KENTUCKY DEPARTMENT OF TRANSPORTATION AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

LOUISA - FORT GAY BRIDGE KY 3 & W VA 37
OVER LEVISA AND TUG FORK OF BIG SANDY RIVER

REFERENCE AND ESTIMATE OF QUANTITIES

ITEM / LOCATION	SHEET NO	CONCRETE CLASS A (CU YDS)	CONCRETE CLASS AA (CU YDS)	STEEL REINFORCEMENT (LBS)	EPOXY COATED STEEL REINFORCEMENT (LBS)	STRUCTURAL STEEL ① (LUMP SUM)	SHEAR CONECTORS ③ (LUMP SUM)	PEDESTRIAN HAND RAIL (LIN FT)	PRECAST PCI BEAM TYPE IV (LIN FT)	STEEL PILES HP12x53 (LIN FT)	TEST PILES (LIN FT)	STRUCTURE EXCAVATION COMMON (CU YDS)	STRUCTURE EXCAVATION SOLID ROCK (CU YDS)	ABUTMENT BACKFILL ② (LUMP SUM)	BRIDGE LIGHTING ④	TELEPHONE CONDUIT ⑤ (LUMP SUM)	TRAFFIC SIGNALS ⑥	EXPANSION DAM 2 IN NEOPRENE RANSFLEX 200 A (LIN FT)	EXPANSION DAM 4 IN NEOPRENE TRANSFLEX 400 (LIN FT)	COFFERDAMS LS KY	COFFERDAMS LS WVA
TITLE SHEET	1																				
GENERAL NOTES	2 & 3																				
LAYOUT	4																				
SOUNDINGS	5,6 & 7																				
GENERAL PLAN	8,9,10,&11																				
		266.9			50,083																
SUBSTRUCTURE																					
ABUTMENT 1	12 & 13	151.2	46.7	20,815	21,471					2,100	76	232									
" 2	14,15 & 16	242.8	72.5	35,400	35,722				3,647	2,865	76	741	1,006								
" 3	17,18,19 & 20	330.4	74.4	38,366	40,990					4,470	90	187									
DETAILS FOR PLACING ABUTMENT BACKFILL	21																				
PIER 1	22	191.9		25,991	26,240					810	48	85									
" 2	23	385.3		75,287	75,387					—	—	728	38							⑦	
" 3	24	461.9		84,540	84,683					—	—	919	73							⑦	
" 4	25	287.6		49,335	49,740					1,575	45	317									
" 5	26	253.2		40,620	40,330					1,785	51	217									
" 6	27	110.5		21,480	19,350					884	52	73									
" 7	28	175.3		26,734	26,910					714	42	103									
" 8	29	395.2		70,606	68,234					—	—	523	60							⑦	
" 9	30	312.6		46,330	45,018					—	—	250	80								⑧
" 10	31	193.4		23,618	23,483					322	14	224									
" 11	32	173.1		20,808	30,176					—	—	269									
" 12 & PILE RECORDS	33 & 34	93.9		17,800	17,851					583	59	129									
SUBSTRUCTURE TOTALS		3,694.5	193.6	609,203	665,563				16,896	16,134	545	5,000	251	②						⑦	⑧
		3,720.5		619,924								5,265									
SUPERSTRUCTURE																					
SUPERSTRUCTURE PLANS	35 - 71		2,742.2	445,170	350,256					1,327.0	1,741.10										
FRAMING PLANS	35 - 37		6.751.0	442,782	377,963													89.0	89.0		
PRECAST PCI BEAM DETAILS	38 - 40																				
STEEL PLATE GIRDER DETAILS	41 & 42																				
STEEL BEARING SHOES	43 - 45																				
CAST-IN-PLACE GIRDER DETAILS	46 - 52																				
SLAB PLANS	53 - 56																				
SLAB CROSS SECTIONS	57 & 58																				
SUPERSTRUCTURE DETAILS	59 - 63																				
CONSTRUCTION ELEVATIONS	64 - 69																				
BRIDGE DRAINS	70																				
PEDESTRIAN HANDRAIL	71																				
BRIDGE LIGHTING	72																				
TELEPHONE CONDUIT	73 - 75																				
TRAFFIC SIGNALS	76 - 80																				
NAVIGATION & CORPS PERMITS	81 & 82		2,751.0	442,782	377,963																
SUPERSTRUCTURE TOTALS			2,749.2	445,170	350,256																
BRIDGE TOTALS		3,694.5	2,943.8	1,054,469	350,256	①	③			1,327.0	1,741.10	16,134	545	5,000	251	②	④	⑤	⑥	89.0	89.0	⑦	⑧
		3,720.5		1,062,706																	

BILL OF INCIDENTAL MATERIAL

ITEM	NO	DESCRIPTION	LOCATION
CORK EXPANSION JT MATERIAL	3	4" - 3" x 1/8"	DECK JOINTS AT ABUTS
EXPANSION JOINT SEAL	3	3" x 1 5/8"	1, 2 & 3 AND PIER 12
BOLT INSERT ASSEMBLY	3		AT BACKWALL-ABUT.
		78" ø	1 & 3 @ W VA ABUT. 2
PLASTIC PIPE	12	5" ø	AT WINGS OF ABUT. 2
			& 3

QUANTITY DIVISION BETWEEN STATES				
ITEM	UNIT	KENTUCKY	WEST VIRGINIA	TOTAL
CONCRETE CLASS A	CU YDS	2,822.5	872.0	3,694.5
CONCRETE CLASS AA	CU YDS	2,453.0	686.8	2,943.8
STEEL REINFORCEMENT	LBS	846,365	208,104	1,054,469
EPOXY COATED STEEL REINF	LBS	249,563	100,693	350,256
STRUCTURAL STEEL *	L.S	1,152,551 LBS	362,911 LBS	1,515,462 LBS
SHEAR CONNECTORS	L.S	3,086 LBS.	1,584 LBS.	5,270 LBS
PEDESTRIAN HANDRAIL	L.F.	945.5	381.5	1,327.0
PRECAST PCI BEAM TYPE IV	L.F.	689.40	851.70	1,741.10
STEEL PILES HP 12 x 53	L.F.	12,927	3,207	16,134
TEST PILES	L.F.	453	92	545
STRUCTURE EXCAVATION - COMMON	C.Y.	3,516	1,484	5,000
STRUCTURE EXCAVATION - SOLID ROCK	C.Y.	171	80	251
ABUTMENT BACKFILL	C.Y.	1,702	774	2,476
BRIDGE LIGHTING	④	④	④	④
TELEPHONE CONDUIT	L.S	⑤	⑤	L.S.
TRAFFIC SIGNALS	⑥	⑥	⑥	⑥
EXP. DAM 2 IN NEOPR. TRANFL. 200A	L.F.	45.5	43.5	89.0
EXP DAM 4 IN NEOPR. TRANFL. 400	L.F.	890	—	890
COFFERDAMS	L.S	⑦	⑧	⑦&⑧

* STRUCTURAL STEEL DISTRIBUTION BY ASTM DESIGNATION:

	KENTUCKY	WEST VIRGINIA	TOTAL
ASTM A36	186,761 Lbs.	68,181 Lbs	254,942 Lbs.
ASTM A588	965,790 Lbs	294,730 Lbs	1260,520 Lbs.

⑦ COFFERDAMS-LUMP SUM BID FOR PIERS 2 3 & 8 IN KENTUCKY
⑧ COFFERDAM - LUMP SUM BID FOR PIER 9 IN WEST VIRGINIA

① APPROX WEIGHT OF STRUCTURAL STEEL 1,515,462 LBS (1,152,551 LBS. KY @ 362,911 LBS W.VA.) (INCLUDED WEIGHT OF DECK DRAINS, PIPE & DRAIN SUPPORTS). &
② LUMP SUM FOR ABUTMENT BACKFILL INCLUDES APPROXIMATELY 2,476 CU YDS (1,702 CU YDS KY @ 774 CU YDS W.VA.) OF ABUTMENT BACKFILL MATERIAL AND 1,160 CU YDS (419 CU YDS KY & 741 CU YDS W.VA.) OF STRUCTURE EXCAVATION, ABUTMENT.
③ APPROX AMOUNT OF SHEAR CONNECTORS 5270 LBS. (3,686 LBS KY & 1,584 LBS W.VA.)
④ FOR TABLE SHOWING QUANTITIES OF BRIDGE LIGHTING SEE SHEET 72.
⑤ NON PARTICIPATING ITEM TO BE PAID FOR BY THE SOUTH CENTRAL BELL CO. FOR TELEPHONE QUANTITIES SEE SHEET 74.
⑥ FOR TABLE SHOWING QUANTITIES OF TRAFFIC SIGNALS SEE SHEET 77.

REFERENCES

REFERENCES LISTED BELOW ARE CURRENT EDITION AND ARE TO BE USED WITH THESE PLANS.

SPECIAL PROVISIONS

4(76) WELDING STEEL BRIDGES
19(76) EPOXY COATED REINFORCEMENT
1(76) TRAFFIC SIGNALS

STANDARD DRAWINGS

BBP-001-04, BGX-006-01, BJE-001-03, BJE-002-03, BJJ-003-02, BJJ-004-02 & BPS-003-01

RECOMMENDED BY:
FRANKLAND & LIENHARD

BY: _____
DATE: _____

SHEET 1 OF 82

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8) ; SP 64-33-14 LI
LOUISA - FORT GAY BRIDGE AND APPROACHES
LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA
ROAD BRS 431( )
STATION 20+20.00 P.E. PROJECT NO. SP 64-33-14L

FRANKLAND AND LIENHARD

CONSTRUCTION PROJECT NO. BRS 5331(4) | MAINTENANCE PROJECT NO. | DRAWING NO. 19302

BRIDGE

KENTUCKY DEPARTMENT OF TRANSPORTATION AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

LOUISA - FORT GAY BRIDGE KY 3 & W VA 37
OVER LEVISA AND TUG FORK OF BIG SANDY RIVER

REFERENCE AND ESTIMATE OF QUANTITIES

ITEM / LOCATION	SHEET NO.	CONCRETE CLASS A (CU. YDS.)	CONCRETE CLASS AA (CU. YDS.)	STEEL REINFORCEMENT (LBS.)	EPOXY COATED STEEL REINFORCEMENT (LBS.)	STRUCTURAL STEEL ① (LUMP SUM)	SHEAR CONNECTORS ⑤ (LUMP SUM)	PEDESTRIAN HAND RAIL (L.F.)	PRECAST PCI BEAM TYPE IV (LIN.FT.)	STEEL PILES HP 12×53 (LIN.FT.)	TEST PILES (LIN.FT.)	STRUCTURE EXCAVATION COMMON (CU. YDS.)	STRUCTURE EXCAVATION SOLID ROCK (CU. YDS.)	ABUTMENT BACKFILL ② (LUMP SUM)	BRIDGE LIGHTING ④	TELEPHONE CONDUIT ⑤ (LUMP SUM)	TRAFFIC SIGNALS ⑥	EXPANSION DAM 2 IN NEOPRENE TRANSFLEX 200 A (LIN.FT.)	EXPANSION DAM 4 IN NEOPRENE TRANSFLEX 400 (LIN.FT.)	COFFERDAMS L.S. KY	COFFERDAMS L.S. W.VA.
TITLE SHEET	1																				
GENERAL NOTES	2 & 3																				
LAYOUT	4																				
SOUNDINGS	5,6 & 7																				
GENERAL PLAN	8,9,10,& 11																				
		288.9		50,085																	
SUBSTRUCTURE																					
ABUTMENT 1	12 & 13	151.2	40.7	(20,815)	21,471					2,100	76	232									
" 2	14,15 & 16	(242.2)	72.5	(35,400)	(35,722)				3,647	(2,885)	78	(741)	1,906								
" 3	17,18,19 & 20	330.4	74.4	(39,366)	40,996					4,470	80	187									
DETAILS FOR PLACING ABUTMENT BACKFILL	21																				
PIER 1	22	161.9		(25,991)	26,246					816	48	95									
" 2	23	385.3		(75,287)	75,387					—	—	728	38							⑦	
" 3	24	461.9		(84,349)	84,683					—	—	918	73							⑦	
" 4	25	297.6		(49,355)	49,740					1,575	45	311									
" 5	26	253.2		(40,820)	40,330					1,785	51	217									
" 6	27	116.5		(23,488)	19,350					884	52	73									
" 7	28	176.3		(28,734)	26,910					714	42	103									
" 8	29	395.3		(70,688)	68,234					—	—	523	60							⑦	
" 9	30	312.6		(46,330)	45,018					—	—	250	80								⑧
" 10	31	143.4		(23,316)	23,453					322	14	224									
" 11	32	173.1		(28,860)	30,170					—	—	269									
" 12 & PILE RECORDS	33 & 34	93.9		(17,800)	17,853					583	59	129									
SUBSTRUCTURE TOTALS		(3,694.5)	193.0	(609.209)	(605,583)				16,896	(16,134)	545	(5,000)	251	②						⑦	⑧
		3,7205		659,924								5,265									
SUPERSTRUCTURE																					
SUPERSTRUCTURE PLANS	35 - 71		(2,749.2)	(445,176)	(350,256)					(1,327.0)	(1,741.10)										
FRAMING PLANS	35 - 37		(2,751.2)	(442,782)	(377,983)					1,328.5	1,749.60										
PRECAST PCI BEAM DETAILS	38 - 40		2,743.7	443,169	(378,440)																
STEEL PLATE GIRDER DETAILS	41 & 42				378,708																
STEEL BEARING SHOES	43 - 45																				
CAST-IN-PLACE GIRDER DETAILS	46 - 52																				
SLAB PLANS	53 - 56																				
SLAB CROSS SECTIONS	57 & 58																				
SUPERSTRUCTURE DETAILS	59 - 63																				
CONSTRUCTION ELEVATIONS	64 - 69																				
BRIDGE DRAINS	70																				
PEDESTRIAN HANDRAIL	71																				
BRIDGE LIGHTING	72																				
TELEPHONE CONDUIT	73 - 75				378,708																
TRAFFIC SIGNALS	76 - 80		(2,751.2)		(378,440)					1,328.5	1,749.60										
NAVIGATION & CORPS PERMITS	81 & 82		2,751.2	442,782	377,983					1,328.5	1,749.60										
SUPERSTRUCTURE TOTALS			(2,749.2)	(445,176)	(350,256)																
BRIDGE TOTALS		(3,694.5)	(2,942.8)	(1,054,469)	(350,256)	①	③			1,327.0	1,741.10	16,896									
		3,7205	2,9470	(2,944.9)	1,048,345																
					1,082,706	①	③			1,327.0	1,741.10	16,134	545	5,000	251	②	④	⑤	⑥	89.0	890	⑦	⑧

QUANTITY DIVISION		BETWEEN STATES		
ITEM	UNIT	KENTUCKY	WEST VIRGINIA	TOTAL
CONCRETE CLASS A	CU.YDS.	2,822.5	872.0	3,694.5
CONCRETE CLASS AA	CU.YDS.	2,243.0	699.8	2,942.8
STEEL REINFORCEMENT	LBS.	(845,385)	(208,104)	1,053,489
EPOXY COATED STEEL REINF.	LBS.	(249,563)	(100,693)	350,256
STRUCTURAL STEEL *	L.S.	1,152,551 LBS.	362,911 LBS.	1,515,462 LBS.
SHEAR CONNECTORS	L.S.	3,686 LBS.	1,584 LBS.	5,270 LBS.
PEDESTRIAN HANDRAIL	L.F.	945.5	381.5	1,327.0
PRECAST PCI BEAM TYPE IV	L.F.	689.40	1,051.70	1,741.10
STEEL PILES HP 12×53	L.F.	12,927	3,207	16,134
TEST PILES	L.F.	453	92	545
STRUCTURE EXCAVATION-COMMON	C.Y.	3,516	1,484	5,000
STRUCTURE EXCAVATION-SOLID ROCK	C.Y.	171	80	251
ABUTMENT BACKFILL	C.Y.	1,702	774	2,476
BRIDGE LIGHTING	④	④	④	④
TELEPHONE CONDUIT	L.S.	⑤	⑤	L.S.
TRAFFIC SIGNALS	⑥	⑥	⑥	⑥
EXP.DAM 2 IN.NEOPR. TRANFL. 200A	L.F.	45.5	43.5	89.0
EXP.DAM 4 IN.NEOPR. TRANFL. 400	L.F.	890	—	890
COFFERDAMS	L.S.	⑦	⑧	⑦ & ⑧

* STRUCTURAL STEEL DISTRIBUTION BY ASTM DESIGNATION:

	KENTUCKY	WEST VIRGINIA	TOTAL
ASTM A36	186,761 Lbs.	68,181 Lbs.	254,942 Lbs.
ASTM A588	965,790 Lbs.	294,730 Lbs.	1260,520 Lbs.

⑦ COFFERDAMS-LUMP SUM BID FOR PIERS 2 3 & 8 IN KENTUCKY
⑧ COFFERDAM -LUMP SUM BID FOR PIER 9 IN WEST VIRGINIA

BILL OF INCIDENTAL MATERIAL

ITEM	NO.	DESCRIPTION	LOCATION
CORK EXPANSION JT. MATERIAL	3	4"-3" x 1½"	DECK JOINTS AT ABUTS. 2 & 3 AND PIER 12
EXPANSION JOINT SEAL	3	3" x 1½"	
BOLT INSERT ASSEMBLY	3	⅞" ø	AT BACKWALL-ABUT. 1 & 3.0 W.W. ABUT. 2
PLASTIC PIPE	12	1" I.D.	AT WINGS OF ABUT 1,2 & 3

SPECIAL PROVISIONS

4(76) WELDING STEEL BRIDGES
19(78) EPOXY COATED REINFORCEMENT
1(76) TRAFFIC SIGNALS

STANDARD DRAWINGS

BBP-001-04, BDX-006-01, BJE-001-03, BJE-002-03, BJJ-003-02, BJJ-004-02 & BPS-003-01

① APPROX. WEIGHT OF STRUCTURAL STEEL 1,515,462 LBS. (1,152,551 LBS. KY. & 362,911 LBS. W.VA.) (INCLUDED WEIGHT OF DECK DRAINS, PIPE & DRAIN SUPPORTS). *
② LUMP SUM FOR ABUTMENT BACKFILL INCLUDES APPROXIMATELY 2,476 CU.YDS. (1,702 CU.YDS. KY. & 774 CU.YDS. W.VA.) OF ABUTMENT BACKFILL MATERIAL AND 1,160 CU.YDS. (419 CU.YDS. KY. & 741 CU.YDS. W.VA.) OF STRUCTURE EXCAVATION, ABUTMENT.
③ APPROX. AMOUNT OF SHEAR CONNECTORS 5270 LBS. (3,686 LBS. KY. & 1,584 LBS. W.VA.)
④ FOR TABLE SHOWING QUANTITIES OF BRIDGE LIGHTING SEE SHEET 72.
⑤ NON PARTICIPATING ITEM TO BE PAID FOR BY THE SOUTH CENTRAL BELL CO. FOR TELEPHONE QUANTITIES SEE SHEET 74.
⑥ FOR TABLE SHOWING QUANTITIES OF TRAFFIC SIGNALS SEE SHEET 77.

REFERENCES

REFERENCES LISTED BELOW ARE CURRENT EDITION AND ARE TO BE USED WITH THESE PLANS.

RECOMMENDED BY:
FRANKLAND & LIENHARD

BY: E. Frank Stanley
DATE: Aug. 25 '77

SHEET 1 OF 82

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD BRS 431( )
STATION 20+20.00 P.E. PROJECT NO. SP 64-33-14L

CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
BRS 5331(4)		19502

FRANKLAND AND LIENHARD

BRIDGE

KENTUCKY DEPARTMENT OF TRANSPORTATION AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

LOUISA - FORT GAY BRIDGE KY 3 & W VA 37
OVER LEVISA AND TUG FORK OF BIG SANDY RIVER

REFERENCE AND ESTIMATE OF QUANTITIES

ITEM / LOCATION	SHEET NO.	CONCRETE CLASS A (CU. YDS.)	CONCRETE CLASS AA (CU. YDS.)	STEEL REINFORCEMENT (LBS.)	EPOXY COATED STEEL REINFORCEMENT (LBS.)	STRUCTURAL STEEL ① (LUMP SUM)	SHEAR CONECTORS ③ (LUMP SUM)	PEDESTRIAN HAND RAIL (LIN.FT.)	PRECAST PCI BEAM TYPE IV (LIN.FT.)	STEEL PILES HP12X53 (LIN.FT.)	TEST PILES (LIN.FT.)	STRUCTURE EXCAVATION COMMON (CU. YDS.)	STRUCTURE EXCAVATION SOLID ROCK (CU. YDS.)	ABUTMENT BACKFILL ② (LUMP SUM)	BRIDGE LIGHTING ④	TELEPHONE CONDUIT ⑤ (LUMP SUM)	TRAFFIC SIGNALS ⑥	EXPANSION DAM 2 IN. NEOPRENE TRANSFLEX 200 A (LIN.FT.)	EXPANSION DAM 4 IN. NEOPRENE TRANSFLEX 400 (LIN.FT.)	COFFER-DAMS L.S. KY	COFFER-DAMS L.S. WVA.
TITLE SHEET	1																				
GENERAL NOTES	2 & 3																				
LAYOUT	4																				
SOUNDINGS	5,6 & 7																				
GENERAL PLAN	8,9,10,& 11																				
SUBSTRUCTURE																					
ABUTMENT 1	12 & 13	151.2	46.7	(20,815)	21,471					2,100	76	232									
" 2	14,15 & 16	242.9	72.5	(35,400)	35,722					2,885	78	741									
" 3	17,18,19 & 20	330.4	74.4	(39,366)	40,996					4,470	80	187									
DETAILS FOR PLACING ABUTMENT BACKFILL	21																				
PIER 1	22	161.9		(25,991)	26,246					816	48	95									
" 2	23	385.3		(75,287)	75,387					—	—	728	38							⑦	
" 3	24	461.9		(84,949)	84,683					—	—	918	73							⑦	
" 4	25	267.6		(49,335)	49,740					1,575	45	311									
" 5	26	253.2		(40,620)	40,330					1,785	51	217									
" 6	27	116.5		(23,488)	19,350					884	52	73									
" 7	28	175.3		(26,734)	26,910					714	42	103									
" 8	29	395.3		(70,688)	66,234					—	—	523	60							⑦	
" 9	30	312.6		(46,330)	45,018					—	—	250	80								⑧
" 10	31	143.4		(23,016)	23,483					322	14	224									
" 11	32	173.1		(28,868)	30,170					—	—	269									
" 12 & PILE RECORDS	33 & 34	93.9		(17,806)	17,853					583	59	129									
SUBSTRUCTURE TOTALS		3,694.5	193.6	(609,293)	605,963					16,134	545	5,000	251	②						⑦	⑧
SUPERSTRUCTURE																					
SUPERSTRUCTURE PLANS	35 - 71			(2,749.2)	(445,176)	(350,256)			1,327.0	1,741.10								89.0	890		
FRAMING PLANS	35 - 37			(2,751.2)	442,782	(377,963)															
PRECAST PCI BEAM DETAILS	38 - 40					(379,440)															
STEEL PLATE GIRDER DETAILS	41 & 42																				
STEEL BEARING SHOES	43 - 45																				
CAST-IN-PLACE GIRDER DETAILS	46 - 52																				
SLAB PLANS	53 - 56																				
SLAB CROSS SECTIONS	57 & 58																				
SUPERSTRUCTURE DETAILS	59 - 63																				
CONSTRUCTION ELEVATIONS	64 - 69																				
BRIDGE DRAINS	70																				
PEDESTRIAN HANDRAIL	71																				
BRIDGE LIGHTING	72																				
TELEPHONE CONDUIT	73 - 75																				
TRAFFIC SIGNALS	76 - 80																				
NAVIGATION & CORPS PERMITS	81 & 82					(29,440)															
SUPERSTRUCTURE TOTALS				(2,751.2)	442,782	(377,963)															
BRIDGE TOTALS		3,694.5		(2,749.2)	(445,176)	(350,256)	①	③	1,327.0	1,741.10								89.0	890		
				(2,942.8)	(1,054,469)	(350,256)	①	③	1,327.0	1,741.10	16,134	545	5,000	251	②	④	⑤	⑥	89.0	890	⑦	⑧
				2,941.2	1,048,345	(327,963)															
						(379,440)															

QUANTITY DIVISION BETWEEN STATES				
ITEM	UNIT	KENTUCKY	WEST VIRGINIA	TOTAL
CONCRETE CLASS A	CU.YDS.	2,822.5	872.0	3,694.5
CONCRETE CLASS AA	CU.YDS.	(2,453.0)	689.8	(3,942.8)
STEEL REINFORCEMENT	LBS.	(846,365)	208,104	(1,054,469)
EPOXY COATED STEEL REINF	LBS.	(249,563)	(100,693)	(350,256)
STRUCTURAL STEEL *	L.S.	1,152,551 LBS	362,911 LBS	1,515,462 LBS
SHEAR CONNECTORS	L.S.	3,686 LBS	1,584 LBS	5,270 LBS
PEDESTRIAN HANDRAIL	L.F.	945.5	381.5	1,327.0
PRECAST PCI BEAM TYPE IV	L.F.	889.40	851.70	1,741.10
STEEL PILES HP 12 x 53	L.F.	12,927	3,207	16,134
TEST PILES	L.F.	453	92	545
STRUCTURE EXCAVATION-COMMON	C.Y.	3,516	1,484	5,000
STRUCTURE EXCAVATION-SOLID ROCK	C.Y.	171	80	251
ABUTMENT BACKFILL	C.Y.	1,702	774	2,426
BRIDGE LIGHTING	④	④	④	④
TELEPHONE CONDUIT	L.S.	⑤	⑤	L.S.
TRAFFIC SIGNALS	⑥	⑥	⑥	⑥
EXP.DAM 2 IN.NEOPR. TRANFL.200A	L.F.	45.5	43.5	89.0
EXP.DAM 4 IN.NEOPR. TRANFL. 400	L.F.	890	—	890
COFFERDAMS	L.S.	⑦	⑧	7&8

(276,513) (270,730) | 101,227 | 376,440 (377,963) | 1,048,345 | 2,944.8

* STRUCTURAL STEEL DISYRIBUTION BY ASTM DESIGNATION:

	KENTUCKY	WEST VIRGINIA	TOTAL
ASTM A36	186,761 Lbs.	68,181 Lbs	254,942 Lbs
ASTM A588	965,790 Lbs.	294,730 Lbs.	1260,520 Lbs

⑦ COFFERDAMS-LUMP SUM BID FOR PIERS 2 3 & 8 IN KENTUCKY
⑧ COFFERDAM -LUMP SUM BID FOR PIER 9 IN WEST VIRGINIA

BILL OF INCIDENTAL MATERIAL

ITEM	NO	DESCRIPTION	LOCATION
CORK EXPANSION JT. MATERIAL	3	4"-3" x 15/8"	DECK JOINTS AT ABUTS
EXPANSION JOINT SEAL	3	3" x 15/8"	1, 2 & 3 AND PIER 12
BOLT INSERT ASSEMBLY	3	7/8" ø	AT BACKWALL-ABUT. 1 & 3 & W.W. ABUT. 2
PLASTIC PIPE	12	1" I.D.	AT WINGS OF ABUT 1, 2 & 3

① APPROX. WEIGHT OF STRUCTURAL STEEL 1,515,462 LBS. (1,152,551 LBS. KY. & 362,911 LBS W.VA.) (INCLUDED WEIGHT OF DECK DRAINS, PIPE & DRAIN SUPPORTS). *
② LUMP SUM FOR ABUTMENT BACKFILL INCLUDES APPROXIMATELY 2,476 CU.YDS. (1,702 CU.YDS. KY. & 774 CU.YDS. W.VA.) OF ABUTMENT BACKFILL MATERIAL AND 1,160 CU.YDS. (419 CU.YDS. KY. & 741 CU.YDS. W.VA.) OF STRUCTURE EXCAVATION, ABUTMENT.
③ APPROX. AMOUNT OF SHEAR CONNECTORS 5270 LBS. (3,686 LBS. KY. & 1,584 LBS. W.VA.)
④ FOR TABLE SHOWING QUANTITIES OF BRIDGE LIGHTING SEE SHEET 72.
⑤ NON PARTICIPATING ITEM TO BE PAID FOR BY THE SOUTH CENTRAL BELL CO. FOR TELEPHONE QUANTITIES SEE SHEET 74.
⑥ FOR TABLE SHOWING QUANTITIES OF TRAFFIC SIGNALS SEE SHEET 77.

REFERENCES

REFERENCES LISTED BELOW ARE CURRENT EDITION AND ARE TO BE USED WITH THESE PLANS.

SPECIAL PROVISIONS

4(76) WELDING STEEL BRIDGES
19(76) EPOXY COATED REINFORCEMENT
1(76) TRAFFIC SIGNALS

STANDARD DRAWINGS

BBP-001-04, BGX-006-01, BJE-001-03, BJE-002-03, BJJ-003-02, BJJ-004-02 & BPS-003-01

RECOMMENDED BY:
FRANKLAND & LIENHARD

BY: _____

DATE: _____

SHEET 1 OF 82

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD BRS 431( )
STATION 20+2000 P.E. PROJECT NO. SP 64-33-14L

FRANKLAND AND LIENHARD

CONSTRUCTION PROJECT NO. BRS 5331(4)
MAINTENANCE PROJECT NO.
DRAWING NO. 19592

BRIDGE

KENTUCKY DEPARTMENT OF TRANSPORTATION AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

LOUISA - FORT GAY BRIDGE KY 3 & W VA 37
OVER LEVISA AND TUG FORK OF BIG SANDY RIVER

REFERENCE AND ESTIMATE OF QUANTITIES

ITEM / LOCATION	SHEET NO.	CONCRETE CLASS A (CU. YDS.)	CONCRETE CLASS AA (CU. YDS.)	STEEL REINFORCEMENT (LBS.)	EPOXY COATED STEEL REINFORCEMENT (LBS.)	STRUCTURAL STEEL ① (LUMP SUM)	SHEAR CONECTORS ③ (LUMP SUM)	PEDESTRIAN HAND RAIL (LIN.FT.)	PRECAST PCI BEAM TYPE IV (LIN.FT.)	STEEL PILES HP12X53 (LIN.FT.)	TEST PILES (LIN.FT.)	STRUCTURE EXCAVATION COMMON (CU. YDS.)	STRUCTURE EXCAVATION SOLID ROCK (CU. YDS.)	ABUTMENT BACKFILL ② (LUMP SUM)	BRIDGE LIGHTING ④	TELEPHONE CONDUIT ⑤ (LUMP SUM)	TRAFFIC SIGNALS ⑥	EXPANSION DAM 2 IN. NEOPRENE TRANSFLEX 200 A (LIN.FT.)	EXPANSION DAM 4 IN. NEOPRENE TRANSFLEX 400 (LIN.FT.)	COFFERDAMS L.S. KY	COFFERDAMS L.S. W.VA.
TITLE SHEET	1																				
GENERAL NOTES	2 & 3																				
LAYOUT	4																				
SOUNDINGS	5, 6 & 7																				
GENERAL PLAN	8, 9, 10, & 11																				
SUBSTRUCTURE																					
ABUTMENT 1	12 & 13	151.2	46.7	(20,815)	21,471					2,100	76	232									
" 2	14, 15 & 16	242.9	72.5	(35,400)	35,722					2,885	78	741									
" 3	17, 18, 19 & 20	330.4	74.4	(39,366)	40,996					4,470	80	187									
DETAILS FOR PLACING ABUTMENT BACKFILL	21																				
PIER 1	22	161.9		(25,991)	26,246					810	48	95									
" 2	23	385.3		(74,287)	75,387					—	—	728	38							⑦	
" 3	24	461.9		(84,349)	84,683					—	—	918	73							⑦	
" 4	25	297.0		(49,335)	49,740					1,575	45	311									
" 5	26	253.2		(40,620)	40,330					1,785	51	217									
" 6	27	116.5		(23,488)	19,350					884	52	73									
" 7	28	175.3		(26,734)	26,910					714	42	103									
" 8	29	395.3		(70,688)	66,234					—	—	523	60							⑦	
" 9	30	312.6		(46,330)	45,018					—	—	290	60								⑧
" 10	31	143.4		(23,610)	23,453					322	14	264									
" 11	32	173.1		(28,860)	30,170					—	—	269									
" 12 & PILE RECORDS	33 & 34	93.9		(17,806)	17,853					583	59	129									
SUBSTRUCTURE TOTALS		3,694.5	193.6	(605,295)	605,563					16,134	545	5,000	251	②						⑦	⑧
SUPERSTRUCTURE																					
SUPERSTRUCTURE PLANS	35 - 71		2,749.2	(445,176)	(350,256)					1,327.0	1,741.10							89.0	89.0		
FRAMING PLANS	35 - 37			442,782	377,963																
PRECAST PCI BEAM DETAILS	38 - 40																				
STEEL PLATE GIRDER DETAILS	41 & 42																				
STEEL BEARING SHOES	43 - 45																				
CAST-IN-PLACE GIRDER DETAILS	46 - 52																				
SLAB PLANS	53 - 56																				
SLAB CROSS SECTIONS	57 & 58																				
SUPERSTRUCTURE DETAILS	59 - 63																				
CONSTRUCTION ELEVATIONS	64 - 69																				
BRIDGE DRAINS	70																				
PEDESTRIAN HANDRAIL	71																				
BRIDGE LIGHTING	72																				
TELEPHONE CONDUIT	73 - 75																				
TRAFFIC SIGNALS	76 - 80																				
NAVIGATION & CORPS PERMITS	81 & 82																				
SUPERSTRUCTURE TOTALS			2,749.2	(445,176)	(350,256)					1,327.0	1,741.10							89.0	89.0		
				442,782	377,963																
BRIDGE TOTALS		3,694.5	2,942.8	(1,054,469)	(350,256)	①	③	1,327.0	1,741.10	16,134	545	5,000	251	②	④	⑤	⑥	89.0	89.0	⑦	⑧
				1,048,345	377,963	①	③	1,327.0	1,741.10	16,134	545	5,000	251	②	④	⑤	⑥	89.0	89.0	⑦	⑧

QUANTITY DIVISION BETWEEN STATES

ITEM	UNIT	KENTUCKY	WEST VIRGINIA	TOTAL
CONCRETE CLASS A	CU.YDS.	2,822.5	872.0	3,694.5
CONCRETE CLASS AA	CU.YDS.	2,253.0	689.8	2,942.8
STEEL REINFORCEMENT	LBS.	(846,365) 837,168	(208,104) 211,150	1,054,469 1,048,345
EPOXY COATED STEEL REINF	LBS.	(249,563) 276,736	(100,693) 101,227	(350,256) 377,963
STRUCTURAL STEEL *	L.S.	1,152,551 LBS.	362,911 LBS.	1,515,462 LBS.
SHEAR CONNECTORS	L.S.	3,686 LBS.	1,584 LBS.	5,270 LBS.
PEDESTRIAN HANDRAIL	L.F.	945.5	381.5	1,327.0
PRECAST PCI BEAM TYPE IV	L.F.	889.40	851.70	1,741.10
STEEL PILES HP 12 x 53	L.F.	12,927	3,207	16,134
TEST PILES	L.F.	453	92	545
STRUCTURE EXCAVATION- COMMON	C.Y.	3,516	1,484	5,000
STRUCTURE EXCAVATION-SOLID ROCK	C.Y.	171	80	251
ABUTMENT BACKFILL	C.Y.	1,702	774	2,476
BRIDGE LIGHTING	L.S.	④	④	④
TELEPHONE CONDUIT	L.S.	⑤	⑤	L.S.
TRAFFIC SIGNALS	L.S.	⑥	⑥	⑥
EXP.DAM 2 IN NEOPR. TRANFL. 200A	L.F.	45.5	43.5	89.0
EXP.DAM 4 IN. NEOPR. TRANFL. 400	L.F.	89.0	—	89.0
COFFERDAMS	L.S.	⑦	⑧	⑦ & ⑧

* STRUCTURAL STEEL DISTRIBUTION BY ASTM DESIGNATION:

	KENTUCKY	WEST VIRGINIA	TOTAL
ASTM A36	186,761 Lbs.	68,181 Lbs.	254,942 Lbs.
ASTM A588	965,790 Lbs.	294,730 Lbs.	1,260,520 Lbs.

⑦ COFFERDAMS-LUMP SUM BID FOR PIERS 2 3 & 8 IN KENTUCKY
⑧ COFFERDAM -LUMP SUM BID FOR PIER 9 IN WEST VIRGINIA

BILL OF INCIDENTAL MATERIAL

ITEM	NO	DESCRIPTION	LOCATION
CORK EXPANSION JT MATERIAL	3	4" - 3" x 1 5/8"	DECK JOINTS AT ABUTS 1, 2 & 3 AND PIER 12
EXPANSION JOINT SEAL	3	3" x 1 5/8"	
BOLT INSERT ASSEMBLY	3	7/8" ø	AT BACKWALL-ABUT 1 & 3 & W.W. ABUT 2
PLASTIC PIPE	12	1" I.D.	AT WINGS OF ABUT 1, 2 & 3

① APPROX. WEIGHT OF STRUCTURAL STEEL 1,515,462 LBS. (1,152,551 LBS. KY. & 362,911 LBS W.VA. INCLUDED WEIGHT OF DECK DRAINS, PIPE & DRAIN SUPPORTS). *
② LUMP SUM FOR ABUTMENT BACKFILL INCLUDES APPROXIMATELY 2,476 CU.YDS. (1,702 CU.YDS. KY. & 774 CU.YDS. W.VA.) OF ABUTMENT BACKFILL MATERIAL AND 1,160 CU.YDS. (419 CU.YDS. KY. & 741 CU.YDS. W.VA.) OF STRUCTURE EXCAVATION, ABUTMENT.
③ APPROX. AMOUNT OF SHEAR CONNECTORS 5270 LBS. (3,686 LBS. KY. & 1,584 LBS. W.VA.)
④ FOR TABLE SHOWING QUANTITIES OF BRIDGE LIGHTING SEE SHEET 72.
⑤ NON PARTICIPATING ITEM TO BE PAID FOR BY THE SOUTH CENTRAL BELL CO. FOR TELEPHONE QUANTITIES SEE SHEET 74.
⑥ FOR TABLE SHOWING QUANTITIES OF TRAFFIC SIGNALS SEE SHEET 77

REFERENCES

REFERENCES LISTED BELOW ARE CURRENT EDITION AND ARE TO BE USED WITH THESE PLANS.

SPECIAL PROVISIONS

4(76) WELDING STEEL BRIDGES
19(76) EPOXY COATED REINFORCEMENT
1(76) TRAFFIC SIGNALS

STANDARD DRAWINGS

BBP-001-04, BGX-006-01, BJE-001-03, BJE-002-03, BJJ-003-02, BJJ-004-02 & BPS-003-01

RECOMMENDED BY:
FRANKLAND & LIENHARD

BY: _____

DATE: _____

SHEET 1 OF 82

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES
LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD BRS 431( )
STATION 20+2000 P.E. PROJECT NO. SP 64-33-14L

CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
BRS 5331(4)		19592

FRANKLAND AND LIENHARD

BRIDGE

KENTUCKY DEPARTMENT OF TRANSPORTATION AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

LOUISA - FORT GAY BRIDGE KY 3 & W VA 37
OVER LEVISA AND TUG FORK OF BIG SANDY RIVER

REFERENCE AND ESTIMATE OF QUANTITIES

ITEM / LOCATION	SHEET NO	CONCRETE CLASS A (CU YDS)	CONCRETE CLASS AA (CU YDS)	STEEL REINFORCEMENT (LBS)	EPOXY COATED STEEL REINFORCEMENT (LBS)	STRUCTURAL STEEL ① (LUMP SUM)	SHEAR CONECTORS ③ (LUMP SUM)	PEDESTRIAN HAND RAIL (LIN FT)	PRECAST PCI BEAM TYPE IV (LIN FT)	STEEL PILES HP12X53 (LIN FT)	TEST PILES (LIN FT)	STRUCTURE EXCAVATION COMMON (CU YDS)	STRUCTURE EXCAVATION SOLID ROCK (CU YDS)	ABUTMENT BACKFILL ② (LUMP SUM)	BRIDGE LIGHTING ④	TELEPHONE CONDUIT ⑤ (LUMP SUM)	TRAFFIC SIGNALS ⑥	EXPANSION DAM 2 IN NEOPRENE TRANSFLEX 200 A (LIN FT)	EXPANSION DAM 4 IN NEOPRENE TRANSFLEX 400 (LIN FT)	COFFER-DAMS L.S. KY	COFFER-DAMS L.S. W.VA
TITLE SHEET	1																				
GENERAL NOTES	2 & 3																				
LAYOUT	4																				
SOUNDINGS	5,6 & 7																				
GENERAL PLAN	8,9,10 & 11																				
SUBSTRUCTURE																					
ABUTMENT 1	12 & 13	151.2	46.7	20,815						2,100	76	232									
" 2	14,15 & 16	242.9	72.5	35,400						2,885	78	741									
" 3	17,18,19 & 20	330.4	74.4	39,300						3,470	80	187									
DETAILS FOR PLACING ABUTMENT BACKFILL	21																				
PIER 1	22	161.9		25,991						810	46	95									
" 2	23	385.1		75,287						—	—	728	38							⑦	
" 3	24	461.9		84,949						—	—	918	73							⑦	
" 4	25	287.6		49,335						1,575	45	511									
" 5	26	253.2		40,620						1,785	51	217									
" 6	27	116.5		23,988						884	52	73									
" 7	28	175.3		26,734						714	42	103									
" 8	29	395.3		70,688						—	—	527	60							⑦	⑧
" 9	30	312.6		46,330						—	—	250	80								
" 10	31	143.4		23,616						322	14	224									
" 11	32	173.1		28,868						—	—	259									
" 12 & PILE RECORDS	33 & 34	93.9		17,800						—	—	—									
SUBSTRUCTURE TOTALS		3,694.5	193.6	609,293						16,134	545	5,000	251	②						⑦	⑧
SUPERSTRUCTURE																					
SUPERSTRUCTURE PLANS	35 - 71		2,749.2	445,176	350,256	①	③	1,327.0	1,741.10						④	⑤	⑥	89.0	89.0		
FRAMING PLANS	35 - 37																				
PRECAST PCI BEAM DETAILS	38 - 40																				
STEEL PLATE GINDER DETAILS	41 & 42																				
STEEL BEARING SHOES	43 - 45																				
CAST-IN-PLACE GIRDER DETAILS	46 - 52																				
SLAB PLANS	53 - 56																				
SLAB CROSS SECTIONS	57 & 58																				
SUPERSTRUCTURE DETAILS	59 - 63																				
CONSTRUCTION ELEVATIONS	64 - 69																				
BRIDGE DRAINS	70																				
PEDESTRIAN HANDRAIL	71																				
BRIDGE LIGHTING	72																				
TELEPHONE CONDUIT	73 - 75																				
TRAFFIC SIGNALS	76 - 80																				
NAVIGATION & CORPS PERMITS	81 & 82																				
SUPERSTRUCTURE TOTALS			2,749.2	445,176	350,256	①	③	1,327.0	1,741.10						④	⑤	⑥	89.0	89.0		
BRIDGE TOTALS		3,694.5	2,942.8	1,054,469	350,256	①	③	1,327.0	1,741.10	16,134	545	5,000	251	②	④	⑤	⑥	89.0	89.0	⑦	⑧

QUANTITY DIVISION BETWEEN STATES

ITEM	UNIT	KENTUCKY	WEST VIRGINIA	TOTAL
CONCRETE CLASS A	CU.YDS.	2,822.5	872.0	3,694.5
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STRUCTURAL STEEL	L.S.	1,152,551 LBS	167,911 LBS	1,565,462 LBS
SHEAR CONNECTORS	L.S.	3,686 LBS	1,584 LBS.	5,270 LBS
PEDESTRIAN HANDRAIL	L.F.	945.5	381.5	1,327.0
PRECAST PCI BEAM TYPE IV	L.F.	689.40	851.70	1,741.10
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TEST PILES	L.F.	453	92	545
STRUCTURE EXCAVATION - COMMON	C.Y.	3,516	1,484	5,000
STRUCTURE EXCAVATION - SOLID ROCK	C.Y.	171	80	251
ABUTMENT BACKFILL	C.Y.	1,702	774	2,476
BRIDGE LIGHTING	④	④	④	④
TELEPHONE CONDUIT	L.S.	⑤	⑤	L.S.
TRAFFIC SIGNALS	⑥	⑥	⑥	⑥
EXP.DAM 2 IN NEOPR. TRANFL. 200A	L.F.	45.5	43.5	89.0
EXP.DAM 4 IN NEOPR. TRANFL. 400	L.F.	89.0	—	89.0
COFFERDAMS	L.S.	⑦	⑧	⑦&⑧

⑦ COFFERDAMS-LUMP SUM BID FOR PIERS 2, 3 & 8 IN KENTUCKY
⑧ COFFERDAM - LUMP SUM BID FOR PIER 9 IN WEST VIRGINIA

BILL OF INCIDENTAL MATERIAL

ITEM	NO	DESCRIPTION	LOCATION
CORK EXPANSION JT MATERIAL	3	4" x 1½"	DECK JOINTS AT ABUTS 1,2 & 3 AND PIER 12 AT BACKWALL OF ABUT 1 & 3, & W.W. WINGS OF ABUT 1,2 & 3
EXPANSION JOINT SEAL	3	5" x 1½"	
BOLT INSERT ASSEMBLY	3	⅞" ø	
PLASTIC PIPE	12	1" ø	

RECOMMENDED BY:
FRANKLAND B. LIENHARD

BY: _____
DATE: _____

SHEET 1 OF 82

1. APPROX. WEIGHT OF STRUCTURAL STEEL 1,515,462 LBS (1,152,551 LBS. KY & 362,911 LBS W.VA (INCLUDED WEIGHT OF DECK DRAINS, PIPE & DRAIN SUPPORTS).
2. LUMP SUM FOR ABUTMENT BACKFILL INCLUDES APPROXIMATELY 2,476 CU.YDS (1,702 CU.YDS KY. & 774 CU.YDS W.VA.) OF ABUTMENT BACKFILL MATERIAL AND 1,160 CU.YDS (419 CU.YDS KY & 741 CU.YDS W.VA.) OF STRUCTURE EXCAVATION, ABUTMENT.
3. APPROX. AMOUNT OF SHEAR CONNECTORS 5270 LBS. (3,686 LBS. KY. & 1,584 LBS. W.VA.)
4. FOR TABLE SHOWING QUANTITIES OF BRIDGE LIGHTING SEE SHEET 72
5. NON PARTICIPATING ITEM TO BE PAID FOR BY THE SOUTH CENTRAL BELL CO. FOR TELEPHONE QUANTITIES. SEE SHEET 74
6. FOR TABLE SHOWING QUANTITIES OF TRAFFIC SIGNALS SEE SHEET 77

REFERENCES

REFERENCES LISTED BELOW ARE CURRENT EDITION AND ARE TO BE USED WITH THESE PLANS

SPECIAL PROVISIONS

4(76) WELDING STEEL BRIDGES
19(76) EPOXY COATED REINFORCEMENT
1(76) TRAFFIC SIGNALS

STANDARD DRAWINGS

BBP-001-04, BGX-000-01, BJE-001-03, BJE-002-03, BJJ-003-02, BJJ-004-02 & BPS-003-01

FRANKLAND AND LIENHARD

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8), SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES
LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD BRS 431( )
STATION 20+20.00 P.E. PROJECT NO. SP 64-33-14L

CONSTRUCTION PROJECT NO. BRS 5331(4) | MAINTENANCE PROJECT NO. | DRAWING NO. 19592

BRIDGE

SHEET 2

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA - FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY WEST VIRGINIA

ROAD

STATION 20+2000 P.E. PROJECT NO.

CONSTRUCTION PROJECT NO. MAINTENANCE PROJECT NO. DRAWING NO. 19592

GENERAL NOTES

FRANKLAND AND LIENHARD

BRIDGE

SHEET 3

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES
LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD

STATION 20+2000 P.E. PROJECT NO.

CONSTRUCTION PROJECT NO. MAINTENANCE PROJECT NO. ORDERING NO. 19592

GENERAL NOTES

FRANKLAND AND LIENHARD

BRIDGE

UPDATE DATE

LETTING DATE

LOUISA
LAWRENCE COUNTY
KENTUCKY

FORT GAY
WAYNE COUNTY
WEST VIRGINIA

-.04720%

+.350%

PI Sta 13+50
El 578.12
VC 400'

Jan - Feb 1957 Flood El 564.2

El 581.00 Low Steel

Abut. 1 | Pier 1 | Pier 2 | Pier 3 | Pier 4 | Pier 5 | Pier 6 | Pier 7 | Pier 8 | Pier 9 | Pier 10 | Pier 11 | Abut. 2

ELEVATION

1231'-2⅞" Out to Out of Bridge

3'-2½" | 75'-0" | 100'-0" | 200'-0" | 73'-6" | 48'-0" | 50'-3" | 59'-3" | 120'-0" | 180'-0" | 120'-0" | 85'-0" | 85'-0" | 3'-0½"

LOUISA | KENTUCKY | WEST VIRGINIA | FORT GAY

Datum Line

26+35.55

℄ East Box Culvert
2-6'x4' Openings

84°23'00"

N 43°46'24.8" E

Sta 27+51.24
℄ Survey

Sta 10+00.00 ℄ Park St.

Sta 26+94.07
℄ Survey

Sta 10+00.00 ℄ Aerial R.R.

Sta 10+00.00 ℄ Park St.
Sta 25+64.00
℄ Survey

Exist. R.R. crossing to be abandoned

Exist. Bridge (to be removed)

Telephone Conduits (8 conduit runs)

℄ Bngs. Abutment 3
Limits of Sandstone Fill

Sandstone Fill

Natural Ground Line

Normal Solid Rock Line

Datum Line

ELEVATION KY 3

PLAN

SECTION A-A

SECTION B-B

SECTION C-C

SECTION D-D

SUBSTRUCTURE DATA

Unit	Top of Unit El.	Bott of Ftg El.	Pile Cut off El.	Unit Height
Abut. 1	574.500	563.00	563.50	11'-6"
Pier 1	575.403	542.403	542.903	33'-0"
2	575.591	493.591	—	82'-0"
3	583.781	492.781	—	91'-0"
4	582.689	537.689	540.189	45'-0"
5	553.146	549.146	549.646	34'-0"
6	584.671	548.671	549.371	35'-0
7	555.283	540.283	546.783	19'-0"
8	580.440	508.440	—	72'-0"
9	574.090	520.090	—	53'-0"
10	575.396	556.396	550.896	25'-0"
11	574.289	529.289	—	45'-0"
Abut. 2	573.520	558.00	558.50	14'-11"
Pier 12	594.50	543.50	544.00	41'-9"
Abut. 3	581.000	566.00	566.50	15'-0"

NOTES

For General Notes see Sheet 2 & 3
For General Plan see Sheet 9, 10 & 11
For Construction Stages see Roadway Plans

SHEET 4

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA - FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD

STATION 20+20.00 | P.E. PROJECT NO.

LAYOUT

FRANKLAND AND LIENHARD

CONSTRUCTION PROJECT NO. | MAINTENANCE PROJECT NO. | DRAWING NO. 19592

BRIDGE

LOUISA
LAWRENCE COUNTY
KENTUCKY

FORT GAY
WAYNE COUNTY
WEST VIRGINIA

ELEVATION

PLAN

SECTION AA

SECTION BB

SECTION CC

SECTION DD

SUBSTRUCTURE DATA

Unit	Bearing (Unit E)	Bearing (Unit of Eng. El.)	Bearing (Unit of Sta.)	Pile Data (Unit of Sta.)	Unit Height
Abut 1	574.504	574.50	574.50	574.50	11'-0"
Pier 1	575.40	549.40	549.40	549.40	33'-8"
2	575.50	549.50	549.50	—	32'-0"
3	575.78	549.78	549.78	—	31'-6"
4	575.78	549.78	549.78	549.78	43'-0"
5	575.78	549.78	549.78	549.78	34'-0"
6	574.78	549.78	549.78	549.78	34'-0"
7	574.78	549.78	549.78	549.78	33'-0"
8	574.78	549.78	549.78	—	32'-0"
9	574.78	549.78	549.78	—	34'-0"
10	574.78	549.78	549.78	549.78	35'-0"
11	574.78	549.78	549.78	—	41'-0"
Abut 2	574.78	549.78	549.78	549.78	15'-0"
Pier 11	574.78	549.78	549.78	549.78	4'-0"
Abut 2	574.78	549.78	549.78	549.78	15'-0"

NOTES

SHEET 4

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES
LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA
ROAD

STATION 20+20.00 P.E. PROJECT NO.

CONSTRUCTION PROJECT NO. | MAINTENANCE PROJECT NO. | DRAWING NO. 19592

LAYOUT

FRANKLAND AND LIENHARD

BRIDGE

UPDATE DATE

LETTING DATE

LOUISA
LAWRENCE COUNTY
KENTUCKY

FORT GAY
WAYNE COUNTY
WEST VIRGINIA

Span 1 : 3 : 95'-80' : Precast PCI Type II Simple Span
Span 2 & 3 : 8 @ 120' : 120'-200'-120'-180'-120' : Continuous Composite welded steel I Girders.
Span 11 & 12 : 85'-85' : Precast PCI Type II Continuous for Live Load and Impact only
Span 4, 5, 6 & 7 : 73'-6", 46'-0", 59'-3", 59'-3" : Continuous Cast-in Place R.C. Beams.

H5 20-44 Loading; 32' Main Road, 40' KY-3; 8'-0" Sidewalk @ Main Road; 2:1 Fill Slopes.

Abut 1, Pier 1-3 : 20° Skew Right; Pier 4-5 : 9°26'14.5" Skew Right;
Pier 6-11 & Abut 2 : 10° Skew Left, Pier 12 : 9°26'14.5" Skew Left, Abut 3 : 0° Skew.

Profile Grade +3.50% -3.50% -0.5000%

P.I. Sta 9+75 El. 600.00 VC. 800

P.I. Sta. 13+50 El. 578.12 VC. 400'

P.I. Sta. 25+90 El. 578.48 VC. 290

Jan.-Febr. 1957 Flood El. 564.5 Min. Vert. Clearance 51.0' El. 581.00 Low Steel

Standard Proj. Flood El. 583.0
Intermediate Regional Flood El. 576.5 • 144,600 CFS
Modified 2% Line El. 555.0

El. 581.00 (low Steel)

Span 1 | Span 2 | Span 3 | Span 4 | Span 5 | Span 6 | Span 7 | Span 8 | Span 9 | Span 10 | Span 11 | Span 12

80' (Normal) Min. Horiz. Clearance
Future Normal Pool El. 530.00
El. 525.52 (Aug. 5, 1976)
El. 525.70 (Aug. 5, 1976)

Piles, Steel HP 12 x 53 (Typ.)

Min. Vert. Clearance 51.0'

Natural Ground Line
Approx. Solid Rock Line
Datum Line

Abut 1 | Pier 1 | Pier 2 | Pier 3 | Pier 4 | Pier 5 | Pier 6 | Pier 7 | Pier 8 | Pier 9 | Pier 10 | Pier 11 | Abut 2

ELEVATION

1232'-8⅜" — 1231'-2⅞" Out to Out of Bridge

3°-0" | 75'-0" | 75'-0" | 180'-0" | 200'-0" | 73'-6" | 46'-0" | 59'-3" | 59'-3" | 120'-0" | 180'-0" | 120'-0" | 85'-0" | 85'-0" | 3°-0"

LOUISA | KENTUCKY | WEST VIRGINIA | FORT GAY

Sta. 15+20.00 ℄ Survey
Sta. 5+53.17 ℄ Levisa Fork

LEVISA FORK FLOW

Sta. 19+00.00 ℄ Survey
Sta. 19+28.85 ℄ Office Proj. KY 3

Sta. 21+00.00 ℄ Survey
Sta. 4+71.35 ℄ Tug Fork

TUG FORK FLOW

Cassville Branch

Sta. 14+04.50 | Sta. 14+50.50 | Sta. 14+87.50 | Sta. 15+02.50 | Sta. 16+76.00 | Sta. 18+02.50 | Sta. 19+24.00 | Sta. 19+83.75 | Sta. 20+43.50 | Sta. 21+62.50 | Sta. 22+52.50 | Sta. 24+70.50 | Sta. 25+47.50 | Sta. 26+32.50

TO ASHLAND | TO WAYNE

Sta. 17+97.83 ℄ Survey
Sta. 13+08.00 ℄ Kinson St

Bridge St

N 49°46'46" W 94.8' ℄

Sta. 27+5.24 ℄ Survey
Sta. 10+00.00 ℄ Polk St

Sta. 26+94.00 ℄ Survey
Sta. 10+00.00 ℄ M.H. R.R.
Sta. 10+00.00 ℄ Cass St (Sta. 26+64.00) ℄ Survey

Sta. 26+35.55

8°23'30"

Exist. Box Culvert 2-16'-4" Openings 4'x6'

℄ Brgs. Abutment 1
℄ Pier 1 ℄ Exp. Jt.
℄ Telephone Conduits (12 conduit runs)
℄ Pier 2
℄ Pier 3 ℄ Exp. Jt.
℄ Pier 4
℄ Pier 5
℄ Pier 6
℄ Pier 7 ℄ Exp. Jt.
℄ Pier 8
℄ Pier 9
℄ Pier 10 ℄ Exp. Jt.
℄ Telephone Conduits (8 conduit runs)
℄ Pier 11
℄ Brgs. Abutment 2

Sta. 19+50.00 ℄ Survey KY-3
Sta. 19+80.00 ℄ Survey

N 22°35'45" W

Sta. 18+50.00
80°33'45"

Sta. 17+70.00
Sta. 17+67.00

℄ Telephone Conduits (4 conduit runs)

℄ Brgs. Abutment 3
Limits of Sandstone Fill

WAYNE CO. WEST VIRGINIA
LAWRENCE CO. KENTUCKY

Exist. Bridge (to be removed)

Sandstone Fill

Natural Ground Line
Approx. Solid Rock Line
Datum Line

ELEVATION KY 3

P.I. 1432.39
N 30°49'20.7" W
℄ Office Proj. KY 3

P.T. Sta 16+10.74

Bridge St

Exist. R.R. crossing to be abandoned

PLAN

44'-0½" Out to Out

15'-0" | 15'-0" | 17½" | 8'-0"

Profile Grade 6"/ft. | ℄ Survey | 6"/ft.

3'-9"

5 Precast PCI Beams Type II @ 9'-6" - 38'-0" | 3'-0½"

SECTION A-A

34'-0½" Out to Out

15'-0" | 15'-0" | 17½" | 8'-0"

Profile Grade 6"/ft. | ℄ Survey | 6"/ft.

58" (Min.) Web D. | 64" (Max.) Web D. | 3'-0"

5 Welded Steel ℄ Girders @ 9'-6" - 38'-0" | 3'-0½"

℄ Telephone Conduits (12 conduit runs in spans 2 & 3, 8 conduit runs in spans 8 & 10)

SECTION B-B

52'-0½" Out to Out

20'-0" | 17½" | 8'-0"

Profile Grade 6"/ft. | ℄ Office Proj. KY 3 | 6"/ft.

℄ Telephone Conduits (4 conduit runs)

2'-6½"

6 Precast PCI Beams Type II @ 9'-0" - 45'-10" | 3'-0"

SECTION C-C

52'-5⅛" Out to ℄ Exp. Jt.

16'-0" | 74'-9⅛"

Profile Grade 6"/ft. | ℄ Survey | 6"/ft.

℄ Telephone Conduits (12 Conduit runs in Span 4 & 5, 8 Conduit runs in Span 6 & 7)

℄ Exp. Joint

3'-9" | 3'-9" | 3'-0" | 3'-0"

10 - Cast-in-Place Reinf. Concrete T Beams @ 9'-6" - 85'-6" | 3'-10⅜" | 3'-0"

SECTION D-D

SUBSTRUCTURE DATA

Unit	Top of Unit El.	Bott. of Ftg. El.	Pile Cut-off El.	Unit Height
Abut 1	574.500	563.00	563.50	11'-6"
Pier 1	575.403	542.403	542.903	33'-0"
2	575.500	493.500	—	82'-0"
3	583.781	492.781	—	91'-0"
4	582.689	539.689	540.189	43'-0"
5	583.146	549.146	549.646	34'-0"
6	584.871	548.871	549.371	36'-0"
7	585.283	546.283	546.783	37'-0"
8	580.440	508.440	—	72'-0"
9	575.000	520.000	—	56'-0"
10	575.396	550.396	550.896	25'-0"
11	574.289	529.289	—	45'-0"
Abut 2	572.920	556.00	556.50	16'-11"
Pier 12	594.50	543.50	544.00	41'-0"
Abut 3	581.000	566.00	566.50	15'-0"

NOTES

For General Notes see Sheet 2 & 3
For General Plans see Sheet 5, 9, 10 & 11
For Construction Stages see Roadway Plans.

SHEET 4

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES
LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA
ROAD

STATION 20 I-2000 | P.E. PROJECT NO.

LAYOUT

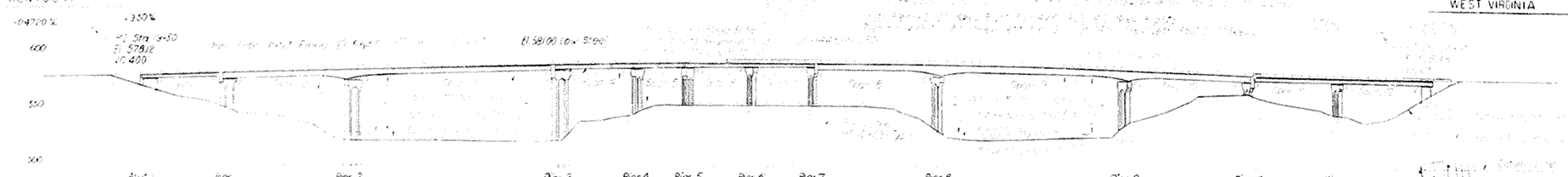
FRANKLAND AND LIENHARD

CONSTRUCTION PROJECT NO. | MAINTENANCE PROJECT NO. | DRAWING NO. 19592

BRIDGE

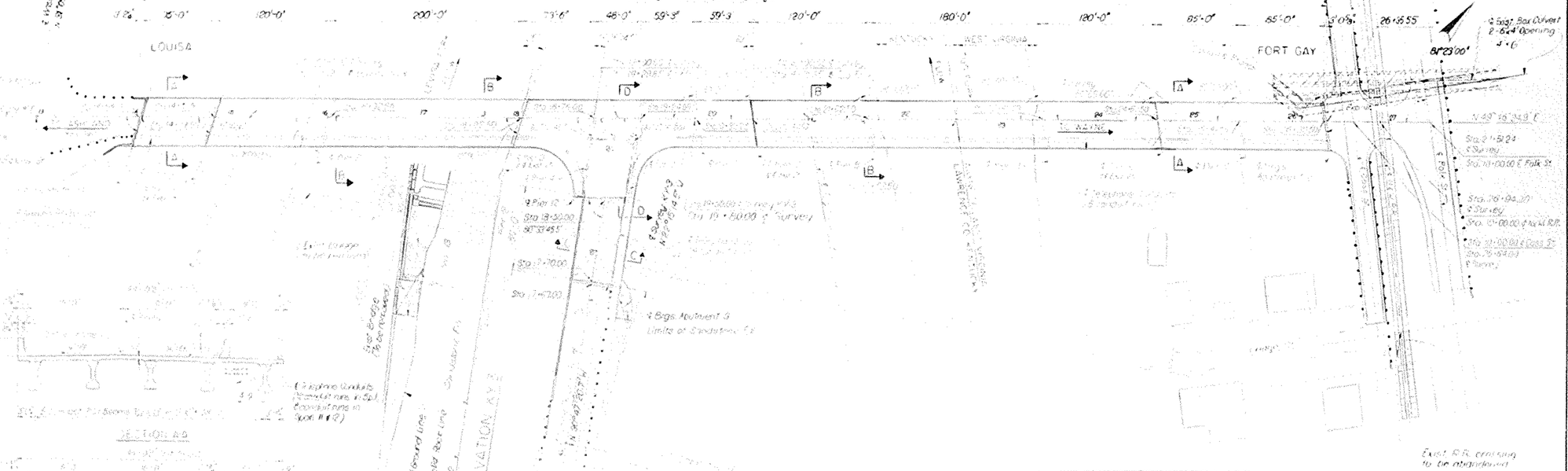
LOUISA
LAWRENCE COUNTY
KENTUCKY

FORT GAY
WAYNE COUNTY
WEST VIRGINIA

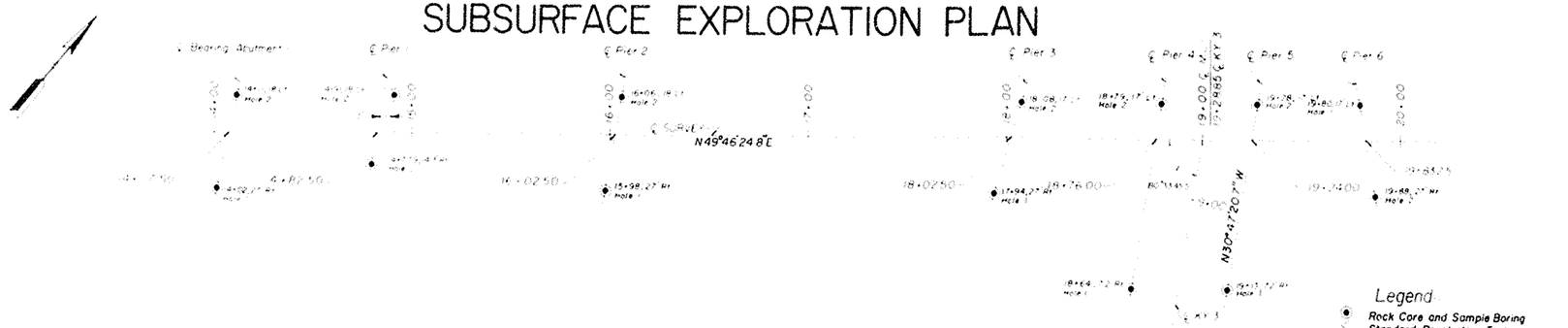


ELEVATION

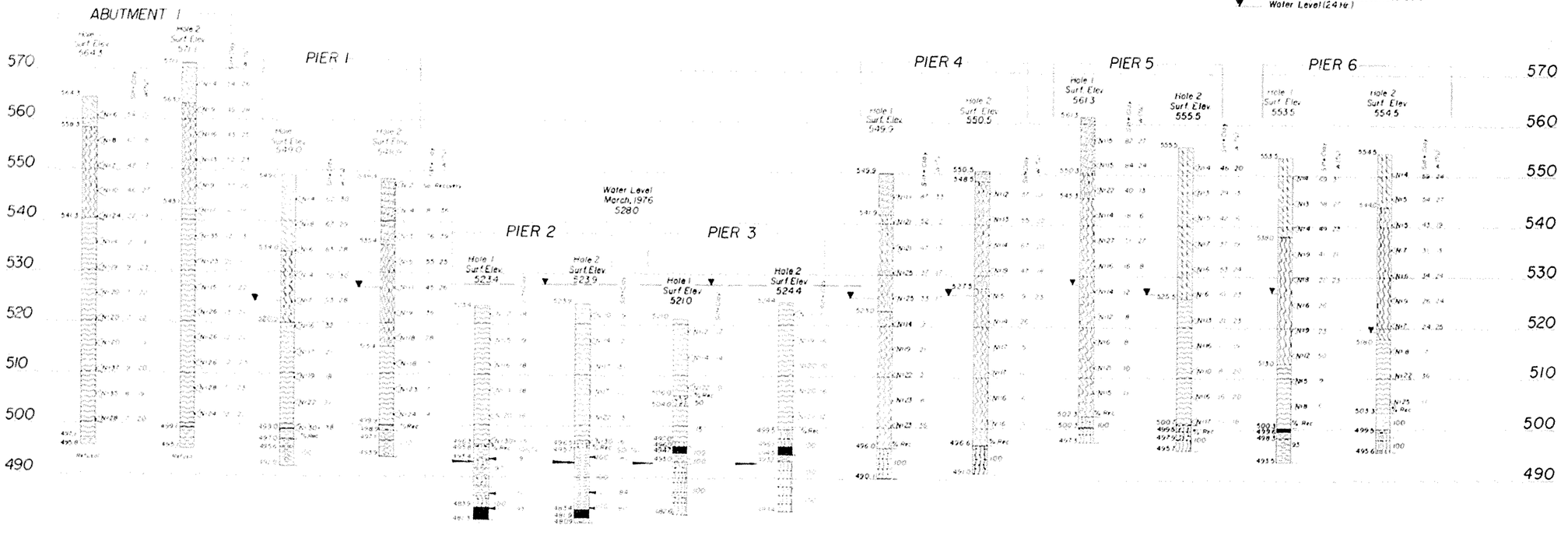
1231-2⅝" Out to Out of Bridge


LOUISA
FORT GAY
WEST VIRGINIA
KENTUCKY
Pier 10
Sta 18+50.00
90°33'45"
Sta 3+70.00
Sta 1+40.00
Begin Abutment 1
Limits of Excavation
Begin Abutment 2
Limits of Excavation
Sta 19+50.00 ℄ Survey
Sta 19+50.00 ℄ Survey
Sta 2+50.00 ℄ Survey
Sta 3+00.00 ℄ Survey
Sta 3+00.00 ℄ Survey
Sta 3+00

SUBSURFACE EXPLORATION PLAN



SUBSURFACE DATA



Rock Core Symbol Legend

Shale, Sandstone, gray, fine grained, micaceous, medium-hard to hard

Sandstone, tan into light gray & gray, fine to coarse grained, calcareous, hard

Sandy Shale, dark gray, moderately hard to hard

Coal

Shale, gray, carbonaceous, medium-hard with slightly weathered

Sandstone, tan, fine to coarse grained, brown, soft

Reworked Sandstone Boulders, hard in earthy Clay Shale or Sandstone conglomerate cobbles, gravel, medium-hard

SHEET 5

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8), SP 64-33-14 LI
LOUISA FORT GAY BRIDGES AND APPROACHES
LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA
ROAD KY 3 & W VA 37

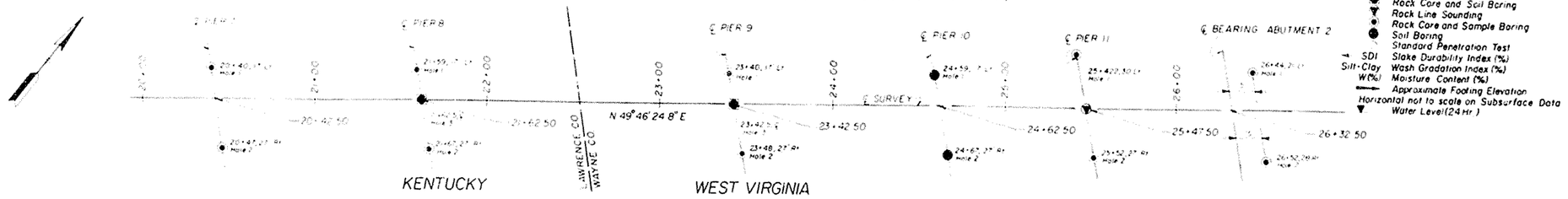
STATION 20+20.00 P.E. PROJECT NO

CONSTRUCTION PROJECT NO. MAINTENANCE PROJECT NO. DRAWING NO.

19592

BRIDGE

SUBSURFACE EXPLORATION PLAN



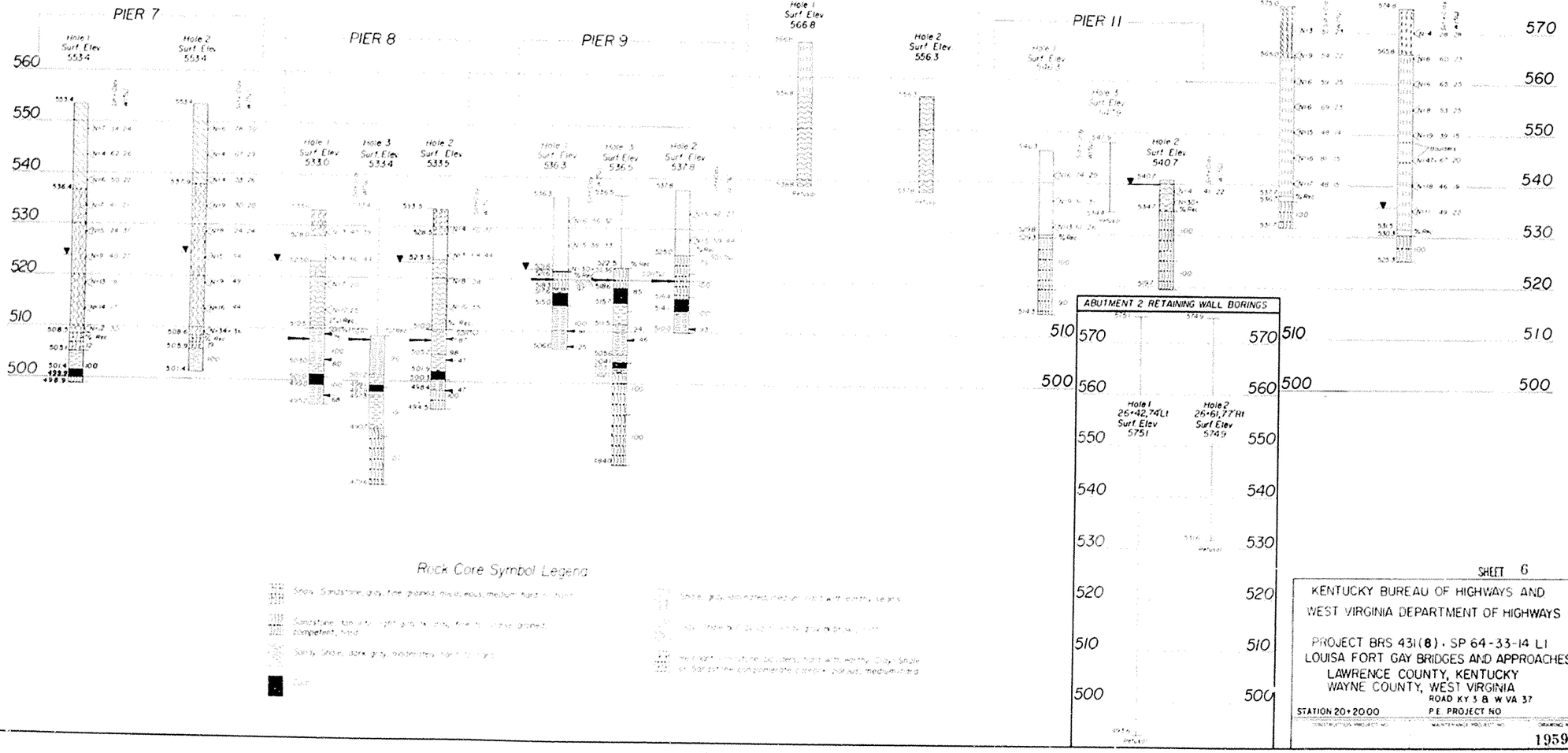
Legend

- Rock Core and Soil Boring
- Rock Line Sounding
- Rock Core and Sample Boring
- Soil Boring
- Standard Penetration Test
- SDI — Slake Durability Index (%)
- Silt-Clay — Wash Gradation Index (%)
- W(%) — Moisture Content (%)
- Approximate Footing Elevation

Horizontal not to scale on Subsurface Data

Water Level(24 Hr.)

SUBSURFACE DATA



Rock Core Symbol Legend

Shale, Sandstone gray, fine grained, thinly bedded, medium hard to hard

Sandstone, tan to light gray to gray, fine to coarse grained, competent, hard

Sandy Shale, dark gray, moderately hard to hard

Coal

Shale, gray, slightly weathered, soft to hard, earthy, clayey

Sandstone, fine to coarse grained, gray, soft to hard, weathered in places, jointed, medium hard

Interbedded Sandstone, Siltstone and Shale, gray, soft to hard, weathered in places, jointed, medium hard

ABUTMENT 2 RETAINING WALL BORINGS

SHEET 6

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

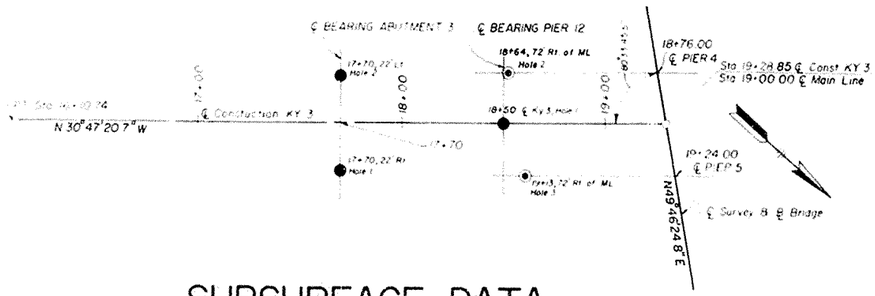
PROJECT BRS 431(8), SP 64-33-14 LI
LOUISA FORT GAY BRIDGES AND APPROACHES
LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA
ROAD KY 3 & W VA 37

STATION 20+2000 P.E. PROJECT NO

19592

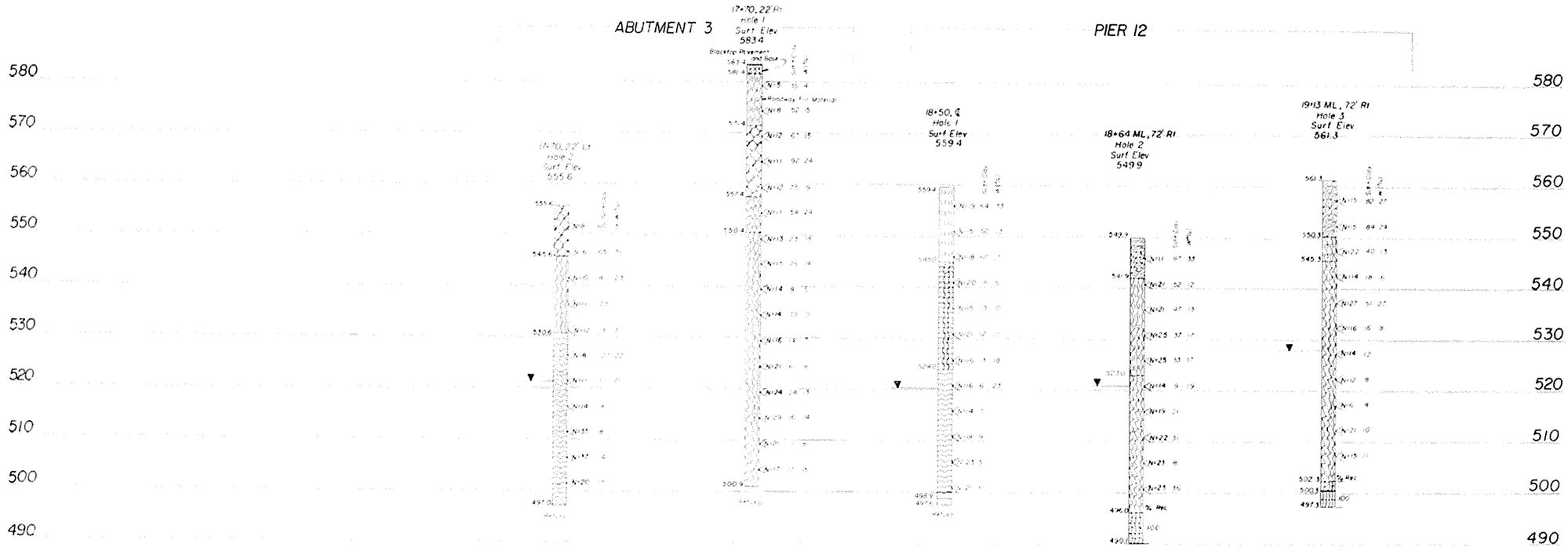
BRIDGE

SUBSURFACE EXPLORATION PLAN



Legend
- Sample Boring
- Rock Core and Sample Boring
- Standard Penetration Test
- SDI — Slake Durability Index (%)
- Silt-Clay — Wash Gradation Analysis (%)
- W(%) — Moisture Content (%)
- Approximate Footing Elevation
- Horizontal not to scale on Subsurface Data
- Water Level (24 Hr.)

SUBSURFACE DATA



Rock Core Symbol Legend

Shale, Sandstone, gray, fine grained, in places, very thin bedded

Sandstone, tan with light gray to gray, fine to medium grained, competent, hard

SHEET 7

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8), SP 64-33-14 LI
LOUISA FORT GAY BRIDGES AND APPROACHES
LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA
ROAD KY 3 & W VA 37

STATION 20+2000 — P.E. PROJECT NO.

CONSTRUCTION PROJECT NO. — MAINTENANCE PROJECT NO. — DRAWING NO. 19592

DESIGNED BY: BITTLER, MONBARGER, SCOTT & MAY
DRAWN BY: [illegible]
CHECKED BY: [illegible]
DATE: DECEMBER 15, MARCH 27

BRIDGE

UPDATE DATE

LETTING DATE

LOUISA

1232'-8⅝"

(1231'-2⅞") out to Out of Bridge

3'-2¼" | (75'-0") 76'-6" | 120'-0" | 200'-0" | 73'-6" | 48'-0"

℄ VINSON ST. N 3°03' 35" W

House

Sta. 13+20.00 ℄ Survey
= Sta. 5+58.17 ℄ LEVISA FORK

02.81

Sta. 14+04.31

℄ Brg. Abutment 1

33°09'00"

To Ashland

Sta. 14+07.50
06.00

Sta. 14+82.50

Sta. 16+02.50

Sta. 17+02.50

FLOW

1:1.74

16'-0"

35°-38"

Sta. 18+02.50

℄ Survey
N 49°46'24.8" E

Sta. 19+00.00 ℄ Survey
= Sta. 19+28.85 ℄ Office Hist
KY 3

14 | 15 | 16 | 17 | 18 | 19

100.00' (Typ.)

10°00'00"

MADISON ST.

Sta. 18+76.00

80°33'45.5"

Sta. 19+24.00

℄ Pier 1
℄ Joint

℄ Pier 2

℄ Pier 3
℄ Joint

LEVISA FORK

75'-0"

150'-0"

75'-0"

Navigation Channel

Exist. Louisa - Fort Gay Bridge (To be removed)

Sta. 18+12.17

℄ Pier 4

P - 35°

Sta. 18+44.41

Exp. Joint

℄ Pier 5

Sta. 12+97.83 ℄ Survey
= Sta. 10+00.00 ℄ Vinson St.

PI. 13+50
El. 538.12
400' V.C.

-0.4780%

+3.5000%

Sta. 19+30.00

LOUISA FORK KY 3
N 30°47'20" W

℄ Pier 12

For cont. see Dwg. 11

PLAN

Sta. 18+30.00

600

Prop. Grade

Existing Ground Line

El 570.50
El 570.00
El 563.50
El 563.00

Fix. El 514.50

El 575.403

Exp.

Span 1

Span 2

Span 3

El 575.50

Elev. 581.00
Low Steel

Exp.

Min. Vert. Clearance 51.0'

El 533.781

Exp.

Proj. Flood Elev. 583.0

Interm. Reg. Flood Elev. 568.5

Ton. Reg. 1957 Flood Elev. 564.5

Exp.
El 582.689

El 583.146

El 549.646
El 549.146

Span 4

Span 5

43'-0"

91'-0"

34'-0"

550

El 542.503
El 542.403

38'-0"

82'-0"

150' (Normal) Min. Horizontal Clearance
Navigation Channel

LEVISA FORK

Future Normal Pool El 530.00

℄ Elev. 525.69 (Aug. 5, 1976)

(El 540.189)
(El 535.689)

Pier 4

Pier 5

Abutment 1

Pier 1

Pier 2

Pier 3

Assumed Rock Line

500 — Datum Line

El 493.50

El 492.781

ELEVATION

GENERAL PLAN

SHEET 8

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8) ; SP 64-33-14 LI
LOUISA - FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

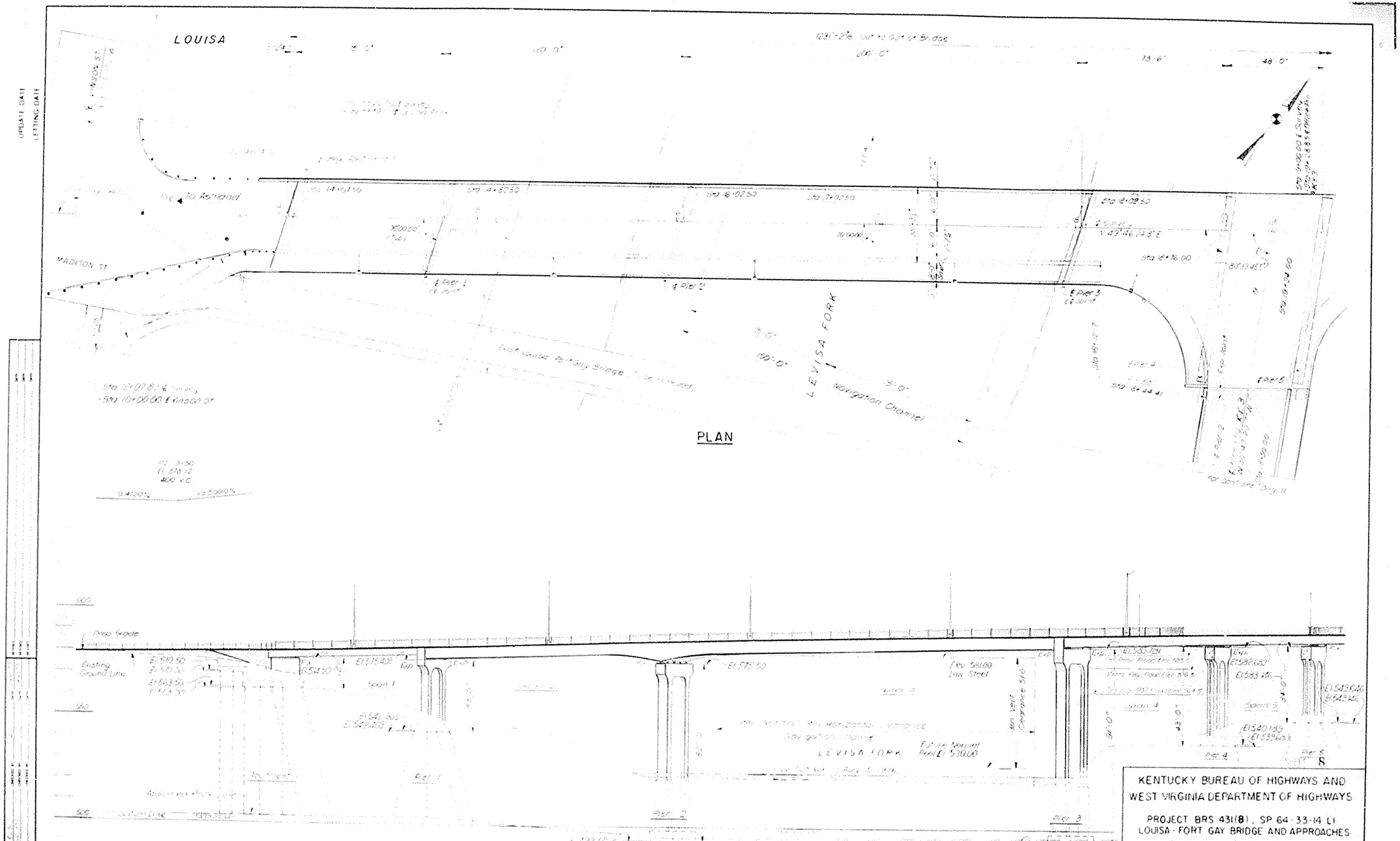
ROAD KY. 3 & W.VA. 37

STATION 20+20.00 — P.E. PROJECT NO.

CONSTRUCTION PROJECT NO | MAINTENANCE PROJECT NO | STATE NO. 19592

FRANKLAND AND LIENHARD

BRIDGE



KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8), SP 64-33-14 LI
LOUISA - FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA
ROAD KY 3 & W VA 37

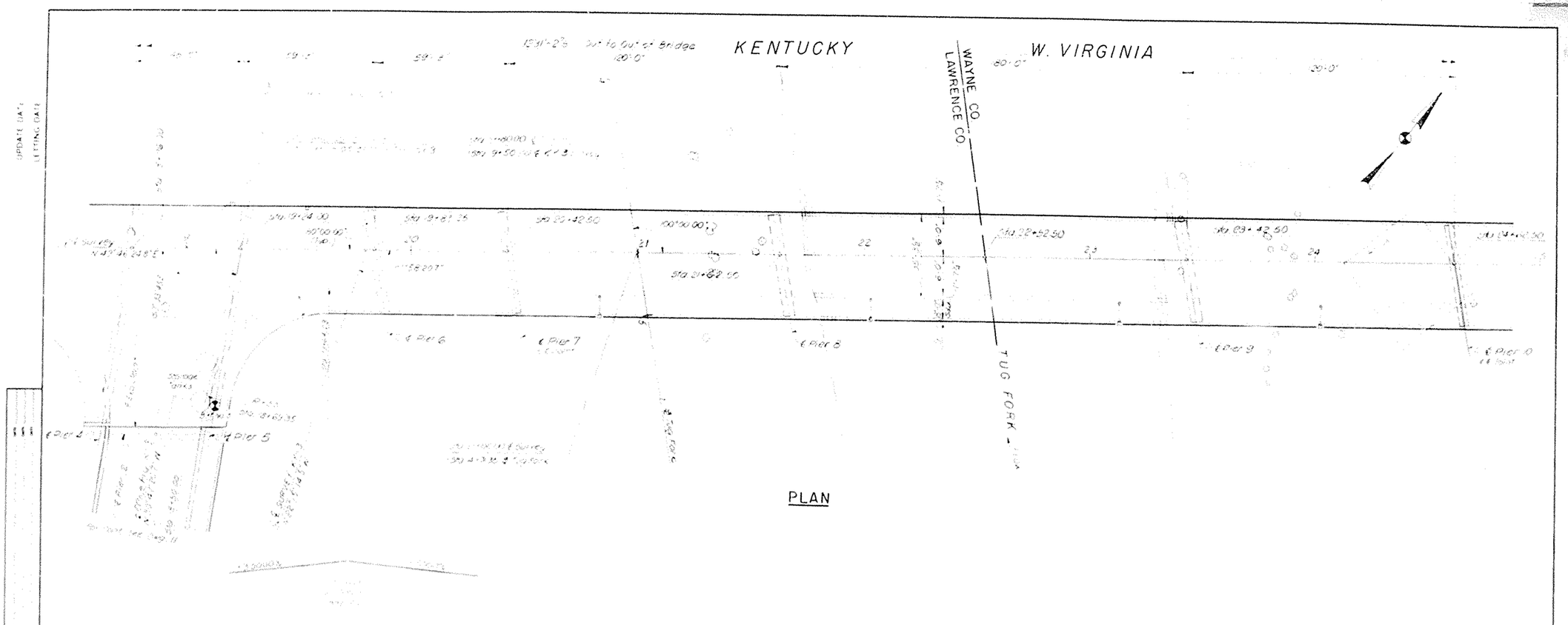
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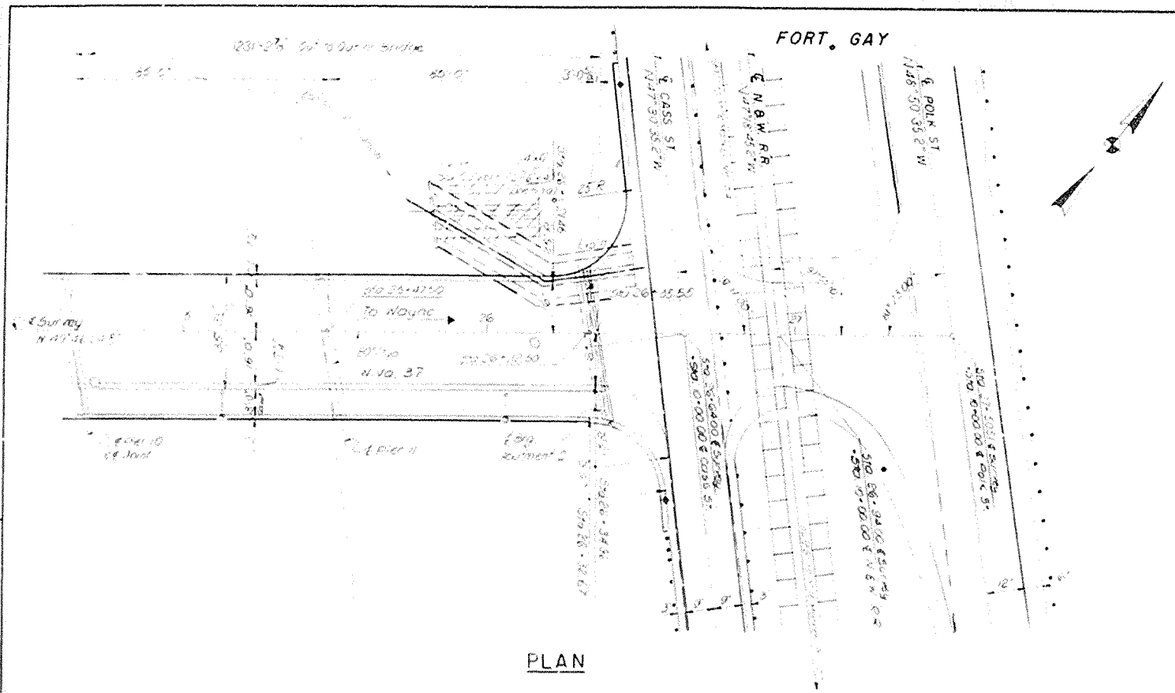
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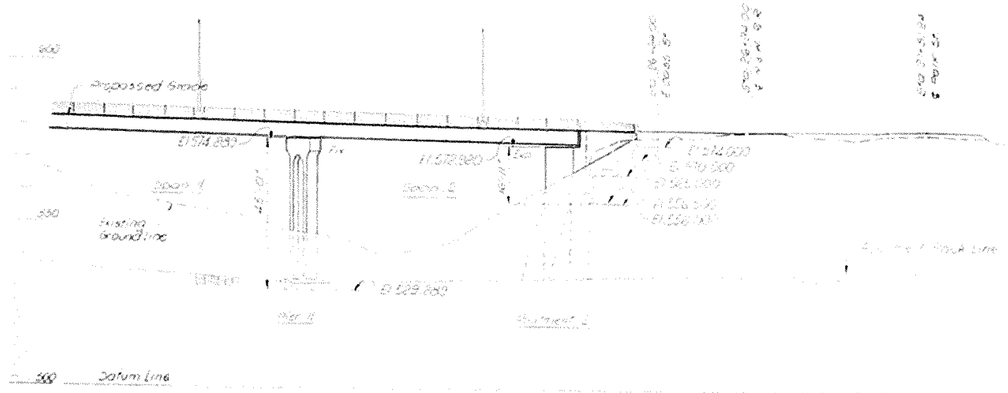
GENERAL PLAN

FRANKLAND AND LIENHARD

BRIDGE


KENTUCKY
W. VIRGINIA
WAYNE CO
LAWRENCE CO
TUG FORK
(Pier 1)
(Pier 2)
(Pier 3)
(Pier 4)
(Pier 5)
(Pier 6)
(Pier 7)
(Pier 8)
(Pier 9)
(Pier 10)
Span 1
Span 2
Span 3
Span 4
Span 5
Span 6
Span 7
Span 8
Span 9
Span 10
Span 11
Sta 20+52.50
Sta 23+42.50
Sta 26+32.50
Sta 29+22.50
Sta 31+82.50
Sta 34+42.50
Sta 37+02.50
Sta 39+62.50
Sta 42+22.50
Sta 44+82.50
Sta 47+42.50
Sta 50+02.50
Sta 52+62.50
Sta 55+22.50
Sta 57+82.50
Sta 60+42.50
Sta 63+02.50
Sta 65+62.50
Sta 68+22.50
Sta 70+82.50
Sta 73+42.50
Sta 76+02.50
Sta 78+62.50
Sta





UPDATE DATE
LETTING DATE

GENERAL PLAN

FRANKLAND AND LIENHARD

SHEET 10

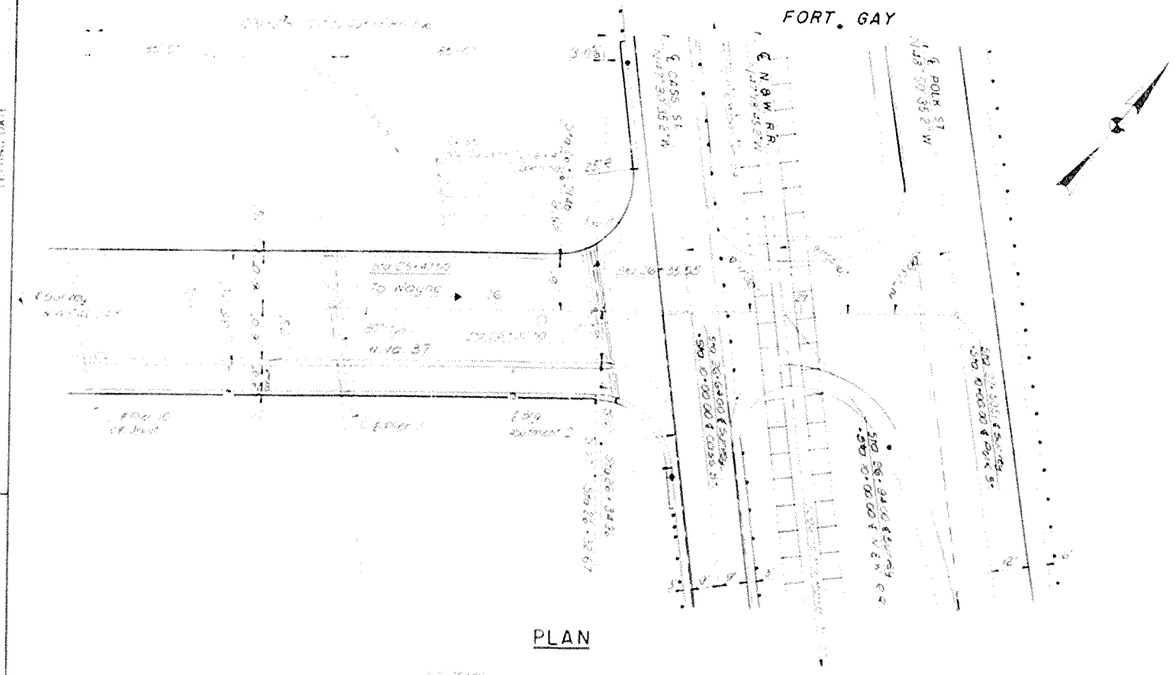
KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

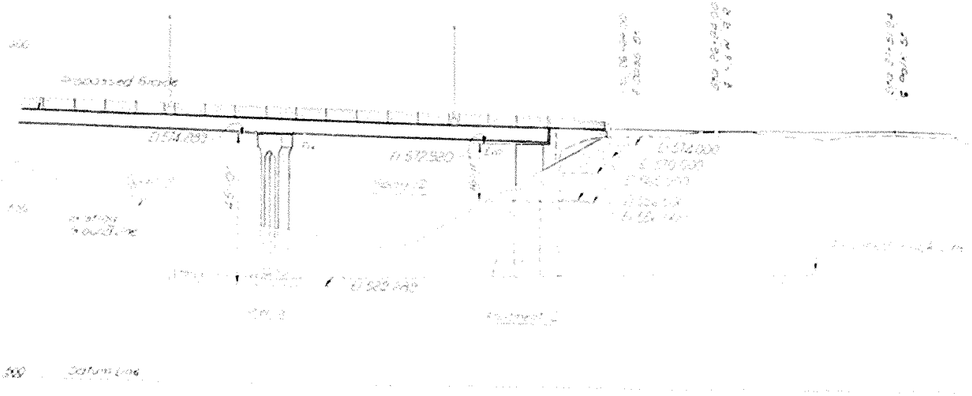
PROJECT BRS 431(8) SP 64-33-14 LI
LOUISA - FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA
ROAD KY 3 & W.VA. 37

STATION 20+20.00 | P.E. PROJECT NO | CONSTRUCTION PROJECT NO | MAINTENANCE PROJECT NO | DRAWING NO 19592

BRIDGE





GENERAL PLAN

FRANKLAND AND LIENHARD

SHEET 10

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 43(8), SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA
ROAD KY 3 & WVA 37

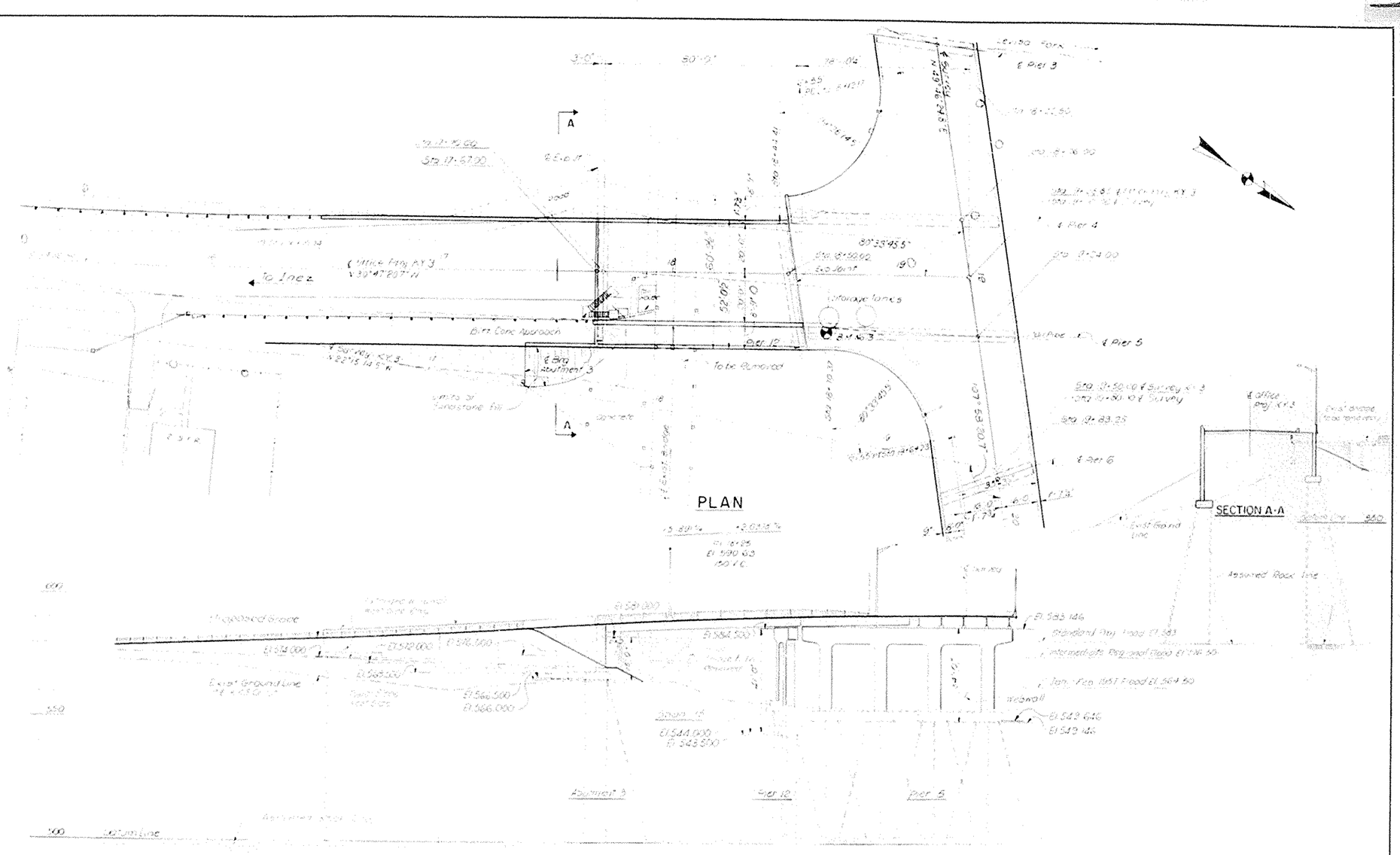
STATION 20+20.00 P.E. PROJECT NO

CONSTRUCTION PROJECT NO. MAINTENANCE PROJECT NO. DRAWING NO. 19592

BRIDGE

UPDATE DATE

LETTING DATE



GENERAL PLAN

SHEET 11

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8), SP 64-33-14 LI
LOUISA - FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD KY. 3 & W.VA. 37

STATION 20+20.00

P.E. PROJECT NO.

CONSTRUCTION PROJECT NO. | MAINTENANCE PROJECT NO. | DRAWING NO. 19592

FRANKLAND AND LIENHARD

BRIDGE

UPDATE DATE

LETTING DATE

PLAN

ELEVATION

FOOTING PLAN

SECTION J-J

SECTION K-K

SECTION L-L

SECTION M-M

CONSTRUCTION STAGES FOR WINGWALL A

Install piles, Footing & construct balance of Wing wall in Stage III

Install piles, Footing & construct Wingwall in Stage I

Construct balance of embankment, pavement and structure in Stage III

Construct Roadway pavement in Stage II

Exist. Bridge to remain during Stage I & II

Move existing Guard Rail Max. 2'-6" from original position required to clear new Bdwy. Deck during construction (Incidental to Class A Concrete)

Exist. Bridge to remain during Stage I & II.

Temporary Barrier (Incidental to Class 'A' Concrete)

Existing Abutment to remain during Stage I & II

Constr. Jt

Exist Ground

Construct embankment in Stage II

Temporary Sheet Piling

Temp Pedest walk

Measured along outside face of Wingwall

Exist Column & Footing

Downstream edge of exist. Bridge

Outside Face of Wingwall

Similar to Section X-X on Sheet 14

Limit of Curb Transition

WINGWALL "A"

WINGWALL "B"

Cap

Constr. Jt

Sta. 14+07.50

06.00

℄ Exist Abut

℄ Survey

℄ Bearings

℄ Exist. Bridge

Exist. Col. & Footing protect at all times while traffic is maintained on exist. Structure

Note: Drive Piles No. 3 & 10 with care in order not to damage adjacent existing Footing.

Downstream edge of existing Bridge

Open Joint in Barrier Wall to match width of roadway Joint

Temporary Sheet Piling

16 Test Pile

Sta. 14+07.50

06.00

Note: Use conc. offset block and reinf. as shown. Omit bars A14 A24 #8 dowels set in drilled holes specified on Std. Dwg. RBC-002-02

Top of Pavement

Exist Ground

Finished Ground

Constr. Jt.

Class A Concrete

Class AA Concrete

Elastomeric Bearing Pad (Typ.)

1-A52 Dowel (Typ.)

5-A39 @ 6½" (Typ)

3" ℄ Sleeve for 2" Rigid Steel Conduit

3'-0" x 1'-0" opening for telephone conduits

15-A5 @ 12" (Ea. Face)

6-A41 (ea Face)

3-A42

2-A42

47-A6 @ 12" (Top) 94-A18 @ 6" (Rear Face) & 47-A50 @ 12" (Front Face)

34-A3 @ 6" (Rear Face) & 47-A50 @ 12" (Front Face)

A2 @ 12"

A1 @ 12"

47-A6 @ 12", 47-A7 @ 12" & 44-A8 @ 12" & 4-A5 @ Opening

6-A16 @ 15" (Top & Bottom) Bent in Field, 2 required

16-A17 @ 12" (Top & Bott)

6-A38 @ 15" (Top & Bott)

14-A17 @ 12" (Top & Bott)

6-A11 @ 14" (Top & Bott) (2 req'd.)

Constr. Jt with 12"x4"x3'-0" Key

6-A12 @ 15" (Top & Bott)

50-A1 @ 12" (Typ)

16-A10 @ 12" (Top & Bott)

18-A21 @ 12" (Top & Bott)

7-A22 @ 15" (Top & Bott)

℄ 4 Bolt Insert Assembly for Guardrail Connector Type B. For Det. see Standard Drawing RBC-002-02.

3-A55 Spaced to clear inserts

4-A45 E.F.

3-A24

℄ 1¼" Holes for Guardrail Connector Type A

4-A40 @ 6' (Typ)

R = 141'-7½"

α = 38°

NOTES:

For General Notes see Sheet 2 & 3
For Wing Wall Elevations and sections A-A thru G-G see Sheet 13.
For Pile Records see Sheet 34.
Work This Sheet with Sheet 13 & 20
I - Denotes Vertical Pile
I - Denotes Pile Battered 1 : 3
For Bill of Reinforcement see Sheet 20.

For Construction Stages see Roadway plans. No separate payment shall be made for stage construction and for Temporary Sheet Piling and the cost of this work shall be incidental to Class 'A' Concrete.

SHEET 12

ESTIMATE OF QUANTITIES	
ITEM	QUANTITY
Concrete, Class AA	46.70 C.Y.
Concrete, Class A	151.2 C.Y.
Reinforcement	(20,815) Lbs. (21,471)

ABUTMENT I

FRANKLAND AND LIENHARD

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 L1
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

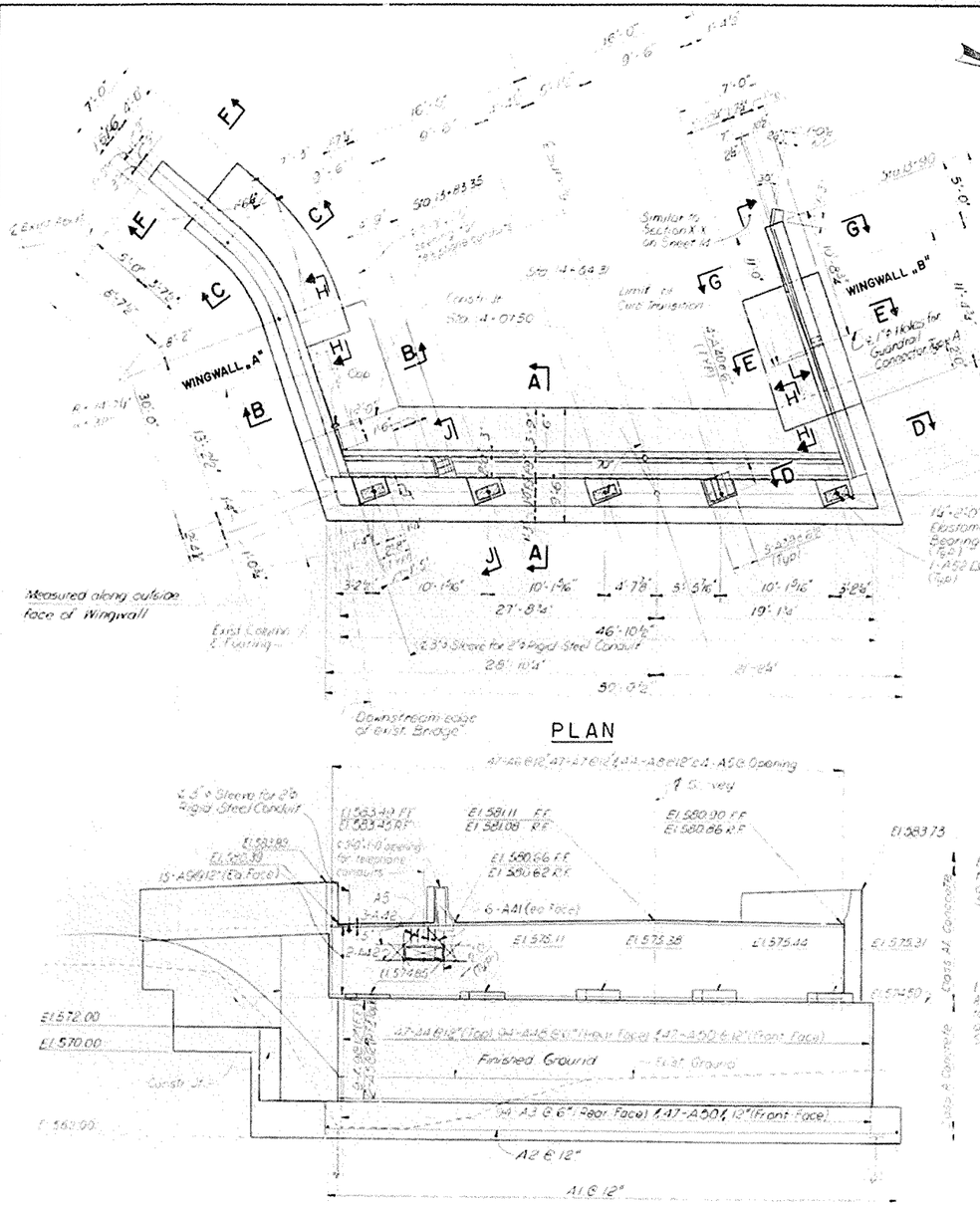
ROAD

STATION | P.E. PROJECT NO.

CONSTRUCTION PROJECT NO | MAINTENANCE PROJECT NO | DRAWING NO. 19592

BRIDGE

UPDATE DATE
LETTING DATE



NOTES:

For General Notes see Sheet 2 & 3
For Wing Wall Elevations and Sections A-A thru G-G see Sheet 13
For Pile Records see Sheet 34.
Work This Sheet with Sheet 13 & 20
I - Denotes Vertical Pile.
I - Denotes Pile Battered 1:3
For Bill of Reinforcement see Sheet 20.
For Construction Stages see Roadway plans. No separate payment shall be made for stage construction and for Temporary Sheet Piling and the cost of this work shall be incidental to Class 'A' Concrete.

SHEET 12

ESTIMATE OF QUANTITIES	
ITEM	QUANTITY
Concrete, Class AA	46.70 C.Y.
Concrete, Class A	151.2 C.Y.
Reinforcement	20,915 Lbs.
	21,471

ABUTMENT 1

FRANKLAND AND LIENHARD

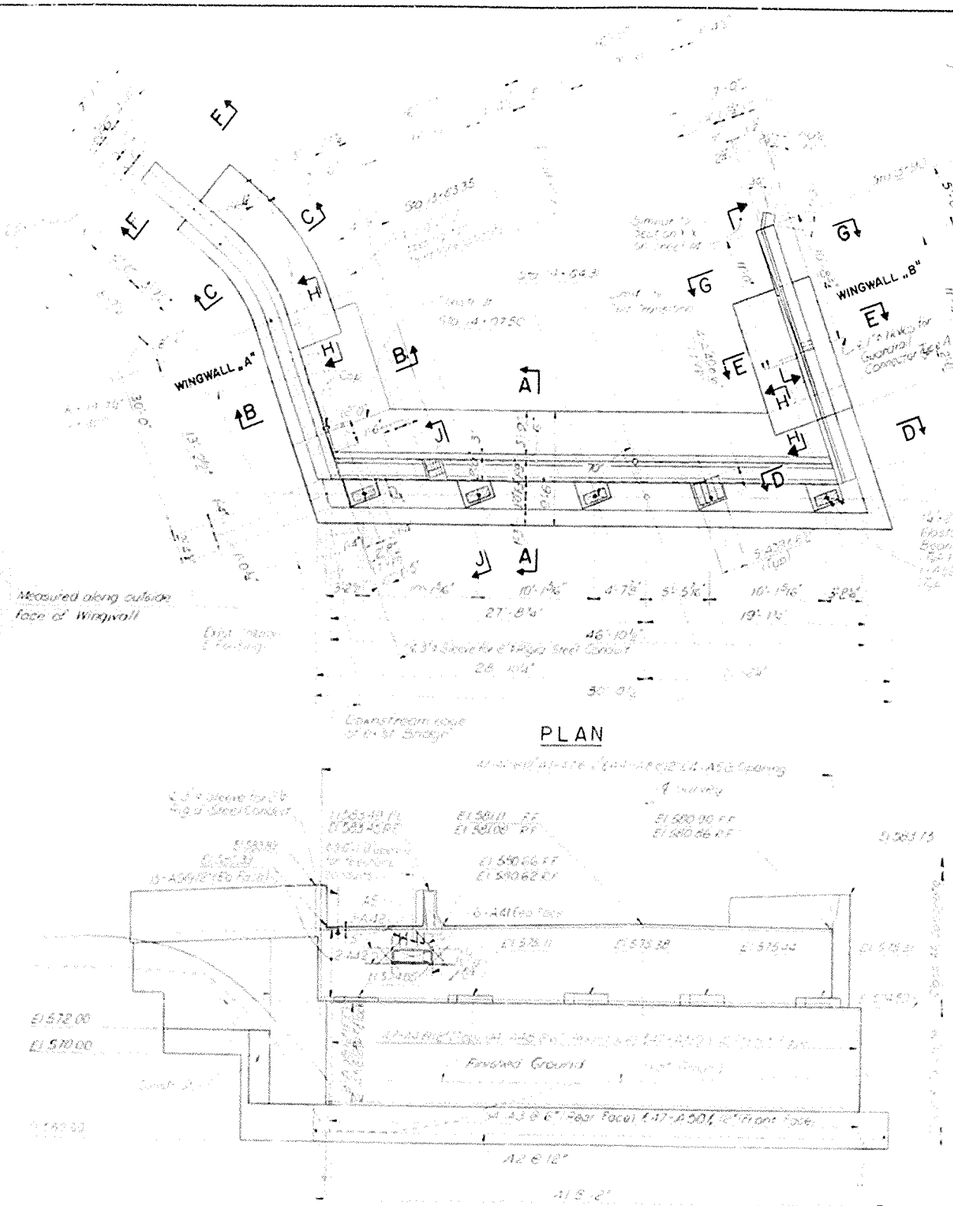
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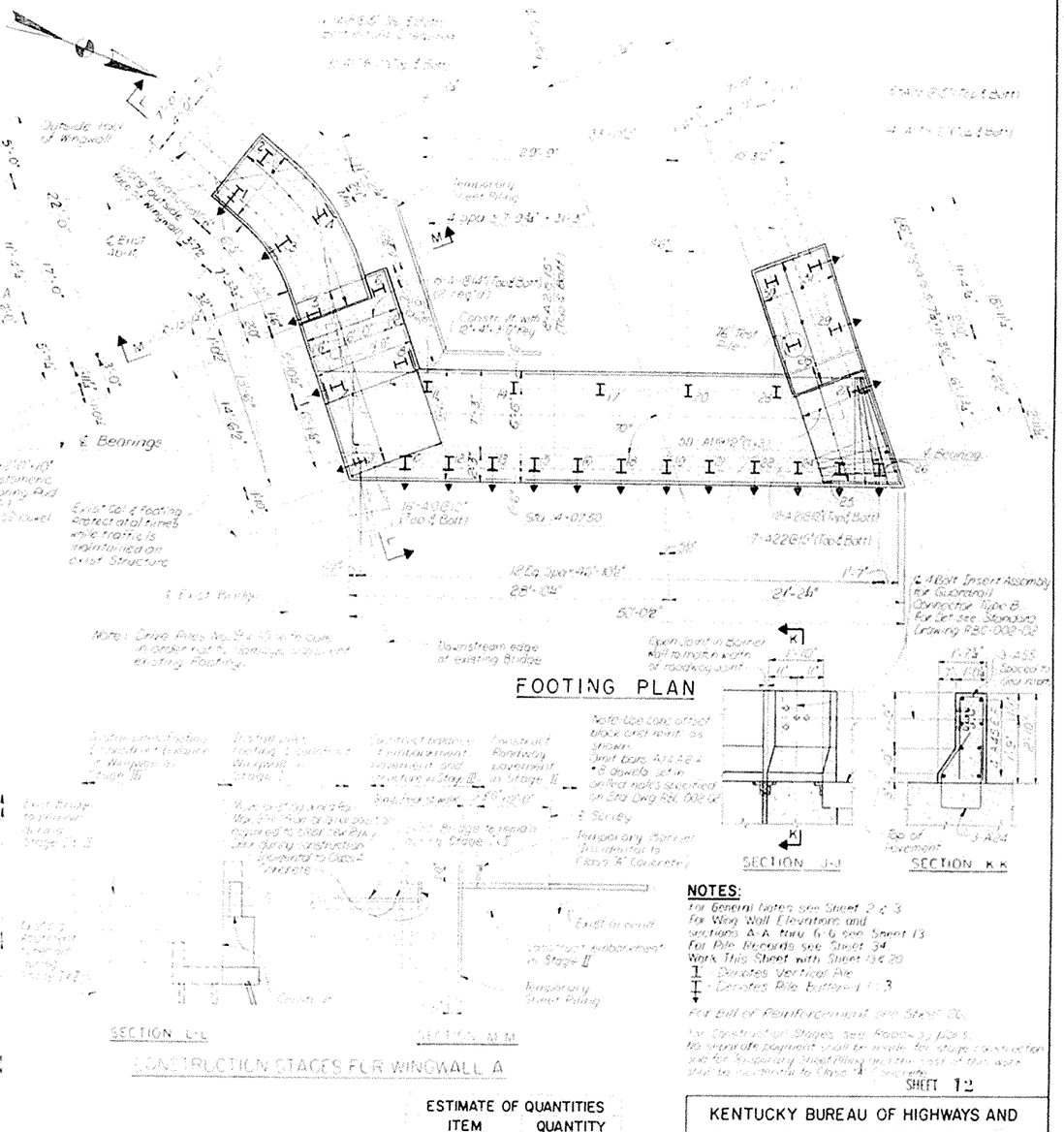
PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

STATION	ROAD / P.E. PROJECT NO.	
CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO. 19592

BRIDGE





CONSTRUCTION STAGES FOR WINGWALL A

NOTES:

For General Notes see Sheet 2 & 3
For Wing Wall Elevations and sections A-A thru G-G see Sheet 13
For Pile Layouts see Sheet 34
Work This Sheet with Sheet 14 & 20
I Denotes Vertical Pile
I Denotes Pile Battered 1:3
For Bill of Reinforcement see Sheet 20.
For Construction Stages see Sheets 3 & 4.
No separate payment shall be made for shoring construction joint for temporary sheet piling or any part of the work shall be included in Class A Concrete.

SHEET 12

ESTIMATE OF QUANTITIES

ITEM	QUANTITY
Concrete, Class AA	48.12 CY
Concrete, Class A	151.2 CY
Reinforcement	9,915 LBS

ABUTMENT 1

FRANKLAND AND LIENHARD

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

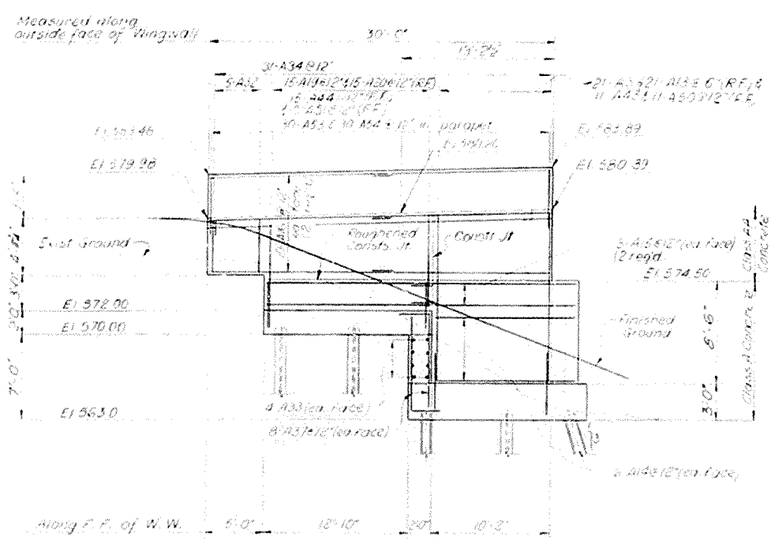
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STATION P.E. PROJECT NO.

DRAWING NO. 19592

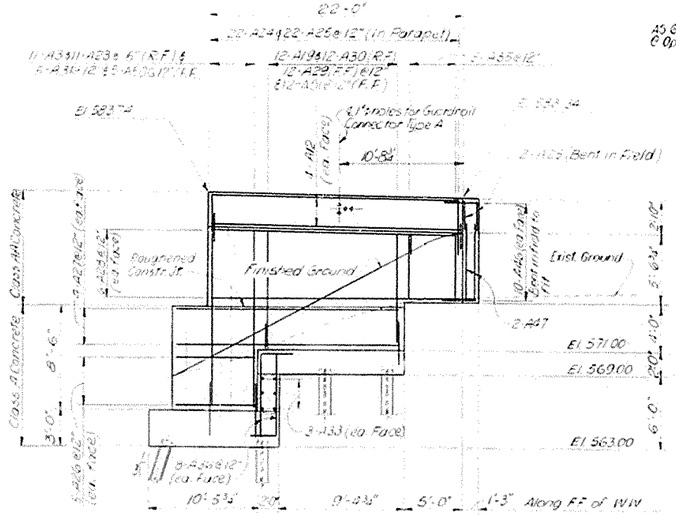
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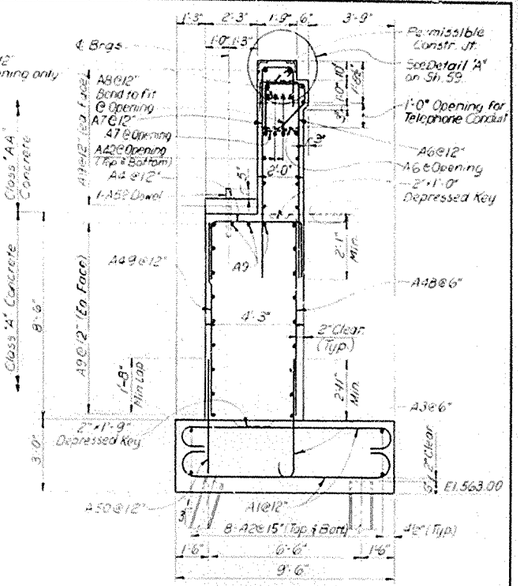
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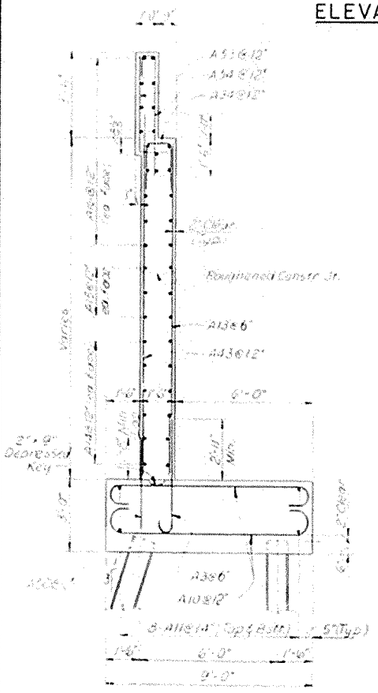
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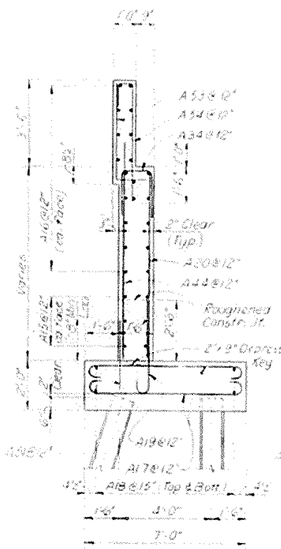
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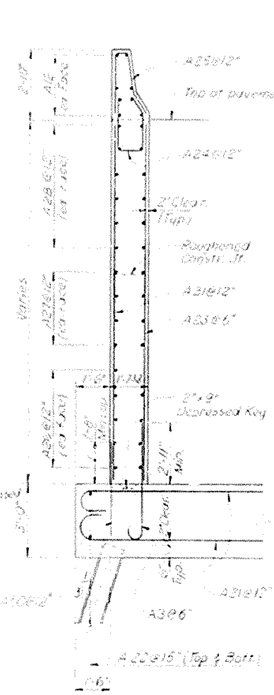
SECTION A-A



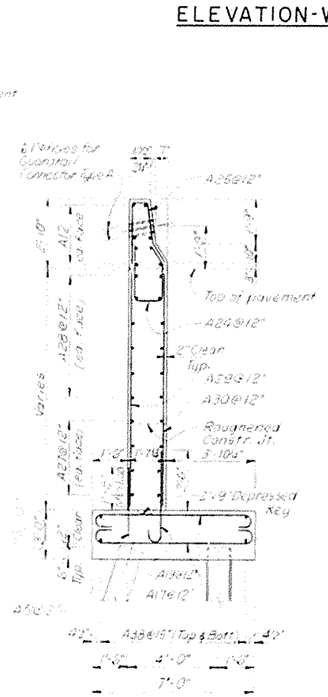
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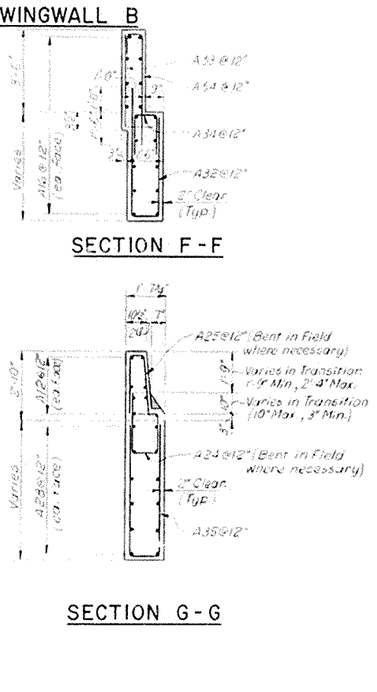
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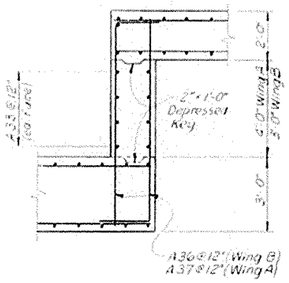
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SECTION E-E



SECTION G-G



SECTION H-H

SECTION F-F

NOTES:

For Locations of Sections A-A thru G-G see Sheet 12. Work This Sheet with Sheet 12 & 20.

SHEET 13

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD

STATION | P.E. PROJECT NO.

CONSTRUCTION PROJECT NO. | MAINTENANCE PROJECT NO. | DRAWING NO. 19592

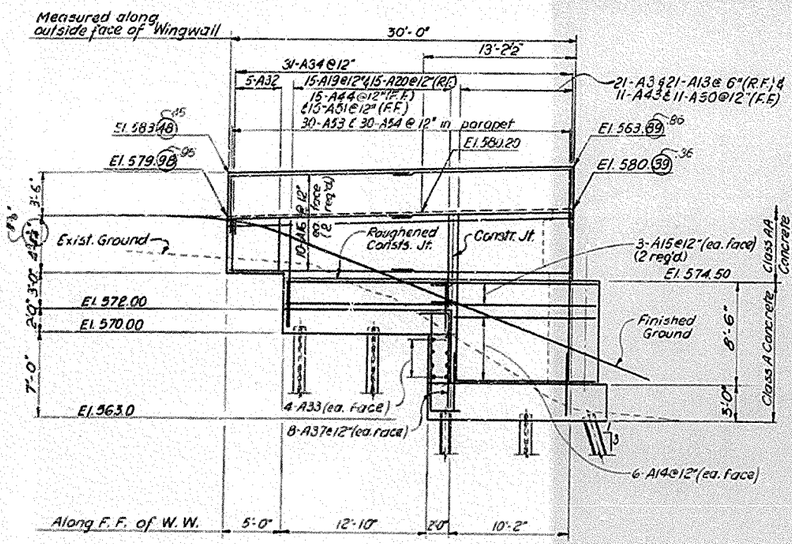
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FRANKLAND AND LIENHARD

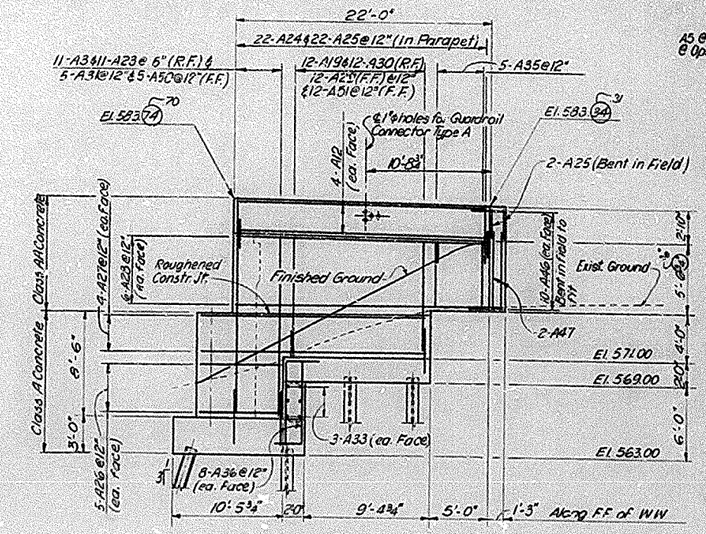
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UPDATE DATE

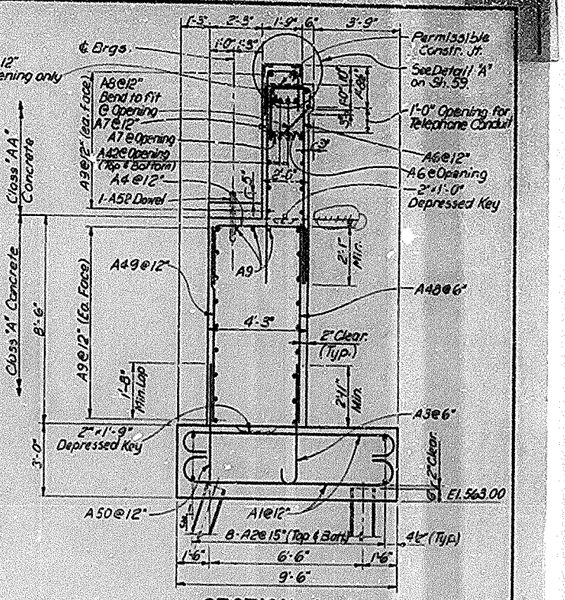
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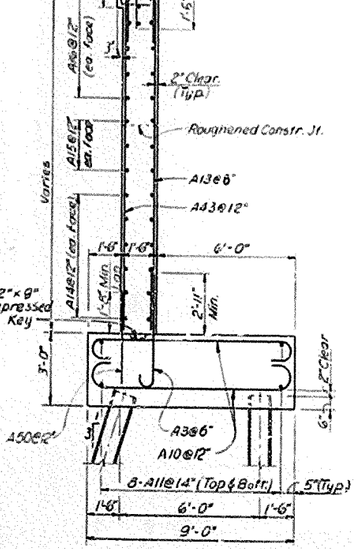
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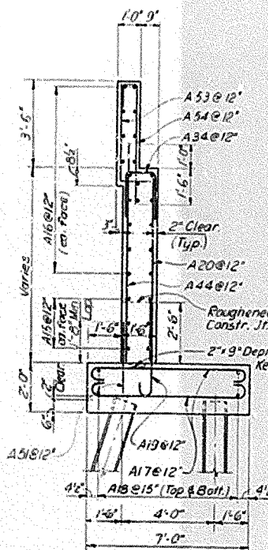
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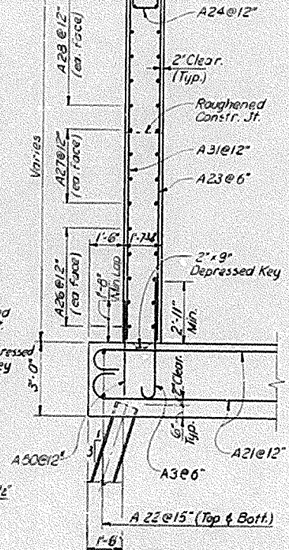
SECTION A-A



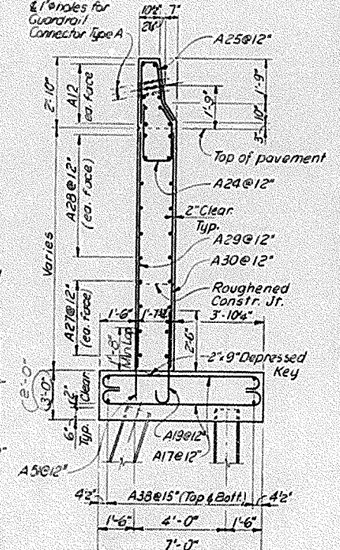
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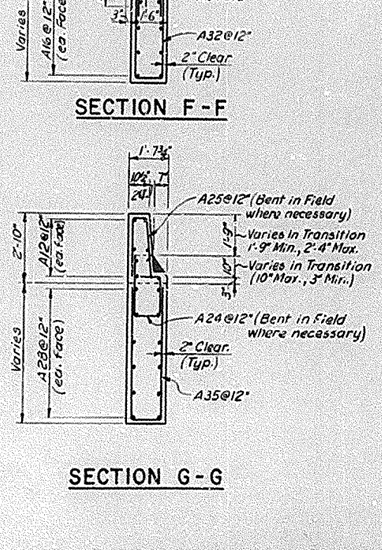
SECTION C-C



SECTION D-D

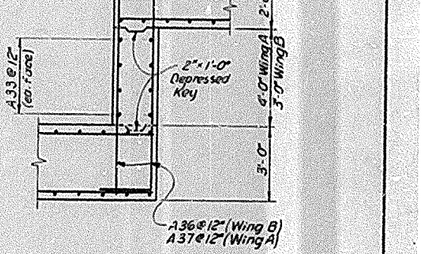


SECTION E-E



SECTION F-F

SECTION G-G



SECTION H-H

NOTES:

For Locations of Sections A-A thru G-G see Sheet 12. Work This Sheet with Sheet 12 & 20.

SHEET 13

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES
LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

STATION | ROAD | P.E. PROJECT NO.

CONSTRUCTION PROJECT NO | MAINTENANCE PROJECT NO | DRAWING NO. 19592

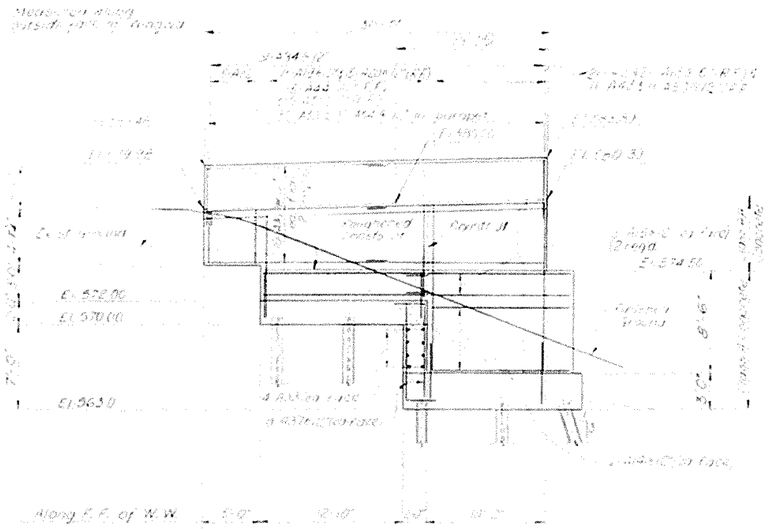
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FRANKLAND AND LIENHARD

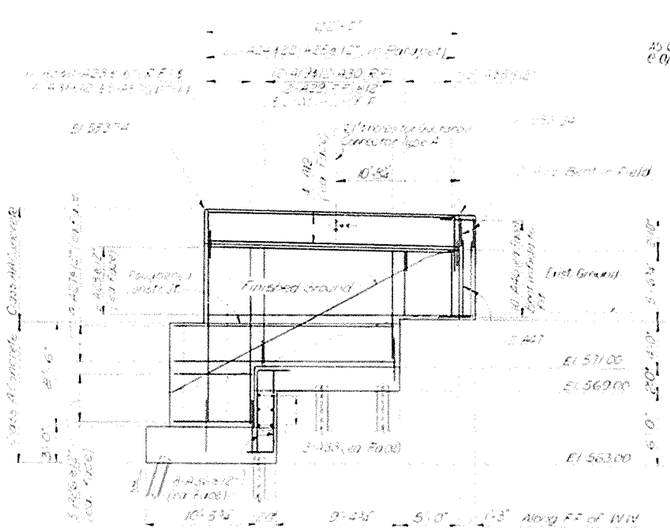
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UPDATE DATE

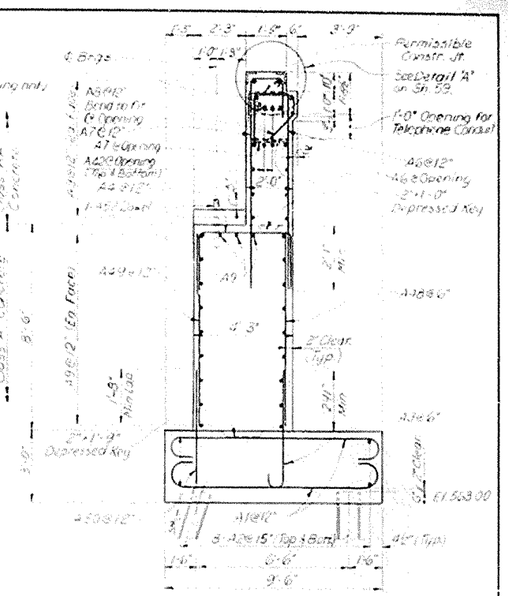
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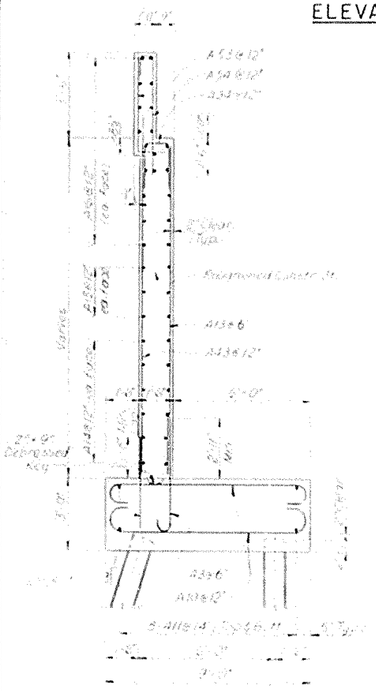
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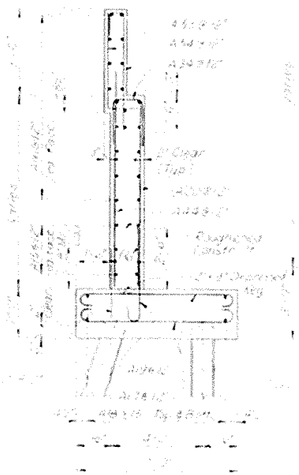
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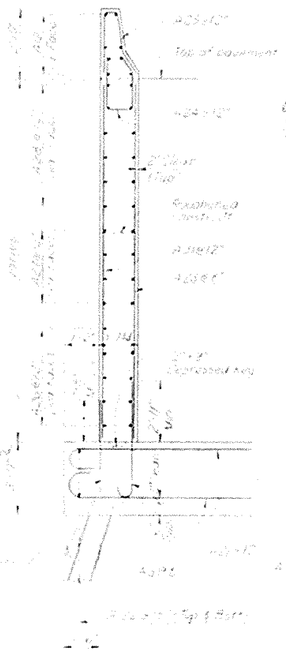
SECTION A-A



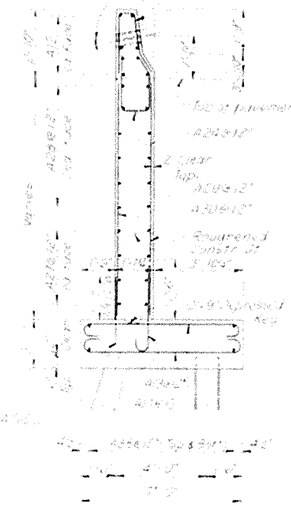
SECTION B-B



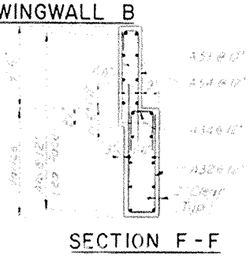
SECTION C-C



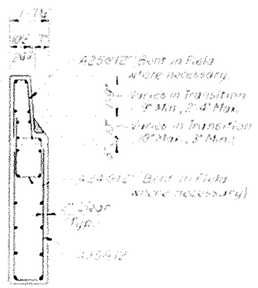
SECTION D-D



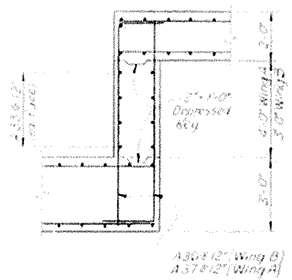
SECTION E-E



SECTION F-F



SECTION G-G



SECTION H-H

NOTES:

For Locations of Sections A-A thru G-G see Sheet 12
Work This Sheet with Sheet 12 & 20

SHEET 13

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD

STATION P.E. PROJECT NO

CONSTRUCTION PROJECT NO. MAINTENANCE PROJECT NO. DRAWING NO. 19592

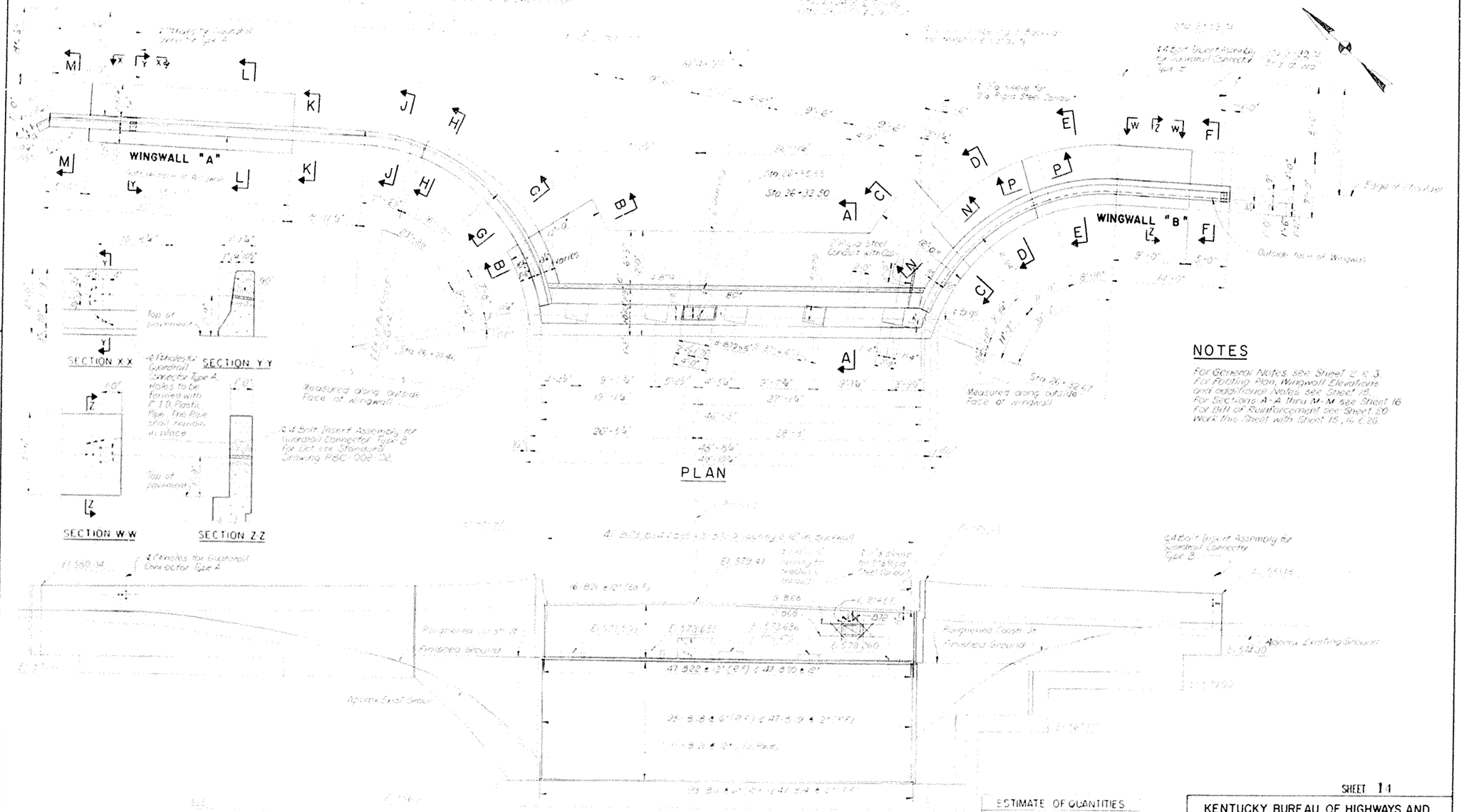
ABUTMENT 1 DETAILS

FRANKLAND AND LIENHARD

BRIDGE

UPDATE DATE

LETTING DATE



NOTES

For General Notes see Sheet 2 & 3.
For Footing Plan, Wingwall Elevations and additional Notes see Sheet 15.
For Sections A - A thru M - M see Sheet 16
For Bill of Reinforcement see Sheet 20
Work this Sheet with Sheet 15, 16 & 20.

ESTIMATE OF QUANTITIES

ITEM	QUANTITY
Concrete, Class AA	2[illegible] C.Y.
Concrete, Class A	2[illegible] C.Y.
Reinforcement	31,400 Lbs.

ABUTMENT 2

FRANKLAND AND LIENHARD

SHEET 14

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD

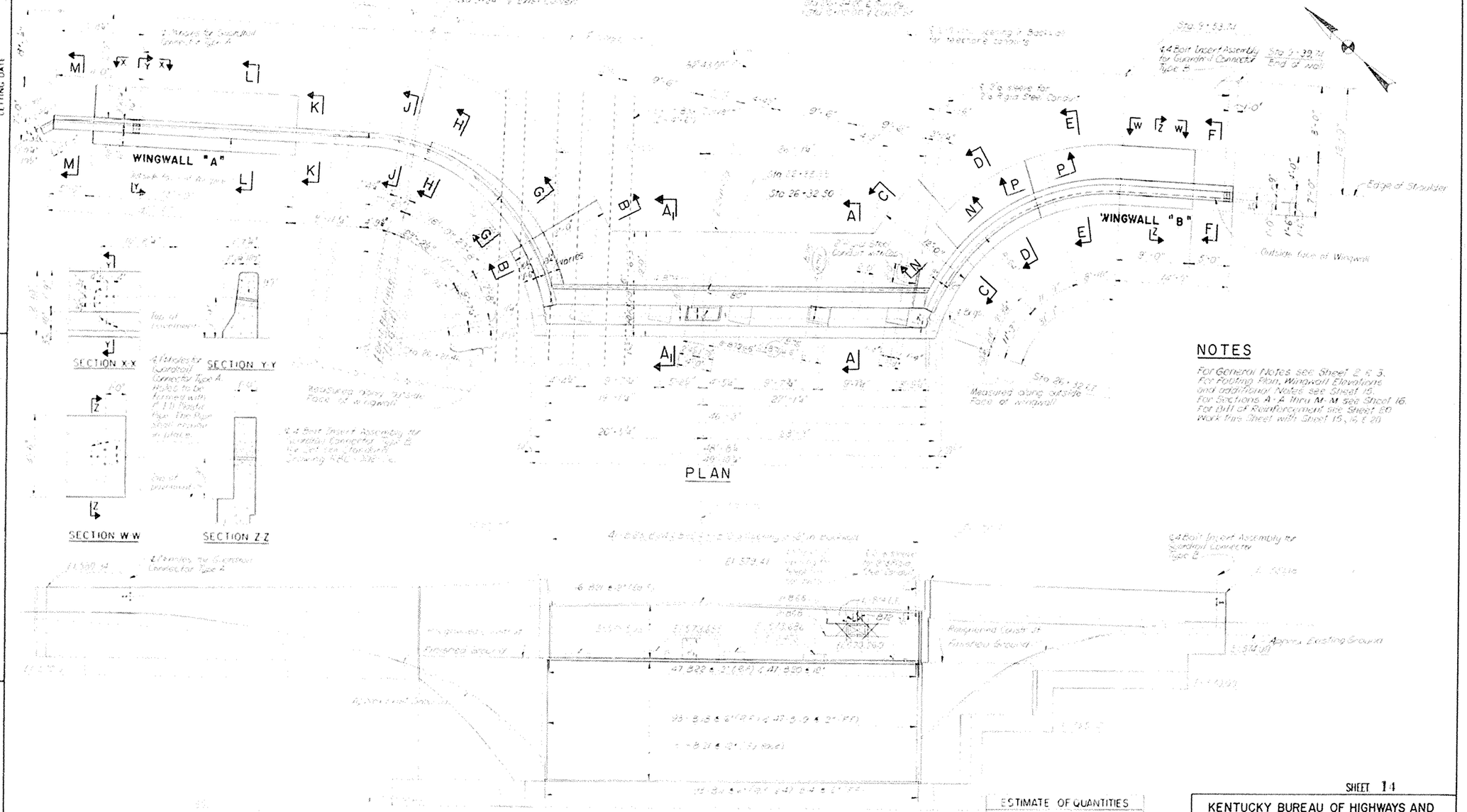
STATION | P.E. PROJECT NO

CONSTRUCTION PROJECT NO. | MAINTENANCE PROJECT NO. | DRAWING NO.

19592

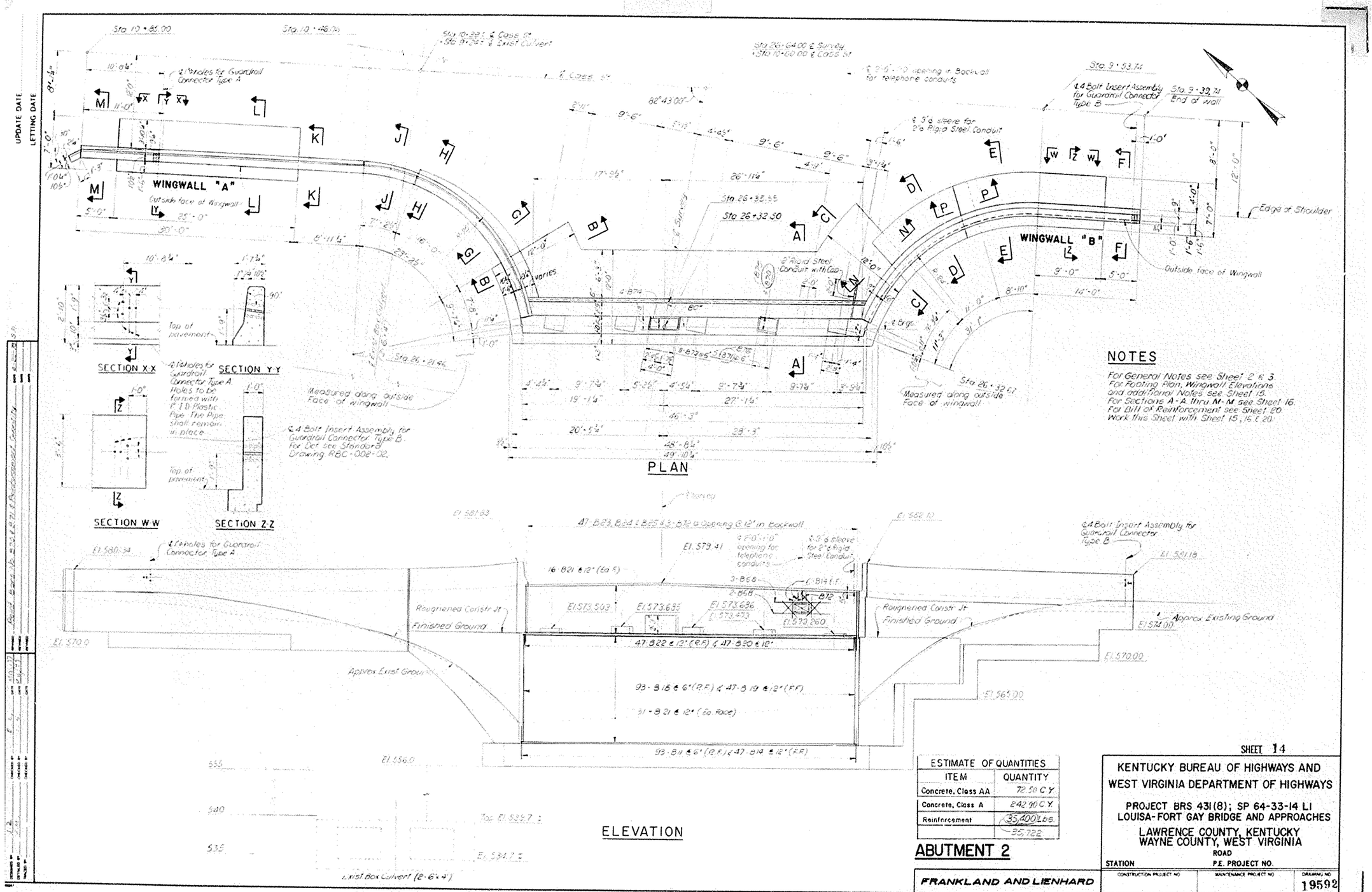
BRIDGE

UPDATE DATE
LETTING DATE


WINGWALL "A"
WINGWALL "B"
Sta 26+32.50
Sta 27+39.71
End of Wall
Edge of Shoulder
Outside face of Wingwall
Measured along outside Face of Wingwall
Sta 26+32.17
Sta 9+53.21
Bearing Seat Elevation
Backwall
Approx. Existing Ground
Finished Ground
Roadway Slope
Roadway Grade
Elevation to Construction Joint A
Elevation to Construction Joint B
Elevation to Construction Joint C
Elevation to Construction Joint D
Elevation to Construction Joint E
Elevation to Construction Joint F
Elevation to Construction Joint G
Elevation to Construction Joint H
Elevation to Construction Joint J
Elevation to Construction Joint K
Elevation to Construction Joint L
Elevation to Construction Joint M
Elevation to Construction Joint N
Elevation to Construction Joint P
Elevation to Construction Joint W
Elevation to Construction Joint X
Elevation to Construction Joint Y
Elevation to Construction Joint Z
Ivories
Top of Footing
Bottom of Footing
Reinforcing Steel to be Formed with Pile Top Plan
Reinforcing Steel to be Formed with Pile Top Plan Sheet 10 for Details

UPDATE DATE

LETTING DATE



NOTES

For General Notes see Sheet 2 & 3.
For Footing Plan, Wingwall Elevations and additional Notes see Sheet 15.
For Sections A-A thru M-M see Sheet 16.
For Bill of Reinforcement see Sheet 20.
Work this Sheet with Sheet 15, 16 & 20.

ESTIMATE OF QUANTITIES	
ITEM	QUANTITY
Concrete, Class AA	72.50 C.Y.
Concrete, Class A	242.90 C.Y.
Reinforcement	35,400 Lbs.
	35,722

ABUTMENT 2

FRANKLAND AND LIENHARD

SHEET 14

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

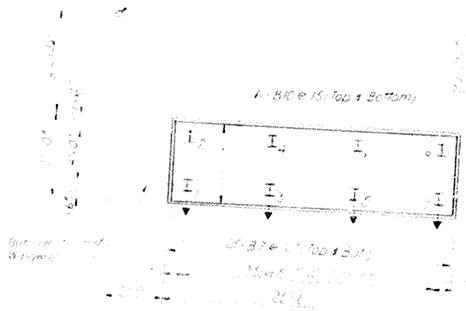
PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

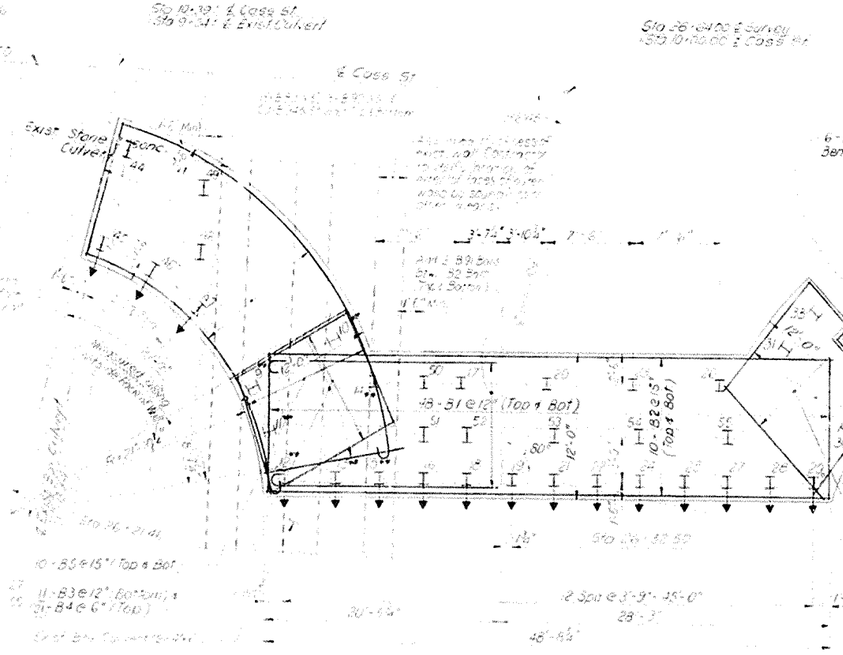
STATION	ROAD	P.E. PROJECT NO.	
CONSTRUCTION PROJECT NO	MAINTENANCE PROJECT NO		DRAWING NO 19592

BRIDGE

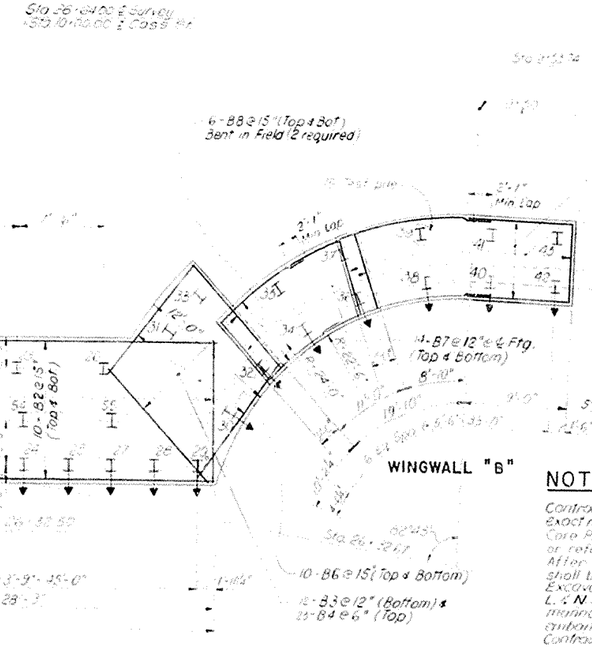
UPDATE DATE
LETTING DATE



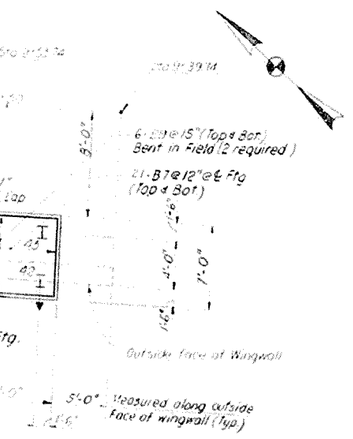
WINGWALL "A"



FOOTING PLAN



WINGWALL "B"



NOTES

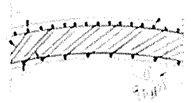
Contractor shall locate the existing culvert by exact measurement prior to driving of piles. Core Piles (1, 5, 9, 2, 11) to an elevation of 530.0 or refusal at within 3' of the elevation 530.0 After Piles have been driven the holes shall be backfilled with dry natural sand. Excavation work in areas adjacent to the L. & N. R.R. tracks shall be done in a secure manner so that no trackage or the supporting embankment is endangered in any way. Contractor shall obtain R.R. Co's. written approval of any method of excavation intended to be used in each areas adjacent to the railroad.

Work this sheet with Sheets 14, 15 & 60
For Pile Records see Sheet 34
I - Denotes Vertical Pile
Denotes Pile Battered 1:3

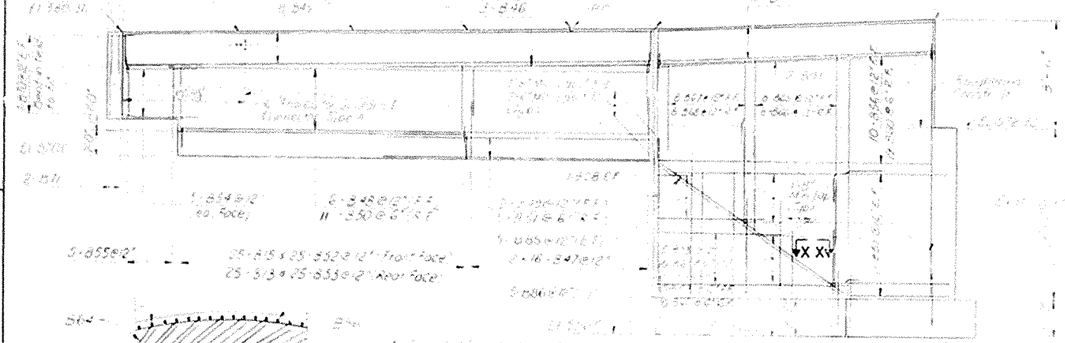
Pile Nos. 9 10 11 12 13 14 already driven in the final grade cut at 2' below the bottom of footings (i.e. at EL 534.5). Any grading encountered to this cut off elevation or below shall be back filled with suitable embankment material and shall be compacted to embankment density. Portion of Piles left after completing the footing concrete may be removed or left in place at Contractor's option. With the top of each steel pile and the voids in steel shall be filled with tightly packed cement grout.

** Battered piles measured from pile centers.

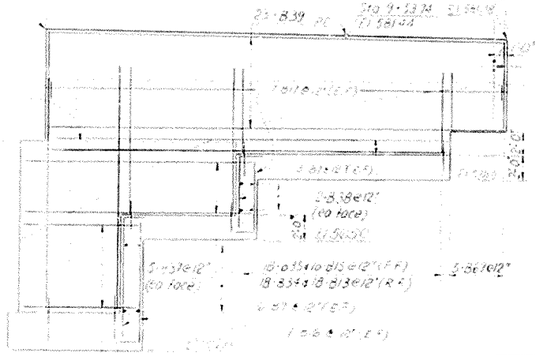
Pile Nos. 17 & 18 shall not be installed



SECTION X-X



ELEVATION WINGWALL "A" (DEVELOPED)



ELEVATION WINGWALL "B"

ABUTMENT 2 DETAILS

SHEET 15

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

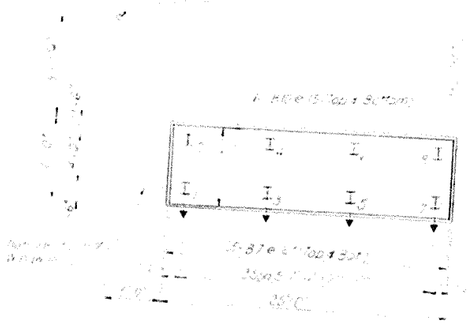
ROAD
STATION P.E. PROJECT NO.

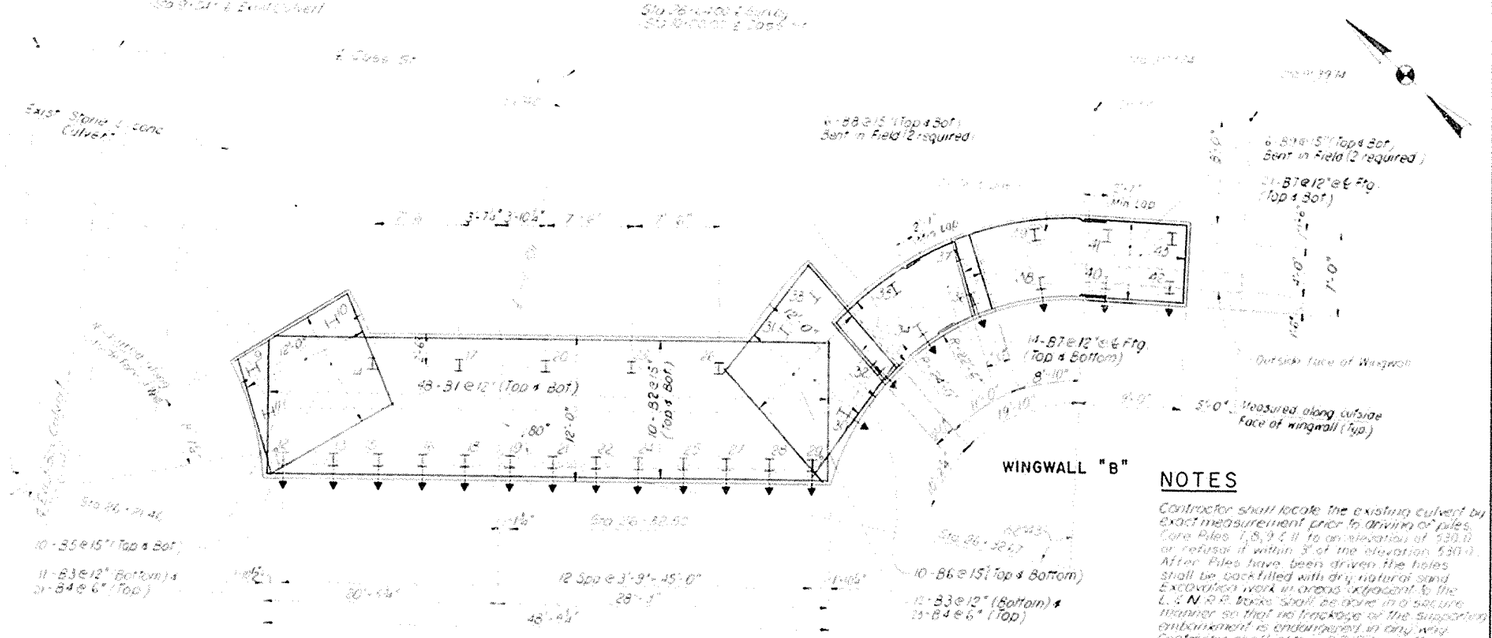
FRANKLAND AND LIENHARD

CONSTRUCTION PROJECT NO. MAINTENANCE PROJECT NO. DRAWING NO. 19592

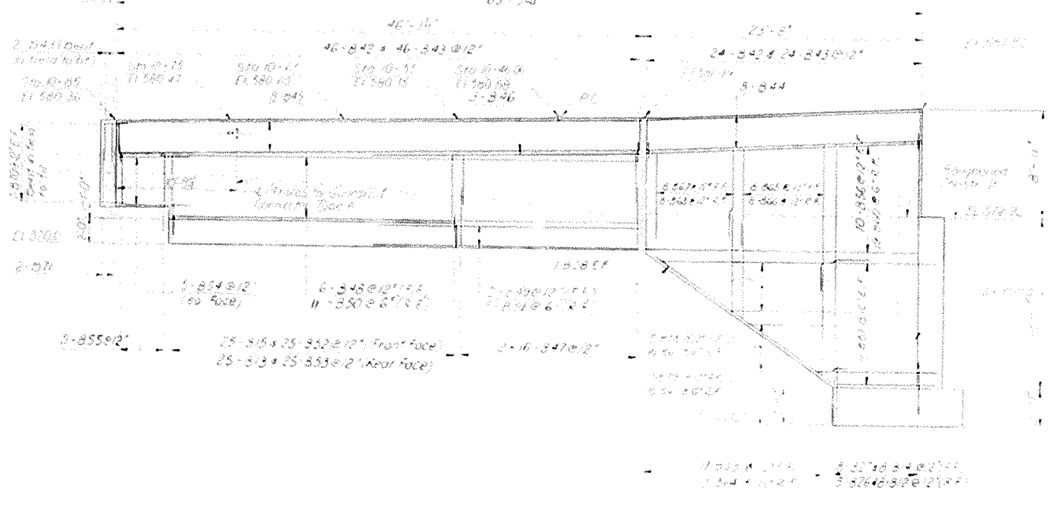
BRIDGE

UPDATE DATE
LETTING DATE

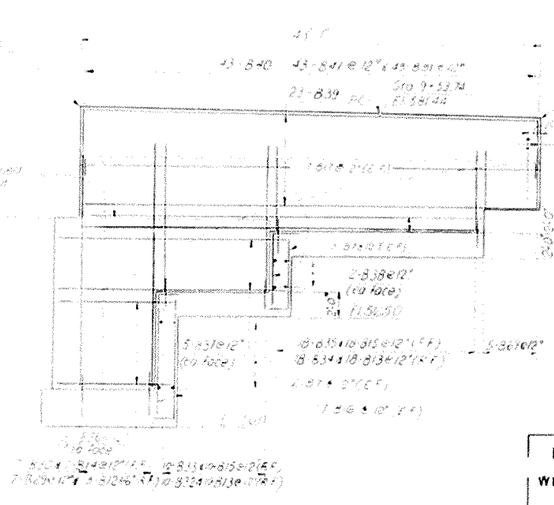




FOOTING PLAN



ELEVATION WINGWALL "A"



ELEVATION WINGWALL "B"

NOTES

Contractor shall locate the existing culvert by exact measurement prior to driving of piles. Core Piles 7, 8, 9 & 11 to an elevation of 530.0 or refusal if within 3' of the elevation 530.0. After Piles have been driven the holes shall be backfilled with dry natural sand. Excavated work in areas adjacent to the L & N R.R. Track shall be done in a secure manner so that no trackage of the Supporting embankment is endangered in any way. Contractor shall obtain C.S.D.E. written approval of any method of excavation intended to be used in such areas adjacent to the railroad.

Work this sheet with Sheets 14 & 20
For Pile Records see Sheet 34
1 - Denotes Vertical Pile.
2 - Denotes Pile Battered 1:3.

SHEET 15

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES
LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD
STATION P.E. PROJECT NO

CONSTRUCTION PROJECT NO. MAINTENANCE PROJECT NO. DRAWING NO. 19592

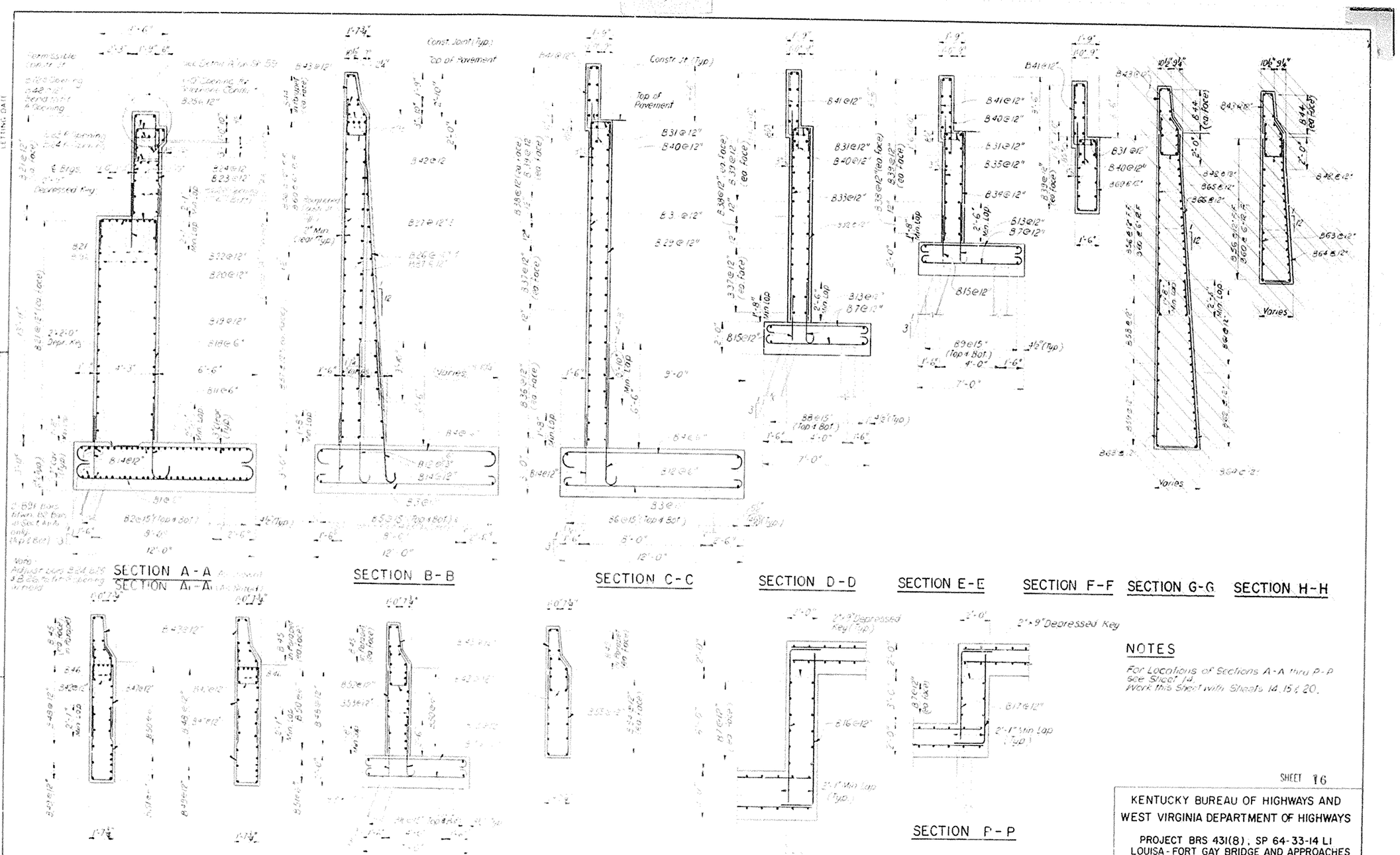
ABUTMENT 2 DETAILS

FRANKLAND AND LIENHARD

BRIDGE

UPDATE DATE

LETTING DATE



NOTES

For Locations of Sections A-A thru P-P see Sheet 14.
Work this Sheet with Sheets 14, 15 & 20.

ABUTMENT 2 - DETAILS

SHEET 16

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8), SP 64-33-14 LI
LOUISA - FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY WEST VIRGINIA

ROAD

STATION | P.E. PROJECT NO.

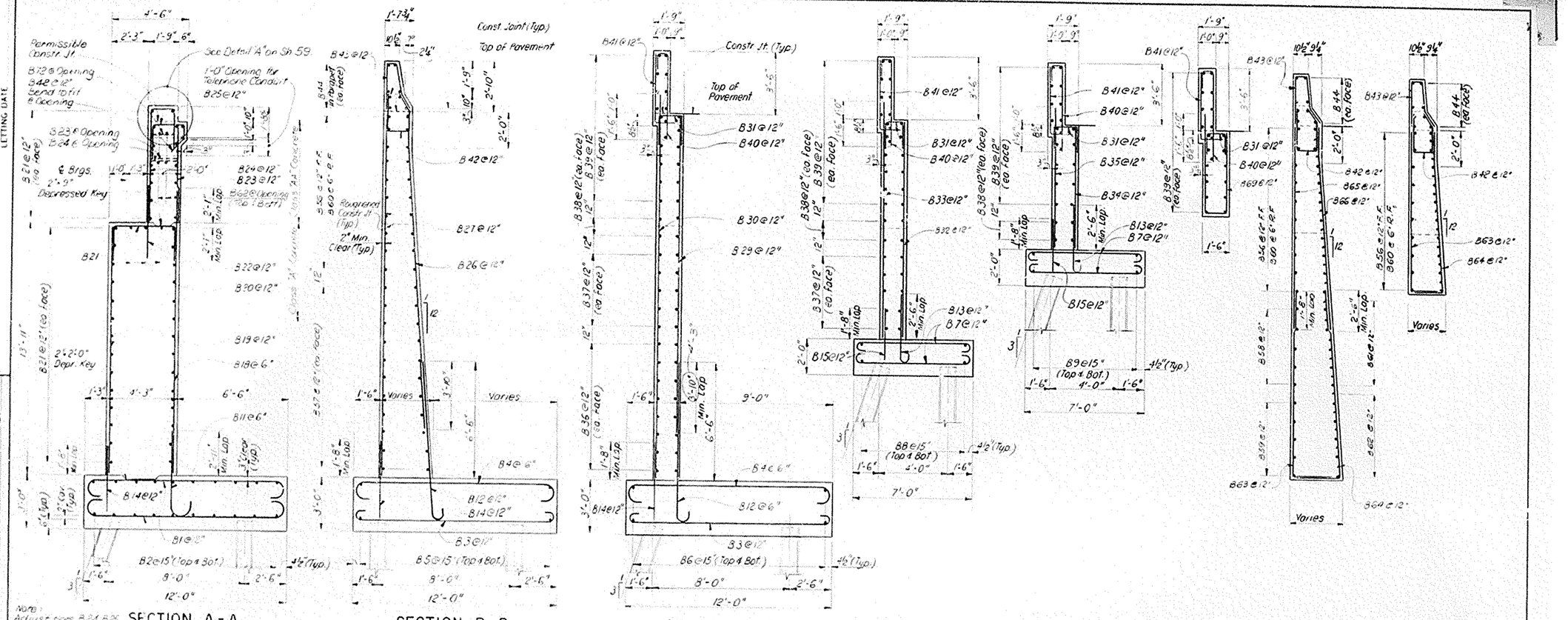
FRANKLAND AND LIENHARD

DRAWING NO. 19592

BRIDGE

UPDATE DATE

LETTING DATE



Note: Adjust bars B24, B25 & B26 to fit opening in field.

SECTION A-A

SECTION B-B

SECTION C-C

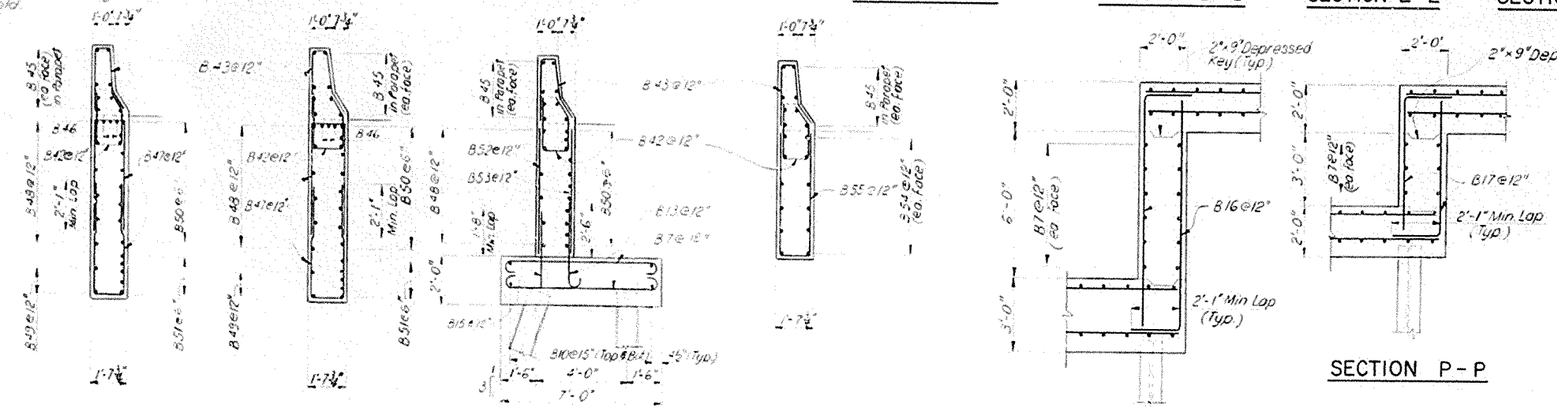
SECTION D-D

SECTION E-E

SECTION F-F

SECTION G-G

SECTION H-H



SECTION J-J

SECTION K-K

SECTION L-L

SECTION M-M

SECTION N-N

SECTION P-P

NOTES

For Locations of Sections A-A thru P-P see Sheet 14.
Work this Sheet with Sheets 14, 15 & 20.

SHEET 16

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA - FORT GAY BRIDGE AND APPROACHES
LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY WEST VIRGINIA

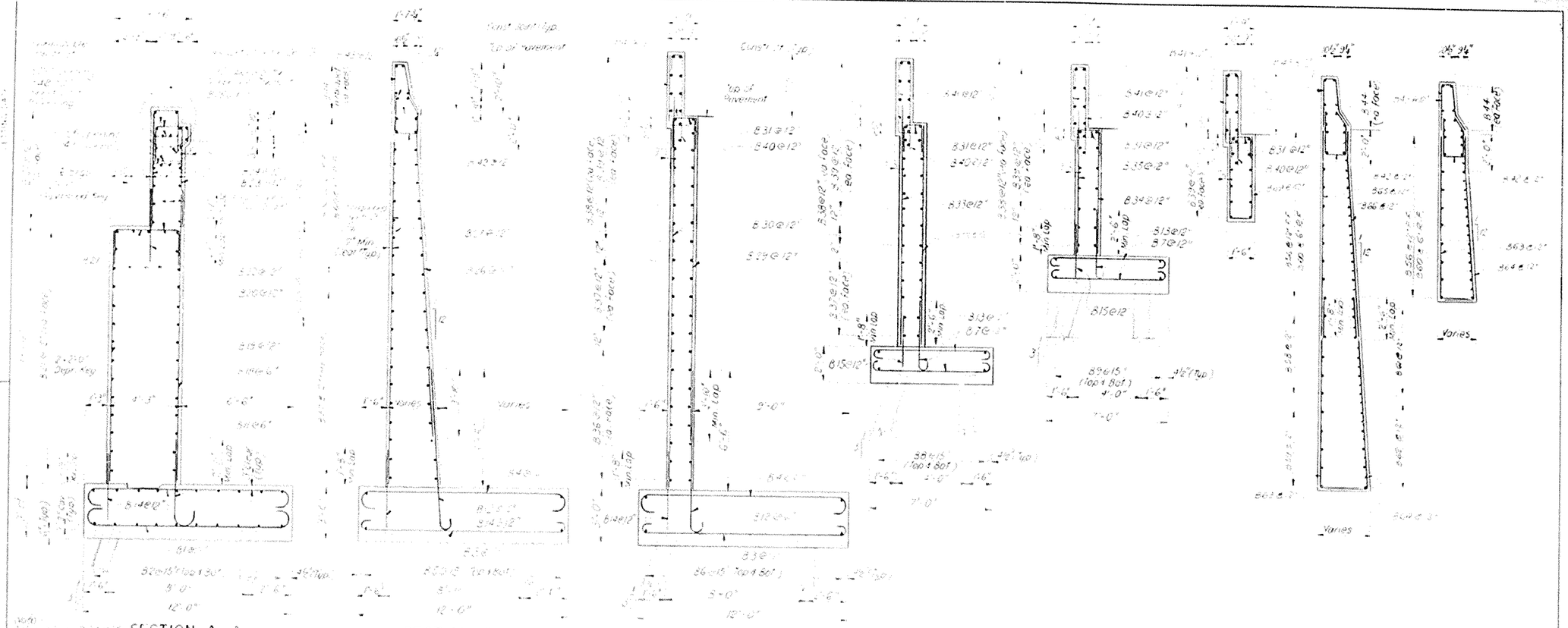
STATION | ROAD | P.E. PROJECT NO.

CONSTRUCTION PROJECT NO. | MAINTENANCE PROJECT NO. | DRAWING NO. 19592

ABUTMENT 2 - DETAILS

FRANKLAND AND LIENHARD

BRIDGE



SECTION A - A

SECTION B - B

SECTION C - C

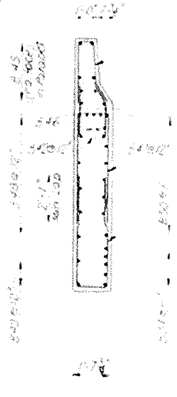
SECTION D - D

SECTION E - E

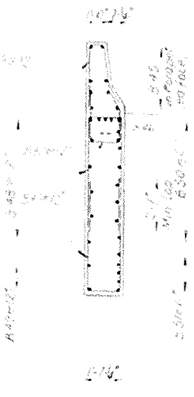
SECTION F - F

SECTION G - G

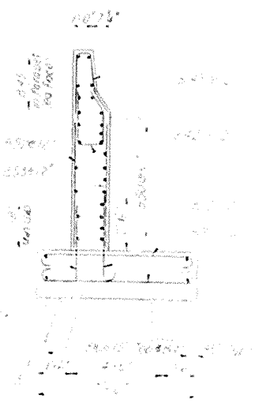
SECTION H - H



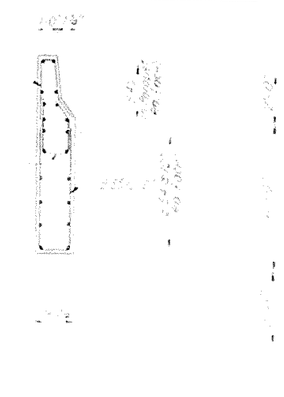
SECTION J - J



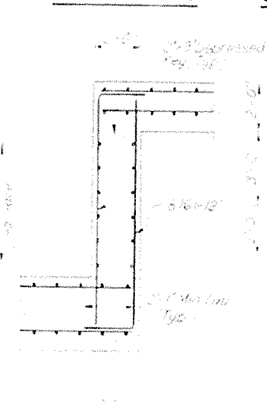
SECTION K - K



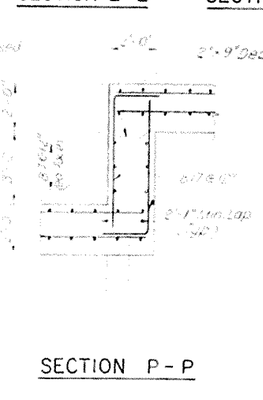
SECTION L - L



SECTION M - M



SECTION N - N



SECTION P - P

NOTES

For Locations of Sections A-A thru P-P
See Sheet 14
Work Will Start with Sheet No. 15 & 20

SHEET 16

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8), SP 64-33-14 LI
LOUISA - FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY WEST VIRGINIA

ROAD

STATION P.E. PROJECT NO

19592

ABUTMENT 2 - DETAILS

FRANKLAND AND LIENHARD

BRIDGE

UPDATE DATE

LETTING DATE

WINGWALL A

WINGWALL B

NOTE

Use cast - off at back and read as shown.
Omit bars A1 & A2.
"B" dowels slot in drilled holes, spacing as on Std Dwg. KBC-1012-02

PLAN

FOOTING PLAN

ELEVATION

SECTION X-X

SECTION Y-Y

ELEVATION WINGWALL A

ESTIMATE OF QUANTITIES

ITEM	QUANTITY
Concrete, Class AA	1240 CY
Concrete, Class A	330.40 CY
Reinforcement	30,366 Lbs.

NOTES:

For Boring Data see Sheet 4.
For Wing Wall Plan & Elevations see Sheet 18.
For Section A-A thru L see Sheet 19.
For Pile Reinforcement see Sheet 34.
For Pile Layout see Sheet 15 & 16.
For Bill of Reinforcement see Sheet 17.
For Precast Beams see Sheet 11.
I denotes Precast Beam.
denotes Pile Bottoms.
For Construction Stages see Paving Plans.

ABUTMENT 3

FRANKLAND AND LIENHARD

SHEET 17

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

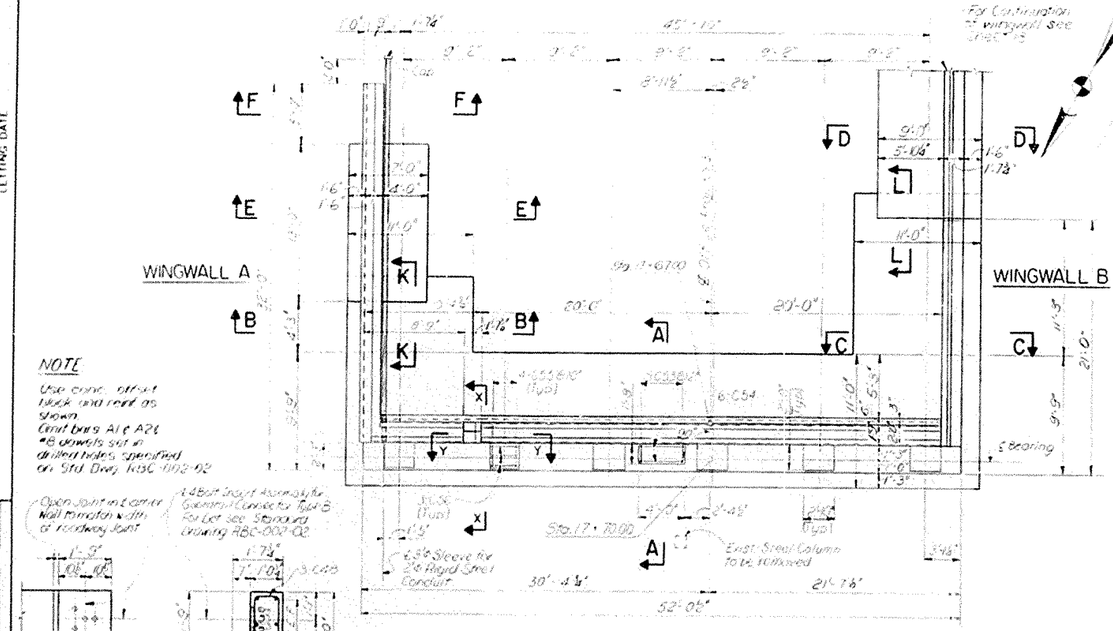
ROAD

STATION | P.E. PROJECT NO.

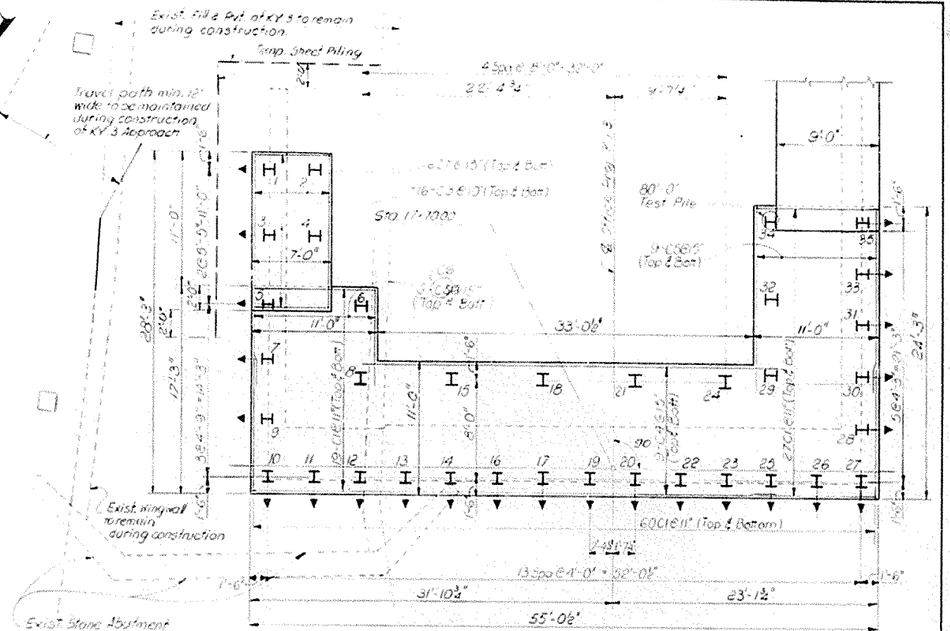
CONSTRUCTION PROJECT NO. | MAINTENANCE PROJECT NO. | DRAWING NO. 19592

BRIDGE

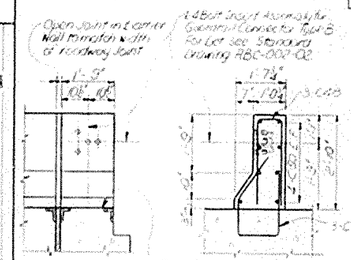
UPDATE DATE
LETTING DATE



PLAN

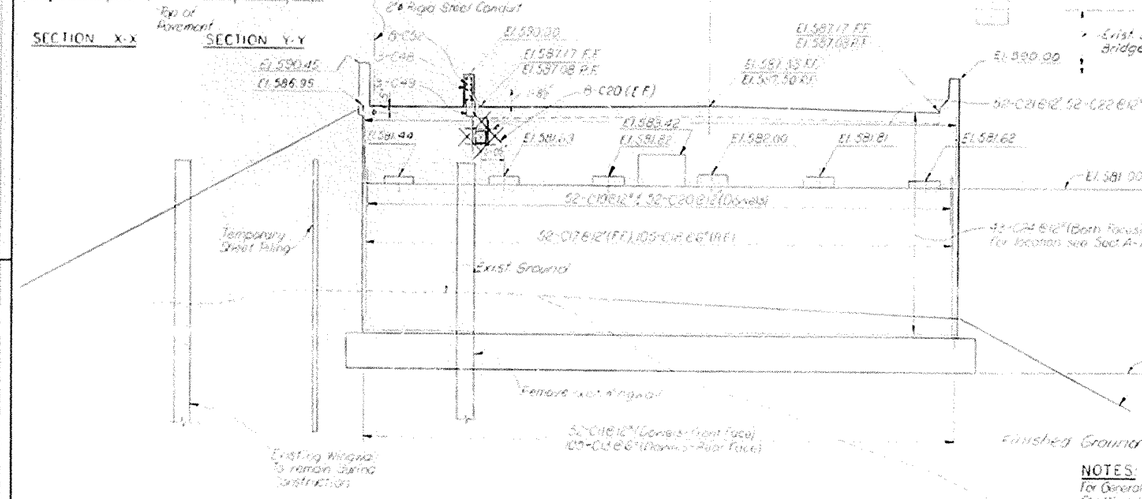


FOOTING PLAN

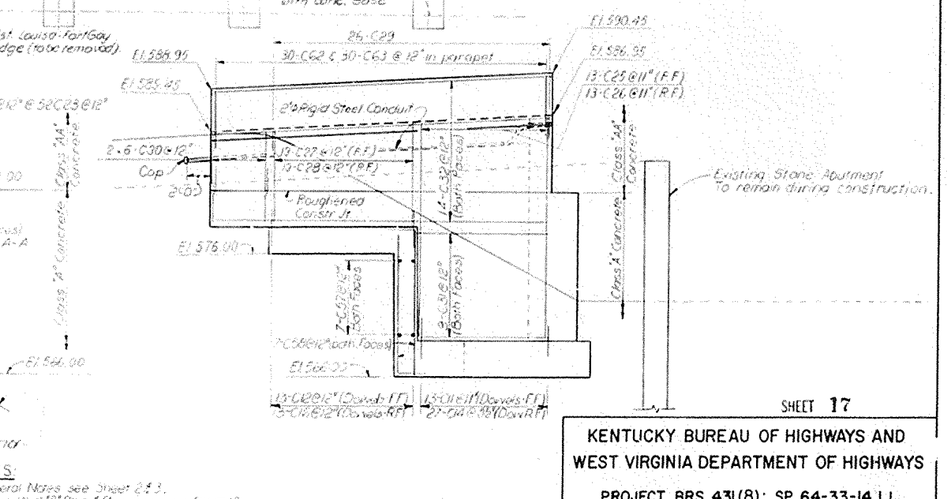


SECTION X-X

SECTION Y-Y



ELEVATION



ELEVATION WINGWALL A

ABUTMENT 3

ESTIMATE OF QUANTITIES	
ITEM	QUANTITY
Concrete, Class AA	7440 C.Y.
Concrete, Class A	2340 C.Y.
Reinforcement	(3036) Lbs.

NOTES:
For General Notes see Sheet 2 & 3.
For Wing Wall "B" Plan & Elevations see Sheet 18.
For sections A-A thru L-L see Sheet 19.
For Pile Records see Sheet 34.
Mark This Sheet with Sheet 18 & 19.
For Bill of Reinforcement see sheet 20
For Handrail Details see Sheet 71
I - Denotes Vertical Pile
I - Denotes Pile Battered 1:3
For Construction Stages see Roadway Plans

FRANKLAND AND LIENHARD

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES
LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD
STATION P.E. PROJECT NO.

CONSTRUCTION PROJECT NO. | MAINTENANCE PROJECT NO. | DRAWING NO. 19592

SHEET 17

BRIDGE

UPDATE DATE
LETTING DATE

WINGWALL A

WINGWALL B

NOTE

Use conc. cl. A at back and wing as shown.
Omit bars A1 & A2.
*Bend bars 90° at 6" to bar ends. Spacing varies, see Detail RBE 80.01.02

PLAN

FOOTING PLAN

SECTION X-X

SECTION Y-Y

ELEVATION

ESTIMATE OF QUANTITIES	
ITEM	QUANTITY
Concrete, Class AA	1430 CY
Concrete, Class A	230.49 CY
Reinforcement	38,366 Lbs.

NOTES
For General Notes, see Sheet 2.1
For Wing and Slope Elevations, see Sheet 4
For Sections A-A thru E-E, see Sheet 19
For Pile Details, see Sheet 34
For Pile Layout, see Sheet 18
For Bill of Reinforcement, see Sheet 37
For Wingwall Details, see Sheet 11
I Denotes Pile Location
For Construction Stages, see Phasing Plans

ELEVATION WINGWALL A

ABUTMENT 3

FRANKLAND AND LIENHARD

SHEET 17

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8), SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD
STATION P.E. PROJECT NO
CONSTRUCTION PROJECT NO. MAINTENANCE PROJECT NO. DRAWING NO. 19592

BRIDGE

PLAN

ELEVATION WINGWALL B

FOOTING PLAN

NOTES

For Pile Records see Sheet 34
1 Denotes Vertical Pile
| Denotes Pile Battered 1:3
Work this Sheet with Sheets 19 & 20
For Sections See Sheet 17

SHEET 18

ABUTMENT 3

FRANKLAND AND LIENHARD

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD

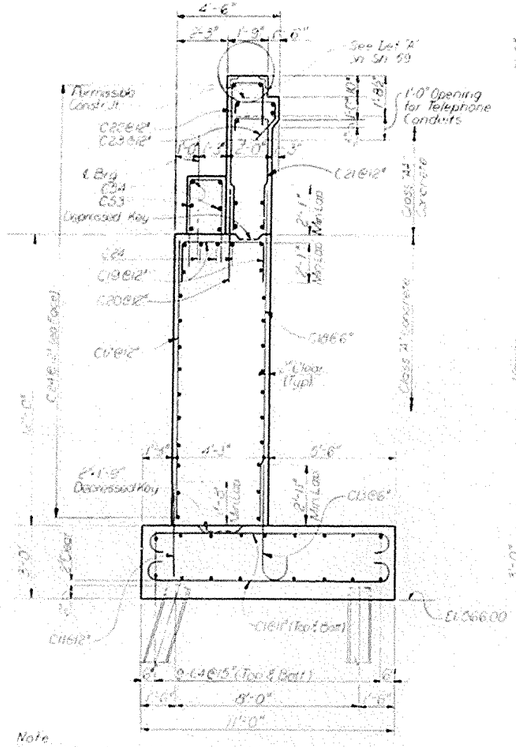
STATION | P.E. PROJECT NO.

CONSTRUCTION PROJECT NO. | MAINTENANCE PROJECT NO. | DRAWING NO. 19592

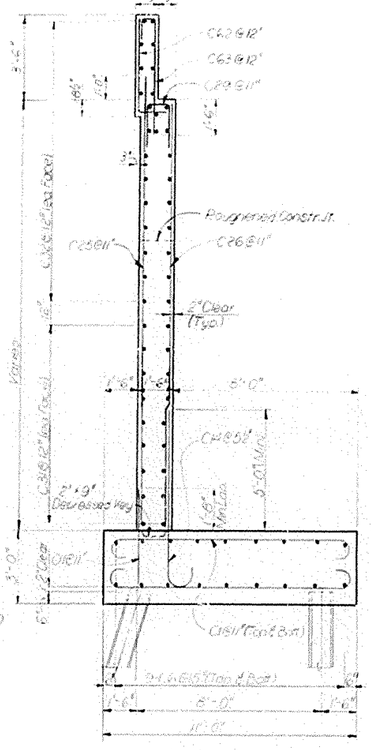
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UPDATE DATE

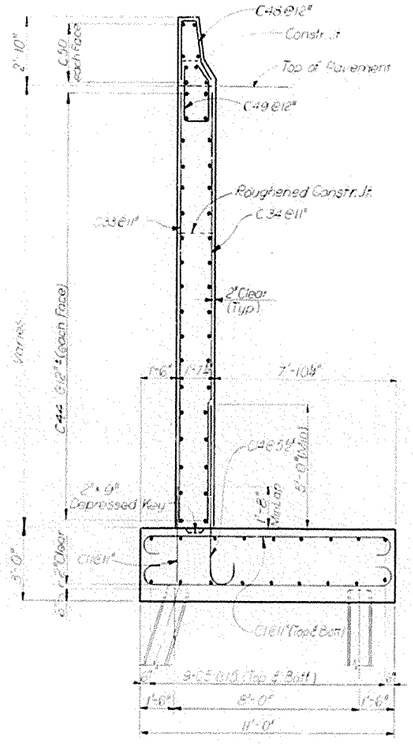
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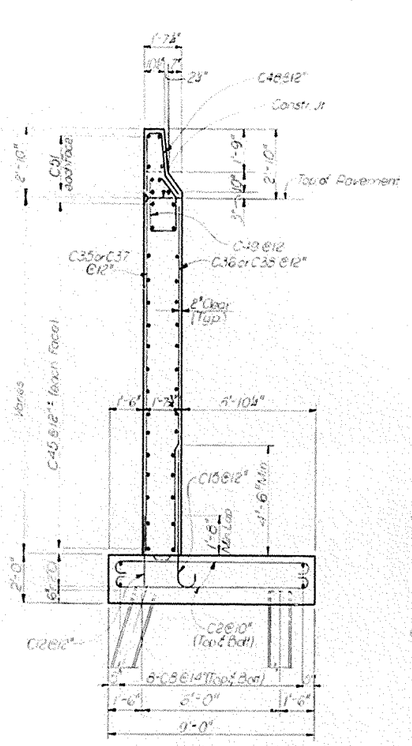
SECTION A-A



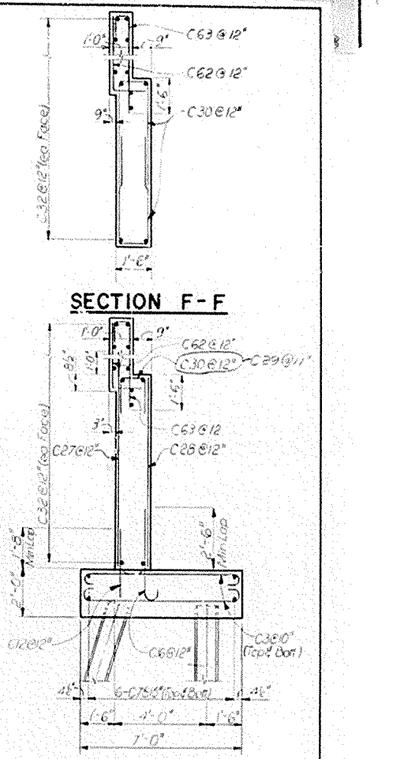
SECTION B-B



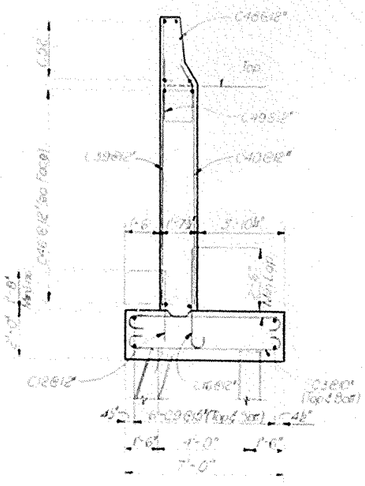
SECTION C-C



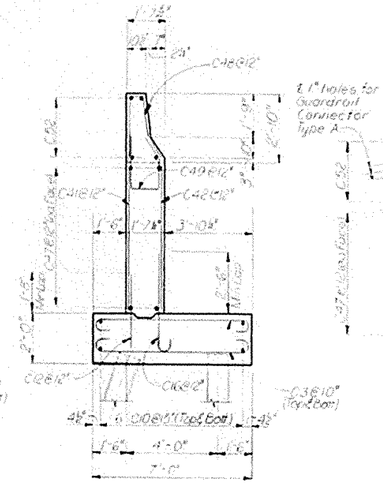
SECTION D-D



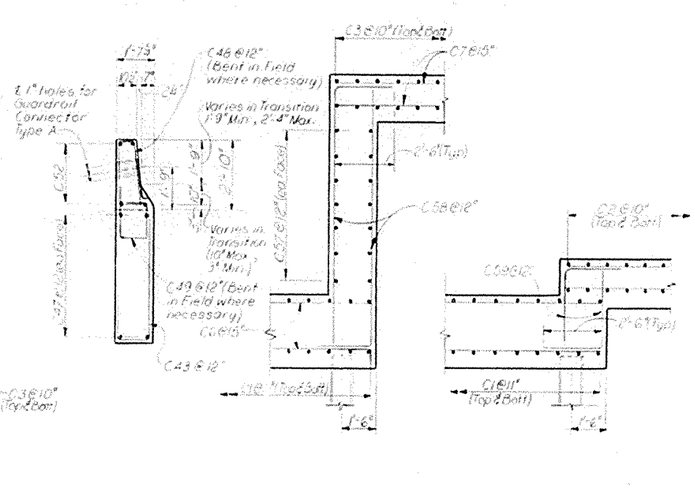
SECTION E-E



SECTION G-G



SECTION H-H



SECTION J-J

SECTION K-K

SECTION L-L

NOTES

For location of sections A-A thru L-L, see Sheet 17.
Work this Sheet with Sheet 17 & 18

SHEET 19

ABUTMENT 3 DETAILS

FRANKLAND AND LIENHARD

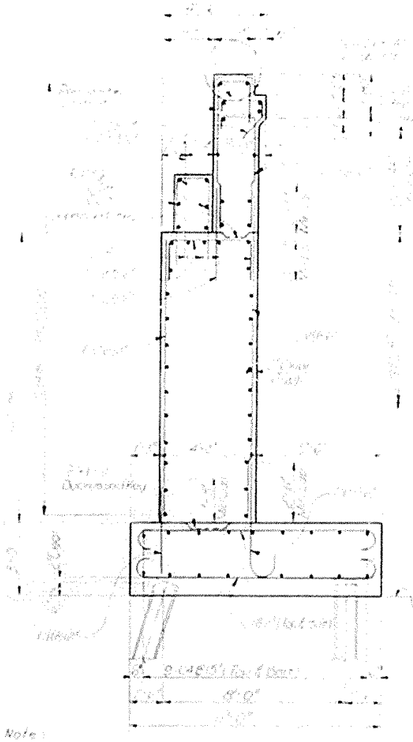
KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA - FORT GAY BRIDGE AND APPROACHES
LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY WEST VIRGINIA
ROAD

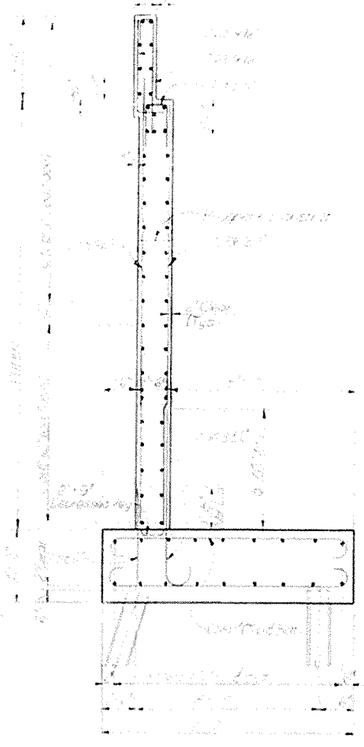
STATION 20+20.00 P.E. PROJECT NO.

CONSTRUCTION PROJECT NO	MAINTENANCE PROJECT NO	DRAWING NO
		19592

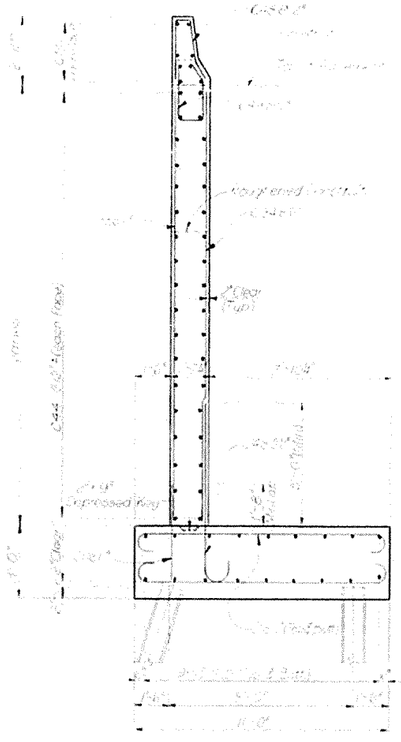
BRIDGE



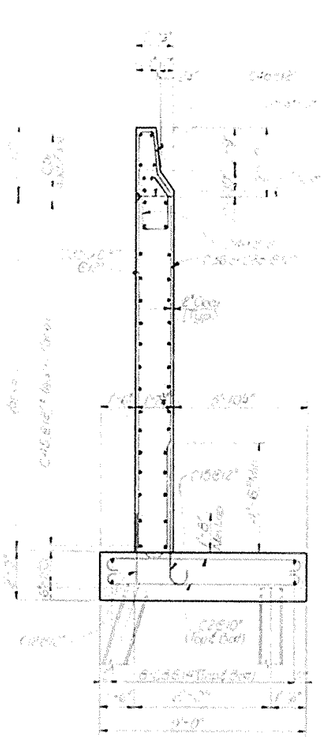
SECTION A-A



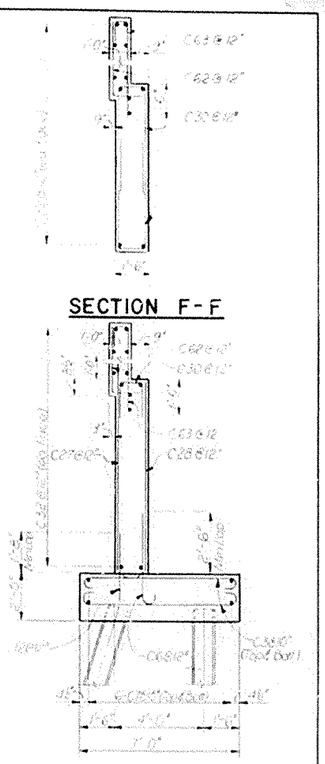
SECTION B-B



SECTION C-C

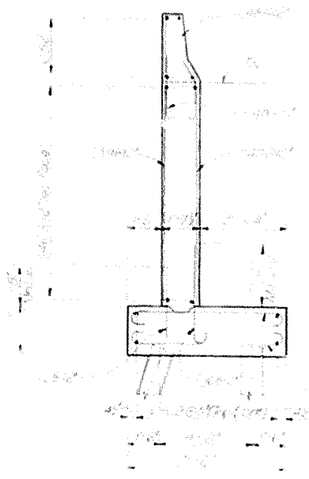


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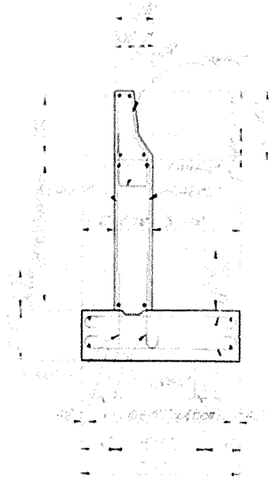


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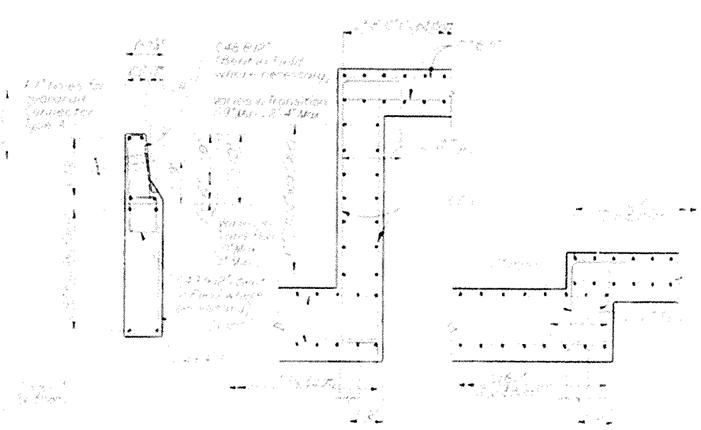
SECTION E-E



SECTION G-G



SECTION H-H



SECTION J-J SECTION K-K SECTION L-L

NOTES

ABUTMENT 3 DETAILS

FRANKLAND AND LIENHARD

SHEET 19

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY WEST VIRGINIA

ROAD

STATION 20+20.00 P.E. PROJECT NO.

CONSTRUCTION PROJECT NO. MAINTENANCE PROJECT NO. CROSSING NO.

BRIDGE

BILL OF REINFORCEMENT

ABUTMENT 1

Mark	Type	Number	Bar Size	Length Ft	Length In	Location	A Ft	A In	B Ft	B In	C Ft	C In	D Ft	D In
A1	5	68	11	12	2	Footing	9	24	1	6	0	11/4	5	4
A2	Str	16	5	4	5									
A	5	26	5	5	8									
A4	5	47	5	11	3	Stem	4	12	1	6	0	11/4	5	3
A5	5	4	5	6	8	Stem	1	5	1	6				
A6	5	47	5	10	9	Parapet	7	6	1	7	1	7		
A7	5	47	5	11	3		7	6	1	7	1	7		
A8	5	44	5	11	3		7	6	1	7	1	7		
A9	Str	16	4	4	1	8" Stem	1	16	4	12	0	8	6	8
A10	5	16	5	11	1	Wing A - Footing	7	24	5	6	11/4	5		
A11	Str	16	4	4	3									
A12	Str	5	5	4	5	Wing B - Parapet								
A13	Str	21	5	14	5	Wing A								
A14	Str	12	4	14	0									
A15	Str	12	4	14	6									
A16	Str	40	4	15	7									
A17	3	60	8	5	7	Wing A & B - Footing								
A18	Str	24	5	9	8	Wing A								
A19	5	27	5	4		Stem	12	4	1	6	0	11/4	5	10
A20	Str	15	5	10		Stem								
A21	5	24	10	5	10	Wing B - Footing	1	26	5	10	0	11/4	5	5
A22	Str	14	5	9	8									
A23	Str	11	7	4	3	Stem								
A24	9	26	5	6	7	Parapet	3	4	1	4	1	2	1	9
A25	10	27	5	5	10		3	8	5	7	1	6	1	8
A26	Str	10	2	7	2	Stem								
A27	Str	8	4	10	5									
A28	Str	12	2	3	8	Stem & Parapet								
A29	Str	12	4	9	6	Stem								
A30	Str	12	6	9	6	Stem								
A31	Str	5	4	14	9	Stem								
A32	5	5	5	10	11	Wing A - Stem	5	24	6	2	4	3		
A33	Str	4	5	5	8	Wing A & B - Footing								
A34	5	5	5	6	3	Wing A	1	8						
A35	5	5	5	12	6	Wing B - Stem	1	4	5	4				
A36	5	16	5	9	6	Wing B - Footing	7	6	1	6				
A37	7	16	5	10	8	Wing A - Footing	8	6	2	6				
A38	Str	12	5	11	0	Wing B - Footing								
A39	Str	2	5	10	0	Bearing Pad	1	1	1	0				
A40	Str	20	5	2	7									
A41	Str	3	5	2	2	Stem & Footing								
A42	Str	3	5	6	1									
A43	5	11	4	9	6	Wing A - Stem	1	6						
A44	5	16	4	9	10									
A45	Str	3	6	5	8	Parapet & Backwall								
A46	Str	20	5	4	3	Wing B								
A47	2	2	5	14	2									
A48	Str	64	5	10	4	Stem								
A49	Str	37	4	8	1	Stem								
A50	Str	63	4	4	10	Stem & Wing A & B								
A51	Str	27	4	9	6	Wing A & B								
A52	Str	3	5	2	3	Keeper								
A53	5	6	5	6	6	Wing A - Footing	1	28						
A54	5	10	5	6	6	Wing A - Parapet	4	4						
A55	5	6	5	6	6	Parapet Backwall	1	28						
B1	Str	3	4	5	3	Wing A								
B2	Str	3	6	5	4									
B3	Str	3	4	5	0									
B4	Str	3	4	5	10									
B5	Str	4	4	10	2									
B6	Str	4	6	5	2									
B7	Str	4	6	15	6									
B8	Str	5	4	5	8									
B9	Str	5	4	10	2									
B10	Str	6	5	10	0									
B11	Str	6	5	10	0									
B12	Str	6	5	10	0									
B13	5	32	11	4	3	Wing A								
B14	Str	32	5	4	3									
B15	Str	32	5	4	3									
B16	Str	32	5	4	3									

LETTING DATE

BILL OF REINFORCEMENT

ABUTMENT 1

Mark	Type	Number	Bar Size	Length Ft	Length In	Location	A Ft	A In	B Ft	B In	C Ft	C In	D Ft	D In
A1	5	100	10	11	7	Footing	8	2¾	1	8	0	11¾	2	2
A2	Str	16	5	49	8	"								
A3	6	169	7	6	2	"	4	4½	1	2	0	7	5	3
A4	3	47	5	8	3	Stem	3	2½	2	1				
A5	4	4	5	6	9	Stem	1	5	1	6				
A6	3	47	5	10	9	Backwall	7	8	1	8	1	6		
A7	3	47	4	11	3	"	3	5	1	5	1	6		
A8	7	24	4	5	5	"	20	50	1	11	0	9	1	50
A9	Str	36	4	46	0	" & Stem								
A10	5	32	10	11	1	Wing A - Footing	7	3¾	1	8	0	11¾	2	8
A11	Str	12	5	6	4	"								
A12	Str	8	5	21	6	Wing B - Parapet								
A13	Str	21	7	14	0	Wing A - Stem								
A14	Str	12	4	14	0	"								
A15	Str	12	4	14	6	"								
A16	Str	40	4	15	5	"								
A17	8	60	6	8	0	Wing A & B - Footing	6	1	1	2	0	7	5	3
A18	Str	24	5	9	6	Wing A								
A19	6	27	6	4	7	" Stem	3	7	1	0	0	6	3	10
A20	Str	15	6	7	10	" Stem								
A21	21	24	10	7	10	Wing B - Footing	5	2½	1	8	0	11¾	6	8
A22	Str	14	5	9	0	"								
A23	Str	11	7	4	3	Stem								
A24	9	22	5	6	1	Parapet	2	4	1	4	1	6	1	0
A25	10	27	5	5	10	"	2	9	0	6	1	9	1	0
A26	Str	10	4	9	5	" Stem								
A27	Str	8	4	19	8	"								
A28	Str	12	4	21	8	" Stem & Parapet								
A29	Str	12	4	9	6	" Stem								
A30	Str	12	6	9	6	" Stem								
A31	Str	5	4	12	9	" Stem								
A32	2	5	5	10	11	Wing A - Stem	5	2½	1	8	2	8		
A33	Str	14	5	6	8	Wing A & B - Footing								
A34	2	31	5	5	5	Wing A - Stem	1	2	2	2				
A35	2	5	5	10	0	Wing B - Stem	1	4	5	4				
A36	1	16	5	9	8	Wing B - Footing	7	2	2	6				
A37	1	16	5	10	8	Wing A - Footing	8	2	2	6				
A38	Str	12	5	11	0	Wing B - Footing								
A39	2	25	5	5	10	Bearing Pad	1	9	2	1				
A40	Str	20	5	2	1	"								
A41	Str	12	5	4	0	Stem & spacing								
A42	Str	5	6	8	10	"								
A43	3	94	4	46	10	Wing A - Stem								
A44	Str	15	4	20	10	"								
A45	Str	5	5	2	8	Parapet & Backwall								
A46	Str	20	5	4	10	Wing B								
A47	2	2	5	11	2	"	0	3½	6	9				
A48	Str	94	7	8	4	Stem								
A49	Str	47	4	8	4	Stem								
A50	Str	69	4	4	10	Stem & Wing A & B								
A51	Str	27	4	8	0	Wing A & B								
A52	Str	5	*	2	0	Dowels								
A53	1	30	5	6	3	Wing A - Parapet	1	4	4	9				
A54	3	30	5	7	0	Wing A - Parapet	4	10	0	8	1	6		
A55	1	3	5	6	0	Parapets Backwall		9	2	8				

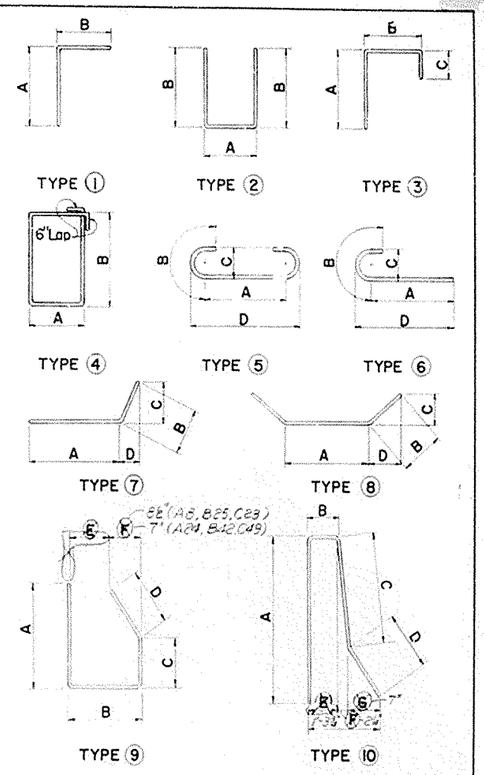
* 1¾" Round Pin - May be of commercial Grade Steel

ABUTMENT 2

Mark	Type	Number	Bar Size	Length Ft	Length In	Location	A Ft	A In	B Ft	B In	C Ft	C In	D Ft	D In
B1	5	96	10	14	3	Footing	10	7¾	1	10	1	0¾	11	8
B2	Str	20	5	48	9	"	-	-	-	-	-	-	-	-
B3	5	33	6	13	2	"	11	2	1	0	0	5	11	8
B4	3	44	4	14	1	"	10	8¾	1	8	0	11¾	11	8
B5	Str	20	5	10	6	"	-	-	-	-	-	-	-	-
B6	Str	20	5	12	0	"	-	-	-	-	-	-	-	-
B7	5	132	8	3	0	"	6	0	1	6	0	8	6	8
B8	Str	24	5	8	6	"	-	-	-	-	-	-	-	-
B9	Str	24	5	12	0	"	-	-	-	-	-	-	-	-
B10	Str	12	5	24	8	"	-	-	-	-	-	-	-	-
B11	3	98	7	5	2	" Dowels	4	11½	1	2	0	7	6	3
B12	5	37	10	10	1	"	8	4	1	10	1	0¾	8	10
B13	6	55	6	4	7	"	3	7	1	0	0	6	3	10
B14	Str	74	4	4	9	"	-	-	-	-	-	-	-	-
B15	Str	53	4	3	0	"	-	-	-	-	-	-	-	-
B16	7	14	5	10	3	"	10	2	2	1	-	-	-	-
B17	7	14	5	9	3	"	6	2	2	1	-	-	-	-
B18	Str	93	7	16	0	" Stem	-	-	-	-	-	-	-	-
B19	Str	47	4	13	9	"	-	-	-	-	-	-	-	-
B20	12	47	5	8	0	"	3	11	2	1	-	-	-	-
B21	Str	47	4	46	3	"	-	-	-	-	-	-	-	-
B22	Str	47	5	4	2	" Dowels								
B23	10	47	5	8	4	" Backwall	4	8	1	8	-	-	-	-
B24	3	47	3	9	3	"	3	6	1	5	2	3	-	-
B25	9	47	4	5	6	"	2	0	1	11	0	6	1	0
B26	Str	6	6	17	0	" Stem - Wing A	-	-	-	-	-	-	-	-
B27	Str	6	4	12	7	"	-	-	-	-	-	-	-	-
B28	Str	2	3	10	0	"								
B29	Str	7	10	17	0	" Wing B	-	-	-	-	-	-	-	-
B30	Str	7	4	20	6	"	-	-	-	-	-	-	-	-
B31	2	43	5	5	3	"	1	2	2	1	-	-	-	-
B32	Str	10	6	11	3	"								
B33	Str	10	4	12	5	"								
B34	Str	18	6	5	6	"								
B35	Str	18	4	5	8	"								
B36	Str	16	4	10	0	"								
B37	Str	10	4	32	0	"								
B38	Str	4	4	43	0	"								
B39	Str	23	5	32	3	"	-	-	-	-	-	-	-	-
B40	3	43	5	11	0	Parapet Wing B	4	10	2	8	1	6	-	-
B41	3	43	4	32	6	"	4	5½	2	11	-	-	-	-
B42	7	70	5	6	2	" Wing A	2	4	1	4	1	6	1	0
B43	10	70	5	5	10	"	2	8	0	6	1	9	1	0
B44	Str	8	4	23	4	"	-	-	-	-	-	-	-	-
B45	Str	8	5	41	6	"	-	-	-	-	-	-	-	-
B46	Str	3	0	22	0	" Stem - Wing A								
B47	2	32	4	11	3	"	1	4	5	0	-	-	-	-
B48	Str	6	4	40	10	"	-	-	-	-	-	-	-	-
B49	Str	2	4	20	0	"								
B50	Str	11	9	40	10	"	-	-	-	-	-	-	-	-
B51	Str	6	9	26	0	"	-	-	-	-	-	-	-	-
B52	Str	25	3	5	2	"	-	-	-	-	-	-	-	-
B53	Str	25	6	5	6	"	-	-	-	-	-	-	-	-
B54	Str	10	5	7	0	"	-	-	-	-	-	-	-	-
B55	2	5	5	0	5	"	1	4	4	2	-	-	-	-
B56	Str	10	4	23	3	"								
B57	Str	52	4	9	6	"								
B58		5	4	12	0	"								
B59		5	4	6	0	"								
B60		12	9	23	4	"								
B61		10	9	18	0	"								
B62		10	9	9	3	"								
B63	2	17	4	10	0	"	3	2	2	-	-	-	-	-
B64	1	17	8	10	0	"	2	0	8	-	-	-	-	-
B65	Str	8	4	12	8	"								
B66	Str	8	6	13	6	"								
B67	Str	6	4	7	2	"								
B68	Str	13	6	8	0	"								
B69	3	5	5	9	3	" Wing B	4	8		2	3	6		
B70	Str	14	3	4	0	" Wing A								
B71	2	3	5	12	9	"	0	9	6	0	-	-	-	-
B72	4	3	5	6	3	" Stem @ opening	1	2			6	-	-	-
B73	8	8	5	8		" Shear Block	1	4	3	5				
B74	Str	4	5	5	8	" Shear Block								
B75	Str	20	5	2	4	" Brg. pads								
B76	2	25	5	5	10	"	1	9	2	1				

ABUTMENT 3

Mark	Type	Number	Bar Size	Length Ft	Length In	Location	A Ft	A In	B Ft	B In	C Ft	C In	D Ft	D In
C1	5	212	5	13	1	Footing	2	5½	1	8	0	11¾	10	8
C2	5	126	7	10	5	"	8	1	1	2	0	7	8	8
C3	5	214	7	8	5	"	6	1	1	2	0	7	6	8
C4	Str	18	5	32	2	"	-	-	-	-	-	-	-	-
C5	Str	18	5	15	10	"	-	-	-	-	-	-	-	-
C6	Str	18	5	8	10	"	-	-	-	-	-	-	-	-
C7	Str	12	5	12	6	"	-	-	-	-	-	-	-	-
C8	Str	16	5	51	8	"	-	-	-	-	-	-	-	-
C9	Str	12	5	26	6	"	-	-	-	-	-	-	-	-
C10	Str	12	5	19	8	"	-	-	-	-	-	-	-	-
C11	Str	86	4	4	0	" (Dowels)	-	-	-	-	-	-	-	-
C12	Str	88	4	3	0	"	-	-	-	-	-	-	-	-
C13	6	105	7	6	2	"	4	1½	1	2	0	7	5	3
C14	6	70	9	8	7	"	6	10½	1	8	0	11¾	7	4
C15	6	50	9	7	1	"	5	4½	1	9	0	11¾	5	10
C16	6	58	6	13	10	"	3	4½	1	0	0	6	3	10
C17	Str	52	4	11	10	" Stem	-	-	-	-	-	-	-	-
C18	Str	105	7	14	2	"	-	-	-	-	-	-	-	-
C19	2	52	5	8	0	"	3	11	2	1	-	-	-	-
C20	Str	68	5	4	2	" (Dowels)	-	-	-	-	-	-	-	-
C21	3	52	5	8	6	" Backwall	5	0	1	8	2	-	-	-
C22	3	52	4	9	5	"	6	0	1	5	2	0	-	-
C23	9	52	4	5	6	"	2	0	1	11	0	8	1	0
C24	Str	43	4	51	8	" Stem & Backwall	-	-	-	-	-	-	-	-
C25	Str	13	4	17	6	" Wing A	-	-	-	-	-	-	-	-
C26	Str	13	9	17	6	"	-	-	-	-	-	-	-	-
C27	Str	13	4	6	6	"	-	-	-	-	-	-	-	-
C28	Str	13	6	7	6	"	-	-	-	-	-	-	-	-
C29	2	26	4	6	1	"	-	-	-	-	-	-	-	-
C30	2	12	4	9	2	"	1	2	2	0	-	-	-	-
C31	Str	18	4	11	6	"	-	-	-	-	-	-	-	-
C32	Str	28	4	29	6	"	-	-	-	-	-	-	-	-
C33	Str	21	4	17	2	" Wing B	-	-	-	-	-	-	-	-
C34	Str	21	9	17	2	"	-	-	-	-	-	-	-	-
C35	Str	25	4	14	5	"	-	-	-	-	-	-	-	-
C36	Str	25	6	12	5	"	-	-	-	-	-	-	-	-
C37	Str	25	4	13	2	"	-	-	-	-	-	-	-	-
C38	Str	25	6	13	2	"	-	-	-	-	-	-	-	-
C39	Str	25	4	6	5	"	-	-	-	-	-	-	-	-
C40	Str	25	6	8	5	"	-	-	-	-	-	-	-	-
C41	Str	20	4	5	4	"	-	-	-	-	-	-	-	-
C42	Str	20	6	5	4	"	-	-	-	-	-	-	-	-
C43	2	5	5	11	9	"	1	4	5	3	-	-	-	-
C44	Str	36	4	18	5	"	-	-	-	-	-	-	-	-
C45	Str	30	4	40	8	"	-	-	-	-	-	-	-	-
C46	Str	18	4	27	2	"	-	-	-	-	-	-	-	-
C47	Str	12	4	24	8	"	-	-	-	-	-	-	-	-
C48	10	124	5	5	10	" Parapet	2	8	0	6	1	9	1	0
C49	9	122	5	7	1	"	2	10	1	4	2	0	1	0
C50	Str	8	5	18	5	"	-	-	-	-	-	-	-	-
C51	Str	16	5	49	8	"	-	-	-	-	-	-	-	-
C52	Str	8	5	7	6	"	-	-	-	-	-	-	-	-
C53	2	5	5	9	0	" Shear Block	1	5	3	10	-	-	-	-
C54	Str	6	4	3	8	"								
C55	2	24	4	6	4	" Brg. Pads	1	9	2	4				
C56	Str	18	4	2	6	"	-	-	-	-	-	-	-	-
C57	Str	14	5	6	8	" Step in Ftg	-	-	-	-	-	-	-	-
C58	7	14	5	13	8	"	11	2	2	6	-	-	-	-
C59	7	18	5	6	2	"	3	8	2	0	-	-	-	-
C60	7	14	5	7	2	"	4	8	2	0	-	-	-	-
C61	7	14	5	3	8	"	3	2	2	1	-	-	-	-
C62	10	30	5	10	6	" Wing A - Parapet	1	4	10	8	1	-	-	-
C63	3	30	5	11	0	" Wing A - Parapet	4	10	0	8	1	6	-	-
C64	2	2	5	10	4	" Wing B - Parapet	-	9	6	4	-	-	-	-



NOTE:
For general Notes see Sheets 2 & 3.
Work this Sheet with Sheets 18 thru 19

SHEET 20

BILL OF REINFORCEMENT
ABUTMENT 1, 2 & 3

FRANKLAND AND LIENHARD

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8), SP 63-33-14 B1
LOUISA - FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD KY 3 & WVA 37

STATION 20 + 20.00 P.E. PROJECT NO.

CONSTRUCTION PROJECT NO	MAINTENANCE PROJECT NO	DRAWING NO
		19592

BRIDGE

BILL OF REINFORCEMENT

ABUTMENT 1

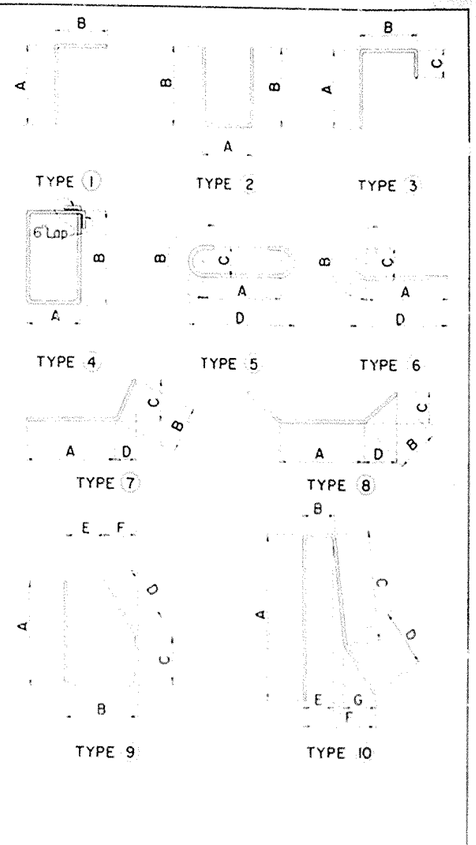
Mark	Type	Number	Bar Size	Length Ft	Length In	Location	A Ft	A In	B Ft	B In	C Ft	C In	D Ft	D In

ABUTMENT 2

Mark	Type	Number	Bar Size	Length Ft	Length In	Location	A Ft	A In	B Ft	B In	C Ft	C In	D Ft	D In

ABUTMENT 3

Mark	Type	Number	Bar Size	Length Ft	Length In	Location	A Ft	A In	B Ft	B In	C Ft	C In	D Ft	D In



NOTE:

SHEET 20

BILL OF REINFORCEMENT
ABUTMENT 1, 2 & 3

FRANKLAND AND LIENHARD

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8), SP 63-35-14 LI
LOUISA - PORT GAY BRIDGE AND APPROACHES

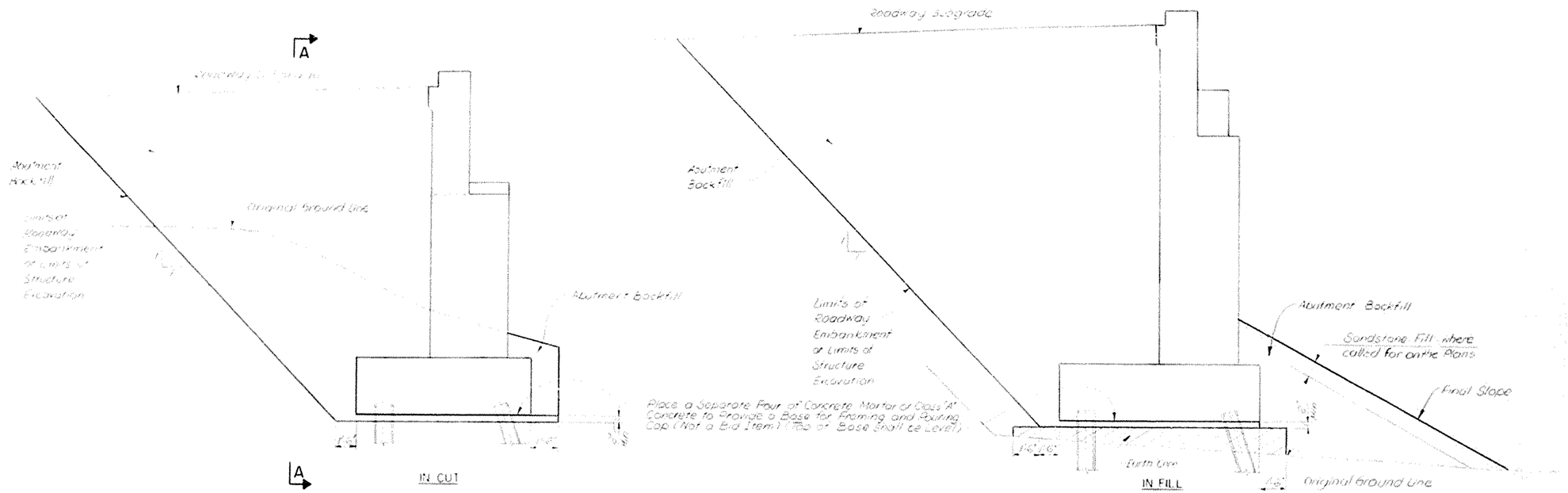
LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD KY 3 & WVA 37

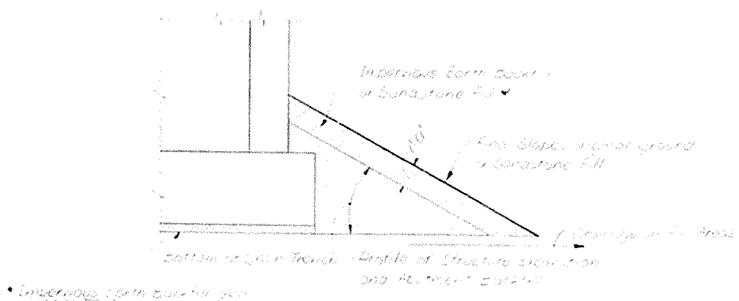
STATION 20 + 20.00 P.E. PROJECT NO.

CONSTRUCTION PROJECT NO. MAINTENANCE PROJECT NO. DRAWING NO.

BRIDGE



DETAILS FOR PLACING ABUTMENT BACKFILL



* Impervious earth core fill shall be AASHTO Classification A-6 or A-7 unless otherwise designated by the Bureau of Highways.

SECTION A-A

NOTES:
Earth Core: In addition to meeting the requirements for embankment materials in accordance with the Specifications, Earth Core shall be free of boulders or any other obstruction which would interfere with the driving of piles. This material shall be obtained from within the limits of the Right-of-Way and paid for at the contract unit price per cubic yard for "Roadway Excavation". If not available within the limits of the Right-of-Way, it shall be obtained off the Right-of-Way from sites acquired by the Contractor and approved by the Engineer. Payment for Borrow Material shall be at the contract unit price per cubic yard for "Borrow Excavation". No direct payment will be allowed for overhaul of Borrow Material or for necessary manipulation, including double handling. AASHTO Classification A-7 or A-6 clayey soils shall not be permitted in approach embankments (excluding Impervious Earth Core Fill as designated above) within 200 feet of the cylinder abutment or in the Earth Core unless otherwise designated by the Bureau of Highways.

SHEET 21

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8) ; SP 64-33-14 LI
LOUISA - FORT GAY BRIDGE AND APPROACHES
LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY WEST VIRGINIA
ROAD

STATION 20+20.00 P.E. PROJECT NO.

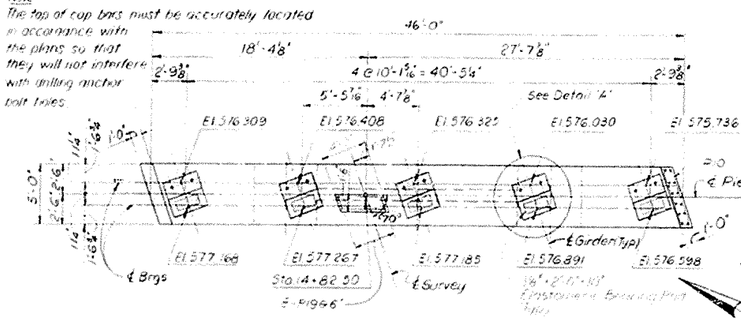
CONSTRUCTION PROJECT NO. MAINTENANCE PROJECT NO. DRAWING NO. 19592

DETAILS FOR PLACING ABUTMENT BACKFILL

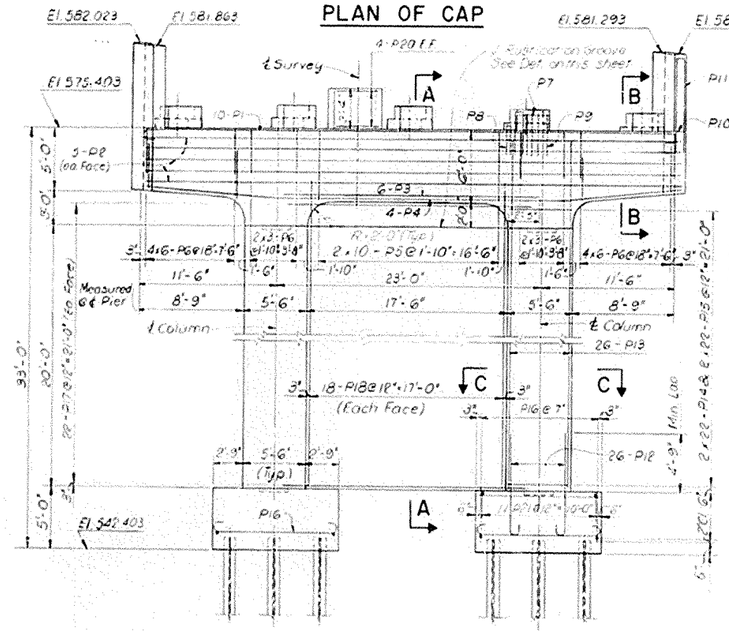
FRANKLAND AND LIENHARD

BRIDGE

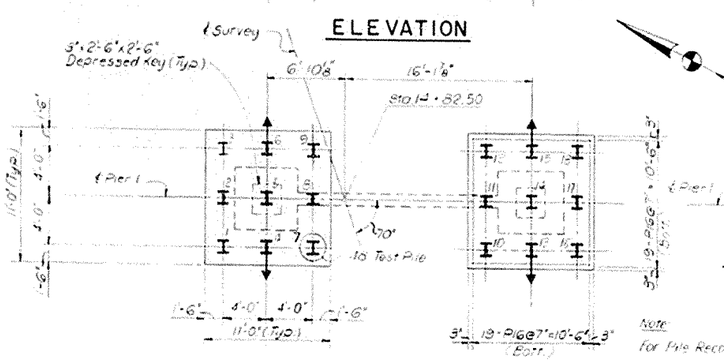
Note
The top of cap bars must be accurately located in accordance with the plans so that they will not interfere with drilling anchor bolt holes.



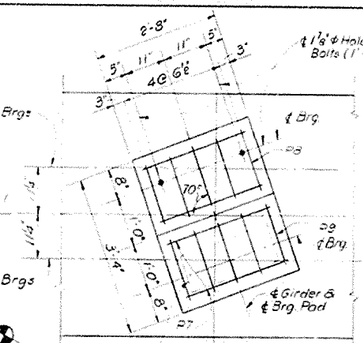
PLAN OF CAP



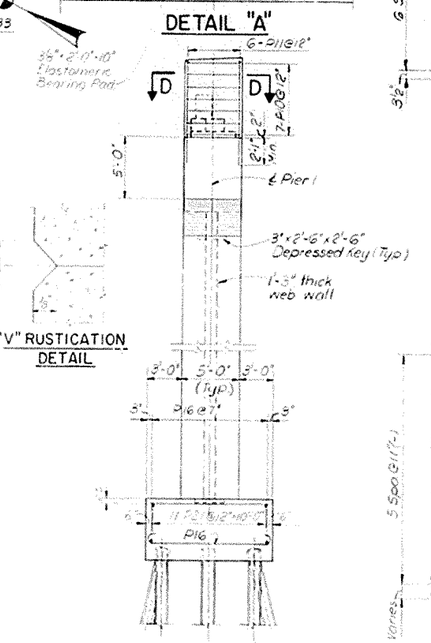
ELEVATION



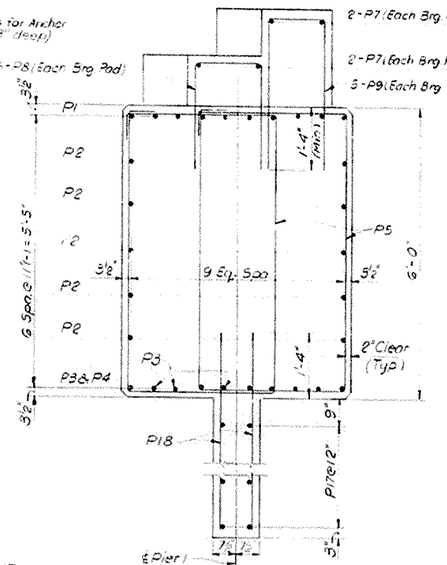
FOOTING PLAN



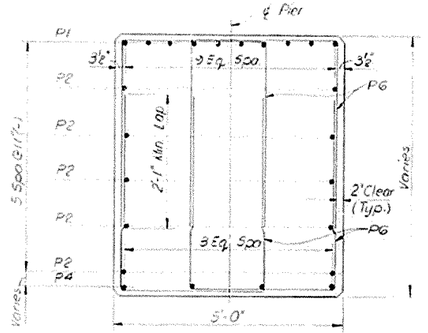
DETAIL "A"



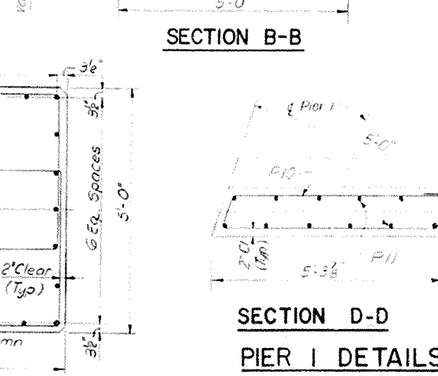
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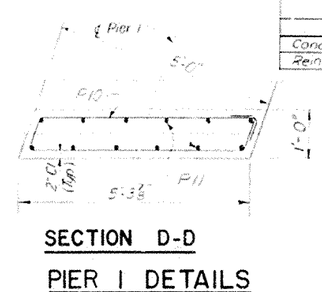
SECTION A-A



SECTION B-B



SECTION C-C

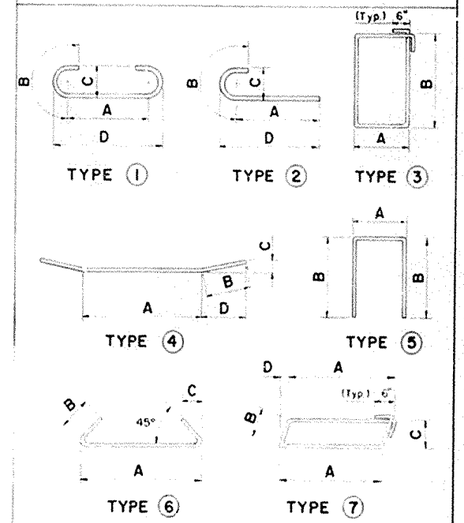


SECTION D-D

PIER I DETAILS

BILL OF REINFORCEMENT

Mark		Type	Size	No	Length Ft	Length In	Location	A Ft	A In	B Ft	B In	C Ft	C In	D Ft	D In
P1	①	11		10	48	6	Cap	44	5¾	2	–	1	2¾	45	8
P2		Str.	5	10	45	8	Cap	–	–	–	–	–	–	–	–
P3		Str.	9	6	22	4	Cap	–	–	–	–	–	–	–	–
P4	④	9	4	45	9	Cap	28	2	8	9¾	1	–	8	9
P5	③	5	20	18	5	Cap	3	2	5	8	–	–	–	–
P6	⑤	5	60	10	9	Cap	3	2	3	10	–	–	–	–
P7		Str.	5	20	2	4	Brg. Pads	–	–	–	–	–	–	–	–
P8	⑤	5	25	5	9	Brg. Pads	1	6	2	2	–	–	–	–
P9	⑤	5	25	7	7	Brg. Pads	1	4	3	2	–	–	–	–
P10	⑦	5	14	12	2	Cheek Wall	5	–	–	8½	–	8	–	3
P11	⑤	5	10	17	8	Cheek Wall	–	7	8	7	–	–	–	–
P12	②	11	52	10	6	Columns	8	6	2	–	1	2¾	3	8 (?)
P13		Str.	11	52	86	9	Columns	–	–	–	–	–	–	–	–
P14	③	5	88	17	5	Columns	3	2	5	2	–	–	–	–
P15	⑥	5	88	5	8	Columns	4	8	–	6	–	4½	–	–
P16	①	11	76	13	6	Footings	9	5¾	2	–	1	2¾	10	8
P17		Str.	5	44	20	2	Web Wall	–	–	–	–	–	–	–	–
P18		Str.	5	36	23	2	Web Wall	–	–	–	–	–	–	–	–
P19	⑤	5	6	10	0	2	Shear Block	1	0	0	5	–	–	–	–
P20		Str.	5	9	4	0	Shear Block	–	–	–	–	–	–	–	–
P21		Str.	5	44	10	8	Footings	–	–	–	–	–	–	–	–



ESTIMATE OF QUANTITIES

ITEM	QUANTITY
Concrete, Class A	161.9 C.Y.
Reinforcement	26,216 Lbs.

SHEET 29

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD

STATION 20 + 20.00 P.E. PROJECT NO

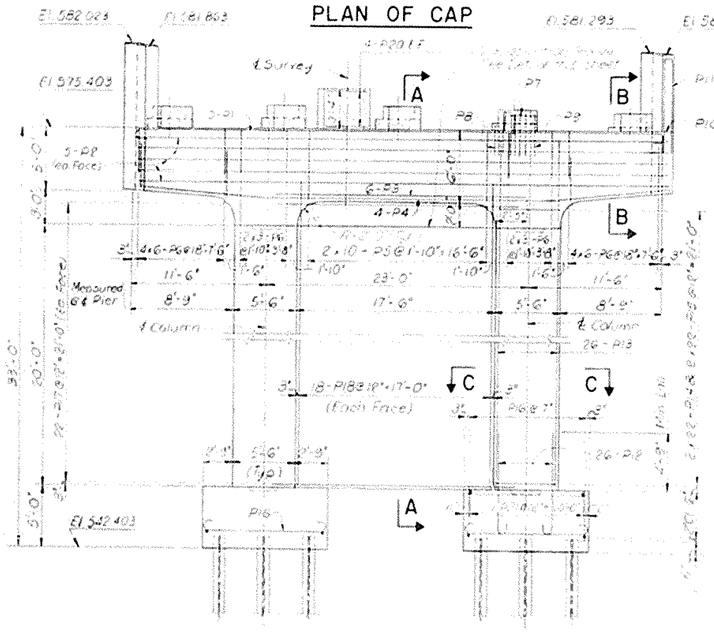
FRANKLAND AND LIENHARD

DRAWING NO. 19592

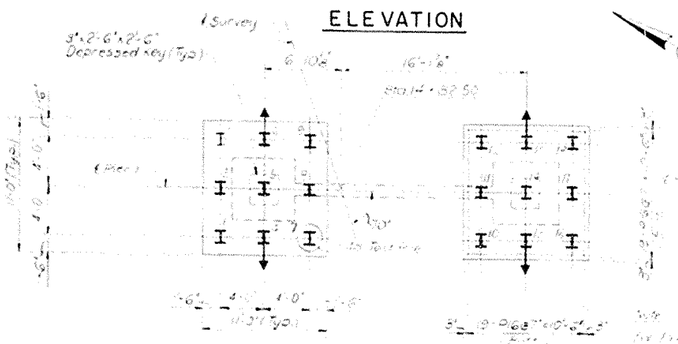
BRIDGE

Note
The top of tall type must be accurately located in relation to the grade so that they will not interfere with fitting curbs

PLAN OF CAP

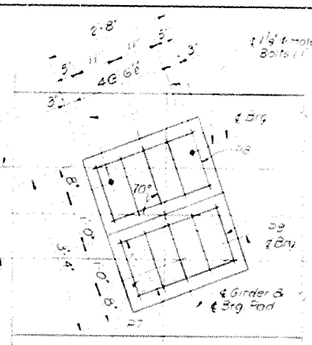


ELEVATION

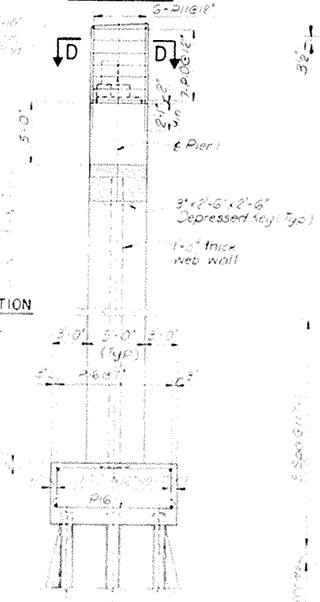


FOOTING PLAN

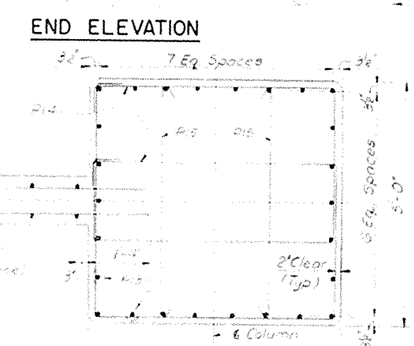
DETAIL "A"



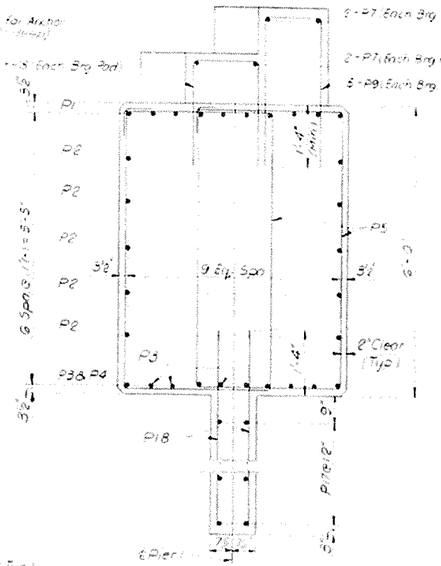
"V" RUSTICATION DETAIL



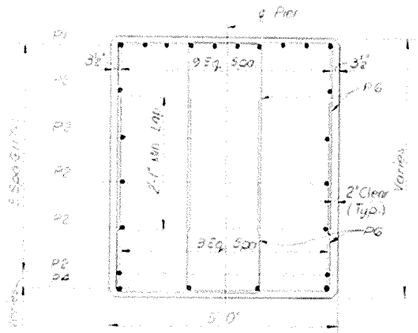
END ELEVATION



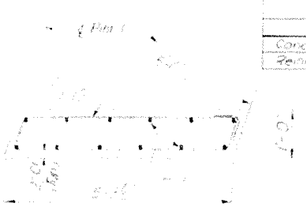
SECTION C-C



SECTION A-A



SECTION B-B



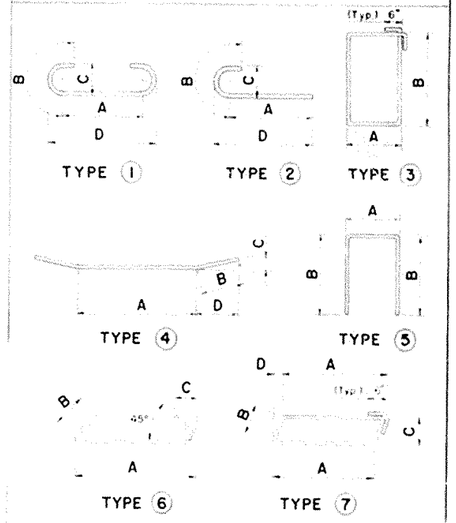
SECTION D-D

PIER 1 DETAILS

FRANKLAND AND LIENHARD

BILL OF REINFORCEMENT

Mark	Type	Size	No	Length Ft	Length In	Location	A Ft	A In	B Ft	B In	C Ft	C In	D Ft	D In
P1		11	10	48	6	Cap	44	5½	2	–	–	–	24	45 B
P2	ST	5	10	45	8	Cap	–	–	–	–	–	–	–	–
P3	ST	9	6	28	4	Cap	–	–	–	–	–	–	–	–
P4	(2)	6	4	45	9	Cap	28	–	8	9½	–	8	9	
P5	ST	5	10	18	5	Cap	3	7	5	8	–	–	–	–
P6	ST	5	60	10	9	Cap	3	7	3	10	–	–	–	–
P7	ST	5	20	2	1	Brg Pads	–	–	–	–	–	–	–	–
P8	ST	5	25	5	9	Brg Pads	1	6	2	2	–	–	–	–
P9	ST	5	25	7	1	Brg Pads	1	8	3	3	–	–	–	–
P10	ST	5	4	10	2	Cheek Wall	5	–	–	8½	–	8	–	3
P11	ST	5	8	7	8	Cheek Wall	5	–	7	8	–	–	–	–
P12	ST	5	50	10	0	Columns	8	6	–	–	–	24	8	–
P13	ST	5	50	26	9	Columns	–	–	–	–	–	–	–	–
P14	3	5	88	17	5	Columns	3	0	5	2	–	–	–	–
P15	3	5	88	5	8	Columns	4	8	–	6	–	4	–	–
P16	3	5	70	15	0	Footings	9	5½	2	–	1	24	10	8
P17	ST	5	44	20	2	Web Wall	–	–	–	–	–	–	–	–
P18	ST	5	36	33	2	Web Wall	–	–	–	–	–	–	–	–
S 1	3	5	8	10	0	Shear Block	–	–	–	–	–	–	–	–
S 2	3	5	8	7	0	Shear Block	–	–	–	–	–	–	–	–
F1	1	5	8	7	1	Footings	–	–	–	–	–	–	–	–
F2	1	5	22	10	0	Footings	–	–	–	–	–	–	–	–



ESTIMATE OF QUANTITIES

ITEM	QUANTITY
Concrete Class A	161 CY
Reinforcement	13

SHEET 9

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8), SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

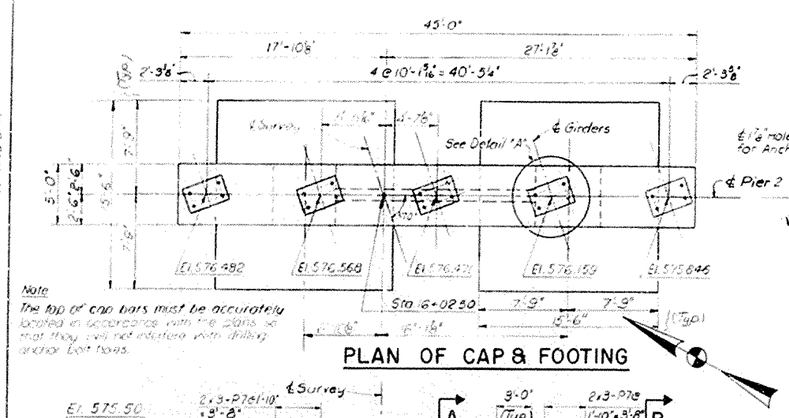
LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD

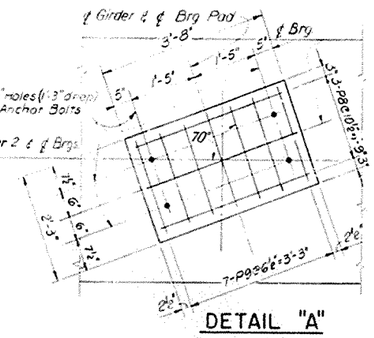
STATION 20 + 20.00 P.E. PROJECT NO

19592

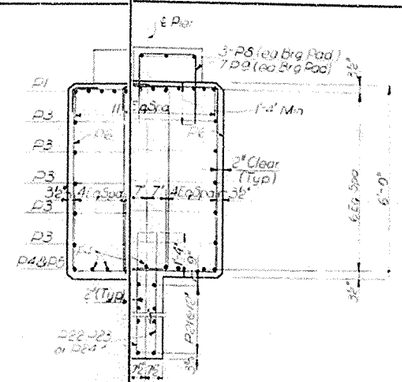
BRIDGE



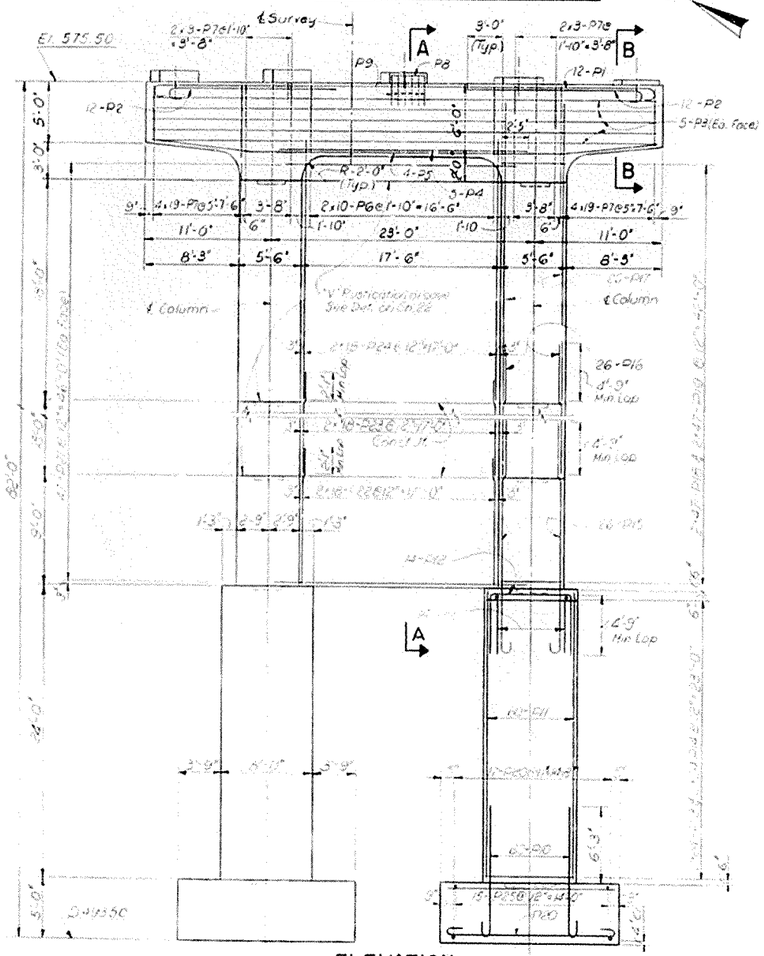
PLAN OF CAP & FOOTING

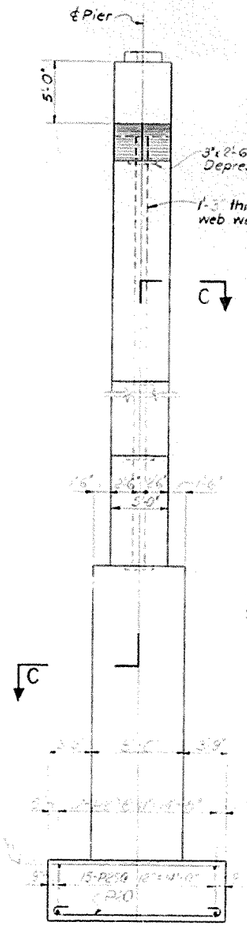


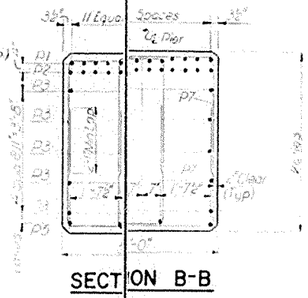
DETAIL "A"



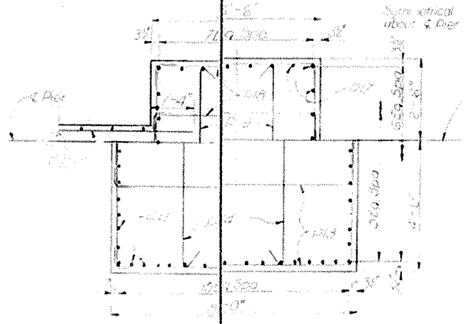
SECTION A-A

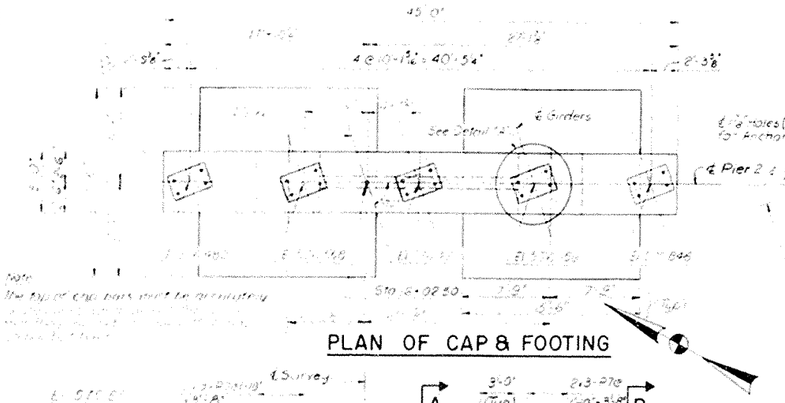


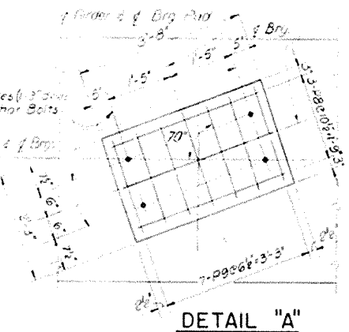


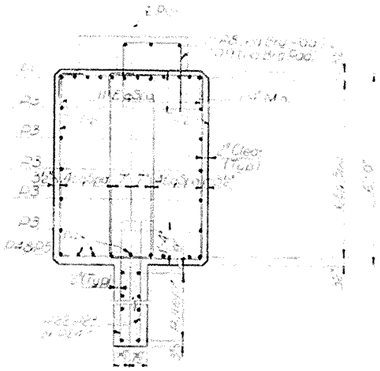


SECTION B-B


Sym. about ℄ Pier
℄ Pier
P20
P21
P22
P23
P24
P25
3'-0"
3'-0"
3'-0"

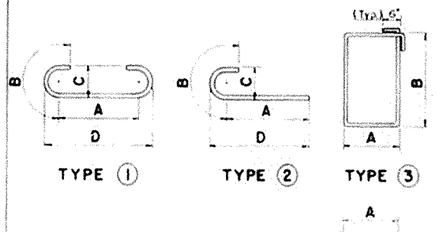






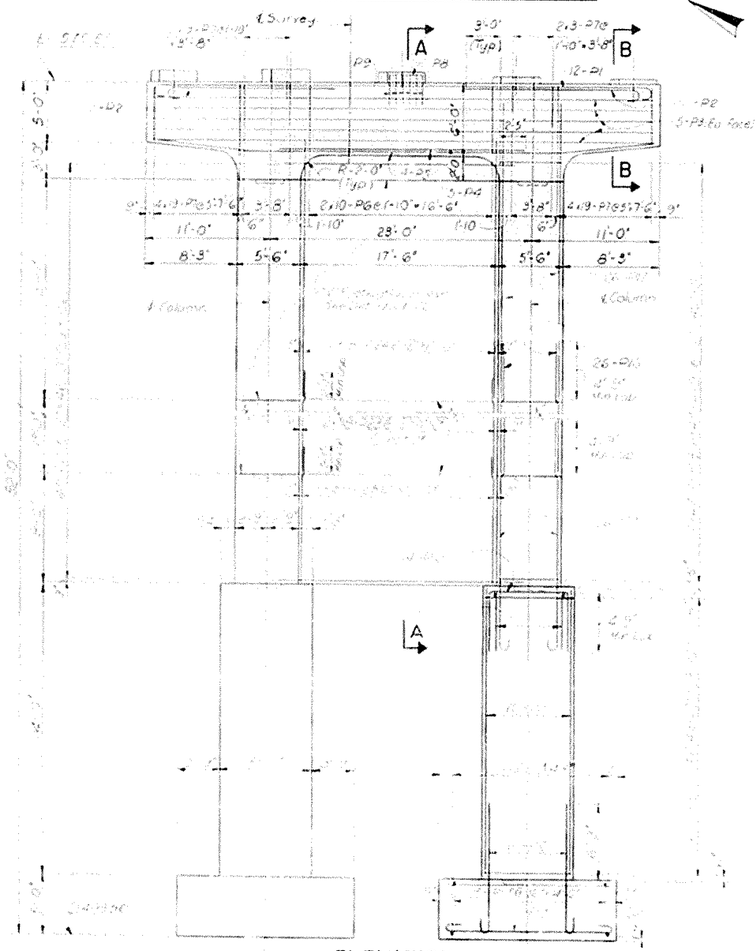
BILL OF REINFORCEMENT

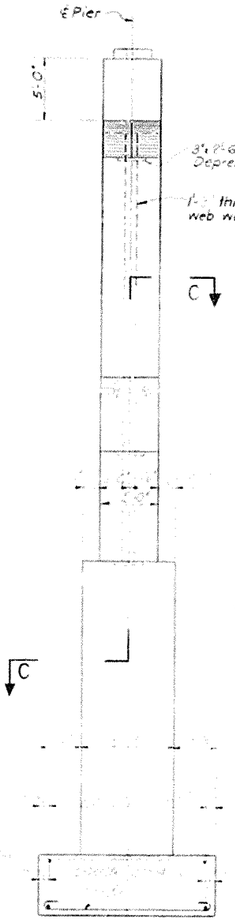
Mark	Type	Size	No	Length Ft	Length in	Location	A Ft	A in	B Ft	B in	C Ft	C in	D Ft	D in
P1	1	11	12	47	6	Cap	45	2½	2	0	1	24	44	8
P2	2	11	24	7	3	Cap	5	3	2	0	1	24	15	10
P3	Str.	5	10	44	8	Cap	–	–	–	–	–	–	–	–
P4	Str.	9	5	12	4	Cap	–	–	–	–	–	–	–	–
P5	2	9	4	34	9	Cap	28	6	8	3¾	1	0	8	3
P6	3	5	20	18	5	Cap	3	2	3	8	–	–	–	–
P7	3	5	164	10	9	Cap	3	2	3	10	–	–	–	–
P8	Str.	5	15	3	4	Brg. Pads	–	–	–	–	–	–	–	–
P9	3	5	35	6	4	Brg. Pads	1	11	2	3	–	–	–	–
P10	2	11	120	12	4	Columns	10	4	2	0	1	24	10	11
P11	Str.	11	20	23	0	Columns	–	–	–	–	–	–	–	–
P12	2	11	96	17	1	Columns	7	8	4	9	–	–	–	–
P13	2	5	96	24	0	Columns	4	10	7	8	–	–	–	–
P14	2	5	96	5	8	Columns	7	8	0	4	–	–	–	–
P15	2	11	92	19	11	Columns	17	1	2	0	1	24	8	6
P16	Str.	11	92	22	4	Columns	–	–	–	–	–	–	–	–
P17	Str.	11	92	25	0	Columns	–	–	–	–	–	–	–	–
P18	3	5	188	17	5	Columns	3	2	3	2	–	–	–	–
P19	6	5	188	5	8	Columns	4	–	0	6	0	12	–	–
P20	1	11	66	18	0	Footings	13	11½	–	–	–	–	26	15
P21	Str.	5	44	20	2	Web Wall	–	–	–	–	–	–	–	–
P22	Str.	5	36	11	1	Web Wall	–	–	–	–	–	–	–	–
P23	Str.	5	36	20	1	Web Wall	–	–	–	–	–	–	–	–
P24	Str.	5	36	21	4	Web Wall	–	–	–	–	–	–	–	–
P25	Str.	5	60	15	8	Footings	–	–	–	–	–	–	–	–

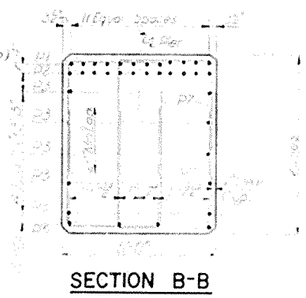


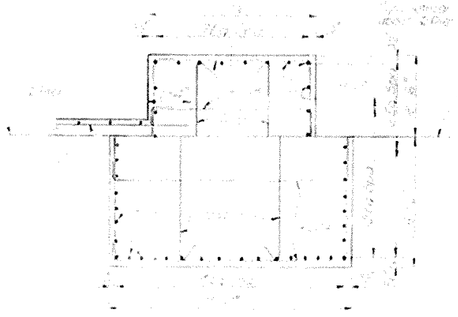
ESTIMATE OF QUANTITIES

ITEM	QUANTITY
Concrete Class A	235.4 CY
Reinforcement	40,927 Lbs









PIER 2 DETAILS

FRANKLAND AND LIENHARD

SHT 23

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8), SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

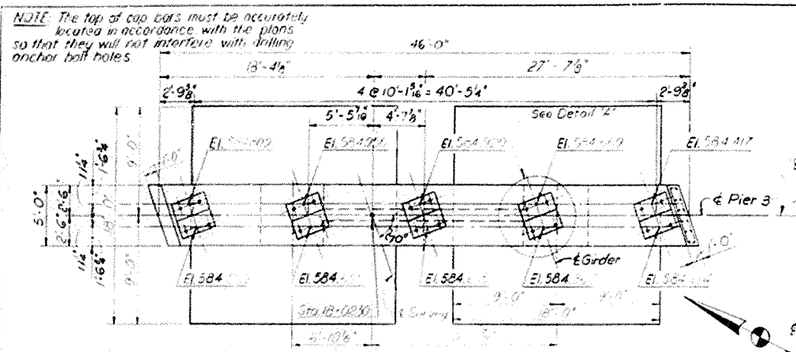
ROAD

STATION 20 + 20.00 P.E. PROJECT NO

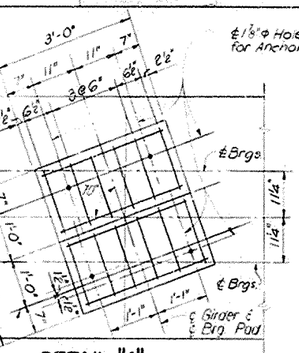
19592

BRIDGE

NOTE: The top of cap bars must be accurately located in accordance with the plans so that they will not interfere with drilling anchor bolt holes.

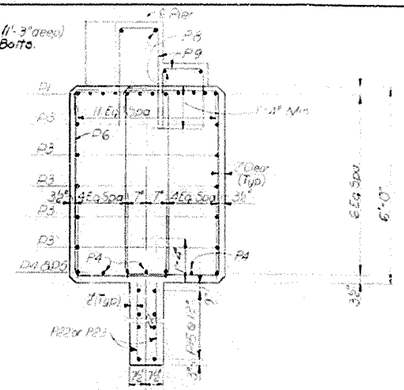


PLAN OF CAP & FOOTING

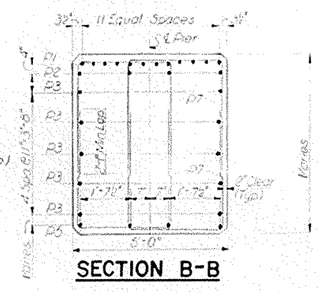


DETAIL "A"

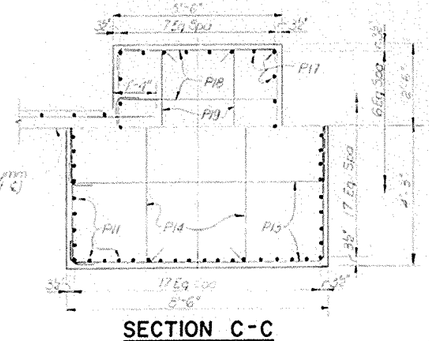
℄ 1⅛"ø Holes (1'-3" deep) for Anchor Bolts.



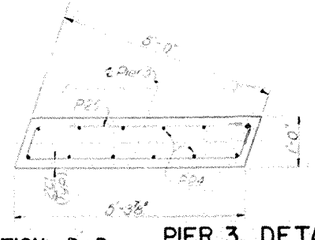
SECTION A-A



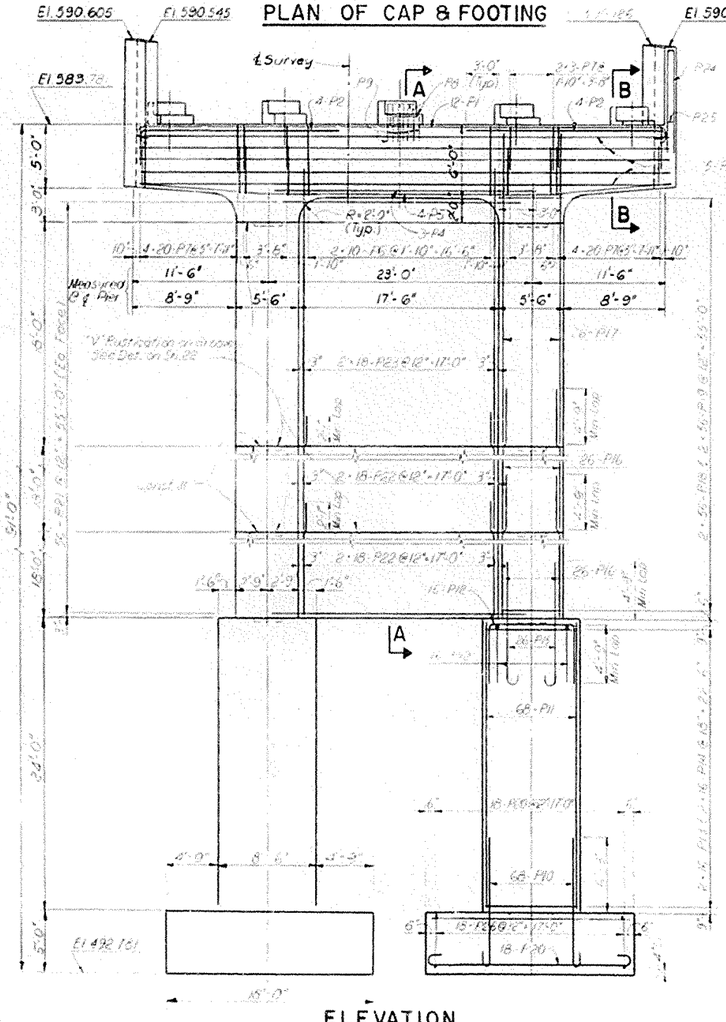
SECTION B-B

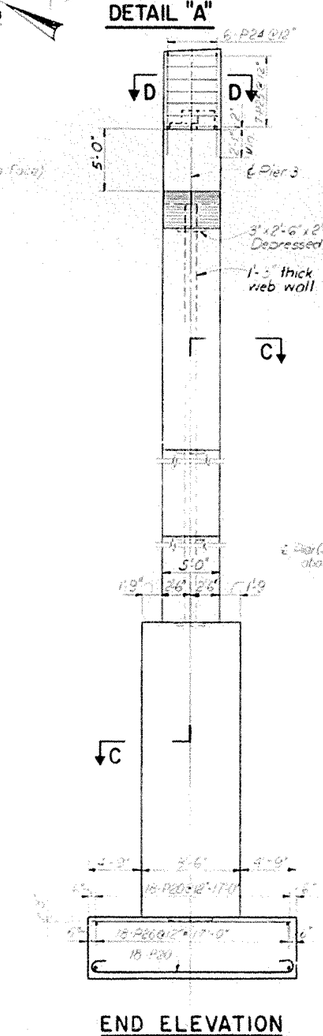


SECTION C-C



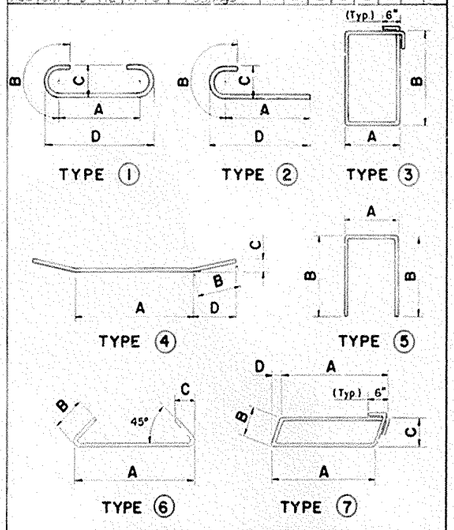
SECTION D-D





BILL OF REINFORCEMENT

Mark	Type	Size	No.	Length Ft.	Length In.	Location	A Ft.	A In.	B Ft.	B In.	C Ft.	C In.	D Ft.	D In.
P1	1	11	12	48	6	Cap	44	5½	2	0	1	24	45	8
P2	6	11	8	47	9½	Cap	42	8½	2	0	1	24	46	11
P3	Str.	5	10	45	8	Cap	—	—	—	—	—	—	—	—
P4	Str.	9	3	23	1	Cap	—	—	—	—	—	—	—	—
P5	4	9	3	41	10	Cap	28	2	8	10	1	0	8	9
P6	3	5	20	18	5	Cap	3	2	5	8	—	—	—	—
P7	5	5	178	10	9	Cap	3	2	3	10	—	—	—	—
P8	Str.	5	20	2	8	Brg. Pads	—	—	—	—	—	—	—	—
P9	5	5	60	6	3	Brg. Pads	1	3	2	6	—	—	—	—
P10	2	11	136	12	4	Columns	10	4	2	0	1	24	10	11
P11	Str.	11	136	23	10	Columns	—	—	—	—	—	—	—	—
P12	5	11	64	17	8	Columns	8	2	4	9	—	—	—	—
P13	5	5	64	27	8	Columns	1	2	3	2	—	—	—	—
P14	6	5	64	9	2	Columns	8	2	0	6	0	4½	—	—
P15	2	11	52	10	11	Columns	8	11	2	0	1	24	9	6
P16	Str.	11	104	22	9	Columns	—	—	—	—	—	—	—	—
P17	Str.	11	52	25	0	Columns	—	—	—	—	—	—	—	—
P18	3	5	124	18	6½	Columns	3	2	4½	8	—	—	—	—
P19	6	5	204	5	6	Columns	4	8	0	6	0	4½	—	—
P20	1	11	72	20	6	Footings	16	5½	2	0	1	24	17	8
P21	Str.	5	112	20	2	Web Wall	—	—	—	—	—	—	—	—
P22	Str.	5	72	20	1	Web Wall	—	—	—	—	—	—	—	—
P23	Str.	5	36	21	4	Web Wall	—	—	—	—	—	—	—	—
P24	7	5	12	17	3	Check Wall	0	7	8	4	—	—	—	—
P25	8	5	44	12	2	Check Wall	5	0	0	8½	0	8	0	3
P26	Str.	5	76	17	8	Footings	—	—	—	—	—	—	—	—



ESTIMATE OF QUANTITIES

ITEM	QUANTITY
Concrete, Class "A"	461.0 C.Y.
Reinforcement	(84,549) 82,883 Lbs.

SHEET 24

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 L.I.
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD

STATION 20+20.00 P.E. PROJECT NO.

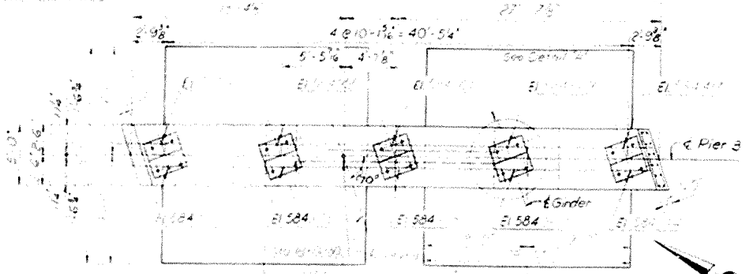
PIER 3 DETAILS

FRANKLAND AND LIENHARD

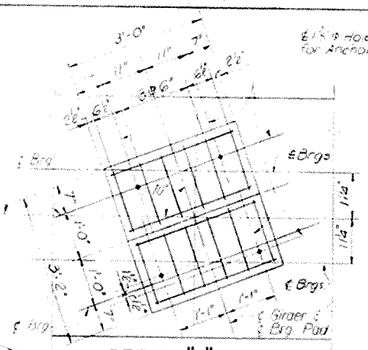
CONSTRUCTION PROJECT NO. | MAINTENANCE PROJECT NO. | DRAWING NO. 19592

BRIDGE

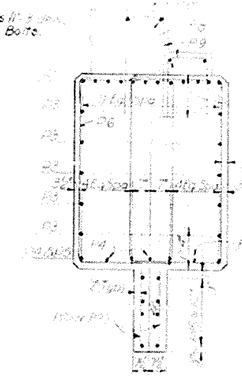
NOTE: The top of the bars must be accurately located in accordance with the plans so that they will not interfere with bolts and nut caps.



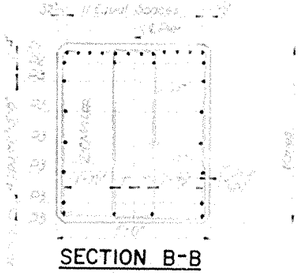
PLAN OF CAP & FOOTING



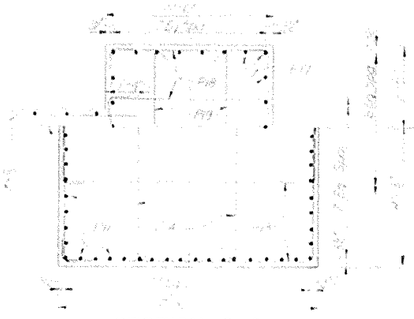
DETAIL "A"



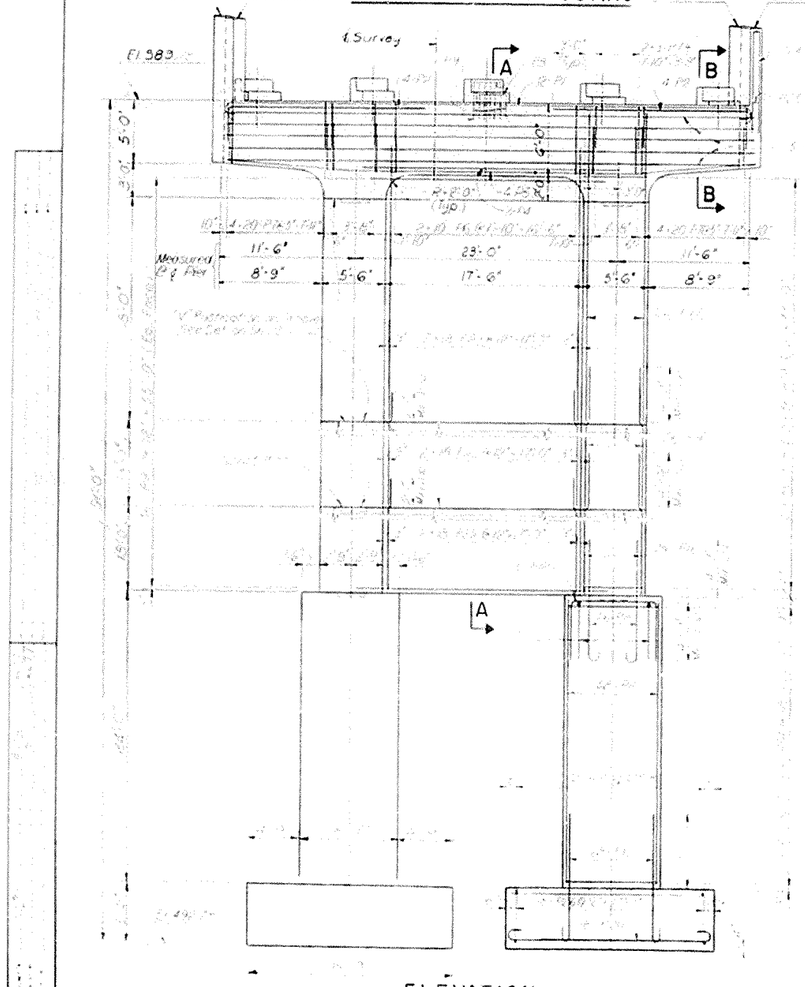
SECTION A-A



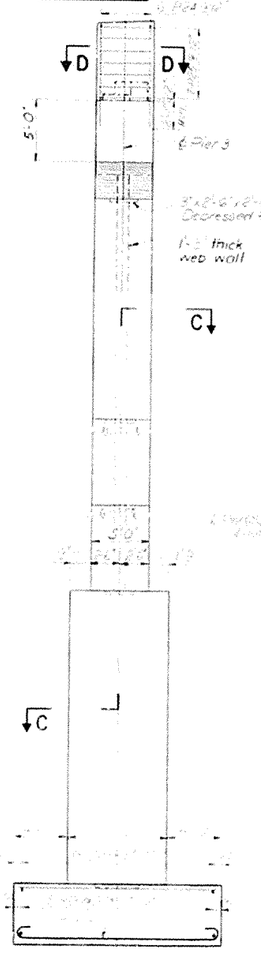
SECTION B-B



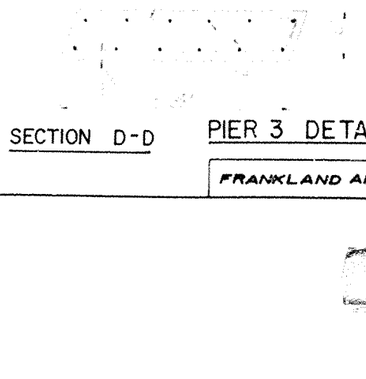
SECTION C-C



ELEVATION



END ELEVATION

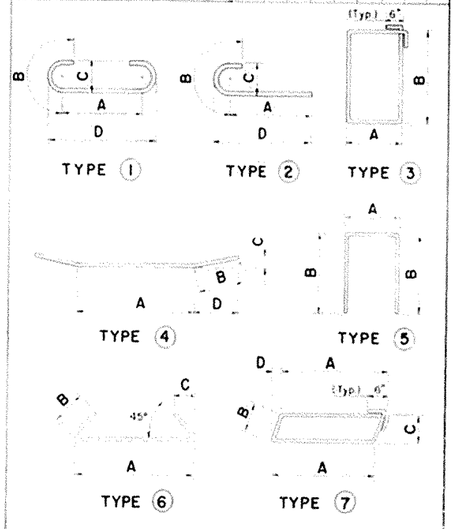


SECTION D-D

PIER 3 DETAILS

BILL OF REINFORCEMENT

Mark	Type	Size	No	Length Ft	Length In	Location	A Ft	A In	B Ft	B In	C Ft	C In	D Ft	D In
A1			4	5		Cap	44	4½	2	0		24	45	9
A2			2	7	1	Cap	17	5¾	2	0	1	24	6	11
A3	Str	3	10	4	5	Cap								
A4	Str	3	2	5	1	Cap								
B1		3	4	42	0	Cap	30	6	5	0	1	0	8	0
B2		3	10	8	7	Cap	1	0	1	8				
B3		3	2	9	3	Cap	1	0	1	8				
A5	Str	3	20	2	4	Brg Pads								
A6		11	20	2	4	Brg Pads								
A7		11	16	2	4	Coluмns	4	0	1	0	1	24		
A8		11	20	2	10	Coluмns								
A9		11	24	7	8	Coluмns	6	2	4	3				
A10		11	4	7	8	Coluмns	1	2	1	3				
A11		11	2	9	2	Coluмns	5	2	1	0	1	48		
A12		11	52	9	11	Coluмns								
A13	Str	11	52	25	11	Coluмns								
A14	Str	11	52	25	11	Coluмns								
A15		11	24	25	11	Coluмns	3	2	1	8				
A16		11	24	25	11	Coluмns	4	8	1	0	1	24		
A17		11	72	10	6	Footings	6	10½	3	0	1	4	17	2
A18		5	72	20	2	Web Wall								
A19		5	72	20	2	Web Wall								
A20		5	4	20	4	Web Wall								
A21		5	2	5	4	Cheek Wall	2	7	1	4				
A22		5	2	5	4	Cheek Wall	2	7	1	4				
A23		5	24	5	4	Wing Wall	2	7	1	4	1	24	2	5



ESTIMATE OF QUANTITIES

ITEM	QUANTITY
Concrete Class A	42.2 C.Y.
Reinforcement	3.4 Tons

SHEET 24

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8), SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD

STATION 20+20.00 P.E. PROJECT NO

FRANKLAND AND LIENHARD

19592

BRIDGE

PLAN OF CAP

DETAIL "A"

SECTION A-A

ELEVATION

END ELEVATION

SECTION B-B

FOOTING PLAN

SECTION C-C

PIER 4 DETAILS

BILL OF REINFORCEMENT

Mark	Type	Size	No	Length Ft	Length In	Location	A Ft	A In	B Ft	B In	C Ft	C In	D Ft	D In
P1	C	11	12	4	3	Cap	46	3/4	2	0	1	24	47	3/4
P2	C	11	6	4	6	"	46	3/4	2	0	1	24	47	3/4
P3	St.	11	4	4	6	"								
P4	St.	11	4	4	6	"								
P5	St.	5	36	4	6	"								
P6	St.	5	36	4	6	"	3	0	2	9				
P7	St.	5	36	4	6	"	3	0	2	9				
P8	St.	5	36	4	6	"								
P9	St.	5	36	4	6	"								
P10	St.	5	36	4	6	"								
P11	St.	11	2	17	3	"								
P12	St.	5	12	6	6	"								
P13	St.	5	24	5	6	"								
P14	St.	11	2	13	6	Footings	9	3½	2	0	1	24	10	6
P15	St.	5	15	11	0	Footings								
P16	St.	5	108	20	6	"								
P17	St.	5	108	22	0	"								
P18	St.	5	108	22	0	"								
P19	St.	11	64	24	9	Columns								
P20	St.	5	64	10	6	Footings								

TYPE (1) TYPE (2) TYPE (3)

TYPE (4) TYPE (5)

TYPE 6

ESTIMATE OF QUANTITIES

ITEM	QUANTITY
Concrete Class A	2716 CY
Reinforcement	204,400 Lbs

SHEET 25

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

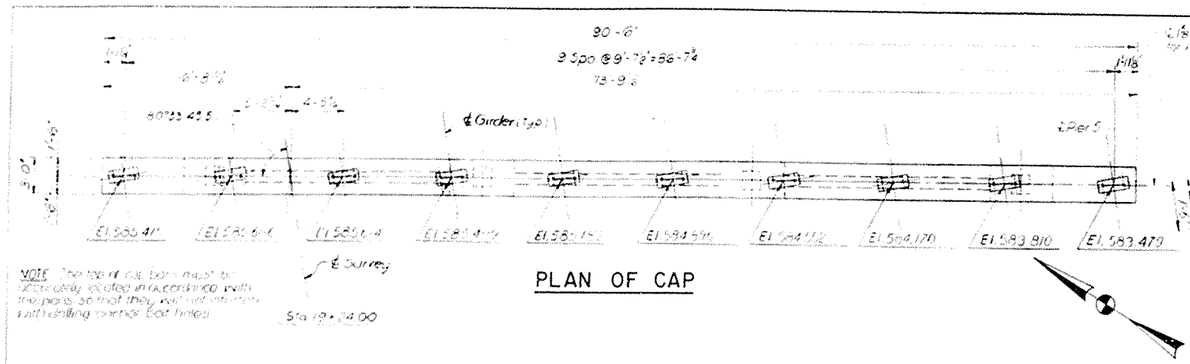
ROAD

STATION 20+20.00 P.E. PROJECT NO

FRANKLAND AND LIENHARD

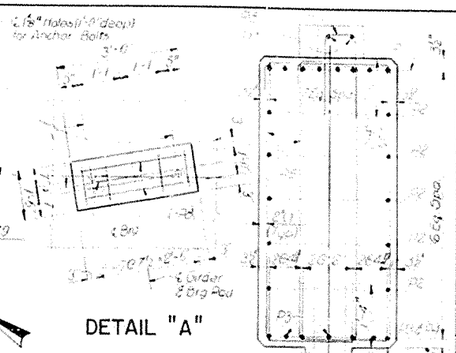
19592

BRIDGE

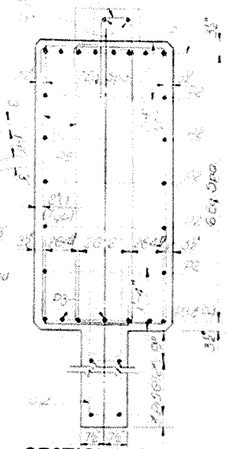


PLAN OF CAP

NOTE The top of cut bar must be accurately located in accordance with the plans, so that they will not interfere with drilling reamer bar holes.



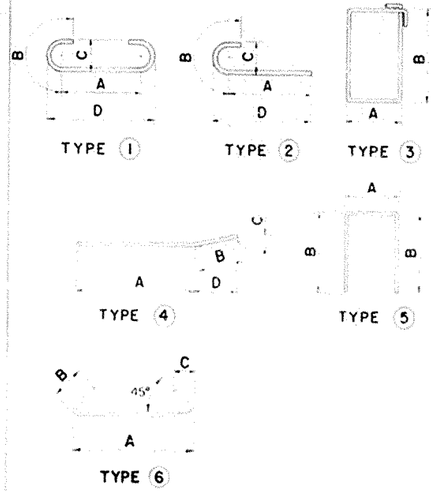
DETAIL "A"

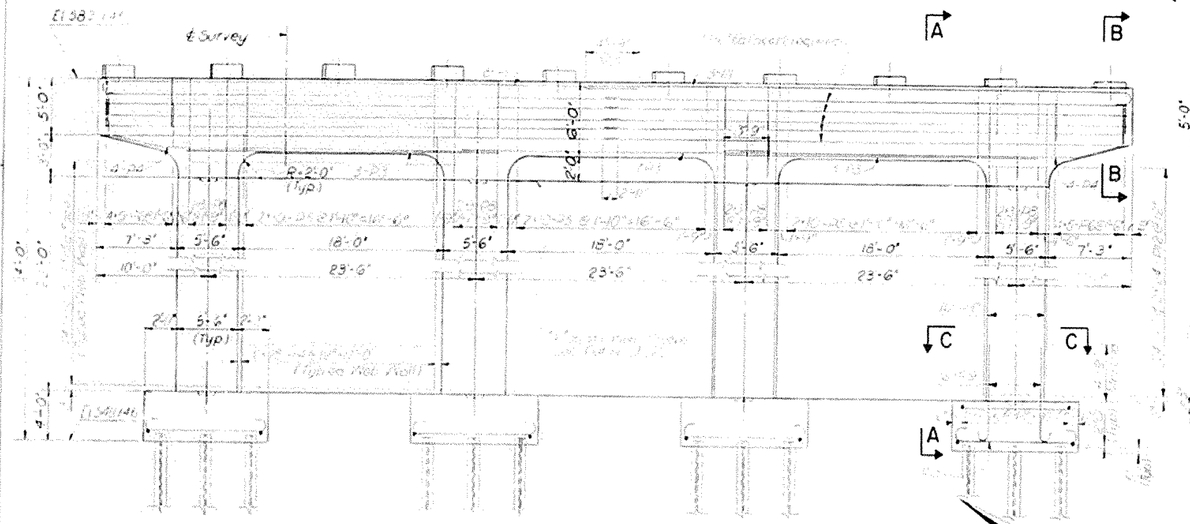


SECTION A-A

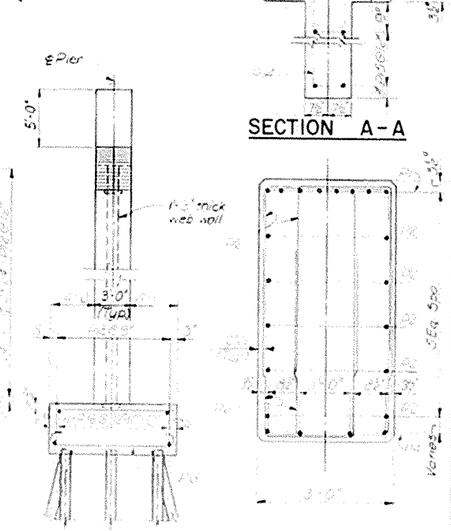
BILL OF REINFORCEMENT

Mark	Type	Size	No	Length Ft	Length In	Location	A Ft	A In	B Ft	B In	C Ft	C In	D Ft	D In
B1	C	11	16	48	3	Cap	46	3¼	2	0	1	24	47	5½
B2	Str	6	10	15	4	"								
B3	Str	9	3	27	3	"								
B4	Str	9	5	45	7	"	45	0	7	4	0		3	
B5	Str	5	86	5	1	"	5	0	5	6				
B6	Str	5	64	9	7	"	2	0	3	10				
B7	Str	5	20	3	4	Brg Pad	1	7	3	6				
B8	Str	5	20	2	8	"								
C9	C	11	64	0	6	Columns	7	6	2	0		24	6	7
P10	Str	11	64	28	9	"								
P11	Str	5	96	16	3	"	2	8	5	2				
P12	Str	5	192	3	8	"	2	8				48		
P13	C	11	120	13	6	Footings	9	5½	2	0	1	24	10	5
S14	Str	5	108	25	2	Web wall								
D15	Str	5	144	20	8	"								
D16	Str	5	88	10	6	Footings								



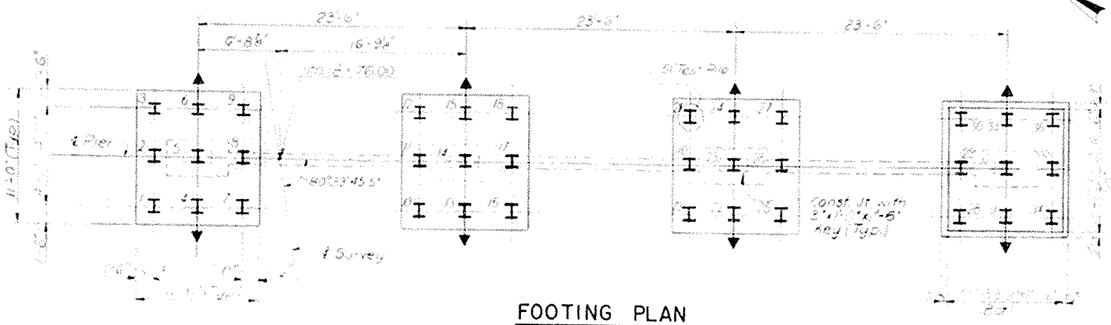


ELEVATION

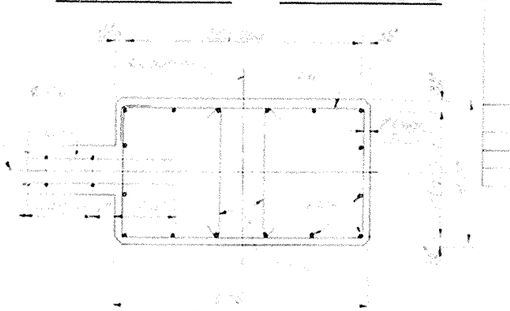


END ELEVATION

SECTION B-B



FOOTING PLAN



SECTION C-C

ESTIMATE OF QUANTITIES

ITEM	QUANTITY

PIER 5 DETAILS

FRANKLAND AND LIENHARD

SHEET 26

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8), SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

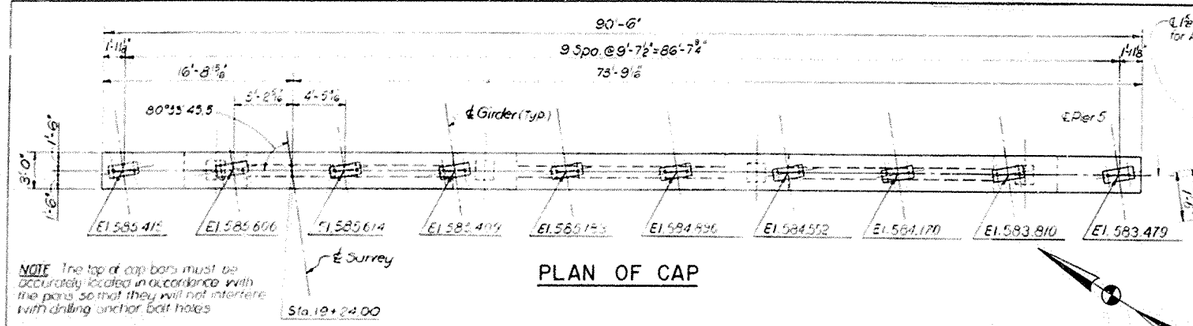
LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD

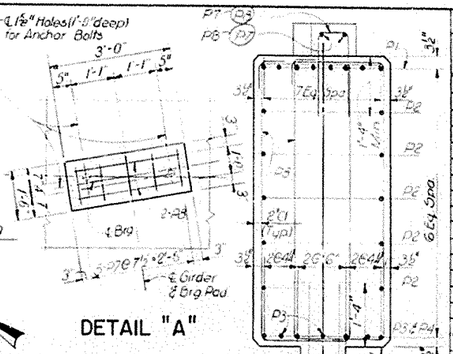
STATION 20+20.00 P.E. PROJECT NO

19592

BRIDGE

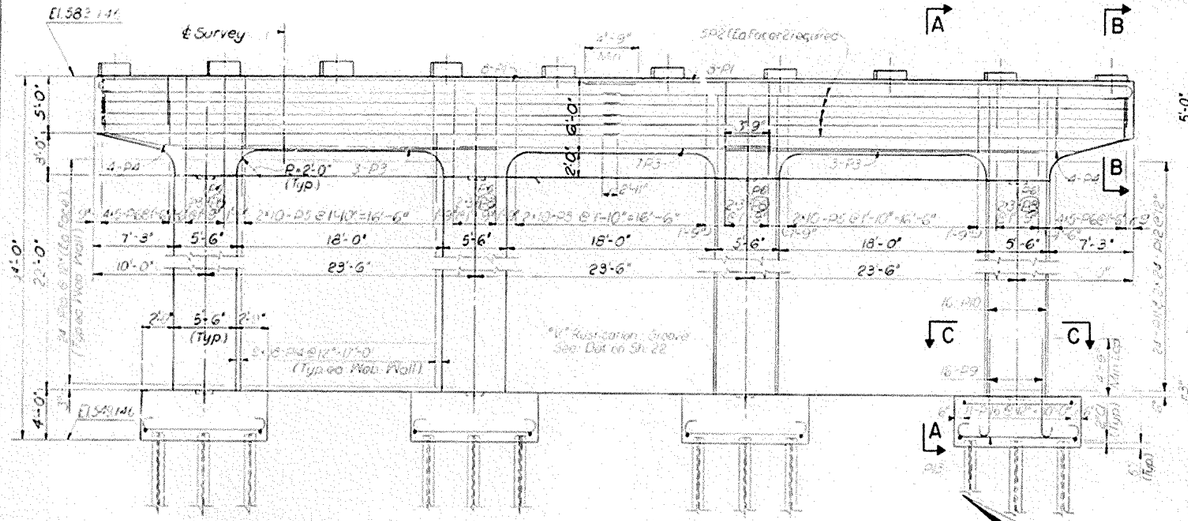


PLAN OF CAP

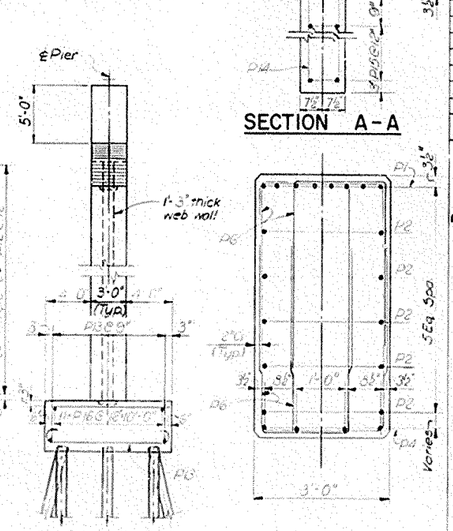


DETAIL "A"

SECTION A-A

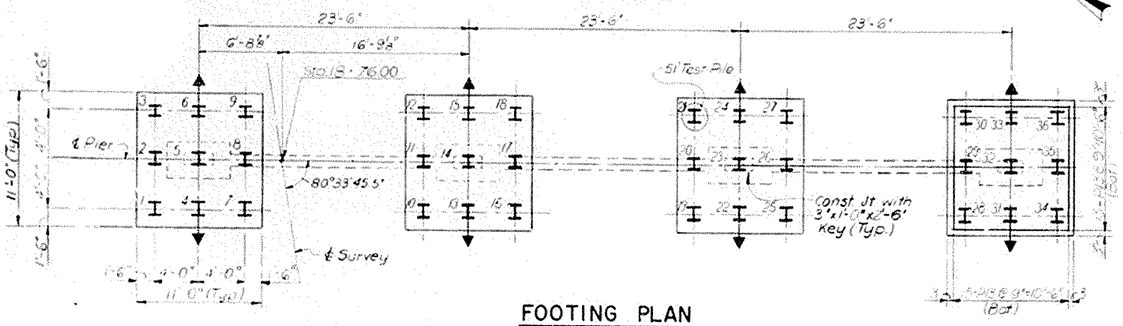


ELEVATION

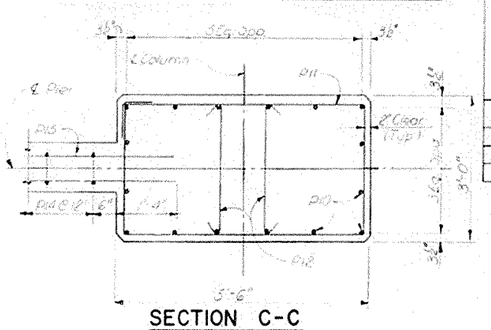


END ELEVATION

SECTION B-B



FOOTING PLAN

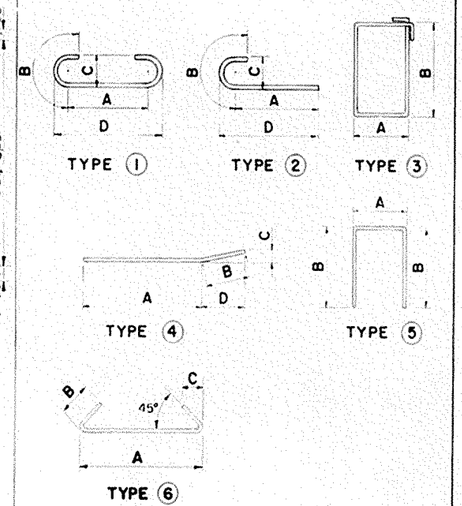


SECTION C-C

NOTE For Pile Record see Sheet 34.
: Denotes Vertical Pile
: Denotes Pile Battered 1:4

BILL OF REINFORCEMENT

Mark	Type	Size	No	Length Ft	Length In	Location	A Ft	A In	B Ft	B In	C Ft	C In	D Ft	D In
P1	②	11	16	48	3	Cap	46	10½	2	0	1	2½	47	5½
P2	Str.	5	30	46	4	"								
P3	Str.	9	13	27	3	"								
P4	④	9	8	35	4	"	28	0	7	3	1	0	7	3
P5	③	5	60	45	7	"	2	0	6	8				
P6	⑤	5	64	9	7	"	2	0	3	10				
P7	⑤	5	50	8	4	Brg. Pad	1	1	3	6				
P8	Str.	5	20	2	8	"								
P9	②	11	64	9	6	Columns	7	6	2	0	1	2½	6	1
P10	Str.	11	64	28	9	"								
P11	③	5	96	16	5	"	2	8	5	2				
P12	⑥	5	192	3	8	"	2	6		6		4½		
P13	①	11	120	13	6	Footings	9	3½	2	0	1	3½	10	8
P14	Str.	5	108	25	1	Web wall								
P15	Str.	5	144	20	8	"								
P16	Str.	5	89	10	5	Footings								



ESTIMATE OF QUANTITIES

ITEM	QUANTITY
Concrete Class A	2532 C.Y.
Reinforcement	410,660 Lbs. 410,990

SHEET 26

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8), SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD

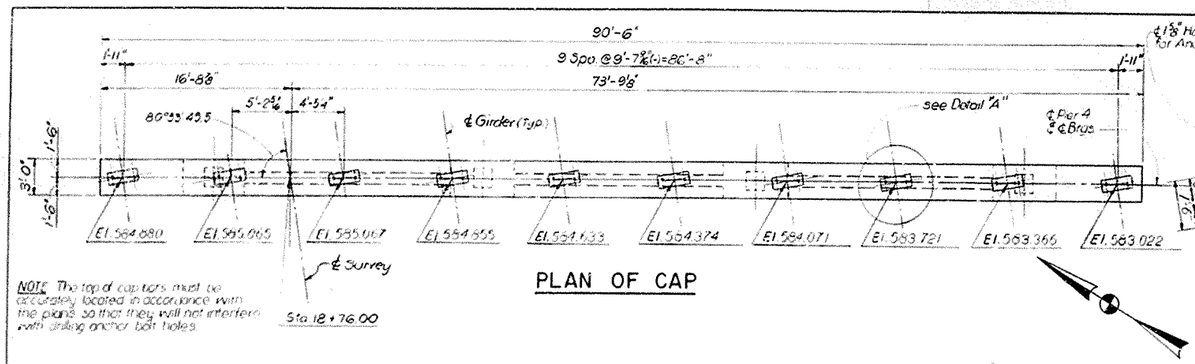
STATION 20+2000 P.E. PROJECT NO

PIER 5 DETAILS

FRANKLAND AND LIENHARD

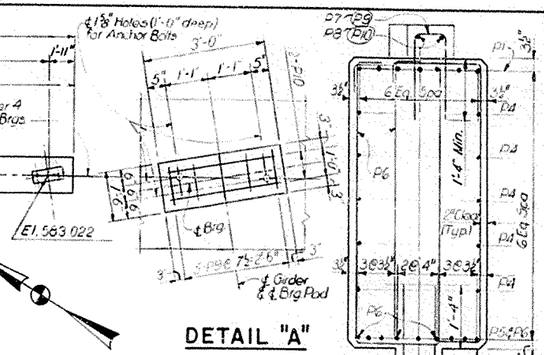
19592

BRIDGE

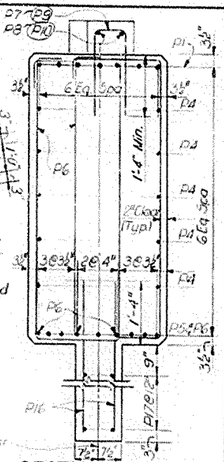


PLAN OF CAP

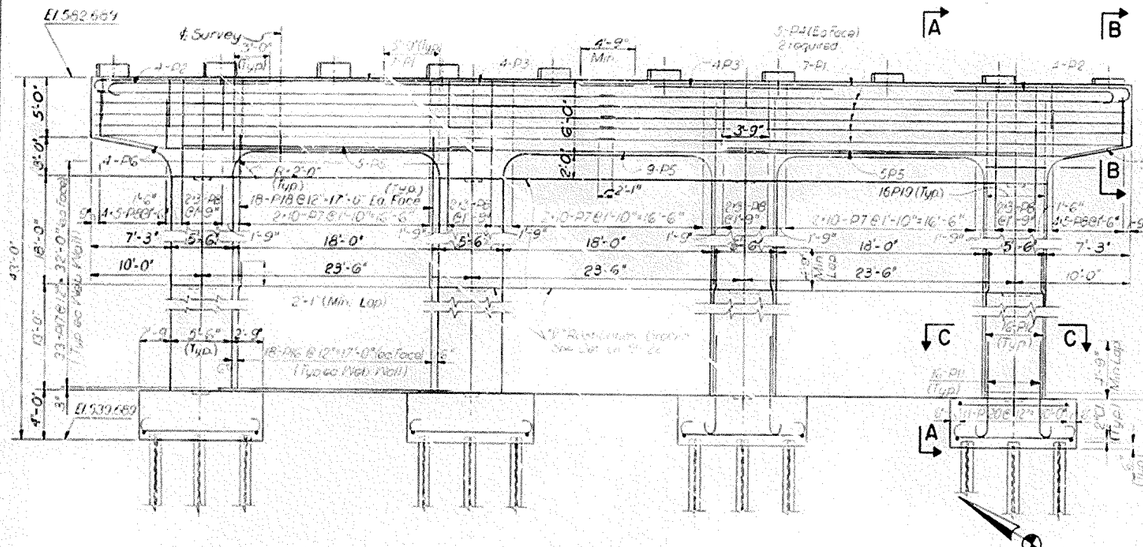
NOTE The top of caps/abts must be accurately located in accordance with the plans so that they will not interfere with drilling anchor bolt holes.



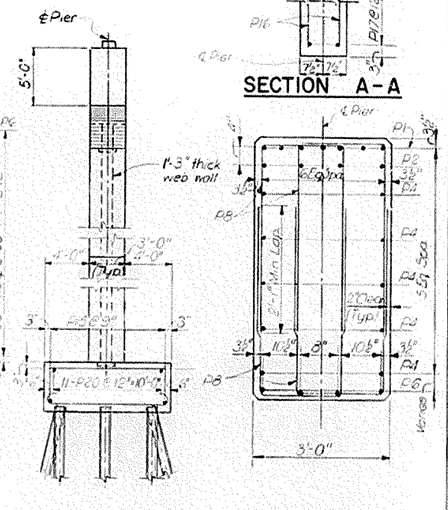
DETAIL "A"



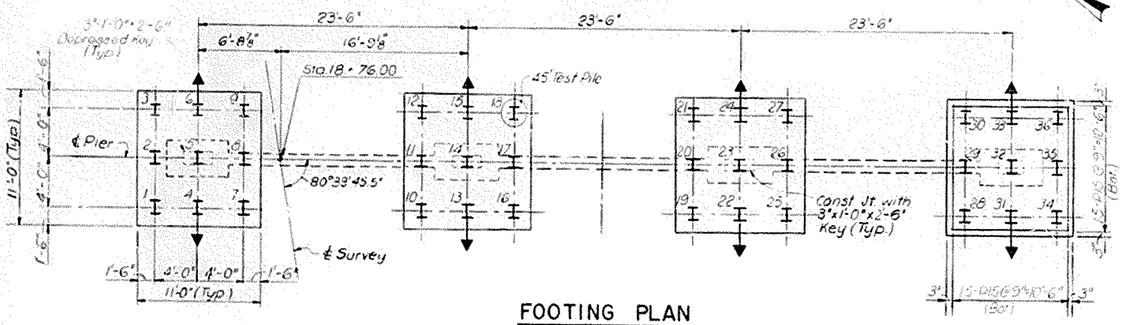
SECTION A-A



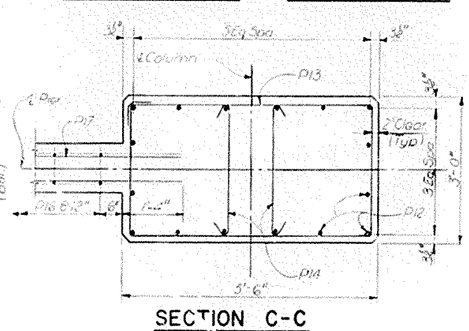
ELEVATION



END ELEVATION



FOOTING PLAN



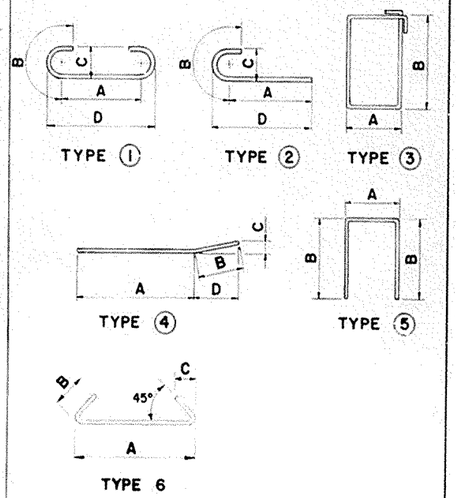
SECTION B-B

SECTION C-C

NOTE For Pile Record see Sheet 34
- Denotes Vertical Pile
- Denotes Pile Battered 1:4

BILL OF REINFORCEMENT

Mark	Type	Size	No	Length Ft	Length In	Location	A Ft	A In	B Ft	B In	C Ft	C In	D Ft	D In
P1	⑤	11	14	45	10	Cap	42	10½	2	0	1	24	47	5½
P2	②	11	5	16	5	"	14	5	2	0	1	24	15	0
P3	Str.	11	6	15	6	"	—	—	—	—	—	—	—	—
P4	Str.	5	30	46	2	"	—	—	—	—	—	—	—	—
P5	Str.	9	19	22?	9½	"	—	—	—	—	—	—	—	—
P6	④	9	8	35	4	"	28	0	7	4	1	0	7	3
P7	③	5	60	8	9	"	1	10	5	8	—	—	—	—
P8	③	5	64	9	3	"	1	10	3	10	—	—	—	—
P9	①	5	30	6	0	Brg. Pad	1	1	3	6	—	—	—	—
P10	Str.	5	20	2	8	"	—	—	—	—	—	—	—	—
P11	⑫	11	64	9	6	Columns	7	6	2	0	1	24	8	1
P12	Str.	11	64	17	9	"	—	—	—	—	—	—	—	—
P13	③	5	132	16	5	"	5	2	2	8	—	—	—	—
P14	⑥	5	264	3	0	"	2	8	—	6	—	4½	—	—
P15	⑦	11	120	13	6	Footings	9	5½	2	0	1	24	10	8
P16	Str.	5	108	15	0	Web wall	—	—	—	—	—	—	—	—
P17	Str.	5	198	20	8	"	—	—	—	—	—	—	—	—
P18	Str.	5	108	22	0	"	—	—	—	—	—	—	—	—
P19	Str.	11	64	24	9	Columns	—	—	—	—	—	—	—	—
P20	Str.	5	88	10	8	Footings	—	—	—	—	—	—	—	—



ESTIMATE OF QUANTITIES

ITEM	QUANTITY
Concrete Class A	297.6 C.Y.
Reinforcement	419,339 (419,740) Lbs.

SHEET 25

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD

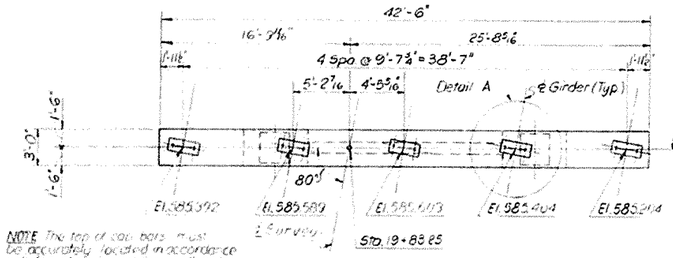
STATION 20+20.00 P.E. PROJECT NO.

CONSTRUCTION PROJECT NO. MAINTENANCE PROJECT NO. DRAWING NO. 19592

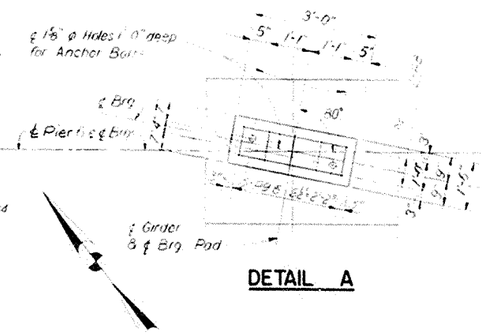
PIER 4 DETAILS

FRANKLAND AND LIENHARD

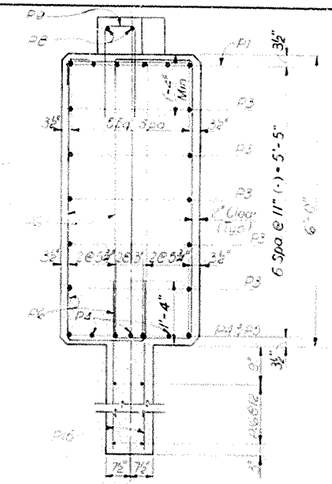
BRIDGE



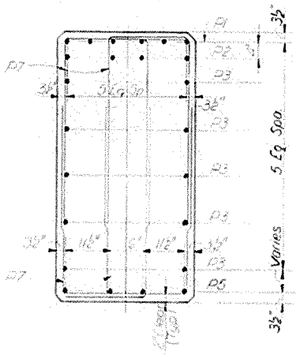
PLAN OF CAP



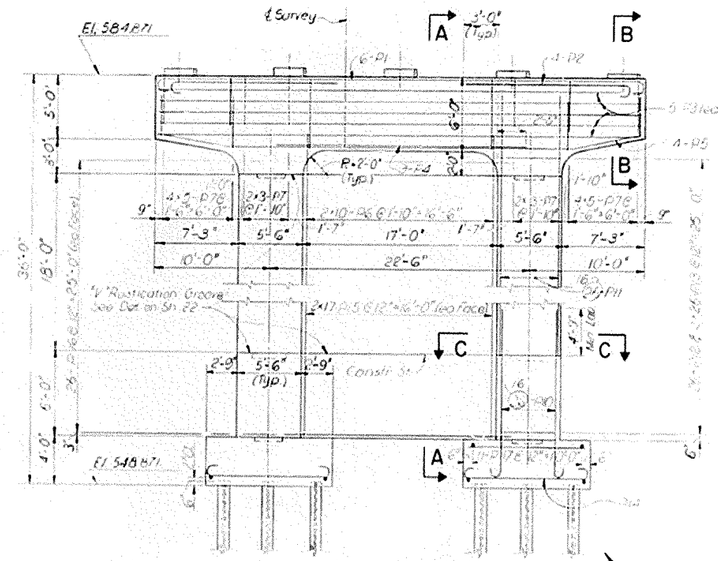
DETAIL A



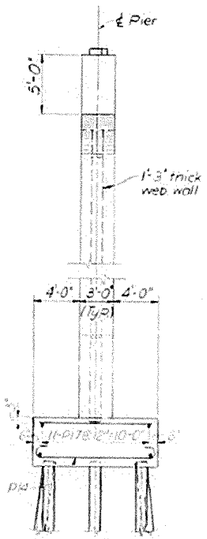
SECTION A-A



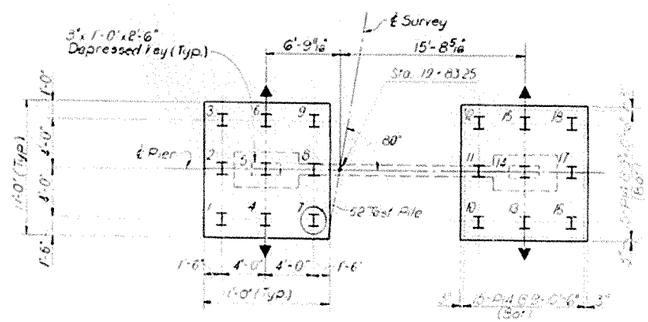
SECTION B-B



ELEVATION

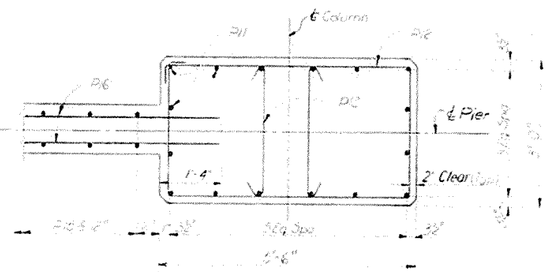


END ELEVATION



FOOTING PLAN

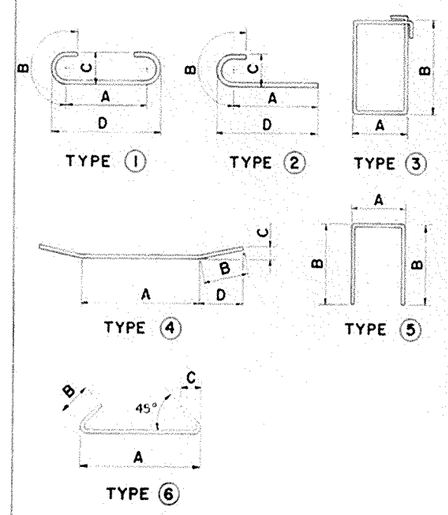
NOTE Ex. Pile Record see Sheet 34
Denotes Vertical Pile
Denotes Pile Battered 1:4



SECTION C-C

BILL OF REINFORCEMENT

Mark	Type	Size	No.	Length Ft	Length In	Location	A Ft	A In	B Ft	B In	C Ft	C In	D Ft	D In
P1	①	11	6	45	0	Cap	40	11½	2	0	1	24	42	2
P2	②	11	8	16	2	Cap	14	2	2	0	1	24	14	9
P3	Str.	5	10	42	2	Cap	—	—	—	—	—	—	—	—
P4	Str.	9	3	21	10	"	—	—	—	—	—	—	—	—
P5	③	9	4	32	4	"	27	6	7	4	1	0	7	3
P6	③	5	20	15	9	"	1	10	5	6	—	—	—	—
P7	③	9	32	9	6½	"	1	9½	3	10	—	—	—	—
P8	Str.	5	10	2	8	Brg Pad	—	—	—	—	—	—	—	—
P9	⑤	5	20	4	10	"	1	1	1	11	—	—	—	—
P10	⑥	11	32	14	5½	Columns	13	6½	2	0	1	24	14	1
P11	⑦	11	32	75	0	"	—	—	—	—	—	—	—	—
P12	⑧	5	32	16	5	"	2	8	5	2	1	—	—	—
P13	⑨	5	104	3	8	"	2	8	1	6	—	24	—	—
P14	⑩	11	60	13	6	Footings	9	5½	2	0	1	24	10	6
P15	Str.	5	34	27	2	Web Wall	—	—	—	—	—	—	—	—
P16	Str.	5	52	19	8	"	—	—	—	—	—	—	—	—
P17	Str.	9	44	10	8	Footings	—	—	—	—	—	—	—	—



ESTIMATE OF QUANTITIES

ITEM	QUANTITY	
Concrete Class A	116.5	C.Y.
Reinforcement	23,488 19,550	Lbs.

SHEET 27

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES
LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD

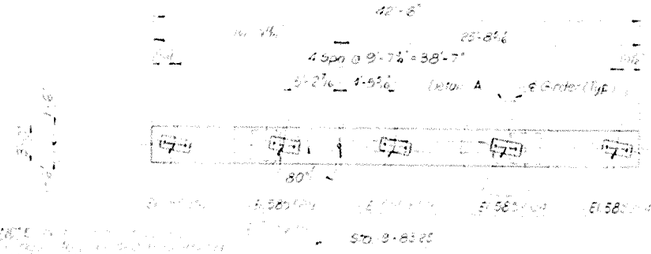
STATION 20+2000 P.E. PROJECT NO

PIER 6 DETAILS

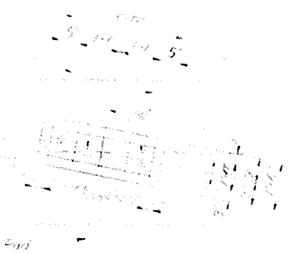
FRANKLAND AND LIENHARD

DRAWING NO. 19592

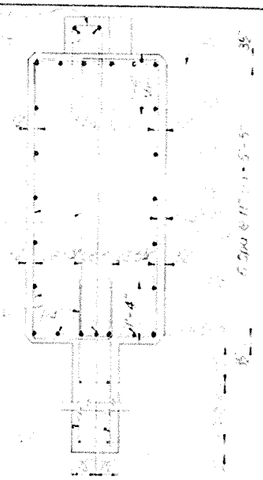
BRIDGE



PLAN OF CAP



DETAIL A

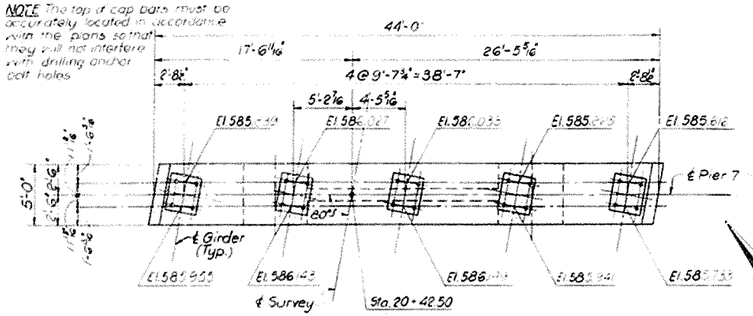


SECTION A-A

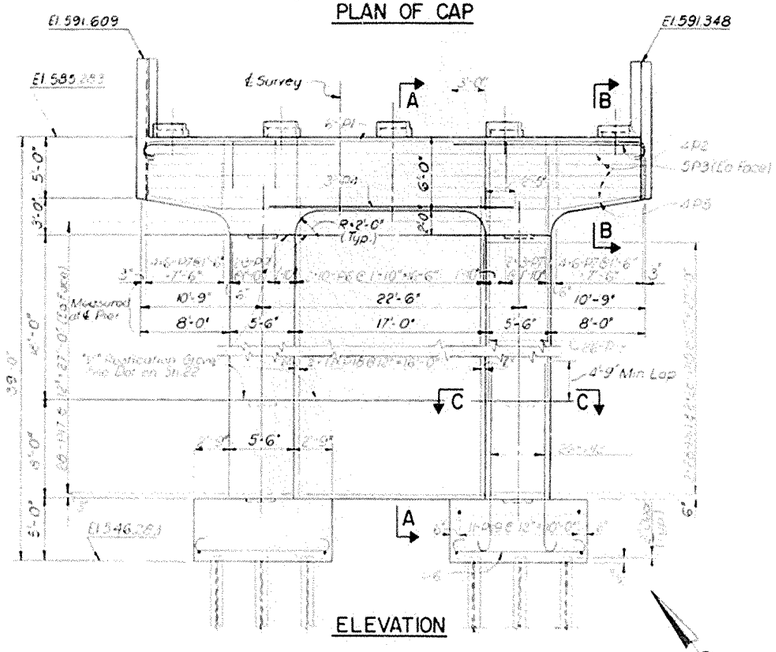
BILL OF REINFORCEMENT

Mark	Type	Size	No.	Length Ft	Length In	Location	A Ft	A In	B Ft	B In	C Ft	C In	D Ft	D In
A1	Straight	#8	2	42	8	Top Slab	42	8						
A2	Straight	#8	2	42	8	Top Slab	42	8						
A3	Straight	#8	2	42	8	Top Slab	42	8						

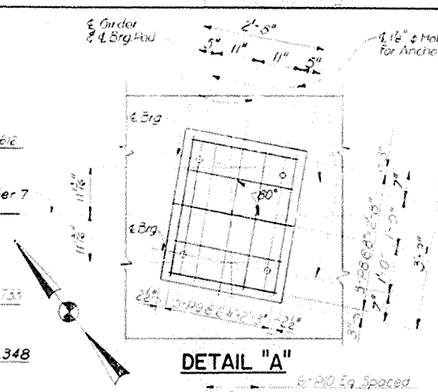
NOTE The top of cap bars must be accurately located in accordance with the plans so that they will not interfere with drilling anchor bolt holes



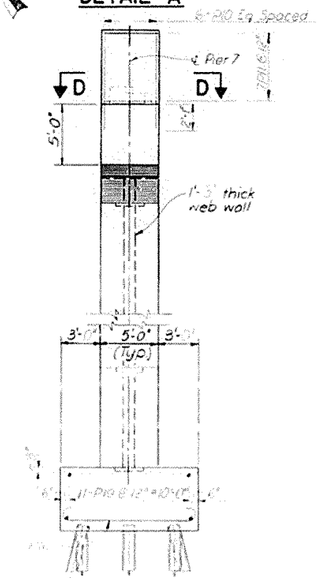
PLAN OF CAP



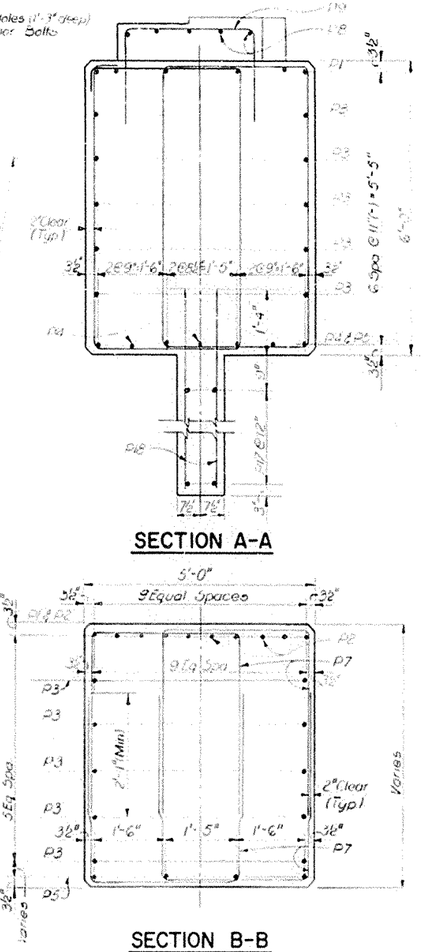
ELEVATION



DETAIL "A"

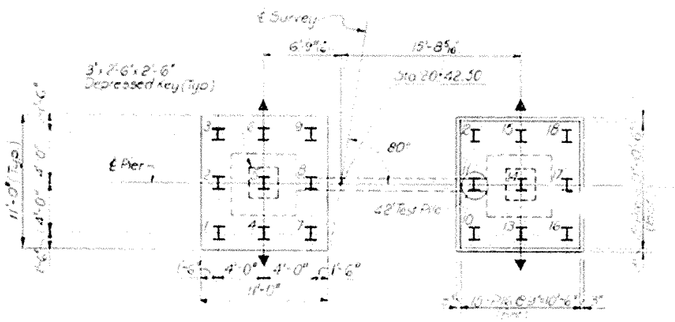


END ELEVATION



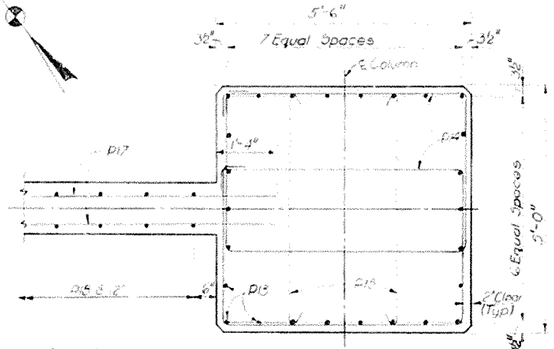
SECTION A-A

SECTION B-B

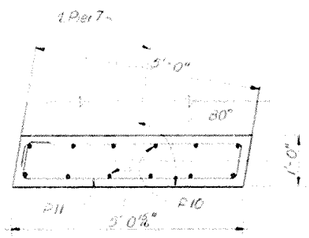


FOOTING PLAN

NOTE For Pile Record see Sheet 14.
- Denotes Vertical Pile
- Denotes Pile Battered 1:4



SECTION C-C

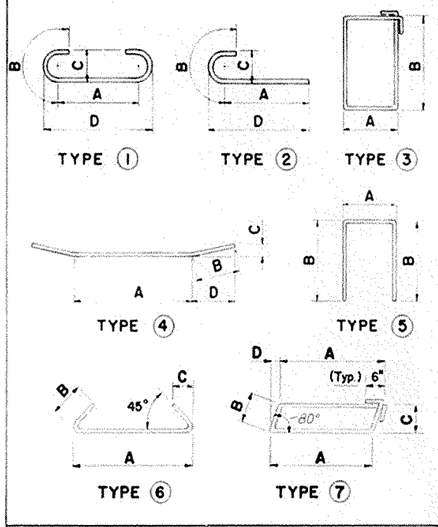


SECTION D-D

PIER 7 DETAILS

BILL OF REINFORCEMENT

Mark	Type	Size	No	Length Ft	Length In	Location	A Ft	A In	B Ft	B In	C Ft	C In	D Ft	D In
P1	(1)	11	6	46	6	Cap	42	9½	2	0	1	24	43	8
P2	(2)	11	20	18	3	"	16	3	2	0	1	24	16	10
P3	Str.	5	10	43	6	"	—	—	—	—	—	—	—	—
P4	Str.	9	3	21	10	"	—	—	—	—	—	—	—	—
P5	(4)	9	4	43	10	"	27	5	6	1	1	0	8	0
P6	3	5	20	18	5	"	3	2	5	8	—	—	—	—
P7	(3)	5	60	10	9	"	3	2	3	10	—	—	—	—
P8	Str.	6	36	2	4	Brg Pad	—	—	—	—	—	—	—	—
P9	(5)	5	22	6	11	"	3	10	2	1	—	—	—	—
P10	5	5	12	17	—	Cheek Wall	—	7	6	3	—	—	—	—
P11	(7)	5	12	11	—	"	4	9	—	8½	—	8	—	11½
P12	(1)	11	52	18	6	Columns	16	6	2	0	1	24	17	1
P13	Str.	11	52	25	0	"	—	—	—	—	—	—	—	—
P14	(3)	5	112	17	5	"	3	2	6	2	—	—	—	—
P15	(6)	5	112	5	8	"	4	8	—	6	—	45	—	—
P16	(1)	11	60	13	6	Footings	3	9½	2	0	1	24	10	18
P17	Str.	5	56	22	10½	Web Wall	—	—	—	—	—	—	—	—
P18	Str.	6	34	10	8	"	—	—	—	—	—	—	—	—
P19	Str.	6	44	10	8	Footings	—	—	—	—	—	—	—	—



ESTIMATE OF QUANTITIES

ITEM	QUANTITY
Concrete, Class A	170.3 C.Y.
Reinforcement	26,734 Lbs.
	26,910

SHEET 28

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD
STATION 20+20.00 P.E. PROJECT NO

FRANKLAND AND LIENHARD

19592

BRIDGE

PLAN OF CAP

ELEVATION

DETAIL "A"

END ELEVATION

SECTION A-A

SECTION B-B

FOOTING PLAN

SECTION C-C

SECTION D-D

PIER 7 DETAILS

BILL OF REINFORCEMENT

Mark	Type	Size	No	Length Ft	Length In	Location	A Ft	A In	B Ft	B In	C Ft	C In	D Ft	D In

TYPE 1 TYPE 2 TYPE 3

TYPE 4 TYPE 5

TYPE 6 TYPE 7

ESTIMATE OF QUANTITIES

ITEM	QUANTITY
Concrete, Class A	
Reinforcement	

SHEET 28

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8), SP 60-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

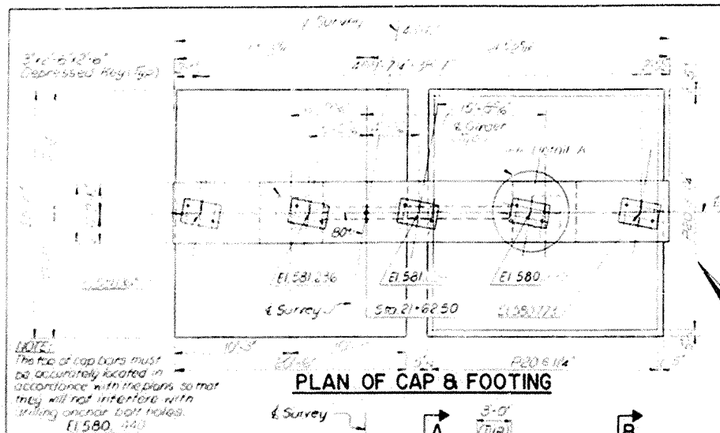
ROAD

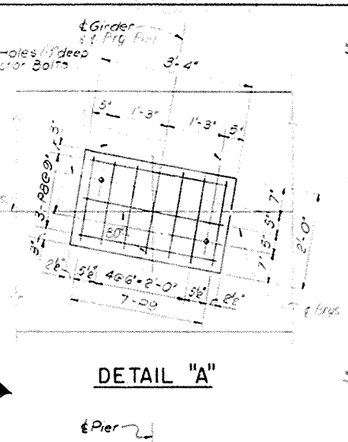
STATION 20+20.00 P.E. PROJECT NO

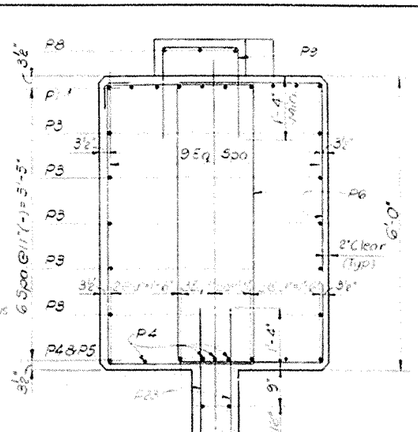
FRANKLAND AND LIENHARD

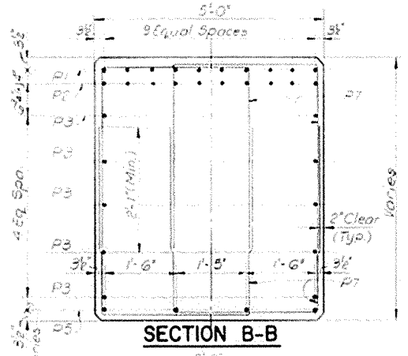
19592

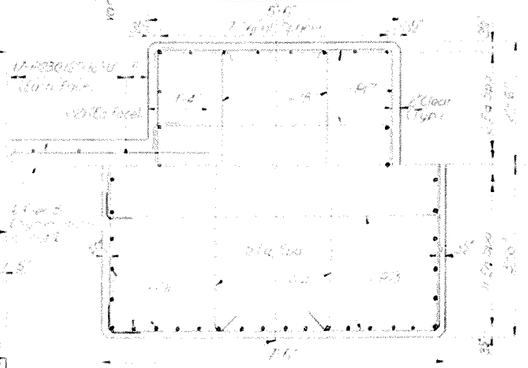
BRIDGE





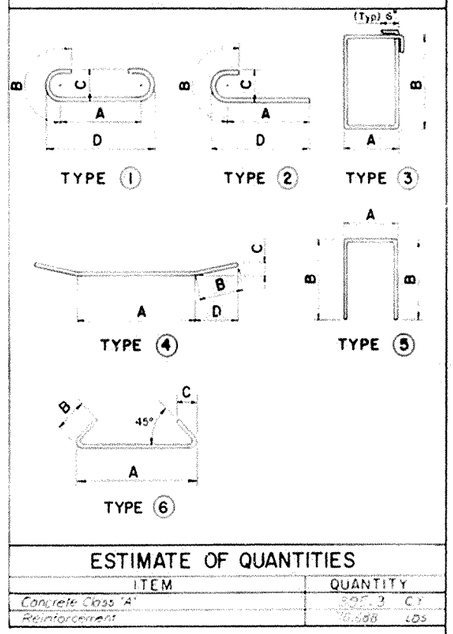






BILL OF REINFORCEMENT

Mark	Type	Size	No.	Length Ft	Length In	Location	A Ft	A In	B Ft	B In	C Ft	C In	D Ft	D In
P1	(1)	11	6	46	-	Cap	4	11½	2	-	1	24	43	2
P2	(1)	11	20	16	11	Cap	14	11	2	-	1	24	15	6
P3	Str.	5	10	43	2	Cap	-	-	-	-	-	-	-	-
P4	Str.	9	4	21	10	Cap	-	-	-	-	-	-	-	-
P5	(2)	9	4	43	4	Cap	27	8	7	10	1	-	7	9
P6	(3)	5	10	18	5	Cap	3	2	5	8	-	-	-	-
P7	(3)	5	76	20	9	Cap	3	2	3	10	-	-	-	-
P8	Str.	5	15	3	-	Brg Pad	-	-	-	-	-	-	-	-
P9	(5)	5	35	5	7	Brg Pad	1	8	2	-	-	-	-	-
P10	(2)	11	64	12	5	Columns	10	5	1	-	1	24	11	0
P11	Str.	11	64	7	10	Columns	-	-	-	-	-	-	-	-
P12	(2)	11	32	16	6	Columns	7	2	4	9	-	-	-	-
P13	(3)	5	72	24	5	"	4	8	7	2	-	-	-	-
P14	(6)	5	72	7	6	"	2	8	-	6	-	42	-	-
P15	Str.	11	32	27	9	"	-	-	-	-	-	-	-	-
P16	Str.	11	32	25	0	"	-	-	-	-	-	-	-	-
P17	(3)	5	172	17	9	"	3	6	6	2	-	-	-	-
P18	(4)	5	172	9	8	Columns	4	8	-	6	-	42	-	-
P19	(3)	5	28	16	5	"	3	8	4	3	-	-	-	-
P20	(7)	11	88	23	0	Footings	8	11½	2	-	1	24	30	2
P21	Str.	5	86	19	8	Web Wall	-	-	-	-	-	-	-	-
P22	Str.	5	34	23	0	"	-	-	-	-	-	-	-	-
P23	Str.	5	34	21	4	"	-	-	-	-	-	-	-	-
P24	(2)	11	52	10	11	Columns	5	10	-	-	-	-	4	10
P25	Str.	5	40	20	10	Footings	-	-	-	-	-	-	-	-



ESTIMATE OF QUANTITIES

ITEM	QUANTITY
Concrete Class "A"	507.2 C.Y.
Reinforcement	70,588 LBS

SHEET 29

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8), SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

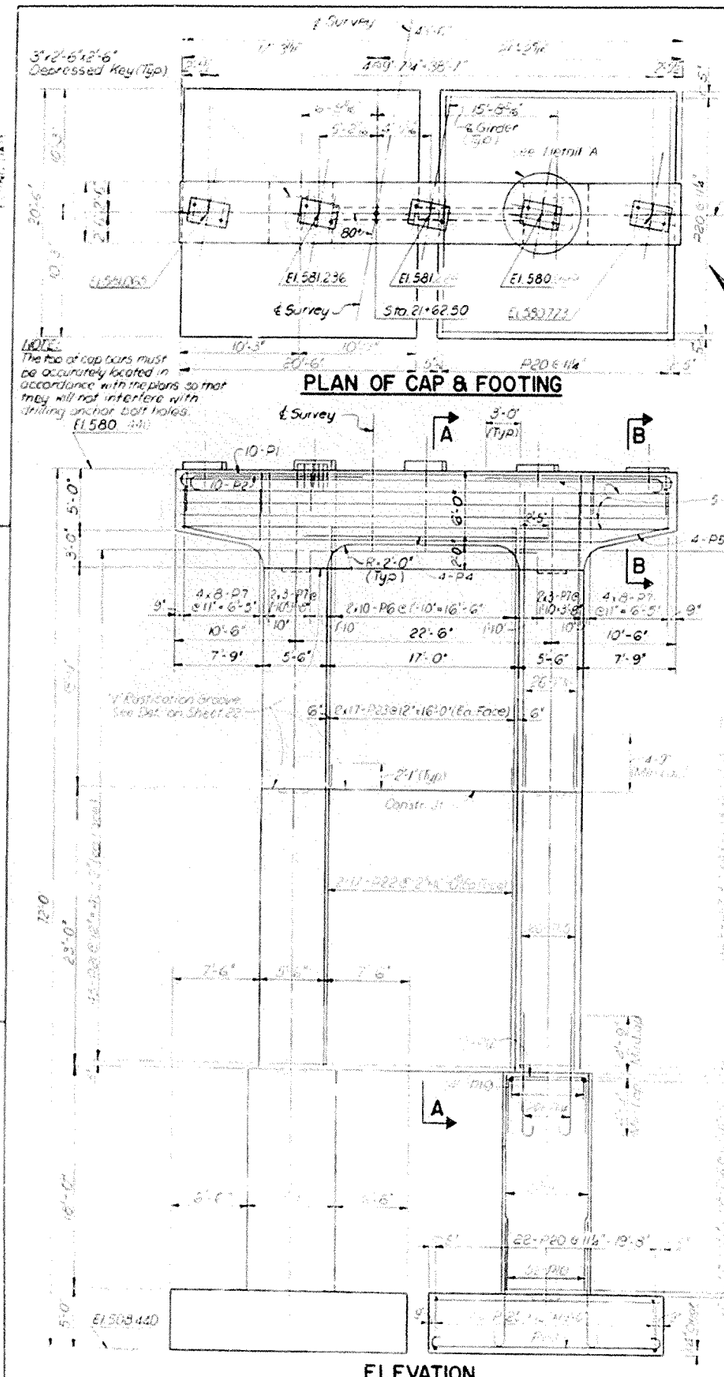
ROAD

STATION 20 + 2000 P.E. PROJECT NO

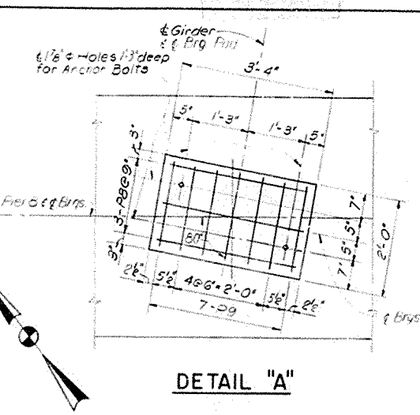
FRANKLAND AND LENHARD

19592

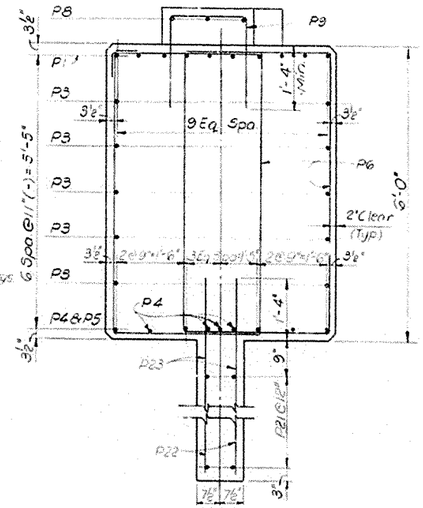
BRIDGE



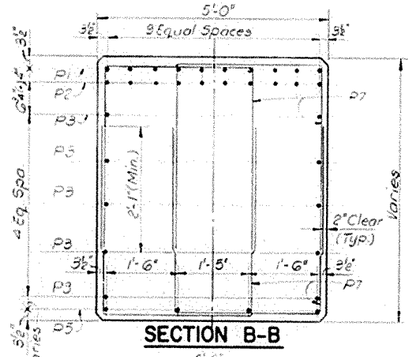
PLAN OF CAP & FOOTING



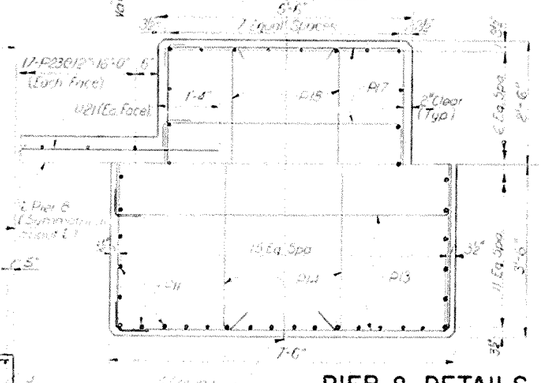
DETAIL "A"



SECTION A-A



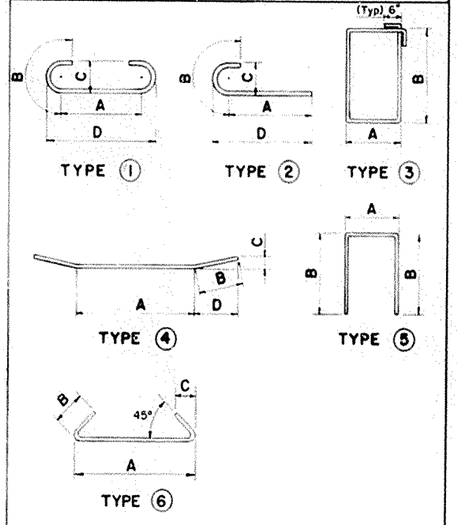
SECTION B-B



PIER 8 DETAILS

BILL OF REINFORCEMENT

Mark	Type	Size	No.	Length Ft	Length In	Location	A Ft	A In	B Ft	B In	C Ft	C In	D Ft	D In
P1	①	11	10	46	–	Cap	41	11¾	2	–	1	24	43	2
P2	②	11	20	16	11	Cap	14	11	2	–	1	24	15	6
P3	Str.	5	10	43	2	Cap	–	–	–	–	–	–	–	–
P4	Str.	9	4	81	10	Cap	–	–	–	–	–	–	–	–
P5	④	9	4	43	4	Cap	27	8	7	10	1	–	7	9
P6	⑤	5	20	18	5	Cap	3	2	5	8	–	–	–	–
P7	⑥	5	76	10	9	Cap	3	2	3	10	–	–	–	–
P8	Str.	5	15	3	–	Brg. Pad	–	–	–	–	–	–	–	–
P9	⑤	5	35	5	7	Brg. Pad	1	8	2	–	–	–	–	–
P10	②	11	104	12	5	Columns	10	3	2	–	1	24	11	0
P11	Str.	11	104	17	10	Columns	–	–	–	–	–	–	–	–
P12	⑦	11	82	16	6	Columns	7	2	4	9	–	–	–	–
P13	③	6	72	24	9	"	4	8	7	2	–	–	–	–
P14	⑥	9	72	7	8	"	6	8	–	6	–	42	–	–
P15	Str.	11	32	27	9	"								
P16	Str.	11	32	25	0	"	–	–	–	–	–	–	–	–
P17	③	5	172	17	3	"	3	2	5	2	–	–	–	–
P18	⑧	5	172	5	8	Columns	4	8	–	6	–	45		
P19	⑨	11	86	16	0	"	7	8	4	9				
P20	①	11	88	23	0	Footings	18	11¾	2	–	1	24	20	2
P21	Str.	5	86	19	8	Web Wall								
P22	Str.	5	34	25	0	"								
P23	Str.	5	34	21	4	"								
P24	②	11	32	10	11	Columns	8	11	2	0	1	24	9	6
P25	Str.	5	80	20	0	Footings	–	–	–	–	–	–	–	–



ESTIMATE OF QUANTITIES

ITEM	QUANTITY
Concrete Class "A"	395.3 C.Y.
Reinforcement	41,888 LBS.

SHEET 29

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

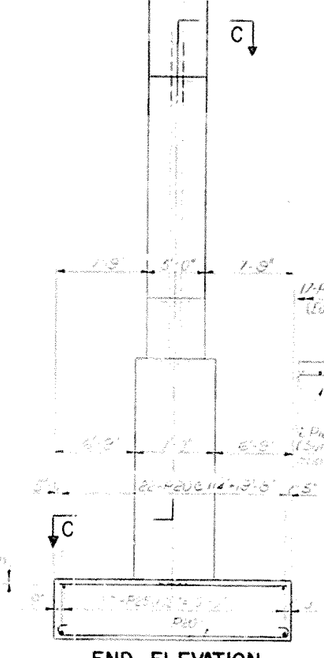
ROAD

STATION 20 + 20.00 P.E. PROJECT NO.

FRANKLAND AND LIENHARD

19592

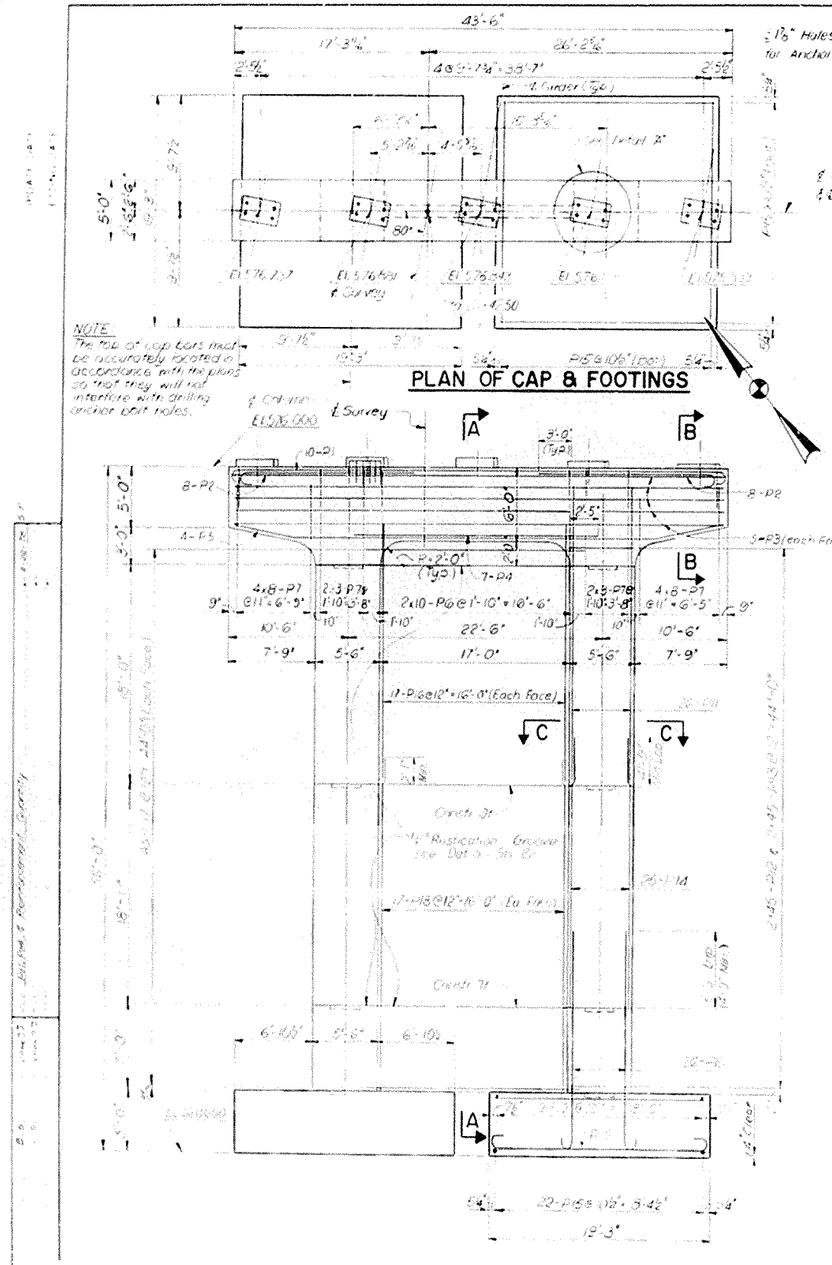
ELEVATION



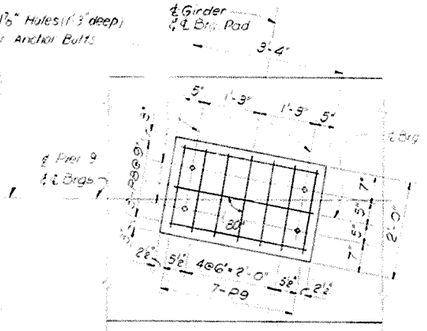
END ELEVATION

SECTION C-C

BRIDGE

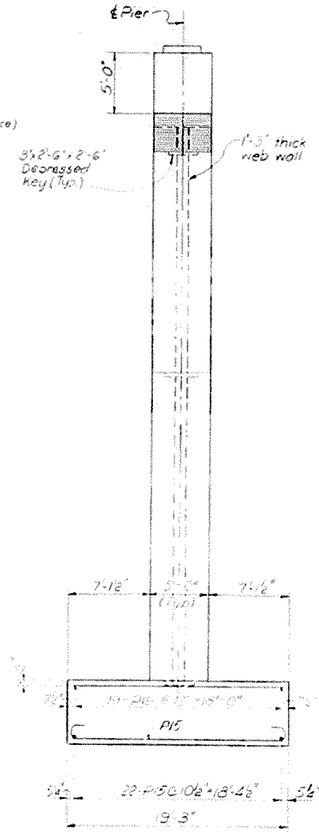


PLAN OF CAP & FOOTINGS

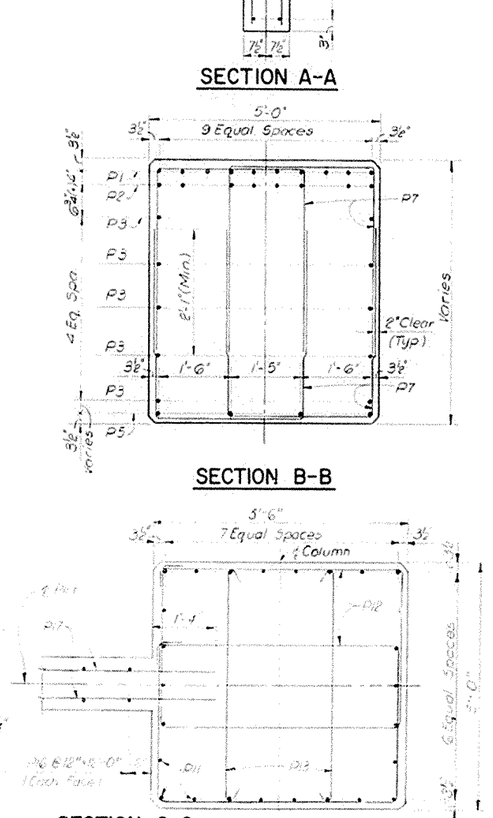


DETAIL "A"

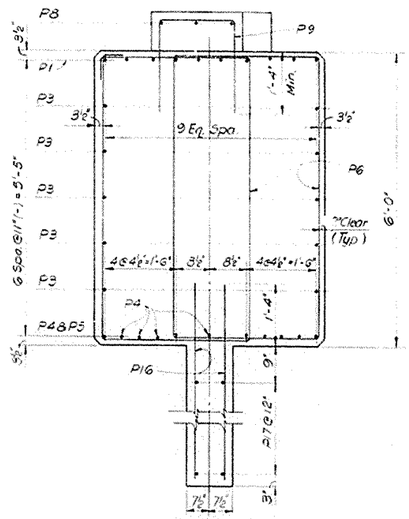
ELEVATION



END ELEVATION



SECTION C-C



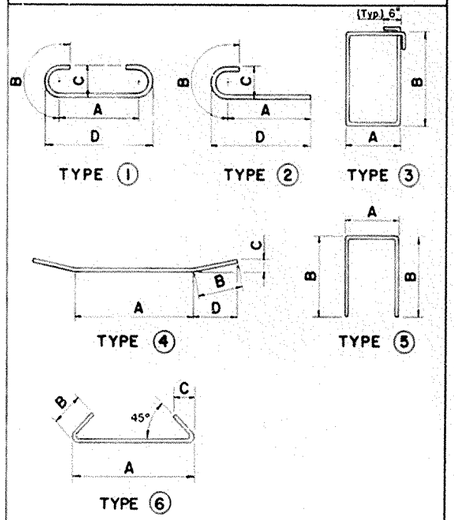
SECTION A-A

SECTION B-B

ELEVATION

BILL OF REINFORCEMENT

Mark	Type	Size	No	Length Ft	Length In	Location	A Ft	A In	B Ft	B In	C Ft	C In	D Ft	D In
P1	①	11	10	46	–	Cap	41	11¾	2	–	1	24	43	2
P2	②	11	16	16	11	Cap	14	11	2	–	1	24	15	6
P3	Str.	5	10	43	2	Cap	–	–	–	–	–	–	–	–
P4	Str.	9	7	21	10	Cap	–	–	–	–	–	–	–	–
P5	④	9	4	48	4	Cap	27	8	7	10	1	–	7	9
P6	③	5	20	18	3	Cap	3	2	5	8	–	–	–	–
P7	⑤	5	16	10	9	Cap	3	2	3	10	–	–	–	–
P8	Str.	5	15	3	0	Brg. Pad	–	–	–	–	–	–	–	–
P9	⑥	5	35	5	7	Brg. Pad	1	8	2	–	–	–	–	–
P10	②	11	52	19	4	Columns	17	4	2	0	1	24	17	11
P11	Str.	11	52	[illegible]	[illegible]	Columns	–	–	–	–	–	–	–	–
P12	③	5	100	17	9	Columns	3	2	3	2	–	–	–	–
P13	⑥	5	100	5	8	Columns	4	8	–	6	–	48	–	–
P14	Str.	11	52	[illegible]	9	Columns	–	–	–	–	–	–	–	–
P15	①	11	88	21	9	Footings	17	8¾	2	0	1	24	18	11
P16	Str.	5	34	21	4	Web Wall	–	–	–	–	–	–	–	–
P17	Str.	5	90	19	8	Web Wall	–	–	–	–	–	–	–	–
P18	Str.	5	34	27	0	Web Wall	–	–	–	–	–	–	–	–
P19	Str.	5	76	18	10	Footings	–	–	–	–	–	–	–	–



ESTIMATE OF QUANTITIES

ITEM	QUANTITY
Concrete, Class "A"	312.6 C.Y.
Reinforcement	40,330 Lbs.
	45,018

SHEET 80

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

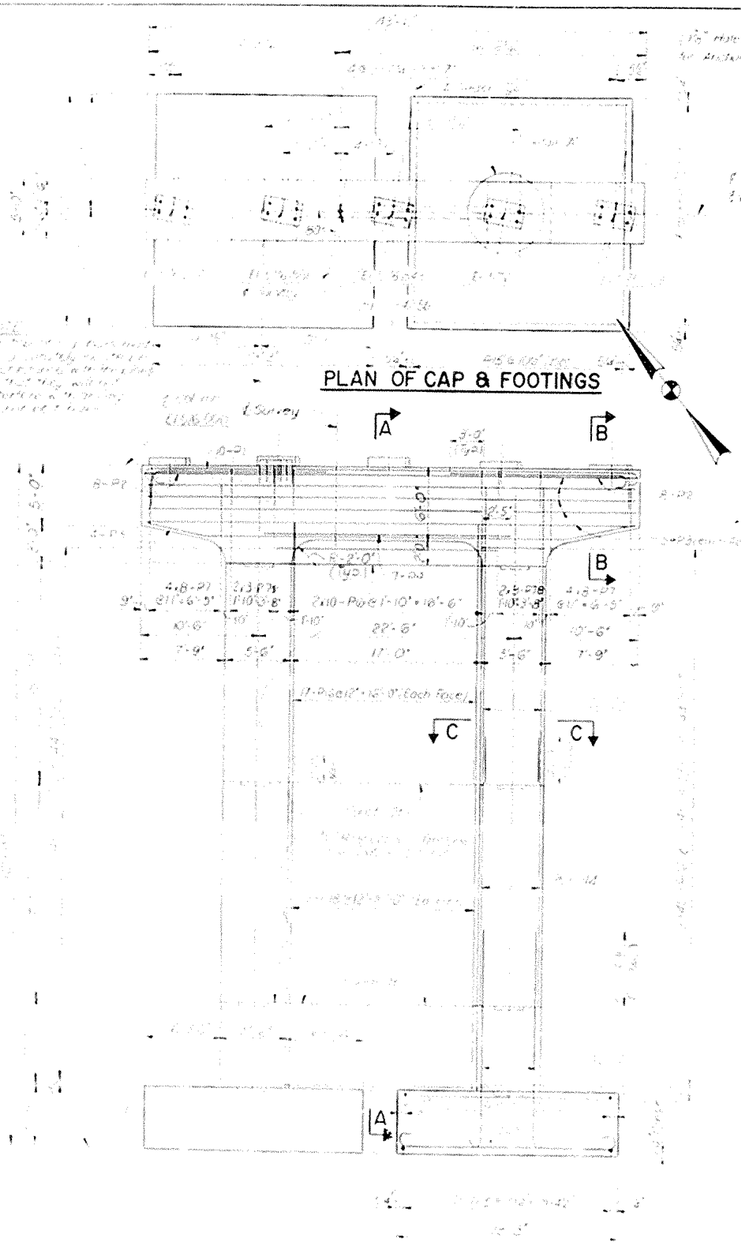
ROAD

STATION 20 + 2000 P.E. PROJECT NO

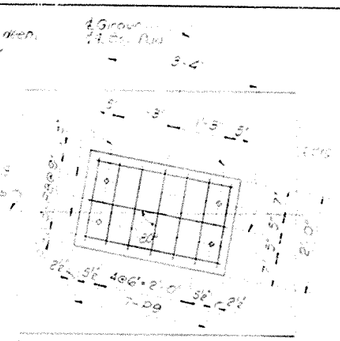
FRANKLAND AND LIENHARD

19592

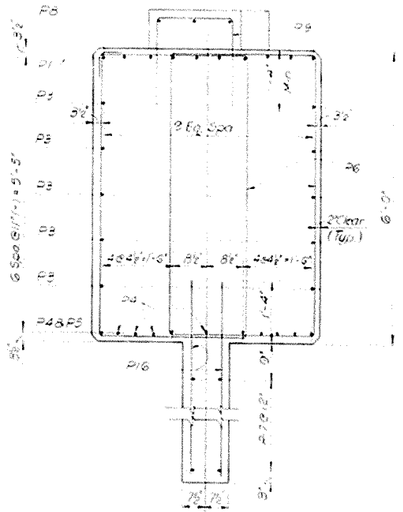
BRIDGE



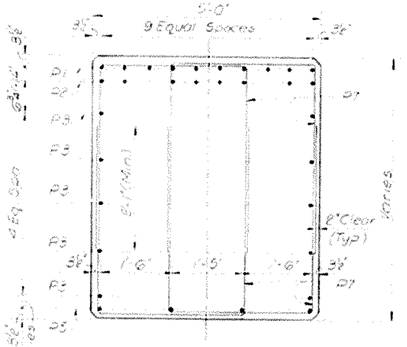
PLAN OF CAP & FOOTINGS



DETAIL "A"

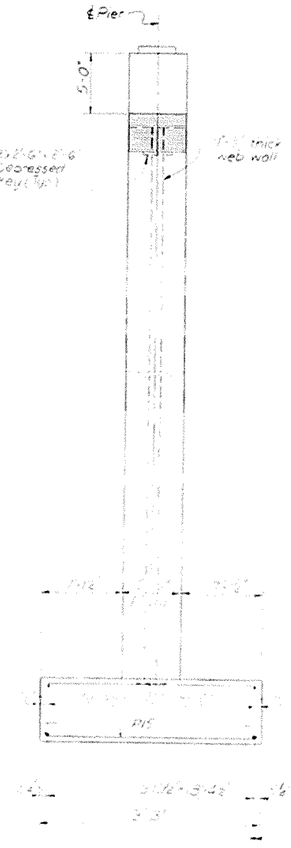


SECTION A-A

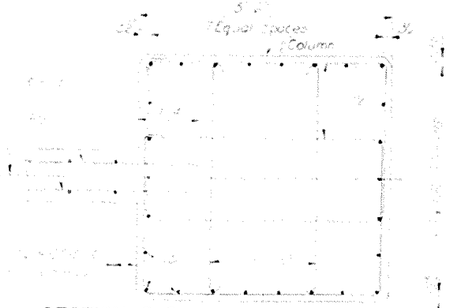


SECTION B-B

ELEVATION



END ELEVATION

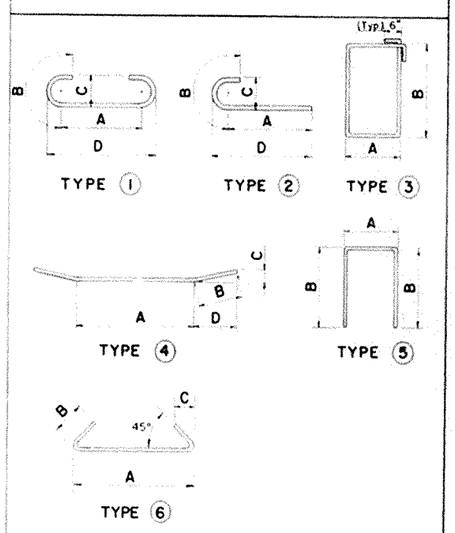


SECTION C-C

PIER 9 DETAILS

BILL OF REINFORCEMENT

Mark	Type	Size	No	Length Ft	Length In	Location	A Ft	A In	B Ft	B In	C Ft	C In	D Ft	D In
P1	1		10	45	-	Cap	41	11½	2	-	1	-	24	43 8
P2	2		16	16	11	Cap	14	11	2	-	1	-	24	15 6
P3	51	5	10	45	8	Cap	-	-	-	-	-	-	-	-
P4	51	5	7	21	10	Cap	-	-	-	-	-	-	-	-
P5	47	9	4	45	4	Cap	27	8	7	10	1	-	7	2
P6	3	5	22	18	5	Cap	3	2	5	8	-	-	-	-
P7	3	5	16	10	2	Cap	3	2	3	10	-	-	-	-
P8	51	5	15	3	10	Stg. Pad	-	-	-	-	-	-	-	-
P9	3	5	85	5	7	Stg. Pad	1	8	2	-	-	-	-	-
P10	2	11	92	12	4	Columns	17	4	6	10	1	2	17	1
P11	51	11	92	22	10	Columns	-	-	-	-	-	-	-	-
P12	3	5	140	17	9	Columns	3	2	3	8	-	-	-	-
P13	3	5	60	5	8	Columns	4	8	-	6	-	12	-	-
P14	51	11	92	29	10	Columns	-	-	-	-	-	-	-	-
P15	1	11	88	21	5	Footings	7	8½	3	10	1	2	13	11
P16	51	5	32	21	4	Web Wall	-	-	-	-	-	-	-	-
P17	51	5	90	19	8	Web Wall	-	-	-	-	-	-	-	-
P18	51	5	34	27	0	Web Wall	-	-	-	-	-	-	-	-
P19	51	5	74	25	10	Footings	-	-	-	-	-	-	-	-



ESTIMATE OF QUANTITIES

ITEM	QUANTITY
Concrete, Class "A"	312.6 C.Y.
Reinforcement	46,330 lbs.

SHEET 30

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8), SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD

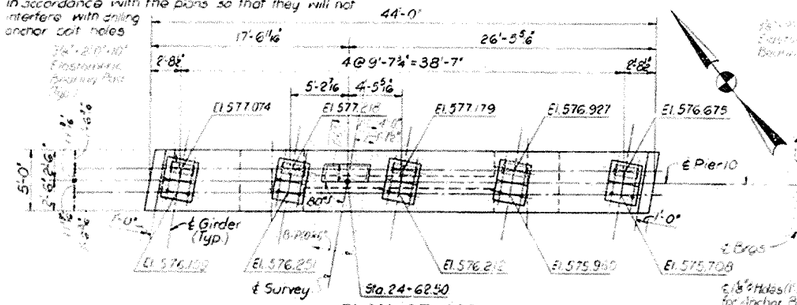
STATION 20 + 2000 P.E. PROJECT NO

FRANKLAND AND LIENHARD

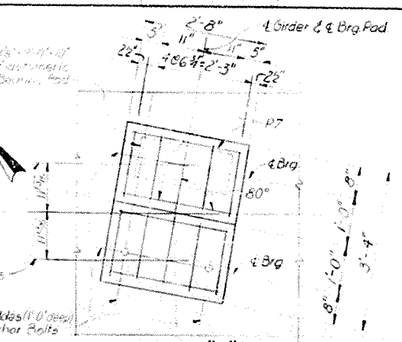
19592

BRIDGE

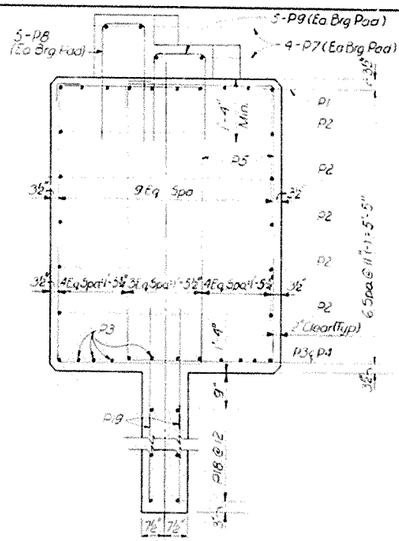
NOTE The top of cap bars must be accurately located in accordance with the plans so that they will not interfere with piling anchor bolt holes



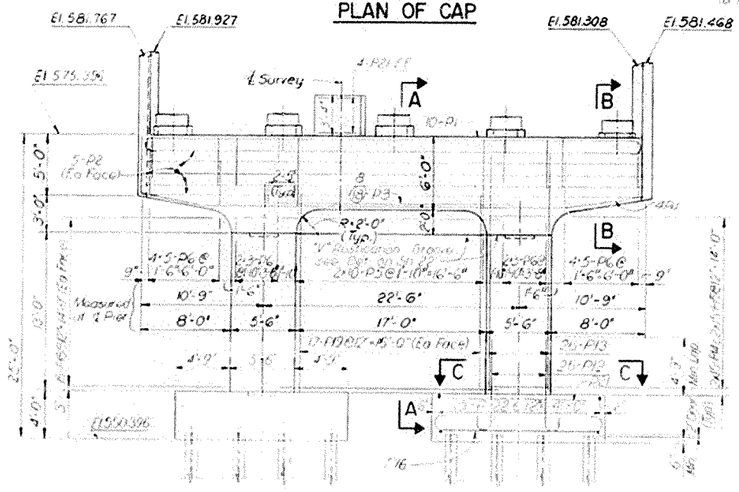
PLAN OF CAP

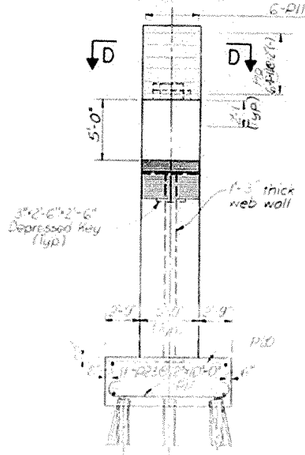


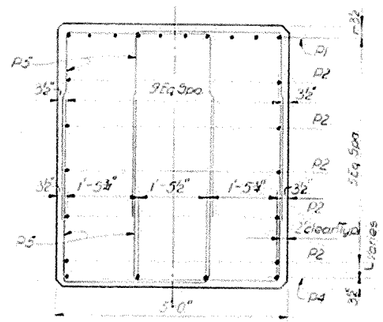
DETAIL "A"



SECTION A-A

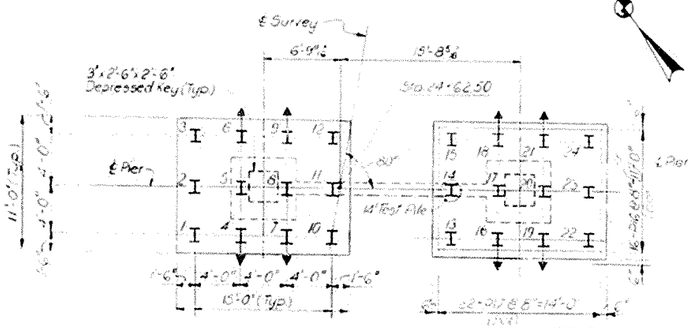






SECTION B-B

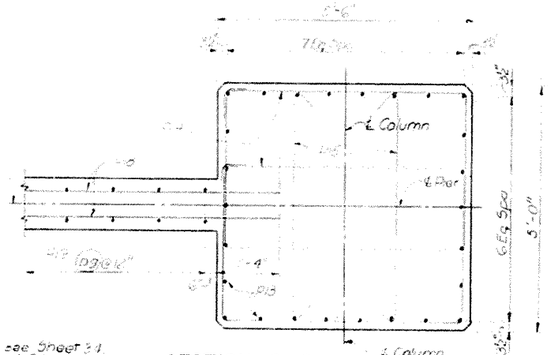
ELEVATION



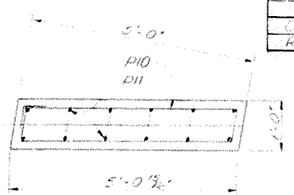
FOOTING PLAN

NOTE For Pile Record see Sheet 21
-Denotes Vertical Pile
-Denotes Pile Battered 1:4

END ELEVATION



SECTION C-C

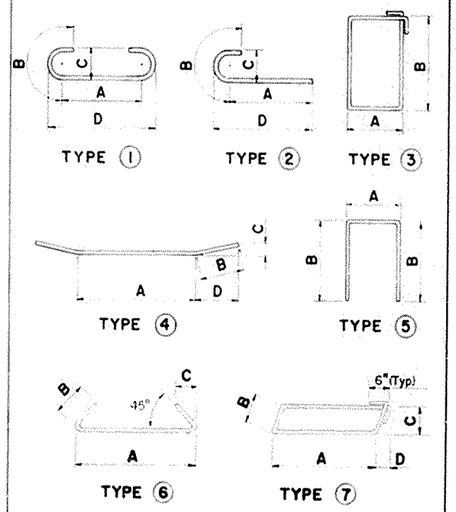


SECTION D-D

PIER 10 DETAILS

BILL OF REINFORCEMENT

Mark	Type	Size	No	Length Ft	Length In	Location	A Ft	A In	B Ft	B In	C Ft	C In	D Ft	D In
P1	①	11	10	46	6	Cap	42	5½	2	0	1	2½	43	8
P2	Str	5	10	23	8	Cap								
P3	Str	9	8	21	10	Cap								
P4	④	9	4	43	3	Cap	27	6	8	0½	1	0	8	0
P5	③	5	20	15	5	Cap	3	2	5	6				
P6	⑤	5	52	10	9	Cap	3	2	3	10				
P7	Str	5	20	2	4	Brg. Pads								
P8	⑥	5	25	7	2		1	4	2	11½				
P9	⑤	5	25	5	6		1	6	2	0½				
P10	7	5	12	11	5	Cheek Wall	4	8	0	6	0	7½	0	1½
P11	⑤	5	12	17	6	Cheek Wall	0	6½	8	6				
P12	2	11	52	10	6	Column	38	6	2	0	1	0	2	7½
P13	Str	11	52	19	9	Column								
P14	③	5	60	17	5	Column	3	2	5	2				
P15	⑥	5	60	5	8	Column	4	8		6		4½		
P16	1	11	32	17	6	Footing	13	5½	2	0	1	2½	14	6
P17	1	11	44	13	6	Footing	9	5½	2	0	1	2½	10	8
P18	Str	5	30	19	6	Web Wall								
P19	Str	5	34	16	2	Web Wall								
P20	⑤	5	8	10	0	Shear Block	1	2	4	5				
P21	Str	5	8	3	8	Shear Block								
P22	Str	5	30	10	9	Footings								
P23	Str	5	60	14	9	Footings								



ESTIMATE OF QUANTITIES

ITEM	QUANTITY
Concrete Class A	1424 CY
Reinforcement	231K Lbs

SHEET 31

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD

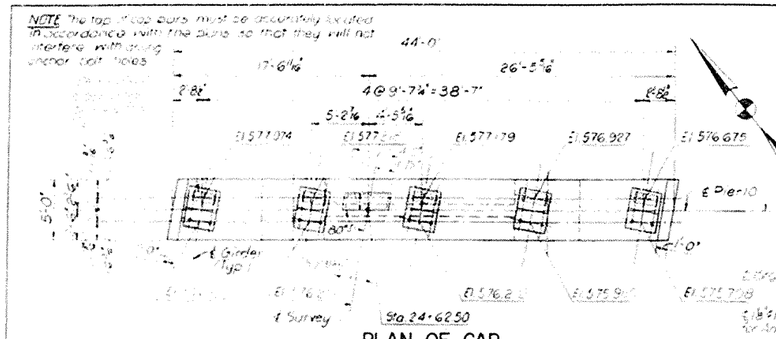
STATION 20+2000 P.E. PROJECT NO

FRANKLAND AND LIENHARD

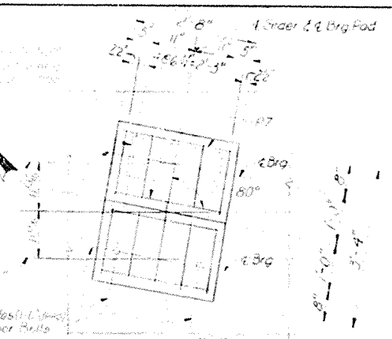
19592

BRIDGE

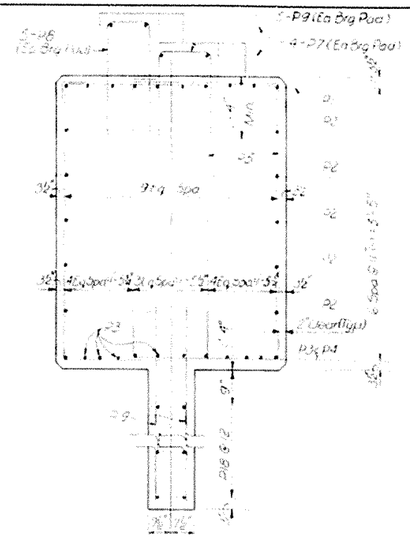
NOTE The top 3 cap bars must be accurately located in accordance with the plans so that they will not interfere with prestressing anchor bolt holes



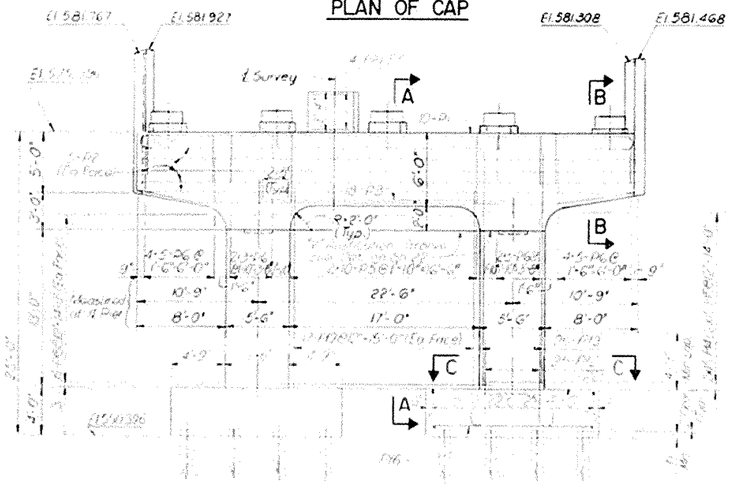
PLAN OF CAP

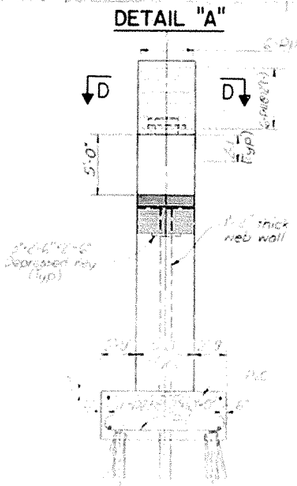


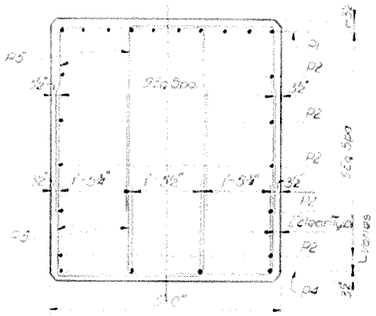
DETAIL "A"



SECTION A-A



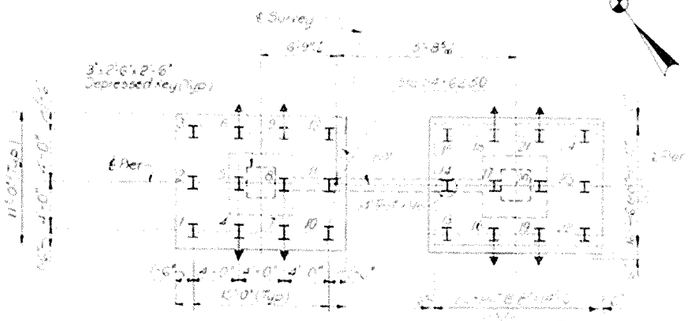




SECTION B-B

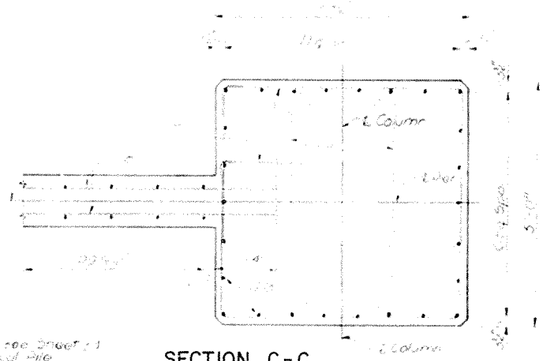
ELEVATION

END ELEVATION

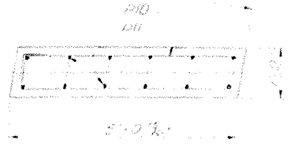


FOOTING PLAN

NOTE For pile symbols see Sheet 1
Denotes Vert. Piles
Denotes Vert. Battered Piles



SECTION C-C

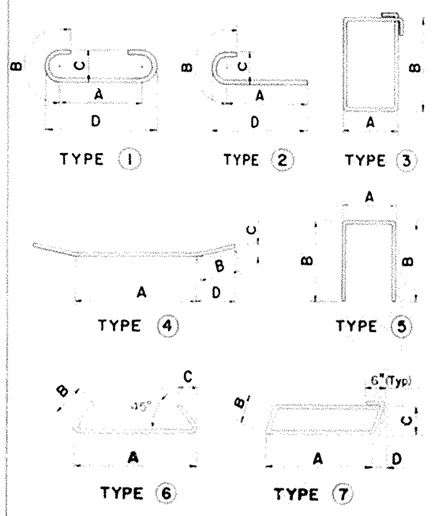


SECTION D-D

PIER 10 DETAILS

BILL OF REINFORCEMENT

Mark	Type	Size	No	Length Ft	Length In	Location	A Ft	A In	B Ft	B In	C Ft	C In	D Ft	D In
P1	1	11	6	45	6		42	5½	2	0	1	2½	13	8
P2	St	5	10	23	8									
P3	St	9	8	5	10									
P4	St	9	4	23	9									
P5	St	5	10	8	5		27	6	8	0½	1	0	8	0
P6	St	5	52	10	9		3	2	5	5				
P7	St	5	52	10	9		3	2	3	10				
P8	St	5	20	2	4	Dowels								
P9	St	5	25	7	2		1	4	2	11½				
P10	St	5	23	5	6		1	-	1	7½				
P11	2	5	12	11	5	Tube Rail	4	8	6	8	3	7½	0	14
P12	2	5	12	17	6	Tube Rail	6	5½	8	6				
P13	6	11	52	10	6	Shim	8	6	2	0	0	7	9	1
P14	St	11	52	9	9	Shim								
P15	St	5	60	17	5	Coping	3	2	2	5	2			
P16	6	5	60	5	8	Coping	3	8	1	6		4½		
P17	1	11	32	17	6	Footing	13	5½	2	0	1	2½	14	6
P18	1	11	44	13	6	Footing	9	5½	2	0	1	2½	10	8
P19	St	5	30	19	6	Pedestal								
P20	St	5	44	16	2	Pedestal								
P21	5	5	8	10	11	Shear Block	1	2	1	5				
P22	St	5	8	5	6	Shear Block	-	-	-	-				
P23	St	5	30	10	8	Footings								
P24	St	5	22	4	8	Footings								



ESTIMATE OF QUANTITIES

ITEM	QUANTITY
Concrete, Class A	144.4 C.Y.
Reinforcement	23,616 Lbs

SHEET 31

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8), SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

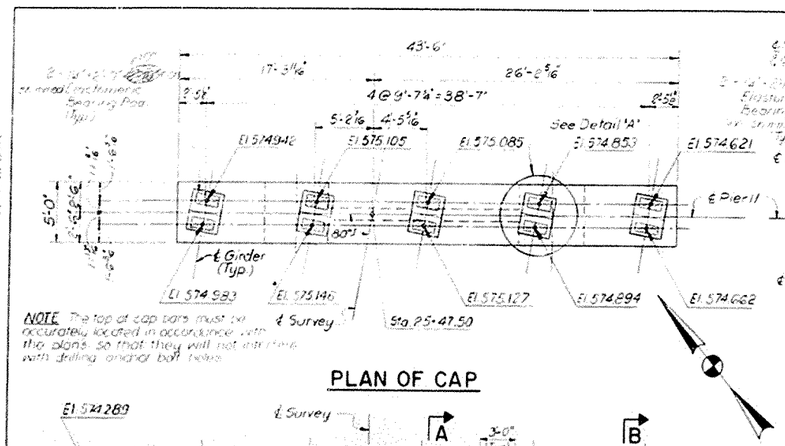
ROAD

STATION 20+2000 PE PROJECT NO

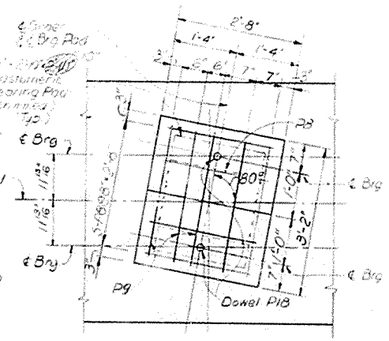
FRANKLAND AND LIENHARD

19592

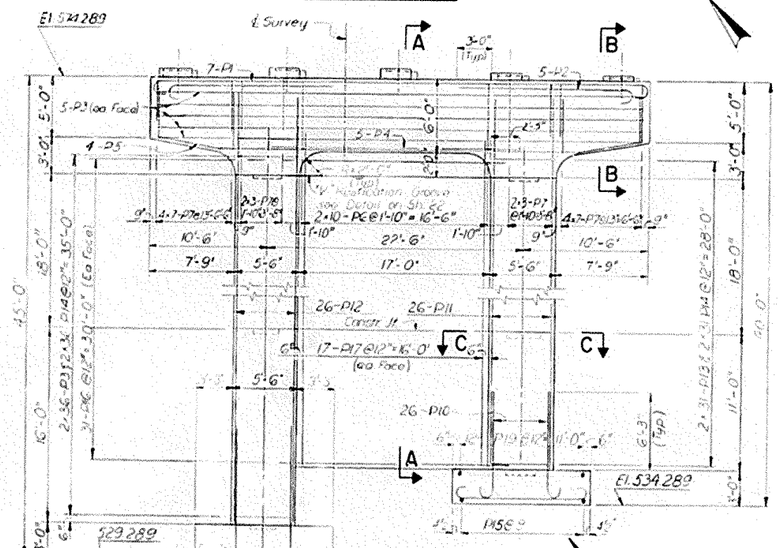
BRIDGE



PLAN OF CAP



DETAIL "A"


El 574.289
℄ Survey
A
B
C
3'-0" (Typ)
7-P1
5-P2
5-P3 (ea Face)
4-P5
5-P4
2-3 P6
2-3 P7 @ 10 5/8"
2-10-P8 @ 1'-10" = 16'-6"
4-7-P7 @ 3 1/2"
26-P12
Detail of Sh 22
26-P11
17-P17 @ 12" = 16'-0" (ea Face)
26-P10
2-3 P9 @ 1'-0"
El 534.289
129.289
45'-0"
18'-0"
16'-0"
3'-0"
5'-0"
2-56-P13 @ 1'-0" (Ea Face)
2-31-P13 @ 1'-0" (Ea Face)
2-36-P15 @ 1'-0" (Ea Face)
2-P16 @ 1'-0" (Ea Face)
2-P18 @ 1'-0" (Ea Face)
1'-6" (Typ)
1'-0" (Typ)
1'-6" (Typ)
1'-3" (Typ)
1'-0" (Typ)
1'-0" (Typ)
1'-0

PLAN OF CAP

DETAIL "A"

SECTION A-A

ELEVATION

END ELEVATION

SECTION B-B

FOOTING PLAN

SECTION C-C

BILL OF REINFORCEMENT

Mark	Type	Size	No	Length Ft	Length In	Location	A Ft	A In	B Ft	B In	C Ft	C In	D Ft	D In
P1	-	11	7	46	-	Cap	41	11	2	0	1	24	43	2
P2	2	11	8	16	11	Cap	14	1	2	0	1	4	15	6
P3	Str	"	10	43	2	Cap								
P4	Str	9	4	21	10	Cap								
P5	3	9	4	41	3	Cap	37	3	7	10	1	10	7	9
P6	2	5	20	16	9	Cap	3	1	5	8				
P7	2	5	66	10	9	Cap	3	7	3	10				
P8	Str	9	4	4	-	Brg. Seats								
P9	3	9	28	6	9	Brg. Pads	2	10	2	6				
P10	2	11	13	10	4	Columns	6	7	2	0	1	24	5	11
P11	Str	11	26	33	9	Columns								
P12	Str	11	26	38	9	Columns								
P13	2	5	104	17	5	Columns	3	1	3	2				
P14	2	5	52	5	5	Columns	4	8	-	6				
P15	11	11	64	12	6	Footings	8	5	2	6	1	24	9	8
P16	Str	5	62	19	6	Web Wall								
P17	Str	5	34	32	2	Web Wall								
P18	Str	9	10	8	3	Curb Corbels								
P19	Str	5	45	11	8	Footings								

TYPE (1) TYPE (2) TYPE (3)

TYPE (4) TYPE (5)

TYPE (6)

ESTIMATE OF QUANTITIES

ITEM	QUANTITY
Concrete, Class A	123 CY
Reinforcement	25,962 Lbs

SHEET 8-2

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8), SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD

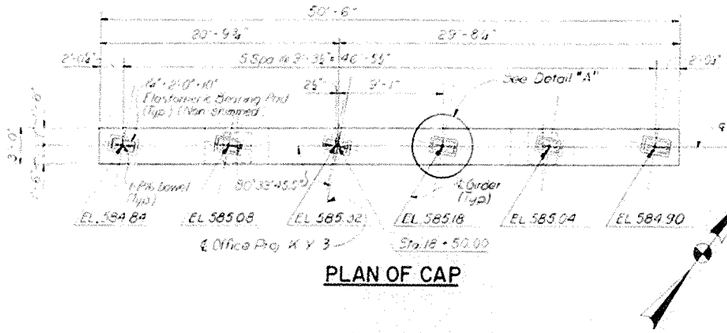
STATION 20+2000 P.E. PROJECT NO

PIER II DETAILS

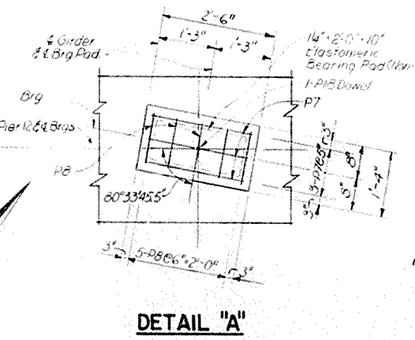
FRANKLAND AND LIENHARD

19592

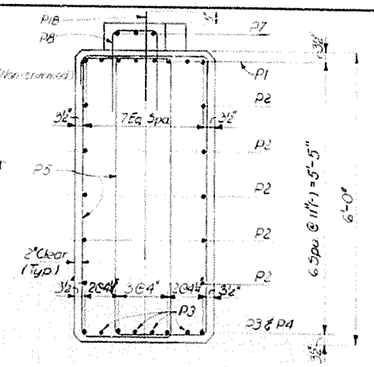
BRIDGE

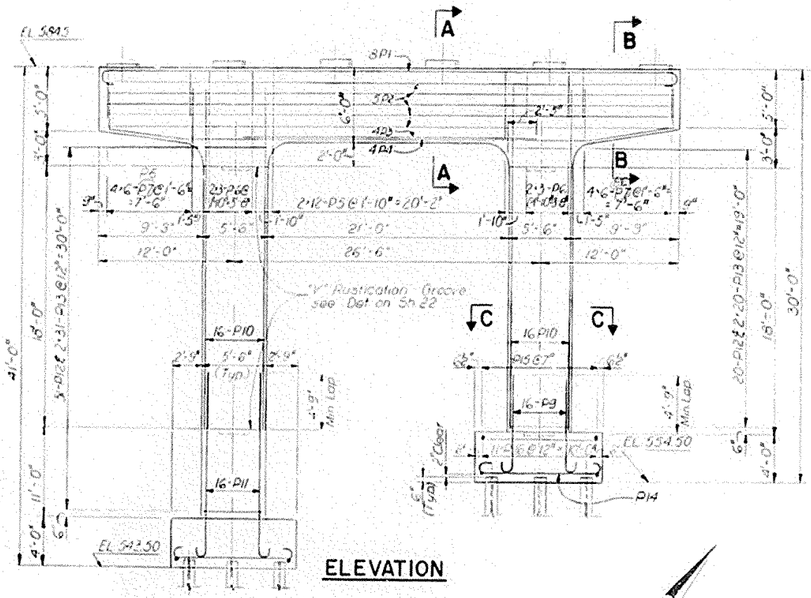


PLAN OF CAP

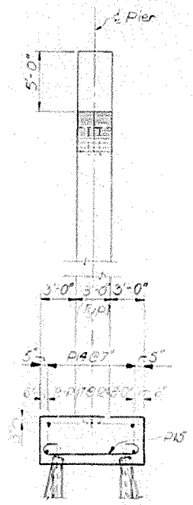


DETAIL "A"

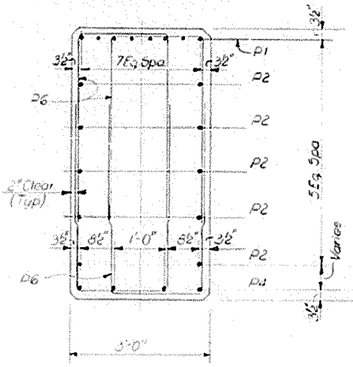




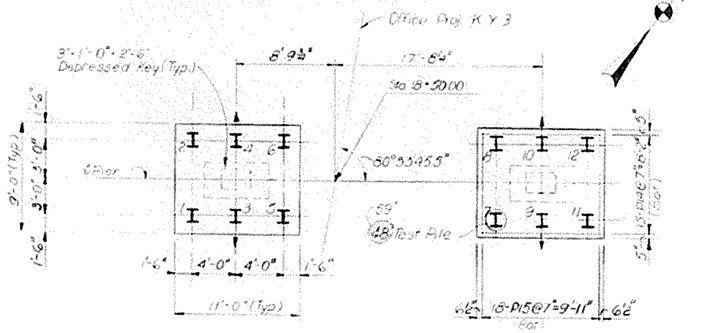
ELEVATION



END ELEVATION

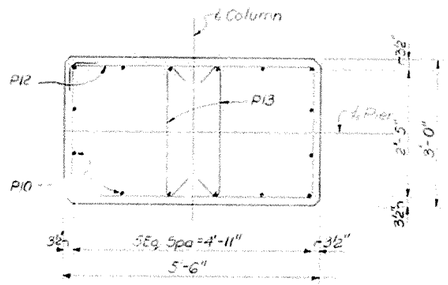


SECTION B-B



FOOTING PLAN

NOTE For Pile Record see Sheet 34
Denotes Vertical Pile
Denotes Pile Battered 1:4

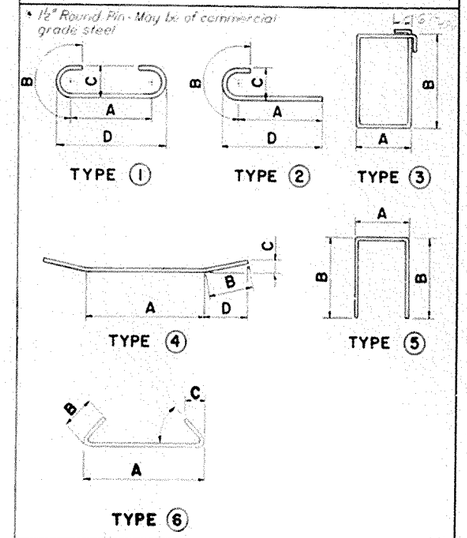


SECTION C-C

BILL OF REINFORCEMENT

Mark	Type	Size	No.	Length Ft.	Length In.	Location	A Ft.	A In.	B Ft.	B In.	C Ft.	C In.	D Ft.	D In.
P1	①	11	8	53	0	Cap	48	11½	2	0	1	24	50	2
P2	Str.	5	10	50	2	"	—	—	—	—	—	—	—	—
P3	Str.	3	4	25	10	"	—	—	—	—	—	—	—	—
P4	④	9	4	50	4	"	31	8	9	4	1	0	9	3
P5	⑤	5	24	16	1	"	2	0	5	8	—	—	—	—
P6	⑤	5	60	8	10	"	2	0	3	10	—	—	—	—
P7	Str.	5	18	2	2	Brg Pads	—	—	—	—	—	—	—	—
P8	③	5	30	4	11	"	1	0	2	0	—	—	—	—
P9	②	11	16	31	6	Columns	7	6	2	0	1	24	8	1
P10	Str.	11	32	24	9	"	—	—	—	—	—	—	—	—
P11	Str.	11	16	20	6	"	18	6	2	0	1	24	19	1
P12	③	5	51	16	5	"	2	8	5	2	—	—	—	—
P13	⑥	5	102	3	8	"	2	8	—	6	4½	—	—	—
P14	⑦	11	30	13	6	Footings	9	5½	2	0	1	24	10	8
P15	⑦	11	36	11	6	Footings	7	5½	2	0	1	24	8	8
P16	Str.	5	22	8	8	"	—	—	—	—	—	—	—	—
P17	Str.	5	18	10	8	"	—	—	—	—	—	—	—	—
P18	Str.	*	6	2	0	Cap (Dowels)	—	—	—	—	—	—	—	—

* 1½" Round Pin - May be of commercial grade steel



ESTIMATE OF QUANTITIES

ITEM	QUANTITY
Concrete, Class A	93.5 (C.Y.)
Reinforcement	(17,800) Lbs (17,953)

SHEET 33

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 L1
LOUISA-FORT GAY BRIDGE AND APPROACHES
LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA
ROAD
STATION 20+20.00 P.E. PROJECT NO.

FRANKLAND AND LIENHARD

PIER 12 DETAILS

19592

BRIDGE

PLAN OF CAP

DETAIL "A"

SECTION A-A

ELEVATION

END ELEVATION

SECTION B-B

FOOTING PLAN

SECTION C-C

BILL OF REINFORCEMENT

Mark	Type	Size	No	Length Ft	Length In	Location	A Ft	A In	B Ft	B In	C Ft	C In	D Ft	D In
P1	7	11	5	53	0	Cap	38	11½	2	0	1	24	50	3
P2	4	5	10	50	2	"								
P3	5	9	4	25	0	"								
P4	2	9	3	50	3	"	3	5	9	4	1	0	9	3
P5	3	3	24	16	1	"	2	0	5	8				
P6	6	5	6	8	10	"	2	0	3	10				
P7	5	5	16	3	7	Leg Pads	1	0	2	0				
P8	1	5	50	3	11	"	1	0	2	0				
P9	2	11	16	3	6	Columns	7	6	2	3	1	24	8	7
P10	11	11	32	24	9	"								
P11	2	11	16	60	6	"	8	6	2	0	1	24	19	7
P12	3	5	51	16	5	"	2	8	2	2				
P13	6	5	30	3	8	"	2	8		6		42		
P14	2	11	30	13	6	Footings	9	5½	2	0	1	24	10	8
P15	1	11	36	11	6	Footings	7	5½	2	0	1	24	8	8
P16	2	5	22	6	6	"								
P17	2	5	8	10	8	"								
P18	2	6	2	0		Cap (Dowels)								

TYPE (1) TYPE (2) TYPE (3)

TYPE (4) TYPE (5)

TYPE (6)

ESTIMATE OF QUANTITIES

ITEM	QUANTITY
Concrete, Class A	995 C.Y.
Reinforcement	17800 Lbs.

SHEET 83

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8), SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD

STATION 20 + 20.00 P.E. PROJECT NO.

19592

PIER 12 DETAILS

FRANKLAND AND LIENHARD

BRIDGE

PILE RECORD

ABUTMENT 1

PILE	CUT OFF ELEV.	TIP ELEV.	LENGTH FEET	CALCULATED BRG. CAPACITY (TONS)
1	574.50			
2	"			
* 4	"			
5	569.50			
6	"			
7	"			
8	"			
9	"			
10	"			
11	"			
12	"			

PIER 1

PILE	CUT OFF ELEV.	TIP ELEV.	LENGTH FEET	CALCULATED BRG. CAPACITY (TONS)
1	542.903			
2	"			
3	"			
4	"			
5	"			
6	"			
7	"			
8	"			
9	"			
10	"			
11	"			
12	"			

PIER 4

PILE	CUT OFF ELEV.	TIP ELEV.	LENGTH FEET	CALCULATED BRG. CAPACITY (TONS)
1	542.859			
2	"			
3	"			
4	"			
5	"			
6	"			
7	"			
8	"			
9	"			
10	"			
11	"			
12	"			

PIER 5

PILE	CUT OFF ELEV.	TIP ELEV.	LENGTH FEET	CALCULATED BRG. CAPACITY (TONS)
22	540.189			
23	"			
24	"			
25	"			
26	"			
27	"			
28	"			
29	"			
30	"			
31	"			
32	"			
33	"			
34	"			
35	"			
36	"			
37	"			
38	"			
39	"			
40	"			
41	"			
42	"			
43	"			

PIER 6

PILE	CUT OFF ELEV.	TIP ELEV.	LENGTH FEET	CALCULATED BRG. CAPACITY (TONS)
1	540.640			
2	"			
3	"			
4	"			
5	"			
6	"			
7	"			
8	"			
9	"			
10	"			
11	"			
12	"			

PIER 7

PILE	CUT OFF ELEV.	TIP ELEV.	LENGTH FEET	CALCULATED BRG. CAPACITY (TONS)
22	549.571			
23	"			
24	"			
25	"			
26	"			
27	"			
28	"			
29	"			
30	"			
31	"			
32	"			
33	"			
34	"			
35	"			
36	"			
37	"			
38	"			
39	"			
40	"			
41	"			
42	"			
43	"			

PIER 10

PILE	CUT OFF ELEV.	TIP ELEV.	LENGTH FEET	CALCULATED BRG. CAPACITY (TONS)
1	552.534			
2	"			
3	"			
4	"			
5	"			
6	"			
7	"			
8	"			
9	"			
10	"			
11	"			
12	"			

ABUTMENT 2

PILE	CUT OFF ELEV.	TIP ELEV.	LENGTH FEET	CALCULATED BRG. CAPACITY (TONS)
44	550.00			
45	"			
46	"			
47	"			
48	"			
49	"			
50	"			
51	"			
52	"			
53	"			
54	"			
55	"			
56	"			
57	"			
58	"			
59	"			
60	"			
61	"			
62	"			
63	"			

PIER 12

PILE	CUT OFF ELEV.	TIP ELEV.	LENGTH FEET	CALCULATED BRG. CAPACITY (TONS)
23	556.50			
24	"			
25	"			
26	"			
27	"			
28	"			
29	"			
30	"			
31	"			
32	"			
33	565.50			
34	"			
35	"			
36	"			
37	"			
38	"			
39	570.50			
* 40	"			
41	"			
42	"			
43	"			

PILE	CUT OFF ELEV.	TIP ELEV.	LENGTH FEET	CALCULATED BRG. CAPACITY (TONS)
1	544.30			
2	"			
3	"			
4	"			
5	"			
6	"			
* 7	"			
8	"			
9	"			
10	"			
11	"			
12	"			

ABUTMENT 3

PILE	CUT OFF ELEV.	TIP ELEV.	LENGTH FEET	CALCULATED BRG. CAPACITY (TONS)
1	571.50			
2	"			
3	"			
4	566.50			
5	"			
6	"			
7	"			
8	"			
9	"			
10	"			
11	"			
12	"			

PILE	CUT OFF ELEV.	TIP ELEV.	LENGTH FEET	CALCULATED BRG. CAPACITY (TONS)
31	568.50			
32	"			
33	"			
* 34	"			
35	"			
36	569.00			
37	"			
38	"			
39	"			
40	"			
41	"			
42	"			
43	"			
44	"			
45	"			
46	"			
47	"			
48	"			
49	"			
50	572.50			
51	"			
52	"			
53	"			
54	"			
55	"			
56	"			
57	"			
58	574.50			
59	"			
60	"			
61	"			
62	"			
63	"			

NOTE:

This Pile Record does not replace other records of piles required to be kept and submitted by the Resident Engineer.

After all piles have been driven, the Resident Engineer shall record the tip of pile elevation as driven, the length of pile in place, the calculated bearing capacity of each pile, and shall return one blue print copy of this sheet with the data to the Director, Division of Bridges, so that the data may be recorded on the original plans.

Lengths of piles in place shown hereon are the actual lengths of piles in the finished structure below the cut off elevation.

Battered piles are indicated on the respective sheets on Footing Plan.

Piles are to be battered thus: Abutments 1 3
Piers 1 4

Work this sheet with Sheets 12 thru 33

* Indicates Test Pile

** Denotes piles eliminated from pile pattern

SHEET 34

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8), SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD

STATION 20+200 P.E. PROJECT NO

PILE RECORD

FRANKLAND AND LIENHARD

15592

BRIDGE

PILE RECORD

ABUTMENT 1

PILE	CUT OFF ELEV.	TIP ELEV.	LENGTH FEET	CALCULATED BRG. CAPACITY (TONS)
1				
2				
3				
4				
5	569.50			

PIER 1

PILE	CUT OFF ELEV.	TIP ELEV.	LENGTH FEET	CALCULATED BRG. CAPACITY (TONS)
1	546.50			
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				

PIER 4

PILE	CUT OFF ELEV.	TIP ELEV.	LENGTH FEET	CALCULATED BRG. CAPACITY (TONS)
1	540.89			
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				

PIER 5

PILE	CUT OFF ELEV.	TIP ELEV.	LENGTH FEET	CALCULATED BRG. CAPACITY (TONS)
1	549.17			
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				

PIER 6

PILE	CUT OFF ELEV.	TIP ELEV.	LENGTH FEET	CALCULATED BRG. CAPACITY (TONS)
1	549.17			
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				

PIER 7

PILE	CUT OFF ELEV.	TIP ELEV.	LENGTH FEET	CALCULATED BRG. CAPACITY (TONS)
1	549.371			
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				

PIER 10

PILE	CUT OFF ELEV.	TIP ELEV.	LENGTH FEET	CALCULATED BRG. CAPACITY (TONS)
1	549.296			
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				

ABUTMENT 2

PILE	CUT OFF ELEV.	TIP ELEV.	LENGTH FEET	CALCULATED BRG. CAPACITY (TONS)
1	527.50			
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				

PIER 12

PILE	CUT OFF ELEV.	TIP ELEV.	LENGTH FEET	CALCULATED BRG. CAPACITY (TONS)
1	550.50			
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22	565.50			
23				
24				
25				
26				
27				
28				
29				
30				
31				
32				
33				
34				
35				
36				
37				
38				
39				
40				
41				
42				
43	570.50			

ABUTMENT 3

PILE	CUT OFF ELEV.	TIP ELEV.	LENGTH FEET	CALCULATED BRG. CAPACITY (TONS)
1	554.50			
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22	566.50			
23				
24				
25				
26				
27				
28				
29				
30				
31				
32				
33				
34				
35				
36				
37				
38				
39				
40				
41				
42				
43				
44				
45				
46				
47				
48				
49				
50	572.50			
51				
52				
53				
54				
55				
56				
57				
58	574.50			
59				
60				
61				
62				
63				

NOTE:

This Pile Record does not replace other records of piles required to be kept and submitted by the Resident Engineer.

After all piles have been driven, the Resident Engineer shall record the tip of pile elevation as driven, the length of pile in place, the calculated bearing capacity of each pile, and shall return one blue print copy of this sheet with the data to the Director, Division of Bridges, so that the data may be recorded on the original plans.

Lengths of piles in place show hereon are the actual lengths of piles in the finished structure below the cut-off elevation.

Battered piles are indicated on the respective sheets on Footing Plan.

Piles are to be battered thus: Abutments: 1 : 3
Piers: 1 : 4

Work this sheet with Sheets 12 thru 33.

* *Indicates Test Pile.*

SHEET 34

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8), SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD

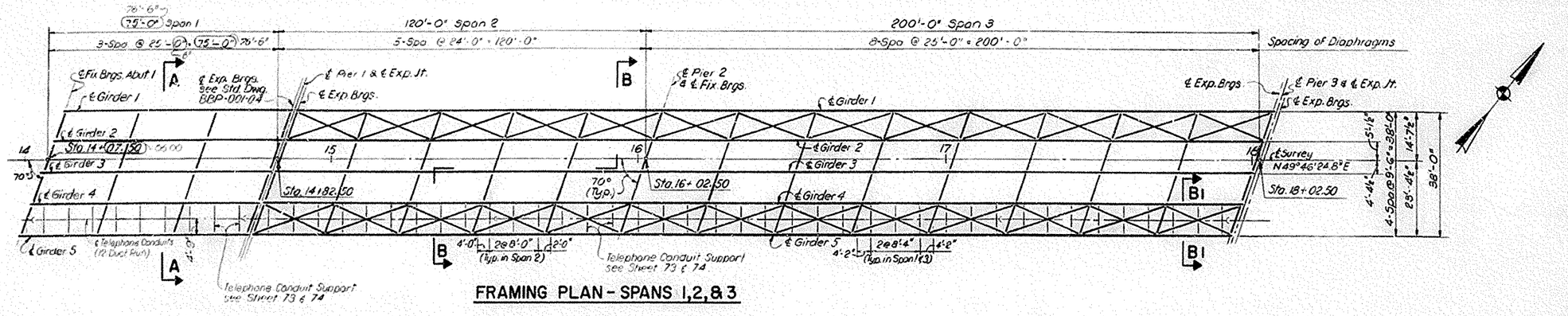
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CONSTRUCTION PROJECT NO. MAINTENANCE PROJECT NO. DRAWING NO. 19592

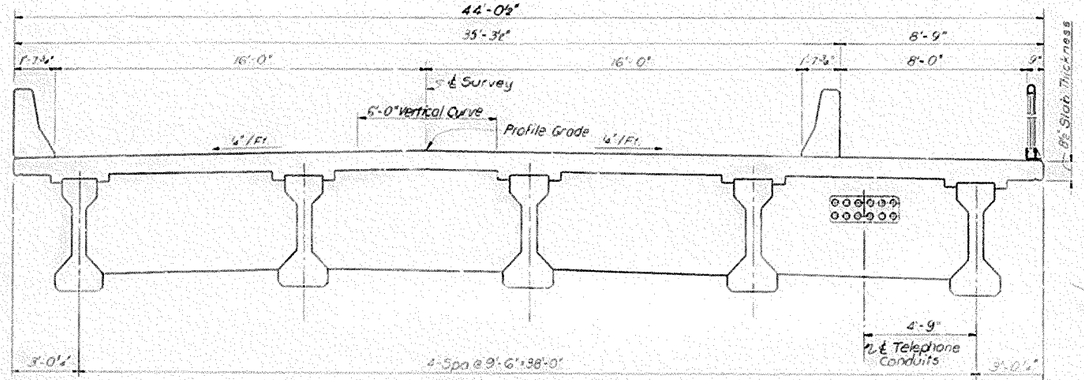
PILE RECORD

FRANKLAND AND LIENHARD

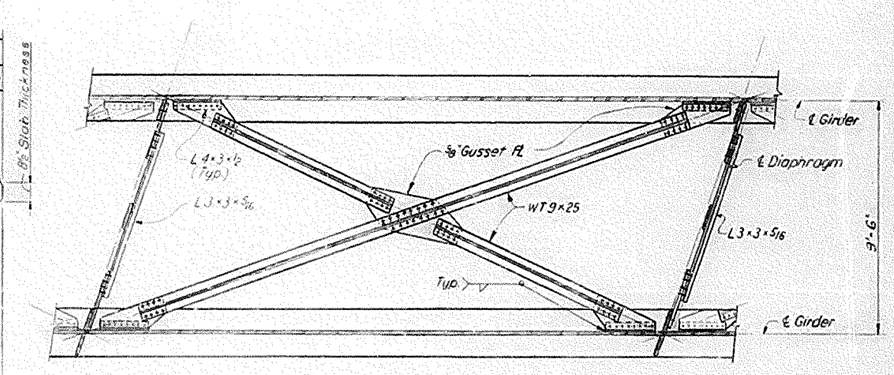
BRIDGE



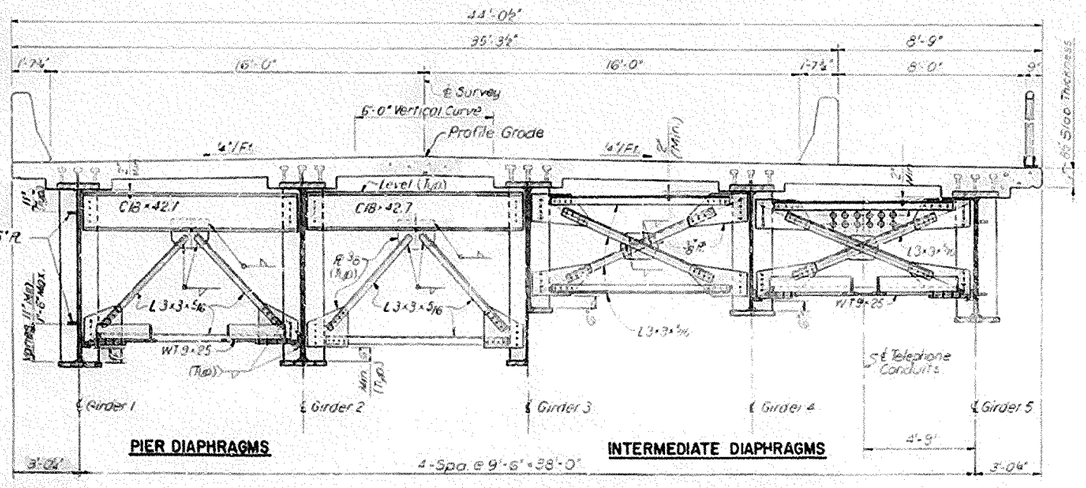
FRAMING PLAN - SPANS 1,2,& 3



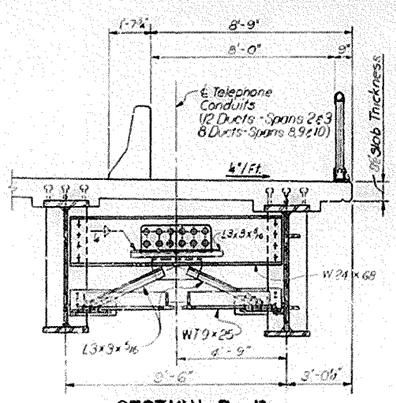
SECTION A-A (SPAN 1,11 & 12)



PLAN - LATERAL BRACING



SECTION B-B (SPAN 2,3 & 8 THRU 10)



SECTION B1-B1

SPAN 2,3,8,9 & 10
FRAMING PLAN

NOTES:

For General Notes see Sheet 2&3.
For PPCI Beams Details see Sheet 38.
For Steel Plate Girder Details see Sheet 41&42.
For Details of Telephone conduit & supports see Sheet 73 & 74.
For Structural Steel designations see Sheet 41.

SHEET 35

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA - FORT GAY BRIDGE AND APPROACHES
LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA
ROAD

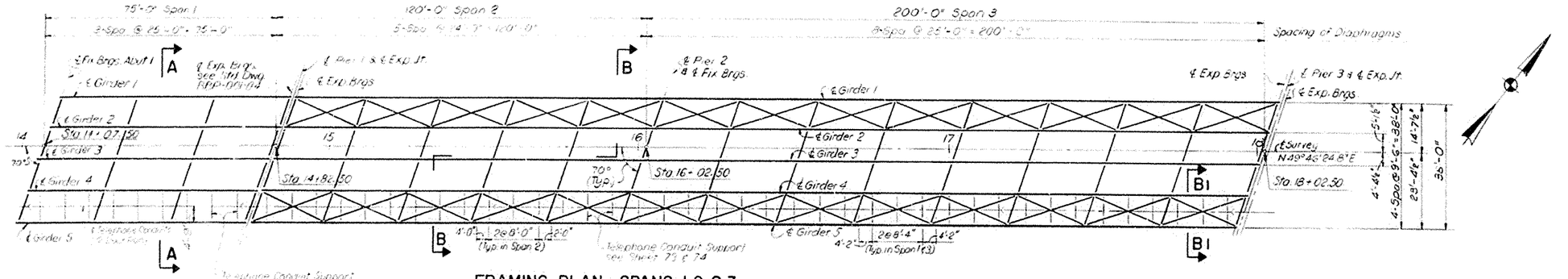
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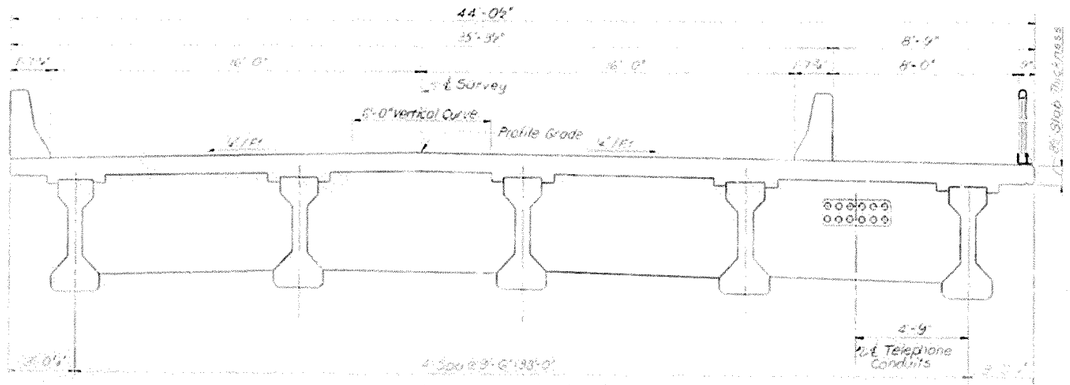
FRANKLAND AND LIENHARD

UPDATE DATE
LETTING DATE

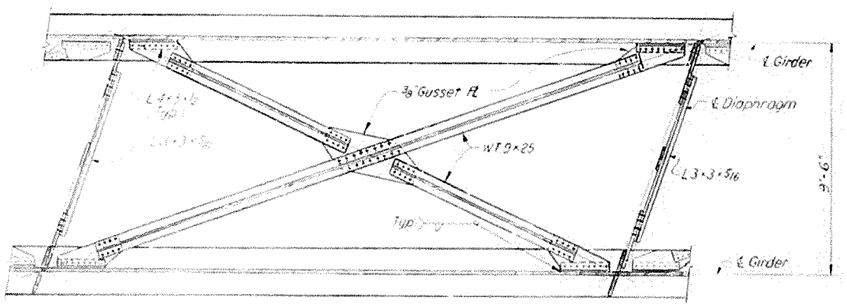
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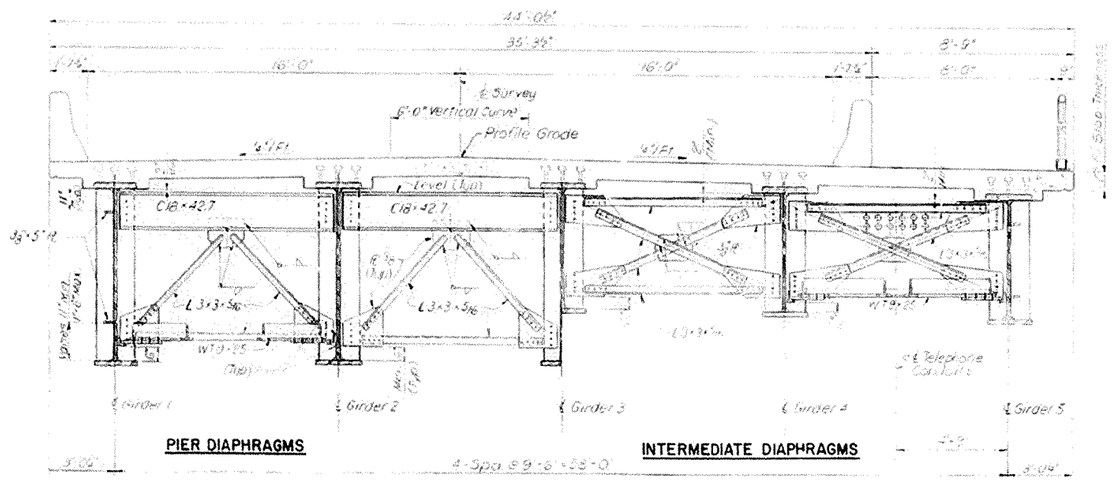
FRAMING PLAN - SPANS 1,2,& 3



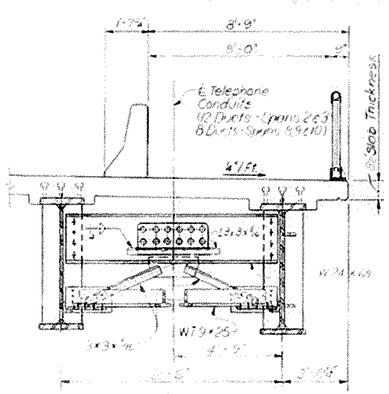
SECTION A-A (SPAN 1,11 & 12)



PLAN - LATERAL BRACING



SECTION B-B (SPAN 2,3 & 8 THRU 10)



SECTION B1-B1

SPAN 2,3,8,9 & 10
FRAMING PLAN

NOTES:

For General Notes see Sheet 2&3.
For PPCI Beams Details see Sheet 38.
For Steel Plate Girder Details see Sheet 41 & 42.
For Details of Telephone conduit & supports see Sheet 73 & 74.
For Structural Steel designations see Sheet 41.

SHEET 35

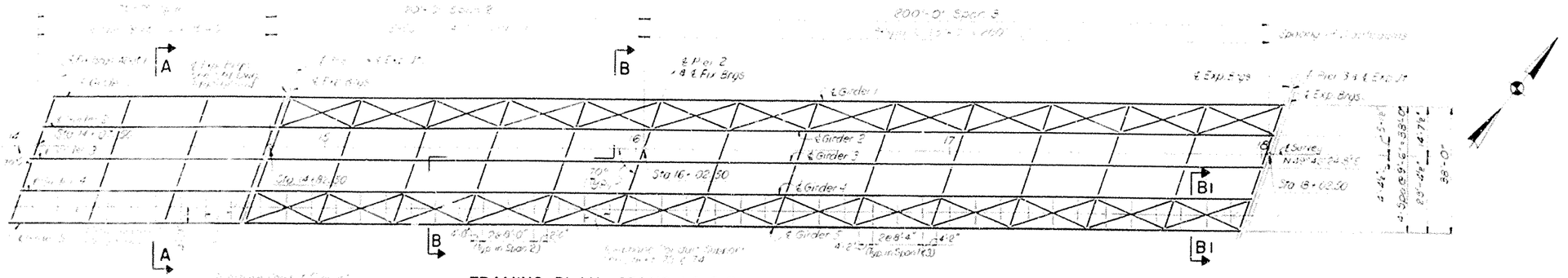
KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8) ; SP 64-33-14 LI
LOUISA - FORT GAY BRIDGE AND APPROACHES
LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA
ROAD
STATION 20+20.00 P.E. PROJECT NO.

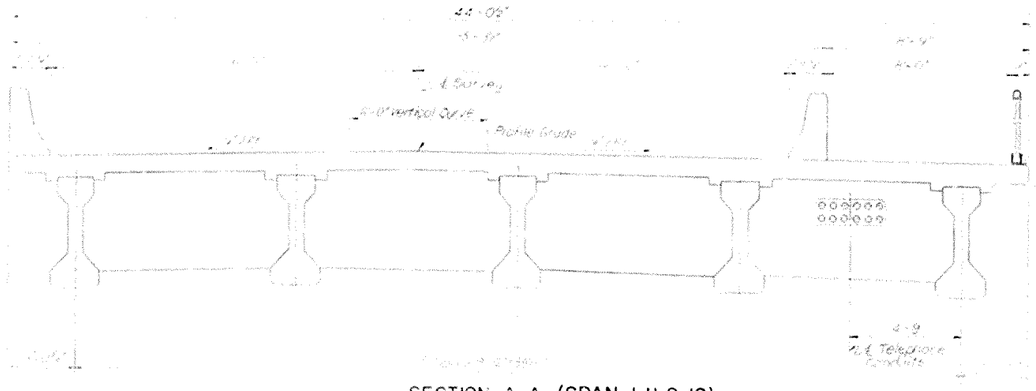
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LETTING DATE

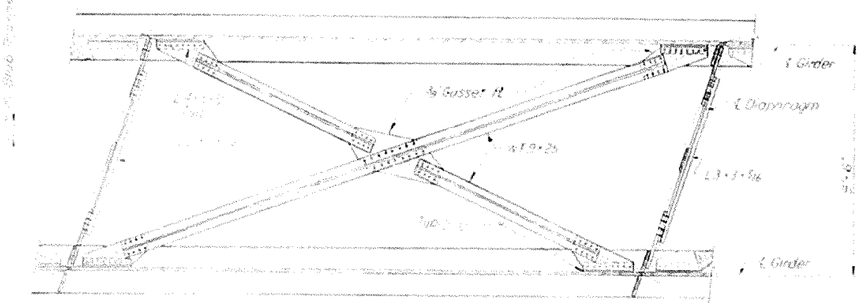
BRIDGE



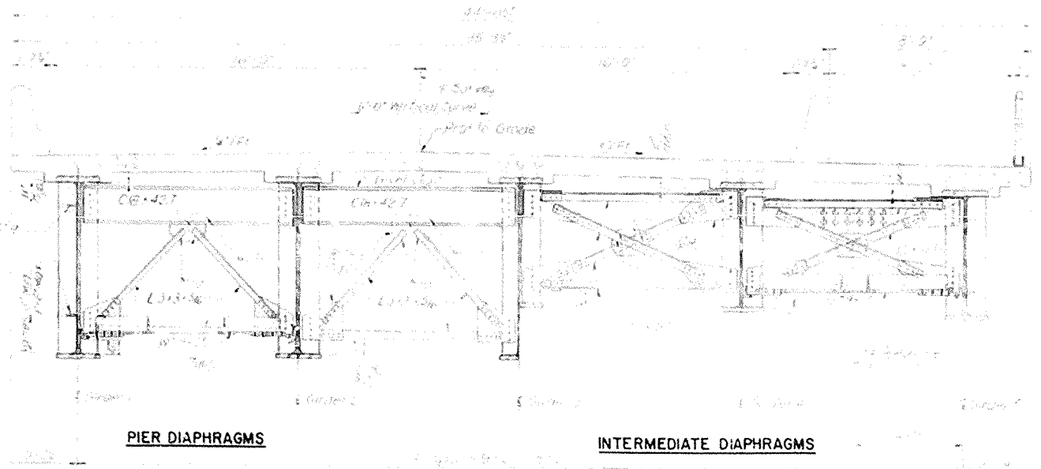
FRAMING PLAN - SPANS 1,2,& 3



SECTION A-A (SPAN 1,11 & 12)



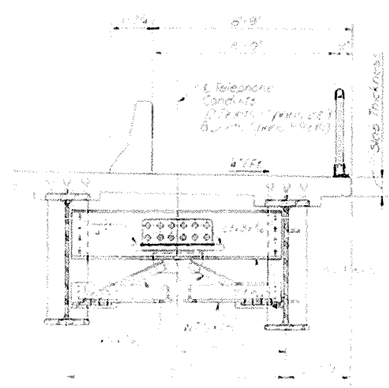
PLAN - LATERAL BRACING



PIER DIAPHRAGMS

INTERMEDIATE DIAPHRAGMS

SECTION B-B (SPAN 2,3 & 8 THRU 10)



SECTION B1-B1

SPAN 2,3,8,9 & 10
FRAMING PLAN

NOTES:

For General Notes see Sheet 2C3.
For Erection Notes see Sheet 3C.
For Steel Plate Girder Details see Sheet 21B2.
For Expansion Devices & Expansion Joint Details see Sheet 7B.

SHEET 3C

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA - FORT GAY BRIDGE AND APPROACHES
LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA
ROAD

STATION 20+20.00 P.E. PROJECT NO

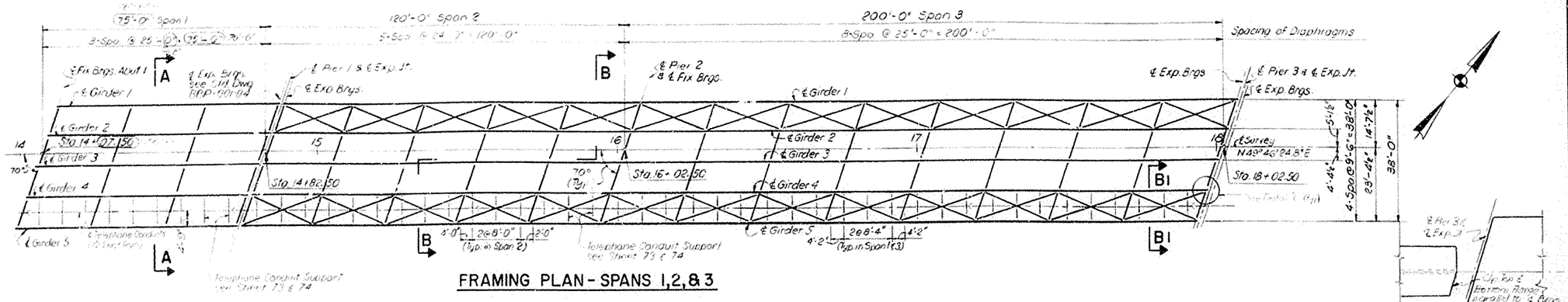
FRANKLAND AND LIENHARD

CONSTRUCTION PROJECT NO | MAINTENANCE PROJECT NO | DRAWING NO. 19592

BRIDGE

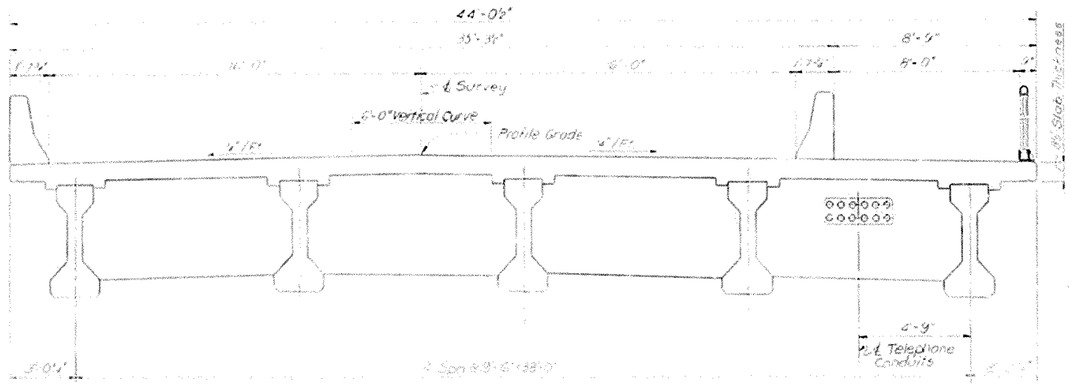
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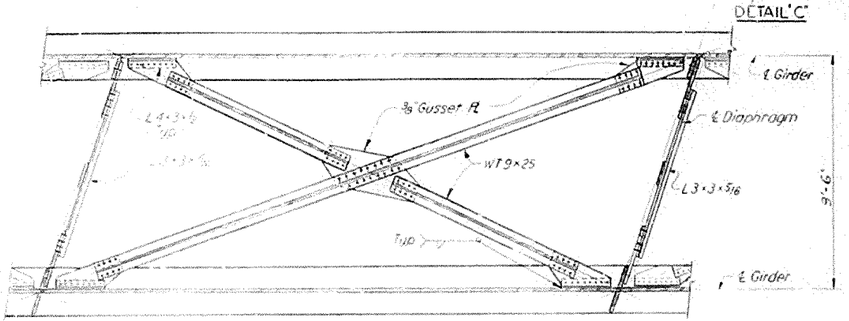


FRAMING PLAN - SPANS 1,2,& 3

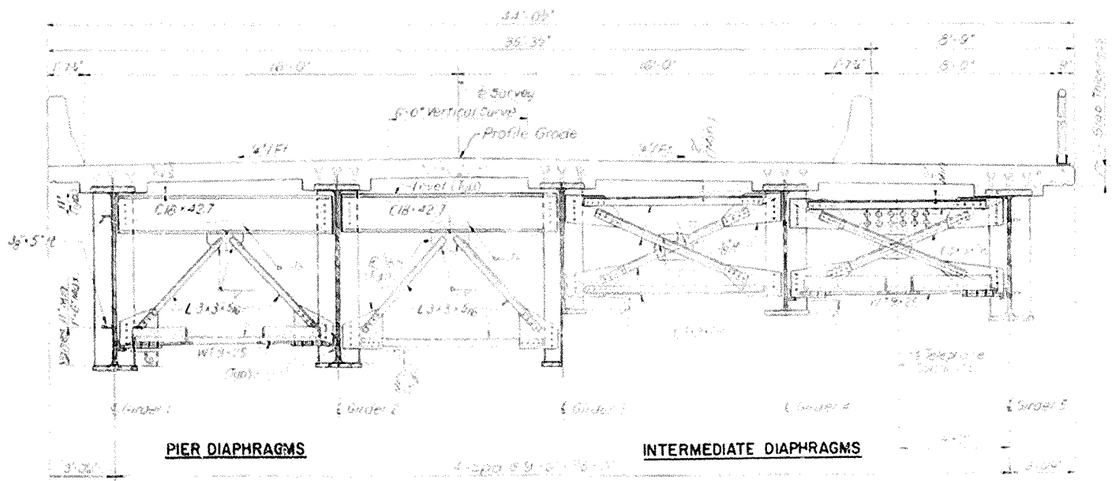
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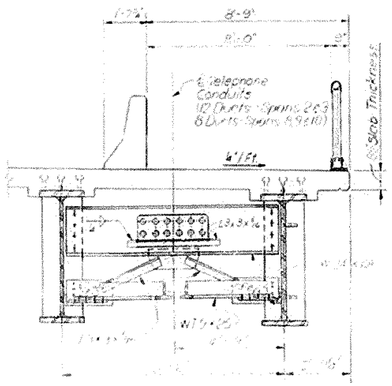
SECTION A-A (SPAN 1,11 & 12)



PLAN - LATERAL BRACING



SECTION B-B (SPAN 2,3 & 8 THRU 10)



SECTION B1-B1

SPAN 2,3,8,9 & 10
FRAMING PLAN

NOTES:

For General Notes see Sheet 2&3.
For PPCI Beams Details see Sheet 38
For Steel Plate Girder Details see Sheet 41 & 42.
For Details of Telephone Conduit & Supports See Sheet 73 & 74.
For Structural Steel designations see Sheet 31.

SHEET 35

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

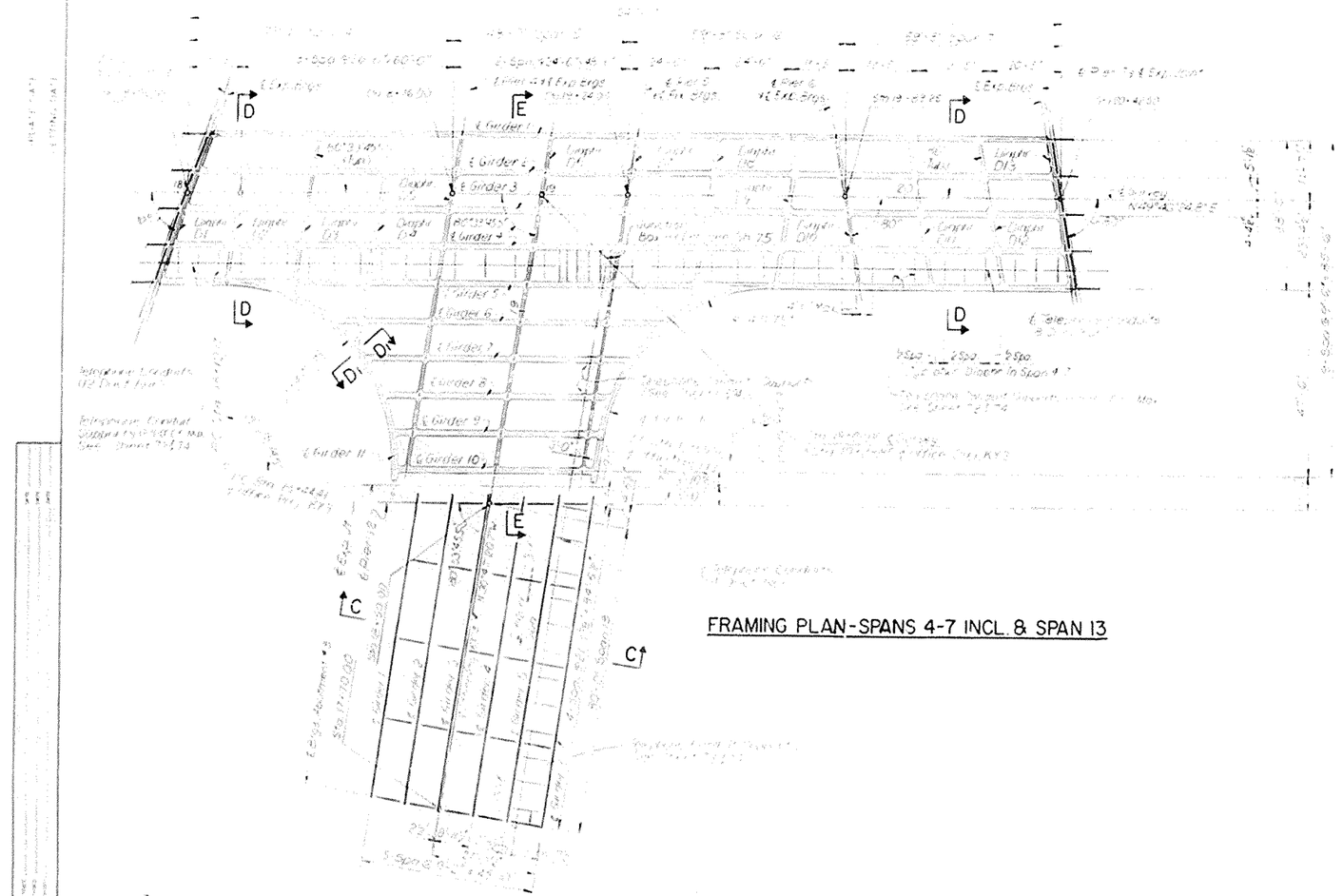
PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA - FORT GAY BRIDGE AND APPROACHES
LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA
ROAD

STATION 20+20.00 | P.E. PROJECT NO.

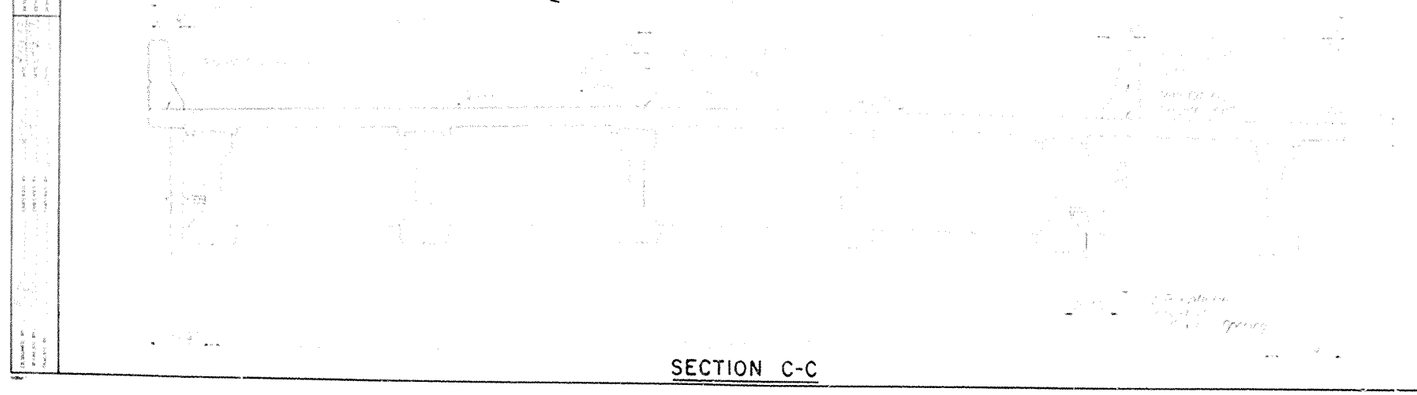
CONSTRUCTION PROJECT NO. | MAINTENANCE PROJECT NO. | DRAWING NO. 19592

FRANKLAND AND LIENHARD

BRIDGE



FRAMING PLAN-SPANS 4-7 INCL. & SPAN 13



SECTION C-C

NOTE:

For Section D-D, D'-D', & E-E' see Sheet 58.
For PCI Piles - Details - see Sheet 49.
For Details of Temporary Support - see Sheet 7 (54 of 79).

SHEET 30

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA - FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD

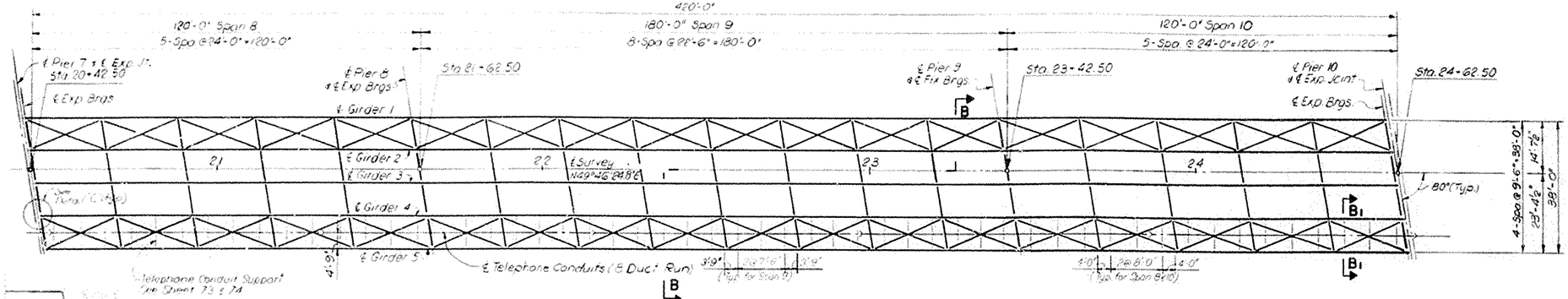
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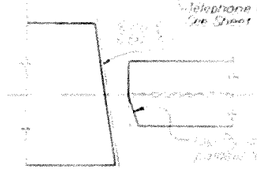
SPAN 4 THRU 7 & 13
FRAMING PLAN

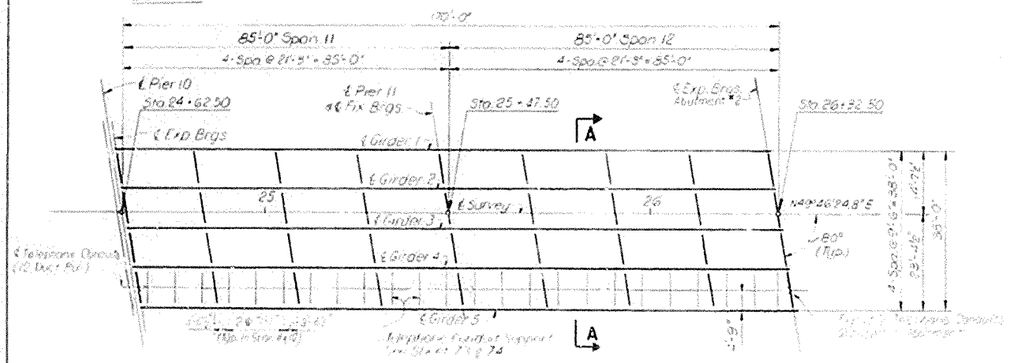
FRANKLAND AND LIENHARD

BRIDGE

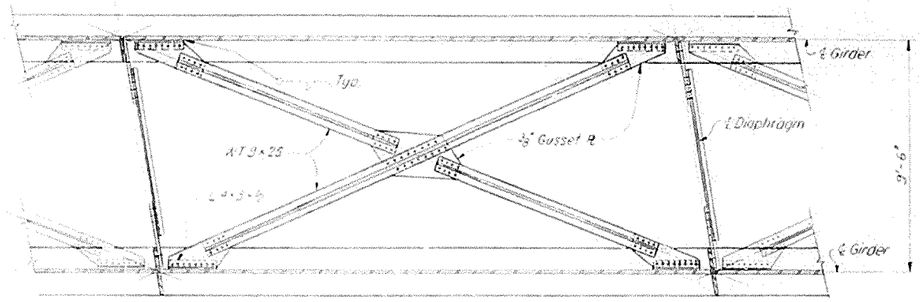


FRAMING PLAN - SPANS 8, 9 & 10





FRAMING PLAN - SPANS 11 & 12



PLAN - LATERAL BRACING

NOTE:

For Section A-A, B-B & B1-B1 see Sheet 35.
For Girder Elevation and Details see Sheet 41, 42.
For PPCI Beams Details see Sheet 39.
For Details of Telephone Conduit & Supports see Sheet 73 & 74.
For Structural Steel designations see Sheet 41

SHEET 37

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA - FORT GAY BRIDGE AND APPROACHES

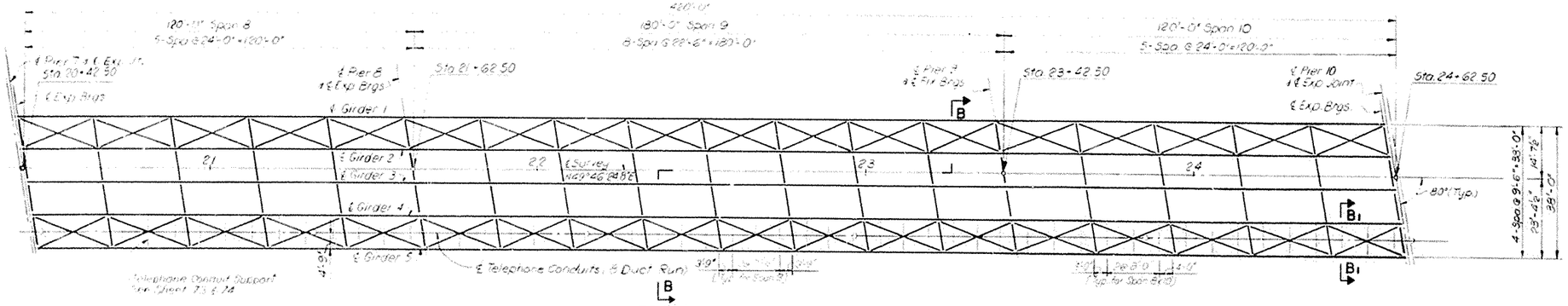
LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA
ROAD

STATION 20 + 20.00 | P.E. PROJECT NO. | CONSTRUCTION PROJECT NO. | MAINTENANCE PROJECT NO. | DRAWING NO. 19592

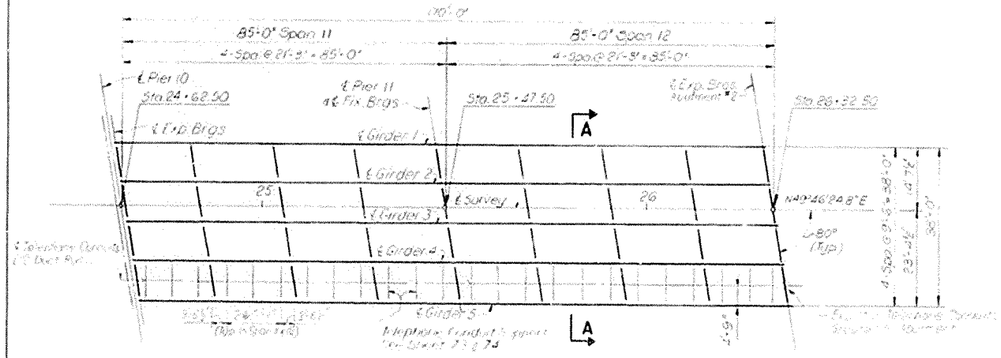
SPAN 8 THRU 12
FRAMING PLAN

FRANKLAND AND LIENHARD

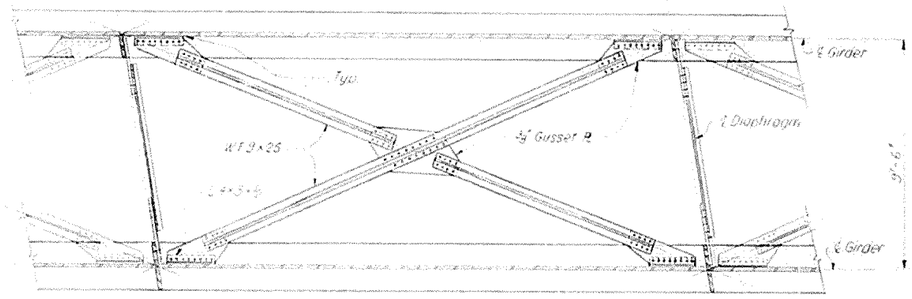
BRIDGE



FRAMING PLAN - SPANS 8, 9 & 10



FRAMING PLAN - SPANS 11 & 12



PLAN - LATERAL BRACING

NOTE:

For Section A-A, B-B & B1-B1 see Sheet 35.
For Girder Elevation and Details see Sheet 41 & 42.
For PPCI Beams Details see Sheet 39.
For Details of Telephone Conduit & Supports see Sheet 73 & 74.
For Structural Steel designations see Sheet 41.

SHEET 37

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA - FORT GAY BRIDGE AND APPROACHES
LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA
ROAD

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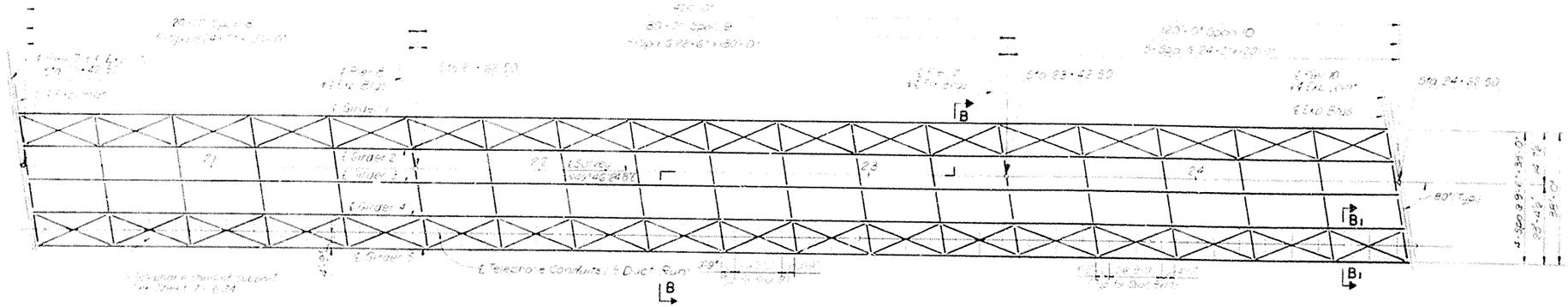
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SPAN 8 THRU 12
FRAMING PLAN

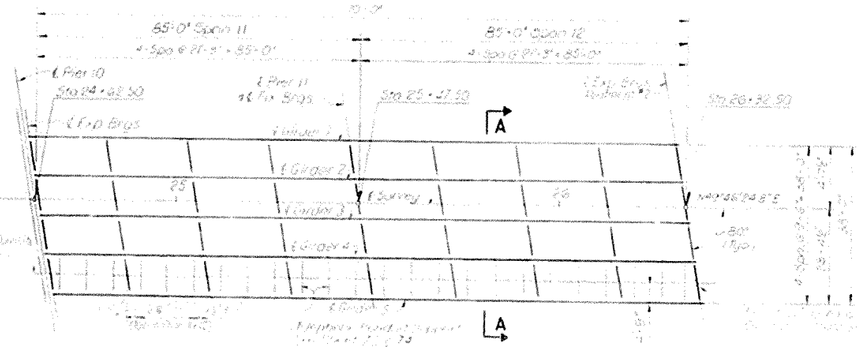
FRANKLAND AND LIENHARD

UPDATE DATE
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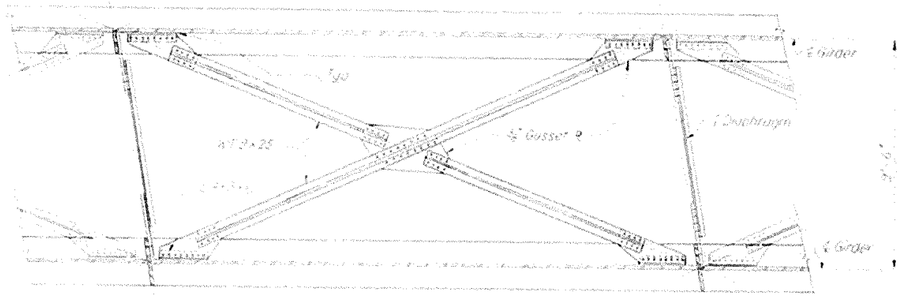
BRIDGE



FRAMING PLAN - SPANS 8,9 & 10



FRAMING PLAN - SPANS 11 & 12



PLAN - LATERAL BRACING

NOTE:

For Section A-A, B-B & B1-B1 see Sheet 35
For Girder Elevation and Details see Sheet 31 & 32
For PPCI Beams Details see Sheet 39
For Details of Diaphragm Cradle & Supports
see Sheet 73 & 74

SHEET 37

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA - FORT GAY BRIDGE AND APPROACHES
LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA
ROAD

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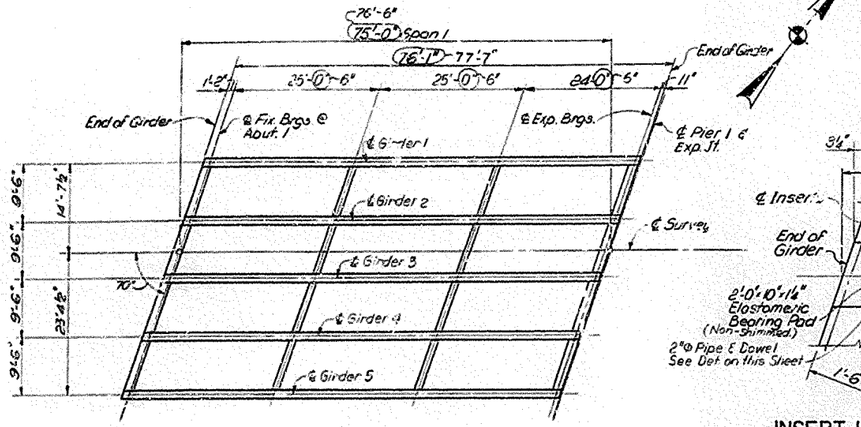
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SPAN 8 THRU 12
FRAMING PLAN

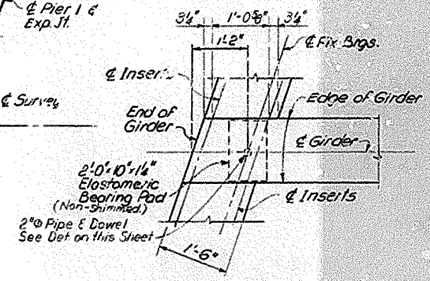
FRANKLAND AND LIENHARD

BRIDGE

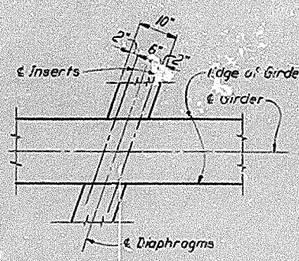
LETTING DATE



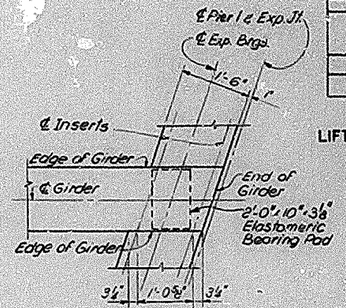
FRAMING PLAN



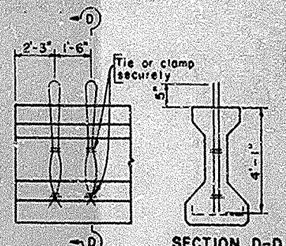
INSERT LOCATION AT ABUTMENT I DIAPHRAGMS



INSERT LOCATION AT INTERMEDIATE DIAPHRAGMS

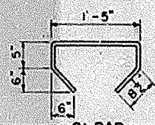


INSERT LOCATION AT PIER I DIAPHRAGMS

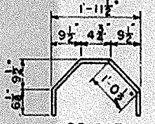


DETAIL "L"

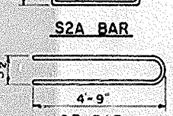
NOTE Lifting shall be by equal loads to each pair of loops



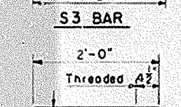
S1 BAR



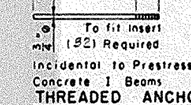
S2 BAR



S2A BAR

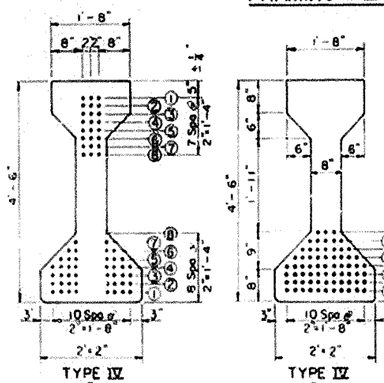


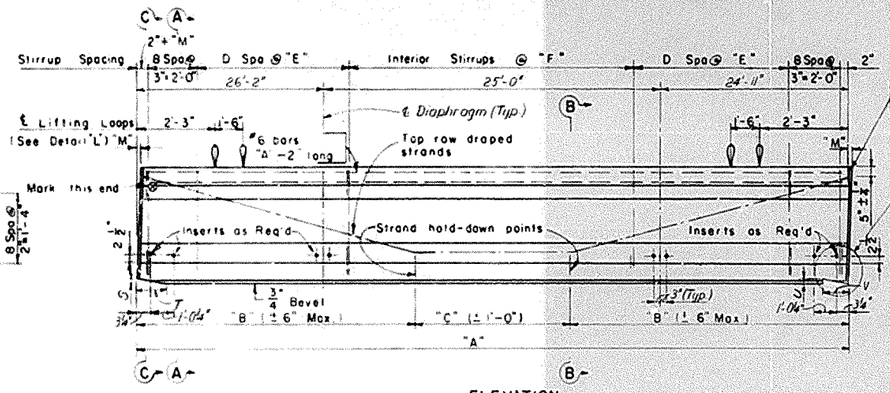
S3 BAR



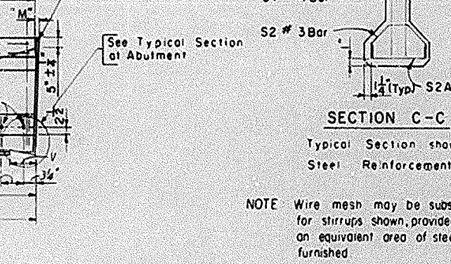
Incidental to Prestressed Concrete I Beams

THREADED ANCHOR BAR DETAIL





ELEVATION



SECTION C-C

Typical Section showing Steel Reinforcement

NOTE Wire mesh may be substituted for stirrups shown, provided that an equivalent area of steel is furnished

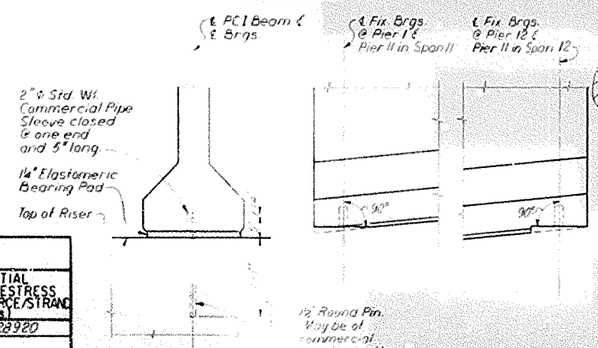
* These Dimensions Given on ℄ of Beams

BEAM DIMENSIONS *

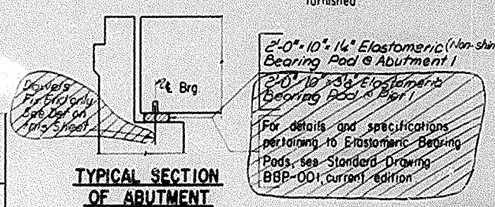
MARK	NO REQD	DIMENSIONS A	B	C	D	E	F	S	T	M	U	V	APPROX WEIGHT EACH
S1 thru 65	5	76'-1" 77'-7"	6'-0" 5'-11"	18'-0" 18'-6"	50 51	6¾"	18"	½"	1'-8½"	14"	⅝"	1'-4⅞"	62545 Lbs. 63778

NUMBER OF 1/2 Ø-7 WIRE STRANDS IN INDICATED ROW

MARK	MIDSPAN (SECTION B-B) BOTTOM (1)	(2)	(3)	(4)	(5)	(6)	(7)	END (SECTION A-A) BOTTOM (1)	(2)	(3)	(4)	(5)	(6)	(7)	TOP (1)	(2)	(3)	TOTAL NO	INITIAL PRESTRESS FORCE/STRAND (lbs)
S1 thru 65	11	11	8	–	–	–	–	8	8	8	–	–	–	–	9	3	–	50	28920



TYP. DETAIL OF DOWELS AT FIXED ENDS



TYPICAL SECTION OF ABUTMENT

(Showing Elastomeric Brg. Pad)

NOTE Elastomeric Bearing Pads are incidental to Prestressed Beams

NOTE : Work this Sheet with Sheet 35

PRESTRESSED-CONCRETE I BEAM TYPE IV DETAILS

SPAN 1

SHEET 38

KENTUCKY BUREAU OF HIGHWAYS AND WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431( ); SP 64-33-14 LI

LOUISA-FORT GAY BRIDGE AND APPROACHES

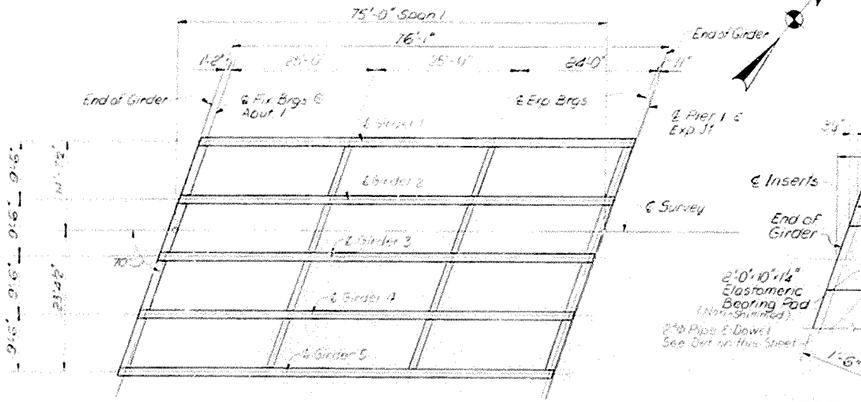
LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY WEST VIRGINIA

ROAD

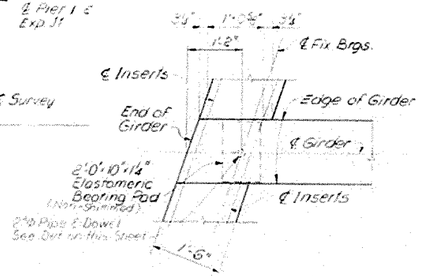
STATION | P.E. PROJECT NO. | CONSTRUCTION PROJECT NO | MAINTENANCE PROJECT NO | DRAWING NO 19592

BRIDGE

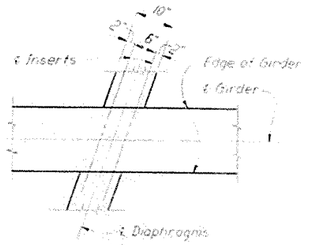
LETTING DATE



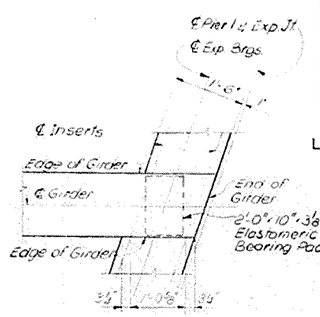
FRAMING PLAN



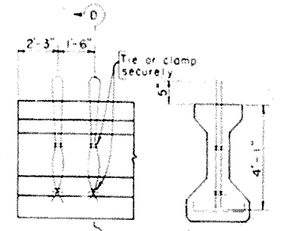
INSERT LOCATION AT
ABUTMENT 1 DIAPHRAGMS



INSERT LOCATION AT
INTERMEDIATE DIAPHRAGMS

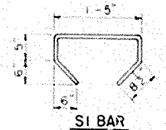


INSERT LOCATION AT
PIER 1 DIAPHRAGMS

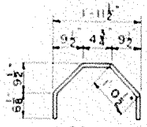


DETAIL "L"

NOTE Lifting shall be by equal loads to each pair of loops



S1 BAR



S2 BAR



S2A BAR



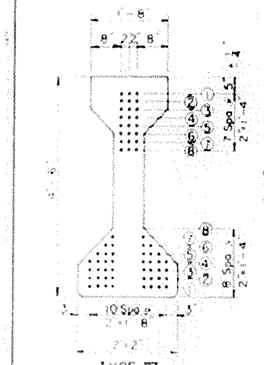
S3 BAR



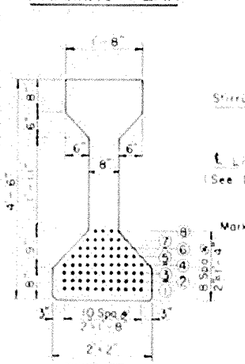
Incidental to Prestressed Concrete I Beams

THREADED ANCHOR BAR DETAIL

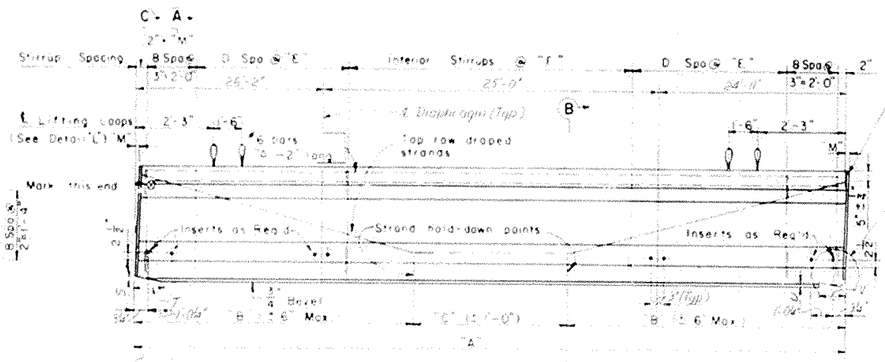
NOTE
Work this Sheet with Sheet 35



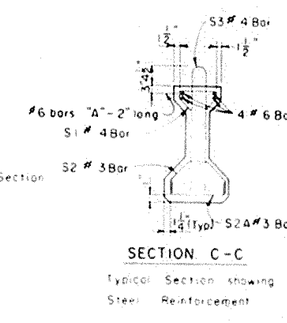
SECTION A-A



SECTION B-B



ELEVATION



SECTION C-C

Typical Section showing Steel Reinforcement

NOTE Wire mesh may be substituted for stirrups shown, provided that an equivalent area of steel is furnished

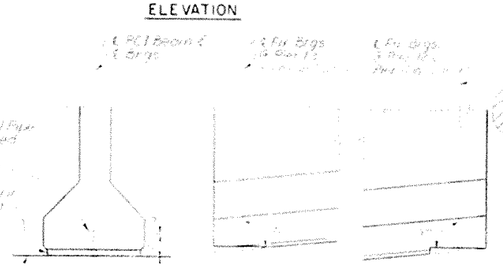
* These Dimensions Given on ℄ of Beams

BEAM DIMENSIONS*

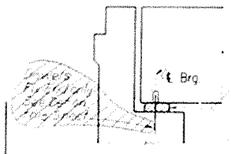
MARK	NO REQD	DIMENSIONS A	B	C	D	E	F	S	T	W	U	V	APPROX WEIGHT EACH
S1 thru S5	5	2'-5"	29'-0"	2'-0"	30	6⅜	18"	8"	12	14	12	1'-3"	62,425 lbs

NUMBER OF ½ ø-7 WIRE STRANDS IN INDICATED ROW

MARK	MIDSPAN (SECTION B-B) BOTTOM ①	②	③	④	⑤	⑥	⑦	END (SECTION A-A) BOTTOM ①	②	③	④	⑤	⑥	⑦	TOP ①	②	③	TOTAL NO	INITIAL PRESTRESS FORCE/STRAND (lbs)
S1 thru S5	11	11	8	-	-	-	-	8	8	5	-	-	-	-	5	5	-	50	28920



TYP. DETAIL OF DOWELS AT FIXED ENDS



TYPICAL SECTION OF ABUTMENT

(Showing Elastomeric Brg Pad)

2'-0"x10"x1¼" Elastomeric (Non-Shrinkable) Bearing Pad @ Abutment 1

2'-0"x10"x3⅜" Elastomeric Bearing Pad @ Bent 1

For details and specifications pertaining to Elastomeric Bearing Pads, see Standard Drawing BBP-001, current edition

NOTE Elastomeric Bearing Pads are incidental to Prestressed Beams

PRESTRESSED-CONCRETE I BEAM
TYPE IV DETAILS
SPAN 1

SHEET 38

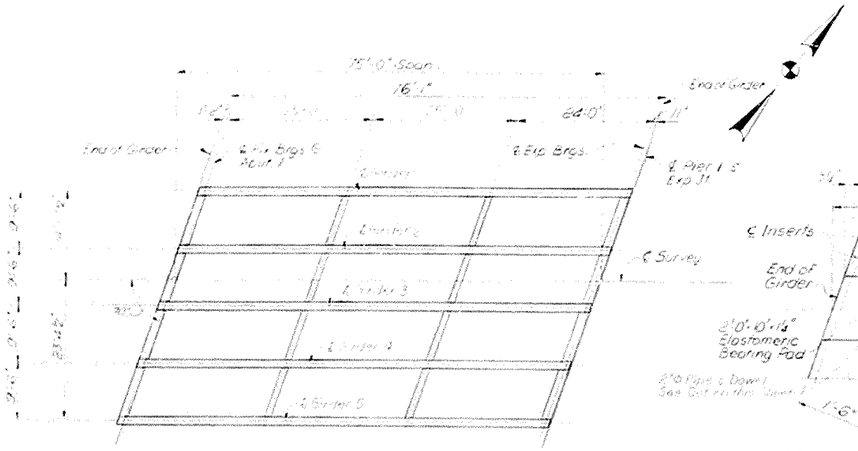
KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431( ); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES
LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY WEST VIRGINIA
ROAD

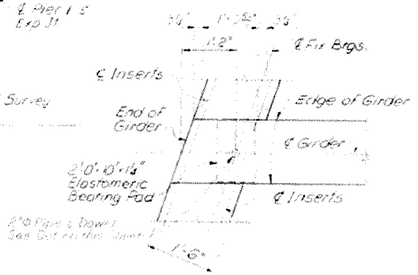
STATION P.E. PROJECT NO.

CONSTRUCTION PROJECT NO. MAINTENANCE PROJECT NO. DRAWING NO.
19592

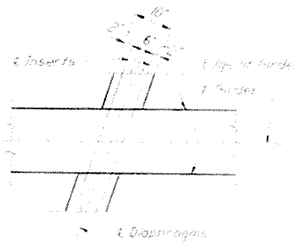
BRIDGE



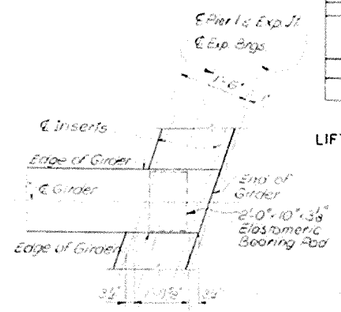
FRAMING PLAN



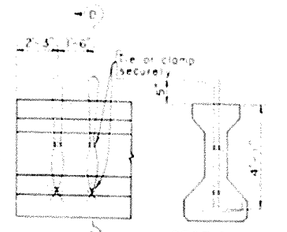
INSERT LOCATION AT
ABUTMENT 1 DIAPHRAGMS



INSERT LOCATION AT
INTERMEDIATE DIAPHRAGMS

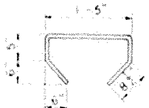


INSERT LOCATION AT
PIER 1 DIAPHRAGMS



DETAIL "L"

NOTE: Lifting shall be by equal loads to each pair of loops



S1 BAR



S2 BAR



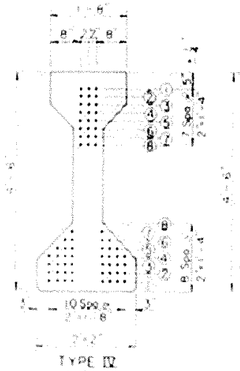
S2A BAR

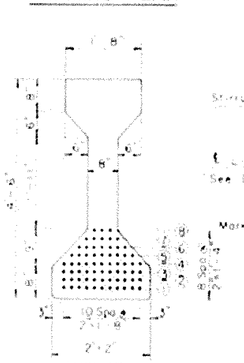


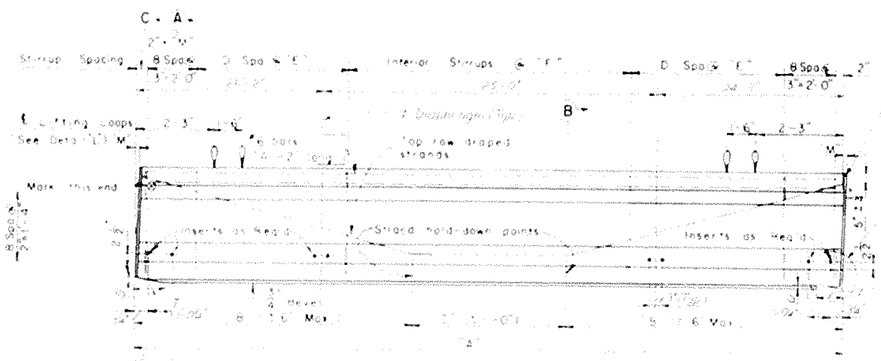
S3 BAR

INCIDENTAL TO PRESTRESSED CONCRETE I BEAMS

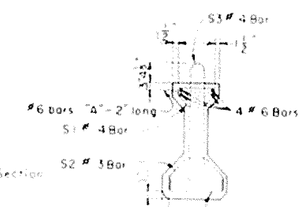
THREADED ANCHOR BAR DETAIL







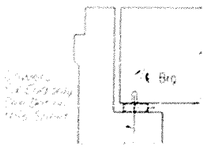
ELEVATION



SECTION C-C

Typical Section showing Steel Reinforcement

NOTE: Wire mesh may be substituted for stirrups shown, providing that an equivalent area of steel is furnished



TYPICAL SECTION
OF ABUTMENT

(Showing Elastomeric Brg. Pad)

2'-0"x10"x1¼" Elastomeric Bearing Pad @ Abutment 1
2'-0"x10"x3⅜" Elastomeric Bearing Pad @ Pier 1

For details and specifications pertaining to Elastomeric Bearing Pads, see Standard Drawing BBP-001, current edition

NOTE: Work this Sheet with Sheet 15

NOTE: Elastomeric Bearing Pads are incidental to Prestressed Beams

*These Dimensions Given on ℄ of Beams

BEAM DIMENSIONS *

MARK	NO. REQD.	DIMENSIONS A	B	C	D	E	F	G	H	J	K	L	APPROX. WEIGHT EACH
Of Pieces	5	8'-0"	11'-0"	2'-0"	2'-0"	3"	3"	3"	3"	3"	3"	3"	27,200

NUMBER OF ½" ℄ 270 K WIRE STRANDS IN INDICATED ROW

MARK	MIDSPAN (SECTION B-B) BOTTOM 1	2	3	4	5	6	7	END (SECTION A-A) BOTTOM 1	2	3	4	5	6	7	TOP 1	2	3	TOTAL NO.	INITIAL PRESTRESS FORCE/STRAND (KIPS)
Of Pieces	0	10	10					4	4	4					2	2	2	10	32.6

TYP. DETAIL OF DOWELS AT FIXED ENDS

PRESTRESSED-CONCRETE I BEAM
TYPE IV DETAILS
SPAN 1

SHEET 88

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431( ); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

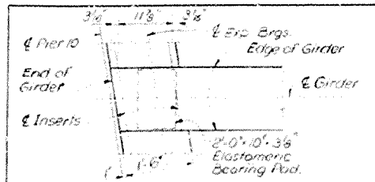
LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY WEST VIRGINIA
ROAD

STATION | P.E. PROJECT NO.

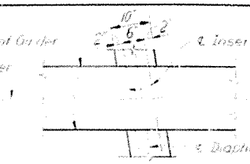
19592

BRIDGE

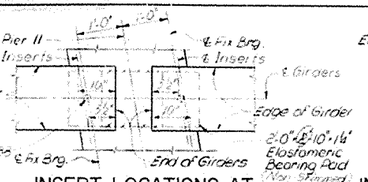
LETTING DATE



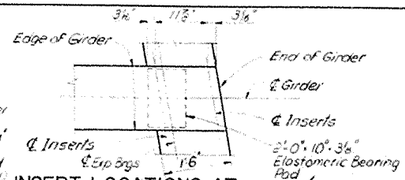
INSERT LOCATIONS AT PIER 10 DIAPHRAGMS



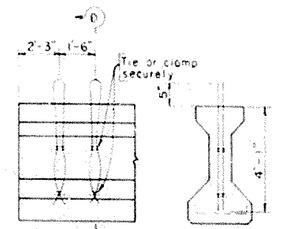
INSERT LOCATIONS AT INTERMEDIATE DIAPHRAGMS



INSERT LOCATIONS AT PIER 11 DIAPHRAGMS

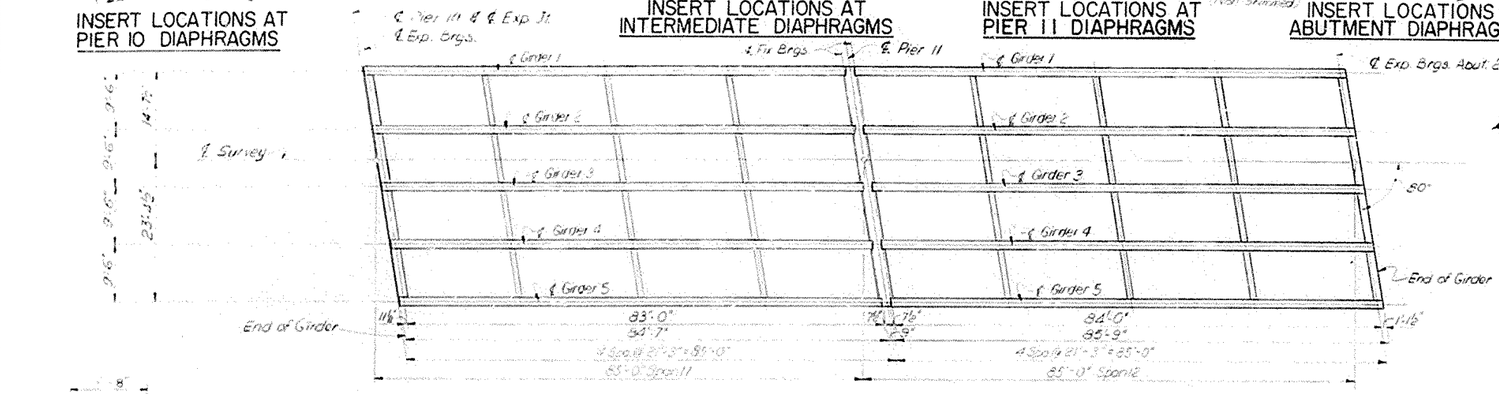


INSERT LOCATIONS AT ABUTMENT DIAPHRAGMS

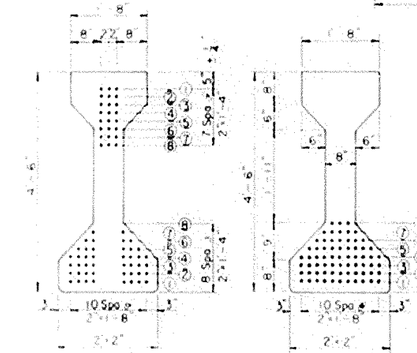


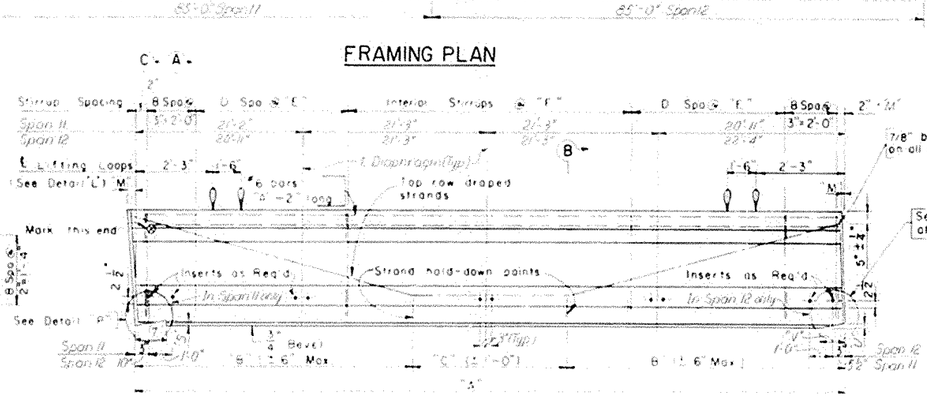
DETAIL "L"

NOTE: Lifting shall be by equal loads to each pair of loops

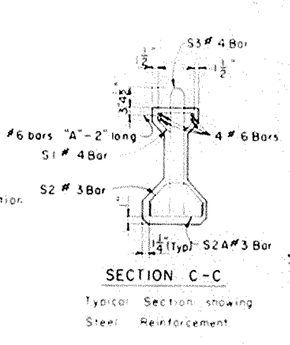


FRAMING PLAN





ELEVATION



SECTION C-C

Typical Section showing Steel Reinforcement

NOTE: Wire mesh may be substituted for stirrups shown, provided that an equivalent area of steel is furnished

THREADED ANCHOR BAR DETAIL

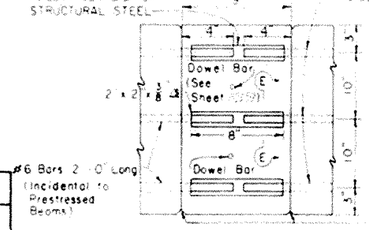
* These Dimensions Given on ℄ of Beams

BEAM DIMENSIONS *

MARK	NO REQD	DIMENSIONS A	B	C	D	E	F	S	T	M	U	V	APPROX WEIGHT EACH
S1 thru S5 Span 11	5	36"	31'-4½"	23'-3"	52"	6½"	18"	9"	1'-6"	4"	36"	1'-6"	62527 LBS
S1 thru S5 Span 12	5	30'-3"	31'-4½"	23'-3"	52"	6½"	18"	9"	1'-6"	4"	8"	1'-7½"	62687 LBS

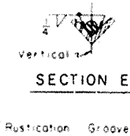
NUMBER OF ½" Ø 7 WIRE STRANDS IN INDICATED ROW

MARK	MIDSPAN (SECTION B-B) BOTTOM ①	②	③	④	⑤	⑥	⑦	END (SECTION A-A) BOTTOM ①	②	③	④	⑤	⑥	⑦	TOP ①	②	③	TOTAL NO	INITIAL PRESTRESS FORCE/STRAND (lbs)
S1 thru S5 Spans 11 & 12	2	2	2					2	2	2					2	2	2	31	42600

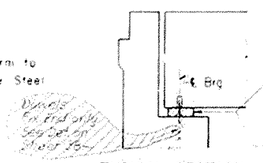


DETAIL "P"

(Typical At Pier 11)



SECTION E-E



TYPICAL SECTION OF ABUTMENT

(Showing Elastomeric Brg. Pad)

For details and specifications pertaining to Elastomeric Bearing Pads, see Standard Drawing BBP-001, current edition

NOTE: Elastomeric Bearing Pads are incidental to Prestressed Beams

NOTE: Work this Sheet with Sheet 37

PRESTRESSED-CONCRETE I BEAM TYPE IV DETAILS

SPAN 11 & 12

SHEET 39

KENTUCKY BUREAU OF HIGHWAYS AND WEST VIRGINIA DEPARTMENT OF H...WAYS

PROJECT BRS 431( ); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

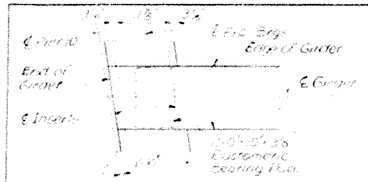
LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY WEST VIRGINIA

ROAD

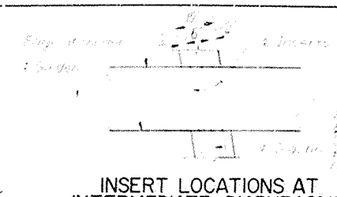
STATION | P.E. PROJECT NO. | CONSTRUCTION PROJECT NO. | MAINTENANCE PROJECT NO. | DRAWING NO. 19592

BRIDGE

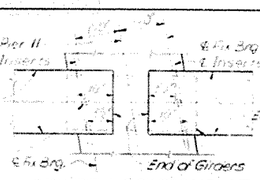
LETTING DATE



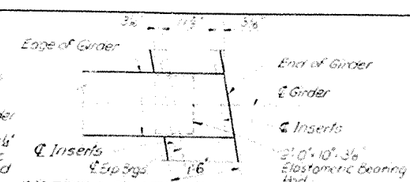
INSERT LOCATIONS AT PIER 10 DIAPHRAGMS



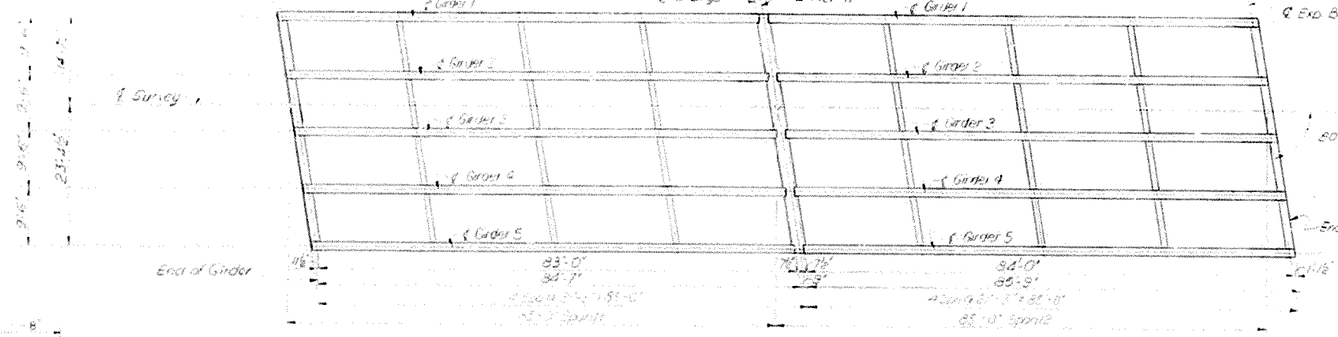
INSERT LOCATIONS AT INTERMEDIATE DIAPHRAGMS



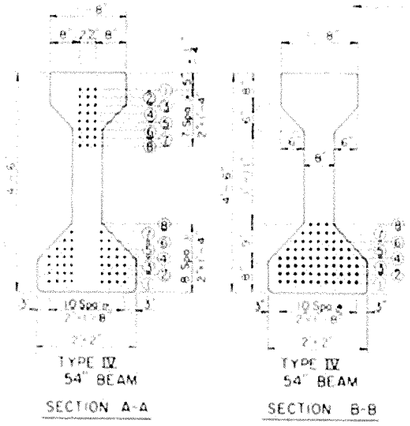
INSERT LOCATIONS AT PIER 11 DIAPHRAGMS

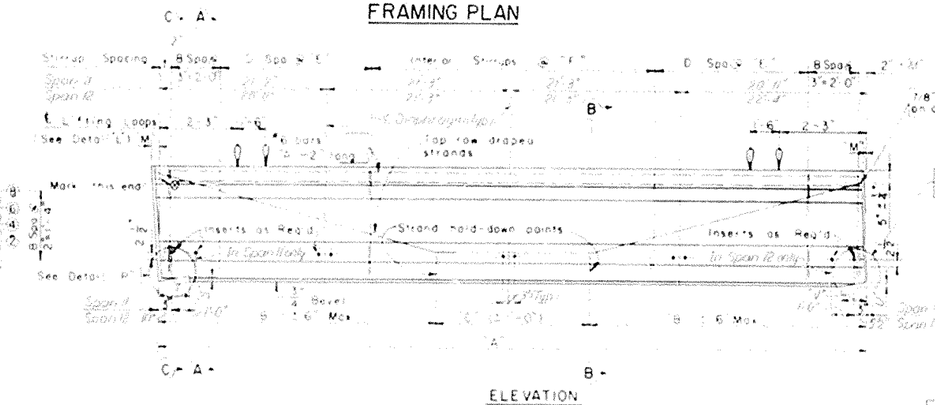


INSERT LOCATIONS AT ABUTMENT DIAPHRAGMS

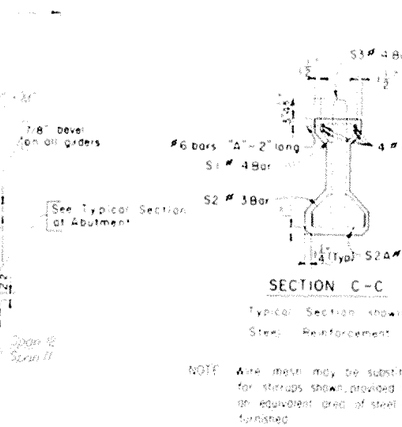


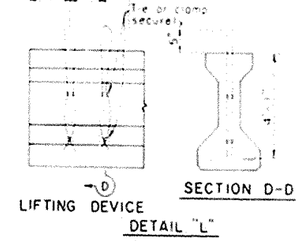
FRAMING PLAN





ELEVATION





DETAIL "L"

NOTE: Lifting shall be by equal loads to each pair of loops



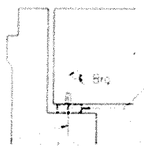








NOTE: Auto metal may be substituted for stirrups shown, provided that an equivalent area of steel is furnished.

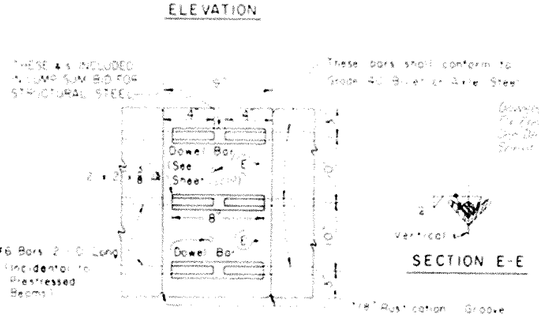


2'-0" x 2'-10" x 1⅛" Elastomeric Bearing Pad @ Pier 11

2'-0" x 2'-10" x 3⅛" Elastomeric Bearing Pad @ Pier 10 & Abutment 2

For details and specifications pertaining to Elastomeric Bearing Pads, see Standard Drawing BBP-001, current edition.

NOTE: Work this Sheet with Sheet 37.



DETAIL "P"

SECTION E-E

NOTE: Elastomeric Bearing Pads are incidental to Prestressed Beams

* These Dimensions Given at ℄ of Beams

BEAM DIMENSIONS *

MARK	NO. REQD.	DIMENSIONS A	B	C	D	E	F	G	H	J	K	APPROX. WEIGHT EACH
S1 Mark at Stirrups												
S2 Mark at Stirrups												
S3 Mark at Spirals												

NUMBER OF ½" Ø 7 WIRE STRANDS IN INDICATED ROW

MARK	MIDSPAN (SECTION B-B) BOTTOM							END (SECTION A-A) BOTTOM							TOP			TOTAL NO.	INITIAL PRESTRESS FORCE/STRAND (lbs.)
	①	②	③	④	⑤	⑥	⑦	①	②	③	④	⑤	⑥	⑦	①	②	③		
S1 Mark at Stirrups																			
S2 Mark at Stirrups																			
S3 Mark at Spirals																			

PRESTRESSED-CONCRETE I BEAM
TYPE IV DETAILS
SPAN 11 & 12

SHEET 39

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

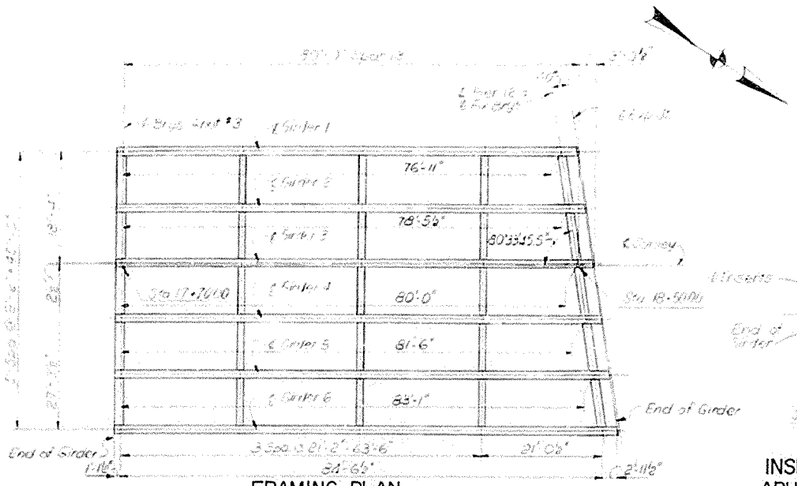
PROJECT BRS 431( ); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES
LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY WEST VIRGINIA

ROAD
STATION P.E. PROJECT NO.

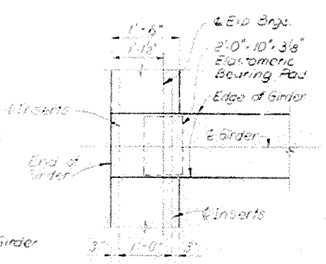
19592

BRIDGE

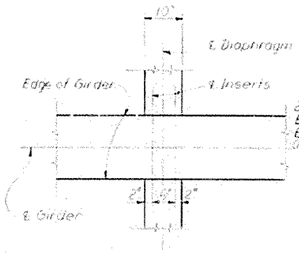
LETTING DATE



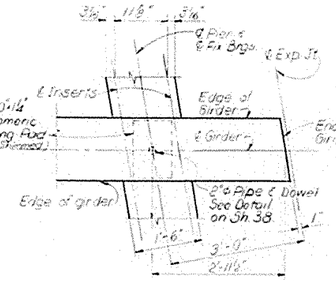
FRAMING PLAN



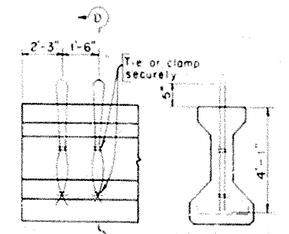
INSERT LOCATION AT ABUTMENT 3 DIAPHRAGMS



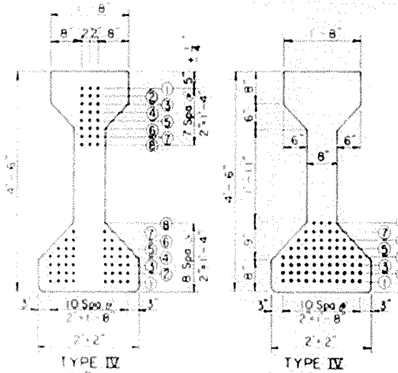
INSERT LOCATION AT INTERMEDIATE DIAPHRAGMS

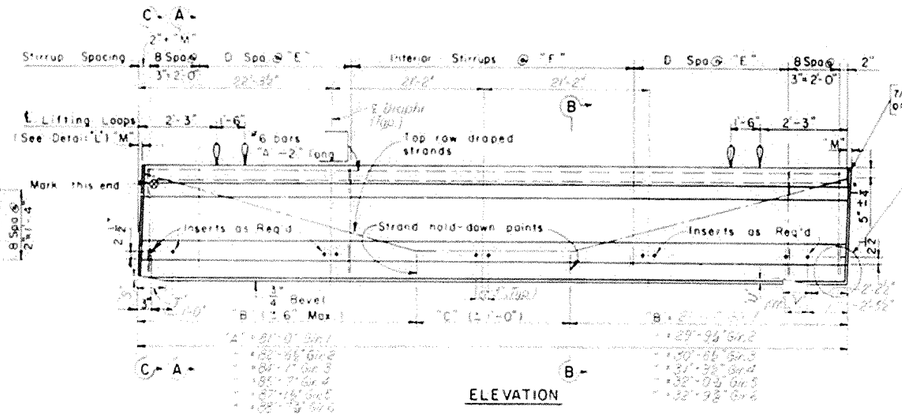


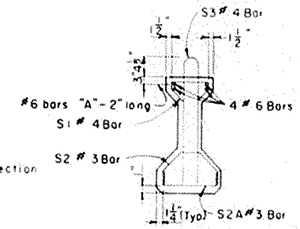
INSERT LOCATION AT PIER 12 DIAPHRAGMS



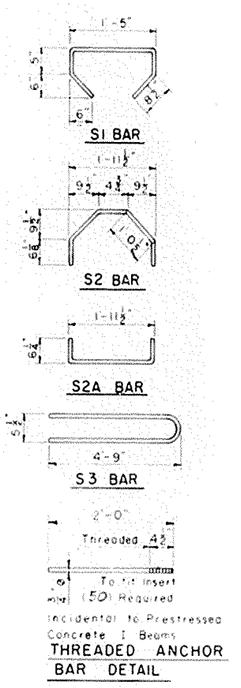
NOTE Lifting shall be by equal loads to each pair of loops

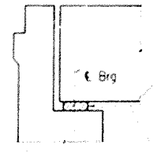






NOTE Wire mesh may be substituted for stirrups shown, provided that an equivalent area of steel is furnished





TYPICAL SECTION OF ABUTMENT
(Showing Elastomeric Brg Pad)

2'-0" x 10" x 1¼" Elastomeric Bearing Pad @ Pier 14

2'-0" x 10" x 3⅛" Elastomeric Bearing Pad @ Abutment 3

For details and specifications pertaining to Elastomeric Bearing Pads, see Standard Drawing BBP-001, current edition

NOTES:
Work this Sheet with Sheet 36.

NOTE Elastomeric Bearing Pads are incidental to Prestressed Beams

•• See Bridge Elevation

• These Dimensions Given on ℄ of Beams

BEAM DIMENSIONS •

MARK	NO REQD	DIMENSIONS A••	B••	C	D	E	F	S	T	M	U	V	APPROX WEIGHT EACH
S1 Modified	10			25'-0"	30	6½	18	3	11	3½	3	4	1'-6"	29790 LBS

NUMBER OF 1/2 Ø-7 WIRE STRANDS IN INDICATED ROW

MARK	MIDSPAN (SECTION B-B) BOTTOM ①	②	③	④	⑤	⑥	⑦	END (SECTION A-A) BOTTOM ①	②	③	④	⑤	⑥	⑦	TOP ①	②	③	TOTAL NO	INITIAL PRESTRESS FORCE/STRAND (lbs)
S1 Modified	12	7	10	2				8	2	2	2				3	3	3	44	23940

PRESTRESSED-CONCRETE I BEAM
TYPE IV DETAILS
SPAN 13

SHEET 40

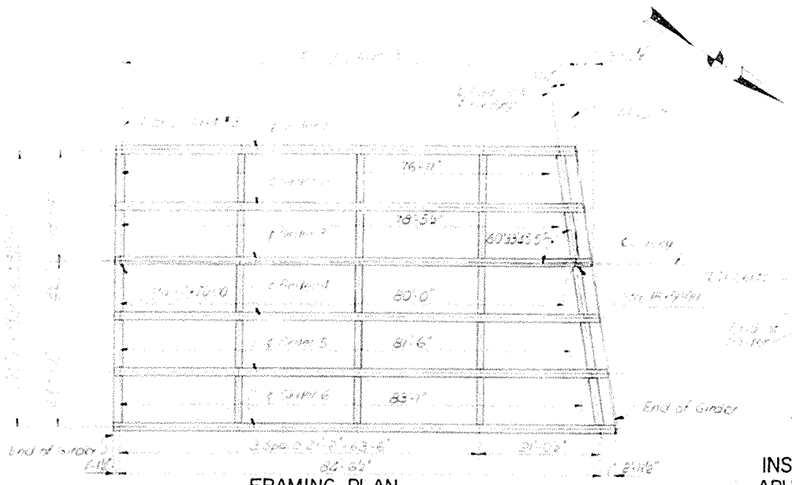
KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431( ); SP 64-33-14 L.I
LOUISA-FORT GAY BRIDGE AND APPROACHES

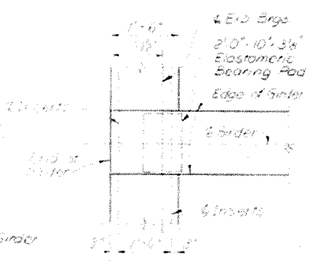
LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY WEST VIRGINIA
ROAD

STATION | P.E. PROJECT NO.
CONSTRUCTION PROJECT NO. | MAINTENANCE PROJECT NO. | DRAWING NO. 19592

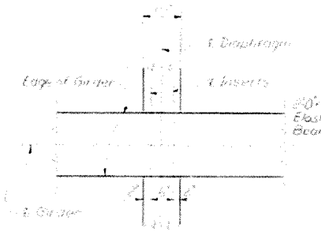
BRIDGE



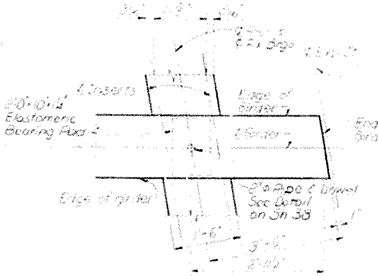
FRAMING PLAN



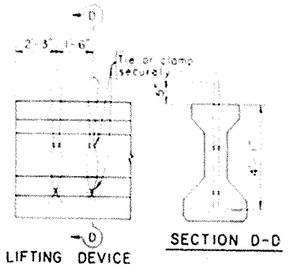
INSERT LOCATION AT
ABUTMENT 3 DIAPHRAGMS



INSERT LOCATION AT
INTERMEDIATE DIAPHRAGMS



INSERT LOCATION AT
PIER 12 DIAPHRAGMS



LIFTING DEVICE DETAIL "L"

SECTION D-D

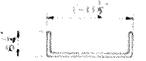
NOTE Lifting shall be by equal loads to each pair of loops



S1 BAR



S2 BAR



S2A BAR

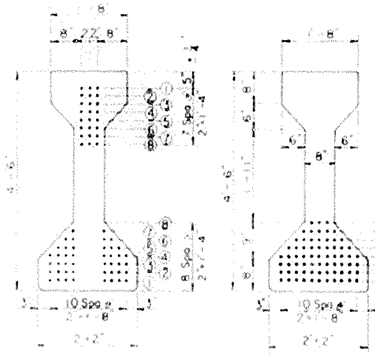


S3 BAR

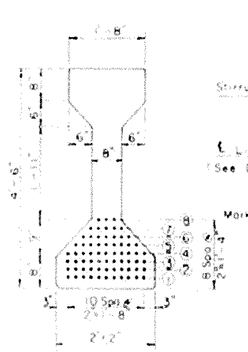


THREADED ANCHOR BAR DETAIL

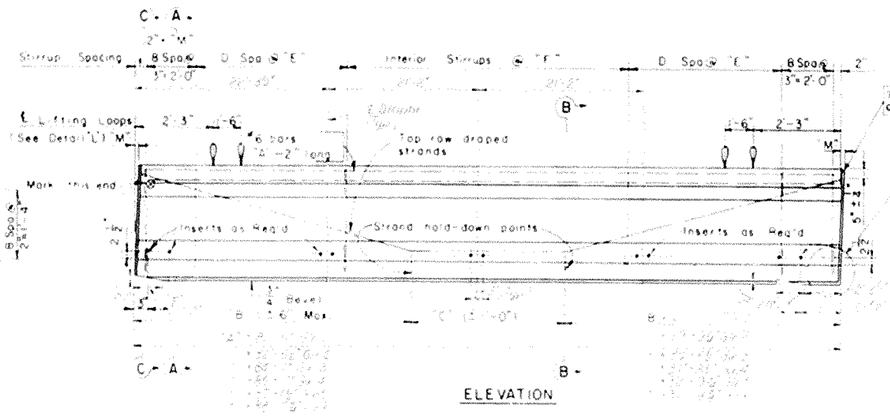
NOTE Work this Sheet with Sheet 36



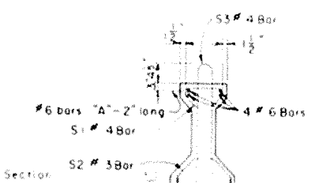
TYPE IV
54" BEAM
SECTION A-A



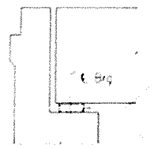
TYPE IV
54" BEAM
SECTION B-B



ELEVATION



SECTION C-C
Typical Section showing
Steel Reinforcement



TYPICAL SECTION
OF ABUTMENT
(Showing Elastomeric Brg. Pad)

NOTE Elastomeric Bearing Pads are incidental to Prestressed Beams

2'-0"x10"x1¼" Elastomeric Bearing Pad @ Pier 12
2'-0"x10"x3/8" Elastomeric Bearing Pad @ Abutment 3

For details and specifications pertaining to Elastomeric Bearing Pads, see Standard Drawing BBP-001, current edition

NOTE: Wire mesh may be substituted for stirrups shown, provided that an equivalent area of steel is furnished

** See Sheet Number
* These Dimensions Given at ℄ of Beams

BEAM DIMENSIONS *

MARK	NO REQ'D	DIMENSIONS A**	B**	C	D	E	F	APPROX WEIGHT EACH
SUPPLIER	6							

NUMBER OF ½" Ø-7 WIRE STRANDS IN INDICATED ROW

MARK	MIDSPAN (SECTION B-B) BOTTOM ① ② ③ ④ ⑤ ⑥ ⑦	END (SECTION A-A) BOTTOM ① ② ③ ④ ⑤ ⑥ ⑦	TOP ① ② ④	TOTAL NO	INITIAL PRESTRESS FORCE/STRAND (lbs)
SUPPLIER					

PRESTRESSED-CONCRETE I BEAM
TYPE IV DETAILS
SPAN 13

SHEET 40

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431( ); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

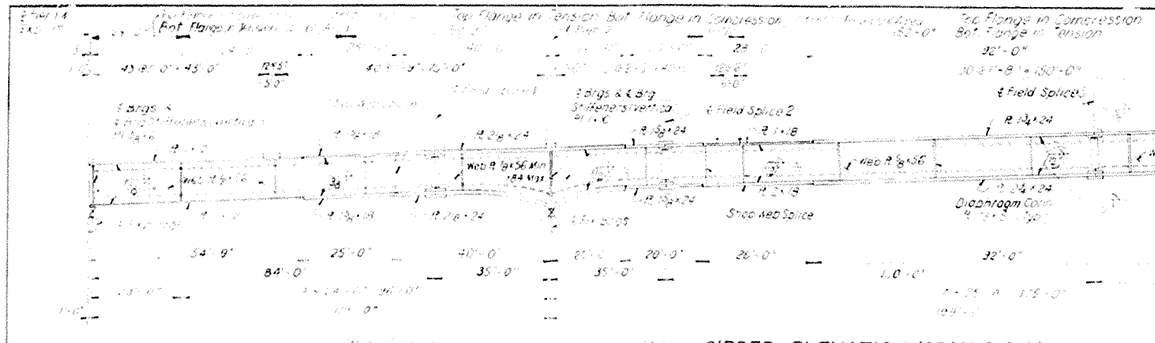
LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY WEST VIRGINIA

ROAD

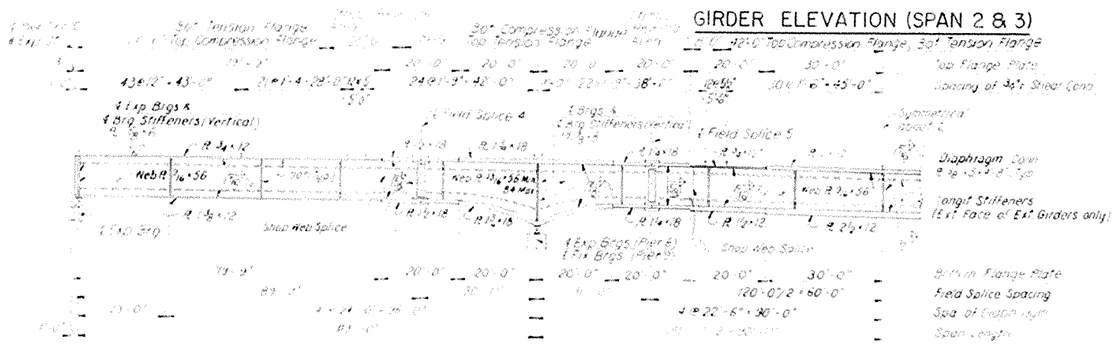
STATION P.E. PROJECT NO.

19592

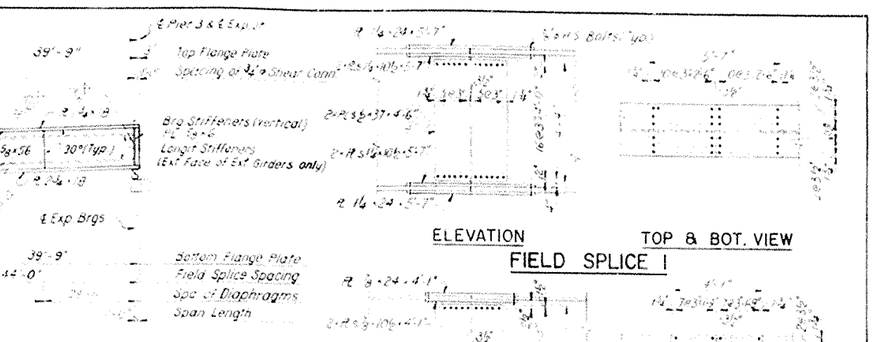
BRIDGE



GIRDER ELEVATION (SPAN 2 & 3)



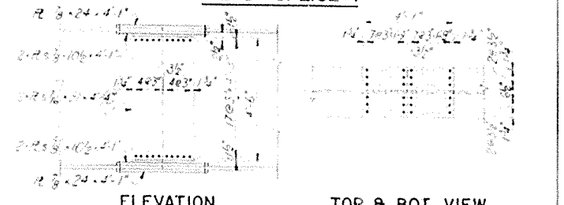
GIRDER ELEVATION (SPAN 8,9 & 10)



SHEAR CONNECTOR DETAIL

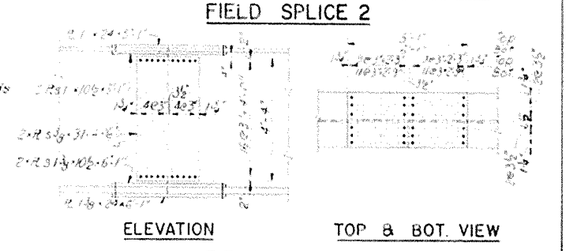
ELEVATION TOP & BOT. VIEW

FIELD SPLICE 1



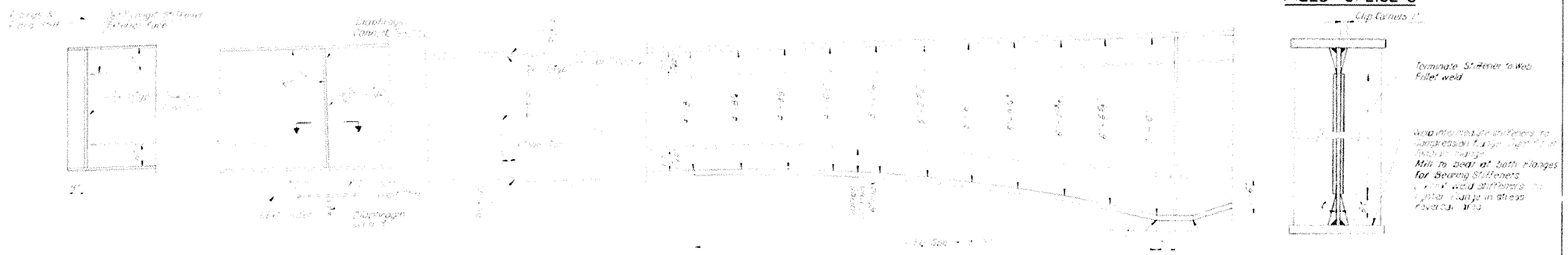
ELEVATION TOP & BOT. VIEW

FIELD SPLICE 2



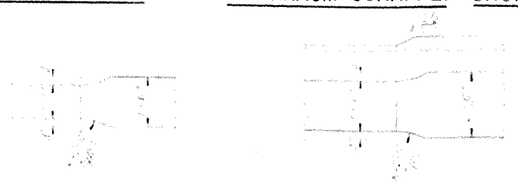
ELEVATION TOP & BOT. VIEW

FIELD SPLICE 3



BRG. STIFFENER DIAPHRAGM CONN. PL. SHOP SPLICE DETAIL HAUNCH DETAIL

TYPICAL BRG. STIFF. & CROSS FRAME CONN. PLATE DETAILS



DETAILS OF FLANGE TRANSITION



ELEVATION TOP & BOT. VIEW

FIELD SPLICE 4 & 5

GIRDER DETAILS
SPAN 2,3,8,9 & 10

FRANKLAND AND LIENHARD

SHEET 41

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8), SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

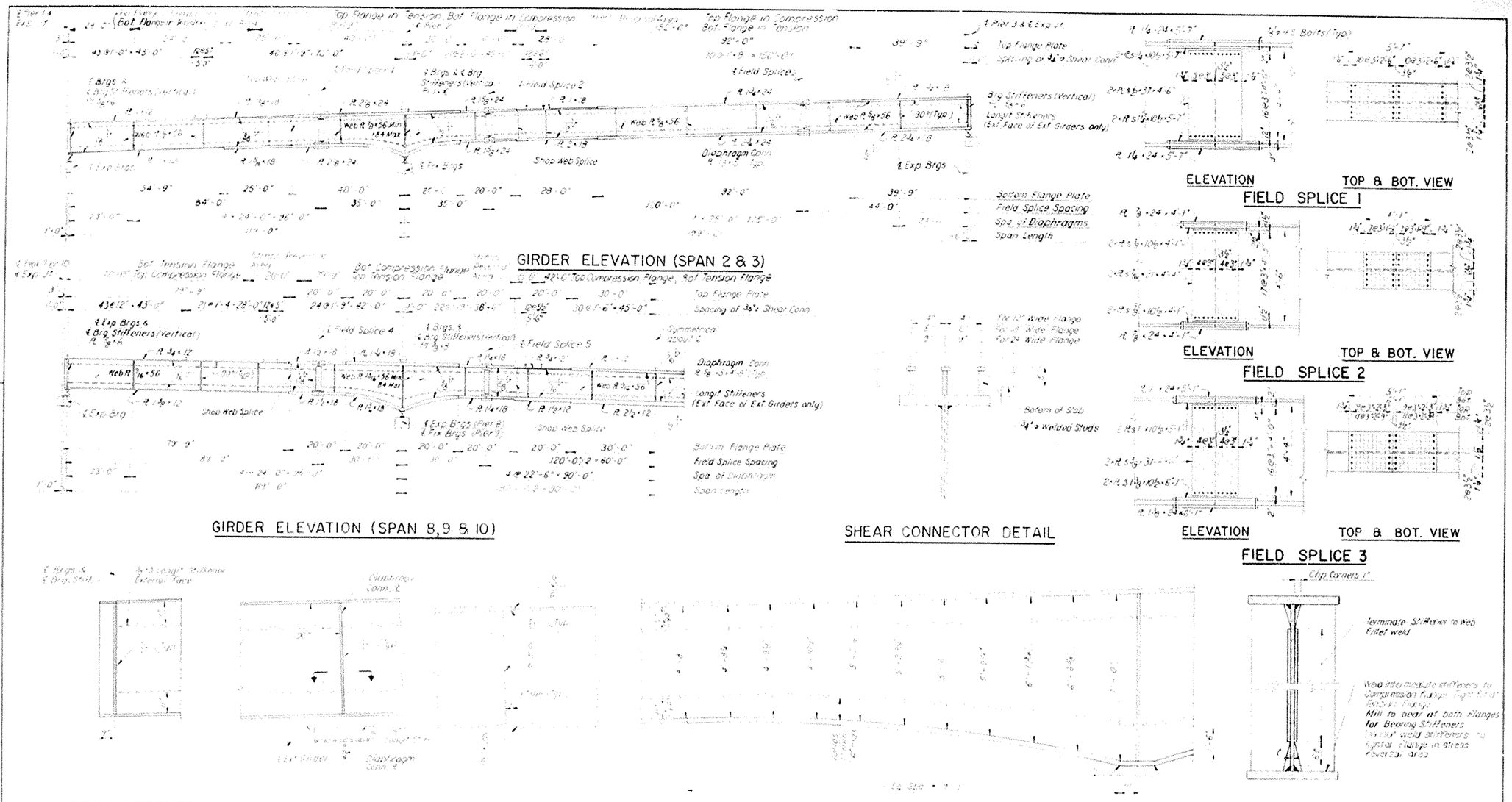
LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD

STATION 20 + 20.00 P.E. PROJECT NO.

19592

BRIDGE



SHEET 41

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8), SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD

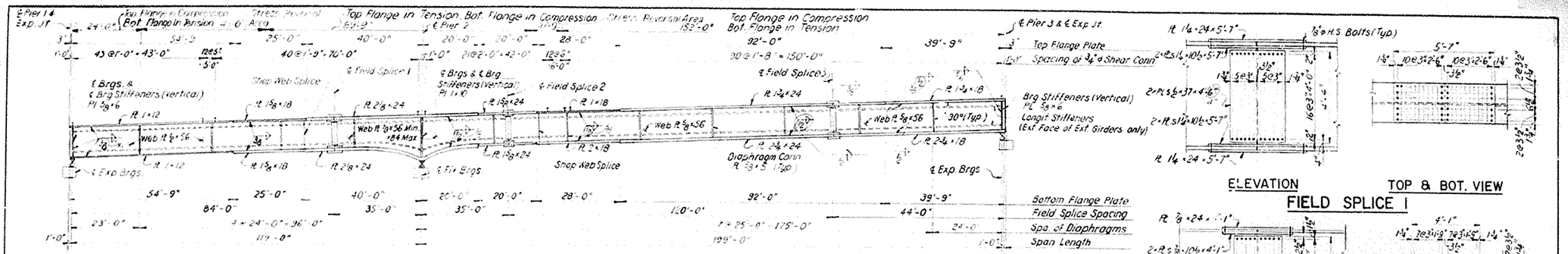
STATION 20 + 20.00 P.E. PROJECT NO

FRANKLAND AND LIENHARD

19592

BRIDGE

UPDATE DATE
LETTING DATE



NOTE
Work this sheet with sheet 35, 37 & 42.

Structural steel for girder webs, flanges and their field splice plates shown on this drawing shall be A 588. Structural steel for longitudinal and bearing stiffeners of these girders, connection plates, diaphragms and lateral bracing shall be A 36.

TYPICAL BRG. STIFF. & CROSS FRAME CONN. PLATE DETAILS

SHEET 41

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES
LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD
STATION 20 + 20.00 P.E. PROJECT NO

GIRDER DETAILS
SPAN 2,3,8,9 & 10

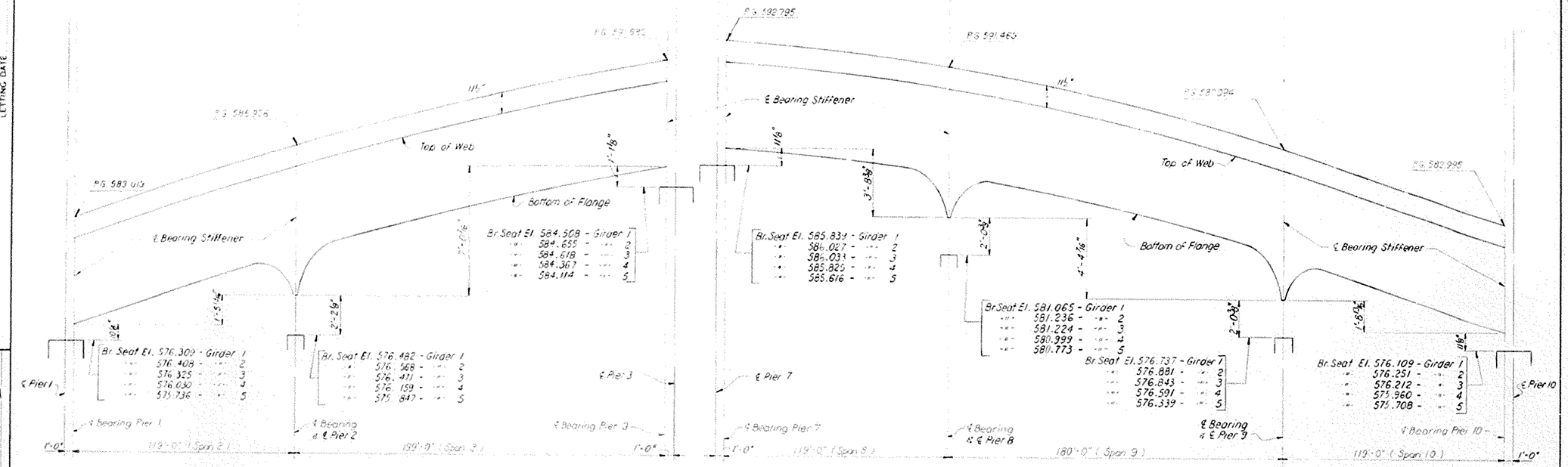
FRANKLAND AND LIENHARD

CONSTRUCTION PROJECT NO. MAINTENANCE PROJECT NO. DRAWING NO. 19592

BRIDGE

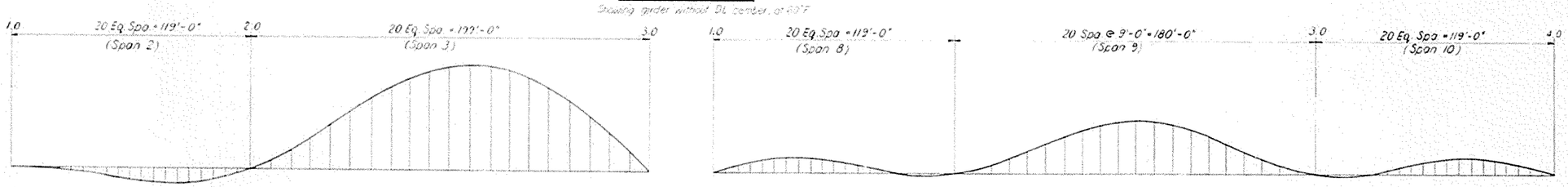
UPDATE DATE

LETTING DATE



ELEVATIONS

Showing girder without DL camber, at 60°F



CAMBER DIAGRAMS

SPAN 2			
PT	Δ1	Δ2	Δ3
1.0	0	0	0
.05	-0.00	-0.01	-0.01
.10	-0.01	-0.02	-0.03
.15	-0.02	-0.06	-0.08
.20	-0.05	-0.12	-0.17
.25	-0.08	-0.22	-0.30
.30	-0.12	-0.33	-0.45
.35	-0.17	-0.47	-0.64
.40	-0.22	-0.62	-0.84
.45	-0.27	-0.76	-1.03
.50	-0.31	-0.90	-1.21
.55	-0.35	-1.02	-1.37
.60	-0.38	-1.10	-1.48
.65	-0.39	-1.15	-1.54
.70	-0.39	-1.15	-1.54
.75	-0.38	-1.11	-1.49
.80	-0.34	-1.01	-1.35
.85	-0.29	-0.86	-1.15
.90	-0.21	-0.63	-0.84
.95	-0.12	-0.34	-0.46
2.0	0	0	0

SPAN 3			
PT	Δ1	Δ2	Δ3
2.0	0	0	0
.05	0.23	0.69	0.92
.10	0.51	1.53	2.04
.15	0.86	2.57	3.43
.20	1.25	3.71	4.96
.25	1.65	4.89	6.54
.30	2.02	6.00	8.02
.35	2.34	6.93	9.27
.40	2.59	7.68	10.27
.45	2.79	8.26	11.05
.50	2.92	8.63	11.55
.55	2.97	8.77	11.74
.60	2.94	8.68	11.61
.65	2.82	8.33	11.15
.70	2.62	7.75	10.37
.75	2.35	6.93	9.28
.80	2.00	5.90	7.90
.85	1.58	4.66	6.24
.90	1.09	3.22	4.31
.95	0.56	1.65	2.21
3.0	0	0	0

SPAN 8			
PT	Δ1	Δ2	Δ3
1.0	0	0	0
.05	0.11	0.29	0.40
.10	0.21	0.57	0.78
.15	0.30	0.81	1.11
.20	0.37	1.01	1.38
.25	0.42	1.15	1.57
.30	0.45	1.23	1.68
.35	0.45	1.25	1.70
.40	0.44	1.20	1.64
.45	0.40	1.10	1.50
.50	0.35	0.96	1.31
.55	0.28	0.78	1.06
.60	0.21	0.58	0.79
.65	0.14	0.38	0.52
.70	0.07	0.19	0.26
.75	-0.01	-0.03	-0.04
.80	-0.03	-0.09	-0.12
.85	-0.05	-0.16	-0.21
.90	-0.05	-0.16	-0.21
.95	-0.04	-0.0	-0.14
2.0	0	0	0

SPAN 9			
PT	Δ1	Δ2	Δ3
2.0	0	0	0
.05	0.09	0.25	0.34
.10	0.32	0.63	0.85
.15	0.40	1.16	1.56
.20	0.62	1.78	2.40
.25	0.85	2.44	3.29
.30	1.07	3.08	4.15
.35	1.26	3.60	4.86
.40	1.40	4.00	5.40
.45	1.49	4.25	5.74
.50	1.52	4.33	5.85
.55	1.49	4.25	5.74
.60	1.40	4.00	5.40
.65	1.26	3.60	4.86
.70	1.07	3.08	4.15
.75	0.85	2.44	3.29
.80	0.62	1.78	2.40
.85	0.40	1.16	1.56
.90	0.22	0.63	0.85
.95	0.09	0.25	0.34
3.0	0	0	0

SPAN 10			
PT	Δ1	Δ2	Δ3
3.0	0	0	0
.05	-0.04	-0.10	-0.14
.10	-0.05	-0.16	-0.21
.15	-0.05	-0.16	-0.21
.20	-0.03	-0.09	-0.12
.25	-0.01	-0.03	-0.04
.30	0.07	0.19	0.26
.35	0.14	0.38	0.52
.40	0.21	0.58	0.79
.45	0.28	0.78	1.06
.50	0.35	0.96	1.31
.55	0.40	1.10	1.50
.60	0.44	1.20	1.64
.65	0.45	1.25	1.70
.70	0.43	1.23	1.68
.75	0.42	1.15	1.57
.80	0.37	1.01	1.38
.85	0.30	0.81	1.11
.90	0.21	0.57	0.78
.95	0.11	0.29	0.40
4.0	0	0	0

Δ 1 = Camber due to steel

Δ 2 = Camber due to concrete

Δ 3 = Camber to be cut into web to account for DL deflection. Add to this the offsets due to vert. curvature.

All camber shown is in inches

NOTE

Work this Sheet with Sheets 35, 37 & 41

SHEET 42

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD

STATION 20 + 20.00 P.E. PROJECT NO.

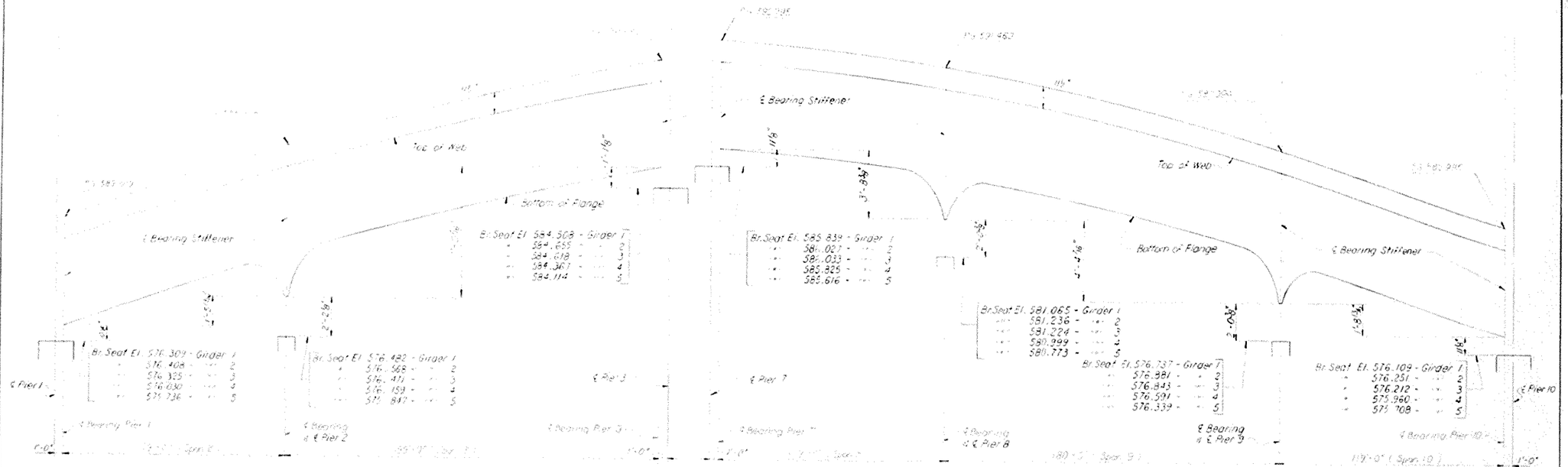
CONSTRUCTION PROJECT NO. | MAINTENANCE PROJECT NO. | DRAWING NO. 19592

BLOCKING & CAMBER DIAGRAMS

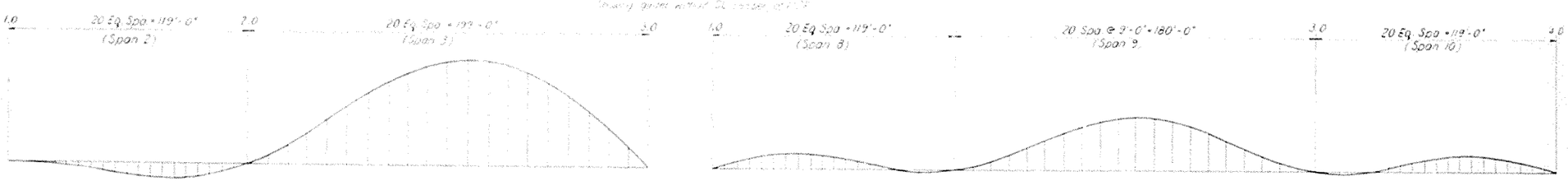
FRANKLAND AND LIENHARD

BRIDGE

UPDATE DATE
LETTING DATE



ELEVATIONS



CAMBER DIAGRAMS

SPAN 2			
PT	Δ1	Δ2	Δ3
10	0	0	0
15	-0.00	-0.01	-0.01
10	-0.01	-0.02	-0.03
15	-0.02	-0.06	-0.08
20	-0.05	-0.12	-0.17
25	-0.08	-0.22	-0.30
30	-0.12	-0.33	-0.45
35	-0.17	-0.47	-0.64
40	-0.22	-0.62	-0.84
45	-0.27	-0.76	-1.03
50	-0.31	-0.90	-1.21
55	-0.35	-1.02	-1.37
60	-0.38	-1.10	-1.48
65	-0.39	-1.15	-1.54
70	-0.39	-1.15	-1.54
75	-0.38	-1.11	-1.49
80	-0.34	-1.0	-1.35
85	-0.29	-0.86	-1.15
90	-0.21	-0.63	-0.84
95	-0.12	-0.34	-0.46
100	0	0	0

SPAN 3			
PT	Δ1	Δ2	Δ3
100	0	0	0
95	0.23	0.69	0.92
90	0.51	1.53	2.04
85	0.86	2.57	3.43
80	1.25	3.71	4.96
75	1.65	4.89	6.54
70	2.02	6.00	8.02
65	2.34	6.93	9.27
60	2.59	7.68	10.27
55	2.79	8.26	11.05
50	2.92	8.63	11.55
45	2.97	8.77	11.74
40	2.94	8.68	11.61
35	2.82	8.33	11.15
30	2.62	7.75	10.37
25	2.35	6.93	9.28
20	2.00	5.90	7.90
15	1.58	4.66	6.24
10	1.09	3.22	4.31
5	0.56	1.65	2.21
0	0	0	0

SPAN 8			
PT	Δ1	Δ2	Δ3
100	0	0	0
95	0.11	0.29	0.40
90	0.21	0.57	0.78
85	0.30	0.81	1.11
80	0.37	1.01	1.38
75	0.42	1.15	1.57
70	0.45	1.23	1.68
65	0.45	1.25	1.70
60	0.44	1.20	1.64
55	0.40	1.10	1.50
50	0.35	0.96	1.31
45	0.28	0.78	1.06
40	0.21	0.58	0.79
35	0.14	0.38	0.52
30	0.07	0.19	0.26
25	0.01	-0.03	-0.04
20	-0.03	-0.09	-0.12
15	-0.05	-0.16	-0.21
10	-0.05	-0.16	-0.21
5	-0.04	-0.13	-0.17
0	0	0	0

SPAN 9			
PT	Δ1	Δ2	Δ3
100	0	0	0
95	0.09	0.23	0.32
90	0.23	0.63	0.85
85	0.40	1.6	1.56
80	0.62	1.78	2.40
75	0.85	2.44	3.29
70	1.07	3.08	4.15
65	1.26	3.60	4.86
60	1.40	4.00	5.40
55	1.49	4.25	5.74
50	1.52	4.33	5.85
45	1.49	4.25	5.74
40	1.40	4.00	5.40
35	1.26	3.60	4.86
30	1.07	3.08	4.15
25	0.85	2.44	3.29
20	0.62	1.78	2.40
15	0.40	1.6	1.56
10	0.22	0.63	0.85
5	0.09	0.25	0.34
0	0	0	0

SPAN 10			
PT	Δ1	Δ2	Δ3
100	0	0	0
95	0.04	0.10	0.14
90	0.05	0.16	0.21
85	0.05	0.16	0.21
80	0.03	0.09	0.12
75	0.01	0.03	0.04
70	0.07	0.19	0.26
65	0.14	0.38	0.52
60	0.21	0.58	0.79
55	0.28	0.78	0.8
50	0.35	0.96	1.31
45	0.40	1.10	1.50
40	0.44	1.20	1.64
35	0.45	1.25	1.70
30	0.45	1.23	1.68
25	0.42	1.15	1.57
20	0.37	1.01	1.38
15	0.30	0.81	1.11
10	0.21	0.57	0.78
5	0.11	0.29	0.40
0	0	0	0

Δ 1 = Camber due to steel
Δ 2 = Camber due to concrete
Δ 3 = Camber to be cut into web
All camber shown is in inches

NOTE
Work this Sheet with Sheets 35, 37 & 41

SHEET 42

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES
LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA
ROAD
STATION 20 + 20.00 P.E. PROJECT NO.

CONSTRUCTION PROJECT NO. | MAINTENANCE PROJECT NO. | DRAWING NO. 19592

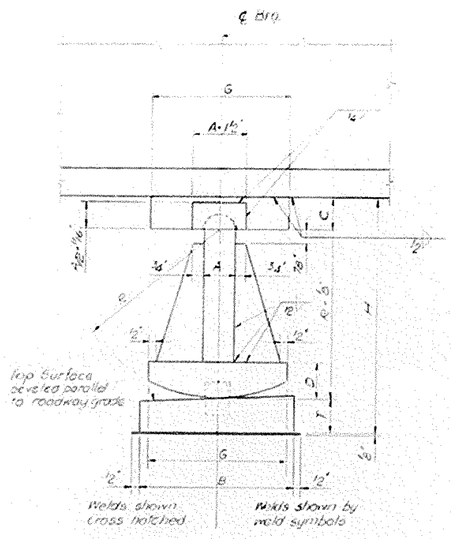
BLOCKING & CAMBER DIAGRAMS

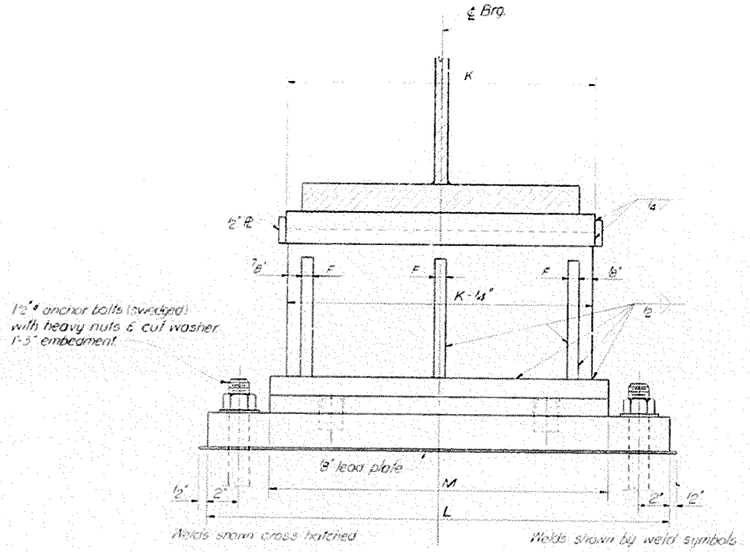
FRANKLAND AND LIENHARD

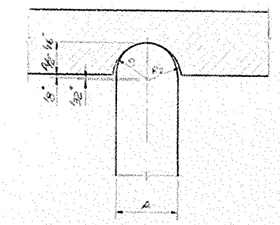
BRIDGE

UPDATE DATE

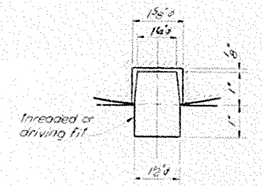
LETTING DATE







TOP BEARING DETAIL

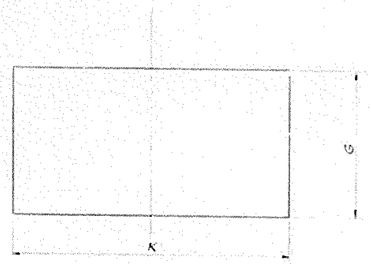


PINTLE DETAIL

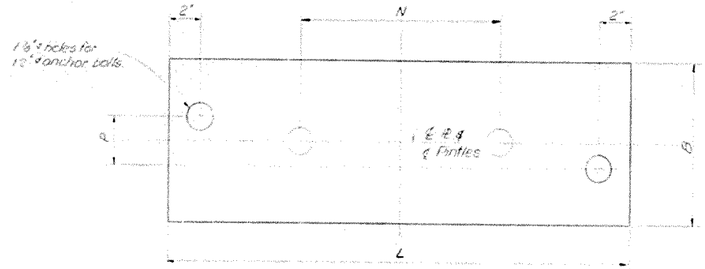
EXPANSION SHOE AT PIER 1, 3, 7, 8 & 10

(5 Req'd-Pier 1) (5 Req'd-Pier 3) (5 Req'd-Pier 7)
(5 Req'd-Pier 8) (5 Req'd-Pier 10)

LOCATION	DIMENSIONS (inches)																12" Anchor bolt length
	A	B	C	D	F	G	H	K	L	M	N	P	R	R_1	R_2	T	
Pier 1	2	7	2	1¾	12	6	10	16	26	16	11	0	6 3/8	1¼	1 31/32	1½	1'-6
Pier 3	2	10	2	2¾	3¼	9	13	20	30	22	14	3	8⅞	1¼	1 31/32	2	1'-7
Pier 8	3½	17	4½	3	1	12	20⅝	20	34	26	17	10	16⅞	1 15/16	1 15/32	3	1'-8
Pier 7 & 10	2	8	2	2	12	7	11	16	26	18	11	0	7⅞	1¼	1 31/32	1½	1'-6



TOP PLATE



BOTTOM PLATE

NOTE
For General Notes see Sheet 44.

SHEET 43

STEEL BEARING SHOES FOR STEEL SPANS AT PIER 1, 3, 7, 8 & 10

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

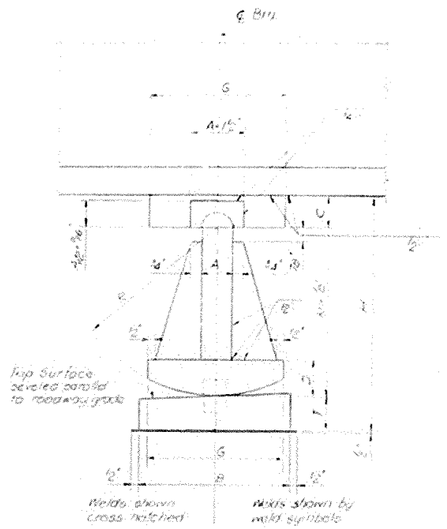
PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES
LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA
ROAD

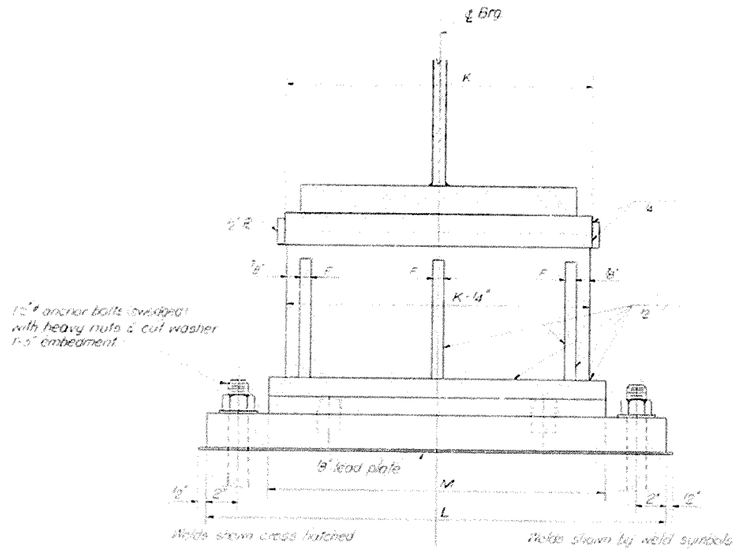
STATION 20+20.00 P.E. PROJECT NO.

FRANKLAND AND LIENHARD

CONSTRUCTION PROJECT NO. MAINTENANCE PROJECT NO. DRAWING NO. 19592

BRIDGE

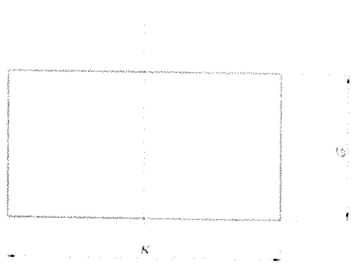




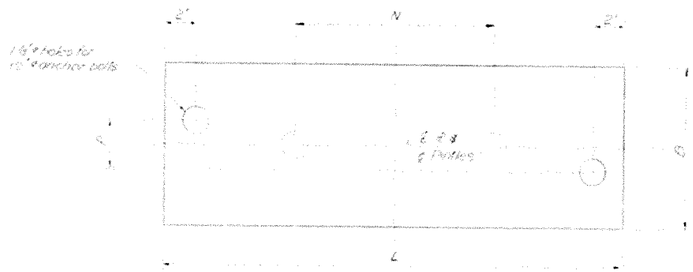
EXPANSION SHOE AT PIER 1, 3, 7, 8 & 10

(5 Reqd - Part 1) (5 Reqd - Part 3) (5 Reqd - Part 7)
(5 Reqd - Part 8) (5 Reqd - Part 10)

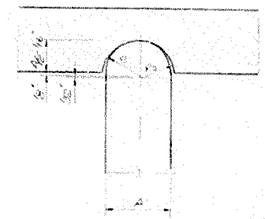
LOCATION	DIMENSIONS (inches)																1½" Anchor bolt length
	A	B	C	D	E	G	H	K	L	M	N	P	R	R	R_3	T	
Pier 1	2	7	2	14	12	6	10	16	36	18	11	0	6⅜	1⅛	1¹⁵/₃₂	12	1'-6
Pier 3	2	10	2	24	14	9	13	20	30	25	14	3	8⅜	1⅛	1¹⁵/₃₂	2	1'-9
Pier 8	3½	17	4½	3	1	12	14½	20	34	26	17	10	16⅜	1⅝	1¹⁵/₃₂	3	1'-6
Pier 7 & 10	2	8	3	2	12	7	11	16	28	18	11	0	7⅜	1⅛	1¹⁵/₃₂	12	1'-6



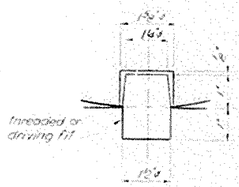
TOP PLATE



BOTTOM PLATE



TOP BEARING DETAIL



PINTLE DETAIL

NOTE
For General Notes see Sheet 44

STEEL BEARING SHOES
FOR STEEL SPANS
AT PIER 1,3,7,8 & 10

FRANKLAND AND LIENHARD

SHEET 43

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES
LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA
ROAD

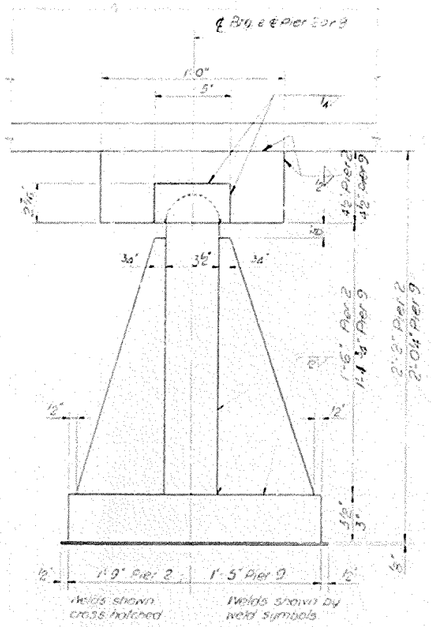
STATION 20+2000 P.E. PROJECT NO

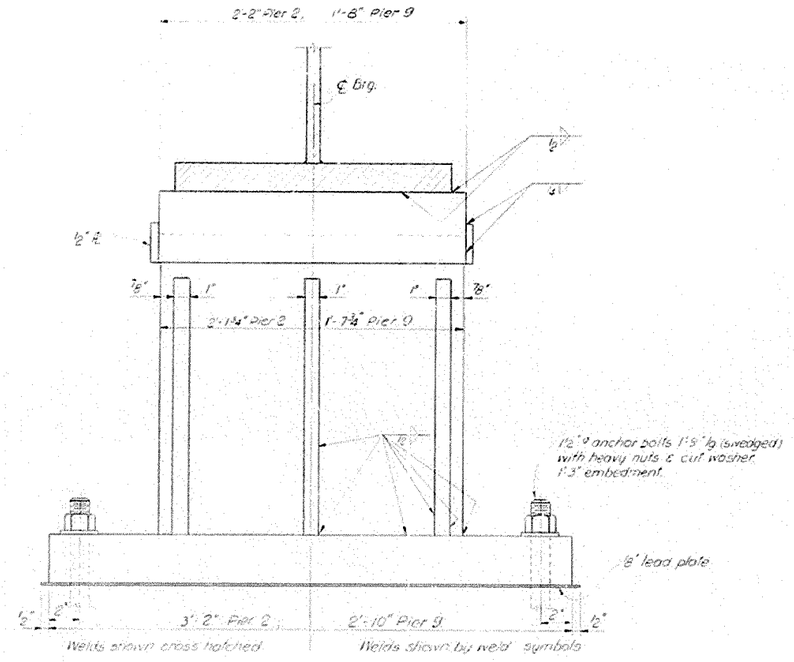
19592

BRIDGE

UPDATE DATE

LETTING DATE





FIXED SHOE AT PIER 2 & 9

(5 Required - Pier 2) (5 Required - Pier 9)

GENERAL NOTES

SPECIFICATIONS: Kentucky Bureau of Highways Standard Specifications for Road and Bridge Construction, current edition with revisions.

PLATES: Plates must be true and free from warp.

MILL TEST REPORTS: Notarized statements in triplicate shall be furnished the Bureau showing that all structural steel furnished meet the specifications.

WELDING MATERIAL: Welding material shall conform to the American Welding Society's "Structural Welding Code" D.1.1-72 with revisions.

WELDING: The cost of welding material and labor to be included in the lump sum bid for structural steel. No direct payment will be made for welding and welding material.

PAINT: All structural steel shown on this sheet except finished surfaces formed by radii R1 and R2 shall be cleaned and painted in accordance with Section 607.25 of the K.B.H Specifications. The finished surfaces of structural steel formed by radii R1 and R2 shall not be painted.

WATERPROOF GREASE: Finished surfaces of structural steel formed by radii R1 and R2, shall be coated with waterproof grease in accordance with current specifications with revisions.

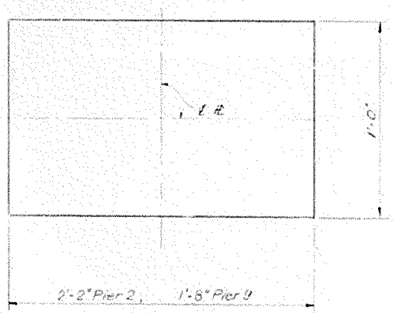
ANCHOR BOLTS: The cost of lead required to set anchor bolts and the cost of drilling anchor bolts holes shall be included in the lump sum bid for structural steel. The contractor shall be responsible for keeping holes dry in wet and freezing weather. At the time of setting, anchor bolts are to be heated to a blue heat to assure free flow of lead to bottom of hole.

SHOP PLANS: The contractor shall furnish the Bureau with complete shop detail plans for review.

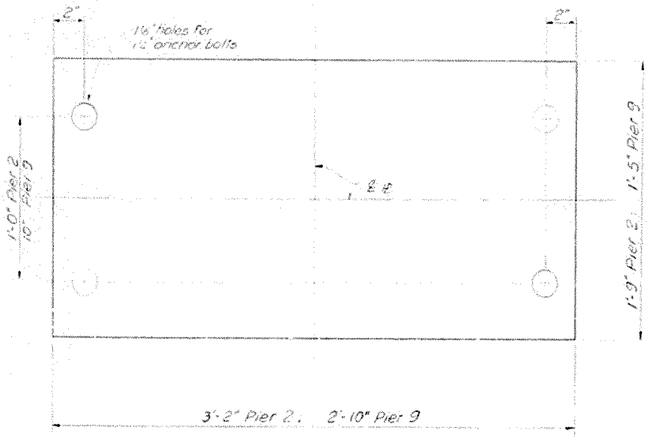
SURFACE FINISH OF STEEL: Steel Slabs, Heavy Plates in contact in Shoes to be Welded, Milled Ends of Compression Members, Stiffeners and Fillers, Bridge Rollers and Rockers shall be according to ANSI Specification B46.1 (Microinches).

A.S.T.M. SPECIFICATIONS (Except use A 588 where denoted by *)

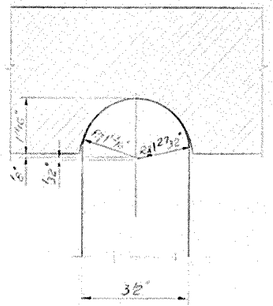
Structural Steel	A36, Current Specifications*
Pintles	A36 or A108, Current Specifications (Grade 1016 to 1030 included)
Sheet Lead and Lead for Anchor Bolts	B29, Current Specifications
Anchor Bolts	A307 (766)



TOP PLATE



BOTTOM PLATE



TOP BEARING DETAIL

STEEL BEARING SHOES FOR STEEL SPANS AT PIER 2 & 9

SHEET 44

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD

STATION 20+20.00 P.E. PROJECT NO.

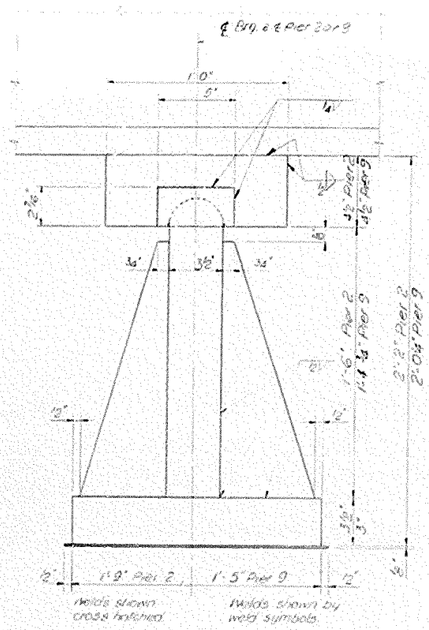
FRANKLAND AND LIENHARD

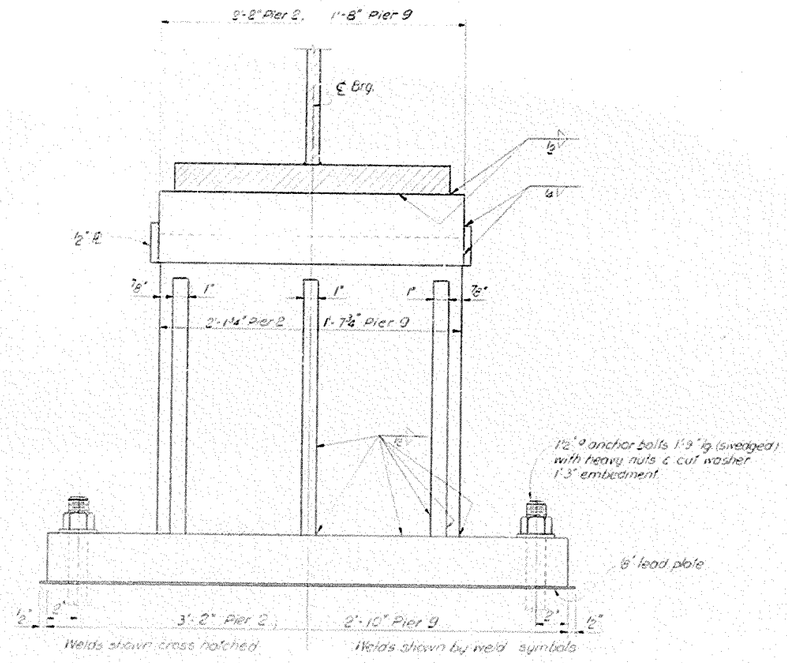
CONSTRUCTION PROJECT NO. | MAINTENANCE PROJECT NO. | DRAWING NO. 19592

BRIDGE

UPDATE DATE

LETTING DATE





FIXED SHOE AT PIER 2 & 9

(5 Required-Pier 2) (5 Required-Pier 9)

GENERAL NOTES

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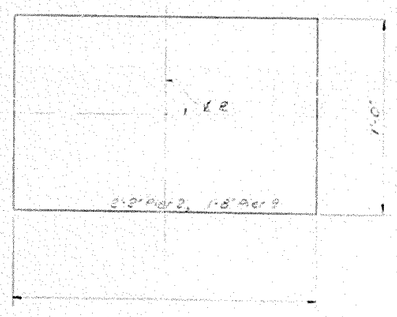
ANCHOR BOLTS: The cost of lead required to set anchor bolts and the cost of drilling anchor bolts holes shall be included in the lump sum bid for structural steel. The contractor shall be responsible for keeping holes dry in wet and freezing weather. At the time of setting, anchor bolts are to be heated to a blue heat to assure free flow of lead to bottom of hole.

SHOP PLANS: The contractor shall furnish the Bureau with complete shop detail plans for review.

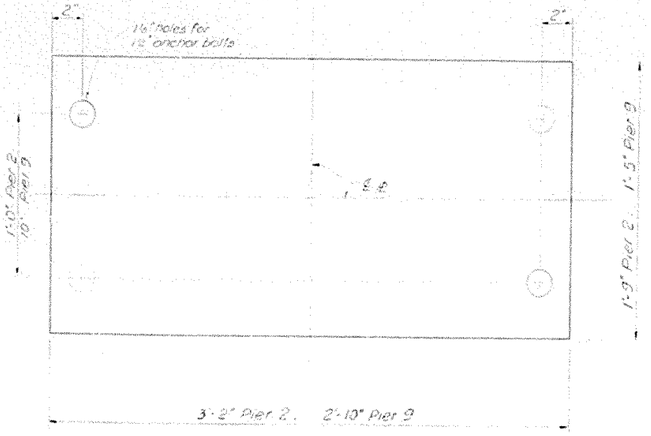
SURFACE FINISH OF STEEL: Steel Slabs, Heavy Plates in contact in Shoes to be Welded, Milled Ends of Compression Members, Stiffeners and Fillers, Bridge Rollers and Rockers shall be according to ANSI Specification B46.1 (Microinches).

A.S.T.M. SPECIFICATIONS

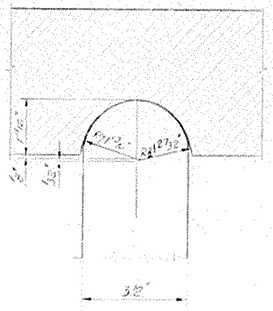
Structural Steel	A36, Current Specifications
Pintles	A36 or A108, Current Specifications (Grade 1016 to 1030 included)
Sheet Lead and Lead for Anchor Bolts	B29, Current Specifications
Anchor Bolts	A307 (766)



TOP PLATE



BOTTOM PLATE



TOP BEARING DETAIL

STEEL BEARING SHOES FOR STEEL SPANS AT PIER 2 & 9

SHEET 44

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD

STATION 20+20.00 P.E. PROJECT NO

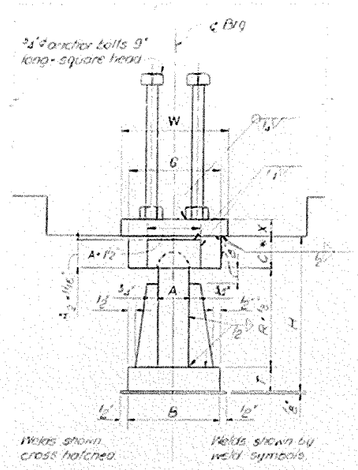
FRANKLAND AND LIENHARD

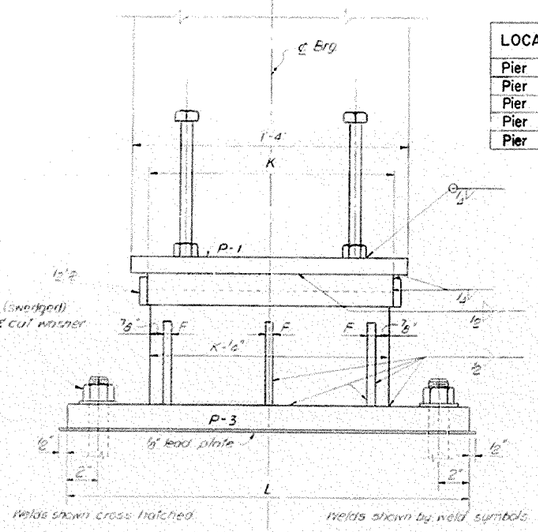
CONSTRUCTION PROJECT NO | MAINTENANCE PROJECT NO | DRAWING NO. 19592

BRIDGE

UPDATE DATE

LETTING DATE

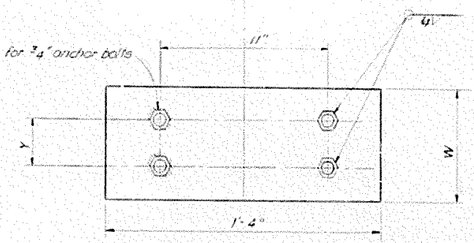




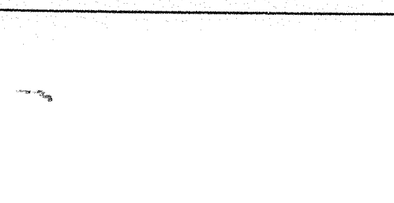
FIXED SHOE AT PIER 5

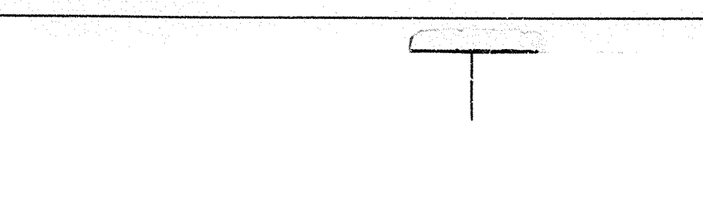
LOCATION		DIMENSIONS (inches)																		14" Anchor bolt length	No. of Brgs. Required
		A	B	C	D	F	G	H	K	L	M	N	P	R	R_1	R_2	T	W	X	Y	
Pier	3	2	8	2¼*	2	½	7	11	15	26	18	11	0	7⅛	1/16	1 3/32	1½	12	1	3	1'-3"	5
Pier	4	2½	13	3¼*	3	¾	12	16¾	15	30	22	14	6	10⅜	1 5/16	1 11/32	2½	22	1½	9	1'-4"	10
Pier	5	2	11	3 *	—	¾	10	14	15	30	—	—	4	8⅞	1/16	1 1/32	2	16	1¼	7	1'-4"	10
Pier	6	2½	12	3½*	2¾	¾	11	15½	15	30	22	14	5	9⅝	1 1/16	1 3/32	2¼	18	1½	8	1'-4"	5
Pier	7	2	6	2 *	1½	½	6	9⅝	15	26	18	11	0	6	1/16	1 1/32	1½	8	1	3	1'-3"	5

* Denotes A 588 Steel

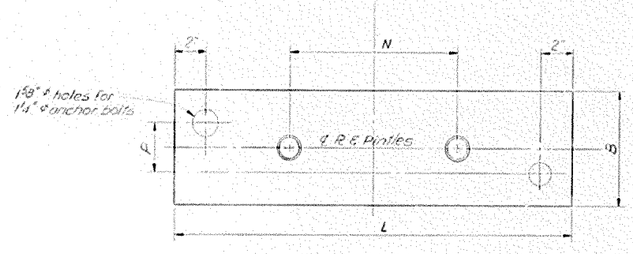


TOP PLATE P-1

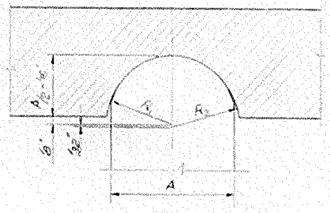




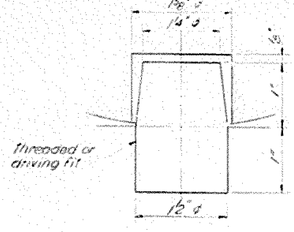
EXPANSION SHOE AT PIERS 3, 4, 6 & 7



BOTTOM PLATE P-2 WITH PINTLES
BOTTOM PLATE P-3 WITHOUT PINTLES



TOP BEARING DETAIL



PINTLE DETAIL

SHEET 45

NOTE
For General Notes see Sheet 44.

STEEL BEARING SHOES
FOR SPANS 4 THRU 7
AT PIER 3, 4, 5, 6 & 7

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES
LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA
ROAD

STATION 20+20.00 P.E. PROJECT NO.

FRANKLAND AND LIENHARD

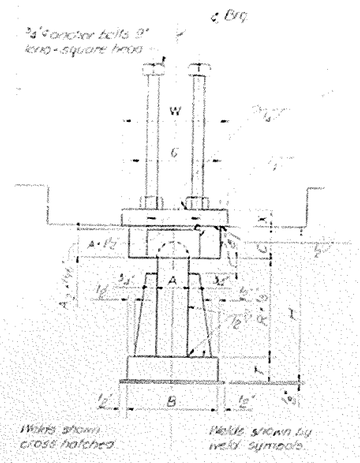
CONSTRUCTION PROJECT NO. | MAINTENANCE PROJECT NO. | DRAWING NO. 19592

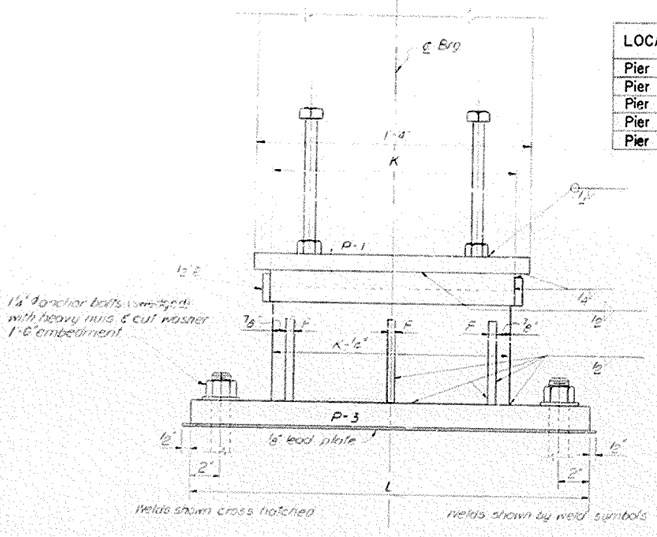
BRIDGE

UPDATE DATE

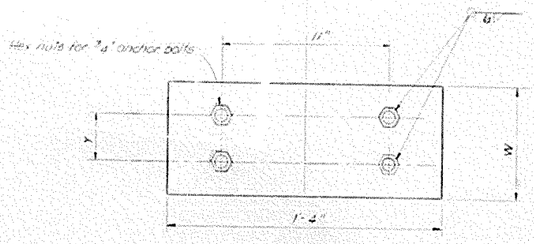
LETTING DATE

LOCATION	DIMENSIONS (inches)																		14" Anchor bolt length	No. of Bags Required
	A	B	C	D	F	G	H	K	L	M	N	P	R	R_1	R_2	T	W	X	Y	
Pier 3	2	8	2¼	2	½	7	11	15	26	18	11	0	7 1/8	1 1/16	1 3/32	1½	12	1	3	1'-3"	5
Pier 4	2 9/16	13	3¼	3	¾	12	16 3/4	15	30	22	14	6	10 3/8	1 5/8	1 5/32	2⅛	22	1½	9	1'-4"	10
Pier 5	2	11	3	—	¾	10	14	15	30	—	—	4	8 7/8	1 1/16	1 3/32	2	16	1¼	7	1'-4"	10
Pier 6	2 9/16	12	3½	2¾	¾	11	15½	15	30	22	14	5	9 3/8	1 5/16	1 5/32	2¼	18	1½	8	1'-4"	9
Pier 7	2	6	2	1¾	½	6	9 5/8	15	26	18	11	0	6	1¼	1 3/32	1½	8	1	3	1'-3"	5

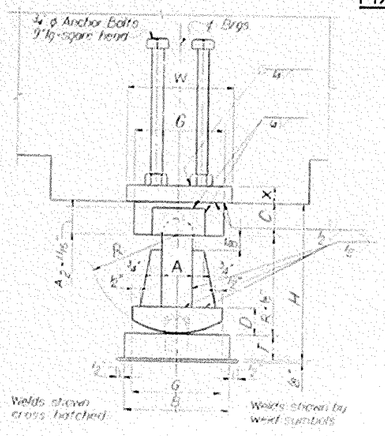


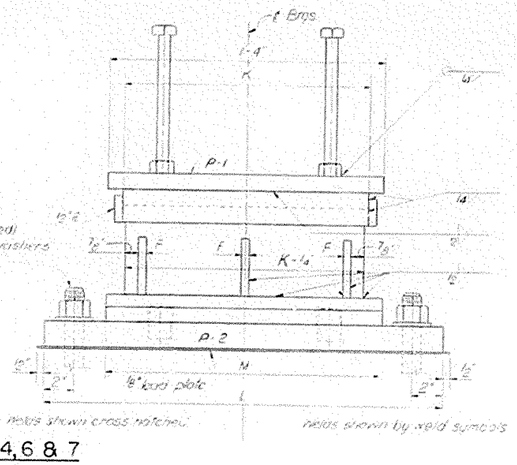


FIXED SHOE AT PIER 5

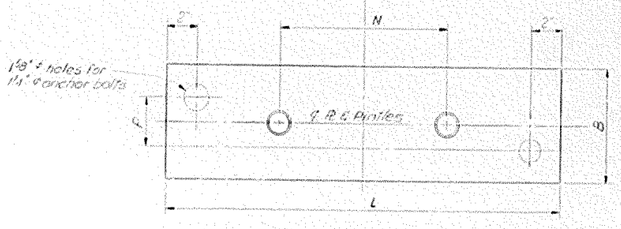


TOP PLATE P-1

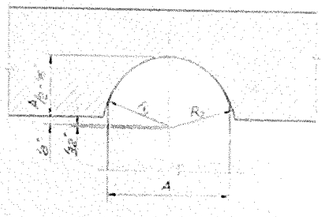




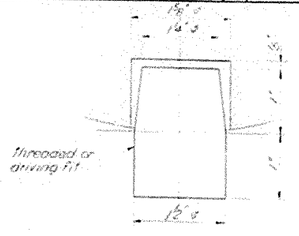
EXPANSION SHOE AT PIERS 3, 4, 6 & 7



BOTTOM PLATE P-2 WITH PINTLES
BOTTOM PLATE P-3 WITHOUT PINTLES



TOP BEARING DETAIL



PINTLE DETAIL

SHEET 45

NOTE
For General Notes see Sheet 44.

STEEL BEARING SHOES
FOR SPANS 4 THRU 7
AT PIER 3, 4, 5, 6 & 7

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES
LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA
ROAD

STATION 20+20.00 P.E. PROJECT NO.

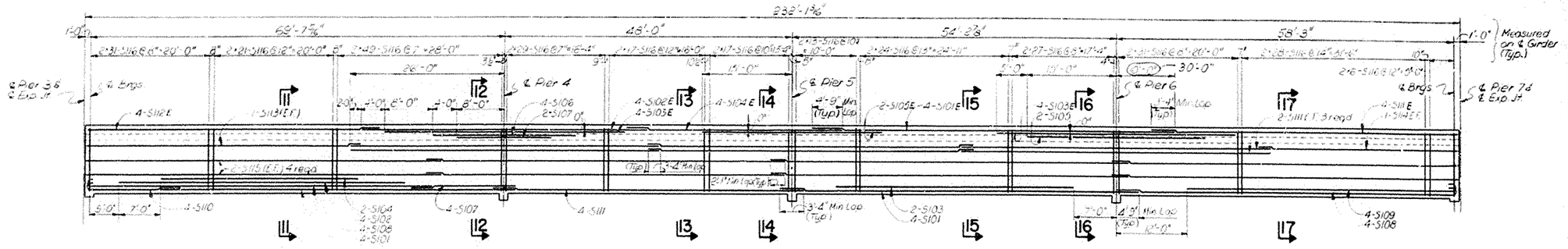
FRANKLAND AND LIENHARD

CONSTRUCTION PROJECT NO. | MAINTENANCE PROJECT NO. | DRAWING NO. 19592

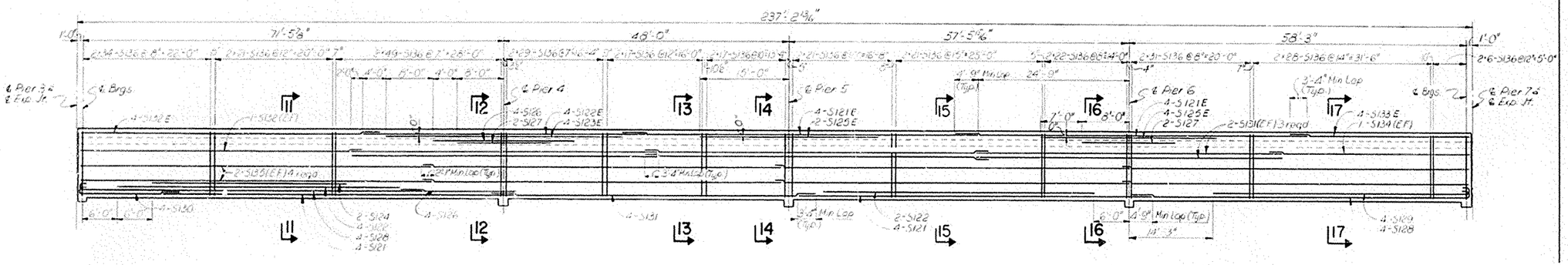
BRIDGE

UPDATE DATE

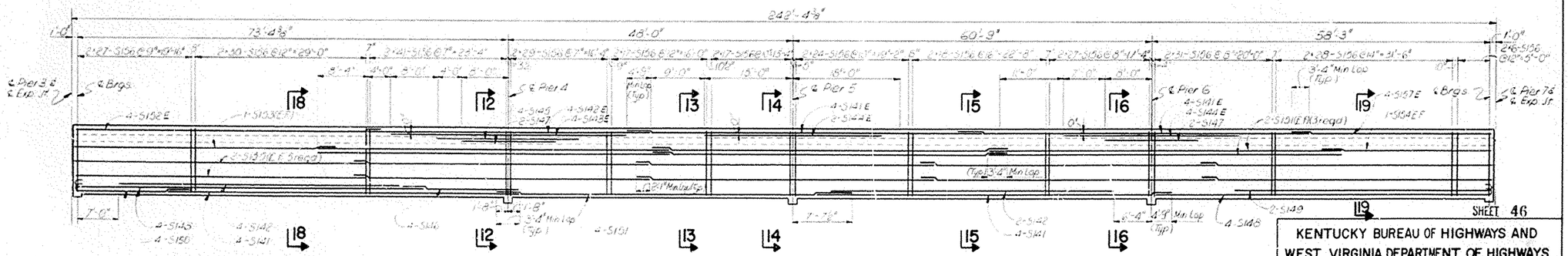
LETTING DATE



GIRDER 1



GIRDER 2



GIRDER 3

GIRDER ELEVATIONS

NOTES:

Work this Sheet with Sheets 35, 49, 54, 58, 59, 61 & 62.
All dimentions are measured along ℄ Girder.
All reinforcing bars designated by Suffix (E) in the plans shall be epoxy coated in accordance with the special Provision No. 19 (76) Epoxy Coated Reinforcing Steel.

SPAN 4 THRU 7
GIRDER ELEVATIONS

FRANKLAND AND LIENHARD

SHEET 46

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA - FORT GAY BRIDGE AND APPROACHES
LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY WEST VIRGINIA
ROAD

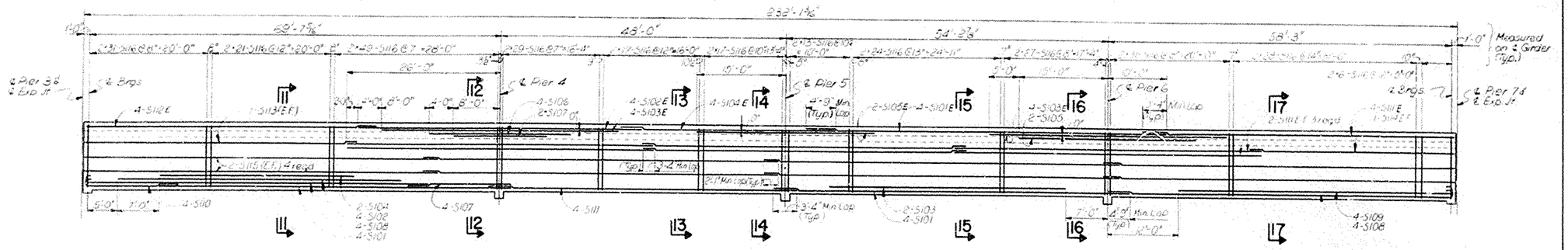
STATION 20 + 2000 P.E. PROJECT NO.

CONSTRUCTION PROJECT NO.	MAINTENCE PROJECT NO.	DRAWING NO.
		19592

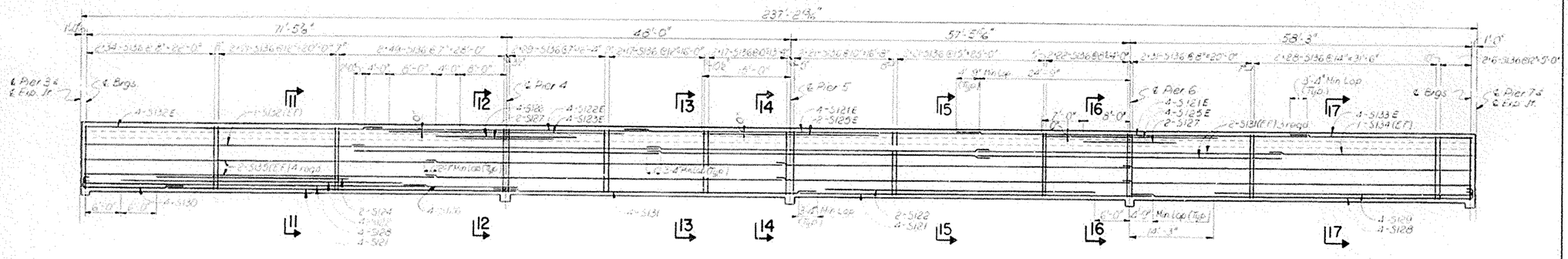
BRIDGE

UPDATE DATE

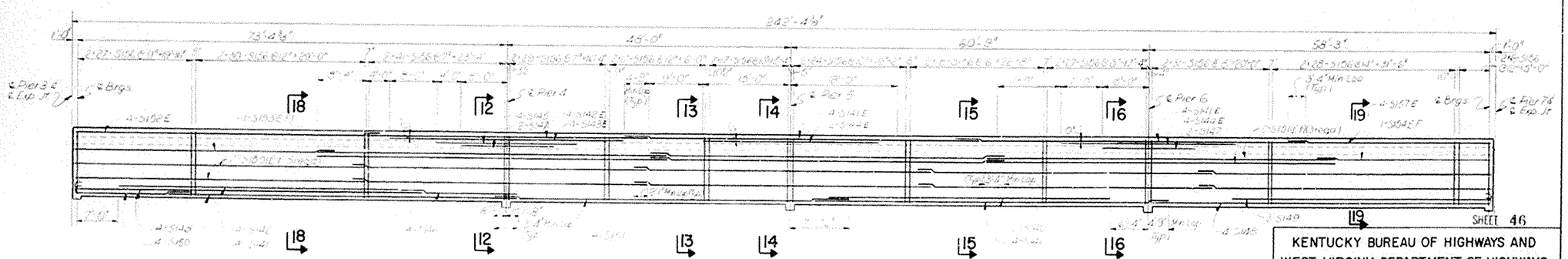
LETTING DATE



GIRDER 1



GIRDER 2



GIRDER 3

GIRDER ELEVATIONS

NOTES:

Work this Sheet with Sheets 36, 49, 54, 58, 59, 61 & 62.
All dimensions are measured along ℄ Girder.
All reinforcing bars designated by Suffix (E) in the plans shall be epoxy coated in accordance with the special Provision No. 19 (7th) Epoxy Coated Reinforcing Steel.

SPAN 4 THRU 7
GIRDER ELEVATIONS

FRANKLAND AND LIENHARD

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8) ; SP 64-33-14 LI
LOUISA - FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY WEST VIRGINIA

ROAD

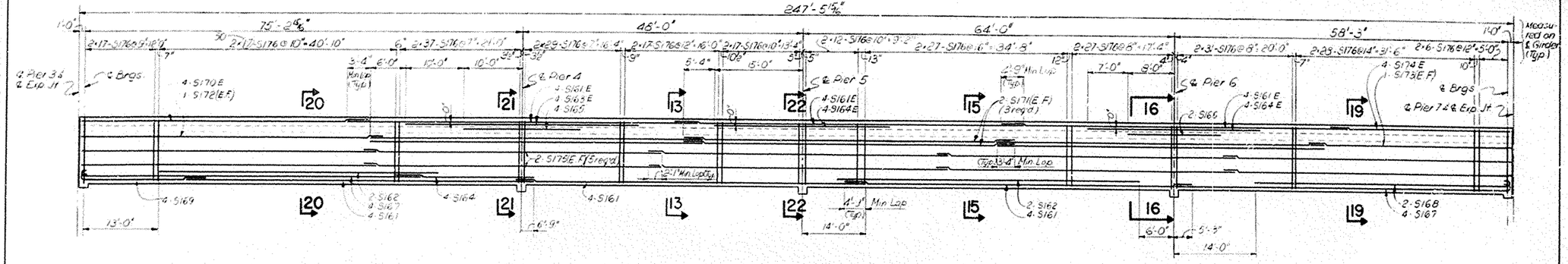
STATION 20 + 2000 P.E. PROJECT NO.

CONSTRUCTION PROJECT NO. MAINTENANCE PROJECT NO. DRAWING NO. 19592

BRIDGE

UPDATE DATE

LETTING DATE



GIRDER ELEVATIONS

NOTES

Work this Sheet with Sheets 36, 49, 54, 58, 59, 61 & 62.
All dimentions are measured along ℄ Girder.
All reinforcing bars designated by Suffix (E) in the plans shall be epoxy coated in accordance with the special Provision No 19 (76) Epoxy Coated Reinforcing Steel.

SHEET 47

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY WEST VIRGINIA

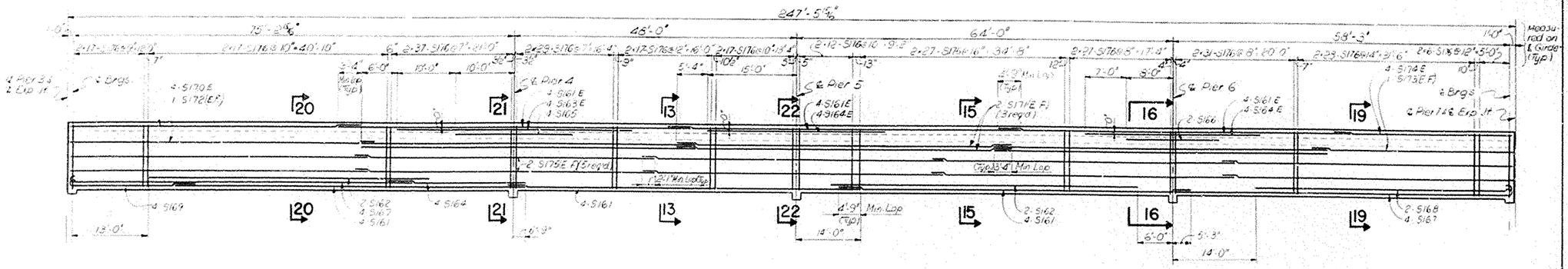
ROAD

STATION 20 + 20.00 | P.E. PROJECT NO. | CONSTRUCTION PROJECT NO. | MAINTENANCE PROJECT NO. | DRAWING NO. 19592

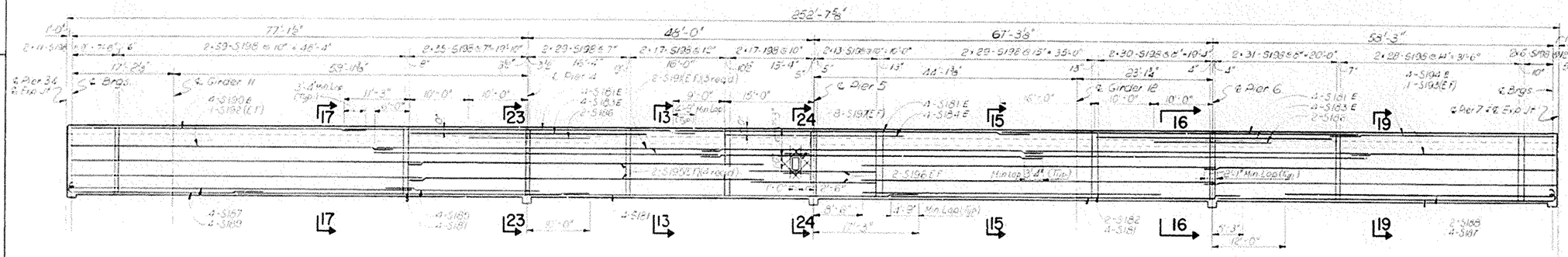
FRANKLAND AND LIENHARD

SPAN 4 THRU 7
GIRDER ELEVATIONS

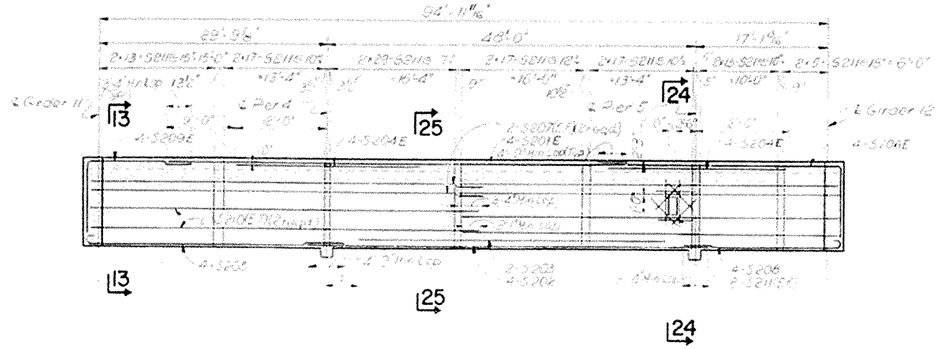
BRIDGE



GIRDER 4



GIRDER 5



GIRDER 6

GIRDER ELEVATIONS

NOTES

Work this Sheet with Sheets 36, 45 & 55, 59, 61 & 62.
All dimensions are measured along ℄ Girder.
All reinforcing bars designated by Suffix (E) in the plans shall be epoxy coated in accordance with the "Special Provision No. 19 (96) Epoxy Coated Reinforcing Steel."

SHEET 47

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8), SP 64-33-14 LI
LOUISA - FORT GAY BRIDGE AND APPROACHES
LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY WEST VIRGINIA
ROAD

STATION 20 + 20.00 P.E. PROJECT NO

CONSTRUCTION PROJECT NO. MAINTENANCE PROJECT NO. DRAWING NO. 19592

SPAN 4 THRU 7
GIRDER ELEVATIONS

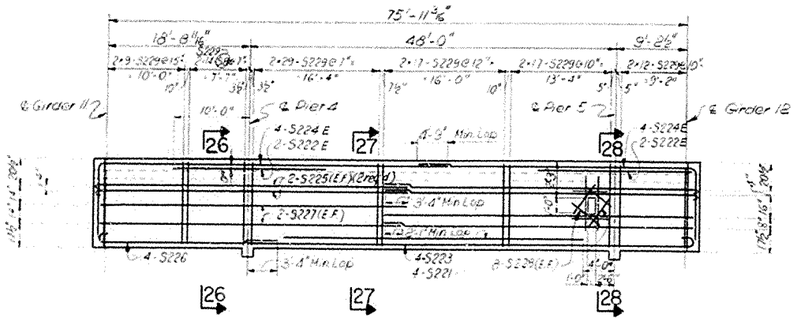
FRANKLAND AND LIENHARD

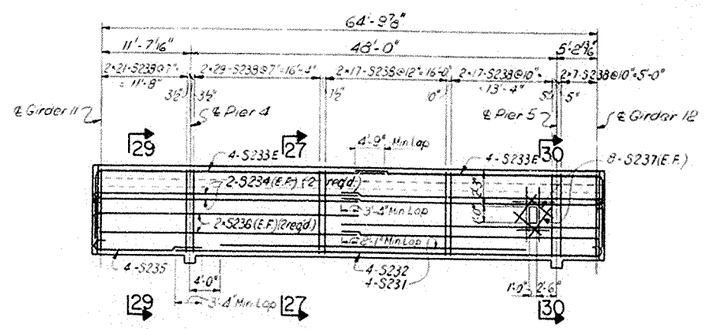
BRIDGE

UPDATE DATE
LETTING DATE

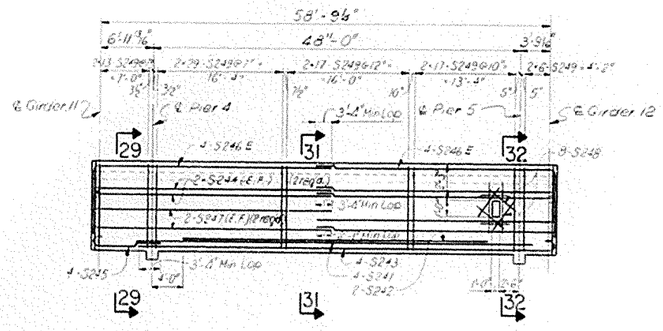
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LETTING DATE

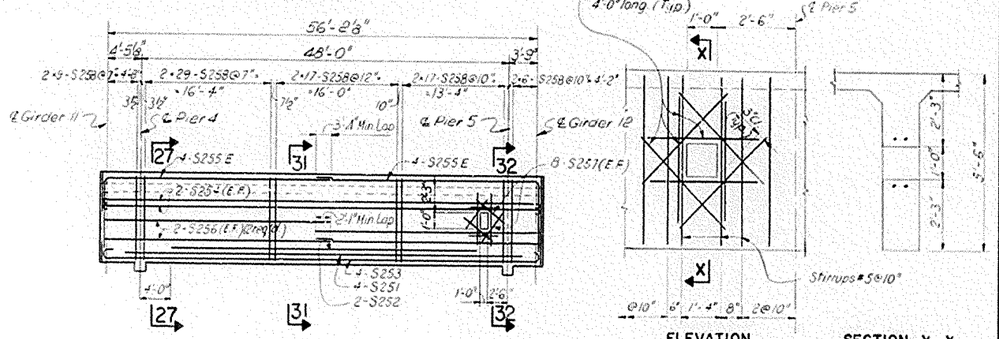




GIRDER 7

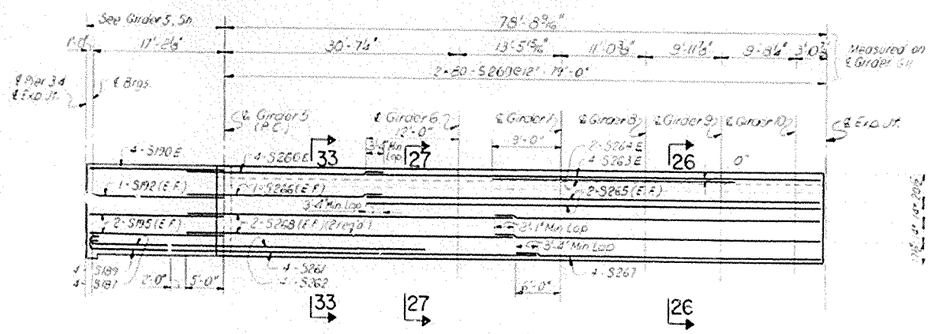


GIRDER 8

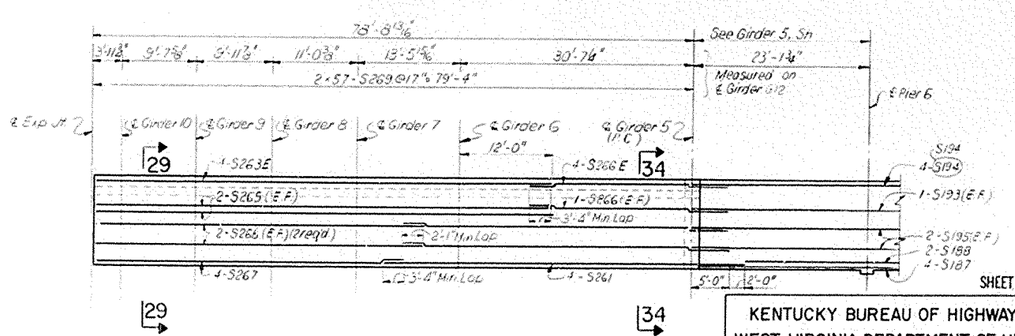


DETAIL AT TELEPHONE DUCTS OPENING

GIRDER 9



GIRDER 10



GIRDER 11 (DEVELOPED)

GIRDER 12 (DEVELOPED)

NOTES

Work this Sheet with Sheets 36, 49, 50, 54, 58, 59, 61 & 62.
All dimentions are measured along ℄ Girder.
All reinforcing bars designated by Suffix (E.) in the plans shall be epoxy coated in accordance with the Special Provision No. 19 (76) Epoxy Coated Reinforcing Steel.

GIRDER ELEVATIONS

SPAN 4 THRU 7 GIRDER ELEVATIONS

FRANKLAND AND LIENHARD

SHEET 48

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA - FORT GAY BRIDGE AND APPROACHES

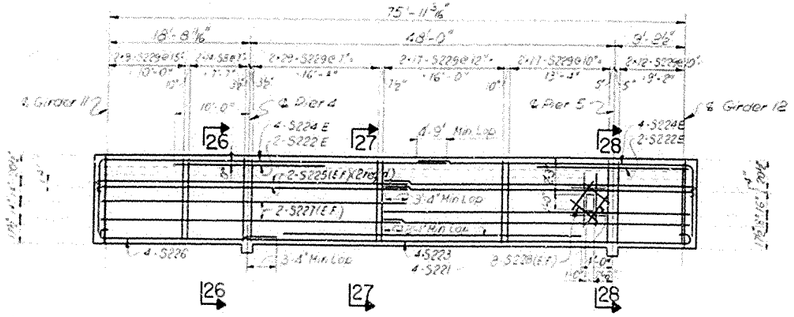
LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY WEST VIRGINIA

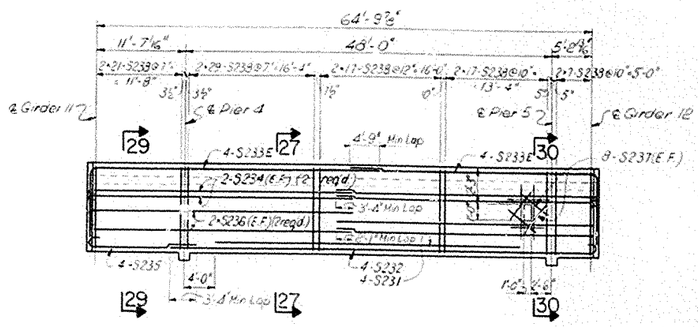
ROAD

STATION 20 + 20.00 P.E. PROJECT NO.

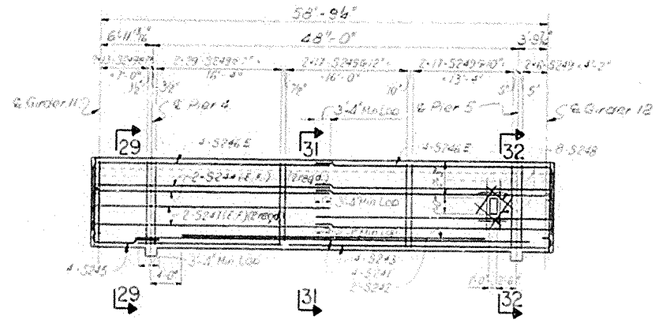
CONSTRUCTION PROJECT NO. | MAINTENANCE PROJECT NO. | DRAWING NO. 19592

BRIDGE

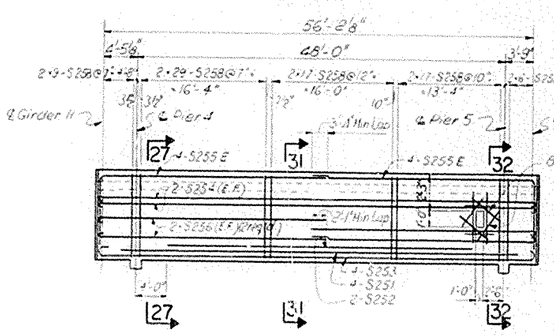


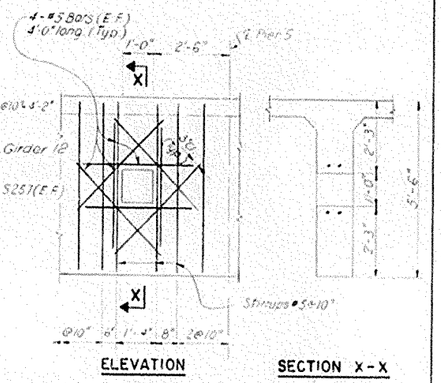


GIRDER 7



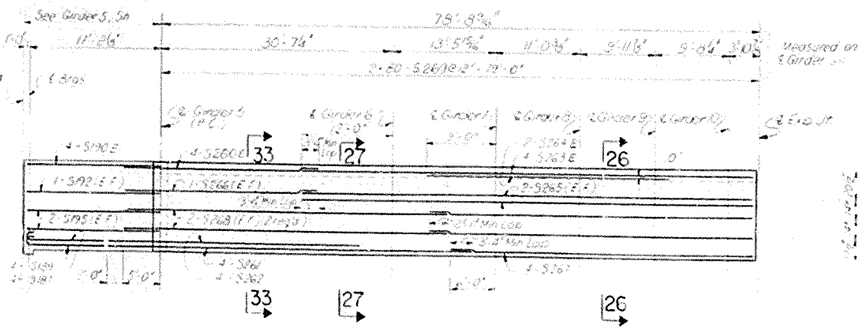
GIRDER 8





DETAIL AT TELEPHONE DUCTS OPENING

GIRDER 9

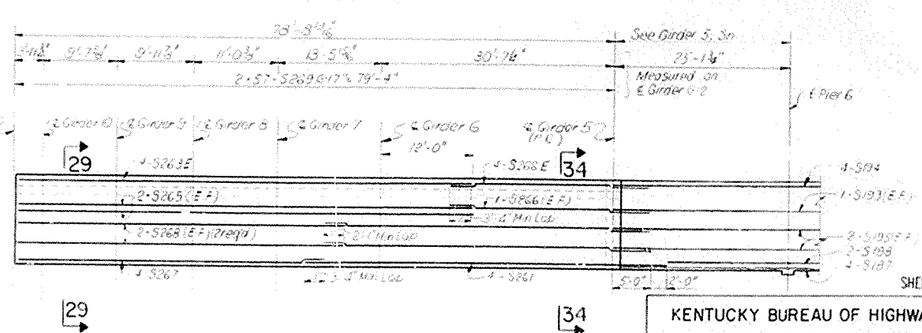


GIRDER 11 (DEVELOPED)

NOTES

Work this Sheet with Sheets 36, 39, 41, 43, 45, 47, 51 & 52
All dimensions are measured along ℄ Girder.
All reinforcing bars designated by Suffix (E) in the plans shall be epoxy coated in accordance with the Special Provision No. 19 (76) "Epoxy Coated Reinforcing Steel"

GIRDER 10



GIRDER 12 (DEVELOPED)

GIRDER ELEVATIONS

SPAN 4 THRU 7
GIRDER ELEVATIONS

FRANKLAND AND LIENHARD

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8), SP 64-33-14 LI
LOUISA - FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY WEST VIRGINIA

ROAD

STATION 20 + 2000 P.E. PROJECT NO

SHEET 48

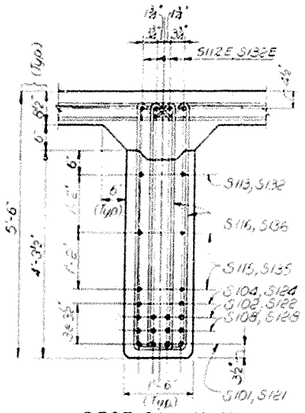
19592

UPDATE DATE
LETTING DATE

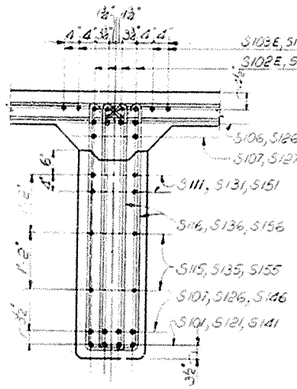
BRIDGE

UPDATE DATE

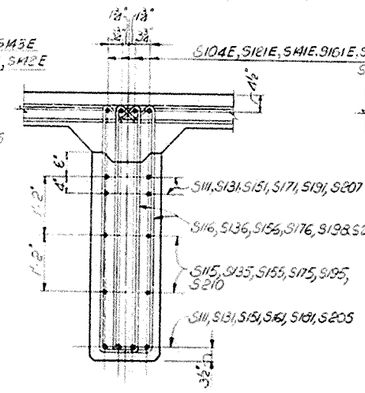
LETTING DATE



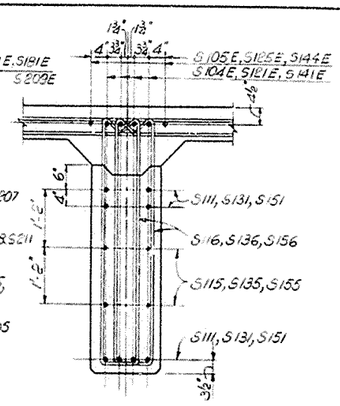
SECTION 11-11



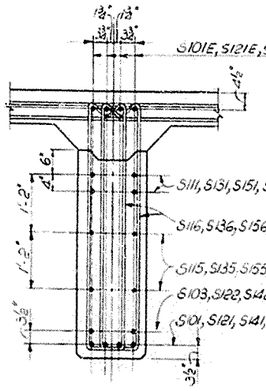
SECTION 12-12



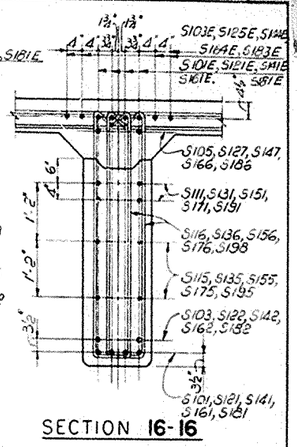
SECTION 13-13



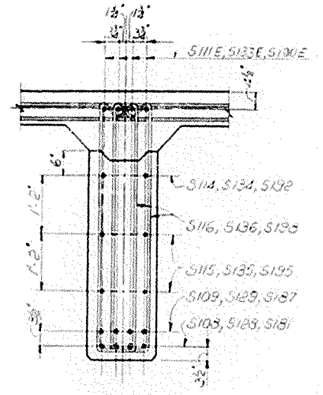
SECTION 14-14



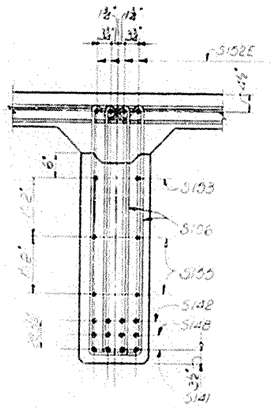
SECTION 15-15



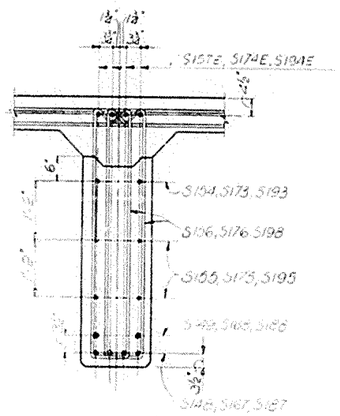
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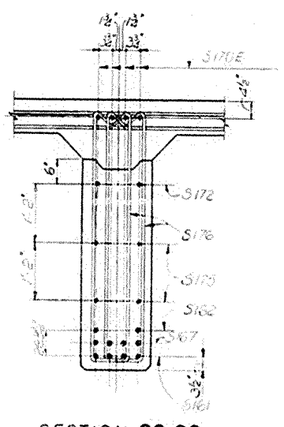
SECTION 17-17



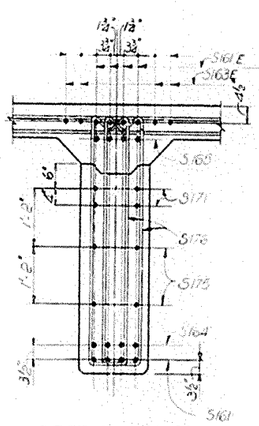
SECTION 18-18



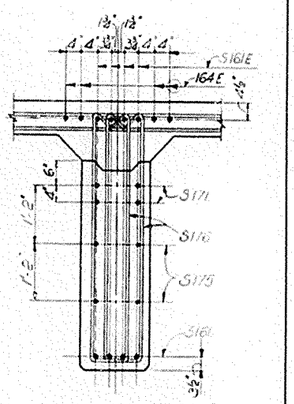
SECTION 19-19



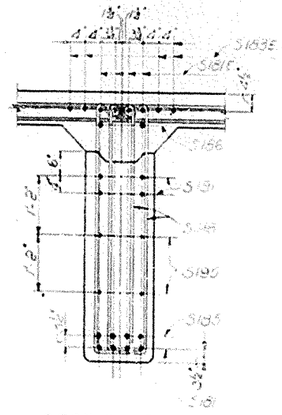
SECTION 20-20



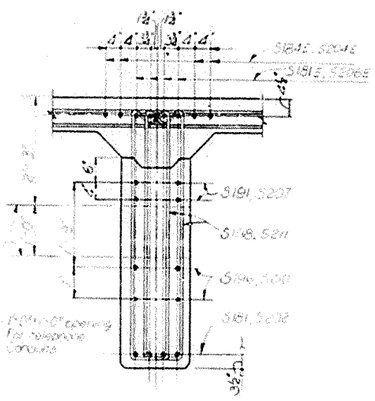
SECTION 21-21



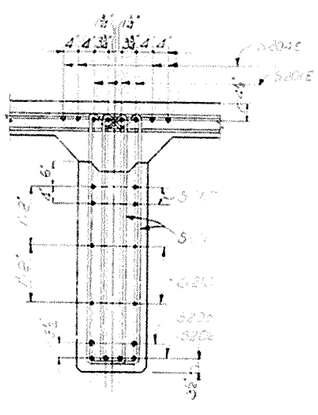
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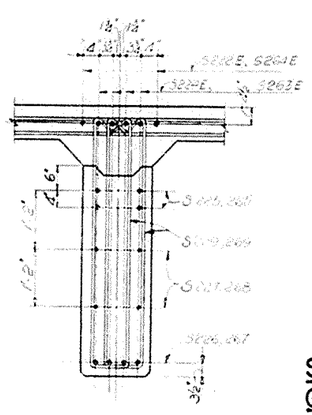
SECTION 23-23



SECTION 24-24



SECTION 25-25



SECTION 26-26

NOTES

Work this Sheet with Sheets 46, 47, 48, 61 & 62.
All reinforcing bars designated by Suffix (E) in the plans shall be epoxy coated in accordance with the "special Provision No. 19 (76) Epoxy Coated Reinforcing Steel."

SHEET 49

SPAN 4 THRU 7 GIRDER SECTIONS

FRANKLAND AND LIENHARD

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

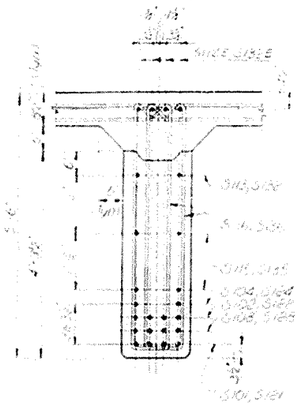
PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

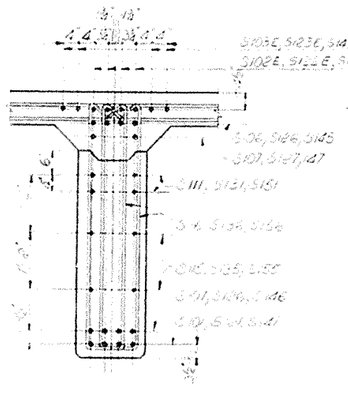
ROAD

STATION 20+20.00 | P.E. PROJECT NO. | CONSTRUCTION PROJECT NO. | MAINTENANCE PROJECT NO. | DRAWING NO. 19592

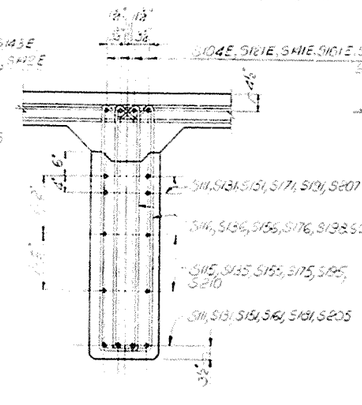
BRIDGE



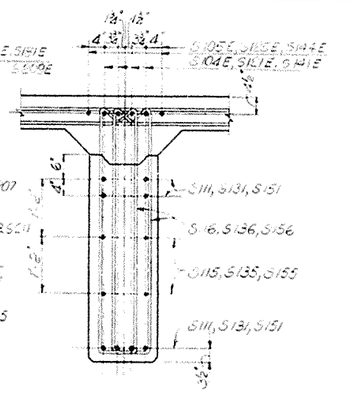
SECTION 11-11



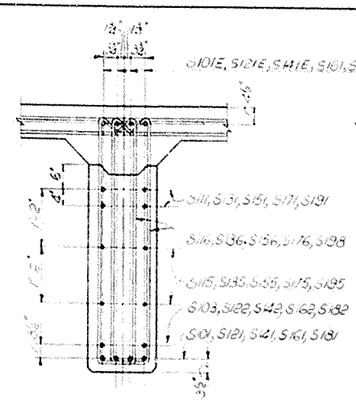
SECTION 12-12



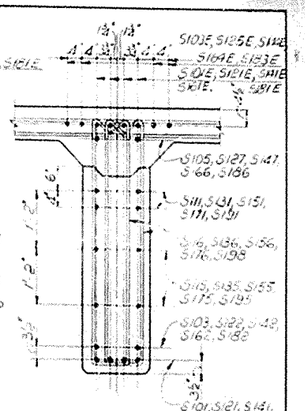
SECTION 13-13



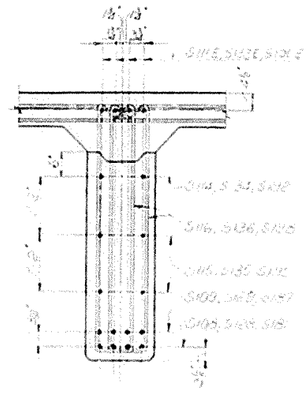
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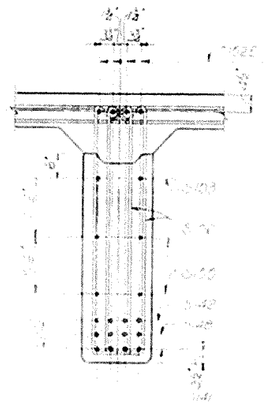
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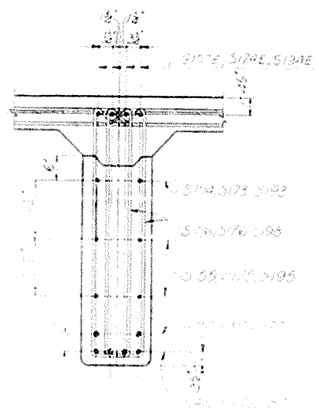
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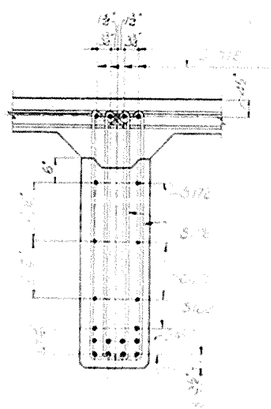
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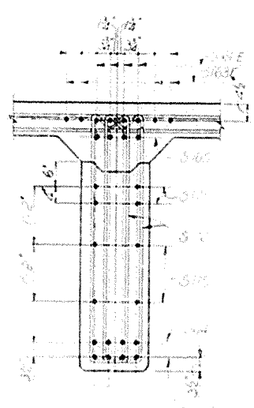
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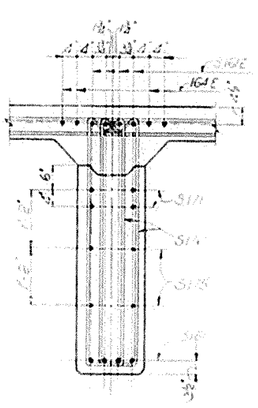
SECTION 19-19



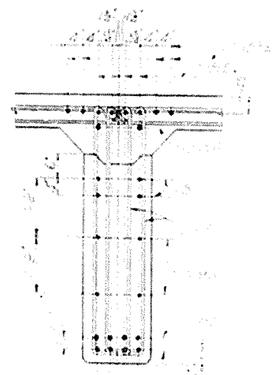
SECTION 20-20



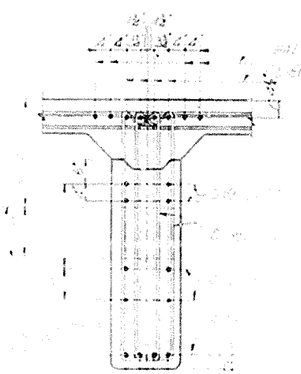
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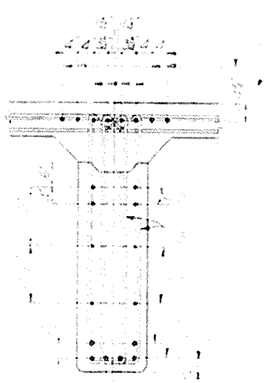
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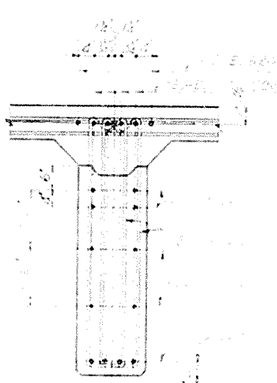
SECTION 23-23



SECTION 24-24



SECTION 25-25



SECTION 26-26

NOTES

Work this Sheet with Sheets 46, 47, 48, 49 & 50.

All reinforcing bars designated by Suffix (E) on the plans shall be epoxy coated in accordance with the Special Provision No. 13 (76) Epoxy Coated Reinforcing Steel.

SHEET 49

SPAN 4 THRU 7 GIRDER SECTIONS

FRANKLAND AND LIENHARD

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8), SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD

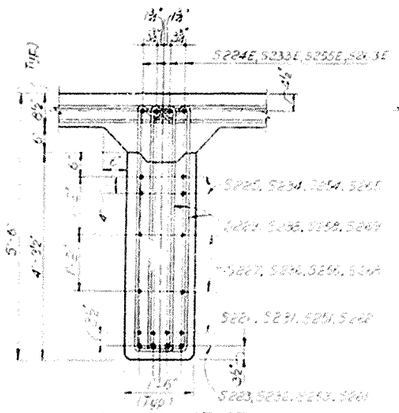
STATION 20+20.00 P.E. PROJECT NO.

19592

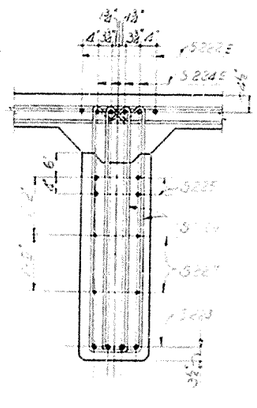
BRIDGE

UPDATE DATE

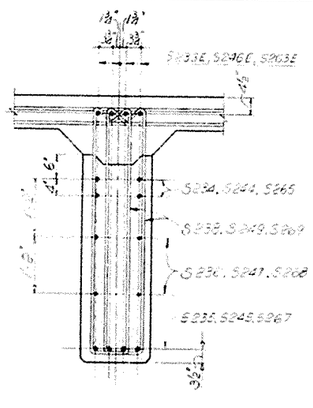
LETTING DATE



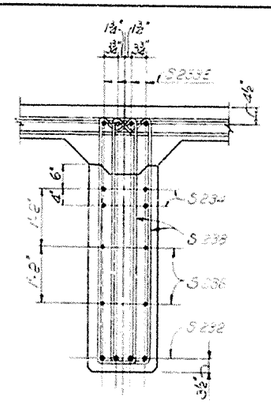
SECTION 27-27



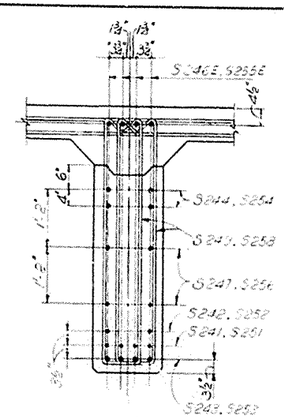
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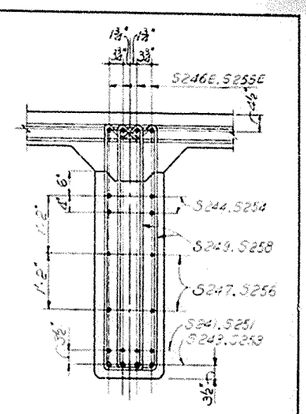
SECTION 29-29



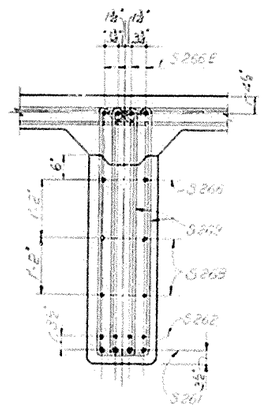
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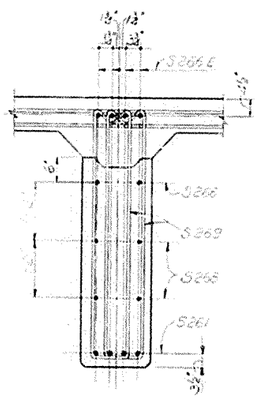
SECTION 31 - 31



SECTION 32-32



SECTION 33-33



SECTION 34-34

NOTES

Work this Sheet with Sheets 48 & 52.
All reinforcing bars designated by Suffix (E) in the plans shall be epoxy coated in accordance with the special Provision No. 19 (76) Epoxy Coated Reinforcing Steel."

SHEET 50

SPAN 4 THRU 7 GIRDER SECTIONS

FRANKLAND AND LIENHARD

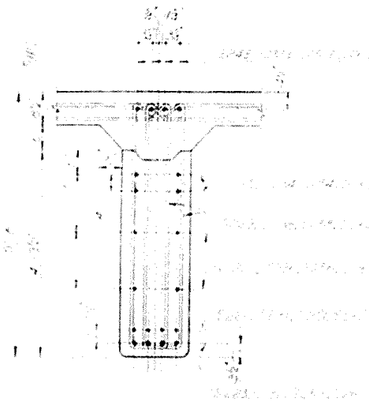
KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES
LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

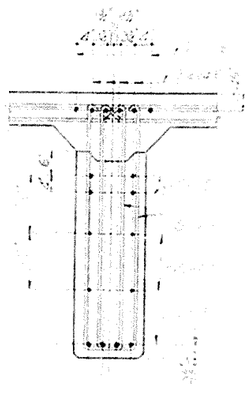
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STATION 20 + 20.00	P.E. PROJECT NO.		
CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO. 19592	

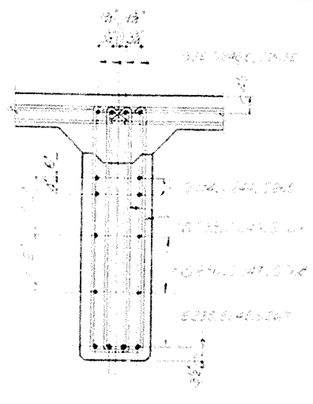
BRIDGE



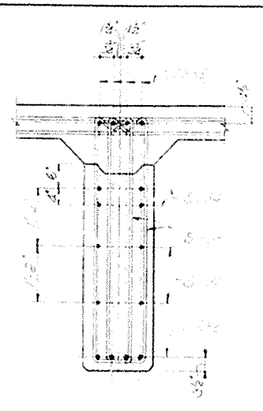
SECTION 27-27



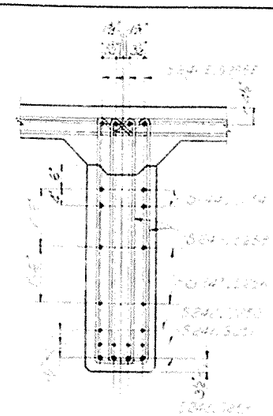
SECTION 28-28



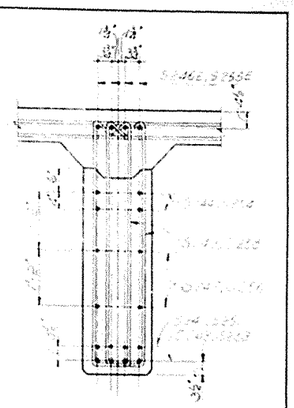
SECTION 29-29



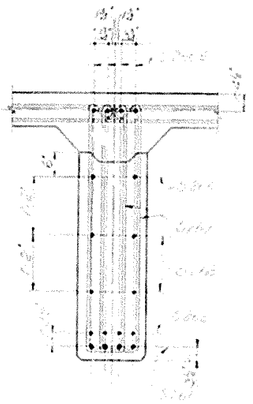
SECTION 30-30



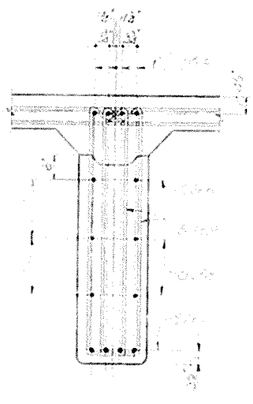
SECTION 31 - 31



SECTION 32-32



SECTION 33-33



SECTION 34-34

NOTE:

Work this sheet with Sheets 48 & 62.
All reinforcing bars designated by Suffix (E) on the plans shall be epoxy coated in accordance with the special provision No. 05 (36) Epoxy Coated Reinforcing Steel.

SHEET 50

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8), SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES
LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA
ROAD

STATION 20 + 2000 P.E. PROJECT NO

SPAN 4 THRU 7
GIRDER SECTIONS

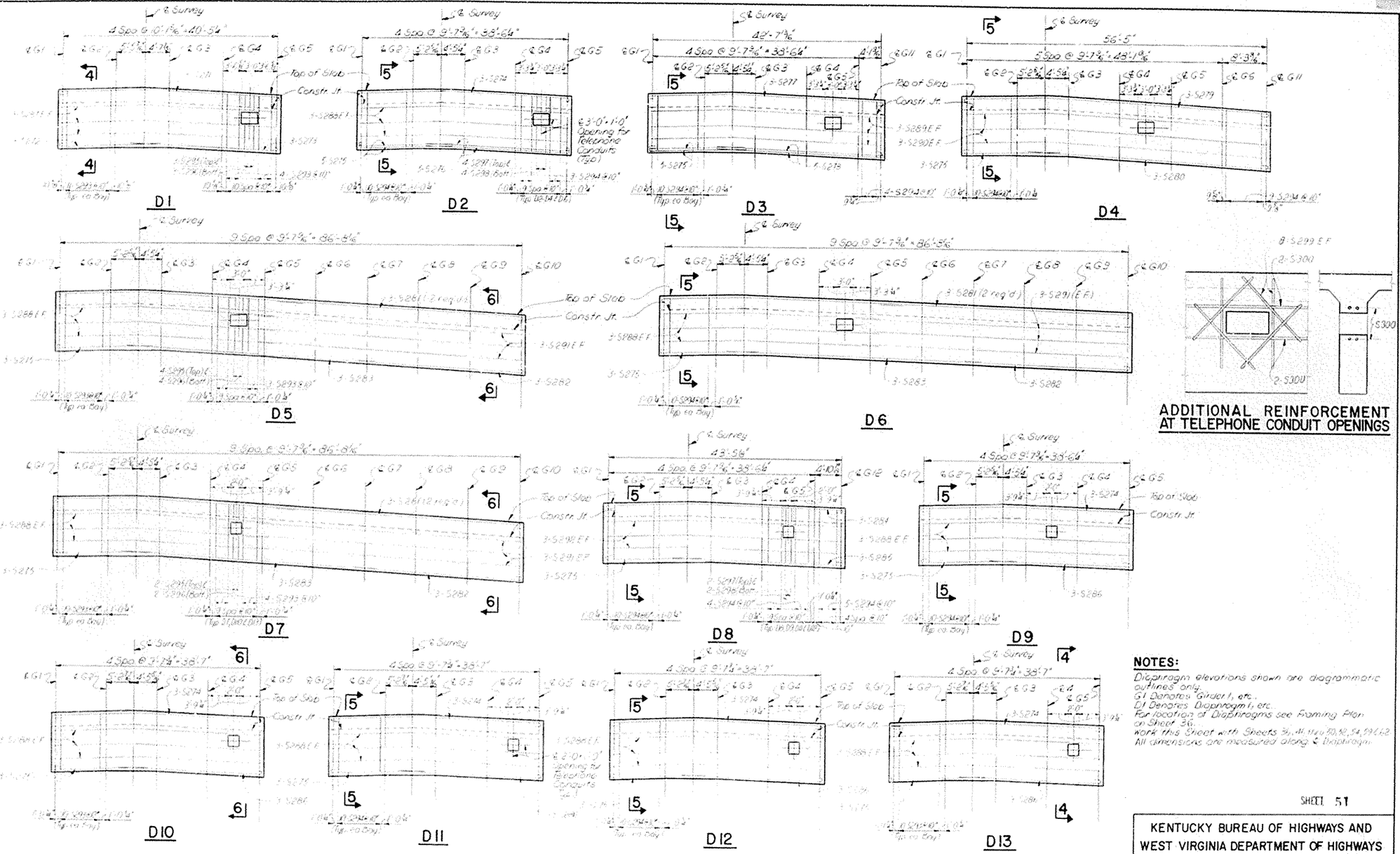
FRANKLAND AND LIENHARD

19592

BRIDGE

UPDATE DATE

LETTING DATE



ADDITIONAL REINFORCEMENT AT TELEPHONE CONDUIT OPENINGS

DIAPHRAGM ELEVATIONS

NOTES:

Diaphragm elevations shown are diagrammatic outlines only.
G1 Denotes "Girder 1", etc.
D1 Denotes Diaphragm 1, etc.
For location of Diaphragms see Framing Plan on Sheet 36.
Work this Sheet with Sheets 36, 41, 44, 50, 52, 54, 59 & 62.
All dimensions are measured along ℄ Diaphragm.

SHEET 51

SPAN 4 THRU 7
DIAPHRAGM
ELEVATIONS

FRANKLAND AND LIENHARD

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8), SP 64-33-14 LI
LOUISA - FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY WEST VIRGINIA

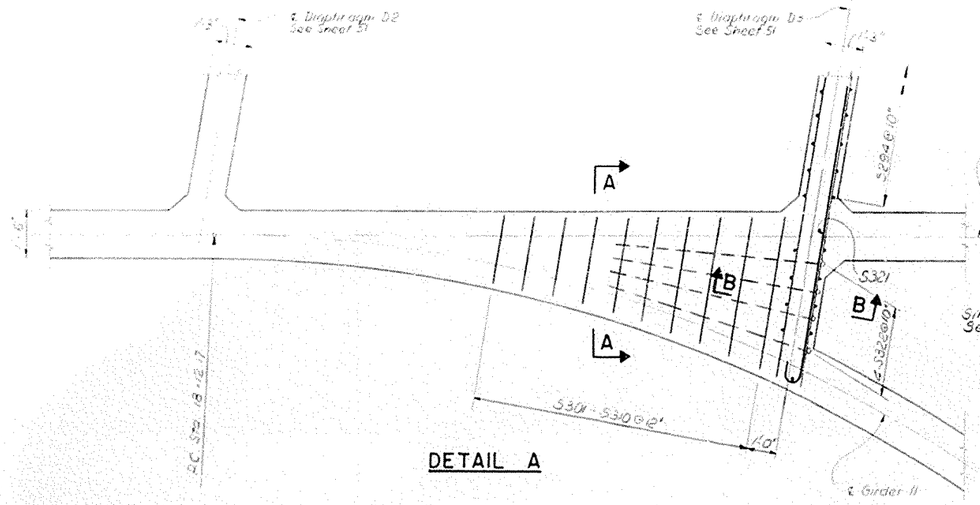
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STATION 20 + 20.00 P.E. PROJECT NO.

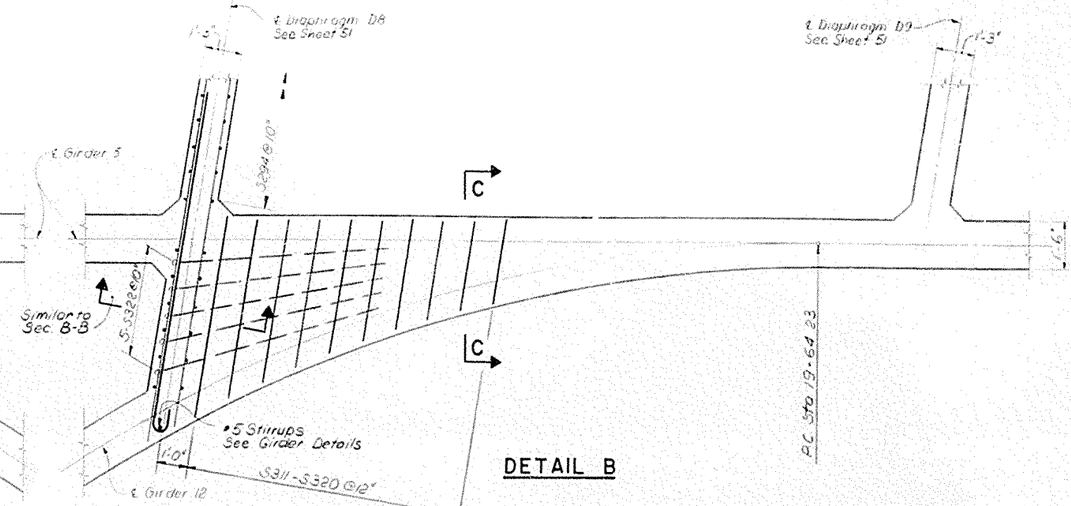
CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
		19592

BRIDGE

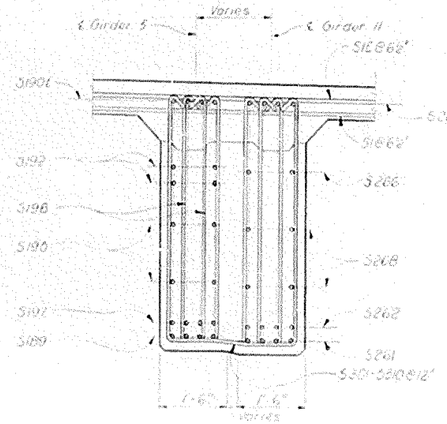
UPDATE DATE
LETTING DATE



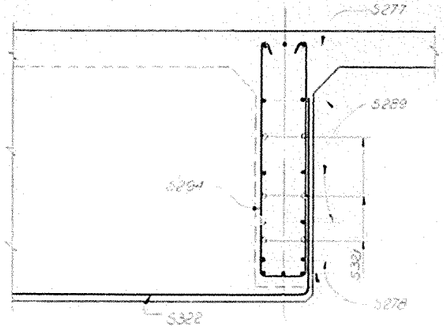
DETAIL A



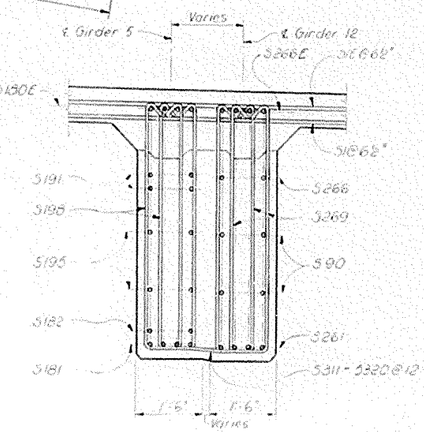
DETAIL B



SECTION A-A



SECTION B-B



SECTION C-C

NOTES:
Work this Sheet with Sheets 39, 42, 50, 51, 54, 60 & 61.
All reinforcing bars designated by Suffix (E) in the plans shall be epoxy coated in accordance with the Special Provision No 19 (76) "Epoxy Coated Reinforcing Steel."

SHEET 52

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8), SP 64-33-14 LI
LOUISA - FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY WEST VIRGINIA

ROAD

STATION 20+20.00 P.E. PROJECT NO

CONSTRUCTION PROJECT NO. MAINTENANCE PROJECT NO. DRAWING NO. 19592

SPAN 4 THRU 7
GIRDER DETAILS

FRANKLAND AND LIENHARD

BRIDGE

UPDATE DATE

LETTING DATE

Quantity of Reinforcement
Epoxy Coated Reinforcement
Epoxy Coated Reinforcement and Conc. Queen

PLAN

PLAN

POURING SEQUENCE IN SPAN 2&3

NOTES:

All reinforcing bars designated by Suffix (E) in the plans shall be epoxy coated in accordance with the special Provision No.19 (76) Epoxy Coated Reinforcing Steel.
The construction joint between the roadway slab and the barrier is mandatory. The concrete in the barrier shall not be poured until the deck slab has properly cured.

NOTES:

For General Notes see Sh. 2 & 3.
For Sections A-A & B-B see Sh. 57.
For Sections 1-1 through 4-4 see Sh. 59.
For Bill of Reinforcement see Sh. 60.
For Light Standard Pad Details see Sh. 72
For Pedestrian Handrail Details see Sh. 71

SHEET 53

ESTIMATE OF QUANTITIES (SEE 11)

ITEM (410.01)	Span 1	Span 2,3	Total
Concrete Class AA	138.40	471.50	609.90
Reinforcement (15,210 / 15,529)	(16,457)	(57,780)	(74,237)
	(16,365)	(60,093)	(76,058)
Epoxy Coated Reinf.	(19,805)	(59,634)	(79,439)
(15,209 / 97,662)	14,953	82,458	97,411

SLAB PLAN SPAN 1,2&3

FRANKLAND AND LIENHARD

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD

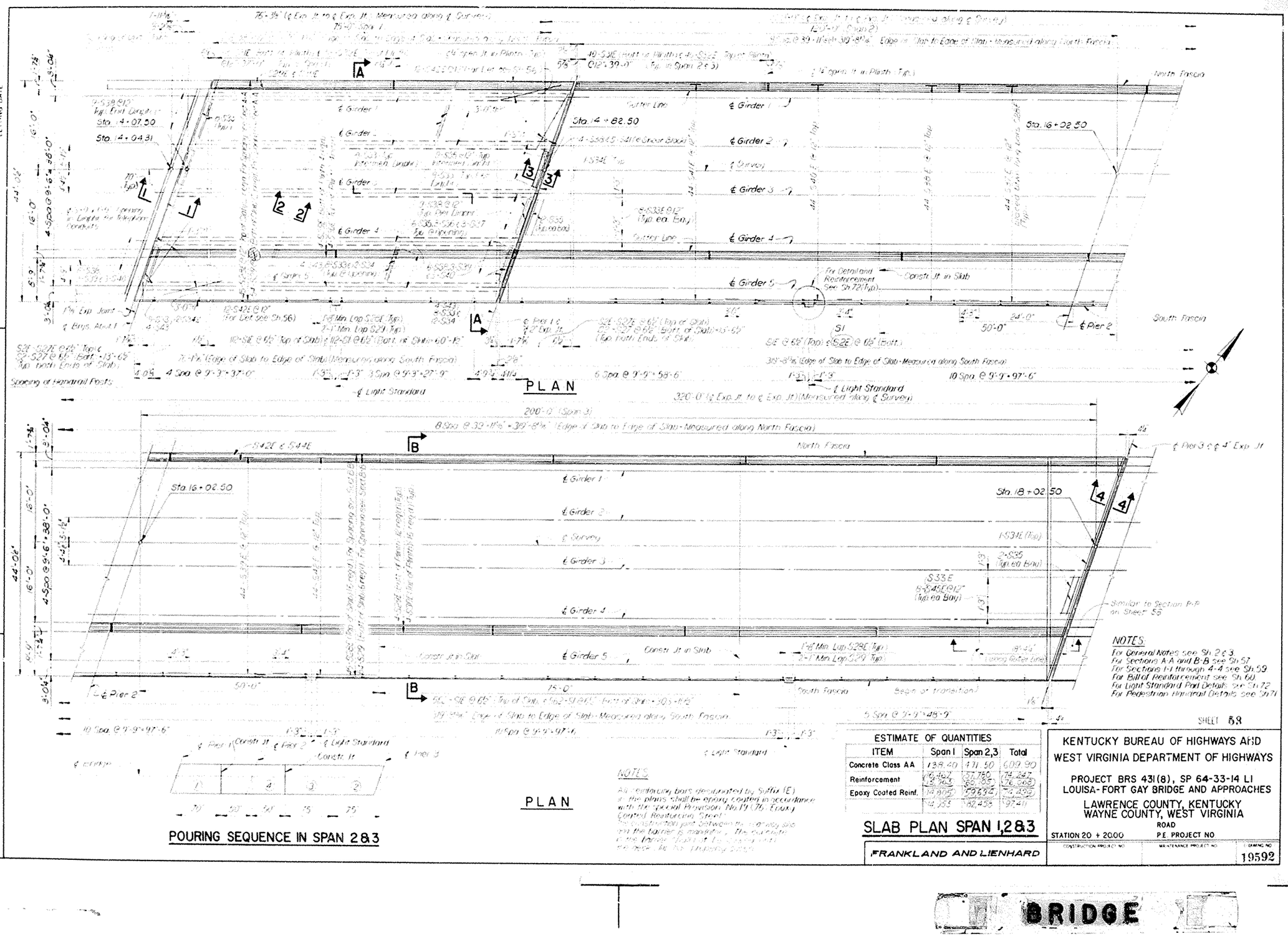
STATION 20 + 20.00 P.E. PROJECT NO.

CONSTRUCTION PROJECT NO. | MAINTENANCE PROJECT NO. | DRAWING NO. 19592

BRIDGE

UPDATE DATE

LETTING DATE



ESTIMATE OF QUANTITIES

ITEM	Span 1	Span 2,3	Total
Concrete Class AA	138.40	471.50	609.90
Reinforcement	16,467	57,780	74,247
	5,743	60,865	66,608
Epoxy Coated Reinf.	16,992	79,834	96,826
	14,353	82,456	97,241

SLAB PLAN SPAN 1,2&3

FRANKLAND AND LIENHARD

SHEET 58

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8), SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD

STATION 20 + 20.00 P.E. PROJECT NO

CONSTRUCTION PROJECT NO. | MAINTENANCE PROJECT NO. | DRAWING NO. 19592

BRIDGE

UPDATE DATE
LETTING DATE

PLAN

PLAN

POURING SEQUENCE IN SPAN 2&3

NOTES
For General Notes, see Sh 2&3
For Sections A-A and B-B see Sh 57
For Sections 1-1 through 4-4 see Sh 59
For Bent Reinforcement see Sh 60
For Light Standard Foot Detail see Sh 72
For Prestressed Members Details see Sh 74

SHEET 53

ESTIMATE OF QUANTITIES

ITEM	Span 1	Span 2,3	Total
Concrete Class AA	134.40	411.50	629.90
Reinforcement	[illegible]	60,165	75,068
Epoxy Coated Reinf.	[illegible]	59,634	72,419

SLAB PLAN SPAN 1,2&3

FRANKLAND AND LIENHARD

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

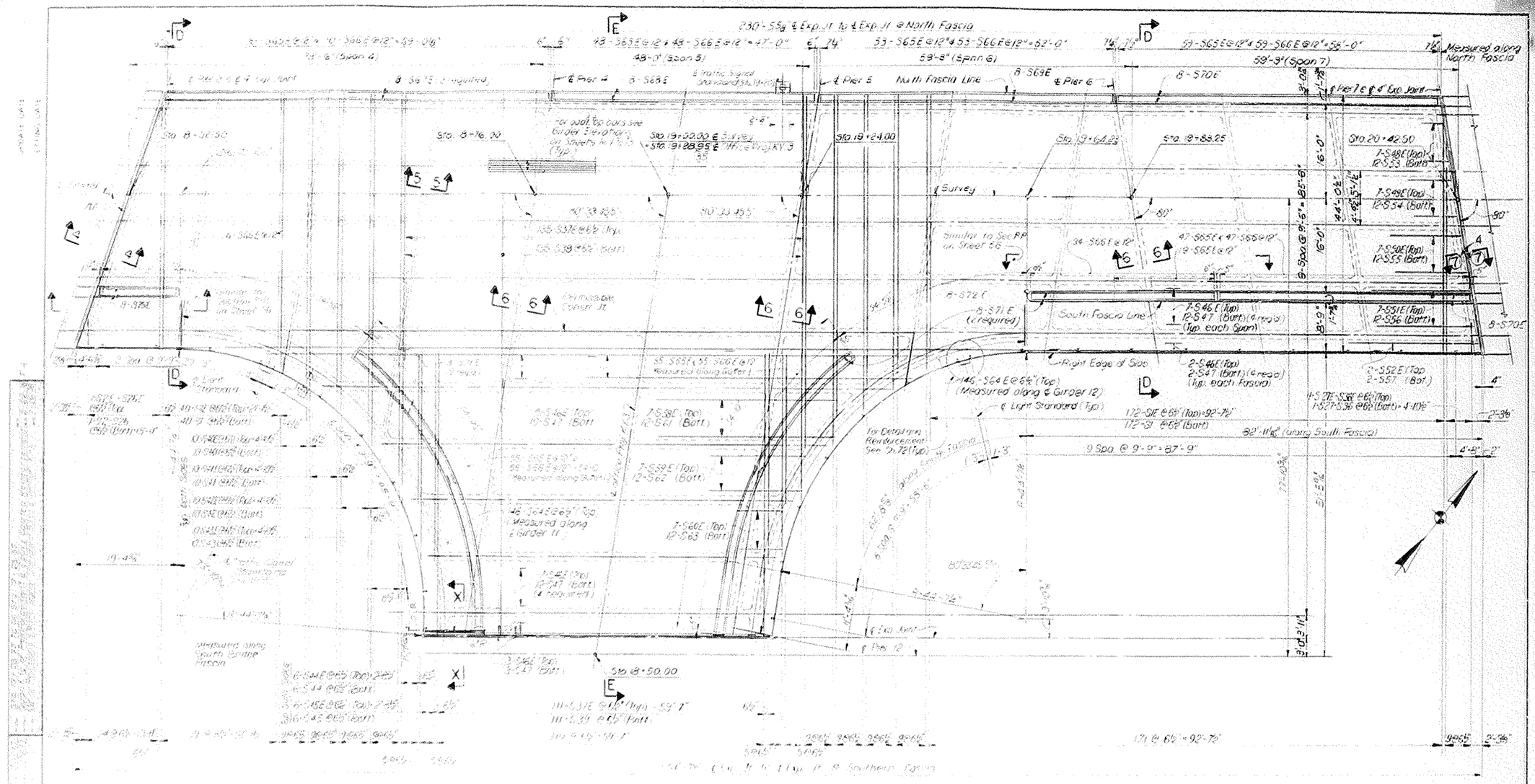
PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA
ROAD

STATION 20 + 2000 P.E. PROJECT NO

CONSTRUCTION PROJECT NO. MAINTENANCE PROJECT NO. DRAWING NO.
19592

BRIDGE



SHEET 54

NOTES

For General Notes see Sheet C-2.
For Section E-E & D see Sheet 52.
For Sections A thru D see Sheet 53.
Work this sheet with Sheets 46 thru 50.
For Bill of Reinforcement see Sheet 62.
The construction joint between the roadway slab and the barrier is mandatory. The concrete in the barrier shall not be poured until the deck slab has properly cured.
All reinforcing bars designated by Suffix (E) in the plans shall be epoxy coated in accordance with the Special Provision No. 19 (76) "Epoxy Coated Reinforcing Steel".

ESTIMATE OF QUANTITIES

ITEM	QUANTITY	
Concrete, Class AA	(1055.7 C.Y.)	1055.7
Reinforcement	204,011 lbs.	229,216
Epoxy Coated Reinf.	101,991 lbs.	103,902
		106,339

SLAB PLAN SPAN 4-7

FRANKLAND AND LIENHARD

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

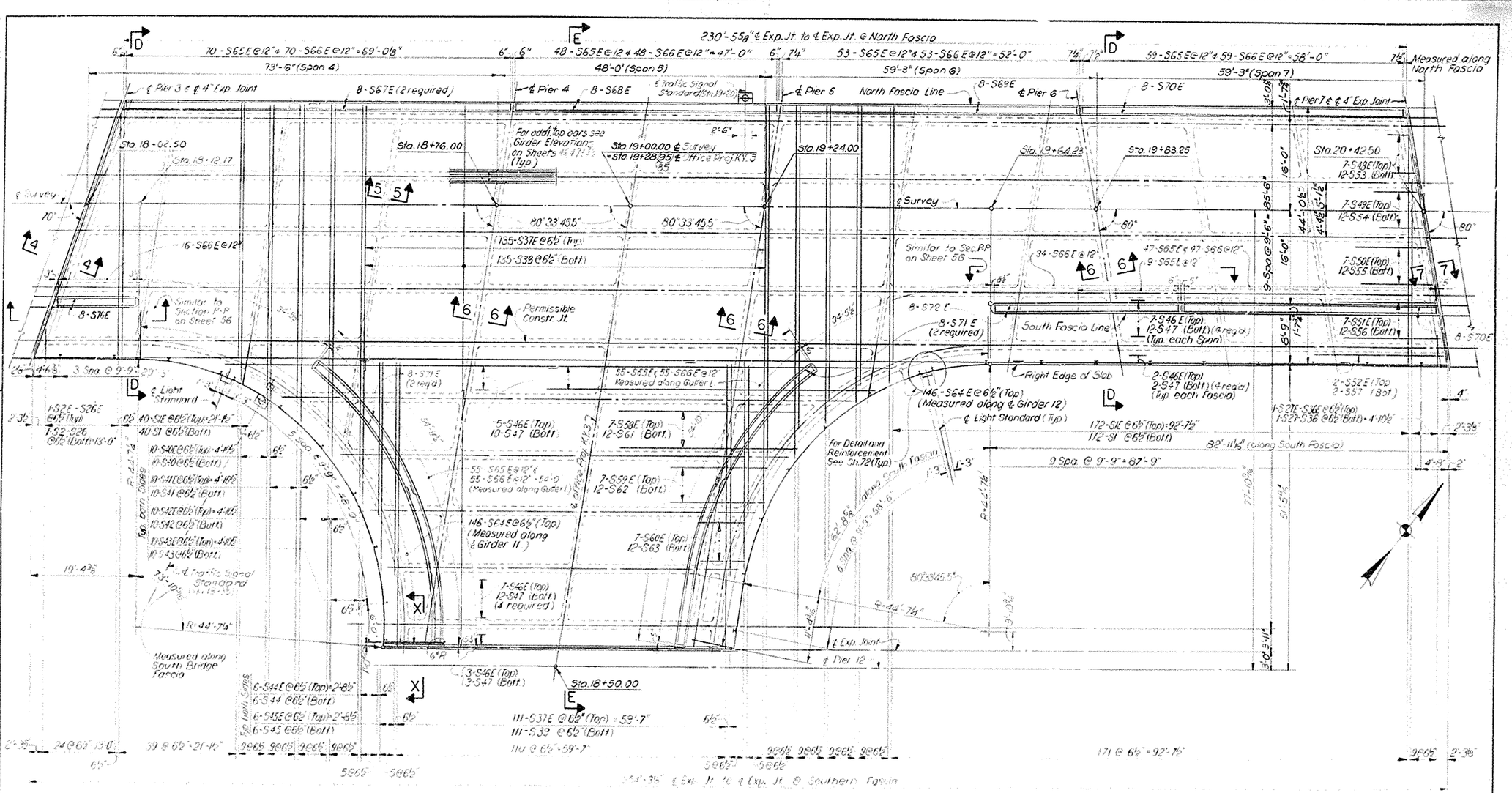
PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES
LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA
ROAD

STATION 20 + 20.00 — P.E. PROJECT NO.

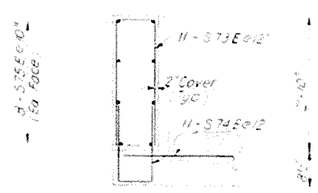
CONSTRUCTION PROJECT NO. — MAINTENANCE PROJECT NO. — DRAWING NO. 19592

BRIDGE

UPDATE DATE
LETTING DATE



PLAN



SECTION X-X

NOTES

For General Notes see Sheet 2 & 3.
For Section E-E & D-D see Sheet 57.
For Sections 4 thru 7 see Sheet 59.
Work this Sheet with Sheets 46 thru 52.
For Bill of Reinforcement see Sh. 61 & 62.
The construction joint between the roadway slab and the barrier is mandatory. The concrete in the barrier shall not be poured until the deck slab has properly cured.
All reinforcing bars designated by Suffix (E) in the plans shall be epoxy coated in accordance with the Special Provision No. 19 (70) Epoxy Coated Reinforcing Steel.

ESTIMATE OF QUANTITIES	
EM	QUANTITY
Concrete Class AA	935.5 CY 1039.7
Reinforcement	204,600 lbs 229,216
Epoxy Coated Reinf.	102,990 lbs 115,272 104,339

SLAB PLAN SPAN 4-7

FRANKLAND AND LIENHARD

SHEET 54

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD

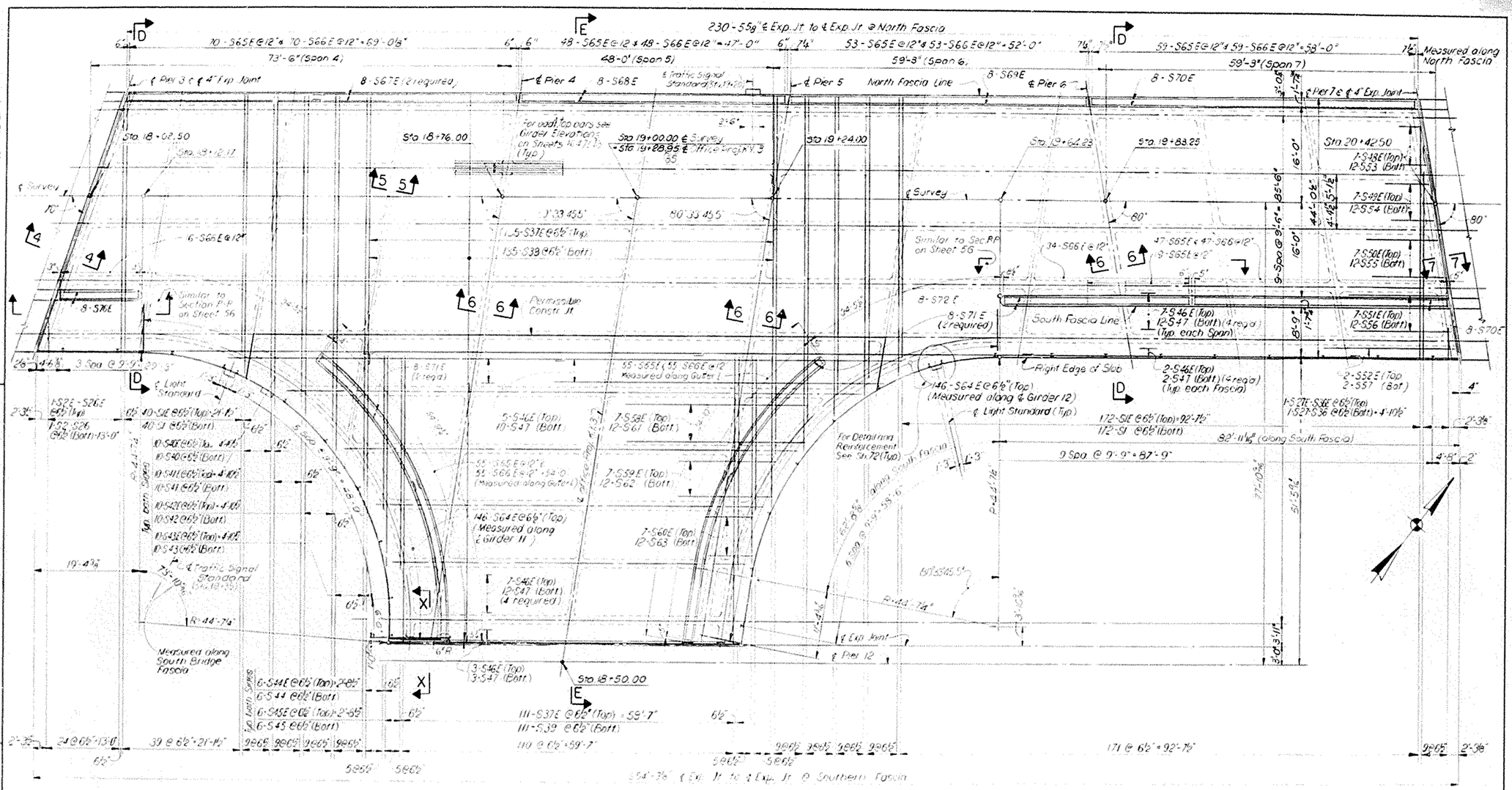
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CONSTRUCTION PROJECT NO. MAINTENANCE PROJECT NO. DRAWING NO. 19592

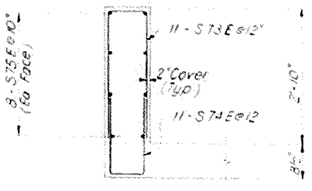
BRIDGE

UPDATE DATE

LETTING DATE



PLAN



SECTION X-X

NOTES

For General Notes see Sheet 2 & 3.
For Section E-E & D-D see Sheet 57
For Sections 4 thru 7 see Sheet 59
Work this Sheet with Sheets 46 thru 52
For Bill of Reinforcement see Sh. 61 & 62
The construction joint between the roadway slab and the barrier is mandatory. The concrete in the barrier shall not be poured until the deck slab has properly cured.
All reinforcing bars designated by Suffix (E) in the plans shall be epoxy coated in accordance with the special Provision No. 19 (76) Epoxy Coated Reinforcing Steel.

ESTIMATE OF QUANTITIES		
ITEM	QUANTITY	
Concrete Class AA	1033.75 CY	
Reinforcement	234,611 lbs.	229,216
Epoxy Coated Reinf.	107,990 lbs.	105,562

SLAB PLAN SPAN 4-7

FRANKLAND AND LIENHARD

SHEET 54

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD

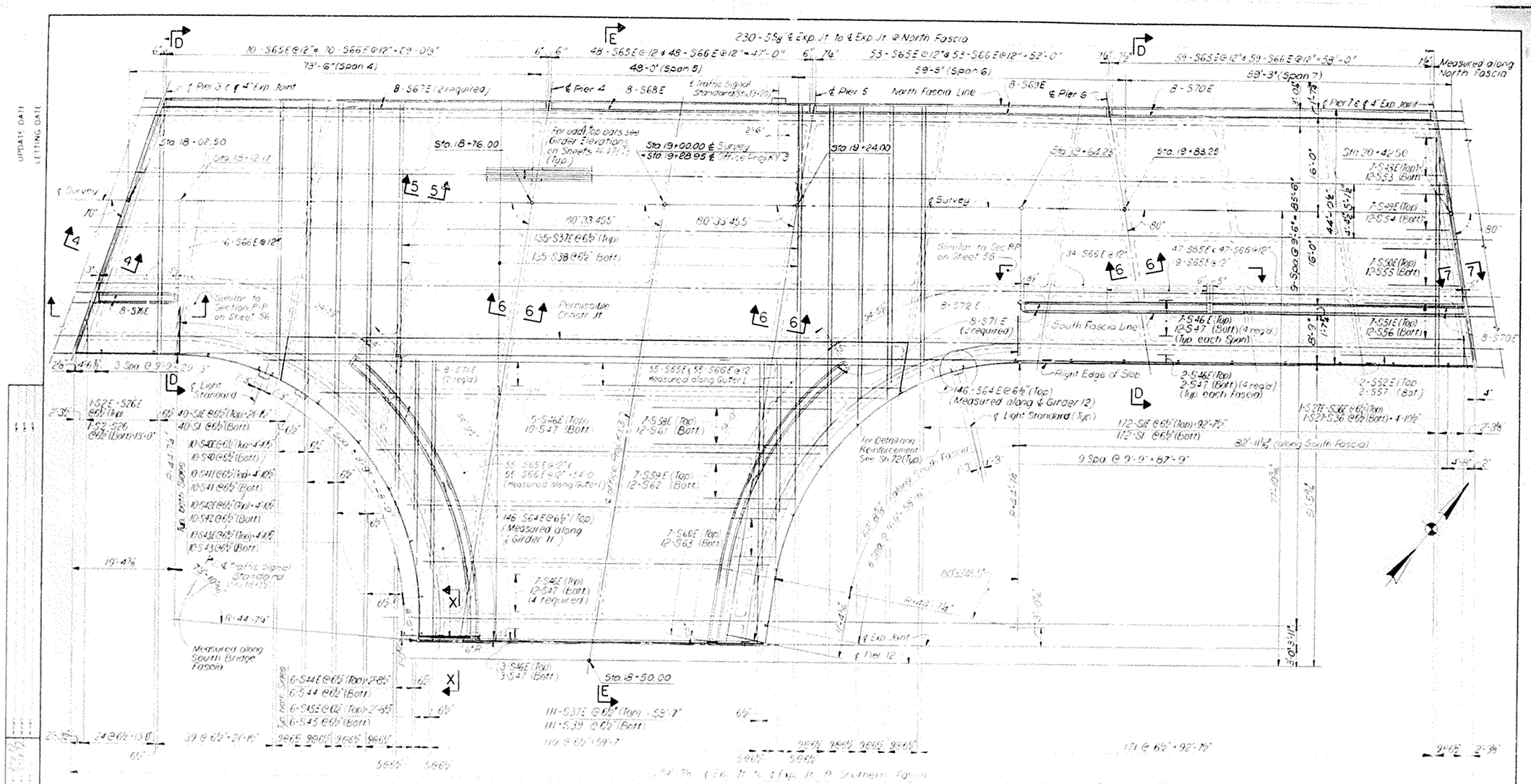
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DRAWING NO. 19592

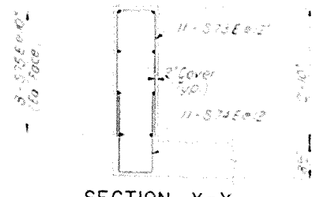
BRIDGE

UPDATE DATE

LETTING DATE



PLAN



SECTION X-X

NOTES:

For General Notes see Sheet 2 & 3
For Section E-E & D-D see Sheet 57
For Details A thru F see Sheet 59
Work this Sheet with Sheets 45 thru 52
For Bill of Reinforcement see Sh. 61 & 62
The construction joint between the roadway slab and the barrier is mandatory. The concrete in the barrier shall not be poured until the deck slab has properly cured.
All reinforcing bars designated by Suffix (E) on the plans shall be epoxy coated in accordance with the Special Provision No. 19 (76) Epoxy Coated Reinforcing Steel

ESTIMATE OF QUANTITIES

ITEM	QUANTITY
Concrete Class AA	339 C.Y.
Reinforcement	28.6 Tons
Epoxy Coated Reinf.	102.895 Lbs

SLAB PLAN SPAN 4-7

FRANKLAND AND LIENHARD

SHEET 54

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8), SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD

STATION 20 + 20.00 P.E. PROJECT NO.

19592

BRIDGE

UPDATE DATE

LETTING DATE

420'-0" (℄ Exp. Joint to ℄ Exp. Jt.) (Measured along ℄ Survey)

120'-0" (Span 8)

180'-0" (Span 9)

11 Spa. @ 38'-2" = 419'-9" (Edge of Slab to Edge of Slab) (Measured along North Fascia)

Spacing of Open Joints in Plinths

℄ Pier 7 & 4" Exp Jt

S15E & S16E

B

℄ Tug Fork

7" - 3-S20E (Bot of Plinth) & 38-S21E (Top of Plinth) 842'-37'-0" Typ in Span 8, 9 & 10

7"

℄ Pier 8

℄4" Open Joint in Plinth (Typ)

North Fascia Line

℄ Navigation Channel

4

Sta. 20+42.50

Sta. 21+00.00 ℄ Survey = Sta. 4+11.35 ℄ Tug Fork

Sta. 21+62.50

Sta. 22+52.50

1-S18E

℄ Survey

80° (Typ)

45-S14E @ 14" (Top of Slab) For Spacing See Sect B-B (a Reqd)

54-S15 (Bottom of Slab) For Spacing See Sect B-B (a Reqd)

1-S15E 16 Reqd (Bottom of Plinth)

1-S16E-22 Reqd (Top of Plinth)

44-S24E @ 12" (Typ)

44-S25E @ 12" (Typ)

44-S26E @ 12" (Typ)

4-S20 @ 9'-6" = 38'-0"

2'-4½" 5'-1½" 16'-0" 16'-0" 4'-0½" 3'-0¼" 1'-7¾"

2-S19 (Typ. ea. Bay)

8-S17E @ 12" = 7'-0" (Typ. ea. Bay)

44-S23E @ 12" (Typ)

44-S22E @ 12" (Typ)

S15E & S16E

Construction Joint in Slab

Construction Joint in Slab

16" Min Lap S14 E (Typ)

24" Min Lap S15 (Typ)

For Detail and Reinforcement see Sh. 72 (Typ)

30'-0"

24'-0"

50'-0"

South Fascia Line

761 - S1E @ 6½" (Top of Slab) & 761 - S1B 6½" (Bottom of Slab) = 411'-8"

419'-9" (Edge of Slab to Edge of Slab) (Measured along South Fascia)

Spacing of Handrail Posts

5'-1" 3 Spa. @ 9'-9" = 29'-3" 1'-3" 1'-3"

12 Spa. @ 9'-9" = 117'-0"

1'-3" 1'-3" 11 Spa. @ 9'-9" = 107'-3"

℄ Light Standard

℄ Light Standard

PLAN

420'-0" (℄ Exp. Joint to ℄ Exp. Joint) (Measured along ℄ Survey)

120'-0" (Span 10)

180'-0" (Span 9)

11@38'-2" (=) 419'-9" (Edge of Slab to Edge of Slab) (Measured along North Fascia)

2" Spacing of Open Joints in Plinth

℄ Navigation Channel

℄ Pier 9

S15E & S16E

North Fascia Line

℄ Pier 10 & ℄ 2" Exp. Jt.

Sta. 22+52.50

Sta. 23+42.50

Sta. 24+62.50

3

1-S18E

℄ Survey

8-S17 @ 12" = 7'-0" (Typ. ea. Bay)

2-S19 (Typ. ea. Bay)

S15E & S16E

Construction Joint in Slab

Construction Joint in Slab

3'-0" (Typ) 50'-0" (Typ) 1'-0"

24'-0"

30'-0"

South Fascia Line

761 - S1E @ 6½" (Top of Slab) & 761-S1B 6½" (Bottom of Slab) = 411'-8"

419'-9" (Edge to Slab to Edge of Slab) (Measured along South Fascia)

52E-S13E @ 6½" (Top of Slab) & 52-S13 @ 6½ (Bottom of Slab) = 5'-11½" Typ both ends)

11 Spa @ 9'-9" = 107'-3"

1'-3" 1'-3"

9 Spa @ 9'-9" = 87'-9"

1'-3" 1'-3" 6 Spa @ 9'-9" = 58'-6"

℄ Light Standard

6½" 4'-11" 1'-3" 2"

Bridge

℄ Pier 7 ℄ Pier 8 ℄ Pier 9 ℄ Light Standard ℄ Pier 10

1 2 1 2 1

90' 50' 50' 100' 50' 30' 90'

POURING SEQUENCE IN SPAN 8,9 & 10

PLAN

NOTES:

For General Notes see Sheet 2A3.
For Section B-B see Sheet 57.
For Sections 3-3 & 4-4 see Sheet 59.
For Bill of Reinforcement see Sh 60.
The construction joint between the roadway slab and the barrier is mandatory. The concrete in the barrier shall not be poured until the deck slab has properly cured.
All reinforcing bars designated by Suffix (E) in the plans shall be epoxy coated in accordance with the special Provision No.19 (76) Epoxy Coated Reinforcing Steel."

ESTIMATE OF QUANTITIES

ITEM	QUANTITY
Concrete Class AA	617.45 CY 729.36
Reinforcement	78,924 Lbs
Epoxy Coated Reinf.	104,647 Lbs 105,174

SLAB PLAN SPAN 8,9 & 10

FRANKLAND AND LIENHARD

SHEET 55

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD

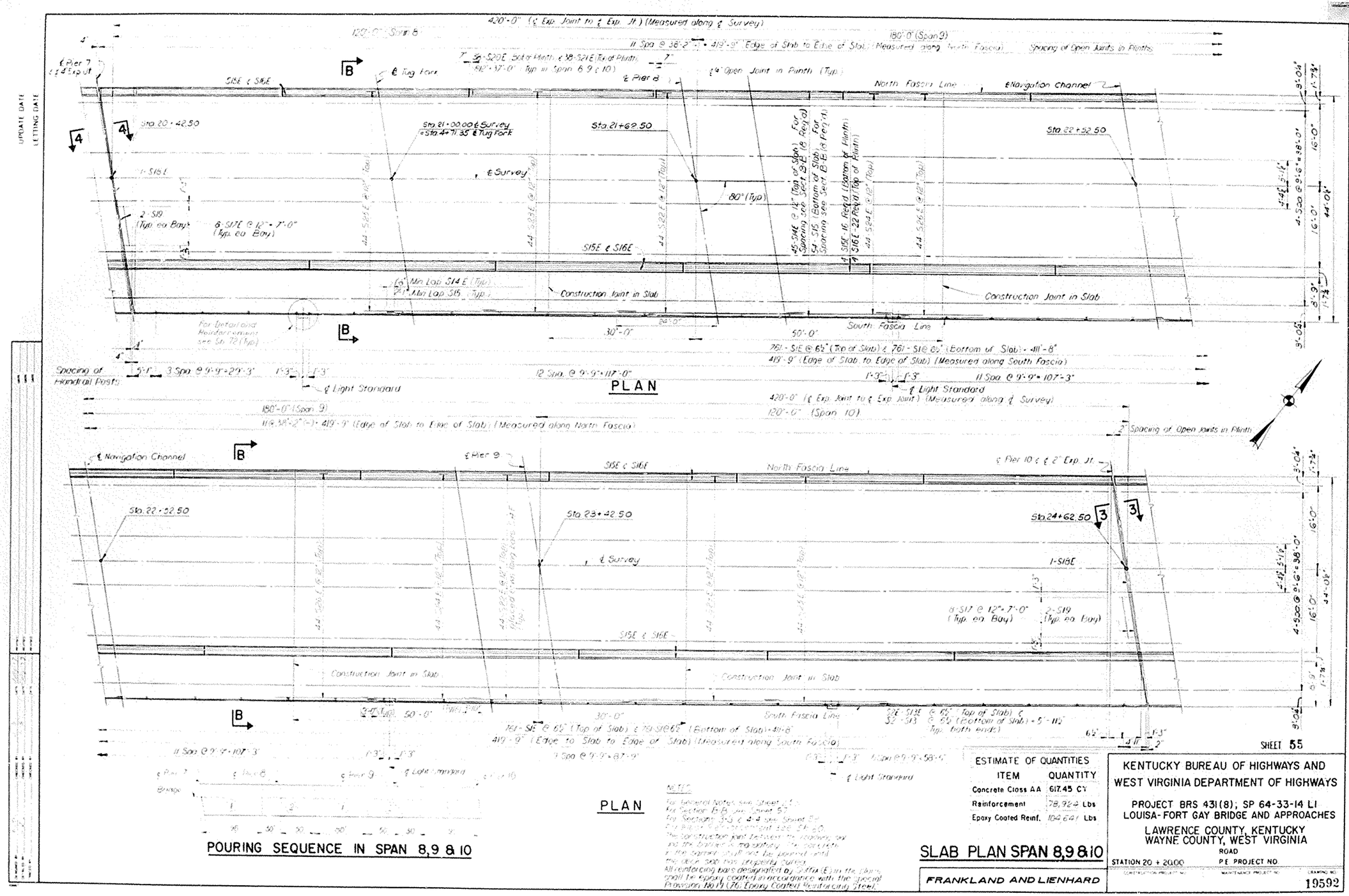
STATION 20 + 20.00 P.E. PROJECT NO.

CONSTRUCTION PROJECT NO. MAINTENANCE PROJECT NO. DRAWING NO. 19592

BRIDGE

UPDATE DATE

LETTING DATE



POURING SEQUENCE IN SPAN 8,9 & 10

PLAN

NOTE

For General Notes, see Sheet 4-5
For Section B-B, see Sheet 57
For Sections S15 & S16 see Sheet 58
For Bridge Reinforcement see Sh 70
The construction joint between the roadway and the barrier is mandatory. The location of the barrier shall not be altered until the deck slab has adequately cured.
All reinforcing bars designated as "S15E (S16E) in the plans shall be epoxy coated in accordance with the special provision No. 19 (No. Epoxy Coated Reinforcing Steel).

ESTIMATE OF QUANTITIES

ITEM	QUANTITY
Concrete Class AA	617.45 CY
Reinforcement	78,924 Lbs
Epoxy Coated Reinf.	104,641 Lbs

SLAB PLAN SPAN 8,9 & 10

FRANKLAND AND LIENHARD

SHEET 55

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD

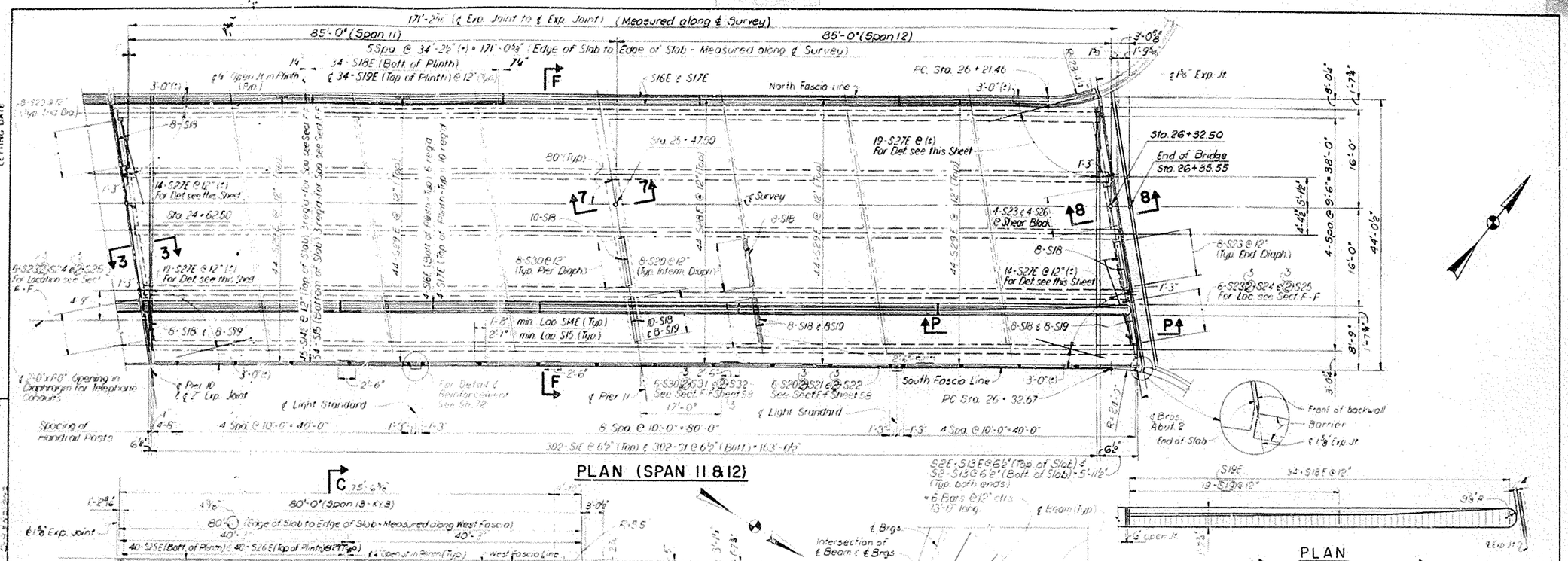
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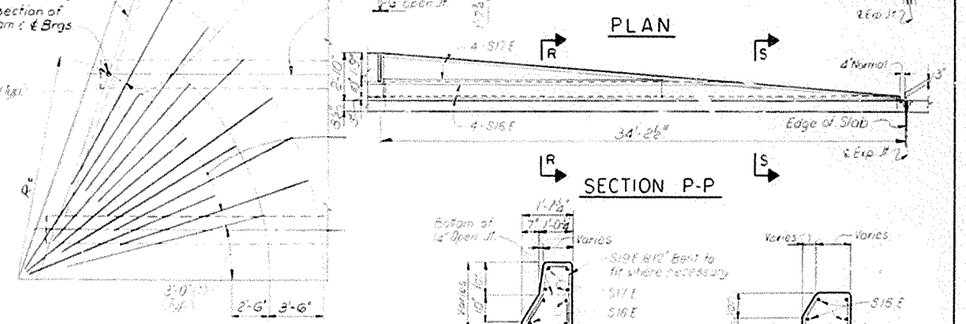
DRAWING NO. 19592

BRIDGE

UPDATE DATE

LETTING DATE





TYPICAL CORNER REINFORCEMENT

NOTE. Corner Reinforcement is to be placed beneath the longitudinal and transverse Reinforcement in the top of the Slab.

NOTES

For General Notes see Sh. 3 & 5
For Sections C-C & F-F see Sh. 57 & 59
For Sections 3-3 & 7-7 thru 10-10 see Sh. 59
For Bill of Reinforcement see Sh. 68
All reinforcing bars designated by Suffix (E) in the plans shall be epoxy coated in accordance with the Special Provision No. 19 (78) Epoxy Coated Reinforcing Steel.

NOTE

The construction joint between the roadway slab and the barrier in approach & the concrete in the barrier shall not be poured until the deck slab has adequately cured.

ESTIMATE OF QUANTITIES			
ITEM	Span 11,12	Span 13	Total
Concrete Class AA	369.50 CY	129.60 CY	499.10 CY
Reinforcement	37,159 LB	22,844 LB	60,003 LB
Epoxy Coated Reinf.	36,372 LB	20,592 LB	56,964 LB
	45,640	20,876	69,516

SLAB PLAN SPAN 11,12&13

FRANKLAND AND LIENHARD

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD

STATION 20 + 20.00 P.E. PROJECT NO.

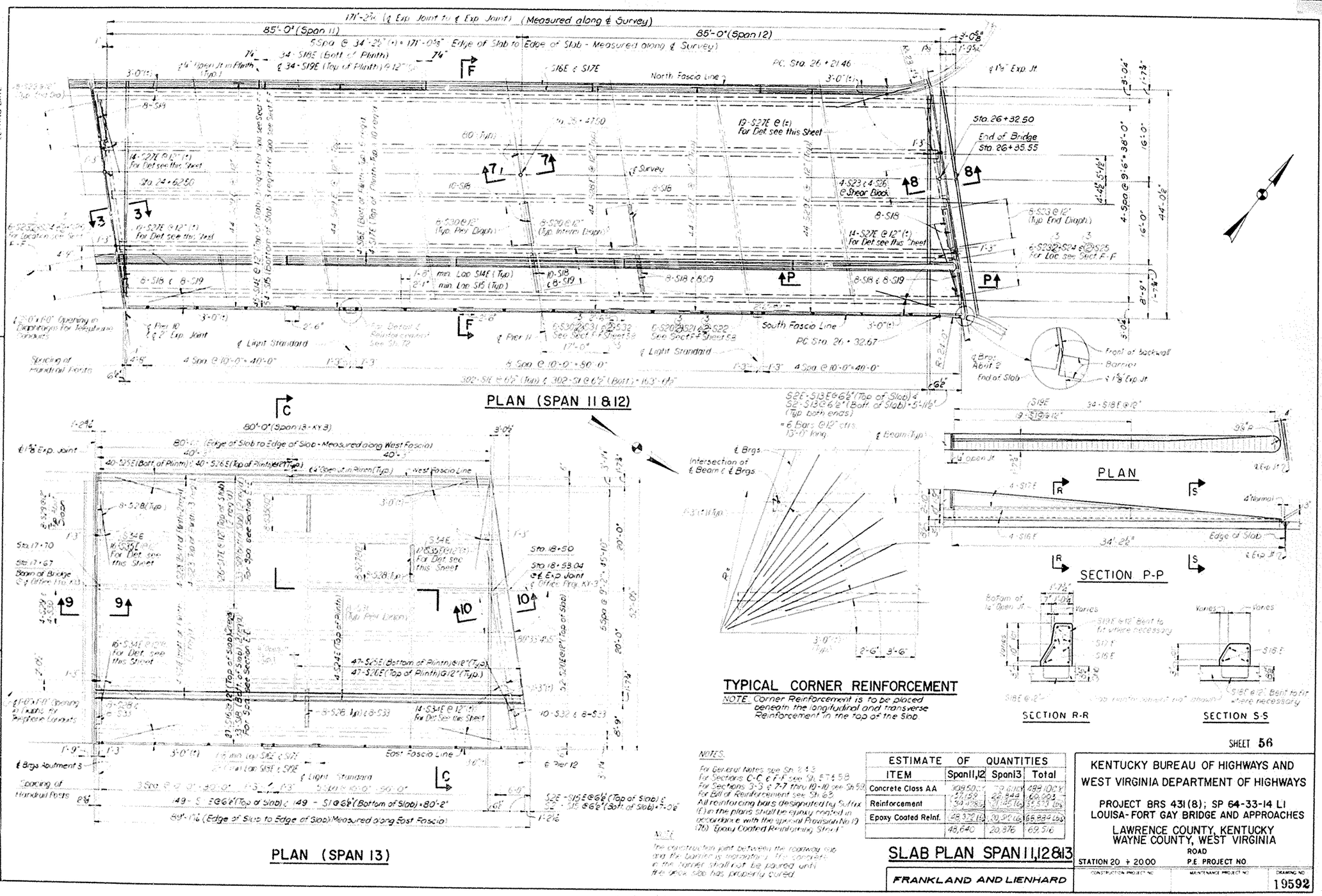
CONSTRUCTION PROJECT NO. | MAINTENANCE PROJECT NO. | DRAWING NO. 19592

SHEET 56

BRIDGE

UPDATE DATE

LETTING DATE



NOTES.

For General Notes see Sh. 54.3
For Sections C-C & F-F see Sh. 57 & 58
For Sections 3-3 & 7-7 thru 10-10 see Sh. 59
For Bill of Reinforcement see Sh. 60
All reinforcing bars designated by Suffix (E) on the plans shall be epoxy coated in accordance with the special Provision No. 19 (7b) Epoxy Coated Reinforcing, Sheet 1

NOTE

The construction joint between the roadway slab and the backing is optional. The concrete in the backing shall not be placed until the deck slab has properly cured.

ESTIMATE OF QUANTITIES			
ITEM	Span 11,12	Span 13	Total
Concrete Class AA	389.50 C.Y.	99.10 C.Y.	488.10 C.Y.
Reinforcement	57,198 lbs. 30.1 Tons	22,944 lbs. 11.45 Tons	80,142 lbs. 41.55 Tons
Epoxy Coated Reinf.	48,372 (lbs.)	20,511 (lbs.)	68,883 Lbs.
	48,640	20,376	69,516

SLAB PLAN SPAN 11, 12 & 13

FRANKLAND AND LIENHARD

SHEET 56

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

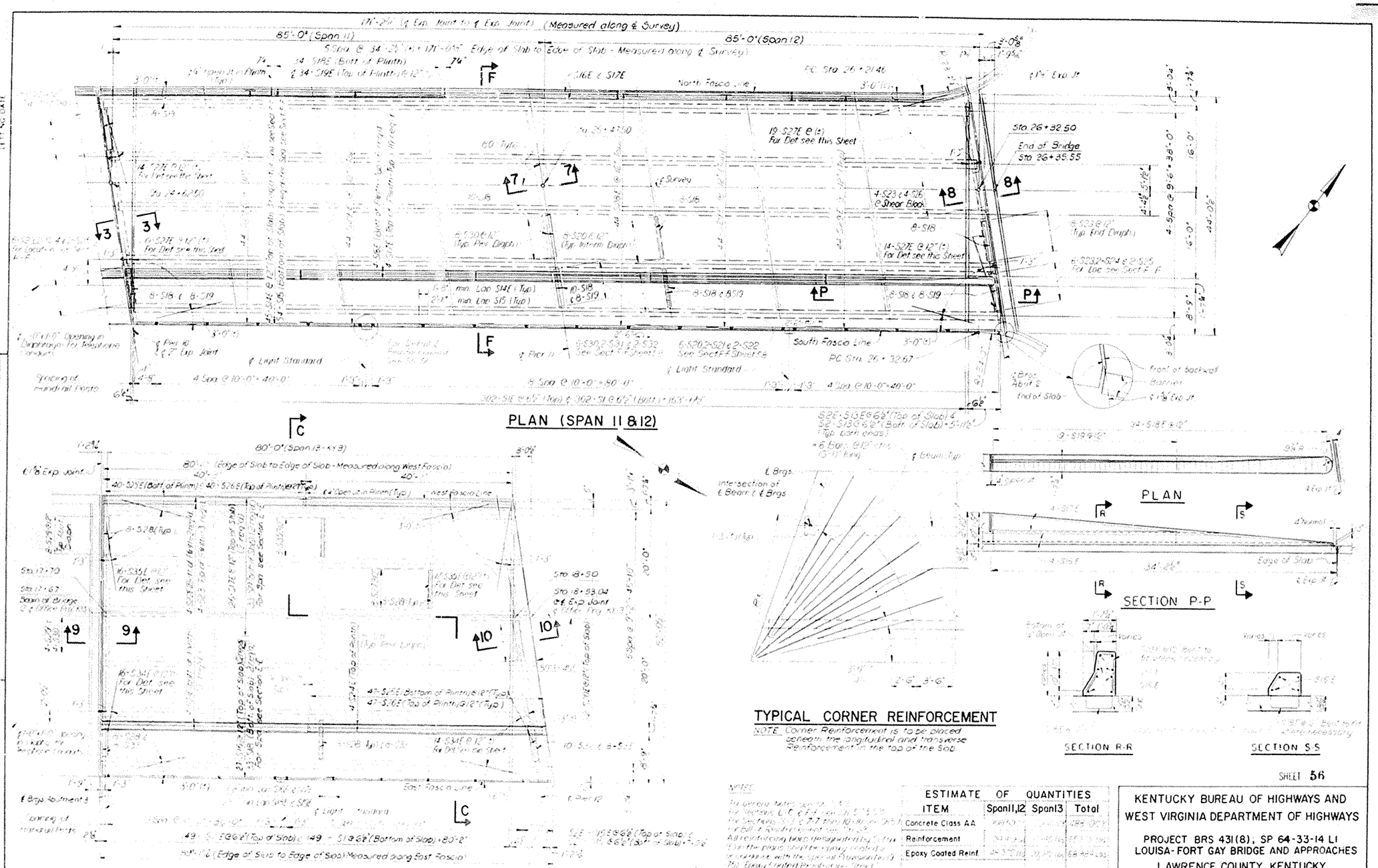
PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

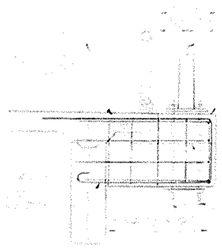
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WAYNE COUNTY, WEST VIRGINIA

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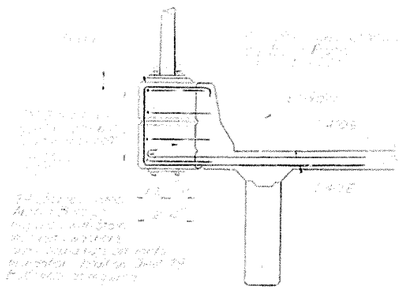
CONSTRUCTION PROJECT NO. | MAINTENANCE PROJECT NO. | DRAWING NO. 19592

BRIDGE


171'-2½" (℄ Exp. Joint to ℄ Exp. Joint) (Measured along ℄ Survey)
85'-0" (Span 11)
85'-0" (Span 12)
5 Spa. @ 34'-2" (c) = 171'-0" Edge of Slab to Edge of Slab - Measured along ℄ Survey
PC Sta. 26+21.46
Sta. 26+32.50
End of Bridge
Sta. 26+35.55
Sta. 24+62.50
Sta. 25+47.50
South Fascia Line
PC Sta. 26+32.67
4 Spa. @ 10'-0" = 40'-0"
8 Spa. @ 10'-0" = 80'-0"
PLAN (SPAN 11 & 12)
80'-0" (Span 13)
Edge of Slab to Edge of Slab - Measured along West Fascia
Sta. 17+79
Sta. 17+67
Sta. 18+50
Sta. 18+53.04
℄ Exp. Joint
East Fascia Line
PLAN (SPAN 13)
TYPICAL CORNER REINFORCEMENT
NOTE Corner Reinforcement is to be placed beneath the longitudinal and transverse Reinforcement in the top of the Slab
PLAN
SECTION P-P
SECTION R-R
SECTION S-S
ESTIMATE OF QUANTITIES
ITEM | Span11,12 | Span13 | Total
Concrete Class AA
Reinforcement
Epoxy Coated Reinf.
SLAB PLAN SPAN 11,12&13
FRANKLAND AND LIENHARD
KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS
PROJECT BRS 431(8), SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES
LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA
ROAD
STATION 20 + 20.00
P.E. PROJECT NO
19592
SHEET 56
BRIDGE

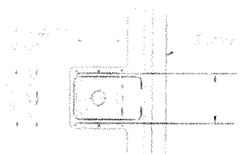


SECTION A - A



SECTION B - B





A A B B

PLAN PLAN

DETAILS OF TRAFFIC SIGNAL STANDARD BASE

TRAFFIC SIGNAL BASE

SHEET 57 A

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8), SP 64-33-14 LI
LOUISA - FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY WEST VIRGINIA

ROAD

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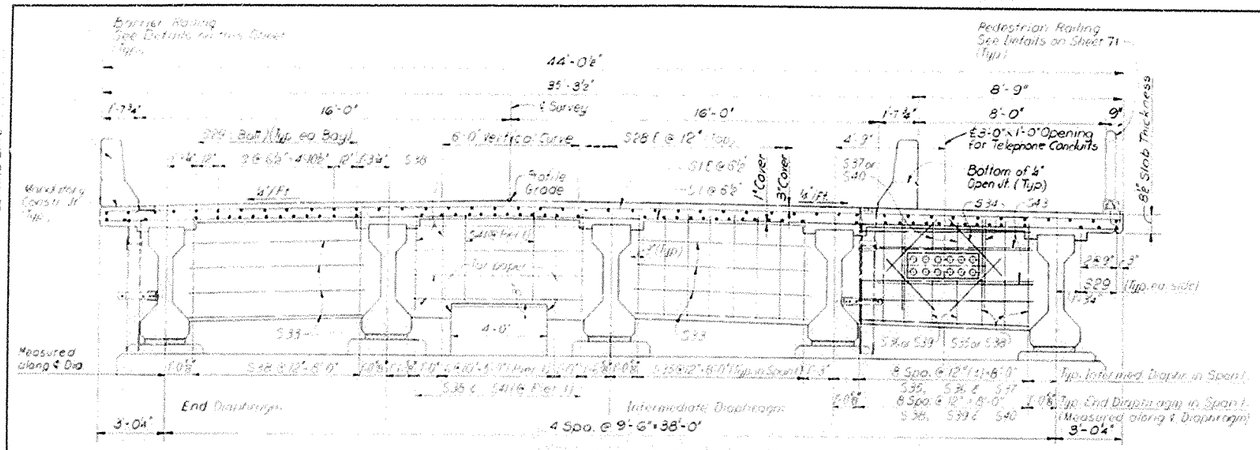
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FRANKLAND AND LIENHARD

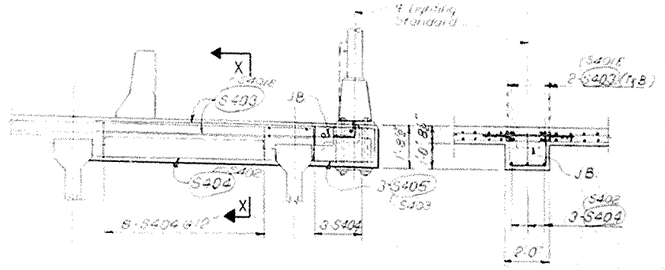
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UPDATE DATE

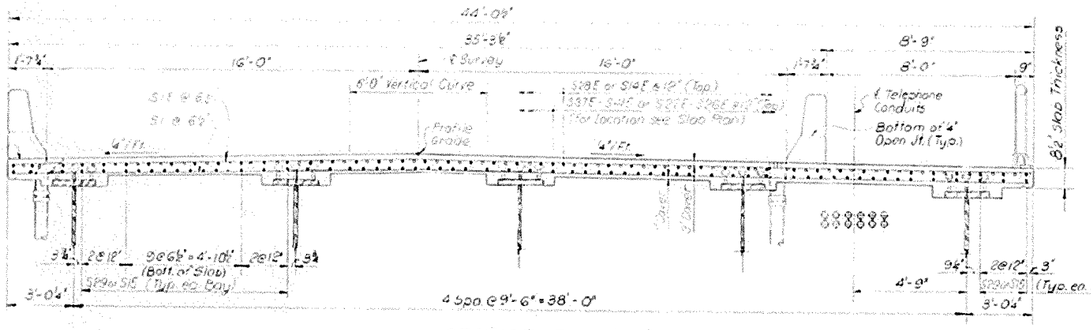
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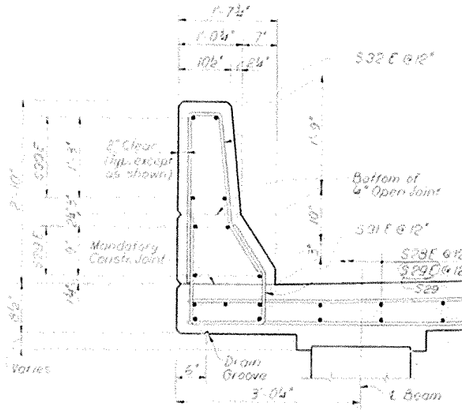
SECTION A-A (SPAN 1)



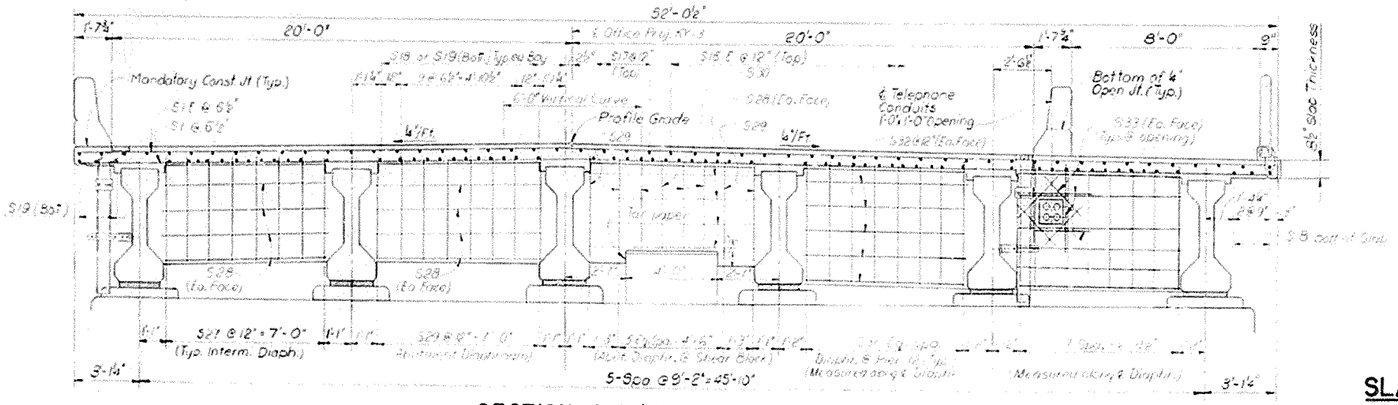
DETAIL OF LIGHTING STANDARD BASE



SECTION B-B (SPAN 2,3 & 8 THRU 10)



BARRIER RAILING DETAILS



SECTION C-C (SPAN 13)

SLAB CROSS SECTIONS

NOTES:

For General Notes see Sheet 2A3.
For Drain Details see Sheet 70.
For Pedestrian Railing see Sheet 71.
Work this Sheet with Sheets 35 57,58,59,5&6D&63.
All reinforcing bars designated by Suffix (E) in the plans shall be epoxy coated in accordance with the "Special Provision No. 19(76) "Epoxy Coated Reinforcing Steel."

SHEET 57

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES
LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA
ROAD

STATION 20 + 20.00 — P.E. PROJECT NO.

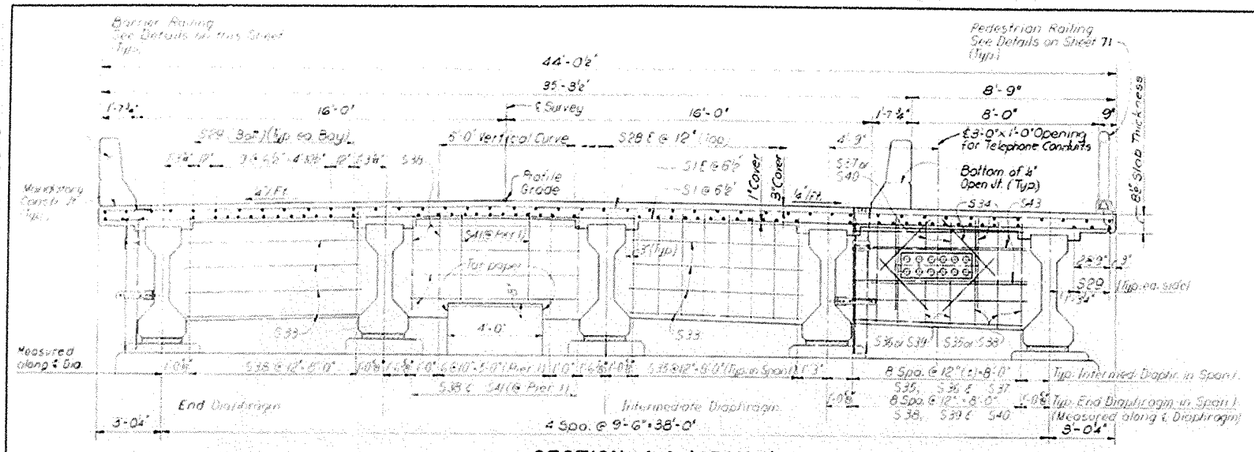
FRANKLAND AND LIENHARD

CONSTRUCTION PROJECT NO. — MAINTENANCE PROJECT NO. — DRAWING NO. 19592

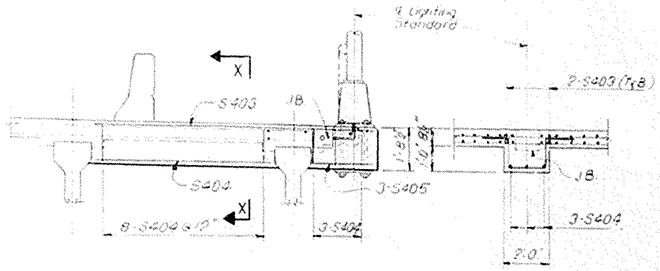
BRIDGE

UPDATE DATE

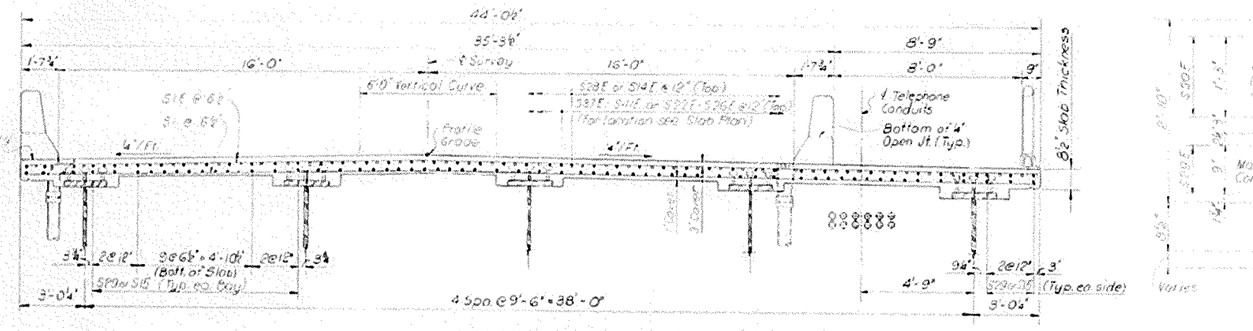
LETTING DATE



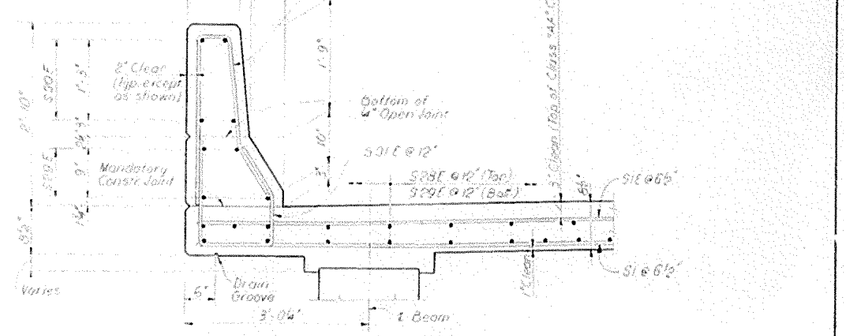
SECTION A-A (SPAN 1)



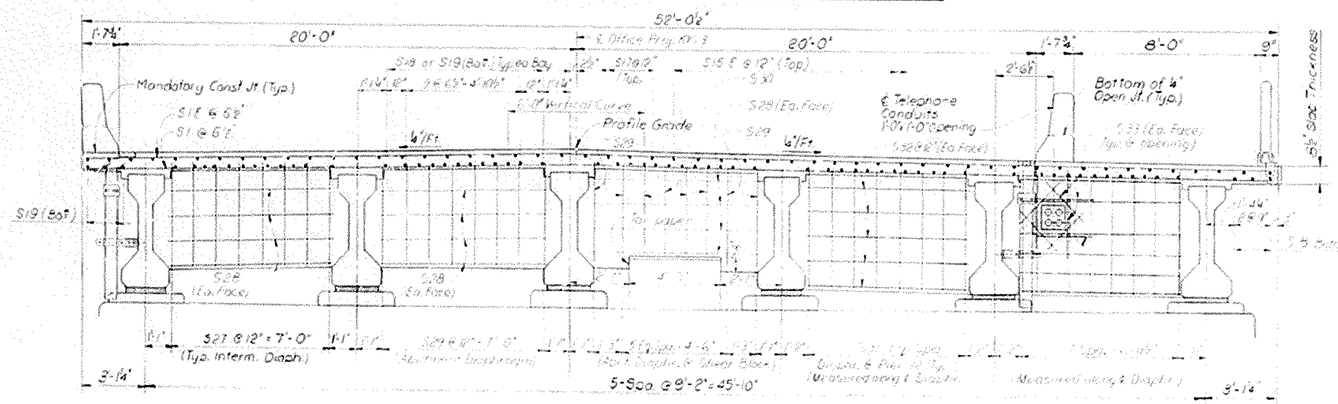
DETAIL OF LIGHTING STANDARD BASE



SECTION B-B (SPAN 2,3 & 8 THRU 10)



BARRIER RAILING DETAILS



SECTION C-C (SPAN 13)

SLAB CROSS SECTIONS

FRANKLAND AND LIENHARD

NOTES:

For General Notes see Sheet 2A.
For Drain Details see Sheet 7D.
For Pedestrian Railing see Sheet 71.
Work this Sheet with Sheets 45,51,52,55,58,63 & 68.
All reinforcing bars designated by Suffix (E) on the plans shall be epoxy coated in accordance with the special Provision No. 19 (76) "Epoxy Coated Reinforcing Steel."

SHEET 57

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

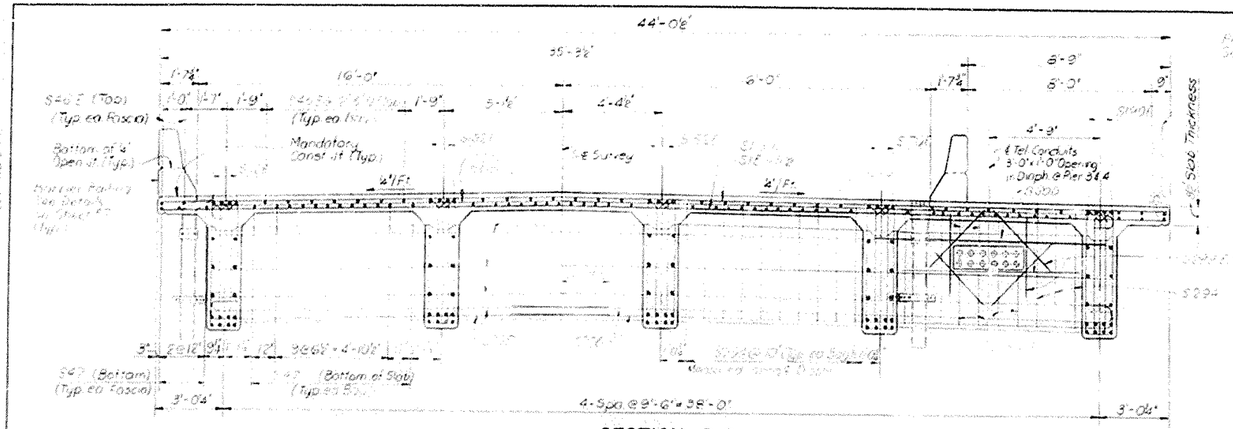
LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD

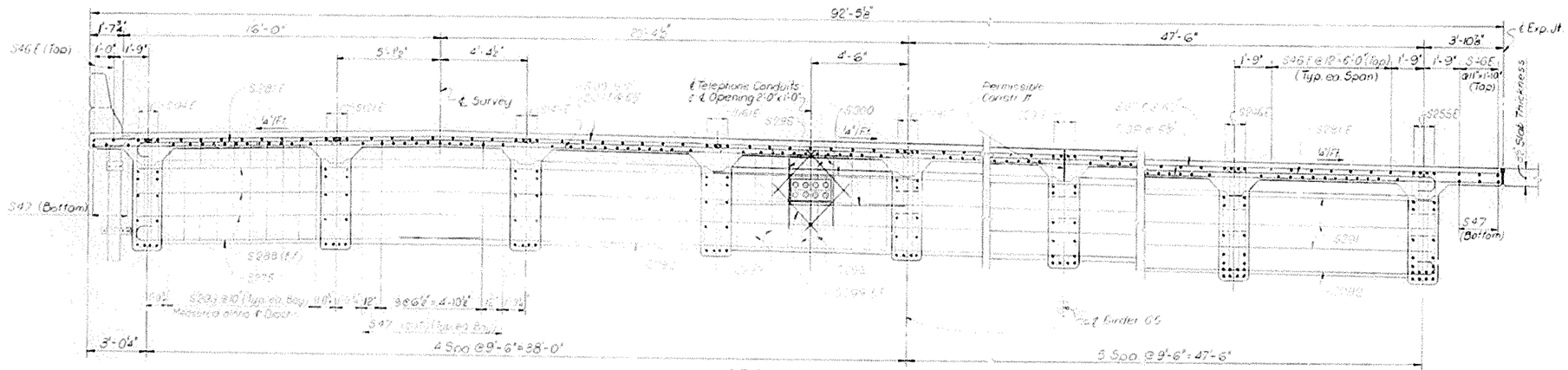
STATION 20 + 20.00 | P.E. PROJECT NO

CONSTRUCTION PROJECT NO | MAINTENANCE PROJECT NO | DRAWING NO 19592

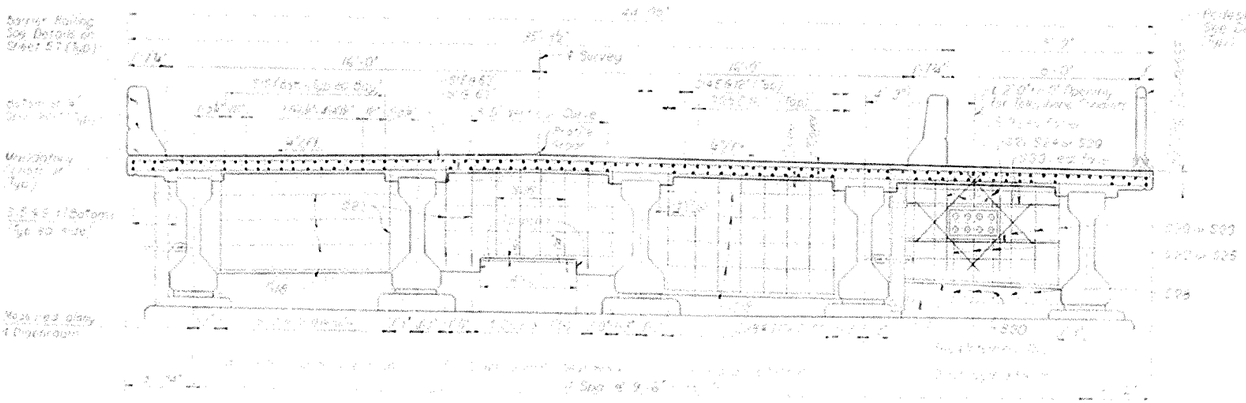
BRIDGE



SECTION D-D



SECTION E-E



SECTION F-F (SPAN 11 & 12)

NOTES:

For General Notes see Sheet 2.1.2
For Drain Details see Sheet 79.
For Barrier Railing see Sheet 57.
For Pedestrian Handrail see Sheet 71.
Work this Sheet with Sheets 36, 37, 47 thru 53, 58, 61, 62, 63.
All reinforcing bars designated by Suffix (E) in the plans shall be epoxy coated in accordance with the special provision No. 91761 Epoxy Coated Reinforcing Steel."

SHEET 58

SLAB CROSS SECTIONS

FRANKLAND AND LIENHARD

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA - FORT GAY BRIDGE AND APPROACHES

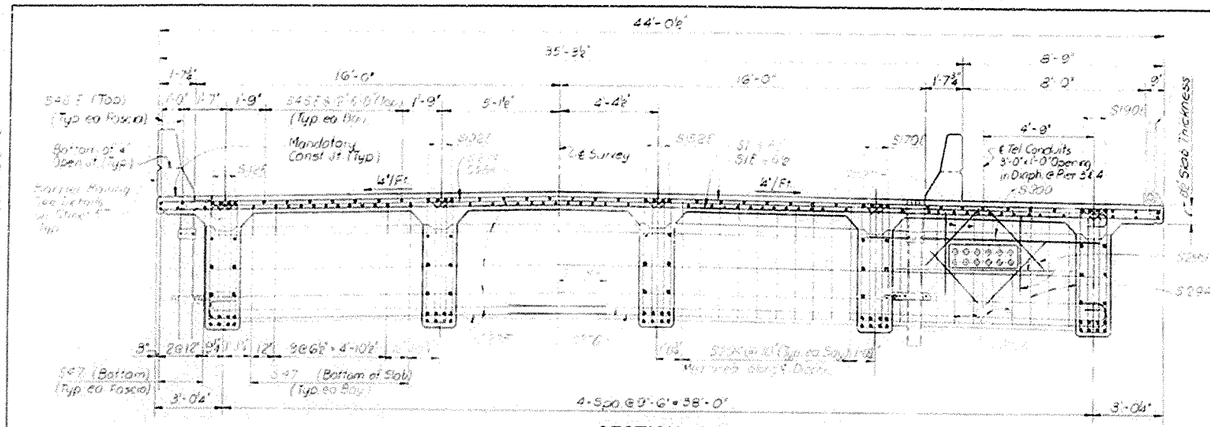
LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD

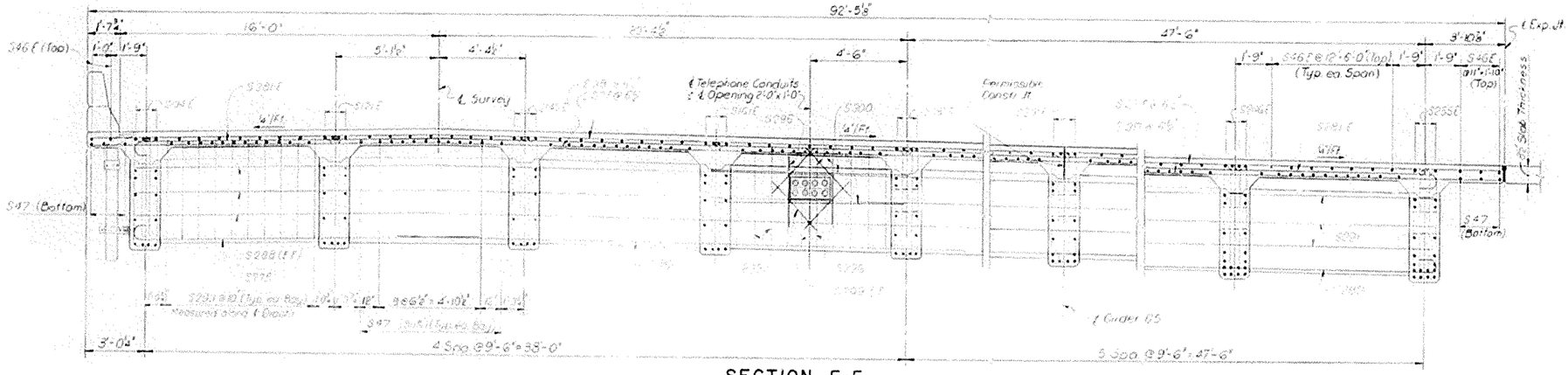
STATION 20 + 2000 P.E. PROJECT NO.

CONSTRUCTION PROJECT NO. MAINTENANCE PROJECT NO. DRAWING NO. 19592

BRIDGE



SECTION D-D


92'-5⅛"
1'-7½"
16'-0"
23'-4½"
47'-6"
3'-10⅜"
℄ Exp. Jt
S46 E (Top)
1'-0"
1'-9"
5'-1½"
4'-4½"
4'-6"
℄ Survey
℄ Telephone Conduits 3'-0"x1'-0"
Permissive Const. Jt
1'-9"
S46 E @ 5'-0" (Top)
(Typ. ea Span)
1'-9"
1'-9"
S46 E
(Typ.)
1'-6" Slab Thickness
S47 (Bottom)
S47 (Bottom)
4'1Ft.
4'1Ft.
S200 E.F.
S200 E.F.
S200 E.F.
S200 E.F.
S288 (E.F.)
S200
S200
S200

UPDATE DATE

LETTING DATE

SECTION 1-1

SECTION 2-2

SECTION 3-3

SECTION 4-4

SECTION 5-5

SECTION 6-6

SECTION 7-7

SECTION 8-8

SECTION 9-9

SECTION 10-10

DETAIL A

DETAIL B

(200A & 400A Transflex Expansion Dam)

SECTION X-X

DETAIL D

Note: Extreme care must be exercised by the Contractor in forming, bracing and holding to Line & Grade the formwork for the Expansion Dam Notch.

NOTES:
Work this Sheet with Sheets 58 thru 58
60 thru 63

SUPERSTRUCTURE DETAILS

SHEET 59

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD

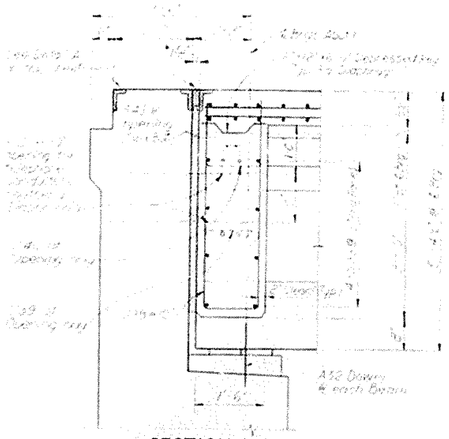
STATION 20 + 2000 P.E. PROJECT NO

FRANKLAND AND LIENHARD

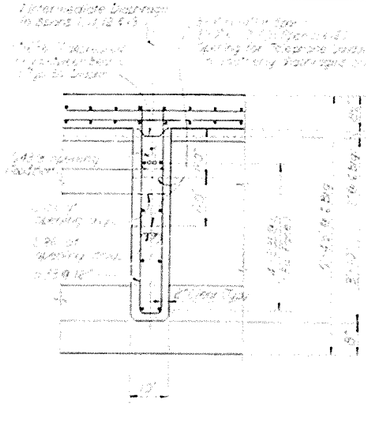
CONSTRUCTION PROJECT NO | MAINTENANCE PROJECT NO | DRAWING NO 19592

BRIDGE

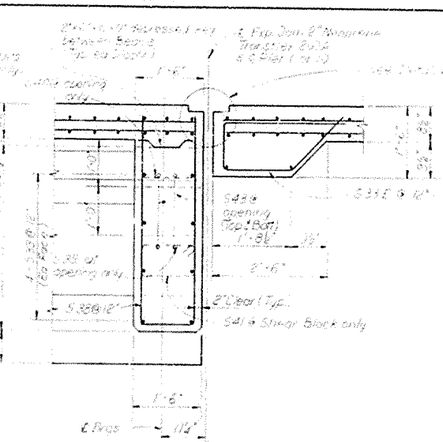
UPDATE DATE
LETTING DATE



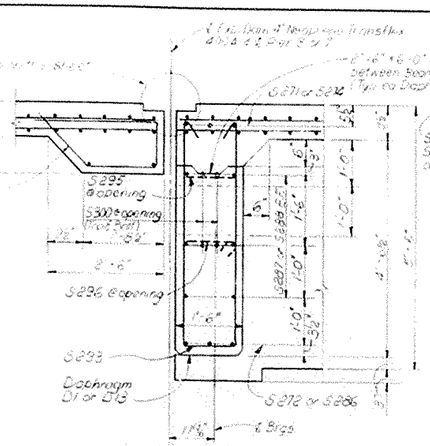
SECTION 1-1



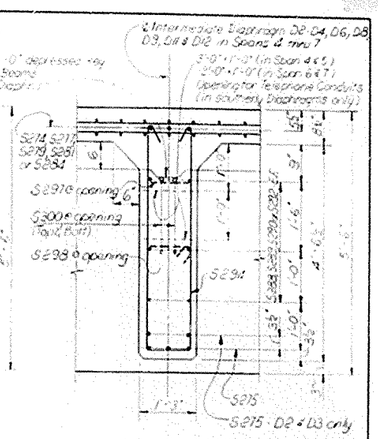
SECTION 2-2



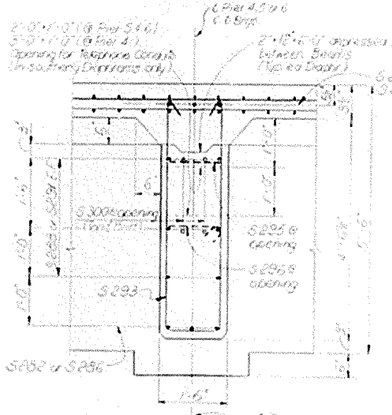
SECTION 3-3



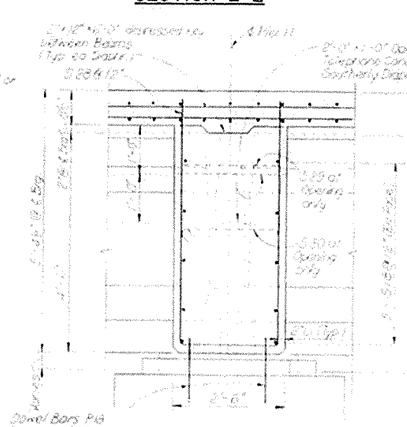
SECTION 4-4



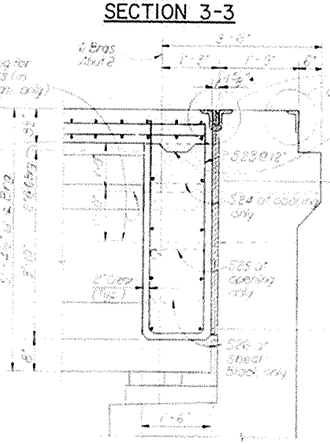
SECTION 5-5



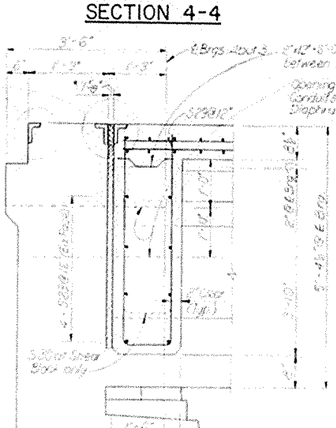
SECTION 6-6



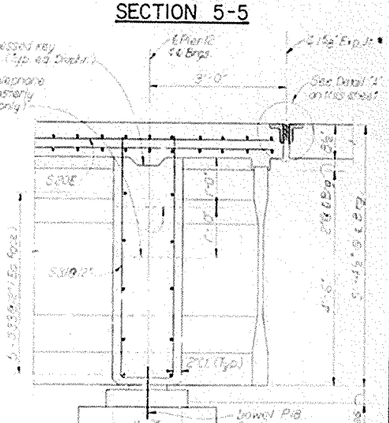
SECTION 7-7



SECTION 8-8

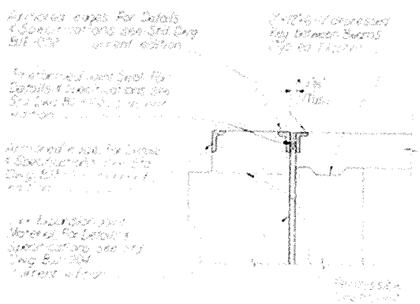


SECTION 9-9

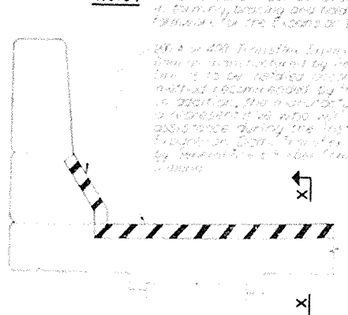


SECTION 10-10

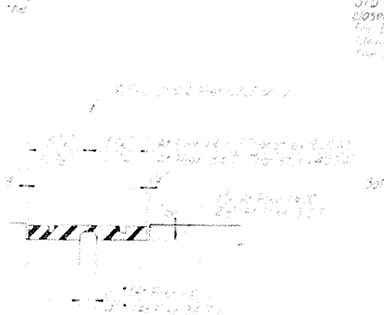
Note: Existing core must be Removed By Use of Hydraulic Equipment By Cutting and Lifting, or Use a Single Tie Method to the Extent of Deck Core.



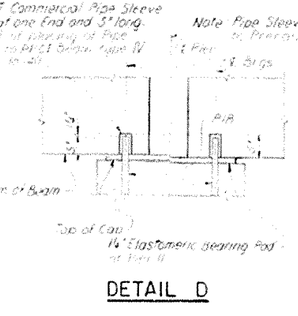
DETAIL A



DETAIL B



SECTION X-X



DETAIL D

SUPERSTRUCTURE DETAILS

FRANKLAND AND LIENHARD

SHEET 59

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD

STATION 20 + 2000 P.E. PROJECT NO

19592

BRIDGE

BILL OF REINFORCEMENT

LETTING DATE

SPAN 1

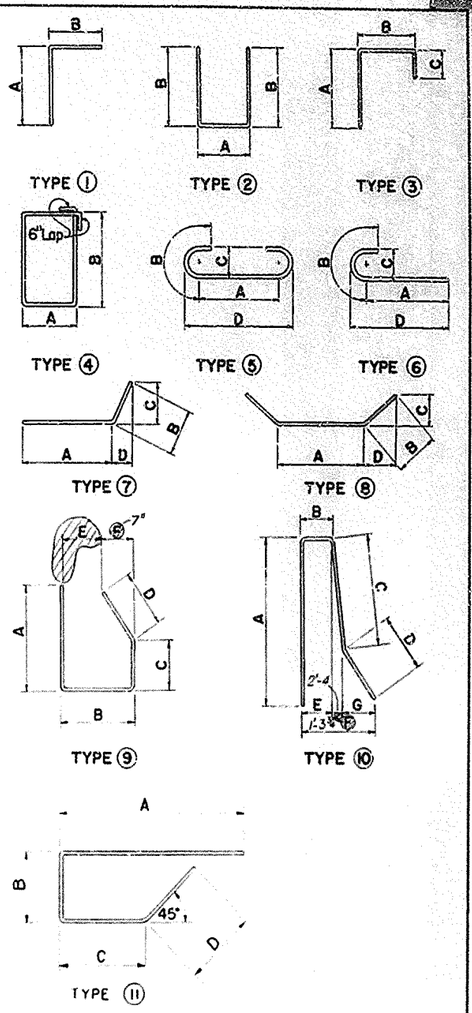
Mark	Type	Number	Bar Size	Length Ft	Length In	Location	A Ft	A In	B Ft	B In	C Ft	C In	D Ft	D In
S1 E	Str.	(11)	6	43	9	Top & Bottom of Slab								
S1		(11)	6	43	9									
S2 E		2	6	41	6									
S2				41	6									
S3 E				40	0									
S3				40	0									
S4 E				38	6									
S4				38	6									
S5 E				37	0									
S5				37	0									
S6 E				35	6									
S6				35	6									
S7 E				34	0									
S7				34	0									
S8 E				32	6									
S8				32	6									
S9 E				31	0									
S9				31	0									
S10 E				29	6									
S10				29	6									
S11 E				28	0									
S11				28	0									
S12 E				26	6									
S12				26	6									
S13 E				25	0									
S13				25	0									
S14 E				23	6									
S14				23	6									
S15 E				22	0									
S15				22	0									
S16 E				20	6									
S16				20	6									
S17 E				19	0									
S17				19	0									
S18 E				17	6									
S18				17	6									
S19 E				16	0									
S19				16	0									
S20 E				14	6									
S20				14	6									
S21 E				13	0									
S21				13	0									
S22 E				11	6									
S22				11	6									
S23 E				10	0									
S23				10	0									
S24 E				8	6									
S24				8	6									
S25 E				7	0									
S25				7	0									
S26 E				5	6									
S26				5	6									
S27 E				4	0									
S27		2	12	6	4	0 Top & Bottom of Slab								
S28 E		99	9	4	10	9 Top of Slab								
S29		108	9	5	3	9 Bottom of Slab								
S29E		16	38	5	3	9 Bottom of Plinth								
S30E	Str	16		5	0	7 Top of Plinth								
S31E	(9)	152	5	5	4	8 Bottom of Plinth	1	7	1	3½	0	9	1	1
S32E	(10)	152		5	5	9 Top of Plinth	2	7	0	6½		8	1	0
S33	Str.	128		5	7	10 Diaphragms								
S34	Str.	48		5	4	0 Diaphragms @ Opening								
S35	2	66		5	9	1 Intermediate Diaphragms	0	6	1	4				
S36	4	6		5	5	1 Interm Diaphr @ Operat.	0	8	1	8				
S37	2	6		5	3	1 Interm Diaphr @ Opening	0	6	1	4				
S38	2	61		5	9	9 End Diaphragms	1	2	4	4				
S39	4	6		5	6	5 End Diaphr @ Opening	1	3	1	8				
S40	2	6		5	3	9 End Diaphr @ Opening	1	2	1	4				
S41	5	5		5	8	3 End Diaphr @ Shear Block	1	2	3	7	–	–	–	–
S42E	Str.	24		6	13	0 Corner Reinforcement								
S43	Str.	16		6	7	6 Diaphragms @ Opening								
	(1)	4		6	14	4								
S44E	Str.	(12)	5	3	8	0 Lighting Standard	1	0	3	4	–	–	–	–
S44EB	Str.	(12)	3	3	8	6 Lighting Standard								
S403	Str.	3		5	2	9								
S404	(4)	11		5	6	7								

SPAN 2 & 3

Mark	Type	Number	Bar Size	Length Ft	Length In	Location	A Ft	A In	B Ft	B In	C Ft	C In	D Ft	D In
S1 E	Str	562	6	43	9	Top & Bottom of Slab								
S1		562	6	43	9									
S2 E		2		41	6									
S2				41	6									
S3 E				40	0									
S3				40	0									
S4 E				38	6									
S4				38	6									
S5 E				37	0									
S5				37	0									
S6 E				35	6									
S6				35	6									
S7 E				34	0									
S7				34	0									
S8 E				32	6									
S8				32	6									
S9 E				31	0									
S9				31	0									
S10E				29	6									
S10				29	6									
S11 E				28	0									
S11				28	0									
S12E				26	6									
S12				26	6									
S13E				25	0									
S13				25	0									
S14E				23	6									
S14				23	6									
S15E				22	0									
S15				22	0									
S16E				20	6									
S16				20	6									
S17E				19	0									
S17				19	0									
S18E				17	6									
S18				17	6									
S19E				16	0									
S19				16	0									
S20E				14	6									
S20				14	6									
S21E				13	0									
S21				13	0									
S22E				11	6									
S22				11	6									
S23E				10	0									
S23				10	0									
S24E				8	6									
S24				8	6									
S25E				7	0									
S25				7	0									
S26E				5	6									
S26				5	6									
S27E				4	0									
S27		2		6	4	0 Top & Bottom of Slab								
S28E		270		4	54	8 Top of Slab								
S29		324		5	55	0 Bottom of Slab								
S29E		48		5	55	0 Bottom of Plinth								
S30E	Str	64		5	39	8 Top of Plinth								
S31E	(9)	641		5	4	8 Bottom of Plinth	1	7	1	3½	0	9	1	1
S32E	(10)	641		5	5	9 Top of Plinth	2	7	0	6½	1	8	1	1
S33	(11)	64		5	7	0 Slab @ Exp Joint	3	0	1	1	1	5	1	8
S34E	Str	2		5	46	6 Slab @ Exp Joint								
S35	Str	16		5	9	9 Slab @ Exp Joint								
S36E	Str	23		6	13	0 Corner Reinforcement								
S37E	Str	22		10	44	0 Top of Slab								
S38E	Str	44		8	28	3								
S39E	Str	44		8	24	3								
S40E	Str	44		7	27	4								
S41E	Str	44		6	27	5								
S42E	Str	44		6	23	4 Top of Slab								
	(1)	12		6	14	4								
S44E	Str	(13)	5	3	8	0 Lighting Standard	1	0	3	4	–	–	–	–
S44EB	Str	(13)	3	3	8	6 Lighting Standard								
S403	Str	9		5	2	8								
S404	(4)	33		5	6	7								

SPAN 8,9 & 10

Mark	Type	Number	Bar Size	Length Ft	Length In	Location	A Ft	A In	B Ft	B In	C Ft	C In	D Ft	D In
S1 E	Str.	761	6	43	9	Top & Bottom of Slab								
S1		761		43	9									
S2 E		2		39	4									
S2				39	4									
S3 E				36	3									
S3				36	3									
S4 E				33	2									
S4				33	2									
S5 E				30	1									
S5				30	1									
S6 E				27	0									
S6				27	0									
S7 E				23	11									
S7				23	11									
S8 E				20	10									
S8				20	10									
S9 E				17	9									
S9				17	9									
S10E				14	8									
S10				14	8									
S11 E				11	7									
S11				11	7									
S12E				8	6									
S12				8	6									
S13E				5	5									
S13		2	6	5	5	Top & Bottom of Slab								
S14E		360	4	53	8	Top of Slab								
S15		432	5	54	3	Bottom of Slab								
S15E		64	5	54	3	Bottom of Plinth								
S16	Str.	88	5	37	10	Top of Plinth								
S17E	(11)	64	5	7	0	Slab @ Exp. Joint	3	0	1	1	1	5	1	8
S18E	Str.	2	5	44	4	Slab @ Exp. Joint								
S19	Str.	16	5	9	4	Slab @ Exp. Joint								
S20E	(9)	836	5	4	8	Bottom of Plinth	1	7	1	3½	0	9	1	1
S21E	(10)	836	5	5	9	Top of Plinth	2	7	0	6½	1	8	1	0
S22E	Str.	88	9	42	0	Top of Slab								
S23E	Str.	88	7	27	10									
S24E	Str.	88	7	21	10									
S25E	Str.	88	6	27	0									
S26E	Str.	88	6	21	0	Top of Slab								
	(1)	16	6	14	4									
S40E	Str.	(12)	(9)	(4)	(0)	Lighting Standard								
S40EB	Str.	(24)	5	(4)	(0)	6 Lighting Standard								
S403	Str.	(12)	5	2	8									
S404	(4)	44	5	6	7									



NOTE:

Work this Sheet with Sheets 53,55,57 & 59.
All reinforcing bars designated by Suffix (E) in the plans shall be epoxy coated in accordance with the special Provision No. 19 (76) Epoxy Coated Reinforcing Steel."

SHEET 60

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8), SP 63-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA
ROAD KY 3 & WVA. 37

STATION 20 + 20.00 P.E. PROJECT NO.

CONSTRUCTION PROJECT NO	MAINTENANCE PROJECT NO.	DRAWING NO.
		19592

BILL OF REINFORCEMENT
SPAN 1,2,3,8,9 & 10

FRANKLAND AND LIENHARD

BRIDGE

BILL OF REINFORCEMENT

LETTING DATE

SPAN 1

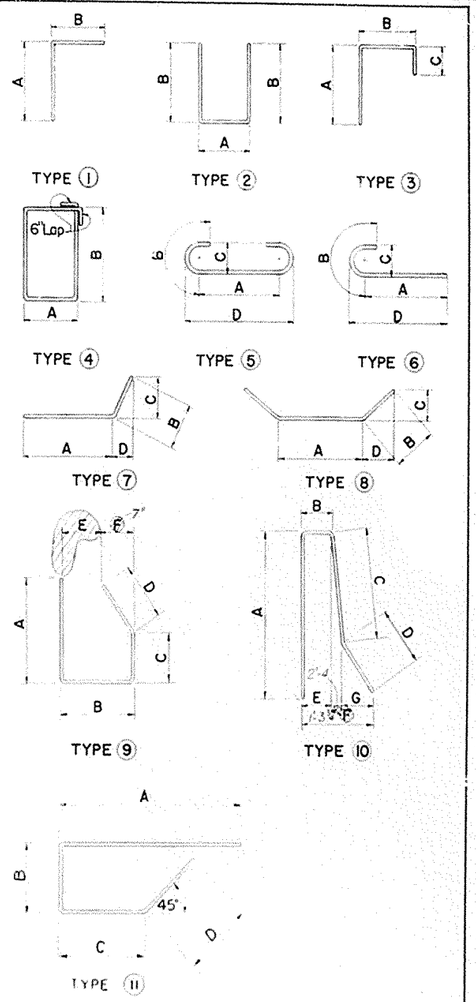
Mark	Type	Number	Bar Size	Length Ft	Length In	Location	A Ft	A In	B Ft	B In	C Ft	C In	D Ft	D In
S1 E	Str.	112	6	43	9	Top & Bottom of Slab								
S1		112	6	43	9									
S2E		2	6	41	6									
S2				41	6									
S3E				40	6									
S3				40	0									
S4E				39	6									
S4				39	6									
S5E				37	0									
S5				37	0									
S6E				35	6									
S6				35	6									
S7E				34	0									
S7				34	0									
S8E				32	6									
S8				32	6									
S9E				31	0									
S9				31	0									
S10E				29	6									
S10				29	6									
S11E				28	0									
S11				28	0									
S12E				26	6									
S12				26	6									
S13E				25	0									
S13				25	0									
S14E				23	6									
S14				23	6									
S15E				22	0									
S15				22	0									
S16E				20	6									
S16				20	6									
S17E				19	0									
S17				19	0									
S18E				17	6									
S18				17	6									
S19E				16	0									
S19				16	0									
S20E				14	6									
S20				14	6									
S21E				13	0									
S21				13	0									
S22E				11	6									
S22				11	6									
S23E				10	0									
S23				10	0									
S24E				8	6									
S24				8	6									
S25E				7	0									
S25				7	0									
S26E				5	6									
S26				5	6									
S27E				4	0									
S27		2	6	4	0	Top & Bottom of Slab								
S28E		90	4	36	9	Top of Slab								
S29		108	5	39	0	Bottom of Slab								
S29E		16	5	39	0	Bottom of Plinth								
S30E	Str.	16	5	37	8	Top of Plinth								
S31E	(2)	152	5	4	8	Bottom of Plinth	1 7 1 3/4		0 9		1 1			
S32E	(1)	152	5	5	9	Top of Plinth	2 7 0 5/8		1 8		1 0			
S33	Str.	128	5	7	10	Diaphragms								
S34	Str.	49	5	4	0	Diaphragms @ Opening								
S35	3	98	5	9	1	Intermdiate Diaphragms	0 6		4 4					
S36	4	6	5	5	1	Interm. Diaphr. @ Opening	0 6		1 8					
S37	5	6	5	3	1	Interm. Diaphr. @ Opening	0 6		1 4					
S38	2	61	5	9	9	End Diaphragms	1 2		4 4					
S39	4	6	5	6	5	End Diaphr. @ Opening	1 2		1 8					
S40	3	6	5	3	9	End Diaphr. @ Opening	1 2		1 4					
S41	5	5	5	8	3	Ext Diaphr & Shear Block	1 2	3 7						
S42E	Str.	24	6	13	0	Corner Reinforcement								
S43	Str.	18	6	7	6	Diaphragms @ Opening								
		4	6	14	4									
S49E	Str.	2	6	14	0	Lighting Standard	1 0		3 4					
S49	Str.	6	6	14	6	Lighting Standard								
S403	Str.	2	5	2	8									
S404	(3)	11	5	5	6	7								

SPAN 2 & 3

Mark	Type	Number	Bar Size	Length Ft	Length In	Location	A Ft	A In	B Ft	B In	C Ft	C In	D Ft	D In
S1 E	Str.	562	6	43	9	Top & Bottom of Slab								
S1		562	6	43	9									
S2 E		2	6	41	6									
S2				41	6									
S3 E				40	0									
S3				40	0									
S4 E				38	6									
S4				38	6									
S5 E				37	0									
S5				37	0									
S6 E				35	6									
S6				35	6									
S7 E				34	0									
S7				34	0									
S8 E				32	6									
S8				32	6									
S9 E				31	0									
S9				31	0									
S10E				29	6									
S10				29	6									
S11E				28	0									
S11				28	0									
S12E				26	6									
S12				26	6									
S13E				25	0									
S13				25	0									
S14E				23	6									
S14				23	6									
S15E				22	0									
S15				22	0									
S16E				20	6									
S16				20	6									
S17E				19	0									
S17				19	0									
S18E				17	6									
S18				17	6									
S19E				16	0									
S19				16	0									
S20E				14	6									
S20				14	6									
S21E				13	0									
S21				13	0									
S22E				11	6									
S22				11	6									
S23E				10	0									
S23				10	0									
S24E				8	6									
S24				8	6									
S25E				7	0									
S25				7	0									
S26E				5	6									
S26				5	6									
S27E				4	0									
S27		2	6	4	0	Top & Bottom of Slab								
S28E		270	4	34	8	Top of Slab								
S29		324	5	55	0	Bottom of Slab								
S29E		48	5	55	0	Bottom of Plinth								
S30E	Str.	64	5	39	8	Top of Plinth								
S31E	(2)	640	5	4	8	Bottom of Plinth	1 7 1 3/4		0 9		1 1			
S32E	(1)	640	5	5	9	Top of Plinth	2 7 0 5/8		1 8		1 0			
S33	(4)	64	5	7	0	Slab @ Exp. Joint	3 0 1 1		1 5		1 8			
S34E	Str.	2	5	46	6	Slab @ Exp. Joint								
S35	Str.	16	5	9	9	Slab @ Exp. Joint								
S36E	Str.	22	6	13	0	Corner Reinforcement								
S37E	Str.	44	10	44	0	Top of Slab								
S38E	Str.	44	8	28	3									
S39E	Str.	44	8	24	3									
S40E	Str.	44	7	87	4									
S41E	Str.	44	6	87	0									
S42E	Str.	44	6	23	4	Top of Slab								
		11	6	12	4									
S49E	Str.	15	5	3	9	Lighting Standard	1 0		3 4					
S48	Str.	120	5	4	9	Lighting Standard								
S405	Str.	9	5	2	8									
S406	(3)	33	5	6	7									

SPAN 8,9 & 10

Mark	Type	Number	Bar Size	Length Ft	Length In	Location	A Ft	A In	B Ft	B In	C Ft	C In	D Ft	D In
S1 E	Str.	761	6	43	9	Top & Bottom of Slab								
S1		761		43	9									
S2 E		2		39	4									
S2				39	4									
S3 E				36	3									
S3				36	3									
S4 E				33	2									
S4				33	2									
S5 E				30	7									
S5				30	1									
S6 E				27	0									
S6				27	0									
S7 E				23	11									
S7				23	11									
S8 E				20	10									
S8				20	10									
S9 E				17	9									
S9				17	9									
S10E				14	8									
S10				14	8									
S11 E				11	7									
S11				11	7									
S12 E				8	6									
S12				8	6									
S13E				5	5									
S13		2	6	5	5	Top & Bottom of Slab								
S14E		360	4	53	8	Top of Slab								
S15		432	5	54	3	Bottom of Slab								
S16E		64	5	54	3	Bottom of Plinth								
S16	Str.	88	5	37	10	Top of Plinth								
S17E	(1)	64	5	7	0	Slab @ Exp. Joint	3 0 1 1		1 5		1 8			
S18E	Str.	2	5	44	4	Slab @ Exp. Joint								
S19	Str.	16	5	9	4	Slab @ Exp. Joint								
S20E	(2)	836	5	4	8	Bottom of Plinth	1 7 1 3/4		0 9		1 1			
S21E	(1)	836	5	5	9	Top of Plinth	2 7 0 5/8		1 8		1 0			
S22E	Str.	88	9	22	0	Top of Slab								
S23E	Str.	88	7	27	10									
S24E	Str.	88	7	21	10									
S25E	Str.	88	6	21	0									
S26E	Str.	88	6	21	0	Top of Slab								
	(1)	110	6	14	4									
S49E	Str.	22	5	4	0	Lighting Standard								
S48	Str.	22	5	4	0	Lighting Standard								
S405	Str.	2	5	2	8									
S404	(3)	22	5	6	7									



NOTE

Work this Sheet with Sheets 53,55,57 & 59.
All reinforcing bars designated by Suffix (E) in the plans shall be epoxy coated in accordance with the special Provision No. 19 (76) Epoxy Coated Reinforcing Steel.

SHEET 60

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8), SP 63-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD KY 3 & WVA 37

STATION 20 + 20.00 | P. E. PROJECT NO. | CONSTRUCTION PROJECT NO | MAINTENANCE PROJECT NO | DRAWING NO. 19592

BILL OF REINFORCEMENT
SPAN 1, 2, 3, 8, 9 & 10

FRANKLAND AND LIENHARD

BRIDGE

LETTING DATE

BILL OF REINFORCEMENT

SPAN 1

Mark	Type	Number	Bar Size	Length Ft	Length In	Location	A Ft	A In	B Ft	B In	C Ft	C In	D Ft	D In
S1E	Str.	762	6	43	9	Top & Bottom of Slab								
S1		762	6	43	9									
S2E		2	6	41	6									
S2				41	6									
S3E				40	0									
S3				40	0									
S4E				38	6									
S4				38	6									
S5E				37	0									
S5				37	0									
S6E				35	6									
S6				35	6									
S7E				34	0									
S7				34	0									
S8E				32	6									
S8				32	6									
S9E				31	0									
S9				31	0									
S10E				29	6									
S10				29	6									
S11E				28	0									
S11				28	0									
S12E				26	6									
S12				26	6									
S13E				25	0									
S13				25	0									
S14E				23	6									
S14				23	6									
S15E				22	0									
S15				22	0									
S16E				20	6									
S16				20	6									
S17E				19	0									
S17				19	0									
S18E				17	6									
S18				17	6									
S19E				16	0									
S19				16	0									
S20E				14	6									
S20				14	6									
S21E				13	0									
S21				13	0									
S22E				11	6									
S22				11	6									
S23E				10	0									
S23				10	0									
S24E				8	6									
S24				8	6									
S25E				7	0									
S25				7	0									
S26E				5	6									
S26				5	6									
S27E		2	6	4	0	Top & Bottom of Slab								
S27														
S28E		270	4	36	9	Top of Slab								
S28		135	5	39	0	Bottom of Slab								
S29E		16	5	39	0	Bottom of Plinth								
S29E	Str.	16	5	32	8	Top of Plinth								
S29	(1)	152	5	4	8	Bottom of Plinth	1	7	1	3½	0	9	1	1
S30E	(1)	152	5	5	9	Top of Plinth	2	7	0	6½	1	8	1	0
S31		228	5	7	10	Diaphragms								
S4	Str.	48		4	0	Diaphragms @ Openings								
S32		56	5	9	1	Intermediate Diaphragm	0	1	4	3				
S36		6	5	5	1	Interior Diaphr @ Opening	0	3	1	8				
S37		6	5	3	1	Interior Diaphr @ Opening	0	1	1	4				
S38		64	5	9	9	End Diaphragms	1	5	4					
S39		4	5	6	5	End Diaphr @ Opening	1	2	1	8				
S40		6	5	3	9	End Diaphr @ Opening	1	2	1	4				
S41		5	5	8		End Diaphr @ Shear Block	1	2	1	3				
S42E	Str.	24	5	13	0	Corner Reinforcement								
		6				Supplementary Reinforcement								
A6E	Str.	1	4	12	0	Lighting Standard								
A6E	Str.	1	4	12	0	Lighting Standard								

SPAN 2 & 3

Mark	Type	Number	Bar Size	Length Ft	Length In	Location	A Ft	A In	B Ft	B In	C Ft	C In	D Ft	D In
S1E	Str.	562	6	43	9	Top & Bottom of Slab								
S1		562	6	43	9									
S2E				41	6									
S2				41	6									
S3E				40	0									
S3				40	0									
S4E				38	6									
S4				38	6									
S5E				37	0									
S5				37	0									
S6E				35	6									
S6				35	6									
S7E				34	0									
S7				34	0									
S8E				32	6									
S8				32	6									
S9E				31	0									
S9				31	0									
S10E				29	6									
S10				29	6									
S11E				28	0									
S11				28	0									
S12E				26	6									
S12				26	6									
S13E				25	0									
S13				25	0									
S14E				23	6									
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S17E				19	0									
S17				19	0									
S18E				17	6									
S18				17	6									
S19E				16	0									
S19				16	0									
S20E				14	6									
S20				14	6									
S21E				13	0									
S21				13	0									
S22E				11	6									
S22				11	6									
S23E				10	0									
S23				10	0									
S24E				8	6									
S24				8	6									
S25E				7	0									
S25				7	0									
S26E				5	6									
S26				5	6									
S27E		2	6	4	0	Top & Bottom of Slab								
S27														
S28E		270	4	54	6	Top of Slab								
S29		324	5	55	0	Bottom of Slab								
S29E		45	5	55	0	Bottom of Plinth								
S30E	Str.	64	5	49	8	Top of Plinth								
S31E	(1)	836	5	4	8	Bottom of Plinth	1	7	1	3½	0	9	1	1
S32E	(1)	836	5	5	9	Top of Plinth	2	7	0	6½	1	8	1	0
S33E		64	5	7	0	Slab @ Exp. Joint	3	0	1	1	1	5	1	8
S34E	Str.	2	5	46	5	Slab @ Exp. Joint								
S35	Str.	16	5	9	9	Slab @ Exp. Joint								
S36E	Str.	32	6	15	2	Parapet Reinforcement								
S37E	Str.	44	9	44	0	Top of Slab								
S38E	Str.	44	8	8	3									
S39E	Str.	44	8	4	3									
S40E	Str.	44	7	27	4									
S41E	Str.	44	6	21	0									
S42E	Str.	44	6	15	4									
A6E	Str.	1	4	12	0	Lighting Standard								
A6E	Str.	1	4	12	0	Lighting Standard								

SPAN 8,9 & 10

Mark	Type	Number	Bar Size	Length Ft	Length In	Location	A Ft	A In	B Ft	B In	C Ft	C In	D Ft	D In
S1E	Str.	761	6	45	7	Top & Bottom of Slab								
S1		761	6	43	9									
S2E		2		39	4									
S2				39	4									
S3E				36	3									
S3				36	3									
S4E				33	2									
S4				33	2									
S5E				30	1									
S5				30	1									
S6E				27	0									
S6				27	0									
S7E				25	11									
S7				23	11									
S8E				20	10									
S8				20	11									
S9E				17	9									
S9				17	9									
S10E				14	8									
S10				14	8									
S11E				11	7									
S11				11	7									
S12E				8	6									
S12				8	6									
S13E				5	5									
S13		2	6	5	5	Top & Bottom of Slab								
S14E		360	4	53	9	Top of Slab								
S15		432	5	54	3	Bottom of Slab								
S15E		64	5	54	3	Bottom of Plinth								
S15	Str.	88	5	37	10	Top of Plinth								
S17E	(1)	64	5	7	0	Slab @ Exp. Joint	3	0	1	1	1	5	1	8
S18E	Str.	2	5	48	4	Slab @ Exp. Joint								
S19	Str.	16	5	9	4	Slab @ Exp. Joint								
S20E	(1)	836	5	4	8	Bottom of Plinth	1	7	1	3½	0	9	1	1
S21E	(1)	836	5	5	9	Top of Plinth	2	7	0	6½	1	8	1	0
S22E	Str.	88	9	42	0	Top of Slab								
S23E	Str.	88	7	27	10									
S24E	Str.	88	7	21	10									
S25E	Str.	88	6	27	0									
S26E	Str.	88	6	21	0	Top of Slab								
A6E	Str.	20	5	4	0	Lighting Standard								
A6E	Str.	24	4	1	6	Lighting Standard								

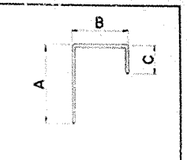
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TYPE (2)



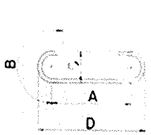
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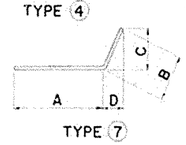
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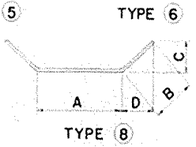
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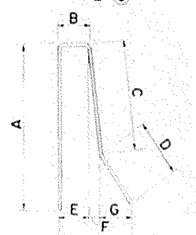
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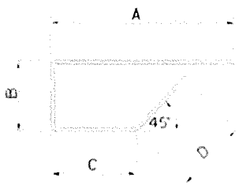
TYPE (9)



TYPE (10)



TYPE (11)



NOTE

Work this Sheet with Sheets 53, 55, 57 & 59.
All reinforcing bars designated by Suffix (E) in the plans shall be epoxy coated in accordance with the Special Provision No. 19 (76) Epoxy Coated Reinforcing Steel.

SHEET 60

BILL OF REINFORCEMENT
SPAN 1, 2, 3, 8, 9 & 10

FRANKLAND AND LIENHARD

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8), SP 63-33-14 LI
LOUISA - FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD KY 3 & WVA 37

STATION 20 + 20.00 P.E. PROJECT NO.

CONSTRUCTION PROJECT NO. MAINTENANCE PROJECT NO. DRAWING NO.

19592

BRIDGE

LETTING DATE

BILL OF REINFORCEMENT

SLAB-SPAN 4 THRU 7

Mark	Type	Number	Bar Size	Length Ft	Length In	Location	A Ft	A In	B Ft	B In	C Ft	C In	D Ft	D In
S1E	Str.	212	6	43	9	Slab								
S1	Str.	212	6	43	9	"								
S2E	Str.	1	6	1	0	"								
S2	"	1	6	6	0	"								
S3E	"	1	6	7	6	"								
S3	"	1	6	7	6	"								
S4E	"	1	6	9	0	"								
S4	"	1	6	9	0	"								
S5E	"	1	6	10	6	"								
S5	"	1	6	10	6	"								
S6E	"	1	6	12	0	"								
S6	"	1	6	12	0	"								
S7E	"	1	6	13	6	"								
S7	"	1	6	13	6	"								
S8E	"	1	6	15	0	"								
S8	"	1	6	15	0	"								
S9E	"	1	6	16	6	"								
S9	"	1	6	16	6	"								
S10E	"	1	6	18	0	"								
S10	"	1	6	18	0	"								
S11E	"	1	6	19	6	"								
S11	"	1	6	19	6	"								
S12E	"	1	6	21	0	"								
S12	"	1	6	21	0	"								
S13E	"	1	6	22	6	"								
S13	"	1	6	22	6	"								
S14E	"	1	6	24	0	"								
S14	"	1	6	24	0	"								
S15E	"	1	6	25	6	"								
S15	"	1	6	25	6	"								
S16E	"	1	6	27	0	"								
S16	"	1	6	27	0	"								
S17E	"	1	6	28	6	"								
S17	"	1	6	28	6	"								
S18E	"	1	6	30	0	"								
S18	"	1	6	30	0	"								
S19E	"	1	6	31	6	"								
S19	"	1	6	31	6	"								
S20E	"	1	6	33	0	"								
S20	"	1	6	33	0	"								
S21E	"	1	6	34	6	"								
S21	"	1	6	34	6	"								
S22E	"	1	6	36	0	"								
S22	"	1	6	36	0	"								
S23E	"	1	6	37	6	"								
S23	"	1	6	37	6	"								
S24E	"	1	6	39	0	"								
S24	"	1	6	39	0	"								
S25E	"	1	6	40	6	"								
S25	"	1	6	40	6	"								
S26E	"	1	6	42	0	"								
S26	"	1	6	42	0	"								
S27E	"	1	6	43	5	"								
S27	"	1	6	43	8	"								
S28E	"	1	6	45	10	"								
S28	"	1	6	46	10	"								
S29E	"	1	6	48	5	"								
S29	"	1	6	48	3	"								
S30E	"	1	6	49	2	"								
S30	"	1	6	49	2	"								
S31E	"	1	6	49	4	"								
S31	"	1	6	49	4	"								
S32E	"	1	6	51	6	"								
S32	"	1	6	51	6	"								
S33E	"	1	6	53	8	"								
S33	"	1	6	53	8	"								
S34E	"	1	6	53	10	"								
S34	"	1	6	53	10	"								
S35E	"	1	6	54	0	"								
S35	"	1	6	54	0	"								
S36E	"	1	6	54	2	"								
S36	"	1	6	54	2	"								
S37E	"	246	6	54	4	"								
S37	"	135	6	54	4	"								

SLAB-SPAN 4 THRU 7

Mark	Type	Number	Bar Size	Length Ft	Length In	Location	A Ft	A In	B Ft	B In	C Ft	C In	D Ft	D In
S39	Str.	111	6	43	3	Slab								
S40E	"	20	6	47	3	"								
S40	"	20	6	47	7	"								
S41E	"	20	6	50	5	"								
S41	"	20	6	50	5	"								
S42E	"	20	6	55	0	"								
S42	"	20	6	55	0	"								
S43E	"	20	6	60	0	"								
S43	"	20	6	60	0	"								
S44E	"	12	6	23	6	"								
S44	"	12	6	19	6	"								
S45E	"	12	6	32	3	"								
S45	"	12	6	26	0	"								
S46E	"	169	4	60	0	"								
S47	"	279	5	60	0	"								
S48E	"	7	4	5	3	"								
S49E	"	7	4	9	9	"								
S50E	"	7	4	14	4	"								
S51E	"	7	4	19	0	"								
S52E	"	2	4	21	0	"								
S53	"	12	5	5	7	"								
S54	"	12	5	10	5	"								
S55	"	12	5	15	3	"								
S56	"	12	5	20	0	"								
S57	"	2	5	22	4	"								
S58E	"	7	4	36	0	"								
S59E	"	7	4	18	0	"								
S60E	"	7	4	9	0	"								
S61	"	12	5	36	0	"								
S62	"	12	5	18	0	"								
S63	"	12	5	9	0	"								
S64E	"	292	6	8	0	Slab	-	-	-	-	-	-	-	-
S65E	(11)	237	5	5	9	Parapet	2	7	0	6½	1	8	1	0
S66E	(9)	437	5	4	6	"	1	7	1	3¾	0	9	1	1
S67E	Str.	15	5	36	0	North Parapet-Span 4	-	-	-	-	-	-	-	-
S69E	Str.	8	5	47	6	" -Span 5	-	-	-	-	-	-	-	-
S69E	Str.	8	5	52	6	" -Span 6	-	-	-	-	-	-	-	-
S70E	Str.	15	5	58	6	North & South Par-Span 7	-	-	-	-	-	-	-	-
S71E	Str.	32	5	38	6	South Parapet-Span 4a	-	-	-	-	-	-	-	-
S72E	Str.	8	5	21	6	" -Span 6	-	-	-	-	-	-	-	-
S73E	(2)	11	5	5	9	Parapet & Pier 12	0	6	2	7	-	-	-	-
S74E	(2)	11	5	3	7	"	0	6	1	6	-	-	-	-
S75E	Str.	8	5	10	0	"	-	-	-	-	-	-	-	-
S76E	Str.	8	5	15	3	South Parapet - Span 4	-	-	-	-	-	-	-	-
S40E	(1)	16	6	14	4	Lighting Standard	1	0	13	4	-	-	-	-
S402	Str.	12	3	7	6	and Traffic Signal Stand								
S403	Str.	12	2	2	8									
S404	2	44	5	6	7	"	1	8	1	3	-	-	-	-
S71	12	4	5	10	10	"	3	9	1	10	1	5	1	4
S40	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S401	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S402	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S403	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S404	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S405	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S406	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S407	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S408	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S409	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S410	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S411	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S412	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S413	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S414	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S415	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S416	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S417	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S418	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S419	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S420	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S421	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S422	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S423	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S424	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S425	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S426	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S427	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S428	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S429	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S430	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S431	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S432	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S433	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S434	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S435	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S436	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S437	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S438	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S439	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S440	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S441	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S442	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S443	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S444	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S445	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S446	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S447	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S448	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S449	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S450	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S451	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S452	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S453	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S454	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S455	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S456	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S457	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S458	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S459	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S460	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S461	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S462	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S463	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S464	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S465	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S466	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S467	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S468	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S469	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S470	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S471	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S472	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S473	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S474	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S475	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S476	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S477	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S478	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S479	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S480	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S481	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S482	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S483	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S484	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S485	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S486	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S487	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S488	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S489	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S490	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S491	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S492	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S493	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S494	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S495	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S496	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S497	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S498	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S499	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S500	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S501	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S502	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S503	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S504	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S505	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S506	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S507	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S508	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S509	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S510	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S511	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S512	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S513	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S514	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S515	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S516	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S517	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S518	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S519	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S520	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S521	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S522	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S523	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S524	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S525	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S526	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S527	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S528	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S529	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S530	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S531	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S532	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S533	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S534	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S535	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S536	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S537	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S538	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S539	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S540	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S541	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S542	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S543	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S544	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S545	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S546	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S547	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S548	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S549	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S550	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S551	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S552	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S553	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S554	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S555	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S556	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S557	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S558	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S559	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S560	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S561	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S562	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S563	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S564	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S565	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S566	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S567	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S568	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S569	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S570	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S571	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S572	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S573	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S574	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S575	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S576	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S577	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S578	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S579	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S580	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S581	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S582	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S583	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S584	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S585	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S586	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S587	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S588	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S589	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S590	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S591	12	5	2	10	6	"	2	2	1	2	1	1	1	1
S592	3	5	4	8	6	"	2	1	1	3	1	1	-	-
S593	3	5	4	8	6	"	2

BILL OF REINFORCEMENT

SLAB-SPAN 4 THRU 7

Mark	Type	Number	Bar Size	Length Ft	Length In	Location	A Ft	A In	B Ft	B In	C Ft	C In	D Ft	D In
S1E	Str.	312	6	43	9	Slab								
S1	Str.	312	6	43	9									
S2E	Str.	1	6	6	0									
S2	"	1	6	6	0									
S3E	"	1	6	7	6									
S3	"	1	6	7	6									
S4E	"	1	6	9	0									
S4	"	1	6	9	0									
S5E	"	1	6	10	6									
S5	"	1	6	10	6									
S6E	"	1	6	12	0									
S6	"	1	6	12	0									
S7E	"	1	6	13	6									
S7	"	1	6	13	6									
S8E	"	1	6	15	0									
S8	"	1	6	15	0									
S9E	"	1	6	16	6									
S9	"	1	6	16	6									
S10E	"	1	6	18	0									
S10	"	1	6	18	0									
S11E	"	1	6	19	6									
S11	"	1	6	19	6									
S12E	"	1	6	21	0									
S12	"	1	6	21	0									
S13E	"	1	6	22	6									
S13	"	1	6	22	6									
S14E	"	1	6	24	0									
S14	"	1	6	24	0									
S15E	"	1	6	25	6									
S15	"	1	6	25	6									
S16E	"	1	6	27	0									
S16	"	1	6	27	0									
S17E	"	1	6	28	6									
S17	"	1	6	28	6									
S18E	"	1	6	30	0									
S18	"	1	6	30	0									
S19E	"	1	6	31	6									
S19	"	1	6	31	6									
S20E	"	1	6	33	0									
S20	"	1	6	33	0									
S21E	"	1	6	34	6									
S21	"	1	6	34	6									
S22E	"	1	6	36	0									
S22	"	1	6	36	0									
S23E	"	1	6	37	6									
S23	"	1	6	37	6									
S24E	"	1	6	39	0									
S24	"	1	6	39	0									
S25E	"	1	6	40	0									
S25	"	1	6	40	6									
S26E	"	1	6	42	0									
S26	"	1	6	42	0									
S27E	"	1	6	40	5									
S27	"	1	6	40	5									
S28E	"	1	6	36	10									
S28	"	1	6	36	10									
S29E	"	1	6	33	0									
S29	"	1	6	33	0									
S30E	"	1	6	29	2									
S30	"	1	6	29	2									
S31E	"	1	6	25	4									
S31	"	1	6	25	4									
S32E	"	1	6	21	6									
S32	"	1	6	21	6									
S33E	"	1	6	17	8									
S33	"	1	6	17	8									
S34E	"	1	6	13	10									
S34	"	1	6	13	10									
S35E	"	1	6	10	0									
S35	"	1	6	10	0									
S36E	"	1	6	6	2									
S36	"	1	6	6	2									
S37E	"	241	6	47	4	Slab								
S38	"	195	6	51	6	"								

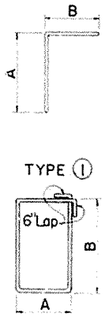
SLAB-SPAN 4 THRU 7

Mark	Type	Number	Bar Size	Length Ft	Length In	Location	A Ft	A In	B Ft	B In	C Ft	C In	D Ft	D In
S39	Str.	111	6	43	3	Slab								
S40E	"	20	6	47	3									
S40	"	20	6	47	7									
S41E	"	20	6	50	5									
S41	"	20	6	50	5									
S42E	"	20	6	55	0									
S42	"	20	6	55	0									
S43E	"	20	6	60	0									
S43	"	20	6	60	0									
S44E	"	12	6	23	6									
S44	"	12	6	19	6									
S45E	"	12	6	32	3									
S45	"	12	6	26	0									
S46E	"	169	4	60	0									
S47	"	279	5	60	0									
S48E	"	7	4	5	3									
S48E	"	7	4	9	9									
S50E	"	7	4	14	4									
S51E	"	7	4	19	0									
S52E	"	2	4	21	0									
S53	"	12	5	5	7									
S54	"	12	5	10	5									
S55	"	12	5	15	3									
S56	"	12	5	20	0									
S57	"	2	5	22	4									
S58E	"	7	4	36	0									
S58E	"	7	4	18	0									
S60E	"	7	4	9	0									
S61	"	12	5	36	0									
S62	"	12	5	18	0									
S63	"	12	5	9	0									
S64E	"	392	6	8	0	Slab	-	-	-	-	-	-	-	-
S65	(11)	437	5	5	9	Parapet	2	7	0	6	1	8	1	0
S66E	(11)	437	5	4	8	"	1	7	1	3	0	9	1	1
S67E	Str.	16	5	36	0	North Parapet-Span 4	-	-						
S68E	Str.	8	5	47	6	"-Span 5	-	-	-	-	-	-	-	-
S69E	Str.	8	5	52	6	"-Span 6	-	-	-	-	-	-	-	-
S70E	Str.	16	5	59	1	North & South Par-Span 7	-	-	-	-	-	-	-	-
S71E	Str.	92	5	28	2	South Parapet-Span 5	-	-	-	-	-	-	-	-
S72E	Str.	8	5	21	6	"-Span 6	-	-	-	-	-	-	-	-
S73E	(3)	11	5	5	9	Parapet ℄ Pier 12	0	8	2	7	-	-	-	-
S74E	(3)	11	5	3	7	"	0	8	1	6	-	-	-	-
S75E	Str.	8	5	10	0	"	-	-	-	-	-	-	-	-
S76E	Str.	8	5	16	3	South Parapet - Span 8	-	-	-	-	-	-	-	-
S400E	(1)	16	6	14	3	Lighting Standard	1	0	1	5	3	-	-	-
S402	Str.	2	5	1	6	Cond. Traffic Signal Stand								
S403	Str.	2	5	2	3	"								
S404	2	44	5	6	7	"			1	6	1	3	-	-

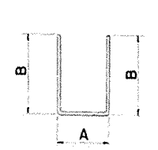
GIRDERS-SPAN 4 THRU 7

Mark	Type	Number	Bar Size	Length Ft	Length In	Location	A Ft	A In	B Ft	B In	C Ft	C In	D Ft	D In
S101	Str.	6	11	60	0	Girder 1								
S102	Str.	4	11	48	0									
S103	Str.	2	11	40	0									
S104	Str.	2	11	36	0									
S105	Str.	2	11	30	0									
S106	Str.	4	11	24	0									
S107	Str.	6	11	17	6									
S108	(6)	8	11	60	0		58	0	2	0	1	24	58	7
S109	(6)	4	11	48	6		46	6	2	0	1	24	47	1
S110	(6)	4	11	19	0		17	0	2	0	1	24	17	7
S111	Str.	16	8	52	6									
S112E	Str.	4	8	50	6									
S113	Str.	2	8	47	9									
S114	Str.	2	8	36	6									
S115	Str.	16	5	59	6									
S116	(1)	586	5	12	0		0	10	5	1	0	6	-	-
S101E	Str.	4	11	60	0									
S102E	Str.	4	11	48	0									
S103E	Str.	6	11	40	0									
S104E	Str.	1	11	36	0	S6								
S105E	Str.	2	11	30	0									
S111E	Str.	4	8	52	6	Girder 1								
				32										
S121	Str.	8	11	60	0	Girder 2								
S121E	Str.	8	11	60	0									
S122	Str.	6	11	48	0									
S122E	Str.	1	11	46	0									
S123E	Str.	1	11	40	0									
S124	Str.	2	11	33	0									
S125E	Str.	6	11	30	0									
S126E	Str.	6	11	24	0									
S127	Str.	4	11	16	0									
S128	(6)	8	11	60	0		58	0	2	0	1	24	58	7
S129	(6)	4	11	46	3		44	3	2	0	1	24	44	10
S130	(6)	4	11	21	0		19	11	2	0	1	24	19	6
S131	Str.	16	6	55	0									
S132	Str.	2	6	51	6									
S132E	Str.	4	6	51	6									
S133E	Str.	4	8	32	0									
S134	Str.	2	8	36	6									
S135	Str.	16	5	60	0									
S136	(1)	592	5	12	1	Girder 2	0	10	5	1	0	6	-	-
S141	Str.	8	11	60	0	Girder 3								
S141E	Str.	8	11	60	0									
S142	Str.	6	11	46	0									
S142E	Str.	2	11	46	0									
S143E	Str.	4	11	40	0									
S144E	Str.	6	11	30	0									
S145	Str.	4	11	24	0									
S146	Str.	4	11	22	9									
S147	Str.	4	11	16	0									
S148	(6)	8	11	60	0		58	0	2	0	1	24	58	7
S149	(6)	2	11	43	0		41	0	2	0	1	24	40	7
S150	(6)	4	11	21	6		19	5	2	0	1	24	20	3
S151	Str.	16	8	60	0									
S152E	Str.	4	8	52	6									
S153	Str.	2	8	45	3									
S154	Str.	2	8	30	4									
S155	Str.	20	5	50	0									
S156	(1)	620	5	12	0		0	10	5	1	0	6	-	-
S157E	Str.	4	8	35	0	Girder 3								
S161	Str.	12	11	60	0	Girder 4								
S161E	Str.	12	11	60	0									
S162	Str.	4	11	52	0									
S163E	Str.	4	11	40	0									
S164	Str.	4	11	30	0									
S164E	Str.	6	11	30	0									
S165	Str.	4	11	20	0									
S166	Str.	2	11	16	0									
S167	(6)	8	11	60	0	Girder 4	58	0	2	0	1	24	58	7

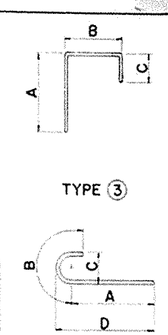
TYPE (1)



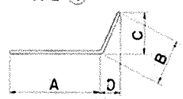
TYPE (2)



TYPE (3)



TYPE (4)

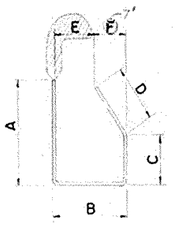


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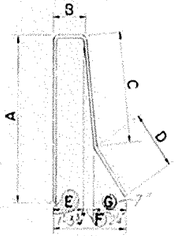


TYPE (6)

TYPE (7)



TYPE (8)



TYPE (9)

TYPE (10)

TYPE (11)



NOTE

Work this Sheet with Sheets 46 thru 52,54,58,59 & 62. All reinforcing bars designated by Suffix (E) in the plans shall be epoxy coated in accordance with the special Provision No. 19 (76) Epoxy Coated Reinforcing Steel.

SHEET 61

BILL OF REINFORCEMENT
SPAN 4 THRU 7

FRANKLAND AND LIENHARD

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8), SP 63-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA
ROAD KY 3 & WVA 37

STATION 20 + 2000 | P. E. PROJECT NO. | CONSTRUCTION PROJECT NO | MAINTENANCE PROJECT NO | DRAWING NO. 19592

LETTING DATE

BRIDGE

BILL OF REINFORCEMENT

SLAB-SPAN 4 THRU 7

Mark	Type	Number	Bar Size	Length Ft	Length In	Location	A Ft	A In	B Ft	B In	C Ft	C In	D Ft	D In
S2	Str.	111	6	43	3	Slab								
S2E	"	20	6	43	3									
S1	Str.	1	4	1	0									
S1E	"	1	4	1	0									
S4	"	1	4	1	0									
S4E	"	1	4	1	0									
S5	"	1	4	1	0									
S5E	"	1	4	1	0									
S6	"	1	4	1	0									
S6E	"	1	4	1	0									
S7	"	1	4	1	0									
S7E	"	1	4	1	0									
S8	"	1	4	1	0									
S8E	"	1	4	1	0									
S9	"	1	4	1	0									
S9E	"	1	4	1	0									
S10	"	1	4	1	0									
S10E	"	1	4	1	0									
S11	"	1	4	1	0									
S11E	"	1	4	1	0									
S12	"	1	4	1	0									
S12E	"	1	4	1	0									
S13	"	1	4	1	0									
S13E	"	1	4	1	0									
S14	"	1	4	1	0									
S14E	"	1	4	1	0									
S15	"	1	4	1	0									
S15E	"	1	4	1	0									
S16	"	1	4	1	0									
S16E	"	1	4	1	0									
S17	"	1	4	1	0									
S17E	"	1	4	1	0									
S18	"	1	4	1	0									
S18E	"	1	4	1	0									
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S19E	"	1	4	1	0									
S20	"	1	4	1	0									
S20E	"	1	4	1	0									
S21	"	1	4	1	0									
S21E	"	1	4	1	0									
S22	"	1	4	1	0									
S22E	"	1	4	1	0									
S23	"	1	4	1	0									
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S26E	"	1	4	1	0									
S27	"	1	4	1	0									
S27E	"	1	4	1	0									
S28	"	1	4	1	0									
S28E	"	1	4	1	0									
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S29E	"	1	4	1	0									
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S30E	"	1	4	1	0									
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S31E	"	1	4	1	0									
S32	"	1	4	1	0									
S32E	"	1	4	1	0									
S33	"	1	4	1	0									
S33E	"	1	4	1	0									
S34	"	1	4	1	0									
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S44E	"	1	4	1	0									
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S70E	"	1	4	1	0									
S71	"	1	4	1	0									
S71E	"	1	4	1	0									
S72	"	1	4	1	0									
S72E	"	1	4	1	0									
S73	"	1	4	1	0									
S73E	"	1	4	1	0									
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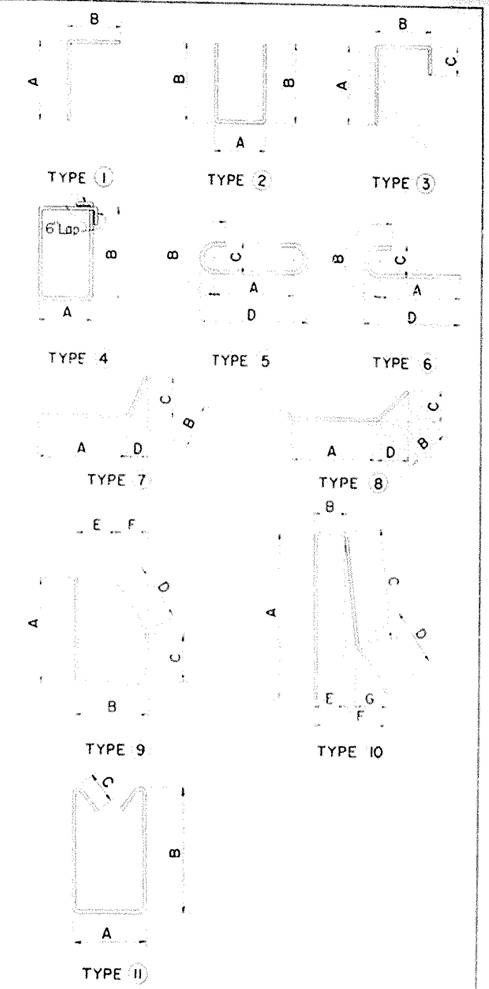
BILL OF REINFORCEMENT

GIRDERS - SPAN 4 THRU 7

Mark	Type	Number	Bar Size	Length Ft	Length In	Location	A Ft	A In	B Ft	B In	C Ft	C In	D Ft	D In
S24E	(1)	8	8	36	9	Girder 9	4	6	32	3	–	–	–	–
S247	Str.	8	5	21	6									
S248	Str.	8	5	4	0									
S249	(11)	164	5	12	0	Girder 9	0	10	5	1	0	6	–	–
S251	Str.	4	11	52	0	Girder 16								
S252	Str.	2	11	40	0									
S253	(5)	4	11	60	0		56	0	2	0	1	24	57	24
S254	(5)	4	8	60	0		57	0	1	6	0	8	57	8
S25E	(1)	6	6	35	3		4	6	30	9	–	–	–	–
S256	Str.	6	5	30	3									
S257	Str.	6	5	4	0									
S258	(11)	156	5	12	0	Girder 10	0	10	5	1	0	6	–	–
S25E	Str.	6	8	27	0	Girder 11 & 12								
S261	Str.	8	11	50	0	Girder 11 & 12								
S262	Str.	4	11	33	6	11								
S263	Str.	8	11	60	0	11 & 12								
S264	Str.	2	11	44	6	11								
S265	Str.	6	8	60	0	11 & 12								
S266	Str.	12	8	27	0									
S267	Str.	8	8	40	8									
S268	Str.	16	5	43	0									
S269	(11)	274	5	12	0	Girder 11 & 12	0	10	5	1	0	6	–	–
S27E	Str.	6	8	27	0	Girder 11 & 12								
S271	(5)	3	8	45	11	Diaphragm D1	40	11	1	6	0	8	41	7
S272	(6)	3	8	19	5	D1	17	11	1	6	0	8	18	3
S273	(6)	3	8	25	9	D1	24	3	1	6	0	8	27	7
S274	(6)	18	6	42	0	D2-D3-D5	39	0	1	6	0	8	39	5
S275	(6)	40	5	18	7	D2-D3-D7	17	1	1	6	0	8	17	2
S276	(6)	5	8	26	10	D2	25	4	1	6	0	8	25	5
S277	(6)	5	8	46	2	D3	45	2	1	6	0	8	45	10
S278	(6)	5	8	27	3	D3	25	7	1	6	0	8	26	1
S279	(6)	3	5	59	11	D4	56	11	1	6	0	8	57	7
S280	(6)	3	8	45	8	D4	25	8	1	6	0	8	14	4
S281	(6)	18	8	46	11	D5-D7-D9	5	1	1	6	0	8	45	9
S282	(6)	9	8	32	4	D5-D7	30	10	1	6	0	8	31	2
S283	Str.	9	8	12	5	D5-D7								
S284	(6)	3	8	46	11	D5	45	11	1	6	0	8	45	7
S285	(6)	3	5	59	6	D5	57	0	1	6	0	8	57	4
S286	(6)	6	5	27	0	D1-D3	26	2	1	6	0	8	26	5
S287	Str.	6	5	41	7	D1								
S288	Str.	54	5	39	9	D1-D3-D5								
S289	Str.	6	5	45	5	D3								
S290	Str.	6	5	57	7	D4								
S291	Str.	18	5	49	10	D5-D7								
S292	Str.	6	5	44	7	D8								
S293	(11)	99	5	11	0	D5-D10	5	2	1	4	0	9		
S294	(6)	34	5	11	3	D5-D6-D8-D10	5	2	1	4	0	9		
S295	(6)	15	5	4	2	D5-D10-D13	5	2	1	3				
S296	(6)	15	5	7	6		5	2	1	3				
S297	(6)	24	5	10	2	D5-D6-D8-D10	5	2	1	3				
S298	Str.	12	5	10	2	D11								
S299	Str.	6	5	4	0	D5-D10								
S300	Str.	1	5	4	0									
S301	(11)	1	5	12	0	Girder 5	0	10	5	1	0	6	–	–
S302	Str.	4	11	40	0	Girder 5								
S303	(6)	4	11	58	0		58	0	2	0	1	24	58	1
S304	(6)	2	11	40	0		40	1	2	0	1	24	41	0
S305	(6)	4	11	56	0		52	2	2	0	1	24	52	9
S306	(11)	1	11	60	0	Girder 5	0	10	5	1	0	6	–	–
S30E	Str.	12	11	60	0	Girder 5								
S311	Str.	4	11	50	0	Girder 5								
S312	Str.	2	11	40	0									
S313	Str.	2	11	30	0									
S314	Str.	6	5	4	0									
S315	(11)	1	5	12	0	Girder 6	0	10	5	1	0	6	–	–
S316	Str.	4	11	40	0	Girder 6								
S317	(6)	4	11	58	0		58	0	2	0	1	24	58	1
S318	(6)	2	11	40	0		40	1	2	0	1	24	41	0
S319	(6)	4	11	56	0		52	2	2	0	1	24	52	9
S320	(6)	2	8	36	6		33	0	1	6	0	8	35	4
S321	(6)	4	8	15	6		14	0	1	6	0	8	14	4
S322	Str.	6	5	4	0									
S323	(11)	1	5	12	0	Girder 9	0	10	5	1	0	6	–	–
S324	Str.	4	11	40	0	Girder 9								
S325	(6)	4	11	58	0		58	0	2	0	1	24	58	1
S326	(6)	2	11	40	0		40	1	2	0	1	24	41	0
S327	(6)	4	11	56	0		52	2	2	0	1	24	52	9
S328	(6)	2	8	36	6		33	0	1	6	0	8	35	4
S329	(6)	4	8	15	6		14	0	1	6	0	8	14	4
S330	Str.	6	5	4	0									
S331	(11)	1	5	12	0	Girder 10	0	10	5	1	0	6	–	–
S332	Str.	4	11	40	0	Girder 10								
S333	(6)	4	11	58	0		58	0	2	0	1	24	58	1
S334	(6)	2	11	40	0		40	1	2	0	1	24	41	0
S335	(6)	4	11	56	0		52	2	2	0	1	24	52	9
S336	(6)	2	8	36	6		33	0	1	6	0	8	35	4
S337	(6)	4	8	15	6		14	0	1	6	0	8	14	4
S338	Str.	6	5	4	0									
S339	(11)	1	5	12	0	Girder 11	0	10	5	1	0	6	–	–
S340	Str.	4	11	50	0	Girder 11								
S341	(6)	4	11	58	0		58	0	2	0	1	24	58	1
S342	(6)	2	11	40	0		40	1	2	0	1	24	41	0
S343	(6)	4	11	56	0		52	2	2	0	1	24	52	9
S344	(6)	2	8	36	6		33	0	1	6	0	8	35	4
S345	(6)	4	8	15	6		14	0	1	6	0	8	14	4

GIRDERS - SPAN 4 THRU 7

Mark	Type	Number	Bar Size	Length Ft	Length In	Location	A Ft	A In	B Ft	B In	C Ft	C In	D Ft	D In
S320	(11)		5	4		Connect S5-D10	2	4	3	2	0	6	–	–
S321	(6)	6	5	10	9	Connect S5-D10-S321	2	2	1	0	–	6	0	–
S322	(7)	9	6	0	0		4	0	7	0	–	–	–	–



NOTE

Work this Sheet with Sheets 46 thru 52, 54, 58, 59 & 61.
All reinforcing bars designated by Suffix (E) on the plans shall be epoxy coated in accordance with the special Provision No. 91 (A) Epoxy Coated Reinforcing Steel.

SHEET 62

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 451(8), SP 63-33-14 (1)
LOUISA - FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD KY 3 & WVA 37

STATION 20 + 2000 | P.E. PROJECT NO. | DRAWING NO. 19592

BILL OF REINFORCEMENT
SPAN 4 THRU 7

FRANKLAND AND LIENHARD

LETTING DATE

BRIDGE

BILL OF REINFORCEMENT

LETTING DATE

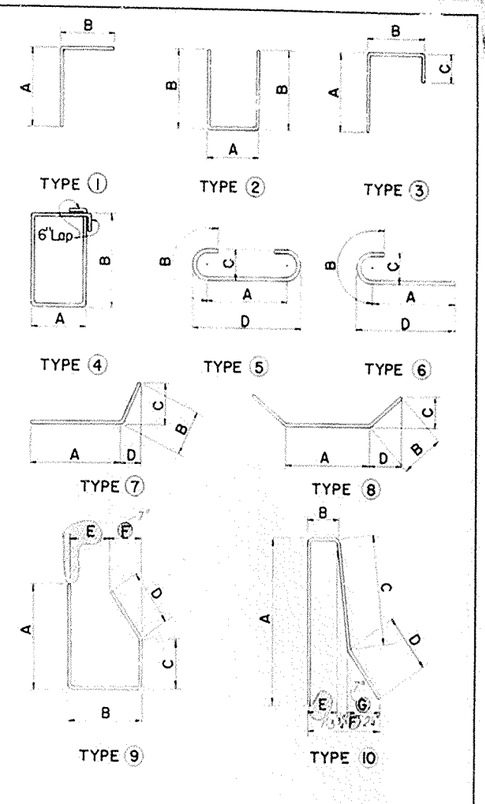
SPAN 11 & 12

Mark	Type	Number	Bar Size	Length Ft	Length In	Location	A Ft	A In	B Ft	B In	C Ft	C In	D Ft	D In
S1E	Str	302	6	43	9	Top & Bottom of Slab								
S1		102		43	9									
S2E		2		39	4									
S2		1		39	4									
S3E				36	3									
S3				36	3									
S4E				33	2									
S4				33	2									
S5E				30	1									
S5				30	1									
S6E				27	0									
S6				27	0									
S7E				23	11									
S7				23	11									
S8E				20	10									
S8				20	10									
S9E				17	9									
S9				17	9									
S10E				14	8									
S10				14	8									
S11E				11	7									
S11				11	7									
S12E				9	6									
S12				9	6									
S13E				6	5									
S13		2	6	5	5	Top & Bottom of Slab								
S14E		135	4	56	1	Top of Slab								
S14		102	4	56	4	Top of Slab								
S16C		24	5	57	10	Bott of Plinth								
S17E	Str	40	5	33	10	Top of Plinth								
S18L	9	340	5	4	6	Bottom of Plinth	1 7	1 3	0 9	1 1				
S19C	10	340	5	5	9	Top of Plinth	2 7	0 6	1 8	1 0				
S20	Str	296	5	7	6	All Diaphragms								
S19	Str	108	6	4	9	Diaphragms @ Opening								
S20	2	180	5	3	1	Intermediate Diaph	6	4						
S21	4	18	5	5	1	Interm Diaphr & Opening	6	1	8					
S22	5	18	5	3	1	Interm Diaphr & Opening	6	1	4					
S23	3	54	5	9	9	End Diaphr	1 2	4	6					
S24	4	6	5	6	5	End Diaphr & Opening	1 2	1	8					
S25	2	6	5	3	9	End Diaphr & Opening	1 2	1	4					
S26	2	4	5	1	7	End Diaphr @ Skew Block	1 2	3	9					
S27L	Str	60	6	13	0	Corner Reinforcement								
S28C	Str	44	9	34	0	Top of Slab								
S29C	Str	176	5	12	6	Top of Slab								
S30	C	8	5	12	0	Pier Diaphr	2 2	4	11					
S31	C	8	5	10	0	Pier Diaphr @ opening	2 2	3	4					
S32	C	8	5	8	6	Pier Diaphr @ opening	2 2	1	9					
S33	Str	36	6	7	0	Diaphragms @ opening								
	C	6	5	4										
		8	5	3	0	Lighting Standard	1 0	1	3	-	-	-	-	
		6	5	3		Lighting Standard								
		6	5	3										
		2	5	6			1 8	1	3	-	-	-	-	

SPAN 13

Mark	Type	Number	Bar Size	Length Ft	Length In	Location	A Ft	A In	B Ft	B In	C Ft	C In	D Ft	D In
S1E	Str	149	6	51	9	Top & Bottom of Slab								
S1		149	6	51	9									
S2E		2	4	49	1									
S2		1	4	49	1									
S3E				45	10									
S3				45	10									
S4E				42	7									
S4				42	7									
S5E				39	4									
S5				39	4									
S6E				36	1									
S6				36	1									
S7E				33	10									
S7				32	10									
S8E				30	7									
S8				29	7									
S9E				26	4									
S9				26	4									
S10E				23	1									
S10				23	1									
S11E				19	10									
S11				19	10									
S12E				16	7									
S12				16	7									
S13E				13	4									
S13				13	4									
S14E				10	1									
S14				10	1									
S15E		2	6	6	10									
S15		1	6	6	10	Top & Bottom of Slab								
S16E		55	4	45	0	Top of Slab								
S16		52	4	42	10	Top of Slab								
S16		66	5	45	0	Bottom of Slab								
S19		56	5	42	10	Bottom of Slab								
S20L		52	6	6	0	Cantilever @ Pier 12								
S21C		8	5	44	4	Bottom of Plinth								
S22C		8	5	41	0	Bottom of Plinth								
S23L		12	5	40	0	Top of Plinth								
S24C	Str	4	5	46	4	Top of Plinth								
S25L	9	167	5	4	8	Bottom of Plinth	1 7	1 3	0 9	6 1				
S26L	10	167	5	5	9	Top of Plinth	2 7	0 6	1 8	1 0				
S27	2	120	5	9	0	Interm. Diaphragm	6	4						
S28	Str	80 Pairs	6	7	0	End & Interm Diaphr								
S29	2	36	5	9	7	End Diaphragm	1 2	4						
S30	2	4	5	6	3	End Diaphr & Skew Block	1 2	3	7					
S31	C	40	5	9	4	Diaphragm @ Pier 12	1 2	4	9					
S32	Str	10	5	7	2	Diaphragm @ Pier 12								
S33	Str	40 80	6	4	0	Diaphragm @ Opening								
S34C	Str	65	6	15	0	Corner Reinforcement								
			6	12										
S35	C	6	5	3	4	Lighting Standard	1 0	1	3	-	-	-	-	
S36	Str	6	5	3	1	Lighting Standard								
		3	5	2										
		2	5	7			1 8	1	3	-	-	-	-	

Mark	Type	Number	Bar Size	Length Ft	Length In	Location	A Ft	A In	B Ft	B In	C Ft	C In	D Ft	D In



NOTE:

Work this Sheet with Sheets 56,57,58 & 59.
All reinforcing bars designated by Suffix (E) in the plans shall be epoxy coated in accordance with the special Provision No. 19 (76) "Epoxy Coated Reinforcing Steel"

SHEET 63

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8), SP 63-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD KY 3 & WVA 37

STATION 20 + 2000 P. E. PROJECT NO.

CONSTRUCTION PROJECT NO	MAINTENANCE PROJECT NO	DRAWING NO
		19592

BILL OF REINFORCEMENT
SPAN 11, 12 & 13

FRANKLAND AND LIENHARD

BRIDGE

BILL OF REINFORCEMENT

LETTING DATE

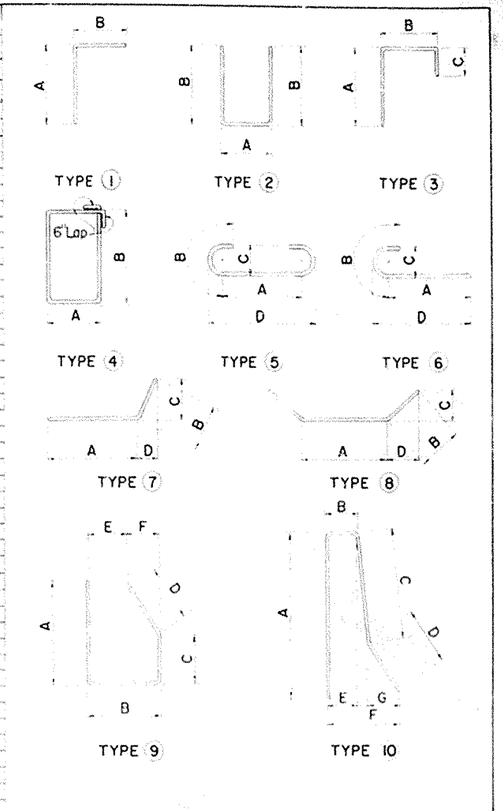
SPAN 11 & 12

Mark	Type	Number	Bar Size	Length Ft	Length In	Location	A Ft	A In	B Ft	B In	D Ft	D In
S1E	Str	340	6	43	3	Top & Bottom of Slab						
S1	Str	170	6	43	3							
S2E		2		39	4							
S2		1		39	4							
S3E				6	3							
S3				30	3							
S4				32	2							
S4				30	2							
S5E				5	1							
S5				30	1							
S6E				27	10							
S6				25	0							
S7E				23	11							
S7				23	11							
S8E				5	10							
S8				20	10							
S9E				17	9							
S9				17	9							
S10E				14	8							
S10				14	8							
S11E				11	7							
S11				11	7							
S12E				8	6							
S12				8	6							
V1E		1	1	5	5							
S13		2	6	5	5	Top & Bottom of Slab						
S14		136	4	5	5	Top of Slab						
S15		102	4	5	5	Top of Slab						
S16E	1	24	5	5	11	Bottom of Parapet						
S17E	Str	40	5	5	11	Top of Parapet						
S18E	9	340	5	4	0	Bottom of Slab						
S18E	17	340	5	5	9	Top of Parapet						
S19	Str	36	6	7	6	Bottom of Slab						
S19	Str	36	6	4	0	Diaphragm						
S20	2	180	5	5	1	Intermediate						
S21	2	4	5	5	1	Interm Diaphragm						
S22	2	8	5	3	1	Interm Diaphragm						
S23	2	36	5	9	3	End Diaphragm						
S24	2	4	5	6	1	End Diaphragm						
S25	2	4	5	5	9	End Diaphragm						
S26	2	4	5	5	5	End Diaphragm						
S27E	Str	10	6	13	0	Cant. Rail						
S28E	Str	44	6	34	0	Cant. Rail						
S29E	Str	176	6	34	0	Top of Slab						
S30	Str	10	5	4	0	Lighting Standard						
S31E	Str	8	4	7	0	Lighting Standard						

SPAN 13

Mark	Type	Number	Bar Size	Length Ft	Length In	Location	A Ft	A In	B Ft	B In	C Ft	C In	D Ft	D In
S1E	Str	149	6	41	7	Top & Bottom of Slab								
S1		149	5	41	7									
S2E		1	6	42	1									
S2		1	6	42	1									
S3E				42	10									
S3				43	1									
S4E				42	7									
S4				42	7									
S5E				42	4									
S5				42	4									
S6E				42	1									
S6				42	1									
S7E				41	10									
S7				42	10									
S8E				42	7									
S8				42	7									
S9E				42	4									
S9				42	4									
S10E				42	1									
S10				42	1									
S11E				41	10									
S11				41	10									
S12E				41	7									
S12				41	7									
S13E				41	4									
S13				41	4									
S14E				41	1									
S14				41	1									
S15E		1	6	6	10	Top & Bottom of Slab								
S15		1	6	6	10	Top & Bottom of Slab								
S16E		54	4	45	0	Top of Slab								
S16E		52	4	42	10	Top of Slab								
S18		66	5	45	0	Bottom of Slab								
S19		66	5	42	10	Bottom of Slab								
S20		54	5	6	0	Cantilever @ Pier 12								
S21		6	5	44	4	Bottom of Plinth								
S22		8	5	43	4	Bottom of Plinth								
S23		12	5	40	0	Top of Plinth								
S24	Str	4	5	42	4	Top of Plinth								
S25	2	167	5	4	9	Bottom of Plinth	1	7	0	34	0	9	1	0
S26	2	167	5	5	9	Top of Plinth	2	7	0	55	1	8	1	0
S27	2	2	5	5	9	Interm. Diaphragm	6	3	0					
S28	2	50	5	5	1	Int'r & Interm Diaphr								
S29	2	25	5	5	5	End Diaphragm	1	2	3					
S30	2	4	5	6	1	End Diaphr & Parapet	1	6	1					
S31	2	10	5	5	1	Diaphragm @ Pier 12	1	2	3					
S32		10	5	5	1	Diaphragm @ Pier 12								
S33	Str	40	5	5	1	Diaphragm @ Railing								
S34	Str	47	6	5	3	Interior Diaphragm								
S35	Str	8	5	5	1	Lighting Standard								
S36	Str	2	5	5	1	Lighting Standard								

Mark	Type	Number	Bar Size	Length Ft	Length In	Location	A Ft	A In	B Ft	B In	C Ft	C In	D Ft	D In



NOTE:
Use this Sheet with Sheets 58, 58 & 59
All reinforcing bars designated by Suffix (E) in the plans shall be epoxy coated in accordance with the special provision No 79 (76) Epoxy Coated Reinforcing Steel

SHEET 63

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 43(68), SP 63-33-14 LI
LOUISA - FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA
ROAD KY 3 & WVA 37

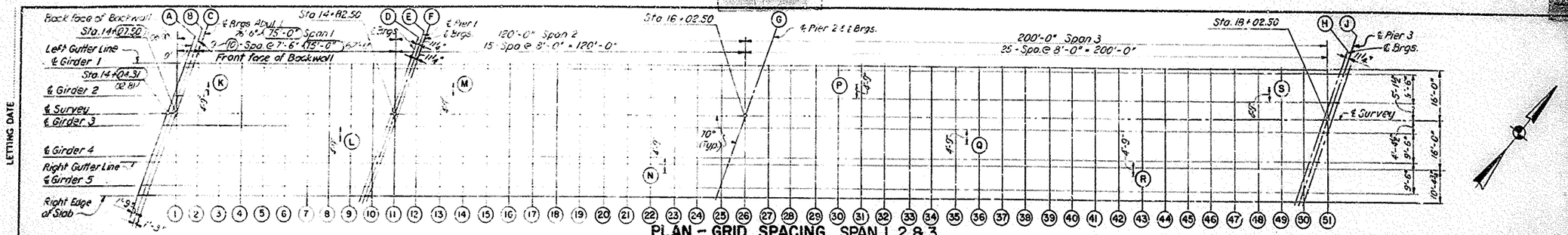
STATION 20 + 20.00 P.E. PROJECT NO.

DRAWING NO. 19592

BILL OF REINFORCEMENT
SPAN 11, 12 & 13

FRANKLAND AND LIENHARD

BRIDGE



PLAN – GRID SPACING SPAN 1, 2 & 3

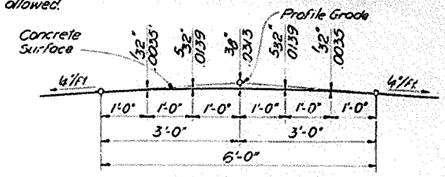
TABLE OF ELEVATIONS

LINE	LEFT GUTTER LINE	℄ GIRDER 1 CONSTR. ELEV.	℄ GIRDER 1 TOP OF GIRDER	℄ GIRDER 1 DIM. "X"	℄ GIRDER 2 CONSTR. ELEV.	℄ GIRDER 2 TOP OF GIRDER	℄ GIRDER 2 DIM. "X"	℄ SURVEY	℄ GIRDER 3 CONSTR. ELEV.	℄ GIRDER 3 TOP OF GIRDER	℄ GIRDER 3 DIM. "X"	℄ GIRDER 4 CONSTR. ELEV.	℄ GIRDER 4 TOP OF GIRDER	℄ GIRDER 4 DIM. "X"	RIGHT GUTTER LINE	℄ GIRDER 5 CONSTR. ELEV.	℄ GIRDER 5 TOP OF GIRDER	℄ GIRDER 5 DIM. "X"	RIGHT EDGE OF SLAB
A 850	580.863	580.691	.848		581.007	580.974	.311	581.044	580.952	.919		580.684	.651	.591	580.624	580.417	.384		580.933 .300
B 870	580.903	580.921	.888		581.046	.913	.050	581.083	580.980	.967		580.721	.688	.629	580.662	580.454	.421		580.969 .336
C 898	580.931	580.945	.916		581.074	.941	.077	581.110	581.010	580.984		580.748	.715	.655	580.688	580.481	.448		580.996 .363
D	582.769	582.804			582.903			582.925	582.821			582.526			582.461	582.233			582.140
E	582.818	582.832			582.931			582.954	582.849			582.554			582.488	582.261			582.166
F	582.847	582.861			582.960			582.982	582.877			582.582			582.516	582.288			582.195
G	586.782	586.794			586.880			586.895	586.793			586.472			586.402	586.159			586.059
H	591.435	591.457			591.613			591.650	591.566			591.315			591.258	591.062			590.982
J	591.450	591.471			591.618			591.656	591.582			591.330			591.274	591.078			590.998
1 376	580.803	580.837	.804		581.035	.880		581.070	581.054	.021		580.865	.832	.700	580.823	580.676	.643		580.616 .583
2	580.972	581.002			581.206		.777	581.289	581.233			581.043			581.000	580.852			580.791
3	581.155	581.195			581.391			581.470	581.414			581.222			581.179	581.029			580.968
4	581.342	581.372			581.576			581.654	581.596			581.402			581.359	581.207			581.145
5	581.530	581.559			581.761			581.835	581.779			581.583			581.539	581.385			581.322
6	581.719	581.748			581.947			582.022	581.962			581.763			581.718	581.562			581.498
7	581.907	581.936			582.132			582.206	582.145			581.943			581.898	581.740			581.675
8	582.095	582.123			582.317			582.390	582.327			582.123			582.077	581.918			581.853
9	582.283	582.311			582.503			582.574	582.511			582.305			582.259	582.099			582.033
10	582.473	582.500			582.690			582.761	582.697			582.490			582.444	582.284			582.225
11	582.664	582.691			582.880			582.954	582.884			582.676			582.651	582.497			582.454
12	582.881	582.910			583.107			583.193	583.125			582.925			582.879	582.724			582.660
13	583.116	583.144			583.341			583.416	583.356			583.154			583.109	582.955			582.889
14	583.355	583.383			583.578			583.652	583.590			583.396			583.343	583.195			583.120
15	583.596	583.624			583.817			583.890	583.829			583.634			583.578	583.419			583.354
16	583.840	583.867			584.059			584.131	584.068			583.873			583.817	583.661			583.593
17	584.086	584.114			584.305			584.376	584.313			584.109			584.062	583.904			583.839
18	584.338	584.365			584.556			584.625	584.560			584.351			584.315	584.157			584.092
19	584.596	584.624			584.815			584.886	584.820			584.623			584.578	584.421			584.357
20	584.862	584.890			585.083			585.157	585.095			584.895			584.851	584.617			584.634
21	585.133	585.161			585.357			585.432	585.372			585.175			585.131	584.979			584.917
22	585.410	585.439			585.633			585.714	585.655			585.462			585.418	585.269			585.208
23	585.693	585.722			585.925			586.003	585.946			585.756			585.714	585.568			585.509
24	585.980	586.010			586.216			586.297	586.242			586.056			586.015	585.872			585.814
25	586.271	586.301			586.512			586.595	586.541			586.360			586.319	586.179			586.122
26	586.565	586.596			586.811			586.895	586.844			586.665			586.627	586.486			586.432
27	586.864	586.895			587.113			587.199	587.148			586.974			586.936	586.801			586.746
28	587.162	587.194			587.417			587.505	587.457			587.285			587.248	587.117			587.064
29	587.466	587.498			587.724			587.816	587.769			587.602			587.564	587.436			587.384
30	587.774	587.807			588.035			588.128	588.084			587.919			587.882	587.754			587.702
31	588.083	588.116			588.347			588.441	588.397			588.233			588.196	588.069			588.017
32	588.390	588.424			588.656			588.750	588.705			588.540			588.502	588.374			588.321
33	588.693	588.728			588.954			589.049	589.004			588.836			588.798	588.665			588.611
34	588.986	589.019			589.246			589.336	589.289			589.118			589.079	588.943			588.887
35	589.264	589.297			589.521			589.608	589.559			589.382			589.343	589.205			589.147
36	589.528	589.559			589.779			589.866	589.813			589.632			589.592	589.451			589.393
37	589.776	589.807			590.022			590.106	590.054			589.867			589.825	589.679			589.620
38	590.010	590.040			590.249			590.339	590.285			590.085			590.042	589.891			589.830
39	590.226	590.254			590.459			590.547	590.490			590.295			590.241	590.065			590.022
40	590.423	590.452			590.653			590.727	590.669			590.490			590.429	590.267			590.196
41	590.603	590.631			590.826			590.899	590.834			590.676			590.560	590.419			590.352
42	590.764	590.792			590.980			591.059	590.995			590.826			590.722	590.565			590.487
43	590.908	590.934			591.115			591.192	591.114			590.941			590.846	590.674			590.604
44	591.032	591.058			591.233			591.296	591.225			591.004			590.953	590.776			590.704
45	591.136	591.162			591.334			591.394	591.320			591.092			591.041	590.862			590.788
46	591.225	591.249			591.417			591.475	591.398			591.165			591.112	590.931			590.856
47	591.296	591.320			591.482			591.538	591.461			591.221			591.168	590.982			590.905
48	591.352	591.374			591.531			591.584	591.505			591.263			591.209	591.020			590.942
49	591.390	591.413			591.566			591.617	591.536			591.292			591.237	591.047			590.969
50	591.415	591.437			591.589			591.639	591.557			591.311			591.256	591.066			591.023
51	591.430	591.452			591.602			591.652	591.570			591.325			591.269	591.080			591.147

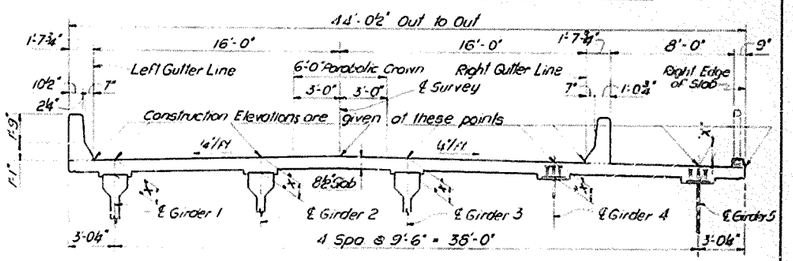
TABLE OF ELEVATIONS FOR CONTROL OF SLAB THICKNESS

Check Point	Plan Elev. Top of Slab	Field Elev. Bott. of Slab	Computed Slab Thickness
K	581.288		
L	582.408		
N	583.481		
N	585.366		
P	587.921		
Q	589.723		
P	590.765		
S	590.490		

NOTE: *After the slab forms are erected and before the slab reinforcement is placed, the Resident Engineer shall take field elevations of the slab thickness check points and enter them in the table in the space provided. The slab thickness shall then be computed. If the computed slab thickness varies more than ¼" from the plan thickness, allowing ½ of the slab span for deflection of the form work, the form shall be adjusted until the computed slab thickness is within the tolerance allowed.*



PARABOLIC CROWN



TYPICAL SECTION

CONSTRUCTION NOTES:

Elevations for Structural Steel or Prestressed Spans:

1. *Take elevations on top of Girder at points indicated after the cross frames and lateral bracing or diaphragms are in place, and after all falsework has been removed, but before forms for concrete slabs have been put in place. Read elevations to three decimals using a target rod and enter readings in tables under Top of Girder Elevations.*
2. *Compute Dimensions X as follows: Construction Elevation minus Top of Girder Elevation equals Dimension X. Construction Elevation includes camber due to weight of concrete slab, barrier, parapet, and future surfacing. Measuring of Dimension X gives the final check on girder tolerances for camber, girder damage and errors in erection that produce reverse cambers, sags and unsightly fascia girders.*
3. *For setting templates measure Dimension X above Top of girder for Top of template. Do not set templates by elevations.*
4. *Construct barrier to roadway grade. Do not add camber to barrier.*

NOTE:

Work this Sheet with Sheets 53, 57 & 59.

SHEET **64**

SPAN 1, 2 & 3
GRID SPACING AND
TABLE OF ELEVATIONS

FRANKLAND AND LIENHARD

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

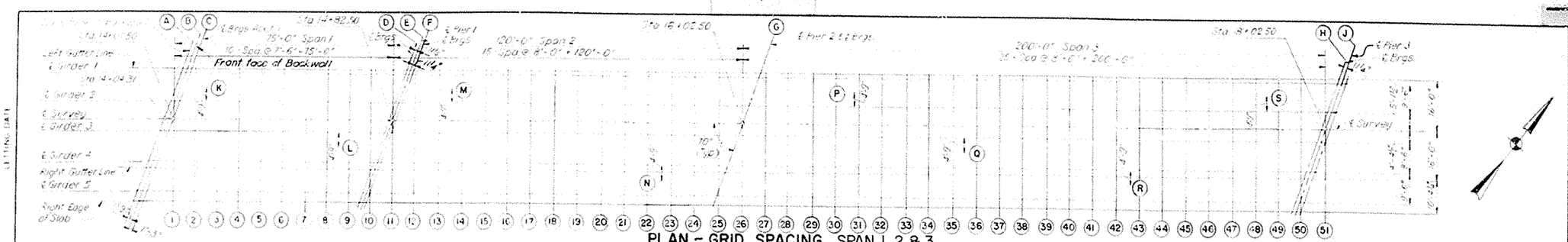
ROAD

STATION 20 + 20.00 P.E. PROJECT NO.

CONSTRUCTION PROJECT NO. MAINTENANCE PROJECT NO. DRAWING NO. 19592

BRIDGE

UPDATE DATE
LETTING DATE



PLAN - GRID SPACING SPAN 1, 2 & 3

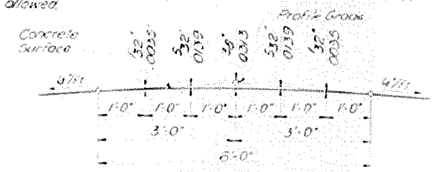
TABLE OF ELEVATIONS

LINE	LEFT GUTTER LINE	℄ GIRDER 1 CONSTR ELEV.	℄ GIRDER 1 TOP OF GIRDER	℄ GIRDER 1 DIM "X"	℄ GIRDER 2 CONSTR ELEV.	℄ GIRDER 2 TOP OF GIRDER	℄ GIRDER 2 DIM "X"	℄ SURVEY	℄ GIRDER 3 CONSTR ELEV.	℄ GIRDER 3 TOP OF GIRDER	℄ GIRDER 3 DIM "X"	℄ GIRDER 4 CONSTR ELEV.	℄ GIRDER 4 TOP OF GIRDER	℄ GIRDER 4 DIM "X"	RIGHT GUTTER LINE	℄ GIRDER 5 CONSTR ELEV.	℄ GIRDER 5 TOP OF GIRDER	℄ GIRDER 5 DIM "X"	RIGHT EDGE OF SLAB
K	580.863	580.821			581.007			581.044	580.952			580.684			580.524	580.417			580.333
L	580.903	580.921			581.046			581.083	580.999			580.721			580.662	580.454			580.369
M	580.931	580.942			581.074			581.110	581.017			580.748			580.696	580.481			580.396
N	582.783	582.804			582.903			582.935	582.821			582.526			582.461	582.233			582.149
P	582.818	582.832			582.931			582.964	582.849			582.554			582.488	582.261			582.178
Q	582.847	582.861			582.960			582.992	582.877			582.582			582.516	582.285			582.135
R	581.732	581.794			581.891			581.935	581.753			581.412			581.402	581.159			581.059
S	591.435	591.457			591.603			591.650	591.566			591.315			591.256	591.062			590.982
J	591.459	591.471			591.618			591.666	591.585			591.330			591.274	591.078			590.996
1	580.808	580.837			581.035			581.110	581.054			580.865			580.823	580.676			580.611
2	580.972	581.002			581.208			581.209	581.233			581.043			581.050	580.852			580.791
3	581.155	581.185			581.391			581.470	581.414			581.239			581.179	581.029			580.965
4	581.342	581.372			581.576			581.654	581.594			581.402			581.359	581.207			581.145
5	581.530	581.559			581.761			581.833	581.779			581.555			581.539	581.385			581.326
6	581.719	581.748			581.947			582.027	581.965			581.763			581.718	581.562			581.498
7	581.907	581.936			582.132			582.206	582.145			581.943			581.898	581.740			581.675
8	582.095	582.123			582.317			582.390	582.327			582.125			582.077	581.918			581.853
9	582.283	582.311			582.503			582.574	582.511			582.305			582.249	582.099			582.033
10	582.473	582.500			582.670			582.741	582.681			582.490			582.444	582.295			582.225
11	582.664	582.691			582.890			582.964	582.904			582.696			582.651	582.497			582.434
12	582.861	582.910			583.107			583.185	583.123			582.923			582.879	582.724			582.660
13	583.116	583.144			583.341			583.416	583.355			583.154			583.109	582.953			582.889
14	583.369	583.396			583.576			583.652	583.590			583.386			583.343	583.186			583.120
15	583.596	583.624			583.817			583.890	583.826			583.624			583.578	583.419			583.353
16	583.840	583.867			584.059			584.131	584.066			583.863			583.817	583.655			583.593
17	584.086	584.114			584.306			584.376	584.315			584.105			584.062	583.904			583.839
18	584.338	584.365			584.556			584.625	584.565			584.361			584.315	584.157			584.092
19	584.596	584.624			584.815			584.885	584.822			584.623			584.575	584.421			584.357
20	584.862	584.890			585.083			585.157	585.105			584.905			584.851	584.697			584.634
21	585.133	585.161			585.357			585.433	585.372			585.175			585.131	584.979			584.917
22	585.410	585.439			585.635			585.713	585.656			585.462			585.418	585.267			585.208
23	585.693	585.722			585.925			586.001	585.946			585.756			585.714	585.568			585.509
24	585.980	586.010			586.216			586.297	586.241			586.056			586.016	585.872			585.814
25	586.271	586.301			586.512			586.595	586.541			586.366			586.319	586.175			586.122
26	586.565	586.596			586.817			586.895	586.844			586.676			586.627	586.486			586.436
27	586.864	586.895			587.113			587.194	587.149			586.974			586.938	586.801			586.751
28	587.162	587.194			587.417			587.496	587.457			587.285			587.248	587.117			587.064
29	587.461	587.493			587.725			587.801	587.764			587.602			587.564	587.436			587.384
30	587.774	587.801			588.055			588.126	588.084			587.919			587.882	587.764			587.702
31	588.083	588.116			588.347			588.441	588.397			588.233			588.196	588.069			588.017
32	588.390	588.414			588.655			588.750	588.705			588.540			588.508	588.394			588.341
33	588.703	588.726			588.962			589.049	589.004			588.830			588.798	588.665			588.611
34	589.016	589.039			589.271			589.358	589.313			589.119			589.079	588.945			588.897
35	589.324	589.347			589.581			589.668	589.623			589.429			589.383	589.250			589.197
36	589.628	589.650			589.879			589.966	589.921			589.727			589.681	589.547			589.497
37	589.926	589.947			590.162			590.248	590.203			590.009			589.962	589.827			589.777
38	590.210	590.230			590.439			590.525	590.480			590.286			590.239	590.104			590.054
39	590.486	590.504			590.711			590.796	590.751			590.557			590.510	590.375			590.325
40	590.753	590.771			590.977			591.062	591.017			590.823			590.776	590.641			590.591
41	590.993	590.991			591.226			591.311	591.266			591.072			591.025	590.890			590.840
42	591.214	591.232			591.450			591.535	591.490			591.296			591.249	591.114			591.064
43	591.418	591.436			591.654			591.739	591.694			591.500			591.453	591.318			591.268
44	591.606	591.624			591.842			591.927	591.882			591.688			591.641	591.506			591.456
45	591.778	591.796			592.014			592.099	592.054			591.860			591.813	591.678			591.628
46	591.935	591.953			592.171			592.256	592.211			592.017			591.970	591.835			591.785
47	592.076	592.094			592.312			592.397	592.352			592.158			592.111	591.976			591.926
48	592.202	592.220			592.438			592.523	592.478			592.284			592.237	592.102			592.052
49	592.312	592.330			592.548			592.633	592.588			592.394			592.347	592.212			592.162
50	592.406	592.424			592.642			592.727	592.682			592.488			592.441	592.306			592.256
51	592.484	592.502			592.720			592.805	592.760			592.566			592.519	592.384			592.334

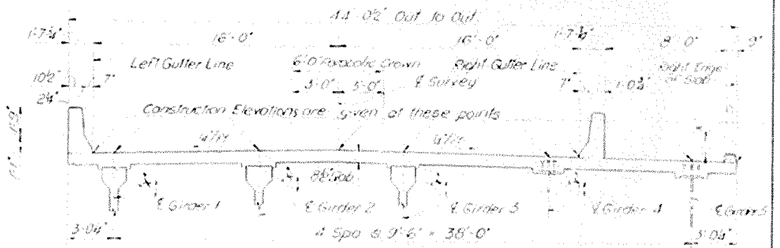
TABLE OF ELEVATIONS FOR CONTROL OF SLAB THICKNESS

Check Point	Plan Elev Top of Slab	Field Elev Bott of Slab	Computed Slab Thickness
K	581.288		
L	582.406		
M	583.481		
N	585.366		
P	587.921		
Q	589.723		
R	590.785		
S	590.490		

NOTE: After the slab forms are erected and before the slab reinforcement is placed, the Resident Engineer shall take field elevations at the slab thickness check points and enter them in the table in the space provided. The slab thickness shall then be computed. If the computed slab thickness varies more than ½" from the plan thickness, allowing ½ of the slab soon for deflection of the form work, the form shall be adjusted until the computed slab thickness is within the tolerance allowed.



PARABOLIC CROWN



TYPICAL SECTION

CONSTRUCTION NOTES:

Elevations for Structural Steel or Prestressed Spans

1 Take elevations on top of Girder at points indicated after the cross frames and lateral bracing or diaphragms are in place, and after all falsework has been removed, but before forms for concrete slab have been put in place. Read elevations to three decimals using a target and vary readings in Tables under Top of Girder Elevations.

2 Compute Dimensions X as follows. Construction Elevation minus Top of Girder Elevation equals Dimension X. Construction Elevation includes camber due to weight of concrete slab, barrier, horizontal and future surfacing. Measuring of dimension X gives the final check on girder tolerances for camber, girder damage and errors in erection that produce reverse curvature, sags and unsightly roadway.

3 For setting templates measure Dimension X above top of girder for top of template. Do not set templates by elevations.

4 Construct barrier to roadway grade. Do not add camber to barrier.

NOTE

View this Sheet with Sheets 53, 57 & 59

SHEET 64

SPAN 1, 2 & 3
GRID SPACING AND
TABLE OF ELEVATIONS

FRANKLAND AND LIENHARD

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8), SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD

STATION 20 + 2000 P.E. PROJECT NO

19592

BRIDGE

TABLE OF ELEVATIONS

LINE	LEFT GUTTER LINE	℄ GIRDER 1 TOP OF SLAB	℄ GIRDER 1 BOT. OF GIRDER	℄ GIRDER 2 TOP OF SLAB	℄ GIRDER 2 BOT. OF GIRDER	℄ SURVEY	℄ GIRDER 3 TOP OF SLAB	℄ GIRDER 3 BOT. OF GIRDER	℄ GIRDER 4 TOP OF SLAB	℄ GIRDER 4 BOT. OF GIRDER	RIGHT GUTTER LINE	℄ GIRDER 5 TOP OF SLAB	℄ GIRDER 5 BOT. OF GIRDER	℄ GIRDER 6 TOP OF SLAB	℄ GIRDER 6 BOT. OF GIRDER	℄ GIRDER 7 TOP OF SLAB	℄ GIRDER 7 BOT. OF GIRDER	℄ GIRDER 8 TOP OF SLAB	℄ GIRDER 8 BOT. OF GIRDER	℄ GIRDER 9 TOP OF SLAB	℄ GIRDER 9 BOT. OF GIRDER	℄ GIRDER 10 TOP OF SLAB	℄ GIRDER 10 BOT. OF GIRDER	℄ GIRDER 11 TOP OF SLAB	℄ GIRDER 11 BOT. OF GIRDER	℄ GIRDER 12 TOP OF SLAB	℄ GIRDER 12 BOT. OF GIRDER	RIGHT EDGE OF SLAB	℄ EXP JOINT
	591.420					591.606					591.274																			
	591.465	591.466	585.966	591.633	586.133	591.651	591.597	586.097	591.345	585.845	591.290	591.094	585.594																590.908	
	591.425	591.427	585.927	591.644	586.144	591.662	591.608	586.108	591.357	585.857	591.301	591.106	585.606																591.014	
	591.249	591.276	585.776	591.410	585.960	591.509	591.413	585.963	591.250	585.750	590.913	591.027	585.527																591.025	
	591.260	591.287	585.787	591.421	585.971	591.539	591.473	585.973	591.261	585.761	590.824	591.039	585.539	591.730	585.280	591.477	585.977	591.127	585.627	590.773	585.273	590.420	584.918							590.259
	591.270	591.297	585.797	591.432	585.982	591.550	591.484	585.984	591.272	585.772	590.716	591.051	585.551	591.744	585.294	591.495	585.995	591.151	585.651	590.801	585.301	590.460	584.960							590.291
	591.284	591.461	585.961	591.649	587.149	591.719	591.654	587.154	591.449	586.149		591.236	586.736	592.002	586.502	591.764	586.264	591.527	586.027	591.382	585.782	591.093	585.503							590.323
	591.559	591.586	587.086	591.777	587.277	591.849	591.786	587.286	591.580	587.080	591.576	591.355	586.855	592.070	586.570	591.732	586.232	591.356	585.856	591.002	585.502	590.675	585.175							590.879
	591.564	591.592	587.092	591.783	587.283	591.855	591.791	587.291	591.586	587.086	591.702	591.360	586.860	592.073	586.573	591.736	586.230	591.347	585.847	590.987	585.487	590.656	585.156							590.546
	591.539	591.567	587.067	591.786	587.285	591.840	591.797	587.297	591.592	587.092	591.304	591.306	586.806	592.075	586.575	591.737	586.237	591.337	585.837	590.971	585.471	590.636	585.136							590.527
	591.466	591.491	587.191	591.692	587.392	591.747	591.701	587.401	591.707	587.207	591.703	591.506	587.006																	590.508
	591.663	591.694	587.194	591.891	587.371	591.909	591.905	587.405	591.706	587.206	591.691	591.506	587.006																591.444	
	591.665	591.693	587.193	591.890	587.390	591.905	591.904	587.403	591.705	587.205	591.650	591.509	587.005																591.443	
	591.664	591.691	587.191	591.888	587.388	591.904	591.904	587.404	591.705	587.205	591.650	591.508	587.008																591.441	
	591.470	591.517	587.017	591.709	587.209	591.774	591.741	587.241	591.504	587.004	591.447	591.295	586.795																591.234	
	591.484	591.512	587.012	591.700	587.200	591.770	591.706	587.206	591.495	586.995	591.411	591.287	586.787																591.229	
																								591.332	585.832				591.223	
																								591.415	585.915					
																								591.192	585.692					
																								590.898	585.398					
																								590.607	585.107					
																								590.311	584.811					
																										592.473	589.273			
																										592.103	586.602			
																										591.710	586.210			
																										591.305	585.805			
																										590.940	585.440			
																										590.601	585.101			
	591.430	591.452	585.952	591.602	586.102	591.616	591.606	586.101	591.412	585.912	591.366	591.215	585.715																	
	591.486	591.515	586.015	591.717	586.217	591.709	591.717	586.217	591.532	586.032	591.457	591.321	585.820																591.153	
	591.612	591.641	586.141	591.842	586.342	591.910	591.859	586.359	591.651	586.151	591.608	591.429	585.929																591.229	
	591.728	591.756	586.256	591.956	586.456	592.032	591.973	586.473	591.773	586.273	591.673	591.543	586.043											591.415	585.915				591.320	
	591.837	591.865	586.365	592.065	586.565	592.140	592.090	586.590	591.878	586.378	591.711	591.649	586.149											591.473	585.973				591.370	
	591.934	591.963	586.463	592.160	586.660	592.234	592.173	586.673	591.972	586.472	591.682	591.736	586.236	591.450	586.050									591.429	585.969				591.348	
	592.032	592.059	586.559	592.247	586.747	592.321	592.260	586.760	592.052	586.552	591.560	591.838	586.338	591.595	586.095	591.212	585.712							591.376	585.876				591.217	
	592.102	592.131	586.631	592.327	586.827	592.401	592.340	586.840	592.139	586.639	591.385	591.902	586.422	591.655	586.155	591.337	585.937	590.960	585.460	590.610	585.110	590.286	584.786	591.141	585.641				590.892	
	592.174	592.200	586.700	592.415	586.915	592.473	592.412	586.912	592.212	586.712		592.069	586.569	591.751	586.251	591.452	585.952	591.127	585.627	590.898	585.398	590.567	584.967	590.416	584.916					590.165
	592.240	592.268	586.768	592.464	586.964	592.529	592.479	586.979	592.251	586.751		592.114	586.714	591.841	586.341	591.578	585.978	591.391	585.791	591.264	585.564	590.723	585.223							590.388
	592.303	592.331	586.931	592.529	587.079	592.644	592.543	587.043	592.327	586.927		592.134	586.434	591.927	586.427	591.595	586.095	591.439	585.639	591.193	585.693	590.930	585.430							590.609
	592.364	592.391	586.991	592.593	587.093	592.664	592.604	587.104	592.406	586.966		592.196	586.496	592.011	586.511	591.655	586.155	591.524	586.024	591.258	585.758	590.994	585.464							590.819
	592.417	592.445	587.045	592.643	587.143	592.716	592.654	587.154	592.456	587.016		592.259	586.559	592.021	586.521	591.726	586.226	591.469	585.969	591.100	585.600	590.844	585.344							590.855
	592.470	592.498	587.098	592.696	587.196	592.769	592.707	587.207	592.509	587.069		592.301	586.601	592.047	586.547	591.747	586.247	591.420	585.920	591.061	585.561	590.732	585.232							590.710
	592.511	592.541	587.141	592.739	587.239	592.815	592.765	587.265	592.552	587.052	591.644	592.343	586.943	592.074	586.574	591.782	586.282	591.443	585.943	591.143	585.643	590.760	585.260							590.580
	592.556	592.584	587.184	592.782	587.282	592.858	592.808	587.308	592.598	587.098	591.687	592.376	586.976	592.084	586.584	591.719	586.219	591.277	585.877	590.960	585.460	590.600	584.700							590.459
	592.594	592.623	587.223	592.821	587.321	592.898	592.851	587.351	592.639	587.139	591.731	592.406	586.906	592.091	586.591	591.726	586.226									591.577	586.077	591.264		
	592.634	592.663	587.263	592.861	587.361	592.938	592.891	587.391	592.679	587.179	591.770	592.441	586.941													591.955	586.455	591.768		
	592.691	592.720	587.320	592.918	587.418	592.995	592.948	587.448	592.736	587.236	591.832	592.483	586.983													592.187	586.687	592.045		
	592.661	592.690	587.190	592.888	587.388	592.965	592.918	587.418	592.709	587.209	591.832	592.483	586.983													592.337	586.537	592.217		
	592.661	592.690	587.190	592.888	587.388	592.965	592.918	587.418	592.709	587.209	591.832	592.471	586.971													592.425	586.925	592.317		
	592.661	592.690	587.190	592.888	587.388	592.965	592.918	587.418	592.709	587.209	591.832	592.508	587.008													592.465	586.965	592.363		
	592.667	592.696	587.196	592.894	587.394	592.971	592.924	587.424	592.715	587.215	591.838	592.511	587.011															592.419		
	592.665	592.693	587.193	592.891	587.391	592.968	592.921	587.421	592.712	587.212	591.835	592.509	587.009															592.454		
	592.658	592.687	587.187	592.884	587.384	592.961	592.914	587.414	592.705	587.205	591.828	592.502	587.002															592.449		
	592.645	592.674	587.174	592.871	587.371	592.948	592.901	587.401	592.692	587.192	591.815	592.489	586.989															592.440		
	592.632	592.661	587.161	592.858	587.358	592.935	592.888	587.388	592.679	587.179	591.802	592.476	586.976															592.429		
	592.614	592.643	587.143	592.840	587.340	592.917	592.870	587.370	592.661	587.161	591.784	592.458	586.958															592.413		
	592.594	592.623	587.123	592.821	587.321	592.898	592.851	587.351	592.639	587.139	591.763	592.437	586.937															592.392		
	592.570	592.599	587.099	592.797	587.297	592.874	592.827	587.327	592.615	587.115	591.739	592.413	586.913															592.368		
	592.546	592.575	587.075	592.773	587.273	592.850	592.803	587.303	592.591	587.091	591.715	592.389	586.889															592.344		
	592.520	592.549	587.049	592.747	587.247	592.824	592.777	587.277	592.565	587.065	591.689	592.363	586.863															592.318		
	592.494	592.523	587.023	592.721	587.221	592.798	592.751	587.251	592.539	587.039	591.663	592.337	586.837															592.292		
	592.468	592.497	586.997	592.695	587.195	592.772	592.725	587.225	592.513	587.013	591.637	592.311	586.811															592.266		

TABLE OF SLAB THICKNESS CONTROL POINTS

CHECK POINT	PLAN ELEVATION TOP OF SLAB	FIELD ELEVATION TOP OF SLAB	SLAB THICKNESS
V 1	591.72		
V 2	592.16		
V 3	592.49		
V 4	592.49		
V 5	592.17		
V 6	591.72		
V 7	591.54		
V 8	591.53		
V 9	591.50		

NOTE:

Elevations shown on this sheet include dead load camber and are to be maintained with falsework in place.

After the slab forms are erected and before the slab reinforcement is placed, the Resident Engineer shall take field elevations at the slab thickness check points and enter them in the table in the space provided. The slab thickness shall then be computed. If the computed slab thickness varies more than ¼" from the plan thickness, allowing 1/360 of the slab span for deflection of the form work, the form shall be adjusted until the computed slab thickness is within the tolerance allowed.

For Grid spacing see Sheet #5
Work this Sheet with Sheets 54,58,59 & 65

SPAN 4 THRU 7
TABLE OF ELEVATION

FRANKLAND AND LIENHARD

SHEET 66

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8), SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

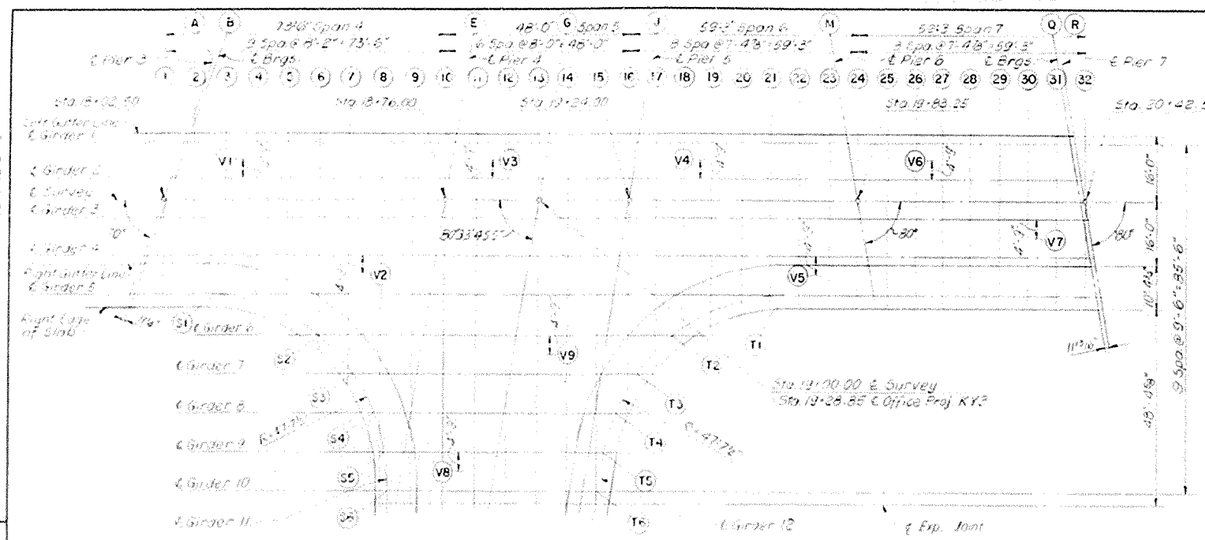
LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD

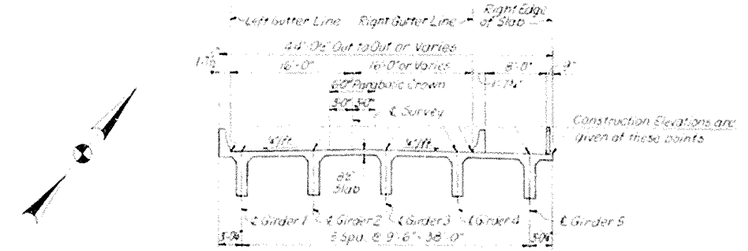
STATION 20 + 2000 P.E. PROJECT NO

19592

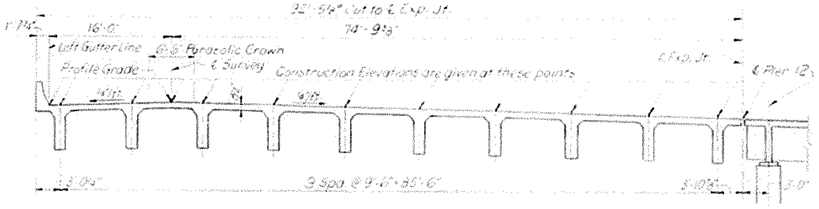
BRIDGE



PLAN - GRID SPACING SPANS 4,5,6 & 7

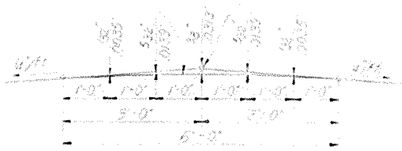


SPAN 4,6 & 7



SPAN 5

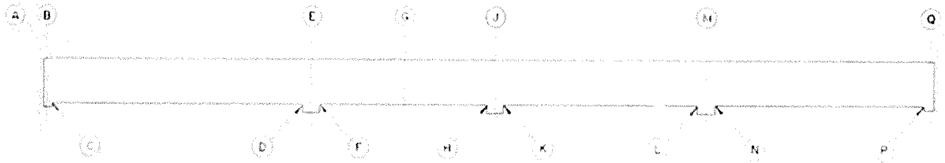
TYPICAL SECTIONS



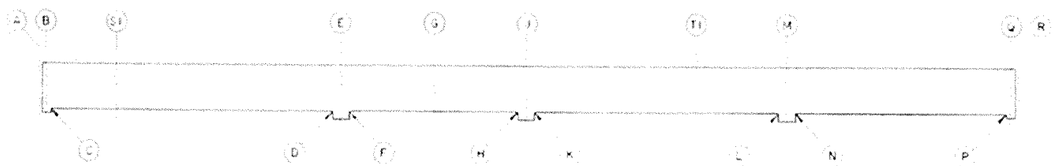
PARABOLIC CROWN

NOTE

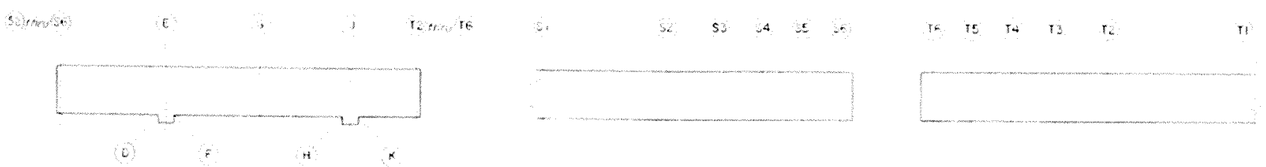
For table of elevations and table of slab thickness control points see Sheet 51
Work this Sheet with Sheets 54,55 & 59



GIRDER 1,2,3 & 4



GIRDER 5



GIRDER 6,7,8,9 & 10 GIRDER 11 GIRDER 12

LONGITUDINAL SECTIONS ON ℄ GIRDEPS

SPANS 4 THRU 7
GRID SPACING
AND LONGITUDINAL
SECTIONS OF GIRDERS

FRANKLAND AND LIENHARD

SHEET 65

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8), SP 64-33-14 LI
LOUISA - FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY WEST VIRGINIA

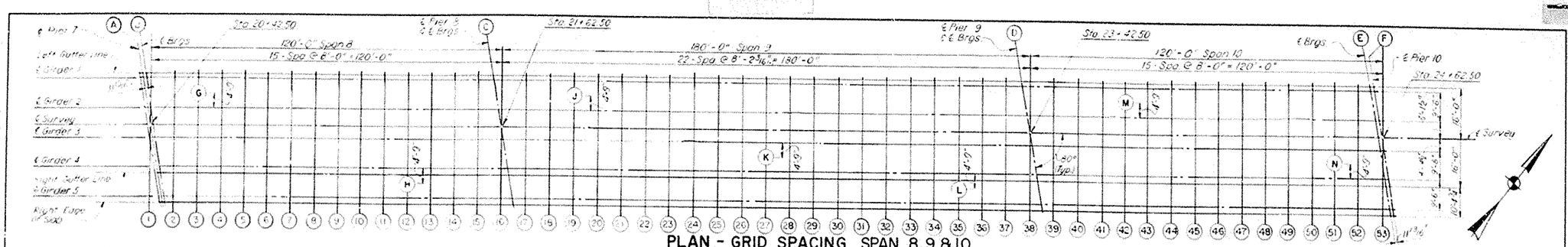
ROAD

STATION 20 + 2000 P.E. PROJECT NO

DRAWING NO. 10592

BRIDGE

UPDATE DATE
LETTING DATE



PLAN - GRID SPACING SPAN 8,9 & 10

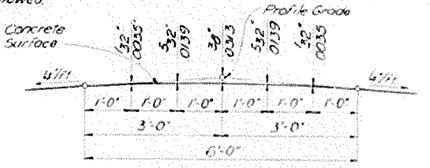
TABLE OF ELEVATIONS

LINE	LEFT GUTTER LINE	℄ GIRDER 1 CONSTR. ELEV.	℄ GIRDER 1 TOP OF GIRDER	℄ GIRDER 1 DIM. "X"	℄ GIRDER 2 CONSTR. ELEV.	℄ GIRDER 2 TOP OF GIRDER	℄ GIRDER 2 DIM. "X"	℄ SURVEY	℄ GIRDER 3 CONSTR. ELEV.	℄ GIRDER 3 TOP OF GIRDER	℄ GIRDER 3 DIM. "X"	℄ GIRDER 4 CONSTR. ELEV.	℄ GIRDER 4 TOP OF GIRDER	℄ GIRDER 4 DIM. "X"	RIGHT GUTTER LINE	℄ GIRDER 5 CONSTR. ELEV.	℄ GIRDER 5 TOP OF GIRDER	℄ GIRDER 5 DIM. "X"	RIGHT EDGE OF SLAB
A	592.484	592.512			592.700			592.770	592.766			592.498			592.491	592.289			592.223
B	592.473	592.506			592.694			592.764	592.760			592.491			592.485	592.283			592.217
C	591.176	591.201			591.372			591.432	591.360			591.134			591.064	590.908			590.896
D	586.851	586.872			587.017			587.07	586.978			586.726			586.670	586.474			586.394
E	582.755	582.775			582.918			582.64	582.879			582.627			582.570	582.379			582.295
F	582.722	582.742			582.885			582.931	582.840			582.594			582.538	582.343			582.263
1	592.479	592.507			592.698			592.729	592.710			592.512			592.468	592.314			592.251
2	592.461	592.489			592.680			592.752	592.689			592.485			592.439	592.290			592.215
3	592.432	592.460			592.653			592.725	592.663			592.459			592.414	592.266			592.191
4	592.391	592.419			592.613			592.687	592.625			592.423			592.376	592.220			592.156
5	592.335	592.364			592.560			592.634	592.574			592.374			592.323	592.172			592.108
6	592.265	592.294			592.492			592.567	592.507			592.309			592.261	592.111			592.047
7	592.180	592.209			592.410			592.484	592.427			592.230			592.186	592.033			591.970
8	592.083	592.112			592.313			592.390	592.332			592.137			592.094	591.942			591.879
9	591.974	592.003			592.205			592.293	592.225			592.031			591.988	591.836			591.770
10	591.857	591.886			592.089			592.107	592.109			591.916			591.872	591.722			591.661
11	591.735	591.765			591.967			592.045	591.987			591.793			591.750	591.600			591.538
12	591.611	591.640			591.842			591.919	591.861			591.667			591.624	591.473			591.411
13	591.486	591.517			591.717			591.793	591.734			591.539			591.496	591.344			591.282
14	591.368	591.397			591.595			591.670	591.610			591.413			591.369	591.217			591.154
15	591.251	591.279			591.475			591.550	591.490			591.291			591.246	591.092			591.029
16	591.136	591.164			591.359			591.432	591.371			591.171			591.126	590.970			590.907
17	591.019	591.047			591.239			591.312	591.251			591.049			591.004	590.848			590.785
18	590.909	590.936			591.127			591.199	591.136			590.933			590.890	590.727			590.663
19	590.800	590.827			591.017			591.088	591.024			590.818			590.772	590.612			590.547
20	590.692	590.720			590.908			590.978	590.914			590.700			590.660	590.499			590.433
21	590.582	590.609			590.797			590.867	590.802			590.594			590.547	590.386			590.319
22	590.464	590.491			590.679			590.749	590.685			590.477			590.431	590.269			590.203
23	590.324	590.351			590.551			590.622	590.558			590.352			590.306	590.145			590.079
24	590.159	590.187			590.407			590.481	590.418			590.214			590.168	590.008			589.942
25	590.029	590.057			590.251			590.324	590.263			590.060			590.014	589.856			589.791
26	589.852	589.881			590.077			590.152	590.092			589.890			589.845	589.688			589.623
27	589.659	589.687			589.887			589.963	589.902			589.703			589.659	589.504			589.441
28	589.448	589.477			589.679			589.755	589.696			589.499			589.455	589.302			589.240
29	589.220	589.249			589.452			589.528	589.472			589.278			589.234	589.084			589.022
30	588.976	589.006			589.210			589.289	589.232			589.048			589.007	588.848			588.787
31	588.717	588.747			588.953			589.033	588.977			588.787			588.745	588.598			588.537
32	588.445	588.475			588.683			588.763	588.708			588.520			588.478	588.332			588.272
33	588.164	588.194			588.402			588.483	588.428			588.241			588.199	588.053			587.993
34	587.877	587.909			588.117			588.198	588.142			587.953			587.912	587.766			587.707
35	587.595	587.624			587.830			587.910	587.854			587.664			587.622	587.476			587.416
36	587.312	587.342			587.546			587.624	587.567			587.376			587.334	587.186			587.125
37	587.034	587.063			587.260			587.342	587.284			587.092			587.049	586.900			586.839
38	586.757	586.786			586.986			587.063	587.005			586.811			586.768	586.617			586.555
39	586.489	586.517			586.717			586.793	586.733			586.537			586.493	586.342			586.279
40	586.233	586.261			586.449			586.524	586.464			586.280			586.236	586.089			586.026
41	585.962	585.990			586.185			586.259	586.198			586.019			585.974	585.823			585.756
42	585.701	585.729			585.923			585.997	585.935			585.734			585.689	585.537			585.469
43	585.441	585.469			585.663			585.736	585.674			585.472			585.427	585.278			585.206
44	585.184	585.212			585.405			585.476	585.416			585.213			585.168	585.017			584.946
45	584.925	584.953			585.146			585.220	585.158			584.956			584.910	584.759			584.689
46	584.661	584.689			584.884			584.956	584.896			584.695			584.650	584.494			584.430
47	584.390	584.418			584.615			584.690	584.629			584.429			584.384	584.229			584.165
48	584.110	584.139			584.337			584.413	584.354			584.156			584.111	583.962			583.898
49	583.822	583.851			584.051			584.128	584.069			583.873			583.829	583.677			583.613
50	583.524	583.554			583.750			583.824	583.776			583.581			583.537	583.390			583.324
51	583.220	583.249			583.453			583.531	583.474			583.281			583.238	583.086			583.022
52	582.916	582.945			583.150			583.229	583.173			582.980			582.937	582.785			582.722
53	582.639	582.668			582.852			582.931	582.875			582.684			582.641	582.492			582.430

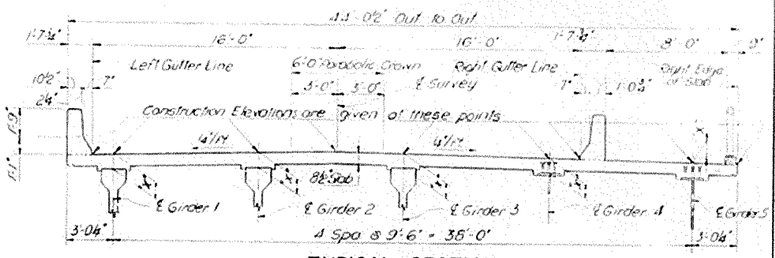
TABLE OF ELEVATIONS FOR CONTROL OF SLAB THICKNESS

Check Point	Plan Elev. Top of Slab	Field Elev. Bott. of Slab	Computed Slab Thickness
G	592.557		
H	591.570		
J	590.922		
K	589.803		
L	587.570		
M	585.826		
N	583.076		

NOTE: After the slab forms are erected and before the slab reinforcement is placed, the Resident Engineer shall take field elevations of the slab thickness check points and enter them in the table in the space provided. The slab thickness shall then be computed. If the computed slab thickness varies more than ¼" from the plan thickness, allowing 360 of the slab span for deflection of the form work, the form shall be adjusted until the computed slab thickness is within the tolerance allowed.



PARABOLIC CROWN



TYPICAL SECTION

CONSTRUCTION NOTES:

1. Elevations for Structural Steel or Prestressed Spans:
   Take elevations on top of Girder at points indicated after the cross frames and lateral bracing or diaphragms are in place, and after all falsework has been removed, but before forms for concrete slabs have been put in place. Read elevations to three decimals using a larger rod and enter readings in tables under Top of Girder Elevations.
2. Compute Dimensions X as follows: Construction Elevation minus Top of Girder Elevation equals Dimension X. Construction Elevation includes camber due to weight of concrete slab, barrier, headrail and future surfacing. Measuring at Dimension X gives the final check on girder tolerances. For camber, girder damage and errors in erection that produce reverse cambers, sags and unsightly fascia grades.
3. For setting templates measure Dimension X above top of girder for top of template. Do not set templates by elevations.
4. Construct barrier to roadway grade. Do not add camber to barrier.

NOTE

Work this Sheet with Sheets 55, 57 & 59.

SHEET 67

SPAN 8, 9 & 10
GRID SPACING AND
TABLE OF ELEVATIONS

FRANKLAND AND LIENHARD

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

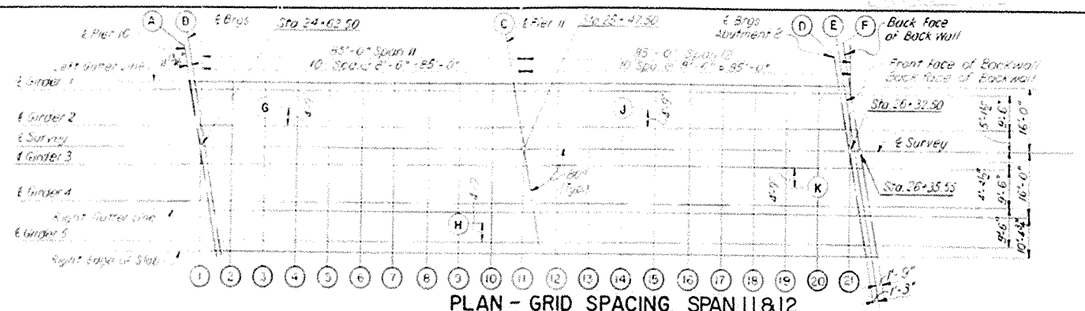
LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD

STATION 20 + 2000 P.E. PROJECT NO.

19592

BRIDGE



PLAN - GRID SPACING SPAN 11&12

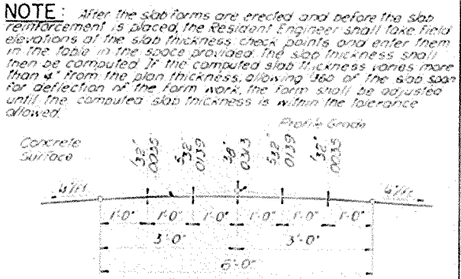
TABLE OF ELEVATIONS

LINE	LEFT GUTTER LINE	℄ GIRDER 1 CONSTR ELEV.	℄ GIRDER 1 TOP OF GIRDER	℄ GIRDER 1 DIM "X"	℄ GIRDER 2 CONSTR ELEV.	℄ GIRDER 2 TOP OF GIRDER	℄ GIRDER 2 DIM "X"	℄ SURVEY	℄ GIRDER 3 CONSTR ELEV.	℄ GIRDER 3 TOP OF GIRDER	℄ GIRDER 3 DIM "X"	℄ GIRDER 4 CONSTR ELEV.	℄ GIRDER 4 TOP OF GIRDER	℄ GIRDER 4 DIM "X"	RIGHT GUTTER LINE	℄ GIRDER 5 CONSTR. ELEV.	℄ GIRDER 5 TOP OF GIRDER	℄ GIRDER 5 DIM "X"	RIGHT EDGE OF SLAB
A	582.722	582.742			582.885			582.931	582.946			582.594			582.538	582.249			582.263
B	582.689	582.710			582.853			582.879	582.914			582.562			582.506	582.311			582.231
C	580.475	580.442			580.604			580.661	580.555			580.353			580.301	580.121			580.047
D	579.112	579.136			579.321			579.359	579.321			579.108			579.061	578.696			578.828
E	579.100	579.126			579.309			579.376	579.310			579.097			579.050	578.885			578.918
F	579.084	579.110			579.293			579.361	579.294			579.082			579.035	578.870			578.903
1	582.639	582.660			582.858			582.931	582.875			582.654			582.641	582.492			582.432
2	582.410	582.435			582.628			582.679	582.635			582.428			582.382	582.221			582.156
3	582.186	582.214			582.405			582.477	582.419			582.206			582.163	582.002			581.937
4	581.960	581.988			582.182			582.255	582.193			581.990			581.945	581.786			581.721
5	581.732	581.760			581.957			582.031	581.970			581.769			581.724	581.568			581.504
6	581.497	581.528			581.727			581.803	581.743			581.545			581.501	581.347			581.284
7	581.262	581.291			581.494			581.571	581.512			581.317			581.274	581.122			581.059
8	581.024	581.054			581.258			581.336	581.279			581.085			581.042	580.892			580.831
9	580.790	580.819			581.024			581.103	581.046			580.865			580.812	580.663			580.602
10	580.562	580.592			580.796			580.876	580.819			580.628			580.586	580.437			580.377
11	580.309	580.337			580.569			580.661	580.604			580.412			580.369	580.220			580.159
12	580.233	580.260			580.451			580.523	580.490			580.255			580.209	580.060			579.995
13	580.105	580.133			580.324			580.397	580.333			580.133			580.052	579.903			579.858
14	579.952	580.010			580.263			580.276	580.213			580.009			579.964	579.805			579.740
15	579.860	579.888			580.093			580.157	580.095			579.893			579.848	579.691			579.626
16	579.753	579.792			579.969			580.035	579.974			579.775			579.731	579.570			579.512
17	579.603	579.633			579.833			579.910	579.851			579.654			579.610	579.459			579.394
18	579.470	579.499			579.702			579.781	579.723			579.526			579.485	579.334			579.272
19	579.333	579.363			579.569			579.640	579.582			579.400			579.357	579.208			579.147
20	579.199	579.229			579.436			579.516	579.460			579.270			579.227	579.080			579.019
21	579.056	579.114			579.312			579.393	579.336			579.143			579.101	578.954			578.894

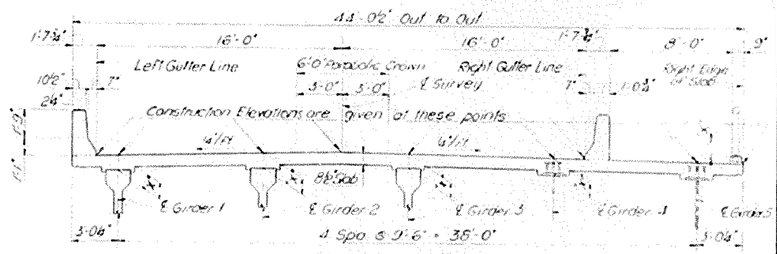
TABLE OF ELEVATIONS FOR CONTROL OF SLAB THICKNESS

Check Point	Plan Elev. Top of Slab	Field Elev. Bott. of Slab	Computed Slab Thickness
G	582.310		
H	580.759		
J	580.107		
K	579.365		

NOTE: After the slab forms are erected and before the slab reinforcement is placed, the Resident Engineer shall take field elevations of the slab thickness check points and enter them in the table in the space provided. The slab thickness shall then be computed. If the computed slab thickness varies more than ¼" from the plan thickness, allowing ½ of the slab for deflection of the form work, the form shall be adjusted until the computed slab thickness is within the tolerance allowed.



PARABOLIC CROWN



TYPICAL SECTION

CONSTRUCTION NOTES:

Elevations for Structural Steel or Prestressed Spans:

1. Take elevations on top of Girder at points indicated after the cross frames and lateral bracing or diaphragms are in place, and after all falsework has been removed, but before forms for concrete slabs have been put in place. Read elevations to three decimals using a target rod and enter readings in tables under Top of Girder Elevations.
2. Compute Dimensions X as follows: Construction Elevation minus Top of Girder Elevation equals Dimension X. Construction Elevation includes camber due to weight of concrete slab, barrier, handrail, and future surfacing. Measuring of Dimension X gives the final check on girder tolerances. For camber, girder damage, and errors in erection that produce reverse cambers, sags and unsightly fascia girders.
3. For setting templates measure Dimension X above top of girder. For top of template. Do not set templates by elevations.
4. Construct barrier to roadway grade. Do not add camber to barrier.

NOTE:

Work this Sheet with Sheets 56, 57 & 59.

SHEET 68

SPAN 11 & 12
GRID SPACING AND
TABLE OF ELEVATIONS

FRANKLAND AND LIENHARD

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8), SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

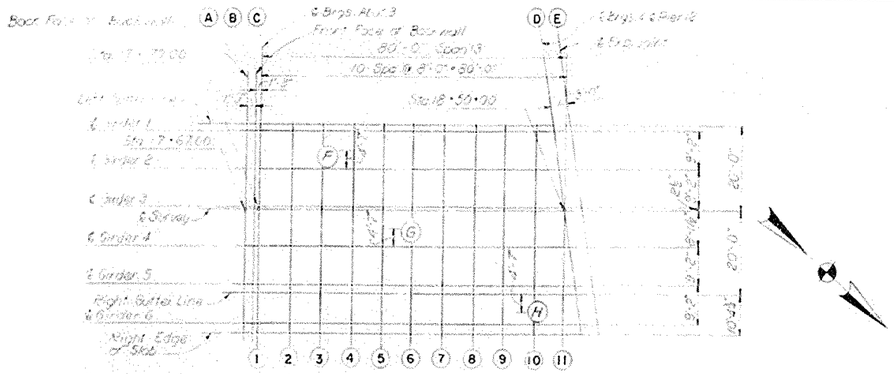
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STATION 20 + 20.00 P.E. PROJECT NO.

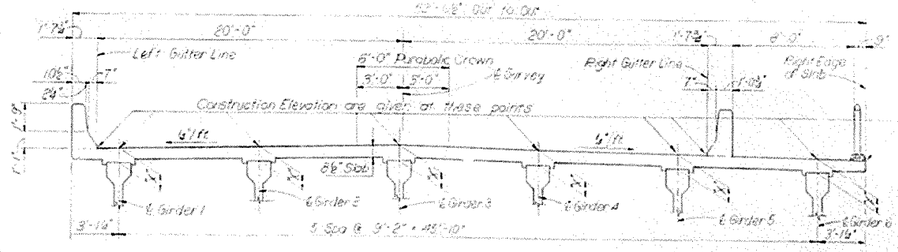
19592

BRIDGE

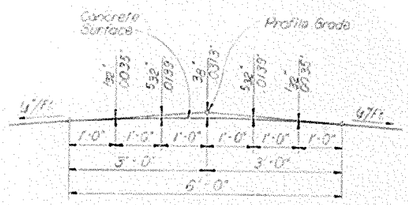
UPDATE DATE
LETTING DATE



PLAN - GRID SPACING SPAN 13



TYPICAL SECTION



PARABOLIC CROWN

TABLE OF ELEVATIONS

LINE	LEFT GUTTER LINE	℄ GIRDER 1 CONSTR. ELEV.	℄ GIRDER 1 TOP OF GIRDER	℄ GIRDER 1 DIM "X"	℄ GIRDER 2 CONSTR. ELEV.	℄ GIRDER 2 TOP OF GIRDER	℄ GIRDER 2 DIM "X"	℄ GIRDER 3 CONSTR. ELEV.	℄ GIRDER 3 TOP OF GIRDER	℄ GIRDER 3 DIM "X"	℄ SURVEY	℄ GIRDER 4 CONSTR. ELEV.	℄ GIRDER 4 TOP OF GIRDER	℄ GIRDER 4 DIM "X"	℄ GIRDER 5 CONSTR. ELEV.	℄ GIRDER 5 TOP OF GIRDER	℄ GIRDER 5 DIM "X"	RIGHT GUTTER LINE	℄ GIRDER 6 CONSTR. ELEV.	℄ GIRDER 6 TOP OF GIRDER	℄ GIRDER 6 DIM "X"	RIGHT EDGE OF SLAB
A	587.077	587.105			587.896			587.462			587.602	587.508			587.117			587.077	586.926			586.561
B	587.161	587.192			587.983			587.543			587.687	587.591			587.260			587.161	587.009			586.645
C	587.221	587.251			587.742			587.606			587.771	587.681			587.360			587.221	587.070			587.503
D	590.380	590.318			590.557			590.770			590.711	590.865			590.519			590.484	590.375			590.326
E	590.393	590.420			590.657			590.905			590.869	590.757			590.615			590.586	590.473			590.422
F	587.22	587.251			587.242			587.460			587.606	587.451			587.260			587.221	587.063			587.009
G	587.620	587.650			587.840			588.103			588.004	587.845			587.657			587.615	587.455			587.401
H	588.007	588.037			588.228			588.491			588.391	588.232			588.038			587.995	587.841			587.788
J	588.360	588.388			588.582			588.851			588.751	588.592			588.398			588.355	588.201			588.148
K	588.713	588.743			588.934			589.191			589.091	588.941			588.760			588.717	588.566			588.513
L	589.075	589.108			589.300			589.523			589.424	589.268			589.077			589.035	588.926			588.870
M	589.440	589.473			589.665			589.886			589.730	589.577			589.396			589.354	589.204			589.150
N	589.826	589.857			589.810			590.096			590.016	589.863			589.676			589.634	589.484			589.430
P	590.180	590.213			590.117			590.354			590.254	590.101			589.943			589.905	589.755			589.701
Q	590.440	590.471			590.364			590.654			590.554	590.385			590.195			590.157	590.008			589.943
R	590.392	590.421			590.608			590.897			590.771	590.619			590.435			590.394	590.245			590.182

TABLE OF ELEVATIONS FOR CONTROL OF SLAB THICKNESS

Girder Point	Plan Elev. Top of Slab	Field Elev. Bott. of Slab	Computed Slab Thickness
F	588.132		
G	588.336		
H	588.192		

NOTE: After the girders are erected and before the slab reinforcement is placed, the Resident Engineer shall take field elevations at the slab thickness check points and enter them in the table in the space provided. The slab thickness shall then be computed. If the computed slab thickness varies more than ½ from the plan thickness, allowance is to be made for deflection of the form work, the form shall be adjusted and the computed slab thickness is within the tolerance allowed.

Work this Sheet with Sheets 56, 58 & 59

CONSTRUCTION NOTES

1. Structural Steel for reinforcement bars.
2. Concrete Strengths & as follows: Substructure, Superstructure, Top of slab Exterior, Interior, Slope Protection, Curbs or Railing, Approach Slabs, Footings, Seal Course, Underwater, and Prestressed Girders.
3. For Spacing Templates showing Diaphragm & Bearing Seat Reinforcement, see Sheet 58.
4. Concrete barrier to roadway width shall be the same as the roadway width.

SHEET 69

SPAN 13
GRID SPACING AND
TABLE OF ELEVATIONS

FRANKLAND AND LIENHARD

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

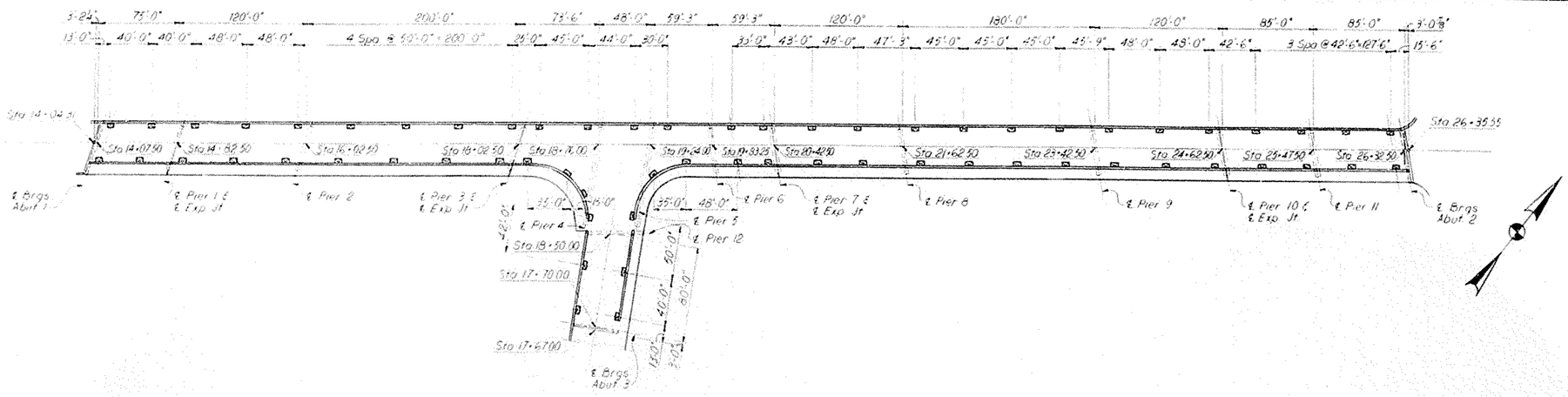
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WAYNE COUNTY, WEST VIRGINIA

ROAD

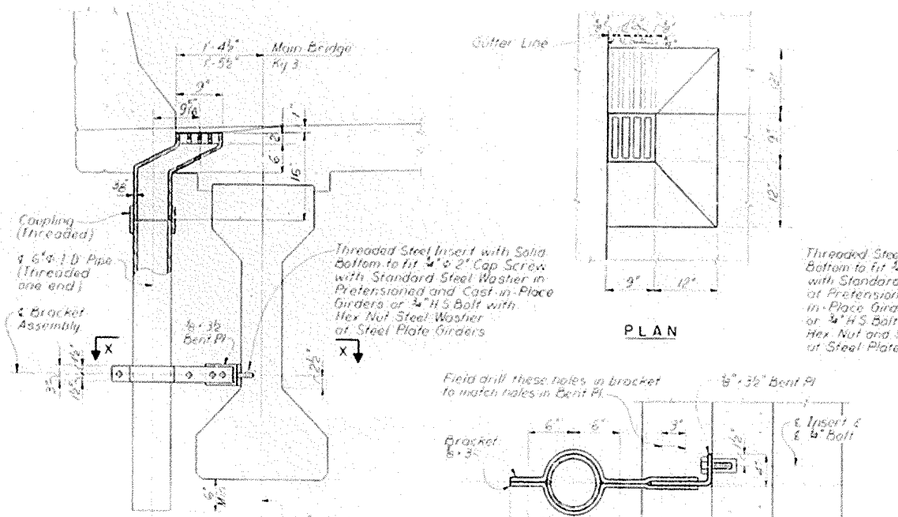
STATION 20 + 2000 P.E. PROJECT NO.

CONSTRUCTION PROJECT NO. | MAINTENANCE PROJECT NO. | DRAWING NO. 19592

BRIDGE



SPACING OF BRIDGE DRAINS



SECTION THRU DRAIN AT LEFT GUTTER

Approximate weight of Each Drain
200 Lbs
(28) Req'd
30

SECTION X-X
(Bracket Assembly)

SECTION THRU DRAIN AT RIGHT GUTTER

Approximate weight of Each Drain
200 Lbs
(35) Req'd
35

DRAIN DETAILS

NOTE:

Drains, Pipe Fittings and connections shall be included in lump sum price for Structural Steel. Pipe and all fittings shall be painted in accordance with Section 607.25 of the Specifications.

SHEET 70

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES
LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA
ROAD

STATION 20+20.00 P.E. PROJECT NO.

FRANKLAND AND LIENHARD	CONSTRUCTION PROJECT NO	MAINTENANCE PROJECT NO	DRAWING NO 19592

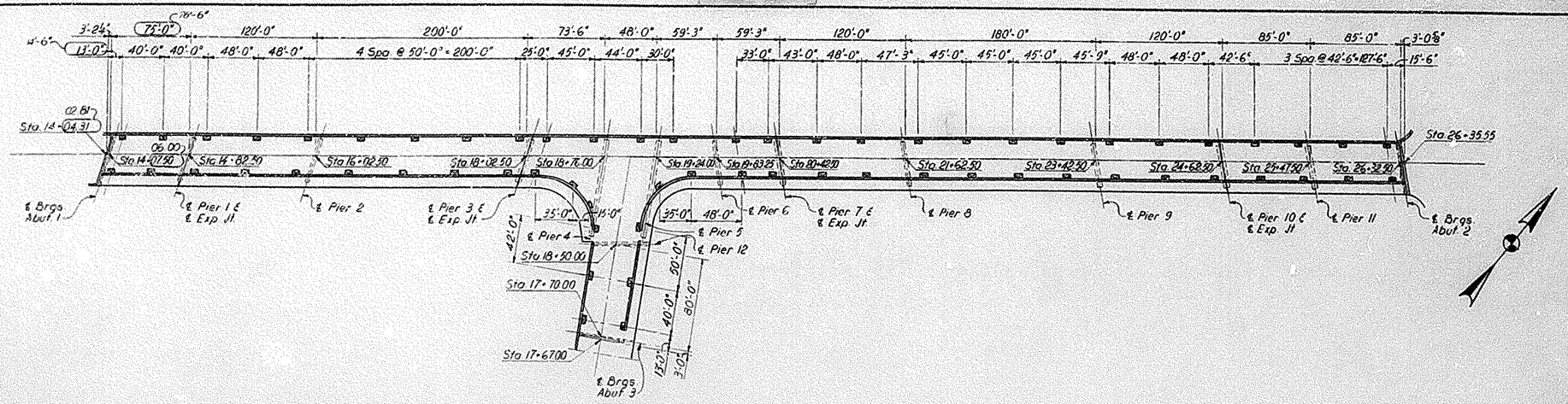
BRIDGE DRAINS

UPDATE DATE
LETTING DATE

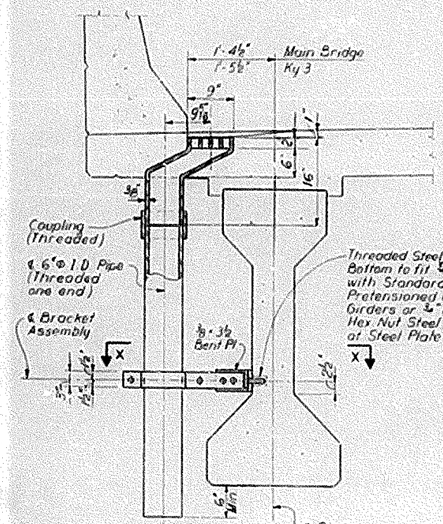
BRIDGE

UPDATE DATE

LETTING DATE



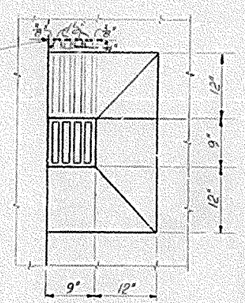
SPACING OF BRIDGE DRAINS



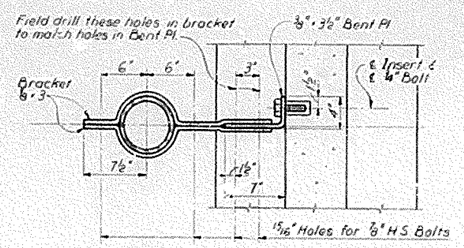
SECTION THRU DRAIN AT LEFT GUTTER

Approximate weight of Each Drain

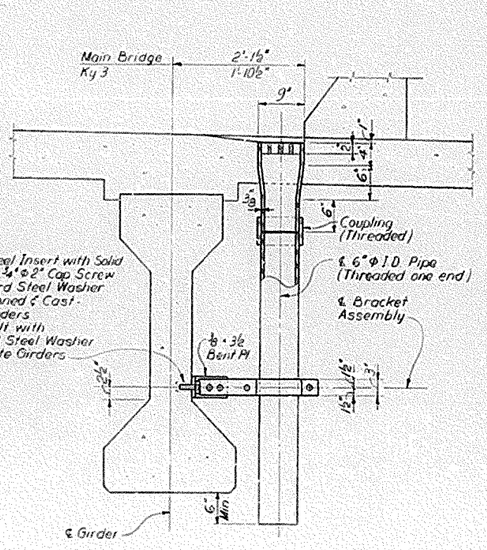
200 Lbs (28) Req'd. (30)



PLAN



SECTION X-X
(Bracket Assembly)



SECTION THRU DRAIN AT RIGHT GUTTER

Approximate weight of Each Drain

200 Lbs (35) Req'd. (33)

DRAIN DETAILS

NOTE:

Drains, Pipe Fittings and connections shall be included in lump sum price for structural Steel. Pipe and all fittings shall be painted in accordance with Section 607.25 of the Specifications.

SHEET 70

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES
LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA
ROAD

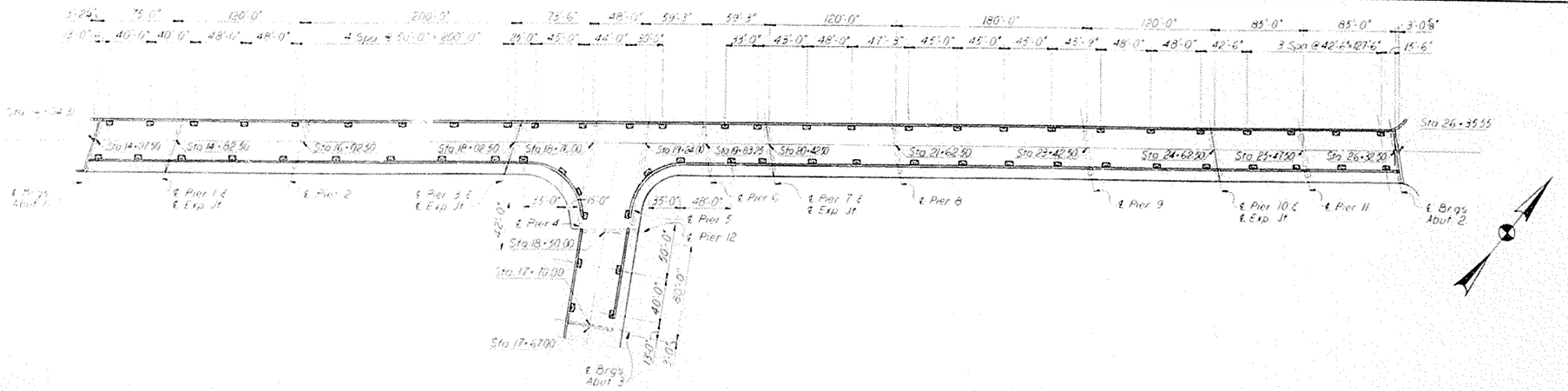
STATION 20 + 20.00 P.E. PROJECT NO.

BRIDGE DRAINS

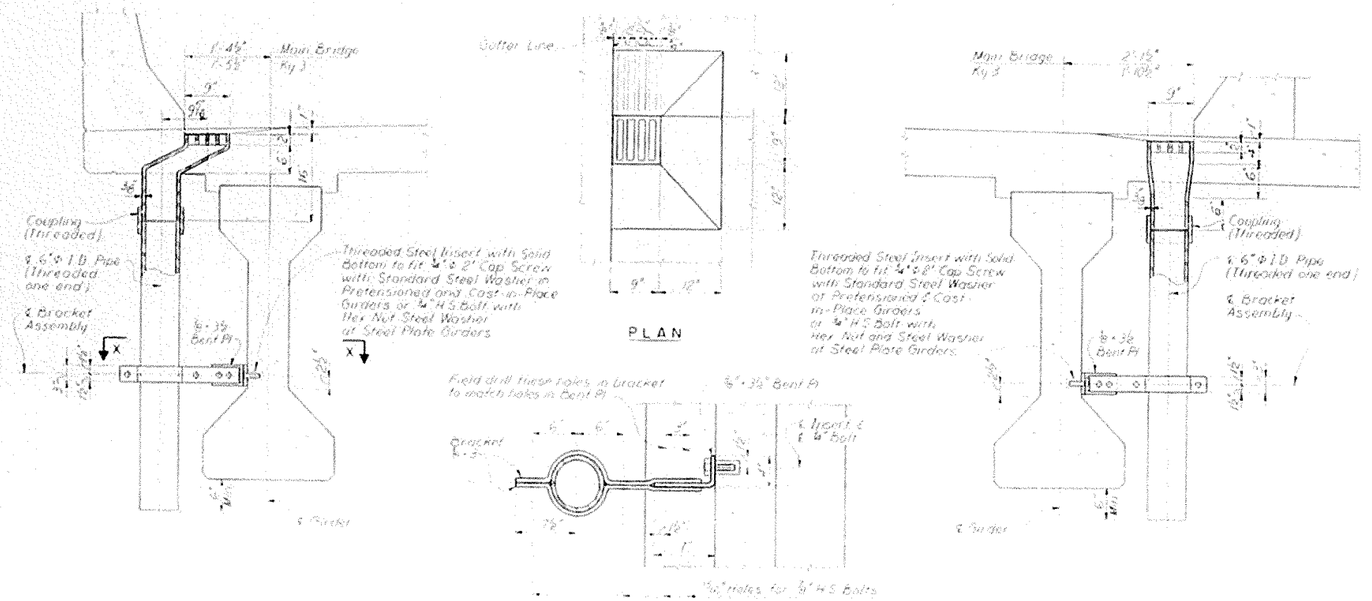
FRANKLAND AND LIENHARD

CONSTRUCTION PROJECT NO | MAINTENANCE PROJECT NO | DRAWING NO. 19592

BRIDGE



SPACING OF BRIDGE DRAINS



SECTION THRU DRAIN AT LEFT GUTTER

Approximate weight of Each Drain

200 Lbs 28 Req'd

SECTION X-X

Bracket Assembly

SECTION THRU DRAIN AT RIGHT GUTTER

Approximate weight of Each Drain

200 Lbs 55 Req'd

DRAIN DETAILS

NOTE:

Drains, Pipe Fittings and connections shall be included in lump sum price for Structural Steel, Pipe and all fittings shall be painted in accordance with Section 607.25 of the Specifications

SHEET 70

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD

STATION 20 + 20.00 P.E. PROJECT NO.

CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
		19592

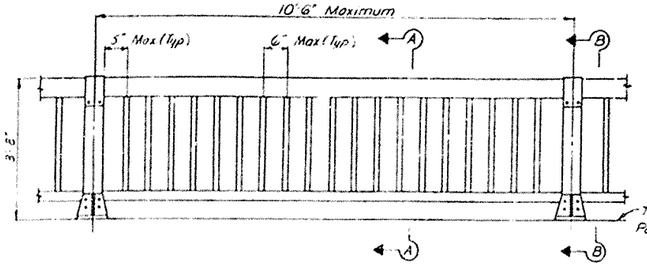
BRIDGE DRAINS

FRANKLAND AND LIENHARD

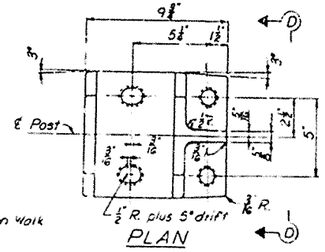
BRIDGE

UPDATE DATE

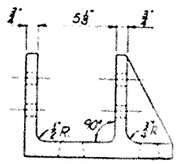
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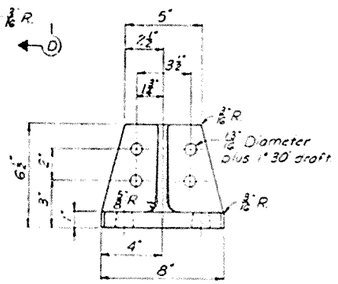
TYPICAL PANEL



PLAN

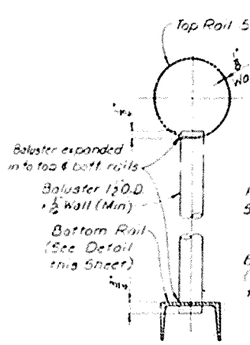


ELEVATION

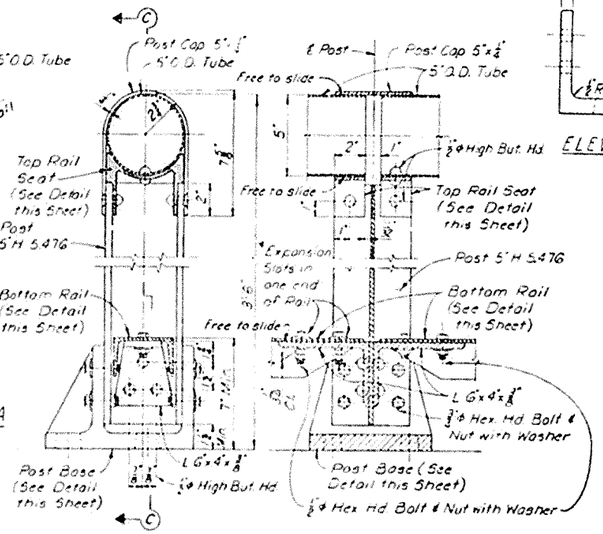


VIEW D-D

POST BASE DETAIL



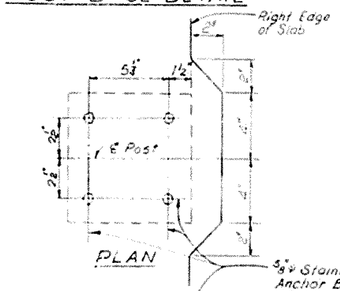
SECTION A-A



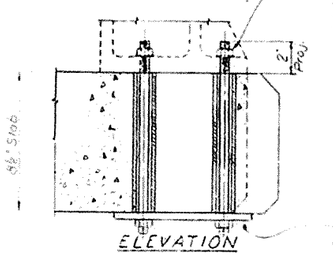
SECTION B-B

SECTION C-C

* Provide ½" movement in either direction See Section C-C for Post at Piers 1,3,7 & 10

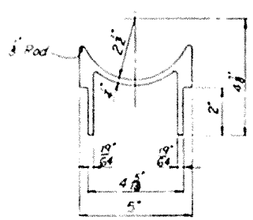


PLAN

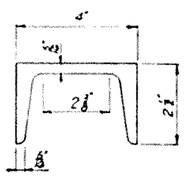


ELEVATION

ANCHOR BOLT SETTING DETAIL



TOP RAIL SEAT DETAIL



BOTTOM RAIL DETAIL

GENERAL NOTES

SPECIFICATIONS: Kentucky Department of Highways Standard Specifications for Road and Bridge Construction, current edition with revisions, AASHO, ASTM, AWS and Aluminum Assoc. Material Specifications, current edition, are also applicable as designated hereon.

FABRICATION

GENERAL: Post spacing is governed by the details shown on the Bridge Plans. The end result shall be a continuous rail, with each rail section being attached as detailed on the plans. Fabricator's Shop Detail Plans must be approved by the Kentucky Department of Highways, and the Contractor is responsible for furnishing these plans to the Department for approval prior to fabrication.

APPEARANCE: Pieces having surfaces so scored or marked as to cause an objectionable appearance will be rejected.

CUTTING: All cuts are to be sawed and milled.

HOLES: All holes in castings shall be cored.

WELDING: Welding shall be done by an arc welding process in which no welding flux is used. Filler material for welding shall conform to AWS A5.10, current specification, classification ER 4043 or ER 5356.

ERECTION, MEASUREMENT AND PAYMENT

ERECTION: Posts shall be set at right angles to the Bridge Fascia line and vertical. The alignment of the railing shall be parallel to the Fascia Line. Special fabrication of curvature will be required when Fascia Lines are curved. U-Shaped washer shims having a maximum thickness of 1/8" may be used under the posts to obtain desired alignment of post or rail. The void space under the post base shall be filled with Atsualastic Compound, or an approved equal, so as to completely insulate the aluminum from the concrete.

MEASUREMENT: The work actually completed and accepted in place shall be measured along the rail in Linear Feet within the pay length limits.

PAYMENT: Payment will be made for the quantity measured as described above at the contract unit price per Linear Foot and such payment shall be full compensation for all materials and work necessary for completion.

MATERIAL

TUBING, BALUSTERS, RAIL SEATS - ASTM B429, Alloy 6061-T6

POSTS AND CHANNELS - ASTM B308, Alloy 6061-T6

BASE CASTINGS - ASTM B108, Alloy SG70A-T6

RIVETS - ASTM B316, Alloy 6061-H13

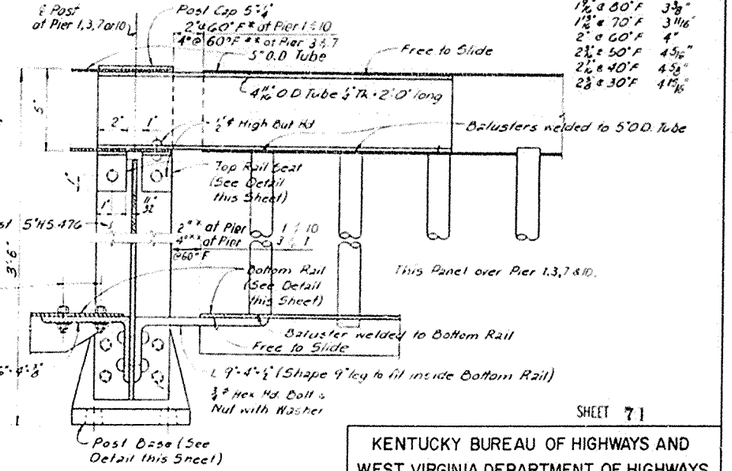
RAIL TO POST AND BASE TO POST HARDWARE: Bolts ASTM B211 Alloy 2024-T4
Nuts ASTM B211 Alloy 6061-T6
PostCaps, Washers & Shims ASTM B209 Alloy Alclad 2024-T3

Nuts and Bolts shall be hexagon and in accordance with USNAS Specification B18.2. Threads shall conform to Standards of Class 2B.

ANCHOR BOLTS - ASTM A276 Type 304 Stainless Steel. Threads shall be rolled.

MILL TEST: Notarized Mill Test Reports or Statements certifying that the Materials comply with the Specifications shall be furnished in triplicate to the Department of Highways.

* 1⅜" @ 90°F = 13¼"
1⅜" @ 80°F = 3⅜"
1½" @ 70°F = 3 11/16"
2" @ 60°F = 4"
2⅛" @ 50°F = 4 5/16"
2¼" @ 40°F = 4 5/8"
2⅜" @ 30°F = 4 15/16"



SECTION C-C
(At Piers 1, 3, 7 & 10)

PEDESTRIAN HANDRAIL

SHEET 71

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD

STATION 20 + 20.00 | P.E. PROJECT NO

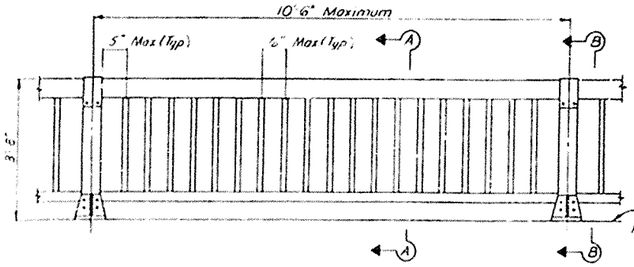
FRANKLAND AND LIENHARD

CONSTRUCTION PROJECT NO. | MAINTENANCE PROJECT NO. | DRAWING NO. 19592

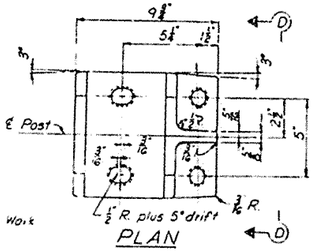
BRIDGE

UPDATE DATE

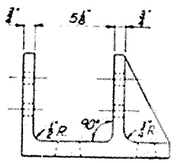
LETTING DATE



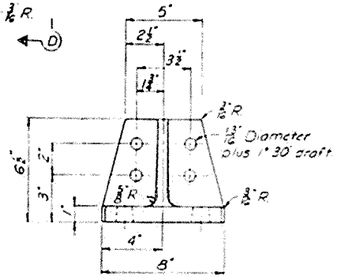
TYPICAL PANEL



PLAN

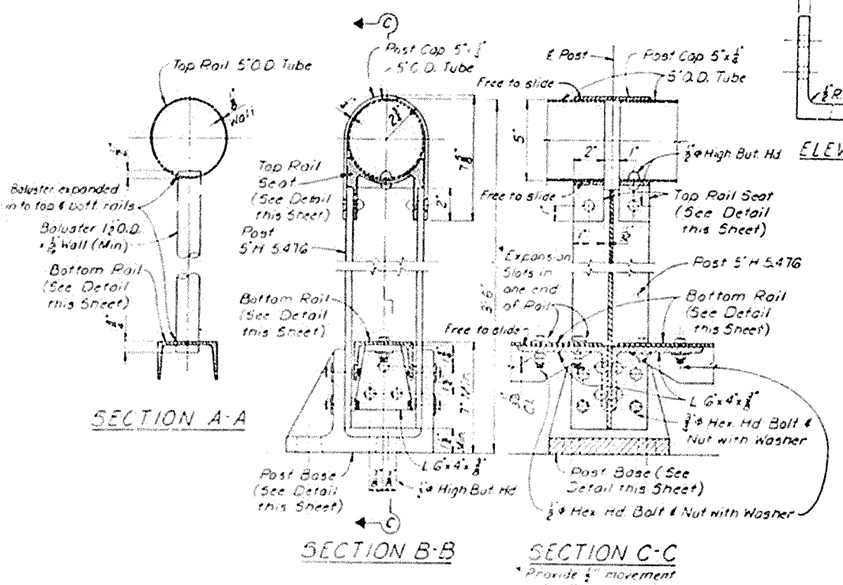


ELEVATION



VIEW D-D

POST BASE DETAIL

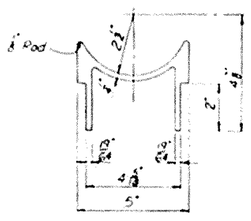


SECTION A-A

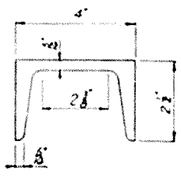
SECTION B-B

SECTION C-C

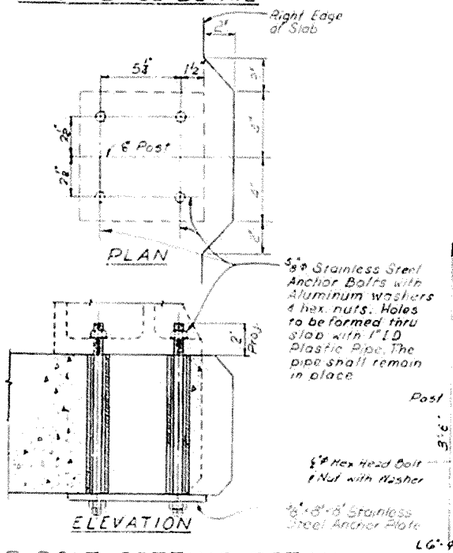
Provide ½" movement in either direction See Section C-C for Post at Piers 1, 3, 7 & 10



TOP RAIL SEAT DETAIL



BOTTOM RAIL DETAIL



PLAN

ELEVATION

ANCHOR BOLT SETTING DETAIL

GENERAL NOTES

SPECIFICATIONS: Kentucky Department of Highways Standard Specifications for Road and Bridge Construction, current edition with revisions, AASHO, ASTM, AWS and Aluminum Assoc. Material Specifications, current edition, are also applicable as designated hereon.

FABRICATION

GENERAL: Post spacing is governed by the details shown on the Bridge Plans. The end result shall be a continuous rail, with each rail section being attached as detailed in the plans. Fabricator's Shop Detail Plans must be approved by the Kentucky Department of Highways, and the Contractor is responsible for furnishing these plans to the Department for approval prior to fabrication.

APPEARANCE: Pieces having surfaces so scored or marked as to cause an objectionable appearance will be rejected.

CUTTING: All cuts are to be sawed and milled.

HOLES: All holes in castings shall be cored.

WELDING: Welding shall be done by an arc welding process in which no welding flux is used. Filler material for welding shall conform to AWS A5.10, current specification, classification ER 4043 or ER 5356.

ERECTION, MEASUREMENT AND PAYMENT

ERECTION: Posts shall be set at right angles to the bridge fascia line and vertical. The alignment of the railing shall be parallel to the fascia line. Special fabrication of curvature will be required when fascia lines are curved. U-Shaped washer shims having a maximum thickness of 1/8" may be used under the posts to obtain desired alignment of post or rail. The void space under the post base shall be filled with Aluminilastic Compound, or an approved equal, so as to completely insulate the aluminum from the concrete.

MEASUREMENT: The work actually completed and accepted in place shall be measured along the rail in Linear Feet within the pay length limits.

PAYMENT: Payment will be made for the quantity measured as described above at the contract unit price per Linear Foot and such payment shall be full compensation for all materials and work necessary for completion.

MATERIAL

TUBING, BALUSTERS, RAIL SEATS - ASTM B429, Alloy 6061-T6

POSTS AND CHANNELS - ASTM B308, Alloy 6061-T6

BASE CASTINGS - ASTM B108, Alloy SG70A-T6

RIVETS - ASTM B316, Alloy 6061-H13

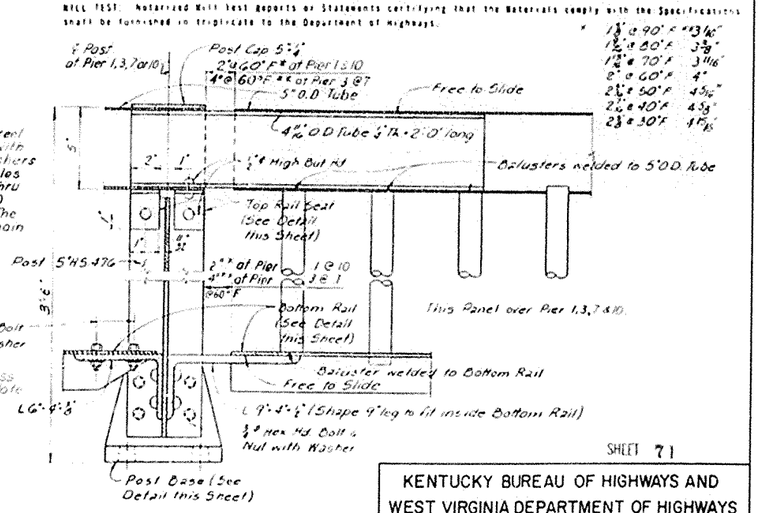
RAIL TO POST AND BASE TO POST HARDWARE: Bolts ASTM B211 Alloy 2024-T4
Nuts ASTM B211 Alloy 6061-T6
PostCaps, Washers & Shims ASTM B209 Alloy Alclad 7024-T3

Nuts and Bolts shall be hexagon and in accordance with USNAS Specification B18.2. Threads shall conform to Standards of Class 2B.

ANCHOR BOLTS - ASTM A276 Type 304 Stainless Steel. Threads shall be rolled.

MILL TEST: Notarized Mill Test Reports or Statements certifying that the Materials comply with the Specifications shall be furnished in triplicate to the Department of Highways.

1⅜" @ 90° F	1 13/16"
1½" @ 80° F	1 7/8"
1⅝" @ 70° F	1 11/16"
8" @ 60° F	4"
2⅛" @ 50° F	4 5/16"
2⅜" @ 40° F	4 3/8"
2⅝" @ 30° F	4 5/16"



SECTION C-C
(At Piers 1, 3, 7 & 10)

SHEET 71

PEDESTRIAN HANDRAIL

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD

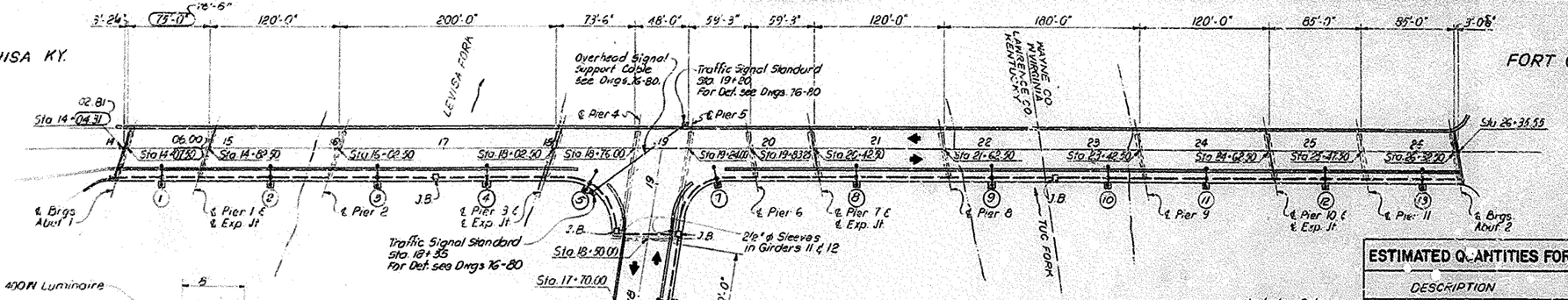
STATION 20+20.00 | P.E. PROJECT NO. | 19592

FRANKLAND AND LIENHARD

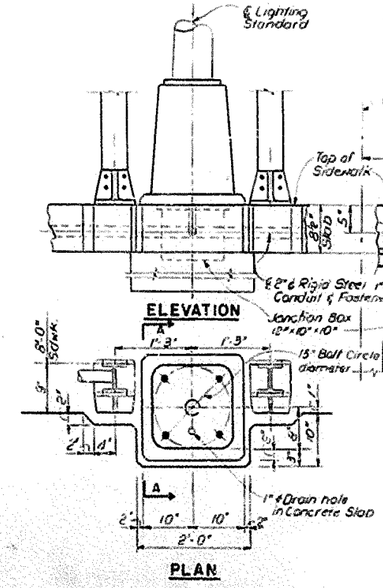
BRIDGE

UPDATE DATE

LETTING DATE



TYPICAL LIGHTING STANDARD INSTALLATION



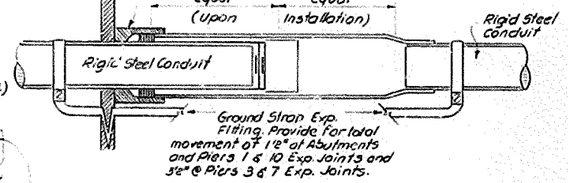
DETAILS OF BASE

PLAN

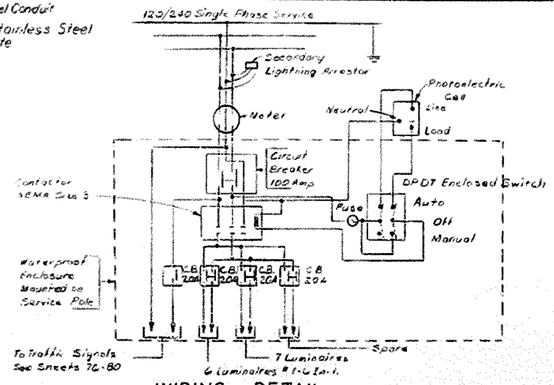
LEGEND

- Denotes Lighting Standard with 8ft bracket
- 2" ϕ Rigid Steel Conduit
- Junction Box
- J.B.

DETAIL OF POWER SOURCE



CONDUIT EXP. JOINT DETAILS



WIRING DETAIL

BRIDGE LIGHTING

ESTIMATED QUANTITIES FOR ELECTRICAL WORK

DESCRIPTION	UNIT	QUANTITY KY.	QUANTITY W.VA.	QUANTITY TOTAL
Lighting Standard *(30' Mtg. Ht.)	Each	9	4	13
Junction Box	Each	12	5	17
2" ϕ Rigid Steel Conduit	Lin.Ft.	1040	380	1420
Mercury Vapor Luminaire 400 W	Each	9	4	13
Pole W. Sec. Control Equipment*	Each	1	-	1
#2 Wire	Lin.Ft.	2800	920	3720
#8 Wire	Lin.Ft.	120	-	120
* 12/c Conductor Wire	Lin.Ft.	720	320	1,040
Trenching and Backfill	Lin.Ft.	60	-	60
Fused Connect Kit	Each	18	8	26

NOTES:

The Standard Specifications for Road and Bridge Construction edition of 1976 with the following notes shall apply to this project.

Junction Boxes shall be
12"x 10"x 10" O.Z. Electric Co. Type YR
Spring City Elec. Co. Type ER
Hope Elec. Products Co. Type H7000

Junction Boxes shall include furnishing and installing boxes with covers, bonding of all conduits to box, providing drain, and all conduit "Stub - outs" as required.

Conduit shall include furnishing and installing conduit, fittings and expansion devices with bonding jumper.

Expansion Fitting shall be:
Crouse-Hinds Co. Type XJ641
O.Z. Elec. Type Ex 200
Spring City Elec. Co Type EFP200

Light Standard Assembly includes pole, transformer base, bracket, anchor bolts, and all fitting and wiring to the junction box

Mercury vapor luminaires shall be 400 W units and shall include furnishing and installing luminaire, built-in ballast, lamp and associated hardware.

Trenching shall include excavation and backfilling.

Wire shall include furnishing and installing specified wire within conduit provided.

Pole with secondary control equipment shall include furnishing and installing pole, necessary anchors, service racks, lightning arrestors, photoelectric control circuit breakers, contactor, switch fuse, cabinet, ground rod, transformer, cutout, and all conduit, fittings and connections.

Connectors shall include furnishing and installing connectors and fuse.

Underground conduit shall include excavation, furnishing and installing concrete, conduit, fittings, ground rod, ground wire and backfilling.

SHEET 72

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA - FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY WEST VIRGINIA

ROAD

STATION 20 + 20.00 | P.E. PROJECT NO.

CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
		19592

FRANKLAND AND LIENHARD

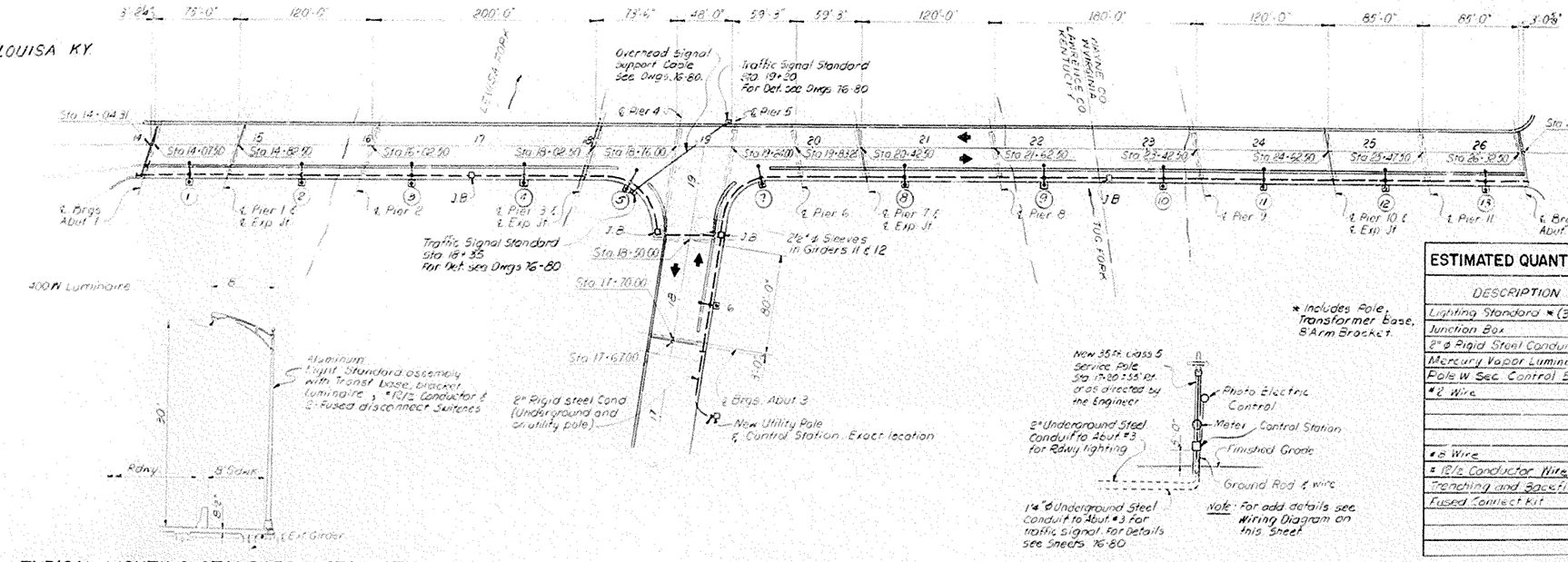
BRIDGE

UPDATE DATE

LETTING DATE

LOUISA KY

FORT GAY W.VA.



TYPICAL LIGHTING STANDARD INSTALLATION

PLAN

DETAIL OF POWER SOURCE

ESTIMATED QUANTITIES FOR ELECTRICAL WORK				
DESCRIPTION	UNIT	QUANTITY KY	W.VA	TOTAL
Lighting Standard * (30' Mtg Ht.)	Each	9	4	13
Junction Box	Each	12	5	17
2" ϕ Rigid Steel Conduit	Lin Ft	1040	380	1420
Mercury Vapor Luminaire 400 W	Each	9	4	13
Pole w Sec. Control Equipment	Each	1	-	1
#2 Wire	Lin Ft	2800	920	3720
#8 Wire	Lin Ft	120	-	120
#12/2 Conductor Wire	Lin Ft	720	320	1040
Trenching and Backfill	Lin Ft	60	-	60
Fused Connect Kit	Each	16	8	24

NOTES

The Standard Specifications for Road and Bridge Construction edition of 1976 with the following notes shall apply to this project.

Junction Boxes shall be:
12"x 10"x 10" O.Z. Electric Co. Type YR
Spring City Elec. Co. Type ER
Hope Elec. Products Co. Type H-7000

Junction Boxes shall include furnishing and installing boxes with covers, bonding of all conduits to box, providing drain, and all conduit "Stub-outs" as required.

Conduit shall include furnishing and installing conduit, fittings and expansion devices with bonding jumper.

Expansion fitting shall be:
Crouse-Hinds Co. Type XJ641
O.Z. Elec. Type EX 200
Spring City Elec. Co. Type EF200

Light Standard Assembly includes pole, transformer base, bracket, anchor bolts, and all fitting and wiring to the junction box.

Mercury vapor luminaires shall be 400 W units and shall include furnishing and installing luminaire, built-in ballast, lamp and associated hardware.

Trenching shall include excavation and backfilling.

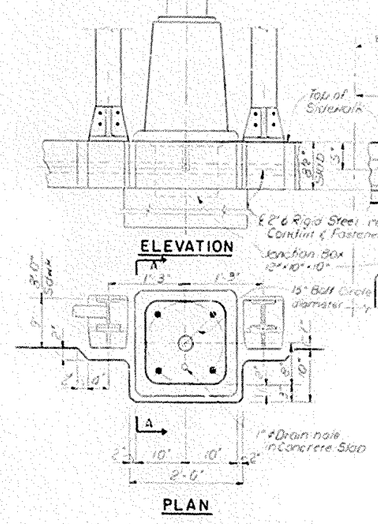
Wire shall include furnishing and installing specified wire within conduit provided.

Pole with secondary control equipment shall include furnishing and installing pole, necessary anchors, service racks, lightning arrestors, photoelectric control circuit breakers, contactor, switch fuse, cabinet, ground rod, transformer, cutout, and all conduit, fittings and connections.

Connectors shall include furnishing and installing connectors and fuse.

Underground conduit shall include excavation, furnishing and installing concrete, conduit fittings, ground rod, ground wire and backfilling.

SHEET 72

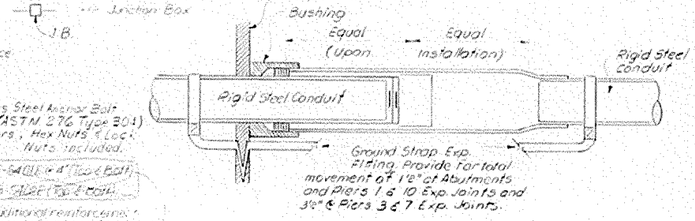


ELEVATION

SECTION A-A

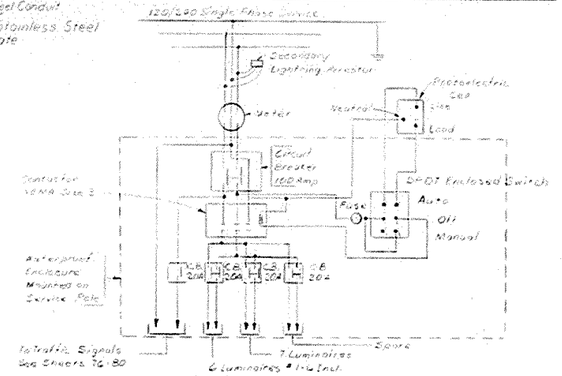
PLAN

DETAILS OF BASE



PLAN

CONDUIT EXP. JOINT DETAILS



WIRING DETAIL

BRIDGE LIGHTING

FRANKLAND AND LIENHARD

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA - FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY WEST VIRGINIA

ROAD

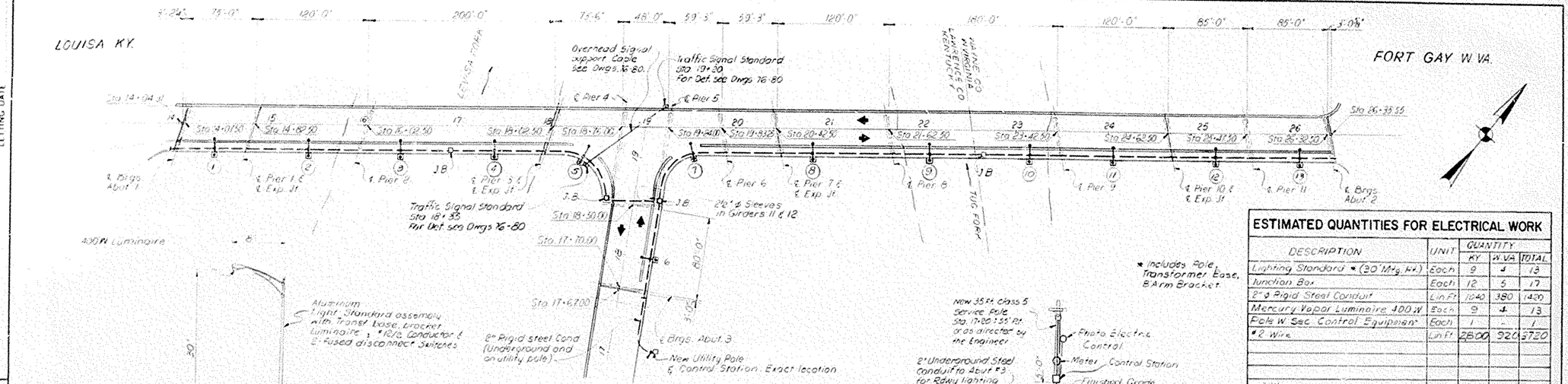
STATION 20 + 200.00 P.E. PROJECT NO.

CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
		19592

BRIDGE

UPDATE DATE

LETTING DATE



TYPICAL LIGHTING STANDARD INSTALLATION

PLAN

DETAIL OF POWER SOURCE

ESTIMATED QUANTITIES FOR ELECTRICAL WORK

DESCRIPTION	UNIT	QUANTITY KY	QUANTITY W.VA	QUANTITY TOTAL
Lighting Standard * (30' Mtg. Ht.)	Each	9	4	13
Junction Box	Each	12	5	17
2" ϕ Rigid Steel Conduit	Lin. Ft.	1040	380	1420
Mercury Vapor Luminaire 400 W	Each	9	4	13
Pole W. Sec. Control Equipment	Each	1	-	1
#2 Wire	Lin. Ft.	2800	920	3720
#8 Wire	Lin. Ft.	120	-	120
#12/c Conductor Wire	Lin. Ft.	720	320	1,040
Trenching and Backfill	Lin. Ft.	60	-	60
Fused Connect Kit	Each	18	8	26

* Includes Pole, Transformer Base, Bracket, Luminaire, #12/c Conductor & 2 Fused disconnect Switches

NOTES:

The Standard Specifications for Road and Bridge Construction edition of 1976 with the following notes shall apply to this project.

Junction Boxes shall be:
12"×10"×10" O.Z. Electric Co. Type YP
Spring City Elec. Co. Type ER
Hope Elec. Products Co. Type H-7000

Junction Boxes shall include: furnishing and installing boxes with covers, bonding of all conduits to box, providing drain, and all conduit "Stub-outs" as required.

Conduit shall include: furnishing and installing conduit, fittings and expansion devices with bonding jumper.

Expansion fitting shall be:
Crouse-Hinds Co. Type XJ641
O.Z. Elec. Type Ex 200
Spring City Elec. Co. Type EF 200

Light Standard Assembly includes pole, transformer base, bracket, anchor bolts, and all fitting and wiring to the junction box.

Mercury vapor luminaires shall be 400 W units and shall include furnishing and installing luminaire, built-in ballast, lamp and associated hardware.

Trenching shall include excavation and backfilling.

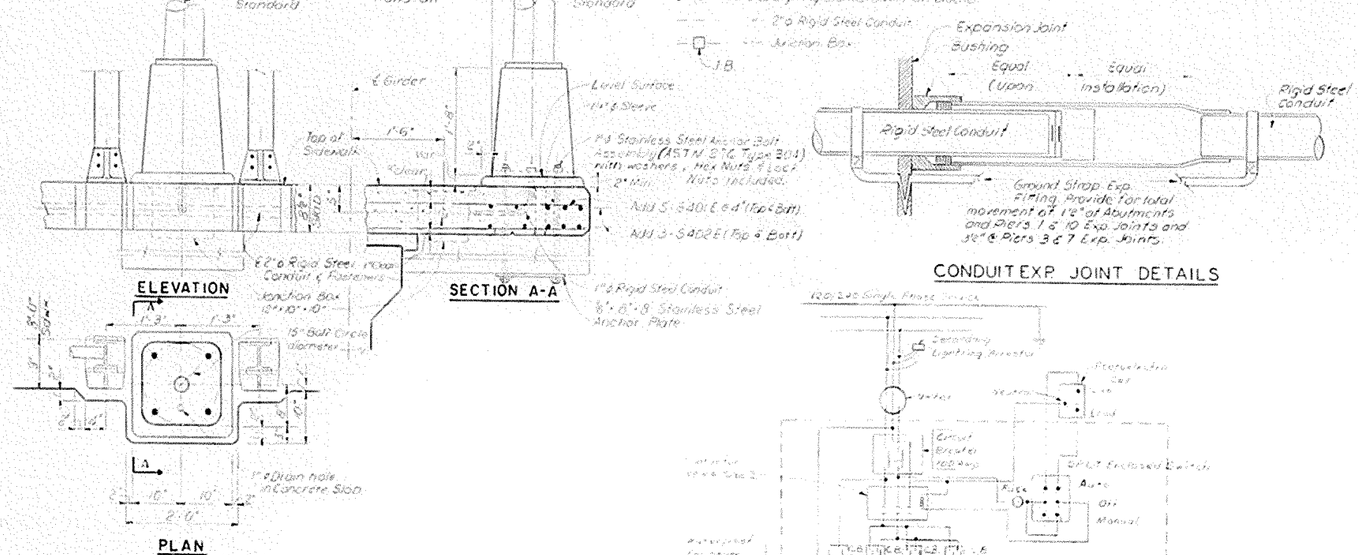
Wire shall include furnishing and installing specified wire within conduit provided.

Pole with secondary control equipment shall include furnishing and installing pole, necessary anchors, service risers, lightning arrestors, photoelectric control, circuit breaker, contactor, switch fuse, conduit, ground rod, transformer, cutout, and all conduit, fittings and connections.

Connectors shall include furnishing and installing connectors and fuse.

Underground conduit shall include: excavation, furnishing and installing concrete, conduit fittings, ground rod, ground wire and backfilling.

SHEET 72



BRIDGE LIGHTING

FRANKLAND AND LIENHARD

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA - FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY WEST VIRGINIA

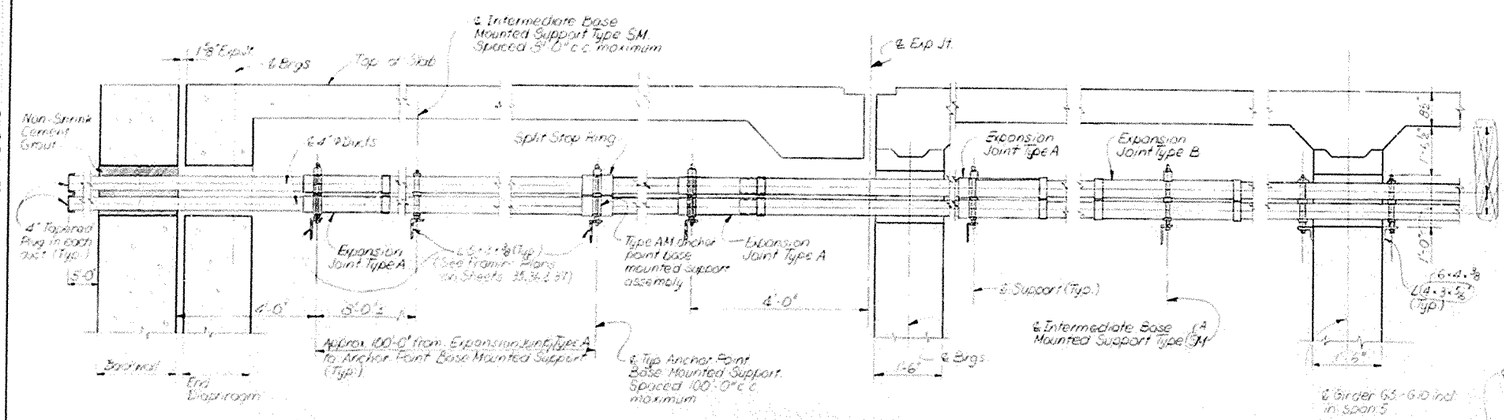
ROAD

STATION 20 + 2000 | P.E. PROJECT NO. | CONSTRUCTION PROJECT NO. | MAINTENANCE PROJECT NO. | DESIGNING NO. 19592

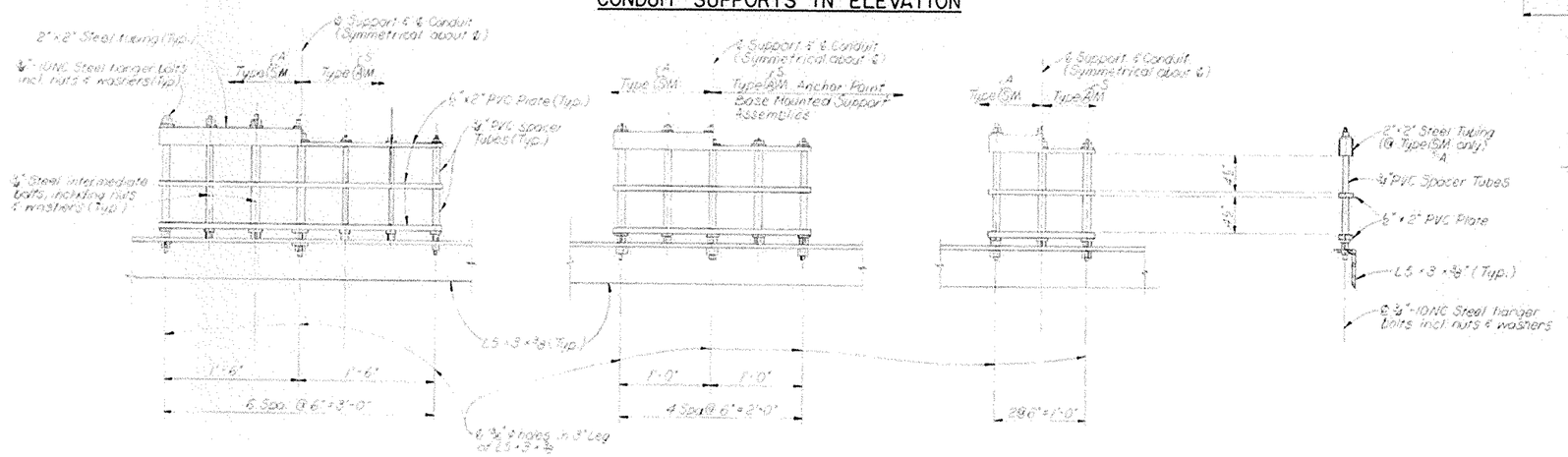
BRIDGE

UPDATE DATE

LETTING DATE



CONDUIT SUPPORTS IN ELEVATION



12 DUCTS - SPANS 1-5

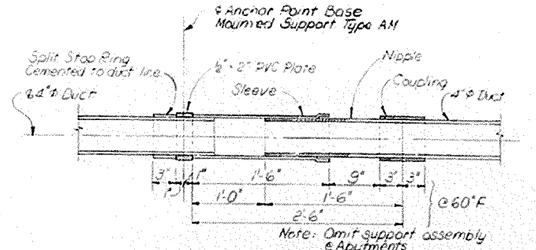
8 DUCTS - SPANS 6-12

4 DUCTS KY-3

TYPICAL SECTION

DETAILS OF BASE MOUNTED SUPPORTS

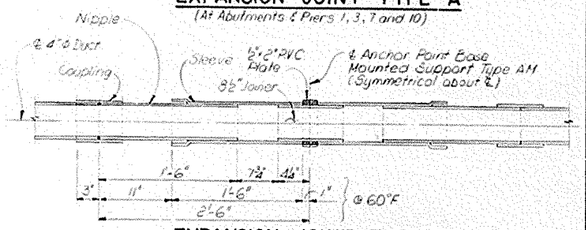
NOTE: Type SM - Intermediate Base Mounted Support
Type AM - Anchor Point Base Mounted Support



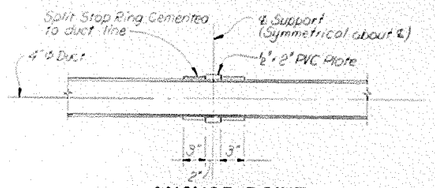
Note: Omit support assembly @ Abutments

EXPANSION JOINT TYPE A

(At Abutments & Piers 1, 3, 7 and 10)



EXPANSION JOINT TYPE B



ANCHOR POINT

NOTES:

Work this Sheet with Sheets 35, 36, 37, 74 & 75.
All conduit and fittings shall be Ashland PVC plastic type "D" Size of conduit : 4" ϕ O.D.
Fittings and accessories shall be as follows :
Sleeve Type "D" Conduit Couplings : Part III - 035
PVC Expansion Joint : " III - 235
Split Stop Rings : " III - 250
Structural Steel Shall conform to ASTM designation A 36
Base mounted conduit support assemblies and accessories shall be as manufactured by KYOVA CORP of Columbus, Ohio, or approved equal.

SHEET 73

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA - FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY WEST VIRGINIA

ROAD

STATION 20 + 20.00 P.E. PROJECT NO.

CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
		19592

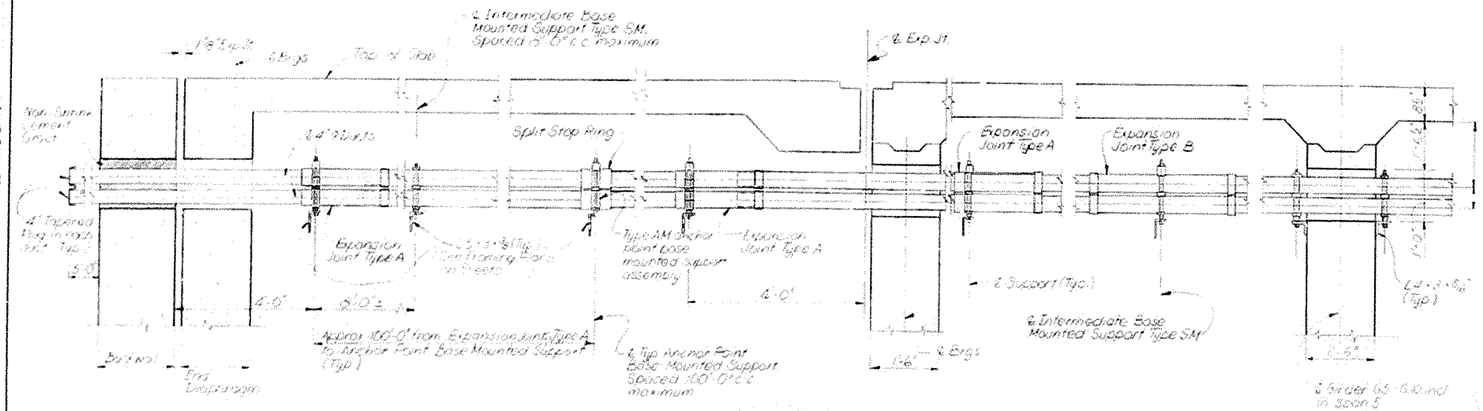
TELEPHONE CONDUITS

FRANKLAND AND LIENHARD

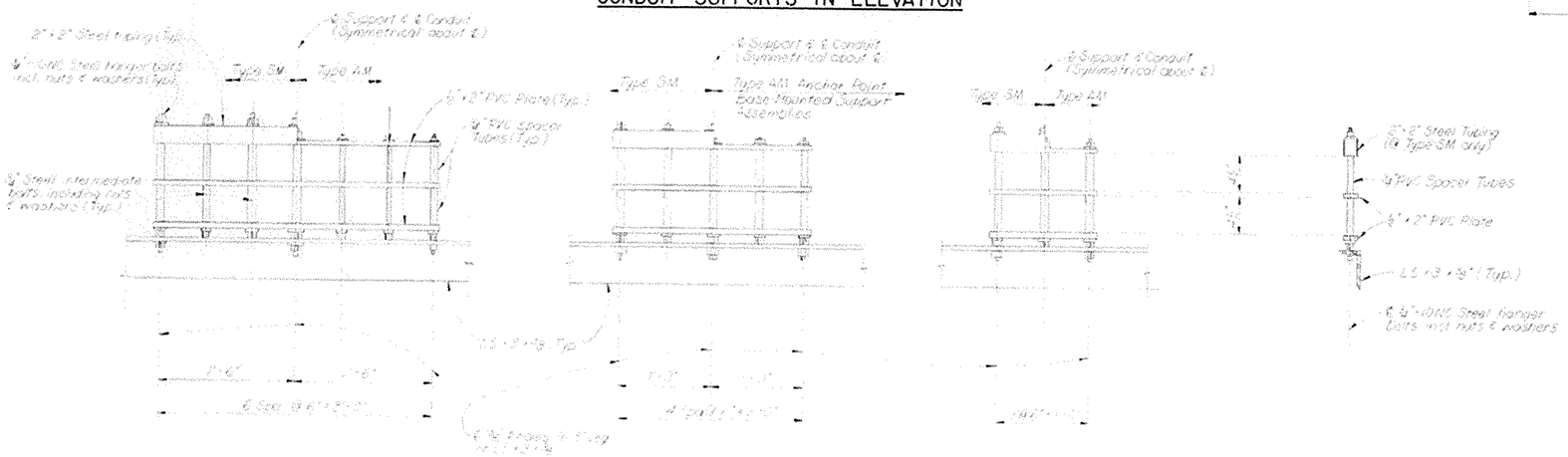
BRIDGE

UPDATE DATE

LETTING DATE



CONDUIT SUPPORTS IN ELEVATION



12 DUCTS - SPANS 1-5

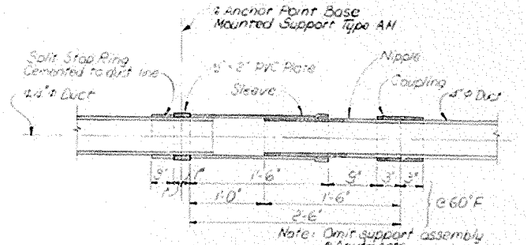
8 DUCTS - SPANS 6-12

4 DUCTS KY-3

TYPICAL SECTION

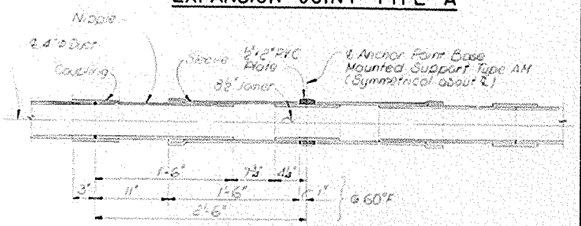
DETAILS OF BASE MOUNTED SUPPORTS

NOTE :

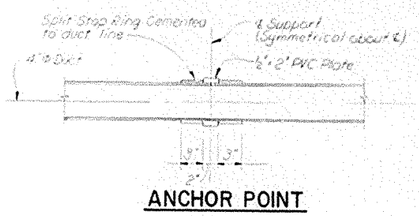


Note: Omit support assembly @ Abutments

EXPANSION JOINT TYPE A



EXPANSION JOINT TYPE B



ANCHOR POINT

NOTES:

Work this Sheet with Sheets 35, 36 & 37.
All conduit and fittings shall be Ashland PVC plastic type "D". Size of conduit : 4" ø O.D.
Fittings and accessories shall be as follows :
Sleeve Type "D" Conduit Couplings : Part # III - 635
PVC Expansion Joint : " III - 235
Split Stop Rings : " III - 250
Structural Steel shall conform to ASTM designation A 36.
Base mounted conduit support assemblies and accessories shall be as manufactured by KYOVA CORP. of Columbus, Ohio, or approved equal.

SHEET 73

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8), SP 64-33-14 LI
LOUISA - FORT GAY BRIDGE AND APPROACHES
LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY WEST VIRGINIA
ROAD

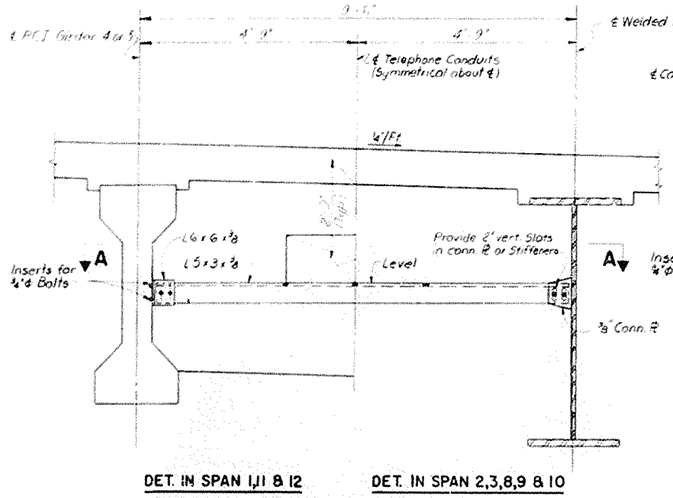
STATION 20 + 20.00 P.E. PROJECT NO

19592

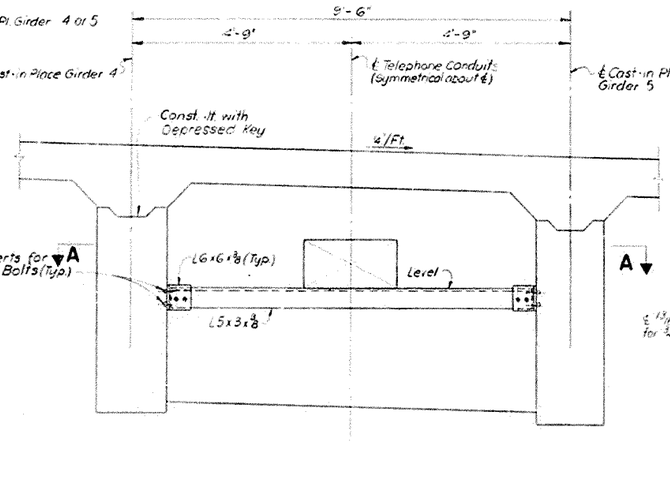
TELEPHONE CONDUITS

FRANKLAND AND LIENHARD

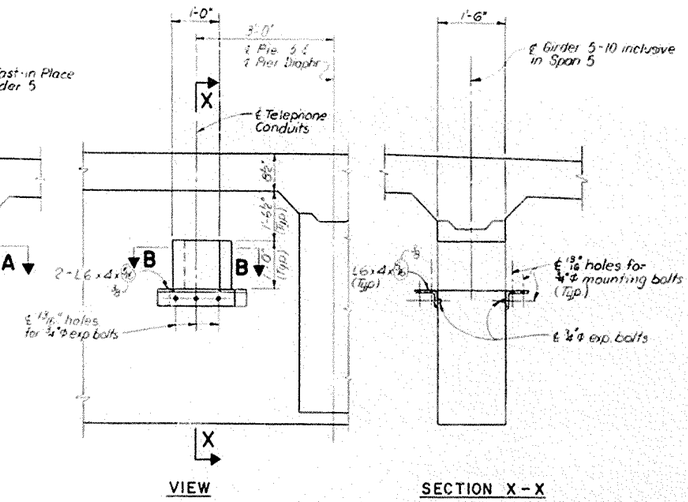
BRIDGE



DET. IN SPAN 1,11 & 12



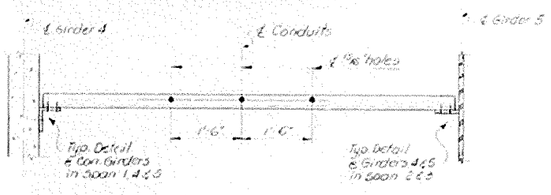
DET. IN SPAN 2,3,8,9 & 10



VIEW

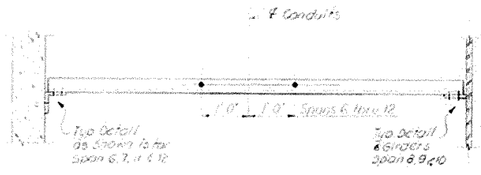
SECTION X-X

CONDUIT SUPPORT IN SPANS 1,2,3,8,9,10,11 & 12



IN SPANS 1,2,3,4 & 5

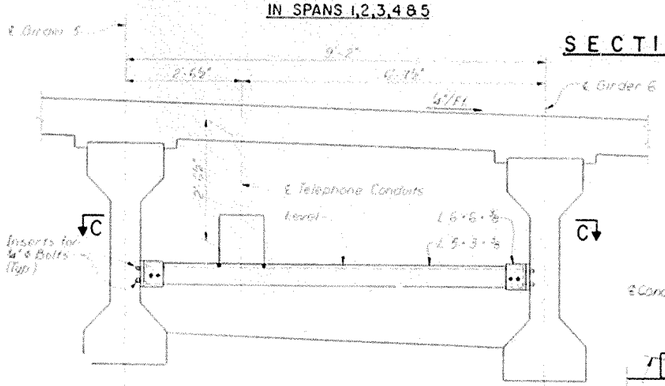
CONDUIT SUPPORT IN SPANS 4,5,6 & 7



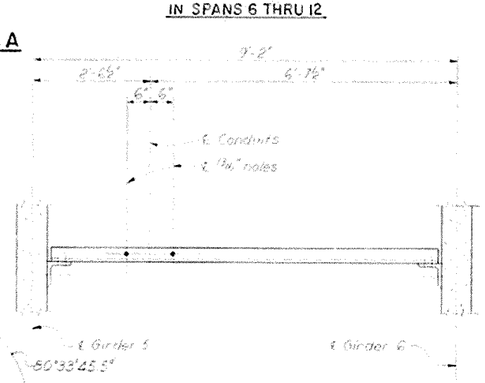
IN SPANS 6 THRU 12

CONDUIT SUPPORT AT GIRDERS 5-10 INCLUSIVE IN SPAN 5

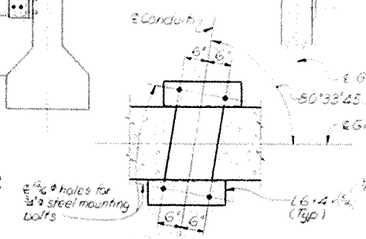
SECTION A-A



CONDUIT SUPPORT IN SPAN 13



SECTION C-C



SECTION B-B (IN SPAN 5)

ESTIMATED QUANTITIES FOR TELEPHONE CONDUIT (NON PARTICIPATING)		
DESCRIPTION	UNIT	QUANTITY
4" ϕ DUCT (INCLUDING FITTINGS)	L.F.	12,650
DUCT SUPPORT ASSEMBLIES TYPE SM - 12 DUCT UNITS	Ea.	20
Do. - 8 " "	Ea.	65
Do. - 4 " "	Ea.	21
Do. TYPE AM - 12 DUCT UNITS	Ea.	4
Do. - 8 " "	Ea.	7
Do. - 4 " "	Ea.	2
* STRUCTURAL STEEL (A36) FOR DUCT SYSTEM SUPPORTS	Lbs.	16,700
WOVEN WIRE PARTITIONS (INCLUDES DOOR WITH HINGES LOCK AND KEYS)	S.F.	140
PIPE HANDRAIL (INCLUDES GATE)	L.F.	80

* STRUCTURAL STEEL (A36) FOR DUCT SYSTEM INCLUDES 1 - A STEEL GRATING, CABLE RACK SUPPORTS, PULLING IRONS, INSERTS, WELDS, H.S. BOLTS, EXPANSION BOLTS, L 5 x 3 x ⅜, L 6 x 4 x ⅜ & L 5 x 3 x ⅜ AND THE PIPE HANDRAIL.

NOTES: Work this Sheet with Sheets 35, 36, 37, 73 & 75.

TELEPHONE CONDUITS

FRANKLAND AND LIENHARD

SHEET 74

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD

STATION 20+20.00 P.E. PROJECT NO.

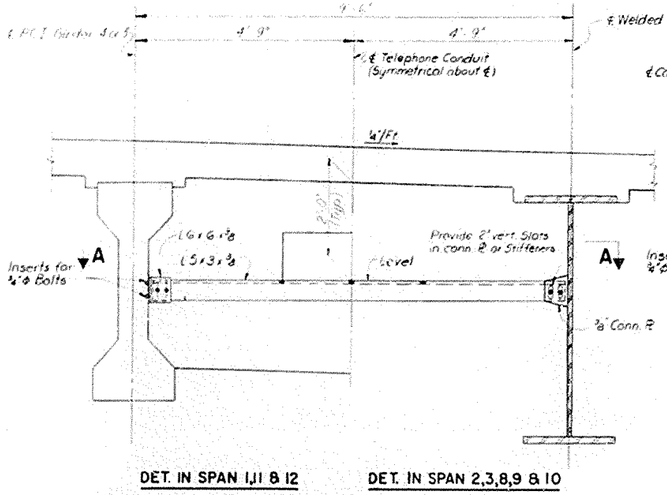
CONSTRUCTION PROJECT NO. | MAINTENANCE PROJECT NO. | DRAWING NO. 19592

BRIDGE

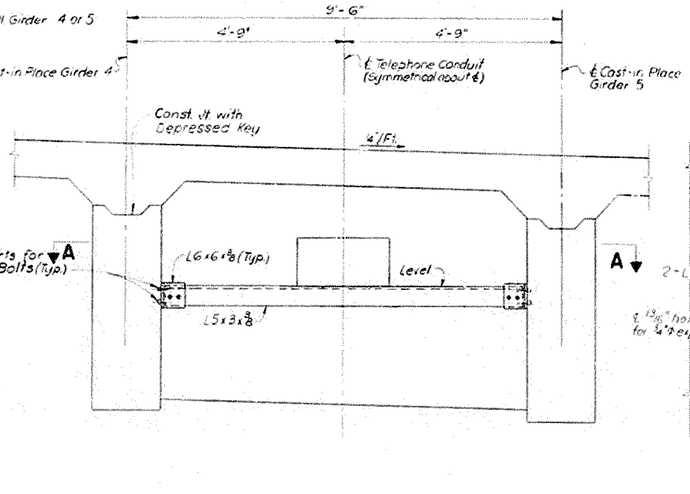
UPDATE DATE
LETTING DATE

UPDATE DATE

LETTING DATE

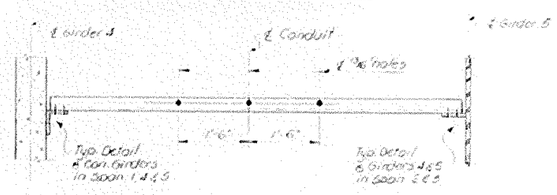


DET. IN SPAN 1,11 & 12



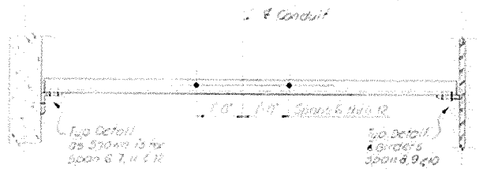
DET. IN SPAN 2,3,8,9 & 10

CONDUIT SUPPORT IN SPANS 1,2,3,8,9,10,11 & 12

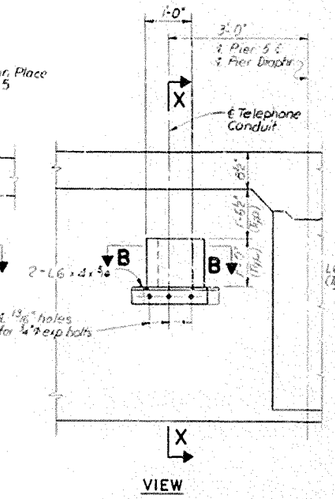


IN SPANS 1,2,3,4 & 5

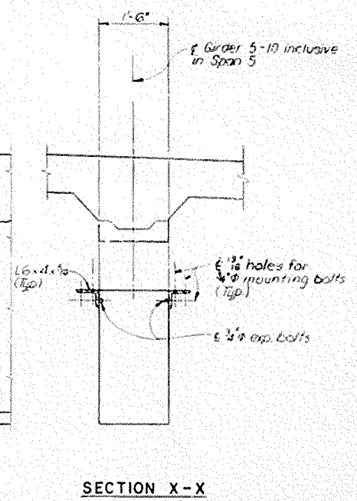
CONDUIT SUPPORT IN SPANS 4,5,6 & 7



IN SPANS 6 THRU 12



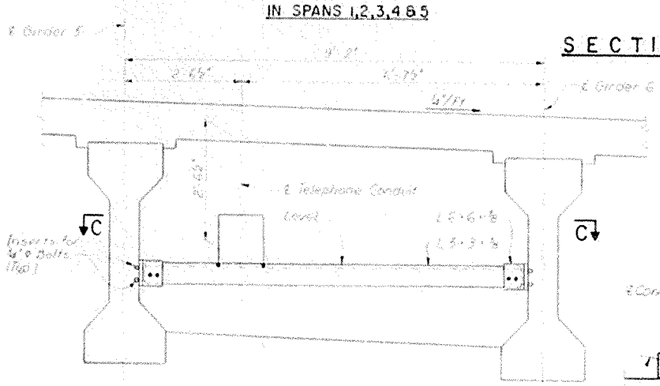
VIEW



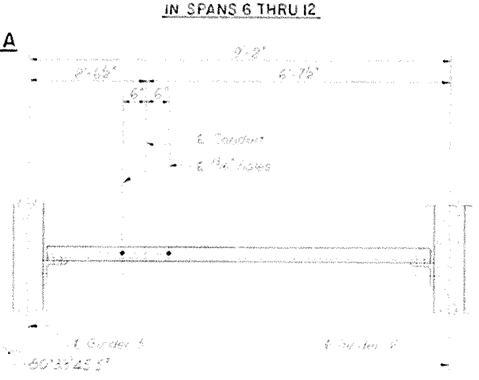
SECTION X-X

CONDUIT SUPPORT AT GIRDERS 5-10 INCLUSIVE IN SPAN 5

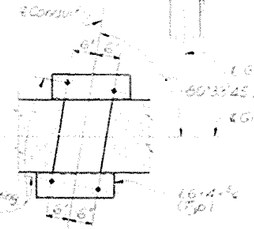
SECTION A-A



CONDUIT SUPPORT IN SPAN 13



SECTION C-C



SECTION B-B (IN SPAN 5)

ESTIMATED QUANTITIES FOR TELEPHONE CONDUIT (NON PARTICIPATING)		
DESCRIPTION	UNIT	QUANTITY
4" Φ DUCT (INCLUDING FITTINGS)	L.F.	12,650
DUCT SUPPORT ASSEMBLIES TYPE SM-12 DUCT UNITS	EA.	40
Do - 8 " "	EA.	65
Do - 4 " "	EA.	21
Do TYPE AM-12 DUCT UNITS	EA.	4
Do - 8 " "	EA.	7
Do - 4 " "	EA.	2
▲ STRUCTURAL STEEL (A36) FOR DUCT SYSTEM	LBS.	16,700
WOVEN WIRE PARTITIONS (INCLUDES DOOR WITH HINGES LOCK AND KEYS)	S.F.	140
PIPE HANDRAIL (INCLUDES GATE)	L.F.	80

▲ STRUCTURAL STEEL (A36) FOR DUCT SYSTEM INCLUDES L's STEEL GRATING, CABLE RACK SUPPORTS PULLING IRONS, INSERTS, WELD & H.S. BOLTS)

NOTES: Work this Sheet with Sheets 35, 36, 37, 74 & 75.

SHEET 74

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD

STATION 20+20.00 P.E. PROJECT NO.

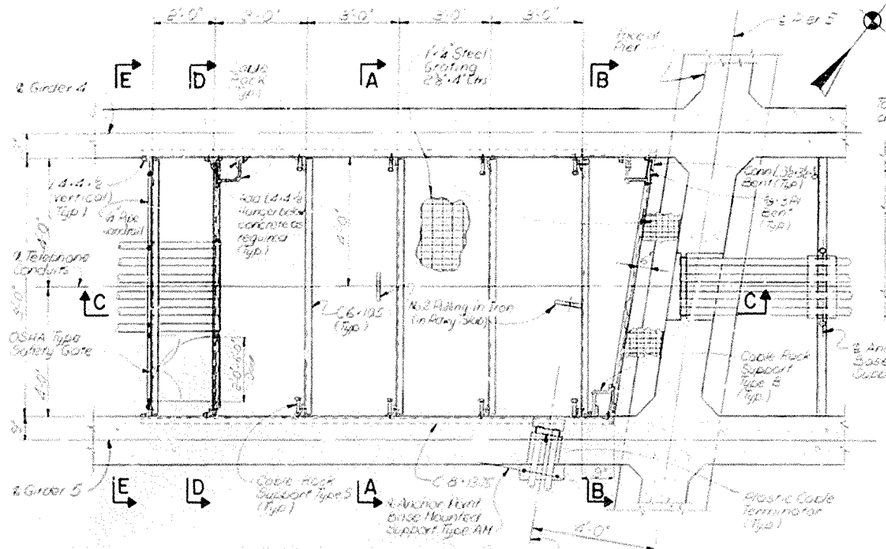
CONSTRUCTION PROJECT NO. MAINTENANCE PROJECT NO. DRAWING NO. 19592

TELEPHONE CONDUITS

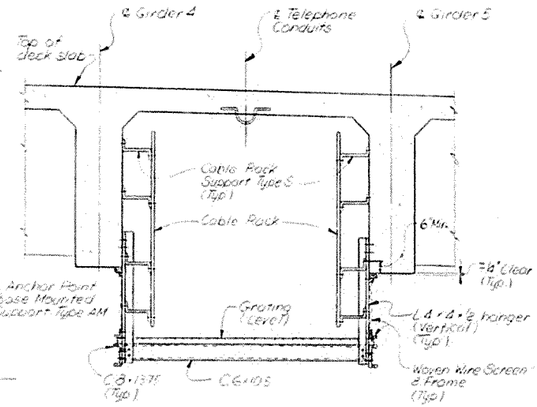
FRANKLAND AND LIENHARD

BRIDGE

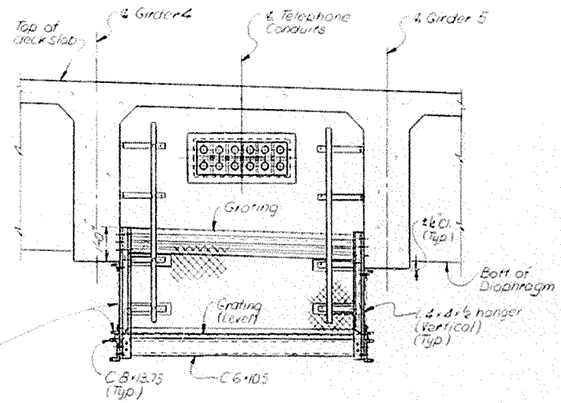
UPDATE DATE
LETTING DATE



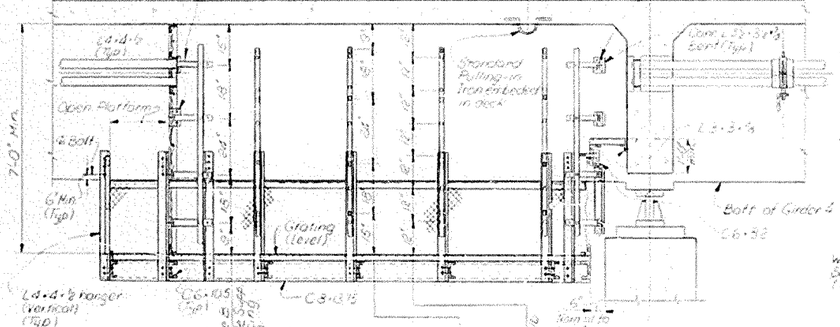
PLAN OF JUNCTION BOX



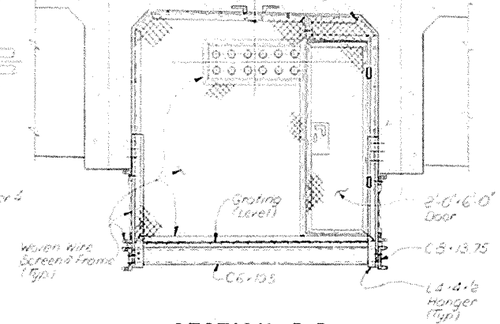
SECTION A-A



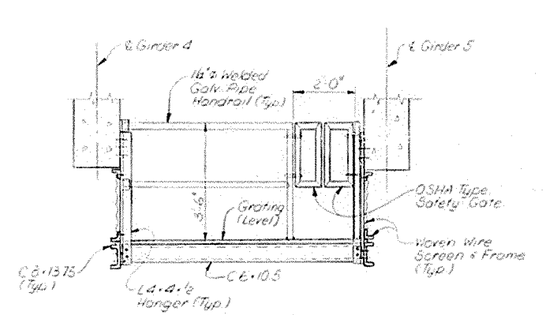
SECTION B-B



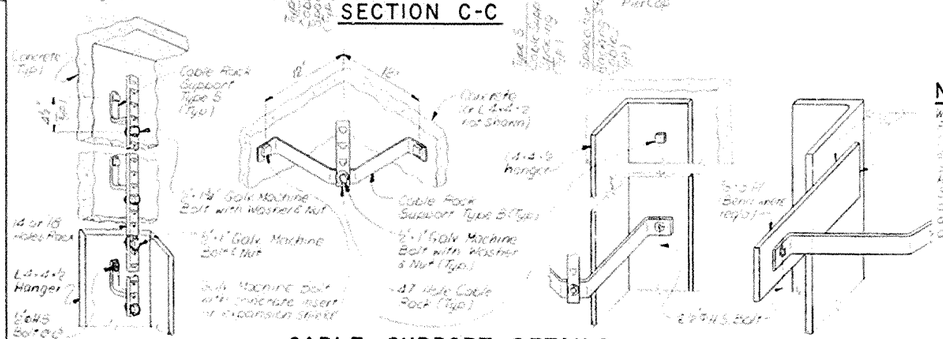
SECTION C-C



SECTION D-D



SECTION E-E



CABLE SUPPORT DETAILS

NOTES:

Work this Sheet with Sheets 56, 73 & 74.
Fasteners for structural steel shall be ⅞"ø H.S. Bolts (ASTM A325) for joining of rolled steel shapes to each other or ⅞" expansion bolts for joining of rolled steel shapes to concrete, or as shown on plans. Holes for ⅞"ø bolts shall be 1"ø.
Steel grating shall be as manufactured by Herrigon or Reliance. Cast grating shall be galvanized in accordance with ASTM A153 and it shall be painted as for Std. Steel.

SHEET 75

TELEPHONE CONDUIT JUNCTION BOX DETAILS BTWN. GIRDERS 4 & 5 IN SPAN 5

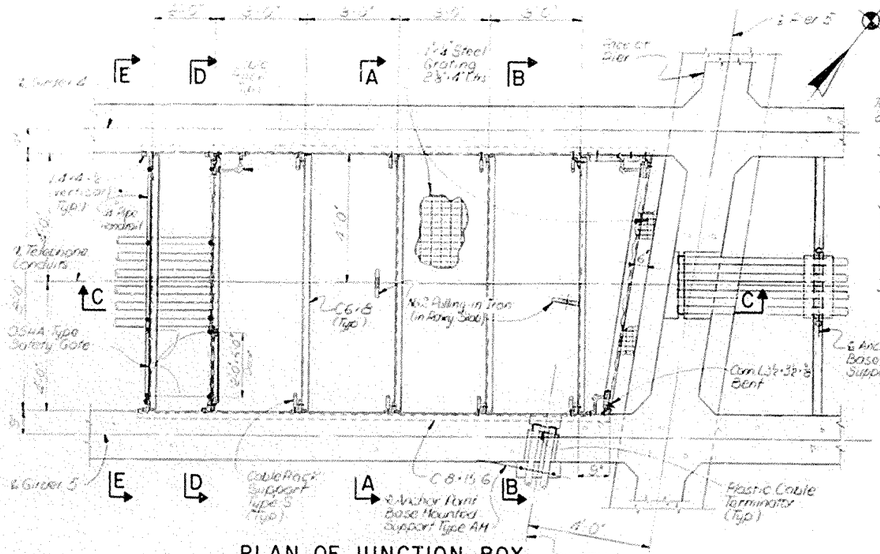
FRANKLAND AND LIENHARD

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

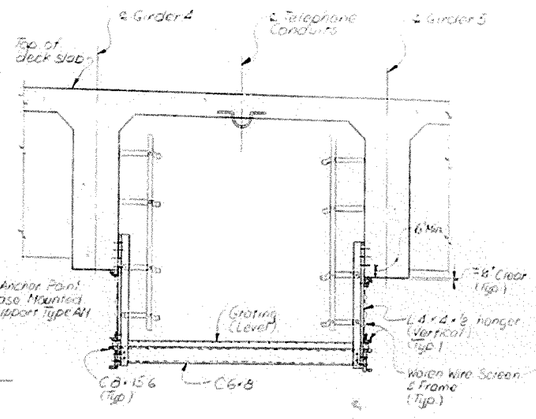
PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA - FORT GAY BRIDGE AND APPROACHES
LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY WEST VIRGINIA
ROAD
STATION 20+20.00 P.E. PROJECT NO.

CONSTRUCTION PROJECT NO. MAINTENANCE PROJECT NO. DRAWING NO. 19592

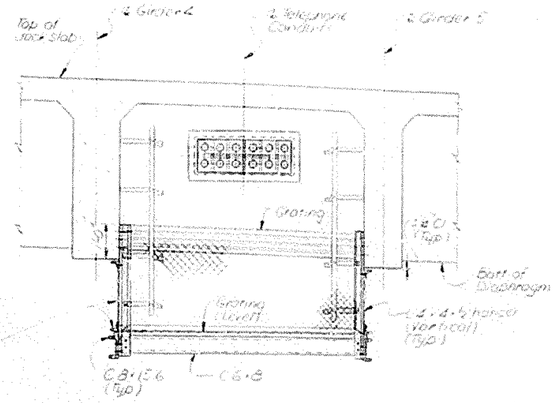
BRIDGE



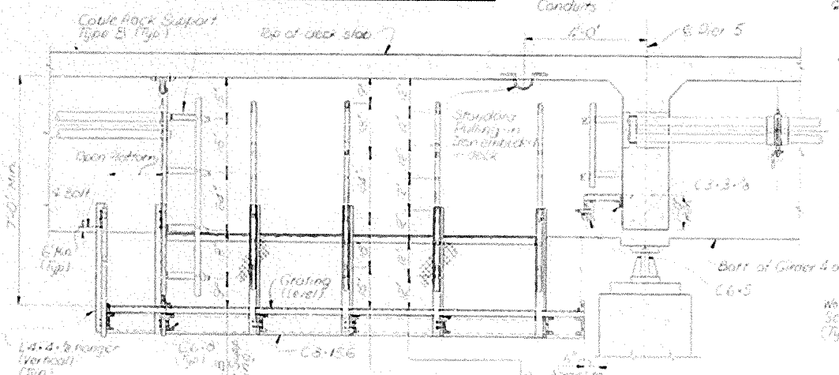
PLAN OF JUNCTION BOX



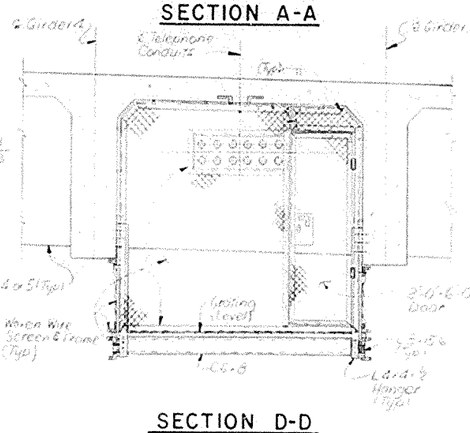
SECTION A-A



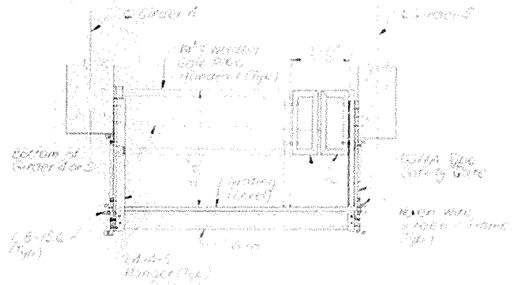
SECTION B-B



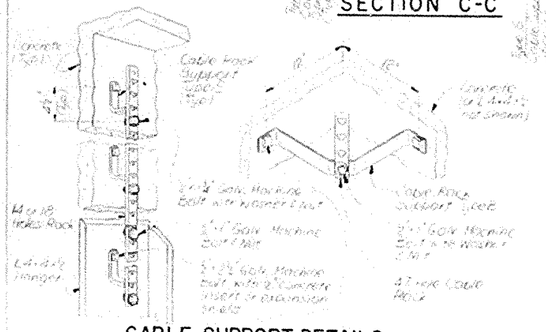
SECTION C-C



SECTION D-D



SECTION E-E



CABLE SUPPORT DETAILS

NOTES:

Use the Steel with Sheets 36 to 38 for Stringers for Structural steel is to be ASTM A 36. Bolts ASTM A 325 for joining all rolled steel shapes to each other or to connection bars for joining drilled steel shapes to concrete. Bolts for all light loads (e.g. railing) shall be of unfinished bolting. Nuts shall be galvanized after fabrication. Bolts shall be galvanized after fabrication with ASTM [illegible]

TELEPHONE CONDUIT JUNCTION BOX DETAILS BTWN. GIRDERS 4 & 5 IN SPAN 5

SHEET 75

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 43(8), SP 64-33-14PL1
LOUISA FORT GAY BRIDGE AND APPROACHES
LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY WEST VIRGINIA

STATION 20+20.00

FRANKLAND AND LIENHARD

19592

BRIDGE

DESCRIPTION

This work shall consist of furnishing, installing and connecting complete traffic signal installation(s), with accessories, and placing in satisfactory condition. The work shall be performed in accordance with:

1. Special Provision No. 1 (76) Traffic Control Devices, latest edition
2. Applicable drawings and plans
3. Kentucky Bureau of Highways Standard Specifications, latest edition with revisions
4. National Electrical Code, latest issue
5. Manual on Uniform Traffic Control Devices
6. Standards of the utility company serving the installation

The plans indicate the extent and general arrangement of the signal installation and are for general guidance. Any commission or omission shown or implied shall not be cause for deviating from the intent of the plans and specifications. If any modifications of the plans or specifications are deemed necessary by the Contractor, details of such modifications and the reasons therefore shall be submitted in writing to the Engineer for written approval prior to begining such modified work.

Pole locations will be staked by the Engineer, and any necessary assistance shall be provided by the Contractor. Additional assistance will also be available from the Division of Traffic in the Central Office.

The Contractor shall use all possible care in excavating on this project so as not to disturb any existing utilities whether shown on the plans or not shown on the plans. Elevations and locations of existing utilities are approximate only. Any utilities disturbed or damaged by the Contractor through carelessness during his construction shall be replaced by the Contractor at no extra cost to the Department.

MATERIALS

General

All materials shall be approved prior to being utilized. The Contractor shall submit for approval, five (5) copies of descriptive literature, drawings, and any requested design data for the materials he proposes to use. After approval, no substitutions for any approved materials may be made without the written approval of the Engineer.

Wire

All wire and cable shall be plainly marked in accordance with the provisions of the National Electrical Code. Grounding conductors shall be copper of the sizes indicated in the National Electrical Code unless otherwise specified. Service - entrance conductors installed on the service pole(s) shall be copper of the size and with the insulation specified by the National Electrical Code for service entrance conductors.

All signal cables shall be # 14 AWG with the number of conductors indicated and shall conform to IMSA 19 - 1 - 1973.

All induction loop wire shall be single conductor, # 14 AWG, stranded Type THWN or THHN.

Loop lead-in cable shall be # 14 AWG, paired conductors, electrically shielded and conforming to IMSA 19 - 2 - 1973, stranded conductors required.

All other wire shall be single conductor Type RHW or THW with sizes larger than # 12 AWG being stranded.

Conduit

Conduit shall be rigid steel unless otherwise specified. All rigid steel conduit shall be galvanized inside and out and shall conform to the Underwriters' Laboratories requirements for rigid metallic conduit.

Concrete

All concrete shall be Class A, conforming to the requirements of Section 403 of the 1965 Standard Specifications.

Ground Rods

All ground rods shall be composite shafts consisting of a pure copper exterior which has been inseparably molten welded to a steel core. The rods shall have a minimum diameter of 1/2" and a minimum length of 8'. The rods shall be equipped with copper or bronze clamps.

Wood Poles

All wood poles shall be Class 4 conforming to the requirements of ANSI 05.1.

Span and Messenger Wire

All span wire, guy wire, messenger wire, and tether wire shall consist of high strength steel strands with an inseperable molten - welded copper outer coating.

Anchor Rods

All anchor rods, unless otherwise specified shall be 7 feet minimum length, 5/8 inch minimum diameter, and be of double - eye design.

Anchors

All anchors, except rock anchors, shall be of the expandable type, and with a minimum area of 135 square inches and spread under undisturbed earth.

CONSTRUCTION METHODS

Wiring

All wiring shall conform to the provisions of the National Electrical Code unless otherwise shown on the plans. Where more than one circuit is installed within the same conduit, permanent circuit indentification numbers shall be affixed to the wires.

Conduit Installation

Rigid steel conduit encasement shall be provided for all conductors except for overhead installations, where conductors are run inside poles or cabinets and induction loop conductors sealed within pavements. All conduit installations shall conform to the provisions of the National Electrical Code except where directed otherwise. Bonded slip joints will be permitted for joining rigid conduit to junction boxes. Where a standard coupling cannot be used, an approved threaded union coupling shall be used. All conduit ends shall be reamed to remove burrs and sharp edges. Damaged portions of the galvanized surfaces and untreated threads resulting from field cuts shall be painted with a rust inhibitive paint. Conduit bends shall have a radius of not less than 12 times the nominal diameter of the conduit, unless otherwise shown on the plans.

Conduit which will not be subjected to regular pressure from traffic shall be laid to a depth of not less than 18". On transverse crossings under roadway surfaces and shoulders, the conduit shall be placed at a depth of not less than 24" below grade. The Contractor will not be permitted to cut any pavement in carrying out this work. All pavement crossings shall be made by placing conduit in the subgrade prior to paving or by jacking or boring under existing pavements. After the conduit has been installed and before backfilling is started, the conduit installation shall be inspected and approved by the Engineer.

In backfilling trenches, the backfill material shall be placed and compacted in lifts of 9" or less. Any area disturbed as a result of the Contractor's operations shall be restored to the satisfaction of the Engineer. Conduits, junction boxes, metal poles, and control boxes throughout the signal system shall be bonded together and bonded to all ground rods by using grounding bushings on the conduit ends. These conduits shall be bonded to the electrical system ground.

Splicing

All splices shall conform to the provisions of the National Electrical Code unless otherwise shown on the plans. Splices shall be made with mechanical connectors of a type approved by the Engineer or shall be twisted and soldered. Splices shall be protected by a double spiral wrapping of rubber tape, a double spiral wrapping of friction tape, and a thorough painting of the completed splice with an insulating electrical paint.

Painting

Ungalvanized or damaged surfaces of exposed junction boxes, pull boxes, etc. shall be given one coat of red lead, and two coats of aluminum paint after the installation is completed. For items fabricated from galvanized or non-ferrous alloys, which are inherently rust resistant, painting is required only on damaged surfaces.

Loop Lead-in

Loop lead-in wire, exclusive of shielded cable, shall be twisted with three to five turns per foot before placement in saw slot, conduit or junction box. Unshielded loop wiring to field terminal connections of cabinet, and unshielded loop wiring in loop amplifier connector harness shall also be twisted three to five turns per foot.

Loops

Loops shall be extended splice-free to the controller, pole, or junction box. Loop wires shown as extended to poles or junction boxes shall be spliced into loop lead-in cable at the boxes, or poles. Loop lead-in cable shall be extended splice-free from pole or junction box to controller. Splices shall be made with approved pressure connectors, or twisted and soldered. Splices then shall be protected with a double spiral wrapping of rubber tape covered by a double wrapping of friction tape.

ACCEPTANCE REQUIREMENTS

After the installation(s) is completed and at such time as the Engineer shall direct, the Contractor shall conduct an operating test for approval. The test shall demonstrate that the system operates in accordance with the plans and specifications. Induction loop conductors shall test free of shorts and unauthorized grounds and shall have an insulating resistance of ten (10) megohms when tested with a 500-volt direct current potential in a reasonably dry atmosphere between conductors and ground.

MEASUREMENT AND PAYMENT

Measurement of the completed work will be made in the units shown on the plans and in the proposal. Payment for the completed work will be made at the contract unit prices. Such payment shall be full compensation for installing and placing complete signal installation in satisfactory operation.

SHEET 76

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD

STATION 20+20.00 P.E. PROJECT NO.

CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
		19592

BRIDGE

UPDATE DATE

LETTING DATE

ESTIMATE OF QUANTITIES

ITEM	UNIT	QUANTITY	BID ITEM NO.
WIRE #12	LIN FT	180	6924
WIRE #14/2C	LIN FT	175	6928
WIRE #14/5C	LIN FT	800	6932
WIRE #8	LIN FT	765	6801
WIRE #6/1C	LIN FT	105	6956
B.M. MESSENGER	LIN FT	800	6885
1½" CONDUIT R.S.	LIN FT	275	6912
STEEL STRAIN POLE	EA	2	6560
JUNCTION BOX 12"X12"X8"	EA	3	6905
* SIGNAL 8" R.B.B.	EA	6	6981
BR CONTROL 2 PHASE	EA	1	6991
LOOP AMPLIFIER	EA	1	6884
TRENCHING & BACKFILL	LIN FT	60	6950
SAW SLOT & FILL	LIN FT	60	6951

* FOR PURPOSE OF BIDDING, THE TWO 2-WAY SIGNALS SHOWN ON INTERSECTION SHEET SHALL BE CONSIDERED AS FOUR 1-WAY SIGNALS.

ALL THE ABOVE ITEMS SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR

BID ITEM NOTES

CONTROLLER ASSEMBLY FURNISHED AND INSTALLED SHALL INCLUDE INSTALLATION OF CONTROLLER HOUSING AND CONTROLLER WITH MOUNTING EQUIPMENT, FURNISHING AND INSTALLING CONDUITS, PROVIDING ELECTRIC SERVICE AND THE CONNECTION OF SIGNALS AND DETECTOR AS SPECIFIED. PROVIDING ELECTRIC SERVICE SHALL INCLUDE CONNECTING SERVICE WIRES AT CONTROLLER AND AT SERVICE POLE. CONTROLLER AND ACCESSORIES (SWITCH PACKS, FLASHERS, ETC.) SHALL BE MODULAR AND OF SOLID-STATE CONSTRUCTION.

CONDUIT SHALL INCLUDE FURNISHING AND INSTALLING CONDUIT, FITTINGS, EXPANSION FITTINGS WITH BONDING STRAPS, AND DEFLECTION FITTINGS. THIS ITEM DOES NOT INCLUDE CONDUITS ASSOCIATED WITH CONTROLLER ASSEMBLY.

SIGNALS FURNISHED AND INSTALLED SHALL INCLUDE FURNISHING SPECIFIED SIGNAL SECTIONS, FABRICATION, INSTALLATION AND CONNECTION TO SIGNAL CONNECTORS. THIS ITEM SHALL INCLUDE FURNISHING AND INSTALLING PROPER LAMPS.

INDUCTION LOOP AMPLIFIER FURNISHED AND INSTALLED SHALL INCLUDE FURNISHING AND INSTALLING (WORK) HARNESSES AS SPECIFIED, INSTALLING AMPLIFIERS, AND ANY ASSOCIATED UNITS SUCH AS TIMERS, SUMMATORS, COUNTERS, ETC. THAT MAY BE SPECIFIED.

WIRE SHALL INCLUDE FURNISHING AND INSTALLING SPECIFIED CONDUCTORS WITHIN CONDUIT, OR SAW SLOT OR OVERHEAD AS INDICATED ON DRAWINGS. THIS ITEM SHALL INCLUDE FURNISHING AND INSTALLING CABLE RINGS, OR OTHER ATTACHMENT MEANS REQUIRED FOR ATTACHING CABLES TO MESSENGER.

B.M. MESSENGER SHALL INCLUDE FURNISHING AND INSTALLING MESSENGER AND ALL ASSOCIATED HARDWARE SUCH AS LUGS, ETC.

STEEL STRAIN POLE SHALL INCLUDE FURNISHING AND INSTALLING CABLE AS NECESSARY. EXCAVATION, CONCRETE REINFORCEMENT, BACKFILLING, AND RESTORATION OF DISTURBED AREAS. THIS ITEM SHALL ALSO INCLUDE FURNISHING AND INSTALLING NECESSARY HARDWARE SUCH AS POLE TOP CAP, HAND HOLE COVER, ANCHOR BOLT COVERS, POLE BANDS, ETC.

LOOP SAW SLOT AND FILL SHALL INCLUDE SAWING, CLEANING, AND REFILLING SLOT WITH A SUITABLE EPOXY COMPOUND.

TRENCHING AND BACKFILLING SHALL INCLUDE EXCAVATION, BACKFILLING, ROADWAY CROSSINGS, AND RESEEDING OF DISTURBED AREAS.

JUNCTION BOX SHALL INCLUDE FURNISHING AND INSTALLING CABLE IN ACCORDANCE WITH SPECIFICATIONS.

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD

STATION 20+20.00 | P.E. PROJECT NO.

FRANKLAND AND LIENHARD | CONSTRUCTION PROJECT NO. | MAINTENANCE PROJECT NO. | DRAWING NO. 19592

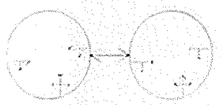
BRIDGE

COUNTY OF	FISCAL YEAR	SHEET NO	TOTAL SHEETS
LAWRENCE			

LEGEND

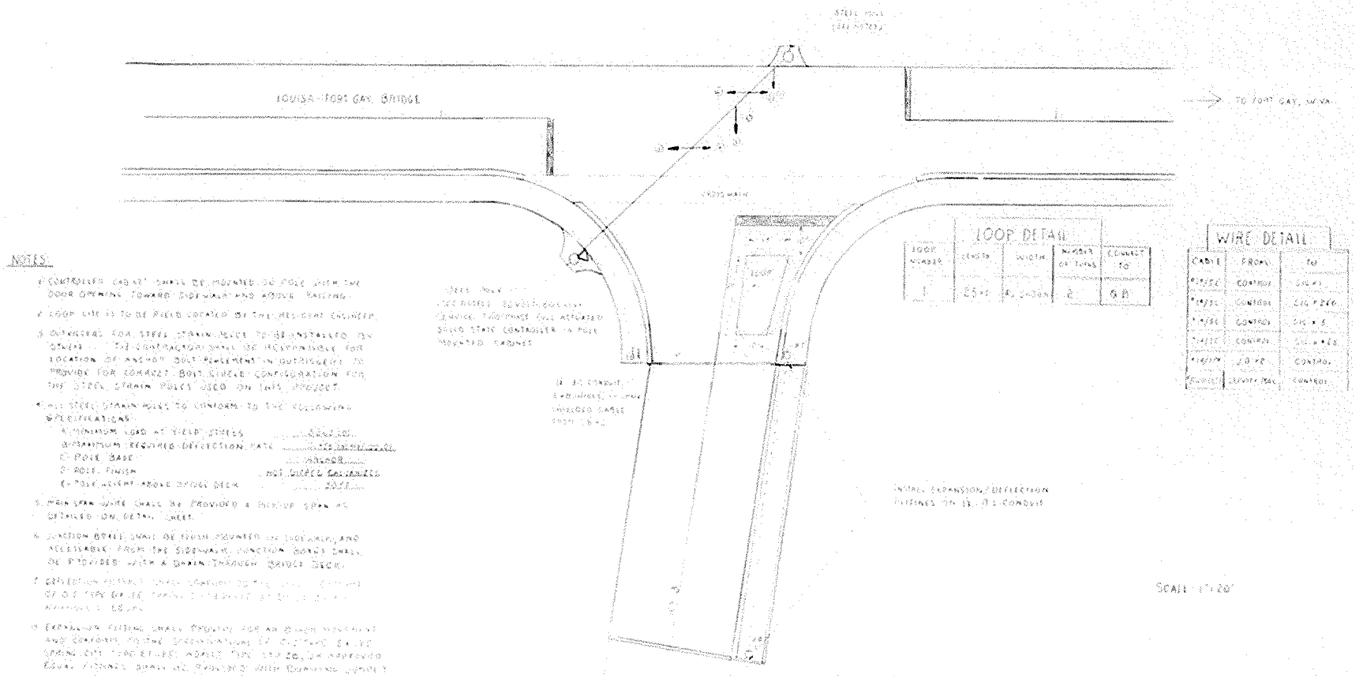
- STEEL STRAIN POLE
- WOOD POLE - SEE NOTE 2 FOR DETAILS AND SPACING ON PLANS
- RIGID CONDUIT - UNDERGROUND OR IN BRIDGE DECK
- SPAN WIRE
- CONTROL CABINET
- SERVICE CABINET - SEE NOTE 1 FOR ELEVATION ON THESE PLANS
- SIGNAL HEAD ON OVERHEAD SPAN WIRE
- JUNCTION BOX

PHASING



COLOR SEQUENCE

	Ø A			Ø B		
	NEAR SIDE			FAR SIDE		
	R	G	Y	R	G	Y
1	R	G	Y	R	G	Y
2	G	R	R	Y	R	R
3	R	G	Y	R	G	Y
4	G	R	R	Y	R	R
5	R	G	Y	R	G	Y
6	G	R	R	Y	R	R



NOTES:

1. CONTROLLER CABINET SHALL BE MOUNTED ON POLE WITH DOOR OPENING TOWARD SIDEWALK AND ABOVE RAILING.
2. LOOP SIZE TO BE FIELD LOCATED BY THE RESIDENT ENGINEER.
3. DIMENSIONS FOR STEEL STRAIN POLES TO BE INSTALLED ON STREET ... THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATION OF ANCHOR BOLT PLACEMENT IN FOUNDATIONS TO PROVIDE FOR CORRECT BOLT CIRCLE CONFIGURATION FOR THE STEEL STRAIN POLES USED ON THIS PROJECT.
4. ALL STEEL STRAIN POLES TO CONFORM TO THE FOLLOWING SPECIFICATIONS:
   - A. MINIMUM LOAD AT YIELD STRESS ... GRADE 50
   - B. MAXIMUM REQUIRED DEFLECTION RATE ... 12" IN 100 MPH GUST
   - C. POLE BASE ... ANCHOR
   - D. POLE FINISH ... HOT DIPPED GALVANIZED
   - E. POLE HEIGHT ABOVE BRIDGE DECK ... 30'-0"
5. MAIN SPAN WIRE SHALL BE PROVIDED A PICK-UP SPAN AS DETAILED ON DETAIL SHEET.
6. JUNCTION BOXES SHALL BE FLUSH MOUNTED ON SIDEWALKS AND ACCESSIBLE FROM THE SIDEWALK. JUNCTION BOXES SHALL BE PROVIDED WITH A DRAIN THROUGH BRIDGE DECK.
7. DEFLECTION FITTINGS SHALL CONSIST OF TWO ... SECTIONS OF 2-1/2" TYPE GR-125 RIGID ... ELBOWS AT 45° ... AS SHOWN ON DETAIL SHEET.
8. EXPANSION FITTING SHALL PROVIDE FOR AN 8-INCH MINIMUM AND CONFORM TO THE SPECIFICATIONS OF 2-1/2" GR-125 SWING JOINT CONDUIT EXPANSION FITTING, OR APPROVED EQUAL FITTINGS SHALL BE PROVIDED WITH EQUIPMENT SUPPLIED.
9. JUNCTION BOXES SHALL BE CAST IRON PROVIDED WITH A CHECKERED COVER AND CONFORM TO THE SPECIFICATIONS OF 12" SQUARE SWING OUT CONCRETE ACCESS TYPE ... OR APPROVED EQUAL FITTINGS SHALL BE PROVIDED WITH EQUIPMENT SUPPLIED.

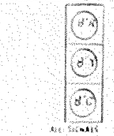
LOOP DETAIL

LOOP NUMBER	LENGTH	WIDTH	NUMBER OF TURNS	CONNECT TO
1	25'-0"	6'-0"	2	Ø B

WIRE DETAIL

CABLE	FROM	TO
#14 SEC	CONTROL	SIGNAL
7 #14 SEC	CONTROL	SIG. POLE
7 #14 SEC	CONTROL	SIG. # 2
7 #14 SEC	CONTROL	SIG. # 3
#14 SEC	SIG. POLE	CONTROL
EQUIP.	SERVICE POLE	CONTROL

SIGNAL HEAD DETAIL



ALL SIGNALS

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KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD

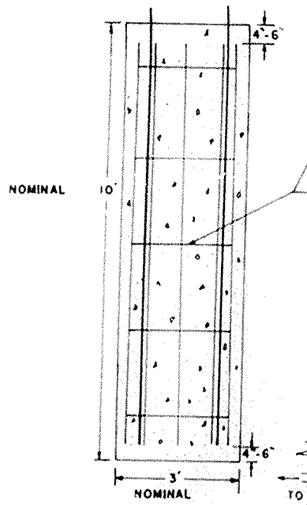
STATION 20+20.00 P.E. PROJECT NO.

CONSTRUCTION PROJECT NO	MAINTENANCE PROJECT NO	DRAWING NO
		19592

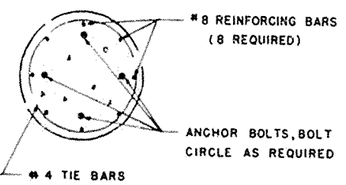
DIETZGEN 113 13 X DESK NO. 2

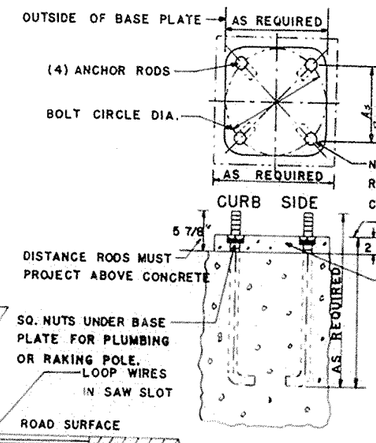
BRIDGE

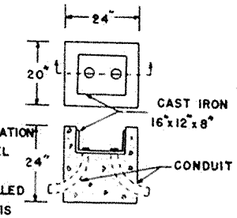
COUNTY OF	FISCAL YEAR	SHEET NO	TOTAL SHEETS
LAWRENCE			



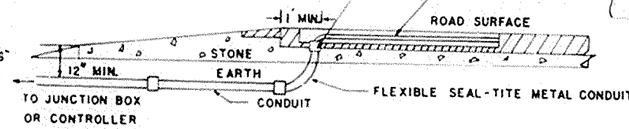
POLE BASE DETAIL





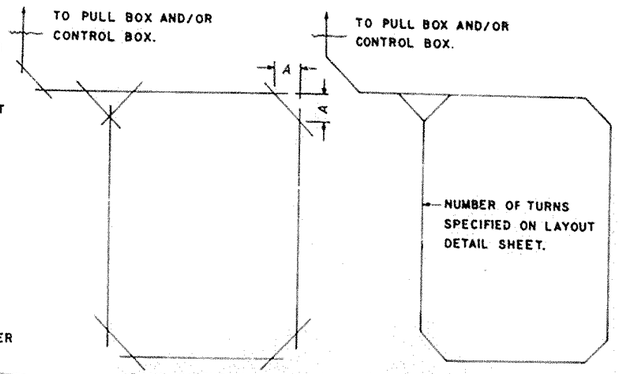


JUNCTION BOX DETAIL



PAVEMENT TO EARTH CONDUIT TRANSITION DETAIL

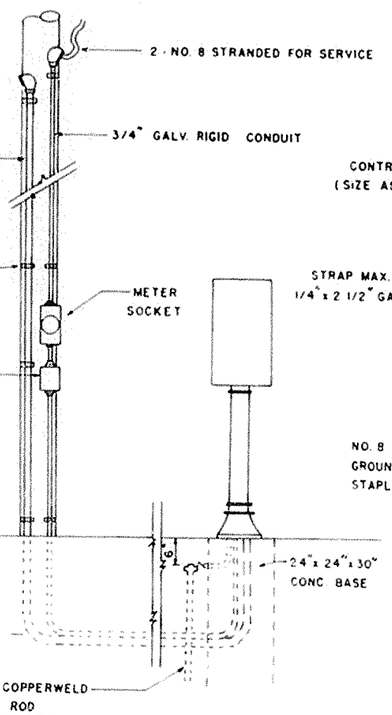
LOOP LEAD-IN WIRES SHALL BE TWISTED WITH THREE TO FIVE TURNS PER FOOT UNTIL TERMINATED AT FIELD CONNECTIONS IN THE CABINET, OR CONNECTED TO SHIELDED CABLE.



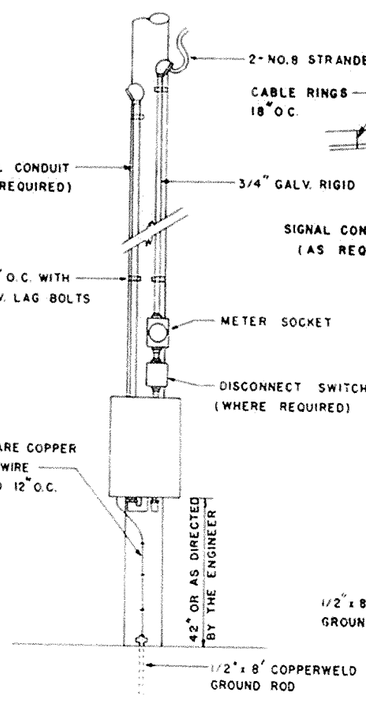
DEPTH	NO. OF WIRES 2	3	4	5
D-1	1.8	2.0	2.5	3.0
D-2	2.0	2.5	3.0	3.0

LOOP IN CONCRETE LOOP IN ASPHALT

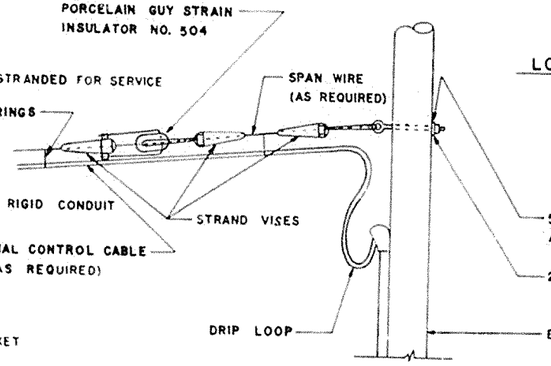
NOTES: "A" TO BE MINIMUM 1'-0"
"Z" SHALL BE LARGE ENOUGH TO ACCOMMADATE LOOP WIRE WITHOUT CHAFING INSULATOR WITH A MAXIMUM DIMENSION OF 1/4".



CONTROLLER PEDESTAL DETAIL

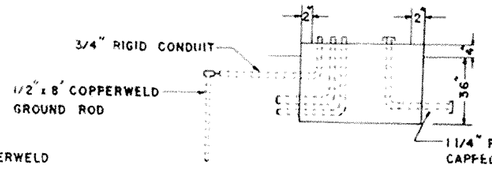


CONTROLLER POLE DETAIL

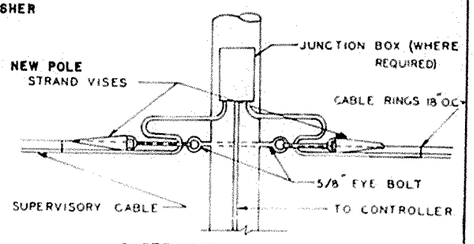


SPAN WIRE & NEW POLE DETAIL

2" RIGID CONDUIT (PROVIDE AS REQUIRED FOR SIGNAL CONDUCTORS AND INTERCONNECT CONDUCTORS, WITH MINIMUM OF 2).



CONTROLLER CABINET BASE DETAIL



SUPERVISORY CABLE DETAIL

SHEET 79

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

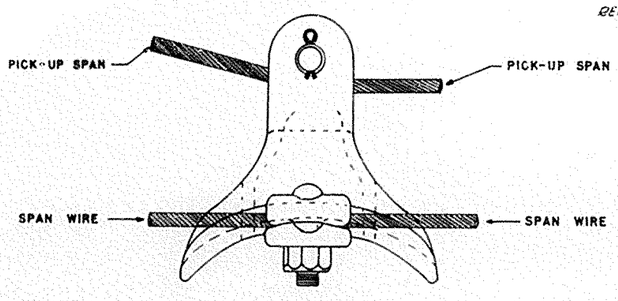
PROJECT BRS 431(8); SP 64 33 14 LI
LOUISA FORT GAY BRIDGE AND APPROACHES
LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA
ROAD

STATION 20+20.00 P.E. PROJECT NO.

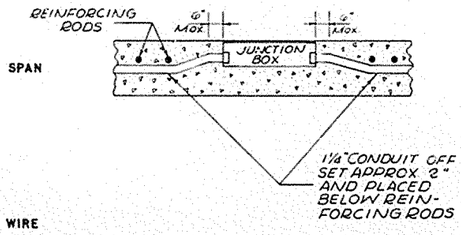
CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
		19592

BRIDGE

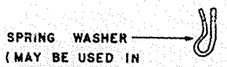
COUNTY OF	FISCAL YEAR	SHEET NO	TOTAL SHEETS
LAWRENCE			

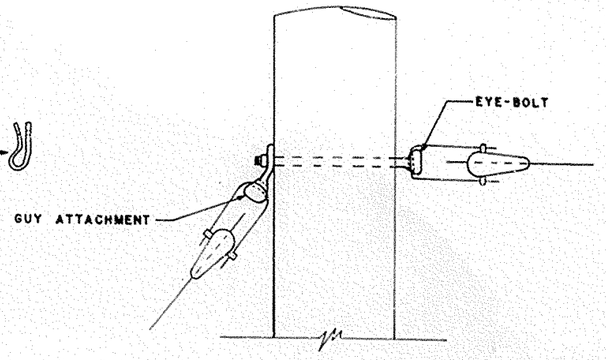


ANGLE CLAMP

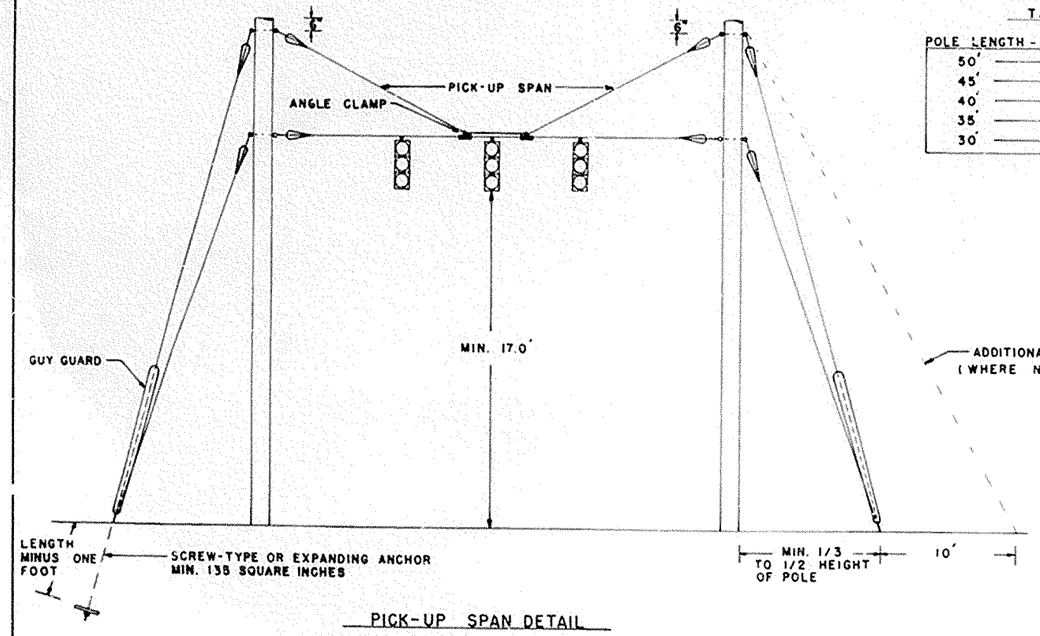


BRIDGE DECK JUNCTION BOX DETAIL





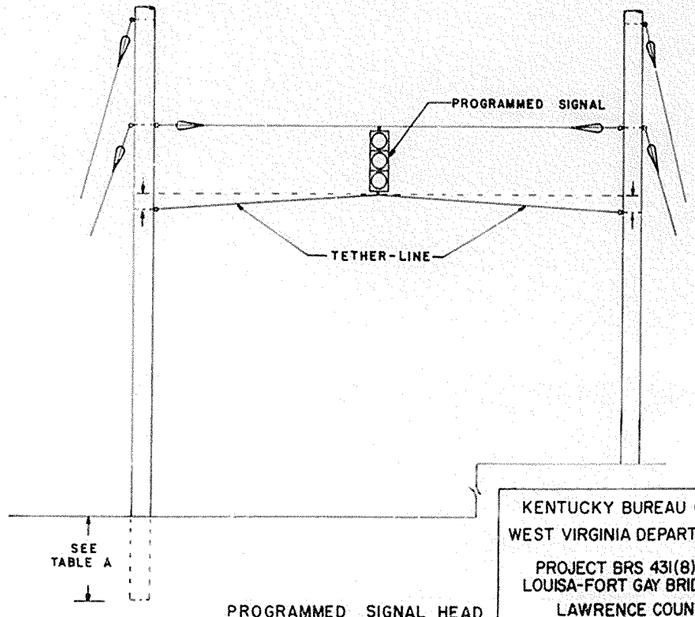
GUY ATTACHMENT



PICK-UP SPAN DETAIL

TABLE A

POLE LENGTH - GROUND TO BUTT	
50'	7'
45'	6 1/2'
40'	6'
35'	6'
30'	5 1/2'



PROGRAMMED SIGNAL HEAD DETAIL

SHEET 80

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD

STATION 20+20.00 P.E. PROJECT NO.

CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
		19592

TYPE A 7-13-73 FORM NO. 2

BRIDGE

DEPARTMENT OF TRANSPORTATION
UNITED STATES COAST GUARD

RECEIVED
JUN 20 1977
DIVISION OF BRIDGES
FRANKFORT, KENTUCKY

JUN 16 1977

Mr. [illegible]
Director of Highways
Department of Highways
Kentucky Department of Transportation
Frankfort, Kentucky 40601

Re: Proposed bridge across Levisa Fork of the Big Sandy River, mile 0.0, at Louisa, Kentucky, and Fort Gay, W.Va.

Dear Mr. [illegible]:

Your application of 8 December 1976 requesting approval of the location and plans for a proposed bridge across Levisa and Tug Forks at Mile 0.0 has been approved. Bridge Permit No. 31-77 dated 8 June 1977 is enclosed.

It is essential that we be kept informed of any events that might affect navigation during construction of the bridge. Your representative should be specifically instructed to keep this office informed of the progress of construction with particular reference to any and all events that may have an effect on navigation. The information received regarding the times will be disseminated to mariners by radio and by written notices.

Piers for cofferdams, temporary causeways, work bridges, falsework bents, or any other temporary structures that will be placed in the water to facilitate construction of the bridge must be approved by the District Commander. Construction of this bridge must be accomplished with minimal interference with navigation. To this end, construction schedules, plans, and methods should be submitted to us at the earliest possible time so that approval can be obtained prior to commencing work.

The U.S. Environmental Protection Agency, Region III; West Virginia Antiquities Commission; West Virginia Department of Natural Resources; and the Kentucky Department of Natural Resources and Environmental Protection have asked us to advise you that certain precautions should be taken during construction. A copy of each agency's letter, listing recommended conditions is enclosed. Also, the Huntington District Corps of Engineers has asked us to inform you that a Department of the Army Permit is required before any fill or dredged material is deposited at or below ordinary high water elevation in either waterway.

It has been determined that you will not be required to install navigation lights or vertical clearance gauges on the bridge at this time. Should conditions change so as to require a review of navigation needs, we will advise you.

Please acknowledge receipt of the Permit. If you have any questions concerning our publication of requirements, you can contact us at telephone no. (314) 425-4607.

Sincerely,

W. H. HARRINGMAN
Chief, Bridge Branch
By direction of the District Commander

Encls: (1) USCG Bridge Permit No. 31-77 of 8 June 1977
(2) Copy of U.S. EPA, Region III, letter of 24 February 1977
(3) Copy of W.V. Antiquities Commission letter of 3 February 1977
(4) Copy of W.V. Department of Natural Resources letter of 22 March 1977
(5) Copy of W.V. Department of Natural Resources and Environmental Protection letter of 7 December 1976

Copy to:
Corps, Huntington, Dist.
Div. Engr., Ohio River Div.
U.S. EPA, Region III
DNRA, W.V.
DNREA, K.Y. Dist.
W.V. Dist.10
K.Y. Dist.NR&EP

DEPARTMENT OF TRANSPORTATION
UNITED STATES COAST GUARD

BRIDGE PERMIT
(31-77)

8 JUN

WHEREAS by Title I of an act of Congress approved August 2, 1946, entitled "General Bridge Act of 1946," as amended (33 U.S.C. 525-533), the consent of Congress was granted for the construction, maintenance and operation of bridges and approaches thereto over the navigable waters of the United States;

AND WHEREAS, under Section 6(2)(B)(C) of that act, the authority of which was transferred to and vested in the Secretary of Transportation by Section 6(g)(1)(C) of the Department of Transportation Act (80 Stat. 937) and delegated by the Secretary to the Commandant, U. S. Coast Guard by Section 1.46(c) of Title 49 Code of Federal Regulations, it is required that the location and plans for such bridges be approved by the Commandant before construction is commenced and in approving the location and plans of any such bridge, the Commandant may impose any specific conditions relating to the construction, maintenance and operation of the structure which he deems necessary in the interest of public navigation, such conditions to have the force of law;

AND WHEREAS the COMMONWEALTH OF KENTUCKY, acting as construction agent for the Commonwealth of Kentucky and the State of West Virginia has submitted plans and a map of location of a bridge to be constructed across the Tug and Levisa Forks of the Big Sandy River between Louisa, Kentucky and Fort Gay, West Virginia;

NOW THEREFORE, This is to certify that the location and plan sheet 1 (of 2) dated 9 December 1976 and sheet 2 revised 18 January 1977 are hereby approved by the Commandant, subject to the following conditions:

1. No deviation from the approved plans may be made either before or after completion of the structure unless the modification of said plans has previously been submitted to and received the approval of the Commandant.

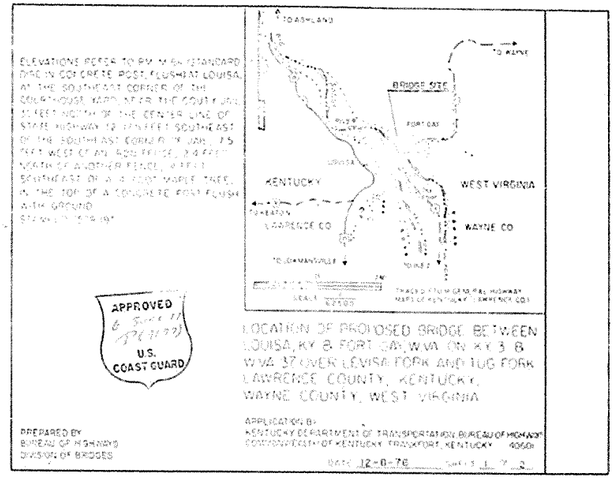
2. All work shall be so conducted that the free navigation of the waterways are not unreasonably interfered with and the present navigable depths are not impaired. The construction of falsework, pilings or other obstructions, if required, shall be accomplished in accordance with plans submitted to and approved by the Commander, Second Coast Guard District, prior to construction of the bridge. The channel or channels through the structure shall be promptly cleared of all obstructions placed therein or caused by the construction of the bridge to the satisfaction of the District Commander, whom in his judgment the construction work has reached a point when such action should be taken, but in no case later than ninety days after the bridge has been opened to traffic.

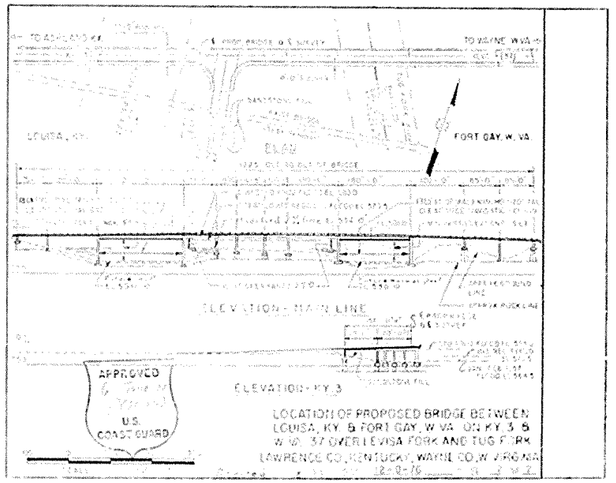
3. Issuance of this permit does not relieve the permittee of the obligation or responsibility for compliance with the provisions of any other law or regulation as may be under the jurisdiction of the U.S. Army Corps of Engineers, Huntington District; U.S. Environmental Protection Agency, Region III; Commonwealth of Kentucky, Department for Natural Resources and Environmental Protection; State of West Virginia, Department of Natural Resources; Antiquities Commission, or any other federal, state or local authority having cognizance of any aspect of the location, construction or maintenance of said bridge.

4. All parts of the existing to be replaced Kentucky Route 3 - west Virginia Route 37 bridge across the Tug and Levisa Forks of the Big Sandy River, mile 0.0, shall be removed down to or below the natural bottom of the waterways and the waterways cleared to the satisfaction of the District Commander. Such removal and clearance shall be completed within 90 days after the new bridge, mile 0.0 , has been opened to traffic. The proposed method and schedule for removal of the existing bridge shall be submitted to the District Commander for approval prior to commencing such removal.

5. The approval hereby granted shall cease and be null and void unless construction of the bridge is commenced within 3 years and completed within 5 years after the date of this permit.

R. T. HAZLETT
Captain, U.S. Coast Guard
Chief, Bridge Administration Division
By direction of the District Commander





SHEET 81

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD

STATION 20 + 20.00 P. E. PROJECT NO.

19592

U.S.C.G
PERMIT

FOR INFORMATION ONLY

BRIDGE

LETTING DATE

DEPARTMENT OF TRANSPORTATION
UNITED STATES COAST GUARD

MAILING ADDRESS: COMMANDER (obr) SECOND COAST GUARD DISTRICT 1430 OLIVE ST. ST. LOUIS, MO. 63103 PHONE: Tel: (314) 423-6607

RECEIVED
JUN 20 1977
DIVISION OF BRIDGES
FRANKFORT, KENTUCKY

16591.1/0.1 Levisa-Tug Frks

JUN 16 1977

Mr. Charles G. Cook, Director
Division of Bridges
Bureau of Highways
Kentucky Department of Transportation
Frankfort, KY 40601

Re: Proposed bridge across Levisa-Tug Forks of the Big Sandy River, Mile 0.1, at Louisa, KY -- Fort Gay, WV

Dear Mr. Cook:

Your application of 8 December 1976 requesting approval of the location and plans for a proposed bridge across Levisa and Tug Forks at Mile 0.1 has been approved. Bridge Permit No. 71-77 dated 6 June 1977 is enclosed.

It is essential that we be kept informed of any events that could affect navigation during construction of the bridge. Your representative should be specifically instructed to keep this office informed of the progress of construction with particular reference to any and all events that may have an effect on navigation. The information received regarding the work will be disseminated to mariners by radio and by written notices.

Plans for cofferdams, temporary causeways, work bridges, falsework bents, or any other temporary structures that will be placed in the water to facilitate construction of this bridge must be approved by this office. Construction of this bridge must be accomplished with minimal interference with navigation. To this end, construction schedules, plans, and erection schemes should be submitted to us at the earliest possible time so that approval can be assured prior to commencing work.

The U.S. Environmental Protection Agency, Region III; West Virginia Antiquities Commission; West Virginia Department of Natural Resources; and the Kentucky Department of Natural Resources and Environmental Protection have asked us to inform you that certain precautions should be taken during construction; a copy of each agency's letter listing recommended conditions is enclosed. Also, the Huntington District Corps of Engineers has asked us to inform you that a Department of the Army Permit is required before any fill or dredged material is deposited at or below ordinary high water elevation in either waterway.

It has been determined that you will not be required to install navigation lights or vertical clearance gauges on the bridge at this time. Should conditions change so as to require a review of navigation needs, we will advise you.

Please acknowledge receipt of the Permit. If you have any questions concerning our jurisdiction or requirements, you can contact us at telephone no. (314) 423-6607.

Sincerely,

S. R. THOROUGHMAN
Chief, Bridge Branch
By direction of the District Commander

Encls: (1) USCG Bridge Permit No. 71-77 of 6 June 1977
(2) Copy of U.S. EPA, Region III, letter of 24 February 1977
(3) Copy of WV Antiquities Commission letter of 3 February 1977
(4) Copy of WV Department of Natural Resources letter of 22 March 1977
(5) Copy of KY Department of Natural Resources and Environmental Protection letter of 7 December 1976

Copy to:
Col E, Huntington Dist.
Div. Engr., Ohio River Div.
U.S. EPA, Region III
FHWA, WV
FHWA, KY Div.
WV DotNR
KY DotNR&EP

DEPARTMENT OF TRANSPORTATION
UNITED STATES COAST GUARD

MAILING ADDRESS: U.S. COAST GUARD WASHINGTON D.C. 20590 PHONE:

BRIDGE PERMIT
(71-77)

6 JUN 77

WHEREAS by Title V of an act of Congress approved August 2, 1946, entitled "General Bridge Act of 1946," as amended (33 U.S.C. 525-533), the consent of Congress was granted for the construction, maintenance and operation of bridges and approaches thereto over the navigable waters of the United States;

AND WHEREAS under Section 502(b) of that act, the authority of which was transferred to and vested in the Secretary of Transportation by Section 6(g)(6)(C) of the Department of Transportation Act (80 Stat. 931) and delegated by the Secretary to the Commandant, U. S. Coast Guard by Section 1.46(c) of Title 49 Code of Federal Regulations, it is required that the location and plans for such bridges be approved by the Commandant before construction is commenced and in approving the location and plans of any such bridge, the Commandant may impose any specific conditions relating to the construction, maintenance and operation of the structure which he deems necessary in the interest of public navigation, such conditions to have the force of law;

AND WHEREAS the - COMMONWEALTH OF KENTUCKY -, acting as construction agent for the Commonwealth of Kentucky and the State of West Virginia has submitted plans and a map of location of a bridge to be constructed across the Tug and Levisa Forks of the Big Sandy River between Louisa, Kentucky and Fort Gay, West Virginia;

NOW THEREFORE, this is to certify that the location and plan sheet 1 (of 2) dated 8 December 1976 and sheet 2 revised 18 January 1977 are hereby approved by the Commandant, subject to the following conditions:

1. No deviation from the approved plans may be made either before or after completion of the structure unless the modification of said plans has previously been submitted to and received the approval of the Commandant.

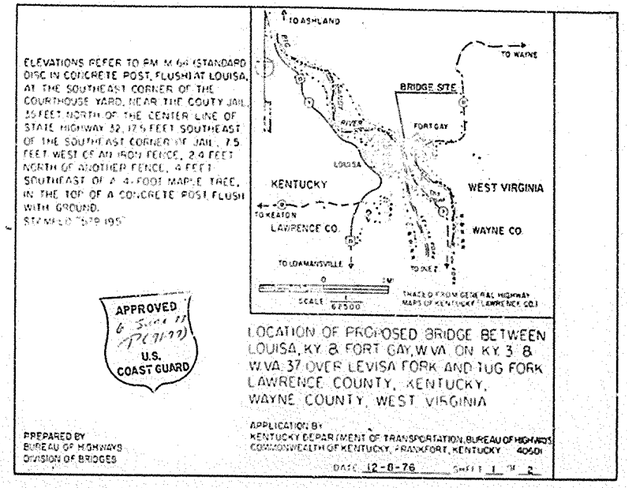
2. All work shall be so conducted that the free navigation of the waterways are not unreasonably interfered with and the present navigable depths are not lessened. The construction of falsework, pilings or other obstructions, if required, shall be accomplished in accordance with plans submitted to and approved by the Commander, Second Coast Guard District prior to construction of the bridge. The channel or channels through the structure shall be promptly cleared of all obstructions placed therein or caused by the construction of the bridge to the satisfaction of the District Commander, when in his judgment the construction work has reached a point where such action should be taken, but in no case later than ninety days after the bridge has been opened to traffic.

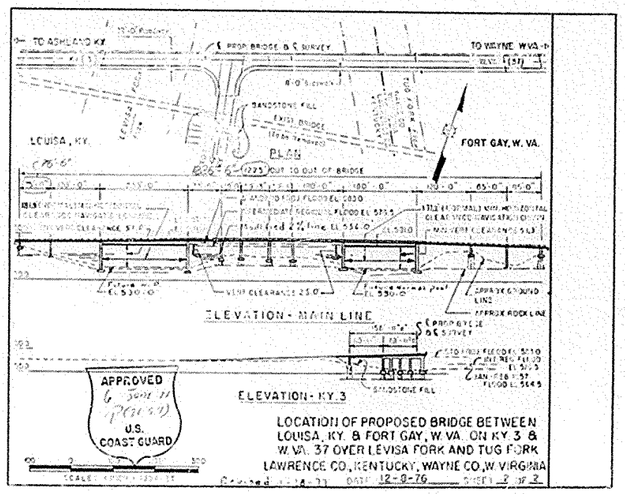
3. Issuance of this permit does not relieve the permittee of the obligation or responsibility for compliance with the provisions of any other law or regulation as may be under the jurisdiction of the U.S. Army Corps of Engineers, Huntington District; U.S. Environmental Protection Agency, Region III; Commonwealth of Kentucky, Department for Natural Resources and Environmental Protection; State of West Virginia: Department of Natural Resources; Antiquities Commission, or any other federal, state or local authority having cognizance of any aspect of the location, construction or maintenance of said bridge.

4. All parts of the existing to be replaced Kentucky Route 3 - West Virginia Route 37 Bridge across the Tug and Levisa Forks of the Big Sandy River, mile 0.12, shall be removed down to or below the natural bottom of the waterways and the waterways cleared to the satisfaction of the District Commander. Such removal and clearance shall be completed within 90 days after the new bridge, mile 0.1, has been opened to traffic. The proposed method and schedule for removal of the existing bridge shall be submitted to the District Commander for approval prior to commencing such removal.

5. The approval hereby granted shall cease and be null and void unless construction of the bridge is commenced within 3 years and completed within 5 years after the date of this permit.

R. D. HAMMOND
Captain, U.S. Coast Guard
Chief, Bridge Division
By direction of the Commandant





SHEET 81

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 431(8); SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES

LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA
ROAD

STATION 20+20.00 P. E. PROJECT NO.

CONSTRUCTION PROJECT NO	MAINTENANCE PROJECT NO	DRAWING NO
		19592

U.S.C.G
PERMIT

FOR INFORMATION ONLY

BRIDGE

DEPARTMENT OF THE ARMY
PERMIT

1

2

3

Charles Thayer 9/20/77

CORPS OF ENGINEERS PERMIT

SHEET 82

KENTUCKY BUREAU OF HIGHWAYS AND
WEST VIRGINIA DEPARTMENT OF HIGHWAYS

PROJECT BRS 43(6), SP 64-33-14 LI
LOUISA-FORT GAY BRIDGE AND APPROACHES
LAWRENCE COUNTY, KENTUCKY
WAYNE COUNTY, WEST VIRGINIA

ROAD
FED. PROJECT NO.

FRANKLAND AND LIENHARD

BRIDGE