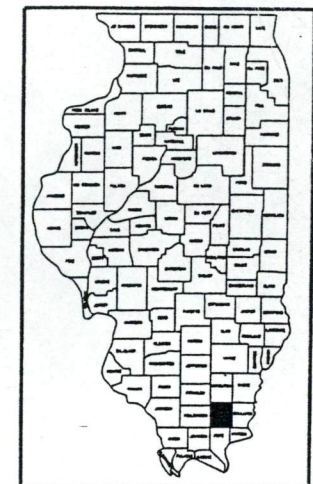


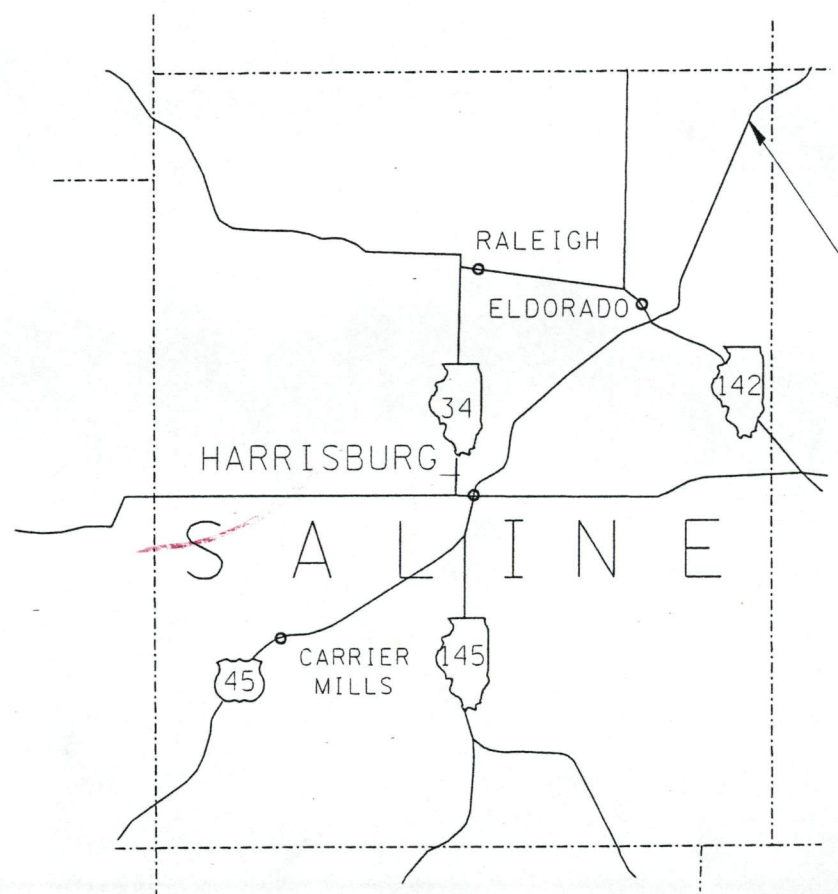
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
US 45	.	SALINE	7	1
FED. ROAD DIST. NO. 7		ILLINOIS	DAY LABOR	03L901

\*BRIDGE REPAIRS



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
**PROPOSED  
HIGHWAY PLANS  
DISTRICT 9**  
FAP ROUTE 332 (US 45)  
BRIDGE REPAIRS  
SALINE COUNTY

RECTOR TOWNSHIP  
1999 ADT = 4500  
2019 ADT = 5575  
POSTED SPEED = 55 MPH  
INVENTORY RATING HS 27.8  
OPERATING RATING HS 31.7



PROPOSED IMPROVEMENT  
SN 083-0002  
BRIDGE RAIL

PROJECT ENGINEER: KAREN RICHARDSON  
SQUAD LEADER: RITA GAUTNEY  
PHONE: (815) 549-2171  
CENTREX: 782-854

FOR INDEX OF SHEETS, SEE SHEET NO. 3.  
FOR SUMMARY OF QUANTITIES, SEE SHEET NO. 3.

JULIE 1-800-892-0123

DAY LABOR PROJECT NO. 03L901

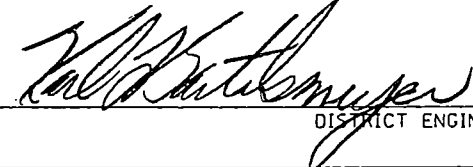
083-0002

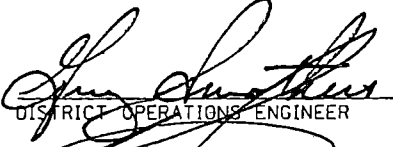
083-0002


ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
US 45	.	SALINE	7	2
FED. ROAD DIST. NO. 7		ILLINOIS	DAY LABOR	03L901
*BRIDGE REPAIRS				

STATE OF ILLINOIS  
 — DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS

SUBMITTED July 12 20 02

  
 DISTRICT ENGINEER

PREPARED BY:   
 DISTRICT OPERATIONS ENGINEER

EXAMINED BY:   
 DISTRICT PROGRAM DEVELOPMENT ENGINEER

EXAMINED BY:   
 DISTRICT PROJECT IMPLEMENTATION ENGINEER

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
US 45	.	SALINE	7	3
FED. ROAD DIST. NO. 7		ILLINOIS	DAY LABOR	03L901
*BRIDGE REPAIRS				

INDEX OF SHEETS

<u>SHEET NO.</u>	<u>DESCRIPTION</u>
1.	Cover Sheet
2.	Signature Block
3.	Index of Sheets Summary of Quantities
4.	General Notes
5.	Typical Section
6.	Plan View Bridge Rail and Guardrail

Standards

- 509001
- 631041-01
- 701006-01
- 701201-01
- 702001-02

SUMMARY OF QUANTITIES

<i>Code No.</i>	<i>Item</i>	<i>Unit</i>	<i>Total Quantity</i>
50901710	TUBULAR THRIE BEAM RETROFIT RAIL FOR BRIDGES (SPECIAL)	FOOT	550
63100230	TRAFFIC BARRIER TERMINAL, TYPE 9 (SPECIAL)	EACH	4
63301235	REMOVE AND RE-ERECT STEEL PLATE BEAM GUARD RAIL	FOOT	100
63304335	TERMINAL SECTION REMOVAL AND SALVAGE	EACH	4
67100100	MOBILIZATION	L SUM	1
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1

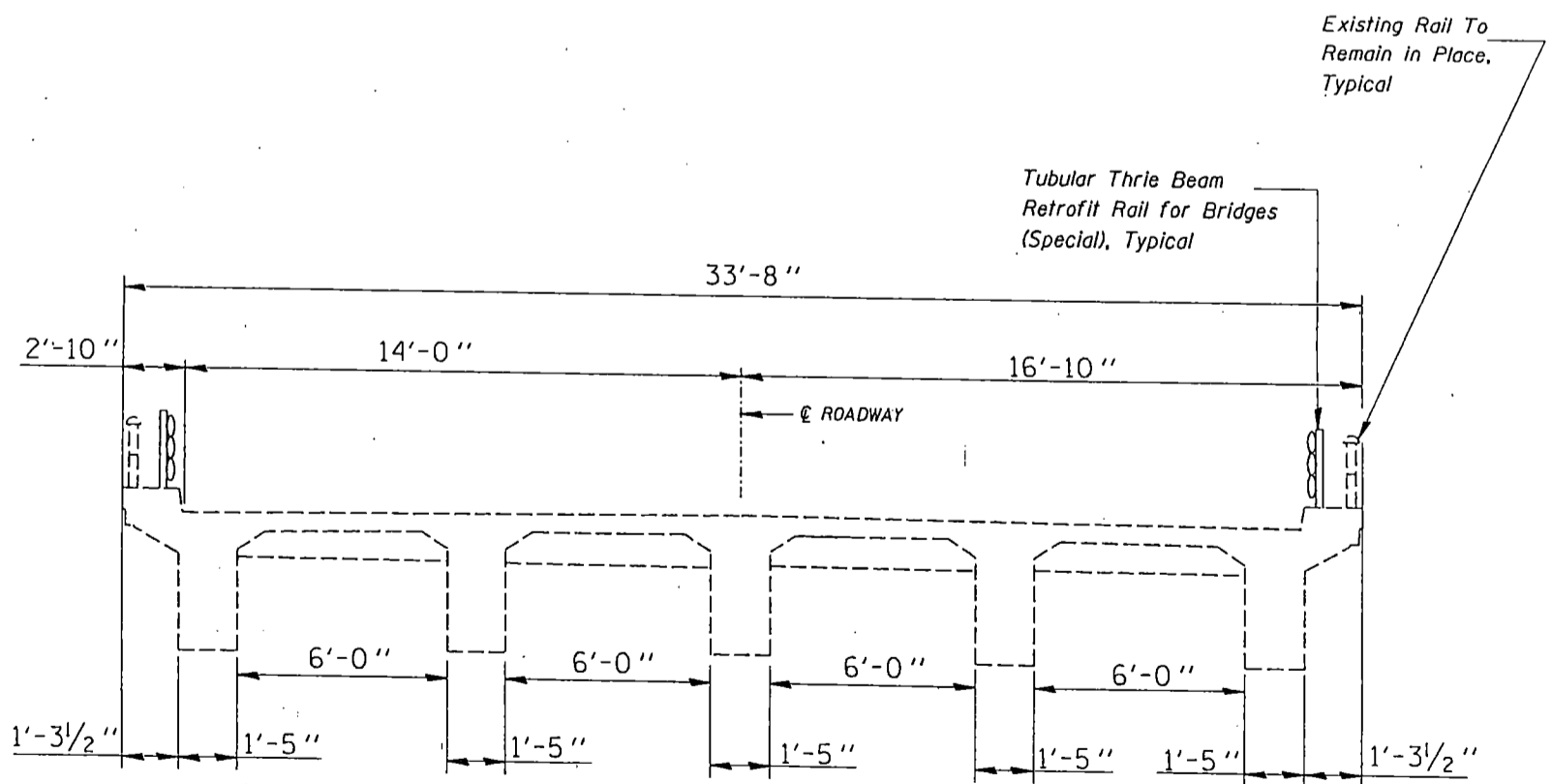
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
US 45	.	SALINE	7	4
FED. ROAD DIST. NO. 7		ILLINOIS	DAY LABOR	03L901
*BRIDGE REPAIRS				

### GENERAL NOTES

*Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.*

*Thrie beam retrofit rail and transition sections are available from the District Nine maintenance facility located on U.S. Rte. 51 near Dongola. Telephone: (618) 827-3552.*

*Terminal sections which are removed from the structure shall be salvaged and stored at the Dongola facility.*

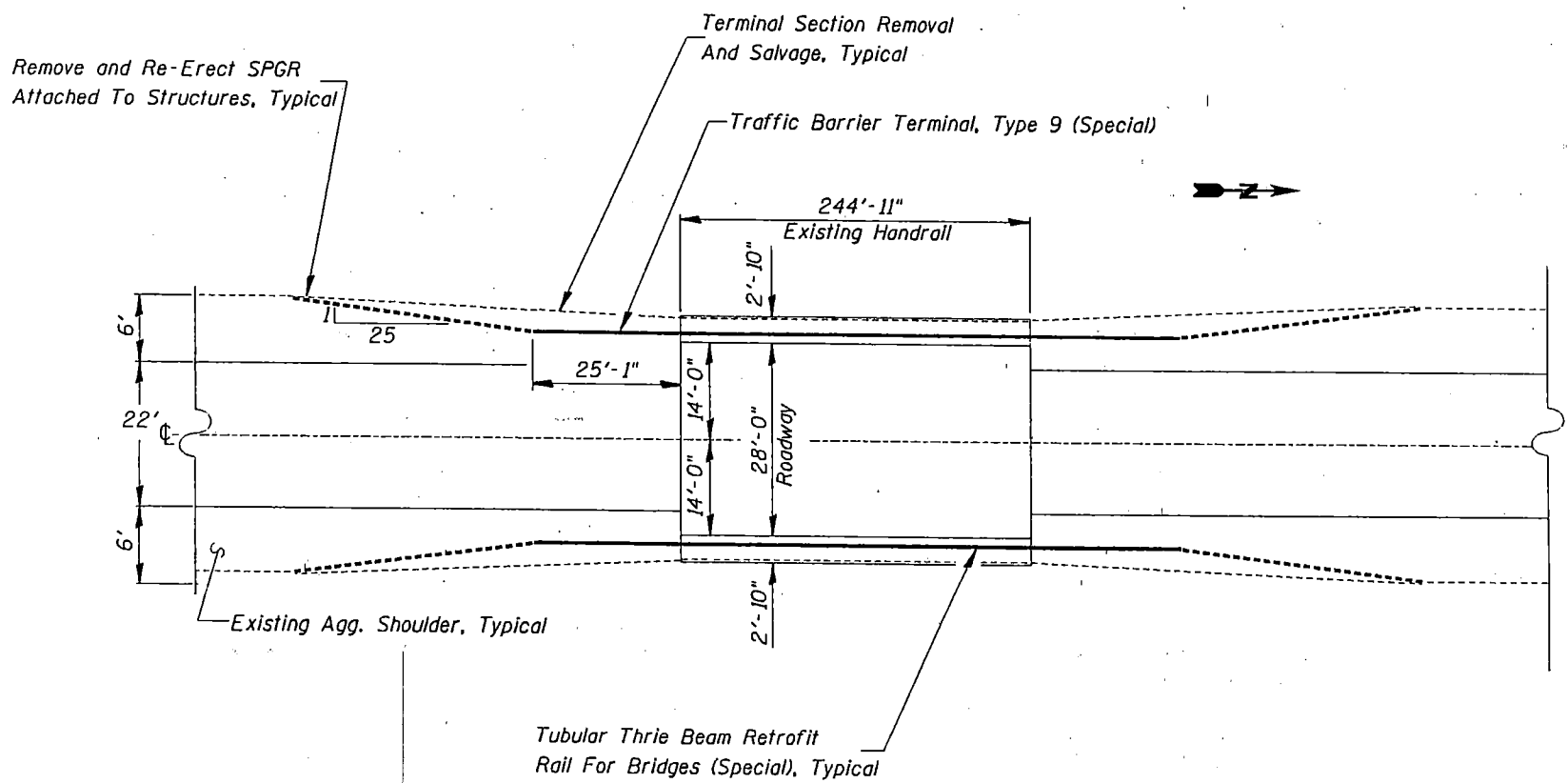


TYPICAL SECTION  
STRUCTURE 083-0002

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
US 45	*	SALINE	7	5

FED. ROAD DIST. NO. 1	ILLINOIS	DAY LABOR	031.901
BRIDGE REPAIRS			



Note: Salvaged Traffic Barrier Terminal and transition sections, and Tubular Thrie Beam Retrofit Rail elements and posts shall be furnished by the District. All hardware required for assembly and installation shall be supplied by the Contractor. Posts for Traffic Barrier Terminal, Type 9, shall be supplied by the Contractor.

**BRIDGE RAIL AND GUARDRAIL**

ROUTE		SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
US 45			SALINE	7	6
FED. ROAD DIST. NO. 7		ILLINOIS	DAY LABOR	031901	
BRIDGE REPAIRS					

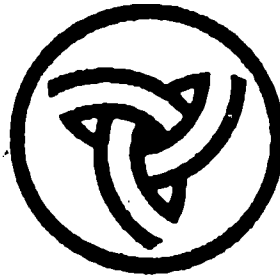
INDEX  
FOR  
SUPPLEMENTAL SPECIFICATIONS  
AND RECURRING SPECIAL PROVISIONS

Adopted January 1, 2002

This index contains a listing of SUPPLEMENTAL SPECIFICATIONS, frequently used RECURRING SPECIAL PROVISIONS and LOCAL AGENCY SPECIAL PROVISIONS.

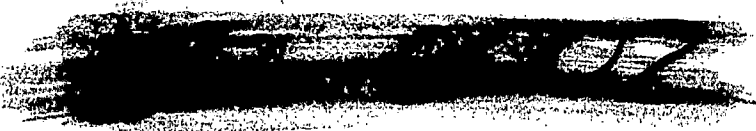
<u>Std. Spec. Sec.</u>	<u>SUPPLEMENTAL SPECIFICATIONS</u>	<u>Page No.</u>
	No Supplemental Specifications this year.	

Sheet 1 of 14  
Project # 00F907  
JOINT REPAIR  
U.S. 45  
SALINE COUNTY



# Illinois Department of Transportation

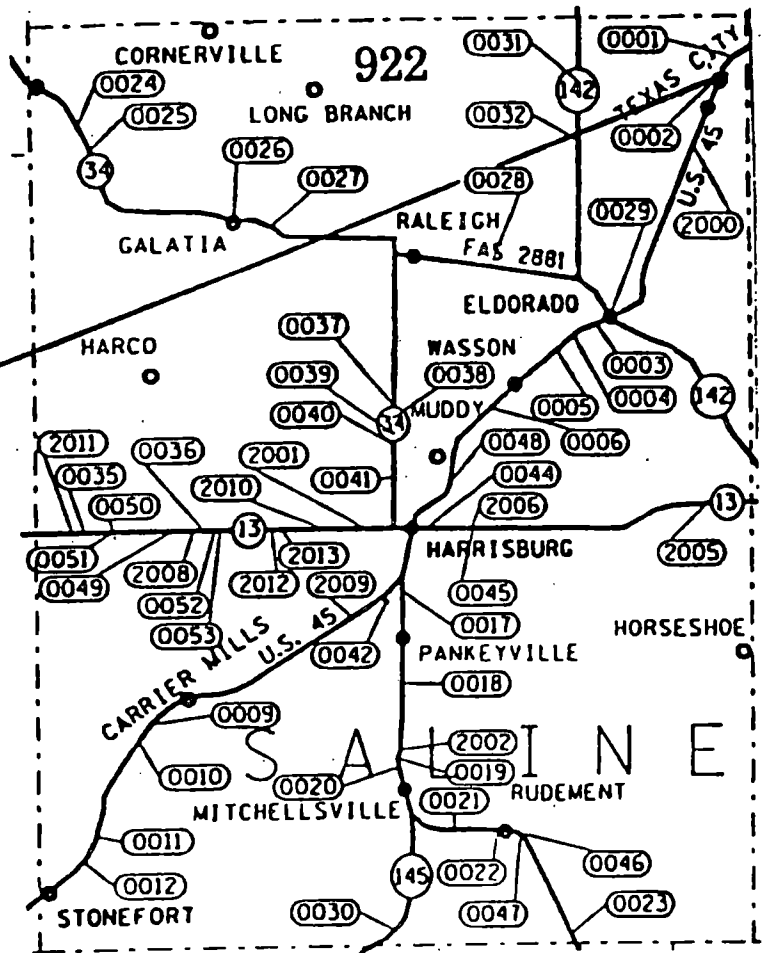
DAY LABOR PROJECT # 00F907



00F907

Improvement Location  
0.5 Miles North of Texas City  
On U.S. 45

SN 083-0002



Date Submitted : July 14, 1998

Prepared By: Bill Stout, Jr.  
Dist. Operations Engineer

Examined By: Jim Burkhardt  
Dist. Program Dev. Engineer

Examined By: Bob Zieba  
Dist. Project Impl. Engineer

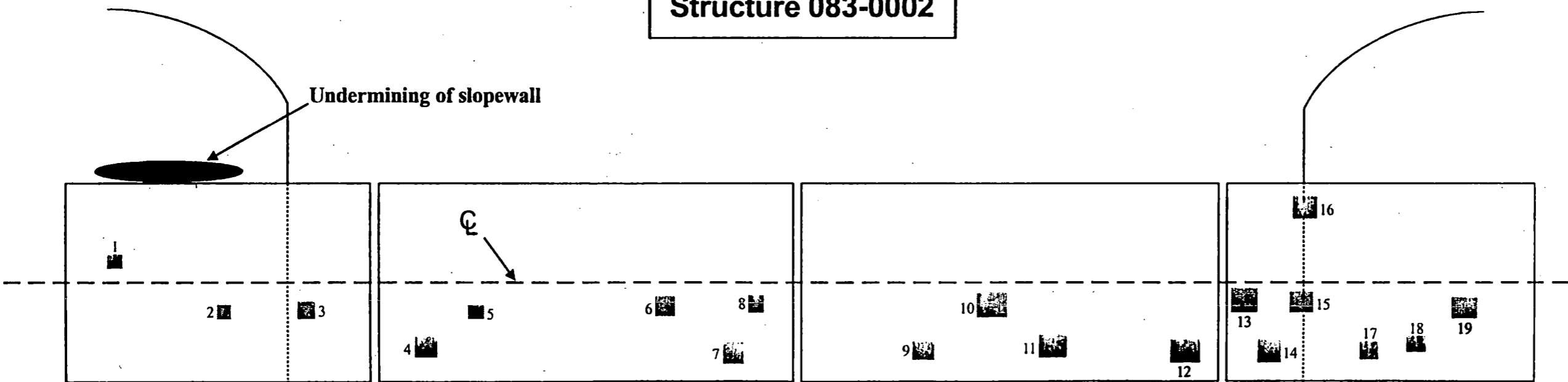
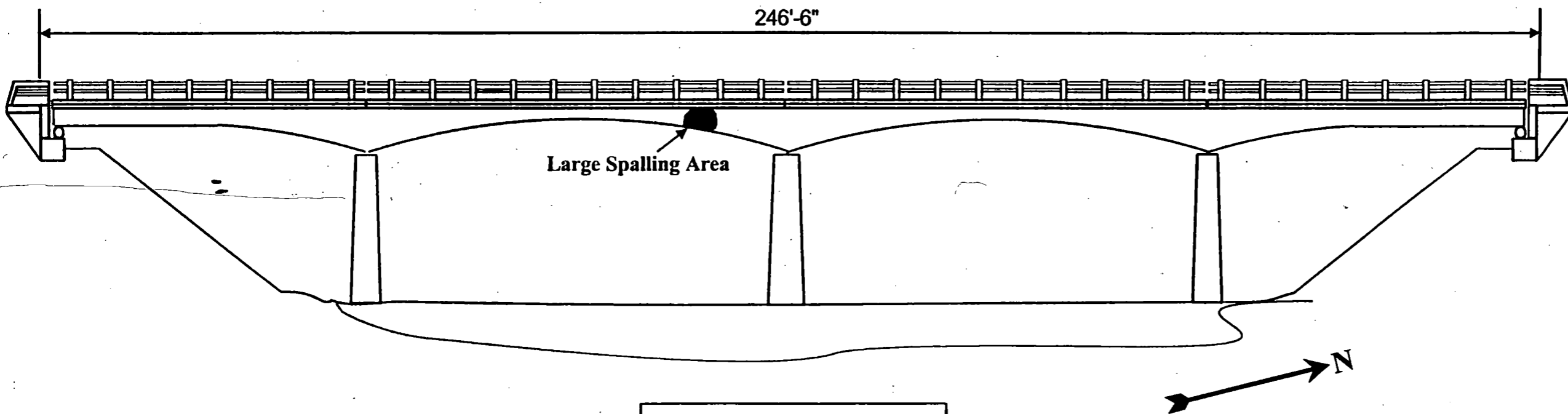
Approved: Kal Katsenya  
District Engineer



Sheet 4 of 14  
 Project #  
 JOINT REPAIR  
 U.S. 45  
 SALINE COUNTY

**SUMMARY OF QUANTITIES**

QUANTITY	UNIT	ITEM DESCRIPTION	CODE NO.
767	Sq. Yd	Bit. Surface Removal (Deck)	44000910
11	Cu. Yd	Concrete Removal	50102400
1222	Pound	Reinforcement Bars, Epoxy Coated	50800205
26	Each	Bar Splicers	Z0002600
10.5	Cu. Yd.	Concrete Superstructure	50300255
69	Foot	Silicone Joint Sealer	X0301424
760	Sq. Yd	Waterproofing Membrane System	58100200
64.5	Ton	Bit. Conc. Surface Coarse Mix D, Class I, Type 2	40600850
19	Sq. Yd	Deck Slab Repair (Partial)	Z0016200
25	Sq. Ft.	Formed Concrete Repair = < 5"	50301245
1	Each	Floor Drain Extension	50300530
3.5	Cu. Yd.	Controlled Low Strength Mat.	DL037700
1	Each	TRAF. CONTROL & PROT. (701321)	70100100
1	Lump Sum	MOBILIZATION	65000100



**Partial Depth Patching = 19 Sq. Yd.**  
 (Deck Surveyed March of 1998)

Note: The Engineer shall mark the actual deck repair in the as built plans

Sheet 5 of 14  
 Project #  
 JOINT REPAIR  
 U.S. 45  
 SALINE COUNTY

Sheet 6 of 14  
 Project #  
 JOINT REPAIR  
 U.S. 45  
 SALINE COUNTY

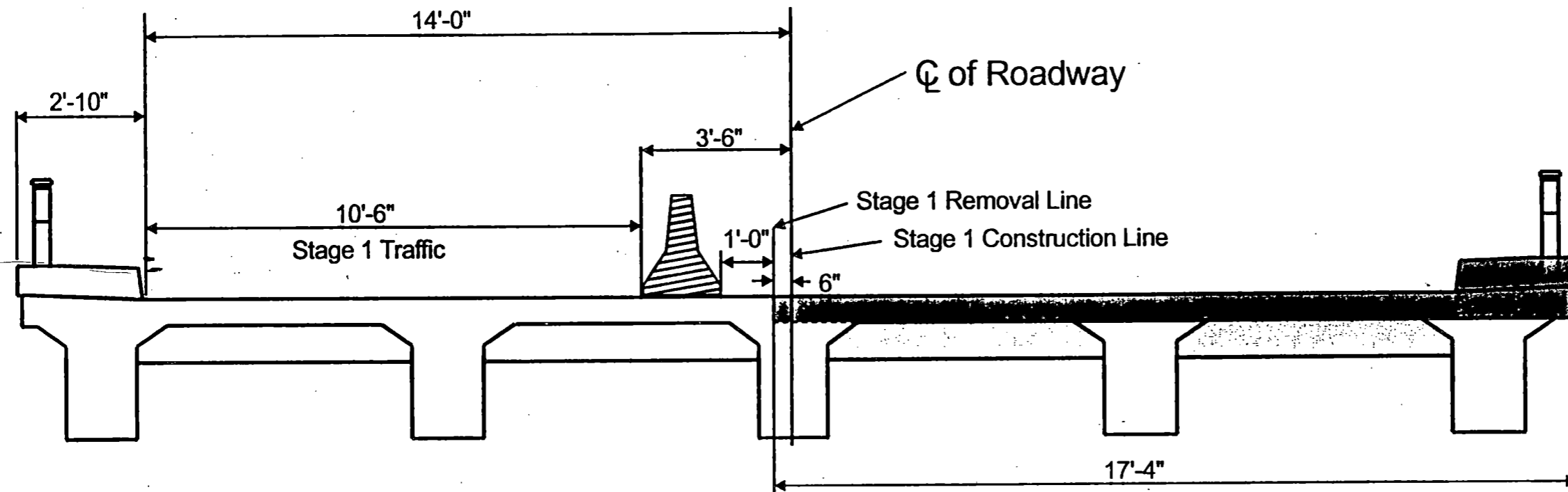
**Partial Depth Patching**

Patch #	Station**	Offset*	Size	Area (Ft)
1	0+12	3' left	2 x 4	8
2	0+29	3' right	2 x 3	6
3	0+43	2' right	2 x 3	6
4	0+62	10' right	3.5 x 4.5	15.8
5	0+67	3' right	2.5 x 3	7.5
6	1+12	3' right	1.5 x 2	3
7	1+24	10' right	1.5 x 2.5	3.8
8	1+33	4' right	1.5 x 2	3
9	1+55	11' right	2.5 x 3	7.5
10	1+59	2' right	3.5 x 4.5	15.8
11	1+66	11' right	3 x 4.5	13.5
12	1+90	10' right	2 x 7	14
13	2+00	2' right	3 x 4.5	13.5
14	2+06	10' right	2.5 x 4.5	11.3
15	2+08	2' right	2.5 x 5	12.5
16	2+09	10' left	2 x 4.5	9
17	2+25	10' right	2 x 2.5	5
18	2+30	9' right	1.5 x 2	3
19	2+38	3' right	3 x 4	12
				170.2 SQ. FT.

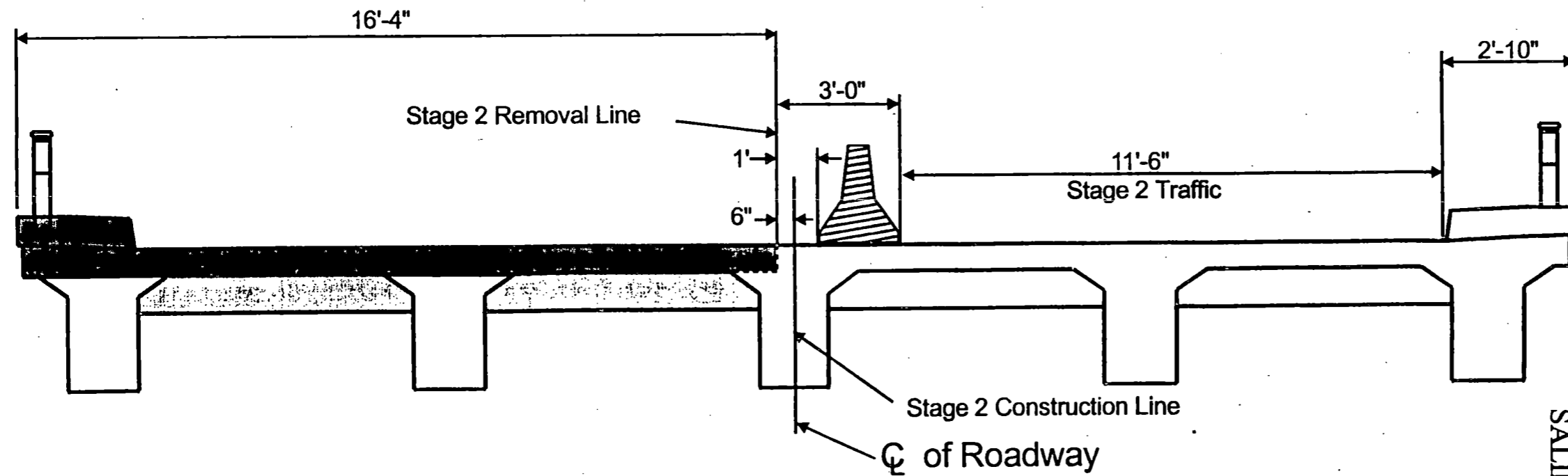
Which is Equal To: 18.9 SQ. YDs.

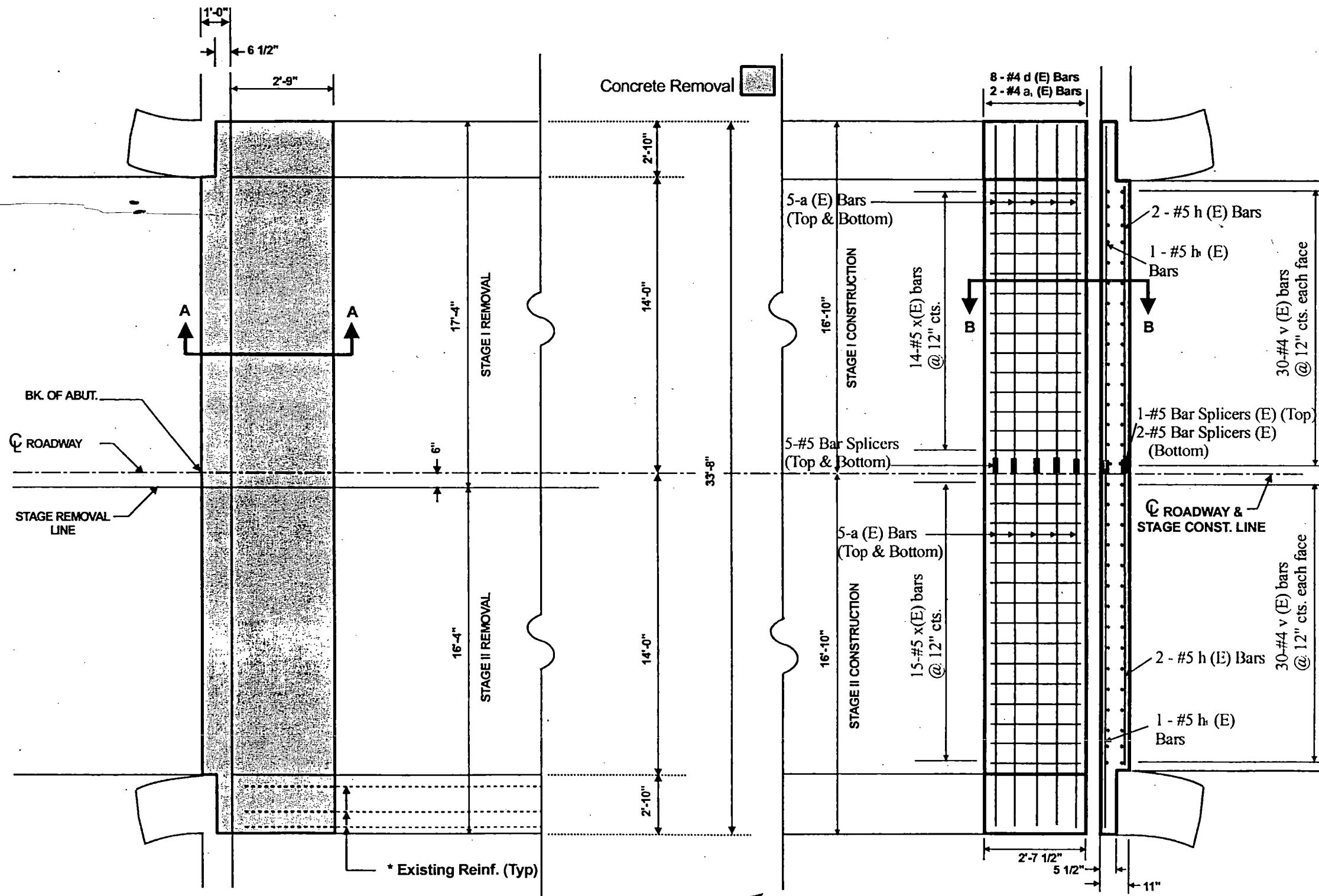
**\*\*Stations indicated in the chart above are measured from the south end of the bridge.**

**\*Offsets are measured to the middle of each patch.**



**Stage Construction**

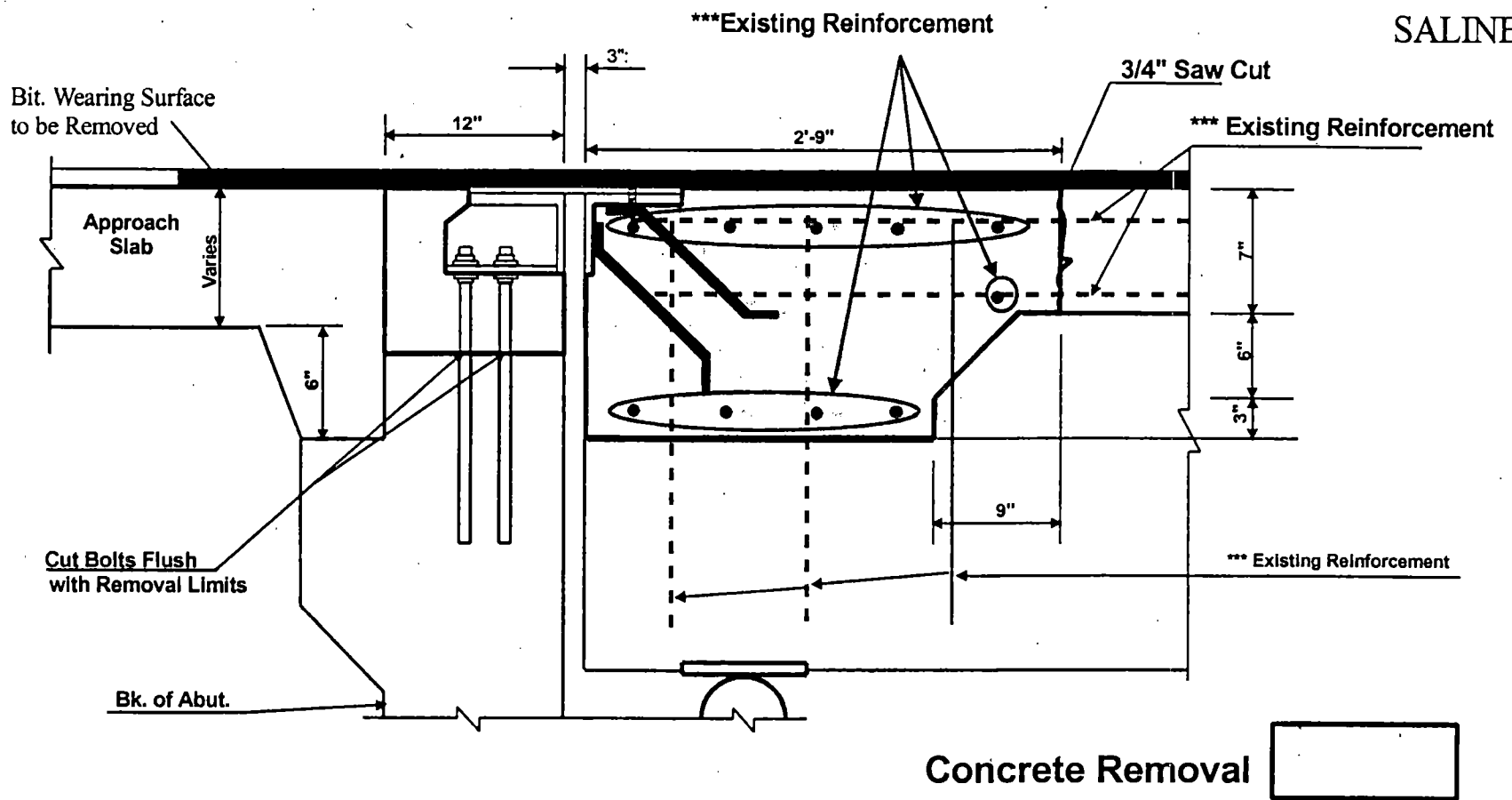




North Abutment Plan  
Showing Conc. Removal  
(South Abut. similar by 180° rotation)

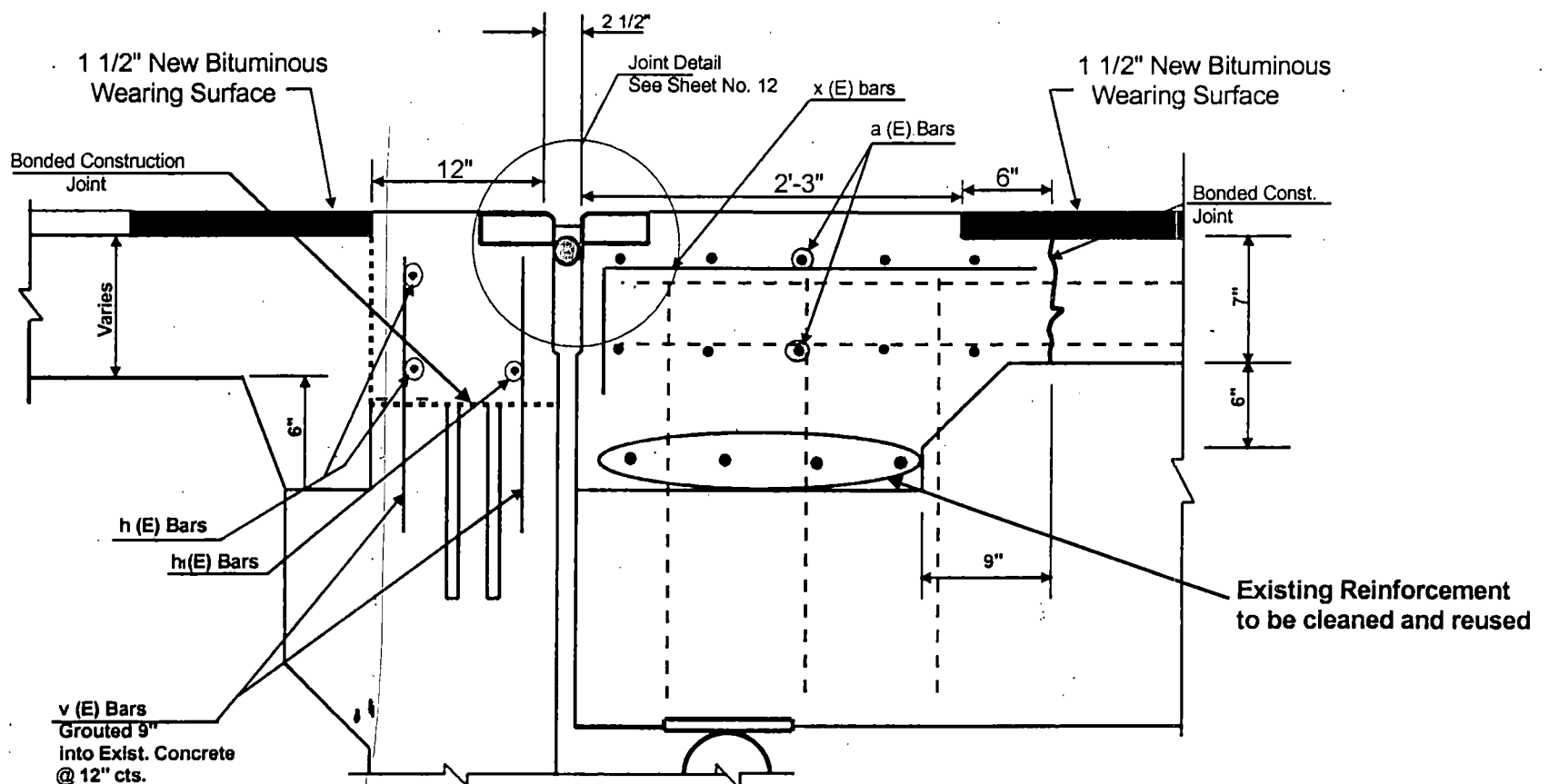
South Abutment Plan  
Showing Conc. Replacement  
(North Abut. similar by 180° rotation)

Sheet 8 of 14  
Project #  
JOINT REPAIR  
U.S. 45  
SALINE COUNTY

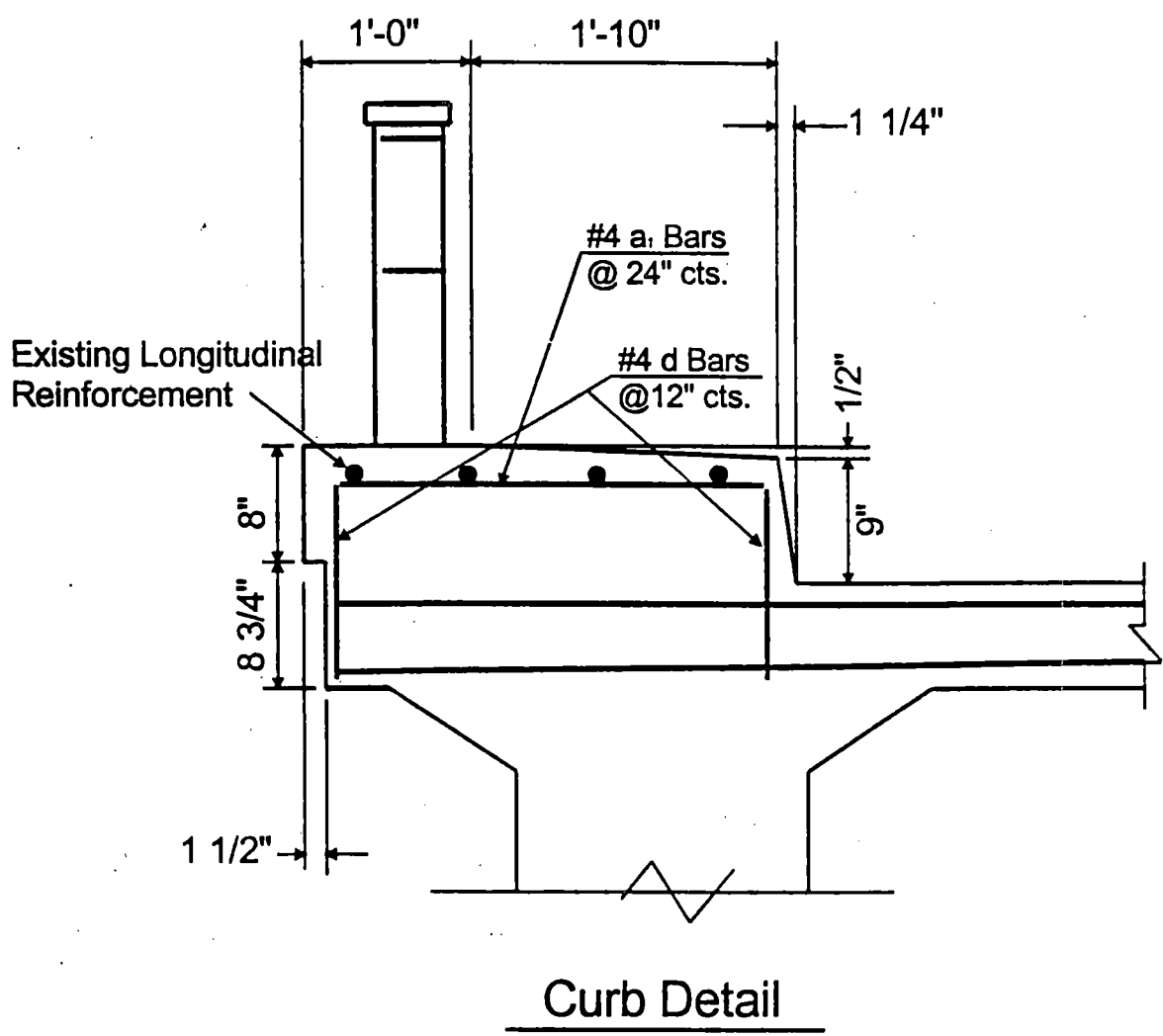


**Section A-A**

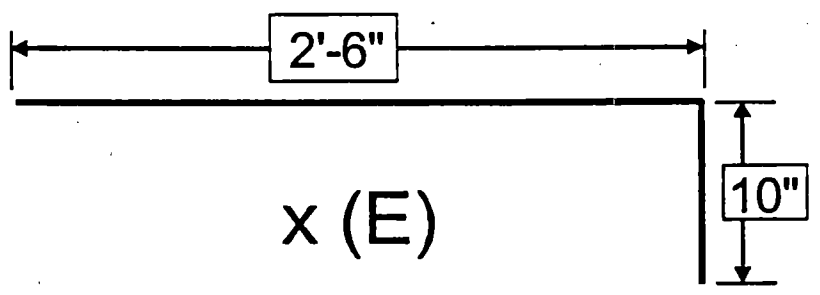
**Removal and Replacement**



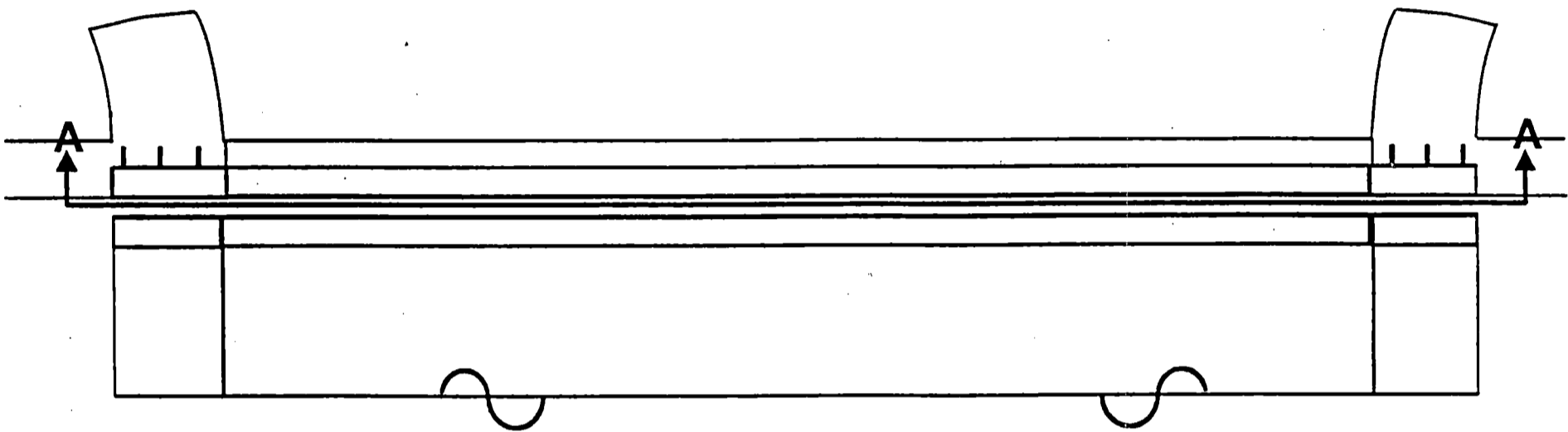
**Section B-B**



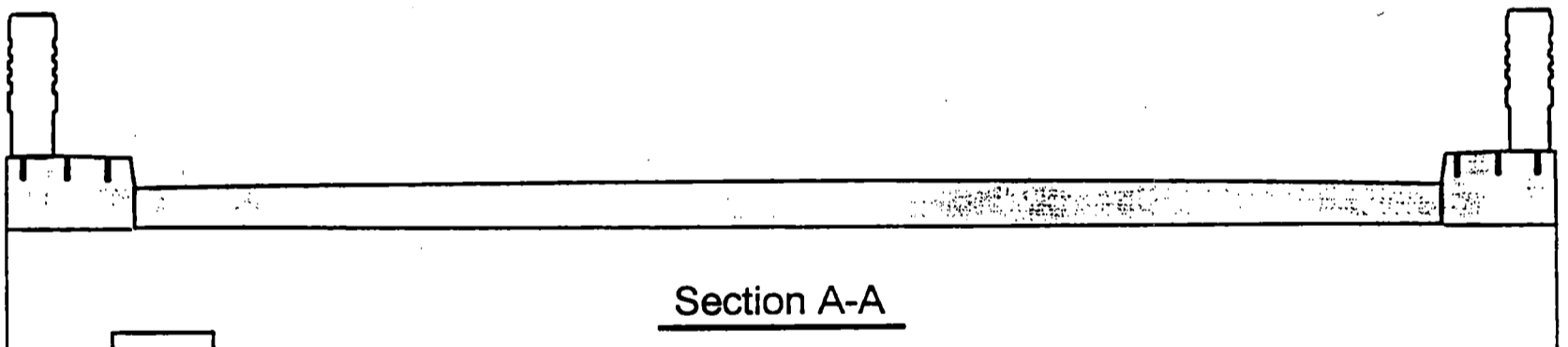
Bar	No.	Size	Length	Shape
a (E)	40	#5	16'-3"	—
x (E)	58	#5	3'-4"	└┘
v (E)	120	#4	1'-6"	—
h (E)	8	#5	13'-8"	—
h <sub>1</sub> (E)	4	#5	16'-5"	—
d (E)	32	#4	1'-3"	—
a <sub>i</sub> (E)	8	#4	2'-6"	—



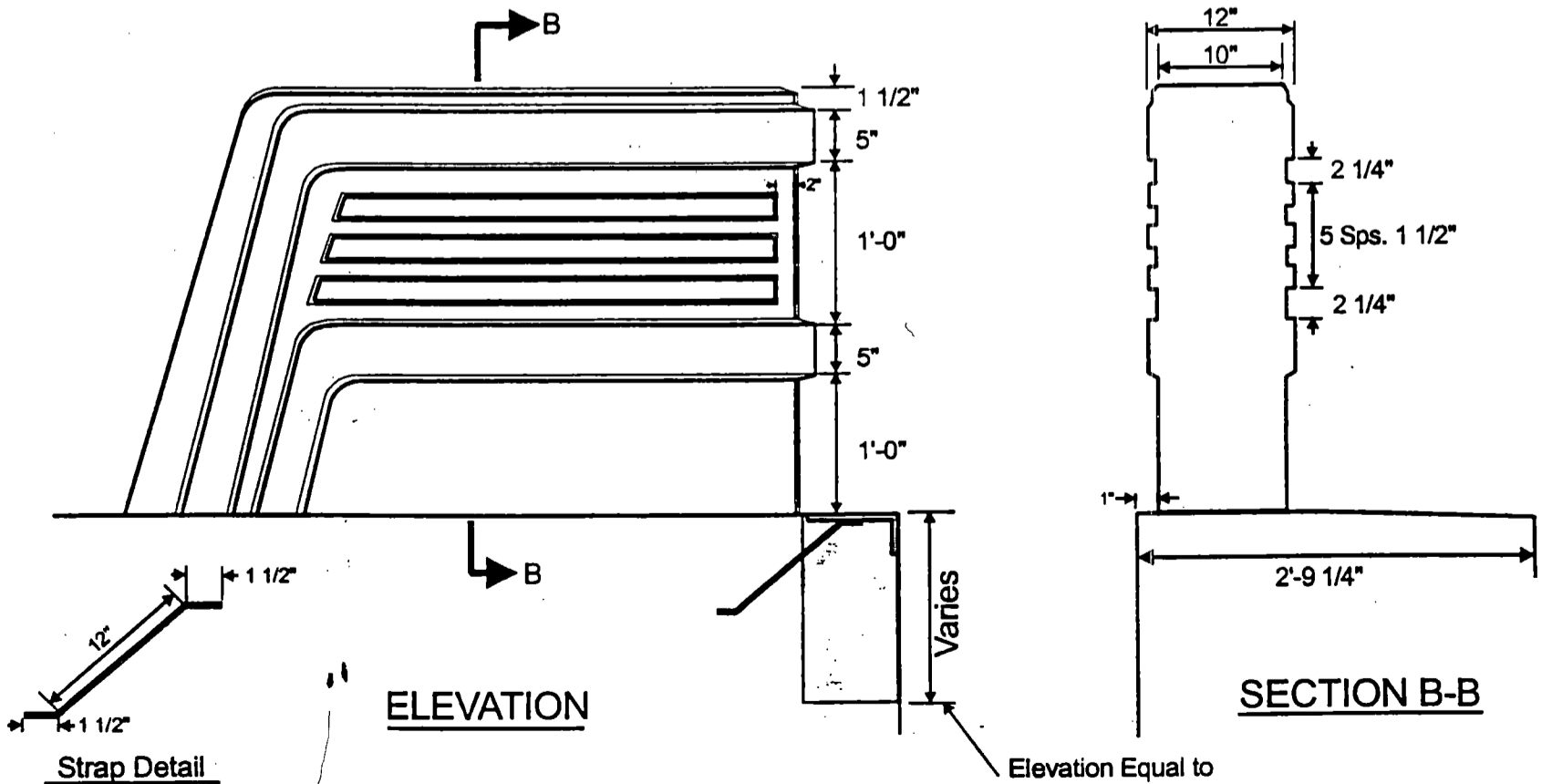
Abutment Details For Removal



Plan of Expansion Opening  
 W/ Expansion Plate Removed  
 (North and South Abutment)



Section A-A



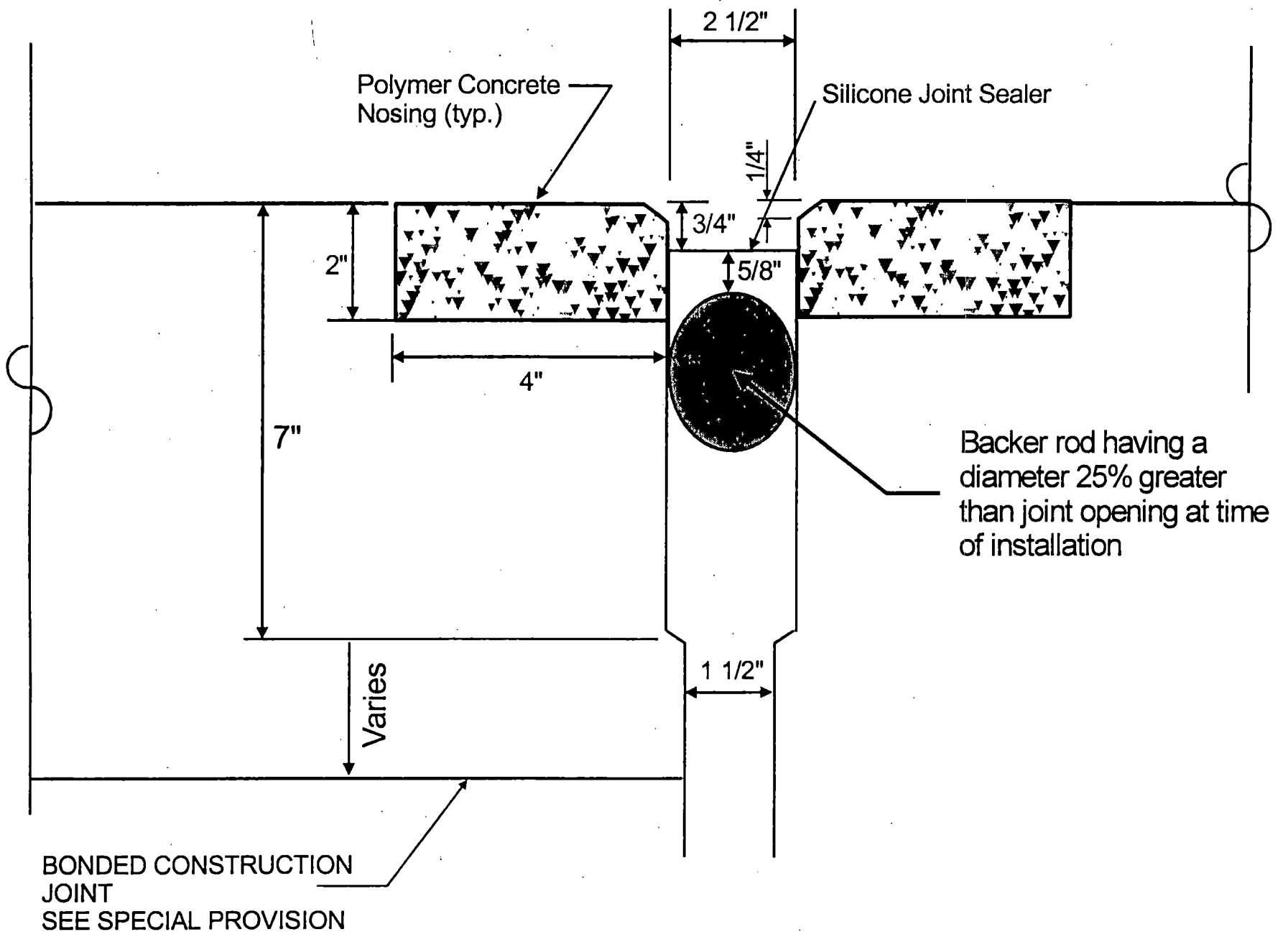
ELEVATION

SECTION B-B

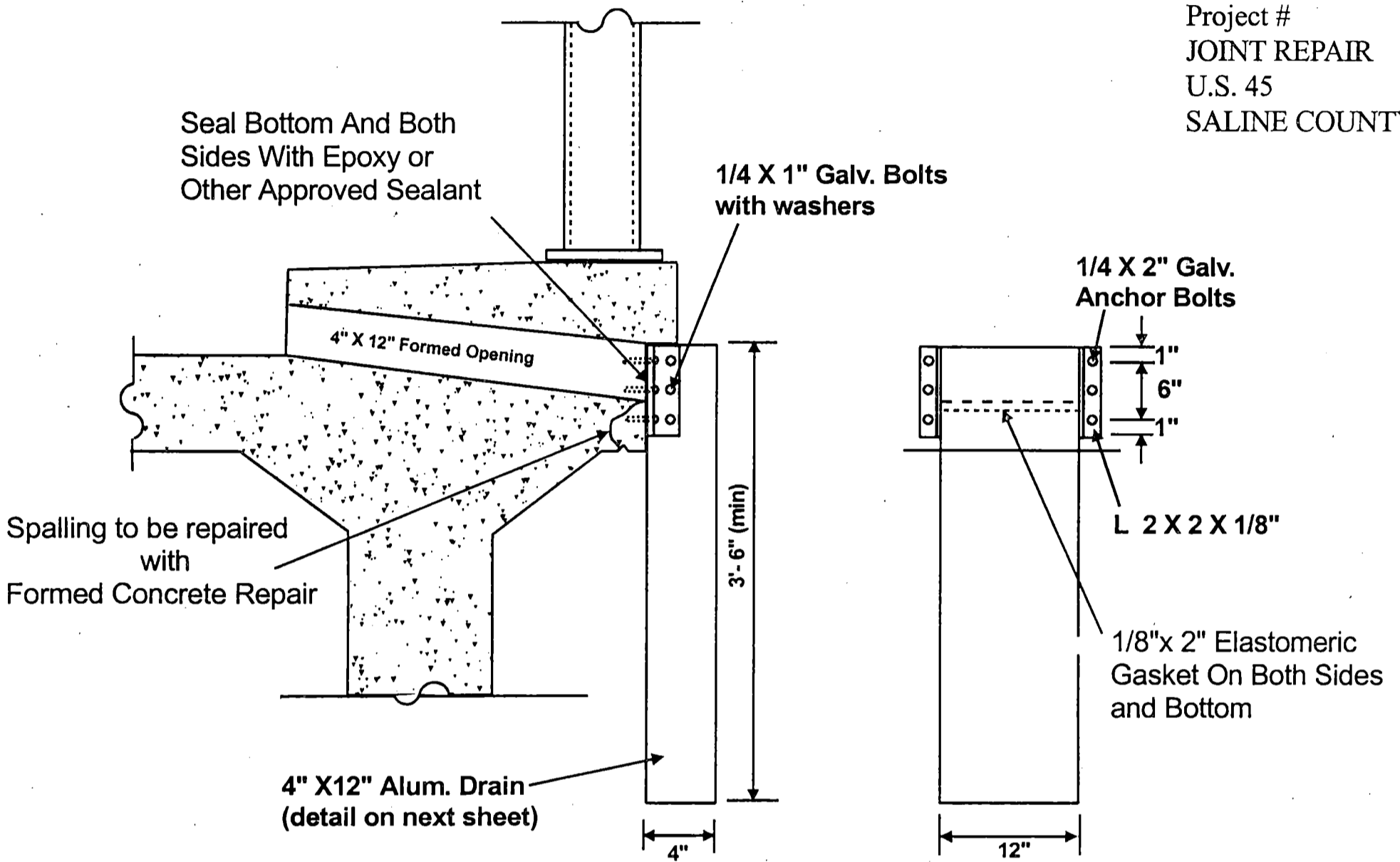
Head Wall Detail

Elevation Equal to  
 the Bottom of the  
 Hatched Block



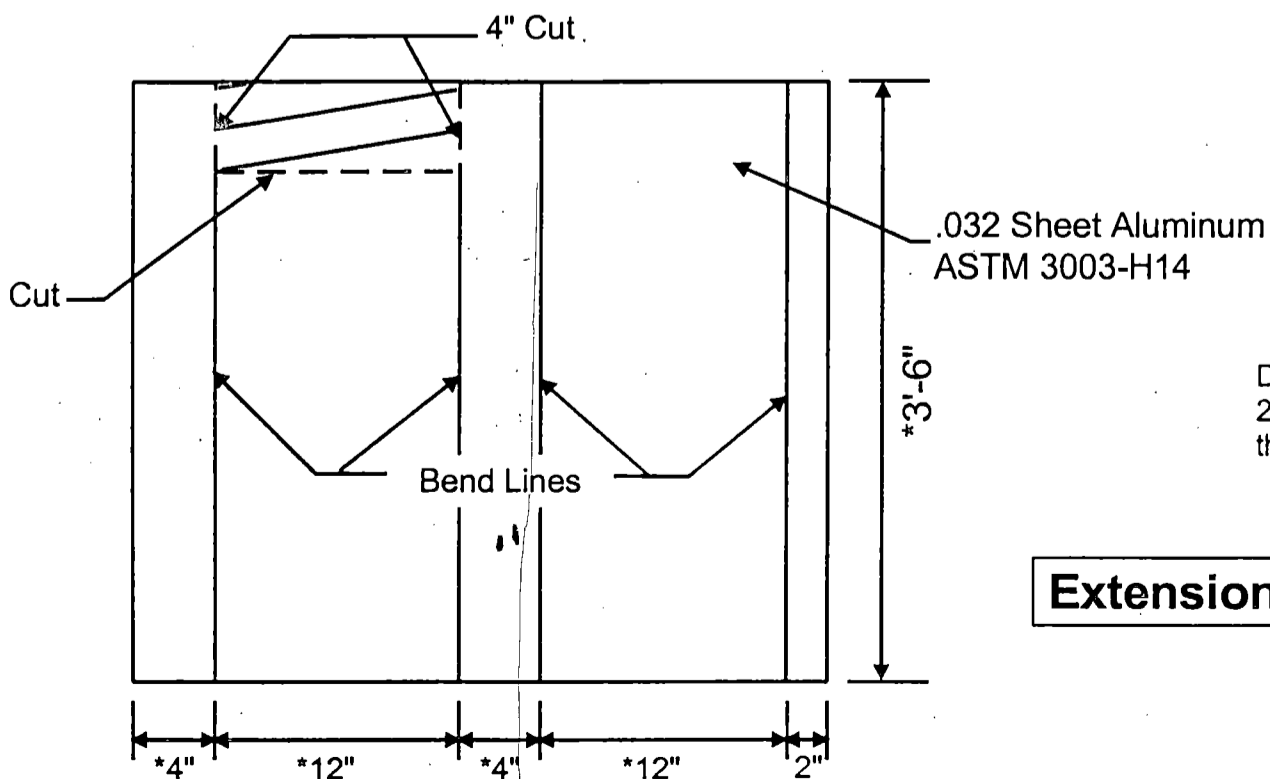


Polymer Concrete and Silicone Joint Sealer Detail



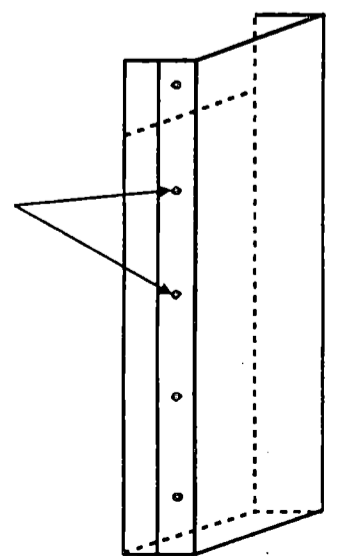
**Drain Extension**

\*Drain to be extended is the 4th from the north end on the west side



Drill and pop rivet 2" from top and then 8" on center

**Extension Detail**



\* Field Measure and cut to fit existing drain opening

**NOTES**

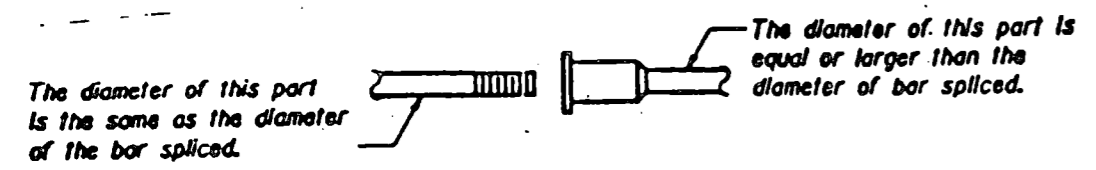
Bar splicer assemblies shall be of an approved type and shall develop in tension at least 5 percent of the yield strength of the lapped reinforcement bars.  
 Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.  
 All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.  
 Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.  
 Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

- ① Minimum Capacity (Tension in kips) =  $1.25 \times f_y \times A_1$
- ② Minimum Pull-out Strength (Tension in kips) =  $1.25 \times f_{s_{allow}} \times A_1$

Where  $f_y$  = Yield strength of lapped reinforcement bars in ksi.  
 $f_{s_{allow}}$  = Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)  
 $A_1$  = Tensile stress area of lapped reinforcement bars.  
 \* = 28 day concrete

BAR SPLICER ASSEMBLIES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#5	2'-0"	23.0	9.2
#6	2'-7"	33.1	13.3
#7	3'-5"	45.1	18.0
#8	4'-6"	58.9	23.6

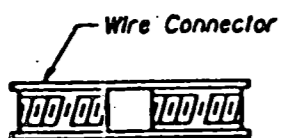
Bar splicer assemblies shall be according to Section 508 of the Standard Specifications, except as noted. The furnishing and installation of bar splicer assemblies will be measured and paid for at the contract unit price each for "BAR SPLICERS."



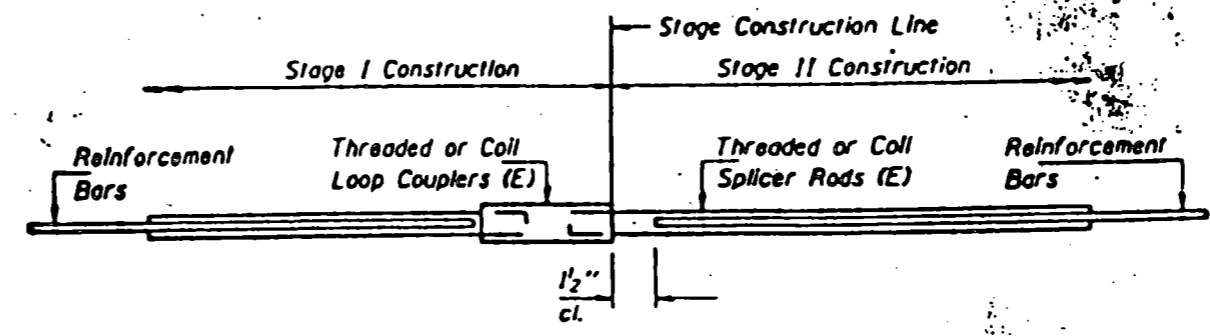
**ROLLED THREAD DOWEL BAR**



**ONE PIECE**



**WELDED SECTIONS**

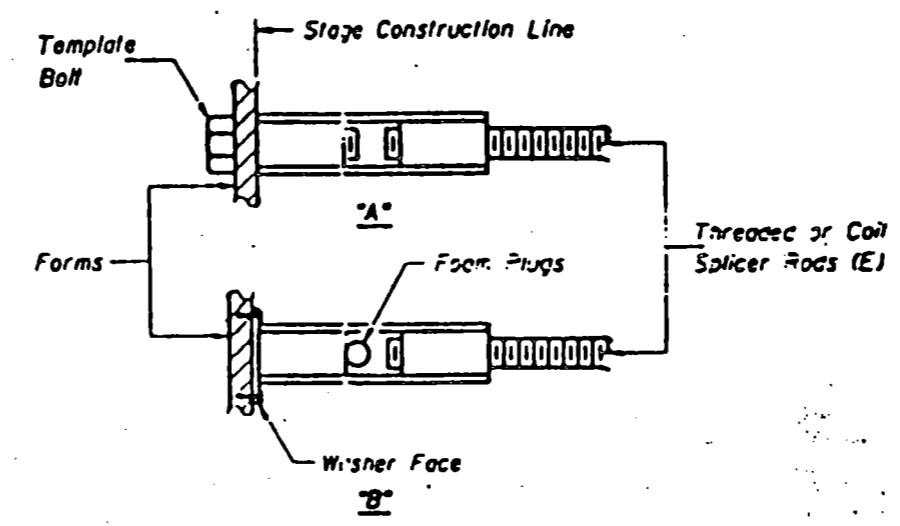


**SPLICER DETAIL**

No. Required 26 #5 (E) Bar Splicers

**BAR SPLICER ASSEMBLY ALTERNATIVES**

\*\* Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.



**INSTALLATION AND SETTING METHODS**

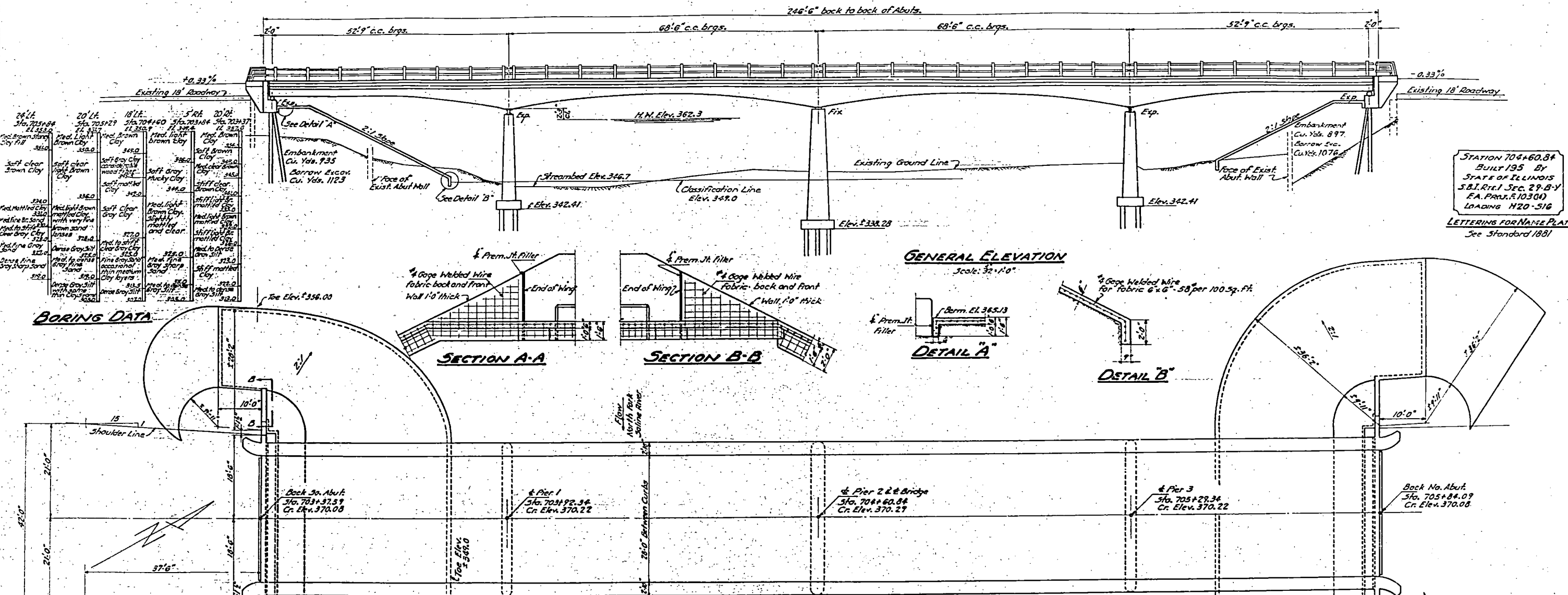
"A" : Set bar splicer assembly by means of a template bolt.  
 "B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.  
 (E) : Indicates epoxy coating.

Sheet 14 of 14  
 Project #  
 JOINT REPAIR  
 U.S. 45  
 SALINE COUNT

D.M. Cut 3/4 Corner E. Hoodwall Bridge  
15' Rte. Sta. 703+38 Elev. 362.25  
For Existing Structure see Sheet 10  
For removal of Existing Structure see Sheet 10 and Special Provisions.

STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS

ROAD DISTRICT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. / 10 SHEETS
1	29BY	Saline	37	12	
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT: F-103(14)		



STATION 704+60.84  
BUILT 195 BY  
STATE OF ILLINOIS  
S.B.I. RTE. 1 SEC. 29-B-Y  
F.A. PROJ. F-103(14)  
LOADING H20-516  
LETTERING FOR NAME PLATE  
See Standard 1881

**GENERAL NOTES**

Class-X Concrete shall be used throughout except as noted.  
Handrail Concrete shall be used in Concrete Handrail Posts.  
Class-A Concrete shall be used in all Piers.  
Concrete floor slabs shall be finished in accordance with Art. 51.18 (a) of the Standard Specifications. The concrete floor slabs and girders shall be poured in one continuous operation.  
All rollers, bearing plates, lead plates and anchor bolts shall be finished, painted and set in accordance with Art. 51.14 of the Standard Specifications and are included for payment as Structural Steel Estimated Weight 11140 Lbs.  
All Structural Steel except Anchor Bolts and Straps shall receive one shop coat of red lead paint after inspection and two field coats of aluminum paint. All paint to be furnished and applied by the Contractor.  
For Metal Handrail see Special Provisions.  
Boring data are shown only as a guide to bidders in estimating soil conditions which may be encountered in the work.  
Four (4) Test Piles shall be driven in permanent pile location as directed by the Engineer before ordering or casting Piles.  
Before the superstructure is placed, the Contractor shall construct the embankment around the Abutments as shown and in accordance with Sec. 16 of the Standard Specifications. Material necessary for embankment shall be obtained from Borrow Excavation.  
Layout of Slope Walls may be varied as necessary to conform to ground surface after embankment has been constructed if so directed by the Engineer.  
The Contract unit price each for Expansion Bolts shall include:  
Furnishing, drilling holes and setting Expansion Bolts.  
\* All bolts shall be round A-316 1/2"-49. The size number is the number of 8 inches in the nominal diameter.  
Structural Steel shall be inspected by Illinois Division of Highways.

**TOTAL BILL OF MATERIAL**

ITEM	SUPER.	SUBSTR.	TOTAL
Handrail Concrete	Cu. Yds. 1.6		1.6
Class-X Concrete	Cu. Yds. 437.4	45.6	483.0
Class-A Concrete	Cu. Yds. 200.7	200.7	401.4
Reinforcement Bars	Lbs. 117350	9530	126880
Structural Steel	Lbs. 15670		15670
Metal Handrail	Lin. Ft. 489.8		489.8
Name Plates	Each 1		1
Untreated Timber Piles (20'-0")	Lin. Ft. 460		460
Untreated Timber Piles (14'-0")	Lin. Ft. 462		462
Timber Test Piles	Each 2		2
16" Precast Concrete Piles (25'-0")	Lin. Ft. 150		150
16" Precast Concrete Piles (35'-0")	Lin. Ft. 210		210
Precast Concrete Test Piles	Each 2		2
Class-A Excv. for Structures	Cu. Yds. 52.5		52.5
Class-B Excv. for Structures	Cu. Yds. 275		275
Removal of Existing Structure No. 11	Each 1		1
Borrow Excavation	Cu. Yds. 2199		2199
Slope Wall	Sq. Yds. 1021		1021

**STRESSES**

SC	14000 psi	Superstructure
FC	8000 psi	Substructure
RS	20000 psi	Reinforcement Bars
SS	18000 psi	Structural Steel
N	10	

DESIGNED A. J. Campbell  
CHECKED J. J. Tamm  
DRAWN A. J. C. Miller  
CHECKED J. J. Tamm

EXAMINED W. B. Hanson  
PASSED A. J. C. Miller  
APPROVED A. J. C. Miller

Feb 5 1952

083-0002

Removal of Exist. Steel Span No. 1 Each 1  
Expansion Bolts Each 96  
Trans. Exist. Struct. Steel Span No. 1 Each 1

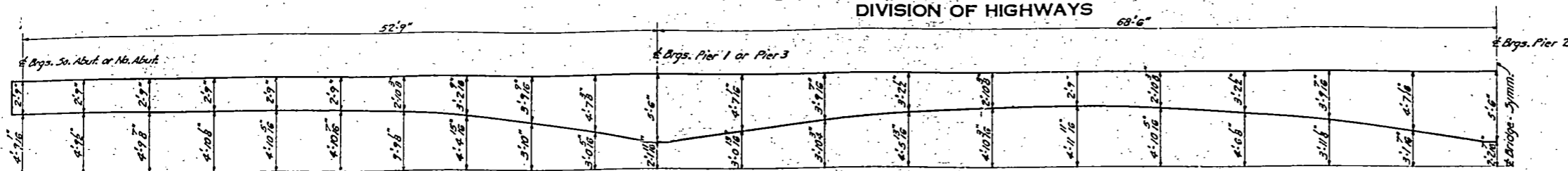
**WATERWAY INFORMATION**

Drainage Area --- (Two Bridges) --- 176,000 Acres  
Character --- Level to Rolling Wooded Cultivated  
Required Opening --- (Two Bridges 25 Year Flood) --- 4000 sq. ft.  
Present Opening --- Sta. 704+60.84 --- 2264 sq. ft.  
Proposed Opening --- Sta. 704+60.84 --- 2270 sq. ft.  
Sta. 704+23.0 --- 2802 sq. ft.

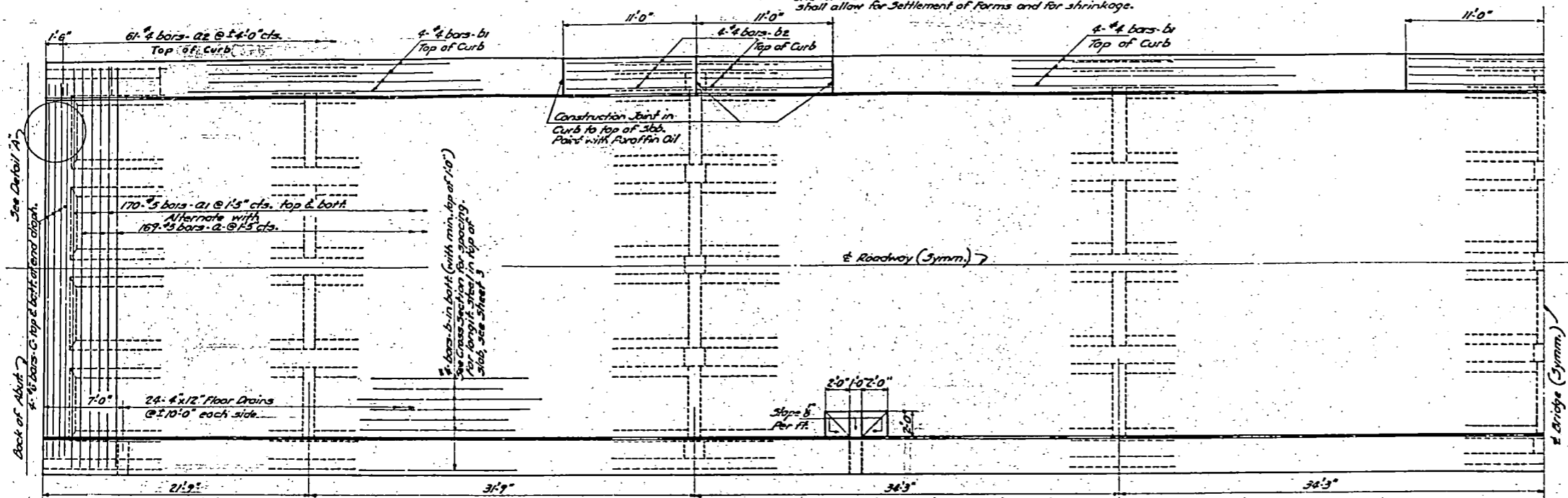
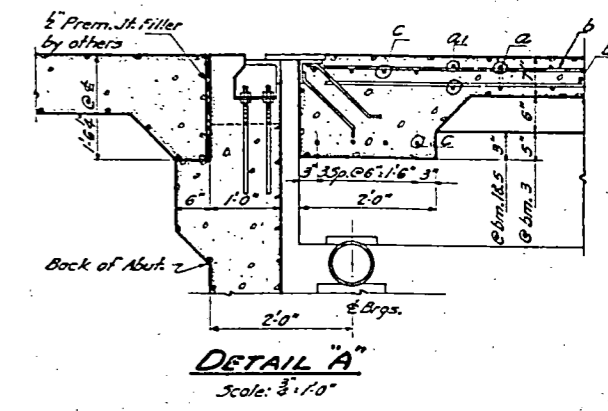
REEL 9-1  
GENERAL PLAN & ELEVATION  
PROJECT F-103(14)  
S.B.I. RTE. 1 (F.A. RTE. 1)  
SECTION 29-B-Y  
SALINE COUNTY  
STA. 704+60.84  
Loading H20-516

STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS

ROAD DISTRICT NO. 1	SECTION 29-B-Y	COUNTY Saline	TOTAL SHEETS 37	SHEET NO. 13	SHEET NO. 2
PER ROAD DIST. NO. 1 ILLINOIS			PER AID PROJECT F-103(11)		



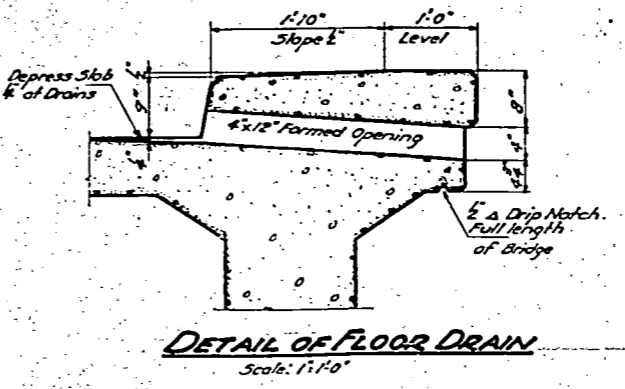
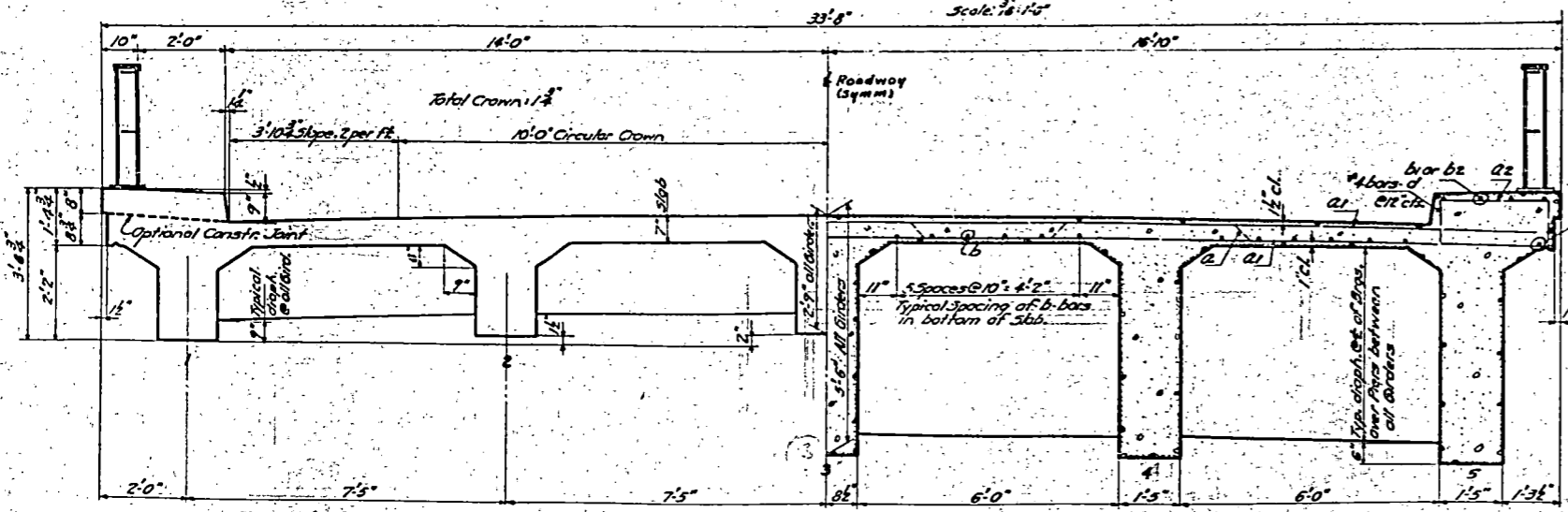
**ORDER ORDINATES**  
Order Ordinates include an allowance for Dead Load Deflection and for the Vertical Curve. In addition the Contractor shall allow for Settlement of Forms and for shrinkage.



**BAR LIST-SLAB**

Bar	No.	Size	Length	Shape
a	189	5	36'-0"	
a1	340	5	33'-0"	
a2	122	4	2'-6"	
b	260	4	25'-5"	
b1	64	4	23'-6"	
b2	48	4	10'-6"	
c	16	6	30'-6"	
d	408	4	1'-3"	

\* See General Notes Sheet 1



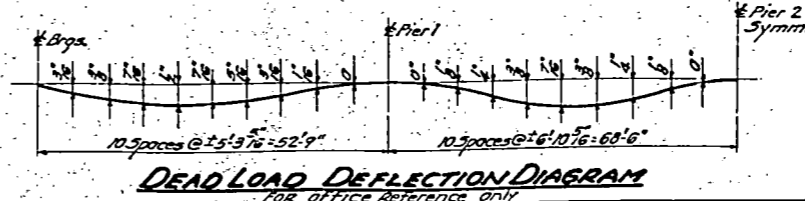
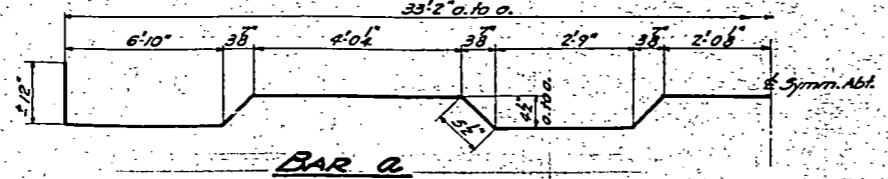
**BILL OF MATERIAL-SUPERSTRUCTURE**

Class 'X' Concrete	Cu. Yds. 437.4
Reinforcement Bars	Lbs. 117200
Structural Steel	Lbs. 15670

DESIGNED *C. J. Campbell*  
CHECKED *P. J. Tavel*  
DRAWN *A. J. C. Miller*  
CHECKED *P. J. Tavel*

EXAMINED *W. E. Farnsworth*  
PASSED *E. L. H. [Signature]*  
APPROVED *J. M. Parker*

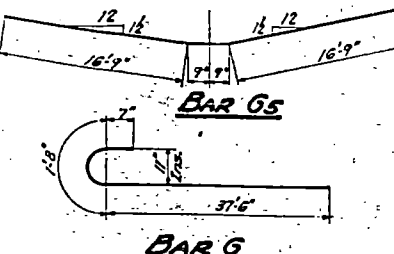
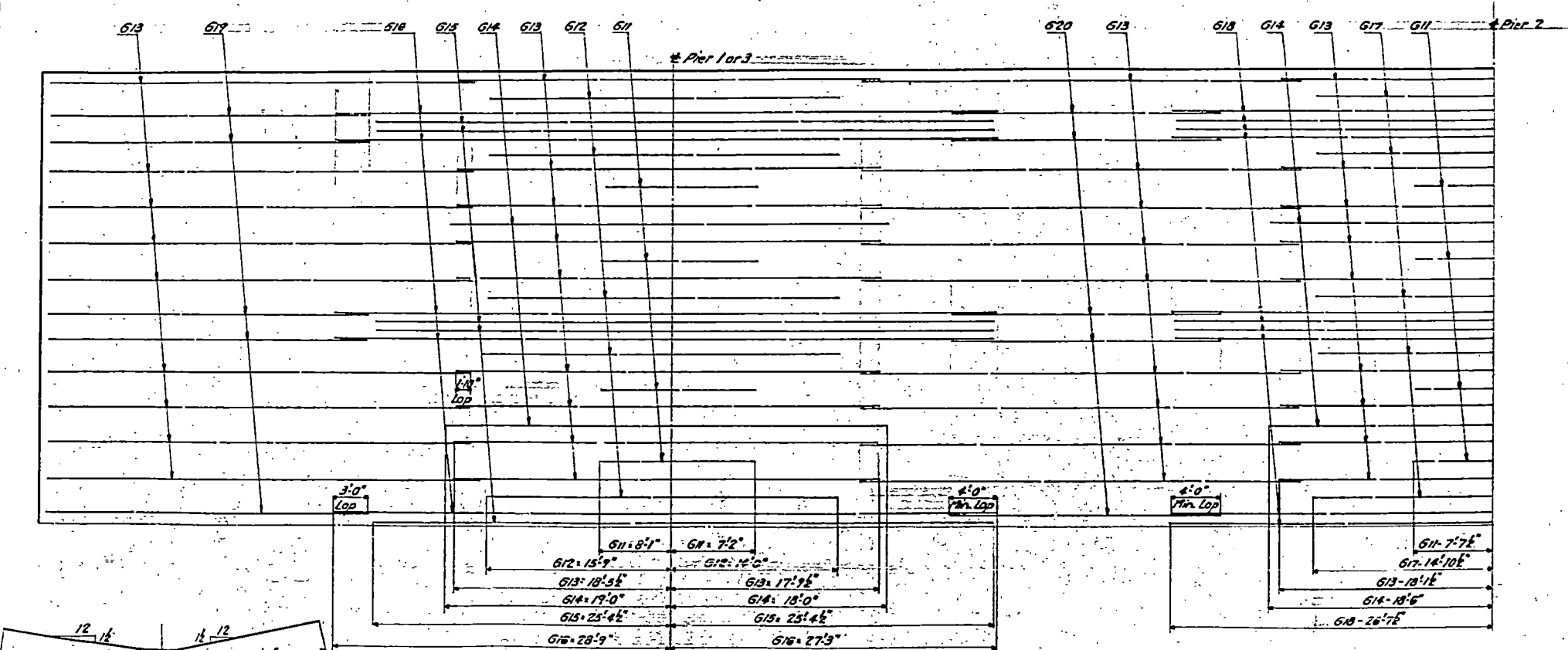
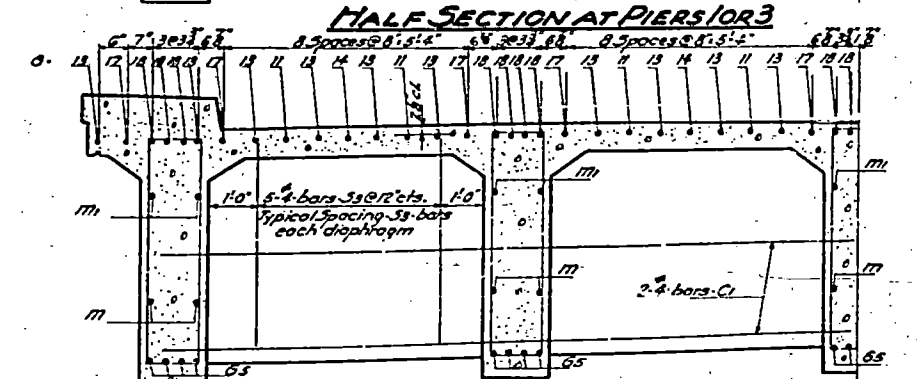
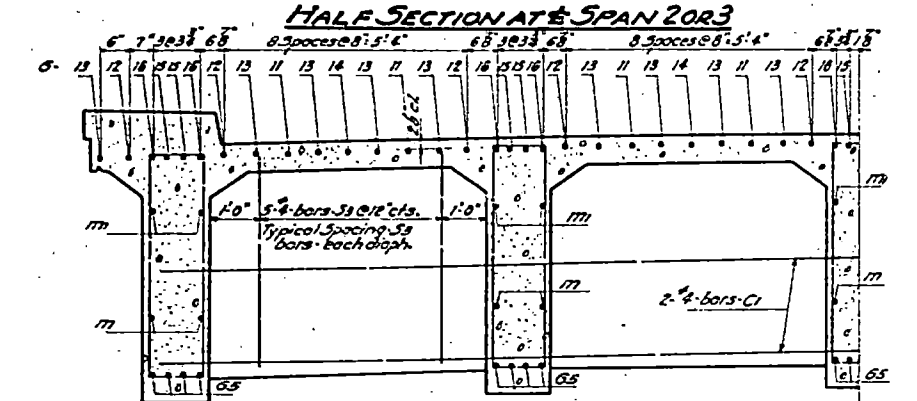
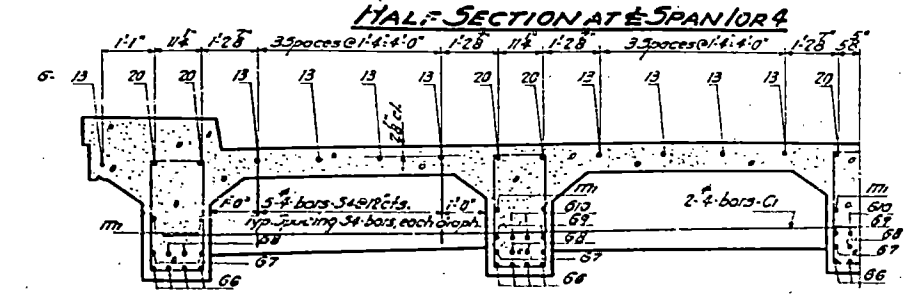
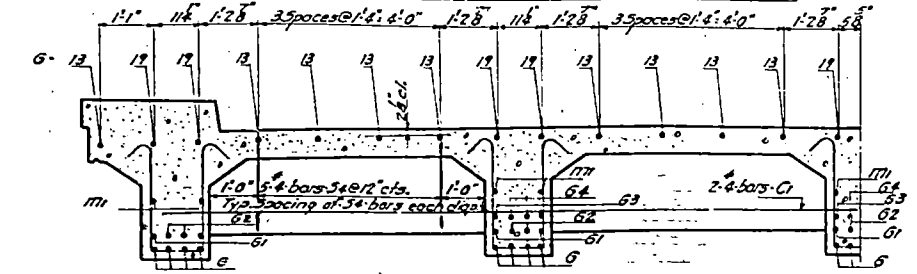
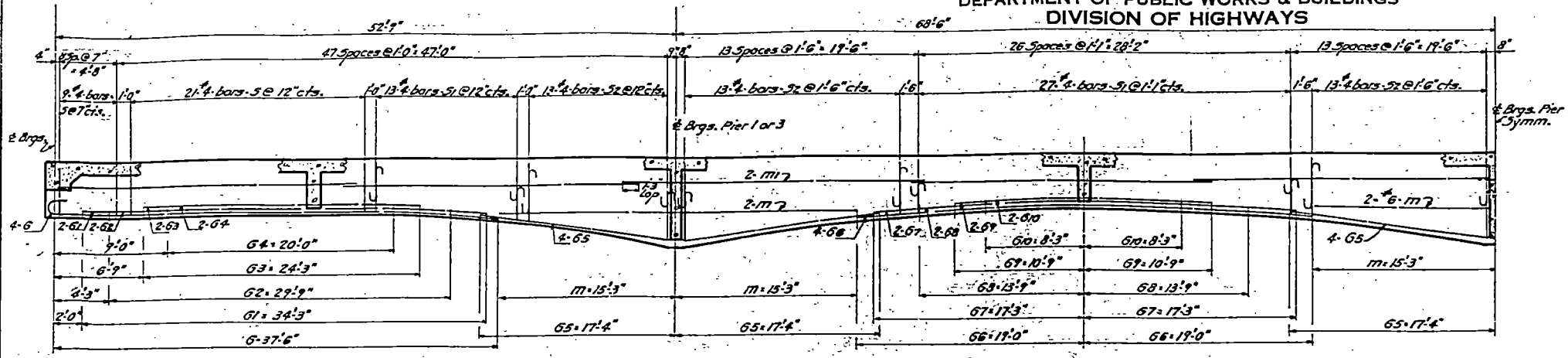
Feb. 3 1952



**SUPERSTRUCTURE**  
**PROJECT F. 103(11)**  
**S.B.I. RTE. 1 (C.A.R.T.E. 1)**  
**SECTION 29-B-Y**  
**SALINE COUNTY**  
**STA. 704+60.84**

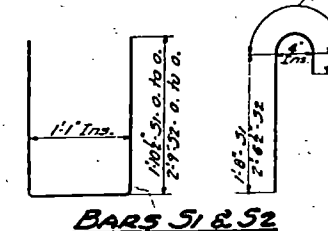
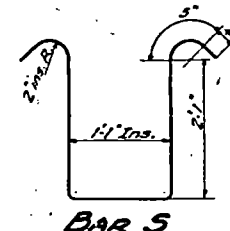
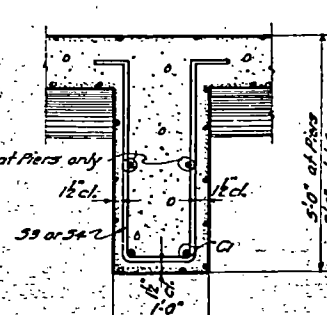
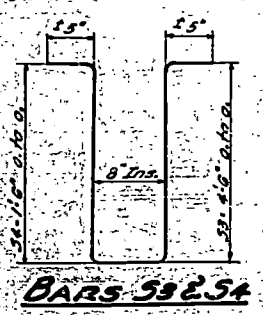
STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS

ROAD DISTRICT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 3 10 SHEETS
1	2987	Saline	37	14	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT: F-103(14)			



**BAR LIST FOR GIRDERS & DIAPHRAGMS**

Bar No.	Size	Length	Shape	Bar No.	Size	Length	Shape
G 40	7/8	39'9"	C	G7 10	7/8	29'9"	C
G1 20	7/8	34'5"	C	G8 20	7/8	33'3"	C
G2 20	7/8	27'5"	C	G9 20	7/8	27'0"	C
G3 12	7/8	24'5"	C	G10 20	7/8	22'9"	C
G4 12	7/8	20'0"	C	G11 24	7/8	15'3"	C
G5 60	7/8	35'0"	C	G12 20	7/8	29'9"	C
G6 60	7/8	38'0"	C	G13 26	7/8	36'5"	C
G7 20	7/8	34'6"	C	G14 12	7/8	37'0"	C
G8 20	7/8	27'6"	C	G15 20	7/8	50'9"	C
G9 12	7/8	21'6"	C	G16 20	7/8	56'0"	C
G10 12	7/8	16'6"	C				
G11 24	7/8	15'3"	C				
G12 20	7/8	29'9"	C				
G13 26	7/8	36'5"	C				
G14 12	7/8	37'0"	C				
G15 20	7/8	50'9"	C				
G16 20	7/8	56'0"	C				



DESIGNED *A. J. Campbell*  
CHECKED *H. T. Tavel*  
DRAWN *A. J. Campbell*  
CHECKED *H. T. Tavel*

EXAMINED *W. G. Johnson*  
PASSED *E. Johnson*  
APPROVED *J. N. Barker*

Feb 8 1952

**GIRDER DETAILS**  
**PROJECT F.103(14)**  
**S.B.I. RTE. 1 (EA. RTE. 1)**  
**SECTION 29-B-Y**  
**SALINE COUNTY**  
**STA. 704+60.84**

See Sheet 2 for Bill of Material

STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS

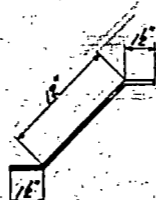
ROAD DISTRICT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1	29BY	Saline	37	15
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT: F-103(14)		

SHEET NO. 4  
10 SHEETS

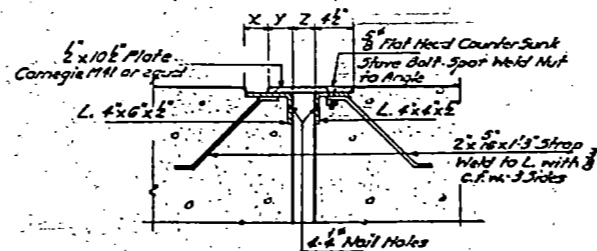
Roadway Expansion Device shall be fabricated to fit crown and shall be assembled in proper position in shop. Leave assembled for inspection. All surfaces inaccessible after erection shall receive two shop coats of red lead paint except 2" x 1/2" Anchor Bolts and Straps, which shall not be painted. Estimated Weight 4530. Lbs.

TABLE OF X-Y-Z DIMENSIONS

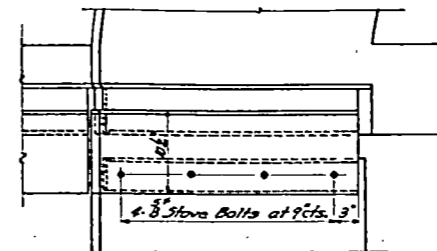
Degree F	X	Y	Z
10°	3 1/8"	2 7/8"	3 3/8"
10°	3 3/8"	2 5/8"	3 3/8"
30°	3 1/8"	2 1/8"	3 3/8"
50°	3"	3"	3"
70°	2 7/8"	3 1/8"	2 7/8"
70°	2 3/8"	3 3/8"	2 3/8"
110°	2 7/8"	3 1/8"	2 7/8"



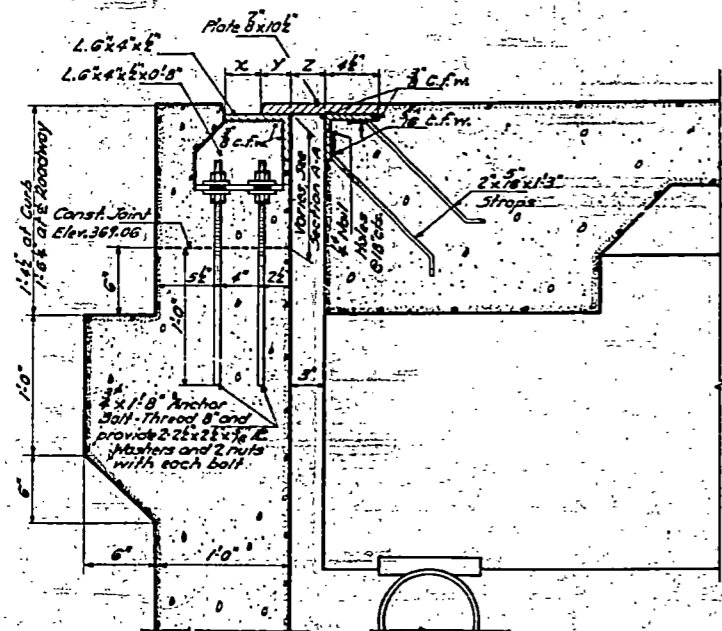
STRAP DETAIL



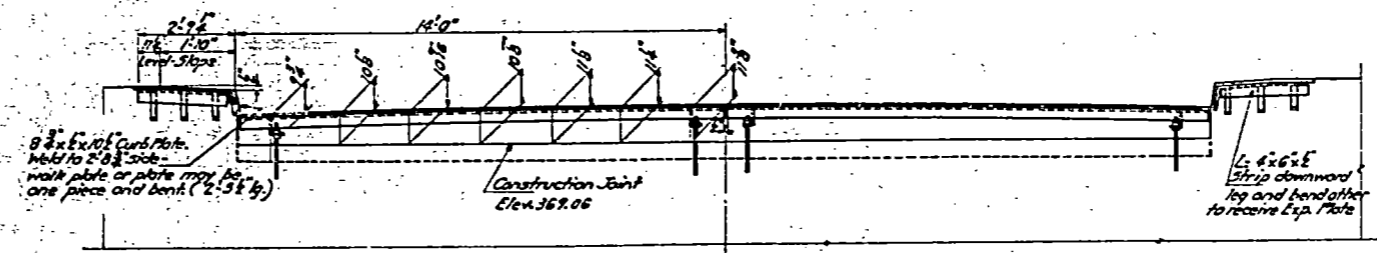
SECTION C-C



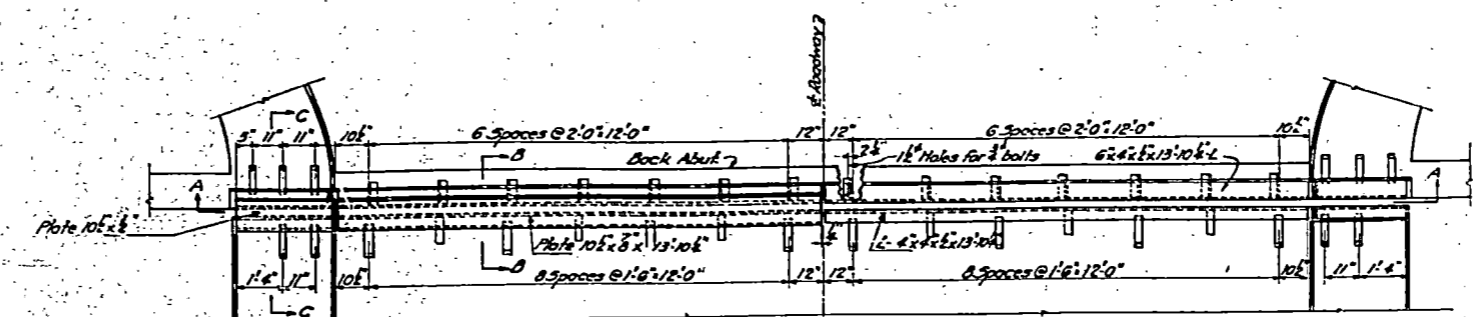
DETAIL OF SIDEWALK EXPANSION DEVICE



SECTION B-B



SECTION A-A



SHOWING EXPANSION PLATE

SHOWING EXPANSION PLATE REMOVED

PLAN OF EXPANSION DEVICE

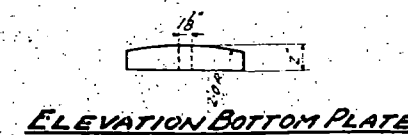
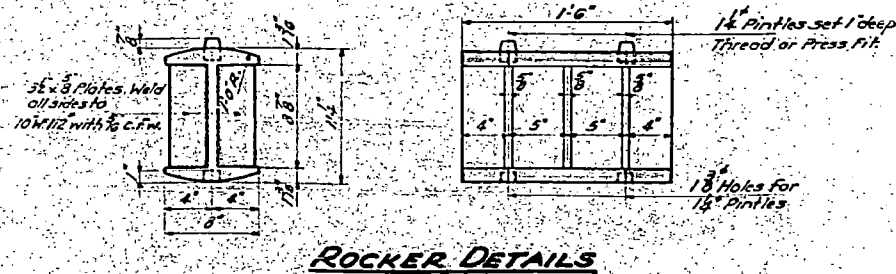
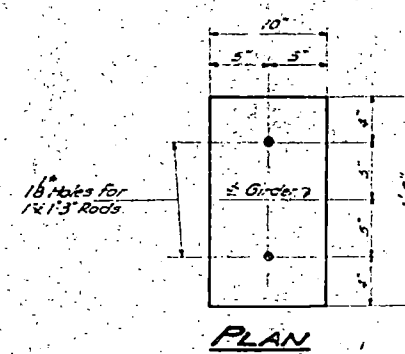
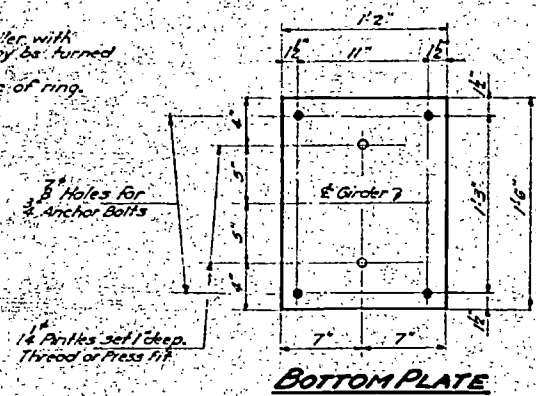
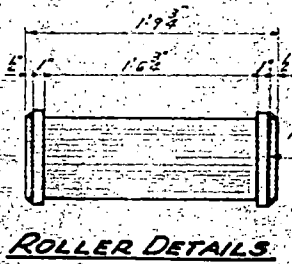
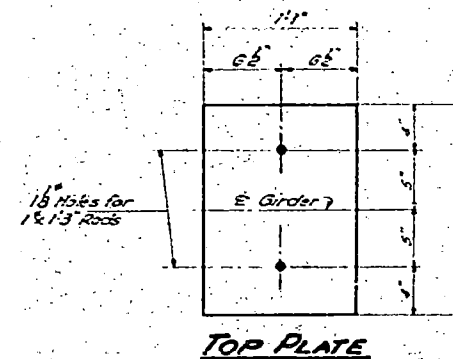
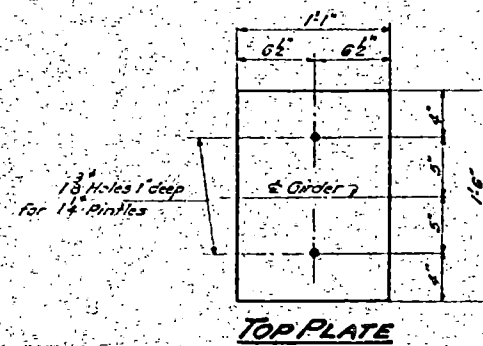
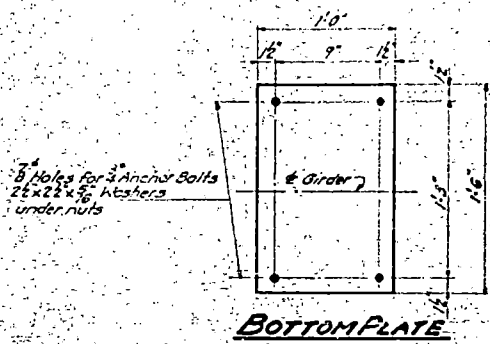
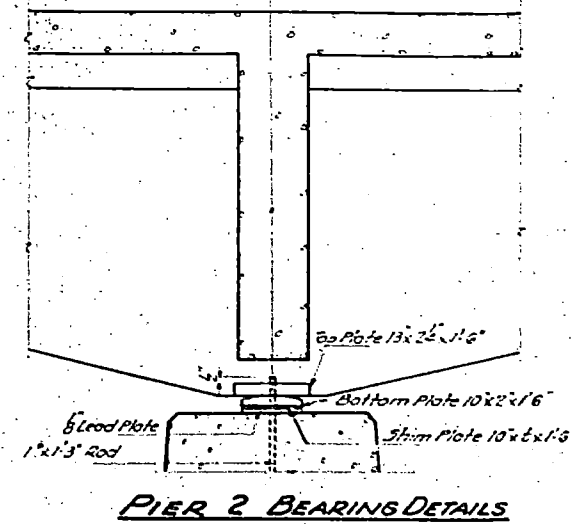
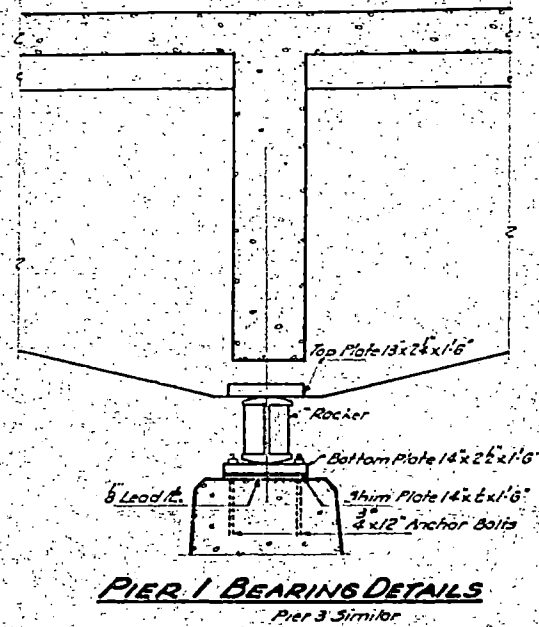
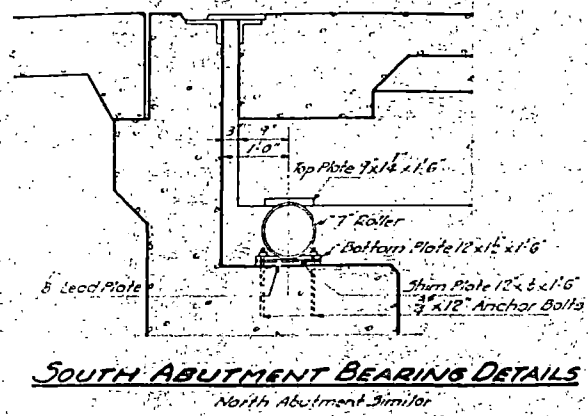
North & South Abutments

DESIGNED	A. J. Campbell	EXAMINED	Feb 3 1952
CHECKED	J. J. Tavel	PASSED	W. S. Hanson
DRAWN	A. J. Campbell	APPROVED	F. W. Barber
CHECKED	J. J. Tavel		

EXPANSION DEVICE  
PROJECT F. 103(14)  
S.B.T. RTE. 1 (F.A. RTE. 1)  
SECTION 29-B-Y  
SALINE COUNTY  
STA. 704+60.84

TABLE OF DIMENSIONS

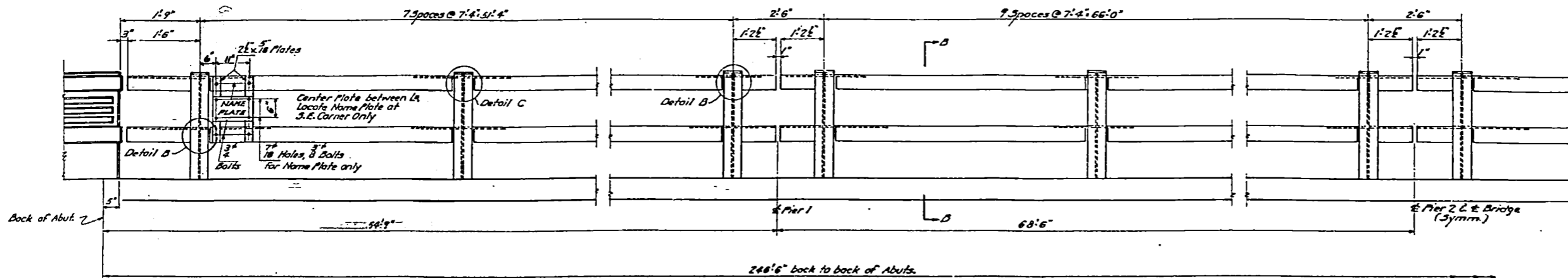
Girder	1	2	3	4	5
So. Abut.	0	0	2	0	0
Pier 1	0	0	2	0	0
Pier 2	0	0	2	0	0
Pier 3	0	0	2	0	0
No. Abut.	0	0	2	0	0



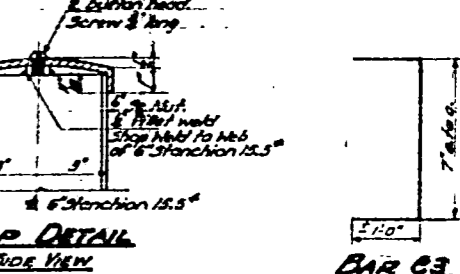
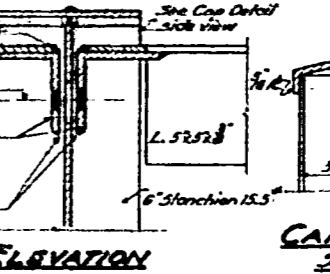
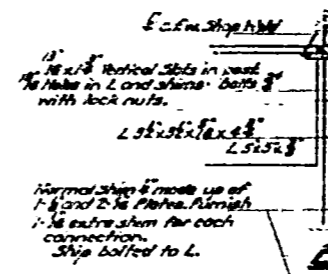
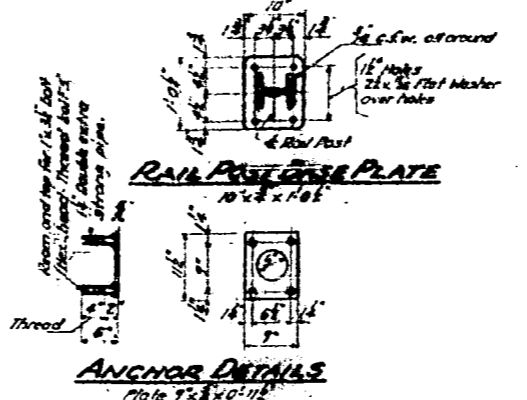
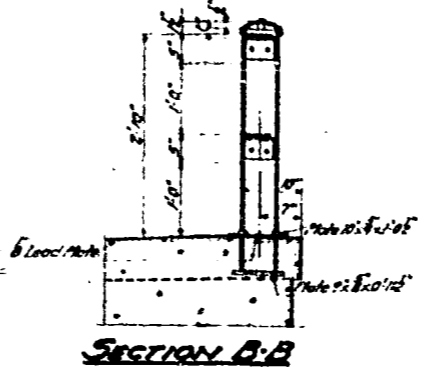
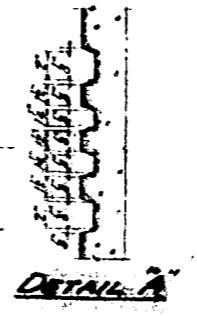
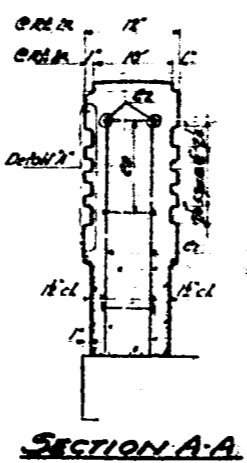
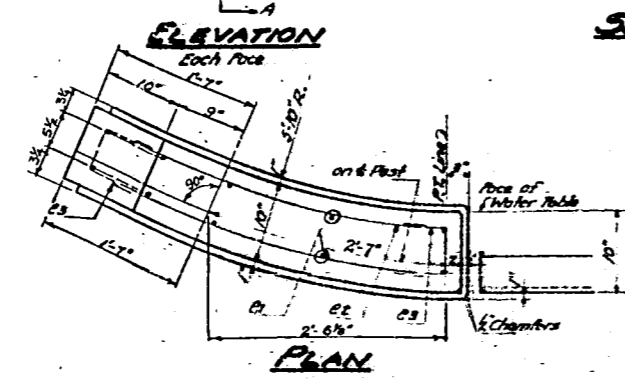
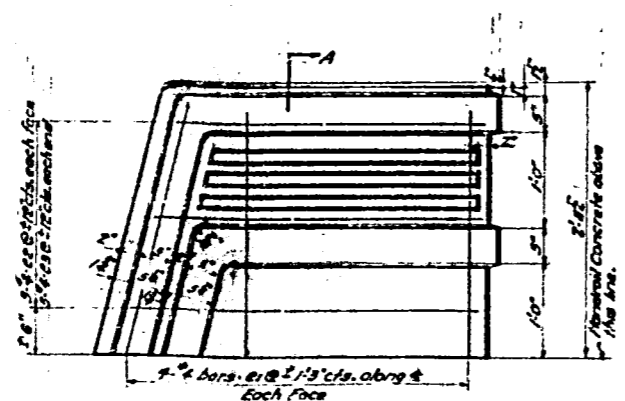
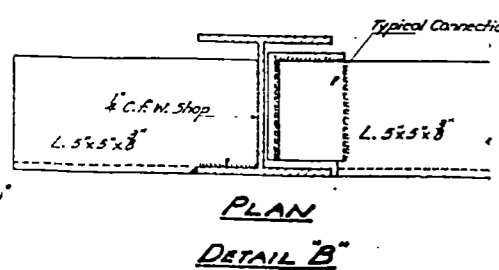
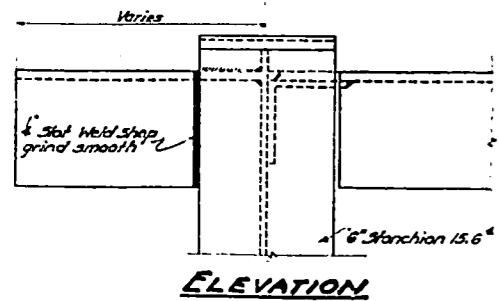
DESIGNED BY: A. J. Campbell  
CHECKED BY: A. J. C.  
DATE: 11/1/37

BEARING DETAILS  
PROJECT F-103(10)  
S.B. RTE. 1 (C.F.A. RTE. 1)  
SECTION 29-B-Y  
SALINE COUNTY  
STA. 704+60.84



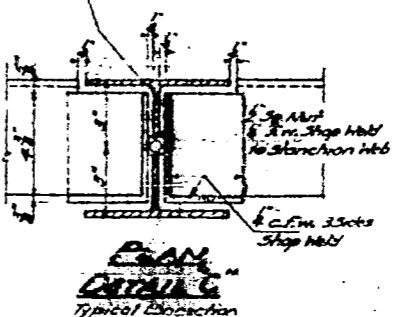


**HALF ELEVATION - WEST RAIL**



**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
C1	32	3/4"	2'-9"	—
C2	24	3/4"	3'-3"	—
C3	24	3/4"	2'-6"	L
Handrail Concrete	Cu. Yds. 1.6			
Reinforcement Bars	Lbs. 150			
Vertical Handrail	Lin. Ft. 389.8			



**HANDRAIL  
PROJECT F-103(14)  
S.B.I.R.T. (FA.R.T.E. 1)  
SECTION 29-B-Y  
SALINE COUNTY  
STA. 70+60.84**

DESIGNED: A. J. Ruppelle  
CHECKED: J. J. Tawell  
DRAWN: J. J. Miller A. J. C.  
REVIEWED: J. J. Tawell

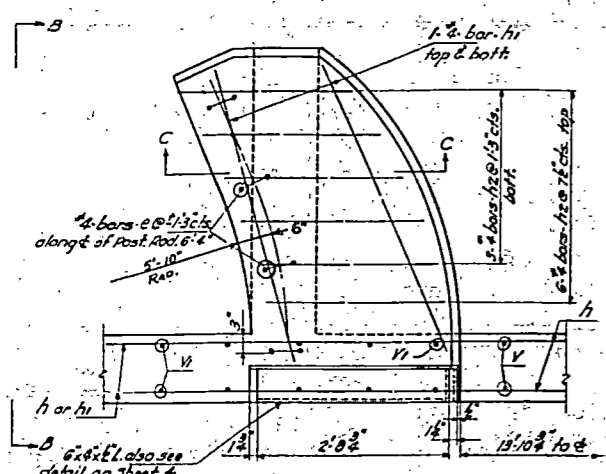
DATE: Feb. 8, 1952  
EXAMINED: W. G. Hancock  
DESIGNED: J. J. Tawell  
APPROVED: J. M. Barker

STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS

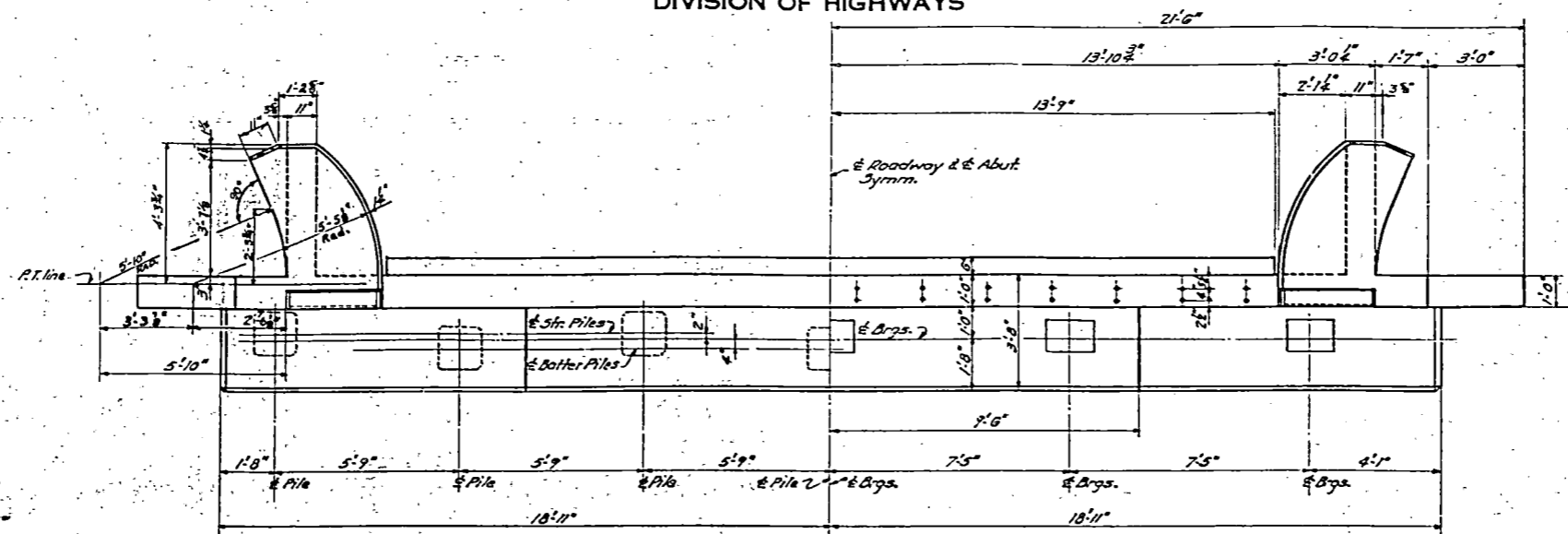
ROAD DISTRICT NO.	SECTOR	COUNTY	TOTAL SHEETS	SHEET NO.
1	29BY	Saline	37	18
PER. ROAD DIST. NO. 1	ILLINOIS	PER. AID PROJECT: F-103(18)		

SHEET NO 7  
10 SHEETS

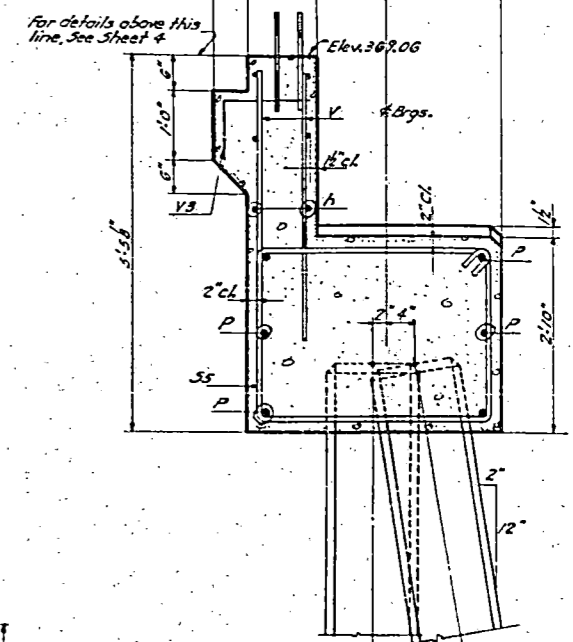
Back South Abut. Sta. 703+37.59  
Back North Abut. Sta. 705+84.057  
Cr. Elev. 370.08



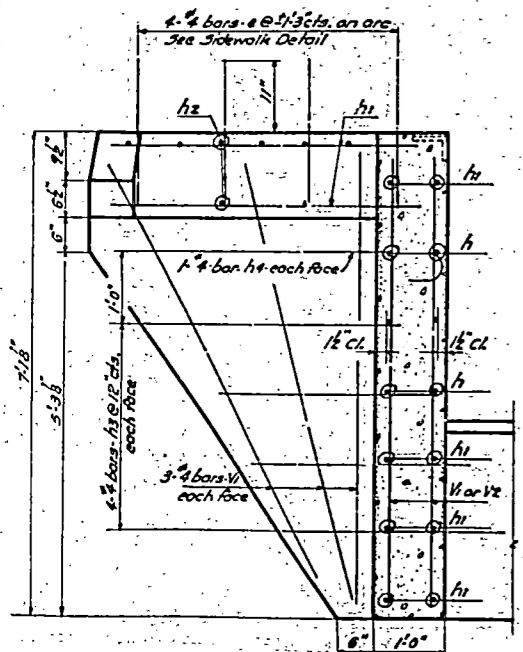
**SIDEWALK DETAIL**



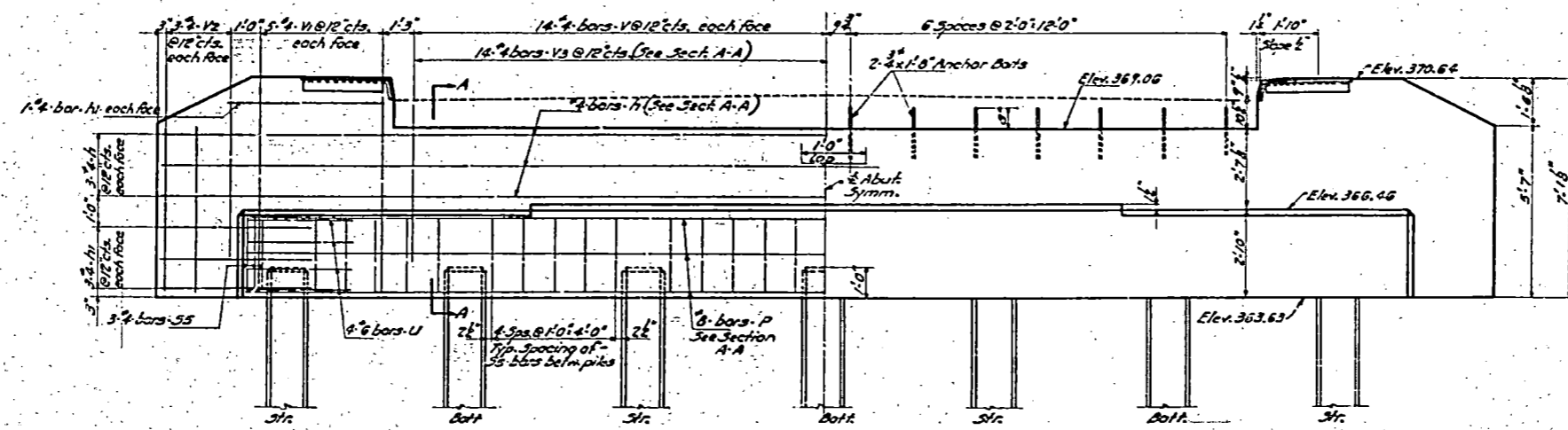
**PLAN**  
Scale: 3/160



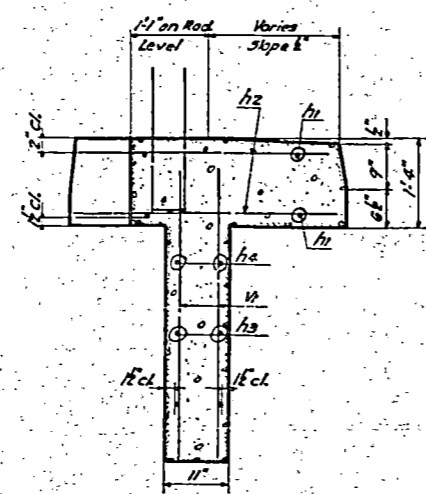
**SECTION A-A**



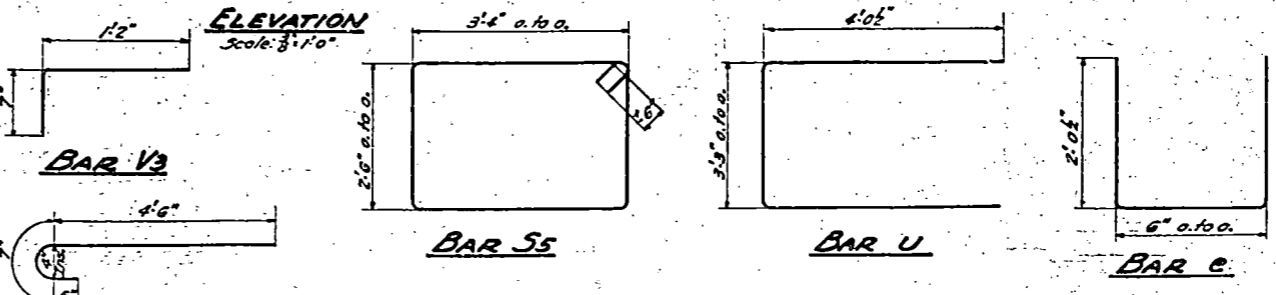
**SECTION B-B**



**ELEVATION**  
Scale: 3/160



**SECTION C-C**



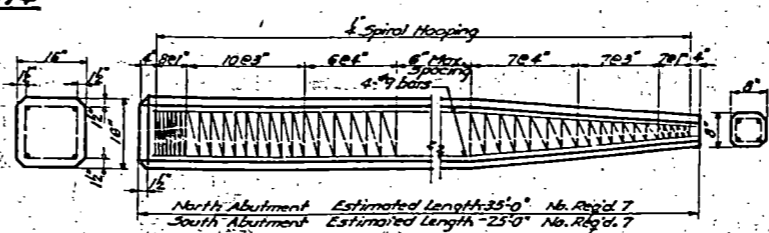
**BILL OF MATERIAL TWO ABUTS.**

Bar	No.	Size	Length	Shape
V	120	4	4'-0"	
V2	64	4	6'-6"	
V2	24	4	5'-3"	
V3	54	4	1'-9"	
h	24	4	2'-9"	
h1	48	4	4'-6"	
h2	36	4	2'-6"	
h3	32	4	3'-0"	
h4	8	4	5'-6"	
S5	72	4	13'-0"	
U	18	6	8'-3"	
P	12	9	37'-5"	
C	16	4	4'-6"	

Class X Concrete Cuycks. 45.6  
Reinforcement Bars Lbs. 3510  
16" Precast Conc. Piles (25'lg) Lin. Ft. 150  
16" Precast Conc. Piles (35'lg) Lin. Ft. 210  
16" Precast Conc. Test Piles Each 2

**PILE DATA**  
South Abutment:  
Minimum Capacity 25 Tons  
Estimated Length 23'-0"  
No. Required 7 (6+1 test pile)  
North Abutment:  
Minimum Capacity 25 Tons  
Estimated Length 33'-0"  
No. Required 7 (6+1 test pile)

DESIGNED *A.J. Campbell*  
CHECKED *J.P. Tamm*  
DRAWN *A.J.C. Miller*  
CHECKED *J.P. Tamm*  
EXAMINED *W.E. Shuman*  
PASSED *[Signature]*  
APPROVED *F.M. Barker*



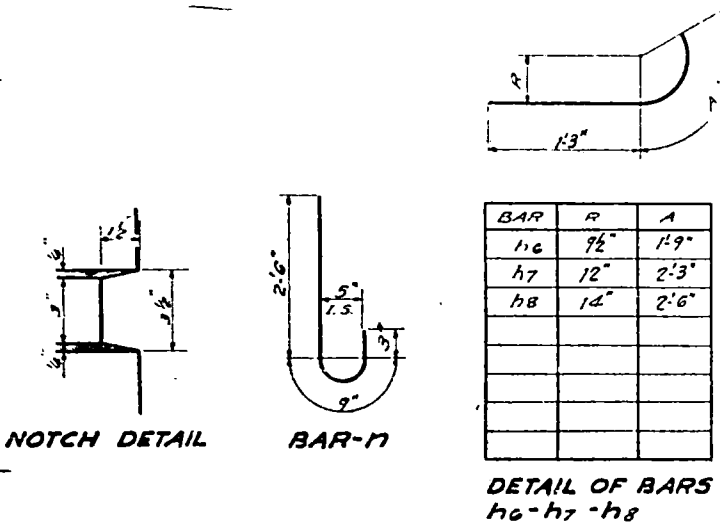
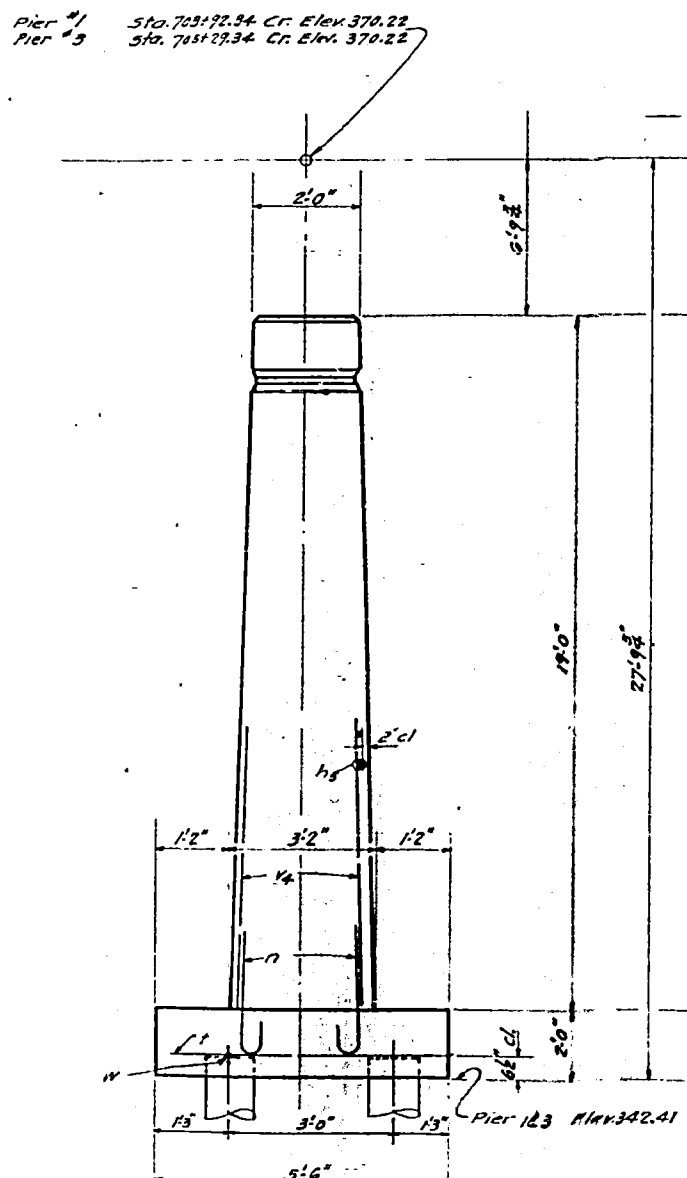
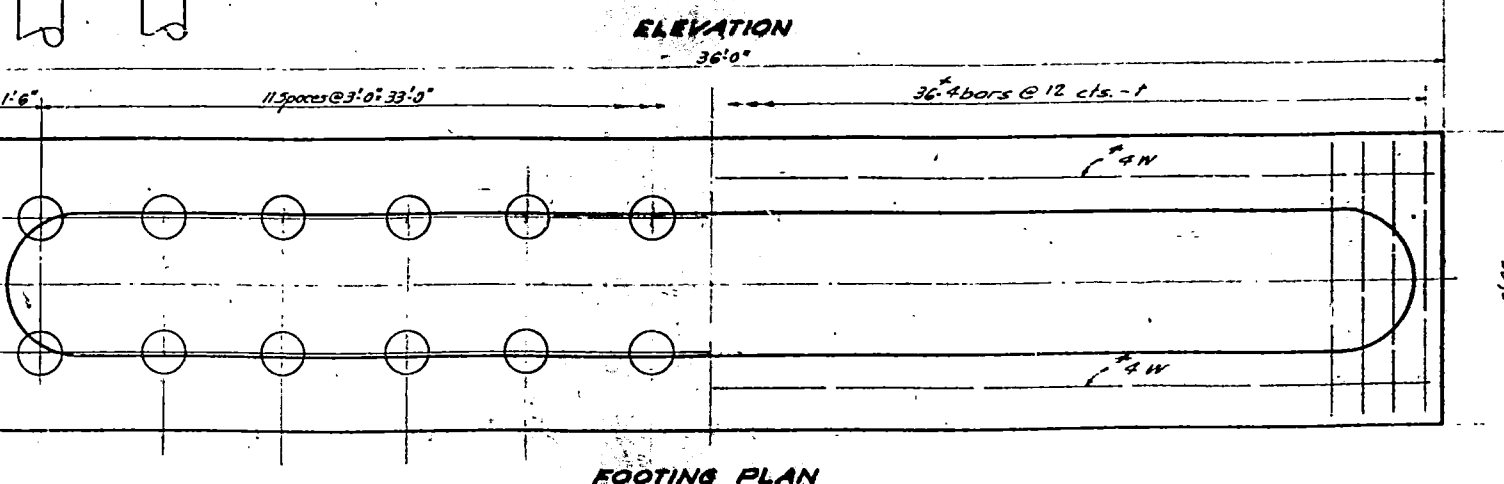
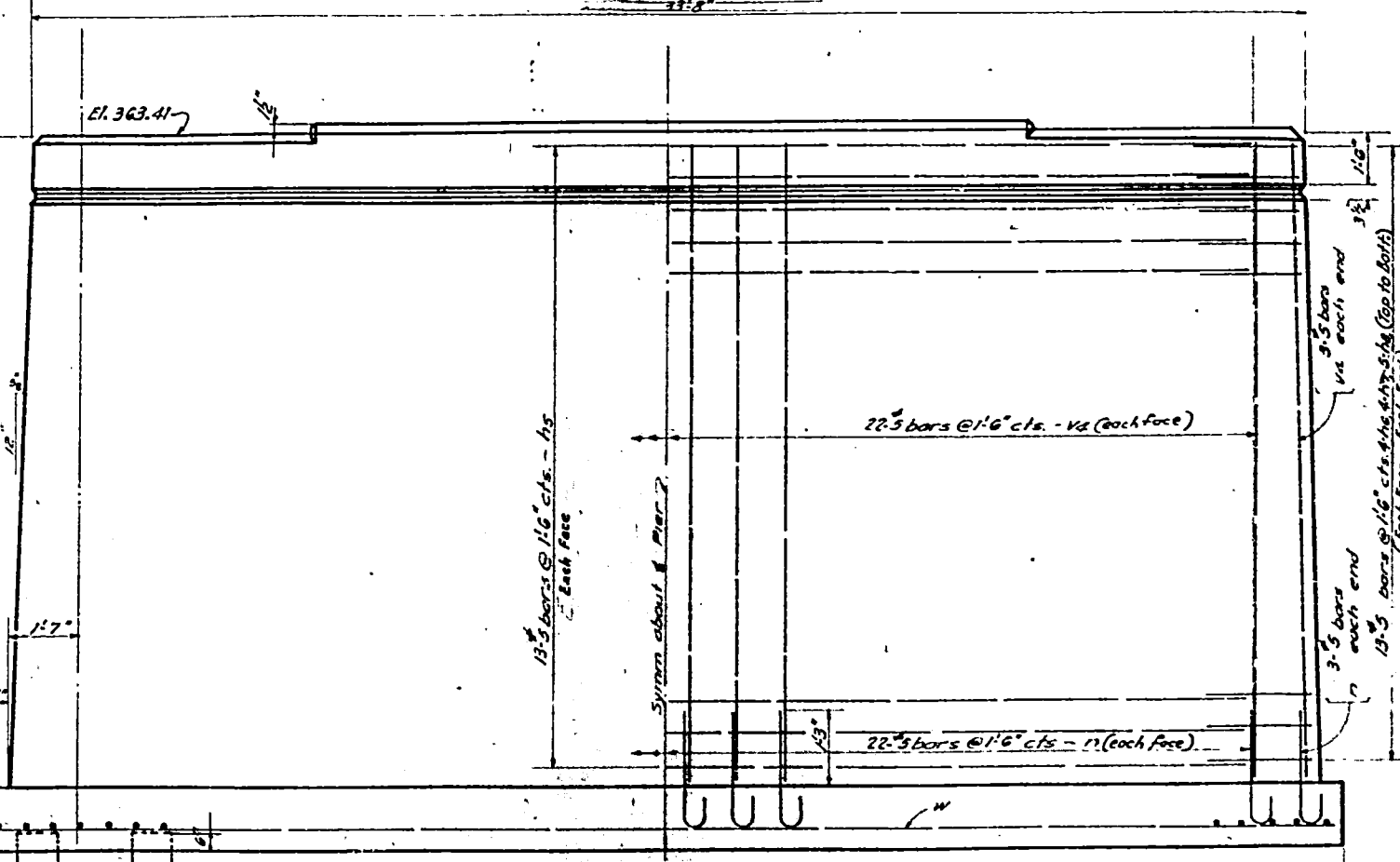
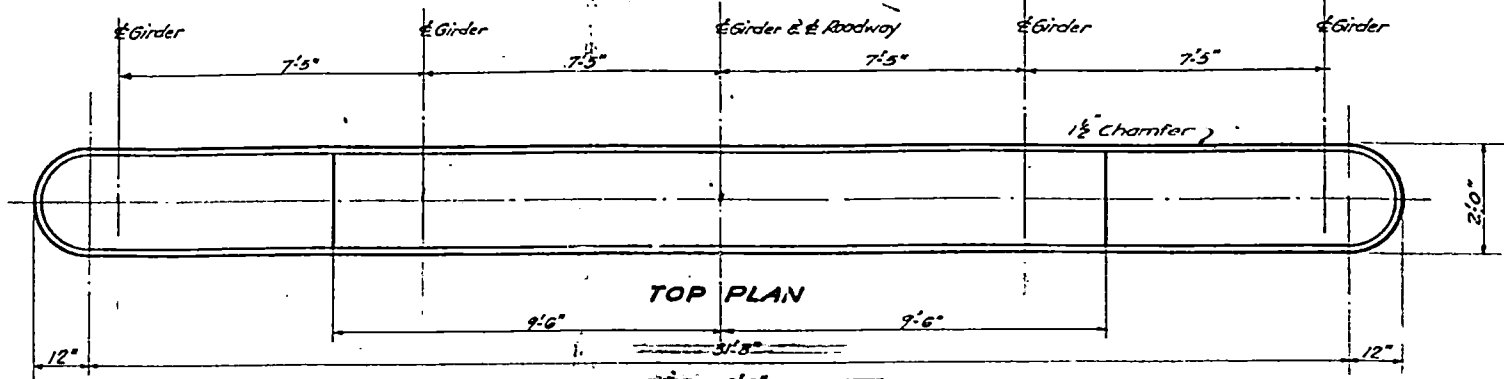
**DETAIL OF PRECAST CONCRETE PILES**  
Note: 4" Spiral Hooping may be Structural Grade Reinforcement

**NORTH & SOUTH ABUTMENTS**  
**PROJECT F-103(18)**  
**S.B.I. RTE. 1 (F.A. RTE. 1)**  
**SECTION 27-B-Y**  
**SALINE COUNTY**  
**STA. 704+60.84**

STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1	29B-Y	Saline	37	19
PIER ROAD DIST. NO. 7	ILLINOIS	PIER AID PROJECT: F-103(14)		

SHEET NO. 8  
10 SHEETS



PILE DATA

Type	Untreated Timber
Min. Capacity	20 Tons
Est. Length, Pier 1	26'-0"
Est. Length, Pier 3	14'-0"
No. Req. at (20'-0")	24 (23+1 test pile)
No. Req. at (14'-0")	24 (23+1 test pile)

BILL OF MATERIAL - PIER #2 & 3

BAR	NO.	SIZE	LENGTH	BAR	NO.	SIZE	LENGTH
V4	100	#5	18'-9"	h5	52	#5	31'-6"
				h6	32	#5	3'-0"
11	100	#5	3'-6"	h7	32	#5	3'-6"
				h8	40	#5	3'-9"
T	72	#4	5'-0"				
W	8	#4	18'-6"				
Class A Concrete			Cu. Yds.	151.2			
Reinforcement Bars			Lbs.	4740			
Class A Excavation for Structures			Cu. Yds.	40.8			
Class B Excavation for Structures			Cu. Yds.	166.1			
Untreated Timber Piles (20'-0")			Lin. Ft.	460			
Untreated Timber Piles (14'-0")			Lin. Ft.	322			
Test Piles			Each	2			

COMPUTED: A.J. Campbell  
CHECKED: J. Tamm  
DRAWN: A. J. Visions  
CHECKED: J. Owens  
ASSEMBLED: A.J.C.  
CHECKED: J. Tamm

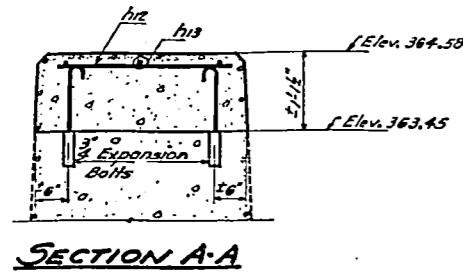
EXAMINED: Feb. 8 1952  
W.B. Hanson  
E. Shuman  
APPROVED: F.N. Parker

PIERS 1&3  
PROJECT F-103(14)  
S.B.I. RTE. 1 (FARTE. 1)  
SECTION 29-B-Y  
SALINE COUNTY  
STA. 704+60.84

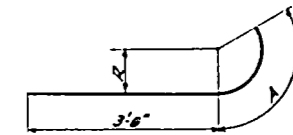
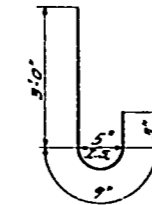
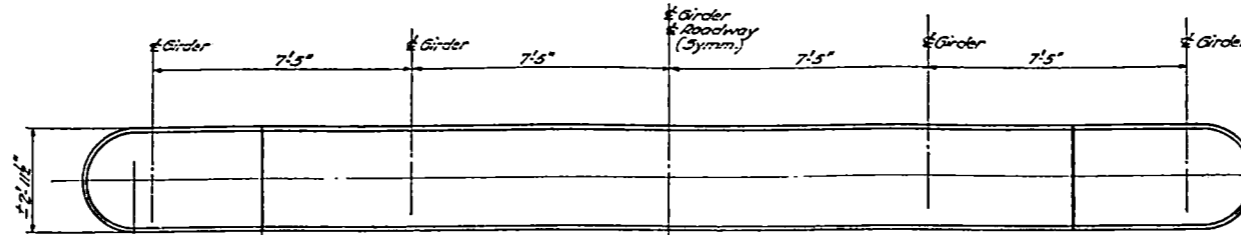
STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS

ROAD DISTRICT NO. 7	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ILLINOIS	29BY	Saline	37	20
PER AIR PROJECT: F-103(14)				

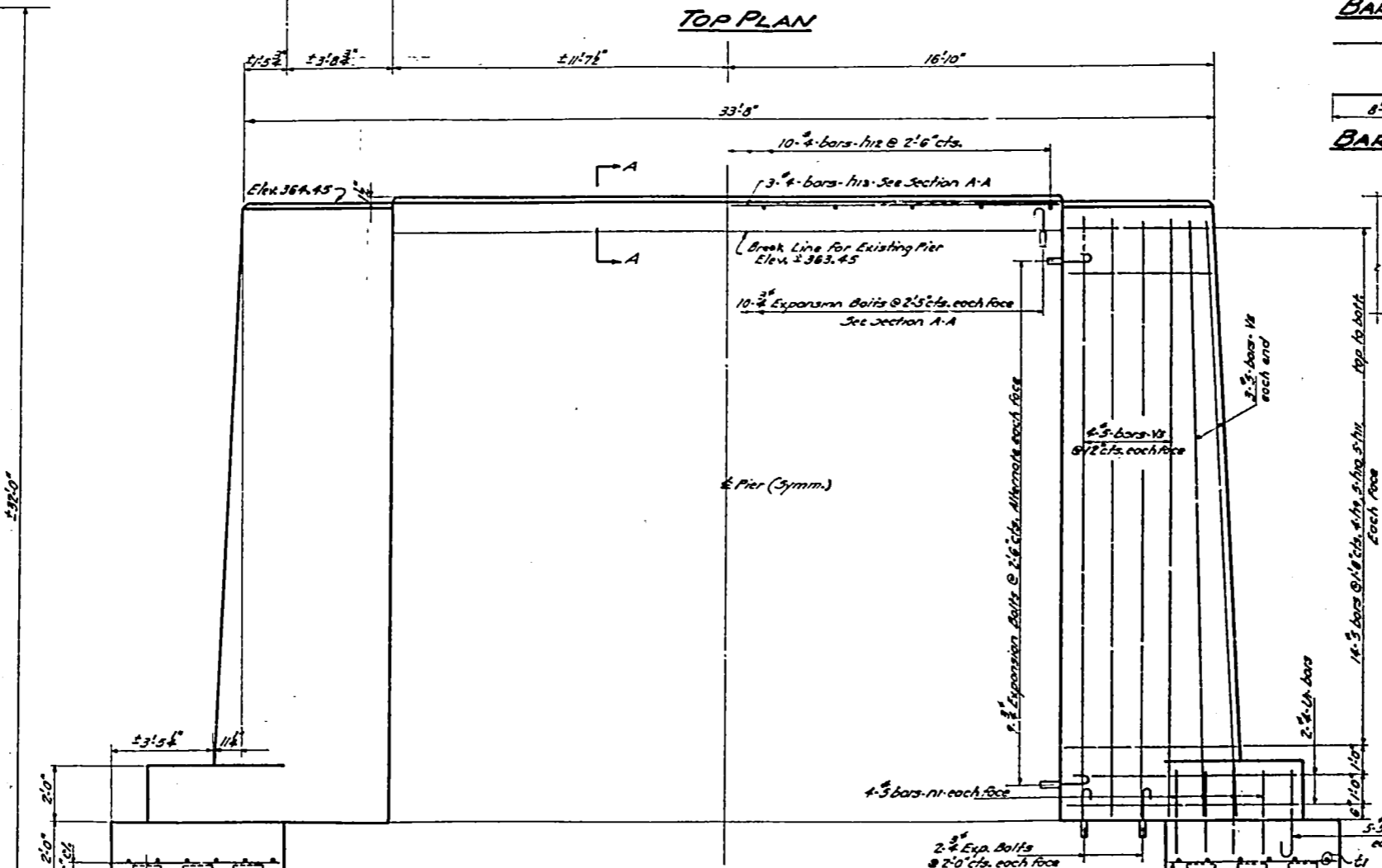
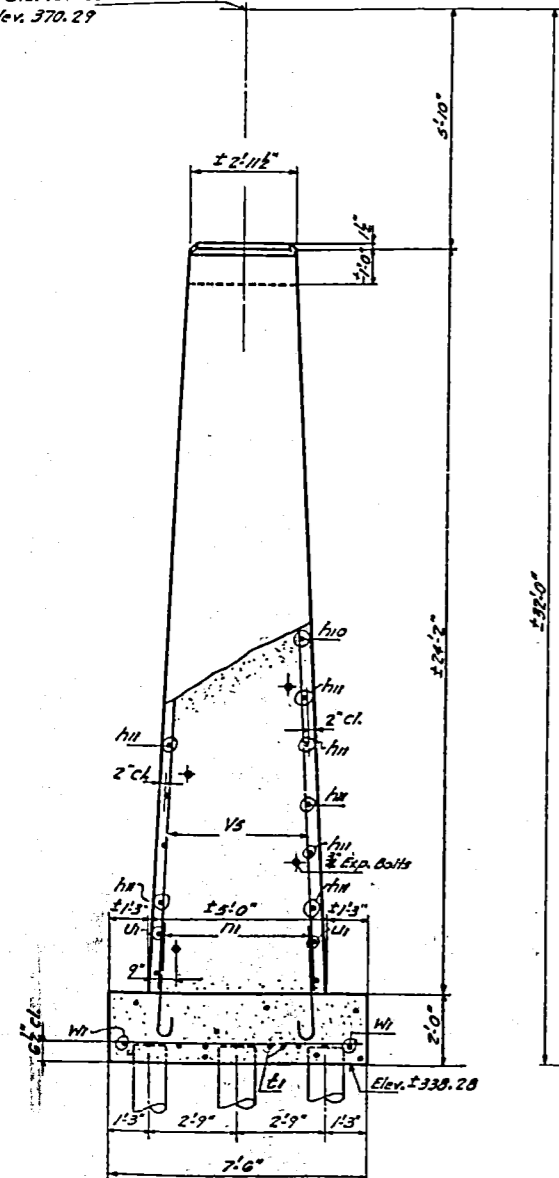
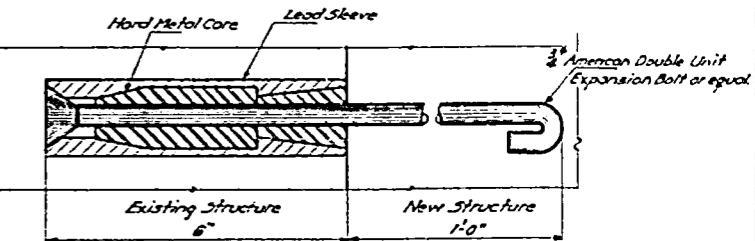
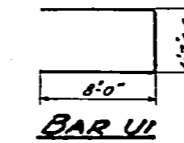
SHEET NO 9  
10 SHEETS



Pier 2 - Sta. 704+60.84  
Cr. Elev. 370.29



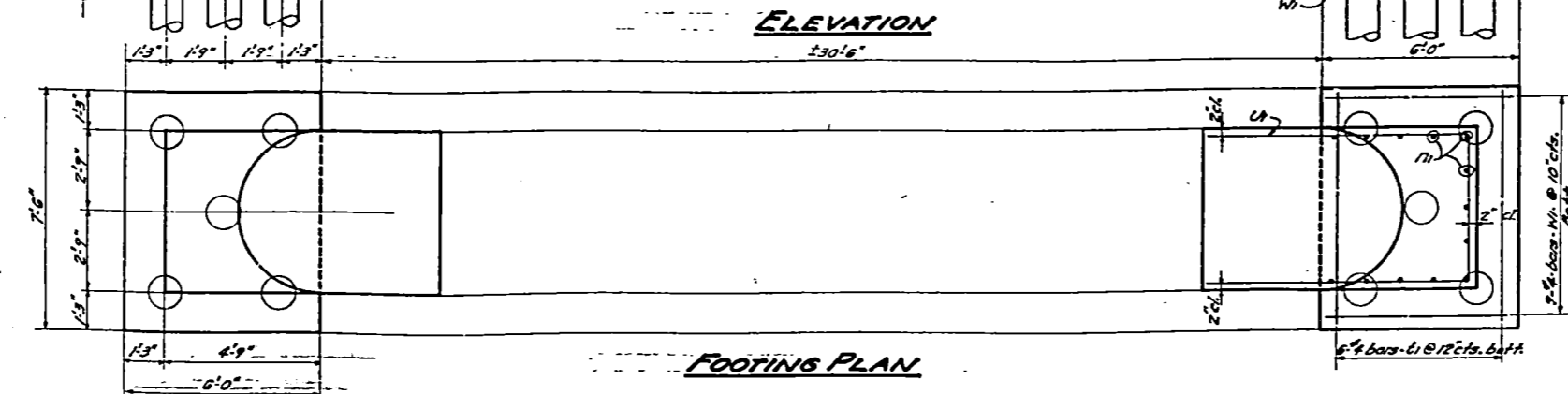
BAR	R	A
h9	1'-38"	2'-9"
h10	1'-68"	3'-0"
h11	1'-10"	3'-6"



**DETAIL OF EXPANSION BOLT**

**BILL OF MATERIAL**

BAR	NO.	SIZE	LENGTH	SHAPE
V5	22	1/2"	23'-9"	—
VI	26	5/8"	4'-0"	—
VI	4	1/2"	20'-6"	—
h9	16	5/8"	5'-6"	—
h10	20	5/8"	6'-0"	—
h11	20	5/8"	7'-0"	—
h12	10	5/8"	2'-6"	—
h13	3	1/2"	22'-9"	—
Class-A Concrete				Cu. Yds. 47.5
Reinforcement Bars				Lbs. 1280
Expansion Bolts				Each 46
Untreated Timber Piles (12 1/2")				Lin. Ft. 140
Class-A Excavation for Structure				Cu. Yds. 11.7
Class-B Excavation for Structure				Cu. Yds. 108.9



**PILE DATA**

Type	Untreated Timber
Min. Capacity	10 Tons
Estimated Length	14'-0"
No. Required	10

DESIGNED *A. J. Campbell*  
CHECKED *J. J. Connel*  
DRAWN *A. J. Campbell*  
CHECKED *J. J. Connel*

EXAMINED *W. G. Hanson*  
PASSED *E. J. Connel*  
APPROVED *J. N. Barker*

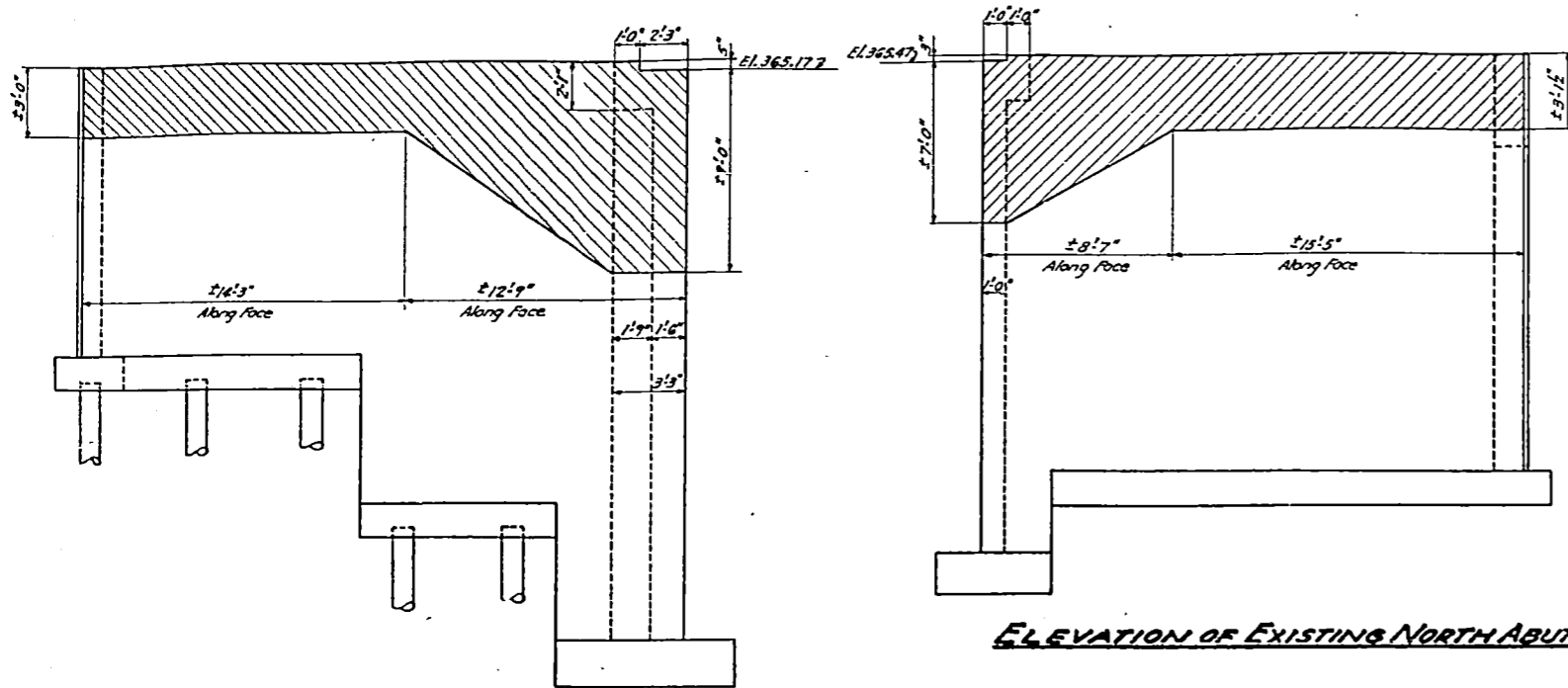
Feb 8 1952

**PIER 2**  
**PROJECT F-103(14)**  
**S.B.I. RTE. 1 (F.A.R.T.E. 1)**  
**SECTION 29-B-Y**  
**SALINE COUNTY**  
**STA. 704+60.84**

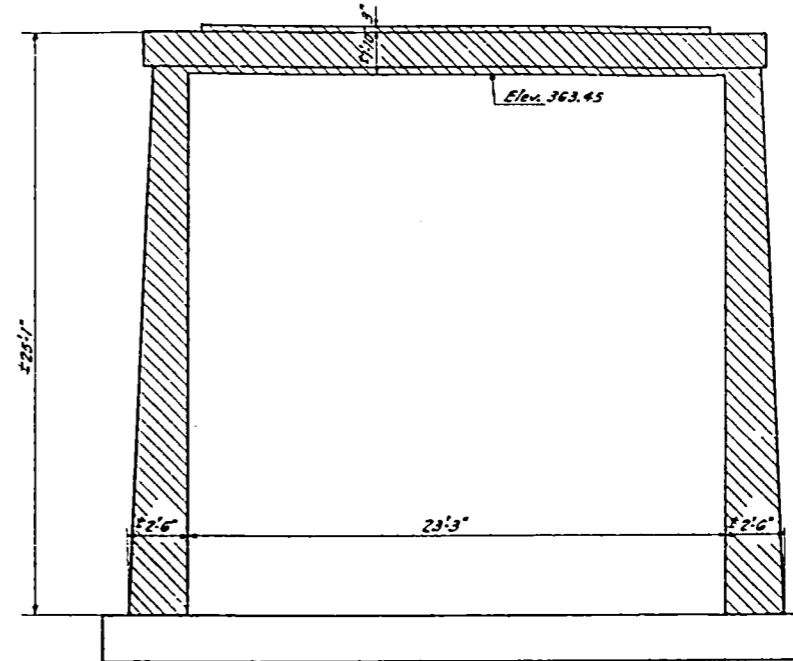
STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS

ROAD DISTRICT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I	29BY	Saline	37	21
PER ROAD DIST. NO. 7		ILLINOIS	PER AID PROJECT - F-103(14)	

SHEET NO 10  
10 SHEETS

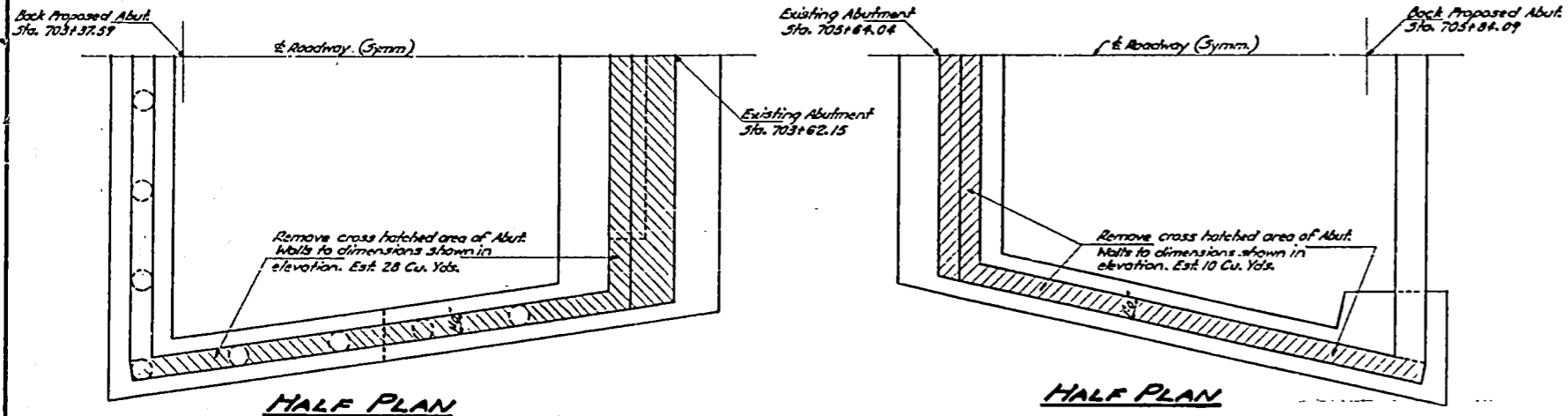


**ELEVATION OF EXISTING NORTH ABUTMENT**



**ELEVATION OF EXISTING PIER 1**

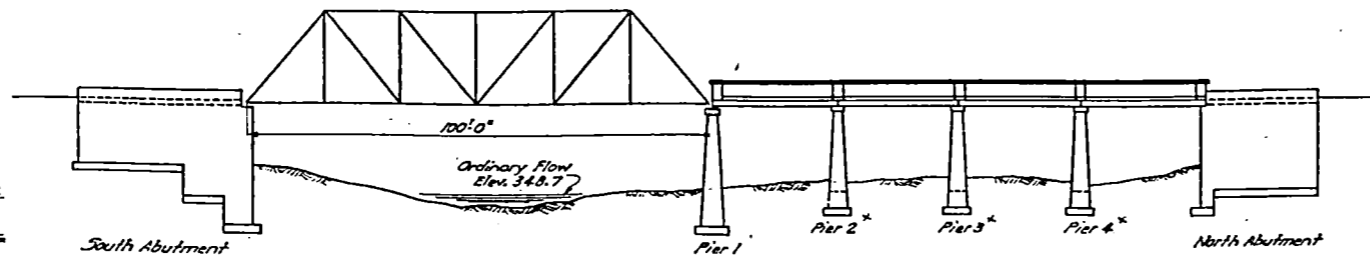
**ELEVATION OF EXISTING SOUTH ABUTMENT**



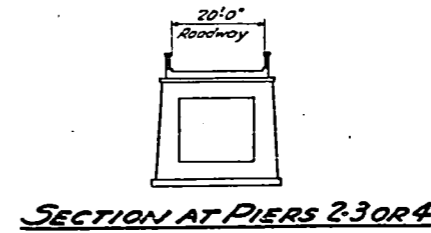
**HALF PLAN**

**HALF PLAN**

**PLAN**



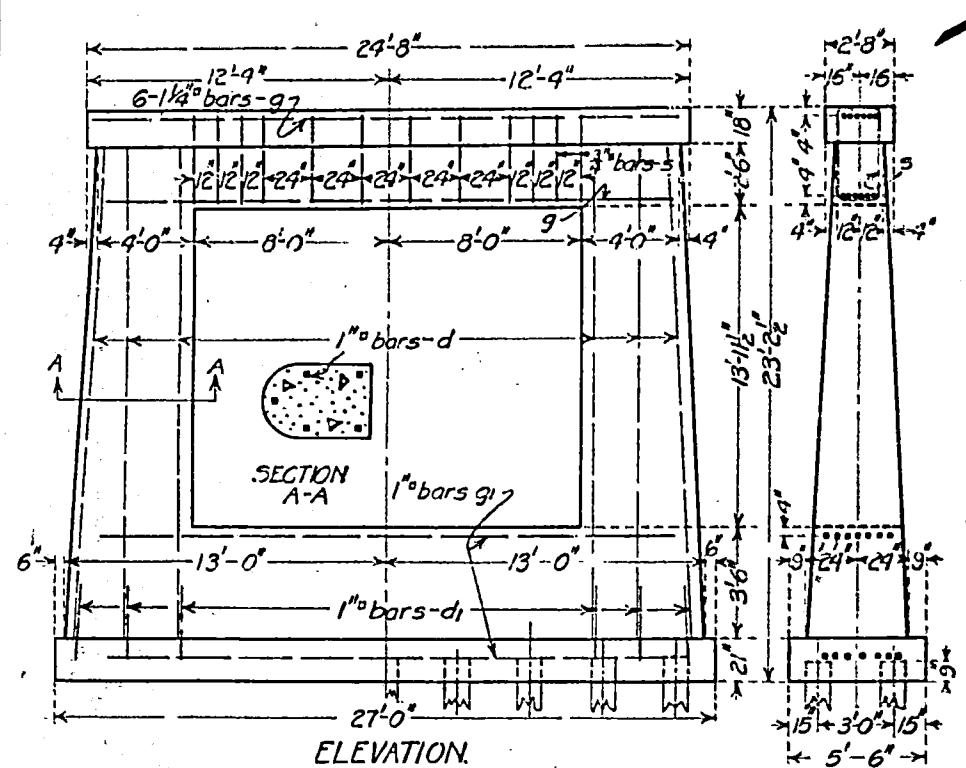
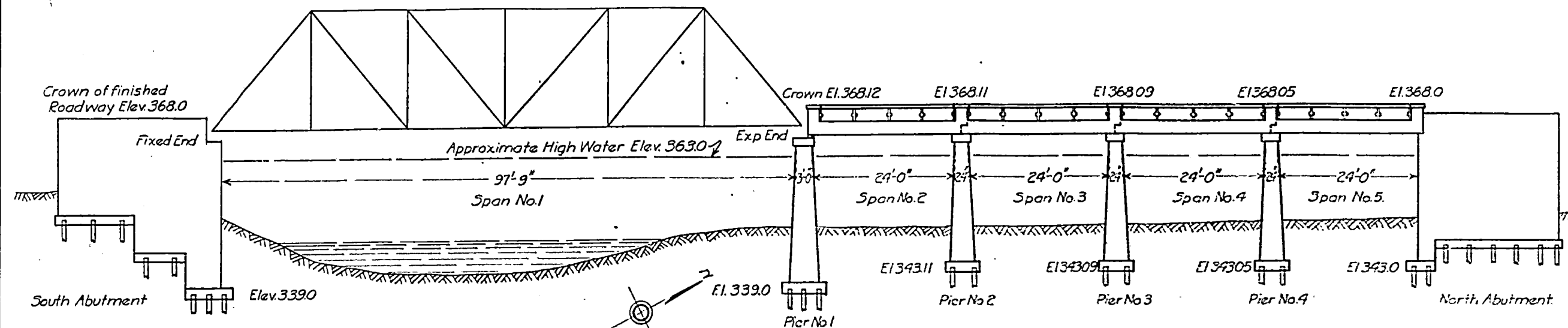
**ELEVATION OF EXISTING STRUCTURE**



\* Remove Piers 2, 3 & 4 to Elev. 1' 6" below Natural Ground Level Estimated Cu. Yds. 54

DESIGNED	A. J. Campbell	EXAMINED	W. G. Hansen	19 52
CHECKED	J. J. Tavel	PASSED	E. L. ...	
DRAWN	G. C. ...	APPROVED	F. N. ...	
CHECKED	J. J. Tavel			

**EXISTING STRUCTURE  
PROJECT F-103(14)  
S.B.I. RTE. 1 (FA. RTE. 1)  
SECTION 29-B-Y  
SALINE COUNTY  
STA. 704+60.84**



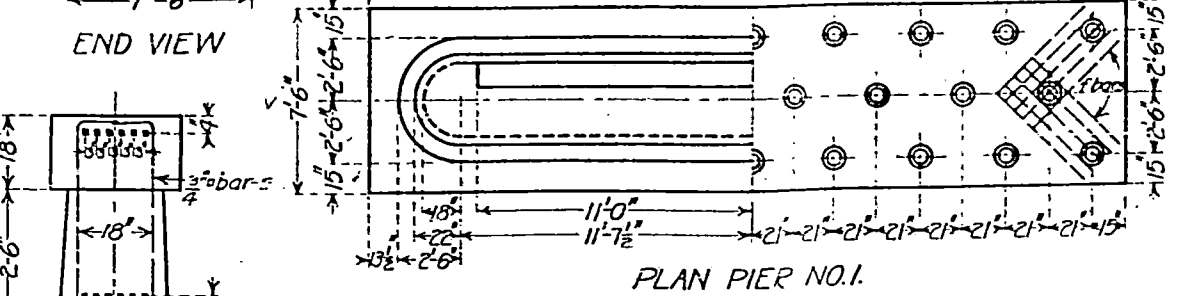
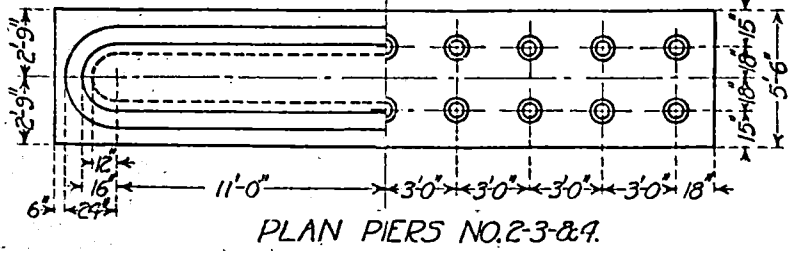
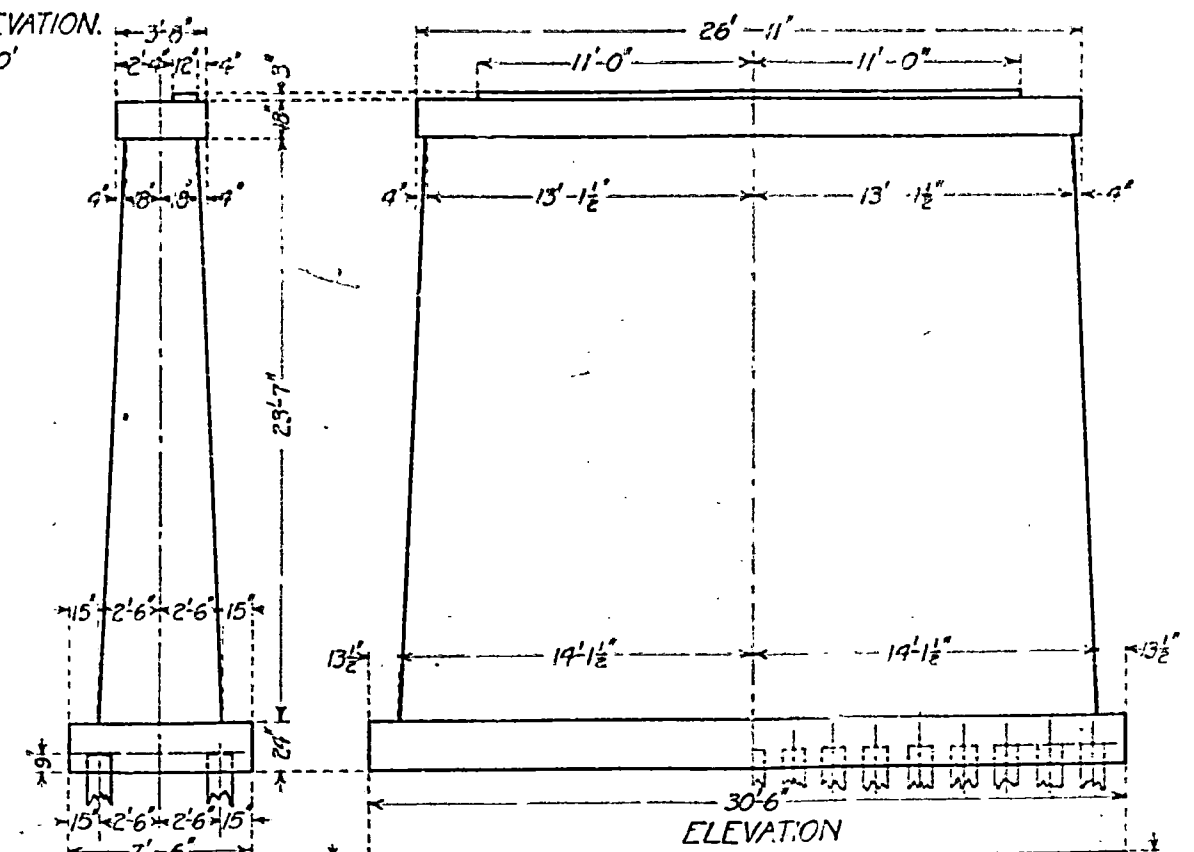
BILL OF MATERIAL FOR PIERS NO. 1, 2, 3 & 4.

Bars	No.	Size	Length
f	20	1/2"	5'-0"
d	30	1"	20'-0"
d	30	1"	5'-0"
g	36	1/2"	23'-0"
g	42	1"	23'-0"
s	36	3/4"	10'-6"
Class A Conc. Cu. Yds. 129.4			
Class B Conc. Cu. Yds. 114.9			
Rein. Steel Lbs. 10910			
15 Ton. Untreated Piles - 80			

Class B Concrete to be used in Pier No. 1. Proportions 1:3:5.  
Class A Concrete to be used in Piers No. 2, 3 & 4. Proportions 1:2 1/2:4.

TOTAL BILL OF MATERIAL.

SUPERSTRUCTURE	
Structural Steel-Lbs.	90350
Class X Conc.-Cu. Yds.	40.8
Reinforcing Steel-Lbs.	29980
Expansion Devices-Lbs.	355
Class A Conc.-Cu. Yds.	128.9
Brick Masonry-Cu. Yds.	9.0
ABUTMENTS.	
Class A Concrete Cu. Yds.	258.8
Reinforcing Steel-Lbs.	31220
15 Ton. Untreated piles.	52
15 Ton. Creosoted Piles.	12
PIERS- Class A Concrete-Cu. Yds.	
Class A Concrete-Cu. Yds.	129.4
Class B Concrete-Cu. Yds.	114.9
Reinforcing Steel-Lbs.	10910
15 Ton-Untreated Piles	80
TOTALS	
Class A Conc.-Cu. Yds.	517.1
Class B Conc.-Cu. Yds.	114.9
Class X Conc.-Cu. Yds.	40.8
Brick Masonry-Cu. Yds.	9.0
Reinforcing Steel-Lbs.	72110
Structural Steel-Lbs.	90350
Expansion Devices-Lbs.	355
15 Ton-Untreated Piles.	132
15 Ton-Creosoted Piles.	12



083-0002

STANDARD	COMPUTED - H.B. Walravens
CHECKED - S.T. Ben	
DRAWN - H.B.W.	
CHECKED - S.T. G.	
SPECIAL	ASSEMBLED -
CHECKED -	

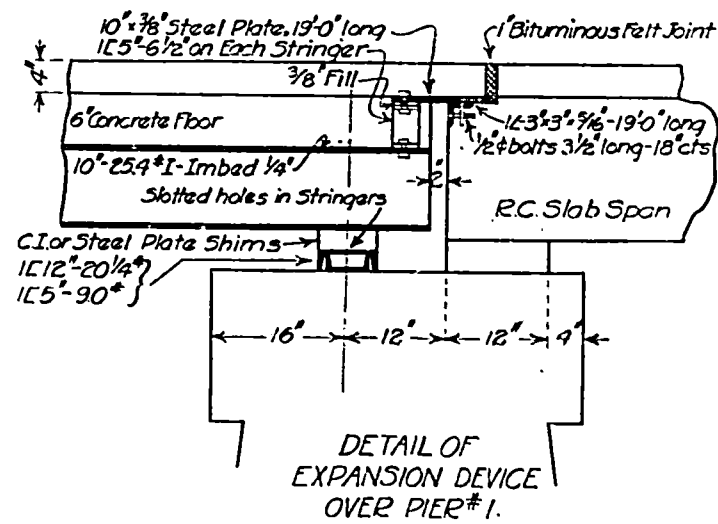
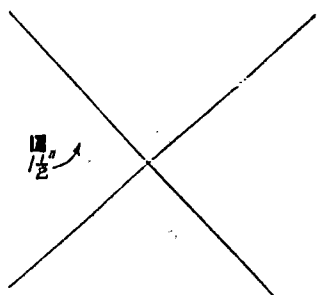
EXAMINED May 22, 1922  
S.T. Ben  
BRIDGE ENGINEER  
APPROVED  
C. Oller  
CHIEF HIGHWAY ENGINEER

Enlarged Detail Showing Steel in Top of Piers #2, 3 & 4.

REEL 9-1

STATION 704+60  
STATE BOND ISSUE ROUTE #1  
SEC. 23-B SALINE CO.

		5		2	
BOND ISSUE ROUTE NO.	COUNTY	SEC.	TOTAL SHEETS	SHEET NO.	
1	SALINE	29	38	32	

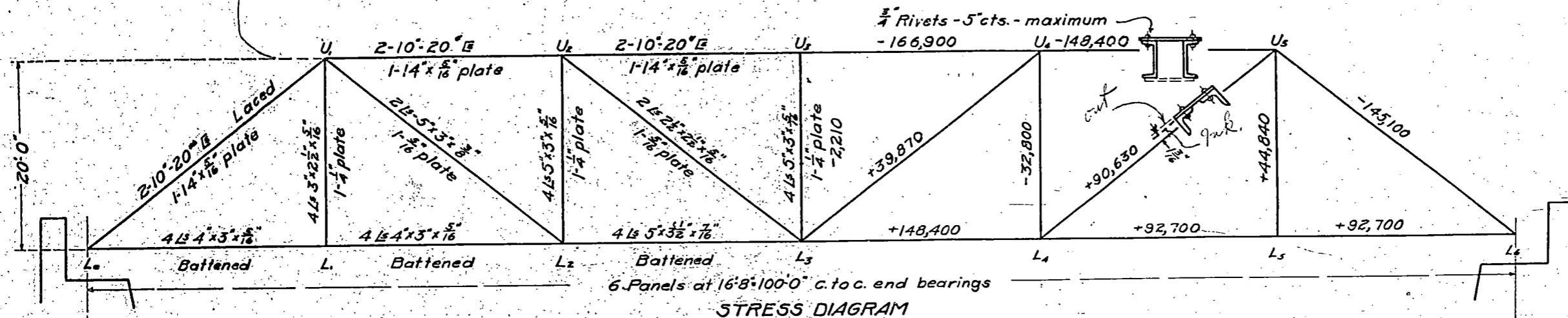


H.B. Halverson  
S. T. Con

May 22, 22  
F. Burch  
W. Arman  
C. Alder

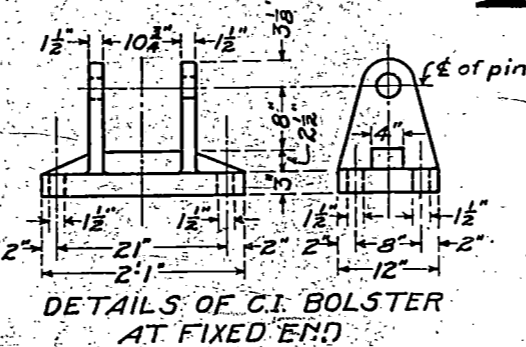
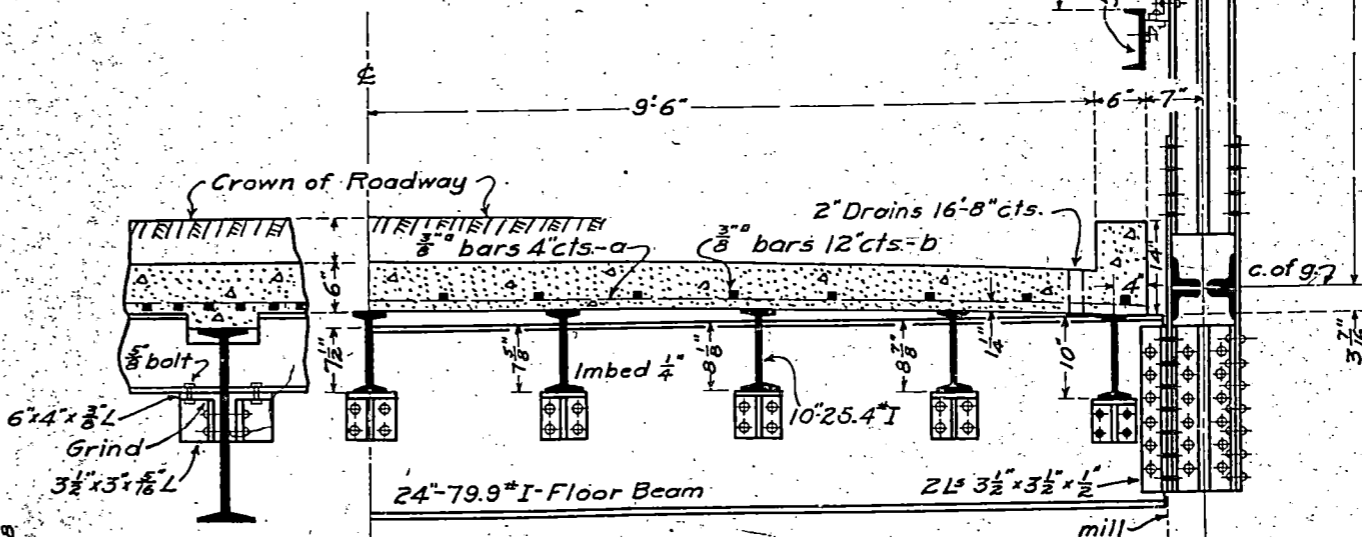
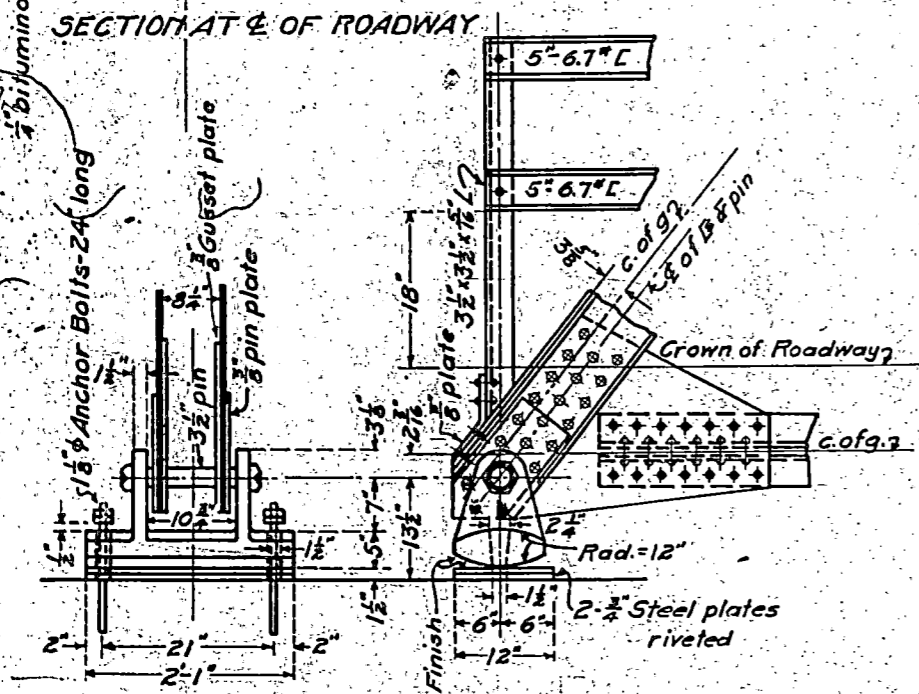
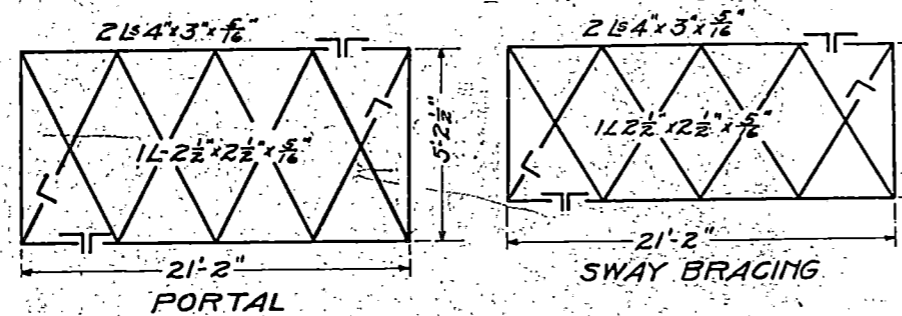
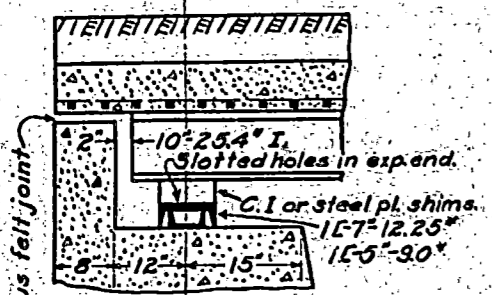
STA. 704+60  
STATE BOND ISSUE ROUTE NO. 1  
SECTION 29-B SALINE CO.

STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS



NOTE

Parapet walls are to be built of Class X concrete by superstructure contractor before floor is placed. Floor is to be constructed of Class X concrete; proportions 1:2:3 1/2. Provide cast iron or steel plate shims between joists and joist spacers to provide proper crown. Rivets 3/4" diameter except in 2 1/2" legs of angles. Maximum pitch for 3/4" rivets is 5" and for 5/8" rivets is 4 1/2". Move outside stringers ± 5" to clear shoe. Class X concrete in parapet walls = Cu. Yds. Top Laterals - 1L 2 1/2 x 2 1/2 x 7/8.



BILL OF MATERIAL FOR FLOOR

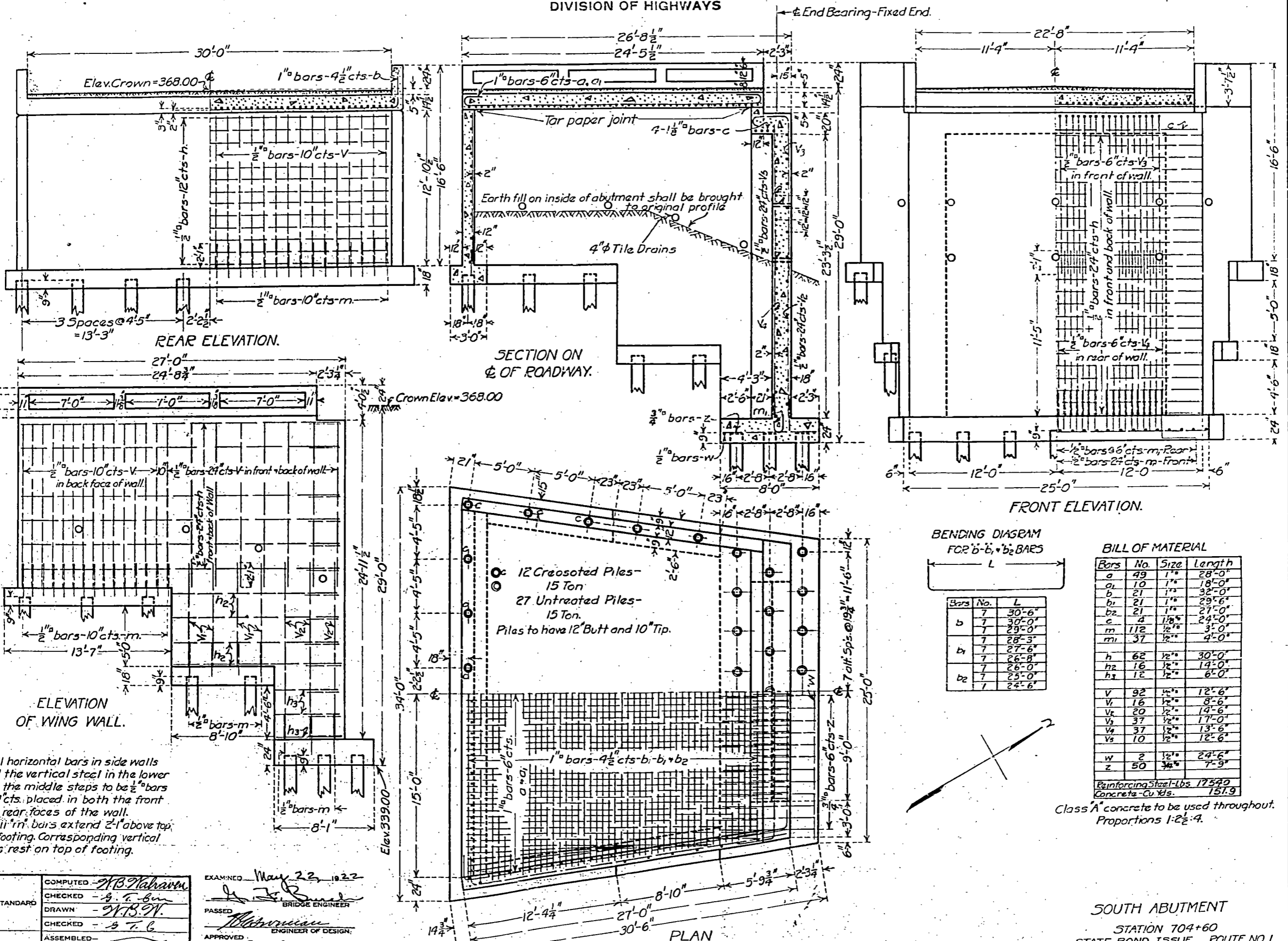
Bars	No.	Size	Length
a	310	3/8"	19'-9"
b	100	3/8"	22'-3"
Steel-Lbs.			3990
Concrete-Cu.Yds.			40.8

COMPUTED	Waldreider	EXAMINED	
CHECKED	H.B. Mahan	PASSED	BRIDGE ENGINEER
DRAWN	W. G. Tate	APPROVED	ENGINEER OF DESIGN
CHECKED	S. N. Som		
ASSEMBLED			
CHECKED			CHIEF HIGHWAY ENGINEER



STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS

ROAD ISSUE COUNTY SEC. TOTAL SHEET SHEET No. 7  
1 SALINE 29 38 33 5 Sheets.

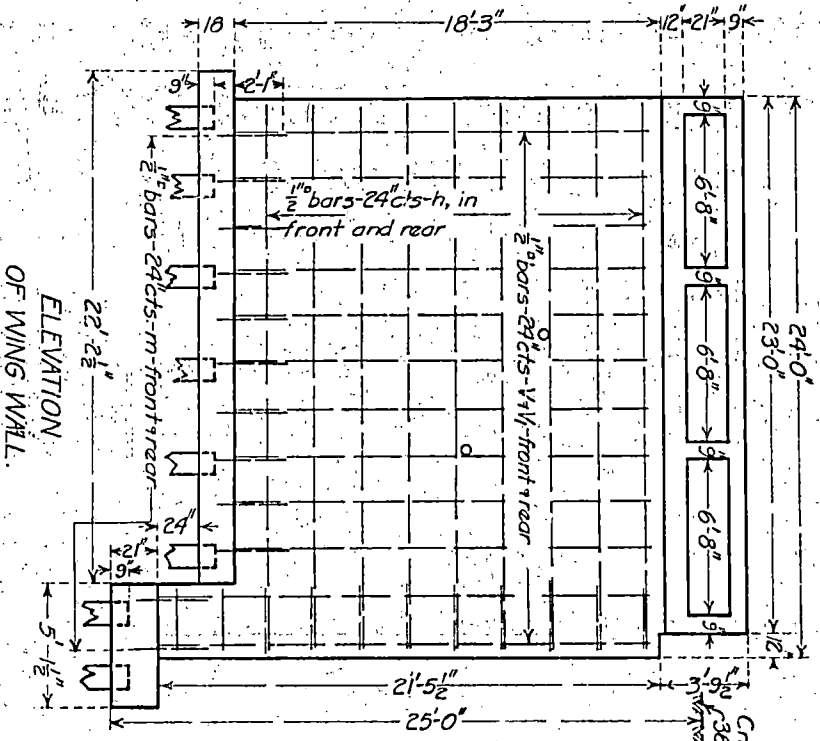
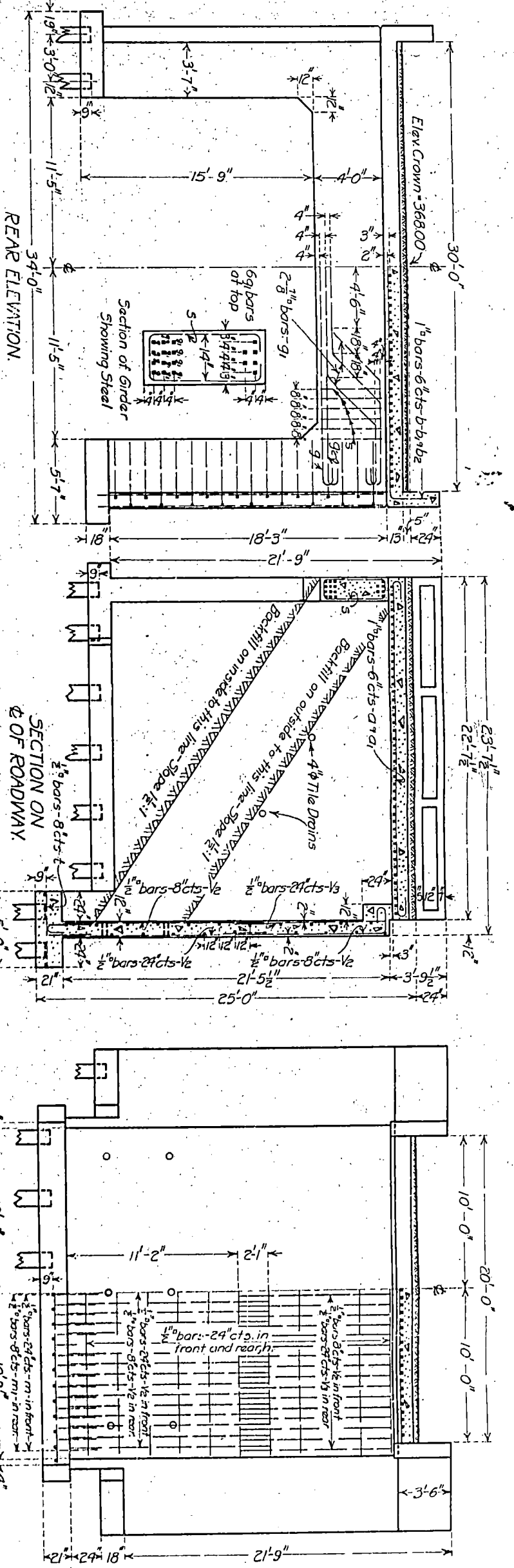


All horizontal bars in side walls and the vertical steel in the lower and the middle steps to be 1/2" bars @ 24" cts. placed in both the front and rear faces of the wall.  
All m. bars extend 2' above top of footing. Corresponding vertical bars rest on top of footing.

STANDARD	COMPUTED	EXAMINED
CHECKED	H.B. Narayan	May 22, 1922
DRAWN	S.T.C.	
CHECKED	H.B. Narayan	
ASSEMBLED	S.T.C.	
CHECKED		

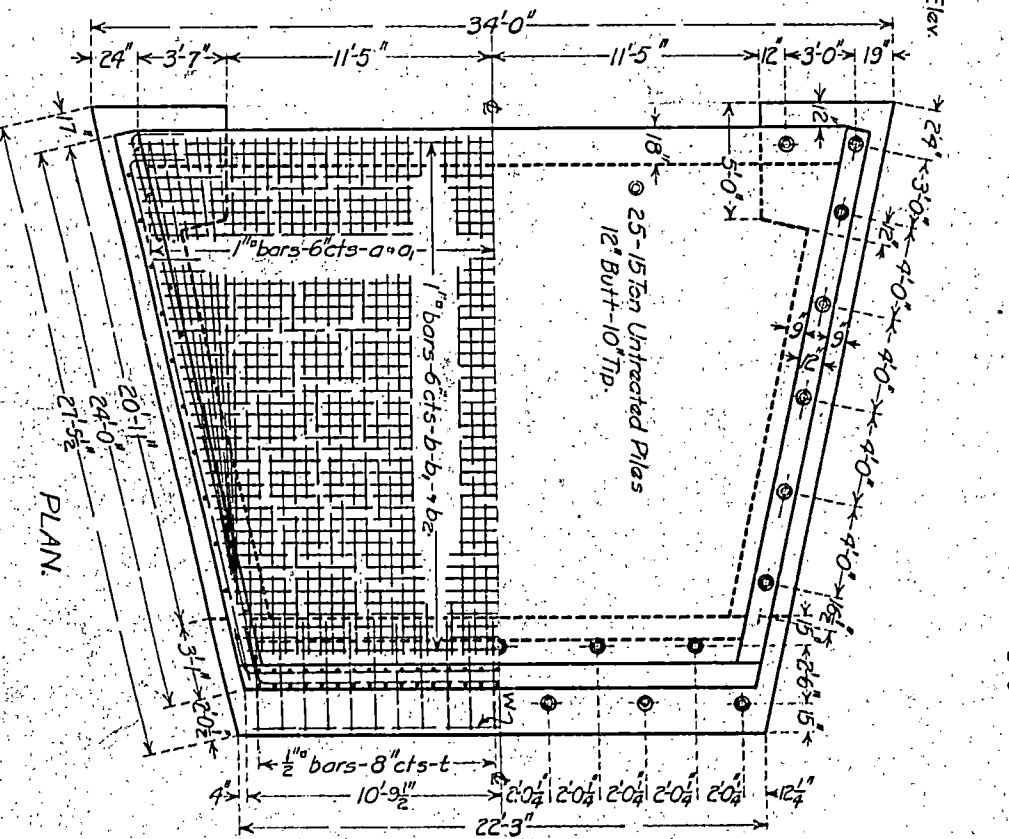
BRIDGE ENGINEER  
ENGINEER OF DESIGN  
APPROVED

SOUTH ABUTMENT  
STATION 704+60  
STATE BOND ISSUE ROUTE NO. 1  
SEC 29-B SALINE CO.



COMPUTED - *M.B. Galka*  
CHECKED - *J.P. Galka*  
DRAWN - *J.P. Galka*  
CHECKED - *J.P. Galka*  
ASSEMBLED - *J.P. Galka*  
SPECIAL CHECKED -

EXAMINED - *May 23, 1922*  
PASSED - *J.P. Galka*  
ENGINEER OF DESIGN  
APPROVED - *J.P. Galka*  
CHIEF HIGHWAY ENGINEER



BENDING DIAGRAM FOR b-b & b2 BARS

Bar No.	L
b	30'-6"
b	28'-6"
b	27'-3"
b	26'-3"
b	25'-0"
b2	23'-0"
b2	21'-6"

BILL OF MATERIAL.

Bars	No.	Size	Length
a	43	1 1/2"	26'-0"
b	8	1 1/2"	32'-0"
b	15	1 1/2"	29'-6"
b	15	1 1/2"	27'-0"
b	2	1 1/2"	31'-0"
b	6	1 1/2"	34'-0"
b	8	1 1/2"	31'-0"
b	12	1 1/2"	31'-9"
h	38	1/2"	27'-0"
v	40	1/2"	18'-0"
v	8	1/2"	21'-6"
v	75	1/2"	13'-3"
v	11	1/2"	10'-0"
m	59	1/2"	3'-0"
m	32	1/2"	4'-3"
w	2	1/2"	22'-0"
w	33	1/2"	4'-9"

Reinforcing Steel - Lbs. 13680  
Concrete Cu. Yds. 106.9

Class A concrete to be used throughout.  
Proportions 1:2 1/2:4

NORTH ABUTMENT.  
STATION 704+60  
STATE BOND ISSUE ROUTE NO. 1.  
SEC. 29-B SALINE CO.