BRIDGE CONTRACT No. R-6290

INDEX

PROJECT	STRUCTURE	TYPE	SPAN	OVER	STATION	CONTRACT NO.
I-74-1(36)27	I-74-30-4942	TWIN STRUCTURES R.C. GIRDER	3@38', SK.32°R.	BLACK CREEK	1220+60	R-6290

SHEET NO.	SHEET DESIGNATION	SUBJECT	B.P.R. APPROVAL
1		INDEX & TITLE SHEET	
2	ROAD STD.	~~STANDARD DIVIDED LANE SECTIONS (INTERSTATE) (R-T-3-61)~~	~~8-23-61~~
3	ONE SHEET	TYPICAL GRADING SECTIONS	
4	ROAD PLAN SHEET NO. 1	~~ROAD PLAN & PROFILE RD. PROJ. NO. I-74-(C-)87, STA. 1185+00 TO STA. 1256+00~~	
5	ROAD PLAN SHEET NO. 2	~~ROAD PLAN & PROFILE RD. PROJ. NO. I-74-(C-)87, STA. 1310+00 TO STA. 1350+00~~	
6	ONE SHEET	TEST BORING DATA	
7	ONE SHEET	CHANNEL LAYOUT OF BLACK CREEK	
8	C1 (STRUCTURE I-74-30-4942)	LAYOUT	
9	C2	GENERAL PLAN	
10	C3	END BENT DETAILS	
11	C4	PIER DETAILS	
12	C5	SPANS "A" & "C" DETAILS	
13	C6	SPAN "B" DETAILS	
14	C7	SUPERSTRUCTURE DETAILS	
15	ONE SHEET	SUMMARY	
16-21	SIX SHEETS	CROSS SECTIONS	

STATE OF INDIANA

STATE HIGHWAY DEPARTMENT

BRIDGE PLANS

FOR SPANS OVER 20 FEET ON INTERSTATE HIGHWAY 74 SECTION 1

F.A. PROJECT NO. I-74-1(36) 27

ILLINOIS STATE LINE-CRAWFORDSVILLE AREA

BEGINNING AT A POINT IN SECTION 13-T.19N.-R.5W. ON INTERSTATE 74 APPROX. 904' NORTHWEST OF THE EAST LINE OF SECTION 13 (RGE. L.) AND EXTENDING SOUTHEAST A DISTANCE OF APPROX. 1110' TO A POINT IN SECTION 18-T.19N.-R.4W. ON INTERSTATE 74 APPROX. 204' SOUTHEAST OF THE EAST LINE OF SECTION 13 (RGE. L.) IN MONTGOMERY COUNTY

ROADWAY LENGTH = 0.187 MI.
BRIDGE LENGTH = 0.023 MI.
TOTAL LENGTH = 0.210 MI.

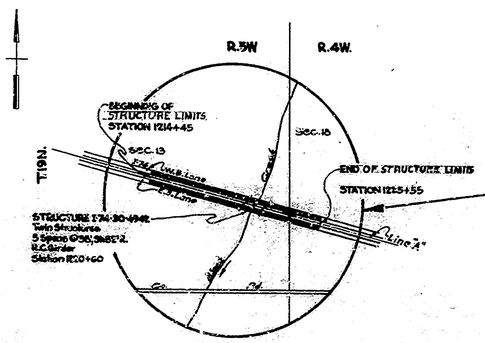
MAX. GRADE = -1.367%

BRIDGES OVER 20' SPAN

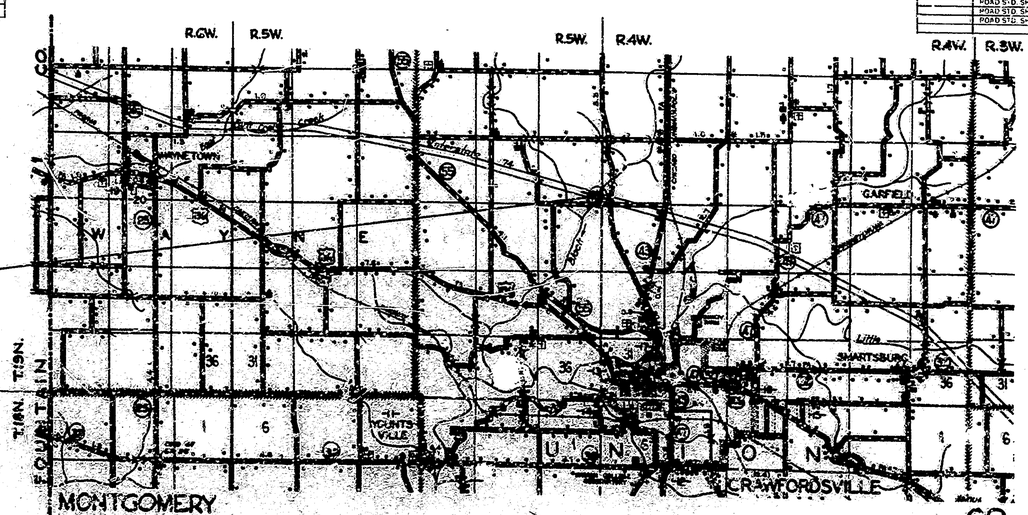
PUBLIC ROAD PERIOD NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-74-(36)27	1962	1	23

INDEX CONTINUED
STANDARD DRAWINGS

SHEET NO.	SHEET DESIGNATION	SUBJECT	B.P.R. APPROVAL	ADOPTED AS REVISION "B"
22	BRIDGE STD. C1	STANDARD MISCELLANEOUS DETAILS	6-21-63	5-1-63
	BRIDGE STD. C2	STANDARD MISCELLANEOUS DETAILS		
	BRIDGE STD. D	CASTING DETAILS ROADWAY DRAINS		
	BRIDGE STD. F	ROADWAY DRAIN OUTLET DETAILS		
	BRIDGE STD. H	TYP. DETAILS OF THICK. PAVEMENT & LOC. TOE OF S., 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		
23	BRIDGE STD. M8	SLOPE WALL DETAILS	12-4-62	10-4-62
	BRIDGE STD. S2	STANDARD CONCRETE PILE DETAILS		
24	BRIDGE STD. R1-A	ALUMINUM RAILING DETAILS		1-22-63
24-A	~~BRIDGE STD. R1-B~~	~~STEEL RAILING DETAILS~~		1-10-63
	BRIDGE STD. S1	TYPICAL DETAILS FOR PLACING SPECIAL FILLING MATERIAL		
24-B	BRIDGE STD. S2	TYPICAL DETAILS FOR PLACING ~~SPECIAL~~ BORROW	3-28-63	2-18-63
	BRIDGE STD. T SHEET A	STANDARD TEMPORARY BRIDGE		
	BRIDGE STD. T SHEET B	STANDARD TEMPORARY BRIDGE		
	ROAD STD. SHEET A	STANDARD PAVEMENT JOINTS		
25	ROAD STD. SHEET MA	MISCELLANEOUS STANDARDS	3-5-61	8-2-11-60
	ROAD STD. SHEET MB	MISCELLANEOUS STANDARDS		
26	ROAD STD. SHEET MC	MISCELLANEOUS STANDARDS	1-26-60	8-4-1-59
	ROAD STD. SHEET MC1	MISCELLANEOUS STANDARDS		
27	ROAD STD. SHEET MD	MISCELLANEOUS STANDARDS	1-26-60	8-8-26-59
	ROAD STD. SHEET MD1	MISCELLANEOUS STANDARDS		
28	ROAD STD. SHEET ME	MISCELLANEOUS STANDARDS	8-8-61	8-10-14-60
	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 MK	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET MN	MISCELLANEOUS STANDARDS		
29	ROAD STD. SHEET MP	MISCELLANEOUS STANDARDS	6-5-62	5-25-62
	ROAD STD. SHEET MQ	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET MR	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET S	MISCELLANEOUS STANDARDS CENTER DITCH INLETS		
	ROAD STD. SHEET S1	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET MT	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET	MISCELLANEOUS STANDARDS		
	ROAD STD.	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	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		



PROJECT LIMITS
Scale-1"=400'



Scale-1"=1 Mile

TRAFFIC DATA	
A.D.T. (1961)	5545 V.P.D.
A.D.T. (1975 PROJECTED)	7346 V.P.D.
TRUCKS	7%
DESIGN SPEED	70 M.P.H.
ACCESS CONTROL	FULL

APPROVED 3-8-62
Jno. E. Jordan
CHIEF ENGINEER—INDIANA STATE HIGHWAY COMMISSION

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

REVISIONS	
DATE	SHEET NO.
12-22-63	Sheets 22, 23, 24, 25, 27, 27-A, 28
	29. Sheet 24-A & 24-B ADDED
	Sheets 2, 12, 5 DELETED
	Project Designation changed from I-74-(36)27 to I-74-1(36)27

RECOMMENDED FOR APPROVAL 3-8-62
C. R. Rammer
DIRECTOR OF PROJECT DEVELOPMENT, INDIANA STATE HIGHWAY COMMISSION

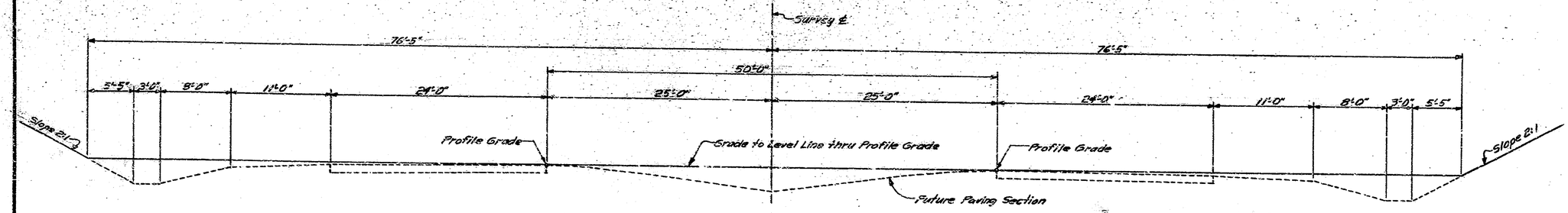
CHARLES R. RUMMER REGISTERED NO. 2275 STATE OF INDIANA PROFESSIONAL ENGINEER

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

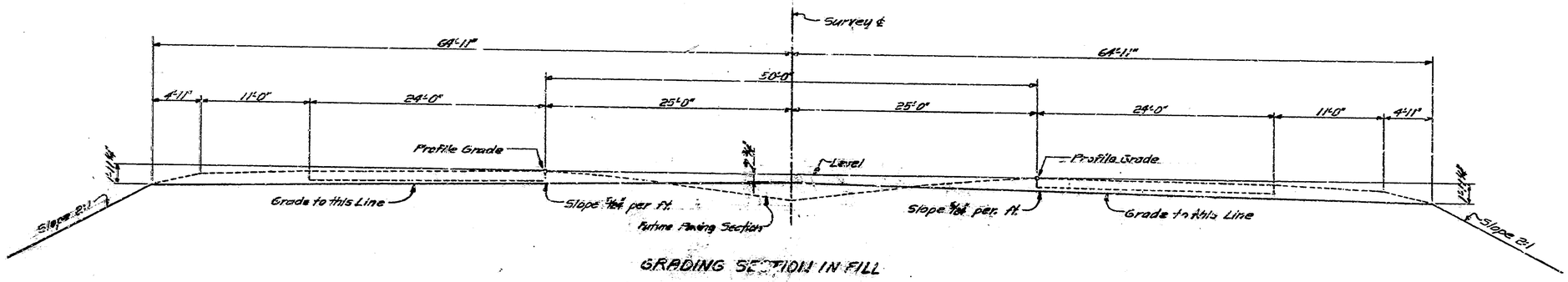
BRIDGE FILE: I-74-CO-4942

BRIDGES OVER 20' SPAN

FED. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-74-1 (30) 27	1962	5	29



GRADING SECTION IN CUT



GRADING SECTION IN FILL

TYPICAL GRADING SECTIONS

INDIANA STATE HIGHWAY COMMISSION

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

RECOMMENDED FOR APPROVAL: C. R. Rummel

DRAWING: OF

PROJECT: I-74-1(30)27

~~BRIDGE~~ CONTRACT NO. B6290

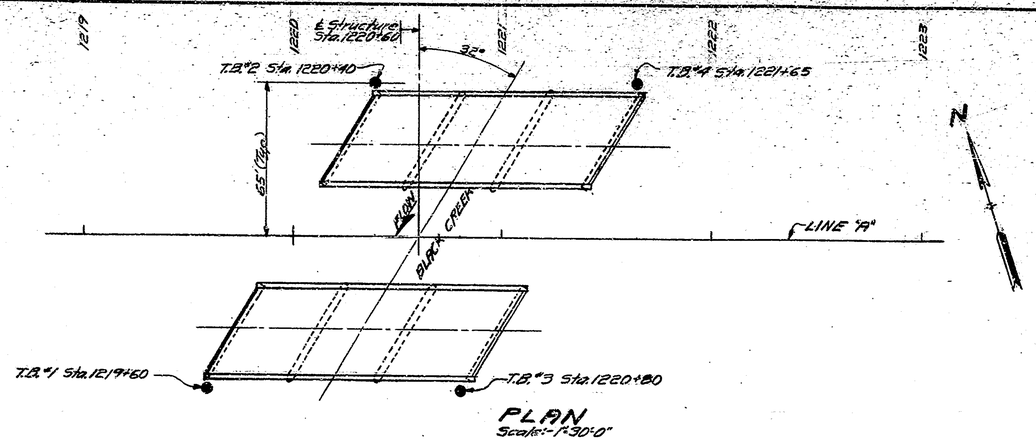
BRIDGE FILE: I-74-30-4

DESIGNED CK'D

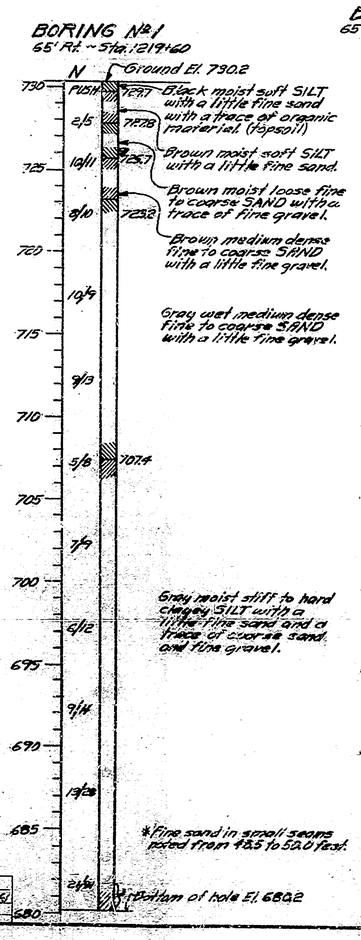
DRAWN CK'D

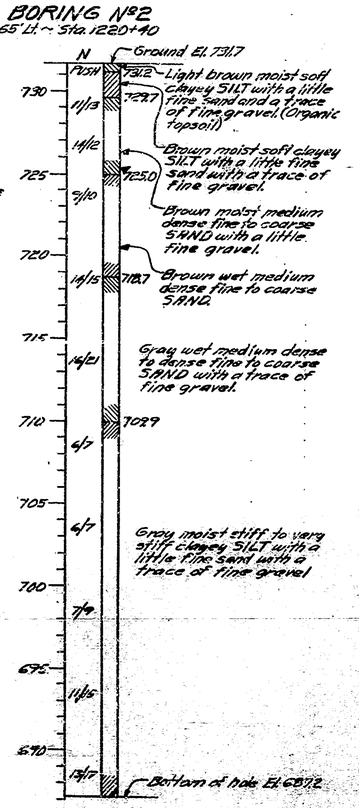
TRACED CK'D

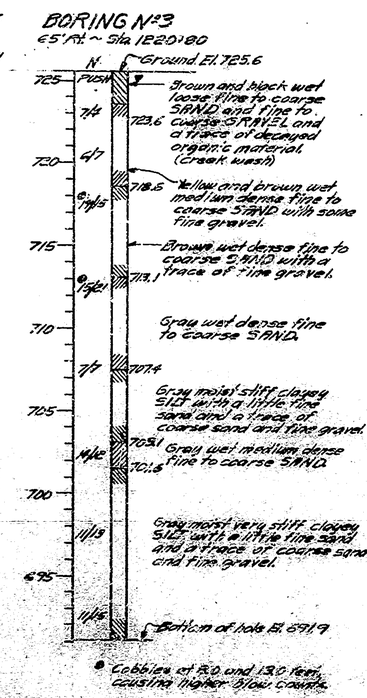
BRIDGES OVER 20' SPAN					
FED. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-74-1 (36)27	1962	6	29

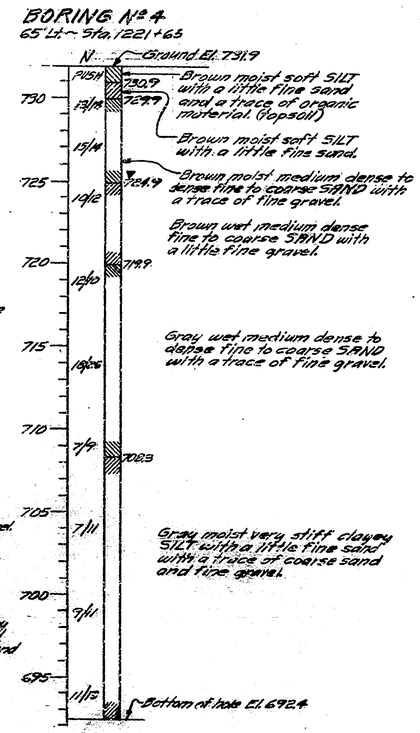


PLAN
Scale:- 1"=30'-0"









NOTES:-

"N" indicates number of blows per ft. in standard penetration test - driving 2" O.D. Sampler 12" with 140# hammer falling 30". Count made at 6" intervals.

▲ Denotes Ground Water Table.

Date of borings:- Sept. 8, 1961.

See Art. A203 of Specifications regarding Test Pit Data.

Vertical Scale: 1"=4'-0"

TEST BORING DATA
BLACK CREEK
STATE HIGHWAY DEPARTMENT OF INDIANA

SCALE:- AS NOTED — JANUARY 1962

RECOMMENDED FOR APPROVAL: C. P. Rumme, ENGINEER OF BRIDGE DESIGN

DRAWING:- OF-

PROJECT:- I-74-1(36)27

~~BRIDGE~~ CONTRACT NO. R-6290

BRIDGE FILE:- I-74-1-6

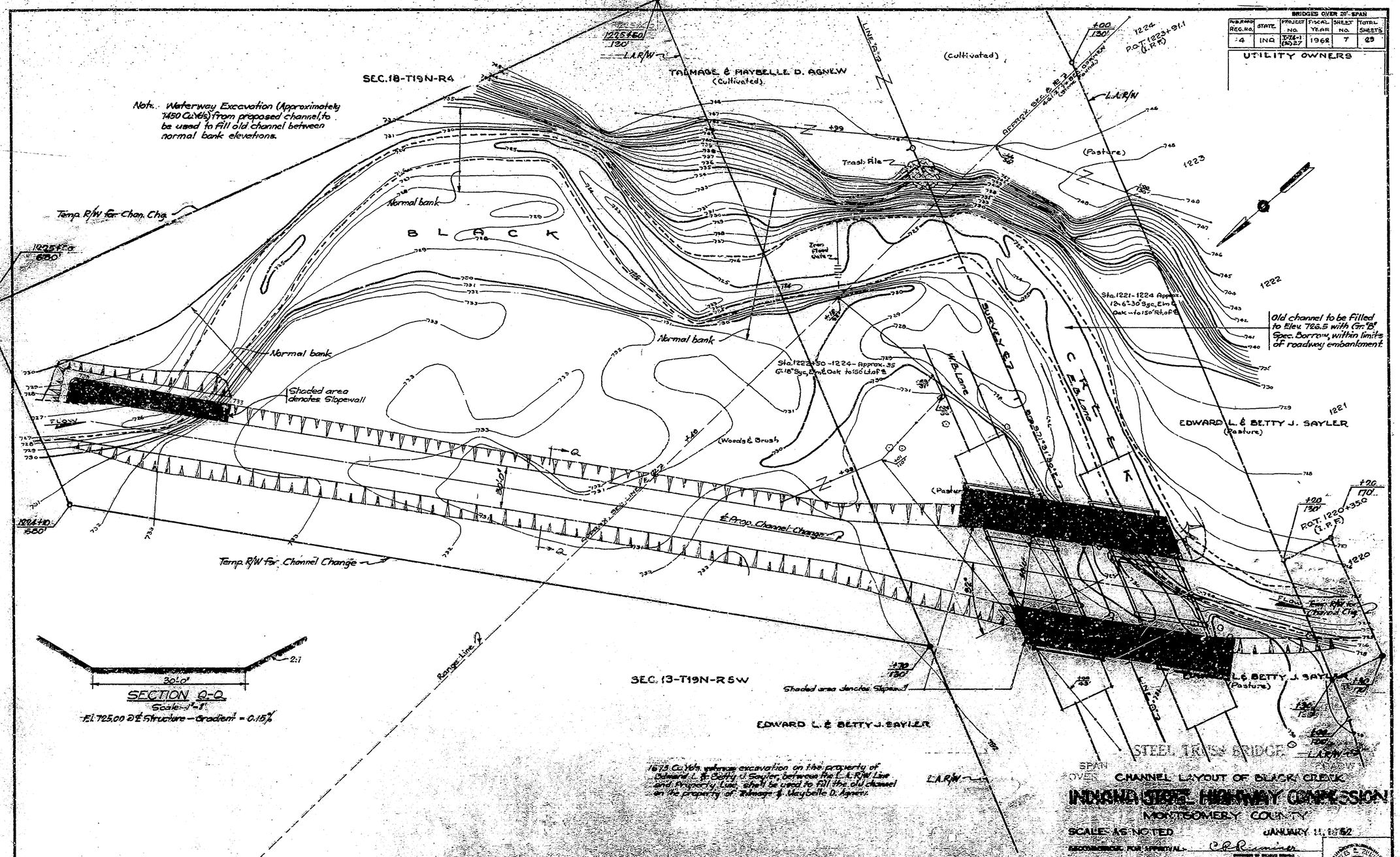
CHARLES E. REMMIE, REGISTERED PROFESSIONAL ENGINEER, NO. 22751, STATE OF INDIANA

DESIGNED: CKD
DRAWN: MKA 7/56 CKD 9-1-56
TRACED: CKD

PUBLISHED REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND	BR-(4) (82) 27	1962	7	25

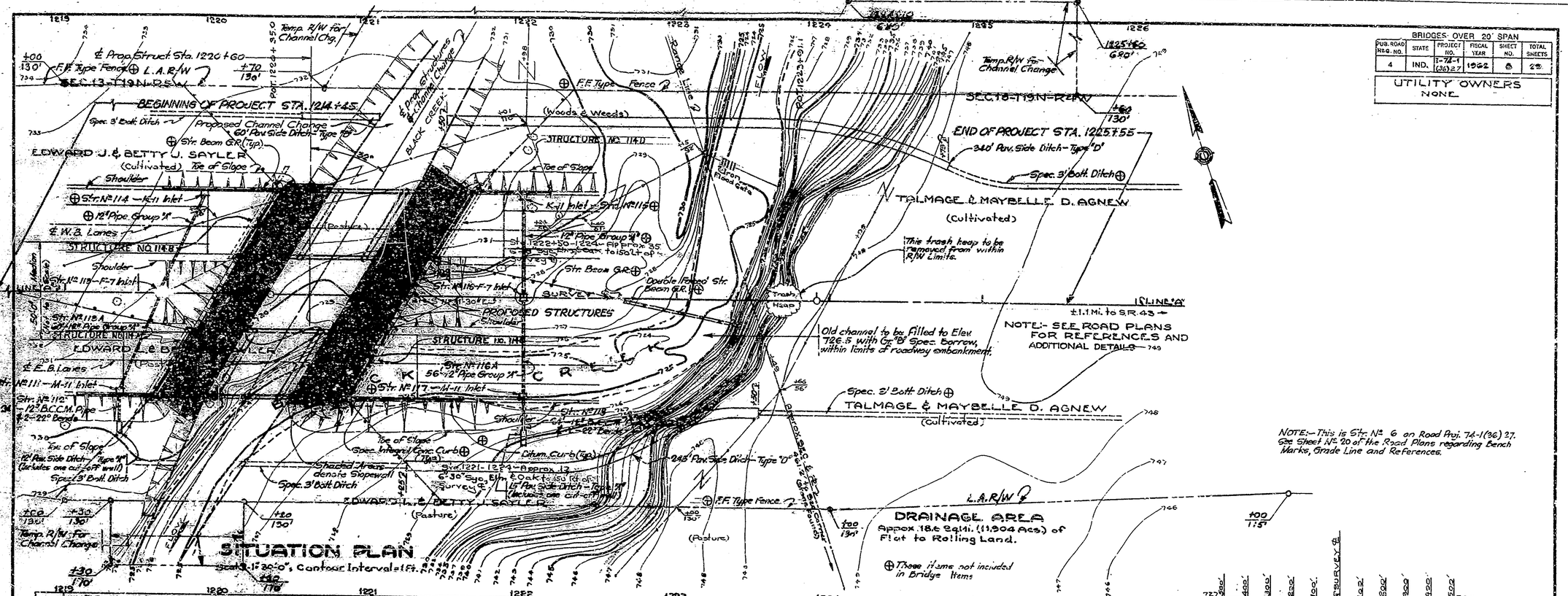
BRIDGES OVER 20'-SPAN

UTILITY OWNERS

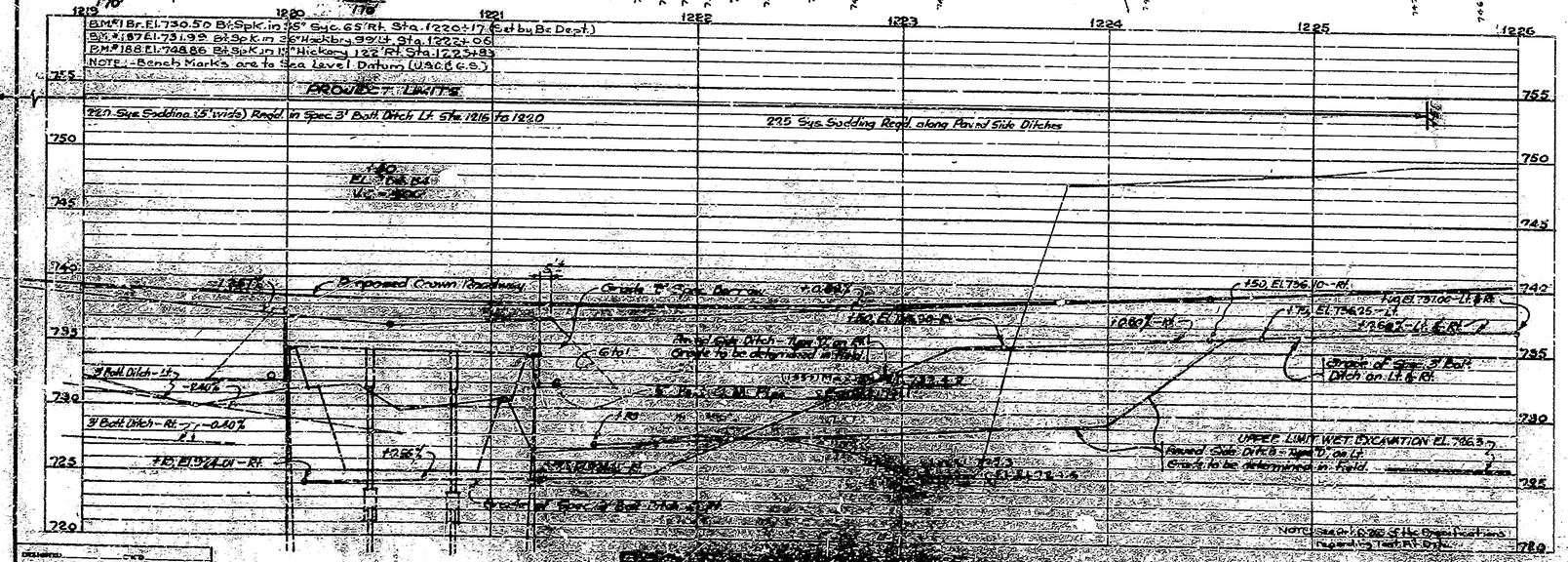


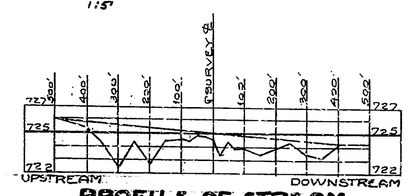
BRIDGES OVER 20' SPAN					
PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-74-1 (36) 27	1962	8	28

UTILITY OWNERS
NONE



NOTE:- This is Str. No. 6 on Road Proj. 74-1(36) 27. See Sheet No. 20 of the Road Plans regarding Bench Marks, Grade Line and References.





BALANCE:-

Net Fill + 20%	22,225 Cu. Yds.
Surplus Excavation	195 " "
Common Excavation	22,270 " "
Waste	170 " "

LAYOUT
TWIN REINF. CONCRETE GIRDER BRIDGES
3 SPANS @ 38'-0" SK. 32° R. 6' CURBS 32'-6" RDWY.
OVER BLACK CREEK ON I. ROUTE 74

STATE HIGHWAY DEPARTMENT OF INDIANA
MONTGOMERY COUNTY

SCALE: As Noted — JANUARY 11, 1962

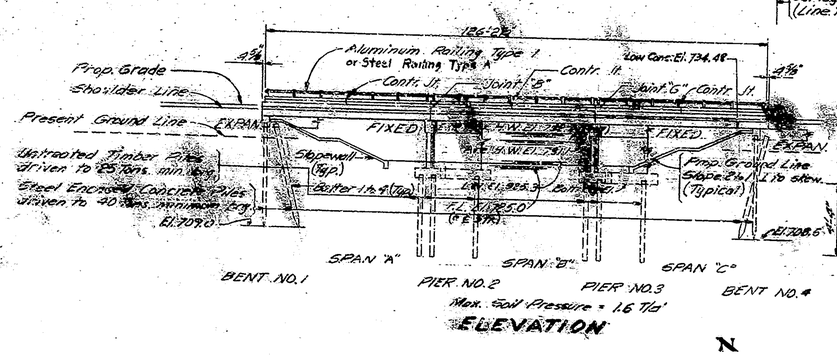
RECOMMENDED FOR APPROVAL: C. R. Rummer
LEADER OF BRIDGE DESIGN

DRAWING: C.I.C.F. 7
PROJECT: I-74-1(36) 27 — STATION: 1220+60
BRIDGE CONTRACT NO. R-6280
BRIDGE FILE: [illegible]

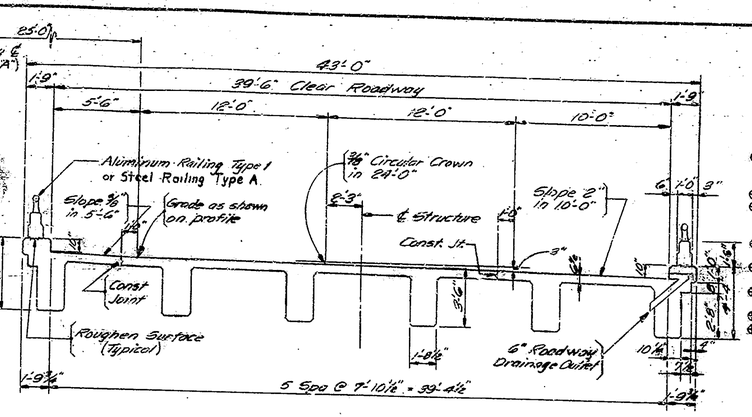
DESIGNED: C.R.F. 12-20-60 — CHK'D: 12-21-60
TRACED: W.E.G. 12-22-60 — CHK'D: [illegible]

BRIDGES OVER 20' SPAN					
PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-74-1 (36)27	1962	9	29

NOTE :- STRUCTURE TO BE BUILT TO AN 800' V.C.



ELEVATION



SECTION A-A

Scale ¼" = 1'-0"

STANDARD DRAWINGS

BRIDGE	ROAD	PURPOSE
C1		Details, Text, Bars, Bar Bending, Etc.
M3		Rigid Approach Details
M9		Slope Wall Details
RP1		Aluminum Railing Details
GR1		Typical Beam Guard Rail Details
	A	Pavement Expansion Joints
	MR	Pavement Or Curb, Bridge Limits
	MC	Castings
	MG	Gas Lines
	MD	Inlets
	MD	Inlets
	ME	Curb Inlets, Integral Curb, Paved Side Ditch
	MM	Subsurface Drains
	MP	Piles
	MQ	Forms, Field Bends
	GR-1	Beam Guard Rail
B1-B		Steel Railing Details
S2		For Spacing 6" Perf. Steel Pipe

⊕ Not included in Bridge items

ELEVATIONS AT THE INTERSECTIONS OF PROFILE GRADE AND ℄'s OF BENTS AND PIERS

POINT	①	②	③	④	⑤	⑥	⑦	⑧
STATION	1220+13.61	1220+51.65	1220+96.39	1221+37.69	1221+82.37	1220+23.61	1220+65.15	1221+06.39
ELEV.	[illegible].74	738.58	738.47	738.40	738.89	738.70	738.55	739.45

TYPICAL CROSS SECTION

See Sheet №2 for ~~Standard~~ Divided Lane Sections For Federal Aid Interstate Projects. ~~Median~~ shall be 50'-0" wide.
See Sheet №3 for Typical Grading Sections.

GENERAL NOTES

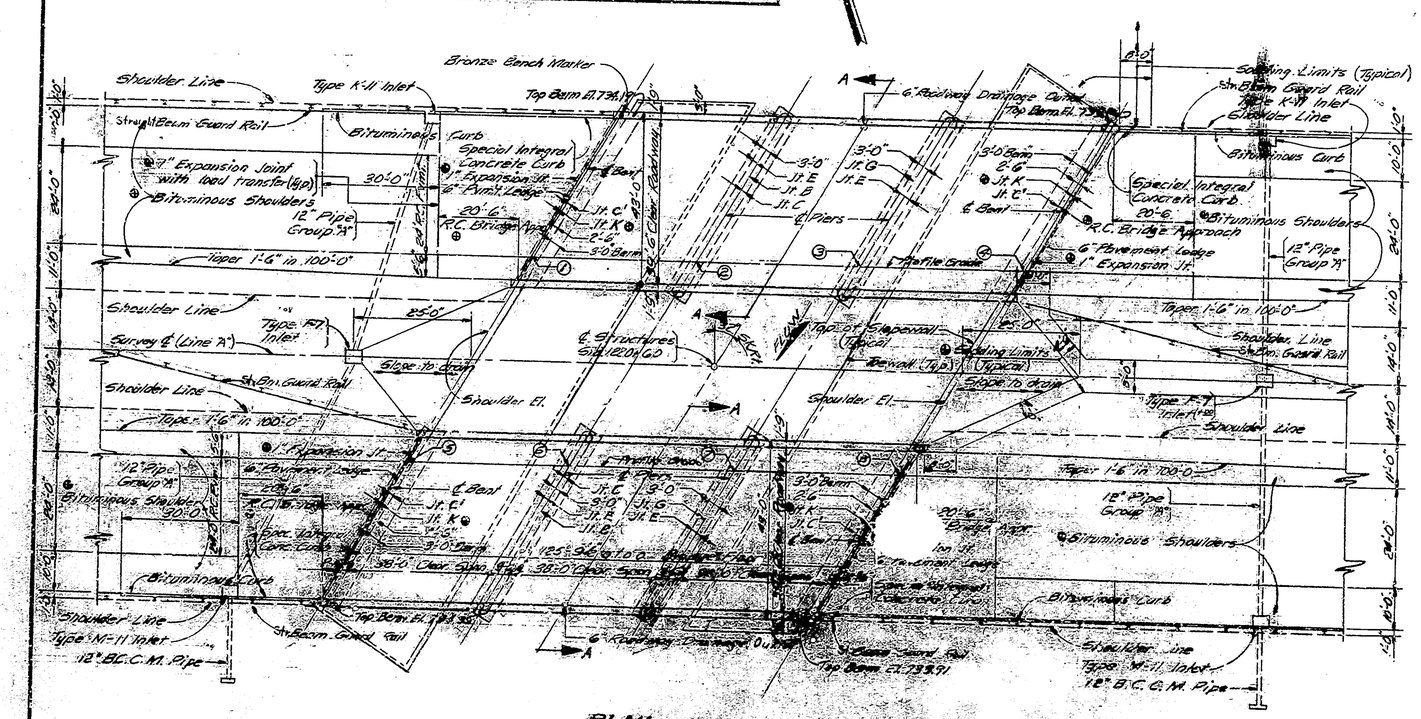
No present structure at proposed bridge site.
Depth of footings to be extended if found necessary. See Art. B-[illegible](a) of Specifications.
Piles shall have minimum bearing value shown on detail drawings. Determine pile lengths by Arts. F103 and F203 of Specifications.
For details of steel encased concrete piles see Bridge Standard C, the special provisions, and applicable articles in the specifications.
Piles shall be driven to elevation shown on plans or below if necessary to obtain desired bearing.
Reinforcing steel covering shall be 1 inch in floor slabs, 3 inches in footings, except bottom steel which shall be 4 inches, and 2 inches in all other parts unless noted.
Concrete in footings and pier stems up to bottom of cap to be Class "E".
Concrete in superstructure, including railing base, bent caps and pier caps to be Class "A".
Concrete in steel encased concrete piles, concrete slopewalls, headwalls, and pavement side ditches to be Class "D".
Continuous concrete pours shall be required between construction joints as shown on detail plans.
Waterproof back of end curtain walls in accordance with Specifications.
Bevel forms ¾" under copings; and chamfer exposed edges 1 inch unless noted.
Two roadway drainage outlets to be placed as shown on this drawing.
Construct 5' concrete slopewalls or alternate 12" hand laid riprap slopewalls at locations as shown on Layout.
Tolerance in position of steel encased concrete pile head maximum 2 inches.
⊕ Three 1 inch expansion joints with load transfer to be placed in the approach pavement. See Bridge Standard M3.
All railings to be constructed perpendicular to grade.
See special provisions for items included in this contract.

JOINT LEGEND

JOINT B indicates vertical ½" preformed joint filler extending from approximately 1½" below the surface of roadway, curb and top of coping down to top of pier at girders and to bottom of curtain wall between girders. Joint sealing compound (hot poured joint sealer or cold applied mastic type filler) to be placed in the top 1½" portion.
JOINT C & C' indicates ½" preformed joint filler under fronts of girder bearing areas, ¾" expansion joint material along vertical faces of keyways, and one layer of medium weight roofing felt under remainder of horizontal bearing area. "C" is "C-2", "C-3", etc.
JOINT E indicates ½" preformed joint filler under front 3" of girder bearing area with one layer of medium weight roofing felt under outside girder bearing area.
JOINT G indicates vertical ½" joint in top 1½" of roadway, curb and coping filled with joint sealing compound (hot poured joint sealer or cold applied mastic type filler) with vertical construction joint extending down from ½" joint to top of pier at girders and to bottom of curtain wall between girders.
⊕ JOINT K indicates ¾" expansion joint material along vertical faces of keyways and one layer of medium weight roofing felt on horizontal bearing area of pavement ledge.

DESIGN DATA

Designed for H20-S16-44 loading in accordance with 1957 A.H.S.H.O. Specifications.
Structures checked for E-80,000 lb. axles spaced 4'-0" apart.



PLAN

NOTE :- Special Integral Concrete Curb to be of height from 10" at structure to 6" at the end of the approach pavement. See Road Standard [illegible] for details and reinforcing.

⊕ These items included in Bridge Items. See layout for additional items.

GENERAL PLAN

THRU REINF. CONCRETE BRIDGE
3 SPANS @ 38'-0" SKEW 30° FT. 6" CURB 39'-0" ROADWAY
OVER BLACK CREEK ON INTERSTATE RT. 74

STATE HIGHWAY DEPARTMENT OF INDIANA

MONTGOMERY COUNTY

SCALE: 1/16" = 1'-0" UNLESS NOTED [illegible] 1962

RECOMMENDED FOR APPROVAL: C. R. Cummer, ENGINEER OF BRIDGE DESIGN

DRAWING: C2 OF 7
PROJECT: I-74-1(36)27 STATION 1220+[illegible]
~~BRIDGE~~ CONTRACT NO. R-6290
BRIDGE FILE: I-74-[illegible]

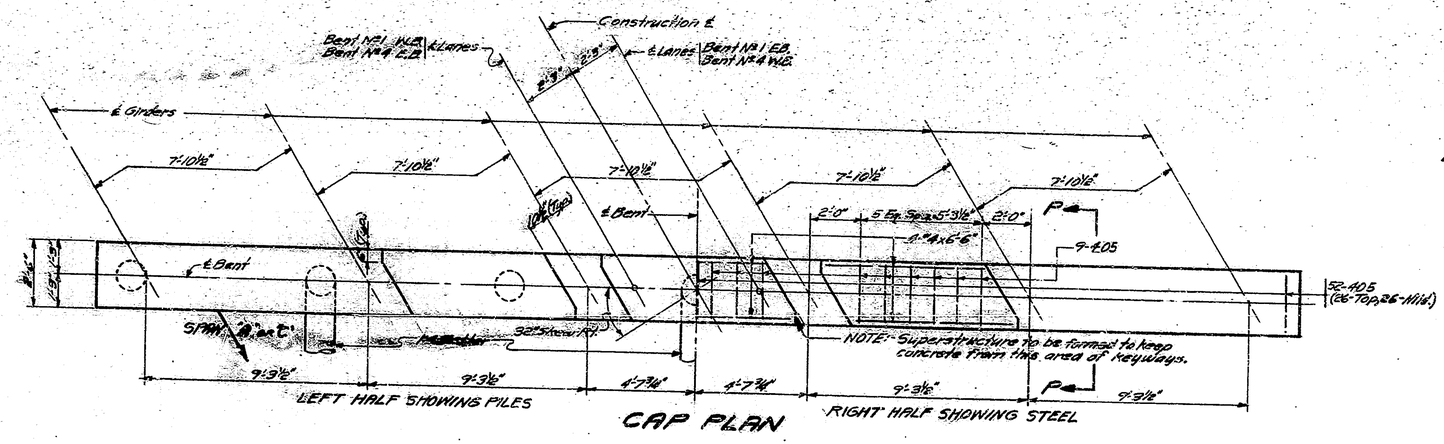
DESIGNED ____ CKD. ____
DRAWN [illegible] CKD. [illegible]
TRACED ____ CKD. ____

CHARLES L. SCHMITZ REGISTERED PROFESSIONAL ENGINEER No. 2275 STATE OF INDIANA

NOTE:- CAP NOT TO BE POURED UNTIL FILL HAS BEEN COMPLETED UP TO APPROXIMATELY THE ELEVATION OF THE BOTTOM OF THE CAP.

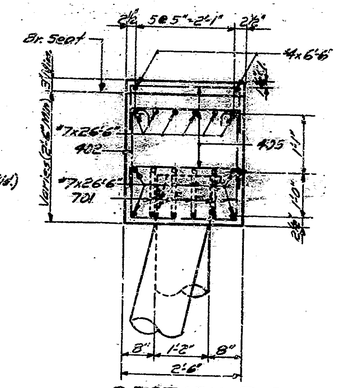
PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-74-1 (36) 27	1962	10	28

BRIDGES OVER 20' SPAN



CAP PLAN

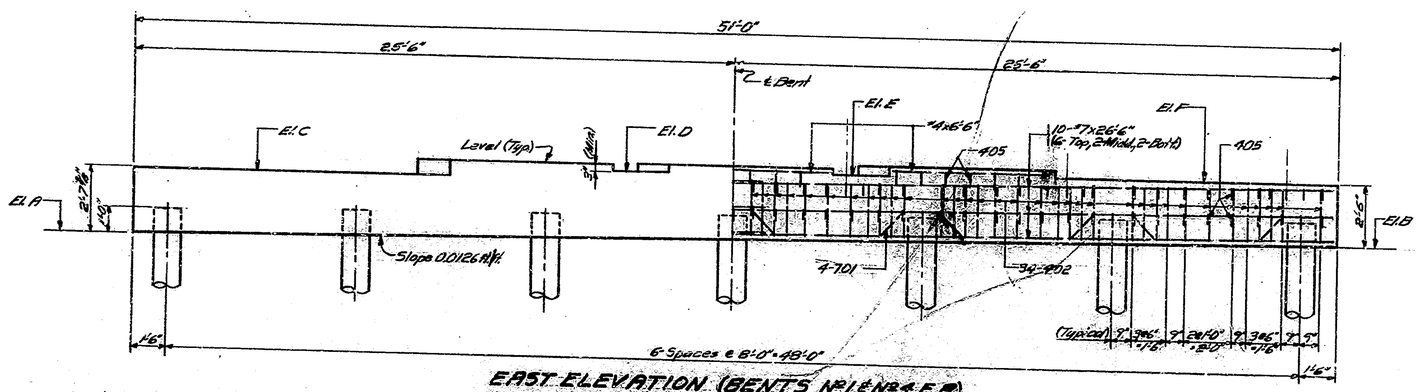
NOTE:- 7-14"x25'-0" Steel Encased Concrete Piles required for each Bent driven 40 Ton Bearing.



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

BILL OF MATERIALS FOR ONE END BENT

REINFORCING STEEL			
SIZE AND MARK	NO. OF BARS	LENGTH	WEIGHT (LBS.)
701	8	29'-2"	
#7	20	26'-6"	
	TOTAL	No. 7	1560
402	68	7'-9"	
405	131	3'-3"	
#4	6	6'-6"	
	TOTAL	No. 4	641
	TOTAL	STEEL	2201
CONCRETE			
Class "B" Cap			130 Cu.Yds.
MISCELLANEOUS			
7-Steel Encased Conc. Piles 14"x25'-0" #7 Ga.			175 Lin.Ft.

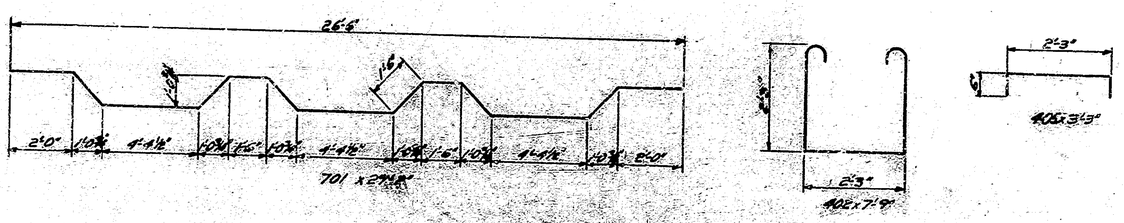


EAST ELEVATION (BENTS No.1 & No.4 E.B.)
WEST ELEVATION (BENTS No.1 & No.4 W.B.)

CAP ELEVATIONS

EL.	EAST BOUND		WEST BOUND	
	Bent No.1	Bent No.4	Bent No.1	Bent No.4
A	732.19	731.75	732.09	731.70
B	732.84	732.40	732.68	732.34
C	734.85	734.41	734.69	734.36
D	735.15	734.71	734.99	734.66
E	735.25	734.81	735.09	734.76
F	735.34	734.90	735.18	734.84

NOTE: See Br. Std. C1 for Reinforcing Bar Notes.



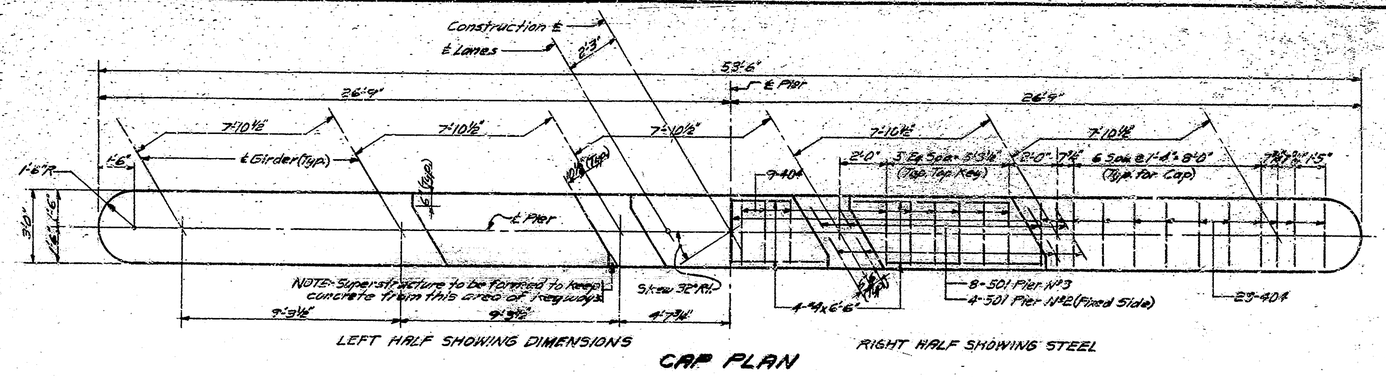
END BENT DETAILS
STATE HIGHWAY DEPARTMENT OF INDIANA

SCALE:- 3/4"=1'-0" UNLESS NOTED
OCTOBER 12, 1961
RECOMMENDED FOR APPROVAL:- C. R. Runnie, ENGINEER OF BRIDGE DESIGN
DRAWING:- C3 OF 7
PROJECT:- I-74-1 (36) 27
BRIDGE CONTRACT NO. R-6290
BRIDGE FILE:- I-74-30-49.42

DESIGNED M.L.S. CKD. M.L.S. 11-2-61
DRAWN M.L.S. CKD. M.L.S. 11-2-61
TRACED CKD.

FED. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-74-1 (36)27	1962	11	29

BRIDGES OVER 20' SPAN



LEFT HALF SHOWING DIMENSIONS

RIGHT HALF SHOWING STEEL

CAP PLAN

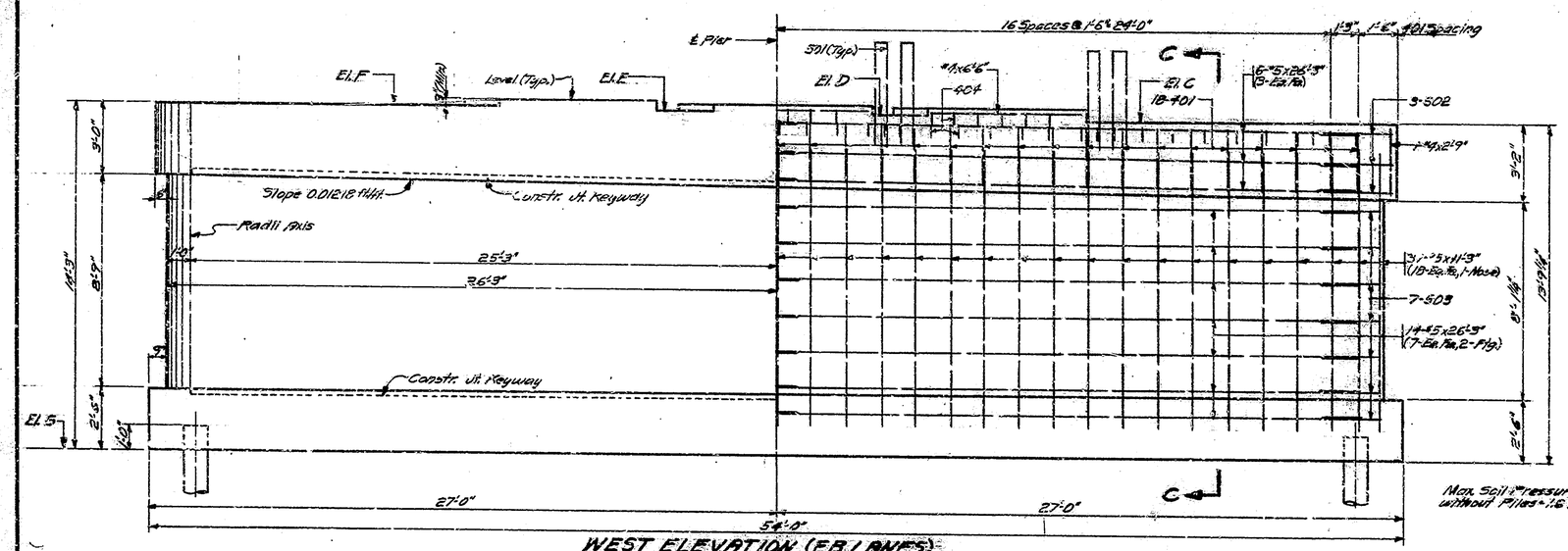
PIER ELEVATIONS

EL.	EAST BOUND Pier No. 2	EAST BOUND Pier No. 3	WEST BOUND Pier No. 2	WEST BOUND Pier No. 3
C	734.66	734.52	734.54	734.43
D	734.96	734.81	734.83	734.72
E	735.06	734.92	734.94	734.83
F	735.15	735.00	735.02	734.91
G	720.90	720.75	720.77	720.66

BILL OF MATERIALS FOR ONE PIER

REINFORCING STEEL			
SIZE AND MARK	NO. OF BARS	LENGTH	WEIGHT (LBS)
* 501	12	9'-8"	
502	6	7'-6"	
503	14	5'-9"	
#5	40	26'-9"	
#5	72	11'-5"	
	TOTAL	No. 5	2,192
401	35	9'-0"	
403	55	6'-0"	
404	63	3'-9"	
#4	12	27'-6"	
#4	6	6'-6"	
#4	2	2'-9"	
	TOTAL	No. 4	859
	TOTAL	STEEL	3,051
CONCRETE			
Class "A" Cap			171 Cu. Yds.
Class "A" Stem			325 Cu. Yds.
Class "A" Footing			275 Cu. Yds.
MISCELLANEOUS			
22- Untreated Timber Piles 20'-0" Long Approx.			440 Lin. Ft.

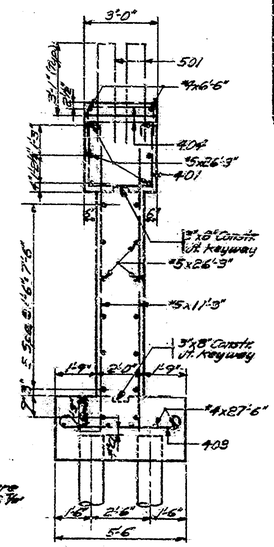
* 8-501 Bars Reqd. for Pier No. 2
16-501 Bars Reqd. for Pier No. 3



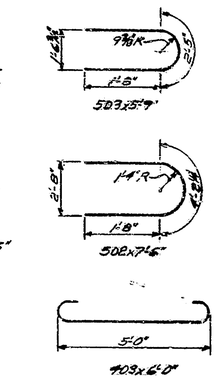
WEST ELEVATION (E.B. LANES)
EAST ELEVATION (W.B. LANES)

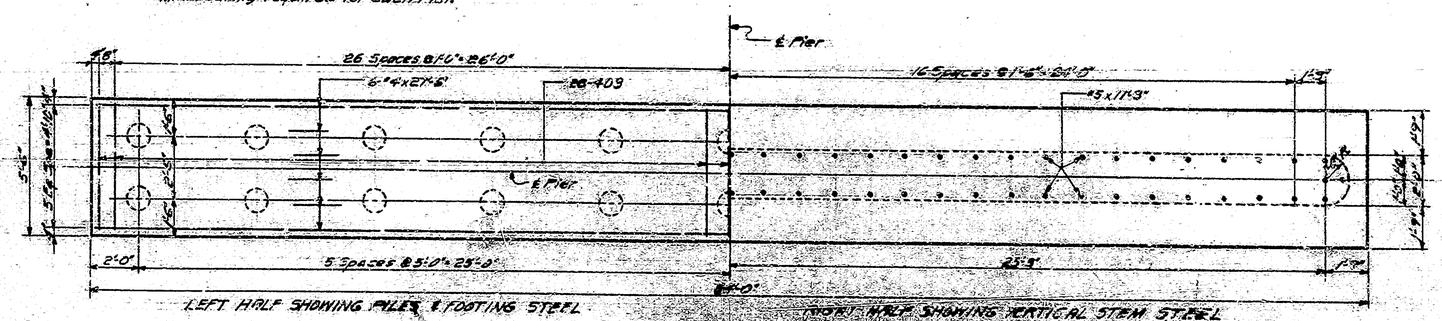
NOTE: 22- Untreated timber piles 20'-0" long driven to 25 Tons Min. Bearing required for each Pier.

NOTE: See Br. Std. C1 for Reinforcing Bar Notes.



SECTION C-C

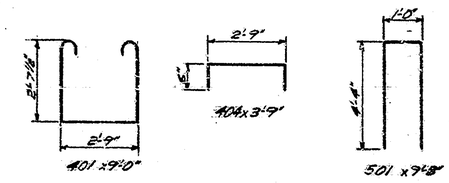




LEFT HALF SHOWING PILES & FOOTING STEEL

RIGHT HALF SHOWING VERTICAL STEM STEEL

FOOTING PLAN



PIER DETAILS

STATE HIGHWAY DEPARTMENT OF INDIANA

SCALE:- ⅜"=1'-0"

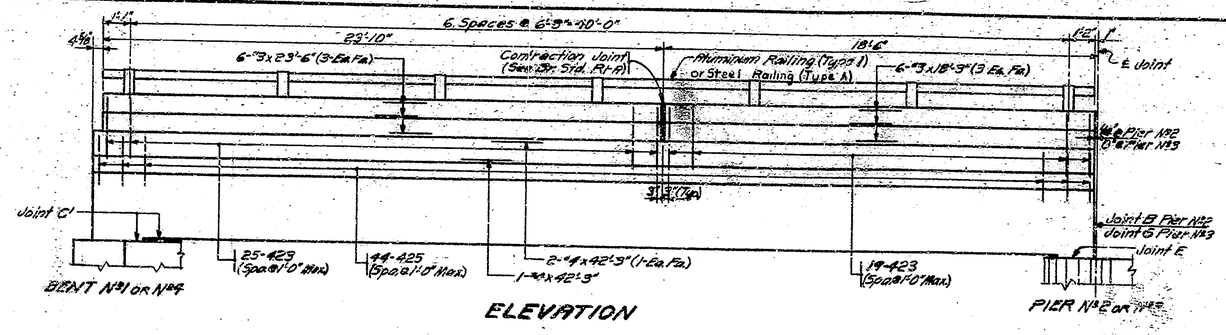
JANUARY 1, 1962

RECOMMENDED FOR APPROVAL: C. R. Runnion
ENGINEER OF BRIDGE DESIGN

DRAWING:- C4 OF 7
PROJECT:- I-74-1(36)27
BRIDGE CONTRACT NO. R-6290
BRIDGE FILE:- F74-50-1742

CHARLES R. RUNNION
REGISTERED
No. 2275
STATE OF
INDIANA
PROFESSIONAL ENGINEER

DESIGNED: [illegible] CHECKED: [illegible]
DRAWN: [illegible] CHECKED: [illegible]
TRACED: C. D.



ELEVATION

DESIGN DATA

Unit Stresses:- $f_s = 20{,}000$ lb. $f_c = 1{,}200$ lb.

Live Load:- H20-S16-44 with Impact with distribution of loads in accordance with 1957 AASHO Specifications. Checked for 2-24,000# Axles spaced 4'-0" apart.

Dead Load increased 35 lb. of roadway for future wearing surface.

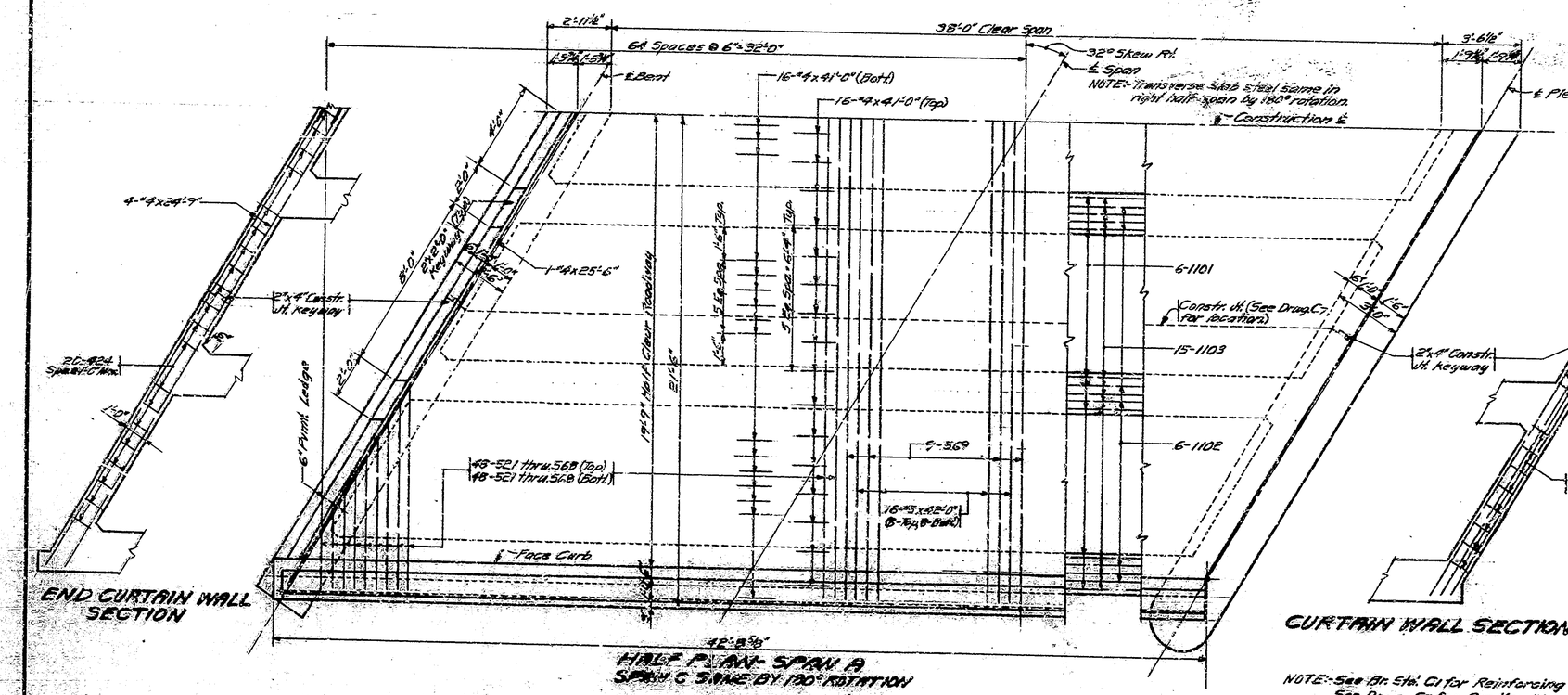
Slab designed with 1½" wearing surface.

Maximum dead load deflection = 3/4".

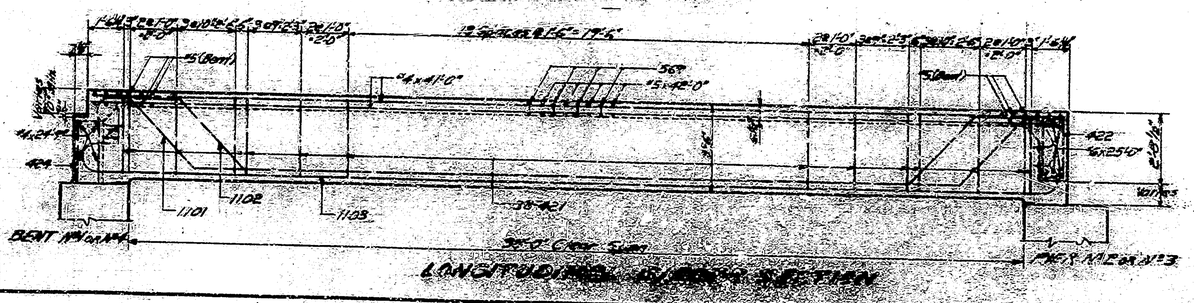
BRIDGES OVER 20' SPAN					
PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	F-74-1-(9)27	1962	38	49

BILL OF MATERIALS
SPAN 'A'
(SPAN 'C' SAME)

REINFORCING STEEL			
SIZE AND MARK	NO. OF BARS	LENGTH	WEIGHT (LBS.)
1101	12	46'-4"	
1102	12	46'-4"	
1103	30	46'-7"	
	TOTAL	No. 11	13,014
#6	12	25'-0"	451.
521 Thru. 568	4 Each	1,083'-2"	
569	17	44'-8"	
#5	32	42'-0"	
	TOTAL	No. 5	6,713
421	228	7'-0"	
422	40	6'-5"	
423	88	5'-3"	
424	40	5'-0"	
425	88	4'-0"	
#4	6	42'-9"	
#4	64	41'-0"	
#4	1	25'-6"	
#4	8	24'-8"	
	TOTAL	No. 4	4,291.
#3	12	23'-6"	
#3	12	18'-9"	
	TOTAL	No. 3	108
	TOTAL	STEEL	24,657
CONCRETE			
Class 'F'			
Outer 6'-3" Pour			16.4 Cu. Yds.
Center Pour			48.0 Cu. Yds.
Outer 12'-7" Pour			31.1 Cu. Yds.
Total Class 'F' (Except Railing Conc.)			755 Cu. Yds.
Railing Concrete (Class 'F')			44 Cu. Yds.
MISCELLANEOUS			
Railing (Type I or A)			847 Lin. Ft.



NOTE:- See Br. Std. C1 for Reinforcing Bar Notes.
See Dwg. C7 for Bending Diagrams.



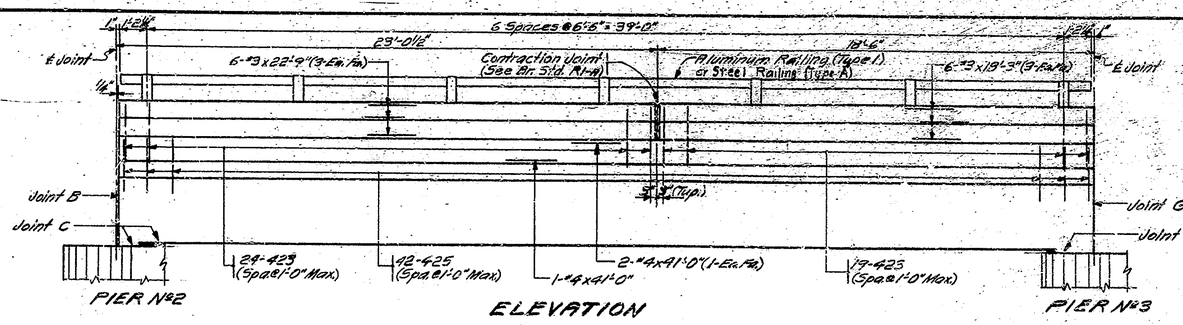
DESIGNED ____ CK'D ____
DRAWN ____ CK'D ____
TRACED ____ CK'D ____

SPANS A & C DETAILS
STATE HIGHWAY DEPARTMENT OF INDIANA

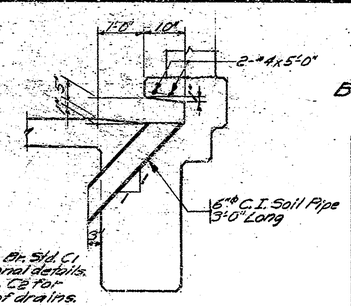
SCALE:- ½" = 1'-0"
DATE: ____ 1962
RECOMMENDED FOR APPROVAL:- ____
DRAWING:- C5 OF 7
PROJECT:- F-74-1(9)27
BRIDGE CONTRACT NO. R-6290
BRIDGE FILE:- F-74-50-[illegible]

Rev. 10-23-63 Railing

BRIDGES OVER 20' SPAN					
PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-74-1 (20)27	1962	13	29

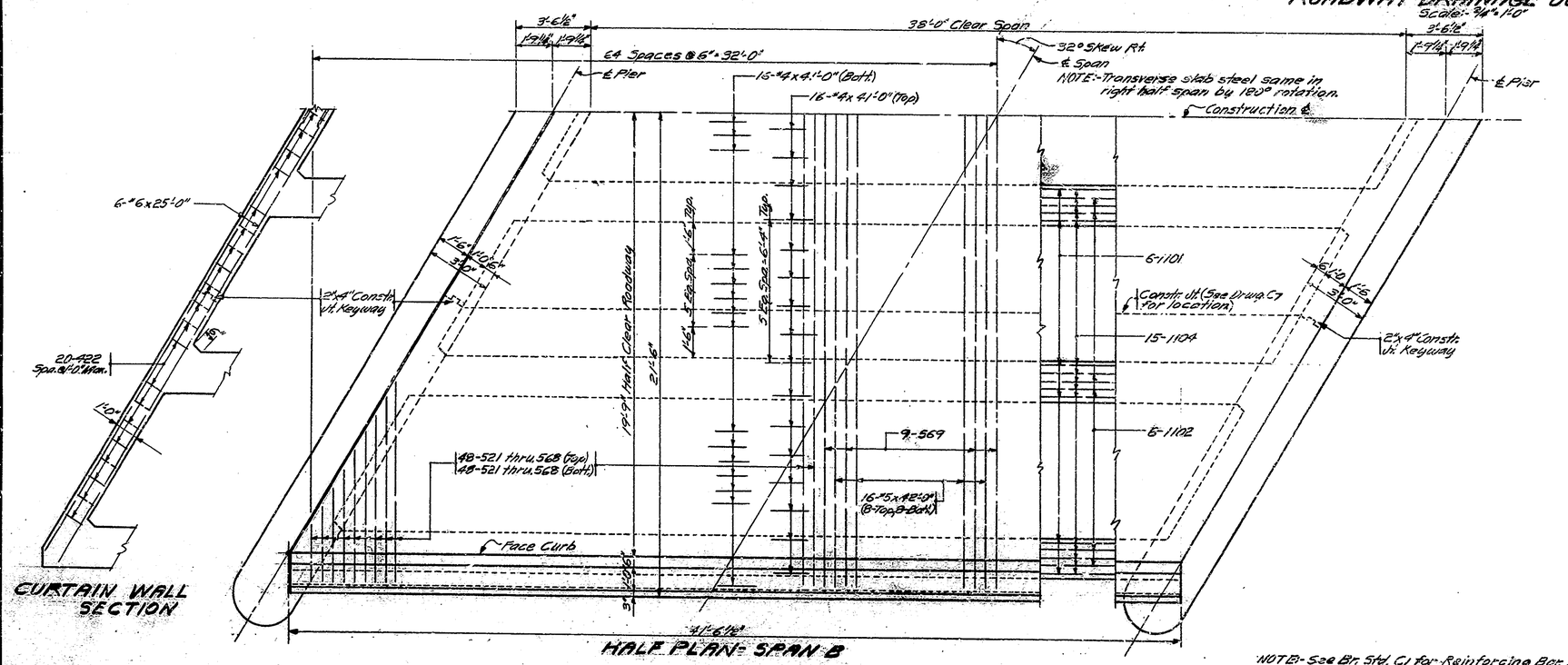


ELEVATION



NOTE: See Br. Std. C1 for additional details. See Drwg. C2 for location of drains.

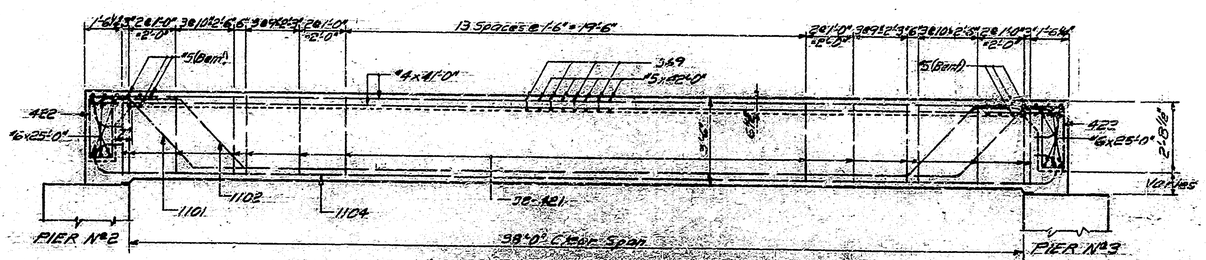
ROADWAY DRAINAGE OUTLET
Scale: 3/4" = 1'-0"



CURTAIN WALL SECTION

HALF PLAN- SPAN B

NOTE- See Br. Std. C1 for Reinforcing Bar Notes. See Drwg. C7 for Bending Diagrams.



LONGITUDINAL GIRDER SECTION

BILL OF MATERIALS

SPAN B

REINFORCING STEEL			
SIZE AND MARK	NO. OF BARS	LENGTH	WEIGHT (LBS.)
1101	12	46'-4"	
1102	12	46'-4"	
1104	30	44'-0"	
	TOTAL	No 11	12,921
#6	24	25'-0"	901
521 Thru. 568	4 Each	1,083'-2"	
569	17	44'-8"	
#5	32	42'-0"	
	TOTAL	No 5	6,713
421	228	9'-0"	
422	80	6'-5"	
423	86	5'-3"	
425	84	4'-0"	
#4	70	41'-0"	
#4	2	5'-0"	
	TOTAL	No 4	4,164
#3	12	22'-9"	
#3	12	18'-3"	
	TOTAL	No 3	185
TOTAL STEEL			24,884
CONCRETE			
Class "F"			
Outer 6'-3" Pour			161 Cu. Yd.
Center Pour			47.3 Cu. Yd.
Outer 12'-9" Pour			30.3 Cu. Yd.
Total Class "F" (Except Railing Conc.)			93.7 Cu. Yd.
Railing Concrete (Ea. 2½")			4.3 Cu. Yd.
MISCELLANEOUS			
Railing (Type 1)			83.1 Lin. Ft.
6" ϕ C.I. Soil Pipe 1'-3" Lgths.			54"

SPAN B DETAILS
INDIANA STATE HIGHWAY COMMISSION

SCALE: 3/4" = 1'-0" UNLESS NOTED — DATE: JULY 11, 1962

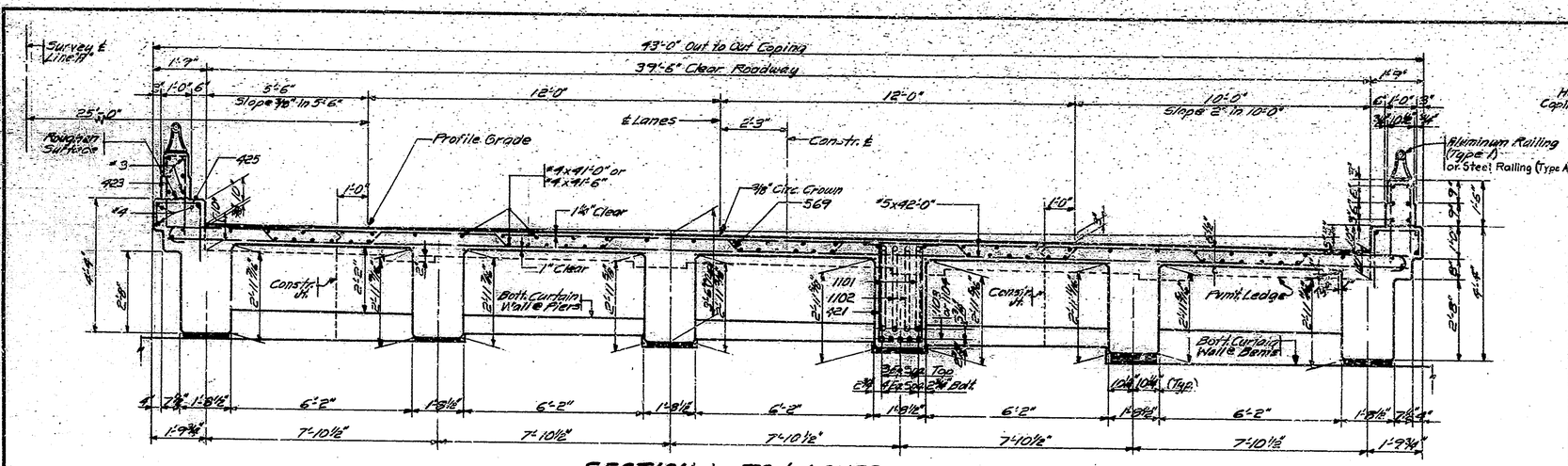
RECOMMENDED FOR APPROVAL: S. R. Runnels — ENGINEER OF BRIDGE DESIGN

DRAWING: C6 OF 7
PROJECT: I-74-1(20)27
BRIDGE CONTRACT NO. R6290
BRIDGE FILE: I-74-59-1962

DESIGNED: J.S.B. 12-6-61 CK'D: W.R.R. 2-22-61
DRAWN: W.R.R. 11-1-61 CK'D: H.L.S. 2-8-61
TRACED: CK'D:

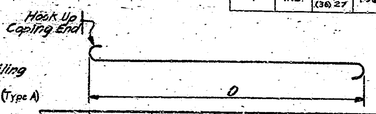
Rev. 10-25-63 Railing

BRIDGES OVER 20' SPAN					
PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	I-74-1 (36) 27	1962	14	29

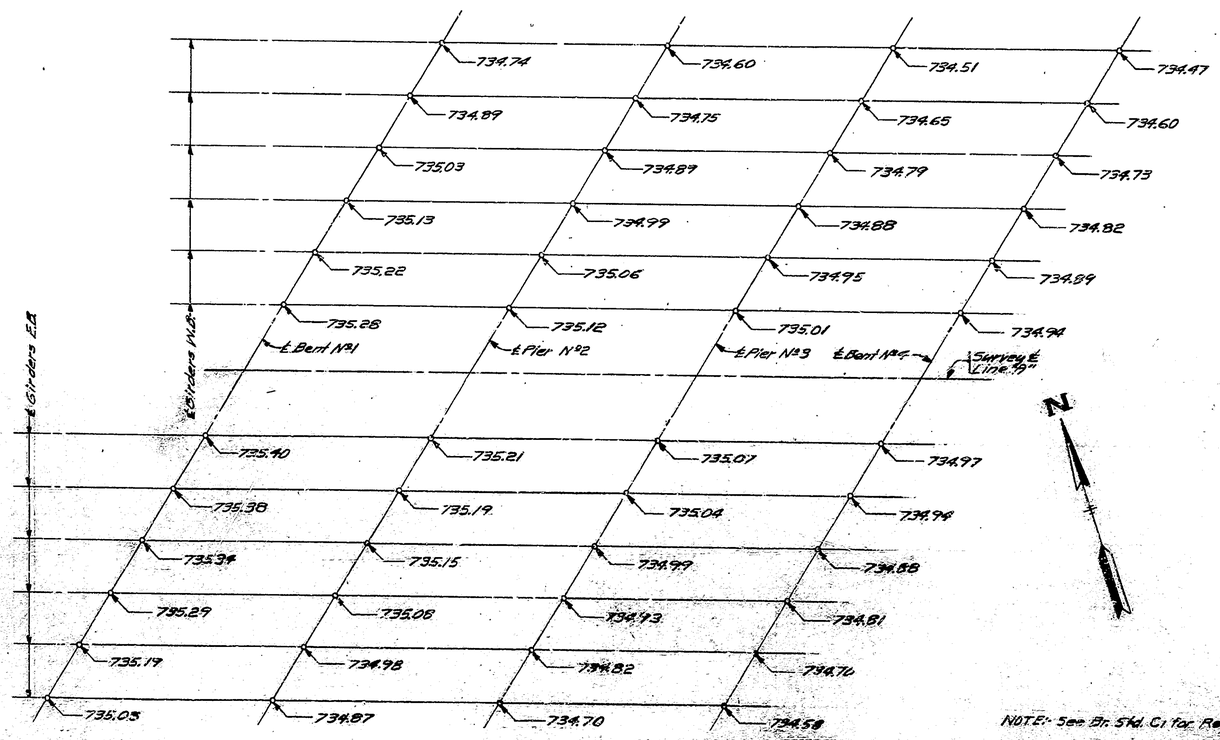


SECTION ⊥ TO ℄ LANES
Scale: 1/2" = 1'-0"

Hook Up Coping End

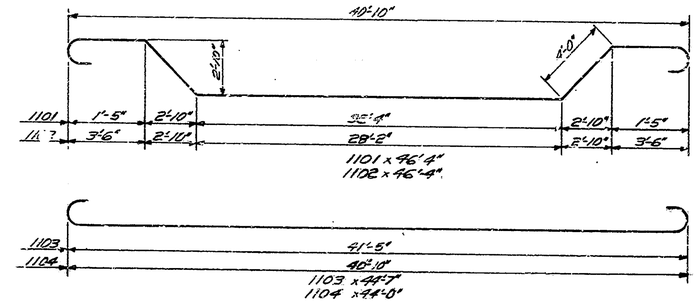


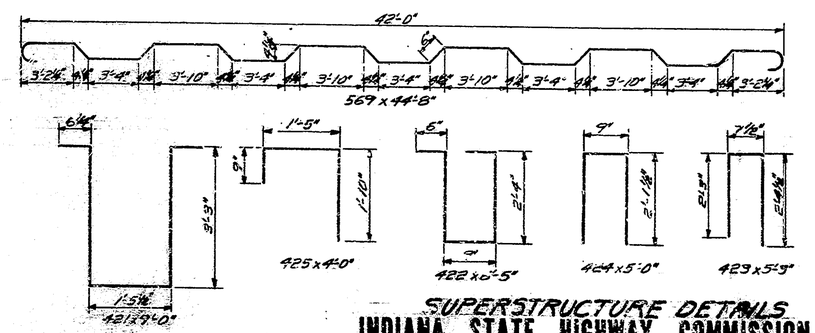
SIZE & MARK	O	LENGTH	SIZE & MARK	O	LENGTH
521	40'-2"	41'-4"	545	21'-0"	22'-3"
522	39'-5"	40'-7"	546	20'-3"	21'-4"
523	38'-7"	39'-9"	547	19'-5"	20'-7"
524	37'-10"	39'-0"	548	18'-7"	19'-9"
525	37'-0"	38'-2"	549	17'-10"	19'-0"
526	36'-2"	37'-4"	550	17'-0"	18'-2"
527	35'-5"	36'-7"	551	16'-2"	17'-4"
528	34'-7"	35'-9"	552	15'-5"	16'-7"
529	33'-10"	35'-0"	553	14'-7"	15'-9"
530	33'-0"	34'-2"	554	13'-10"	15'-0"
531	32'-2"	33'-4"	555	13'-0"	14'-2"
532	31'-5"	32'-7"	556	12'-2"	13'-4"
533	30'-7"	31'-9"	557	11'-5"	12'-7"
534	29'-10"	31'-0"	558	10'-7"	11'-9"
535	29'-0"	30'-2"	559	9'-10"	11'-0"
536	28'-2"	27'-4"	560	9'-0"	10'-2"
537	27'-5"	28'-7"	561	8'-2"	9'-4"
538	26'-7"	27'-9"	562	7'-5"	8'-7"
539	25'-10"	27'-0"	563	6'-7"	7'-9"
540	25'-0"	26'-2"	564	5'-10"	7'-0"
541	24'-2"	25'-4"	565	5'-0"	6'-2"
542	23'-5"	24'-7"	566	4'-2"	5'-4"
543	22'-7"	23'-9"	567	3'-5"	4'-7"
544	21'-10"	23'-0"	568	2'-7"	3'-9"
			TOTAL LENGTH		1083'-2"



GIRDER SOFFIT ELEVATIONS
NOT TO SCALE

NOTE:- See Br. Std. C1 for Reinforcing Bar Notes.





SUPERSTRUCTURE DETAILS
INDIANA STATE HIGHWAY COMMISSION

SCALE:- AS NOTED

[redacted] 11, 1962

RECOMMENDED FOR APPROVAL:- C. R. Runner
ENGINEER OF BRIDGE DESIGN

DRAWING:- C7 OF 7
PROJECT:- I-74-1(36)27
~~BRIDGE~~ CONTRACT NO. R-6290
BRIDGE FILE:- I-74-30-4002

CHARLES R. RUNNER REGISTERED 39 2273 STATE OF INDIANA PROFESSIONAL ENGINEER

DESIGNED L.E.S. 12-5-61 CK'D W.D.P. 12-22-61
DRAWN W.R.B. 11-28-61 CK'D H.L.S. 12-7-61
TRACED _____ CK'D _____

Rev. 10-23-63 Railing

PUB. ROAD REG. No.	STATE	PROJECT No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
4	IND.	I-74-1 (36)27	1962	15	25

BRIDGES OVER 20' SPAN

STRUCTURE QUANTITIES

ITEM	Concrete Class F Cu. Yds.	Concrete Class D Cu. Yds.	Class E Above Ftg. Cu. Yds.	Class E Ftg. Cu. Yds.	Railing Concrete Class F Cu. Yds.	Railing Concrete Class F Lin. Ft.	Reinforcing Steel (1934 Std. Wts.) #11 (1 1/4") Lbs.	#10 (1 1/8") Lbs.	#9 (1") Lbs.	#6 (3/4") Lbs.	#7 (7/8") Lbs.	#6 (3/4") Lbs.	#5 (5/8") Lbs.	#4 (1/2") Lbs.	#3 (3/8") Lbs.	#2 (1/4") Lbs.	Totals Lbs.	Structural Steel Lbs.	Cast Iron Lbs.	14" Steel Encased Concrete Piles No.	Lin. Ft.	Untreated Timber Piles No.	Lin. Ft.	Railing Type Tor A Lin. Ft.
E BOUND LANE																								
BENT No 1	13.0																							
SPAN "A"	95.5										1560			641			2201							
PIER No 2	19.1		32.5	27.5	4.4		13,014					451	6713	4291	188		24,657			7	175			
SPAN "B"	93.7												2192	839			3031							84.7
PIER No 3	19.1		32.5	27.5	4.3		12,921					901	6713	4164	185		24,884		54			22	440	
SPAN "C"	95.5												2192	839			3031							83.1
BENT No 4	13.0				4.4		13,014					451	6713	4291	188		24,657					22	440	
W. BOUND LANE											1560			641			2201							84.7
BENT No 1	13.0																			7	175			
SPAN "A"	95.5				4.4		13,014				1560			641			2201							
PIER No 2	19.1		32.5	27.5								451	6713	4291	188		24,657			7	175			
SPAN "B"	93.7				4.3		12,921						2192	839			3031							84.7
PIER No 3	19.1		32.5	27.5								901	6713	4164	185		24,884		54			22	440	
SPAN "C"	95.5												2192	839			3031							83.1
BENT No 4	13.0				4.4		13,014					451	6713	4291	188		24,657					22	440	
SPLICE BARS							254				1560			651			2201							84.7
											16	34	35	16	6		341			7	175			
Reinf. Steel from "Approach Struct." column																								
Reinf. Steel for R.C. Bridge Approach																								
Reinf. Steel for Lip Gutter, Pmt. Tsers, etc.																								
TOTALS	697.8		130.0	110.0	26.2		78,792				6256	3660	19,081	31,428	1128		162,665		108	28	700	88	1760	505.0

BILL OF SPLICE BARS

REINFORCING STEEL

Size	Number Pieces	Length	Weight Lbs.
#11	4	11'0"	234
#7	1	8'0"	16
#6	5	7'6"	32
#5	5	6'9"	35
#4	4	6'0"	16
#3	2	5'6"	6
	TOTAL		341

Note:- For Test Bar Samples see Br Std. "C."

BILL OF MATERIALS FOR R.C. BRIDGE APPROACH

REINFORCING STEEL

Size Mark	No Pcs.	Length	No Pcs.	Length	No Pcs.	Length	Weight

BARRICADES, BARRIERS, TRAFFIC SIGNS, & LIGHTS

ITEM	UNIT	QUANTITY	ASSEMBLY		
WARNING SIGNS	Each		Signs		
			"		
			"		
			"		
			Torches		
STD. BARRICADES (TYPE A)	Each		Barricades (Type A)		
			Signs		
			"		
			"		
			Lanterns		
STD. 3'-0" x 4'-0" SIGNS	Each		Signs		
BRIDGE (SUITABLE) BARRIERS	Each	2	Suitable Barriers	2	
			Lanterns or Torches	2	
STD. BARRICADES (TYPE B)	Each		Barricades (Type B)		
			Signs		
			Lanterns or Torches		
TYPICAL SIGN STANDARDS	Each		Signs		
			"		
			"		
			Lanterns		

APPROACH STRUCTURES

STRUCT. No	LOCATION	DESCRIPTION SIZE	KIND	LENGTH	Cl. D Conc. in Structs. Cu. Yds.	Reinf. Steel Lbs.	Cast Iron Lbs.	REMARKS
113	℄ Sta. 1219+62	10"	Pipe - Group "A" Std. F-7 Inlet	2'				Stub into Str. No 113
113A	R Sta. 1219+62	12"	Pipe - Group "A"	60'				Connect to Str. No 113
112	59' R Sta. 1219+36	10"	B.C.C.M. Pipe	32'	0.6			Temp. Connection to Str. No 113A - Includes 2-22½° Bends
116	℄ Sta. 1222+00	10"	Pipe - Group "A" Std. F-7 Inlet	2'				Stub into Str. No 116
116A	R Sta. 1222+00	12"	Pipe - Group "A"	56'				Connect to Str. No 116
115	59' R Sta. 1222+00	10"	B.C.C.M. Pipe	32'	0.6			Temp. Connection to Str. No 116A - Includes 2-22½° Bends
114A	R Sta. 1219+69	6"	Perf. C.M. Pipe	60'				To drain end Bents
114B	L Sta. 1220+23	6"	Perf. C.M. Pipe	60'				To drain end Bents
114C	R Sta. 1220+98	6"	Perf. C.M. Pipe	60'				To drain end Bents
114D	L Sta. 1221+52	6"	Perf. C.M. Pipe	60'				To drain end Bents
				TOTALS	1.2			Tots of Reinf. Steel carried to "Structure Quantities"

SUMMARIZED BY [illegible] CKD [illegible]
TRACED BY [illegible] CKD [illegible]

SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
1	Class F Concrete	Cu. Yds.	697.8
2	Class D Concrete	Cu. Yds.	
3	Class E Concrete above Footings	Cu. Yds.	130.0
4	Class E Concrete in Footings	Cu. Yds.	110.0
5	Railing Concrete	Lin. Ft.	
6	Reinforcing Steel	Lbs.	169665
7	Structural Steel	Lbs.	
8	Cast Iron	Lbs.	108
9	Untreated Timber Piles Furnished	Lin. Ft.	1760
10	Untreated Timber Piles Driven	Lin. Ft.	1408
11	Furnishing Equipment for Driving Piles	Lump Sum	1
12	Wet Excavation	Cu. Yds.	313
13	Waterway Excavation	Cu. Yds.	7450
14	Common Excavation	Cu. Yds.	22,270
15	Special Borrow	Cu. Yds.	
16	Grade B Special Borrow	Cu. Yds.	2080
17	Sodding	Sq. Yds.	700
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.	1.2
28	R/W Markers	Each	
29	Steel Pile Shells Furnished 14"	Lin. Ft.	700
30	Steel Pile Shells Driven 14"	Lin. Ft.	700
31	Railing (Type Tor A)	Lin. Ft.	505.0
32	Railing Concrete	Cu. Yds.	26.2
33	Slopewall	Sq. Yds.	1550
34	Paved Side Ditch - Type "A"	Lin. Ft.	27
‡ 35	Paved Side Ditch - Type "B"	Lin. Ft.	270
36	Paved Side Ditch - Type "D"	Lin. Ft.	585
37	12" Pipe - Group "A"	Lin. Ft.	120
38	12" B.C.C.M. Pipe	Lin. Ft.	64
39	Std. F-7 Inlet	Each	2
40	6" Perf. C.M. Pipe	Lin. Ft.	240
41	Furnishing & Placing Agricultural Limestone	Tons	2.31
42	Furnishing & Placing Fertilizer	Tons	.35
43	Furnishing & Placing Seed	Lbs.	81
44	Furnishing & Applying Mulching Material	Tons	2.75
45			
46			
47			
48			
49			
50			
51			
52			
53			
54			
55			
56			
57			
58			
59			
60			

‡ Includes 210 Lin. Ft. on R/W Sta. 1215+75 to 1217+75

Drawing not Legible

SUMMARY

STATE HIGHWAY DEPARTMENT OF INDIANA

JANUARY 11, 1962

RECOMMENDED FOR APPROVAL: C. R. Dunmire
ENGINEER OF BRIDGE DESIGN

PROJECT:- I-74-1(36)27

~~BRIDGE~~ CONTRACT No R-6290

BRIDGE FILE:- I-74-30-4842

CHARLES R. DUNMIRE REGISTERED No 2275 STATE OF INDIANA PROFESSIONAL ENGINEER

Rev. 10-25-63 Railing & 6" Pipe.
& Items 18, 41, 42, 43 & 44

STR

I-74 3-4842