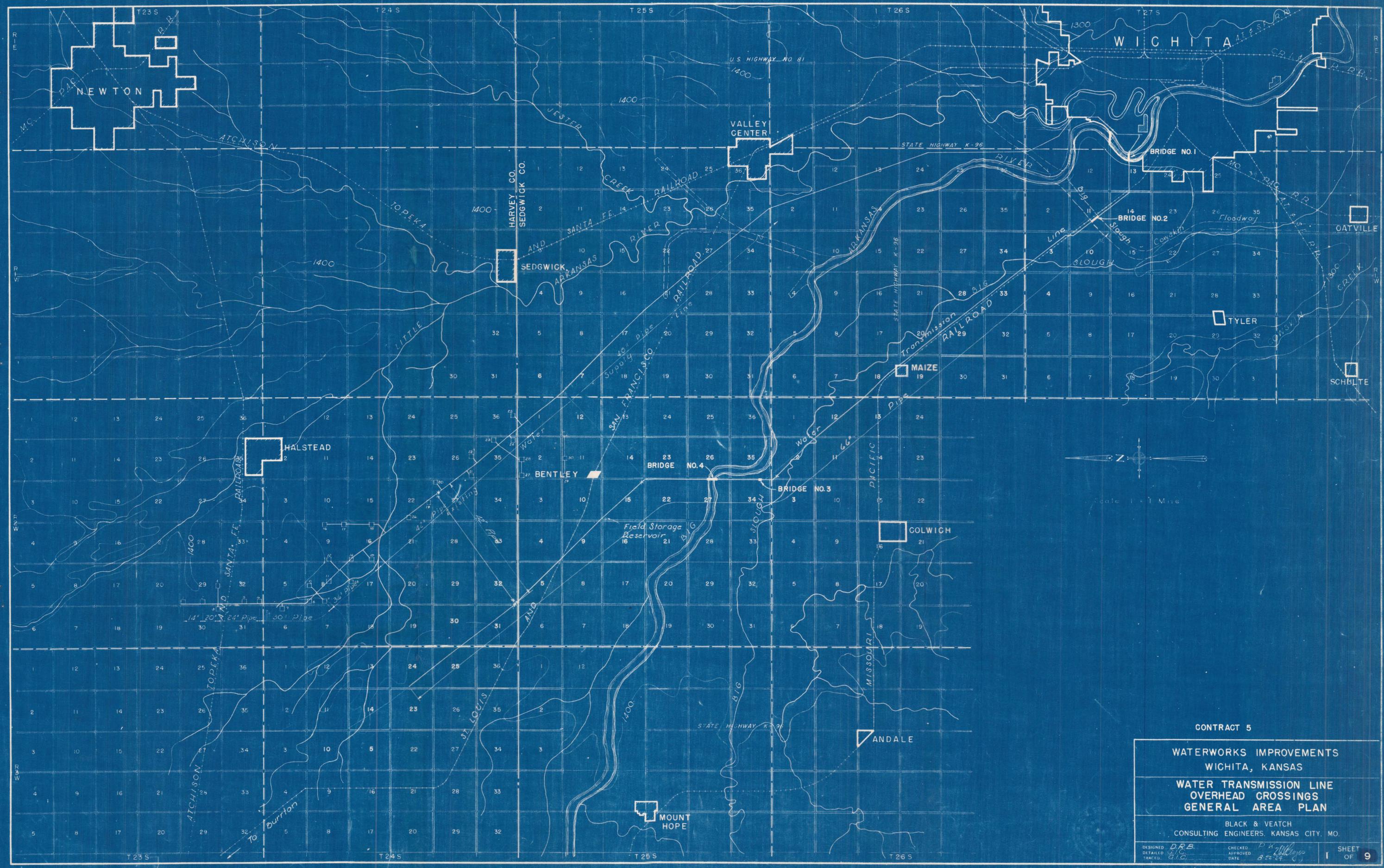


B. & V.
Office Copy

PLANS FOR
WATERWORKS IMPROVEMENTS
WICHITA, KANSAS
WATER TRANSMISSION LINE
CONTRACT 5

BLACK & VEATCH
CONSULTING ENGINEERS
KANSAS CITY, MO.
1954

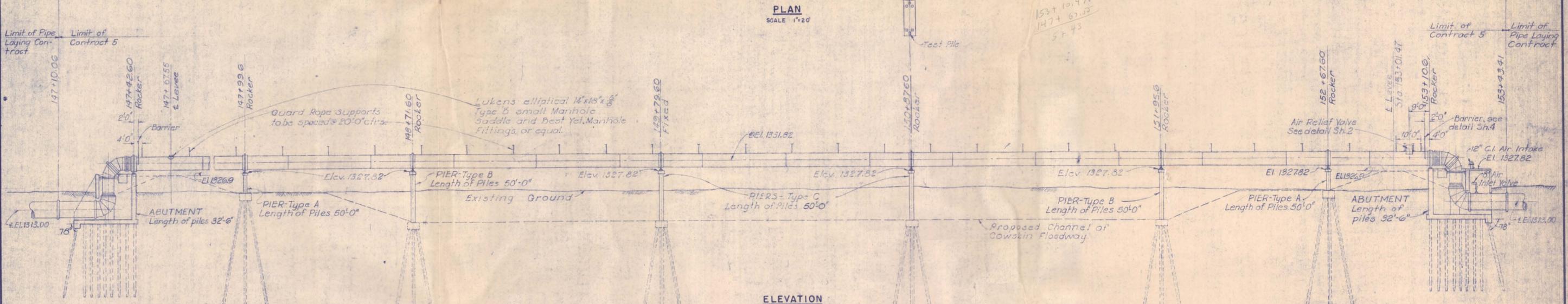
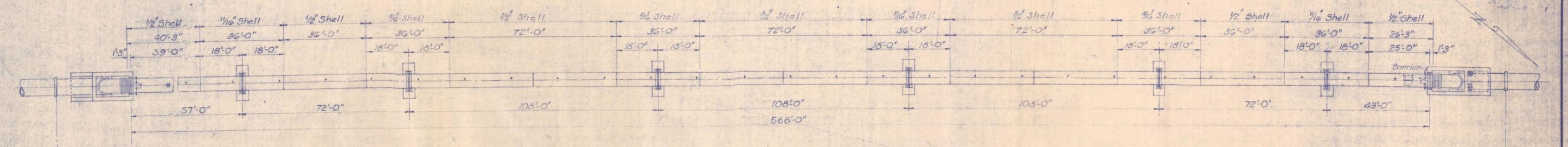


CONTRACT 5

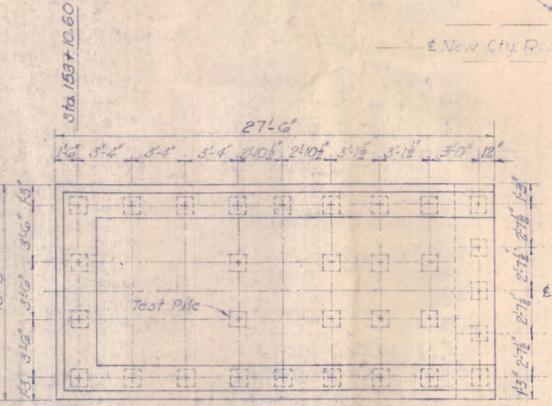
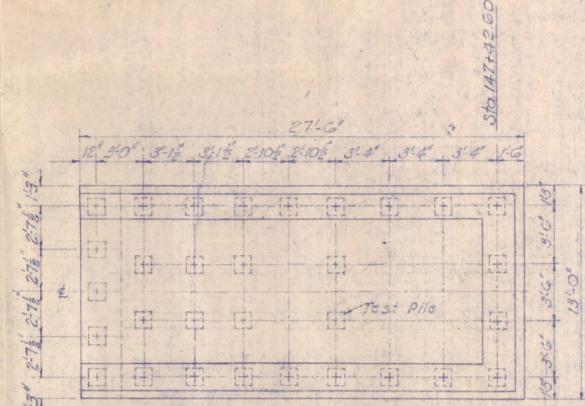
**WATERWORKS IMPROVEMENTS
WICHITA, KANSAS
WATER TRANSMISSION LINE
OVERHEAD CROSSINGS
GENERAL AREA PLAN**

BLACK & VEATCH
CONSULTING ENGINEERS, KANSAS CITY, MO.

DESIGNED: <i>D.R.B.</i>	CHECKED: <i>D.K.</i>	SHEET OF 9
TRACED: <i>A.L.C.</i>	APPROVED: <i>[Signature]</i> DATE: <i>8-25-58</i>	

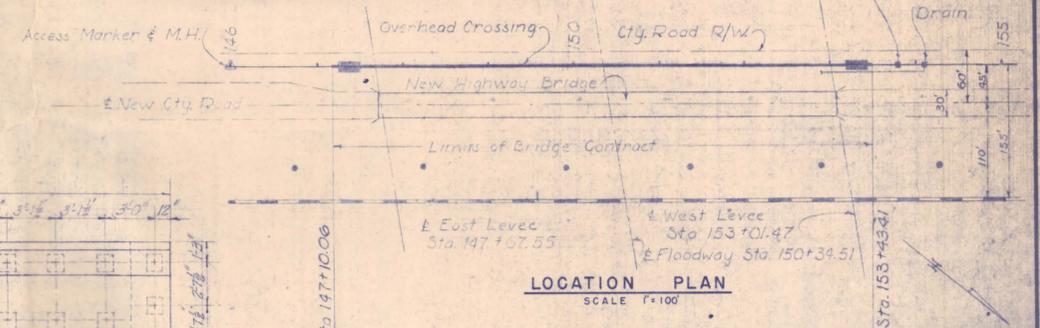


NOTE
 Concrete elbow, concrete to steel adapter piece and one lying length of 66" concrete pipe for each end of bridge to be furnished by others and installed by overhead crossing contractor.



ABUTMENT PILING PLANS
 SCALE 3/16" = 1'-0"

8-15-58	Moved piers and abutments 74' south	WRC
DATE	REVISION	BY



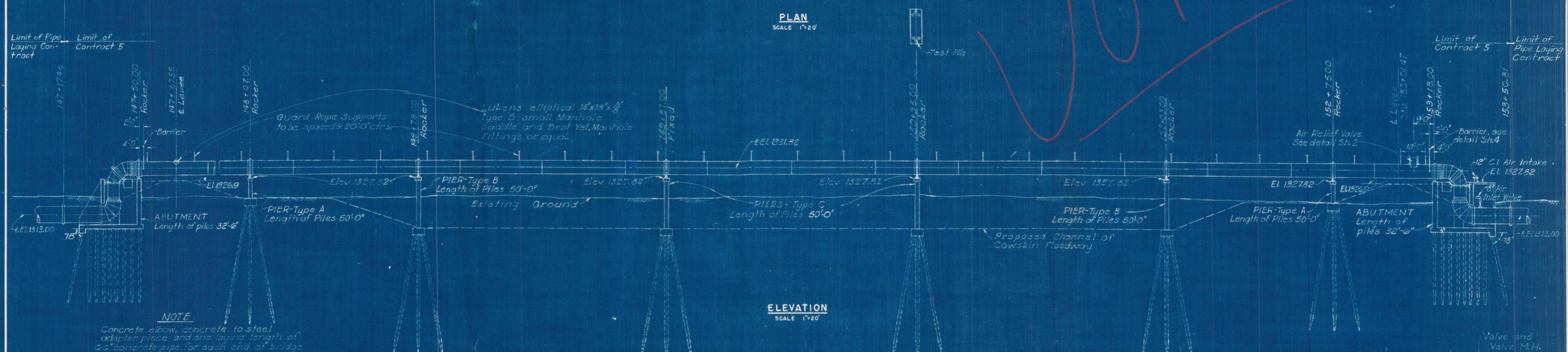
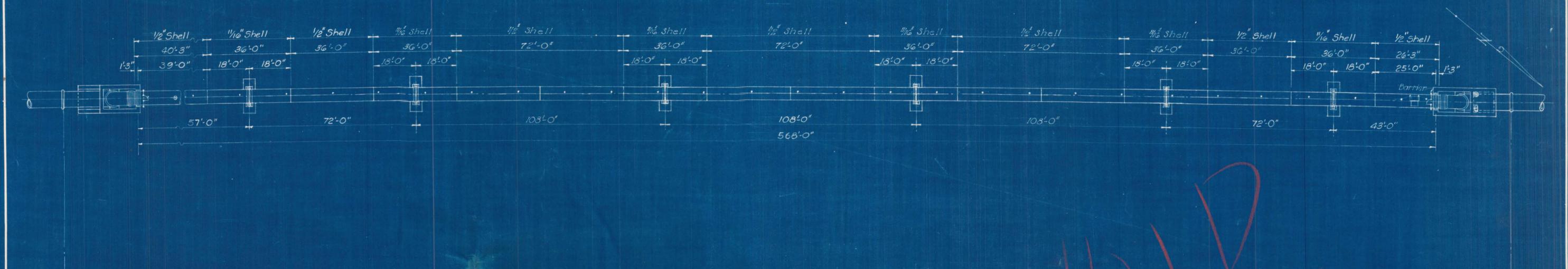
**WATERWORKS IMPROVEMENTS
 WICHITA, KANSAS**

**WATER TRANSMISSION LINE
 OVERHEAD CROSSINGS
 GENERAL LAYOUT BRIDGE NO. 2**

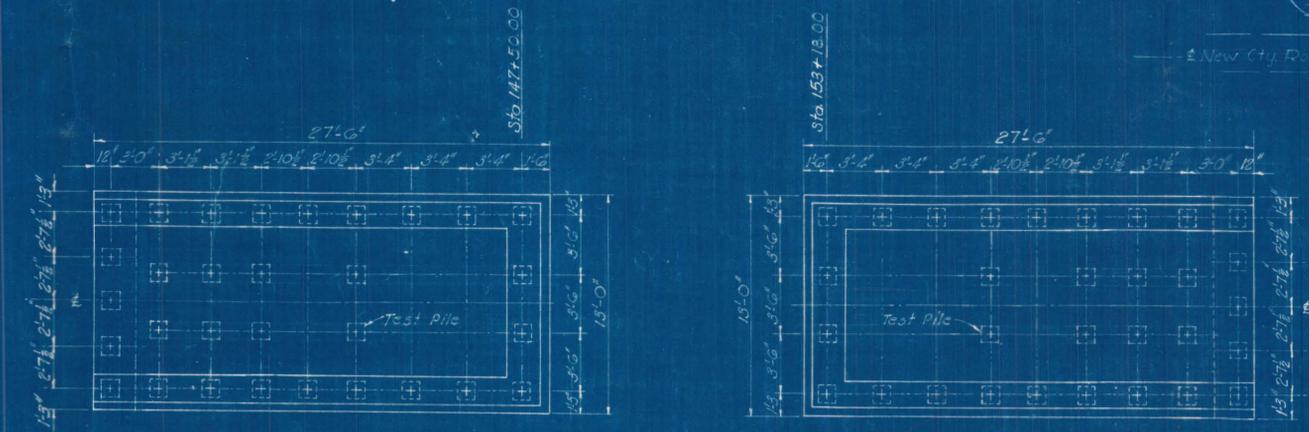
BLACK & VEATCH
 CONSULTING ENGINEERS, KANSAS CITY, MO.

DESIGNED D.R.B.	CHECKED D.R.B.	DATE 8-15-58	3 SHEET OF 9
DETAILED M.H.P.	APPROVED [Signature]	DATE 8-15-58	

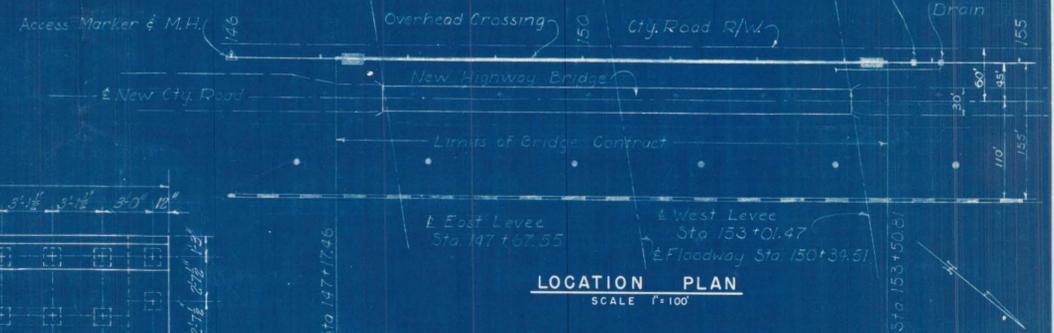
CONTRACT 5



NOTE
 Concrete elbow, concrete to steel adapter piece and one laying length of 66" concrete pipe for each end of bridge to be furnished by others and installed by overhead crossing contractor.



ABUTMENT PILING PLANS
 SCALE 3/16"=1'-0"



LOCATION PLAN
 SCALE 1"=100'

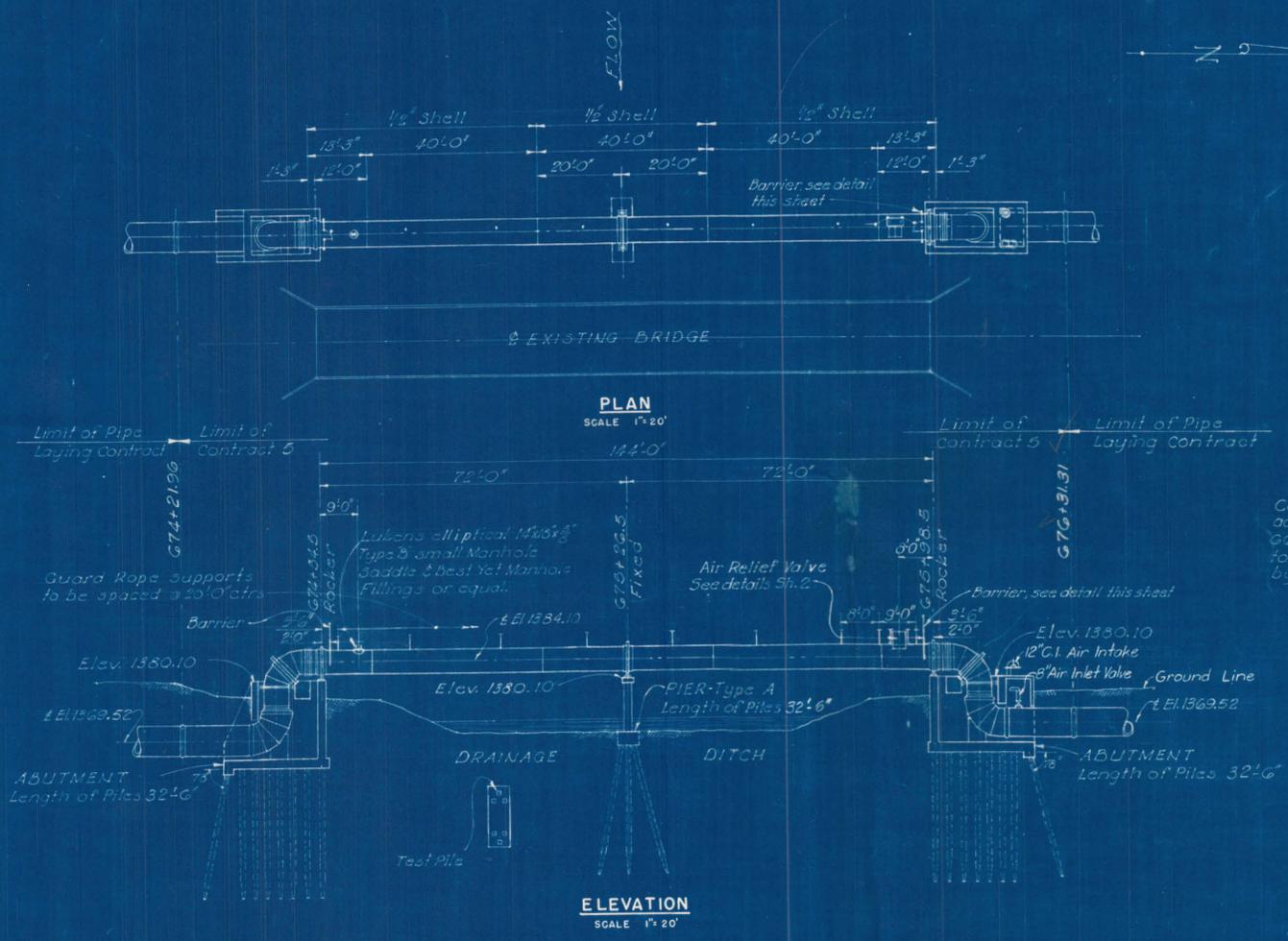
WATERWORKS IMPROVEMENTS
WICHITA, KANSAS

WATER TRANSMISSION LINE
OVERHEAD CROSSINGS
GENERAL LAYOUT BRIDGE NO. 2

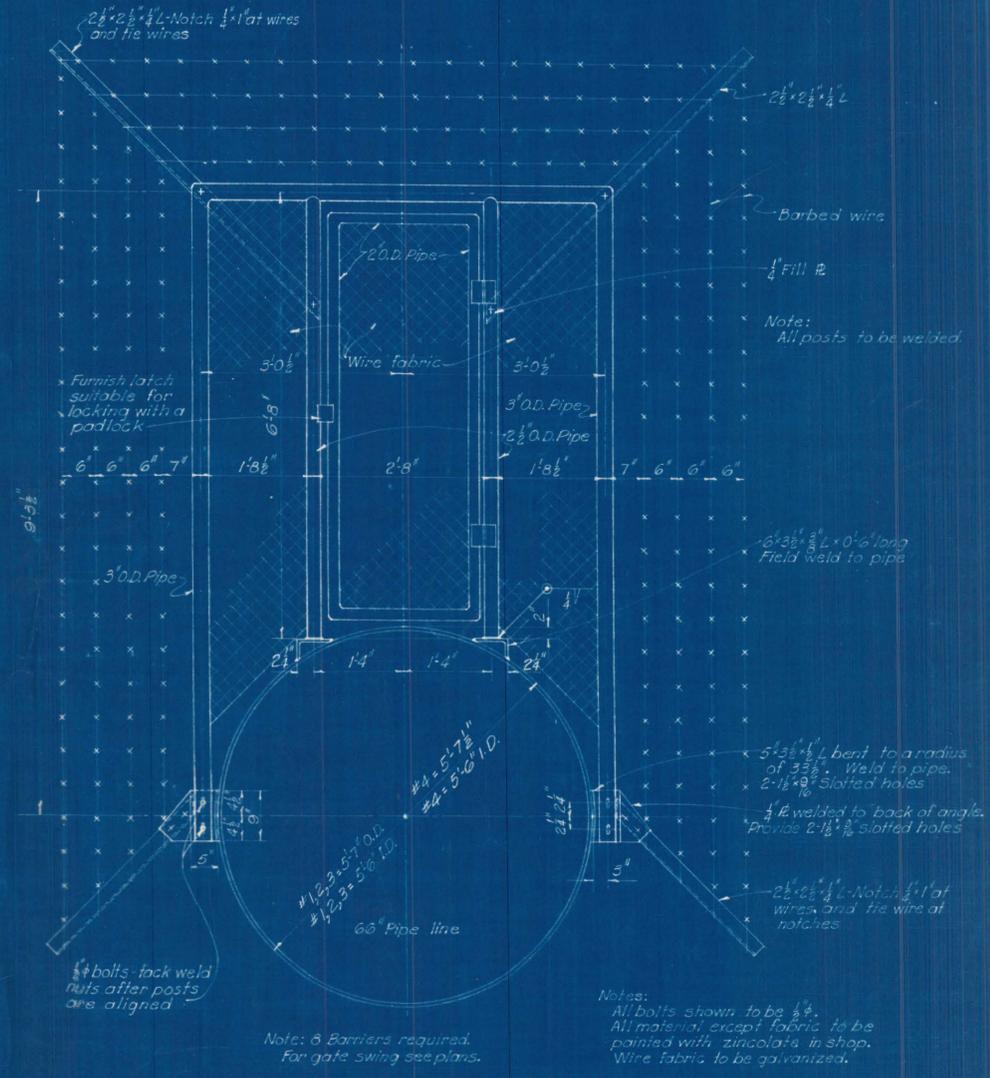
BLACK & VEATCH
 CONSULTING ENGINEERS, KANSAS CITY, MO.

DESIGNED	D.R.B.	CHECKED	D.R.B.
DATE	11-15-50	DATE	11-15-50

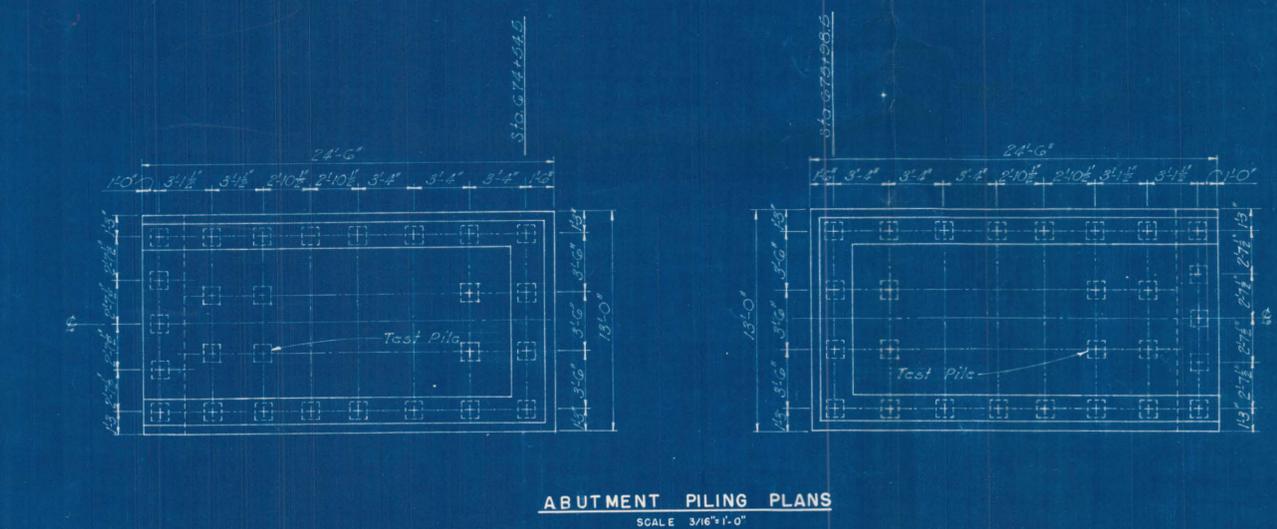
CONTRACT 5 3 SHEET 9 OF



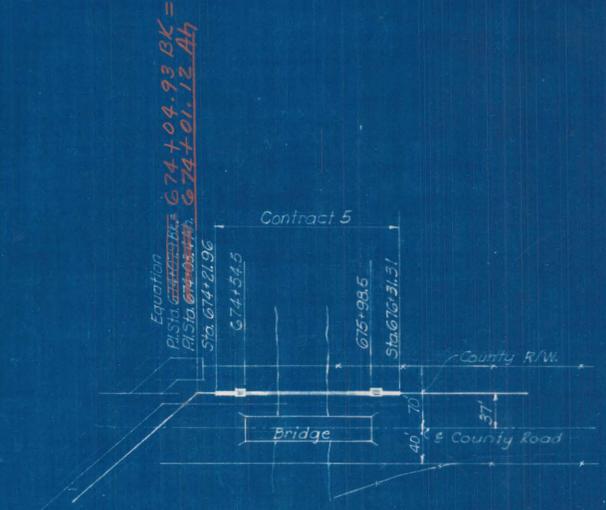
NOTE
 Concrete elbow, concrete to steel adapter piece and one laying length of 60" concrete pipe for each end of bridge to be furnished by others, and installed by overhead crossing contractor.



DETAIL BARRIER FOR OVERHEAD CROSSINGS
 SCALE 3/4"=1'-0"



ABUTMENT PILING PLANS
 SCALE 3/16"=1'-0"

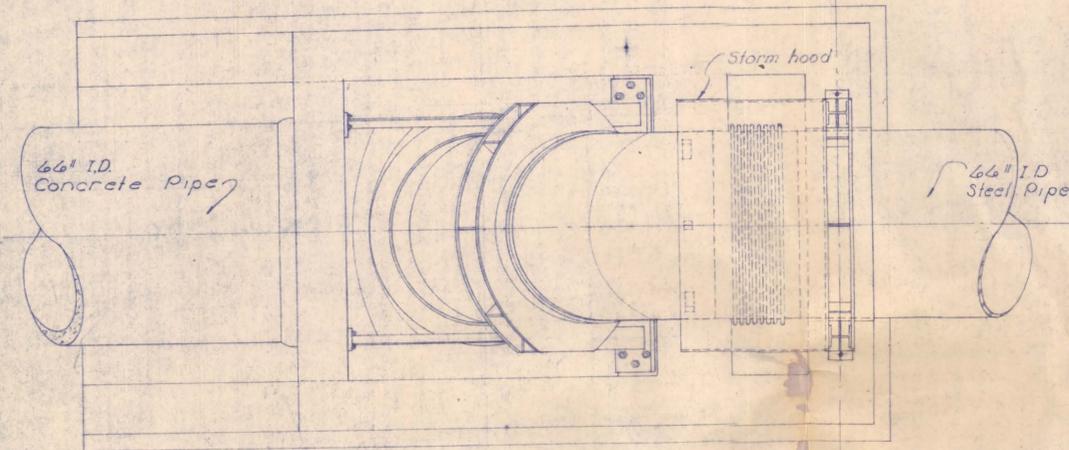


LOCATION PLAN
 SCALE 1"=100'

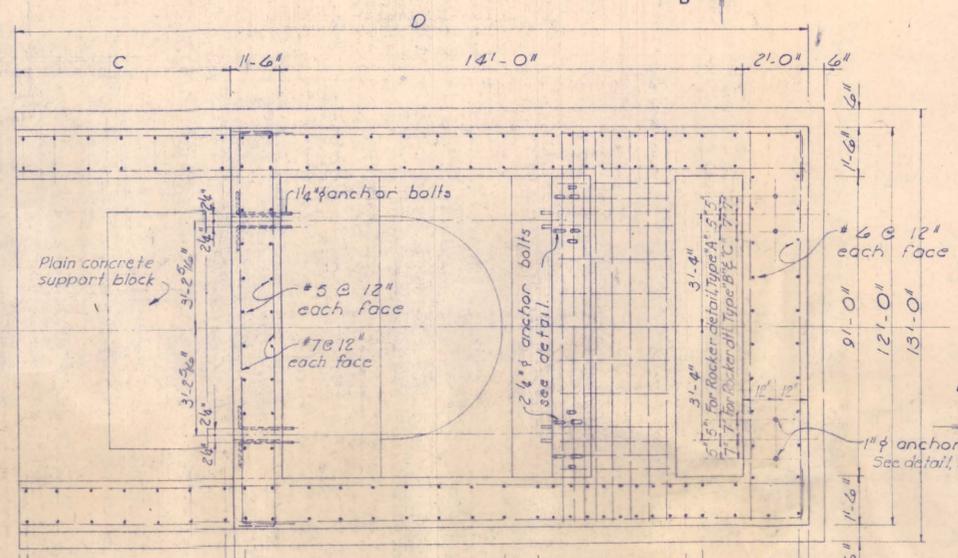
BM #20 El. 1381.26
 N&BC IN TOP WOOD WING
 WALL SW COR. OF BRIDGE
 9' RT. STA. 674+54 ORIG. SURVEY.

WATERWORKS IMPROVEMENTS WICHITA, KANSAS	
WATER TRANSMISSION LINE OVERHEAD CROSSINGS GENERAL LAYOUT BRIDGE NO. 3	
BLACK & VEATCH CONSULTING ENGINEERS, KANSAS CITY, MO.	
DESIGNED D.R.B.	CHECKED D.R.B.
DATE 11-25-59	DATE 11-25-59

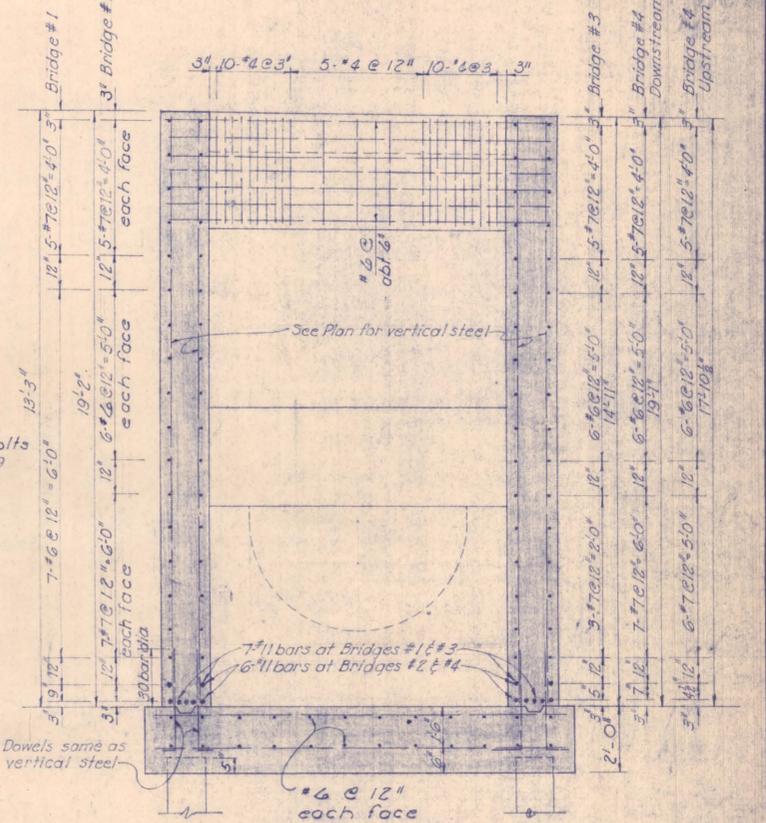
DATE	REVISION	BY
8-15-55	Moved abutments Bridge #2 74' south	WRC



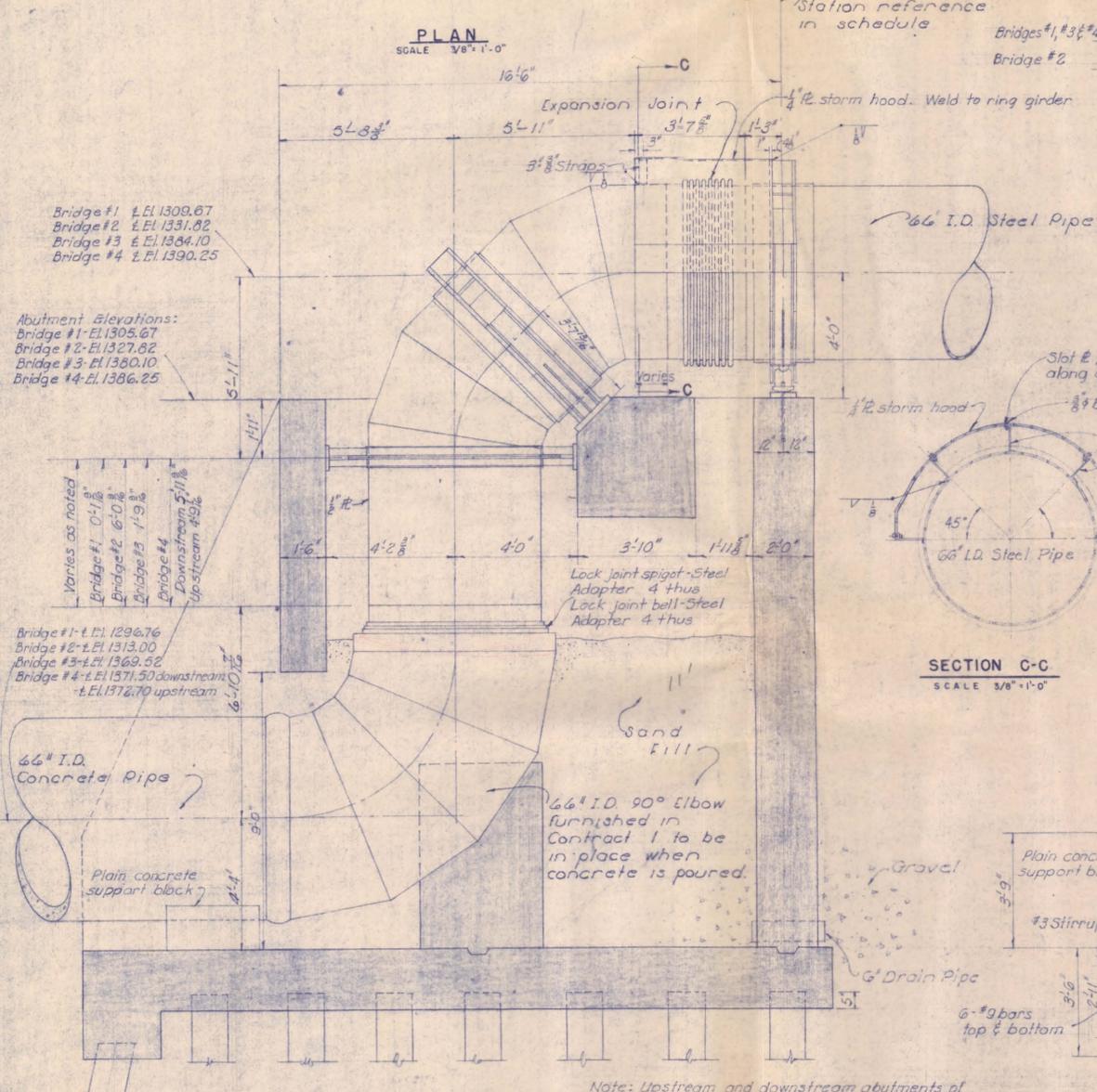
PLAN
SCALE 3/8" = 1'-0"



REINFORCING PLAN
SCALE 3/8" = 1'-0"

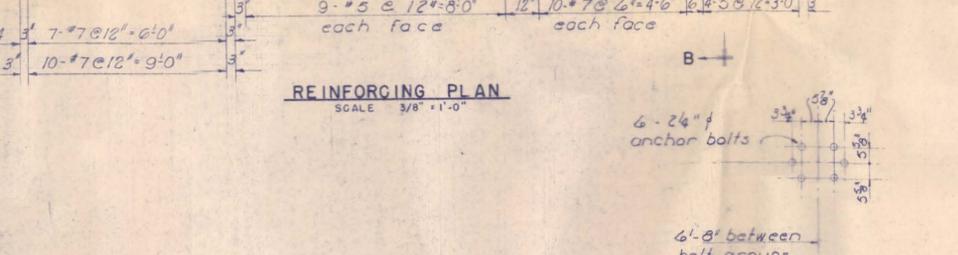


SECTION B-B
SCALE 3/8" = 1'-0"

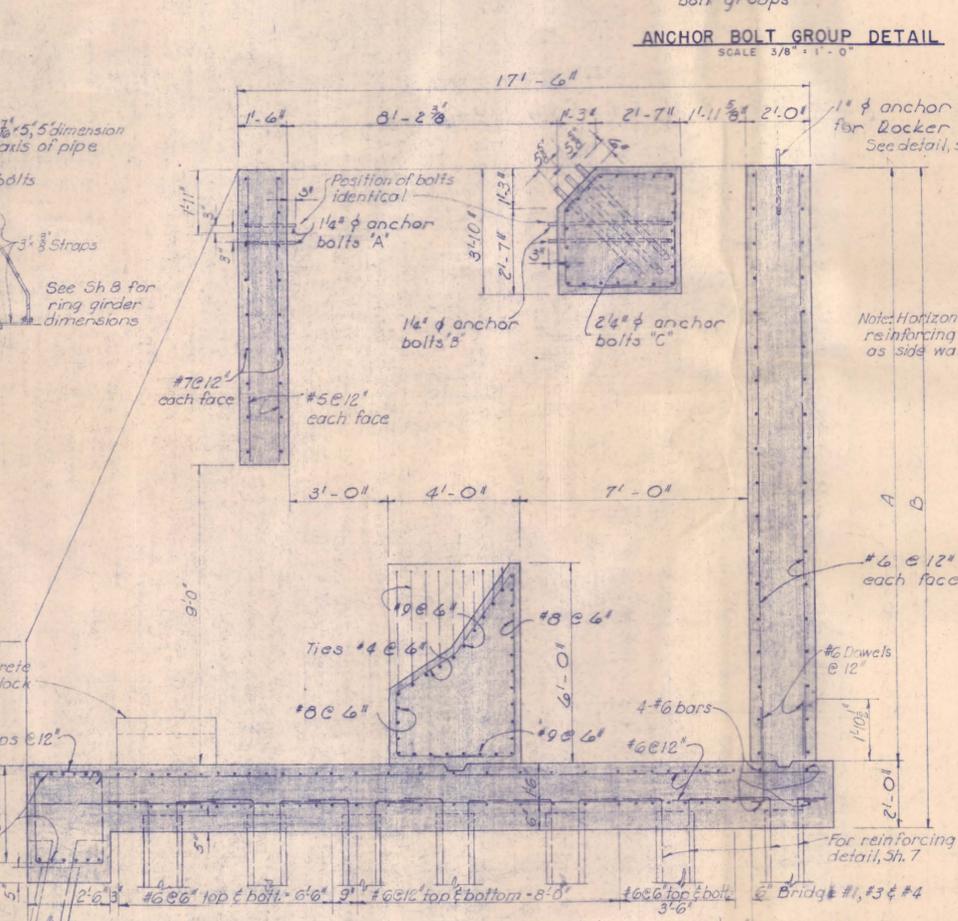


SECTIONAL ELEVATION
SCALE 3/8" = 1'-0"

Note: Upstream and downstream abutments of pipeline similar except for enclosure of Air Inlet Valve at upstream abutment. See Sh. 9 for this detail. All other dimensions and details shown above applicable to both abutments.

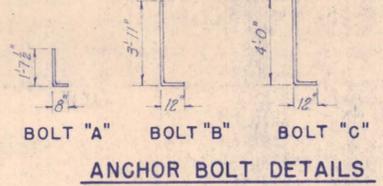


ANCHOR BOLT GROUP DETAIL
SCALE 3/8" = 1'-0"



SECTION A-A
SCALE 3/8" = 1'-0"

BRIDGE ABUTMENT SCHEDULE					
	Station	A	B	C	D
Bridge #1	39+00.0	13'-3"	15'-3"	6'-6"	24'-0"
	41+85.0	13'-3"	15'-3"	6'-6"	24'-0"
Bridge #2	147+42.00	19'-2"	21'-2"	9'-4"	27'-0"
	153+10.60	19'-2"	21'-2"	9'-4"	27'-0"
Bridge #3	674+54.5	14'-11"	16'-11"	6'-6"	24'-0"
	675+96.5	14'-11"	16'-11"	6'-6"	24'-0"
Bridge #4	730+31.0	19'-1"	21'-1"	6'-6"	24'-0"
	744+71.0	17'-10 1/2"	19'-10 1/2"	6'-6"	24'-0"



ANCHOR BOLT DETAILS

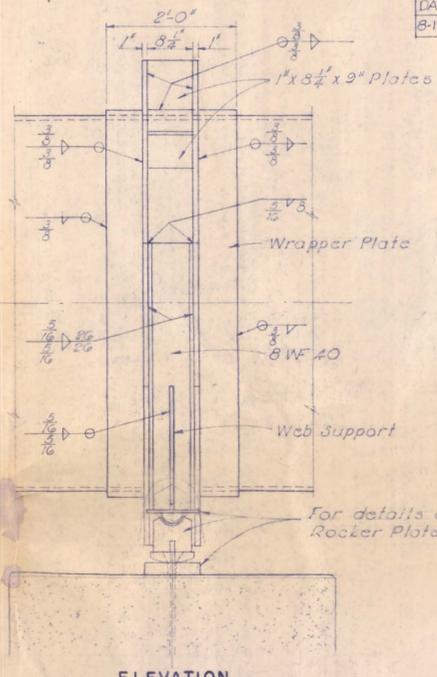
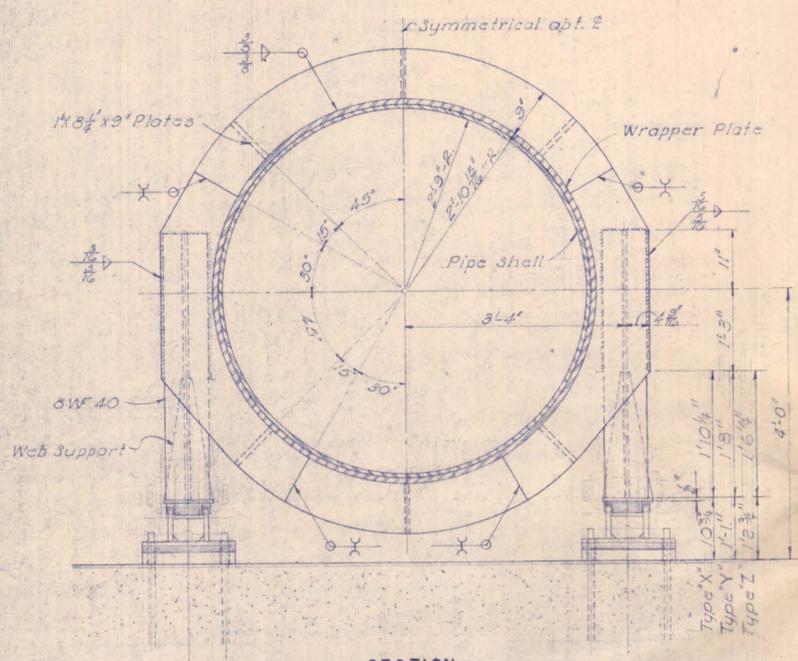
**WATERWORKS IMPROVEMENTS
WICHITA, KANSAS**

**WATER TRANSMISSION LINE
OVERHEAD CROSSINGS
BRIDGE ABUTMENTS**

**BLACK & VEATCH
CONSULTING ENGINEERS, KANSAS CITY, MO.**

DESIGNED: *D.R.B.* CHECKED: *D.R.B.*
 DETAILED: *G.V.C.* APPROVED: *D.R.B.*
 DATE: 8-25-55

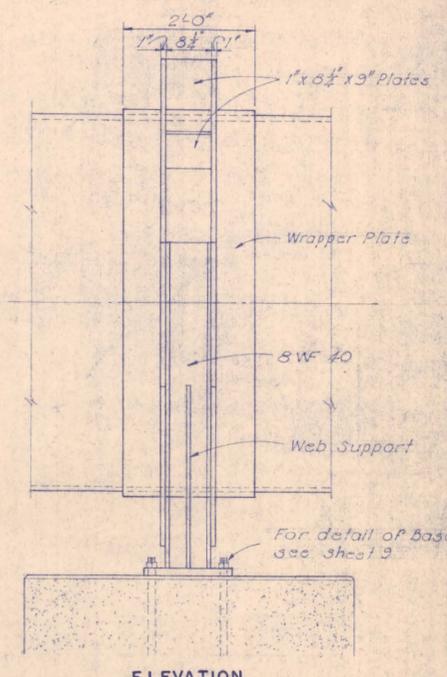
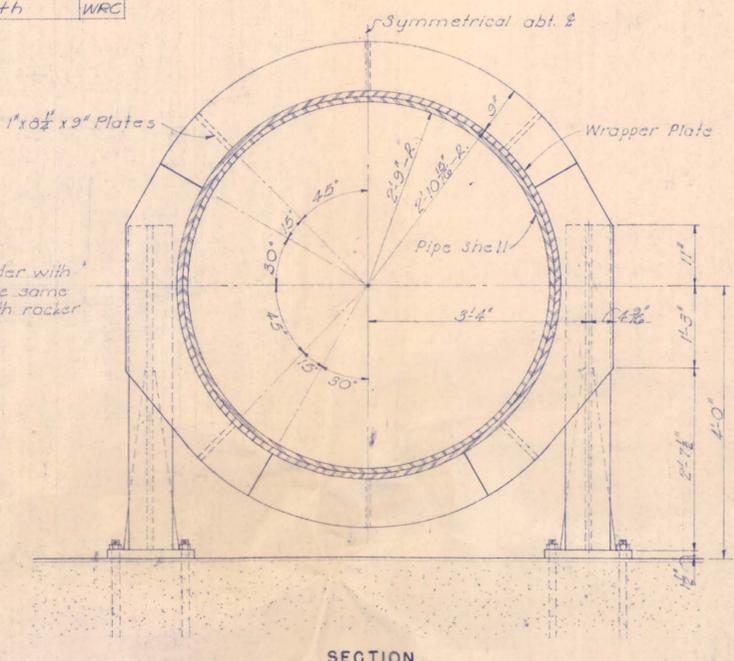
CONTRACT 5 **6 SHEET 9**



SECTION
RING GIRDER WITH ROCKER SUPPORT
SCALE 3/4"=1'-0"

BRIDGE	STATION	TYPE	PIPE SHELL	WRAPPER PLATE
No. 1	39+00, 41+85	"X"	1 1/2"	1 1/2"
No. 1	40+90	"X"	1 1/2"	1 1/2"
No. 2	147+42.60, 153+10.60	"Y"	1 1/2"	1 1/2"
No. 2	147+90.0, 149+11.6, 150+97.0, 151+95.6, 152+67.6	"Y"	1 1/2"	1 1/2"
No. 3	674+54.5, 675+38.5	"X"	1 1/2"	1 1/2"
No. 4	730+31, 744+11	"Z"	1 1/2"	1 1/2"
No. 4	732+71, 735+11, 739+91, 742+31	"Z"	1 1/2"	1 1/2"
No. 4	731+31, 736+91, 737+46.71, 737+55.23, 738+71, 743+51	"Z"	1 1/2"	1 1/2"

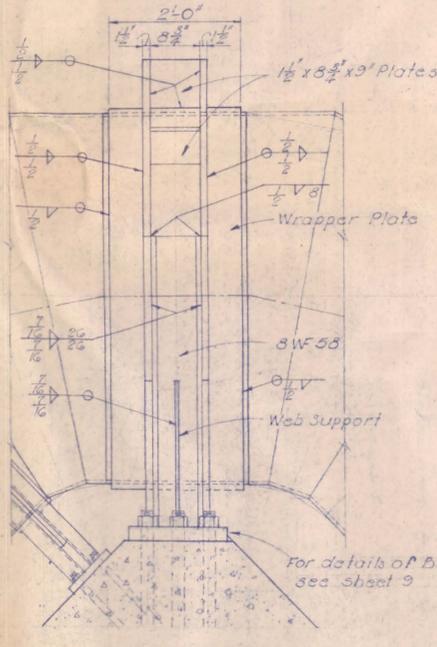
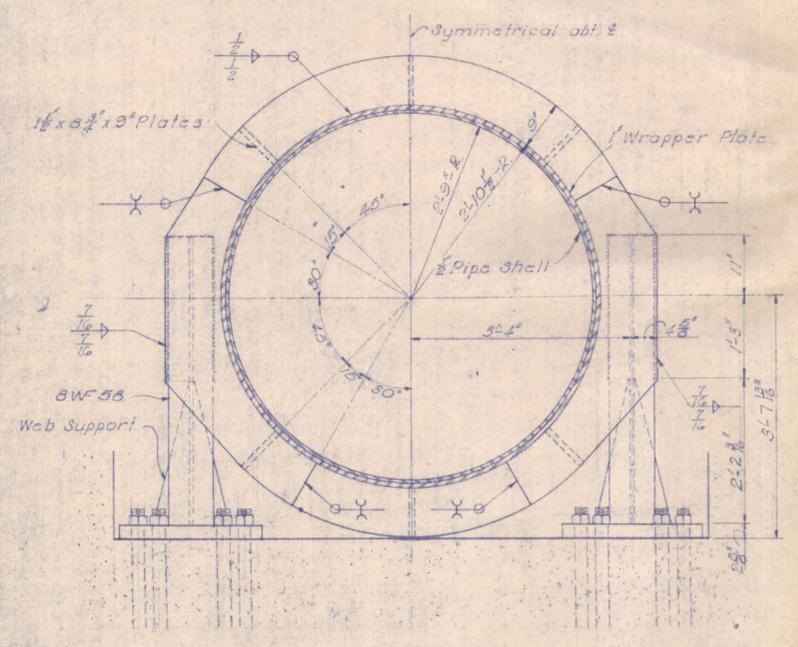
SCHEDULE OF ROCKER SUPPORTS



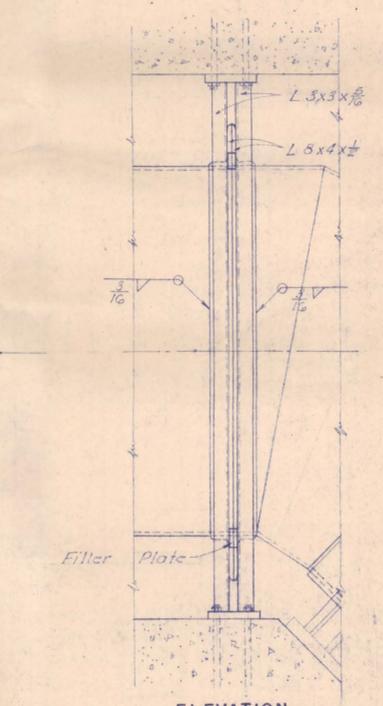
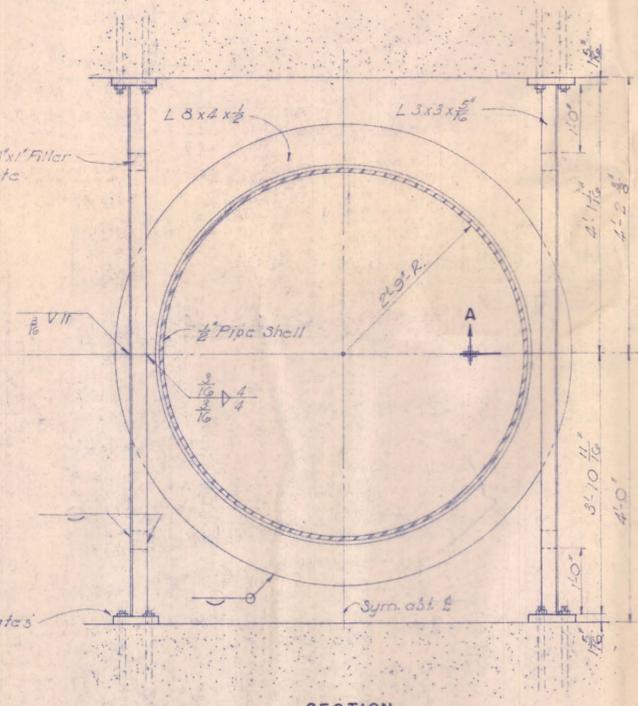
SECTION
RING GIRDER WITH FIXED SUPPORT
SCALE 3/4"=1'-0"

BRIDGE	STATION	NO.	PIPE SHELL	WRAPPER PLATE
No. 1	39+95.0	1	1 1/2"	1 1/2"
No. 2	149+79.60	1	1 1/2"	1 1/2"
No. 3	675+26.5	1	1 1/2"	1 1/2"
No. 4	733+91, 741+11	2	1 1/2"	1 1/2"

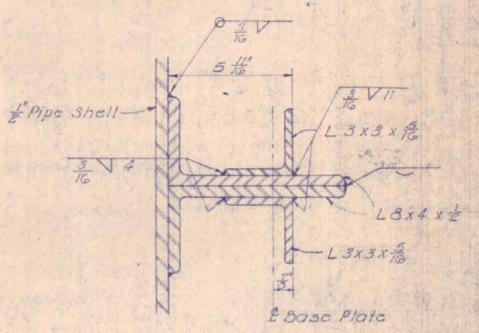
SCHEDULE OF FIXED SUPPORTS



SECTION
INCLINED RING GIRDER AT ABUTMENT
SCALE 3/4"=1'-0"



SECTION
HORIZONTAL RING GIRDER AT ABUTMENT
SCALE 3/4"=1'-0"



SECTION A-A
SCALE 3"=1'-0"

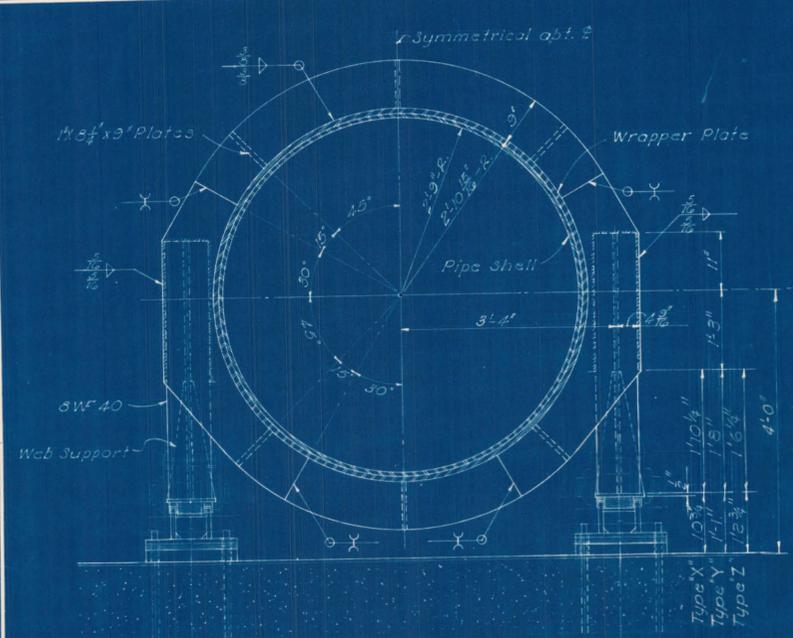
WATERWORKS IMPROVEMENTS
WICHITA, KANSAS

WATER TRANSMISSION LINE
OVERHEAD CROSSINGS
RING GIRDERS

BLACK & VEATCH
CONSULTING ENGINEERS, KANSAS CITY, MO.

DESIGNED D.R.B. CHECKED D.R.B. APPROVED H.H.B. DATE 8-25-55

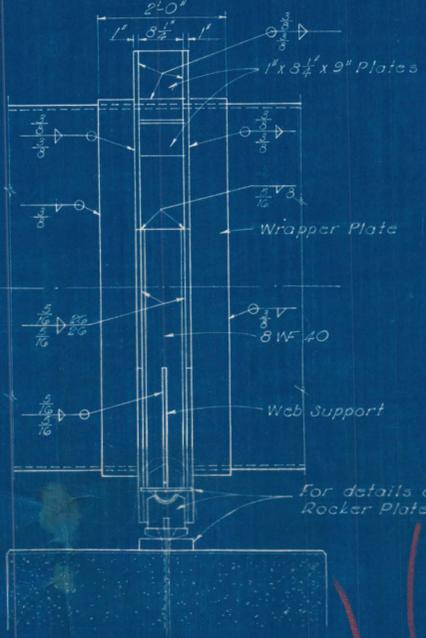
CONTRACT 5 8 SHEET 9 OF



SECTION
RING GIRDER WITH ROCKER SUPPORT
 SCALE 3/4"=1'-0"

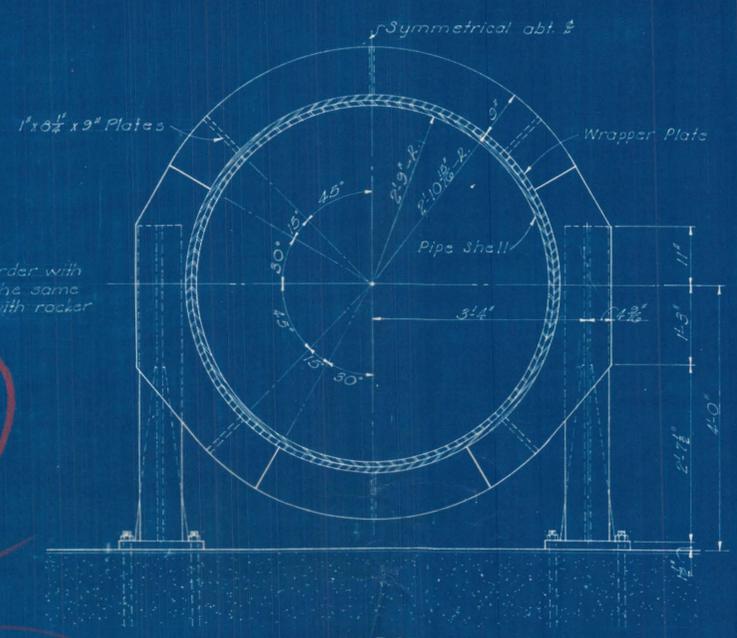
BRIDGE	STATION	TYPE	PIPE SHELL	WRAPPER PLATE
No. 1	39+00, 44+55	"X"	1/2"	1 1/2"
No. 1	40+90	"X"	1/2"	1 1/2"
No. 2	147+59.77, 153+17.77	"Y"	1/2"	1 1/2"
No. 2	148+07.00, 148+39.00, 150+25.00, 152+03.00, 152+75.00	"Y"	1/2"	1 1/2"
No. 3	674+54.0, 675+35.0	"X"	1/2"	1 1/2"
No. 4	730+31, 744+71	"Z"	1/2"	1 1/2"
No. 4	732+71, 735+11, 739+91, 742+31	"Z"	1/2"	1 1/2"
No. 4	731+31, 736+31, 737+46.71, 737+55.23, 738+71, 743+51	"Z"	1/2"	1 1/2"

SCHEDULE OF ROCKER SUPPORTS



ELEVATION
 For details of Rocker & Rocker Plate see sheet 9

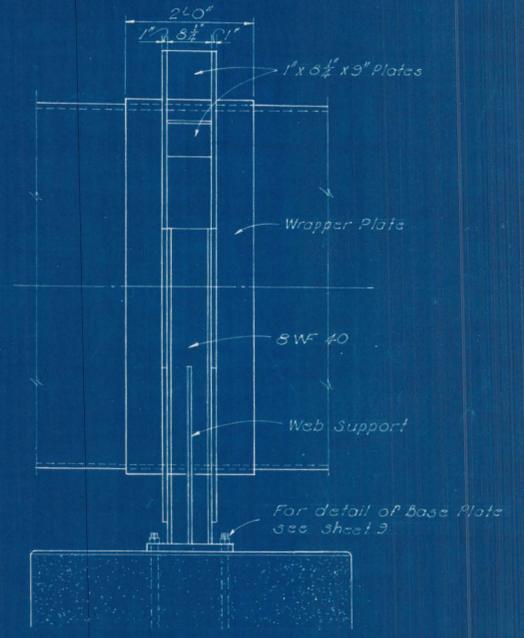
Note: Welding for ring girder with fixed support to be the same as for ring girder with rocker support.



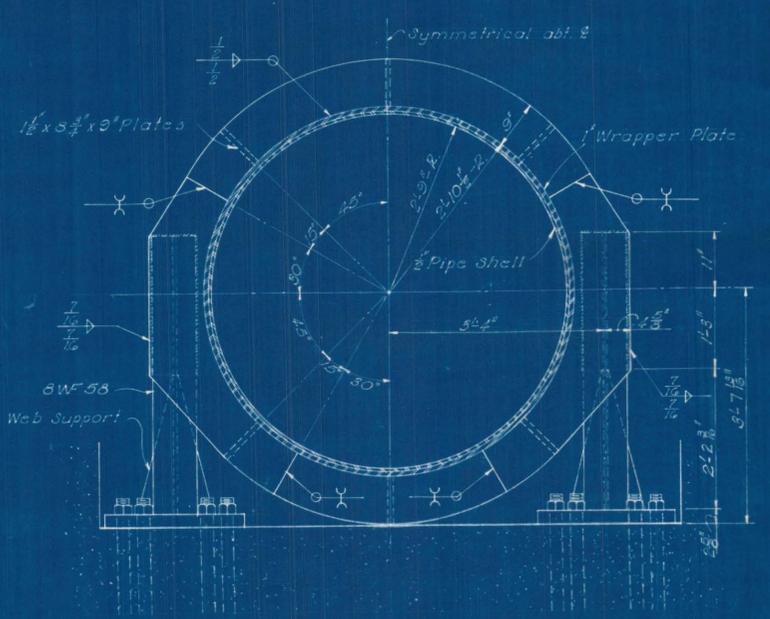
SECTION
RING GIRDER WITH FIXED SUPPORT
 SCALE 3/4"=1'-0"

BRIDGE	STATION	No.	PIPE SHELL	WRAPPER PLATE
No. 1	39+95.0	1	1/2"	1 1/2"
No. 2	142+57.00	1	1/2"	1 1/2"
No. 3	575+26.5	1	1/2"	1 1/2"
No. 4	733+91, 741+11	2	1/2"	1 1/2"

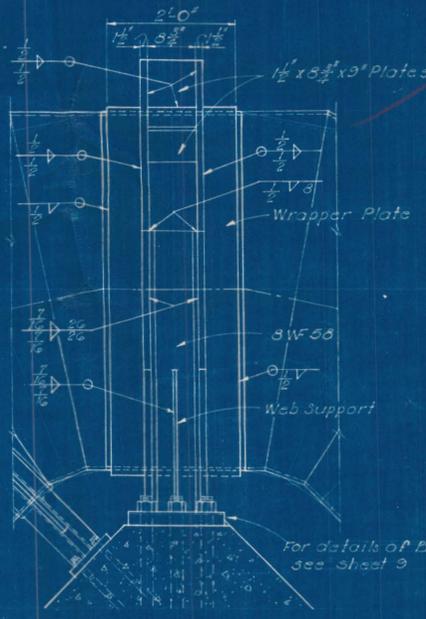
SCHEDULE OF FIXED SUPPORTS



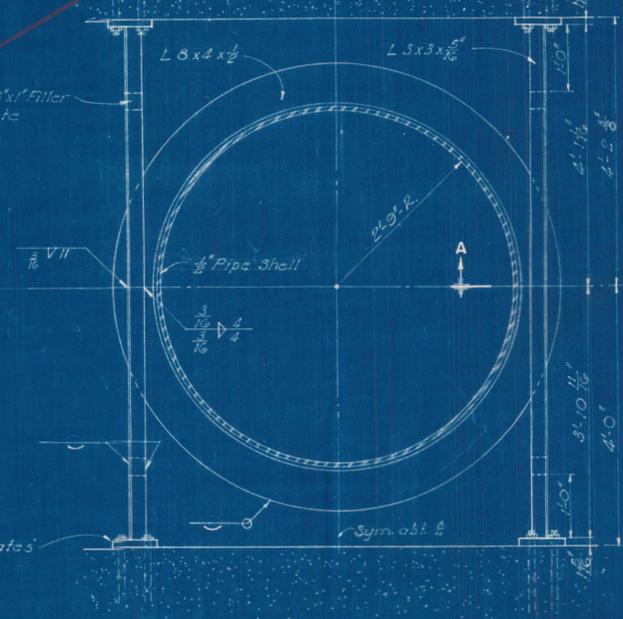
ELEVATION
 For detail of Base Plate see sheet 9



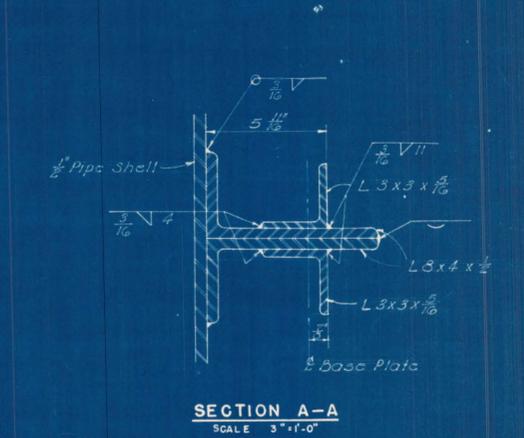
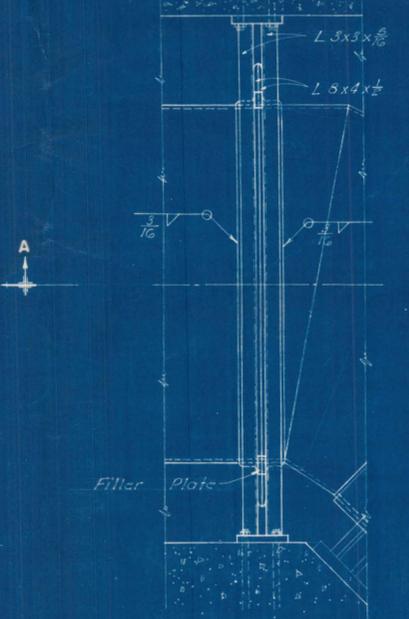
SECTION
INCLINED RING GIRDER AT ABUTMENT
 SCALE 3/4"=1'-0"



ELEVATION
 For details of Base Plates see sheet 9



SECTION
HORIZONTAL RING GIRDER AT ABUTMENT
 SCALE 3/4"=1'-0"



SECTION A-A
 SCALE 3"=1'-0"

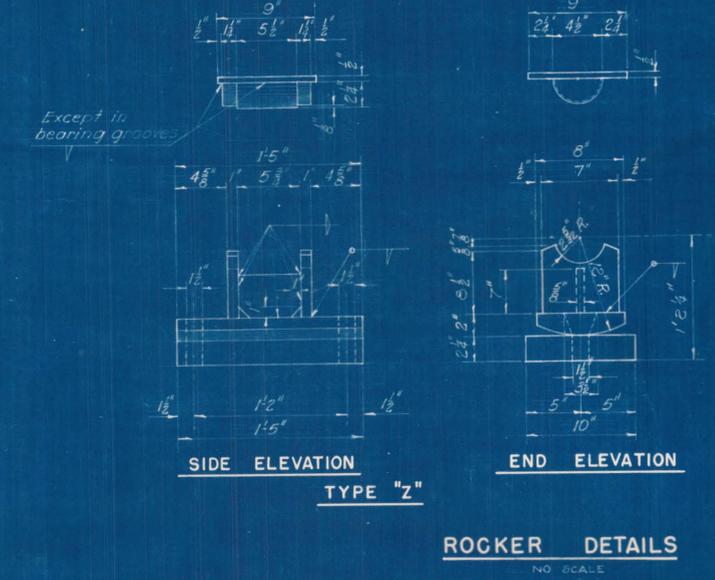
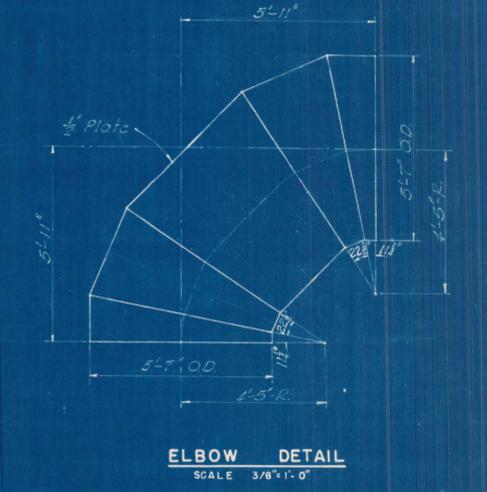
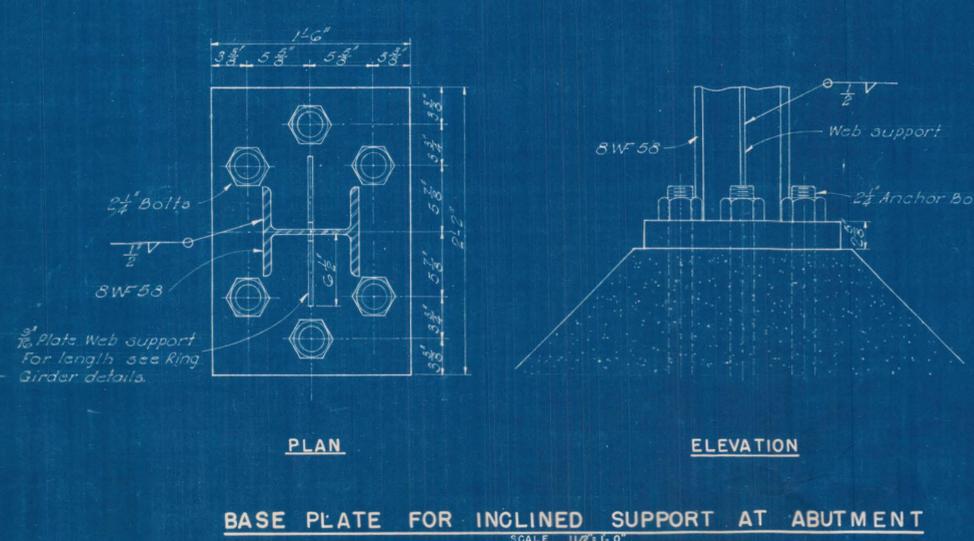
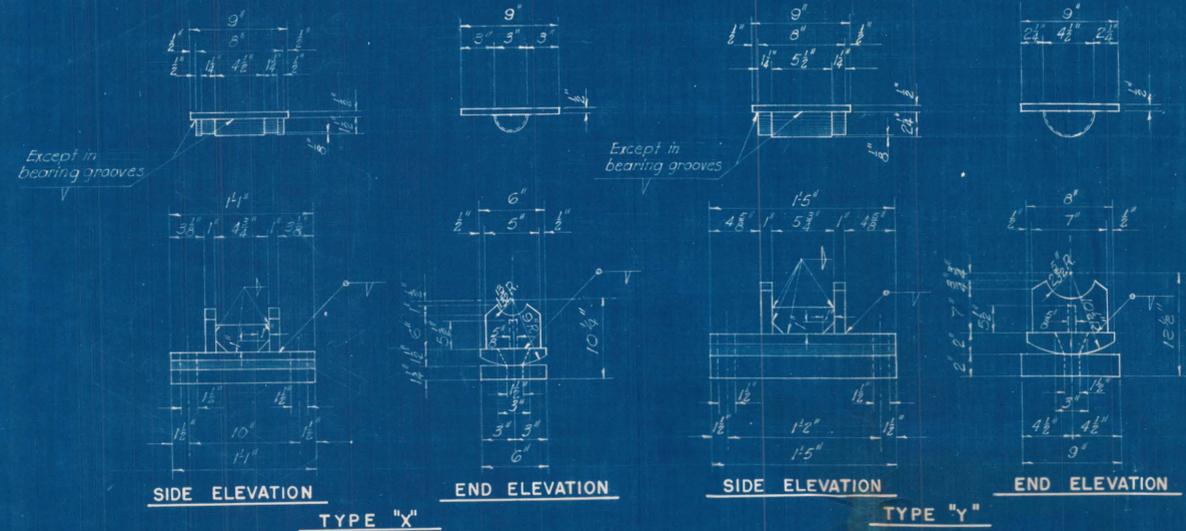
**WATERWORKS IMPROVEMENTS
 WICHITA, KANSAS**

**WATER TRANSMISSION LINE
 OVERHEAD CROSSINGS
 RING GIRDERS**

**BLACK & VEATCH
 CONSULTING ENGINEERS, KANSAS CITY, MO.**

DESIGNED *D.R.B.* CHECKED *D.R.B.*
 DETAILED *C.H.L.S.* APPROVED *D.R.B.*
 DATE *6-15-24*

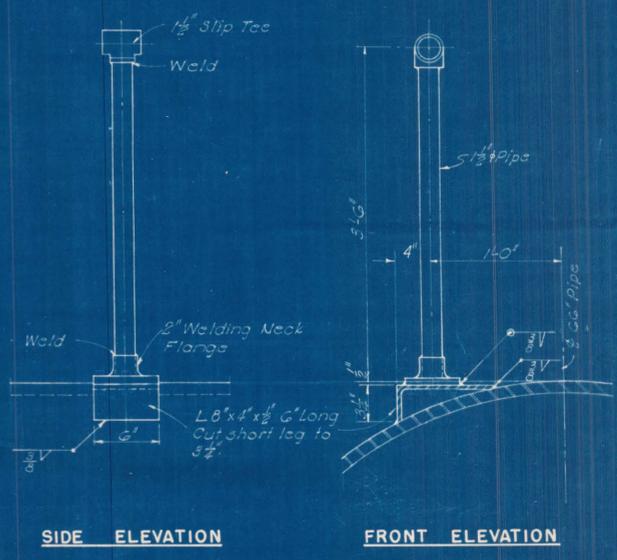
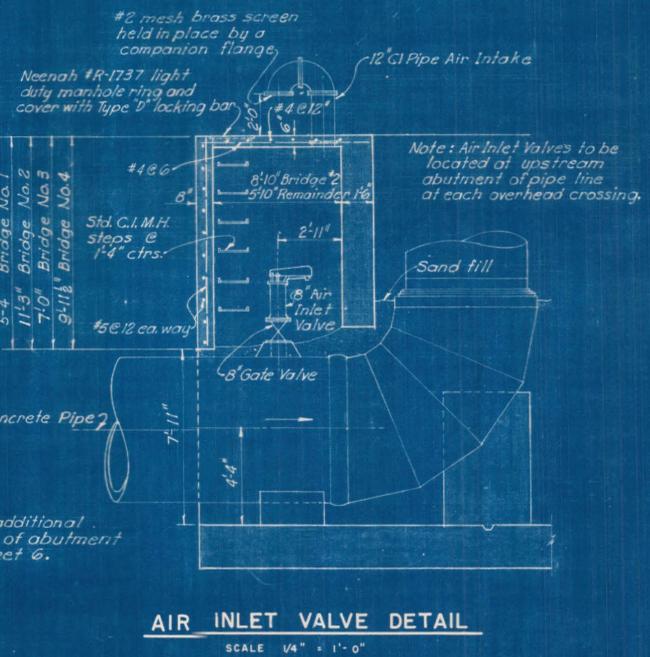
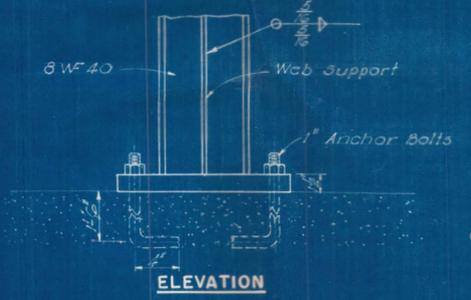
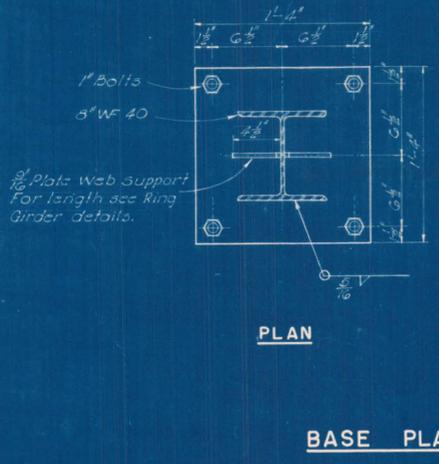
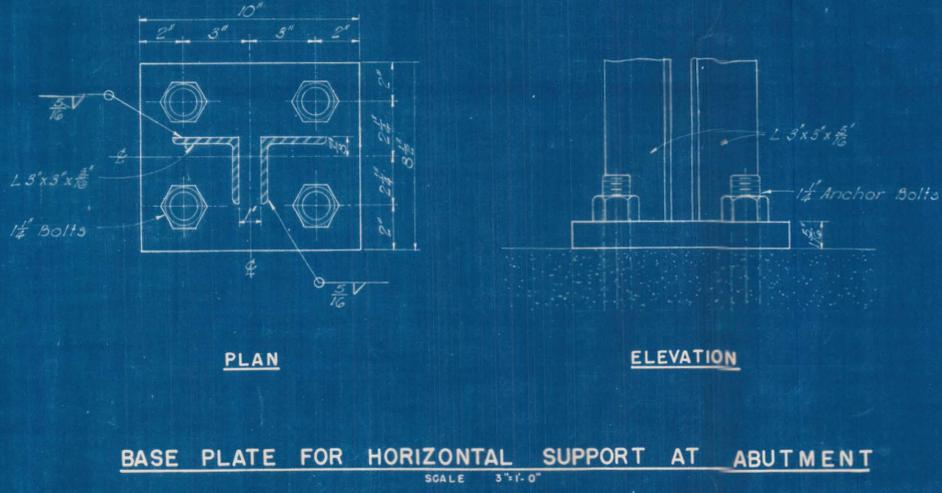
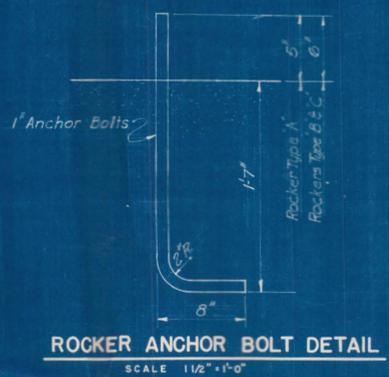
CONTRACT 5 **8 SHEET 9**



Note: Rockers shall be sufficiently true to form that they will fit machined grooves of pins without binding. No machining or grinding of rockers shall be permitted that will reduce the bearing surfaces on the pins to less than those indicated.

All parts of bearing devices shall be structural steel.

All welds shall be continuous fillet welds, unless otherwise noted.



WATERWORKS IMPROVEMENTS WICHITA, KANSAS	
WATER TRANSMISSION LINE OVERHEAD CROSSINGS MISCELLANEOUS DETAILS	
BLACK & VEATCH CONSULTING ENGINEERS, KANSAS CITY, MO.	
DESIGNED D.R.B.	CHECKED D.R.B.
DATE 4.11.12	DATE 8.22.12
9 SHEET 9 OF	