BRIDGE CONTRACT NO. R-6333

INDEX

PROJECT	STRUCTURE	TYPE	SPAN	OVER	STATION	CONTRACT NO.
I-UI-65-3 (46) 117	I-65-119	CONTINUOUS	2313 & 2313J	C.C.C.& St L. R.R. & F.R.#5(GUION RD.)	2313 & 2313J 192+17.35("N")	R-6333
	-2313	(COMPOSITE)	4@83', 44'-9			
	-2313J	STEEL			2314 47+58.53("WBL")	
	-2314	BEAM	2314 & 2314J			
	-2314J	BRIDGES	4@3,2@78', 42'-3		2314J 47+89.90("EBL")	

SHEET NO.	SHEET DESIGNATION	SUBJECT
1		INDEX & TITLE SHEET
2-4	RD. PLAN SHEET NO. 4 & 8-9	~~TYPICAL CROSS SECTIONS, RD. PROJ. I-UI-65-3(46)117~~
5-6	RD. PLAN SHEET NO. 16 & 17	~~ROAD PLAN & PROFILE, RD. PROJ. I-UI-65-3(46)117~~
7	RD. PLAN SHEET NO. 24	~~GRADE PROFILE LINE "SBL", RD. PROJ. I-UI-65-3(46)117~~
8-11	RD. PLAN SHEET NO. 25-28	~~ALIGNMENT, CURVES, MISC. DETAILS & R/W, W. 38TH ST. INTERCHANGE AT NEW YORK CENTRAL R.R.~~ RD. PROJ. I-UI-65-3(46)117
12	RD. PLAN SHEET NO. 30	~~GRADE PROFILE, EAST BOUND LANE (WBL) AT W. 38TH. ST. INTERCHANGE, RD. PROJ. I-UI-65-3(46)117~~
13	RD. PLAN SHEET NO. 31	~~GRADE PROFILE, EAST BOUND LANE (EBL) AT W. 38TH. ST. INTERCHANGE, RD. PROJ. I-UI-65-3(46)117~~
14	RD. PLAN SHEET NO. 32	~~GRADE PROFILE, SOUTH EAST CONNECTION (S.E.C.) AND NORTH EAST CONNECTION (N.E.C.), W. 38TH ST. INTERCHANGE, RD. PROJ. I-UI-65-3(46)117~~
15	RD. PLAN SHEET NO. 34	~~DETAILS, RD. PROJ. I-UI-65-3(46)117~~
16	RD. PLAN SHEET NO. 40	~~GRADE PROFILE, FRONTAGE ROAD NO. 5, RD. PROJ. I-UI-65-3(46)117~~
17	ONE SHEET	WIDENED R.C.BRIDGE APPROACH DETAILS & BILL OF MATERIALS.
18	ONE SHEET	SOIL BORINGS
19	SI(I-65-119-2313 & 2313J)	LAYOUT "A"
20	S2	LAYOUT "B"
21	S3	GENERAL PLAN
22	S4	TIE-UP DIMENSIONS
23	S5	COPING LINE OFFSETS
24	S6 (I-65-119-2313)	BENT NO. 1 DETAILS
25	S7	BENT NO. 1 DETAILS
26	S8	BENT NO. 1 DETAILS & BILL OF MATERIALS
27	S9	PIER NO. 2 DETAILS
28	S10	PIER NO. 3 DETAILS
29	S11	PIER NO. 4 DETAILS
30	S12	PIERS NO. 2, NO. 3 & NO. 4 BILL OF MATERIALS
31	S13	BENT NO. 5 DETAILS
32	S14	BENT NO. 5 DETAILS
33	S15	BENT NO. 5 DETAILS & BILL OF MATERIALS
34	S16	FRAMING PLAN
35	S17	STRUCTURAL STEEL DETAILS
36	S18	STRUCTURAL STEEL DETAILS
37	S19	TOOTHED EXPANSION JOINT DETAILS
38	S20	TOOTHED EXPANSION JOINT DETAILS
39	S21	FLOOR DETAILS
40	S22	FLOOR DETAILS
41	S23	FLOOR DETAILS & BILL OF MATERIALS
42	S24	CORNER DETAILS
43	S25	SCREEDS
44	S26	TABLE OF ELEVATIONS
45	ONE SHEET	WIDENED R.C.BRIDGE APPROACH DETAILS & BILL OF MATERIALS
46	S6(I-65-119-2313J)	BENT NO. 1 DETAILS
47	S7	BENT NO. 1 DETAILS
48	S8	BENT NO. 1 DETAILS & BILL OF MATERIALS
49	S9	PIER NO. 2 DETAILS
50	S10	PIER NO. 3 DETAILS
51	S11	PIER NO. 4 DETAILS
52	S12	PIERS NO. 2, NO. 3 & NO. 4 BILL OF MATERIALS
53	S13	BENT NO. 5 DETAILS
54	S14	BENT NO. 5 DETAILS
55	S15	BENT NO. 5 DETAILS & BILL OF MATERIALS
56	S16	FRAMING PLAN
57	S17	STRUCTURAL STEEL DETAILS
58	S18	STRUCTURAL STEEL DETAILS
59	S19	TOOTHED EXPANSION JOINT DETAILS
60	S20	TOOTHED EXPANSION JOINT DETAILS
61	S21	FLOOR DETAILS
62	S22	FLOOR DETAILS
63	S23	FLOOR DETAILS & BILL OF MATERIALS
64	S24	CORNER DETAILS
65	S25	SCREEDS
66	S26	TABLE OF ELEVATIONS
67	ONE SHEET	WIDENED R.C. BRIDGE APPROACH DETAILS & BILL OF MATERIALS
68	ONE SHEET	SOIL BORINGS
69	SI (I-65-119-2314)	LAYOUT
70	S2	GENERAL PLAN
71	S3	TIE-UP DIMENSIONS & COPING LINE OFFSETS
72	S4	BENT NO. 1 DETAILS
73	S5	BENT NO. 1 DETAILS & BILL OF MATERIALS
74	S6	PIER NO. 2 DETAILS
75	S7	PIER NO. 3 DETAILS
76	S8	PIER NO. 4 DETAILS
77	S9	PIERS NO. 2, NO. 3 & NO. 4 BILL OF MATERIALS
78	S10	BENT NO. 5 DETAILS
79	S11	BENT NO. 5 DETAILS & BILL OF MATERIALS
80	S12	FRAMING PLAN
81	S13	STRUCTURAL STEEL DETAILS
82	S14	STRUCTURAL STEEL DETAILS
83	S15	TOOTHED EXPANSION JOINT DETAILS
84	S16	TOOTHED EXPANSION JOINT DETAILS
85	S17	FLOOR DETAILS
86	S18	FLOOR DETAILS & BILL OF MATERIALS
87	S19	CORNER DETAILS
88	S20	SCREEDS
89	S21	TABLE OF ELEVATIONS
90	ONE SHEET	WIDENED R.C. BRIDGE APPROACH DETAILS & BILL OF MATERIALS
91	ONE SHEET	SOIL BORINGS
92	SI (I-65-119-2314J)	LAYOUT
93	S2	GENERAL PLAN
94	S3	TIE-UP DIMENSIONS & COPING LINE OFFSETS
95	S4	BENT NO. 1 DETAILS
96	S5	BENT NO. 1 DETAILS & BILL OF MATERIALS
97	S6	PIER NO. 2 DETAILS
98	S7	PIER NO. 3 DETAILS
99	S8	PIER NO. 4 DETAILS
100	S9	PIERS NO. 2, NO. 3 & NO. 4 BILL OF MATERIALS
101	S10	BENT NO. 5 DETAILS
102	S11	BENT NO. 5 DETAILS & BILL OF MATERIALS
103	S12	FRAMING PLAN
104	S13	STRUCTURAL STEEL DETAILS
105	S14	STRUCTURAL STEEL DETAILS
106	S15	TOOTHED EXPANSION JOINT DETAILS
107	S16	TOOTHED EXPANSION JOINT DETAILS
108	S17	FLOOR DETAILS
109	S18	FLOOR DETAILS & BILL OF MATERIALS
110	S19	CORNER DETAILS
111	S20	SCREEDS
112	S21	TABLE OF ELEVATIONS

STATE OF INDIANA

INDIANA STATE HIGHWAY COMMISSION

BRIDGE PLANS

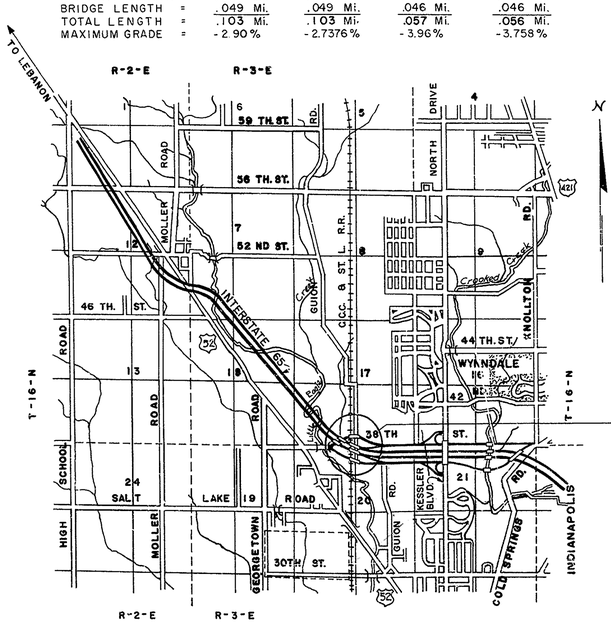
FOR SPANS OVER 20 FEET ON

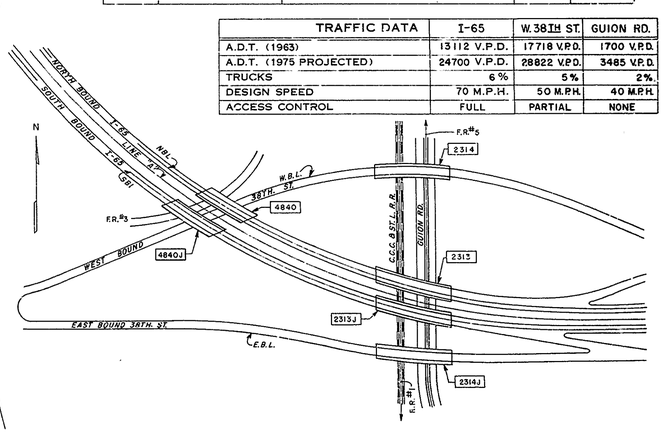
INTERSTATE ROAD NO. 65 SECTION 3

F.A. PROJECT I-UI-65-3(46)117

BEGINNING AT A POINT ON ℄ APPROXIMATELY 146.6 FEET NORTHWEST OF A POINT ON THE NORTH LINE OF SECTION 20, T-16-N, R-3-E, AND EXTENDING SOUTHEASTERLY 545.0 FEET TO A POINT ON ℄ APPROXIMATELY 398.4 FEET SOUTHEAST OF A POINT ON THE NORTH LINE OF SECTION 20, T-16-N, R-3-E. ALL IN MARION COUNTY.

	2313	2313J	2314	2314J
ROADWAY LENGTH =	.054 Mi.	.054 Mi.	.011 Mi.	.010 Mi.
BRIDGE LENGTH =	.049 Mi.	.049 Mi.	.046 Mi.	.046 Mi.
TOTAL LENGTH =	.103 Mi.	.103 Mi.	.057 Mi.	.056 Mi.
MAXIMUM GRADE =	-2.90%	-2.7376%	-3.96%	-3.758%





TRAFFIC DATA	I-65	W. 38TH ST.	GUION RD.
A.D.T. (1963)	13112 V.P.D.	17718 V.P.D.	1700 V.P.D.
A.D.T. (1975 PROJECTED)	24700 V.P.D.	28822 V.P.D.	3485 V.P.D.
TRUCKS	6%	5%	2%
DESIGN SPEED	70 M.P.H.	50 M.P.H.	40 M.P.H.
ACCESS CONTROL	FULL	PARTIAL	NONE

APPROVED 10-11-63

CHIEF ENGINEER—INDIANA STATE HIGHWAY COMMISSION

BRIDGES OVER 20' SPAN

PUBLIC ROAD REGION NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-UI-65-3(46)117	1963	1	140

INDEX CONTINUED
STANDARD DRAWINGS

SHEET NO.	SHEET DESIGNATION	SUBJECT	B.P.R. APPROVAL	ADOPTED "A" REVISION "R"
113-113A	TWO SHEETS	SUMMARY		
114-130	~~RD. PLAN SHEETS 120-185, 190-195, 198-199, 207-210~~ NO. 2, RD. PROJ. I-UI-65-3(46)117	~~CROSS SECTIONS LINES "A", "WBL", "EBL" & F.R. #5~~		
131	BRIDGE STD. C1	STANDARD MISCELLANEOUS DETAILS	6-21-63	R.8-1-63
	BRIDGE STD. C2	STANDARD MISCELLANEOUS DETAILS		
132	BRIDGE STD. D	CASTING DETAILS ROADWAY DRAINS	1-12-60	A.1-3-50
	BRIDGE STD. F	ROADWAY DRAIN OUTLET DETAILS		
	BRIDGE STD. H	TYP. DETAILS OF THICK. PAVEMENT & LOC. TOE OF SL. A.E.B.		
	BRIDGE STD. H	TYP. DETAILS OF THICK. PAVEMENT & LOCATING TOE OF SLOPE		
	BRIDGE STD. M1	MISCELLANEOUS APPROACH DETAILS		
	BRIDGE STD. M2	MISCELLANEOUS APPROACH DETAILS		
	BRIDGE STD. M3	MISCELLANEOUS APPROACH DETAILS		
133	BRIDGE STD. M5	SLOPEWALL & DRAINAGE DETAILS	12-4-62	R.10-4-62
	BRIDGE STD. P2	STANDARD CONCRETE PILE DETAILS		
134	BRIDGE STD. R1-A	ALUMINUM RAILING DETAILS		R.1-22-63
135	BRIDGE STD R1-B	STEEL RAILING DETAILS		R.1-14-63
	BRIDGE STD. S1	TYPICAL DETAILS FOR PLACING SPECIAL FILLING MATERIAL		
136	BRIDGE STD. S2	TYPICAL DETAILS FOR PLACING GRAVEL & SPECIAL BORROW	3-28-63	R.2-18-63
137	BRIDGE STD. R2	BRIDGE LIGHTING DETAILS	9-28-61	R.2-24-61
	BRIDGE STD. T SHEET A	STANDARD TEMPORARY BRIDGE		
	BRIDGE STD. T SHEET B	STANDARD TEMPORARY BRIDGE		
	ROAD STD. SHEET A	STANDARD PAVEMENT JOINTS		
	ROAD STD. SHEET MA	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET MB	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET MC	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET MC1	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET MD	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET MD1	MISCELLANEOUS STANDARDS		
138	ROAD STD. SHEET ME	MISCELLANEOUS STANDARDS	8-9-61	R.10-14-60
	ROAD STD. SHEET MF	MISCELLANEOUS STRUCTURE STANDARDS		
	ROAD STD. SHEET MG	MISCELLANEOUS STRUCTURE STANDARDS		
	ROAD STD. SHEET MH	MISCELLANEOUS PRIVATE DRIVE STANDARDS		
	ROAD STD. SHEET MI	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET MJ	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET K	MISCELLANEOUS STANDARDS		
139	ROAD STD. SHEET MN	MISCELLANEOUS STANDARDS	5-9-61	R. 4-11-61
140	ROAD STD. SHEET MP	MISCELLANEOUS STANDARDS	6-5-62	R.5-22-62
	ROAD STD. SHEET MQ	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET MR	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET S	MISCELLANEOUS STANDARDS CENTER DITCH INLETS		
	ROAD STD. SHEET SI	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET MT	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET	MISCELLANEOUS STANDARDS		
	ROAD STD.	STANDARD STRUCTURE CONNECTIONS FOR EXTENSION		
	ROAD STD.	STANDARD REINF. CONC. BOX CULVERTS		
	ROAD STD.	STANDARD REINF. CONC. BOX CULVERTS—SK. END & WING		
	ROAD STD.	STANDARD REINF. CONC. CULVERTS—SLAB TOP TYPE (W.F.)		
	ROAD STD.	STANDARD REINF. CONC. CULVERTS—SLAB TOP TYPE (U.F.)		
	ROAD STD. SHEET GR	STANDARD GUARD RAIL		
	ROAD STD. SHEET GR	STEEL BEAM GUARD RAIL		
	ROAD STD.	STANDARD REINF. CONCRETE ARCH—12' SPAN		
	ROAD STD.	STANDARD HEADWALLS		
	ROAD STD.	STANDARD STRUCTURAL PLATE ARCH		
	ROAD STD	CONCRETE WINGS FOR STD. STRUCTURAL PLATE ARCHES		
	ROAD STD.	STANDARDS FOR SUPER-ELEVATION & WIDENING OF CURVES		
	ROAD STD. SHEET 1 DETOURS	STANDARD DETOUR SIGNS		
	ROAD STD. SHEET 2 DETOURS	STANDARD DETOUR SIGNS		
	ROAD STD. SHEET 3 DETOURS	STANDARD DETOUR SIGNS		
	ROAD STD. SHEET 4 DETOURS	STANDARD DETO R SIGNS		

DESIGNED & PREPARED
SORRELL & MATTIS ASSOC. INC.
ENGINEERS, INDIANAPOLIS, IND.
James D. Mattis 10-10-63

SUBMITTED BY
FLECK, QUEBE & REID ASSOC. INC.
ENGINEERS, INDIANAPOLIS, IND.
William T. Quebe 10/10/63

STATE HIGHWAY DEPARTMENT OF INDIANA.
STANDARD SPECIFICATIONS DATED 1960
TO BE USED WITH THESE PLANS.

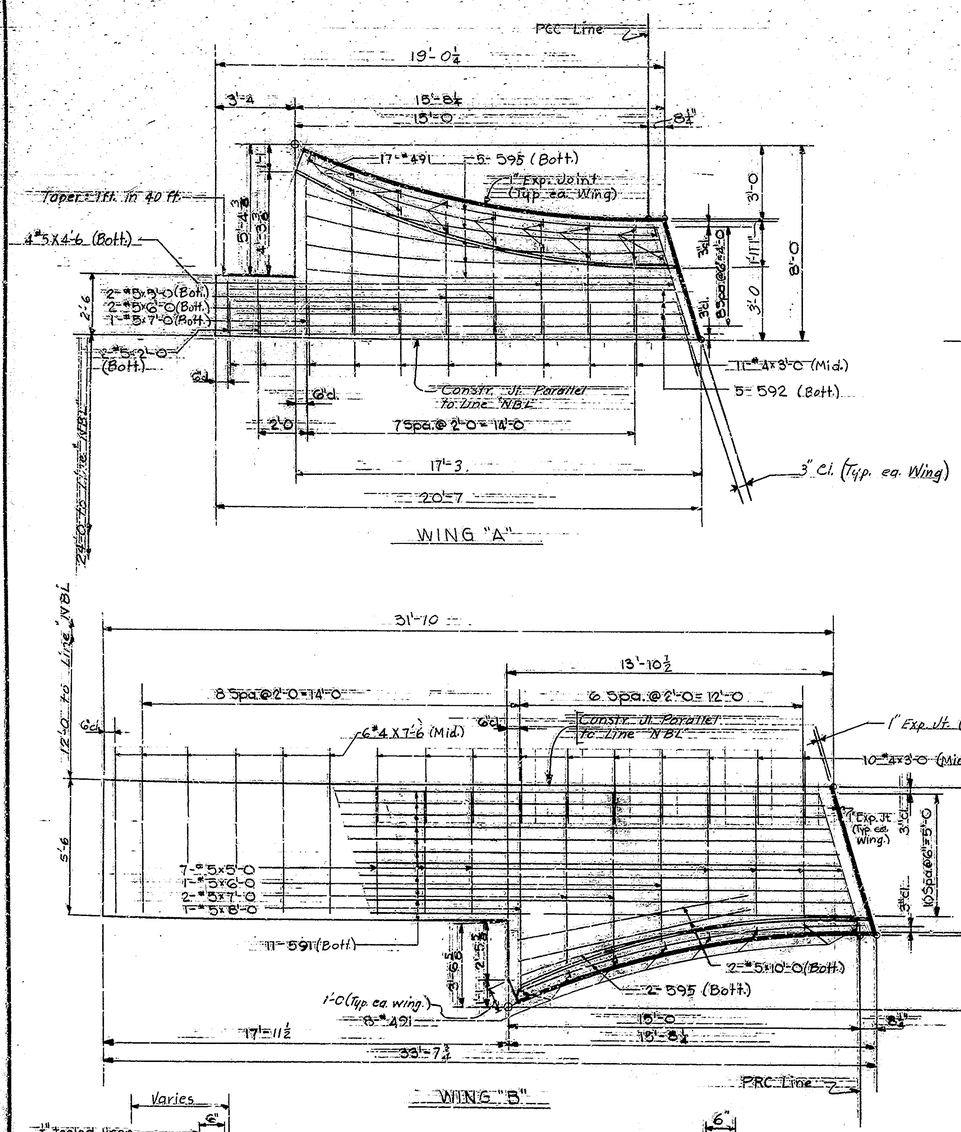
REVISIONS	
DATE	SHEET NO.
10-14-63	2,3,4,5,6,7,8,9,10,11,14,12,13,15,16,114-130 Deleted; 113 A Added
12-30-63	41

RECOMMENDED FOR APPROVAL 10-10-63
ENGINEER OF BRIDGE DESIGN, INDIANA STATE HIGHWAY COMMISSION

CHARLES R. RUMINER NO. 2275 STATE OF INDIANA REGISTERED PROFESSIONAL ENGINEER

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS
APPROVED:
DIVISION ENGINEER DATE

BRIDGE FILE: I-65-119-2313 & 2313J
I-65-119-2314 & 2314J



BRIDGES OVER 20' SPAN

FUR. ROAD SYS. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-U1-65-3(46)117	1963	17	140

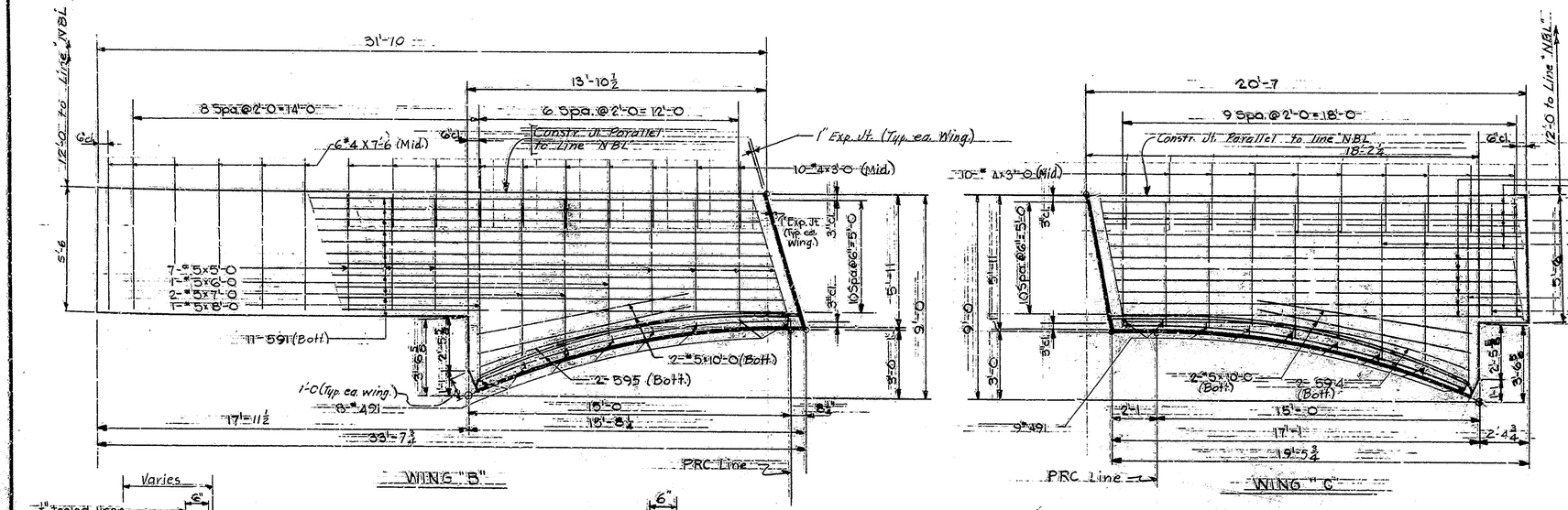
*BILL OF MATERIALS

WIDENED R.C. BRIDGE APPROACH
& R.C. BRIDGE APPROACH

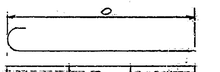
REINFORCING STEEL

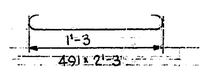
Mark & Size	No. of Bars	Length	Weight
591	163	20'-6	
592	110	20'-0	
593	6	19'-3	
594	4	18'-9	
595	7	16'-0	
① #5	11	37'-0	
② #5	11	36'-3	
*#5	1	12'-0	
*#5	1	9'-0	
*#5	6	7'-0	
*#5	7	6'-0	
*#5	3	5'-6	
*#5	13	3'-0	
*#5	8	4'-6	
*#5	2	2'-0	
Total #5			5757*
491	52	2'-3	
*#4	6	7'-6	
*#4	6	5'-0	
*#4	40	3'-0	
Total #4			208*
TOTAL STEEL			53.65*
CONCRETE			
10" R.C. Pavement			26.6 Cu. Yds.
Class "F"			
Int. Curb Walk			3.0 Cu. Yds.
Special Integral Conc. Curb			1.5 Cu. Yds.
MISCELLANEOUS			
1" Expansion Joint			162 Lin. Ft.

① Place @ Bent No. 1
② Place @ Bent No. 5

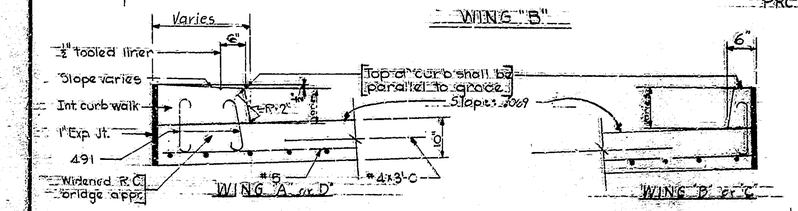


Mark	0	Length
591	20'-0	20'-6
592	19'-3	20'-0
593	18'-8	19'-3
594	16'-2	16'-9
595	15'-5	16'-0

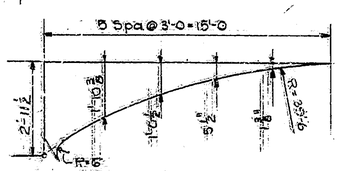




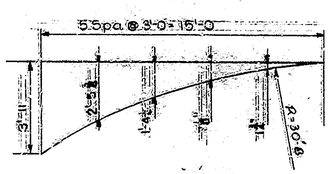
NOTES:
For Reinforcing Bar Notes, See Br. Std. "G".
For Std. R.C. Br. Approach Details, See Br. Std. "M3"
*Indicates all items in Bill of Materials not included in Br. Quantities.
For additional information, See the GENERAL PLAN



TYPICAL SECTION THRU WINGS
Scale: ¾" = 1'-0



OFFSETS TO INTEGRAL CURB GUTTER LINE WINGS "B" & "C"
No Scale



OFFSETS TO INTEGRAL CURB WALK GUTTER LINE WING "A"
No Scale

DESIGNED ____ CK'D. ____
DRAWN DD 9-6-63 CK'D HB 9-16-63
TRACED ____ CK'D. ____

WIDENED R.C. BRIDGE APPROACH DETAILS AND BILL OF MATERIALS

INDIANA STATE HIGHWAY COMMISSION

SCALE: ⅜" = 1'-0 Unless Noted — OCTOBER 10, 1963

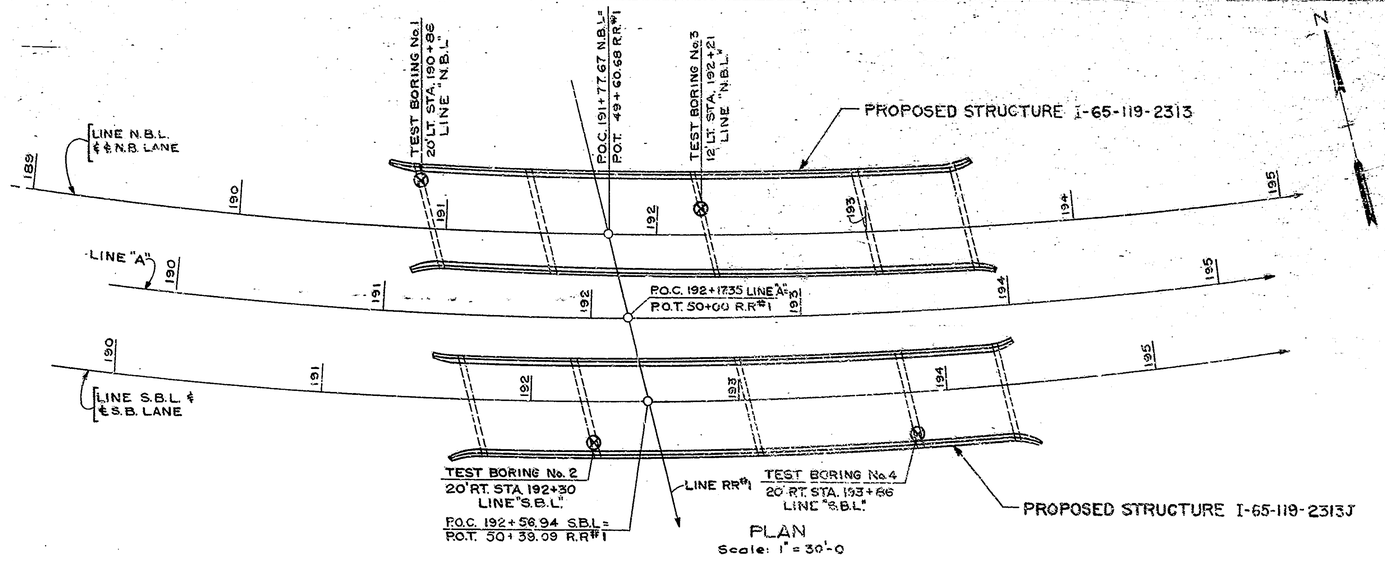
SUBMITTED FOR APPROVAL: James D. Matte

PROJECT: I-U1-65-3(46)117
BRIDGE CONTRACT NO. R-6333
BRIDGE FILE: I-65-110-2313

HARRISBURG ENG. NO. 138

STATE HIGHWAY
DEPARTMENT OF INDIANA

I-65-1 S-461-1(7)	1963	18	140



PLAN
Scale: 1" = 30'-0

NOTE:

▽ Denotes Ground Water Table
N Indicates the number of Blows required to Drive a 1⅜" I.D., 2" O.D. Split Spoon Sampler 12" by Means of a 140# Weight Falling 30".

BORING NO.	T.B. #1	T.B. #2	T.B. #3	T.B. #4
STATION	190+86 "NBL"	192+30 "SBL"	192+21 "NBL"	193+86 "SBL"
OFFSET	20' Lt.	20' Rt.	12' Lt.	20' Rt.
GROUND ELEV.	750.9±	750.89	752.24	751.23

	SAMPLE No.	ELEV.	N	DESCRIPTION
T.B. #1		750.9		GROUND LINE?
		749.9		(DARK BROWN ORGANIC SILT (TOPSOIL)
	1	745.9	11	BROWN AND GRAY MOTTLED MOIST STIFF SILTY CLAY.
		743.9		
	2	740.9	13	BROWN MOIST STIFF CLAYEY SILT.
		736.9		▽
	3	735.9	93	GRAY WET VERY DENSE FINE TO COARSE SAND AND GRAVEL
	4	730.9	44	GRAY MOIST HARD CLAYEY SILT WITH A TRACE OF COARSE SAND AND FINE GRAVEL (HARDPAN)
	5	725.9	64	
	6	720.9	60	
		719.9		END OF BORING?
				DEPTH OF BORING 31'-6
T.B. #2		750.9		GROUND LINE?
		745.9		DARK BROWN ORGANIC SILT (TOPSOIL)
	1	745.9	7	BROWN AND GRAY MOTTLED MOIST MEDIUM STIFF CLAYEY SILT WITH A LITTLE FINE TO COARSE SAND.
		743.9		
	2	740.9	5	BROWN AND GRAY MOTTLED MEDIUM STIFF MOIST SILTY CLAY WITH A TRACE OF FINE TO COARSE SAND.
		737.9		▽
	3	735.9	24	GRAY MOIST VERY STIFF CLAYEY SILT WITH A TRACE OF COARSE SAND AND FINE GRAVEL.
		731.9		
	4	730.9	39	GRAY MOIST HARD CLAYEY SILT WITH A TRACE OF FINE GRAVEL (HARDPAN)
	5	725.9	54	
	6	720.9	49	
	7	715.9	40	
	8	710.9	42	
	9	705.9	33	GRAY WET DENSE FINE TO COARSE SAND WITH A LITTLE FINE TO MEDIUM GRAVEL
	10	700.9	30	END OF BORING?
T.B. #3		752.2		GROUND LINE?
		746.2		SAND COVER OVER GRAVEL FILL
	1	747.2	11	BROWN MOIST STIFF CLAYEY SILT WITH A TRACE OF COARSE SAND.
	2	742.2	14	
		739.2		▽
	3	737.2	17	GRAY MOIST VERY STIFF CLAYEY SILT WITH A TRACE OF FINE TO COARSE SAND AND FINE GRAVEL.
	4	732.2	19	
		728.2		
	5	722.2	63	GRAY MOIST HARD CLAYEY SILT WITH A TRACE OF FINE GRAVEL (HARDPAN)
	6	722.2	50	
		720.7		END OF BORING?
				DEPTH OF BORING 50'-0
T.B. #4		751.2		GROUND LINE?
	1	746.2	12	BROWN MOIST STIFF CLAYEY SILT WITH A LITTLE FINE TO COARSE SAND AND FINE GRAVEL.
	2	741.2	14	
	3	736.2	13	▽
		734.2		
	4	731.2	17	BROWN AND GRAY MOTTLED MOIST STIFF CLAYEY SILT WITH A LITTLE FINE TO COARSE SAND.
	5	726.2	26	GRAY MOIST VERY STIFF TO HARD CLAYEY SILT WITH A TRACE OF FINE TO COARSE SAND AND FINE GRAVEL (HARDPAN)
	6	721.2	36	
		719.2		END OF BORING?
				DEPTH OF BORING 31'-6

Drawn: T.L.N. 9-20-61 | C'k'd. R.E.B. 9-21-62
Traced: L.K.T. 6-27-63 | C'k'd. R.E.C. 9-24-63

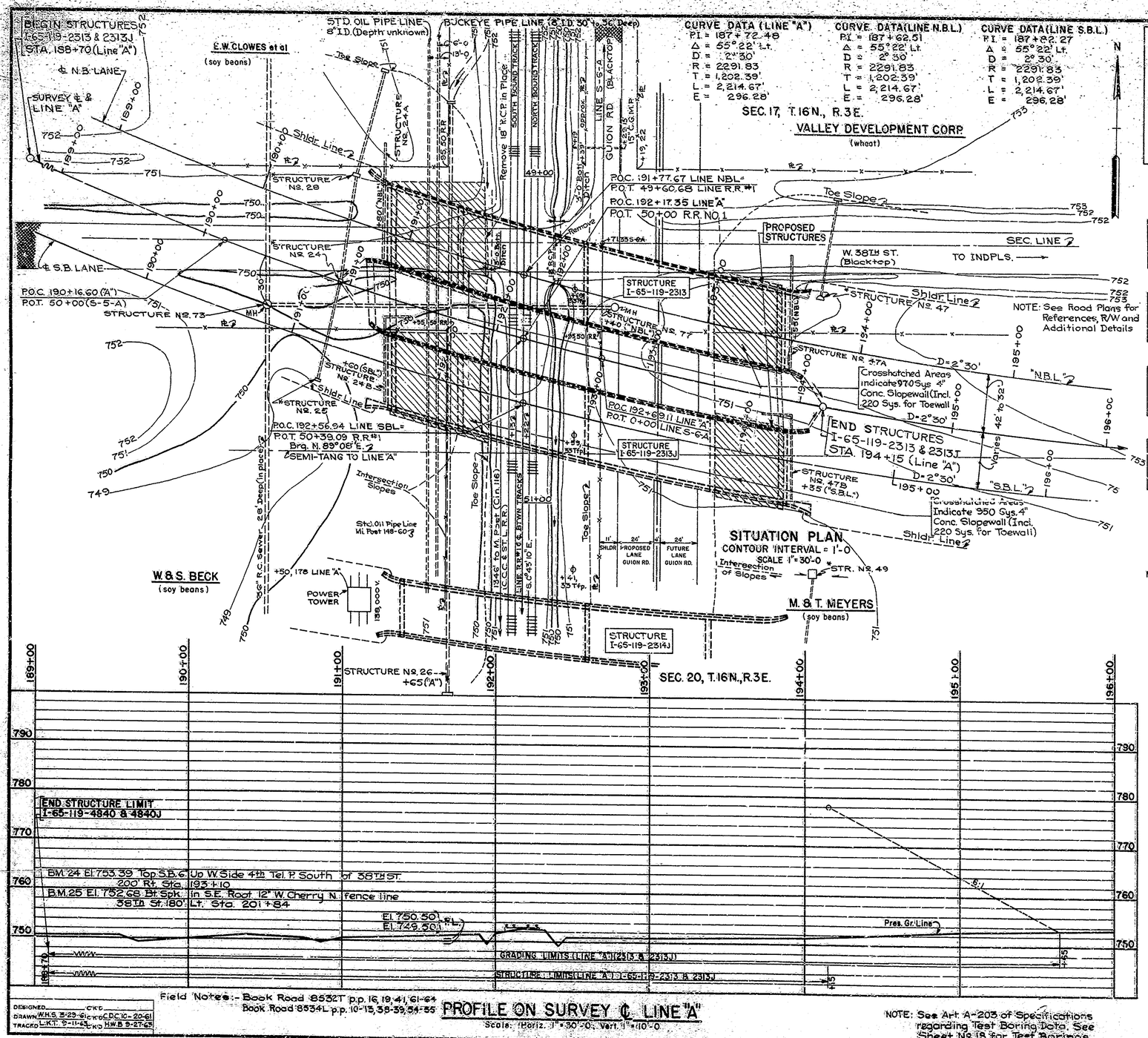
SOIL BORINGS

OCTOBER 10, 1963

SCALE:- HORIZ. 1" = 30'-0 VERT. 1" = 5'

SUBMITTED FOR APPROVAL James D. Mattis

PROJECT:- I-UI-65-3(46)117
BRIDGE CONTRACT NO. R-6333
BRIDGE FILE:- I-65-119-2313 & 2313J



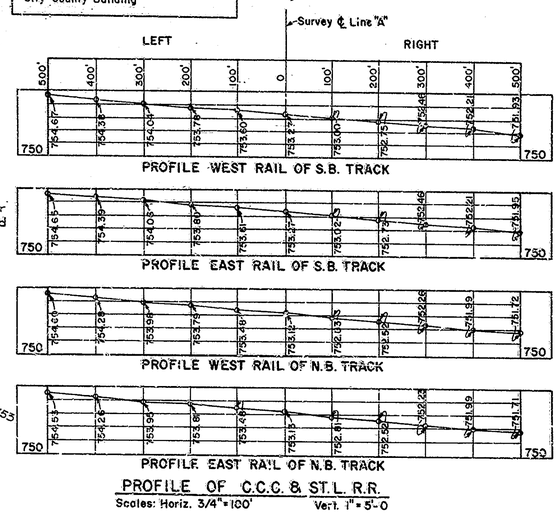
UTILITIES

INDIANAPOLIS POWER & LIGHT CO.
25 Monument Circle, Indianapolis
STANDARD OIL COMPANY
Post Box 366, Argo, Illinois
C.C.C. & St. L. R.R. (TEL.)
BUCKEYE PIPE LINE CO.
3815 W. 16th., Speedway City
INDIANAPOLIS SANITARY DISTRICT
City County Building

BRIDGES OVER 20' SPAN

PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-UI-65-3(46)117	1963	19	140

R.R. TRAFFIC CENSUS (DAILY)
Northbound - 2 Pass., 1 Switch
Southbound - 2 Pass., 1 Switch



PROFILE OF C.C.C. & ST. L. R.R.
Scales: Horiz. 3/4" = 100' Vert. 1" = 5'-0

NOTES: See Layout "B" for additional details.
Item marked (*) not included in Bridge Quantities.
These bridges are Structure No. 2 on Rd. Proj. I-UI-65-3(46)117

BALANCE	2313	2313J
FILL + 15%	48,840 CYS	46,130 CYS.
SURPLUS FOUNDATION EXCAVATION	00 CYS.	00 CYS.
⊗ SURPLUS EXCAVATION	33,310 CYS.	33,305 CYS.
SPECIAL BORROW	15,430 CYS.	12,725 CYS.

⊗ Surplus Excavation to be obtained from Balance No. 4, See Rd. Project I-UI-65-3(46)117 Road Plan & Profile Sheet No. 14.

NOTE: See Art. A-203 of Specifications regarding Test Boring Data. See Sheet No. 18 for Test Borings.

LAYOUT "A"

CONTINUOUS (COMPOSITE) STEEL BEAM BRIDGES

N.B. & S.B. STRUCTURES - 4 SPANS: 44'-9, 2 @ 83'-0, 44'-9
N.B. STR. 44'-6 CL. RDWY., 1 @ 2'-0 WALK, 1 @ 6" CURB, APPROX. SK 13°46'
S.B. STR. 41'-6 CL. RDWY., 1 @ 2'-0 WALK, 1 @ 6" CURB, APPROX. SK 12°18'
ON INTERSTATE 65 OVER C.C.C. & ST. L. R.R. & F.P. RD. NO. 5

STATE HIGHWAY DEPARTMENT OF INDIANA

MARION COUNTY

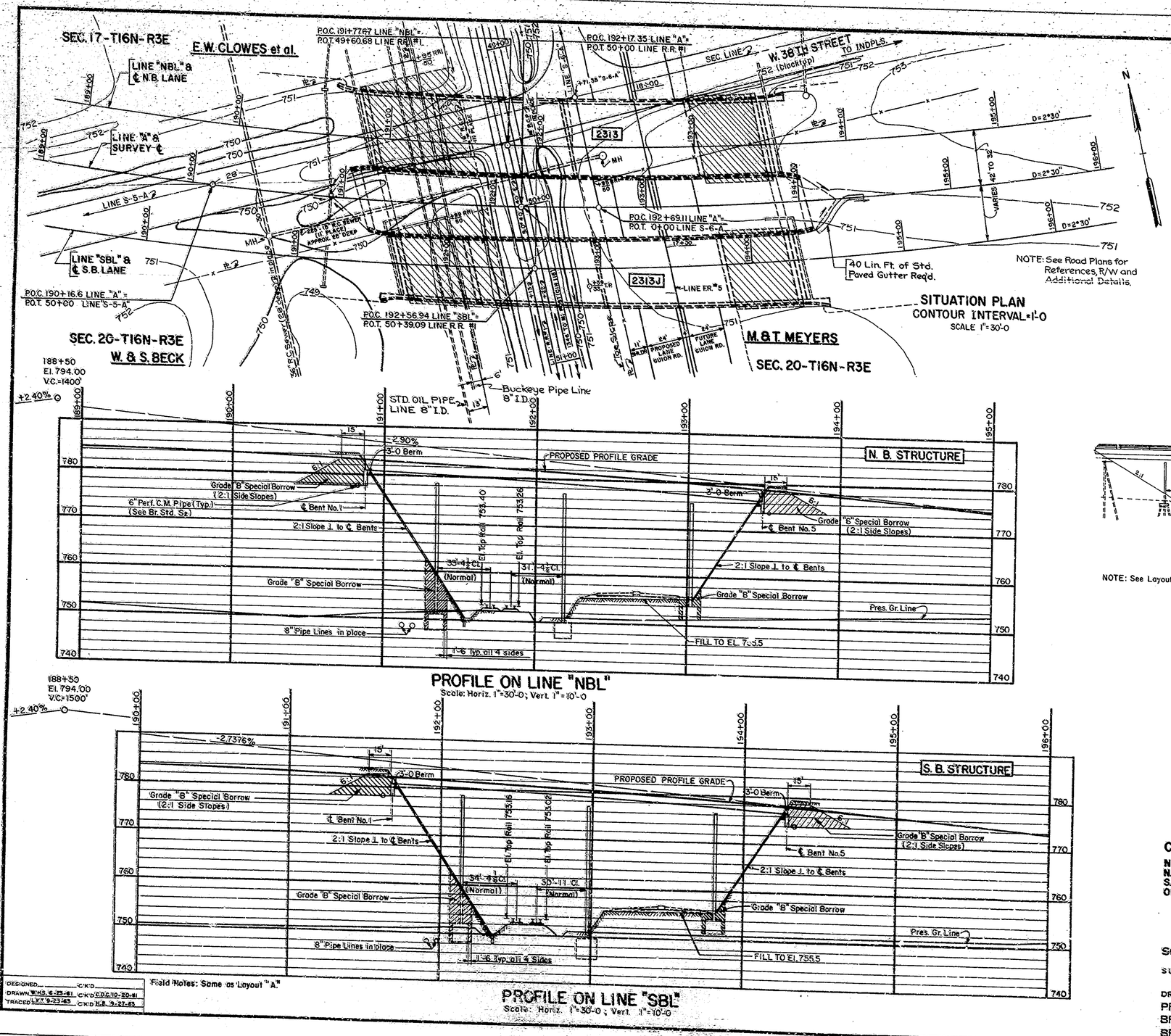
SCALE:- AS NOTED OCTOBER 10, 1963

SUBMITTED FOR APPROVAL:- James D. Mathis

DRAWING SI OF 26

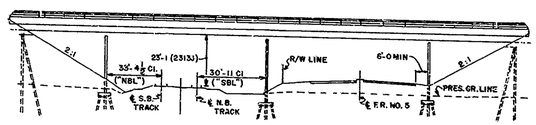
PROJECT:- I-UI-65-3(46)117 STA. 192+17.35 ("A")
BRIDGE CONTRACT NO. F-2333
BRIDGE FILE:- I-65-119-2313 N.B.
I-65-119-2313J S.B.

MARSHALL



BRIDGES OVER 20' SPAN

PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-UI-65-3(46)117	1963	20	140



ELEVATION
(Normal to Line "R.R. #1")
Scale: 1"=30'-0

NOTE: See Layout "A" for additional details.

LAYOUT "B"

CONTINUOUS (COMPOSITE) STEEL BEAM BRIDGES

N.B. & S.B. STRUCTURES - 4 - SPANS: 44'-9, 2 @ 83'-0, 44'-9
N.B. STR. 44'-6 CL. RDWY., 1 @ 2'-0 WALK, 1 @ 6" CURB, APPROX. SK. 13°46'
S.B. STR. 41'-6 CL. RDWY., 1 @ 2'-0 WALK, 1 @ 6" CURB, APPROX. SK. 12°18'
ON INTERSTATE 65 OVER C.C.C. & ST. L. R.R. & F.R. RD. NO. 5

STATE HIGHWAY DEPARTMENT OF INDIANA

MARION COUNTY

SCALE:- AS NOTED OCTOBER 10, 1963

SUBMITTED FOR APPROVAL: James D. Mathis

DRAWING:- S2 OF 26

PROJECT:- I-UI-65-3(46)117 STA. 192+17.35 ("A")

BRIDGE CONTRACT NO. R-6333

BRIDGE FILE:- I-65-119-2313 N.B.
I-65-119-2313J S.B.

BRIDGES OVER 70' SPAN					
FED. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-UI-65-3 (46) 117	1963	21.	140

N.B. Lane (2313) to be built to a 1400' vertical curve and a 2°30' horizontal curve.
S.B. Lane (2313J) to be built to a 1500' vertical curve and a 2°30' horizontal curve.

(Typ) Conduit to extend 3'-0 beyond coping into ground and not to be exposed. Conduits (See Plan & Br. Std. R2 for locations & details)

Prop. Gr. Line
Prop. Profile Grade
Aluminum Railing Type A or Steel Railing Type A
2" Steel Conduit
Prop. Gr. Line
Prop. Profile Grade
Berm
N.B. Lane Varies El. 776.5 to 778.72
S.B. Lane Varies El. 775.32 to 778.55
N.B. Lane Varies El. 771.92 to 774.54
S.B. Lane Varies El. 771.55 to El. 774.02
14" Steel Enc. Conc. Piles
Pres. Gr. Line
Batter 1:4
2:1 Slope
4" Conc. Slopewall
Pres. Ground Line
Batter 1:4 (Typ)
Treated Timber Piles
N.B. Lane El. 747.69
S.B. Lane El. 748.11
El. 747.09
El. 745.50
El. 751.59
El. 751.02
EXP.
FIXED
250'-0" Min. Vert. C.O.
275'-0" Min. Vert. C.O.
345'-0" Min. Vert. C.O.

BENT No. 1 — SPAN "A" — PIER No. 2 — SPAN "B" — PIER No. 3 — SPAN "C" — PIER No. 4 — SPAN "D" — BENT No. 5

ELEVATION

Typ. Sodding Limits
Sodding Limits (Typ)
Inlet (Type F-1)
Inlet (Type H-1)
Inlet (Type A-3)
Rdwy. Drain Type 1-A (To be centered over berm) (Typ)
Steel Exp. Jt.
Chord Span "A"
Chord Spans "B" & "C"
Chord Span "D"
Gutter Line
Curb
Clear Roadway
Bridge Floor (Along Chord)
Top Shoes
Bent Cap
Coping
Pt. of Int. Clearance
Pt. Light Std.
Light Std.
2" Steel Conduit
Joint "R"
Joint "F"
Joint "H"
4" Conc. Slopewall (See Br. Std. No.)
Slope Paving
Concrete Paving
Bituminous Paving
Bituminous Curb
Bituminous Shoulder
Integral Conc. Curb Type "B"
Integral Curb Walk
Std. Paved Gutter
Curb Turnout to Std. A-3 Inlet
Special Integral Conc. Curb
Reinf. Conc. Pavement
R.C. Bridge Approach
Widened R.C. Bridge Approach
Half Round Drip (Typ)
Roughen Constr. Jt. (Typ)
Constr. Jt. Keyway
Typ. Spans A & D
Typ. Spans B & C
Typ. @ Piers No. 2 & 4
Typ. @ Pier #3
Superelevation = 0.069'/'
Profile Grade
Chord
Varies
Prop. Line
Ft. 4'-0 Center Curb
Future Lane
Clearance

BETWEEN TRACKS C.C.C.&St.L. RR. (Line RR#)
FUTURE ℄ BETWEEN LANES, GUION RD. (Line FR#5)
℄ BETWEEN LANES & SURVEY ℄ (Line "A")
℄ N.B. LANE (Line "NBL")
℄ S.B. LANE (Line "SBL")
2313
2313J
36'-5" (Along R.R. Parapet Wall)
Skill 07' 51.7" Lt.
Skill 07' 51.7" Rt.
Sta. 14+46 50.8
Sta. 13+46 24.2
Sta. 14+92 06.8
Sta. 14+58 48.1 Lt.
Sta. 13+58 13.6 Lt.
Sta. 15+24 17.35 (A')
P.O.T. 50+39.00 (68 RR#1)
Sta. 15+24 32.54 (SBL)
P.O.T. 50+39.09 (NBL#1)
R = 1911.67 (NBL)
T = 297.43'
I = 7°60'-0" (BCRR#2)
R = 12°18' 13.6' Lt.
R = 9°39'32.2" Rt.
259'-5" c-c Bridge Floor (Along NBL)
259'-4 1/2" c-c Bridge Floor (Along SBL)
82'-10" c-c Top Shoes (Along Chord B-C)
85'-1" c-c Top Shoes
44'-9" c-c Top Shoes
Elev. 1124.9
Elev. 1124.3
Elev. 1124.0
Elev. 1123.9
Elev. 1123.8
Elev. 1123.7
Elev. 1123.6
Elev. 1123.5
Elev. 1123.4
Elev. 1123.3
Elev. 1123.2
Elev. 1123.1
Elev. 1123.0
Elev. 1122.9
Elev. 1122.8
Elev. 1122.7
Elev. 1122.6
Elev. 1122.5
Elev. 1122.4
Elev. 1122.3
Elev. 1122.2
Elev. 1122.1
Elev.

BRIDGES OVER 20' SPAN

FED. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-65-3 (46) 117	1963	22	140

℄ Between Tracks Line R.R. N°1

℄ Bent N°1

℄ Pier N°2

℄ Pier N°3

℄ Pier N°4

℄ Bent N°5

"N.B.L."

Chord Span "A"

Chord Spans "B" & "C"

Chord Span "D"

Tie Up Point Sta. 49+60.68 Line R.R. N°1

2313

(Along Chord B-C)

℄ N.B. Lane Line "N.B.L."

Tangent to "N.B.L." at Sta. 191+77.67

Sta. 50+00 Line R.R. N°1

℄ Between Lanes Line "A"

Tangent to Line "A" at Sta. 192+17.35

℄ S.B. Lane Line "S.B.L."

Tangent to "S.B.L." at Sta. 192+56.94

Tie Up Point Sta. 50+39.09 Line R.P. N°1

2313J

TIE UP DIMENSIONS

INDIANA STATE HIGHWAY COMMISSION

SCALE: 1" = 10'-0"

OCTOBER 10, 1963

SUBMITTED FOR APPROVAL: James D. Mattis

DRAWING: 5 OF 26

PROJECT: I-01-65-3 (46) 117

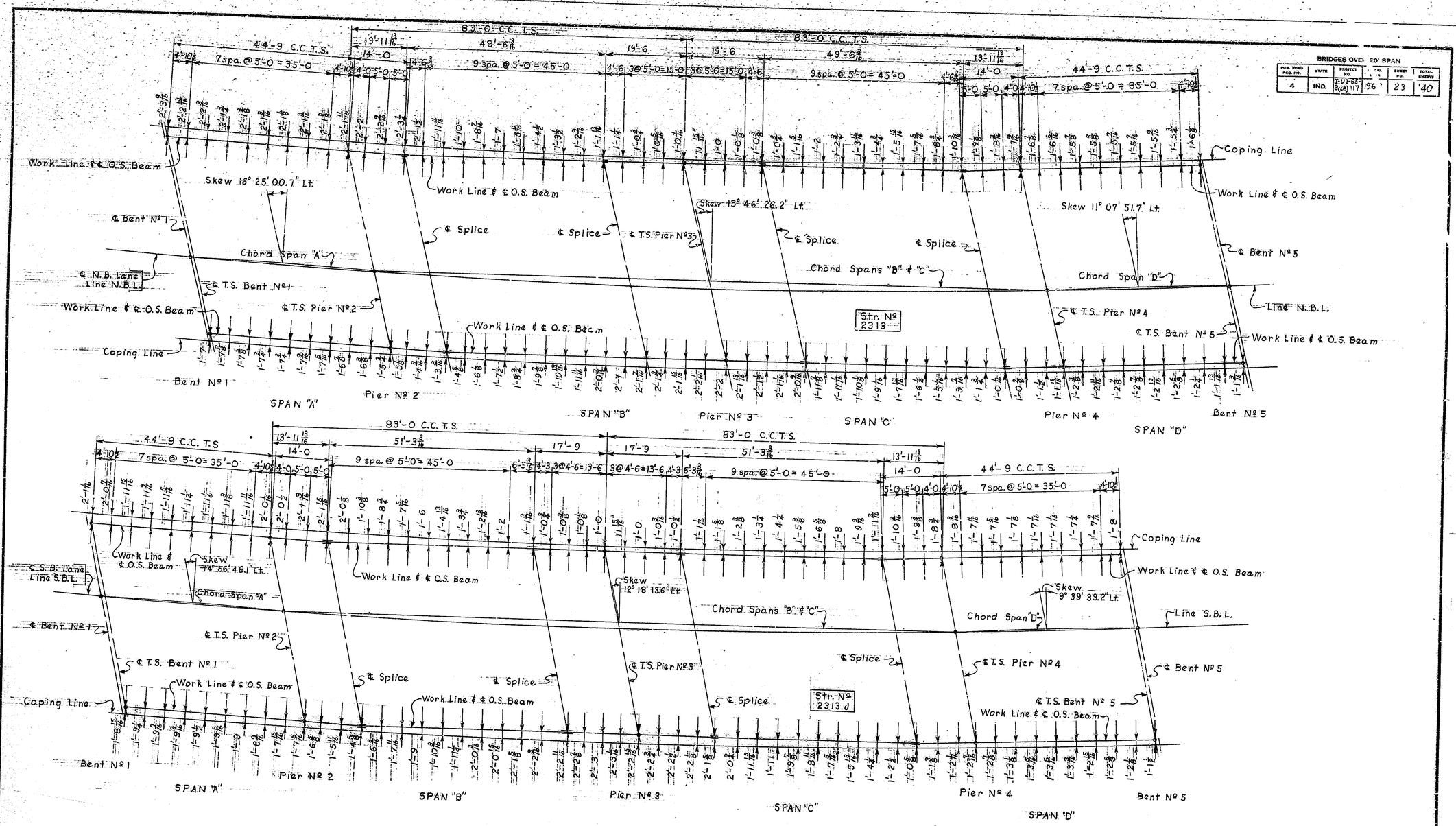
BRIDGE CONTRACT NO. F-6333

BRIDGE FILE: I-65-119-2313 (N.B. Lane)
I-65-119-2313J (S.B. Lane)

DESIGNED _____ CKD. _____
DRAWN LEM 7-15-63 CKD. JDM 8-29-63
TRACED JDO 8-23-63 CKD. JDM 9-3-63

MARBAUCH ENG. NO. 169

BRIDGES OVER 20' SPAN						
PUB. ROAD FED. NO.	STATE	PROJECT NO.	SEC.	SHEET NO.	TOTAL SHEETS
4	IND.	I-U-65-3(46)	117	196	23	40



COPING LINE OFFSETS

INDIANA STATE HIGHWAY COMMISSION

SCALE:- $\frac{3}{32}$" = 1'-0

OCTOBER 10, 1963

SUBMITTED FOR APPROVAL:- James D. Mattis

DRAWING:- S5 OF 26

PROJECT:- I-U-65-3(46) 117

BRIDGE CONTRACT NO. R-6333

BRIDGE FILE:- I-65-119-2313 N.B.L.
I-65-119-2313 J.S.B.L.

DESIGNED HWA 7-1-63 CK'D JDM 7-2-63
DRAWN LEN 7-22-63 CK'D JDM 9-25-63
TRACED _____ CK'D _____

MARBAUGH ENG. NO. 166

BRIDGES OVER 20' SPAN

PUB. ROAD SER. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-UI-65 3(46)117	1963	24	140

WING "B"
(Details & Dim. not shown same as for corresponding parts Wing "A")

Parallel to Chord "A" Extended @ P.R.C.

Tangent to R.F. Railing @ P.R.C.

CHORD "A" Extended

Parallel to Chord "A" Extended @ P.C.C.

Tangent to R.F. Railing @ P.C.C.

Along R.F. Railing

WING "A"

P.R.C.

P.C.C.

End 1½" Coping

End 1½" Coping

℄ Bent

℄ Anchor B. "AP"

1-Anchor B. "AP" req'd @ each Bm (8 Total)

4 Eq. Spcs.

℄ Anchor B. "AP"

3"x5" Const. Jt. Keyway

Typ Unless Noted

Anchor Rods: MK AR

501b (Unless Noted)

Spa. Anchor Rods: MK AR

11 Spa. @ 2'-0 = 22'-0

3 Spa @ 1'-0 = 3'-0

Typ Spa. 401b Btwn. Int. Bms.

5 Eq. Spa.

3 Eq. Spa.

Step Location

Skew 16°25'00" Lt.

602b

56-401b

½" Coping

CHORD "A"

PLAN - BENT Nº 1

Showing Conc. Dim. & Reinf. Bars 401b

Scale: ⅜" = 1'-0

NOTES:

Anchor Plates "AP" to be preset in concrete.
For Reinforcing Bar Notes, see Br. Std "C."
For Additional Details, see Drwg. S 7, and Drwg. S 8.
For Bill of Materials, see Drwg. S 8.
Bent Cap is not to be poured until fill has been completed up to approximate elevation of the bottom of cap.
Crosshatched portions indicate extent of horizontal Const. Jts. of top of cap.

OFFSETS TO REAR FACE WALL
WING "B"
WING "A" Same by opp. Hand
Scale: ⅜" = 1'-0

P.R.C. or P.C.C.

Chord "A" Extended

9-14" ϕ Steel Encased Concrete Piles to be Driven to 40 Ton Min. Brg.

℄ Bent

Batter Piles 1:4

PILING PLAN
Scale: ¼" = 1'-0

BENT Nº 1 DETAILS

INDIANA STATE HIGHWAY COMMISSION

SCALE: As Noted — OCTOBER 10, 1963

SUBMITTED FOR APPROVAL: James D. Mather

DRAWING 56 OF 26

PROJECT: I-UI-65-3(46)117

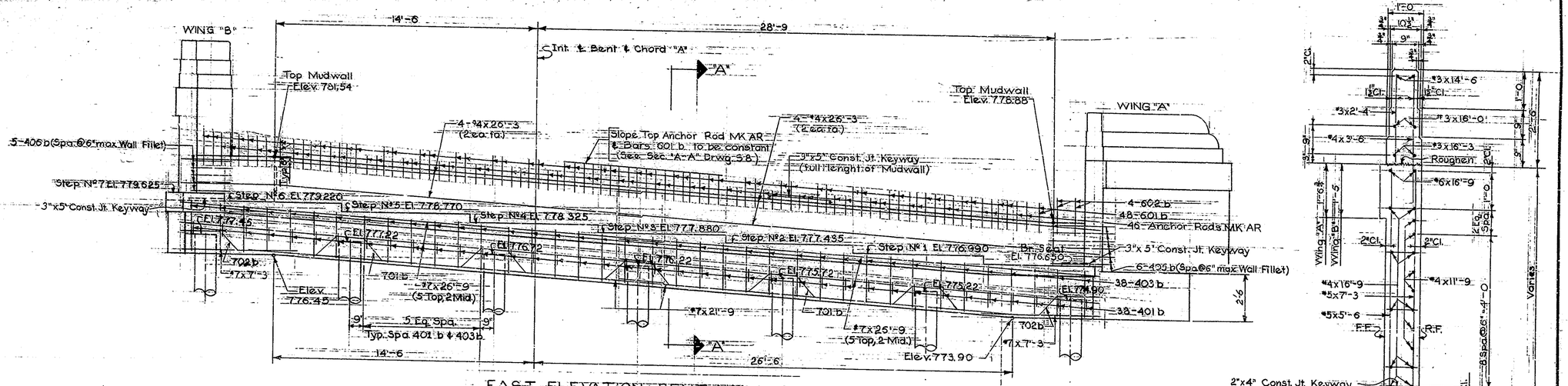
BRIDGE CONTRACT NO. R-6533

BRIDGE FILE: I-65-119-2313

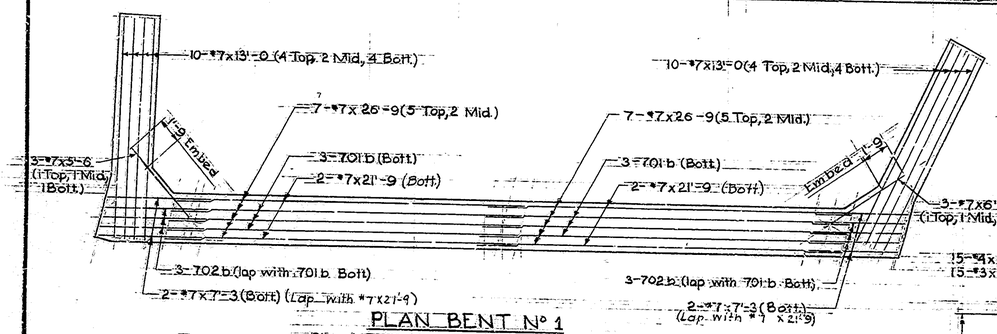
DESIGNED HRB 2-3-63 CKD. JSS 6-27-63
DRAWN JKB 3-30-63 CKD. HB 7-24-63
TRACED CKD.

MARBAUGH ENGINEERING SUPPLY N166

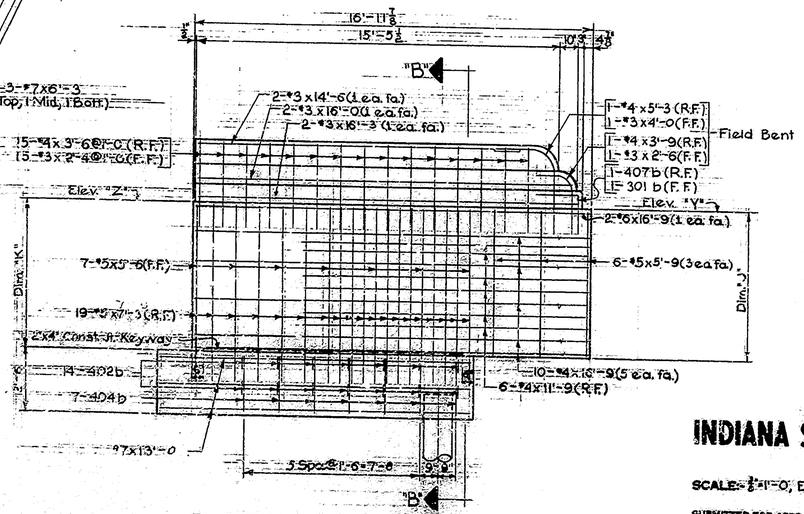
BRIDGES OVER 20' SPAN					
PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-UI-65 3(48)117	1963	25	140



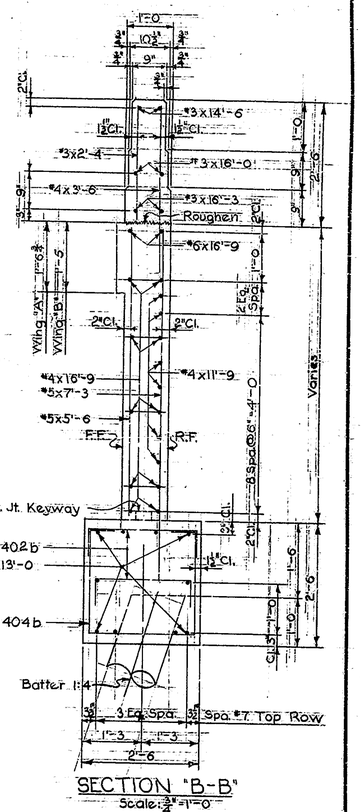
EAST ELEVATION BENT Nº 1



PLAN BENT Nº 1
Showing Cap Longitudinal Reinforcing Steel
Scale: 1/4"=1'-0



TYPICAL WING DETAILS



NOTES:
For Reinforcing Bar Notes, see Br. Std. "C."
For Additional Details, see Drwg. 96 & Drwg. S8
For Bill of Materials, see Drwg. S 8
For Section "A-A", see Drwg. S-8

WING WALL HEIGHTS		
Wing	Dim. "J"	Dim. "K"
"A"	5'-11"	5'-9"
"B"	6'-5"	6'-0"

TABLE OF ELEVATIONS		
Elev.	Wing "A"	Wing "B"
"Y"	782.34	785.21
"Z"	782.16	785.02

DESIGNED FLD 6-21-63 Checked JSS 8-27-63
DRAWN LK 9-6-63 Checked HR 9-24-63
TRACED CKD.

BENT Nº 1 DETAILS

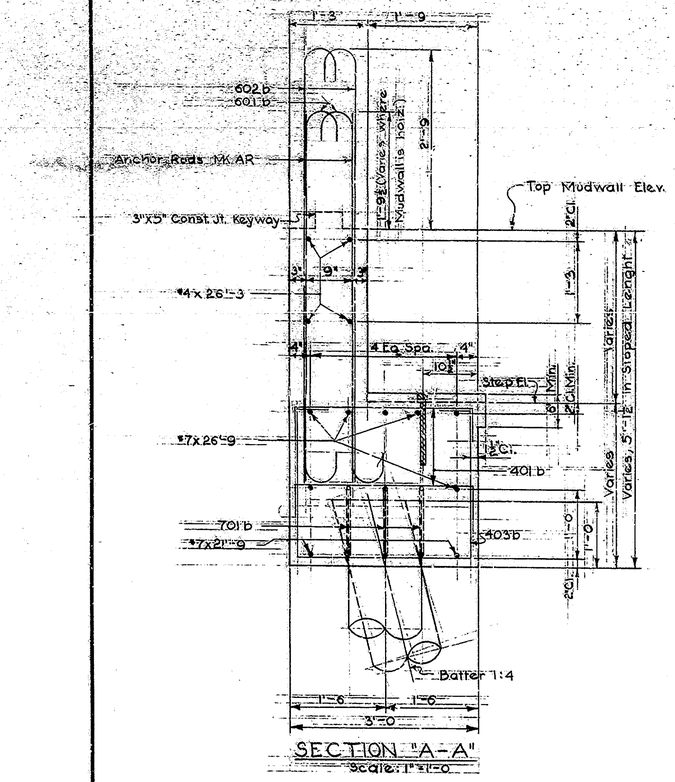
INDIANA STATE HIGHWAY COMMISSION

SCALE: 3/8"=1'-0, Except as Noted. OCTOBER 10, 1963
SUBMITTED FOR APPROVAL: James D. Mathis
DRAWING 57 OF 26
PROJECT I-UI-65-3(48)117
BRIDGE CONTRACT NO. R-6333
BRIDGE FILE I-65-119-2313

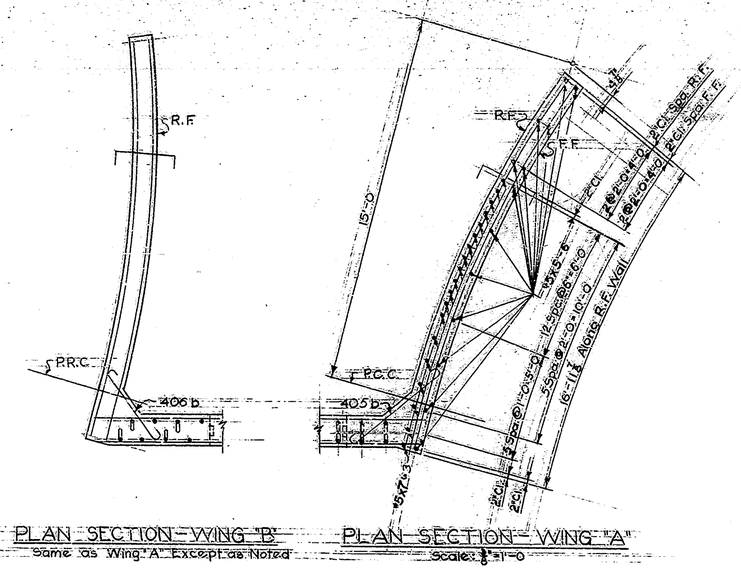
HARRISON ENGINEERING SUPPLY N°100

BRIDGES OVER 20' SPAN

PUB. ROAD RTE. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-UT-65 3(40)117	1963	28	140

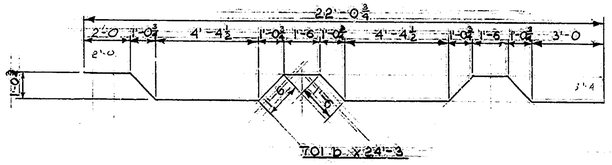


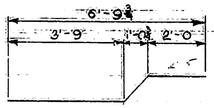
SECTION "A-A"
Scale: 1" = 1'-0

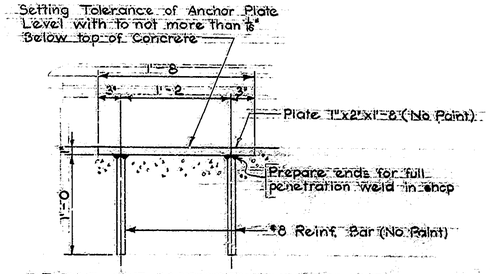


PLAN SECTION - WING "B"
Same as Wing "A" Except as Noted

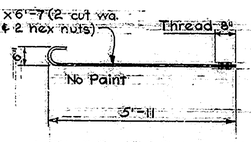
PLAN SECTION - WING "A"
Scale: ⅜"=1'-0



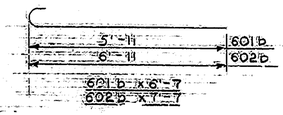




DETAIL OF ANCHOR PLATE "AP"
Scale: 1½"=1'-0

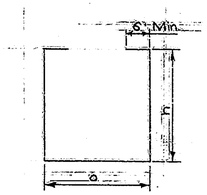


ANCHOR RODS - MK AR

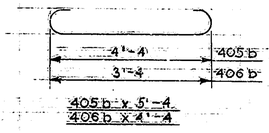


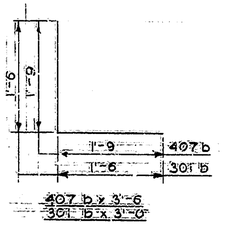


Mark	o	h	Length
401b	2'-9	6"	3'-9
402b	2'-3	6"	3'-3



Mark	o	h	Length
403b	2'-9	2'-3	8'-3
404b	2'-3	2'-2	7'-7





BILL OF MATERIALS

Size & Mark	No. of Bars	Length	Weight
701b	6	24'-3	
702b	6	7'-3	
*7	14	26'-9	
*7	4	21'-9	
*7	20	13'-0	
*7	4	7'-3	
*7	3	6'-3	
*7	3	5'-6	
	Total *7		1992#
601b	48	6'-7	
602b	4	7'-7	
*6	4	16'-9	
	Total *6		621#
*5	38	7'-3	
*5	12	5'-9	
*5	14	5'-6	
	Total *5		1410#
401b	96	3'-9	
402b	28	3'-3	
403b	32	8'-3	
404b	14	7'-7	
405b	6	5'-4	
406b	5	4'-4	
407b	2	3'-6	
*4	6	26'-3	
*4	20	16'-9	
*4	12	11'-9	
*4	2	5'-3	
*4	2	3'-9	
*4	30	3'-6	
	Total *4		1163#
301b	2	3'-0	
*3	4	16'-3	
*3	4	16'-0	
*3	4	14'-6	
*3	2	4'-6	
*3	2	2'-6	
*3	30	2'-4	
	Total 13		104#
	Total Steel		4320#

CONCRETE

Class "F" Concrete	
Pour No. 1	25.7 cys.
Pour No. 2	4.3 cys.
Pour No. 3	2.3 cys.
Total Class "F" (Except Railing Conc.)	34.3 C/yds.
Railing Conc.	
Railing Concrete (CL)	
4 Rails @ 1.65 c/yd	2.6 cys.

MISCELLANEOUS

9-1¼" Steel Encased Conc. Pile x ⓔ 45'-0 (76)	405 Lft.
Anchor Plates "AP"	8 ea.
2" ø Steel Conduit	22 Lft.
Anchor Rods MK AR	48 ea.

POUR DESIGNATION

Pour No. 1 Main Cap, Wing Cap and Mudwall between vertical Construction Joints.
Pour No. 2 Wingwall "A" and Mudwall outside vertical Construction Joint.
Pour No. 3 Wingwall "B" and Mudwall outside vertical Construction Joint.

NOTES

For Reinforcing Bar Notes, see Br. Std. "C."
For Location of Section "A-A" see Drwg. S.Z.

BENT No. 1 DETAILS & BILL OF MATERIALS

INDIANA STATE HIGHWAY COMMISSION

SCALE: As Noted — OCTOBER 10, 1963

SUBMITTED FOR APPROVAL: James D. Mattox

DRAWING 3 OF 20

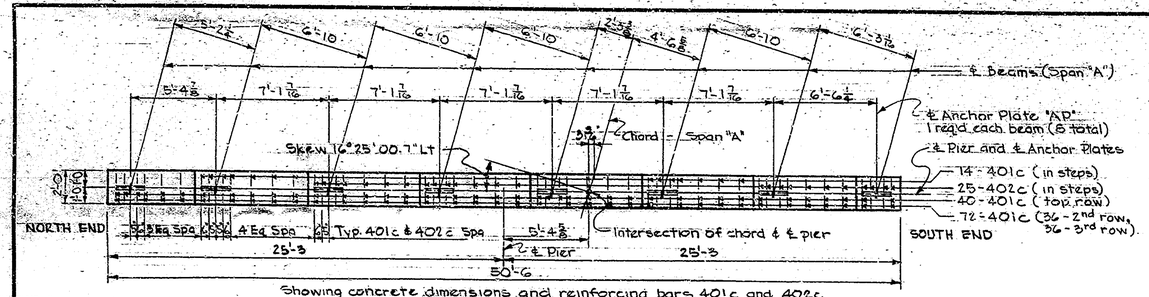
PROJECT: I-UT-65-3(40)117

BRIDGE CONTRACT NO. R-6335

BRIDGE FILE: I-65-119-2.51 3

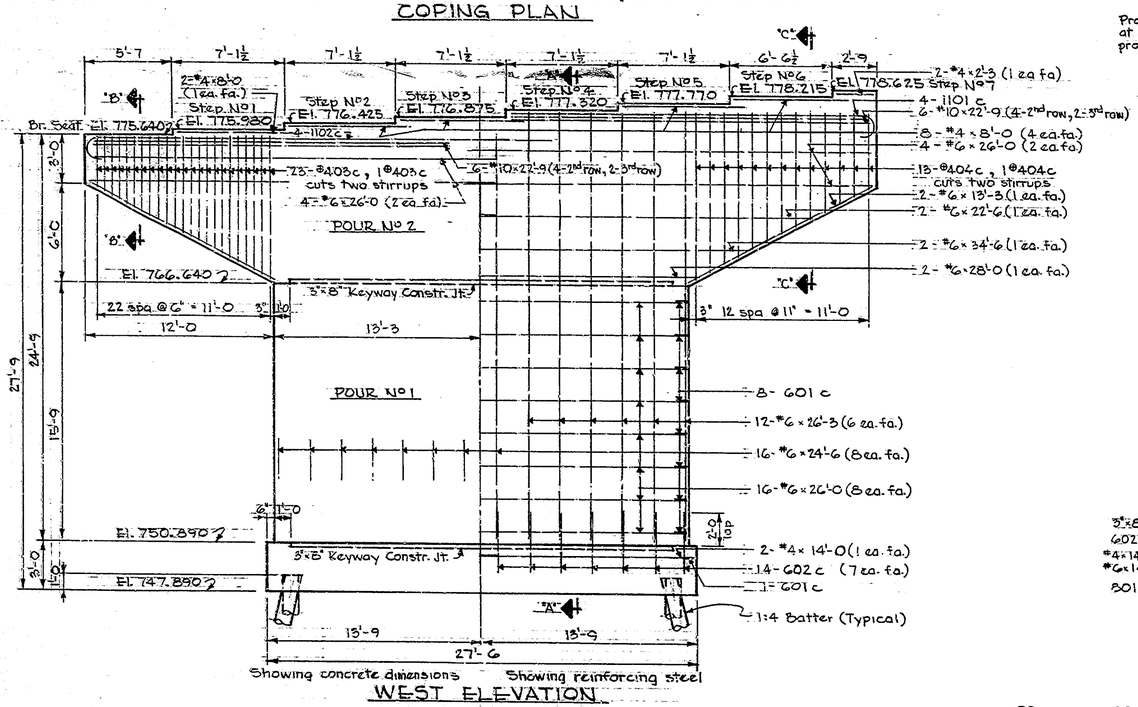
DESIGNED LB 9-23-63 CKD AS 9-27-63
DRAWN JK S-9-63 CKD LB 9-27-63
TRACED CKD

BRIDGES OVER 20' SPAN					
PUB. ROAD SER. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-UT-65-3(46) 117	1963	27	140



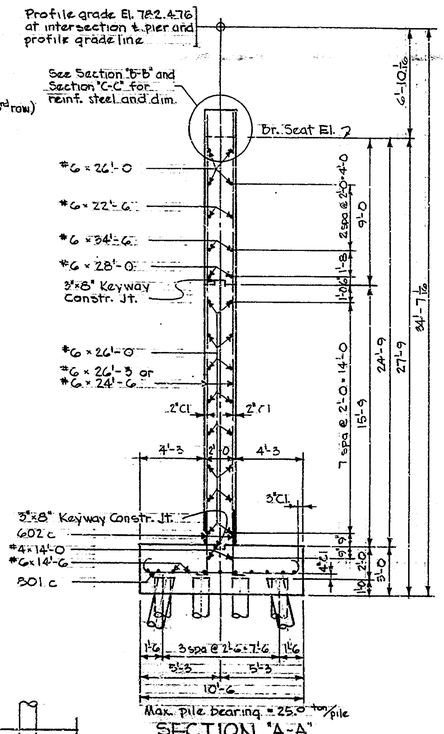
Showing concrete dimensions and reinforcing bars 401c and 402c

COPING PLAN

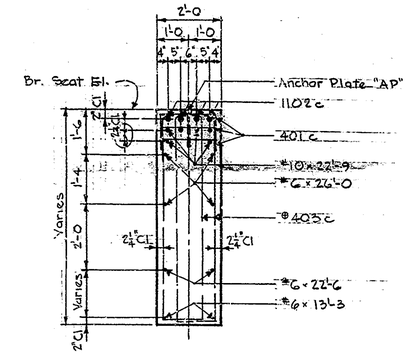


Showing concrete dimensions — Showing reinforcing steel

WEST ELEVATION

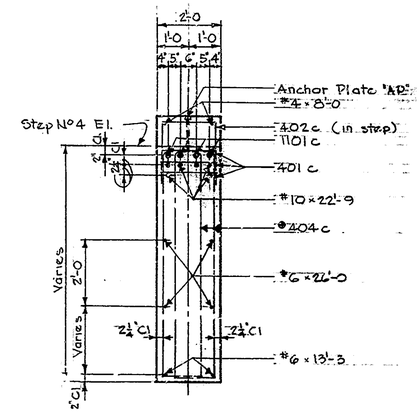


SECTION "A-A"



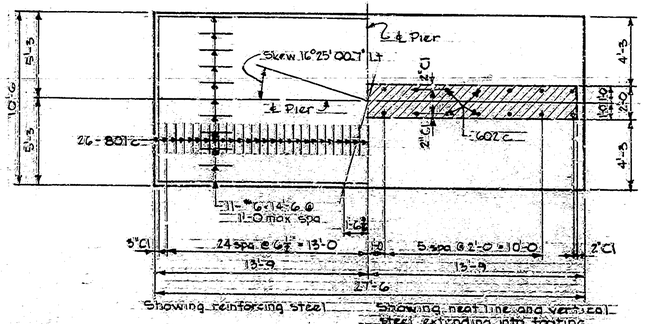
SECTION "B-B"

Scale: ½"=1'-0

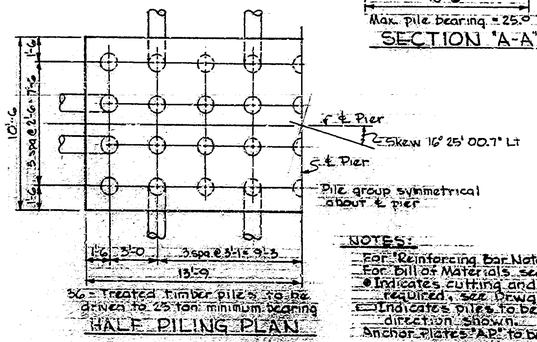


SECTION "C-C"

Scale: ½"=1'-0



FOOTING PLAN



HALF PILING PLAN

NOTES:
- For 'Reinforcing Bar Notes' see Br. Std. 'C'.
- For Bill of Materials see Drwg. 3.12.
- ● Indicates cutting and bending diagram required. See Drwg. 3.9.
- ⊂ Indicates piles to be battered 1:4 in the direction shown.
- Anchor plates 'AP' to be preset in the concrete.

PIER No. 2 DETAILS

INDIANA STATE HIGHWAY COMMISSION

SCALE: ½"=1'-0 UNLESS NOTED — OCTOBER 10, 1963

SUBMITTED FOR APPROVAL: James D. Mattis

DRAWING: 3.9 OF 26

PROJECT: I-UT-65-3(46)-117

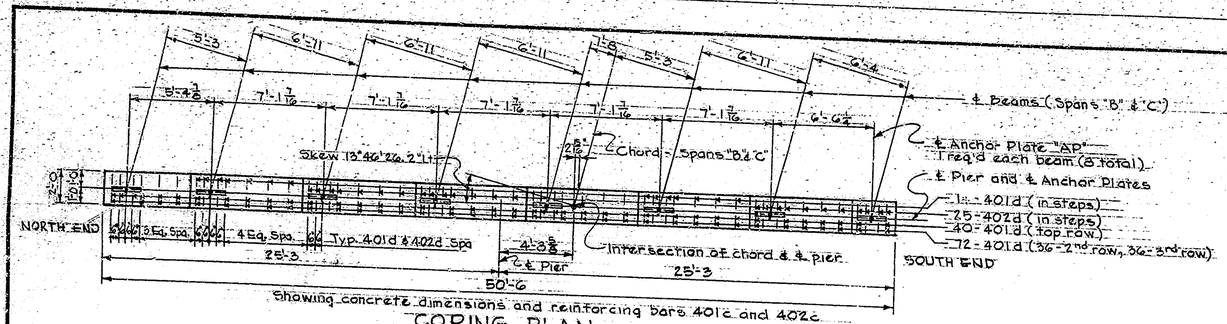
BRIDGE CONTRACT NO. R-6333

BRIDGE FILE: I-65-117-2315

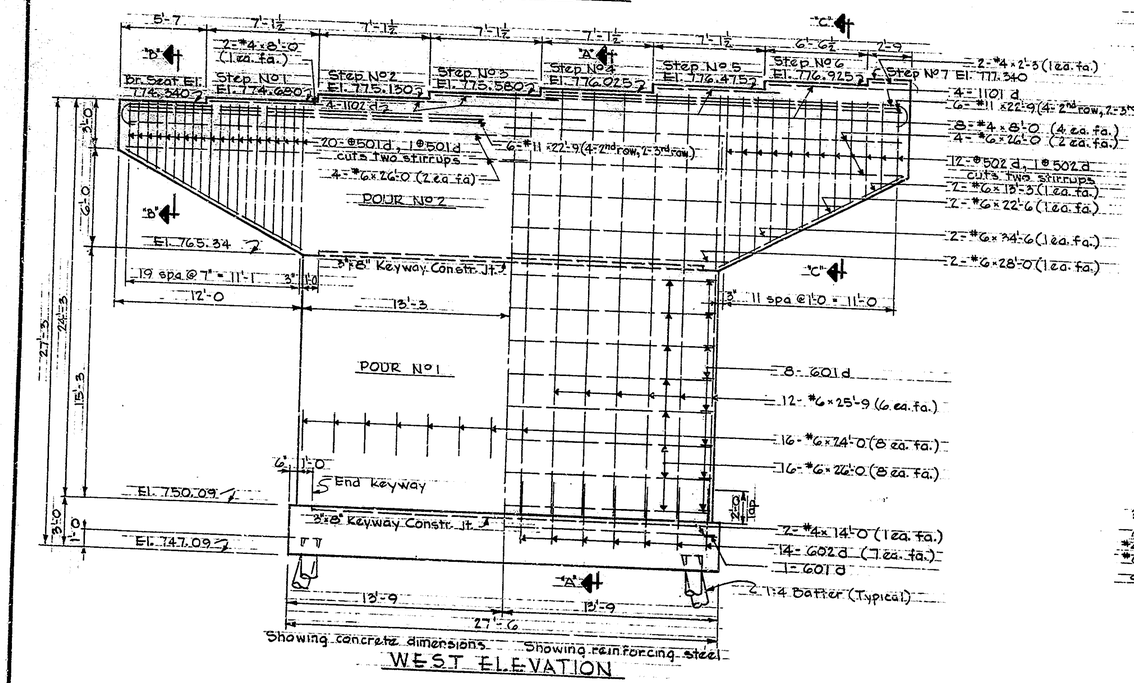
DESIGNED	CKD.	Sec. 3-16-63	Sec. 3-30-63
DRAWN	CKD.	Sec. 9-16-63	Sec. 9-28-63
TRACED	CKD.		

WARRANTY - ENG. NO. 188

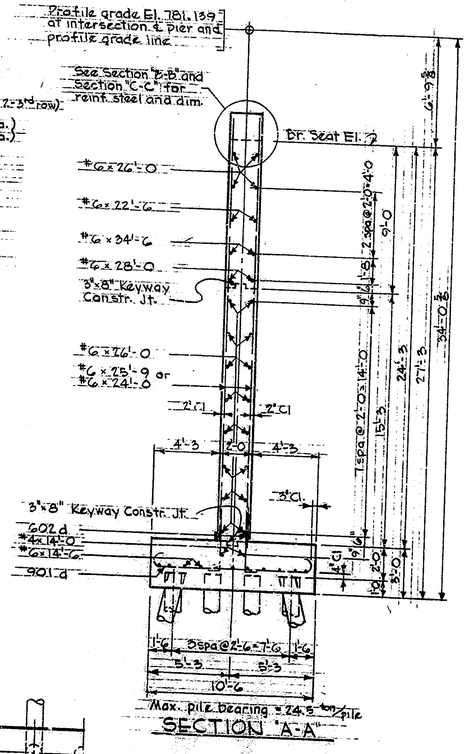
BRIDGES OVER 20' SPAN					
PUR. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-UI-65 3(40)117	1963	28	140



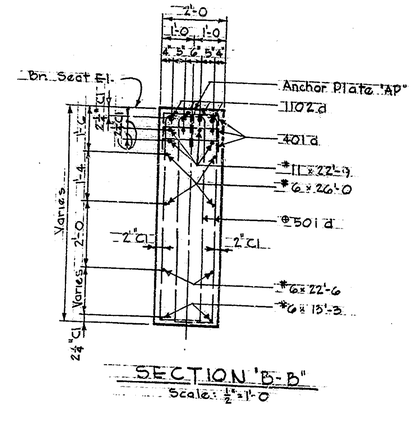
COPING PLAN



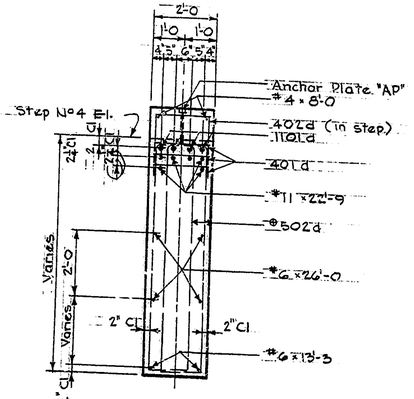
WEST ELEVATION



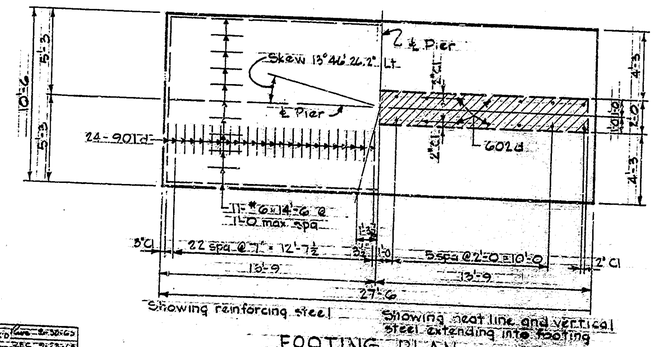
SECTION "A-A"



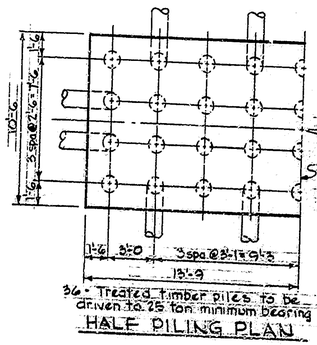
SECTION "B-B"
Scale: ½" = 1'-0



SECTION "C-C"
Scale: ½" = 1'-0



FOOTING PLAN



HALF PILING PLAN

NOTES:
- For "Reinforcing Bar Notes" see Dr. Std. "C".
- For Bill of Materials see Drwg. S10.
- ● Indicates cutting and bending diagram required. See Drwg. S11.
- ⊏ Indicates piles to be battered 4:1 in the direction shown.
- Anchor Plates "AP" to be preset in the concrete.

PIER No 3 DETAILS

INDIANA STATE HIGHWAY COMMISSION

SCALE: ½" = 1'-0 UNLESS NOTED OCTOBER 10, 1963

SUBMITTED FOR APPROVAL: James D. Mattis

DRAWING S10 OF 26

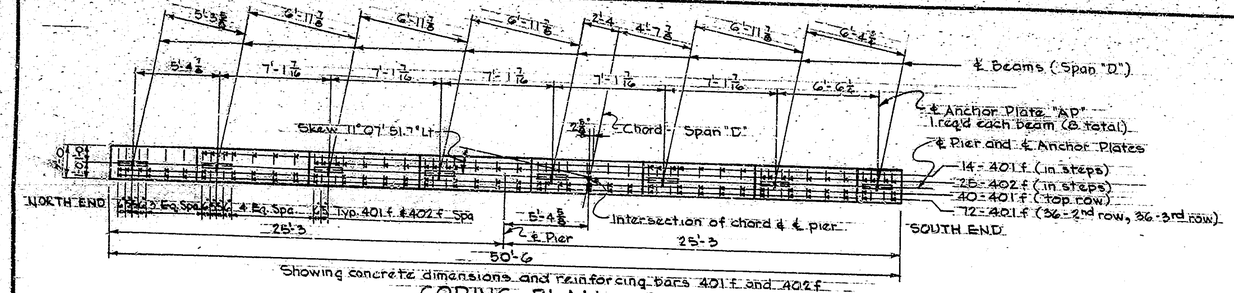
PROJECT: I-UI-65-3(40)117

BRIDGE CONTRACT NO. R-6333

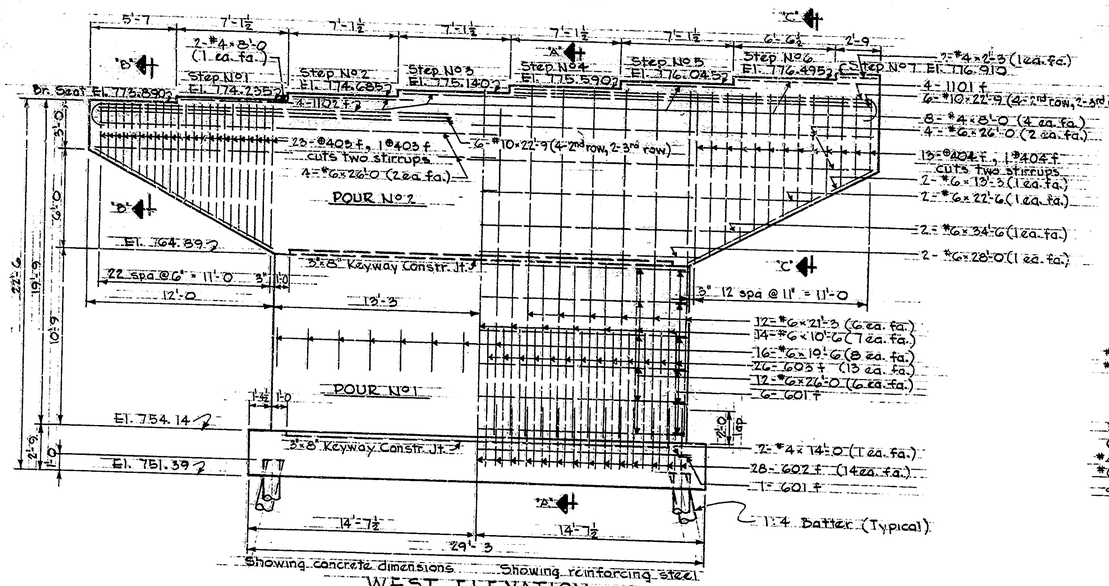
BRIDGE FILE: I-65-119-2313

DESIGNED KBC 8-63 CK'D Date 8-30-63
DRAWN [illegible] 9-63 CK'D SEC. 9-23-63
TRACED CK'D

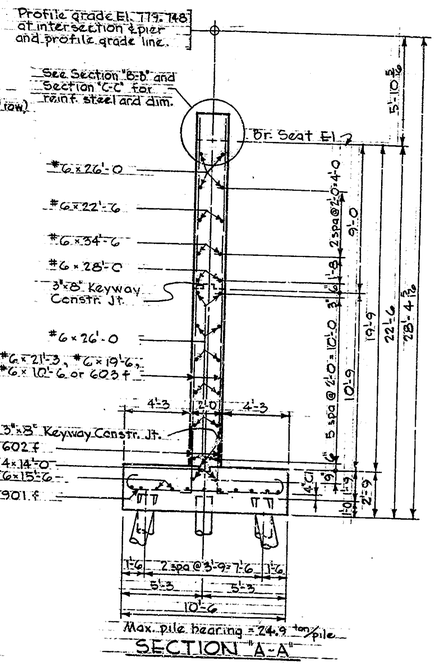
BRIDGES OVER 20' SPAN					
FED. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-UI-65 Sec. 5(46)117	1963	29	140



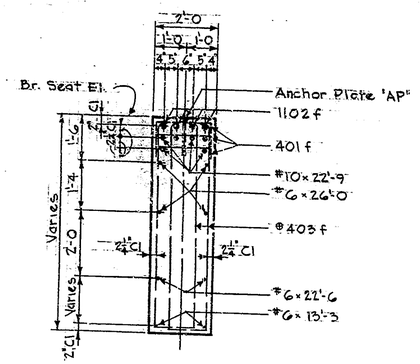
COPING PLAN



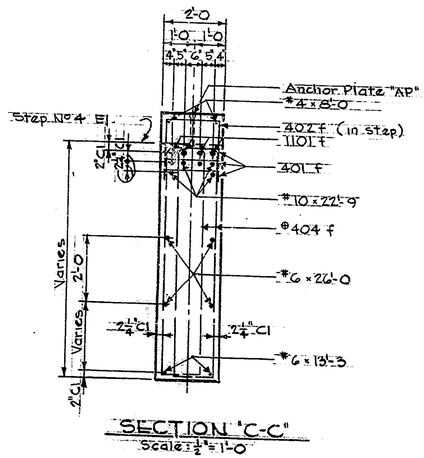
WEST ELEVATION



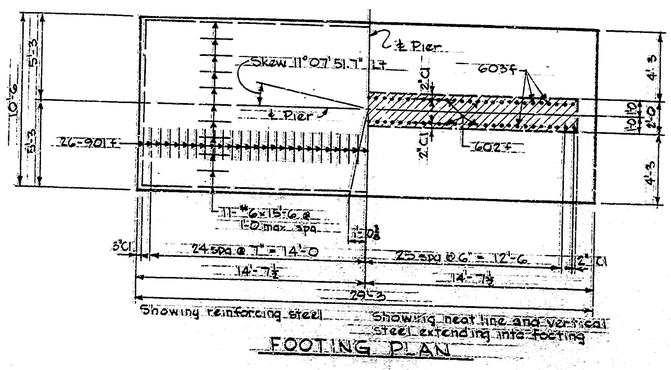
SECTION "A-A"



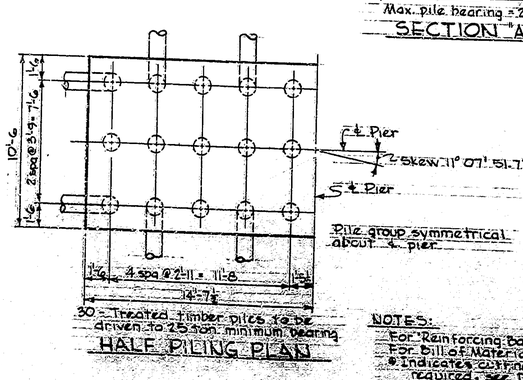
SECTION "B-B"
Scale: ½"=1'-0



SECTION "C-C"
Scale: ½"=1'-0



FOOTING PLAN



HALF PILING PLAN

NOTES:
For "Reinforcing Bar Notes" see Br. Std. "C".
For Bill of Materials see Drwg. Sig.
# Indicates cutting and bending diagram required, see Drwg. Sig.
□ Indicates piles to be battered 1:4 in the direction shown.
Anchor Plates "AP" to be preset in the concrete.

PIER No 4 DETAILS

INDIANA STATE HIGHWAY COMMISSION

SCALE: ½"=1'-0 UNLESS NOTED OCTOBER 10, 1963

SUBMITTED FOR APPROVAL: James D. Mattis

DRAWING 31 OF 26

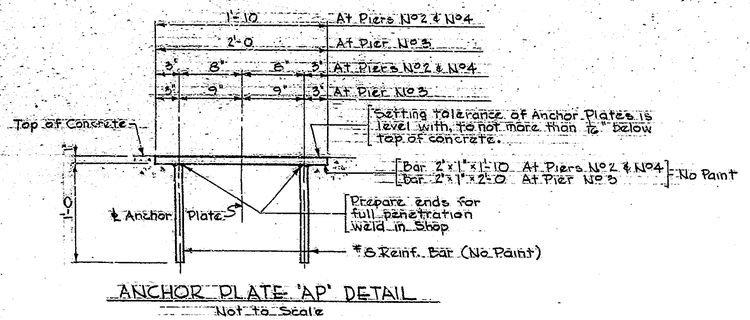
PROJECT I-UI-65-5(46)-117

BRIDGE CONTRACT NO. R-6333

BRIDGE FILE I-65-119-2315

DESIGNED	REC 8-21-63	C'K'D	Rec 8-30-63
DRAWN	Rec 9-19-63	C'K'D	Rec 9-25-63
TRACED		C'K'D	

BRIDGES OVER 20' SPAN					
FED. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
#	IND.	I-UI-65 3(22)117	1963	30	140

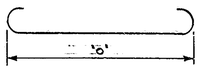


ANCHOR PLATE 'AP' DETAIL

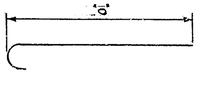
Not to Scale



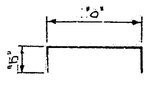
Mark	'h'	'o'	Length
602.c	3'-8	6"	4'-4
602.d			
602.f	3'-5	8"	4'-1
603.f	8'-0	2"	8'-8



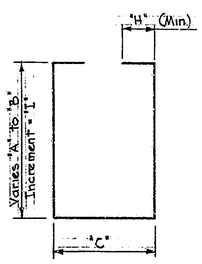
Mark	'o'	Length
801.c	10'-0	12'-2
901.d	10'-0	12'-6
901.f		



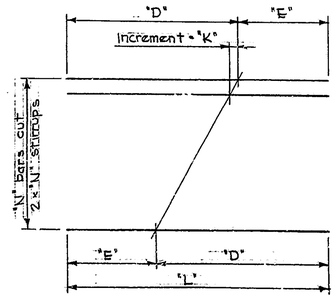
Mark	'o'	Length
1101.c	23'-1	24'-8
1101.d		
1101.f		
1102.c	29'-7	31'-2
1102.d		
1102.f		



Mark	'o'	'h'	Length
601.c	1'-6½	6¼"	2'-7
601.d			
601.f			
401.c			
401.d	7'-9	8"	3'-7
401.f			
402.c			
402.d	1'-9	7'-6	4'-9
402.f			



BENDING DIAGRAM



CUTTING DIAGRAM

Mark	'A'	'B'	'C'	'H'	'I'	'K'	'N'	'D'	'E'	'L'
@403.c	3'-1½	3'-7½	1'-3	6"	3"	6"	23	19'-6	8'-6	28'-0
@403.f										
@404.c	4'-10	10'-4	1'-3	6"	5¼"	11"	13	22'-11	11'-11	34'-10
@404.f										
@501.d	3'-1	8'-7½	1'-3½	7"	5"	9"	20	19'-9	8'-8	28'-5
@502.d	4'-10	10'-4	1'-3½	7"	6"	1'-0	12	23'-2	12'-2	35'-4

BILL OF MATERIALS PIER No 2

REINFORCING STEEL

Size & Mark	No of Bars	Length	Weight
1101.c	4	24'-8	
1102.c	4	31'-2	
		Total #11	1187#
#10	12	22'-9	1175#
801.c	51	12'-2	1687#
601.c	18	2'-7	
602.c	28	4'-4	
#6	2	34'-6	
#6	2	28'-0	
#6	12	26'-3	
#6	24	22'-0	
#6	16	20'-6	
#6	4	22'-6	
#6	22	14'-6	
#6	4	13'-3	
		Total #6	3133#
401.c	126	3'-1	
402.c	25	4'-9	
@403.c	23	28'-0	
@404.c	13	34'-10	
#4	4	14'-0	
#4	10	8'-0	
#4	2	2'-3	
		Total #4	1165#
	Total	Steel	8317#

CONCRETE

Class 'F' (Pour No 2)	33.4 cys
Class 'E'-Adv. Plg. (Pour No 1)	30.9
Class 'E'-In Footing	32.1

MISCELLANEOUS

Anchor Plates 'AP'	8 Each
30'-Treated Timber Piles x 25'-0 (Approx.)	900 LFT

BILL OF MATERIALS PIER No 3

REINFORCING STEEL

Size & Mark	No of Bars	Length	Weight
1101.d	4	24'-8	
1102.d	4	31'-2	
#11	12	22'-9	
		Total #11	2637#
901.d	48	12'-6	2040#
601.d	18	2'-7	
602.d	28	4'-4	
#6	2	34'-6	
#6	2	28'-0	
#6	24	26'-0	
#6	12	25'-9	
#6	16	24'-0	
#6	4	22'-6	
#6	22	14'-6	
#6	4	13'-3	
		Total #6	3112#
@501.d	20	28'-5	
@502.d	12	35'-4	
		Total #5	1035#
401.d	126	3'-1	
402.d	25	4'-9	
#4	4	14'-0	
#4	10	8'-0	
#4	2	2'-3	
		Total #4	433#
	Total	Steel	9257#

CONCRETE

Class 'F' (Pour No 2)	33.5cys
Class 'E'-Adv. Plg. (Pour No 1)	29.9
Class 'E'-In Footing	32.1

MISCELLANEOUS

Anchor Plates 'AP'	8 Each
30'-Treated Timber Piles x 25'-0 (Approx.)	900 LFT

BILL OF MATERIALS PIER No 4

REINFORCING STEEL

Size & Mark	No of Bars	Length	Weight
1101.f	4	24'-8	
1102.f	4	31'-2	
		Total #11	1187#
#10	12	22'-9	1175#
901.f	51	12'-6	2168#
601.f	14	2'-7	
602.f	54	4'-1	
603.f	52	8'-8	
#6	2	34'-6	
#6	2	28'-0	
#6	20	26'-0	
#6	4	22'-6	
#6	12	21'-3	
#6	16	19'-6	
#6	22	15'-6	
#6	4	13'-3	
#6	26	10'-6	
		Total #6	4020#
401.f	126	3'-1	
402.f	25	4'-9	
@403.f	23	28'-0	
@404.f	13	34'-10	
#4	4	14'-0	
#4	10	8'-0	
#4	2	2'-6	
		Total #4	1165#
	Total	Steel	9715#

CONCRETE

Class 'F' (Pour No 2)	33.5cys
Class 'E'-Adv. Plg. (Pour No 1)	21.1
Class 'E'-In Footing	31.3

MISCELLANEOUS

Anchor Plates 'AP'	8 Each
30'-Treated Timber Piles x 25'-0 (Approx.)	750 LFT

NOTES:

For Reinforcing Bar Notes, see Br. Std. C-1.
Anchor Plates 'AP' are to be preset in the concrete.
@ Indicates Cutting and Bending Diagrams are required. See diagrams on this Drawing.

PIERS No 2, No 3 & No 4
BILLS OF MATERIALS

INDIANA STATE HIGHWAY COMMISSION

SCALE:- NONE — OCTOBER 10, 1963

SUBMITTED FOR APPROVAL:- James D Mallett

DRAWING:- 5 12 OF 26

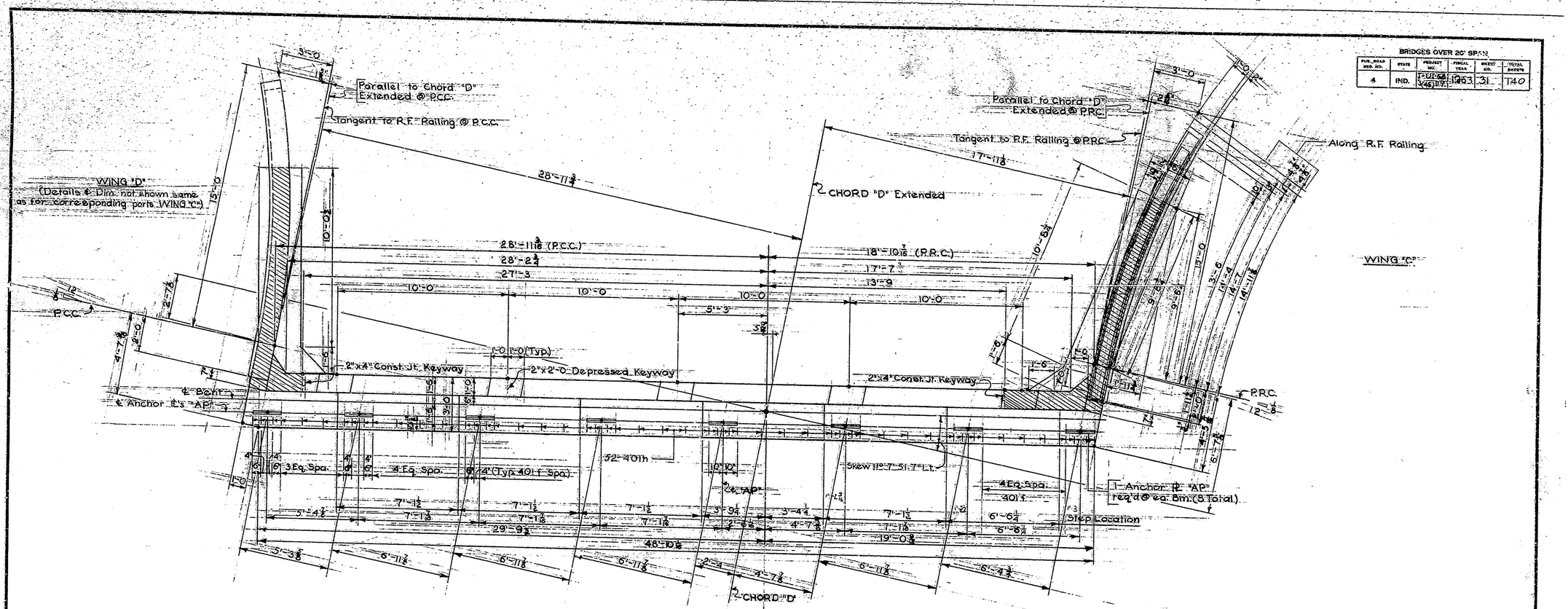
PROJECT:- I-UI-65-3(22)-117

BRIDGE CONTRACT NO. R-6333

BRIDGE FILE:- I-65-119-2315

DESIGNED ____ C'K'D ____
DRAWN Kuc. 9-24-63 C'K'D REC. 9-24-63
TRACED ____ C'K'D ____

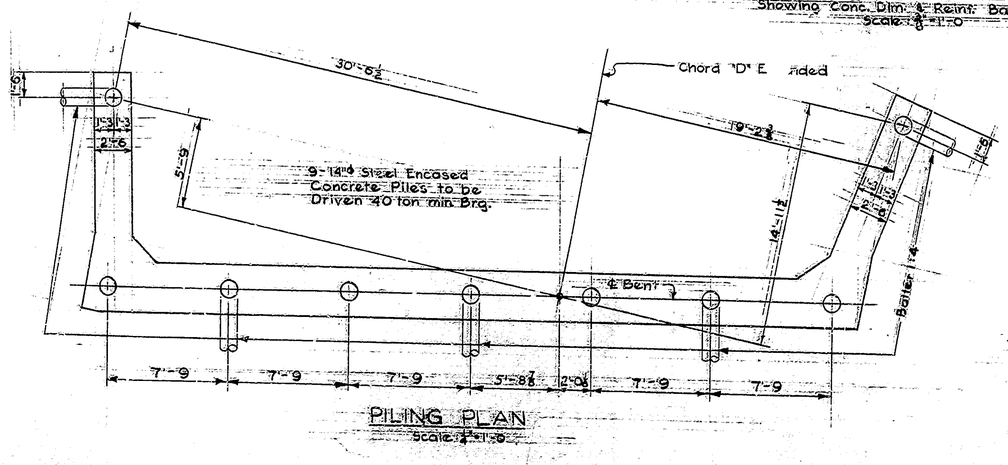
BRIDGES OVER 20' SPAN					
FUR. ROAD MSS. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-01-65 (46) 117	1963	31	140



PLAN - BENT N°5

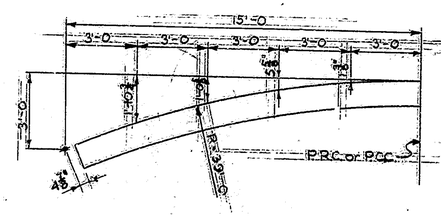
Showing Conc. Dim. & Reinf. Bars 40'1" h

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



PILING PLAN

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



OFFSETS TO REAR FACE WALL WING "D"

WING "C" same by opp. Hand

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

NOTES

For Reinforcing Bar Notes, see Br. Std. "C."
Anchor Plates "AP" to be preset in Concrete.
For Bill of Materials, see Drwg. S15.
For additional Details, see Drwg. S14. & Drwg. S15.
Bent cap is not to be poured until fill has been completed up to approximate elevation of the bottom of the cap.
Crosshatched portions indicate extent of horizontal Construction Joints at top of cap.

DESIGNED H.G. 8-27-63 WITH S 9-4-63
DRAWN W.K. 9-17-63 WITH HE 10-1-63
TRACED CKD.

BENT N°5 DETAILS

INDIANA STATE HIGHWAY COMMISSION

SCALE: As Noted OCTOBER 10, 1963

SUBMITTED FOR APPROVAL: James D. Mueller

DRAWING S13 of 2S

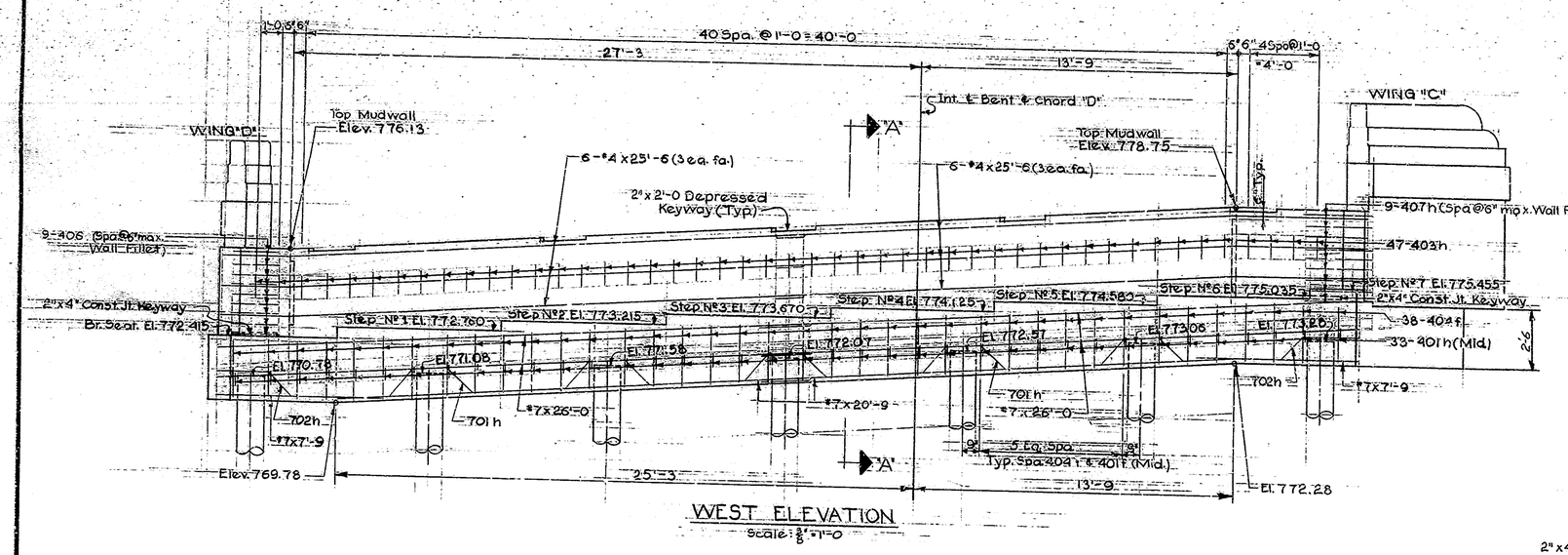
PROJECT: I-01-65 (46) 117

BRIDGE CONTRACT NO. R-6135

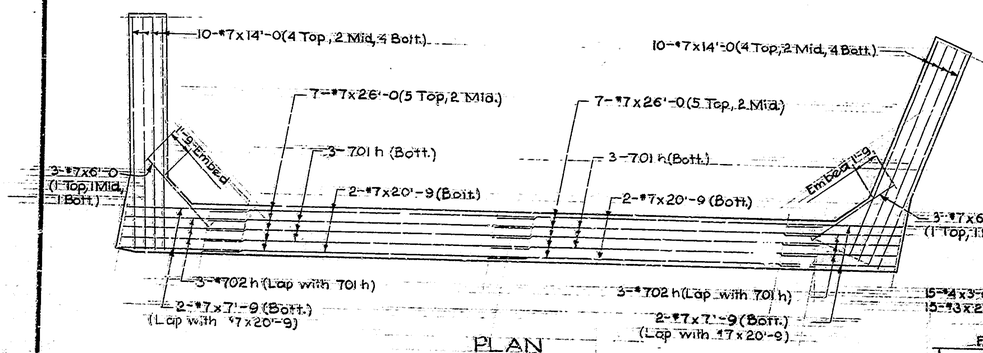
BRIDGE FILE: I-65-117-2313

MATHAUGH ENG. No. 168

BRIDGES OVER 20' SPAN					
PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-DI-65-3(46)117	1963	32	140



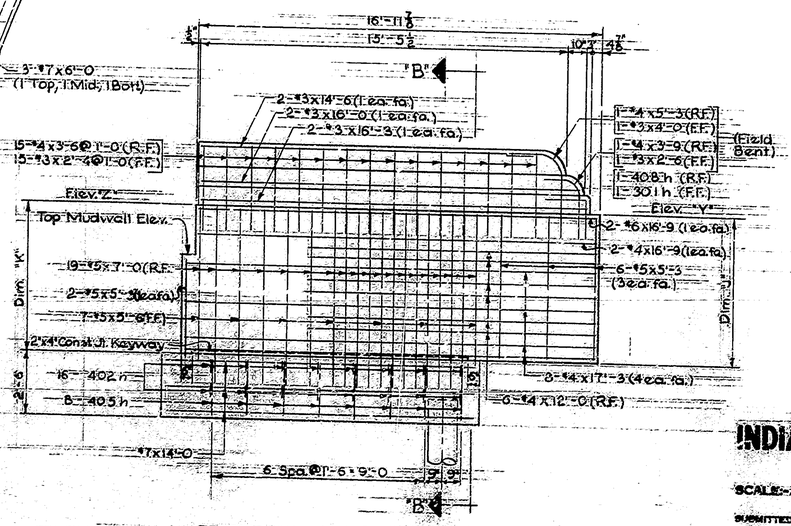
WEST ELEVATION
Scale: 3/8" = 1'-0



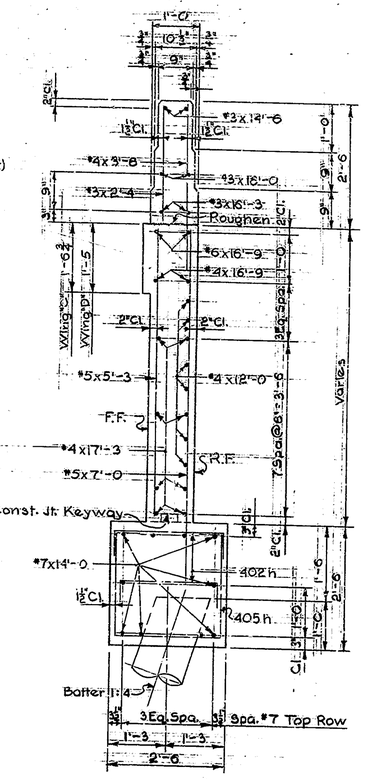
PLAN
Showing Top Longitudinal Reinf. Steel
Scale: 1/4" = 1'-0

WING WALL HEIGHTS		
WING	Dim. "J"	Dim. "K"
"C"	5'-7 1/2"	5'-11 1/2"
"D"	5'-3 3/8"	5'-7 1/2"

TABLE OF ELEVATIONS		
Elev.	Wing "C"	Wing "D"
"Y"	780.41	777.56
"Z"	780.77	777.92



TYPICAL WING DETAILS
Scale: 3/8" = 1'-0



SECTION "B-B"
Scale: 3/4" = 1'-0

NOTES

For Reinforcing Bar Notes, see Br. Std. "C".
For additional Details, see Drwg. 513 & Drwg. 515.
For Bill of Materials, see Drwg. 515.
For Section "A-A", see Drwg. 515.

DESIGNED HB 8-27-62 CKD WH 3-9-63
DRAWN JKG 8-8-63 CKD HB 10-7-63
TRACED CKD

BENT Nº 5 DETAILS

INDIANA STATE HIGHWAY COMMISSION

SCALE: As Noted — OCTOBER 10, 1963

SUBMITTED FOR APPROVAL: James D. Mather

DRAWING 514 OF 26

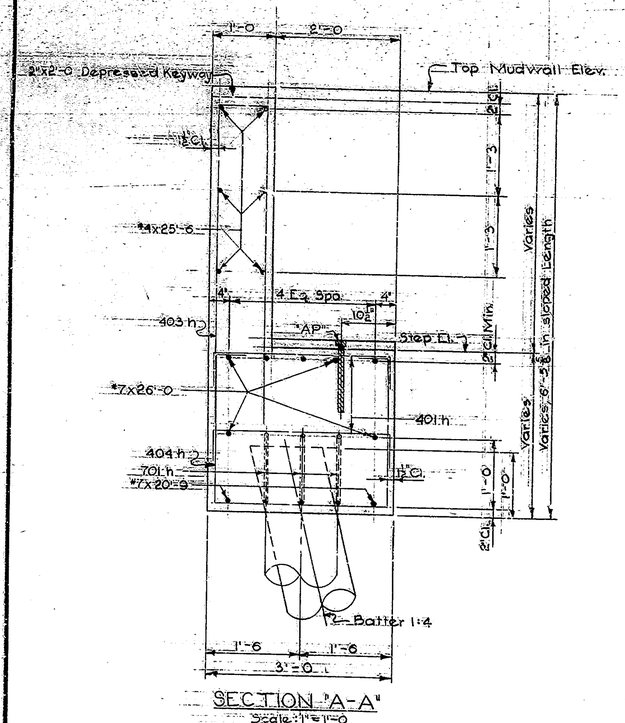
PROJECT: I-DI-65-3(46)117

BRIDGE CONTRACT NO. B-6333

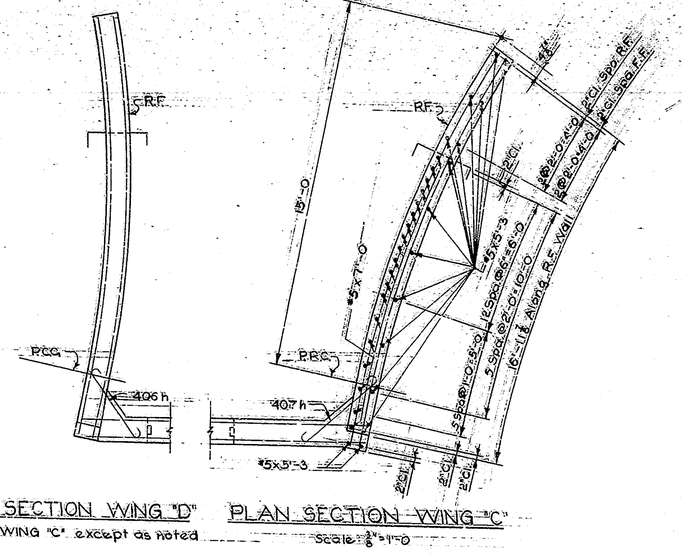
BRIDGE FILE: I-65-119-2313

MARSHALL ENGINEERING SUPPLY 57166

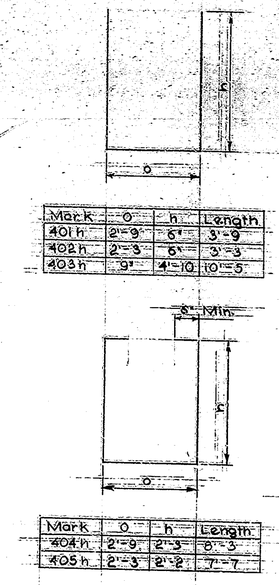
BRIDGES OVER 20' SPAN					
PUB. ROAD RTE. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-UL-65-3(68)117	1963	33	140



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

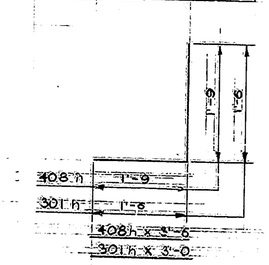


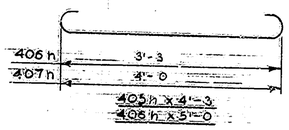
PLAN SECTION WING "D" PLAN SECTION WING "C"
Same as WING "C" except as noted
Scale: ⅜"=1'-0

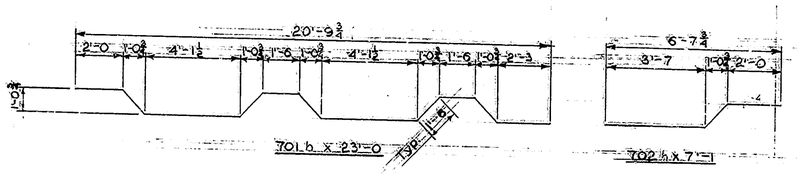


Mark	o	h	Length
401 h	2'-9"	6"	3'-9
402 h	2'-3	6"	3'-3
403 h	9"	4'-10	10'-5

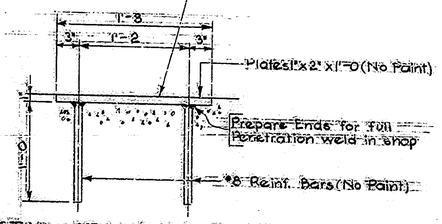
Mark	o	h	Length
404 h	2'-9	2'-3	6'-3
405 h	2'-3	2'-2	7'-7







Setting Tolerance of Anchor Plates level with, to not more than ⅛" below top of concrete



DETAIL OF ANCHOR PLATE "AP"
Scale: 1½"=1'-0

POUR DESIGNATION

Pour N° 1 Main Cap, Wing Cap and Mudwall between vertical Construction Joints.
Pour N° 2 Wingwall "C" and Mudwall outside vertical Construction Joint.
Pour N° 3 Wingwall "D" and Mudwall outside vertical Construction Joint.

NOTES

For Reinforcing Bar Notes, see Br Std. "C"
For Location of Section "A-A" see Drwg. Sht.

BILL OF MATERIALS

REINFORCING STEEL			
Size & Mark	No. of Bars	Length	Weight
701 h	6	23'-0	
702 h	6	7'-1	
#7	14	26'-0	
#7	4	20'-9	
#7	20	14'-0	
#7	4	7'-9	
#7	5	6'-0	
	Total #7		1933#
#6	4	16'-9	101#
#5	38	7'-0	
#5	14	5'-6	
#5	16	3'-3	
	Total #5		445#
401 h	90	3'-9	
402 h	32	3'-3	
403 h	47	10'-5	
404 h	38	6'-3	
405 h	16	7'-7	
406 h	9	4'-3	
407 h	5	5'-0	
408 h	2	3'-6	
#4	12	25'-6	
#4	16	17'-3	
#4	4	16'-9	
#4	12	12'-0	
#4	2	5'-3	
#4	2	3'-9	
#4	30	3'-6	
	Total #4		1585#
301 h	2	3'-0	
#3	4	18'-3	
#3	4	16'-0	
#3	4	14'-6	
#3	2	4'-0	
#3	2	2'-6	
#3	30	6'-4	
	Total #3		184#
	Total Steel		4227#
CONCRETE			
Class "F" Concrete Pour N° 1			25.9 cys
Pour N° 2			8.5 cys
Pour N° 3			4.0 cys
Total Class "F" (Except Railing Concrete)			38.5 cys
Railing Concrete (CL. & Rt. Alike 2@ 1.3 cys.)			2.6 cys
MISCELLANEOUS			
Anchor Plates "AP" 9-1¼" Steel Encased			6 ea.
Conc. Piles @ 40'-0" (7 Ga)			360 Lft.
2½" Steel Conduit			22 Lft.

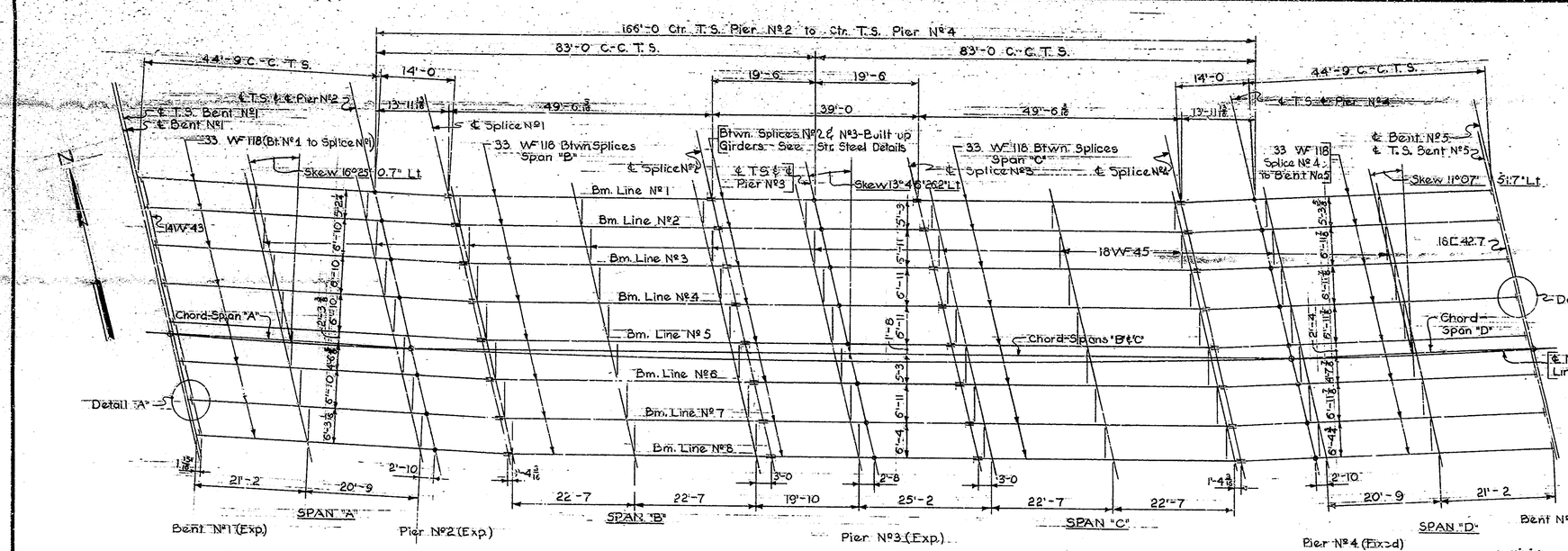
DESIGNED L.B. & P.S. 9-4-63 — W.H.S. 9-4-63
DRAWN L.K. 9-20-63 — CHKD. H.D. 10-7-63
TRACED — CHKD.

BENT N°S DETAILS & BILL OF MATERIALS
INDIANA STATE HIGHWAY COMMISSION

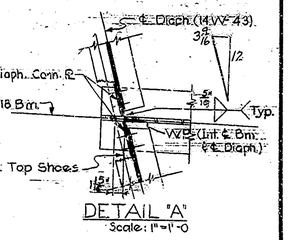
SCALE: As Noted — OCTOBER 10, 1963
SUBMITTED FOR APPROVAL: James D. Martin
DRAWING S 15 OF 26
PROJECT: I-UL-65-3(68)117
BRIDGE CONTRACT NO. R-6383
BRIDGE FILE: I-65-119-2913

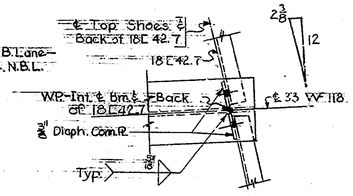
HARRISON BRO. NO. 186

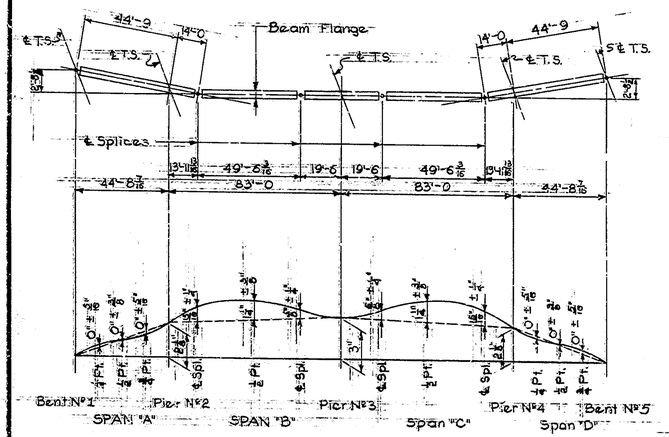
BRIDGES OVER 20' SPAN					
PUR. ROAD BRG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-01-65 3(46)117	1963	34	140



FRAMING PLAN
Scale: 3/32" = 1'-0







NO LOAD CAMBER & REAMING DIAGRAM
Not to Scale

DATA USED FOR DESIGN AND DETAILS

LIVE LOADS: H20-S16-44 loading with impact and distribution of loads in accordance with 1961 AASHO Specifications and checked for loading of P-24,000# axles spaced 4'-0 apart.

DEAD LOADS: Actual Weight plus 35 pounds per sq.ft. of roadway to provide for future wearing surface.

SLAB: Designed for H20 truck loading, single live load plus impact in accordance with 1961 AASHO Specifications. Allows for ½" monolithic wearing surface

UNIT STRESSES

Structural Steel Bending (Tension) ASTM-A-36	20,000psi.
Structural Steel Bending (Tension) ASTM-A-441	
Thickness Over ¾" to 1½" incl.	24,000psi.
Thickness Over 1½" to 4" incl.	22,000psi.
Shear on Rivets	13,000psi.
Butt Welds (Tension) (Thickness Over ¾" to 1½" incl.)	24,000psi.
Shear in Fillet Welds	
For Base Metal A-36	13,000psi.
For Base Metal A-441 (Over ¾" to 1½" incl.)	16,500psi.
For Base Metal A-441 (Over 1½" to 4" incl.)	15,200psi.
Structural Steel Bearing (Not Incl. Rivets)	23,500psi.
Str. Steel Brg. on Power Driven Rivets & Torqued HS Bolts	40,000psi.
Brg. Steel on Conc. (Incl. Overturning & eccentric loading)	1,000psi.
Reinforcing Steel (Tension)	20,000psi.
Concrete (Compression)	1,200psi.

FABRICATION NOTES:

1. Rivets, ⅞"ϕ unless noted
2. Open Holes, 15/16"ϕ unless noted
3. No Paint on Anchor Plates "AP"
4. 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: Two coats of Aluminum.

5. Beams must be cambered to a smooth curve. Camber must be checked while supported in such a way as to have no bending moment in the direction of Camber.
6. Holes for beam splices shall be subpunched or subdrilled and reamed to size while assembled. See Article 1103.18(d) of the Specifications.
7. 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 NO-LOAD-CAMBER & REAMING DIAGRAM. If the beams are shop reamed or drilled, full size drift pins shall be used in erection. A minimum of one line of beams shall be shop assembled with the webs vertical and inspected for fit.
8. The Shop details shall show a Plan of match-marking for all reamed pieces.
9. All splice plates to be removed, cleaned and painted after reaming. Splice plates shall not extend beyond the end of the beam after bolting for Shipment.
10. Flange Splice bars shall have planed or rolled edges and holes in bars shall be subdrilled and reamed or drilled full size while assembled.
11. All structural steel shall be erected and beams adjusted to their true elevations before driving rivets in beam field splices. The elevation shall be checked with splices connected by full size drift pins and erection bolts and with beam unsupported by any falsework. See "Table of Splice Elevations", Drwg. S-18.
12. Holes in all material connecting Top Shoes to Beam Flanges to be 1" diameter. Bolts connecting Beam Flange to Top Shoe shall extend into Top Shoe a minimum of 1 inch.
13. 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 five (5) copies of these to the Engineer. See Article 1103.2 of the Specifications.
14. All welding shall conform to the provisions of Article 1103.28 of the Specifications and Special Provisions unless otherwise noted.
15. As soon as the Engineer has approved the field welds, all welds and any surface from which the shop coat has been omitted, has become worn off or has otherwise become defective shall be thoroughly cleaned of all charred paint or any foreign matter and completly covered with one coat of shop paint.
16. Welded stud shear connectors may be used in lieu of channel shear connectors. If welded stud shear connectors are used, the Contractor shall prepare design computations and structural steel details and submit five (5) copies of these to the Engineer.
17. Temporary stiffeners to be used for jigs and/or warpage control shall not be tack welded to the flange material. Tacking to the web may be done if the tack welds are at least one sixth of the web depth away from the flange. The tack weld shall be removed by grinding flush to the parent metal.
18. When the beam sections are fit up in the shop for reaming or drilling of field splices, the centerlines of opposing flanges shall not deviate more than ⅛ inch when the webs are in alignment.
19. All structural steel to be Structural Carbon Steel A.S.T.M. A36 unless otherwise noted.
20. Weight of Structural Steel (Estimated) 335,000 # (Includes 7,500 # for steel toothed expansion joint.)

TABLE OF MAXIMUM MOMENTS

	Pos. Mom. @ 0.4 Pt. Span "A" ft.-kips			Pos. Mom. @ 0.5 Pt. Span "B" ft.-kips			Neg. Mom. @ R_2 ft.-kips			Neg. Mom. @ R_3 ft.-kips		
	Lt. 0.5 Bm.	Int. Bm.	Rt. 0.5 Bm.	Lt. 0.5 Bm.	Int. Bm.	Rt. 0.5 Bm.	Lt. 0.5 Bm.	Int. Bm.	Rt. 0.5 Bm.	Lt. 0.5 Bm.	Int. Bm.	Rt. 0.5 Bm.
D.L. on Steel Section	79.8	147.4	91.7	291.2	226.0	259.4	452.9	327.8	360.1	522.6	520.4	572.2
D.L. on Composite Section	22.6	22.6	22.6	95.7	95.7	95.7	98.8	98.8	98.8	154.5	154.5	154.5
L.L. on Composite Section	203.6	268.3	241.9	403.6	531.7	479.3	223.8	294.8	265.8	304.9	401.6	362.0
Imp. on Composite Section	60.1	79.1	71.3	96.9	127.6	115.0	59.3	78.1	70.4	73.2	96.4	86.9
Total	366.1	417.4	377.5	893.4	981.0	949.4	834.8	799.5	795.1	1185.2	1172.9	1175.6

TABLE OF REACTIONS

	Reaction @ R_1 Kips			Reaction @ R_2 Kips			Reaction @ R_3 Kips			Reaction @ R_4 Kips			Reaction @ R_5 Kips		
	Lt. 0.5 Bm.	Int. Bm.	Rt. 0.5 Bm.	Lt. 0.5 Bm.	Int. Bm.	Rt. 0.5 Bm.	Lt. 0.5 Bm.	Int. Bm.	Rt. 0.5 Bm.	Lt. 0.5 Bm.	Int. Bm.	Rt. 0.5 Bm.	Lt. 0.5 Bm.	Int. Bm.	Rt. 0.5 Bm.
D.L. on Steel Section	48.2	9.3	9.3	74.5	53.0	56.6	82.9	61.5	75.1	73.5	47.1	42.5	40.7	53.6	48.3
D.L. on Composite Section	3.5	3.5	3.5	17.5	17.5	17.5	22.1	22.1	22.1	19.3	12.5	11.3	9.8	12.9	11.6
L.L. on Composite Section	27.6	10.0	9.0	9.5	12.5	11.3	9.8	12.9	11.6	7.90	1.90	2.38	2.21	2.98	2.68
Imp. on Composite Section	5.1	5.8	5.2	13.5	13.0	12.7	15.5	15.5	15.1	19.25	19.90	19.91	19.91	19.91	19.91

TABLE OF STRESSES

Stresses @ 0.5 Pt. Span "B"

	Bott. Steel Fiber - ksi		
	Lt. 0.5 Bm.	Int. Bm.	Rt. 0.5 Bm.
	7.55	5.74	6.59
	1.93	1.85	1.89
	7.90	9.94	9.22
	19.25	19.90	19.91

DESIGNED: JDN 2-63 CHK'D: HA 6-26-63
DRAWN: K 7-23-63 CHK'D: HA 8-5-63
TRACED: CHK'D:

FRAMING PLAN
INDIANA STATE HIGHWAY COMMISSION

SCALE: As Noted — OCTOBER 10, 1963

SUBMITTED FOR APPROVAL: James D. Mattis

DRAWING 5 OF 25

PROJECT: I-01-65 3(46) 117

BRIDGE CONTRACT NO. R-6333

BRIDGE FILE: I-65-119-2313

MARSHALL ENG. NO. 1-88

BRIDGES OVER 20' SPAN					
PUB. ROAD ASS. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-UI-65-3(45)117	1963	35	140

3/16 See Note "A"
℄ T.S.
Top Cover Pl 9½" x 1"
2'-0 5'-0 4'-0 2'-0
℄ Splice
3'-0 3/16
12 Spa. @ 9" = 9'-0
9 Spa. @ 1'-0 = 9'-0
6 Spa. @ 1'-3 = 7'-6
Shear Conn. 5 L 6.7 (Typ.)
Clip Corners ½" to Clear Fillet Top & Bott. (Typ.)
Tight Fit (No Weld)
See "ELEVATION-C.C." Drwg. S20
3/8 R
33 WF 118
(Typ) 5/16
2-Bars 5" x ½" 1-N.S., 1-F.S.
2-Pls 29" x 7/16" 1-N.S., 1-F.S.
Typ. 1½ - 3 5/16
Typical Int. C.L. Diaph. (See "TYPICAL INTERIOR DIAPHRAGM DETAIL" Drwg. S18)
9½"
¼
℄ Top Shoe Bent No 1
44'-9 c-c T.S.
13'-11 13/16
14'-0
49'-6 3/16
2° 38' 34.5"
2'-0 5'-0 4'-0 2'-0
See Detail "C"
2 @ 3" = 6"
4 @ 3" = 1'-0
10'-6 3/16
30'-6
Holes
Bott. Cover Pl 13" x 3/8"
℄ Top Shoe Pier No 2 or ℄ Pier No 4
1-Pl ½" x (11½" min.) (top & bott.)
W.P.
2 Bars ½" x (4½" min) (top & bott.)
5/16 See Note "A"
Bott. Cover Pl 9½" x 1"

Note "A"
Return ends of welds around corners at ends of taper

6 Spa. @ 1'-3 = 7'-6
9 Spa. @ 1'-0 = 9'-0
12 Spa. @ 9" = 9'-0
3'-0
℄ Splice
See Shop Flg. Splice Detail
1" 4 1"
2-Pls 29" x 7/16" 1-N.S., 1-F.S.
33 WF 118
Web Pl 31 3/8" x 5/16" (A441)
20°
Web Pl 31 3/8" x 9/16" (A441)
5/16
2-Pls 7" x ¾" 1-N.S., 1-F.S.
Tight Fit (No Weld)
Clip Corners 1" to Clear Weld Top & Bott. (Typ.)
5/16 (Typ.)
Pl 7" x ¾"
33 WF 118
¾" R (See TYPICAL DIAPHRAGM DETAIL @ BENT No 5, Drwg S18 and DETAIL "B" Drwg. S 15)
¼"
℄ Top Shoe Bent No 5
49'-6 3/16
19'-6
8'-6
9'-6
2'-0
8'-0
30'-6
2'-0
2 @ 3" = 6"
4 @ 3" = 1'-0
3 @ 3" = 1'-0
1½" 1½"
2 @ 3" AWS 2 WDG
60°
2-Bars 4½" x ½" (top & bott.)
2-Flg. Pls 15" x 1⅛" 1-top & 1-bott. (A441)
Symmetrical about intersection ℄ Top Shoes, Pier No 3 & ℄ Brg. Unless Noted.
1-Pl 11" x ½" (top & bott.)
2-Flg. Pls 11½" x ¾" 1-top & 1-bott. (A441)
Grind to 4" Rad. (min.)
No Weld (Typ.)
2" 2"
Holes
Pl 11½" x ¾"
1" max. (+0 - 1/16)
Grind Flush
⅜" (+1/16 - 0")
Pl 15" x 1⅛"
Thickness of metal at weld after grinding shall not be less than thinner flange
Return Weld ⅜" Rad. corner
2'-0

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

SHOP FLANGE SPLICE DETAIL
Scale: 1"=1"
NOTE: AWS Prequalified Joint 221-D, 221-E, 221-F may be used in lieu of the joint shown.

NOTES:
For Fabrication Notes, See Drwg. S16.
Rivets are ⅞" ϕ
Open holes are 15/16" unless noted.

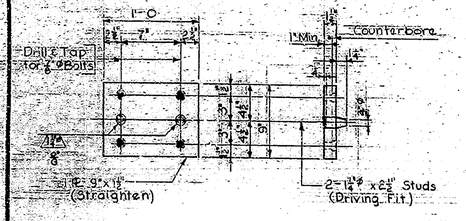
DESIGNED JDM 6-13-63 CKD HB 6-27-63
DRAWN CRD 8-1-63 CKD HB 9-16-63
TRACED CKD

STRUCTURAL STEEL DETAILS
INDIANA STATE HIGHWAY COMMISSION

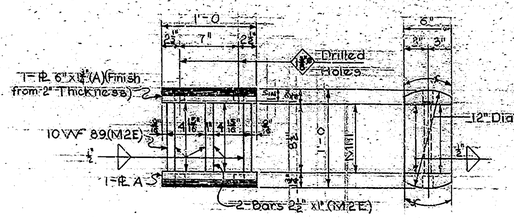
SCALE: ¾"=1'-0 Except as Noted OCTOBER 10, 1963
SUBMITTED FOR APPROVAL: James D. Mathes
DRAWING S17 OF 26
PROJECT: I-UI-65-3(45)117
BRIDGE CONTRACT NO. R-6333
BRIDGE FILE: I-65-119-231.3

MATHAUGH ENG. NO. 166

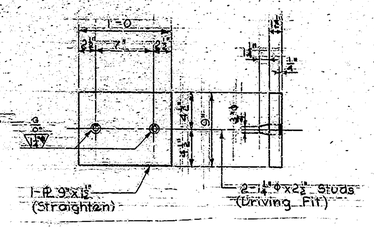
BRIDGES OVER 20' SPAN					
SUB. ROAD SEQ. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
A	IND.	I-UI-65 3(45)117	1963	36	140



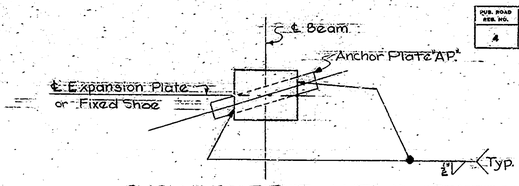
TOP SHOE @ BENTS Nº1 & 5



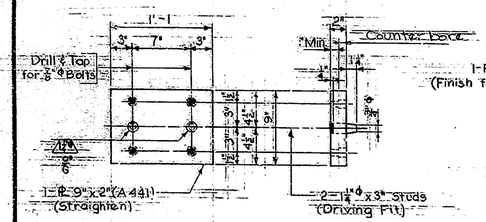
EXPANSION SHOE @ BENTS Nº1&5



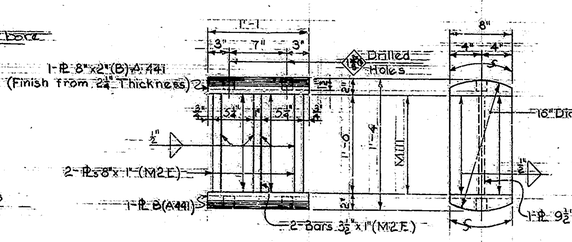
EXPANSION PLATE @ BENTS Nº1&5



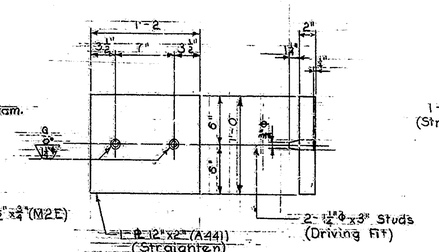
SHOWING FIELD WELD BTWN. SHOE & ANCHOR PLATE "AP"
Not to Scale



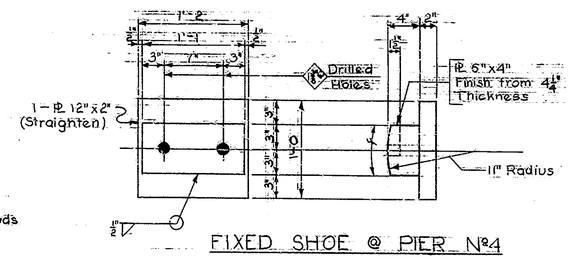
TOP SHOE @ PIERS Nº2 & 4



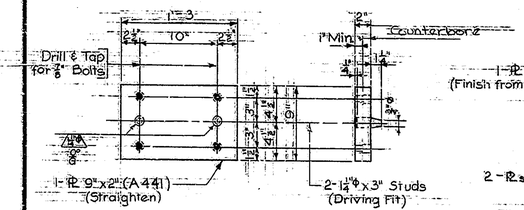
EXPANSION SHOE @ PIER Nº 2



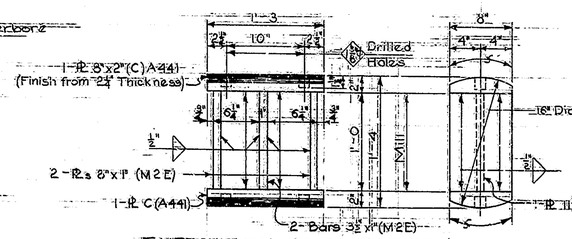
EXPANSION PLATE @ PIER Nº 2



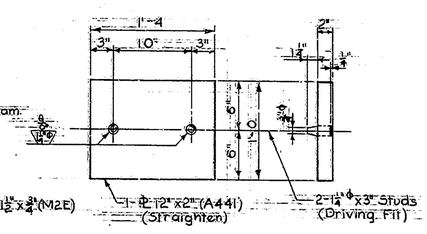
FIXED SHOE @ PIER Nº4



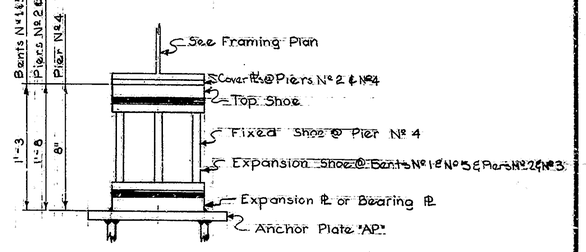
TOP SHOE @ PIER Nº 3



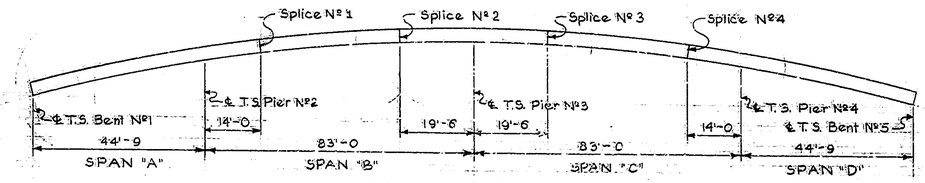
EXPANSION SHOE @ PIER Nº 3



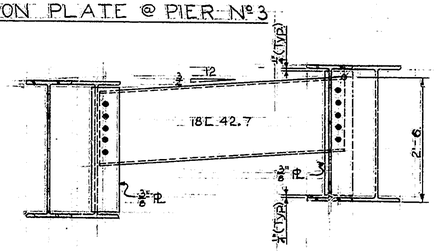
EXPANSION PLATE @ PIER Nº 3



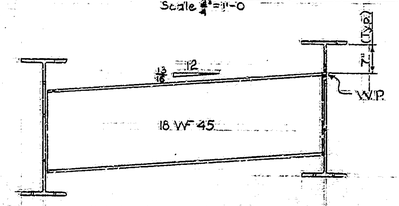
SHOE ASSEMBLY
Not to Scale



LOCATION OF SPLICES
Not to Scale



TYPICAL DIAPHRAGM DETAIL @ BENT Nº5
Scale ¾"=1'-0



TYPICAL INTERIOR DIAPHRAGM DETAIL
Scale ¾"=1'-0

TABLE OF SPLICE ELEVATIONS

Beam Line Nº	1	2	3	4	5	6	7	8
Splice Nº1	779.930	780.270	780.715	781.165	781.610	782.060	782.505	782.915
Splice Nº2	779.130	779.470	779.915	780.365	780.815	781.260	781.710	782.120
Splice Nº3	778.480	778.720	779.270	779.720	780.170	780.520	781.070	781.485
Splice Nº4	777.540	777.975	778.435	778.890	779.340	779.795	780.245	780.660

NOTE: Top of Splice Elevation is the required elevation of the top of the top flange of the 33 WF 118 at the ℄ of the splice.

NOTES:
Rivets ⅞" ϕ
Open Holes 15/16" ϕ Unless Noted
For Fabrication Notes, See Drwg. S16
For Screeds, Concrete DL. Deflections & Shoe Setting Data, See Drwgs. S5 & S26

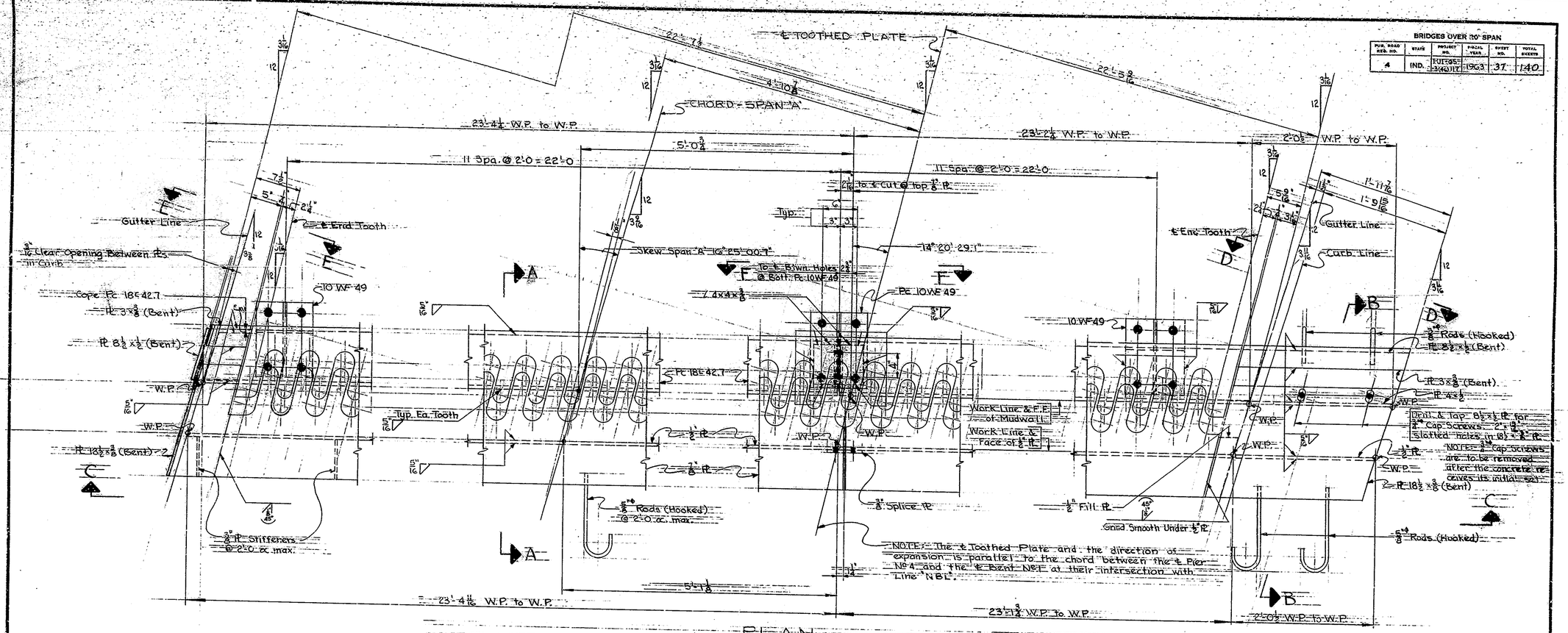
STRUCTURAL STEEL DETAILS
INDIANA STATE HIGHWAY COMMISSION

SCALE: ½"=1'-0, Except As Noted — OCTOBER 10, 1963
SUBMITTED FOR APPROVAL: James D. Mattis
DRAWING: S 18 OF 26
PROJECT: I-UI-65-3(45)117
BRIDGE CONTRACT NO. R-6333
BRIDGE FILE: I-65-119-2313

DESIGNED: JDM 7/63 CKD: HB 7/19/63
DRAWN: JK 7-28-63 CKD: HB 9-6-63
TRACED: CKD:

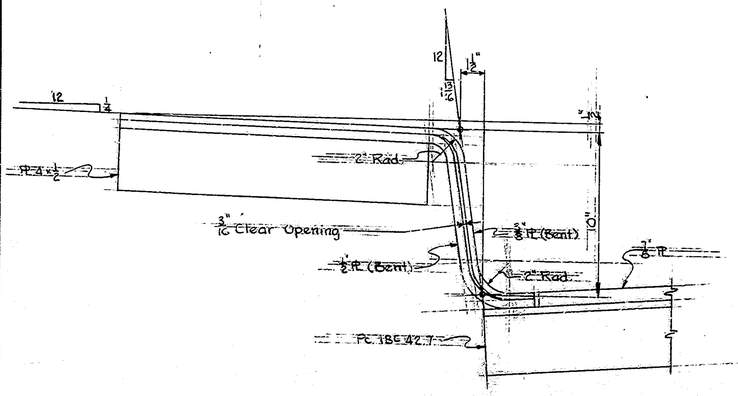
HARRISBURG ENG. NO. 166

BRIDGES OVER 20' SPAN					
FUR. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	FURGS-3(46)117	1963	37	140

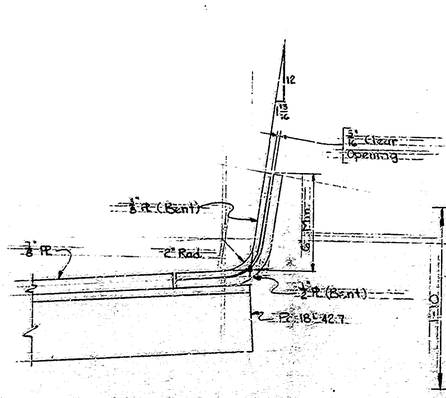


PLAN

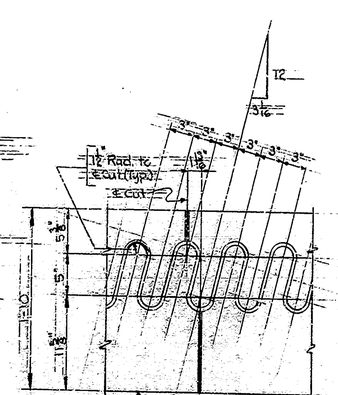
NOTE: The ℄ Toothed Plate and the direction of expansion is parallel to the chord between the ℄ Pier No 4 and the ℄ Bent No 5 at their intersection with Line "NB".



ELEVATION D-D



ELEVATION E-E



TYPICAL TOOTH DETAIL

Scale: 3" = 1'-0

NOTES:
- Rivets ¾" ø unless noted.
- Open ø's ¾" unless noted.
- All dimensions to cuts are given to ℄ cut. See Specifications Art. 1103.13 regarding burning of toothed plates.
- If curves in plates are flame cut they shall be ground smooth.
- The toothed plates shall be match marked to maintain the same relative position before and after cutting.
- The expansion joint shall be assembled in the shop in its relative position and inspected for fit.
- For toothed expansion joint setting see TABLE II Drwg. Sa.
- For Fabrication Notes see Drwg. S-16.
- For additional details see Drwg. S-26.
- Estimated weight of Structural Steel in toothed expansion joint = 7,500 lbs.

DESIGNED J.D.M. 9-10-63 CK'D D.W.S. 9-11-63
DRAWN J.D.M. & I.S.H. 9-15-63 CK'D D.W.S. 9-26-63
TRACED CK'D

TOOTHED EXPANSION JOINT DETAILS
INDIANA STATE HIGHWAY COMMISSION

SCALE: 1½" = 1'-0 UNLESS NOTED OCTOBER 10, 1963.

SUBMITTED FOR APPROVAL: James D. Walther

DRAWING S 19 OF 26

PROJECTS: I-01-65-5(46)117

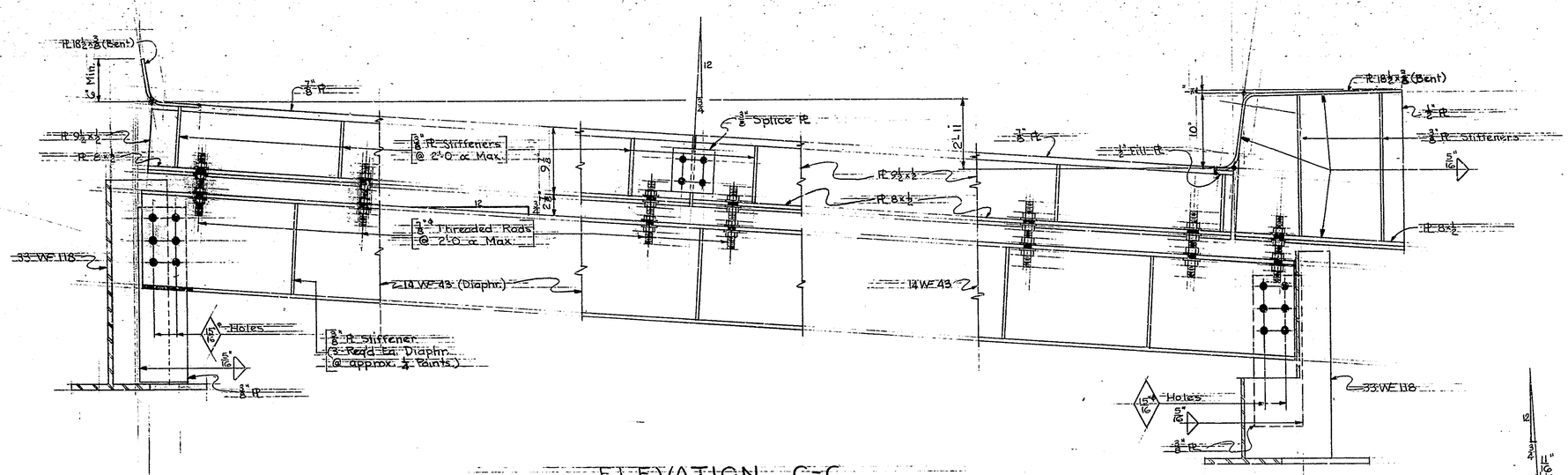
BRIDGE CONTRACT NO. R-6333

BRIDGE FILE: I-65-119-2313

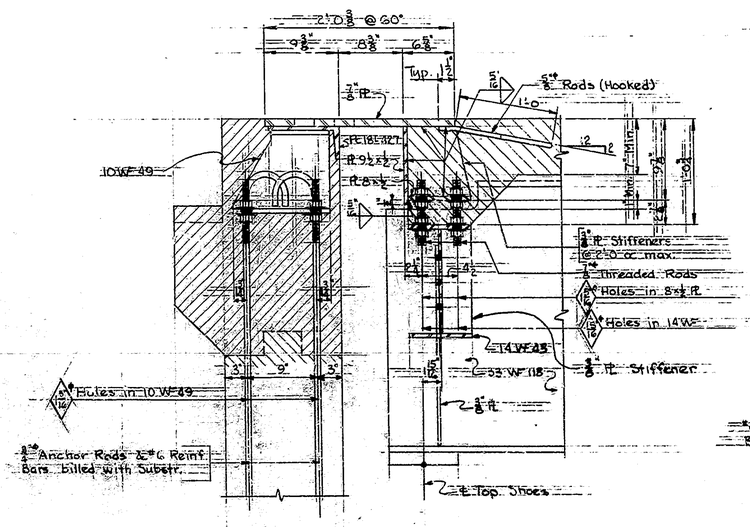
MARQUARDT ENG. NO. 186

BRIDGES OVER 20' SPAN

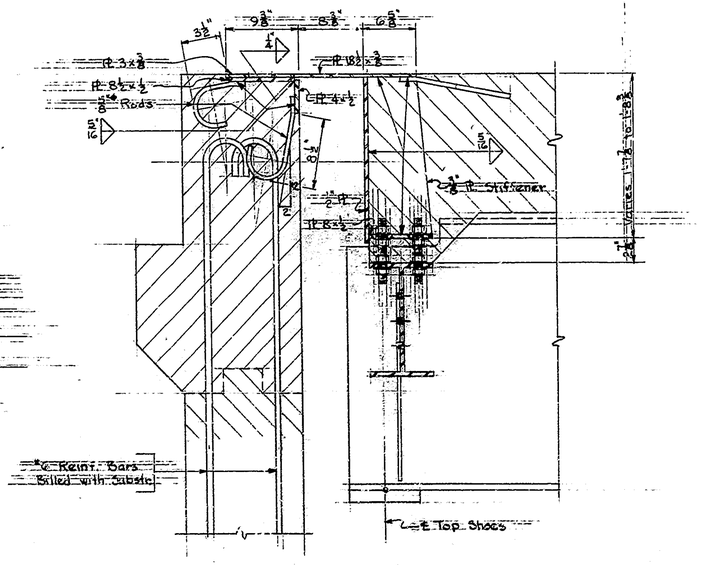
FED. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-UI-65 3(46)117	1963	38	140



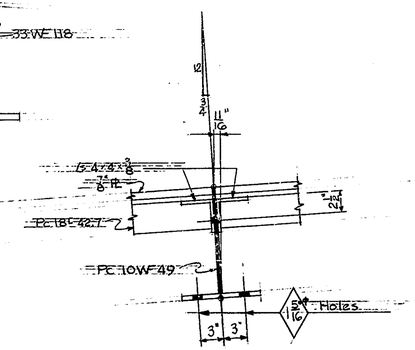
ELEVATION C-C



SECTION A-A



SECTION B-B



ELEVATION F-F

NOTES:-
Rivets ¾" unless noted.
Open holes 15/16" unless noted.
For additional details and notes see Drwg. S.19

TOOTHED EXPANSION JOINT DETAILS

INDIANA STATE HIGHWAY COMMISSION

SCALE:- 1½" = 1'-0

OCTOBER 10, 1963

SUBMITTED FOR APPROVAL: James D. Mattis

DRAWING:- S 200f 26

PROJECT:- I-UI-65-3(46)117

BRIDGE CONTRACT NO. R-6333

BRIDGE FILE:- I-65-119-2313

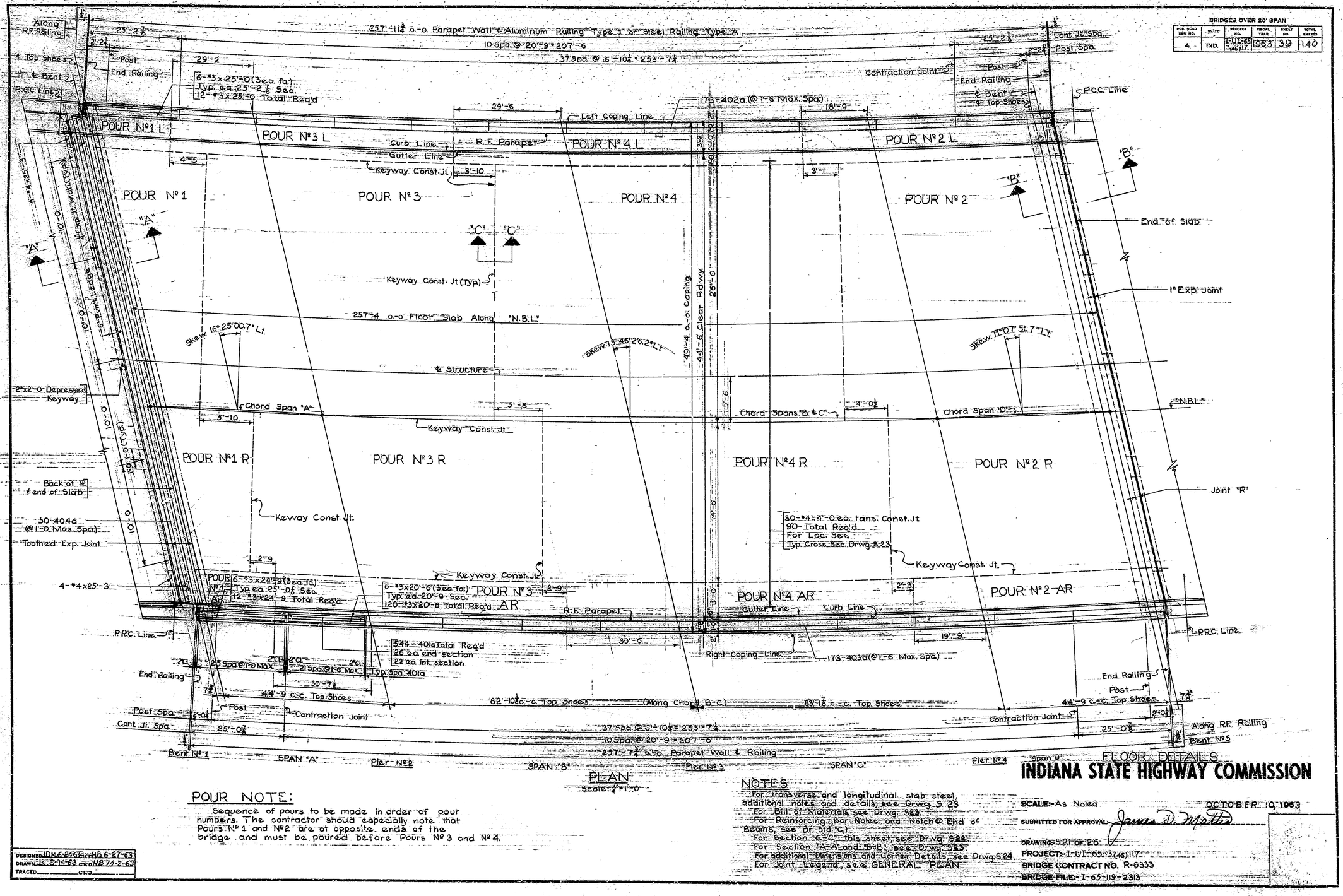
DESIGNED: J.M.M. CHECKED: R.W.B. E.H.C.

DRAWN: E.D.M. A.H.C. CHECKED: R.W.B. E.H.C.

TRACED: CHKD.

HANSAUSH ENG. NO. 186

BRIDGES OVER 20' SPAN					
FED. ROAD DES. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-UI-65 3(46)117	1963	39	140



PLAN
Scale: 1" = 10'-0"

FLOOR DETAILS

INDIANA STATE HIGHWAY COMMISSION

POUR NOTE:

Sequence of pours to be made in order of pour numbers. The contractor should especially note that Pours Nº 1 and Nº 2 are at opposite ends of the bridge and must be poured before Pours Nº 3 and Nº 4.

NOTES

- For transverse and longitudinal slab steel, additional notes and details, see Drwg. S 23
- For Bill of Materials, see Drwg. S23
- For Reinforcing Bar Notes and Notch @ End of Beams, see Detail "C"
- For Section "C-C" this sheet, see Drwg. S22
- For Section "A-A" and "B-B", see Drwg. S23
- For additional Dimensions and Corner Details, see Drwg. S 24
- For Joint Legend, see GENERAL PLAN

DESIGNED JDM 6-25-63 checked HB 6-27-63
DRAWN JR 8-14-63 checked HB 10-2-63
TRACED ____ CHKD. ____

SCALE:- As Noted — OCTOBER 10, 1963

SUBMITTED FOR APPROVAL:- James D. Mallett

DRAWING S 21 OF 26

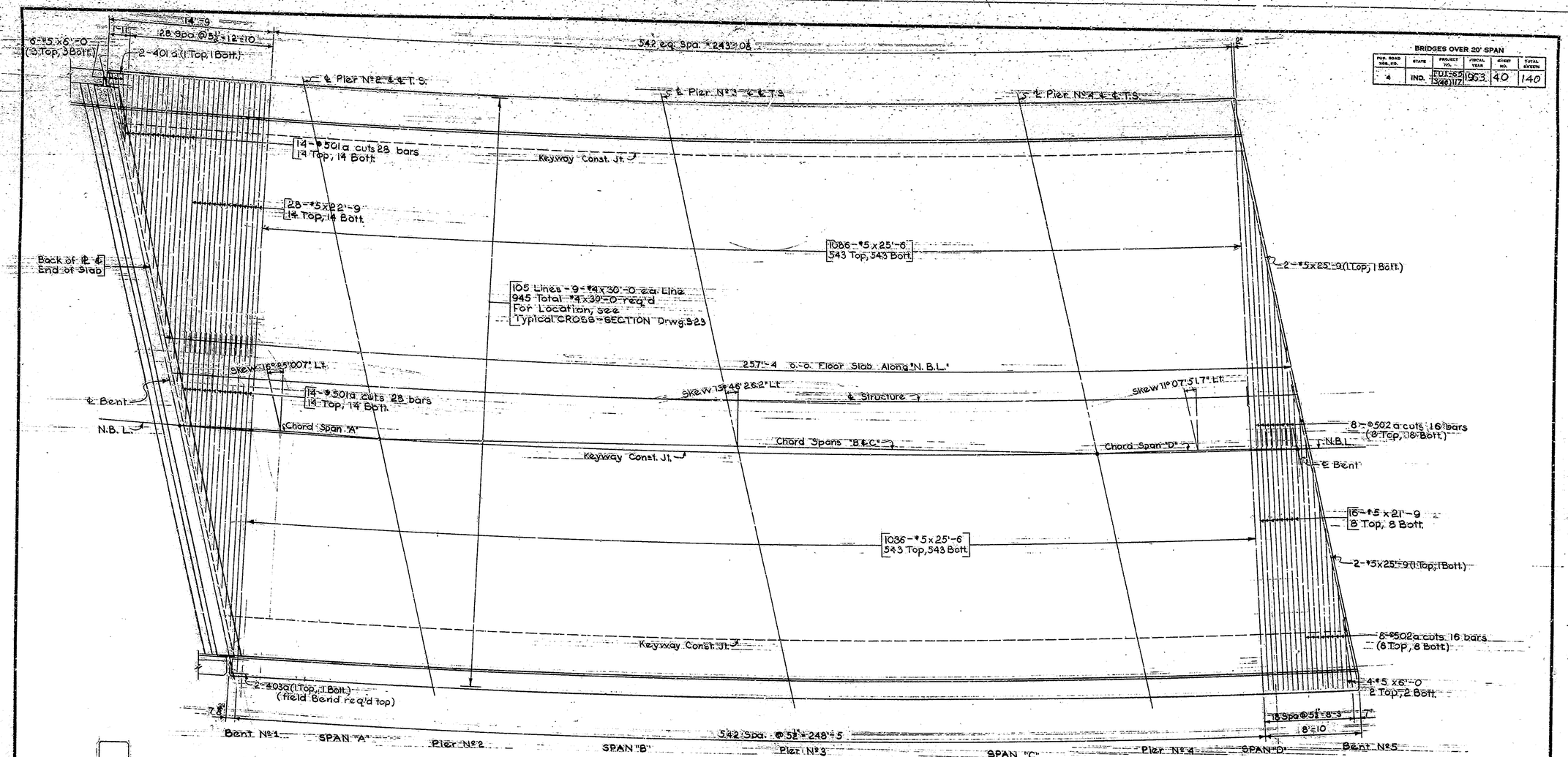
PROJECT:- I-UI-65 3(46)117

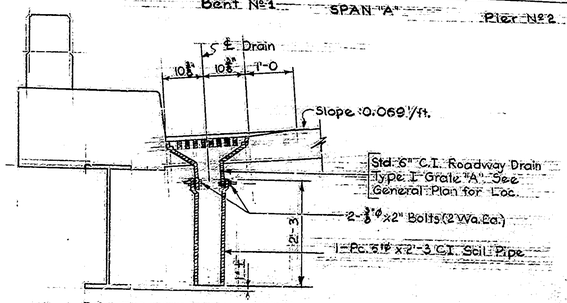
BRIDGE CONTRACT NO. R-6333

BRIDGE FILE:- I-65-119-2313

HARRAUGH ENG. NO. 166

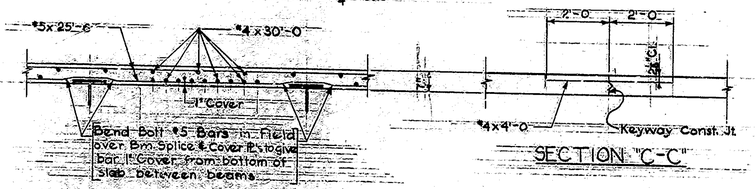
BRIDGES OVER 20' SPAN					
PUB. ROAD SYS. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-U1-65-3(46)117	1963	40	140





ROADWAY DRAIN DETAIL
Scale: 1/4"=1'-0"

PLAN
Showing Transverse & Longitudinal slab steel
Scale: 1/4"=1'-0"



SECTION "C-C"

FIELD BEND REQUIRED ON #5 BARS OVER BEAM SPLICES & COVER PLATES

NOTES
For dim. additional notes & details, see Drwg. S 21 & S 23.
Hooked Ends of 501a & 502a to be placed at End of Slab.
For Bill of Materials, see Drwg. S 23.
℄ Indicates Bending & Cutting Diagram required.
Anchor bolts for railing to be preset in concrete.
For railing posts & anchor bolts details, see Br. Std. R "A" (Type I) or R "B" (Type B).
For Details Std. 6" C.I. Roadway Drain Type I Grate "A", see Br. Std. D.

FLOOR DETAILS
INDIANA STATE HIGHWAY COMMISSION

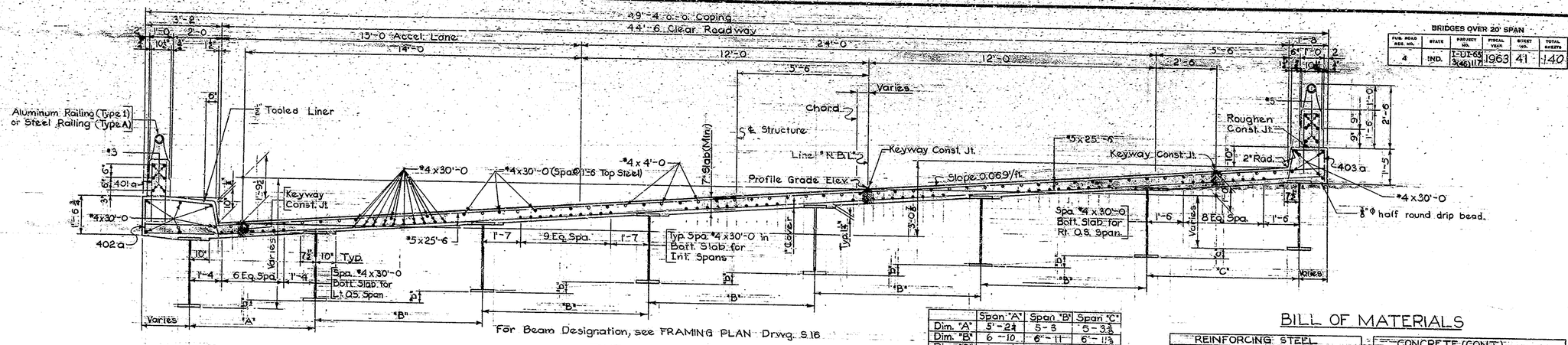
SCALE: As Noted — OCTOBER 10, 1963
SUBMITTED FOR APPROVAL: James D. Martin
DRAWING S 22 OF 26
PROJECT: I-U1-65-3(46)117
BRIDGE CONTRACT NO. R-6333
BRIDGE FILE: I-65-119-2313

DESIGNED JDM 6-21-63 cco HA 8-27-63
DRAWN JK 8-26-63 cco HA 10-3-63
TRACED CKD

MARBALOY END. NO. 186

FUN. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-U1-65 3(46)117	1963	41	140

BRIDGES OVER 20' SPAN

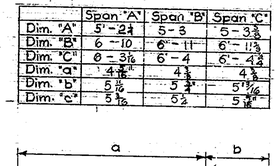


For Beam Designation, see FRAMING PLAN Drwg. S 16

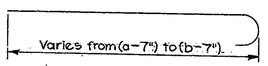
TYPICAL CROSS-SECTION

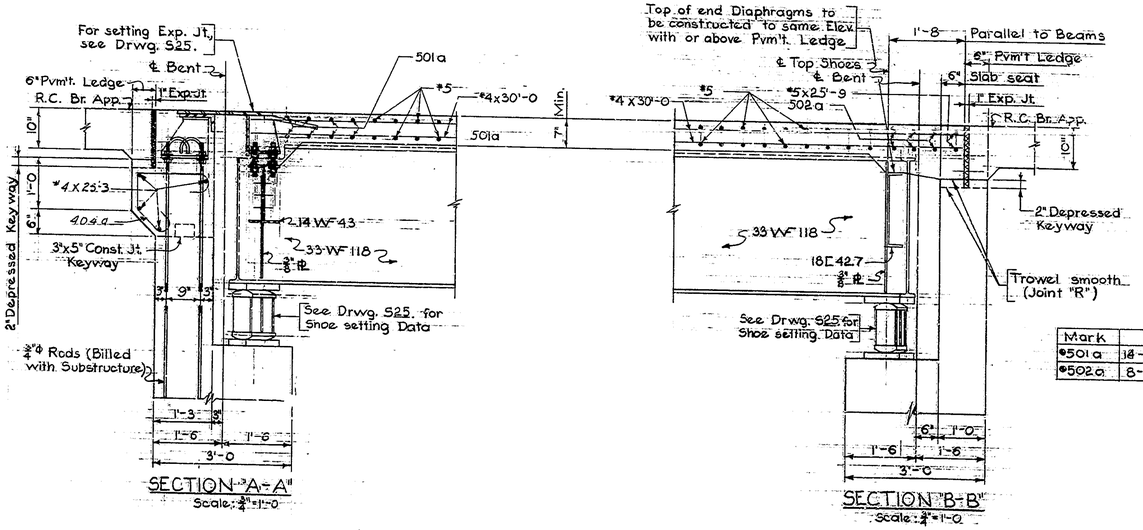
Scale: ½" = 1'-0

	Span "A"	Span "B"	Span "C"
Dim. "A"	5'-2¼	5-3	5-3⅜
Dim. "B"	6-10	6'-11	6'-11⅜
Dim. "C"	0-3⅛	6'-4	6'-4⅜
Dim. "a"	4 5/16	4¼	4 5/16
Dim. "b"	5 5/16	5 3/4"	5 5/16
Dim. "c"	5 5/16	5½	5 5/16

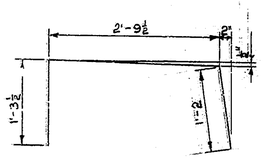


CUTTING DIAGRAM

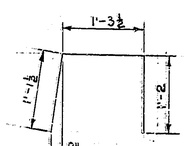




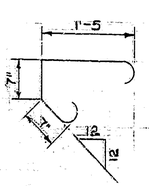
Mark	Remarks	a	b	c	Length
*501a	18-501a cuts 28 bars	25'-3	5'-9	1'-6	31'-0
*502a	8-502a cuts 16 bars	26'-6	9'-0	2'-6	35'-6



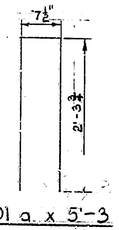
402a x 5'-3



403a x 3'-7



404a x 3'-7



401a x 5'-3

BILL OF MATERIALS

REINFORCING STEEL			
Mark & Size	No. of Bars	Length	Weight
601A	4	8'-0	
602A	9	4'-6	
	Total #6		109#
*501a	28	31'-0	
*502a	16	35'-6	
#5	4	25'-9	
#5	2172	25'-6	
#5	28	22'-9	
#5	16	21'-9	
#5	10	6'-0	
	Total #5		60,463#
401a	546	5'-3	
402a	173	5'-3	
403a	175	3'-7	
404a	50	3'-7	
#4	945	30'-0	
#4	8	25'-3	
#4	90	4'-0	
	Total #4		22,373#
#3	12	25'-0	
#3	12	24'-9	
#3	120	20'-6	
	Total #3		1,149#
	Total Steel		84,094#
CONCRETE			
Class "F"			
Cap @ Bent No. 1			6.7 cys
Pour No. 1			8.9 "
Pour No. 1L			9.1 "
Pour No. 1R			5.0 "
Pour No. 1AR			2.4 "

CONCRETE (CONT.)	
Pour No. 2	37.6 cys.
Pour No. 2L	13.3 "
Pour No. 2R	21.0 "
Pour No. 2AR	9.8 "
Pour No. 3	46.9 "
Pour No. 3L	16.6 "
Pour No. 3R	26.1 "
Pour No. 3AR	12.7 "
Pour No. 4	52.8 "
Pour No. 4L	18.8 "
Pour No. 4R	29.4 "
Pour No. 4AR	14.1 "
Total Class "F"	325.2 cys.
Railing Concrete Rt. & Lt. Alike 2@ 13.45	26.9 cys.
MISCELLANEOUS	
Cast Iron 1-Std. 6" ϕ CI. Rdwy. Drain Type I Grate "A" @ 192#	192#
1 pc 6" ϕ 2'-3 CI. Soil Pipe (Cut from 5'-0 length) @ 95#	95#
2-⅜" ϕ x 0'-2" Bolts (2 Wa. Ea.)	1 #
Total Cast Iron	288#
Aluminum Railing (Type 1) or Steel Railing (Type A)	
Left Railing	258.0 Lft
Right Railing	257.7 "
Total Railing	515.7 Lft
Anchor Bolts AR-21	42 ea.
2" ϕ Steel Conduit	265 Lft.

NOTES

For additional notes, details, and location of Sections, see Drwg. S 21 & S 22.

For location of 2" ϕ Steel Conduit & Lighting Standards, see General Plan.

For details and location of reinforcing bars 601A & 602A, 2" ϕ Steel Conduit and Anchor bolts AR-21, see Br. Std. "R".

One additional railing post req'd at each Light Standard.

FLOOR DETAILS & BILL OF MATERIALS

INDIANA STATE HIGHWAY COMMISSION

SCALE: As Noted — OCTOBER 10, 1963

SUBMITTED FOR APPROVAL: James L. Martin

DRAWING: S 23 of 26

PROJECT: I-U1-65-3(46)117

BRIDGE CONTRACT NO. R-6333

BRIDGE FILE: I-65-119-2313

DESIGNED: LDM 6-24-63 — CK'D: HPD 6-27-63

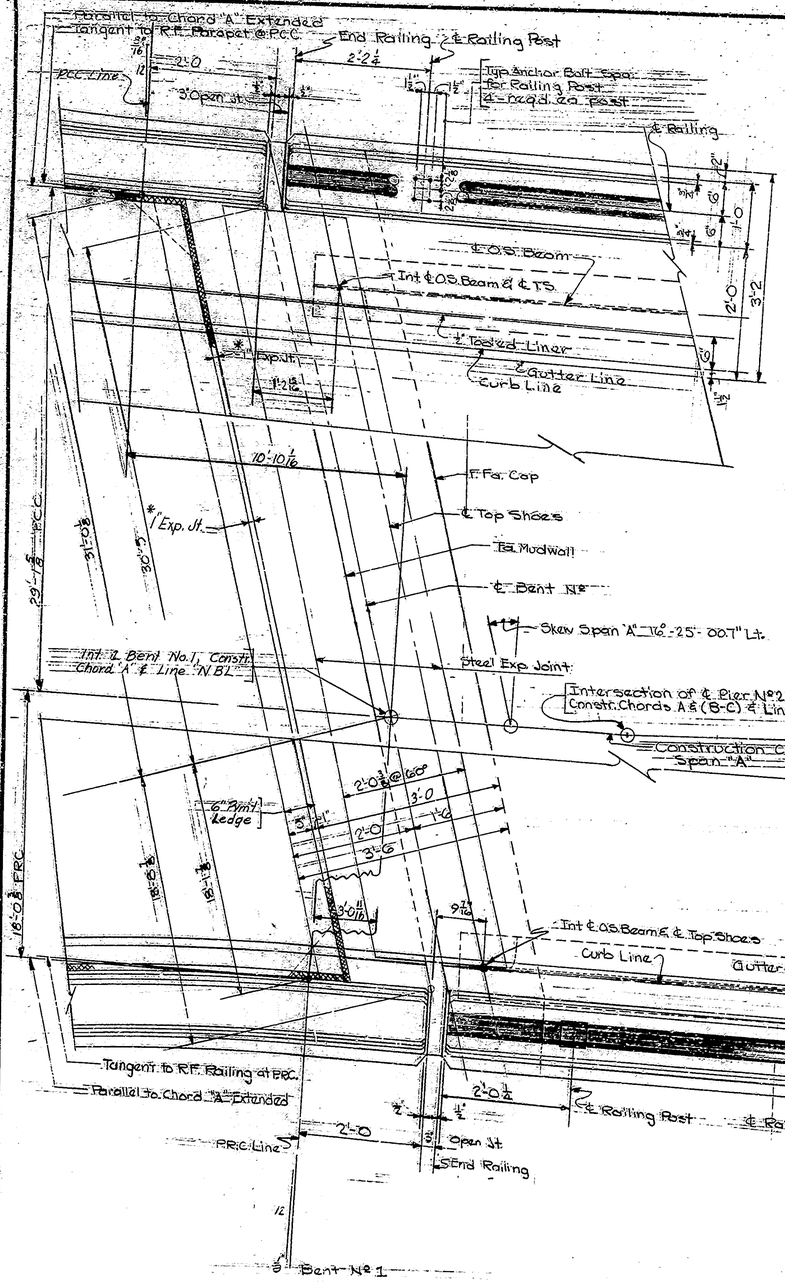
DRAWN: NK 8-15-63 — CK'D: HB 10-3-63

TRACED: — CK'D:

Rev. Bm. Spa. Table 12-30-63

MARBAUGH END. NO. 166

BRIDGES OVER 20' SPAN					
PUB. ROAD NUMB. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	245-65-9 (Alt.)	1963	42	140



CORNER DETAILS

INDIANA STATE HIGHWAY COMMISSION

DESIGNED _____ CKD _____
DRAWN JDO 8-12-63 CKD HB 9-16-63
TRACED _____ CKD _____

SCALE: 1"=10" Unless Noted OCTOBER 10, 1963

SUBMITTED FOR APPROVAL: James D. Mattis

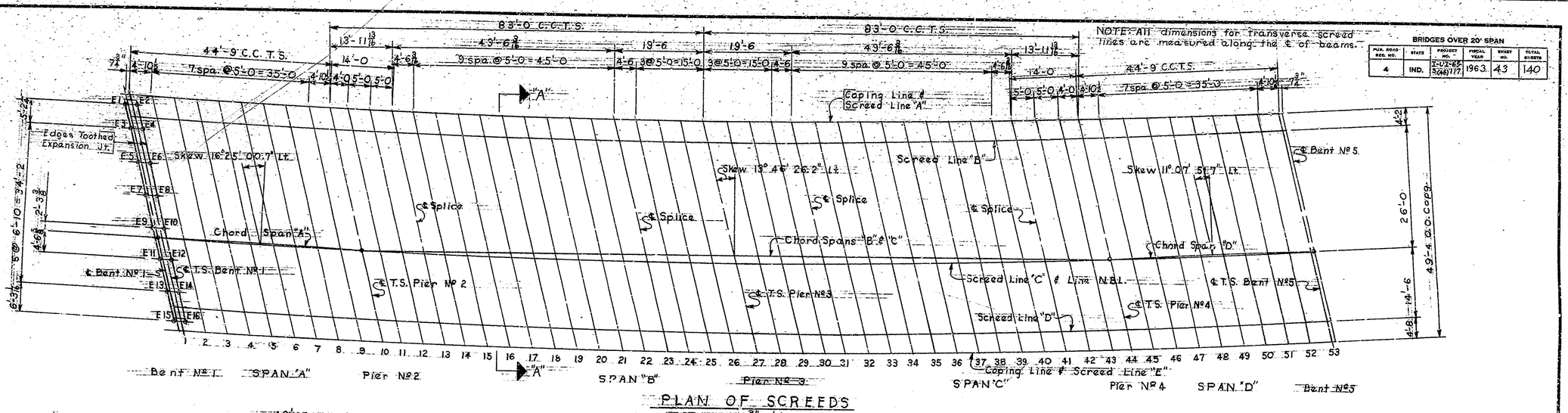
DRAWING: S-24 OF 26

PROJECT: I-[illegible]

BRIDGE CONTRACT NO. R-6333

BRIDGE FILE: [illegible]

MARZAUGH ENG. NO. 190

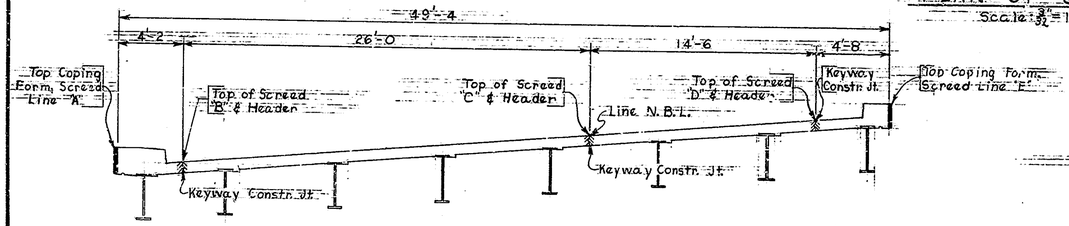


NOTE: All dimensions for transverse screed lines are measured along the ℄ of beams.

BRIDGES OVER 20' SPAN					
FED. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-U.I-65 3(44)117	1963	43	140

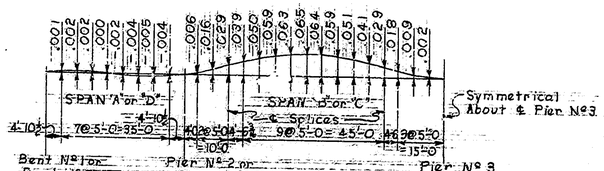
PLAN OF SCREEDS

Scale: $\frac{3}{32}$" = 1'-0



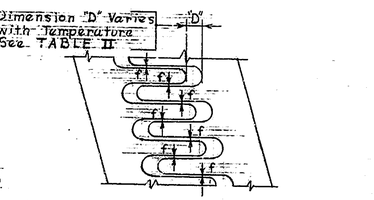
SECTION "AA"

Scale: $\frac{1}{4}$" = 1'-0



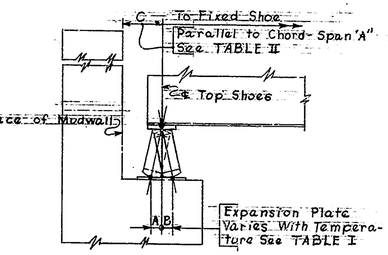
CONCRETE D.L. DEFLECTIONS

Not To Scale



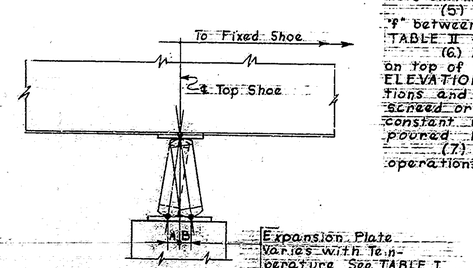
PART TOOTHED EXPANSION JOINT

Not To Scale



BENTS No 1 & No 5

Not To Scale



PIERS No 2 & No 3

Not To Scale

TABLE I

Temperature	Dimension "A" 0°	20°	40°	60°	80°	100°	120°	Dimension "B" 80°	100°	120°
Bent No 1 (Dim. ℄ T.S. to ℄ Exp. R)	1½"	1 5/16"	1 1/8"	15/16"	⅞"	—	—	—	1 5/16"	1½"
Pier No 2 (Dim. ℄ T.S. to ℄ Exp. R)	¼"	⅛"	0"	—	—	—	—	¼"	⅛"	¼"
Pier No 3 (Dim. ℄ T.S. to ℄ Exp. R)	⅜"	¼"	⅛"	0"	—	—	—	⅜"	¼"	⅜"
Bent No 5 (Dim. ℄ T.S. to ℄ Exp. R)	1 1/16"	⅞"	¾"	⅝"	½"	⅜"	¼"	—	—	—

TABLE II

Temperature	0°	20°	40°	60°	80°	100°	120°
Bent No 1 Dimension "C"	1⅛"	1¼"	1⅜"	1½"	1⅝"	1¾"	1⅞"
Bent No 1 Dimension "D"	3½"	3⅜"	3¼"	3⅛"	3"	2⅞"	2¾"

NOTES:-

PURPOSE:

PLAN OF SCREEDS shows location of Screeds.

TABLE OF ELEVATIONS shows data for setting screeds and coping forms so that the slab and copings will be at the final grade elevations after all the concrete has been poured. See Drwg. S.25.

TABLE I shows data for setting Expansion Plates.

TABLE II shows data for setting Toothed Expansion Joint.

GENERAL PROCEDURE:

(1) After all rivets have been driven and all interior diaphragms have been welded in place, adjust the superstructure longitudinally so that the distance from the ℄ Top Shoes to the face of the mudwall at Bent No 1 equals Dimension "C" as shown in TABLE II for the prevailing temperature.

(2) With the superstructure in the adjusted position called for in (1) weld the fixed shoes to the anchor plates at Pier No 4.

(3) Adjust the Expansion Plates 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 thru the ℄ Top Shoe in a direction away from the fixed shoes. Weld the Expansion Plates to the Anchor Plates.

(4) Set steel expansion joint and adjust it to the elevations given for the points shown on the PLAN OF SCREEDS using the double nuts on the anchor rods and on the 2" ø rods on top of the diaphragms.

(5) Adjust steel expansion joints horizontally to make openings "F" between teeth equal and openings "D" to the dimension shown in TABLE II for the prevailing temperature.

(6) After the shoes are set take elevations at all screed points on top of adjacent beams. 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 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.

(7) No concrete in the floor is to be poured until the above operations are completed.

DESIGNED S.E.T. 1-7-63 C.W.O. H.W.B. 7-21-63
DRAWN L.E.M. 8-5-63 C.W.O. J.M.M. 9-23-63
TRACED C.W.O.

SCREEDS

INDIANA STATE HIGHWAY COMMISSION

SCALE:- AS NOTED OCTOBER 10, 1963

SUBMITTED FOR APPROVAL: James D. Mathis

DRAWING:- S.25 OF 26

PROJECT:- I-U.I-65-3(44)117

BRIDGE CONTRACT NO. R-6333

BRIDGE FILE:- I-65-119-2313 (N. B. Lane)

KLAMBAUGH KNAG. NO. 166

BRIDGES OVER 20' SPAN

PUB. ROAD RTE. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-UI-65-3(46)117	1963	44	140

TABLE OF ELEVATIONS

Point		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
A	Elevation Top of Coping Form	782.150	782.095	782.040	781.980	781.915	781.855	781.790	781.725	781.660	781.600	781.555	781.500	781.445	781.390	781.330	781.270	781.200	781.130	781.055	780.975	780.890	780.805	780.7	780.635	780.545	780.455	780.375
	Elevation Top of O.S. Beam																											
	Dist. Top Bm. to top Coping Form																											
B	Elevation Top of Screed	781.330	781.275	781.215	781.160	781.095	781.030	780.965	780.905	780.840	780.780	780.735	780.675	780.620	780.570	780.510	780.445	780.380	780.310	780.235	780.155	780.070	779.980	779.890	779.810	779.720	779.635	779.550
	Elevation Top of Beam																											
	Dist. Top Bm. to Top Screed																											
C	Elevation Top of Screed	783.035	782.975	782.920	782.860	782.795	782.730	782.665	782.600	782.535	782.475	782.430	782.370	782.315	782.265	782.205	782.140	782.070	782.000	781.925	781.845	781.760	781.670	781.580	781.500	781.410	781.325	781.240
	Elevation Top of Beam																											
	Dist. Top Bm. to Top Screed																											
D	Elevation Top of Screed	783.980	783.925	783.865	783.805	783.740	783.675	783.610	783.545	783.480	783.420	783.375	783.315	783.260	783.210	783.145	783.085	783.015	782.945	782.870	782.785	782.700	782.615	782.525	782.440	782.355	782.265	782.180
	Elevation Top of Beam																											
	Dist. Top Bm. to Top Screed																											
E	Elevation Top of Coping Form	785.005	784.950	784.890	784.830	784.765	784.700	784.635	784.570	784.505	784.445	784.395	784.340	784.285	784.230	784.170	784.105	784.035	783.965	783.890	783.810	783.725	783.635	783.545	783.465	783.375	783.285	783.205
	Elevation Top of O.S. Beam																											
	Dist. Top Bm. to Top Coping Form																											

Point		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
A	Elevation Top of Coping Form	780.295	780.215	780.140	780.075	780.000	779.925	779.845	779.760	779.675	779.580	779.435	779.385	779.280	779.185	779.075	778.970	778.885	778.785	778.685	778.585	778.485	778.385	778.280	778.180	778.070	777.970
	Elevation Top of O.S. Beam																										
	Dist. Top Bm. to Top Coping Form																										
B	Elevation Top of Screed	779.470	779.395	779.320	779.255	779.180	779.100	779.020	778.940	778.850	778.755	778.660	778.560	778.455	778.360	778.250	778.145	778.060	777.960	777.860	777.760	777.660	777.560	777.460	777.355	777.250	777.145
	Elevation Top of Beam																										
	Dist. Top Bm. to Top Screed																										
C	Elevation Top of Screed	781.160	781.080	781.005	780.940	780.865	780.790	780.710	780.625	780.535	780.445	780.350	780.245	780.145	780.050	779.940	779.830	779.750	779.650	779.550	779.450	779.350	779.250	779.150	779.045	778.940	776.835
	Elevation Top of Beam																										
	Dist. Top Bm. to Top Screed																										
D	Elevation Top of Screed	782.100	782.025	781.950	781.885	781.810	781.730	781.650	781.565	781.480	781.385	781.290	781.190	781.085	780.990	780.880	780.775	780.690	780.590	780.490	780.390	780.290	780.190	780.090	779.985	779.880	779.775
	Elevation Top of Beam																										
	Dist. Top Bm. to Top Screed																										
E	Elevation Top of Coping Form	783.120	783.045	782.970	782.905	782.830	782.750	782.670	782.590	782.500	782.405	782.310	782.210	782.105	782.010	781.900	781.795	781.710	781.610	781.510	781.410	781.315	781.215	781.110	781.010	780.905	780.800
	Elevation Top of O.S. Beam																										
	Dist. Top Bm. to Top Coping Form																										

TOOTHED EXPANSION JOINT ELEVATIONS

Point	Elevation	Point	Elevation
E1	782.140	E2	782.115
E3	781.565	4	781.540
E5	782.010	E6	781.985
E7	782.460	E8	782.430
E9	782.905	E10	782.880
E11	783.350	E12	783.325
E13	783.795	E14	783.770
E15	784.205	E16	784.180

NOTE:-
For location of screed points and "General Procedure" see Drwg. 526.

DESIGNED LEM 7-1763 CK'D HWB 7-31-63
DRAWN LEM 8-6-63 CK'D DM 9-23-63
TRACED CK'D

MARBALIGH ENG. NO. 186

TABLE OF ELEVATIONS

INDIANA STATE HIGHWAY COMMISSION

SCALE:- NONE OCTOBER 10, 1963

SUBMITTED FOR APPROVAL:- Jesse D. Mathis

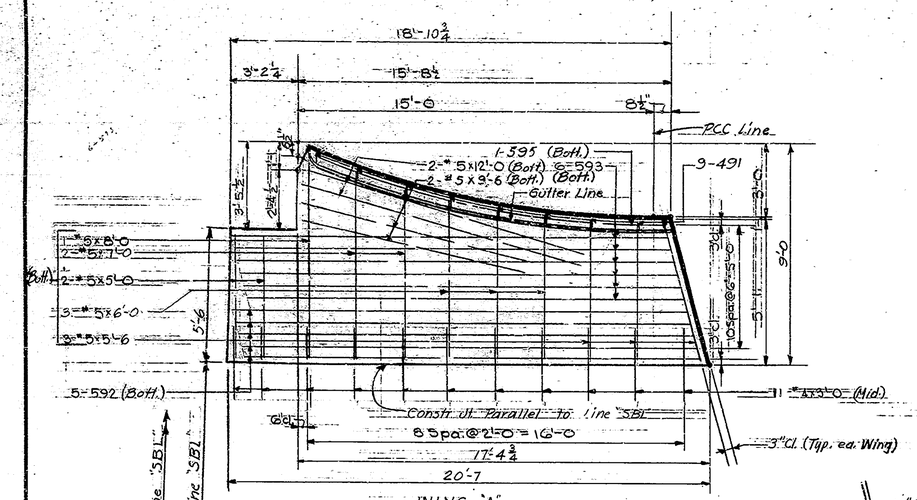
DRAWING:- 526 OF 26

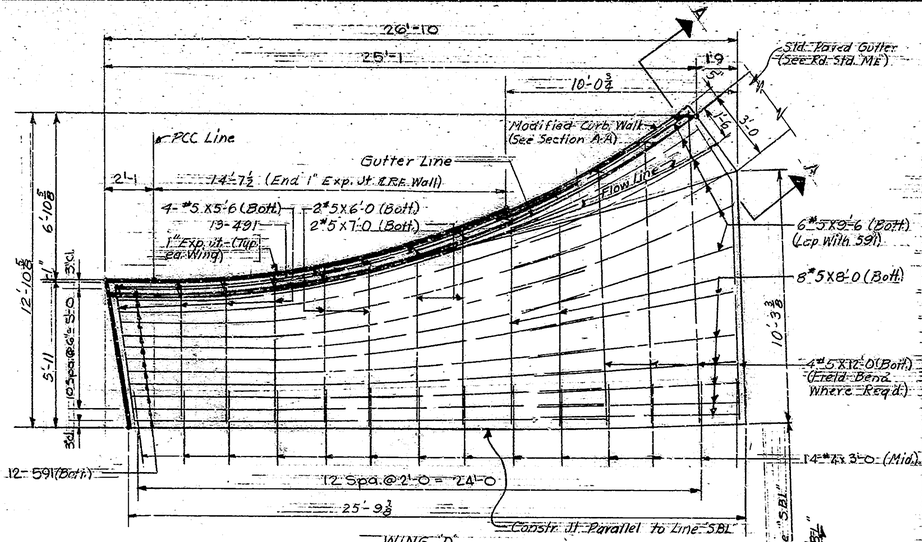
PROJECT:- I-UI-65-3(46).117

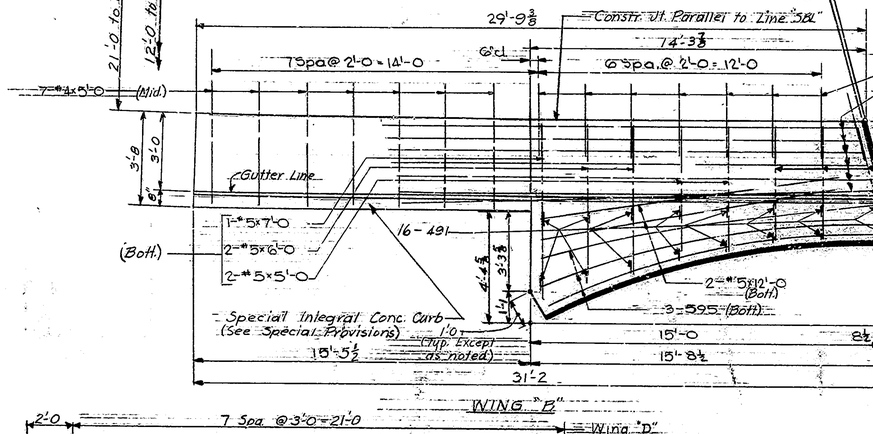
BRIDGE CONTRACT NO. R-6333

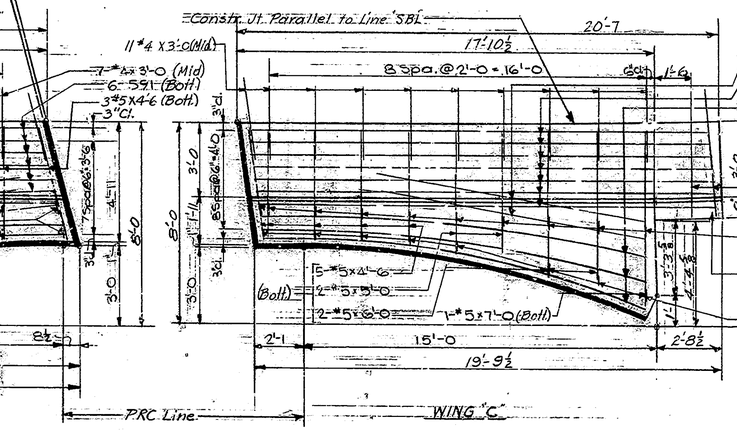
BRIDGE FILE:- I-65-117-23.18 (N. B. Lane)

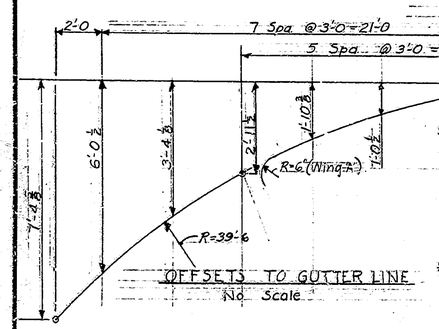
BRIDGES OVER 20' SPAN					
PUB. ROAD SCD. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-UI-65-5(46)117	1963	45	120

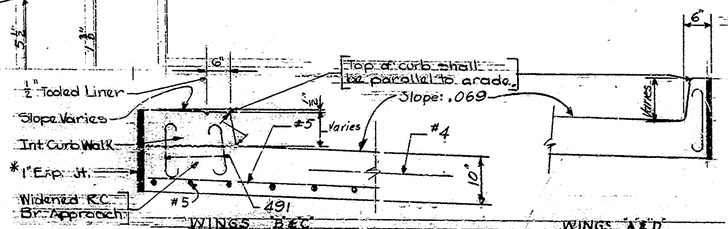


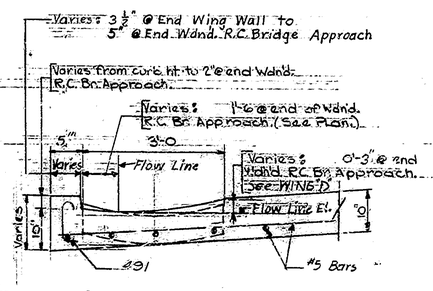










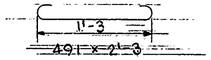


*BILL OF MATERIALS

WIDENED R.C. BRIDGE APPROACH
& R.C. BRIDGE APPROACH

REINFORCING STEEL			
Mark & Size	No. of Bars	Length	Weight
591	150	20'-6	
592	12	20'-0	
593	6	19'-4	
594	3	17'-0	
595	4	15'-9	
#5	22	33'-3	
#5	10	12'-0	
#5	8	9'-6	
#5	8	8'-0	
#5	3	6'-0	
#5	9	6'-0	
#5	7	5'-6	
#5	6	5'-0	
#5	8	2'-6	
Tot. #5			1935*
491	51	4'-3	
#4	9	3'-0	
#4	13	3'-0	
Tot. #4			202*
Total Steel			5151*
CONCRETE			
10" R.C. Pavement			243.5 Cu. Yds.
Class "A" (Int. Curb Walk)			3.3 Cu. Yds.
Special Int. Conc. Curb			11.9 Lin. Ft.
MISCELLANEOUS			
1" Expansion Joint			155.2 Lin. Ft.

O		
Mark	O	Length
591	20'-0	20'-6
592	19'-5	20'-0
593	18'-9	19'-4
594	16'-5	17'-0
595	15'-2	15'-9



NOTES:
For Reinforcing Bar Notes, See Br. Std. "C".
For Std. R.C. Bridge Approach Details, See Br. Std. "E".
*Indicates all items in Bill of Materials not included in Br. Quantities.
For Additional Information See the GENERAL PLAN

WIDENED R.C. BRIDGE APPROACH DETAILS AND BILL OF MATERIALS

INDIANA STATE HIGHWAY COMMISSION

SCALE: 3/8" = 1'-0 Unless Noted. OCTOBER 10, 1963.

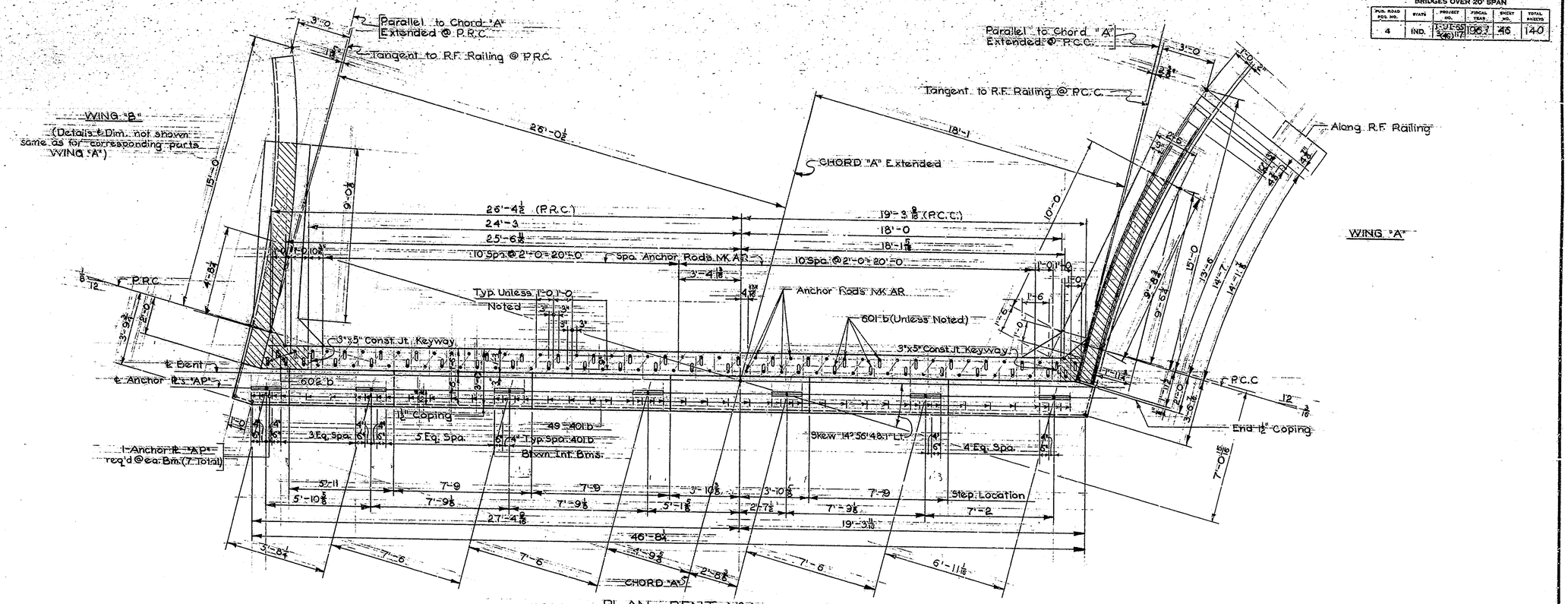
SUBMITTED FOR APPROVAL: James D. Mattis

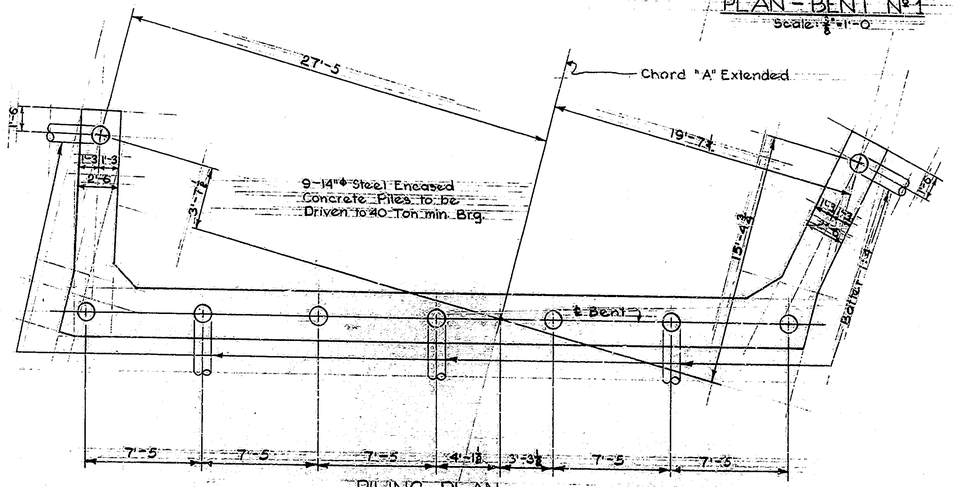
PROJECT: I-UI-3(46).117
BRIDGE CONTRACT NO. R-6333
BRIDGE FILE: I-65-119 2313 J

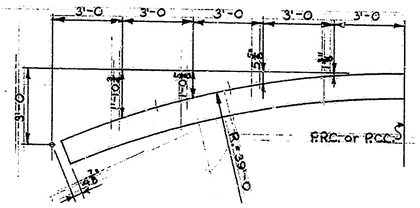
DESIGNED ____ CKD. ____
DRAWN WDO 9-11-63 CKD HB 9-20-63
TRACED ____ CKD. ____

HAUGHAUGH ENG. PHO. 196

BRIDGES OVER 20' SPAN					
PUB. ROAD DES. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-UI-65-3(46)117	1967	46	140







OFFSETS TO REAR FACE WALL
WING "B"
WING "A" Same by opp. Hand
Scale: ⅜" = 1'-0

NOTES:
Anchor Plates "AP" to be preset in concrete.
For Reinforcing Bar Notes, see Br. Std. "C".
For Additional Details, see Drwg. S.7., & Drwg. S.8.
For Bill of Materials, see Drwg. S.5.
Bent cap is not to be poured until fill has been completed up to approximate elevation of the bottom of the cap.
Crosshatched portions indicate extent of horizontal construction joints at top of cap.

BENT Nº 1 DETAILS
INDIANA STATE HIGHWAY COMMISSION

SCALE: As Noted — OCTOBER 10, 1963

SUBMITTED FOR APPROVAL: James T. Martin

DRAWING S.6 OF 26

PROJECT: I-UI-65-3(46)117

BRIDGE CONTRACT NO. R-6333

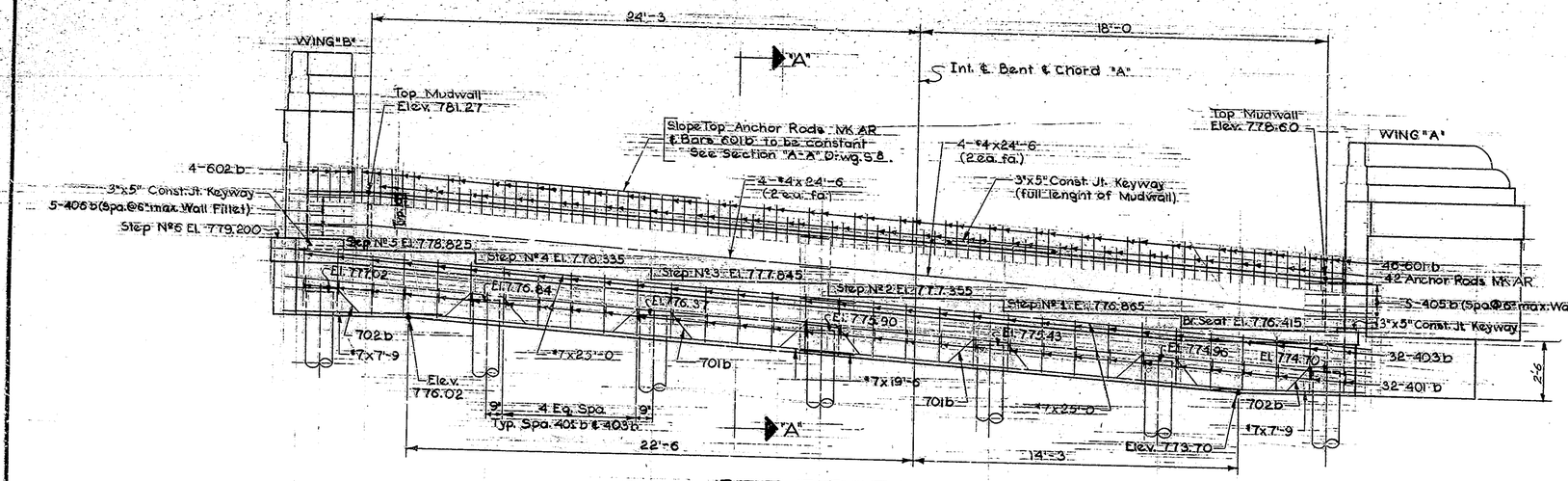
BRIDGE FILE: I-65-119-8913 "J"

DESIGNED H.D. 8-3-63 checked WHS 9-4-63
DRAWN J.K. 9-12-63 checked H.D. 9-30-63
TRACED ____ checked ____

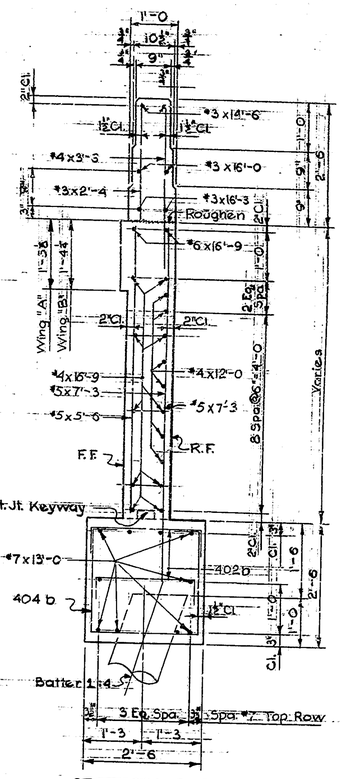
MARBAUGH ENG. NO. 130

BRIDGES OVER 20' SPAN

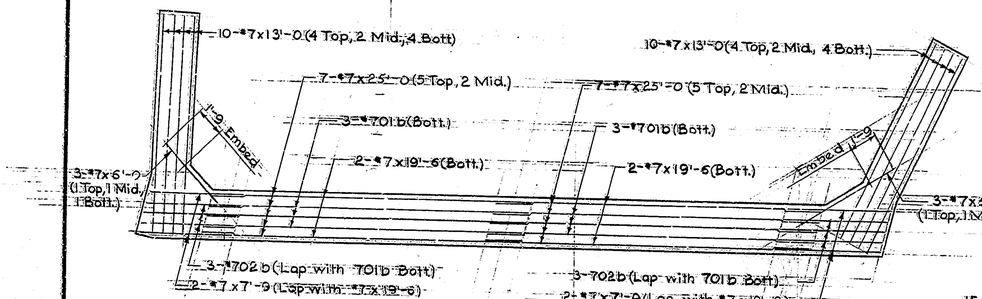
FED. ROAD DIST. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-UI-65 3(46)117	1963	47	140



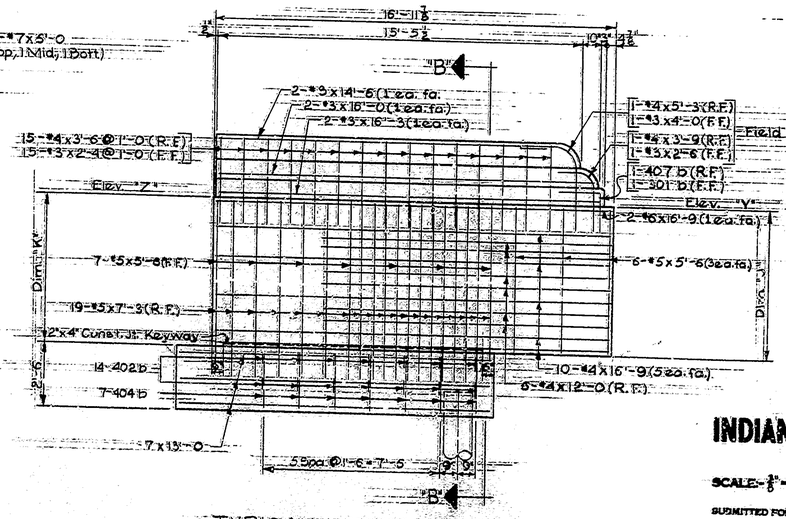
EAST ELEVATION BENT Nº 1



SECTION "B-B"
Scale: 3/4"=1'-0



PLAN BENT Nº 1
Showing Cap Longitudinal Reinforcing Steel
Scale: 3/4"=1'-0



TYPICAL WING DETAILS

WINGWALL HEIGHTS		
WING	Dim. "J"	Dim. "K"
"A"	5'-9½	2'-7⅝
"B"	6'-2½	3'-0¼

TABLE OF ELEVATIONS		
Elev.	Wing "A"	Wing "B"
"Y"	781.99	784.75
"Z"	781.79	784.54

NOTES
For Reinforcing Bar Notes, see Br. Std. "C"
For Additional Details, see Drwg. S 6 & Drwg. S 8
For Bill of Materials, see Drwg. S 8
For Section "A-A", see Drwg. S 8

BENT Nº 1 DETAILS

INDIANA STATE HIGHWAY COMMISSION

SCALE: 3/4"=1'-0, Except as noted OCTOBER 10, 1963

SUBMITTED FOR APPROVAL: James D. Mathis

DRAWING: S 7 OF 25

PROJECT: I-UI-65-3(46)117

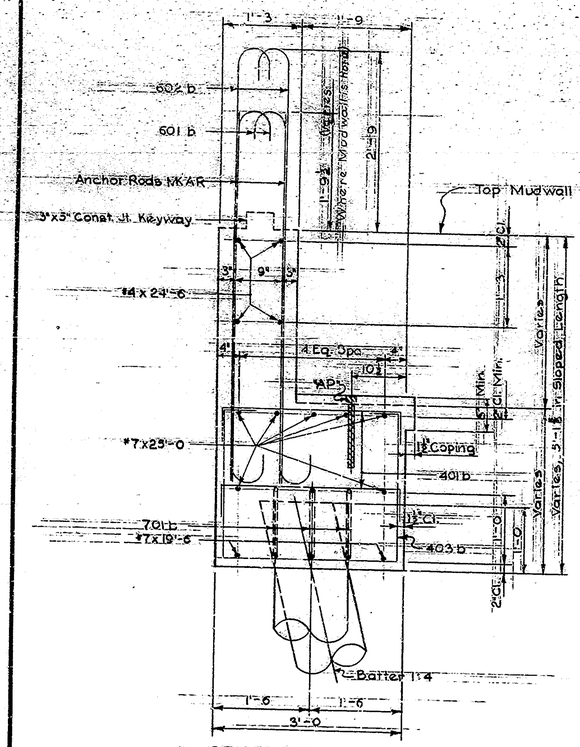
BRIDGE CONTRACT NO. R-6333

BRIDGE FILE: I-65-19-2913 "J"

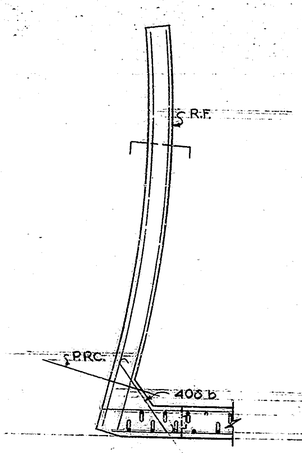
DESIGNED: H.B. 8-31-63 WHS 9-3-63
DRAWN: W.H.S. 9-3-63 H.B. 9-30-63
TRACED: J.W.D.

WARRAUGH ENG. NO. 1199

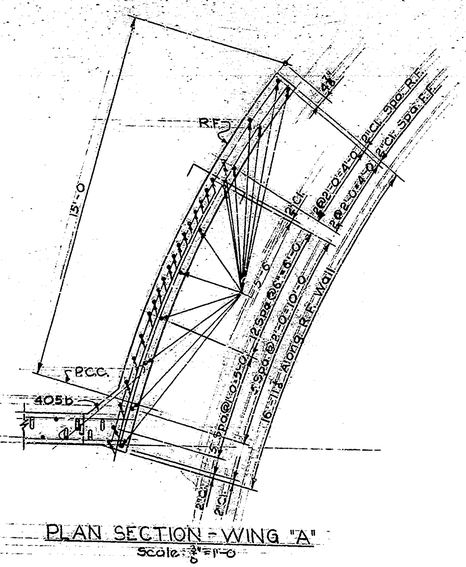
BRIDGES OVER 20' SPAN					
P.S. ROAD SCH. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-DI-65 3(46)117	1963	48	140



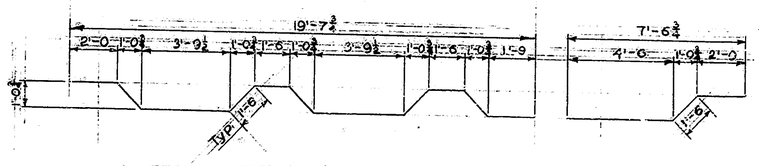
SECTION "A-A"
Scale: 1"=1'-0



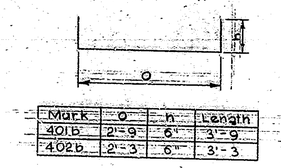
PLAN SECTION - WING "B"
Same as Wing "A" Except as Noted



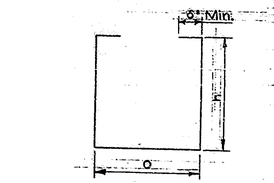
PLAN SECTION - WING "A"
Scale: 3/8"=1'-0



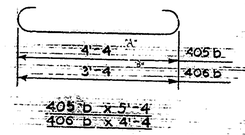
701 b x 21'-10 — 702 b x 8'-0



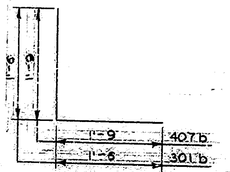
Mark	O	h	Length
401b	2'-9	6"	3'-9
402b	2'-3	6"	3'-3



Mark	O	h	Length
403b	2'-9	2'-3	8'-3
404b	2'-3	2'-2	7'-7



405 b x 5'-4
406 b x 4'-4



407 b x 3'-6
301 b x 3'-0

BILL OF MATERIALS

REINFORCING STEEL

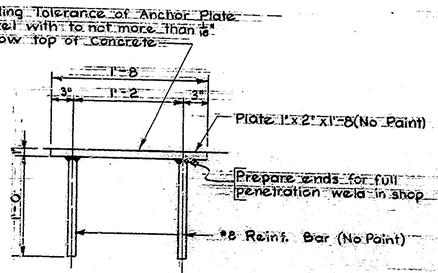
Size & Mark	No. of Bars	Length	Weight
701b	2	21'-10	
702	6	8'-0	
#7	14	25'-0	
#7	4	19'-6	
#7	20	13'-0	
17	4	7'-9	
#7	6	6'-0	
	Total #7		1909#
601b	46	6'-7	
602b	4	7'-7	
#6	4	76'-9	
	Total #6		601#
#5	38	7'-3	
#5	26	5'-0	
	Total #5		436#
401b	81	3'-9	
402b	28	3'-3	
403b	32	8'-3	
404b	14	7'-7	
405b	3	5'-4	
406b	3	4'-4	
407b	2	3'-6	
#4	8	24'-6	
#4	2	16'-9	
#4	1	12'-0	
#4	2	5'-3	
#4	2	3'-9	
#4	30	3'-6	
	Total #4		1081#
301b	2	3'-0	
#3	4	16'-3	
#3	4	16'-0	
#3	4	14'-6	
#3	2	4'-0	
#3	2	2'-6	
#3	30	2'-4	
	Total #3		104#
	Total Steel		4131#

CONCRETE

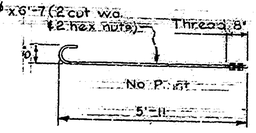
Class "F" Conc.	
Pour No. 1	24.6 cys.
Pour No. 2	3.9 "
Pour No. 3	4.4 "
Total Class "F" Conc.	
Except Railing	32.9 cys.
Railing Concrete (Lt. & Rt. Alike 2@1.3 cys.)	2.6 cys.

MISCELLANEOUS

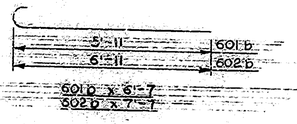
Anchor Plates "AP"	7 ea.
Anchor Rods MKAR	42 ea.
2" ϕ Steel Conduit	22 L.F.
3-14" ϕ Steel Encased Conc. Piles @ 4'-0" (7.6a)	405 Lft.



DETAIL OF ANCHOR PLATE "AP"
Scale: 1½"=1'-0



ANCHOR RODS-MKAR



601b x 6'-7
602b x 7'-7

POUR DESIGNATION

Pour No. 1 - Main Cap, Wing Cap and Mudwall between vertical Construction Joints.
Pour No. 2 - Wingwall "A" and Mudwall outside vertical Construction Joint.
Pour No. 3 - Wingwall "B" and Mudwall outside vertical Construction Joint.

NOTES

For Reinforcing Bar Notes, see Br. Std. "C"
For Location of Section "A-A", see Drwg. S.7.

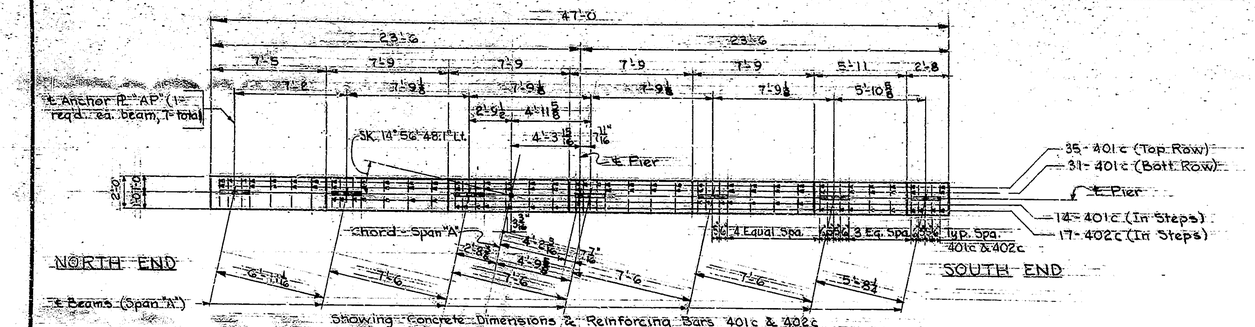
DESIGNED KB 2-3-63 CKD WH 2-4-63
DRAWN JK 2-14-63 CKD KB 2-20-63
TRACED CKD

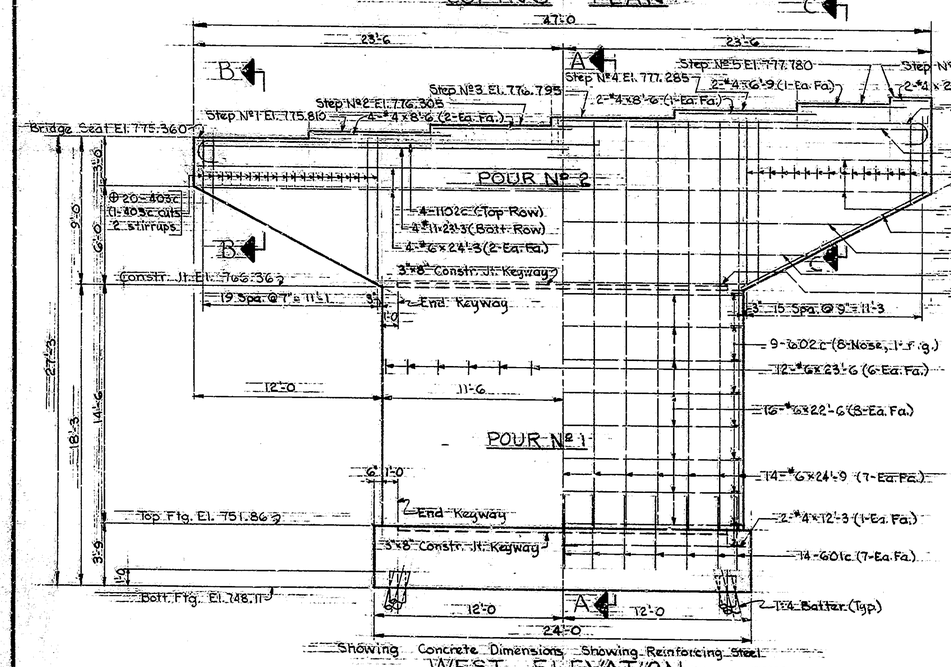
BENT No. 1 DETAILS & BILL OF MATERIALS
INDIANA STATE HIGHWAY COMMISSION

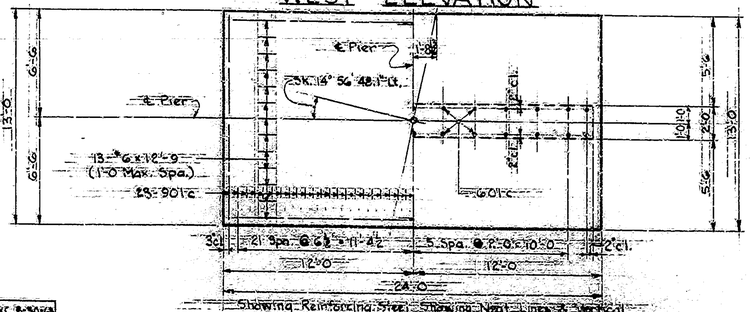
SCALE: As Noted — OCTOBER 10, 1963
SUBMITTED FOR APPROVAL: James D. Mattis
DRAWING S.8 or 26
PROJECT: I-DI-65-3(46)117
BRIDGE CONTRACT NO. R-6333
BRIDGE FILE: I-65-119-23.13="3"

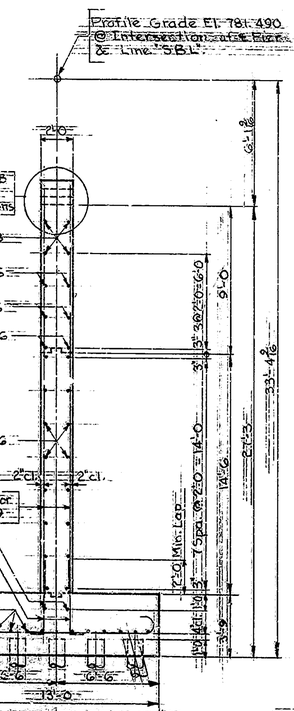
HARRAUGH ENG. CO. 186

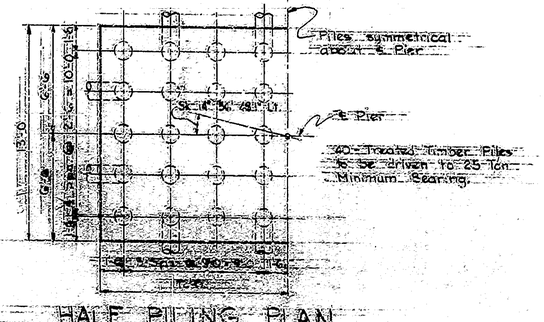
BRIDGES OVER 20' SPAN					
FED. ROAD DES. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	FUF-63-3(6) 117	1963	49	140

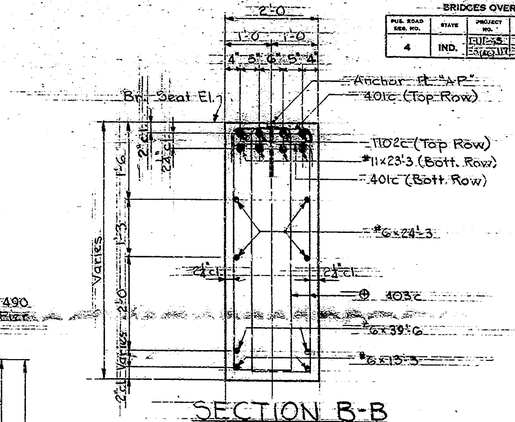


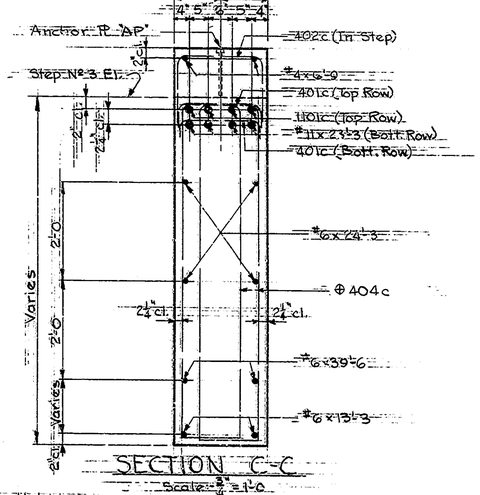












Notes:
For "Reinforcing Bar Notes" see Br. Std. C1.
For "Bill of Materials" see Drwg. S12.
⊕ Indicates cutting and bending diagram required, see Drwg. S12.
□ Indicates piles to be battered 1:4 in the direction shown.
Anchor Plates "AP" to be preset in the concrete.

PIER No 2 DETAILS

INDIANA STATE HIGHWAY COMMISSION

SCALE - 1/4" = 1'-0 UNLESS NOTED OCTOBER 10, 1963

SUBMITTED FOR APPROVAL: James D. Martin

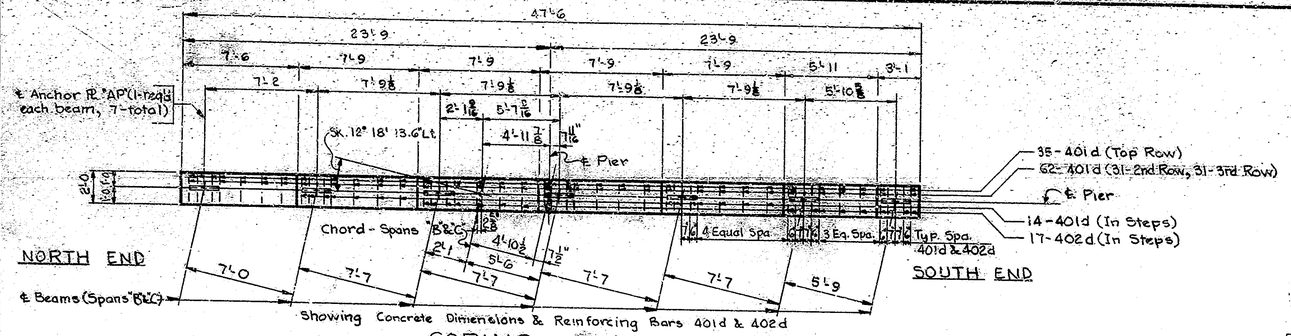
DRAWING S-3 OF 26

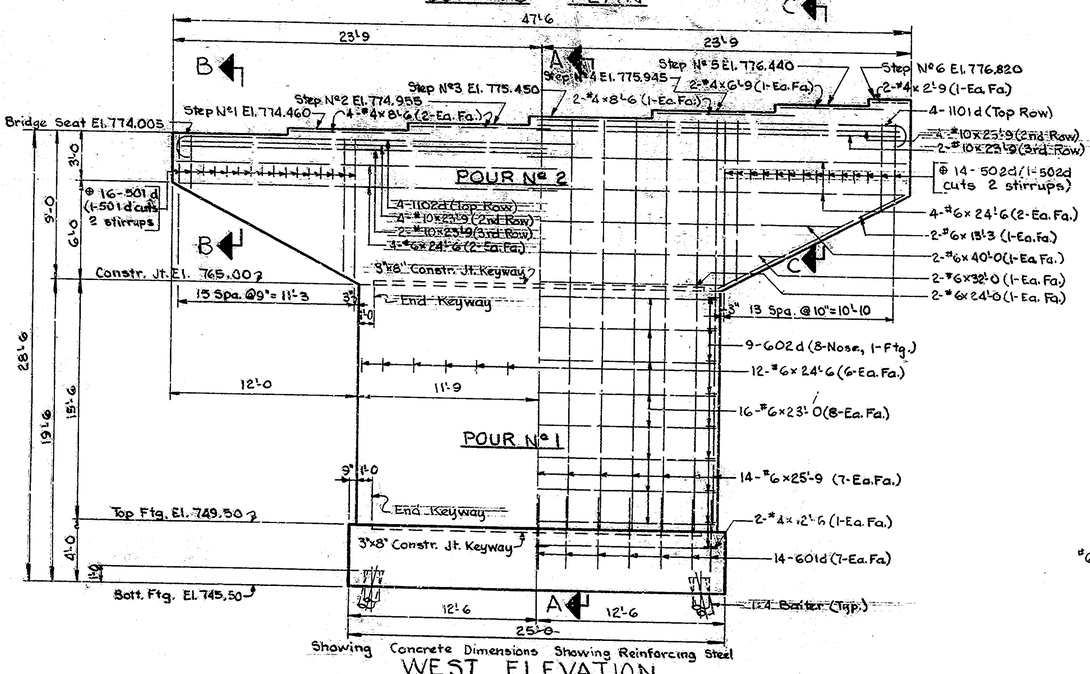
PROJECT - FUF-63-3(6) 117

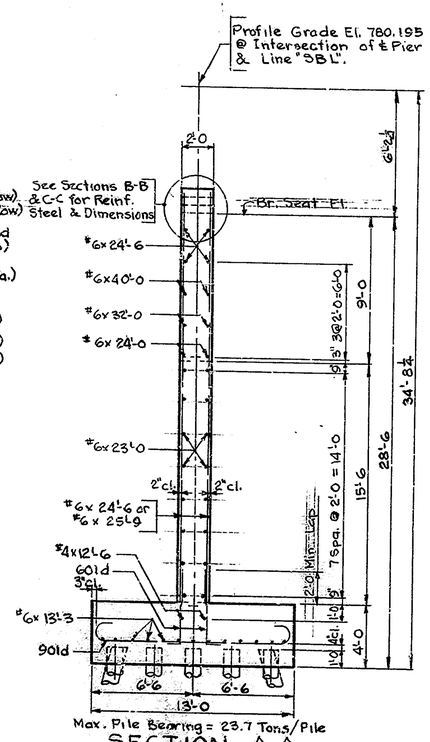
BRIDGE CONTRACT NO. R-6333

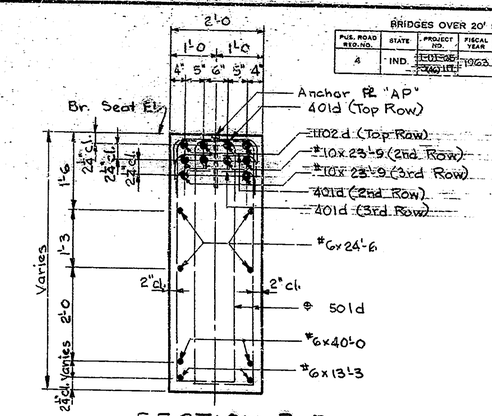
BRIDGE FILE - I-65-119-23.13.1

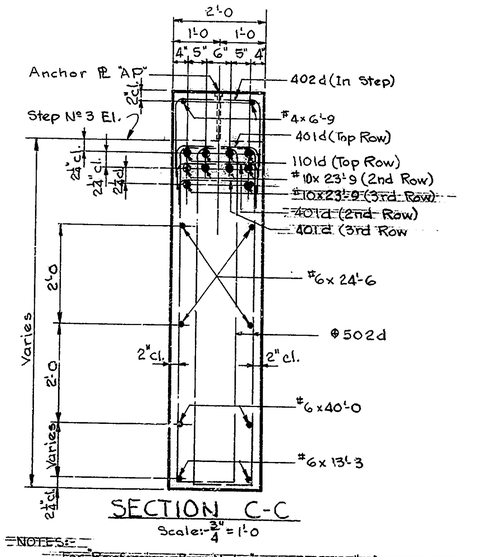
DESIGNED REC 8-10-63 CHK'D RWC 8-10-63
DRAWN JDK 9-23-63 CHK'D REC 9-25-63
TRACED CHK'D





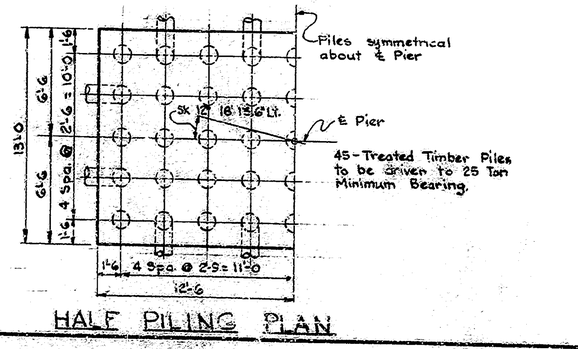


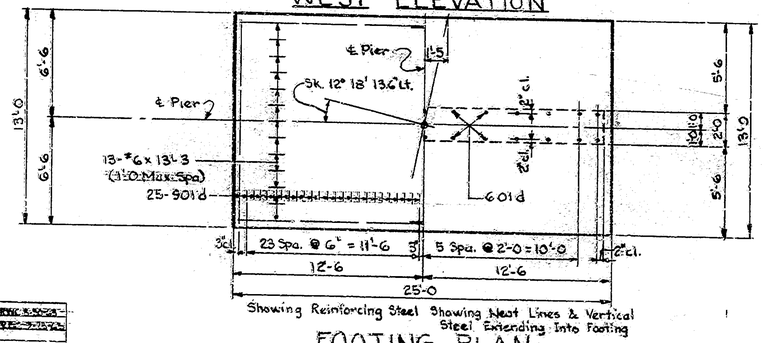




BRIDGES OVER 20' SPAN					
PUB. ROAD REQ. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOT. NO. SHEETS
4	IND.	I-IDI-65-3(46)117	1963	50	140

NOTES:
- For Reinforcing Bar Notes, see Bar Std. C1
- For Bill of Materials, see Dwg. 5-12
- ⊕ Indicates cutting and bending diagram required, see Dwg. 5-12
- Indicates piles to be battered 1:4 in the direction shown.
- Anchor Plates "AP" to be preset in the concrete.





DESIGNED — CHKD
DRAWN — CHKD
TRACED — CHKD

PIER N° 3 DETAILS

INDIANA STATE HIGHWAY COMMISSION

SCALE: 1/4" = 1'-0 UNLESS NOTED OCTOBER 10, 1963

SUBMITTED FOR APPROVAL: James D. Mathis

DRAWING 510 OF 26

PROJECT: I-IDI-65-3(46)117

BRIDGE CONTRACT NO. R-6333

BRIDGE FILE: I-65-119-23131

BRIDGES OVER 20' SPAN					
PUB. ROAD REG. I.C.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-I1F-65-3(44)	1963	51	140

℄ Beams (Span B)

℄ Anchor Pt. "AP" (1-req'd each beam, 7-total)

Chord-Span B

℄ Pier

5K 9° 39' 39.2" Lt.

5 @ 6⅛" = 2'-6⅝" ℄ Equal Spa. — 6 @ 5'-6" Typ. Spa. — 5 @ 5'-6" Typ. Spa.

35- 401f (Top Row)
31- 401f (Bott. Row)
401f & 402f

℄ Pier

14- 401f (In Steps)
17- 402f (In Steps)

NORTH END — SOUTH END

Showing Concrete Dimensions & Reinforcing Bars 401f & 402f

COPING PLAN

Step №1 El. 773.980
Step №2 El. 774.480
Step №3 El. 774.980
Step №4 El. 775.480
Step №5 El. 775.980
Step №6 El. 776.360

4-⅞"x8'-6 (2-Ea. Fa.)
2-⅞"x6'-9 (1-Ea. Fa.)
2-⅞"x6'-6 (1-Ea. Fa.)
2-⅞"x2'-3 (1-Ea. Fa.)

Bridge Seat El. 773.520

4- 1101f (Top Row)
4-⅞"11x23'-3 (Bott. Row)
⊕ 16- 404f (1- 404f cuts 2 stirrups)
⊕ 20- 403f (1-403f cuts 2 stirrups)
4-⅞"6x24'-3 (2-Ea. Fa.)
2-⅞"6x13'-3 (1-Ea. Fa.)
2-⅞"6x39'-6 (1-Ea. Fa.)
2-⅞"6x31'-6 (1-Ea. Fa.)
2-⅞"6x23'-6 (1-Ea. Fa.)

POUR №2
POUR №1

4-1102f (Top Row)
4-⅞"11x23'-3 (Bott. Row)
4-⅞"6x24'-3 (2-Ea. Fa.)

Constr. Jt. El. 764.52?

3"x8" Constr. Jt. Keyway

19 Spa. @ 7" = 11'-1
15 Spa. @ 9" = 11'-3
End Keyway

14-⅞"6x11'-0 (7-Ea. Fa.)
T- 603f (6-Nose, 1-Ftg.)
12-⅞"6x19'-6 (6-Ea. Fa.)
14-⅞"6x20'-9 (7-Ea. Fa.)
28- 602f (10-Ea. Fa.)
12-⅞"6x22'-6 (6-Ea. Fa.)

Top Ftg. El. 754.02?
Bott. Ftg. El. 751.02?

2-⅞"4x12'-3 (1-Ea. Fa.)
28- 601f (14-Ea. Fa.)
328 Constr. Jt. Keyway

1:4 Batter (Typ.)

Showing Concrete Dimensions — Showing Reinforcing Steel

WEST ELEVATION

Profile Grade El. 778.670 @ Intersection of ℄ Pier & Line "SBL".

See Sections B-B & C-C for Reinf. Steel & Dimensions

Br. Seat El.?

*6x24'-3
*6x39'-6
*6x31'-6
*6x23'-6
*6x19'-6
*6x20'-9 or *6x11'-0
*6x22'-6
*4x12'-3
*6x13'-9

3 Spa. @ 2'-0" = 6'-0
3 Spa. @ 2'-10" = 8'-6
20 Mat'l Lap
601f or 602f
901f

Max. Pile Brg. = 225.6 Tons/Pile

SECTION A-A

Br. Seat El.?

Anchor Pt. "AP" 401f (Top Row)
1102f (Top Row)
*11x23'-3 (Bott. Row)
401f (Bott. Row)
*6x24'-3
⊕ 403f
*6x39'-6
*6x13'-3

Varies

SECTION B-B

Scale: 3/4" = 1'-0

Anchor Pt. "AP"
402f (In Step)
Step №3 El.
*4x6'-9
401f (Top Row)
1101f (Top Row)
*11x23'-3 (Bott. Row)
401f (Bott. Row)
*6x24'-3
⊕ 404f
*6x39'-6
*6x13'-3

Varies

SECTION C-C

Scale: 3/4" = 1'-0

℄ Pier
601f
602f
5K 9° 39' 39.2" Lt.
*6x13'-3 (10-Max. Req'd)
24-901f
22 Spa. @ 6" = 11'-11
20 Spa. @ 6'-0" = 10'-0
13'-0
26'-0

Showing Reinforcing Steel — Showing Neat Lines & Vertical Steel Extending Into Footing

FOOTING PLAN

Piles Symmetrical About ℄ Pier

5K 9° 39' 39.2" Lt.

℄ Pier

1-6 Spa. @ 2'-10" = 11'-6
13'-0

36 Treated Timber Piles to be Driven to 25 Ton Minimum Bearing

HALF PILING PLAN

NOTES:-
For "Reinforcing Bar Notes" see Br. Std. "C1".
For "Bill of Materials" see Drwg. S12.
⊕ Indicates cutting and bending diagram required, see Drwg. S12.
Indicates piles to be battered 1:4 in the direction shown.
Anchor Plates "AP" to be preset in the concrete.

PIER №4 DETAILS

INDIANA STATE HIGHWAY COMMISSION

SCALE: 1/4" = 1'-0" UNLESS NOTED — OCTOBER 10, 1963

SUBMITTED FOR APPROVAL: James D. Mathis

DRAWING S11 OF 26

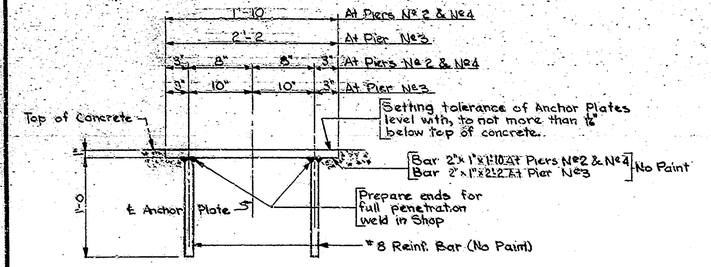
PROJECT: I-I1F-65-3(44) 117

BRIDGE CONTRACT NO. R-6333

BRIDGE FILE: I-65-119-23.83J

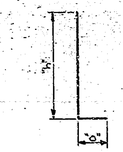
DESIGNED RWC 8-27-63 CKD RWC 9-30-63
DRAWING RWC 9-27-63 CKD RWC 9-28-63
TRACED ____ CKD ____

BRIDGES OVER 20' SPAN					
PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-01-3(2) 346117	1963	32	140



ANCHOR PLATE "AP" DETAIL

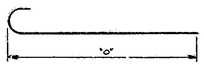
Not to Scale



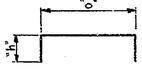
Mark	"o"	"h"	Length
601c	8"	4'-5"	5'-1"
601d	8"	4'-8"	5'-4"
601f	8"	3'-8"	4'-4"
602f	8"	9'-3"	9'-11"



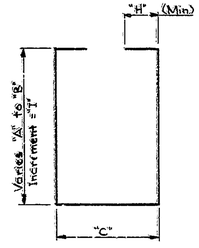
Mark	"o"	Length
901c	12'-6"	13'-0"
901d	10'-6"	13'-0"



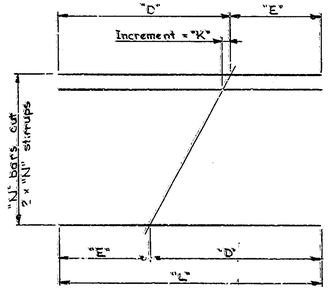
Mark	"o"	Length
1101c	23'-7"	25'-2"
1101f		
1101d	24'-0"	25'-7"
1102c	25'-6"	27'-1"
1102f		
1102d	25'-7"	27'-2"



Mark	"o"	"h"	Length
602c			
602d	1'-6½"	6¼"	2'-7"
603f			
401c			
401d	1'-9"	8"	3'-1"
401f			
402c			
402d	1'-9"	1'-6"	4'-9"
402f			



BENDING DIAGRAM



CUTTING DIAGRAM

Mark	"A"	"B"	"C"	"H"	"I"	"K"	"N"	"O"	"E"	"L"
⊕ 501d	3'-0"	5'-7½"	1'-5½"	7"	4½"	9"	16	9'-5"	8'-6"	22'-3"
⊕ 502d	4'-3"	7'-0½"	1'-5½"	7"	5"	10"	14	22'-8"	11'-10"	34'-6"
⊕ 403c	3'-11"	5'-7½"	1'-3"	6"	3½"	7"	20	19'-6"	5'-5"	27'-11"
⊕ 403f	4'-5½"	10'-0½"	1'-3"	6"	4½"	9"	16	22'-5"	11'-2"	33'-7"
⊕ 403d	3'-11"	5'-7½"	1'-3"	6"	3½"	7"	20	19'-6"	5'-5"	27'-11"
⊕ 404f	4'-5½"	10'-1"	1'-3"	6"	4½"	9"	16	22'-5"	11'-2"	33'-7"

BILL OF MATERIALS
PIER Nº 2

REINFORCING STEEL

Size & Mark	Nº of Bars	Length	Weight
1101c	4	25'-2"	
1102c	4	27'-1"	
*11	8	25'-5"	
		Total *11	2090*
901c	45	13'-0"	2295*
601c	26	5'-1"	
602c	18	2'-7"	
*6	2	39'-6"	
*6	2	31'-6"	
*6	14	24'-9"	
*6	8	24'-3"	
*6	14	23'-6"	
*6	16	22'-6"	
*6	4	13'-3"	
*6	26	12'-9"	
		Total *6	2906*
401c	80	3'-1"	
402c	17	4'-9"	
⊕ 403c	20	27'-11"	
⊕ 404c	16	33'-7"	
*4	4	12'-3"	
*4	6	8'-6"	
*4	2	6'-9"	
*4	2	2'-3"	
		Total *4	1029*
		TOTAL STEEL	8329*

CONCRETE

Class "F": (Pour Nº 2)	30.3 Cys.
Class "E": Abv. Ftg. (Pour Nº1)	24.7 Cys.
Class "E": In Ftg.	43.3 Cys.

MISCELLANEOUS

Anchor Plates "AP"	7 Each
40'- Treated Timber Piles x 25'-0 (Approx.)	1000 Lft.

BILL OF MATERIALS
PIER Nº 3

REINFORCING STEEL

Size & Mark	Nº of Bars	Length	Weight
1101d	04	25'-7"	
1102d	4	27'-2"	
		Total *11	1760*
*10	12	23'-9"	1226*
*9	50	15'-0"	2550*
601d	26	5'-4"	
602d	18	2'-7"	
*6	2	40'-0"	
*6	2	32'-0"	
*6	14	25'-9"	
*6	20	24'-6"	
*6	2	24'-0"	
*6	16	23'-0"	
*6	50	13'-3"	
		Total *6	2994*
⊕ 501d	16	28'-3"	
⊕ 502d	14	34'-6"	
		Total *5	975*
401d	111	3'-1"	
402d	17	4'-9"	
*4	4	12'-6"	
*4	6	8'-6"	
*4	2	6'-9"	
*4	2	2'-3"	
		Total *4	363*
		TOTAL STEEL	9229*

CONCRETE

Class "F": (Pour Nº 2)	30.8 Cys.
Class "E": Abv. Ftg. (Pour Nº1)	21.0 Cys.
Class "E": In Ftg.	48.1 Cys.

MISCELLANEOUS

Anchor Plates "AP"	7 Each
45'- Treated Timber Piles x 25'-0 (Approx.)	1125 Lft.

BILL OF MATERIALS
PIER Nº 4

REINFORCING STEEL

Size & Mark	Nº of Bars	Length	Weight
1101f	04	25'-2"	
1102f	4	27'-1"	
*11	8	23'-5"	
		Total *11	2090*
901f	48	13'-0"	2122*
501f	54	4'-4"	
602f	40	9'-11"	
603f	14	2'-7"	
*6	2	39'-6"	
*6	2	31'-6"	
*6	8	24'-3"	
*6	2	23'-6"	
*6	12	22'-6"	
*6	14	20'-9"	
*6	12	19'-6"	
*6	22	13'-9"	
*6	4	13'-3"	
*6	28	11'-0"	
		Total *6	3761*
401f	80	3'-1"	
402f	17	4'-9"	
⊕ 403f	20	27'-11"	
⊕ 404f	16	33'-7"	
*4	4	12'-3"	
*4	6	8'-6"	
*4	2	6'-9"	
*4	2	2'-3"	
		Total *4	1029*
		TOTAL STEEL	9017*

CONCRETE

Class "F": (Pour Nº 2)	30.1 Cys.
Class "E": Abv. Ftg (Pour Nº 1)	17.9 Cys.
Class "E": In Ftg.	31.6 Cys.

MISCELLANEOUS

Anchor Plates "AP"	7 Each
36'- Treated Timber Piles x 25'-0 (Approx.)	900 Lft.

NOTES:
For "Reinforcing Bar Notes" see Sh. 31 and "C".
For Pier Details see Drawings Nos. 36 & 37.
⊕ Indicates cutting diagram required.
Anchor Plates "AP" to be welded to the Steel Piles.

PIERS Nº 2, Nº 3 & Nº 4
BILL OF MATERIALS
INDIANA STATE HIGHWAY COMMISSION

SCALE: NONE — OCTOBER 10, 1963

SUBMITTED FOR APPROVAL: James D. Mathis

DRAWING S12 OF 26
PROJECT I-01-65-3(46) 17
BRIDGE CONTRACT NO. R-6333
BRIDGE FILE: 1-65-119-2313J

DESIGNED — CK'D
DRAWN — CK'D
TRACED — CK'D

BRIDGES OVER 20' SPAN					
PUB. ROAD REQ. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-UT-65 2(46)117	1963	53	120

WING "D"
(Details & Dim. not shown, same as for corresponding parts Wing "C")

Parallel to Chord "D" Extended @ P.C.C.

Tangent to R.F. Railing @ P.C.C.

Parallel to Chord "D" Extended @ P.R.C.

Tangent to R.F. Railing @ P.R.C.

Along R.F. Wall

CHORD "D" Extended

WING "C"

P.C.C.

℄ P.R.C.

2"x4" Const. Jt. Keyway

1'-0 1-0 Typ.

2"x2'-0 Depressed Keyway

2"x4" Const. Jt. Keyway

℄ Bent

℄ Anchor B's "AP"

Skew 9° 39' 39.2" Lt.

49-401 h

3 Eq. Spa.

1-Anchor B "AP" req'd @ ea Bm. (7 Total)

4 Eq. Spa.

5 Eq. Spa.

(Typ Spa 401 h Btwn. Internal Beams)

Step Location

CHORD "D"

PLAN

Showing Conc. Dim. & Reinf. bars 401 h
Scale: 3/8" = 1'-0

Chord "D" Extended

9-14"Φ Steel Encased Concrete Piles to be Driven 40 Ton min. Brg.

Batter 1:4

PILING PLAN

Scale: 1/4" = 1'-0

R.R.C. or P.C.C.

OFFSETS TO REAR FACE-WALL

WING "D"
WING "C" Same by opp. Hand
Scale: 3/8" = 1'-0

NOTES

For Reinforcing Bar Notes, see Br. Std. "C."
Anchor Plates "AP" to be preset in Concrete.
For Bill of Materials, see Drwg. S.15
For additional Details, see Drwg. S.14 & Drwg. S.15
Bent cap is not to be poured until fill has been completed up to approximate elevation of the bottom of the cap.
Crosshatched portions indicate extent of horizontal Construction Joints at top of cap.

BENT No. 5 DETAILS

INDIANA STATE HIGHWAY COMMISSION

SCALE: As Noted — OCTOBER 10, 1963

SUBMITTED FOR APPROVAL: James D. Mattes

DRAWING S.13 OF 25

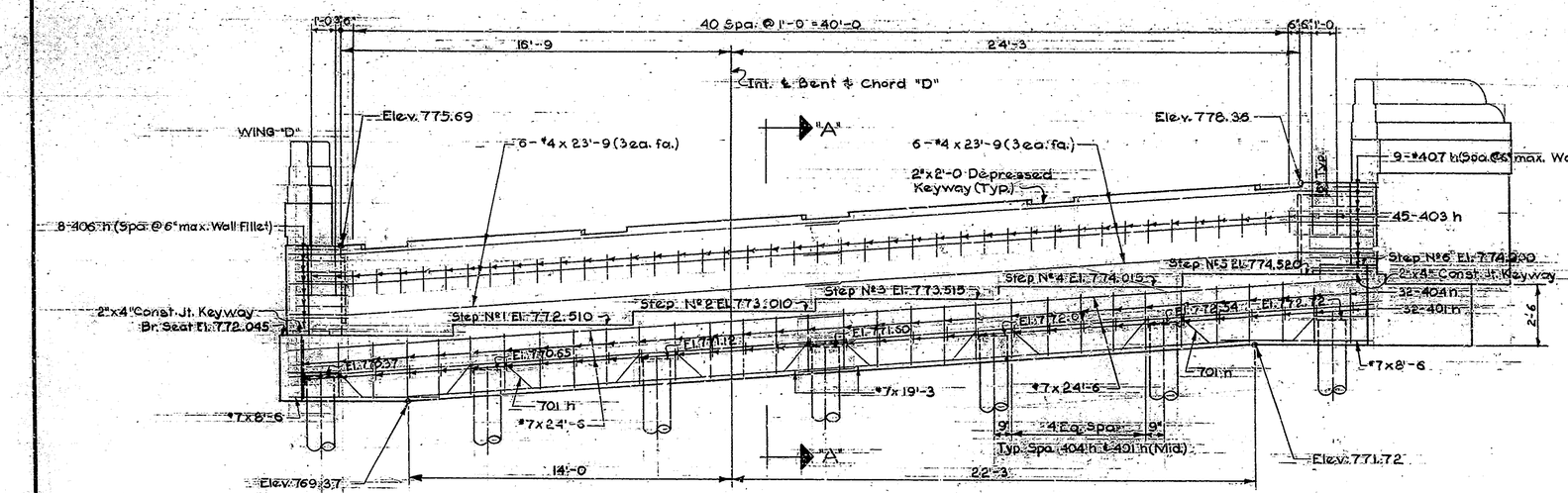
PROJECT: I-UT-65-2(46)117

BRIDGE CONTRACT NO. R-6333

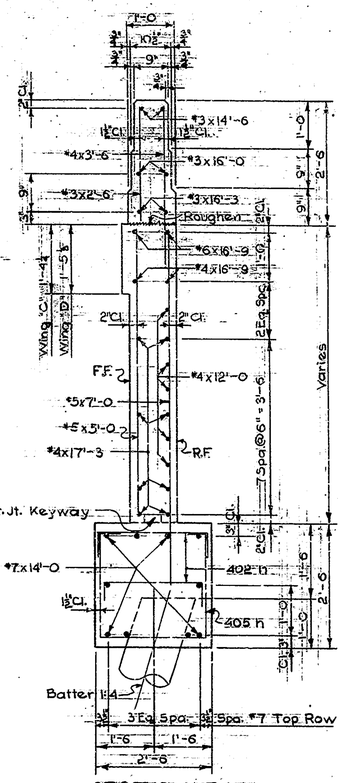
BRIDGE FILE: I-65-119-23.13"J"

DESIGNED HB 8-2-63 C'K'D WHS 9-6-63
DRAWN JK 9-18-63 C'K'D HB 10-1-63
TRACED ____ C'K'D ____

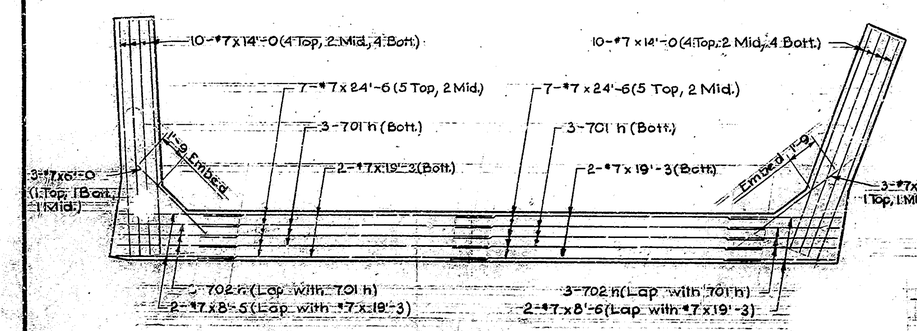
BRIDGES OVER 20' SPAN					
PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-UI-65 3(46)117	1963	54	140



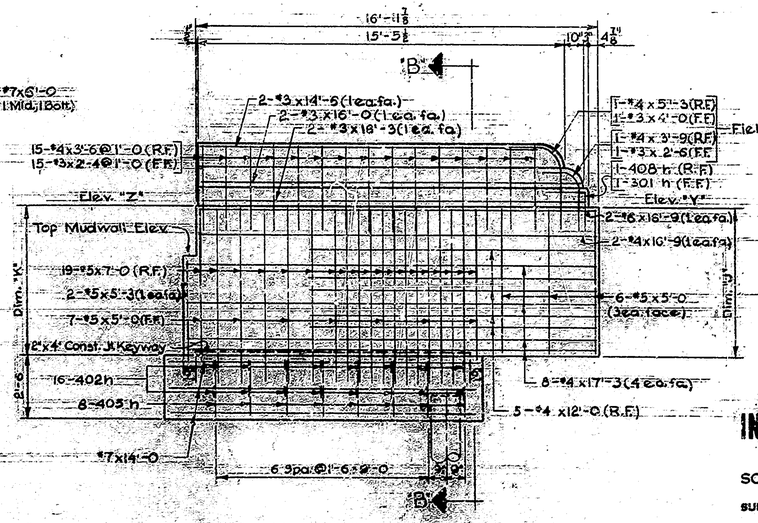
WEST ELEVATION
Scale: 3/8" = 1'-0



SECTION "B-B"
Scale: 3/4" = 1'-0



PLAN
Showing Cap Longitudinal Reinforcing Steel
Scale: 1" = 1'-0



TYPICAL WING DETAILS
Scale: 3/4" = 1'-0

WINGWALL HEIGHTS		
Wing	Dim. "J"	Dim. "K"
"C"	5'-6 1/2"	5'-11 1/2"
"D"	5'-2"	5'-6 1/2"

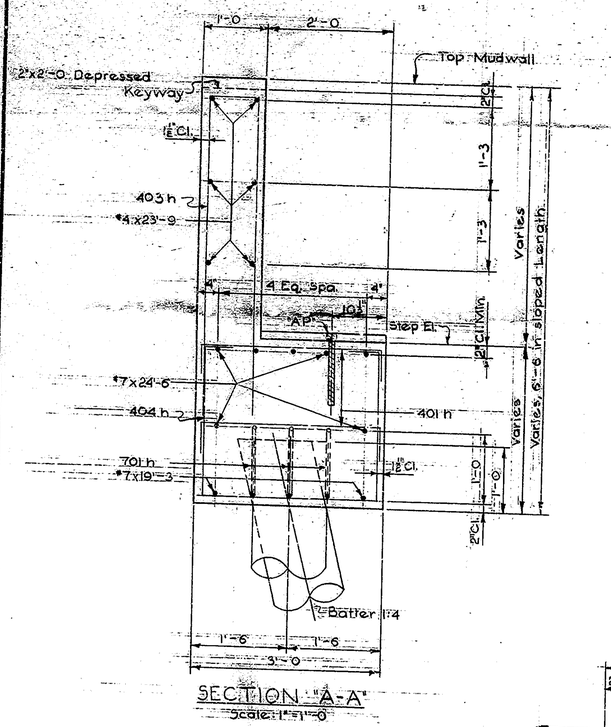
TABLE OF ELEVATIONS		
Elev.	Wing "C"	Wing "D"
"Y"	777.80	777.04
"Z"	780.26	779.40

NOTES
For Reinforcing Bar Notes, see Br. Std. "C."
For additional details, see Drwg. S 13 & Drwg. S 15
For Bill of Materials see Drwg. S 15
For Section "A-A" see Drwg. S 15

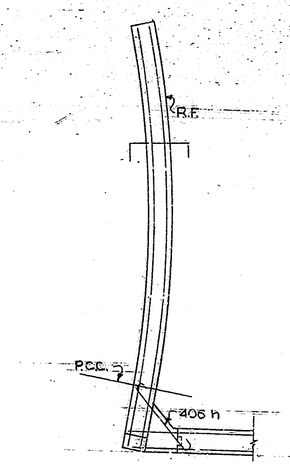
BENT No. 5 - DETAILS
INDIANA STATE HIGHWAY COMMISSION

SCALE: As Noted — OCTOBER 10, 1963
SUBMITTED FOR APPROVAL: James D. Mattis
DRAWING S 14 OF 25
PROJECT: I-UI-65-3(46)117
BRIDGE CONTRACT NO. R-6333
BRIDGE FILE: I-65-119-2913 "J"

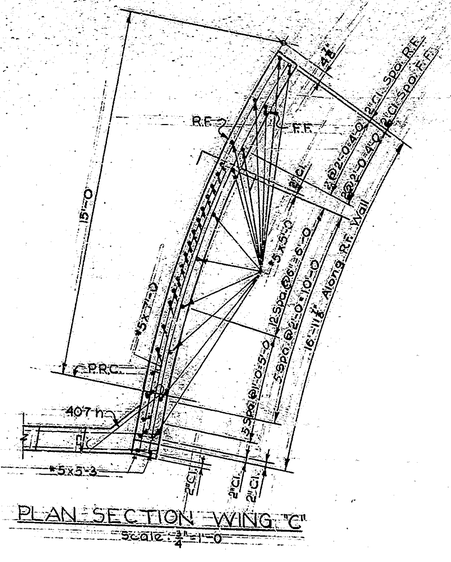
DESIGNED HB 9-23-63 CK'D WHS 9-6-63
DRAWN JKG 9-25-63 CK'D HB-10-1-63
TRACED ____ CK'D ____



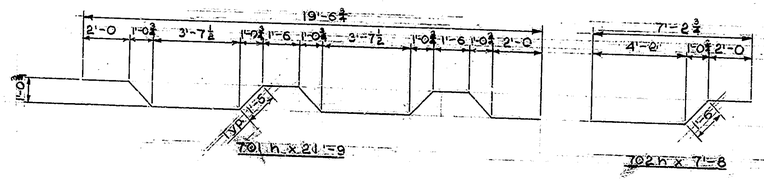
SECTION "A-A"
Scale: 1"=1'-0

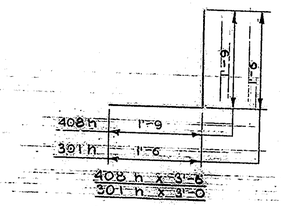


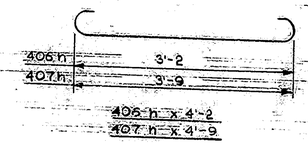
PLAN SECTION WING "D"
Same as WING "C" except as noted

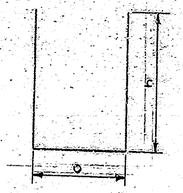


PLAN SECTION WING "C"
Scale: ¾"=1'-0

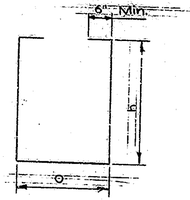






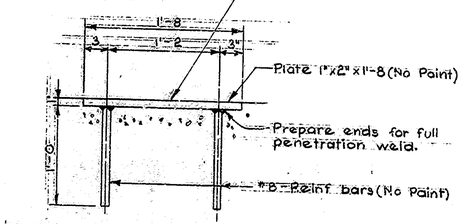


Mark	0	h	Length
401 h	2'-9	6"	3'-9
402 h	0'-3	6"	3'-3
403 h	9"	4'-10	10'-9



Mark	0	h	Length
404 h	2'-9	2'-3	8'-3
405 h	2'-3	2'-2	7'-7

Setting Tolerance of Anchor Plates level with, to not more than 1/16" below top of concrete



DETAIL OF ANCHOR PLATE "AP"
Scale: 1½"=1'-0

POUR DESIGNATION

Pour N°1 Main cap, Wing cap and Mudwall between vertical Construction Joints.
Pour N°2 Wingwall "C" and Mudwall outside vertical Construction Joint.
Pour N°3 Wingwall "D" and Mudwall outside vertical Construction Joint.

NOTES

For Reinforcing Bar Notes, see Br. Std. "C"
For Location of Section "A-A" see Drwg. S 14

BRIDGES OVER 20' SPAN

PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-01-65 3(117)	1963	55	140

BILL OF MATERIALS

REINFORCING STEEL			
Size & Mark	No. of Bars	Length	Weight
701 h	6	21'-6	
701 h	6	7'-6	
#7	14	24'-6	
#7	4	19'-5	
#7	20	14'-0	
#7	4	8'-6	
#7	6	6'-0	
	Total #7		1835#
#8	4	16'-9	101#
#5	38	7'-0	
#5	4	5'-3	
#5	26	5'-0	
	Total #5		435#
401 h	61	3'-9	
402 h	32	3'-3	
403 h	45	10'-9	
404 h	32	8'-3	
405 h	16	7'-7	
406 h	8	4'-2	
407 h	9	4'-9	
408 h	3	3'-6	
#4	2	23'-9	
#4	16	17'-3	
#4	4	16'-3	
#4	10	12'-0	
#4	2	5'-3	
#4	2	3'-9	
#4	30	3'-6	
	Total #4		1480#
301 h	2	3'-6	
#3	4	16'-3	
#3	4	15'-0	
#3	4	14'-6	
#3	2	9'-0	
#3	2	2'-6	
#3	30	2'-4	
	Total #3		104#
	Total Steel		4055#
CONCRETE			
Class "F" Concr. 1:2			
Pour N°1			256 cys
Pour N°2			42 cys
Pour N°3			38 cys
Total Class "F" (Except Railing Concrete)			336 cys
Railing Concrete (Lt. & Rt. Alike - 2 @ 1.3 cys)			2.6 cys
MISCELLANEOUS			
Anchor Plates "AP"			7 ea.
2-14"ø Steel Encased Conc. Piles @ 40'-0" (7-80)			560 Lft.
2" ø Steel Conduit			22 Lft.

BENT N° 5 DETAILS & BILL OF MATERIALS OF
INDIANA STATE HIGHWAY COMMISSION

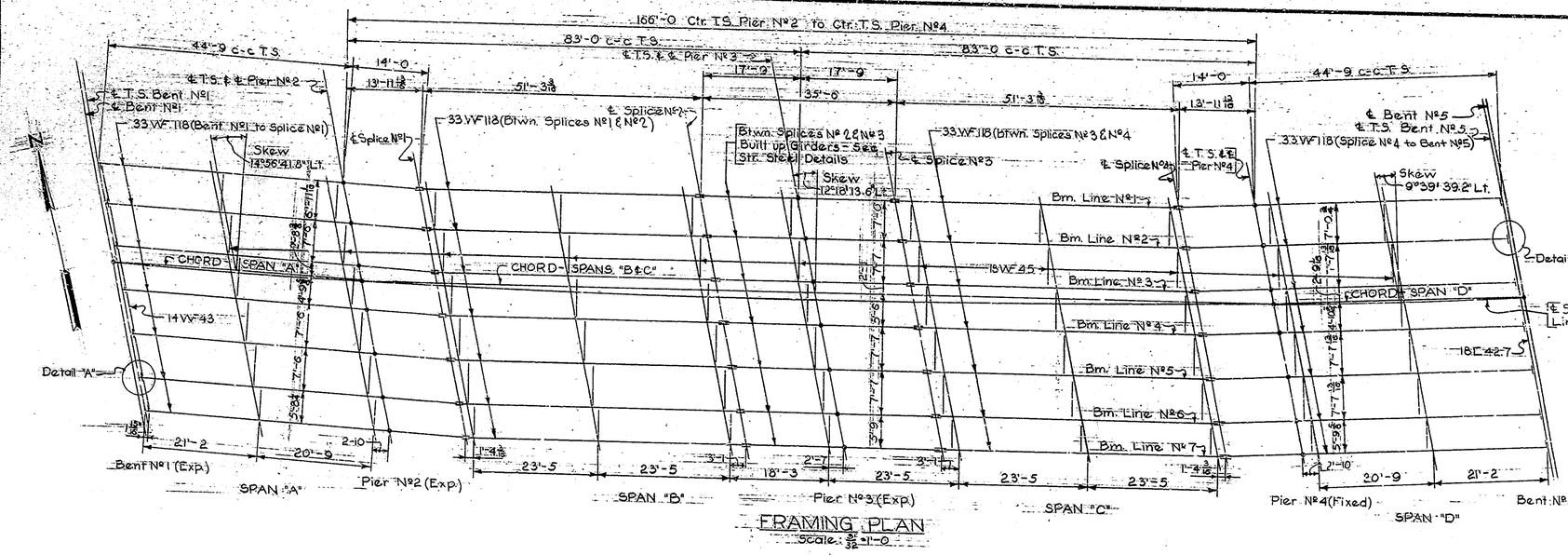
SCALE: As Noted — OCTOBER 10, 1963

SUBMITTED FOR APPROVAL: James D. Mathis

DRAWING S 13 of 26
PROJECT: I-01-65-3(117)
BRIDGE CONTRACT NO. R-6333
BRIDGE FILE: I-65-11C-231 "J"

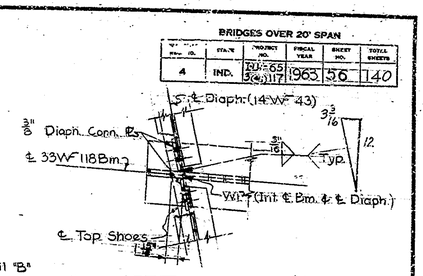
DESIGNED HR 9-2-63 CKD WHS 9-6-63
DRAWN LK 9-27-63 CKD HR 10-1-63
TRACED CKD

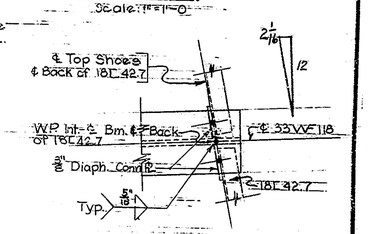
MARSHALL ENG. NO. 108

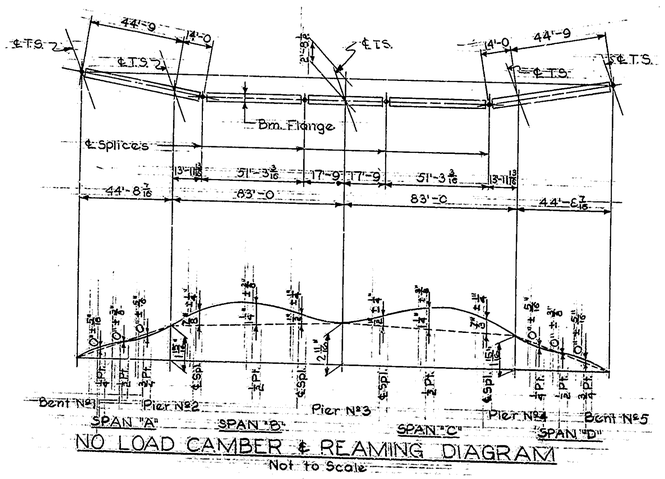


FRAMING PLAN
Scale: 3/32" = 1'-0

BRIDGES OVER 20' SPAN					
DIST.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-65 (4)117	1963	56	140







NO LOAD CAMBER & REAMING DIAGRAM
Not to Scale

DATA USED FOR DESIGN AND DETAILS

LIVE LOADS: H 20-S 16-44 loading with impact and distribution of loads in accordance with 1961 AASHO Specifications and checked for loading of 2-24,000# axles spaced 4'-0 apart.

DEAD LOADS: actual weight plus 35 pounds per sq ft of roadway to provide for future wearing surface.

SLAB: Designed for H 20 truck loading, single live load plus impact in accordance with 1961 AASHO Specifications. Allows for ½" monolithic wearing surface.

UNIT STRESSES:

Structural Steel Bending (Tension) ASTM-A-36	20,000 psi.
Structural Steel Bending (Tension) ASTM-A-441	
Thickness Over ¾" to 1½" incl.	24,000 psi.
Thickness Over 1½" to 4" incl.	22,000 psi.
Shear on Rivets	13,500 psi.
Built Welds (Tension, Thickness Over ¾" to 1½" incl.)	24,000 psi.
Shear in Fillet Welds	
For Base Metal A-36	13,600 psi.
For Base Metal A-441 (Over ¾" to 1½" incl.	16,500 psi.
For Base Metal A-441 (Over 1½" to 4" incl.)	15,200 psi.
Structural Steel Bearing (Not Incl. Rivets	22,500 psi.
Str. Steel Brg. on Power Driven Rivets & Torqued HS Bolts	40,000 psi.
Brg. Steel on Conc (Incl. Overturning & eccentric loading	1,000 psi.
Reinforcing Steel (Tension)	20,000 psi.
Concrete (Compression)	1,200 psi.

FABRICATION NOTES

1. Rivets ⅞" ø unless noted.
2. Open Holes 1⅛" ø unless noted.
3. No paint on Anchor Plates "AP".
4. All paint shall be in accordance with current State Highway Specification.
   Shop Paint: One coat Red Lead, Type I or II Except as noted.
   Field Paint: Two Coats of Aluminum.
5. Beams must be cambered to a smooth curve. Camber must be checked while supported in such a way as to have no bending moment in the direction of camber.
6. Holes for Beam Splices shall be Subpunched or Subdrilled and Reamed to size while assembled. See Article E 1103.18 (d) of the Specification.
7. 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 NO-LOAD CAMBER & REAMING DIAGRAM. If the beams are shop reamed or drilled, full size drift pins shall be used in erection. A minimum of one line of beams shall be shop assembled with the webs vertical and inspected for fit.
8. The Shop Details shall show a plan of match-marking for all reamed pieces.
9. All splice plates to be removed, cleaned and painted after reaming. Splice plates shall not extend beyond the end of the beam after bolting for shipment.
10. Flange Splice bars shall have planed or rolled edges and holes in bars shall be subdrilled and reamed or drilled full size while assembled.
11. All structural steel shall be erected and beams adjusted to their true elevations before driving rivets in beam field splices. The elevations shall be checked with splices connected by full size drift pins and erection bolts and with beam unsupported by any falsework. See "Table of Splice Elevations", Drwg. S 18.
12. Holes in all material connecting Top Shoes to Beam Flanges to be 1" diameter. Bolts connecting Beam Flange to Top Shoe shall extend into Top Shoe a minimum of 1 inch.
13. 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 Engineers drawings and Specifications and shall submit five (5) copies of these to the Engineer. See Article E 1103.2 of the Specifications.
14. All welding shall conform to the provisions of Article E 1103.26 of the Specifications and Special Provisions, unless otherwise noted.
15. As soon as the Engineer has approved the field welds, all welds and any surface from which the shop coat has been omitted, has become worn off or has otherwise become defective shall be thoroughly cleaned of all charred paint or any foreign matter and completly covered with one coat of shop paint.
16. Welded stud shear connectors may be used in lieu of channel shear connectors. If welded stud shear connectors are used, the Contractor shall prepare design computations and structural steel details and submit five (5) copies of these to the Engineer.
17. Temporary stiffeners to be used for jigs and/or warpage control shall not be tack welded to the flange material. Tacking to the web may be done if the tack welds are at least one sixth of the web depth away from the flange. The tack weld shall be removed by grinding flush to the parent metal.
18. When the beam sections are fit up in the shop for reaming or drilling of field splices, the centerlines of opposing flanges shall not deviate more than ⅛ inch when the webs are in alignment.
19. All structural steel to be Structural Carbon Steel A.S.T.M. A 36 unless otherwise noted.
20. Weight of Structural Steel (estimated)
    305,800 * (Includes 7,000 * for steel toothed expansion joint.

TABLE OF MAXIMUM MOMENTS

	Pos. Mom. @ 0.4 Pt. Span "A" ft-kips			Pos. Mom. @ 0.5 Pt. Span "B" ft-kips			Neg. Mom. @ R_2 ft-kips			Neg. Mom. @ R_3 ft-kips		
	Lt. 0.5 Bm.	Int. Bm.	Rt. 0.5 Bm.	Lt. 0.5 Bm.	Int. Bm.	Rt. 0.5 Bm.	Lt. 0.5 Bm.	Int. Bm.	Rt. 0.5 Bm.	Lt. 0.5 Bm.	Int. Bm.	Rt. 0.5 Bm.
D.L. on Steel Section	63.2	52.2	54.1	257.6	250.6	299.2	379.0	358.1	412.5	561.2	563.3	669.1
D.L. on Composite Section	24.6	24.6	24.6	104.9	104.9	104.9	106.3	106.3	106.3	693.0	693.0	693.0
L.L. on Composite Section	237.4	291.7	221.0	520.4	569.7	446.9	693.5	320.1	242.6	982.0	832.9	928.1
Imp. on Composite Section	75.9	86.0	65.2	164.9	181.5	107.2	74.9	64.8	64.3	91.7	103.9	76.7
Total	421.1	454.5	364.9	1047.8	1086.7	958.2	842.7	867.3	825.7	1999.9	1293.5	1249.9

TABLE OF REACTIONS

	Reaction @ R_1 kips			Reaction @ R_2 kips			Reaction @ R_3 kips		
	Lt. 0.5 Bm.	Int. Bm.	Rt. 0.5 Bm.	Lt. 0.5 Bm.	Int. Bm.	Rt. 0.5 Bm.	Lt. 0.5 Bm.	Int. Bm.	Rt. 0.5 Bm.
D.L. on Steel Section	11.5	10.2	11.2	62.4	57.8	55.9	72.2	73.5	88.0
D.L. on Composite Section	3.3	3.8	3.5	16.9	16.9	16.9	23.8	23.8	23.8
L.L. on Composite Section	21.5	37.1	26.1	145.3	91.6	59.1	91.8	58.7	23.3
Imp. on Composite Section	9.7	11.0	6.3	42.1	10.7	10.4	12.4	8.1	10.7
Total	46.0	62.1	51.1	266.9	177.0	142.3	200.2	164.2	145.8

TABLE OF STRESSES

Stresses @ 0.5 Pt. Span "B" Bott. Steel Fiber, ksi	Lt. 0.5 Bm.	Int. Bm.	Rt. 0.5 Bm.
	8.76	9.55	9.96

DESIGNED HA 7-24-62 CHKD JDM 7-29-62
DRAWN JK 7-31-62 CHKD AB 8-6-62
TRACED CHKD

FRAMING PLAN

INDIANA STATE HIGHWAY COMMISSION

SCALE: As Noted OCTOBER 10, 1963

SUBMITTED FOR APPROVAL: James D. Mathis

DRAWING: S 16 OF 26

PROJECT: I-UI-65-3(4)117

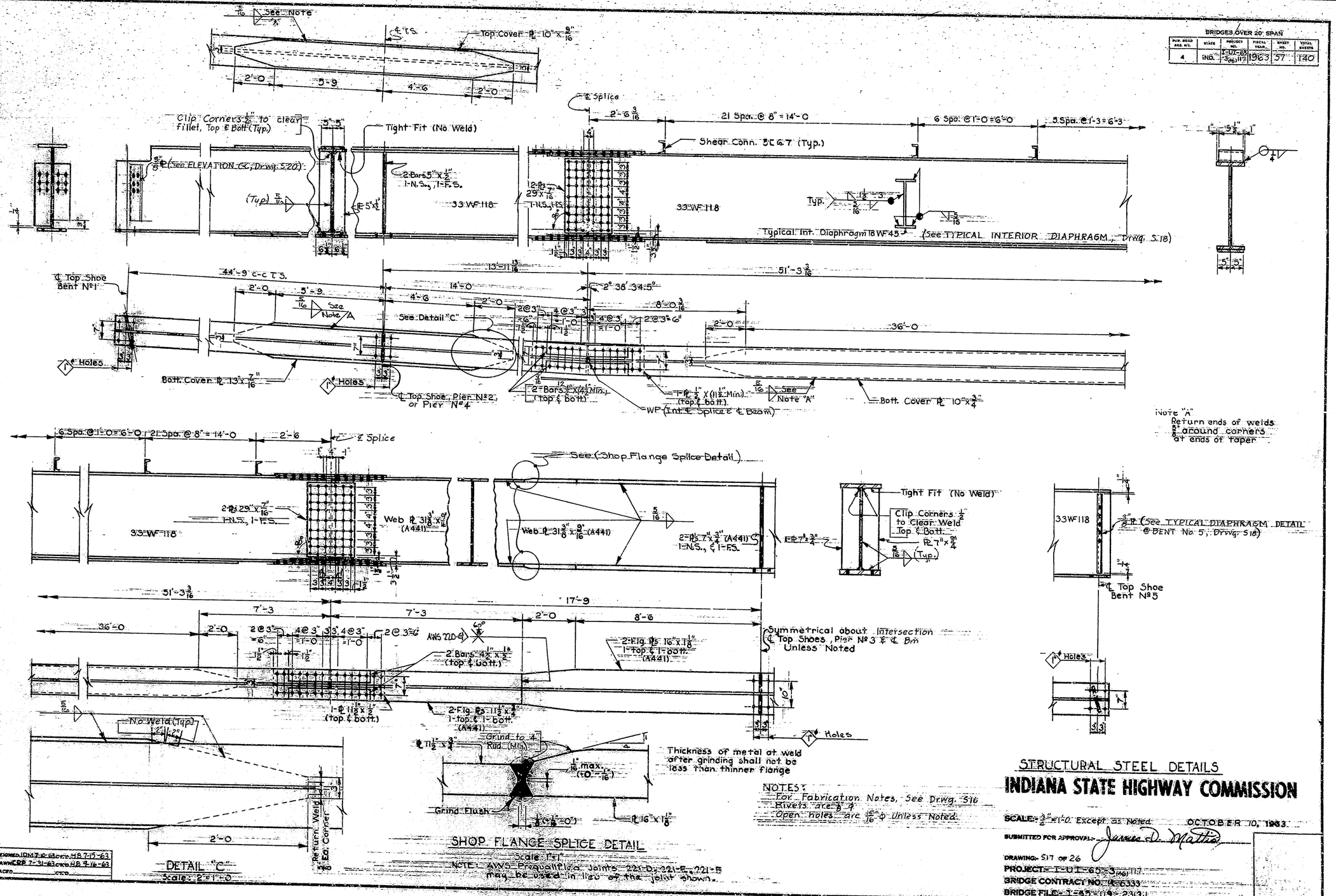
BRIDGE CONTRACT NO. R-6333

BRIDGE FILE: I-65-119-23.13 "J"

MARBAUGH ENG. NO. 166

BRIDGES OVER 20' SPAN

PUB. ROAD SEC. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-01-65 (306) 117	1963	57	140



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

SHOP FLANGE SPLICE DETAIL
Scale: 1"=1'
NOTE: AWS Prequalified Joints 221-D, 221-E, 221-5 may be used in lieu of the joint shown.

NOTES:
For Fabrication Notes, See Drwg. S16
Rivets are 3/4"
Open holes are 13/16" ø Unless Noted.

STRUCTURAL STEEL DETAILS

INDIANA STATE HIGHWAY COMMISSION

SCALE: 3/4"=1'-0 Except as Noted. OCTOBER 10, 1963.

SUBMITTED FOR APPROVAL: James D. Mathis

DRAWING: S17 OF 26

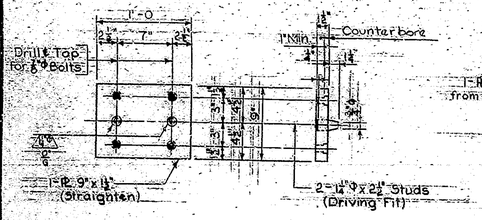
PROJECT: I-01-65-3(306)117

BRIDGE CONTRACT NO. C-6333

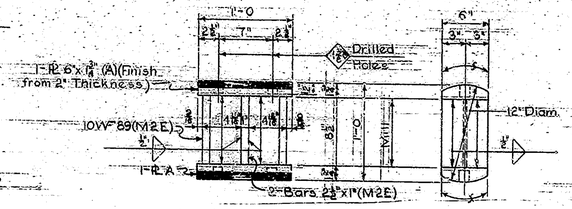
BRIDGE FILE: I-65-119-2313J

DESIGNED JDM 7-10-63 CKD. HB 7-15-63
DRAWN CRP 7-31-63 CKD. HB 9-16-63
TRACED CKD.

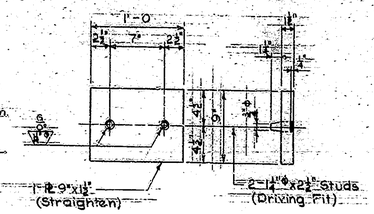
RAEBAUGH ENG. NO. 198



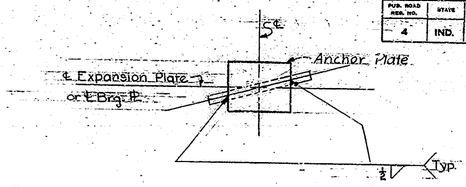
TOP SHOE @ BENTS Nº 1 & Nº 5



EXPANSION SHOE @ BENTS Nº 1 & Nº 5

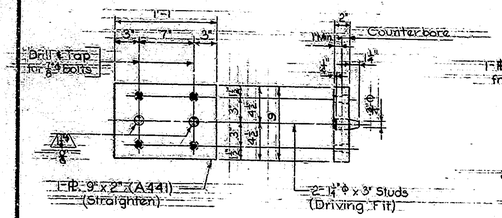


EXPANSION PLATE @ BENTS Nº 1 & Nº 5

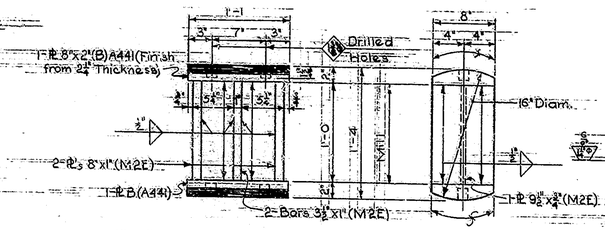


SHOWING FIELD WELD BTWN SHOE & ANCHOR PLATE "AP"

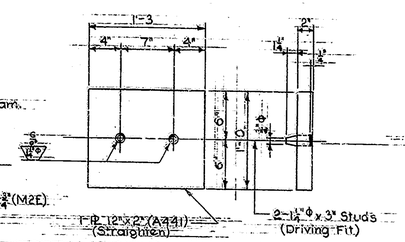
BRIDGES OVER 20' SPAN					
FUR. ROAD MISC. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-UI-65 3(46) 117	1963	58	140



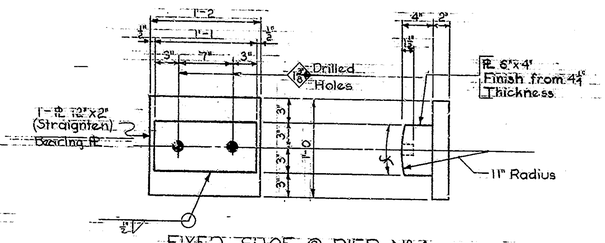
TOP SHOE @ PIERS Nº 2 & Nº 4



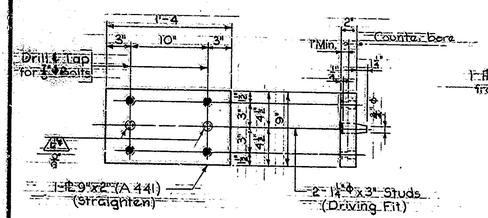
EXPANSION SHOE @ PIER Nº 2



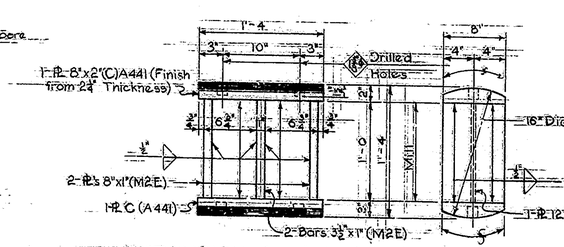
EXPANSION PLATE @ PIER Nº 2



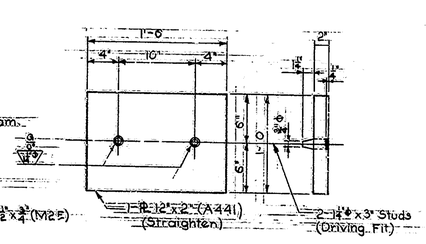
FIXED SHOE @ PIER Nº 4



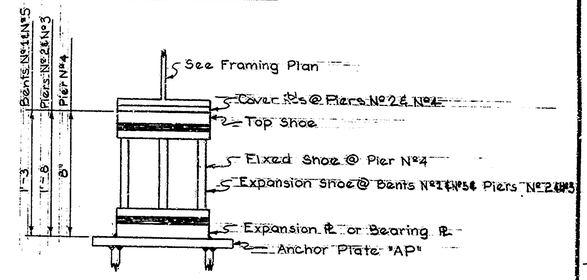
TOP SHOE @ PIER Nº 3



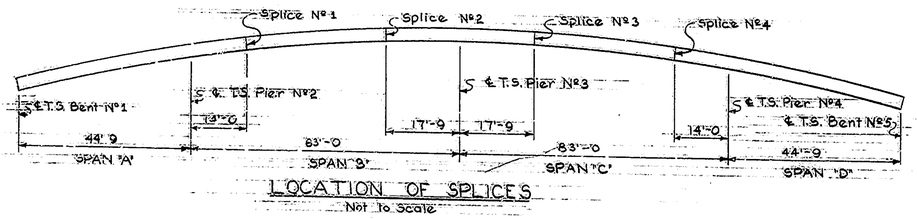
EXPANSION SHOE @ PIER Nº 3



EXPANSION PLATE @ PIER Nº 3



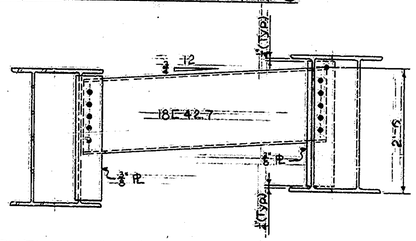
SHOE ASSEMBLY
Not To Scale



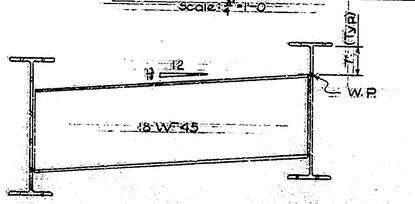
LOCATION OF SPLICES
Not To Scale

TABLE OF SPLICE ELEVATIONS								
Beam Line Nº	1	2	3	4	5	6	7	
Splice Nº 1	779.030	780.095	780.585	781.080	781.570	782.065	782.435	
Splice Nº 2	776.770	779.223	779.720	780.213	780.710	781.205	781.580	
Splice Nº 3	776.165	778.620	779.115	779.610	780.110	780.605	780.960	
Splice Nº 4	777.280	777.740	778.240	778.740	779.235	779.735	780.115	

NOTE: Top of Splice Elevation is the required elevation of the top of the top flange of the 33 WF 118 at the ℄ of the splice.



TYPICAL DIAPHRAGM DETAIL @ BENT Nº 5
Scale: ¾"=1'-0



TYPICAL INTERIOR DIAPHRAGM DETAIL
Scale: ¾"=1'-0

NOTES
Rivets ⅞" Ø
Open Holes 15/16" Ø Unless Noted
For Fabrication Notes, See Drwg. S15.
For Screeds, Concrete D.L. Deflection & Shoe Setting Data, See Drwgs. S25 & S26

STRUCTURAL STEEL DETAILS
INDIANA STATE HIGHWAY COMMISSION

SCALE: 1½"=1'-0, Except As Noted — OCTOBER 10, 1963

SUBMITTED FOR APPROVAL: James D. Mathis

DRAWING S18 OF 26

PROJECT: I-UI-65-3(46)117

BRIDGE CONTRACT NO. R-6333

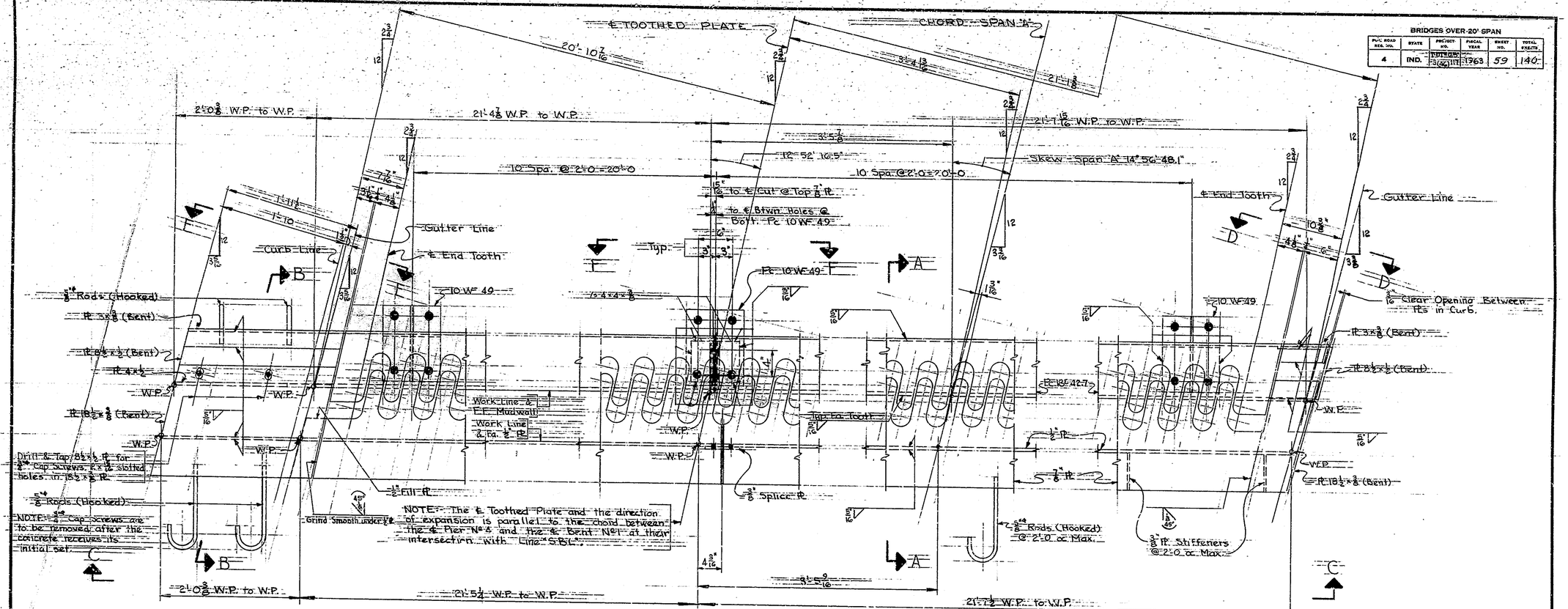
BRIDGE FILE: I-65-110-2318 "J"

DESIGNED JDM 7-16-63 CHKD. JKB 7-16-63
DRAWN JKB 7-16-63 CHKD. JDM 9-5-63
TRACED CHKD.

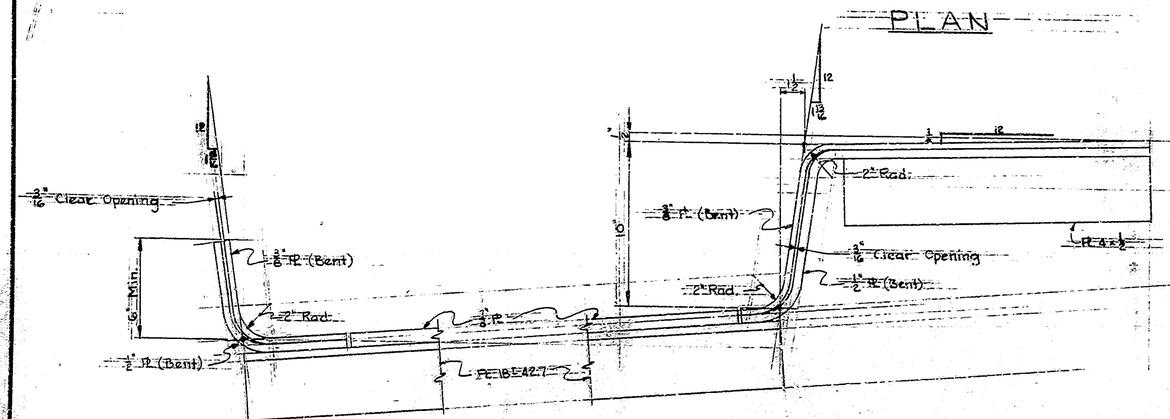
McMAHON ENG. NO. 196

BRIDGES OVER 20' SPAN

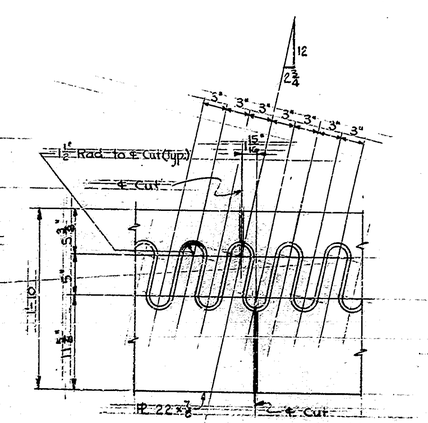
FA/C ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-U1-65-3(46)117	1963	59	140



PLAN



ELEVATION D-D



ELEVATION E-E

TYPICAL TOOTH DETAIL

Scale: 3" = 1'-0

NOTES:-
Rivets 3/4" ϕ unless noted.
Open holes 13/16" ϕ unless noted.
All dimensions to cuts are given to ℄ cut. See Specifications Art. E-1103-13 regarding burning of toothed plates.
If curves in plates are flame cut they shall be ground smooth.
The toothed plates shall be match marked to maintain the same relative position before and after cutting.
The expansion joint shall be assembled in the shop in its relative position and inspected for fit.
For toothed expansion joint setting see TABLE II, Drwg. S-29.
For Fabrication Notes see Drwg. S-26.
For additional details see Drwg. S-26.
Estimated weight of structural steel in toothed expansion joint = 7,000 lbs.

TOOTHED EXPANSION JOINT DETAILS

INDIANA STATE HIGHWAY COMMISSION

SCALE: 1 1/2" = 1'-0 UNLESS NOTED OCTOBER 10, 1963

SUBMITTED FOR APPROVAL: James D. Mathis

DRAWING S-19 OF 26

PROJECT: I-U1-65-3(46) 117

BRIDGE CONTRACT NO. R-6333

BRIDGE FILE: I-65-119-2313

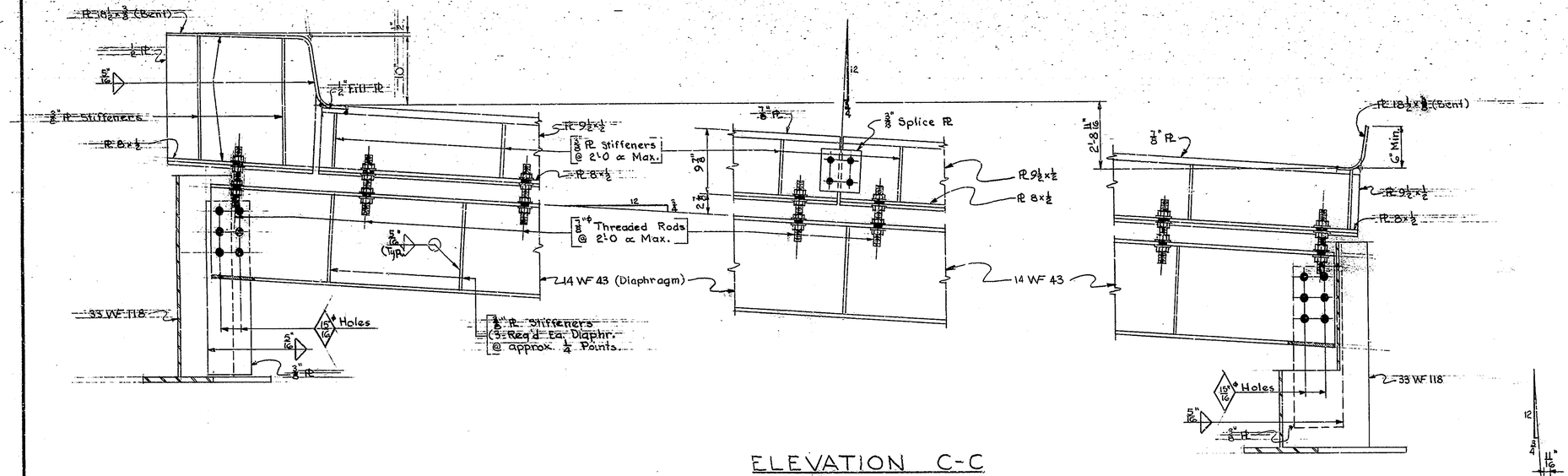
DESIGNED: R-M-A CHECKED: R-M-C

DRAWN: R-B-C CHECKED: W-S-A 26-63

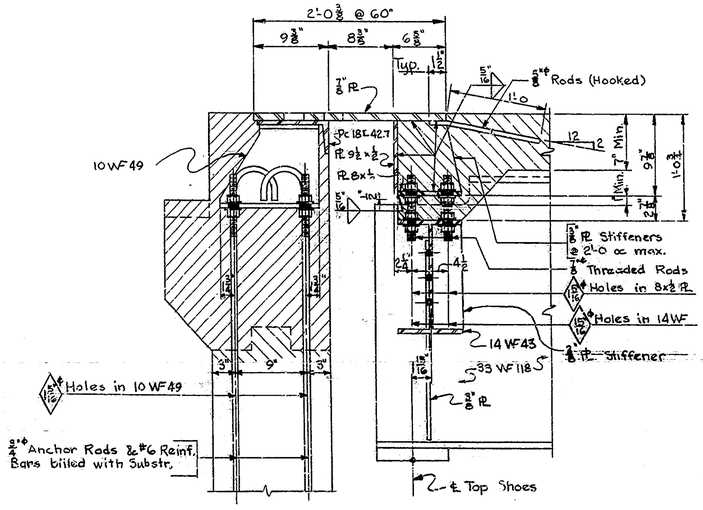
TRACED CHD.

WABASH ENG. NO. 186

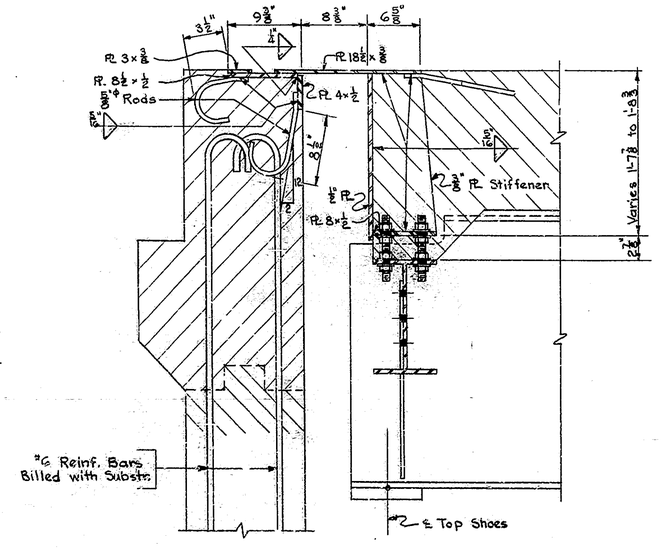
BRIDGES OVER 20' SPAN					
PUB. ROAD SER. LO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-UI-65 (44) 117	1963	60	140



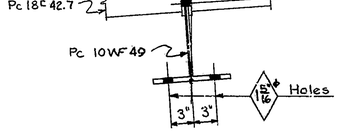
ELEVATION C-C



SECTION A-A



SECTION B-B



ELEVATION F-F

NOTES:-
Rivets ⅞"ϕ, unless noted.
Open holes 15/16"ϕ, unless noted.
For additional details and notes see Drwg. S.19.

TOOTHED EXPANSION JOINT DETAILS

INDIANA STATE HIGHWAY COMMISSION

SCALE:- 1½" = 1'-0 OCTOBER 10, 1963

SUBMITTED FOR APPROVAL:- James D. Mathis

DRAWING:- S.200E 26

PROJECT:- I-UI-65-3(44) 117

BRIDGE CONTRACT NO. R-6333

BRIDGE FILE:- I-65-119-2313J

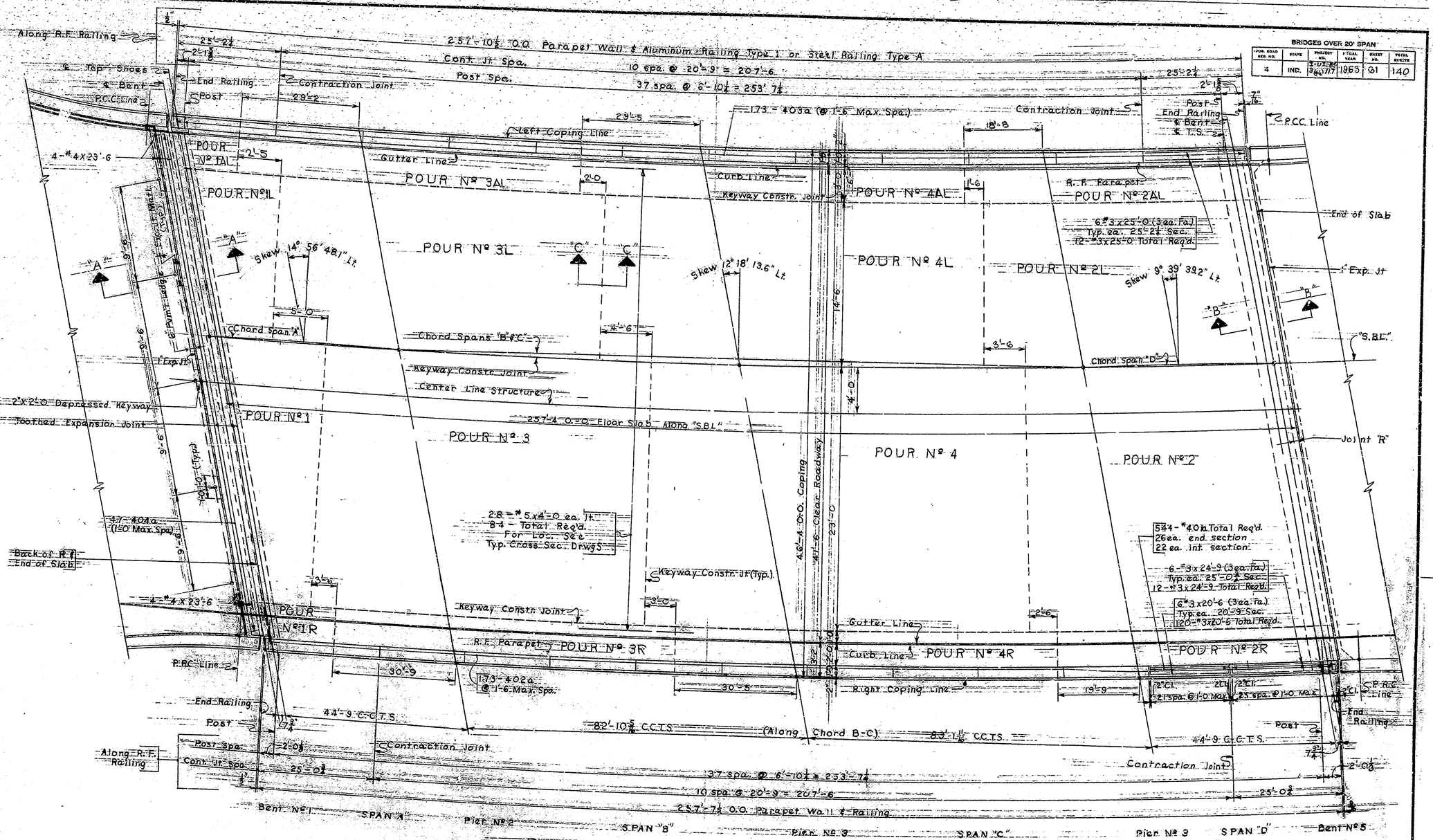
DESIGNED WHS 8-19-63 CK'D WHS 8-26-63

DRAWN RDM 8-21-63 CK'D WHS 8-26-63

TRACED CK'D

HARRAUGH ENG. NO. 196

BRIDGES OVER 20' SPAN					
PUR. ROAD SER. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
2	IND.	I-DI-65-3 (44) 117	1963	21	140



PLAN

FLOOR DETAILS

INDIANA STATE HIGHWAY COMMISSION

SCALE- ½" = 1'-0

OCTOBER 10, 1962

SUBMITTED FOR APPROVAL: James D. Mathis

DRAWING 3-21 OF 26

PROJECT:- I-DI-65-3 (44) 117

BRIDGE CONTRACT NO. R-6335

BRIDGE FILE:- I-65-19-23.13 (S.B. Lane)

POUR NOTES:

Sequence of pours to be made in order of pour numbers. The Contractor should especially note that Pours Nº1 and Nº2 and at opposite ends of the bridge and must be poured before Pours Nº3 and Nº4.

NOTES:-

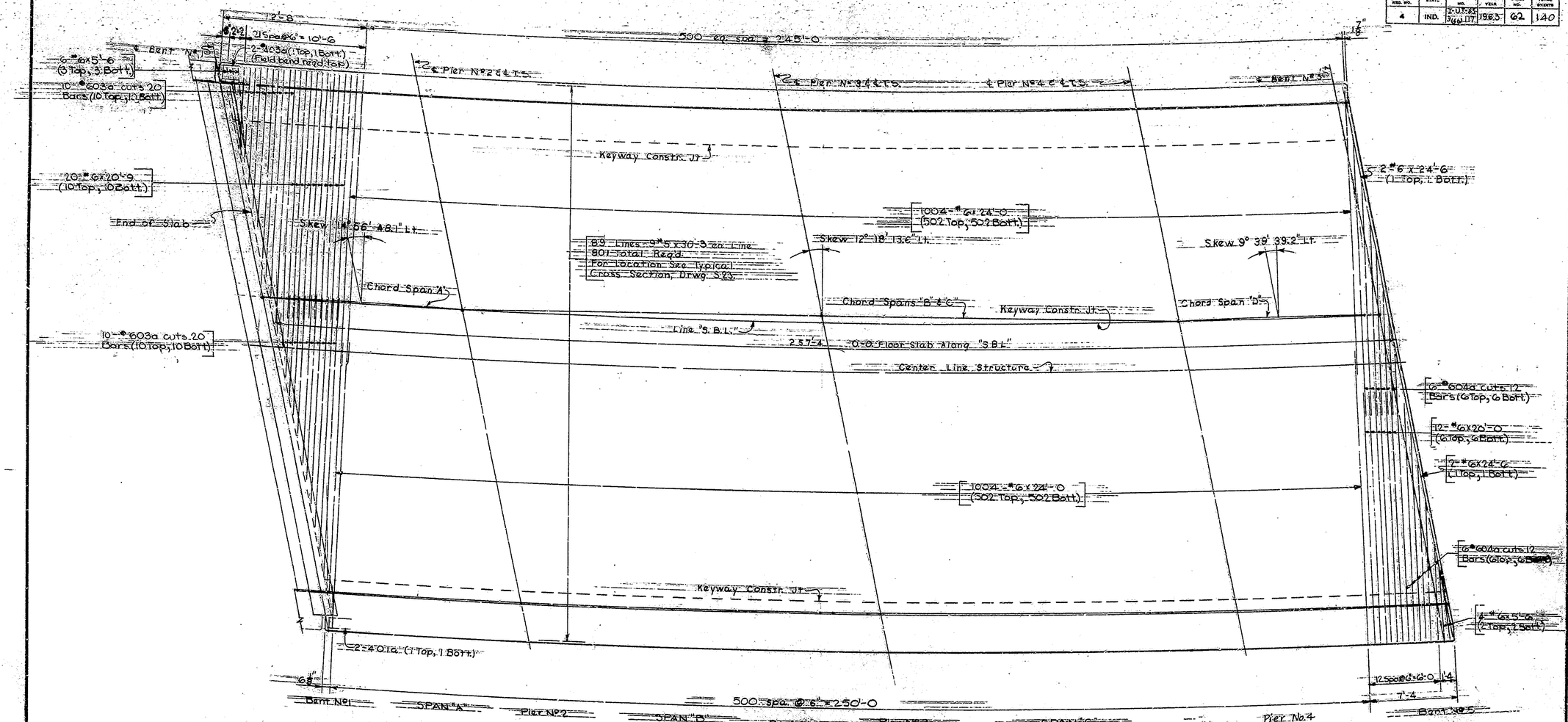
For transverse, longitudinal steel & additional notes and details, see Drwg S22.
For Bill of Materials, see Drwg S23.
For reinforcing bar Notes and Notch at end of Beams, see Br. Std "C".
For Section A-A see Drwg S23.
For Section B-B see Drwg S23.
For Section C-C see Drwg S22.
For Additional Dimensions and Common Details, see Drwg S24.
For Joint Legend see General Plan.

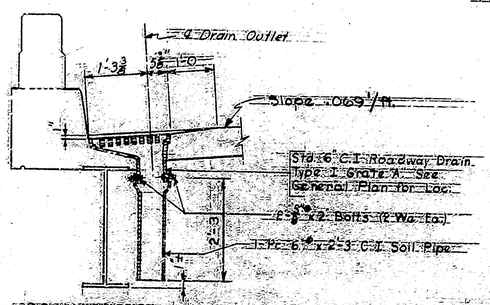
DESIGNED H.W.B. 7-1963 CKD. J.S.S. 7-20-63
DRAWN E.M.R. 8-20-63 CKD. H.B. 10-3-63
TRACED CKD.

MARBAUGH ENG. CO. IND. 1963

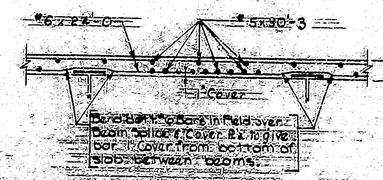
BRIDGES OVER 20' SPAN

FUR. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-01-65 3(6) 117	1965	62	140



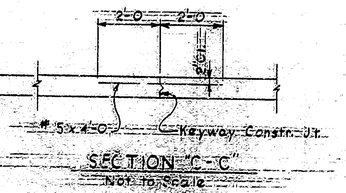


ROADWAY DRAIN DETAIL
Scale 1" = 1'-0



FIELD BEND REQUIRED ON
#6 BARS OVER BEAM SPLICES & COVER PLATES
Not To Scale

PLAN
Showing transverse and longitudinal slab steel
Scale 1" = 1'-0



SECTION "C-C"
Not To Scale

NOTES
For details Std. 6" C.I. Roadway Drain, Type I Grate A, See Br. Std. D
For dimensions, additional notes, and additional details, see S.P.& S. 23.
Hook ends of #6 Z6 & #6 Z4a at end of slab.
For Bill of Materials, see Drwg. S 23.
#Indicates cutting & bending diagram required.
Anchor bolts for railing to be preset in the concrete.
For railing posts and/or bolt details, see Br. Std. R-A (type I) and B-5 (type A)

FLOOR DETAILS
INDIANA STATE HIGHWAY COMMISSION

SCALE: As Noted — OCTOBER 10, 1967

SUBMITTED FOR APPROVAL: James D. Mattes

DRAWING S-22 OF 26

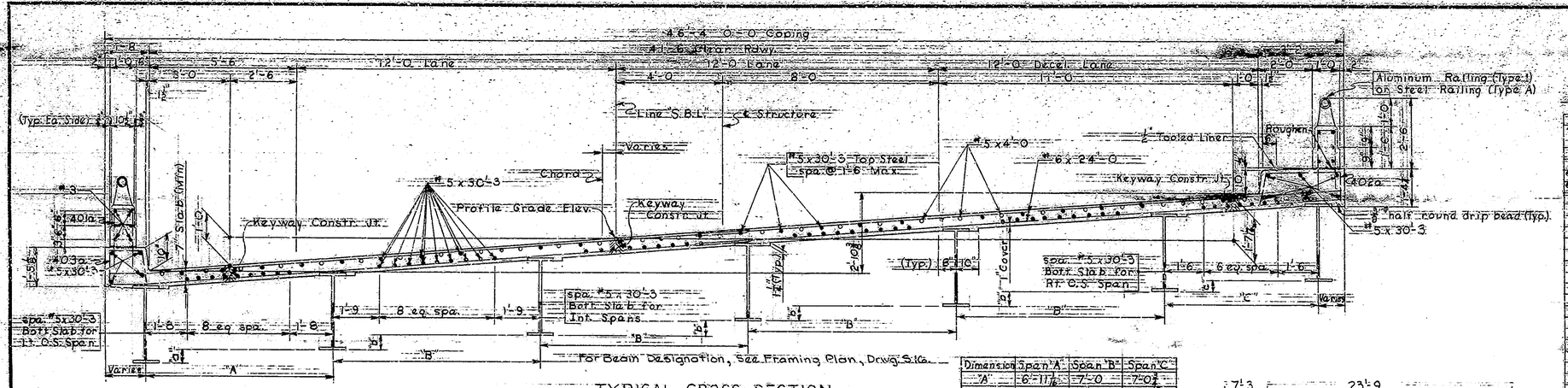
PROJECT: I-01-65-3 (4) 117

BRIDGE CONTRACT NO. R-6333

BRIDGE F.A.E.- I-65-1(9) 231 (S.B. Lane)

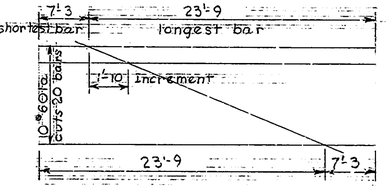
DESIGNED H.W.B. 7-18-63 CKD. J.S.S. 7-20-63
DRAWN L.E.M. 8-22-63 CKD. H.B. 10-3-63
TRACED CKD.

MARSHALL ENG. NO. 196

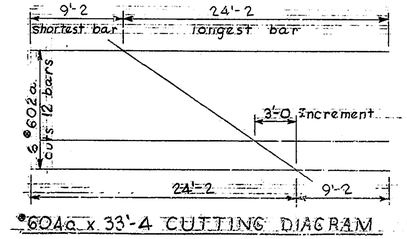


TYPICAL CROSS SECTION
Scale: ½" = 1'-0"

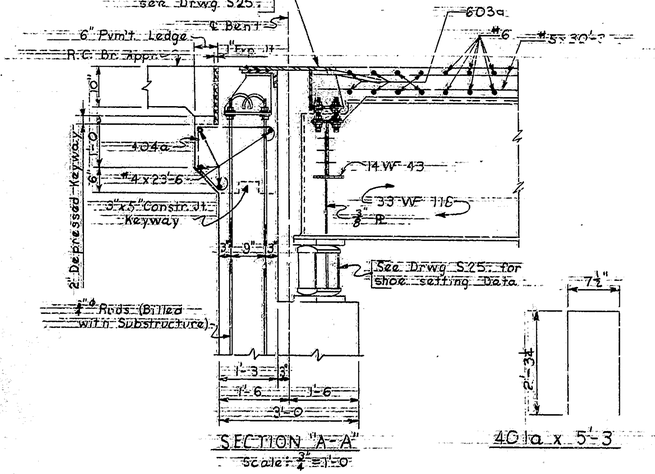
Dimension	Span "A"	Span "B"	Span "C"
"A"	6'-11 1/16"	7'-0"	7'-0 7/16"
"B"	7'-6"	7'-7"	7'-7 7/16"
"C"	5'-8 7/16"	5'-9"	5'-9 7/16"
"a"	5 3/8"	5 3/8"	5 3/8"
"b"	6 1/16"	6 1/16"	6 1/16"
"c"	4 7/16"	4 7/16"	4 7/16"

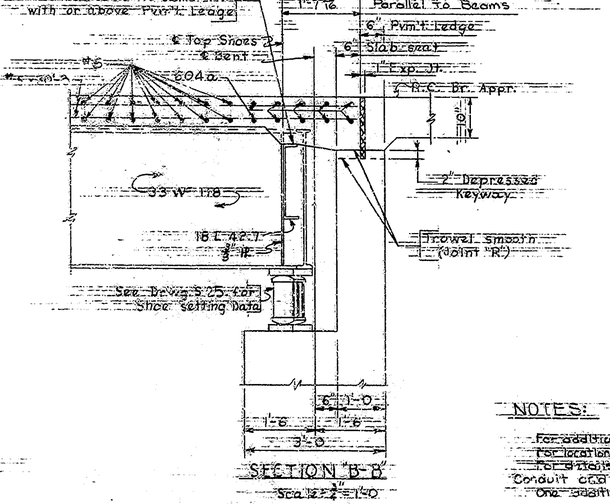


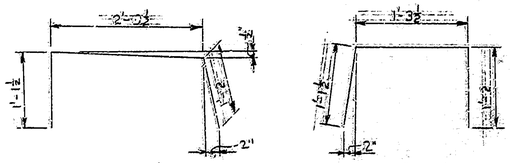
#603a x 31'-0 CUTTING DIAGRAM

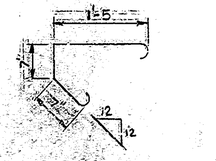


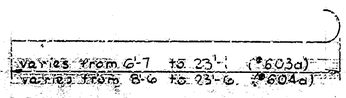
#604a x 33'-4 CUTTING DIAGRAM











#603a & #604a BENDING DIAGRAM

NOTES:

For additional notes, details, and location of Sections, see Drwg. S21 & S22.
For location of 2" ø Steel Conduit & Lighting Standards, see the General Plan.
For details and location of Reinforcing Bars Go1A & G02A, 2" ø Steel Conduit and Anchor Baffs AR-21, see Dr Std. R22.
One additional railing post req'd. each lighting standard.

BRIDGES OVER 20' SPAN

FED. ROAD DIST. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-UI-65-3(14)117	1963	6a	40

BILL OF MATERIALS

REINFORCING STEEL			
Size & Mark	No. of Bars	Length	Weight
G01A	4	8'-0	
G02A	9	4'-6	
*603a	20	31'-0	
*604a	12	33'-4	
*6	8	24'-6	
*6	2008	24'-0	
*6	20	20'-9	
*6	12	20'-0	
*6	10	5'-6	
	Total	*6	7,523*
*5	801	30'-3	
*5	84	4'-0	
	Total	*5	25,623*
401a	546	5'-3	
402a	173	5'-1	
403a	415	3'-7	
404a	87	3'-7	
*4	8	23'-6	
	Total	*4	3,159*
*3	12	25'-0	
*3	12	24'-9	
*3	120	20'-6	
	Total	*3	1,149*
Total Steel			35,170*

CONCRETE	
Class "F"	
Cap @ Bent No. 1	6.2 cys.
Pour No. 1	7.9
Pour No. 1L	4.6
Pour No. 1AL	4.4
Pour No. 1R	2.9
Pour No. 2	33.1
Pour No. 2L	20.9
Pour No. 2AL	9.0
Pour No. 2R	10.0
Pour No. 3	41.4
Pour No. 3L	26.1
Pour No. 3AL	12.8
Pour No. 3R	15.1
Pour No. 4	46.7
Pour No. 4L	29.6
Pour No. 4AL	14.4
Pour No. 4R	17.1
Total Class "F" Concrete	303.5cy.
Railing Concrete Rt. & Lt. (Alling) 2@13.45 cys	26.9 cys.

MISCELLANEOUS	
Cast Iron:	
1-Std. 6" ø Dr. Rdwy. Drain (Type 4 Cast Al.) @ 192*	192*
1pc. 6"ø x 2'-3" Cl. Soil Pipe (Cut from 5'-0" length) @ 35*	35*
⅞" ø x 10" Lg. Bolts (2 req'd.)	1*
Total Cost Iron	228*
Steel Railing (Type A) or Alum. Railing (Type I)	
Rt. Side	257.6 Lft.
Lt. Side	257.9 Lft.
Total Railing	515.5 Lft.
Anchor Bolts AR-21	422.
2" ø Steel Conduit	265. Lft.

FLOOR DETAILS & BILL OF MATERIALS

INDIANA STATE HIGHWAY COMMISSION

SCALE: As Noted — OCTOBER 10, 1963

SUBMITTED FOR APPROVAL: James D. Martin

DRAWING S23 OF 26

PROJECT: I-UI-65-3(14)117

BRIDGE CONTRACT NO. R-6333

BRIDGE FILE: I-65-1.09-231.3-J (S.B. Lane)

DESIGNED JDM 7-2-63 CKD HWB 7-10-63
DRAWN P.M. 9-4-63 CKD HB 10-2-63
TRACED CK'D.

MARQUARDT ENGINEERING SUPPLY #186

BRIDGES OVER 20' SPAN

FED. ROAD CLASS. NO	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-U1-65 (Acc) 117	1963	64	140

Tang @ P.C.C. Parallel to Chord "A" Extended

P.C.C. Line

2'-0

2'-1 3/8

3" Open Jt.

End Railing

℄ Railing Post

℄ Railing & Railing Post

Curb Line

Gutter Line

℄ O.S. Beam

Int. ℄ O.S. Beam & ℄ Top Shoes

18'-0" (P.C.C.)

19'-9 5/8"

18'-9 7/8"

Fa. Cap

℄ Top Shoes

℄ Bent

SKEW SPAN "A" 14° 56' 48.1" Lt.

7'-0 15/16

Intersection of ℄ Bent No. 1, Construction Chord "A" & Line S.B.L.

Constr. Chord Span "A"

Fa. Mudwall

Pvmt. Ledge

1" Exp. Joint

1'-6

5"

3'-0

6"

3'-6

Pvmt. Ledge

Steel Exp. Joint

2'-0 3/8 @ 60°

26'-10 7/8"

26'-4 3/4"

16'-0 1/2" (P.R.C.)

2'-9

Gutter Line

1/2" Tooled Liner

2'-8 1/2

9"

Curb Line

Tang @ P.R.C.

Int. ℄ O.S. Beam & Top Shoes

Parallel to Chord "A" Extended

2'-0

2'-0

3" Open Jt.

P.R.C. Line

End Railing

℄ Railing & Railing Post

BENT No. 1

SKEW SPANS "B-C" 12° 18' 13.6" Lt.

Intersection of ℄ Pier No. 2, Construction Chords A and (B-C) and Line "S.B.L."

Intersection of ℄ Pier No. 4, Construction Chords (B-C) and "D" and Line "S.B.L."

Constr. Chord Spans (B-C)

Top of Copg.

1" Exp. Joint

Notch

5"-18E 12.7

33WF 118

℄ Bent

℄ Top Shoes

3'-2

2'-0

SECTION "A-A"

Scale: 3/4" = 1'-0

Typ. Anchor Bolt Spa. for Railing Post & Reqd. Fa. Post

2'-1 3/8

P.C.C. Line

12"

1"

2'-0

Tang @ P.C.C. Parallel to Chord "D" Extended

℄ Railing

Joint "H" (1")

Int. ℄ O.S. Bm. & ℄ T.S.

A

A

Beam Notch

1'-7 15/16

3'-7 7/8

℄ Top Shoes

℄ Bent

4 @ 1" Exp. Joint

Fa. Mudwall

Pvmt. Ledge

SKEW SPAN "D" 9° 39' 39.2" Lt.

Intersection of ℄ Bent No. 5, Constr. Chord "D" & Line S.B.L.

Constr. Chord Span "D"

1'-6

6'-6"

5"

6"

2'-6

3'-0

1'-0

Slab Seat

17'-8 3/8

18'-0" (P.C.C.)

25'-11" (P.R.C.)

7'-6 3/8

5'-5 3/16

2'-8 3/16

1'-7 13/16

Gutter Line

Curb Line

Beam Notch

Int. ℄ O.S. Beam & ℄ T. Shoes

Joint "H" (1")

℄ O.S. Beam

9" 16

1/2" 2'-0

1" Exp. Jt.

P.R.C. Line

BENT No. 5

℄ Railing Post

2'-0 1/2

End Railing

CORNER DETAILS

NOTES:

For details of notch in slab at end of beams see Br. Std. "C".

For Joint Legend see Drwg. S-3 (General Plan).

* Indicates items not included in Bridge Quantities.

Railing and or Railing Post reform to Aluminum Railing Type "L" or Steel Railing Type "A".

DESIGNED CWD

DRAWN JDO 8-1963 CKD HS 9-19-63

TRACED CWD

INDIANA STATE HIGHWAY COMMISSION

SCALE: 1" = 1'-0 Unless Noted OCTOBER 10, 1963

SUBMITTED FOR APPROVAL: James D. Mathis

DRAWING S 24 OF 26

PROJECT: I-U1-65-3(Acc).117

BRIDGE CONTRACT NO. R-6333

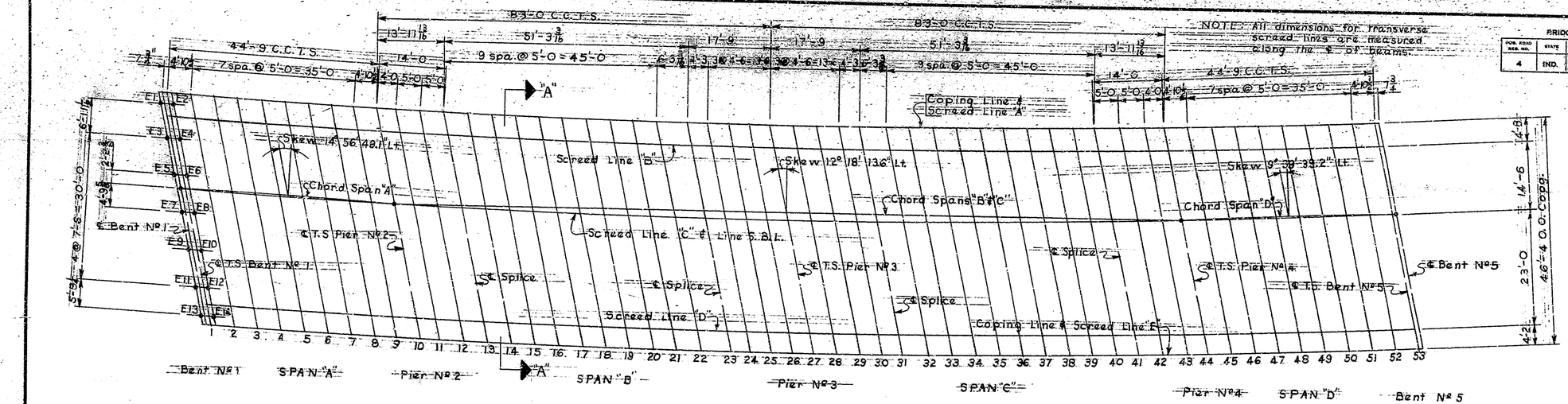
BRIDGE FILE: I-65-1-9-2313.1

"MICROFILMED BY ENG. NO. 198"

PUB. ROAD SER. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-UI-65 3(46)117	1963	65	140

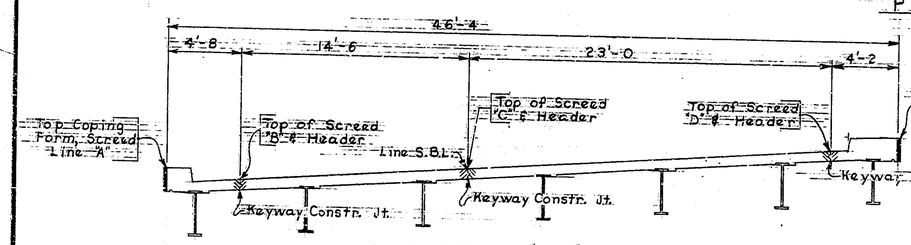
BRIDGES OVER 20' SPAN

NOTE: All dimensions for transverse screed lines are measured along the ℄ of beams.



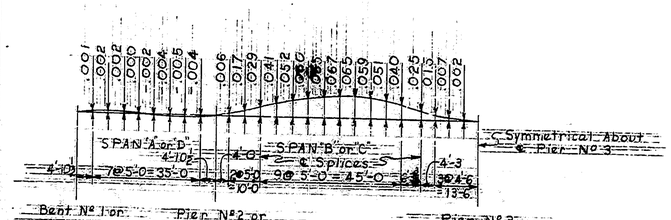
PLAN OF SCREEDS

Scale: $\frac{3}{32}$" = 1'-0



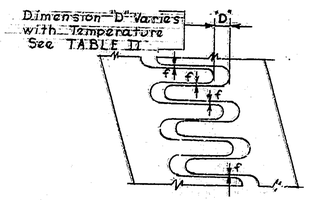
SECTION "A-A"

Scale: $\frac{1}{4}$" = 1'-0



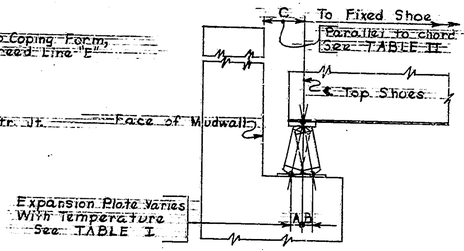
CONCRETE D.L. DEFLECTIONS

Not to Scale



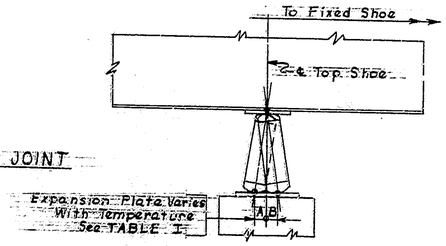
PART TOOTHED EXPANSION JOINT

Not to Scale



BENTS No 1 & No 5

Not to Scale



PIERS No 2 & No 3

Not to Scale

NOTES:-

PURPOSE

PLAN OF SCREEDS shows location of Screeds.
TABLE OF ELEVATIONS shows data for setting screeds and coping forms so that the slab and copings will be at the final grade elevations after all the concrete has been poured. See Drwg. S 26
TABLE I shows data for setting Expansion Plates.
TABLE II shows data for setting Toothed Expansion Joint.

GENERAL PROCEDURE

(1.) After all rivets have been driven and all interior diaphragms have been welded in place, adjust the superstructure longitudinally so that the distance from the ℄ Top Shoes to the face of the mudwall at Bent No 1 equals Dimension "C" as shown in TABLE II for the prevailing temperature.
(2.) With the superstructure in the adjusted position called for in (1.) weld the fixed shoes to the anchor plates at Pier No 4.
(3.) Adjust the Expansion Plates 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 thru the ℄ Top Shoe in a direction away from the fixed shoes. Weld the Expansion Plates to the Anchor Plates.
(4) Set steel expansion joint and adjust it to the elevations given for the points shown on the PLAN OF SCREEDS using the double nuts on the anchor rods and on the ¾" rods on top of the diaphragms.
(5.) Adjust steel expansion joints horizontally to make openings "f" between teeth equal and openings "D" to the dimension shown in TABLE II for the prevailing temperature.
(6.) After the shoes are set take elevations at all screed points on top of adjacent beams. Enter these elevations in the TABLE OF ELEVATIONS. Subtract these elevations from the calculated elevations 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.
(7.) No concrete in the floor is to be poured until the above operations are completed.

TABLE I

Temperature	Dimension "A" 0°	20°	40°	60°	80°	100°	120°	Dimension "B" 80°	100°	120°
Bent No 1 (Dim. ℄ T.S. to ℄ Exp. ℞)	1 5/16"	1 1/8"	15/16"	½"	1/16"			3/8"	¼"	
Pier No 2 (Dim. ℄ T.S. to ℄ Exp. ℞)	¾"	½"	¼"	0"				¼"	½"	¾"
Pier No 3 (Dim. ℄ T.S. to ℄ Exp. ℞)	⅛"	¼"	½"	0"				⅛"	¼"	⅜"
Bent No 5 (Dim. ℄ T.S. to ℄ Exp. ℞)	1 1/16"	⅞"	¾"	½"	⅜"	¼"	1/16"			

TABLE II

Temperature	0°	20°	40°	60°	80°	100°	120°
Bent No 1 Dimension "C"	11⅞"	11 9/16"	11 3/16"	10 13/16"	10 7/16"	10 1/16"	9 7/8"
Bent No 1 Dimension "D"	3⅛"	3¼"	3 7/16"	3 9/16"	3 11/16"	3 13/16"	3 15/16"

DESIGNED FLK 7-25-63 CHKD JDM 8-30-63
DRAWN E.M.B. & C.S.K. CHKD JDM 9-25-63
TRACED CHKD

MARVAUGH ENG. NO. 133

SCREEDS

INDIANA STATE HIGHWAY COMMISSION

SCALE: AS NOTED
OCTOBER 10, 1963
SUBMITTED FOR APPROVAL: James D. Mattis
DRAWING: S 25 of 26
PROJECT: I-UI-65-3(46) 117
BRIDGE CONTRACT NO. R 6333
BRIDGE FILE: I-65-119-2313J (S.B. Lane)

BRIDGES OVER 20' SPAN

FOR ROAD RTE. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-UI-65-3(44) 117	1963	66	140

TABLE OF ELEVATIONS

Point		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
A	Elevation Top of Coping Form	781.780	781.720	781.660	781.595	781.525	781.455	781.385	781.320	781.250	781.185	781.135	781.075	781.015	780.955	780.890	780.820	780.750	780.675	780.595	780.510	780.425	780.330	780.215	780.135	780.050	779.970	779.895
	Elevation Top of O.S. Beam																											
	Dist. Top Bm. to Top Coping Form																											
B	Elevation Top of Screed	781.140	781.080	781.015	780.950	780.885	780.815	780.745	780.675	780.605	780.545	780.490	780.430	780.370	780.310	780.245	780.180	780.105	780.030	779.950	779.865	779.780	779.690	779.570	779.490	779.410	779.325	779.250
	Elevation Top of Beam																											
	Dist. Top Bm. to Top Screed																											
C	Elevation Top of Screed	782.030	782.030	781.965	781.900	781.830	781.765	781.695	781.625	781.595	781.490	781.440	781.380	781.320	781.255	781.195	781.125	781.055	780.980	780.900	730.815	780.725	780.635	780.535	780.435	780.355	780.275	780.195
	Elevation Top of Beam																											
	Dist. Top Bm. to Top Screed																											
D	Elevation Top of Screed	783.595	783.535	783.470	783.405	783.340	783.270	783.200	783.130	783.060	782.995	782.945	782.885	782.820	782.760	782.695	782.630	782.555	782.480	782.400	782.315	782.230	782.135	782.020	781.940	781.855	781.775	781.700
	Elevation Top of Beam																											
	Dist. Top Bm. to Top Screed																											
E	Elevation Top of Coping Form	784.525	784.465	784.400	784.335	784.265	784.195	784.125	784.055	783.990	783.925	783.870	783.810	783.750	783.690	783.625	783.555	783.485	783.410	783.330	783.245	783.155	783.065	782.950	782.870	782.785	782.705	782.625
	Elevation Top of O.S. Beam																											
	Dist. Top Bm. to Top Coping Form																											

Point		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
A	Elevation Top of Coping Form	779.820	779.745	779.675	779.610	779.515	779.455	779.355	779.270	779.180	779.085	778.985	778.885	778.780	778.670	778.560	778.450	778.365	778.265	778.160	778.060	777.960	777.860	777.760	777.655	777.545	777.440
	Elevation Top of O.S. Beam																										
	Dist. Top Bm to Top Coping Form																										
B	Elevation Top of Screed	779.175	779.100	779.030	778.965	778.870	778.795	778.710	778.625	778.535	778.440	778.345	778.240	778.135	778.025	777.920	777.810	777.725	777.620	777.520	777.420	777.320	777.220	777.115	777.010	776.905	776.800
	Elevation Top of Beam																										
	Dist. Top Bm to Top Screed																										
C	Elevation Top of Screed	780.120	780.050	779.980	779.915	779.820	779.740	779.660	779.575	779.485	779.390	779.290	779.190	779.085	778.975	778.865	778.755	778.670	778.570	778.470	778.370	778.270	778.170	778.065	777.960	777.855	777.750
	Elevation Top of Beam																										
	Dist. Top Bm to Top Screed																										
D	Elevation Top of Screed	781.625	781.550	781.480	781.415	781.320	781.245	781.160	781.075	780.985	780.895	780.795	780.695	780.585	780.480	780.370	780.260	760.175	760.075	779.975	779.875	779.775	779.675	779.575	779.470	779.365	779.260
	Elevation Top of Beam																										
	Dist. Top Bm to Top Screed																										
E	Elevation Top of Coping Form	782.550	782.480	782.410	782.345	782.250	782.170	782.090	782.005	781.915	781.820	781.725	781.620	781.515	781.410	781.300	781.190	781.105	781.005	760.905	780.805	780.705	780.605	780.500	780.400	780.295	780.190
	Elevation Top of O.S. Beam																										
	Dist. Top Bm to Top Coping Form																										

TOOTHED EXPANSION JOINT ELEVATIONS

Point	Elevation	Point	Elevation
E 1	780.925	E 2	780.965
E 3	781.445	E 4	781.415
E 5	781.935	E 6	781.905
E 7	782.425	E 8	782.395
E 9	782.915	E 10	782.885
E 11	783.405	E 12	783.375
E 13	784.540	E 14	784.515

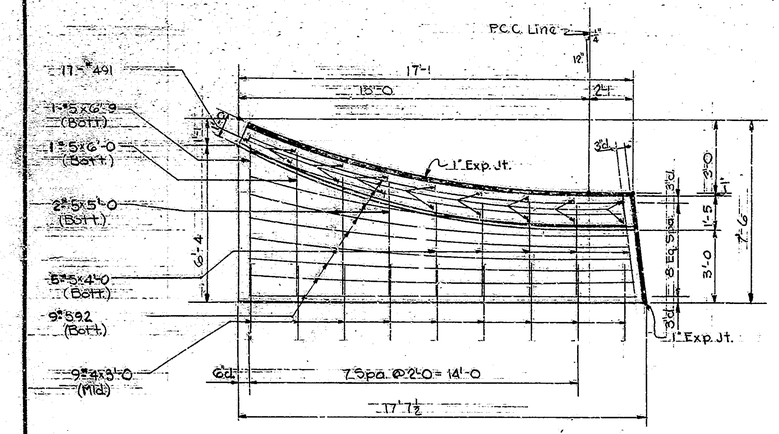
NOTE:
For location of screed points and "General Procedure" see Drwg. S 26.

DESIGNED L.E.M. 7-25-63 CKD. JDM 8-30-63
DRAWN L.E.M. 8-15-63 CKD. JDM 9-24-63
TRACED CKD.

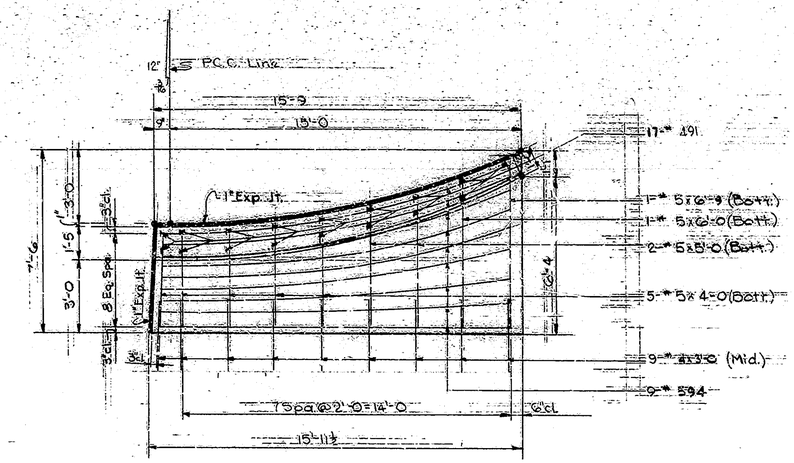
TABLE OF ELEVATIONS
INDIANA STATE HIGHWAY COMMISSION

SCALE:- Not to Scale OCTOBER 10, 1963
SUBMITTED FOR APPROVAL:- James D. Mattis
DRAWING:- S 26 OF 26
PROJECT:- I-UI-65-3(44) 117
BRIDGE CONTRACT NO. R-6335
BRIDGE FILE:- I-65-119-2313 J (S.B. Lane)

MARSAUGH ENG. NO. 186



WING "A"



WING "D"

BRIDGES OVER 20' SPAN

PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-65-3(40)117	1963	27	140

BILL OF MATERIALS
WIDENED R.C. BRIDGE
APPROACH @ BENTS No. 1 & No. 5

REINFORCING STEEL

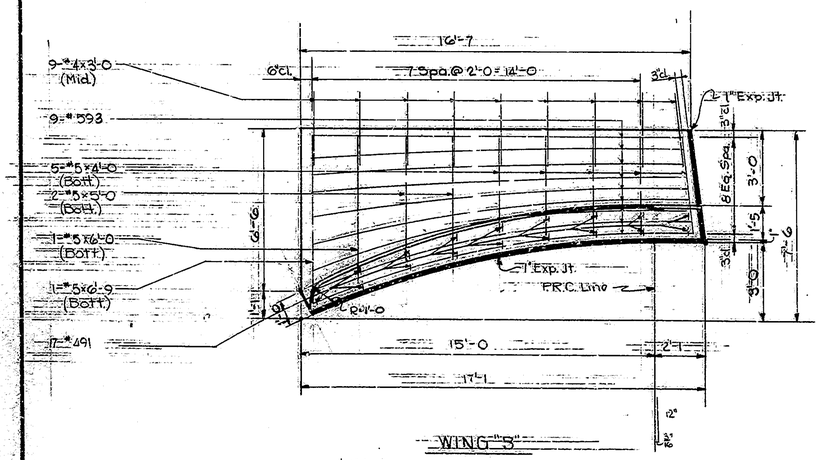
SIZE & MARK	No. of BARS	LENGTH	WEIGHT
591	96	20'-6	
592	9	17'-6	
593	9	16'-6	
594	18	15'-6	
#5	22	23'-6	
#5	4	6'-9	
#5	4	6'-0	
#5	8	5'-3	
#5	20	4'-0	
	Total	#5	3,382 Lb.
491	68	21-3	
#4	36	3'-0	
	Total	#4	1741 Lb.
	Total	Steel	3,554 Lb.

CONCRETE

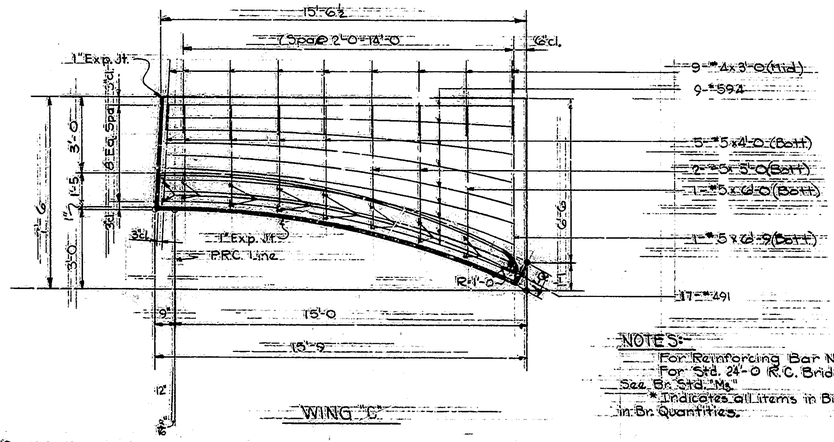
10" R.C. Pavement	153.5 Cys.
Class "F" Int. Curb Walk	2.6 Cys.

MISCELLANEOUS

1" Exp. Joint	132 Lft.

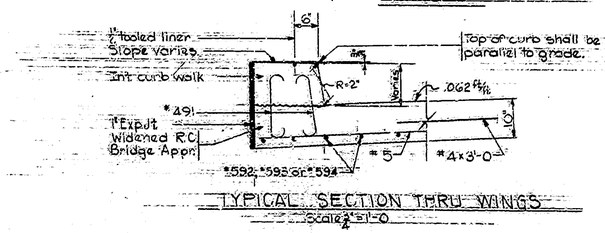


WING "B"

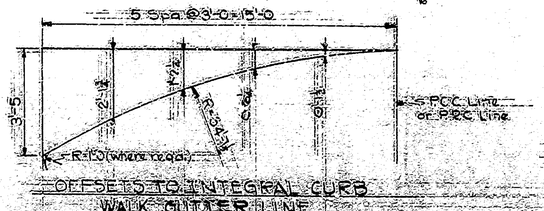


WING "C"

NOTES:
For Reinforcing Bar Notes, See Br. Std. "C."
For Std. 24'-0 R.C. Bridge Approach Details, See Br. Std. "M."
* Indicates all items in Bill of Materials not included in Br. Quantities.



TYPICAL SECTION THRU WINGS
Scale ½"=1'-0



OFFSETS TO INTEGRAL CURB WALK GUTTER LINE
No Scale

Mark	Q	Length
592	16°-11	17'-6
593	15°-11	16'-6
594	14°-11	15'-6



WIDENED R.C. BRIDGE APPROACH DETAILS
AND BILL OF MATERIALS

INDIANA STATE HIGHWAY COMMISSION

SCALE: ½"=1'-0 Unless Noted. OCTOBER 10, 1963

SUBMITTED FOR APPROVAL: James D. Mattes

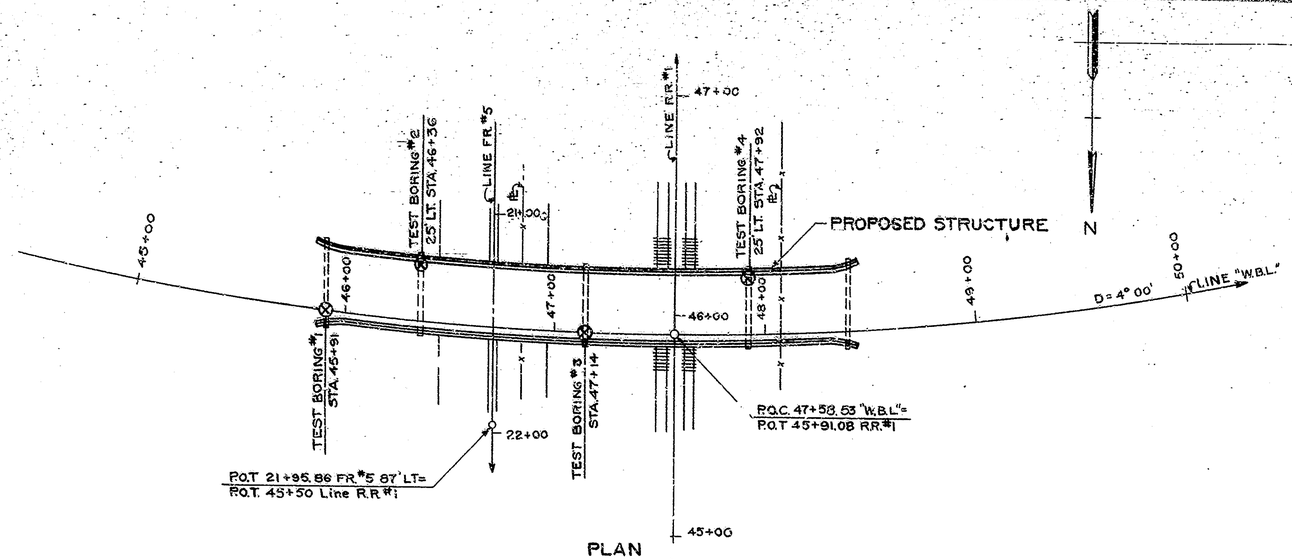
PROJECT:- I-UI-65-3(40)117
BRIDGE CONTRACT NO. R-6333
BRIDGE FILE:- I-65-UD-251A

DESIGNED CK'D.
DRAWN JDO 8-27-63 CK'D JDS 9-11-63
TRACED CK'D.

MARSHALL ENG. NO. 188

STATE HIGHWAY DEPARTMENT OF INDIANA

I-65-3(46)117	1965	68	140



PLAN
Scale: 1" = 30'

BORING NO.	T.B. #1	T.B. #2	T.B. #3	T.B. #4
STATION	45+91	46+36	47+14	47+92
OFFSET	0.0	25' Lt.	0.0	25' Lt.
GROUND ELEV.	752.38	752.98	752.60	731.97

EL.	SAMPLE NO.	TYPE	N	DESCRIPTION
752.4				BEGINNING LINE 1
752.3				BLACKTOP
752.0				SAND AND GRAVEL (ROADFILL)
751.4				BROWN MOIST MEDIUM STIFF CLAYEY SILT WITH A TRACE OF FINE TO COARSE SAND AND FINE GRAVEL.
747.9	1	S	5	
746.9	2	S	8	
744.9	3	S	16	
743.9				BROWN WET MEDIUM DENSE FINE TO COARSE SAND WITH A LITTLE FINE GRAVEL.
742.9	4	S	25	
741.9	5	S	26	GRAY MOIST VERY STIFF CLAYEY SILT WITH A LITTLE FINE TO COARSE SAND AND FINE GRAVEL.
738.9	6	S	30	
738.4				END OF BORING 2
				DEPTH OF BORING = 31'-6

EL.	SAMPLE NO.	TYPE	N	DESCRIPTION
752.6				BEGINNING LINE 2
752.0				BLACKTOP
751.7				SAND AND GRAVEL (ROADFILL)
748.0	1	S	5	BROWN MOIST MEDIUM STIFF CLAYEY SILT WITH A LITTLE FINE SAND.
743.0	2	S	5	
739.0	3	S	14	GRAY MOIST STIFF CLAYEY SILT WITH A LITTLE FINE TO COARSE SAND.
735.0	4	S	20	
733.0	5	S	23	GRAY MOIST VERY STIFF CLAYEY SILT WITH A LITTLE FINE TO COARSE SAND AND FINE GRAVEL.
729.3				END OF BORING 2
				DEPTH OF BORING = 31'-6

EL.	SAMPLE NO.	TYPE	N	DESCRIPTION
752.6				BEGINNING LINE 3
752.0				BLACKTOP
751.7				SAND AND GRAVEL (ROADFILL)
747.6	1	S	9	BROWN AND GRAY MOTTLED MOIST STIFF SILTY CLAY WITH A TRACE OF FINE SAND.
742.6	2	S	10	
738.6				GRAY WET TO MOIST VERY STIFF CLAYEY SILT WITH A LITTLE FINE TO COARSE SAND AND FINE GRAVEL
737.6	3	S	7	
732.6	4	S	31	GRAY MOIST HARD CLAYEY SILT WITH A TRACE OF COARSE SAND AND FINE GRAVEL.
727.6	5	S	55	
723.6				
722.6	6	S	25	GRAY MOIST VERY STIFF CLAYEY SILT WITH A TRACE OF FINE TO COARSE SAND.
717.6	7	S	25	
712.6	8	S	22	
708.6				
707.6	9	S	89	GRAY MOIST HARD CLAYEY SILT WITH A LITTLE COARSE SAND AND FINE TO MEDIUM GRAVEL. LIMESTONE
706.6	10	S	66	END OF BORING 2
				DEPTH OF BORING = 50'-10

EL.	SAMPLE NO.	TYPE	N	DESCRIPTION
731.9				BEGINNING LINE 4
731.6				BLACKTOP
731.3				SAND AND GRAVEL (ROADFILL)
727.3	1	S	15	BROWN MOIST STIFF CLAYEY SILT WITH A LITTLE FINE TO COARSE SAND.
722.3	2	S	15	
720.3				
717.3	3	S	6	GRAY MOIST MEDIUM STIFF CLAYEY SILT WITH A TRACE OF FINE TO COARSE SAND AND FINE GRAVEL.
712.3	4	S	18	
709.3				GRAY MOIST, VERY STIFF CLAYEY SILT WITH A TRACE OF FINE SAND AND FINE GRAVEL.
707.3	5	S	20	
704.3	6	S	18	
703.3				END OF BORING 2
				DEPTH OF BORING = 31'-6

NOTE
▼ Denotes Ground Water Table.
N Indicates the number of Blows required to Drive a 1⅜" I.D., 2" O.D. Split Spoon Sampler 12" by Means of a 140# Weight Falling 30".

SOIL BORINGS

SCALE:- Horiz.: 1" = 30'-0 ; Vert: 1" = 5'-0 OCTOBER 10, 1963

SUBMITTED FOR APPROVAL James D. Mallin

PROJECT:- I-UI-65-3(46)117
BRIDGE CONTRACT NO. R-6333
BRIDGE FILE:- I-65-119-2314

Drawn: TLN 9-21-63 Ck'd REB 9-24-63
Traced: TLN 9-26-63 Ck'd JSS 9-25-63

VALLEY DEVELOPMENT CORP

*STRUCTURE Nº 46 +00

SEC. 17, T. 16 N.; R. 3 E.

POT 192+74.54 (Grid 400' Lt) = POT. 34+42.83 (Line S-6-A)

GUION RD.

N.B. Track

S.B. Track

STRUCTURE Nº 45

STRUCTURE Nº 44

CURVE DATA LINE "WBL"
Δ = 42° 33' 23" Lt
T = 562.64'
L = 1072.24'
D = 4°00
R = 1432.39'

E.W. CLOWES et al.

Gnd. Line 400' Lt. fore Tang. (Line "A")

POT 192+24.37 (Grid 400' Lt)
POT 467+07.07 R.R.*1

Shldr. Line-2

LINE "WBL" (N. Edge Pvmt.)

D = 4°00

NOTE:
See Road Plans for References, R/W and Additional Details.

STRUCTURE Nº 46A +00

Shldr. Line

BEGIN STRUCTURE
I-65-119-2314
STA. 45+65.0

Cross hatched Area Indicates 640 Sys. 4" Conc. Slope wall Reqd. (Incl. 177 Sq. yds. for Tazewell.)

STRUCTURE Nº 45A

END STRUCTURE
I-65-119-2314
STA. 48+65.0

Tower (380000V)

POT. 47+58.53 WBL = POT. 45+91.08 RR*1

Toe Slope

POT 21+95.36 RR*5 87' Lt
POT. 45+50 Line RR*1

24' FUTURE LANE GUION RD.

24' PROPOSED LANE GUION RD.

87'

PROPOSED STRUCTURE

Line RR*5

50 Ft. Extending from Subsoils at endline S-6-A and Boring No. 5 on Line A

Temp. R/W For Sewer Manhole Constr.

110' L.A. R/W.

5" Std. OIL PIPE LINE

8" Buckeye Pipe Line (8' Depth Unknown)

L.A. R/W

SITUATION PLAN
CONTOUR INTERVAL = 1-0
Scale: 1" = 30'-0

UTILITIES
INDPLS. POWER & LIGHT CO.
2.8 MONUMENT CIRCLE
STD. OIL COMPANY
P.O. BOX 568 AREA CO., ILL.
BUCKEYE PIPE LINE CO.
3626 N. LAS VEGAS BLVD. SPEEDWAY CITY
INDPLS. SANITARY DISTRICT
CITY-COUNTY BUILD.

BRIDGES OVER 20' SPAN

PUB. ROAD REGION	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-UI-65-3 (46) 117	1963	69	140

R.R. TRAFFIC CENSUS (DAILY)
NORTHBOUND - 2 PASS - 1 SWITCH
SOUTHBOUND - 2 PASS - 1 SWITCH

℄ LINE "WBL" = 91.08 (RR*1)

PROFILE WEST RAIL of S.B. TRACK

PROFILE EAST RAIL of S.B. TRACK

PROFILE WEST RAIL of N.B. TRACK

PROFILE EAST RAIL of N.B. TRACK

PROFILE OF C.C.C. & ST. L. R.R.
Scales: Horiz 1/2" = 100' Vert 1" = 5'-0

ELEVATION (Normal to R.R. Nº1)
Scale: 1" = 30'-0

PROFILE ON LINE "WBL" (W.B. 38TH St.)
Scale: Horiz 1" = 30'-0 Vert 1" = 10'-0

+50 EL. 787.07 V.C. Good (Unsuit) (315-225)

PROPOSED PROFILE GRADE "WBL"

Grade "B" Special Borrow (2:1 Side Slopes)

6' Reinf. C.M. Pipe (Type) See Bridge Std. Sht.

Grade "A" Special Borrow (2:1 Side Slopes)

3'-0 Berm

℄ Bent Nº1

℄ Bent Nº5

2:1 Slope 1 to ℄ Bent

Grade "B" Special Borrow

1-6 Type III 4 Sides

FILL TO EL. 750

GRADING LIMITS (2314)

STRUCTURE LIMITS I-65-119-2314

4'-9 Pipe Lines in place

Field Notes Book Road 8552T pp. 21, 62, 68, 69
Book Road 8554L pp. 38, 39, 54, 55 & 1 of 3

NOTE: See Art. A-203 of Specifications regarding Test Boring Data. See Sheet Nº 68 for Test Borings

NOTE:
Items marked (*) not included in Bridge Quantities.
This Structure is Nº 3 on Road Proj. I-UI-65-3 (46) 117

BALANCE

Fill + 15%	35,505	Cys.
Surplus Foundation Excavation	— 95	Cys.
* Surplus Excavation	— 35,410	Cys.
Special Borrow	0	Cys.

* Surplus Excavation to be obtained from Balance Nº 4. See Rd. Project I-UI-65-3 (46) 117, Rd. Plan & Profile Sheet Nº 14

LAY OUT
CONTINUOUS (COMPOSITE) STEEL BEAM BRIDGE
4 SPANS 42'-3, 2@78'-0, 42'-3 CURVED 30'-0 RDWY 2@1'-6 WALK
LINE WBL W.B. 38TH. ST. OVER C.C.C. & ST.L. R.R.
ROUTE I-65 AT 38TH. ST. INTERCHANGE

STATE HIGHWAY DEPARTMENT OF INDIANA

MARION COUNTY

SCALE:- AS NOTED OCTOBER 10, 1963

RECOMMENDED FOR APPROVAL: James D. Mathis

DRAWING:- S1 OF 21

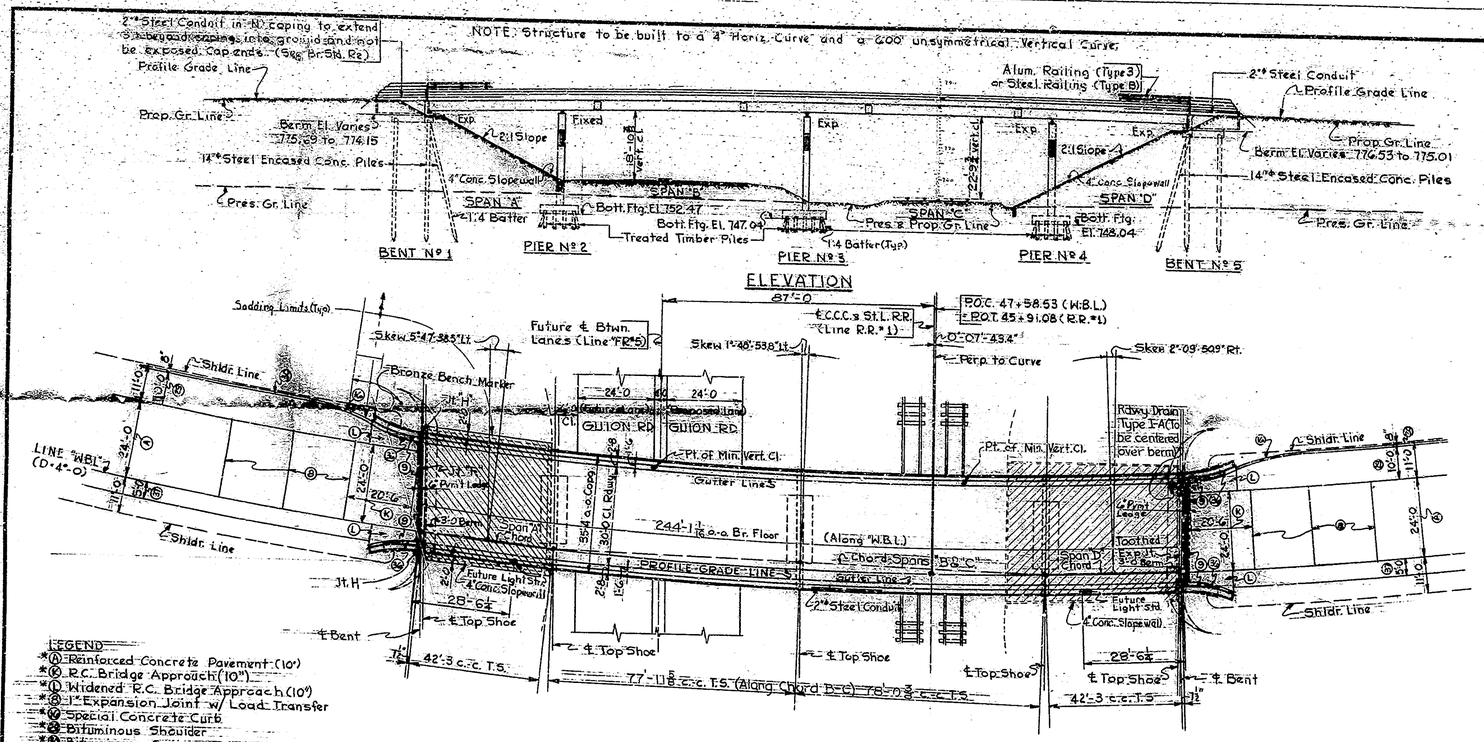
PROJECT:- I-UI-65-3 (46) 117 STA. 47+58.53

BRIDGE CONTRACT NO. R-6333

BRIDGE FILE:- I-65-119-2314

DESIGNED ____ CHKD ____
DRAWN KHS 4-27-61 CHKD CDC 10-20-61
TRACED JD 9-22-63 CHKD JJS & TJ 10-10-63

BRIDGES OVER 20' SPAN					
PUB. ROAD SER. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
-4	IND.	I-65-3 (46)117	1963	70	140

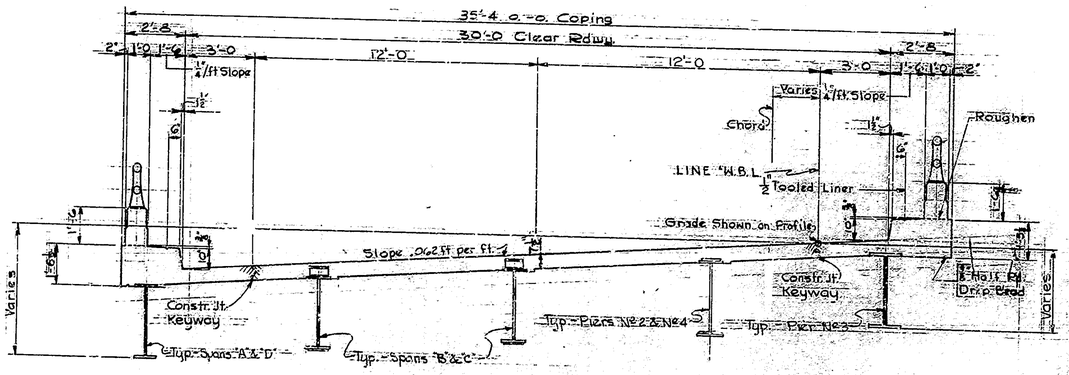


ELEVATION

LEGEND
- *Ⓐ Reinforced Concrete Pavement (10")
- *Ⓑ R.C. Bridge Approach (10")
- *Ⓒ Widened R.C. Bridge Approach (10")
- *Ⓓ 1" Expansion Joint w/ Load Transfer
- *Ⓔ Special Concrete Curb
- Ⓕ Bituminous Shoulder
- *Ⓖ Bituminous Curb
- *Ⓗ 1" Expansion Joint
- Ⓘ Integral Curb Walk
- Ⓙ 5" Compacted Aggregate Shoulder

PLAN

NOTE:
Items marked (*) not included in Bridge Quantities



TYPICAL CROSS-SECTION AT PIERS

Scale: ½" = 1'-0"

IN SPANS

DESIGNED	CKD.
DRAWN LSS 5/14/63	CKD. LDN 5-15-63
TRACED	CKD.

PR. STD.	RD. STD.	STANDARD DRAWINGS PURPOSE
C1		Reinf. Bar Notes, Test Bar Samples, Bar Bending Details, Splicing Pile Shells in the Field, Notch at End of Beams, 1" Exp. Jt.
D		Roadway Drains, Type I-A
M3		4" Conc. Bridge Approach Details, 1" Exp. Jt. with Load Transfer
M5		Slopewall Details
R1-A		Aluminum Railing Details
R1-B		Steel Railing Details
R2		Bridge Lighting Details
S2		Typical Section at End Bents
CP		Pipe Culvert Placement
BN		Backfill for Structures
NP		Pipe for Surface Drainage

TYPICAL CROSS-SECTION

For Typical Cross Section on Line "WB L" see Sheet N° 3
For Typical Cross Section on Line "FR"5" see Sheet N° 4

DESIGN DATA

Designed for H20-S16-44 Loading in accordance with 1961 A.A.S.H.O. Specifications.

GENERAL NOTES

No present structure at proposed bridge site.
Depth of footings to be extended if found necessary. See Art. B 403.2(a) of the Specifications.
Piles shall have the minimum bearing value shown on the detail drawings. Determine pile lengths by Art. E 103 and E 203 of the Specifications.
For details of steel encased concrete piles see Bridge Standard C1, the Special Provisions, and applicable articles in the Specifications.
Reinforcing steel covering shall be 1½ inches at top and 1 inch in bottom of floor slabs, 3 inches in footing except bottom steel which shall be 4 inches, and 2 inches in all other parts unless noted.
Concrete in footings and pier stems (Pour Nr. 1) to be Class "E".
Concrete in superstructure, including railing, bent caps, and top of pier stems down to construction joint (Pour Nr. 2) to be Class "E".
Concrete in slopewall, steel encased concrete piles and headwalls to be Class "D".
Continuous concrete pours shall be required between construction joints as shown on the detail plans.
Waterproof the back of mudwalls and bent wingwalls in accordance with the Specifications.
Bevel forms ¾ inch under copings and chamfer exposed edges 1 inch unless noted.
1 standard type I-A roadway drain to be placed as shown on this drawing.
Construct 4" concrete slopewall at locations as shown on the Layout.
Tolerance in position of pile head, maximum of 2 inches.
* Three 1 inch expansion joints with load transfer to be placed in the pavement as shown on Bridge Standard M3.
All railings to be constructed perpendicular to grade.
Railings and posts may be Aluminum or Steel, see Bridge Standards R1-A and R1-B.
Provision to be made for future bridge lighting, see Bridge Standard R2.
See the Special Provisions for items included in this contract.

JOINT LEGEND

*1" Exp. Joint, See Bridge Standard C1. Includes 1" joint filler on vertical faces of 2"x2'-0 depressed keyways in pavement ledge at Bents No. 1 & No. 5.
Joint "H" indicates vertical 1" preformed joint filler extending from the top of coping to the top of slab seat at Bent No. 1.
Joint "R" indicates 1" preformed joint filler on vertical faces of 2" x 2'-0 depressed keyways with one layer of medium weight roofing felt under the entire slab bearing area at Bent No. 1.

GENERAL PLAN

CONTINUOUS (COMPOSITE) STEEL BEAM
4 SPANS: 42'3; 2@76'-0; 42'3 CURVED 30' ORDNY. 2@1'-6 WALKS
LINE WBL (West Bound 38th St.) OVER C.C.C. & St. L. RR. & GUION RD
INTERSTATE RT. N° 65 AT 38th ST. INTERCHANGE

INDIANA STATE HIGHWAY COMMISSION

MARION COUNTY

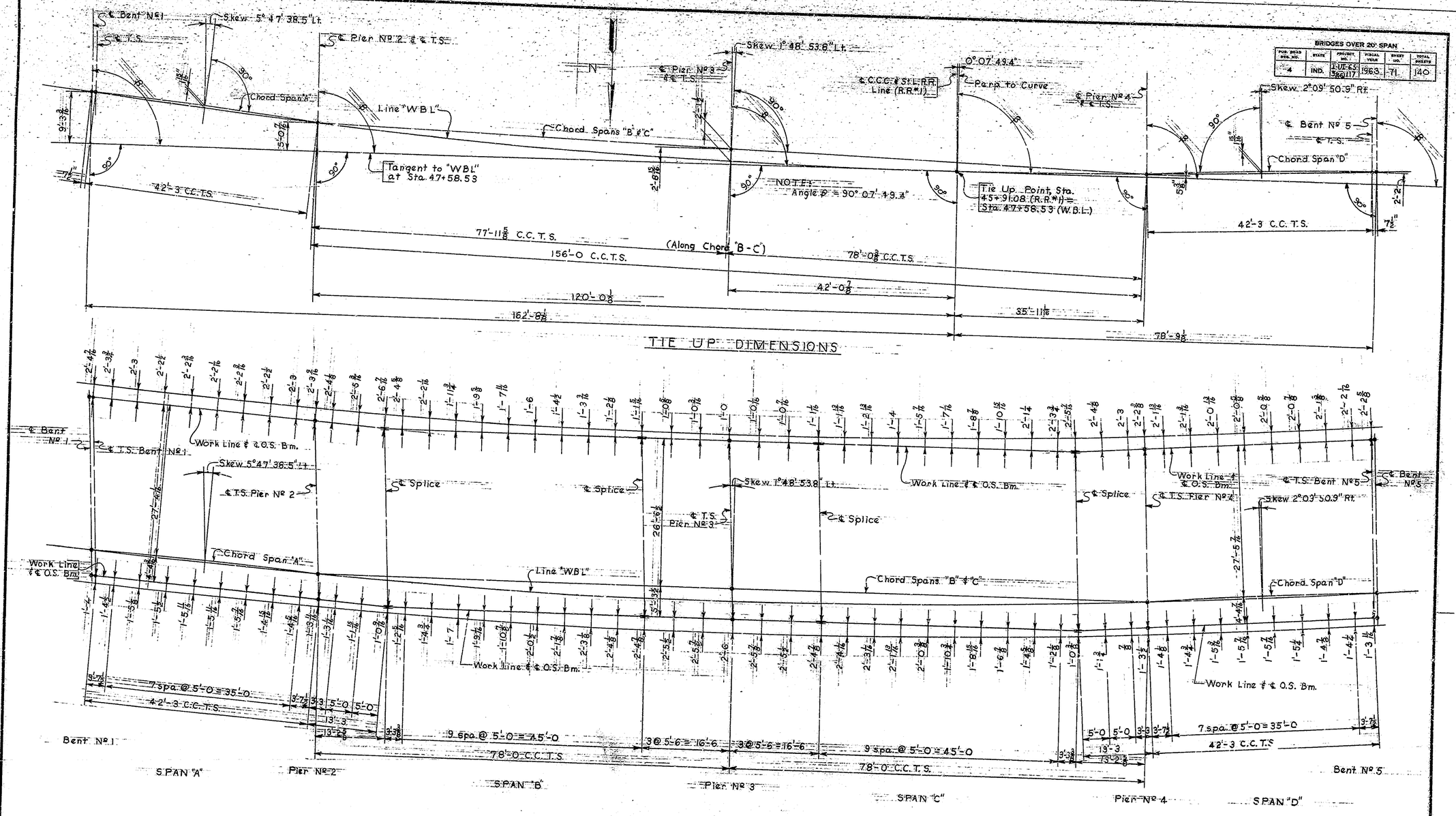
SCALE: 1" = 20'-0 UNLESS NOTED OCTOBER 10, 1963

SUBMITTED FOR APPROVAL: James D. Mattis

DRAWING S2 OF 21
PROJECT: I-UI-65-3 (46)117
BRIDGE CONTRACT NO. R-6333
BRIDGE FILE: I-65-119-23.14

NARRAUGH ENGINEERING SUPPLY 70100

BRIDGES OVER 20' SPAN					
FED. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
- 4	IND.	I-UI-65 (46) 117	1963	71	140



DESIGNED JSS 5-14-63 CK'D JDM 5-15-63
DRAWN LFM 7-25-63 CK'D JSS 8-9-63
TRACED CK'D

HARRAUGH ENG. NO. 166

TIE-UP DIMENSIONS & COPING LINE OFFSETS

INDIANA STATE HIGHWAY COMMISSION

SCALE: Not to Scale OCTOBER 10, 1963

SUBMITTED FOR APPROVAL: James D. Mattox

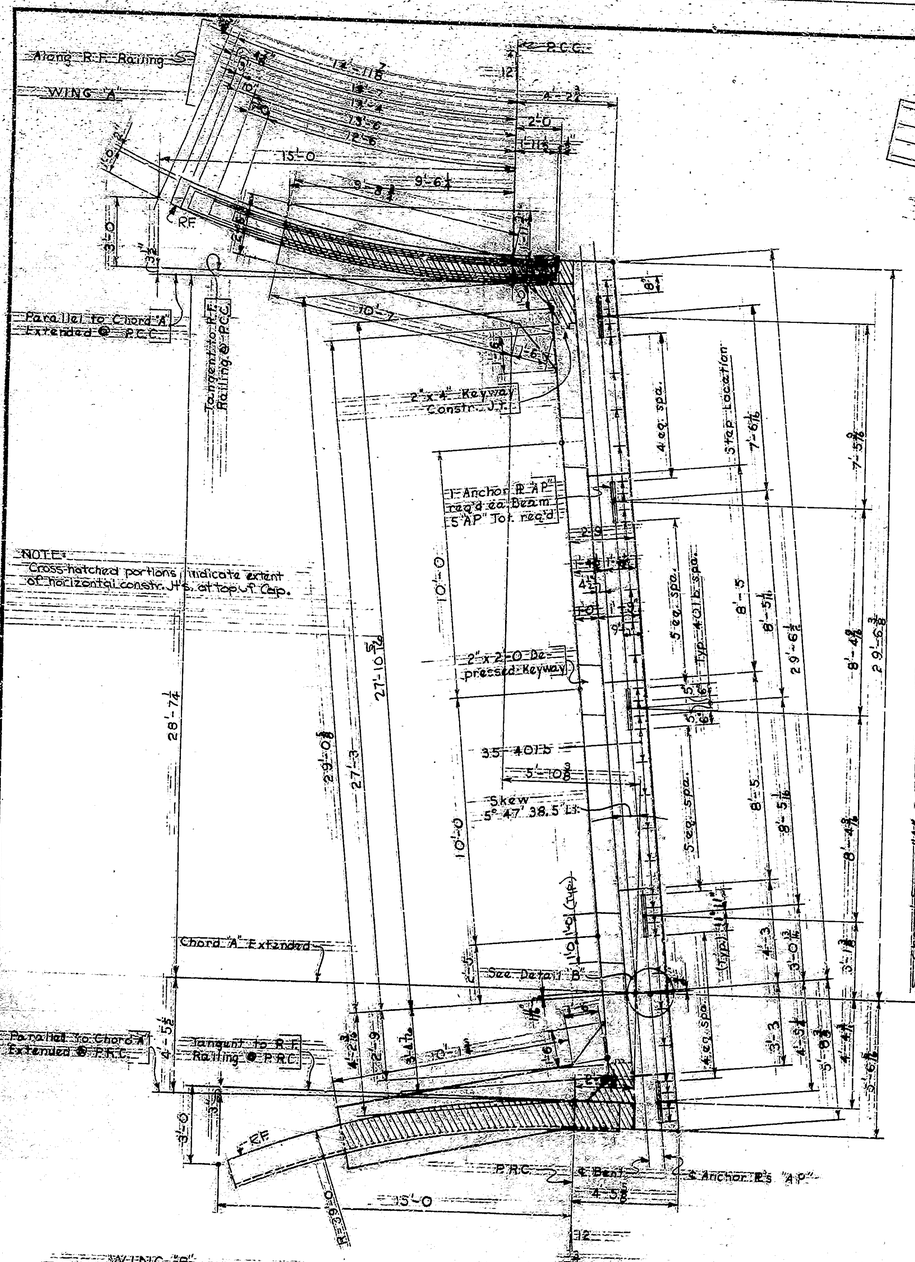
DRAWING 53 OF 21

PROJECT: I-UI-65-3(46) 117

BRIDGE CONTRACT NO. R-6333

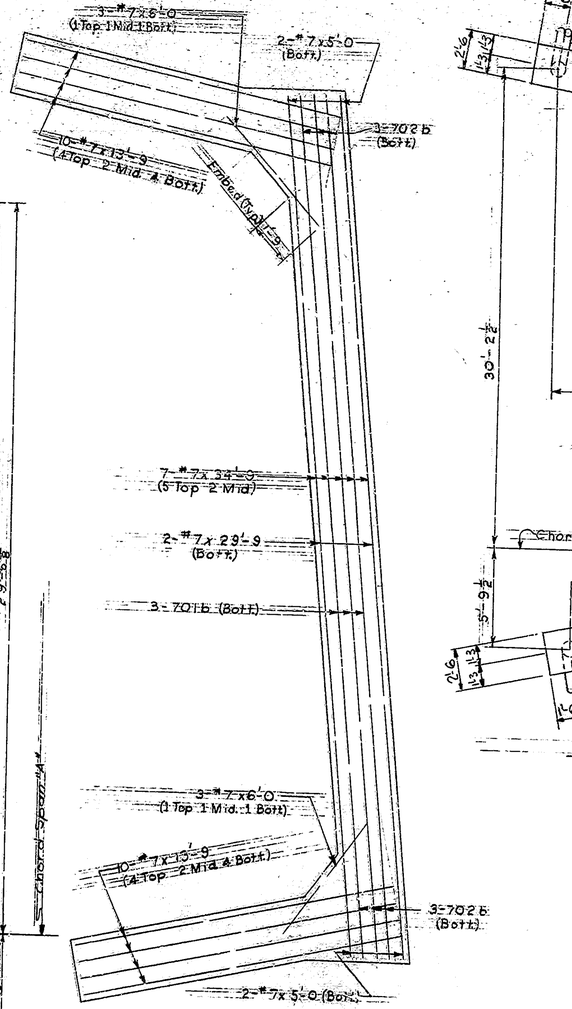
BRIDGE FILE: I-65-119-2374

BRIDGES OVER 20' SPAN					
PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-UI-65-3(44)117	1963	72	140

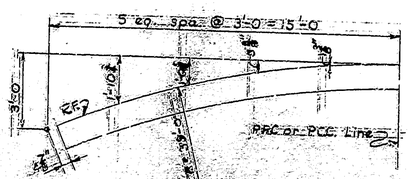


PLAN BENT Nº 1
Showing concrete dimensions and reinforcing bars 4015 (Top).
Scale: 3/8" = 1'-0

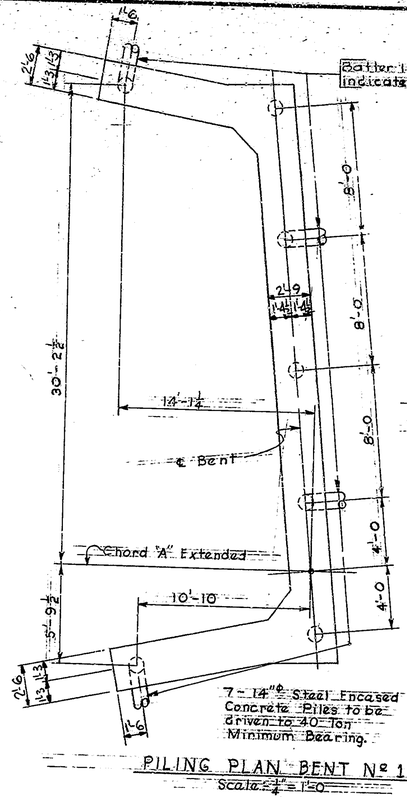
WING "B"
Details and Dimensions not shown same as corresponding parts of Wing "A".



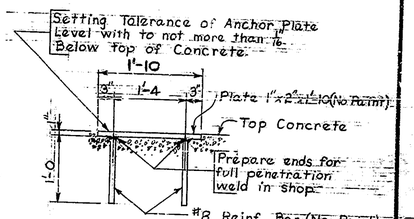
PLAN BENT Nº 1
Showing Cap Longitudinal Reinforcing Steel.
Scale: 3/8" = 1'-0



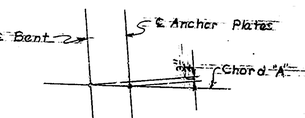
OFFSETS TO REAR FACE WALL WING "B"
Wing "A" Same by Opp. Hand
Scale: 3/8" = 1'-0



PILING PLAN BENT Nº 1
Scale: 1/4" = 1'-0



DETAIL OF ANCHOR PLATE "AP"
Scale: 1"=1'-0



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

NOTES:
Anchor Plates "AP" to be pre-set in concrete.
For Reinforcing Bar Notes see Br. Std. "C1".
For Additional Details see Drwg. S 5
For Bill of Materials see Drwg S 5.
Bent Cap is not to be poured until after fill has been completed up to approximate elevation of the bottom of cap.

BENT Nº 1 DETAILS

INDIANA STATE HIGHWAY COMMISSION

SCALE: As Noted — OCTOBER 10, 1963

SUBMITTED FOR APPROVAL: James D. Mattis

DRAWING 54 OF 21

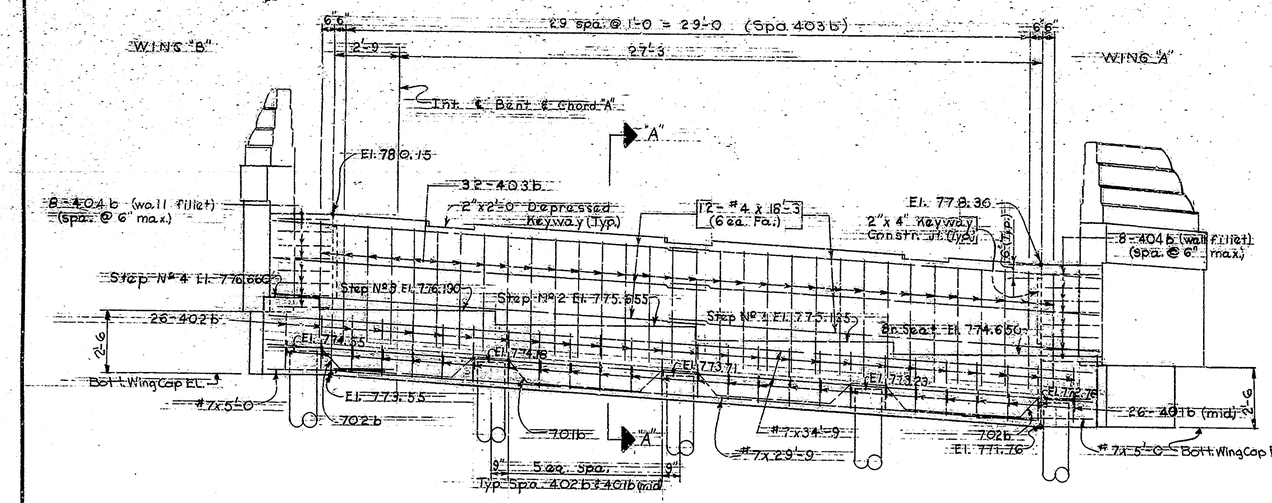
PROJECT: I-UI-65-3(44) 117

BRIDGE CONTRACT NO. R-6333

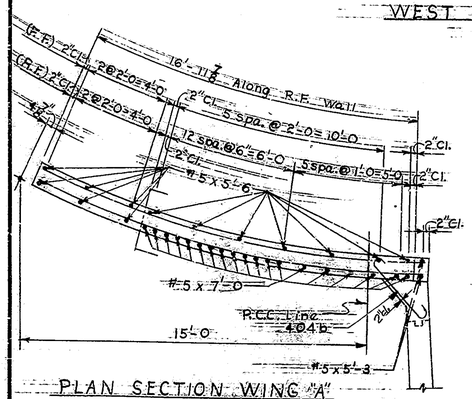
BRIDGE FILE: I-65-10-2314

DESIGNED LSS 8/29/63 CKD JWHS 9-3-63
DRAWN LEN 9/10/63 CKD LSS 10-2-63
TRACED ____ CKD ____

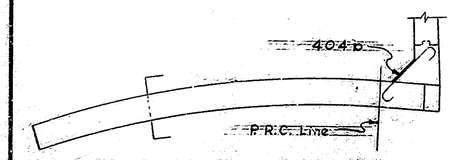
MARSHALL ENG. NO. 199



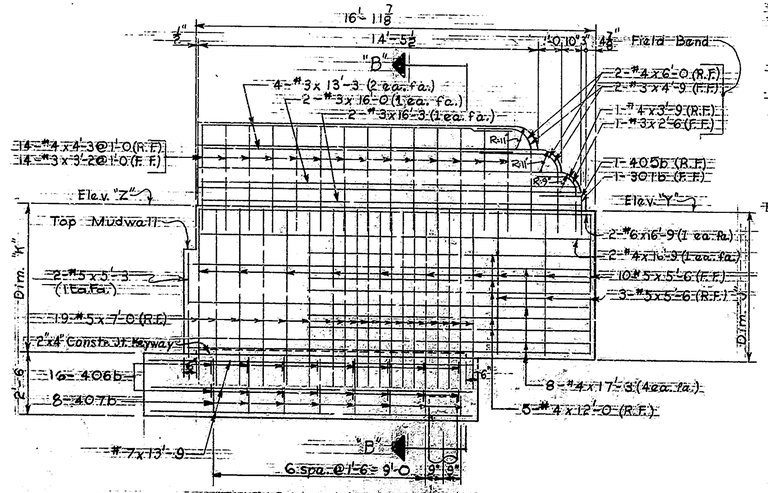
WEST ELEVATION BENT Nº 1



PLAN SECTION WING "A"



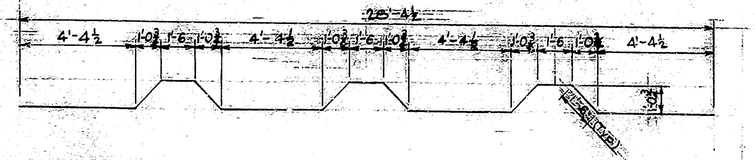
PLAN SECTION WING "B"
Same as Wing "A" Except as Noted



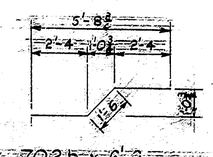
TYPICAL WING DETAILS

TABLE OF ELEVATIONS		
WING	Elev. "Y"	Elev. "Z"
"A"	779.86	780.10
"B"	781.78	782.02

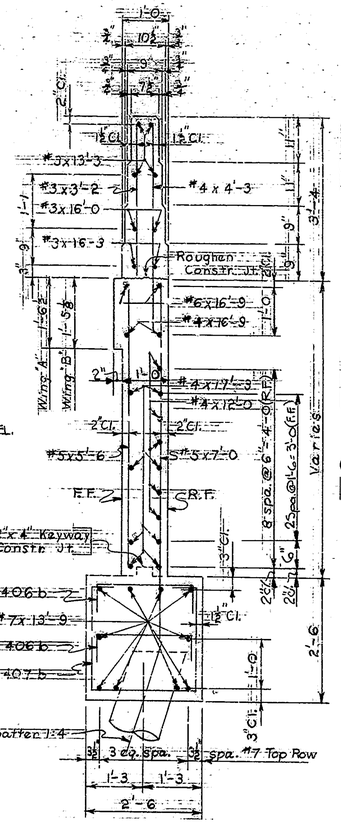
WING WALL HEIGHTS		
WING	Dim. "J"	Dim. "K"
"A"	5'-7¼	5'-10⅝
"B"	5'-8¾	5'-11⅝



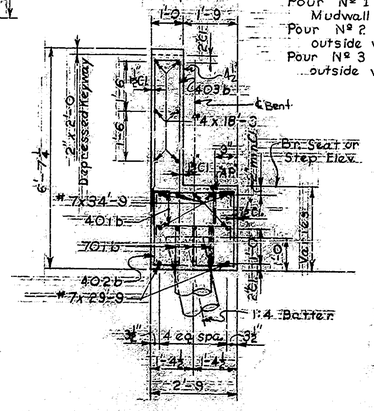
701b x 31'-0



702b x 6'-2



SECTION "B-B"
Scale: ¾" = 1'-0

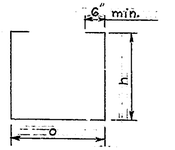


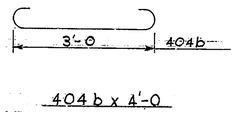
SECTION "A-A"
Scale: ¾" = 1'-0

Mark	ō	h	Length
406b	2'-6	6"	3'-6
406b	2'-3	6"	3'-3
403b	9"	5'-0	10'-9

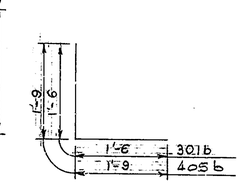


Mark	ō	h	Length
402b	2'-6	2'-3	8'-0
407b	2'-3	2'-1	7'-5





404b x 4'-0



301b x 3'-0
405b x 3'-6

POUR DESIGNATION

Pour Nº 1 Main Cap, Wing Cap and Mudwall between vertical Constr. Joints.
Pour Nº 2 Wingwall "A" and Mudwall outside vertical Constr. Joint.
Pour Nº 3 Wingwall "B" and Mudwall outside vertical Constr. Joint.

NOTES:-

For Reinforcing Bar Notes, see Br Std. "C,".
For Additional Details, see Drwg. S4.

BRIDGES OVER 20' SPAN

PUB. ROAD ADM. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-01-65 3(46)117	1963	73	140

BILL OF MATERIALS

REINFORCING STEEL

Size & Mark	Nº of Bars	Length	Weight
701b	3	31'-0	
702b	6	6'-2	
#7	7	34'-9	
#7	2	29'-9	
#7	20	13'-9	
#7	6	9'-0	
#7	4	5'-0	
	Total	#7	1,561#
#6	4	16'-9	101#
#5	38	7'-0	
#5	26	5'-6	
#5	4	3'-3	
	Total	#5	448#
401b	61	3'-6	
402b	26	8'-0	
403b	32	10'-9	
404b	16	4'-0	
405b	2	3'-6	
406b	32	3'-3	
407b	16	7'-5	
#4	12	18'-3	
#4	16	17'-3	
#4	4	16'-9	
#4	10	12'-0	
#4	4	9'-0	
#4	28	4'-9	
#4	2	3'-9	
	Total	#4	1,264#
301b	2	3'-0	
#3	4	16'-3	
#3	4	16'-0	
#3	8	13'-3	
#3	4	4'-9	
#3	28	9'-2	
#3	2	2'-6	
	Total	#3	135#
	Total	Steel	3,508#

CONCRETE

Class "F"	
Pour Nº 1	199 cys.
Pour Nº 2	4.2 cys.
Pour Nº 3	4.2 cys.
Total Class "F" (Except Railing Concrete)	28.3 cys.
Railing Concrete (R.S. & Ab.) 2@1.55 cys.	3.1 cys.

MISCELLANEOUS

7-14"ø Steel Encased Conc. Piles (Tgt.) x 40'-0 Approx.	280 Lft.
2" ø Steel Conduit (Wing "B" only)	20 Lft.
Anchor Plates - AP	5 Ea.

NOTES:-

For Reinforcing Bar Notes, see Br Std. "C,".
For Additional Details, see Drwg. S4.

BENT Nº 1 DETAILS AND BILL OF MATERIALS

INDIANA STATE HIGHWAY COMMISSION

SCALE: ¾" = 1'-0 Unless Noted — OCTOBER 10, 1963

SUBMITTED FOR APPROVAL: James D. Mathis

DRAWING 35 OF 21

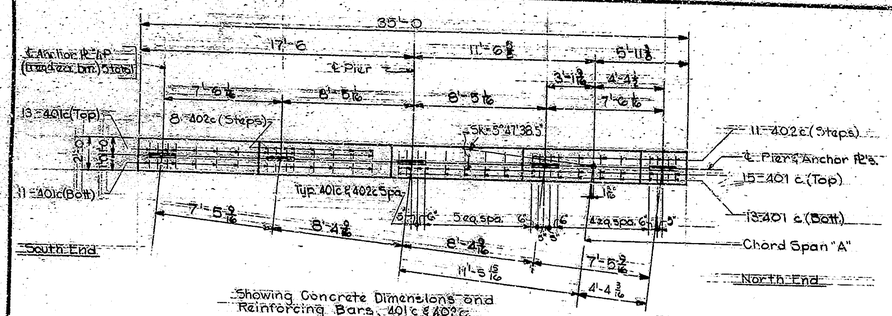
PROJECT: I-01-65 3(46) 117

BRIDGE CONTRACT NO. R-6333

BRIDGE FILE: I-65-119-2314

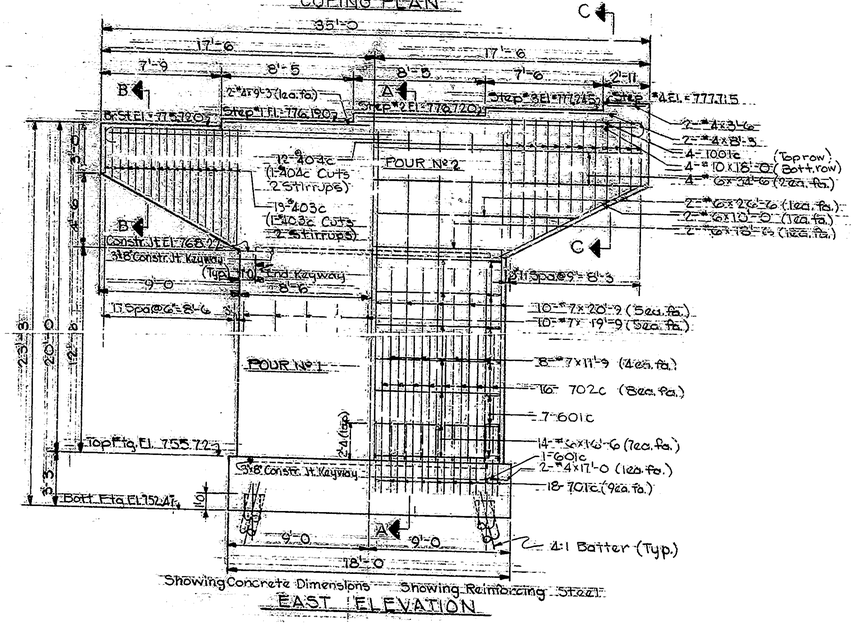
DESIGNED: SS 8-23-63 ck'd WHS 9-3-63
DRAWN: EJA 9-17-63 ck'd TSS 10-2-63
TRACED: CK'D.

MARATHON CAMB. NO. 109



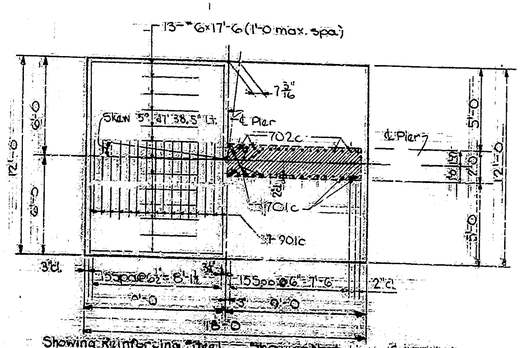
Showing Concrete Dimensions and Reinforcing Bars, 401c & 402c.

COPING PLAN



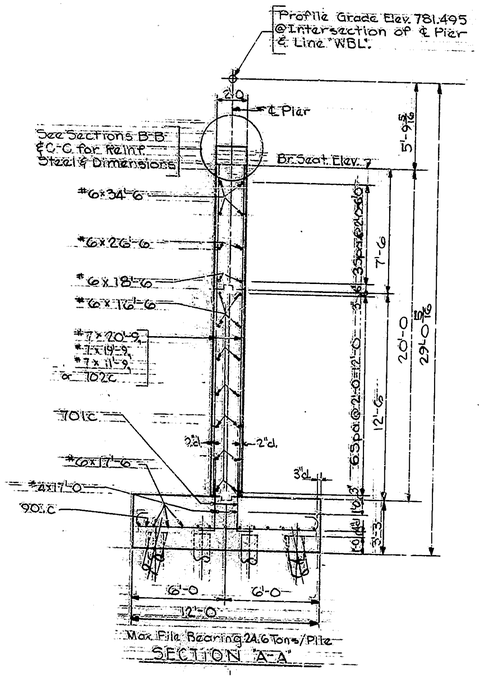
Showing Concrete Dimensions Showing Reinforcing Steel

EAST ELEVATION

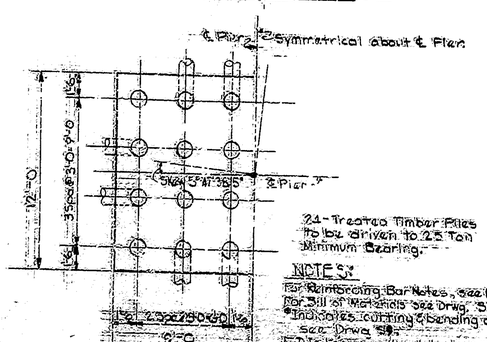


Showing Reinforcing Steel Showing Neat Lines & Vertical Steel Extending Into Footing

FOOTING PLAN



SECTION "A-A"



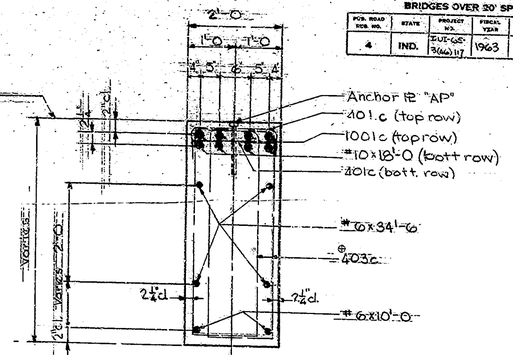
NOTES

For Reinforcing Bar Notes, see Br. Std. "G".
For Bill of Materials see Dwg. 39.
*Indicates cutting & bending diagram required. See Dwgs. 59.
Indicates piles to be battered in the direction shown.
Anchor Pt. "AP" to be preset in the concrete.

HALF PILING PLAN

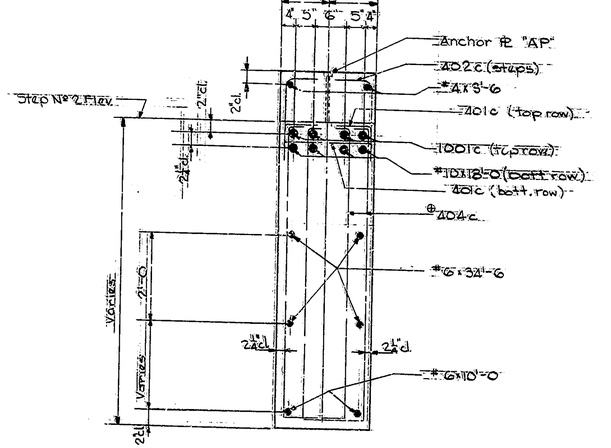
BRIDGES OVER 20' SPAN

FED. ROAD SER. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	BUC-65-3(44)117	1963	74	140



SECTION "B-B"

Scale: 3/4"=1'-0



SECTION "C-C"

Scale: 3/4"=1'-0

PIER No 2 DETAILS

INDIANA STATE HIGHWAY COMMISSION

SCALE: 3/4"=1'-0 Unless Noted. OCTOBER 10, 1963

SUBMITTED FOR APPROVAL: James D Mattis

DRAWING: 36 of 21

PROJECT: I-65-3(44)117

BRIDGE CONTRACT NO. R-6335

BRIDGE FILE: I-65-119.73 W

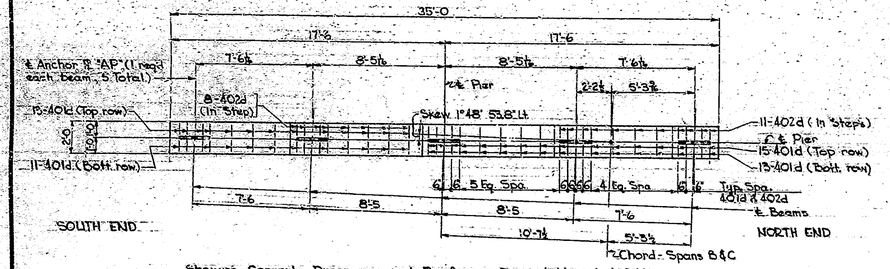
DESIGNED CEC 9-11-63 CHKD. EEC 9-24-63

DRAWN JDC 9-11-63 CHKD. EEC 9-24-63

TRACED CKD.

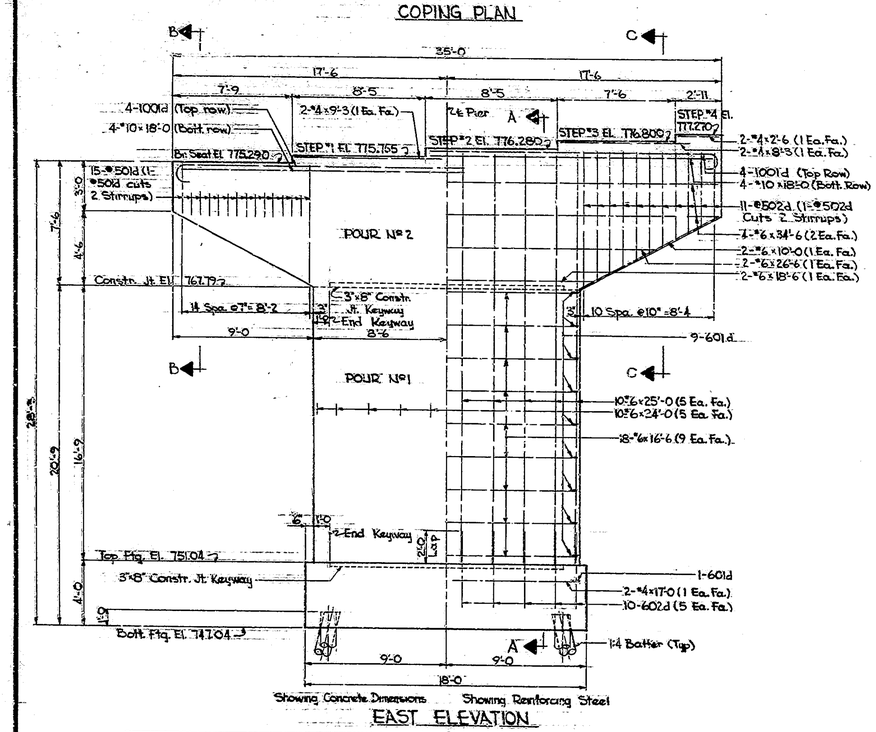
MARSHALL ENG. NO. 199

BRIDGES OVER 20' SPAN					
PUB. ROAD MFG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-III-65 (46)117	1963	75	140



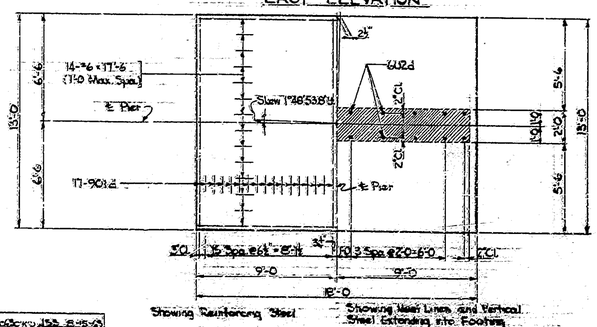
Showing Concrete Dimensions and Reinforcing Bars 401d and 402d

COPING PLAN



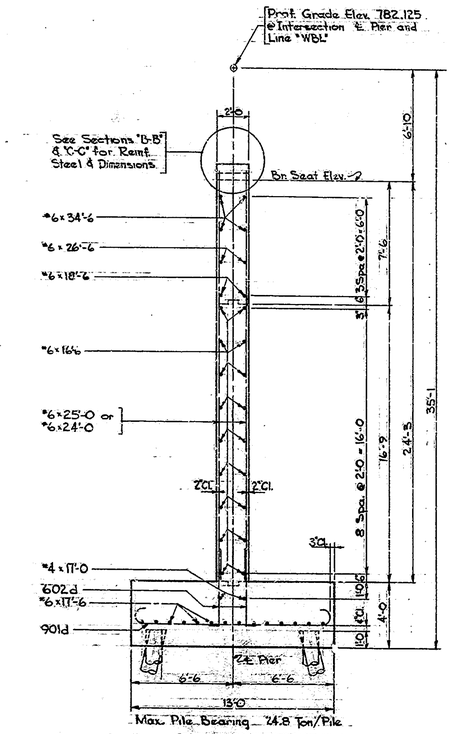
Showing Concrete Dimensions | Showing Reinforcing Steel

EAST ELEVATION

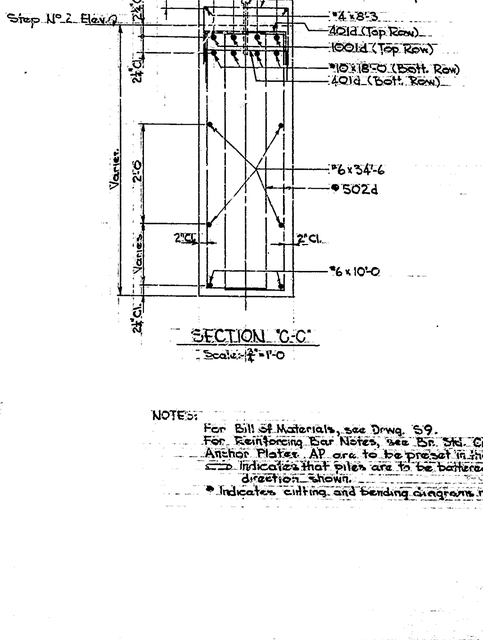


Showing Reinforcing Steel | Showing Steel Lines and Vertical Steel Extending into Footing

FOOTING PLAN



SECTION "A-A"



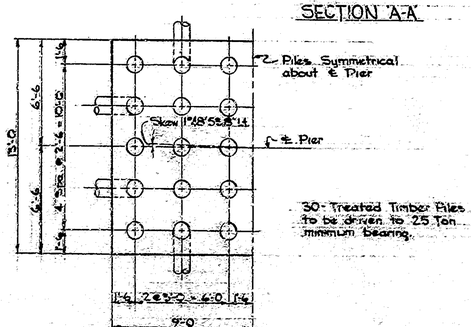
SECTION "B-B"

Scale: ¾"=1'-0

SECTION "C-C"

Scale: ¾"=1'-0

NOTES:
For Bill of Materials, see Drwg. S9.
For Reinforcing Bar Notes, see Bar. Std. C1
Anchor Plates AP are to be preset in the concrete.
⟹ Indicates that piles are to be battered 1:4 in the direction shown.
* Indicates cutting and bending diagrams required. See Drwg. S9.



30-Treated Timber Piles to be driven to 25 Ton minimum bearing.

HALF PILING PLAN

PIER No 3 DETAILS

INDIANA STATE HIGHWAY COMMISSION

SCALE: ¼"=1'-0 UNLESS NOTED OCTOBER 10, 1963

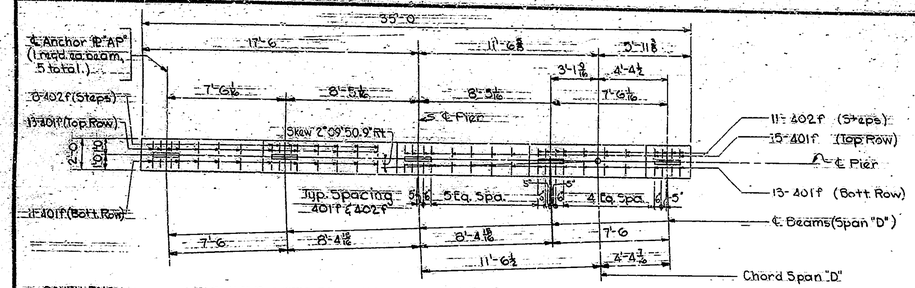
SUBMITTED FOR APPROVAL: James D. Mattie

DRAWING: 37 OF 21
PROJECT: I-III-65-3(46)117
BRIDGE CONTRACT NO. B-6333
BRIDGE FILE: I-65-119-2314

DESIGNED RBC 8-15-63 CK'D JSB 8-15-63
DRAWN RBC 9-18-63 CK'D JDM 9-23-63
TRACED _____ CK'D _____

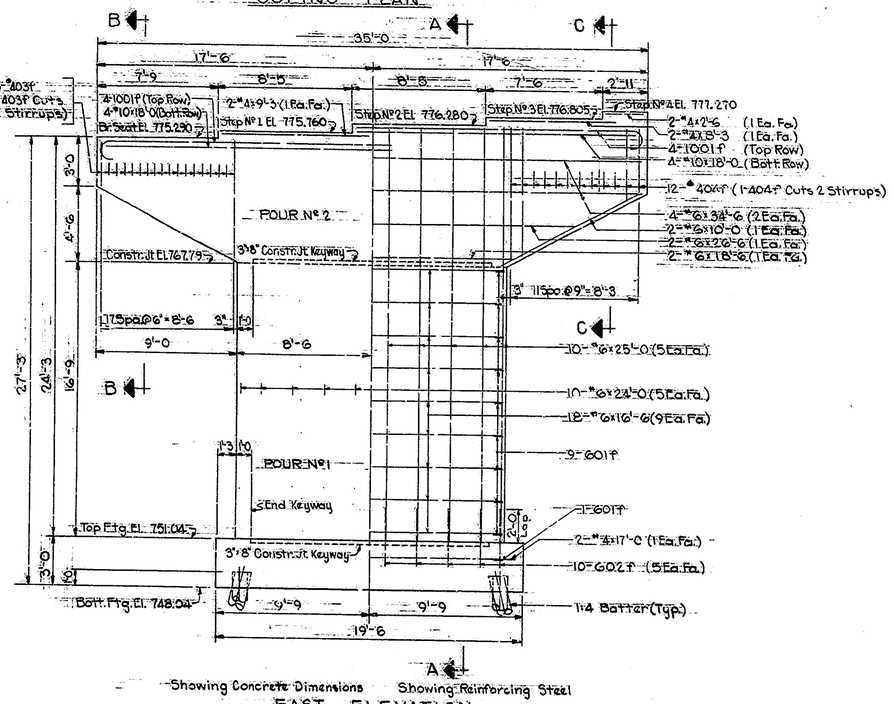
BRIDGES OVER 20' SPAN

FUR. NO'D REQ. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-74-3(44)117	1963	76	140



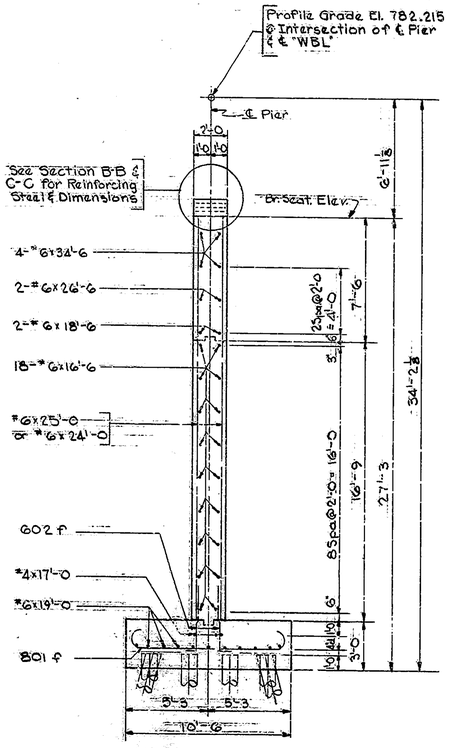
Showing Concrete Dimensions and Reinforcing Bars 401f and 402f

COPING PLAN



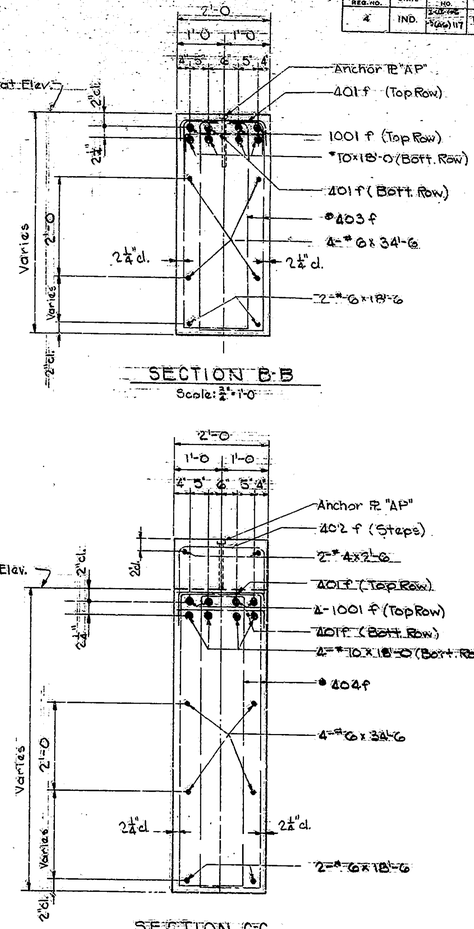
Showing Concrete Dimensions Showing Reinforcing Steel

EAST ELEVATION



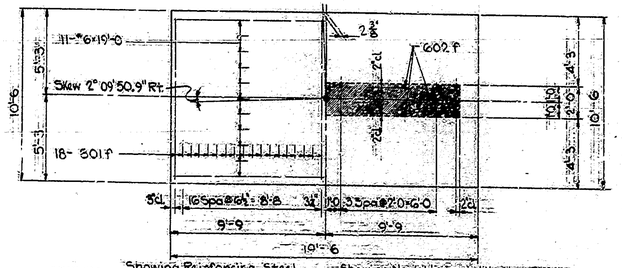
Max. Pile Bearing 21.9 Tons/Pile

SECTION A-A



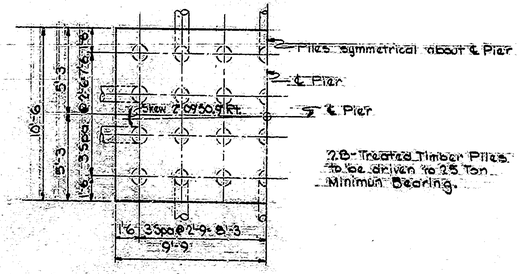
SECTION B-B
Scale: ½"=1'-0

SECTION C-C
Scale: ½"=1'-0



Showing Reinforcing Steel — Showing Neat Lines and Vertical Steel Extending into Footing.

FOOTING PLAN



28-Treated Timber Piles to be driven to 25 Ton Minimum Bearing.

HALF PILING PLAN

NOTES:

For Bill of Materials, see Drwg. 59.
For Reinforcing Bar Notes, see Bridge Std. G.
Anchor Plates. AP are to be preset in the concrete
Indicates that piles are to be battered 1:4 in the direction indicated.
•Indicates cutting and bending diagrams required, see Drwg. 59.

PIER No 2 DETAILS

INDIANA STATE HIGHWAY COMMISSION

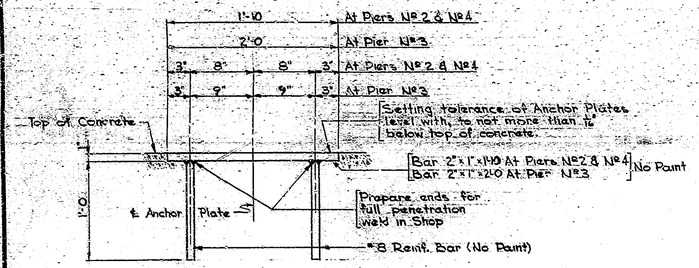
SCALE: ¼"=1'-0 UNLESS NOTED — OCTOBER 10, 1963

SUBMITTED FOR APPROVAL: James D Mattis

DRAWING 58 OF 21
PROJECT I-U.C.S-3(44)117
BRIDGE CONTRACT NO. 6333
BRIDGE FILE I-65-19-23.14

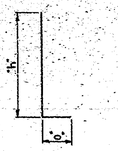
DESIGNED REC. 8-12-63 CK'D 155 8-16-63
DRAWN JBD 9-5-63 CK'D REC. 9-24-63
TRACED CK'D

BRIDGES OVER 20' SPAN					
PUB. ROAD DES. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-41-65-3(46)117	1963	77	140

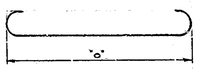


ANCHOR PLATE 'AP' DETAIL

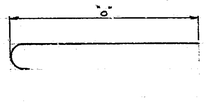
Not to Scale



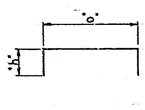
Mark	"h"	"o"	Length
701c	4'-3	10"	5'-1
702c	9'-9	10"	10'-7
602d	4'-8	8"	5'-4
602f	3'-8	8"	4'-4



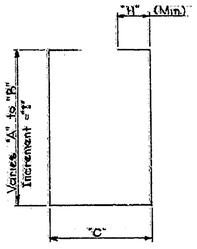
Mark	"o"	Length
901c	11'-6	14'-0
901d	12'-6	15'-0
801f	10'-0	12'-2



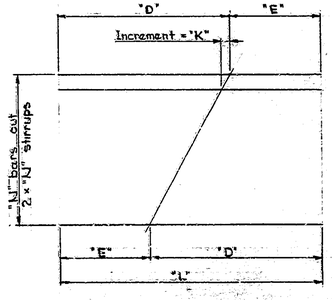
Mark	"o"	Length
1001c	18'-4	19'-9
1001d		
1001f		



Mark	"o"	"h"	Length
601c	1'-6	6"	2'-6
601d	1'-6½	6¼"	2'-7
601f			
401c	1'-9	6"	2'-9
401d			
401f			
402c	1'-9	1'-2	4'-1
402d			
402f			



BENDING DIAGRAM



CUTTING DIAGRAM

Mark	"A"	"B"	"C"	"H"	"I"	"K"	"N"	"D"	"E"	"L"
*501d	3'-0⅜	1'-1½	1'-3½	7"	3½	7"	15	16'-9	8'-7	25'-4
*502d	3'-11½	1'-1½	1'-3½	7"	5"	10"	11	18'-9	10'-5	29'-2
*403c	2'-10⅜	1'-1½	1'-3	6"	3"	6"	15	16'-6	8'-0	24'-6
*403f										
*404c	4'-0	1'-1½	1'-3	6"	4½	9"	12	18'-6	10'-3	28'-9
*404f										

NOTES:
For Reinforcing Bar Notes, see Sr. Std. C.
Anchor Plates "AP" are to be preset in the concrete.
*Indicates Cutting and Bending Diagrams are required. See diagrams on this Dwg.

BILL OF MATERIALS PIER Nº 2

REINFORCING STEEL			
Size & Mark	No. of Bars	Length	Weight
1001c	8	19'-9	
*10	8	18'-0	
	Total	*10	1300 Lb.
901c	34	14'-0	1618 Lb.
701c	36	5'-1	
702c	32	10'-7	
*7	10	20'-9	
*7	10	19'-9	
*7	16	11'-9	
	Total	*7	2278 Lb.
601c	16	2'-6	
*6	4	34'-6	
*6	2	26'-6	
*6	2	18'-6	
*6	13	17'-6	
*6	14	16'-6	
*6	4	10'-0	
	Total	*6	1151 Lb.
401c	52	2'-9	
402c	19	4'-1	
*403c	18	24'-6	
*404c	12	28'-9	
*4	2	17'-0	
*4	2	9'-3	
*4	2	8'-3	
*4	2	2'-6	
	Total	*4	722 Lb.
	Total Steel		7069 Lb.

CONCRETE	
Class "F" (Pour Nº 2)	18.6 cys.
Class "E"-Abv. Ftg. (Pour Nº 1)	15.7 cys.
Class "E"-In Ftg.	26.0 cys.

MISCELLANEOUS	
Anchor Plates "AP"	5 Each
24-Treated Timber Piles x 25'-0 (Approx.)	600 Lft.

BILL OF MATERIALS PIER Nº 3

REINFORCING STEEL			
Size & Mark	No. of Bars	Length	Weight
1001d	8	19'-9	
*10	8	18'-0	
	Total	*10	1300 Lb.
901d	34	15'-0	1734 Lb.
601d	20	2'-7	
602d	20	5'-4	
*6	4	34'-6	
*6	2	26'-6	
*6	10	25'-0	
*6	10	24'-0	
*6	2	19'-6	
*6	14	17'-6	
*6	18	16'-6	
*6	4	10'-0	
	Total	*6	2190 Lb.
*501d	15	25'-4	
*502d	11	29'-2	
	Total	*5	731 Lb.
401d	52	2'-9	
402d	19	4'-1	
*4	2	17'-0	
*4	2	9'-3	
*4	2	8'-3	
*4	2	2'-6	
	Total	*4	197 Lb.
	Total Steel		6152 Lb.

CONCRETE	
Class "F" (Pour Nº 2)	18.6 cys
Class "E"-Abv. Ftg. (Pour Nº 1)	21.1 cys
Class "E"-In Ftg.	34.7 cys

MISCELLANEOUS	
Anchor Plates "AP"	5 Each
30-Treated Timber Piles x 25'-0 (Approx.)	750 Lft.

BILL OF MATERIALS PIER Nº 4

REINFORCING STEEL			
Size & Mark	No. of Bars	Length	Weight
1001f	8	19'-9	
*10	8	18'-0	
	Total	*10	1300 Lb.
801f	36	12'-2	1169 Lb.
601f	20	2'-7	
602f	20	4'-4	
*6	4	34'-6	
*6	2	26'-6	
*6	10	25'-0	
*6	10	24'-0	
*6	11	19'-0	
*6	2	18'-6	
*6	18	16'-6	
*6	4	10'-0	
	Total	*6	2106 Lb.
401f	52	2'-9	
402f	19	4'-1	
*403f	18	24'-6	
*404f	12	28'-9	
*4	2	17'-0	
*4	2	9'-3	
*4	2	8'-3	
*4	2	2'-6	
	Total	*4	722 Lb.
	Total Steel		5297 Lb.

CONCRETE	
Class "F" (Pour Nº 2)	18.6 cys
Class "E"-Abv. Ftg. (Pour Nº 1)	21.1 cys
Class "E"-In Ftg.	22.8 cys

MISCELLANEOUS	
Anchor Plates "AP"	5 Each
28-Treated Timber Piles x 25'-0 (Approx.)	700 Lft.

DESIGNED ____ C'K'D ____
DRAWN R.E.C. 9-24-63 C'K'D J.S.S. 9-24-63
TRACED ____ C'K'D ____

PIERS Nº 2, Nº 3 & Nº 4
BILLS OF MATERIALS

INDIANA STATE HIGHWAY COMMISSION

SCALE:- NOT TO SCALE OCTOBER 10, 1963

SUBMITTED FOR APPROVAL: James D. Mattes

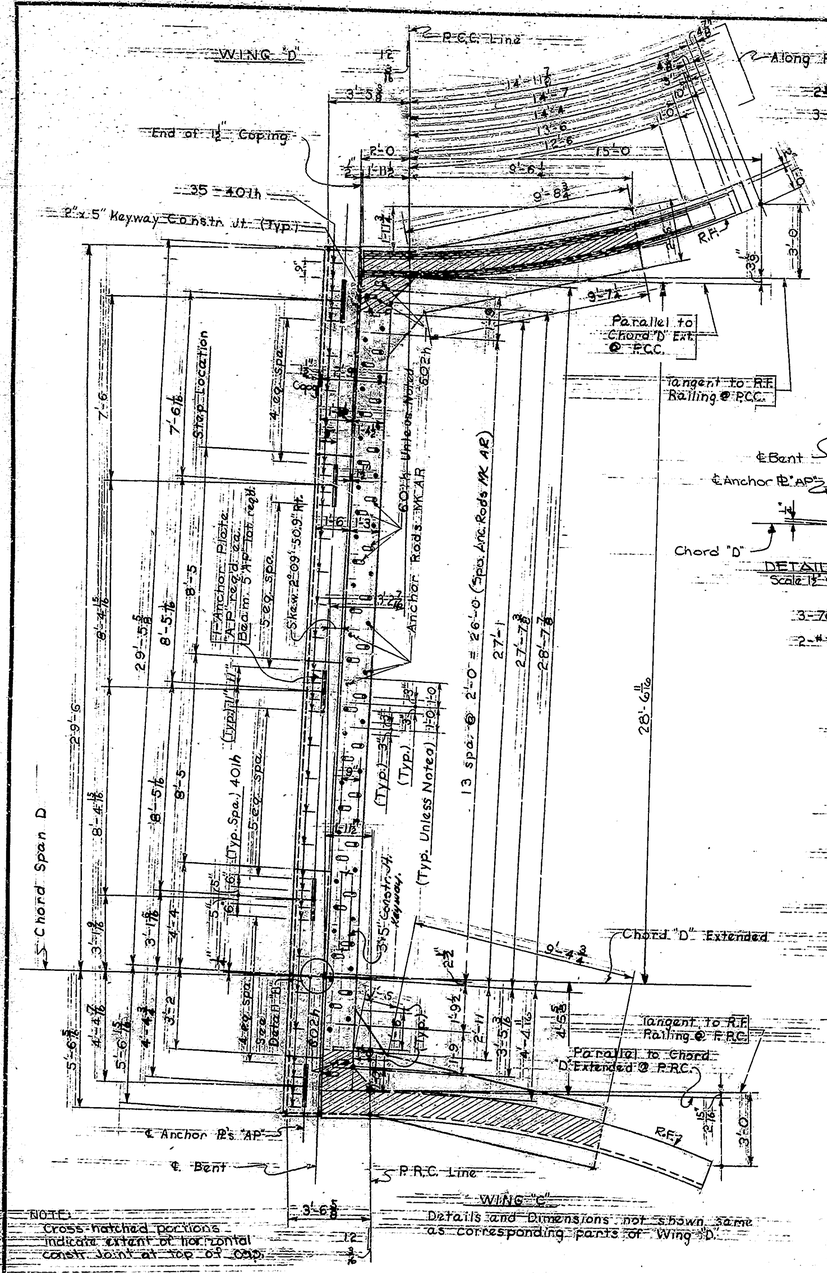
DRAWING:- 39 OF 21

PROJECT:- I-UI-65-3(46)117

BRIDGE CONTRACT NO. R-6333

BRIDGE FILE:- I-65-119-2314

BRIDGES OVER 20' SPAN					
PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-U.I-65-3(46)117	1963	78	140



NOTES:
Anchor Plates "AP" to be pre-set in concrete.
For Reinforcing Bar Notes see Br. Std. "C."
For Additional Details & Location of Sec. A-A see Dwg. S11.
For Bill of Materials see Dwg. S11.
Bent Cap is not to be poured until Pier Fill has been completed up to approximate elevation of the bottom of Cap.

DESIGNED: I.S.H.C. 8-63 CKD: W.B.S. 9-13-63
DRAWN: I.S.H.C. 9-23-63 CKD: J.S.D. 10-1-63
TRACED: CKD:

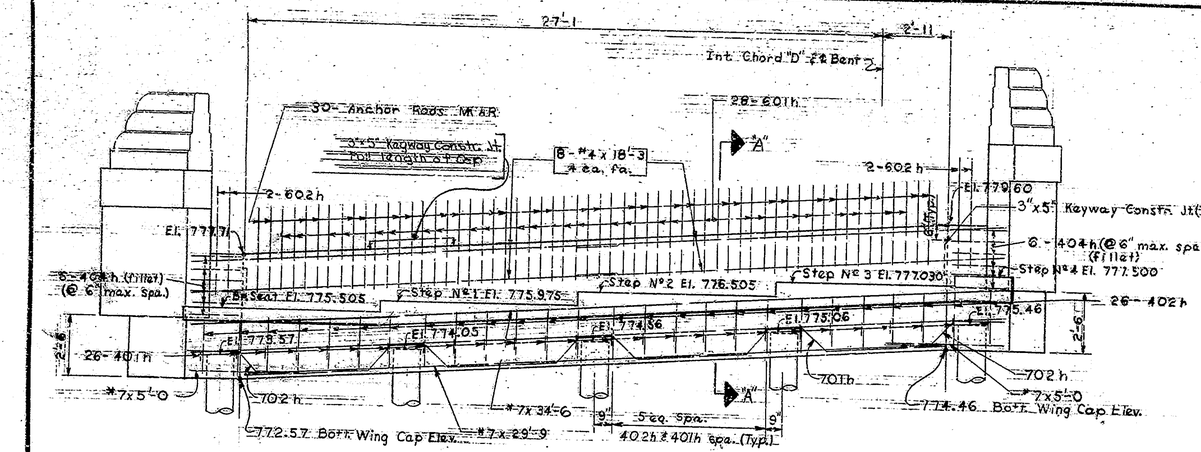
BENT Nº 5 DETAILS

INDIANA STATE HIGHWAY COMMISSION

SCALE: As Noted — OCTOBER 10 1963

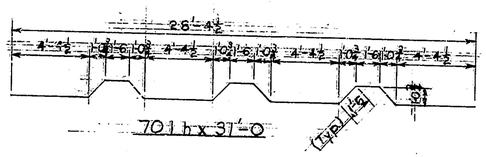
SUBMITTED FOR APPROVAL: James D. Martin

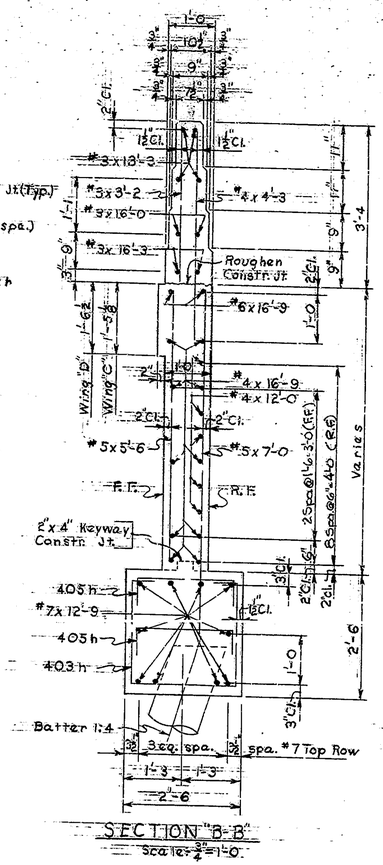
DRAWING S10 OF 21
PROJECT: I-U.I-65-3(46)117
BRIDGE CONTRACT NO. R-6333
BRIDGE FILE: I-65-119-2314



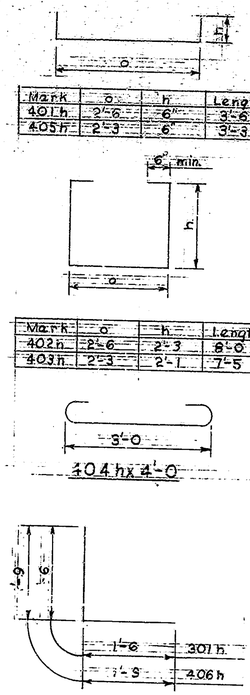
EAST ELEVATION - BENT No 5







SECTION "B-B"
Scale: ¾"=1'-0



Mark	o	h	Length
401h	2'-6	6"	3'-6
405h	2'-3	6"	3'-3

Mark	o	h	Length
402h	2'-6	2'-3	8'-0
403h	2'-3	2'-1	7'-5

BRIDGES OVER 20' SPAN

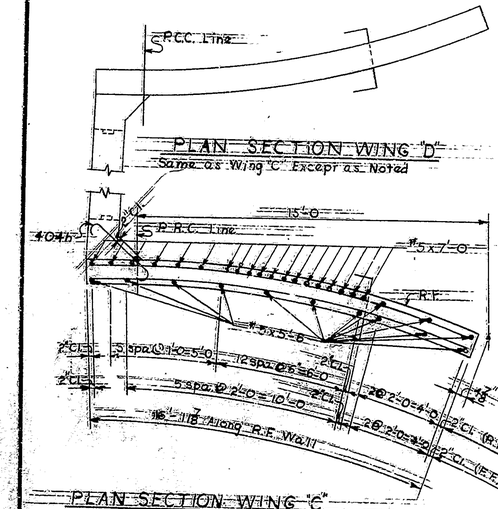
PUB. ROAD REQ. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-LUD-65 (4) 117	1963	79	140

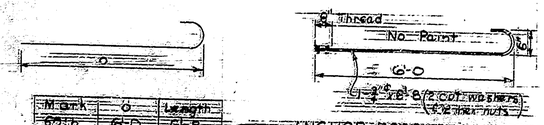
BILL OF MATERIALS

REINFORCING STEEL			
Size & Mark	No. of Bars	Length	Weight
701h	3	31'-0	
702h	6	5'-11	
*7	1	34'-6	
*7	2	29'-9	
*7	10	12'-9	
*7	6	6'-0	
*7	4	5'-0	
	Total	*7	4514#
601h	28	6'-5	
602h	4	7'-7	
*6	4	16'-9	
	Total	*6	327#
*5	38	7'-0	
*5	26	5'-6	
	Total	*5	427#
401h	61	3'-6	
402h	26	8'-0	
403h	16	7'-5	
404h	12	4'-0	
405h	32	3'-3	
406h	12	3'-6	
*4	6	18'-3	
*4	20	16'-3	
*4	10	12'-9	
*4	4	6'-0	
*4	28	4'-3	
*4	2	3'-9	
	Total	*4	969#
301h	2	3'-0	
3	4	16'-3	
3	4	16'-0	
3	6	13'-3	
3	4	4'-9	
3	28	3'-2	
3	2	2'-6	
	Total	*3	1336
	Total	Steel	3470#

CONCRETE	
Class "F"	
Pour No 1	18.4 Cys.
Pour No 2	4.0 Cys.
Pour No 3	4.0 Cys.
Total Class "F" (Except Railing Concrete)	26.4 Cys.
Railing Concrete (Rt. & Lt. Alike) 2@ 1.55 cys.	3.1 Cys.

MISCELLANEOUS	
1-14" ϕ Steel Encasing	
Conc. Piles (Typ.) @ 40'-0 Approx.	220 Lft.
2" ϕ Steel Conduit (Piling Conn.)	20 Lft.
1¼" ϕ Anchor Rods M.A.R. (@ 10.5# per ft. approx.)	30 ea.
Anchor Plates - AP	5 ea.





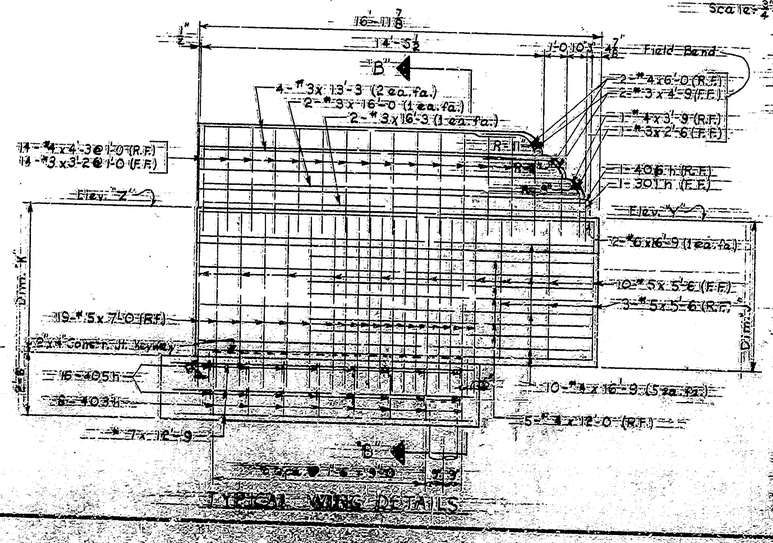


TABLE OF ELEVATIONS		
Wing	Elev. "Y"	Elev. "Z"
C	782.66	782.87
D	780.72	780.96

WINGWALL HEIGHTS		
Wing	Dim. "X"	Dim. "Y"
C	5'-7"	5'-10"
D	3'-7"	3'-10"

POUR DESIGNATION

Pour No 1 - Main Cap, Wing Caps and Mudwall between vertical Constr. Joints.
Pour No 2 - Wingwall "C" and Mudwall outside vertical Constr. Joint.
Pour No 3 - Wingwall "D" and Mudwall outside vertical Constr. Joint.

NOTES:

For Reinforcing Bar Notes, see Br. Std "C".
For Additional Details, see Drwg. S10.

BENT No 5 DETAILS & BILL OF MATERIALS

INDIANA STATE HIGHWAY COMMISSION

SCALE: ¾"=1'-0 Unless Noted — OCTOBER 10, 1963

SUBMITTED FOR APPROVAL: James D Martin

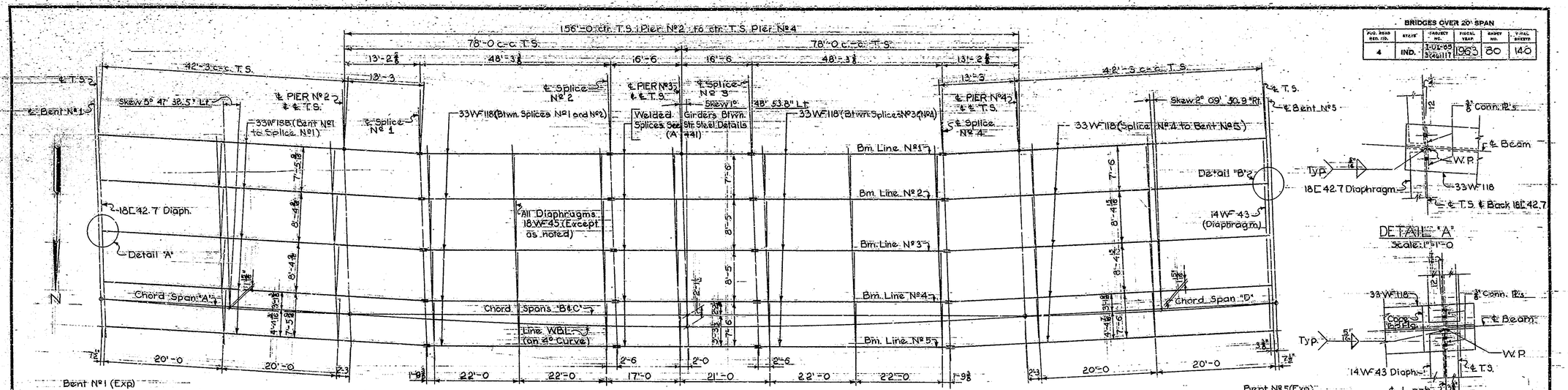
DRAWING S11 OF 21

PROJECT I-LUD-65-3(4)117

BRIDGE CONTRACT NO. R-6333

BRIDGE FILE TAGS 119-2314

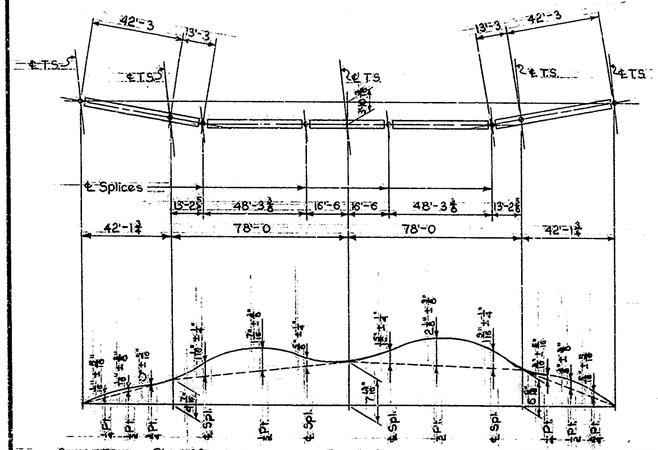
DESIGNED BLS 9-63 CKD DWM 9-63
DRAWN BLS 9-26-63 CKD JSS 10-3-63
TRACED CKD



FRAMING PLAN
Not to Scale

BRIDGES OVER 20' SPAN

FED. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-UI-65 Sec.11	1983	80	140



NO LOAD CAMBER & REAMING DIAGRAM
Not to Scale

DATA USED FOR DESIGN AND DETAILS

LIVE LOADS: H-20-S16-44 loading with impact and distribution of loads in accordance with 1961 AASHO Specifications.

DEAD LOADS: Actual weight plus 35 pounds per sq. ft. of roadway to provide for future wearing surface.

SLAB: Designed for H-20 truck loading, single live load plus impact in accordance with 1961 AASHO Specifications. Allows for ½" monolithic wearing surface.

UNIT STRESSES:

Structural Steel Bending (Tension) AST M-A-36	20,000 psi.
Structural Steel Bending (Tension) AST M-A-441	
Thickness Over ¾" to 1½" incl.	24,000 psi.
Thickness Over 1½" to 4" incl.	22,000 psi.
Shear on Rivets	13,500 psi.
Butt Welds (Tension, Thickness Over ¾" to 1½" incl.)	24,000 psi.
Shear in Fillet Welds	
For Base Metal A-36	12,900 psi.
For Base Metal A-441 (Over ¾" to 1½" incl.)	16,200 psi.
For Base Metal A-441 (Over 1½" to 4" incl.)	15,200 psi.
Structural Steel Bearing (Not Incl. Rivets)	29,500 psi.
Str. Steel Brg. on Power Driven Rivets & Torqued H.S. Bolts	40,000 psi.
Brg. Steel on Conc. (Incl. Overturning eccentric loading)	1,000 psi.
Reinforcing Steel (Tension)	20,000 psi.
Concrete (Compression)	1,200 psi.

FABRICATION NOTES

1. Rivets ¾" ø unless noted.
2. Open Holes ¾" ø unless noted.
3. No Paint on Anchor Plates "AP".
4. 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: Two Coats of Aluminum.
5. Beams must be cambered to a smooth curve. Camber must be checked while supported in such a way as to have no bending moment in the direction of Camber.
6. Holes for Beam Splices shall be Subpunched or Subdrilled and Reamed to size while assembled. See Article E1103.18(d) of the Specifications.
7. 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 NO LOAD CAMBER & REAMING DIAGRAM. If the beams are shop reamed or drilled, full size drift pins shall be used in erection. A minimum of one line of beams shall be shop assembled with the webs vertical and inspected for fit.
8. The shop details shall show a plan of match marking for all reamed pieces.
9. All splice plates to be removed, cleaned and painted after reaming. Splice plates shall not extend beyond the end of the beam after bolting for Shipment.
10. Flange splice bars shall have planed or rolled edges and holes in bars shall be subdrilled and reamed or drilled full size while assembled.
11. All structural steel shall be erected and beams adjusted to their true elevation before driving rivets in beam field splices. The elevations shall be checked with splices connected by full size drift pins and erection bolts and with beam unsupported by any falsework. See "Table of Splice Elevations", Drwg. S 13.
12. Holes in all material connecting Top Shoes to beam flanges to be 1" diameter. Bolts connecting beam flange to Top Shoe shall extend into Top Shoe a minimum of one (1) inch.
13. 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 five (5) copies of these to the Engineer. See Article E1103.2 of the Specifications.
14. All welding shall conform to the provisions of Article E1103.28 of the Specifications and Special Provisions, unless otherwise noted.
15. As soon as the Engineer has approved the field welds, all welds and any surface from which the shop coat has been omitted or become 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.
16. Welded stud shear connectors may be used in lieu of channel shear connectors. If welded stud shear connectors are used, the Contractor shall prepare design computations and structural steel details and submit five (5) copies of these to the Engineer.
17. Temporary stiffeners to be used for jigs and/or warpage control shall not be tack welded to the flange material. Tacking to the web may be done if the tack welds are at least one sixth (⅙) of the web depth away from the flange. The tack weld shall be removed by grinding flush to the parent metal.
18. When the beam sections are fit up in the shop for reaming or drilling of field splices, the the centerlines of opposing flanges shall not deviate more than one eighth (⅛) inch when the webs are in alignment.
19. All Structural Steel to be Structural Carbon Steel A.S.T.M. A-36 unless otherwise noted.
20. Weight of Structural Steel (estimated) 211,900#. (Includes 4,300# for steel toothed expansion joint.)

TABLE OF MAXIMUM MOMENTS

	Pos. Mom. @ 0.4 Pt. Span 'A' ft.-kips			Pos. Mom. @ 0.5 Pt. Span 'B' ft.-kips			Neg. Mom. @ R_2 ft.-kips		Neg. Mom. @ R_3 ft.-kips					
	L.O.S.Bm.	Int. Bm.	Rt. O.S.Bm.	L.O.S.Bm.	Int. Bm.	Rt. O.S.Bm.	L.O.S.Bm.	Int. Bm.	Rt. O.S.Bm.	L.O.S.Bm.	Int. Bm.	Rt. O.S.Bm.	L.O.S.Bm.	Int. Bm.	Rt. O.S.Bm.
D.L. on Steel Section	74.6	50.2	39.8	276.0	253.5	275.0	433.5	377.4	388.4	892.7	800.0	884.9	14.20	10.90	10.07
D.L. on Composite Section	23.5	23.5	23.5	99.5	99.5	99.5	103.9	103.9	103.9	139.7	139.7	139.7	3.75	3.75	3.75
L.L. on Composite Section	245.4	294.3	245.4	501.5	600.5	501.5	274.3	329.7	274.3	395.5	457.3	395.5	334.7	400.93	334.7
Imp. on Composite Section	73.6	87.9	73.6	123.5	148.0	123.5	74.0	87.8	74.0	90.0	107.8	90.0	10.10	12.11	10.10
Total	417.1	455.9	382.3	1000.2	1101.5	999.2	885.7	898.8	840.6	1517.9	1504.8	1510.1	362.75	427.69	358.59

TABLE OF REACTIONS

	Reaction @ R_1 kips			Reaction @ R_2 kips			Reaction @ R_3 kips			Reaction @ R_4 kips		
	L.O.S.Bm.	Int. Bm.	Rt. O.S.Bm.	L.O.S.Bm.	Int. Bm.	Rt. O.S.Bm.	L.O.S.Bm.	Int. Bm.	Rt. O.S.Bm.	L.O.S.Bm.	Int. Bm.	Rt. O.S.Bm.
D.L. on Steel Section	14.20	10.90	10.07	74.64	63.98	64.62	88.58	81.84	82.25	6.28	5.75	6.26
D.L. on Composite Section	3.75	3.75	3.75	19.98	19.82	19.82	23.25	24.36	24.36	.74	1.83	.68
L.L. on Composite Section	334.7	400.93	334.7	559.3	655.4	559.3	465.5	528.4	465.5	52.14	70.08	52.14
Imp. on Composite Section	10.10	12.11	10.10	124.90	147.09	124.90	103.60	118.06	103.60	12.96	17.52	12.96
Total	362.75	427.69	358.59	1,178.82	1,386.29	1,168.64	680.93	752.70	675.71	72.12	95.18	72.04

TABLE OF STRESSES

	Stresses @ 0.5 Pt. Span 'B' (on Steel Fiber) - Ksi		
	L.O.S.Bm.	Int. Bm.	Rt. O.S.Bm.
D.L. on Steel Section	6.28	5.75	6.26
D.L. on Composite Section	.74	1.83	.68
L.L. on Composite Section	8.53	10.08	8.49
Imp. on Composite Section	2.10	2.57	2.09
Total	18.65	20.23	17.52

DESIGNED 55 7-12-83 — H 8-7-83
DRAWN JK 8-7-83 — CK'D 8-21-83
TRACED — CK'D

FRAMING PLAN

INDIANA STATE HIGHWAY COMMISSION

SCALE: As Noted — OCTOBER 10, 1983

SUBMITTED FOR APPROVAL: James D. Mattis

DRAWING 512 OF 2.1

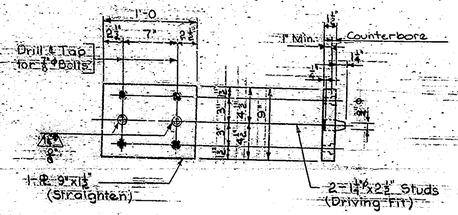
PROJECT: I-UI-65-3(24) 117

BRIDGE CONTRACT NO. R-6333

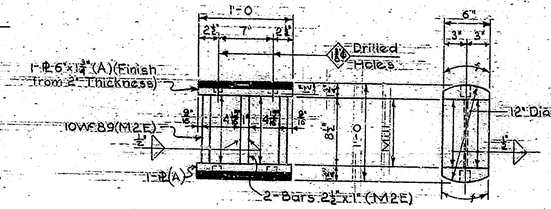
BRIDGE FILE: I-65-119-2.314

HARRISBURG ENG. NO. 186

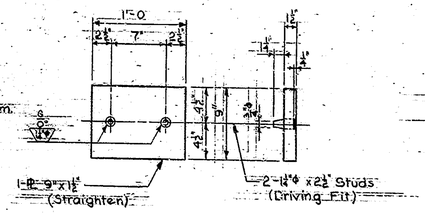
BRIDGES OVER 20' SPAN					
PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-065 3(46)117	1963	81	140



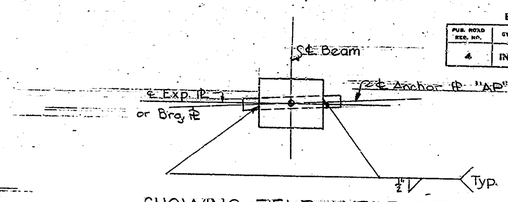
TOP SHOE @ BENTS Nº 1 & 5



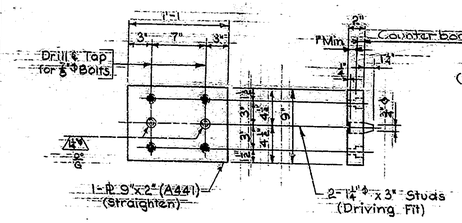
EXPANSION SHOE @ BENTS Nº 1 & 5



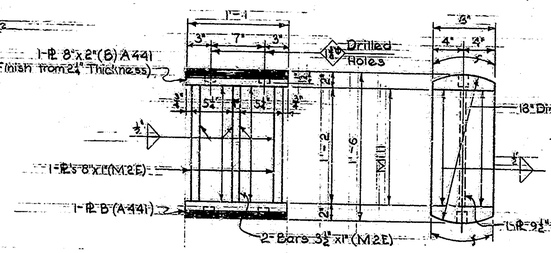
EXPANSION PLATE @ BENTS Nº 1 & 5



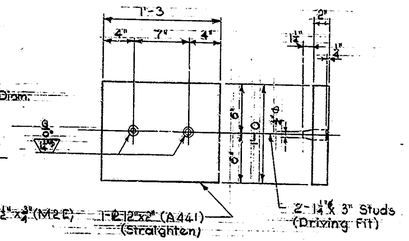
SHOWING FIELD WELD BTWN. SHOE & ANCHOR PLATE "AP"



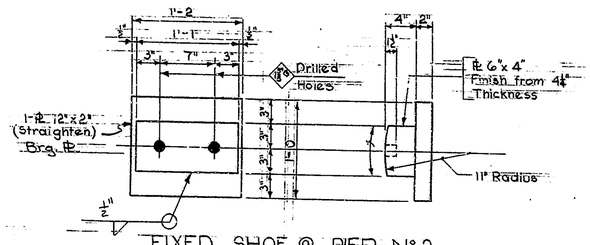
TOP SHOE @ PIERS Nº 2 & Nº 4



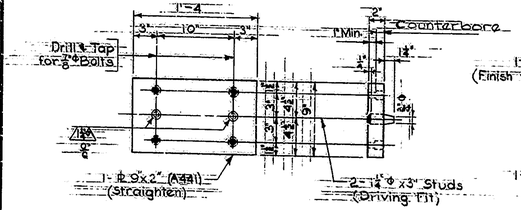
EXPANSION SHOE @ PIER Nº 4



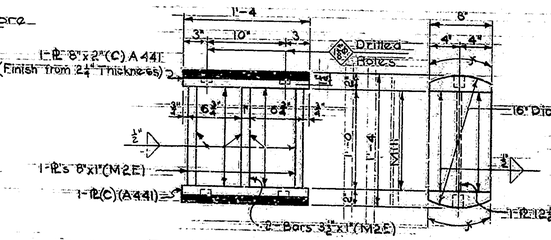
EXPANSION PLATE @ PIER Nº 4



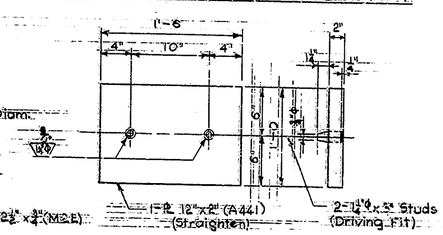
FIXED SHOE @ PIER Nº 2



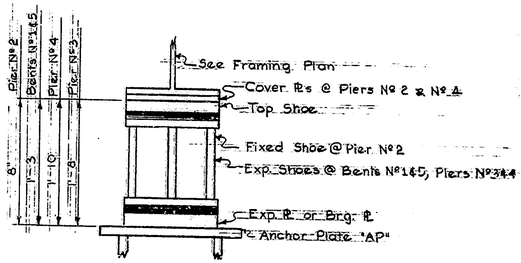
TOP SHOE @ PIER Nº 3



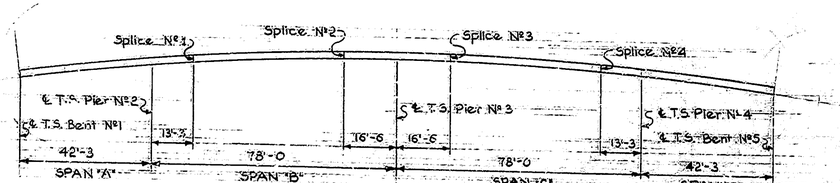
EXPANSION SHOE @ PIER Nº 3



EXPANSION PLATE @ PIER Nº 3



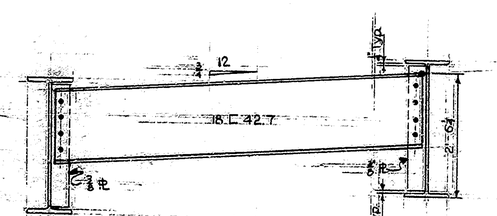
SHOE ASSEMBLY
Not to Scale



LOCATION OF SPLICES
Not to Scale

TABLE OF SPLICE ELEVATIONS					
Beam Line Nº	1	2	3	4	5
Splice Nº1	779.350	779.620	780.345	780.635	781.340
Splice Nº2	779.665	780.130	780.655	781.180	781.845
Splice Nº3	779.845	780.315	780.805	781.350	781.825
Splice Nº4	780.005	780.470	780.990	781.515	781.980

NOTE: Top of splice elevation is the required elevation of Top of the top flange of the 93 W 18 at the ℄ of the splice.



TYPICAL DIAPHRAGM DETAIL @ BENT Nº 1
Scale: ¾"=1'-0

TYPICAL INTERIOR DIAPHRAGM DETAIL
Scale: ¾"=1'-0

NOTES:
Rivets ⅞"ϕ.
Open holes 15/16"ϕ Unless noted.
For Fabrication Notes, See Drwg. S.12.
For Screeds, Concrete D.L. Deflection & Shoe setting data, see Drwg. S.22.
For Diaphragm Detail @ Bent Nº 5 see Drwg. S.16
All Structural Steel to be ASTM-A36 unless noted.

STRUCTURAL STEEL DETAILS
INDIANA STATE HIGHWAY COMMISSION

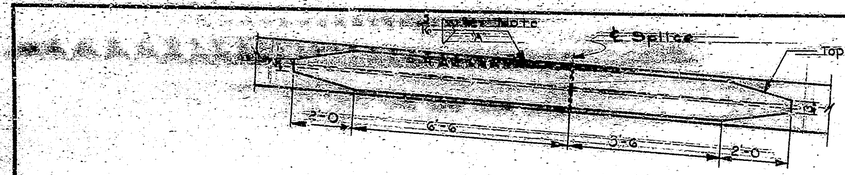
SCALE: ½"=1'-0, Unless noted. OCTOBER 10, 1963.
SUBMITTED FOR APPROVAL: James D. Mattis
DRAWING: S.13 OF 21
PROJECT: I-01-65-3(46)117
BRIDGE CONTRACT NO. A-6335
BRIDGE FILE: I-65-119-2314

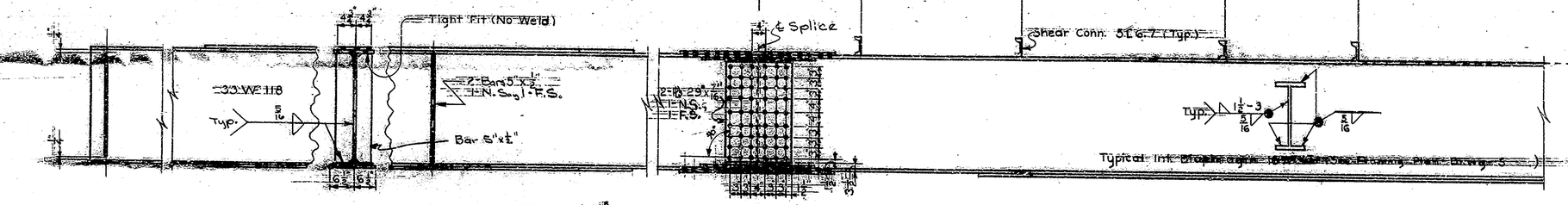
DESIGNED: JSS 7-23-63 CKD. WHS 7-24-63
DRAWN: JK 8-9-63 CKD. JSS 9-3-63
TRACED: CKD.

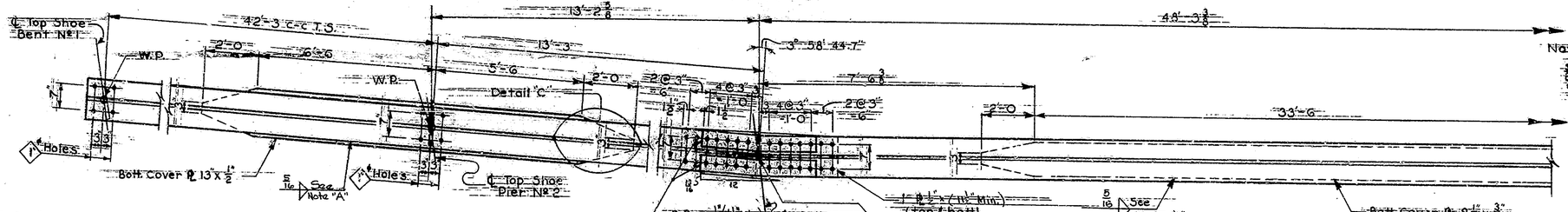
MANZEL BROS. ENG. NO. 160

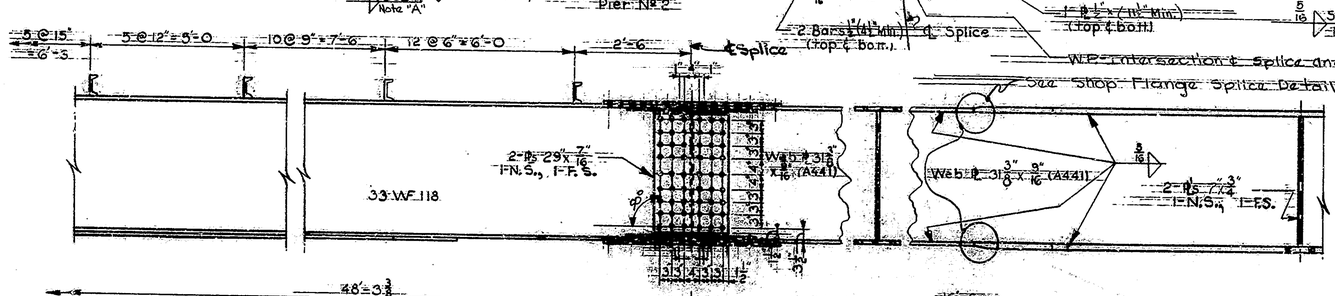
BRIDGES OVER 20' SPAN

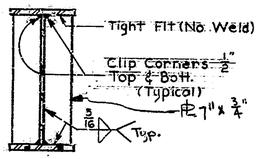
PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-[illegible] (66) 117	1963	82	140

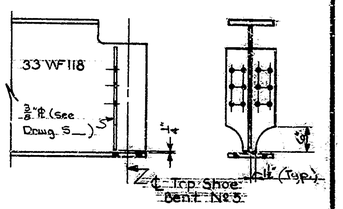


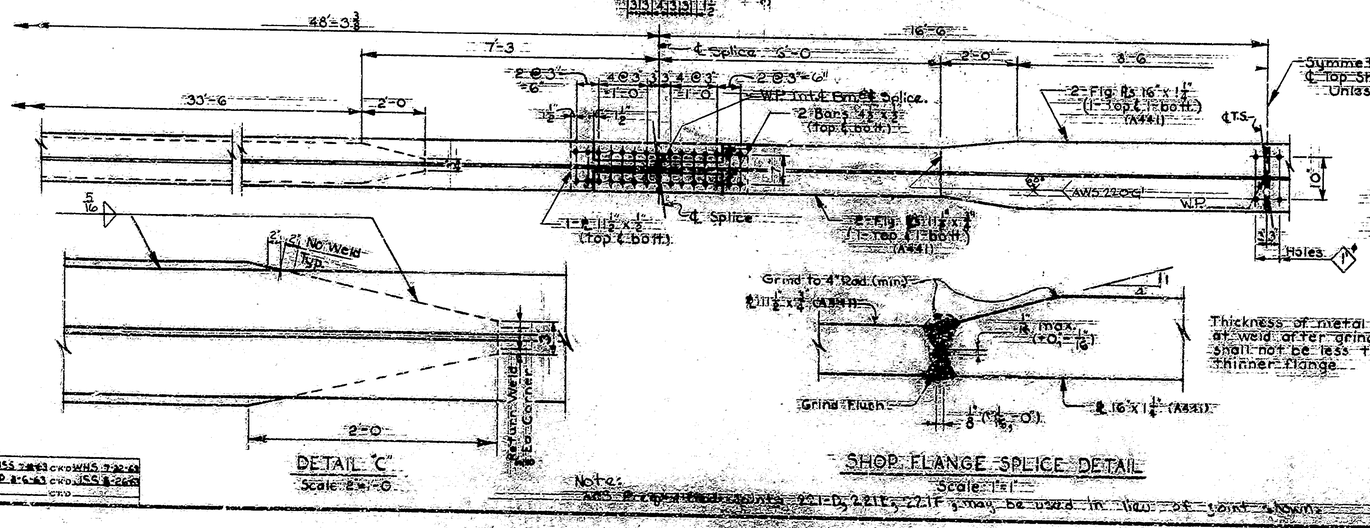


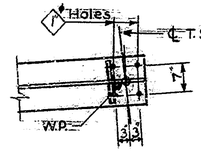












Notes:
For Fabrication Notes See Drwg. S10.
All steel to be AST.M-A36 except as noted
Rivets are ⅞" ø. Open holes are 15/16" unless noted.

DESIGNED JSS 7-22-63 CK'D WHS 7-22-63
DRAWN CRP 8-6-63 CK'D JSS 8-26-63
TRACED CK'D

STRUCTURAL STEEL DETAILS

INDIANA STATE HIGHWAY COMMISSION

SCALE: ¾"=1'-0 Except as noted OCTOBER 10, 1963

SUBMITTED FOR APPROVAL: James D. Mathis

DRAWING S12 OF 21

PROJECT I-UI-65-3(66)117

BRIDGE CONTRACT NO. R-0355

BRIDGE FILE I-65-119-2314

BRIDGES OVER 20' SPAN					
PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-065-3(80)117	1963	85	140

PLAN

SECTION A-A

SECTION B-B

NOTE:- The ℄ of the Toothed Plate and the direction of expansion is parallel to the chord between ℄ Pier N°2 and the ℄ Bent N°5 @ their intersection with Line WBE

NOTES:-
Rivets ¾" ϕ, Unless noted.
Open holes 13/16" ϕ, unless noted.
All dimensions to cuts are given to ℄ cut. See Specifications Art. E.1103.13 regarding burning of toothed plates.
If curves in plates are flame cut they shall be ground smooth.
The toothed plates shall be match marked to maintain the same relative position before and after cutting.
The expansion joint shall be assembled in the shop in its relative position and inspected for fit.
For toothed expansion joint setting see TABLE II Drwg S20.
For Fabrication Notes see Drwg S12.
For additional details see Drwg S16.
Estimated weight of Structural Steel in toothed expansion joint = 4,800 lbs.

TOOTHED EXPANSION JOINT DETAILS
INDIANA STATE HIGHWAY COMMISSION

SCALE- 1½ = 1'-0

OCTOBER 10, 1963

SUBMITTED FOR APPROVAL- James D. Mathias

DRAWING- S 15 of 21

PROJECT- I-UT-65-3(80)117

BRIDGE CONTRACT NO.- R-6333

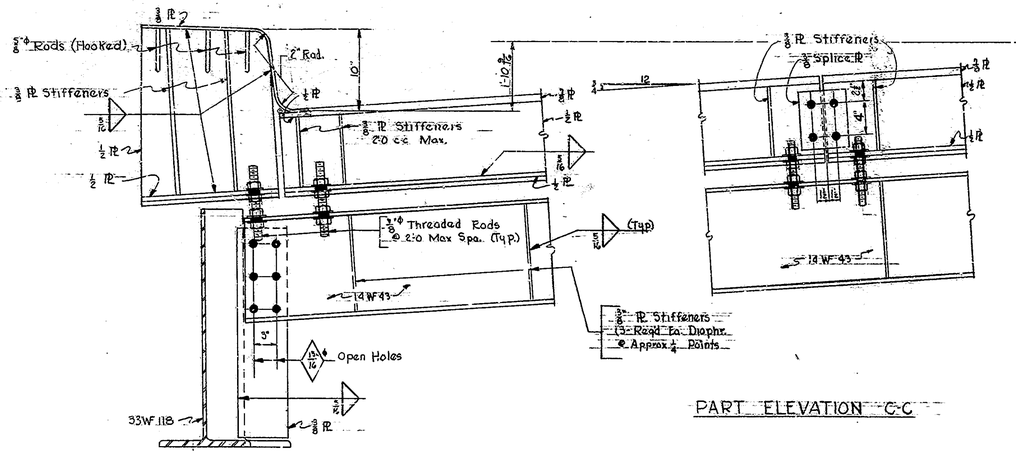
BRIDGE FILE- I-65-119-2514

DESIGNED- CKD.
DRAWN- WRS-RM-GS-CWG-LSS-9-1963
TRACED- CKD.

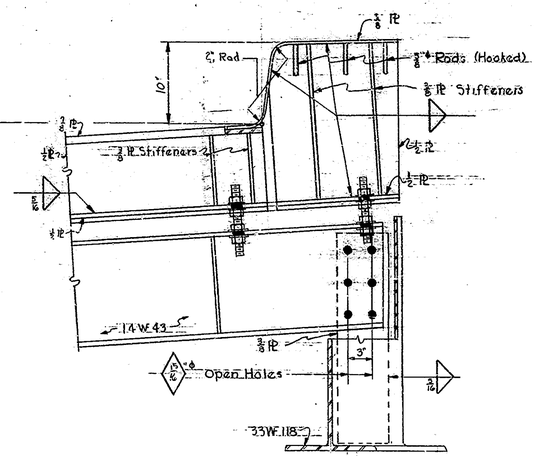
HARRISON ENG. CO. 168

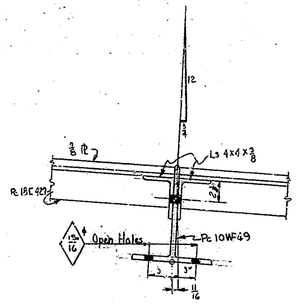
BRIDGES OVER 20' SPAN

FUR. ROAD RTE. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-UI-65 3(46) 117	1963	84	140

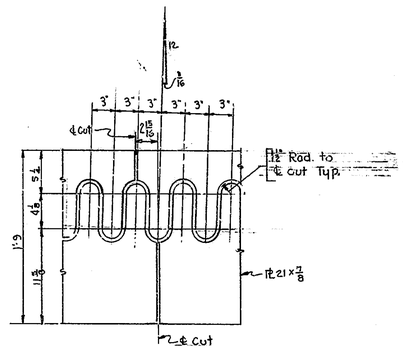


PART ELEVATION C-C

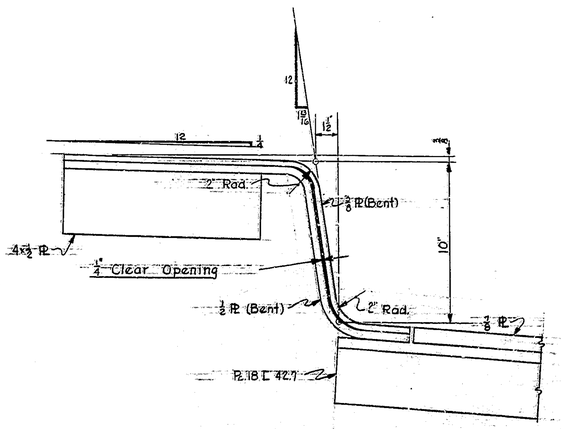




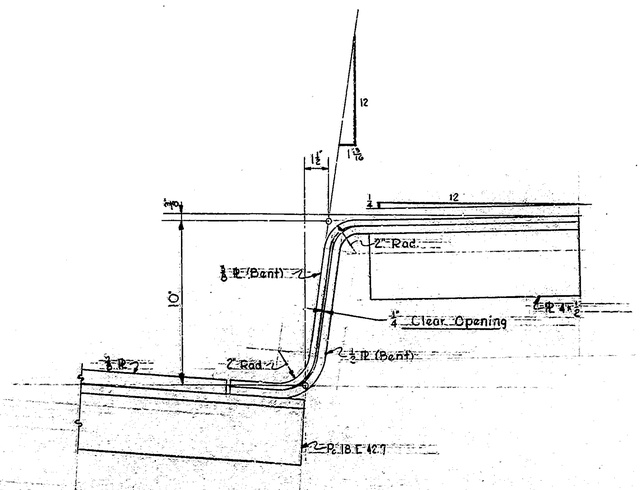
SECTION F-F



TYPICAL TOOTH DETAIL



ELEVATION D-D
Scale 1" = 1'-0



ELEVATION E-E
Scale 1" = 1'-0

NOTES:-
Rivets ¾" ℄ unless noted.
Open Holes ⅞" ℄ unless noted.
For Additional Details & Notes see Drwg 515.

TOOTHED EXPANSION JOINT DETAILS

INDIANA STATE HIGHWAY COMMISSION

SCALE:- 1" = 1'-0" UNLESS NOTED. OCTOBER 10, 1963

SUBMITTED FOR APPROVAL:- James D. Martin

DRAWING:- 516 OF 2 L

PROJECT:- I-UI-65-3(46)117

BRIDGE CONTRACT NO. R-6333

BRIDGE FILE:- I-65-119-2314

DESIGNED _____ CK'D _____
DRAWN WHS 8-23-63 CK'D JJS 9-16-63
TRACED _____ CK'D _____

BRIDGES OVER 20' SPAN					
PUB. ROAD RTE. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-U2-65 346117	1963	85	116

242'-6⅛" O-O Railing ℄ Parapet Wall (Along R.F. Parapet Wall)

42'-3 c-c T.S.

(Along Chord B-C) 156'-0 ℄ T.S. Pier №2 to ℄ T.S. Pier №4

77'-11⅝"

78'-0⅜"

42'-3 c-c T.S.

Joint "H" (1")

SPAN A

SPAN B

SPAN C

SPAN D

℄ Top Shoes ℄ ℄ Pier №2

℄ Top Shoes ℄ ℄ Pier №3

℄ Top Shoes ℄ ℄ Pier №4

POUR №1R

POUR №3L

POUR №4L

POUR №2L

Pvm't Leads ℄

Tooled Liner

Keyway Const. Jt.

163 - 402a 1'-6 max. Spa.

℄ Top Shoe

℄ Bent №1

POUR №1

POUR №3

POUR №2

POUR №4

2"x2'-0 Depressed Keyway (Typ.)

℄ Slab Seat

Joint "R"

28'-0

End of Slab

1" Exp. Jt.

Skew 5°47' 38.5" Lt.

Keyway Const. Jt.

Chord Span A

POUR №1L

POUR №3R

Joint "H" (1")

Gutter Line

Curb Line

Line W.B.L. (on 4° Curve)

℄ Post

15'-3¼

2'-0

26 Lines #5 x 36'-0
7 bars ea. line
(6 lines ea. walk
14 lines top slab)
See Typ. Sect for location.

15 - #5 x 4'-0 Req'd Ea. Transv. Keyway Const. Jt.
45 - #5 x 4'-0 Tot. Req'd See Typ. Sect. for location

30 Lines #5 x 28'-6
9 bars ea. line
Bot. Slab - See Typ. Sect. for loc.

830 - #6 x 35'-0
415 top ; 415 bott.

28'-6

242'-2 o.-o. Floor Slab Along W.B.L.

Skew 1°48' 53.8" Lt.

410 Spa. @ 7" = 239'-2 (spa. along W.B.L.) #6 x 35'-0 top & bott.

Keyway Const. Jt.

Chord Spans "B" & "C"

Keyway Const. Jt.

Chord Span D

Keyway Const. Jt.

POUR №4R

POUR №2R

R.F. Parapet Wall

℄ Post

2'-0

15'-3¼

2 cl.

2 cl. 27 Spa. @ 1'-0 max. (Typ. Spa. 401a ea. 26'-6 wall sect.

2 cl. 15 Spa. @ 1'-0 max. Spa. 401a ea. (5'-3" wall sect.

2'-0¼

Along R.F. Parapet Wall (Lt. Side Same)

24 - #3 x 13'-0 Tot. req'd in para. wall 6 ea. 15'-3" sect. (3 ea. face) See Typ. Sect. for location

96 - #3 x 26'-3 Tot. req'd in para wall 6 ea. 26'-6 sect. 16 ea. face See Typ. Sect. for location

312 - 401a Tot. req'd in para. wall 28 ea. 26'-6 section 16 ea. 15'-3¼ section

For Contr. Jt. Details See Br. Std. RI-A or RI-B

2 Spa. @ 8'-10 = 238'-6 (Railing Posts Spa.)

9 Spa. @ 26'-6 = 212'-0 (Contraction Jt. Spa. in Parapet Wall)

242'-6⅛" O-O Railing ℄ Parapet Wall (Alum. Railing Type 3 or Steel Railing Type "B")

Skew 2°09'50.9" Rt.

4 - #4 x 32'-9 (See Sect. C-C for location)

See 21 x 2'-0 Depressed Keyways

10'-0

℄ Bent №5

Back of ½" Exp. Jt. End of Slab

℄ Top Shoe

24'-0

30'-0 clear roadway

35'-4" c. to c. tops

10'-0

34 - 403a (1'-0 max. spa.)

Toothed Exp. Jt.

2'-0

2'-0

18'-6

#5 x 36'-0

#6 x 35'-0

#5 x 28'-6

Bend Bottom #6 bars in field over Beam Splice to give bars 1" cover from bottom of slab between beams

FIELD BEND REQUIRED ON #6 BARS OVER BEAM SPLICE

PLAN.
Scale: ¼" = 1'-0

2'-0 2'-0

#5 x 4'-0.

Keyway Const. Jt.

SECTION "B-B"
Scale: ½" = 1'-0

Notes:
For Reinforcing Bar Notes, See Br. Std "C1".
For additional details and Bill of Materials, see Drwg. S16.
For Corner Details, see Drwg. S19.
For Joint Legend, see Drwg. S2.
Sequence of Pours to be made in order of Pour Nos. Transverse construction Joints are optional and pours may be made continuous provided pour terminates at a construction joint indicated on the Plans.
The Contractor should especially note that Pours №1 & №2 are at opposite ends of the bridge and must be poured before Pours №3 & №4.
For Railing and Post Details, see Br. Std. RI-A or RI-B.
Anchor Bolts for Railing Posts to be preset in the concrete

FLOOR DETAILS

INDIANA STATE HIGHWAY COMMISSION

SCALE: As Noted. OCTOBER 10, 1963

SUBMITTED FOR APPROVAL: James D. Mattis

DRAWING: S17 OF 21

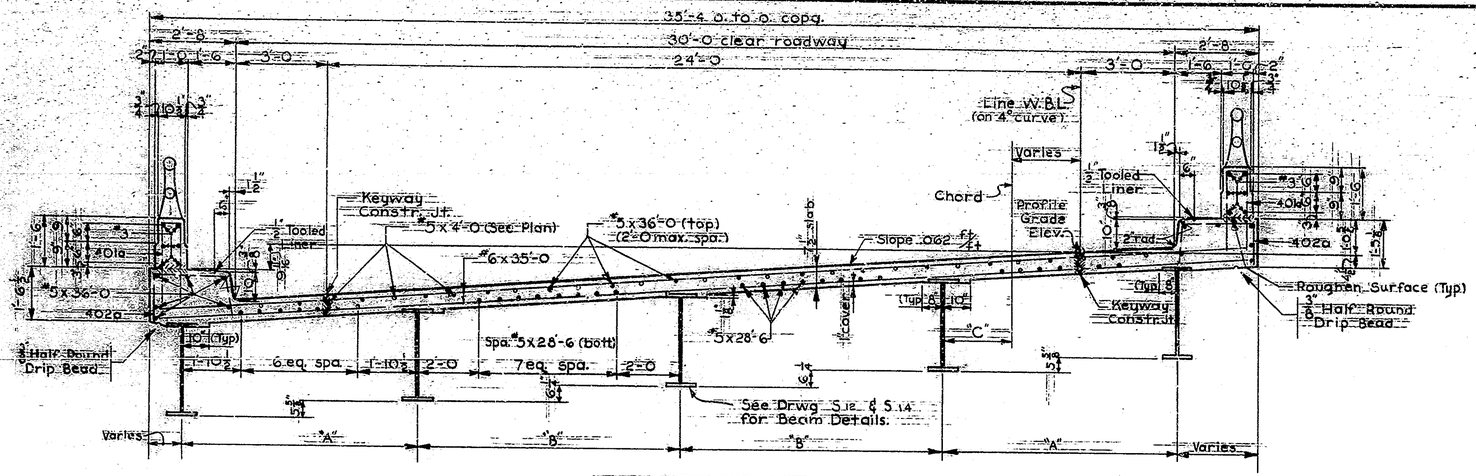
PROJECT: I-U1-65-3(4) 117

BRIDGE CONTRACT NO. R-6553

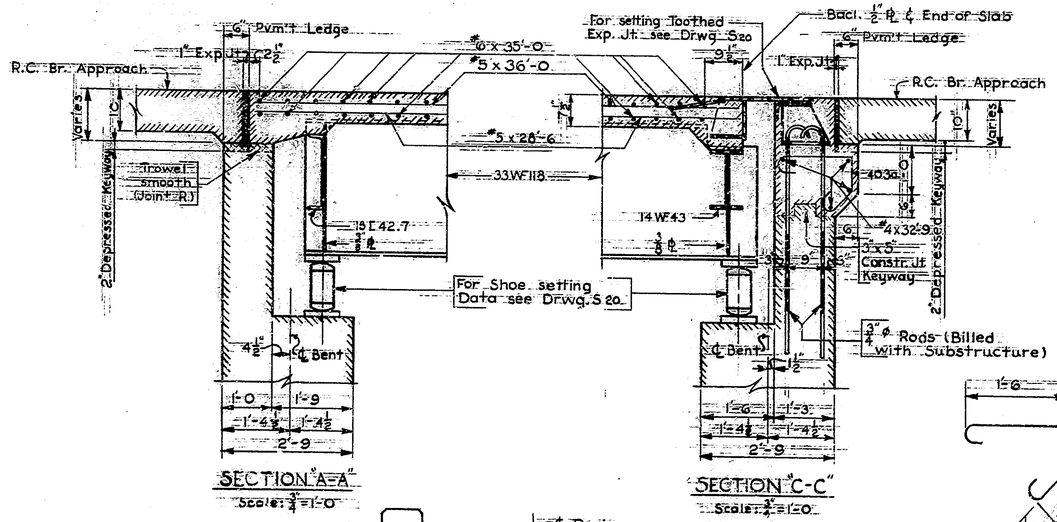
BRIDGE FILE: 1-65-119-231

DESIGNED: JSS 7-31-63 WHS 7-31-63
DRAWN: CAP 8-21-63 CKD: JSS 9-10-63
TRACED: CKD:

MARSHALL ENG. NO. 196

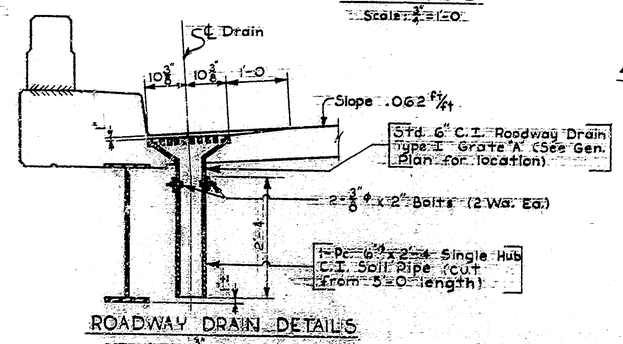


TYPICAL SECTION
Scale: ½"=1'-0"



SECTION "A-A"
Scale: ¾"=1'-0"

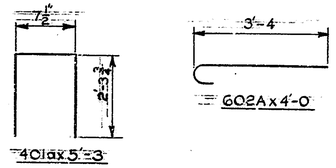
SECTION "C-C"
Scale: ¾"=1'-0"

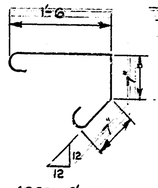


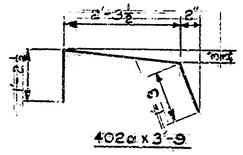
ROADWAY DRAIN DETAILS
Scale: ¾"=1'-0"

	Bent No. 1 to Splice No. 1	Splice No. 1 to Splice No. 4	Splice No. 4 to Bent No. 5
Dim. "A"	7'-5 5/16	7'-6	7'-6
Dim. "B"	8'-4 5/16	8'-5	8'-4 5/16
Dim. "C"	3'-1⅛	2'-2½	3'-1 5/16

*For details of 601A see Br. Std. R2







Notes:
For Reinforcing Bar Notes See Br. Std. C.
For additional details see Drwg. S 17.
For Joint Legend see Drwg. S 2.
For details of Roadway Drain (Type I, Grate "A") see Br. Std. D. See Gen. Plan for location.
Provision to be made for future Bridge Lighting. See Gen. Plan for location.
See Br. Std. R2 for Details.

BRIDGES OVER 20' SPAN

PUB. ROAD REQ. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-UI-65 3(66)117	1965	86	140

BILL OF MATERIALS

Reinforcing Steel			
Size & Mark	No. of Bars	Length	Weight
*601A	8	8'-0	
602A	18	4'-0	
#6	830	35'-0	
	Total #6		43,831#
#5	182	36'-0	
#5	270	28'-6	
#5	45	4'-0	
	Total #5		15,047#
401a	512	5'-3	
402a	326	3'-9	
403a	34	3'-8	
#4	4	32'-9	
	Total #4		2,783#
#3	96	26'-3	
#3	24	15'-0	
	Total #3		1,083#
	Total Steel		62,750#
CONCRETE			
Class "F"			
Cap @ Bent No. 5			4.5 cys
Pour No. 1			9.1 "
Pour No. 2			34.2 "
Pour No. 3			43.2 "
Pour No. 4			48.8 "
Pour No. 1R			3.3 "
Pour No. 2R			12.7 "
Pour No. 3R			16.1 "
Pour No. 4R			18.3 "
Pour No. 1L			3.5 "
Pour No. 2L			13.3 "
Pour No. 3L			17.0 "
Pour No. 4L			19.3 "
Total Class "F" (Except Railing Concrete)			243.3 cys
Railing Concrete (Rt. & Lt. Alike) 2 @ 12.6 cys			25.2 cys
MISCELLANEOUS			
Railing (Type B or Type S) (Rt. & Lt. Alike) 2 @ 242.5 Lft.			485 Lft
Anchor Bolts - AR 21			8 ea.
Cast Iron:			
1-Std. Rdwy. Drain (Type I, Grate A)			192#
1-Pc. 6" C.I. Soil Pipe x 5'-0 (Single Hub)			95#
2 - ⅝" x 2" Bolts (2 wa. eq.)			1#
Total Cast Iron			288#
2 - 1½" Steel Conduit			24 Be Lt.

*For details of 601A see Br. Std. R2

FLOOR DETAILS AND BILL OF MATERIALS

INDIANA STATE HIGHWAY COMMISSION

SCALE:- As Noted — OCTOBER 10, 1963

SUBMITTED FOR APPROVAL:- James D. Mattis

DRAWING:- S 18 OF 21

PROJECT:- I-UI-65-3(66)117

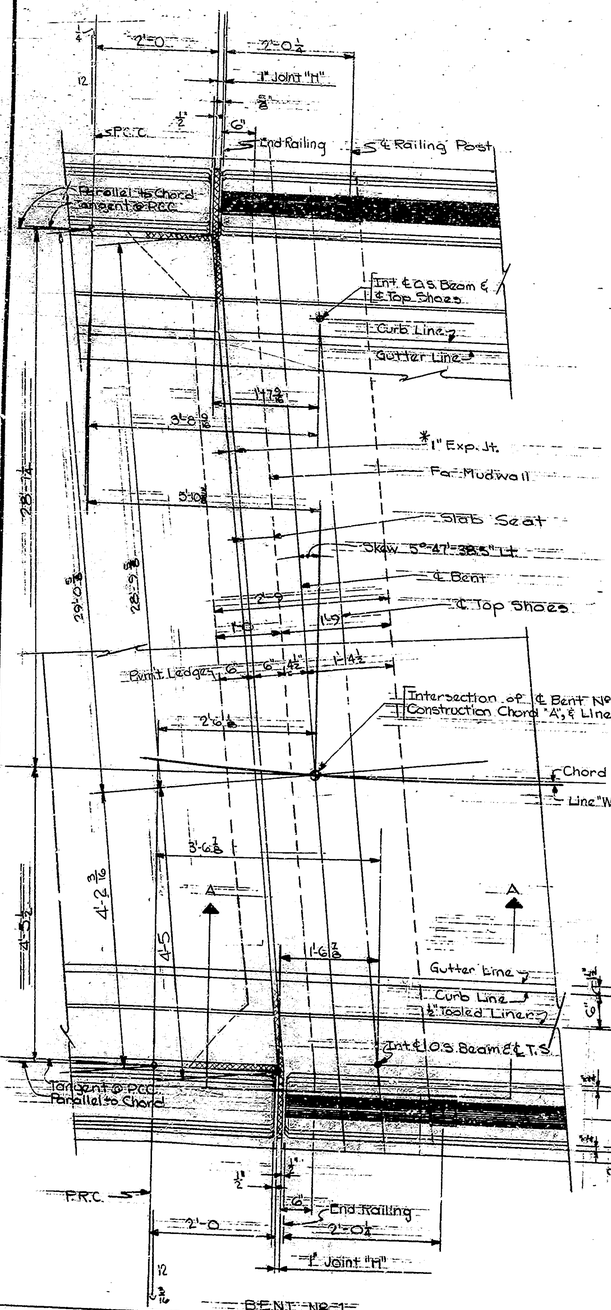
BRIDGE CONTRACT NO. R-6333

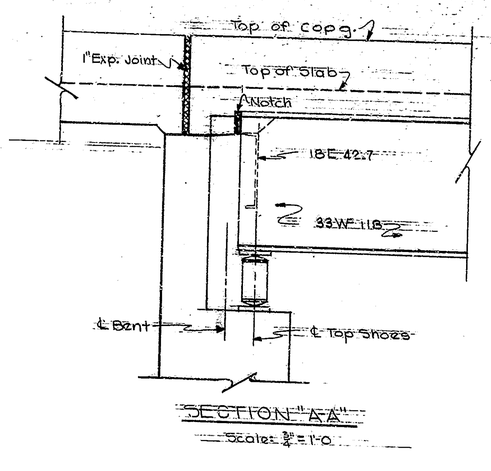
BRIDGE FILE:- I-65-119-2314

DESIGNED: JSS 7-8-63 CK'D: W.H.S. 7-22-63
DRAWN: CRP 9-9-63 CK'D: JSS 9-18-63
TRACED: CK'D:

MARBAUGH ENG. NO. 199

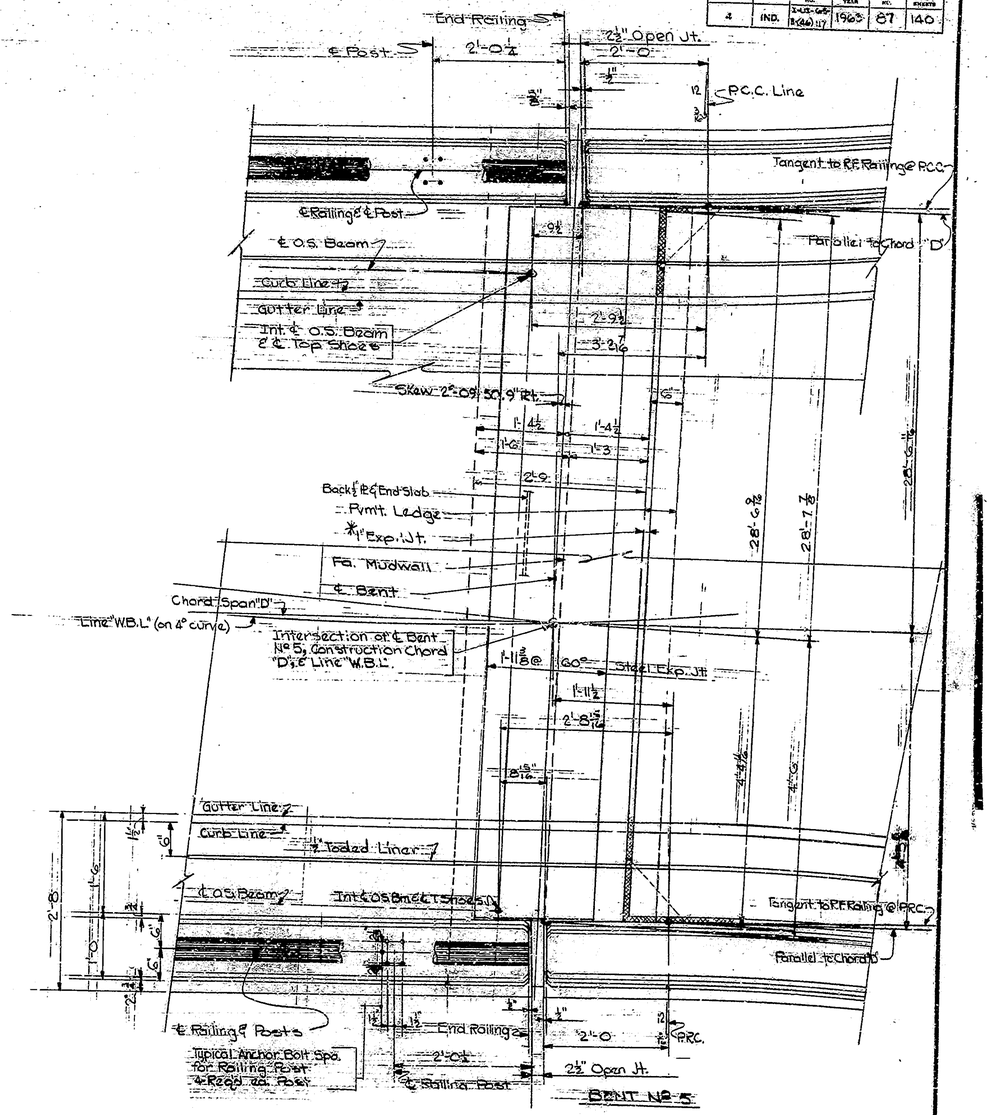
BRIDGES OVER 20' SPAN.					
PUB. ROAD RTE. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-65-3(44)117	1963	87	140





SECTION "AA"

Scale: ¾" = 1'-0



BENT No 5

NOTES:

For details of notch in slab at end of beams see Br. Std. "G".

For Joint Legend see Drwg. S-2

* Indicates item not included in Br. Quantities.

Railing and or Railing Post refers to Aluminum Railing Type 3 or Steel Railing Type B.

DESIGNED
DRAWN LDO 8-14-63 CK'D J.S.S. 9-5-63
TRACED CK'D

HARVAUGH ENG. No. 100

CORNER DETAILS

INDIANA STATE HIGHWAY COMMISSION

SCALE: 1" = 1'-0 Unless Noted — OCTOBER 10, 1963

SUBMITTED FOR APPROVAL: James D. Mathis

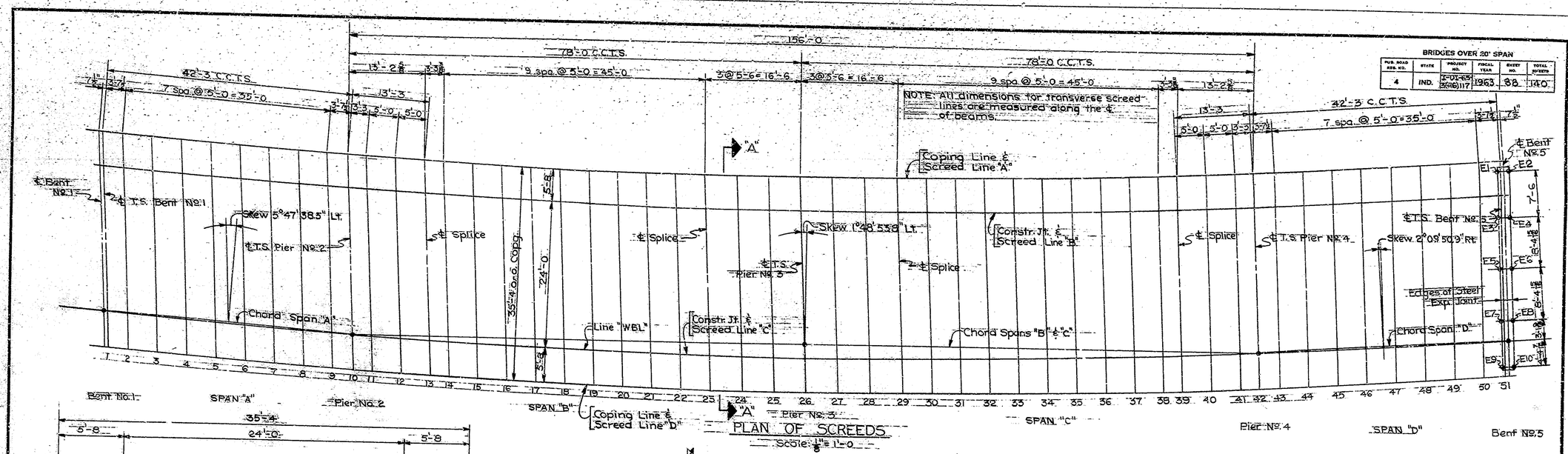
DRAWING S-19 OF S-L

PROJECT: I-65-3(44)117

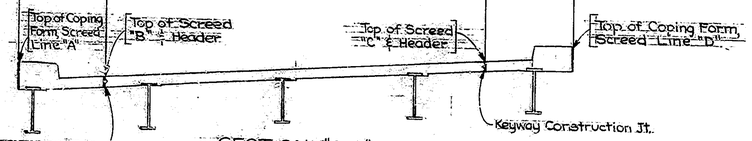
BRIDGE CONTRACT NO. R-6333

BRIDGE FILE: I-65-119-2314

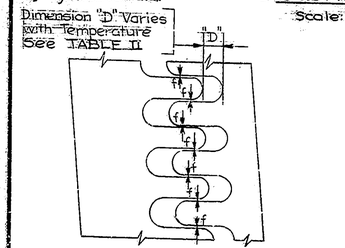
BRIDGES OVER 20' SPAN					
PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-01-65-3(46)117	1963	88	140



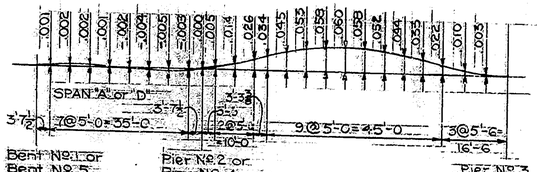
PLAN OF SCREEDS
Scale: 1" = 1'-0



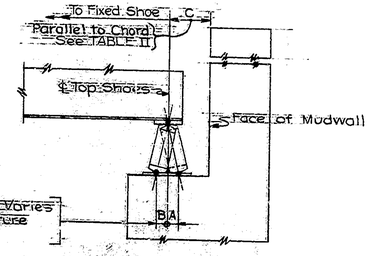
SECTION "A-A"
Scale: 1/4" = 1'-0



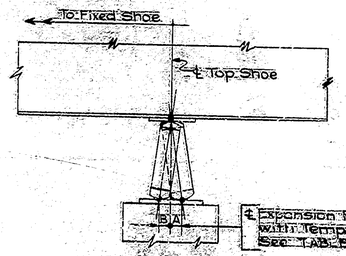
PART TOOTHED EXPANSION JOINT
Not to Scale



CONCRETE D.L. DEFLECTIONS
Not to Scale



BENTS No. 1 & No. 5
Not to Scale



PIERS No. 3 & No. 4
Not to Scale

NOTES:-

PURPOSE:

PLAN OF SCREEDS shows location of Screeds.
TABLE OF ELEVATIONS shows data for setting screeds and coping forms so that the slab and copings will be at the final grade elevations after all the concrete has been poured. See Dwg. S 21.
TABLE I shows data for setting Expansion Plates.
TABLE II shows data for setting Toothed Expansion Joint.

GENERAL PROCEDURE:

(1) After all rivets have been driven and all interior diaphragms have been welded in place adjust the superstructure longitudinally so that the distance from the ℄ Top Shoes to the face of the mudwall at Bent No. 5 equals Dimension "C" as shown in TABLE II for the prevailing temperature.
(2) With the superstructure in the adjusted position called for in (1) weld the fixed shoes to the anchor plates at Pier No. 2.
(3) Adjust the Expansion Plates 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 thru the ℄ Top Shoe in a direction away from the fixed shoes. Weld the Expansion Plates to the Anchor Plates.
(4) Set steel expansion joint and adjust it to the elevations given for the points shown on the PLAN OF SCREEDS using the double nuts on the anchor rods and on the 7/8" ϕ rods on top of the diaphragms.
(5) Adjust Steel Expansion Joints horizontally to make openings "E" between teeth equal and openings "D" to the dimension shown in TABLE II for the prevailing temperature.
(6) After the shoes are set take elevations at all screed points on top of adjacent beams. From 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 at each 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.
(7) No concrete in the floor is to be poured until the above operations are completed.

TABLE I

Temperature	Dimension "A" 0°	20°	30°	50°	80°	100°	120°	Dimension "B" 80°	100°	120°
Dim. ℄ T.S. to ℄ Exp. ℄ @ Bent No. 1	1 1/16"	5/8"	9/16"	1/2"	7/16"	3/8"	5/16"	—	—	—
Dim. ℄ T.S. to ℄ Exp. ℄ @ Pier No. 3	3/16"	1/4"	1/8"	0"	—	—	—	1/8"	1/4"	3/8"
Dim. ℄ T.S. to ℄ Exp. ℄ @ Pier No. 4	3/4"	1/2"	1/4"	0	—	—	—	1/4"	1/2"	3/4"
Dim. ℄ T.S. to ℄ Exp. ℄ @ Bent No. 5	1 7/16"	1 1/16"	13/16"	1/2"	3/16"	—	—	1/8"	7/16"	

TABLE II

Temperature	0°	20°	40°	60°	80°	100°	120°
Dim. "C" @ Bent No. 5	9 1/16"	9 1/16"	9 1/16"	9"	8 15/16"	8 15/16"	8 15/16"
Dim. "D" @ Bent No. 5	3 1/16"	3 1/16"	2 15/16"	2 1/2"	2 7/16"	1 7/8"	1 9/16"

SCREEDS
INDIANA STATE HIGHWAY COMMISSION

SCALE: AS NOTED
OCTOBER 10, 1963
SUBMITTED FOR APPROVAL: James D. Mattis
DRAWING: S 20 of 21
PROJECT: I-01-65-3(46)117
BRIDGE CONTRACT NO. R-6333
BRIDGE FILE: I-65-119-2314

DESIGNED ____ CK'D. ____
DRAWN L.K.T. 10-19-63 CK'D. JSS 9-11-63
TRACED ____ CK'D. ____

MARBAUGH ENG. NO. 196

BRIDGES OVER 20' SPAN

PUB. ROAD SER. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	FEDERAL	1963	89	140

TABLE OF ELEVATIONS

Point		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
A	Elevation Top of Coping Form	780.125	780.175	780.245	780.310	780.375	780.435	780.495	780.555	780.615	780.635	780.700	780.760	780.825	780.865	780.925	780.980	781.030	781.075	781.115	781.150	781.180	781.205	781.230	781.255	781.280	781.310	781.340
	Elevation Top of O.S. Beam																											
	Dist. Top Bm. to Top Coping Form																											
B	Elevation Top of Screed	779.455	779.505	779.575	779.640	779.705	779.765	779.825	779.880	779.940	779.985	780.025	780.085	780.150	780.190	780.250	780.305	780.355	780.400	780.440	780.475	780.505	780.530	780.555	780.575	780.605	780.630	780.665
	Elevation Top of Beam																											
	Dist. Top Bm. to Top Screed																											
C	Elevation Top of Screed	780.980	781.030	781.095	781.160	781.225	781.280	781.340	781.395	781.450	781.495	781.535	781.595	781.655	781.695	781.755	781.810	781.855	781.900	781.940	781.970	782.000	782.025	782.050	782.070	782.095	782.125	782.155
	Elevation Top of Beam																											
	Dist. Top Bm. to Top Screed																											
D	Elevation Top of Coping Form	782.040	782.090	782.155	782.220	782.280	782.340	782.395	782.450	782.510	782.550	782.590	782.650	782.710	782.750	782.810	782.865	782.910	782.955	782.995	783.025	783.055	783.080	783.100	783.125	783.150	783.175	783.210
	Elevation Top of O.S. Beam																											
	Dist. Top Bm. to Top Coping Form																											

Point		28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
A	Elevation Top of Coping Form	781.375	781.415	781.445	781.475	781.500	781.525	781.535	781.540	781.535	781.525	781.505	781.485	781.455	781.425	781.405	781.380	781.345	781.305	781.265	781.215	781.165	781.105	781.040	780.990
	Elevation Top of O.S. Beam																								
	Dist. Top Bm. to Top Coping Form																								
B	Elevation Top of Screed	780.700	780.735	780.765	780.800	780.825	780.845	780.855	780.860	780.855	780.845	780.825	780.810	780.780	780.745	780.725	780.700	780.665	780.630	780.585	780.540	780.490	780.430	780.365	780.315
	Elevation Top of Beam																								
	Dist. Top Bm. to Top Screed																								
C	Elevation Top of Screed	782.190	782.225	782.255	782.285	782.310	782.335	782.345	782.350	782.345	782.330	782.315	782.295	782.270	782.240	782.215	782.195	782.160	782.120	782.080	782.040	781.990	781.930	781.870	781.820
	Elevation Top of Beam																								
	Dist. Top Bm. to Top Screed																								
D	Elevation Top of Coping Form	783.240	783.275	783.310	783.340	783.365	783.385	783.395	783.400	783.395	783.385	783.365	783.350	783.320	783.290	783.270	783.245	783.210	783.175	783.135	783.090	783.040	782.985	782.925	782.875
	Elevation Top of O.S. Beam																								
	Dist. Top Bm. to Top Coping Form																								

EXPANSION JOINT ELEVATIONS

Point	Elevation	Point	Elevation
E.1	780.975	E.2	780.950
E.3	780.575	E.4	780.550
E.5	781.105	E.6	781.080
E.7	781.630	E.8	781.605
E.9	782.875	E.10	782.850

Note:

For location of screed points and "General Procedure," see Drwg. "S20."

DESIGNED ____ CKD. ____
DRAWN K.T. 8-20-63 CKD. J.S.S. 9-11-63
TRACED ____ CKD. ____

TABLE OF ELEVATIONS

INDIANA STATE HIGHWAY COMMISSION

SCALE:- NONE — OCTOBER 10, 1963

SUBMITTED FOR APPROVAL: James D. Mathis

DRAWING S 21 OF 21

PROJECT FAI-65-3(46)117

BRIDGE CONTRACT NO. R-6333

BRIDGE FILE:- I-65-119-23.14

McGRAW-EDIS. NO. 169

FED. ROAD REQ. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	E-45-6(5) 3(46) 117	1963	90	140

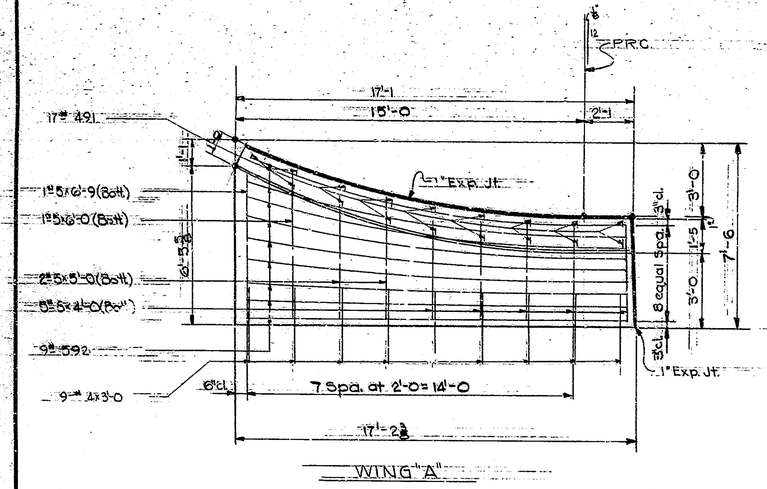
BRIDGES OVER 20' SPAN

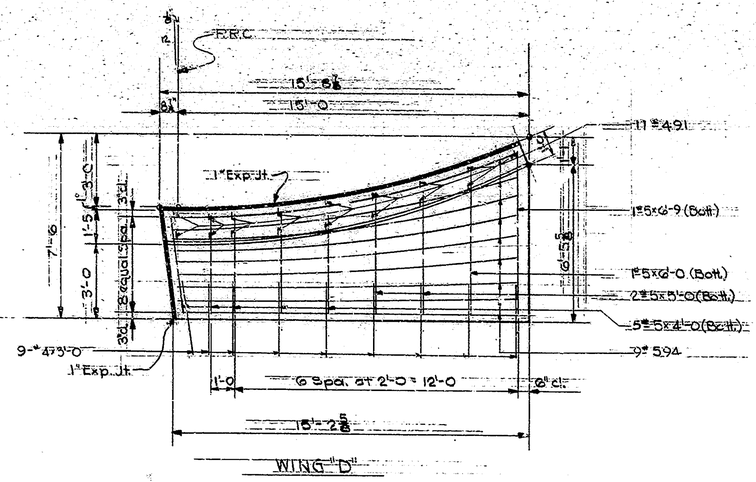
*BILL OF MATERIALS
WIDENED R.C. BRIDGE
APPROACH @ BENTS No 1 & No 5

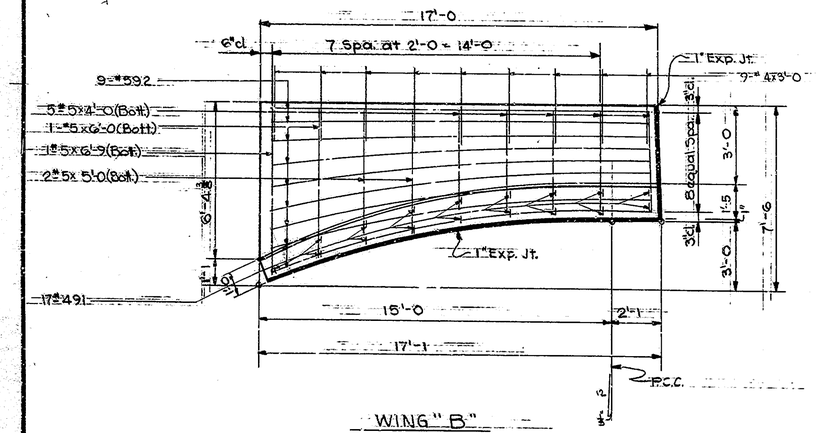
REINFORCING STEEL			
SIZE & MARK	No. of BARS	LENGTH	WEIGHT
591	96	20'-6	
592	18	17'-0	
593	9	15'-9	
594	9	14'-9	
#5	22	23'-6	
#5	4	6'-9	
#5	4	6'-0	
#5	8	5'-0	
#5	20	4'-0	
	Total #5		3,376 Lb.
491	66	2'-3	
#4	36	5'-0	
	Total #4		176 Lb.
	Total	Steel	3,550 Lb.

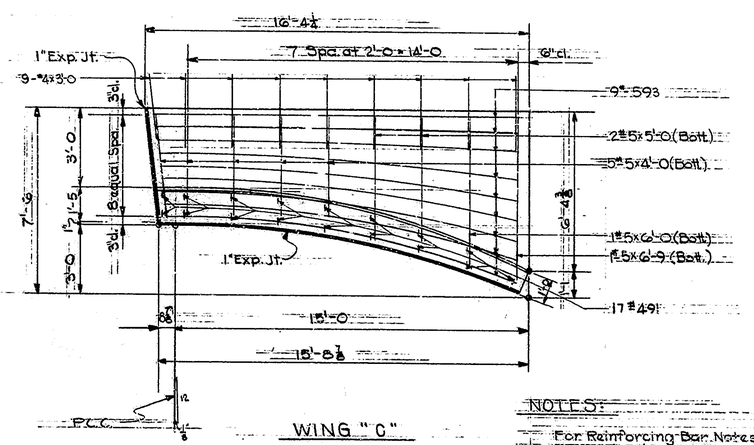
CONCRETE	
10" R.C. Pavement	154.4 Sq. Yds.
Class "P" Inf. Curb Walk	7.6 Cu. Yds.

MISCELLANEOUS	
1" Exp. Joint	132 Lin. Ft.

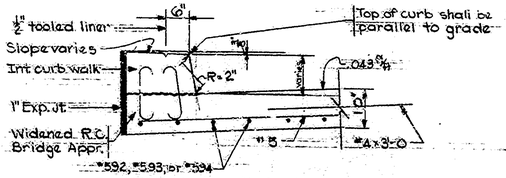




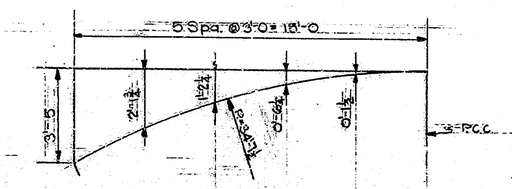




NOTES:
For Reinforcing Bar Notes, See Br. Std. "C"
For Std. 24'-0 R.C. Bridge Approach Details, See Br. Std. "M."
*Indicates all items in Bill of Materials not included in Br. Quantities.



TYPICAL SECTION THRU WINGS
Scale: 3/4" = 1'-0



OFFSETS TO INTEGRAL CURB WALK GUTTER LINE
No Scale

Mark	℄	Length
592	16'-5	17'-0
593	15'-2	15'-9
594	14'-2	14'-9



WIDENED R.C. BRIDGE APPROACH DETAILS
AND BILL OF MATERIALS

INDIANA STATE HIGHWAY COMMISSION

SCALE: 3/4" = 1'-0 Unless Noted. OCTOBER 10, 1963

SUBMITTED FOR APPROVAL: James D. Martin

PROJECT: I-UI-5 (46) 117

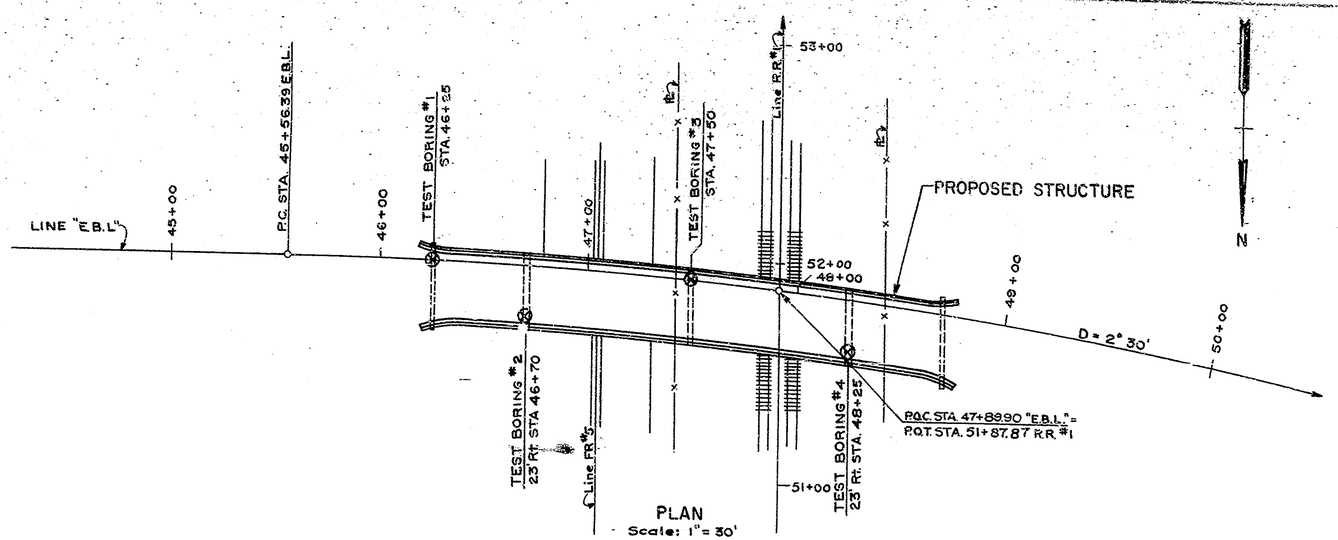
BRIDGE CONTRACT NO. R-6355

BRIDGE FILE: I-65-118-23.14-J

DESIGNED _____ CK'D. _____
DRAWN LNO 6-30-63 CK'D. JSS 9-11-63
TRACED _____ CK'D. _____

STATE HIGHWAY DEPARTMENT OF INDIANA

	INT.	CULVERT (346)117	1963	91	140



PLAN
Scale: 1" = 30'

NOTE:-
▼ Denotes Ground Water Table.
N Indicates the number of Blows required to Drive a 1⅜" I.D., 2" O.D. Split Spoon Sampler 12" by Means of a 140" Weight Falling 30".

BORING No	T.B. #1			T.B. #2			T.B. #3			T.B. #4		
STATION	46+25			46+70			47+50			48+25		
OFFSET	0.0			23' Rt.			0.0			23' Rt.		
GROUND ELEV.	751.77			751.74			752.29			751.70		
	Sample No / El.	N	DESCRIPTION	Sample No / El.	N	DESCRIPTION	Sample No / El.	N	DESCRIPTION	Sample No / El.	N	DESCRIPTION
755												
	751.18		GROUND ELEV.	751.7		GROUND ELEV.	752.3		GROUND ELEV.	751.7		GROUND ELEV.
750	750.8		6" BROWN ORGANIC SILT (TOPSOIL)	750.9		6" BROWN ORGANIC SILT (TOPSOIL)	751.9		DARK BROWN ORGANIC SILT (TOPSOIL).	750.9		6" DARK BROWN ORGANIC SILT (TOPSOIL)
745	1 746.8	8	BROWN MOIST STIFF CLAYEY SILT WITH A LITTLE FINE TO COARSE SAND AND FINE GRAVEL.	1 746.7	10	BROWN AND GRAY MOTTLED STIFF CLAYEY SILT WITH A TRACE OF FINE TO COARSE SAND.	1 747.3 / 745.8	10	BROWN AND GRAY MOTTLED MOIST STIFF CLAYEY SILT.	1 748.7	6	
740	2 741.0	10		2 741.7	12		2 742.3	8	BROWN MOIST MEDIUM STIFF CLAYEY SILT WITH A LITTLE FINE TO COARSE SAND.	2 741.7	6	BROWN MOIST MEDIUM STIFF CLAYEY SILT WITH A LITTLE FINE TO COARSE SAND.
735	737.8 ▼			737.7 ▼			3 737.3 / 736.8 ▼	8		3 736.7	18 ▼	
	3 736.8	20		3 736.7	19	GRAY MOIST VERY STIFF CLAYEY SILT WITH A LITTLE FINE TO COA\ SAND AND FINE GRAVEL.						
730	4 731.5	21	GRAY MOIST VERY STIFF CLAYEY SILT WITH A TRACE OF FINE TO COARSE SAND AND FINE GRAVEL.	4 731.7 / 731.2	29		4 732.3	28	GRAY MOIST VERY STIFF CLAYEY SILT WITH A TRACE OF FINE TO COARSE SAND AND FINE GRAVEL.	4 731.7	10	
725	5 726.8	25		5 726.7	32	GRAY MOIST HARD CLAYEY SILT WITH A TRACE OF COARSE SAND AND FINE GRAVEL.	5 727.3	29		5 726.7	21	GRAY MOIST STIFF TO VERY STIFF CLAYEY SILT WITH A TRACE OF COARSE SAND AND FINE GRAVEL.
720	6 721.8 / 720.3	23	END OF BORING	6 721.7 / 720.2	39	END OF BORING	6 722.3	34		6 721.7 / 720.2	24	END OF BORING
715			DEPTH OF BORING 31'-6			DEPTH OF BORING 31'-6	7 717.3	35	GRAY MOIST HARD CLAYEY SILT WITH A LITTLE COARSE SAND AND FINE GRAVEL.			DEPTH OF BORING 31'-6
710							8 712.3	37				
705							9 707.3	30				
700							10 704.3	31	END OF BORING			
									DEPTH OF BORING 30'-0			

750 745 740 735 730 725 720 715 710 705 700

SOIL BORINGS

SCALE:- Horiz: 1"=30'-0; VERT.: 1"=5'-0 OCTOBER 10, 1963

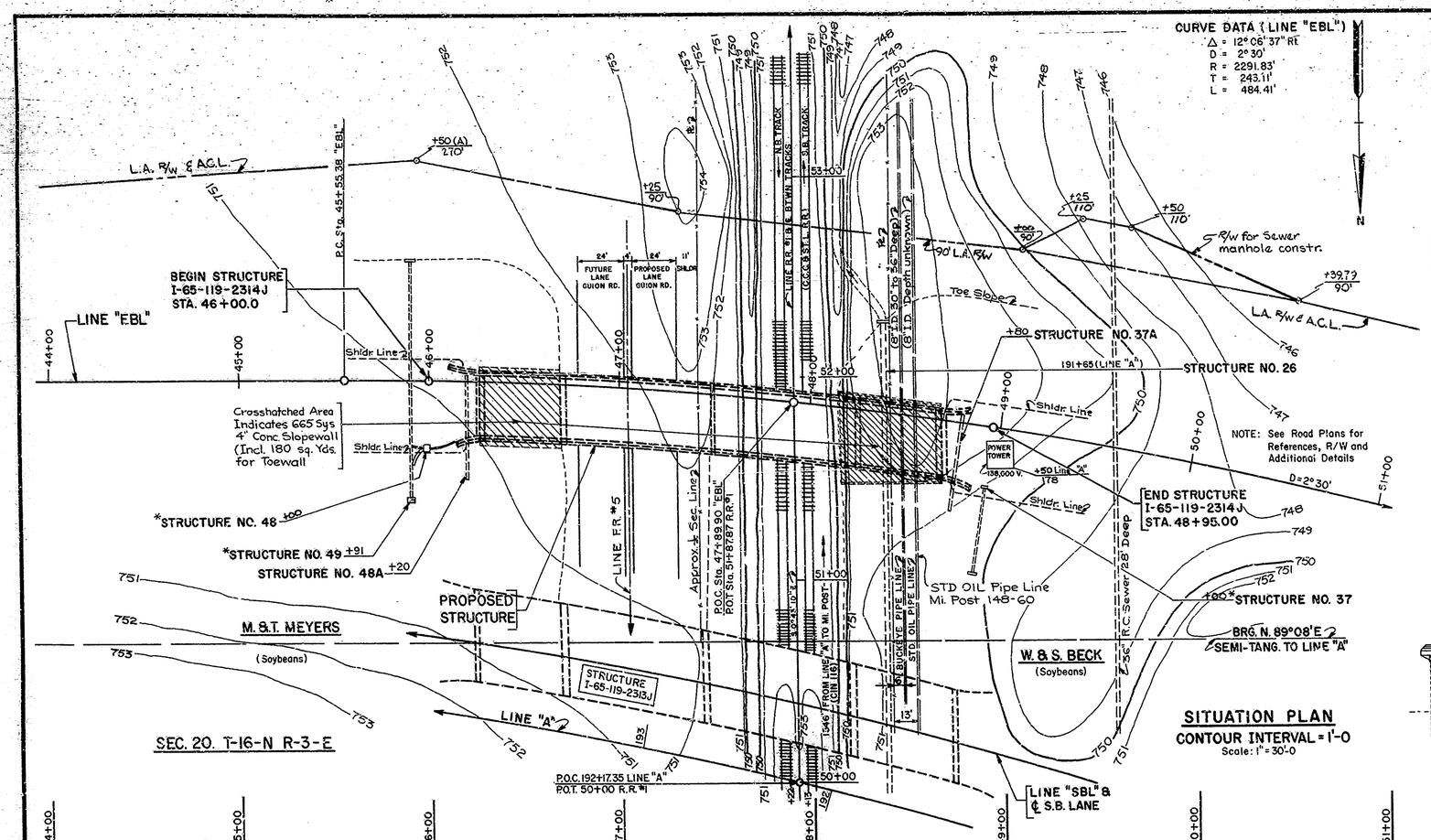
SUBMITTED FOR APPROVAL James D. Mathis

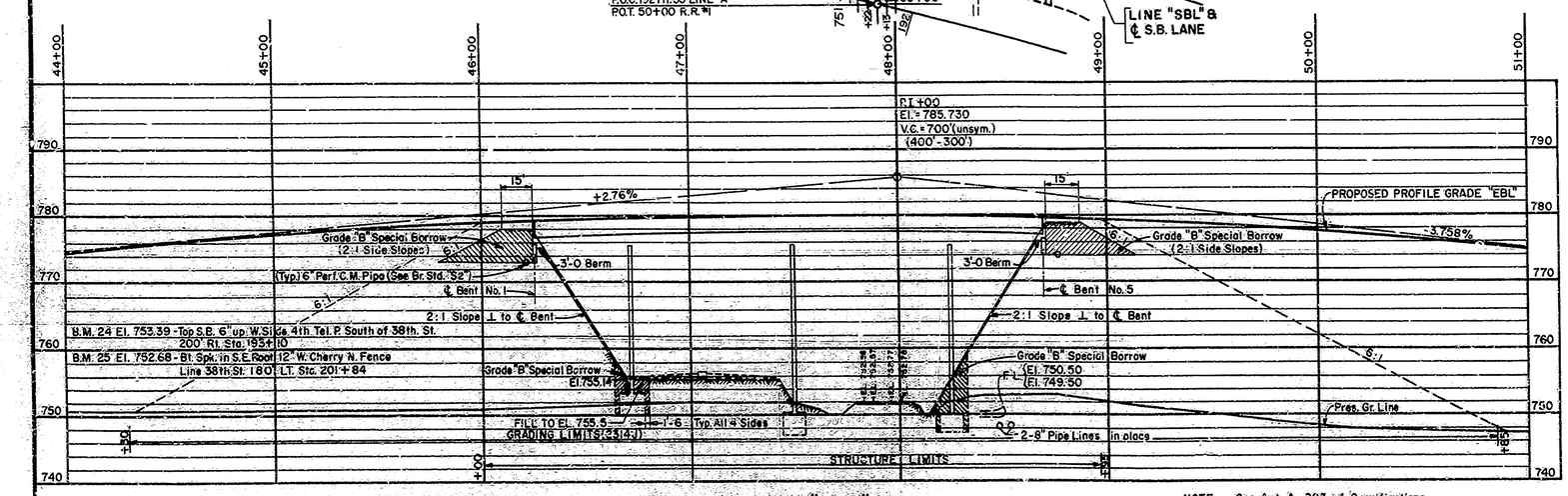
PROJECT:- I-UI-65-3(46)117
BRIDGE CONTRACT NO. B-6333
BRIDGE FILE:- I-65-119-25.14J

Drawn: D.E.D 9-14-62 Ckd: R.E.B. 9-21-62
Traced: T.L.N. 9-25-62 Ckd: J.S.S. 9-23-63

PLAN — STATED / SCALE / NOTE BOOK, HIGHWAY CRITERIA / BY WM. T. CILENTO / No.

PROFILE — STRUCTURE / DRAWING BY / CHECKED BY / NOTE BOOK / No. / HORIZ. SCALE / VERT. SCALE / AS PER NOTE / STRUCTURE DRAWING PASSED





PROFILE ON LINE "EBL"
Scale: Horiz. 1" = 30'-0; Vert. 1" = 10'-0

DESIGNED _____ C'K'D _____
DRAWN W.H.S. 5-17-61 C'K'D C.D.D. 10-20-61
TRACED L.K.T. 9-27-63 C'K'D H.S.S. 9-27-63

Field Notes:- Book Road 8532T pp. 41, 62, 63 & 69
Book Road 8534L pp. 38, 39, 54, 55 & 1 of 3

NOTE:- See Art. A-203 of Specifications regarding Test Boring Data. See Sheet No. 9 for Test Borings.

UTILITIES

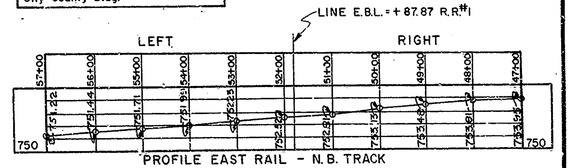
INDIANAPOLIS POWER & LIGHT CO.
25 Monument Circle
STANDARD OIL COMPANY
P.O. Box 360, Argo, Ill.
C.C.C.& St. L. R.R. (TEL)

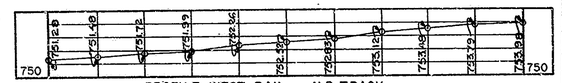
BUCKEYE PIPE LINE CO.
3815 W. 16th St., Speedway City
INDIANAPOLIS SANITARY DISTRICT
City-County Bldg.

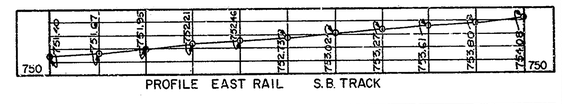
BRIDGES OVER 20' SPAN

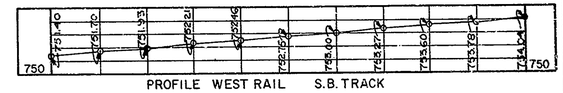
FUR. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-UI-65-3(46)117	1963	92	140

R.R. TRAFFIC CENSUS (DAILY)
Northbound - 2 Pass., 1 Switch
Southbound - 2 Pass., 1 Switch

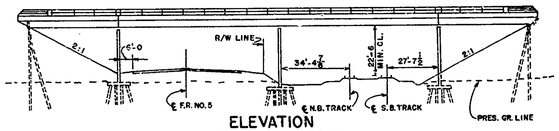








PROFILE OF C.C.C. & ST. L. R.R.
Scales:- Horiz. 3/4" = 100'; Vert. 1" = 5'-0



ELEVATION
(NORMAL TO R.R NO.1)
Scale: 1" = 30'-0

NOTES:-
Items marked (*) not included in Bridge Quantities.
This is Structure No. 4 on Road Project I-UI-65-3(46)117.

BALANCE

Fill + 15%	34,970	CYS.
Surplus Foundation Excavation	- 95	CYS.
⊗ Surplus Excavation	- 34,875	CYS.
Special Borrow	0	CYS.

⊗ Note:- SURPLUS EXCAVATION TO BE OBTAINED FROM BALANCE NO. 4. SEE RD. PROJ. I-UI-65-3(46)117 ROAD PLAN & PROFILE SHEET NO. 14.

LAYOUT

CONTINUOUS (COMPOSITE) STEEL BEAM BRIDGE
4 SPANS: 42'-3, 2@78'-0, 42'-3 CURVED 30'-0 RDWY. 2@1'-6 WALKS
LINE "EBL" (E.B. 38th ST.) OVER C.C.C.& ST. L. R.R.
RT. I-65 AT 38th ST. INTERCHANGE

STATE HIGHWAY DEPARTMENT OF INDIANA

MARION COUNTY

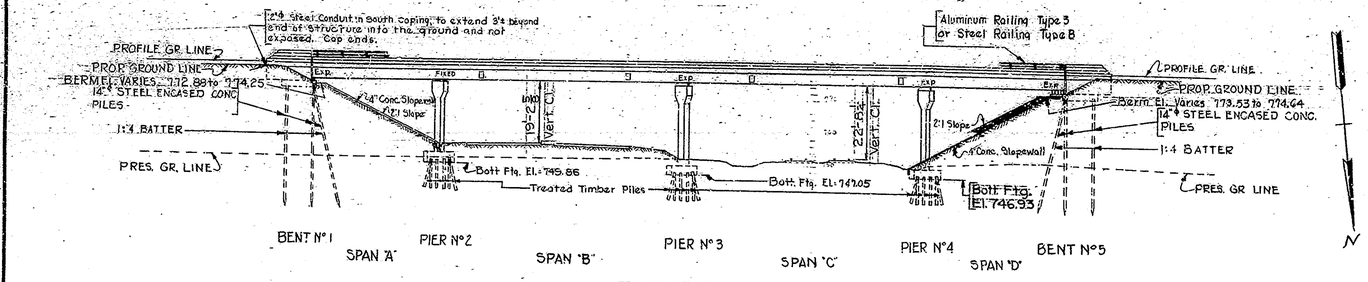
SCALE:- AS NOTED OCTOBER 10, 1963

SUBMITTED FOR APPROVAL:- James D. Mathis

DRAWING:- SI OF 21

PROJECT:- I-UI-65-3(46)117 STA. 47+89.90
BRIDGE CONTRACT NO. R-6333
BRIDGE FILE:- I-65-119-2314 "J"

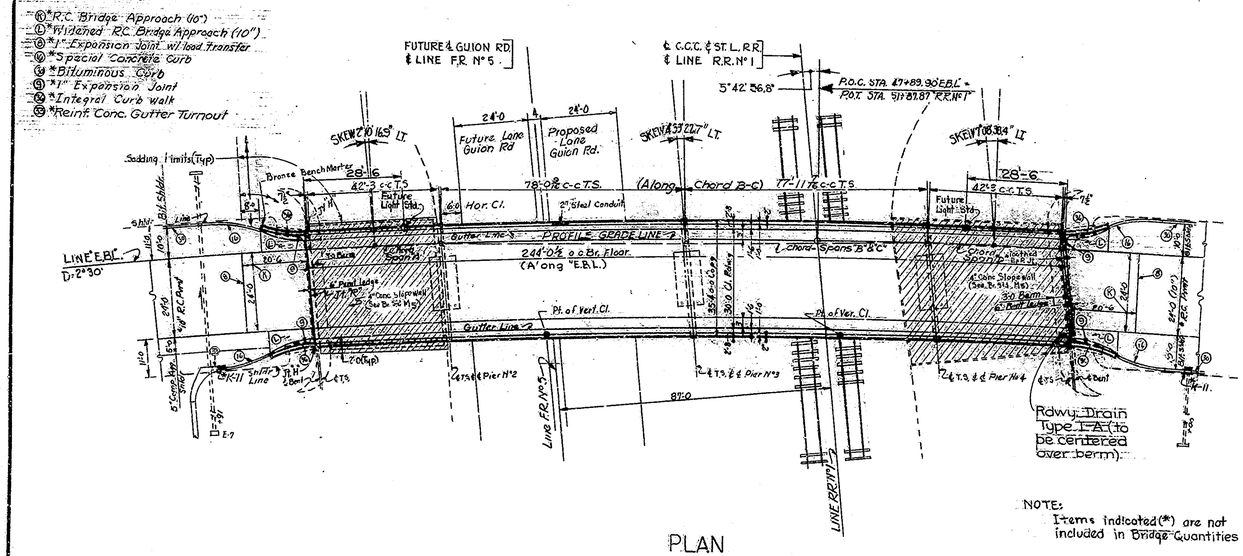
NOTE:- Structure to be built to a 700' unsymmetrical Vertical Curve and a 2° 30' horizontal Curve.



ELEVATION

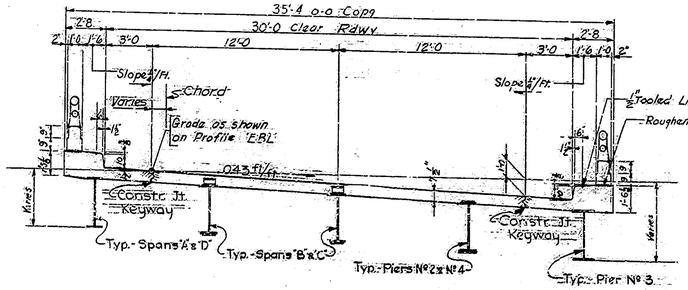
LEGEND

Ⓐ "R.C. Bridge Approach (10")
Ⓑ "Widened R.C. Bridge Approach (10")
Ⓒ "I" Expansion Joint w/ load Transfer
Ⓓ "Special" Concrete Curb
Ⓔ "Bituminous Curb
Ⓕ "H" Expansion Joint
Ⓖ "Integral Curb walk
Ⓗ "Reinf. Conc. Gutter Turnout



PLAN

NOTE:
Items indicated (*) are not included in Bridge Quantities



IN SPANS AT PIERS

TYPICAL CROSS-SECTION

Scale ½"=1'-0

DESIGNED	C'K'D
DRAWN WHS 5-10-63	C'K'D JDM 5-15-63
TRACED	C'K'D

BUREAU OF ENGINEERING SUPPLY NI&R

BRIDGES OVER 20' SPAN					
PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-(7)-65 3(46)117	1963	93	140

DESIGN DATA:-

Designed for H20-S16-44 loading in accordance with 1961 A.A.S.H.O. Specifications.

TYPICAL CROSS-SECTION:-

For Typical Cross-Section on Line E.B.L. see Sheet N° 3
For Typical Cross-Section on Line F.R. N° 5 See Sheet N° 4

GENERAL NOTES:-

No present structure at proposed bridge site.
Depth of footings to be extended if found necessary. See Art. F 403.2 (a) of the Specifications.
Piles shall have the minimum bearing value shown on the detail drawings. Determine pile lengths by Art. F.103 and F.203 of the Specifications.
For details of steel encased concrete piles see Bridge Standard C1, the Special Provisions and applicable articles in the Specifications.
Reinforcing steel covering shall be 1½ inches in top and 1 inch in bottom of floor slabs, 3 inches in footing except bottom steel which shall be 4 inches, and 2 inches in all other parts unless noted.
Concrete in footings and pier stems (Four No. 1) to be Class "E".
Concrete in superstructure, including railing, bent caps and top of pier stems down to construction joint (Four No. 2) to be Class "F".
Concrete in slopewall, steel encased concrete piles and headwalls to be Class "D."
Continuous concrete pours shall be required between construction joints as shown on the detail plans.
Waterproof the back of mudwalls and bent wingwalls in accordance with the Specifications.
Bevel forms ¾ inch under copings and chamfer exposed edges 1 inch unless noted.
1 standard type I-A roadway drain to be placed as shown on this drawing.
Construct 4" concrete slopewall at locations as shown on the Layout.
Tolerance in position of pile head, maximum of 2 inches.
Three 1 inch expansion joints with load transfer to be placed in the pavement as shown on Bridge Standard M3.
All railings to be constructed perpendicular to grade.
Railings and posts may be Aluminum or Steel, see Bridge Standards R-1A and R-1B.
Provision to be made for future bridge lighting, see Bridge Standard R2.
See the Special Provisions for items included in this contract.

JOINT LEGEND:-

"I" Exp. Joint, See Bridge Standard C1, includes ¼" joint filler on vertical faces of 2" x 2'-0 depressed Keyways in pavement ledge at Bents N°. 1 & No. 5.
Joint "H" indicates vertical 1" preformed joint filler extending from the top of coping to the top of slab seat at Bent N°. 1.
Joint "R" indicates ¼ preformed joint filler on vertical faces of 2" x 2'-0 depressed keyways with one layer of medium weight roofing felt under the entire slab bearing area at Bent No. 1.

STANDARD DRAWINGS

BR. STD.	RD. STD.	PURPOSE
C1		Reinf. Bar Notes, Test Bar Samples, Bar Bending Details, Splicing, Pile Shells in the Field, Notch at End of Beams, 1" Exp. Jt.
D		Roadway Drains, Type I-A
M3		R.C. Bridge Approach Details, 1" Exp. Jt. with Load Transfer
M5		Slopewall Details
R1-A		Aluminum Railing Details
R1-B		Steel Railing Details
R2		Bridge Lighting Details
S2		Typical Section at End Bents
	ME	Pipe Culvert Headwalls
	VE	Reinforced Concrete Pipe Culvert
	MN	Backfill for Structures
	MP	Piling for Surface Drainage

GENERAL PLAN

CONTINUOUS (COMPOSITE) STEEL BEAM BRIDGE
4 SPANS: 42'-3, 2@78'-0, 42'-3 CURVED 30'-0 RDWY 2@1'-6 WALKS
LINE 'E.B.L.' (EAST BOUND 38TH STREET) OVER C.C.C.& ST. L. R.R.
RTE. I-65 AT 38TH STREET INTERCHANGE

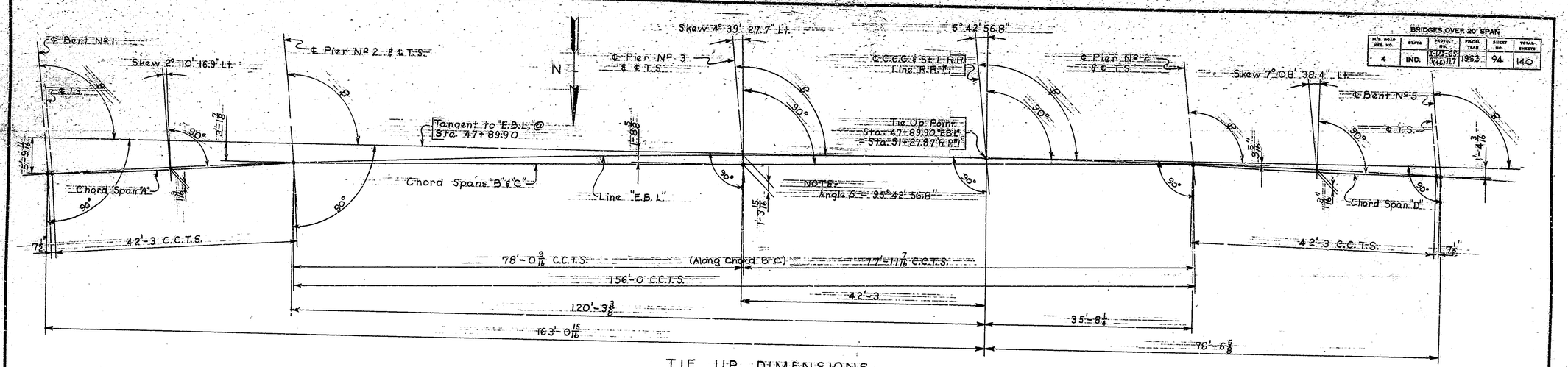
INDIANA STATE HIGHWAY COMMISSION
MARION COUNTY

SCALE:- 1"= 20'-0 UNLESS NOTED OCTOBER 10, 1963

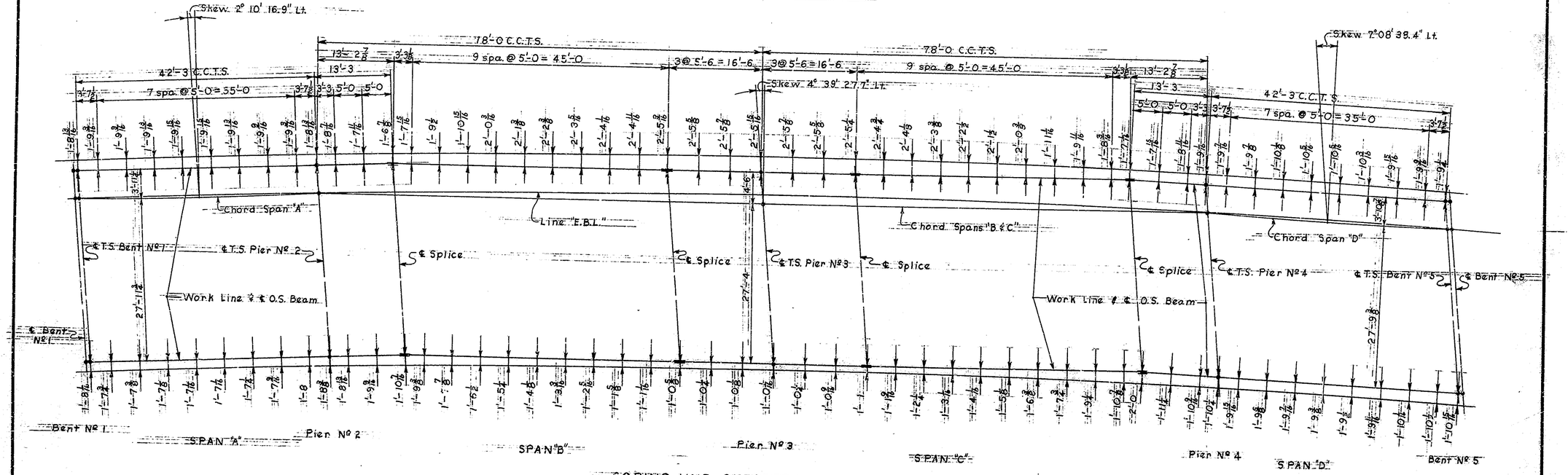
SUBMITTED FOR APPROVAL: James D. Mathis

DRAWING:- S 2 OF 21
PROJECT:- I-UI-65-3(46)117
BRIDGE CONTRACT NO. R-6333
BRIDGE FILE:- I-65-119-2314 'J'

BRIDGES OVER 20' SPAN					
FED. ROAD SEC. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-IJI-65-3(46)117	1983	94	140



TIE UP DIMENSIONS



COPING LINE OFFSETS

DESIGNED WHS 7-9-82 CKD WJS 7-16-82
DRAWN LEM 7-30-82 CKD WJS 8-12-82
TRACED ____ CKD ____

TIE-UP DIMENSIONS & COPING LINE OFFSETS

INDIANA STATE HIGHWAY COMMISSION

SCALE: Not to Scale — OCTOBER 10, 1983

SUBMITTED FOR APPROVAL: James D. Mattis

DRAWING 33 OF 21

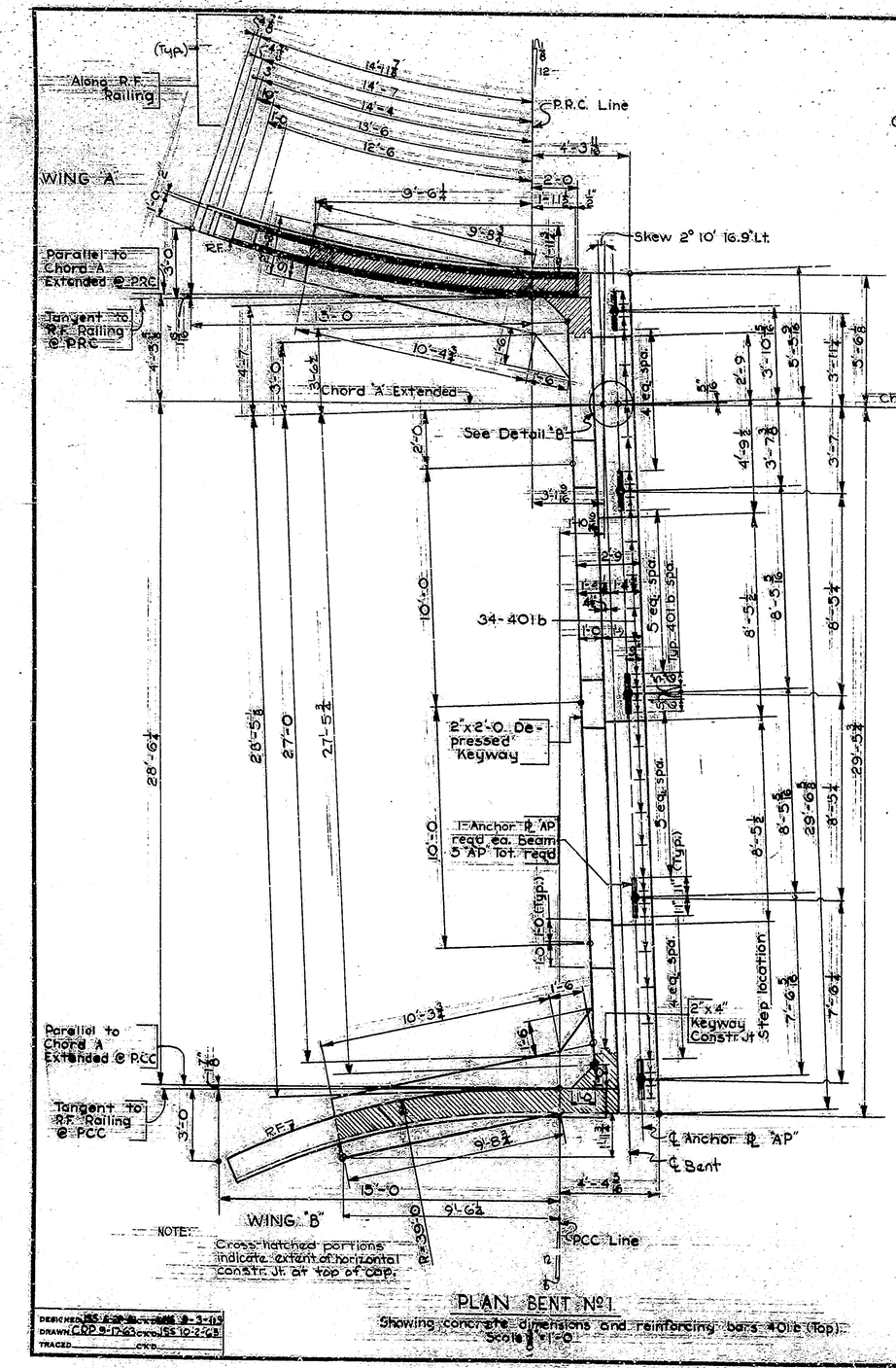
PROJECT: I-UI-65-3(46)117

BRIDGE CONTRACT NO. R-8333

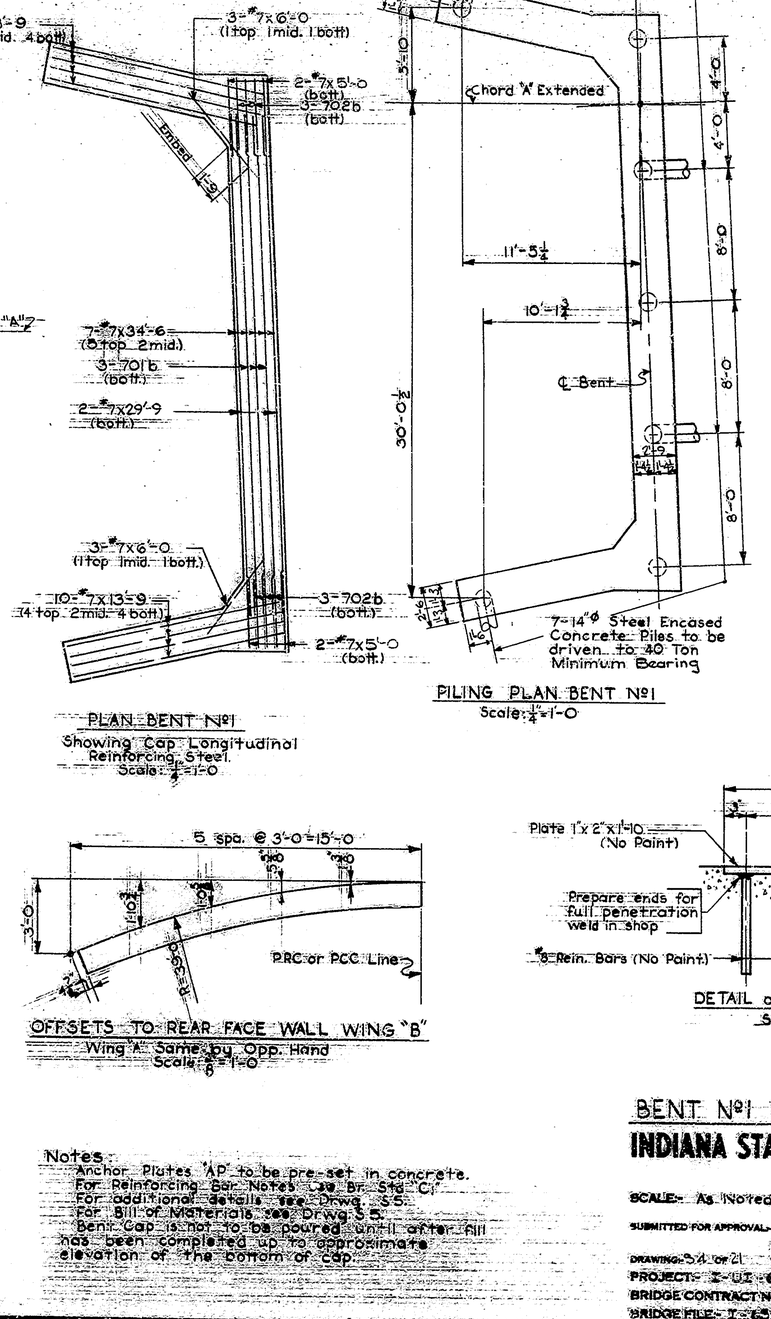
BRIDGE FILE: I-65-119-23140

HARRISON ENG. NO. 185

BRIDGES OVER 20' SPAN					
PUB. ROAD SER. NO.	STATE	PROJECT NO.	FISCAL YEAR	BODY NO.	TOTAL SHEETS
4	IND.	I-U.I. 65 (3rd) 117	1963	95	140

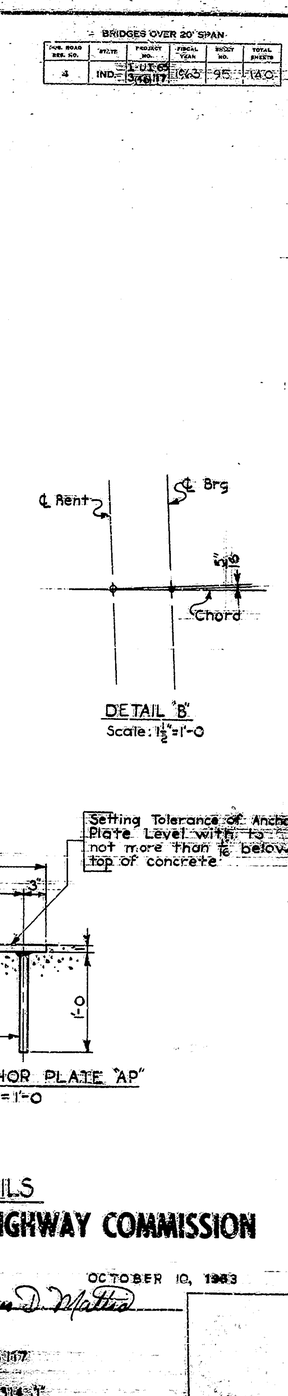


PLAN BENT Nº1
Showing concrete dimensions and reinforcing bars #01b (Top).
Scale: ½"=1'-0



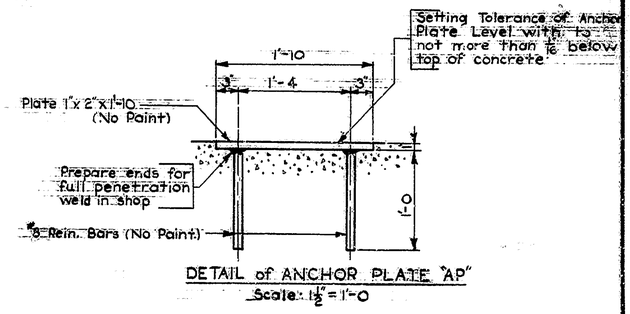
PILING PLAN BENT Nº1
Scale: ¼"=1'-0

PLAN BENT Nº1
Showing Cap Longitudinal Reinforcing Steel.
Scale: ¼"=1'-0



DETAIL 'B'
Scale: 1½"=1'-0

OFFSETS TO REAR FACE WALL WING "B"
Wing "A" Same by Opp. Hand
Scale: ½"=1'-0



DETAIL of ANCHOR PLATE "AP"
Scale: 1½"=1'-0

Notes:
- Anchor Plates 'AP' to be pre-set in concrete.
- For Reinforcing Bar Notes see Br. Std. C.
- For additional details see Drwg. S 5.
- For Bill of Materials see Drwg. S 5.
- Bent Cap is not to be poured until after fill has been completed up to approximate elevation of the bottom of cap.

BENT Nº1 DETAILS

INDIANA STATE HIGHWAY COMMISSION

SCALE: As Noted — OCTOBER 10, 1963

SUBMITTED FOR APPROVAL: James D. Mathis

DRAWING S 4 OF 21

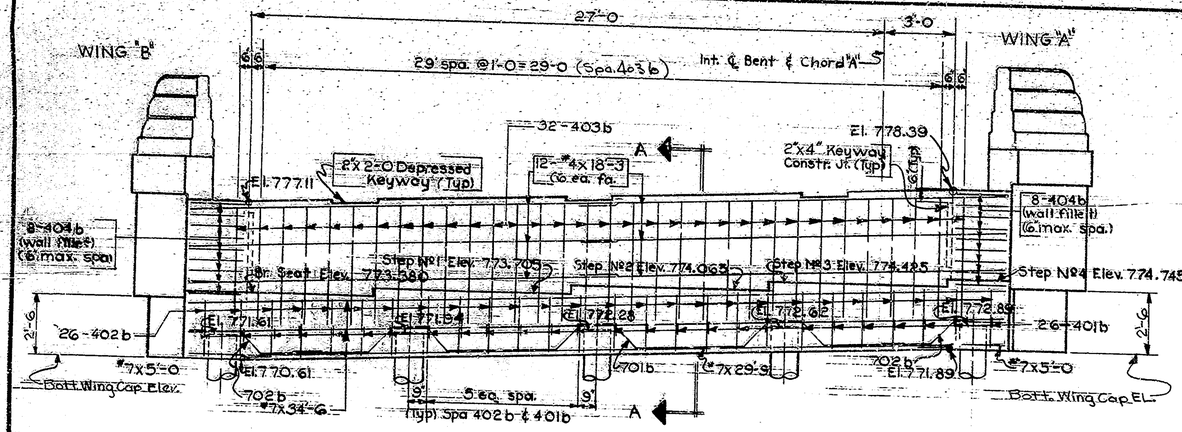
PROJECT: I-U.I. 65 - 3(46) 117

BRIDGE CONTRACT NO. R-6559

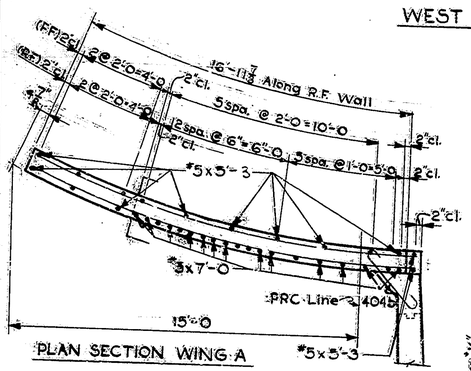
BRIDGE FILE: I-65-1/9 2314 J

DESIGNED SS 8-29-63 CHKD. RB 9-3-63
DRAWN CRP 9-17-63 CHKD. SS 10-2-63
TRACED CHKD.

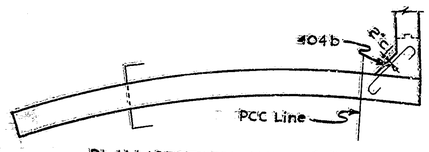
MATHAUGH ENG. NO. 186



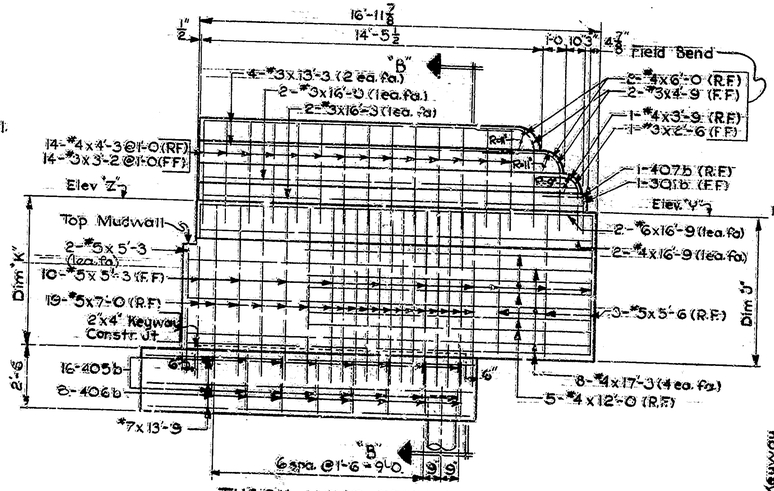
WEST ELEVATION BENT №1



PLAN SECTION WING "A"



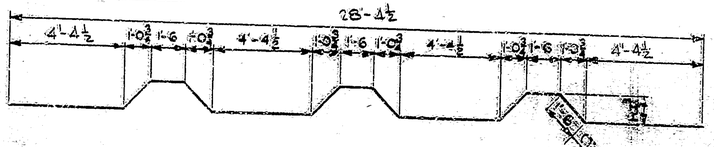
PLAN SECTION WING "B"
Same as Wing "A" Except as Noted



TYPICAL WING DETAILS

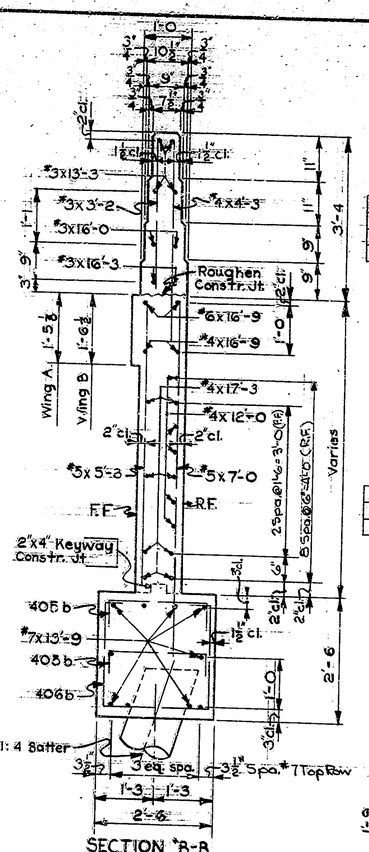
TABLE OF ELEVATIONS		
WING	Elev. Y	Elev. Z
A	779.53	780.13
B	778.65	778.86

WING "A" ALL HEIGHTS		
WING	Dim. J	Dim. K
A	5'-6 1/2	5'-8 3/4
B	5'-6 1/2	5'-9

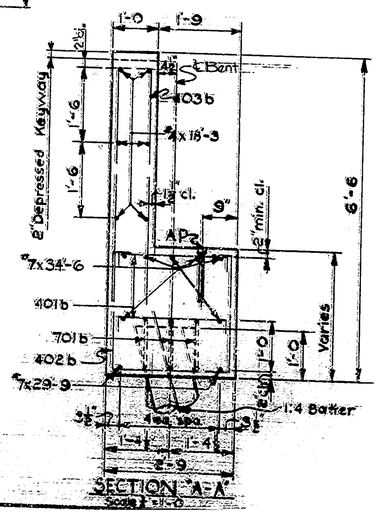


POUR DESIGNATION
Pour №1 Main Cap, Wing Cap and Mudwall between vertical Constr. Jt.
Pour №2 Wingwall A and Mudwall outside vertical Constr. Jt.
Pour №3 Wingwall B and Mudwall outside vertical Constr. Jt.

NOTES
For Reinforcing Bar Notes, see Br. Std. "C"
For additional details, see Drwg. S4.

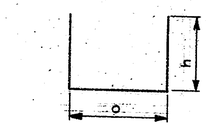


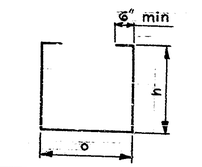
SECTION "B-B"
Scale 3/4"=1'-0



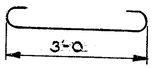
SECTION "A-A"
Scale 1"=1'-0

Mark	o	h	Length
401b	2'-6	6"	3'-6
405b	2'-3	6"	3'-3
403	9"	5'-0	10'-9

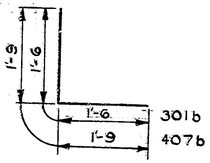




Mark	o	h	Length
402b	2'-6	2'-3	8'-0
406b	2'-3	2'-1	7'-5



404b x 4'-0



301b x 3'-0
407b x 3'-0

BRIDGES OVER 20' SPAN					
PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-UI-65-3(46)117	1963	96	140

BILL OF MATERIALS

REINFORCING STEEL

Size & Mark	№ of Bars	Length	Weight
701b	3	31'-0	
702b	6	6'-2	
#7	7	34'-6	
#7	2	29'-9	
#7	20	13'-9	
#7	6	6'-0	
#7	4	5'-0	
	Total #7		1,558#
#6	4	16'-9	101#
#5	38	7'-0	
#5	30	5'-3	
	Total #5		442#
401b	60	3'-6	
402b	26	8'-0	
403b	32	10'-9	
404b	16	4'-0	
405b	32	3'-3	
406b	16	7'-5	
407b	2	3'-6	
#4	12	18'-3	
#4	16	17'-3	
#4	4	16'-9	
#4	10	12'-0	
#4	4	6'-0	
#4	28	4'-3	
#4	2	3'-9	
	Total #4		1,261#
301b	2	3'-0	
#3	4	16'-3	
#3	4	16'-0	
#3	8	13'-3	
#3	4	4'-9	
#3	28	3'-2	
#3	2	2'-6	
	Total #3		133#
	TOTAL STEEL		3,495#

CONCRETE

CLASS "F" Pour №1	19.3 cys
Pour №2	4.1 cys
Pour №3	4.1 cys
Total Class "F" Concrete	
Except Railing Conc.)	27.7 cys
Railing Concrete (Rt.)	
Lt. Allow. 2 @ 1.55 cys	3.1 cys

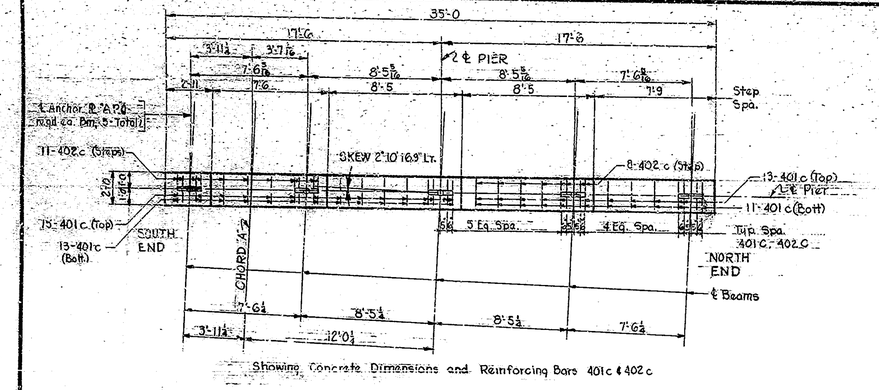
MISCELLANEOUS

7-14"ø Steel Encased Conc. Piles	35'0 Approx = 245 Lft
Anchor Plates "AP"	5 ea.
2"ø Steel Conduit	20 Lft

BENT №1 DETAILS
AND BILL OF MATERIALS
INDIANA STATE HIGHWAY COMMISSION

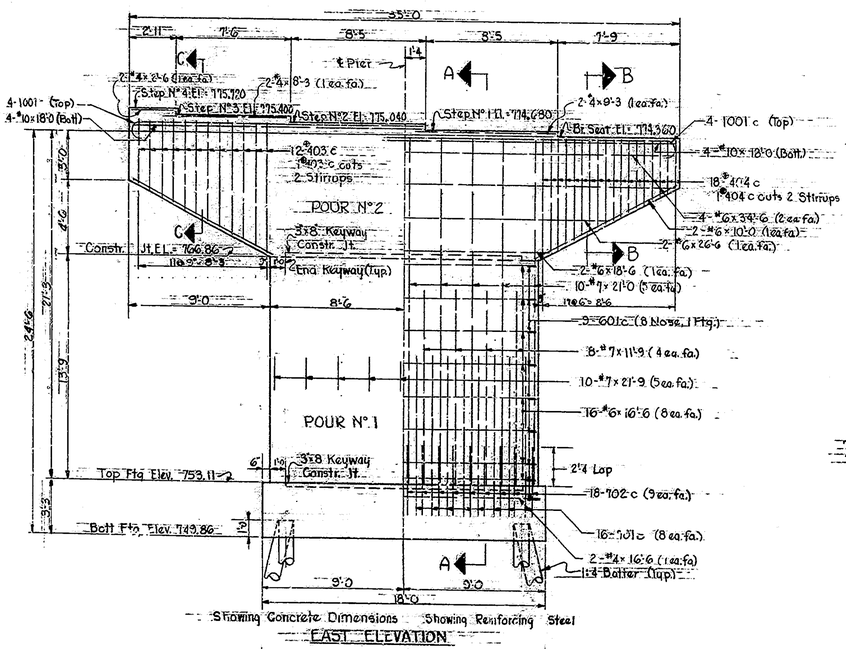
SCALE:- 3/8"=1'-0 Unless Noted OCTOBER 10, 1963
SUBMITTED FOR APPROVAL:- James D. Mathes
DRAWING: S5 OF 21
PROJECT:- I-UI-65-3(46)117
BRIDGE CONTRACT NO. R-6333
BRIDGE FILE:- I-65-119-6314

DESIGNED MES 9-3-63 CK'D WHS 9-3-63
DRAWN CRP 9-24-63 CK'D JSS 10-2-63
TRACED ____ CK'D ____



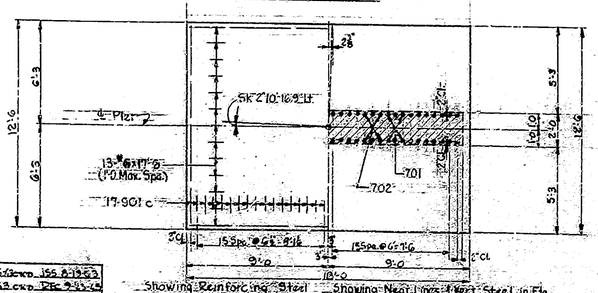
Showing Concrete Dimensions and Reinforcing Bars 401 c & 402 c

COPING PLAN



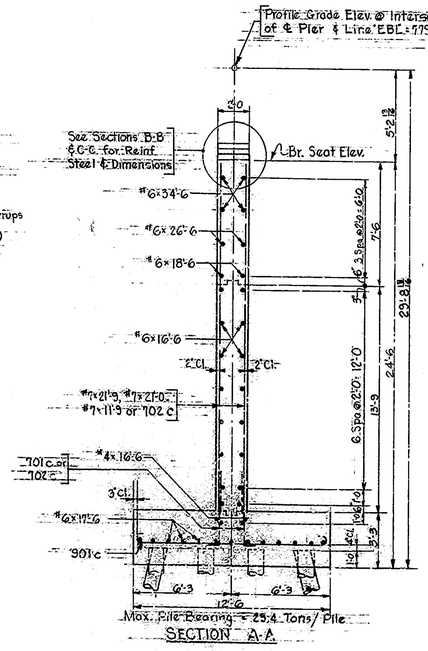
Showing Concrete Dimensions Showing Reinforcing Steel

EAST ELEVATION

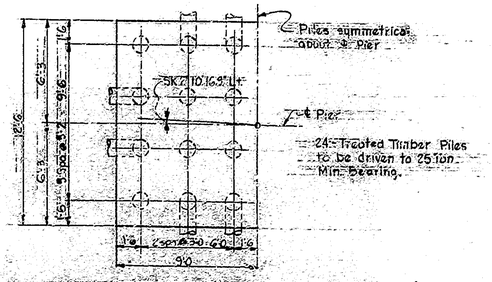


Showing Reinforcing Steel Showing Near Lines of Steel in Ftg.

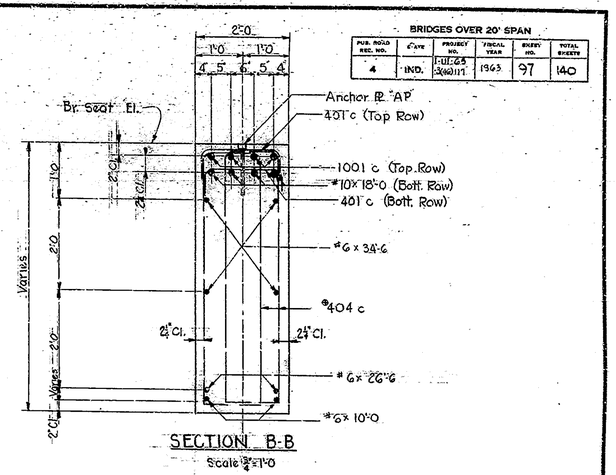
FOOTING PLAN



SECTION A-A

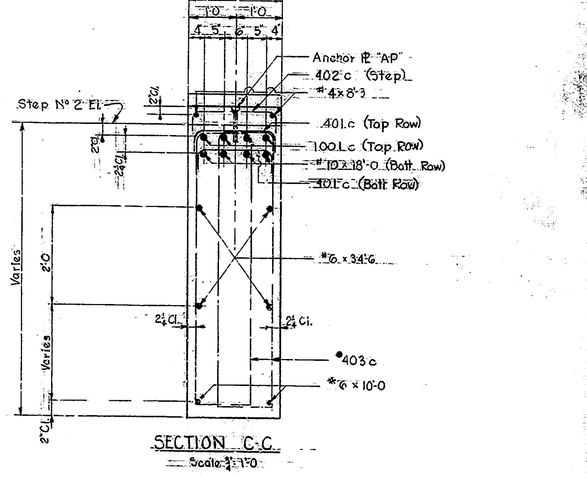


HALF PILING PLAN



SECTION B-B

Scale ¾"=1'-0



SECTION C-C

Scale ¾"=1'-0

BRIDGES OVER 20' SPAN

PUB. ROAD REC. NO.	COUNTY	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-UI-65 3(46)117	1963	97	140

NOTES:
- For Bill of Materials, See Drwg. 5 9
- For Reinforcing Bar Notes, See Br. Std. C1.
- Anchor Plates "AP" are to be preset in the Concrete
- ▱ Indicates that piles are to be battered 1:4 in the direction shown.
- * Indicates cutting and bending diagrams required, See Drwg 5 9.

PIER N° 2 DETAILS

INDIANA STATE HIGHWAY COMMISSION

SCALE:- ¾"=1'-0 UNLESS NOTED OCTOBER 10, 1963.

SUBMITTED FOR APPROVAL:- James D. Mathis

DRAWING 5 6 OF 21

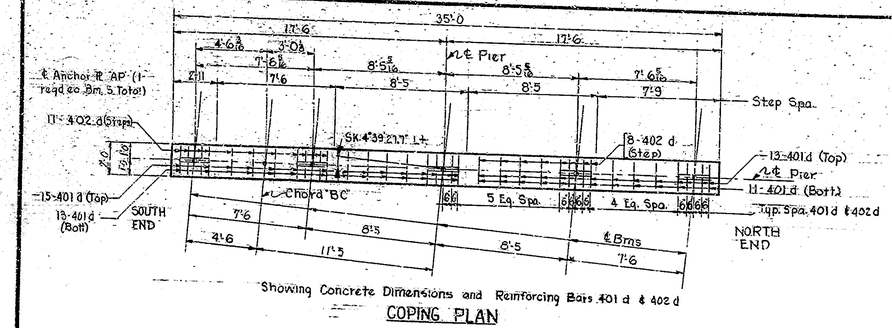
PROJECT:- I-UI-65 3(46) 117

BRIDGE CONTRACT NO. R-6333

BRIDGE FILE:- I-65-119-2314 J

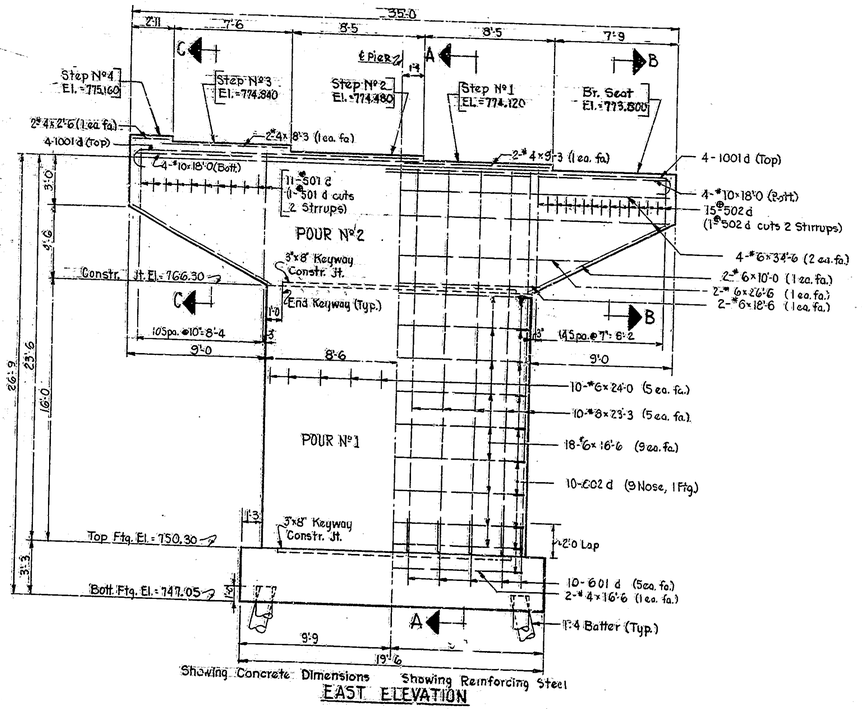
DESIGNED RJC 8-16-63 CKD. JSS 8-19-63
DRAWN MBS 9-11-63 CKD. RJC 9-13-63
TRACED CKD.

HAMMAUSEN ENG. NO. 199



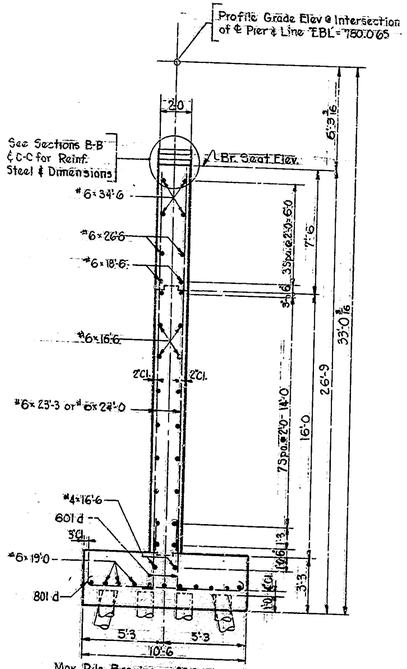
Showing Concrete Dimensions and Reinforcing Bars 401 d & 402 d

COPING PLAN



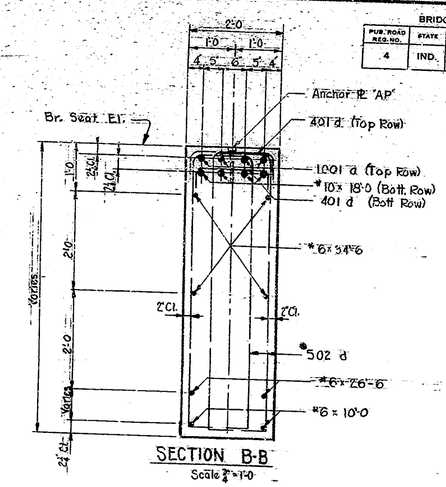
Showing Concrete Dimensions Showing Reinforcing Steel

EAST ELEVATION



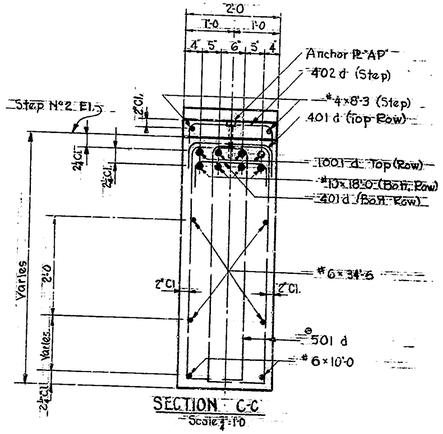
Max. Pile Bearing = 23.8 Tons / Pile

SECTION A-A



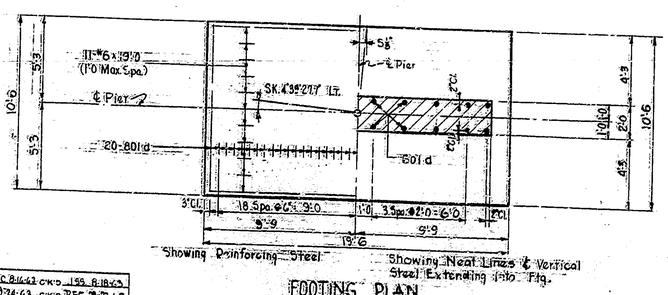
SECTION B-B

Scale 3/4" = 1'-0



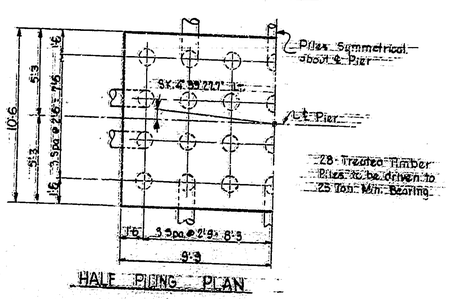
SECTION C-C

Scale 3/4" = 1'-0



Showing Reinforcing Steel Showing Neat Lines & Vertical Steel Extending into Ftg.

FOOTING PLAN



HALF PILING PLAN

NOTES:

For Bill of Materials, See Dwg. S 9.
For Reinforcing Bar Notes, See Br. Std. C1.
Anchor Plates "AP" are to be preset in the Concrete
Indicates that piles are to be battered 1:4 in the direction shown.
℄ Indicates cutting and bending diagrams required, See Dwg. S 9.

BRIDGES OVER 20' SPAN

PUB. ROAD REQ. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	FUE 65 2(66) 117	1963	98	140

DESIGNED F.E.C. 8-14-63 C'K'D J.S.S. 8-18-63
DRAWN W.H.S. 9-24-63 C'K'D F.E.C. 9-27-63
TRACED C'K'D

PIER N° 3 DETAILS

INDIANA STATE HIGHWAY COMMISSION

SCALE: 1/4"-1'-0 UNLESS NOTED

OCTOBER 10, 1963

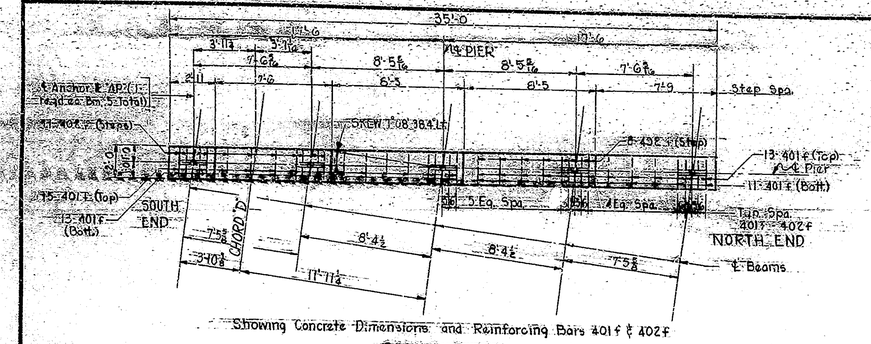
SUBMITTED FOR APPROVAL: James D. Mattis

DRAWING S 7 OF 21

PROJECT: I-FU-65-3(66)117

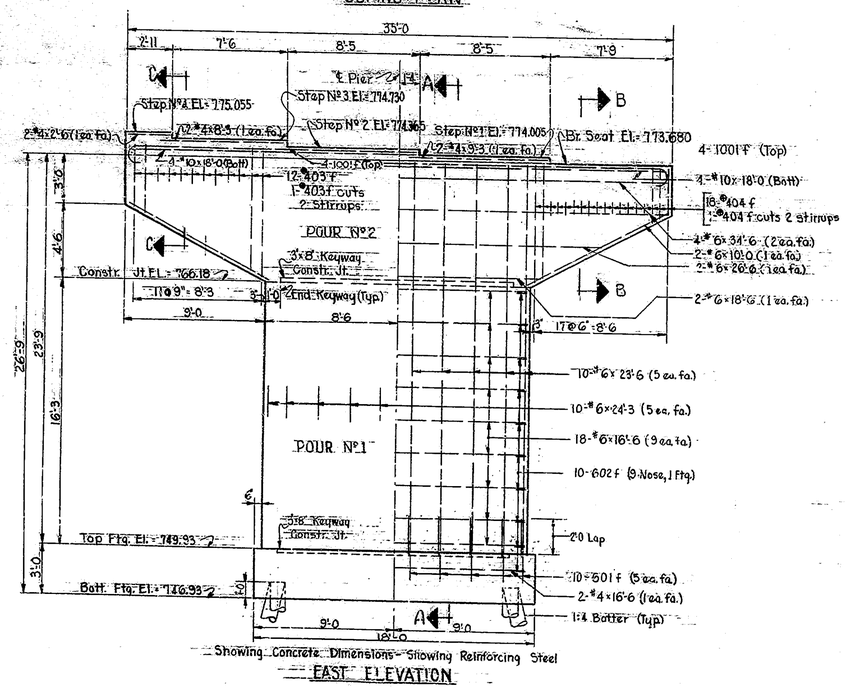
BRIDGE CONTRACT NO. R-6333

BRIDGE FILE: I-65-119-2814 J

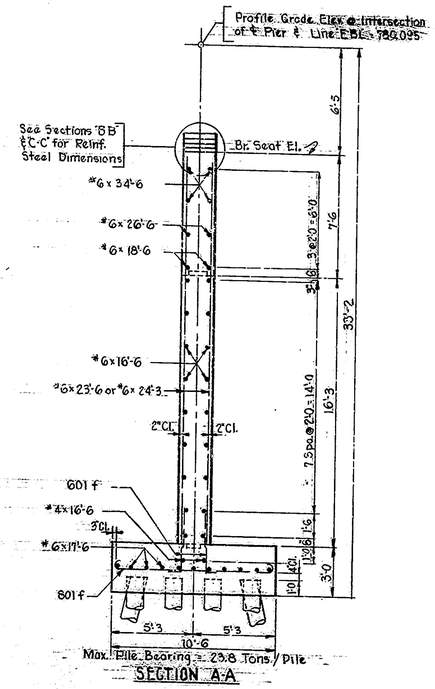


Showing Concrete Dimensions and Reinforcing Bars 401 f & 402 f

COPING PLAN

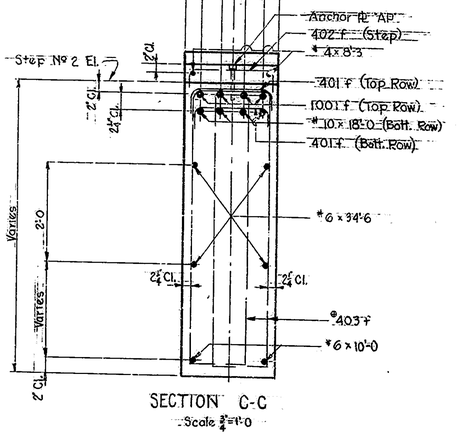


EAST ELEVATION



Max. Pile Bearing = 23.8 Tons / Pile

SECTION A-A

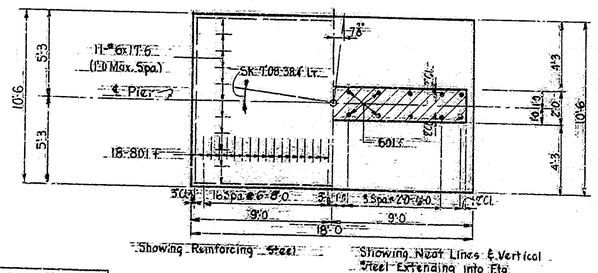


SECTION B-B

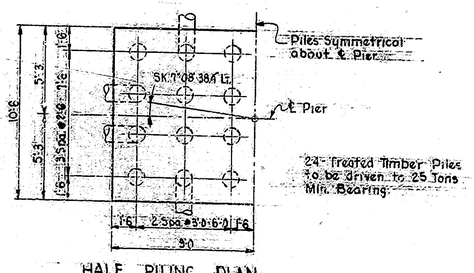
Scale ¾"=1'-0

SECTION C-C

Scale ¾"=1'-0



FOOTING PLAN



HALF PILING PLAN

NOTES:-

For Bill of Materials, See Drwg. S 9.
For Reinforcing Bar Notes, See Br. Std. C1.
Anchor Plates AP are to be preset in the concrete.
⊏ Indicates that piles are to be battered 1:4 in the direction shown.
⊖ Indicates cutting and bending diagrams required; See Drwg S 9.

PIER No 4 DETAILS

INDIANA STATE HIGHWAY COMMISSION

SCALE: 1"=1'0" UNLESS NOTED — OCTOBER 10, 1963

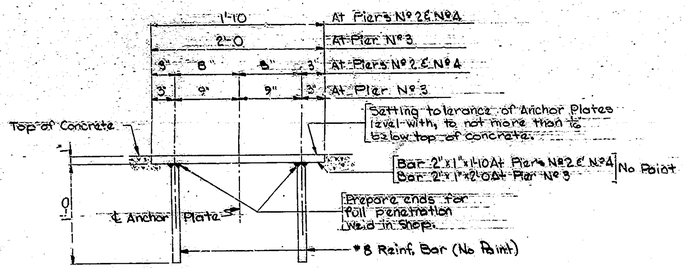
SUBMITTED FOR APPROVAL: James D. Mattes

DRAWING S 8 OF 21
PROJECT: I-UI-65-3(117)
BRIDGE CONTRACT NO. R-6333
BRIDGE FILE: I-65-119-2314

DESIGNED REC 9-16 CK'D JSS 8-19-63
DRAWN WHS 9-21-63 CK'D REC 9-24-63
TRACED ____ CK'D ____

BRIDGES OVER 20' SPAN

PUB. ROAD DES. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	3-03-65 S(46)117	1963	100	140

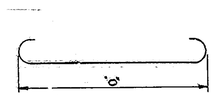


ANCHOR PLATE "AP" DETAIL

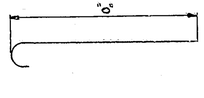
Not to scale



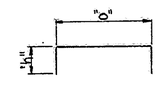
Mark	"h"	"b"	Length
701c	9'-9	10"	10'-7
702c	4'-5	10"	5'-1
601d	3'-11	8"	4'-7
601f	3'-8	8"	4'-4



Mark	"o"	Length
901c	12'-0	14'-6
801d	10'-0	12'-2
801f		



Mark	"o"	Length
1001c		
1001d	18'-4"	19'-9
1001f		



Mark	"o"	"h"	Length
601c	1'-6	6"	2'-6
602d	1'-6½	6¼"	2'-7
602f			
401c			
401d	11'-9	6"	2'-9
401f			
402c			
402d	11'-9	10"	3'-5
402f			

BILL OF MATERIALS
PIER Nº 2

REINFORCING STEEL

Size & Mark	No of Bars	Length	Weight
1001c	8	19'-9	
*10	8	18'-0	
	Total	*10	1300 Lb.
901c	34	14'-6	1676 Lb.
701c	32	10'-7	
702c	36	5'-1	
*7	10	21'-9	
*7	10	21'-0	
*7	16	11'-9	
	Total	*7	2324 Lb.
601c	18	2'-6	
*6	4	34'-6	
*6	2	26'-6	
*6	2	18'-6	
*6	13	17'-6	
*6	16	16'-6	
*6	4	10'-0	
	Total	*6	1208 Lb.
401c	52	2'-9	
402c	19	3'-5	
*403c	12	27'-7	
*404c	18	24'-6	
*4	2	16'-6	
*4	2	9'-3	
*4	2	8'-3	
*4	2	2'-6	
	Total	*4	703 Lb.
	Total	Steel	7211 Lb.

CONCRETE

Class "F" (Pour Nº 2)	17.9 cys.
Class "E" Abv. Ftg. (Pour Nº 1)	17.3 cys.
Class "E" In Ftg.	27.1 cys.

MISCELLANEOUS

Anchor Plates "AP"	5 Each
24-Treated Timber Piles x 25'-0 (Approx.)	600 Lin. Ft.

BILL OF MATERIALS
PIER Nº 3

REINFORCING STEEL

Size & Mark	No of Bars	Length	Weight
1001d	8	19'-9	
*10	8	18'-0	
	Total	*10	1300 Lb.
901d	39	12'-2	1267 Lb.
601d	20	4'-7	
602d	20	2'-7	
*6	4	34'-6	
*6	2	26'-6	
*6	10	24'-0	
*6	10	23'-3	
*6	11	19'-5	
*6	2	18'-6	
*6	18	16'-6	
*6	4	10'-0	
	Total	*6	2088 Lb.
501d	11	28'-0	
*502d	15	23'-4	
	Total	*5	718 Lb.
401d	52	2'-9	
402d	19	3'-5	
*4	2	16'-6	
*4	2	9'-3	
*4	2	8'-3	
*4	2	2'-6	
	Total	*4	888 Lb.
	Total	Steel	5561 Lb.

CONCRETE

Class "F" (Pour Nº 2)	17.9 cys.
Class "E" Abv. Ftg. (Pour Nº 1)	20.1 cys.
Class "E" In Ftg.	24.6 cys.

MISCELLANEOUS

Anchor Plates "AP"	5 Each
28-Treated Timber Piles x 25'-0 (Approx.)	700 Lin. Ft.

BILL OF MATERIALS
PIER Nº 4

REINFORCING STEEL

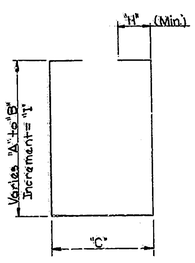
Size & Mark	No of Bars	Length	Weight
1001f	8	19'-9	
*10	8	18'-0	
	Total	*10	1300 Lb.
901f	36	12'-2	1169 Lb.
601f	20	4'-4	
602f	20	2'-7	
*6	4	34'-6	
*6	2	26'-6	
*6	10	24'-3	
*6	10	23'-6	
*6	2	18'-6	
*6	11	17'-6	
*6	18	16'-6	
*6	4	10'-0	
	Total	*6	2063 Lb.
401f	52	2'-9	
402f	19	3'-5	
*403f	12	27'-7	
*404f	18	24'-6	
*4	2	16'-6	
*4	2	9'-3	
*4	2	8'-3	
*4	2	2'-6	
	Total	*4	703 Lb.
	Total	Steel	5235 Lb.

CONCRETE

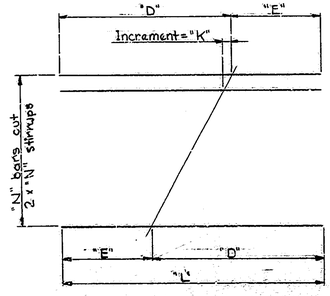
Class "F" (Pour Nº 2)	18.0 cys.
Class "E" Abv. Ftg. (Pour Nº 1)	20.5 cys.
Class "E" In Ftg.	21.0 cys.

MISCELLANEOUS

Anchor Plates "AP"	5 Each
24-Treated Timber Piles x 25'-0 (Approx.)	600 Lin. Ft.



BENDING DIAGRAM



CUTTING DIAGRAM

Mark	"A"	"B"	"C"	"H"	"I"	"K"	"N"	"D"	"E"	"L"
*501d	9'-7½	7'-9½	1'-3½	7"	5"	10"	11	16'-9	9'-11	28'-0
*502d	9'-0½	7'-1"	1'-3½	7"	3½"	7"	15	16'-9	8'-7	25'-4
*403c	3'-8½	1'-9½	1'-3	6"	4½"	9"	12	17'-11	9'-8	27'-7
*403f										
*404c	2'-10½	7'-1½	1'-3	6"	3"	6"	18	16'-6	8'-0	24'-6
*404f										

NOTES:
For Reinforcing Bar Notes, see Br. Std. C.
Anchor Plates "AP" are to be preset in the concrete.
*Indicates Cutting and Bending Diagrams are required.
See Diagrams on this Drwg.

PIERS Nº 2, Nº 3 & Nº 4
BILLS OF MATERIALS

INDIANA STATE HIGHWAY COMMISSION

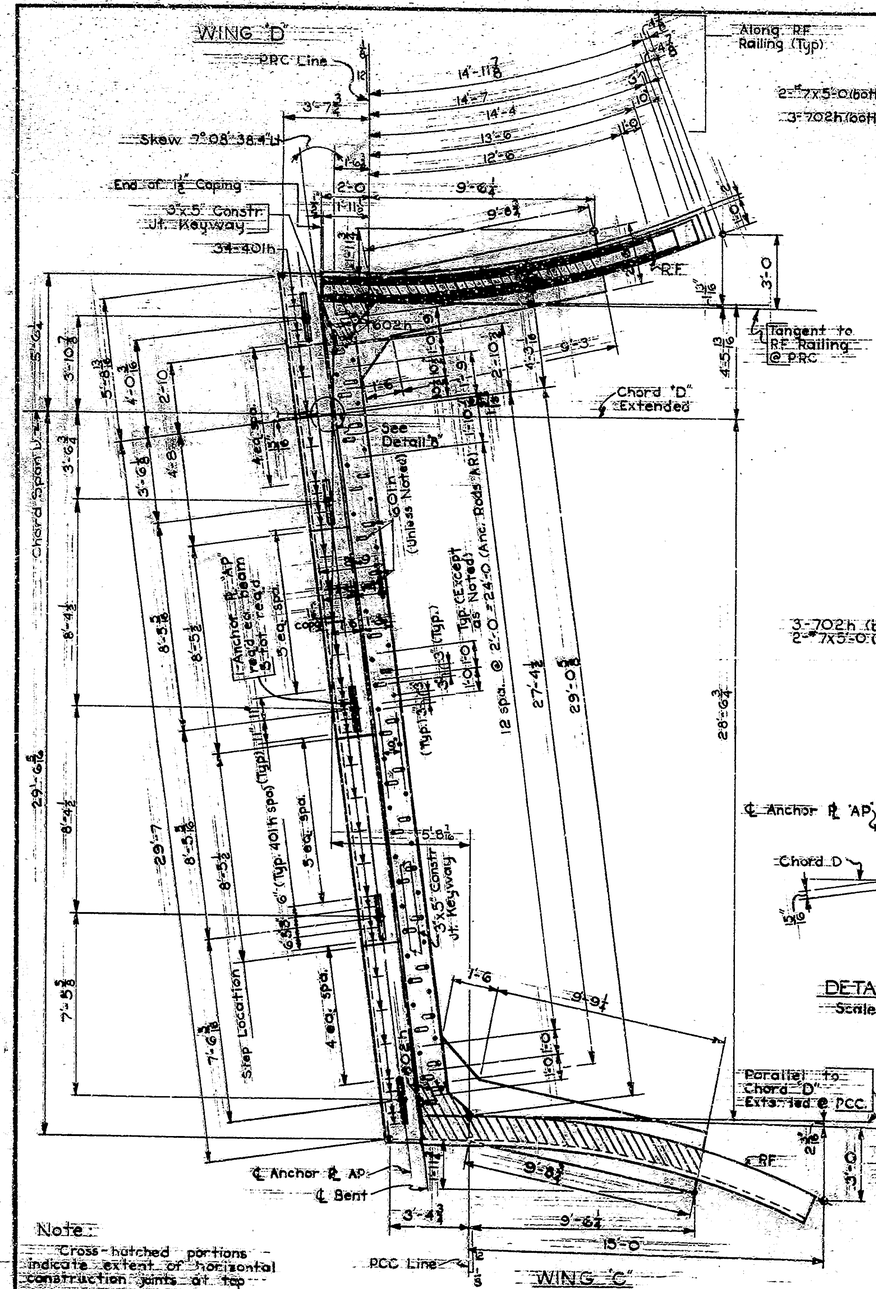
SCALE: NOT TO SCALE — OCTOBER 10, 1963

SUBMITTED FOR APPROVAL: James D. Mathis

DRAWING: S 9 OF 21
PROJECT: I-LUT-65-3 (46) 117
BRIDGE CONTRACT NO. R-6333
BRIDGE FILE: I-65-119-2.94 J

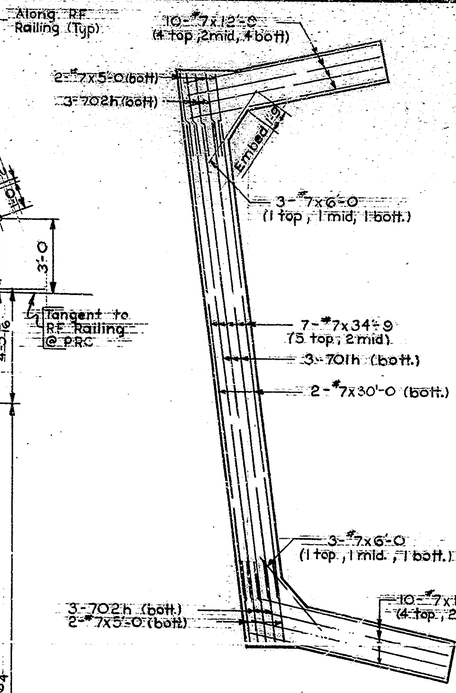
DESIGNED ____ C'K'D ____
DRAWN: DD 9-26-63 C'K'D REC 9-27-63
TRACED ____ C'K'D ____

BRIDGES OVER 20' SPAN					
PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-UI-65 3(46)117	1963	101	140

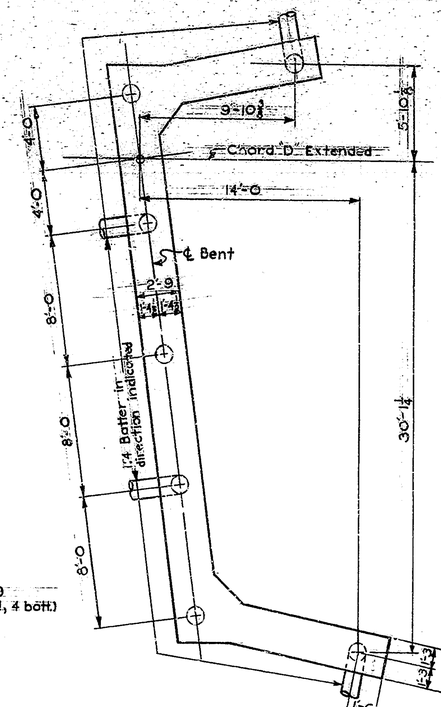


Note:
Cross-hatched portions indicate extent of horizontal construction joints at top cap.

PLAN BENT Nº5
Showing concrete dimensions, reinforcing bars 401h (top), 601h, 602h and Anchor Rods MK AR
Scale: 1/4"=1'-0

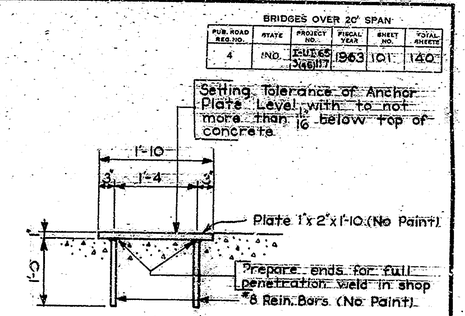


PLAN BENT Nº5
Showing Cap longitudinal reinforcing steel
Scale: 1/4"=1'-0

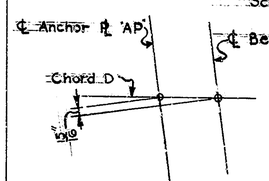


7-14"ϕ Steel Encased Concrete Piles to be Driven to 40 Ton Minimum Bearing.

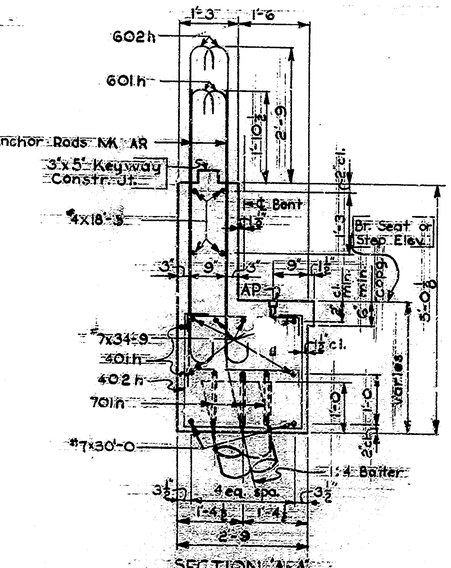
PILING PLAN BENT Nº5



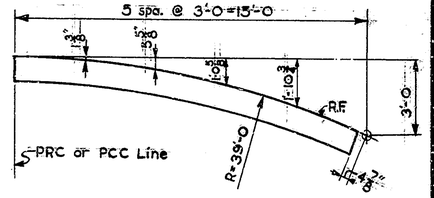
DETAIL of ANCHOR PLATE "AP"
Scale: 1"=1'-0



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



SECTION "A-A"
Scale: 1/4"=1'-0



OFFSETS to REAR FACE WALL WING "C"
Wing "D" Same by Opp. Hand
Scale: 1/8"=1'-0

Notes:
Anchor Plates "AP" to be pre-set in concrete
For Reinforcing Bar Notes see Br. Std. "C"
For additional details & location of Sec. A-A, see Drwg. 5 11.
For Bill of Materials see Drwg. 5 11.
Bent Cap is not to be poured until after fill has been completed up to approximate elevation of the bottom of cap.

BENT Nº5 DETAILS
INDIANA STATE HIGHWAY COMMISSION

SCALE:- As Noted — OCTOBER 10, 1963

SUBMITTED FOR APPROVAL: James D. Martin

DRAWING 5 10 OF 21

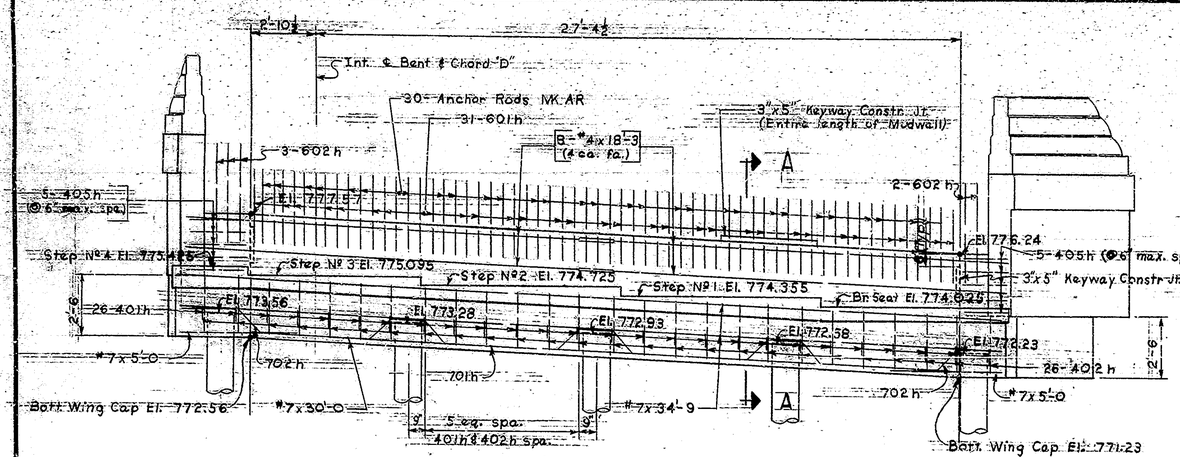
PROJECT:- I-UI-63-3(46)117

BRIDGE CONTRACT NO. R-6335

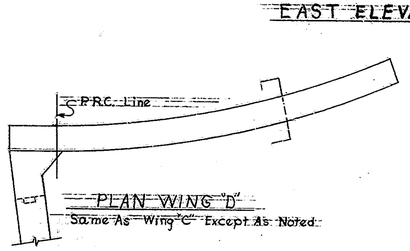
BRIDGE FILE:- I-65-119-2314

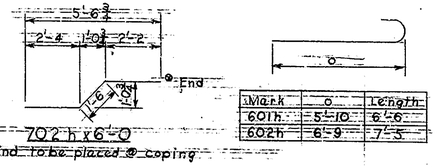
DESIGNED JSS 9-63 CKD WHS 9-12-63
DRAWN CRP 10-1-63 CKD JSS 10-3-63
TRACED ____ CKD ____

BRIDGES OVER 20' SPAN					
PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-65-3(40)117	1963	102	140



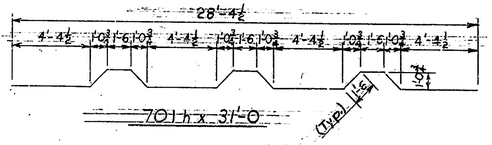
EAST ELEVATION BENT No 5



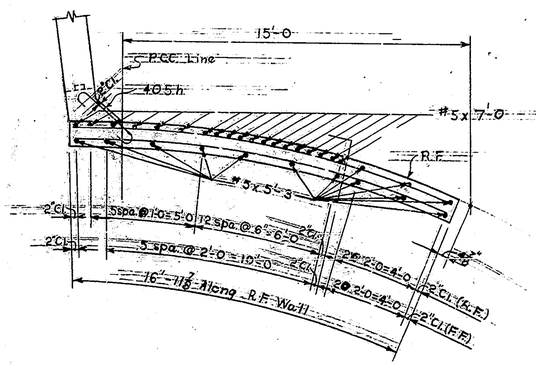


Mark	o	Length
601h	5'-10"	6'-6"
602h	6'-9"	7'-5"

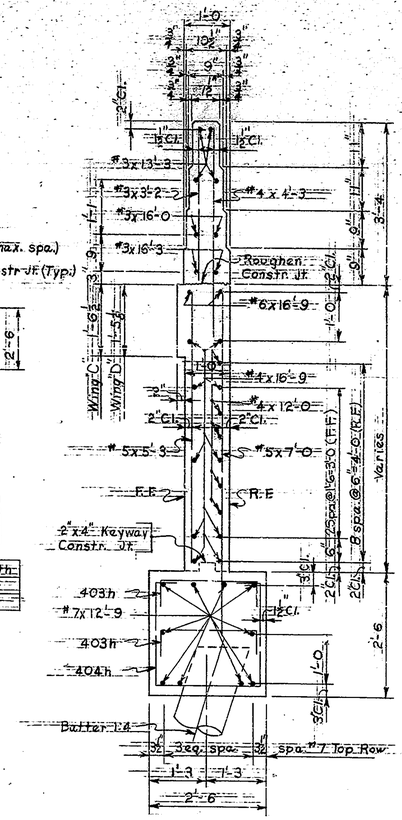
702h x 6'-0"



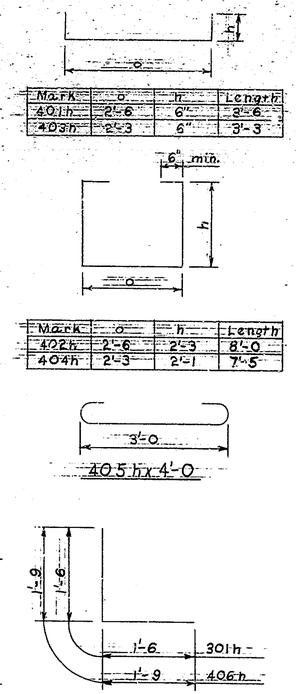
701h x 31'-0



PLAN WING "C"



SECTION "B-B"
Scale: ¾"=1'-0



Mark	o	h	Length
401h	2'-6"	6"	2'-6"
403h	2'-3"	6"	3'-3"

Mark	o	h	Length
402h	2'-6"	2'-3"	8'-0"
404h	2'-3"	2'-1"	7'-5"

405h x 4'-0"

301h x 3'-0
406h x 3'-6

BILL OF MATERIALS

REINFORCING STEEL

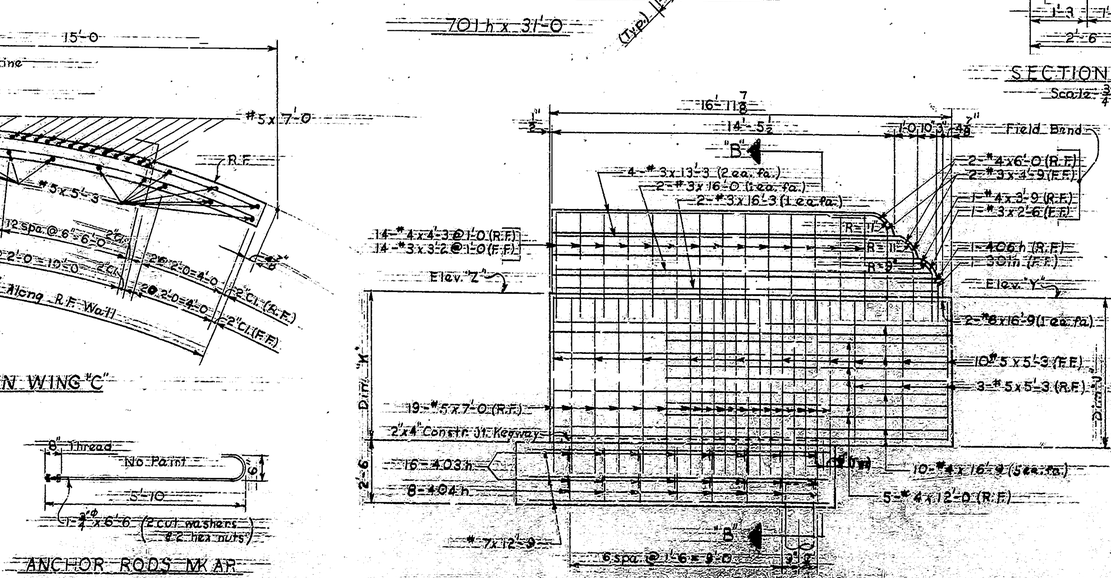
Size & Mark	No. of Bars	Length	Weight
601h	3	31'-0"	
702h	6	6'-0"	
#7	7	34'-9"	
#7	2	30'-0"	
#7	20	12'-9"	
#7	6	6'-0"	
#7	4	5'-0"	
#7	Total	#7	1819#
601h	31	6'-6"	
602h	5	7'-5"	
#6	4	6'-9"	
	Total	#6	459#
#5	38	7'-0"	
#5	26	5'-3"	
	Total	#5	420#
401h	60	3'-6"	
402h	26	8'-0"	
403h	32	3'-3"	
404h	16	7'-5"	
405h	10	4'-0"	
406h	2	3'-6"	
#4	8	R-3	
#4	20	16'-9"	
#4	10	12'-0"	
#4	4	6'-0"	
#4	28	4'-3"	
#4	2	3'-9"	
#4	Total	#4	961#
301h	2	31'-0"	
#3	4	16'-3"	
#3	4	16'-0"	
#3	8	13'-3"	
#3	4	4'-8"	
#3	28	3'-2"	
#3	2	2'-6"	
#3	Total	#3	179#
	Total	Steel	3492#

CONCRETE

Class "F"	
Pour No 1	167 Cys.
Pour No 2	4.0 Cys.
Pour No 3	4.0 Cys.
Total Class "F" (Except Railing Concrete)	176.2 Cys.
Railing Concrete (Rt & Left Hd) @ 1.55 Cys.	5.1 Cys.

MISCELLANEOUS

7-1¼" ø Steel Encased Conc. Piles (Tgt. @ 38 Tons Approx.)	245 Lft.
2" ø Steel Conduit (Wing "D" only)	20 Lft.
2" ø Anchor Rods-MK AR (@ 10.5" ea. approx.)	30 ea.
Anchor Plates-AP	5 ea.



TYPICAL WING DETAILS

TABLE OF ELEVATIONS		
Wing	Elev. "Y"	Elev. "Z"
C	779.32	779.50
D	780.67	780.83

WING WALL HEIGHTS		
Wing	Dim. "X"	Dim. "A"
C	5'-7"	5'-9"
D	7'-1"	5'-9"

ANCHOR RODS MK AR

POUR DESIGNATION

Pour No 1 - Main Caps, Wing Caps and Mudwall between vertical Constr. Joints.
Pour No 2 - Wingwall "C" and Mudwall outside vertical Constr. Joint.
Pour No 3 - Wingwall "D" and Mudwall outside vertical Constr. Joint.

NOTES:

For Reinforcing Bar Notes, see Bn Std "C."
For Additional Details & Section A-A, see Drwg. 510.

BENT No 5 DETAILS & BILL OF MATERIALS

INDIANA STATE HIGHWAY COMMISSION

SCALE: ¾"=1'-0 Unless Noted — OCTOBER 10, 1963

SUBMITTED FOR APPROVAL: James D. Mattis

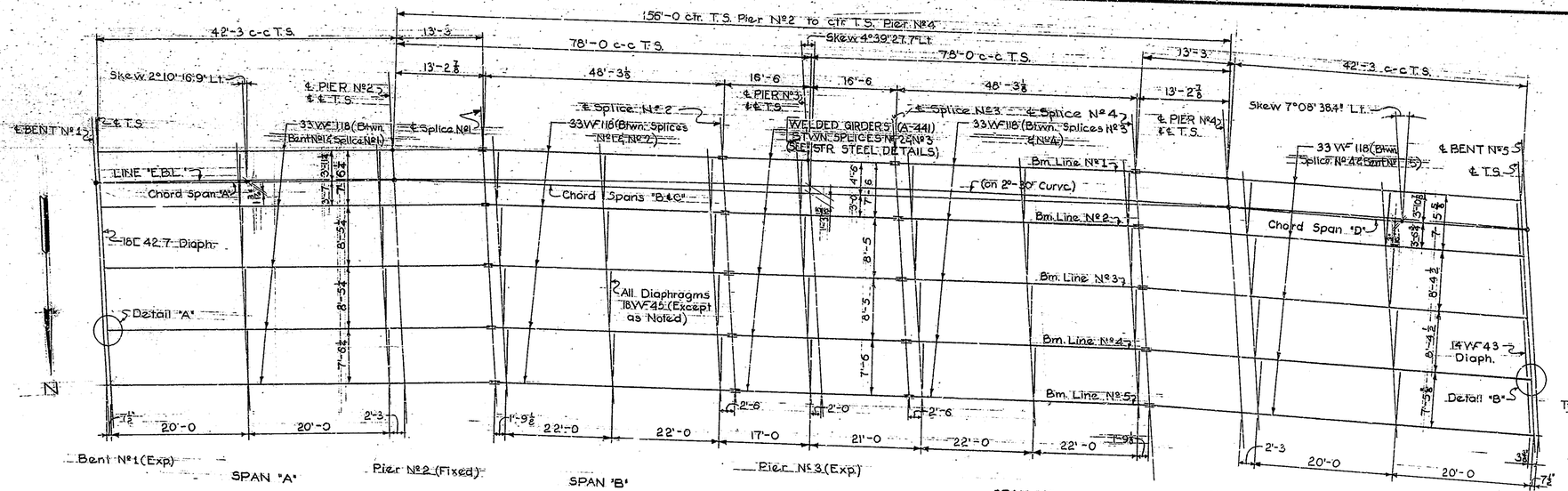
DRAWING 511 OF 21

PROJECT:- I-DI-65-3(40)117

BRIDGE CONTRACT NO. R-6333

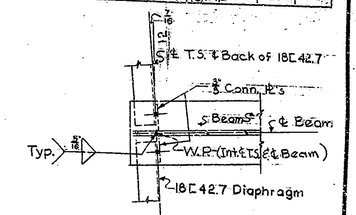
BRIDGE FILE:- I-65-119.2814J

DESIGNED 9-9-63 CKD WHB 9-9-63
DRAWN EW 10-1-63 CKD SS 10-3-63
TRACED CKD

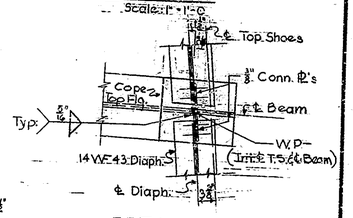


FRAMING PLAN
Not to Scale

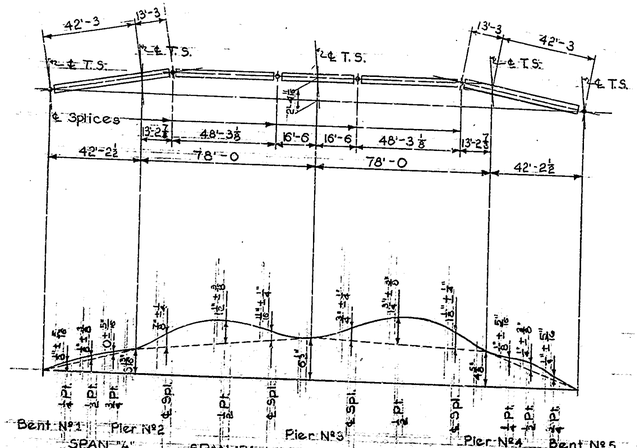
BRIDGES OVER 20' SPAN					
PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-UI-65 3(46)117	1963	103	140



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



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



NO LOAD CAMBER & REAMING DIAGRAM
Not to Scale

DATA USED FOR DESIGN AND DETAILS

LIVE LOADS: H 20-S 16-44 loading with impact and distribution of loads in accordance with 1961 AASHO Specifications.

DEAD LOADS: Actual weight plus 35 pounds per sq ft of roadway to provide for future wearing surface.

SLAB: Designed for H 20 truck loading single live load plus impact in accordance with 1961 AASHO Specifications. Allows for ½" monolithic wearing surface.

UNIT STRESSES:

Structural Steel Bending (Tension) AS TM-A-36	20,000 psi.
Structural Steel Bending (Tension) AS TM-A-441	
Thickness Over ¾" to 1½" incl.	24,000 psi.
Thickness Over 1½" to 4" incl.	22,000 psi.
Shear on Rivets	13,500 psi.
Butt Welds (Tension, Thickness Over ¾" to 1½" incl.)	24,000 psi.
Shear in Fillet Welds	
For Base Metal A-36	13,800 psi.
For Base Metal A-441 (Over ¾" to 1½" incl.)	16,500 psi.
For Base Metal A-441 (Over 1¼" to 4" incl.)	15,200 psi.
Structural Steel Bearing (Not Incl. Rivets)	29,500 psi.
Str. Steel Brg. on Power Driven Rivets & Torqued Bolts	40,000 psi.
Brg. Steel on Conc. (Incl. Overturning & eccentric loading)	1,000 psi.
Reinforcing Steel (Tension)	20,000 psi.
Concrete (Compression)	1,200 psi.

FABRICATION NOTES

1. Rivets ⅞" ϕ Unless noted.
2. Open Holes ⅞" ϕ Unless noted.
3. No Paint on Anchor Plates "AP".
4. All paint shall be in accordance with current State Highway Specifications.
   Shop Paint: One coat of Red Lead, Type I or II, Except as noted.
   Field Paint: Two Coats of Aluminum.
5. Beams must be cambered to a smooth curve. Camber must be checked while supported in such a way as to have no bending moment in the direction of camber.
6. Holes for Beam Splices shall be Subpunched or Subdrilled and Reamed to size while assembled. See Article E 1103.18(d) of the Specifications.
7. 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 NO-LOAD CAMBER & REAMING DIAGRAM. If the beams are shop reamed or drilled, full size drift pins shall be used in erection. A minimum of one line of beams shall be shop assembled with the webs vertical and inspected for fit.
8. The shop details shall show a plan of match-marking for all reamed pieces.
9. All splice plates to be removed, cleaned and painted after reaming. Splice plates shall not extend beyond the end of the beam after bolting for Shipment.
10. Flange Splice bars shall have planed or rolled edges and holes in bars shall be subdrilled and reamed or drilled full size while assembled.
11. All structural steel shall be erected and beams adjusted to their true elevations before driving rivets in beam field splices. The elevations shall be checked with splices connected by full size drift pins and erection bolts and with beam unsupported by any falsework. See "Table of Splice Elevations," Drwg. S 13.
12. Holes in all material connecting Top Shoes to Beam Flanges to be 1" diameter. Bolts connecting Beam Flange to Top Shoe shall extend into Top Shoe a minimum of 1 inch.
13. 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 five (5) copies of these to the Engineer. See Article E 1103.2 of the Specifications.
14. All welding shall conform to the provisions of Article E 1103.28 of the Specifications and Special Provisions, unless otherwise noted.
15. As soon as the Engineer has approved the field welds, all welds and any surface from which the shop coat has been omitted or become 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.
16. Welded stud shear connectors may be used in lieu of channel shear connectors. If welded stud shear connectors are used, the Contractor shall prepare design computations and structural steel details and submit five (5) copies of these to the Engineer.
17. Temporary stiffeners to be used for jigs and/or warpage control shall not be tack welded to the flange material. Tacking to the web may be done if the tack welds are at least one sixth of the web depth away from the flange. The tack weld shall be removed by grinding flush to the parent metal.
18. When the beam sections are fit up in the shop for reaming or drilling of field splices, the centerlines of opposing flanges shall not deviate more than ⅛ inch when the webs are in alignment.
19. All structural steel to be Structural Carbon Steel A.S.T.M. A 36 unless otherwise noted.
20. Weight of Structural Steel (estimated) 211,800 # (Includes 4,800 # for steel toothed expansion joint.)

TABLE OF MAXIMUM MOMENTS

	Pos. Mom. @ 0.4 Pt. Span "A" ft.-kips			Pos. Mom. @ 0.5 Pt. Span "B" ft.-kips			Neg. Mom. @ R_2 ft.-kips			Neg. Mom. @ R_3 ft.-kips		
	Rt. 0.5 Bm.	Int. Bm.	Lt. 0.5 Bm.	Rt. 0.5 Bm.	Int. Bm.	Lt. 0.5 Bm.	Rt. 0.5 Bm.	Int. Bm.	Lt. 0.5 Bm.	Rt. 0.5 Bm.	Int. Bm.	Lt. 0.5 Bm.
DL. on Steel Section	74.6	50.2	39.6	276.0	253.5	275.0	433.5	377.4	389.4	642.7	600.0	664.4
DL. on Composite Section	23.5	23.5	23.5	99.5	99.5	99.5	103.9	103.9	103.9	159.7	159.7	159.7
L.L. on Composite Section	245.4	294.3	245.4	501.5	600.5	501.5	274.3	329.7	274.3	365.0	437.3	365.0
Imp. on Composite Section	73.6	87.9	73.6	123.2	148.0	123.2	74.0	87.6	74.0	90.0	107.6	90.0
Total	417.1	455.9	382.3	1000.2	1101.5	999.2	885.7	898.6	841.6	1257.4	1304.6	1279.1

TABLE OF REACTIONS

	Reaction @ R_1 kips			Reaction @ R_2 kips			Reaction @ R_3 kips			Reaction @ R_4 kips		
	Rt. 0.5 Bm.	Int. Bm.	Lt. 0.5 Bm.	Rt. 0.5 Bm.	Int. Bm.	Lt. 0.5 Bm.	Rt. 0.5 Bm.	Int. Bm.	Lt. 0.5 Bm.	Rt. 0.5 Bm.	Int. Bm.	Lt. 0.5 Bm.
DL. on Steel Section	11.20	10.90	10.07	74.93	63.98	64.62	86.59	81.83	92.28	66.28	5.75	6.26
DL. on Composite Section	3.75	3.75	3.75	19.42	19.42	19.42	24.36	24.36	24.36	1.74	1.69	1.88
L.L. on Composite Section	40.33	33.67	46.05	55.44	46.05	52.14	62.45	52.14	62.45	8.03	10.00	8.49
Imp. on Composite Section	10.10	12.11	10.10	12.40	14.59	12.40	12.62	15.35	12.62	2.10	2.47	2.09
Total	61.72	67.09	57.59	152.80	143.43	142.49	175.91	184.03	181.60	18.65	19.93	18.72

TABLE OF STRESSES

	Stresses @ 0.5 Pt. Span "B" Bott. Steel Fiber - ksi.
	Rt. 0.5 Bm.	Int. Bm.	Lt. 0.5 Bm.
DL. on Steel Section	8.03	10.00	8.49
DL. on Composite Section	2.10	2.47	2.09
L.L. on Composite Section	18.65	19.93	18.72

DESIGNED WHS 7-11-63 CKD ASS 7-24-63
DRAWN JK 8-5-63 CKD ASS 8-21-63
TRACED _____ CKD _____
CHECKED _____

FRAMING PLAN
INDIANA STATE HIGHWAY COMMISSION

SCALE:- As Noted — OCTOBER 10, 1963.

SUBMITTED FOR APPROVAL:- James D. Mathis

DRAWING:- S 12 OF 21

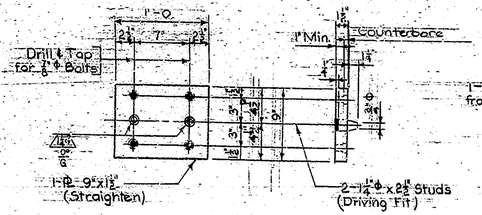
PROJECT:- I-UI-65-3(46)117

BRIDGE CONTRACT NO. R-6333

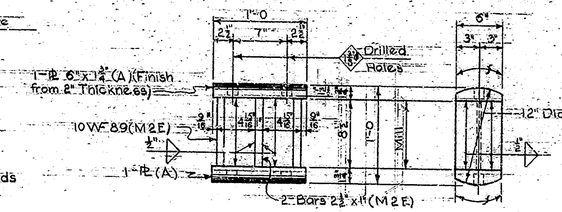
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HARRAUBH ENG. NO. 186

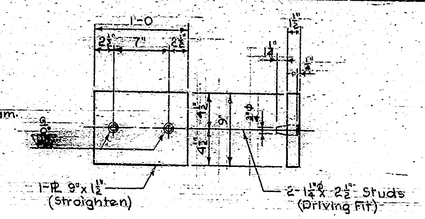
BRIDGES OVER 20' SPAN					
PRIM. ROAD SEC. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-UI-65 3(46)117	1963	104	140



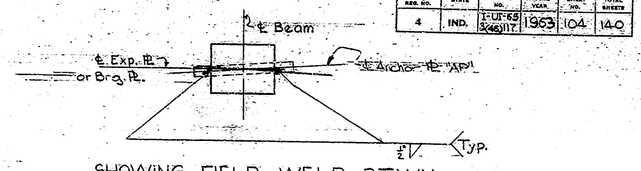
TOP SHOE @ BENTS Nº 1 & 5



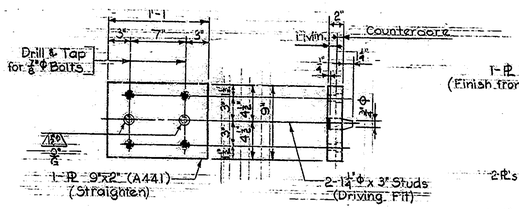
EXPANSION SHOE @ BENTS Nº 1 & 5



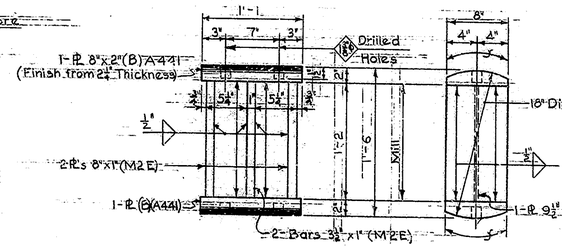
EXPANSION PLATE @ BENTS Nº 1 & 5



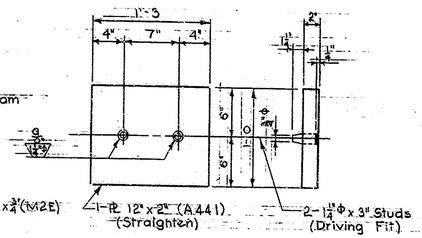
SHOWING FIELD WELD BTWN. SHOE AND ANCHOR PLATE "AP"



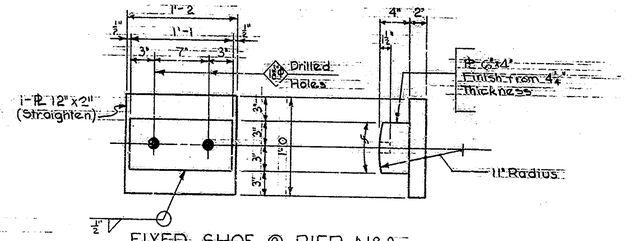
TOP SHOE @ PIERS Nº 2 & 4



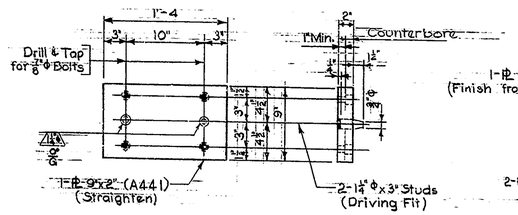
EXPANSION SHOE @ PIER Nº 4



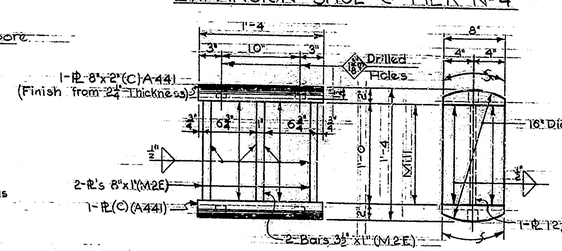
EXPANSION PLATE @ PIER Nº 4



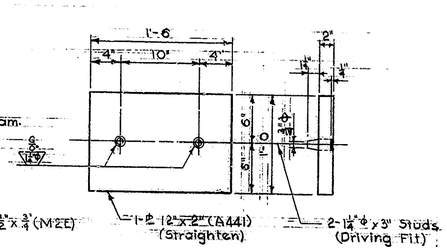
FIXED SHOE @ PIER Nº 2



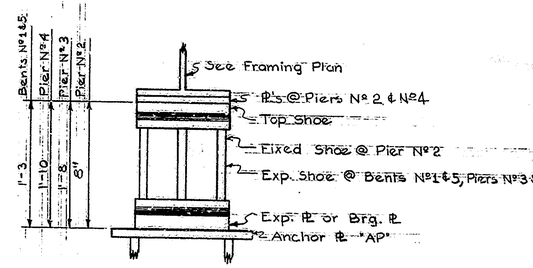
TOP SHOE @ PIER Nº 3



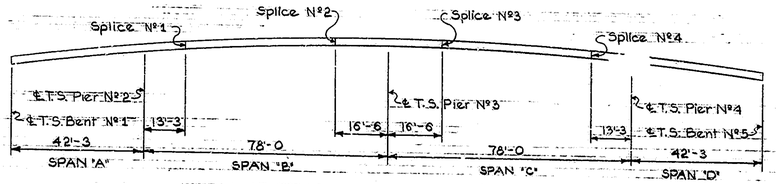
EXPANSION SHOE @ PIER Nº 3



EXPANSION PLATE @ PIER Nº 3



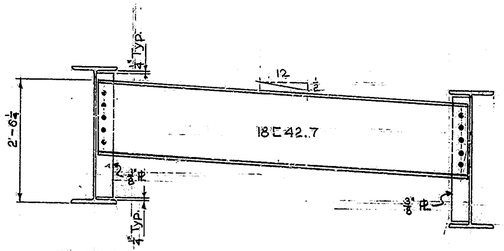
SHOE ASSEMBLY
Not to Scale



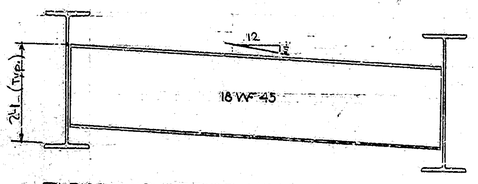
LOCATION OF SPLICES
Not to Scale

TABLE OF SPLICE ELEVATIONS					
Beam Line Nº	1	2	3	4	5
Splice Nº1	779.310	778.990	778.630	778.275	777.955
Splice Nº2	779.570	779.250	778.890	778.530	778.210
Splice Nº3	779.680	779.355	778.995	778.635	778.315
Splice Nº4	779.740	779.415	779.055	778.690	778.385

Note: Top of Splice elevation is the required elevation of the top of the top flange of the 33WF118 at the ℄ of the Splice.



TYPICAL DIAPHRAGM DETAIL @ BENT Nº 1
Scale: ¾"=1'-0



TYPICAL INTERIOR DIAPHRAGM DETAIL
Scale: ¾"=1'-0

NOTES:
Rivets ⅞" ϕ
Open Holes ⅞" ϕ Unless noted
For Fabrication notes see Drwg. S-12
For Screeds, Concrete D.L. Deflection & Shoe setting data, see Drwg. S-20
For Diaphragm Detail @ Bent Nº 5, See Drwg. S-16.
All Structural Steel to be ASTM-A36, unless noted.

STRUCTURAL STEEL DETAILS
INDIANA STATE HIGHWAY COMMISSION

SCALE: 1½"=1'-0, Except as noted. OCTOBER 10, 1963

SUBMITTED FOR APPROVAL: James D. Mattes

DRAWING: S 13 of 21
PROJECT: I-UI-65-3(46)117
BRIDGE CONTRACT NO. R-6333
BRIDGE FILE: I-65-119-23174 "J"

DESIGNED WHS 6-1-63 CHKD. ISS 6-7-63
DRAWN J.V.S. 12-63 CHKD. ISS 9-30-63
TRACED CHKD.

HARRAUGH ENG. NO. 186

BRIDGES OVER 20' SPAN					
FED. ROAD DES. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-UI-65 3(46)117	1963	105	140

Top Cover PL 9½"x1"

See Note "A"

5 E 1.5

2'-0 | 6'-6 | 5'-6 | 2'-0

Clip corners ½" to clear fillet Top & Bott. (Typ.)

Tight Fit (No Weld)

33 WF 118

PL 5"x½"

2-PLS 5"x½" 1-N.S., 1-F.S.

2-PLS 29"x7/16 1-N.S., 1-F.S.

2'-6⅛ | 12 @ 6" = 6'-0 | 10 @ 9" = 7'-6 | 5 @ 12" = 5'-0 | 5 @ 15" = 6'-3

Shear Conn. 5 E 6.7 (Typ.)

33 WF 118

Typ. ½-3

5/16 | 5/16

Typical Int. Diaphragm 18 WF 45 (See Framing Plan Drwg. 5)

9½"

5 E 6.7

4

Holes

Bott. Cover PL 13"x½"

See Note "A"

℄ Top Shoe Pier No 2 See Detail "C"

Holes

2'-0 | 6'-6 | 5'-6 | 2'-0 | 2 @ 3" = 6" | 4 @ 3" = 1'-0"

13'-3

13'-2⅞

42'-3 c-c T.S.

℄ Top Shoe Bent No 1

2° 29' 10.8"

W.P. Int. Splice & ℄ Bm.

1-PL ½"x11½" (Min.) ℄ Splice (Top & Bott.)

2 Bars ⅞"x42⅛" (Min.) (Top & Bott.)

See Note "A"

Bott. Cover PL 3½"x¾"

2'-0 | 33'-6

48'-3⅛

Note "A"
Return ends of welds around corners at ends of taper

5 @ 15" = 6'-3 | 5 @ 12" = 5'-0 | 10 @ 9" = 7'-6 | 12 @ 6" = 6'-0 | 2'-6

2-PLS 29"x7/16 1-N.S., 1-F.S.

Web PL 31⅜"x9/16 (A441)

33 WF 118

See Shop Flange Splice Detail

Web PL 31⅜"x9/16 (A441)

2-PLS 7"x¾" 1-N.S., 1-F.S.

Tight Fit (No Weld)

Clip Corners ½" Top & Bott. (Typ.)

PL 7"x¾"

33 WF 118

℄ Top Shoe Bent No 5

48'-3⅛

7'-3 | 6'-0 | 16'-6

33'-6 | 2'-0 | 2 @ 3" = 6" | 4 @ 3" = 1'-0" | 4 @ 3" = 1'-0" | 2 @ 3" = 6" | 1½" | 1½" | 2'-0 | 8'-6

AWS 220

W.P. Int. Splice & ℄ Bm.

2 Bars ⅞"x2"x2' (Top & bott.)

2-Fig. PLS 16"x1¼" 1-Top & 1-bott. (A441)

Symmetrical about Intersection ℄ Top Shoes, Pier No 3 & ℄ Bm. Unless Noted

W.P.

1-PL 11½"x½" (Top & bott.) ℄ Splice

2-Fig. PLS 11½"x½" 1-Top & 1-bott. (A441)

Holes

Holes

T.S.

W.P.

5/16

2" No Weld Typ.

2'-0

Return Weld around Corner

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

Grind to 4" Rad. (min)

PL 11½"x¼"

1" max. +0 -1/16

Thickness of metal at weld after grinding shall not be less than thinner flange.

Grind Flush

PL 16"x1¼" (A441)

6" (+1/16 -0")

SHOP FLANGE SPLICE DETAIL
Scale: 1"=1"

Notes
For Fabrication Notes See Drwg. 5.12.
All steel to be ASTM-A 36 except as noted.
Rivets are ¾" ø. Open holes are 1⅛" ø unless noted.

Note: AWS Prequalified Joints 22-D, 22-E, 22-F may be used in lieu of the joint shown.

STRUCTURAL STEEL DETAILS

INDIANA STATE HIGHWAY COMMISSION

SCALE: ¾"=1'-0 Unless Noted — OCTOBER 10, 1963

SUBMITTED FOR APPROVAL: James D. Mattes

DRAWING 5.14 of 21

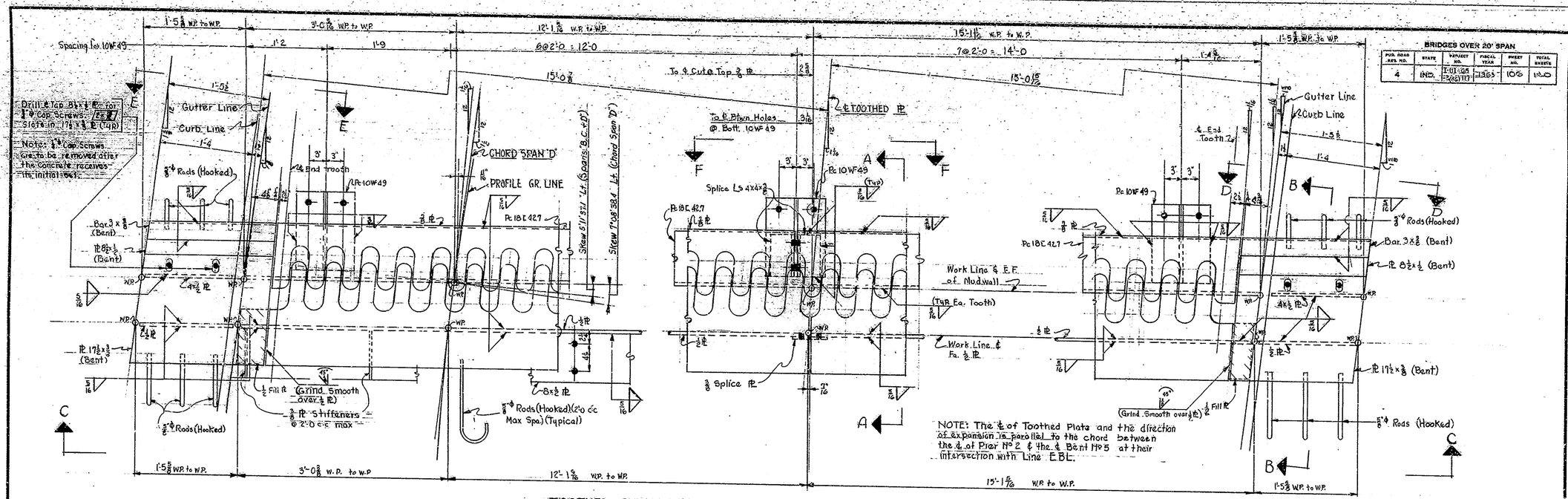
PROJECT: I-UI-65 3(46)117

BRIDGE CONTRACT NO. R-6335

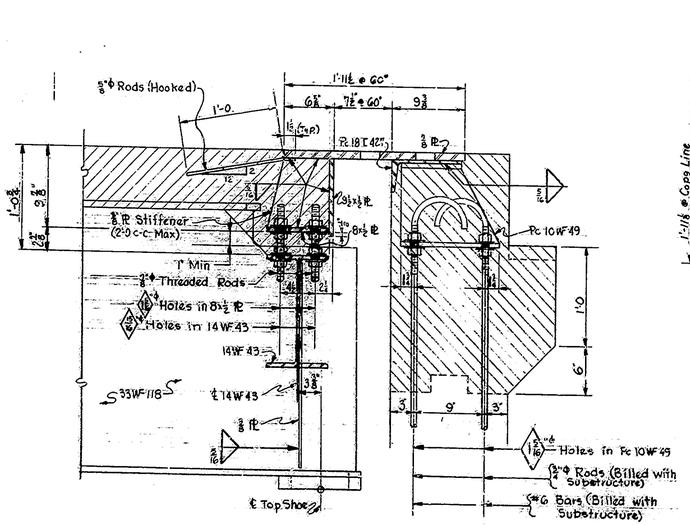
BRIDGE FILE: 1-63-119-2.314.0

DESIGNED JSS 7-18-63 CKD WAS 7-22-63
DRAWN CDP 8-9-63 CKD JSS 8-26-63
TRACED CKD

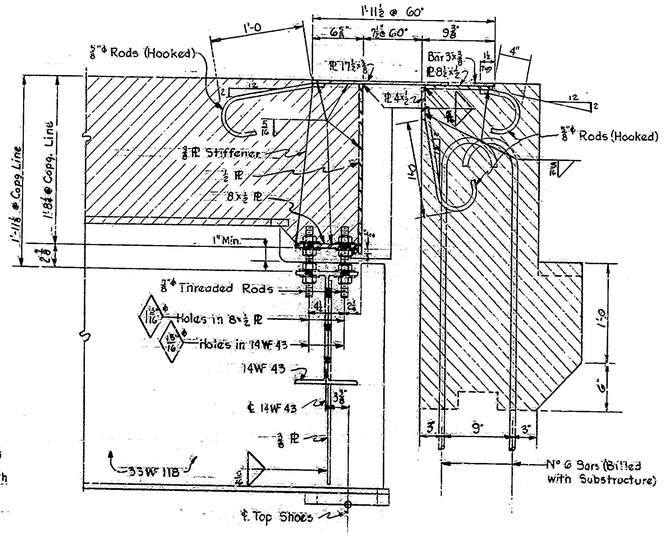
WARNAOEN ENG. NO. 166



TOOTHED EXPANSION JOINT DETAILS



SECTION A-A



SECTION B-B

NOTES:-

Rivets 3/4" ϕ, Unless noted.
Open holes 1 3/16" ϕ, unless noted.
All dimensions to cuts are given to ℄ cut. See Specifications Art. E 1103.13 regarding burning of toothed plates.
If curves in plates are flame cut they shall be ground smooth.
The toothed plates shall be match marked to maintain the same relative position before and after cutting.
The expansion joint shall be assembled in the shop in its relative position and inspected for fit.
For toothed expansion joint setting see TABLE II Drwg. 520.
For Fabrication Notes see Drwg. 512.
For additional details see Drwg. 516.
Estimated weight of structural steel in toothed expansion joint = 4,800 lbs.

TOOTHED EXPANSION JOINT DETAILS

INDIANA STATE HIGHWAY COMMISSION

SCALE:- 1 1/2"=1'-0 OCTOBER 10, 1963

SUBMITTED FOR APPROVAL:- James D. Mattis

DRAWING:- 8 OF 21

PROJECT:- I-01-65-3(46) 117

BRIDGE CONTRACT NO. R-6333

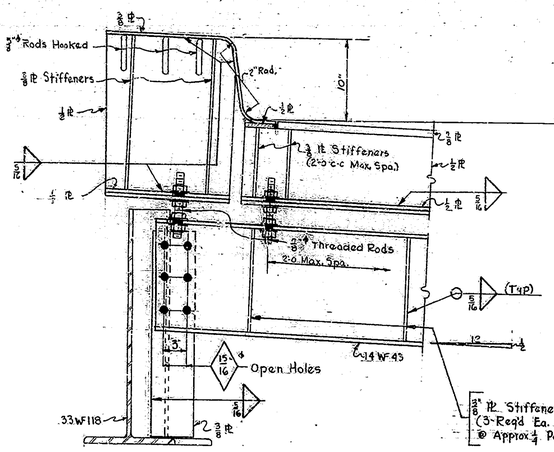
BRIDGE FILE:- I-65-119-2314 J

DESIGNED ____ C'K'D ____
DRAWN MHSB-15-63 C'K'D JSS 9-12-63
TRACED ____ C'K'D ____

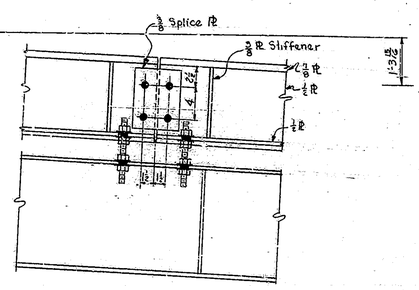
MARBURGH ENG. NO. 139

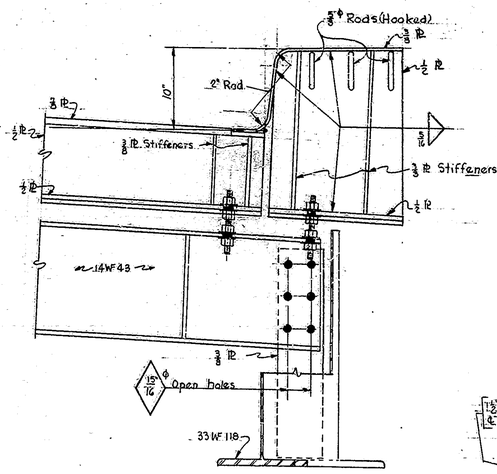
BRIDGES OVER 20' SPAN

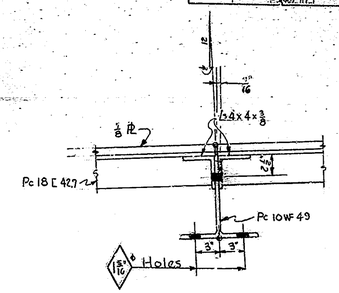
FED. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-IR-65-3(70) 117	1963	107	140



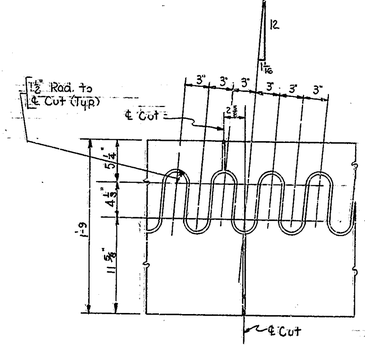
PART ELEVATION C-C



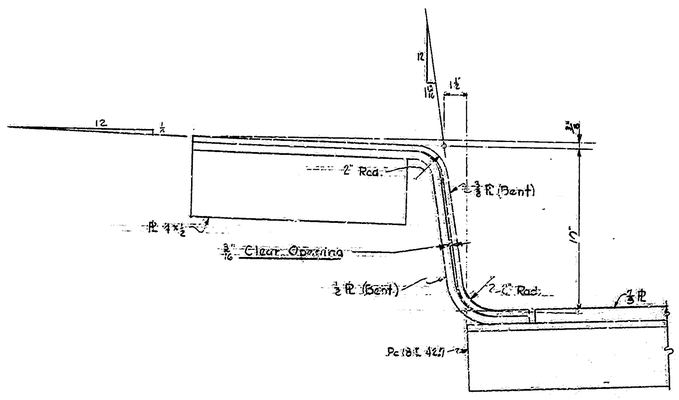




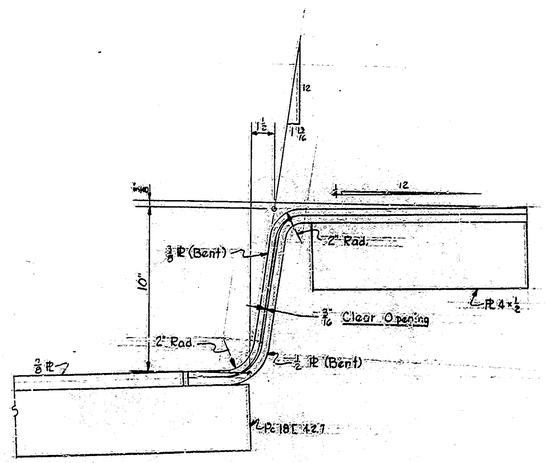
SECTION F-F



TYPICAL TOOTH DETAIL



ELEVATION D-D
Scale 3"=1'-0



ELEVATION E-E
Scale 3"=1'-0

NOTES:
Rivets ¾" ϕ unless noted.
Open holes 15/16" ϕ unless noted.
For Additional Details & Notes see Drwg S15

TOOTHED EXPANSION JOINT DETAILS

INDIANA STATE HIGHWAY COMMISSION

SCALE- 1½"=1'-0 UNLESS NOTED — OCTOBER 10, 1963

SUBMITTED FOR APPROVAL- James D. Mattis

DRAWING- 5160F21

PROJECT- I-IR-65-3(70) 117

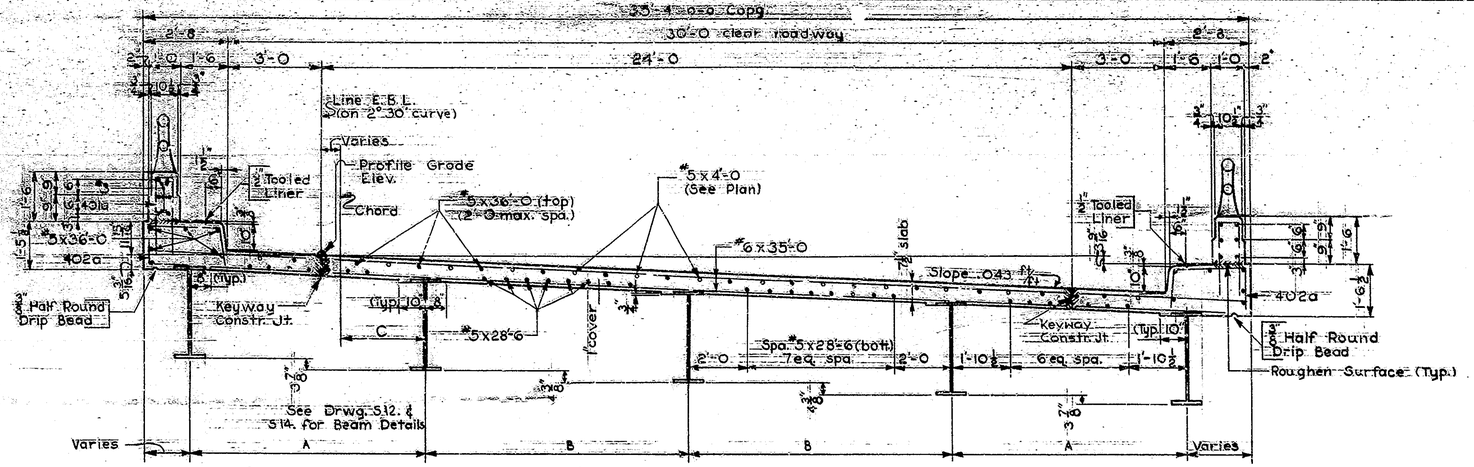
BRIDGE CONTRACT NO. R-6353

BRIDGE FILE- I-65-119-2314

DESIGNED — CKD.
DRAWN WHS 8-19-63 CKD. JSS 9-11-63
TRACED — CKD.

HARRISBURG ESTD. NO. 198

BRIDGES OVER 20' SPAN					
PUB. ROAD RTE. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-UI-65 (46)117	1963	109	140



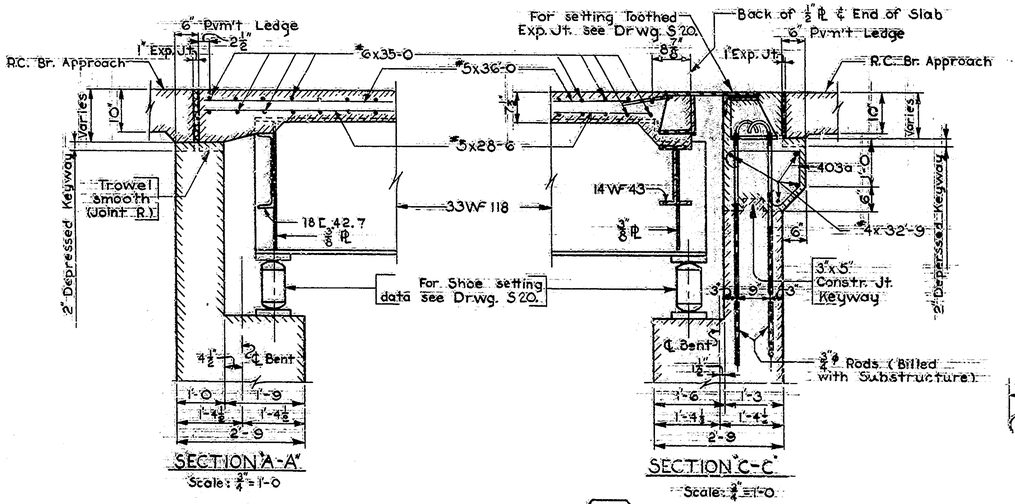
TYPICAL SECTION

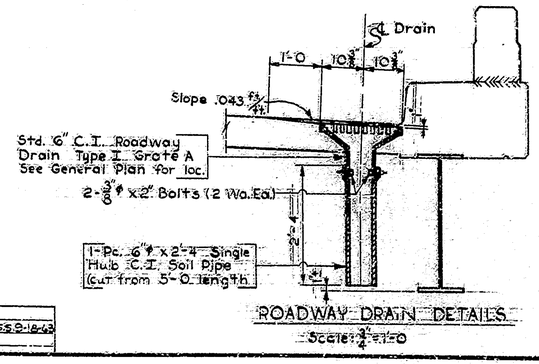
Scale: ½"=1'-0

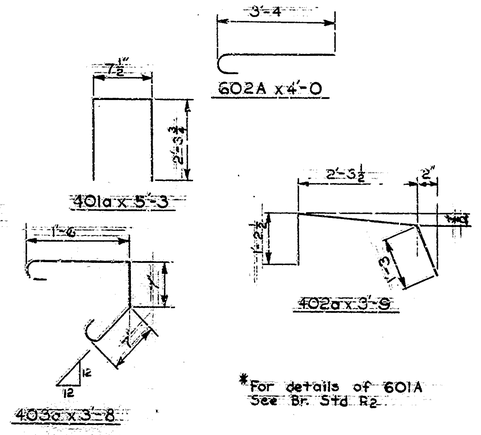
	Bent N°1 to Splice N°1	Splice N°1 to Splice N°4	Splice N°4 to Bent N°5
Dim. A	7'-6¼	7'-6	7'-5⅞
Dim. B	8'-5½	8'-5	8'-4⅛
Dim. C	3'-7	3'-0	3'-6¾

BILL OF MATERIALS

Reinforcing Steel			
Size & Mark	N° of Bars	Length	Weigth
*601A	8	8'-0	
602A	18	4'-0	
*6	830	33'-0	
	Total *6		43,857#
*5	182	36'-0	
*5	270	28'-6	
*5	45	4'-0	
	Total *5		15,047#
401a	512	5'-3	
402a	326	3'-9	
403a	34	3'-8	
*4	4	32'-9	
	Total *4		2,783#
*3	96	26'-3	
*3	64	15'-0	
	Total *3		1,083#
	Total Steel		62,750#
CONCRETE			
Class "F"			
Cap @ Bent N° 5			4.5 cys
Pour N°1			9.1
Pour N°2			34.1
Pour N°3			42.8
Pour N°4			48.5
Pour N°1R			3.4
Pour N°2R			13.3
Pour N°3R			17.0
Pour N°4R			19.3
Pour N°1L			3.3
Pour N°2L			12.7
Pour N°3L			16.1
Pour N°4L			18.3
Total Class "F" (Except Railing Concrete)			242.4 cys
Railing Concrete (Rt. & Lt. Alike) 2@12.6 cys			25.2 cys
MISCELLANEOUS			
Railing (Type 3 or B) (Rt. & Lt. Alike) 2@242.5ft			485 Lft
Anchor Bolts AR 21			8 ea.
Cast Iron			
1-Std. Rdwy. Drain (Type I Grate A)			192#
1-Pc. 6" Cl. Soil Pipe x5'-0 (Single Hub)			95#
2-⅝"ø x 2" Bolts (2 Wa. Ea.)			1#
Total Cast Iron			288#
2" Steel Conduit			240 Lft.







*For details of 601A See Br. Std. R2.

Notes:
- For Reinforcing Bar Notes See Br. Std. C1
- For additional details see Drwg. S 17.
- For Joint Legend see Drwg. S 2.
- For details of Roadway Drain (Type I Grate A) see Br. Std. D See Gen. Plan for loc.
- Provision to be made for future Bridge Lighting. See Gen. Plan for location. See Br. Std. R2 for Details.

*For details of 601A see Br. Std. R2.

DESIGNED JSS CK'D
DRAWN CPP 5-18-63 CK'D JSS 5-16-63
TRACED CK'D

FLOOR DETAILS AND BILL OF MATERIALS

INDIANA STATE HIGHWAY COMMISSION

SCALE- As Noted OCTOBER 10, 1963

SUBMITTED FOR APPROVAL- James D. Mattes

DRAWING S 18 of 21

PROJECT- I-UI-65-3(46)117

BRIDGE CONTRACT NO. R-6333

BRIDGE FILE- I-65-119-2314 0"

BRIDGES OVER 20' SPAN					
PUB. ROAD DES. NO.	STATE PROJECT NO.	FISCAL YEAR	BRIDGE NO.	TOTAL SHEETS
4	IND. I-UI-65 3(66)117	1963	108	140

242'-6 O-O Railing & Parapet Wall (Along R.F. Parapet Wall)

42'-3 c-c T.S. | (Along Chord B-C) 156'-0 ℄ T.S. Pier №2 to ℄ T.S. Pier №4 | 42'-3 c-c T.S.

℄ Pier №2 ℄ Top Shoe | ℄ Pier №3 ℄ Top Shoe | ℄ Pier №4 ℄ Top Shoe

SPAN A | SPAN B | SPAN C | SPAN D

Joint H(1) | Skew 2° 10' 16.9" Lt. | Skew 4° 39' 27.7" Lt. | Skew 7° 08' 38.4" Lt.

Chord Span A | Chord Spans "B" & "C" | Chord Span D

POUR №1R | POUR №1 | POUR №3L | POUR №3 | POUR №3R | POUR №4L | POUR №4 | POUR №4R | POUR №2L | POUR №2

Line E.B.L. (on 2° 30' curve)

℄ Top Shoe | ℄ Bent №1 | End of Slab | 1" Exp. Jt. | Pvmt. Ledge | ℄ Slab Seat | Joint "R" | "A" | 2½"

Keyway Constr. Jt.

830-#6x35'-0 415 top; 415 bott.

163-402a 1'-6 max. Spa.

34-403a (1'-0 max. Spa.)

Depressed Keyways

Back of ½" Pt. & End of Floor Slab

"B" | "C"

℄ Top Shoe | ℄ Bent №3 | 4-#3x36'-0 (See Sect. C-C for location)

Toothed Exp. Jt.

1" Exp. Jt.

℄ Post

Gutter Line | Curb Line | R.F. Parapet Wall | Tooled Liner (Typ.)

Joint H(1)

24-#3x15'-0 tot. req'd in para. wall 6 ea. 15'-3½" sect. (3 ea. face) See Typ. Sect. for location

96-#3x26'-3 tot. req'd in para. wall 6 ea. 26'-6 sect. (3 ea. face) See Typical Section for loc.

512-401a tot. req'd in para. wall 28 ea. 26'-6 section 16 ea. 15'-3¼ section

For Contr. Jt. Details See Br. Std. R1-A or R1-B

26 Lines #5x36'-0 7 bars ea. line (6 lines ea. walk 14 lines top of slab) See Typ. Sect. for location.

15-#5x4'-0 Req'd Ea. Transv. Keyway Constr. Jt. 45-#5x4'-0 Tot. Req'd See Typ. Sect. for location.

30 Lines #5x28'-6 9 bars ea. line Bott. Slab See Typ. Sect. for loc.

242'-1⅜ o-o. Floor Slab Along E.B.L.

410 Spa. @ 7" = 239'-2 (Spa. along E.B.L. #6x35'-0 bars top ℄ bott)

163-402a 1'-6 max. spa.

2 cl. 27 Spa. @ 1'-0 max. (Typ.) 2 cl.

Spa. 401a ea. 26'-6 wall sect.

27 Spa. @ 8'-10" = 238'-6 (Railing Posts Spa)

8 Spa. @ 26'-6 = 212'-0 (Contraction Jt. Spa. in Parapet Wall)

242'-6 O-O Railing & Parapet Wall (Alum. Railing Type 3 or Steel Railing Type "B")

℄ Post | 2 cl. 5 Spa. @ 1'-0 max. = 5'-0 | 2 cl. | 15'-3 | 2'-0 | 9/16

Along R.F. Para. Wall (Lt. Side Same)

PLAN

Scale: ¼"=1'-0

#6x35'-0 | #5x36'-0 | #5x28'-6

Bend Bottom #6 bars in field over Beam Splice & to give bars 1" cover from bottom of slab between beams.

FIELD BEND REQUIRED ON #6 BARS OVER BEAM SPLICE

Scale: ½"=1'-0

2'-0 | 2'-0 | 2 cl. | #5x4'-0 | Keyway Constr. Jt.

SECTION "B-B"

Scale: ½"=1'-0

Notes:

For Reinforcing Bar Notes, See Br. Std "C."
For additional details and Bill of Materials, see Drwg. S18.
For Corner Details, see Drwg. S19.
For Joint Legend, see Drwg. S2.
Sequence of Pours to be made in order of Pour №'s. Transverse construction joints are optional and pours may be made continuous, provided pour terminates at a construction joint indicated on the Plans.
The contractor should especially note that Pours №1 & №2 are at opposite ends of the bridge and must be poured before Pours №3 & №4.
For Railing and Post Detail, see Br. Std. R1-A or R1-B"
Anchor bolts for Railing Posts to be preset in the concrete

DESIGNED LSS CKD.
DRAWN CRF 9-9-63 CKD. LSS 3-18-63
TRACED CKD.

FLOOR DETAILS

INDIANA STATE HIGHWAY COMMISSION

SCALE: As Noted. OCTOBER 10, 1963.

SUBMITTED FOR APPROVAL: James D. Martin

DRAWING S17 OF 21

PROJECT: I-UI-65-3(66)117

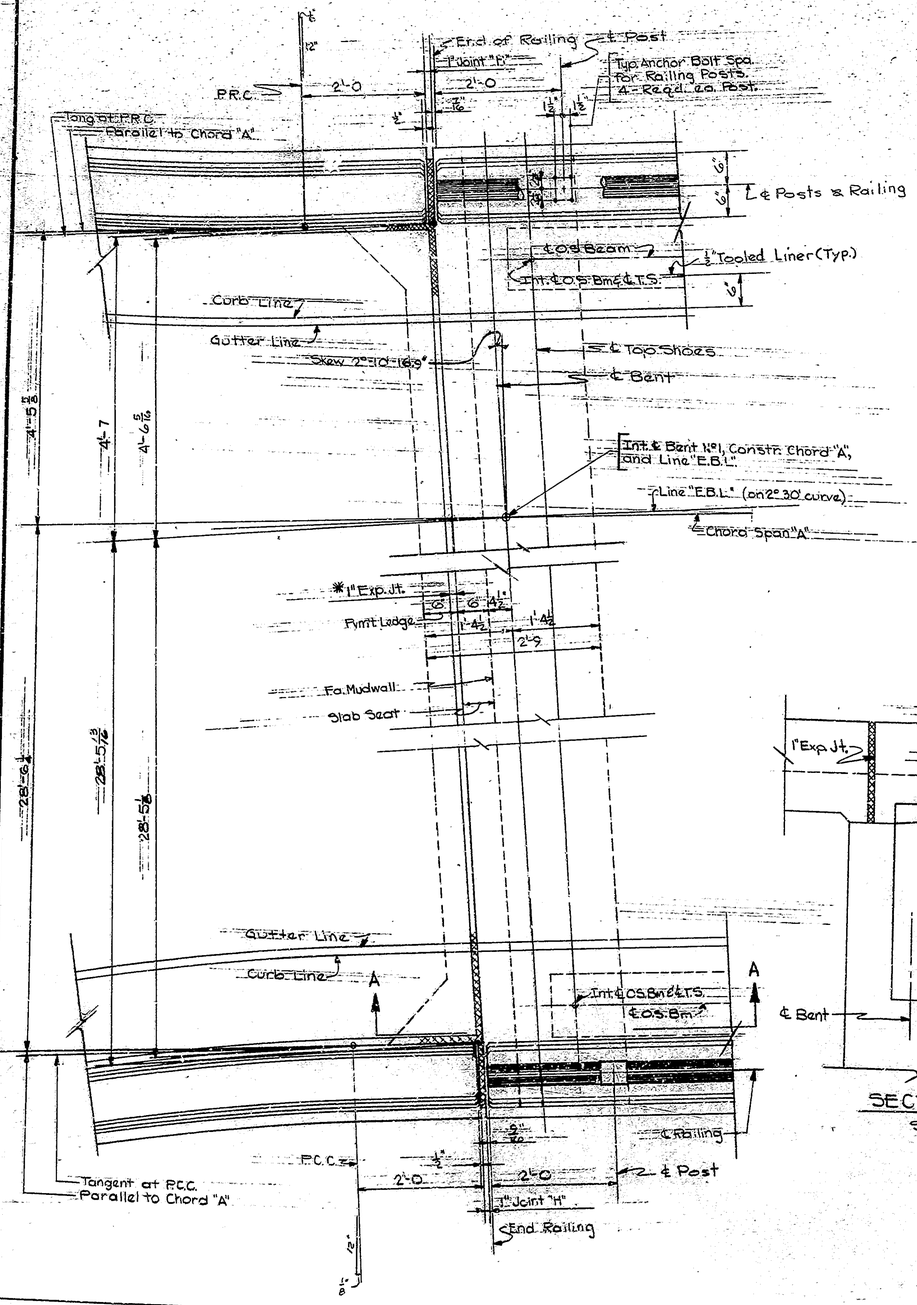
BRIDGE CONTRACT NO. R-6333

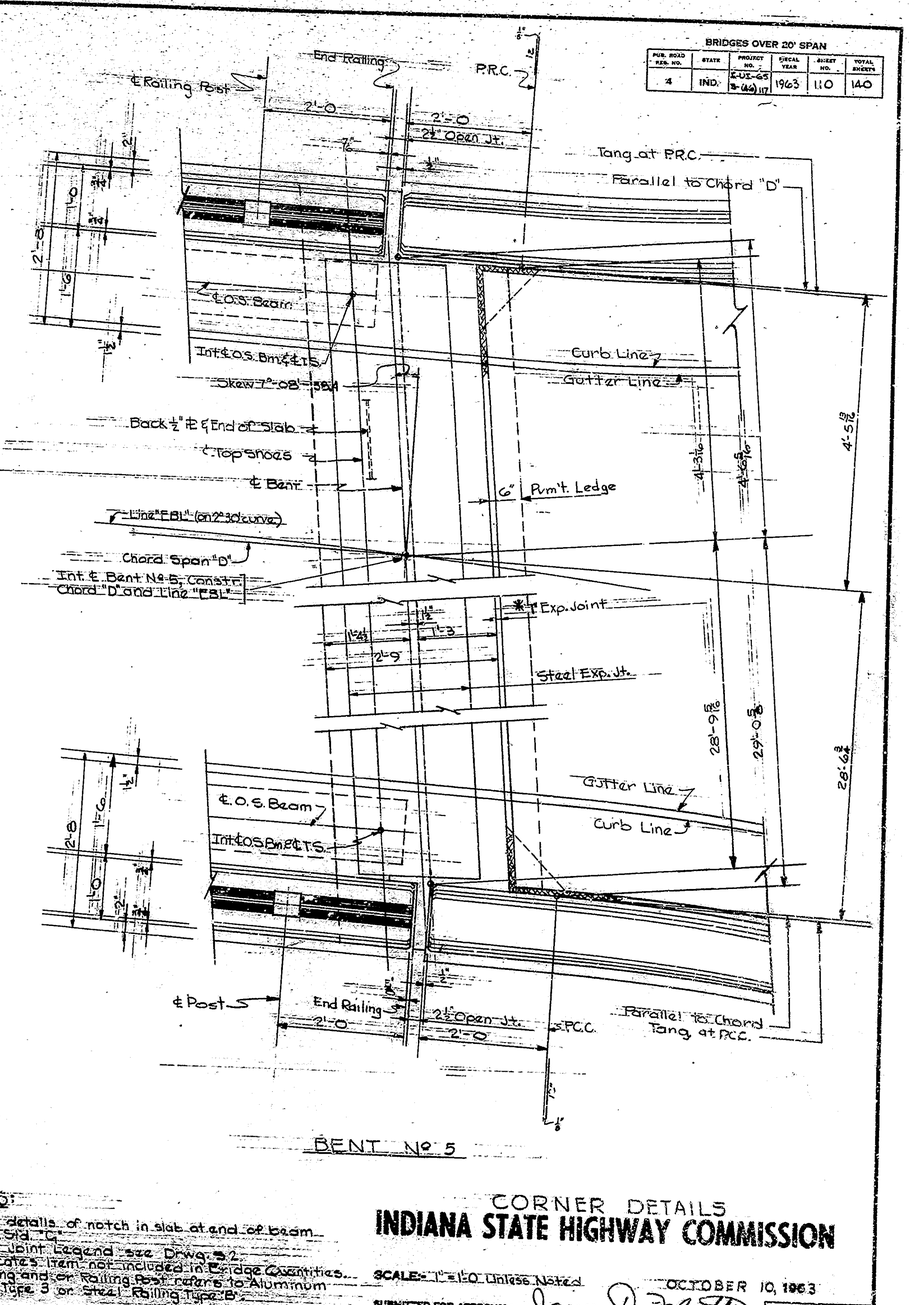
BRIDGE FILE: I-65-119-23.41

MARCALUSH ENGINEERING SUPPLY N166

BRIDGES OVER 20' SPAN

PUB. ROAD FED. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-65-3 (46) 117	1963	110	140





NOTES:
For details of notch in slab at end of beam see Br. Std. "C"
For Joint Legend see Drwg. S-2.
* Indicates item not included in Bridge Quantities.
Railing and or Railing Post refers to Aluminum Railing Type 3 or Steel Railing Type B.

DESIGNED ____ CK'D.
DRAWN JJD 8-27-63 CK'D JSS 9-6-63
TRACED ____ CK'D.

CORNER DETAILS
INDIANA STATE HIGHWAY COMMISSION

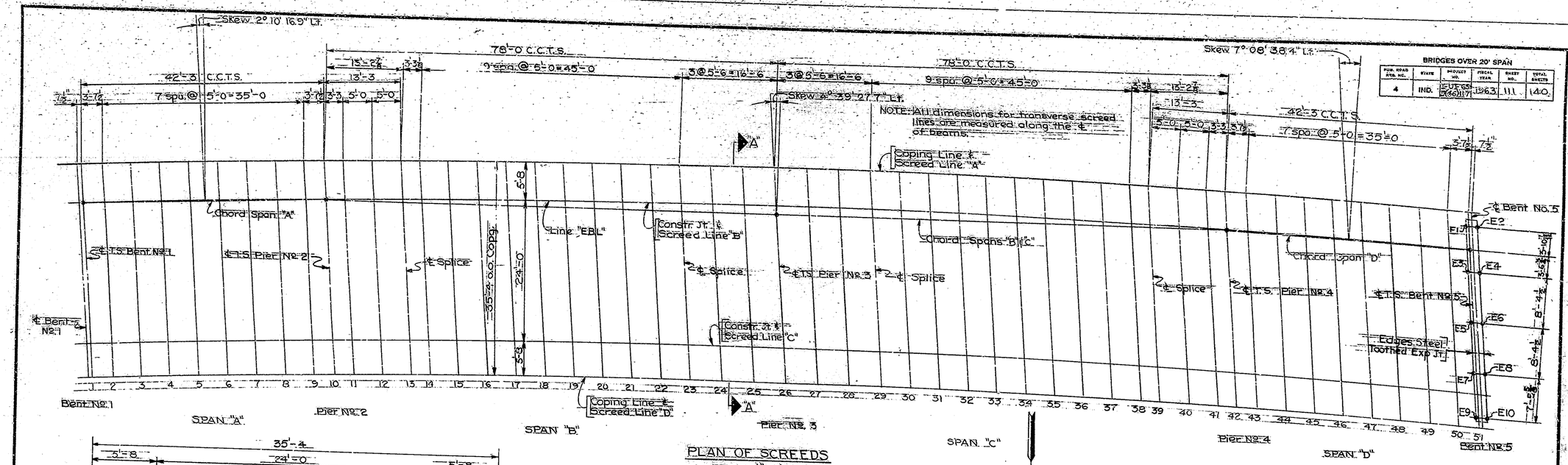
SCALE: 1" = 1'-0 Unless Noted — OCTOBER 10, 1963

SUBMITTED FOR APPROVAL: James D. Mathis

DRAWING S 19 of 21
PROJECT: I-U-I-65-3(46)117
BRIDGE CONTRACT NO. R-6333
BRIDGE FILE: I-65-119 - 2314 J

HARRINGTON ENG. NO. 186

BRIDGES OVER 20' SPAN					
FED. ROAD SYS. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-UI-65-3(46)117	1963	111	140



NOTES:-

PURPOSE:

PLAN OF SCREEDS shows location of Screeds.

TABLE OF ELEVATIONS shows data for setting screeds and coping forms so that the slab and copings will be at the final grade elevations, after all the concrete has been poured. See Dwg. S.21.

TABLE I shows data for setting Expansion Plates.

TABLE II shows data for setting Toothed Expansion Joint.

GENERAL PROCEDURE:

(1) After all rivets have been driven and all interior diaphragms have been welded in place adjust the superstructure longitudinally so that the distance from the ℄ Top Shoes to the face of the mudwall at Bent No. 5 equals Dimension "C" as shown in TABLE II for the prevailing temperature.

(2) With the superstructure in the adjusted position called for in (1) weld the fixed shoes to the anchor plates at Pier No. 2.

(3) Adjust the Expansion Plates 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 thru the ℄ Top Shoe in a direction away from the fixed shoes. Weld the Expansion Plates to the Anchor Plates.

(4) Set steel expansion joint and adjust it to the elevations given for the points shown on the PLAN OF SCREEDS using the double nuts on the anchor rods and on the ℄ rods on top of the diaphragms.

(5) Adjust steel expansion joints horizontally to make openings between teeth equal and openings "D" to the dimension shown in TABLE II for the prevailing temperature.

(6) After the Shoes are set take elevations at all screed points on top of adjacent beams. 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 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.

(7) No concrete in the floor is to be poured until the above operations are completed.

TABLE I

Temperature	Dimension "A" 0°	20°	40°	60°	80°	100°	120°	Dimension "B" 80°	100°	120°
Dim. ℄ T.S. to ℄ Exp. ℄ @ Bent No. 1	11/16"	5/8"	9/16"	1/2"	7/16"	3/8"	5/16"	—	—	—
Dim. ℄ T.S. to ℄ Exp. ℄ @ Pier No. 3	3/8"	1/4"	1/8"	0"	—	—	—	1/8"	1/4"	3/8"
Dim. ℄ T.S. to ℄ Exp. ℄ @ Pier No. 4	3/4"	1/2"	1/4"	0"	—	—	—	1/4"	1/2"	3/4"
Dim. ℄ T.S. to ℄ Exp. ℄ @ Bent No. 5	1 7/16"	1 1/8"	15/16"	1/2"	5/16"	—	—	—	1/8"	7/16"

TABLE II

Temperature	0°	20°	40°	60°	80°	100°	120°
Dim. "C" @ Bent No. 5	9 5/16"	9 3/16"	9 1/16"	9"	8 15/16"	8 13/16"	8 11/16"
Dim. "D" @ Bent No. 5	3 1/16"	3 1/8"	3 3/16"	2 1/2"	2 5/16"	1 7/8"	1 9/16"

DESIGNED CK'D.
DRAWN L.K.T. 8-22-63 CK'D. J.S.S. 9-11-63
TRACED CK'D.

MARSHALL ENG. NO. 164

SCREEDS

INDIANA STATE HIGHWAY COMMISSION

SCALE:- AS NOTED

OCTOBER 10, 1963

SUBMITTED FOR APPROVAL: James D. Mather

DRAWING: S 20 OF 21

PROJECT:- I-UI-65-3(46)117

BRIDGE CONTRACT NO. 2-6333

BRIDGE FILE:- I-65-119-23.14 J

BRIDGES OVER 20' SPAN					
PUB. ROAD FED. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-DUE-65-3(46)117	1963	112	140

TABLE OF ELEVATIONS

Point		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
A	Elevation Top of Coping Form	780.150	780.195	780.250	780.305	780.360	780.405	780.455	780.500	780.550	780.585	780.615	780.670	780.720	780.755	780.800	780.845	780.885	780.920	780.945	780.970	780.985	781.000	781.015	781.025	781.040	781.055	781.075
	Elevation Top of O.S. Beam																											
	Dist. Top Bm. to Top Coping Form																											
B	Elevation Top of Screed	779.160	779.205	779.260	779.315	779.365	779.415	779.465	779.510	779.555	779.595	779.625	779.675	779.730	779.760	779.810	779.855	779.890	779.925	779.955	779.975	779.995	780.010	780.020	780.035	780.050	780.065	780.085
	Elevation Top of Beam																											
	Dist. Top Bm. to Top Screed																											
C	Elevation Top of Screed	778.135	778.180	778.235	778.290	778.345	778.395	778.440	778.485	778.535	778.570	778.605	778.655	778.705	778.740	778.790	778.830	778.870	778.905	778.930	778.955	778.970	778.985	779.000	779.010	779.025	779.040	779.060
	Elevation Top of Beam																											
	Dist. Top Bm. to Top Screed																											
D	Elevation Top of Coping Form	778.875	778.915	778.975	779.030	779.085	779.130	779.180	779.225	779.275	779.310	779.345	779.395	779.445	779.480	779.525	779.570	779.610	779.640	779.670	779.690	779.710	779.725	779.735	779.745	779.760	779.775	779.795
	Elevation Top of O.S. Beam																											
	Dist. Top Bm. to Top Coping Form																											

Point		28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
A	Elevation Top of Coping Form	781.100	781.125	781.145	781.165	781.180	781.190	781.195	781.195	781.190	781.180	781.165	781.150	781.130	781.105	781.090	781.075	781.050	781.030	781.005	780.975	780.945	780.905	780.865	780.835
	Elevation Top of O.S. Beam																								
	Dist. Top Bm. to Top Coping Form																								
B	Elevation Top of Screed	780.105	780.130	780.155	780.170	780.185	780.200	780.205	780.200	780.195	780.185	780.170	780.155	780.135	780.110	780.095	780.075	780.055	780.030	780.005	779.975	779.945	779.910	779.865	779.835
	Elevation Top of Beam																								
	Dist. Top Bm. to Top Screed																								
C	Elevation Top of Screed	779.080	779.105	779.125	779.145	779.155	779.165	779.170	779.165	779.150	779.135	779.120	779.095	779.070	779.050	779.055	779.010	778.985	778.955	778.925	778.890	778.850	778.805	778.775	
	Elevation Top of Beam																								
	Dist. Top Bm. to Top Screed																								
D	Elevation Top of Coping Form	779.820	779.840	779.860	779.880	779.895	779.905	779.910	779.905	779.900	779.885	779.870	779.855	779.830	779.805	779.785	779.765	779.740	779.715	779.685	779.655	779.620	779.580	779.535	779.505
	Elevation Top of O.S. Beam																								
	Dist. Top Bm. to Top Coping Form																								

EXPANSION JOINT ELEVATIONS

Point	Elevation	Point	Elevation
E 1	780.825	E 2	780.805
E 3	779.680	E 4	779.665
E 5	779.510	E 6	779.295
E 7	778.940	E 8	778.925
E 9	778.495	E10	779.475

Note:
For location of screed points, and "General Procedure," see Drwg. "S22."

DESIGNED ____ CKD. ____
DRAWN R.T.B. CKD. J.S.S. 11-63
TRACED ____ CKD. ____

TABLE OF ELEVATIONS

INDIANA STATE HIGHWAY COMMISSION

SCALE: NONE — OCTOBER 10, 1963

SUBMITTED FOR APPROVAL: James D. Martin

DRAWING S 21 OF 21

PROJECT: I-DUE-65-3(46)117

BRIDGE CONTRACT NO. R-6333

BRIDGE FILE: I-65-09-23143

WARBAUGH ENG. NO. 106

STRUCTURE QUANTITIES

ITEM	CONCRETE CLASS F Cu.Yds.	CONCRETE CLASS D Cu.Yds.	CONCRETE CLASS E ABOVE FTG. Cu.Yds.	CONCRETE CLASS E IN FTG. Cu.Yds.	RAILING CONCRETE CLASS F Cu. Yds.	REINFORCING STEEL 1934 STD. WTS. #11 (1 1/4"ø) Lbs.	#10 (1 1/8"ø) Lbs.	#9 (1"ø) Lbs.	#8 (1"ø) Lbs.	#7 (7/8"ø) Lbs.	#6 (3/4"ø) Lbs.	#5 (5/8"ø) Lbs.	#4 (1/2"ø) Lbs.	#3 (3/8"ø) Lbs.	TOTALS Lbs.	** STRUCTURAL STEEL Lbs.	CAST IRON Lbs.	PILES STEEL ENCASED CONCRETE No.	PILES STEEL ENCASED CONCRETE Lin. Ft.	PILES TREATED TIMBER No.	PILES TREATED TIMBER Lin.Ft.	RAILING TYPE 1 OR TYPE A Lin. Ft.	RAILING TYPE 3 OR TYPE B Lin. Ft.	ANCHOR PLATES AP Each	ANCHOR RODS MK-AR Each	ANCHOR BOLTS AR-21 Each	2"ø STEEL CONDUIT Lin. Ft.
I-65-119-2313																											
SUBSTRUCTURE																											
BENT No. 1	34.3				2.6																						
PIER No. 2	33.4		30.9	32.1						1,992	621	440	1,163	104	4,320												
PIER No. 3	33.5		29.9	32.1		1,187	1,175		1,667		3,133		1,165		8,327									8	46		22
PIER No. 4	33.5		21.1	31.3		2,637		2,040			3,112	1,035	433		9,257					36	900			8			
BENT No. 5	35.5				2.6	1,187	1,175	2,168			4,020		1,195		9,715					34	900			8			
SUPERSTRUCTURE	325.2				26.9					1,992	101	445	1,585	104	4,227					30	750			3			
											109	60,463	22,373	1,149	84,094	335,000	288	9	360					8			22
SPLICE BARS						58	45	32	23	16	34	42	16	6	272							516				4	265
TOTALS(2313)	495.4		81.9	95.5	31.1	5,069	2,395	4,240	1,680	4,000	11,130	62,425	27,900	1,363	120,202	335,000	288	18	765	102	2,550	516		40	46	4	309
I-65-119-2313J																											
SUBSTRUCTURE																											
BENT No. 1	32.9				2.6																						
PIER No. 2	30.3		24.7	43.3						1,909	601	436	1,081	104	4,131												
PIER No. 3	30.8		27.0	48.1		2,099		2,295			2,906		1,029		8,329			9	405					7	42		22
PIER No. 4	30.4		17.9	31.8		1,121	1,226	2,550			2,994	975	363		9,229					40	1,000			7			
BENT No. 5	33.6				2.6	2,099		2,122			3,767		1,029		9,017					45	1,125			7			
SUPERSTRUCTURE	303.5				26.9					1,935	101	435	1,480	104	4,055					36	900			7			
											75,239	25,623	3,159	1,149	105,170	305,800	288	9	360					7			22
SPLICE BARS						58	45	32		16	79	28	12	6	276							516				4	265
TOTALS(2313J)	461.5		69.6	123.2	32.1	5,377	1,271	6,999		3,860	85,687	27,497	8,153	1,363	140,207	305,800	288	18	765	121	3,025	516		35	42	4	309
I-65-119-2314																											
SUBSTRUCTURE																											
BENT No. 1	28.3				3.1																						
PIER No. 2	18.6		15.7	26.0			1,300	1,618		1,561	101	448	1,264	133	3,507									5			20
PIER No. 3	18.6		21.1	34.7						2,278	1,151		722		7,029			7	230					5			
PIER No. 4	18.6		21.1	22.8			1,300	1,734			2,190	731	197		6,152					24	600			5			
BENT No. 5	26.4				3.1		1,300		1,169		2,106		722		5,297					30	750			5			
SUPERSTRUCTURE	243.3				25.2					1,514	427	427	969	133	3,470					28	700			5			
											43,837	15,047	2,783	1,083	62,750	211,900	288	7	280					5			20
SPLICE BARS							45	32	23	16	56	21	12	6	211							485				8	248
TOTALS(2314)	353.8		57.9	83.5	31.4		3,945	3,384	1,192	5,369	49,868	16,674	6,669	1,355	88,456	211,900	288	14	560	82	2,050		485	25	30	8	288
I-65-119-2314J																											
SUBSTRUCTURE																											
BENT No. 1	27.7				3.1																						
PIER No. 2	17.9		17.3	27.1						1,558	101	442	4,261	133	3,495												
PIER No. 3	17.9		20.1	24.6			1,300	1,676		2,324	1,208		703		7,211			7	245					5			20
PIER No. 4	18.0		20.5	21.0			1,300		1,267		2,083	718	188		5,561					24	600			5			
BENT No. 5	26.2				3.1		1,300		1,169		2,063		703		5,235					28	700			5			
SUPERSTRUCTURE	242.4				25.2					1,519	459	420	961	133	3,492					24	600			5			
											43,837	15,047	2,783	1,083	62,750	211,800	288	7	245					5			20
SPLICE BARS							45	32	23	16	56	21	12	6	211							485				8	248
TOTALS(2314J)	350.1		57.9	72.7	31.4		3,945	4,708	2,459	5,417	49,812	16,648	6,611	1,355	87,955	211,800	288	14	490	76	1,900		485	25	30	8	288
GRAND TOTALS	1660.8		267.3	374.9	127.0	10,446	11,556	16,331	5,331	18,646	196,497	123,244	49,333	5,436	430,820	1,064,500	1,152	64	2,580	561	9,525	1,032	970	125	148	24	1,194

APPROACH STRUCTURES

BRIDGE FILE NO.	STR. NO.	LOCATION	DESCRIPTION Size	DESCRIPTION Kind	DESCRIPTION Length	CL.D CONC. IN STR'S Cu. Yds.	GRADE B SPEC. BOR. Cu. Yds.	REMARKS
2313	24A	190+80 ("N.B.L.")	6"	Perf. C.M. Pipe	70'			Slope to Drain
2313J	24B	191+60 ("S.B.L.")	6"	Perf. C.M. Pipe	72'			Slope to Drain
2313	47A	193+55 ("N.B.L.")	6"	Perf C.M. Pipe	30'			Slope to Drain
2313J	47B	194+35 ("S.B.L.")	6"	Perf. C.M. Pipe	72'			Slope to Drain
2314	46A	45+80 ("W.B.L.")	6"	Perf. C.M. Pipe	50'			Slope to Drain
2314	45A	48+45 ("W.B.L.")	6"	Perf. C.M. Pipe	50'			Slope to Drain
2314J	48A	46+20 ("E.B.L.")	6"	Perf. C.M. Pipe	50'			Slope to Drain
2314J	37A	48+80 ("E.B.L.")	6"	Perf. C.M. Pipe	50'			Slope to Drain
2313	11	192+40 ("N.B.L.")				0.3	12	Seal Pipe in Place, Fill Manhole in Place
2314	45	48+05 ("W.B.L.")	24"	Group "B" Pipe	146'	3.8	13	2-Culv. Hdwls. Req'd.
2313	26	191+65 ("A")	24"	Group "B" Pipe	132'	1.9	12	1-Culv. Hdwl. Req'd.
2313J	26	191+65 ("A")	24"	Group "B" Pipe	112'		10	
2314J	26	191+65 ("A")	24"	Group "B" Pipe	140'	1.9	13	1. Culv. Hdwl. Req'd.
		Subtotals-Structure № 26			384'	3.8	35	
		TOTALS				7.9	60	

BARRICADES, BARRIERS, TRAFFIC SIGNS & LIGHTS

ITEM	UNIT	QUANTITY	ASSEMBLY		2313	2313J	2314	2314J	TOTALS
TYPICAL SIGN STANDARDS	Each		Signs XW-1						
			Signs XW-2						
			Signs XW-3						
			Signs XM-2						
			Signs W-4B, W-35A						
			Torches						
STANDARD BARRICADES (TYPE A)	Each		Barricades (Type A)						
			Signs XR-1						
			Signs M-20A						
			Lanterns						
STANDARD BARRICADES (TYPE B)	Each		Barricades (Type B)						
			Signs XR-1						
			Lanterns						
STANDARD SIGNS	Each		Signs W-11						
			Signs W-35A						
			Torches						
SUITABLE BRIDGE BARRIERS	Each	8	* Suitable Barriers		2	2	2	2	8
			* Lanterns or Torches		4	4	4	4	16
CONSTRUCTION IDENTIFICATION SIGNS	Each		* Signs XM-6						
			* Signs XM-7						
			* Signs XM-8						

BILL OF MATERIALS FOR R.C. BRIDGE APPROACH

SIZE & MK.	NO. OF PIECES	LENGTH	REINFORCING STEEL WEIGHT 2313	2313J	2314	2314J	TOTALS
			See Sheet №2.17 & Br. Std. "M3"	See Sheet №2.45 & Br. Std. "M3"	See Sheet №2.67 & Br. Std. "M3"	See Sheet №2.90 & Br. Std. "M3"	Not Included in Bridge Quantities

SUMMARIZED JRM 8-5-63 CK'D JSS 10-4-63
TRACED JO 10-4-63 CK'D JSS 10-8-63

BILL OF SPLICE BARS

SIZE	LENGTH	NO. OF PIECES REINFORCING STEEL 2313	2313J	2314	2314J	WEIGHT 2313	2313J	2314	2314J	TOTALS
#11	11'-0	1	1	—	—	56	58	—	—	114*
#10	10'-6	1	1	1	1	45	45	45	45	180*
#9	9'-6	1	1	1	1	32	32	32	32	128*
#8	8'-9	1	—	1	—	23	—	23	23	69*
#7	8'-0	1	1	1	1	16	16	16	16	64*
#6	7'-6	3	7	5	5	34	79	56	56	225*
#5	6'-9	6	4	3	3	42	28	21	21	112*
#4	6'-0	4	5	3	3	16	20	12	12	60*
#3	5'-6	3	3	3	3	6	6	6	6	24*
					TOTALS	272*	276*	211*	211*	970*

NOTE:- For Test Bar Samples see Bridge Std. "C1"

* Not a pay Item. Place as directed by the Engineer.
Where sign standards are used in unpaved areas the Contractor may use two posts set (3) three feet in the ground.
"W-35A" safe speed to be determined by the Engineer at the site.
Directional, Advisory or Warning Signs shall be right hand or left hand as the location of the sign requires.

** 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.

Two Railing Posts required in addition to those shown on detail plans for future Bridge Lighting. See Bridge Std. R2.

BRIDGES OVER 20' SPAN

PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-U1-65-3(46)117	1963	115	140

SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY 2313	2313J	2314	2314J	TOTALS
1	Class F Concrete	Cu. Yds.	495.4	461.5	343.8	350.1	1,660.8
2	Class D Concrete	Cu. Yds.					
3	Class E Concrete above Footings	Cu. Yds.	81.9	69.6	57.9	57.9	267.3
4	Class E Concrete in Footings	Cu. Yds.	95.5	123.2	83.5	72.7	374.9
5	Railing Concrete	Lin. Ft.					
6	Reinforcing Steel	Lbs.	120,202	140,207	88,456	87,955	436,820
7	Structural Steel	Lbs.					
8	Cast Iron	Lbs.	288	288	288	288	1,152
9	Untreated Timber Piles Furnished	Lin. Ft.					
10	Untreated Timber Piles Driven	Lin. Ft.					
11	Furnishing Equipment for Driving Piles (4840)	Lump Sum					
12	Wet Excavation	Cu. Yds.					
13	Waterway Excavation	Cu. Yds.					
14	Common Excavation	Cu. Yds.					
15	Special Borrow	Cu. Yds.	15,430	12,725			28,155
16	Grade B Special Borrow	Cu. Yds.	1,645	1,360	1,040	1,035	4,880
17	Sodding	Sq. Yds.	1,180	910	1,650	1,510	5,250
18	Mulched Seeding	Sq. Yds.					
19	Cement Concrete Pavement	Sq. Yds.					
20	Reinforced Cement Concrete Pavement	Sq. Yds.					
21	Thickened Reinf. Cement Concrete Pavement	Sq. Yds.					
22	Aggregate for Compacted Aggregate Base	Tons					
23	Removal Present Structure	Lump Sum					
24	Temporary Bridge and Approaches	Lump Sum					
25	Warning Signs	Each					
26	Std. Barricades (Type A)	Each					
27	Class D Concrete in Structures	Cu. Yds.	2.2		3.8	1.9	7.9
28	R/W Markers	Each					
29	Steel Pile Shells Furnished (14"ø)	Lin. Ft.	765	765	560	490	2,580
30	Steel Pile Shells Driven (14"ø)	Lin. Ft.	765	765	560	490	2,580
33	Treated Timber Piles Furnished	Lin. Ft.	2,550	3,025	2,050	1,900	9,525
34	Treated Timber Piles Driven	Lin. Ft.	2,550	3,025	2,050	1,900	9,525
35	Foundation Excavation (Unclassified)	Cu. Yds.	140	145	125	125	535
36	Railing-Type 1 or Type A	Lin. Ft.	516	516			1,032
37	Railing-Type 3 or Type B	Lin. Ft.			485	485	970
38	Railing Concrete (Parapet Walls)	Cu. Yds.	32.1	32.1	31.4	31.4	127.0
39	Anchor Plates AP	Each	40	35	25	25	125
40	Anchor Bolts AR 21	Each	4	4	8	8	24
41	Anchor Rods MK-AR	Each	46	42	30	30	148
42	2"ø Steel Conduit	Lin. Ft.	309	309	288	288	1,194
44	4" Concrete Slopewall	Sq. Yds.	970	950	640	665	3,225
47	Special Concrete Curb	Lin. Ft.	146	149	130	130	555
50	Structural Steel (2313)	Lump Sum	1				1
51	Structural Steel (2313J)	Lump Sum		1			1
52	Structural Steel (2314)	Lump Sum			1		1
53	Structural Steel (2314J)	Lump Sum				1	1
61	Furnishing Equip. for Driving Piles (2313)	Lump Sum	1				1
62	Furnishing Equip. for Driving Piles (2313J)	Lump Sum		1			1
63	Furnishing Equip. for Driving Piles (2314)	Lump Sum			1		1
64	Furnishing Equip. for Driving Piles (2314J)	Lump Sum				1	1
75	6" Perf. C.M. Pipe	Lin. Ft.	140	144	100	100	484
77	24" Pipe - Group "B"	Lin. Ft.	132	112	146	140	530
82	Std. Conc. Gutter	Lin. Ft.		40			40

See Sheet 113A Of Tracings Bridge File I-65-119-2313J, 2314J For Combined Summary for I-65-118-4836, 4837 J, 4838 J, 4839, And I-65-119-2313 J, 2314 J, 4840 J

SUMMARY

STATE HIGHWAY DEPARTMENT OF INDIANA

SUBMITTED FOR APPROVAL James D. Mattis OCTOBER 10, 1963

PROJECT:- I-U1-65-3(46)117
BRIDGE CONTRACT NO. R-6333
BRIDGE FILE:- I-65-119-2313 & 2313J
I-65-119-2314 & 2314J

SUMMARY OF BRIDGE QUANTITIES

ITEM	DESCRIPTION	UNIT	QUANTITIES												TOTAL QUANTITY
			4840	4840J	2313	2313J	2314	2314J	4839	4838	4838J	4837	4837J	4836	
1	Class F Concrete	Cu. Yds.	344.1	363.5	495.4	461.5	383.8	350.1	1,098.9	281.5	324.4	349.2	288.9	658.5	5,369.8
2	Class D Concrete	Cu. Yds.													
3	Class E Concrete Above Footings	Cu. Yds.	118.4	113.1	81.9	69.6	57.9	57.9	206.2	43.4	47.2	49.4	53.8	140.2	1,039.0
4	Class E Concrete in Footings	Cu. Yds.	107.0	116.4	95.5	123.2	83.5	72.7	218.8	71.6	81.8	73.2	80.8	105.9	1,230.4
5	Railing Concrete	Lin. Ft.													
6	Reinforcing Steel	Lbs.	96,872	104,625	120,202	140,207	85,485	87,955	241,366	65,433	70,281	74,913	65,633	129,967	1,285,910
7	Structural Steel	Lbs.													
8	Cast Iron	Lbs.													
9	Untreated Timber Piles Furnished	Lin. Ft.			288	288	288	288		1,455	570	3,690	1,485	485	8,807
10	Untreated Timber Piles Driven	Lin. Ft.													
11	Furnishing Equipment for Driving Piles (4840)	Lump Sum	1												1
12	Wet Excavation	Cu. Yds.													
13	Waterway Excavation	Cu. Yds.								300	345	325	350		1,320
14	Common Excavation	Cu. Yds.								945	1,405	3,305	5,880		11,535
15	Special Borrow	Cu. Yds.							11,610					24,525	36,135
16	Grade B Special Borrow	Cu. Yds.	57,235	64,430	15,430	12,785				875	2,200	50		1,600	154,505
17	Seeding	Sq. Yds.	1,000	1,060	1,445	1,360	1,040	1,035	1,920	740	860	245	915	1,130	12,750
18	Mulched Seeding	Sq. Yds.	1,070	1,255	1,180	910	1,650	1,510	415	90	105	185	415	185	8,970
19	Cement Concrete Pavement	Sq. Yds.													
20	Reinforced Cement Concrete Pavement	Sq. Yds.													
21	Thickened Reinf. Cement Concrete Pavement	Sq. Yds.													
22	Aggregate for Compacted Aggregate Base	Tons													
23	Removal Present Structure (4837)	Lump Sum													
24	Temporary Bridge and Approaches	Lump Sum										1			1
25	Warning Signs	Each													
26	Std. Barricades (Type A)	Each													
27	Class D Concrete in Structures	Cu. Yds.			2.2		3.8	1.9	16.4	3.2					27.5
28	R/W Markers	Each													
29	Steel Pile Shells Furnished (14"Φ)	Lin. Ft.	900	900	765	765	560	490	600						4,980
30	Steel Pile Shells Driven (14"Φ)	Lin. Ft.	900	900	765	765	560	490	600						4,980
31	Steel Pile Shells Furnished (12"Φ)	Lin. Ft.								400	450	440	630	520	2,440
32	Steel Pile Shells Driven (12"Φ)	Lin. Ft.								400	450	440	630	520	2,440
33	Treated Timber Piles Furnished	Lin. Ft.	2525	2775	2,550	3,025	2,050	1,900							14,825
34	Treated Timber Piles Driven	Lin. Ft.	2,525	2,775	2,550	3,025	2,050	1,900							14,825
35	Foundation Excavation (Unclassified)	Cu. Yds.	140	75	140	145	125	125	760					690	2,200
36	Railing - Type 1 or Type A	Lin. Ft.	457	504	516	516				380	380				2,753
37	Railing - Type 3 or Type B	Lin. Ft.					485	485	706			397	406	699	3,178
38	Railing Concrete (Parapet Walls)	Cu. Yds.	25.0	27.5	32.1	32.1	31.4	31.4	42.4	20.9	20.9	26.4	26.9	43.2	360.0
39	Anchor Plates AP	Each	54	54	40	35	25	25	80	32	36	36	28	45	490
40	Anchor Bolts A.R. 21	Each	4	4	4	4	8	8					8	8	56
41	Anchor Rods 1/4-AR	Each			46	42	30	30	56					144	348
42	2"Φ Steel Conduit	Lin. Ft.	247	270	309	309	288	288	790	205	205	245	250	404	3,811
43	Bronze Plates	Lbs.	410	475						450	510	525			2,370
44	4" Concrete Slopewall	Sq. Yds.	803	835	970	950	640	663	850					1255	6,568
45	5" Concrete Slopewall	Sq. Yds.								540	790	970	1,200		3,500
46	15" Revetment Riprap	Tons								240	435	560	880		2,115
47	Special Concrete Curb	Lin. Ft.			146	149	130	130						205	760
48	Structural Steel (4840)	Lump Sum	1												1
49	Structural Steel (4840J)	Lump Sum		1											1
50	Structural Steel (2313)	Lump Sum			1										1
51	Structural Steel (2313J)	Lump Sum				1									1
52	Structural Steel (2314)	Lump Sum					1								1
53	Structural Steel (2314J)	Lump Sum						1							1
54	Structural Steel (4839)	Lump Sum							1						1
55	Structural Steel (4838)	Lump Sum								1					1
56	Structural Steel (4838J)	Lump Sum									1				1
57	Structural Steel (4837)	Lump Sum										1			1
58	Structural Steel (4837J)	Lump Sum											1		1
59	Structural Steel 836)	Lump Sum												1	1
60	Furnishing Equipme. for Driving Piles (4840J)	Lump Sum		1											1
61	Furnishing Equipment for Driving Piles (2313)	Lump Sum			1										1
62	Furnishing Equipment for Driving Piles (2313J)	Lump Sum				1									1
63	Furnishing Equipment for Driving Piles (2314)	Lump Sum					1								1
64	Furnishing Equipment for Driving Piles (2314J)	Lump Sum						1							1
65	Furnishing Equipment for Driving Piles (4839)	Lump Sum							1						1
66	Furnishing Equipment for Driving Piles (4838)	Lump Sum								1					1
67	Furnishing Equipment for Driving Piles (4838J)	Lump Sum									1				1
68	Furnishing Equipment for Driving Piles (4837)	Lump Sum										1			1
69	Furnishing Equipment for Driving Piles (4837J)	Lump Sum											1		1
70	Furnishing Equipment for Driving Piles (4836)	Lump Sum												1	1
71	Paved Side Ditch Type A	Lin. Ft.											1		1
72	Paved Side Ditch Type H	Lin. Ft.												140	140
73	Adjust Casting to Grade	Each										145			145
74	Reconstructed Manhole	Lin. Ft.							1						1
75	6" Perf. C.M. Pipe	Lin. Ft.	210	170	160	144	100	100	184	140	140	136	128	240	1,852
76	24" Pipe - Group A	Lin. Ft.							90						90
77	24" Pipe - Group B	Lin. Ft.			132	112	146	140	235						765
78	30" Pipe - Group A	Lin. Ft.							90						90
79	36" R.C.C.M. Pipe	Lin. Ft.								60					60
80	60" Pipe - Group B	Lin. Ft.							241						241
81	Removal of Present Dam (Portions)	Lump Sum													1
82	Std. Conc. Gutter	Lin. Ft.				40									40

SUMMARIZED [illegible] CKD JJS 10-9-63
TRACED JPM 10-8-63 CKD JJS 10-9-63

BRIDGES OVER 20' SPAN

PUB. ROAD RES. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-UI-65-3(46)117	1963	113A	140

COMBINED BRIDGE SUMMARY FOR
I-65-118-4836, 4837 & J, 4838 & J, 4839, 4840 & J
I-65-119-2313 & J, 2314 & J

STATE HIGHWAY DEPARTMENT OF INDIANA

OCTOBER 10, 1963

SUBMITTED FOR APPROVAL: James D. Mattis

PROJECT: I-UI-65-3(46)117
BRIDGE CONTRACT NO. R-6333
BRIDGE FILE: I-65-119-2313 & J, 2314 & J