

PLANS BY: ODELL, WRIGHT, MORGAN AND BROWN, INC.

* BILL OF INCIDENTAL MATERIAL		
ITEM	NO.	SIZE & LOCATION
Preformed Jt. Sealer	2	1 3/4" x 2" x 77'-6" for 1" Exp. Joint
Joint Sealing Compound	2	1 x 3 1/2" x 76'-6" @ Exp. Dams
" " "	4	1" x 6 1/2" x 1'-3" @ Exp. Dams (Curb)
4 Bolt Insert Assembly	6	Nuts

STANDARD DRAWINGS

Standard Drawings listed below are the current edition and are to be used with these plans.
AE1-D, AE2-D, H117E, H150 B, 1740A, SF2B,
P212 AA, G393 F, AWS 2A

SPECIAL NOTES

Special Notes for Bridge Deck Construction for Westbound I-64 structure over U.S. 421.

SPECIAL PROVISIONS

- *30 B - For Membrane Curing of concrete Structure.
- *35-B - For Class 'AA' concrete.
- *37 B - For Preformed Compression Joint Seals.
- *77-B - For Styrene - Butadiene Protective Coating.
- *12 - For Joint Sealing Compound.
- *8-A - For Linseed Oil Protective Coating
- *79 - For Concrete Bridge Deck Finishing Machine
- *80A - For Blast Cleaning and Painting Structural Steel

1-64 OVER U.S. 421

SHEET 1 OF 22

COMMONWEALTH OF KENTUCKY

DEPARTMENT OF HIGHWAYS

FRANKFORT

COUNTY OF _____

WOODFORD

LOUISVILLE-LEXINGTON-CATLETTSBURG

ROAD T 64 4(15) 56

STATION 3007+66.50 I-64 = 50+00.00 US 421 **PROJECT NO.** SP.120-455

BRIDGE	DRAWING NO.	IN
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BRIDGE NUMBER	17619
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[illegible]

DESIGNED BY: JB

CHECKED BY: PCW

DATE: _____

REVISED: _____

DATE: _____

REVISED: _____

DATE: _____

REVISED: _____

DATE: _____

REVISED: _____

DATE: _____

REVISED: _____

GENERAL NOTES

SPECIFICATIONS: THE KENTUCKY DEPARTMENT OF HIGHWAYS STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, CURRENT EDITION AND REVISIONS, SHALL APPLY TO THIS PROJECT.

DESIGN LOAD: THIS BRIDGE IS DESIGNED FOR HS 20-44 LIVE LOAD AS SPECIFIED IN 1969 AASHTO SPECIFICATIONS, INCLUDING INTERIM SPECIFICATIONS OR ALTERNATE LOADING OF HWY 20. ALL AXES SPACED FOUR FEET APART, WHICHEVER PRODUCES THE GREATER STRESS. THIS BRIDGE IS DESIGNED FOR A WIND LOAD BASED ON A WIND VELOCITY OF 84 M.P.H.

DESIGN STRESSES: FOR REINFORCED CONCRETE

CLASS "A"		CLASS "AA" ITEMS 1 AND II	
f_s	= 20,000 PSI	f_s	= 20,000 PSI
f_c	= 1,200 PSI	f_c	= 1,200 PSI FOR DECK SLAB
f_b	= 3,000 PSI	f_b	= 4,000 PSI
n	= 10	n	= 8
u	= 200 PSI FOR EMBEDMENT	u	= 200 PSI FOR EMBEDMENT
u	= 300 PSI FOR ξ_o	u	= 300 PSI FOR ξ_o
f_c	= 300 PSI FOR ξ_o	f_c	= 1,600 PSI FOR OTHER THAN DECK SLABS

FOR STRUCTURAL STEEL
 f_s = 20,000 PSI FOR A36

FOUNDATION PRESSURE: FOOTINGS ARE DESIGNED FOR A MAXIMUM PRESSURE OF 10,590 P.S.F. PILES ARE DESIGNED FOR A MAXIMUM AXIAL LOAD OF 18 TONS PER PILE AND A MAXIMUM HORIZONTAL SHEAR OF 0.8 TONS PER PILE. THESE MAXIMUMS ARE FOR GROUP I LOADS WITH INCREASES ALLOWED FOR OTHER LOADING GROUPS.

REINFORCEMENT: DIMENSIONS SHOWN FROM THE FACE OF CONCRETE TO BARS ARE CLEAR DISTANCE UNLESS OTHERWISE SHOWN. SPACING OF BARS IS FROM CENTER TO CENTER OF BARS.

BEVELLED EDGES: ALL EXPOSED EDGES SHALL BE BEVELLED 7/8" UNLESS OTHERWISE SHOWN.

BILL OF INCIDENTAL MATERIAL: THE QUANTITIES SHOWN IN THE BILL OF INCIDENTAL MATERIAL ARE APPROXIMATE ONLY AND THE CONTRACTOR IS RESPONSIBLE FOR FURNISHING ENOUGH MATERIAL TO COMPLETE THE WORK IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. THE COST OF THESE ITEMS IS TO BE INCLUDED IN THE UNIT PRICE BID FOR CLASS "AA" CONCRETE, ITEM II

PAYMENT FOR STRUCTURAL STEEL: THE LUMP SUM BID FOR STRUCTURAL STEEL SHALL BE FULL PAYMENT FOR ALL STRUCTURAL STEEL, BOLTS, WASHERS, STEEL PINS, LEAD PLATES, MOLTEN LEAD, WELDING AND WELDING MATERIALS, PAINT AND ALL LABOR AND MATERIALS NECESSARY TO ERECT THE STEEL IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. THE APPROXIMATE WEIGHT OF STRUCTURAL STEEL SHOWN IN THE ESTIMATE OF QUANTITIES DOES NOT INCLUDE OVERRUN OR WELD MATERIAL.

FILING: PILING SHALL BE DRIVEN TO REFUSAL OR TO SOLID ROCK. TEST PILES SHALL BE DRIVEN WHERE DESIGNATED IN THE PLANS. DETERMINING THE LENGTH OF PILES REQUIRED FOR ALL TEST PILES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER RECORDING OF ALL TEST PILES. THE CONTRACTOR SHALL USE STANDARD 12" STRUCTURAL STEEL BEARING PILES @ 53" THROUGHOUT. SEE STANDARD DRAWING F212A, CURRENT EDITION.

PAINT: ALL STRUCTURAL STEEL SHALL BE CLEANED AND PAINTED IN ACCORDANCE WITH THE SPECIAL PROVISION FOR BLAST CLEANING AND PAINTING STRUCTURAL STEEL, CURRENT EDITION.

TEMPORARY SUPPORTS: TEMPORARY SUPPORTS OR SHORING WILL NOT BE PERMITTED UNDER THE GIRDERS WHEN POURING THE CONCRETE FLOOR SLAB OR WHEN TAKING TOP OF STEEL ELEVATIONS.

CONNECTIONS: UNLESS OTHERWISE PROVIDED ON THE PLANS, ALL CONNECTIONS SHALL BE MADE USING 7/8" DIAMETER HIGH STRENGTH BOLTS. OPEN HOLES SHALL BE 15/16" DIAMETER. ALL JOINTS ARE DESIGNED AS FRICTION TYPE CONNECTIONS. INSTALLATION SHALL BE BY THE TURN-OF-NUT METHOD. WHEN THE WIDTH OF HIGH STRENGTH BOLT HEAD CORRESPONDS TO THAT OF THE HEAVY SEMI-FINISHED HEXAGON BOLT, ONLY ONE WASHER PER BOLT IS REQUIRED.

DIMENSIONS: DIMENSIONS ARE FOR A NORMAL TEMPERATURE OF 60 DEGREES FAHRENHEIT. LAYOUT DIMENSIONS ARE HORIZONTAL MEASUREMENTS.

OPTIONAL TYPES OF HANDRAIL: THE CONTRACTOR SHALL PROVIDE THROUGHOUT THE PROJECT, AT HIS OPTION, EITHER HIGH STRENGTH ALUMINUM HANDRAIL ACCORDING TO STANDARD DRAWING H117, CURRENT EDITION, OR HIGH STRENGTH CONCRETE HANDRAIL ACCORDING TO STANDARD DRAWING H150, CURRENT EDITION.

CONSTRUCTION IDENTIFICATION: THE NAMES OF THE PRIME CONTRACTOR AND THE SUB-CONTRACTOR SHALL BE IMPRINTED IN THE CONCRETE WITH ONE INCH LETTERS AT A LOCATION DESIGNATED BY THE ENGINEER. THE CONTRACTOR SHALL FURNISH ALL PLANS, EQUIPMENT AND LABOR NECESSARY TO DO THE WORK FOR WHICH NO DIRECT PAYMENT WILL BE MADE.

CONCRETE: Class A concrete is to be used in the substructures throughout below the bearing seats. Class AA concrete, Item I, in accordance with the Special Notes is to be used in the Westbound Superstructure below the top of curbs. Class AA concrete, Item II in accordance with the Special Provision 35, current edition is to be used in the plinths of the Westbound Superstructure, in all substructures above the bearing seats and throughout the Eastbound Superstructure. Class D concrete is to be used in the concrete handrail.

PROHIBITED FIELD WELDING: EXCEPT AS SHOWN ON THE PLANS, NO WELDING OF ANY NATURE SHALL BE PERFORMED ON THE LOAD-CARRYING MEMBERS OF THE BRIDGE WITHOUT THE WRITTEN CONSENT OF THE DIRECTOR, DIVISION OF BRIDGES, OR HIS AUTHORIZED REPRESENTATIVE, AND THEN ONLY IN THE MANNER AND AT THE LOCATION DESIGNATED IN THE AUTHORIZATION.

MATERIALS: ASTM SPECIFICATIONS, CURRENT EDITION, AS DESIGNATED BELOW SHALL GOVERN THE MATERIALS FURNISHED:

MATERIAL	ASTM DESIGNATION
STRUCTURAL STEEL	A36-69
HIGH STRENGTH CARBON STEEL BOLTS, NUTS & PLAIN HARDENED WASHERS	A325-68
SHEET PILE	B29-55 (1966)

ANCHOR BOLT HOLES: HOLES OF DEPTH AND DIMENSIONS SHOWN SHALL BE DRILLED FOR ANCHOR BOLTS OR DOWELS BY THE SUPERSTRUCTURE CONTRACTOR WHO SHALL BE RESPONSIBLE FOR KEEPING HOLES DRY IN FREEZING WEATHER. AFTER BASE PLATES ARE PROPERLY SET AND ANCHOR BOLTS ARE PLACED IN DRILLED HOLES, MOLTEN LEAD SHALL BE POURED IN HOLES AND PACKED UNTIL HOLES ARE COMPLETELY FILLED FLUSH TO TOP OF BASE PLATES. THE COST OF DRILLING ANCHOR BOLT HOLES, FURNISHING LEAD AND ANCHOR BOLT HOLES WITH MOLTEN LEAD SHALL BE INCIDENTAL TO AND INCLUDED IN THE LUM SUM BID FOR STRUCTURAL STEEL.

CAMBER: WEB PLATES SHALL BE CUT TO PROVIDE FOR PARABOLIC CAMBER OF THE GIRDER. PROVIDE FOR POSSIBLE WARPAGE DUE TO EXTRA HEAT IN TOP FLANGE BY VIRTUE OF SHEAR CONNECTORS. GIRDERS WHICH DO NOT CONFORM TO PLAN CAMBER AND GRADE IN THE ERECTED POSITION SHALL BE CONSIDERED AS REQUIRING, AT NO ADDITIONAL COST TO THE STATE, EITHER AN ADJUSTMENT IN DEPTH OF THE CONCRETE SLAB HAUNCH OVER THE STEEL SUPPORTING MEMBERS OR A REMARKING OF THE GIRDER CAMBER TO MEET THE PLAN GRADE AND SLAB THICKNESS.

SHOP ASSEMBLY: GENERAL REAMING OF HOLES FOR EACH BOLTED SPlice AND CONNECTION OF THE CONTINUOUS GIRDERS SHALL BE REQUIRED. EACH CONTINUOUS GIRDER UNIT SHALL BE COMPLETELY SHOP ASSEMBLED WITH PARTS ADJUSTED TO LINE, ELEVATION, AND CAMBER, FIT FOR DRILLING OR REAMING.

OTHER BOLTED CONNECTIONS TO THE GIRDERS SHALL BE DRILLED OR REAMED IN THE SHOP WITH CONNECTING PARTS ASSEMBLED. NO GIRDERS SHALL BE DRILLED OR REAMED TO A METAL TEMPLATE WITHOUT ASSEMBLY. GIRDERS SHALL BE ASSEMBLED FOR INSPECTION BY THE DEPARTMENT OF HIGHWAYS INSPECTOR AND ARE TO BE WATCHMARKED WHILE ASSEMBLED.

CONNECTIONS FOR THE CROSS FRAMES, DIAPHRAGMS, LONGITUDINAL BRACING, EXPANSION JOINTS AND OTHER MINOR MEMBERS MAY BE PUNCHED OR DRILLED FULL SIZE WITHOUT ASSEMBLY, SUBJECT TO THE REQUIREMENTS IN THE SPECIFICATIONS FOR GENERAL REAMING.

WELDING PROCEDURE: QUALIFICATION TESTS OF ALL WELDING PROCEDURES SHALL BE COMPLETED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER PRIOR TO THE FINAL APPROVAL OF THE SHOP DRAWINGS AND WELDING PROCEDURES AND THE START OF THE FABRICATION.

MILL TEST REPORTS: NOTARIZED TEST REPORTS IN TRIPPLICATE SHALL BE FURNISHED THE KENTUCKY DEPARTMENT OF HIGHWAYS SHOWING THAT ALL MATERIALS FURNISHED CONFORM TO THE SPECIFICATIONS.

STEEL FINISH: STEEL BEARING SURFACES IN CONTACT SHALL BE FINISHED IN ACCORDANCE WITH CURRENT SPECIFICATIONS.

SHOP PLANS: THE CONTRACTOR SHALL SUBMIT SHOP DETAIL PLANS IN ACCORDANCE WITH THE SPECIFICATIONS.

WELDING AND WELDING MATERIAL: WELDING AND WELDING MATERIAL SHALL CONFORM TO THE AMERICAN WELDING SOCIETY STANDARD "SPECIFICATIONS FOR WELDED HIGHWAY AND RAILWAY BRIDGES", AWS D2.0-66 AND KENTUCKY STANDARD DRAWING AWS 2, CURRENT EDITION.

CHANGES IN STRUCTURAL STEEL QUANTITIES: IN THE EVENT THAT CHANGES IN STEEL QUANTITIES ARE REQUIRED DUE TO CHANGES BY THE ENGINEER IN PLANS, ADDITIONAL PAYMENTS THEREFOR SHALL BE MADE AT A UNIT PRICE WHICH WILL BE EQUAL TO THE CONTRACT LUMP SUM PRICE DIVIDED BY THE ESTIMATED TOTAL WEIGHT.

PLAN ELEVATION FOR FOOTINGS: WHEN SUITABLE ROCK IS ENCOUNTERED AT A DATUM ELEVATION HIGHER THAN THE PLAN ELEVATION, THE HIGHER ELEVATION MAY BE UTILIZED FOR BEARING AS OUTLINED IN THE SPECIFICATIONS.

ELECTRICAL CONDUIT: THE LUMP SUM BID FOR THIS ITEM SHALL INCLUDE FURNISHING ALL JUNCTION BOXES, CONDUIT AND OTHER MATERIALS AND LABOR NECESSARY FOR PLACING THESE MATERIALS IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.

MEMBRANE CURING COMPOUND: WHITE PIGMENTED CURING COMPOUND SHALL BE APPLIED TO THE BRIDGE DECK IN ACCORDANCE WITH THE SPECIAL PROVISION, EXCEPT THAT THE MEMBRANE COMPOUND USED SHALL HAVE A RESINOUS BASE.

LINSEED OIL PROTECTIVE COATING: LINSEED OIL PROTECTIVE COATING SHALL BE APPLIED IN ACCORDANCE WITH THE SPECIAL PROVISION, EXCEPT THAT IT SHALL ONLY BE APPLIED TO THE BRIDGE DECK BETWEEN THE GUTTER LINES AND SHALL NOT BE APPLIED UNTIL AFTER THE STYRENE-BUTADIENE PROTECTIVE COATING HAS BEEN APPLIED TO THE CURBS AND PLINTHS.

FED. ROAD DIST.	STATE	FED. AID PRO. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	KY.				

1-64 OVER U.S. 421

SHEET 2

COMMONWEALTH OF KENTUCKY

DEPARTMENT OF HIGHWAYS

FRANKFORT

COUNTY OF

WOODFORD

LOUISVILLE-LEXINGTON-CATLETTSBURG

STATION 3007+66.50 I-64 = 50+00.00 U.S. 421

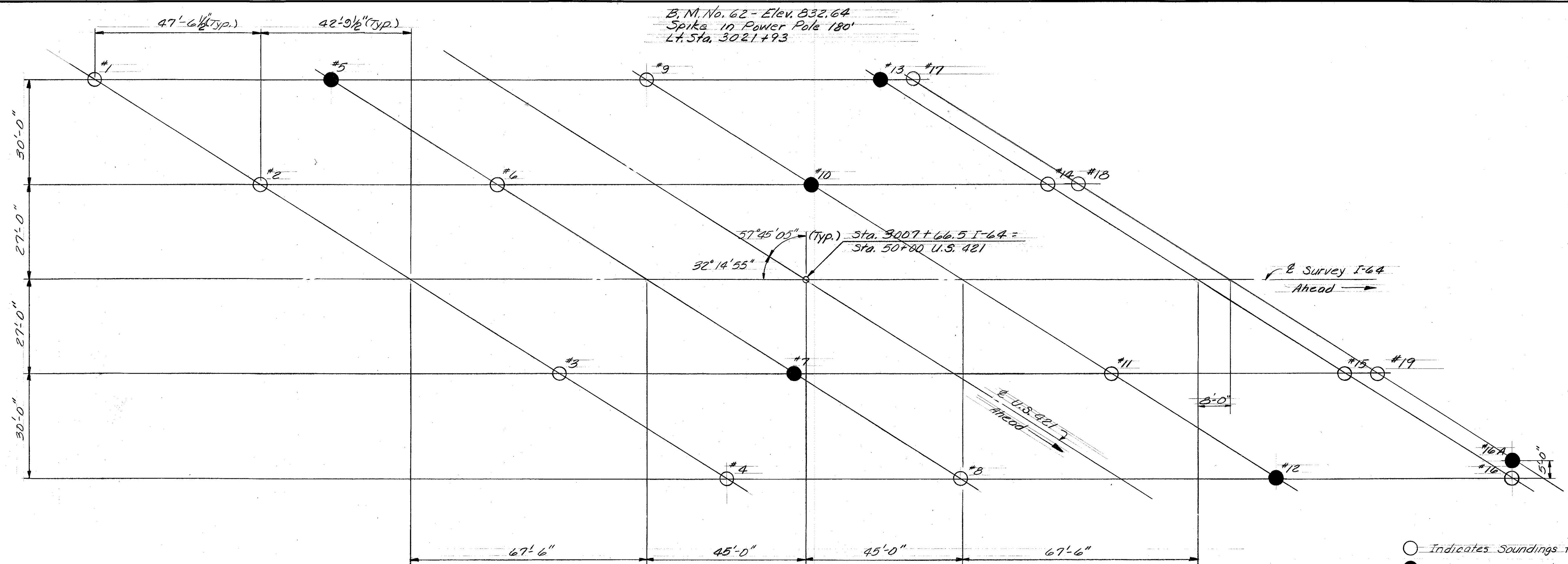
PROJECT NO.

BRIDGE NUMBER

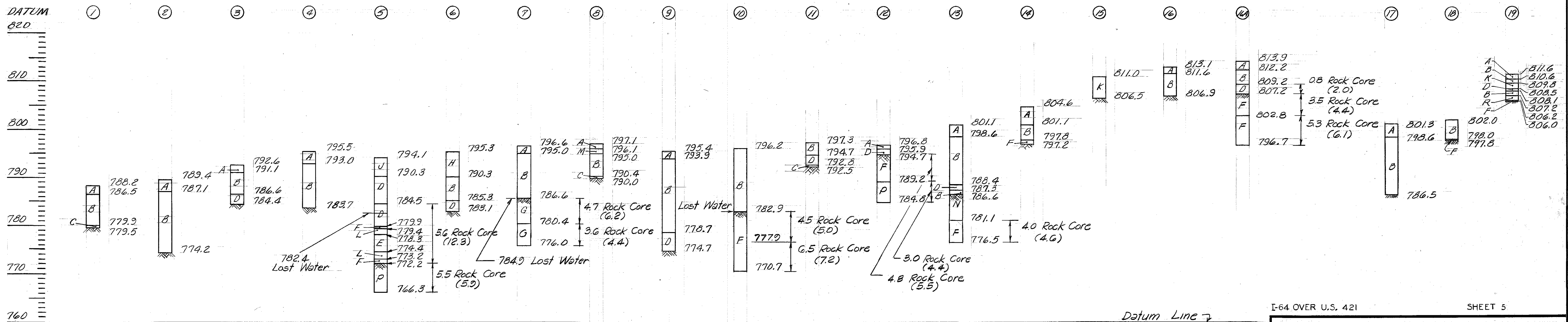
DRAWING NO. 17619

INDEX

NOTES



PLAN



ELEVATION

LEGEND

- | | | |
|--------------------------------|---------------------------------|-----------------------------------|
| A Sandy Soil | F Hard Rock | L Cavern |
| B Red Clay | G Hard Rock and mud or shale | M Loose Rock |
| C Ledges Rock | H Earth Fill | N Hard Rock and Clay |
| D Ledges Rock and Clay | J Earth Fill and Loose Boulders | P Hard Rock and Little Soft Shale |
| E Ledges Rock and mud or shale | K Earth and Thin Ledges Rock | R Soft Ledge Rock |

SOUNDINGS

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
WOODFORD
LOUISVILLE-LEXINGTON-CATLETTSBURG

3007+66.50 I-64= ROAD
STATION 50+0000 U.S. 421 PROJECT NO.

BRIDGE NUMBER 17619 INDEX

DESIGNED BY: JMW, SEC. DATE: 7/65
CHECKED BY: JMW, SEC. DATE: 7/65
TRACED BY: JMW, SEC. DATE: 7/65

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 piles in place, the calculated bearing capacity of each pile, and shall return one blue print copy of this sheet with this data to the Director of Bridges so that the data may be recorded on original plans. Length of piles in place shown hereon are actual length of piles in the finished structure below cut off elevations, and are not necessarily pay items.
12" B.P. 33" Steel Piles - For notes and details see Std. Drwg. P212 A See End Bent details, Sheet 8, for batter on piles.

PILE RECORD WESTBOUND LANES					
Location	Pile No.	Cutoff Elev. Shown	Tip of Pile Elevation as Driven	Pile Length in Place (Lin. Ft.)	Calculated Bearing Capacity (Tons)
End Bent 1W	1	809.11			
"	2	"			
"	3	"			
"	4	"			
"	5	"			
"	6	"			
"	7	"			
"	8	"			
"	9	"			
"	10	"			
"	11	"			
"	12	"			
"	13	"			
"	14	"			
"	15	"			
"	16	"			
"	17	"			
"	18	"			
"	19	"			
"	20	"			
"	21	"			
"	22	"			
End Bent 2W	23	810.08			
"	24	"			
"	25	"			
"	26	"			
"	27	"			
"	28	"			
"	29	"			
"	30	"			
"	31	"			
"	32	"			
"	33	"			
"	34	"			
"	35	"			
"	36	"			
"	37	"			
"	38	"			
"	39	"			
"	40	"			
"	41	"			
"	42	"			
"	43	"			
"	44	"			

W.R.E.I.W.
(See Sheet 3)

END BENT 1W

PLAN

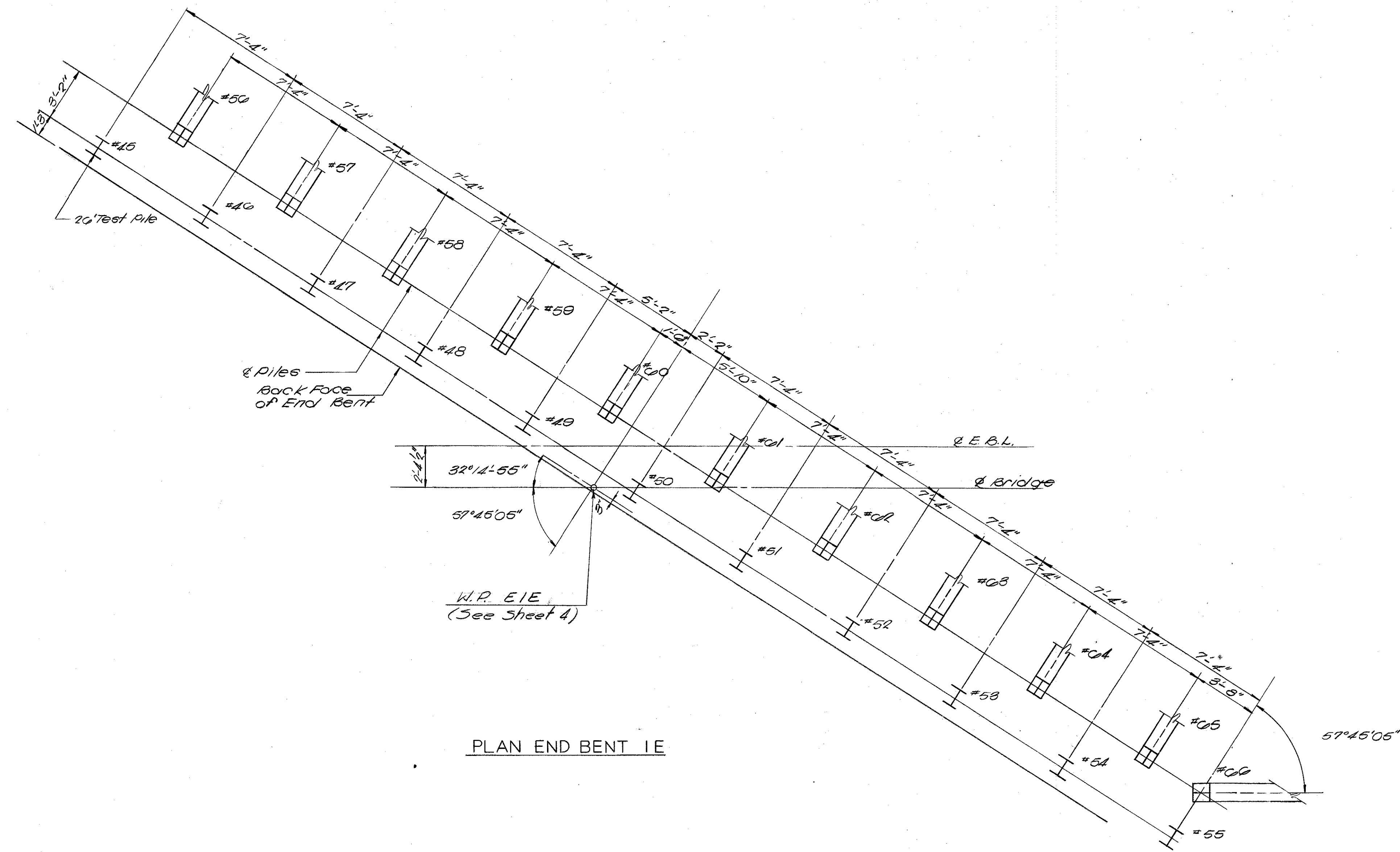
END BENT 2W

PILE RECORD
WESTBOUND LANES

I-64 OVER U.S. 421SHEET 6

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
WOODFORD
LOUISVILLE-LEXINGTON-CATLETTSBURG
ROAD
3007+66.50 I-64= STATION 5040000 U.S. 421 PROJECT NO.

BRIDGE NUMBER17619DRAWING NO. INDEX



PLAN END BENT IE

PILE RECORD EASTBOUND LANES					
Location	Pile No.	Cut-off Elevation Shown	Tip of Pile Elevation as driven	Pile length in Place (Lin. Ft.)	Calculated Bearing Capacity (Tons)
End Bent 1E	45	809.00			
"	46	"			
"	47	"			
"	48	"			
"	49	"			
"	50	"			
"	51	"			
"	52	"			
"	53	"			
"	54	"			
"	55	"			
"	56	"			
"	57	"			
"	58	"			
"	59	"			
"	60	"			
"	61	"			
"	62	"			
"	63	"			
"	64	"			
"	65	"			
"	66				

(For Note See Sheet 6)

DESIGNED BY _____	CHECKED BY _____	DATE _____	REVISED _____	DATE _____
DRAWN BY _____	CHECKED BY _____	DATE _____	REVISED _____	DATE _____
TRACED BY _____	CHECKED BY _____	DATE _____	REVISED _____	DATE _____

I-64 OVER 421 SHEET 7

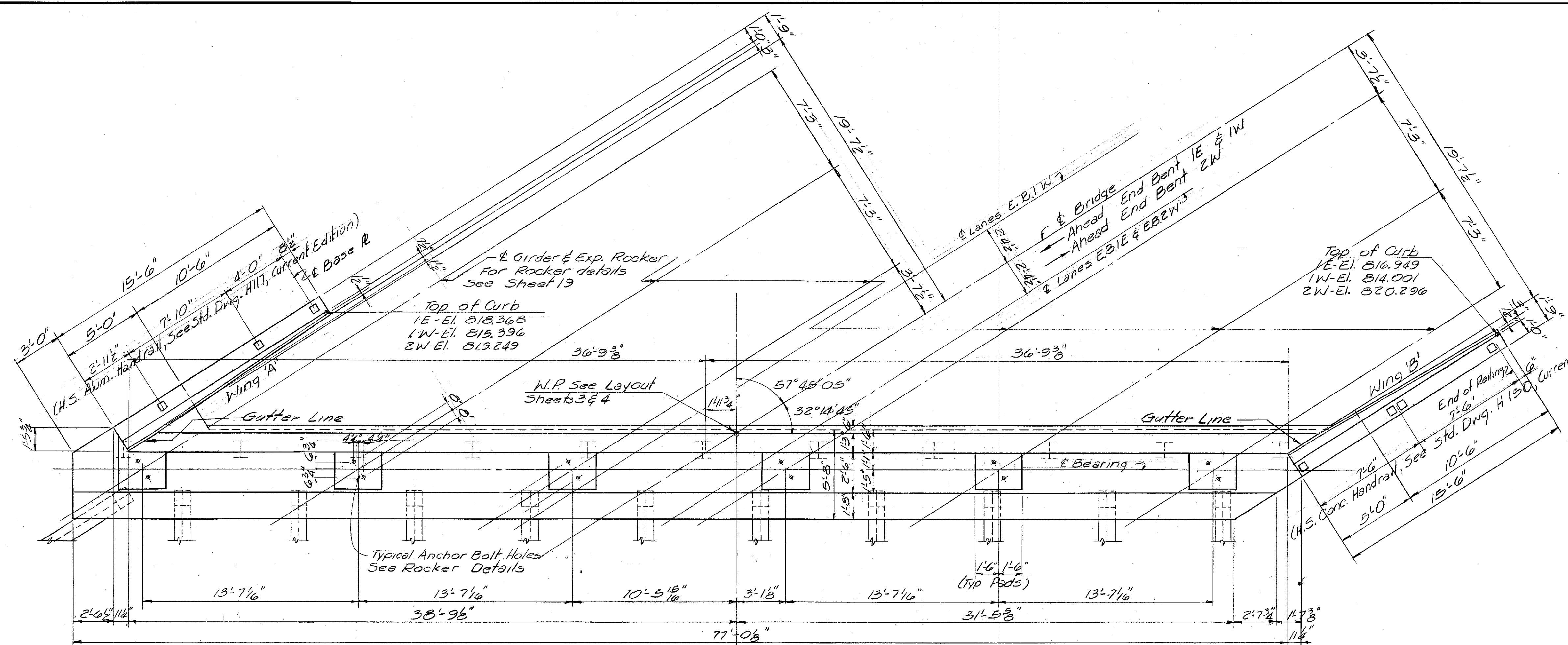
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
WOODFORD

LOUISVILLE-LEXINGTON-CATLETTSBURG

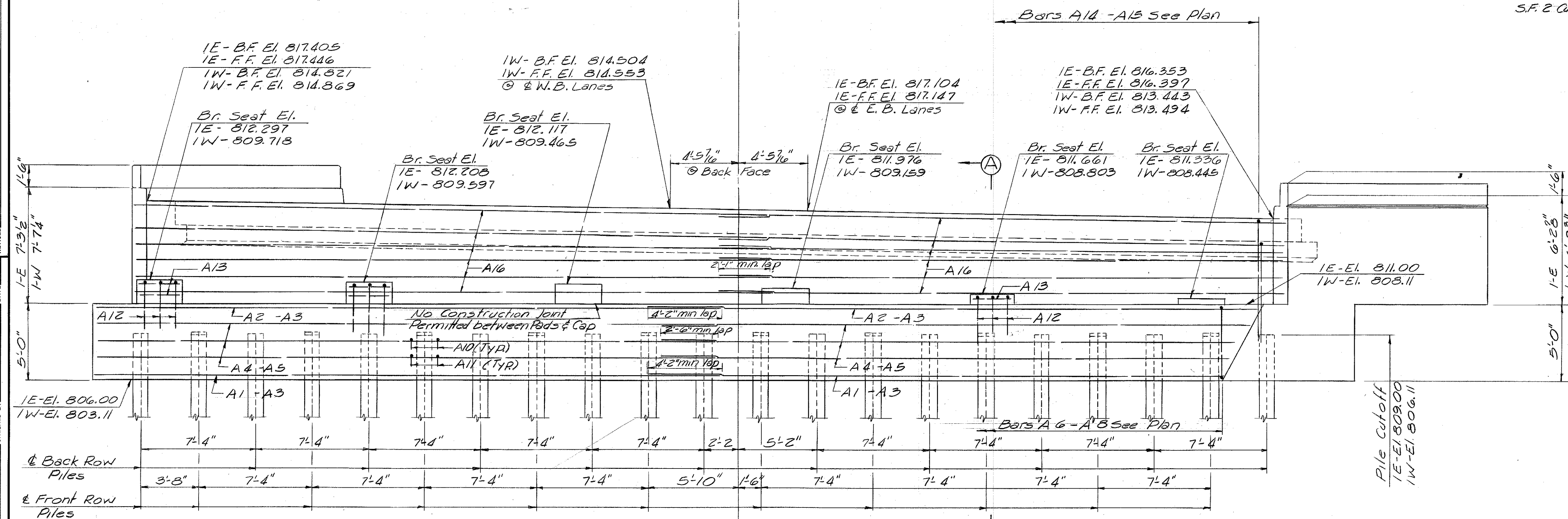
STATION 3007+66.50 I -64: ROAD PROJECT NO.

BRIDGE NUMBER	DRAWING NO. 17619	INDEX
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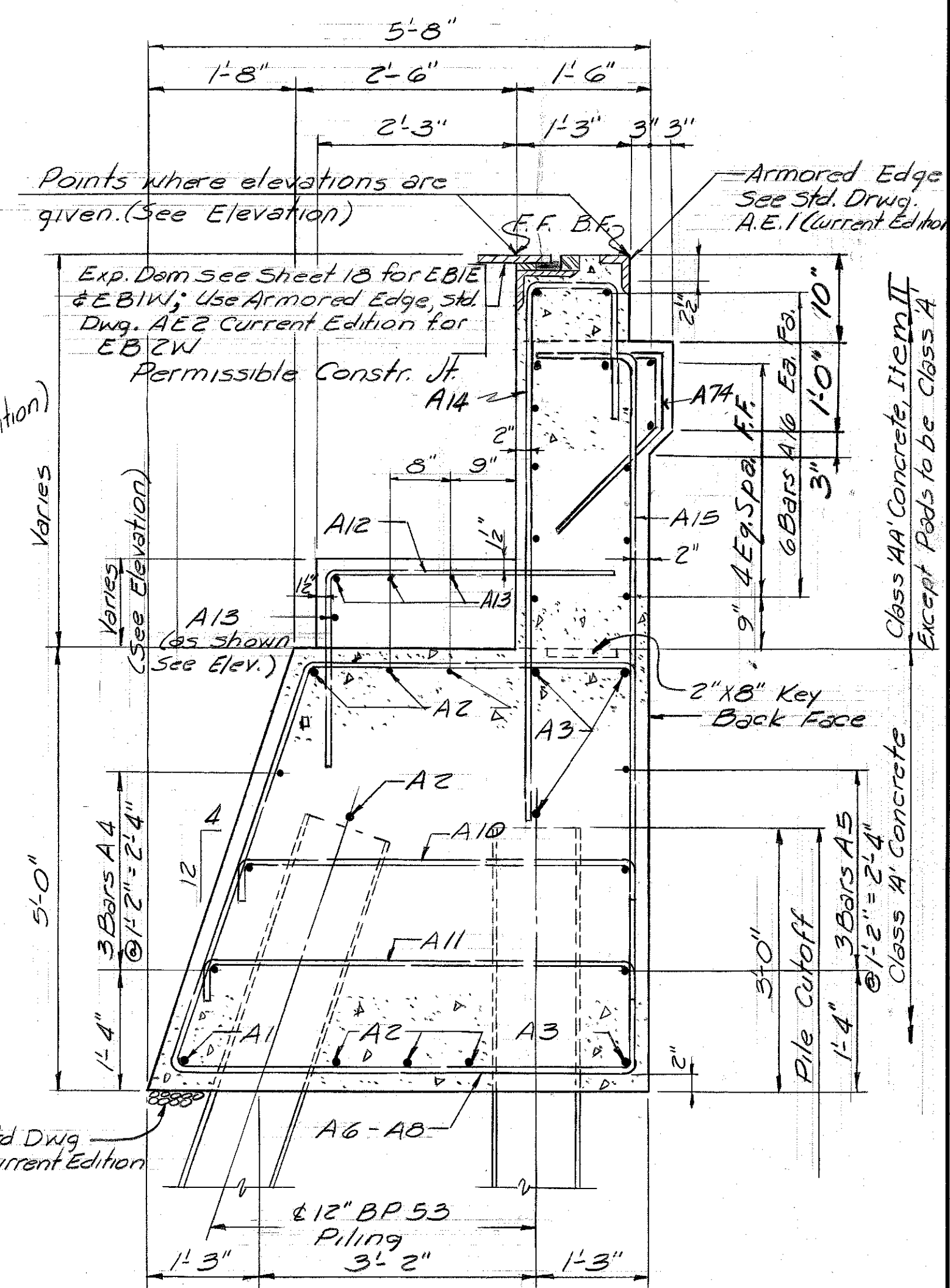
PILE RECORD EASTBOUND LANES



PLAN OF CAP
END BENTS IE, IW & 2W



ELEVATION END BENTS IE & IW



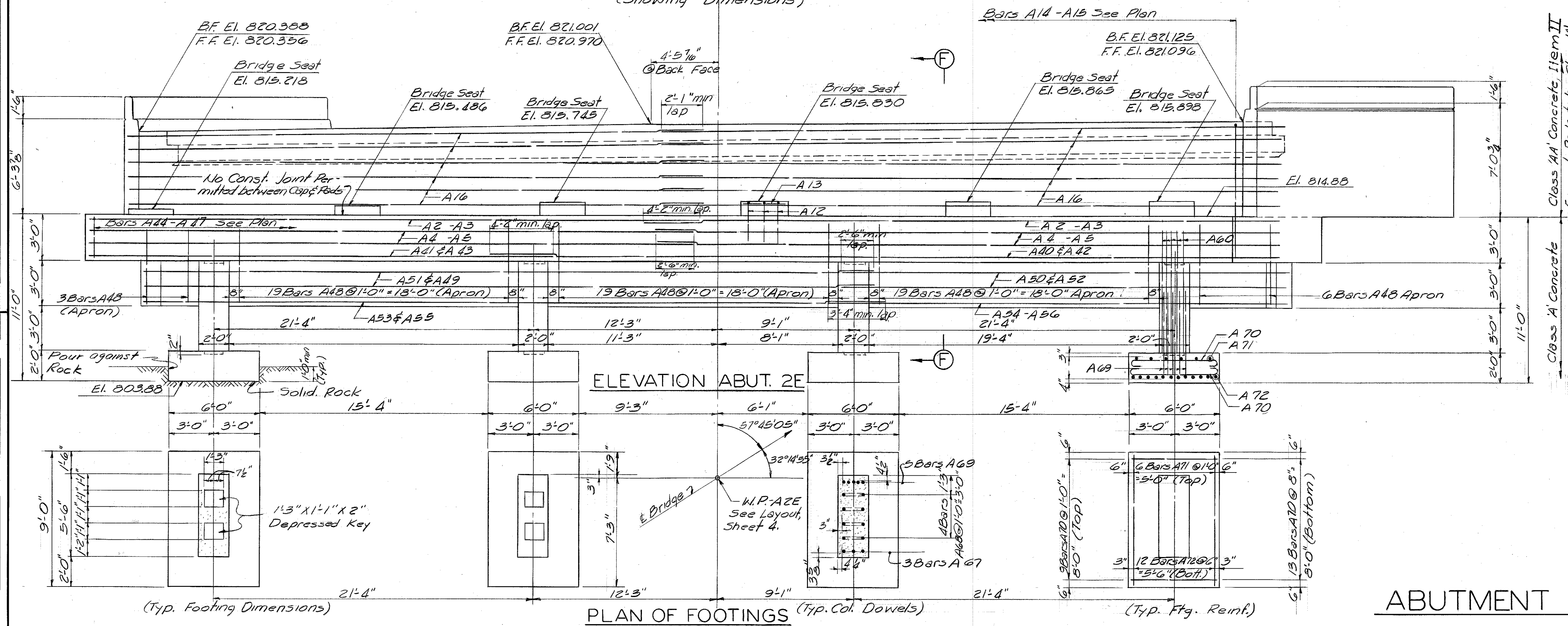
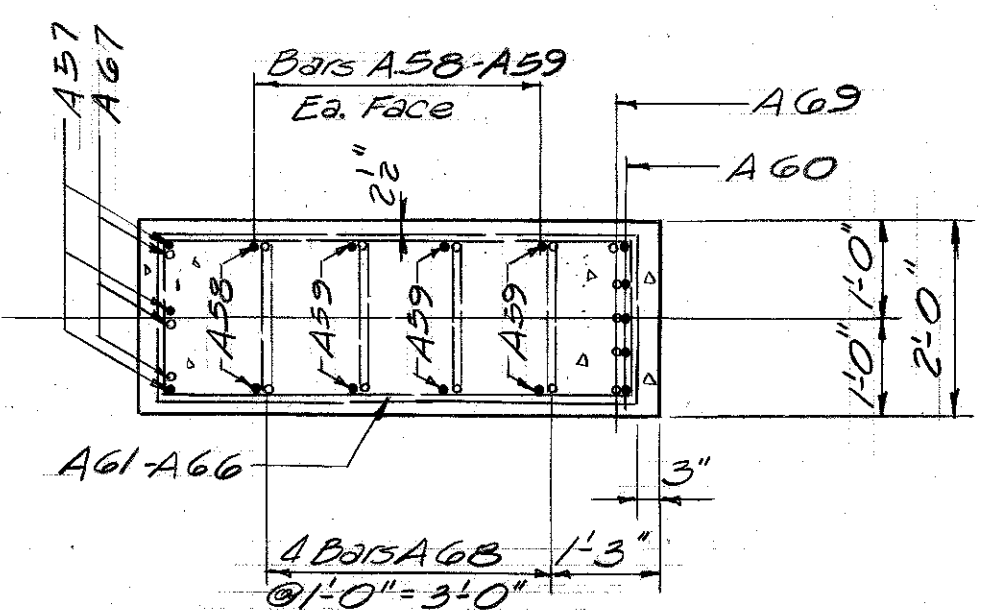
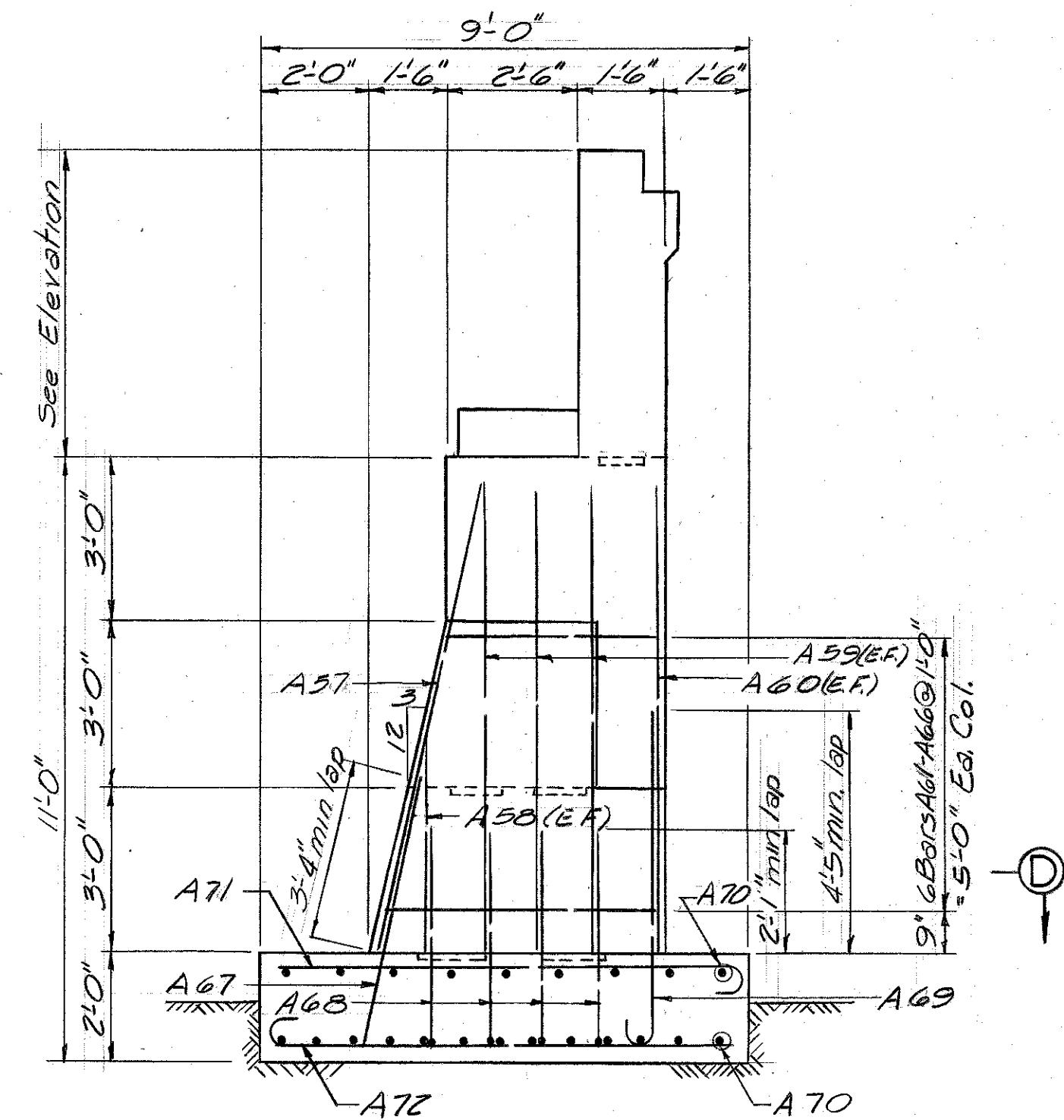
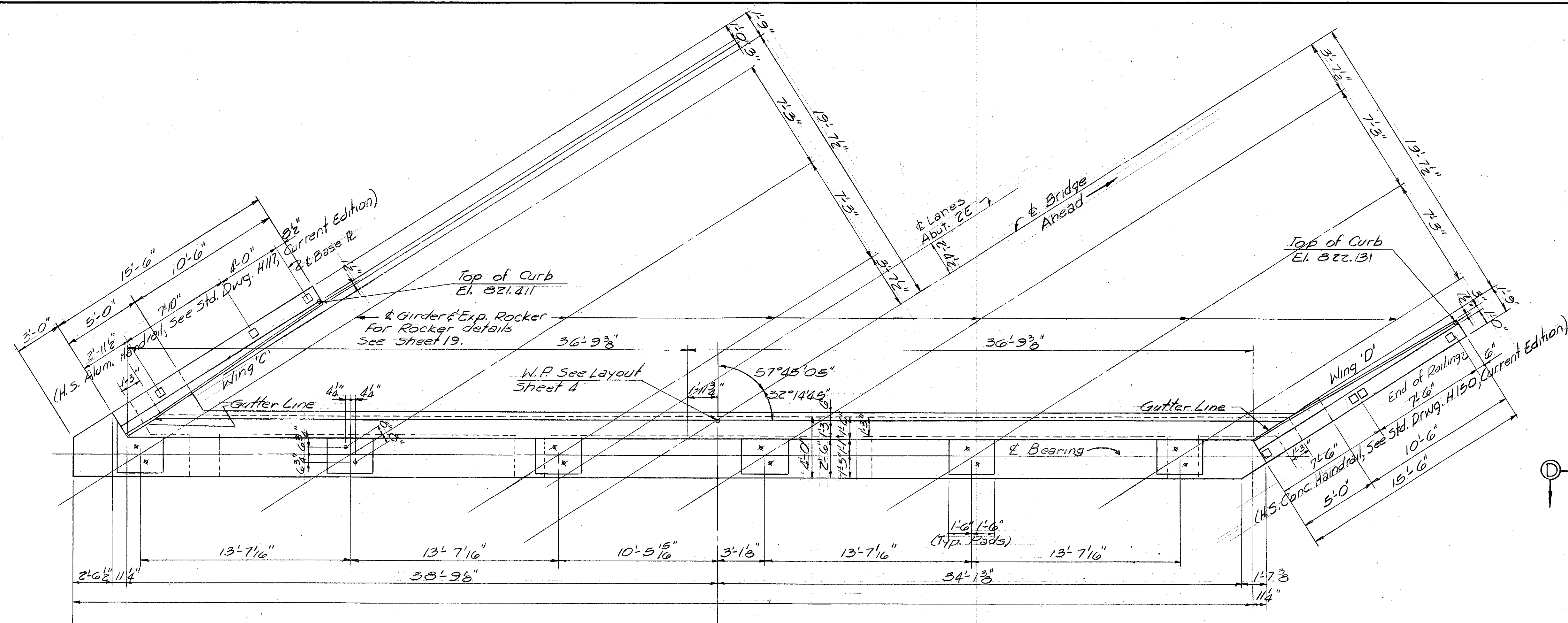
SECTION A-A

(12" BP 53 Piling, For notes and details see Std. Dwg. P212A, current Edition)

Class AA Concrete Item II
Except Pads to be Class A1

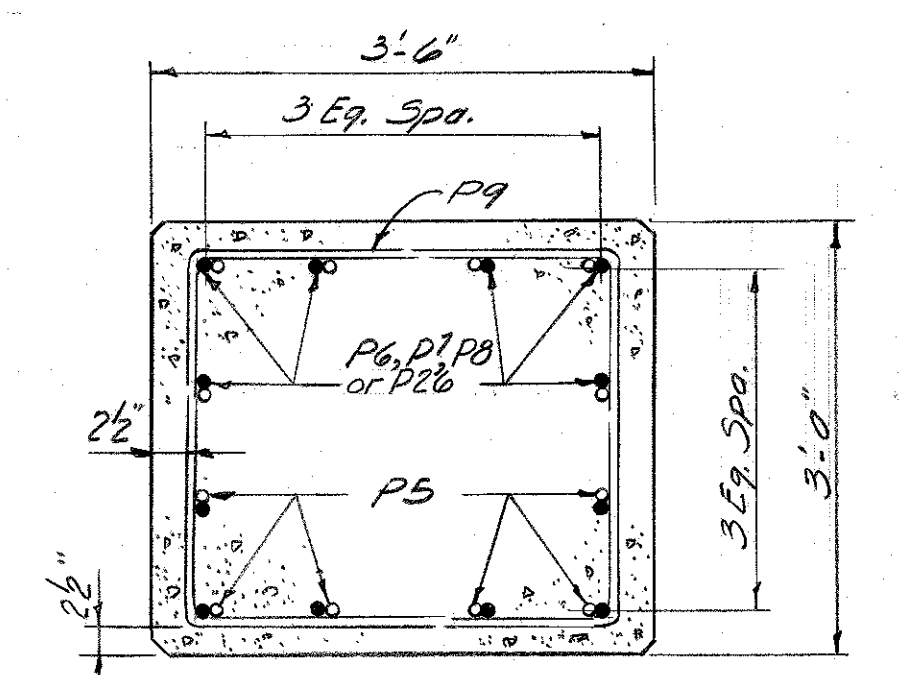
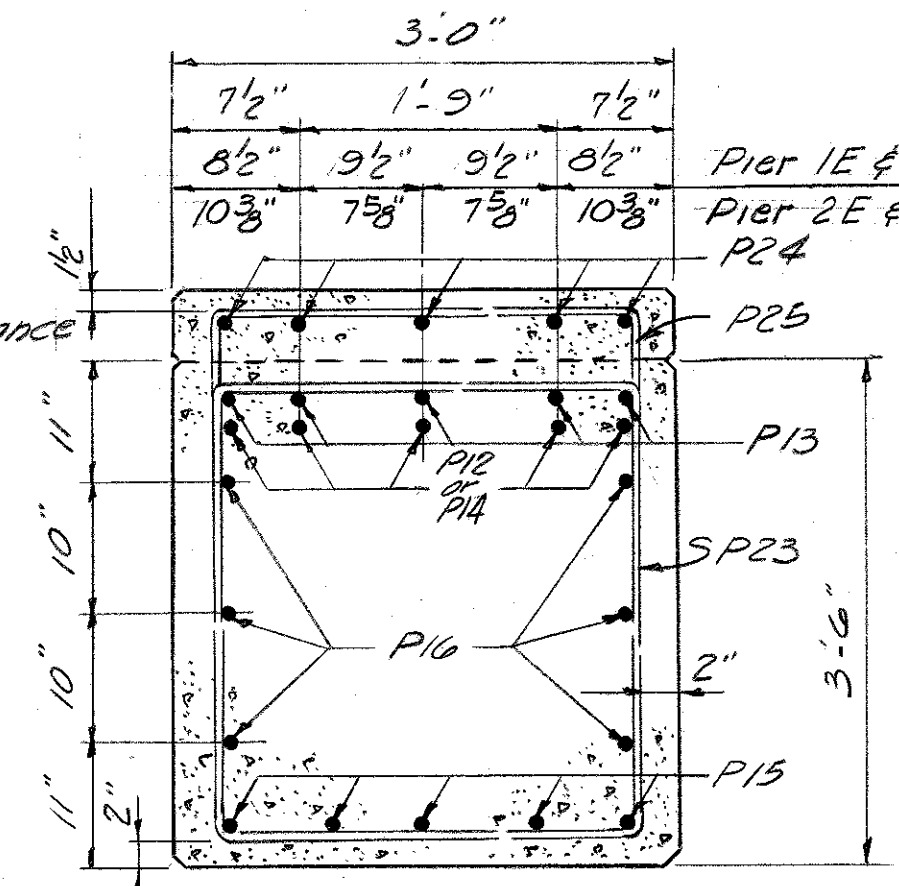
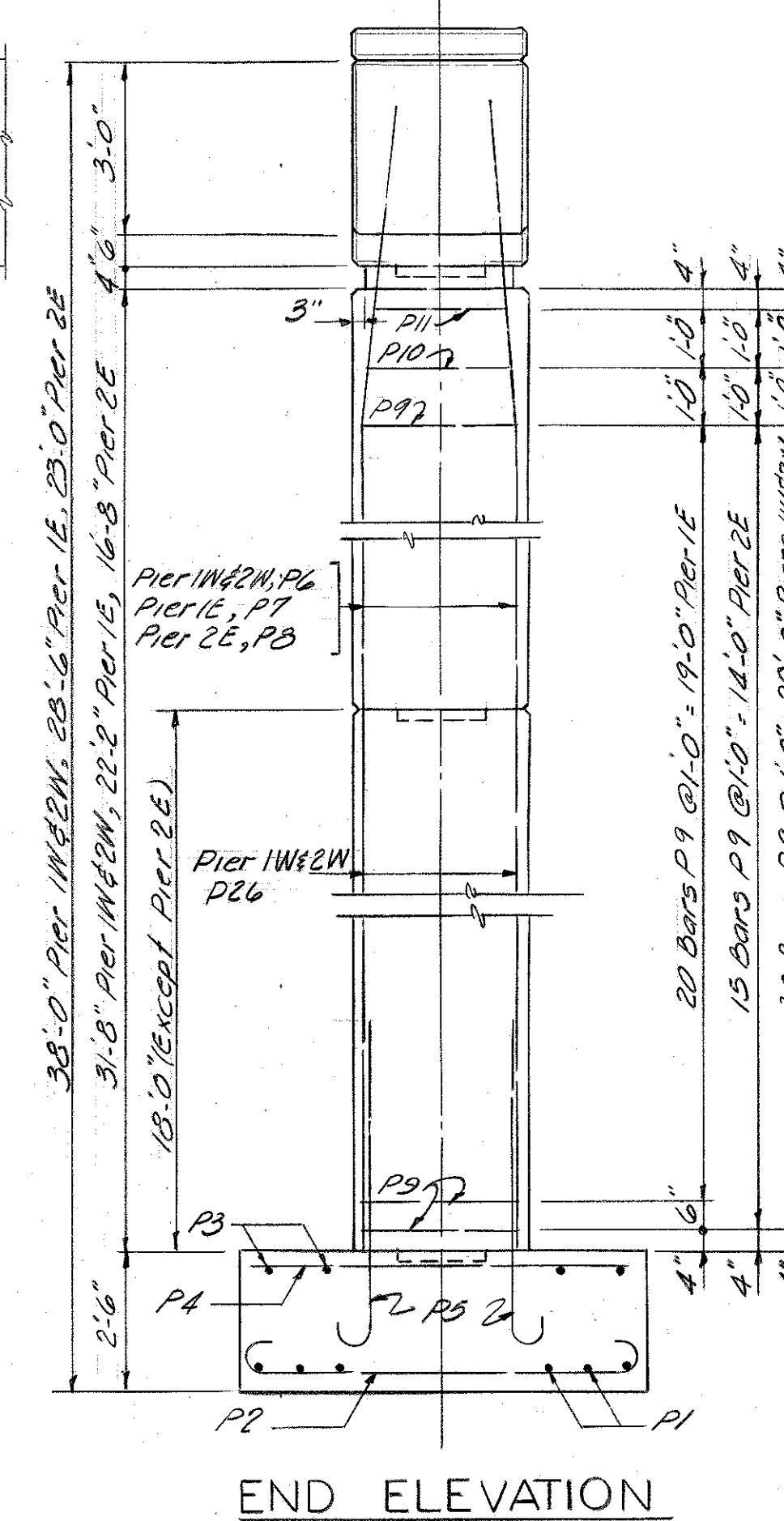
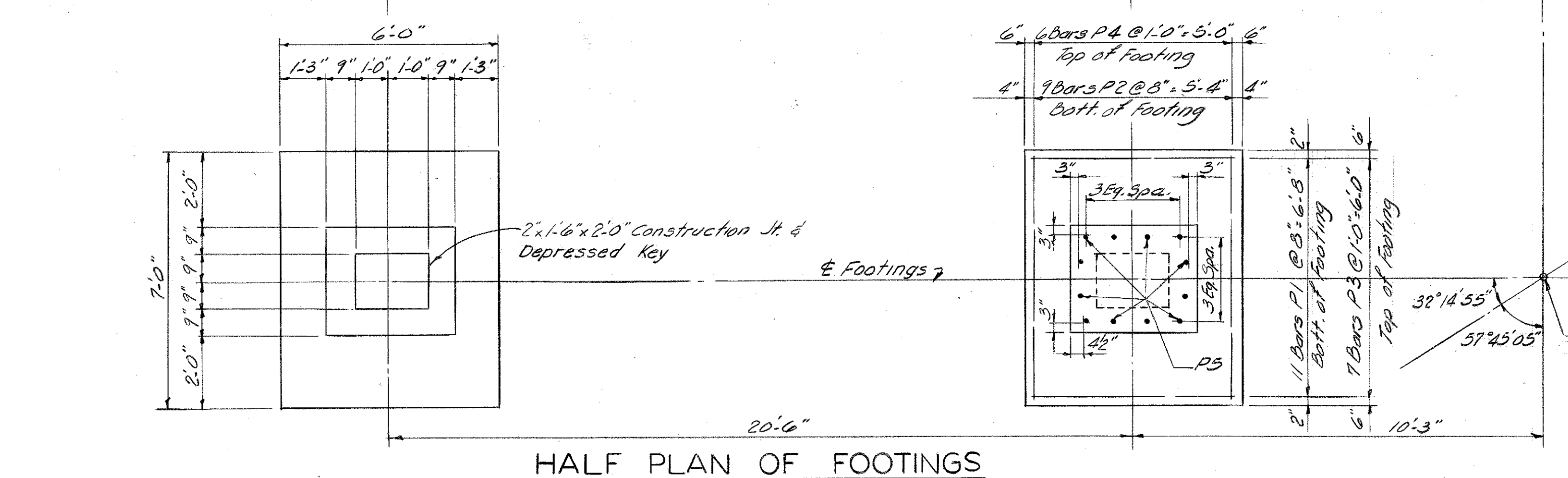
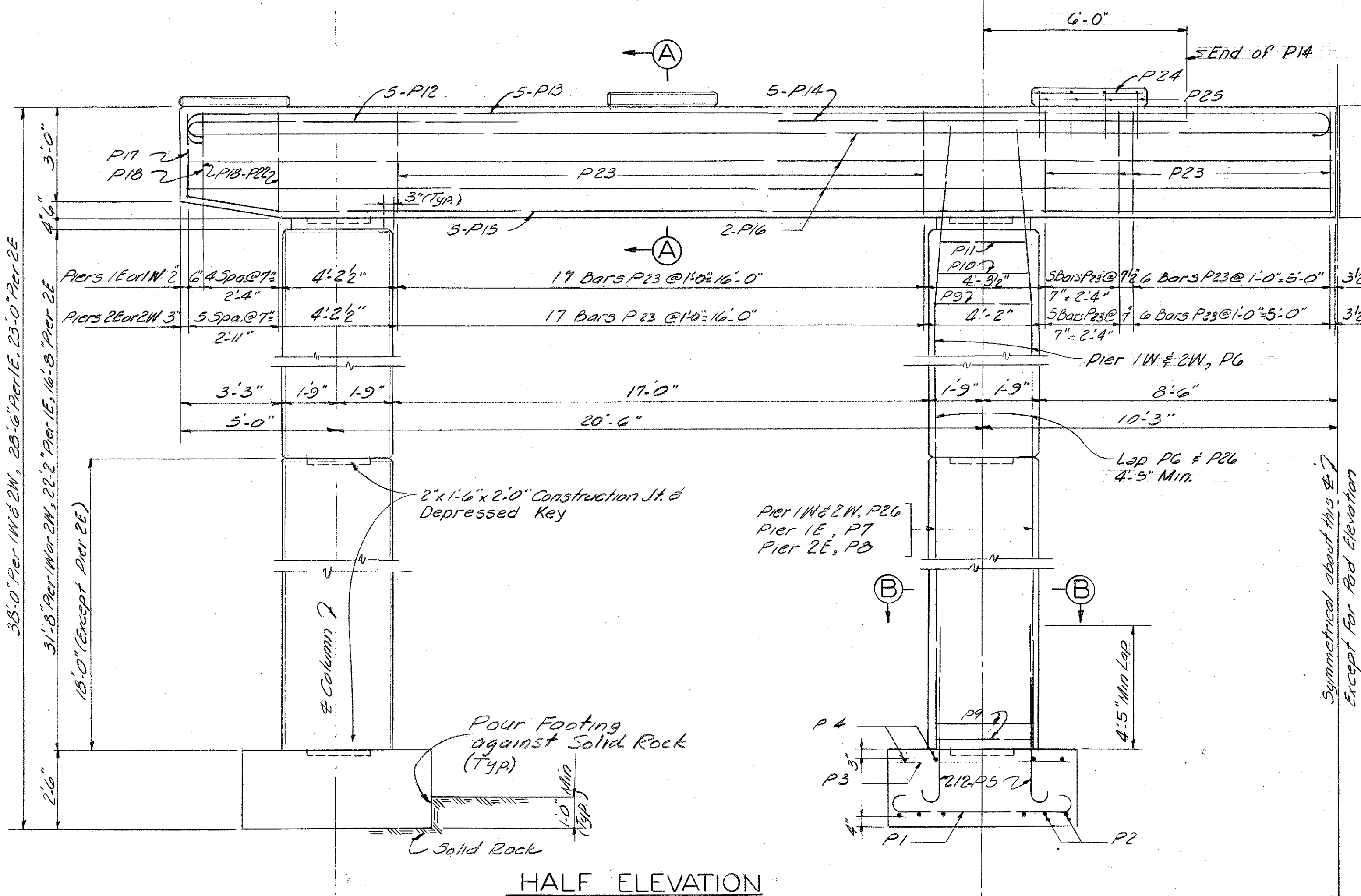
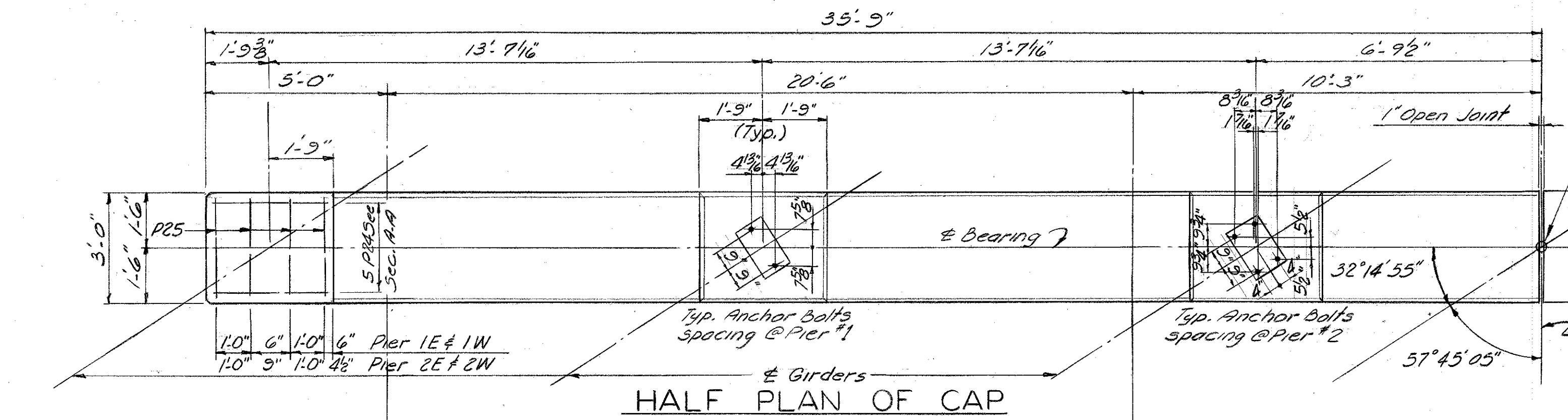
END BENTS

FED. ROAD DIST.	STATE	FED. AID PRO. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	KY.				



ABUTMENT 2E

DESIGNED BY: T.B. CHECKED BY: PFH
DATE: 2-26-69
REVISIONS: 1. DATE: 2-26-69
2. DATE: 2-26-69
3. DATE: 2-26-69



SECTION A-A

SECTION B-B

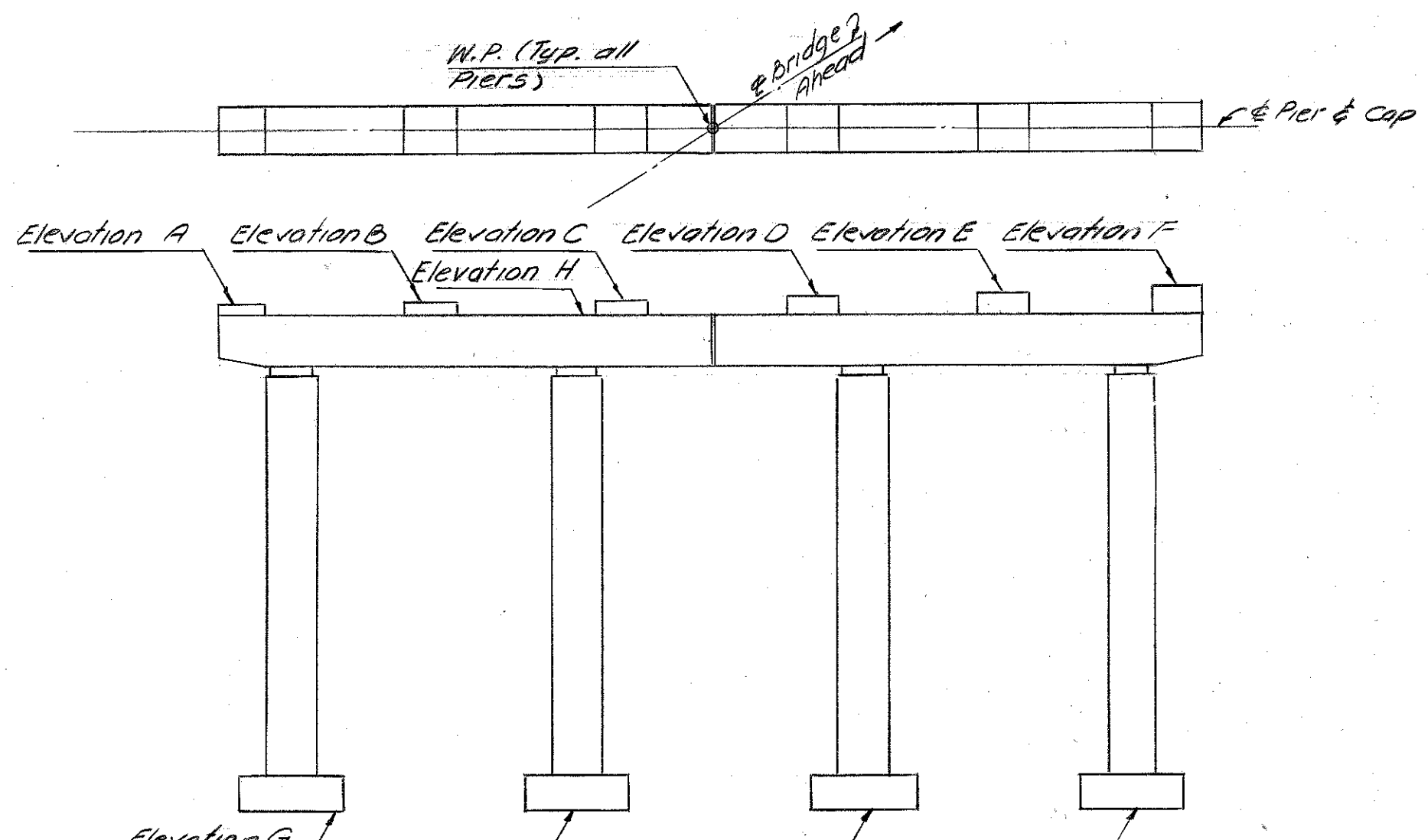


TABLE OF ELEVATIONS								
	A	B	C	D	E	F	G	H
Pier 1E	812.239	812.548	812.847	812.972	813.047	813.120	783.41	811.306
Pier 2E	813.308	814.192	814.467	814.568	814.619	814.668	790.58	813.575
Pier 1W	809.544	809.886	810.226	810.516	810.632	810.738	771.21	809.211
Pier 2W	811.507	811.825	812.140	812.400	812.498	812.580	773.17	811.174

ESTIMATE OF QUANTITIES

	Pier 1E	Pier 2E	Pier 1W	Pier 2W	
Concrete, Class "A"	80.1	71.4	95.3	95.1	Cu. Yds.
Reinforcement	12,601	11,702	14,675	14,675	Lbs.

PIERS

FED. ROAD DIST.	STATE	FED. AID PRO. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	KY.				

The diagrams illustrate various L-shaped and U-shaped metal profiles with the following dimensions and features:

- Type 1:** L-shaped profile with dimensions a (length), b (width), c (radius), and d (total length).
- Type 2:** U-shaped profile with dimensions a (length), b (width), c (radius), and d (total length).
- Type 3:** L-shaped profile with dimensions a (length), b (width), c (radius), and d (total length). It includes a note "6" lap" and a dimension of "4'-8" for the vertical leg.
- Type 4:** L-shaped profile with dimensions a (length), b (width), c (radius), and d (total length).
- Type 5:** U-shaped profile with dimensions a (length), b (width), and d (total length).
- Type 6:** L-shaped profile with dimensions a (length), b (width), and d (total length).
- Type 7:** L-shaped profile with dimensions a (length), b (width), c (radius), and d (total length).
- Type 8:** L-shaped profile with dimensions a (length), b (width), c (radius), and d (total length). It includes a note "6" lap" and a dimension of "4'-8" for the vertical leg.
- Type 9:** L-shaped profile with dimensions a (length), b (width), c (radius), and d (total length). It includes a note "6" lap" and a dimension of "4'-8" for the vertical leg.

	<u>End Bent 1E</u>	<u>Abut 2E</u>	<u>End Bent 1W</u>	<u>End Bent 2W</u>
Concrete Class AA, Item II	38.5	38.5	39.5	39.6
Concrete Class A'	73.0	70.3	73.3	73.1
Reinforcement	14,108	16,941	14,108	14,105

Cu. Yd.
Cu. Yd.
Lb.

I-64 OVER U.S. 421

SHEET 13

COMMONWEALTH OF KENTUCKY

DEPARTMENT OF HIGHWAYS

FRANKFORT
COUNTY OF

WOODFORD

LOUISVILLE - LEXINGTON - CATLETTSBURG

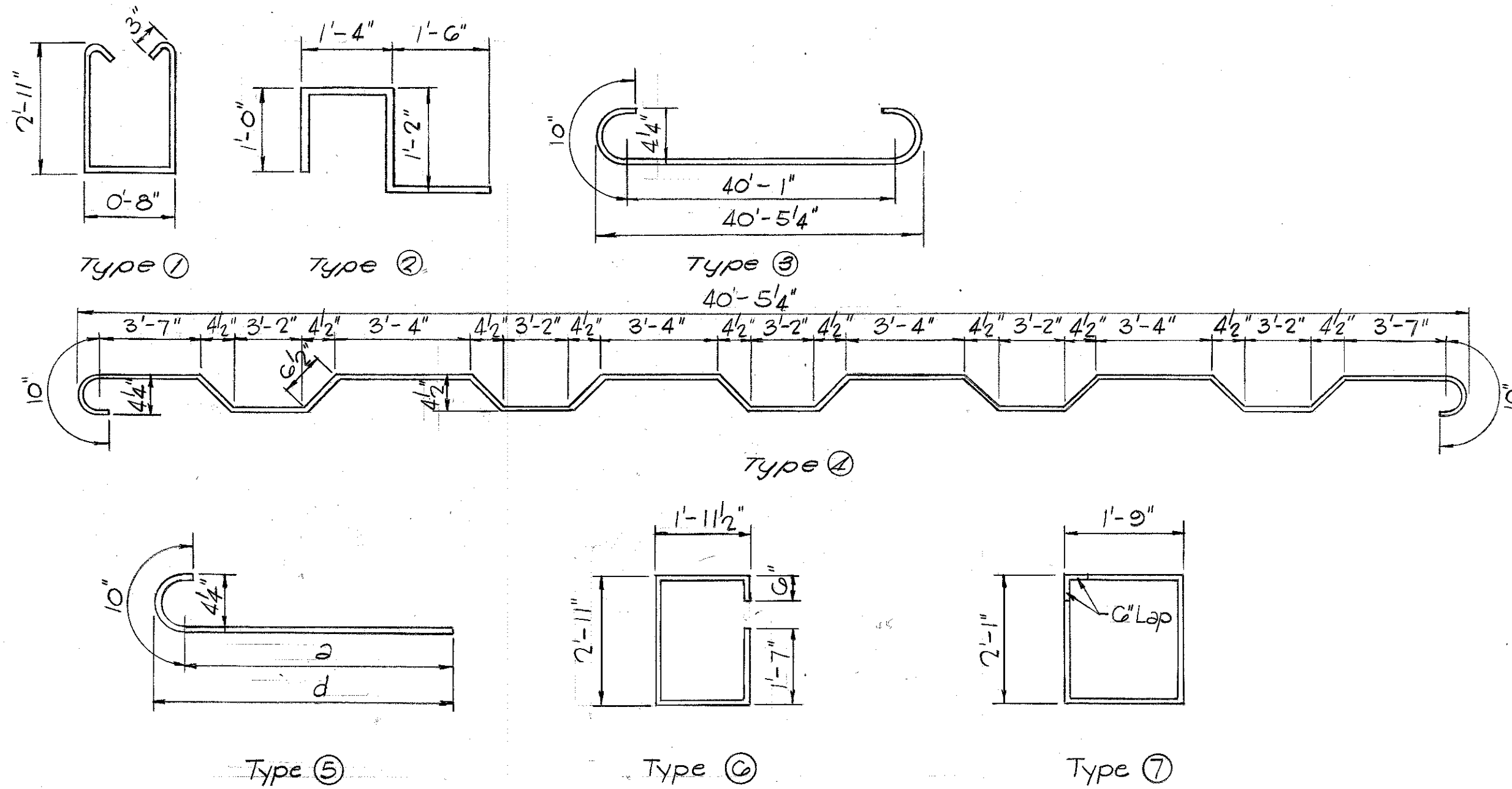
STATION 3007+66.50 I-64= **ROAD**
50+00.00 U.S. 421 **PROJECT NO.**

BRIDGE
NUMBER

DRAWING NO.	INDEX
17619	

SUBSTRUCTURE

BILL OF REINFORCEMENT - ONE SUPERSTRUCTURE														
Mark	Type	No.	Bar Size	Length		Location	a		b		c		d	
				Feet	Inches		Feet	Inches	Feet	Inches	Feet	Inches	Feet	Inches
S1	①	488	5	6	10	Plinth								
S2	②	488	7	4	9	Curb								
S3	Str.	32	4	35	11	Plinth								
S4	Str.	24	4	35	6	"								
S5	④	198	5	43	5	Slab - Bent Bars								
S6	⑤	198	5	41	9	" - Top								
S7	Str.	198	5	40	6	" - Bottom								
S8	⑤	12	5	39	6	" - Ends	38	0					38	10 1/4
S9	"	8	5	38	11	"	38	1					38	3 1/4
S10	"	8	5	38	4	"	37	6					37	8 1/4
S11	"	8	5	37	9	"	36	11					37	1 1/4
S12	"	8	5	37	2	"	36	4					36	6 1/4
S13	"	8	5	36	8	"	35	10					36	0 1/4
S14	"	8	5	36	1	"	35	3					35	5 1/4
S15	"	8	5	35	6	"	34	8					34	10 1/4
S16	"	8	5	34	11	"	34	1					34	3 1/4
S17	"	8	5	34	4	"	33	6					33	8 1/4
S18	"	8	5	33	9	"	32	11					33	1 1/4
S19	"	8	5	33	2	"	32	4					32	6 1/4
S20	"	8	5	32	7	"	31	9					31	11 1/4
S21	"	8	5	32	0	"	31	2					31	4 1/4
S22	"	8	5	31	5	"	30	7					30	9 1/4
S23	"	8	5	30	10	"	30	0					30	2 1/4
S24	"	8	5	30	3	"	29	5					29	7 1/4
S25	"	8	5	29	8	"	28	10					29	0 1/4
S26	"	8	5	29	1	"	28	3					28	5 1/4
S27	"	8	5	28	7	"	27	9					27	11 1/4
S28	"	8	5	28	0	"	27	2					27	4 1/4
S29	"	8	5	27	5	"	26	7					26	9 1/4
S30	"	8	5	26	10	"	26	0					26	2 1/4
S31	"	8	5	26	3	"	25	5					25	7 1/4
S32	"	8	5	25	8	"	24	10					25	0 1/4
S33	"	8	5	25	1	"	24	3					24	5 1/4
S34	"	8	5	24	6	"	23	8					23	10 1/4
S35	"	8	5	23	11	"	23	1					23	3 1/4
S36	"	8	5	23	4	"	22	6					22	8 1/4
S37	"	8	5	22	9	"	21	11					22	1 1/4
S38	"	8	5	22	2	"	21	4					21	6 1/4
S39	"	8	5	21	7	"	20	9					20	11 1/4
S40	"	8	5	21	0	"	20	2					20	4 1/4
S41	"	8	5	20	5	"	19	7					19	9 1/4
S42	"	8	5	19	10	"	19	0					19	2 1/4
S43	"	8	5	19	3	"	18	5					18	7 1/4
S44	"	8	5	18	8	"	17	10					18	0 1/4
S45	"	8	5	18	1	"	17	3					17	5 1/4
S46	"	8	5	17	7	"	16	9					16	11 1/4
S47	"	8	5	17	0	"	16	2					16	4 1/4
S48	"	8	5	16	5	"	15	7					15	9 1/4
S49	"	8	5	15	10	"	15	0					15	2 1/4
S50	"	8	5	15	3	"	14	5					14	7 1/4
S51	"	8	5	14	8	"	13	10					14	0 1/4
S52	"	8	5	14	1	"	13	3					13	5 1/4
S53	"	8	5	13	6	"	12	8					12	10 1/4
S54	"	8	5	12	11	"	12	1					12	3 1/4
S55	"	8	5	12	4	"	11	6					11	8 1/4
S56	"	8	5	11	9	"	10	11					11	1 1/4
S57	"	8	5	11	2	"	10	4					10	6 1/4
S58	"	8	5	10	7	"	9	9					9	11 1/4
S59	"	8	5	10	0	"	9	2					9	4 1/4
S60	"	8	5	9	5	"	8	7					8	9 1/4
S61	"	8	5	8	10	"	8	0					8	2 1/4
S62	"	8	5	8	3	"	7	5					7	7 1/4
S63	"	8	5	7	8	"	6	10					7	0 1/4
S64	"	8	5	7	1	"	6	3					6	5 1/4
S65	"	8	5	6	7	"	5	9					5	11 1/4
S66	"	8	5	6	0	"	5	2					5	4 1/4
S67	"	8	5	5	5	"	4	7					4	9 1/4
S68	"	8	5	4	10	"	4	0					4	2 1/4
S69	"	8	5	4	3	"	3	5					3	7 1/4
S70	"	8	5	3	8	"	2	10					3	0 1/4
S71	Str.	679	5	36	7	" - Longitudinal								
S72	"	24	5	38	11	" - Ends								
S73	⑥	3	5	8	8	Light Pole Support								
S74	⑦	6	5	8	5	"								



ESTIMATE OF QUANTITIES

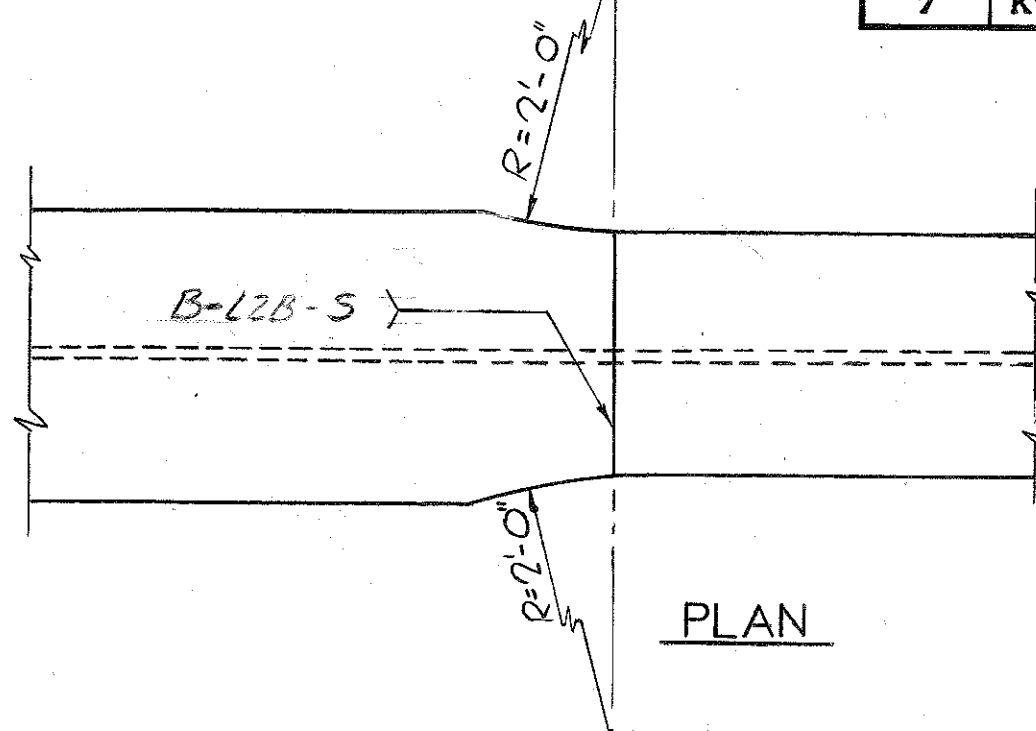
	E.B.	W.B.	
Concrete, Class "AA", Item I		273.0	C.Y.
Concrete, Class "AA", Item II	300.1	27.1	C.Y.
Reinforcement	73,982	73,982	Lbs.

SUPERSTRUCTURE

I-64 OVER U.S. 421		SHEET 15			
COMMONWEALTH OF KENTUCKY					
DEPARTMENT OF HIGHWAYS					
FRANKFORT					
COUNTY OF					
WOODFORD					
LOUISVILLE-LEXINGTON-CATLETTSBURG					
3007+66.50 I-64: ROAD		STATION 50+00.00 U.S. 421 PROJECT NO.			
BRIDGE NUMBER	DRAWING NO.	INDEX			
	17619				

WELD SIZES	
Flange Thickness	Weld Size
over $\frac{3}{4}$ " to $1\frac{1}{2}$ "	$\frac{5}{16}$ "
over $1\frac{1}{2}$ " to $2\frac{1}{4}$ "	$\frac{3}{8}$ "

FED. ROAD DIST.	STATE
7	KY.



The diagram is a plan view of a bridge structure. It features a central horizontal section labeled "B-128'-5\"/>

Flange Thickness

Weld Size

Flange pass should be made in the plate before

10 Equal Spaces

5 Equal Spaces

← Φ Brg. End Bent

← Φ Brg. Pier

← Symm. about this Φ

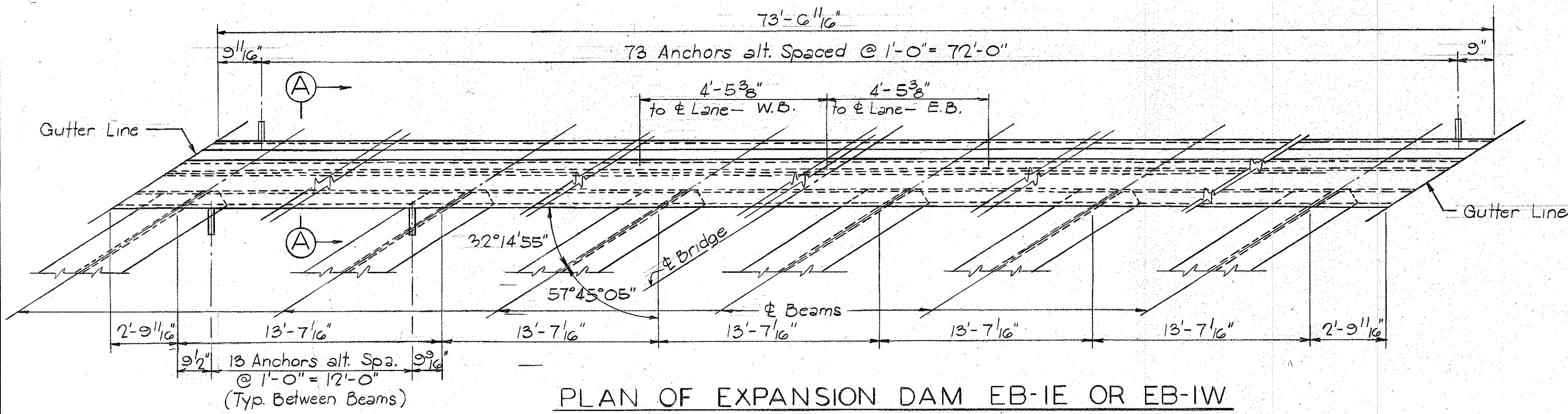
a b c d e f g h i j k l m n o p q

68'-0"

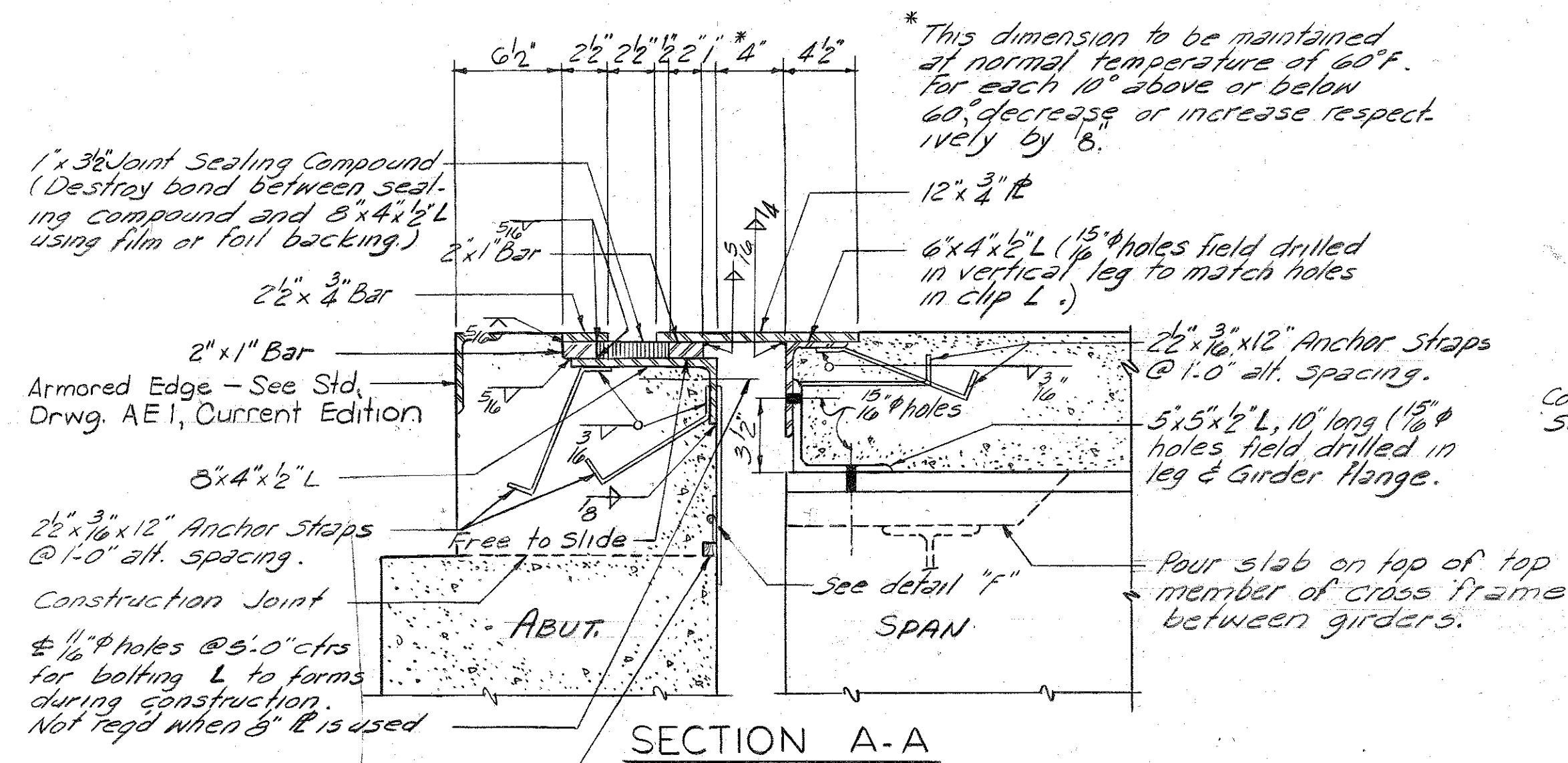
51'-7 1/2"

DEAD LOAD CAMBER			
POINT	STEEL Δ	CONCRETE Δ	TOTAL Δ
a	1/16"	1/8"	3/16"
b	1/16"	1/4"	5/16"
c	1/16"	5/16"	3/8"
d	1/16"	5/16"	3/8"
e	1/16"	1/4"	5/16"
f	1/16"	1/8"	3/16"
g	—	1/16"	1/16"
h	—	1/16"	1/16"
j	—	1/16"	1/16"
K	1/16"	3/16"	1/4"
L	1/8"	5/16"	11/16"
m	3/16"	15/16"	1/8"
n	3/16"	13/16"	13/8"
p	1/4"	1/4"	1/2"

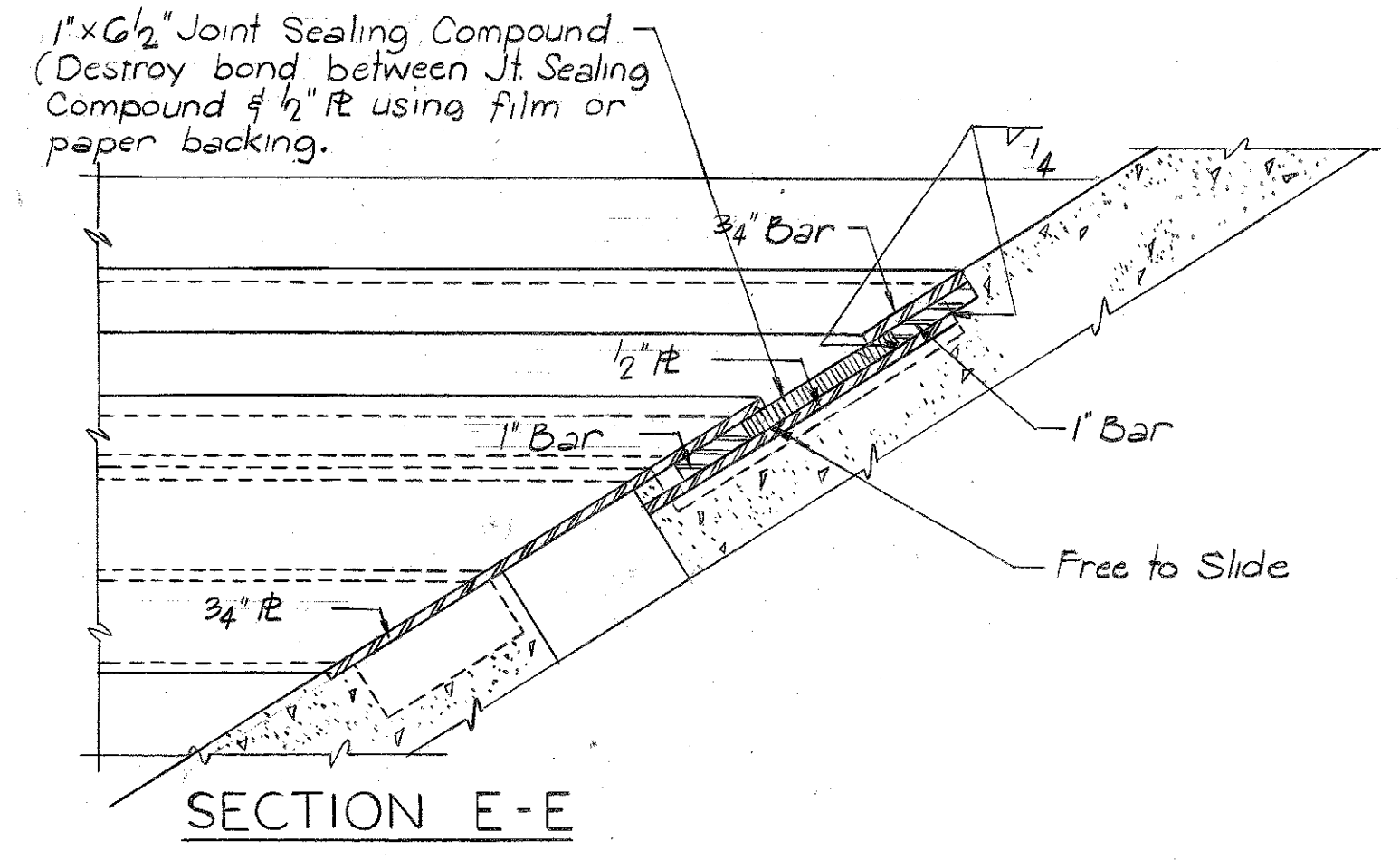
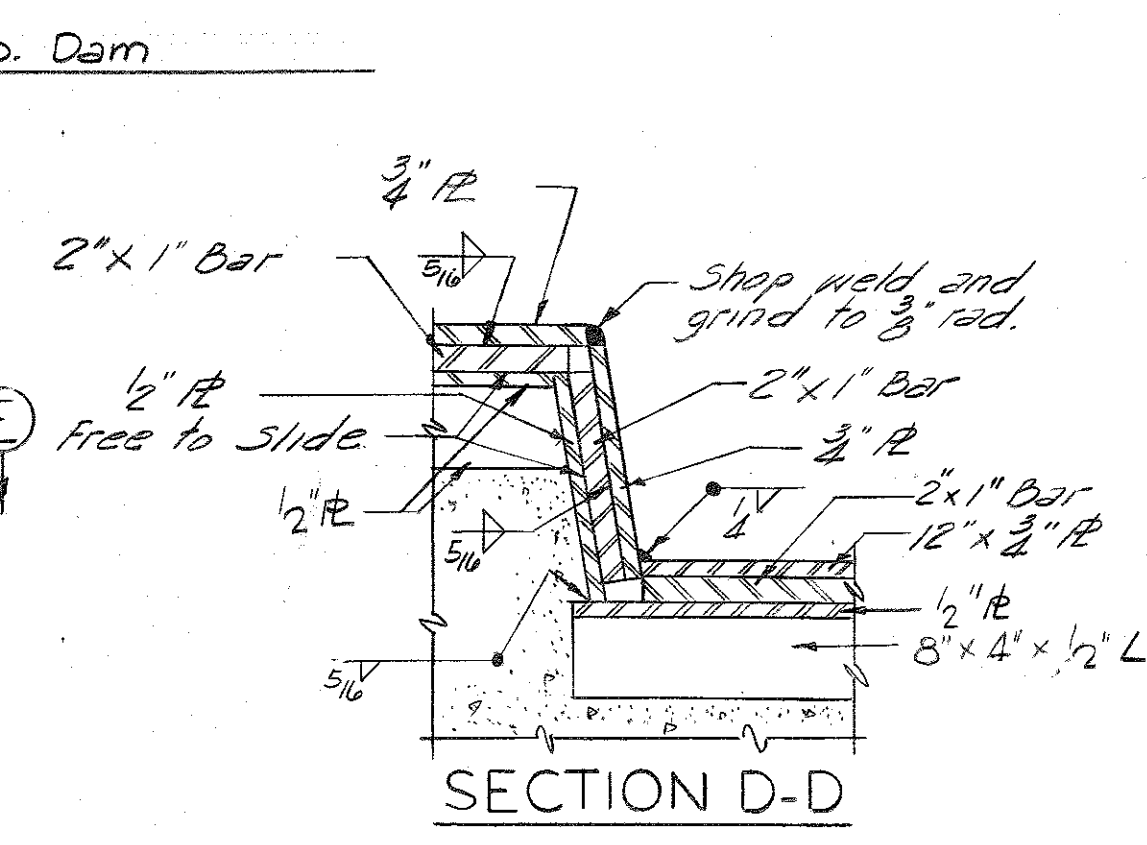
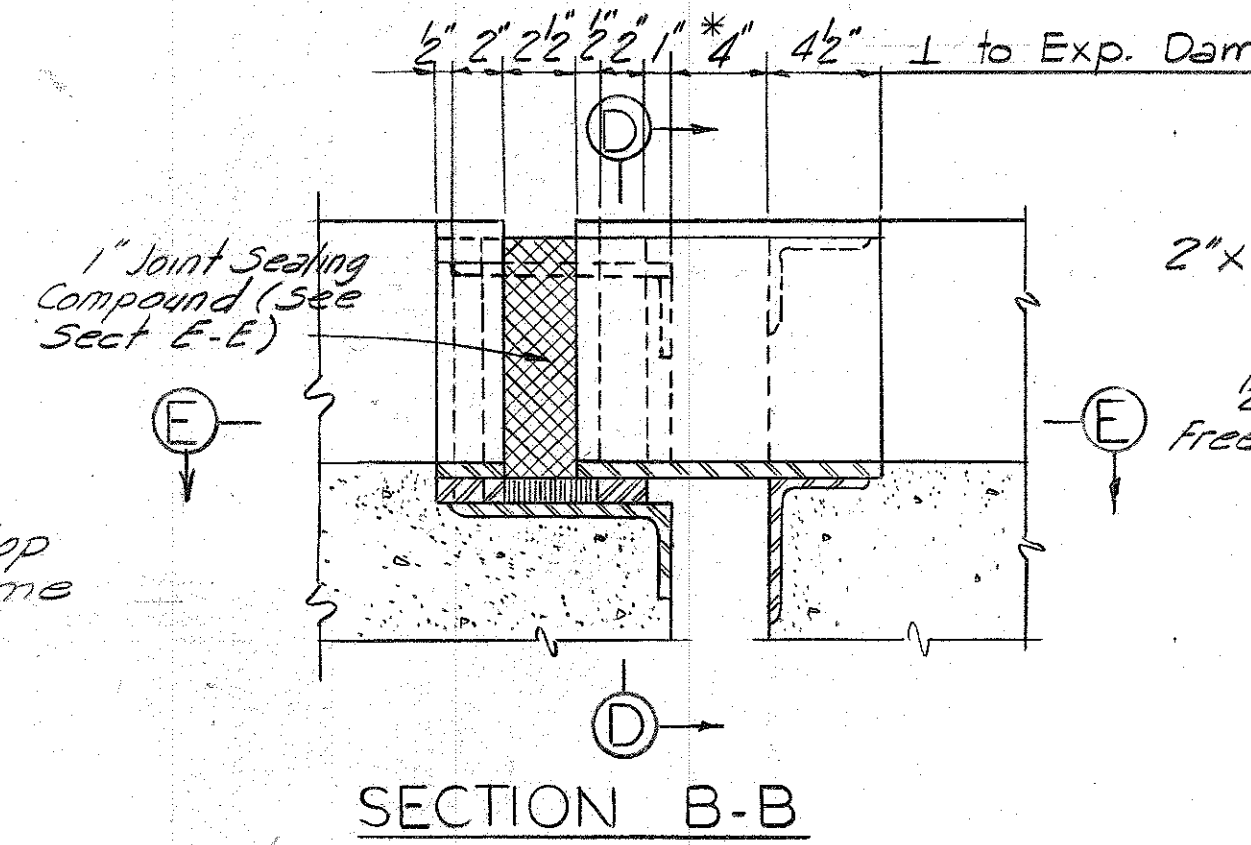
POINT	STEEL Δ	CONCRETE Δ	TOTAL Δ
a	$1/16"$	$1/8"$	$3/16"$
b	$1/16"$	$1/4"$	$5/16"$
c	$1/16"$	$5/16"$	$3/8"$
d	$1/16"$	$5/16"$	$3/8"$
e	$1/16"$	$1/4"$	$5/16"$
f	$1/16"$	$1/8"$	$3/16"$
g	—	$1/16"$	$1/16"$
h	—	$1/16"$	$1/16"$
j	—	$1/16"$	$1/16"$
k	$1/16"$	$3/16"$	$1/4"$
L	$1/8"$	$3/16"$	$11/16"$
m	$3/16"$	$15/16"$	$1/8"$
n	$3/16"$	$13/16"$	$13/8"$
p	$1/4"$	$1/4"$	$1/2"$



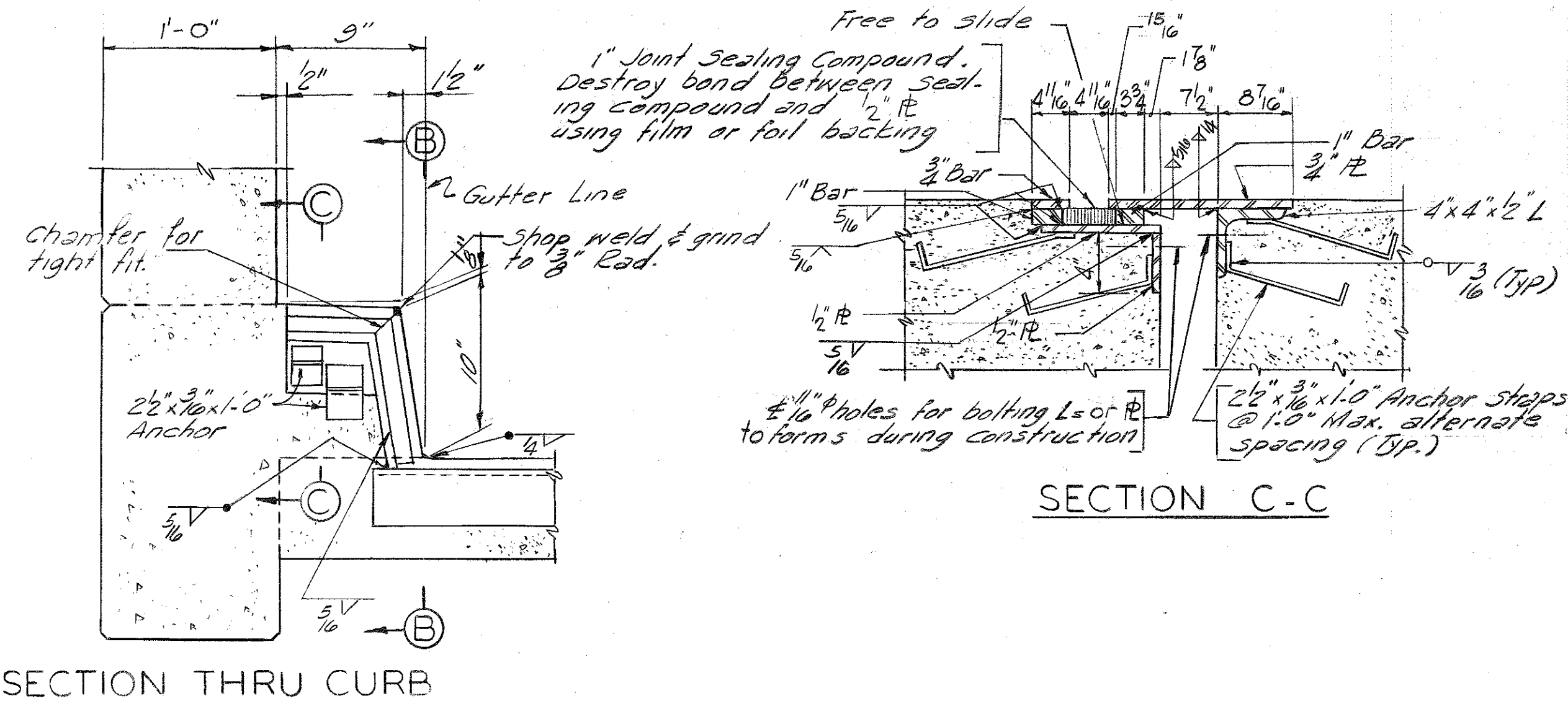
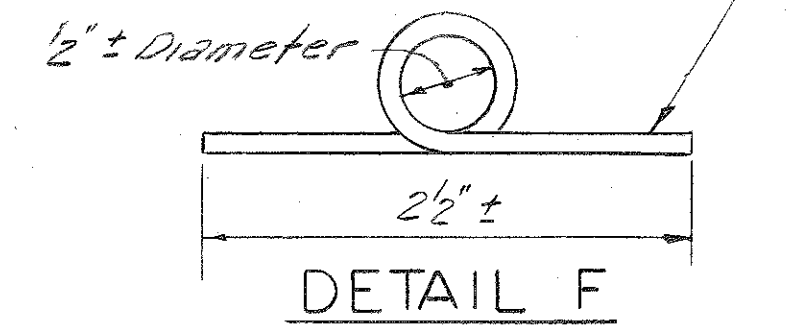
PLAN OF EXPANSION DAM EB-IE OR EB-IW



NOTE
Bonding Surface Finish - Vertical edges of steel bars which require bonding to joint sealing compound shall receive neither shop nor field paint. Before applying joint sealing compound vertical edges of steel bars shall be cleaned to bare metal.



No. 9 Black Iron or equivalent wire eyelets @ 2'-0\"/>



SECTION C-C

SECTION THRU CURB

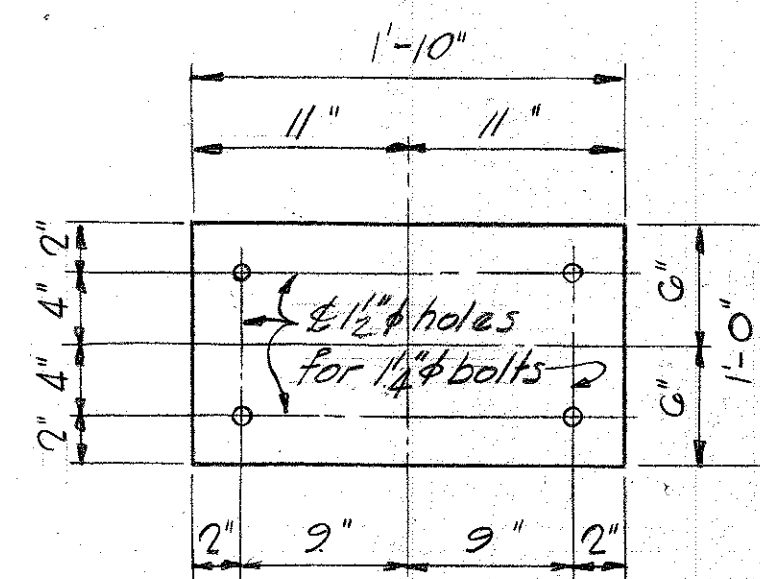
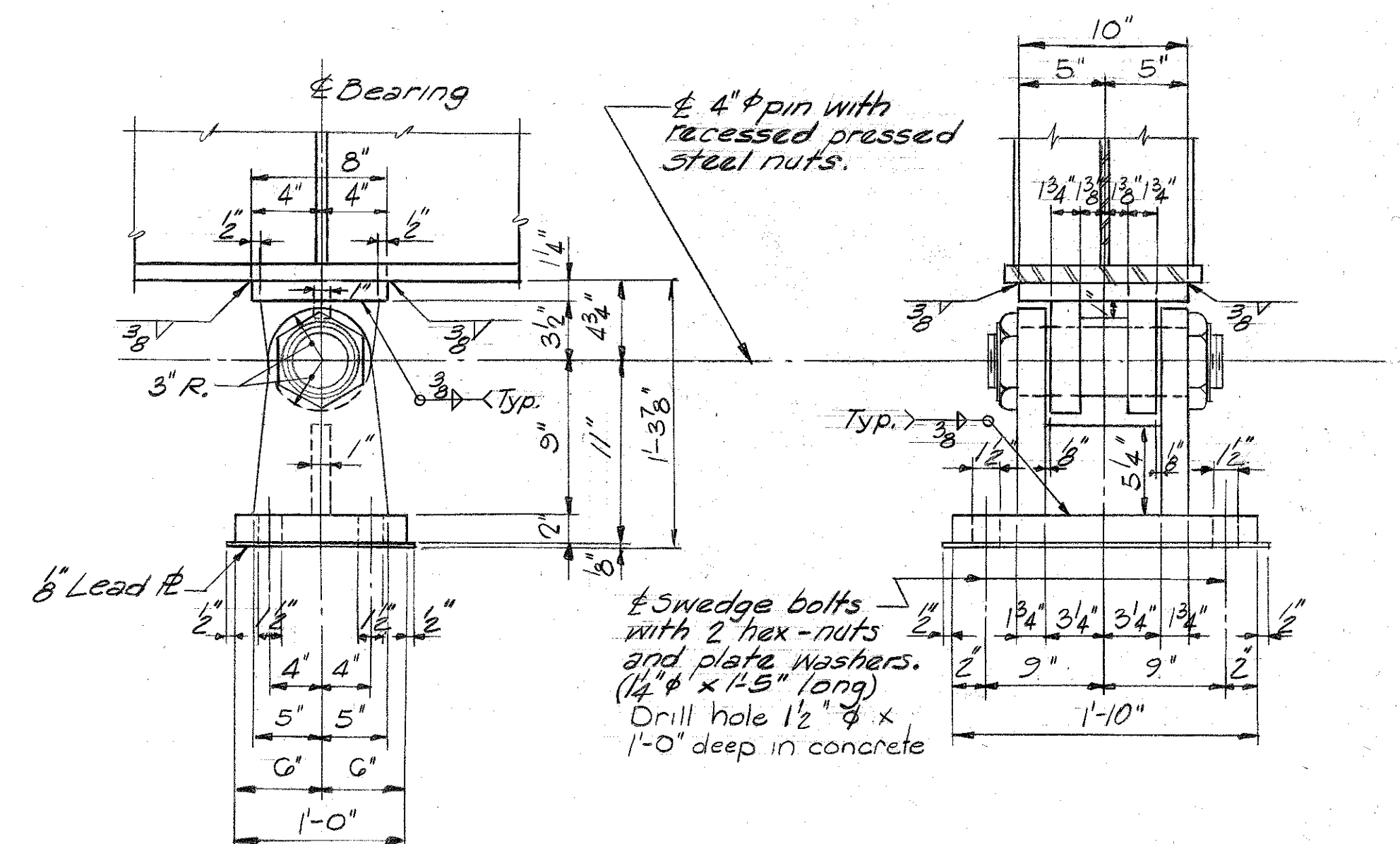
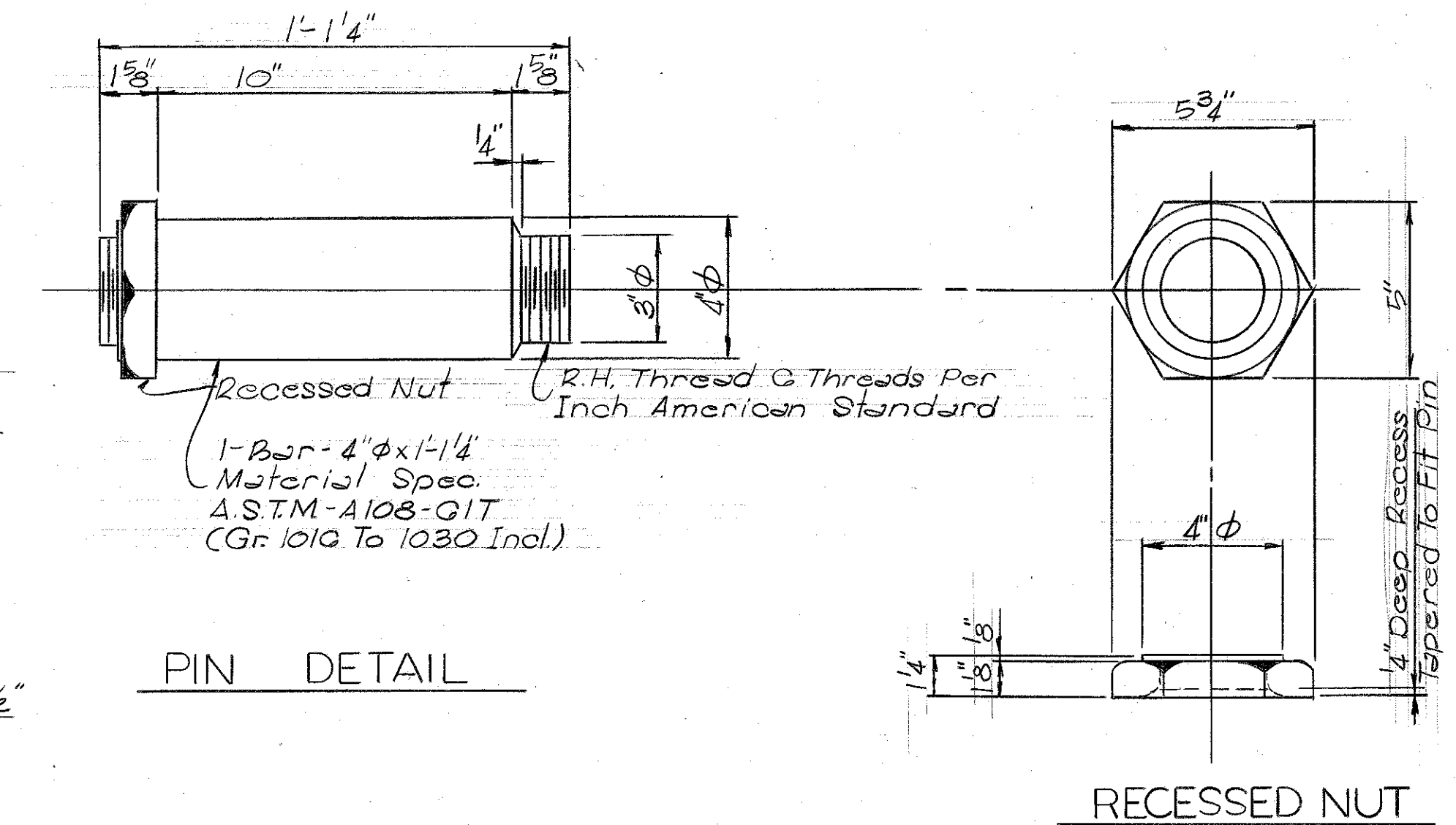
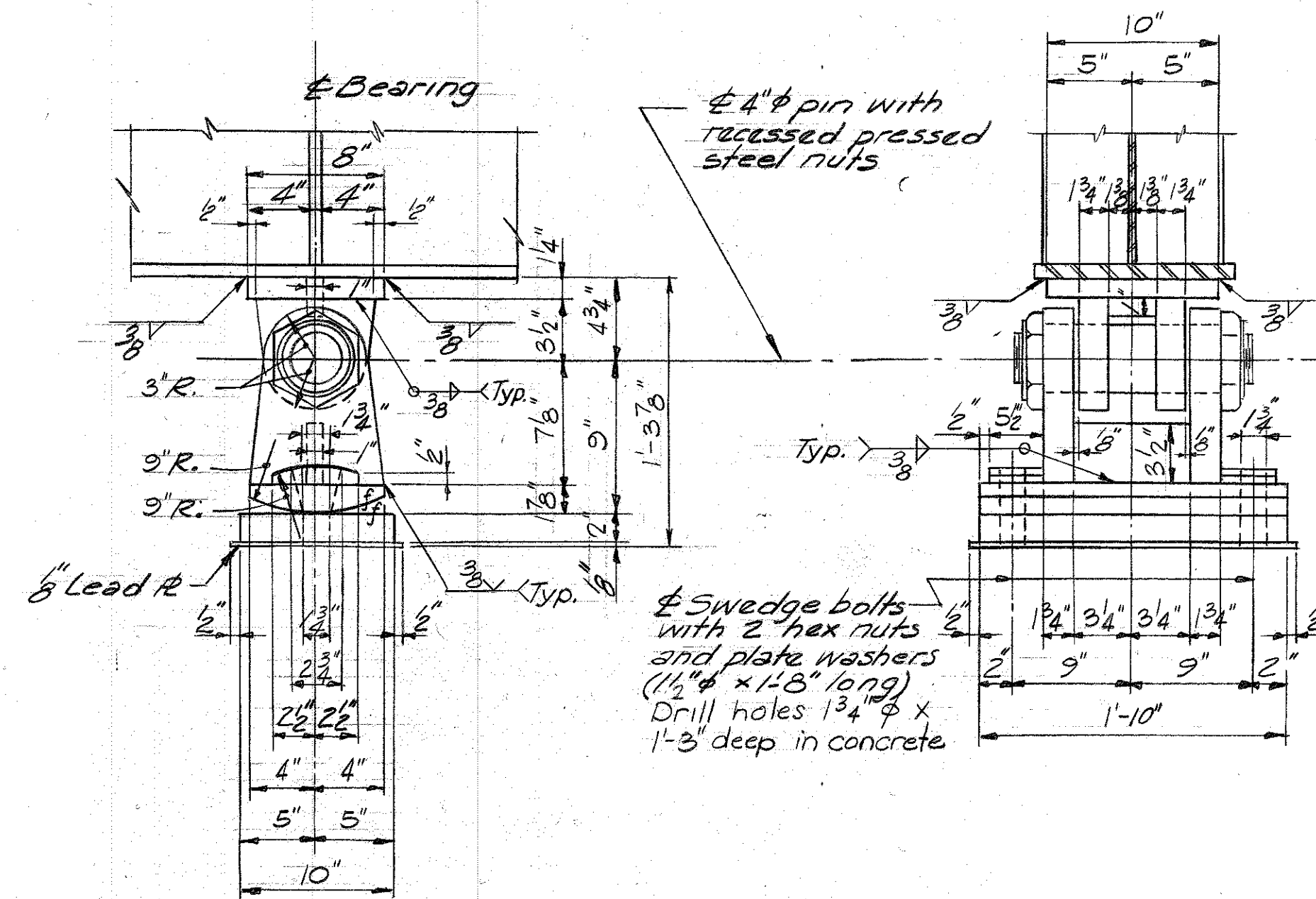
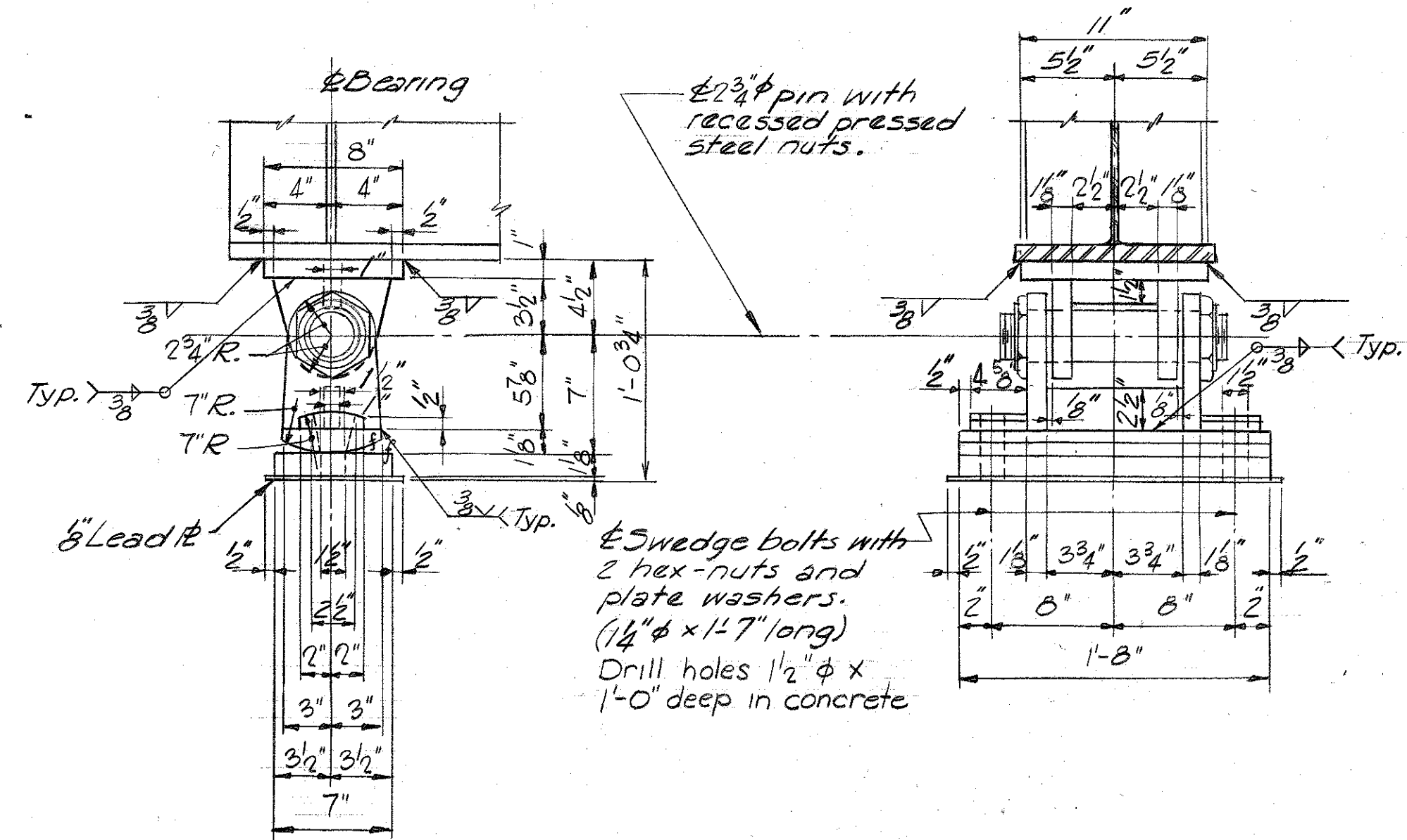
I-64 OVER U.S. 421

SHEET 18

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
WOODFORD
LOUISVILLE-LEXINGTON-CATLETTSBURG

BRIDGE NUMBER: 3007+66.50 I-64
STATION: 50+00.00 US 421
ROAD PROJECT NO.:
DRAWING NO.: 17619
INDEX

SUPERSTRUCTURE

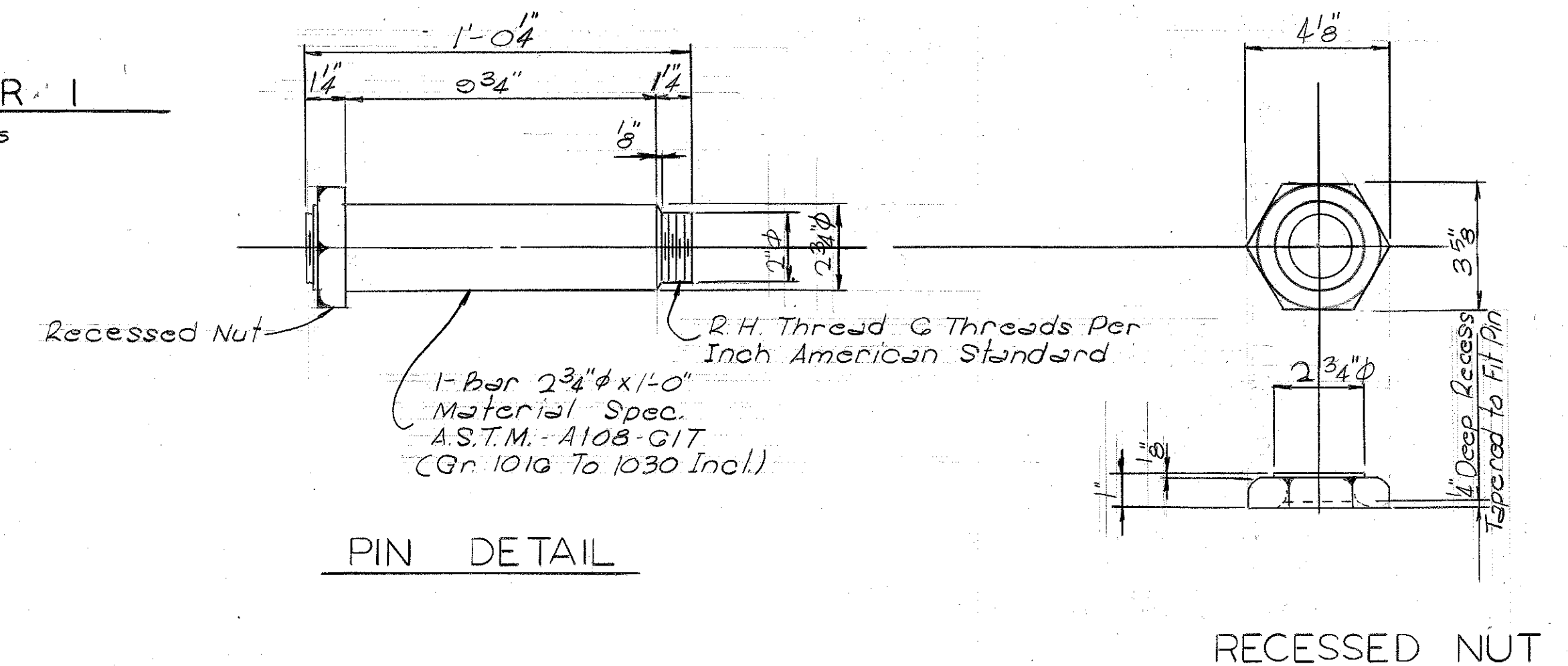


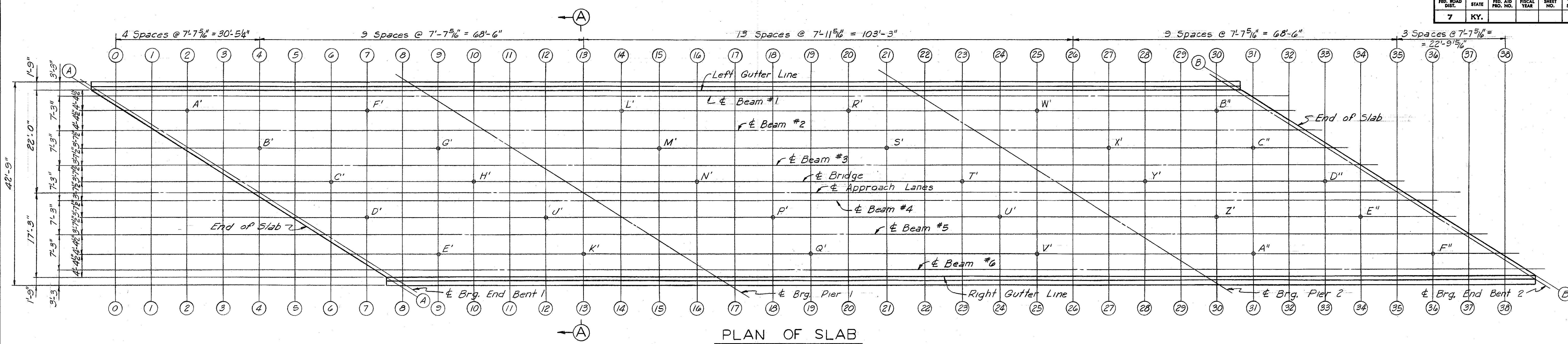
PLAN OF BOTTOM PLATE

NOTE -

PLATES - Plates must be true and free from warp.
ANCHOR BOLTS - See Anchor Bolt Note, sheet 2.
Holes for Anchor Bolts are to be as shown.
WELDS - Use 3" Fillet Welds except as shown for
fabricating bearing devices.
All surfaces of plates in contact except bearing
surfaces to be welded.

<u>SURFACE FINISH OF STEEL SPECIFICATIONS</u>	
<u>STEEL SLABS</u>	A.S.A. 2000
<u>HEAVY PLATES IN CONTACT IN SHOES TO BE WELDED</u>	A.S.A. 1000
<u>MILLED ENDS OF COMPRESSION MEMBERS, STIFFENERS & FILLERS</u>	A.S.A. 500
<u>BRIDGE ROLLERS AND ROLLERS</u>	A.S.A. 250





PLAN OF SLAB

TABLE OF ELEVATIONS

	Left Gutter Line	Beam #1			Beam #2			Beam #3			Approach Lanes			Beam #4			Beam #5			Right Gutter Line			Beam #6		
		Const. Elev.	Top of Steel	Dim. "X"	Const. Elev.	Top of Steel	Dim. "X"	Const. Elev.	Top of Steel	Dim. "X"	Const. Elev.	Top of Steel	Dim. "X"	Const. Elev.	Top of Steel	Dim. "X"	Const. Elev.	Top of Steel	Dim. "X"	Const. Elev.	Top of Steel	Dim. "X"	Const. Elev.	Top of Steel	Dim. "X"
A - A	813.508										814.566									814.882					
0 - 0	813.639																								
1 - 1	.812																								
2 - 2	.973				814.102																				
3 - 3	814.240				.272			814.368																	
4 - 4	.295				.436			.539			814.595														
5 - 5	.543				.593			.704			.765	814.758													
6 - 6	.592				.745			.860			.929	.924		814.801											
7 - 7	.741				.892			815.015			815.090	815.084		.969											
8 - 8	.895				815.037			.163			.241	.239		815.131			814.977								
9 - 9	815.056				.184			.307			.388	.386		.287			815.141								
10 - 10	.225				.337			.451			.531	.528		.439			.299								
11 - 11	.397				.497			.600			.675	.672		.680			.453								
12 - 12	.571				.665			.755			.827	.815		.719			.597								
13 - 13	.738				.835			.915			.972	.964		.860			.739								
14 - 14	.904				816.013			816.092			816.136	816.130		816.012			.883								
15 - 15	816.062				.183			.269			.308	.300		.170			816.028								
16 - 16	.211				.347			.440			.487	.477		.337			.179								
17 - 17	.348				.509			.605			.672	.649		.507			.337								
18 - 18	.479				.642			.761			.821	.798		.682			.502								
19 - 19	.602				.773			.903			.973	.973		.849			.672								
20 - 20	.724				.903			817.043			817.124	817.120		817.009			.844								
21 - 21	.850				817.023			.170			.259	.258		.159			817.006								
22 - 22	.983				.143			.290			.388	.386		.300			.161								
23 - 23	817.125				.268			.407			.508	.509		.431			.307								
24 - 24	.272				.401			.529			.622	.623		.535			.444								
25 - 25	.420				.542			.656			.843	.741		.670			.570								
26 - 26	.566				.687			.792			.867	.865		.784			.691								
27 - 27	.702				.828			.928			.994	.990		.897			.799								
28 - 28	.830				.965			818.066			818.127	818.122		818.016			.905								
29 - 29	.952				818.098			.204			.264	.257		.143			818.017								
30 - 30	818.070				.222			.333			.400	.394		.276			.135								
31 - 31					.342			.465			.532	.527		.410			.261								
32 - 32					.456			.585			.691	.657		.544			.392								
33 - 33								.699			.781	.773		.673			.525								
34 - 34											.896	.892		.798			.655								
35 - 35											819.004	819.003		.915			.782								
36 - 36														819.025			.903								
37 - 37																	819.016								
38 - 38																	.125								
B - B	818.148										819.035						819.215								

CONSTRUCTION NOTES

Layout sections 0-0 to 38-38 as shown in Plan. Center punch marks on top of beams for elevation points.
Take elevations on top of steel at points indicated after cross frames 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 table under top of steel.
Compute Dimension "X" as follows: Construction elevations minus Top of Steel equals Dimension "X". Construction elevations include camber due to weight of concrete slab, plinth, handrail, and future surfacing.
For setting templates measure Dimension "X" above top of steel for top of template. Do not set templates by elevations.
Construct handrail plinth to roadway grade. Do not add camber to handrail plinth.
Slab elevations tolerances are based on delivery to the bridge site of fabricated steel having dimension and sweep tolerances meeting the requirements of A.S.T.M. designation A6 for rolled beams and are based on erection of the steel undamaged.

SLAB THICKNESS CONTROL 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 4" from the plan thickness, allowing 3/60 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.

TABLE OF ELEV. FOR CONTROL OF SLAB THICKNESS

Point	Plan Elev.	Field Elev.	Plan Elev.
	Top of Slab	Top of Form	Slab Thick.
A'	814.041		
B'	.488		
C'	.915		
D'	815.027		
E'	.214		
F'	814.817		
G'	815.246		
H'	.512		
J'	.767		
K'	.800		
L'	.959		
M'	816.226		
N'	.482		
P'	.710		
Q'	.761		
R'	.814		
S'	817.097		
T'	.481		
U'	.589		
V'	.620		
W'	.481		
X'	.873		
Y'	818.116		
Z'	.335		
A''	.336		
B''	.146		
C''	.404		
D''	.762		
E''	.845		
F''	.964		

WBL ELEVATIONS

I64 OVER U.S. 421 SHEET 20

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
WOODFORD
LOUISVILLE-LEXINGTON-CATLETTSBURG

STATION 3007+66.50 I64-50+0000 U.S. 421
BRIDGE NUMBER PROJECT NO. DRAWING NO. 17619 INDEX



	Left Gutter Line	Beam #1			Beam #2			Beam #3			± Approach Lanes	Beam #4			Beam #5			Right Gutter Line	Beam #6	
	Const. Elev.	Top of Steel	Dim. "X"	Const. Elev.	Top of Steel	Dim. "X"	Const. Elev.	Top of Steel	Dim. "X"	Const. Elev.	Const. Elev.	Top of Steel	Dim. "X"	Const. Elev.	Top of Steel	Dim. "X"	Const. Elev.	Top of Steel	Dim. "X"	
A - A	816.409									817.158							817.457			
0 - 0	816.528																			
1 - 1	.677																			
2 - 2	.823			816.946																
3 - 3	.961			817.094			817.182			817.183										
4 - 4	817.093			.236			.330			.343										
5 - 5	.221			.370			.474			.477	817.396									
6 - 6	.348			.500			.612			.616	.541			817.411						
7 - 7	.475			.624			.741			.747	.679			.556						
8 - 8	.608			.749			.867			.873	.811			.695			817.543			
9 - 9	.749			.875			.989			.996	.936			.830			.684			
10 - 10	.896			818.007			818.111			818.117	818.057			.956			.821			
11 - 11	818.048			.147			.239			.243	.178			818.077			.952			
12 - 12	.200			.292			.374			.375	.296			.195			818.074			
13 - 13	.349			.448			.520			.520	.494			.320			.198			
14 - 14	.492			.603			.671			.670	.577			.480			.320			
15 - 15	.626			.749			.828			.826	.725			.586			.443			
16 - 16	.750			.888			.976			.976	.879			.731			.572			
17 - 17	.865			819.017			819.117			819.118	819.028			.881			.708			
18 - 18	.972			.197			.248			.252	.171			819.032			.852			
19 - 19	819.070			.247			.371			.377	.306			.176			819.000			
20 - 20	.170			.350			.483			.490	.429			.311			.147			
21 - 21	.275			.446			.587			.596	.544			.438			.287			
22 - 22	.388			.545			.686			.696	.649			.555			.419			
23 - 23	.507			.649			.770			.787	.748			.661			.541			
24 - 24	.632			.760			.878			.886	.840			.761			.652			
25 - 25	.758			.879			.983			.990	.934			.854			.757			
26 - 26	.875			.997			820.093			820.105	820.033			.942			.849			
27 - 27	.989			820.116			.208			.211	.136			820.034			.933			
28 - 28	820.094			.230			.324			.327	.246			.132			820.020			
29 - 29	.194			.341			.440			.442	.361			.238			.110			
30 - 30																				



Point	Plan Elev. Top of Slab	Field Elev. Top of Form	Plan Elev. Slab Thick.
A'	816.885		
B'	817.283		
C'	.599		
D'	.618		
E'	.757		
F'	.550		
G'	.932		
H'	818.106		
J'	.246		
K'	.259		
L'	.548		
M'	.789		
N'	.951		
P'	819.102		
Q'	.088		
R'	.260		
S'	.517		
T'	.691		
U'	.705		
V'	.806		
W'	.819		
X'	820.162		
Y'	.308		
Z'	.413		
A''	.388		
B''	.367		
C''	.599		
D''	.843		
E''	.835		
F''	.906		



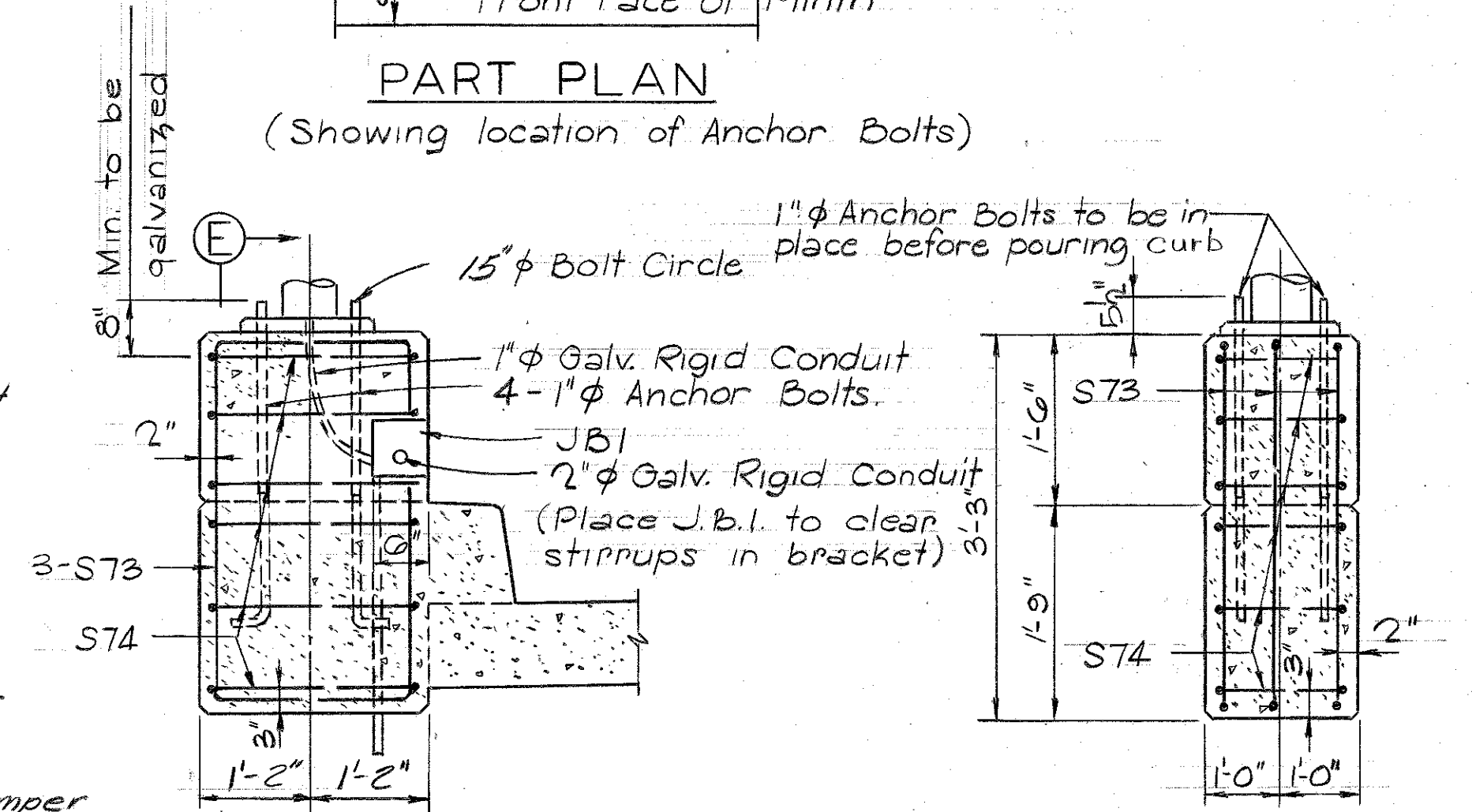
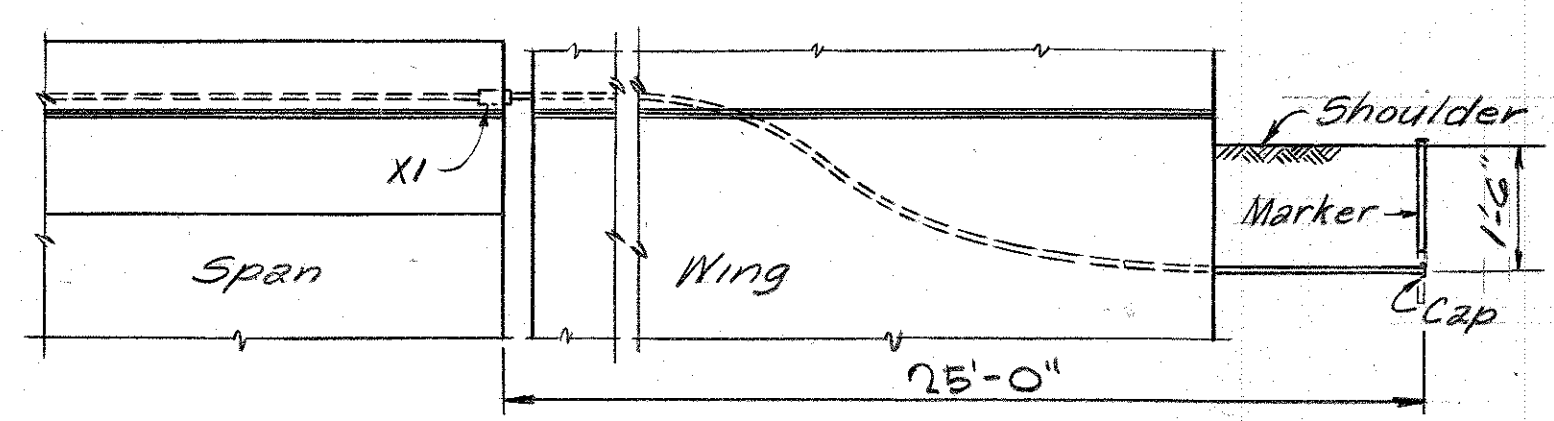
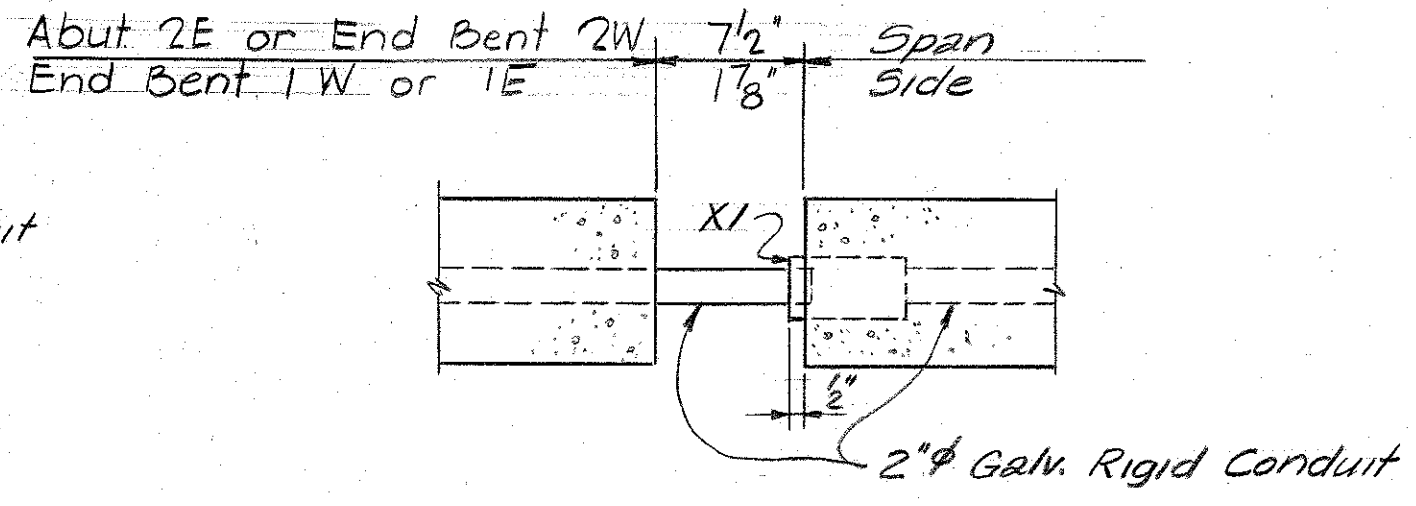
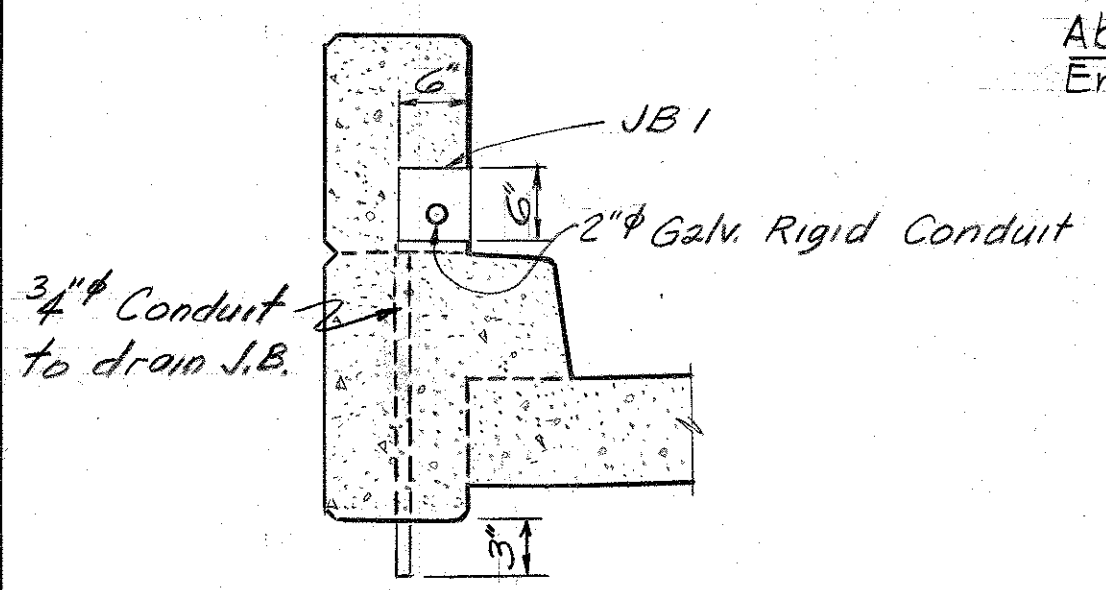
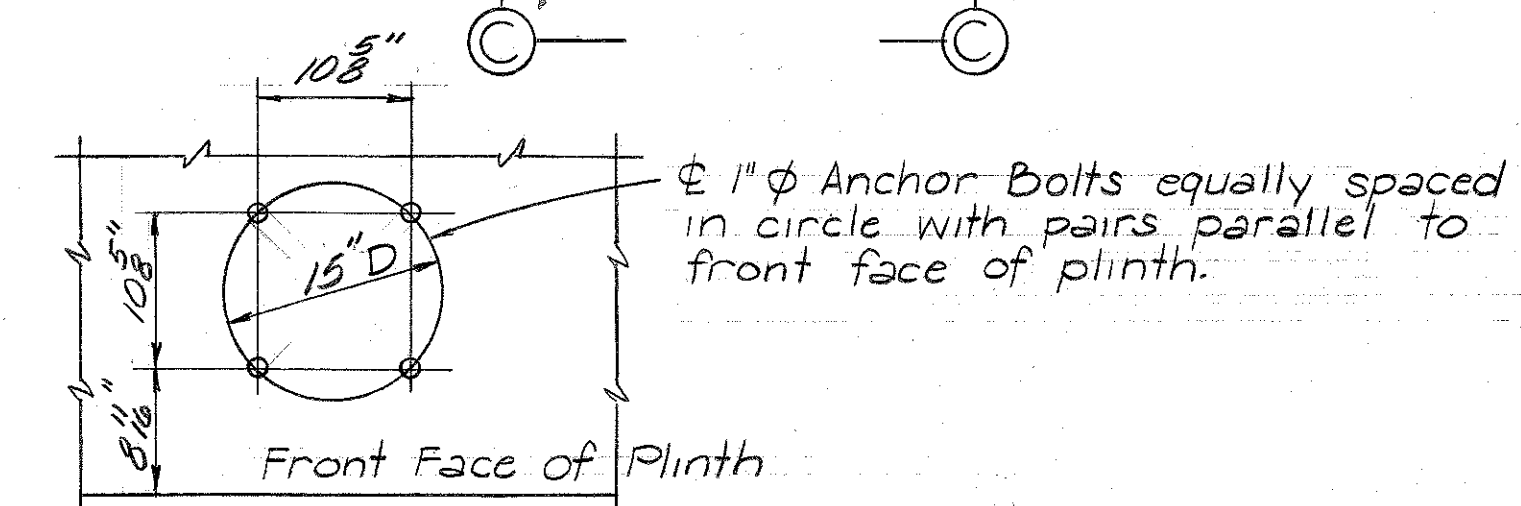
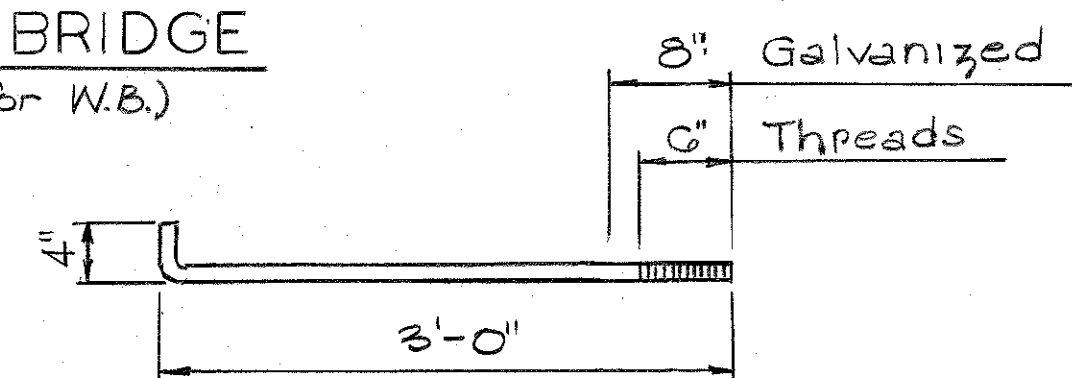
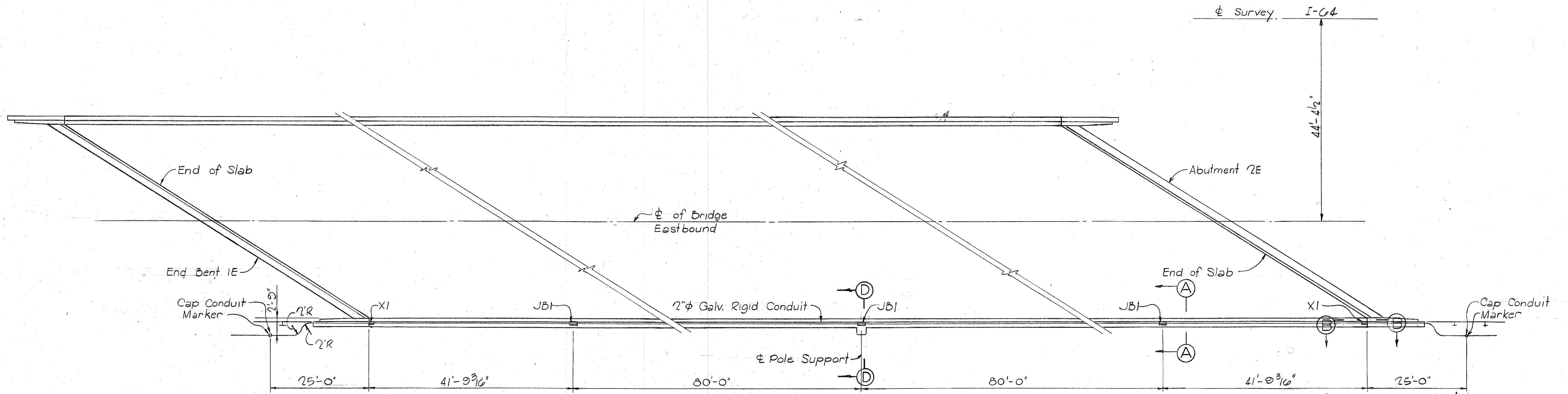
LOUISVILLE-LEXINGTON-CATLETTSBURG

STATION 50 + 00.00 U.S. 421

PROJECT NO.

DRAWING NO.	INDEX
7619	

EBL ELEVATIONS



NOTE-
All conduit to be rigid galvanized. Concrete and reinforcement for brackets, where required, are included in Superstructure quantities. Junction Boxes and Conduit are to be placed so as to interfere with a minimum amount of reinforcement. Bend reinforcement where necessary.

Concrete Marker at terminal points of conduit is to consist of 2 4"x4"x36" reinforced concrete post with 4 size No. 2 deformed reinforcing steel rods. Marker to be 2" above grade.

XI = Expansion fitting for 2" conduit; manufacturer and number may be any of the following, or approved equal.

Manufacturer	Number
Crouse-Hinds Co.	Type XJG41 with GC100 Bonding Jumper
OZ Electric Co.	Type EX200 with BU1520-24 Bonding Jumper
Spring City Electric Co.	Type EF200 with EU200 Bonding Jumper

JBI = Junction Box; manufacturer and number may be any of the following, or approved equal.

Manufacturer	16"x6"x6"	18"x6"x6"
OZ Electric Co.	Type YU	Type YR
Spring City Electric Co.	Type IR	Type ER
Hope Elec. Products Co.	Type H6200	Type H700

BILL OF MATERIALS

	EB	WB	
2" Galv. Rigid Conduit	295	295	Lin. Ft.
Concrete Markers	2	2	Each
* JBI Junction Boxes	3	3	Each
Expansion Fittings	2	2	Each
2" Galv. Conduit Caps	2	2	Each
1" Galv. Rigid Conduit	2	2	Lin. Ft.
** 1" φ Anchor Bolts (See detail)	4	4	Each
3/4" Galv. Rigid Conduit	6	6	Lin. Ft.
** with two hex nuts			
* JBI Junction Boxes to be 16"x6"x6" or 18"x6"x6"			

ELECTRICAL CONDUIT

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
WOODFORD
LOUISVILLE-LEXINGTON-CATLETTSBURG

3007+66.50 I-64
STATION 50+00.00 U.S. 421

ROAD
PROJECT NO.

BRIDGE NUMBER

DRAWING NO.
17619

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