

PROJECT NO.	5282
DATE	JUNE 1949
STATE	N. C.
PROJECT	STATION 668+14.4
SHEET	1
TOTAL SHEETS	2

DESIGN DATA

Specifications	A.A.S.H.O. (194)
Assumed Live Load	H20-S20
Impact Allowance	See Specs
Stress in Extreme Fibre of Structural Steel	18,000 LBS./SQ. IN.
Reinforcing Steel in Tension	10,000 LBS./SQ. IN.
Concrete in Compression	3,000
Concrete in Shear	90
Equivalent Fluid Pressure of Earth	30' cu ft

GENERAL NOTE

CONCRETE: All concrete to be Class "A" Standard size #4-3 coarse aggregate to be used throughout. No construction joints will be permitted except where shown on plans. All exposed surfaces of concrete shall be chamfered 1" except corners of handrails and expansion joints. Corners of handrails and expansion joints shall be chamfered 3/4" except where otherwise noted. All concrete, except in handrails shall be compacted by Mechanical Vibration.

REINFORCING STEEL: All reinforcing steel except bars shall be deformed bars. All dimensions relative to reinforcing steel are to centers of bars. No splices other than those shown on plans will be permitted. All reinforcing steel shall be securely held in correct position.

EXPANSION JOINT MATERIAL: Expansion joint material may be either rubber compound or cork conforming to the requirements of A.A.S.H.O. Spec. M-58.

STRUCTURAL STEEL: Structural steel shall meet all the requirements of the Specifications and shall be given one shop coat and one field coat of red lead and flinty two field coats of aluminum paint. Detail drawings for structural steel shall be submitted for approval. No unchecked drawings will be accepted.

NAME PLATES: Two name plates shall be provided for the bridges. One shall be placed on the N.E. end past of the Left Lane bridge and one on the S.W. end past of the Right Lane bridge.

MATERIAL AND WORKMANSHIP: All material and workmanship shall be in accordance with the Specifications of the N.C. State Highway and Public Works Commission.

EXCAVATION AND FOUNDATION DATA: The excavation and foundation data and all elevations of ground line given are believed to be correct and are furnished for the convenience of the bidders, but the State Highway and Public Works Commission assumes no responsibility for, nor guarantees as correct any of the information given. See Specs.

PROJECT NO. 5282

DAVIDSON COUNTY

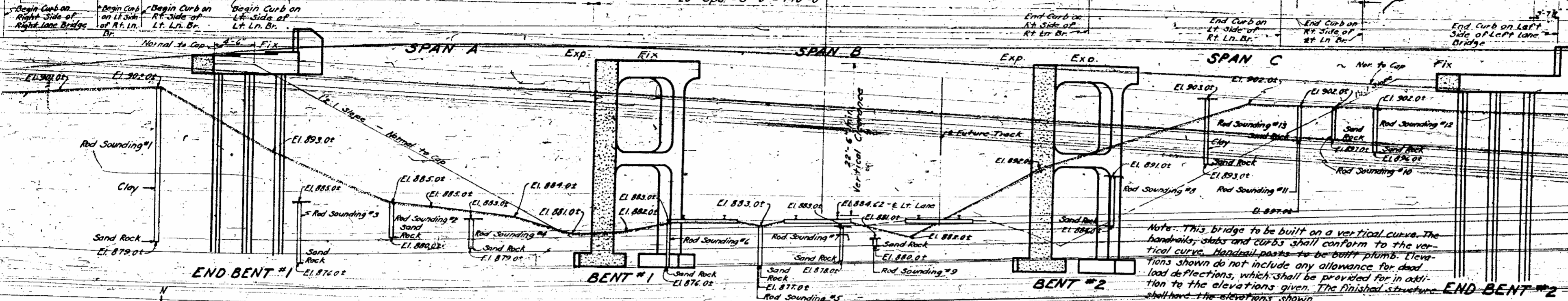
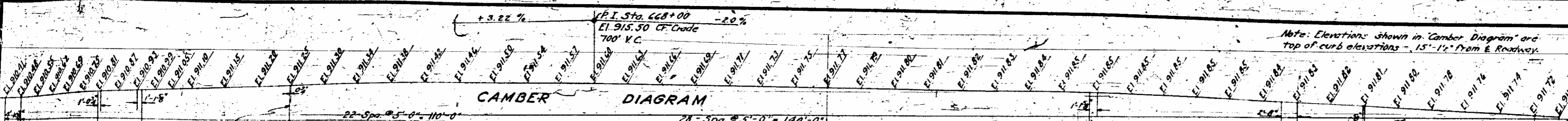
STATION: 668+14.4

Left Lane = Bridge # 168

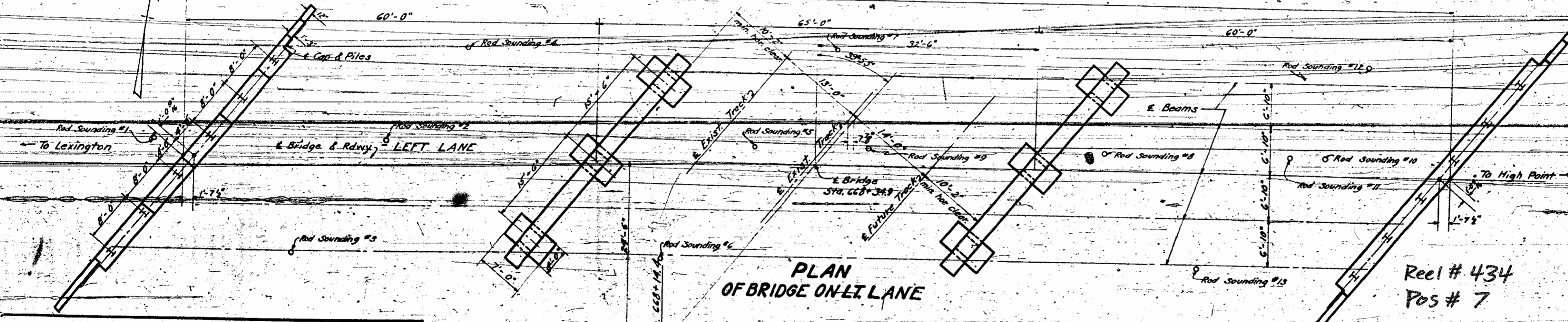
STATE OF NORTH CAROLINA
STATE HIGHWAY AND
PUBLIC WORKS COMMISSION

GENERAL DRAWING
FOR BRIDGES ON U.S. 29 & 70
OVER SOUTHERN RY.
BETWEEN LEXINGTON AND
HIGH POINT
JUNE, 1949

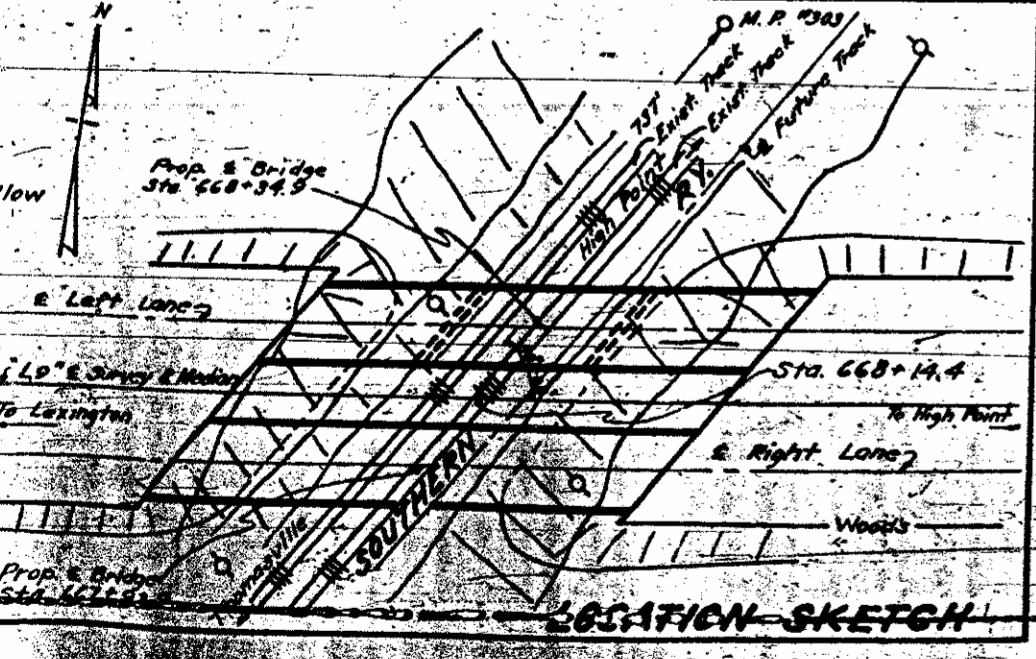
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SECTION ALONG E OF BRIDGE ON LEFT LANE
(SECTION ALONG E OF BRIDGE ON RIGHT LANE SIMILAR)



PLAN OF BRIDGE ON LEFT LANE



LOCATION SKETCH

Note: The Contractor will be required to drive one test pile 37' long in End Bent #1 of Right Lane Bridge and one test pile 32' long in End Bent #2 of Right Lane Bridge. Test piles will be paid for as "Steel Piles." See Specifications.

PILE SPLICES: For payment for any necessary pile splices, see Special Provisions.

NOTE: End Bent piles to be driven to a n.n. bearing capacity of 30 tons each.

COMPUTED FOUNDATION LOAD:
Interior Bents #1 & #2 = 3 1/2 Tons

BILL OF MATERIAL FOR ONE BRIDGE-LEFT LANE

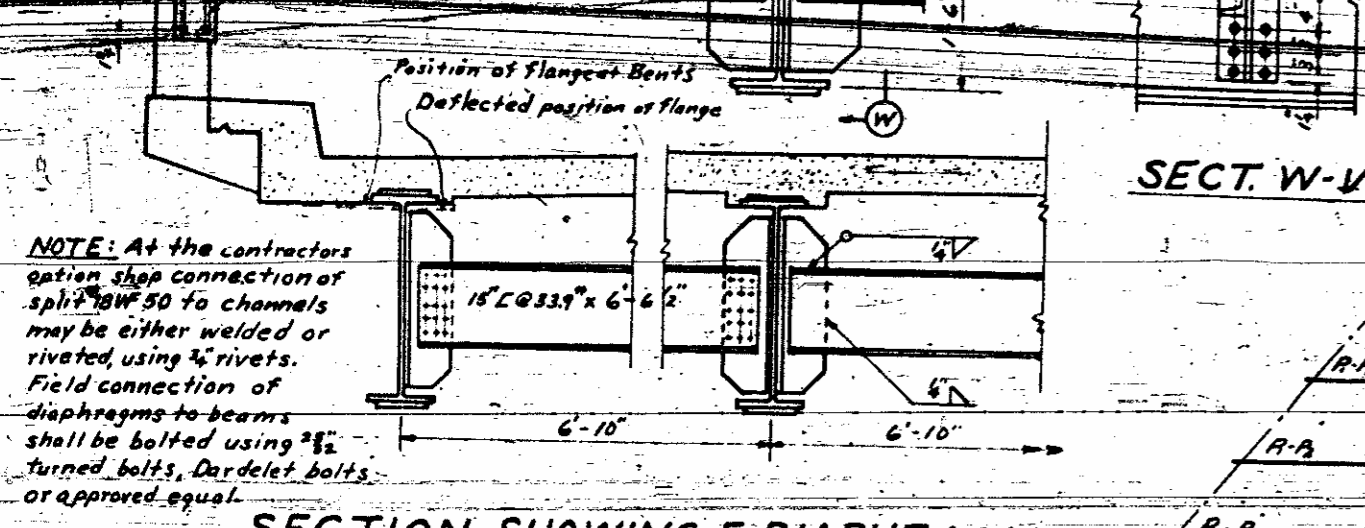
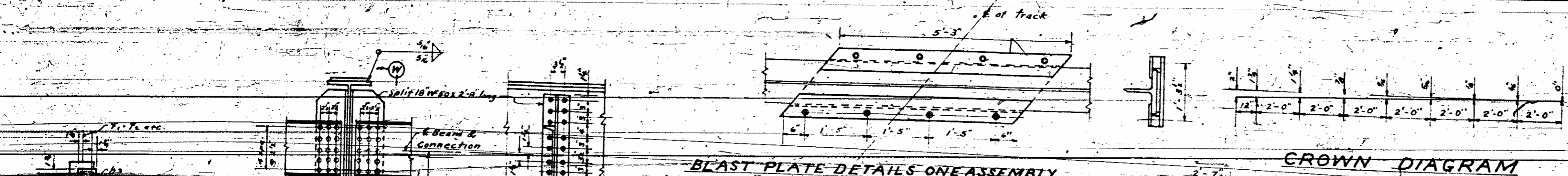
	Cu. Yds. Concrete	Reinforcing Steel Lbs.	Structural Steel (Approx. Lbs.)	Method A Waterproofing (Sq. Yds.)	Unclass. Struc. Excess (Cu. Yds.)	12" x 53" Steel Piles (No. Lin. Ft. (Approx. Lbs.))	Weight Iron Blast Plates (Approx. Lbs.)
Superstructure	177.3	35,257	182,500	25			4600
1-Rail Connection	8.5	422					
End Bent #1	14.7	3235				6	102
Bent #1	39.5	7471			50		
Bent #2	39.5	7471			125		
End Bent #2	14.3	3254				6	122
2-Approach Curbs	1.9	50					
TOTALS	295.7	57,160	182,500	25	175	12	554

BILL OF MATERIAL FOR ONE BRIDGE-RIGHT LANE

	Cu. Yds. Concrete	Reinforcing Steel Lbs.	Structural Steel (Approx. Lbs.)	Method A Waterproofing (Sq. Yds.)	Unclass. Struc. Excess (Cu. Yds.)	12" x 53" Steel Piles (No. Lin. Ft. (Approx. Lbs.))	Weight Iron Blast Plates (Approx. Lbs.)
Superstructure	177.3	35,257	182,500	25			4600
1-Rail Connection	8.5	422					
End Bent #1	15.0	3256				6	102
Bent #1	39.5	7471			50		
Bent #2	39.5	7471			125		
End Bent #2	14.3	3235				6	122
2-Approach Curbs	1.9	50					
TOTALS	226.0	57,162	182,500	25	175	12	554

B.M. Nail in base. 12" dia. 150' Lt. Sta. 662+10. Plot 80.135

NOTE: Method "A" Waterproofing to be placed over the fill side of joints between substructure and superstructure. Strips of waterproofing to be 2'-0" wide and placed symmetrical about the joints. Asphalt for mop coat shall conform to the requirements for type "A" Asphalt of A. A. S. H. O. Spec. M-115.



NOTE: At the contractor's option shear connection of split WF 50 to channels may be either welded or riveted, using 3/4" rivets. Field connection of diaphragms to beams shall be bolted using 3/4" turned bolts, Dardet bolts or approved equal.

BLAST PLATE DETAILS ONE ASSEMBLY
 10-ASSEMBLIES REQ'D FOR EACH BRIDGE.
 1- 18" x 1/2" Wrought Iron plate
 2- 3" x 1 1/2" Wrought Iron Plates
 3- 3/4" Wrought Iron Bolts with Lock washers

NOTE: Blast plates to be placed on bottom flange of each beam on track span at E. of tracks both Bridges.

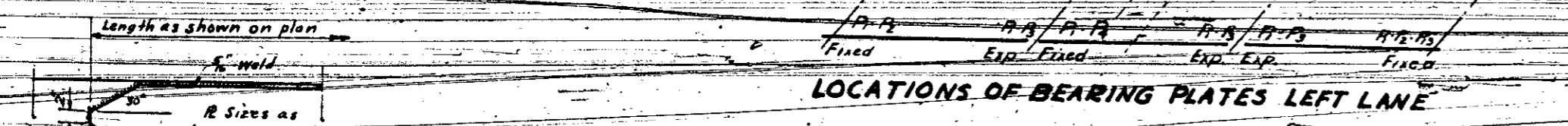
CROWN DIAGRAM

SECTION SHOWING I DIAPHRAGM

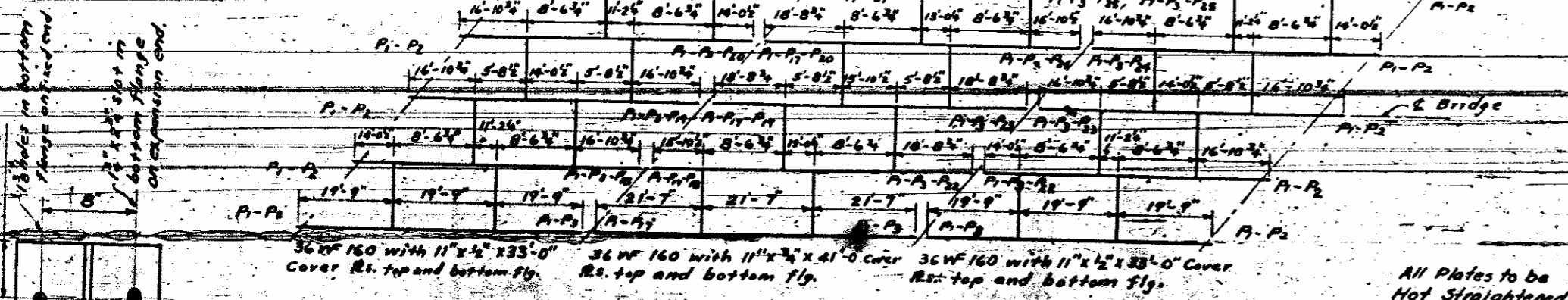
SECT. W-W

HALF SECTION

HALF END VIEW



WELDING DETAIL FOR ENDS OF COVER PLATES



STRUCTURAL STEEL PLAN

BEARING PLATES SHOWN HERE ARE FOR RIGHT LANE

BEARING PLATES REQUIRED RIGHT LANE

Mark	No	Size	Remarks
P1	30	9" x 1/2" x 11'-1"	24" Radius
P2	10	6" x 1/2" x 11'-1"	
P3	15	6" x 1/2" x 11'-1"	Slotted
P4	5	6" x 1/2" x 11'-1"	
P5	2	9" x 1/2" x 11'-1"	File under P1
P6	2	9" x 1/2" x 11'-1"	File under P1
P7	2	9" x 1/2" x 11'-1"	File under P1
P8	2	9" x 1/2" x 11'-1"	File under P1
P9	2	9" x 1/2" x 11'-1"	File under P1
P10	2	9" x 1/2" x 11'-1"	File under P1

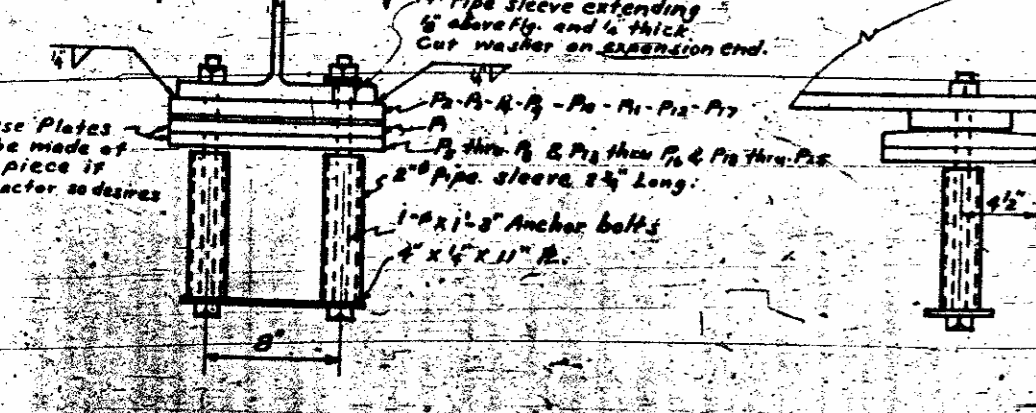
BILL OF MATERIAL FOR 3 SPANS

Bar No.	Size	Type	Length	Weight	Bar No.	Size	Type	Length	Weight	Bar No.	Size	Type	Length	Weight	
A1	202	4"	32'-7"	6865	044	6	4"	7'-7"	47	91	8	4"	20'-3"	243	
A2	199	4"	33'-10"	7022	045	6	4"	6'-5"	39	42	8	4"	25'-0"	276	
A3	12	4"	30'-7"	383	046	6	4"	5'-0"	31	41	4	4"	7'-9"	78	
A4	12	4"	29'-8"	364	047	6	4"	4'-3'-8"	23	42	68	4"	7'-5'-0"	77	
A5	12	4"	28'-0"	351							62	368	4"	2'-9"	169
A6	12	4"	25'-5"	318	048	6	4"	5'-31'-5"	197	K1	8	4"	54'	128	
A7	12	4"	24'-1"	301	049	6	4"	5'-30'-1"	188	K2	4	4"	54'	140	
A8	12	4"	22'-10"	284	050	6	4"	5'-28'-10"	180	K3	4	4"	54'	156	
A9	12	4"	21'-6"	269	051	6	4"	5'-27'-6"	172	K4	8	4"	54'	247	
A10	12	4"	20'-3"	254	052	6	4"	5'-26'-3"	164	K5	8	4"	54'	281	
A11	12	4"	18'-11"	237	053	6	4"	5'-24'-11"	156	K6	4	4"	54'	62	
A12	12	4"	17'-8"	221	054	6	4"	5'-23'-8"	148	S1	112	1/2"	10'	3-10"	287
A13	12	4"	16'-4"	204	055	6	4"	5'-22'-4"	140	S2	54	1/2"	10'	3-10"	114
A14	12	4"	15'-1"	189	056	6	4"	5'-21'-1"	132	K7	4	4"	54'	67	
A15	12	4"	13'-9"	172	057	6	4"	5'-19'-9"	124	Z1	4	3/4"	11'	9'-5"	39
A16	12	4"	12'-8"	156	058	6	4"	5'-18'-8"	116	Z2	68	3/4"	11'	7'-0"	196
A17	12	4"	11'-2"	140	059	6	4"	5'-17'-2"	107						
A18	12	4"	9'-11"	124	060	6	4"	5'-15'-11"	100						
A19	12	4"	8'-7"	107	061	6	4"	5'-14'-7"	91						
A20	12	4"	7'-4"	92	062	6	4"	5'-13'-4"	83						
A21	12	4"	6'-0"	75	063	6	4"	5'-12'-0"	75						
A22	12	4"	4'-9"	59	064	6	4"	5'-10'-9"	67						
A23	12	4"	3'-5"	43	065	6	4"	5'-9'-5"	59						
A24	6	4"	30'-10"	193	066	6	4"	5'-6'-10"	43						
A25	6	4"	29'-6"	185	067	6	4"	5'-5'-6"	35						
A26	6	4"	28'-3"	177	068	6	4"	5'-4'-3"	27						
A27	6	4"	26'-11"	169											
A28	6	4"	25'-8"	161	01	288	4"	21'-8"	4088						
A29	6	4"	24'-5"	152	02	30	4"	24'-6"	497						
A30	6	4"	23'-1"	144	03	165	4"	22'-10"	2516						
A31	6	4"	21'-9"	136	04	6	4"	27'-0"	108						
A32	6	4"	20'-6"	127	05	6	4"	23'-0"	94						
A33	6	4"	19'-2"	120											
A34	6	4"	17'-11"	112	01	148	4"	3'-8"	363						
A35	6	4"	16'-7"	104	02	140	4"	4'-3"	421						
A36	6	4"	15'-4"	96											
A37	6	4"	14'-0"	88	01	8	4"	54'	4						
A38	6	4"	12'-9"	80	02	8	4"	54'	4						
A39	6	4"	11'-5"	71	03	24	4"	54'	14-11"	259					
A40	6	4"	10'-2"	64	04	24	4"	54'	16'-0"	224					
A41	6	4"	8'-10"	56	05	32	4"	54'	15'-10"	330					

LEFT LANE

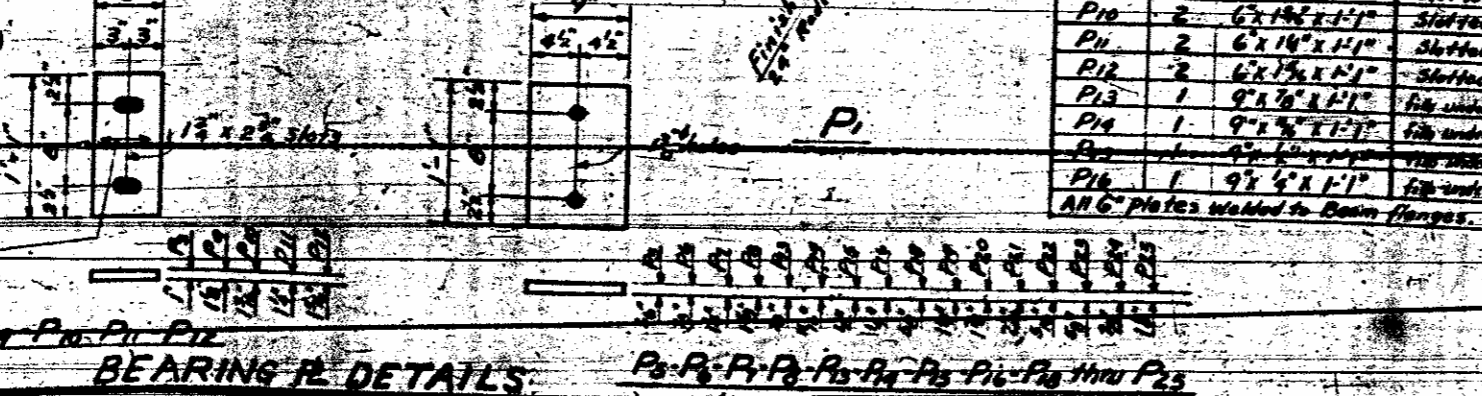
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P4	5	6" x 1/2" x 11'-1"	
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P11	2	9" x 1/2" x 11'-1"	File under P1
P12	2	9" x 1/2" x 11'-1"	File under P1
P13	1	9" x 1/2" x 11'-1"	File under P1
P14	1	9" x 1/2" x 11'-1"	File under P1
P15	1	9" x 1/2" x 11'-1"	File under P1
P16	1	9" x 1/2" x 11'-1"	File under P1

SECT. X-X



BEARING PLATE ASSEMBLY

BEARING PLATE DETAILS



NOTE: All dimensions which are given in section and are affected by dead load deflections are dimensions at bearing. Roadway slab shall be blocked up over beams as shown to provide the required crown. Also additional blocking shall be used between bearing points to compensate for dead load deflection, and vertical curve. Max. Dead Load Deflections 65' Span Int. Beam 1/2" - Ext. Beam 1" 60' Span Int. Beam 1/2" - Ext. Beam 1"

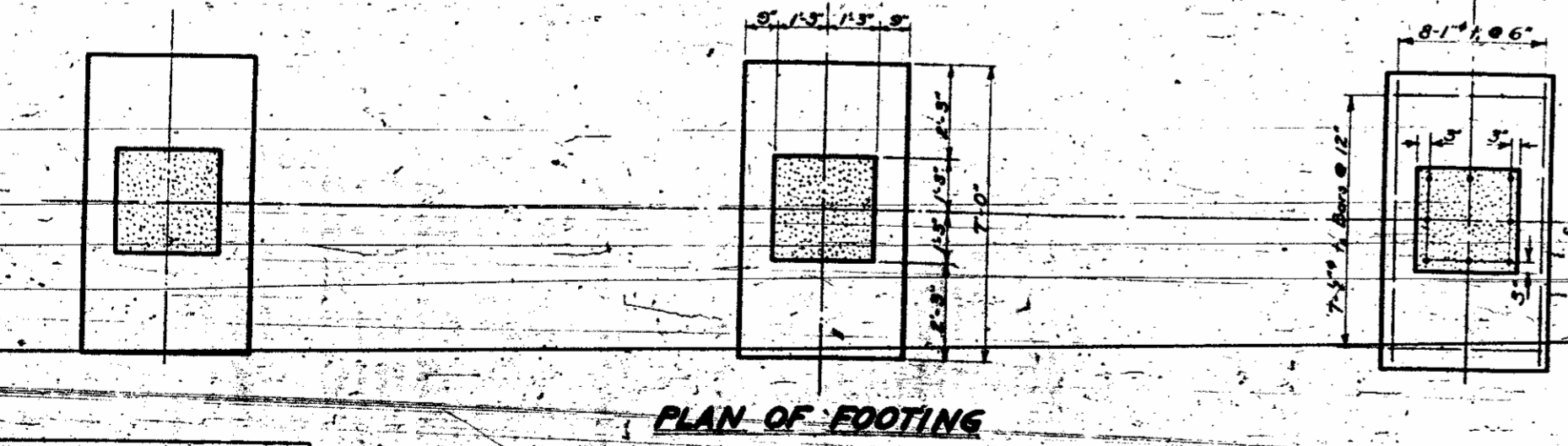
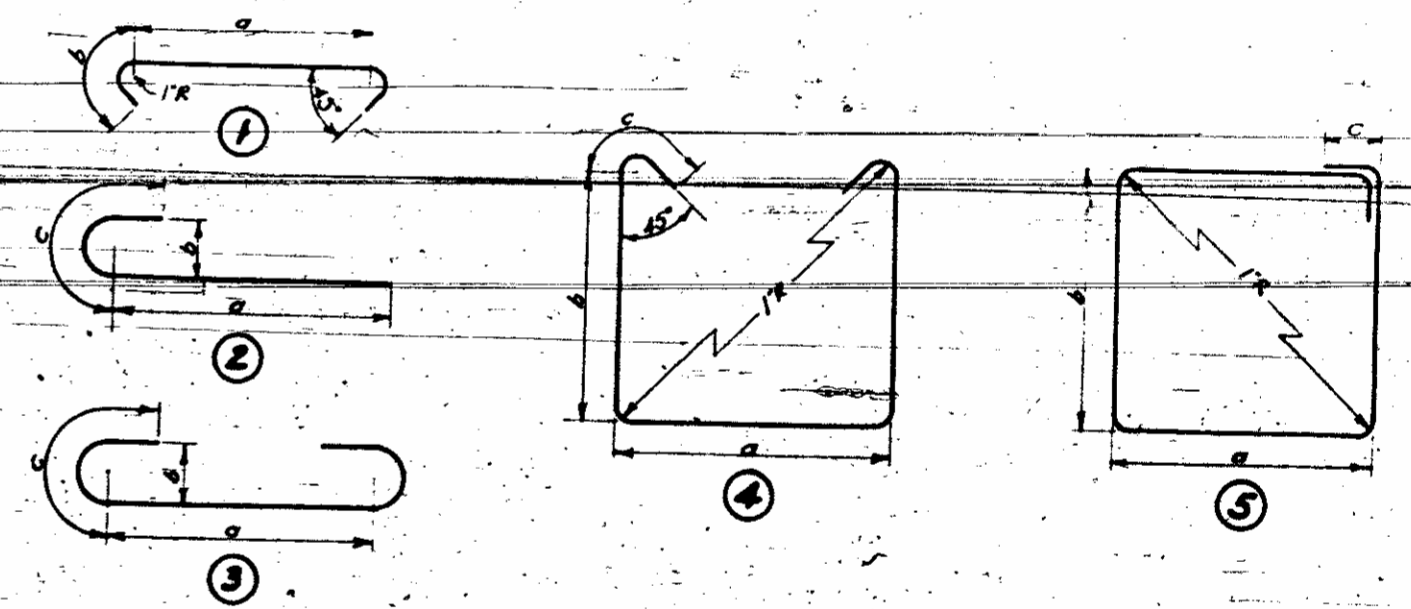
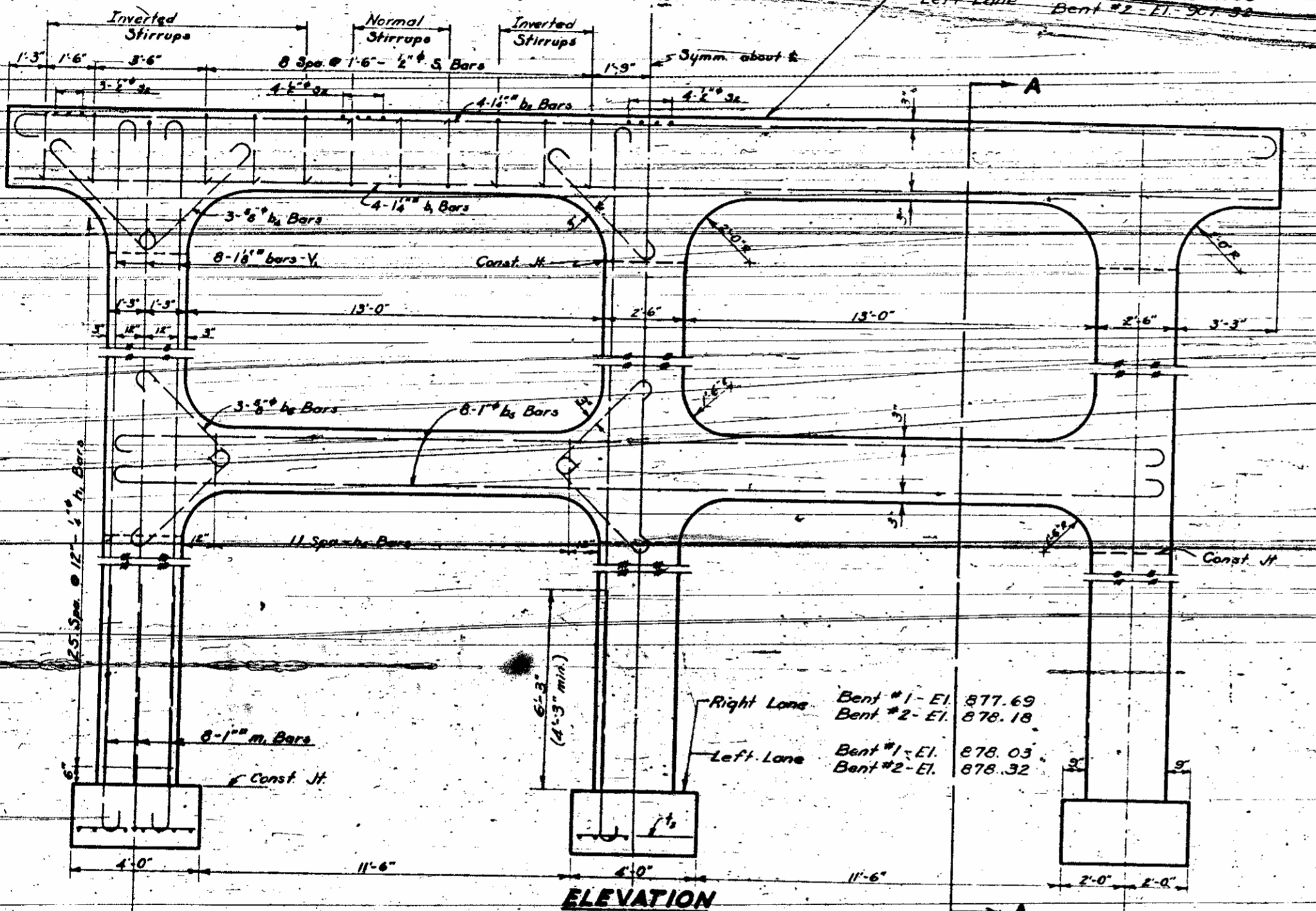
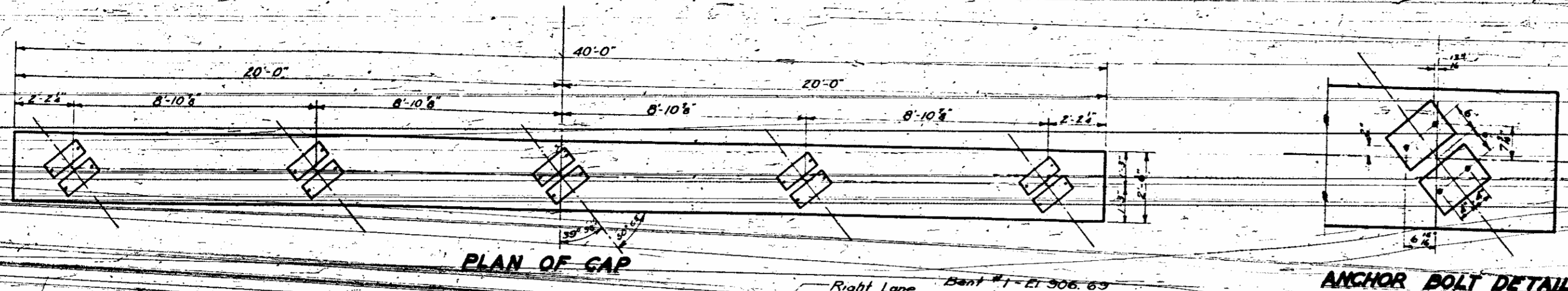
PROJECT NO. 5282
 DAVIDSON COUNTY
 STATION: 668 + 14.4

STATE OF NORTH CAROLINA
 STATE HIGHWAY AND
 PUBLIC WORKS COMMISSION

SUPERSTRUCTURE
R.T. & LT. LANE BRIDGES

AUGUST 1949

Submitted by: W.H. Rouse
 Approved by: W.H. Rouse



BILL OF MATERIAL - 1 BENT

Bar No.	Size	Type	a	b	c	Length	Weight
ba	1 1/2"	str	39'-0"	8'	1'-6"	39'-9"	845
bb	1 1/2"	3	39'-0"	8'	1'-6"	42'-0"	893
bc	1 1/2"	3	4'-0"	4'	1'-0"	6'-0"	113
bd	1 1/2"	3	32'-9"	6'	1'-3"	35'-3"	753
be	1 1/2"	3	3'-6"	4'	1'-0"	5'-6"	130
bf	1 1/2"	3	2'-11"	1'-11"	3 1/2"	8'-5"	114
bg	1 1/2"	3	2'-11"	1'-7 1/2"	3 1/2"	6'-1"	79
bh	2"	2	7'-7"	6'	1'-3"	8'-10"	121
bi	1 1/2"	4	2'-2"	2'-2"	5'	7'-4"	108
bj	1 1/2"	1	2'-1"	5'	—	2'-11"	35
bk	1 1/2"	3	6'-3"	8'	1'-5"	8'-9"	361
bl	1 1/2"	str	—	—	—	3'-5"	53
bm	1 1/2"	2	28'-2"	8'	1'-6"	29'-8"	3064
Reinforcing Steel - Lbs							7471
Class 'A' Concrete - Cu Yds							55.3

PROJECT NO. 5282
 DAVIDSON COUNTY
 STATION: 668+14.4
 RT. & LT. LANES
 BENTS 1 & 2

STATE OF NORTH CAROLINA
 STATE HIGHWAY AND
 PUBLIC WORKS COMMISSION

SUBSTRUCTURE DETAILS
 FOR BRIDGE ON U.S. 29 & TO
 OVER SOUTHERN RY.
 BETWEEN LEXINGTON AND
 HIGH POINT
 JULY 1949

SPECIAL INSTRUCTIONS
 DATE: June 1949
 DATE: July 1949
 DATE: July 1949
 DATE: July 1949

Note: Computed Foundation load per sq. Ft. = 3 1/2 tons

APPROVED BY: [Signature]
 DATE: 7-20-49