

BRIDGE CONTRACT NO. 4541

INDEX						
PROJECT	STRUCTURE	TYPE	SPAN	OVER	STATION	CONTRACT NO.
S-706(4)	19-M-4212	R.C.GIRDER	3@32', SK.30'L.	MUD CREEK	1394+00	4541
SHEET NO.	SHEET DESIGNATION	SUBJECT				
1		INDEX & TITLE SHEET				
2	ONE SHEET	TYPICAL CROSS SECTIONS				
3	ONE SHEET	ROAD PLAN & PROFILE				
4	C1 (STRUCTURE 19-M-4212)	LAYOUT				
5	C2	GENERAL PLAN				
6	C3	BENTS N#1 & N#4 DETAILS				
7	C4	PIERS N#2 & N#3 DETAILS				
8	C5	SUPERSTRUCTURE DETAILS- SPANS 'A' & 'C'				
9	C6	SUPERSTRUCTURE DETAILS- SPAN 'B'				
10	ONE SHEET	SUMMARY				
11-15	FIVE SHEETS	CROSS SECTIONS				
16	BRIDGE STD. C1	STANDARD MISCELLANEOUS DETAILS (REV. 6-3-57)				
17	ROAD STD. SHEET MP	MISCELLANEOUS STANDARDS (REV. 8-28-57)				
18	BRIDGE STD. M1	MISCELLANEOUS APPROACH DETAILS (REV. 6-3-57)				
19	BRIDGE STD. M2	MISCELLANEOUS APPROACH DETAILS (REV. 6-3-57)				
20	BRIDGE STD. M3	MISCELLANEOUS APPROACH DETAILS (SEPT. 25, 1957)				
21	BRIDGE STD. S2	TYP. DETAILS FOR PLACING SPECIAL FILLING MATERIAL (REV. 9-20-52)				
22	SHEET 1 DETOURS	STANDARD DETOUR SIGNS (REV. 2-11-54)				
23	SHEET 2 DETOURS	STANDARD DETOUR SIGNS (REV. 5-1-51)				

STATE OF INDIANA
STATE HIGHWAY DEPARTMENT

BRIDGE PLANS
FOR SPANS OVER 20 FEET
ON
STATE ROAD NO. 19 SECTION M
F.A.S. PROJECT NO. S-706(4)

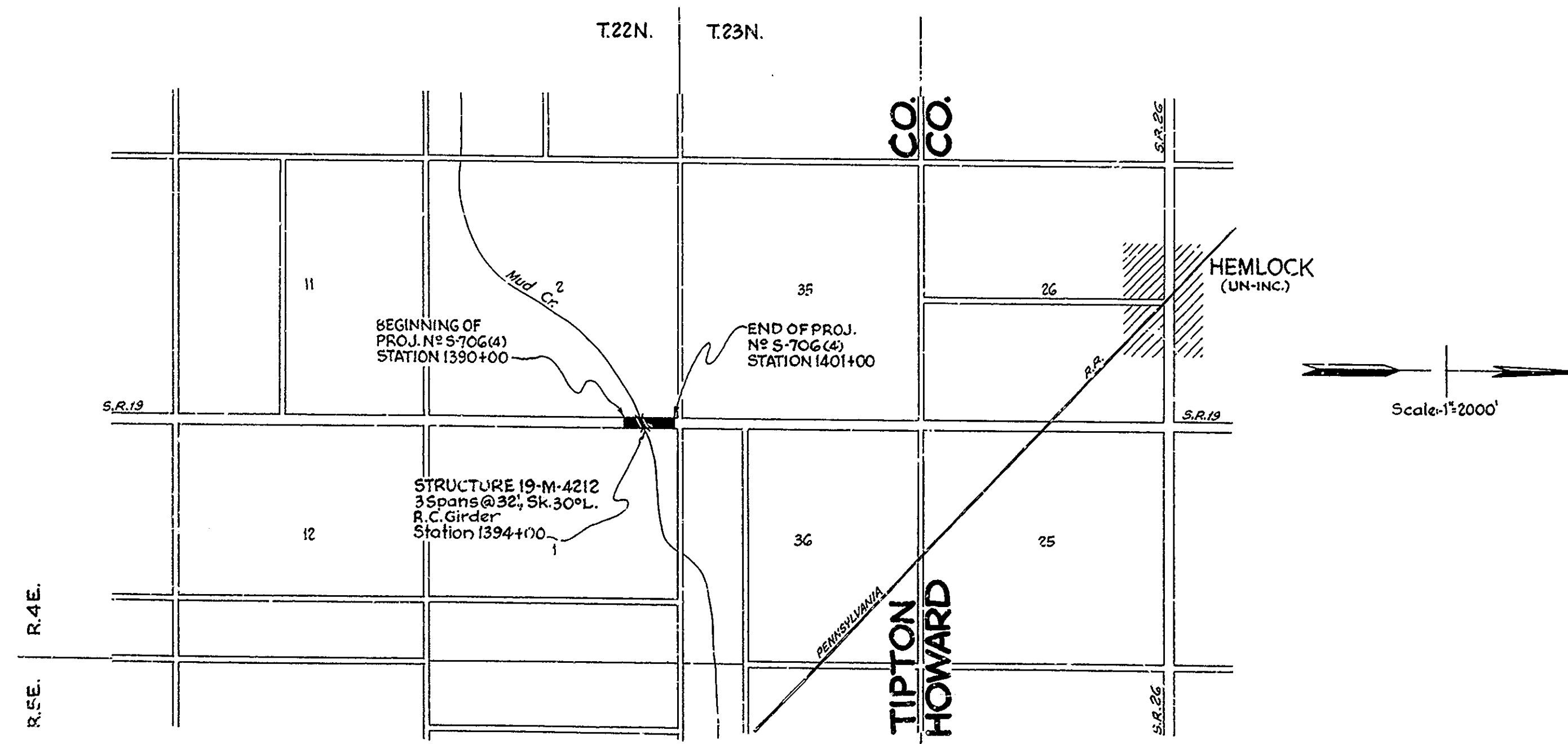
TIPTON-U.S. 35 ROAD
BEGINNING AT A POINT ON S.R. 19 APPROX. 1145.6' SOUTH OF THE CORNER COMMON TO SECTIONS 1, 2, 35 & 36 AND EXTENDING NORTH A DISTANCE OF APPROX. 1100' TO A POINT ON S.R. 19 APPROX. 45.6' SOUTH OF THE CORNER COMMON TO SECTIONS 1, 2, 35 & 36, ALL ON THE APPROX. SECTION LINE (S.R. 19) BETWEEN SECTIONS 1 & 2-T22N-R4E, TIPTON COUNTY.

ROADWAY LENGTH = 0.189 MI.
BRIDGE LENGTH = 0.019 MI.
TOTAL LENGTH = 0.208 MI.

MAX. GRADE = -0.66%

BRIDGES OVER 20' SPAN					
PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	S-706(4)	1958	1	23

TRAFFIC DATA
A.D.T. (1958).....500 V.P.D.
A.D.T. (1978 PROJECTED).....850 V.P.D.
TRUCKS.....19%
DESIGN SPEED.....70 M.P.H.
ACCESS CONTROL.....NONE



APPROVED AND ADOPTED BY STATE HIGHWAY DEPARTMENT OF INDIANA DATE 11-18-57

Joseph L. Lister
CHIEF ENGINEER, STATE HIGHWAY DEPARTMENT OF INDIANA

APPROVED DATE 11-13-57

Carl E. Vondras
CHIEF ENGINEER, STATE HIGHWAY DEPARTMENT OF INDIANA

STATE HIGHWAY DEPARTMENT OF INDIANA
1957 STANDARD ROAD AND BRIDGE SPECIFICATIONS
TO BE USED WITH THESE PLANS

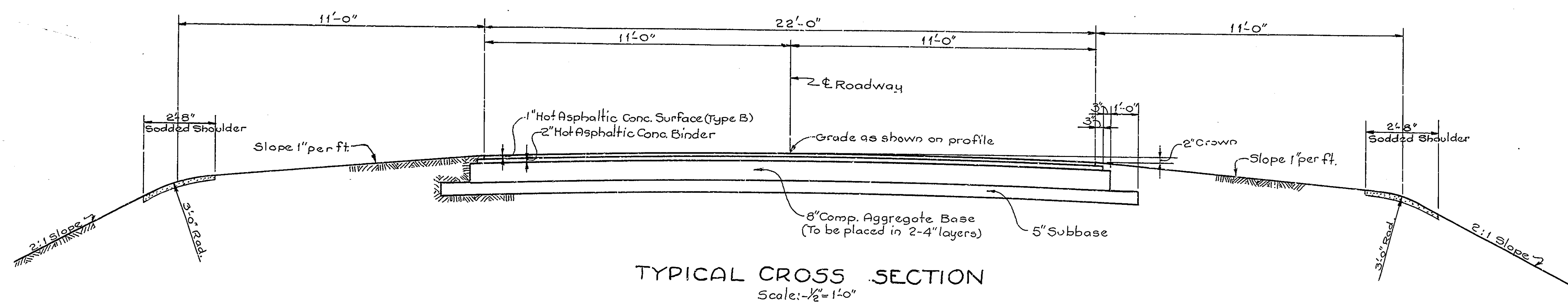
RECOMMENDED FOR APPROVAL DATE 11-13-57

C.R. Rumer
ENGINEER OF BRIDGE DESIGN, STATE HIGHWAY DEPARTMENT OF INDIANA

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

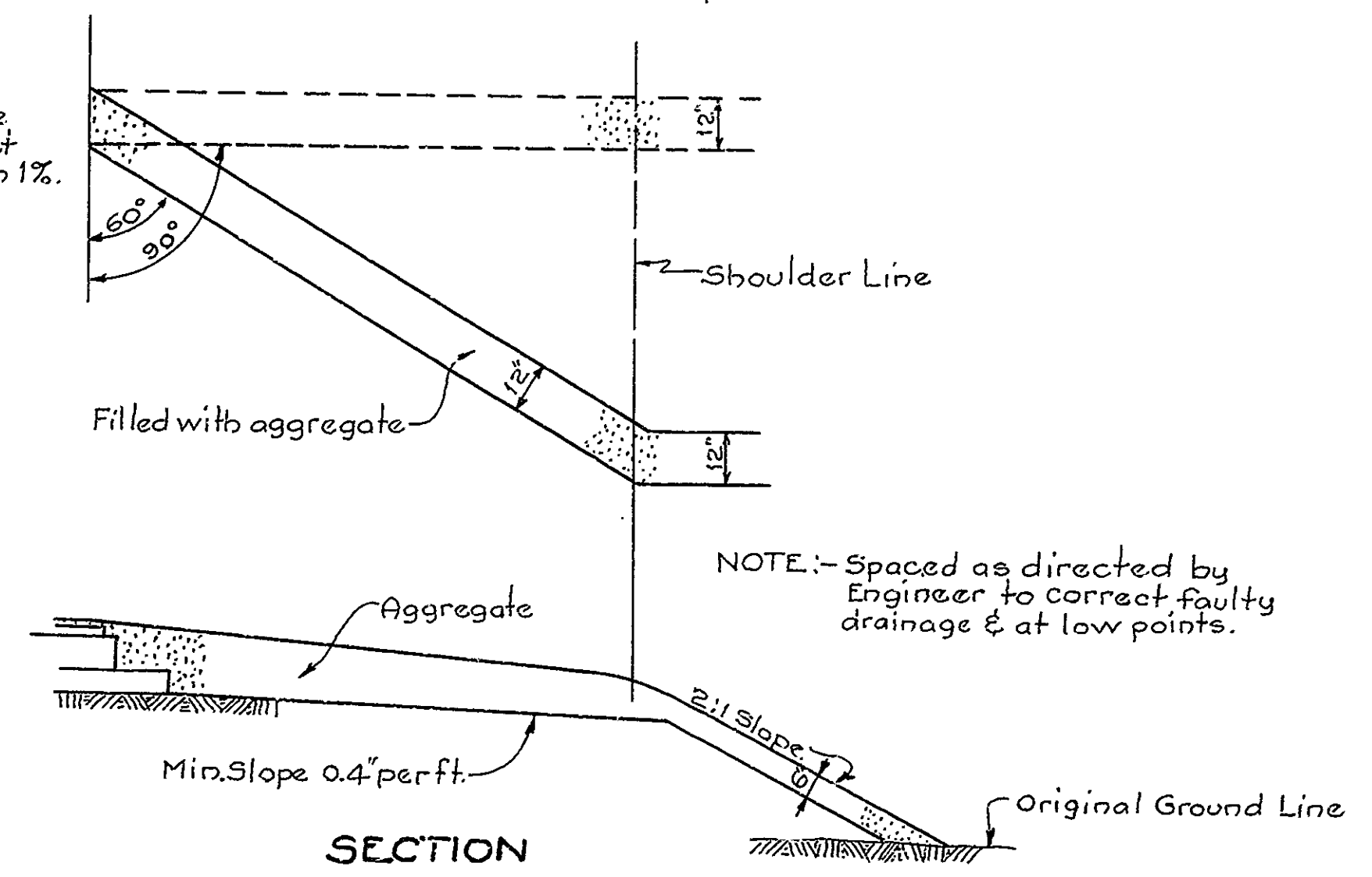
BRIDGE FILE: 19-M-4212

BRIDGES OVER 20' SPAN					
PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	S-706(4)	1958	2	23



TYPICAL CROSS SECTION
Scale: $\frac{1}{2}'' = 1'-0''$

NOTE:- Construct drains at 60° angle when grade is 1% or greater. Construct drains at 90° when grade is less than 1%.



NOTE:- Spaced as directed by Engineer to correct faulty drainage & at low points.

SECTION SHOULDER DRAINS
Scale: $\frac{3}{8}'' = 1'-0''$

TYPICAL CROSS SECTION
STATE HIGHWAY DEPARTMENT OF INDIANA

SCALE: AS NOTED
OCTOBER 24, 1957.

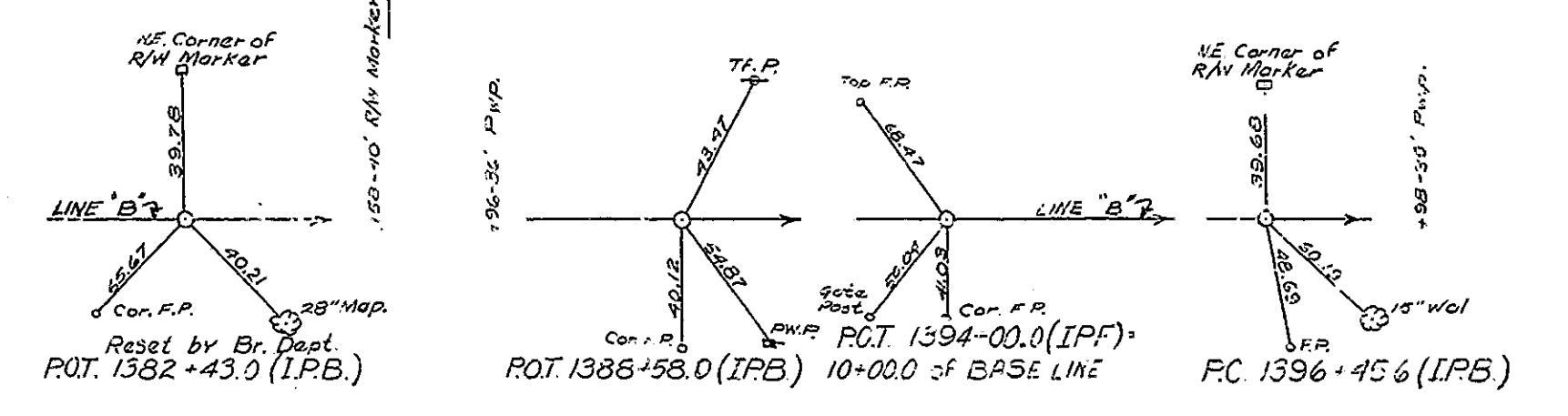
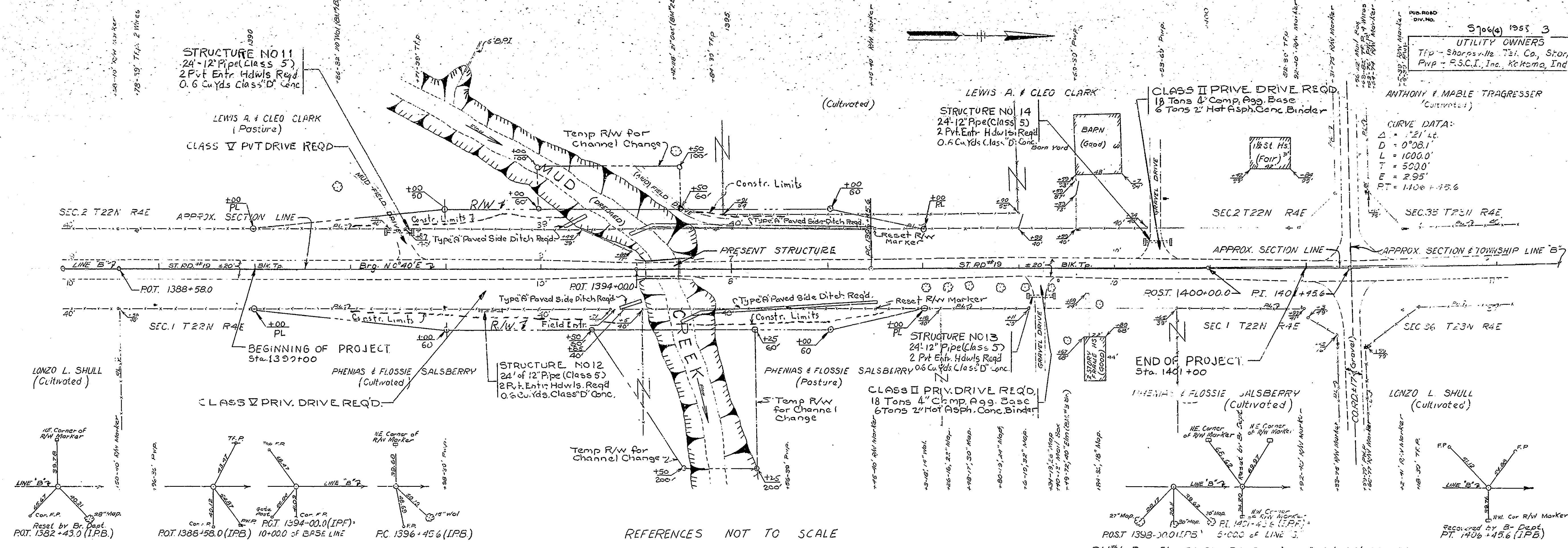
RECOMMENDED FOR APPROVAL: *C. R. Rummel*
ENGINEER OF BRIDGE DESIGN

DRAWING: OF
PROJECT: S-706(4) STATION:
BRIDGE CONTRACT NO. 4541
BRIDGE FILE: 19-M-4212

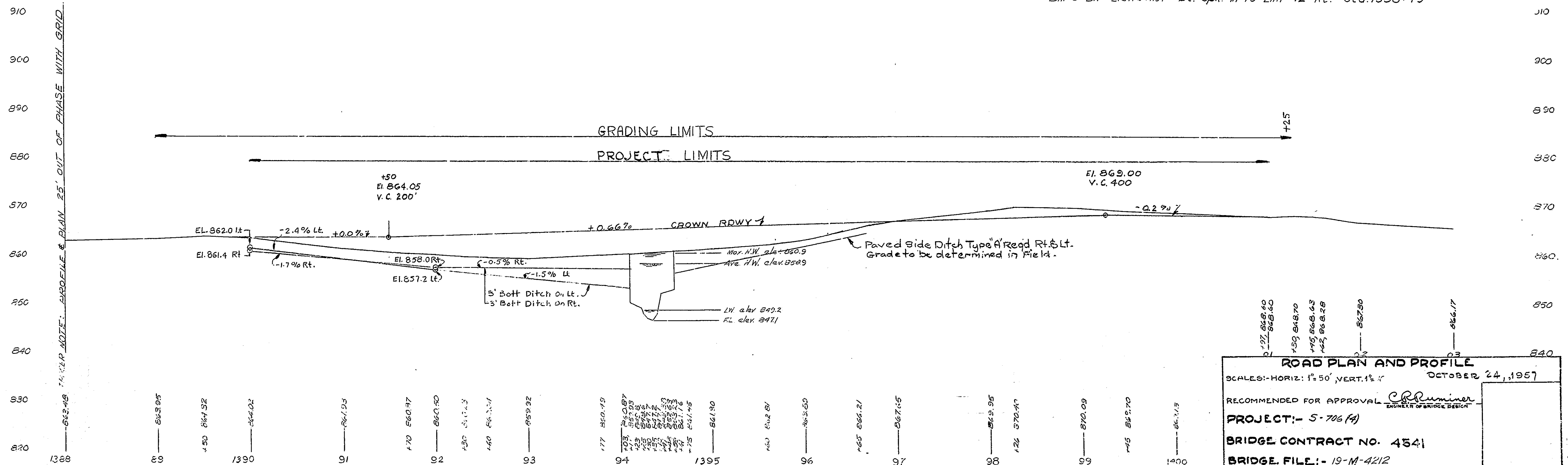
DESIGNED: C.K.D.
DRAWN: M.J.L. 7/21/56, C.W.D. 7/29/56
TRACED: W.E.B. 9-22-57, H.R.R. 10-18-57

STATE HIGHWAY
DEPARTMENT OF INDIANA

5706(a) 1955 3 23
UTILITY OWNERS
T.P. - Sharpsville Twp. Co., Sharpsville, Ind.
P.V.P. - F.S.C.I., Inc., Kokomo, Ind.



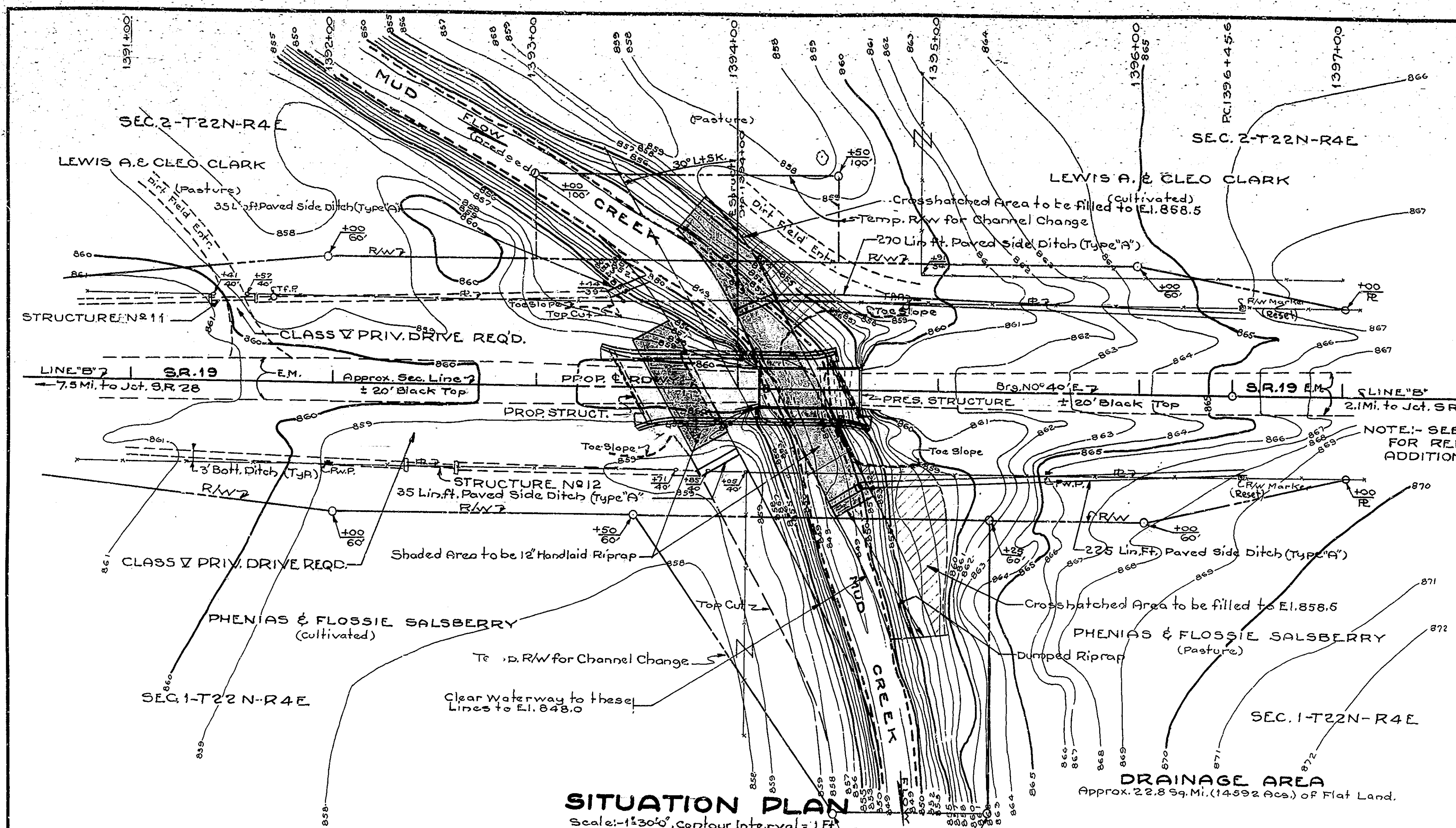
BM #1 Br. - Elev. 861.56 - Bt. Spk. in 20' Wal. 82' Lt. Sta. 1390+86
BM #2 Br. - Elev. 863.39 - Bt. Spk. in 21' Oak 15' Lt. Sta. 1394+42
BM #3 Br. - Elev. 871.27 - Bt. Spk. in 40' Elm 72' Rt. Sta. 1398+49



ROAD PLAN AND PROFILE
 SCALES - HORIZ: 1" = 50', VERT: 1" = 10'
 OCTOBER 24, 1957
 RECOMMENDED FOR APPROVAL *C. R. Rimmer*
 ENGINEER OF SURVEY DESIGN
 PROJECT: - S-706 (A)
 BRIDGE CONTRACT NO. 4541
 BRIDGE FILE: - 19-M-4212

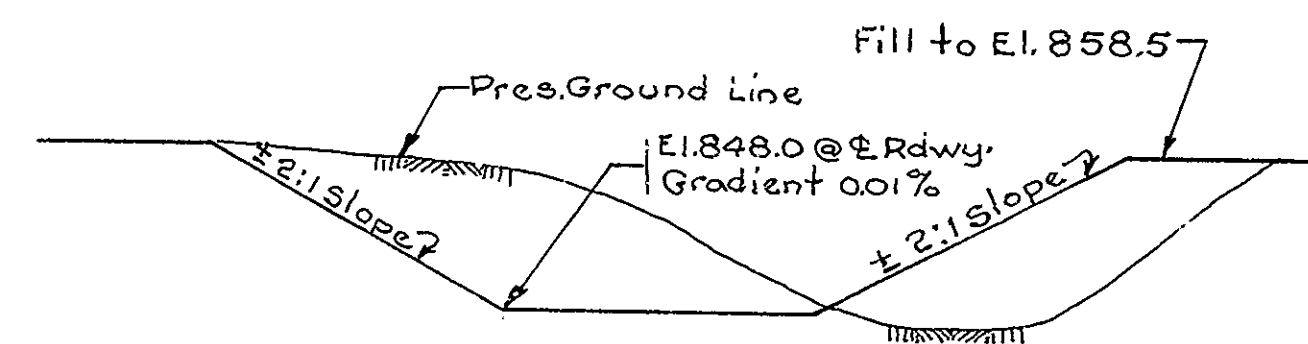
BRIDGES OVER 20' SPAN					
PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	5-706(4)	1958	4	23

UTILITY OWNERS
 Pw. Poles:- PUB. SERV. CO. OF IND.
 Kokomo, Indiana
 T.F. Poles:- SHARPSVILLE TEL. CO.
 Sharpsville, Indiana

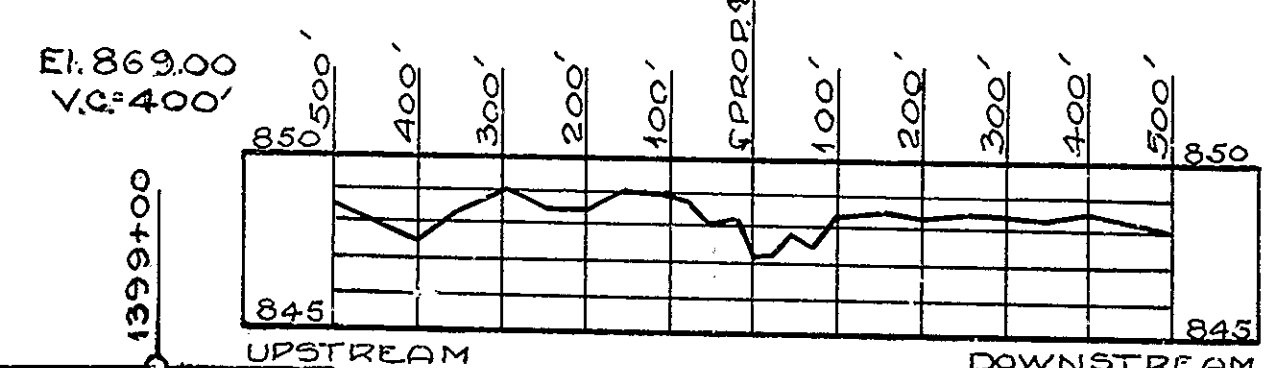
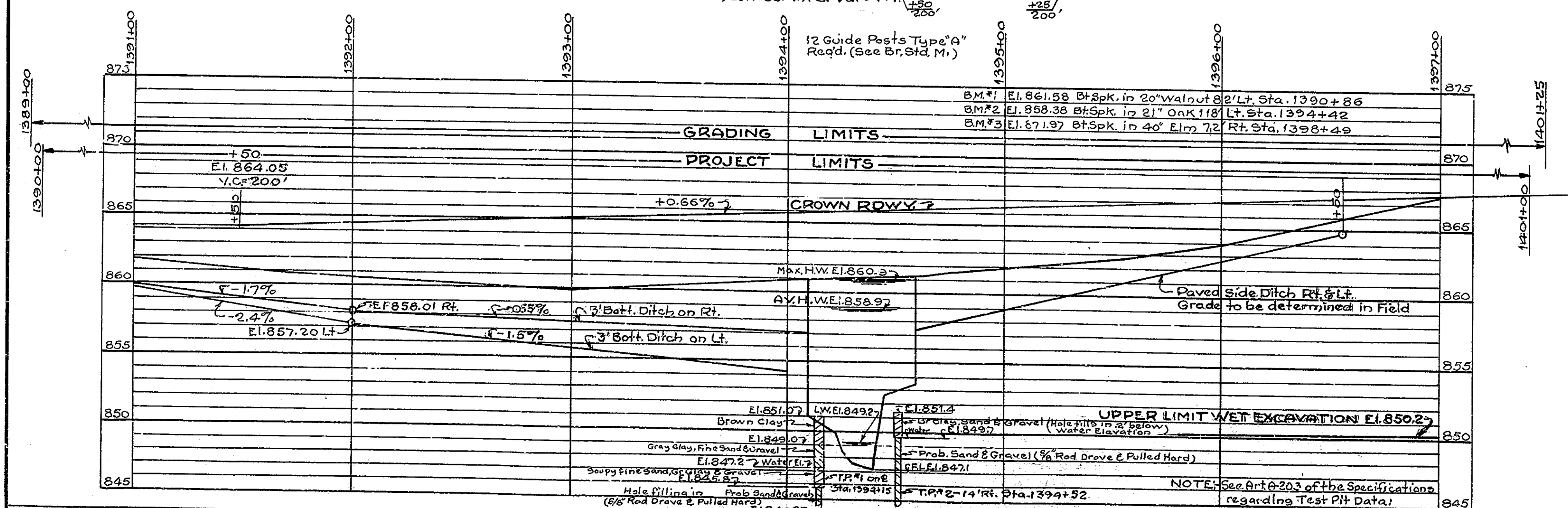


NOTE:- SEE ROAD PLANS FOR REFERENCES AND ADDITIONAL DETAILS

PRESENT STRUCTURE
 Built by Canton Bridge Co., Canton, Ohio
 STEEL TRUSS - 1 @ 35'-3" Square. See Rating Card File No. 2.
 Steel Beam - 1 @ 15'-6"
 FLOOR BEAMS 2-7" Ix 9.8" x 36.0
 2-12" Ix 35" x 16.0
 STRUCTURAL STEEL WGT. 7-7" Ix 15.3" x 36.0" TONS (Approx.)



SECTION 1 TO CHANNEL PROPOSED CHANNEL CHANGE



PROFILE OF STREAM
 Scale:- Horiz. 1"=200', Vert. 1"=5'

FILL + 20%	4225 CU. YDS.
COMMON EXCAVATION	2180 CU. YDS.
SURPLUS EXCAVATION	1495 CU. YDS.
SPECIAL BORROW	550 CU. YDS.

LAYOUT REINFORCED CONCRETE GIRDER BRIDGE
 3 SPANS @ 32'-0" SKW 30° LT. 28'-0" ROADWAY
 OVER MUD CREEK ON STATE ROAD 19-M
 STATE HIGHWAY DEPARTMENT OF INDIANA
 TIPTON COUNTY

SCALE:- As NOTED OCTOBER 24, 1957.

RECOMMENDED FOR APPROVAL: *C. R. ...*

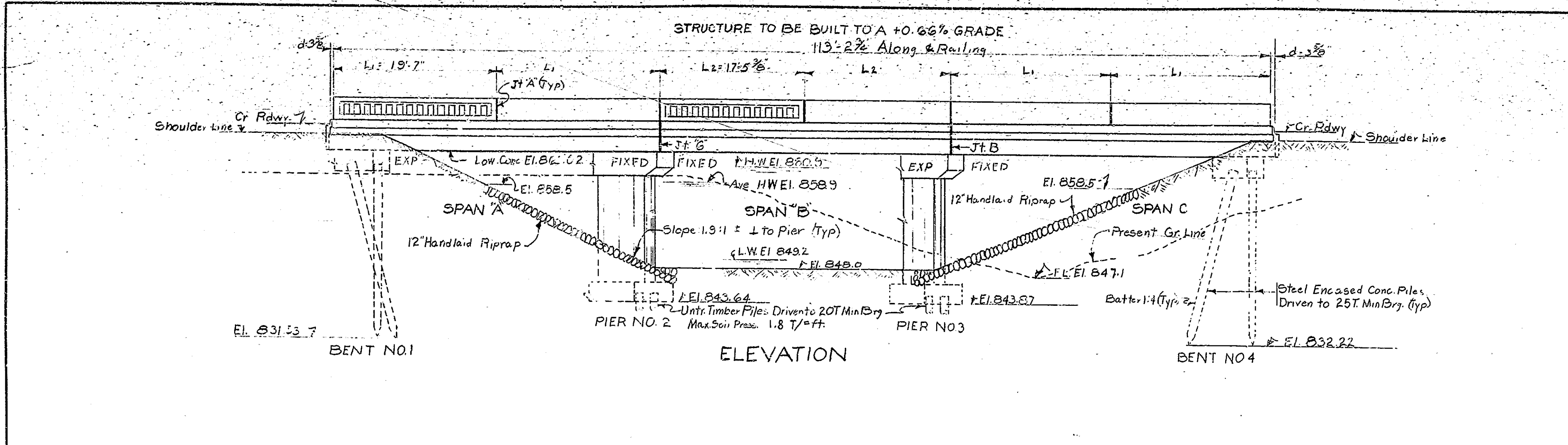
DRAWING: C-1 OF 6
 PROJECT: 5-706(4) STATION: 1394+00
 BRIDGE CONTRACT NO. 4541
 BRIDGE FILE: 19-M-4212

DESIGNED: CKD
 DRAWN: M.D. 6-14-57, CKD
 TRACED: W.F.B. 8-27-52, WDK 8-28-57

PROFILE ON PROPOSED ROADWAY
 Scale:- Horiz. 1"=30', Vert. 1"=5'

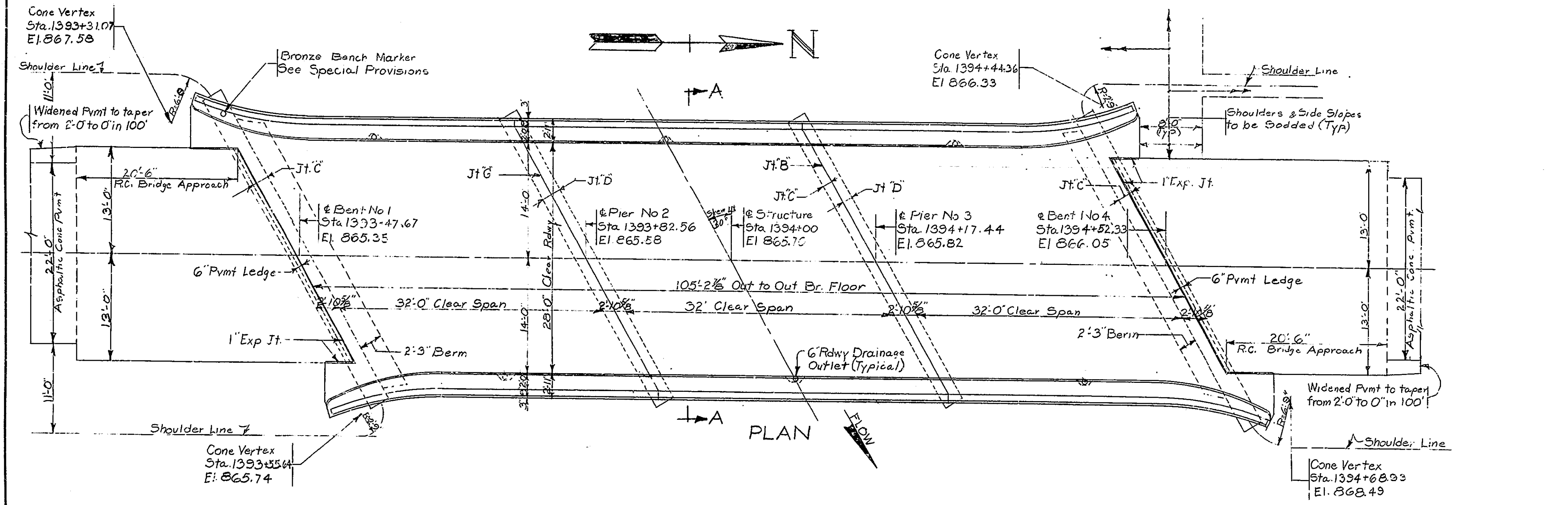
NOTE:- FIELD NOTES BOOK BR. 1634 Pages 1 to 38

BRIDGES OVER 20' SPAN				
PUB. ROAD REC. NO.	STATE	PROJECT NO.	FISCAL YEAR	TOTAL SHEETS
4	IND.	5706(4)	1958	23



GENERAL NOTES

Depth of footings to be extended as found necessary See Art. B11.2 of Specifications
Piles shall have minimum bearing value shown on detail drawings. Determine pile lengths by Arts F 103 and F 203 of Specifications.
For details of steel encased concrete piles see Bridge Standard C1, 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.
Dimensions on bending diagrams for reinforcing bars are measured out to out of bar.
Concrete in footings and pier stems to be Class "E"
Concrete in superstructure, including railings, and bent caps to be Class "F"
Concrete in headwalls to be class "D"
Concrete in steel encased concrete piles, concrete slope wall and paved side ditches to be class "D".
Continuous concrete pours shall be required between construction joints as shown on detail plans.
Bevel forms 1/4" under copings, and chamfer exposed edges 1/4 inch unless noted.
6 Roadway drainage outlets to be placed as shown on this drawing.
Construct 12" handlaid riprap slope walls at locations as shown on layout.
Tolerance in position of pile head maximum 2 inches.



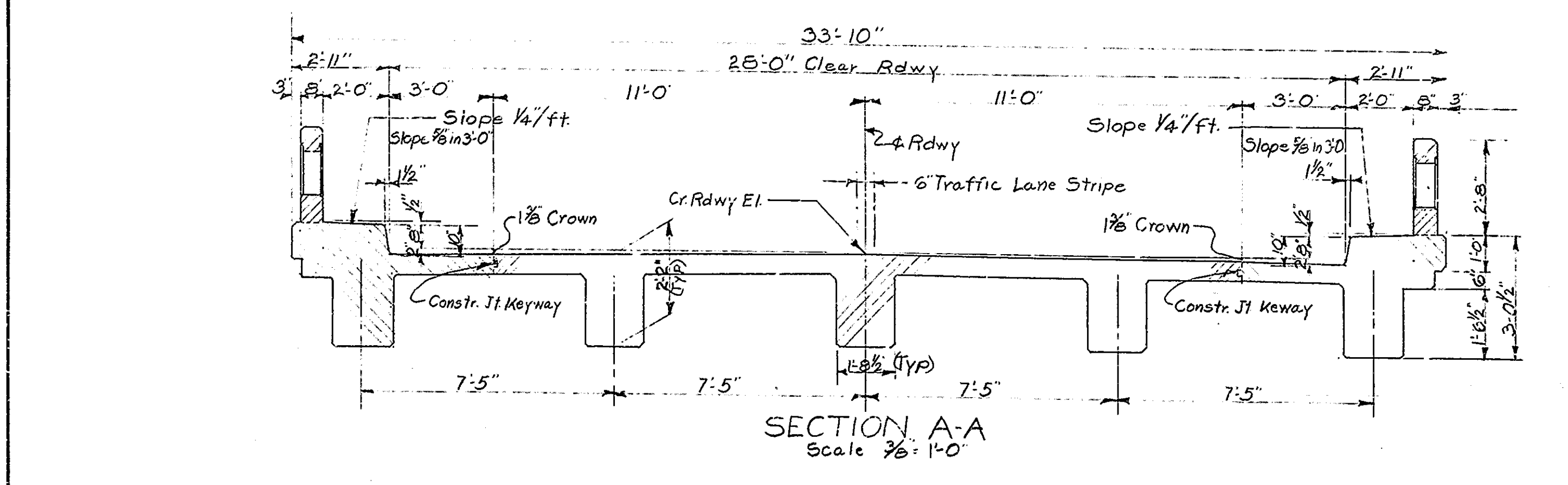
All railings to be constructed perpendicular to grade.
6" traffic lane stripe to be placed along centerline roadway on bridge floor and pavement.
See Special provisions for items included in this contract.

DESIGN DATA
Designed for H20-S16-44 loading in accordance with 1953 A.A.S.H.O Specifications, except floor slab designed for 16000 lb. wheel load.

JOINT LEGEND

Joint A indicates a vertical 1/4" open joint in railing only.
Joint B indicates a vertical preformed joint filler expansion joint extending from approximately 1 1/2" below the surface of roadway and sidewalk slabs down to top of bent cap.
Joint C indicates 1/2" preformed joint filler expansion material under front 6" of girder bearing area with two layers of medium weight roofing felt under remainder of bearing area and on vertical faces of keyways.
Joint D indicates 1/2" preformed joint filler expansion material under front 3" of girder bearing area.
Joint E indicates a vertical 1/2" joint into top 1 1/2" of roadway and sidewalk slabs filled with joint sealing compound, hot poured joint sealer or cold applied mastic type filler with vertical construction joint extending down from joint to top of bent cap.
1" Exp Jt. See Br Std C1.

TYPICAL CROSS SECTION
See Sheet No 2



STANDARD DRAWINGS

BR. STDS	RD. STDS	PURPOSE	DATE
C1		Test Bar Samples, Reinf Bar Notes, 1" Exp. Jt., Rdwy Drainage Outlet	Rev. 6-3-57
M1		Saddling Details, R/W Marker's, Guide Posts, Headwalls, Riv. Dams	Rev. 6-3-57
M2		Riprap, Slope Wall	Rev. 6-3-57
M3		Thickened Pymt Details	Rev. 9-25-57
S2		Placing Grade D Special Borrow	Rev. 9-20-57
	WP	Pipe	Rev. 8-28-57
	Sheet No 1	Standard Detour Signs	Rev. 2-11-54
	Sheet No 2	Detours, Standard Detour Signs	Rev. 5-1-51

GENERAL PLAN
REINFORCED CONCRETE GIRDER BRIDGE
3 SPANS @ 32'-0" SKEW 30° LT 28'-0" ROADWAY
OVER MUD CREEK ON STATE ROAD 19 M
STATE HIGHWAY DEPARTMENT OF INDIANA
TIPTON COUNTY

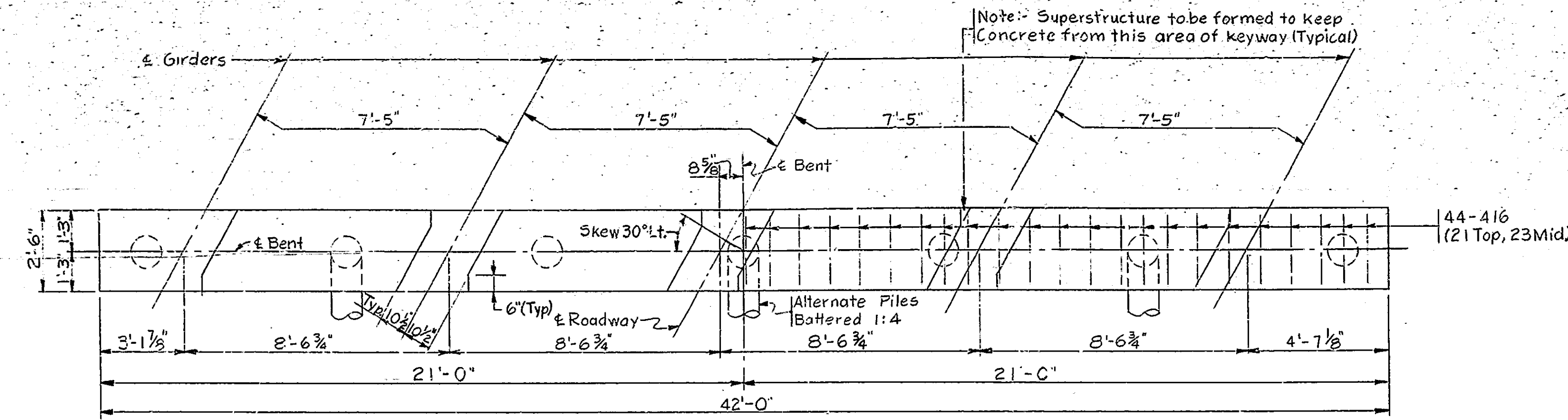
SCALE: 1/8" = 1'-0" UNLESS NOTED
OCTOBER 24, 1957

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

DRAWING: C-2 OF 6
PROJECT: 5-706(4)
BRIDGE CONTRACT NO. 4541
BRIDGE FILE: 19-M-4212

DESIGNED: C.K.D.
DRAWN: R.M. 2-22-57 C.K.D. W.D.K. 9-3-57
TRACED: C.K.D.

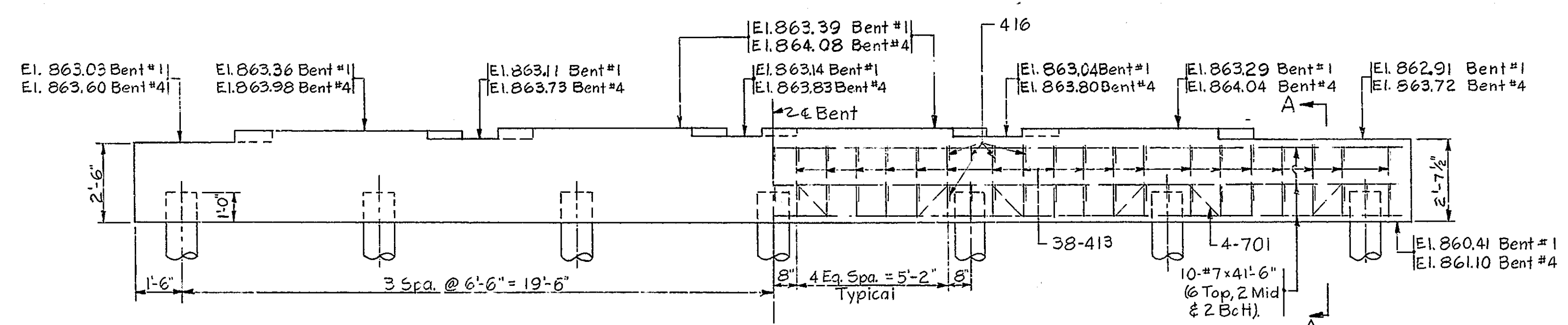
BRIDGES OVER 20' SPAN					
REG. ROAD	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	5706(4)	1958	6	23



Note: Caps not to be poured until fill has been made to approximately the bottom of cap elevations.
Left Half Showing Dimensions

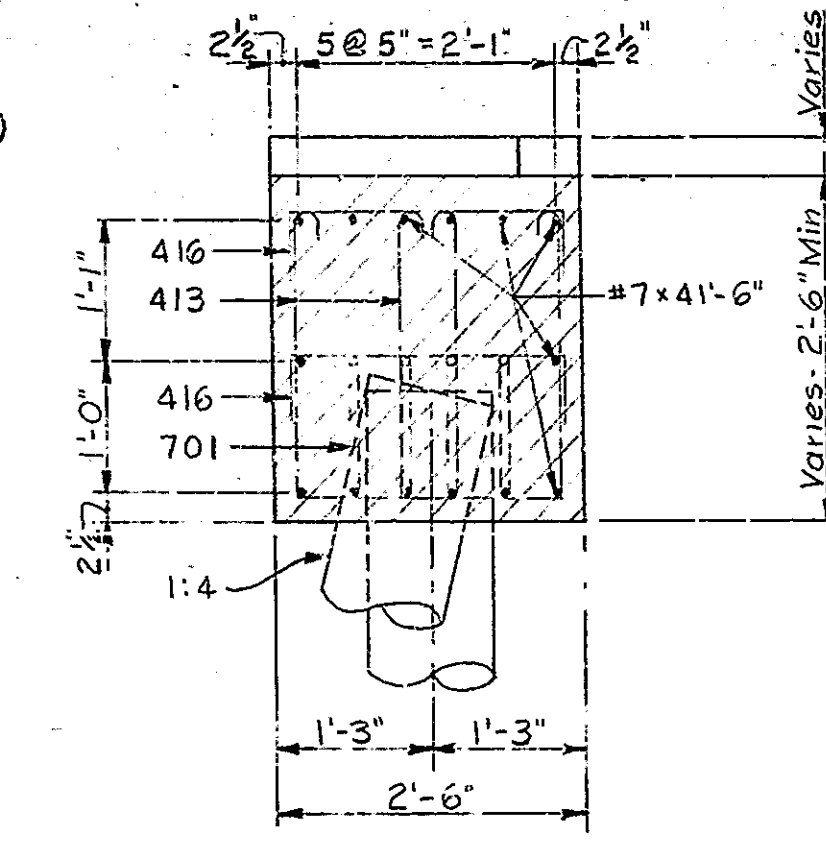
Right Half Showing Reinforcing Steel

CAP PLAN

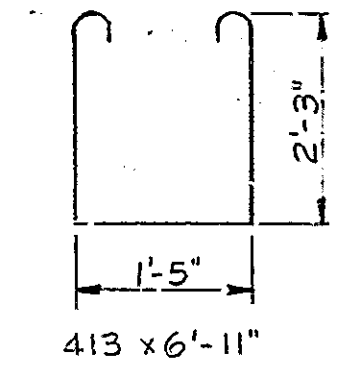


Note: 7-12" x 30'-0" Steel Encased Concrete Piles Each Bent, Driven to 35 Tons Bearing.

ELEVATION- BENTS NO. 1 & NO. 4



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



BILL OF MATERIALS
BENT NO. 1 (BENT NO. 4 SAME)

REINFORCING STEEL			
SIZE AND MARK	NO. OF BARS	LENGTH	WEIGHT (LBS)
701	4	46'-6"	
#7	10	41'-6"	
TOTAL NO. 7			1228
413	76	6'-11"	
416	86	3'-3"	
TOTAL NO. 4			538
TOTAL STEEL			1766
CONCRETE			
Class "F" Cap			111.0 Cys.
MISCELLANEOUS			
7- Steel Encased Concrete Piles			
12" x 30'-0" #7 Co. 1210 Lft.			

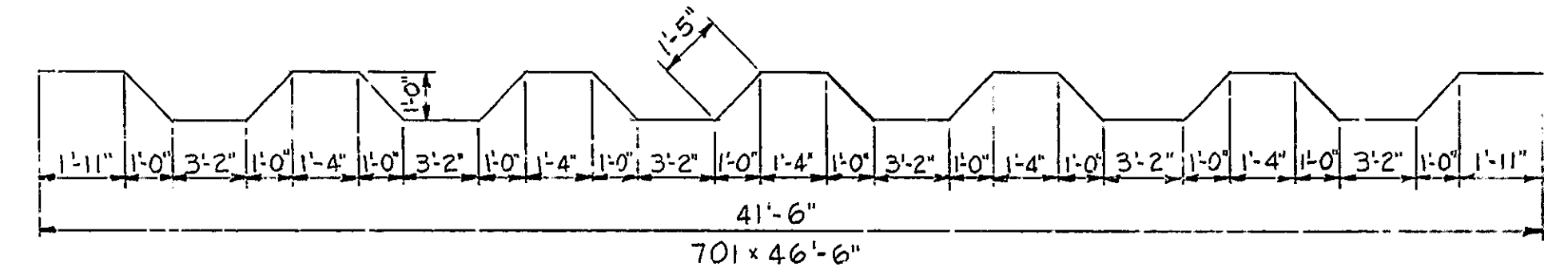


DIAGRAM SHOWING BOTTOM GIRDER ELEVATIONS
NOT TO SCALE

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

BENTS NO. 1 & NO. 4 DETAILS
STATE HIGHWAY DEPARTMENT OF INDIANA

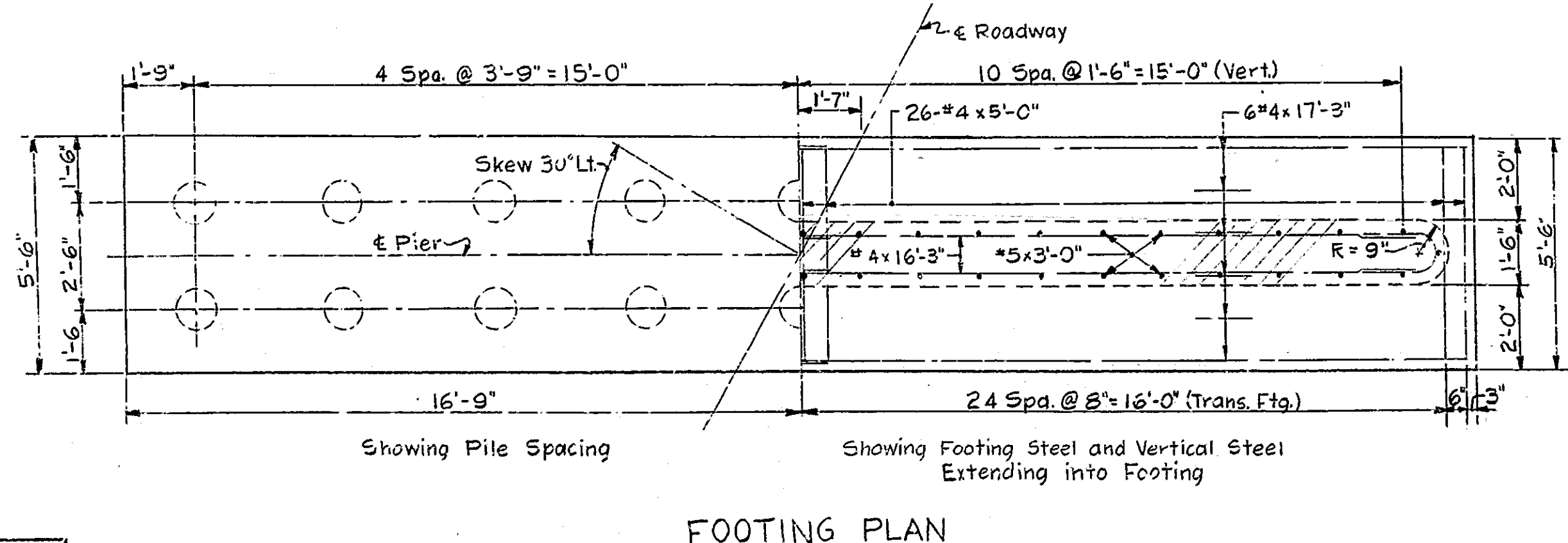
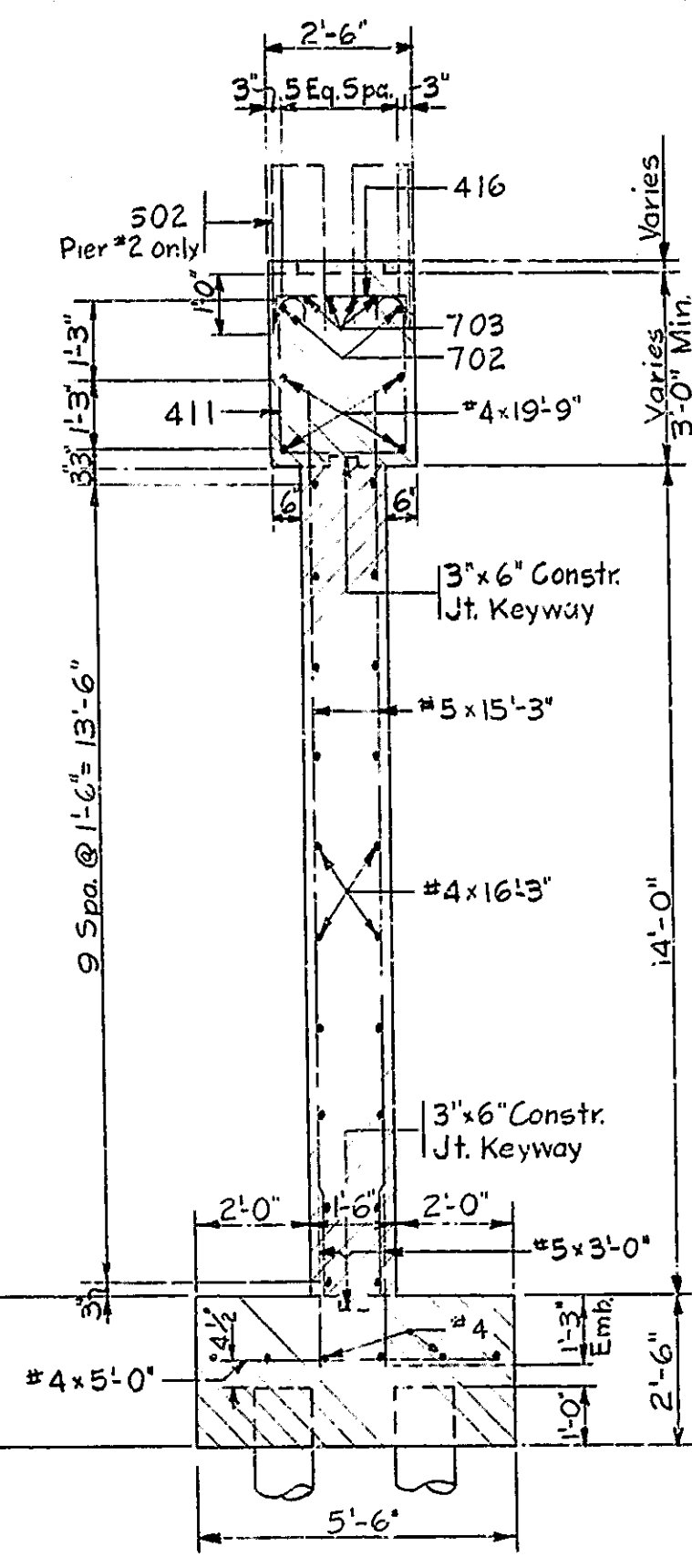
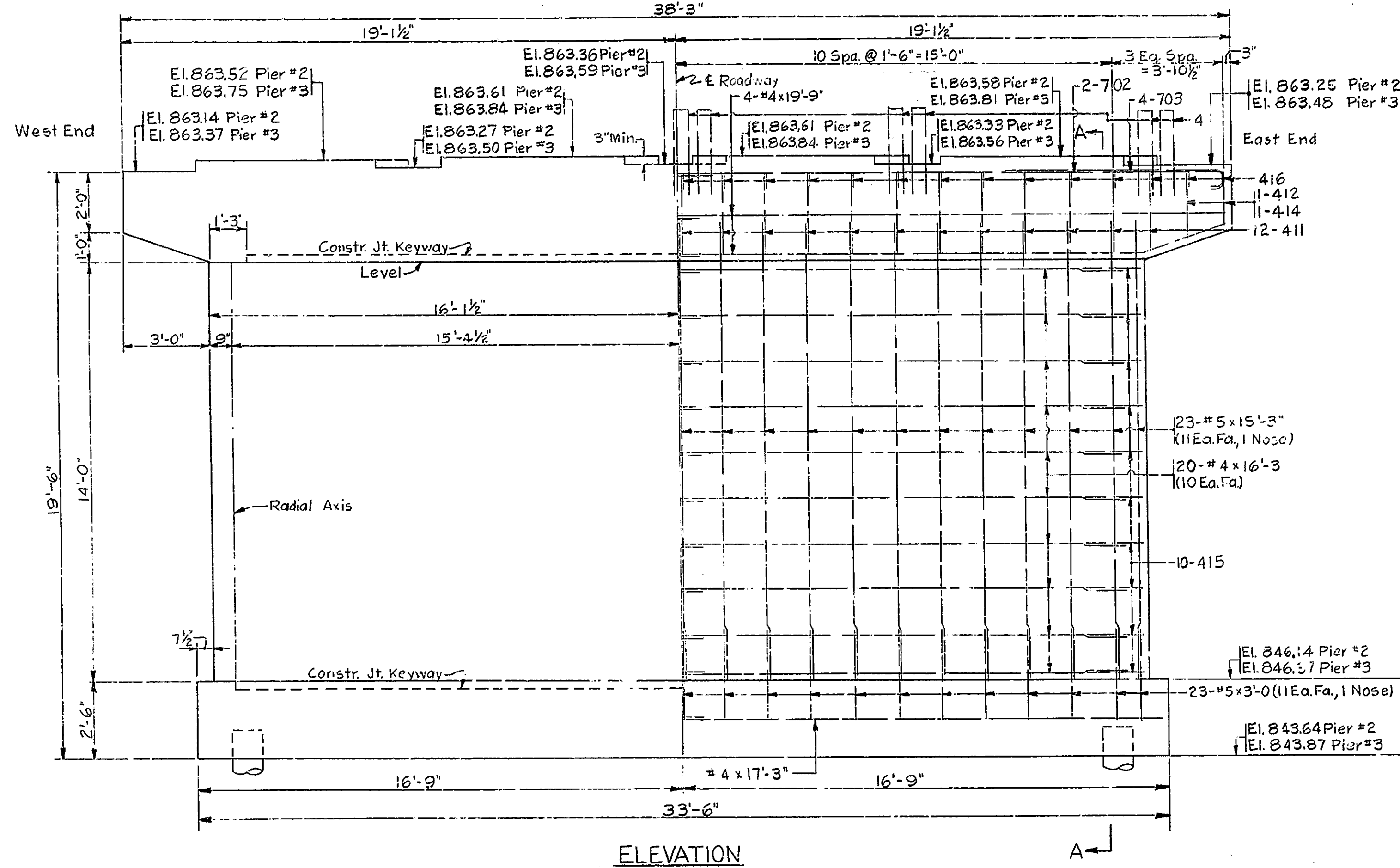
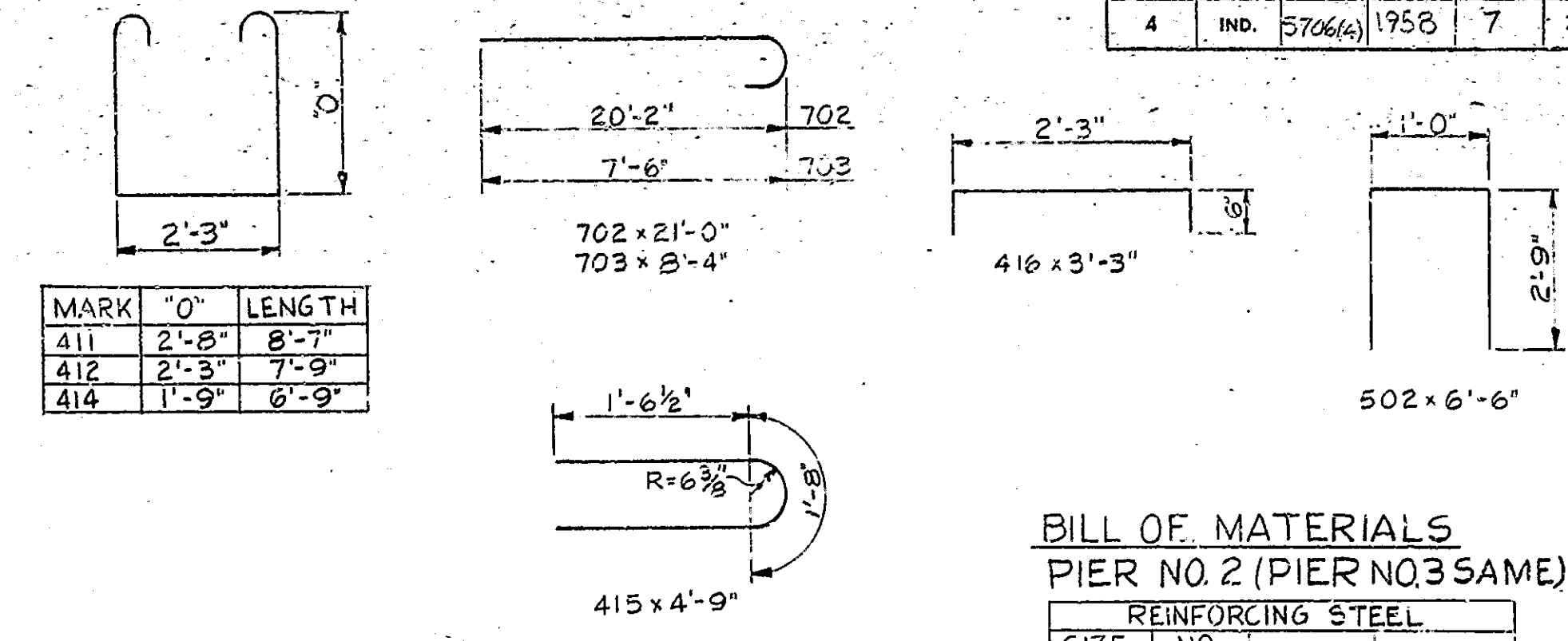
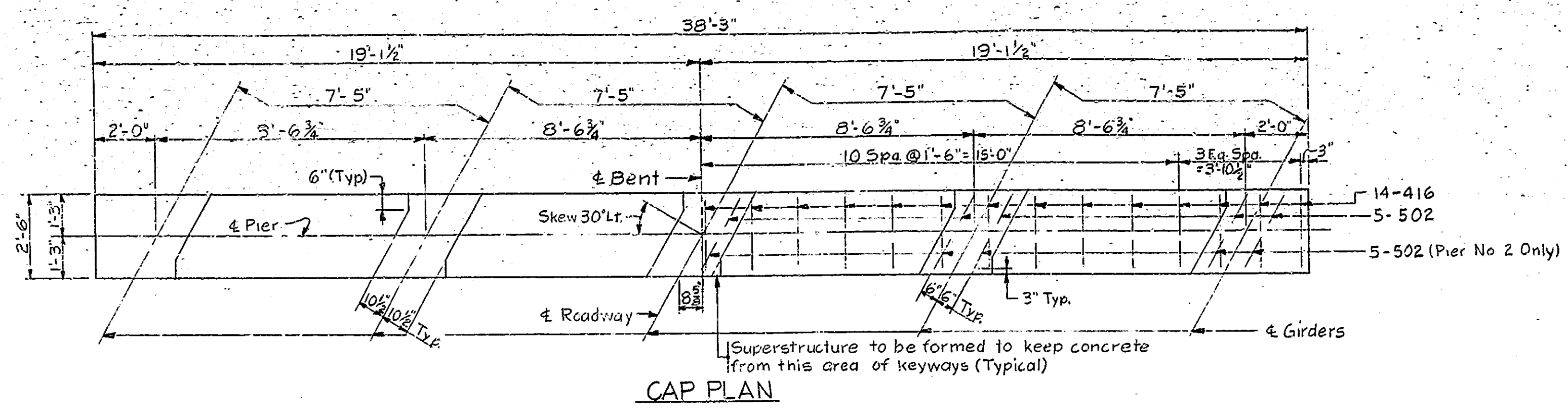
SCALE: 3/8" = 1'-0" UNLESS NOTED OCTOBER 24, 1957

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

DRAWING-C₃ OF 6
PROJECT-S-706(4)
BRIDGE CONTRACT NO. 4541
BRIDGE FILE-19-M-4212

DESIGNED WDK 9-5-57 CWD BMM 9-A-57
DRAWN WDK 9-13-57 CWD BMM 9-B-57
TRACED CWD

BRIDGES OVER 20' SPAN					
PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	5706(4)	1958	7	23



**BILL OF MATERIALS
PIER NO. 2 (PIER NO. 3 SAME)**

REINFORCING STEEL			
SIZE AND MARK	NO. OF BARS	LENGTH	WEIGHT (LBS)
702	4	21'-0"	
703	8	8'-4"	
TOTAL NO. 7			308
#502	15	6'-6"	
#5	44	15'-3"	
"	44	3'-0"	
TOTAL NO. 5			939
411	23	8'-7"	
412	2	7'-9"	
414	2	6'-9"	
415	20	4'-9"	
416	27	3'-3"	
#4	8	19'-9"	
"	12	17'-3"	
"	40	16'-3"	
"	51	5'-0"	
TOTAL NO. 4			1122
TOTAL STEEL			2369
CONCRETE			
Class "F" Cap		11.5 Cys.	
Class "E" Top Ftg. to		Bottom Cap	
Class "E" Ftg.		17.1 Cys.	
MISCELLANEOUS			
18 Untreated Timber			
Piles 20'-0" Long			
360 Lft			
#20-502 Bars in Pier #2			
10-502 Bars in Pier #3			

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

**PIERS # 2 & # 3 DETAILS
STATE HIGHWAY DEPARTMENT OF INDIANA**

SCALE: 3/8" = 1'-0" OCTOBER 24, 1957

RECOMMENDED FOR APPROVAL: *C. P. Rimmer*
REGISTERED PROFESSIONAL ENGINEER

DRAWING: C 40F 6
PROJECT: 5-706(4)
BRIDGE CONTRACT NO. 4541
BRIDGE FILE: 19-M-4212

DESIGNED: WDK 8-23-57 C.R.D. D&M 9-10-57
DRAWN: YDK 8-29-57 C.R.D. D&M 9-17-57
TRACED: C.R.D.

ITEM	STRUCTURE QUANTITIES														TOTALS	STRUCTURAL STEEL LBS.	CAST IRON LBS.	STEEL ENCASED CONCRETE PILES	UNTREATED TIMBER PILES
	CONCRETE				REINFORCING STEEL (1933 STD. WT.)														
	CLASS 1	CLASS 2	CLASS 3	CLASS 4	CLASS 5	CLASS 6	CLASS 7	CLASS 8	CLASS 9	CLASS 10	CLASS 11	CLASS 12	CLASS 13	CLASS 14					
	CU. YDS.	CU. YDS.	CU. YDS.	CU. YDS.	CU. YDS.	CU. YDS.	CU. YDS.	CU. YDS.	CU. YDS.	CU. YDS.	CU. YDS.	CU. YDS.	CU. YDS.	CU. YDS.					
SUBSTRUCTURE																			
BENT No 1	11.0																		
PIER No 2	11.8	24.8	17.1																
PIER No 3	11.8	24.8	17.1																
BENT No 4	11.0																		
SUPERSTRUCTURE																			
SPAN A	55.2			3.8	78.3	10,631													
SPAN B	49.9			3.3	69.8	9,973													
SPAN C	55.2			3.8	78.3	10,631													
SPLICE BARS						117													
TOTALS	205.3	49.6	34.2	10.9	226.4	31,352													

NO.	SIZE	LENGTH	WEIGHT	TOTAL WEIGHT
11	2	11'-0"	117#	
7	1	8'-0"	16#	
6	3	7'-6"	34#	
4	3	6'-9"	21#	
3	3	6'-0"	12#	
3	3	5'-6"	6#	
Total Splice Bars				206#

MARK	SIZE	NO. PER	LENGTH	WEIGHT	TOTAL WEIGHT
591	5"	104	20'-6"	2224	
		22	29'-9"	671	2895#

(See Br. Std. Ms.)

ITEM	UNIT	QUANTITY	ASSEMBLY
1	Each	6	12" R
2	Each	2	12" R
3	Each	2	12" R
4	Each	2	12" R
5	Each	2	12" R
6	Each	2	12" R
7	Each	2	12" R
8	Each	2	12" R
9	Each	2	12" R
10	Each	2	12" R
11	Each	2	12" R
12	Each	2	12" R
13	Each	2	12" R
14	Each	2	12" R
15	Each	2	12" R
16	Each	2	12" R
17	Each	2	12" R
18	Each	2	12" R
19	Each	2	12" R
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36	Each	2	12" R
37	Each	2	12" R
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42	Each	2	12" R
43	Each	2	12" R
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46	Each	2	12" R
47	Each	2	12" R
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50	Each	2	12" R
51	Each	2	12" R
52	Each	2	12" R
53	Each	2	12" R
54	Each	2	12" R
55	Each	2	12" R
56	Each	2	12" R
57	Each	2	12" R
58	Each	2	12" R
59	Each	2	12" R
60	Each	2	12" R
61	Each	2	12" R
62	Each	2	12" R
63	Each	2	12" R
64	Each	2	12" R
65	Each	2	12" R
66	Each	2	12" R
67	Each	2	12" R
68	Each	2	12" R
69	Each	2	12" R
70	Each	2	12" R
71	Each	2	12" R
72	Each	2	12" R
73	Each	2	12" R
74	Each	2	12" R
75	Each	2	12" R
76	Each	2	12" R
77	Each	2	12" R
78	Each	2	12" R
79	Each	2	12" R
80	Each	2	12" R
81	Each	2	12" R
82	Each	2	12" R
83	Each	2	12" R
84	Each	2	12" R
85	Each	2	12" R
86	Each	2	12" R
87	Each	2	12" R
88	Each	2	12" R
89	Each	2	12" R
90	Each	2	12" R
91	Each	2	12" R
92	Each	2	12" R
93	Each	2	12" R
94	Each	2	12" R
95	Each	2	12" R
96	Each	2	12" R
97	Each	2	12" R
98	Each	2	12" R
99	Each	2	12" R
100	Each	2	12" R

ITEM NO.	LOCATION	DESCRIPTION	LENGTH	CU. CONC. IN STRUCT.	REIN. STEEL LBS.	CAST IRON LBS.	REMARKS
11	Lt. Sta. 1391+50	12" Pipe (Class 5)	24'	0.6			2-Private Entrance Headwalls Req'd.
12	Rt. Sta. 1392+45	12" Pipe (Class 5)	24'	0.6			2-Private Entrance Headwalls Req'd.
13	Rt. Sta. 1398+25	12" Pipe (Class 5)	24'	0.6			2-Private Entrance Headwalls Req'd.
14	Lt. Sta. 1399+43	12" Pipe (Class 5)	24'	0.6			2-Private Entrance Headwalls Req'd.
TOTALS				2.4			

ITEM	DESCRIPTION	UNIT	QUANTITY
1	Class 5 Concrete	Cu. Yds.	205.3
2	Class 2 Concrete	Cu. Yds.	49.6
3	Class 3 Concrete	Cu. Yds.	34.2
4	Class 4 Concrete	Cu. Yds.	10.9
5	Class 6 Concrete	Cu. Yds.	226.4
6	Reinforcing Steel	Lbs.	67,281
7	Cast Iron	Lbs.	156
8	Steel Encased Concrete Piles	Lin. Ft.	14,420
9	Untreated Timber Piles	Lin. Ft.	36,720
10	Structural Steel	Lbs.	18,927
11	Span A	Cu. Yds.	55.2
12	Span B	Cu. Yds.	49.9
13	Span C	Cu. Yds.	55.2
14	Splice Bars	Lbs.	206
15	Approach Structures	Cu. Yds.	2.4
16	Barriades	Each	6
17	Barricades	Each	2
18	Traffic Skins	Each	2
19	Lights	Each	2
20	Working Signs	Each	6
21	Steel Pile Shells	Lin. Ft.	420
22	Steel Pile Shells	Lin. Ft.	420
23	Subbase (Type II)	Cu. Yds.	384
24	Paved Side Ditch (Type A)	Lin. Ft.	565
25	Hot Asphaltic Conc. Binder	Tons	24.9
26	Hot Asphaltic Conc. Surface (Type B)	Tons	116
27	Bitum. Material for Prime	Tons	5
28	Aggregate for Shoulder Drain	Tons	3
29	Guide Posts (Type A)	Each	12
30	1" Expansion Joint	Lin. Ft.	76
31	Reset R/W Markers	Each	2
32	12" Hand Laid Riprap	Sq. Yds.	610
33	12" Pipe (Class 5)	Lin. Ft.	96

SUMMARY
STATE HIGHWAY DEPARTMENT OF INDIANA

OCTOBER 24, 1957.
RECOMMENDED FOR APPROVAL *C. R. Rummel*
PROJECT: 5-706(4)
ADD'L CONTRACT NO. 4541
BRIDGE NO. 19-M-4212

STR

HRR. 10-11-57 DRM. 10-14-57
W.E.B. 10-15-57 HRR. 10-15-57