHWESTERLY DIRECTION A DISTANCE OF 325 FT.

LENGTH OF ROADWAY 177 FT. = 0.033 MI.
LENGTH OF BRIDGE 148 FT. = 0.028 MI.
TOTAL LENGTH OF PROJECT 325 FT. = 0.061 MI.

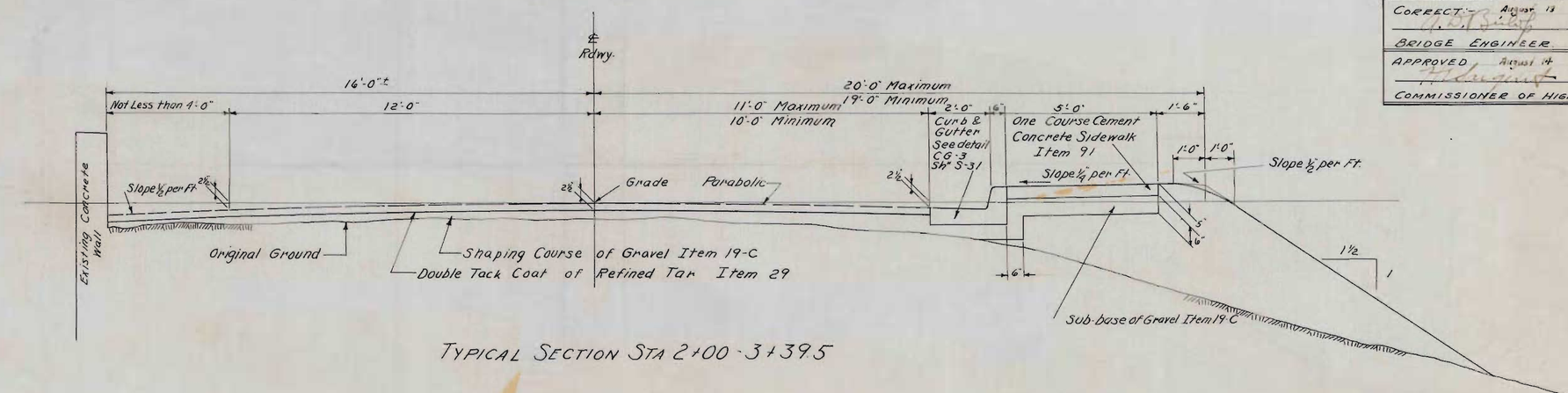
LIST OF SHEETS

1 Typical Sections
2 Plan & Profile
3 Details of Abutment #1
4 Details of Pier #1
5 Details of Abutment #2
6 Details of 6'×7.5' R.C.B. Extension @ Sta. 2+93.5
7 SIB-24 & 5'SW. Std. I-Beam Bridge 2-74' Spans-15° Skew
8 SB-7A Standard Balustrade Rail
9 SB-11 Barricades, Lights, & Signs
10 SB-20 Details A, C, H, I, J, K, & M.
11 S-28 Culvert Details
12 S-30 Wood Guard Rail, Cable Guard Rail & C.R.M. Wall
13 S-31 Curb & Gutter, Sidewalks
14-19 Cross Sections





TYPICAL SECTION STA. 5+00 - 5+25



TYPICAL SECTION STA 2+00 - 3+39.5

APPROVED:- Aug 13 1941
H. W. Marcott
DISTRICT HIGHWAY COMMISSIONER.

CORRECT:- August 13 1941
A. D. Bailey
BRIDGE ENGINEER.

APPROVED August 14 1941
F. Ingerst
COMMISSIONER OF HIGHWAYS

ESTIMATED QUANTITIES

Surveyed by
Designed by J.L.H.
Drawn by J.L.H.
Traced by H.W.S.-J.L.H.
Checked by L.M.B.
Series SA No. 4-1941 Filed
Sheet 1 of 19 Sheets

Rev. Curve
Δ 13°-27'
D 6°-15'
R 917.2'
T 108.2'
L 215.2'
E 6.4'

TIES FOR OLD & REVISED P.I's.

Survey P.I. 7+49.6 = 7+04.8
Δ 55°-57' Rt.
D 11°
Rev. Line 7
Near Corner Ho. Lewis Wirth Thompson & Ross Boy TRP
Ledge
15.22'
27.89'
34.40'
7+25
Rev. P.I. 7+46.0 Δ 52°-10' Rt.
#2566

House 2½-SF

P.I. 7+49.6 = 7+04.8

Sta. 4+16.5 to 5+64.5 12" RCP c/w 48 Long & 40° Relay Pipe C.R.M. Har. @ Outlet

Sta. 5+00 to 5+41.5 Lt. Const. C.R.M. Wall.

P.I. - 0+11.0

WATERBURY

Rev. P.C. 0+35.8

House 2-SF
FANNIE J. BENTLY
STOWE

Conc. Sw.

42.64'

Sta 2+95.5 - 6'x7.5' Conc. Box (Good)
For Extension See Sheet 6 of 19

To House 100'

Shop 1-SF

Rev. P.T. 2+14.10

BM #1 - EL. 712.11
Top Conc. Wall

10" Tile Sewer Pipe

LITTLE RIVER

Outlet 12" R.C.P.

End Brg. Sta 4+18.5

4 Piers Sta 4+19.5

WOOD COVERED BRIDGE

12" CMP

To Creamery

36" E

12" RCP

D.I. & Grate

Conc. Wall

6'-6" Centre MORRISVILLE

POT. 0+00

26.59'
39.09'
24 M

Pipe Discontinued

Tan SW.

4' Conc. SW.

Rec. P.I. 1+34.0
1+32.8

ESTATE OF MRS. C.L. McMAHON

Garage 1-SF

Survey P.I. = 1+93.0
1+92.5
4°16'-38' Lt
D 5°

2-10" & 2-12" RCP Sheet 5-21
Const. Rumble Strip
To be paid for under Item Reinforced Conc. Class A Reinforcing Steel.

Shop 1-SF Abandoned

Fet Wall 10" Metal Stream Pipe

Shop 2-SF NG

Outlet 10' Tile Sewer

Any Repairs or Extension that may be required to this Sewer will be done by others. The Contractor will be required to maintain the Flowage thru his work.

3+33 Rt. End Conc. Curb & Gutter End Conc. Course Cement Concrete Sidewalk

4+33 Rt. Beam Conc. Curb & Gutter Beam Conc. Course Cement Concrete Sidewalk

BM #2 El. 712.82
Spot on Ledge

5+26 Rt. Det. Grate Conc. Curb & Gutter 12" New O.I. Grate 18" M.P. Leap

MRS. MARY SMALLEY ESTATE
House 1-SF

Barn

End Conc. Curb & Gutter End Conc. Course Cement Concrete Sidewalk Const. Satisfactory Approach

Rec. P.I. 1+34.0

Rev. P.C. 0+35.8

Rev. P.T. 2+14.10

Sta 2+00
BEGIN PROJECT

2+00 - 3+39.5
Shaping Course of Gravel

2+00 Rt. Conc. Curb & Gutter Beam Conc. Course Cement Concrete Sidewalk Const. Satisfactory Approach

74' Span

74' Span

Sta. 3+39.5 Begin Roadway Bridge

Sta. 4+18.75 End Bridge Resume Roadway

Sta 5+25
END PROJECT

2+50
150 Y.C.
709.50

5+30
75" Y.C.
715.43

Back of Abut #1 3+39.5
Fin. Gr. El. 711.40

Fix. End.

Exp. End

Back of Abut #2 4+18.75
Fin. Gr. El. 714.33

Fix. End.

Exp. End

℄ Piers #1 4+13.5
Fin. Gr. El. 712.96

4+18.75-5+12.5
12"Sub-base of Gravel

Construct Satisfactory Approach

- 1.070%

+ 2.118%

+ 7.55-4%

Old Road Profile

Max. H.W. 706.5 (1927)

Btm. Footing 701.15

Nor. H.W. 695.0

Ext. L.W. 687.0

Btm. Fty. El. 695± Lt.

Btm. Fty. El. 693± Rt.

Btm. Fty. El. 676.50±

Silt & Gr.

Compact Silt & Gr.
Sand & Gravel & Gravel
Ledge

Sand & Loam

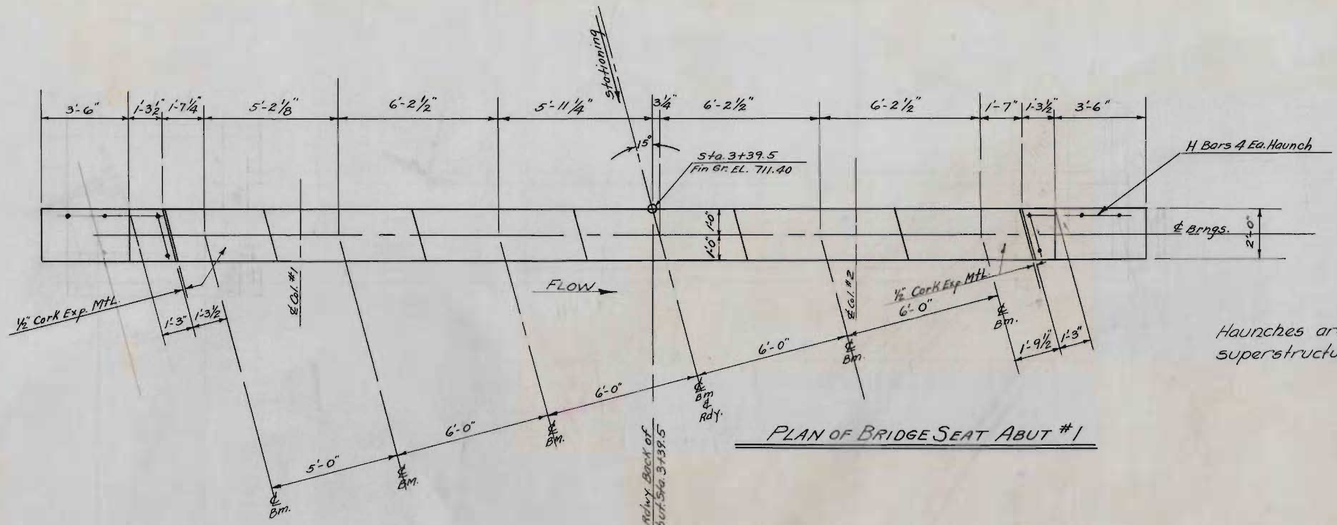
Loam & Sand

Boring #1: Muck, Boulder or Ledge
Boring #2: Muck & Sand, Ledge
Boring #3: Sand, Silt, Gr. & Silt, Gravel, Ledge
Boring #4: Sand, Gr. & Silt, Sand & Silt, Coarse Gravel, Ledge
Boring #5: Loam, Ledge
Boring #6: Loam, Ledge
Boring #7: Loam, Ledge
Boring #8: Sand & Loam, Ledge
Boring #9: Muck, Gravel & Refusal
Boring #10: Sand & Gr., Ledge
Boring #11: Ledge
Boring #12: Gravel, Silt, Ledge
Boring #13: Silt & Gr., Ledge
Boring #14: Silt & Gr., Ledge
Boring #15: Loam & Sand, Ledge

BRIDGE DATA	Present W.C.	Proposed Std. I Bm.
Type		
Spans	1@ 104 Ft.	2@ 74 Ft.
Clear Height	26 Ft.	23 Ft.
Waterway	2080 Sq. Ft.	2100 Sq. Ft.
Leng. Overall	104 Ft.	148 Ft.
Roadway Width	16 Rdy. & Sw.	24 Rdy. & 5 Sw.

BM #1 Spot on Conc. Rail 16' Lt of Sta 2+33 EL 712.11
BM #2 Spot on Ledge 33' Rt of Sta 5+21 EL 712.82

STOWE VILLAGE BRIDGE 5/18/41
S.A. 9-41
Sheet 2 of 19



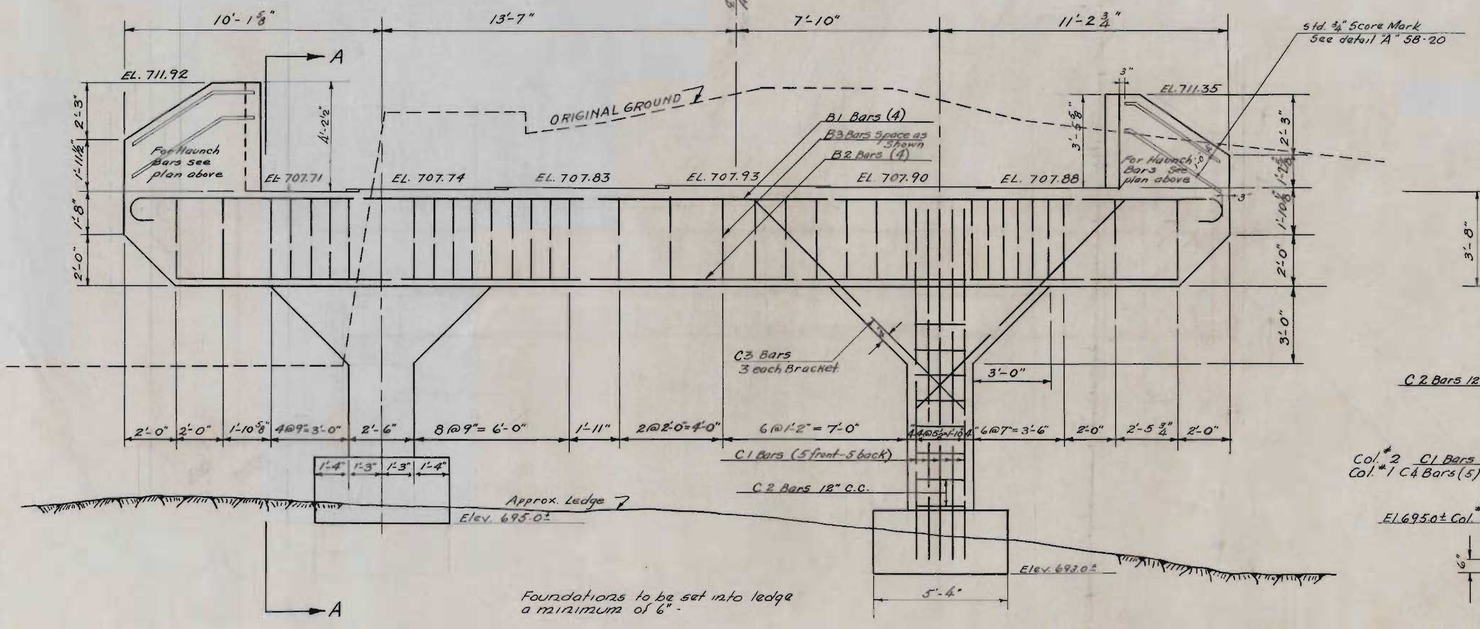
PLAN OF BRIDGE SEAT ABUT #1

Haunches are to be poured after the superstructure is in place.

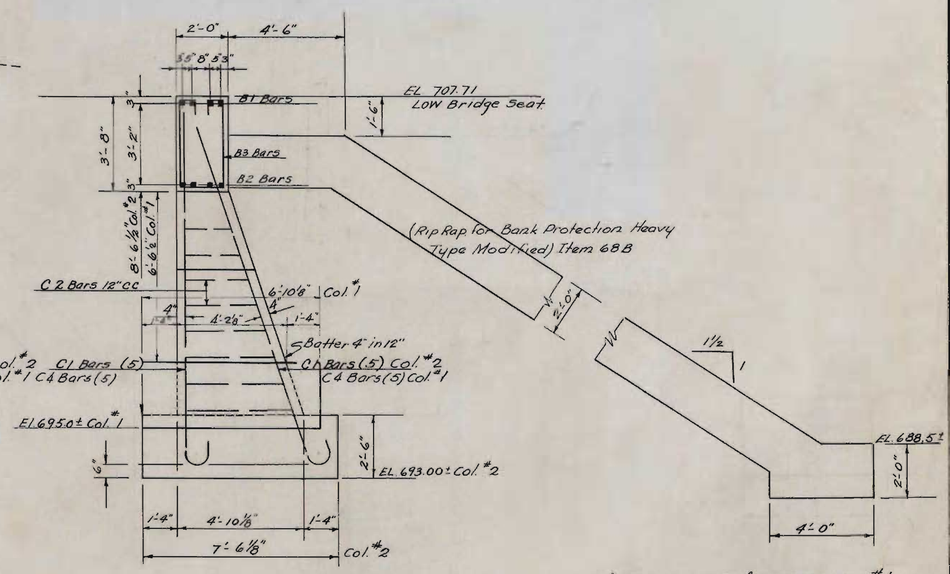
REINFORCING STEEL

MARK	REQ'D	SIZE	T. LENG.	DETAIL
B1	4	1¼"□	44'-10"	41'-4", R=5", 3', 3'
B2	4	1⅛"□	38'-10"	Straight
B3	34	½"ø	10'-1"	7", 7", 4", 3'-3½", 1'-8", 5"
C1	10	1⅛"□	15'-3"	R=5"
C4	10	1⅛"#	13'-3"	13'-6" For C1, 11'-6" For C4
C2	14	¼ø	14'-0"	Straight, Bend in field.
C3	12	1"ø	11'-0"	Straight
H	8	1"ø	6'-6"	Straight, Bend to fit in field.

Bar Dimensions to ℄ of Bars.



FRONT ELEVATION



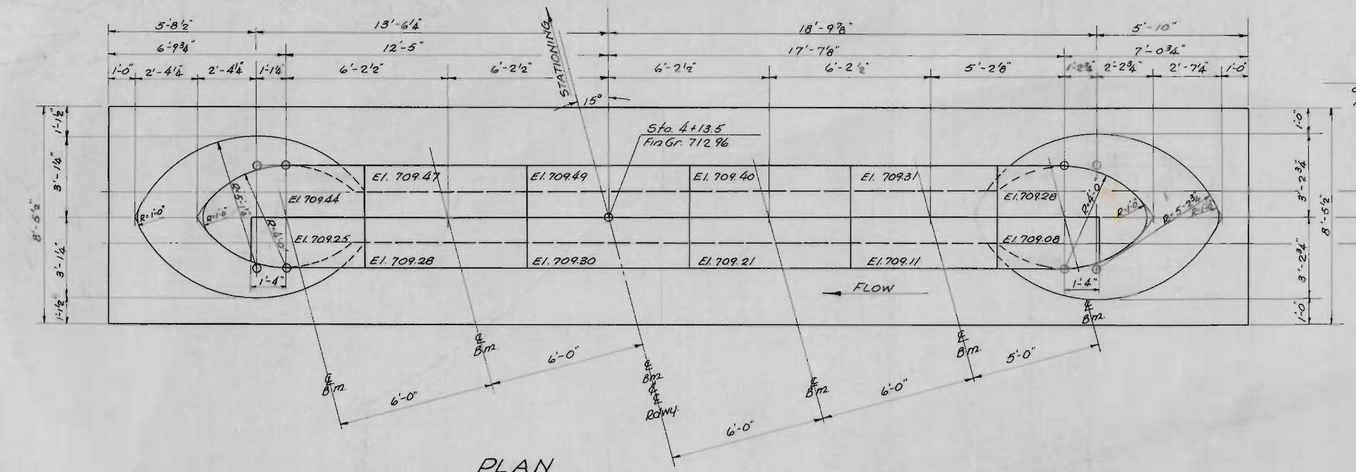
SECTION-A-A

DETAILS OF ABUTMENT #1
STOWE VILLAGE BRIDGE
scale ⅜ in = 1 foot

ESTIMATED QUANTITIES

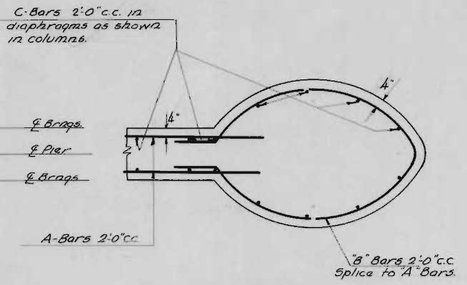
Channel Excavation	730 C.Y.
Structure Excavation	105 C.Y.
Concrete Class A	27 C.Y.
Reinforcing Steel	3605 Lbs.
Rip Rap for Bank Protect. H.T. Mod.	290 C.Y.

Surveyed by
Designed by J.L.H.
Drawn by J.L.H. 6/3/41
Traced by H.R.C.
Checked by L.M.B. 6/26/41
Series S.A. No. 4-1941 Filed
Sheet 3 of 19 Sheets



PLAN

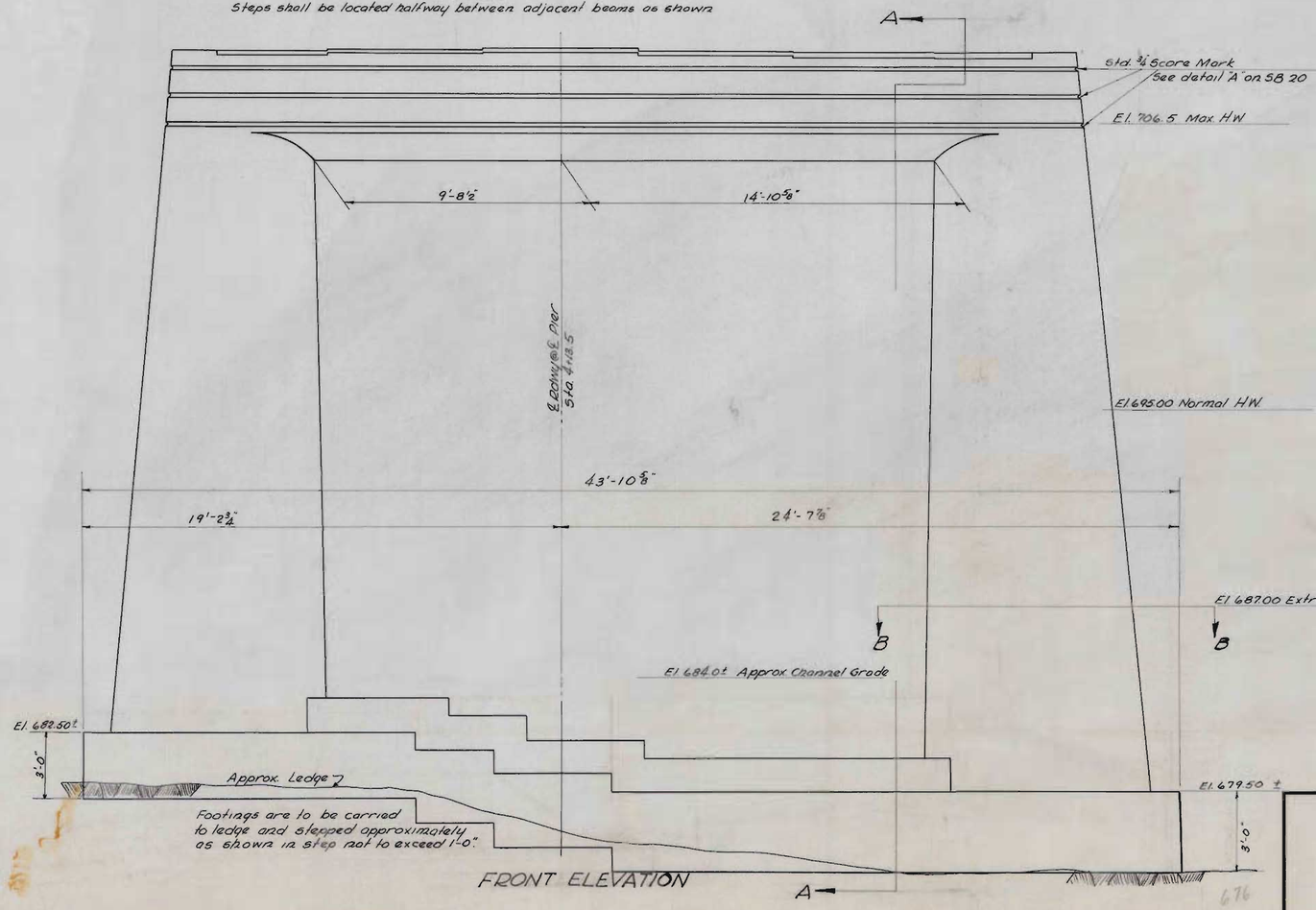
Steps shall be located halfway between adjacent beams as shown



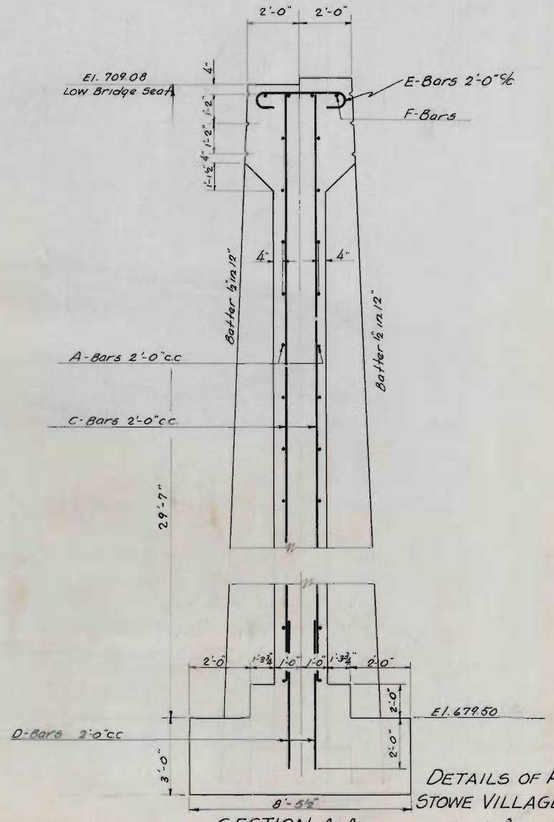
SECTION B-B

REINFORCING STEEL

MARK	REQD	SIZE	T.L.	DETAIL
A	28	5/8" ℄	27'-0"	Straight
B	27	5/8" ℄	19'-10"	Straight - Bend in field
C	44	5/8" ℄	27'-3"	Straight cut if necessary
D	44	5/8" ℄	6'-8"	Straight
E	16	5/8" ℄	5'-3"	4" 4" 3'-0"
F	4	1/2" ℄	32'-0"	Straight



FRONT ELEVATION



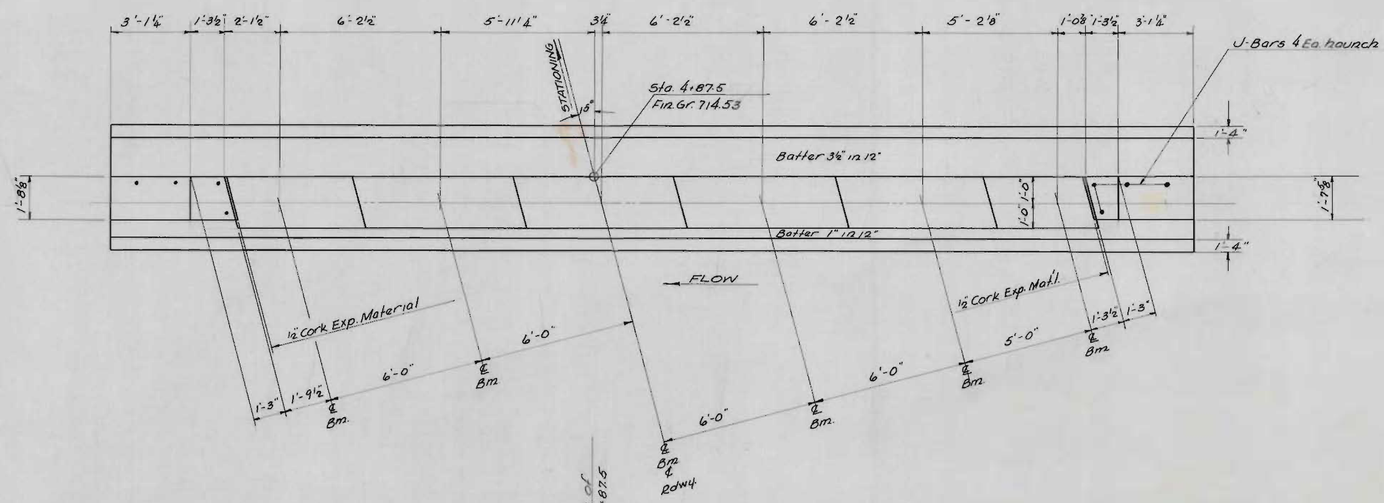
SECTION A-A

DETAILS OF PIER #1
STOWE VILLAGE BRIDGE
Scale 3/8 in. = 1 foot

ESTIMATED QUANTITIES

Structure Excavation	120 C.Y.
Concrete Class B	170 C.Y.
Reinforcing Steel	3055 Lbs.

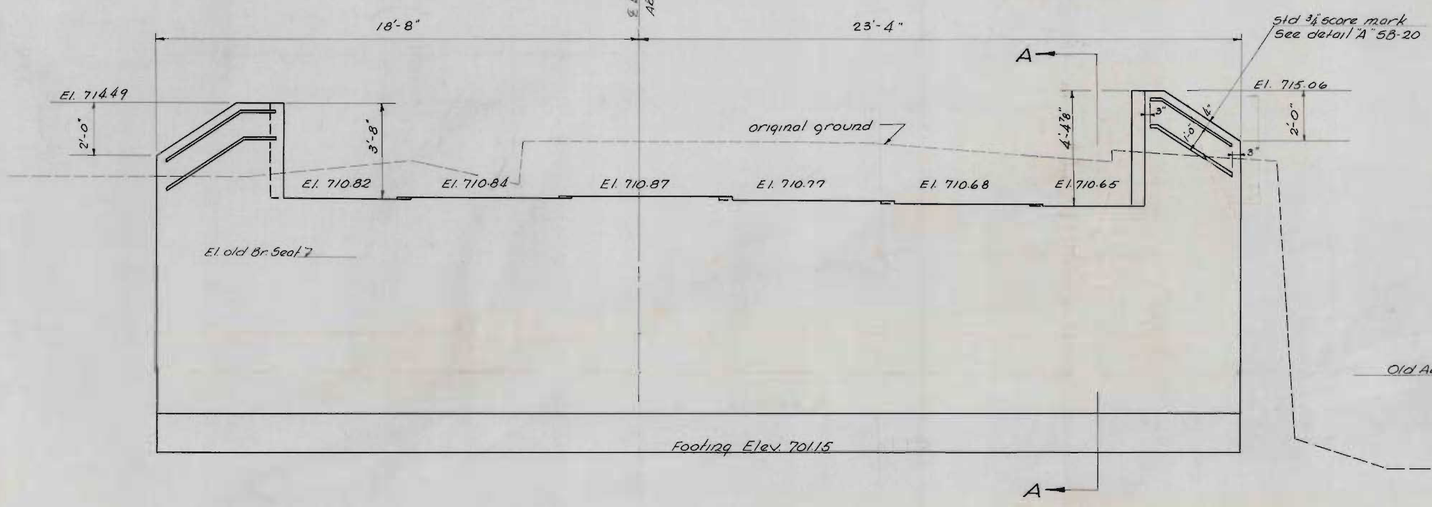
Surveyed by
Designed by J.L.H.
Drawn by J.L.H.
Traced by H.W.S.
Checked by L.M.B.
Series S.A. No. 4-1941 Filed
Sheet 4 of 19 Sheets



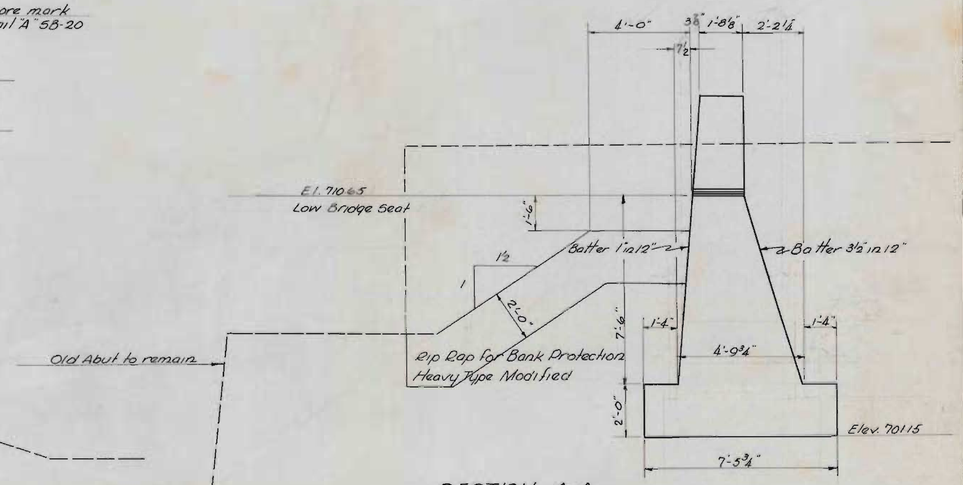
PLAN OF ABUTMENT #2

REINFORCING STEEL

MARK	REQ'D.	SIZE	T.L.	DETAILS
J	8	1"ϕ	7'-0"	Straight



FRONT ELEVATION



SECTION A-A

DETAILS OF ABUTMENT #2
STOWE VILLAGE BRIDGE
Scale ⅜ in. = 1 foot

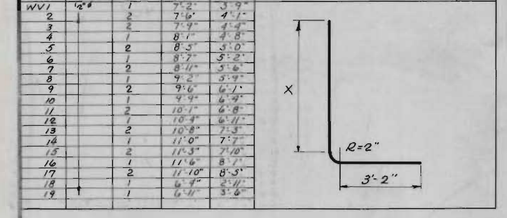
ESTIMATED QUANTITIES

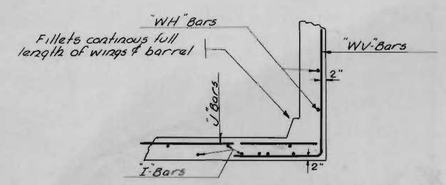
Channel Excavation	150 C.Y.
Structure Excavation	180 C.Y.
Concrete Class C"	66 C.Y.
Reinforcing Steel	150 Lbs.
Rip Rap for Bank Prot. H.T.Mod.	80 C.Y.

Surveyed by
Designed by
Drawn by J.L.H.
Traced by H.W.S.
Checked by L.M.B.
Series S.A. No. 4-1941 Filed
Sheet 5 of 19 Sheets

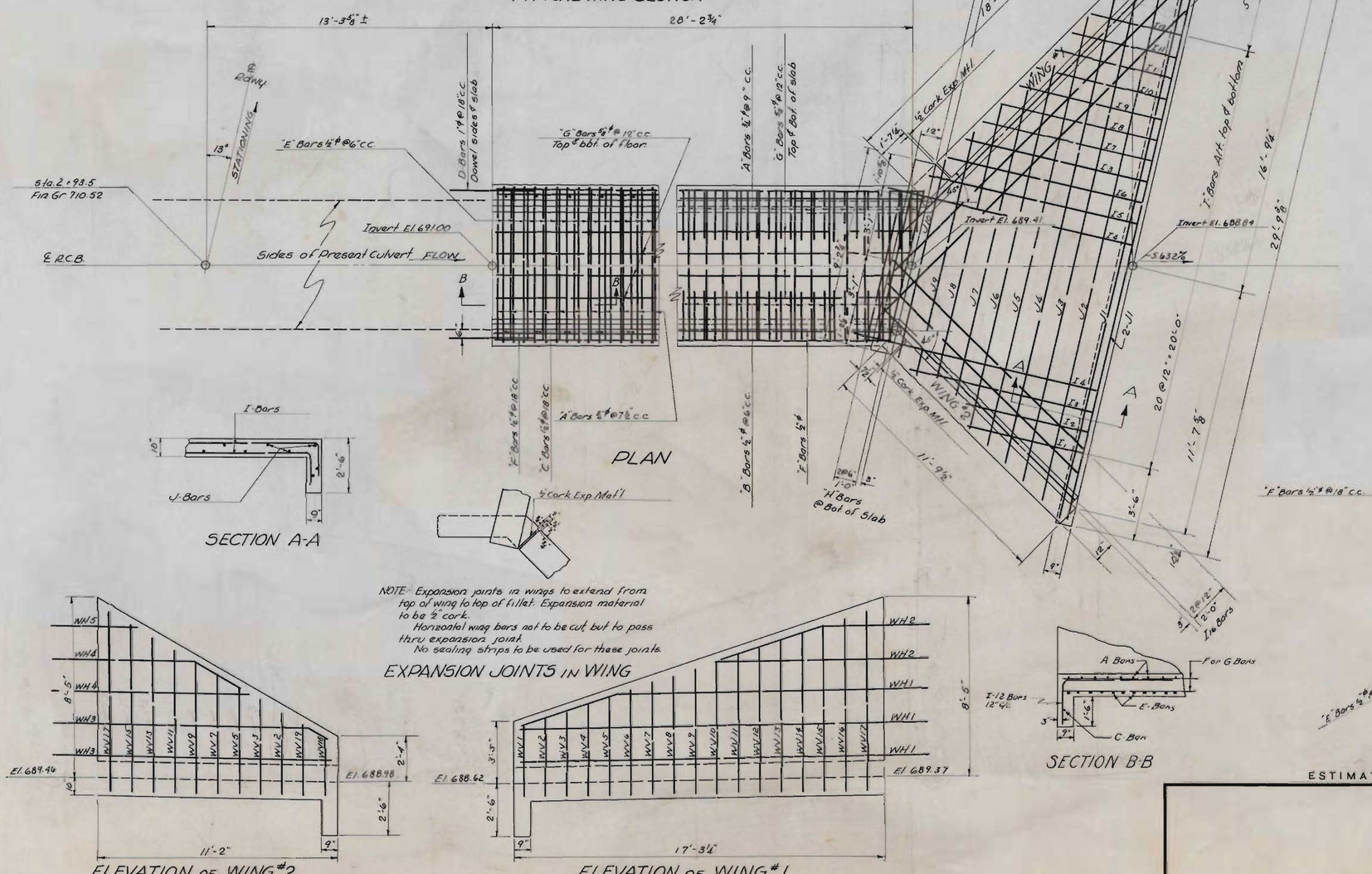
REINFORCING STEEL (CONTINUED)

Bar	Size	No Reqd	Total length	X	Detail
WH1	½"ø	3	19'-1"		Straight (Bend if necessary to fit)
2		2	10'-0"		
3		2	19'-0"		
4		2	9'-2"		
5	½"ø	1	4'-2"		
WV1	½"ø	1	7'-2"	3'-2"	
2		2	7'-6"	4'-1"	
3		2	7'-9"	4'-4"	
4		1	8'-1"	4'-8"	
5		2	8'-3"	4'-10"	
6		1	8'-7"	5'-2"	
7		2	8'-11"	5'-6"	
8		1	9'-2"	5'-9"	
9		2	9'-6"	6'-1"	
10		1	9'-9"	6'-4"	
11		2	10'-1"	6'-8"	
12		2	10'-5"	6'-11"	
13		2	10'-8"	7'-3"	
14		1	11'-0"	7'-7"	
15		2	11'-3"	7'-10"	
16		2	11'-6"	8'-2"	
17		2	11'-10"	8'-5"	
18		1	6'-9"	3'-11"	
19		1	6'-11"	3'-6"	





TYPICAL WING SECTION



SECTION A-A

NOTE: Expansion joints in wings to extend from top of wing to top of fillet. Expansion material to be ½" cork.
Horizontal wing bars not to be cut, but to pass thru expansion joint.
No sealing strips to be used for these joints.

EXPANSION JOINTS IN WING

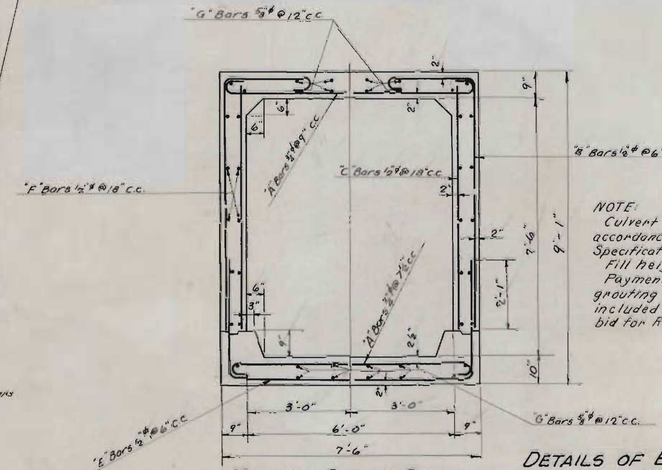
ELEVATION OF WING #2

ELEVATION OF WING #1

SECTION B-B

REINFORCING STEEL

Bar	Size	No Reqd	Total length	X	Detail
A	¾"ø	82	8'-9"		4" R=2½" 4" 6'-9"
B	½"ø	114	10'-5"		4" R=2½" 2'-0" R=2" 7'-2"
C	½"ø	39	7'-8"		Straight
D	1"ø	22	4'-0"		Straight
E	½"ø	57	14'-1"		3'-4" 3'-4" R=2" 6'-10"
F	½"ø	56	18'-3"		Straight
G	⅝"ø	32	15'-0"		Straight
H	⅝"ø	3	7'-8"		Straight
I 1	½"ø	2	6'-8"	4'-10½"	X R=2" 1'-6"
2		1	8'-4"	6'-6½"	
3		2	9'-11"	8'-1½"	
4		8	18'-6"	17'-9"	
5		1	11'-2"	9'-4½"	
6		1	10'-5"	8'-7½"	
7		1	9'-5"	7'-7½"	
8		1	8'-8"	6'-10½"	
9		1	7'-11"	6'-1½"	
10		1	7'-5"	5'-7½"	
11		1	6'-5"	4'-7½"	
12	½"ø	9	5'-6"	4'-8½"	
16	½"ø	3	14'-9"	13'-11½"	
17	½"ø	3	21'-9"	19'-11½"	
W1	½"ø	3	23'-3"		
2		1	27'-2"		
3		1	24'-10"		
4		1	22'-8"		
5		1	20'-4"		
6		1	18'-8"		
7		1	16'-1"		
8		1	13'-10"		
9		1	11'-8"		
10	½"ø	1	9'-5"		Straight



TYPICAL BARREL SECTION
Scale ½ in. = 1 foot

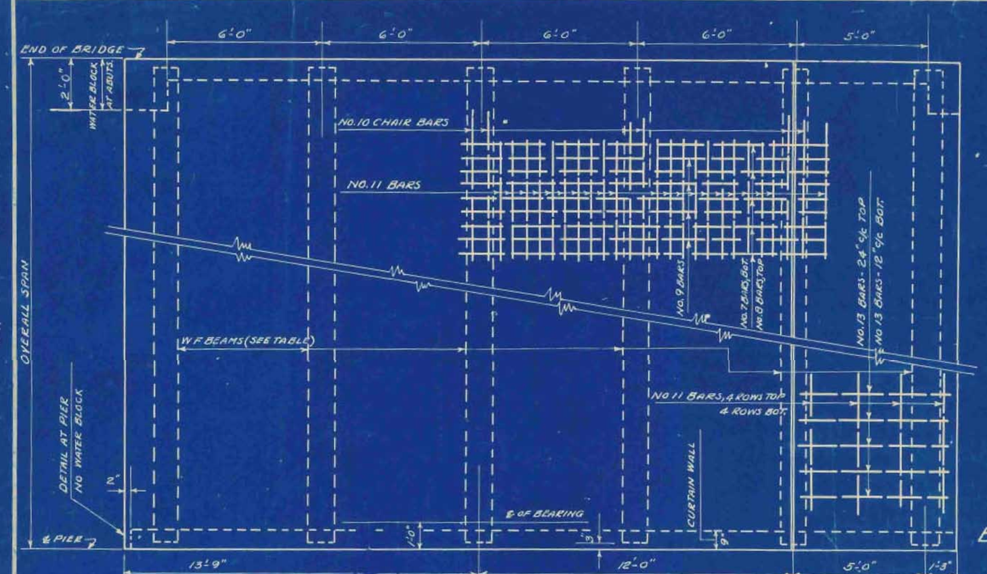
NOTE:
Culvert designed in accordance with A.A.S.H.O. Specifications 1941.
Fill height 13 ft.
Payment for drilling and grouting of dowels to be included in unit price bid for Reinforcing Steel.

DETAILS OF EXTENSION
6'×7'-6" R.C. BOX
STA. 2+93.5
STOWE VILLAGE

ESTIMATED QUANTITIES

Channel Excavation	25 C.Y.
Structure Excavation	30 C.Y.
Concrete Class A	40 C.Y.
Reinforcing Steel	4970 Lbs

Scale ⅜"=1'-0" Except as noted
Surveyed by
Designed by J.L.H. — June 1941
Drawn by J.L.H.
Traced by H.W.S.
Checked by [illegible] 7/2/41
Series 5A No. 4-1941 Filed
Sheet 6 of 19 Sheets

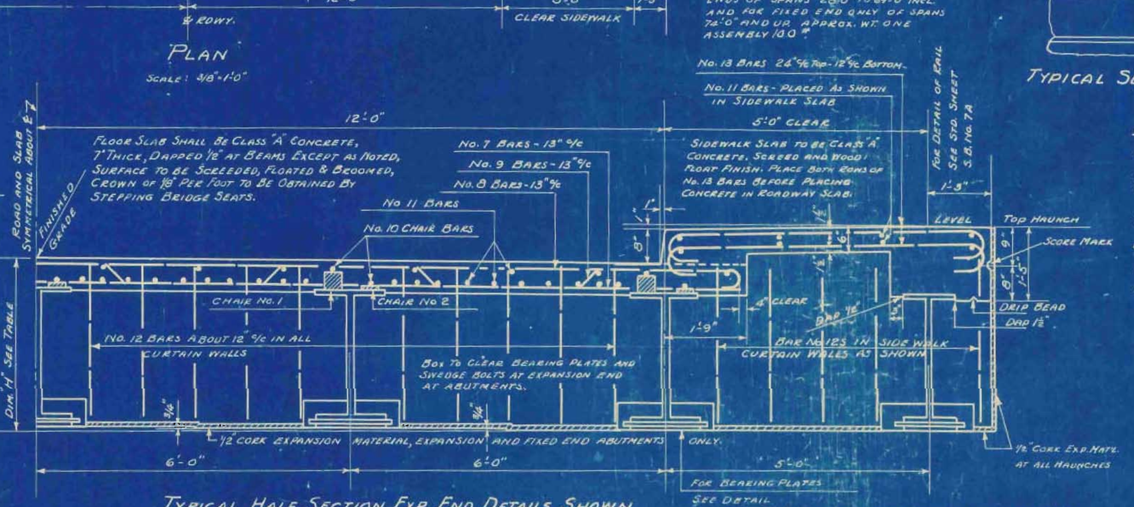


PLAN

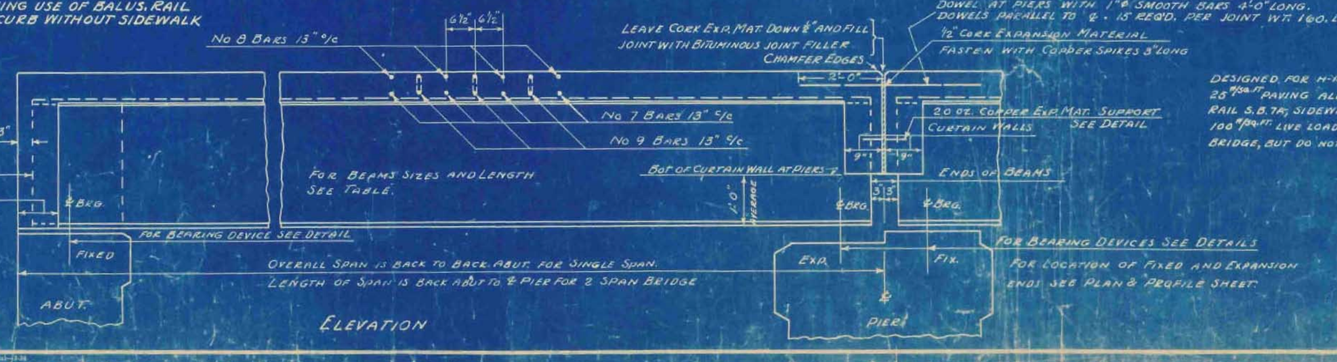
SCALE: 1/8"=1'-0"

PART SECTION

SHOWING USE OF BALUS. RAIL AND CURB WITHOUT SIDEWALK



TYPICAL HALF SECTION EXP. END DETAILS SHOWN

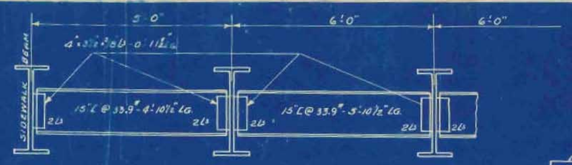


ELEVATION

WHERE THIS STANDARD IS USED FOR SKEW SPANS, DOWEL AT PIERS WITH 1" ℄ SMOOTH BARS 4'-0" LONG. DOWELS PARALLEL TO ℄ IS REQ'D. PER JOINT WT. 160. LBS.

½" Cork Expansion Material Fasten With Copper Spikes 3" Long

DESIGNED FOR H-15 LOADING. DEAD LOAD INCLUDES SLAB 25 #/sq.ft. PAVING ALLOWANCE AND STANDARD BALUSTRADE RAIL S.B.7A; SIDEWALK SLAB DESIGNED FOR DEAD LOAD AND 100 #/sq.ft. LIVE LOAD. QUANTITIES FIGURED FOR SINGLE SPAN BRIDGE, BUT DO NOT INCLUDE RAIL OR CURB QUANTITIES.

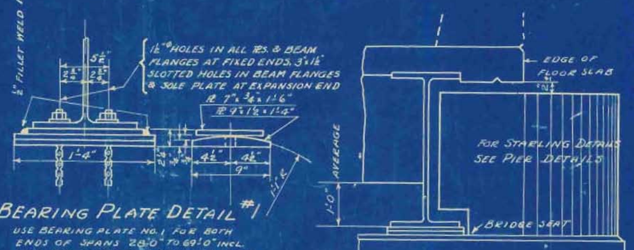


TYPICAL DETAIL OF DIAPHRAGM ASSEMBLY

SHOP CONNECTIONS MAY BE RIVETED OR 100% ELECTRIC WELDED FIELD CONNECTIONS TO BE 100% ELECTRIC WELDED. 4-¾" BOLTS MAY BE USED AT ENDS AND THRU BEAMS FOR ERECTION PURPOSES

SPANS 28'-0" THRU 43'-0" REQUIRED 1 SET OF DIAPHRAGMS
" 49'-0" " 64'-0" " 2 - (3) " "
" 74'-0" " 84'-0" " 3 - (3) " "

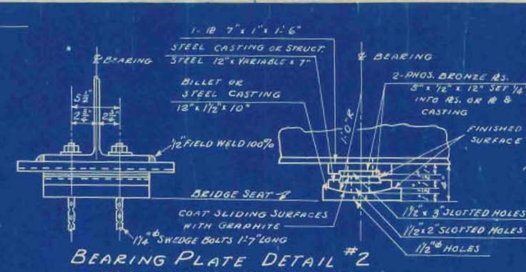
DIAPHRAGM ASSEMBLIES SHALL BE LOCATED TO CONNECT REFERENCE POINTS (¼, ⅓ OR ½ POINTS) OF ADJOINING BEAMS.



BEARING PLATE DETAIL #1

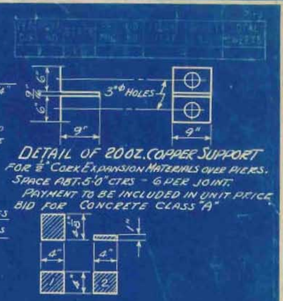
USE BEARING PLATE NO.1 FOR BOTH ENDS OF SPANS 28'-0" TO 69'-0" INCL. AND FOR FIXED END ONLY OF SPANS 74'-0" AND UP. APPROX. WT. ONE ASSEMBLY 130 #

TYPICAL SECTION B-B AT PIERS



BEARING PLATE DETAIL #2

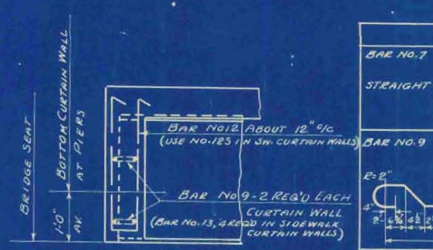
USE FOR EXPANSION END OF SPANS 74'-0" AND UP. APPROX. WT. ONE ASSEMBLY 138 #



DETAIL OF 20 OZ. COPPER SUPPORT

FOR ½" CORK EXPANSION MATERIAL OVER PIERS. SPACE ABT. 5'-0" CTRS - 6 PER JOINT. PAYMENT TO BE INCLUDED IN UNIT PRICE BID FOR CONCRETE CLASS "A"

CONCRETE CHAIR DETAILS



SECTION THRU CURTAIN WALL

REINFORCING STEEL

BAR NO. 7 5/10"ø STRAIGHT - LENGTH 26'-10"	BAR NO. 8 - 5/8"ø TOT. LGTH. 28'-2½" R=2" 4" 26'-6" R=2"
BAR NO. 9 9/8"ø	TOT. LGTH. 29'-5½" R=2" 6⅜" R=12" 2'-6"
BAR NO. 10 - ¾"ø STRAIGHT BAR NO. 11 - ½"ø STRAIGHT	BAR NO. 12 - ⅜"ø BAR NO. 12S - ⅜"ø

BAR	LTH
28' SPAN	27'-6"
33' "	32'-6"
38' "	37'-6"
43' "	42'-6"
49' "	25'-3"
54' "	27'-9"
59' "	30'-3"
64' "	32'-9"
69' "	35'-3"
74' "	37'-9"
79' "	40'-3"
84' "	42'-9"

SPAN	A	T.L.
28'	11'-9"	4'-6"
33'	2'-6"	5'-0"
38'	13'-3"	5'-6"
43'	2'-8"	5'-6"
49'	2'-6"	6'-0"
54'	2'-9"	6'-6"
59'	2'-9"	6'-6"
64'	3'-0"	7'-0"
69'	3'-0"	7'-0"
74'	3'-0"	7'-0"
79'	3'-0"	7'-0"
84'	3'-0"	7'-0"

SHEET A EXTENSION TO STANDARD SHEET NO 129 AT ABUTMENTS DIMENSION 9" FOR BAR No. 13 AS FOR 12S AT ABUT.

BAR NO. 13 ⅝"ø TOT. LTH. 7'-11" E=4" R=6" 5'-2"

TABLE OF QUANTITIES FOR ONE SPAN

OVERALL SPAN	STRUCTURAL STEEL DATA: SIZE W.F. BEAM	LENGTH	HIG. CRA. CAMBER	SPC. MOD. REQ'D.	DIM. H: F.T.	DIM. H: F.E.	TOT. WT. CONT.	TOT. WT. ONE S.W.	REINFORCING STEEL SCHEDULE - NO OF BARS (INCLUDE ONE S.W.): STAGE	8	9	10	11	12	12S	13	TOT. WT. CONC.	TOT. WT. ONE S.W.	CONC. C.Y.: ROADWAY	ONE S.W.
28'-0"		27'-6"	¾"						25	25	29	10	62	44	10	52	3805		126	
33'-0"		32'-6"	⅞"						30	30	34	10	62	44	10	59	4549		150.1	
38'-0"		37'-6"	1"						35	35	39	10	62	44	10	67	5214		26.3	
43'-0"		42'-6"	1⅛"						39	39	43	10	62	44	10	74	5822		29.1	
49'-0"		48'-6"	1¼"						45	45	49	20	124	44	10	83	6770		33.5	
54'-0"		53'-6"	1⅜"						49	49	53	20	124	44	10	91	7377		36.9	
59'-0"	36/8 @ 170#	58'-6"	1½"	563	3.86	3.76	52090	10446	54	54	58	20	124	44	10	98	8086	1165	39.6	15.2
64'-0"		63'-6"	1⅝"						59	59	63	20	124	44	10	106	8795		43.3	
69'-0"		68'-6"	1⅞"						63	63	67	20	124	44	10	113	9323		46.2	
74'-0"	33⅜ @ 210#	73'-6"	2"	700	3.61	3.76	80,872	16,234	68	68	72	20	124	44	10	121	10093	1836	50.7	18.8
79'-0"	35⅜ @ 230#	78'-6"	2⅛"	902	3.84	3.99	93,972	18,854	73	73	77	20	124	44	10	128	10785	1920	53.2	19.8
84'-0"	36⅞ @ 280#	83'-6"	2⅜"	982	3.89	4.04	180664	24185	77	77	81	20	124	44	10	136	11,373	1614	55.1	17.5

SQUARE STANDARD I-BEAM BRIDGE REINFORCED CONCRETE DECK 24 FT. ROADWAY — 5' FT. SIDEWALK SPANS OF 28'-0" TO 84'-0"

ESTIMATED QUANTITIES

NAME	PROJECT NO.	SPANS
WOODSTOCK	R.W.A. 1049-F	2@59'-5½"

REVISED FOR 24'-0" SPAN 8-31-37 J.I.G.
REVISED 7-27-37 SPANS 84'-0" ADDED. ADES.
REVISED 5-14-37 28'-0" TO 59'-0" ADDED. ADES.

Surveyed by
Designed by W. H. DAY 4/24/37
Drawn by W. H. DAY 4/24/37
Traced by D. W. A. 4/26/37
Checked by [illegible] 4/26/37
Series [illegible] No. 56, 80N Filed
Sheet of Sheets

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

SINGLE SPANS

CLEAR SPAN	Total No. Posts	Total No. Balusters	"D"	"d"	"d_1"	Balusters Per Panel
25'0"	6	32	9'6"	8"	1'2"	8
30'0"	6	40	12'0"	9"	1'2"	10
35'0"	6	48	14'6"	10"	1'2"	12
40'0"	8	54	10'6"	7"	1'2"	9
45'0"	8	60	12'6"	7½"	1'3"	10
50'0"	10	64	10'0"	7½"	1'3"	8
55'0"	10	72	11'3"	7½"	1'3"	9
60'0"	10	80	12'6"	7½"	1'3"	10
65'0"	12	90	10'6"	7"	1'2"	9
70'0"	12	90	11'6"	9"	1'3"	9
75'0"	12	100	12'5¼"	7⅞"	1'3"	10
80	14	108	10'9¾"	9"	1'2"	9

END SPANS

Total No. Posts	Total No. Balusters	"D"	"d"	"d_1"	Balusters Per Panel
5	36	10'6"	7"	1'2"	9
5	44	13'0"	8"	1'2"	11
7	48	9'6"	8"	1'2"	8
7	54	11'2"	11"	1'2"	9
7	66	13'2"	9"	1'2"	11
9	72	10'6"	7"	1'2"	9
9	80	11'9"	7⅞"	1'2"	10
9	88	13'0"	8"	1'2"	11
9	96	14'3"	8¼"	1'2"	12
11	100	11'10¾"	8⅜"	1'2"	10
11	110	12'10⅝"	7⅛"	1'2"	11
13	108	11'1⅛"	7	1'3"	9

INTERMEDIATE SPANS

Total No. Posts	Total No. Balusters	"D"	"d"	"d_1"	Balusters Per Panel
4	40	11'6"	9"	1'3"	9
4	48	14'0"	7"	1'2"	12
6	54	10'2"	7"	1'1½"	9
6	60	11'10"	8"	1'2"	10
6	72	13'10"	8"	1'3"	11
8	72	11'0"	10"	1'2"	9
8	80	12'3"	10½"	1'2"	10
8	88	13'6"	8½"	1'2½"	11
8	104	14'9"	7½"	1'1½"	13
10	100	12'3⅝"	10⅛"	1'2"	10
10	110	13'3⅝"	9¼"	1'2"	11
12	108	11'6"	9	1'3"	9

QUANTITIES & BAR SCHEDULE FOR SINGLE SPAN

LIN. FT. RAIL	CLEAR SPAN	Conc. "A" ⑤	Reinforcing Steel	200 BAR REQD	210 BAR Total leng.	210 BAR REQD	220 BAR Total leng.	220 BAR REQD	230 BAR REQD	240 BAR REQD	250 BAR REQD
53'0"	25'0"	2.8 cy.	1400	54	14'0"	16	14'3"	16	128	12	36
63'0"	30'0"	3.3	1790	64	16'6"	16	16'9"	16	160	12	43
73'0"	35'0"	3.8	2033	14	19'0"	16	19'3"	16	192	12	50
83'0"	40'0"	4.3	2209	84	15'0"	24	15'3"	24	216	16	56
95'0"	45'0"	4.8	2654	96	17'0"	24	17'3"	24	240	16	64
105'0"	50'0"	5.4	2970	106	18'9"	24	19'0"	24	256	20	71
115'0"	55'0"	5.9	3248	116	15'9"	32	16'0"	32	288	20	77
125'0"	60'0"	6.4	3491	126	17'0"	32	17'3"	32	320	20	84
135'0"	65'0"	6.9	3922	136	15'0"	40	15'3"	40	360	24	91
145'0"	70'0"	7.4	4061	146	16'0"	40	16'3"	40	360	24	97
155'0"	75'0"	7.9	4344	156	17'0"	40	17'6"	40	400	24	104
165'0	80'0	8.2	4711	166	15'0	48	15'6	48	432	28	111

⑤ Concrete for 2 curbs only.

Note: Spacing must be computed for multiple-unequal-span bridges

NOTE – In top rail only – provide expansion joint of one layer of three-ply bituminous-treated paper or equiv. Joint to be flush with surface of top of rail adjacent to the post in each panel. The joint shall be entirely clean of all edges.

ONE LAYER OF THREE-PLY ROOFING PAPER ON EACH SIDE OF EVERY INTERIOR POST. SURFACE OF PAPER TO BE FLUSH WITH OUTER SURFACE OF RAIL.

ELEV. OF RAIL

SECTION A·A

EXPANSION JOINT AT ℄ OF PIERS IN MULTIPLE SPAN BRIDGES.

NO. 260 BARS – In Expansion Joint over Piers only.

NO. 200 BARS 1'0" ⅝.

NO. 210 BARS ⅞"ϕ – These bars are continuous through all posts except over piers as shown.

NO. 230 BARS ⅞"ϕ

NO. 220 BARS ⅝"ϕ – Do not carry across expansion joint.

Concrete above this line to be paid for at unit price bid for Balustrade Rail –

NO. 250 BARS ⅝"ϕ 1'-6 ⅝

NO. 240 BARS

℄ PIER –

℄ POST IN MULTIPLE SPAN –

ELEVATION OVER PIER

NO. 210 BARS

NO. 260 BARS

NO. 200 BARS 1'0" ⅝

NO. 240 BARS 2 each post

NO. 230 BARS

NO. 220 BARS

DETAIL OF POST

BALUSTRADE RAIL

For Reinforcement and Post Details see, Post Detail – Sidewalk side –

DETAIL OF POST & CURB – RDWY SIDE

NO. 210 BARS

NO. 230 BARS

NO. 220 BARS

NO. 240 BARS

NO. 200 BARS 1'0" ⅝

NO. 250 BARS

½" Premoulded Expan. Joint Material

Score Mark –

Drip Bead

DETAIL OF POST & RAIL – SIDEWALK SIDE

NOTES – Date panel shall be placed on the inside face of left hand End Post when entering, and the F.A Panel on the inside face of the right hand End Post when leaving the Bridge in direction of Stationing. • For location of curb see accompanying bridge sheet. • Camber rail and curb the same as the Bridge Floor on which they are used. • All work and material shall conform to the Standard Road and Bridge Specifications of the Vermont department of highways 1936 – • Concrete in curb, and reinforcing steel in rail and curb shall be paid for at unit price bid for these items. • Concrete in rail shall be paid for under unit price bid for Balustrade Rail (linear foot). • All dimensions for reinforcing steel detail are given to ℄ of bar. Balusters and posts to be erected plumb. • Balusters to be 1:2 Mix. • Post and Rail to be class 'A' concrete. •

Rail & Post Cap – NO. 200 BARS ⅜"ϕ total leng. 2'0"

Rail & Post Cap – NO. 210 BARS ⅝"ϕ – saw table – Wrap ends in paper to allow expansion –

Rail & Post Base – NO. 220 BARS ¾"ϕ – saw table

NO. 230 BARS ⅞"ϕ Balusters – 3'0" – 4 per baluster.

NO. 240 BARS 1" ϕ Posts – 4-0 – 2 per post. total length 8'7"

NO. 250 BARS ⅝"ϕ Base & curb – 1-2 – 1-3 – T.L. 4-9

NO. 260 BARS ⅝"ϕ Post caps over piers only. 2'6" – 6 PER POST OVER PIERS ONLY (EXTRA)

NOTES – All steel to be deformed bars. Reinforcing steel shall conform to the 'Standard Specifications for New Billet Steel Reinforcement Bars, Structural or Intermediate Grade' of the American Society for Testing Materials – serial designation A-15-30.

This steel schedule is not guaranteed to be correct; no claim will be allowed for inaccuracies encountered therein.

2'0" – ⅝ cable clamp – ⅝ϕ for ¾" cable – GALVANIZED ANCHOR ROD for attaching cable rail to curb –

Required – 8 per bridge – INCLUDED IN AND PAID FOR UNDER THE ITEM OF REINFORCING STEEL.

QUANTITY ESTIMATE –

Concrete per lin ft curb,	.0497 cu.yd
" " cap	.0198 "
" " base	.0222 "
Concrete per baluster	.0139 "
" " post	.0324 "

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

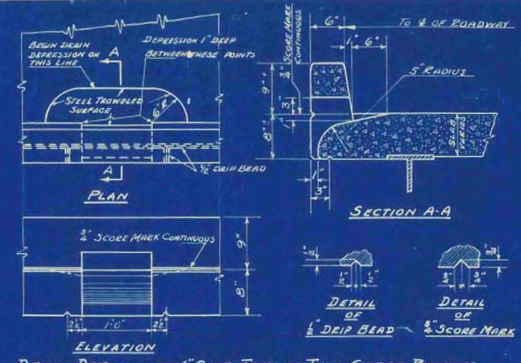
STANDARD BALUSTRADE RAIL FOR "T" AND "I" BEAM BRIDGES

CORRECT _____ BRIDGE ENGINEER

DESIGNED 1935 DRAWN _____

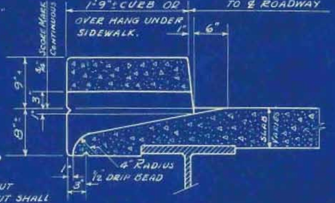
TRACED R.E.S. 11-3-36 CHECKED W.G.A. 12-N-37

SERIES SB NO. 7A SHEET _____ OF _____ SHEETS



Drain Detail with 6" Curb. Truss or Thru Girder Bridges

"Plan" and "Elevation" similar to that shown for Detail above



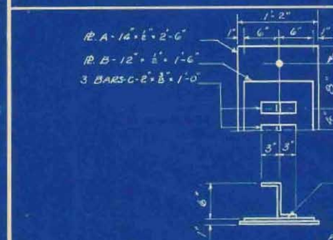
Notes:-

Care shall be taken to see that slab steel is bent aside or cut off so that none will be exposed within the drain.

Drains to be spaced about 20' apart along bridge, but shall be so placed that they do not drain onto abutments, piers or other objects below the superstructure which might be damaged thereby.

All exposed corners (not otherwise called for) shall be stoned to ½" radius

Drain Detail under Curb or Sidewalk T or WF Beam Bridges (A)

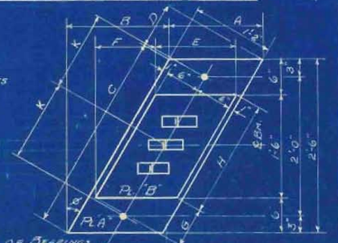


Coat bottom of Rf "B" and covered top of Rf "A" with graphite. All surfaces which will be exposed after erection are to be painted one coat of red lead and oil and one coat of approved graphite paint.

Sliding Plate Expansion Devices for Square T-Beam Bridges.

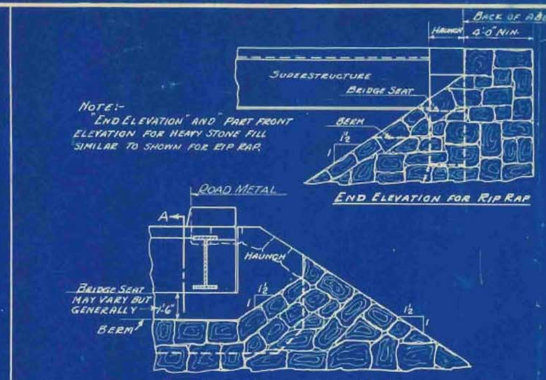
Details not shown and notes similar to those given for square span.

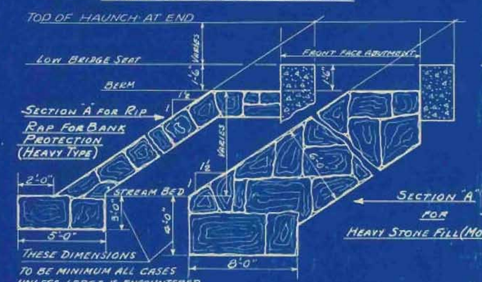
*Tabular length of plates given as this dimension for net weight, overall length for Pl. "A" being C-D and G-H for Pl. "B"



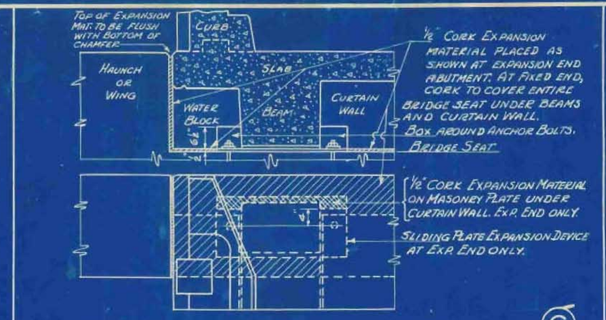
Skew Angle	Size Pl. "A"	Size Pl. "B"	Approx. Wt.	K	A	B	C*	D	E	F	G	H*
15°	14" ± ½ ± 2'-7"	12" ± ½ ± 1'-6⅝"	109#	1'-0½"	1'-2¼"	0'-8"	2'-7"	0'-3½"	1'-0¼"	0'-4½"	3¼"	1'-6⅝"
30°	14" ± ½ ± 2'-10⅝"	12" ± ½ ± 1'-8⅜"	120#	1'-1⅜"	1'-4½"	1'-5½"	2'-10⅝"	0'-8"	1'-1⅜"	0'-10½"	6⅝"	1'-8⅜"
45°	14" ± ½ ± 3'-6½"	12" ± ½ ± 2'-1¾"	143#	1'-4⅜"	1'-7⅞"	2'-6"	3'-6½"	1'-2"	1'-4⅜"	1'-6"	1'-0"	2'-1⅜"
60°	14" ± ½ ± 5'-0"	12" ± ½ ± 3'-0"	196#	2'-0"	2'-4"	4'-4"	5'-0"	2'-0½"	2'-0"	2'-7½"	1'-0¾"	3'-0"

Sliding Plate Expansion Devices for Skew Span T-Beam Bridges (B)

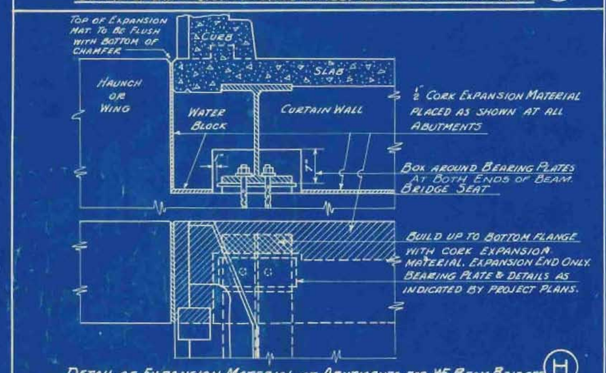




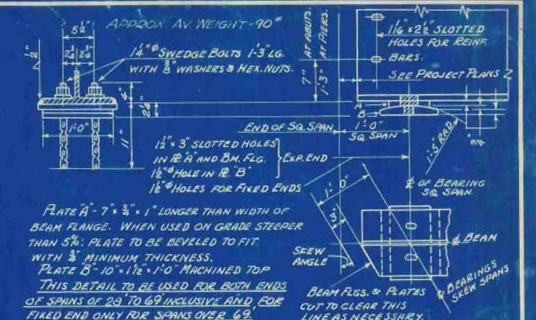
Detail of Rip Rap for Bank Protection (Heavy Type)
Detail of Heavy Stone Fill (Modified) (C)



Detail of Expansion Material at Abutments for T-Beam Bridges (G)



Detail of Expansion Material at Abutments for WF Beam Bridges (H)



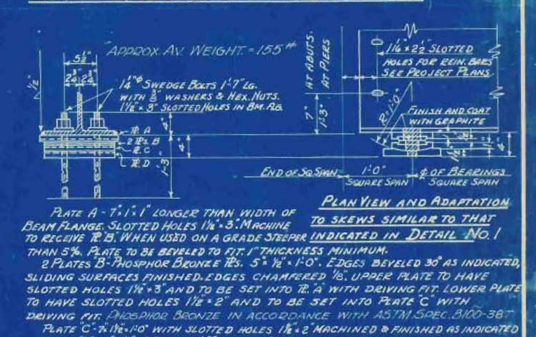


Plate A - 1'-1" longer than width of Beam Flange. Slotted holes 1⅛" × 3" Machine to receive Rf B. When used on a grade steeper than 5%. Plate to be beveled to fit. 1" thickness minimum.

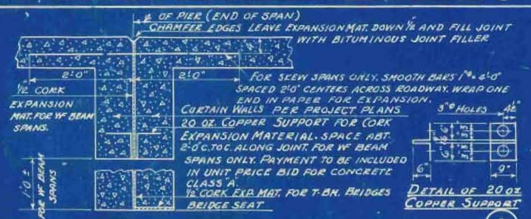
2 Plates B - Phosphor Bronze 12 lbs. 5" × ½" × 1'-0". Edges beveled 30° as indicated, sliding surfaces finished, edges chamfered ⅛". Upper plate to have slotted holes 1⅛" × 3" and to be set into Rf "A" with driving fit. Lower plate to have slotted holes 1⅛" × 2" and to be set into Plate C with driving fit. Phosphor Bronze in accordance with ASTM Spec. B100-38T

Plate C - ¾" × 14" × 1'-0" with slotted holes 1⅛" × 2" machined & finished as indicated

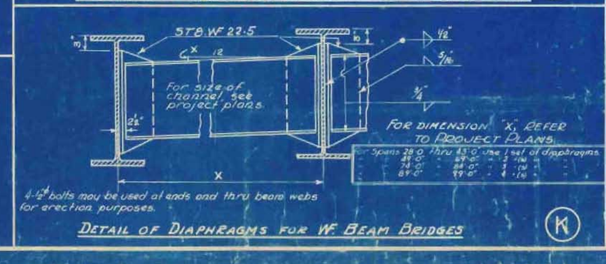
Plate D - 10" × 1⅛" × 1'-0" with 1⅛" ℄ holes, Machine & finish as indicated.

This detail to be used for expansion ends only of spans over 69'

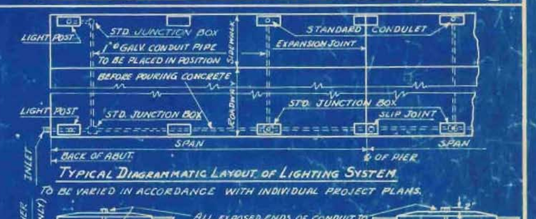
Bearing Plate Detail No. 2 for WF Beam Bridges (L)



Detail of Pier Expansion Material for T and WF Beam Bridges (I)



Detail of Diaphragms for WF Beam Bridges (K)



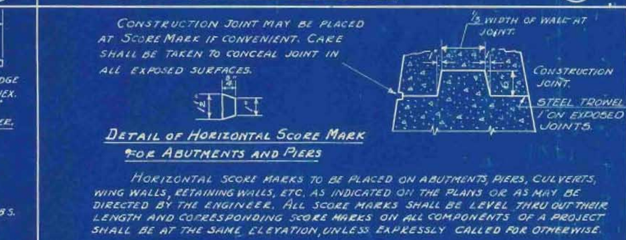
Notes:-

Ordinarily projects will include installation of complete conduit system as indicated only.

If directed anchor bolts for light standards shall be set in accordance with manufacturer's instructions

Where a complete lighting system is to be installed the wiring and fixtures shall be as indicated on the project plans.

Details of Conduit for Lighting System (M)



Details for Vertical Expansion Joints (E)

Detail of Approach Slab Bracket (F)

Construction joint may be placed at score mark if convenient. Care shall be taken to conceal joint in all exposed surfaces.

Detail of Horizontal Score Mark for Abutments and Piers

Horizontal score marks to be placed on abutments, piers, culverts, wing walls, retaining walls, etc. as indicated on the plans or as may be directed by the engineer. All score marks shall be level thru out their length and corresponding score marks on all components of a project shall be at the same elevation, unless expressly called for otherwise.

Detail of Horizontal Score Marks and Construction Joints (D)

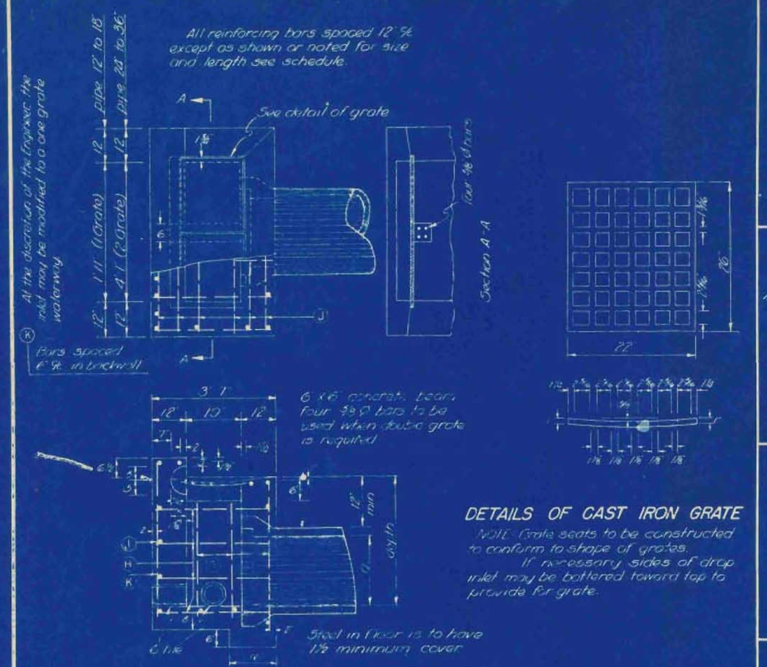
Surveyed by	
Designed by	
Drawn by	H.E. Slack
Traced by	D.W.P.
Checked by	D.W.P.
Series	S B
No.	20
Sheet	of
Filed	
Sheets	

Feb. 1940

State of Vermont
Department of Highways
Standard Bridge Details

Correct
C.A. Tuttle
Bridge Engineer

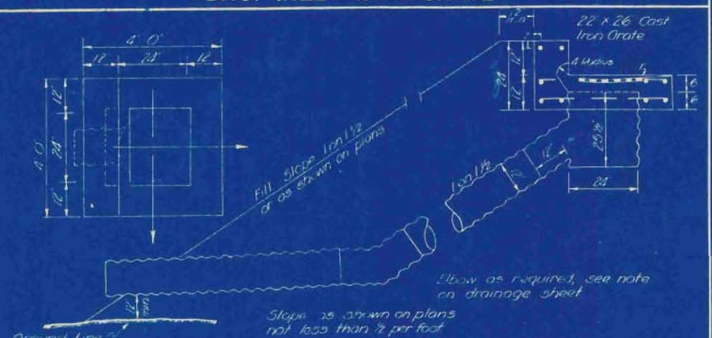
Revised:-



DETAILS OF CAST IRON GRATE

Inlet Grate seats to be constructed to conform to shape of grates. If necessary sides of drop inlet may be battered toward top to provide for grate.

DROP INLET WITH GRATE



Quantities of Concrete Class A and of Reinforcing Steel are to be included in unit price bid for Corrugated Galvanized Metal Drop Inlet Asphalt Coated with Grate Item 90.

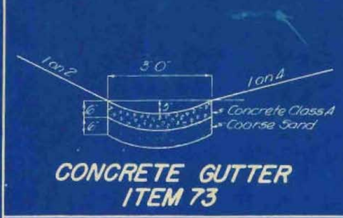
All Reinforcing Steel to be ⅜" ℄ deformed and spaced as shown.

All pipe other than 12" section made integral with Drop Inlet to be paid for at unit price bid for 12" Corrugated Galvanized Metal Pipe, Asphalt Coated.

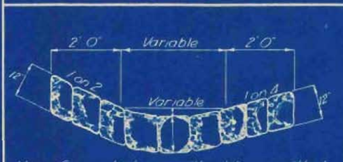
CORRUGATED GALVANIZED METAL DROP INLETS, ASPHALT COATED WITH GRATES ITEM 90

QUANTITIES FOR PIPE CULVERT HEADWALLS

Type of Headwall		Diameter of Pipe in Inches						
		12"	15"	18"	24"	30"	36"	
Straight Headwall	Cement Rubble Masonry	11	13	19	29	37	50	Volumes exclude pipe diameter for 30" & 36" pipes
L Type Headwall	Cement Rubble Masonry	14	19	24	38	49	68	

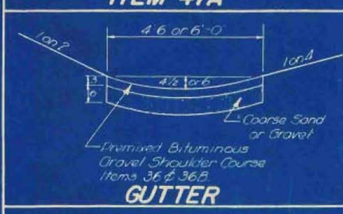


CONCRETE GUTTER ITEM 73

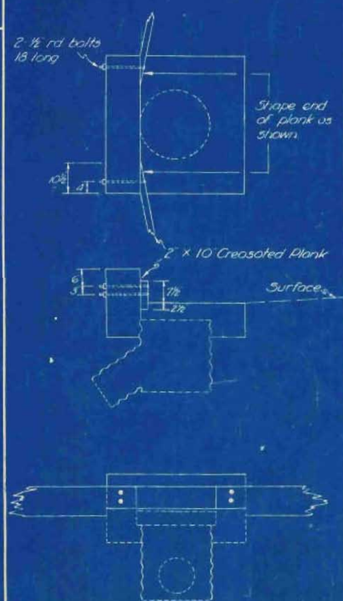


Use of round stones will not be permitted

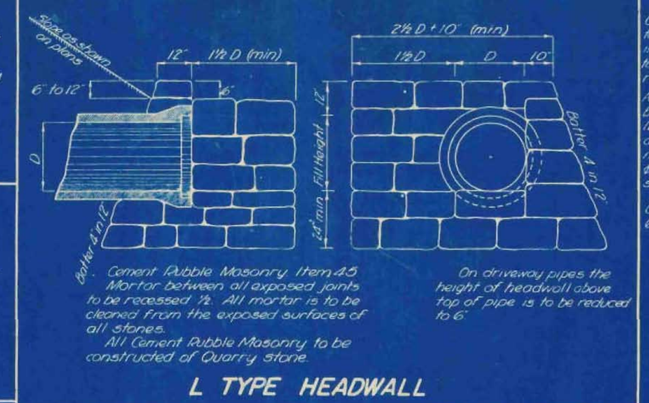
PLAIN RUBBLE PAVING ITEM 47A



GUTTER



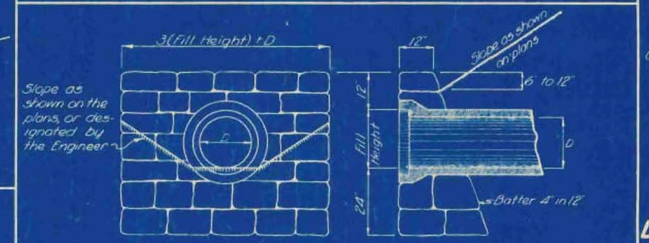
CREOSOTED TIMBER CURB ITEM 98 WITH ITEM 90



1. Cement Rubble Masonry Item 45 Mortar between all exposed joints to be recessed ½". All mortar is to be cleaned from the exposed surfaces of all stones.
All Cement Rubble Masonry to be constructed of Quarry stone.

On driveway pipes the height of headwall above top of pipe is to be reduced to 6"

L TYPE HEADWALL



STRAIGHT HEADWALL

Cement Rubble Masonry - Item 45

Mortar between all exposed joints to be recessed ½"

All mortar is to be cleaned from the exposed surfaces of all stones.

All Cement Rubble Masonry is to be constructed of quarry stone.

On driveway pipes the height of headwall above the top of pipe to be reduced to 6"

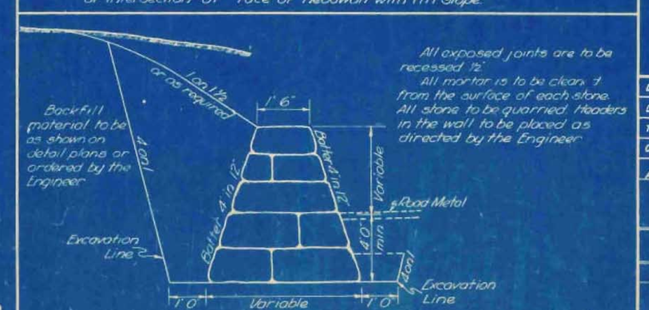
GENERAL NOTES

Tops of Headwalls to be constructed parallel with grade of the road.

Headwalls to be constructed parallel with the center line of the road.

Bell & Spigot pipe to be laid with the bell upstream.

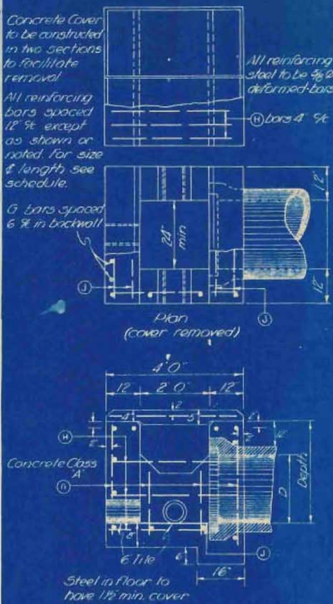
Fill Height is perpendicular distance from flow line to point of intersection of face of headwall with fill slope.



All exposed joints are to be recessed ½".
All mortar is to be clean of from the surface of each stone.
All stone to be quarried Headers in the wall to be placed as directed by the Engineer.

CEMENT RUBBLE MASONRY WALL

Paid for as Cement Rubble Masonry (Item 45)



DROP INLET WITH OR WITHOUT PRE-CAST COVER

STEEL SCHEDULE FOR DROP INLETS

DROP INLETS WITH GRATES

12" To 18" Diameter								24" To 36" Diameter							
Depth	G	Lgth	H	Lgth	J	Lgth	K	Lgth	H	Lgth	J	Lgth	K	Lgth	G	Lgth
2'-0"	8	2'-8"	14	3'-3"	10	3'-7"	8	2'-10"								
2'-6"	8	2'-10"	14	3'-3"	10	3'-7"	8	3'-4"								
3'-0"	8	3'-4"	16	3'-3"	12	3'-7"	8	3'-10"	18	3'-3"	12	3'-9"	13	3'-10"	10	3'-4"
3'-6"	8	3'-10"	16	3'-3"	12	3'-7"	8	4'-4"	18	3'-3"	12	3'-9"	13	4'-4"	10	3'-10"
4'-0"	8	4'-4"	18	3'-3"	14	3'-7"	8	4'-10"	20	3'-3"	14	3'-9"	13	4'-10"	10	4'-4"
4'-6"	8	4'-10"	18	3'-3"	14	3'-7"	8	5'-4"	20	3'-3"	14	3'-9"	13	5'-4"	10	4'-10"
5'-0"	8	5'-4"	20	3'-3"	16	3'-7"	8	5'-10"	22	3'-3"	16	3'-9"	13	5'-10"	10	5'-4"
5'-6"	8	5'-10"	20	3'-3"	16	3'-7"	8	6'-4"	22	3'-3"	16	3'-9"	13	6'-4"	10	5'-10"
6'-0"	8	6'-4"	22	3'-3"	16	3'-7"	8	6'-10"	24	3'-3"	18	3'-9"	13	6'-10"	10	6'-4"

Two Grates required with pipes of 24" to 36" in diameter

OPEN DROP INLETS AND DROP INLETS WITH PRE CAST COVERS

12" to 18" Diameter									30" Diameter								36" Diameter							
	open with top		open with top		open with top		open	with top	open & with top		open	with top	open & with top		open	with top	open & with top		open	with top	open & with top		open	with top
Depth	G	Lgth	H	Lgth	J	Lgth	G	Lgth	J	Lgth	H	Lgth	G	Lgth	J	Lgth	H	Lgth	G	Lgth	J	Lgth	H	Lgth
2'-0"	16	2'-8"	18	3'-3"	10	3'-7"																		
2'-6"	16	2'-10"	18	3'-3"	10	3'-7"																		
3'-0"	16	3'-4"	18	3'-3"	12	3'-7"	8	3'-10"	18	3'-3"	12	3'-9"	13	3'-10"	10	3'-4"								
3'-6"	16	3'-10"	18	3'-3"	12	3'-7"	8	4'-4"	18	3'-3"	12	3'-9"	13	4'-4"	10	3'-10"								
4'-0"	16	4'-4"	18	3'-3"	14	3'-7"	8	4'-10"	20	3'-3"	14	3'-9"	13	4'-10"	10	4'-4"								
4'-6"	16	4'-10"	18	3'-3"	14	3'-7"	8	5'-4"	20	3'-3"	14	3'-9"	13	5'-4"	10	4'-10"								
5'-0"	16	5'-4"	20	3'-3"	16	3'-7"	8	5'-10"	22	3'-3"	16	3'-9"	13	5'-10"	10	5'-4"								
5'-6"	16	5'-10"	20	3'-3"	16	3'-7"	8	6'-4"	22	3'-3"	16	3'-9"	13	6'-4"	10	5'-10"								
6'-0"	16	6'-4"	22	3'-3"	16	3'-7"	8	6'-10"	24	3'-3"	18	3'-9"	13	6'-10"	10	6'-4"								

DESIGNED	A. J. RUNNALS	1-41
DRAWN	C. LAYTHE	3-41
TRACED	E.R. ROGERS	4-15-41
CHECKED	F. C. COATES	3-15-41

APPROVED April 24, 1941
ROAD ENGINEER

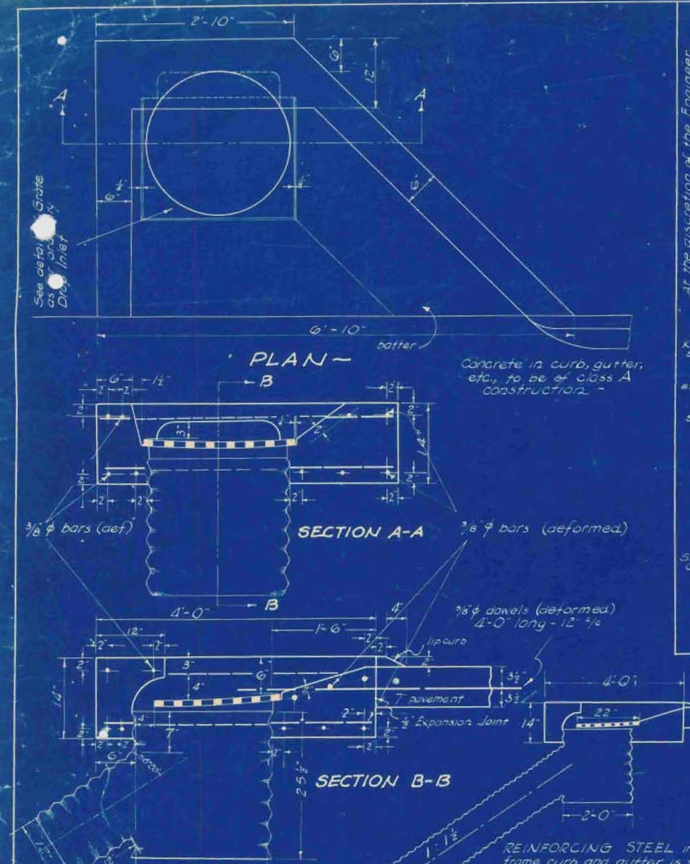
SIGNED April 24, 1941
COMMISSIONER OF HIGHWAYS

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

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
STANDARD STRUCTURES

PLAIN RUBBLE PAVING, CEMENT RUBBLE MASONRY WALL, CORR. GALV. METAL DROP INLETS WITH GRATES, PIPE CULVERT DROP INLETS-HEADWALLS

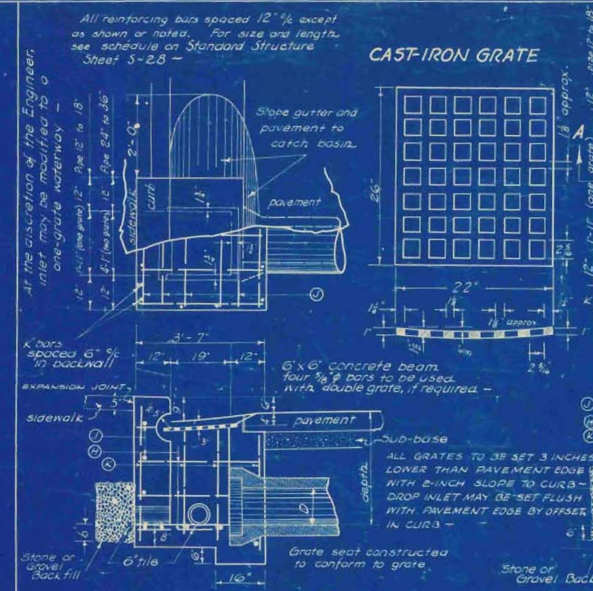
SERIES S NO 28



CORRUGATED GALVANIZED METAL DROP INLET – ASPHALT COATED, WITH GRATES – ITEM 90 –

Drop inlets to be constructed of 24" Corrugated Galvanized Metal Pipe, Asphalt Coated., with outlet pipe of 12" C.G.M.P., A.C. The bottom of the drop inlet shall be made of same guage of metal as the 24" pipe and shall be welded to it.
The 12" outlet pipe is to be welded or riveted to the 24" pipe at the angle shown.
The entire metal drop inlet with outlet pipe is to be thoroughly coated, inside & outside, with waterproof asphaltic material. All riveted joints are to be water tight.
A 12" double-asphalt-coated collar is to be used at the junction of the 12" outlet pipe and the lead-off pipe. This collar is to be included in bid price for "Metal Drop Inlet".

All reinforcing bars spaced 12" c/c except as shown or noted. For size and length, see schedule on Standard Structure Sheet S-2.8 –



DROP INLET WITH GRATE, CURB AND SIDEWALK AND CONCRETE PAVEMENT –

To be paid for as Conc. class A: item 41:A
Reinforcing Steel: item 42
Drop Inlet Grate: item 89

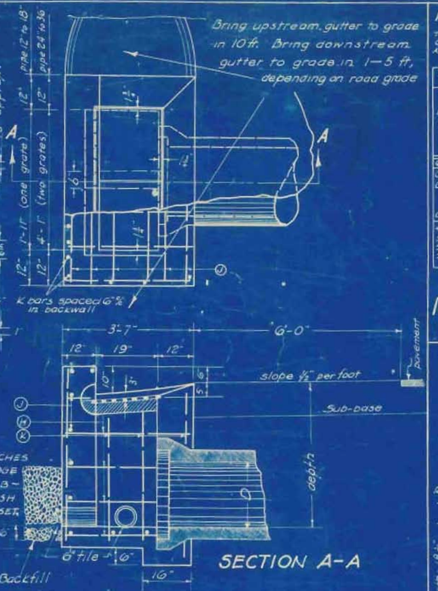
CAST-IRON GRATE

6"x6" concrete beam. Four 5/8 ϕ bars to be used. With double grate, if required. –

Grate seat constructed to conform to grate.

ALL GRATES TO BE SET 3 INCHES LOWER THAN PAVEMENT EDGE WITH 2-INCH SLOPE TO CURB – DROP INLET MAY BE SET FLUSH WITH PAVEMENT EDGE BY OFFSET IN CURB –

At the discretion of the Engineer, inlet may be modified to a one-grate waterway. –



DROP INLET WITH GRATE SET BACK FROM PAVEMENT

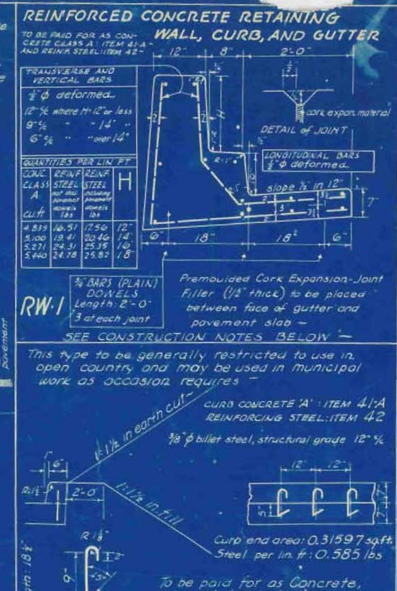
SECTION A-A

REINFORCED CONCRETE RETAINING WALL, CURB, AND GUTTER

TO BE PAID FOR AS CONCRETE CLASS A: ITEM 41:A AND REINF. STEEL: ITEM 42 –

TRANSVERSE AND VERTICAL BARS	
1/2" ϕ deformed	
12" c/c where H 12' or less	
9" c/c " " 14'	
6" c/c " " over 14'	

QUANTITIES PER LIN. FT.			
CONC. CLASS A cuft	REINF. STEEL not incl. pavement dowels lbs	REINF. STEEL including pavement dowels lbs	H
4.839	46.51	47.56	12'
5.100	18.41	20.46	14'
5.371	24.31	25.39	16'
5.640	24.78	25.82	18'



RW-1

3/8 BARS (PLAIN) DOWELS Length 2'-0" 3 at each joint

Premoulded Cork Expansion-Joint Filler (1/2" thick) to be placed between face of gutter and pavement slab –

SEE CONSTRUCTION NOTES BELOW –

This type to be generally restricted to use in open country and may be used in municipal work as occasion requires –

To be paid for as Concrete, class A (item 41:A) and as Reinforcing Steel –

DETAIL OF CURB DOWELLED TO PAVEMENT SLAB –

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

QUANTITIES PER LIN. FOOT
Concrete A: 1.761 cu ft
Reinforcing Steel: 0.75 lb (excluding pavement dowel(s))
* Reinforcing Steel: 1.8 lbs including pavement dowels

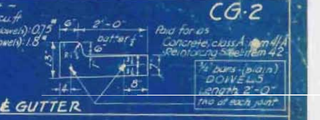
Paid for as Concrete, class A: item 41:A – Reinforcing Steel, item 42 –

CG-1

CONCRETE CURB AND GUTTER WITH GUARD RAIL

1/4" bars (PLAIN) DOWELS Length 2'-0" two at each joint

Quantities per linear foot –
Concrete, class A: 1.719 cu ft
Reinforcing Steel (excl. pavt dowels): 0.75 *
* Reinforcing Steel incl. pavt dowels): 1.8 *



CG-2

Paid for as Concrete, class A: item 41:A Reinforcing Steel: item 42

3/8 bars (plain) DOVELS length 2'-0" two at each joint

CONCRETE CURB & GUTTER

Quantities per linear foot –
Concrete, class A: 1.800 cu ft
Reinforcing Steel (excluding pavement dowels): 0.75 *
* Reinforcing Steel (including pavement dowels): 1.8 *

CG-3

Paid for as Concrete, class A: item 41:A, Reinforcing Steel: item 42

3/8 bars (plain) DOVELS length 2'-0" two at each joint

CONCRETE CURB & GUTTER

Quantities per linear foot –
Concrete, class A: 2.146 cu ft
Reinforcing Steel (excluding pavement dowels): 0.75 *
* Reinforcing Steel (including pavement dowels): 1.8 *

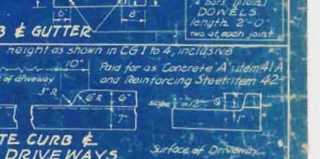
CG-4

Paid for as Concrete, class A: item 41:A Reinforcing Steel: item 42

3/4 bars (plain) DOVELS length 2'-0" two at each joint

CONCRETE CURB & GUTTER

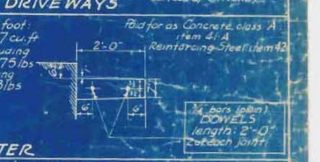
* Variable with curb height as shown in CG-1 to 4, inclusive



SPECIAL CONCRETE CURB & GUTTER AT DRIVEWAYS

Quantities per linear foot –
Concrete class A: 1.107 cu ft
Reinforcing Steel (excluding pavement dowels): 0.75 lbs
* Reinforcing Steel (including pavement dowels): 1.8 lbs

Paid for as Concrete, class A item 41:A Reinforcing Steel item 42



3/4 bars (plain) DOVELS length 2'-0" 3 at each joint

G-1

CONCRETE GUTTER

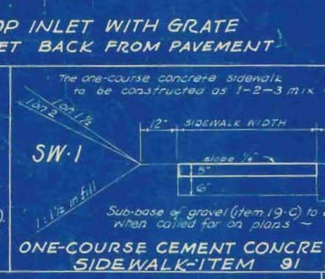
(Paid for on linear foot basis)

LIP CURB (Item 75)

GENERAL NOTES –

All exposed edges to be chamfered one inch –
All concrete to be class A –
Splices shall have a length of not less than 40 diameters –
Bar reinforcement shall conform to the requirements of the Standard Specifications for New Billet Steel Concrete Reinforcement Bars, serial designation A-15-35, of the American Society for Testing Material (item 42-para. 422).
Steel Schedule contemplates some cutting & bending in field –
All steel to be deformed bars.

The one-course concrete sidewalk to be constructed as 1-2-3 mix –



ONE-COURSE CEMENT CONCRETE SIDEWALK – ITEM 91

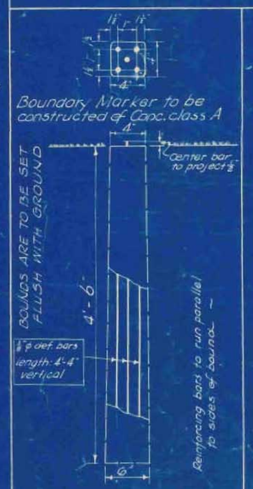
(Paid for on sq yd basis)

Coarse aggregate to have a maximum size of three quarters of an inch.
Sidewalk joints to be placed every 6 feet and be so adjusted that one will occur opposite every transverse joint in the pavement, when sidewalk + curb are adjacent –
Metal separation plates 1/4" to 3/8" thick will be allowed with expansion joint material.
1/4" thick placed at intervals of approximately every 50 feet –
1/4" expansion-joint material to be placed between sidewalk and back of curb at locations called for on the plans –

Sidewalk to be given broom finished surf.

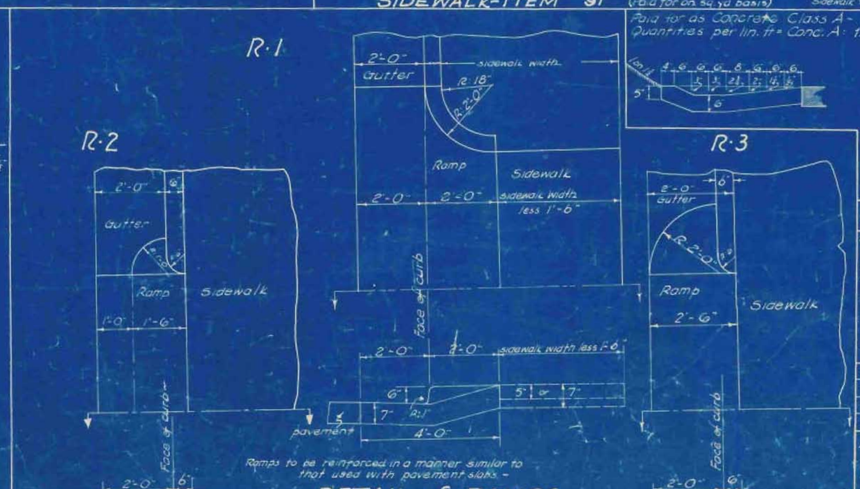
CONSTRUCTION NOTES FOR STANDARDS RW-1, CG-1-2-3-4, AND G-1

1. If called for on the plans, curb & gutter sections to be doweled to the pavement slabs with 3/8" ϕ (deformed) bars, 4'-0" long. Two dowels used for every 8'-0" section.
2. Joints in curb & gutter, and wall curb & gutter, to be spaced 8 ft apart –
3. Premoulded bituminous expansion-joint-filler 1/2" thick to be placed, every 16th section (i.e. every 40') in curb & gutter, and every 8' in wall curb & gutter.
4. Remaining joints to be either butt joints painted with bituminous materials or cut-plate joints –
5. Joints in curb & gutter sections to be placed so that one will occur opposite every transverse joint in the the pavement –
6. Unless otherwise specified, all exposed edges are to be rounded to 3/8" radius.
7. Joints between pavement and gutter to be painted with bituminous material unless otherwise noted.



BOUNDARY MARKER

(ITEM 85)



Ramps to be reinforced in a manner similar to that used with pavement slabs –

DETAIL of RAMPS

ONE COURSE CEMENT CONCRETE PAVEMENT – ITEM 35-A

Ramps to be constructed of One Course Cement Concrete Pavement (Item 35-A) as outlined in "Pamphlet D" of Vermont Road & Bridge Specifications.

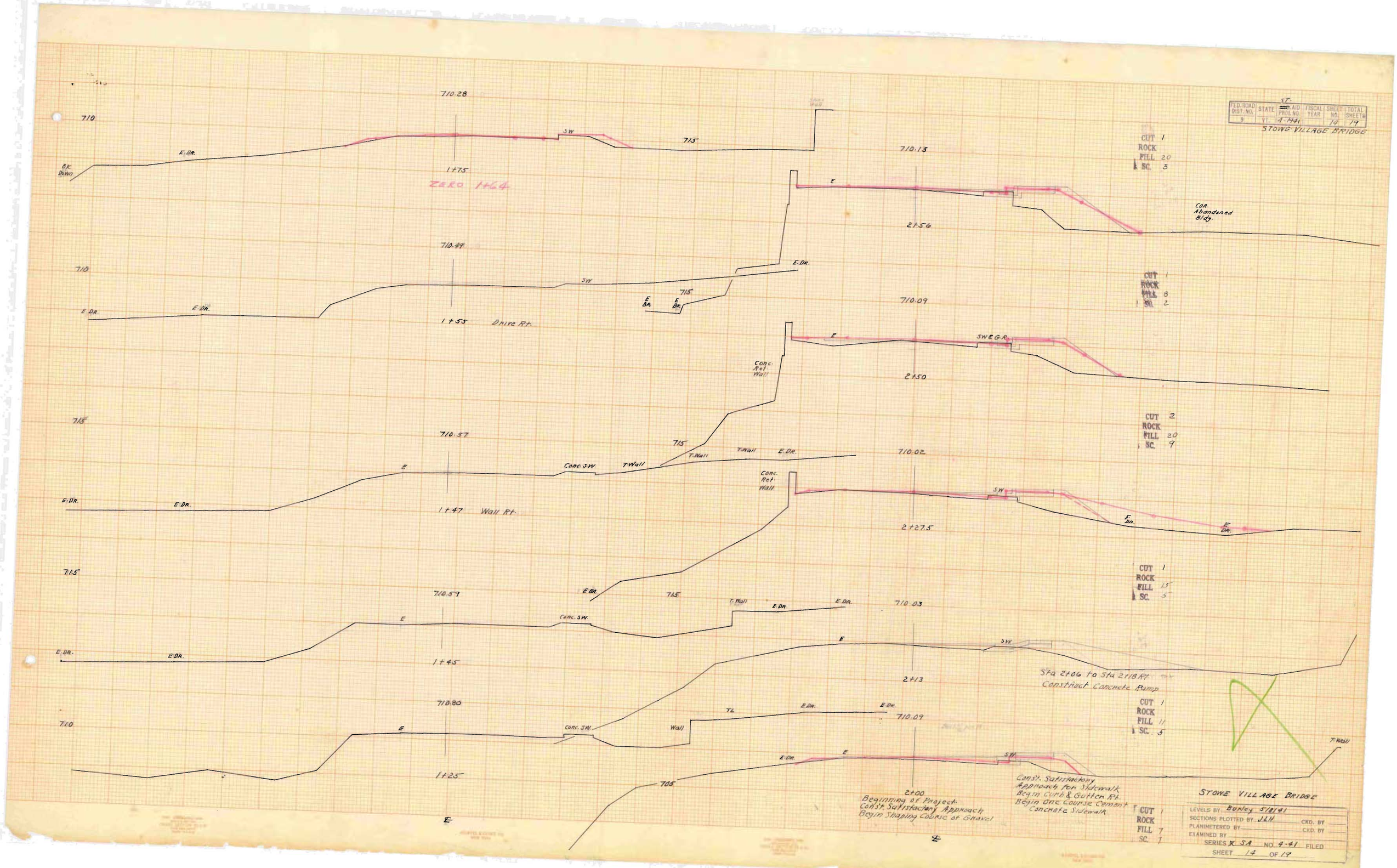
DESIGNED	A. J. RUNNALS	
DRAWN	P.	
TRACED	G.	6-39
CHECKED		
APPROVED		
	ROAD ENGINEER	
SUBMITTED BY ORDER OF THE STATE HIGHWAYS BOARD		
	COMMISSIONER of HIGHWAYS	

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

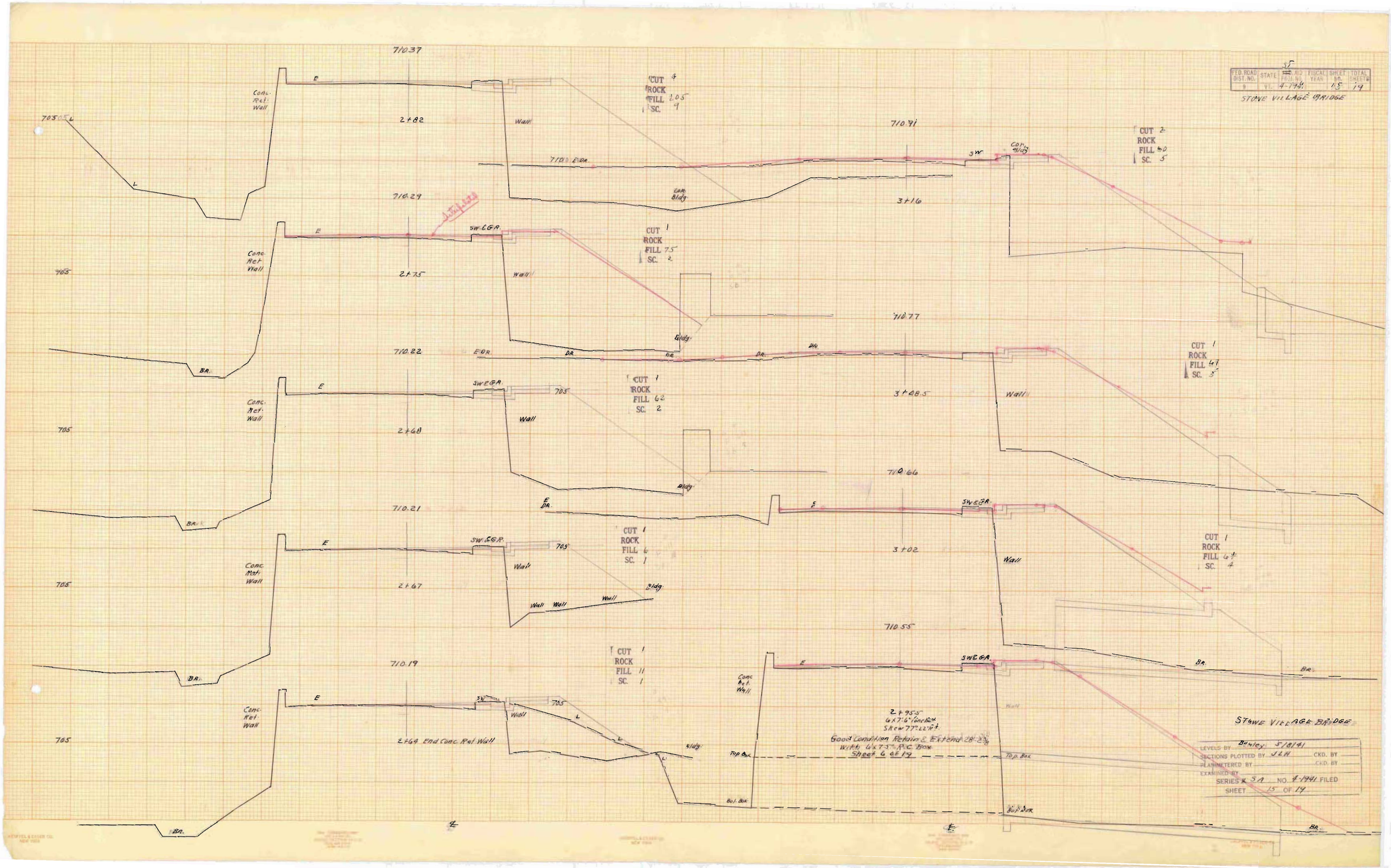
STANDARD STRUCTURES

SPECIAL DROP INLETS, CURB AND GUTTER, RETAINING WALLS, SIDEWALK, ETC.

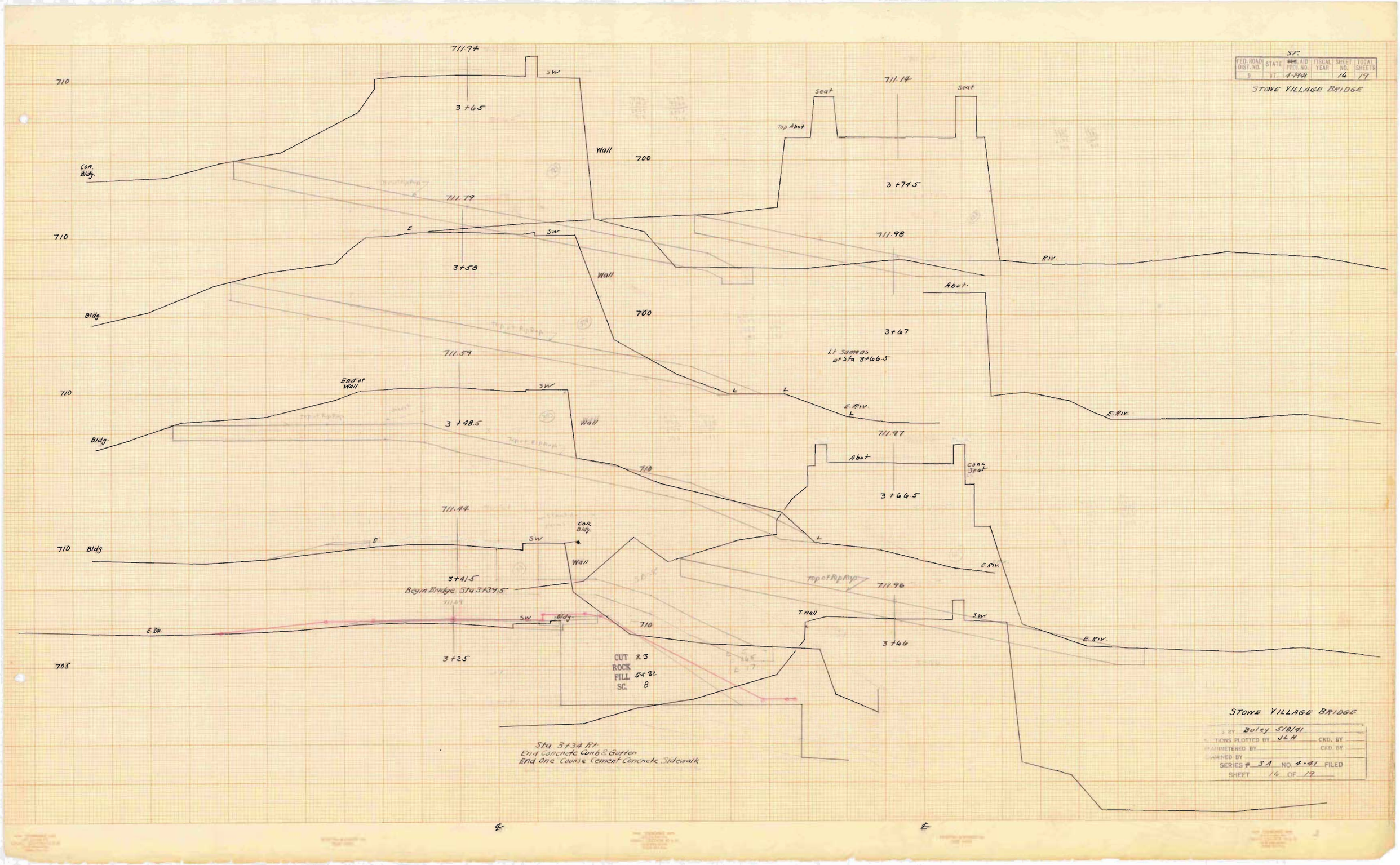
SERIES S NO. 31



FED. ROAD DIST. NO. 9
STATE VT.
ST. AID PROJ. NO. 4-1941
FISCAL YEAR
SHEET NO. 14
TOTAL SHEETS 19
STOWE VILLAGE BRIDGE
710.28
710
E. DR.
SW
715
1+75
ZERO 1+64
710.13
E
2+56
CUT 1
ROCK
FILL 20
SC. 3
COR. Abandoned Bldg.
710.49
710
E. DR.
SW
E. DR.
715
E BR.
E BR.
1+55
Drive Rt.
710.09
E
SW & G.R.
2+50
CUT 1
ROCK
FILL 8
SC. 2
Conc. Ret. Wall
715
710.57
E
Conc. SW
T. Wall
715
T. Wall
T. Wall
E. DR.
710.02
E. DR.
E. DR.
1+47
Wall Rt.
Conc. Ret. Wall
SW
2+27.5
E DR.
E DR.
CUT 2
ROCK
FILL 20
SC. 9
715
710.59
E BR.
715
T. Wall
E. DR.
E. DR.
710.03
E
Conc. SW.
E. DR.
E. DR.
1+45
E
SW
2+13
Sta 2+06 to Sta 2+18 Rt.
Construct Concrete Ramp
CUT 1
ROCK
FILL 15
SC. 5
710.80
710
E
Conc. SW.
Wall
TL
E. DR.
E. DR.
710.09
1+25
E. DR.
E
SW
705
2+00
Beginning of Project.
Const. Satisfactory Approach
Begin Shaping Course of Gravel
Const. Satisfactory Approach for Sidewalk
Begin Curb & Gutter Rt.
Begin One Course Cement Concrete Sidewalk
CUT 1
ROCK
FILL 11
SC. 5
T. Wall
CUT 1
ROCK
FILL 7
SC. 1
STOWE VILLAGE BRIDGE
LEVELS BY Burley 5/8/41
SECTIONS PLOTTED BY JLH
CKD. BY
PLANIMETERED BY
CKD. BY
EXAMINED BY
SERIES X SA NO. 4-41 FILED
SHEET 14 OF 19



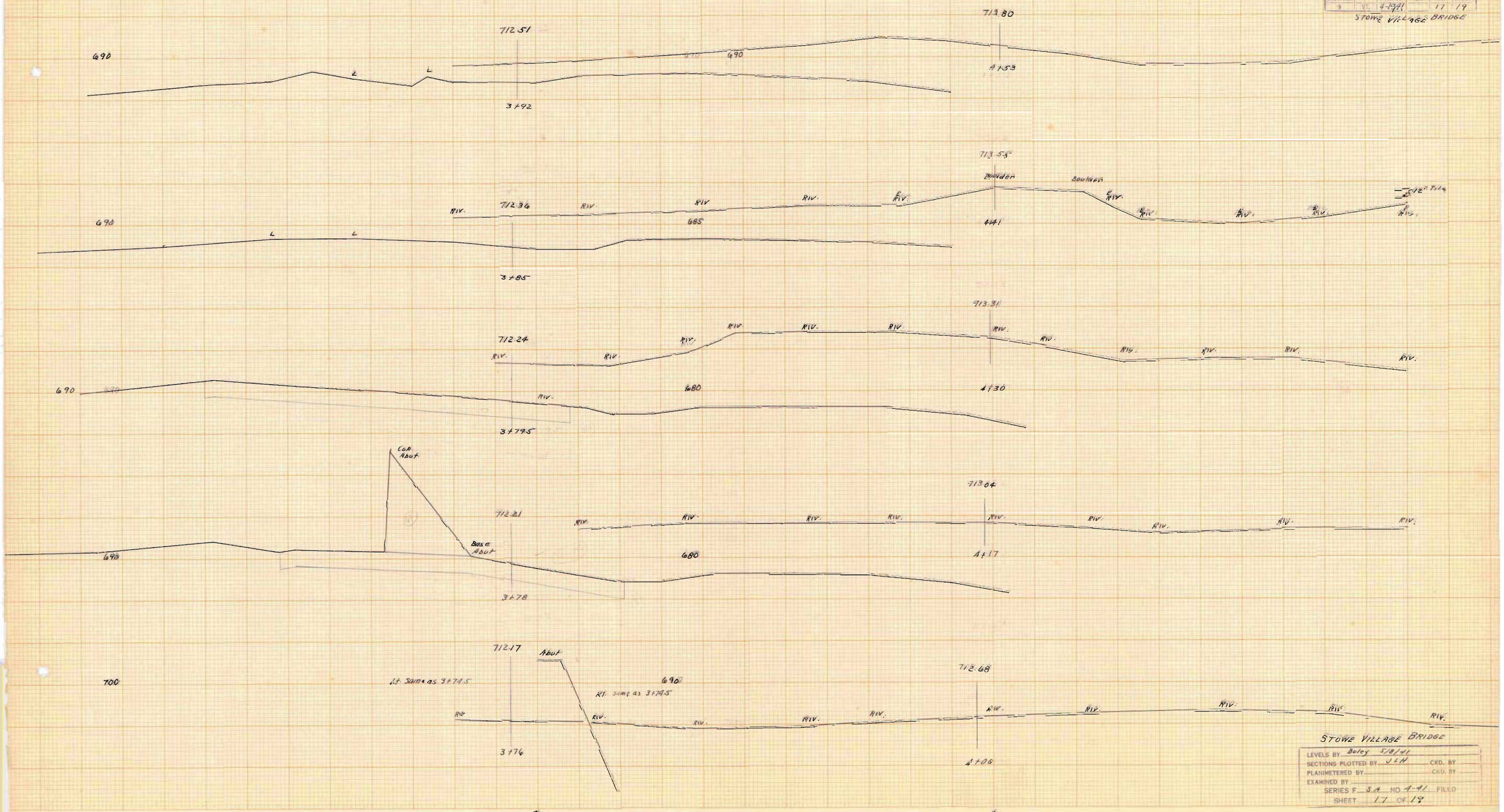
FED. ROAD DIST. NO. 9
STATE VT.
FED. AID PROJ. NO. 4-1941
FISCAL YEAR
SHEET NO. 15
TOTAL SHEETS 19
STONE VILLAGE BRIDGE
710.37
2+82
Conc. Ret. Wall
Wall
CUT 4 ROCK FILL 205 SC. 9
710.91
CUT 2 ROCK FILL 40 SC. 5
710.29
3+16
CUT 1 ROCK FILL 75 SC. 2
2+75
710.77
710.22
CUT 1 ROCK FILL 67 SC. 3
CUT 1 ROCK FILL 62 SC. 2
3+08.5
2+68
710.66
710.21
CUT 1 ROCK FILL 6 SC. 1
3+02
CUT 1 ROCK FILL 64 SC. 4
2+67
710.55
710.19
CUT 1 ROCK FILL 11 SC. 1
2+64 End Conc. Ret. Wall
2+95.5
6x7'-6" Conc. Box
Skew 77°-22' Rt.
Good Condition Retain & Extend 28'-2⅜
With 6x7'-5" R.C. Box
Sheet 6 of 19
Top Box
Bot. Box
STONE VILLAGE BRIDGE
LEVELS BY Bunley 5/8/41
SECTIONS PLOTTED BY JLH
CKD. BY
PLANIMETERED BY
CKD. BY
EXAMINED BY
SERIES SA NO. 4-1941 FILED
SHEET 15 OF 19



FED. ROAD DIST. NO. 9
STATE VT.
AID PROJ. NO. 4-1941
FISCAL YEAR
SHEET NO. 16
TOTAL SHEETS 19
STOWE VILLAGE BRIDGE
711.94
SW
3+65
Wall
700
COR. Bldg.
711.79
E
SW
3+58
Wall
700
Bldg.
711.59
End of Wall
SW
3+48.5
Wall
710
Bldg.
711.44
COR. Bldg.
SW
E
Wall
3+41.5
Begin Bridge Sta 3+39.5
SW
Bldg.
E DR.
3+25
705
Seat
Top Abut
711.14
Seat
3+74.5
711.98
RIV.
Abut.
3+67
Lt same as at Sta 3+66.5
E. RIV.
E. RIV.
711.97
Abut
Conc Seat
3+66.5
E. RIV.
Top of Rip Rap
711.96
T. Wall
SW
3+66
E. RIV.
CUT R 3
ROCK
FILL 5+82
SC. 8
Sta 3+34 Rt.
End Concrete Curb & Gutter
End One Course Cement Concrete Sidewalk
STOWE VILLAGE BRIDGE
BY Buley 5/8/41
TIONS PLOTTED BY JLH
CKD. BY
MINETERED BY
CKD. BY
AMINED BY
SERIES # SA NO. 4-41 FILED
SHEET 16 OF 19

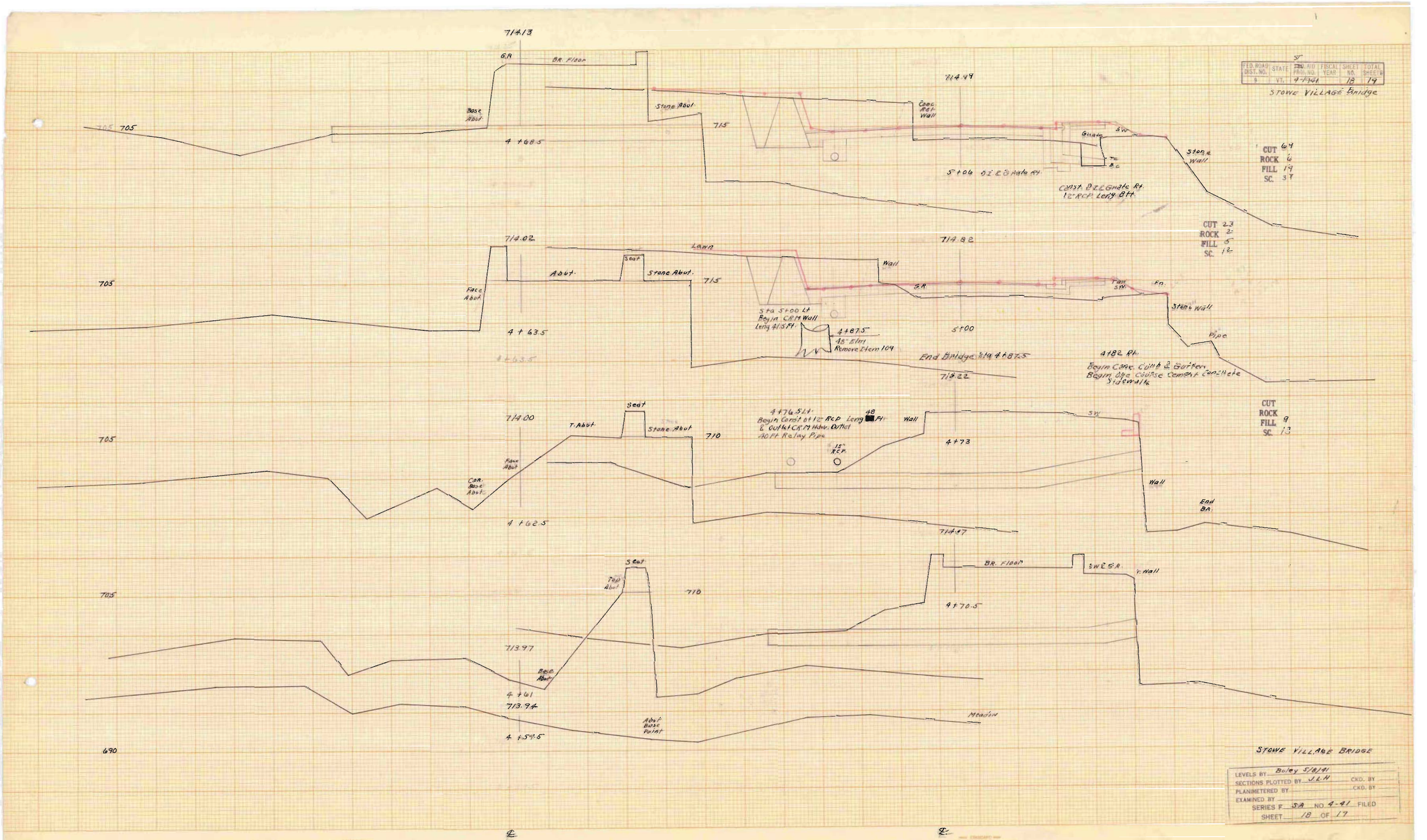
FED. ROAD DIST. NO.	STATE	~~FED.~~ ST. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
9	VT.	4-1941		17	19

STOWE VILLAGE BRIDGE



STOWE VILLAGE BRIDGE

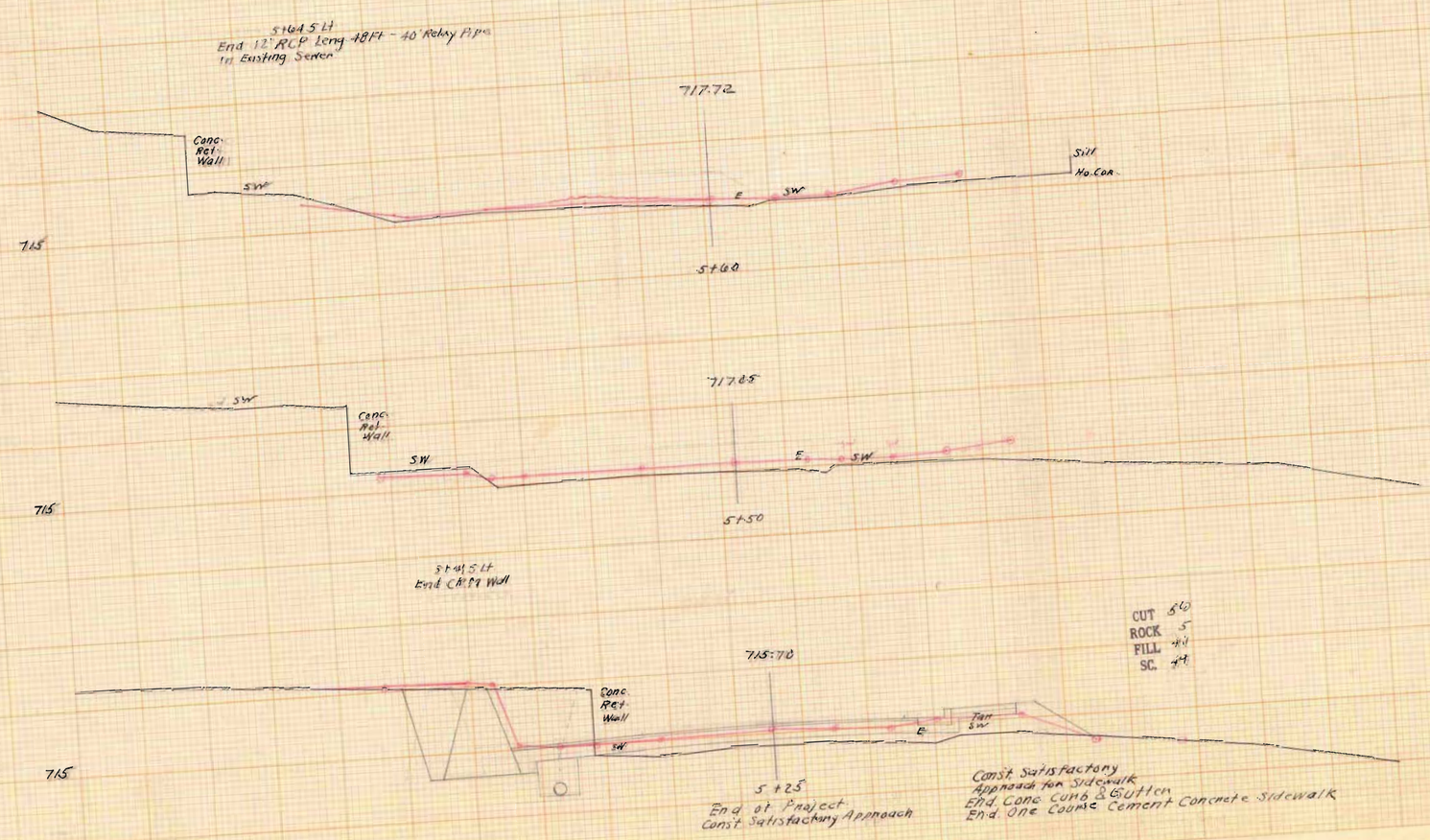
LEVELS BY Buley 5/8/41
SECTIONS PLOTTED BY JLH CKD. BY
PLANIMETERED BY CKD. BY
EXAMINED BY
SERIES F SA NO. 4-41 FILED
SHEET 17 OF 19



FED. ROAD DIST. NO. 9
STATE VT.
FED. AID PROJ. NO. 9-1941
FISCAL YEAR
SHEET NO. 18
TOTAL SHEETS 19
STOWE VILLAGE Bridge
714.13
G.R.
BR. Floor
Base Abut.
Stone Abut.
715
714.99
Conc. Ret. Wall
Grate
SW
Stone Wall
705
4 + 68.5
5 + 06 D.I. & Grate Rt.
Const. D.I. & Grate Rt. 12" RCP Leng. 8 ft.
CUT 69
ROCK 6
FILL 19
SC. 37
CUT 23
ROCK 2
FILL 5
SC. 12
714.02
Lawn
Seat
Abut.
Stone Abut.
715
714.82
Wall
G.R.
Tan SW
Fn.
Stone Wall
Face Abut.
4 + 63.5
Sta 5+00 Lt Begin CRM Wall Leng 41.5 Ft.
4+87.5
48" Elm Remove Item 109
5+00
End Bridge Sta 4+87.5
714.22
4+82 Rt.
Begin Conc. Curb & Gutter
Begin One Course Cement Concrete Sidewalk
Pipe
CUT
ROCK 9
FILL 9
SC. 13
714.00
Seat
T. Abut.
Stone Abut.
710
4+76.5 Lt.
Begin Const of 12" RCP Leng 48 Ft.
& Outlet CRM Hdw. Outlet
40 Ft Relay Pipe
15" R.C.P.
Wall
SW
4+73
Face Abut.
Cor. Base Abut.
4 + 62.5
714.47
Wall
End Br.
Seat
Top Abut.
710
BR. Floor
SW & G.R.
T. Wall
4+70.5
713.97
Base Abut.
4 + 61
713.94
Abut Base Point
Meadow
4 + 59.5
690
STOWE VILLAGE BRIDGE
LEVELS BY Buley 5/8/41
SECTIONS PLOTTED BY J.L.H.
CKD. BY
PLANIMETERED BY
CKD. BY
EXAMINED BY
SERIES F SA NO. 4-41 FILED
SHEET 18 OF 19

FED. ROAD DIST. NO.	STATE	~~FED.~~ St. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
9	VT.	4-1941		19	19

STOWE VILLAGE BRIDGE



CUT 50
ROCK 5
FILL 41
SC. 44

STOWE VILLAGE BRIDGE

LEVELS BY Buley 5/8/41
SECTIONS PLOTTED BY JLH CKD. BY
PLANIMETERED BY CKD. BY
EXAMINED BY
SERIES F SA NO. 4-41 FILED
SHEET 19 OF 19