

BRIDGE CONTRACT NO. R-7841

INDEX						
PROJECT	STRUCTURE	TYPE	SPAN	OVER	STATION	CONTRACT NO.
I-465-4(105)122	STA-0-5273	CONTINUOUS COMPOSITE STEEL BEAM	83'-0" 83'-0" SKEW: 19° ON 18° RT.	SR-37A OVER I-465	STA. 328+21.59 LINE 'A' STA. 336+75.17 LINE 'B' SR-37A	R-7841
SHEET NO.	SHEET DESIGNATION	SUBJECT				S.P.R. APPROVAL
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5	53	BENT NO. 1 AND NO. 3 DETAILS				
6	54	BENT NO. 2 DETAILS				
7	55	FRAMING PLAN AND STEEL DETAILS				
8	56	FLOOR DETAILS				
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21	BRIDGE SHEET	SUMMARY				

STATE OF INDIANA
INDIANA STATE HIGHWAY COMMISSION

BRIDGE PLANS

FOR SPANS OVER 20 FEET

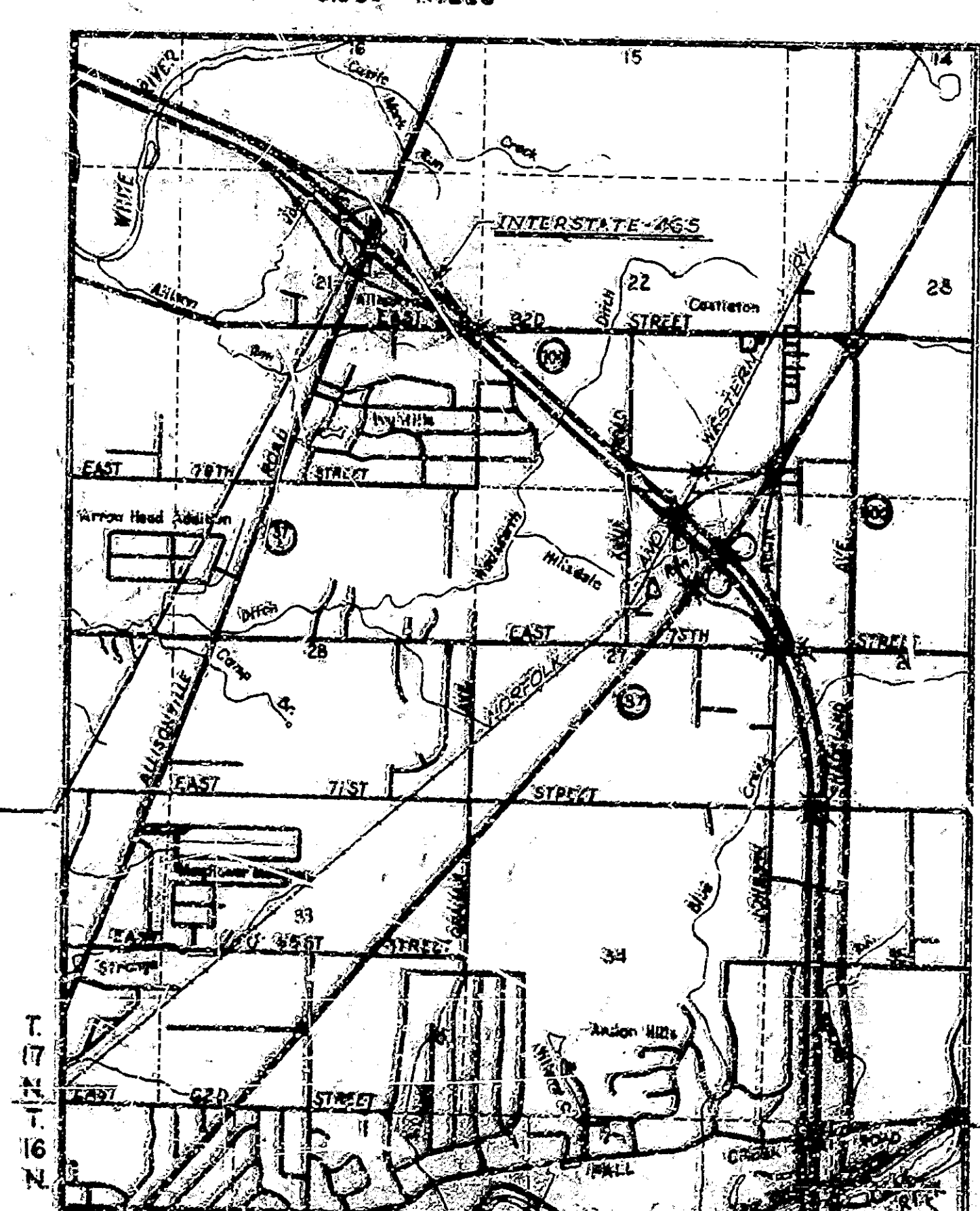
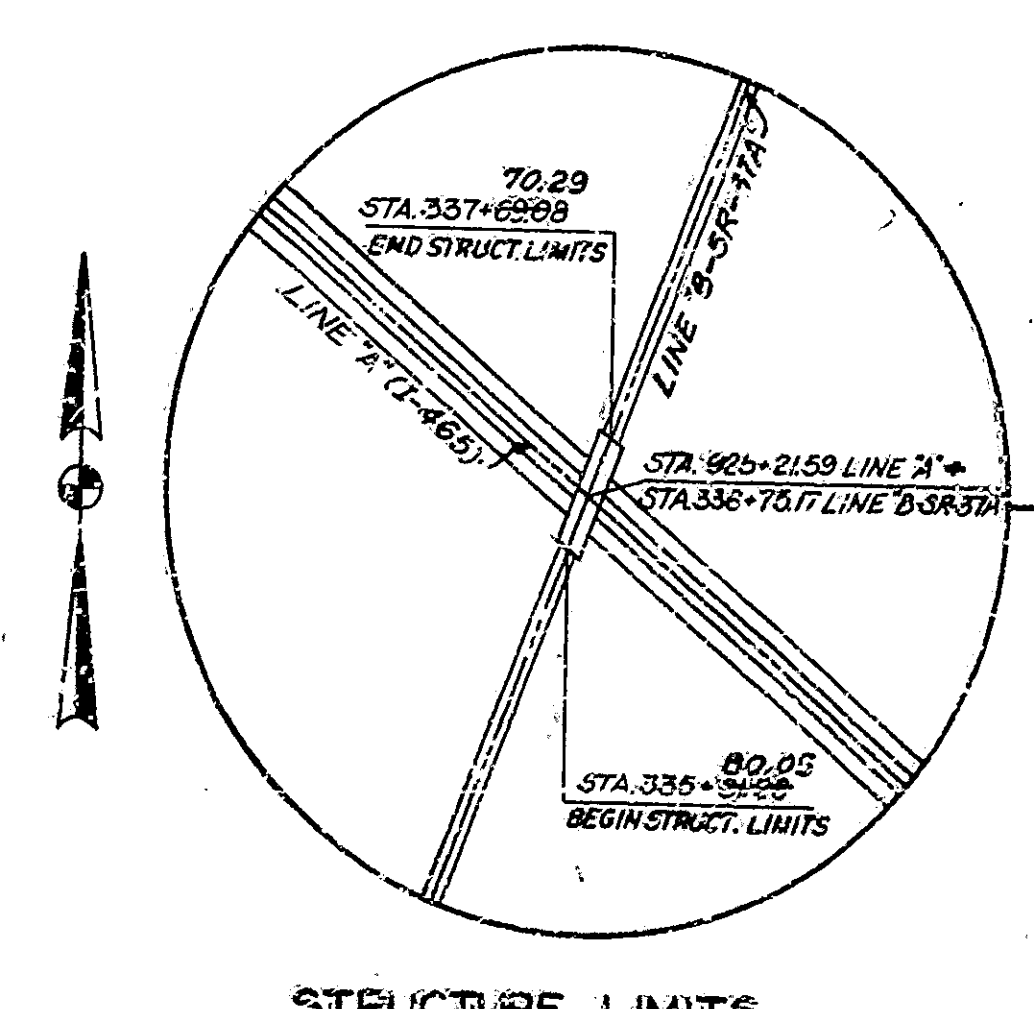
ON
- 4 (105) 122 PE.
F.A. PROJECT No. I-465-4 (105) 122 C
4 (139) 122 RW
SR-37A OVER I-465

BEGINNING AT A POINT ON LINE 'B' SR-37A OF EXISTING SR-37A APPROXIMATELY 30 FT. SOUTHWEST OF ITS INTERSECTION WITH LINE 'A' OF PROPOSED I-465 AND EXTENDING 190.22 FEET IN A NORTH-EAST DIRECTION TO A POINT ON LINE 'B' SR-37A APPROXIMATELY 100 FT. NORTHEAST OF ITS INTERSECTION WITH LINE 'A' ALL IN SECTION 21, T17N, R4E, WASHINGTON TOWNSHIP, MARION COUNTY.

ROADWAY LENGTH: NONE
BRIDGE LENGTH: 6036 FEET
TOTAL LENGTH: 6036 FEET
MAX. GRADE: 2.50%

INDEX CONTINUED STANDARD DRAWINGS						
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24	62	BENT NO. 2 DETAILS				7-27-66
25	63	BENT NO. 3 DETAILS				7-27-66
26	64	FRAMING PLAN AND STEEL DETAILS				7-27-66
27	65	FLOOR DETAILS				7-27-66
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35	73	SUMMARY				7-27-66
36	74	SUMMARY				7-27-66
37	75	SUMMARY				7-27-66
38	76	SUMMARY				7-27-66
39	77	SUMMARY				7-27-66
40	78	SUMMARY				7-27-66
41	79	SUMMARY				7-27-66
42	80	SUMMARY				7-27-66
43	81	SUMMARY				7-27-66
44	82	SUMMARY				7-27-66
45	83	SUMMARY				7-27-66
46	84	SUMMARY				7-27-66
47	85	SUMMARY				7-27-66
48	86	SUMMARY				7-27-66
49	87	SUMMARY				7-27-66
50	88	SUMMARY				7-27-66
51	89	SUMMARY				7-27-66
52	90	SUMMARY				7-27-66
53	91	SUMMARY				7-27-66
54	92	SUMMARY				7-27-66
55	93	SUMMARY				7-27-66
56	94	SUMMARY				7-27-66
57	95	SUMMARY				7-27-66
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59	97	SUMMARY				7-27-66
60	98	SUMMARY				7-27-66
61	99	SUMMARY				7-27-66
62	100	SUMMARY				7-27-66

DATE	REVISIONS
7-17-66	Revised: 3, 4, 5, 6, 7, 8, 9, 11, 12, 18E, 16F Deleted: 3A, 4A, 5A, 6A, 7A, 8A, 9A, 10A, 11A, 12A, 13A, 14A, 15A, 16A, 17A, 19A, 20A, 21A, 22A, 23A, 24A, 25A, 26A, 27A, 28A, 29A, 30A, 31A, 32A, 33A, 34A, 35A, 36A, 37A, 38A, 39A, 40A, 41A, 42A, 43A, 44A, 45A, 46A, 47A, 48A, 49A, 50A, 51A, 52A, 53A, 54A, 55A, 56A, 57A, 58A, 59A, 60A, 61A, 62A, 63A, 64A, 65A, 66A, 67A, 68A, 69A, 70A, 71A, 72A, 73A, 74A, 75A, 76A, 77A, 78A, 79A, 80A, 81A, 82A, 83A, 84A, 85A, 86A, 87A, 88A, 89A, 90A, 91A, 92A, 93A, 94A, 95A, 96A, 97A, 98A, 99A, 100A
	11A, 12A, 13A, 14A, 15A, 16A, 17A, 18A, 19A, 20A, 21A, 22A, 23A, 24A, 25A, 26A, 27A, 28A, 29A, 30A, 31A, 32A, 33A, 34A, 35A, 36A, 37A, 38A, 39A, 40A, 41A, 42A, 43A, 44A, 45A, 46A, 47A, 48A, 49A, 50A, 51A, 52A, 53A, 54A, 55A, 56A, 57A, 58A, 59A, 60A, 61A, 62A, 63A, 64A, 65A, 66A, 67A, 68A, 69A, 70A, 71A, 72A, 73A, 74A, 75A, 76A, 77A, 78A, 79A, 80A, 81A, 82A, 83A, 84A, 85A, 86A, 87A, 88A, 89A, 90A, 91A, 92A, 93A, 94A, 95A, 96A, 97A, 98A, 99A, 100A



TRAFFIC DATA I-465		
A.D.T. (1962)	47,840	V.P.D.
A.D.T. (1962 PROJECTED)	97,020	V.P.D.
TRUCKS	DRV. 6	%
DESIGN SPEED	70 M.P.H.	
ACCESS CONTROL	FULL	

TRAFFIC DATA SR-37A		
A.D.T. (1962)	3,339	V.P.D.
A.D.T. (1962 PROJECTED)	6,343	V.P.D.
TRUCKS	6	%
DESIGN SPEED	60 M.P.H.	
ACCESS CONTROL	LIMITED	

This Section of 37A Abandoned by I-465 1-27-72 Boogie Enclosed

INDIANA STATE HIGHWAY COMMISSION
STANDARD SPECIFICATIONS DATED 1963
TO BE USED WITH THESE PLANS.

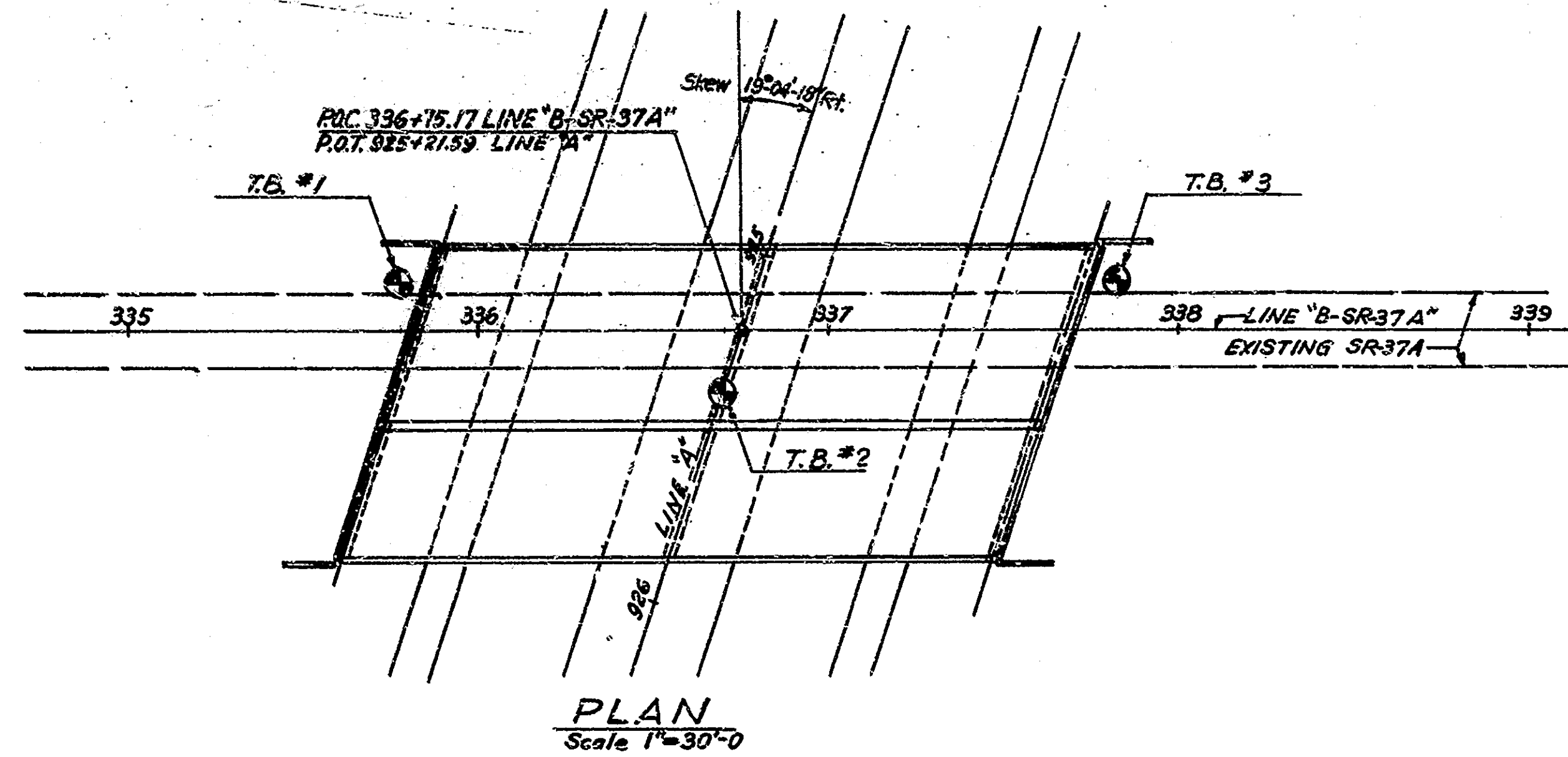
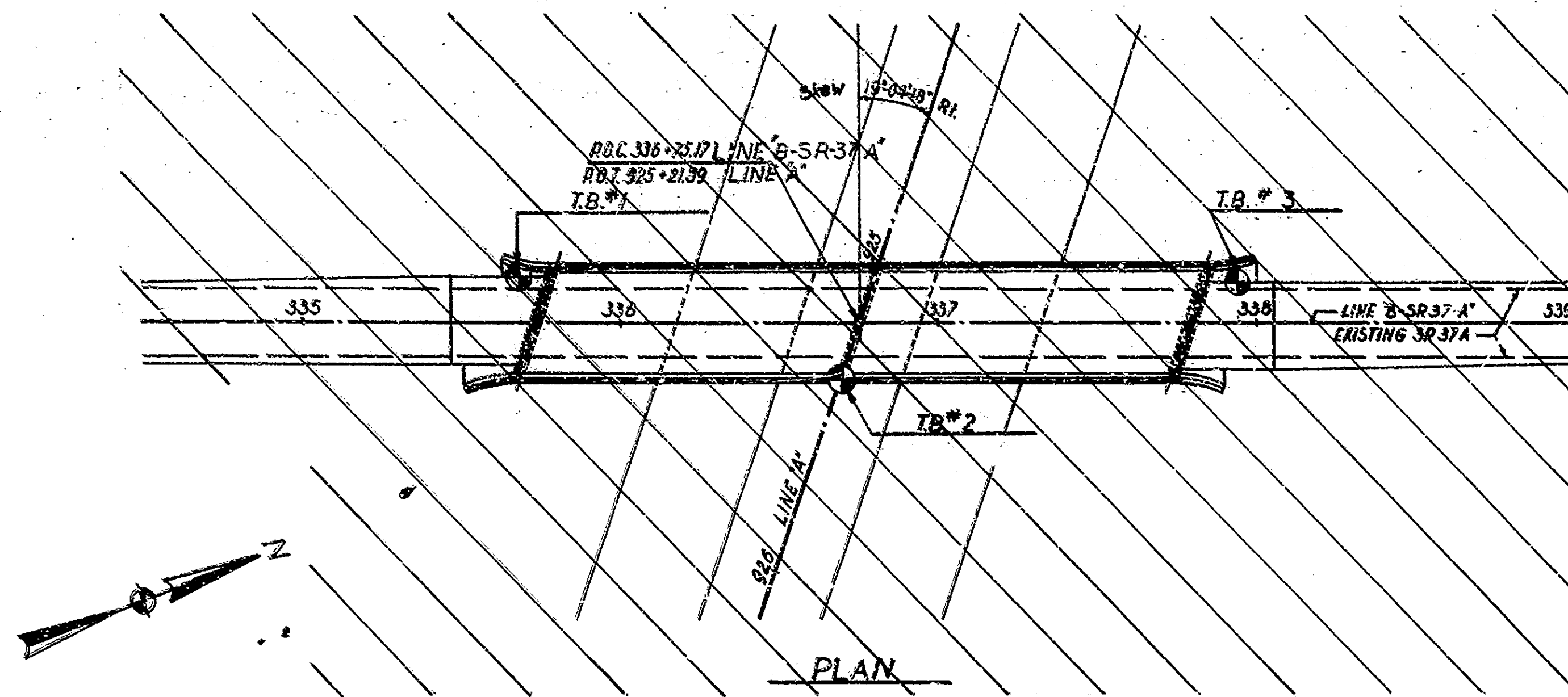
SUBMITTED FOR APPROVAL DATE 7-15-66

H.W. LEONARD, INC.
ENGINEERS
80 N. WACKER, CHICAGO, ILLINOIS

MARION COUNTY



APPROVED: 7-28-66
[Signature]
DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC WORKS
APPROVED: _____
DIVISION ENGINEER
DATE: _____
GENERAL: STA-0-5273



BORING No.	T.B.#1				T.B.#2				T.B.#3			
	335+78 "B-SR-37A"				336+70 "B-SR-37A"				337+83 "B-SR-37A"			
STATION	13' L				17' R				13' L			
OFFSET												
GROUND EL.	769.5				769.5				769.5			
	SAMPLE No.	EL.	N	DESCRIPTION	SAMPLE No.	EL.	N	DESCRIPTION	SAMPLE No.	EL.	N	DESCRIPTION
770		769.5		Ground Level		769.5		Ground Level		769.5		Ground Level
	1	7670	18	Brown moist soft sandy CLAY LOAM	1	7662	19	Brown moist very stiff silty CLAY	1	7660	21	Brown moist very stiff sandy CLAY with some fine to medium GRAVEL
	2	7635	16	Brown moist medium stiff to very stiff sandy CLAY with little fine to medium GRAVEL	2	7642	7	Brown moist medium stiff sandy CLAY with little fine GRAVEL	2	7635	17	Brown moist hard sandy CLAY with some GRAVEL
760	3	7610	33	Gray moist very stiff to hard sandy CLAY with trace of fine to medium GRAVEL with layers of SAND	3	7617	38	Gray moist hard sandy CLAY with trace of fine to medium GRAVEL	3	7610	22	Gray moist very stiff sandy CLAY with little fine to medium GRAVEL and layers of SAND and GRAVEL
	4	7575	26		4	7520	27		4	7560	21	
	5	7510	24		5	7509	28	very stiff below 78.5'	5	7510	23	
	6	7461	19		6	7430	20		6	7470	17	Gray moist very hard sandy CLAY with little fine to medium GRAVEL with SAND seams (hardpan)
740				End of boring Depth of boring 25.0'	7	7410	19	Gray moist very stiff sandy CLAY with layers of well medium dense SAND and GRAVEL	7	7410	19	
					8	7374	16	Gray moist hard sandy CLAY with little GRAVEL and thin layers of SAND and GRAVEL	8	7369	15	End of boring Depth of boring 29.5'
730					9	7310	13		9	7310	13	
					10	7269	11	Gray wet very dense SAND	10	7269	11	
					11	7235	8	Gray moist hard sandy CLAY with SAND layers	11	7235	8	
720					12	7211	7	End of boring Depth of boring 30.0'	12	7211	7	

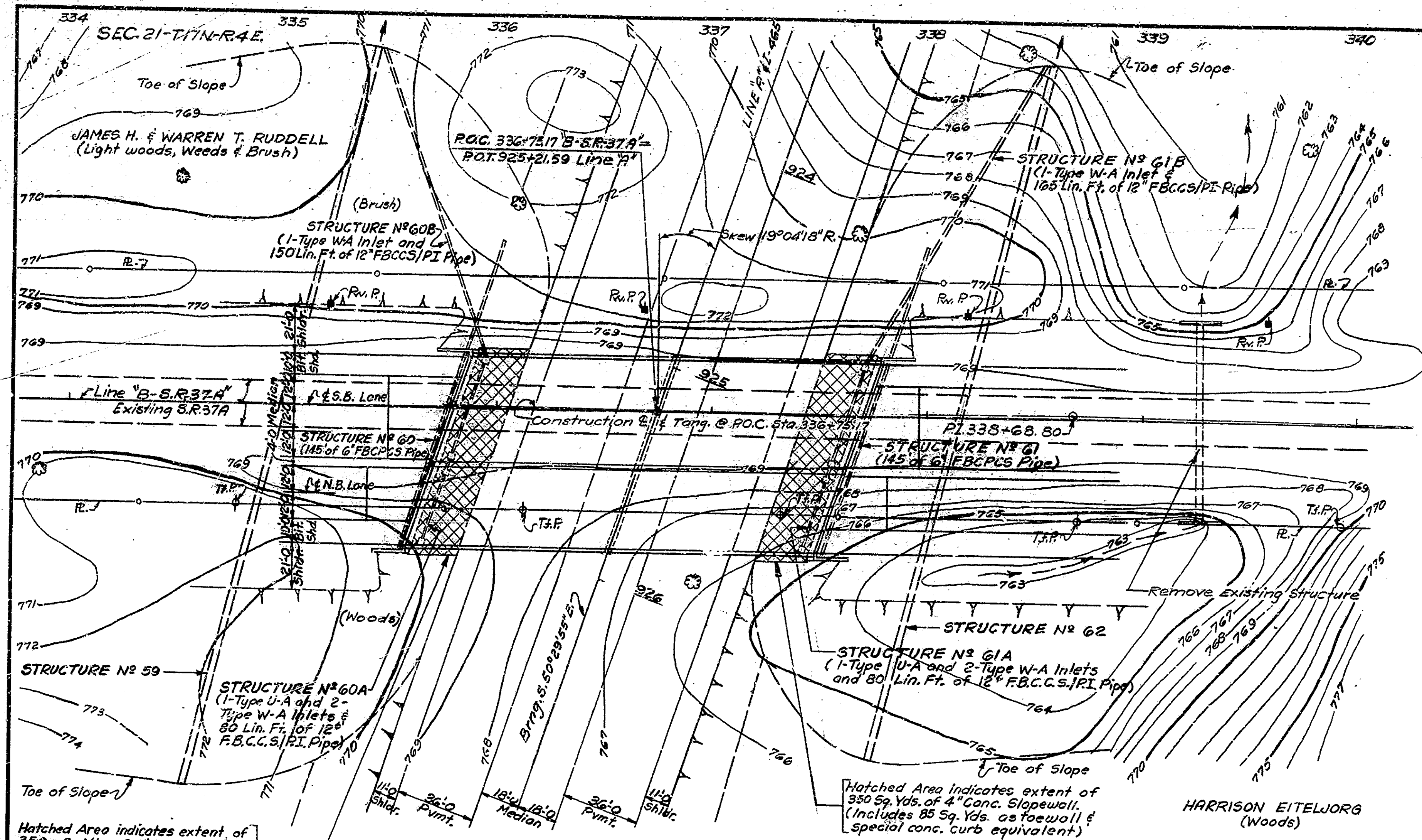
NOTE
 † WL Denotes Ground Water Table
 N-Indicates the Number of Blows required to Drive a 1 1/2" I.D. 2" O.D. Split Spoon Sampler 12" or the length given in the Table by means of a 140# Weight falling 30"

TEST BORING DATA
 MARION COUNTY

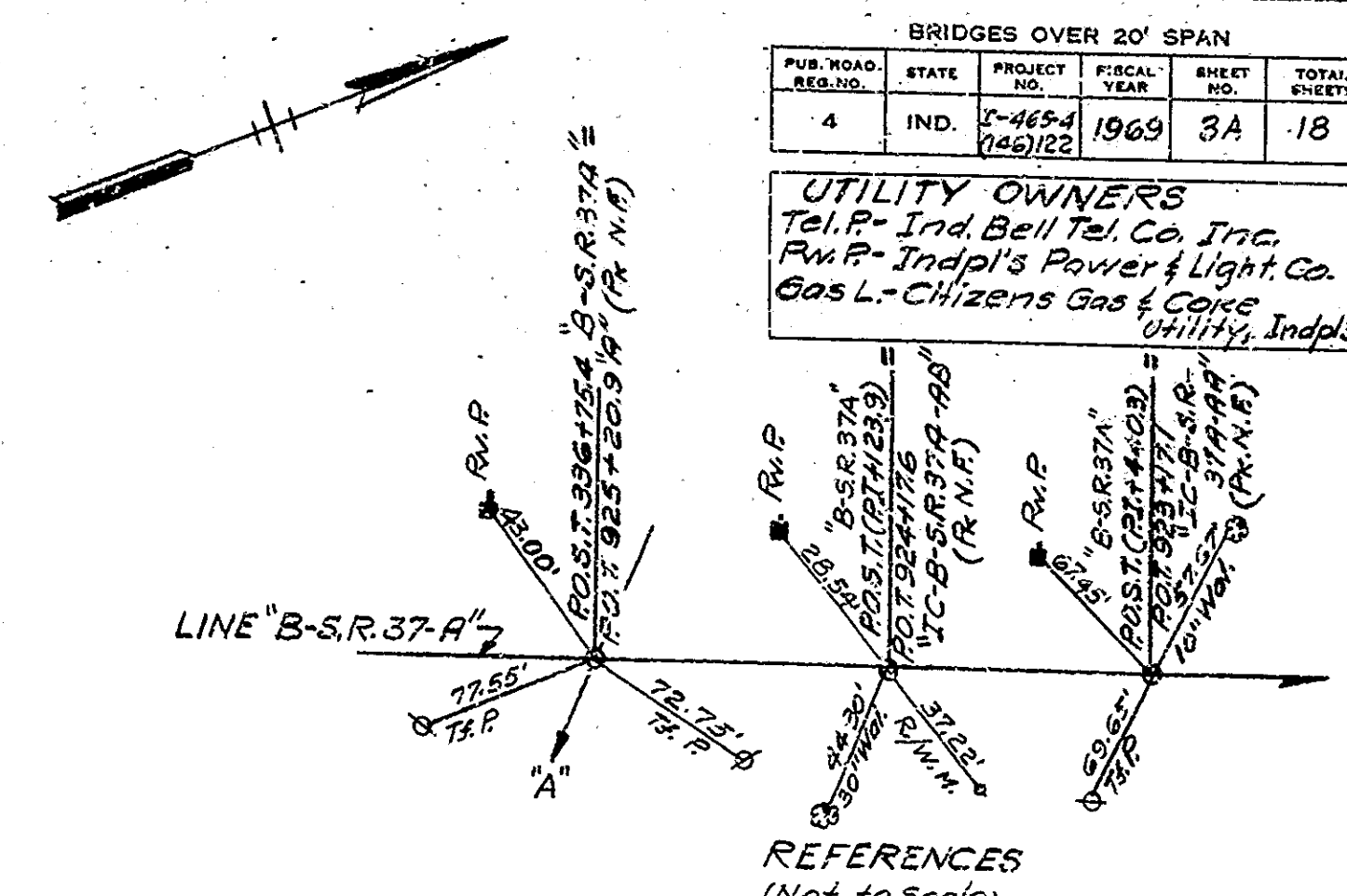
SCALE:-- As Noted
 SUBMITTED FOR APPROVAL:

June 7, 1966

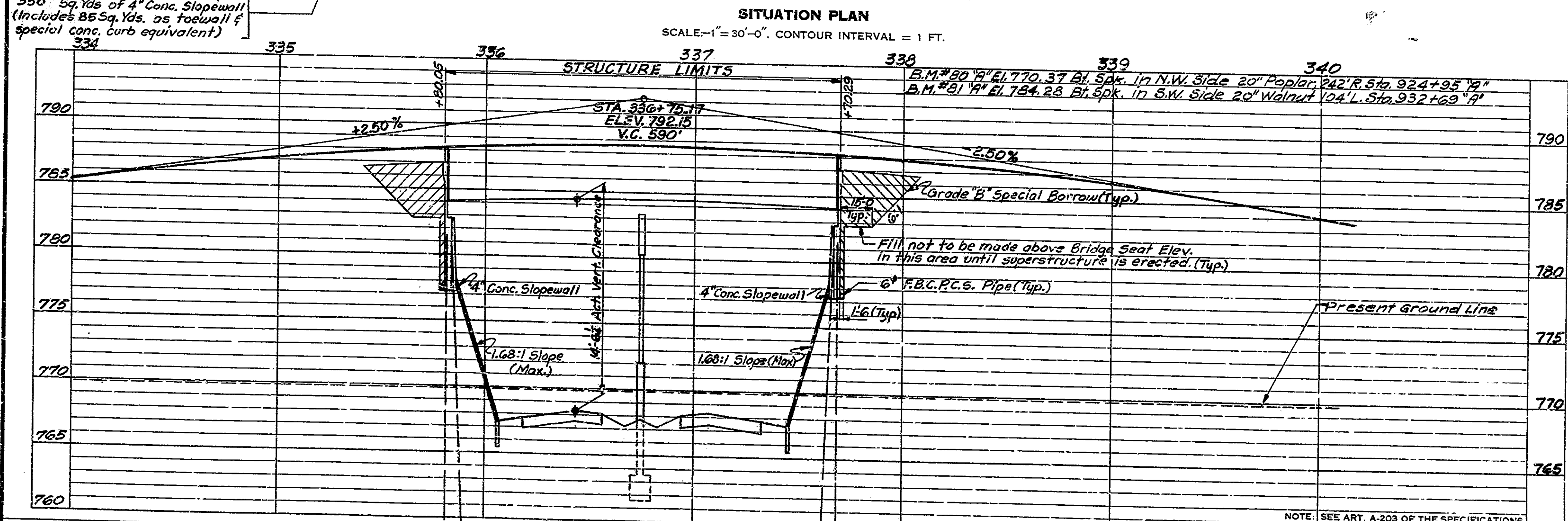
PROJECT: I-465-4(46)122
 BRIDGE CONTRACT NO. R-7841
 BRIDGE FILE: 37A-0-5273



CURVE DATA #2
 I = 0°48'00" Rt.
 D = 0°04.8'
 R = 71,019.75'
 T = 500.0'
 L = 1000.0'
 E = 1.74'
 P.C. 333+68.8
 P.T. 333+68.8
 R.T. 343+68.8



NOTE:
 This is Structure No 1 on Rd. Project I-465-4(146)22
 See Road Plans for additional references and details.



PROFILE ON PROPOSED ROADWAY
 SCALES: HORIZ 1"=30'-0" VERT. 1"=5'-0"

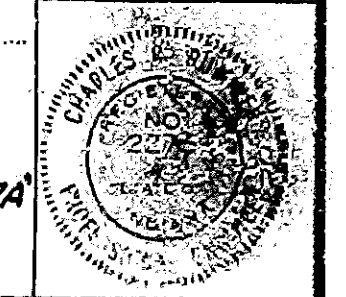
LAYOUT
 CONTINUOUS COMPOSITE STEEL BEAM BRIDGE
 2 Spans: 93'-0 and 93'-0 SKEW, 19°-04'-18" R.
 46" Cl. Rdwy., 2'5 Median Curb, 34" Cl. Rdwy. Two 3" Curbs
 State Road 37A over I-465

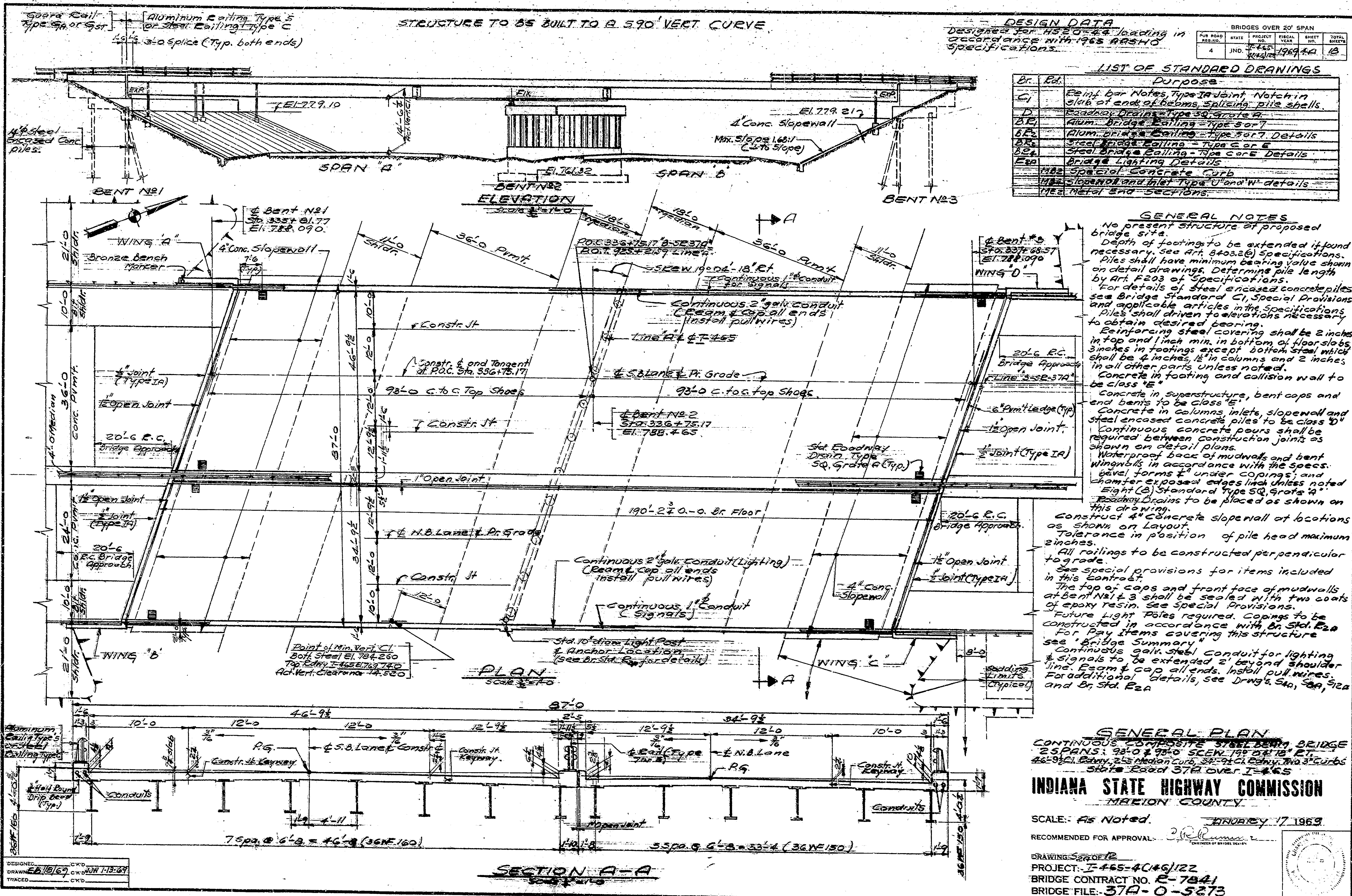
INDIANA STATE HIGHWAY COMMISSION
 MARION COUNTY
 SCALE: -AS NOTED JANUARY 17, 1969

RECOMMENDED FOR APPROVAL: *[Signature]*
 DRAWING: 51A OF 12
 PROJECT: I-465-4(146)22 STATION: - 336+75.17
 BRIDGE CONTRACT NO. R-7841 Line B-SR-37A
 BRIDGE FILE: - 37A-0-5273

DRAWN: J.W.H. CKD
 DESIGNED: J.W.H. CKD
 TRACED: B.R.12-68 CKD

NOTE: FIELD NOTES, BOOK 8886 L. 100057.





STRUCTURE TO BE BUILT TO A 5.90' VERT CURVE

DESIGN DATA
 Designed for HS20-44 loading in accordance with 1965 ARSNO specifications.

FOR ROAD DIST. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	465-4049/122	1969-70	13	13

Br.	Ed.	Purpose
C1		Rein. Bar Notes, Type IA Joint, Notch in slab at end of beams, splicing, pile shells.
D		Roadway Drains - Type 50, Grate A
DE		Alum. Bridge Railing - Type 50 or 7
DEE		Alum. Bridge Railing - Type 50 or 7 Details
DEE		Steel Bridge Railing - Type E or F
DEE		Steel Bridge Railing - Type E or F Core Details
EEA		Bridge Lighting Details
EEB		Special Concrete Carb
EEC		Sloped and Inlet Types 'U' and 'W' details
EEF		Steel End Sections

GENERAL NOTES

No present structure of proposed bridge site.

Depth of footings to be extended if found necessary. See Art. 8403.26) Specifications. Piles shall have minimum bearing value shown on detail drawings. Determine pile length by Art. F203 of Specifications.

For details of steel encased concrete piles see Bridge Standard C1, Special Provisions and applicable articles in the Specifications. Piles shall be driven to elevations necessary to obtain desired bearing.

Reinforcing steel covering shall be 2 inches in top and 1 inch min. in bottom of floor slabs 3 inches in footings except bottom steel which shall be 4 inches in columns and 2 inches in all other parts unless noted.

Concrete in footing and collision wall to be class "E".

Concrete in superstructure, bent caps and end bents to be class "E".

Concrete in columns, inlets, sloped wall and steel encased concrete piles to be class "D".

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

Waterproof back of mudwalls and bent wingwalls in accordance with the specs. Seal forms under copings; and chamfer exposed edges unless noted.

Sign (B) Standard Type 50, Grate "A".

Roadway Drains to be placed as shown on this drawing.

Construct 4" concrete sloped wall at locations as shown on layout.

Tolerance in position of pile head maximum 2 inches.

All railings to be constructed perpendicular to grade.

See special provisions for items included in this contract.

The top of caps and front face of mudwalls at Bent No. 1 & 3 shall be sealed with two coats of epoxy resin. See special provisions.

Future Light Poles required. Copings to be constructed in accordance with Br. Std. E20 For Pay Items covering this structure see "Bridge Summary".

Continuous galv. steel conduit for lighting & signals to be extended 2' beyond shoulder line. Beam & cap all ends. Install pullwires. For additional details, see Drawings S40, S41, S42 and Br. Std. E20.

GENERAL PLAN
 CONTINUOUS COMPOSITE STEEL BEAM BRIDGE
 2 SPANS: 93'-0" & 93'-0" SKEN 190° 04' 18" RT.
 46'-9 1/2" CL. Rdwy. 2 1/2' Median Curbs, 3'-0" CL. Rdwy. 3" Curbs
 State Road 37A over I-465

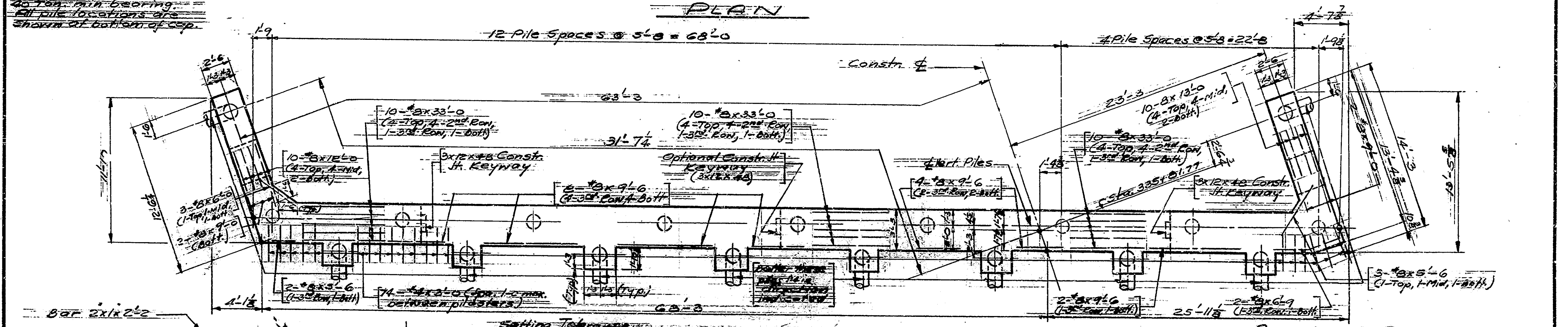
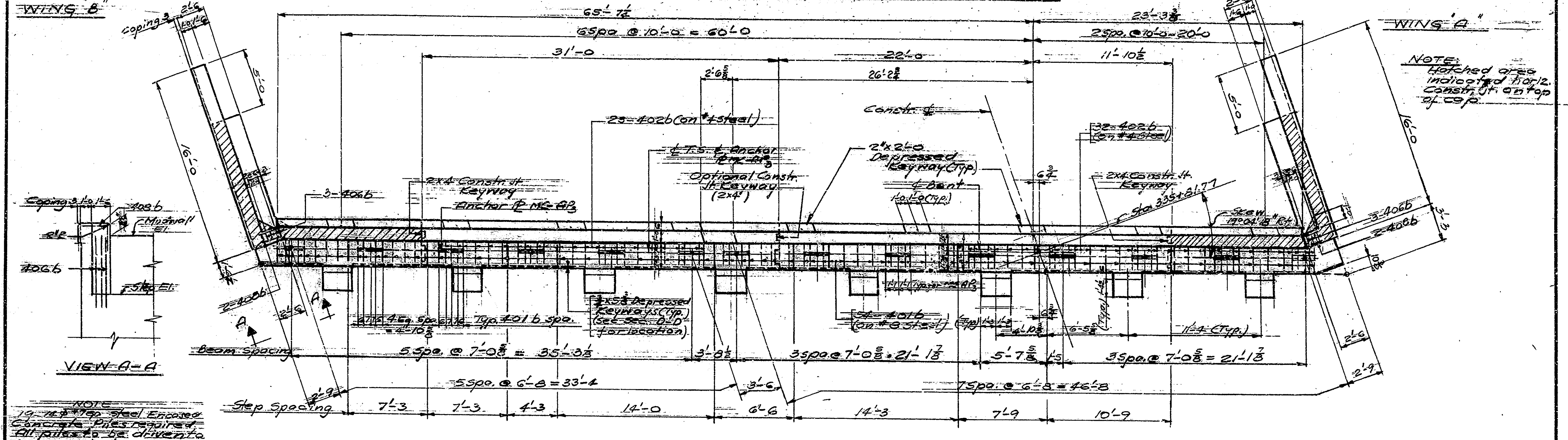
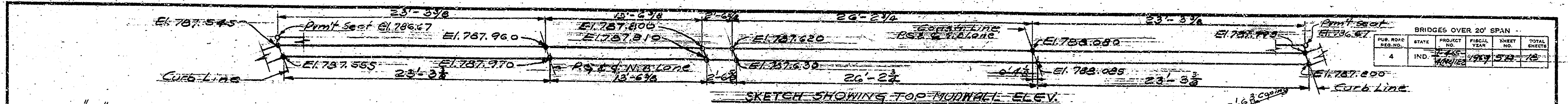
INDIANA STATE HIGHWAY COMMISSION
 MARIION COUNTY

SCALE: AS NOTED. JANUARY 17 1969.

RECOMMENDED FOR APPROVAL: [Signature]

DRAWING: 5 OF 12
 PROJECT: I-465-4049/122
 BRIDGE CONTRACT NO. E-7841
 BRIDGE FILE: 37A-0-5273

DESIGNED: C.K.D.
 DRAWN: E.B. [Signature]
 TRACED: C.K.D.



INDIANA STATE HIGHWAY COMMISSION

SCALE: 1/4" = 1'-0"

RECOMMENDED FOR APPROVAL: *C.R. Rummel*

DATE: JANUARY 17, 1959

DRAWING: 5 OF 12

PROJECT: 7-465-4(156)122

BRIDGE CONTRACT NO. 2-7047

BRIDGE FILE: 378-0-523

NOTES:
 For reinforcing bar sizes see Dr. Std. C.
 Anchor plates must be present in concrete.
 But cap not to be placed until star fill has been completed up to approximate elevation of bottom of curb.
 For additional details see Drawing 54A.

DETAIL - ANCHOR PLATE

Prepare ends for full penetration in shop.

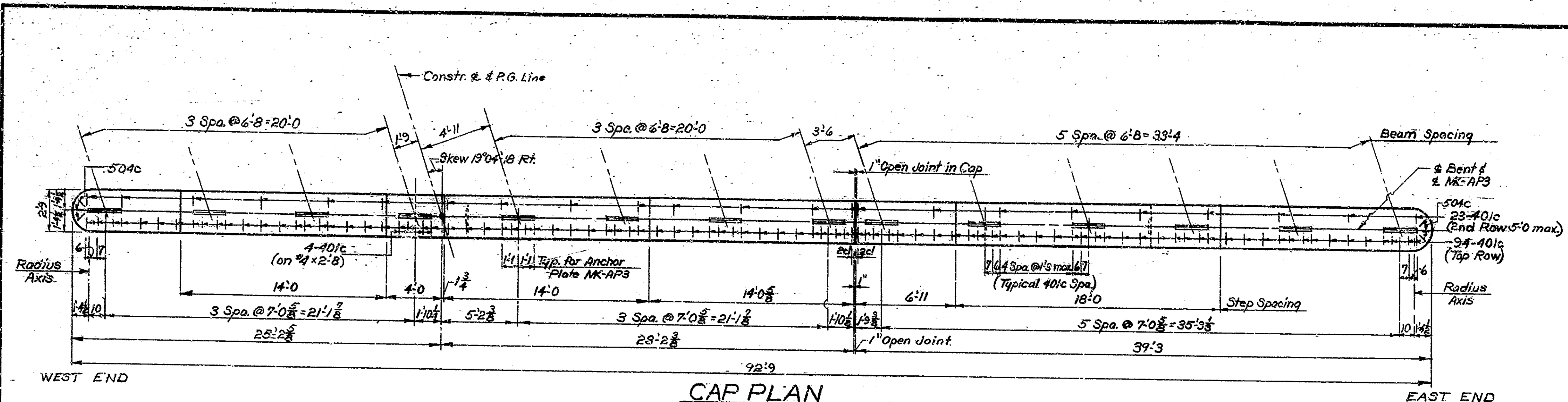
Note: As a note of 3/8" long automatic helical stud (headed) may be used.

DESIGN: J.W. RILEY, P.E. (156)122

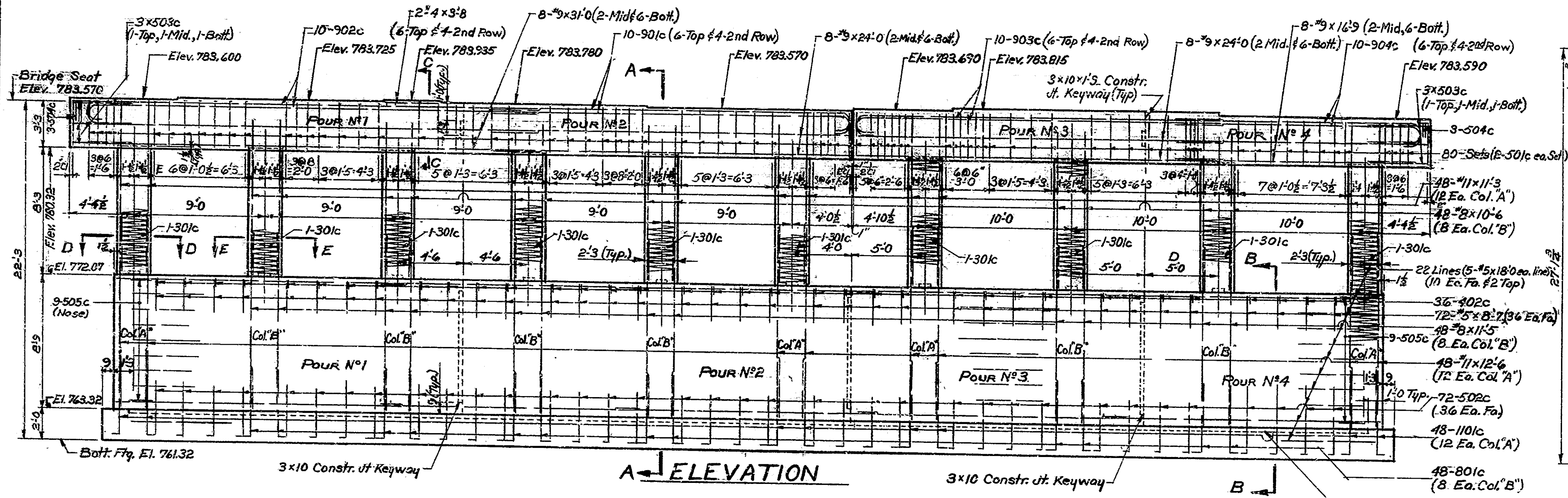
DRAWN: J. J. GIBSON, P.E. (156)122

TRACED: C.K.D.

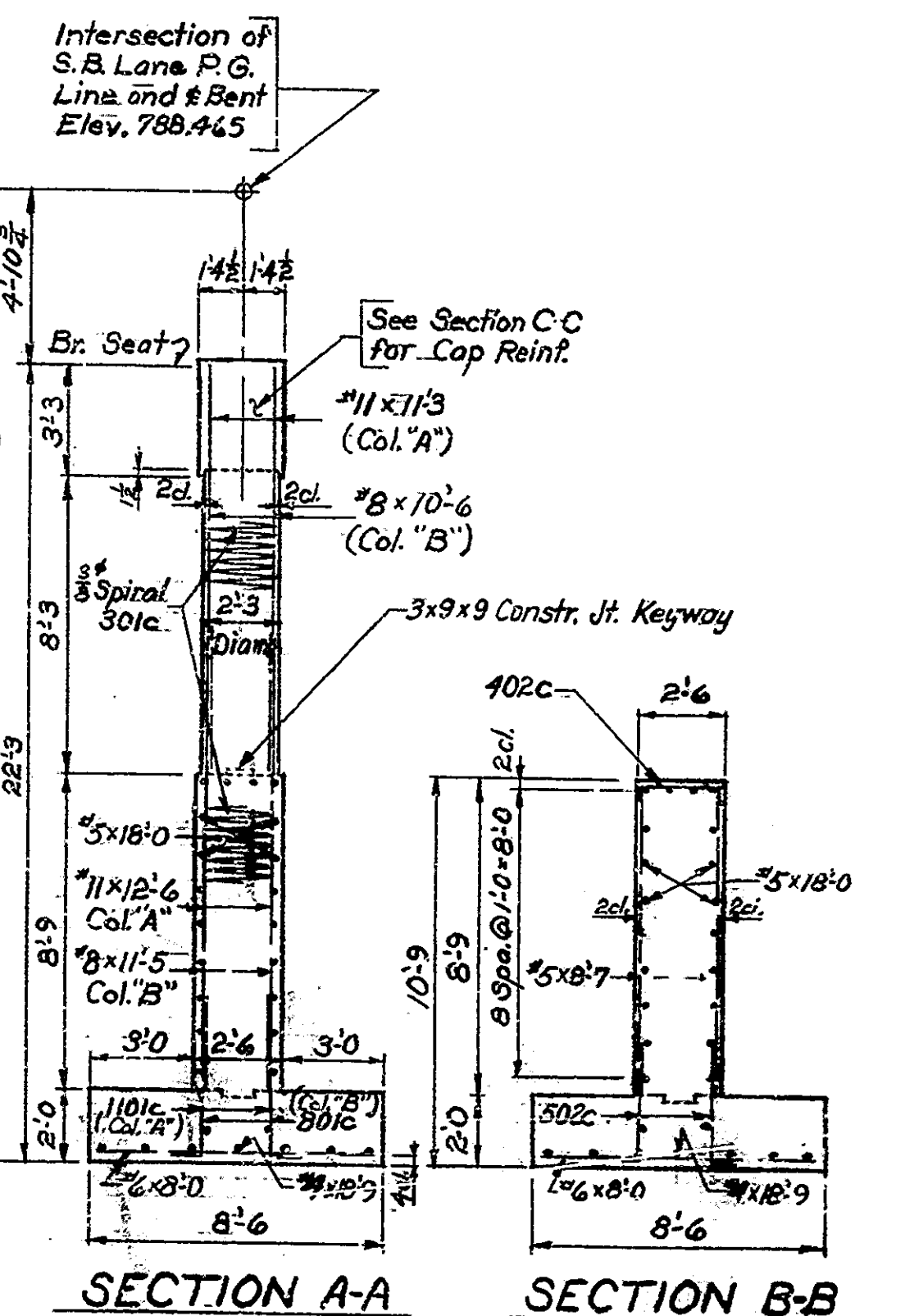
BRIDGES OVER 20' SPAN						
PUB. ROAD DIST. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS	
4	IND.	I-465-4(146)122	1969	7A	18	



CAP PLAN

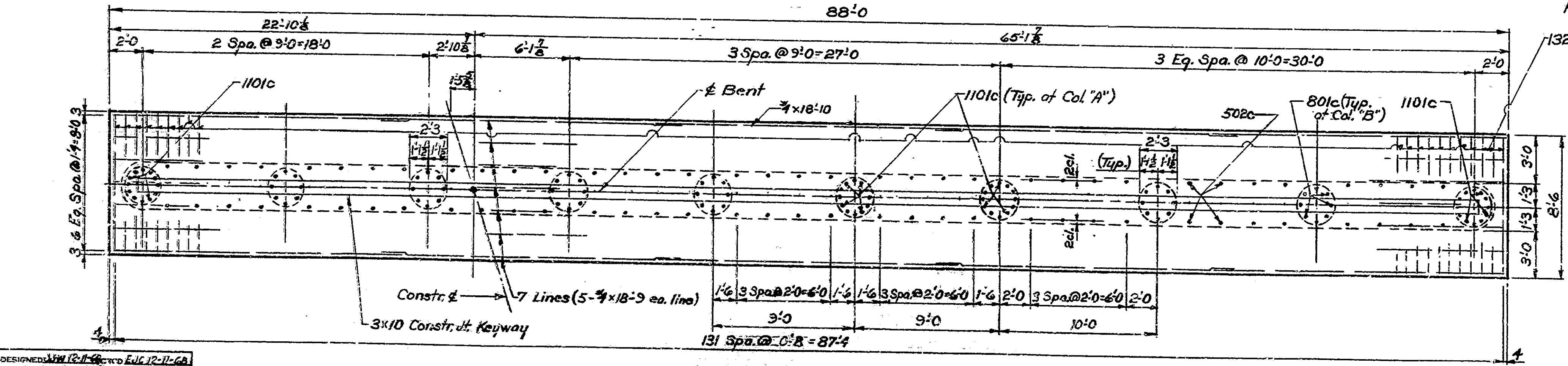


ELEVATION



SECTION A-A

SECTION B-B



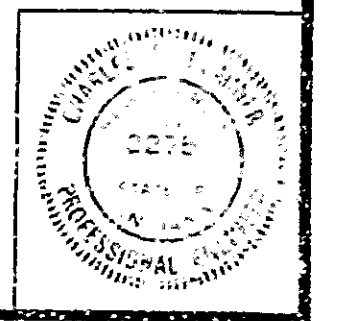
FOOTING PLAN

NOTES:
 See Br. Std. C1 for Rein. Bar Notes
 Anchor Plates MK-AP3 to be preset in concrete.
 For details of Anchor Plates MK-AP3 See Drwg. 53A.
 For Sections C-C, D-D, E-E, Bending Diagrams, and Bill of Materials
 See Drwg. 53A.
 Max. Soil Pressure = 2.5 Ton/Sq. Ft.

BENT N° 2 DETAILS
INDIANA STATE HIGHWAY COMMISSION

SCALE: 1/4" = 1'-0"
 JANUARY 17, 1969
 RECOMMENDED FOR APPROVAL: *C.R. Reimer*
 DRAWING: S-5A OF 12
 PROJECT: I-465-4(146)122
 BRIDGE CONTRACT NO. R-7841
 BRIDGE FILE: 37A-0-5273

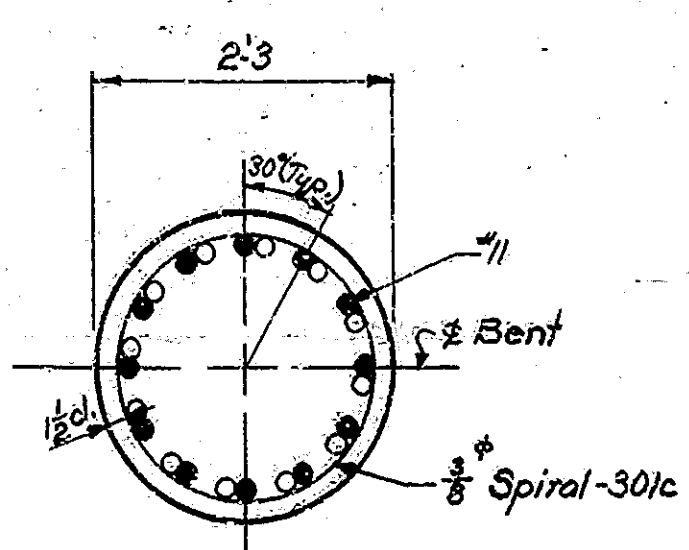
DESIGNED BY: R. J. C. AND E. J. J. 12-11-68
 DRAWN BY: L. J. S. AND L. J. S. 1-15-69
 TRACED: C.K.W.



BRIDGES OVER 20' SPAN					
PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND	I-465-4(146)122	1969	8A	18

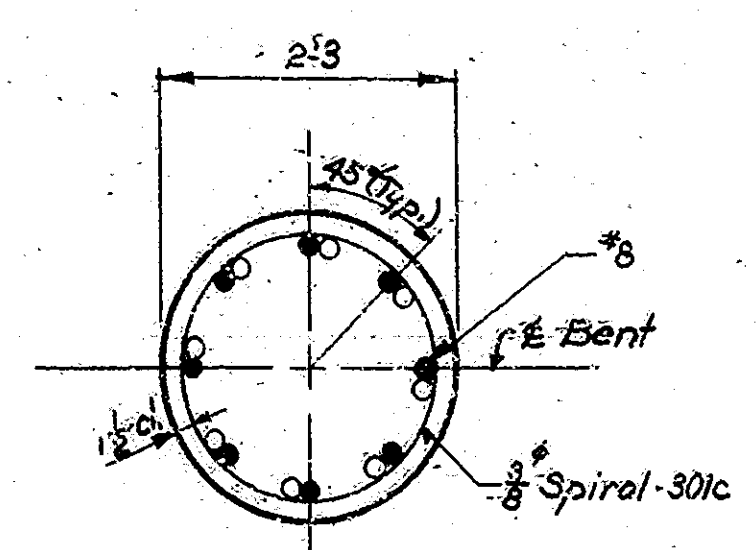
**BILL OF MATERIALS
BENT N° 2**

REINFORCING STEEL			
SIZE AND MARK	N° OF BARS	LENGTH	WEIGHT
110lc	18	6.5	
#11	48	12.6	
#11	48	11.3	
Total #11			76.93
90lc	10	27.1	
902c	10	30.3	
903c	10	24.3	
904c	10	19.0	
#9	8	31.0	
#9	16	24.0	
#8	8	12.9	
Total #9			60.94
80lc	48	5.4	
#8	48	11.5	
#8	48	10.6	
Total #8			34.92
#6	132	8.0	15.84
50lc	180	9.1	
502c	72	3.11	
503c	6	7.0	
504c	6	5.9	
505c	18	6.7	
#5	110	18.0	
#5	72	3.7	
Total #5			47.28
40lc	121	3.6	
402c	36	3.3	
#4	95	12.9	
#4	2	3.8	
Total #4			80.4
#3 Spiral	10	14.14	16.85
Total Steel			274.00
CONCRETE			
CLASS "F"			
Four N°1	9.2		
Four N°2	9.1		
Four N°3	7.0		
Four N°4	6.5		
Total Class "F"			31.80 cya
CLASS "D" 110 @ 12.50 = 12.3 cya			
CLASS "E" above Ft.			
Four N°1	19.0		
Four N°2	21.5		
Four N°3	16.2		
Four N°4	12.9		
Total Class "E" above Ft.			69.60 cya
CLASS "E" in Ft. 55.4 cya			
MISCELLANEOUS			
Anchor Plates, NKAP-3	14 EA.		



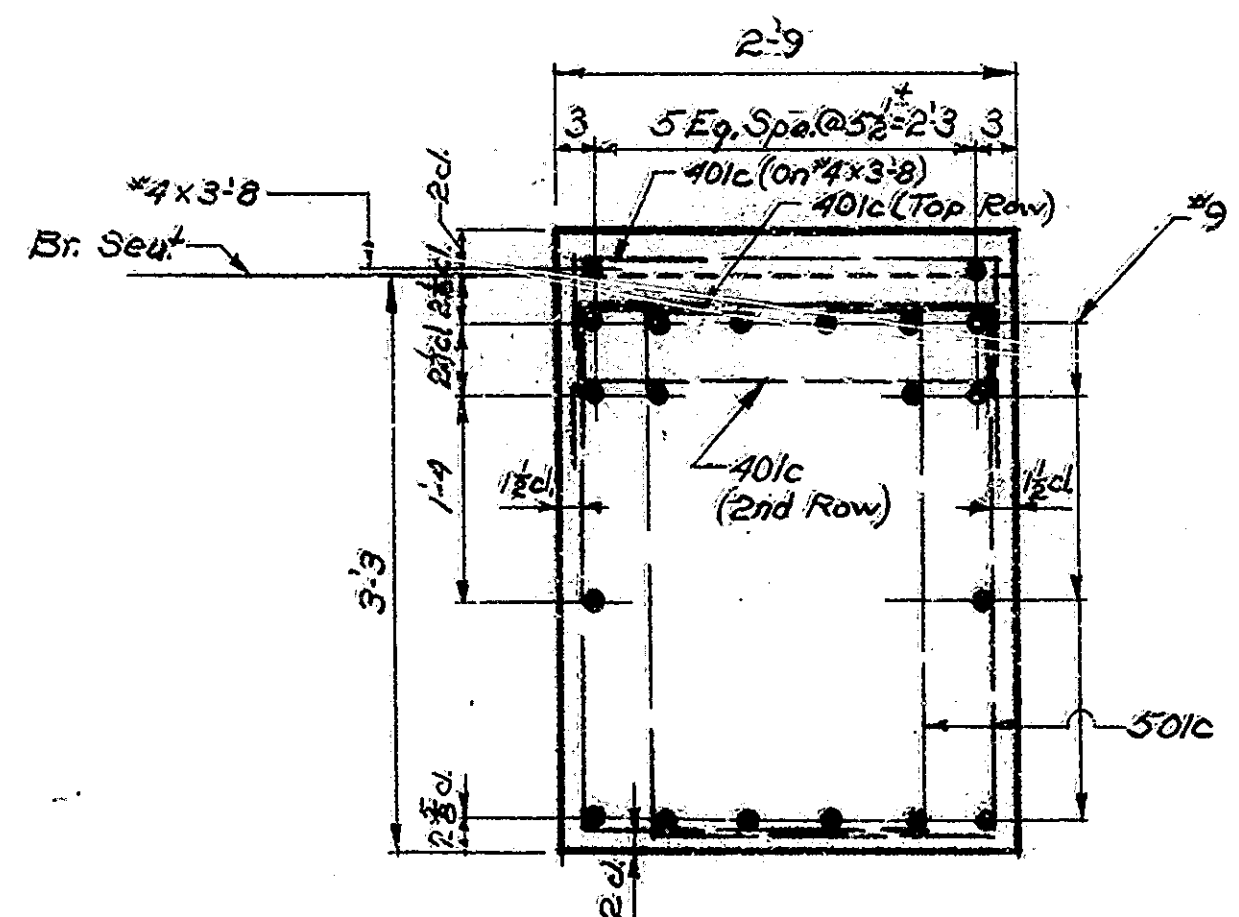
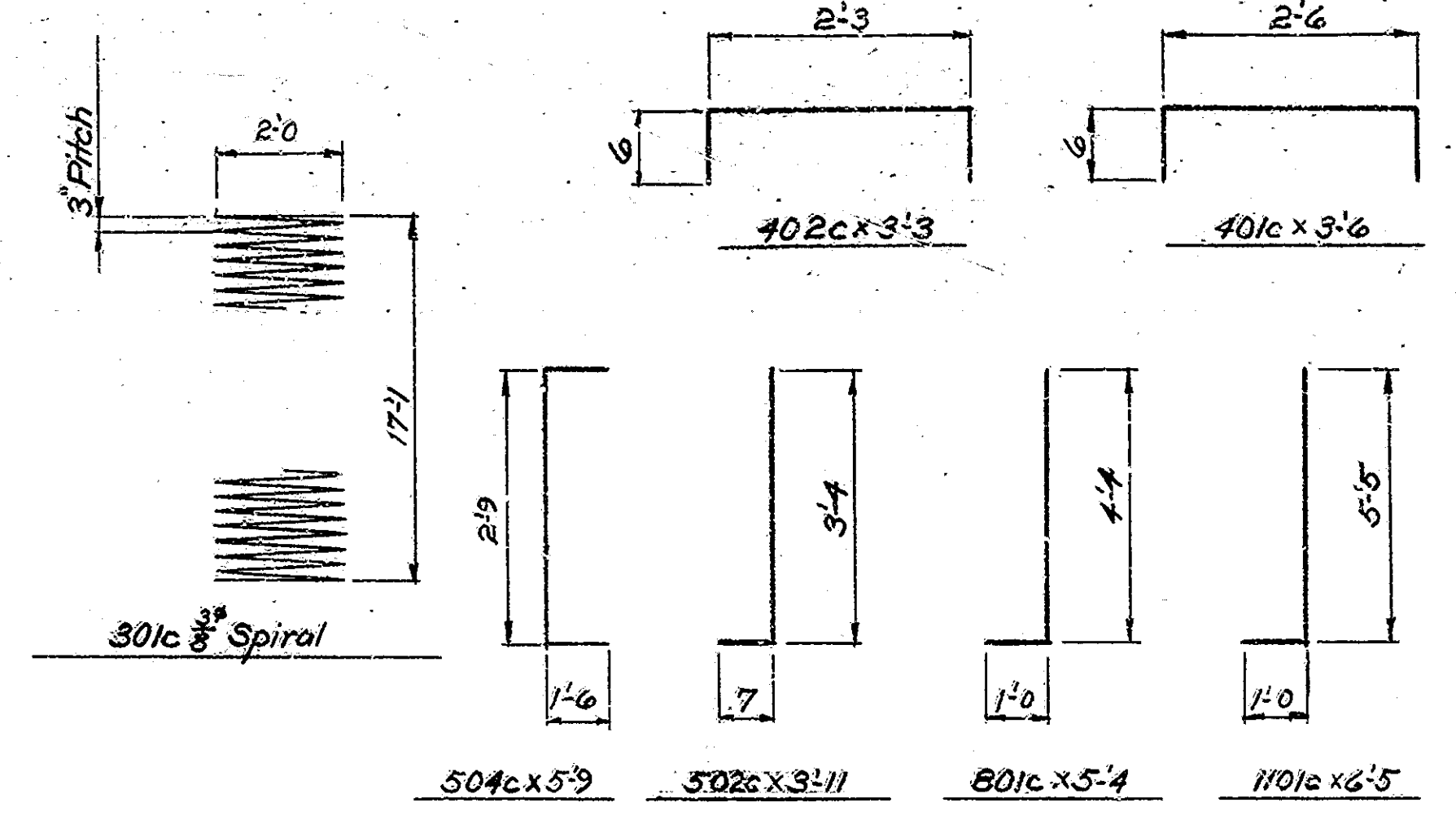
• Indicates location of #11 bars in Columns and 110lc extending from footing.
○ Indicates location of #11x12 1/2 in Collision Wall.

SECTION D-D
Typical at Columns "A"

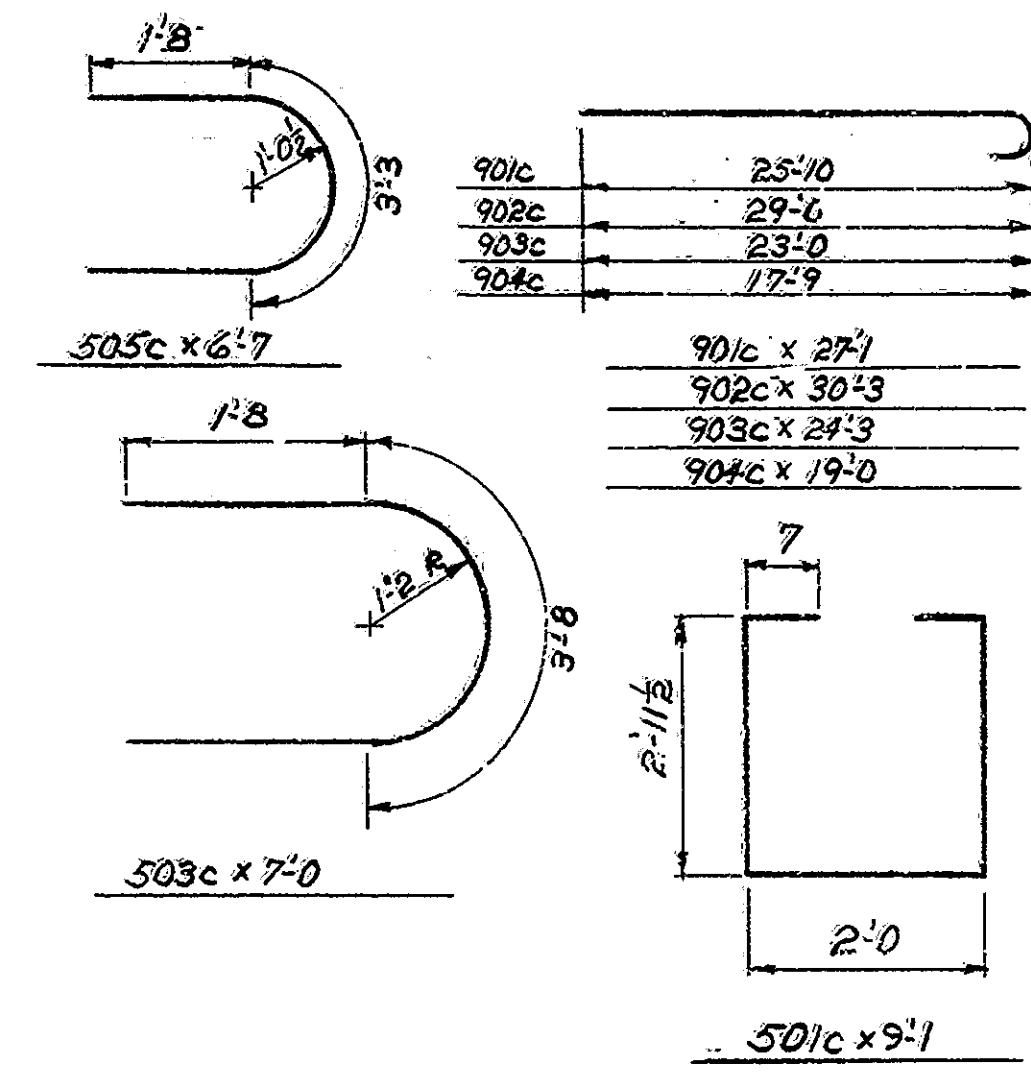


• Indicates location of #8 bars in Columns and 80lc extending from footing.
○ Indicates location of #8x11-5 in Collision Wall.

SECTION E-E
Typical at Columns "B"



SECTION C-C
Scale 1 1/2" = 1'-0"



NOTES:
See Br. Std. C1 for Reinf. Bar Notes.
See Drwg. S6A for location of Sections C-C, D-D, and E-E.
#8 Spirals to have 1/2 extra turns top and bottom.
Splice in spirals to be made by a lap of 1/2 turns.
Cost of spacers and extra turns of laps to be included in cost of spirals.

**BENT N° 2 DETAILS
INDIANA STATE HIGHWAY COMMISSION**

SCALE: NO SCALE UNLESS NOTED. JANUARY 17, 1969

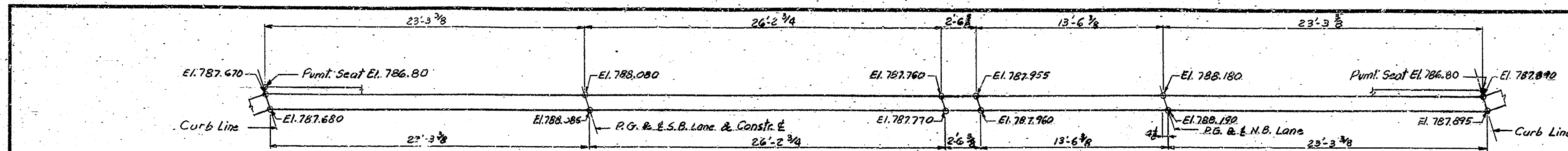
RECOMMENDED FOR APPROVAL: *C.R. Rummel*
ENGINEER OF BRIDGE DIVISION

DRAWING: S6A OF 12
PROJECT: I-465-4(146)122
BRIDGE CONTRACT NO. R-7341
BRIDGE FILE: 37A-0-5273

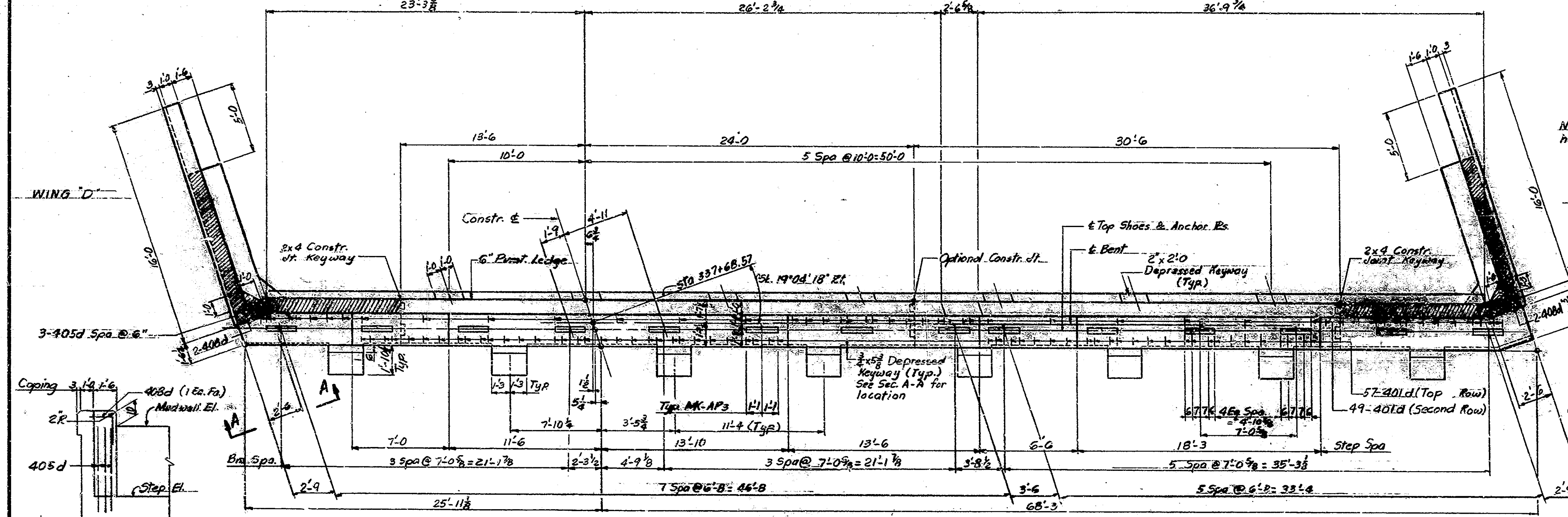


DESIGNED: J.E.B. FOR C&D DIV. 1-18-69
DRAWN: J.E.B. FOR C&D DIV. 1-18-69
CHECKED: C.K.D.

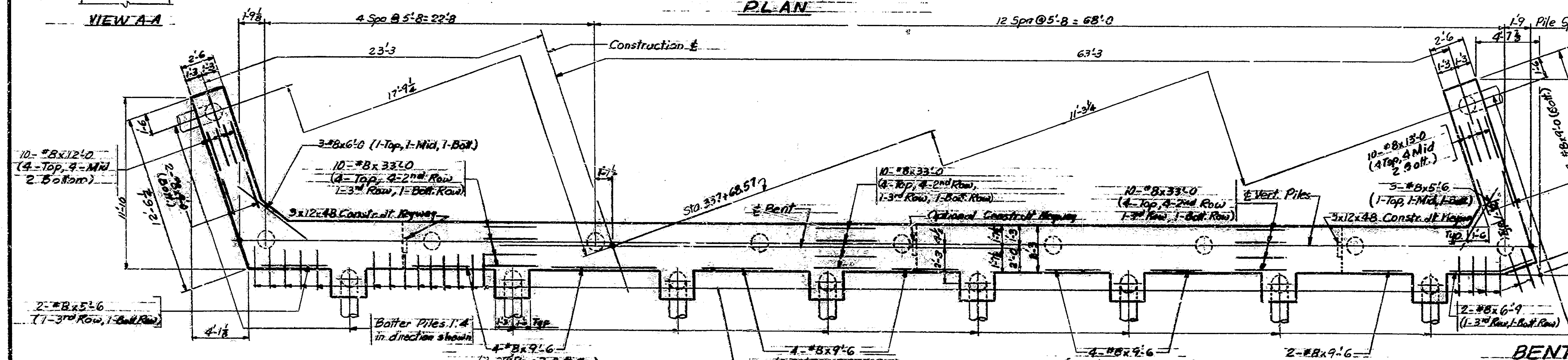
BRIDGES OVER 20' SPAN					
PUB. ROAD NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	1-463	1969	9A	18



SKETCH SHOWING TOP MUDWALL ELEV.



PLAN



CAP PLAN

NOTE
 19-14" 76a steel encased concrete piles reqd.
 All piles to be driven to 40 Ton minimum bearing.
 All pile locations are shown at bottom of cap plan.

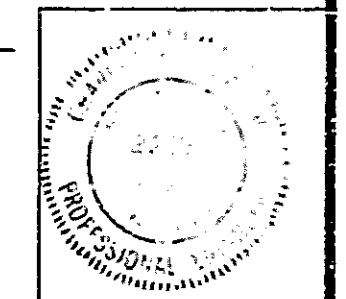
NOTES
 For reinforcing bar notes see Br. Spd. C1
 Anchor Plates MK-APs to be preset in concrete.
 For Anchor Plate MK-APs details, see Drawing S 3A
 Bent cap not to be poured until after fill has been completed up to approximate elevation of bottom of cap.
 For additional details, see Drawing S 8A

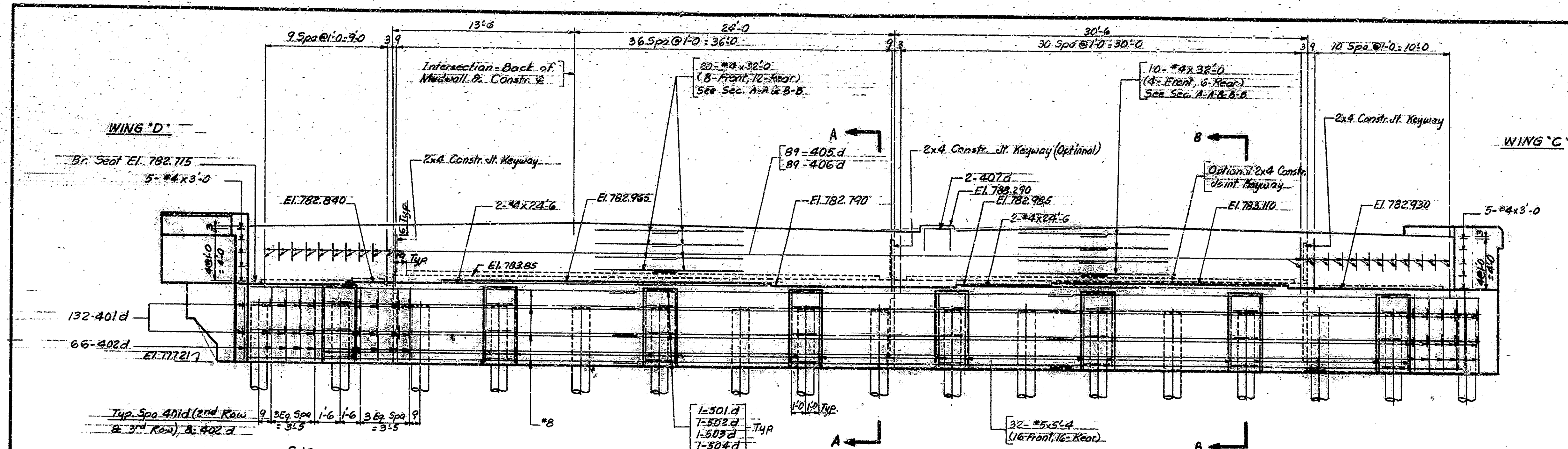
NOTE: Hatched area indicates horizontal constr. jt. of top of cap.

BENT NO. 3 DETAILS
 INDIANA STATE HIGHWAY COMMISSION

SCALE: 1/4" = 1'-0"
 RECOMMENDED FOR APPROVAL: *C.R. Rimmer*
 JANUARY 17, 1969
 DRAWING: S7A OF 12
 PROJECT: I-463-4(146)122
 BRIDGE CONTRACT NO. R-7841
 BRIDGE FILE: 37A-0-5273

DESIGNED: J.W. 12-11-68 BY: D.S. 12-13-68
 DRAWN: D.S. 1-7-69 BY: M.W. 1-11-69
 TRACED: _____



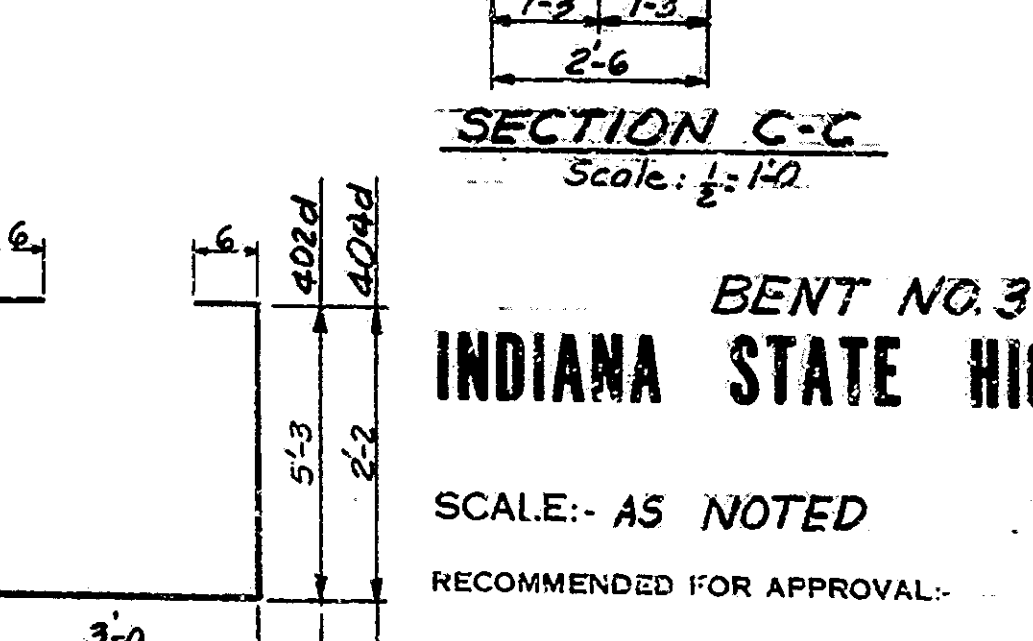
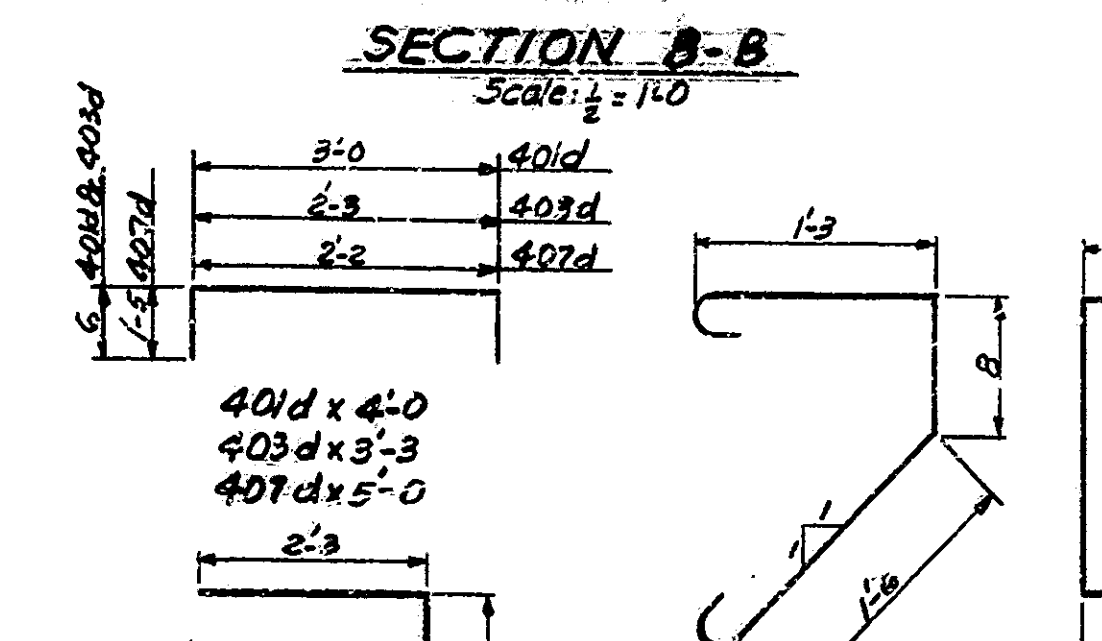
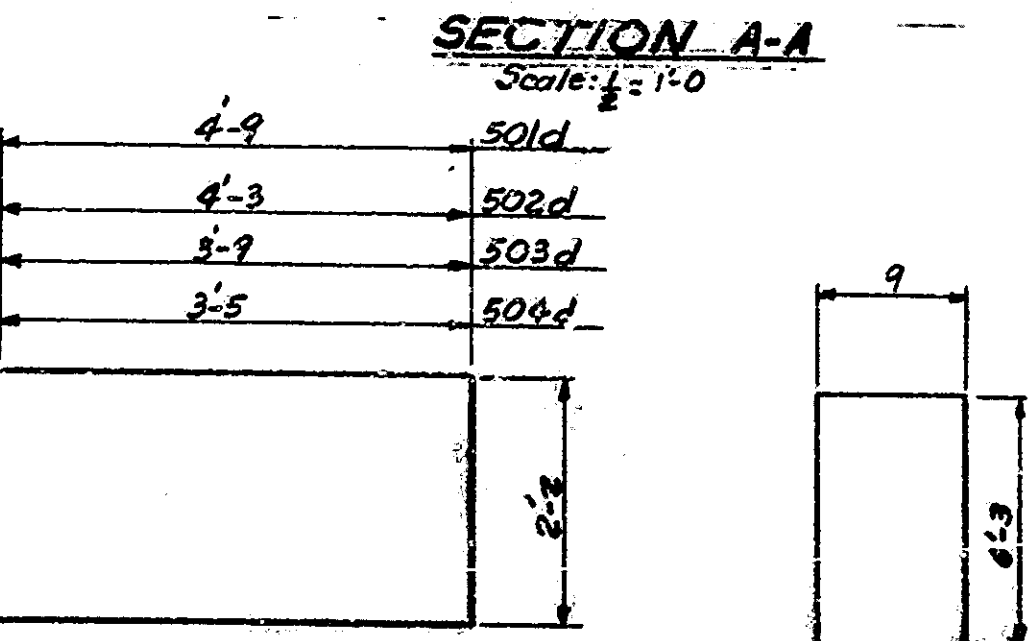
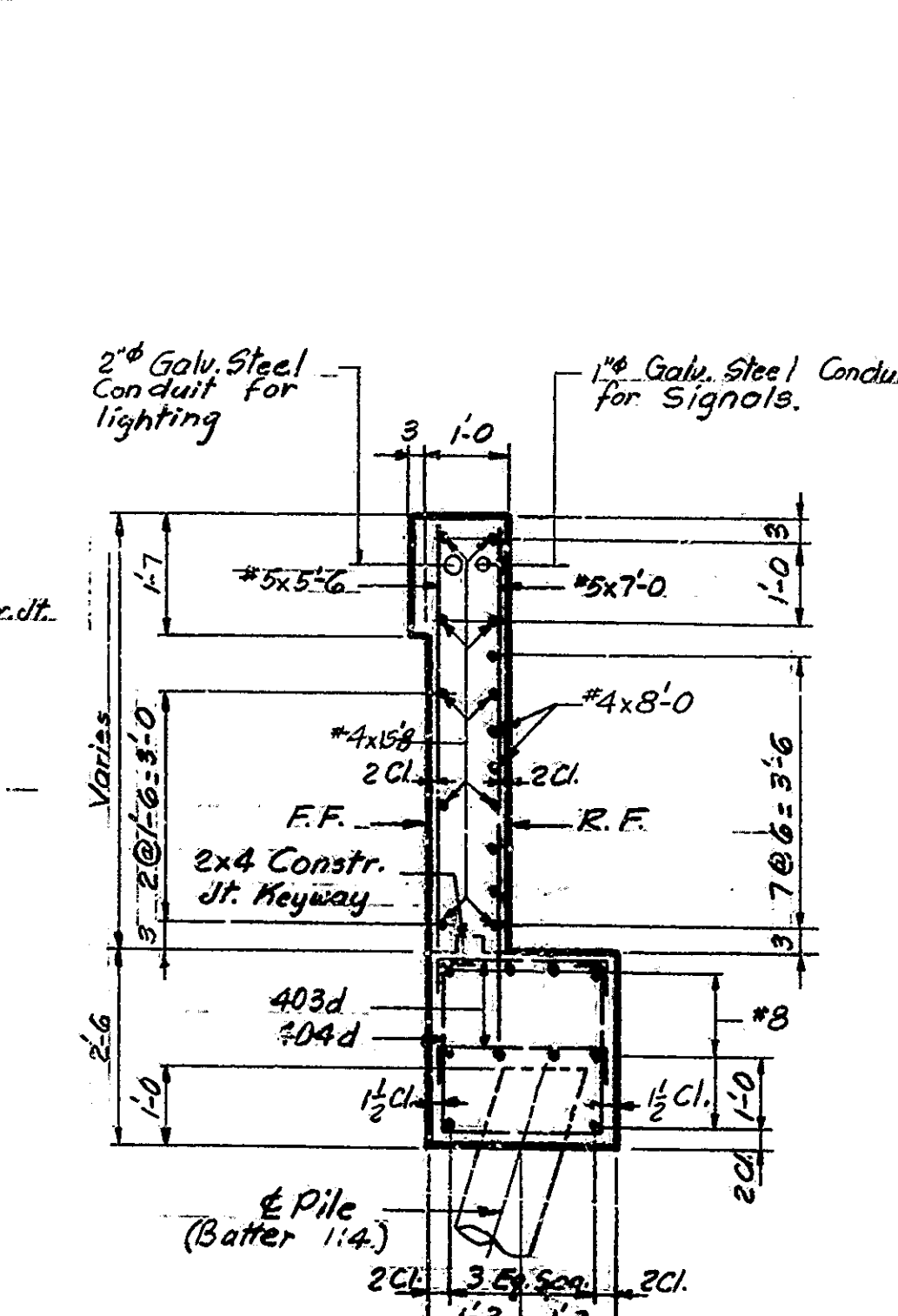
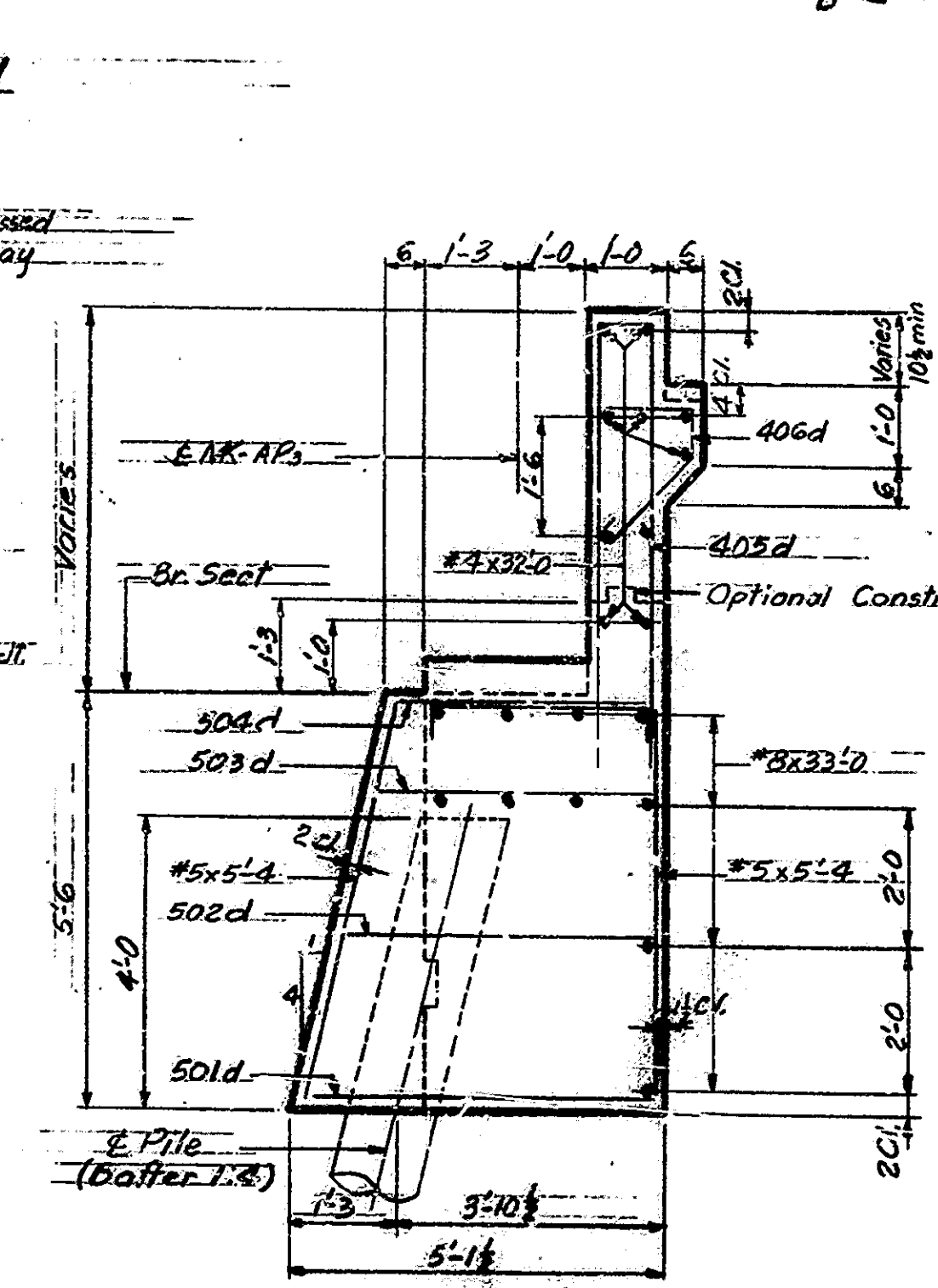
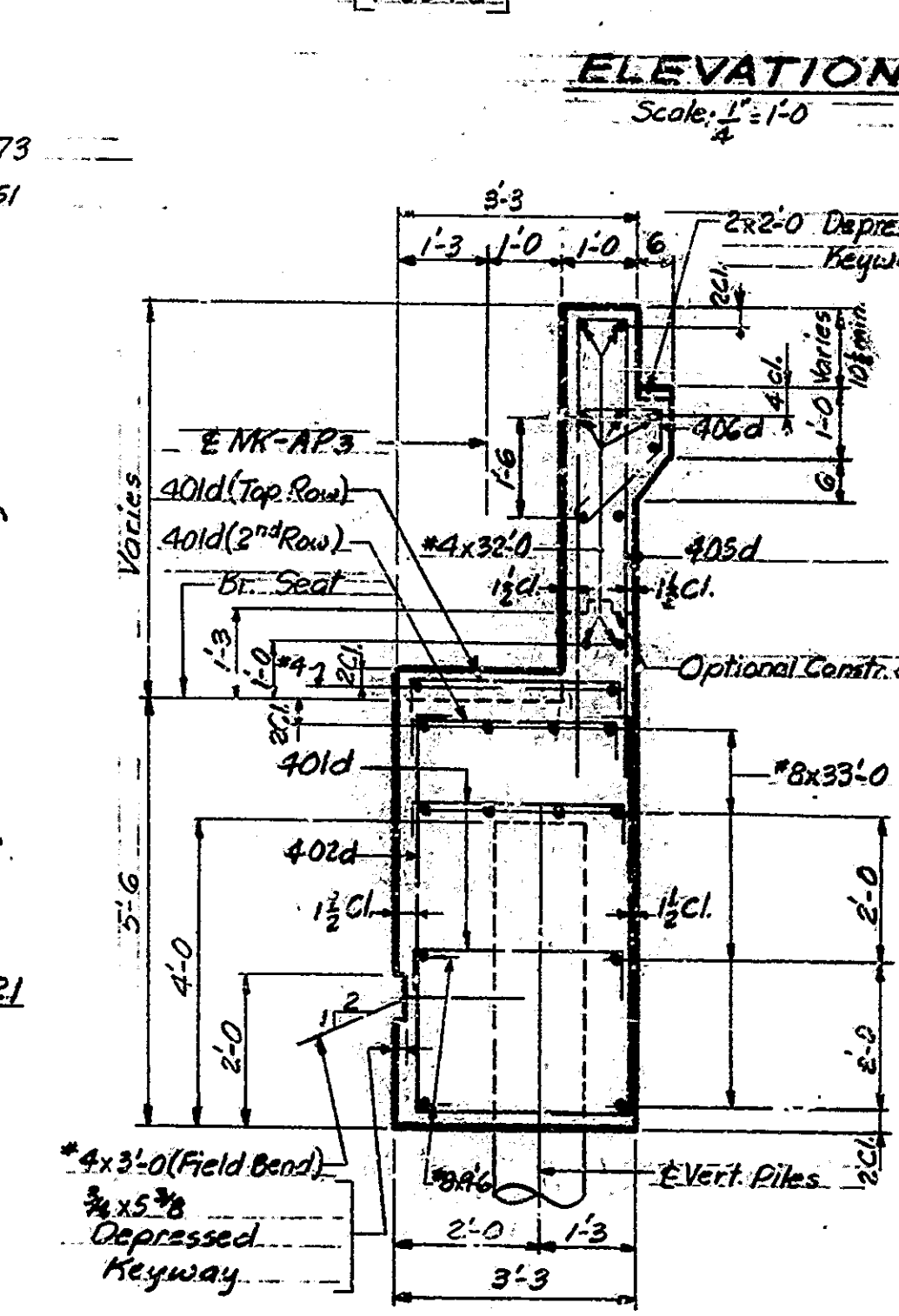
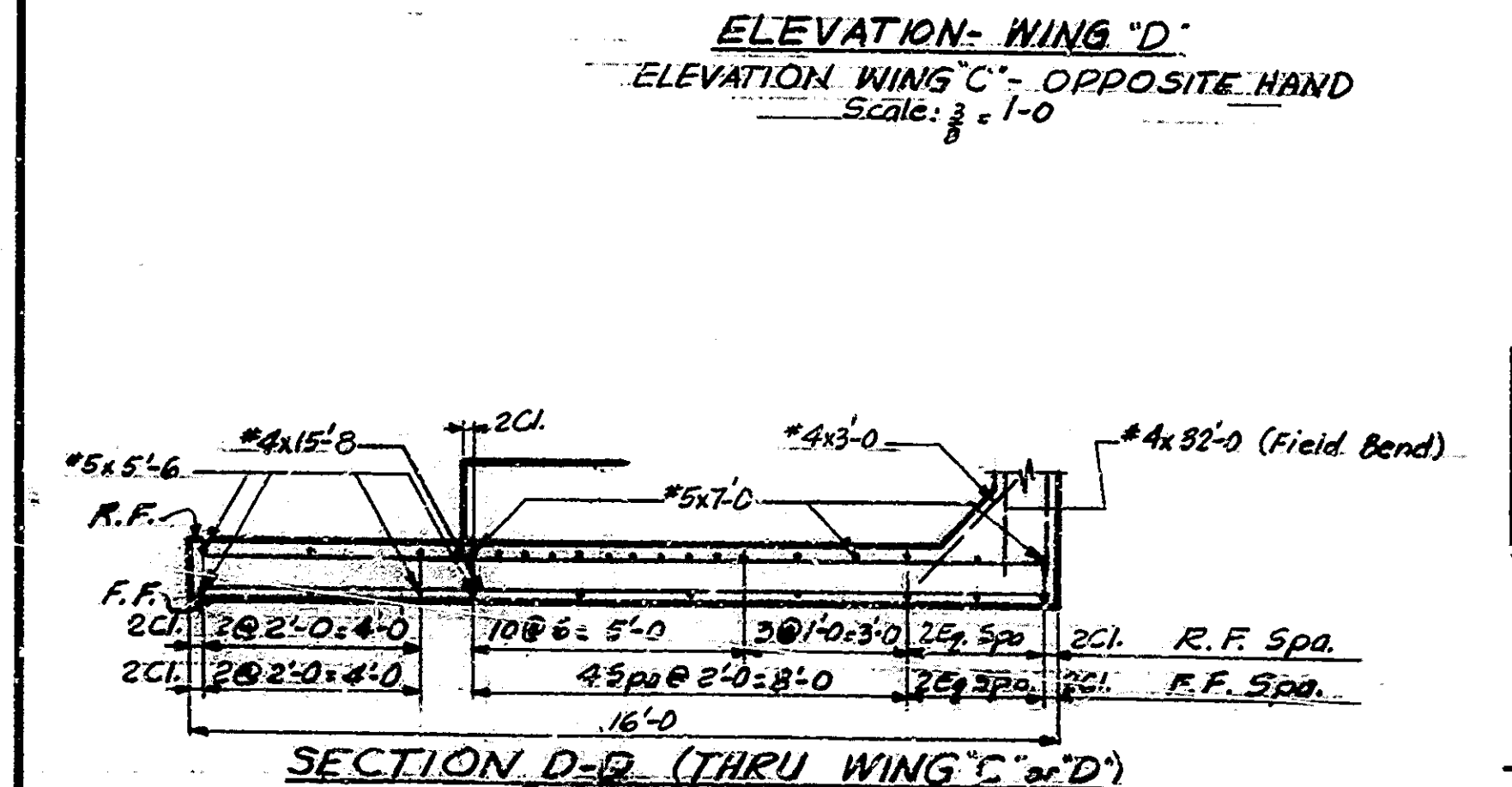
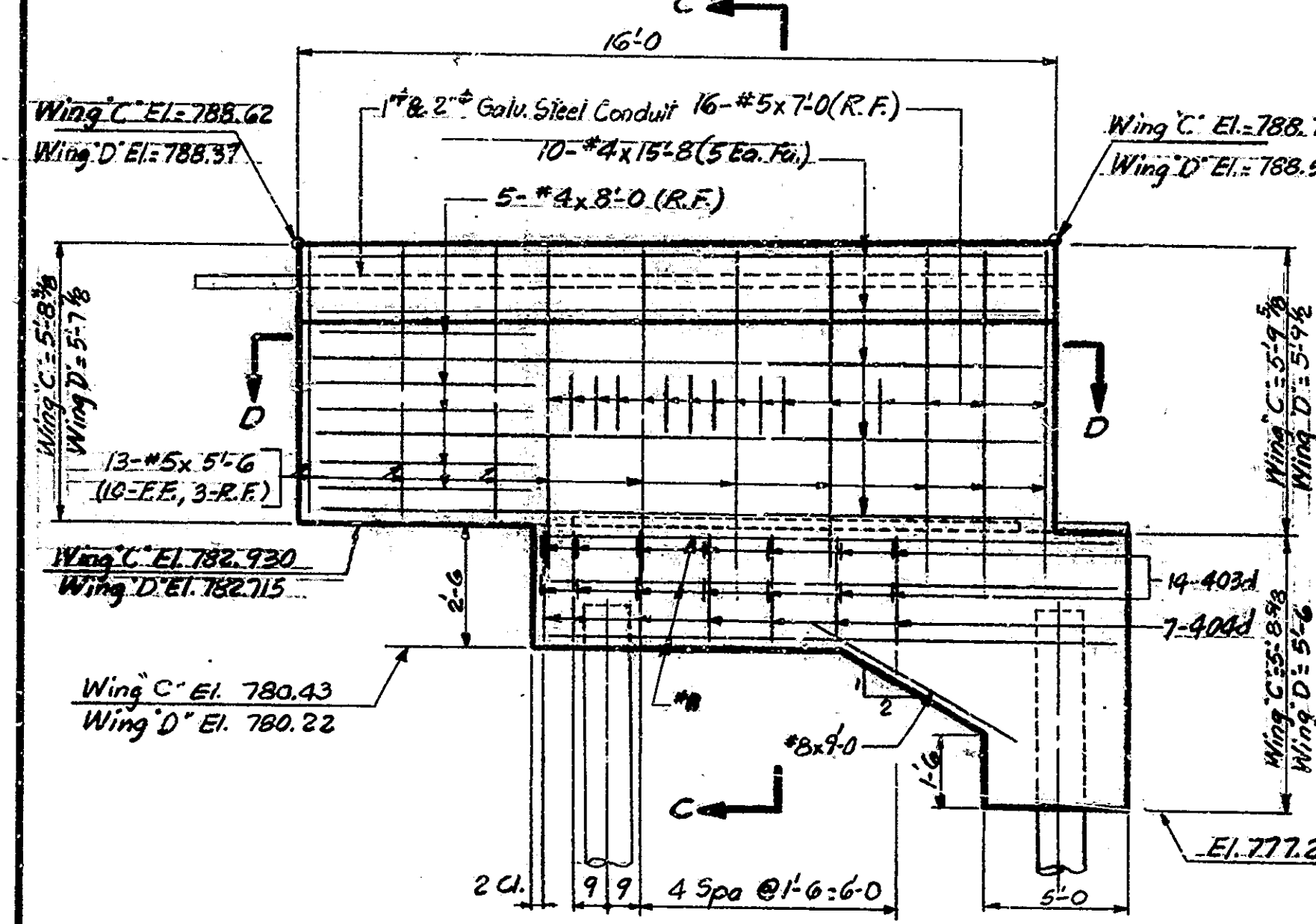


BRIDGES OVER 20' SPAN					
PUB. ROAD RES. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
2	IND.	I-465-404(12)	1969	10A	18

BILL OF MATERIALS
BENT NO. 3

REINFORCING STEEL			
SIZE & NO. OF MARK BARS	LENGTH	WEIGHT (Lbs.)	
#8 30	33'-0"		
#8 10	13'-0"		
#8 12	17'-0"		
#8 4	9'-0"		
#8 2	5'-9"		
#8 3	6'-0"		
#8 5	5'-6"		
Total #8			3920
501d 8	11'-8"		
502d 8	10'-8"		
503d 8	9'-8"		
504d 8	4'-0"		
#5 82	4'-0"		
#5 26	5'-4"		
#5 32	5'-4"		
Total #5			903
401d 238	4'-0"		
402d 66	14'-6"		
403d 28	3'-3"		
404d 14	7'-7"		
405d 95	13'-3"		
406d 89	4'-5"		
407d 2	5'-9"		
408d 4	3'-11"		
#4 30	32'-0"		
#4 4	24'-6"		
#4 20	16'-8"		
#4 18	8'-0"		
#4 84	3'-0"		
Total #4			3665
TOTAL			8488

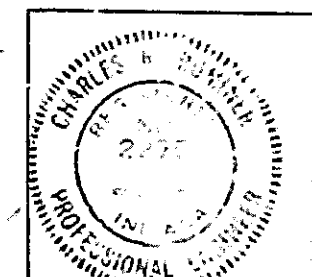
CONCRETE	
Class F	
Cap & Midwall between Vert. Constr. Jts.	652.1 CYS
Wing Cap 'C' to Vertical Constr. Jt.	13.6 "
Wing Cap 'D' to Vertical Constr. Jt.	11.9 "
Wing 'C' and Midwall to Vert. Constr. Jt.	6.4 "
Wing 'D' and Midwall to Vert. Constr. Jt.	6.1 "
Total Class F: 103.2 CYS	
MISCELLANEOUS	
14-14" #70a Steel	
Exposed Conc. Pipe 40" x 40" x 760 Lin. Ft.	
Anchor Pcs - MK-AP3 1/4 Each	
2" Galv. Steel Conduit 40 Lin. Ft.	
1" Galv. Steel Conduit 40 Lin. Ft.	



NOTE: For additional notes and details, see Drawg. 57A. For location of 1" & 2" Galv. steel conduits in wingwalls see Drawg. S12A and Br. Std. R2A.

DESIGNED BY: W. J. L. S. & O. D. S. JUN 17, 69
DRAWN BY: D. S. L. & G. R. JUN 17, 69
TRACED BY: C. W. D.

BENT NO. 3 DETAILS
INDIANA STATE HIGHWAY COMMISSION
SCALE: AS NOTED
RECOMMENDED FOR APPROVAL: *C. R. Remmer*
PROJECT: I-465-4 (146)122
BRIDGE CONTRACT NO. R-7841
BRIDGE FILE: 37A-Q-5273



BRIDGES OVER 20' SPAN					
PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	1-465-A(146)122	1969	11A	18

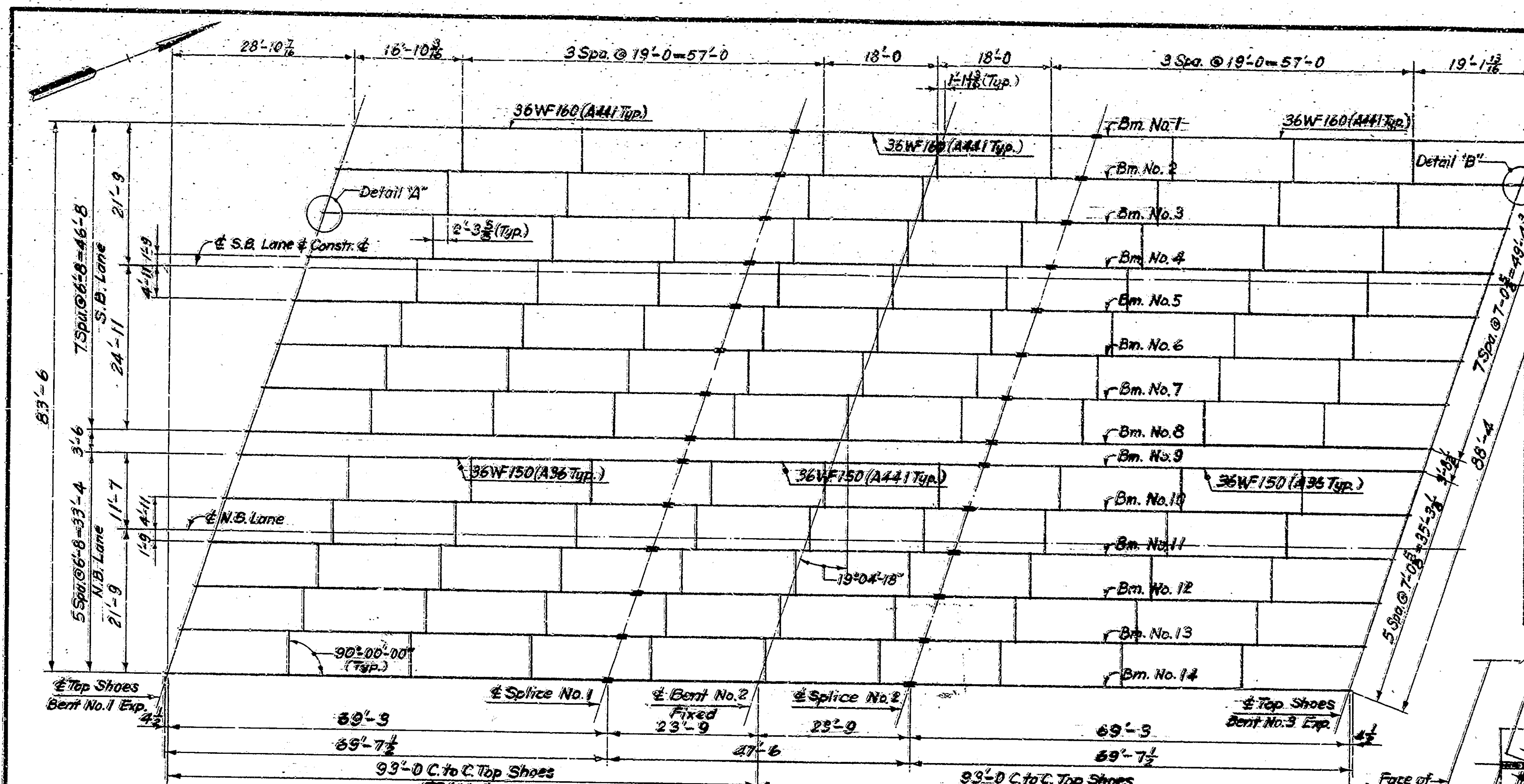


TABLE OF SHIMS

BEAM	NS1	NS2	NS3
NS1	1/2"	1/2"	1/2"
NS2	1/2"	1/2"	1/2"
NS3	1/2"	1/2"	1/2"
NS4	1/2"	1/2"	1/2"
NS5	1/2"	1/2"	1/2"
NS6	1/2"	1/2"	1/2"
NS7	1/2"	1/2"	1/2"
NS8	1/2"	1/2"	1/2"
NS9	1/2"	1/2"	1/2"
NS10	1/2"	1/2"	1/2"
NS11	1/2"	1/2"	1/2"
NS12	1/2"	1/2"	1/2"
NS13	1/2"	1/2"	1/2"
NS14	1/2"	1/2"	1/2"

All End Diaphragms to be 18L427.
All Interior Diaphragms to be 18WF45.

NOTE: Diaphragm connections to beams may be bolted 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 accuracy of all fitted parts. No increase in pay weight will be permitted.

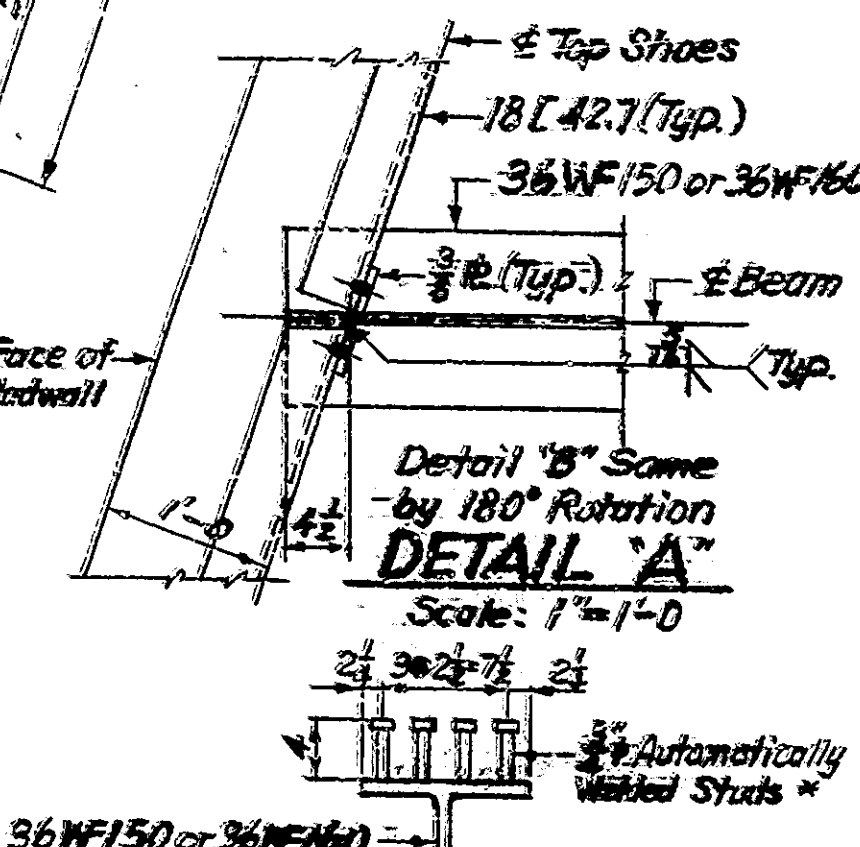
GENERAL NOTES

H.S. 3/4" Bolts unless noted; Open Holes 1/2" unless noted.
All paint shall be in accordance with current State Highway Specifications.
Shop Paint: Basic Lead Silico Chromate (See Special Provisions).
Beams must be cambered to a smooth curve. Camber must be checked while beams are supported in such a way as to have no bending moment in direction of camber and after shop welding is completed.
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 details shall show a plan of matchmarking for all reamed pieces.
All splice plates to be removed, cleaned, and deburred 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.
The contractor shall prepare detailed working or shop drawings to enable him to fabricate, erect, and construct all parts of the work in conformity with the Engineer's drawings and specifications and shall submit four (4) copies of these to the Engineer. See Article E1103.2 of the Specifications.
Diameter of holes in all materials connecting top shoes to beam flanges shall be 1/2".
Bolts connecting beam flange to top shoe shall extend into top shoe a minimum of 1 inch.
As soon as the Engineer has approved the field welds, all welds and any surface from which the shop coat has been omitted 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.
All welding shall conform to the current AWS Specifications for Welding Highway and Railway Bridges unless otherwise noted.
All structural steel shall conform to ASTM A36 unless otherwise noted.
Shims between beams and top shoes may be built up. No shim shall be less than 3/8" in thickness.
Rivets shall not be used in the assembly of structural steel.

Estimated weight of Structural Steel: 568,600* (Includes 356,000* of A-441 Steel).
The weight of H.S. Bolts is not included in the estimated weight of structural steel. The weight of these bolts shall be included in the cost of Structural Steel.

DATA USED FOR DESIGN AND DETAILS

Live Load: HS20-44 loading with impact and distribution of loads in accordance with 1965 A.A.S.H.O. Specifications.
Dead Load: Actual weight plus 35 pounds per sq. ft. of roadway to provide for future wearing surface.
Slab: Designed for 15,000 pound wheel plus impact and with 1" monolithic wearing surface.
Unit Stresses: (Structural Steel)
Bending Tension or Compression (A-36)..... 20,000 psi
Shear in Fillet Welds (A-36)..... 12,000 psi
Shear on H.S. Bolts (Friction Type)..... 13,500 psi
Bearing Steel on Concrete (Including Overturning and Eccentric Loading)..... 1,000 psi
Reinforcing Steel (Tension)..... 20,000 psi



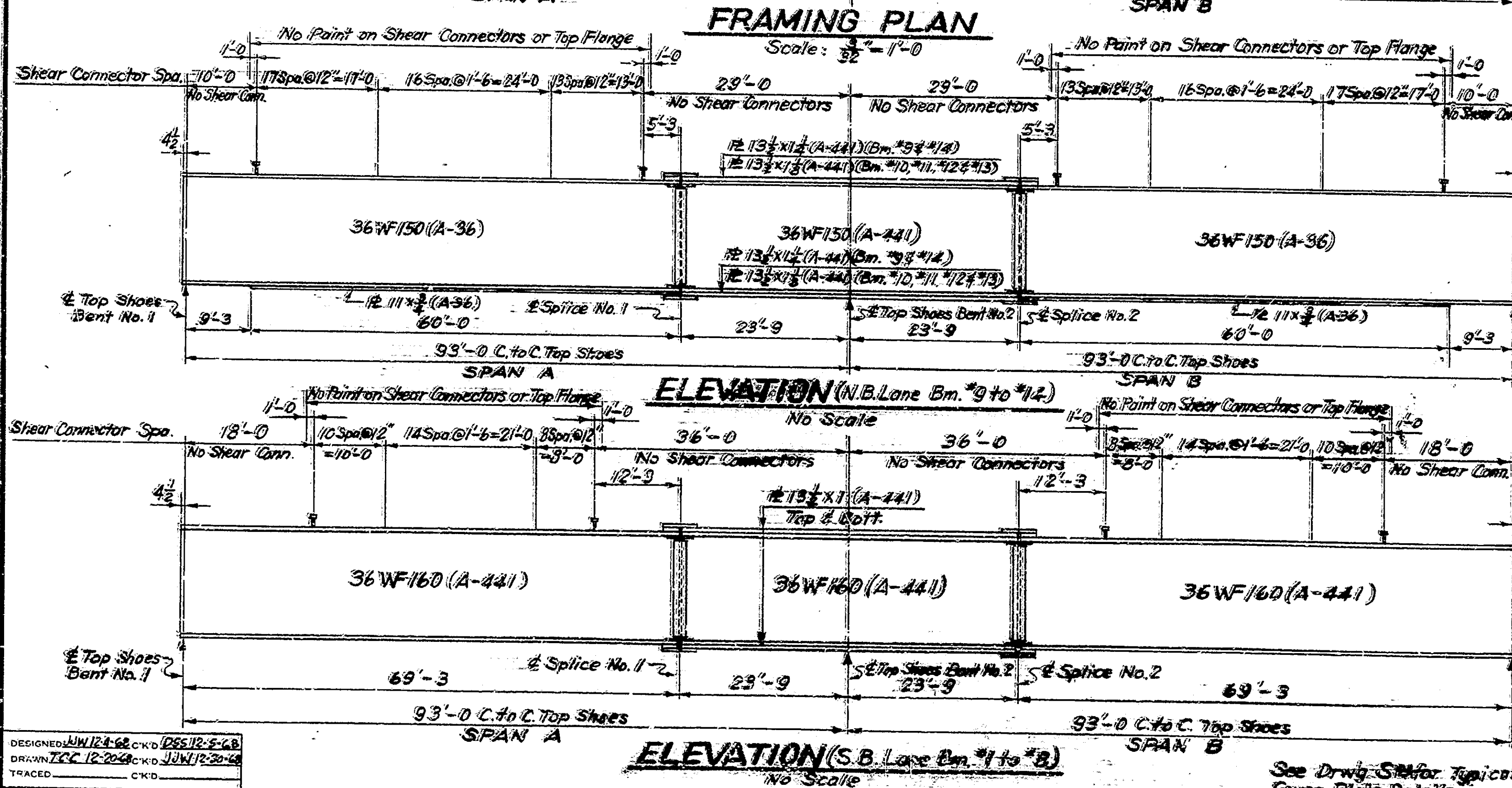
STUD SHEAR CONNECTOR TYP. DETAIL

*The Contractor may use channels or S-shapes as an alternate shear connector. If used they shall have equivalent shear value and the proposed size and spacing submitted for approval.

TOP OF FIELD SPLICE ELEVATION

BEAM NO.	SPRICE	REMERISE	NS1
1	787.620	787.590	
2	787.720	787.700	
3	787.680	787.910	
4	787.920	787.915	
5	787.865	787.970	
6	787.755	787.770	
7	787.645	787.670	
8	787.535	787.570	
9	787.750	787.785	
10	787.935	787.855	
11	787.600	787.940	
12	787.770	787.835	
13	787.635	787.730	
14	787.555	787.640	

NOTE TO ERECTOR:
Beams shall be adjusted to the top of splice elevations shown above before bolting field connections. These elevations are with fieldmark removed, carrying steel D.I. only.



ELEVATION (S.B. Lane Bm. #1 to #8) No Scale

DESIGNED: J.W. 12-68 C.K.D. 1255/12-5-68
DRAWN: J.C. 12-20-68 C.K.D. 12-20-68
TRACED: C.K.D.

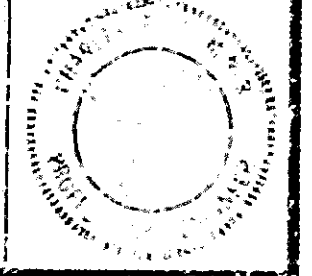
FRAMING PLAN
INDIANA STATE HIGHWAY COMMISSION

SCALE: AS NOTED
JANUARY 17, 1969

RECOMMENDED FOR APPROVAL:

C.R. Rummel
ENGINEER OF PUBLIC WORKS

DRAWING: 59 OF 72
PROJECT: 1-465-A(146)122
BRIDGE CONTRACT NO. R-7841
BRIDGE FILE: 37A-0-5273



See Drawg. S-10 for Typical Cover Plate Details.

BRIDGES OVER 20' SPAN					
PUB. ROAD NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-465-4(146)122	1969	118	16

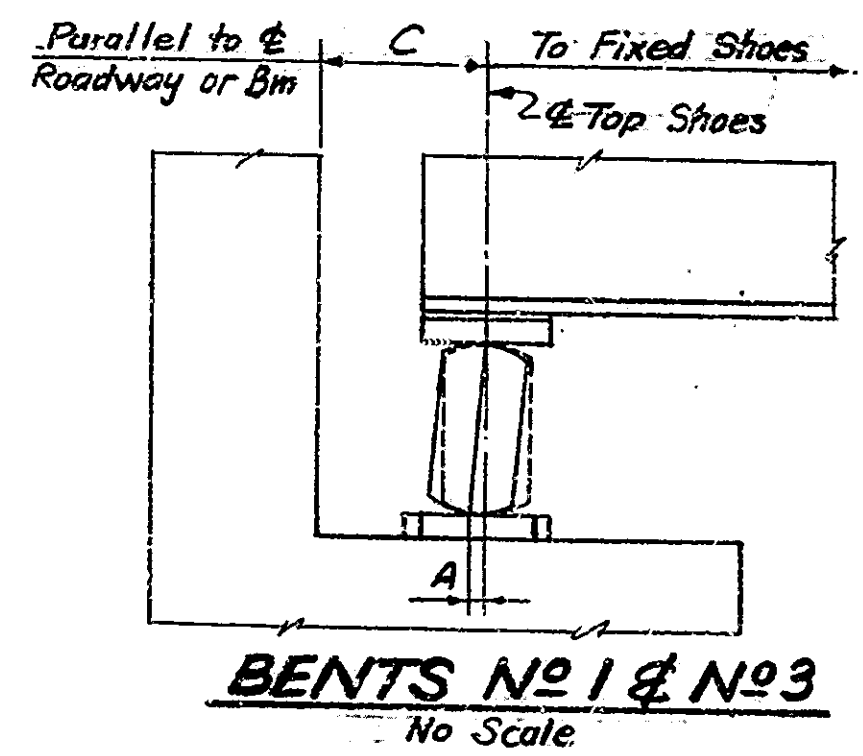
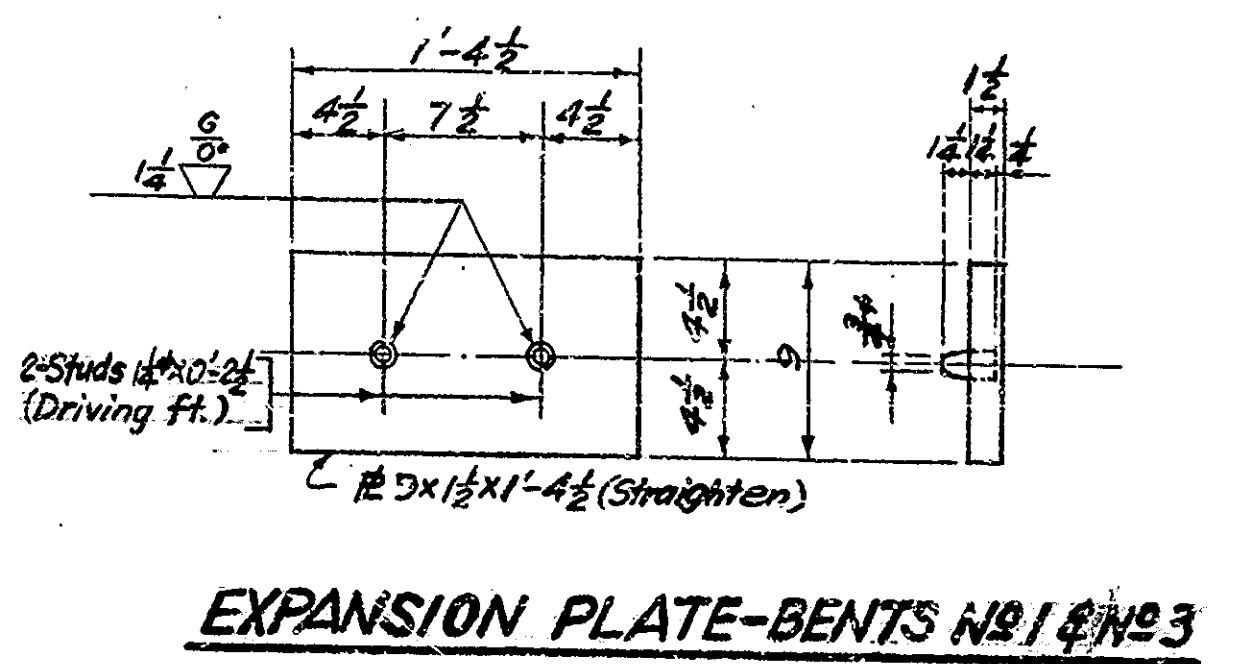
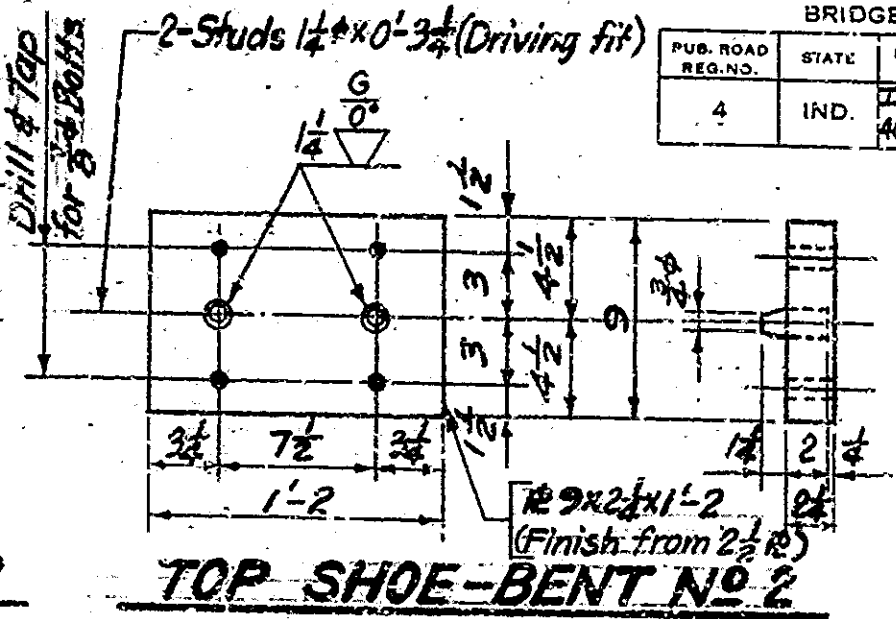
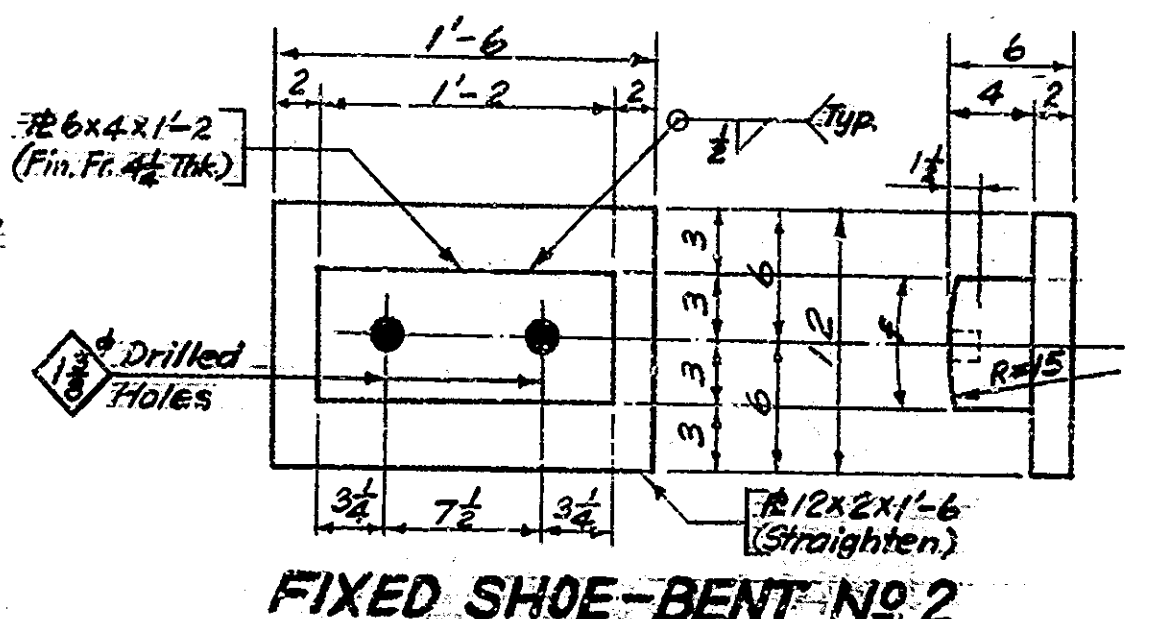
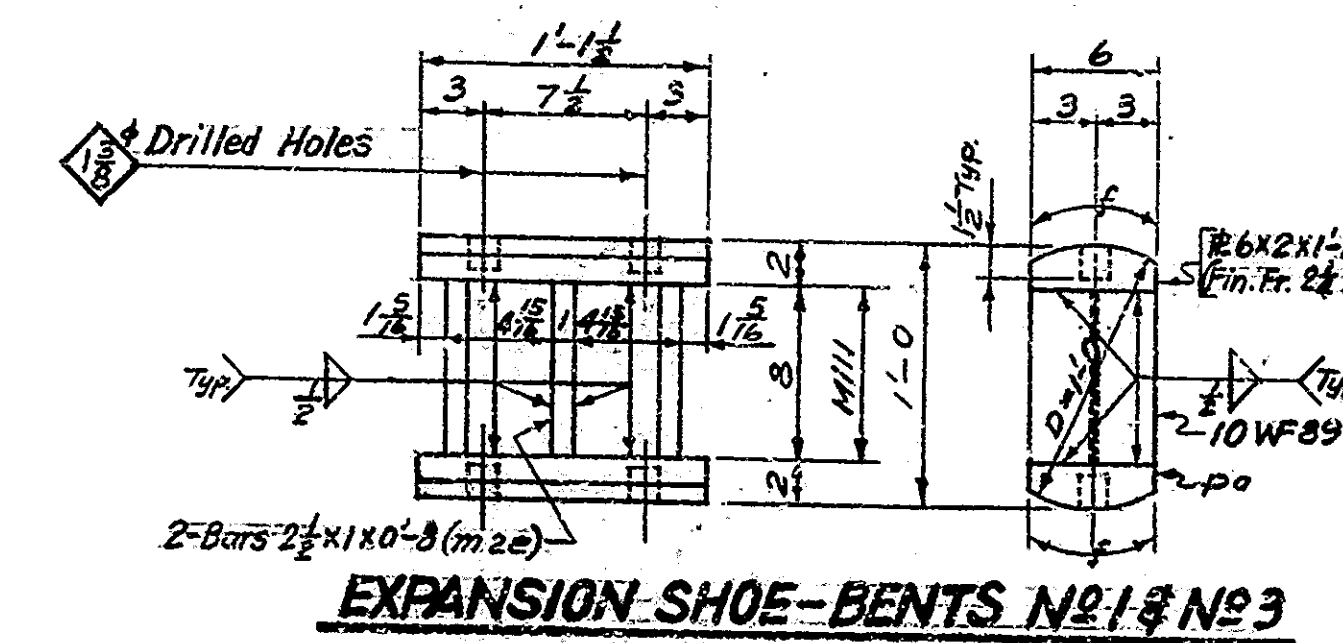
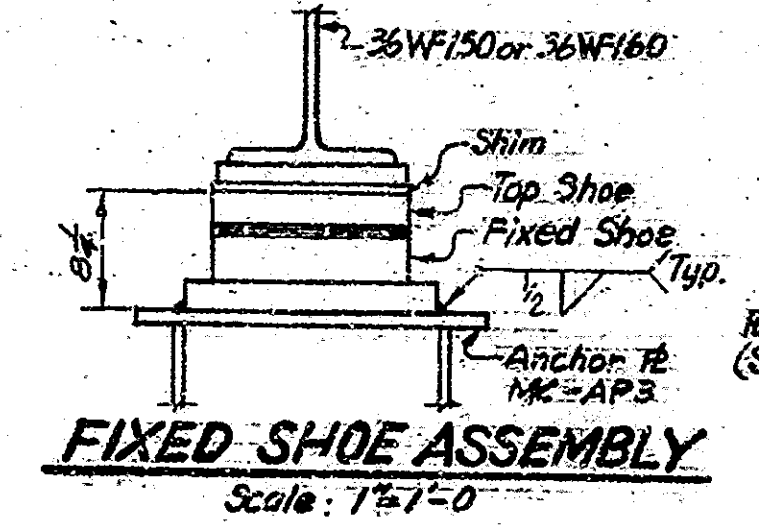
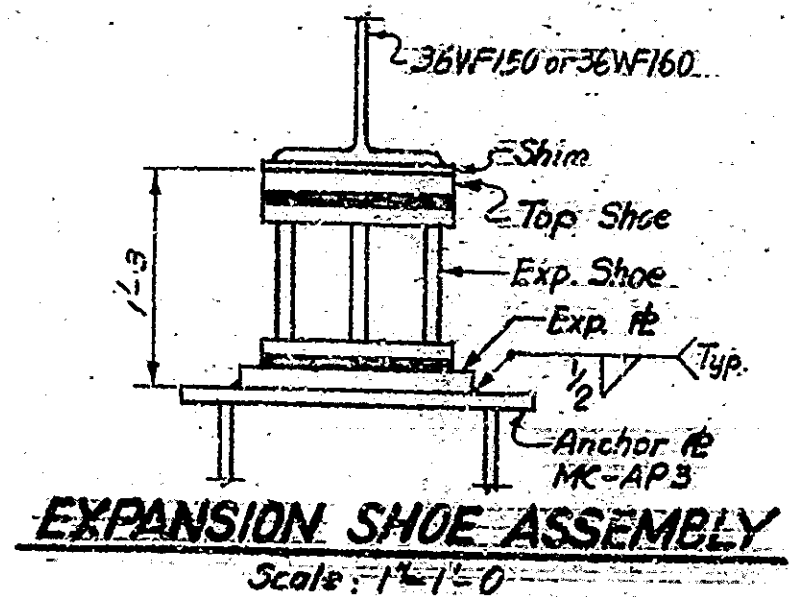
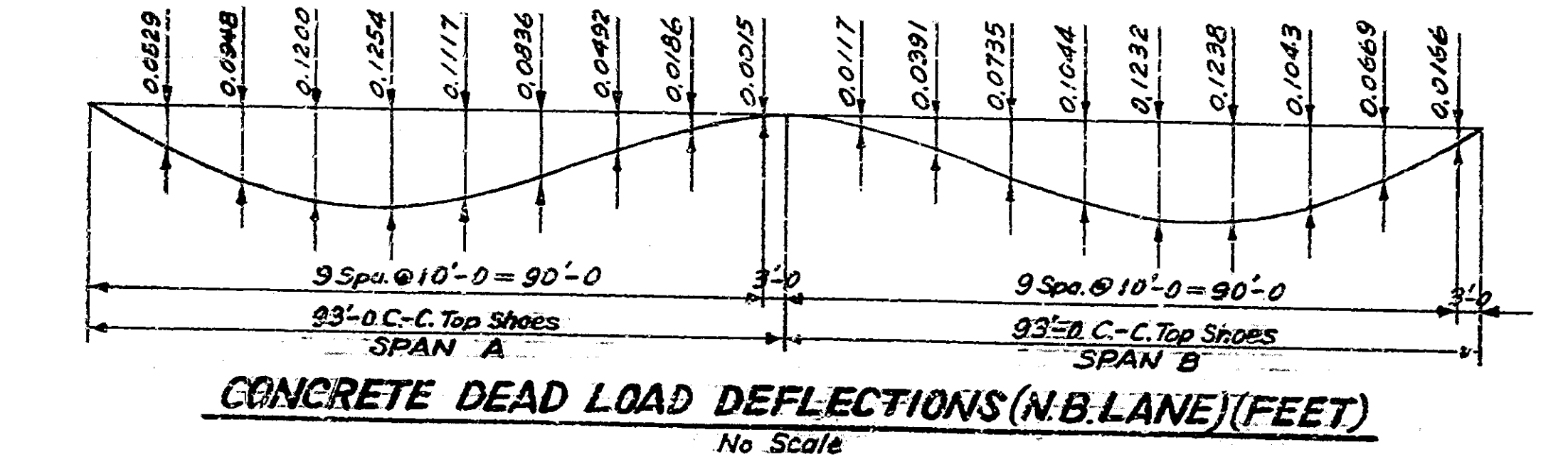
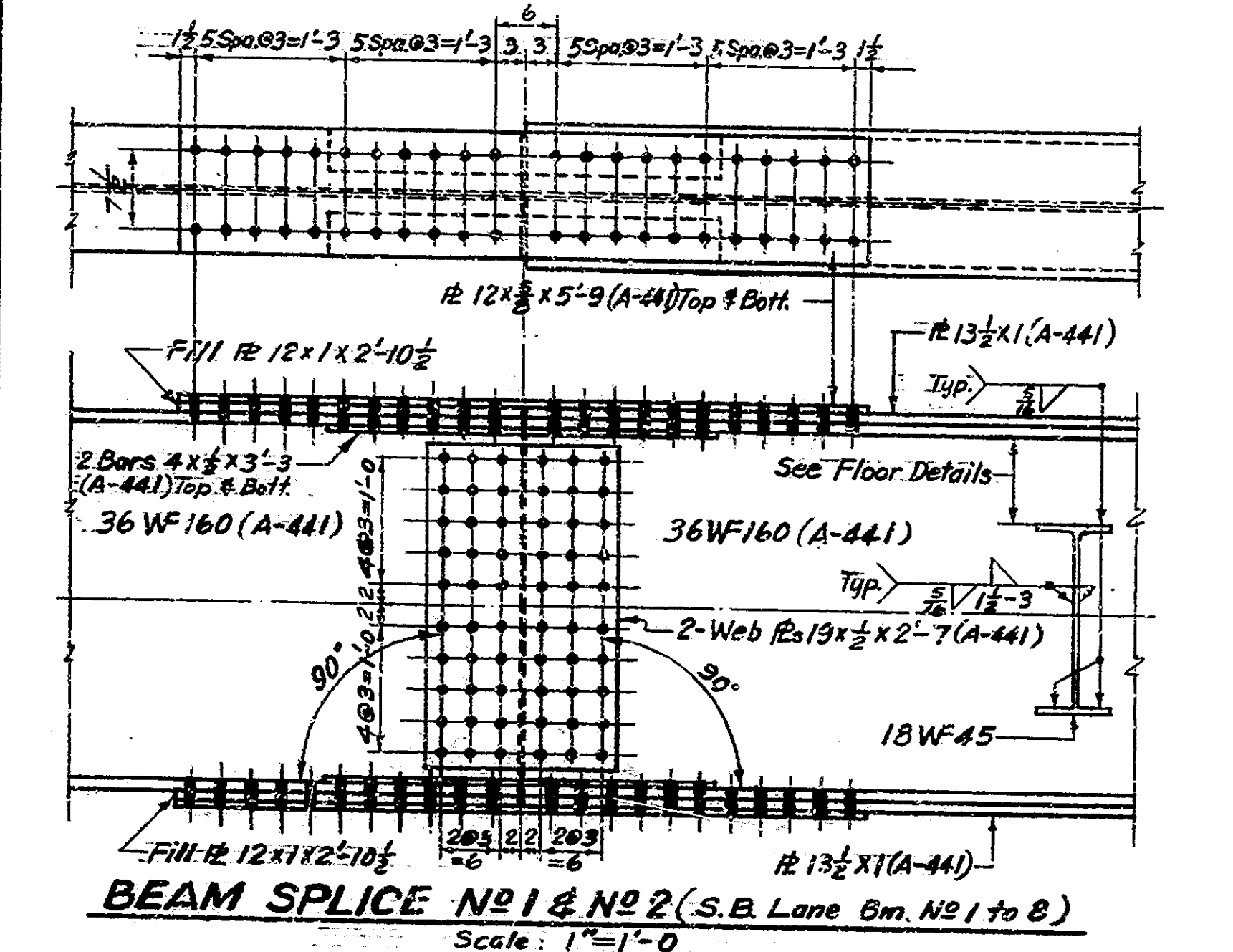
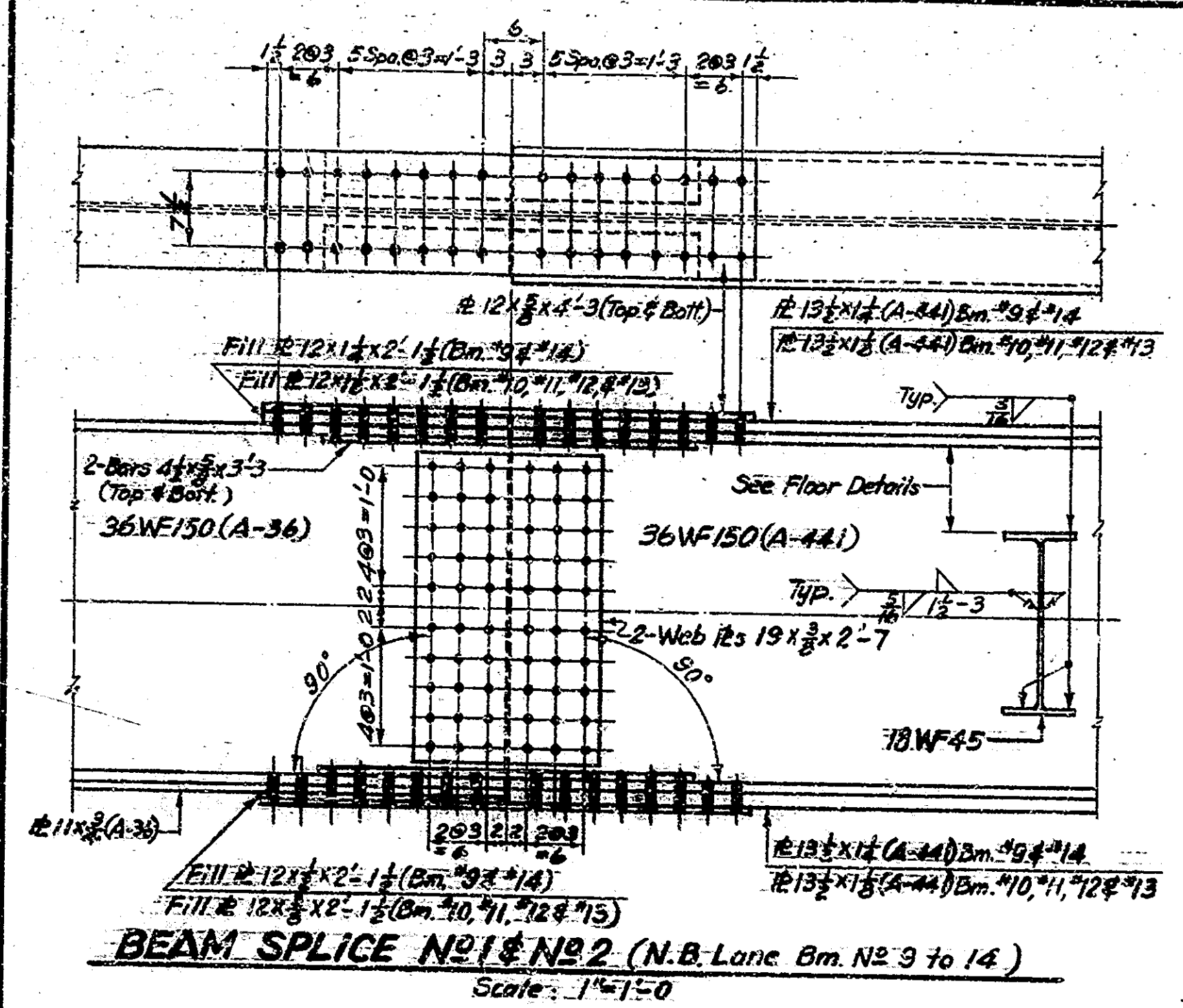
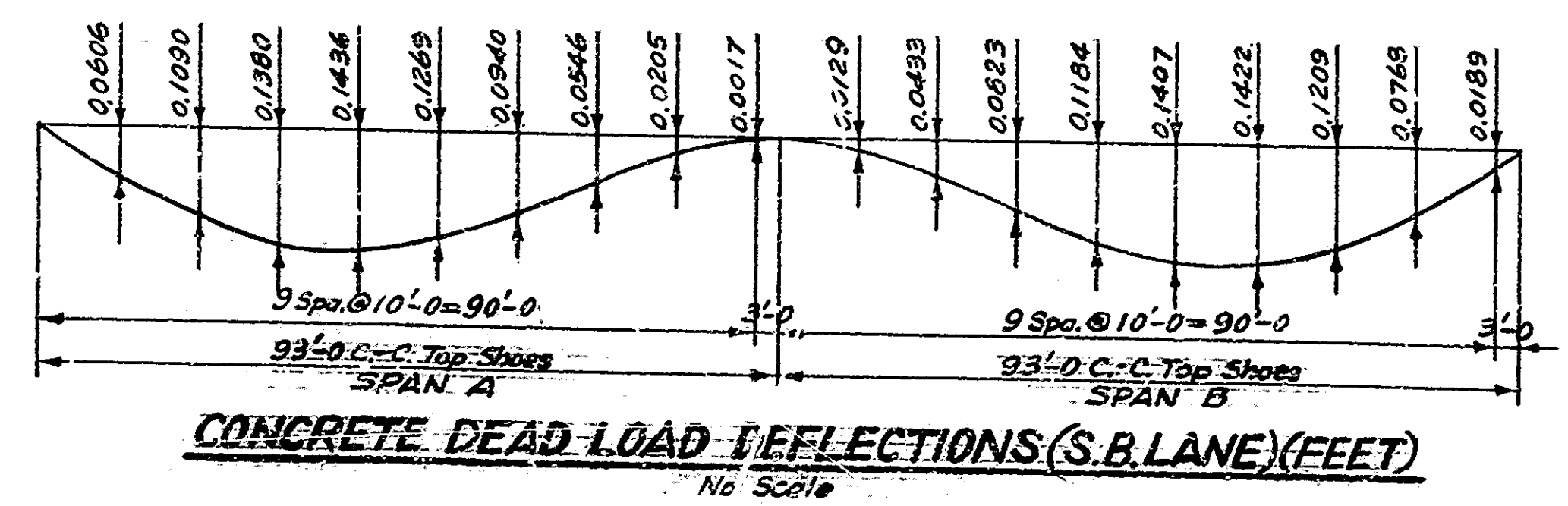
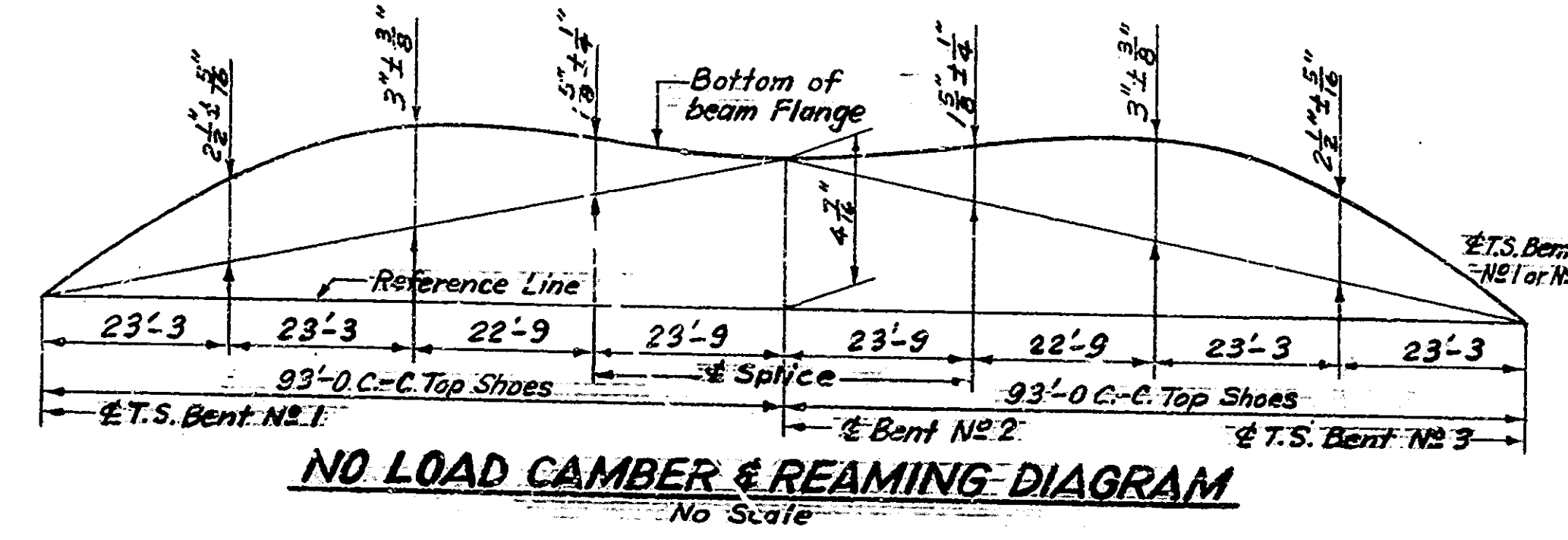


TABLE I

Dimension	A					
Temperature	0°	20°	40°	60°	80°	100°
± T.S. to ± Exp. Pl. Bents No. 1 & No. 3	15/16	13/16	5/8	1/2	3/8	3/16

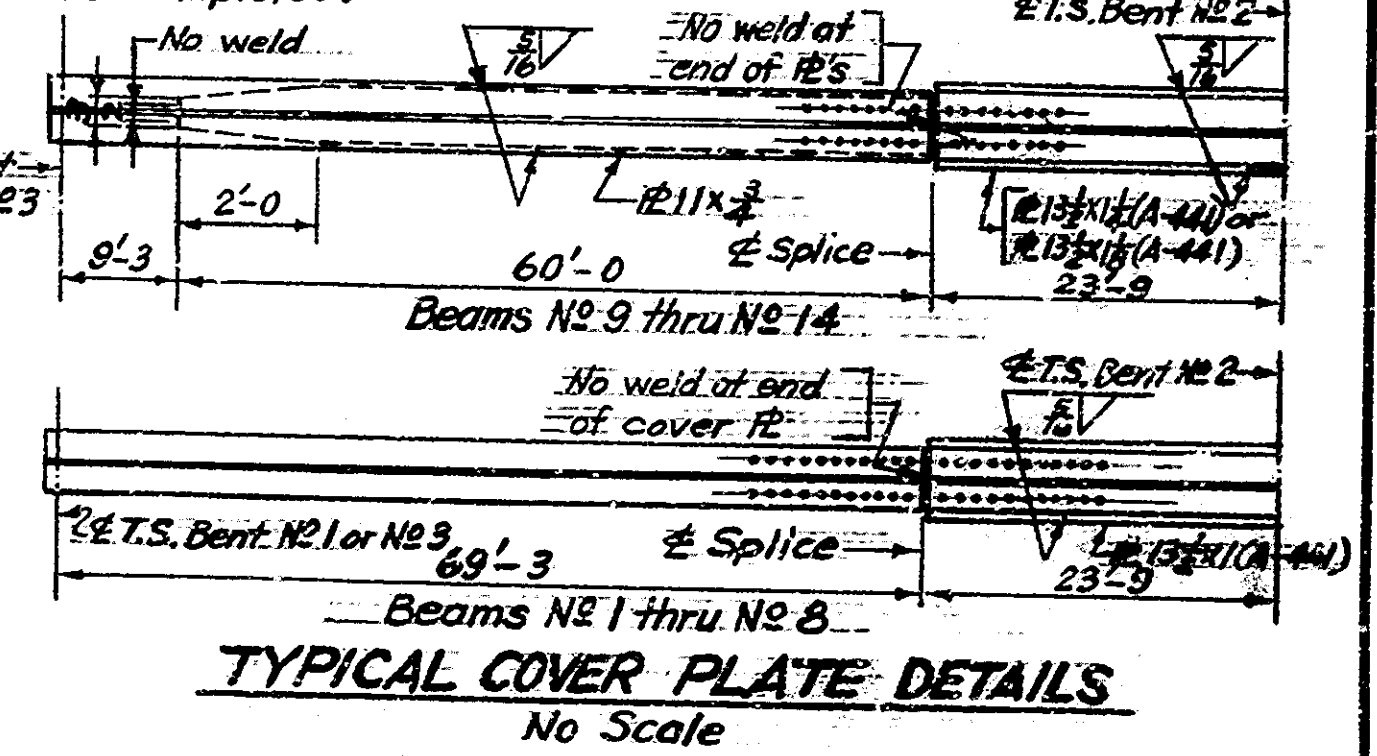
NOTE: The shop plans shall indicate whether reaming or drilling is to be done in shop or field. If shop reaming or drilling is used the beams shall be assembled in accordance with the diagram below. If the beams are shop reamed or drilled, all beams are to be erected using full size drift pins in a minimum of fifty per cent (50%) of the flange splice holes and fifty per cent (50%) of the web splice holes. The elevations shall be checked before bolting field splices and with structural steel unsupported by falsework.



NOTE: Curved Surfaces of Shoes to be machined after weldments have been completed.

GENERAL PROCEDURE

1. After all structural steel has been erected and bolting and welding completed, adjust the superstructure longitudinally so that dimension "C" from the ± Top Shoe to the face of masonry at Bent No. 1 and No. 3 are equal.
2. With the superstructure in the adjusted position called for in (1), weld the Fixed Shoes to the Anchor Plates of Pier No. 2.
3. Adjust the Expansion Plates under each Expansion Shoe in accordance with dimension "A" in TABLE I for the prevailing temperature. Note that dimension "A" is always the distance from a vertical line through the ± of Top Shoe in a direction away from the Fixed Shoe. Weld the Expansion Plates to the Anchor Plates.
4. Screenshot elevations shall be determined by adding the Concrete DL Deflections to the required final concrete elevations at all screed points. Take elevations at all screed points on top of beam adjacent to screed points. Subtract these elevations from the elevations corrected for deflection and use the resulting dimension as the height for setting the screed or coping form above that point. 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. Screenshot elevations will be furnished on request.
5. No concrete in the floor is to be poured until the above operations are completed.



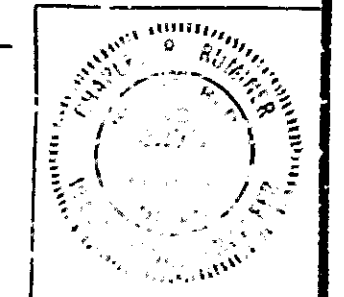
STEEL DETAILS

INDIANA STATE HIGHWAY COMMISSION

SCALE: 1/2"=1'-0 UNLESS NOTED JANUARY 17, 1969

RECOMMENDED FOR APPROVAL: [Signature]

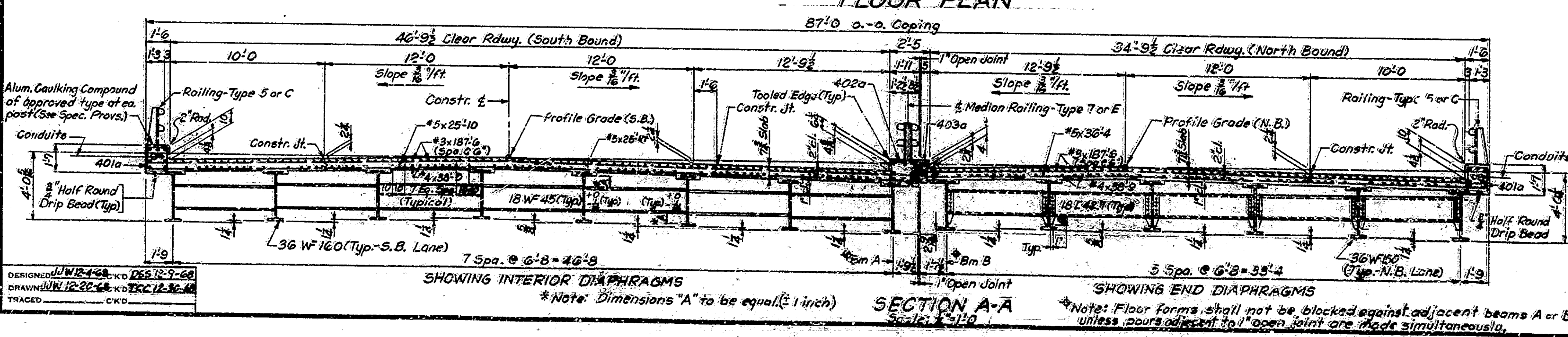
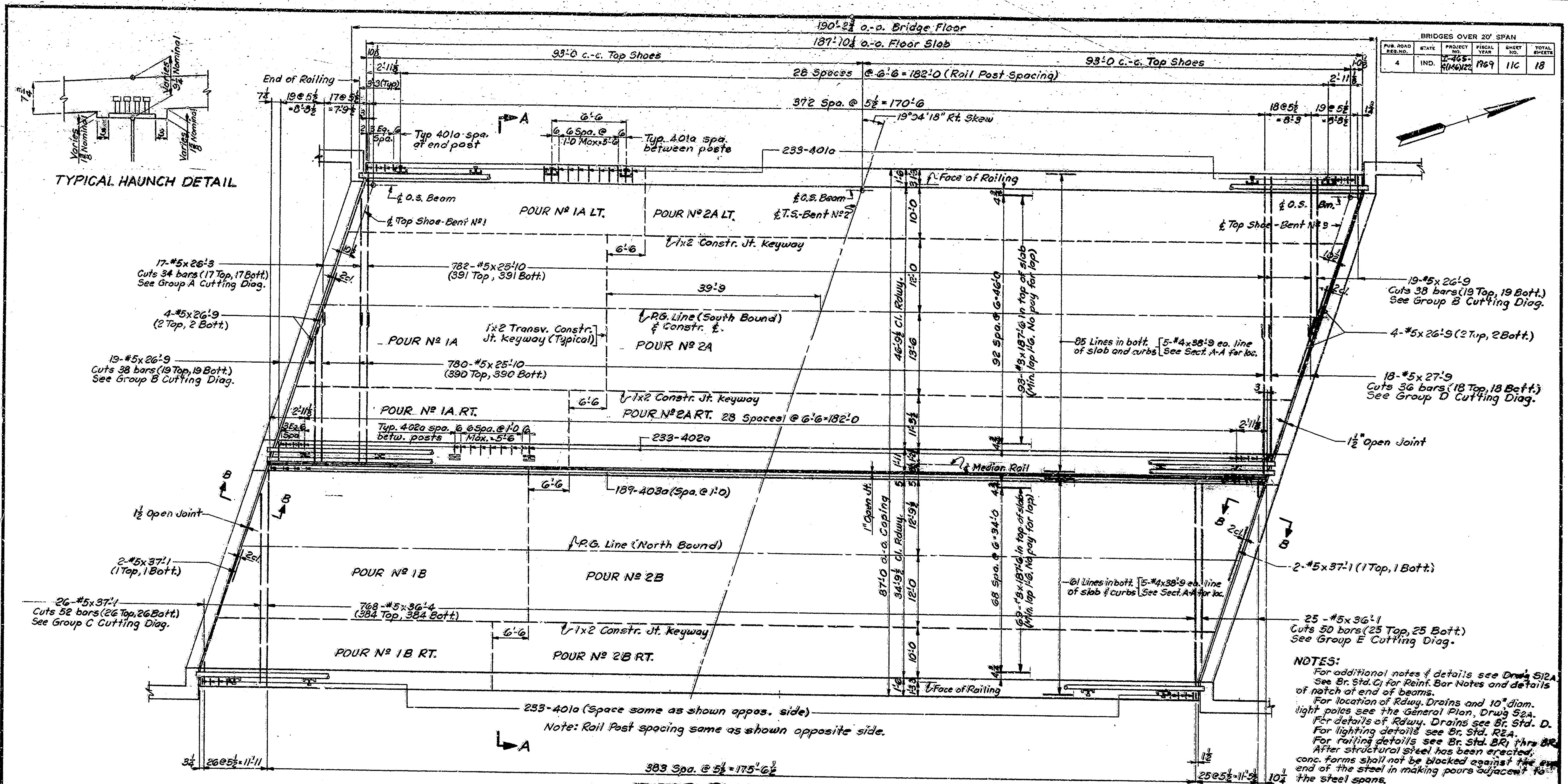
DRAWING: S10 of 12
PROJECT: I-465-4(146)122
BRIDGE CONTRACT NO. R-7841
BRIDGE FILE: 37A-0-5273



DESIGNED: J.W. 12-4-68 C.W.D. 12-5-68
DRAWN: J.C. 12-20-68 C.W.D. 12-23-68
TRACED: CKU

H.S. Bolts 7/8" unless noted.
Open Holes 1/2" unless noted.
For General Notes see Drwg. S9A

BRIDGES OVER 20' SPAN				
PUB. ROAD DIST. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.
4	IND.	465-4(186)122	1969	11C
				TOTAL SHEETS
				18



TYPICAL HAUNCH DETAIL

FLOOR PLAN

SECTION A-A

NOTES:
 For additional notes & details see *Drawg S12A*.
 See *Br. Std. C* for Reinf. Bar Notes and details of notch at end of beams.
 For location of *Rdwy. Drains* and 10" diam. light poles see the *General Plan, Drawg 52a*.
 For details of *Rdwy. Drains* see *Br. Std. D*.
 For lighting details see *Br. Std. R2A*.
 For railing details see *Br. Std. BR* thru *BR*.
 After structural steel has been erected, conc. forms shall not be blocked against the end of the steel in making pours adjacent to the steel spans.
 Sequence of pours to be made in order of pour numbers. All superstr. constr. joints are optional, except as noted, and pours may be made continuous provided the pour terminates at a constr. joint indicated on the plans.
 The contractor may change the width of pours, sequence of pours, or location of constr. joints subject to the approval of the Engineer.
 Top mat of Reinf. Steel shall be supported on chairs under the top transv. reinf. steel.

INDIANA STATE HIGHWAY COMMISSION

SCALE: 1/4" = 1'-0", Unless Noted

JANUARY 17, 1969

RECOMMENDED FOR APPROVAL: *Car... [Signature]*

DESIGNED: *J.W.B. [Signature]* DATE: 12-29-68
 DRAWN: *W.W. [Signature]* DATE: 12-29-68
 TRACED: *CKD*

DRAWING: S11A OF 12
 PROJECT: I-465-4(186)122
 BRIDGE CONTRACT NO. R-7841
 BRIDGE FILE: 374-0-5273

U.S. DEPARTMENT OF TRANSPORTATION
 FEDERAL BUREAU OF SURVEYING
 PROFESSIONAL ENGINEER

