

WASSALL STREET BRIDGE OVER DRY CREEK

CITY OF WICHITA, KANSAS
B. E. SMITH, CITY ENGINEER
FEBRUARY, 1954

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Scale 1" = 50'

SURV. P.C.T. 1/15/54 PLOT. DES. DR. R.C.T. TR. H.L.M. CND. 2/1/54 APP. 2/1/54

GRADING NOTES:

Grading Contractor shall excavate the channel to the grade and dimensions indicated placing the excavated materials in road fills at the ends of the bridge, approximately half at each end of the bridge, as directed by the Engineer. Fills are to be built to the cross section shown, extending as far back as possible with the material available from the channel change.

Dirt and rip-rap in the existing walkway crossing are included in the quantities of Common Excavation. The item of Removal of Existing Crossing includes removal of handrails along the walk and the removal of the concrete pipe under the crossing. Contractor shall use reasonable care in removal of pipes and handrail, storing all salvageable material at the site as directed by the Engineer.

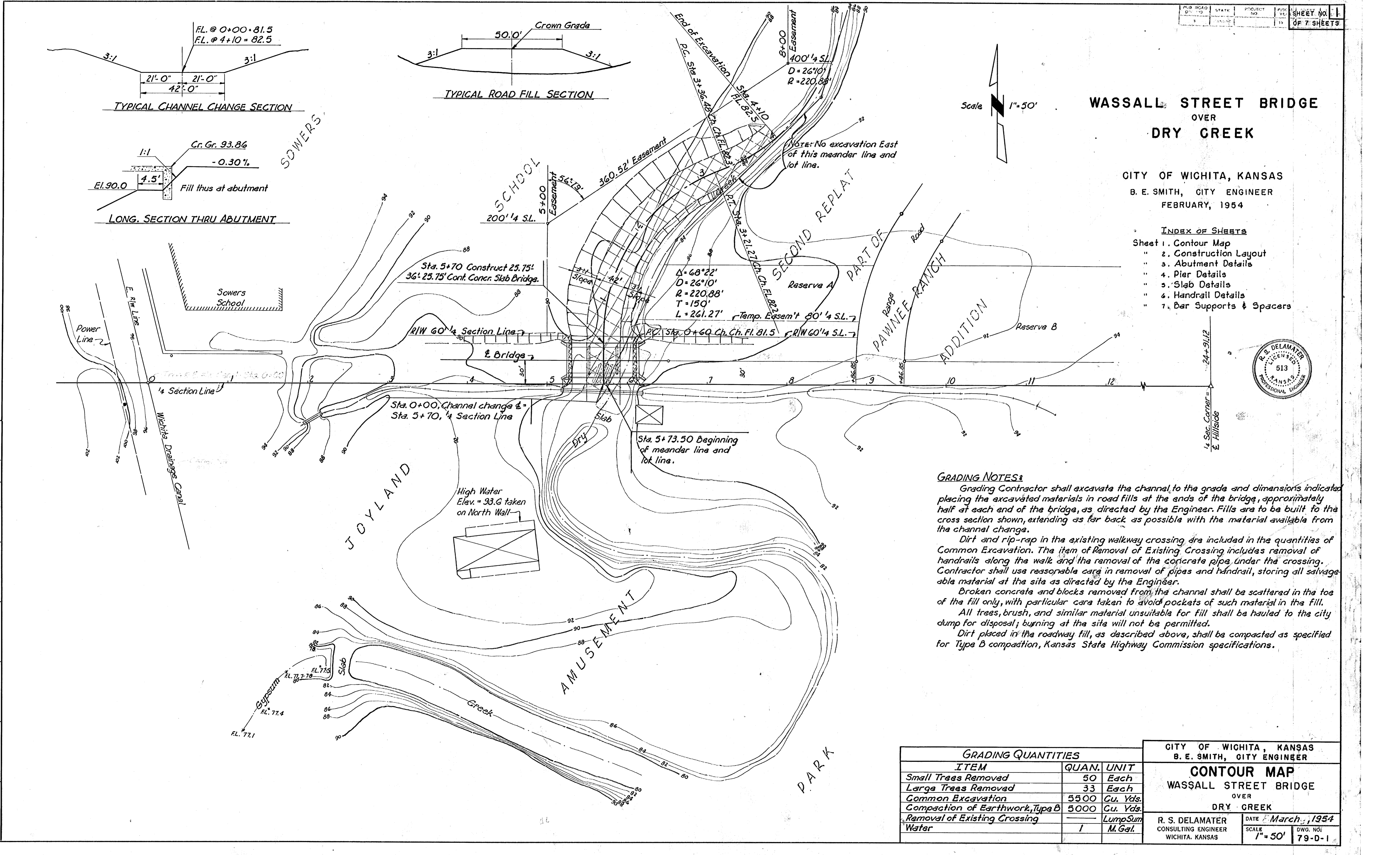
Broken concrete and blocks removed from the channel shall be scattered in the toe of the fill only, with particular care taken to avoid pockets of such material in the fill.

All trees, brush, and similar material unsuitable for fill shall be hauled to the city dump for disposal; burning at the site will not be permitted.

Dirt placed in the roadway fill, as described above, shall be compacted as specified for Type B compaction, Kansas State Highway Commission specifications.

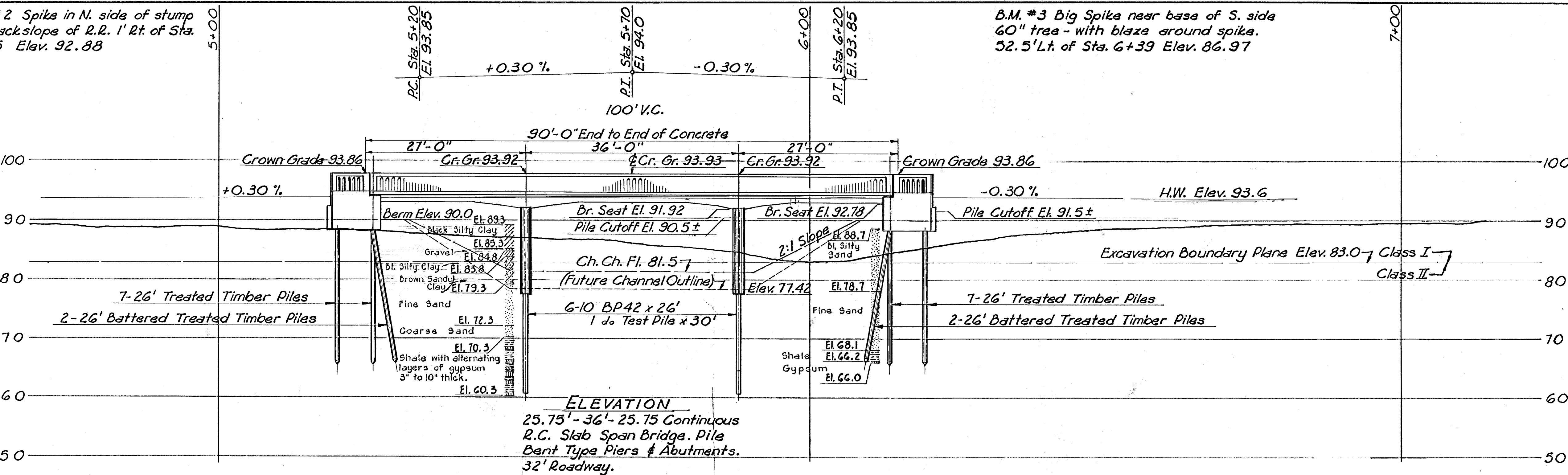
GRADING QUANTITIES		
ITEM	QUAN.	UNIT
Small Trees Removed	50	Each
Large Trees Removed	33	Each
Common Excavation	5500	Cu. Yds.
Compaction of Earthwork, Type B	5000	Cu. Yds.
Removal of Existing Crossing		Lump Sum
Water	1	M. Gal.

CITY OF WICHITA, KANSAS B. E. SMITH, CITY ENGINEER	
CONTOUR MAP WASSALL STREET BRIDGE OVER DRY CREEK	
R. S. DELAMATER CONSULTING ENGINEER WICHITA, KANSAS	DATE <u>March, 1954</u> SCALE <u>1" = 50'</u> DWG. NO. <u>79-D-1</u>



B.M. #2 Spike in N. side of stump on backslope of R.R. 1' Rt. of Sta. 4+75 Elev. 92.88

B.M. #3 Big Spike near base of S. side 60" tree - with blaza around spike. 52.5' Lt. of Sta. 6+39 Elev. 86.97



GENERAL NOTES:

CHANNEL CHANGE & GRADING: The Grading Contractor shall excavate the channel change at bridge site including existing crossing prior to construction of the piers and will construct embankment at abutments to Crown Grade prior to construction of abutments.

BRIDGE EXCAVATION: Elevation 83.0 shall designate the Excavation Boundary Plane, Class I excavation above the plane and Class II below. Bridge excavation quantities shall be computed to a line 1'-6" outside of concrete lines all around.

CONCRETE: Concrete shall be Class A in abutments, piers and handrail and Class AAA in superstructure.

PILES: All piles shall be driven to the penetration shown unless in the opinion of the Engineer such penetration cannot be reached without injury to the piles. All treated timber piles shall be driven to a minimum computed bearing value of 20 tons per pile and all steel piles driven to a minimum computed bearing value of 37 tons per pile.

SOUNDINGS: Soundings shown on this sheet are as taken by borings in the field and represent the best information available to the City of Wichita.

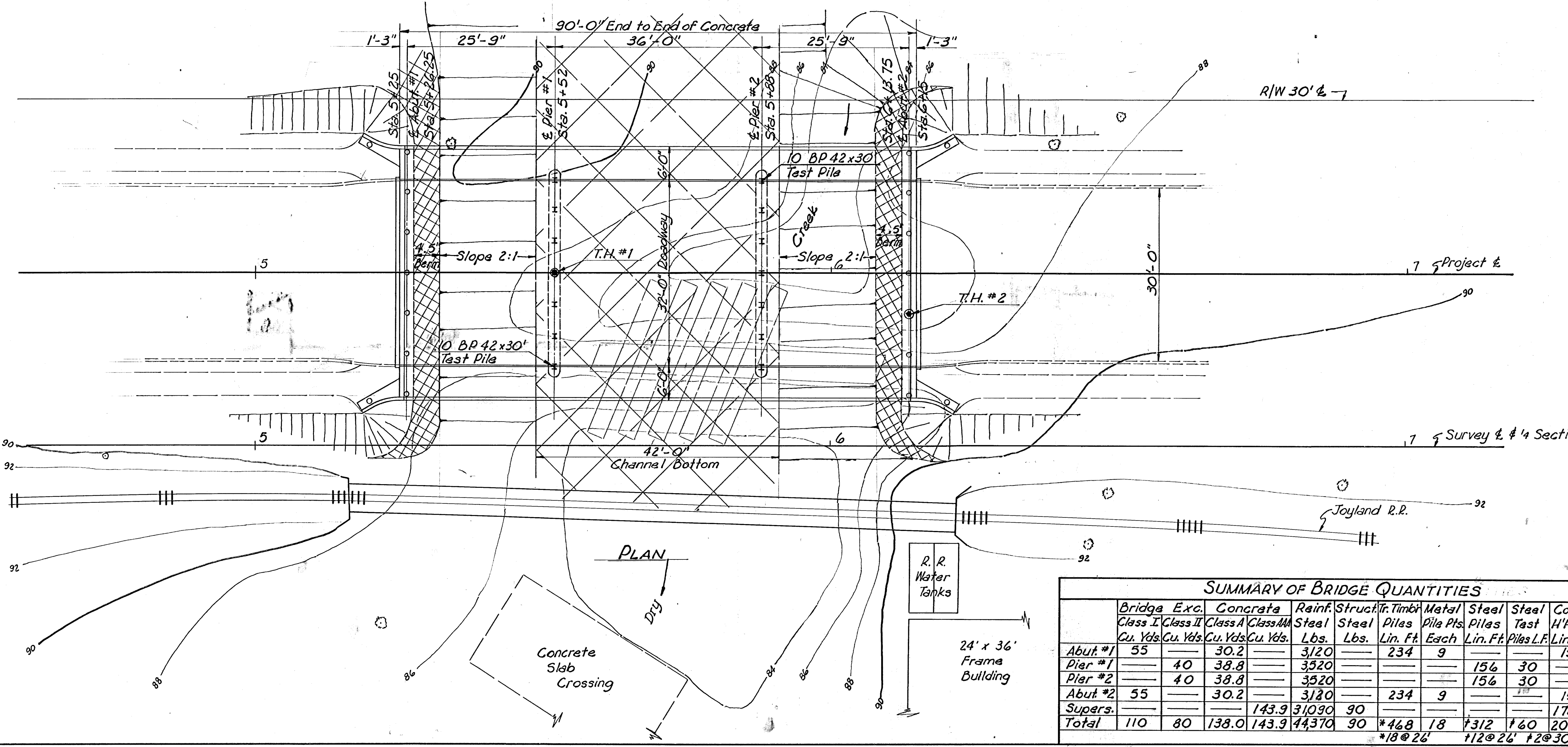
REINFORCING STEEL: All reinforcing steel shall conform to A.S.T.M. Specification A 305-49.

DESIGN:
 Design Loading: H 20-44 AASHO Specifications
 Unit Stresses: $f_s = 20,000$ psi. reinforcing
 $f_c = 1,200$ psi. Class A
 $f_c = 1,600$ psi. Class AAA
 Pile Loading: 20 tons per pile, Treated Timber
 37 tons per pile, Steel

GENERAL REQUIREMENTS: It is the intention of these plans and 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 noted.

WATERWAY DATA

Maximum Design Discharge	4,500 c.f.s.
Area Required @ 6ft/sec.	750 ft. ²
Total Area Provided to Proposed Flow Line	750 ft. ²
Total Area Provided to Future Flow Line	890 ft. ²



SUMMARY OF BRIDGE QUANTITIES

	Bridge Exc.	Concrete	Reinf. Steel	Struct. Steel	Timber	Metal Piles	Steel Piles	Steel Test Piles	Concr. H' Rail		
	Class I	Class II	Class A	Class AAA							
	Cu. Yds.	Cu. Yds.	Cu. Yds.	Cu. Yds.	Lbs.	Lbs.	Lin. Ft.	Each	Lin. Ft.		
Abut. #1	55	30.2	3,120		234	9			15.33		
Pier #1	40	38.8	3,520				156	30			
Pier #2	40	38.8	3,520				156	30			
Abut. #2	55	30.2	3,120		234	9			15.33		
Supers.			143.9	31,090	90				176.50		
Total	110	80	138.0	143.9	44,370	90	*468	18	†312	†60	207.16

*18 @ 26' †12 @ 26' †2 @ 30'

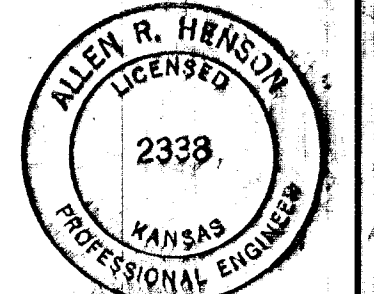
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 B. E. SMITH, CITY ENGINEER

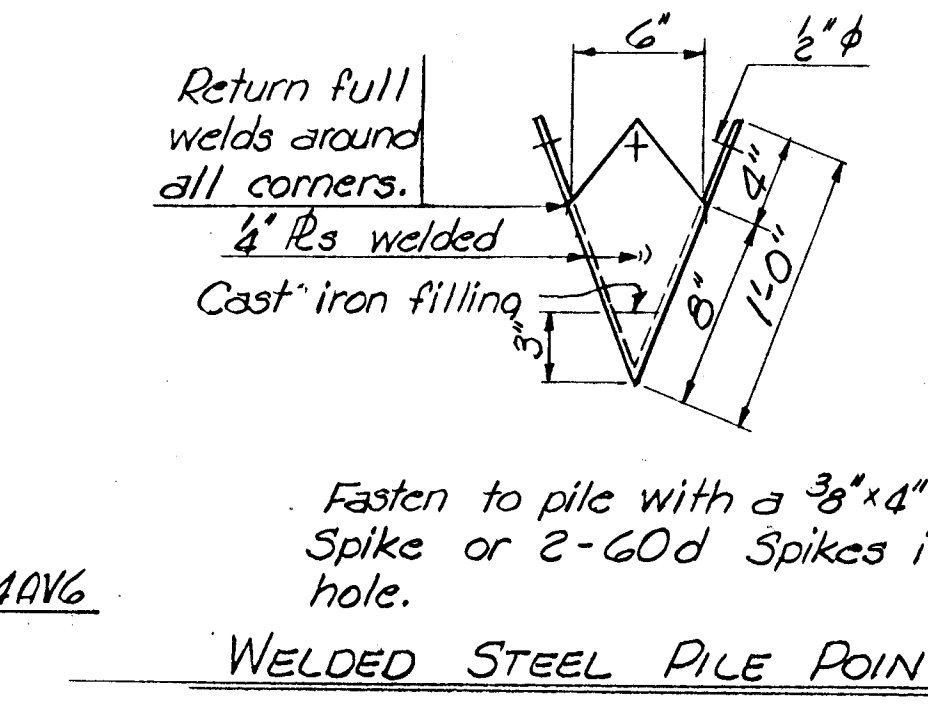
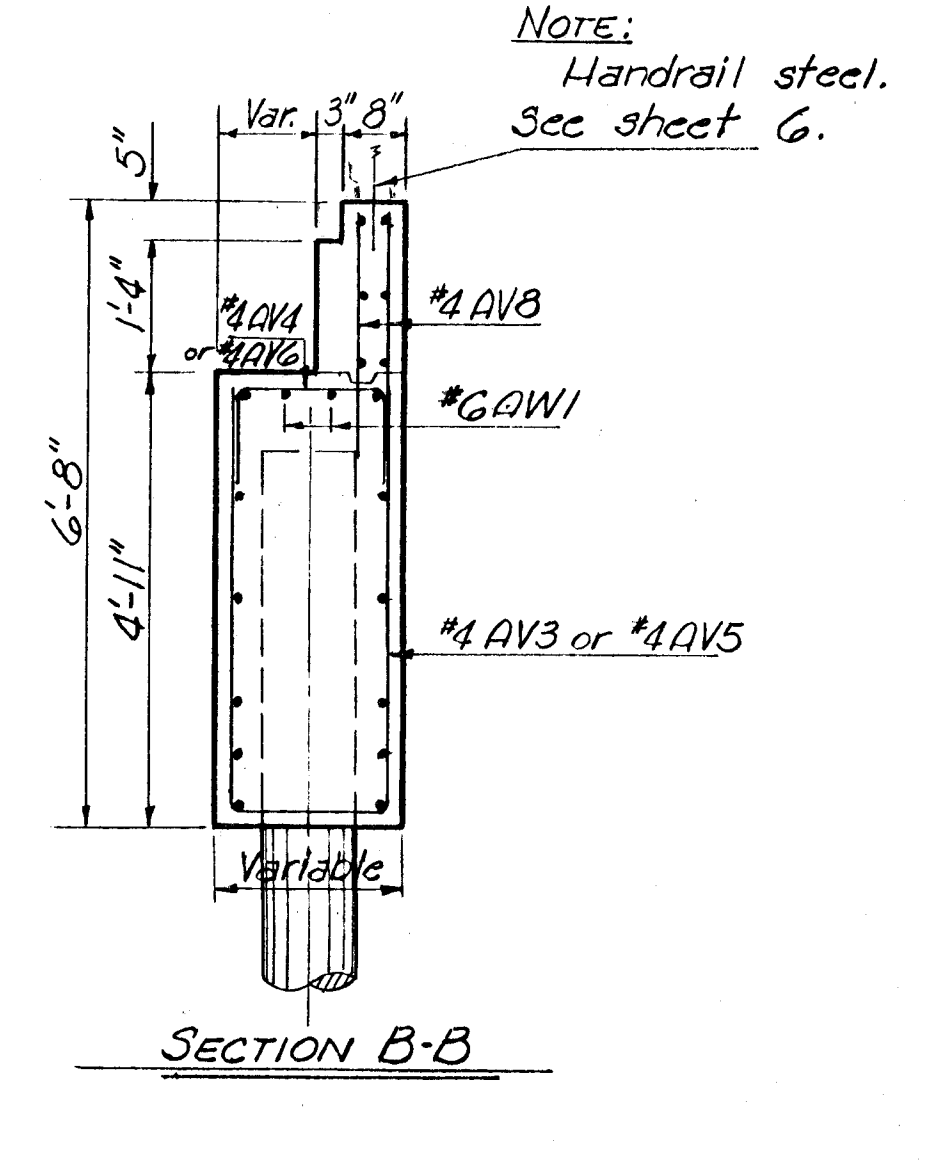
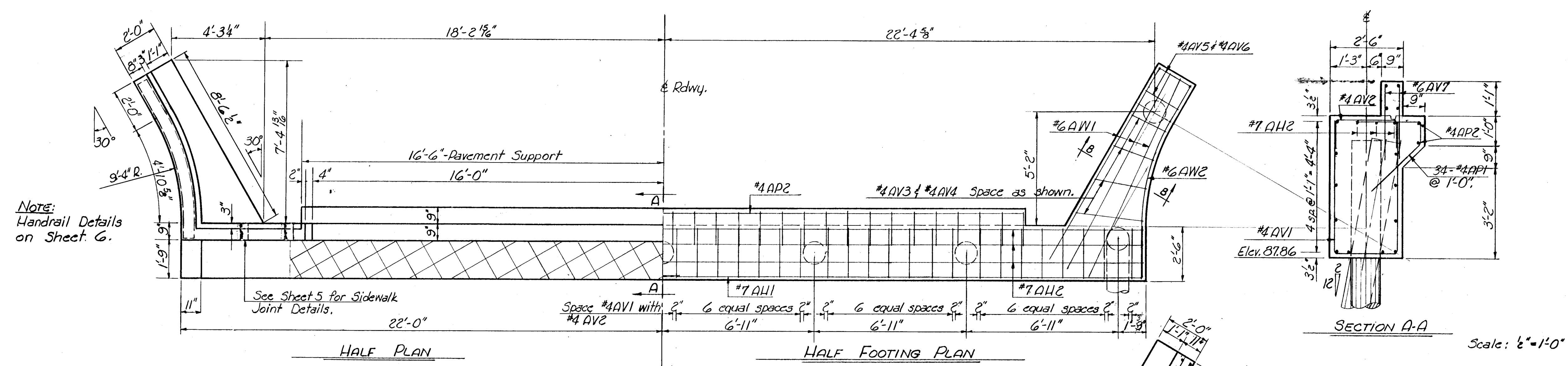
CONSTRUCTION LAYOUT
 WASSALL STREET BRIDGE
 OVER
 DRY CREEK

R. S. DELAMATER
 CONSULTING ENGINEER
 WICHITA, KANSAS

DATE: March, 1954
 SCALE: 1" = 10'
 DWG. NO.: 79-D-2

SURV. P.C.T. # 17123 PLOT. DR. P.C.T. TR. H.L.M. CKD. A.R.H. APP. 1/28/54





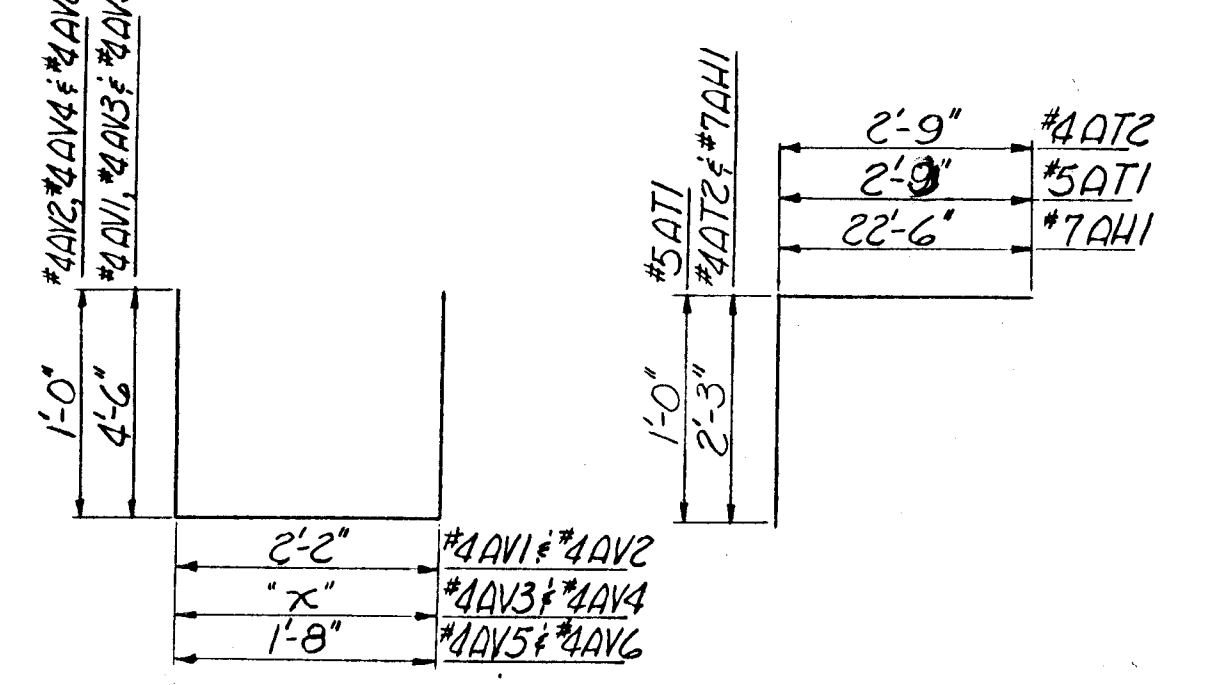
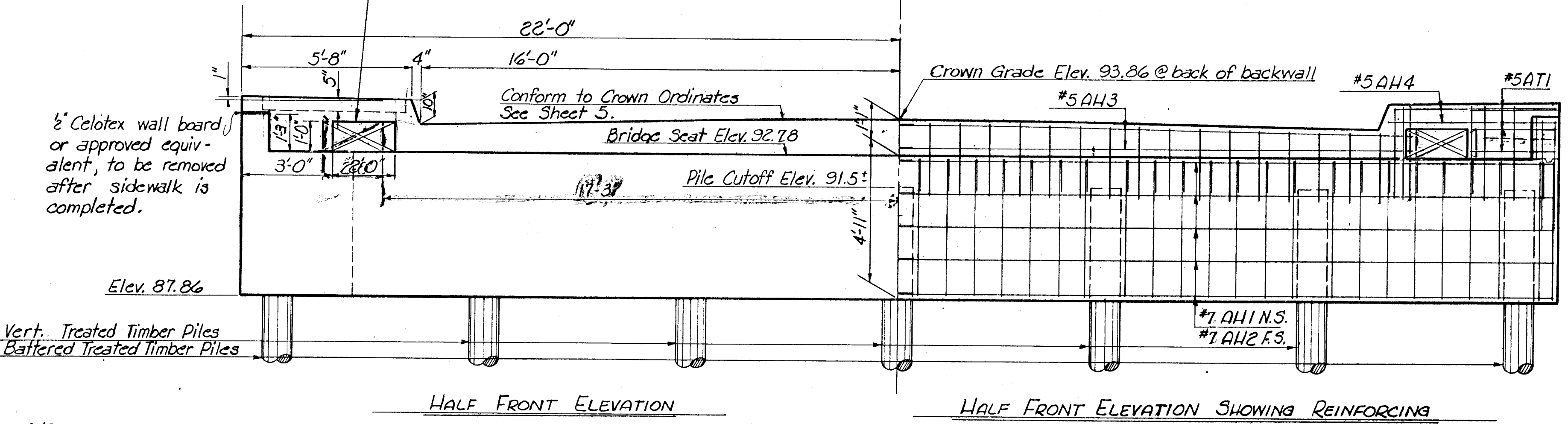
NOTE: Handrail Details on Sheet 6.

NOTE: Handrail steel. See sheet 6.

Return full welds around all corners. 4" R's welded. Cast iron filling.

Fasten to pile with a 3/8" x 4" Boat Spike or 2-60d Spikes in each hole.

WELDED STEEL PILE POINT



* See bar bending diagrams

ABUTMENT BAR LIST AND SUMMARY OF QUANTITIES

Mark	AH1	AH2	AH3	AH4	AP1	AP2	AT1	AT2	AW1	AW2	AW3	AV1	AV2	AV3	AV4	AV5	AV6	AV7	AV8
No. Req'd.	10	18	8	8	34	4	12	4	16	12	12	44	44	8	8	4	4	66	58
Size	#7	#7	#5	#5	#4	#4	#5	#4	#6	#6	#5	#4	#4	#4	#4	#4	#4	#6	#4
Length	24'-9"	22'-6"	17'-6"	5'-6"	4'-9"	16'-9"	3'-9"	5'-0"	9'-9"	8'-11"	7'-3"	11'-2"	4'-2"	*	*	10'-8"	3'-8"	2'-3"	3'-0"
Shape	└	└	└	└	└	└	└	└	└	└	└	└	└	└	└	└	└	└	└

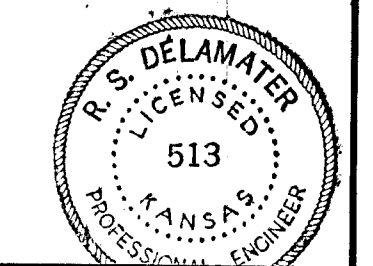
Class A Concrete 302 Cu. Yds.
Concrete Handrail 1533 Lin. Ft.
Reinforcing Steel 3120 Lbs.
Treated Timber Piles 234 Lin. Ft.
Metal Pile Points 9 Each

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B. E. SMITH, CITY ENGINEER

ABUTMENT DETAILS
WASSALL STREET BRIDGE
OVER
DRY CREEK

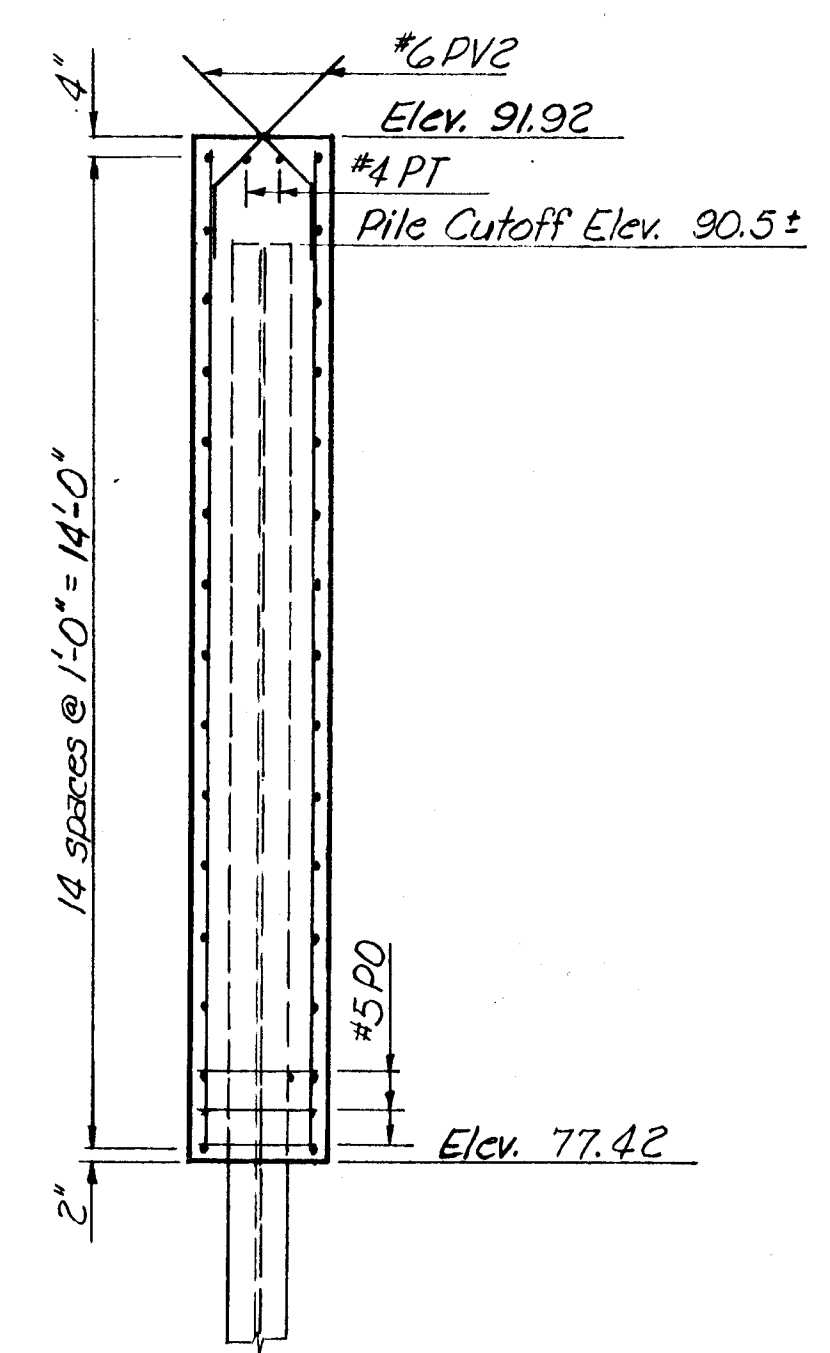
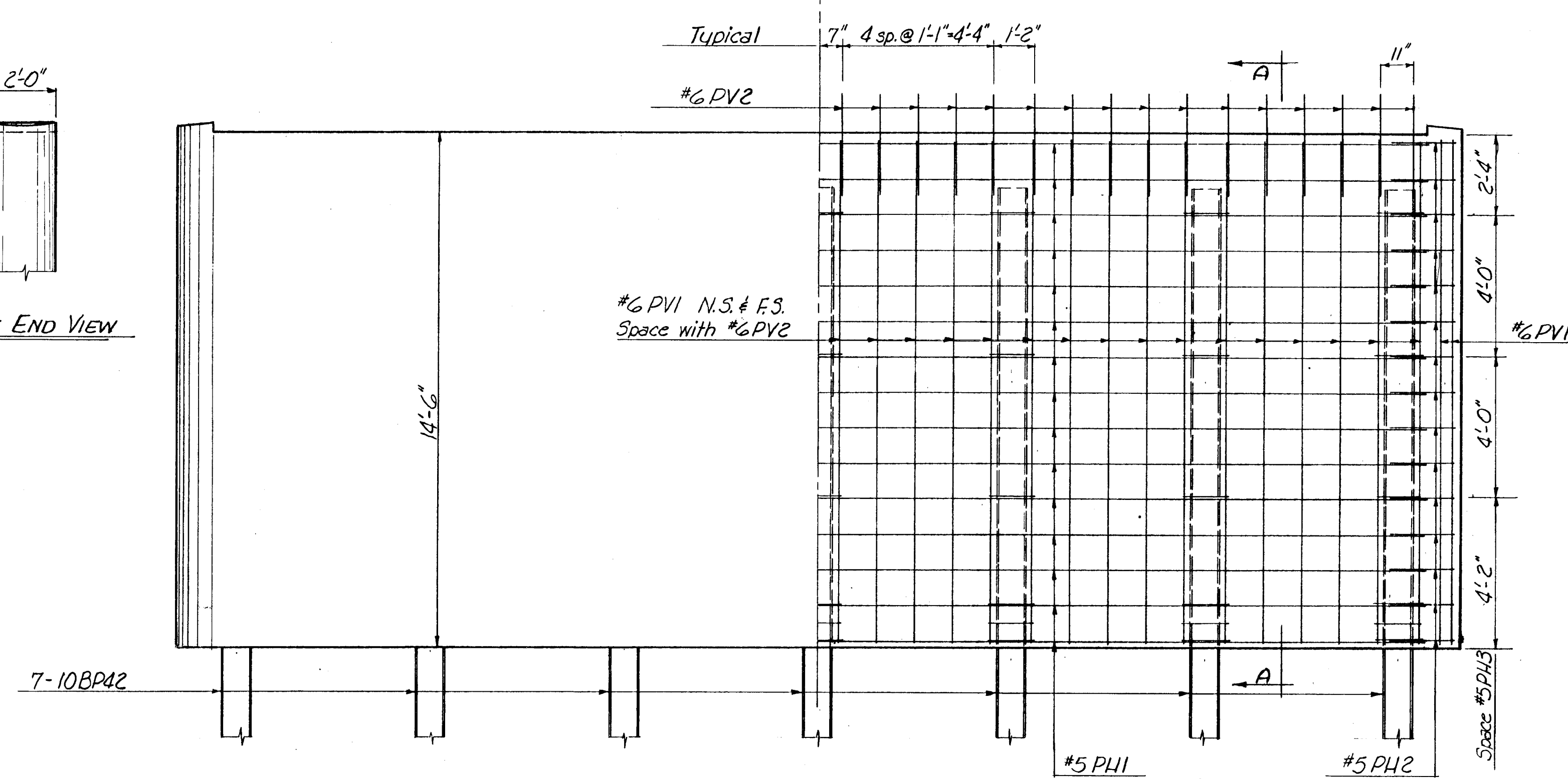
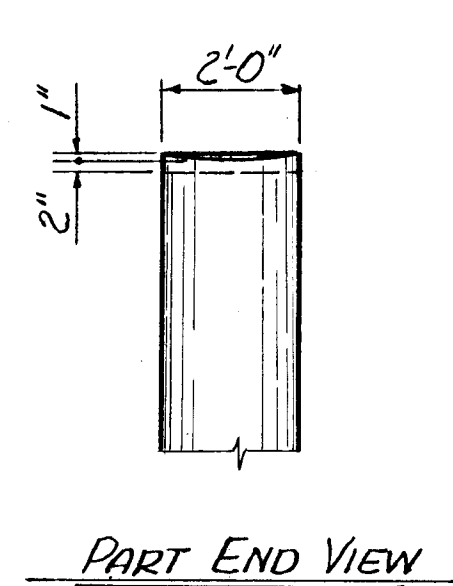
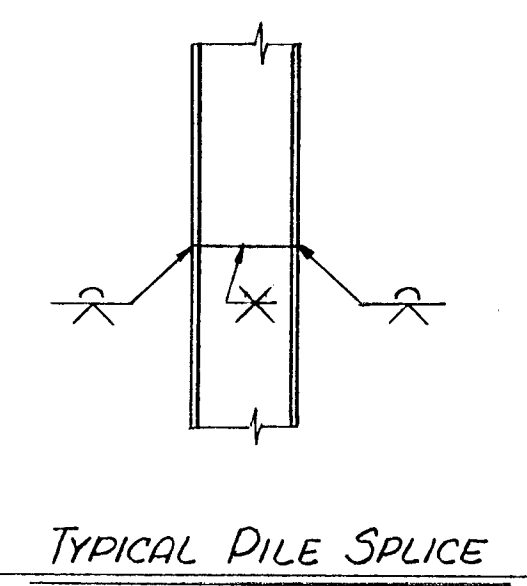
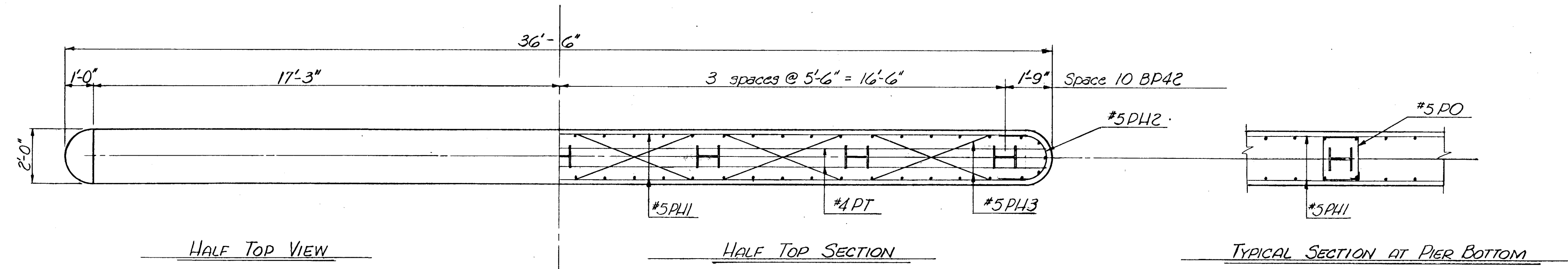
R. S. DELAMATER
CONSULTING ENGINEER
WICHITA, KANSAS

DATE March 1954
SCALE 1/4" = 1'-0"
DWG. NO. 79-D-3

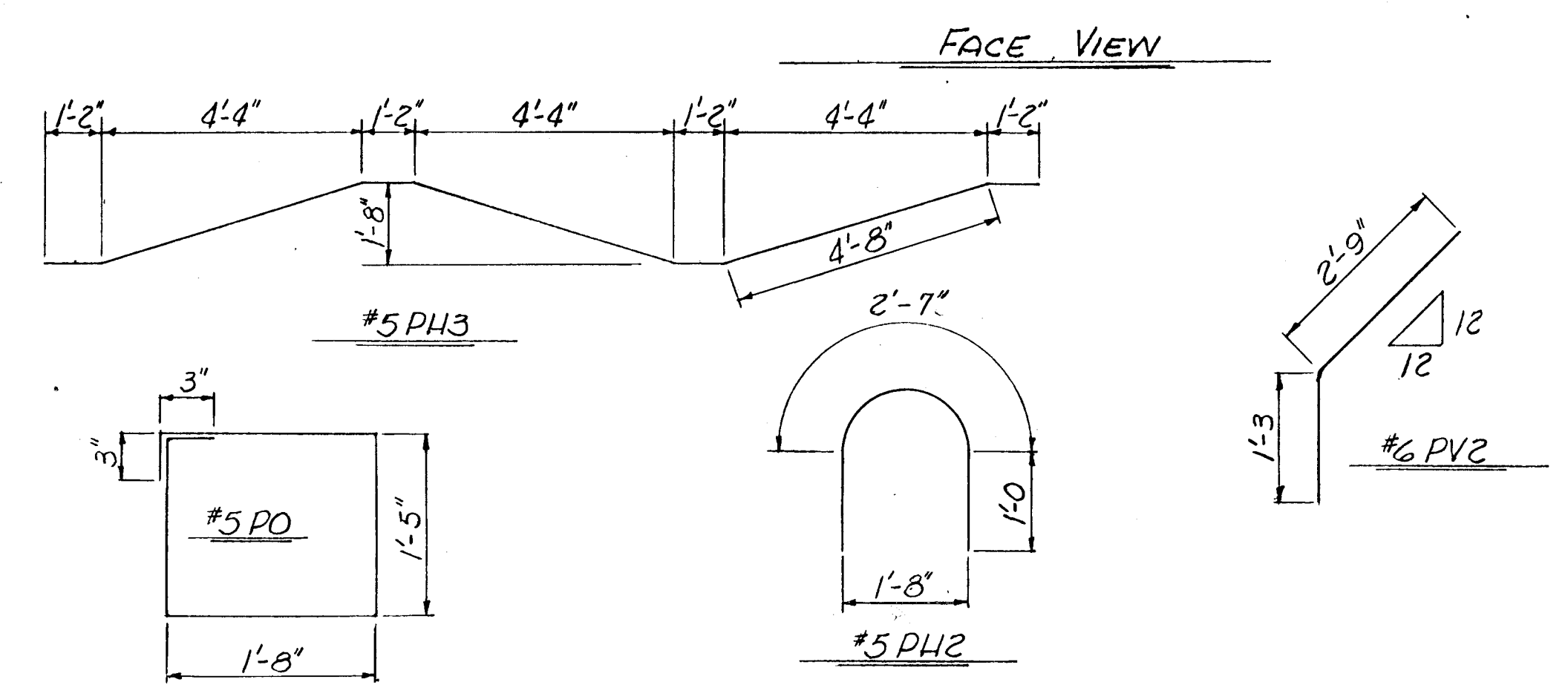


SURV. PLAT. DES. DR. PCT. TR. CKD. A.H. APP. 02/11/54

*x dimension increases in increments of 5" from 1'-9" to 3'-0".



NOTES:
 Class A concrete shall be used throughout.
 Bevel all exposed edges with a 3/4" triangular molding and fillet all corners 3/4" unless otherwise indicated.
 All dimensions shown relative to reinforcing steel placement are to 1/2" of bars unless otherwise noted. All dimensions shown in the bending diagrams are out to out of bars.
 Design Loading: 120-44
 Pile Loading: 37 tons per pile



SUMMARY OF PIER QUANTITIES							
Mark	PH1	PH2	PH3	PVI	PV2	PO	PT
No. Reqd.	30	30	12	70	64	21	2
Size	#5	#5	#5	#6	#6	#5	#4
Length	34'-6"	4'-7"	18'-8"	14'-2"	4'-0"	6'-8"	36'-2"
Shape	—	∩	∩	∩	∩	∩	∩
Class A Concrete		38.8 Cu. Yds.		Reinforcing Steel		3520 Lbs.	
Steel Piles (10BP42)		156 Lin. Ft.		Steel Test Pile		30 Lin. Ft.	

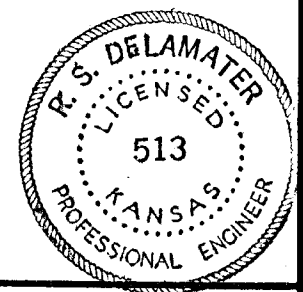
CITY OF WICHITA, KANSAS
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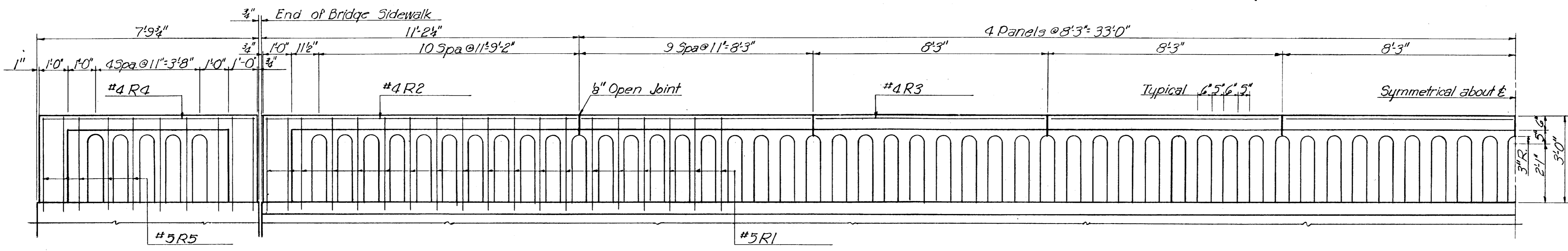
PIER DETAILS
 WASSALL STREET BRIDGE
 OVER
 DRY CREEK

R. S. DELAMATER
 CONSULTING ENGINEER
 WICHITA, KANSAS

DATE: *March 1954*
 SCALE: *1/4" = 1'-0"*
 DWG. NO.: **79-D-4**

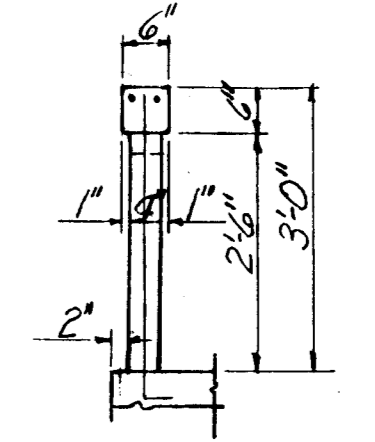
SURV. PLOT. DES. DR. PCT. TR. CHD. A.H. APP. *R.S.D./R.W.*



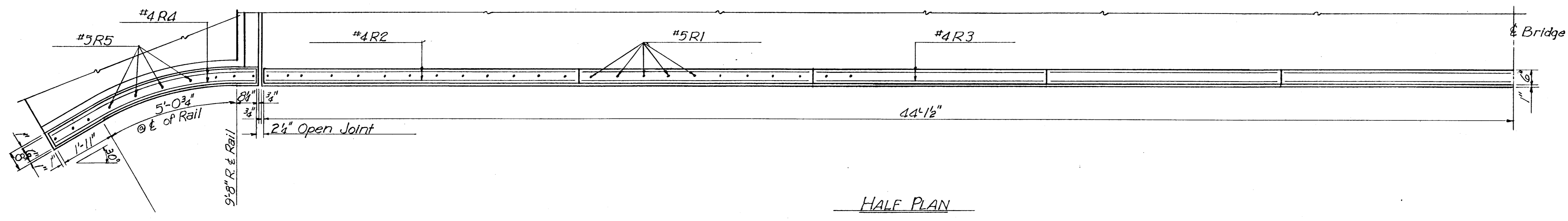


DEVELOPED VIEW OF ABUT. HANDRAIL

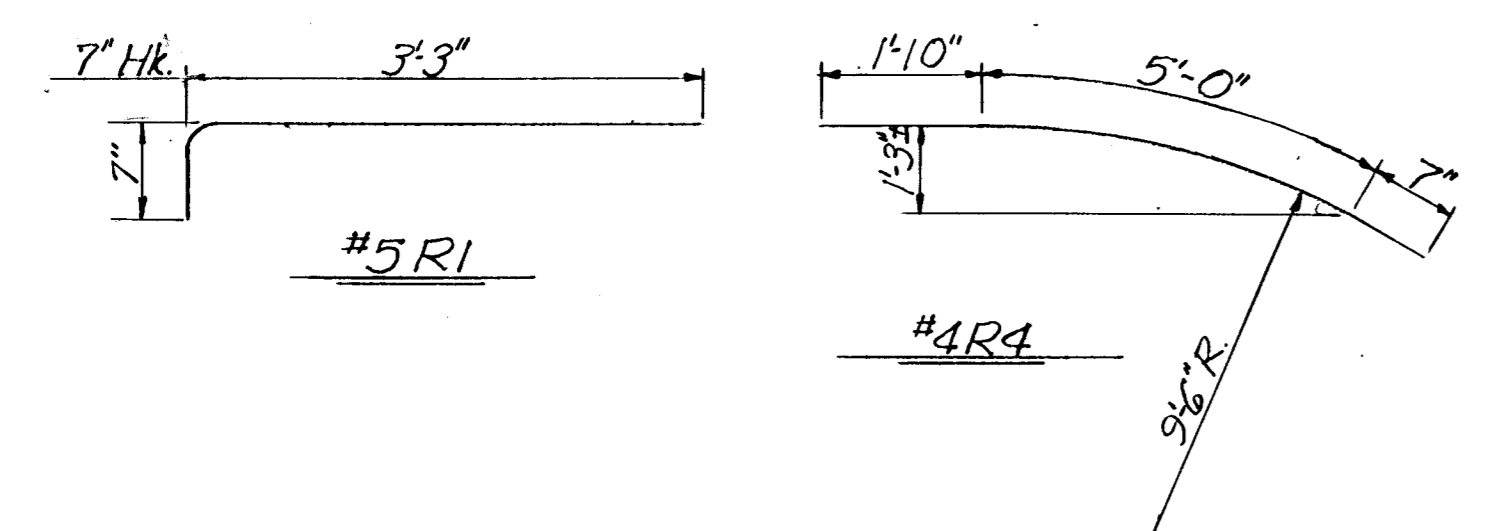
HALF ELEVATION OF BRIDGE HANDRAIL



SECTION THRU RAIL



HALF PLAN

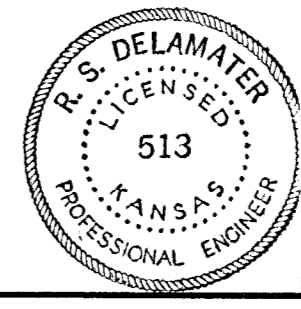


BAR LIST					
Mark	R1	R2	R3	R4	R5
No. Reqd	196	8	32	8	40
Size	#5	#4	#4	#4	#5
Length	3'-10"	11'-0"	8'-0"	7'-5"	3'-4"
Shape					
SUMMARY OF QUANTITIES					
Class A Concrete	5.6 Cu. Yd.				
Reinforcing Steel	1210 Lbs.				

NOTES:

All concrete used in the handrail shall be Class A.
 Bevel all exposed edges with a 1/2" triangular molding unless otherwise indicated.
 Bid item "Concrete Handrail" shall include all Class A Concrete and reinforcing steel in handrail complete in place, as shown on this sheet.
 Concrete Handrail shall be bid on basis of linear feet in place. The Class A Concrete and Reinforcing Steel quantities shown on this sheet are for Contractor's information only.

SURV. PLOT. DES. DR. A.H. TR. CHD. PCT. APP. R.S. DELAMATER



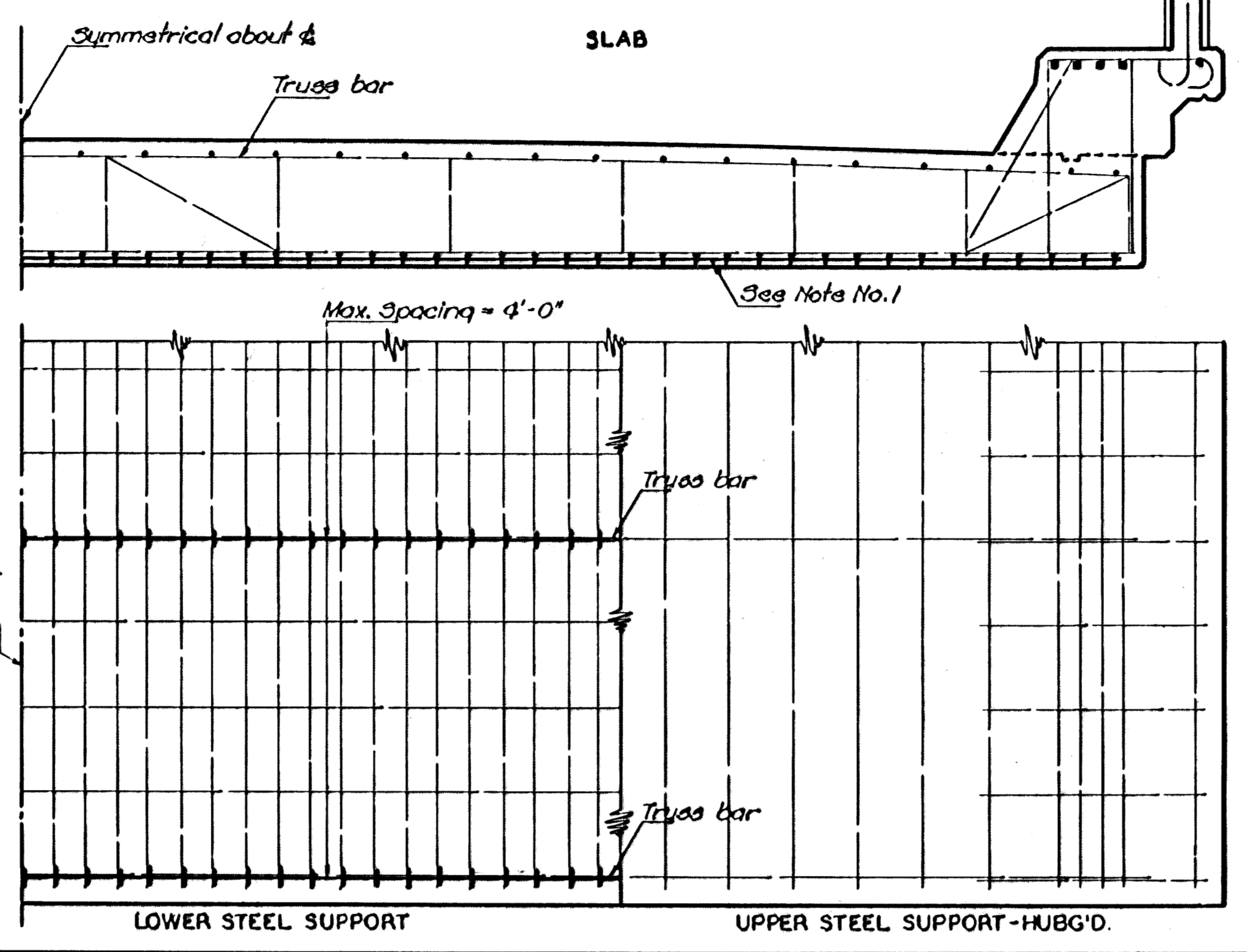
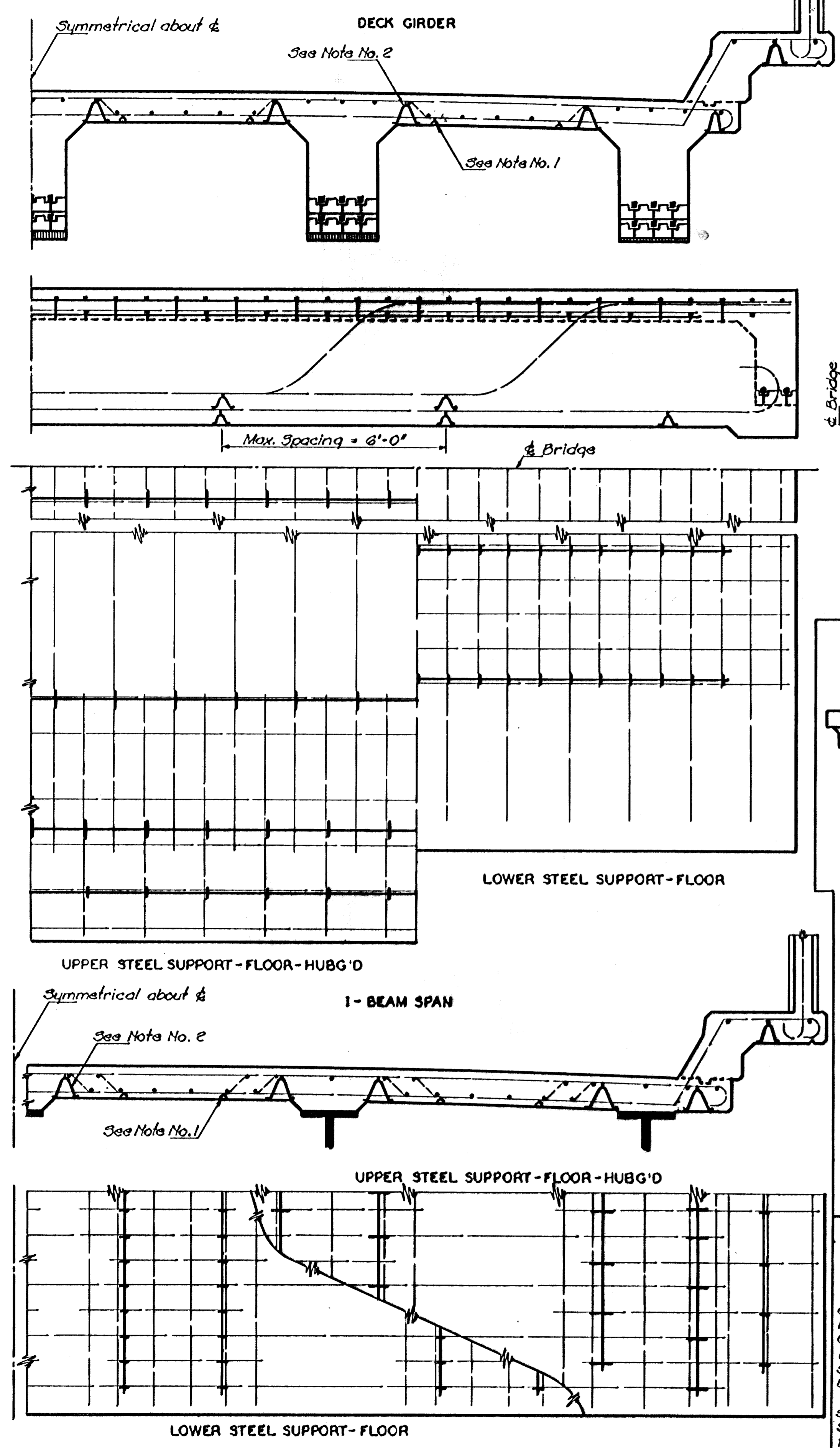
CITY OF WICHITA, KANSAS
 B. E. SMITH, CITY ENGINEER

HANDRAIL DETAILS
 WASSALL STREET BRIDGE
 OVER
 DRY CREEK

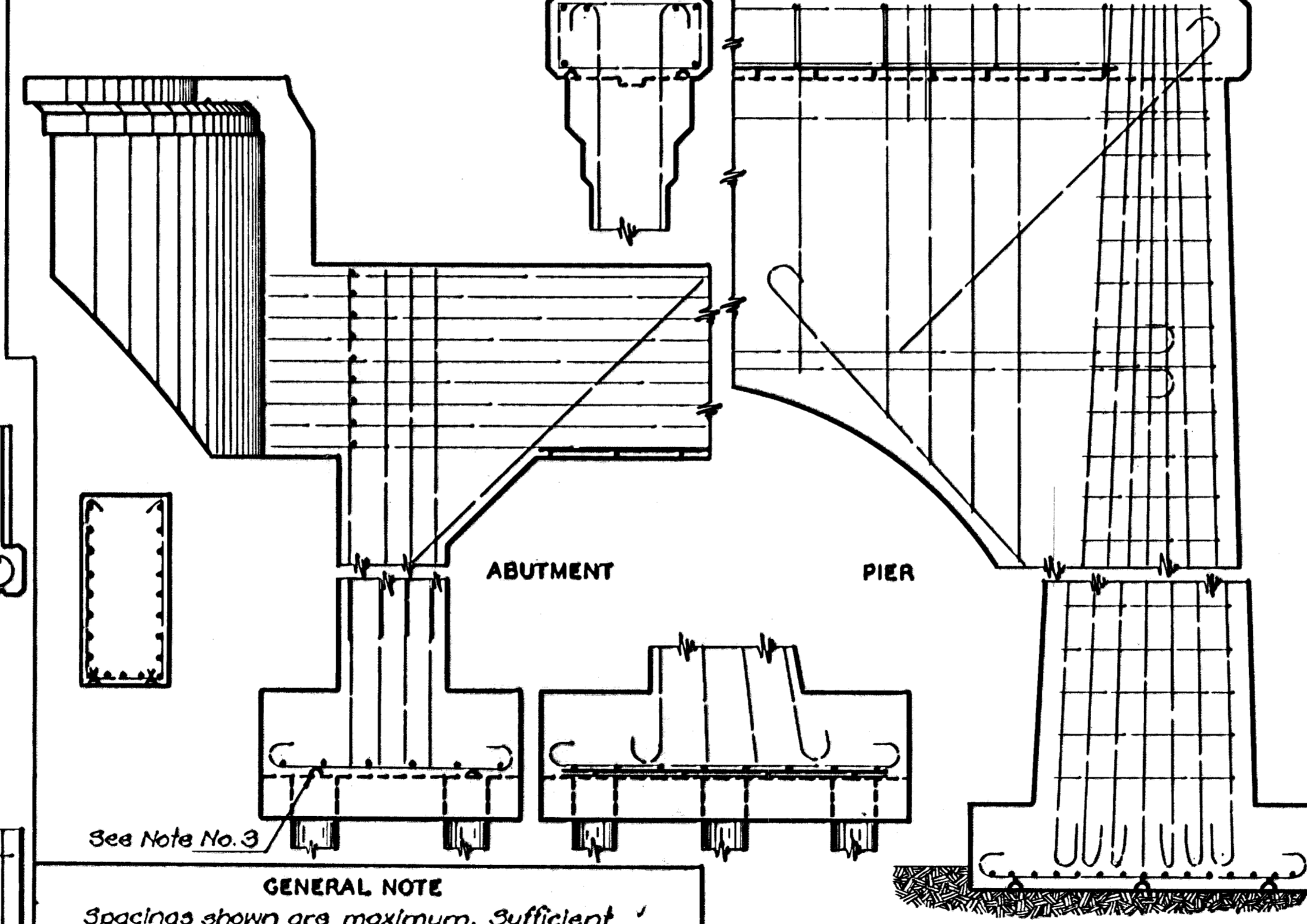
R. S. DELAMATER
 CONSULTING ENGINEER
 WICHITA, KANSAS

DATE *February, 1954*
 SCALE 2" = 1'-0"
 DWG. NO. 79-D-6

TYPICAL SUPERSTRUCTURE DETAILS



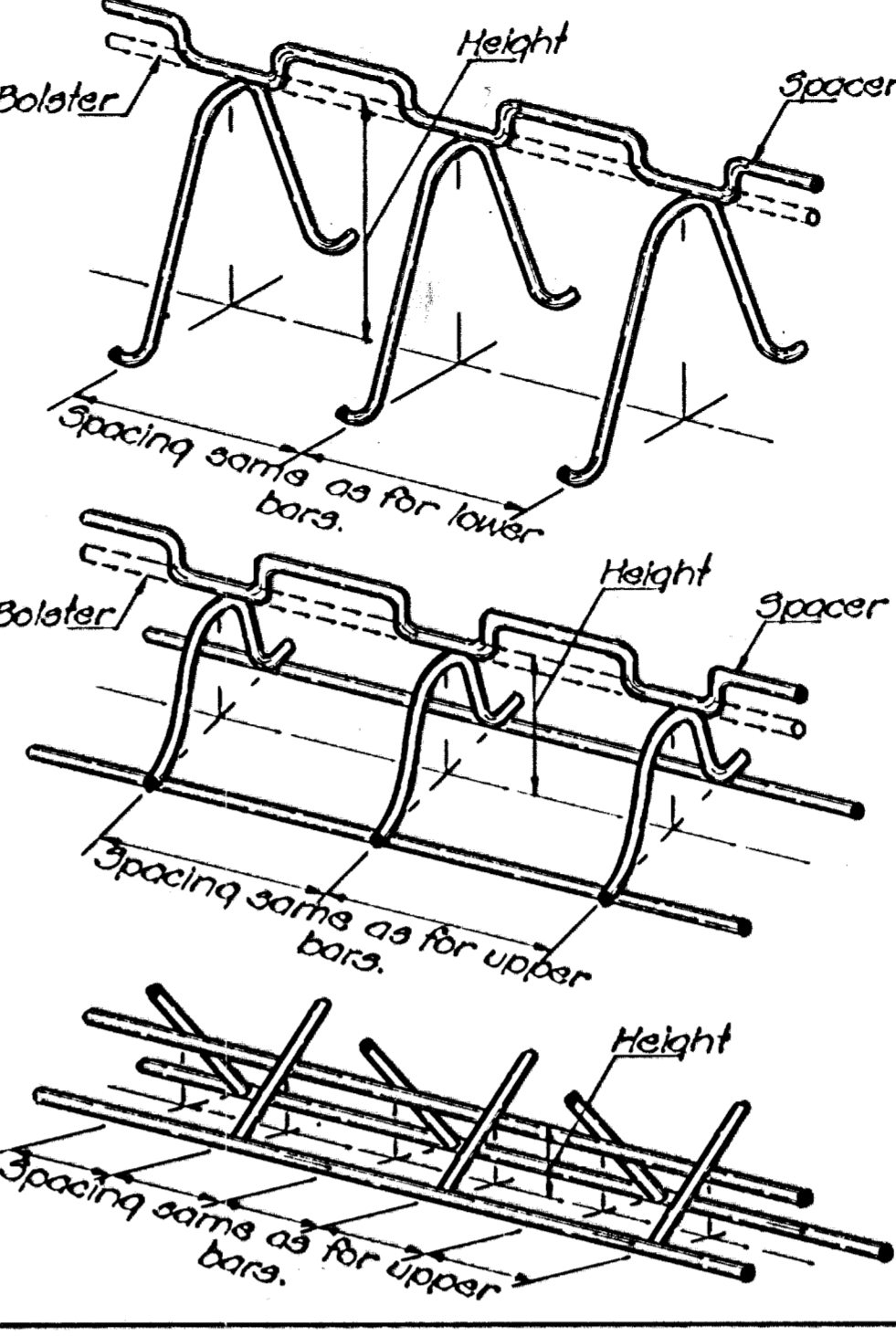
TYPICAL SUBSTRUCTURE DETAILS



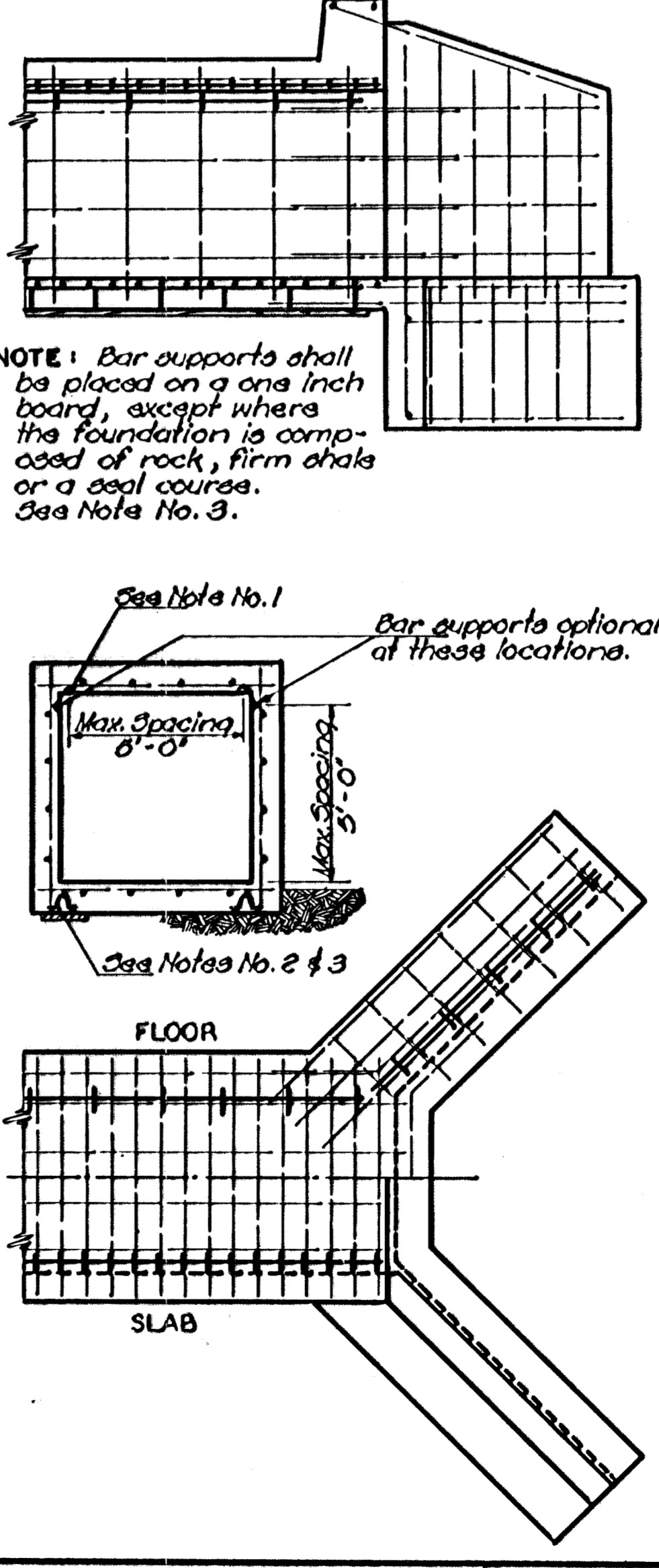
GENERAL NOTE
Spacings shown are maximum. Sufficient supports shall be used, as determined by the Engineer, to retain the reinf. steel in position. Approved designs and arrangements of Supports or Spacers other than as shown on this sheet, may be used with the permission of the Engineer. Component parts 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.
Wires 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. Wires 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.

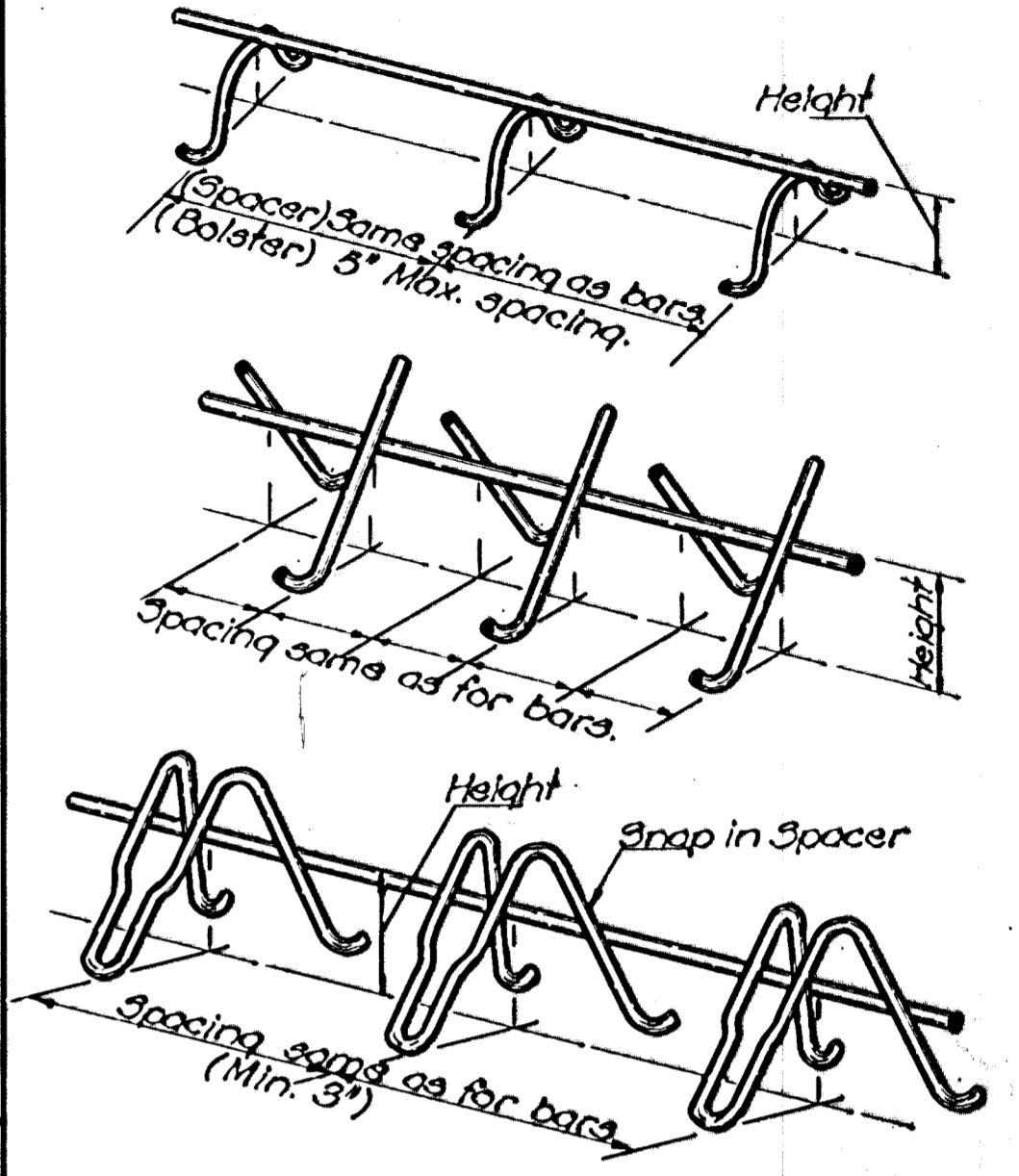
BEAM BAR SPACERS & BOLSTERS



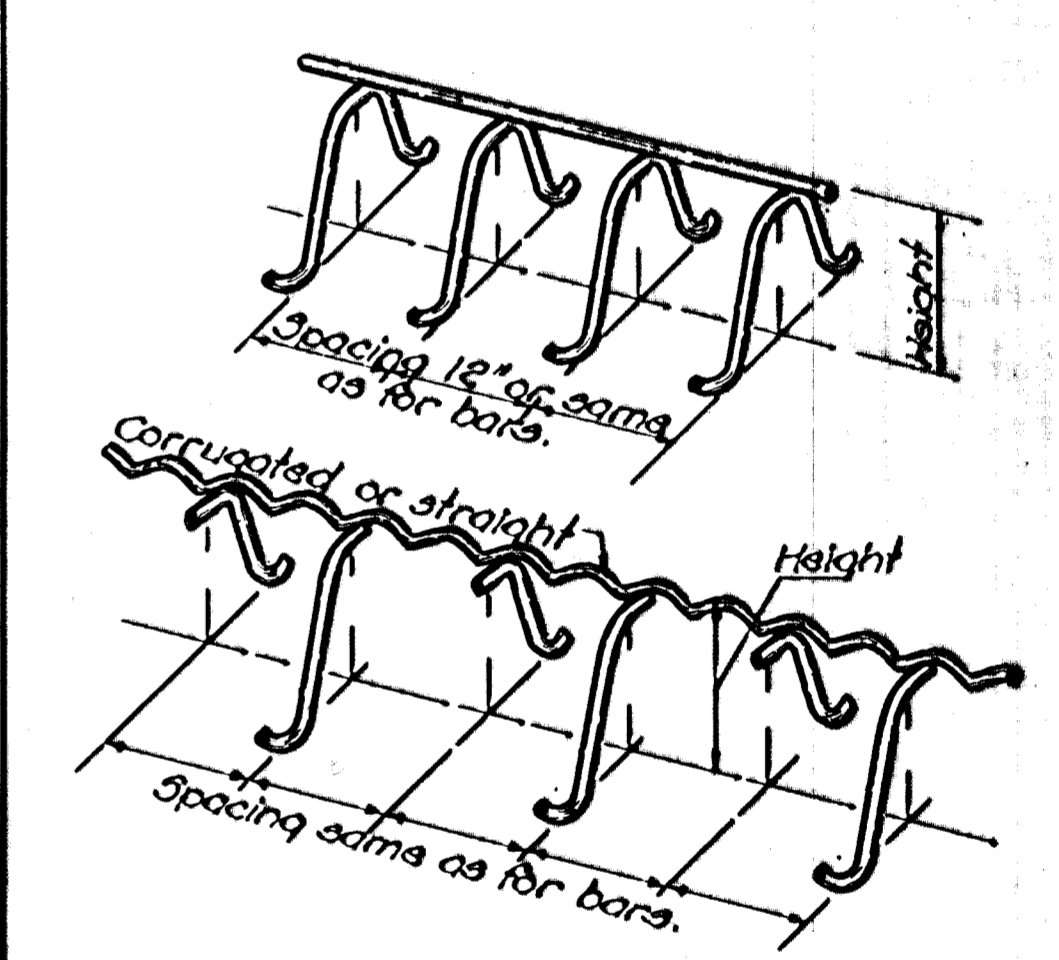
TYPICAL CULVERT DETAILS



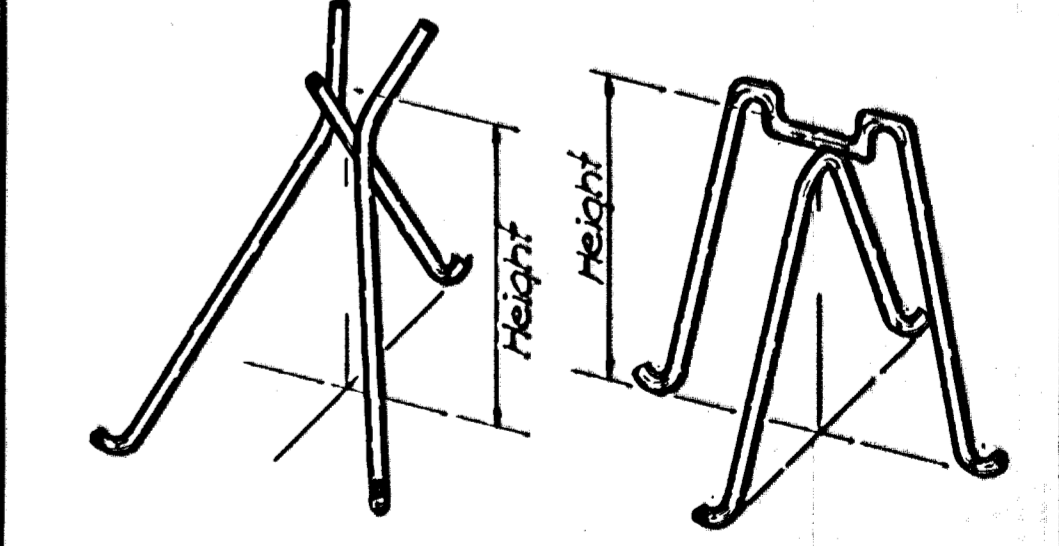
LOW SLAB BAR SPACERS & BOLSTERS



HIGH SLAB BAR SPACERS & BOLSTERS



INDIVIDUAL HIGH BAR CHAIRS



3					
2					
1	3-15	No change for 1945 Spacers			
NO.	DATE	REVISIONS	BY	APP'D	
STATE HIGHWAY COMMISSION OF KANSAS					
SUPPORTS AND SPACERS					
FOR					
REINFORCING STEEL					
STD. NO. 610 SCALE No. 3/4"					
DESIGNED BY E.A. ROATE 7-23 DETAILED BY W.A.B., TRACED BY M.A.D.					
CHECKED BY S.T. APPROVED BY L.D. Universal DATE 4-17-45					