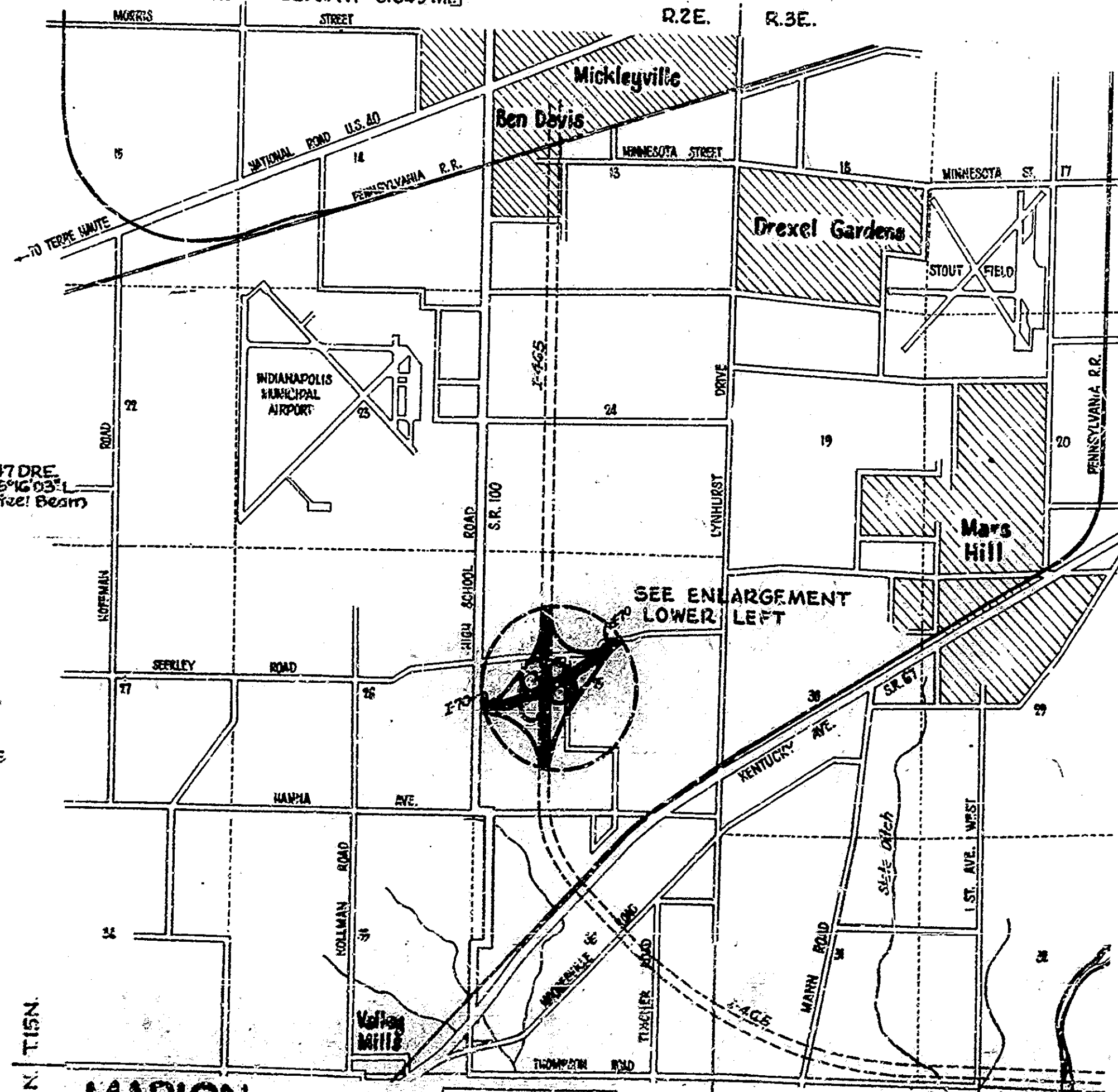
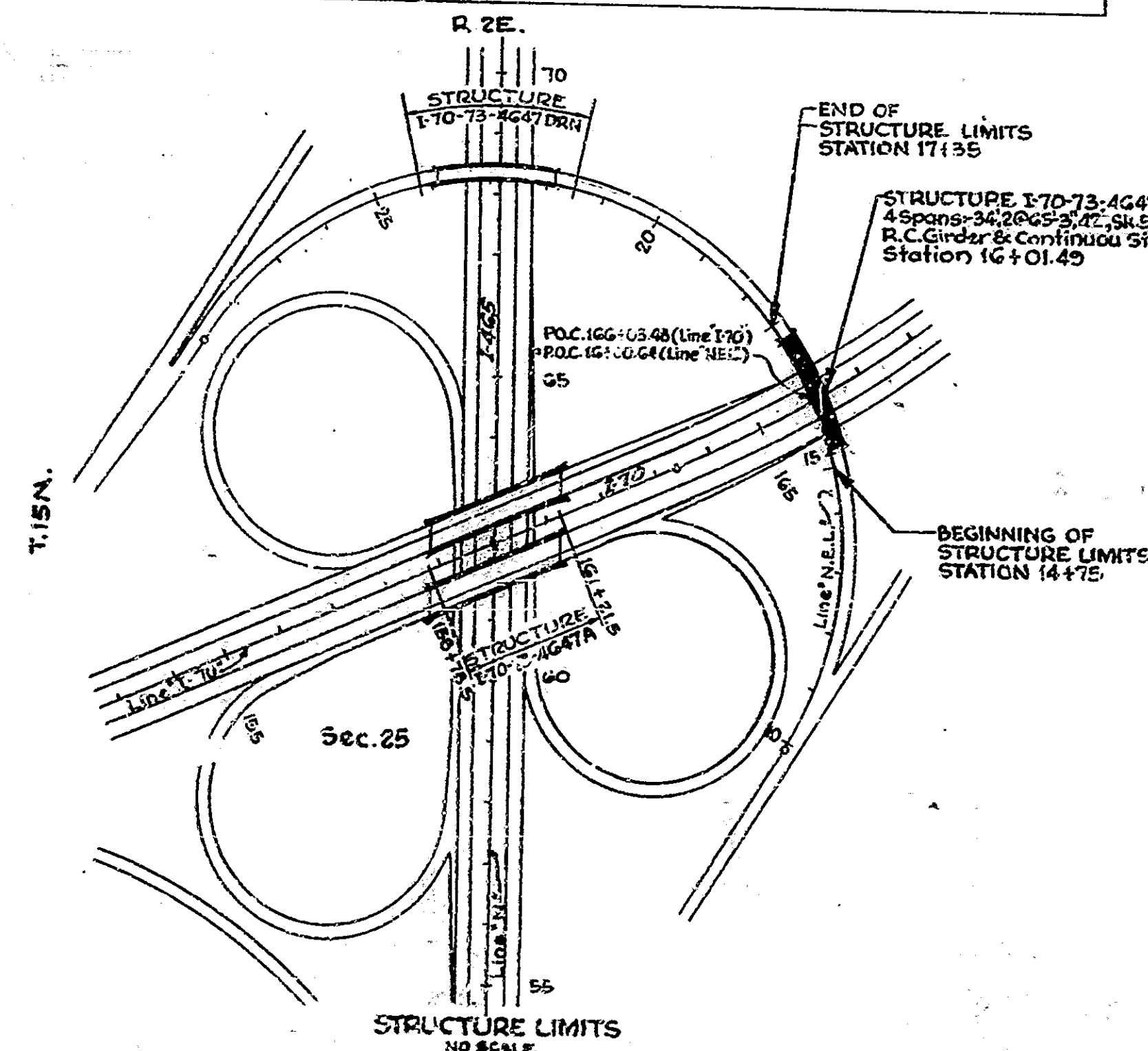


BRIDGE PLANS FOR SPANS OVER 20 FEET ON

WEST LEG-CIRCUMURBAN HIGHWAY

ROADWAY LENGTH=0.009 MI.
BRIDGE LENGTH=0.040 MI. CONSIDERED 0.00 MI. ON I-465
TOTAL LENGTH=0.049 MI. MAX. GRADE=2.86%



BRIDGES OVER 20' SPAN					
SHEET NO.		STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.
4		IND.	1-4-65 1-4-65 1-4-65	1961	1
TOTAL SHEETS 32					

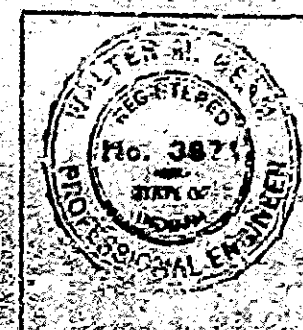
INDEX CONTINUED STANDARD DRAWINGS			
SHEET NO.	SHEET DESIGNATION	SUBJECT	DATE APPROVAL
31	SUMMARY		
32	SECTION		
33	BRIDGE STD. C1	STANDARD MISCELLANEOUS DETAILS	
34	BRIDGE STD. C2	STANDARD MISCELLANEOUS DETAILS	
35	BRIDGE STD. D	CASTING DETAILS ROADWAY DRAINS	
36	BRIDGE STD. E	ROADWAY DRAIN OUTLET DETAILS	
37	BRIDGE STD. H	TYP. DETAILS OF THICK PAVEMENT & LOC. TOE OF SL. AROUND END BENTS	
38	BRIDGE STD. I	TYP. DETAILS OF THICK PAVEMENT & LOCATING TOE OF SLOPE	
39	BRIDGE STD. M1	MISCELLANEOUS APPROACH DETAILS	
40	BRIDGE STD. M2	MISCELLANEOUS APPROACH DETAILS	
41	BRIDGE STD. M3	MISCELLANEOUS APPROACH DETAILS	
42	BRIDGE STD. M4	MISCELLANEOUS APPROACH DETAILS	
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45	BRIDGE STD. R2	DRAINAGE LIGHTING DETAILS	
46	BRIDGE STD. S1	TYPICAL DETAILS FOR PLACING SPECIAL FILLING MATERIAL	
47	BRIDGE STD. S2	TYPICAL DETAILS FOR PLACING SPECIAL FILLING MATERIAL	
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49	BRIDGE STD. T2	STEEL RAILING DETAILS	
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51	BRIDGE STD. T4	STEEL RAILING DETAILS	
52	BRIDGE STD. T5	STEEL RAILING DETAILS	
53	BRIDGE STD. T6	STEEL RAILING DETAILS	
54	BRIDGE STD. T7	STEEL RAILING DETAILS	
55	BRIDGE STD. T8	STEEL RAILING DETAILS	
56	BRIDGE STD. T9	STEEL RAILING DETAILS	
57	BRIDGE STD. T10	STEEL RAILING DETAILS	
58	BRIDGE STD. T11	STEEL RAILING DETAILS	
59	BRIDGE STD. T12	STEEL RAILING DETAILS	
60	BRIDGE STD. T13	STEEL RAILING DETAILS	
61	BRIDGE STD. T14	STEEL RAILING DETAILS	
62	BRIDGE STD. T15	STEEL RAILING DETAILS	
63	BRIDGE STD. T16	STEEL RAILING DETAILS	
64	BRIDGE STD. T17	STEEL RAILING DETAILS	
65	BRIDGE STD. T18	STEEL RAILING DETAILS	
66	BRIDGE STD. T19	STEEL RAILING DETAILS	
67	BRIDGE STD. T20	STEEL RAILING DETAILS	
68	BRIDGE STD. T21	STEEL RAILING DETAILS	
69	BRIDGE STD. T22	STEEL RAILING DETAILS	
70	BRIDGE STD. T23	STEEL RAILING DETAILS	
71	BRIDGE STD. T24	STEEL RAILING DETAILS	
72	BRIDGE STD. T25	STEEL RAILING DETAILS	
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74	BRIDGE STD. T27	STEEL RAILING DETAILS	
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76	BRIDGE STD. T29	STEEL RAILING DETAILS	
77	BRIDGE STD. T30	STEEL RAILING DETAILS	
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79	BRIDGE STD. T32	STEEL RAILING DETAILS	
80	BRIDGE STD. T33	STEEL RAILING DETAILS	
81	BRIDGE STD. T34	STEEL RAILING DETAILS	
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83	BRIDGE STD. T36	STEEL RAILING DETAILS	
84	BRIDGE STD. T37	STEEL RAILING DETAILS	
85	BRIDGE STD. T38	STEEL RAILING DETAILS	
86	BRIDGE STD. T39	STEEL RAILING DETAILS	
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88	BRIDGE STD. T41	STEEL RAILING DETAILS	
89	BRIDGE STD. T42	STEEL RAILING DETAILS	
90	BRIDGE STD. T43	STEEL RAILING DETAILS	
91	BRIDGE STD. T44	STEEL RAILING DETAILS	
92	BRIDGE STD. T45	STEEL RAILING DETAILS	
93	BRIDGE STD. T46	STEEL RAILING DETAILS	
94	BRIDGE STD. T47	STEEL RAILING DETAILS	
95	BRIDGE STD. T48	STEEL RAILING DETAILS	
96	BRIDGE STD. T49	STEEL RAILING DETAILS	
97	BRIDGE STD. T50	STEEL RAILING DETAILS	
98	BRIDGE STD. T51	STEEL RAILING DETAILS	
99	BRIDGE STD. T52	STEEL RAILING DETAILS	
100	BRIDGE STD. T53	STEEL RAILING DETAILS	

TRAFFIC DATA		I-70	I-465
A.D.T. (1980)	PC, 134 V.P.D.	(1980) 31,723 VPD	
A.D.T. (1978 PROJECTED)	61,222 V.P.D.	(1980) 85,657 VPD	
TRUCKS	6 %	6 %	
DESIGN SPEED	70 M.P.H.	70 MPH	
ACCESS CONTROL	FULL	FULL	

INDIANA STATE HIGHWAY COMMISSION
STANDARD SPECIFICATIONS DATED 1969
TO BE USED WITH THESE PLANS.

DATE NOVEMBER 14, 1966

CERTIFIED Walt S. Bean
 PRESIDENT, CHAMBER OF COMMERCE, INC.
 CHAMBER OF COMMERCE, INC.



J-17-63 11/6/31	
REVISIONS	
DATE	SHEET NO.
8-6-65	1
10-31-65	11/2, 11/12, 13, 15, 16, 17, 20, 21, 22, 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, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100
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RECOMMENDED FOR APPROVAL 12-14-6

W. R. Reminger

APPROVED DATE / 2-22-81

Geo. E. Goodwin
CHIEF ENGINEER - NEBRASKA STATE HIGHWAY COMMISSION.

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

APPROVED

DIVISION ENGINEER

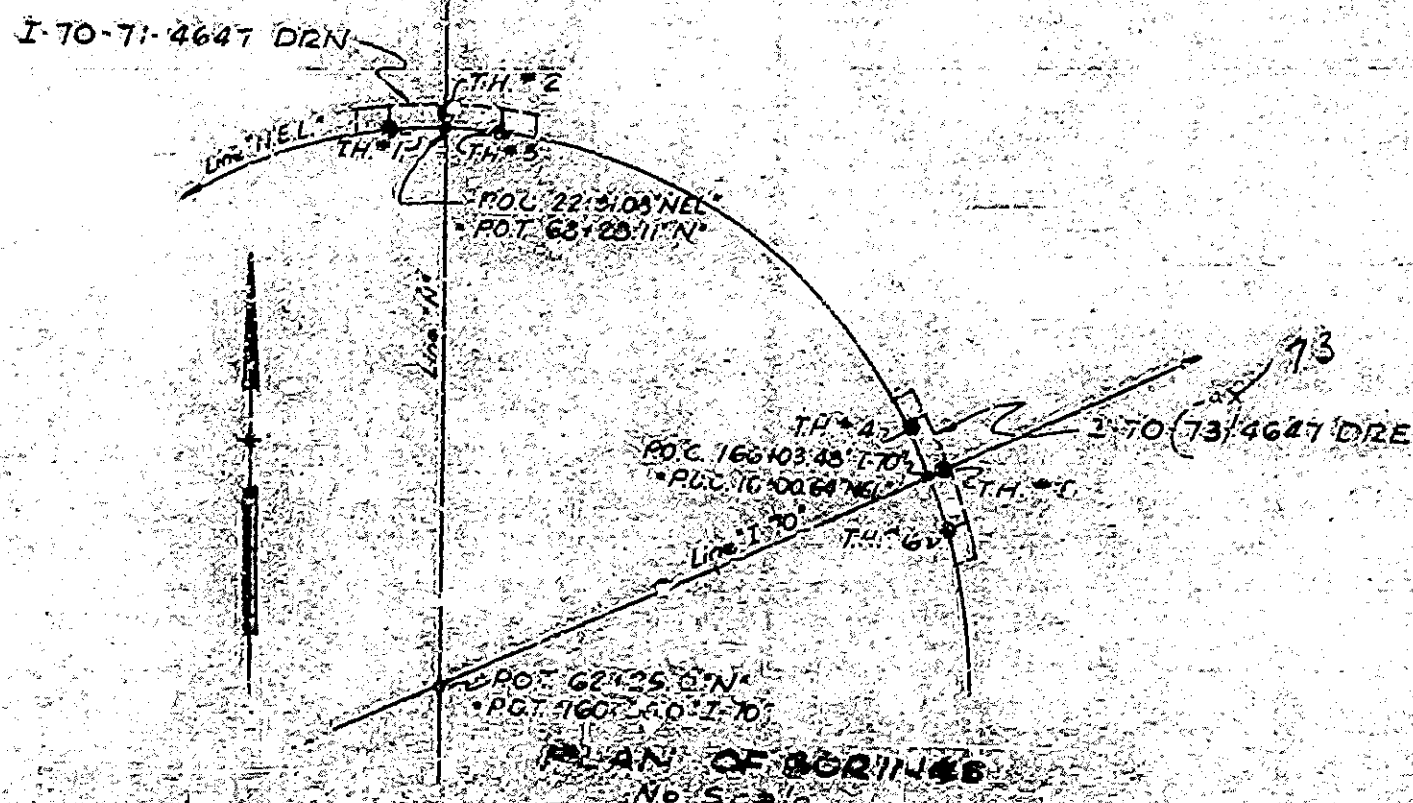
RMJG ENE 1-70-15-4647 D2E

SOIL BORING LOG

BRIDGES OVER 20' SPAN					
FILE NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	1405-27005	1962	4	37

BORING NO.			1			2			3			4			5			6		
STATION			68+25			68+60			69+25			70+05			70+25			70+85		
OFFSET			60' L1			0' L1			62' L1			62' L1			0' L1			62' L1		
SURFACE ELEV.			758.4			757.8			758.5			758.4			758.4			758.4		
GROUNDWATER ELEV.			749.4			747.8			748.5			748.4			748.4			748.4		
DEPTH	Sample No.	Sample Elev.	N	Description	Sample No.	Sample Elev.	N	Description	Sample No.	Sample Elev.	N	Description	Sample No.	Sample Elev.	N	Description	Sample No.	Sample Elev.	N	Description
750																				
755				758.4				757.8				758.5								760
				Brown moist stiff clayey sandy SILT.				Brown moist loose SANDY SILT with a trace of fine gravel.				758.4								755
750	1	755.4	45		1	752.8	45		1	751.5	45	Brown moist very stiff CLAYEY SILT with some fine sand and a trace of fine gravel.								750
745	2	748.4	44	748.4	2	747.8	44	747.8	2	746.5	44	Brown moist medium dense SANDY SILT with a little fine gravel.				748.4				745
				Gray wet dense fine to medium SAND with some silt.				Brown wet medium dense fine to coarse SAND with a trace of clay.												740
740	3	753.4	43	741.4	3	742.8	43	743.8	3	741.5	43		2	743.4	43		1	746.5	43	Brown very stiff moist CLAYEY SILT with some fine sand.
735	4	738.4	42		4	737.8	42	Gray moist very stiff CLAYEY SILT with some fine sand and gravel. (Hardpan)	4	736.5	42		3	738.4	42	737.8	2	739.8	42	739.4
				Gray moist hard clayey SILT with some fine gravel.																735
730	5	733.4	41		5	732.8	41		5	731.5	41	Gray moist hard CLAYEY SILT with some fine sand and fine gravel.	2	735.4	41	Hz 4 moist gray clayey SILT with a trace of sand.	3	734.8	41	
725	6	728.4	40	728.4	6	727.8	40		6	726.5	40		4	728.4	40		4	729.8	40	730
				Bottom of Boring 31.5'																725
720				NOTE: Free ground water was noted 30' below the existing ground surface.	7	722.8	39					722.8	39		5	722.8	39			720
								NOTE: Free ground water was noted 10.0' below the existing ground surface.				NOTE: No free ground water was noted.				721.8	6	719.8	38	722.4
715					8	717.8	38													715
																				710
710					9	712.8	37													705
																				700
705	10	707.8	36		10	707.8	36	706.8												700
								Bottom of Boring 51.5'												

NOTE: (N) = Relative Density - Number of blows required to drive a 2" O.D. sample spoon 12" with a 140 lb weight falling 50". First 10 blows are discarded. Blow count thru disturbed soil and is not to be used.



SOIL BORING LOG

STATE HIGHWAY DEPARTMENT OF INDIANA

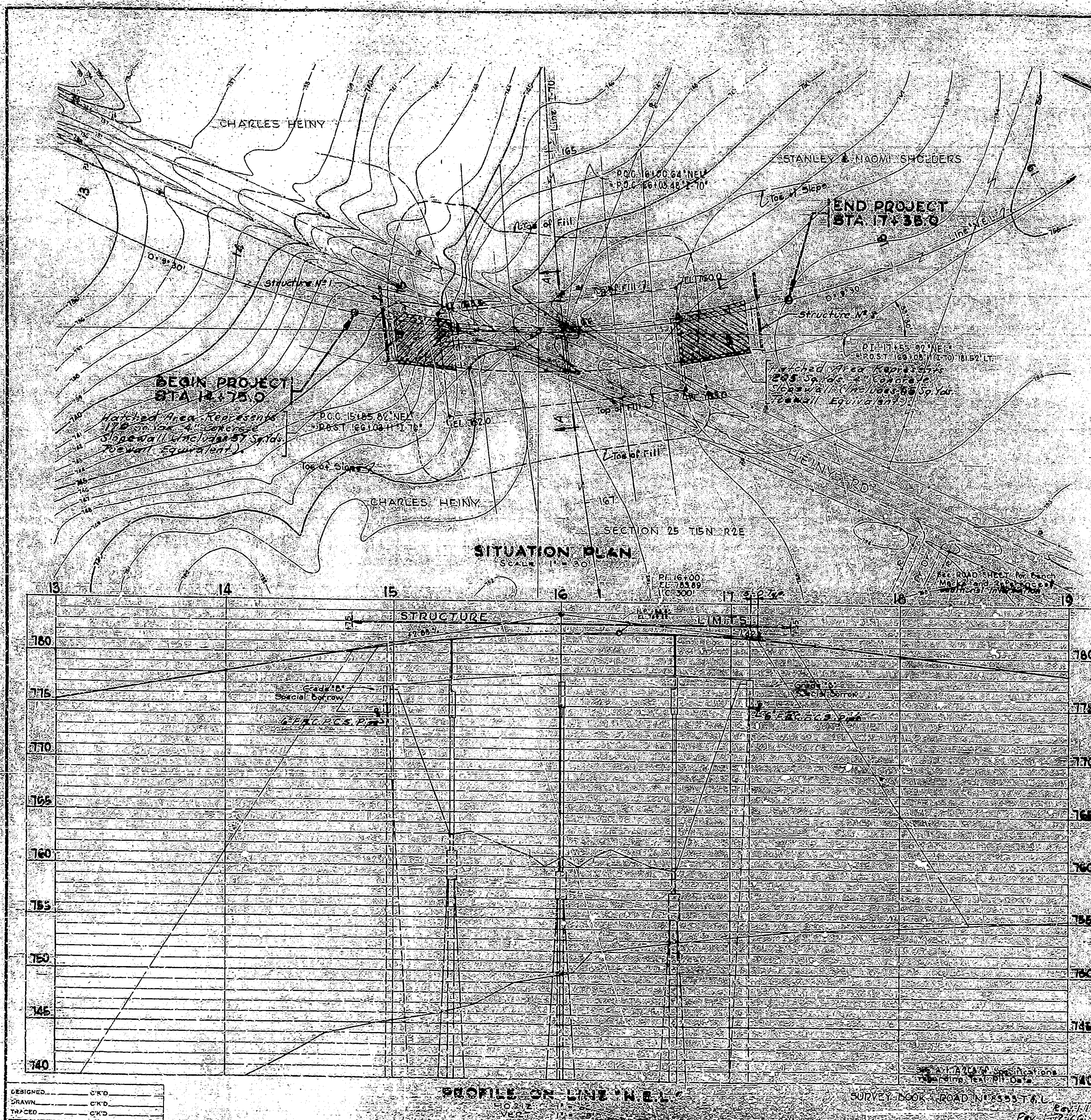
SCALE:

NOVEMBER 1962

Walter M. Brown

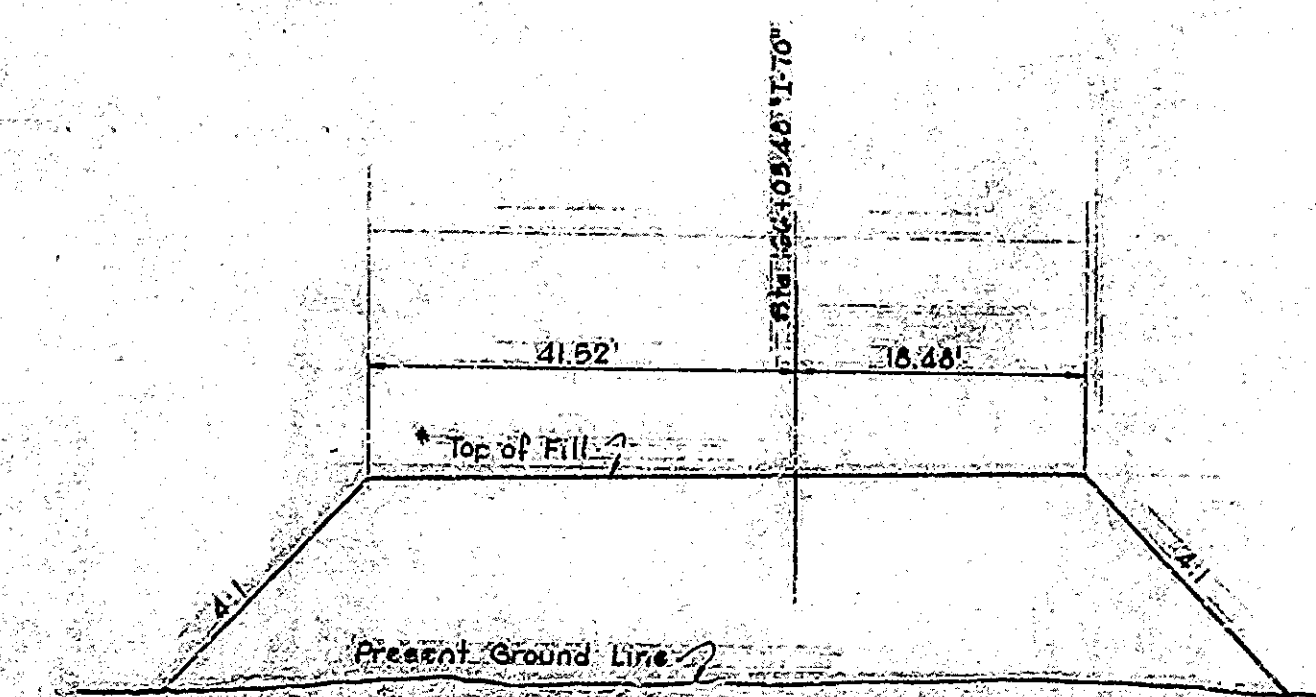
PROJECT: I-465-27005
BRIDGE CONTRACT NO. 6-3921
BRIDGE FILE: I-70-73-4647 DRE

BRIDGES OVER 20' SPAN					
PUB. ROAD DIST. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
2	IND.	1-405-47155	1962	11	37



EARTHWORK SUMMARY

Fill (Line 1-70°)	4,990 CYS
Fill (Line N.E.L.)	51,240 CYS
Fill 1-20%	35,230 CYS
Special Borrow	41,980 CYS
Grade 15% Special Borrow 1-25%	245 CYS



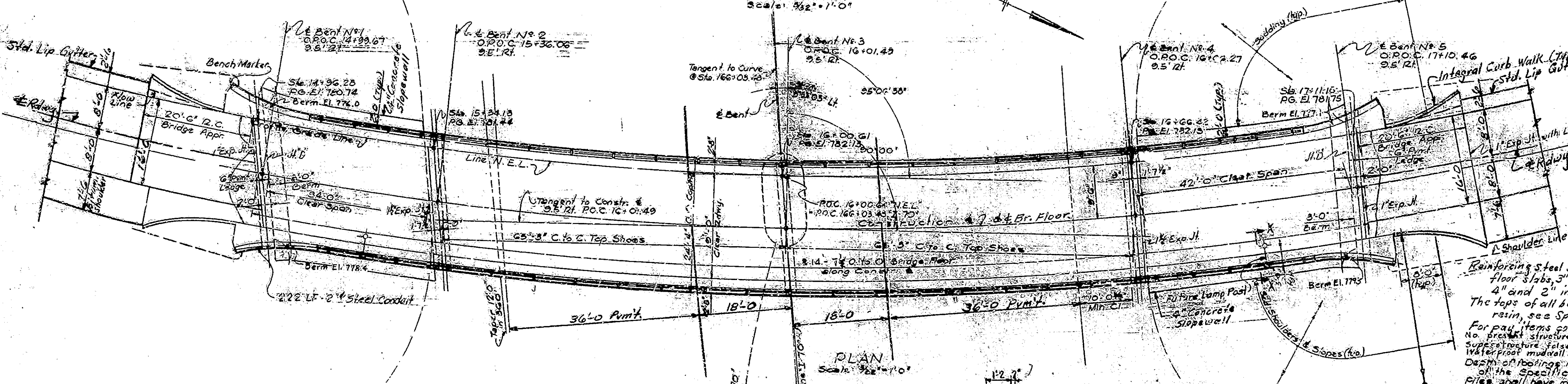
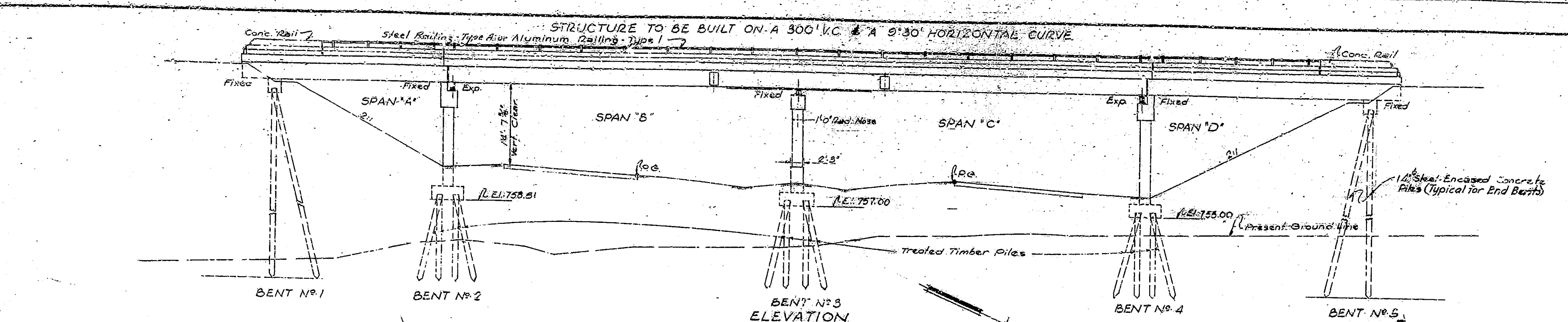
LAYOUT
R.C. GIRDER & CONTINUOUS STEEL BEAM
4 SPANS: 34'-0", 28'-3", 42'-0", 19'-0" ROADWAY
STATE HIGHWAY DEPARTMENT OF INDIANA
MARION COUNTY

SCALE: As Noted

NOVEMBER 1962

DRAWING: S1 of 20
PROJECT: I-405-47155
BRIDGE CONTRACT NO. B-6922
BRIDGE FILE: I-70-71-4947.DDE

BRIDGES OVER 20' SPAN					
FED. ROAD DIST. NO.	STATE	PROJECT NO.	LIBRARY	SHEET NO.	TOTAL SHEETS
4	IND.	1-465-4 MISS	1062	12	37



GENERAL NOTES

Reinforcing steel covering shall be 1/2" in top and 1" in bottom of floor slabs, 3" in footings except bottom steel which shall be 4" and 2" in all other parts unless noted.

The tops of all bent caps shall be sealed with two coats of epoxy.

For paint items covering this structure see "Bridge Summary".

No. 10 bars in bridge piers to be released before pouring railing parapet walls.

Waterproof masonry and wings in accordance with the Specifications.

Depth of footings to be extended if found necessary. See Art. B403.2 of the Specifications.

Piles shall have minimum bearing value shown on detail drawings.

Determine pile lengths by Art. B403.2 of the Specifications.

For details of steel-encased concrete piles see Br. Std. C1, and applicable articles in the Specifications.

Piles shall be driven to elevation necessary to obtain desired bearing.

Construct 4" concrete slopewall at locations as shown on Layout.

Concrete in footings and collision walls to be Class "B".

Concrete in superstructure including railing and bent caps to be Class "A".

Concrete in columns, slopewall and in steel-encased concrete piles to be Class "C".

Continuous concrete pours shall be required between construction joints as shown on detail plans.

Bevel forms 1/2" under copings and chemically exposed edges.

Reference in position of steel-encased concrete piles shall be maximum 1/2" from pile to pile.

3" 10# bars reinforced footing to be placed at end of footing.

All railing to be constructed perpendicular to grade.

See Special Provisions for items included in this contract.

DESIGN DATA

Designed for HS 20-44 loading in accordance with 1941 A.A.S.H.O. Specifications except slab designed for 16,000 wheel load.

Main carrying members checked for live load for Bridges of Interstate System.

JOINT LEGEND

Joint "b" indicates 1/2" preformed joint filler under front 6" of girder bearing area of end bents.

1/2" Exp. Jt. See Br. Std. C1, 1" Exp. Jt. with load transfer. See Br. Std. C1.

TYPICAL CROSS SECTION

Line "N.E.L." See Sheet No. 3.

Line "I-70" Standard Divided Lane Section for Federal Aid Interstate Projects - Adopted May 1964.

GENERAL PLAN

R.C. GIRDER & CONTINUOUS STEEL BEAM BRIDGE

4 SPANS: 34'-0" 28'-3" 32'-0" SKEW 5° 03' 15"

18' 0" B.W.Y. 2'-11" WALKS

STATE HIGHWAY DEPARTMENT OF INDIANA

MARION COUNTY

SCALE: AS NOTED

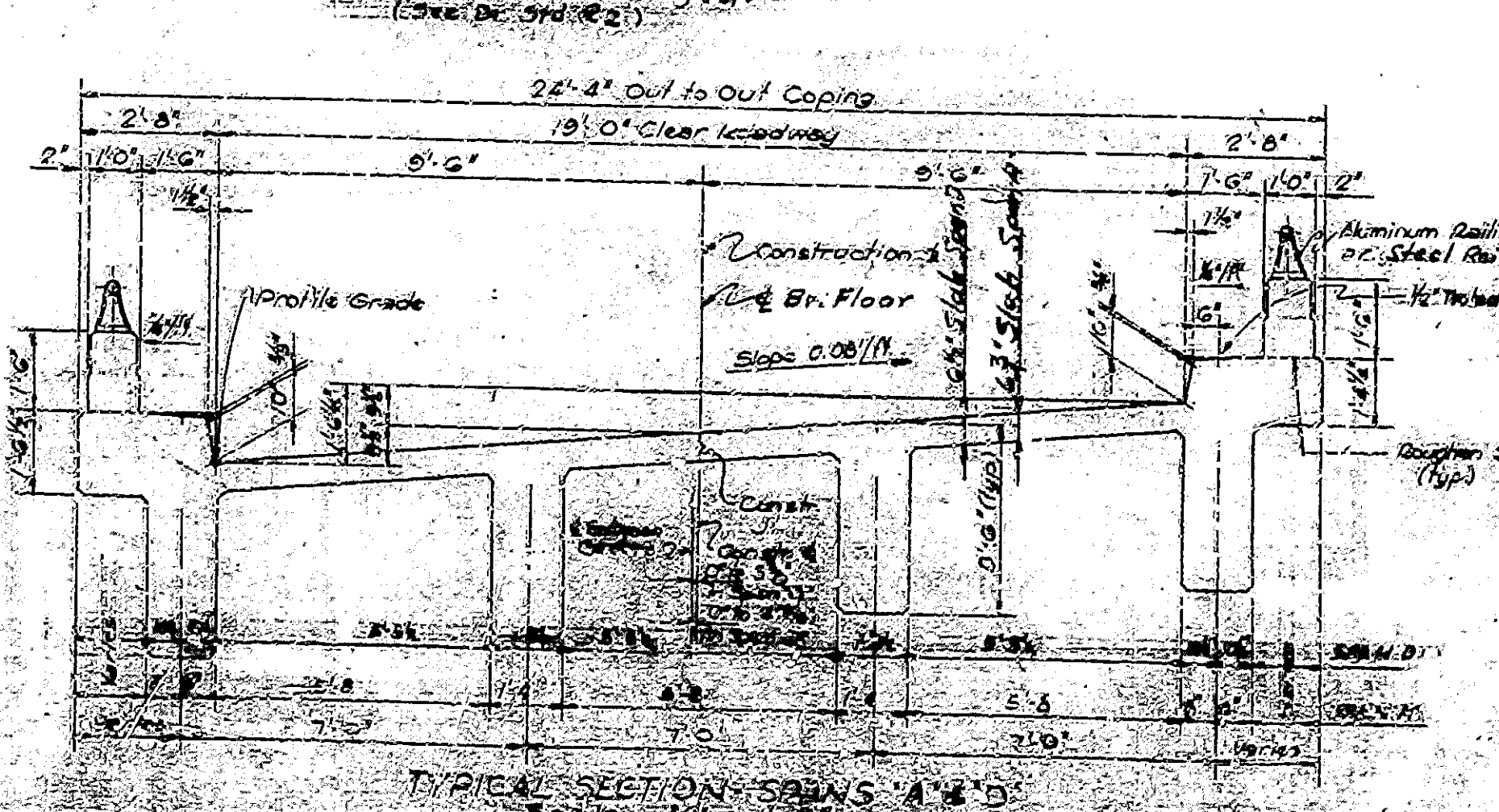
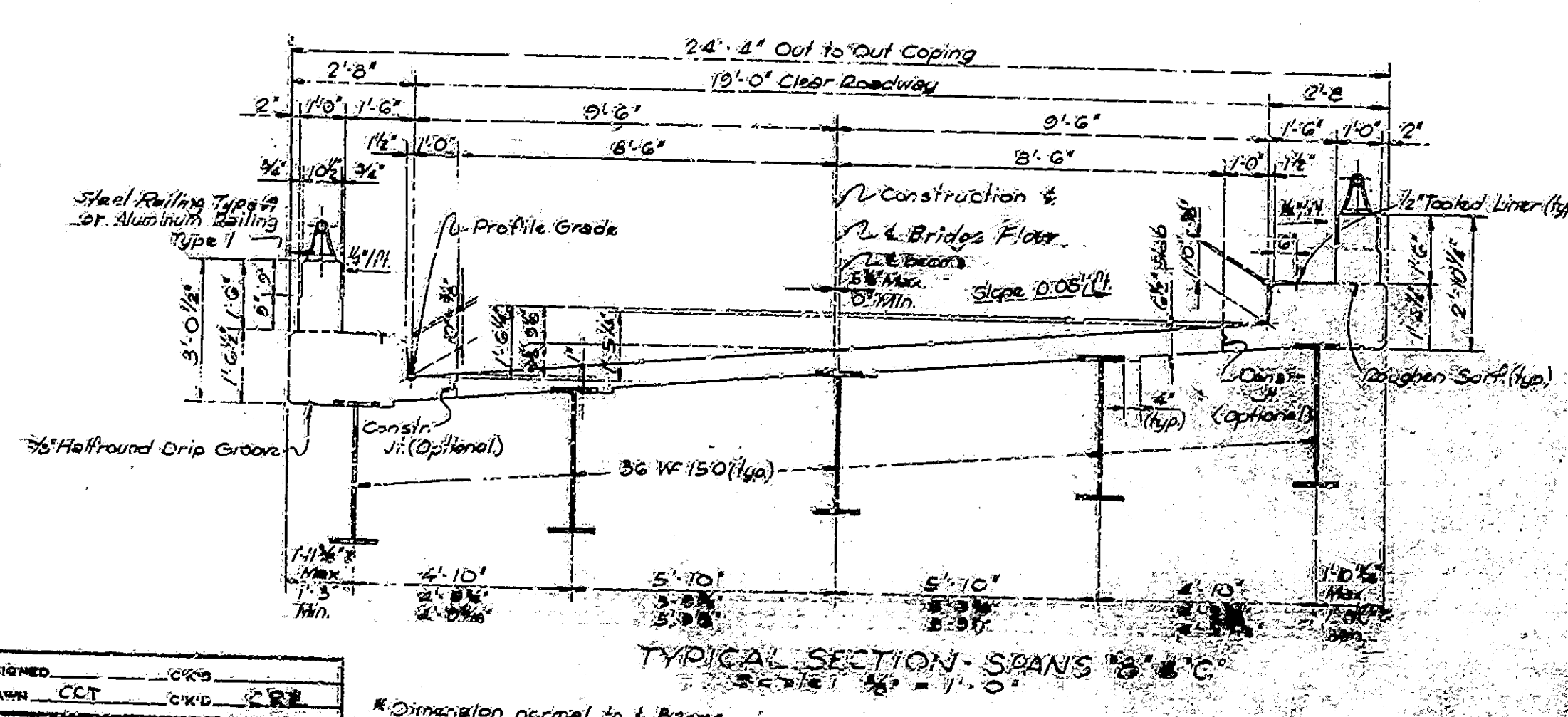
NOVEMBER 11, 1964

DRAWING: S-20

PROJECT: I-465-4 MISS

BRIDGE CONTRACT NO. B-6822

BRIDGE FILE: 1-70-73-4647-DA3



DESIGNED: C.T.

DRAWN: C.T.

CHECKED: C.T.

DATE: 11-11-64

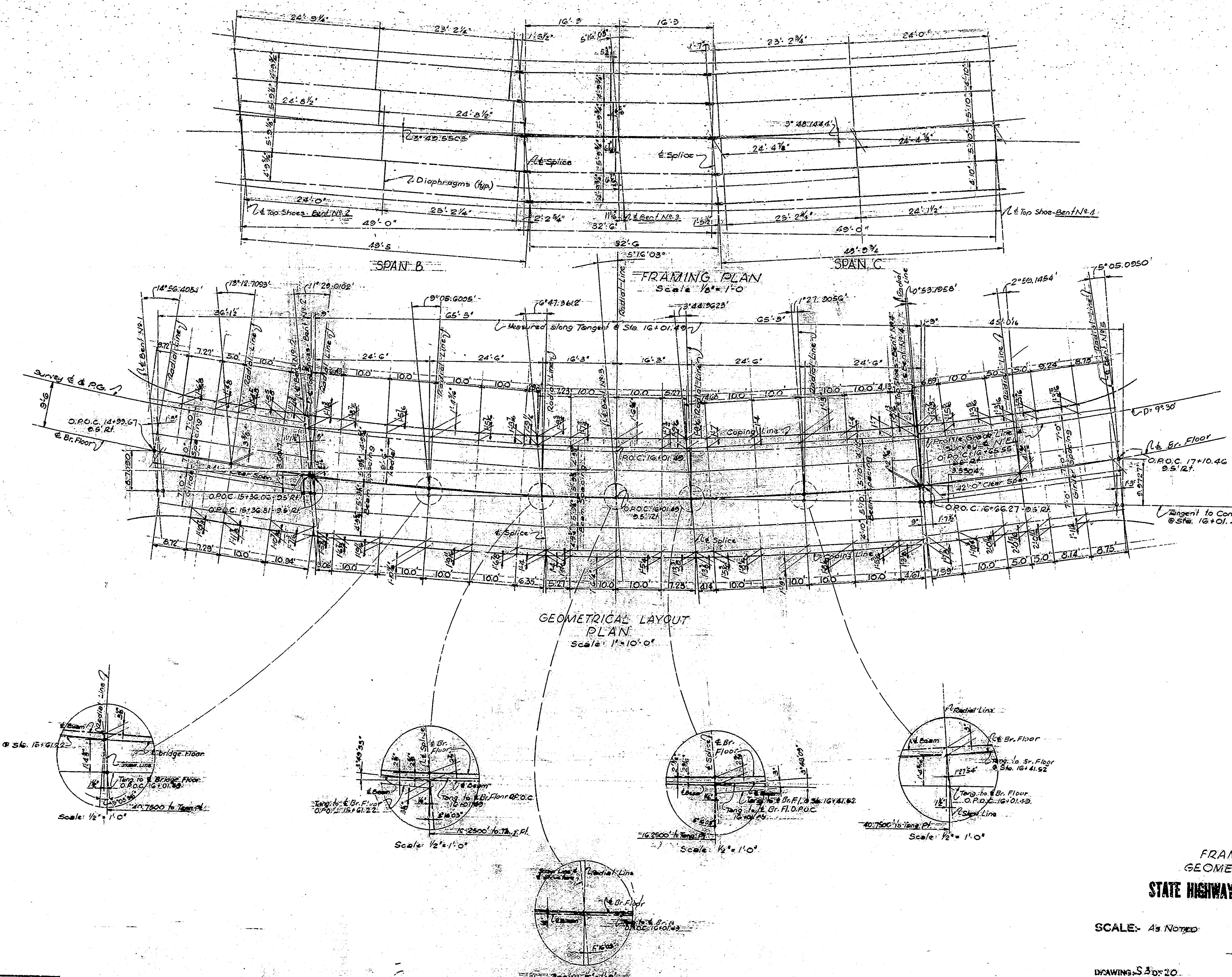
DESIGNED: C.T.

DRAWN: C.T.

CHECKED: C.T.

DATE: 11-11-64

BRIDGES OVER 20' SPAN					
PUB. ROAD SER. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-465 400/KS	1962	13	37



FRAMING PLAN &
GEOMETRICAL LAYOUT
STATE HIGHWAY DEPARTMENT OF INDIANA

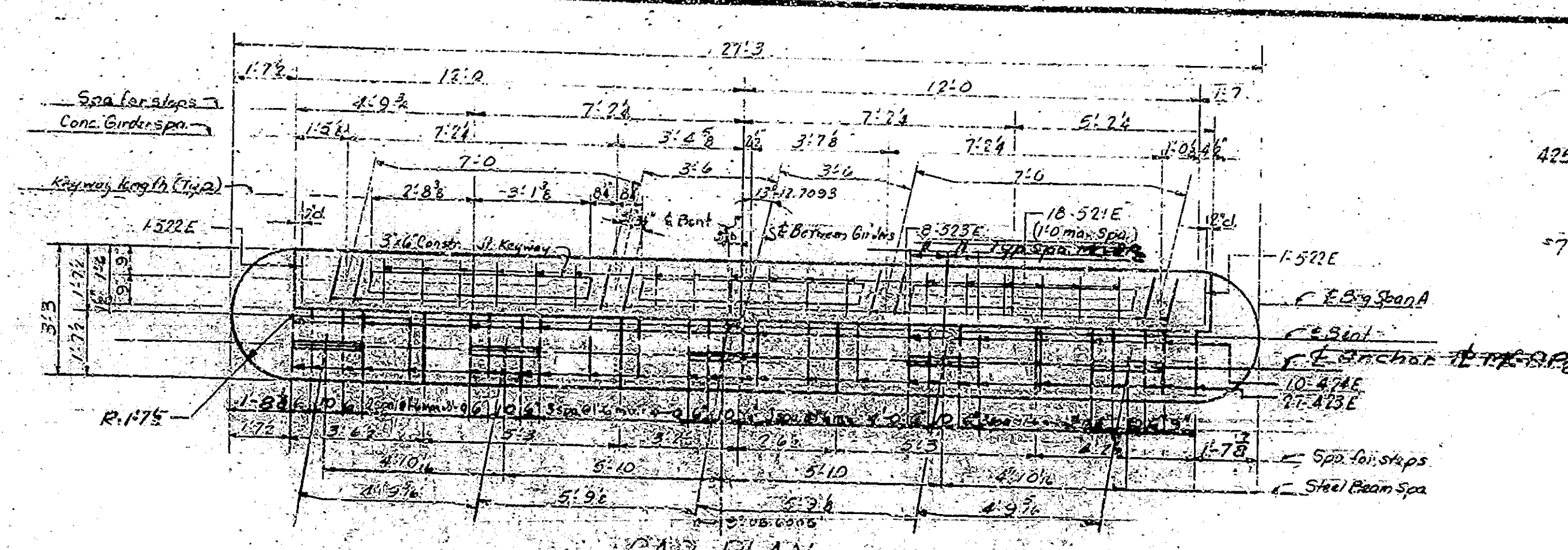
SCALE: As Noted NOVEMBER 14, 1962

Halla, M. B.

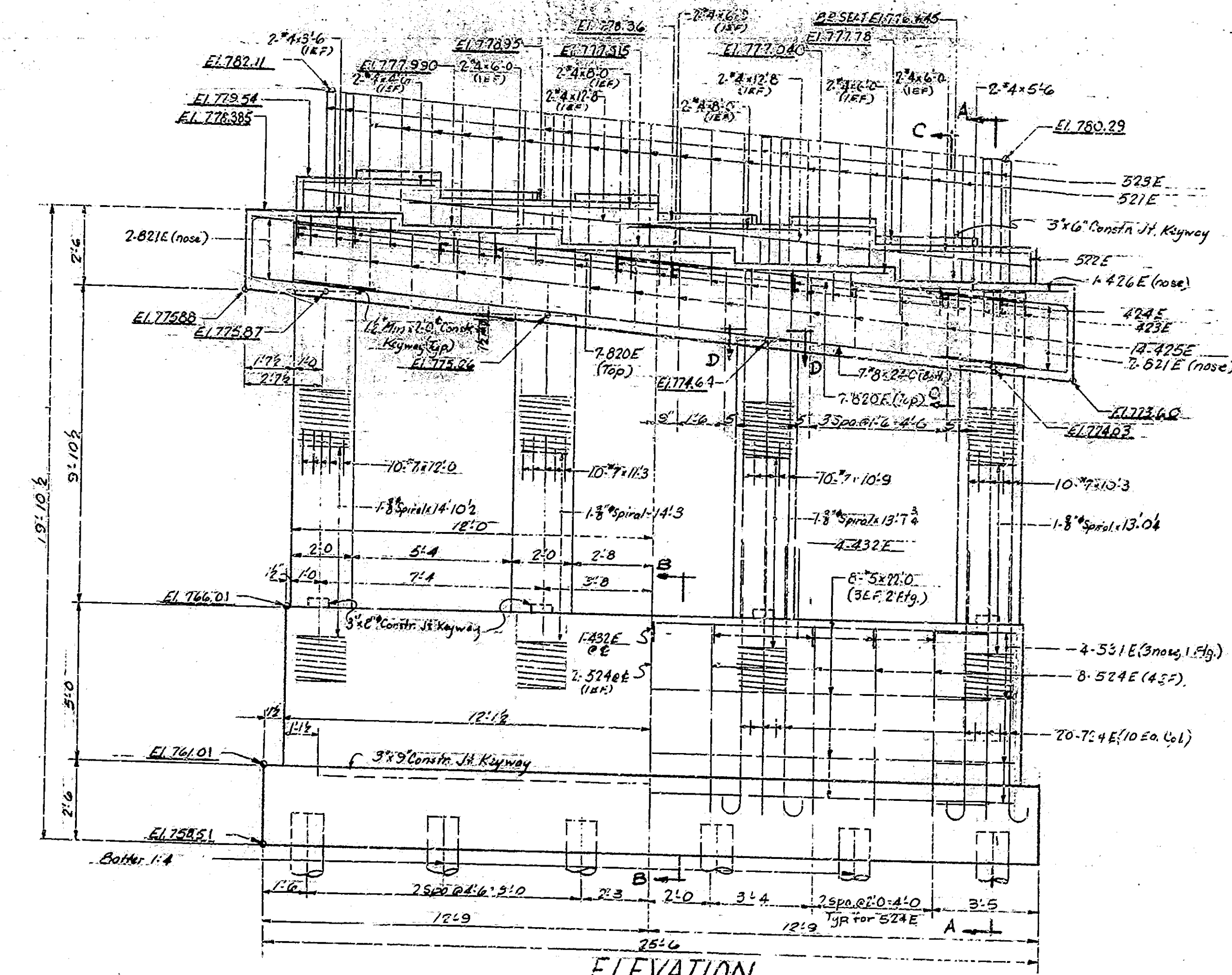
DESIGNED: C.R.E. CWD
DRAWN: C.C.T. CWD C.R.E.

DRAWING: S-30-20
PROJECT: I-465, 400/KS
BRIDGE CONTRACT NO. B-6322
BRIDGE FILE: I-75-73-4647, C.R.E.

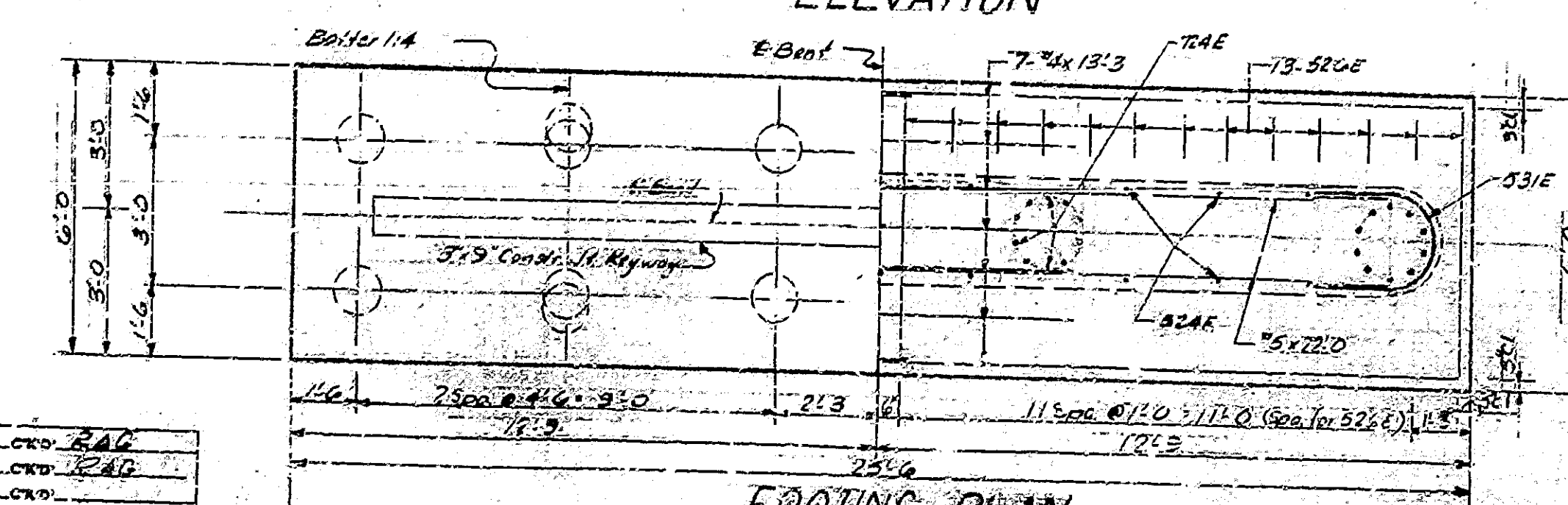
Rev. 10-21-65: Change to Right of Way



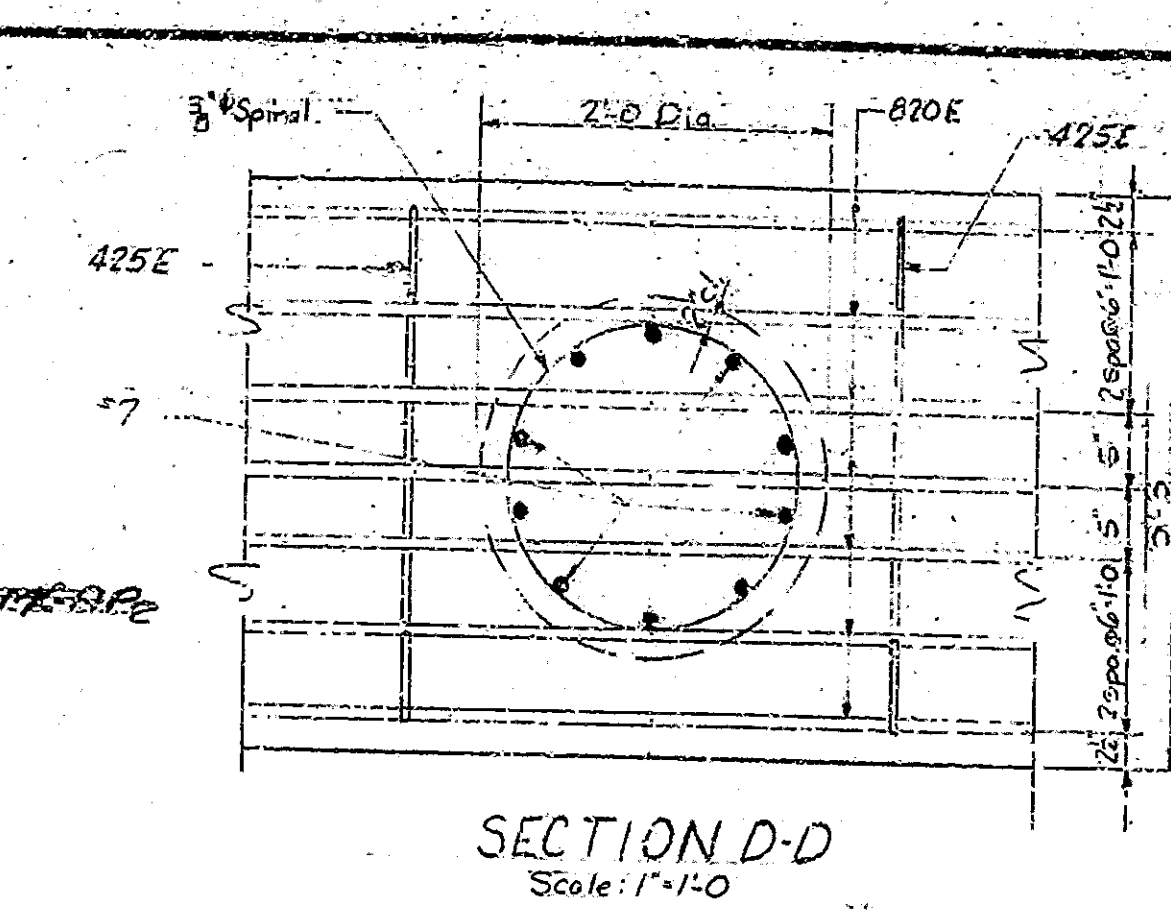
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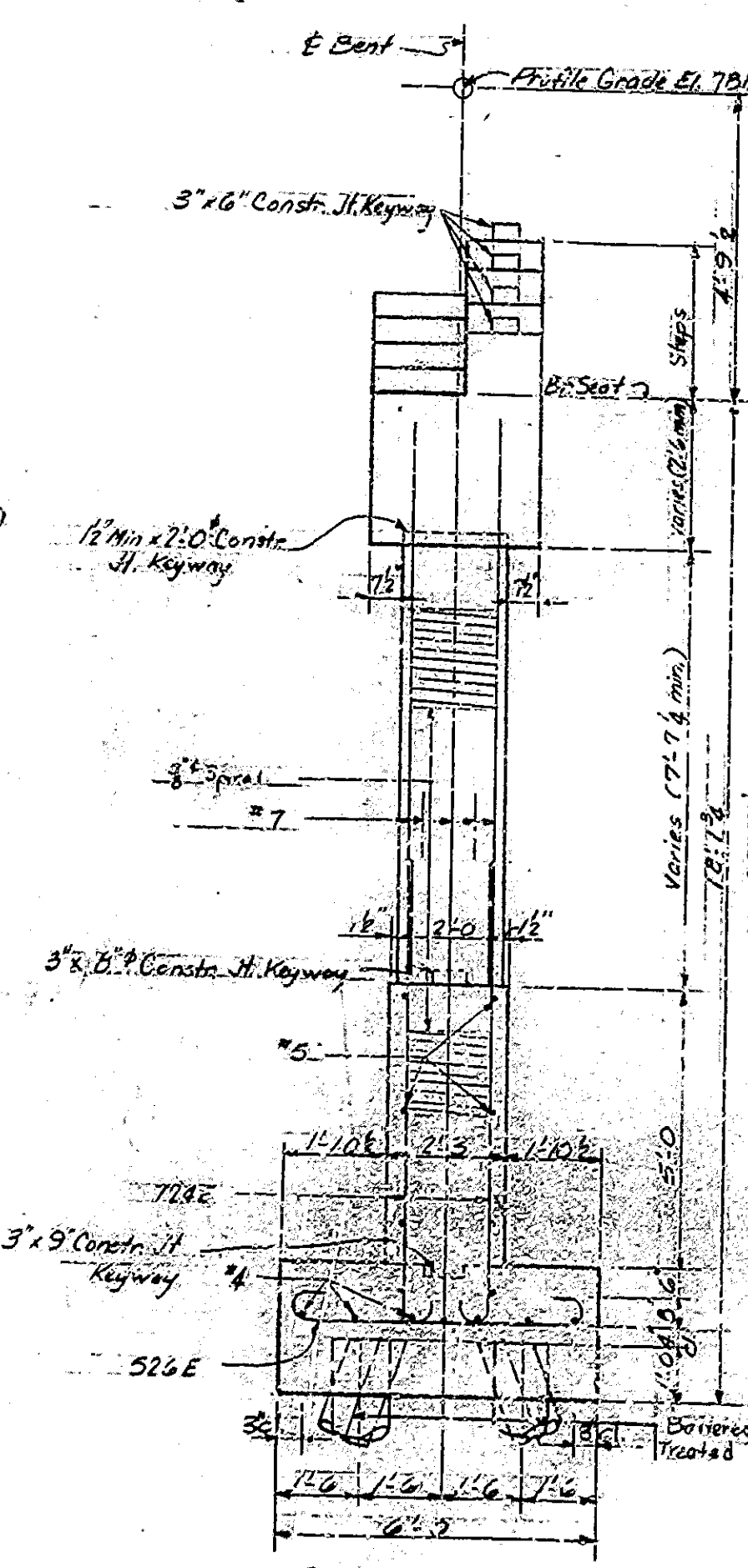
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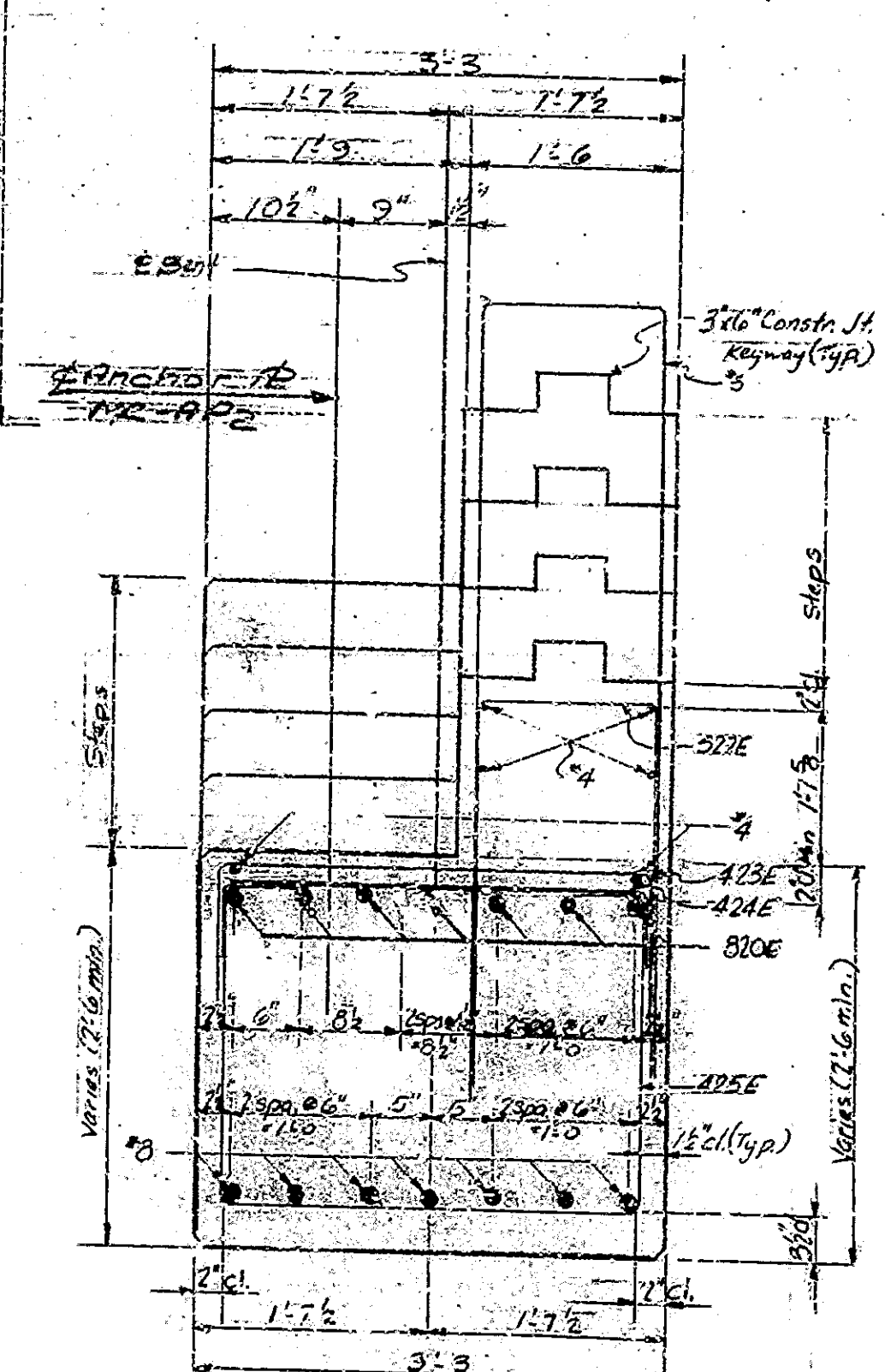
FOOTING PLAN



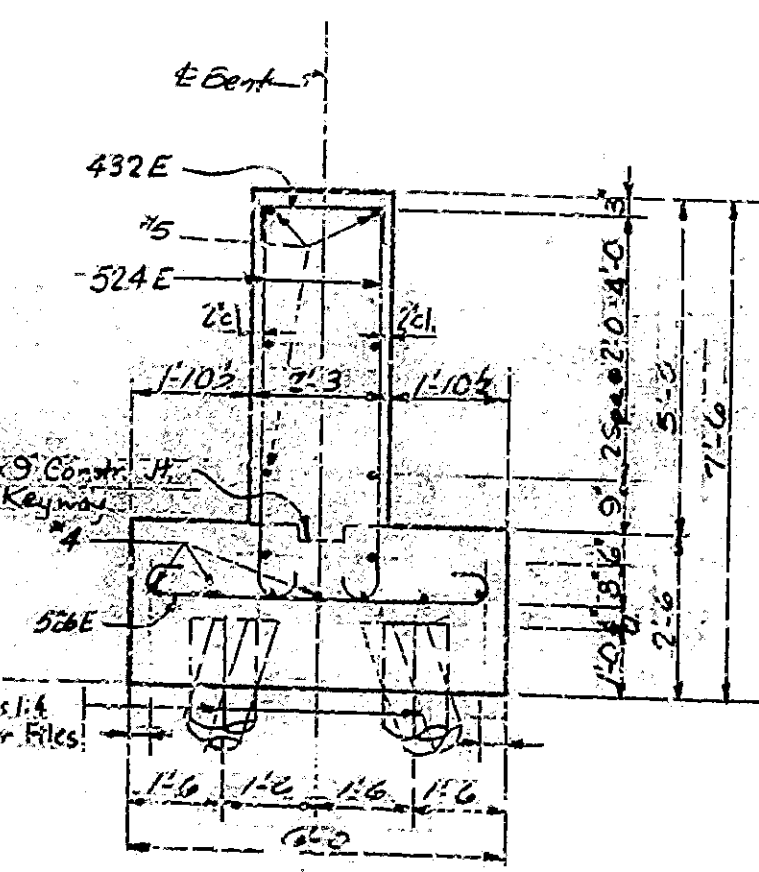
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Scale: 1"=1'-0"



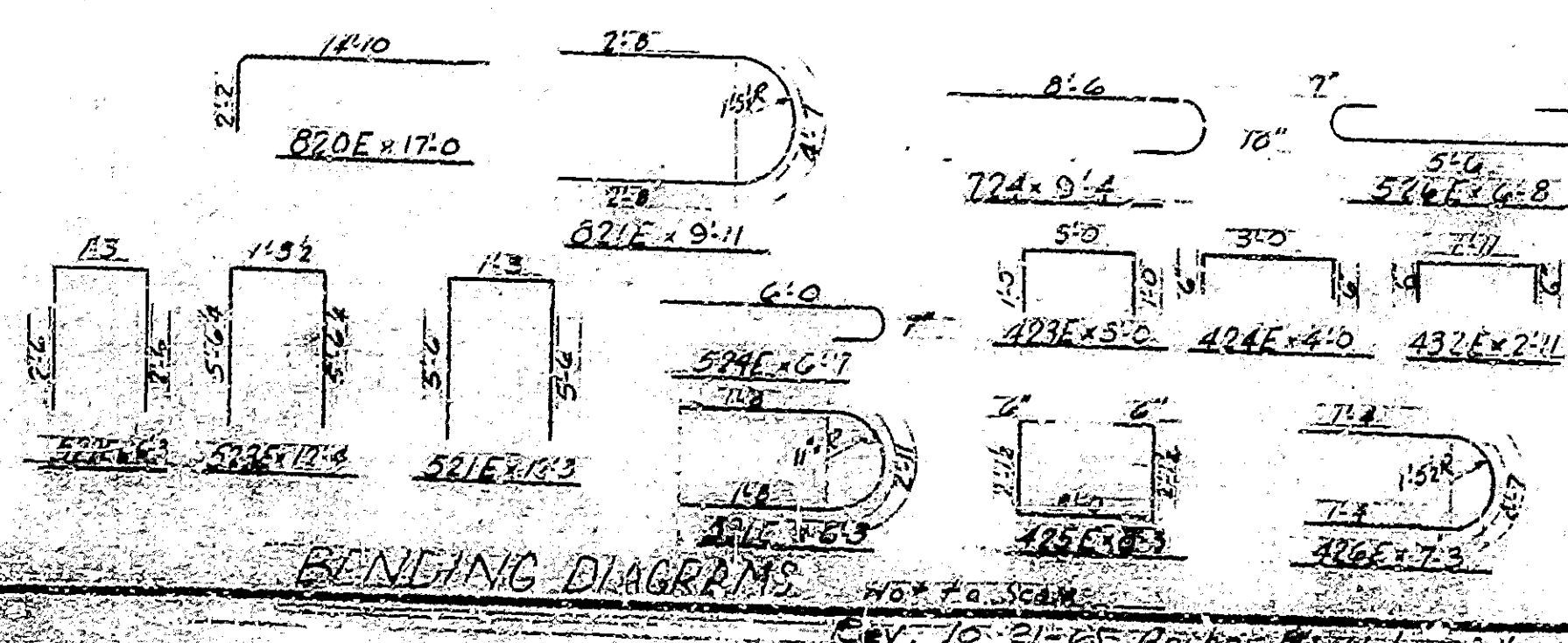
SECTION A-A



SECTION C-C
Scale: 1"=1'-0"



SECTION B-B



REINFORCING DIAGRAMS

BRIDGES OVER 20' SPAN				
PUR. ROAD DIST. NO.	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
4	IND.	100155	15	37

BILL OF MATERIALS BENT NO. 2

MARK OR SIZE	NO. OF BARS	LENGTH (FEET)	WEIGHT (LBS.)
820E	14	17.0	
821E	4	9.11	
#6	7	24.0	
Total	25		1190
724E	40	9.4	
#7	10	12.6	
#7	10	11.3	
#7	10	10.9	
#7	10	10.3	
Total	70		1668
521E	18	12.3	
522E	2	6.5	
523E	8	12.4	
524E	18	6.7	
526E	26	6.8	
531E	8	6.3	
#5	8	22.0	
Total	90		886
423E	27	5.0	
424E	10	4.0	
425E	14	8.3	
426E	1	7.3	
432E	9	2.11	
#4	14	13.3	
#4	4	12.8	
#4	4	8.6	
#4	2	6.9	
#4	6	6.0	
#4	2	5.6	
#4	2	4.6	
#4	2	3.6	
Total	74		447
CONCRETE			
Class "F" Conc.	10.4 cu yd		
Class "D" Columns	42 cu yd		
Class "E" 4 in. Ftg.	9.9 cu yd		
Class "E" Ftg.	14.7 cu yd		
MISCELLANEOUS			
12 Treated Timber Piles 30.0 x 36.0			
10 Treated Timber Piles 30.0 x 36.0			
Total Reinforcing Steel	4875		

CONCRETE			
Class "F" Conc.	10.4 cu yd		
Class "D" Columns	42 cu yd		
Class "E" 4 in. Ftg.	9.9 cu yd		
Class "E" Ftg.	14.7 cu yd		
MISCELLANEOUS			
12 Treated Timber Piles 30.0 x 36.0			
10 Treated Timber Piles 30.0 x 36.0			
Total Reinforcing Steel	4875		

NOTES
 See Drawing Set for details of structure.
 12 Treated Timber Piles required. Piles to be driven to 25 tons per ft.
 Minimum Bearing.
 Space 724E Dowels to miss vertical column steel.
 See Bridge Sta. C for reinforcing bar notes.
 See Dwg. S2 for General Notes.

1. Spirals shall have one and one-half (1 1/2) extra turns provided at the ends and one and one-half (1 1/2) turns of lap at adjoining sections. Last of spiral bars to be included in last of spiral.
 2. Spirals to be made of 8" hot rolled intermediate grade steel.

BENT NO. 2 DETAILS STATE HIGHWAY DEPARTMENT OF INDIANA

SCALE: 3/8"=1'-0" Unless noted

DRAWING: S-3 OF 20
 PROJECT: I-465-400/155
 BRIDGE CONTRACT NO. B-6922
 BRIDGE FILE: I-70-73-4641 DRE

NOVEMBER 14, 1961

Walter J. J. J.

DESIGNED: CKE
 DRAWN: CMG
 CHECKED: CKE
 TRACED: CMG

STANDARD ENGR. SUPPLY CO. INC.

BRIDGES OVER 20' SPAN						
P.L.S. ROAD DIST. NO.	STATE	PROJECT NO.	FISCAL YEAR	REPORT NO.	TOTAL SHEETS	
4	IND.	1-435-4(10)155	1942	16	27	

BILL OF MATERIALS BENT NO. 3

MARK AND SIZE	NO. OF BARS	LENGTH	WEIGHT (LBS.)
830E	12	16'-1"	
831E	4	8'-9"	
*8	6	23'-0"	
Total No. 8			977

730E	40	9'-1"	
731E	26	7'-8"	
*7	10	13'-6"	
*7	10	13'-9"	
*7	10	14'-3"	
*7	10	15'-0"	
Total No. 7			2305

530E	18	6'-4"	
531E	8	6'-3"	
*5	8	22'-0"	
*5	14	13'-6"	
Total No. 5			552

430E	16	7'-6"	
431E	16	4'-8"	
432E	9	2'-11"	
433E	10	3'-3"	
434E	28	4'-3"	
435E	1	6'-1"	
*4	2	7'-3"	
*4	4	6'-9"	
*4	2	4'-9"	
*4	2	3'-3"	
Total No. 4			313

3/8 Spiral	1	15'-8 1/2"	
3/8 Spiral	1	16'-4 1/2"	
3/8 Spiral	1	17'-0"	
3/8 Spiral	1	17'-7 1/2"	
Total 3/8 Spiral			811
Total Steel			4958

CONCRETE	
Class F - Cap	6.3 C.Y.
Class D - Columns	5.6 C.Y.
Class E - Above Footing	9.4 C.Y.
Class B - Footing	15.3 C.Y.

MISCELLANEOUS	
16 Treated Timber	
Piles @ 25'-0"	400 LBS.
ANCHOR PLATES	5 EACH

NOTES

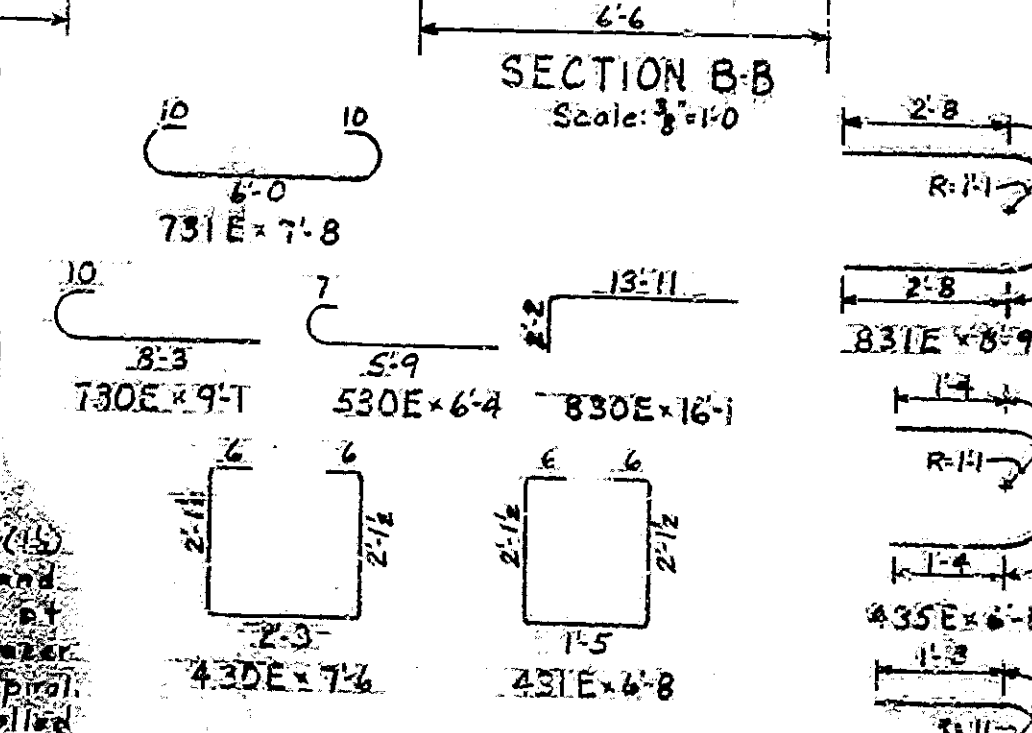
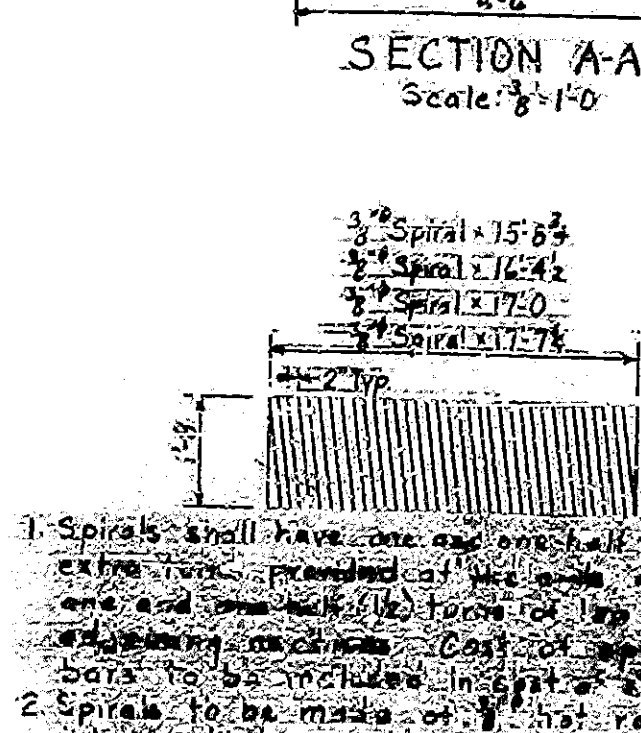
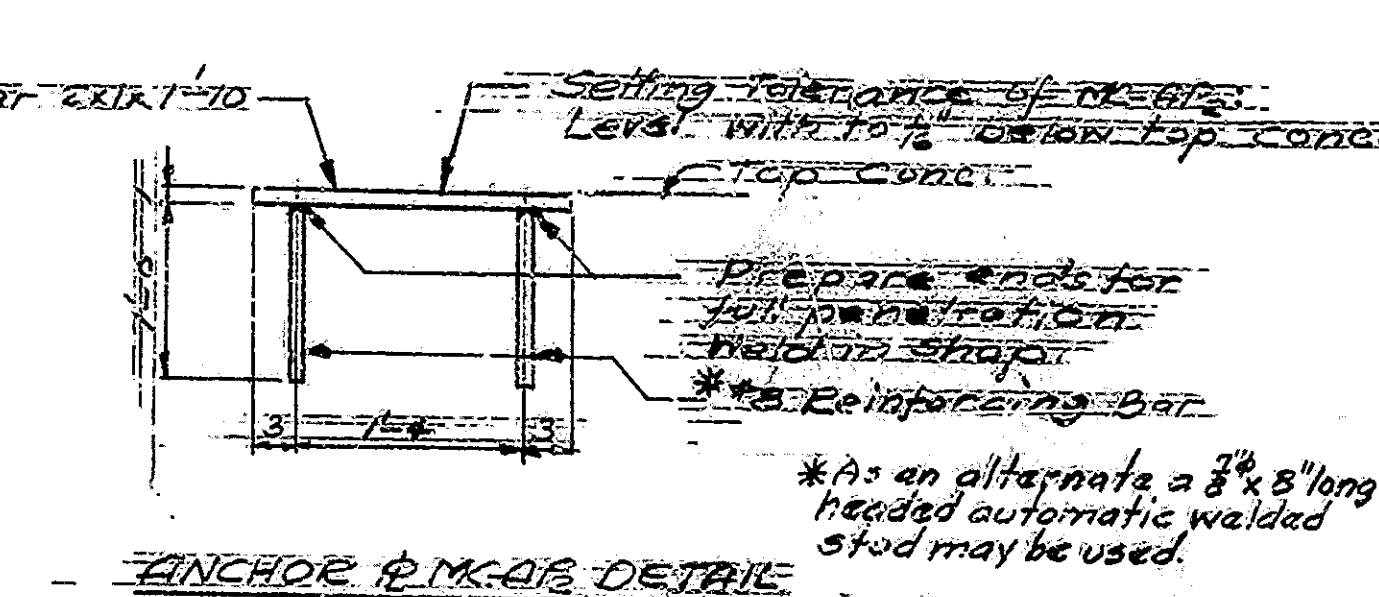
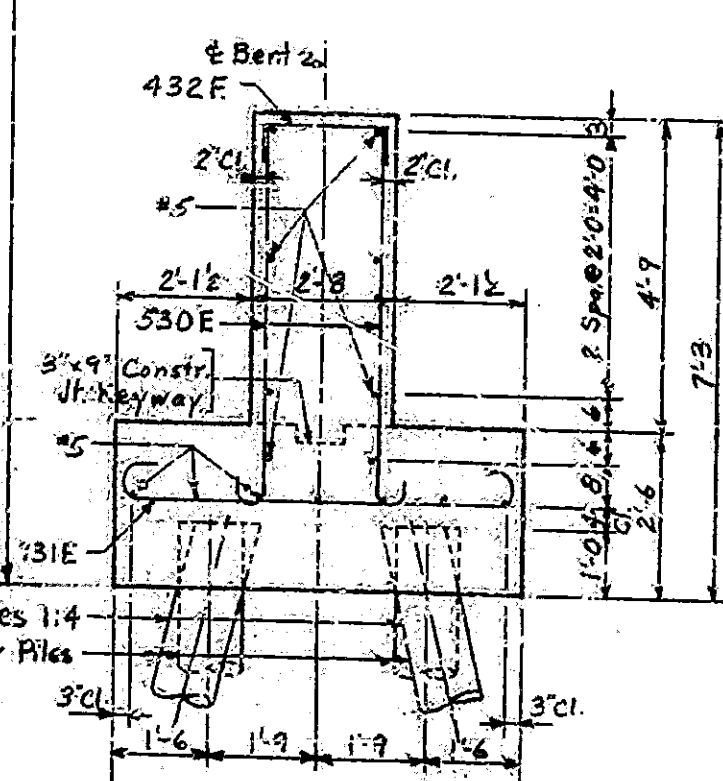
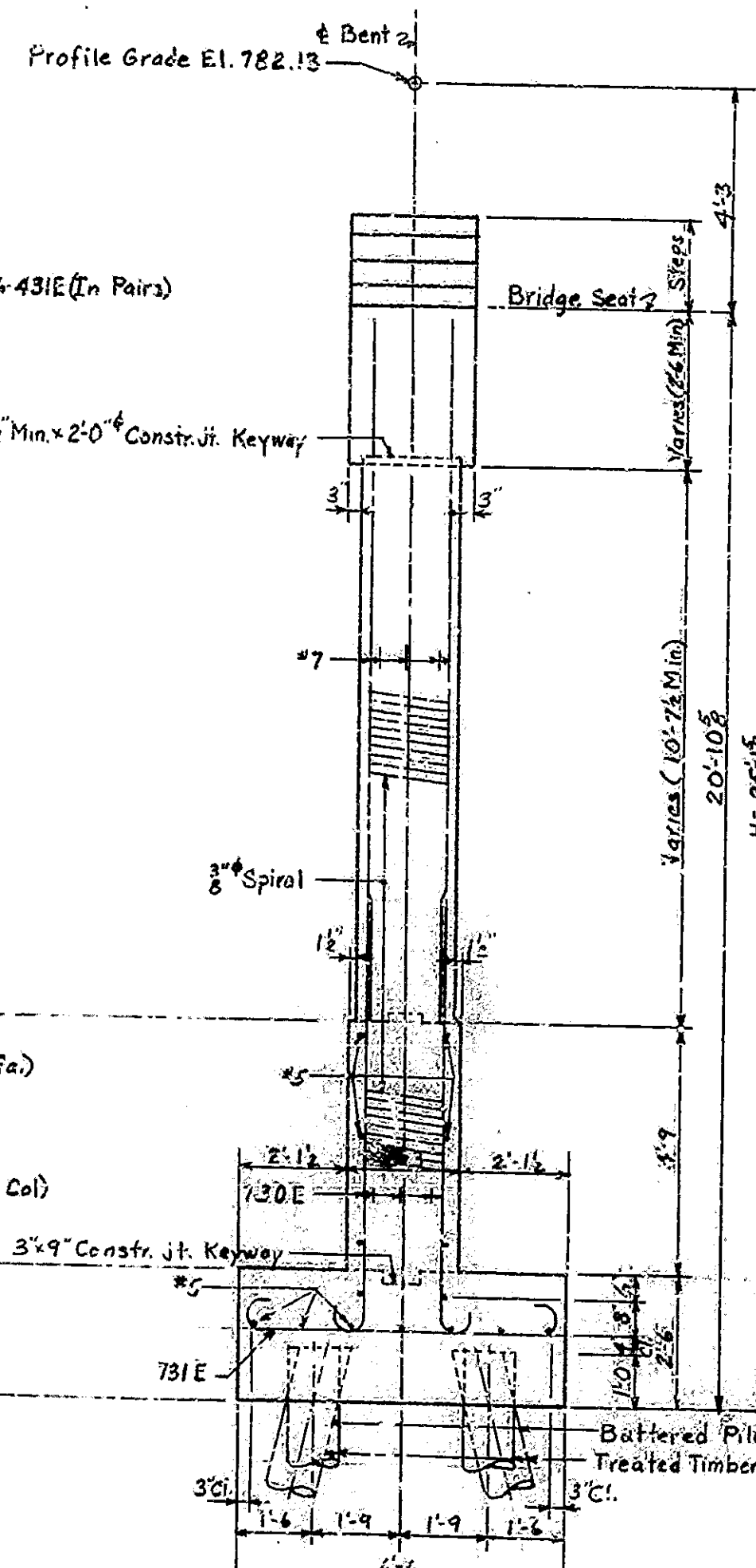
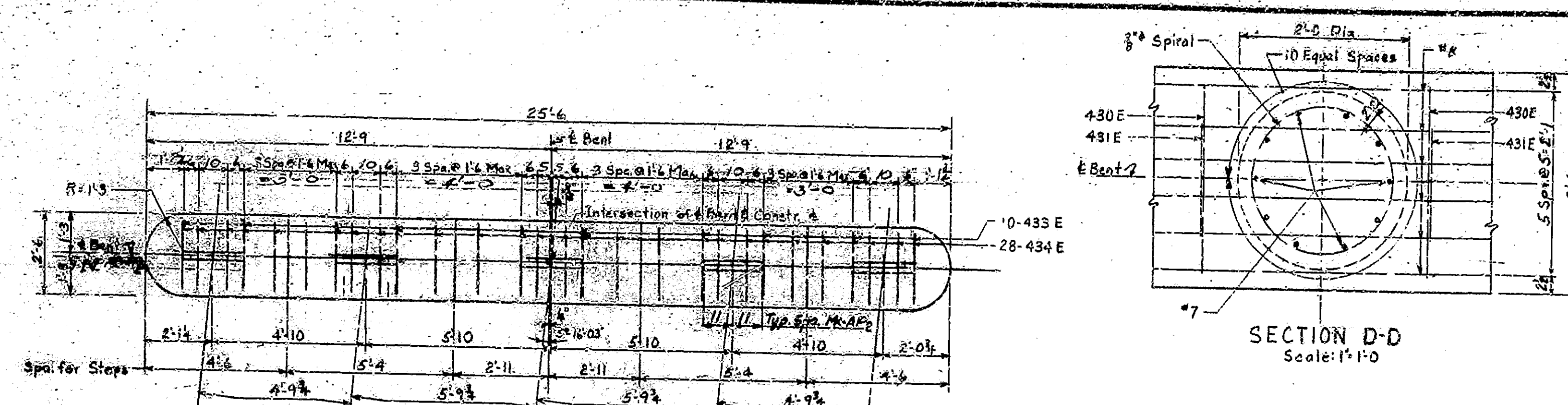
16-Treated Timber Piles required. Piles to be driven to 85 Tons/Pile Minimum Bearing. Space 730E Cows to miss vertical column steel. See Bridge S.H.C. for reinforcing bar notes.

BENT NO. 3 DETAILS STATE HIGHWAY DEPARTMENT OF INDIANA

SCALE: AS NOTED

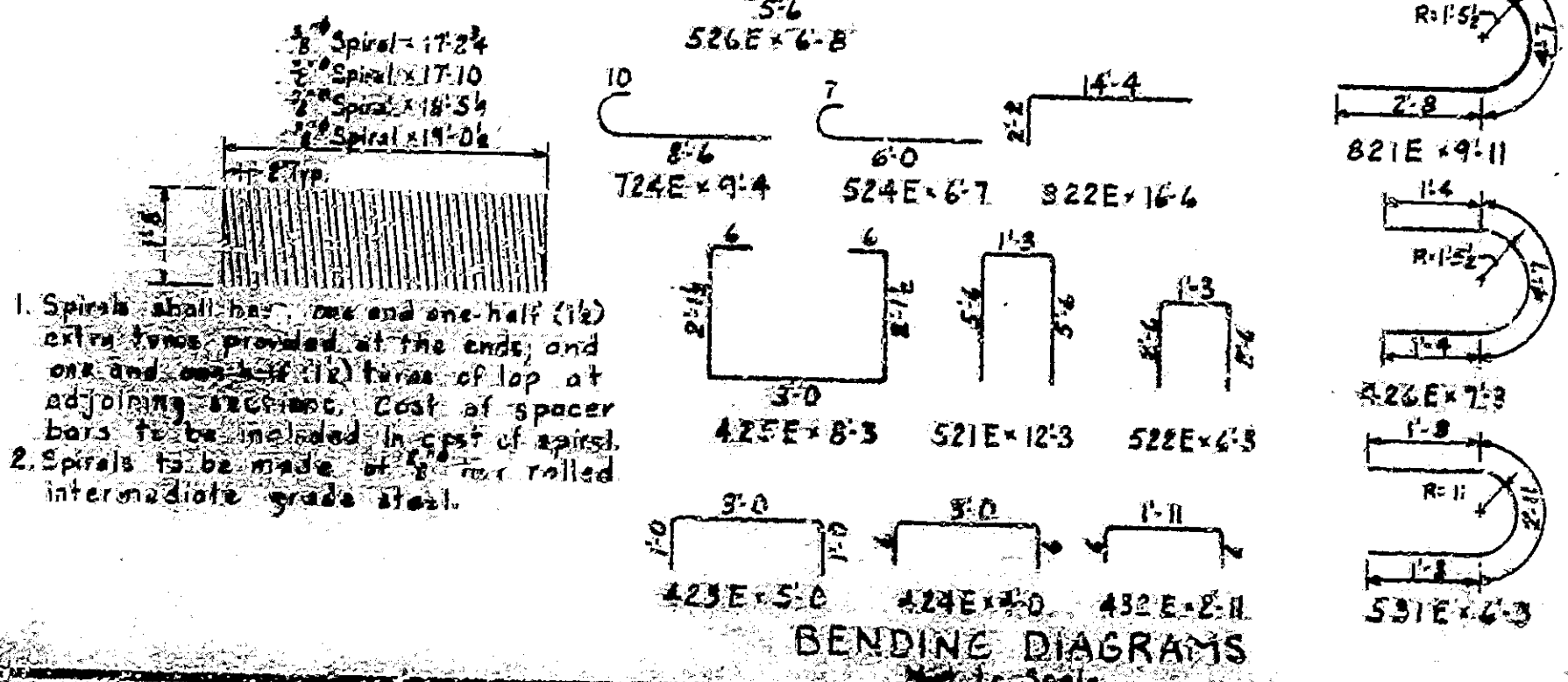
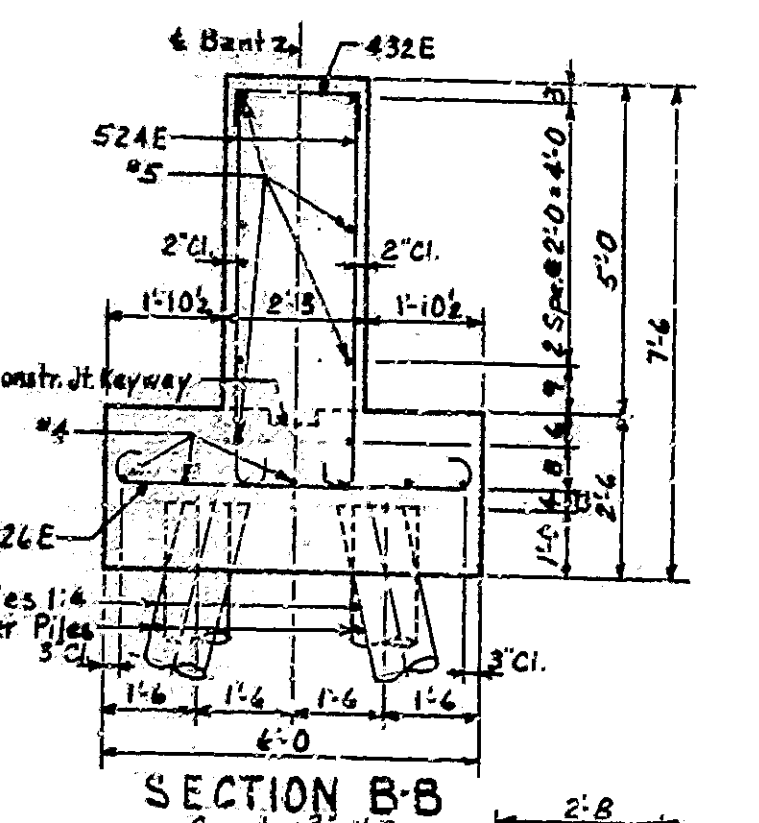
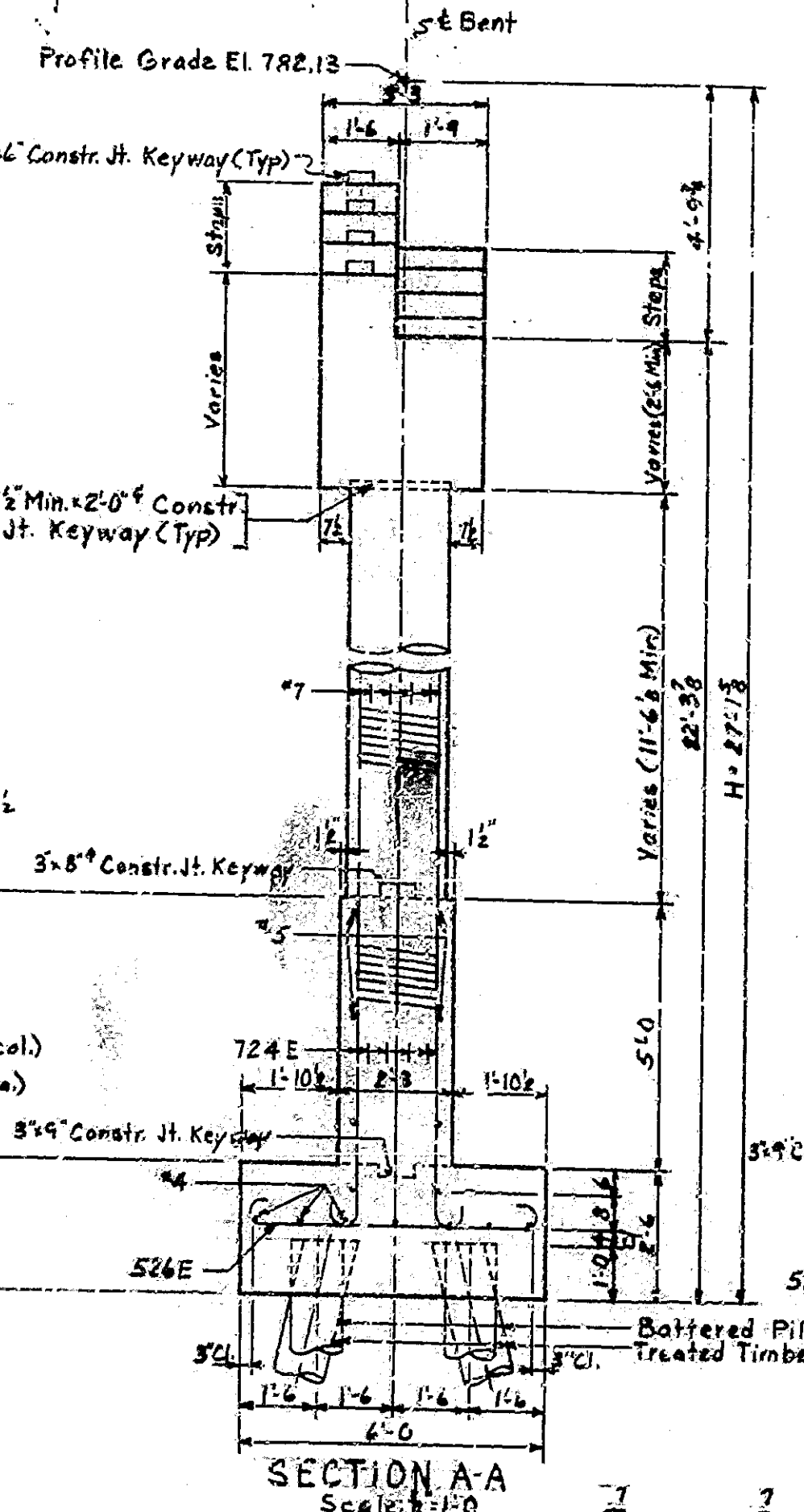
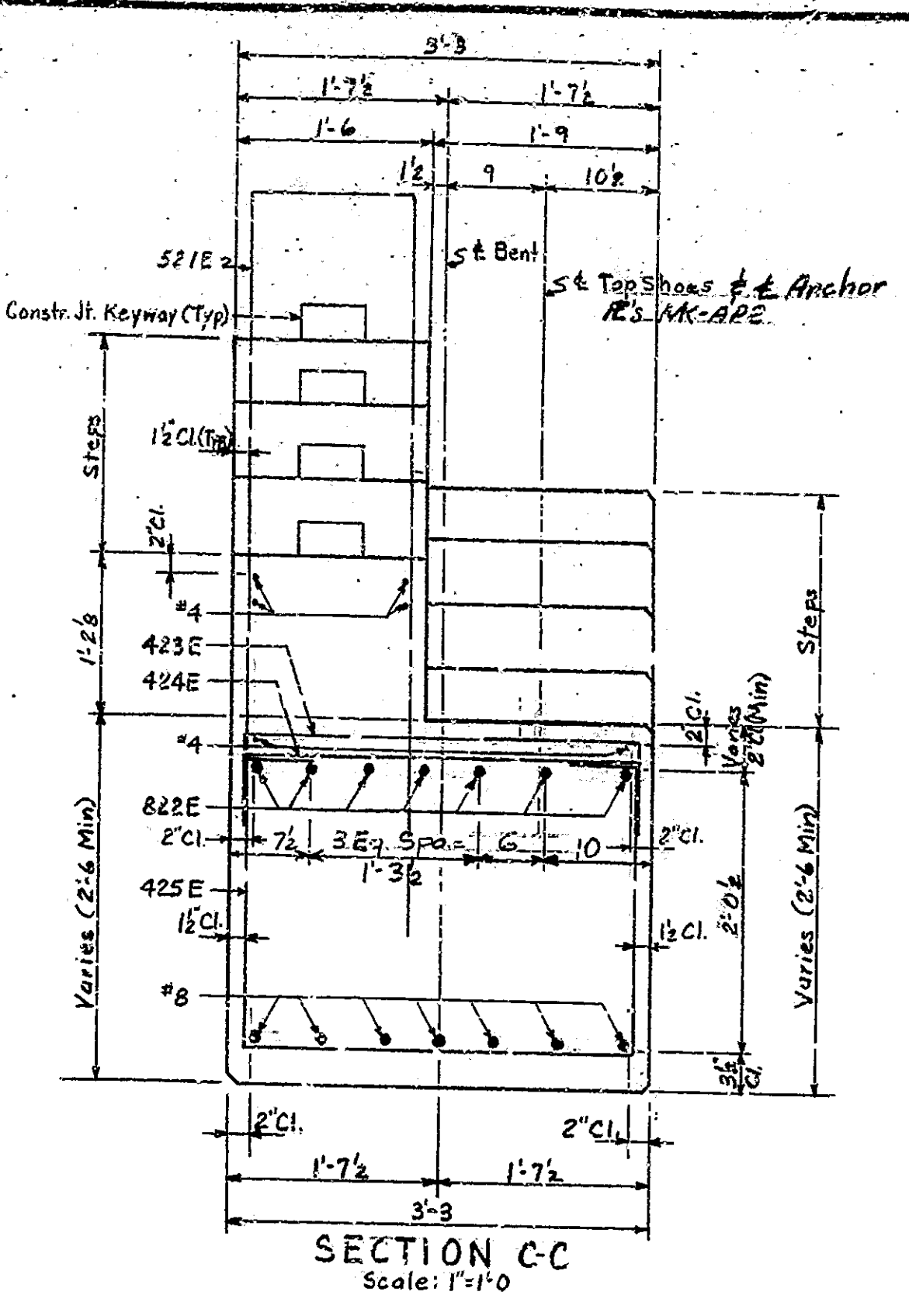
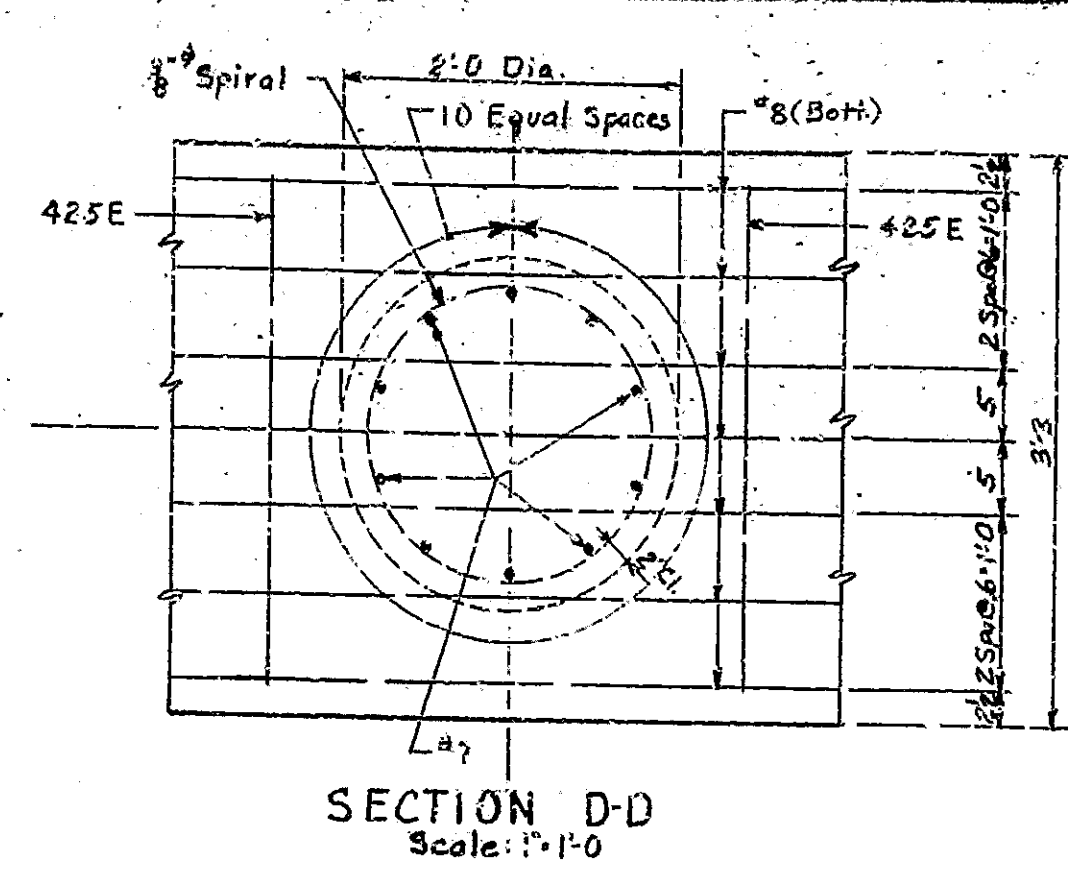
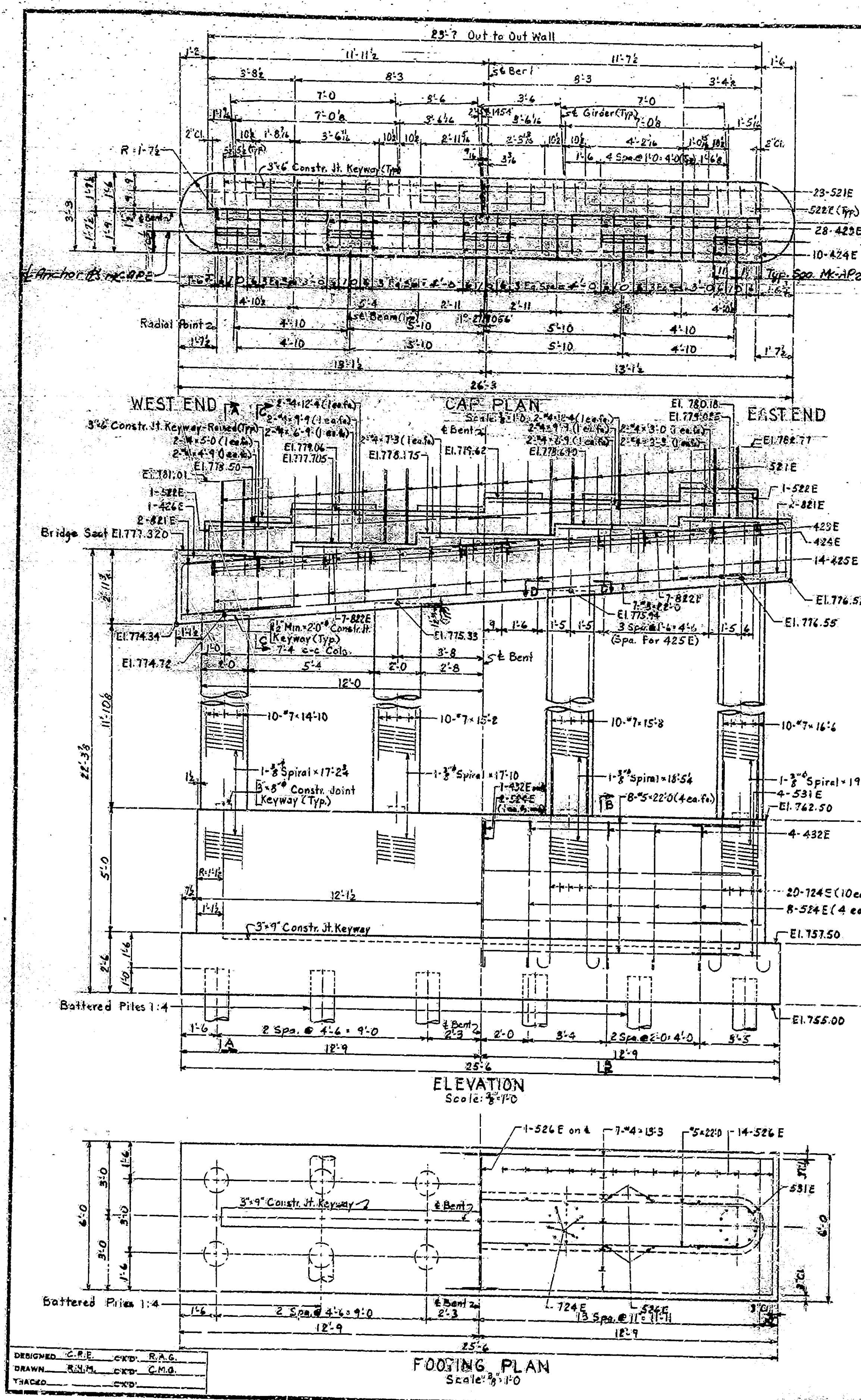
NOVEMBER 14, 1941

DRAWING: S 6 OF 20
PROJECT: 1-435-4(10)155
BRIDGE CONTRACT NO. B-6522
BRIDGE FILE: I-10-73-4401 DRE



DESIGNED: C.E. KNOX
DRAWN: R.H.M.
CHECKED: C.K.D.

FOOTING PLAN
Scale: 1/4"=1'-0"



BRIDGES OVER 20' SPAN					
PUB. ROAD DIST. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	1-465-408155	1962	17	37

BILL OF MATERIALS			
BENT #4			
MARK AND SIZE	Nº OF BARS	LENGTH (LWS)	WEIGHT (LBS)
821E	4	9'-11"	
822E	14	16'-6"	
#8	7	22'-0"	
Total Nº8			1134
724E	40	9'-4"	
#7	10	16'-6"	
#7	10	15'-2"	
#7	10	14'-10"	
Total Nº7			2034
521E	23	12'-3"	
522E	2	6'-3"	
524E	18	6'-7"	
526E	24	6'-8"	
531E	8	6'-3"	
#5	8	22'-0"	
Total Nº5			868
423E	28	5'-0"	
424E	10	4'-0"	
425E	14	6'-3"	
426E	1	7'-3"	
427E	9	2'-11"	
#4	14	13'-3"	
#4	4	12'-4"	
#4	4	9'-9"	
#4	2	7'-3"	
#4	4	6'-7"	
#4	2	5'-0"	
#4	2	4'-9"	
#4	2	3'-3"	
#4	2	3'-0"	
Total Nº4			452
#3 Spiral	1	17'-2 1/2"	
#3 Spiral	1	17'-10"	
#3 Spiral	1	18'-5 1/2"	
#3 Spiral	1	19'-0 1/2"	
Total #3 Spiral			880
Total Steel			5368
CONCRETE			
Class F - Cap		9.9 C.Y.	
Class D - Columns		6.1 C.Y.	
Class E - Above Footing		9.9 C.Y.	
Class E - Footing		14.2 C.Y.	
MISCELLANEOUS			
12" Treated Timber			
Piles @ 20'-0" = 240 Lf. Ft.			
Anchor B-M-A-P-E			

NOTES

See Drawing for details of Anchor B-M-A-P-E.

12" Treated Timber required. Piles to be driven to 25 Tons/Pile Minimum Bearing.

Space 724E: Dowels to miss vertical column steel.

See Bridge Std. C for reinforcing bar notes.

BENT #4 DETAILS
STATE HIGHWAY DEPARTMENT OF INDIANA

SCALE: AS NOTED

NOVEMBER 14, 1961

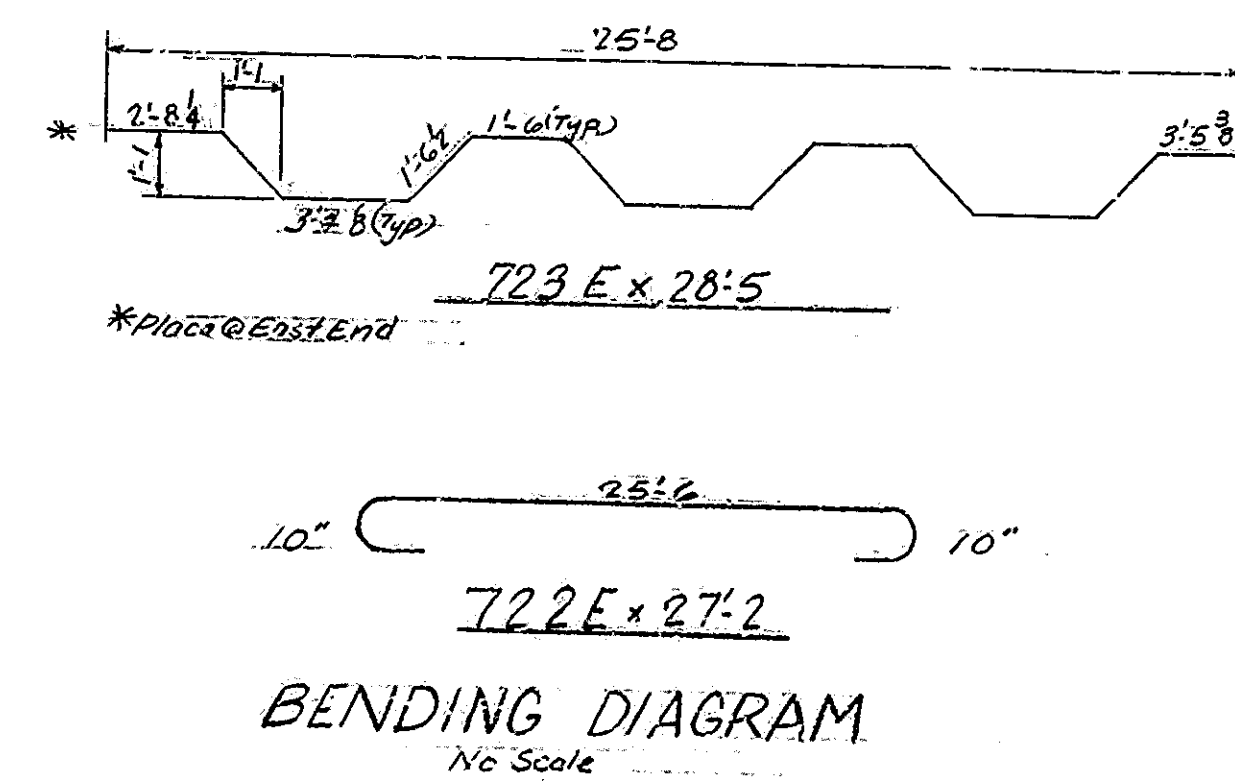
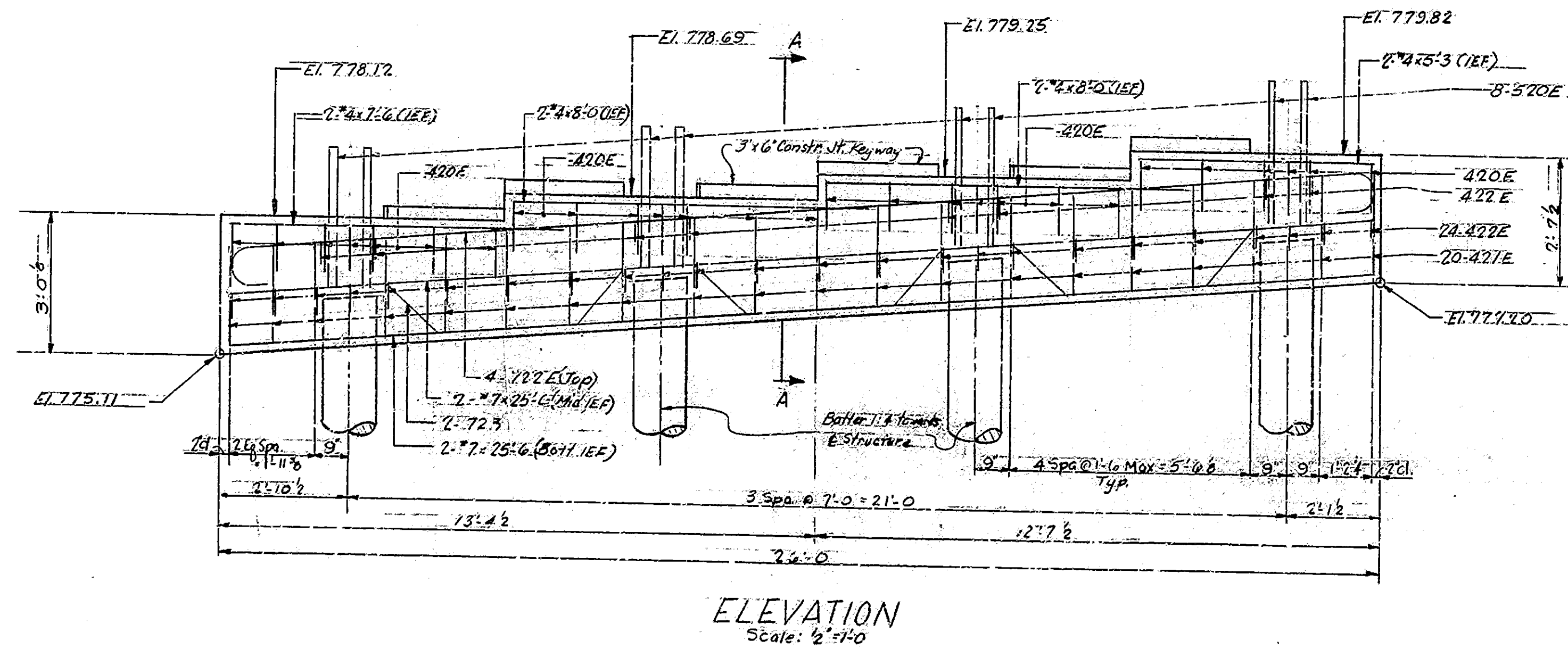
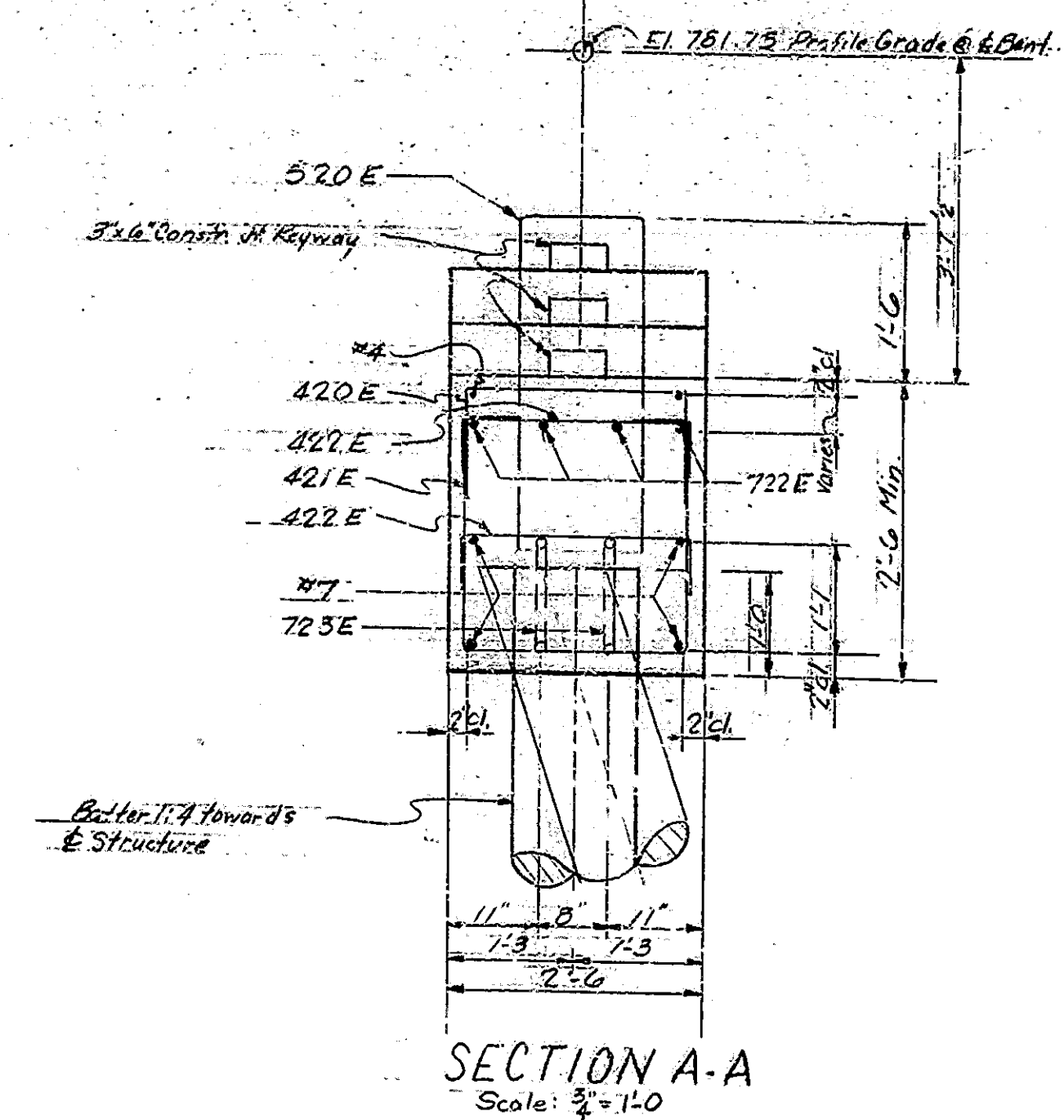
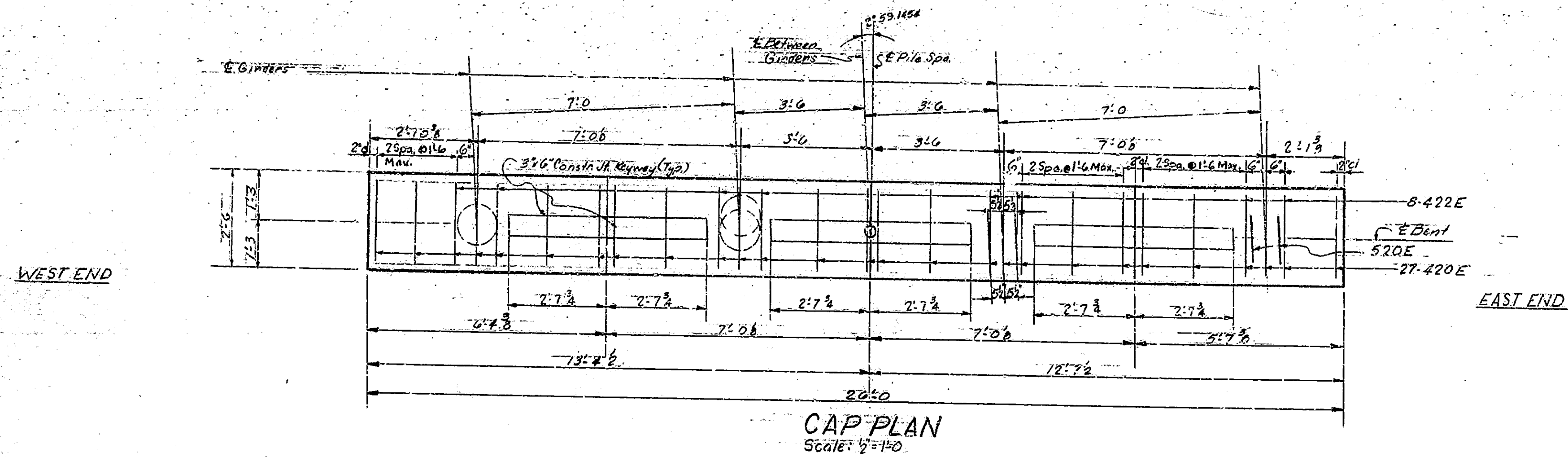
DESIGNED: G.R.E. CWD: R.A.G.
DRAWN: R.N.M. CWD: C.M.G.
CHECKED: CWD

DRAWING: S 7 OF 20
PROJECT: I-465-4(75) 155
BRIDGE CONTRACT NO. 8-3922
BRIDGE FILE: I-10-75-4647 DRE

BRIDGES OVER 20' SPAN					
FED. ROAD REC. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	7-465- A-10855	1962	78	57

BILL OF MATERIALS
BENT N° 5

MARK OR SIZE	NO OF BARS	LENGTH	WEIGHT (LBS.)
732E	4	27'-2"	
723E	2	28'-5"	
#7	4	25'-6"	
	Total #7		547
520E	8	7'-2"	
	Total #5		60
420E	27	4'-3"	
421E	20	7'-9"	
422E	32	3'-3"	
#4	4	8'-0"	
#4	2	7'-6"	
#4	2	5'-3"	
	Total #4		288
Total	Steel		895
CONCRETE			
Class "C" Cap			= 6.8 cu yd
4-14" #7 Ga. Steel Pile Shells			
@ 40'		= 160 lin. ft.	



NOTE: The Bent Cap must not be poured until the fill has been completed to the approximate elevation of the bottom of the cap.
At 14' 7" O.C. Steel Pile Shells are required.
Minimum Bearing = 4.0 TMS/ Cile
See B-51d, C for Reinforcing Bar Notes
See Div 52 for General Notes
See Div 53 for Geometric Layout
See Div 54 for additional Bearing Diagrams

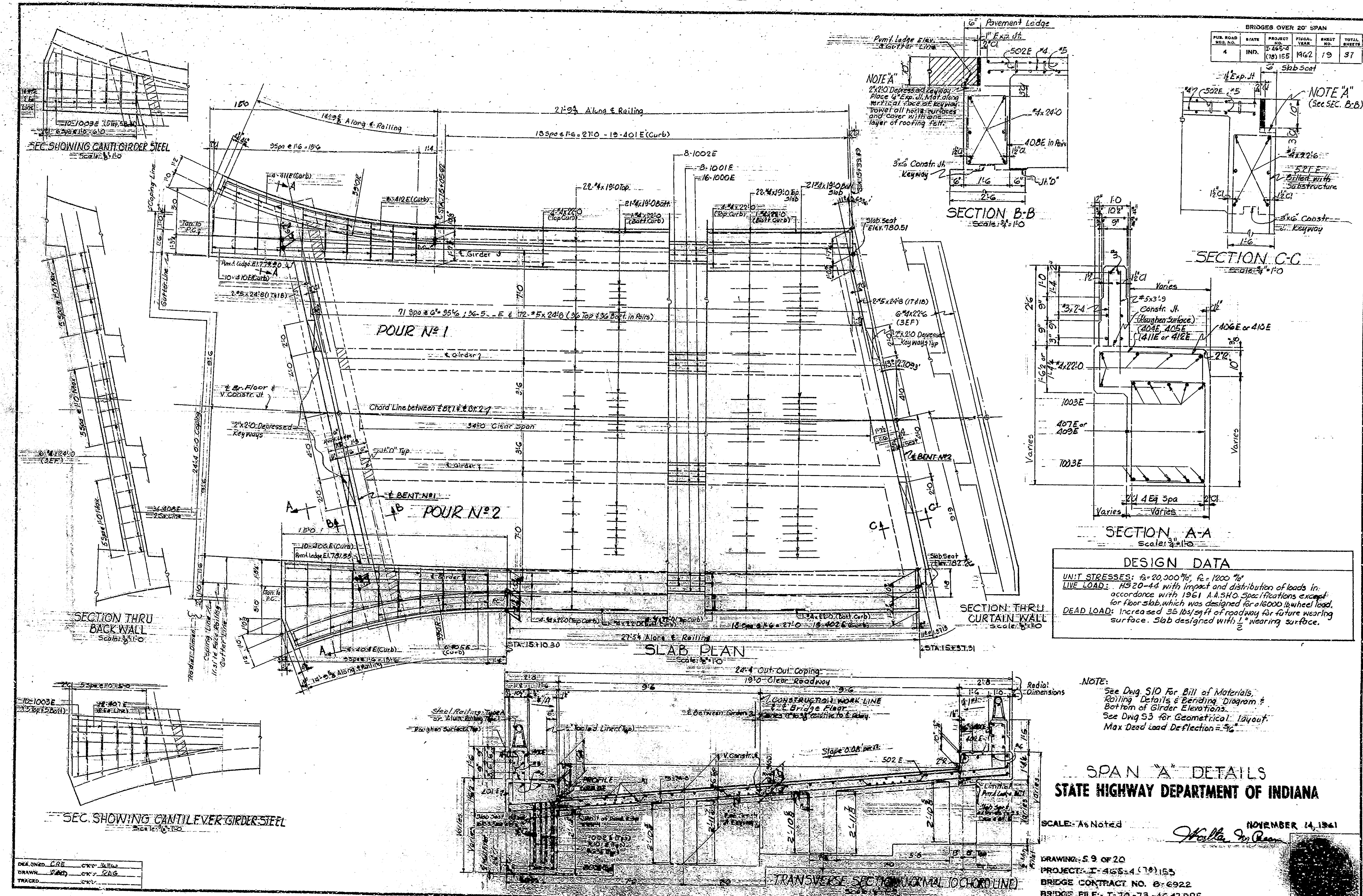
BENT N^o 5 DETAILS
STATE HIGHWAY DEPARTMENT OF INDIANA

SCALE:- AS NOTED

NOVEMBER 14 1964
Halter, M. C.

DRAWING: S 8 OF 20
PROJECT: I-465-179155
BRIDGE CONTRACT NO. D-6922
BRIDGE FILE: I-70-73-2647 DRE

BRIDGES OVER 20' SPAN					
PUB. ROAD	STATE	PROJECT	FISCAL	SHEET	TOTAL
NO. 1	NO.	NO.	YEAR	NO.	SHEETS
4	IND.	I-465-4	1962	19	37
		(78) 155			



DESIGN DATA

UNIT STRESSES: $f_s = 20,000 \text{ psi}$, $f_c = 1200 \text{ psi}$

LIVE LOAD: HS20-44 with impact and distribution of loads in accordance with 1961 A.A.S.H.O. specifications except for floor slab, which was designed for a 6000 lb wheel load.

DEAD LOAD: Increased 35 lbs/sq ft of roadway for future wearing surface. Slab designed with 1" wearing surface.

NOTE:

See Dwg. S10 For Bill of Materials, Railing Details & Bending Diagram & Bottom of Girder Elevations.

See Dwg. S3 for Geometrical Layout.

Max Dead Load Deflection = $\frac{1}{16}$ "

SPAN "A" DETAILS

STATE HIGHWAY DEPARTMENT OF INDIANA

SCALE: As Noted

NOVEMBER 14, 1961

H. J. R.

DRAWING: S9 OF 20

PROJECT: I-465-4 (78) 155

BRIDGE CONTRACT NO. 8-6922

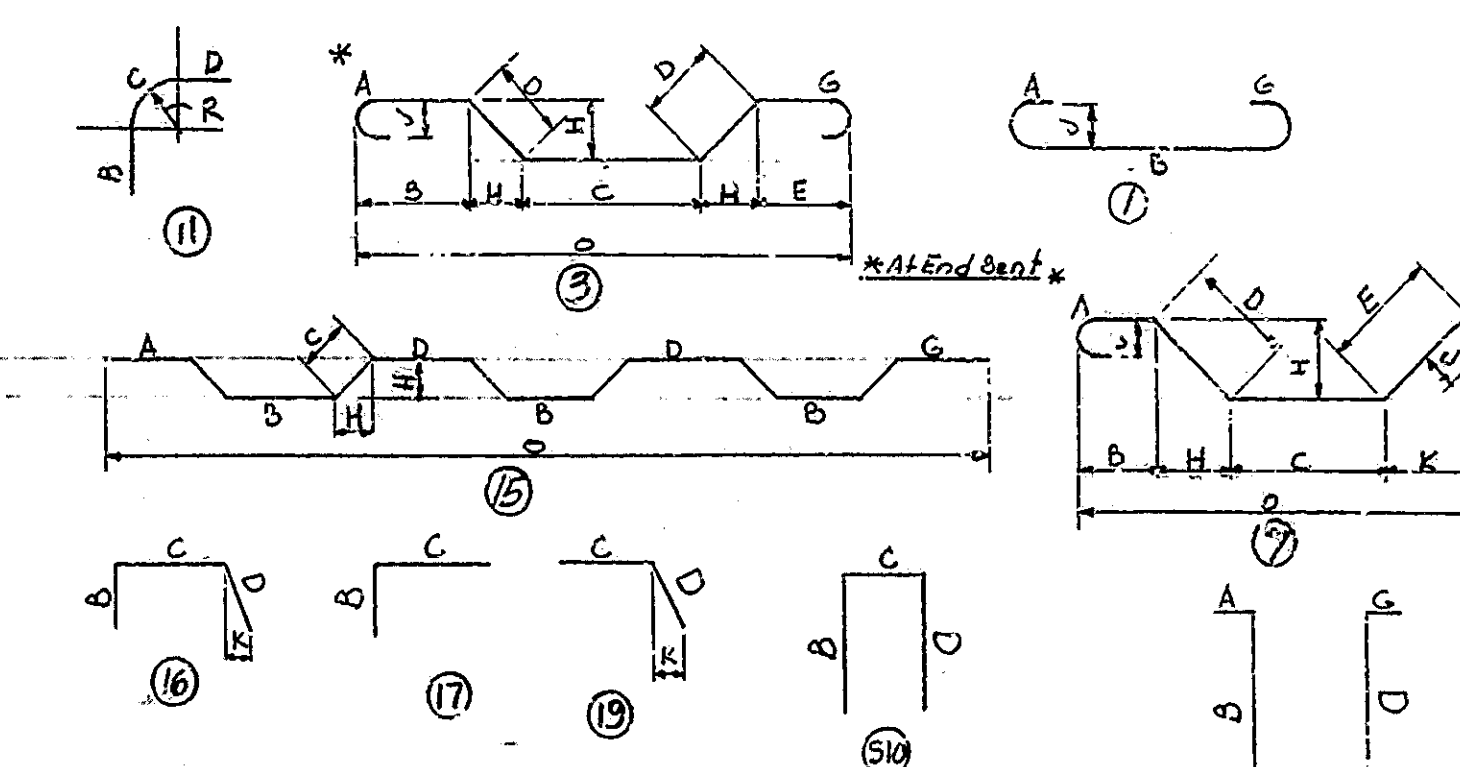
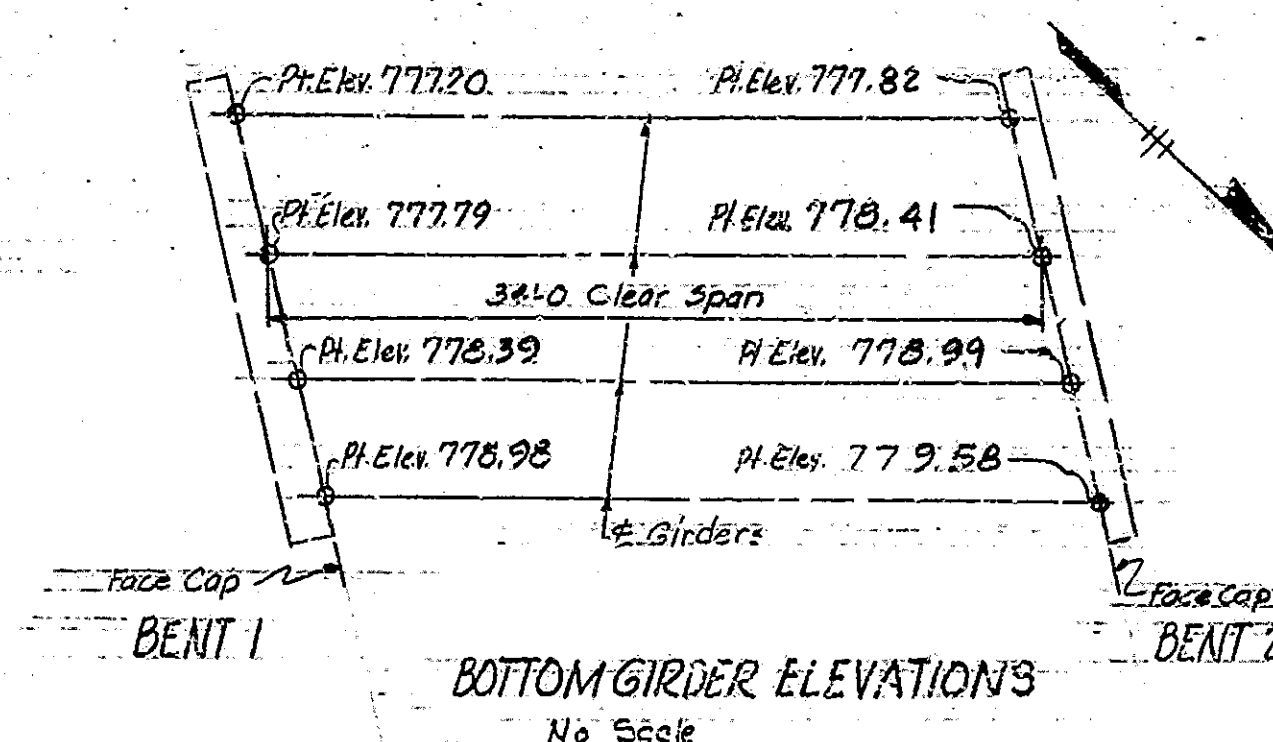
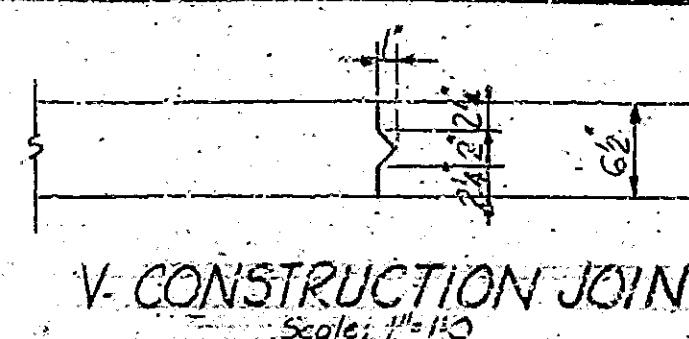
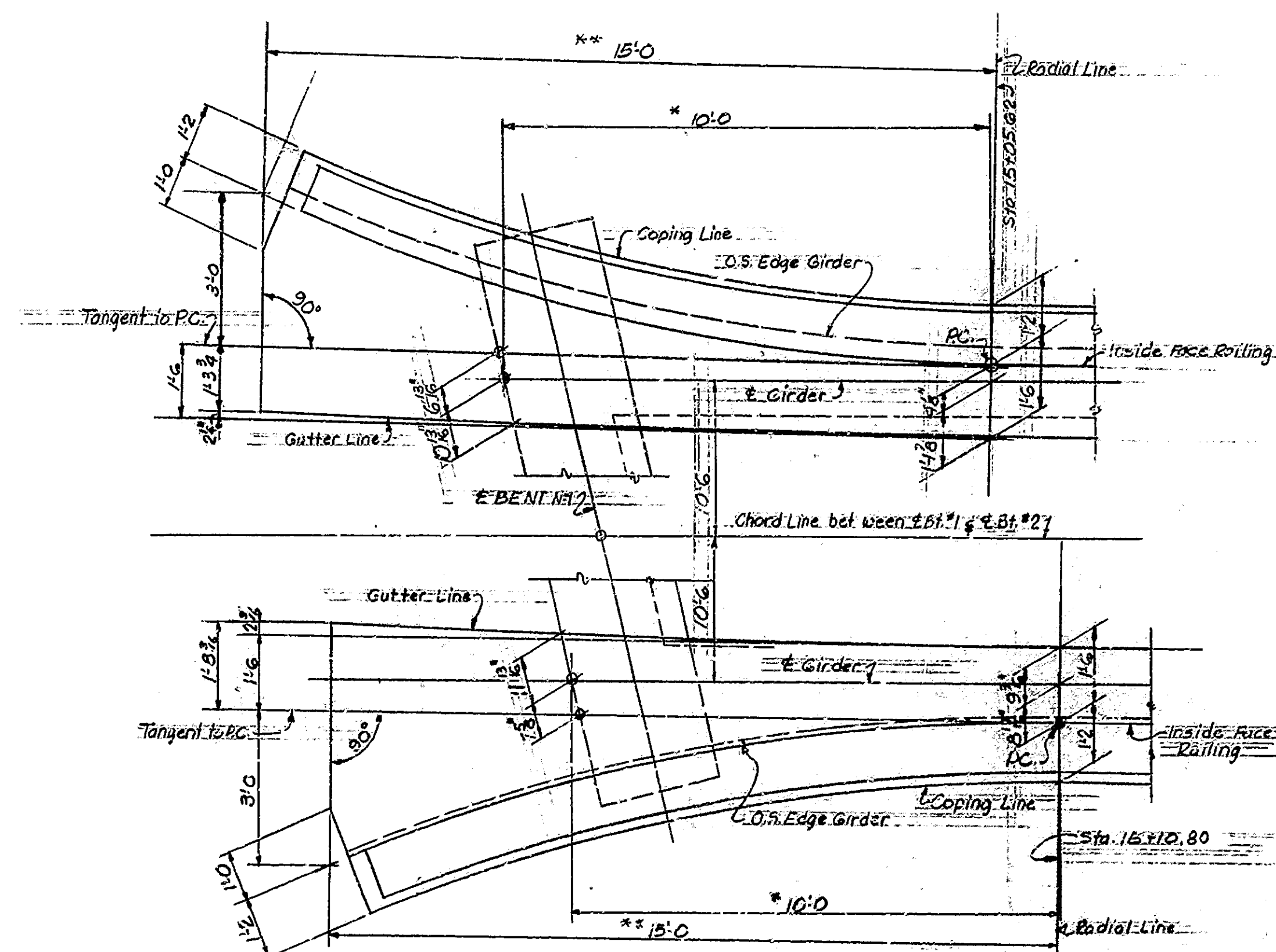
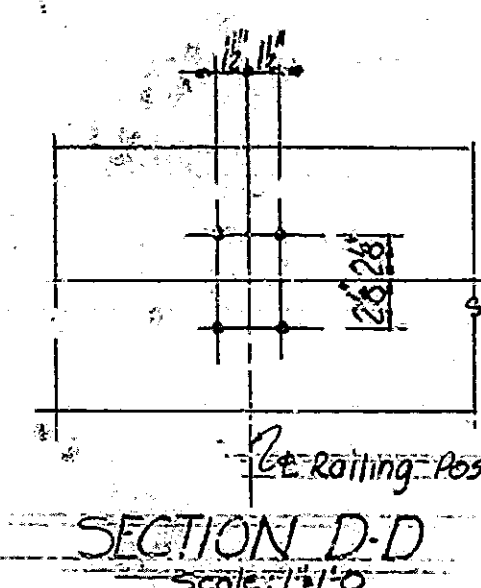
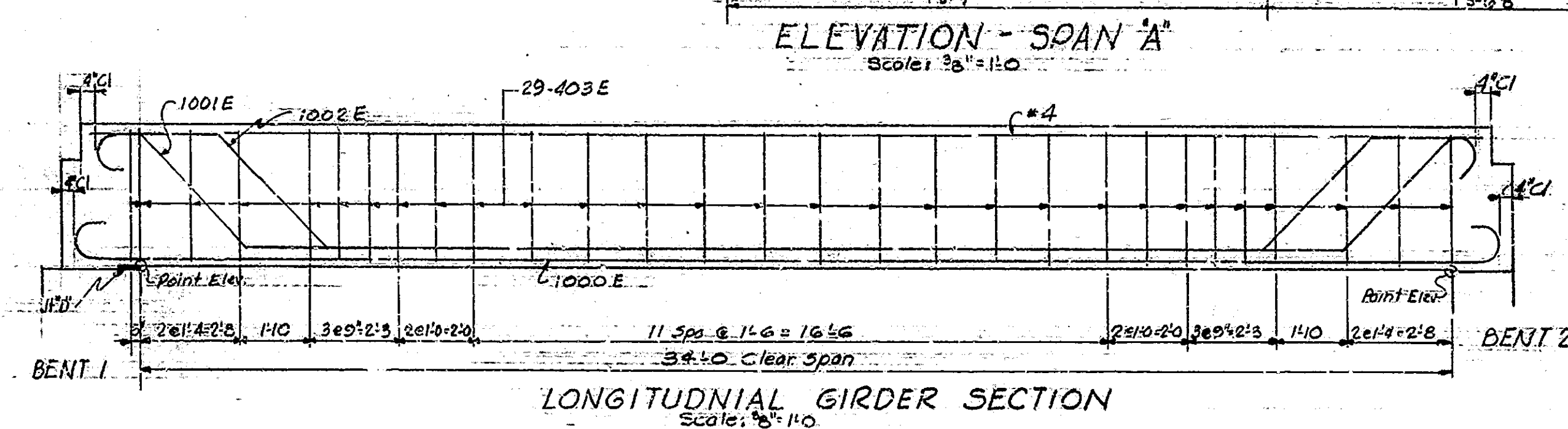
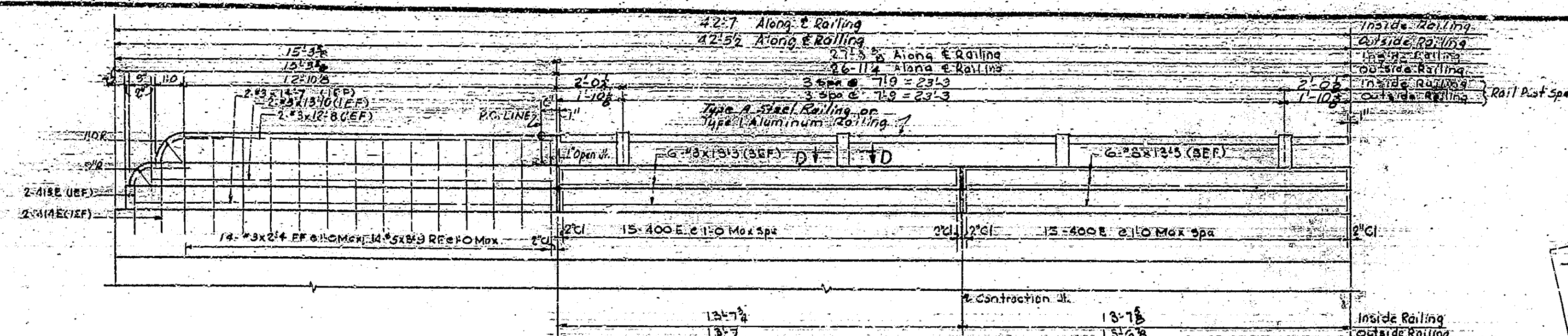
BRIDGE FILE: I-78-73-4647DRE

DESIGNED BY: CRE

DRAWN BY: CRE

CHECKED BY: CRE

TRACED BY: CRE



BRIDGES OVER 20' SPAN					
PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-465-4 (7B) 155	1962	20	3

BILL OF MATERIALS
SPAN "A"

MARK OR SIZE	N° OF BARS	LENGTH	WEIGHT 105
1000E	10	39'9	
1001E	8	40'2	
1002E	8	41'2	
1003E	20	11'E	
Total	*10		6526
502E	36	25'6	
*5	76	24'0	
*5	28	3'9	
Total	*5		3022
400E	60	5'10	
401E	19	4'5	
402E	19	4'3	
*03E	116	8'8	
*04E	4	4'7	
*05E	6	3'4	
406E	10	3'9	
407E	12	8'8	
408E	36	6'3	
409E	14	7'9	
410E	10	3'3	
411E	4	4'8	
412E	6	3'5	
413E	4	4'0	
414E	4	5'3	
*1	6	24'0	
*1	6	22'6	
*1	20	22'0	
*1	80	19'0	
Total	*4		2993
*3	4	14'7	
*3	4	13'0	
*3	24	13'3	
*3	4	12'8	
*3	28	3'4	
Total	*3		206
TOTAL STEEL			12753
CONCRETE			
POUR N°1		50'2 CY	
POUR N°2		29'5 CY	
TOTAL C/L		60'0 CY	
Rolling Concrete			
Steel Rolling Type A or			
Aluminum Rolling Type 55A			

See Br. Std. C1 for Reinforcing Bar Notes.
See Br. Std. R1 for Aluminum Rolling Details.

SPAN "A" DETAILS
STATE HIGHWAY DEPARTMENT OF INDIANA

SCALE:- As Noted

NOVEMBER 14 1961

NO
Halter & Bean

DRAWING: 510 OF 20

PROJECT: J-465-4 (18) 155

BRIDGE CONTRACT NO. 0-6922

BRIDGE FILE: I-70-73-4647 DRA

Rev. 10-21-66 Reinf. Steel Notes, Bill of Materials

BRIDGES OVER 20' SPAN					
PUB. ROAD DES. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	1465-4	1962	21	27

DATA USED FOR DESIGN AND DETAILS

LIVE LOAD: HS20-44 loading with impact and distribution of loads in accordance with 1961 A.A.S.H.O. Specifications.

DEAD LOAD: Actual weight plus 3.5 pounds per sq. ft. of roadway to provide for future wearing surface.

SLAB: Designed for 16,000 lb wheel plus impact and with 1/2 inch monolithic wearing surface.

UNIT STRESSES

Structural Steel Bending (Tension)	20,000*/sq. in.
Shear on Rivets	13,500*/sq. in.
Structural Steel Bearing (Rivets & Torqued U.S. Bolts)	40,000*/sq. in.
Bearing Steel on Concrete (Including overturning and Eccentric Loading)	1,000*/sq. in.
Reinforcing Steel (Tension)	20,000*/sq. in.
Concrete (Compression)	1,200*/sq. in.
Bearing (Including Rivets & Torqued U.S. Bolts)	29,500*/sq. in.

PAINTING STRUCTURAL STEEL

All Paint shall be in accordance with current State Highway Specifications.

SHOP PAINT: One coat Red Lead, Type I or II except as noted.

FIELD PAINT: 2 Coats of Aluminum.

NOTE: * Estimated Weight of Structural Steel = 117,100 lbs.

* Weight of Structural Steel shown is approximate only and it shall be the Contractor's responsibility to determine the weight on which he bases his bid.

GENERAL NOTES

Rivets: 3/4" Unless noted.

Open Holes: 1/2" Unless noted.

Beams shall be cambered as shown on the "No Load Camber Diagram". Beams shall be checked for camber while supported in such a way as to have no bending moment in the direction of camber.

Holes for beam splices shall be subpunched or subdrilled and reamed to size while assembled. See Article E1103.18 (d) of the Specifications.

The shop plans shall indicate whether reaming or drilling is to be done in shop or field. If shop reaming or drilling is used the beams shall be assembled in accordance with the Camber Diagram. If the beams are shop reamed or drilled, full size drift pins shall be used in erection.

The shop details shall show a plan of matchmarking for all reamed pieces. All splice plates are to be removed, cleaned and painted after reaming. Splice plates shall not extend beyond the end of beam after bolting for shipment.

Flange splice bars shall have planed or rolled edges and holes in bars shall be subdrilled and reamed or drilled full size while assembled.

As soon as the Engineer has approved the field welds, all welds and any surface from which the shop coat has been omitted or becomes worn off or has otherwise become defective shall be thoroughly cleaned of all charred paint or any foreign matter and completely covered with one coat of shop paint.

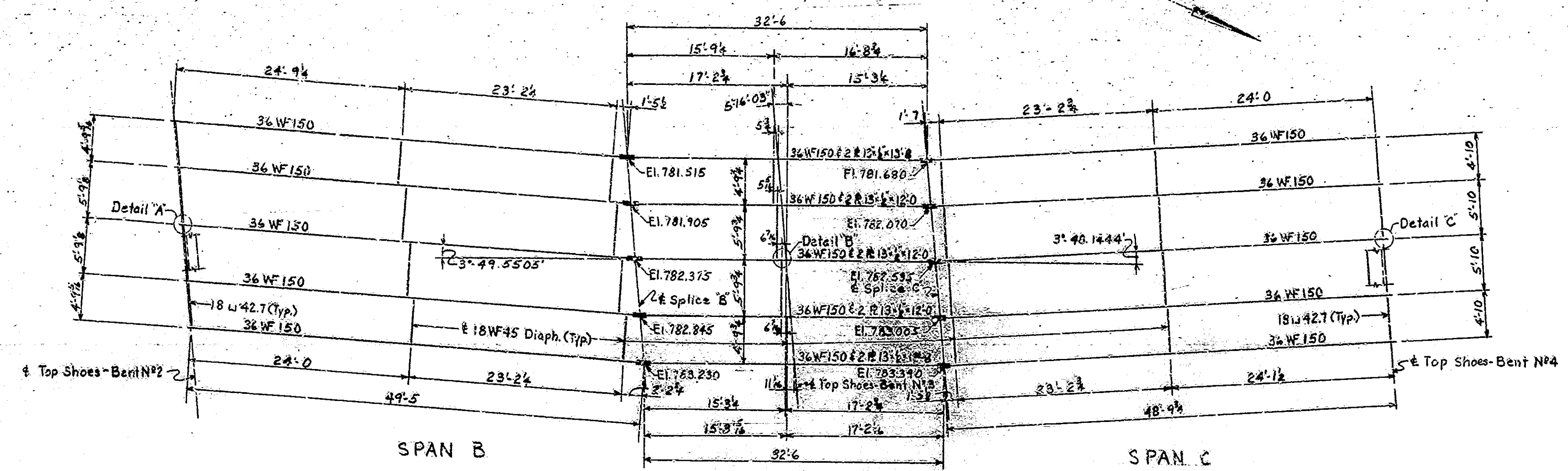
The Contractor shall prepare detailed working or shop drawing to enable him to fabricate, erect and construct all parts of the work in conformity with the Engineers' drawings and specifications and shall submit 5 copies of these to the Engineer. See Article E1103.2 of the Specifications.

All structural steel shall be erected and beams adjusted to their true elevations before driving rivets in field splices. See Framing Plan for true elevations of splices. Welding shall conform to the Welded Highway & Railway Bridges Specifications. See Article E1103.23 of the Specifications.

All structural steel is to be erected using full size drift pins in a minimum of fifty percent (50%) of the flange splice holes and fifty percent (50%) of the web splice holes. The top of splice plate elevations shall be checked before bolting or riveting field splices and with structural steel unsupported by falsework. All structural steel shall conform to ASTM A36.

NOTES:

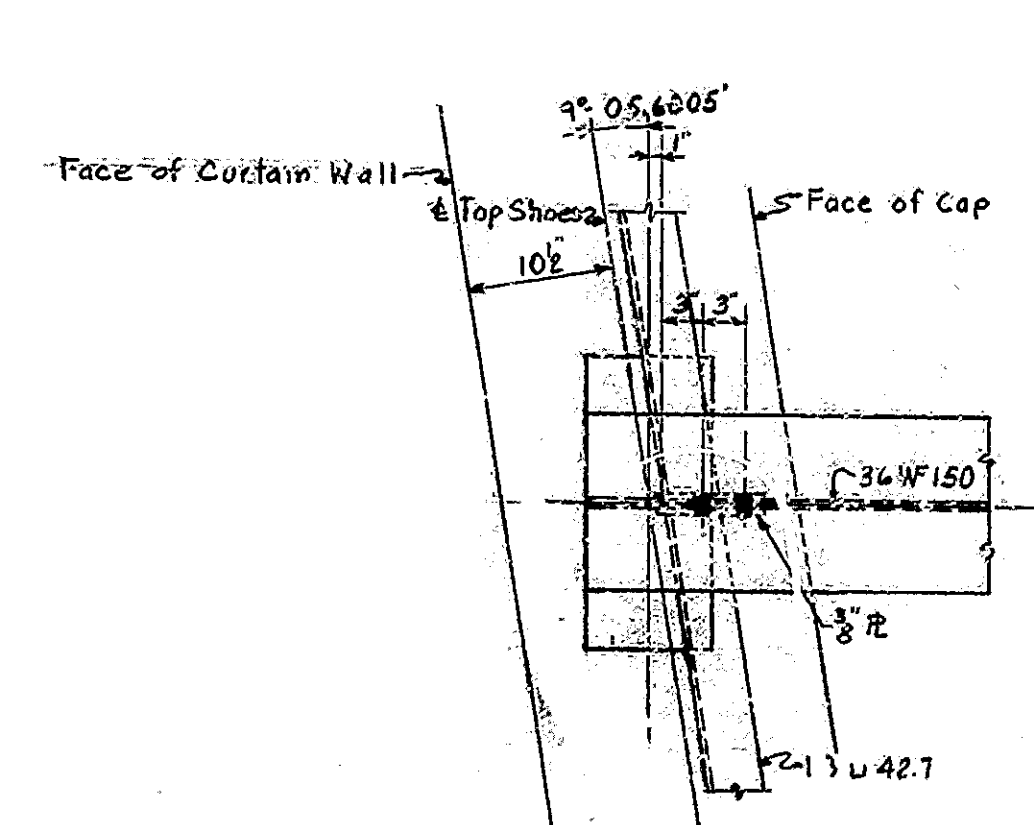
- See Drg. S-3 for Geometrical Layout.
- See Drg. S-14 for Splice Details, Shoe Details and Interior Diaphragm Connections.
- See Drg. S-12 & S-13 for End Diaphragm Connections.
- See Drg. S-16 for Shoe Setting Diagram and Erection Procedures.



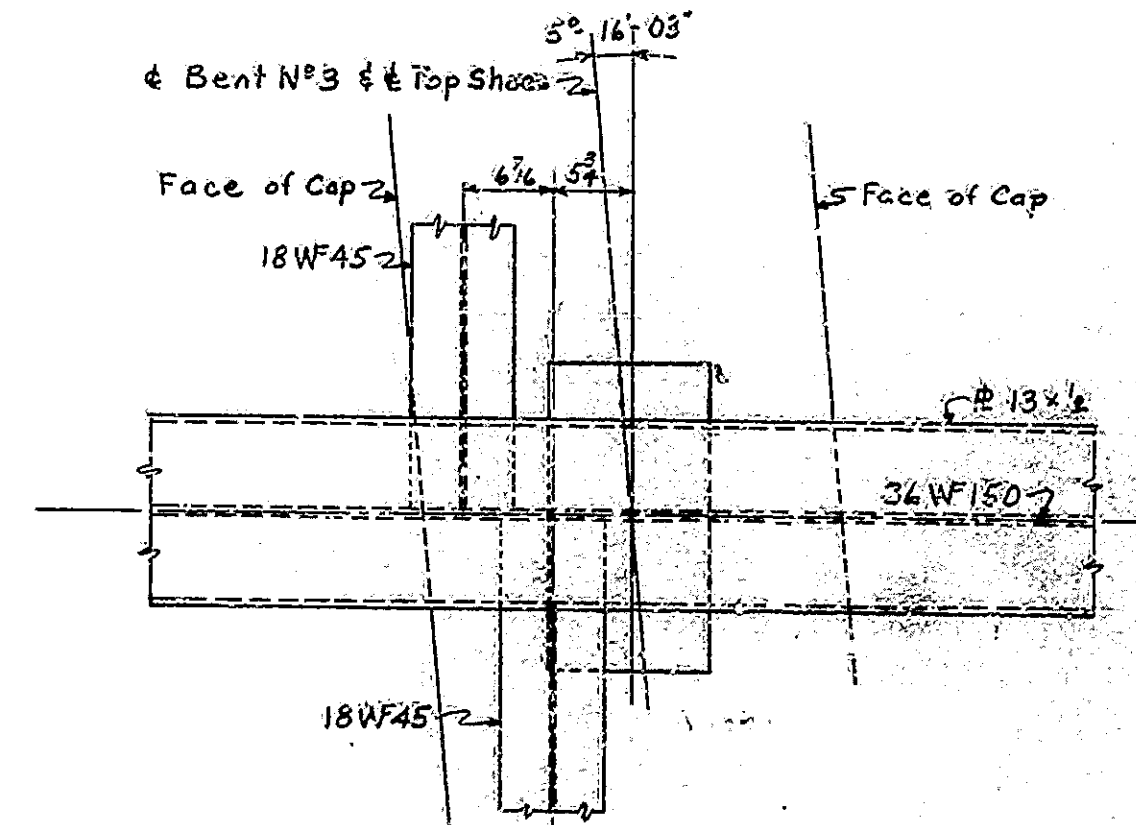
FRAMING PLAN
Scale: 1/4"=1'-0

Note: All elevations as shown are taken at the top of the top splice plate at the intersection of the splice and the beam.

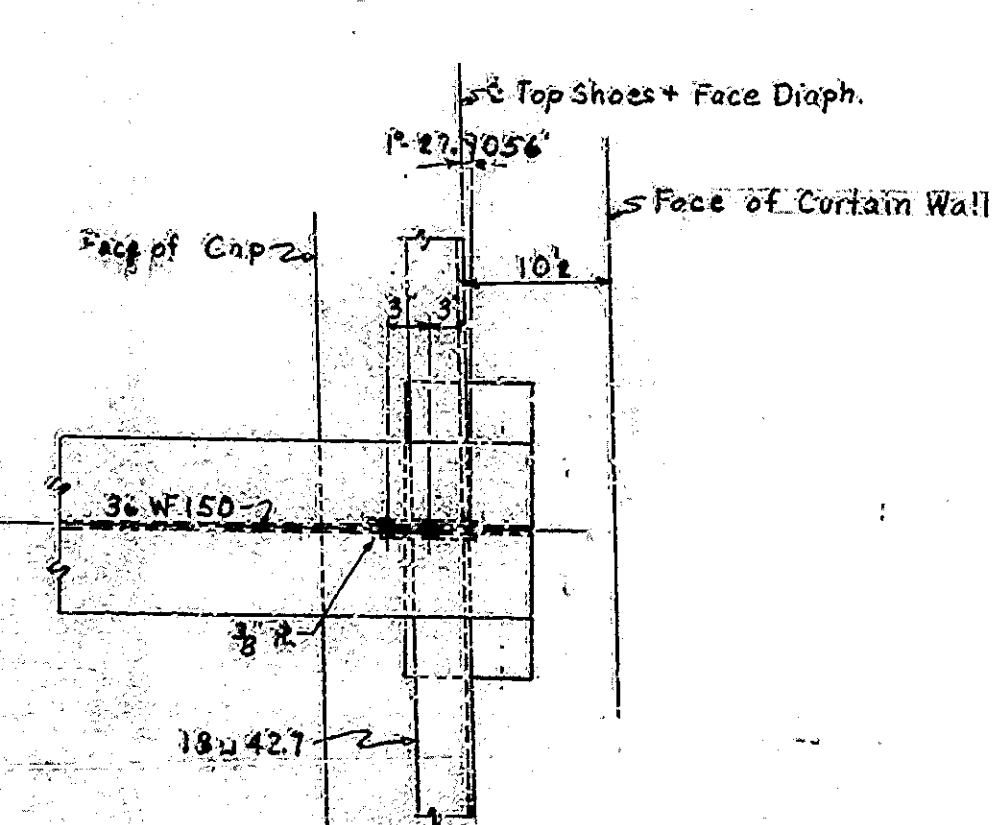
NOTE: Diaphragm connections to beams may be either bolted or riveted in lieu of field welded connections. If the contractor elects to use connections other than shown in the contract plans he shall submit details to the Engineer for approval. He shall assume full responsibility for layout of all diaphragm connections and for the adequacy of all fitted parts. No increase in pay weight will be permitted.



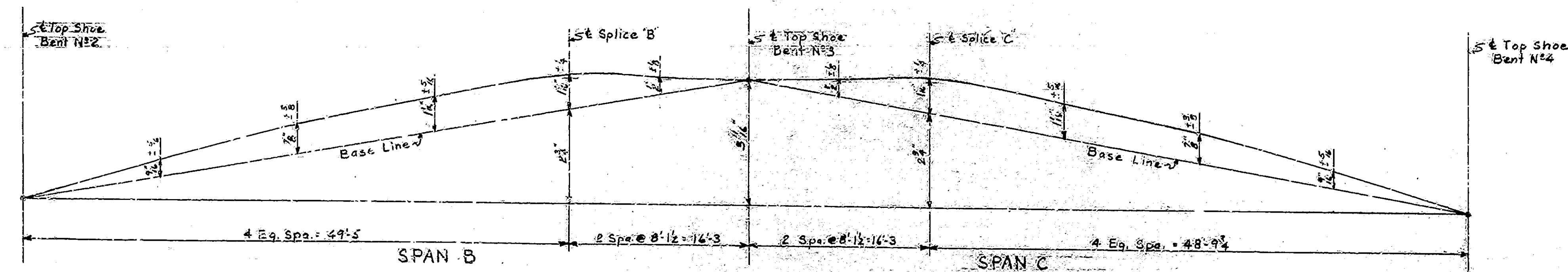
DETAIL A
Scale: 1/2"=1'-0



DETAIL B
Scale: 1/2"=1'-0



DETAIL C
Scale: 1/2"=1'-0



NO LOAD CAMBER DIAGRAM
Scale: 1/4"=1'-0 Horiz, 1/8"=1'-0 Vert

FRAMING PLAN- SPANS B & C STATE HIGHWAY DEPARTMENT OF INDIANA

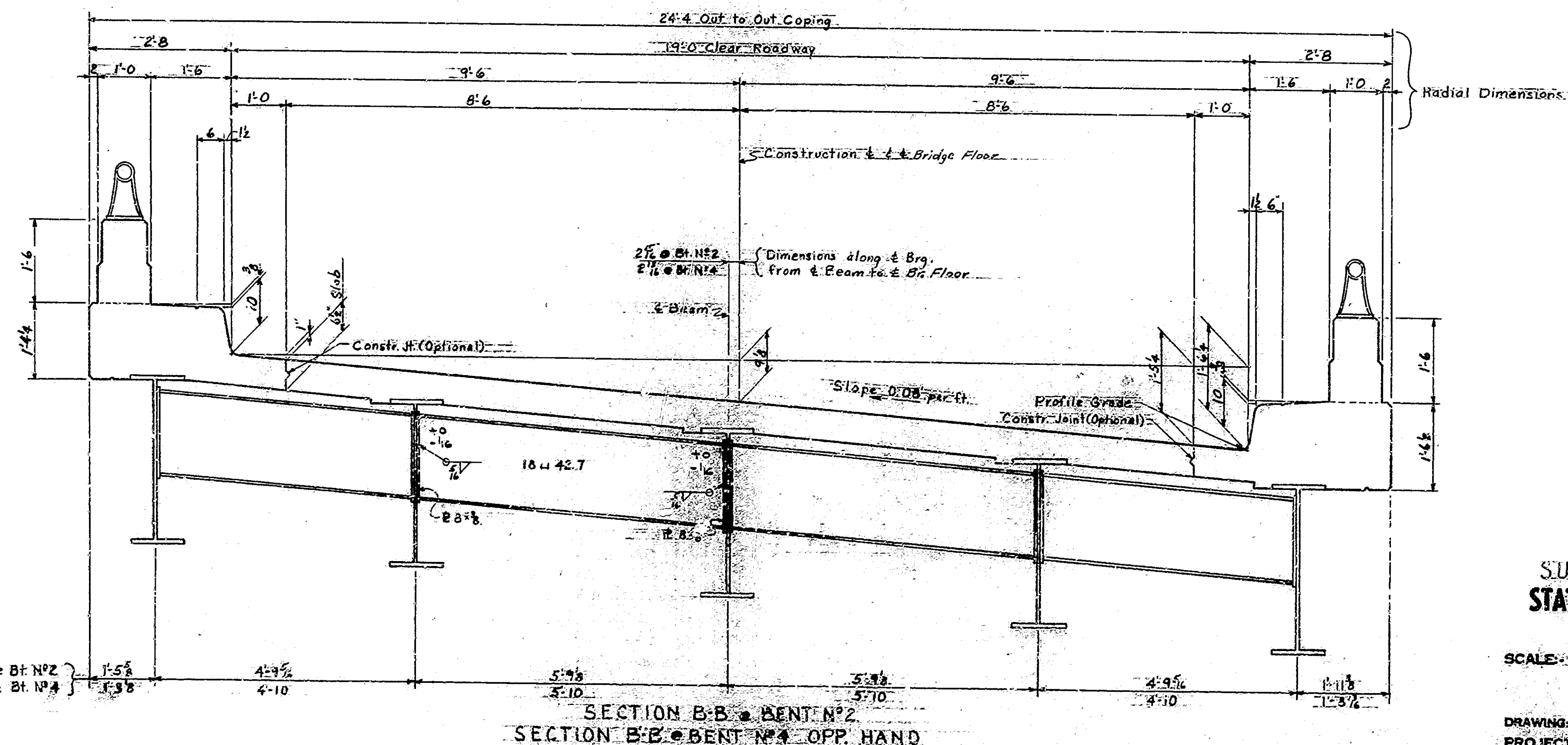
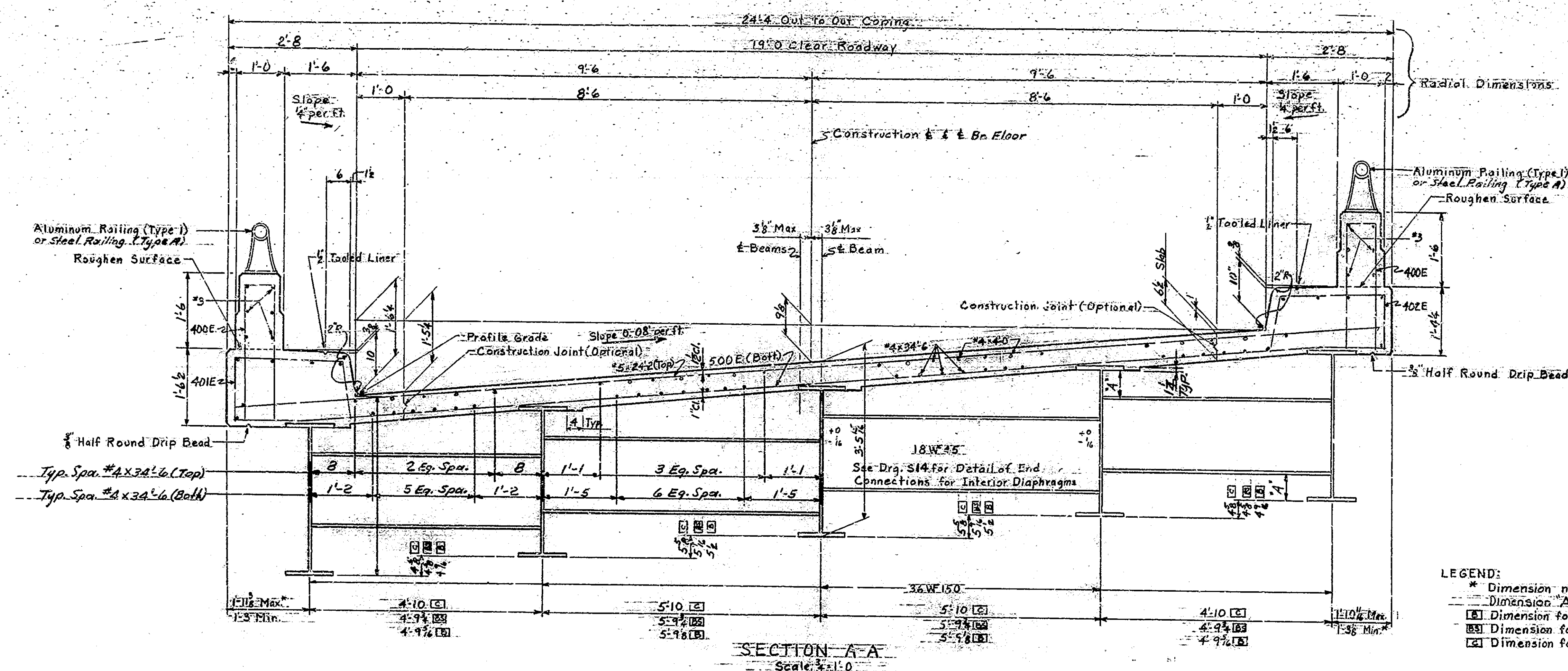
SCALE: As Noted

NOVEMBER 14, 1961

DRAWING: S-11 OF 20
PROJECT: I-465-4(70)155
BRIDGE CONTRACT NO. B-6022
BRIDGE FILE: I-70-73-4647 DAE

DESIGNED	C.R.E.	C.W.D.	R.H.H.
DRAWN	R.H.H.	C.W.D.	R.H.H.
TRACED	C.W.D.		

BRIDGES OVER 20' SPAN					
PUB. ROAD DIST. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	1445-4 400/55	1962	22	37



NOTES:
See Drg. S15 for Location of Sections.
See Drg. S14 for Interior Diaphragm Connections.
See Drg. S13 for End Diaphragm Connections.
See Drg. S.5 for Geometrical Layout.

SUPERSTRUCTURE DETAILS-SPANS B&C
STATE HIGHWAY DEPARTMENT OF INDIANA

SCALE: AS NOTED

NOVEMBER 14, 1961

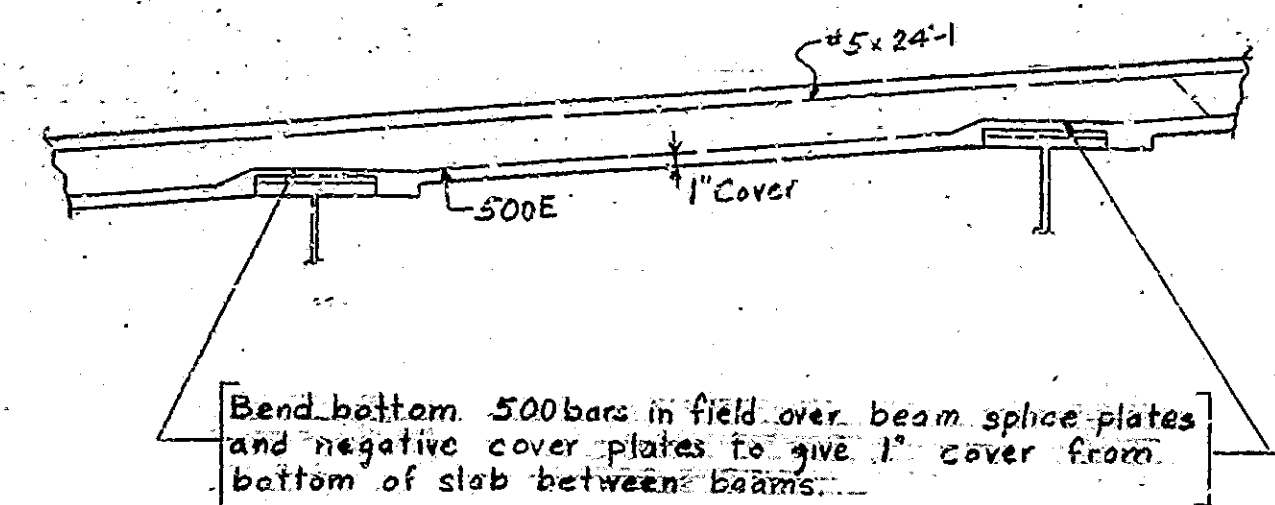
Walter J. Ream

DRAWING: S12 OF 20
PROJECT: I-465-4 (14) 135
BRIDGE CONTRACT NO. B-6922
BRIDGE FILE: I-10173-4347 DRE

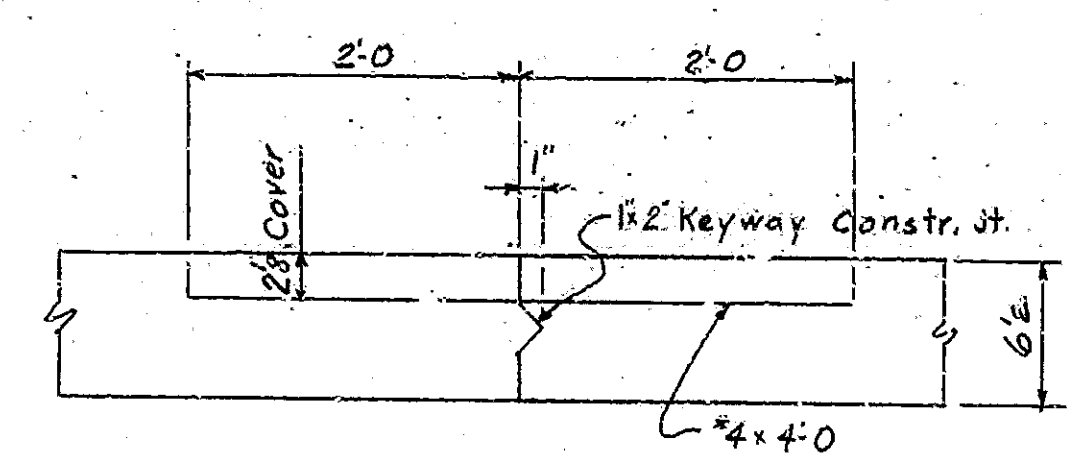
DESIGNED: A.R.E. CWO: R.H.M.
DRAWN: R.H.M. CWO: A.R.E.
CHECKED: CWO:

Rev. 10-21-65: Rein. Railings, Munch. Dns.

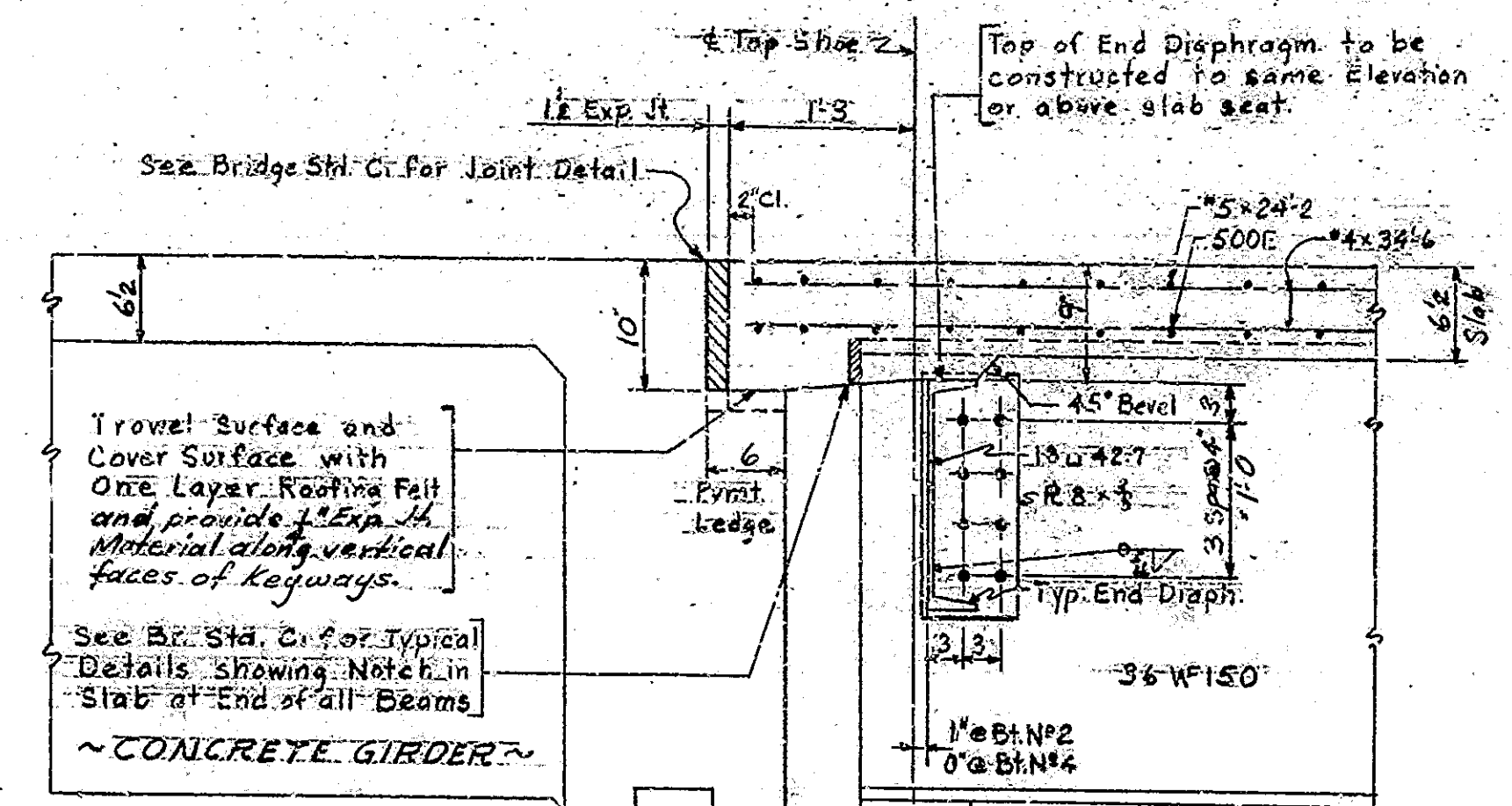
BRIDGES OVER 20' SPAN					
PUR. ROAD	STATE	PROJECT	FISCAL	SHEET	TOTAL
NO.		NO.	YEAR	NO.	SHEETS
4	IND.	465-400	1962	23	37



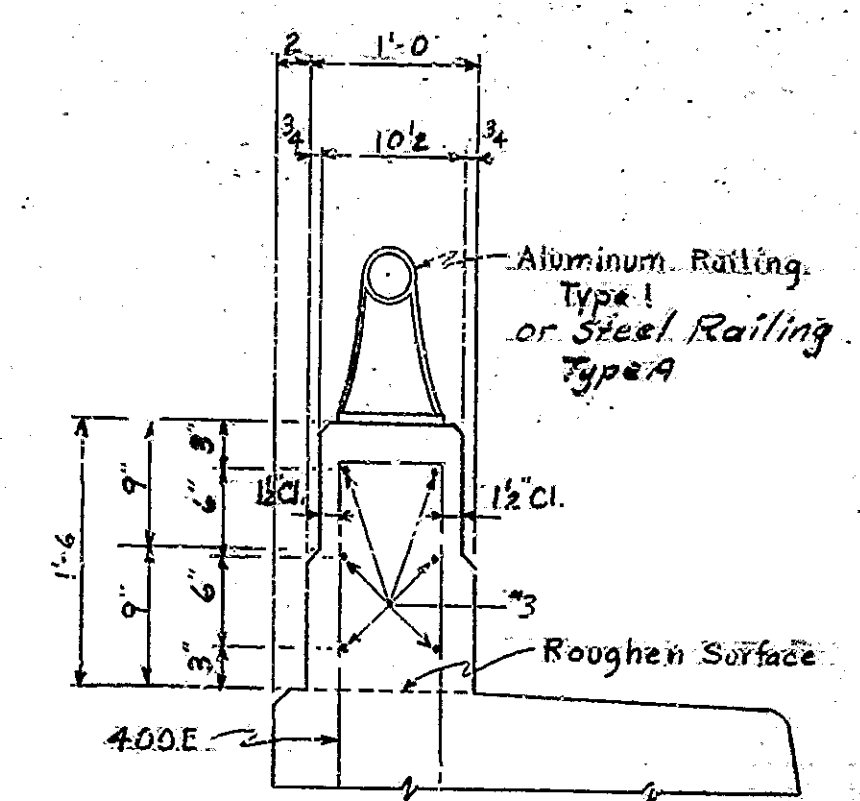
FIELD BEND REQUIRED ON BOTTOM BARS OVER BEAMS
No Scale



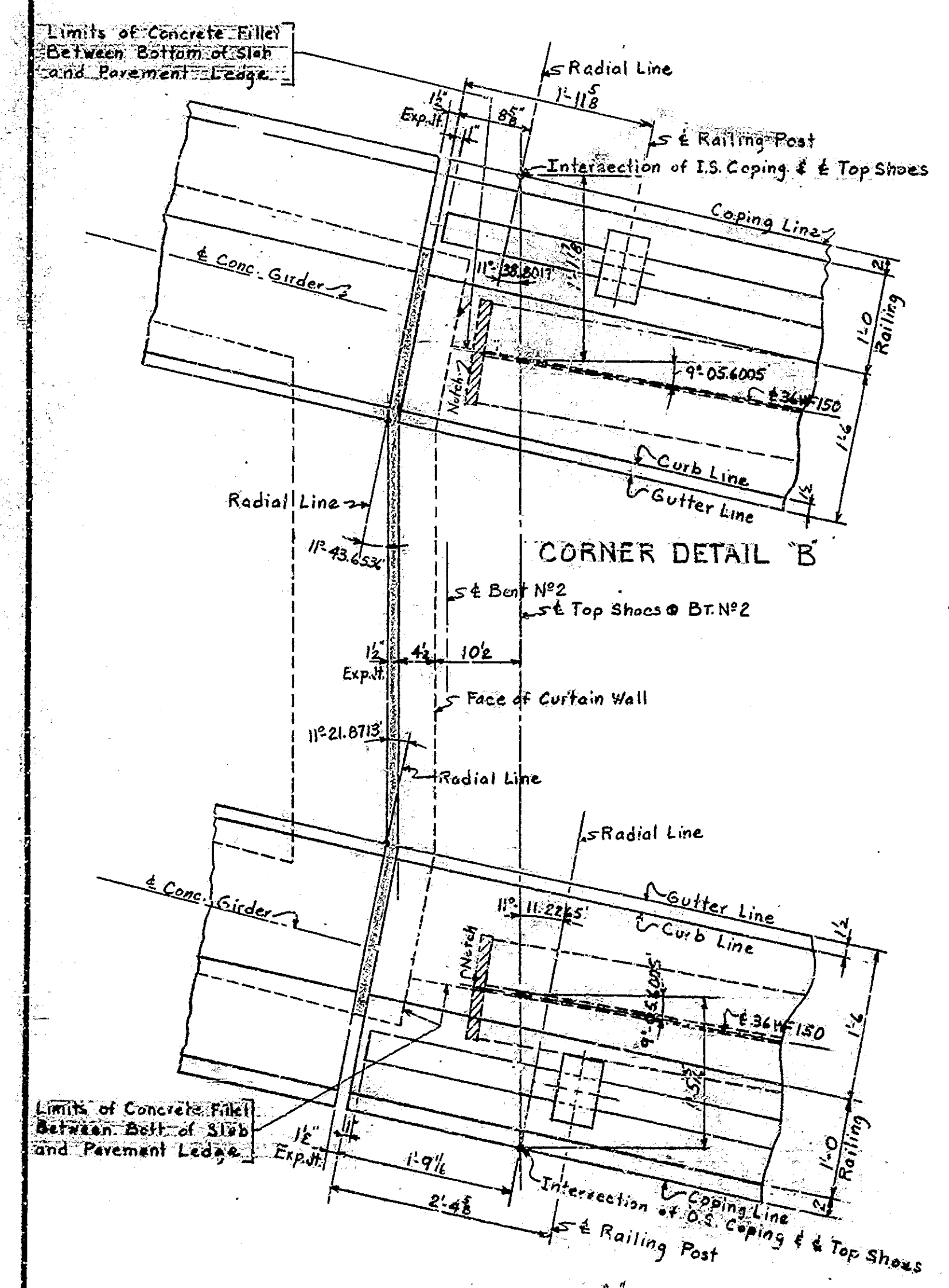
SECTION D-D
Scale: 1/2\"/>



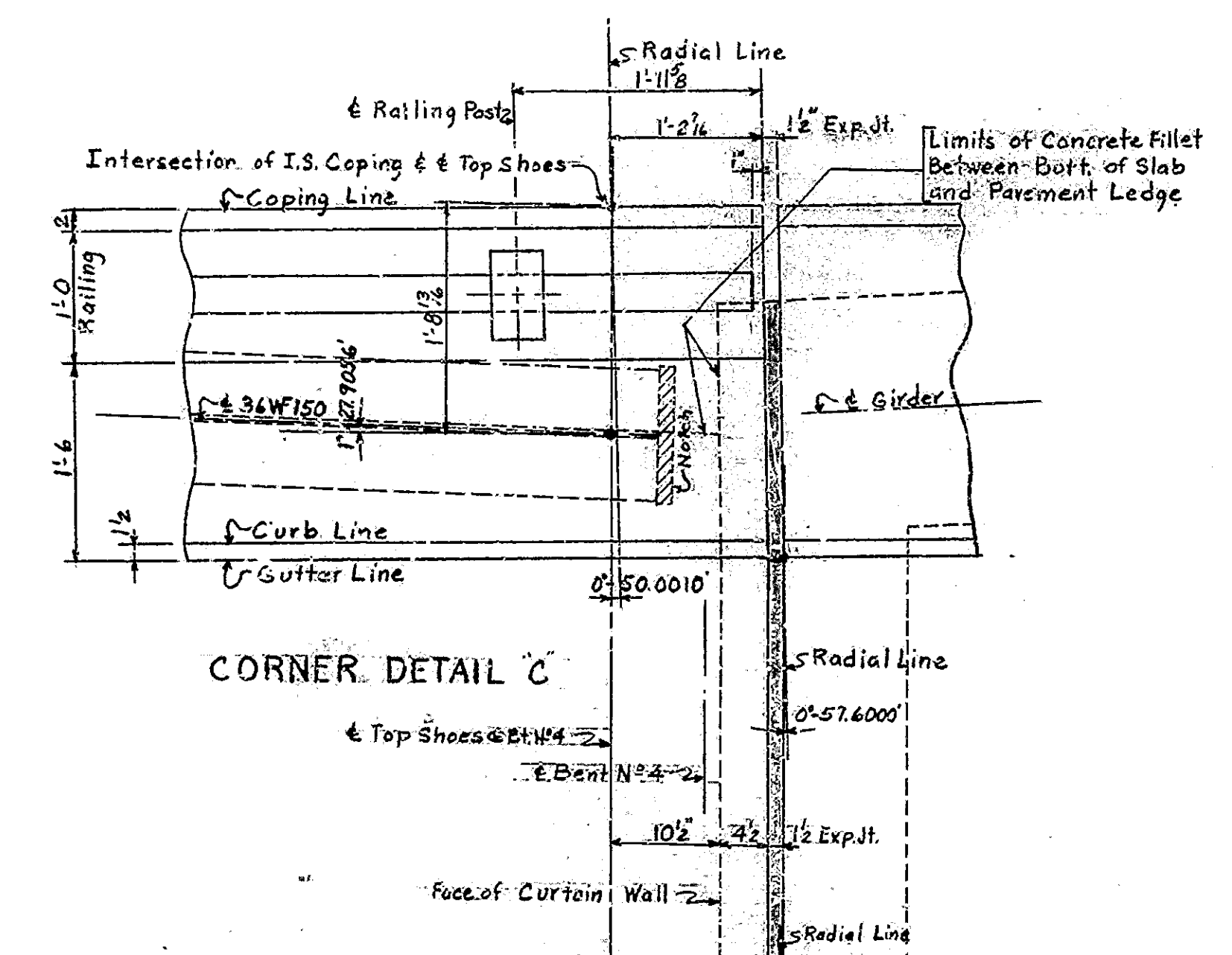
SECTION E-E
Scale: 1\"/>



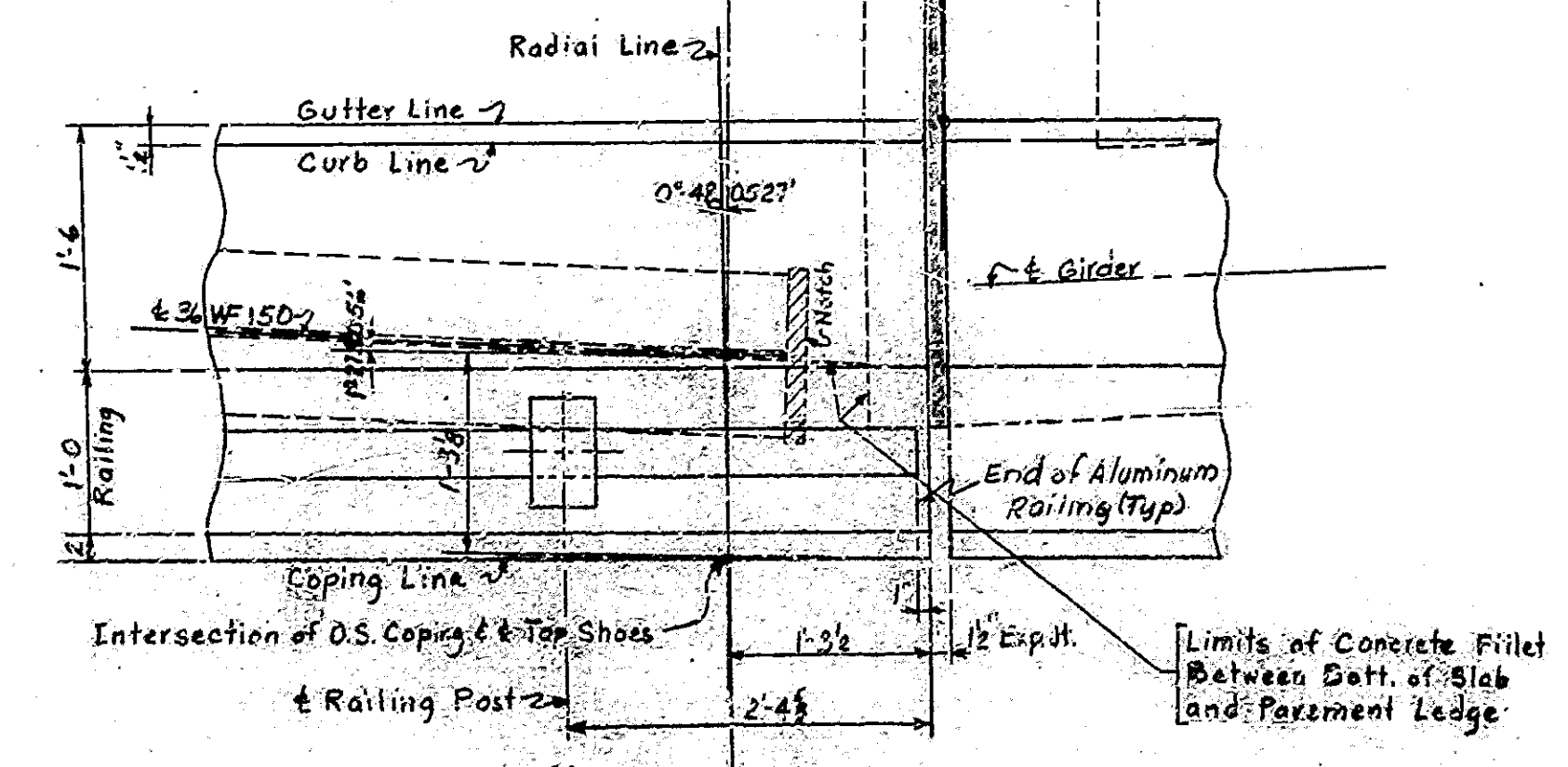
SECTION C-C
Scale: 1\"/>



CORNER DETAIL B
Scale: 1\"/>



CORNER DETAIL C



CORNER DETAIL G
Scale: 1\"/>

NOTE:
See Drg. S15S16 for Location of Sections and Corner Details.
See Bridge Std. C. for Reinforcing Bar Notes.

SUPERSTRUCTURE DETAILS - SPANS B+C
STATE HIGHWAY DEPARTMENT OF INDIANA

SCALE: As Noted

NOVEMBER 14, 1961
Matta, J. C.

DRAWING: S-130P-20
PROJECT: I-465-400-155
BRIDGE CONTRACT NO. B-2922
BRIDGE FILE: I-70-75-4241.DRE

DESIGNED: C.R.E. C.R.D. R.H.M.
DRAWN: R.H.M. C.R.D. R.H.M.
TRACED: C.R.D.

CORNER DETAILS
Scale: 1\"/>

Rev. 10-21-65 Railing

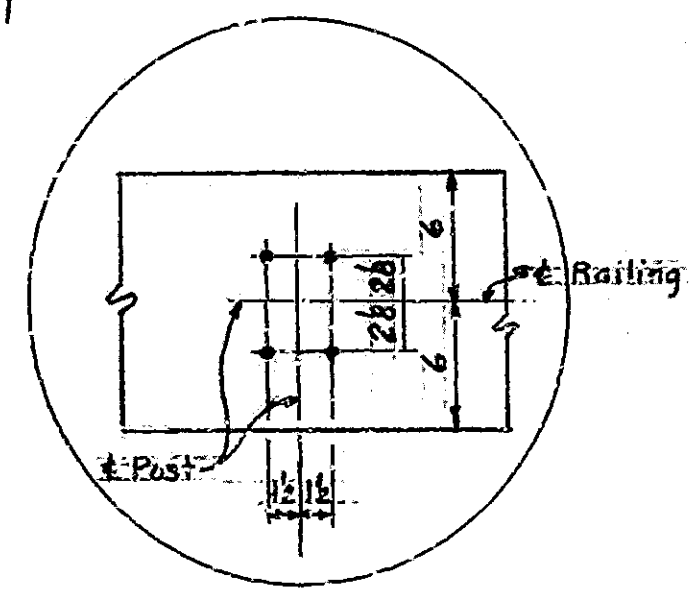
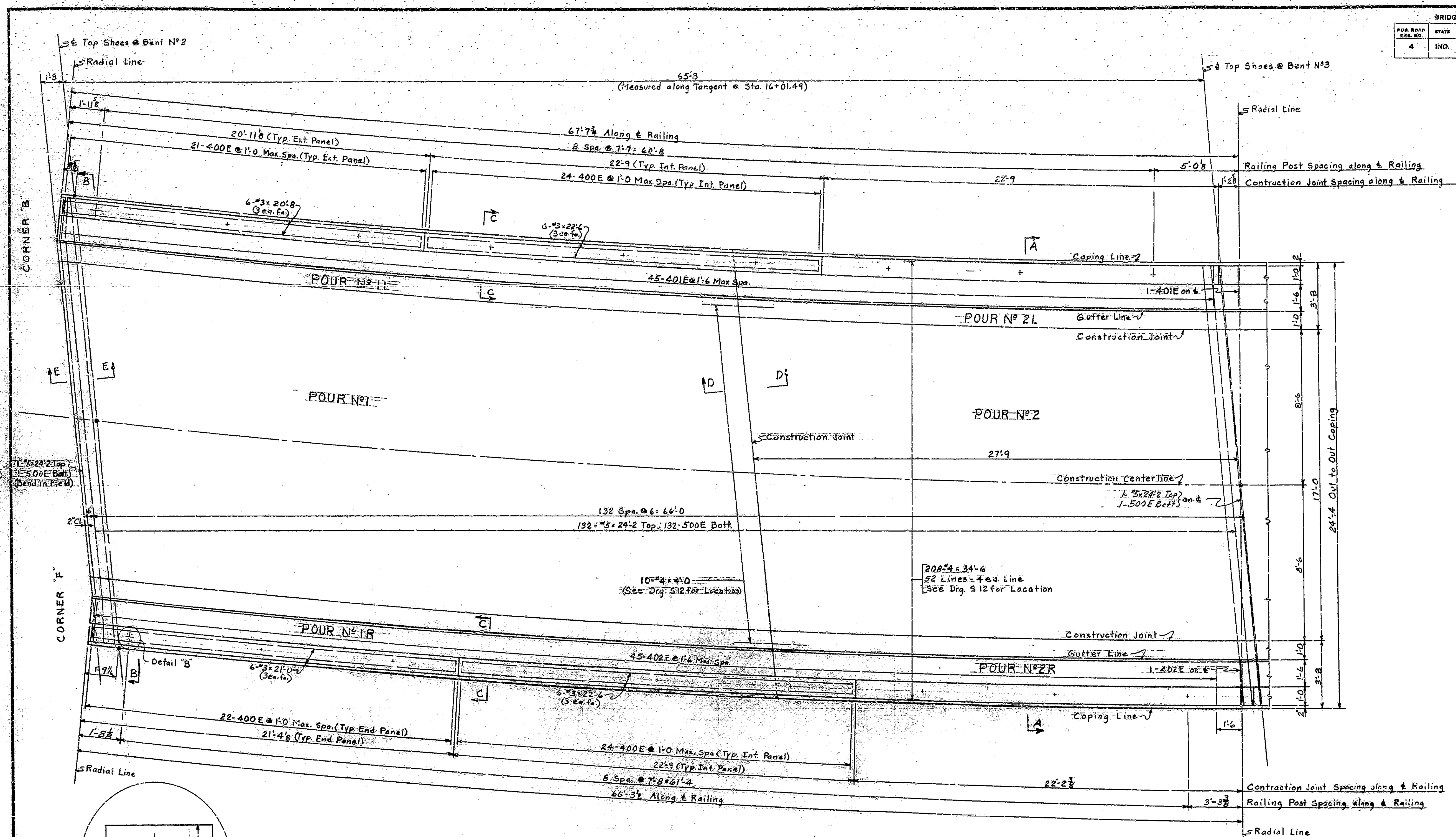
[illegible]

DESIGNED C.R.E. CKD B.H.M.
DRAWN B.H.M. CKD C.M.G.
TRACED CKD

NOTE:- Curved surfaces of shoes to be machined after weldments have been completed.

Rev. 10-21-65, Steep, Anchor B3, north

BRIDGES OVER 20' SPAN					
P.O.B. ROAD DES. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	465- 470	1962	25	37



PLAN - SPAN B
Scale: 1/8" = 1'-0"

NOTES:
 See Drg. S3 for Geometrical Layout.
 See Drg. S15 for Corner Details
 and Sections C-C, D-D & E-E.
 See Drg. S16 for Sections A-A & B-B.
 See Drg. S17 for Pour Diagram and
 Bill of Materials.

Sequence of pours to be made in order
 of p.v. numbers. All construction
 joints are optional and pours may be
 continuous provided the pour terminates
 at construction joints indicated on the
 plans.
 Rev. 11-12-61: Constr. Jt. Note
 Rev. 10-21-65: Rebar Spacing, Reinf.

SUPERSTRUCTURE DETAILS-SPAN B
 STATE HIGHWAY DEPARTMENT OF INDIANA

SCALE: As Noted

NOVEMBER 1961
Halter, J. R.

DRAWING: S10 OF 20
 PROJECT: I-465-470
 BRIDGE CONTRACT NO. 2-6922
 BRIDGE FILE: I-70-73-4677 DRE

DESIGNED: C.R.E. CKD: R.H.M.
 DRAWN: R.H.M. CKD: R.E.B.
 TRACED: CKD:

[illegible]

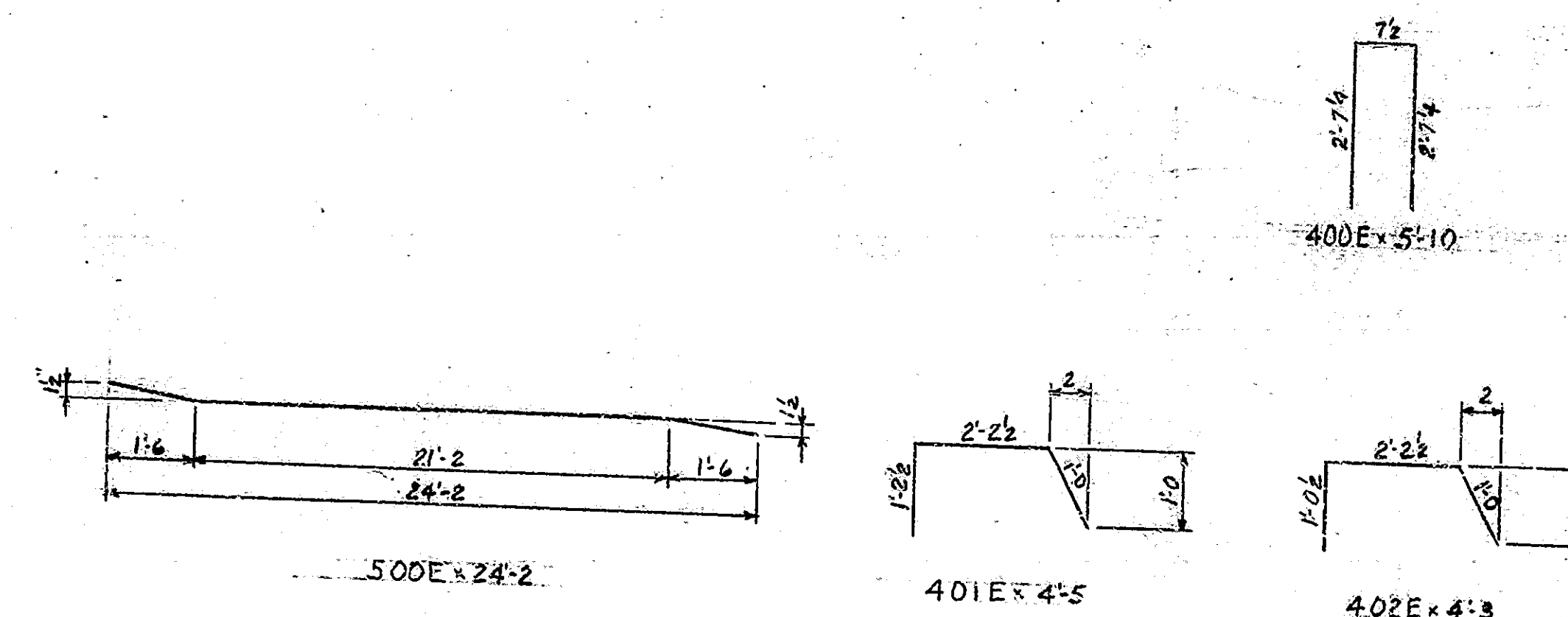
MARBAUGH ENG SUPPLY-INC. 100

BRIDGES OVER 20' SPAN					
PROJ. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	1-465-400/33	1962	27	37

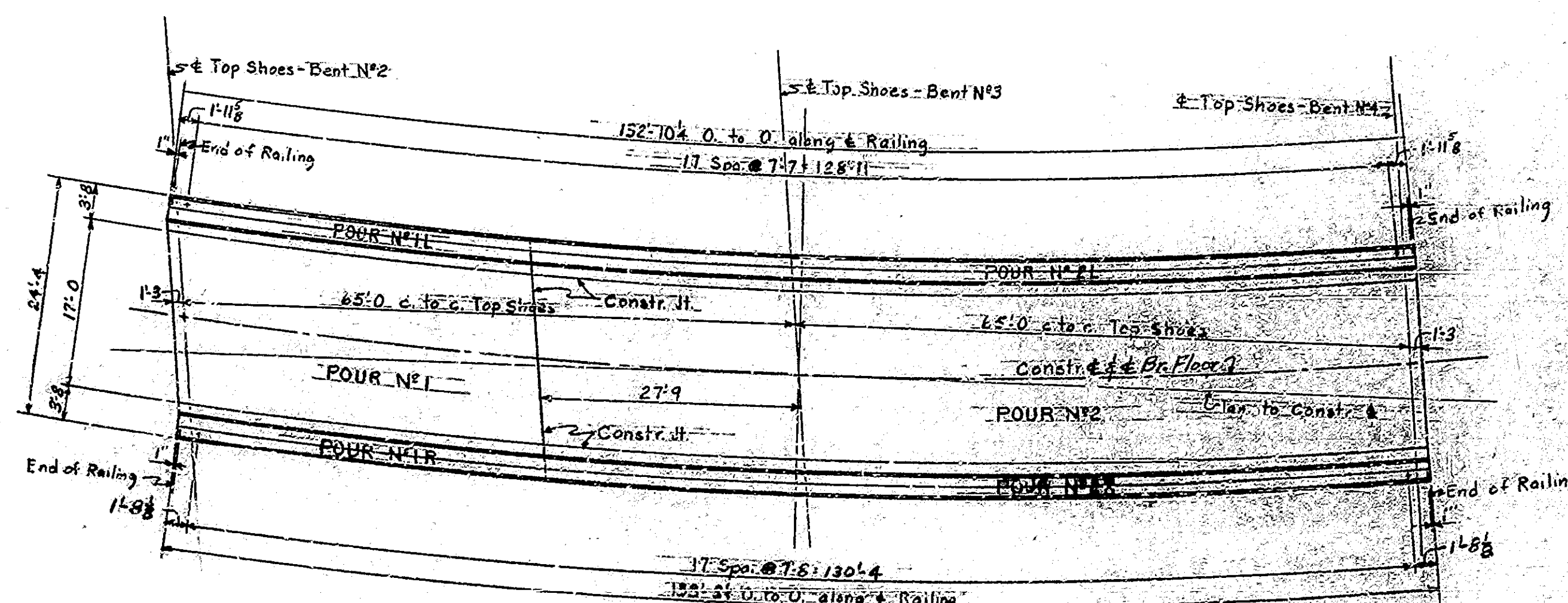
BILL OF MATERIALS SUPERSTRUCTURE SPANS B/C

MARK AND SIZE	NO. OF BARS	LENGTH	WEIGHT (LBS)
500E	267	24.2	
#5	267	24.2	
Total No. 5			13460
400E	276	5.10	
401E	90	4.5	
402E	91	4.3	
#4	208	34.6	
#4	10	4.0	
Total No. 4			6427
#3	12	20.8	
#3	12	21.0	
#3	48	22.6	
Total No. 3			394
Total Steel			20481
CONCRETE			
Four No. 1 L	6.5		
No. 1	13.6		
No. 1 R	6.0		
No. 2 L	15.6		
No. 2	32.2		
No. 2 R	13.9		
Total Class. R			88.0 C.Y.
Railing Concrete			13.9 C.Y.
Aluminum Railing (Type D)			
of Steel Railing (Type A)			266.2 L.F.

*Included in cost of other items.
Weight not included in total.



BENDING DIAGRAMS
No Scale



CONCRETE POUR DIAGRAM AND
RAILING POST SPACING
Scale: 1/2\"/>

NOTES:

Sequence of pours to be made in order of pour numbers.
All construction joints are optional and pours may be continuous provided the pour terminates at a construction joint indicated on the plans.
See Bridge Std. C for reinforcing bar notes.

SUPERSTRUCTURE DETAILS SPANS B/C STATE HIGHWAY DEPARTMENT OF INDIANA

SCALE: AS NOTED

NOVEMBER 1962

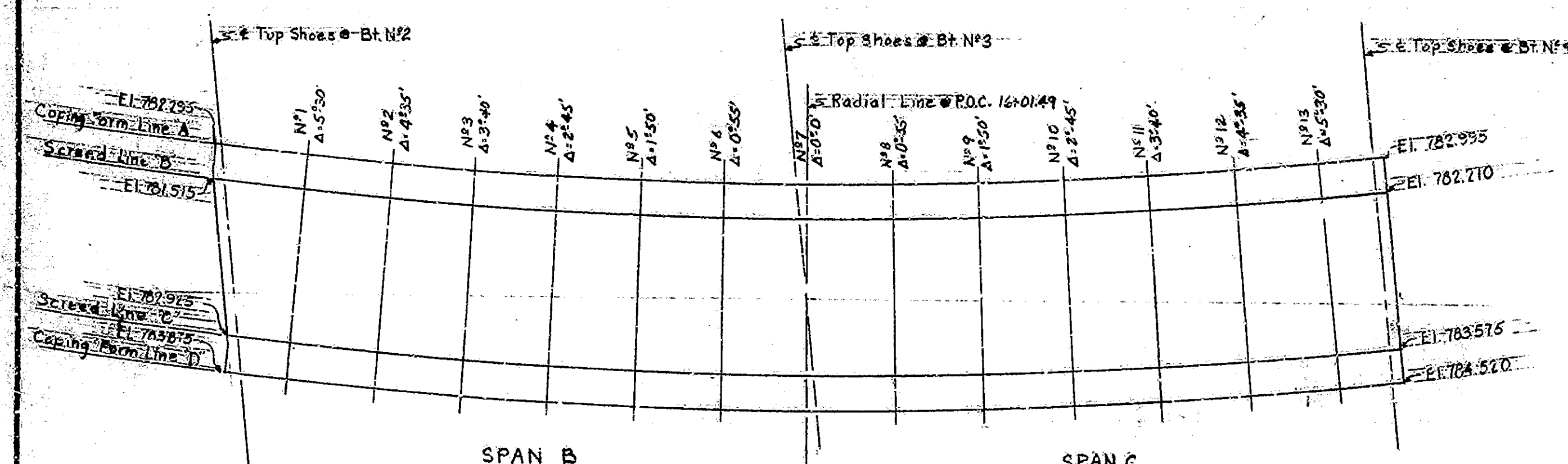
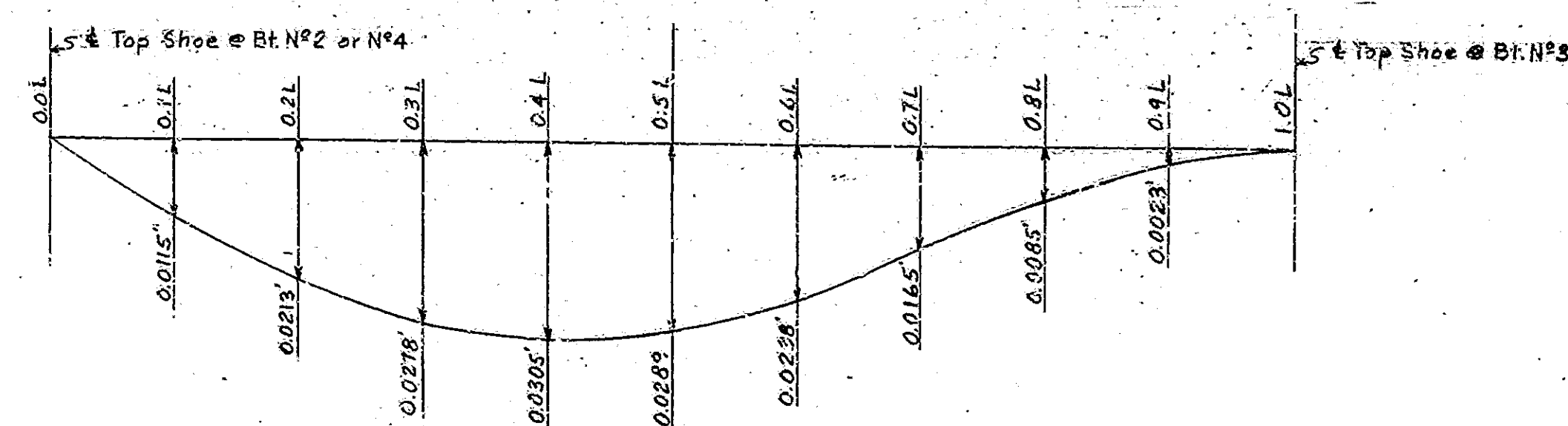
Walter G. Brown

DRAWING: 5/7 OF 20
PROJECT: 1-465-400/33
BRIDGE CONTRACT NO. 18-0-223
BRIDGE FILE: 1-10-73 424 DAE

Rev. 11-12-65 Const. H. Note & Reinf. Steel
Rev. 10-2-65 Rail Post Spacing, Bill of Materials

DESIGNED	C.B.E.	CMD.	R.H.M.
DRAWN	R.H.M.	CMD.	R.H.M.
TRACED	CMD.		

TABLE OF ELEVATIONS													
POINT	LOCATION	1	2	3	4	5	6	7	8	9	10	11	12
A	Elev. Top of Casing Form	782.460	782.600	782.720	782.810	782.890	782.945	783.025	783.095	783.110	783.110	783.085	783.040
B	Elev. Top of Outside Beam												
B	Elev. Top of Slab	781.675	781.815	781.935	782.030	782.105	782.165	782.215	782.265	782.300	782.325	782.375	782.455
C	Elev. Top of Beam												
C	Elev. Top of Slab	785.030	785.170	785.295	785.390	785.465	785.525	785.575	785.620	785.660	785.685	785.740	785.815
D	Elev. Top of Casing Form	783.970	784.115	784.240	784.335	784.410	784.470	784.520	784.565	784.605	784.635	784.690	784.765



PLAN OF SCREEDS

1. Lines 1 through 13 are Radial Lines
2. Unit Deflection Angle Between Any Two Adjacent Lines is 0.55"
3. A Signifies Total Deflection from a Tangent to the Profile Grade Line at Station 16+01.49

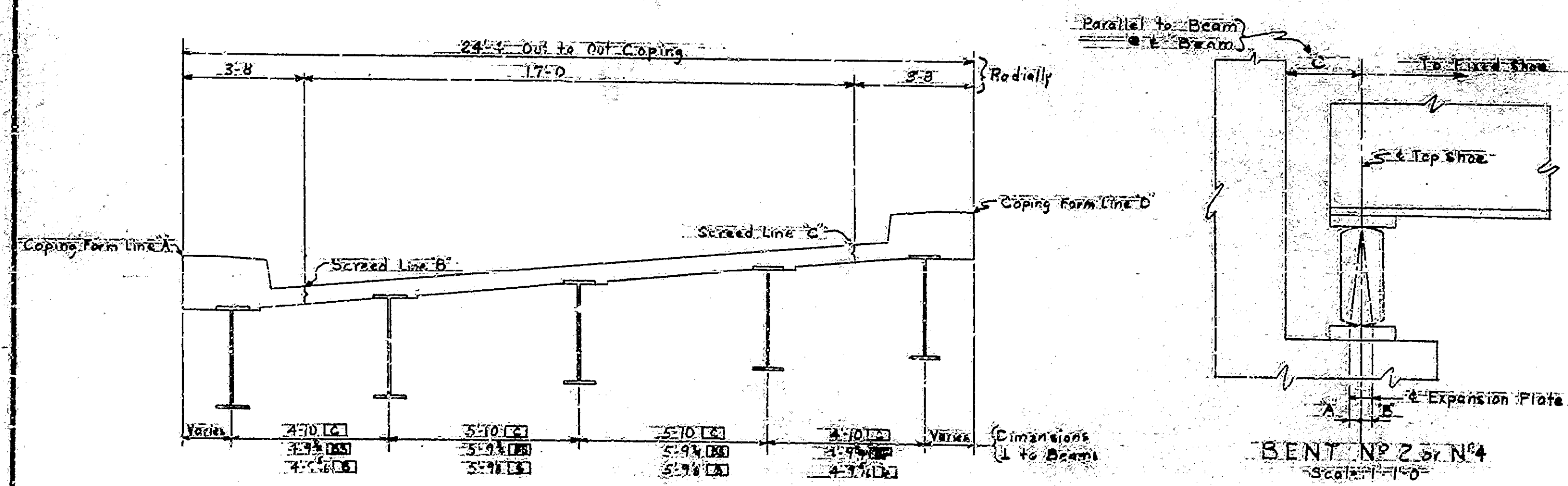
CONCRETE DEAD LOAD DEFLECTION DIAGRAM

Scale: 1" = 0.11' Horiz.
1" = 0.02' Vert.

NOTES:

- Purpose:
1. After rivets and welding have been completed, adjust the superstructure longitudinally so that dimension "C" from the 5' Top Shoe to the face of the curtainwall of Bent N°2 and Bent N°4 are equal.
 2. With the superstructure in the adjusted position called for in N°1, weld the fixed shoes to the Anchor Bolt Bent N°3.
 3. Adjust the expansion plate under each expansion shoe in accordance with dimension "A" or "B" in TABLE I for the prevailing temperature. Note that dimension "A" is always the distance from a vertical line through the 5' Top Shoe in a direction away from the Fixed Shoes, Weld the Exp. Pl. to the Anchor Bolt.
 4. After the shoes are set, take elevations at all screed points on top of adjacent beam. Enter these elevations in the TABLE OF ELEVATIONS. Subtract these elevations from the tabulated elevations and use the resulting dimension as the height for setting the screed or coping form above the beam. This dimension remains constant regardless of how much or in what order the concrete is poured. Do not set screeds or coping forms by leveling.
 5. No concrete is to be poured until the above operations are completed.

GENERAL PROCEDURE



SECTION ON RADIAL LINE

- LEGEND:
- Dimension for Span B before Splice B
 - Dimension for between Splice B & Splice C
 - Dimension for Span C after Splice C

TABLE I		Dim. "A"	Dim. "B"
Temperature (°F)		0 20 40 60 80 100 120	0 20 40 60 80 100 120
5' Top Shoe to Expansion @ Bent N°2 or N°4		3 1/4 3 1/4 3 1/4 3 1/4 3 1/4 3 1/4	3 1/4 3 1/4 3 1/4 3 1/4 3 1/4 3 1/4

SCREEDS FOR SPANS B & C
STATE HIGHWAY DEPARTMENT OF INDIANA

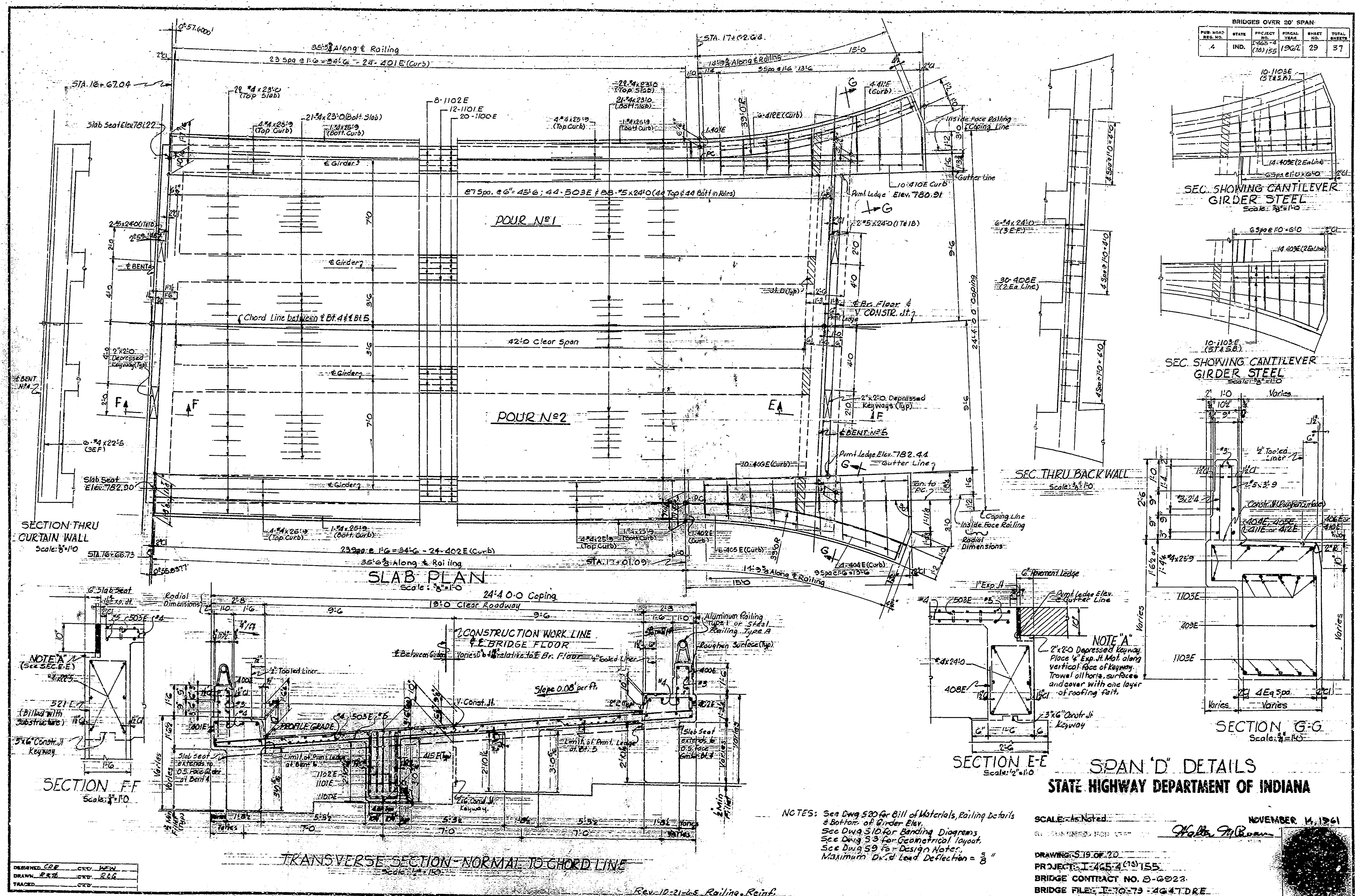
SCALE: AS NOTED NOVEMBER 14, 1961

Walter J. Bann

DRAWING: 510 OF 20
PROJECT: 11-215-1-10-15
BRIDGE CONTRACT NO. B-2322
BRIDGE FILE: 11-215-1-10-15

Rev. 10-21-66. Rational Procedure Notes

BRIDGES OVER 20' SPAN					
PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	1465-4 (25) 155	1961	29	37



BRIDGES OVER 20' SPAN					
PUR. ROAD NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	10/55	1962	30	37

BILL OF MATERIALS SPAN 'D'

MARK OR SIRE	N ^o of BAYS	LENGTH ft.	HEIGHT ft.
1100E	20	48'0"	
1101E	12	48'3"	
1102E	8	49'5"	
1103E	20	11'6"	
Total	60	11499'	
503E	44	24'10"	
#5	32	24'0"	
#5	28	3'9"	
Total	104	3552'	
400E	74	4'40"	
401E	25	4'5"	
402E	25	4'3"	
404E	4	2'7"	
405E	6	3'4"	
406E	10	3'9"	
409E	30	6'8"	
408E	28	7'9"	
410E	10	3'3"	
411E	4	4'5"	
412E	6	3'5"	
413E	4	4'0"	
414E	4	3'3"	
415E	152	3'1"	
#2	20	25'9"	
#4	6	24'0"	
#4	86	73'0"	
#4	6	22'5"	
Total	64	3609'	
#3	12	20'0"	
#3	4	14'7"	
#3	12	14'4"	
#3	4	13'0"	
#3	4	12'5"	
#3	28	2'4"	
Total	63	241'	
TOTAL STEEL 18892'			
CONCRETE			
POUR NO. 1	38.9 CY		
POUR NO. 2	38.9 CY		
TOTAL CIP	77.8 CY		
Railing concrete	5.9 CY		
Aluminum Railing 7161			
or Steel Railing 7161			

See B-516 for Reinforcing Bar Notes
See B-516 for Aluminum Railing Details
See B-516 for Bar Bending Diagram
See B-516 for Steel Railing Details
For Reinf. Steel Required for Lighting,
see Summary Sheets.

SPAN 'D' DETAILS STATE HIGHWAY DEPARTMENT OF INDIANA

SCALE: As Noted

NOVEMBER 14, 1961

Walter H. Brown

DRAWING: S-2008-20

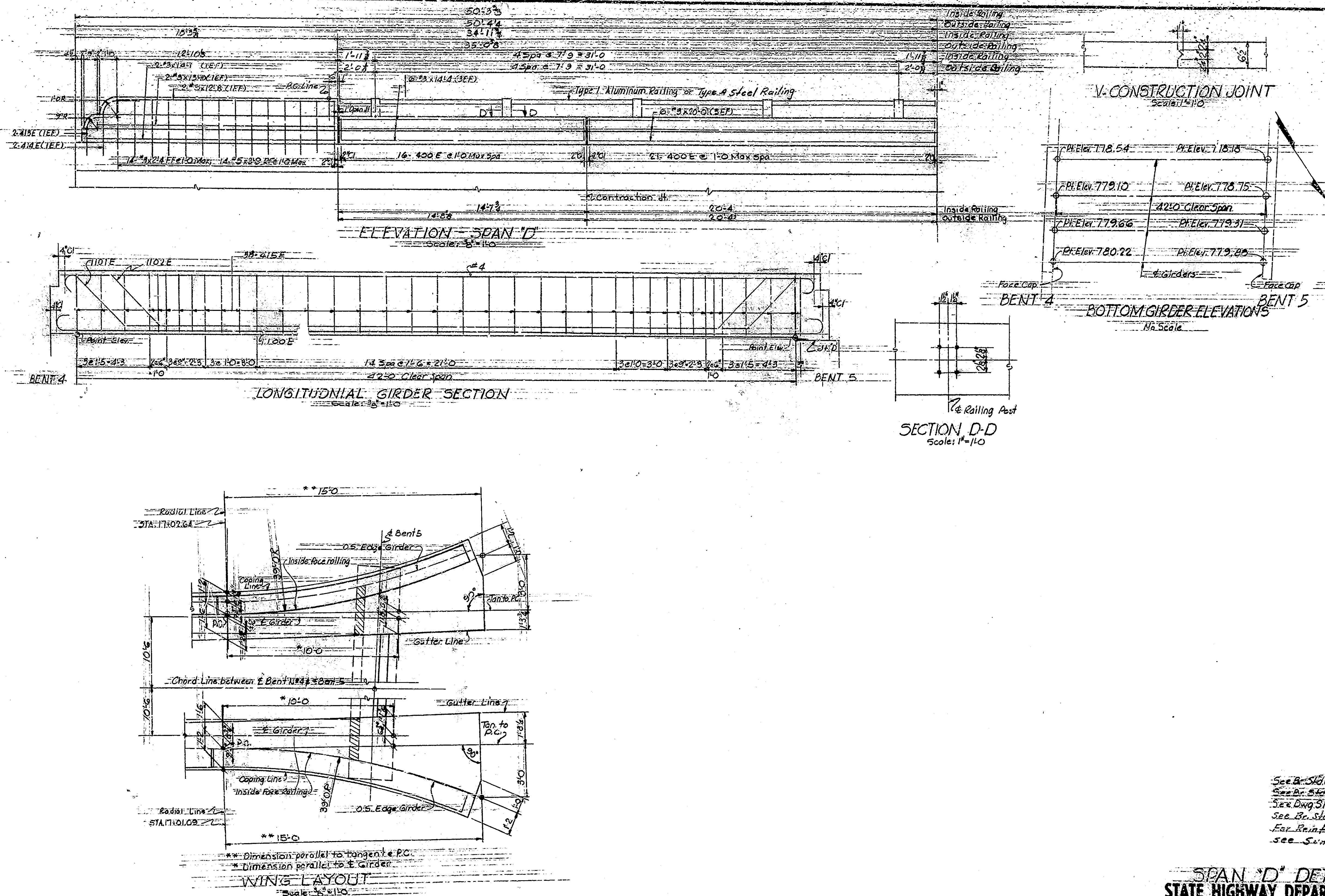
PROJECT: 10-55-4 (75) 155

BRIDGE CONTRACT NO. B-C-922

BRIDGE FILE: 10-55-4 (75) 155

Rev. 10-21-63 Railing Notes, Bill of Materials

DESIGNED: CCE CWD: BMM
DRAWN: BMM CWD: CCE
TRACED: CWD:



STRUCTURE QUANTITIES																												
ITEM	CONCRETE				RAILING CONCRETE	REINFORCING STEEL (1934 STD. WTG.)													** STRUCTURAL STEEL	CAST IRON	STEEL PILE SHEETS	TREATED TIMBER PILES	RAILING TYPE/MA	ANCHOR ROLLS/MA	ANCHOR PLATES/MA			
	CLASS F	CLASS D	CLASS E		CLASS F	*1(1/4")	*10(1/2")	*9(1/2")	*8(1/2")	*7(3/4")	*6(3/4")	*5(3/4")	*4(1/2")	*3(3/4")	*2(1/2")	TOTALS												
			AMCFT	FTG																								
	CU YDS	CU YDS	CU YDS	CU YDS	CU YDS	LINE FT.	LB.	LB.	LB.	LB.	LB.	LB.	LB.	LB.	LB.	LB.	LB.	LB.	LB.	N°	LINE FT.	N°	LINE FT.	EACH	EACH			
SUBSTRUCTURE																												
BENT N°1	7.1												60	231					913		4	200						
BENT N°2	10.4	4.2	3.9	14.2					1190	1668			866	447	682				4813			12	360			5		
BENT N°3	6.3	5.6	3.4	15.3					971	2305			552	313	3811				4958			16	400			5		
BENT N°4	3.9	6.1	3.9	14.2					1134	2034			864	452	380				5360			12	240			5		
BENT N°5	6.3									547			60	288					895		4	160						
SUPERSTRUCTURE																												
SPAN A	60.0				5.1						6526		3922	2399	206				12753					54.1				
SPAN B+C	48.0				13.9								12460	6100	524				20454					266.2				
SPAN D	77.4				5.9		11492						3552	3200	241				18392					69.7				
BILL OF SPICE BARS							38	45		23	16		28	12	6				188									
REIN. STEEL FOR LIGHTING														218					218						3			
TOTALS	265.9	15.9	292	43.7	24.9		11557	6571		3324	7197	218	22488	14802	3420				69547			8	360	40	1000	190.0	2	15

BILL OF SPICE BARS				
ITEM	DESCRIPTION	QUANTITY	UNIT	WEIGHT
1	1" Dia. Bar	10.0	Lbs.	5.8
2	1" Dia. Bar	10.0	Lbs.	4.5
3	1" Dia. Bar	10.0	Lbs.	2.3
4	1" Dia. Bar	10.0	Lbs.	1.6
5	1" Dia. Bar	10.0	Lbs.	2.8
6	1" Dia. Bar	10.0	Lbs.	1.2
7	1" Dia. Bar	10.0	Lbs.	6.0
TOTAL				108

BILL OF MATERIALS FOR R.C. BRIDGE APPROACH				
ITEM	DESCRIPTION	QUANTITY	UNIT	WEIGHT
1	1" Dia. Bar	10.0	Lbs.	5.8
2	1" Dia. Bar	10.0	Lbs.	4.5
3	1" Dia. Bar	10.0	Lbs.	2.3
4	1" Dia. Bar	10.0	Lbs.	1.6
5	1" Dia. Bar	10.0	Lbs.	2.8
6	1" Dia. Bar	10.0	Lbs.	1.2
7	1" Dia. Bar	10.0	Lbs.	6.0
TOTAL				108

BARRICADES, BARRIERS, TRAFFIC SIGNS & LIGHTS				
ITEM	DESCRIPTION	QUANTITY	UNIT	WEIGHT
1	1" Dia. Bar	10.0	Lbs.	5.8
2	1" Dia. Bar	10.0	Lbs.	4.5
3	1" Dia. Bar	10.0	Lbs.	2.3
4	1" Dia. Bar	10.0	Lbs.	1.6
5	1" Dia. Bar	10.0	Lbs.	2.8
6	1" Dia. Bar	10.0	Lbs.	1.2
7	1" Dia. Bar	10.0	Lbs.	6.0
TOTAL				108

APPROACH STRUCTURES				
ITEM	LOCATION	DESCRIPTION	QUANTITY	REMARKS
1	Sta. 14+00	6" F.B.C.P.C. Pipe 180a	20	To drain Grade B Special Borrow behind end bent
2	Sta. 17+15	6" F.B.C.P.C. Pipe 180a	40	To drain Grade B Special Borrow behind end bent
TOTALS				

BILL OF ADDITIONAL REINFORCING STEEL FOR LIGHTING				
MARK OR SIZE	No. of Bars	Length	Weight	
G-1A	8	8'0"		
G-2A	1A	2'0"		
TOTAL				215

BRIDGES OVER 20' SPAN					
STATE	PROJECT	FISCAL YEAR	SHEET NO.	TOTAL SHEETS	
IND.	I-465-4	1962	31	37	

SUMMARY				
ITEM	DESCRIPTION	UNIT	QUANTITY	
1	Class F Concrete	Cu. Yds.	265.9	
2	Class D Concrete	Cu. Yds.	15.9	
3	Class E Concrete above footings	Cu. Yds.	29.2	
4	Class E Concrete in Footings	Cu. Yds.	43.7	
5	Reinforcing Steel	Lbs.	69547	
6	Structural Steel	Lbs.	117100	
7	Cast Iron	Lbs.		
8	Unthreaded Timber Piles	Lin. Ft.		
9	Unthreaded Timber Piles Driven	Lin. Ft.		
10	Unthreaded Timber Piles	Lin. Ft.		
11	Unthreaded Timber Piles	Lin. Ft.		
12	Unthreaded Timber Piles	Lin. Ft.		
13	Unthreaded Timber Piles	Lin. Ft.		
14	Unthreaded Timber Piles	Lin. Ft.		
15	Unthreaded Timber Piles	Lin. Ft.		
16	Unthreaded Timber Piles	Lin. Ft.		
17	Unthreaded Timber Piles	Lin. Ft.		
18	Unthreaded Timber Piles	Lin. Ft.		
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57	Unthreaded Timber Piles	Lin. Ft.		
58	Unthreaded Timber Piles	Lin. Ft.		
59	Unthreaded Timber Piles	Lin. Ft.		
60	Unthreaded Timber Piles	Lin. Ft.		

End of additional railing posts required for lighting (See Br. Std. R2)
 Include in cost per foot of railing.

SUMMARY
 STATE HIGHWAY DEPARTMENT OF INDIANA

NOVEMBER 14, 1962
 Teller R.R.

PROJECT I-465-4 (1962)
 BRIDGE CONTRACT NO. B-0922
 BRIDGE FILE I-70-711-4647 DRE

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