~~BRIDGE~~ CONTRACT No. R-7391

INDEX

PROJECT	STRUCTURE	TYPE	SPAN	OVER	STATION	CONTRACT NO.
I-465-4 (129)127	I-465-130-5279	CONTINUOUS COMPOSITE STEEL BEAM	30'-0" 70'-9" 30'-0"	COLLEGE AVE.	715+46.9	R-7391

SHEET NO.	SHEET DESIGNATION	SUBJECT	B.P.R. APPROVAL
1	ONE SHEET	INDEX AND TITLE SHEET	
2	ONE SHEET	SOIL BORINGS	
3	S-1	LAYOUT	
4	S-2	GENERAL PLAN	
5	S-3	GENERAL PLAN	
6	S-4	BENTS 1 AND 4 DETAILS	
7	S-5	BENTS 1 AND 4 DETAILS	
8	S-6	BENT 2 DETAILS	
9	S-7	BENT 2 DETAILS	
10	S-8	BENT 3 DETAILS	
11	S-9	BENT 3 DETAILS	
12	S-10	FRAMING PLAN	
13	S-11	SUPERSTRUCTURE GENERAL NOTES AND SUPERSTRUCTURE DETAILS	
14	S-12	SUPERSTRUCTURE DETAILS	
15	S-13	SUPERSTRUCTURE BEARING DETAILS	
16	S-14	DECK PLAN AND TRANSVERSE SECTION	
17	S-15	SUPERSTRUCTURE DETAILS	
18	S-16	SCREED DETAILS	
19	ONE SHEET	SUMMARY	

STATE OF INDIANA
INDIANA STATE HIGHWAY COMMISSION

BRIDGE PLANS
FOR SPANS OVER 20 FEET
ON
INTERSTATE ROUTE - 465 - SECTION NO. 4
F.A. PROJECT NO. I-465-4(129)127 CONST.
I-465-4 (106)127 PE
I-465-4 (128)127 R/W

BEGINNING AT A POINT ON LINE "A" APPROXIMATELY 66.6 FEET WEST OF THE INTERSECTION OF LINE "A" AND THE WEST LINE OF SEC. 12, T-17-N, R-3-E, CLAY TWP., HAMILTON CO. AND ALONG LINE "A" IN AN EASTERLY DIRECTION FOR A DISTANCE OF 453.5 FEET TO A POINT ON LINE "A", SAID POINT BEING 64.9 FEET EAST OF THE ABOVE DESCRIBED INTERSECTION.

ROADWAY LENGTH = 0.000 mi.
BRIDGE LENGTH = 0.028 mi.
TOTAL LENGTH = 0.025 mi.

MAX. GRADE = 2.20% (LINE "A" APPROACHES)

BRIDGES OVER 20' SPAN

PUBLIC ROAD REGION NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-465-6 (129)127	1965	1	26

INDEX CONTINUED
STANDARD DRAWINGS

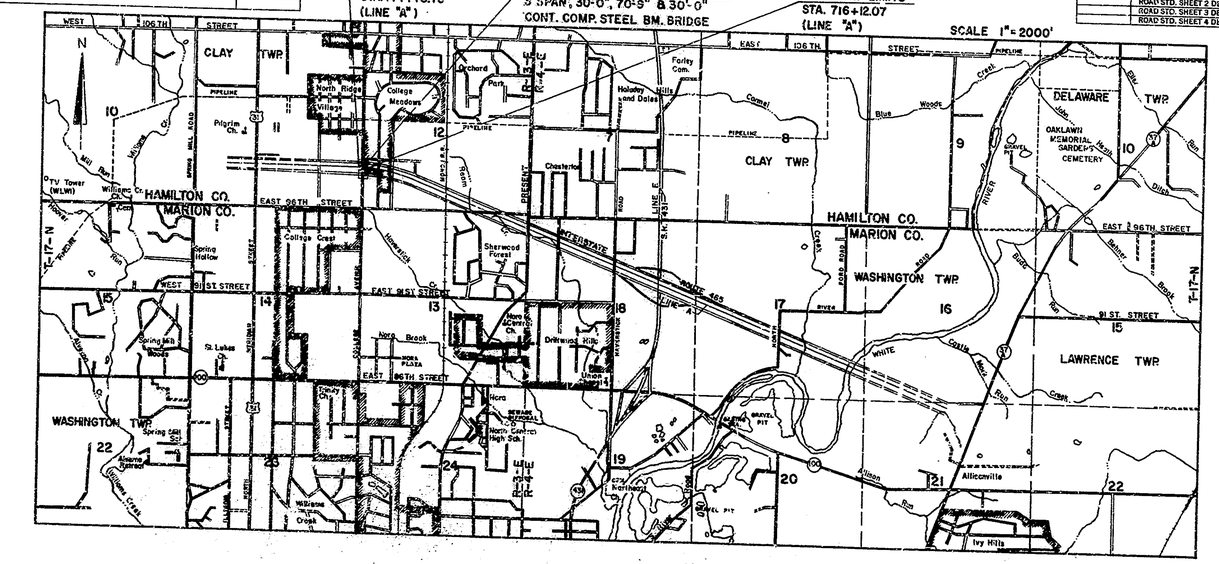
SHEET NO.	SHEET DESIGNATION	SUBJECT	B.P.R. APPROVAL	ADOPTED "A" REVISION "B"
20	BRIDGE STD. C1	STANDARD MISCELLANEOUS DETAILS		
	BRIDGE STD. C2	STANDARD MISCELLANEOUS DETAILS		R-1-28-67
	BRIDGE STD. D	CASTING DETAILS ROADWAY DRAINS		
	BRIDGE STD. F	ROADWAY DRAIN OUTLET DETAILS		
	BRIDGE STD. G8A	TYPICAL BEAM GUARD RAIL DETAILS		
	BRIDGE STD. H	TYP. DETAILS OF THICK. PAVEMENT & LOC. TOE OF SL. AROUND END BENTS		
	BRIDGE STD. H	TYP. DETAILS OF THICK. PAVEMENT & LOCATING TOE OF SLOPE		
	BRIDGE STD. HS	CONT. STEEL BEAM-TYP. APPROACH DETAILS-TWIN STRUCTURES		
	BRIDGE STD. HS	ST. BEAM & R.C. GIRDER-TYP. APPROACH DETAILS-TWIN STRUCTURES		
	BRIDGE STD. HS21	CONT. STEEL BEAM-TYP. APPROACH DETAILS-TWO-LANE STRUCTURES		
	BRIDGE STD. M1	MISCELLANEOUS APPROACH DETAILS		
	BRIDGE STD. M2	MISCELLANEOUS APPROACH DETAILS		
21	BRIDGE STD. J	EXPANSION JOINTS		
	BRIDGE STD. M4	R.C. BRIDGE APPROACH TURNOUT DETAILS-12'-6" SHOULDERS	7-27-66	R-1-14-67
	BRIDGE STD. M5	SLOPE WALL DETAILS		
22	BRIDGE STD. R1C	ALUMINUM RAILING (TYPE S)		
23	BRIDGE STD. R1E	ALUMINUM RAILING DETAILS	6-15-66	R-4-28-66
24	BRIDGE STD. R1F	STEEL RAILING (TYPE C)	8-12-65	R-5-27-66
	BRIDGE STD. 1	ALUMINUM RAILING DETAILS	6-15-66	R-4-28-66
25	BRIDGE STD. R2A	BRIDGE LIGHTING DETAILS		
	BRIDGE STD. S1	TYPICAL DETAILS FOR PLACING SPECIAL FILLING MATERIAL	8-10-66	R-6-6-66
	BRIDGE STD. S2	TYPICAL DETAILS FOR PLACING SPECIAL FILLING MATERIAL		
	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		
26	ROAD STD. SHEET MB 2	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET MC	MISCELLANEOUS STANDARDS	9-22-66	R-1-JUNE66
	ROAD STD. SHEET MC1	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET MD	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET MD1	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET ME	MISCELLANEOUS STANDARDS		
	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		
	ROAD STD. SHEET MN	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET MP	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET MQ	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET MR	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET S	MISCELLANEOUS STANDARDS CENTER DITCH INLETS		
	ROAD STD. SHEET S1	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 DETAILS		
	ROAD STD.	STANDARD REINF. CONC. CULVERTS-SLAB TOP TYPE (W.F.)		
	ROAD STD.	STANDARD REINF. CONC. CULVERTS-SLAB TOP TYPE (U.F.)		
	RD.10 STD. SHEET GR	STANDARD GUARD RAIL		
	ROAD STD. SHEET GR1	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 DETOUR SIGNS		

STRUCTURE NO. I-465-130-5279
STA. 715 + 46.9 (LINE "A")
STA. 50+00.0 (LINE "S-18-A")
3 SPAN, 30'-0", 70'-9" & 30'-0"
CONT. COMP. STEEL BM. BRIDGE

BEGIN STR. LIMITS
STA. 714+78.73
(LINE "A")

END STR. LIMITS
STA. 716+12.07
(LINE "A")

SCALE 1" = 2000'



TRAFFIC DATA I 465		COLLEGE AVENUE	
A.D.T. (1964)	34,205 V.P.D.	62	3599
A.D.T. (1975 PROJECTED)	57,503 V.P.D.	82	8993
TRUCKS	7 %		
DESIGN SPEED	70 M.P.H.		
ACCESS CONTROL	FULL		NONE

THESE PLANS PREPARED BY
ALDEN E. STILSON & ASSOCIATES
LIMITED
CONSULTING ENGINEERS
COLUMBUS, OHIO

BY [redacted] DATE

APPROVED 9-7-66
CHIEF ENGINEER—INDIANA STATE HIGHWAY COMMISSION

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

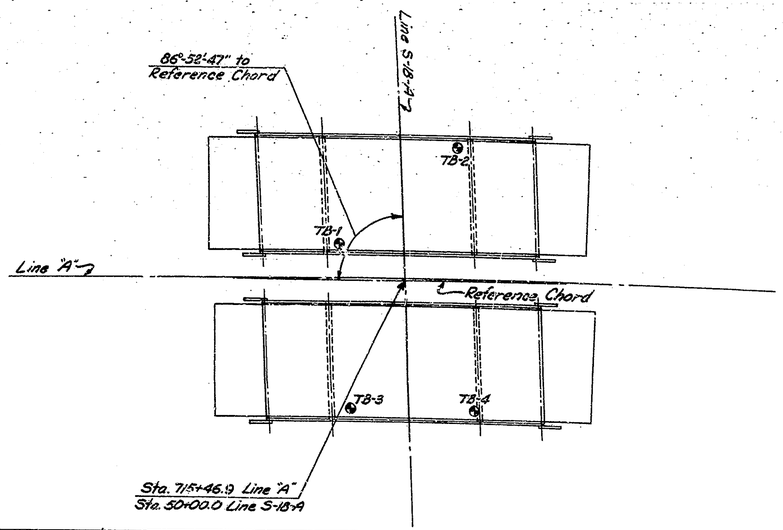
REVISIONS	
DATE	SHEET NO.
10-14-66	3, 4, 5, 13, 17, 19 & 23 Incl., 24, 25
11-2-66	7, 13, 16
2-1-67	Delete Sht. 21; Change Sht. 4, 5, 12, 13, 17, 19 & 20
3-23-67	4
7-13-67	7, 12

RECOMMENDED FOR APPROVAL 8-29-66
[redacted]
ENGINEER OF PLANS AND SPECIFICATIONS—INDIANA STATE HIGHWAY COMMISSION

CARL J. KLINGELHOEFER
REGISTERED
NO. 2429
STATE OF INDIANA
PROFESSIONAL ENGINEER

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS
APPROVED:
[redacted]
DIVISION ENGINEER DATE

BRIDGE FILE: I-465-130-5279



BORING NO.	TB-1	TB-2	TB-3	TB-4
STATION	715+16	715+74	715+21	715+80
OFFSET	16' Lt.	60' Lt.	60' Rt.	60' Rt.
GROUND ELEV.	828.5	827.1	827.8	826.8

	TB-1 SAMPLE NO.	TB-1 ELEV.	TB-1 N	TB-1 DESCRIPTION	TB-2 SAMPLE NO.	TB-2 ELEV.	TB-2 N	TB-2 DESCRIPTION	TB-3 SAMPLE NO.	TB-3 ELEV.	TB-3 N	TB-3 DESCRIPTION	TB-4 SAMPLE NO.	TB-4 ELEV.	TB-4 N	TB-4 DESCRIPTION
830		828.5		Ground Elev.						827.8		Ground Elev.				
	1	827.0	2/6/8	Topsoil, moist-medium stiff	1	827.1	2/6/5	Ground Elev. Black silty clay (fill), moist-medium stiff.	1	826.3	3/6/8	Topsoil		826.6	2/6/4	Ground Elev. Topsoil
825	2		6/6/8	Brown sandy clay with fine gravel, moist-stiff to medium stiff.		824.6			2	824.3	5/7/8	Brown silty clay, moist-stiff	1	825.8	7/8/8	Dark brown silty clay, moist-stiff
	3	829.0	4/6/8		2		5/6/7	Mottled brown and gray sandy clay, moist-medium stiff.	3		6/6/8	Mottled brown and gray sandy clay, moist-medium stiff.	2		5/7/8	Mottled brown and gray silty clay, moist-medium stiff.
820	4	819.5	4/6/8	Brown sandy clay with fine gravel, moist-stiff	3	819.1	4/4/5		4	819.6	2/3/4		3	818.8	5/6/9	
	5	816.5	6/10/14	Brown sandy clay with fine to coarse gravel, and fine sand seams, moist-stiff	4		7/11/16	Brown and gray sandy clay with fine gravel, moist-stiff.	5	815.8	6/9/13	Brown sandy clay with fine gravel, very moist-medium stiff.	4		3/3/4	Mottled brown and gray sandy clay with fine gravel, wet-loose.
815	6		10/16/20	Brown and gray clayey fine to coarse sand with fine gravel and clay seams, moist-dense.		812.6			6	812.8	11/13	Brown silty fine to coarse sand and fine gravel, wet-medium dense.	5	813.8	4	Brown clayey fine to coarse sand and fine gravel, wet-loose.
810		810.5			5	810.1	7/20/31	Brownish gray sandy clay with fine gravel, moist-stiff.	7		13		6		8/15	
	7		8/21/25	Gray sandy clay with fine gravel and fine to coarse sand seams, wet-very stiff.	6		27/34/52	Brown fine to coarse sand and fine gravel, moist-very dense.	8	806.8	14/21/41	Brown sandy silt with fine gravel and fine to coarse sand in seams, wet-dense.	7	808.8		Brown silty fine to coarse sand and fine gravel, wet-medium dense.
805		803.5			7	804.1	16/29/48						8	806.3	7/12/14	Brownish gray sandy clay with fine gravel, moist-hard.
800	8	803.5	24/26/28	Gray sandy clay with fine gravel and fine sand seams, moist-stiff				Gray sandy silt with fine gravel, moist-hard.	9		24/61/86	Gray sandy silt with fine gravel, moist hard.	9		18/77/95	Gray sandy silt with fine gravel and fine to coarse sand and fine gravel in seams, wet-dense to very dense.
	9	798.5	54/75/78	Gray sandy silt with fine gravel, moist-hard.	8		70/95		10	797.8	22/50/50		10	796.8	24/37/42	
795						796.1										
					9		17/36/36	Gray sandy silt with fine gravel and fine to coarse sand and fine gravel in seams, wet-very dense.								
790					10	788.1	22/43/90									
785					11		15/48/91									
					12		12/39/79	Brownish gray sandy clay with fine gravel, moist-very stiff.								
780					13	777.1	18/34/45									
775																
	Depth of Boring - 30'-0"				Depth of Boring - 50'-0"				Depth of Boring - 30'-0"				Depth of Boring - 30'-0"			

Notes:

▲ Denotes Ground Water Table

N - Indicates the number of blows required to drive a 1⅜" I.D., 2" O.D. Split Spoon Sampler 6" by means of a 140# weight falling 30".

SOIL BORINGS

SCALES: HORIZ. 1" = 50'-0", VERT. 1" = 5'-0"

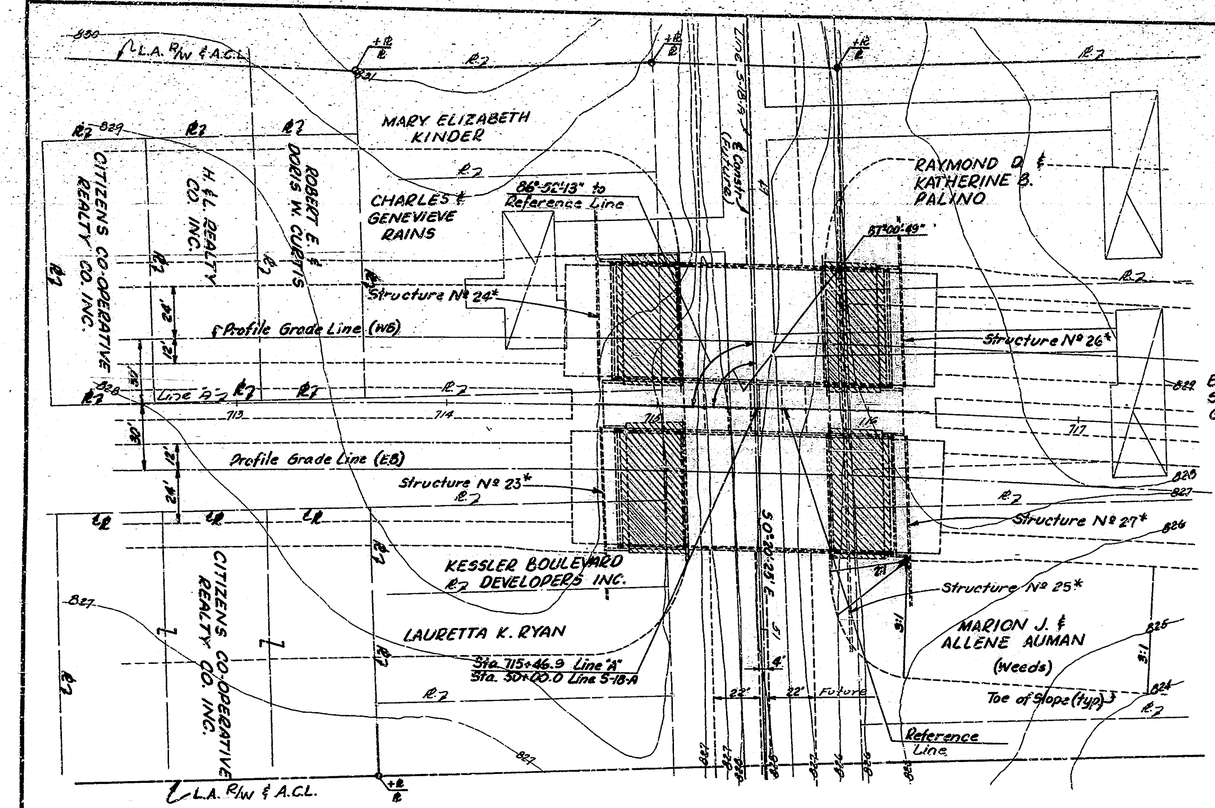
SUBMITTED FOR APPROVAL Tom L. Wheelwright, P.E.

PROJECT I-465-4 (129) 127

~~BRIDGE~~ CONTRACT NO. 12-739J

BRIDGE FILE I-465-130-5279

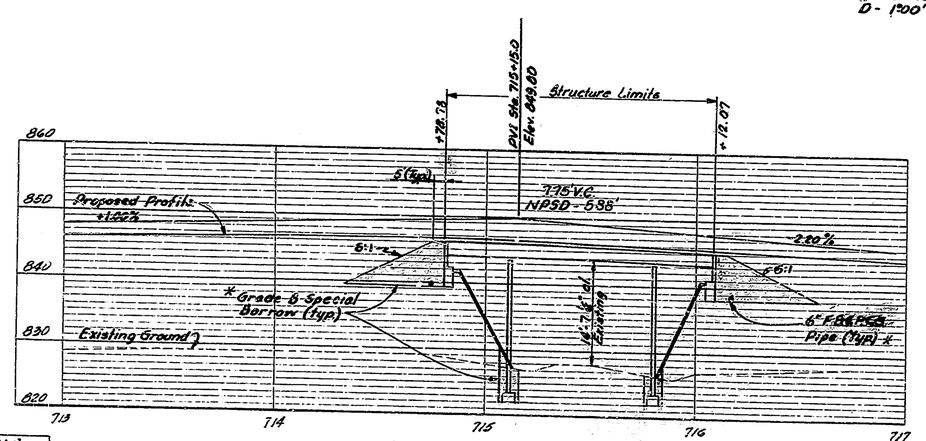
November 8 1961



SITUATION PLAN

SCALE 1" = 30' CONTOUR INTERVAL = 1 FT.

CURVE DATA
P.I. Sta. 722+73.64
Δ - 21°-32'-50" Rt.
D - 1°00'



PROFILE ON SURVEY ℄ LINE "A"

SCALES HORIZ. 1" = 30' VERT. 1" = 10'

DESIGNED RHD CK'D TLD
DRAWN RHD CK'D TLD
TRACED ____ CK'D ____

Rev 10-14-66 Slopes, Pipe

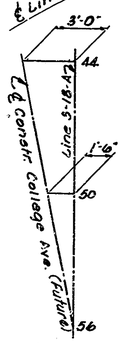
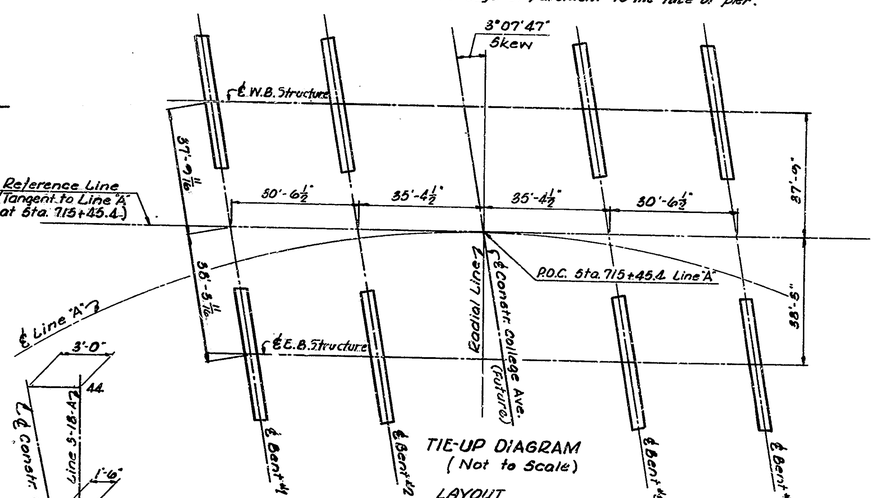


DIAGRAM SHOWING LOCATION of ℄ CONSTR. COLLEGE AVE. (Not to Scale)



TIE-UP DIAGRAM
(Not to Scale)

UTILITY OWNERS

Indianapolis Power & Light Co.
25 Monument Circle
Indianapolis, Indiana

Indiana Bell Telephone Co.
240 N. Meridian St.
Indianapolis, Indiana

Citizen's Gas & Coke Utility
2020 N. Meridian St.
Indianapolis, Indiana

BRIDGES OVER 20' SPAN

FED. ROAD DIST. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-465-4 (129)127	1965	3	26

NOTES:
Location: Sections 11 and 12, Township 17 N, Range 3E, Clay Township, Hamilton County.
Approach Data: For bench marks, alignment references and additional approach details see Sheet 12 Project I-465-4 (129) 127 Roadway Plans
Soil Data: For soil borings see Sheet 2 . See Article A203 of the specifications regarding test pit data.
Field Notes:
Book 8853 T, pages 13 & 14.
Book 8854 L, pages 12 thru 16.
Book 8855 T, pages 13 & 14
Book 8856 L, pages 13 & 19
Slopes: Slopes indicated at S.E. Corner are typical for all corners.
Slopewalls: Crosshatched areas indicate 560 sq. yds. slopewall at Bent 1 and 532 sq. yds. at Bent 4 including 148 sq. yds. equiv. conc. toe wall at Bent 1 and 135 sq. yds. at Bent 4, and 12 sq. yds. equiv. spec. conc. curb.
* Indicates Items Included in Road Quantities.
Horizontal Clearance: Proposed span lengths are based on a 10'-0" horizontal clearance from the future edge of pavement to the face of pier.

LAYOUT

Twin continuous composite steel beam bridges.
3 spans: 30'-0", 70'-0", 30'-0", along Ref. Line, 51'-0" Roadways, 2 Curbs @ 9".
Skew - 3°-07'-47" Left
Over College Ave. an Interstate 465.

INDIANA STATE HIGHWAY COMMISSION

HAMILTON COUNTY

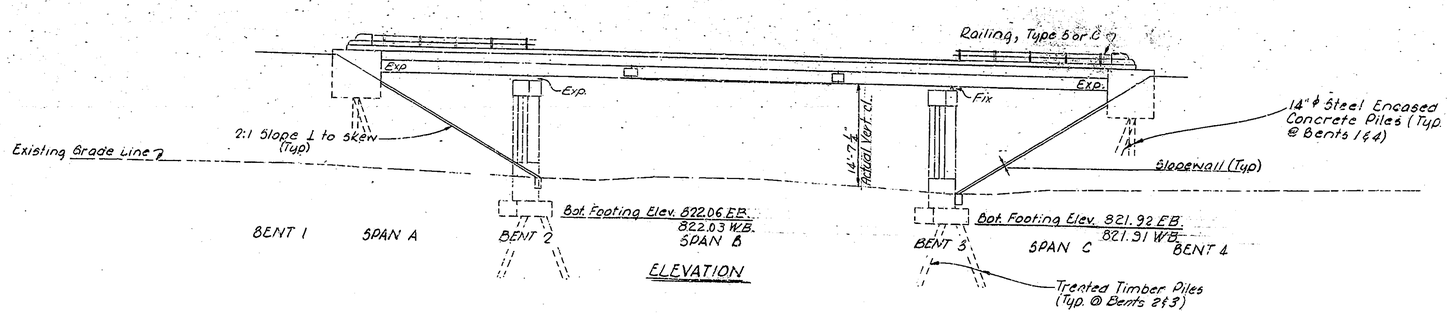
SCALE:- As Noted June 24, 1965

SUBMITTED FOR APPROVAL:- Tom L. McDaniel, P.E.

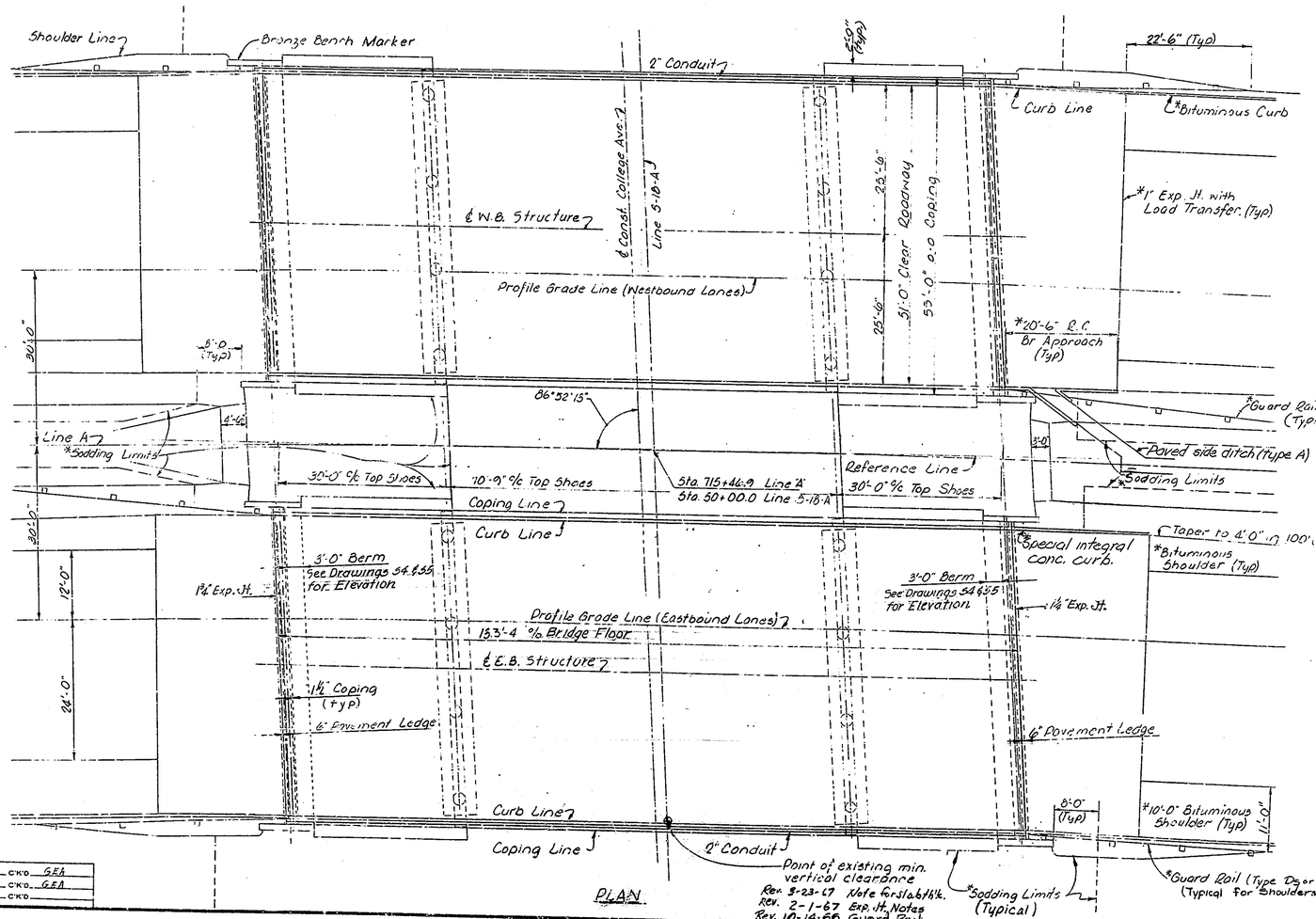
DRAWING:- 51 OF 16
PROJECT:- I-465-4(129)127(North Leg)
~~BRIDGE~~ CONTRACT NO. R-7391 Sta. 715+45.4
BRIDGE FILE:- I-465-130-5279 ℄ Span 8

Structure to be built to an 77.5° V.C.

BRIDGES OVER 20' SPAN					
PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-465-4(129)127	1965	4	26



ELEVATION



PLAN

Rev. 8-23-67 Note for slab & ½"
Rev. 2-1-67 Exp. Jt. Notes
Rev. 10-14-66 Guard Rail

DESIGNED	JHD	C'K'D	G.E.A.
DR. WN.	JHD	C'K'D	G.E.A.
TRACED		C'K'D	

DESIGN DATA: Designed for HS-20 -44 loading in accordance with 1965 AASHO Specifications. Checked for a special loading consisting of 2-24,000 axles, spaced 4'-0" apart.

TYPICAL CROSS SECTION: For I-465 typical sections, see Sheet 4, Roadway Plans.

GENERAL NOTES

The bent caps, N^os 1 & 4, shall be sealed with 2 coats of epoxy resin. See Special Provisions.

Dimensions and details are typical for both bridges unless otherwise shown.

For General Notes and Typical Section see Drawing 53.

* Indicates Road Item.

JOINT LEGEND

1¾" & 1¼" Exp. Jt. same as 1" Exp. Jt. shown on Br. Std. C, except width

N

NOTE:-
Slab thickness as shown on plans to be increased ½" to provide 2" top cover on slab steel. This change shall be made by raising grade on structure A. No change in structure elevations is required except those affected by raising floor surface, including coping and wingwalls.
The approach grade to be warped to match bridge floor.
No revisions have been in these plans for this change. See the Special Provisions.

GENERAL PLAN

Twin Continuous Composite Steel Beam Bridges
3 spans: 30'-0", 70'-9", 30'-0" along ℄ Line, 31'-0" Roadways, 2-Curbs @ 9"
Skew - 3°07'47" Left
Over College Ave. on Interstate Route 465.

INDIANA STATE HIGHWAY COMMISSION

HAMILTON COUNTY

SCALE:- 3/32" - 1'-0"

June 25, 1965

SUBMITTED FOR APPROVAL:- Tom L. Underwood, P.E.

DRAWING:- 52 OF 16

PROJECT:- I-465-4(129)127 (North Leg)

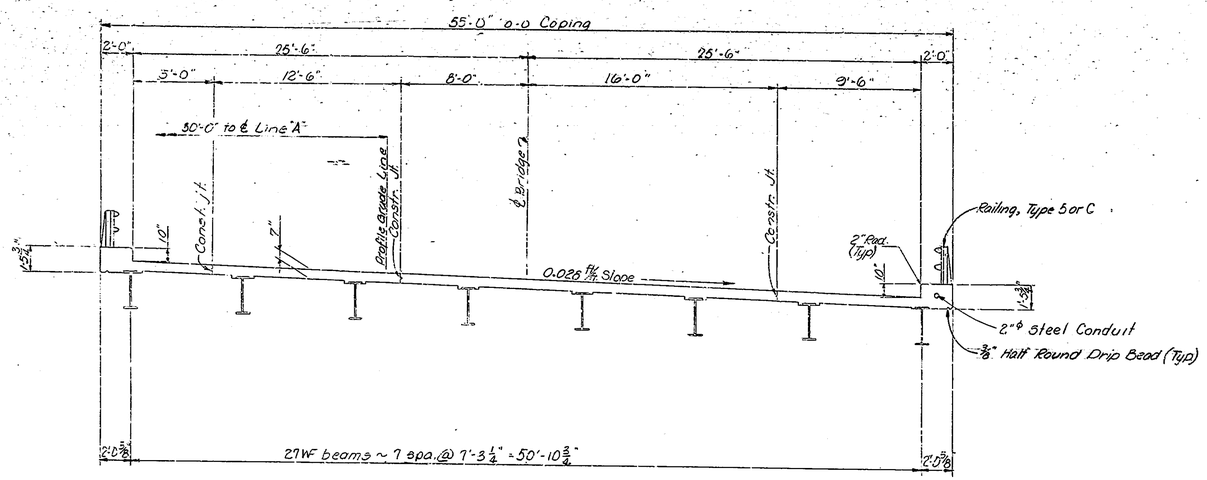
~~BRIDGE~~ CONTRACT NO. 12-7391

BRIDGE FILE:- I-465-130-5279

Sta. 715+45.4 ℄ Span B

BRIDGES OVER 20' SPAN

PUB. ROAD REQ. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-465-4 (129) 127	1965	5	26



TYPICAL SECTION
SCALE: ½" = 1'-0"
(East Bound Lanes Shown. West Bound Lanes same except for location of longitudinal Construction joints and profile grade)

STANDARD DRAWINGS

BRIDGE	ROAD	PURPOSE
C1		Bar bending, test bar samples, reinforcing bar notes, pile splicing, notch in slab at ends of beams, 1" Exp. Joint.
	MB2	Slopewall Details
R1-C		Aluminum Railing-Type 5
R1-E		Aluminum Railing Details
R1-F		Steel Railing-Type C
R2-A		Conduits

*Indicates Road Item

GENERAL NOTES

EXISTING STRUCTURE: No present structure at proposed bridge site.

FOOTING DEPTH: Depth of footing to be extended if found necessary. See Article B 403.2(a) of Specifications.

PILE CAPACITY AND LENGTH: Piles shall have minimum bearing value shown on detail drawings. Determine pile lengths by Articles F103 and F208 of Specifications.

ENCASED CONCRETE PILES: For details of steel encased concrete piles see Bridge Standard C1, the Special Provisions, and applicable articles in the Specifications.

REINFORCING STEEL COVERING: Reinforcing steel covering shall be 1½ inches minimum in top and 1 inch minimum in bottom of floor slabs, 3 inches in footings; except bottom steel which shall be 4 inches, 1½ inches for ties in beams and columns and 2 inches in all other parts unless noted.

SUPERSTRUCTURE CONCRETE: Concrete in superstructure, including railing, to be Class "F"

END BENT CONCRETE: Concrete in end bents to be Class "F".

INTERIOR BENT CONCRETE: Concrete in footings and crash walls to be Class "E". Concrete in columns to be Class "D". Concrete in caps to be Class "F".

MISCELLANEOUS CONCRETE: Concrete in steel-encased concrete piles and slopewall to be Class "D"

CONCRETE POURS: Continuous concrete pours shall be required between construction joints as shown on detail plans

WATERPROOFING: Waterproof backs of mudwalls and wingwalls on end bents in accordance with Specifications.

CONCRETE CHAMFER: Bevel forms ¼ inch under copings and chamfer exposed edges 1 inch unless noted.

SLOPE PROTECTION: Construct slopewall at locations as shown on layout.

PILE TOLERANCE: Maximum tolerance in position of pile head is 2 inches for steel encased concrete piles and 1½ inches for treated timber piles.

*EXPANSION JOINTS: Three 1 inch expansion joints with load transfer to be placed in the pavement as shown on Bridge Standard M13

RAILINGS: All railing posts shall be constructed perpendicular to grade.

SPECIAL PROVISIONS: See Special Provisions for items included in this contract.

SHOP DRAWINGS: 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 submit 5 copies of these to the Engineer. See Article E1103.2 of the Specifications.

PAY ITEMS: For pay items covering this structure, see Bridge Summary.

CONDUIT: Conduit shall extend 2'5 beyond end of Bridge Floor

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

Rev. 2-1-67 Std. Drawg. Exp. Jt.
Rev. 10-14-66 Notes

DESIGNED Lind C'K'D G.E.A.
DRAWN D.W.H. C'K'D G.E.A.
TRACED C'K'D

GENERAL PLAN

Twin Continuous Composite Steel Beam Bridges
3 Spans 30'-0", 70'-9", 30'-0", along Ref. Line, 51'-0" Roadways, 2 Curbs @ 9"
Skew 3°-07'-47" Left
Over College Ave. on Interstate Route 465

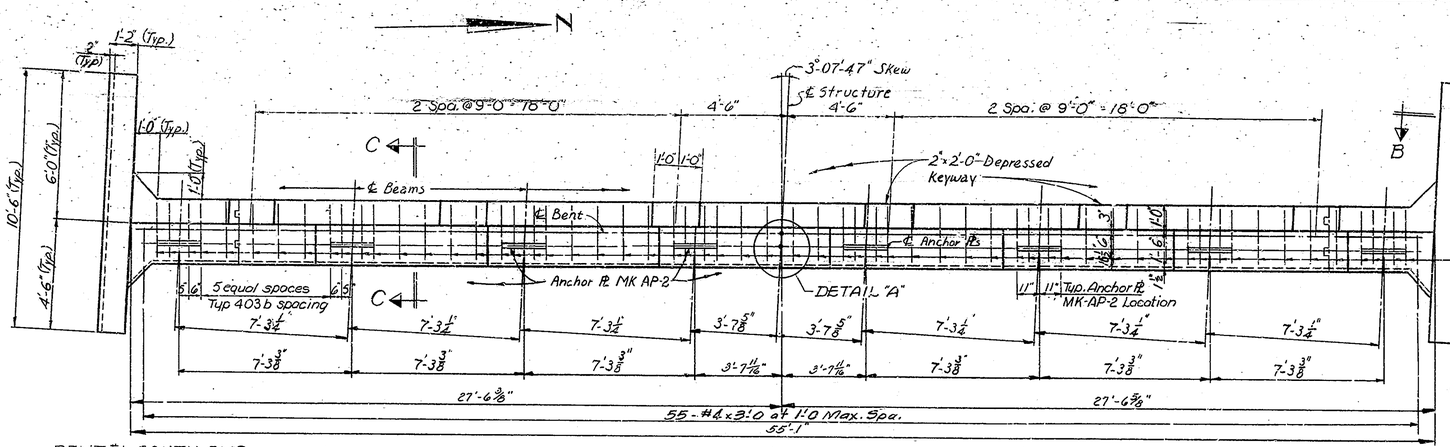
INDIANA STATE HIGHWAY COMMISSION

SCALE:- As Noted June 24, 1965

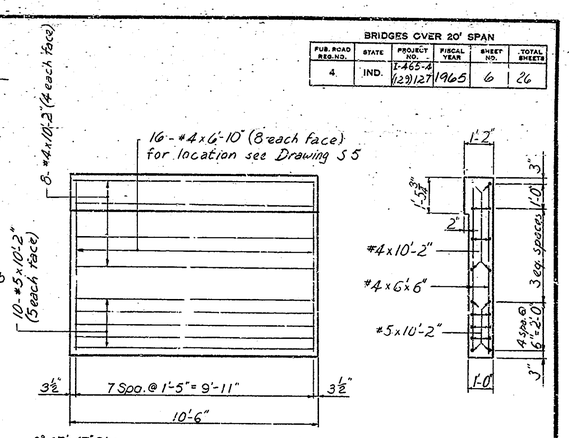
SUBMITTED FOR APPROVAL:- Jos. L. Markwood, P.E.

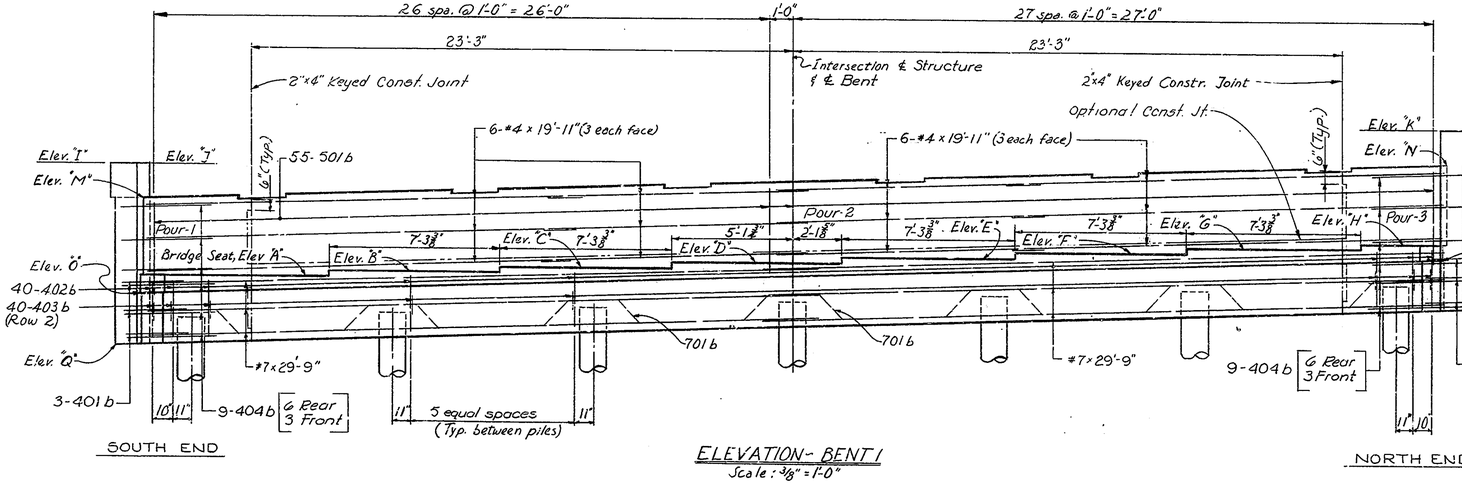
DRAWING:- 3 OF 16
PROJECT:- I-465-4(129)127(North Leg)
~~BRIDGE~~ CONTRACT NO. R-7391
BRIDGE FILE:- I-465-130-5279 Sta. 715+45.4 ℄ Span B

BRIDGES OVER 20' SPAN					
FUR. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4.	IND.	I-465-4 (129) 127	1965	6	26

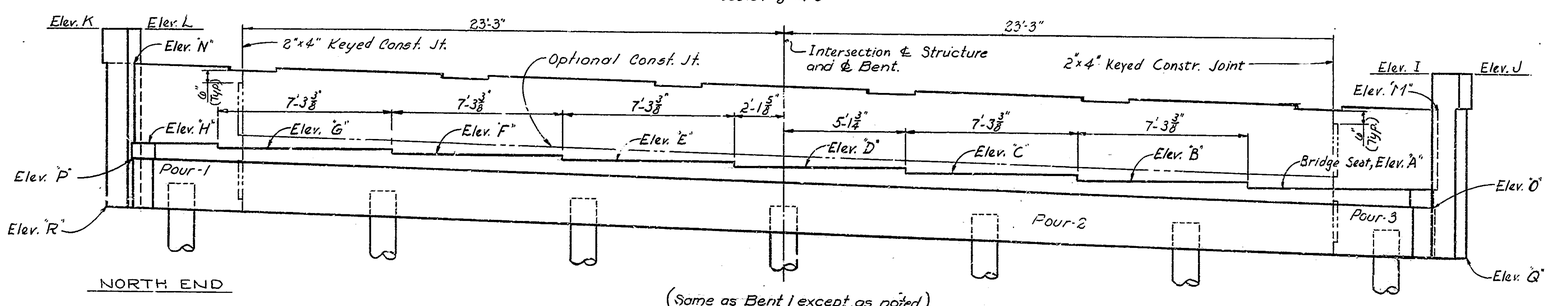


PLAN ~ BENT #1 W.B. Lane (E.B. Lane same)
BENT #4 W.B. Lane same by 180° Rotation (E.B. Lane same)
Scale: 3/8" = 1'-0"



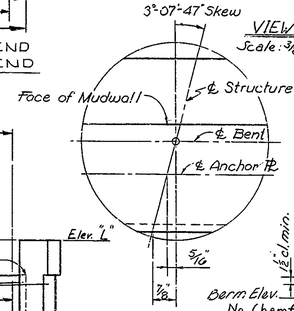


ELEVATION - BENT 1
Scale: 3/8" = 1'-0"

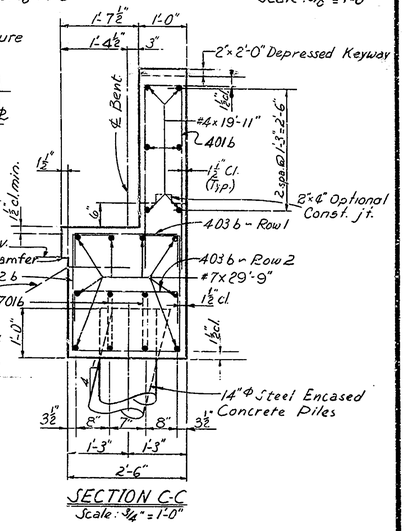


(Same as Bent 1 except as noted)

ELEVATION - BENT 4
Scale: 3/8" = 1'-0"



VIEW A-A
Scale: 3/8" = 1'-0"



SECTION B-B
Scale: 3/8" = 1'-0"

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

NOTES

For location of Bridge ℄ see drawing S-1

For additional Sections, Details, and Notes see drawing S-5

Anchor Plates to be pre-set in concrete. For details see drawing S-5

GENERAL NOTES: See Drowing S3 for General Notes.

BENTS 1 AND 4 DETAILS

INDIANA STATE HIGHWAY COMMISSION

SCALE:- AS NOTED June 24, 1965

SUBMITTED FOR APPROVAL:- Tom L Underwood, P.E.

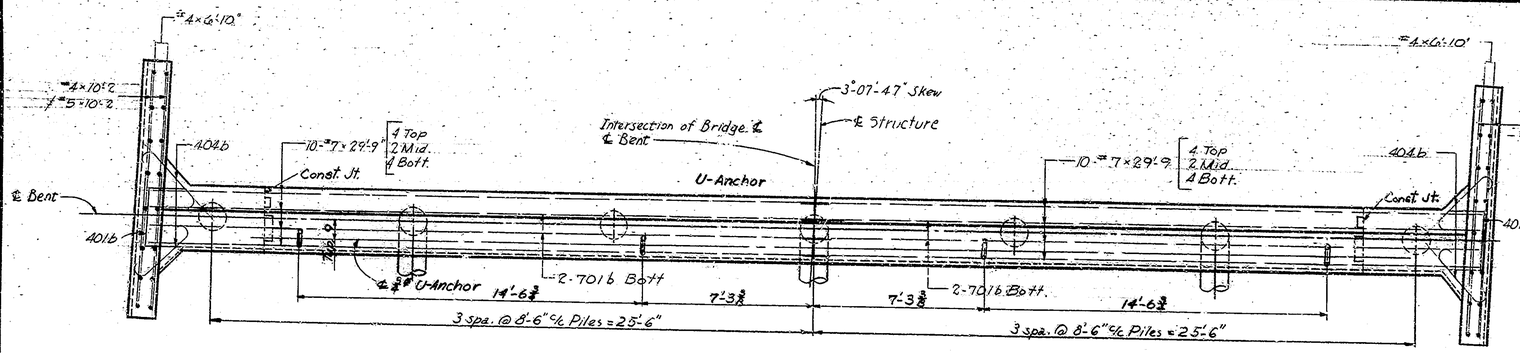
DRAWING:- S4 OF 16
PROJECT:- I-465-4 (129) 127
~~BRIDGE~~ CONTRACT NO. R-7391
BRIDGE FILE:- I-465-130-5279

DESIGNED G.E.A. C'K'D. F.W.J.
DRAWN A.N.R. C'K'D. F.W.J.
TRACED C'K'D.

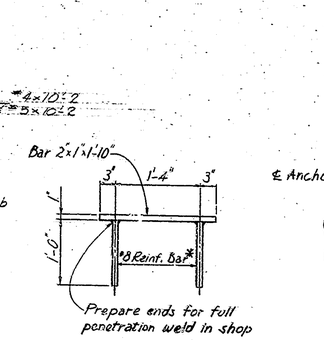
November 6, 1961

PROJECT NO.	LINE	SHEET NO.	TOTAL SHEETS	FILE
I-465-4(129)127	A	6	26	I-465-130-5279

BRIDGES OVER 20' SPAN					
PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-465-4 (123) 127	1965	7	26

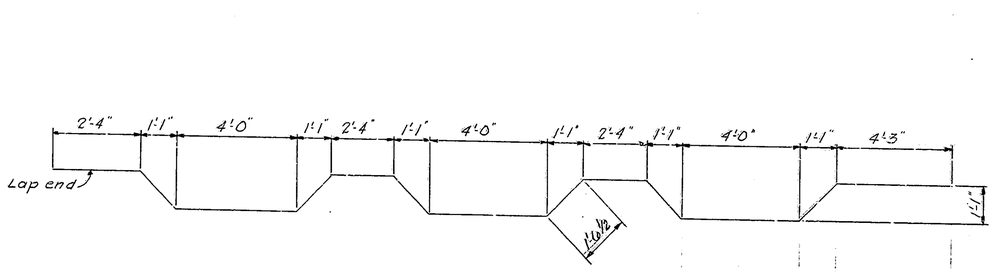


CAP PLAN ~ BENT #1 W.B. Lane (E.B. Lane same)
BENT #4 - W.B. Lane same by 180° Rotation (E.B. Lane same)
Scale 3/16" = 1'-0"

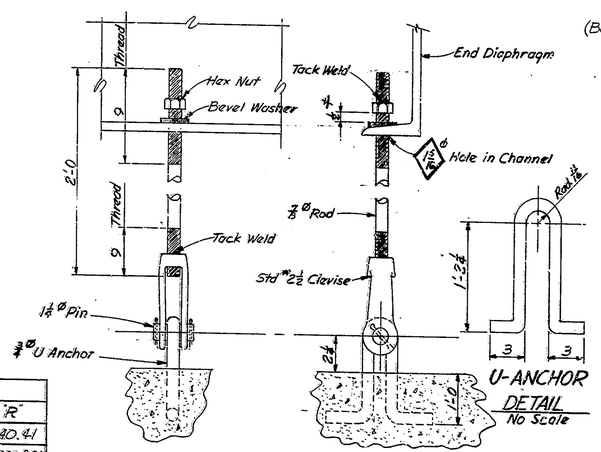


DETAIL OF ANCHOR PLATE MK-AP-2
Scale: 1"=1'-0"

*As an alternate a 7/8"ϕ x 8" long automatically welded stud (headed) may be used.



701b × 32'-6

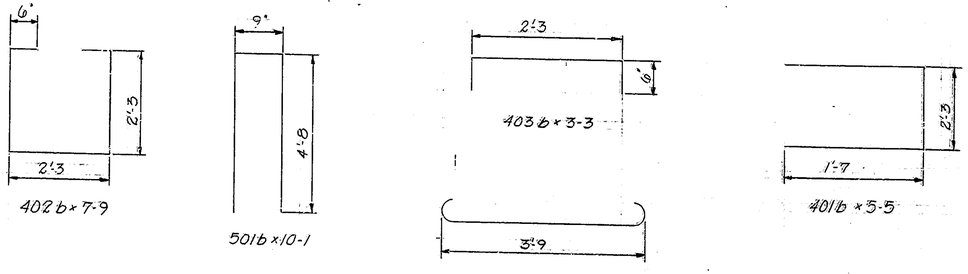


TIE-DOWN ASSEMBLY-U A DETAIL
No Scale

† Before tack welding nut, adjust nut to give ½" clearance with clevise pin snugged up against U-Anchor.

TABLE OF ELEVATIONS

LOCATION	'A'	'B'	'C'	'D'	'E'	'F'	'G'	'H'	'I'	'J'	'K'	'L'	'M'	'N'	'O'	'P'	'Q'	'R'
BENT 1-E.B.	841.600	841.805	842.010	842.215	842.420	842.625	842.830	843.035	846.73	846.78	848.16	848.21	845.03	846.59	840.94	842.47	838.88	840.41
BENT 1-W.B.	842.065	842.270	842.475	842.680	842.885	843.090	843.295	843.500	847.19	847.24	848.63	848.68	845.49	847.04	841.41	842.94	839.35	840.88
BENT 4-E.B.	840.625	840.835	841.040	841.250	841.455	841.665	841.870	842.080	845.81	845.71	847.27	847.17	844.05	845.62	839.98	841.52	837.92	839.40
BENT 4-W.B.	841.125	841.335	841.540	841.750	841.955	842.165	842.370	842.580	846.31	846.21	847.77	847.67	844.55	846.12	840.47	842.02	838.41	839.96



NOTES

Bent Cap: Bent cap shall not be poured until after fill has been completed up to approximate elevation of bottom of cap.
Anchor Plates: Anchor plates MK-AP-2 shall be preset in concrete
Top of Mudwall: Top of mudwall and top of depressed keyways shall be trowelled smooth. Cover horizontal surfaces with one layer of medium weight roofing felt and provide ¼ inch expansion joint material along vertical sides of keyways.
Reinforcing Steel: For Reinforcing bar notes see Standard Drawing C1.
For location of ℄ structure see drawing 5-1
Additional Details: For additional details see Drawing 5-4
General Notes: See Drawing 5-3 for General Notes
Piles: 14"ϕ Steel Encased Concrete, 7Ga. piles to be driven to 40 tons minimum bearing capacity. Approximate pile length is 35 feet

Rev. 7-13-67: Tie-Down Assembly, UA
Rev. 11-2-66 Notes

BILL OF MATERIALS
Bent #1 EB
(Bent #1 WB, Bent #4 EB & Bent #4 WB same)

REINFORCING STEEL			
SIZE & MARK	No OF BARS	LENGTH	WEIGHT
701b	4	32-6	266
#7	20	29-9	1216
		Total #7	1482
501b	55	10-1	578
#5	20	10-2	212
		Total #5	790
401b	6	5-5	22
402b	40	7-9	207
403b	100	3-3	217
404b	18	4-9	57
#4	32	6-10	146
#4	16	10-2	109
#4	18	19-11	239
#4	55	3-0	110
		Total #4	1107
Total Steel			3379
CLASS "F" CONCRETE			
Pour 1			5.0 cys.
Pour 2			17.5 cys.
Pour 3			5.0 cys.
Total			27.5 cys.
Anchor Plates MK-AP-2			8 each
7-14"ϕ * 7Ga. Steel			
Encased concrete			
Piles @ 35 ft.			245 LF.
TIE DOWN ASSEMBLY NO. UA			
Bent No. 1	4 Ea.		
Bent No. 4	4 Ea		
TOTAL			8 Each

DESIGNED GEA C'K'D CWA
DRAWN ANA C'K'D CWA
TRACED C'K'D

BENTS 1 AND 4 DETAILS

INDIANA STATE HIGHWAY COMMISSION

SCALE:- AS NOTED June 24, 1965

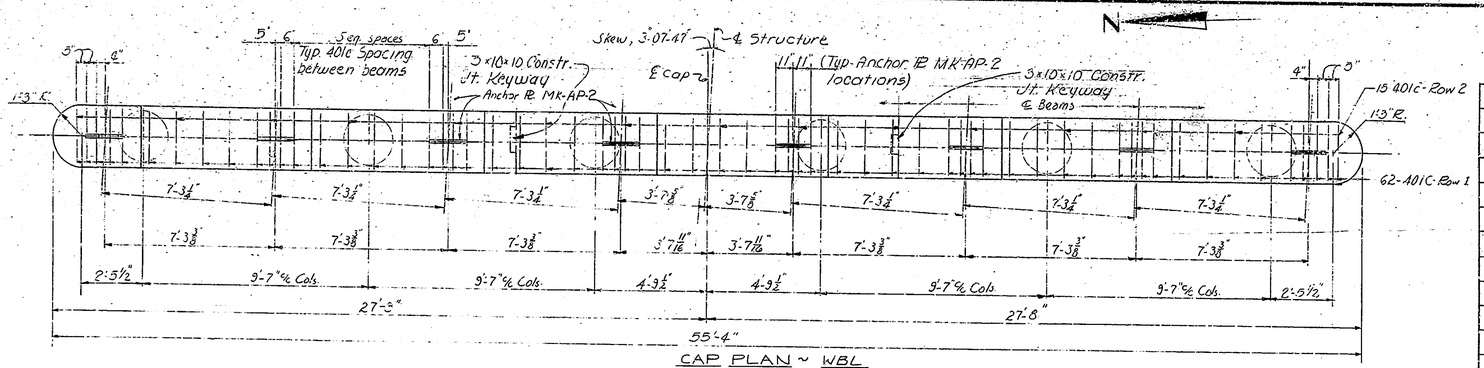
SUBMITTED FOR APPROVAL:- Tom L. Underwood P.E.

DRAWING:- 5 OF 16
PROJECT:- I-465-4(123) 127
~~BRIDGE~~ CONTRACT NO. R-7391
BRIDGE FILE:- I-465-130-5279

November 6, 1961

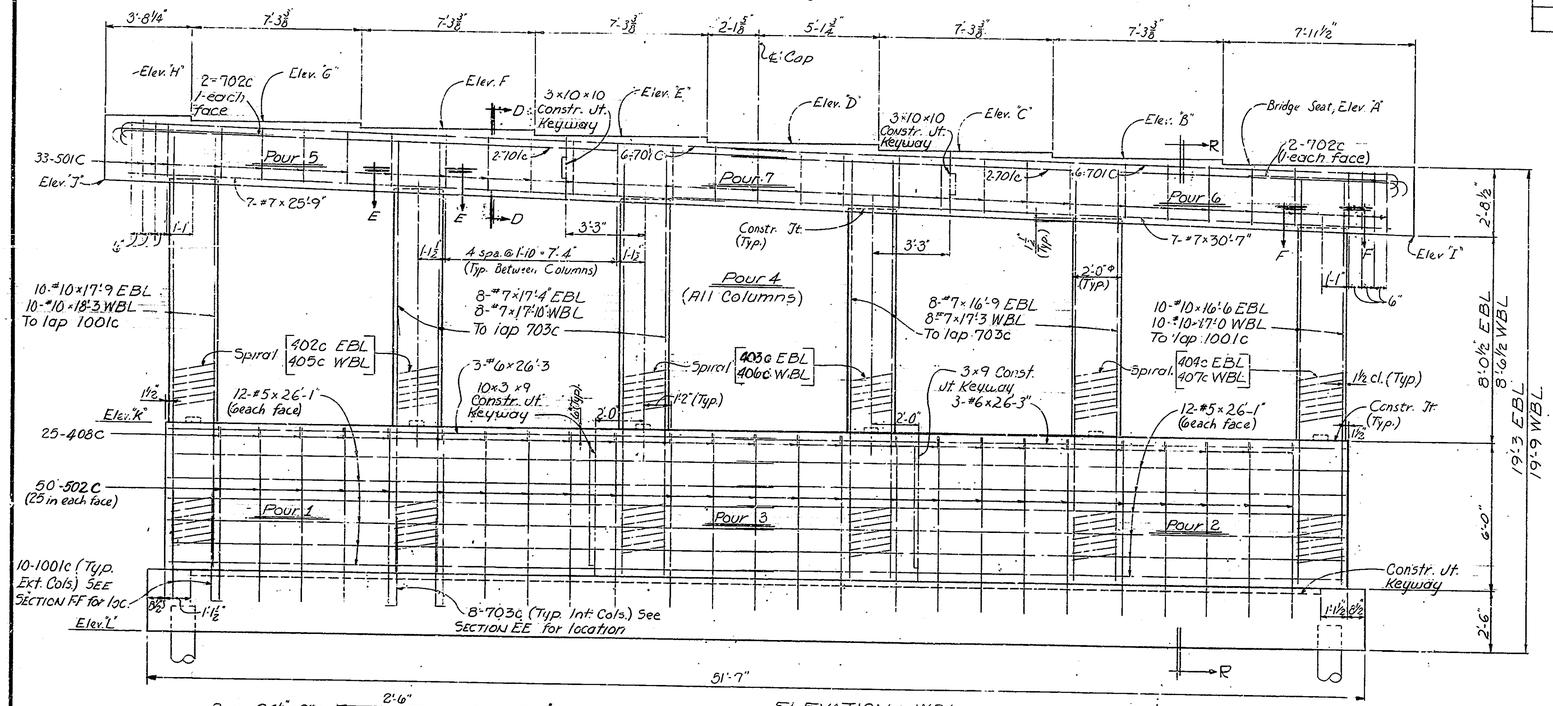
PROJECT NO.	LINE	SHEET NO.	TOTAL SHEETS	FILE
I-465-4(123)127	A	7	26	I-465-130-5279

BRIDGES OVER 20' SPAN					
FUR. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-465-4 (129)127	1965	8	26

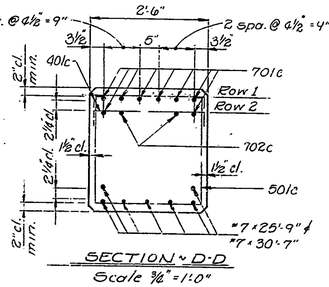


CAP PLAN ~ WBL
EBL same
Scale 3/8" = 1'-0"

ELEVATIONS		
LOCATION	E.B. Bridge	W.B. Bridge
"A"	841.310	841.780
"B"	841.515	841.985
"C"	841.720	842.190
"D"	841.925	842.400
"E"	842.130	842.605
"F"	842.340	842.810
"G"	842.545	843.015
"H"	842.750	843.220
"I"	838.60	839.07
"J"	840.13	840.60
"K"	830.56	830.53
"L"	822.06	822.03



ELEVATION ~ W.B.L.
E.B.L. same except as noted



SECTION ~ D-D
Scale 3/8" = 1'-0"

NOTES

Reinforcing Steel: For reinforcing bar notes see Standard Drawing C1.

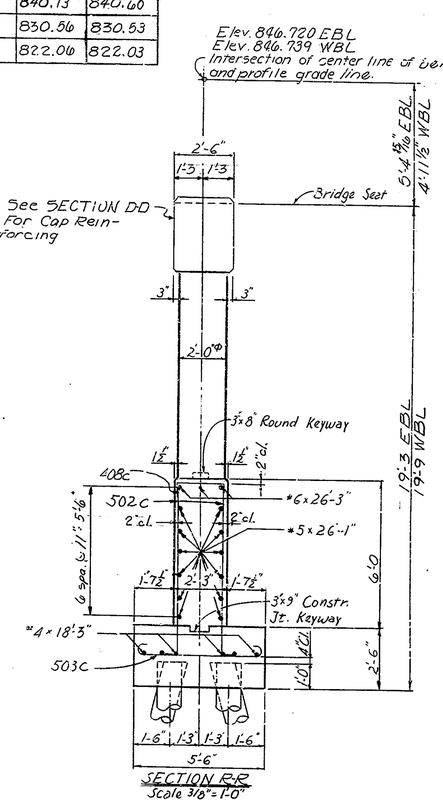
Anchor Plates MK-AP-2 to be pre-set in concrete. For details see Drawing 55

For additional Section Details and Notes, see drawing 57

For location of ℄ structure see drawing 51

PILES: Treated timber piles shall be driven to a minimum bearing capacity of 25 tons. Approximate pile length is 25 feet.

EBL: Indicates Eastbound Lanes
WBL: Indicates Westbound Lanes



SECTION R-R
Scale 3/8" = 1'-0"

BENT 2 DETAILS

INDIANA STATE HIGHWAY COMMISSION

SCALE:- AS NOTED June 24, 1965

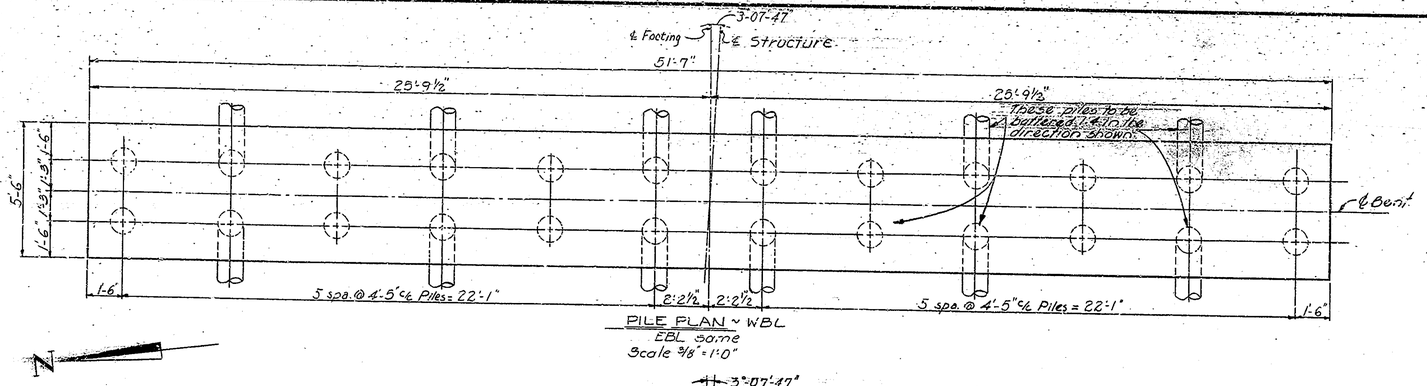
SUBMITTED FOR APPROVAL: Tom L. Vandewark, P.E.

DRAWING NO. 56 OF 16
PROJECT:- I-465-4(129)127
~~BRIDGE~~ CONTRACT NO. R-7391
BRIDGE FILE:- I-465-130-5279

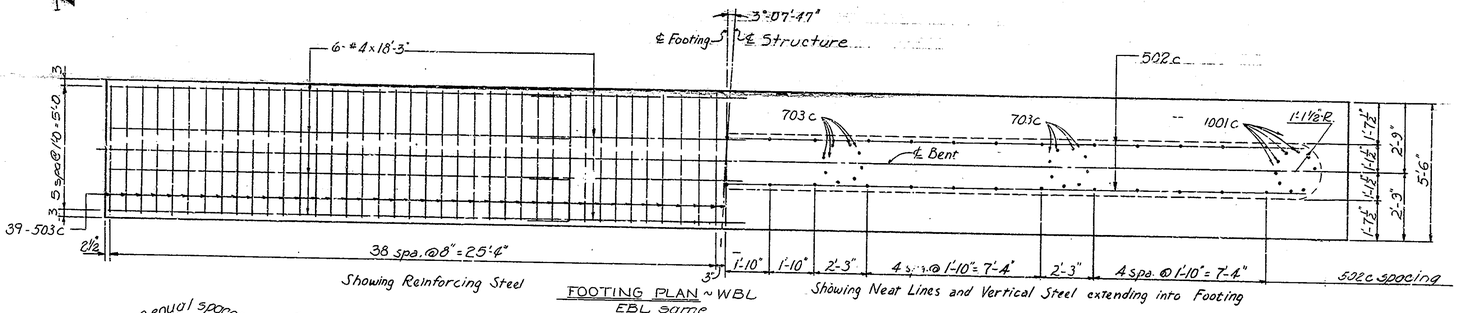
DESIGNED G.E.A.	CK'D. PNG
DRAWN P.N.A.	CK'D. PNG
TRACED	CK'D.

November 6, 1961

PROJECT NO.	LINE	SHEET NO.	TOTAL SHEETS	FILE
I-465-4(129)127	1&2	8	26	



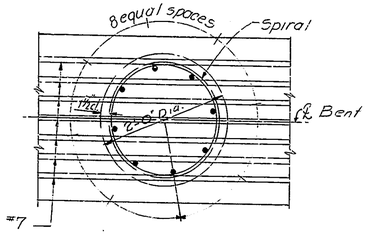
PILE PLAN ~ WBL
EBL same
Scale 3/8" = 1'-0"



Showing Reinforcing Steel

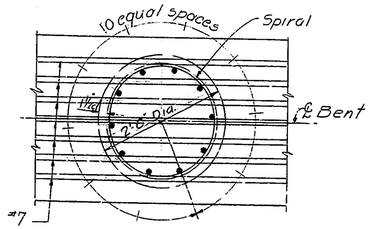
FOOTING PLAN ~ WBL
EBL same
Scale 3/8" = 1'-0"

Showing Neat Lines and Vertical Steel extending into Footing



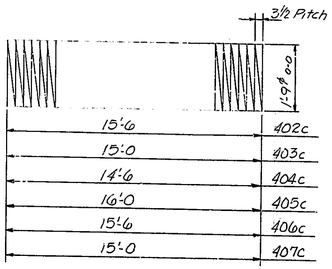
All Vertical Column Steel #7 Bars

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



All Vertical Column Steel #10 Bars

SECTION F-F
Scale 1" = 1'-0"

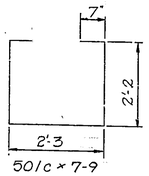


402c × 301'-0
403c × 290'-3
404c × 284'-11
405c × 311'-9
406c × 301'-0
407C × 290'-3

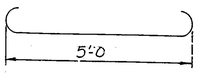
NOTES:

SPIRALS: Spirals to be formed of cold drawn wire. Provide 1½ extra turns at both top and bottom and 1½ turns for a lap of spiral reinforcing.

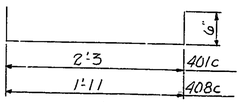
For additional details, see Drawing 56



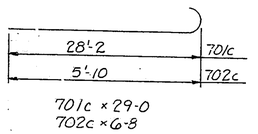
501c × 7-9



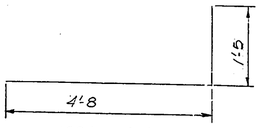
503c × 6-2



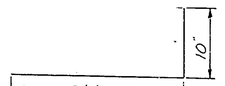
401c × 3-3
408c × 2'-11



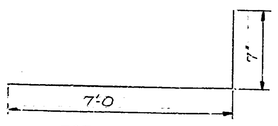
701c × 29-0
702c × 6-8



1001c × 6-1



703c × 4-4



502c × 7-7

GIRDGES OVER 20' SPAN

PUB. ROAD SYS. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-465-4 (123)127	1965	9	26

BILL OF MATERIALS
Bent #2 W.B.

REINFORCING STEEL			
SIZE & MARK	Nº OF BARS	LENGTH	WEIGHT
1001c	20	6-1	524
#10	10	17-0	732
#10	10	18-3	785
		Total #10	2041
701c	16	29'-0	948
702c	4	6-8	55
703c	32	4-4	283
#7	7	30-7	438
#7	7	25-9	368
#7	16	17-3	564
#7	16	17-10	583
		Total #7	3239
#6	6	26-3	237
501c	33	7-9	267
502c	50	7-7	395
503c	78	6-2	502
#5	24	26-1	653
		Total #5	1817
401c	77	3-3	167
405c	2	311-9	416
406c	2	301-0	402
407c	2	290-3	388
408c	25	2-11	49
#4	18	18-3	219
		Total #4	1641
Total Steel			8979

CONCRETE	
Footing, Class 'E'	25.9 CYS.
Above Footing	
Pour #1, Class 'E'	9.4 CYS.
Pour #2, Class 'E'	9.4 CYS.
Pour #3, Class 'E'	6.9 CYS.
Total Class 'E'	25.7 CYS.
Pour #4, Class 'D'	6.1 CYS.
Pour #5, Class 'F'	4.8 CYS.
Pour #6, Class 'F'	4.8 CYS.
Pour #7, Class 'F'	4.0 CYS.
Total Class 'F'	13.6 CYS.

MISCELLANEOUS	
Anchor Plates MK-AP-2	8 each
24" Treated Timber Piles @ 25'	600 LF

BILL OF MATERIALS
Bent #2 E.B.

REINFORCING STEEL			
SIZE & MARK	Nº OF BARS	LENGTH	WEIGHT
1001c	20	6-1	524
#10	10	16-6	710
#10	10	17-9	764
		Total #10	1998
701c	16	29'-0	948
702c	4	6-8	55
703c	32	4-4	283
#7	7	30-7	438
#7	7	25-9	368
#7	16	16-9	548
#7	16	17-4	567
		Total #7	3207
#6	6	26-3	237
501c	33	7-9	267
502c	50	7-7	395
503c	78	6-2	502
#5	24	26-1	653
		Total #5	1817
401c	77	3-3	167
402c	2	301-0	402
403c	2	290-3	388
404c	2	284-11	381
408c	25	2-11	49
#4	18	18-3	219
		Total #4	1606
Total Steel			8869

CONCRETE	
Footing, Class 'E'	25.9 CYS.
Above Footing	
Pour #1, Class 'E'	9.4 CYS.
Pour #2, Class 'E'	9.4 CYS.
Pour #3, Class 'E'	6.9 CYS.
Total Class 'E'	25.7 CYS.
Pour #4, Class 'D'	6.5 CYS.
Pour #5, Class 'F'	4.8 CYS.
Pour #6, Class 'F'	4.8 CYS.
Pour #7, Class 'F'	4.0 CYS.
Total Class 'F'	13.6 CYS.

MISCELLANEOUS	
Anchor Plates MK-AP-2	8 each
24" Treated Timber Piles @ 25'	600 LF

BENT 2 DETAILS

INDIANA STATE HIGHWAY COMMISSION

SCALE:- AS NOTED — June 24, 1965

SUBMITTED FOR APPROVAL: Tom L. Hedmond, P.E.

DRAWING: S7 OF 16
PROJECT:- I-465-4(123)127
~~BRIDGE~~ CONTRACT NO. R-7391
BRIDGE FILE:- I-465-130-5279

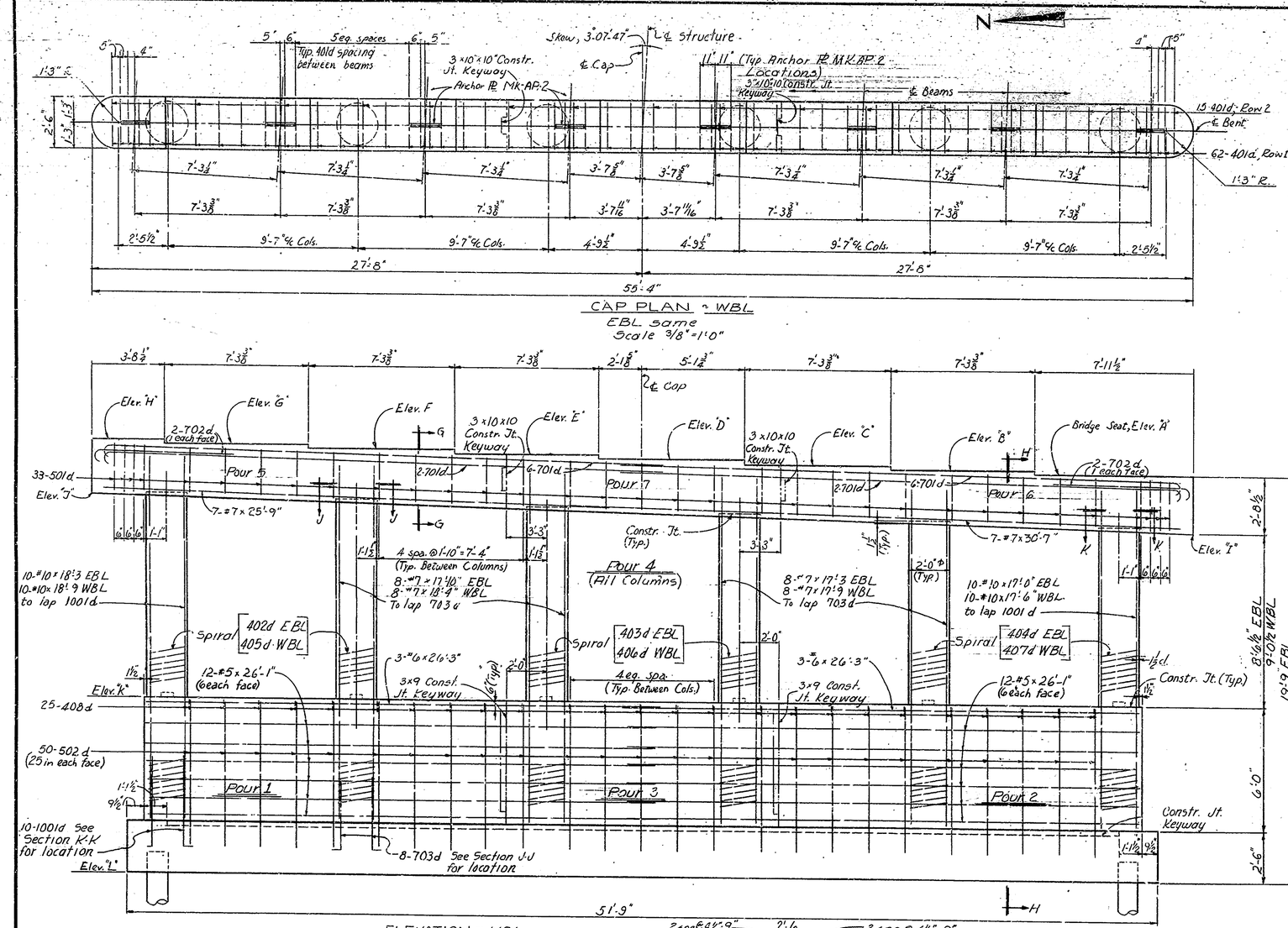
DESIGNED GEA C'K'D PWD
DRAWN AHA C'K'D PWD
TRACED C'K'D

November 6, 1961

PROJECT NO.	LINE	SHEET NO.	TOTAL SHEETS	FILE
I-465-4(123)127	A	9	26	I-465-130-5279

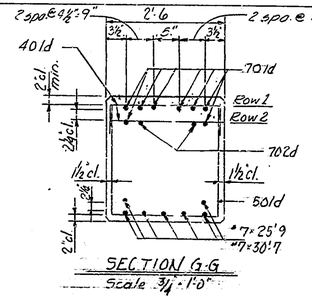
BRIDGES OVER 20' SPAN					
SUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
A.	IND.	I-465-4 (123)127	1965	10	26

ELEVATIONS		
LOCATION	E.B. Bridge	W.B. Bridge
"A"	841.675	842.165
"B"	841.885	842.375
"C"	842.090	842.580
"D"	842.300	842.790
"E"	842.505	842.995
"F"	842.710	843.200
"G"	842.920	843.410
"H"	843.125	843.615
"I"	838.96	839.45
"J"	840.51	841.00
"K"	830.42	830.41
"L"	821.92	821.91



CAP PLAN ~ WBL
EBL same
Scale 3/8" = 1'-0"

ELEVATION ~ WBL
EBL same except as noted
Scale 3/8" = 1'-0"



SECTION G-G
Scale 3/4" = 1'-0"

NOTES

Reinforcing Steel: For reinforcing bar notes see Standard Drawing C1.

Anchor Plates MK-AP-2 To be pre-set in concrete. for details see Drawing 55

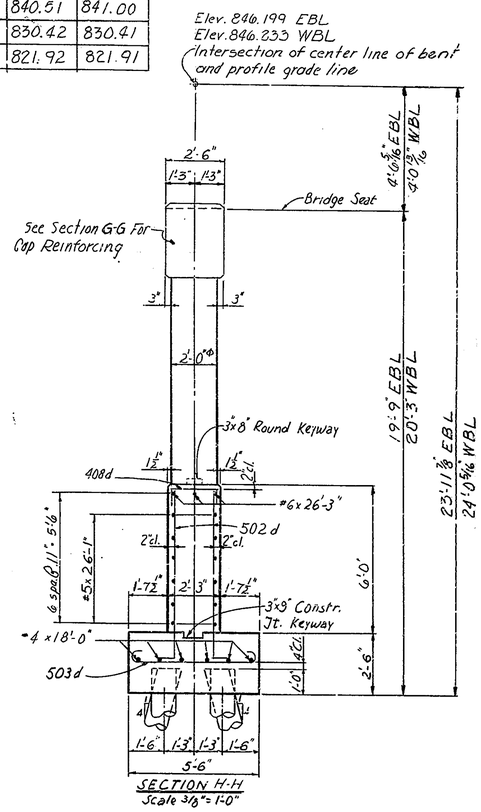
For additional Section Details and Notes, see drawing S 9

For location of ℄ structure see Drawing 51

Piles: Treated timber piles shall be driven to a minimum bearing capacity of 25 tons. Approximate pile length is 25 ft. ±.

EBL: Indicates Eastbound Lanes
WBL: Indicates Westbound Lanes

Elev. 846.199 EBL
Elev. 846.233 WBL
Intersection of center line of bent and profile grade line



SECTION H-H
Scale 3/8" = 1'-0"

BENT 3 DETAILS

INDIANA STATE HIGHWAY COMMISSION

SCALE:- AS NOTED — June 24, 1965

SUBMITTED FOR APPROVAL:- Tom Lillywood, P.E.

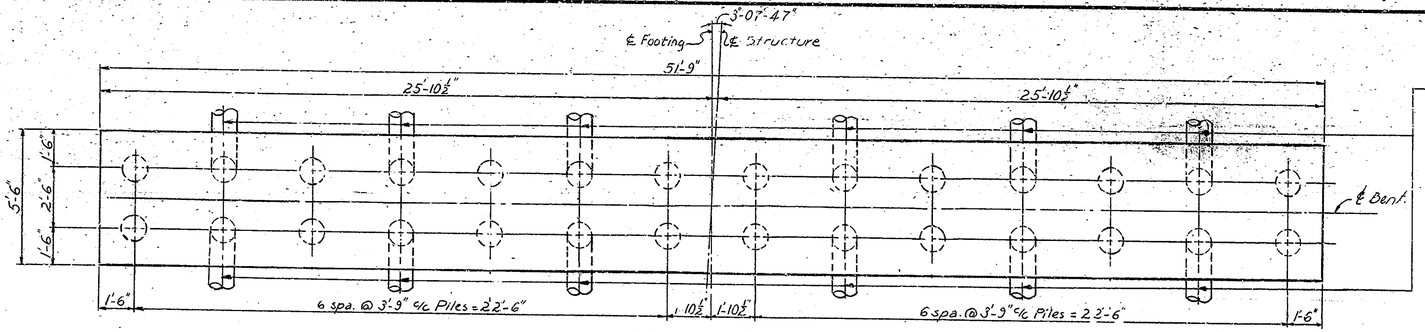
DRAWING:- S 8 OF 16
PROJECT:- I-465-4(129)127
~~BRIDGE~~ CONTRACT NO. R-7391
BRIDGE FILE:- I-465-130-5279

DESIGNED GEA	CK'D DWD
DRAWN ANA	CK'D DWD
TRACED	CK'D

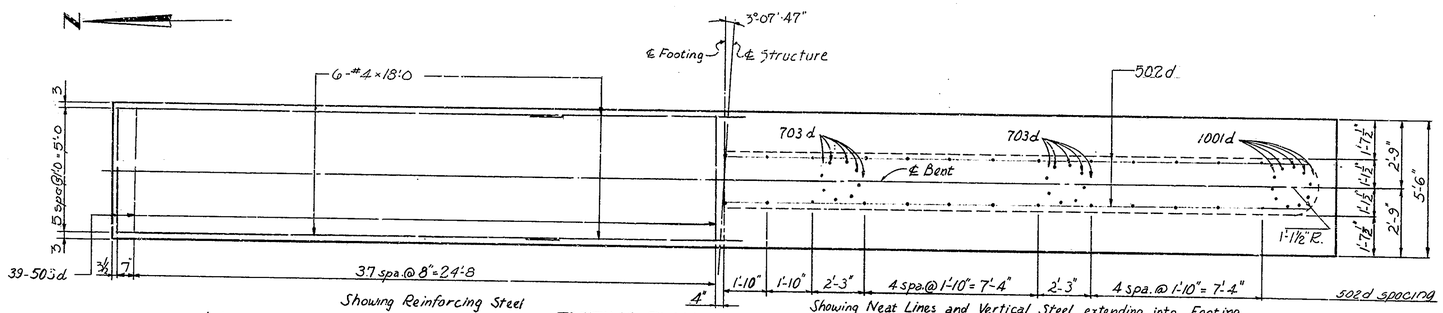
November 6, 1961

PROJECT NO.	LINE	SHEET NO.	TOTAL SHEETS	FILE
I-465-4(129)127	"A"	10	26	I-465-130-5279

BRIDGES OVER 20' SPAN					
PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-465-4(123)127	1965	11	26



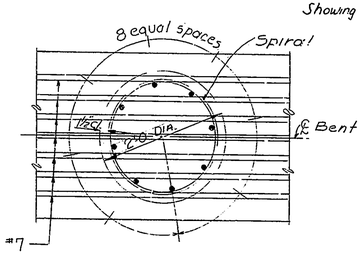
PILE PLAN ~ WBL
EBL same
Scale 3/8" = 1'-0"



Showing Reinforcing Steel

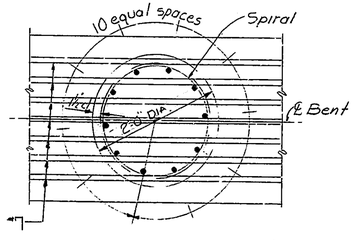
Showing Neat Lines and Vertical Steel extending into Footing

FOOTING PLAN ~ WBL
EBL same
Scale 3/8" = 1'-0"



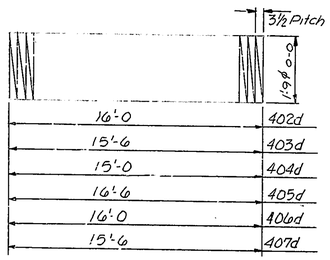
All Vertical Column Steel #7 Bars

SECTION J-J
Scale 1"=1'-0"

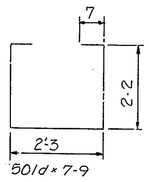


All Vertical Column Steel #10 Bars

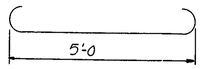
SECTION K-K
Scale 1"=1'-0"



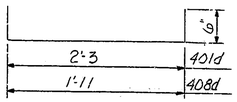
402d × 3'-11-9
403d × 3'-11-0
404d × 3'-11-0-3
405d × 3'-11-22-6
406d × 3'-11-9
407d × 3'-11-30'-0



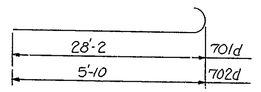
501d × 7-9



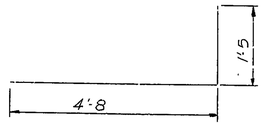
503d × 6-2



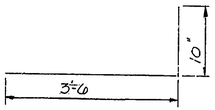
401d × 3-3
408d × 2-11



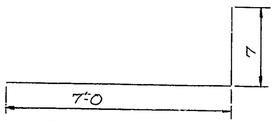
701d × 29-0
702d × 6-8



1001d × 6-1



703d × 4-4



503d × 7-7

NOTES:

SPIRALS: Spirals to be formed of cold drawn wire. Provide 1½ extra turns at both top and bottom and 1½ turns for a lap of spiral reinforcing.

For additional details, see Drawing S8

BILL OF MATERIALS
Bent #3 W.B.

REINFORCING STEEL			
SIZE & MARK	Nº OF BARS	LENGTH	WEIGHT
1001d	20	6-1	524
#10	10	17-6	733
#10	10	18-9	807
		Total #10	2084
701d	16	29-0	948
702d	4	6-8	55
703d	32	4-4	283
#7	16	18-4	600
#7	16	17-9	580
#7	7	30-7	438
#7	7	25-9	368
		Total #7	3272
#6	6	26-3	237
501d	33	7-9	267
502d	50	7-7	395
503d	78	6-2	502
#5	24	26-1	653
		Total #5	1817
401d	77	3-3	167
405d	2	322-6	431
406d	2	311-9	416
407d	2	301-0	402
408d	25	2-11	49
#4	18	18-0	216
		Total #4	1681
Total Steel			9091

CONCRETE	
Footing, Class "E"	26.4 cys.
Above Footing	
Pour #1, Class "E"	9.4 cys.
Pour #2, Class "E"	9.4 cys.
Pour #3, Class "E"	6.9 cys.
Total Class "E"	25.7 cys.
Pour #4, Class "D"	6.5 cys.
Pour #5, Class "F"	4.8 cys.
Pour #6, Class "F"	4.8 cys.
Pour #7, Class "F"	4.0 cys.
Total Class "F"	13.6 cys.

MISCELLANEOUS	
Anchor Plates MK-AP-2	8 each
28-Treated Timber	
Piles @ 25'	700 LF

BILL OF MATERIALS
Bent #3 E.B

REINFORCING STEEL			
SIZE & MARK	Nº OF BARS	LENGTH	WEIGHT
1001d	20	6-1	524
#10	10	17-0	732
#10	10	18-3	785
		Total #10	2041
701d	16	29-0	948
702d	4	6-8	55
703d	32	4-4	283
#7	16	17-10	583
#7	16	17-3	564
#7	7	30-7	438
#7	7	25-9	368
		Total #7	3239
#6	6	26-3	237
501d	33	7-9	267
502d	50	7-7	395
503d	78	6-2	502
#5	24	26-1	653
		Total #5	1817
401d	77	3-3	167
402d	2	311-9	416
403d	2	301-0	402
404d	2	290-3	388
408d	25	2-11	49
#4	18	18-0	216
		Total #4	1638
Total Steel			8972

CONCRETE	
Footing, Class "E"	26.4 cys.
Above Footing	
Pour #1, Class "E"	9.4 cys.
Pour #2, Class "E"	9.4 cys.
Pour #3, Class "E"	6.9 cys.
Total Class "E"	25.7 cys.
Pour #4, Class "D"	6.8 cys.
Pour #5, Class "F"	4.8 cys.
Pour #6, Class "F"	4.8 cys.
Pour #7, Class "F"	4.0 cys.
Total Class "F"	13.6 cys.

MISCELLANEOUS	
Anchor Plates MK-AP-2	8 each
28-Treated Timber	
Piles @ 25'	700 LF

BENT 3 DETAILS

INDIANA STATE HIGHWAY COMMISSION

SCALE:- AS NOTED — June 30, 1965

SUBMITTED FOR APPROVAL: Tom L. Underwood, P.E.

DRAWING:- S 9 OF 16

PROJECT:- I-465-4(129)127

~~BRIDGE~~ CONTRACT NO. 12-7391

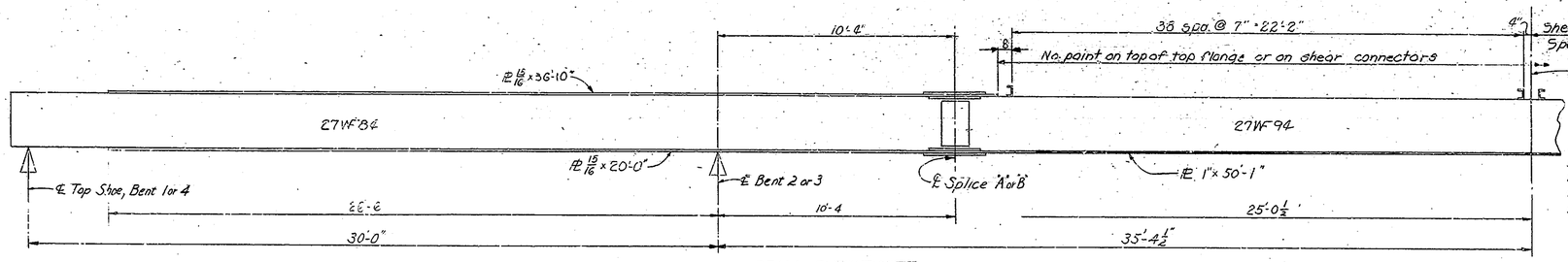
BRIDGE FILE:- I-465-130-5279

DESIGNED	G.E.S.	C'K'D	FWD
DRAWN	B.H.B.	C'K'D	FWD
TRACED		C'K'D	

November 6, 1951

PROJECT NO.	LINE	SHEET NO.	TOTAL SHEETS	FILE
I-465-4(129)127	"A"	11	26	I-465-130-5279

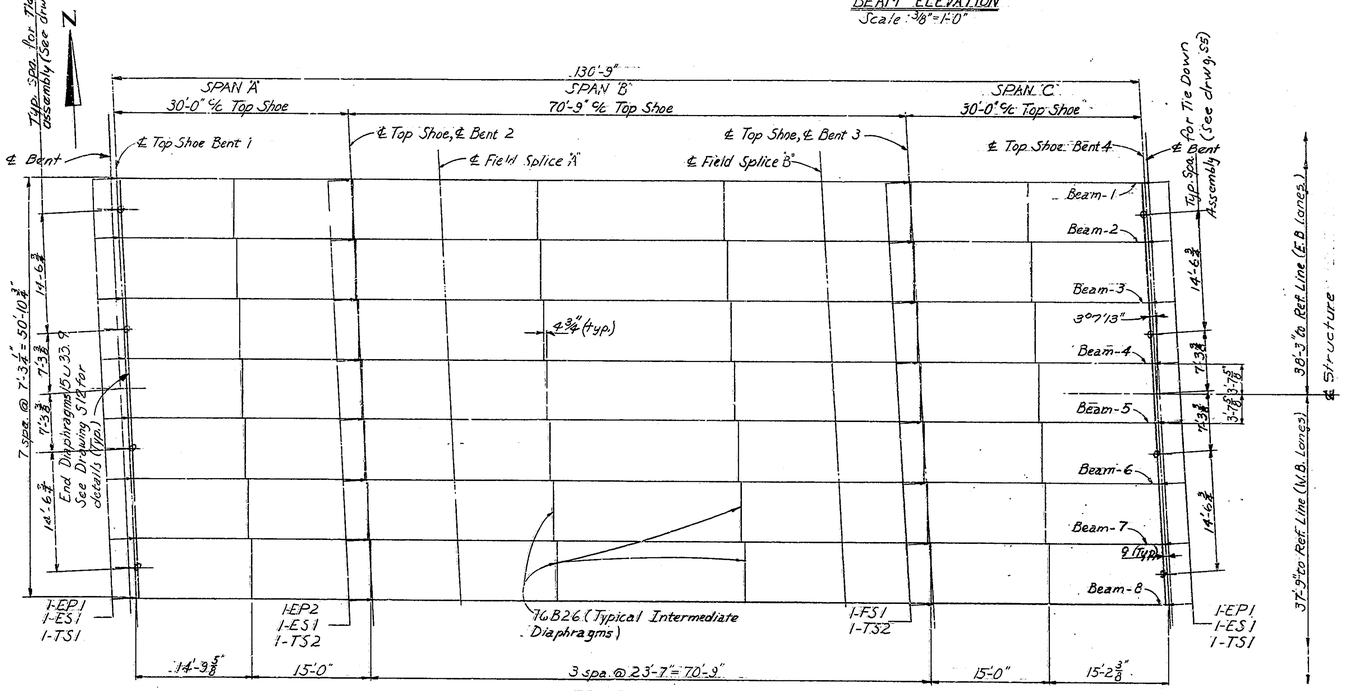
BRIDGES OVER 20' SPAN					
PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-465-4 (129)127	1965	12	26



NOTES

For Splice and Cover Plate Details see Drawing S11
For Shear Connector Detail see Drawing S12
General Notes: For General Notes see Drawing S3.

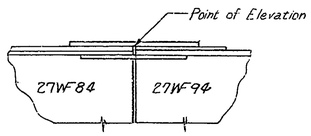
BEAM ELEVATION
Scale: 3/8"=1'-0"



FRAMING PLAN
Scale: 1/8"=1'-0"

* FIELD SPLICE ELEVATIONS

Beam		1	2	3	4	5	6	7	8
Splice 'A'	E.B.	846.645	846.440	846.240	846.025	845.820	845.615	845.410	845.200
	W.B.	847.120	846.915	846.705	846.500	846.295	846.090	845.885	845.675
Splice 'B'	E.B.	846.280	846.070	845.870	845.655	845.450	845.240	845.035	844.830
	W.B.	846.765	846.560	846.350	846.145	845.940	845.730	845.525	845.315



*Note: All elevations are given to the top of beam cover Plate

Indicated elevations may vary by .02±

TABLE OF MOMENTS AND REACTIONS

	Max. Pos. Mom. @ .3 Pt. Spans A & C, ft. Kips		Max. Pos. Mom. @ .5 Pt. Span 'B', ft. Kips		Neg. Mom @ Bents 2 & 3, ft. Kips		Reaction @ Bents 1 & 4, Kips		Reaction @ Bents 2 & 3, Kips	
	Int. Bm.	Ext. Bm.	Int. Bm.	Ext. Bm.	Int. Bm.	Ext. Bm.	Int. Bm.	Ext. Bm.	Int. Bm.	Ext. Bm.
Dead Load	7.6	-9.7	288.3	328.8	338.1	394.8	9.6	7.1	61.2	70.9
Live Load	160.0	151.0	441.0	417.0	245.0	232.0	35.7	21.4	51.8	36.2
Impact	48.0	45.3	113.0	107.0	70.0	66.2	10.7	6.4	14.4	9.7
Total	200.6	186.6	842.3	852.8	653.7	693	56.0	34.9	127.4	116.8

TABLE OF STRESSES

	Stresses @ .5 Span 'B'			
	Interior Beam		Exterior Beam	
	f_s psi	f_c psi	f_s psi	f_c psi
Dead Load	7750	59	8900	59
Live Load	8950	466	8490	442
Impact	2300	119	2170	113
Total	19000	644	19560	614

DESIGNED G.E.A. C'K'D F.J.O
DRAWN A.N.B. C'K'D F.W.D
TRACED C'K'D

Rev. 7-13-67: Tiedown Assembly UA.
Rev. 2-1-67 Cover Plate & Field Splice Ele.

FRAMING PLAN

INDIANA STATE HIGHWAY COMMISSION

SCALE:- As Noted June 24, 1965

SUBMITTED FOR APPROVAL:- Tom L. Underwood, P.E.

DRAWING: S 10 OF 16
PROJECT:- I-465-4(129)127
~~BRIDGE~~ CONTRACT NO. R-7391
BRIDGE FILE:- I-465-130-5279

November 6, 1961

PROJECT NO.	LINE	SHEET NO.	TOTAL SHEETS	FILE
I-465-4(129)127	"A"	12	26	I-465-130-5279

SUPERSTRUCTURE GENERAL NOTES

Structural Steel: All structural steel shall conform to ASTM A-36.

H.S. Bolts: All H.S. Bolts shall be $\frac{7}{8}$ inch diameter and holes $\frac{15}{16}$ inch diameter, unless noted. Rivets shall not be used in the assembly of Structural Steel.

Top Shoe Connection: Diameter of holes in all material connecting top shoes to beam flanges shall be 1/8 inch larger than the diameter of the bolts.

Bolts connecting beam flange to top shoe shall extend into top shoe a minimum of one inch.

Holes For Beam Splices: Holes for beam splices shall be subpunched or subdrilled and reamed to size while assembled. See Article E-1103.18(d) of the Specifications.

Shop Details: The shop details shall show a plan of match marking for all reamed pieces.

Splice Plates: All splice plates to be removed, cleaned and painted after reaming. Splice plates shall not extend beyond the end of beam after bolting for shipment.

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

Camber: Beams in Span B must be cambered to a smooth curve. Camber must be checked while beams are supported in such a way as to have no bending moment in the direction of camber.

Beams in Spans A & C are to be straight within a tolerance of $\frac{3}{16}$ inch at center. If camber exists, layout beams with camber up. Beams shall be checked for camber while supported in such a way as to have no bending moment in the direction of camber.

Erection Marks: Eastbound and Westbound structures shall have seperate erection marks

Painting: All paint shall be in accordance with current State Highway Specifications.
Shop Paint } Basic Lead Silico Chromate. (See Special Provisions)
Field Paint }
As soon as the Engineer has approved the field welds, all welds and any surface from which the shop coat has been omitted or becomes worn off, or has otherwise become defective shall be thoroughly cleaned of all charred paint or any foreign matter and completely covered with one coat of shop paint.

Flame Cutting: Structural carbon steel may be flame cut if the flame cutting equipment is mechanically guided. Hand flame cutting shall be used only when approved, and the surface is further treated by milling, grinding or chipping and grinding.

Welding: All welding shall conform to the current AWS specifications for Welded Highway and Railway Bridges unless otherwise noted.

Structural Steel: Estimated weight of structural steel, 334,800 lbs. *

Shop Details: 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 5 copies of these to the Engineer. See Article E 1103.2 of Specifications.

Field Splices: All beams are to be erected using full size drift pins in a minimum of fifty percent (50%) of the flange splice holes and fifty percent (50%) of the web splice holes. The elevations shall be checked before bolting field splices and the structural steel unsupported by falsework.

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

General Notes: See Drawing 53 for General Notes.

DATA USED FOR DESIGN AND DETAILS

Live Load: H520-44 loading with impact and distribution of loads in accordance with 1965 AASHO Specifications. Checked for a special loading consisting of 2-24,000 pound axles spaced 4'-0" apart.

Dead Load: Actual weight plus 35 pounds per square foot of roadway to provide for future wearing surface.

Slab: Designed for 16000 pound wheel plus impact, and with 1½" monolithic wearing surface.

* The weight of High Strength Bolts is not included in the estimated weight of Structural Steel. The cost of these bolts shall be included in the cost of the Structural Steel.

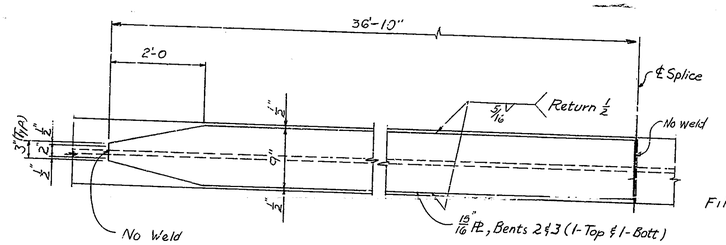
DESIGNED G.E.A. C'K'D. C.W.C.
DRAWN A.W.A. C'K'D. C.W.C.
TRACED C'K'D.

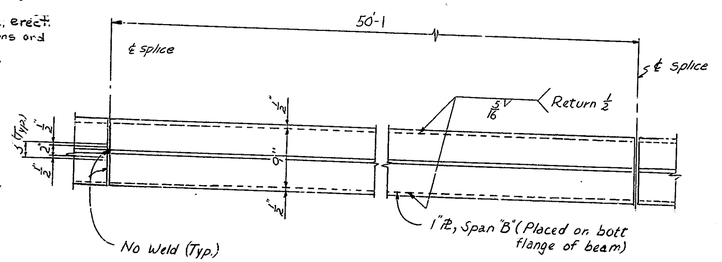
Rev. 2-1-67 Notes, Cov. Pl., Field Splice Details
Rev. 11-2-66 Notes
Rev. 10-14-66 Notes

November 6, 1961

UNIT STRESSES (Structural Steel)

Bending; Tension or Compression	20,000 #/sq. in.
Shear in Fillet Welds	12,400 #/sq. in.
Shear on H. S. Bolts	13,500 #/sq. in.
Bearing	29,000 #/sq. in.
Bearing Steel on Concrete (Including Overturning and Eccentric Loading)	1,000 #/sq. in.
Reinforcing Steel (Tension)	20,000 #/sq. in.
Concrete (Compression)	1,200 #/sq. in.

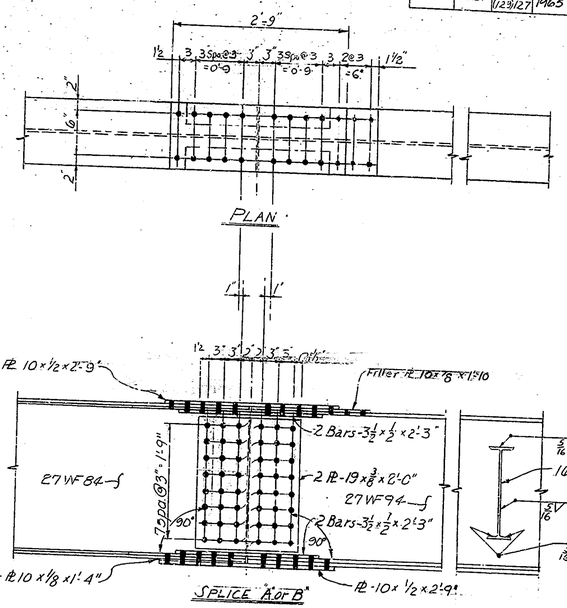




COVER PLATE DETAILS
(Not to Scale)

BRIDGES OVER 20' SPAN

PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-465-4 (123)127	1965	13	26



FIELD SPLICE DETAILS
Scale: 1"=1'-0"

SUPERSTRUCTURE GENERAL NOTES
AND SUPERSTRUCTURE DETAILS

INDIANA STATE HIGHWAY COMMISSION

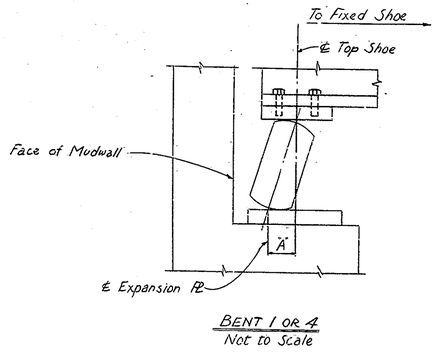
SCALE:- As Noted
June 24, 1965
SUBMITTED FOR APPROVAL: Tom E. Underwood, P.E.

DRAWING:- 5 / 1 OF 16
PROJECT:- I-465-4(129)127
~~BRIDGE~~ CONTRACT NO. R-7391
BRIDGE FILE:- I-465-130-5279

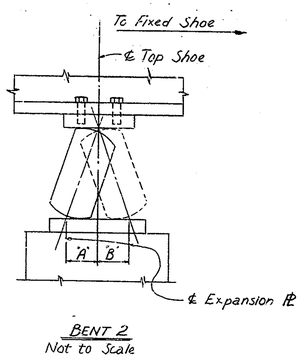
PROJECT NO.	LINE	SHEET NO.	TOTAL SHEETS	FILE

BRIDGES OVER 20' SPAN

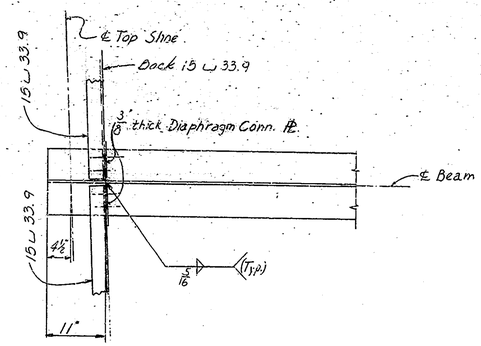
PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-465-4 (129)127	1965	14	26



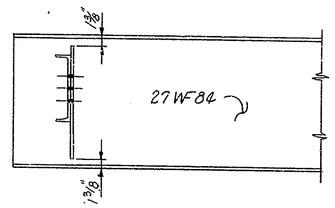
BENT 1 OR 4
Not to Scale



BENT 2
Not to Scale

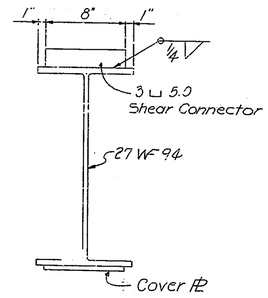


PLAN



ELEVATION

END DIAPHRAGM DETAILS
Scale: 1" = 1'-0"



SHEAR CONNECTOR DETAIL
Scale 1½" = 1'-0"

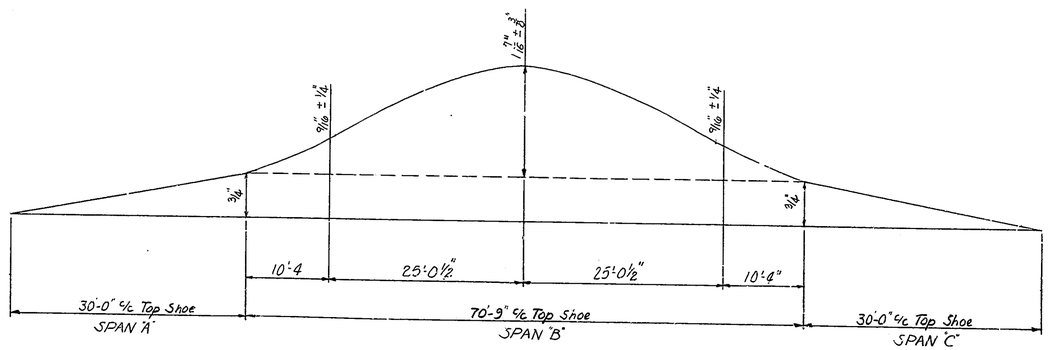
SHEAR CONNECTORS: Automatic welded studs may be substituted for channel shear connectors shown. The Contractor shall submit details of the studs for approval.

SHOE SETTING DETAILS

TABLE FOR SHOE SETTING AT BENT 1							
Temp.	0°	20°	40°	60°	80°	100°	120°
Dim. "A"	1	13/16	5/8	1/2	3/8	3/16	0

TABLE FOR SHOE SETTING AT BENT 2							
Temp	0°	20°	40°	60°	80°	100°	120°
Dim. "A"	5/16	1/4	1/8	0			
Dim. "B"				0	1/8	1/4	5/16

TABLE FOR SHOE SETTING AT BENT 4							
Temp.	0°	20°	40°	60°	80°	100°	120°
Dim. "A"	DRUM	9/16	1/2	1/2	1/2	7/16	3/8



NO LOAD CAMBER AND REAMING DIAGRAM
Scale: 1/8" = 1'-0" Horiz., 1" = 1" Vertical

REAMING: 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.

SUPERSTRUCTURE DETAILS

INDIANA STATE HIGHWAY COMMISSION

SCALE:- AS NOTED

June 24, 1965

SUBMITTED FOR APPROVAL: Tom L. Vanderwood, P.E.

DRAWING:- 5/2 OF 16

PROJECT:- I-465-4(129)127

~~BRIDGE~~ CONTRACT NO. R-7391

BRIDGE FILE:- I-465-130-5279

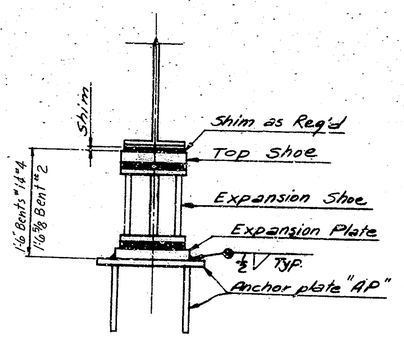
DESIGNED SEA	C'K'D CWD		
DRAWN ANA	C'K'D CWD		
TRACED	C'K'D		

November 6, 1961

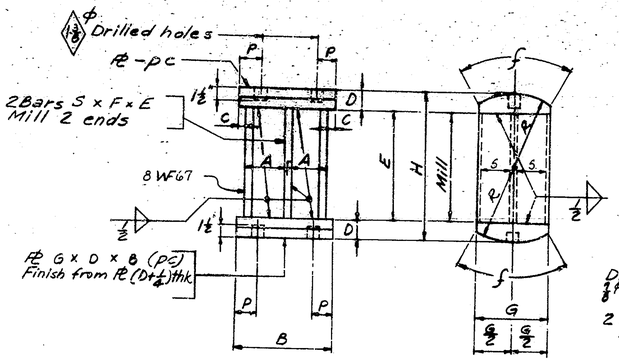
PROJECT NO.	LINE	SHEET NO.	TOTAL SHEETS	FILE
I-465-4(129)127	"A"	14	26	I-465-130-5279

BRIDGES OVER 20' SPAN					
FED. ROAD REQ. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND	I-465-4 (129)127	1965	15	26

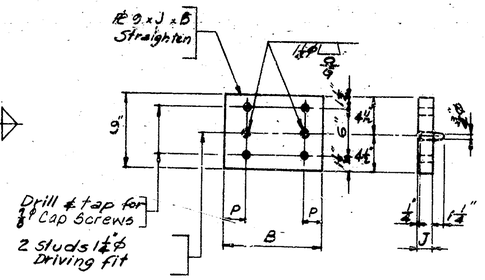
NOTE: Curved surfaces of shoes to be machined after weldments have been completed.



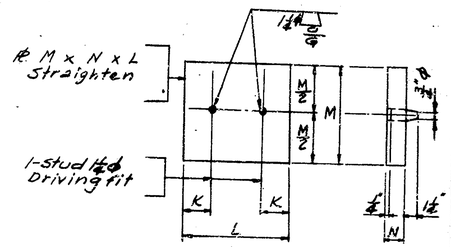
EXPANSION SHOE ASSEMBLY - TYPICAL



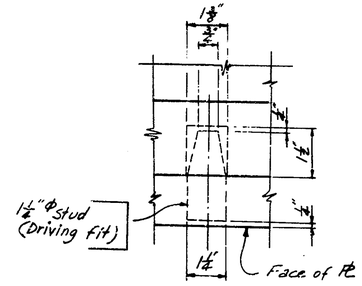
EXPANSION SHOE
ES



TOP SHOE
TS



EXPANSION PLATE
EP

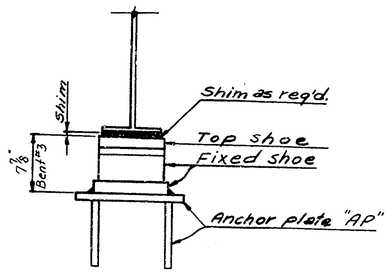


STUD DETAIL

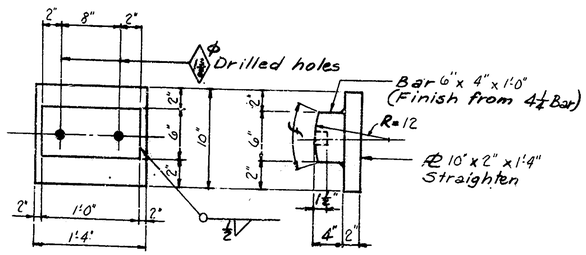
EXPANSION SHOE DIMENSIONS (inches)											
MARK	A	B	C	D	E	F	G	H	P	R	S
ES-1	4	12	1½	2	11	1	8¼	15	2	7½	3½

TOP SHOE DIM. (in.)			
MARK	B	J	P
TS-1	12	1½	2
TS-2	12	1⅞	2

EXPANSION PL DIM. (in)				
MARK	K	L	M	N
EP-1	3½	15	9	1½
EP-2	4	16	10	1¾



FIXED SHOE ASSEMBLY - TYPICAL



FIXED SHOE
FS

See Drwg 53 for General Notes

DESIGNED G.E.A. C'K'D. F.W.d
DRAWN J.E.K. C'K'D. F.W.d
TRACED C'K'D.

SUPERSTRUCTURE BEARING DETAILS

INDIANA STATE HIGHWAY COMMISSION

SCALE:- NO SCALE

June 24, 1965

SUBMITTED FOR APPROVAL: Tom L. Williamson, P.E.

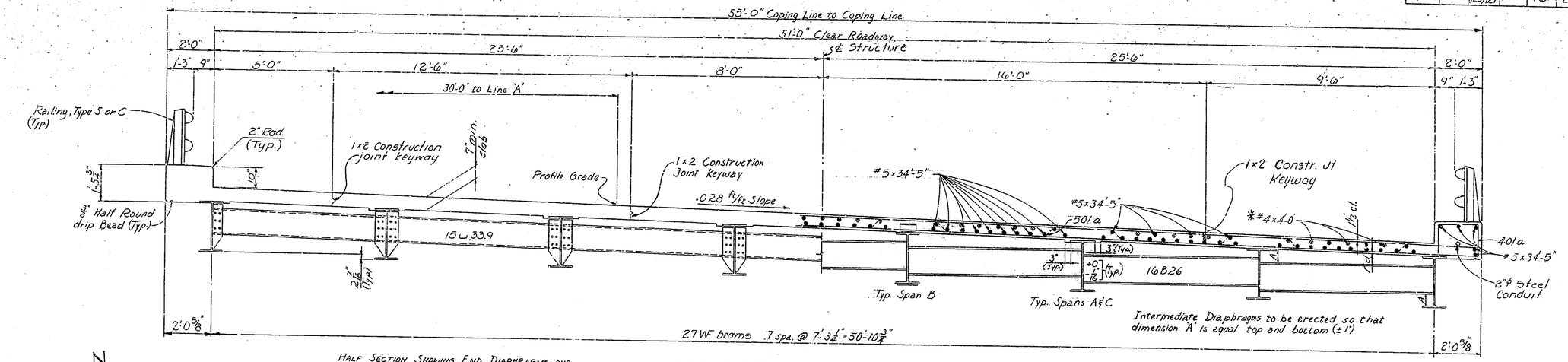
DRAWING:- 51 3 OF 16

PROJECT:- I-465-4(129) 127

~~BRIDGE~~ CONTRACT NO. R-7391

BRIDGE FILE:- I-465-130-5279

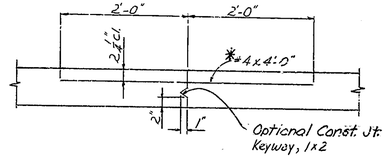
BRIDGES OVER 20' SPAN					
FED. ROAD REQ. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-465-4 (129)127	1965	10	26



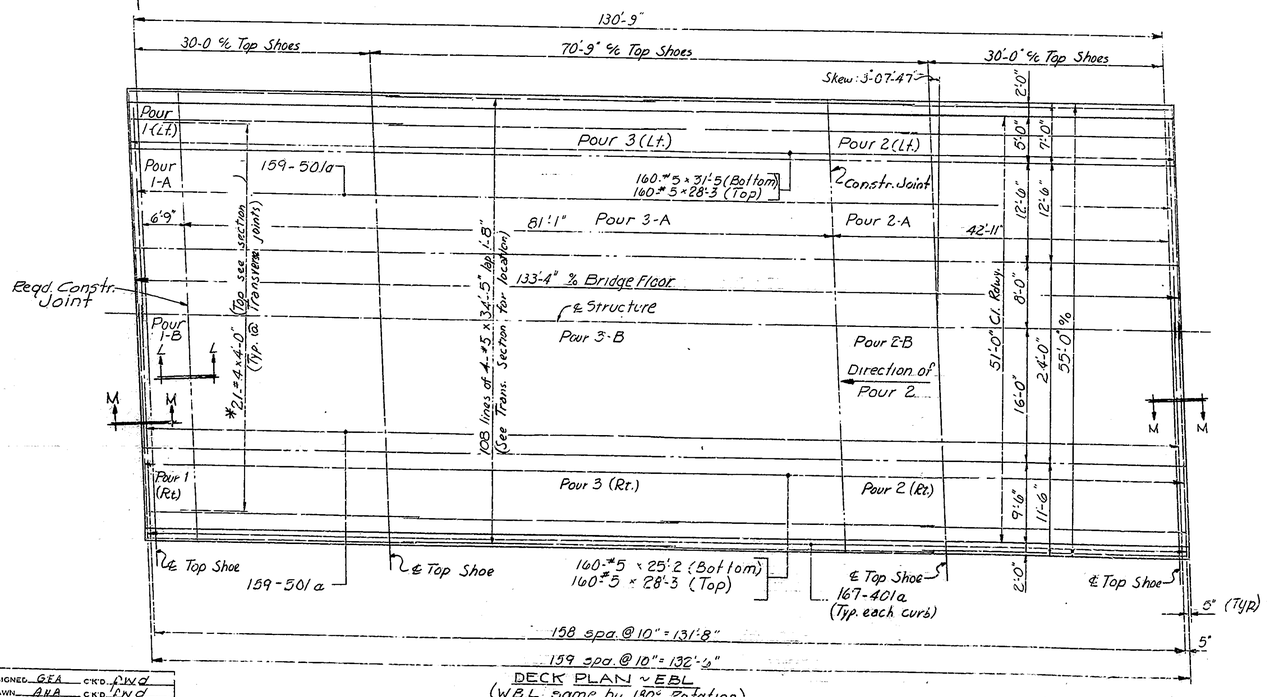
HALF SECTION SHOWING END DIAPHRAGMS AND GENERAL DIMENSIONS

TRANSVERSE SECTION ~ EBL
(WBL same, except for location of Construction Joints, Profile Grade and 2" ϕ Steel Conduit which are same by 180° Rotation)
Scale: ½" = 1'-0"

HALF SECTION SHOWING INTERMEDIATE DIAPHRAGMS AND STEEL PLACEMENT



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



DECK PLAN ~ EBL
(WBL same by 180° Rotation)
Scale 1/8" = 1'-0"

NOTES

Pour Sequence: Sequence of pours in the concrete slab shall be made in the order of pour numbers. All construction joints are optional in superstructure except as noted. Pours may be made continuous provided the pour terminates at a construction joint indicated on the plan except as noted.

Notes: See Drawing S 11 for notes.

For reinforcing bar notes see Bridge Standard C1.

For additional details see Drawings S 15 and S 16

Concrete Forms: After structural steel has been erected, concrete forms shall not be blocked against the expansion end of the steel in making any pours adjacent to steel spans.

* To be paid for in cost of other items.

Rev. 11-2-66 Constr. Jt. Notes.

DESIGNED GEA CK'D FWD
DRAWN ANA CK'D FWD
TRACED CK'D

November 6, 1961

DECK PLAN AND TRANSVERSE SECTION

INDIANA STATE HIGHWAY COMMISSION

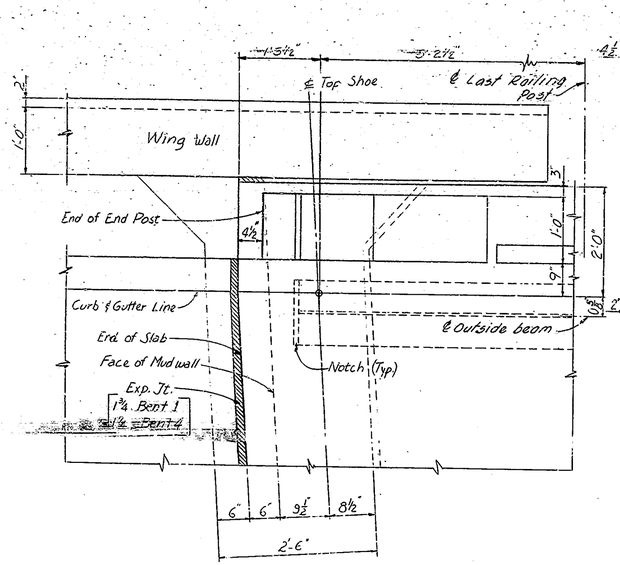
SCALE:- AS NOTED June 24, 1965

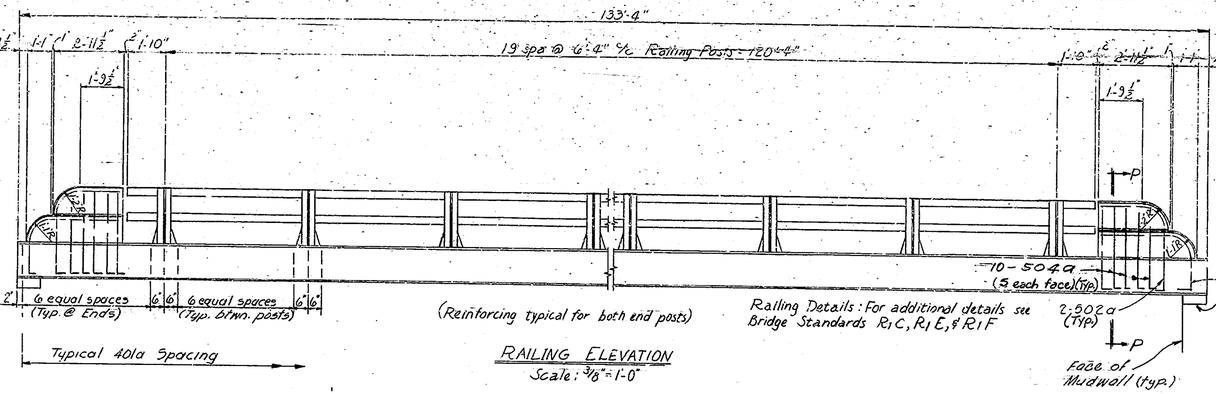
SUBMITTED FOR APPROVAL:- Tom E. Hanna P.E.

DRAWING:- S14 OF 16
PROJECT:- I-465-4(129)127
~~BRIDGE~~ CONTRACT NO. R-7391
BRIDGE FILE:- I-465-130-5279

PROJECT NO.	LINE	SHEET NO.	TOTAL SHEETS	FILE
I-465-4(129)127	A	14	26	I-465-130-5279

BRIDGES OVER 20' SPAN					
PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-465-4 (123)127	1965	17	26

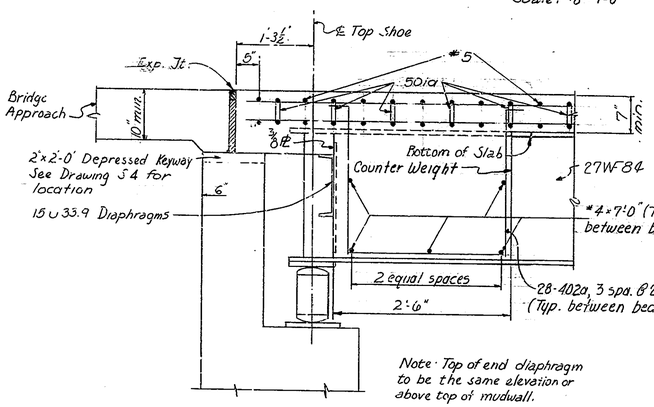




(Reinforcing typical for both end posts)

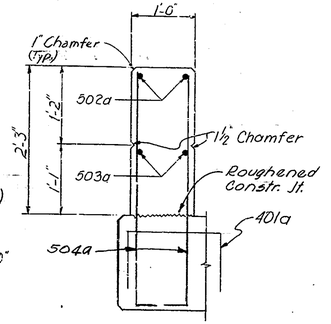
Railing Details: For additional details see Bridge Standards R1C, R1E, & R1F

RAILING ELEVATION
Scale: 3/16" = 1'-0"

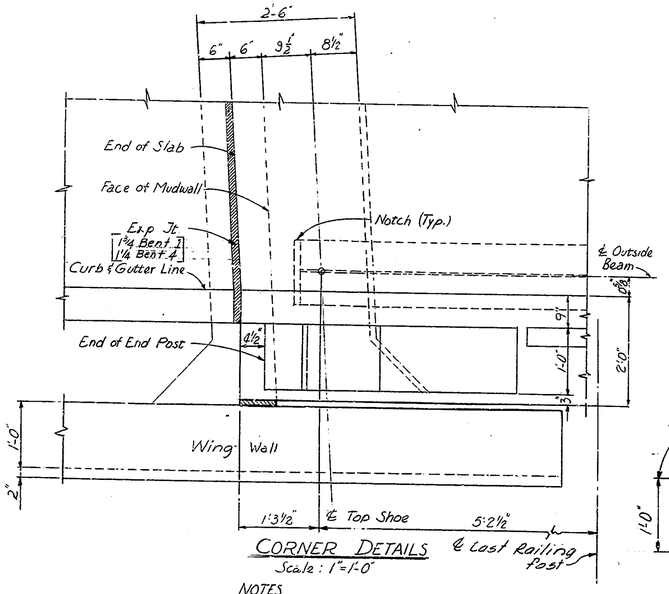


Note: Top of end diaphragm to be the same elevation or above top of mudwall.

SECTION M-M
Not to Scale

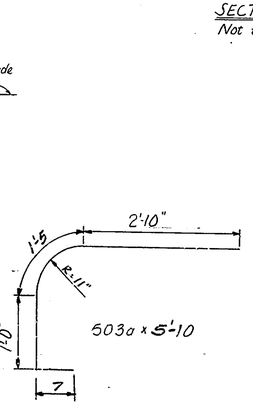


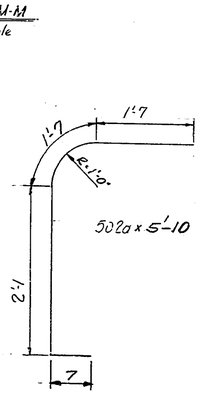
SECTION P-P
Scale: 1" = 1'-0"

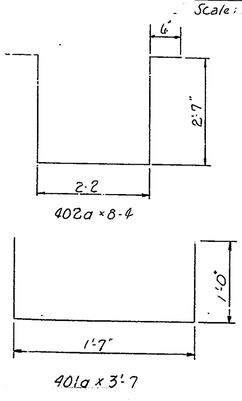


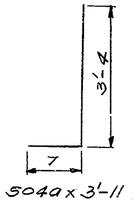
CORNER DETAILS
Scale: 1" = 1'-0"

NOTES
For notch in slab at end of beams and reinforcing bar notes, Exp. Jt see bridge standard C1

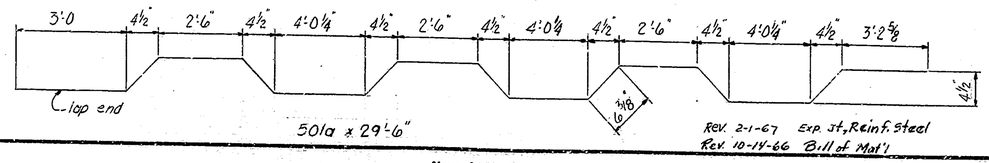








NOTES:
* To be paid for in cost of other items.



Rev. 2-1-67 Exp. Jt, Reinf. Steel
Rev. 10-14-66 Bill of Mat'l

BILL OF MATERIALS
(Eastbound superstructure)
(Westbound superstructure same)

REINFORCING STEEL			
SIZE & MARK	Nº OF BARS	LENGTH	WEIGHT
501a	318	29'-6	9785
502a	8	5'-10	49
503a	8	5'-10	49
#5	160	31'-5	5203
#5	160	25'-2	4200
#5	320	28'-3	9429
#5	432	34'-5	15,508
504a	40	3'-11	163
	Total #5		44,426
401a	336	3'-7	799
402a	56	8'-4	312
#4	70	7'-0	327
	Total #4		1438
Total Steel			45,864
* #4	42	4'-0	..

CONCRETE	
Class "F" Superstructure	
Pour 1-A	5.0 cys.
Pour 2-A	14.8 cys.
Pour 3-A	22.0 cys.
Pour 1-B	9.6 cys.
Pour 2-B	28.4 cys.
Pour 3-B	42.0 cys.
Pour 1 (Lt.)	2.9 cys.
Pour 2 (Lt.)	10.9 cys.
Pour 3 (Lt.)	18.1 cys.
Pour 1 (Rt.)	4.7 cys.
Pour 2 (Rt.)	16.6 cys.
Pour 3 (Rt.)	26.1 cys.
Total Class "F" except railing	200.9 cys.
Railing Concrete @ 0.3	1.2 cys.

MISCELLANEOUS	
Aluminum Railing (Type S)	
or Steel Railing (Type C)	248.0 L.F.
2" ϕ Steel Conduit	137 L.F.

SUPERSTRUCTURE DETAILS

INDIANA STATE HIGHWAY COMMISSION

SCALE:- AS NOTED

June 24, 1965

SUBMITTED FOR APPROVAL:- Tom L. Hudson P.E.

DRAWING: S15 OF 16

PROJECT:- I-465-4(129)127

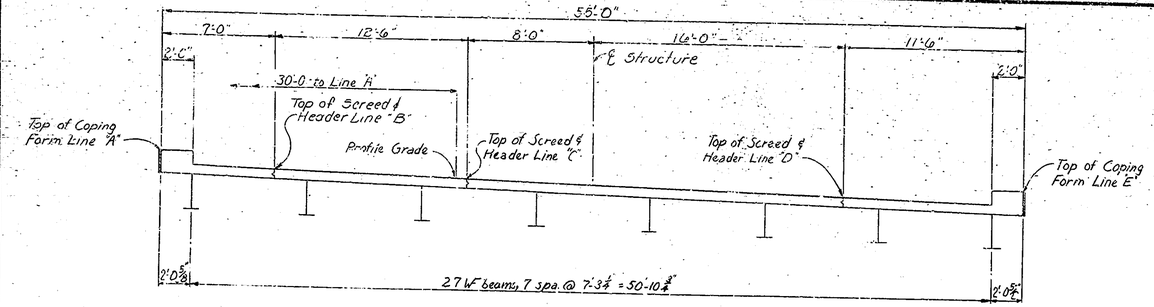
~~BRIDGE~~ CONTRACT NO. R-7391

BRIDGE FILE:- I-465-130-5279

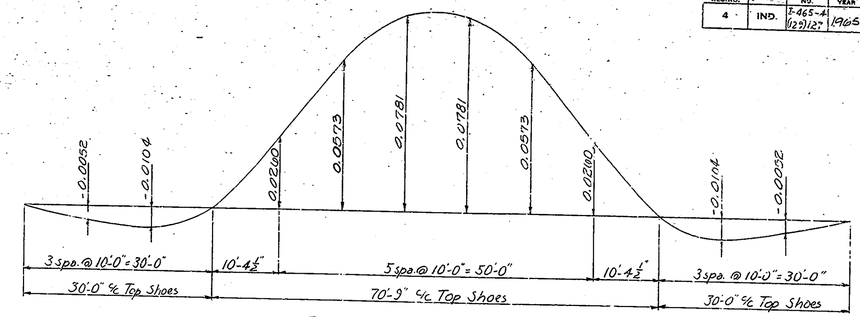
DESIGNED GEA	C'K'D fwd
DRAWN ANA	C'K'D fwd
TRACED	C'K'D

November 6, 1967

PROJECT NO.	LET.	SHEET NO.	TOTAL SHEETS	FILE
I-465-4(129)127	A	17	26	I-465-130-5279



CROSS SECTION FOR SCREEDS
Scale: 1/4" = 1'-0"
(E.B. Lanes shown. W.B. Lanes same, except for location of longitudinal construction joints & Profile Grade, see Plan of Screeds)



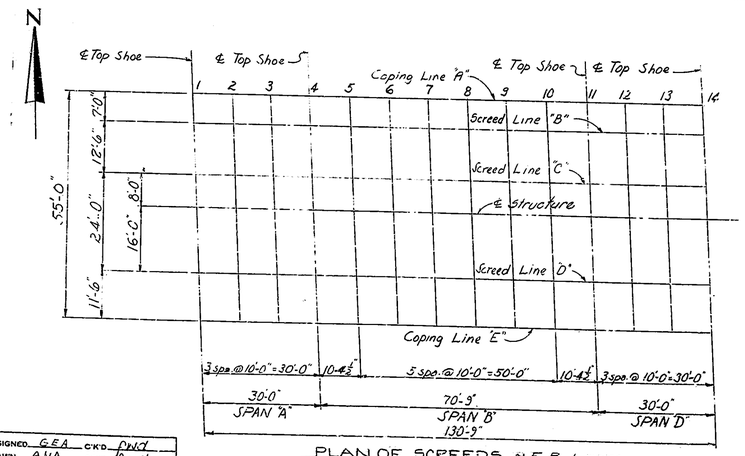
CONCRETE D.L. DEFLECTION (Feet)
Scale: 1" = 10'-0" - Horiz., 1" = 0.02" - Vert.

PUB. ROAD REQ. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-465-4(129)127	1965	18	26

BRIDGES OVER 20' SPAN

TABLE OF SCREED ELEVATIONS

LINE	POINT	SPAN "A"								SPAN "B"														SPAN "C"							
		1		2		3		4		5		6		7		8		9		10		11		12		13		14	
	BRIDGE	E.B.L.	W.B.L.	E.B.L.	W.B.L.	E.B.L.	W.B.L.	E.B.L.	W.B.L.	E.B.L.	W.B.L.	E.B.L.	W.B.L.	E.B.L.	W.B.L.	E.B.L.	W.B.L.	E.B.L.	W.B.L.	E.B.L.	W.B.L.	E.B.L.	W.B.L.	E.B.L.	W.B.L.	E.B.L.	W.B.L.	E.B.L.	W.B.L.	E.B.L.	W.B.L.
A	Elev. @ top of Coping Form	848.200	847.225	848.145	847.170	848.090	847.115	848.040	847.070	848.005	847.035	847.970	847.000	847.920	846.950	847.850	846.880	847.755	846.785	847.640	846.675	847.525	846.560	847.425	846.465	847.330	846.375	847.240	846.285
	Elev. @ top of Exterior Beam																												
	H																												
B	Elev. @ top of Screed Form	847.225	846.530	847.170	846.480	847.115	846.425	847.065	846.380	847.030	846.345	846.995	846.310	846.925	846.260	846.870	846.190	846.775	846.095	846.665	845.985	846.545	845.870	846.450	845.775	846.360	845.685	846.265	845.595
	Elev. @ top of Interior Beam																												
	H																												
C	Elev. @ top of Screed Form	846.870	846.885	846.815	846.830	846.760	846.780	846.715	846.730	846.675	846.700	846.640	846.665	846.590	846.615	846.515	846.545	846.420	846.450	846.310	846.340	846.190	846.225	846.095	846.130	846.000	846.040	845.905	845.950
	Elev. @ top of Interior Beam																												
	H																												
D	Elev. @ top of Screed Form	846.195	847.560	846.130	847.510	846.080	847.455	846.035	847.410	845.995	847.380	845.960	847.345	845.910	847.295	845.835	847.225	845.740	847.130	845.625	847.025	845.510	846.910	845.410	846.815	845.315	846.725	845.220	846.635
	Elev. @ top of Interior Beam																												
	H																												
E	Elev. @ top of Coping Form	846.755	848.665	846.705	848.615	846.645	848.560	846.595	848.515	846.560	848.480	846.525	848.450	846.470	848.400	846.400	848.330	846.300	848.235	846.190	848.130	846.070	848.015	845.970	847.920	845.880	847.830	845.785	847.760
	Elev. @ top of Exterior Beam																												
	H																												



PLAN OF SCREEDS - E.B. Lanes
W.B. Lanes same by 180° Rotation
Scale 1/16" = 1'-0"

DESIGNED GEA C'K'D PWD
DRAWN ANA C'K'D PWD
TRACED C'K'D

SUPERSTRUCTURE, GENERAL PROCEDURE

1- After the structural steel is erected, adjust the superstructure longitudinally so that the distance from the centerline of top shoe to the face of mudwall is equal at Bents 1 and 4.

2- With the superstructure in the adjusted position called for in (1) above, weld the anchor plates for the fixed shoes at Bent 3.

3- Adjust the expansion plates under each expansion shoe in accordance with Dimension "A" or "B" shown on Drawing S 12 for the prevailing temperature. Note that Dimension "A" is always the distance from a vertical line through the centerline of top shoe in a direction away from the fixed shoe. Weld the anchor plates.

4- After the shoes are set, take elevation at all screed points on top of adjacent beams. Enter these elevations in Table of Screed 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.

5- No concrete in the floor is to be poured until the above operations are completed.

General Notes: See Drawing S 3 for notes.

SCREED DETAILS

INDIANA STATE HIGHWAY COMMISSION

SCALE:- AS NOTED

June 24, 1965

SUBMITTED FOR APPROVAL:- Tom L. Thurnwald, P.E.

DRAWING:- S 16 OF 16
PROJECT:- I-465-4(129)127
~~BRIDGE~~ CONTRACT NO. 12-7391
BRIDGE FILE:- I-465-130-5279

November 6, 1961

PROJECT NO.	LINE	SHEET NO.	TOTAL SHEETS	FILE
I-465-4(129)127	"A"	18	26	I-465-130-5279

BRIDGE FILE

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.	RAILING CONCRETE CLASS F LIN.FT.	REINFORCING STEEL (1968 STD. WTS) #11 LBS.	#10 LBS.	#9 LBS.	#8 LBS.	#7 LBS.	#6 LBS.	#5 LBS.	#4 LBS.	#3 (Bar Shapes) LBS.	#4 (Bar Shapes) LBS.	TOTALS LBS.	STRUCTURAL STEEL (M 3XX) LBS.	BRONZE BEARING PLATES LBS.	ANCHOR PLATES (M-AP-2) EACH	ANCHOR RODS (M-AR) EACH	CAST IRON LBS.	ALUMINUM RAILING (TYPE 5 or C) LIN.FT.	UNTREATED TIMBER PILES Nº	UNTREATED TIMBER PILES LIN.FT.	TREATED TIMBER PILES Nº	TREATED TIMBER PILES LIN.FT.	STEEL ENCASED CONCRETE PILES Nº	STEEL ENCASED CONCRETE PILES LIN.FT.	STEEL H BEARING PILES Nº	STEEL H BEARING PILES LIN.FT.	2" STEEL CONDUIT LIN. FT.
Westbound Structure																																
Superstructure	200.9				12								44,826	1438				45,864	167,400					298									137
Substructures																																
Bent 1	27.5										1482		700	1107				3379			8								7	245		
Bent 2	13.6	6.1	25.7	25.9				2021			3239	237	1817	435			1206	8975			8				21	600			7	245		
Bent 3	13.6	6.5	25.7	26.4				2084			3272	237	1817	432			1249	9091			8				28	700						
Bent 4	27.5										1482		700	1107				3379			8								7	245		
Eastbound Structure																																
Superstructure	200.9				12								44,826	1438				45,864	167,400					298									137
Substructures																																
Bent 1	27.5										1482		700	1107				3379			8								7	245		
Bent 2	13.6	6.5	25.7	26.9				1908			3207	237	1817	435			1171	8845			8				21	600						
Bent 3	13.6	6.8	25.7	26.4				2041			3239	237	1817	432			1206	8972			8				28	700						
Bent 4	27.5										1482		700	1107				3379			8								7	245		
SPLICE BARS																																
Reinf. Steel for Approach Structures																																
Reinf. Steel for R.C. Bridge Approaches																																
Reinf. Steel for Lip Curb, Pvmt. Tapers, etc.																																
TOTALS	506.2	25.9	102.8	104.6	2.4			8164			18,885	948	99,238	2035			1032		334,800		64		490.0		84	2600	28	980				274

APPROACH STRUCTURES

STRUCT Nº	LOCATION	DESCRIPTION SIZE	DESCRIPTION KIND	LENGTH LIN. FT.	CL. D CONC IN STRUCTS CU. YDS.	REINF. STEEL LBS.	CAST IRON LBS.	REMARKS
				TOTALS				Total of Reinforcing Steel carried to "Structure Quantities"

BARRICADES, BARRIERS, TRAFFIC SIGNS AND LIGHTS

ITEM	UNIT	QUANTITY	ASSEMBLY	BRIDGE FILE	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	*	Suitable Barriers		
		*	Lanterns or Torches		
CONSTRUCTION IDENTIFICATION SIGNS	Each	*	Signs XM-6		
		*	Signs XM-7		
		*	Signs XM-8		

BILL OF SPLICE BARS

REINFORCING STEEL — BRIDGE FILE

SIZE	LENGTH LIN FT	WEIGHT EACH	Nº PIECES	WEIGHT LBS	Nº PIECES	WEIGHT LBS	Nº PIECES	WEIGHT LBS	TOTAL WEIGHT LBS
# 11	11'-0"	58.4							
# 10	10'-6"	45.2							
# 9	9'-6"	32.3							
# 8	8'-9"	23.4							
# 7	8'-0"	15.4							
# 6	7'-6"	11.5							
# 5	6'-9"	7.5							
# 4	6'-0"	4.0							
# 3	5'-6"	2.1							
TOTAL SPLICE BARS									

SUMMARIZED FWD GEA
T.A.C. FWD GEA

NOTE: for Test Bar Samples see Bridge Std C1.

BILL OF MATERIALS FOR R.C. BRIDGE APPROACHES

REINFORCING STEEL — BRIDGE FILE

SIZE & MARK	NUMBER PIECES	LENGTH LIN. FT	WEIGHT LBS.	WEIGHT LBS.	WEIGHT LBS.	TOTAL WEIGHT LBS.

Drawing Not Legible

* Not a Pay Item. Place as directed by the Engineer. "W-35A" sign speed to be determined by the Engineer. When sign standards are used in unpaved areas the contractor may use two posts set (5) three feet in the ground. Directional, advisory or warning signs shall be right hand or left hand as the location of the sign requires.

** Weight of spirals includes weight of 1½ extra turns top and bottom. Spacers and ½ turns at laps included in cost of spiral.

*** The weight of structural steel is approximate only, and it shall be the contractors responsibility to determine the weight on which he bases his bid. **The weight of High Strength Bolts is not included in the estimated weight of Structural Steel. The cost of these bolts shall be included in the cost of Structural Steel.**

Rev. 2-1-67 Struc. Steel, Exp. Jt, Item 6
~~Rev 10-14-66 Item 6~~

BRIDGES OVER 20' SPAN

F.A. ROUTE NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND	I-465-4 (129) 127	1965	19	26

SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITIES BRIDGE FILE	TOTALS
1	Class F Concrete	Cu.Yds.	506.2	
2	Class D Concrete	Cu.Yds.	25.9	
3	Class E Concrete above Footings	Cu.Yds.	102.8	
4	Class E Concrete in Footings	Cu.Yds.	104.6	
5	Railing Concrete	Cu.Yds.	2.4	
6	Reinforcing Steel	Lbs.	141,123	
7	Structural Steel	Lump Sum	1	
8	Anchor Plates (M-AP-2)	Each	64	
9	Cast Iron	Lbs.		
10	Aluminum Railing (Type)	Lin.Ft.		
11	Untreated Timber Piles Furn	Lin.Ft.		
12	Untreated Timber Piles Driven	Lin.Ft.		
13	Steel Pile Shells Furnished (")	Lin.Ft.		
14	Steel Pile Shells Driven (")	Lin.Ft.		
15	Furnishing Equipment for Driving Piles	Lump Sum	1	
16	Wet Excavation	Cu.Yds.		
17	Waterway Excavation	Cu.Yds.		
18	Common Excavation	Cu.Yds.		
19	Special Borrow	Cu.Yds.		
20	Grade B Special Borrow	Cu.Yds.		
21	Sodding	Sq.Yds.		
22	Mulched Seeding	Sq.Yds.		
23	Plain Cement Concrete Pavement (")	Sq.Yds.		
24	Reinforced Cement Concrete Pavement (")	Sq.Yds.		
25	Aggregate for Compacted Aggregate Base	Tons		
26	Compacted Aggregate Shoulder	Tons		
27	Subbase	Cu.Yds.		
28	Removal Present Structure	Lump Sum		
29	Temporary Bridge and Approaches	Lump Sum		
30	Typical Sign Standards	Each		
31	Standard Barricades (Type A)	Each		
32	Standard Barricades (Type B)	Each		
33	Standard Signs	Each		
34	R/W Markers	Each		
35	Slopewall	Sq.Yds.	1092	
36	"Expansion Joint	Lin.Ft.		
37	Straight Beam Guard Rail	Lin.Ft.		
38	Class D Concrete in Structures	Cu.Yds.		
39	Treated Timber Piles, Furnished	Lin.Ft.	2600	
40	Treated Timber Piles, Driven	Lin.Ft.	2600	
41	Railing, Type 5 or C	Lin.Ft.	490'	
42	2" Steel Conduit	Lin.Ft.	274	
43				
44				
45	Foundation Excavation, Unclassified	Cu.Yd.	347	
46	Steel Pile Shells Furnished & Driven (14")	Lin.Ft.	980	
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SUMMARY
INDIANA STATE HIGHWAY COMMISSION

June 24, 1965

SUBMITTED FOR APPROVAL: Tom K. Hedlund, P.E.

PROJECT I-465-4(129)127
~~PROJECT~~ CONTRACT NO 12-7391
BRIDGE FILE I-465-130-5279

D STR