

INDEX						
PROJECT	STRUCTURE	TYPE	SPAN	OVER	STATION	CONTRACT NO.
ST-1104 "A"	48-69-6012	CONT. PRES. REINF. CONC. I-BEAM	3 SPANS 70'-9", 71'-6", 70'-9"	LAUGHERY CREEK	102 + 30	B-8206
SHEET NO.	SHEET DESIGNATION	SUBJECT				B.P.R. APPROVAL
1	INDEX & TITLE SHEET					
2	TYPICAL CROSS SECTIONS					
3	ROAD PLAN & PROFILE-ROAD PROJ. N#					
4	ONE SHEET TEST BORING DATA					
5	C1 (STR. 48 69 6012)	LAYOUT				
6	C2	GENERAL PLAN				
7	C3	BENT N#1 DETAILS				
8	C4	PIER N#2 & N#3 DETAILS				
9	C5	BUTTRESS BENT N#4 DETAILS				
10	C6	SUPERSTRUCTURE DETAILS				
11	C7	SUPERSTRUCTURE DETAILS				
12	C8	SUPERSTRUCTURE DETAILS				
13	ONE SHEET SUMMARY					
14-17	FOUR SHEETS CROSS SECTIONS					

STATE OF INDIANA
INDIANA STATE HIGHWAY COMMISSION

BRIDGE PLANS

FOR SPANS OVER 20 FEET

ON
STATE ROAD NO. 48 SECTION

PROJECT N° ST. 1104 "A" PE, R/W & CONST

NAPOLEON-LAWRENCEBURG ROAD

BEGINNING AT A POINT ON S.R. 48 APPROX. 66' WESTERLY FROM THE N-S. ONE HALF SECTION LINE AND EXTENDING WESTERLY A DISTANCE OF APPROX. 800' TO A POINT ON S.R. 48 APPROX. 865' WESTERLY FROM THE N-S. ONE HALF SECTION LINE, ALL IN SECTION 25 - T.9N.-R.11E., IN RIPLEY COUNTY.

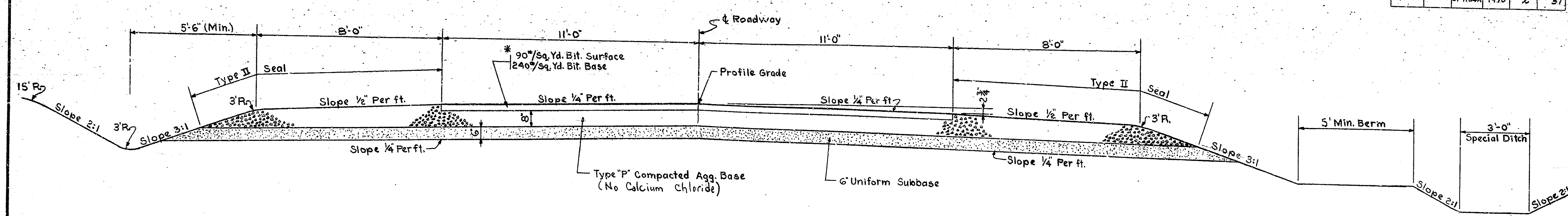
ROADWAY LENGTH = 0.110 MI.
BRIDGE LENGTH = 0.041 MI.
TOTAL LENGTH = 0.151 MI.

MAX. GRADE = 9.0 %

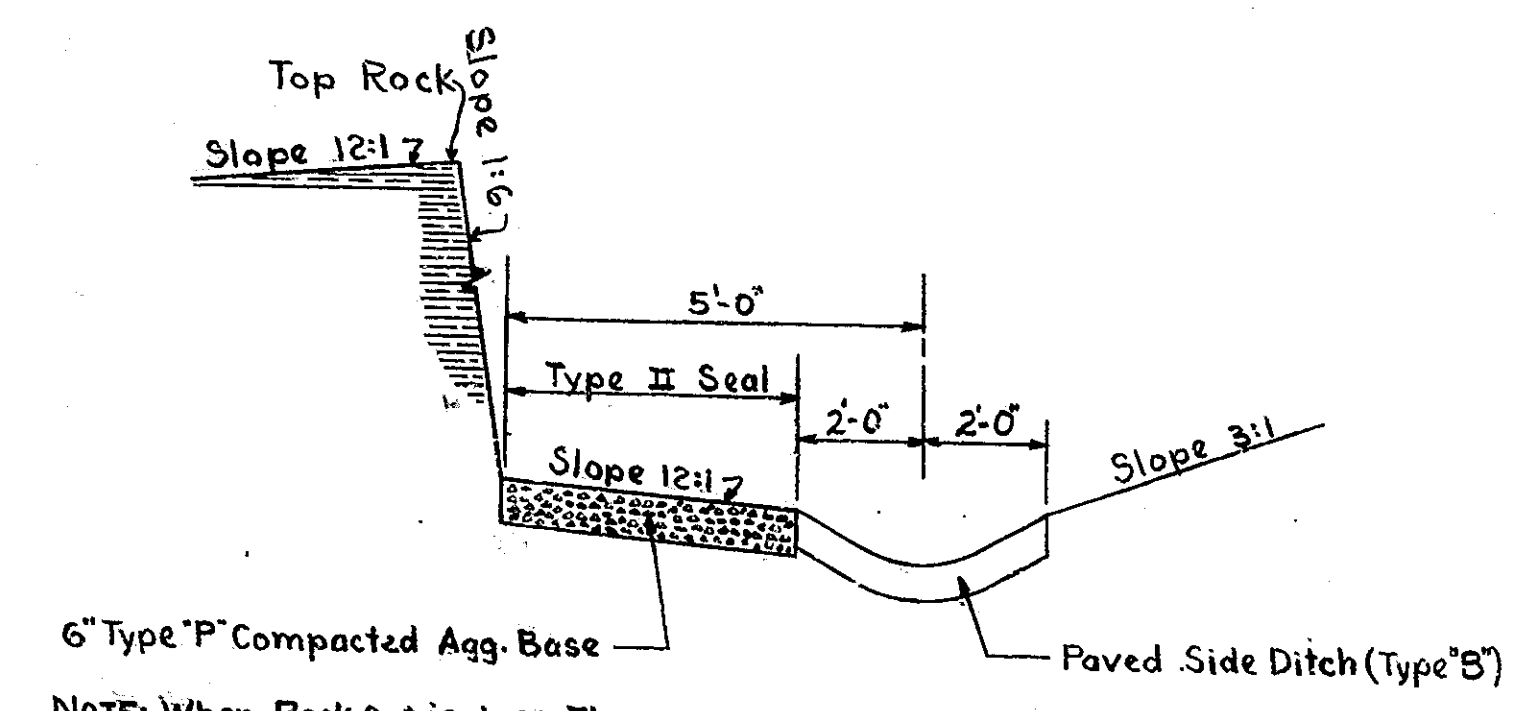
BRIDGES OVER 20' SPAN					
PUBLIC ROAD SECTION NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	ST-1104 "A"	1969	3	37

INDEX CONTINUED STANDARD DRAWINGS				
SHEET NO.	SHEET DESIGNATION	SUBJECT	B.P.R. APPROVAL	ADOPTED "A" REVISION
18	BRIDGE STD. C1	STANDARD MISCELLANEOUS DETAILS		6-10-69
	BRIDGE STD. C2	STANDARD MISCELLANEOUS DETAILS		
	BRIDGE STD. D	CASTING DETAILS ROADWAY DRAINS		
	BRIDGE STD. F	ROADWAY DRAIN CUT/LET DETAILS		
	BRIDGE STD. J	EXPANSION JOINT		
	BRIDGE STD. MA	MISCELLANEOUS APPROACH DETAILS		
	BRIDGE STD. MS	P.C. BRIDGE APPROACH TURNOUT DETAILS-12'-6" SHOULDERS...		
	BRIDGE STD. MS	SLOPEWALL AND DRAINAGE DETAILS		
19	BRIDGE STD. P88	PRESTRESSED CONCRETE TYPE III I-BEAMS	4-16-68	A-JUN 16, 1968
	BRIDGE STD. P89	PRESTRESSED BOX BEAMS		
	BRIDGE STD. P90	PRESTRESSED COMPOSITE BOX BEAMS WIDE		
20	BRIDGE STD. P91	TOLERANCES FOR FABRICATION OF PRESTRESSED BEAMS		
21	BRIDGE STD. P811	ELASTOMERIC BEARING PAD DETAILS	8-14-63	1-Nov. 9, 1968
22	BRIDGE STD. BR 1	ALUMINUM BRIDGE RAILING	5-20-68	A-26, 6, 1968
23	BRIDGE STD. BR 2	ALUMINUM BRIDGE RAILING DETAILS	5-26-65	R-8-1-68
24	BRIDGE STD. BR 3	STEEL BRIDGE RAILING	5-26-65	R-8-1-68
25	BRIDGE STD. R2A	BRIDGE LIGHTING DETAILS	5-26-65	R-8-1-68
26	BRIDGE STD. R2A	STEEL BRIDGE RAILING DETAILS	5-26-65	R-8-1-68
27	BRIDGE STD. S1	TYPICAL DETAILS FOR PLACING "B" BORROW	8-28-69	11-8-10-63
	BRIDGE STD. S2	TYPICAL DETAILS FOR PLACING GRADE "B" SPECIAL BORROW		
	BRIDGE STD. T SHEET A	STANDARD TEMPORARY BRIDGE		
	BRIDGE STD. T SHEET B	STANDARD TEMPORARY BRIDGE		
	ROAD STD. SHEET A	STANDARD PAVEMENT JOINTS		
27	ROAD STD. SHEET MA	MISCELLANEOUS STANDARDS	8-27-69	R-4-1-69
28	ROAD STD. SHEET MB	MISCELLANEOUS STANDARDS	12-19-67	R-11-10-67
29	ROAD STD. SHEET MC	MISCELLANEOUS STANDARDS	4-21-69	R-10-15-68
	ROAD STD. SHEET MD	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET ME	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET ME1	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET ME2	MISCELLANEOUS STANDARDS		
29A	ROAD STD. SHEET ME	MISCELLANEOUS STRUCTURE STANDARDS		R-10-1-69
	ROAD STD. SHEET ME1	MISCELLANEOUS STRUCTURE STANDARDS		
	ROAD STD. SHEET ME2	MISCELLANEOUS STRUCTURE STANDARDS		
29B	ROAD STD. SHEET MH	MISCELLANEOUS STANDARDS		R-4-1-69
	ROAD STD. SHEET MI	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET MJ	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET MK	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET ML	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET MN	MISCELLANEOUS STANDARDS		
29C	ROAD STD. SHEET MP	MISCELLANEOUS STANDARDS		R-8-1-69
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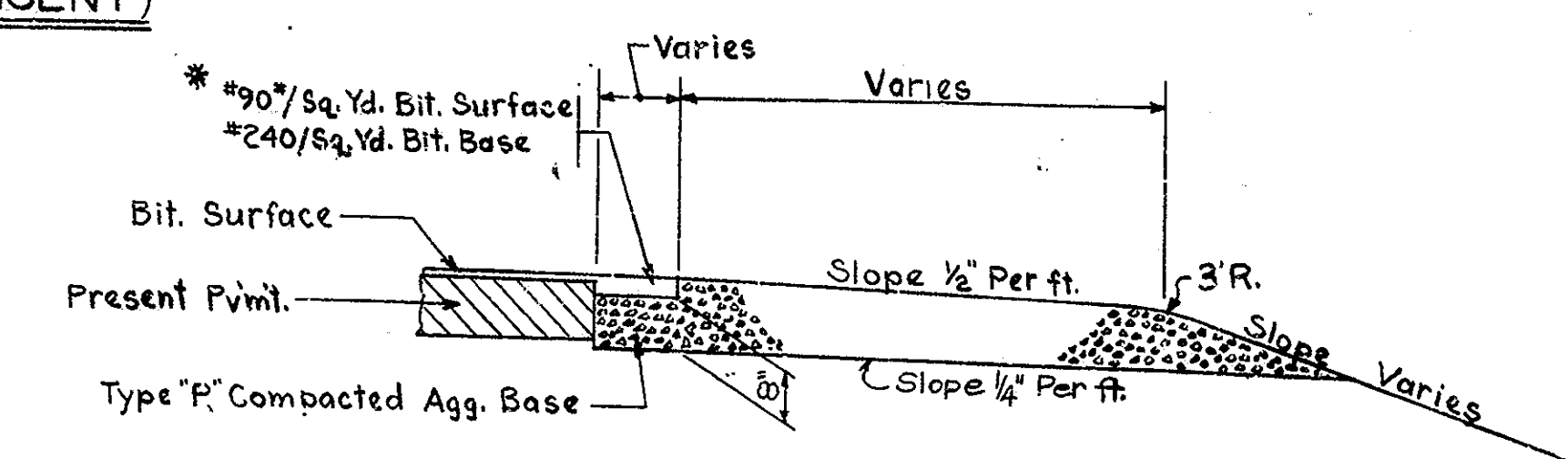
BRIDGES OVER 20' SPAN					
PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	ST-1104A	1970	2	37



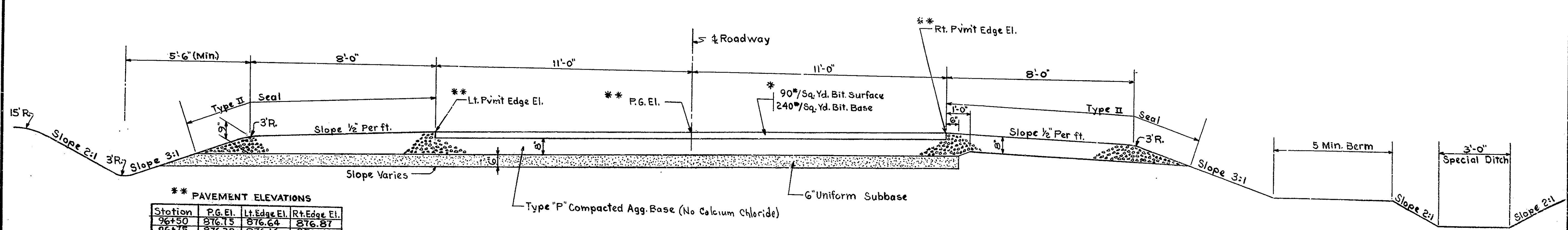
TYPICAL CROSS SECTION (ON TANGENT)



TYPICAL ROCK SECTION



PART SECTION
SHOWING WIDENING BETWEEN GRADING LIMITS & PROJECT LIMITS



TYPICAL CROSS SECTION (ON CURVE)

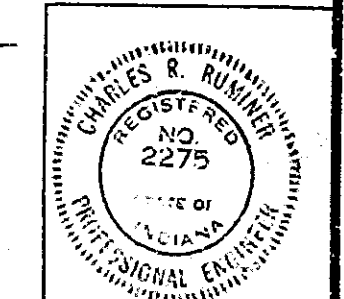
** PAVEMENT ELEVATIONS

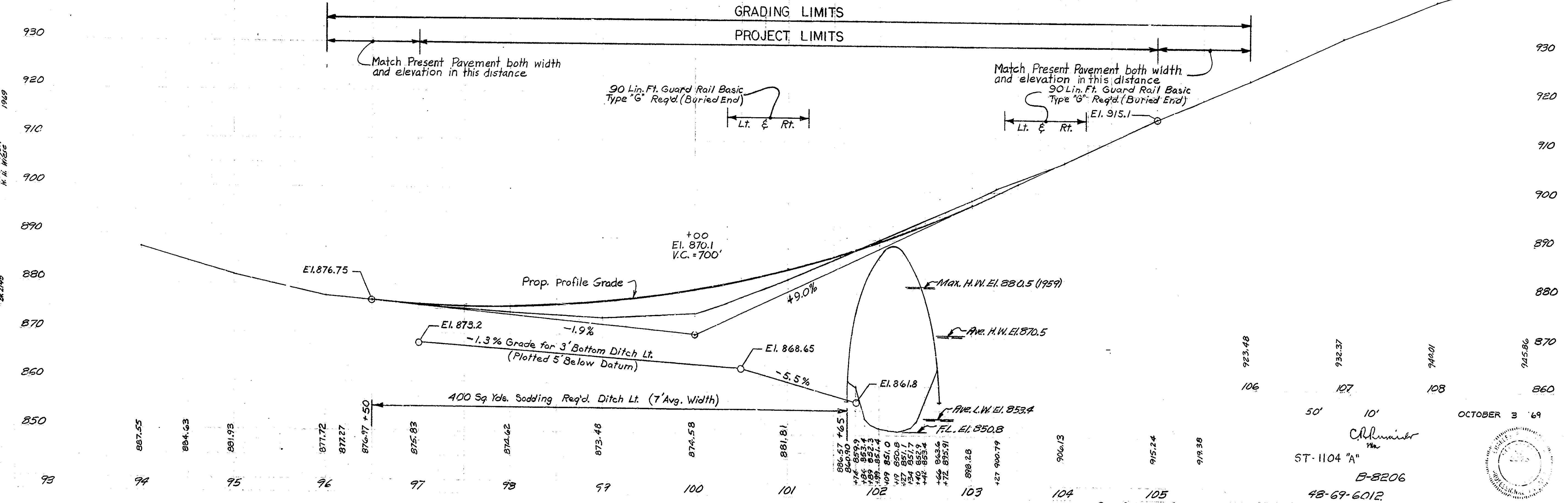
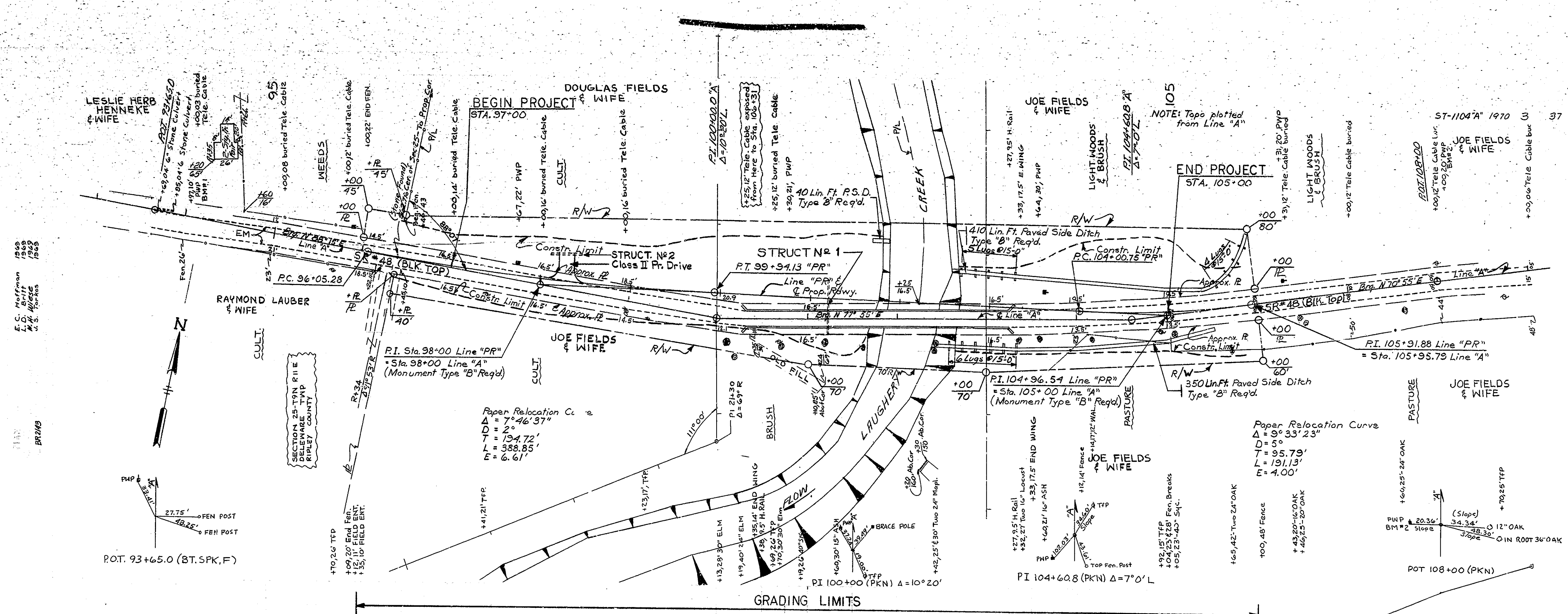
Station	P.G. El.	Lt. Edge El.	Rt. Edge El.
96+50	876.75	876.64	876.87
96+75	876.32	876.16	876.49
97+00	875.99	875.79	876.20
97+30	875.73	875.47	875.99
97+50	875.63	875.34	875.92
97+70	875.59	875.29	875.69
98+00	875.65	875.35	875.95
98+30	875.85	875.55	876.15
98+50	876.07	875.78	876.35
98+70	876.34	876.06	876.57
99+00	876.87	876.60	876.99
99+30	877.53	877.28	877.55
99+50	878.06	877.82	878.01
99+70	878.64	878.41	878.52
99+80	878.92	878.73	878.80
100+00	879.64	879.41	879.43
100+20	880.38	880.15	880.15
103+35	900.27	900.10	900.10
103+50	901.60	901.43	901.45
103+69	902.95	902.78	902.84
103+85	904.15	903.58	904.73
104+00	906.10	905.91	906.14
104+15	907.45	907.24	907.55
104+30	910.60	910.29	910.85
104+80	913.30	912.90	913.61
105+00	915.10	914.65	915.40

* NOTE: Hot Asphaltic Concrete Surface Type "B" on Hot Asphaltic Concrete Base or H.A.E. Surface Type III on H.A.E. Base.

DESIGNED: CKD
 DRAWN: ELM
 TRACED: CKD

TYPICAL CROSS SECTIONS
INDIANA STATE HIGHWAY COMMISSION
 SCALE: 1/2" = 1'-0"
 OCTOBER 3, 1969
 RECOMMENDED FOR APPROVAL: [Signature]
 DRAWING: OF
 PROJECT: ST-1104 "A"
 BRIDGE CONTRACT NO. B-8206
 BRIDGE FILE: 48-69-6012





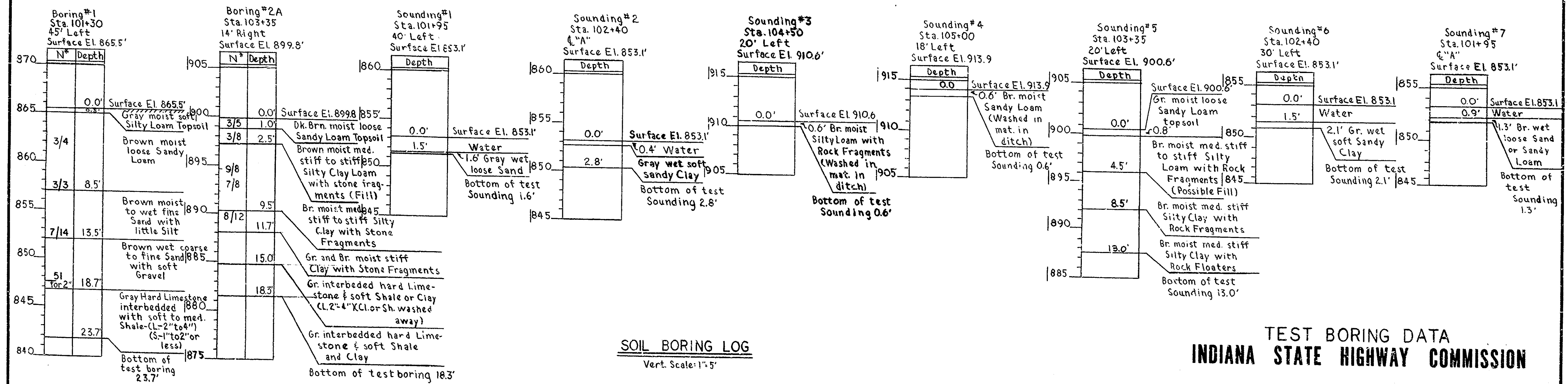
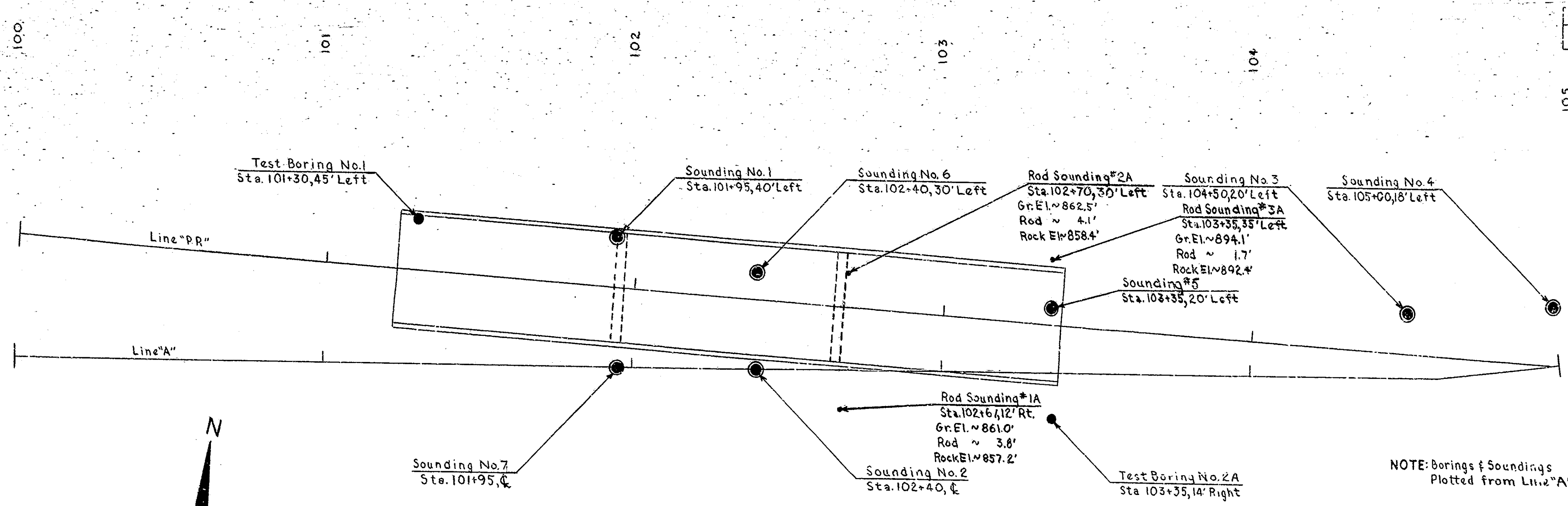
E.C. Hoffman 1949
 L.O. Brit 1969
 J.S. Wages 1969
 M.H. Wages 1969
 BRUNG

E.C. Hoffman 1949
 L.O. Brit 1969
 J.S. Wages 1969
 M.H. Wages 1969

BR 2148

ST-1104 "A"
 B-8206
 48-69-6012
 OCTOBER 3 '69
 Rev. 8-18-69 R
 Rev. 10-21-69 Added Cl. II Pr. Drive # St. #2

BRIDGES OVER 20' SPAN				
STATE	PROJECT NO.	FISCAL YEAR	ENCL. NOS.	TOTAL SHEETS
IND.	ST1104A	1970	4	37



NOTE: N# indicates number of blows per foot in standard penetration test. Driving 2" O.D. sampler 1" with 140# hammer falling 30". Count made at 6" intervals

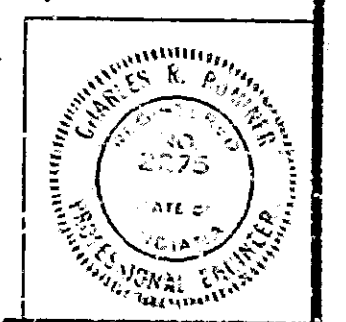
DESIGNED: C.K.D.
DRAWN: G.L.S. 228, 229, 230, 231, 9-2-69
TRACED: C.K.D.

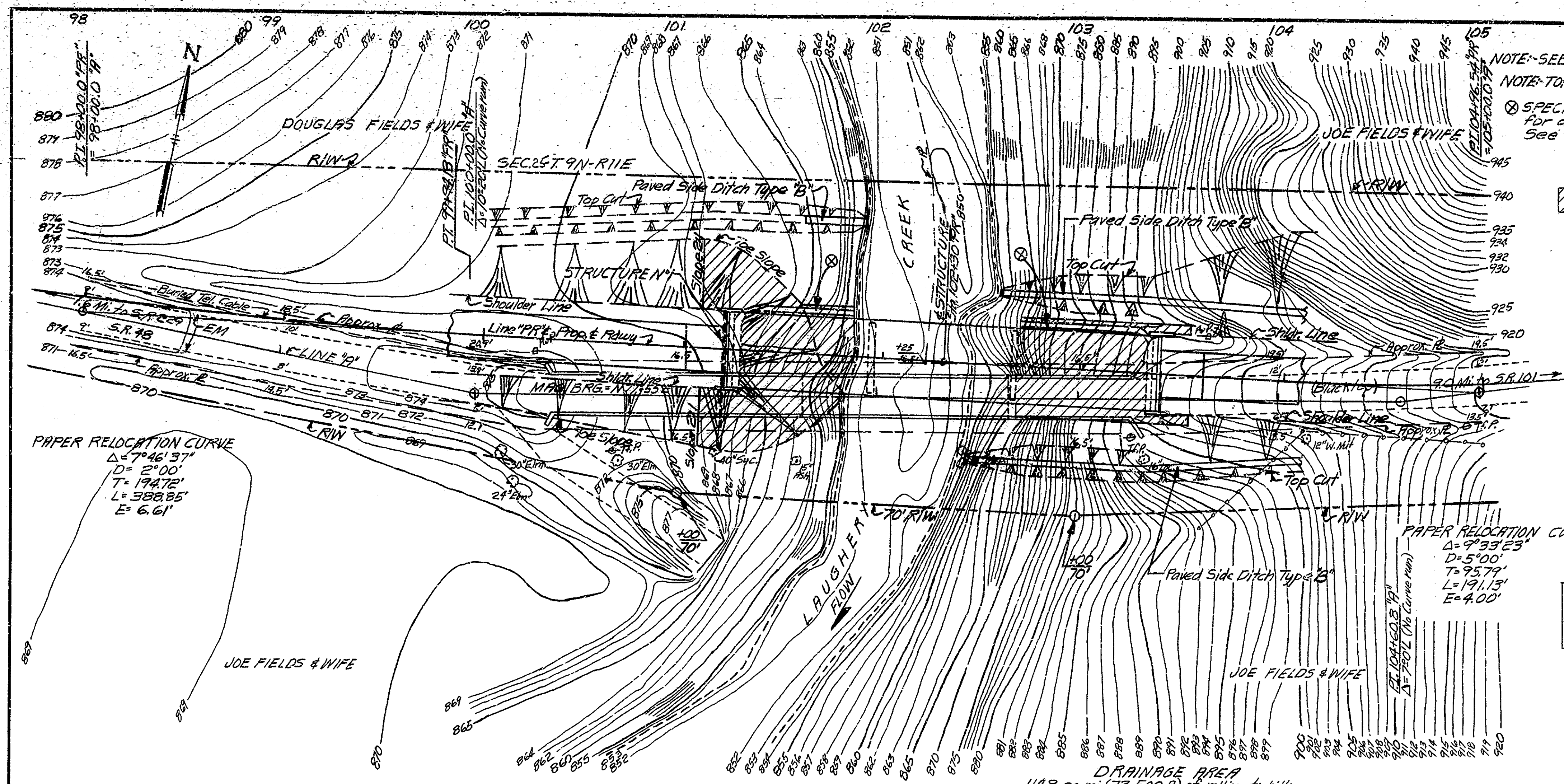
TEST BORING DATA
INDIANA STATE HIGHWAY COMMISSION

SCALE: AS NOTED
OCTOBER 3, 1969

RECOMMENDED FOR APPROVAL: *Chalmers*
ENGINEER OF BRIDGE DESIGN

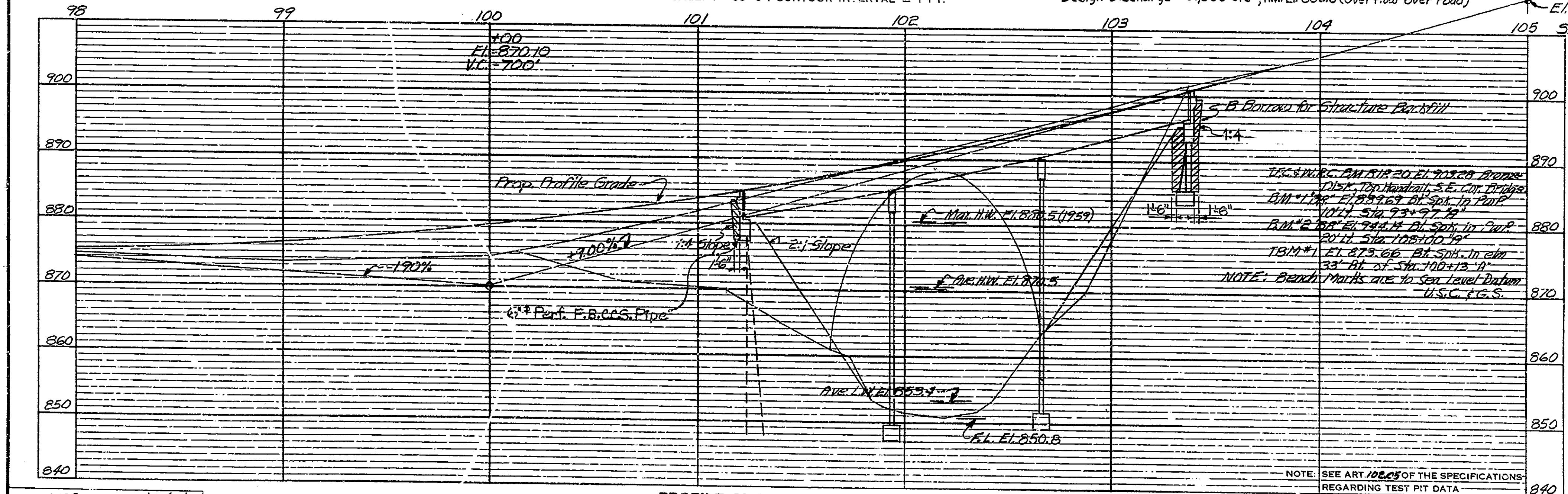
DRAWING OF
PROJECT: ST-1104 "A"
BRIDGE CONTRACT NO. B-2806
BRIDGE FILE: 48-69-6012





SITUATION PLAN
 SCALE: 1" = 30'-0". CONTOUR INTERVAL = 1 FT.

DRAINAGE AREA
 114.8 sq. mi. (73,500 A) of rolling to hilly
 sandy clay loam.
 Design Discharge - 31,500 cfs ; H.W. El. 890.5 (Over flow over road)



PROFILE ON PROPOSED ROADWAY
 SCALES: HORIZ 1" = 30'-0" VERT. 1" = 10'-0"

NOTE-SEE ROAD PLANS FOR REFERENCES.
 NOTE-TOPO PLOTTED FROM LINE "A"

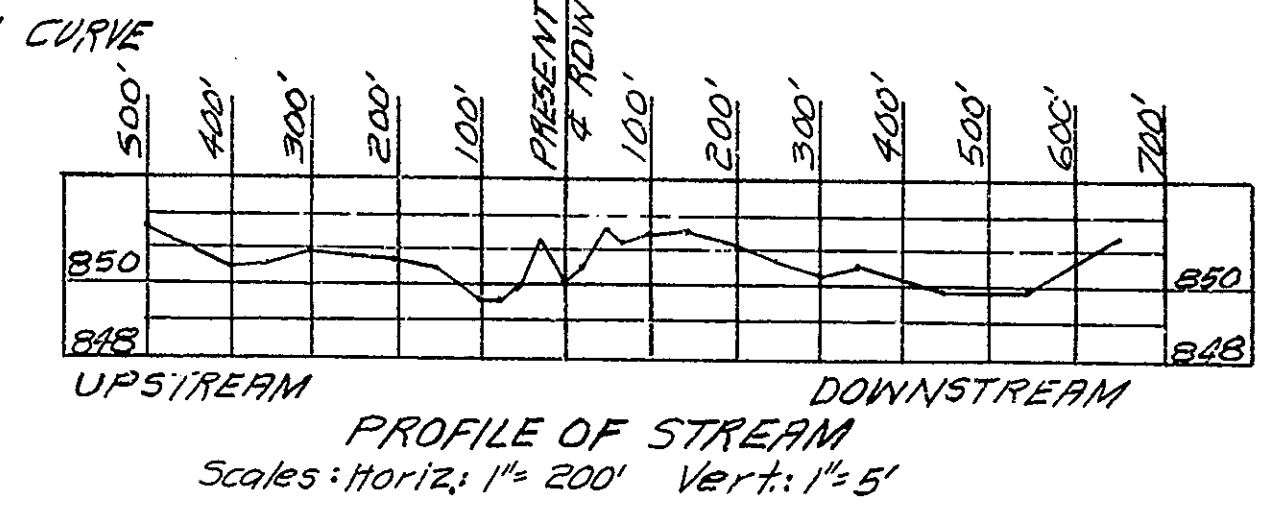
BRIDGES OVER 20' SPAN					
PUB. ROAD NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	ST-104A	1970	5	37

⊗ SPECIAL PAVED DITCH (to be paid for as Slope-wall.)
 See Std. M.82

UTILITY OWNERS
 P.W.P.-REMC Greensburg, Ind.
 Tel. P.-Summit Tel. Co.,
 Summit, Ind.

Denotes 18" Dumped Riprap. Concrete from present structure to be used as Dumped Riprap.

NOTE- Present Structure is a 10100' R.C. Arch, Square, Cl. Rulov. 17'-0" Built by the County about 1930.



EARTH WORK QUANTITIES

- Net Fill + 20% = 7172 cu yd
- Unclassified Excavation = 2347 cu yd
- Surplus Excavation = 210 cu yd
- Borrow = 4615 cu yd

Paper Relocation Line "PR" to be constructed.

LAYOUT
 CONT. PRESTRESSED REINF. CONC. I-BEAM BRIDGE
 3 SPANS-70'-7" x 70'-9" SQUARE 34'-0" RDWY.
 OVER LAUGHERY CREEK ON S.R. 48
INDIANA STATE HIGHWAY COMMISSION
 RIPLEY COUNTY

SCALE: -AS NOTED OCTOBER 3, 1969

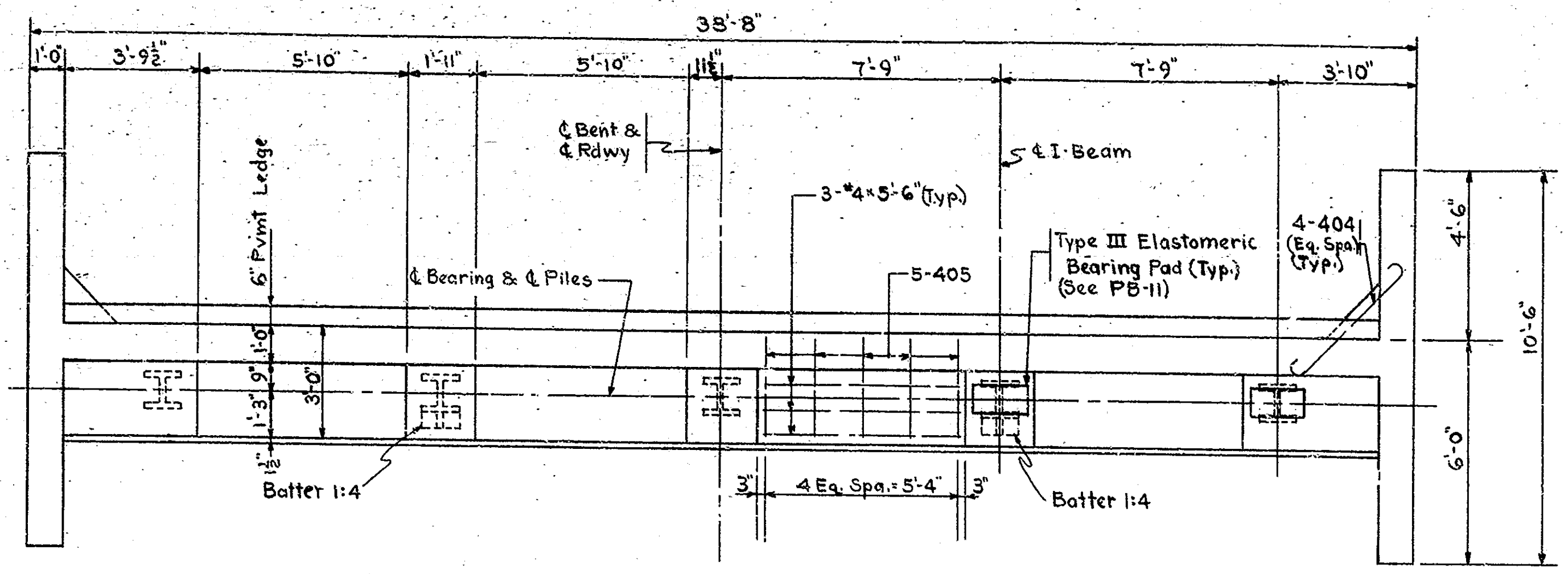
RECOMMENDED FOR APPROVAL: [Signature]

DRAWING: C1 OF 8
 PROJECT: ST-104A STATION: -102+30
 BRIDGE CONTRACT NO. B-8206
 BRIDGE FILE: -48-69-6012

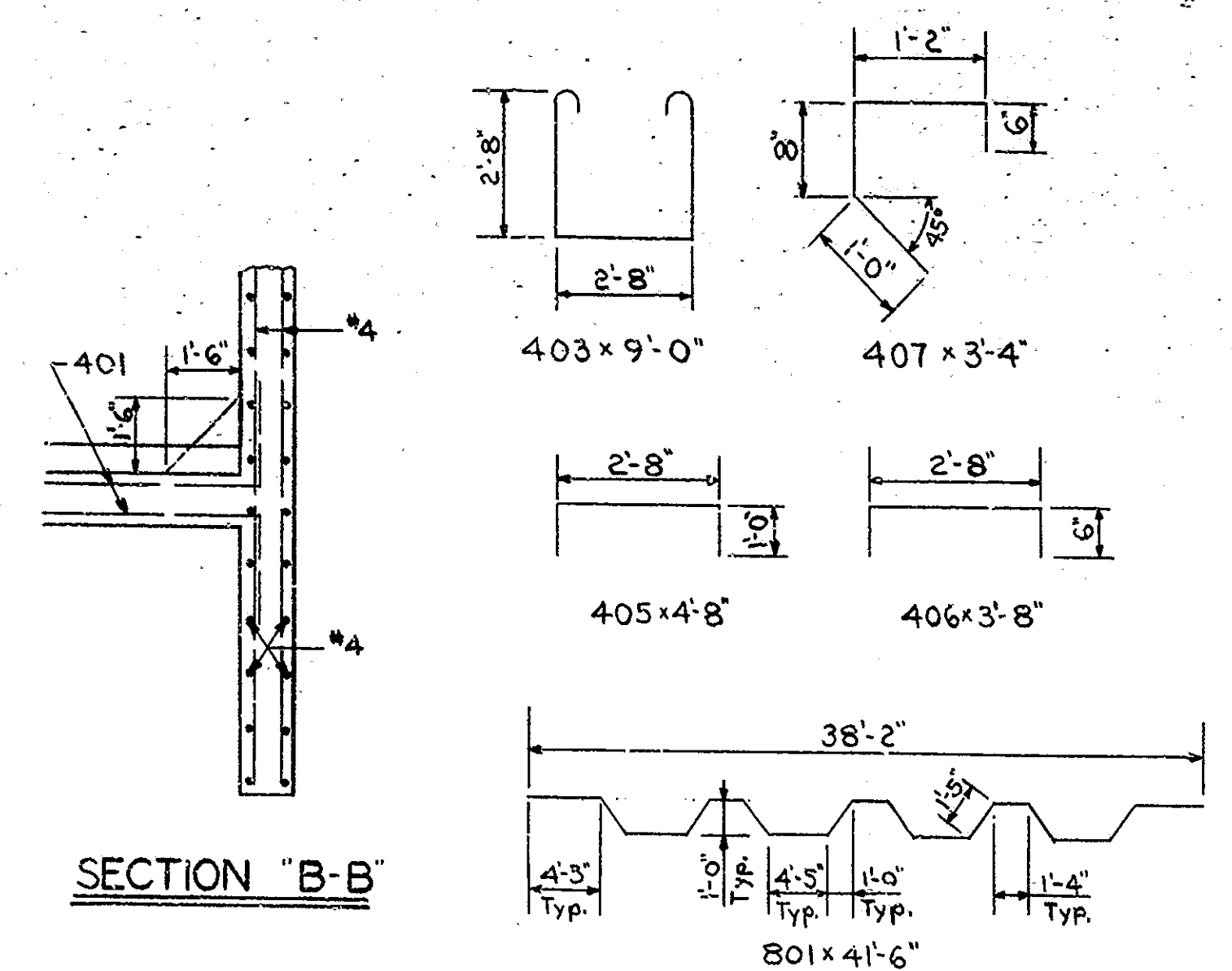
DRAWN: W.B.Z.	CK'D: W.H.W.
DESIGNED: CKD	
TRACED: CKD	

NOTE: FIELD NOTES, BOOK BR-243 Pp 1-31

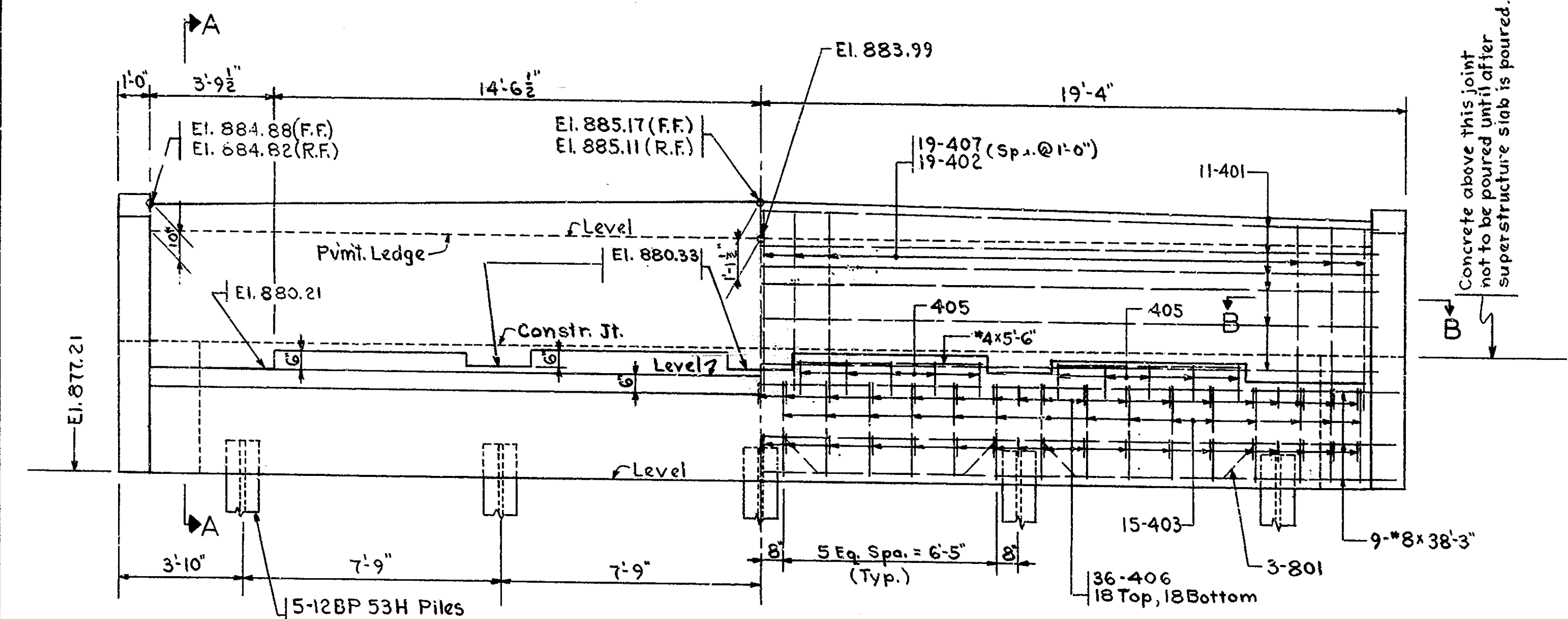
BRIDGES OVER 20' SPAN					
PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	ST-1104A	1970	7	37



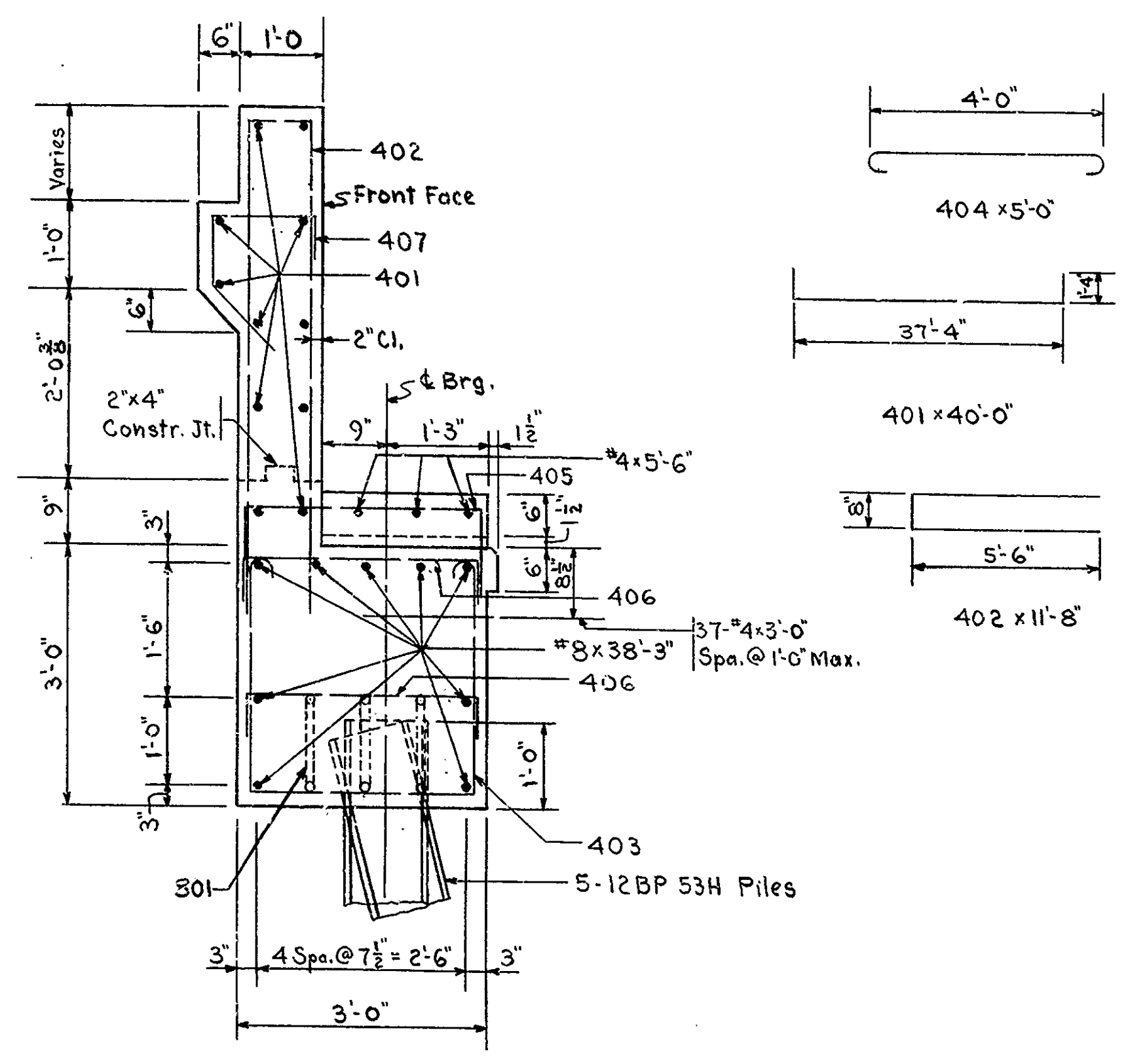
LEFT HALF SHOWING CONCRETE DIMENSIONS **CAP PLAN** RIGHT HALF SHOWING REINFORCING & BEAM LOCATION



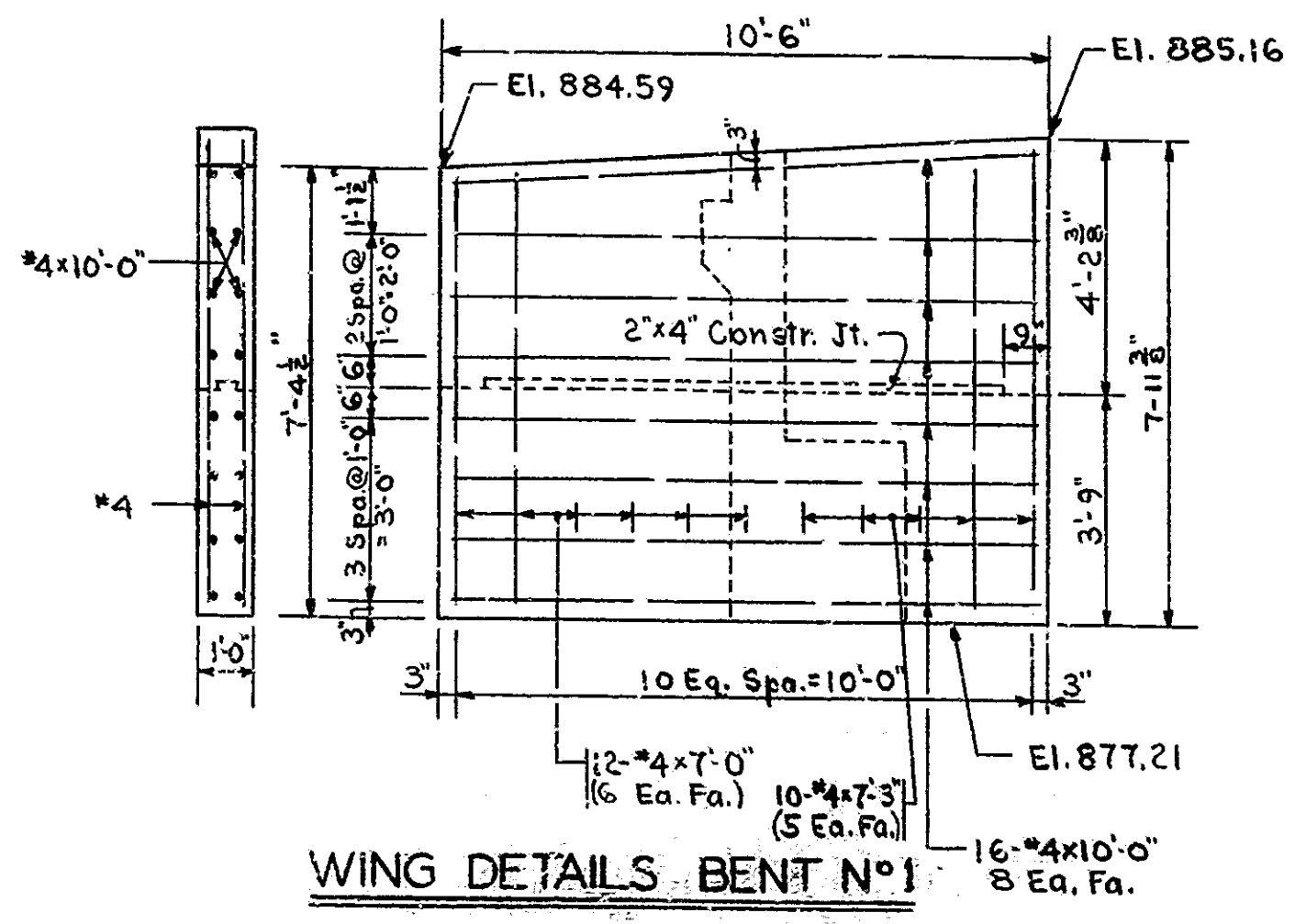
SECTION "B-B"



ELEVATION BENT No. 1



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



WING DETAILS BENT No. 1

(BENT No. 1)
BILL of MATERIALS

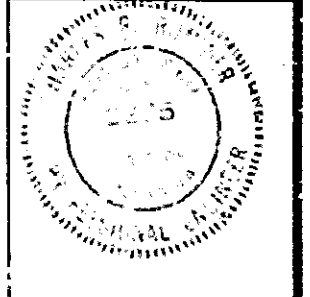
REINFORCING STEEL			
SIZE & MARK	NO. OF BARS	LENGTH	WEIGHT
#01	3	41'-6"	
#8	9	38'-3"	
Total #8			1252#
401	11	40'-0"	
402	37	11'-8"	
403	30	9'-0"	
404	8	5'-0"	
405	20	4'-8"	
406	70	3'-8"	
407	37	3'-4"	
#4	32	10'-0"	
#4	20	7'-3"	
#4	24	7'-0"	
#4	12	5'-6"	
#4	37	3'-0"	
Total #4			1647#
Total Steel			2899#
~ CONCRETE ~			
Class 'A' in Substructure:			
Cap Four			17.5 cys.
Mudwall Four			9.4 cys.
Total Class 'A'			26.9 cys.
~ MISCELLANEOUS ~			
5-12BP53 H Piles			@ 35'0" Ea. = 175 Lin.ft.
"B" Borrow for Str Backfill			21 cys.

BENT No. 1 DETAILS
INDIANA STATE HIGHWAY COMMISSION

SCALE: 3/8" = 1'-0" or AS NOTED OCTOBER 3, 1969

RECOMMENDED FOR APPROVAL: *Edmund J. ...*

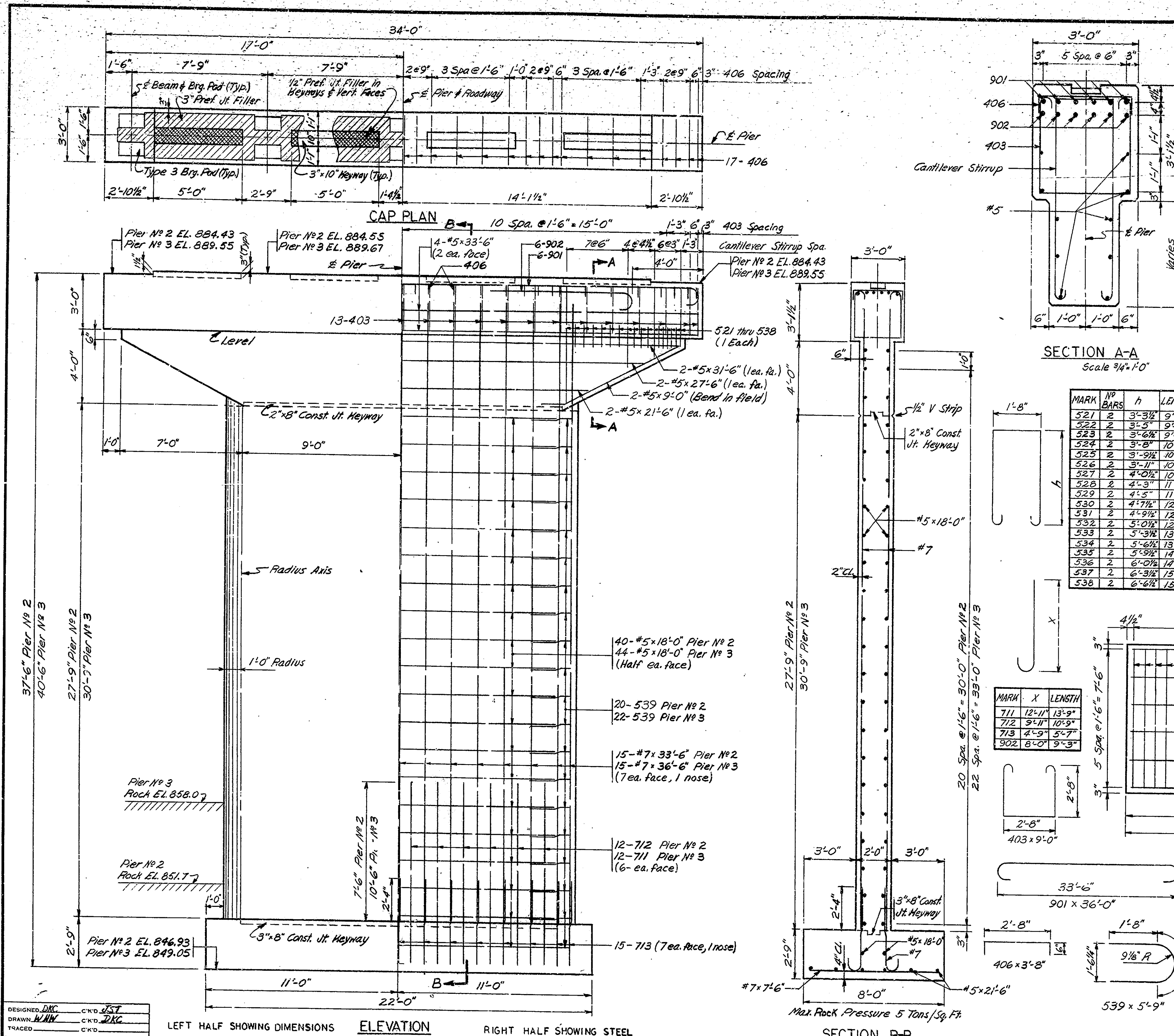
DRAWING: C3 OF 8
PROJECT: ST-1104 'A'
BRIDGE CONTRACT NO. B-8206
BRIDGE FILE: 48-69-6012



DESIGNED: DKC	CHKD: JST
DRAWN: ELM	CHKD: DKC
TRACED: ...	CHKD: ...

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

BRIDGES OVER 20' SPAN					
PUB. ROAD DIST. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND	ST 1104A	1970	8	37



**BILL OF MATERIALS
PIER NO 2**

REINFORCING STEEL			
SIZE/MARK	NO BARS	LENGTH	WEIGHT
901	6	36'-0"	
902	12	9'-3"	
TOTAL #9			1112#
712	24	10'-9"	
713	28	5'-7"	
#7	28	33'-6"	
#7	35	7'-6"	
TOTAL #7			3301#
521-538	2 ea.	219'-7"	
539	40	5'-9"	
#5	4	33'-6"	
#5	2	31'-6"	
#5	2	27'-6"	
#5	8	21'-6"	
#5	40	18'-0"	
#5	4	9'-0"	
TOTAL #5			1929#
403	25	9'-0"	
406	33	3'-8"	
TOTAL #4			231#
TOTAL STEEL			6573#
CONCRETE			
Class A in Substructure			
Cap to const. jt. 19.4 Cys.			
Class B above Fla. 40.2 Cys.			
Class B in Footing 17.9 Cys.			

**BILL OF MATERIALS
PIER NO 3**

REINFORCING STEEL			
SIZE/MARK	NO BARS	LENGTH	WEIGHT
901	6	36'-0"	
902	12	9'-3"	
TOTAL #9			1112#
711	24	13'-9"	
713	28	5'-7"	
#7	28	33'-6"	
#7	35	7'-6"	
TOTAL #7			3620#
521-538	2 ea.	219'-7"	
539	44	5'-9"	
#5	4	33'-6"	
#5	2	31'-6"	
#5	2	27'-6"	
#5	8	21'-6"	
#5	44	18'-0"	
#5	4	9'-0"	
TOTAL #5			2028#
403	25	9'-0"	
406	33	3'-8"	
TOTAL #4			231#
TOTAL STEEL			6991#
CONCRETE			
Class A in Substructure			
Cap to const. jt. 19.4 Cys.			
Class B above Fla. 44.6 Cys.			
Class B in Footing 17.9 Cys.			

**PIER NO 2 & 3 DETAILS
INDIANA STATE HIGHWAY COMMISSION**

SCALE: 3/8" = 1'-0" (Unless Noted)
 OCTOBER 3, 1969
 RECOMMENDED FOR APPROVAL: *[Signature]*
 DRAWING: C4 OF 8
 PROJECT: ST-1104 'A'
 BRIDGE CONTRACT NO. B-8206
 BRIDGE FILE: 48-69-6012

DESIGNED: DRC
 DRAWN: WNW
 TRACED: []
 CKD: JST
 CKD: DRC
 CKD: []

LEFT HALF SHOWING DIMENSIONS ELEVATION RIGHT HALF SHOWING STEEL

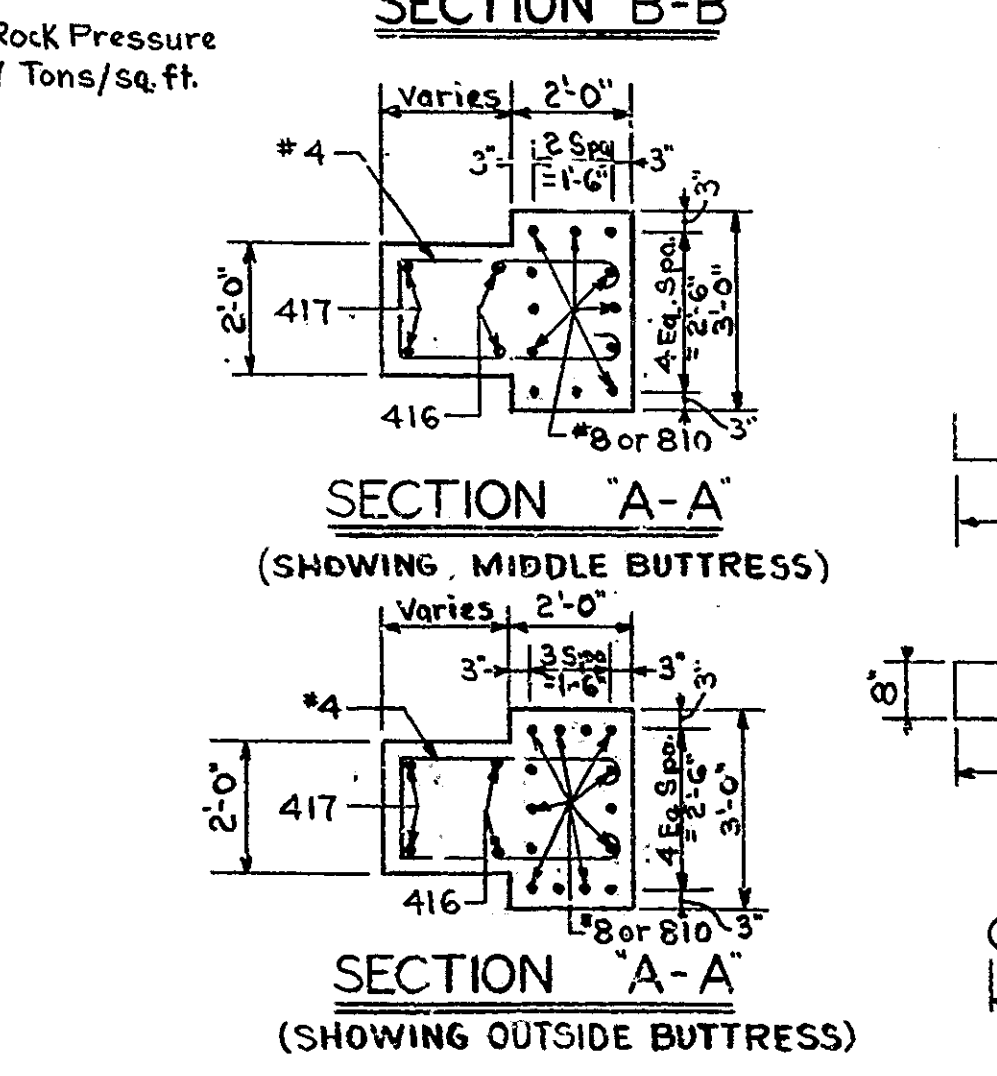
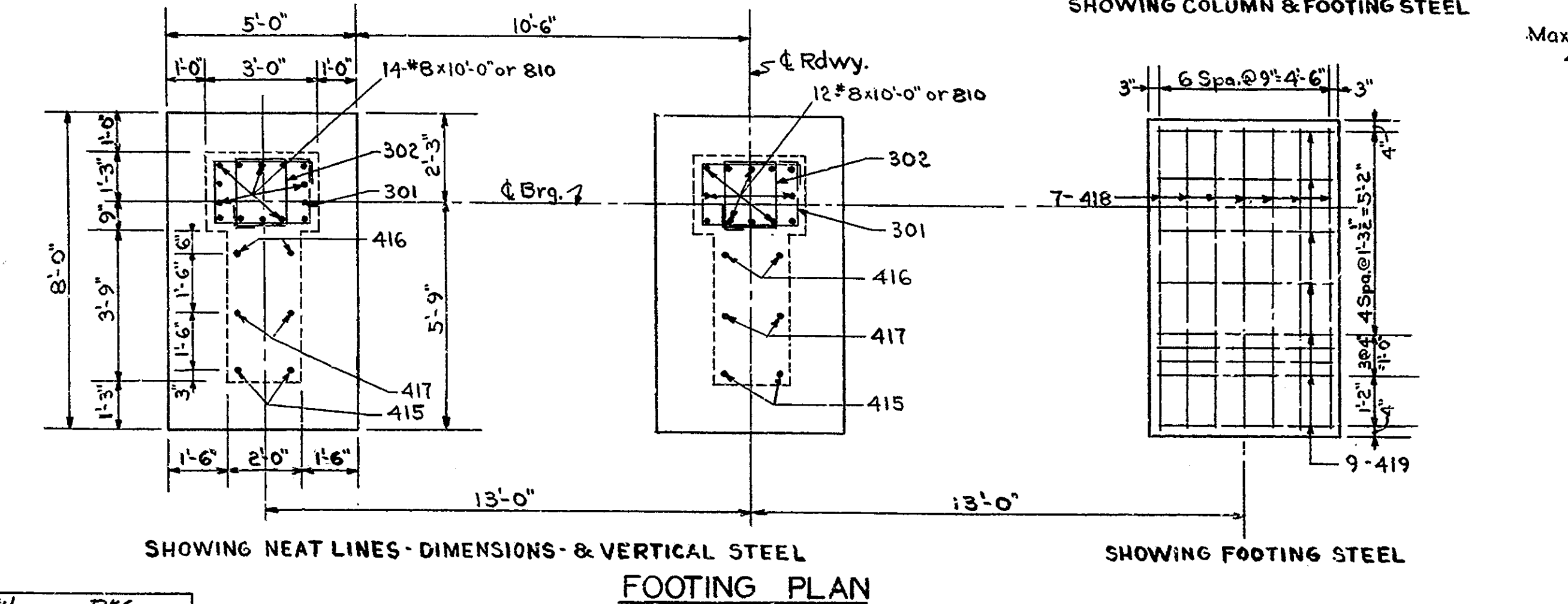
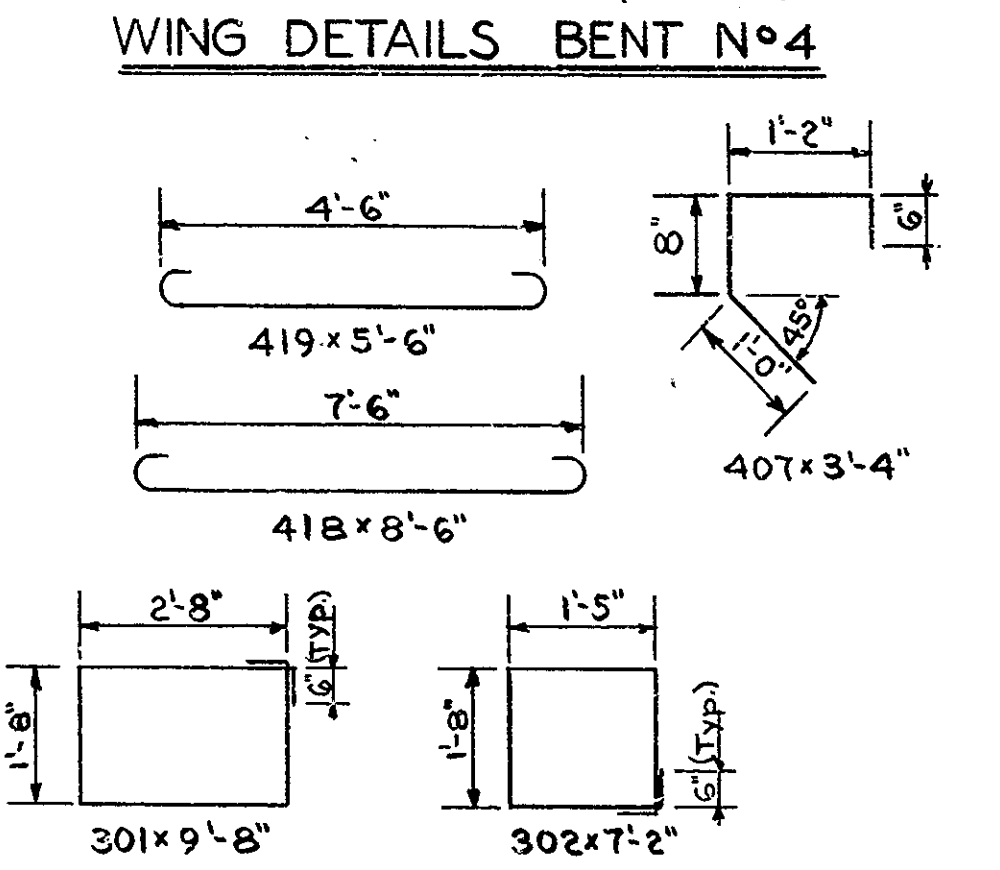
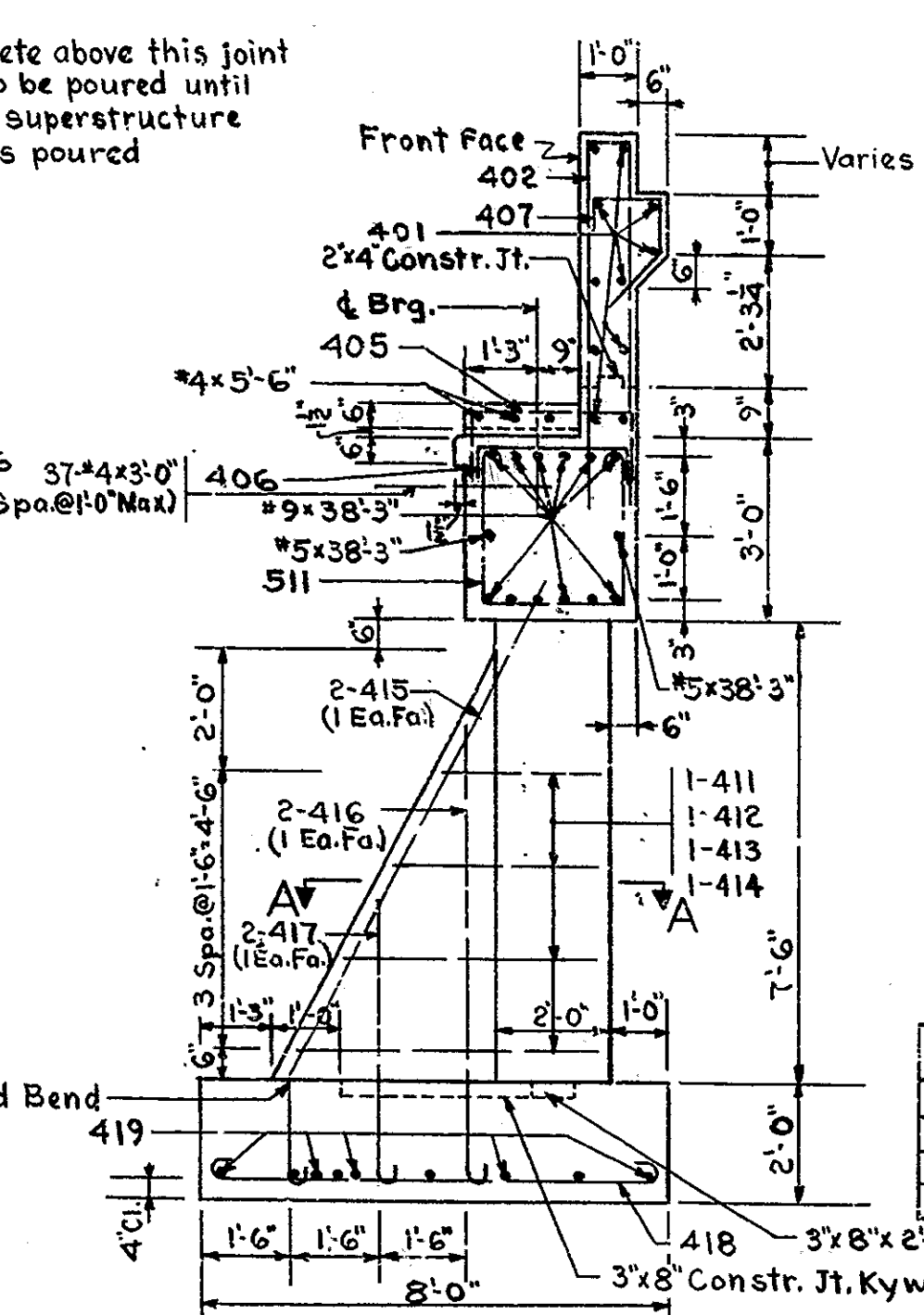
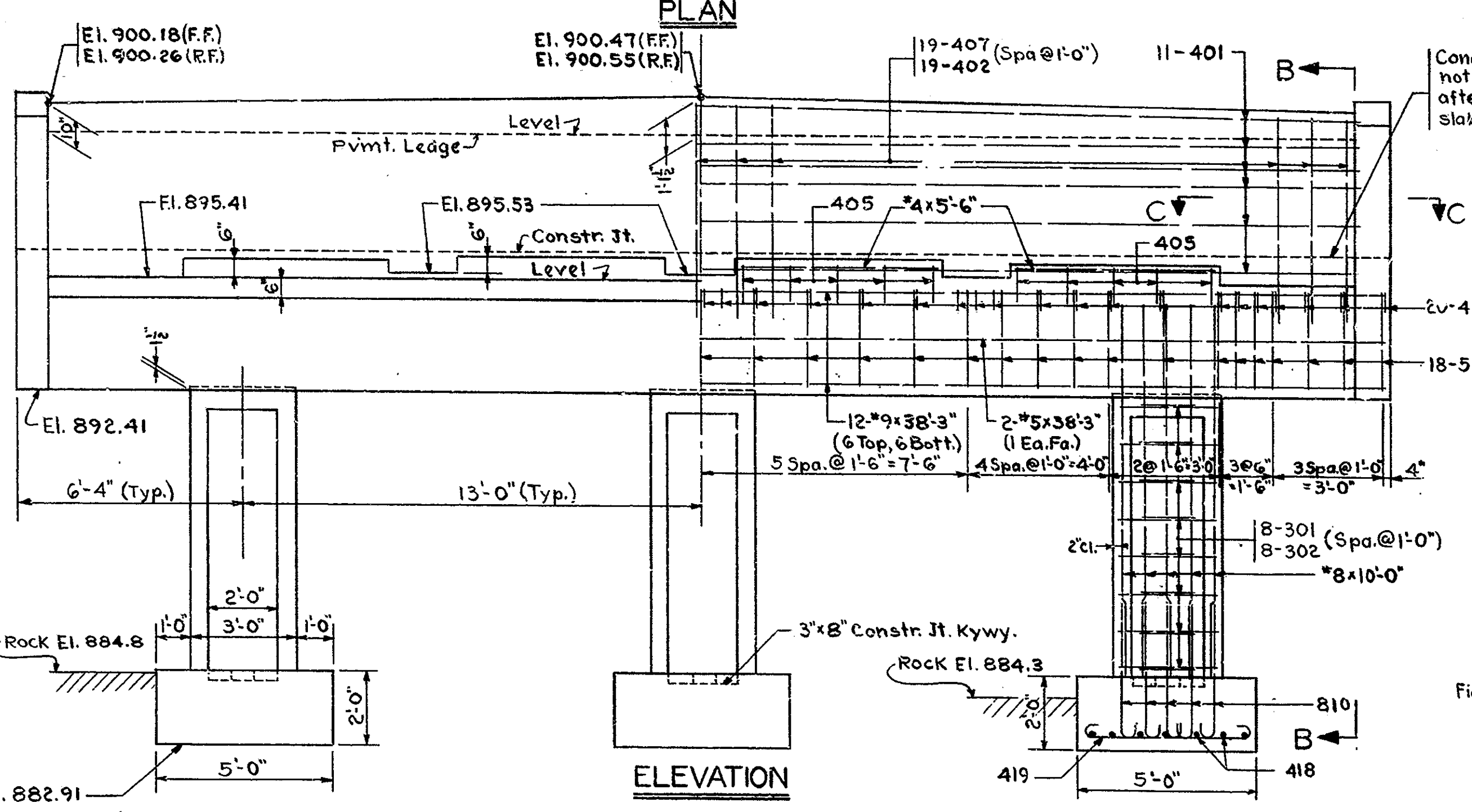
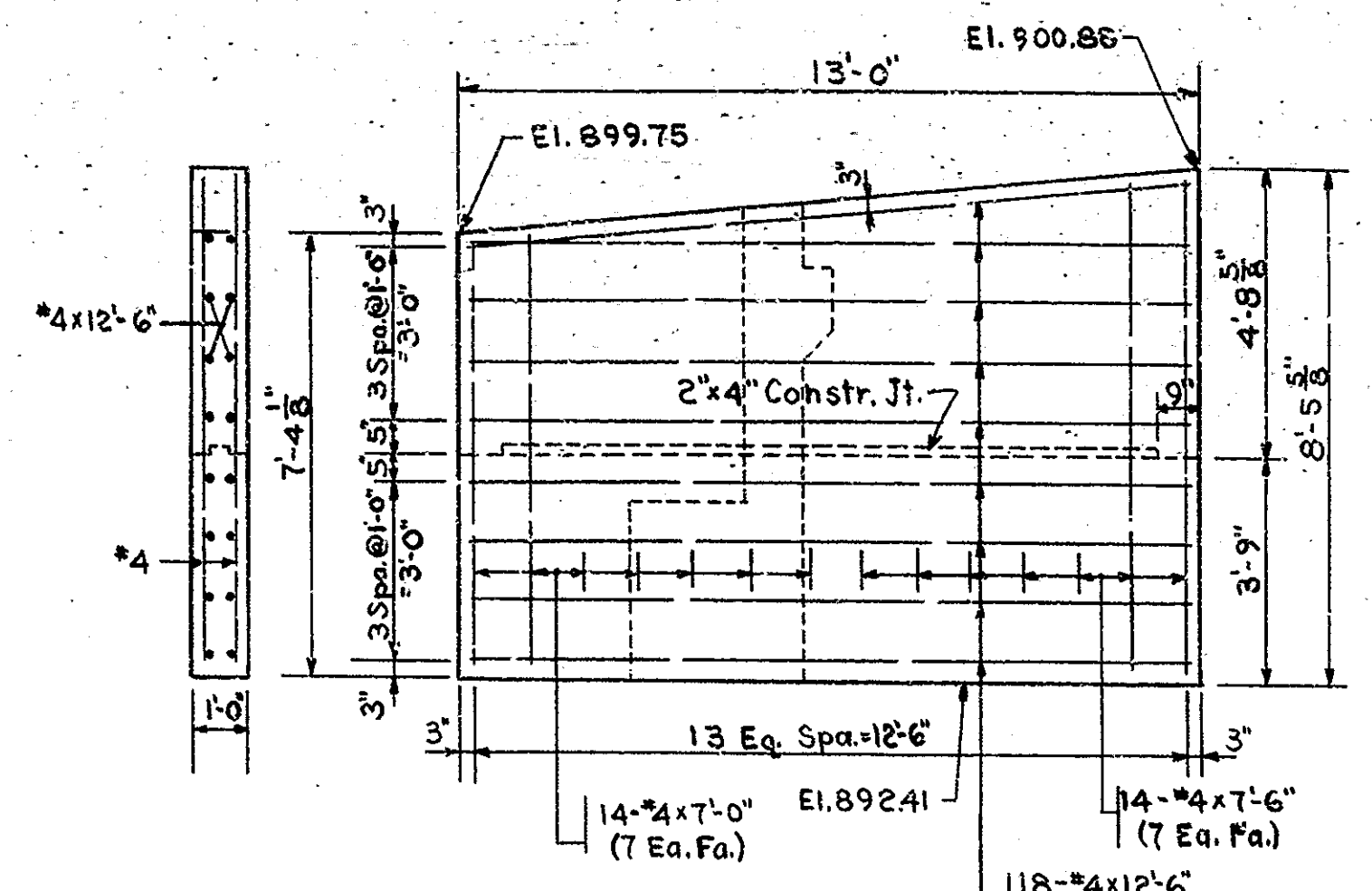
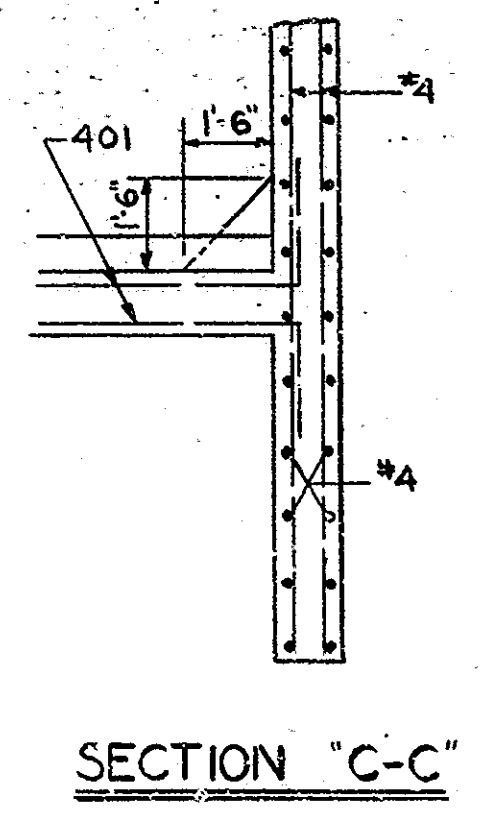
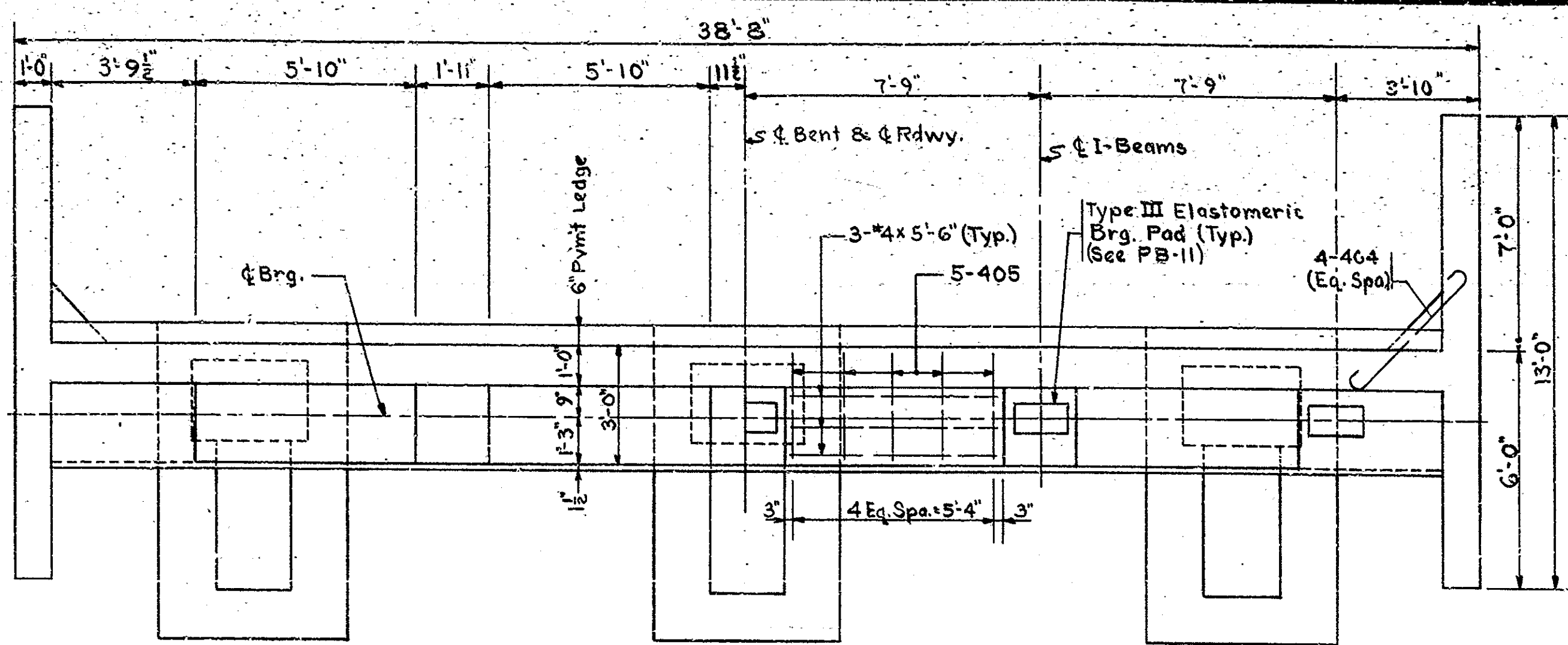
SECTION B-B

See Br. Std. C₁ for Reinforcing Bar Notes

BRIDGES OVER 20' SPAN					
PROJ. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	ST 1104 "A"	1970	9	37

**BILL OF MATERIALS
BENT NO 4**

REINFORCING STEEL			
SIZE & MARK	No. of Bars	LENGTH	WEIGHT
#9	12	38'-3"	1,561*
#10	40	5'-5"	
#8	40	10'-0"	1,647*
Total #8			
#11	35	9'-2"	
#5	2	38'-3"	
Total #5			
401	11	40'-0"	
402	37	11'-8"	
404	8	5'-0"	
405	20	4'-8"	
406	39	3'-8"	
407	37	3'-4"	
411	3	13'-0"	
412	3	11'-4"	
413	3	9'-8"	
414	3	8'-2"	
415	6	10'-9"	
416	6	8'-0"	
417	6	5'-9"	
418	21	5'-6"	
419	36	12'-0"	
#4	28	7'-0"	
#4	28	7'-0"	
#4	12	5'-6"	
#4	37	3'-0"	
Total #4			
301	24	9'-8"	
302	24	7'-8"	
Total #3			
Total Steel 5,712*			
~ CONCRETE ~			
Class 'B' in Footing 8.9 cys			
Class 'B' Above Footing 7.9 cys			
Class 'A' in Substructure:			
Cap 18.6 cys			
Above Constr. Jt. 10.6 cys			
Total Class 'A' 29.2 cys			
~ MISCELLANEOUS ~			
'B' Borrow for Struct. Backfill 81 cys			

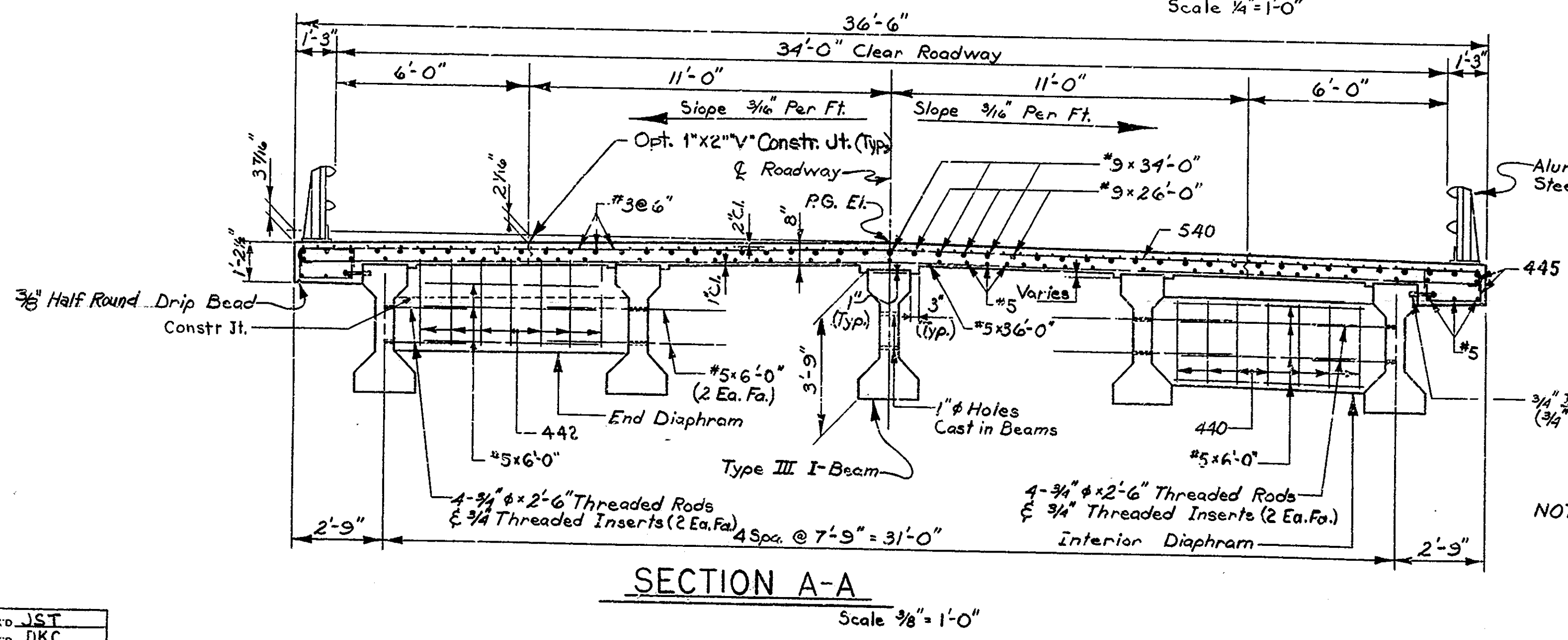
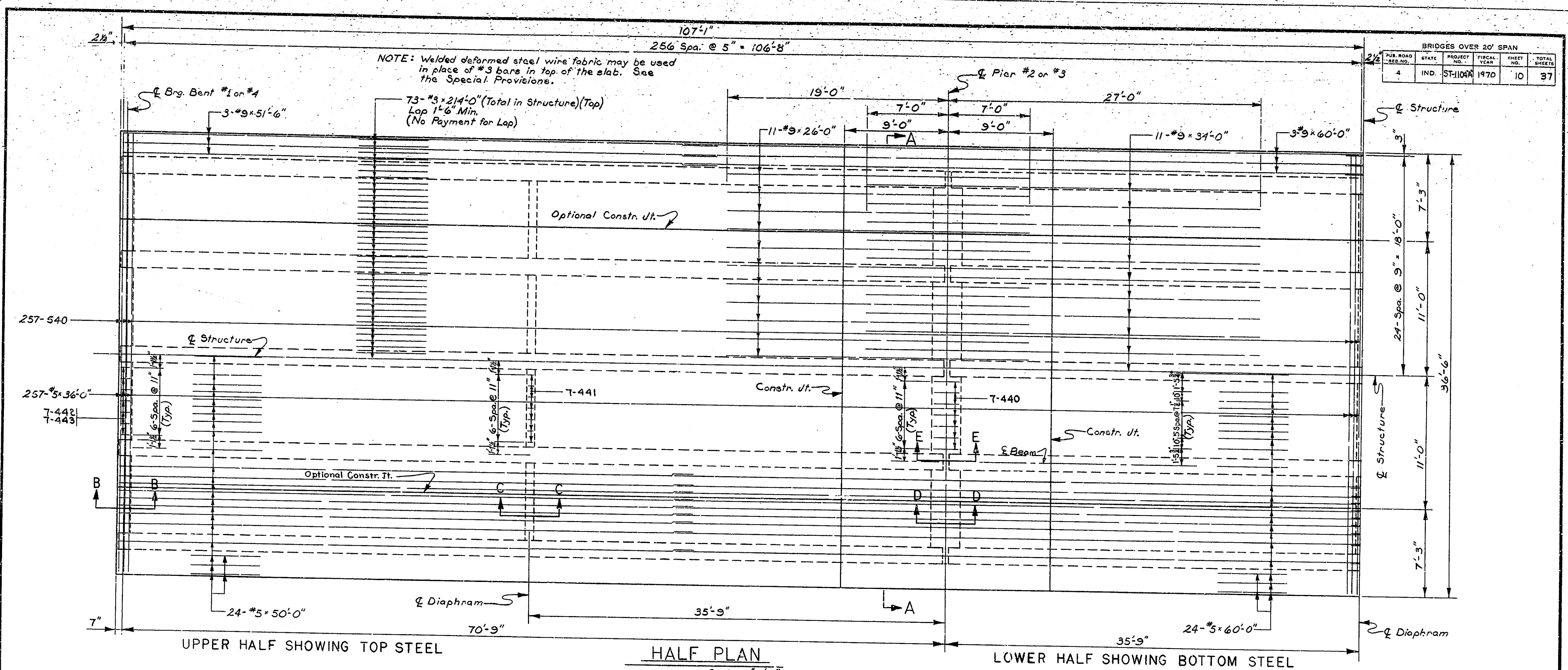


BUTTRESS BENT NO 4 DETAILS
INDIANA STATE HIGHWAY COMMISSION
 SCALE: 3/8" = 1'-0"
 OCTOBER 3, 1969
 RECOMMENDED FOR APPROVAL: *Chalmers*
 DRAWING: C5 OF B
 PROJECT: ST 1104 "A"
 BRIDGE CONTRACT NO. B-3206
 BRIDGE FILE: 48-69-6012

DESIGNED: *WHW* CKD: *DKC*
 DRAWN: *E.L.M.* CKD: *WHW*
 TRACED: CKD

See Br. Std. C, for Reinforcing Bar Notes

BRIDGES OVER 20' SPAN				
FILE NO.	STATE	PROJECT	FISCAL YEAR	TOTAL SHEETS
4	IND.	ST-1104A	1970	10
				37



DESIGN DATA

Reinforced Concrete:

- Unit Stresses ~ $f_s = 20,000$ psi, $f_c = 1200$ psi.
- Live Load ~ HS20-44 with impact and distribution of loads in accordance with 1965 A.A.S.H.O.
- Dead Load ~ Increased 35 psf. of roadway width for future wearing surface. Slab designed with 1" wearing surface.

SUPERSTRUCTURE DETAILS

INDIANA STATE HIGHWAY COMMISSION

SCALE: AS NOTED

OCTOBER 3, 1969

RECOMMENDED FOR APPROVAL: *Ch. H. ...*

DRAWING: C6 OF 8

PROJECT: ST-1104 "A"

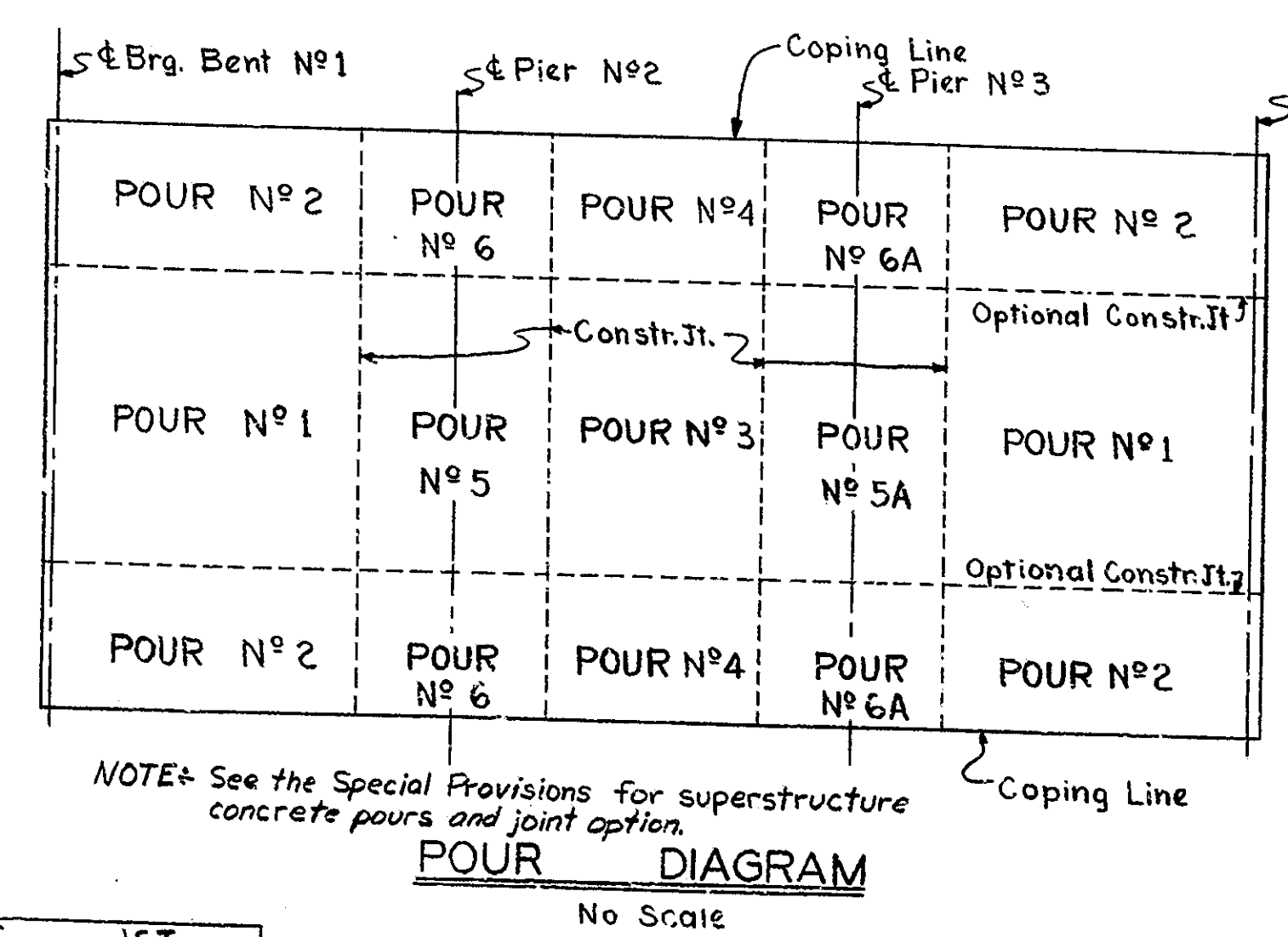
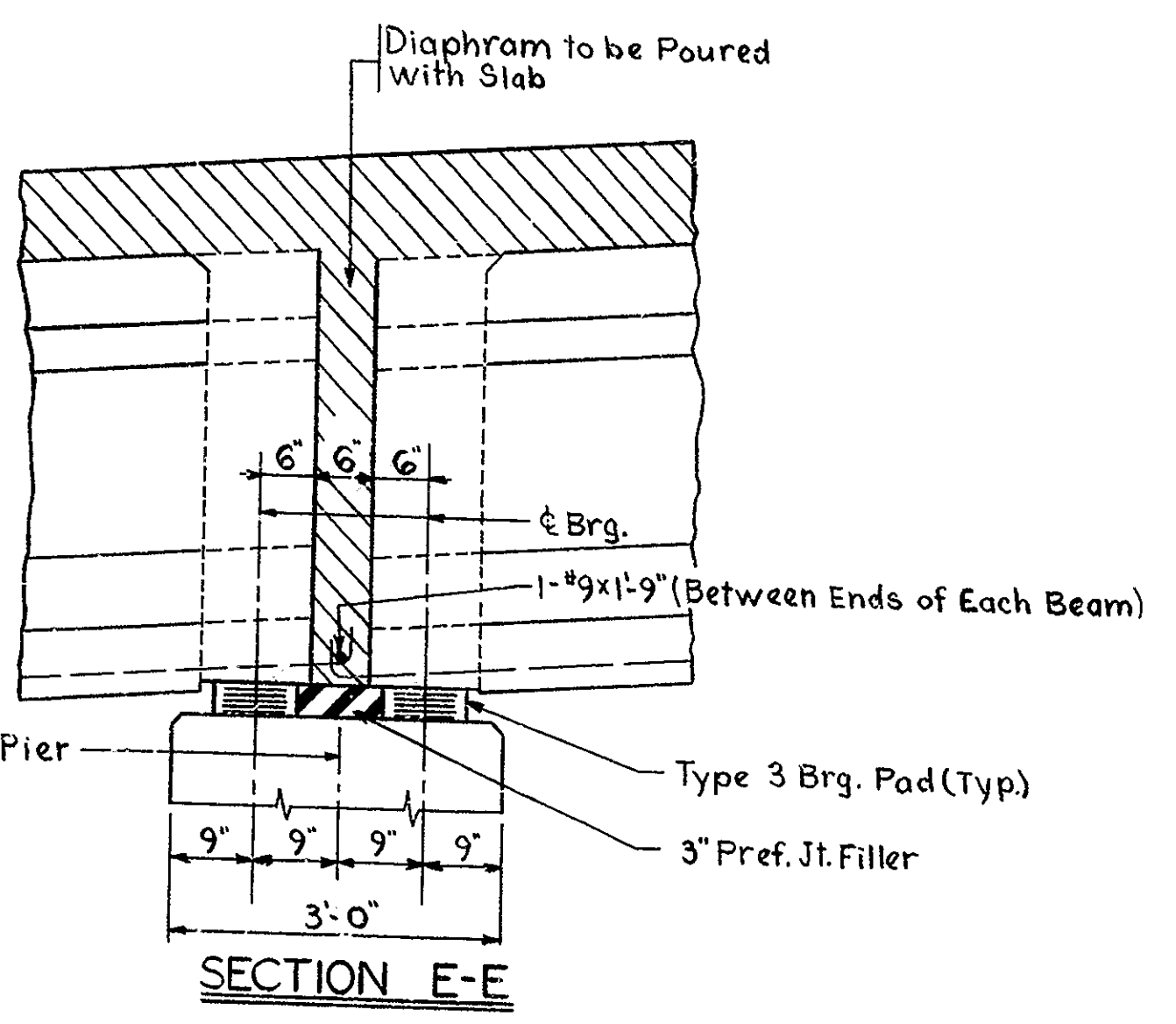
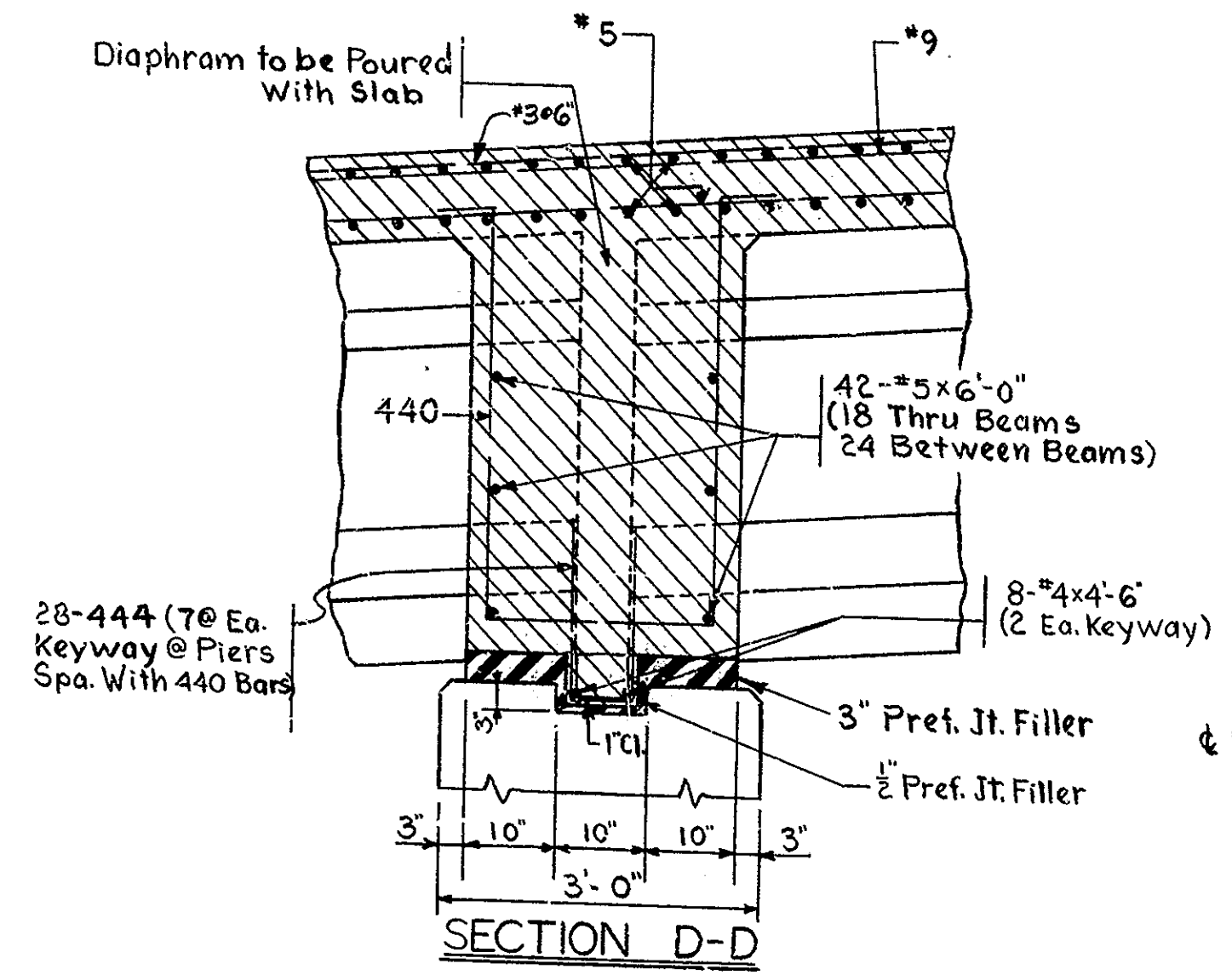
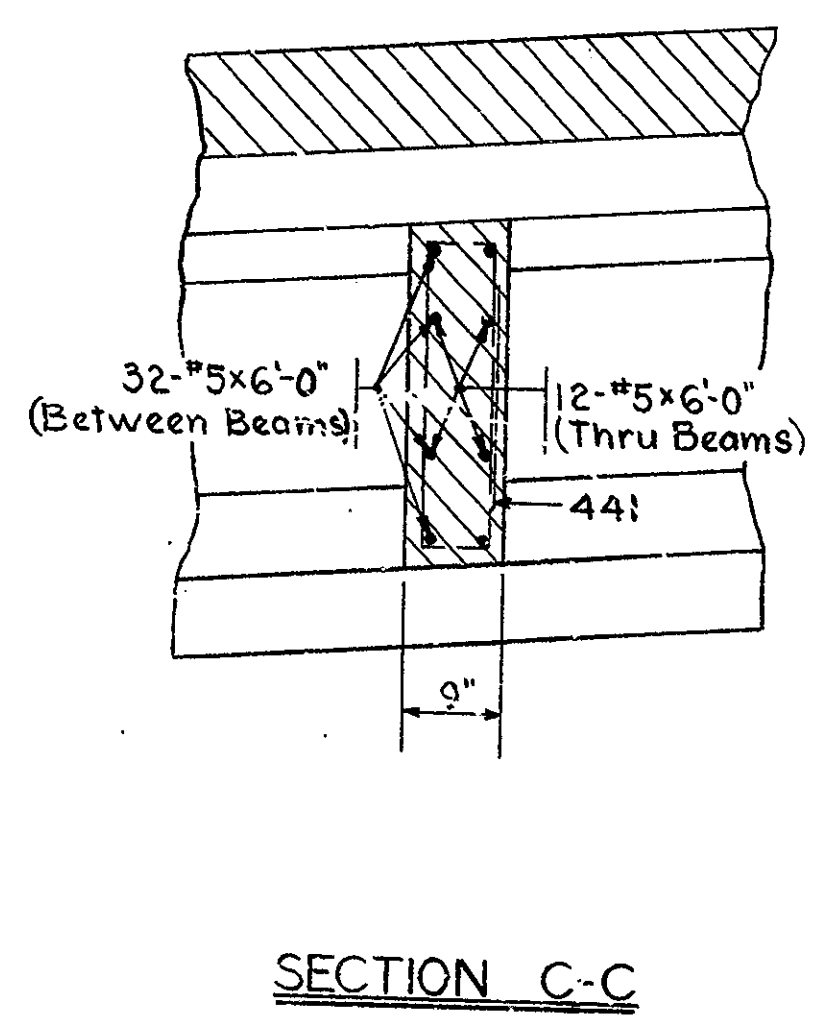
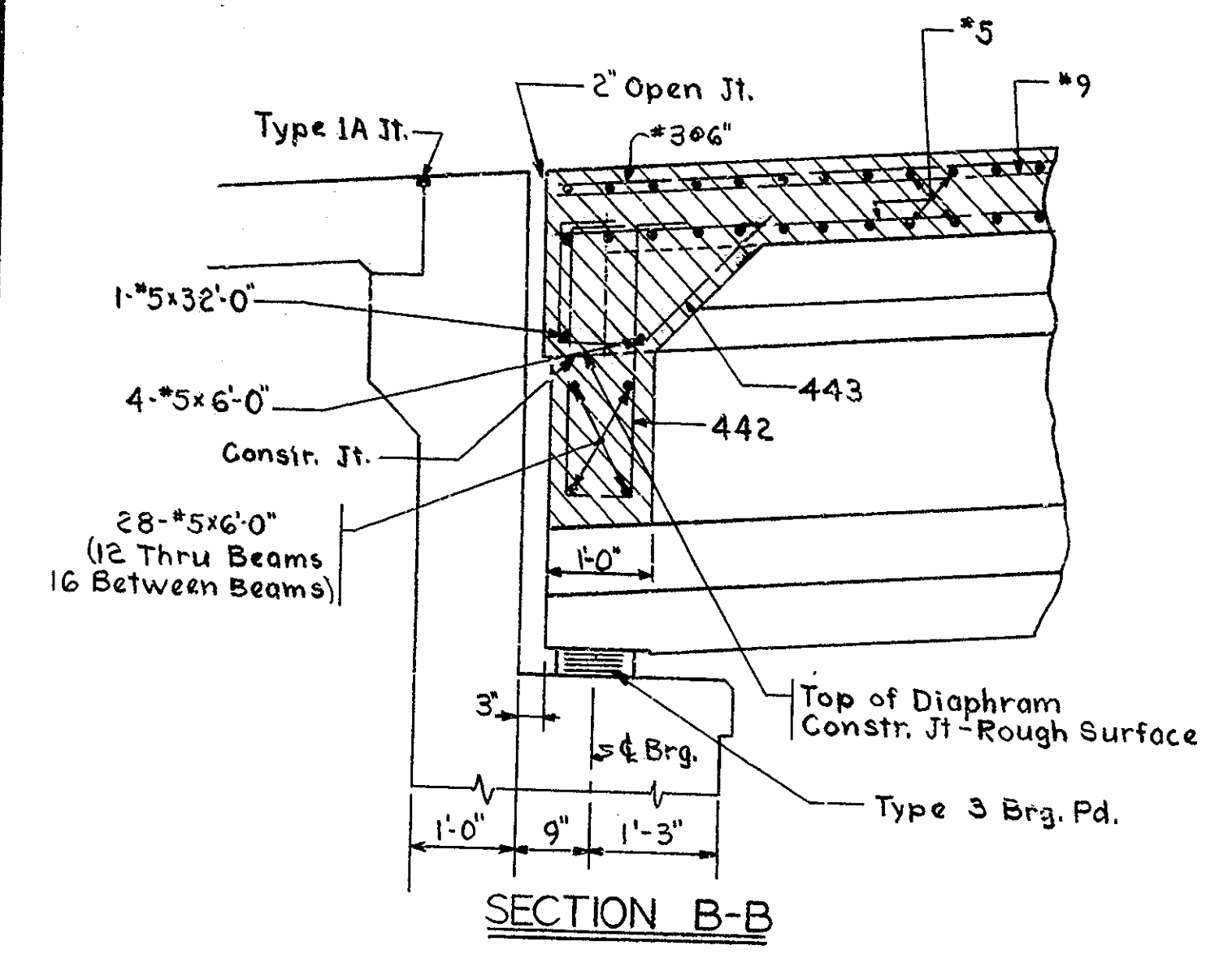
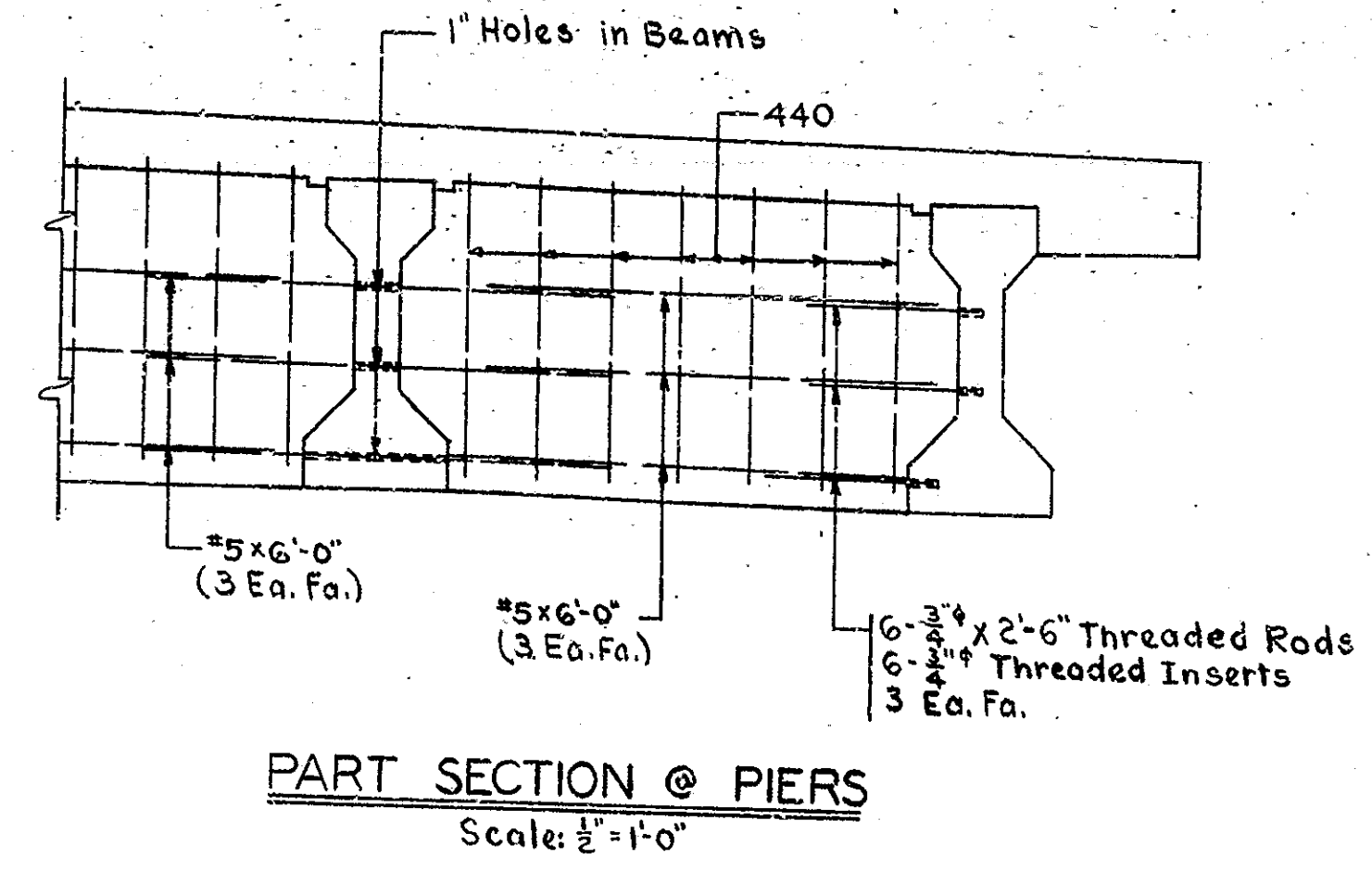
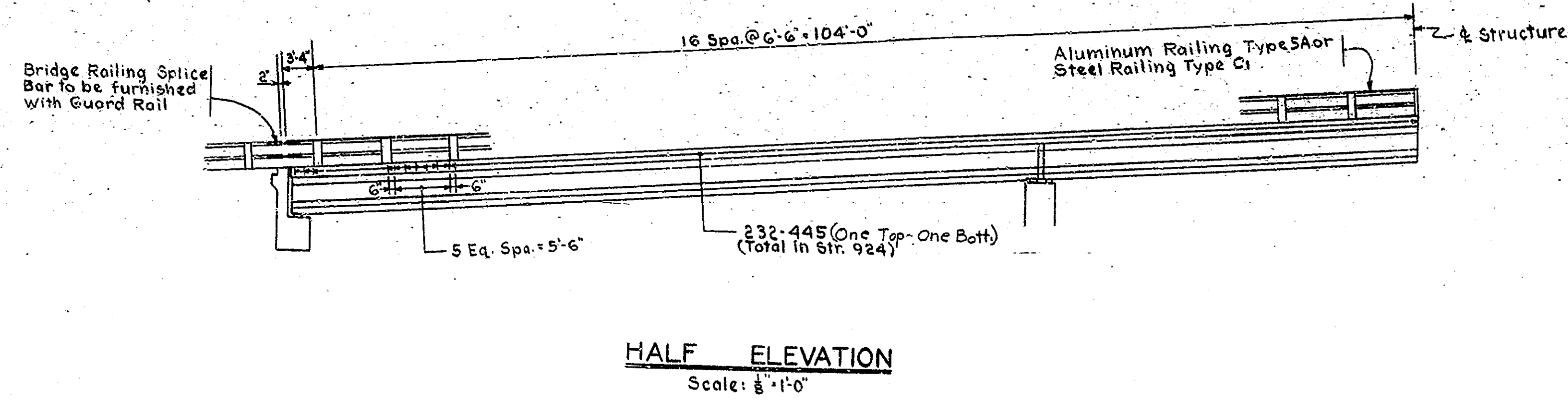
BRIDGE CONTRACT NO. B-8206

BRIDGE FILE: 48-69-6012

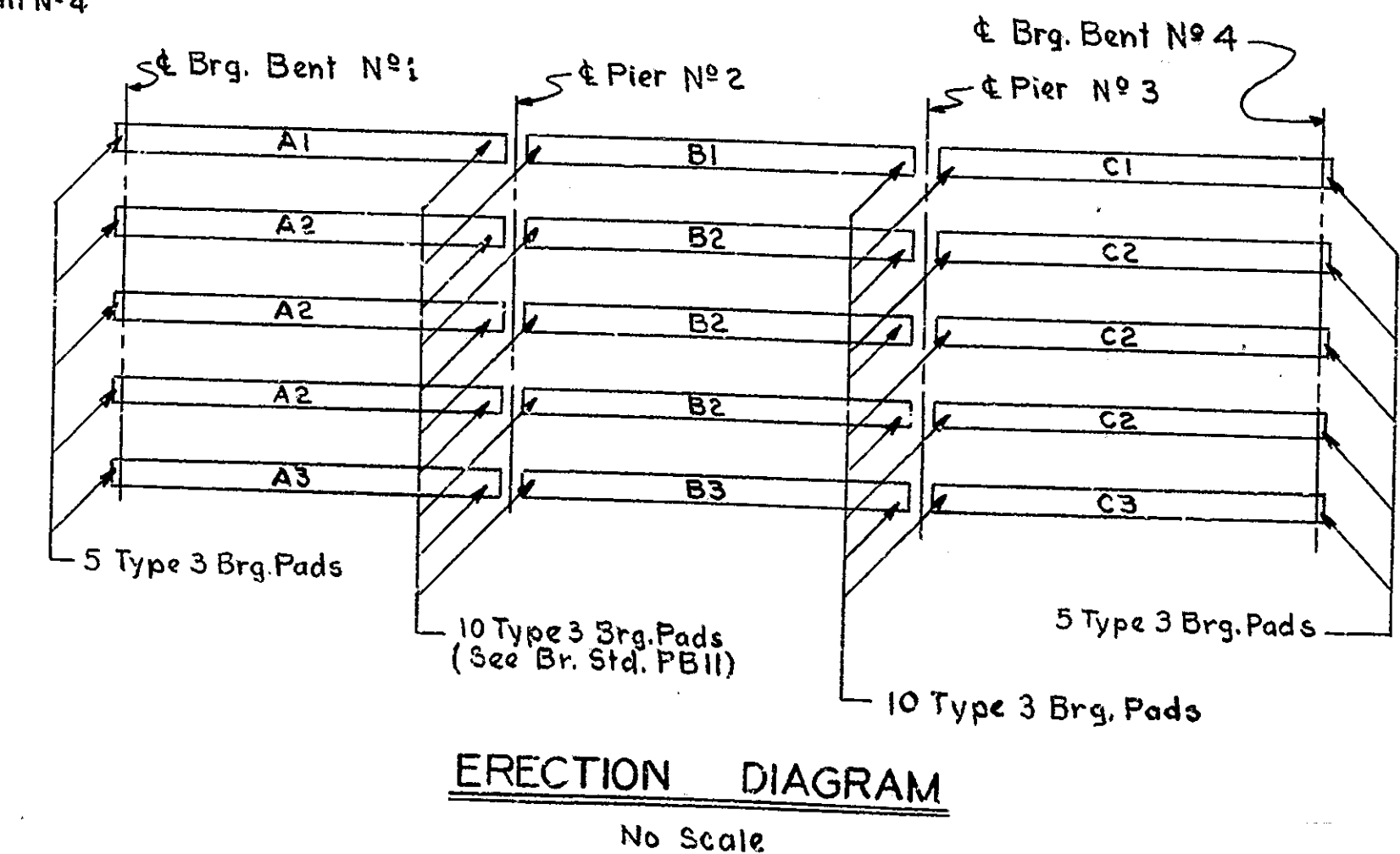
DESIGNED DKC	C.K.D. JST
DRAWN DRW	C.K.D. DKC
TRACED	C.K.D.

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

BRIDGES OVER 20' SPAN					
PUR ROAD REG. NO.	STATE	PROJECT I. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	ST-1104A	1970	11	37



NOTE: See the Special Provisions for superstructure concrete pours and joint option.



NOTE: See Drawg. C6 for location of Sections B-B, C-C, D-D, & E-E.

SUPERSTRUCTURE DETAILS
INDIANA STATE HIGHWAY COMMISSION

SCALE: 3/4" = 1'-0" UNLESS NOTED
OCTOBER 3, 1969

RECOMMENDED FOR APPROVAL: *[Signature]*

DRAWING: C7 OF 8
PROJECT: ST-1104 "A"
BRIDGE CONTRACT NO. B-8206
BRIDGE FILE: 48-69-6012

DESIGNED: DKC	CK'D: JST
DRAWN: ELM, HD, DKC	CK'D: DKC
TRACED:	CK'D:

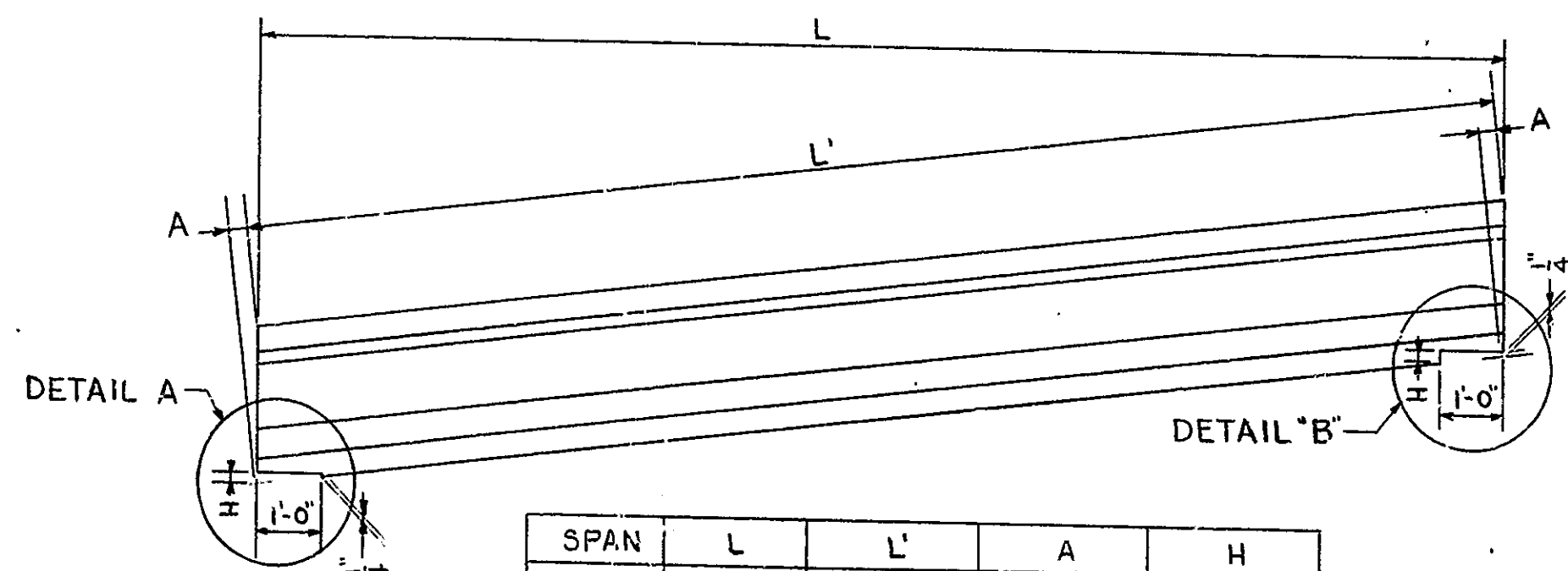
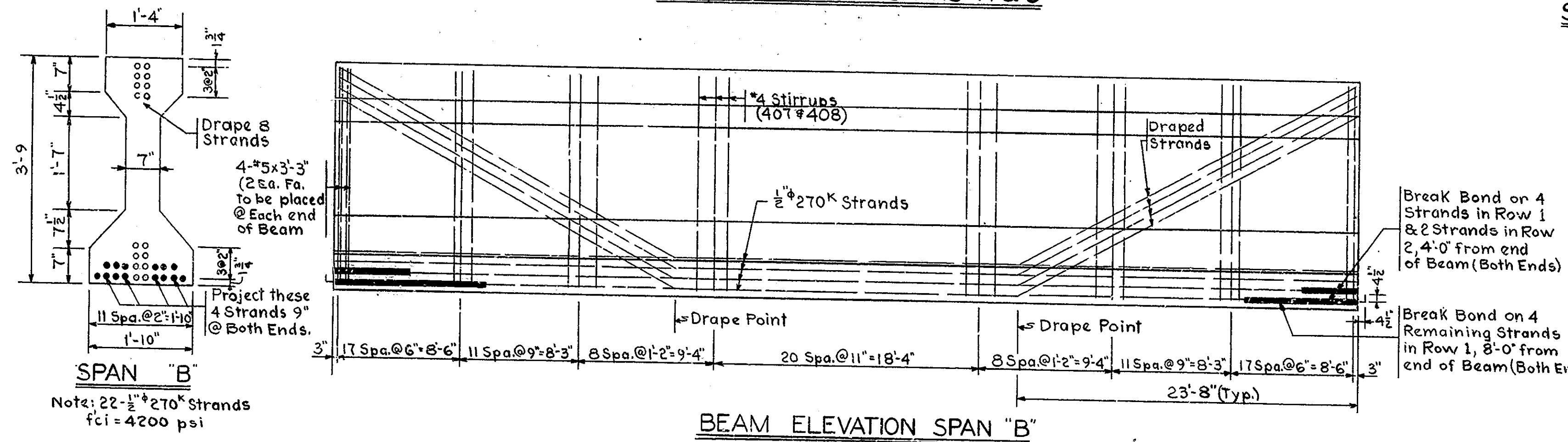
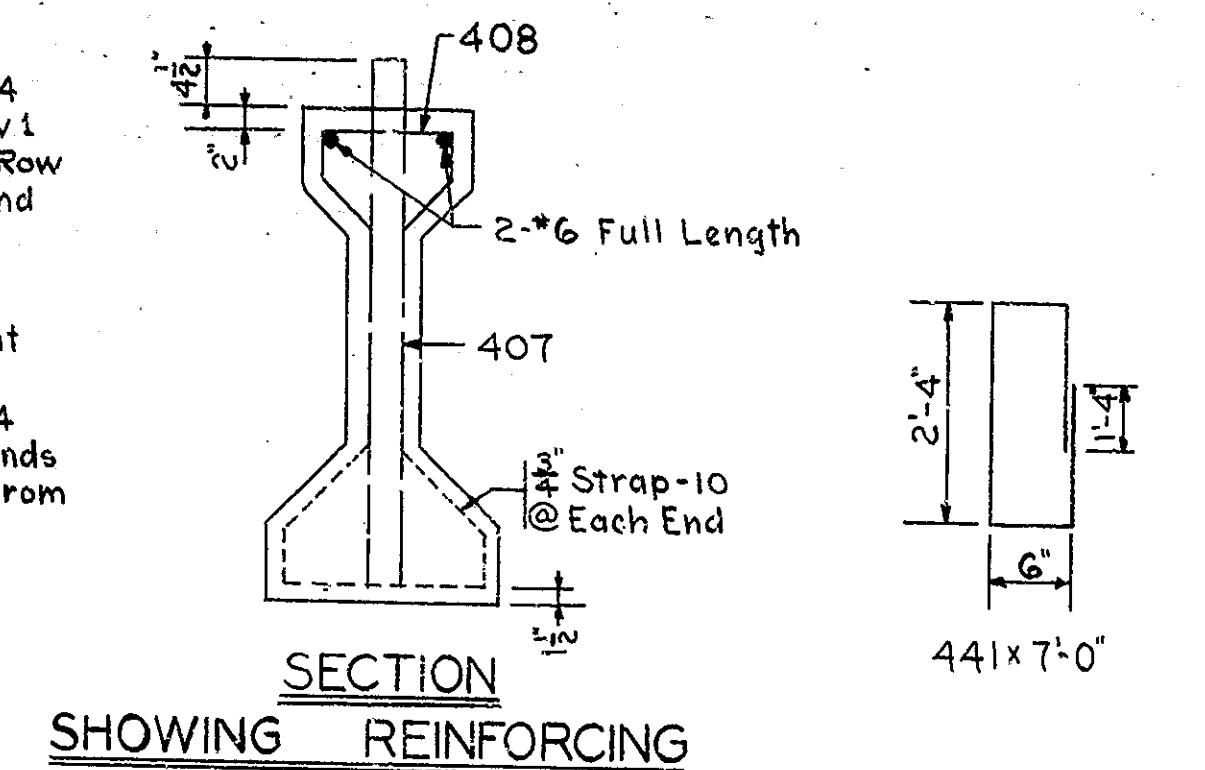
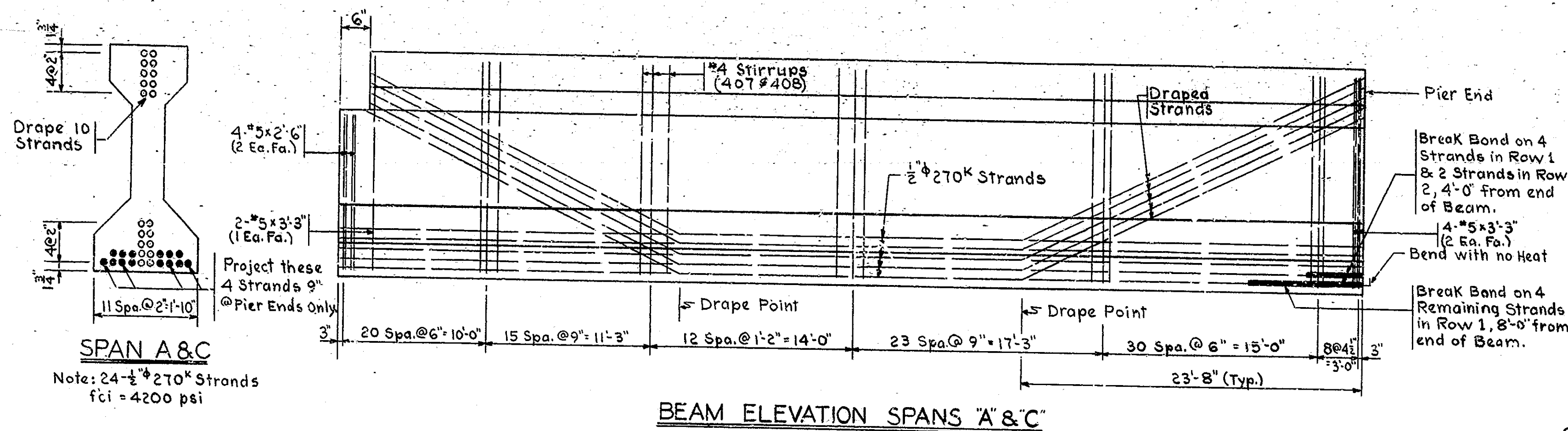
See Br. Std. C1 for Reinf. Bar Notes.



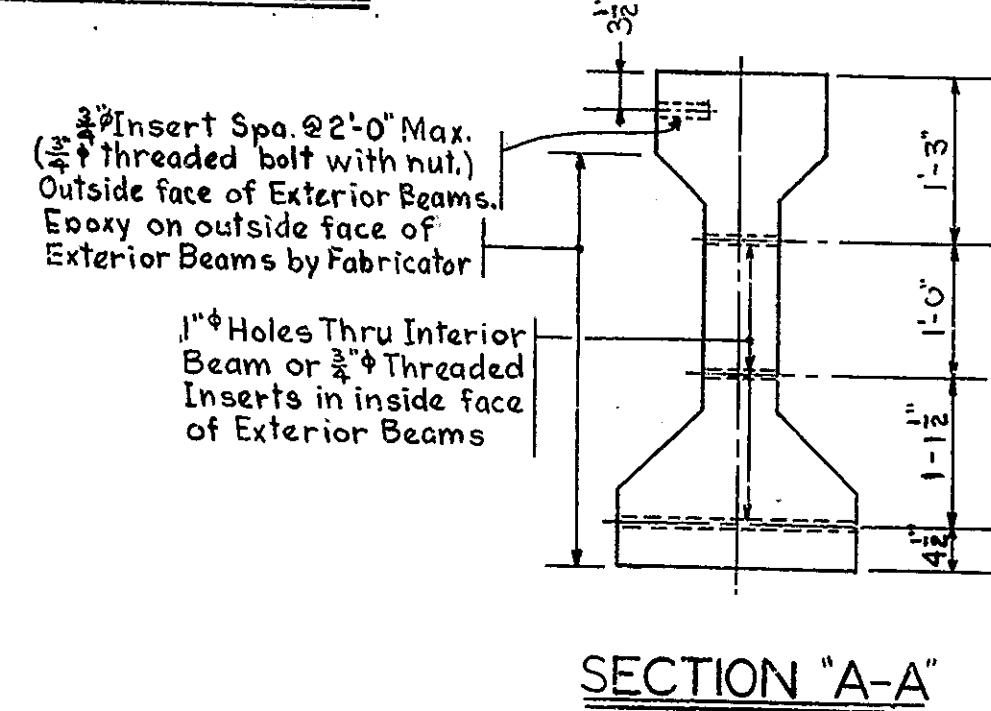
BRIDGES OVER 20' SPAN					
PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	ST-1104A	1970	12	37

BILL OF MATERIALS

REINFORCING STEEL			
SIZE & MARK	No of BARS	LENGTH	WEIGHT
#9	6	60'-0"	
#9	12	51'-6"	
#9	42	34'-0"	
#9	44	26'-0"	
#9	10	1'-9"	
TOTAL #9			12,130#
#540	514	37'-2"	
#5	94	60'-0"	
#5	94	50'-0"	
#5	514	36'-0"	
#5	2	32'-0"	
#5	280	6'-0"	
TOTAL #5			51,828#
#440	56	10'-8"	
#441	84	7'-0"	
#442	56	6'-10"	
#443	56	3'-10"	
#444	56	3'-6"	
#445	924	2'-8"	
#4	16	4'-6"	
TOTAL #4			3,016#
#3	73	214'-0"	5,874#
TOTAL STEEL			72,848#
~ CONCRETE ~			
Class 'A' in Superstructure:			
Pour No 1	2 @ 36.5	73.0 C.Y.	
Pour No 2	4 @ 14.5	58.0 C.Y.	
Pour No 3	1 @ 30.2	30.2 C.Y.	
Pour No 4	2 @ 12.2	24.4 C.Y.	
Pour No 5	1 @ 18.4	18.4 C.Y.	
Pour No 5A	1 @ 18.4	18.4 C.Y.	
Pour No 6	2 @ 5.6	11.2 C.Y.	
Pour No 6A	2 @ 5.6	11.2 C.Y.	
Interior Diaphragms		6.0 C.Y.	
End Bent Diaphragms		3.4 C.Y.	
Total Class 'A'		254.2 C.Y.	
MISCELLANEOUS			
Railing Type 540rC1		429.1 LF	
15(71'-0") x 4" Type III-I Beams			



SPAN	L	L'	A	H
A	71'-0"	71'-1 1/2"	2 1/16"	1"
B	71'-0"	71'-2 1/4"	3 3/4"	1 1/8"
C	71'-0"	71'-3"	3 3/4"	1 1/4"



DESIGN DATA

Prestressed Beams:
All beams shall be Type III as shown on Br. Std. PB3
fci = 4200 psi.

SPAN 'A' & 'C'
Computed beam camber as erected = +1.2004"
Dead load deflection of beam caused by slab and Diaphragm = -0.8474"
Residual beam camber with slab in place = +0.3530"

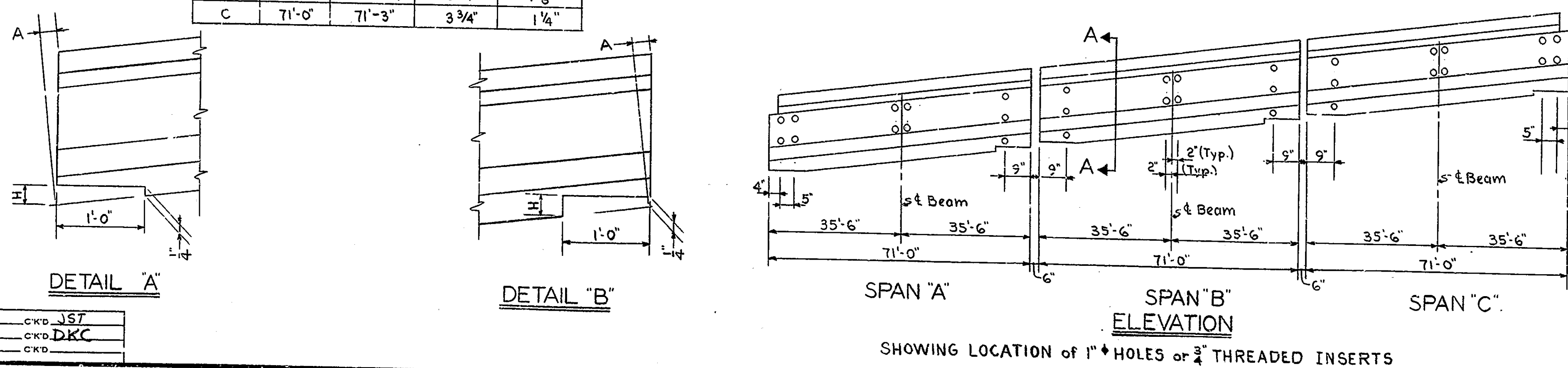
SPAN 'B'
Computed beam camber as erected = +0.9353"
Dead load deflection of beam caused by slab and Diaphragm = -0.8660"
Residual beam camber with slab in place = +0.0693"

GENERAL NOTES

Screed data to be furnished upon request.
The cost of Elastomeric Bearing Pads, 3/4" x 2'-6" Threaded rods, 3/4" Threaded inserts in outside Beams, 3" x 1/2" Preformed Joint Filler, 3/4" Threaded bolts with nuts, Epoxy on outside face of Exterior Beams, and Prestressed Concrete I Beams to be included in the Lump Sum bid for Concrete Structural Members.

Bridge Seat Elevations were set using design Camber and Dead Load deflection of Slab so that Top of Beam will be at Bottom of Slab Elevation at e of Span. Fillet depth to vary along length of Beam to compensate for Camber. Actual Cambers which are greater than Design Cambers will be taken care of by permitting the Top of Beam to extend into Slab. Actual Cambers less than Design Cambers will require slightly higher Fillets.

Epoxy on outside face of Exterior Beams to be done by the fabricator in shop as shown on Detail Plans. Do not rub.



DESIGNED: DKC
DRAWN: ELM
CHECKED: JST
CHECKED: DKC

SUPERSTRUCTURE DETAILS
INDIANA STATE HIGHWAY COMMISSION

SCALE: NO SCALE
OCTOBER 3, 1969

RECOMMENDED FOR APPROVAL: *Ch...*

DRAWING: CB OF 8
PROJECT: ST-1104A
BRIDGE CONTRACT NO. B-3206
BRIDGE FILE: 48-69-6012



ITEM	CONCRETE										STRUCTURE										QUANTITIES									
	CLASS A		CLASS B		CONCRETE RAILING CLASS A		REIN. STEEL TOTAL	STRUCT. STEEL ***	BRONZE PLATES	ANCHOR PLATES MK-P	ANCHOR RODS MK-AR	PILES					CAST IRON DRAIN PIPE	RAILING TYPE 27 OR C1	CAST IRON GRATES BASKETS & FITTINGS	BORROW FOR STR. BACKFILL										
	SUBSTR.	SUPERSTR.	ABOVE FTG.	IN FTG.	CU. YDS.	LN. FT.						LBS.	LBS.	LBS.	ACH	EACH					UNTR. LIN. FT.	TREATED LIN. FT.	STEEL BEARING LIN. FT.	LN. FT.	LBS.	LN. FT.	CU. YDS.			
BENT N#1	26.9						2,899																							
PIER N#2	19.4		40.2	17.9			6,573													21										
PIER N#3	19.4		44.6	17.9			6,991																							
BUTTRESS BENT N#4	29.2		7.9	8.9			5,712																							
SUPERSTRUCTURE	254.2						72,848													81										
TOTALS	949	254.2	92.7	44.7			97,397							5,175	429.3					102										

BRIDGES OVER 20' SPAN						
PUB. ROAD DIST. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS	
4	IND.	ST-1104'9	1970	13	37	

ITEM	DESCRIPTION	UNIT	QUANTITIES		TOTALS
			BRIDGE	FILE	
1	Concrete, Class A in Superstructure	Cu. Yds.	254.2		
2	Concrete, Class A in Substructure	Cu. Yds.	92.7		
3	Concrete, Class B above Footings	Cu. Yds.	44.7		
4	Concrete, Class B in Footings	Cu. Yds.	7.9		
5	Concrete Railing	Cu. Yds.			
6	Reinforcing Steel	Pounds			97,397
7	Structural Steel	Lump Sum			1
8	Concrete Structural Members	Lump Sum			1
9	Anchor Plates (MK-AP)	Each			
10	Bronze Plates	Each			
11	Cast Iron, Drain Pipe, 1/2 Inch	Pounds			
12	Cast Iron, Grates, Basins and Fittings	Pounds			
13	Railing (Type 27 or C1)	Pounds			
14	Timber Piles Furnished, Untreated	Ln. Ft.	429		
15	Timber Piles Driven, Untreated	Ln. Ft.			
16	Timber Piles Furnished, Treated	Ln. Ft.			
17	Timber Piles Driven, Treated	Ln. Ft.			
18	Pile Shells Furnished & Driven (12 BP 53)	Ln. Ft.			
19	Steel H Piles Furnished & Driven (12 BP 53)	Ln. Ft.			
20	Furnishing Equipment for Driving Piles	Lump Sum			175
21	Well Excavation	Cu. Yds.			1
22	Foundation Excavation (Unclassified)	Cu. Yds.			150
23	Waterway Excavation	Cu. Yds.			
24	Common Excavation	Cu. Yds.			
25	Borrow	Cu. Yds.			4615
26	B Borrow for Structure Backfill	Cu. Yds.			102
27	B Borrow	Cu. Yds.			
28	Expansion Joint, Preformed ()	Ln. Ft.			
29	Concrete Pavement, Reinforced Cement (9")	Sq. Yds.			100
30	(Type 2) Compacted Aggregate for Base	Tons			1345
31	Subbase	Cu. Yds.			410
32	Removal of Present Structure	Each			1
33	Temporary Bridge and Approaches	Lump Sum			
34	Construction Signs (Type A)	Each			12
35	Construction Signs (Type B)	Each			2
36	Standard Barricades (Type A)	Each			
37	Standard Barricades (Type B)	Each			
38	R/W Markers	Each			11
39	Stopwat	Sq. Yds.			120
40	Riprap	Sq. Yds.			
41	Concrete, Class A in Structures	Cu. Yds.			
42	Sodding	Sq. Yds.			615
43	Mulched Seeding	Sq. Yds.			8200
44	Anchor Rods (MK-AR)	Each			
45	Monuments Type "B"	Each			2
46	6" Perf. F.B.C.C.S. Pipe (18 ga)	Ln. Ft.			56
47	Guard Rail Basic Type "G"	Ln. Ft.			360
48	Fixed Side Ditch Type B	Ln. Ft.			800
49	Class "X" Excavation	Cu. Yds.			98
50	Bituminous Surface	Tons			80
51	Bituminous Base	Tons			165
52	Bituminous Material Applied, Seal Coat	Tons			38
53	Bituminous Material Applied, Prime Coat	Tons			20
54	Bituminous Material Applied, Tack Coat	Tons			21
55	Covering Aggregate	Tons			28.5
56	Unclassified Excavation	Cu. Yds.			2347
57	15" Group "D" Pipe (16 ga)	Ln. Ft.			24
58	15" Pipe End Section	Each			2

STRUCT. NO.	LOCATION	APPROACH		STRUCTURES				REMARKS
		SIZE	KIND	LENGTH LIN. FT.	CONCR. CL. A IN STRS. CU. YDS.	REIN. STEEL LBS.	B BORROW FOR STR. BACKFILL CU. YDS.	
1	101+20	6"	Perf. F.B.C.C.S. Pipe (18 ga)	56				
2	98+27 Lt.	15"	Group "D" Pipe (16 ga)	24				To Drain "B" Borrow Behind Bent N#1 Under Type II Private Drive
		15"	Pipe End Section	2 Req'd				
TOTALS								

ITEM	UNIT	QUANTITY	BARRICADES, BARRIERS, TRAFFIC SIGNS AND LIGHTS		TOTALS
			ASSEMBLY	BRIDGE FILE	
CONSTRUCTION SIGNS TYPE A	EACH		Signs XW-1		
			Signs XW-2		
			Signs XW-3		
			Signs XM-2		
STANDARD BARRICADES TYPE A	EACH		Signs W-4B, W-35A (20 M.P.H.)		
			Torches		
			Barricades (Type A)		
			Signs XR-1		
STANDARD BARRICADES TYPE B	EACH		Signs M-20A		
			Lanterns		
			Barricades (Type B)		
			Signs XR-1		
CONSTRUCTION SIGNS TYPE B	EACH		Signs W-11		
			Signs W-35A		
			Lanterns		
			Signs W-11		
SUITABLE BRIDGE BARRIERS	EACH	2	Suitable Barriers		
			Lanterns or Torches		
			Signs XM-6		
			Signs XM-7		
CONSTRUCTION IDENTIFICATION SIGNS	EACH		Signs XM-6		
			Signs XM-8		

JUNE 1, 1969

SUMMARIZED JSJ ckd DKC
 TRACED WBB ckd DKC

NOTES:
 For Test Bar Samples See Bridge Standard C1.
 * Not a Pay Item. Place as directed by the Engineer.
 "W-35A" safe speed to be determined by the Engineer.
 Directional, Advisory or Warning Signs shall be right hand or left hand as the location of the sign requires.

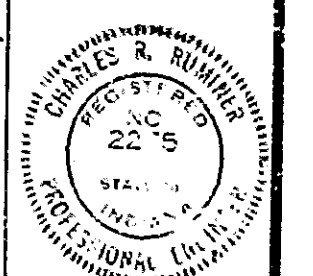
NOTES:
 Weight of Spirals includes weight of 1 1/2 extra turns top and bottom.
 Spacers and 1 1/2 turns at laps included in cost of Spiral.
 *** The weight of structural steel is approximate only, and it shall be the Contractor's responsibility to determine the weight on which he bases his bid.

SUMMARY
INDIANA STATE HIGHWAY COMMISSION

OCTOBER 3, 1969

RECOMMENDED FOR APPROVAL *Chalmers*
 ENGINEER OF BRIDGE DESIGN

PROJECT: ST-1104'9
 CONTRACT NO: B-8206
 BRIDGE FILE: 48-69-6012



END