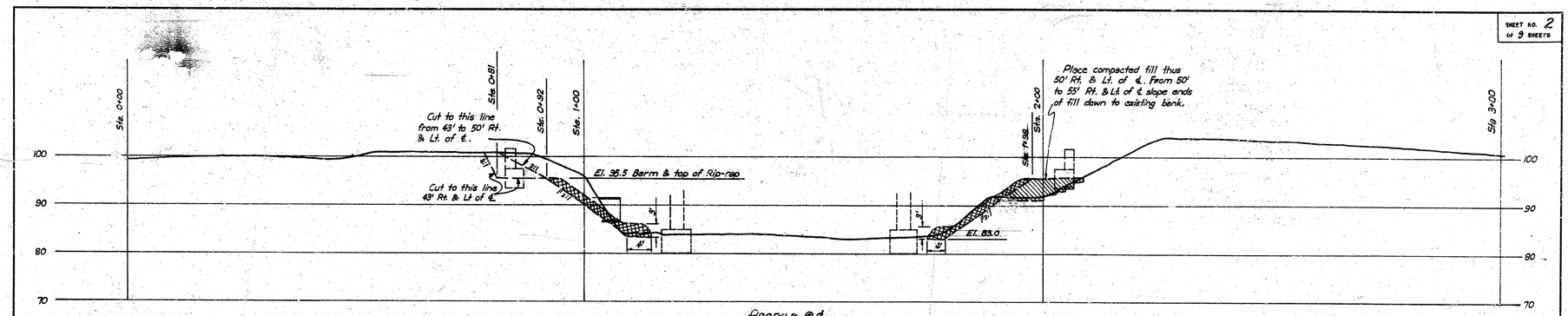
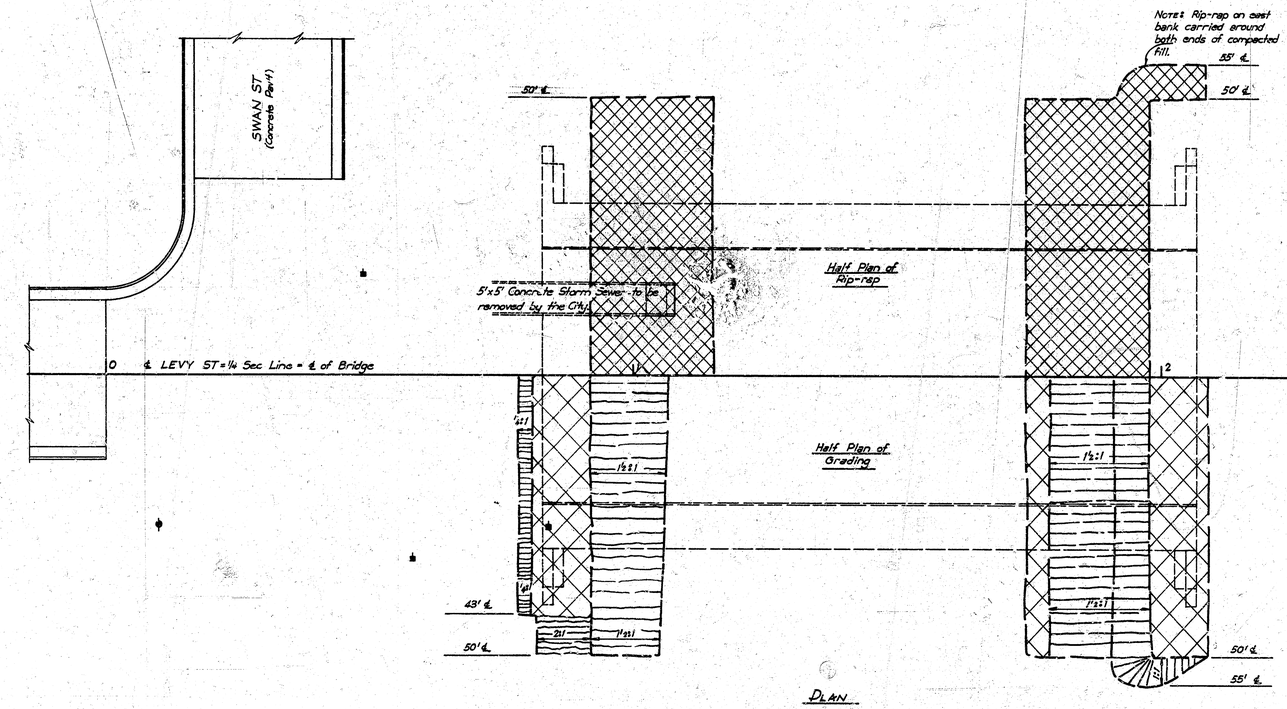


PROFILE ℄



PLAN

Note: Rip-rap on east bank carried around both ends of compacted fill.

SUMMARY OF QUANTITIES
BANK GRADING AND RIP-RAP

ITEM	QUANTITY	UNIT
Common Excavation	560	C.Y.
Compaction of Earthwork Type B	206	C.Y.
Water (for Compacting Earthwork)	1	M Gal
Placing Rip-rap	290	C.Y.

GENERAL NOTES:

BANK GRADING: Contractor shall grade banks to the lines indicated, leaving the banks clean and clear of loose dirt. Any holes dug below grade shall be backfilled and tamped or left to be filled with rip-rap. Dirt shall not be pushed down the slope or dumped in the canal, but shall be removed over the banks. The toe of west bank, where the existing slope falls below the proposed grade, is not to be filled with loose dirt, but will be filled with rip-rap. Contractor shall stockpile at the site enough excavated material, as directed by the Engineer, to provide for backfilling around abutments after completion of the bridge and shall haul away and dispose of any excess.

COMPACTED FILL: Berm on the east bank shall be built to the dimensions shown, with all dirt placed and compacted as specified for Compaction of Earthwork Type B. Grass and weeds shall be graded off the bank before fill is placed and the fill shall be "benched" into the existing bank.

RIP-RAP: Material for rip-rip, consisting of broken concrete, shall be furnished by the City, stockpiled at the site. Contractor shall dump the rip-rap directly on the slope, from skips or buckets, to a minimum of 12" maximum 18" depth, plus extra berms as shown at the waters edge. Hand placing will be required only as necessary to scatter piled up material, or fill in thin spots, and otherwise secure a reasonably even and presentable surface. Payment will be for the number of cubic yards of material actually placed on the slopes.

EXISTING STORM SEWER: The existing 5'x5' RCB Storm Sewer will be moved to outside the limits of construction by the City prior to construction of this project.

R. S. DELAMATER 513 REGISTERED ENGINEER KANSAS

LEVY STREET BRIDGE

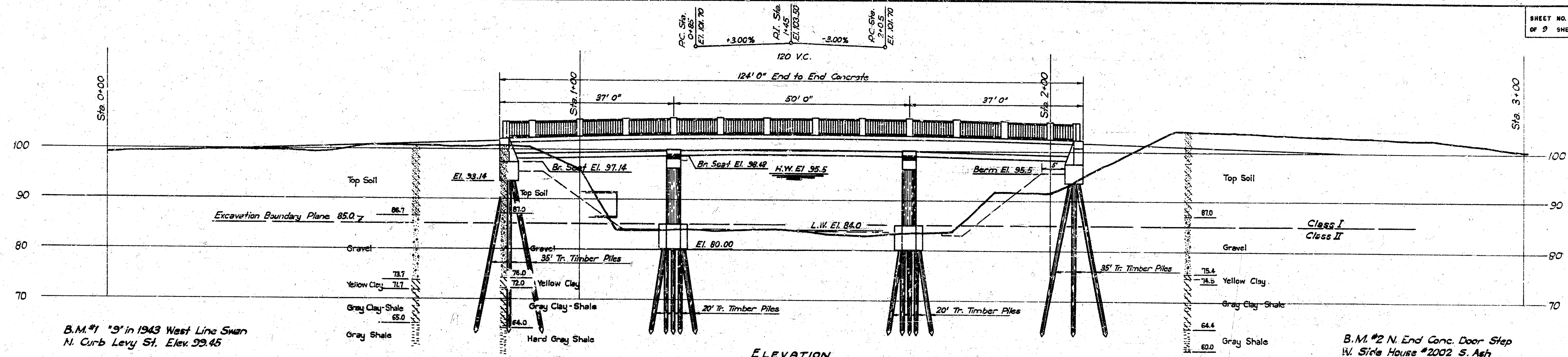
BANK GRADING & RIPRAP

WICHITA DRAINAGE CANAL

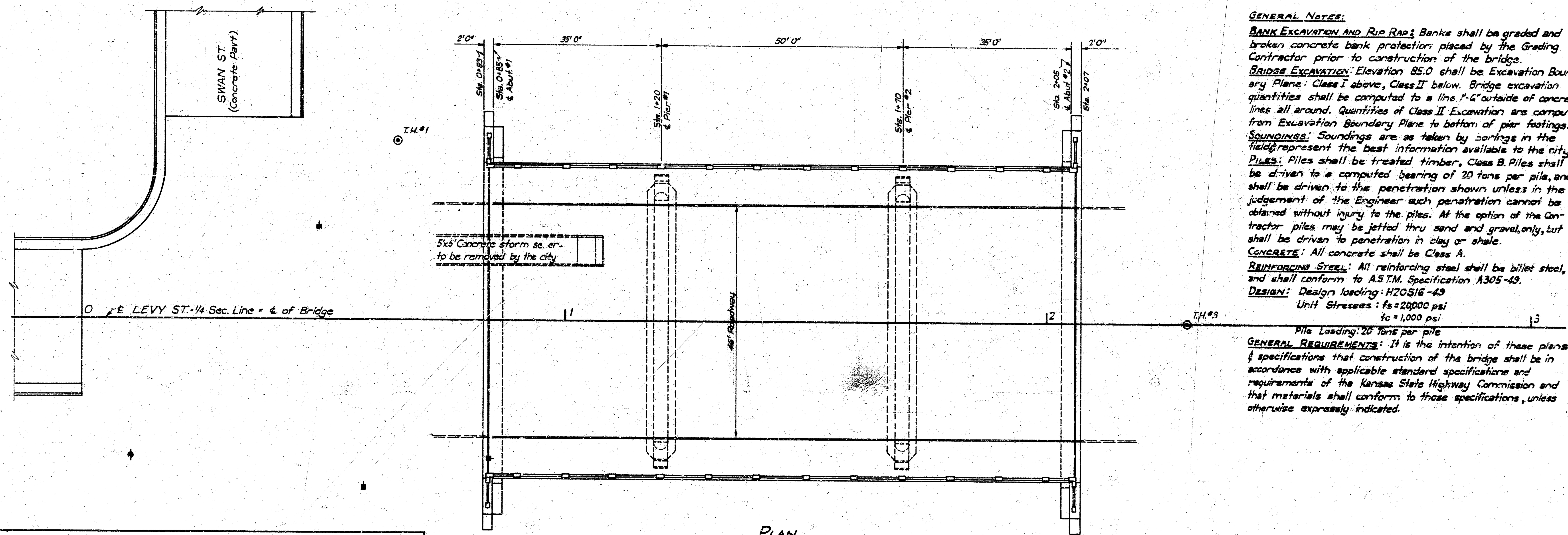
R. S. DELAMATER CONSULTING ENGINEER WICHITA, KANSAS	DATE August, 1952	
	SCALE 1"=10'-0"	DWG. NO. 7902

SURV. | PLOT. | DES. R.S.D. | DR. R.S.D. | TR. J.P.T. | CKD. JBC. | APP.

Hi Vernon Rd and W.D.C Bridge Rip-rap grading



ELEVATION



PLAN

GENERAL NOTES:

BANK EXCAVATION AND RIP RAP: Banks shall be graded and broken concrete bank protection placed by the Grading Contractor prior to construction of the bridge.

BRIDGE EXCAVATION: Elevation 85.0 shall be Excavation Boundary Plane: Class I above, Class II below. Bridge excavation quantities shall be computed to a line 1'-6" outside of concrete lines all around. Quantities of Class II Excavation are computed from Excavation Boundary Plane to bottom of pier footings.

SOUNDINGS: Soundings are as taken by borings in the field & represent the best information available to the city.

PILES: Piles shall be treated timber, Class B. Piles shall be driven to a computed bearing of 20 tons per pile, and shall be driven to the penetration shown unless in the judgement of the Engineer such penetration cannot be obtained without injury to the piles. At the option of the Contractor piles may be jetted thru sand and gravel, only, but shall be driven to penetration in clay or shale.

CONCRETE: All concrete shall be Class A.

REINFORCING STEEL: All reinforcing steel shall be billet steel, and shall conform to A.S.T.M. Specification A305-49.

DESIGN: Design loading: H20S16-49
Unit Stresses: fs = 20,000 psi
fc = 1,000 psi
Pile Loading: 20 Tons per pile

GENERAL REQUIREMENTS: It is the intention of these plans & specifications that construction of the bridge shall be in accordance with applicable standard specifications and requirements of the Kansas State Highway Commission and that materials shall conform to those specifications, unless otherwise expressly indicated.

SUMMARY OF QUANTITIES

LOCATION	Excavation Class I Cu. Yds.	Excavation Class II Cu. Yds.	Concrete Class A Cu. Yds.	Reinf. Steel Lbs.	Expansion Devices Lbs.	Tr. Timber Piles Lin. ft.	Metal Piles Points	Metal Handrail Lin. ft.
Abut #1	48	—	63.2	5430	—	735	21	8
Pier #1	—	93	136.5	7680	—	680	34	—
Pier #2	—	93	136.5	7680	—	680	34	—
Abut #2	48	—	63.2	5430	—	735	21	8
Superstructure	—	—	360.6	61270	9474	—	—	203
Totals	96	186	760.0	87,490	9474	*2830	110	219

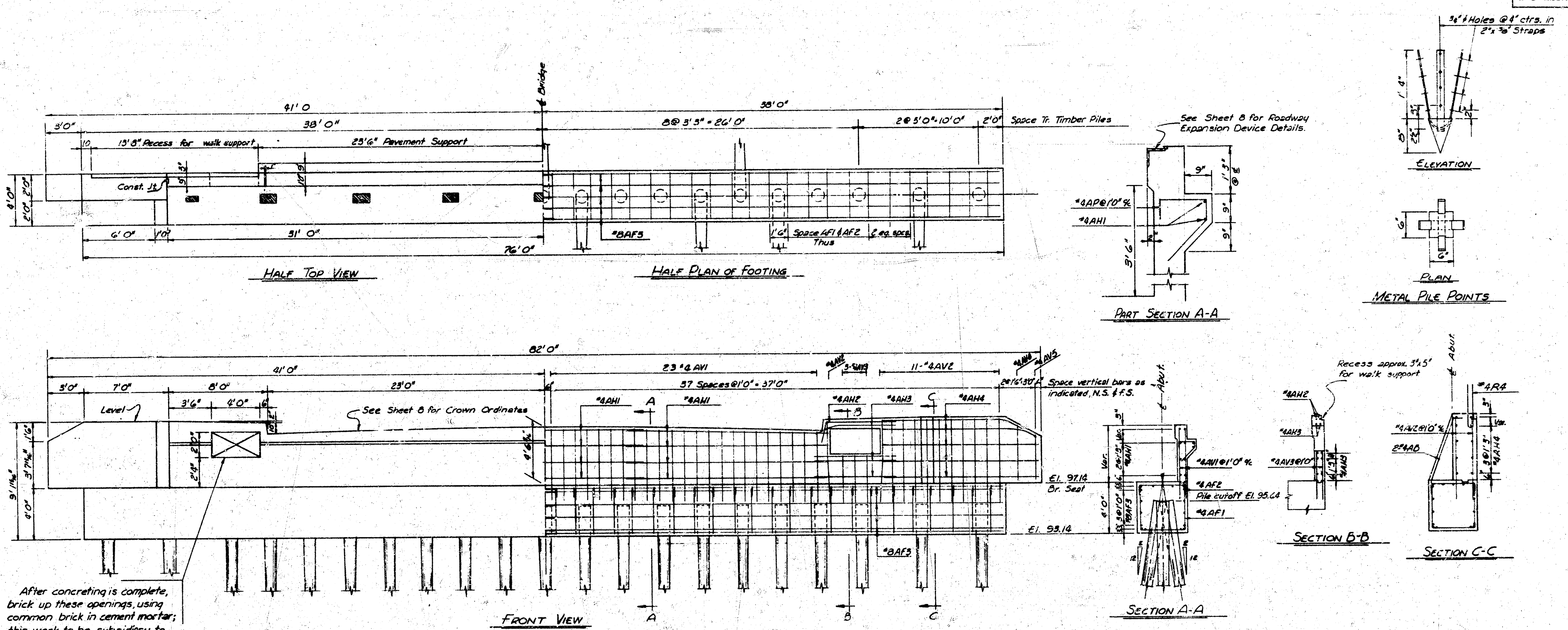
*42@35' & 68@20'

LEVY STREET BRIDGE
CONSTRUCTION LAYOUT
WICHITA DRAINAGE CANAL

R. S. DELAMATER
CONSULTING ENGINEER
WICHITA, KANSAS

DATE August, 1952
SCALE 1"=10'-0"
DWG. NO. 7903

DES. K.R.O. W.D.B. DR. K.R.O. L.R. TR. J.S.T. CKD. SURV. PLOT. APP.



Notes:

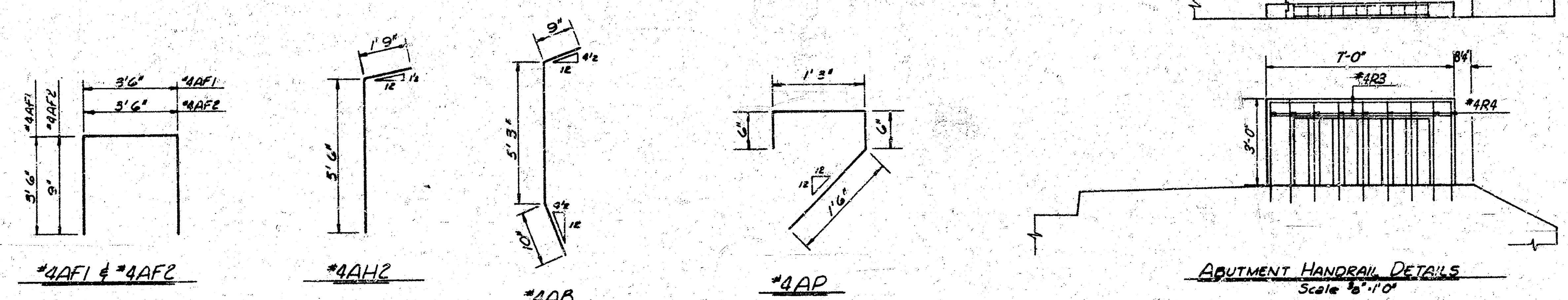
Class A concrete shall be used throughout.

Bevel all exposed edges with a 3/4" triangular moulding and use 3/4" fillets in corners unless otherwise noted.

All dimensions shown relative to reinforcing steel placement are to ℄ of bars. All dimensions shown in the bending diagrams are out to out of bars. Refer to AASHO Manual of Recommended Practice for Detailing Reinforced Concrete Highway Structures.

See Sheet 6 for Handrail Details.

See Sheet 8 for details of expansion rockers and rollers.



Summary of Quantities

Bar	AF1	AF2	AF3	AH1	AH2	AH3	AH4	AV1	AV2	AV3	AV4	AV5		AB	AP	AR
No. Req'd.	46	46	24	30	4	16	20	92	48	12	6	4		4	47	20
Size	#4	#4	#8	#4	#4	#4	#4	#4	#4	#4	#4	#4		#4	#4	#5
Length	10'6"	5'0"	39'0"	16'6"	7'3"	6'6"	13'0"	5'6"	6'6"	3'9"	6'-3"	5'6"		6'9"	3'9"	4'3"
Shape			—	—		—	—	—	—	—		—				—

Class A Concrete	63.2 Cu. Yds.
Reinforcing Steel	5430 Lbs.
Tr. Timber Piling	735 Lin Ft.

REV.	BY	DATE	DESCRIPTION
A	PCT	11-10-52	Revised Handrail

LEVY STREET BRIDGE

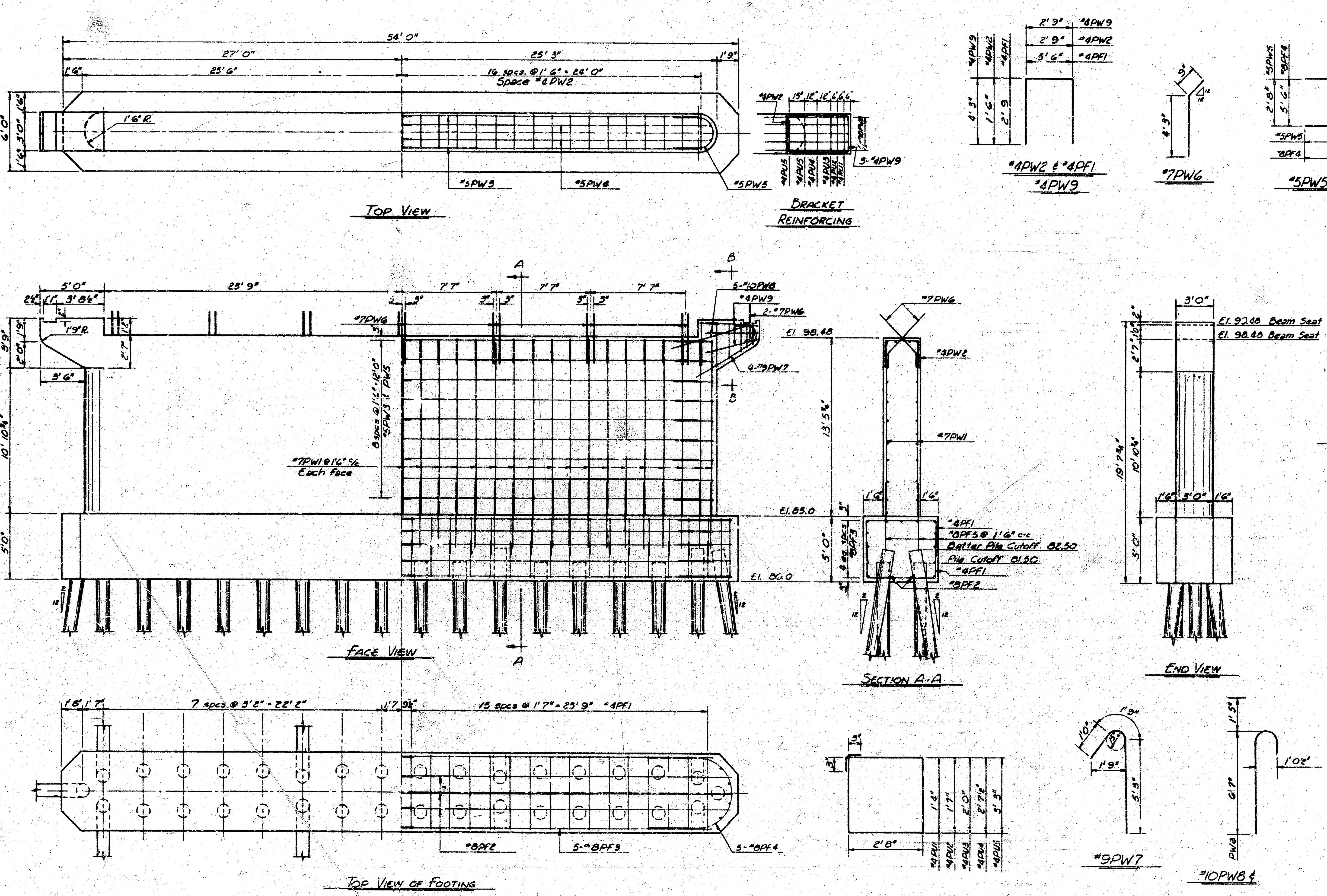
ABUTMENT DETAILS

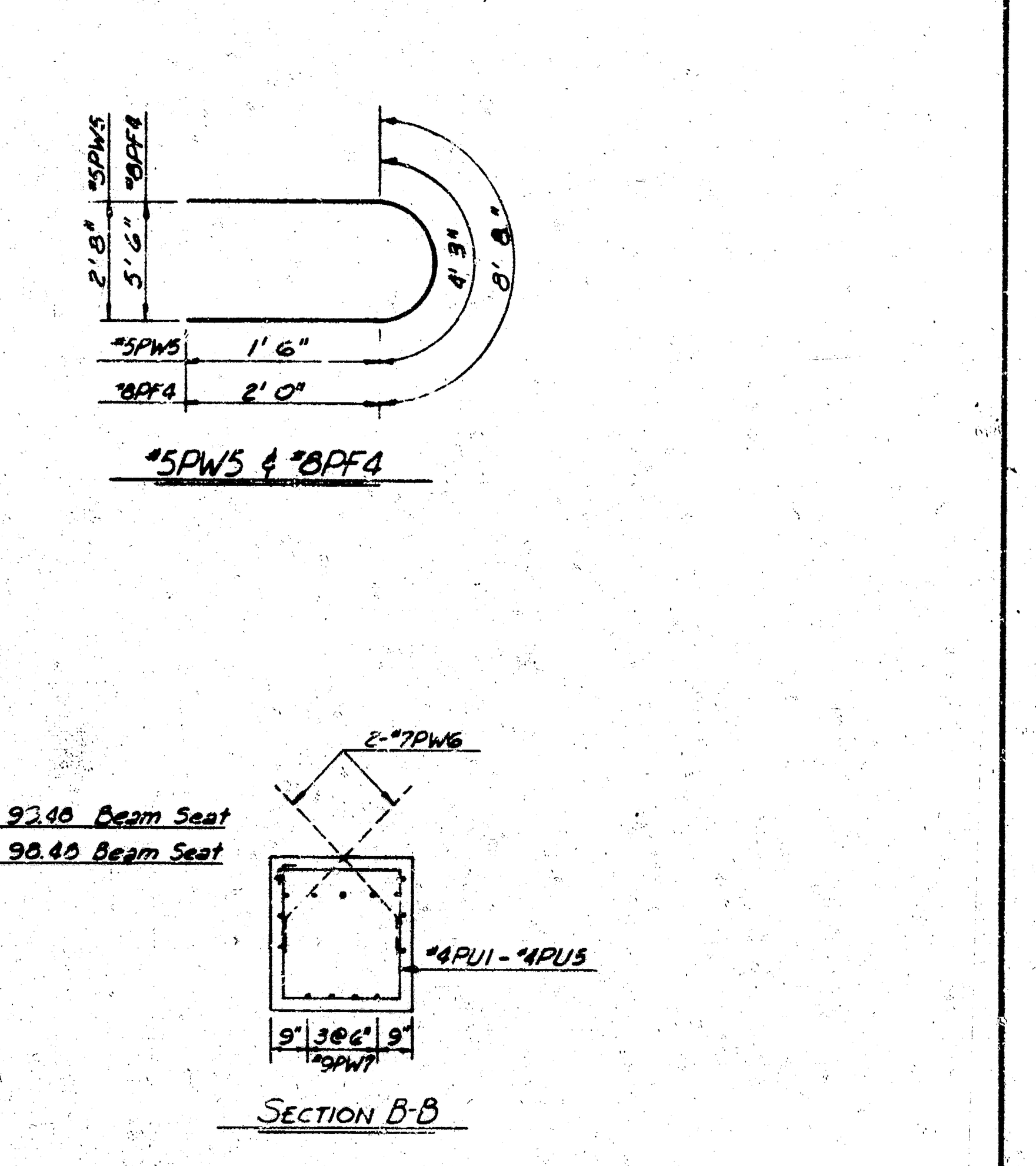
WICHITA DRAINAGE CANAL

R. S. DELAMATER
CONSULTING ENGINEER
WICHITA, KANSAS

DATE August, 1952
SCALE 1/4" = 1'0"
DWG. NO. 7904

SURV. | PLOT. | DES. | DR. AB | TR. AB | CKD. | APP.





NOTES:

Class A concrete shall be used throughout.

Bevel all exposed edges with a ¾" triangular moulding and use ¾" fillets in corners unless otherwise noted.

All dimensions shown relative to reinforcing steel placement are to ℄ of bars. All dimensions shown in the bending diagrams are out to out of bars. Refer to AASHO Manual of Recommended Practice for Detailing Reinforced Concrete Highway Structures.

See Sheet 4 for detail of pile point.

SUMMARY OF QUANTITIES

Bar	PF1	PF2	PF3	PF4	PW1	PW2	PW3	PW4	PW5	PW6	PW7	PW8	PW9		PU1	PU2	PU3	PU4	PU5	PF5
No. Req'd	64	10	20	10	70	33	36	4	18	32	8	10	6		2	2	2	2	4	70
Size	#4	#8	#8	#8	#7	#4	#5	#5	#5	#7	#9	#10	#4		#4	#4	#4	#4	#4	#8
Length	11' 0"	27' 6"	25' 9"	12' 8"	13' 3"	5' 9"	24' 6"	23' 3"	7' 3"	5' 0"	8' 0"	8' 0"	11' 3"		8' 6"	9' 0"	9' 10"	11' 1"	12' 4"	5' 0
Shape																				

Class A Concrete	136.5 Cu. Yds.
Reinforcing Steel	7680 Lbs.
Tr. Timber Piling	680 Lin. Ft.

LEVY STREET BRIDGE

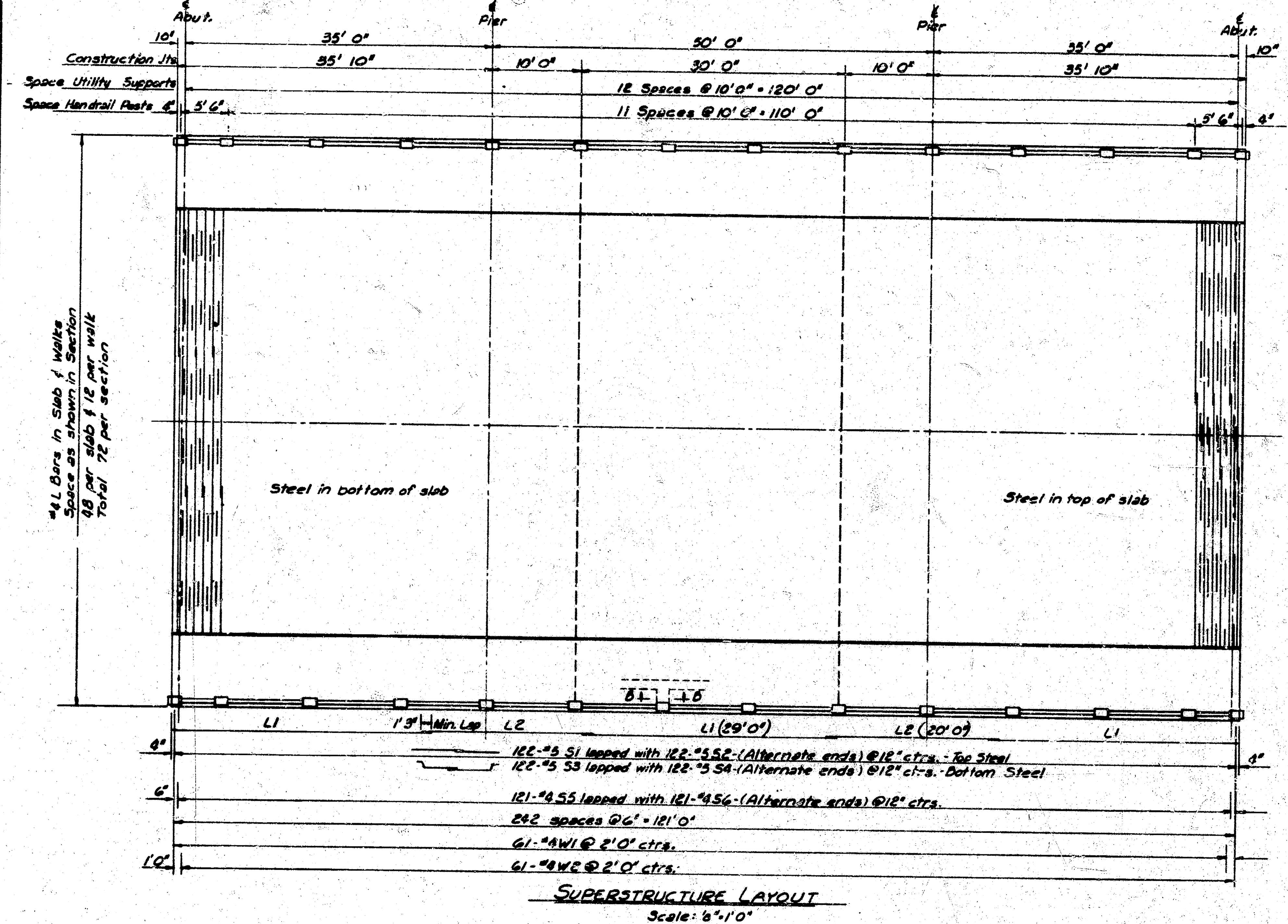
PIER DETAILS

WICHITA DRAINAGE CANAL

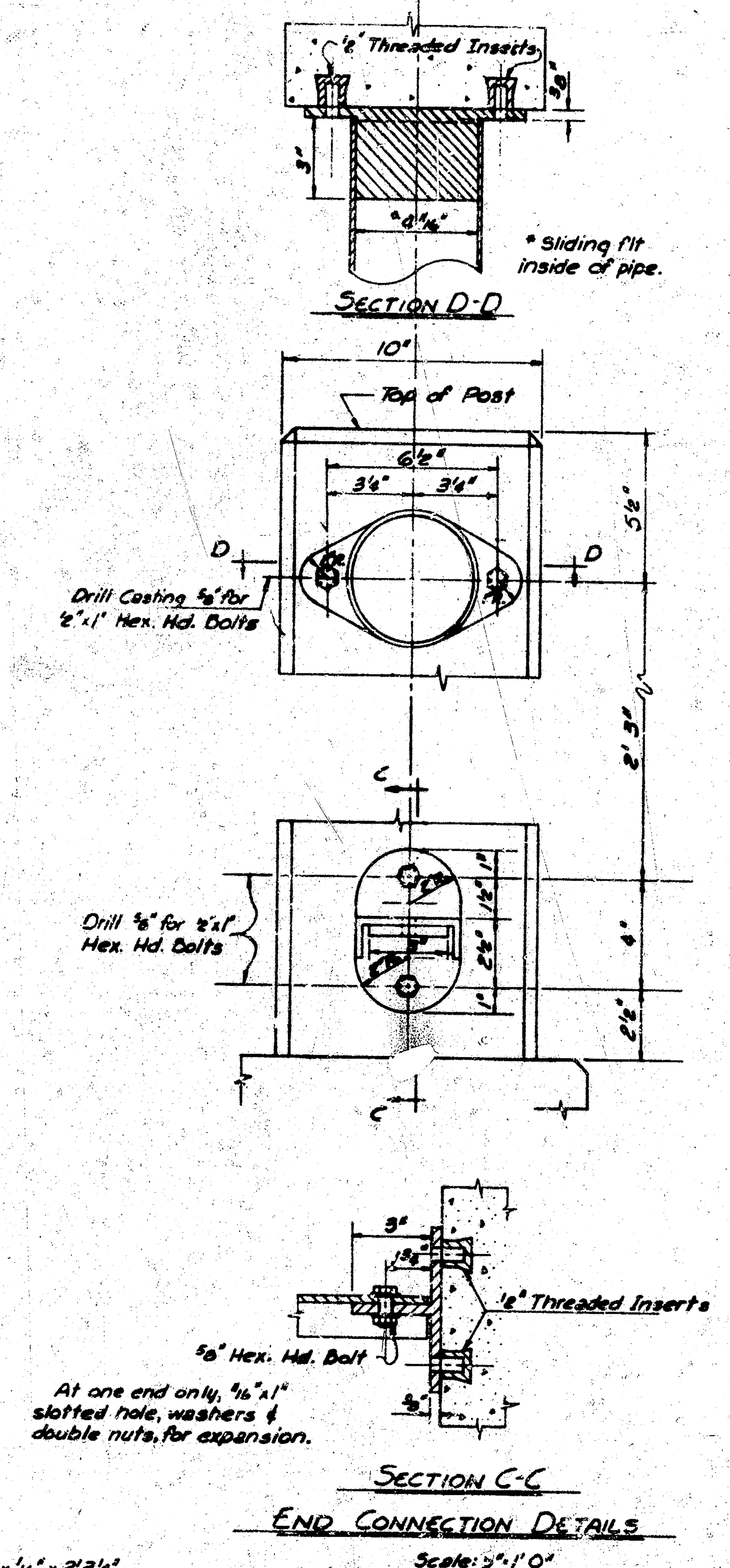
R. S. DELAMATER
CONSULTING ENGINEER
WICHITA, KANSAS

DATE August, 1952
SCALE ¼" = 1'0"
DWG. NO. 7905

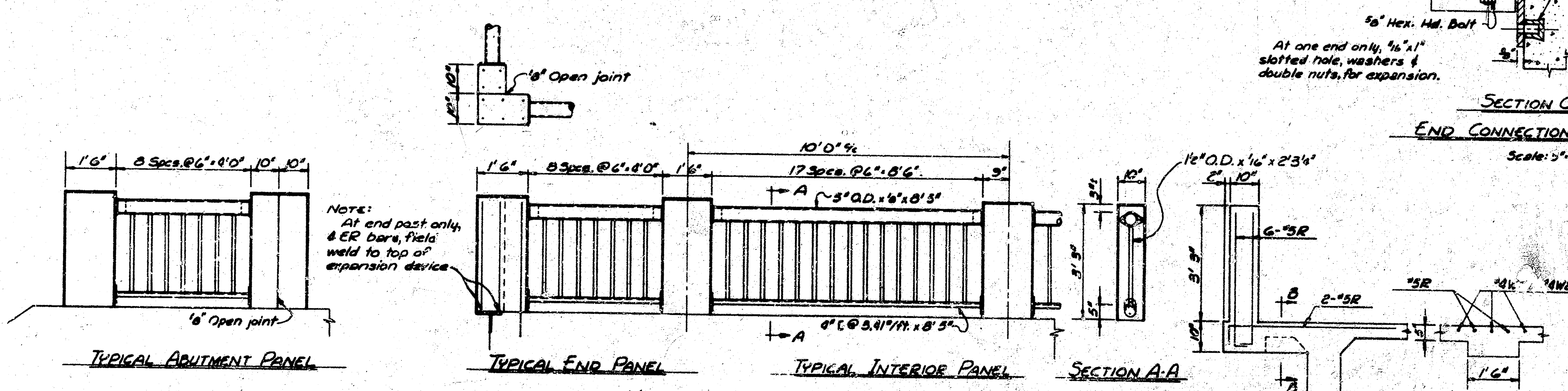
Sheet No. 6 of 9 Sheets



SUPERSTRUCTURE LAYOUT
Scale: 1/8" = 1'0"



END CONNECTION DETAILS
Scale: 3" = 1'0"



HANDRAIL DETAILS
Scale: 1/2" = 1'0"

NOTES:

Unit price bid for Metal Handrail includes fabricated handrail sections as shown, complete and in place, including aluminum end castings, concrete inserts and connecting bolts.

Concrete inserts shall be cast iron; all connecting bolts and nuts shall be galvanized or cadmium plated steel. All other parts of rail shall be aluminum: tubing and channels - 61S-T6; end castings 43, wire brush finish.

Surface of castings in contact with concrete shall be coated with Alumilastic or equal bituminous compound before placing. A coating of the same material shall be placed under all bolt heads.

Bevel all corners of Handrail Posts 1/2".

SUPERSTRUCTURE GENERAL NOTES:

See Sheets 7 & 8 for details of Slab and Girder reinforcing.

All Concrete shall be Class A. Bevel all exposed edges with a 3/4" triangular moulding. Fillet all corners 3/4" unless otherwise noted.

Construction Joints are optional with the Contractor. Construction Joints shall be made only at the points indicated.

All Superstructure falsework shall be left in place until such time that the concrete has attained its designed strength.

All dimensions in the Bending Diagrams are out to out of bars. Refer to AASHO Manual of Recommended Practice for Detailing Reinforced Concrete Highway Structures.

HANDRAIL QUANTITIES	
Metal Handrail	219 Lin. Ft.

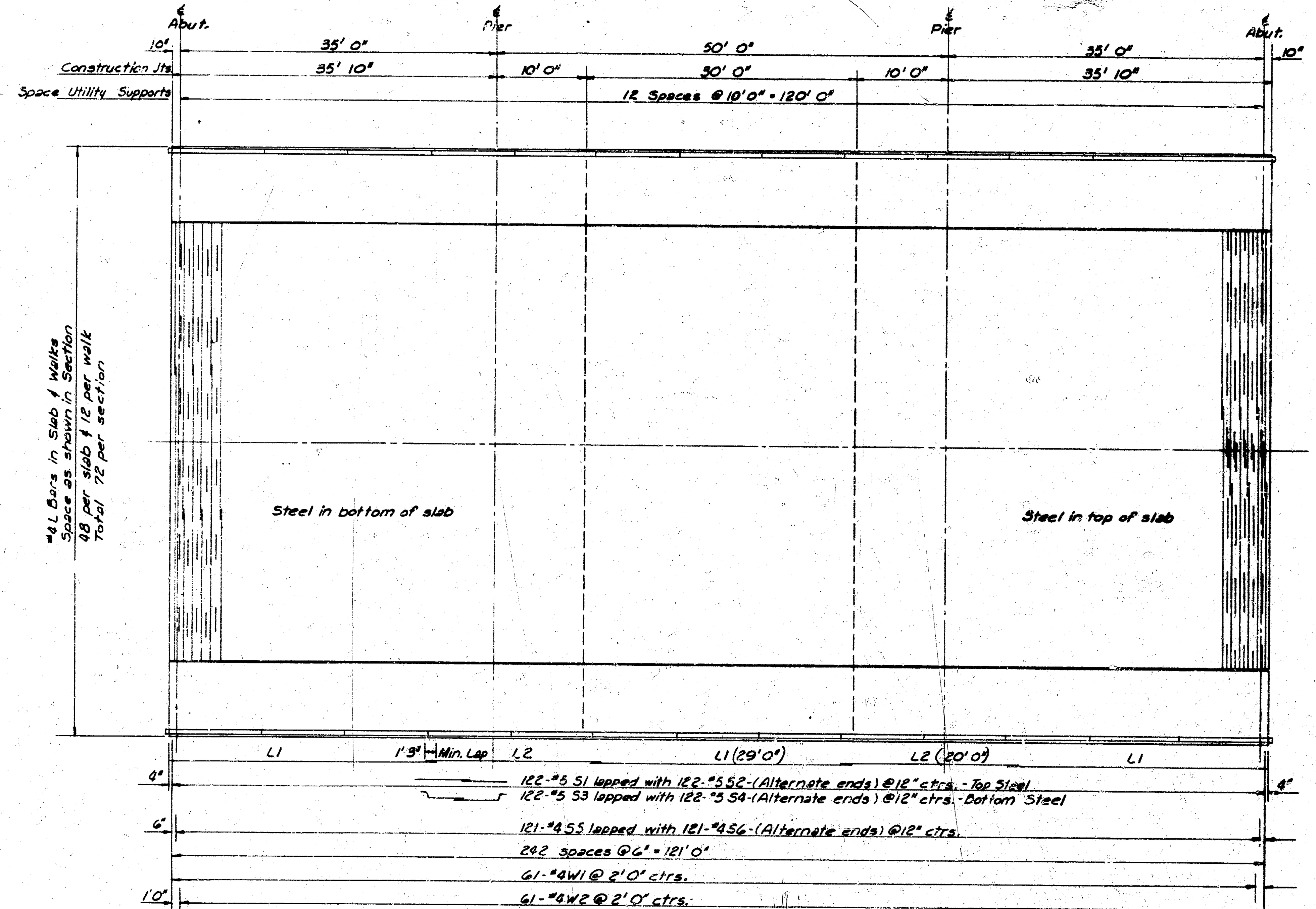
VOID - See Revision 11-10-52

R. S. DELAMATER LICENSED 513 KANSAS PROFESSIONAL ENGINEER

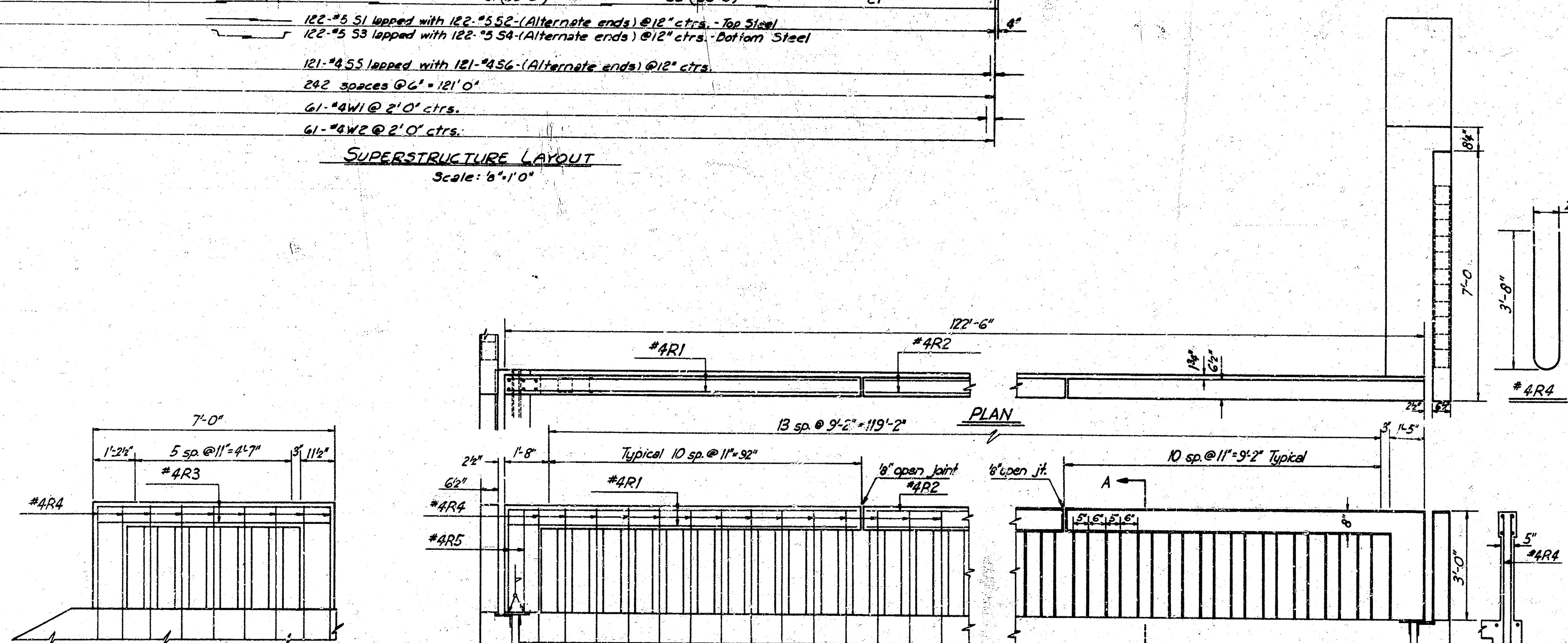
LEVY STREET BRIDGE
SUPERSTRUCTURE PLAN & HANDRAIL DETAILS
WICHITA DRAINAGE CANAL

R. S. DELAMATER
CONSULTING ENGINEER
WICHITA, KANSAS

DATE	August, 1952
SCALE	As shown
DWG. NO.	7906



SUPERSTRUCTURE LAYOUT
Scale: 1/8" = 1'0"



TYPICAL ABUTMENT PANEL

HANDRAIL DETAILS

VIEW A-A

SUPERSTRUCTURE GENERAL NOTES:

See Sheets 7 & 8 for details of Slab and Girder reinforcing.

All Concrete shall be Class A. Bevel all exposed edges with a 3/4" triangular moulding. Fillet all corners 3/4" unless otherwise noted.

Construction Joints are optional with the Contractor. Construction joints shall be made only at the points indicated.

All Superstructure falsework shall be left in place until such time that the concrete has attained its designed strength.

All dimensions in the Bending Diagrams are out to out of bars. Refer to AASHO Manual of Recommended Practice for Detailing Reinforced Concrete Highway Structures.

SUMMARY OF HANDRAIL QUANTITIES

Mark	№	Size	Length	Shape
R1	16	4	10'-8"	——
R2	88	4	9'-0"	——
R3	16	4	6'-10"	——
R4	300	4	7'-6"	U
R5	16	4	2'-11"	——

Class A Concrete 8.5 cu. yds.
Reinforcing Steel 2250 lbs.

REV.	BY	DATE	DESCRIPTION
A	PCT	11-10-52	Revised Handrail

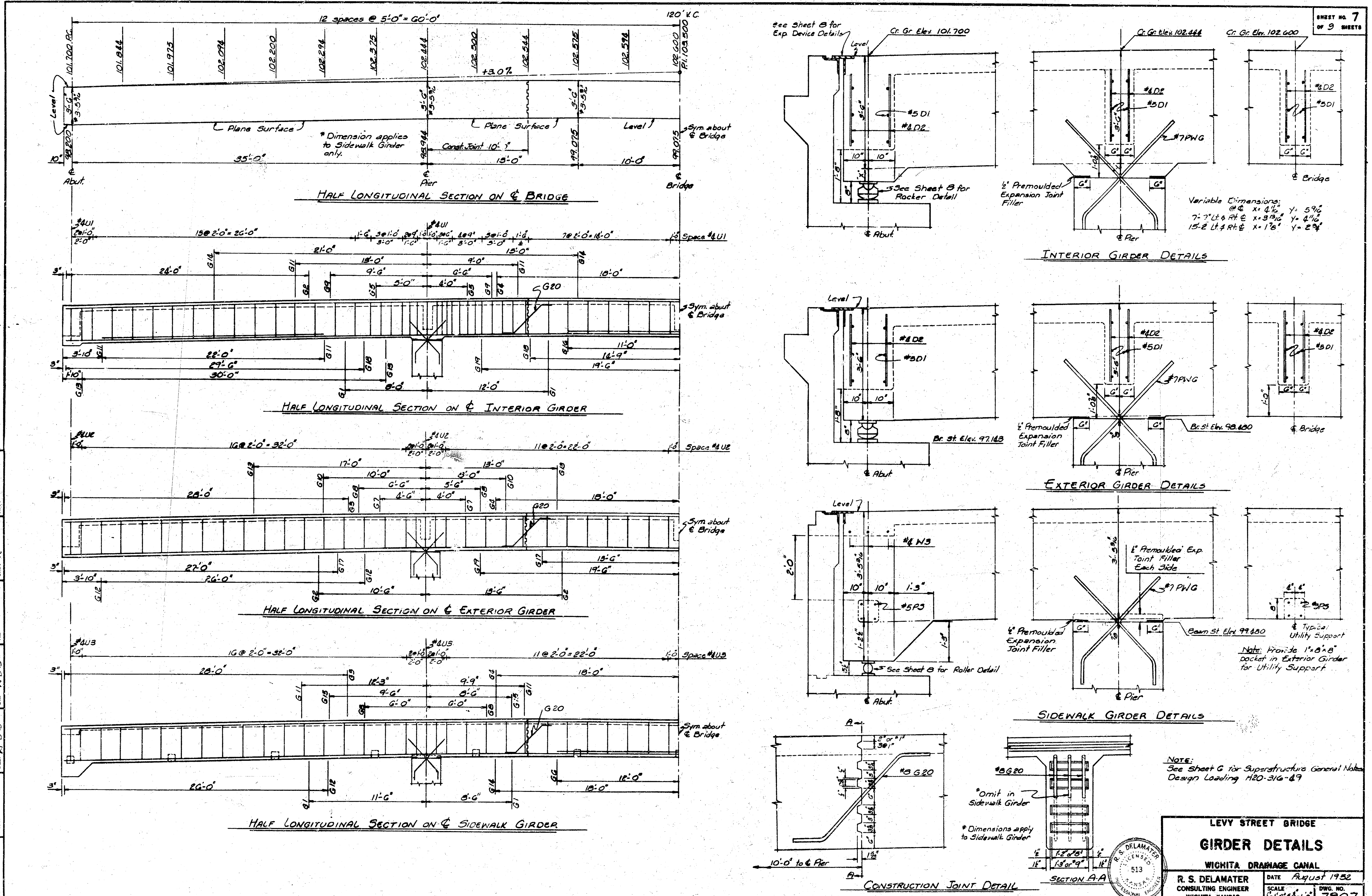
LEVY STREET BRIDGE

SUPERSTRUCTURE PLAN & HANDRAIL DETAILS

WICHITA DRAINAGE CANAL

R. S. DELAMATER
CONSULTING ENGINEER
WICHITA, KANSAS

DATE August, 1952
SCALE As shown
DWG. NO. 7906

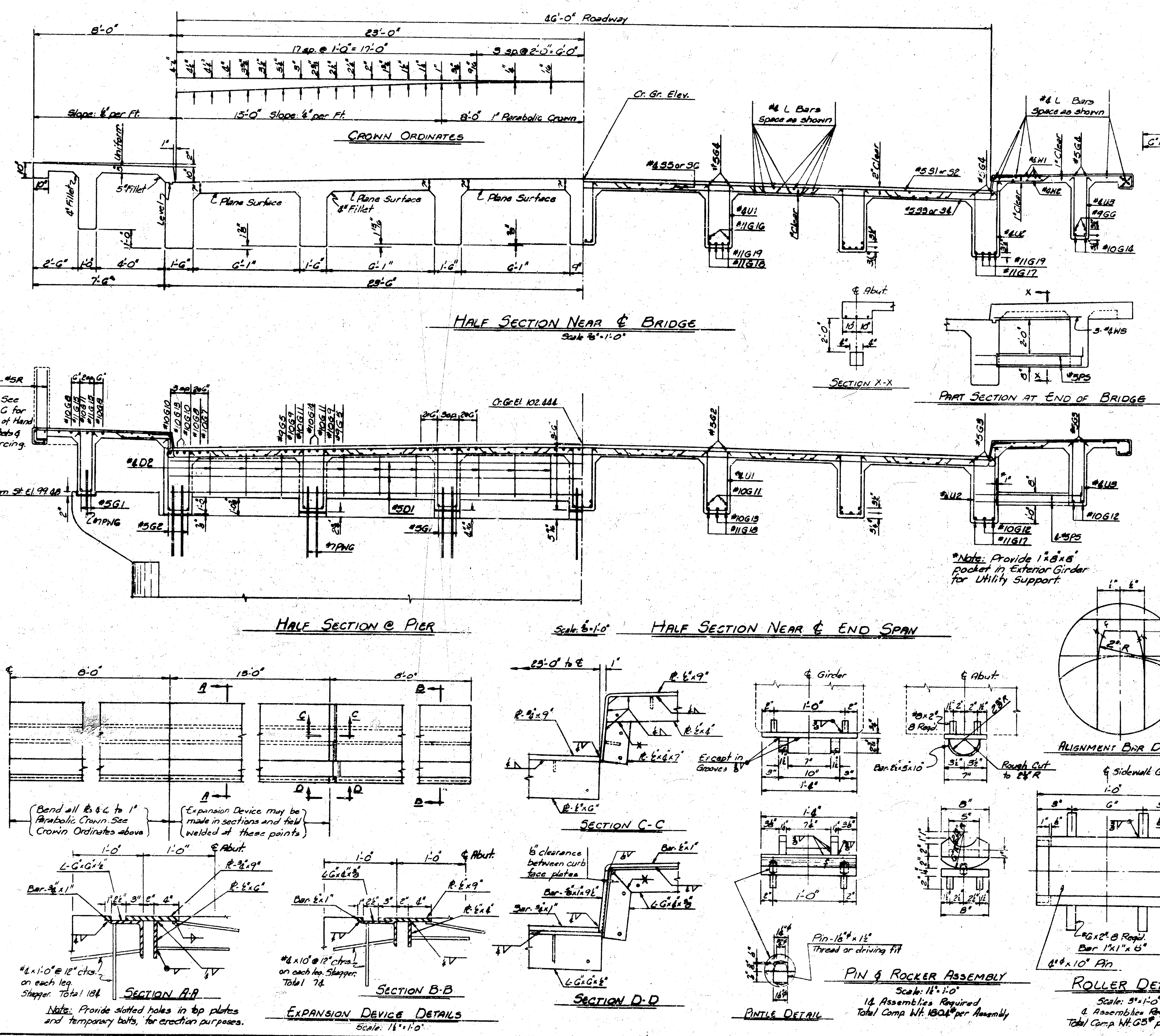


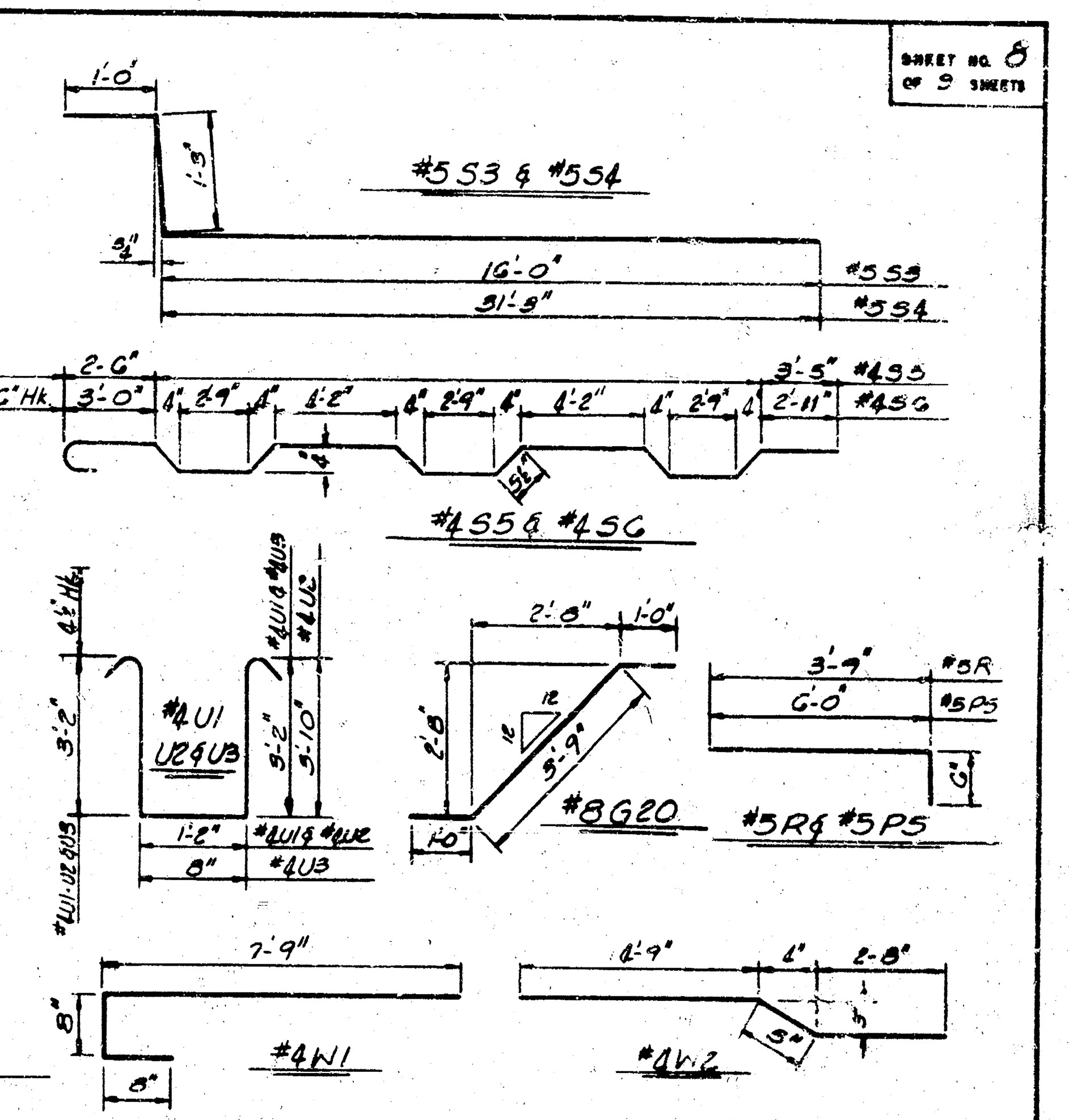
Note:
See Sheet 6 for Superstructure General Notes
Design Loading H20-316-49

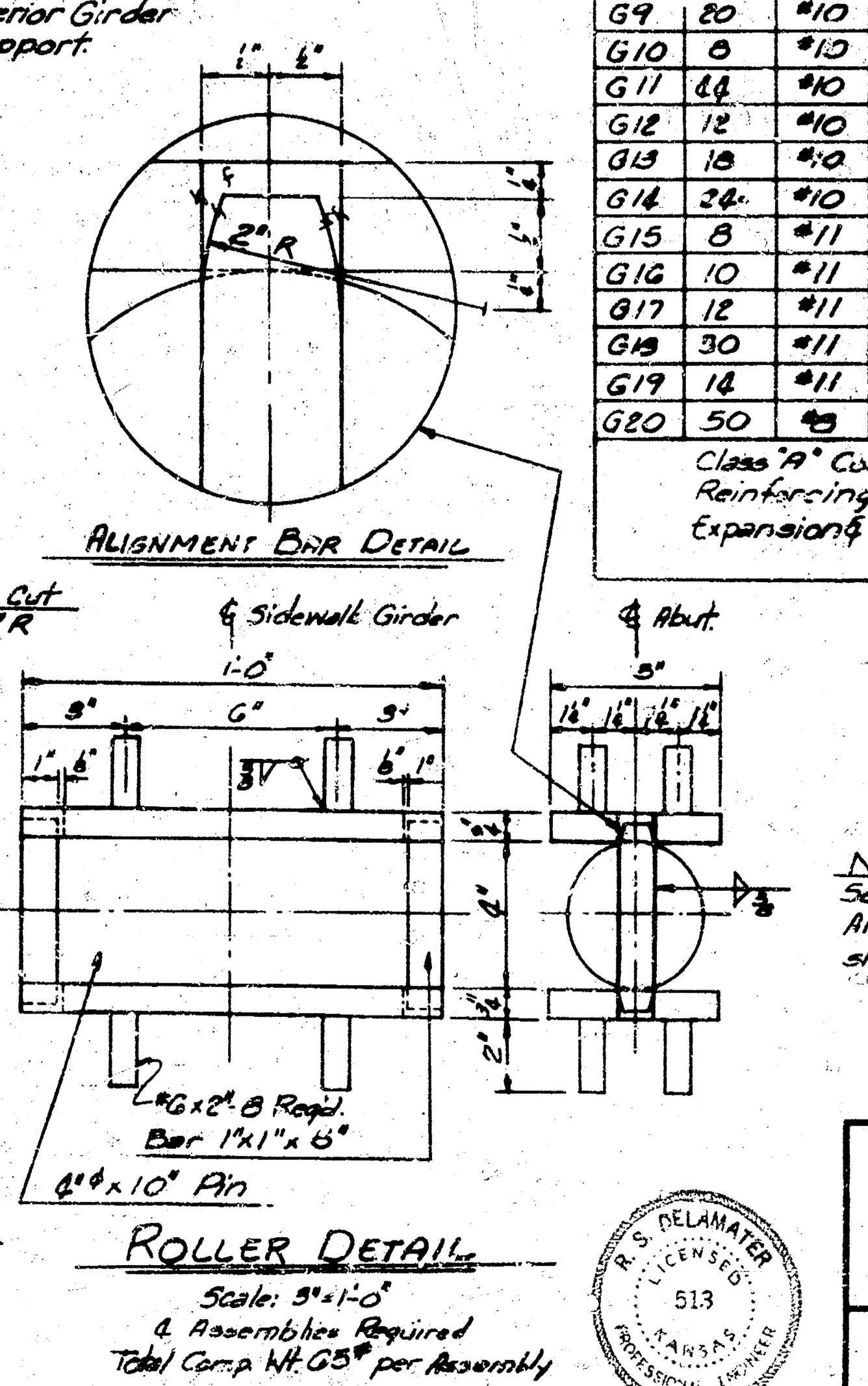
LEVY STREET BRIDGE	
GIRDER DETAILS	
WICHITA DRAINAGE CANAL	
R. S. DELAMATER CONSULTING ENGINEER WICHITA, KANSAS	DATE August 1952
	SCALE 1/8"=1'-0" & 3/4"=1'-0"
	DWG. NO. 7907

R. S. DELAMATER LICENSED 513 KANSAS PROFESSIONAL ENGINEER

SHEET NO. 8 OF 9 SHEETS







SUMMARY OF QUANTITIES

Mark	No. Req'd	Size	Length	Shape	Mark	No. Req'd	Size	Length	Shape
G1	28	#5	20'-0"	—	U1	420	#4	8'-3"	
G2	28	#5	24'-0"	—	U2	132	#4	8'-11"	
G3	16	#5	28'-0"	—	U3	132	#4	7'-9"	
G4	18	#5	36'-0"	—	S1	122	#5	20'-0"	—
G5	20	#9	9'-0"	—	S2	122	#5	27'-9"	—
G6	4	#9	24'-0"	—	S3	122	#5	18'-3"	
G7	4	#10	8'-6"	—	S4	122	#5	33'-6"	
G8	12	#10	12'-0"	—	S5	121	#4	25'-9"	
G9	20	#10	16'-0"	—	S6	121	#4	25'-9"	
G10	8	#10	18'-0"	—	W1	122	#4	9'-1"	
G11	44	#10	22'-0"	—	W2	122	#4	7'-10"	
G12	12	#10	26'-0"	—	L1	216	#4	29'-0"	—
G13	18	#10	30'-0"	—	L2	144	#4	20'-0"	—
G14	24	#10	36'-0"	—	D1	60	#5	23'-9"	—
G15	8	#11	18'-0"	—	D2	180	#4	2'-3"	—
G16	10	#11	22'-0"	—	P5	104	#5	6'-6"	
G17	12	#11	27'-0"	—	R	208	#5	4'-3"	
G18	30	#11	29'-6"	—	ER	16	#5	3'-0"	—
G19	14	#11	39'-0"	—	W3	12	#4	5'-0"	—
G20	50	#8	5'-9"						

Class "A" Concrete 866.6 Cu. Yds.
Reinforcing Steel 61,270 Lbs.
Expansion & Bearing Devices 9,474 Lbs.

NOTE:
See Sheet C for Superstructure General Notes.
All parts of Expansion & Bearing Devices shall be structural steel.

LEVY STREET BRIDGE

SUPERSTRUCTURE DETAILS

WICHITA DRAINAGE CANAL

R. S. DELAMATER
CONSULTING ENGINEER
WICHITA, KANSAS

R. S. DELAMATER LICENSED 513 KANSAS PROFESSIONAL ENGINEER

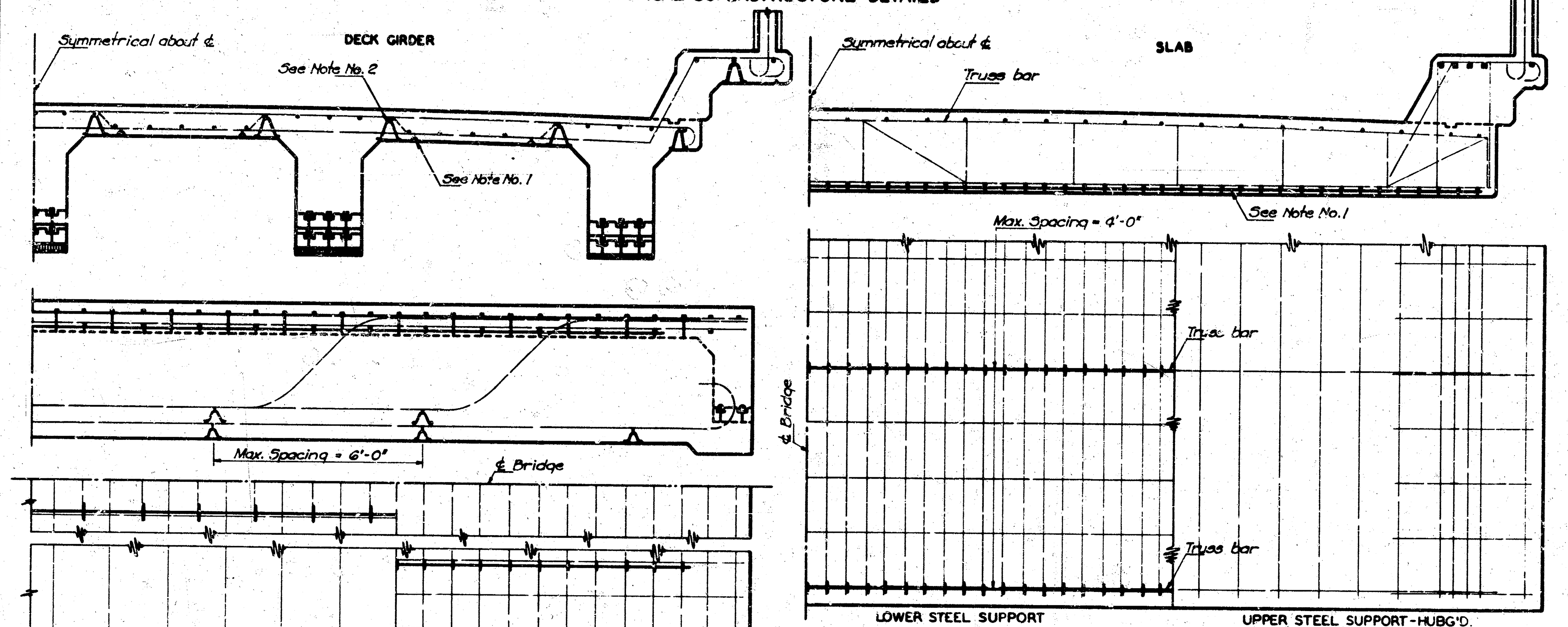
DATE	August 1932
SCALE	As noted
DWG. NO.	7908

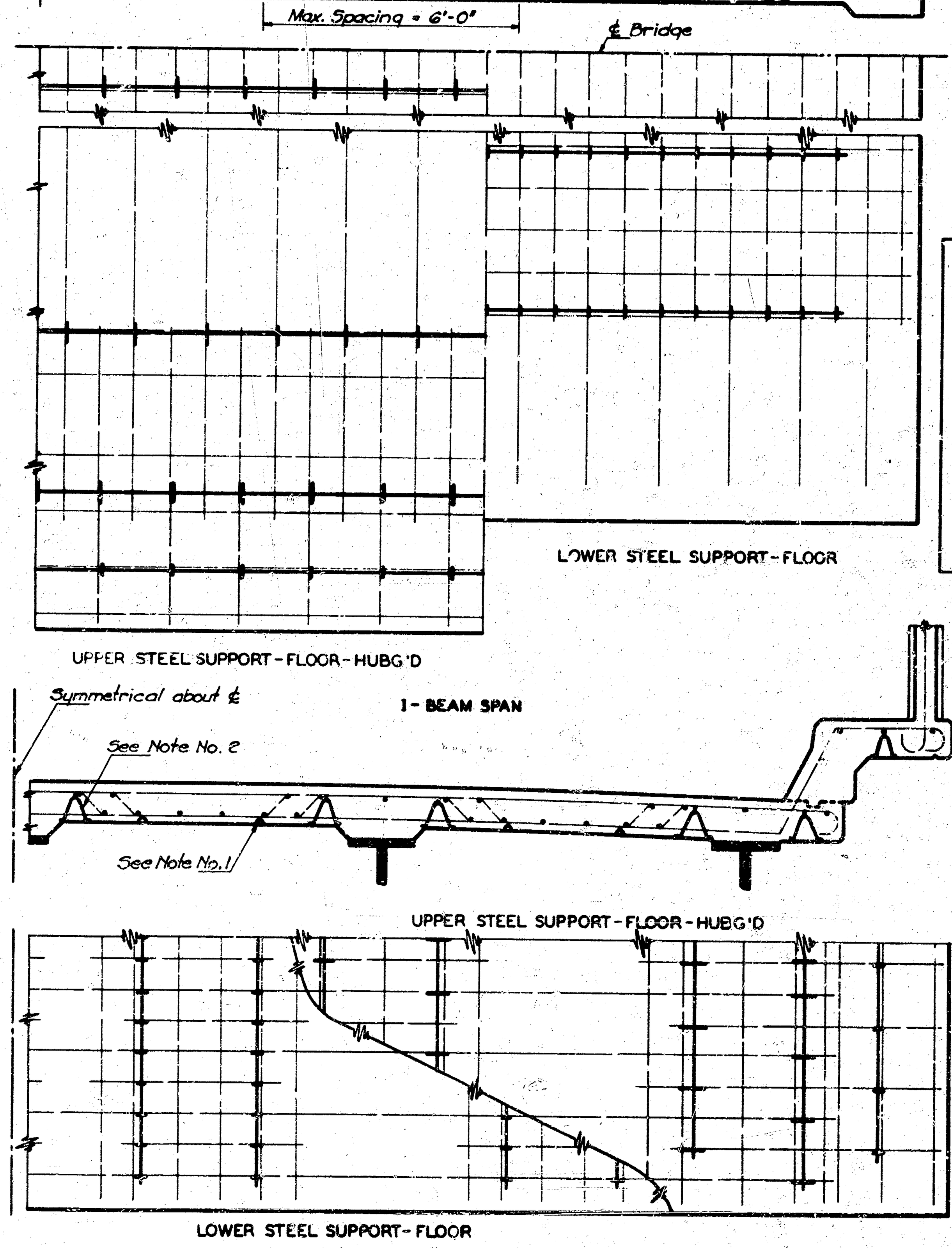
SURV. | PLOT. | DES. WDB | DR. WDB | TR. | CHK. | APP.

Fed. Road Dist. No.	State	Proj. No.	Fiscal Year	Sheet No.	Total Sheets
5	Kansas			9	9

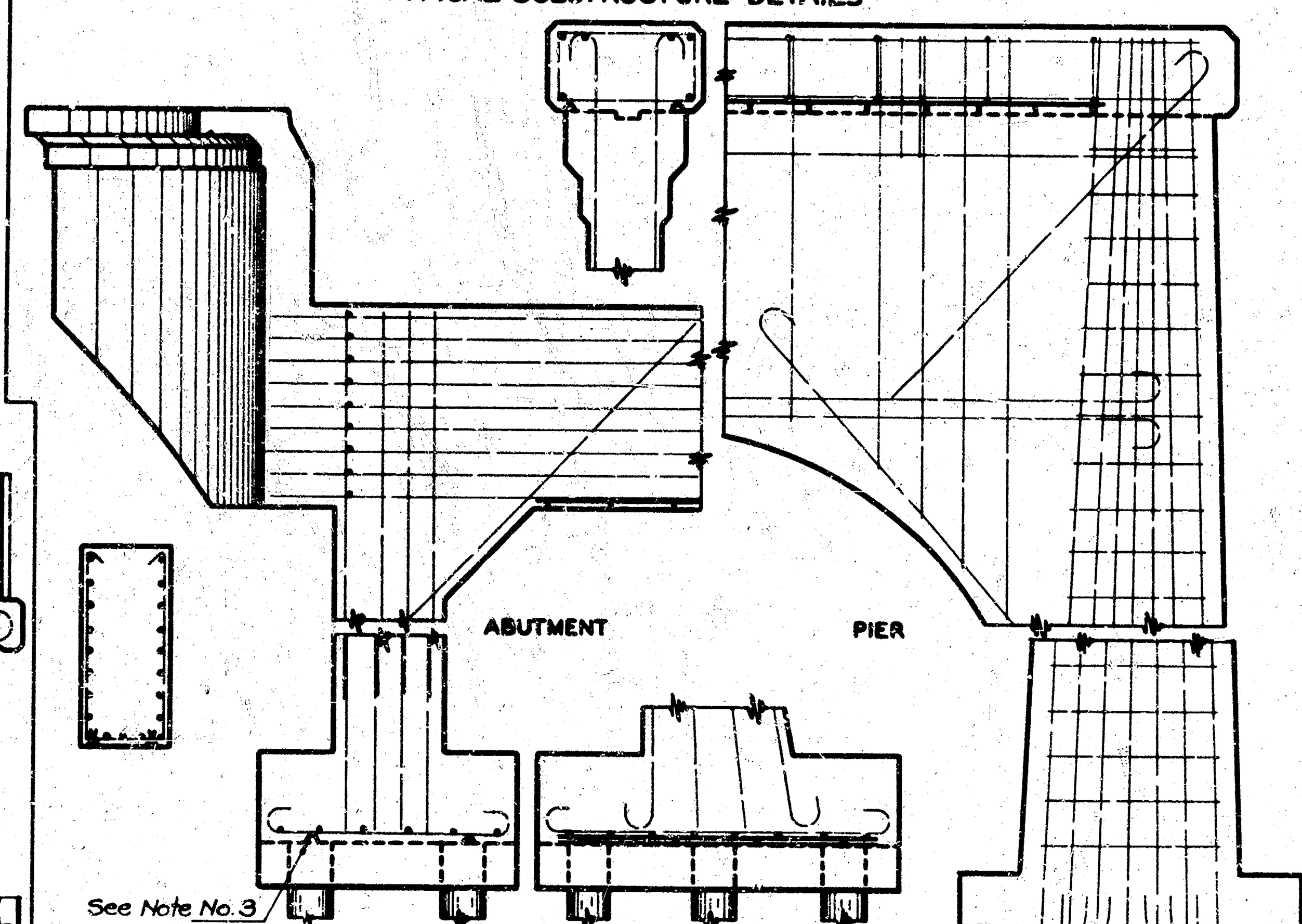
Section

TYPICAL SUPERSTRUCTURE DETAILS





TYPICAL SUBSTRUCTURE DETAILS



GENERAL NOTE

Spacings shown are maximum. Sufficient supports shall be used, as determined by the Engineer, to retain the reinf. steel in position.

Approved designs and arrangements of Supports or Spacers other than as shown on this sheet, may be used with the permission of the Engineer. Component parts of Supports and Spacers shall be securely welded at all contact points. Legs shall be so constructed that only the ends bear upon the forms.

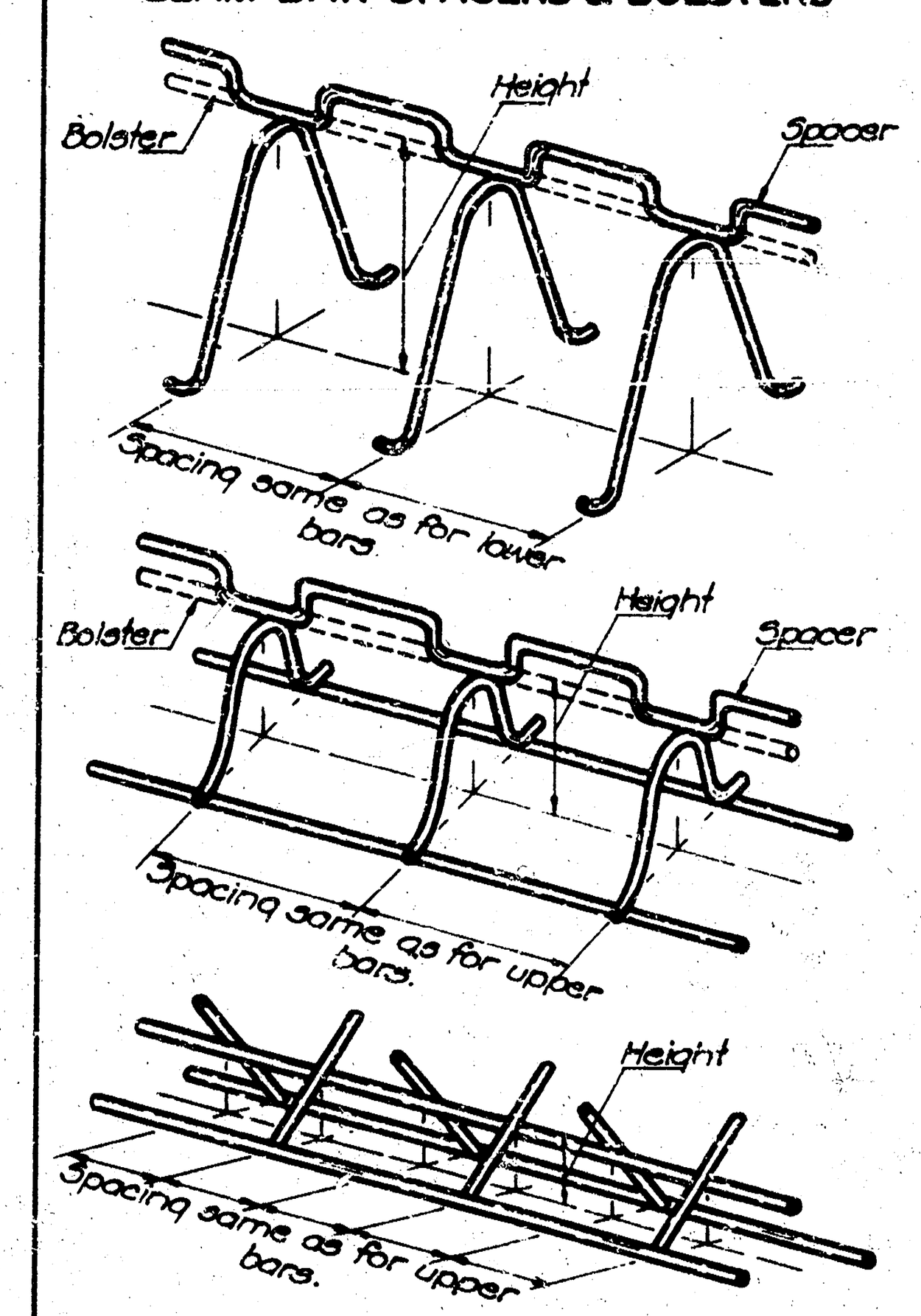
Wire used for Supports and Spacers shall be of sufficient size to insure stability of Reinforcing Steel at the position shown on the Plans, within the limits indicated by Notes 1 & 2. Wire supports shall be supplemented with form ties or other approved devices where necessary.

NOTE 1: The lower side of Reinforcing Steel in these locations shall be not less than one inch (1") from the surface of the concrete.

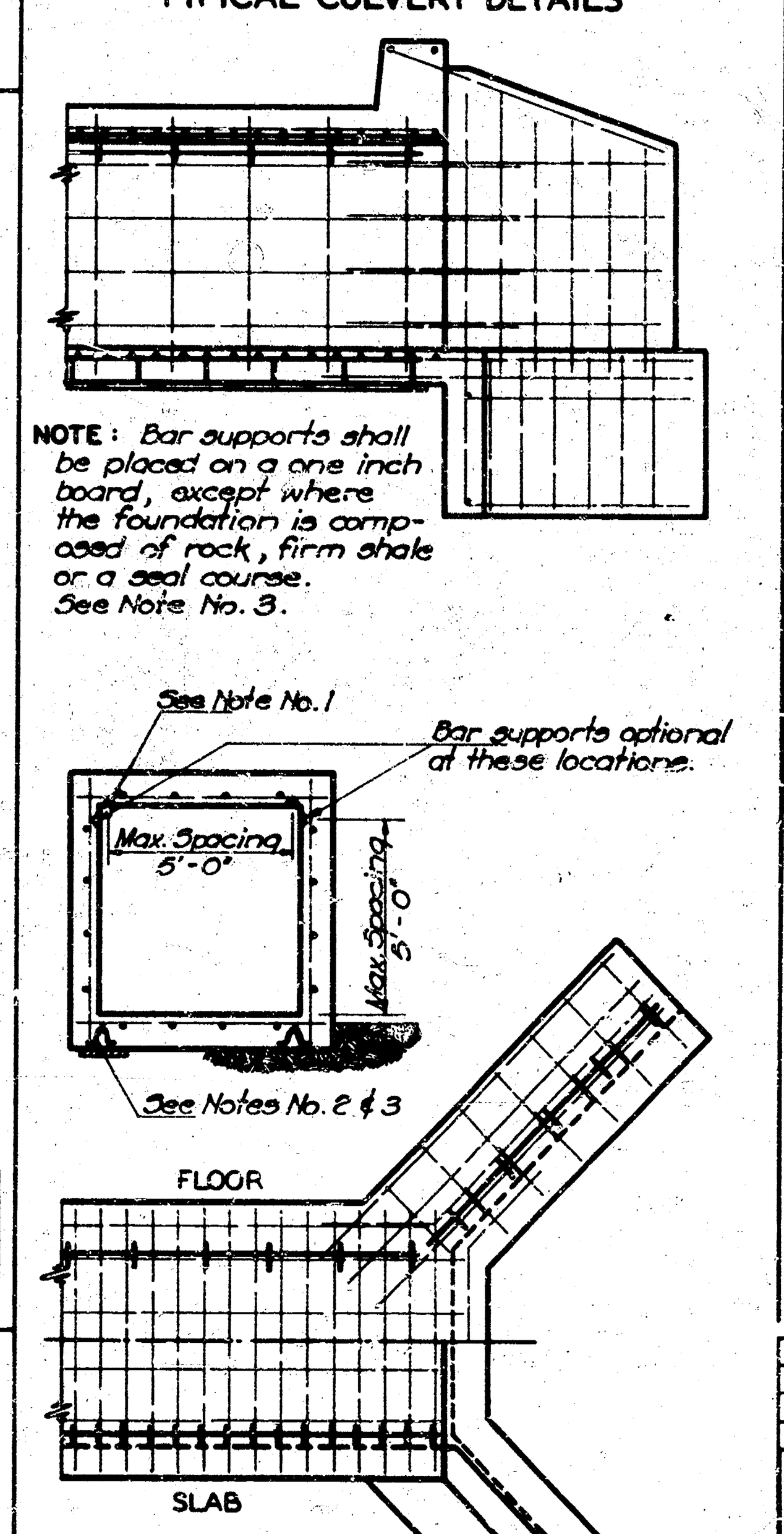
NOTE 2: The upper side of Reinforcing Steel in these locations shall be within the limits shown on the Plans.

NOTE 3: The use of Wire Supports for Reinforcing Steel in these locations is optional. Where they are not used the Steel shall be supported from the forms by means of wire ties or saddles.

BEAM BAR SPACERS & BOLSTERS

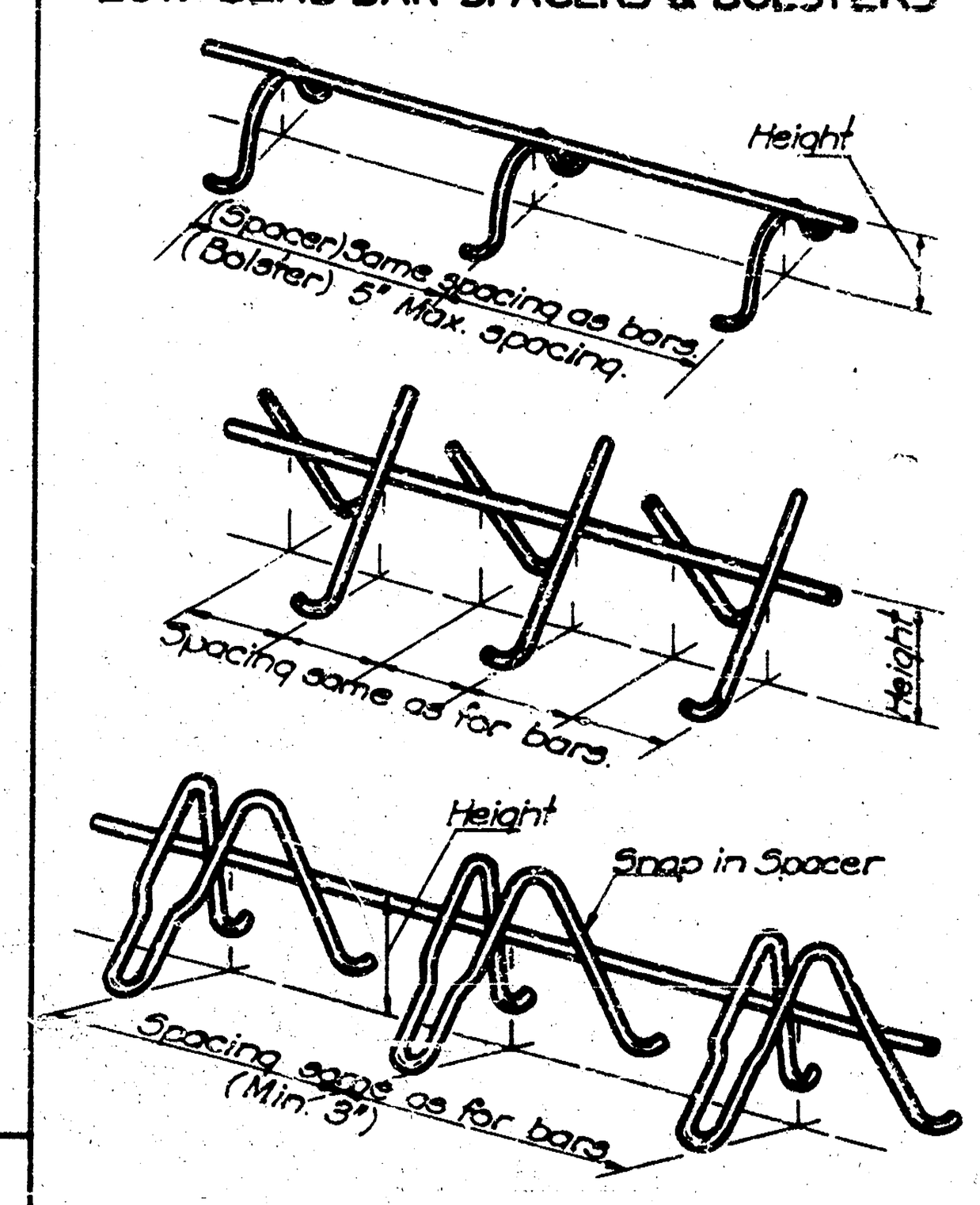


TYPICAL CULVERT DETAILS

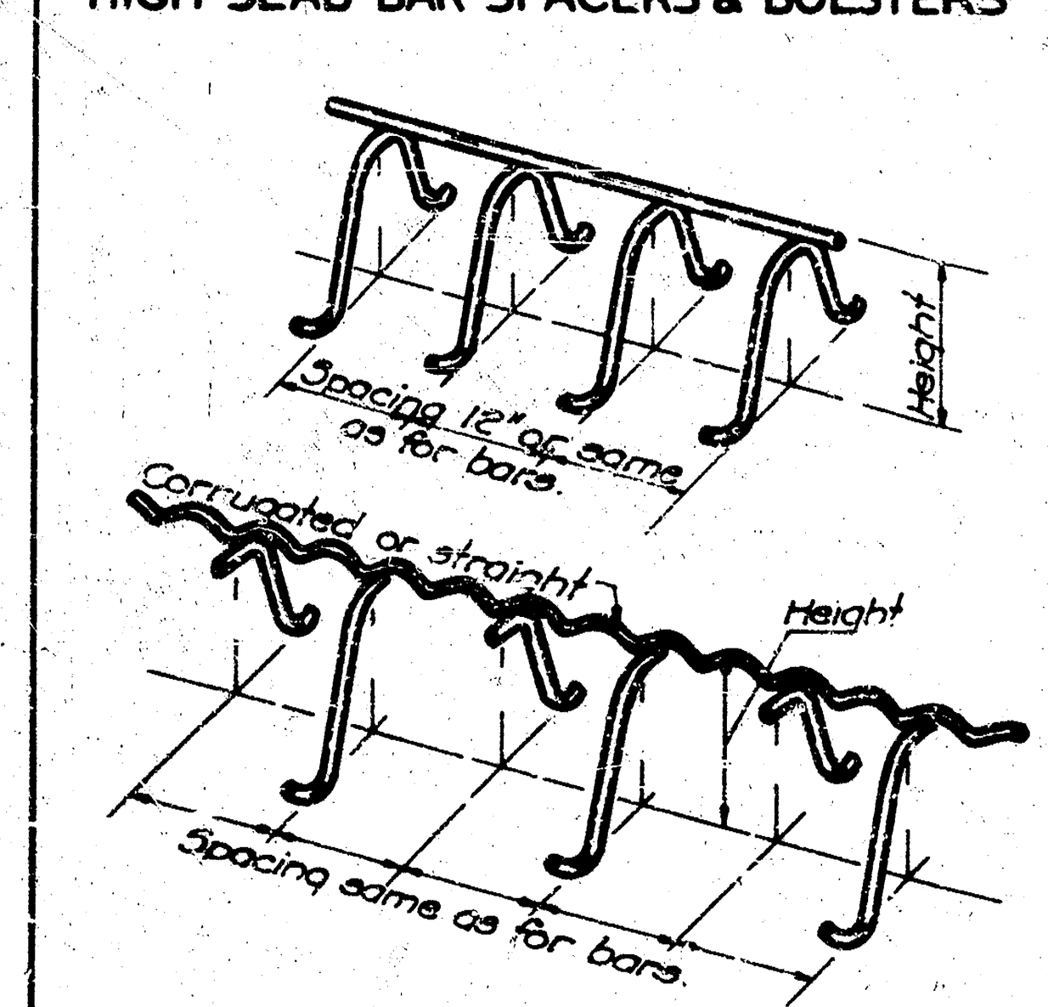


NOTE: Bar supports shall be placed on a one inch board, except where the foundation is composed of rock, firm shale or a seal course. See Note No. 3.

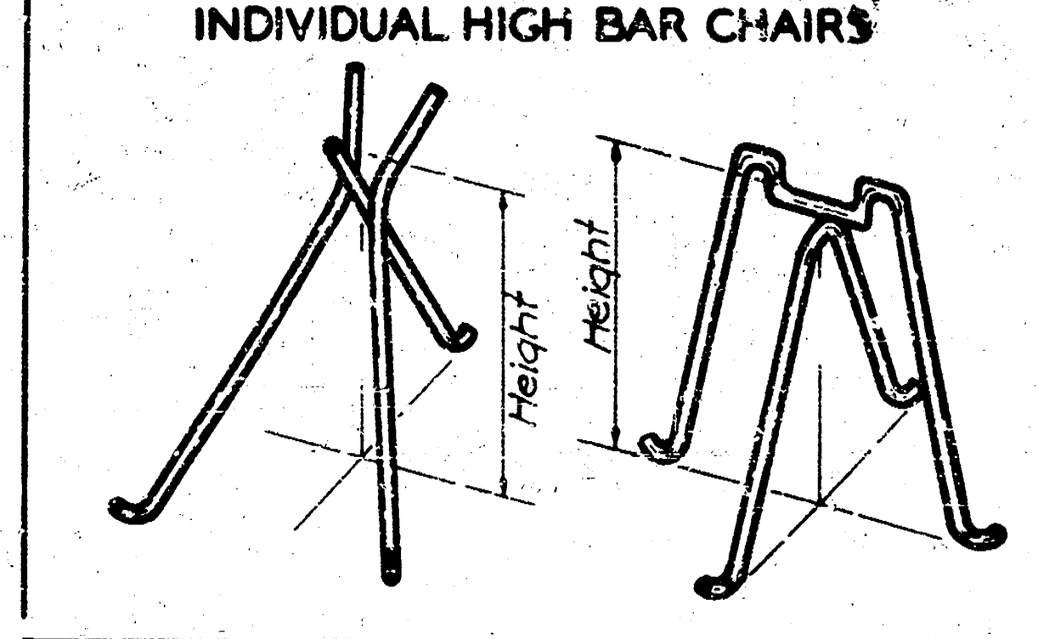
LOW SLAB BAR SPACERS & BOLSTERS



HIGH SLAB BAR SPACERS & BOLSTERS



INDIVIDUAL HIGH BAR CHAIRS



NO.	DATE	REVISIONS	BY	APP'D
3				
2				
1	3-45	No change for 1945 Spec's.	-	-

LEVY STREET BRIDGE WICHITA DRAINAGE CANAL

SUPPORTS AND SPACERS FOR REINFORCING STEEL

STD. NO. 610 SCALE No Scale

DESIGNED BY E.A.R. DATE 7-43 DETAILED BY W.A.B. TRACED BY W.A.B.

CHECKED BY C.T. APPROVED BY L.H. Vincent DATE 4-17-44