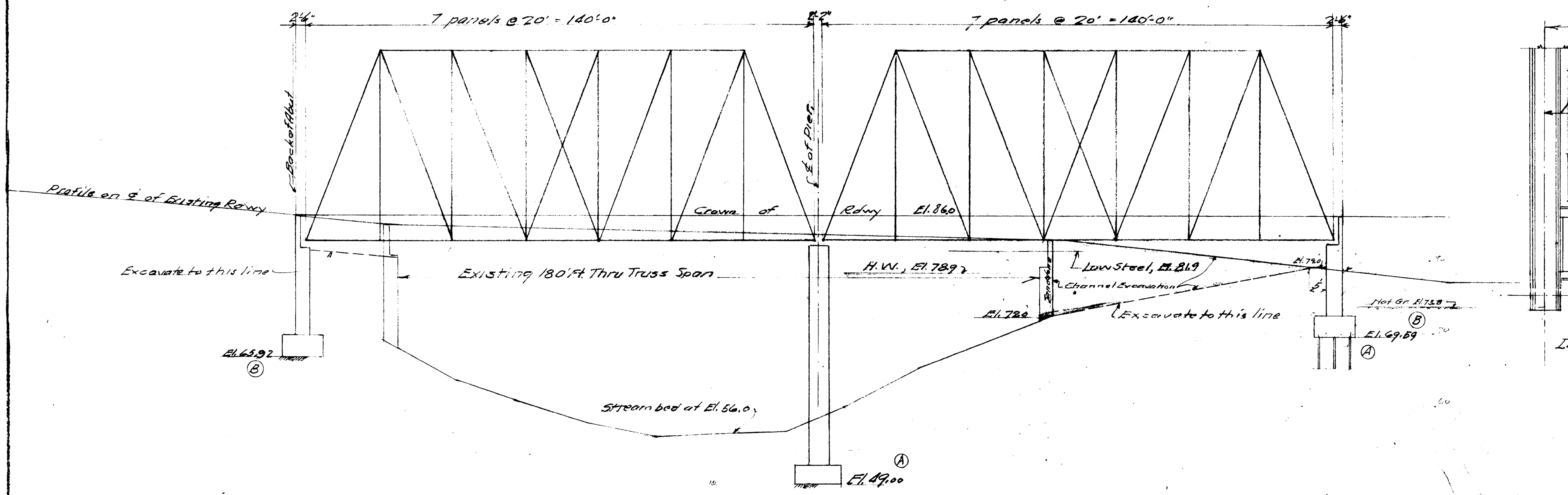
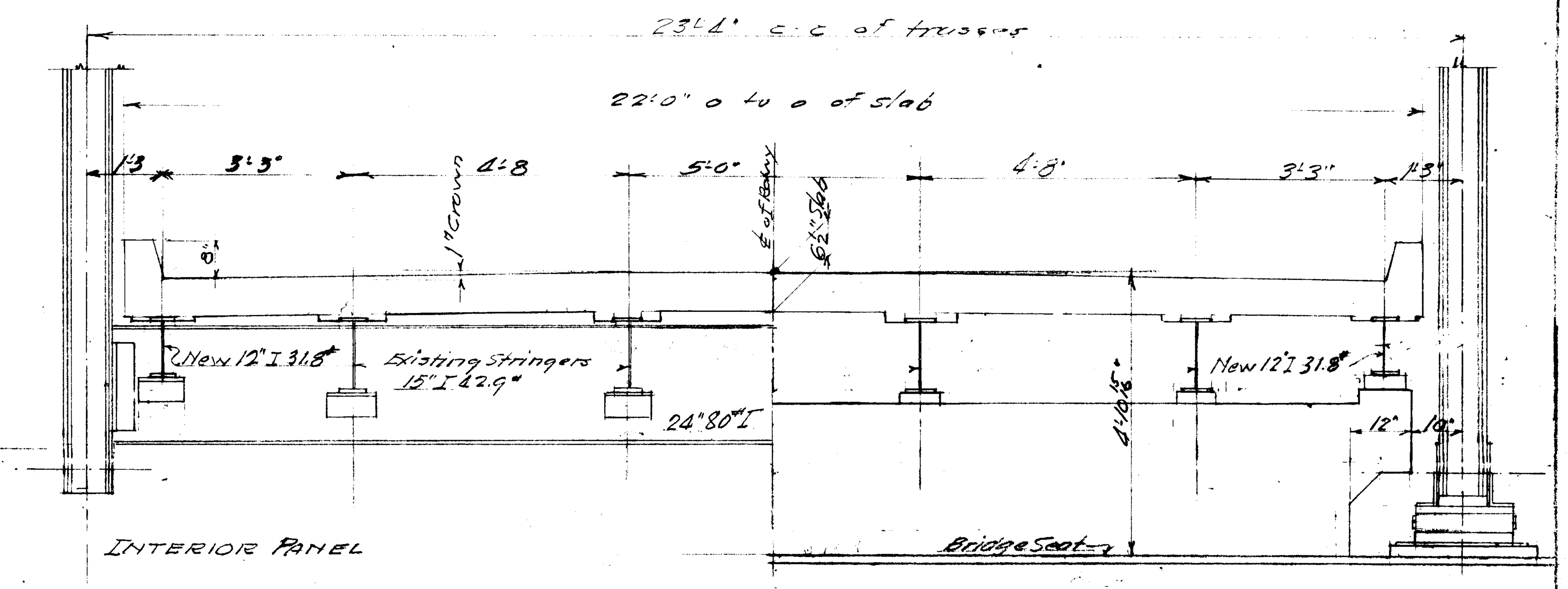
SHEET No 1
4 SHEETS

Bench Marks:
No. 1: RR spike in power line pole 23' Rt. Sta 4+11 El. 100.0
No. 2: RR spike in 24" locust tree 50' Lt Sta 9+32 El. 89.08



SOUTH ELEVATION
SCALE: Horiz. 1" = 20 Ft. Vert. 1" = 10 Ft.



CROSS SECTION OF FLOOR
SCALE: ½ inch = 1 Ft.

ABUT. END PANEL

BASIS OF DESIGN:
Loading and Distribution: D.L. – Computed; L.L. – H-15. Use AASHO distribution

fs – (Structural Steel)	18000# psi
fs – (Reinforcement Steel – Intermediate Grade)	20000# psi
Reinf. Steel Bond; Unanchored Bars	150# psi
Anchored Bars	225# psi
fc – Compression in extreme Fiber: Stress in Flexure	
Substructure	800# psi
Super Structure	1200# psi
Neg. Mom. of Deck Slab	1350# psi
fc Bearing, Bridge seat under Rollers	1000# psi
" " Fixed Plate	700# psi
fc Shear, no web Reinf. Bars unanchored	60# psi
no web Reinf. Bars anchored	90# psi
Earth Pressure: Equivalent Fluid Pressure	40# per cu. ft.

Surcharge: Three Feet above crown of Rdwy.

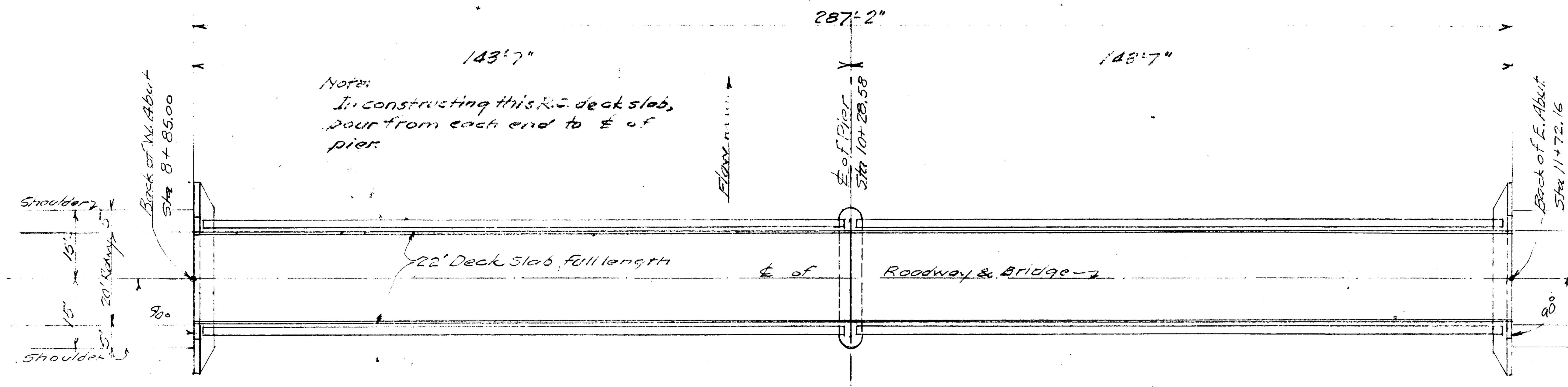
┼ LIST OF QUANTITIES

Item	Unit	Number of Units
Class X Concrete Ⓐ	Cu Yd	ϕ 418.6
Reinforcement Bars Ⓐ	Lbs	11540
Furnishing Treated Piles		
Θ up to 20 ft. long. Ⓐ	Lin Ft	726
Driving piles up to 20 ft long	Lin Ft.	726
Channel Excavation	Cu Yd	2500
Sandstone Masonry Removal	Cu Yd	46
Removal of Existing 180 Ft		
Thru Truss Span (90 tons ±)	Lump Sum	
Test Piles	Each	2

┼ Quantities given are for the substructure only.

ϕ Fine aggregate for Class X concrete will be furnished at the bridge site free of charge.

Θ 33 - 22 Ft. treated piles required. Ⓐ



PLAN

GENERAL NOTES:

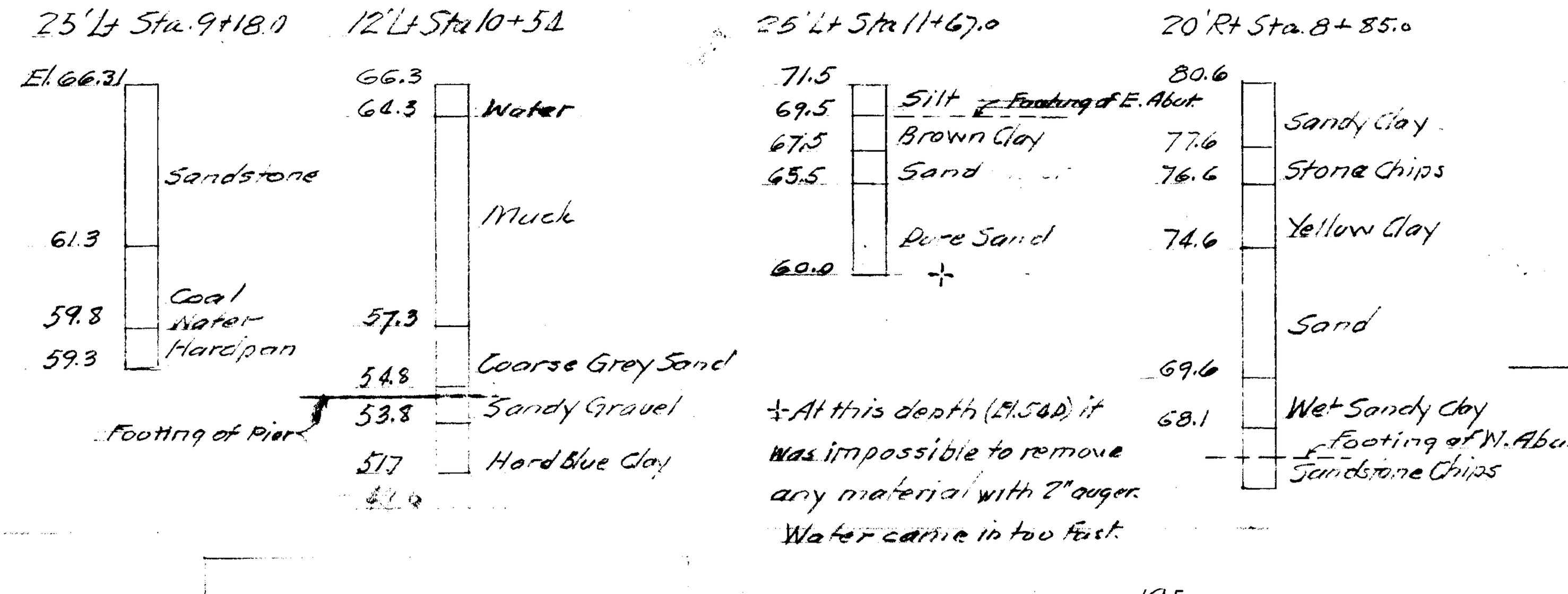
The two 140 Ft. Thru Truss Spans are salvaged from a highway bridge over Mill Creek at Milan, Ill.

The existing 180 Ft. Thru Truss span with timber plank deck is to be removed and stock piled to the East of Sta 12+00. and to remain the property of Clear Lake township. Ⓐ

State of Illinois "Standard Specifications" dated July 1, 1942 with supplemental Special Provisions shall govern for all work.

Materials from channel excavation and masonry removal shall be stock piled on the embankment East of Sta. 12+00

LOG OF TEST BORINGS

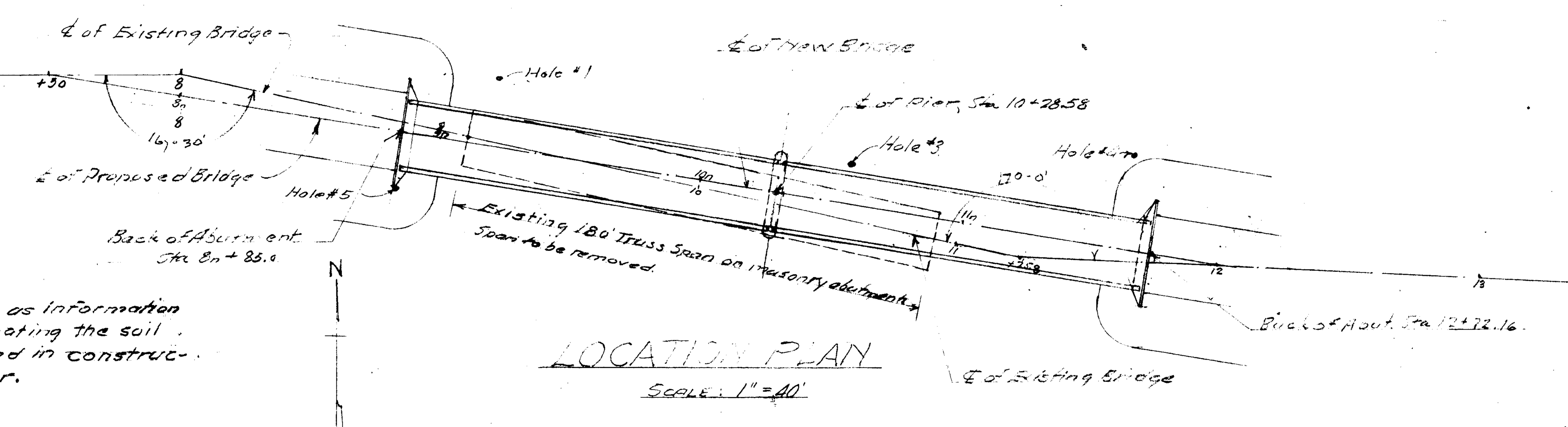


195

Designed. G. E. Simmons	
Checked. G. E. S.	
Drawn. G. E. S.	
Checked. G.M.	

Examined — Bridge Engineer
Passed — Engineer of Design
Approved — Chief Highway Engineer

NOTE:
The Log of Test Borings is shown as information only, for use of the Bidder in estimating the soil conditions which may be encountered in construction of the abutments and pier.



LOCATION PLAN
SCALE: 1" = 40'

Live Load - H-15
Ⓐ Revision 8-15-50
Ⓑ Rev. 9-19-50

GENERAL PLAN
SANGAMON RIVER BRIDGE
CLEAR LAKE TWP.
PROJECT No 5 STA 10+28.58
SANGAMON COUNTY

Bench Mark Loc. Nov. ?

SHEET No 2
4 SHEETS

Bar n1w

Bars t1, t2, t3, t4w & h8w

Bar h7w

-SECTION-A-A- -END ELEVATION-

ANCHOR BOLT, A1
4 Required

BILL OF MATERIAL

MARK	No. REQ.	SIZE	LENGTH	SHAPE
t1w	32	¾"Ø	12'-9	⊂⊃
t2w	4	¾"Ø	11'-6	⊂⊃
t3w	4	¾"Ø	10'-6	⊂⊃
t4w	2	¾"Ø	10'-0	⊂⊃
t5w	19	½"Ø	3'-9"	—
t6w	2	½"Ø	3'-0	—
t7w	2	½"Ø	1'-9"	—
d1	12	½"Ø	0'-9"	—
Z1w	15	⅝"Ø	10'-6	—
Z2w	2	⅝"Ø	10'-3	—
Z3w	2	⅝"Ø	9'-0	—
Z4w	2	⅝"Ø	7'-9"	—
Z5w	15	½"Ø	2'-3	—
W1w	8	½"Ø	41'-0"	—
W2w	2	½"Ø	37'-0	—
W3w	2	½"Ø	31'-0	—
A1	4	1¼"Ø	1'-3"	Anchor Bolts
V1w	22	¾"Ø	15'-0	—
V2w	6	¾"Ø	17'-3	—
V3w	4	¾"Ø	16'-3	—
V4w	4	¾"Ø	15'-3	—
V5w	4	¾"Ø	14'-3	—
V6w	21	½"Ø	12'-3	—
V7w	11	½"Ø	2'-9"	—
h1w	7	½"Ø	40'-0	—
h2w	1	½"Ø	30'-0	—
h3w	2	½"Ø	3'-6	—
h4w	12	½"Ø	30'-0	—
h5w	12	⅝"Ø	32'-0"	—
h6w	21	½"Ø	36'-3"	—
h7w	24	½"Ø	9'-6	—
h8w	2	⅝"Ø	23'-3	⊂⊃
h9w	2	½"Ø	19'-6	—
n1w	40	¾"Ø	5'-0"	—
Class X Concrete			Cu.Yds.	123.7
Reinforcement Bars			Lbs.	3820

NOTE:
Use 1½" clearance to all Reinf. bars unless otherwise shown.
See "General Notes" on sheet No 1
Include cost of anchor bolts, A1, in the bid price for Class X concrete.

-DETAIL OF BRIDGE SEAT-

SECTION B-B

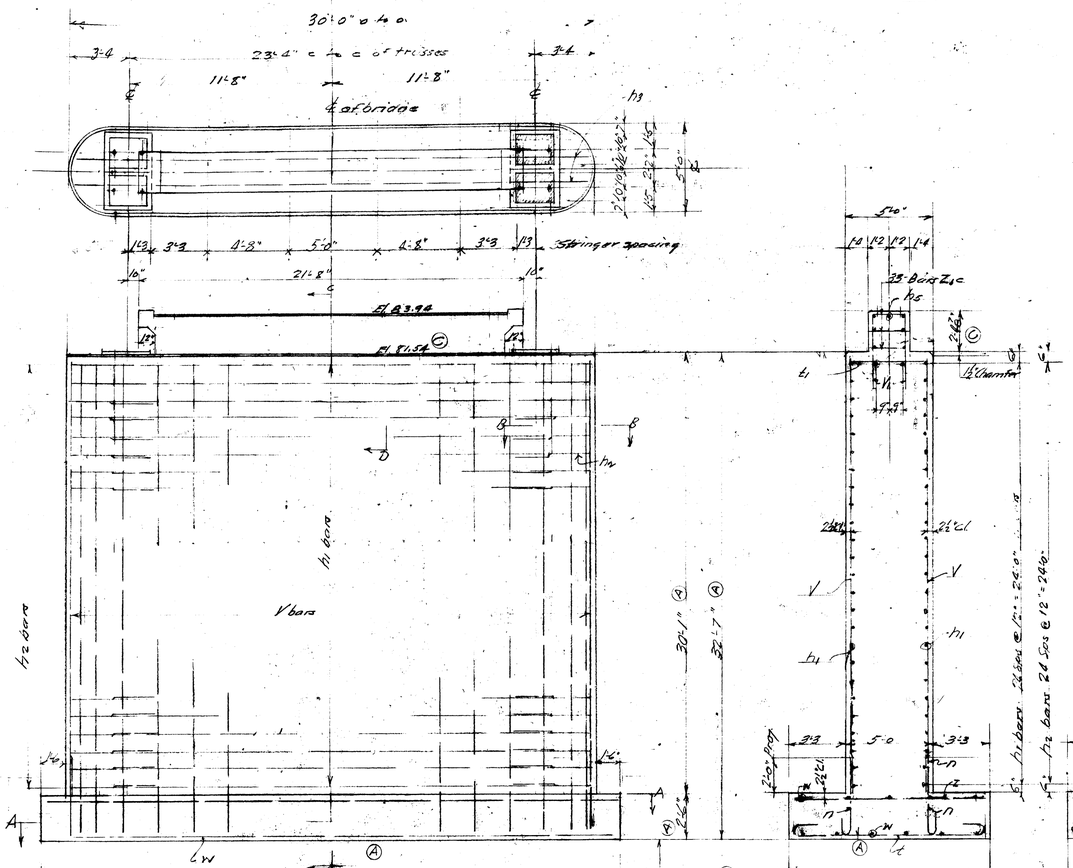
Designed G.E. Simmons
Checked L. J. Miller
Drawn G.E.S. + L.J.M.
Checked G.E.S.

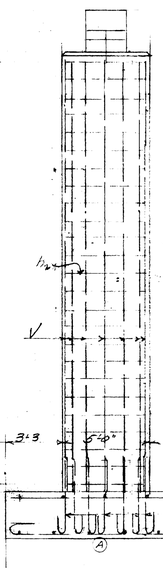
195
Examined
Passed
Approved

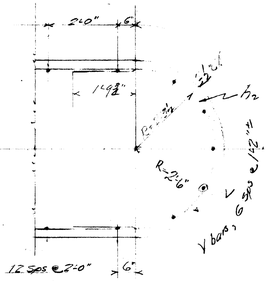
Ⓐ Rev. 8-14-50, GES
Rev. Stringer Block 8-3-50 GES
Ⓑ Rev. 9-19-50, GES

WEST ABUTMENT
SANGAMON RIVER BRIDGE
CLEAR LAKE TWP.
PROJECT No. 5 STA. 10+78.58
SANGAMON COUNTY

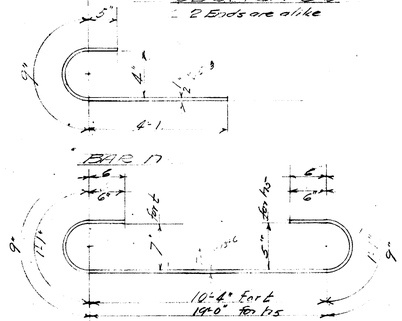
SHEET No. 3.
4 SHEETS

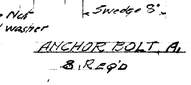






SECTION B-B
2 Ends are alike





BILL OF MATERIAL

Mark	Number Required	Size	Length	Shape	
t1	(A) 60	½"ø	25'-0"		
t2	(A) 60	½"ø	10'-9"		
t3	2	½"ø	29'-0"		
t4	5	½"ø	18'-6"		
t5	3	⅝"ø	21'-6		
t6	4	½"ø	19'-3		
n	36	⅝"ø	5'-3		
t	44	⅞"ø	13'-6"		
t1	23	½"ø	4'-9"		
t8	2	½"ø	4'-6		
t9	2	½"ø	3'-9		
d	20	½"ø	0'-9"		
V	36	⅝"ø	(A) 29'-9"		
V1	22	½"ø	3'-9"		
W	11	½"ø	32'-6"		
Z	33	5/8"ø	11'-0"		
Z1	33	½"ø	2'-0		
A1	8	1¼"ø	1'-3"	Anchor Bolts	

Class X Concrete, 291.2 cu yds (A) (B)
Reinforcement Bars, 5010 lbs (B)
(A)

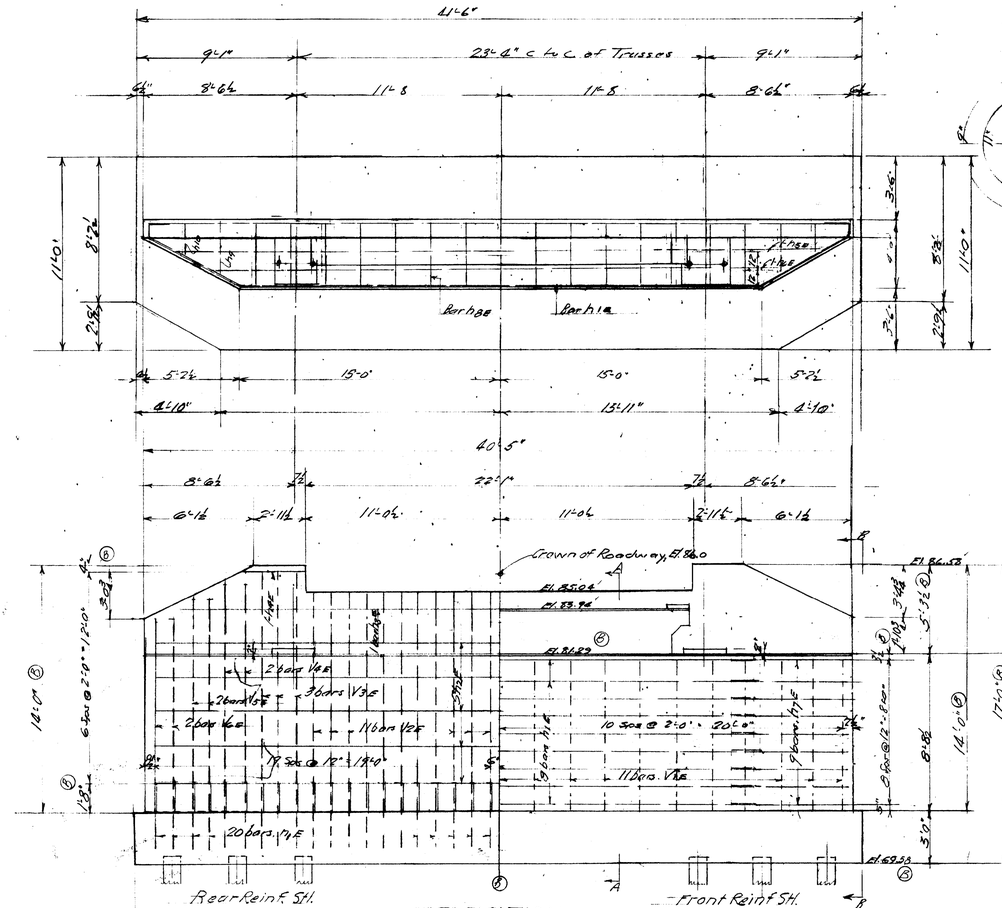
+ Include cost of anchor bolts, A1, in bid price for Class X concrete.

See "General Notes" on sheet No. 1

DESIGNED		195
CHECKED	L. J. M.	Examined BRIDGE ENGINEER
DRAWN		PASSED ENGINEER OF DESIGN
CHECKED	L. J. M.	APPROVED CHIEF, HIGHWAY ENGINEER

CENTER PIER
SANGAMON RIVER BRIDGE
CLEAR LAKE TWP.
PROJECT No. 5 STA. 10+28.58
SANGAMON COUNTY

(B) Rev. 9-11-50 GES
(A) Rev. 8-15-50 GES
Rev. Stringer block 8-9-50 GES
(C) Rev. 9-19-50, GES



Sheet No 4

4 Sheets

ELEVATION
Symmetrical abt. ℄

SECTION A-A

ELEVATION B-B

PLAN OF FOOTING

195

ANCHOR BOLT SETTING PLAN

ANCHOR BOLT, A1
4 Required

BILL OF MATERIAL

Mark	Number Req'd	Size	Length	Shape
t1E	32	¾"⌀	12'-9"	⊏⊐
t2E	4	¾"⌀	11'-3"	⊏⊐
t3E	4	¾"⌀	10'-3"	⊏⊐
t4E	2	¾"⌀	9'-6"	⊏⊐
W1E	8	½"⌀	41'-0	—
W2E	2	½"⌀	39'-0	—
W3E	2	½"⌀	16'-0	—
Z1E	16	½"⌀	10'-6	—
Z2E	2	½"⌀	10'-0	—
Z3E	2	½"⌀	9'-6	—
Z4E	2	½"⌀	8'-0	—
Z5E	15	½"⌀	2'-3	—
h1E	40	⅝"⌀	4'-9	—⊐
d1	12	½"⌀	0'-9"	—
V2E	22	⅝"⌀	12'-3	—
V3E	6	⅝"⌀	13'-9	—
V4E	4	⅝"⌀	13'-0	—
V5E	4	⅝"⌀	12'-0	—
V6E	4	⅝"⌀	11'-0	—
V1E	21	½"⌀	8'-6	—
V7E	11	½"⌀	2'-9	
h1E	9	½"⌀	30'-0"	—
h2E	5	½"⌀	60'-0	—
h3E	1	½"⌀	36'-0"	—
h4E	2	½"⌀	3'-0	—
h5E	1	⅝"⌀	37'-0	—
h6E	1	⅝"⌀	33'-0"	—
h7E	18	½"⌀	9'-6"	⟋
h8E	15	½"⌀	3'-9	—
h9E	2	½"⌀	3'-0	—
h10E	2	½"⌀	1'-9	—
h11E	2	⅝"⌀	23'-9	⊏⊐
h12E	2	½"⌀	19'-6"	—
A1	4	1¼	1'-3	Anchor Bolts
Class X Concrete			93.7	Cu Yds
Reinforcement Bars			2210	Lbs
Treated Timber Piles, 33 @ 22' Ⓐ			726	Lin Ft.

NOTE:
See General Notes on Sheet No. 1

Use 1½" clearance to all Reinf. bars unless otherwise shown.

Include cost of anchor bolts, A1 in the bid price for Class X Concrete.

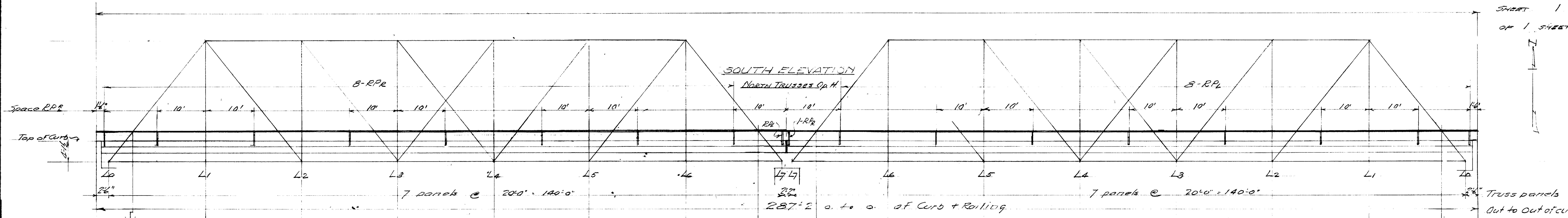
DESIGNED G.E. Simmons
CHECKED L.J. Miller
DRAWN G.E.S. + L.J.M.
CHECKED G.E.S.

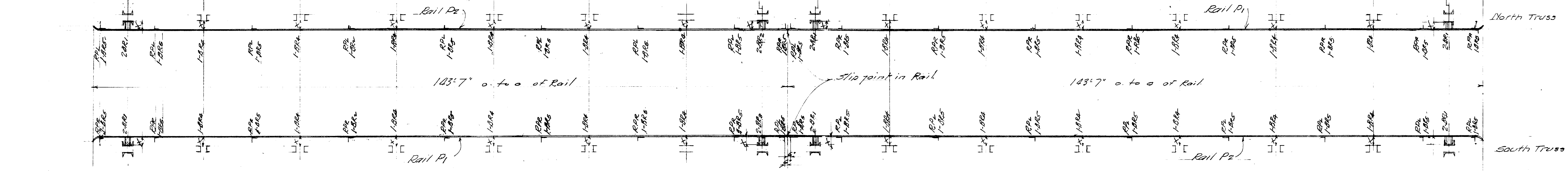
EXAMINED
BRIDGE ENGINEER
PASSED
ENGINEER OF DESIGN
APPROVED
CHIEF HIGHWAY ENGINEER

Ⓐ Rev. 8-14-50 GES
Rev. Stringer Block 8-5-50 GES
Ⓑ Rev. 9-19-50 GES

EAST ABUTMENT
SANGAMON RIVER BRIDGE
CLEAR LAKE TWP.
PROJECT No. 5 STA. 10+28.58
SANGAMON COUNTY

Sheet 1 of 1 Sheets



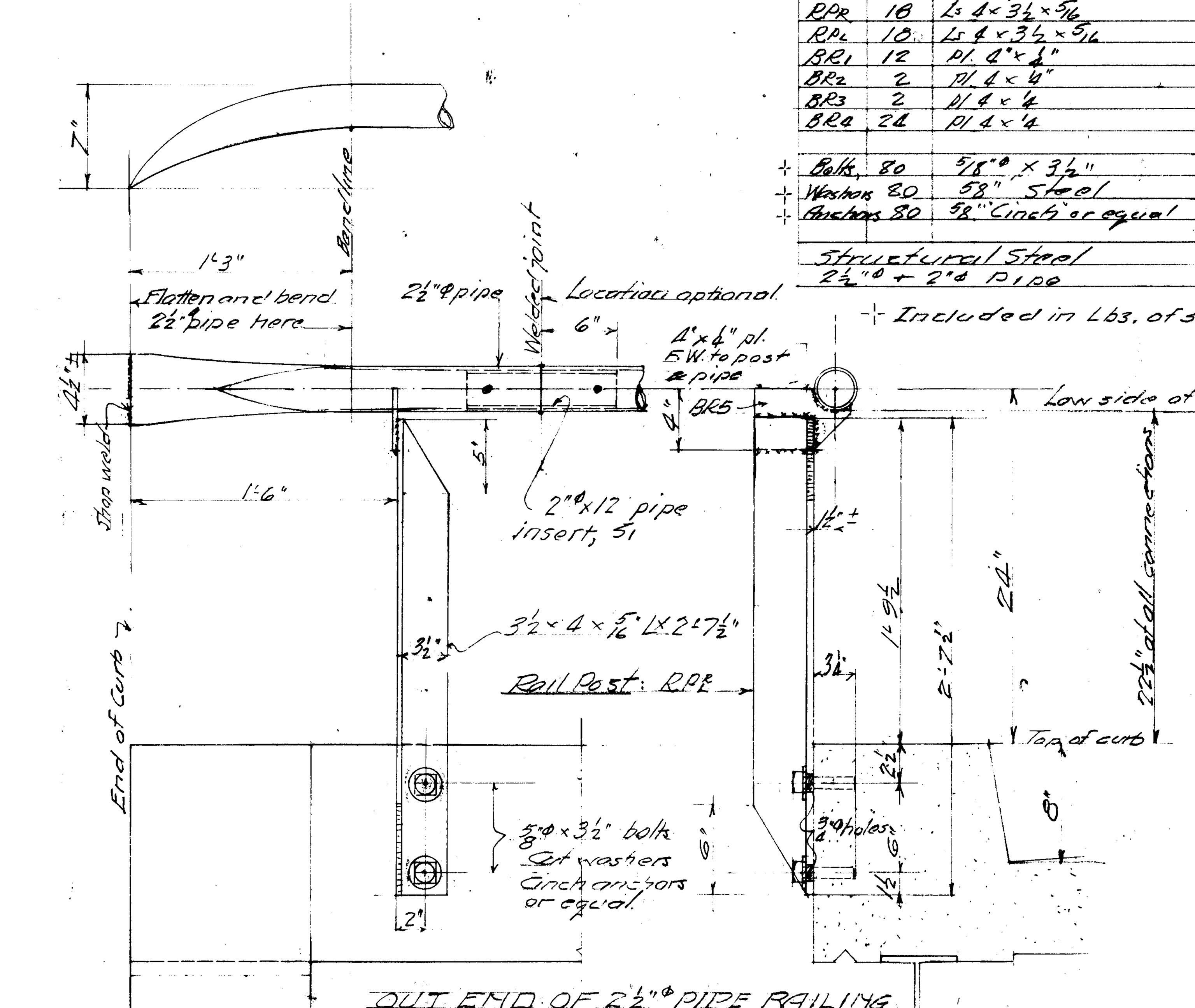


ERECTION PLAN

BILL OF MATERIAL

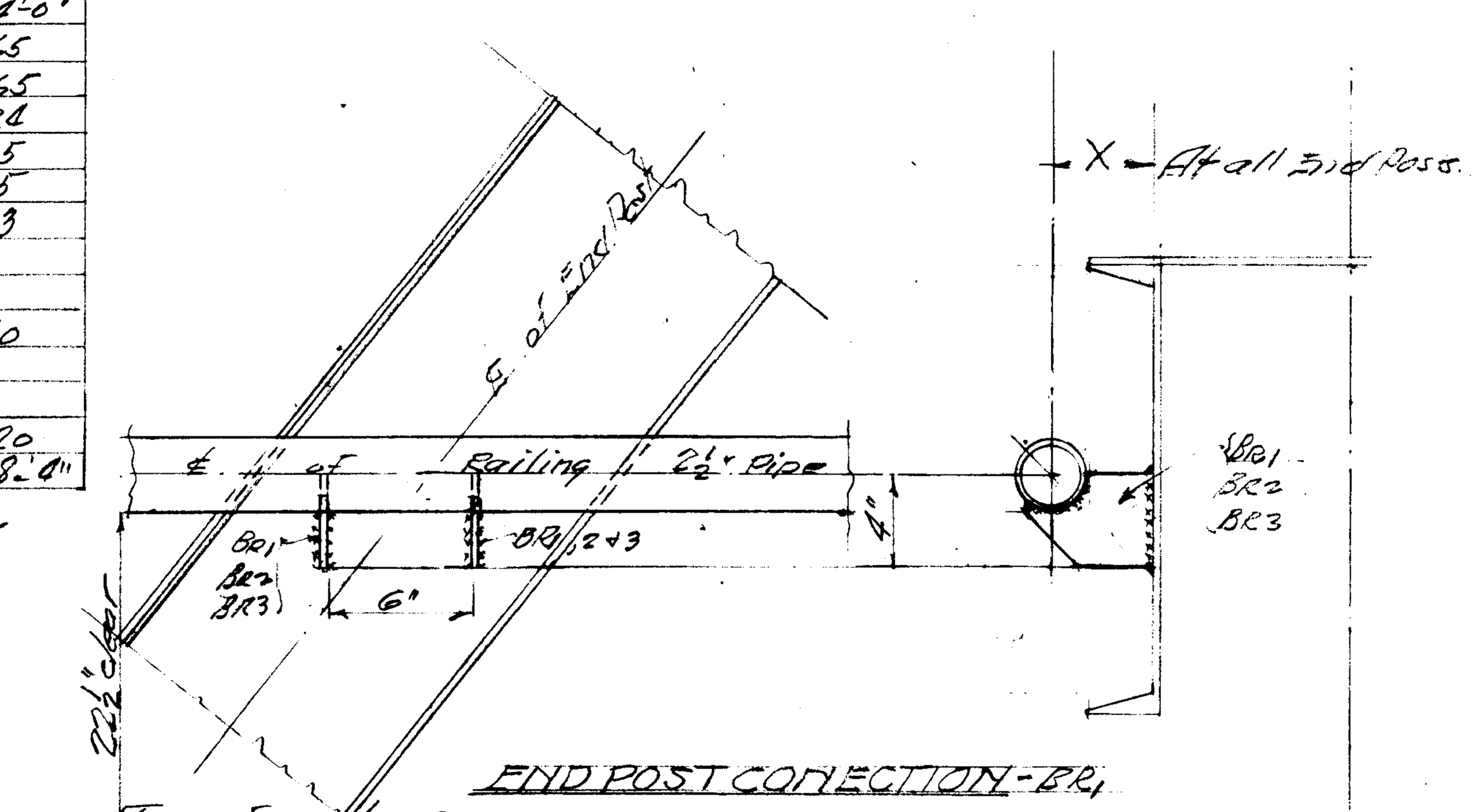
Mark	No. of Pieces	Description	Length	Unit	Total Units
P1	2	2½"Ø Pipe	143'-7"	Lin. Ft.	287'-2"
P2	2	2½"Ø Pipe + Joints, etc	143'-7"	Lin Ft.	287'-2"
S1	34	2"Ø pipe	1'-0"	Lin Ft.	34'-0"
RPR	18	Ls 4 × 3½ × 5/16	2'-7½	Lbs.	365
RPL	18	Ls 4 × 3½ × 5/16	2'-7½	Lbs	365
BR1	12	Pl. 4" × ¼"	0'-5½	Lbs	24
BR2	2	Pl. 4 × ¼"	0'-5⅞	Lbs.	5
BR3	2	Pl 4 × ¼	0'-6⅝	Lbs	5
BR4	24	Pl 4 × ¼	0'-8½"	Lbs	73
⊹ Bolts	80	⅝"Ø × 3½"		Lbs	80
⊹ Washers	80	⅝" Steel		Lbs	
⊹ Anchors	80	⅝" "Cinch" or equal		Lbs	
Structural Steel				Lbs	920
2½"Ø + 2"Ø Pipe				Lin Ft.	608'-0"

⊹ Included in Lbs. of structural steel.

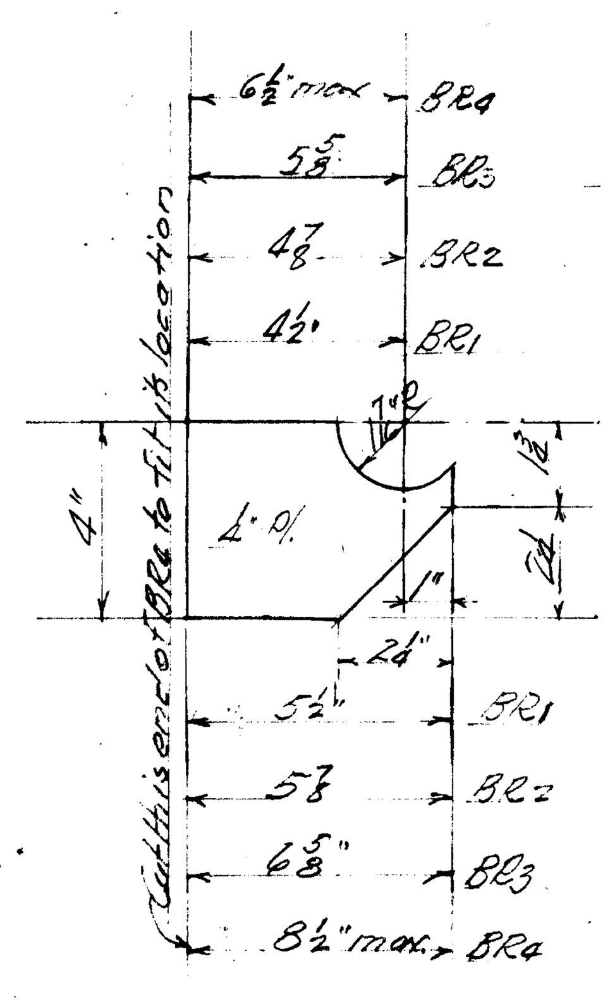


OUT END OF 2½"Ø PIPE RAILING

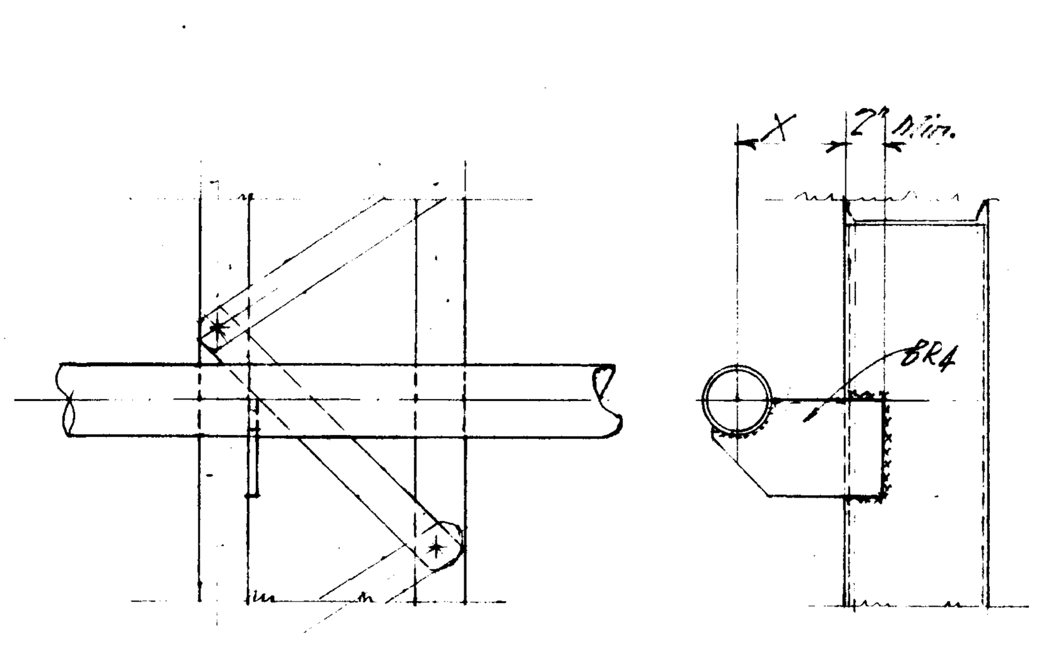
4 Ends like this



END POST CONNECTION - BR1

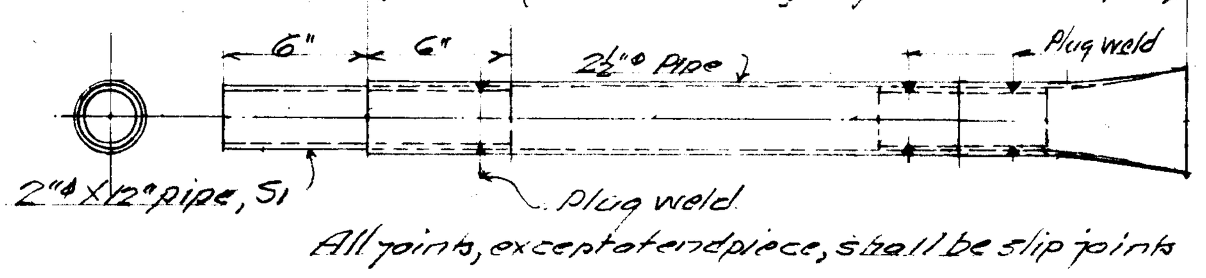


BRACKETS



L1, L2, L3, L4, L5 & L6 CONNECTION

Shown For N. Truss - S. Truss Op. Hd.



RAIL P2

Rail P1 same as P2 except S1 is ommitted.

DIMENSION "X" IN INCHES

	West Span								East Span							
	End Post	L1	L2	L3	L4	L5	L6	End Post	End Post	L6	L5	L4	L3	L2	L1	End Post
South Trusses	BR1 4½"	BR4 6½	BR4 5¾	BR4 6¼	BR4 6½	BR4 5¼	BR4 6½	BR2 4⅞	BR1 4½	BR4 6½	BR4 5¾	BR4 6	BR4 5⅞	BR4 5¼	BR4 5¾	BR1 4½
North Trusses	BR1 4½"	BR4 5⅞	BR4 4⅞	BR4 6⅛	BR4 5⅝	BR4 6	BR4 6½	BR3 5⅝	BR1 4½	BR4 5⅝	BR4 5⅛	BR4 6⅛	BR4 5¾	BR4 5⅛	BR4 6½	BR1 4½

Note to Erector:

"X" Dimensions as shown are derived from field measurements taken at 12" above top of curb. Slight changes may be encountered at 24" above top of curd and the brackets shall be cut in the field to fit the new measurements.

Welds: Field welds shall be 3/16" c. f. an welds & Plug welds shall be 3/16" diameter.

Pipe: Rail shall be made from 2½"Ø salvaged pipe. It may be composed of random lengths of pipe spliced with inserted 12" lengths of 2"Ø galvanized pipe - See detail on this sheet.
Rail shall extend in a straight line throughout the entire length of each span.

Rail Posts: All rail posts shall be set in a vertical position.

Specifications:

State of Illinois Standard Specifications for Road and Bridge Construction adapted July 1, 1942, plus Special Provisions shall govern.

Material: Structural steel specifications ASTM. Designated A 7 plus 0.2% copper, unless otherwise noted
Bolts: ⅝" diam., Open Holes ¾" diam., Reaming, none.
Inspection: Before painting, by Sangamon County Highway Department.
Painting: Shop, one coat of red lead paint.
Field, two coats of aluminum paint.
All paint shall be furnished and applied by the contractor.

Method of Payment: Railing shall be paid for as linear feet of handrail and shall include all pipe, pipe ends, rail posts, rail brackets, bolts, washers and anchors, and all welding required for completion of the handrails as shown on the plans.

All bolts nuts and washers shall be galvanized.

DESIGNED G. Simmons	Feb 21 1951
CHECKED	EXAMINED — BRIDGE ENGINEER
DRAWN GWS	PASSED — ENGINEER OF DESIGN
CHECKED	APPROVED — CHIEF HIGHWAY ENGINEER

PROJECT 5
PIPE HANDRAILS
SANGAMON RIVER BRIDGE
CLEAR LAKE TWP
SANGAMON Co.
STA 10 + 23.50