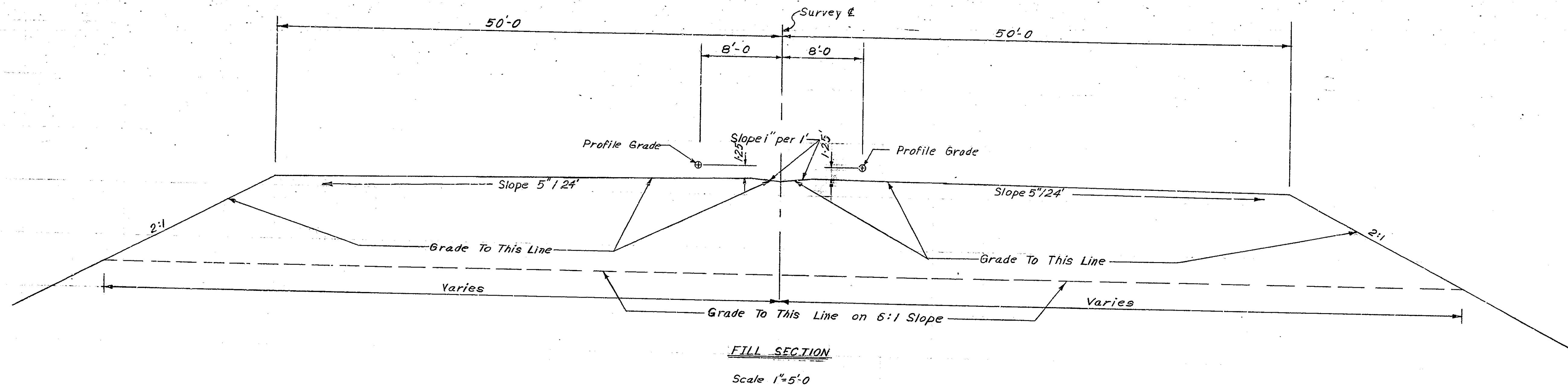


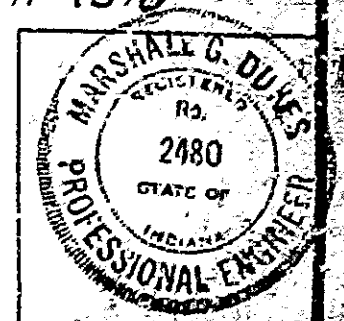
BRIDGES OVER 20' SPAN				
PUB. ROAD NO.	STATE	PROJECT NO.	FISCAL YEAR	TOTAL SHEETS
4	IND.	U.S. 831 (15)	1964	50



TYPICAL GRADING SECTION FOR BRIDGE CONTRACTORS

TYPICAL GRADING SECTION
INDIANA STATE HIGHWAY COMMISSION

SCALE: AS NOTED
 RECOMMENDED FOR APPROVAL: *September-11-1970*
Marshall S. Dukes
 DRAWING: OF
 PROJECT: U.S. 831 (15)
 BRIDGE CONTRACT NO: 8-849B
 BRIDGE FILE: 912-45-5088



DESIGNED	CKD
DRAWN	HRP
TRACED	CKD

STATE	PROJECT NO.	DATE	NO.	DATE
IND.	U.S. D33 (10)	1964	12	50

BORING NO.		T.R. NO. 108					
STATION		315+80 LINE 'E'					
OFFSET		80 FT. RIGHT					
GROUND ELEV.		590.7					
ELEV.	SAMPLE NO.	TYPE	N	MC	QU	ELEV.	SOIL DESCRIPTION
600							
590						590.7	GROUND LEVEL
580							LOOSE DENSE BROWN GRAY FINE SAND
570							
560							
550							
540							SOFT TO TOUGH GRAY SILTY CLAY, MOIST
530							
520							
510							
500							MEDIUM GRAY SILTY CLAY, TRACE FINE GRAVEL, MOIST
490							
480							
470							
460							MEDIUM GRAY CLAYEY SILT, TRACE FINE GRAVEL, MOIST
450							
440							MEDIUM GRAY CLAYEY SILT, TRACE FINE GRAVEL, MOIST
430							
420							END OF BORING
410							DEPTH OF BORING (102.5')
400							
390							
380							
370							
360							
350							
340							
330							
320							
310							
300							

NOTES:

- FOR BORING LOCATION SEE SHEET NO.
- QU - UNCONFIRMED COMPRESSIVE STRENGTH IN TONS PER SQ. FT.
- MC - IN SITH WATER CONTENT.
- N - PENETRATION RESISTANCE IN BLANK END POINT BY 100 LB. C.S. SPLIT BEAM PENET. A DISTANCE OF 12 INCHES WITH A 100-POUND WEIGHT FREELY FALLING 50".
- SR - SPLIT SPONGE SAMPLE.
- ▽ - WATER LEVEL AT END OF BORING.
- ▽ - WATER LEVEL AFTER ELAPSED TIME INTERVAL. 24 HOURS.

SEE ART. 102.05 OF THE STANDARD SPECIFICATIONS REGARDING ICST PIT DATA.

NO. 102.05 OF THE STANDARD SPECIFICATIONS

MAY 17 1964

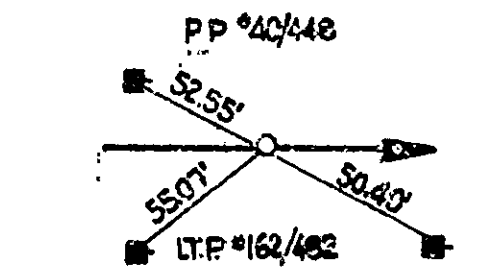


BRIDGES OVER 20' SPAN				
PUB. ROAD DIST. NO.	STATE	PROJECT NO.	FISCAL YEAR	TOTAL SHEETS
4	IND.	US 52 (HS)	1964	15
				50

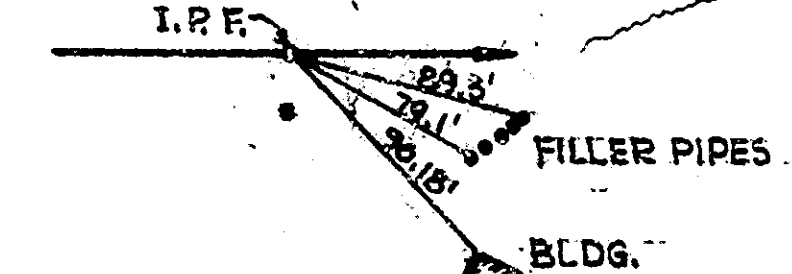
B.M. NO. 16 LINE 'E' ELEV. 593.30 TOP OF GUSSET R 2' UP N. W. LEG TOWER NO. 113, 321.55' RT. STA 313+90.4

NOTES
 NO EXISTING STRUCTURES AT PROPOSED BRIDGE SITE.
 SEE SHEETS 448 FOR ADDITIONAL TOPOGRAPHY, R.O.W. INFORMATION, DRAINAGE STRUCTURES, AND P.O.T. INFORMATION.

UTILITY OWNERS
 ILLINOIS BELL TELEPHONE CO.
 725 CHICAGO ST. HAMMOND, IND.
 NO. IND. PUBLIC SERVICE CO.
 500 BROADWAY GARY, INDIANA
 EAST CHICAGO WATER CO.
 CITY HALL, EAST CHICAGO, IND.
 CITIES SERVICE CO.
 CLINE AVE. EAST CHICAGO, IND.
 JOHNSON OIL CO.
 INDUSTRIAL HWY, EAST CHICAGO, IND.
 TEXAS EMPIRE OIL CO.
 BLOOMINGTON, ILLINOIS



P.O.T. STA. 318+42
 LINE 'E'



P.O.T. STA. 315+28.55
 LINE 'E'

FILL + 20% ----- 40,300 CU. YDS
 SURPLUS ----- 100
 COMMON EXCAVATION --- 200
 BORROW --- 40,500

CURVE DATA
 CURVE NO. 2 P.P. NO. 2
 P.T. 313+24.54
 Δ = 41° 42' 30"
 D = 8' 00" 00"
 R = 1500'
 T = 1751.67'
 L = 1600.00'
 E = 150.00'
 B.E. = 313+24.54

LAYOUT
 CONCRETE STEEL BEAM & P.C. GIRDER BRIDGE
 4 BEAMS - 37" x 48" @ 8' 0" ON CENTER, SKEW 26° 20'
 2 - 4' - 4" ROADWAYS + 1' - 4" MEDIAN + 2' 5" CURBS
 OVER U.S. 12 (INDUSTRIAL HWY) ON CLINE AVENUE

INDIANA STATE HIGHWAY COMMISSION
 LAKE COUNTY

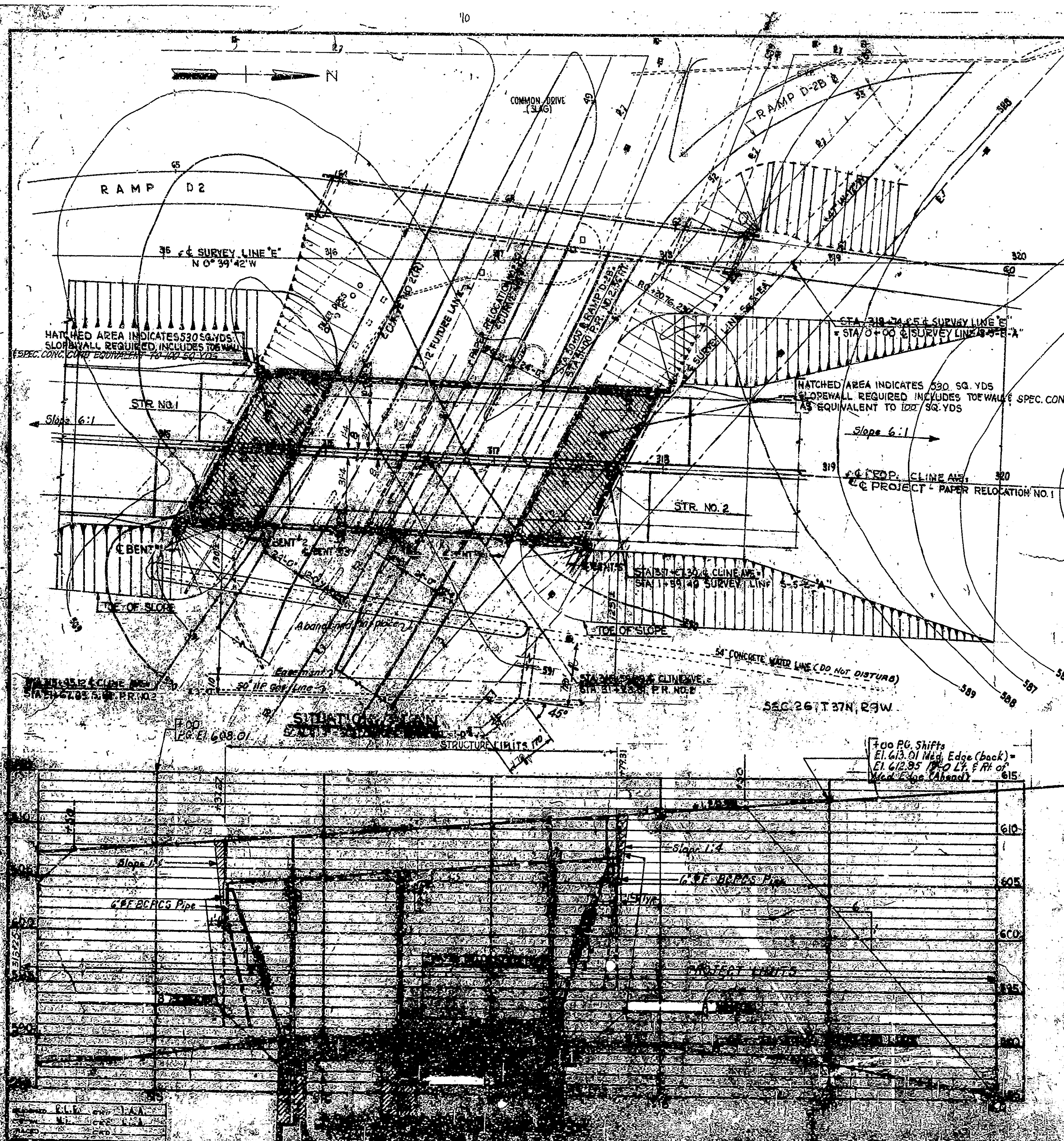
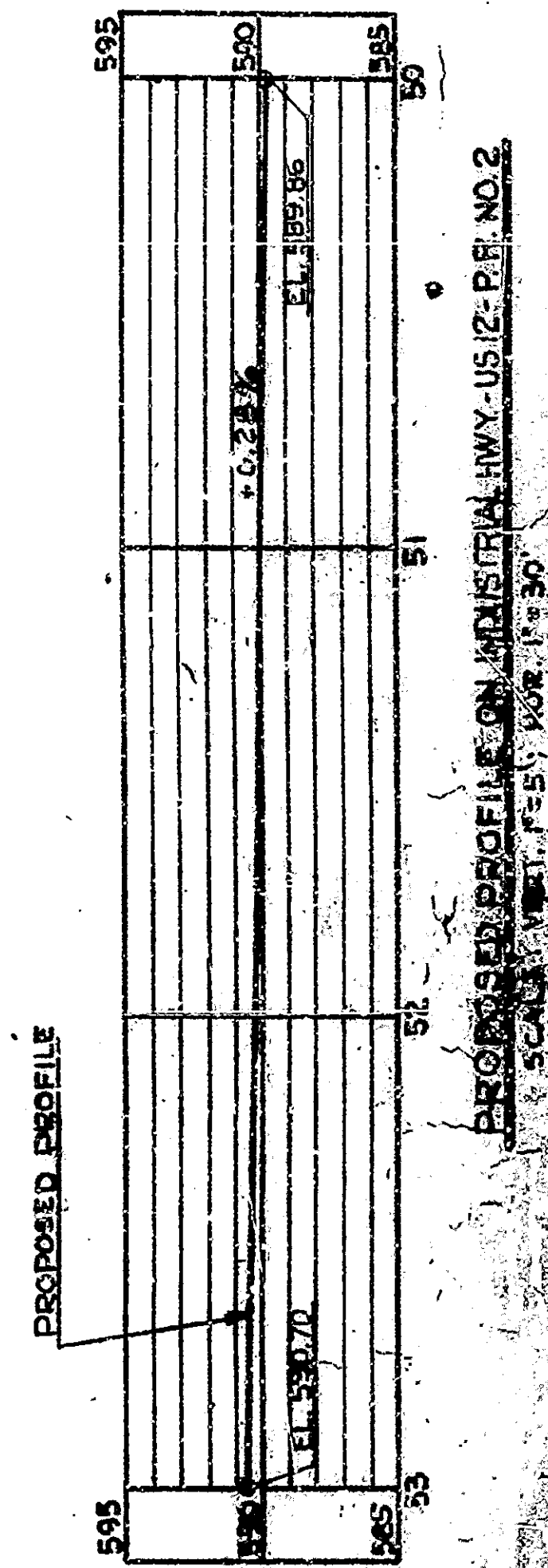
SCALE AS NOTED MAY 27, 1964

SUBMITTED FOR APPROVAL: Carl W. W. W. W.

SEE SHEET 448

REV. 12-15-67, Rev. 12-15-67, Slope wall
 Rev. 1-17-68, SH. NES
 Rev. 4-1-65, Final Limits
 Rev. 1-1-64, Final Limits

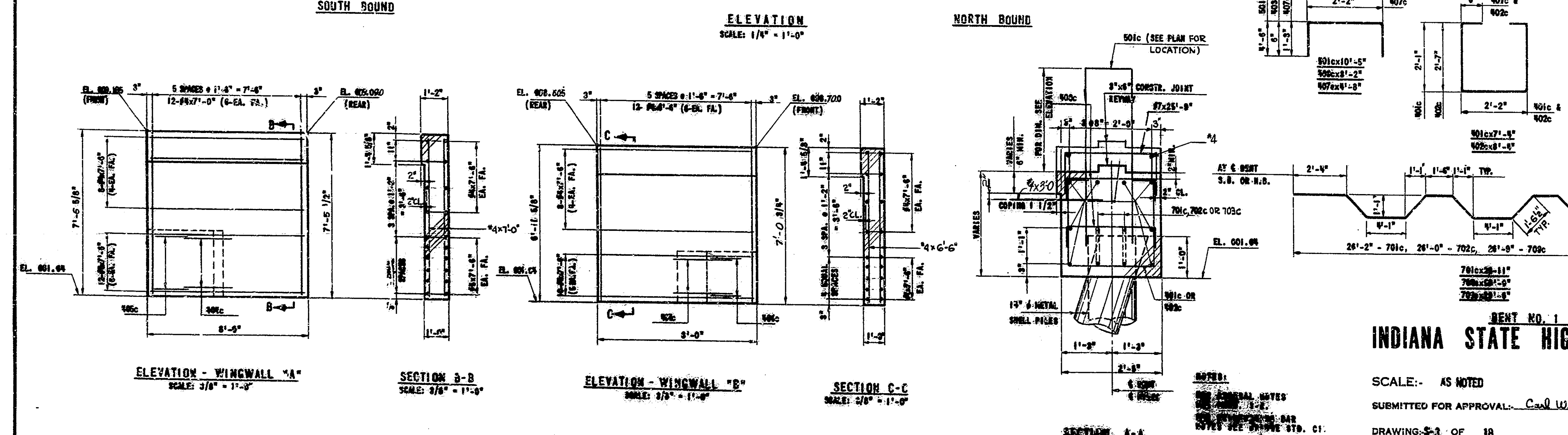
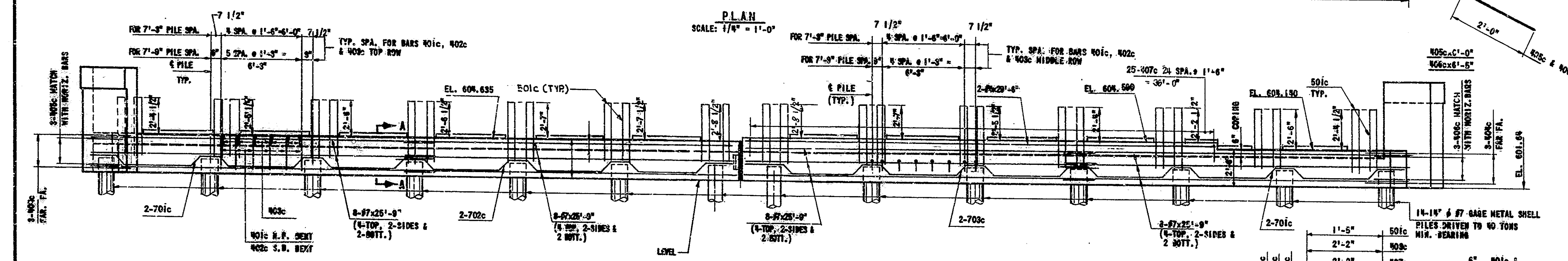
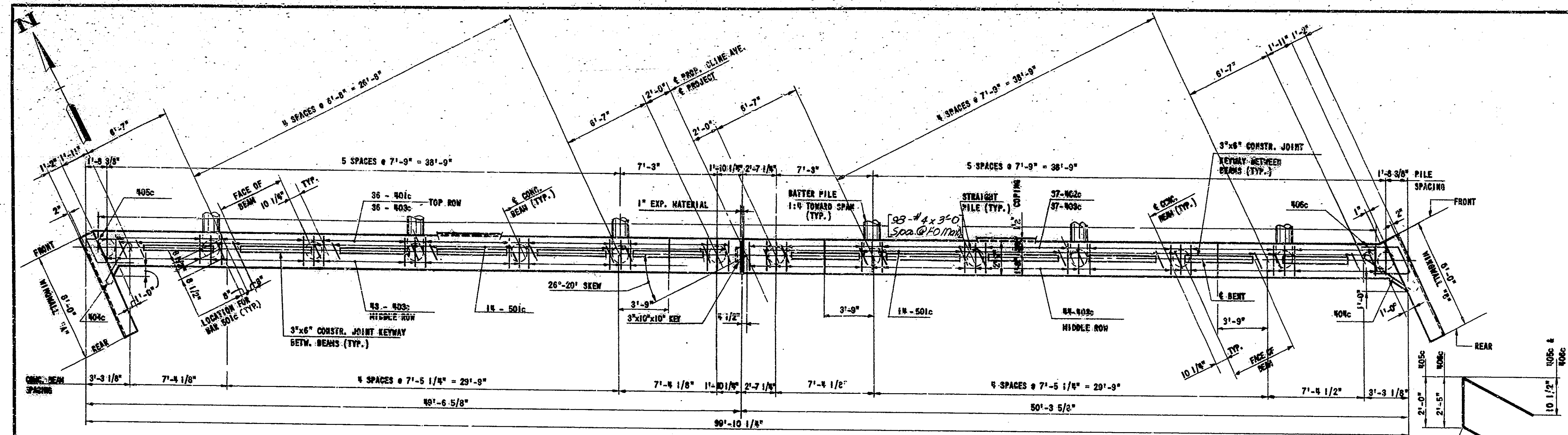
DRAWING NO. 10
 PROJECT - U.S. 12 (HS)
 BRIDGE CONTRACT NO.
 BRIDGE FILE NO. 15-5088



BRIDGE FILE NO. 15-5088
 PROJECT - U.S. 12 (HS)
 BRIDGE CONTRACT NO.
 BRIDGE FILE NO. 15-5088

BRIDGES OVER 20' SPAN					
PUR. ROAD	STATE	PROJECT	FISCAL	SHEET	TOTAL
NO. NO.		NO.	YEAR	NO.	SHEETS
4	IND.	U.S. 83(15)	1964	15	50

BILL OF MATERIAL			
REINFORCING STEEL			
SIZE & MARK	NO. OF BARS	LENGTH	WEIGHT (LBS.)
701c	4	25'-11"	
702c	2	28'-9"	
703c	2	29'-8"	
#7	32	25'-0"	
#7	TOTAL		2,159
501c	28	10'-5"	
#5	22	7'-6"	
#5	TOTAL		476
401c	35	7'-4"	
402c	37	8'-4"	
403c	160	3'-2"	
404c	6	8'-0"	
405c	3	6'-0"	
406c	3	5'-5"	
407c	25	8'-8"	
#4	2	29'-5"	
#4	16	7'-6"	
#4	12	7'-0"	
#4	12	5'-8"	
#4	58	3'-0"	
#4	TOTAL		1,265
TOTAL STEEL 3,900			
C.O.B.C. B.E.T.E.			
CLASS "A" CAP			
4 WINGWALLS = 32.3 C.Y.			
MISCELLANEOUS			
14-14" # 87 GAL. METAL SHELL			
SHELL PILES (118') = 1,382 LIN. FT.			
14-14" # 87 GAL. STEEL PILE			
SHELLS (58'-0") = 784 LIN. FT.			



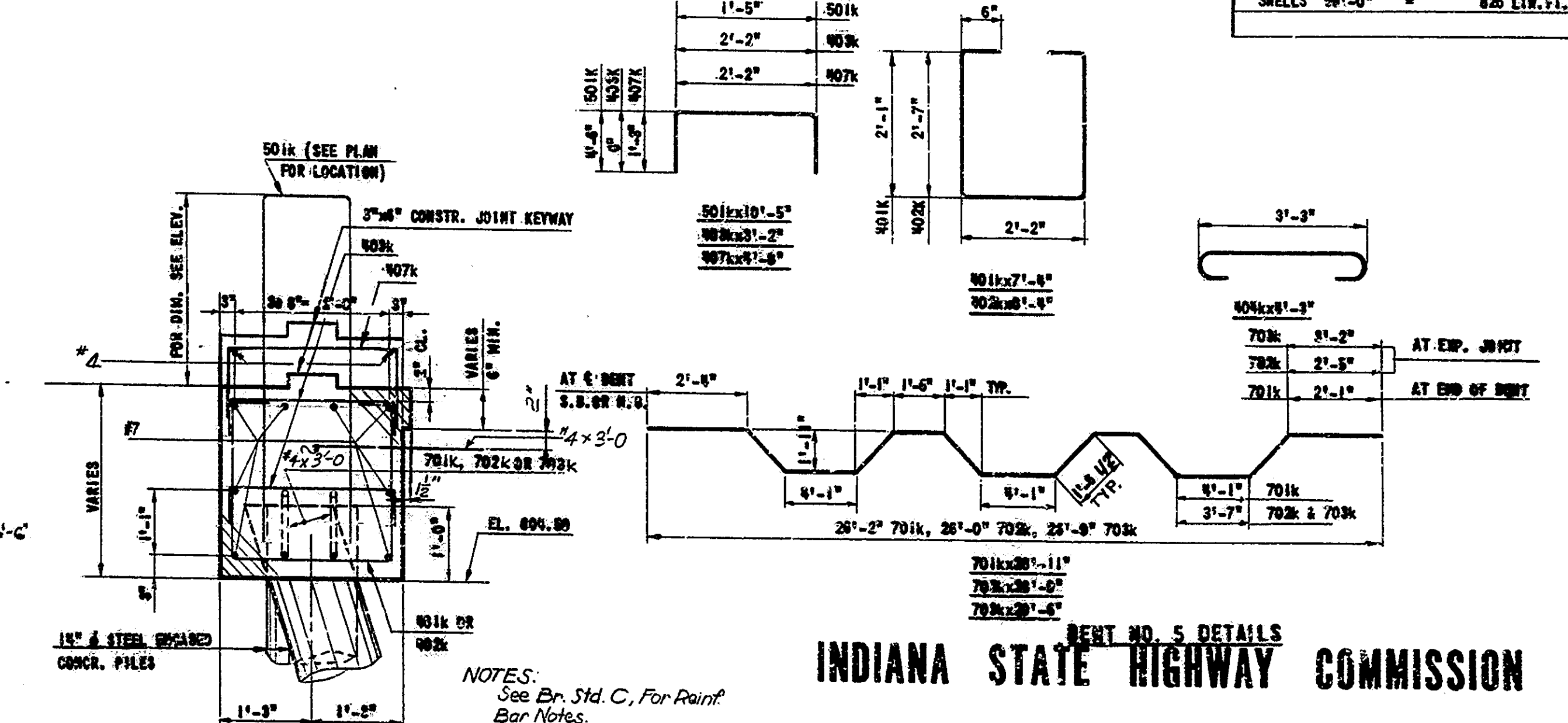
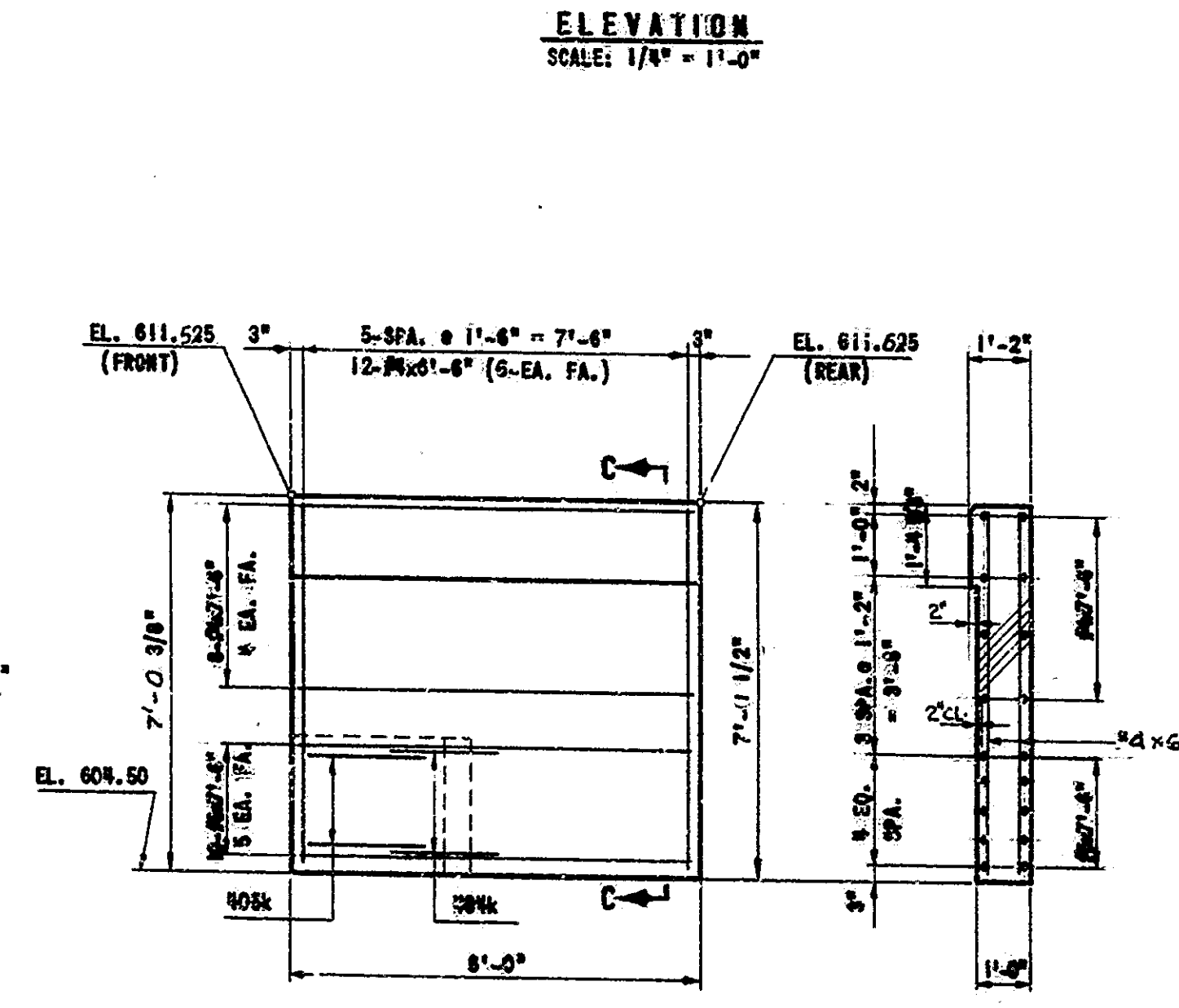
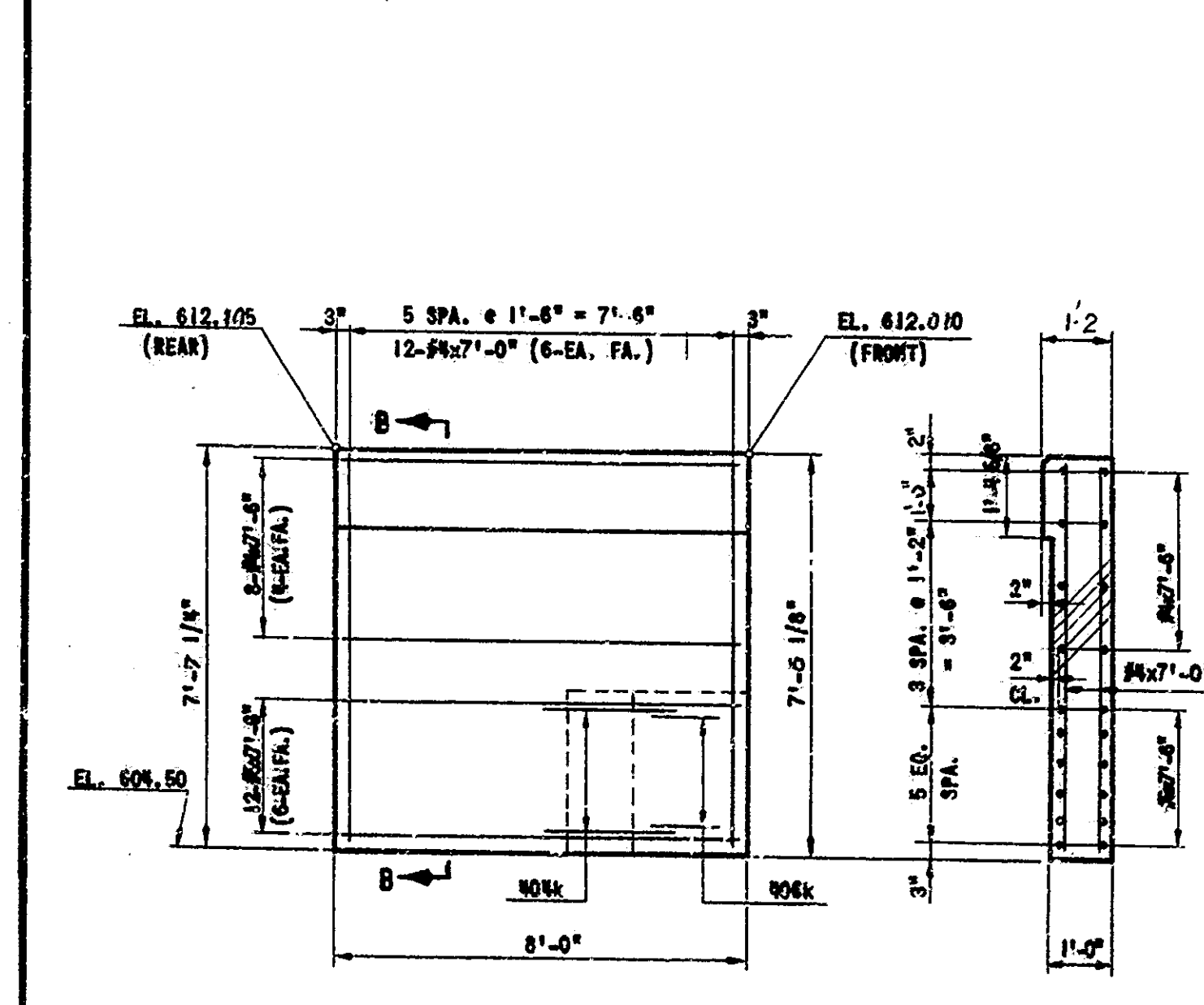
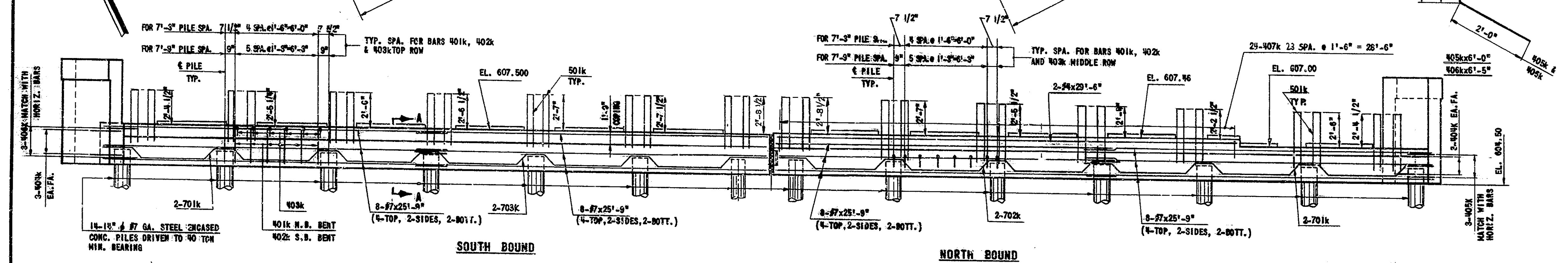
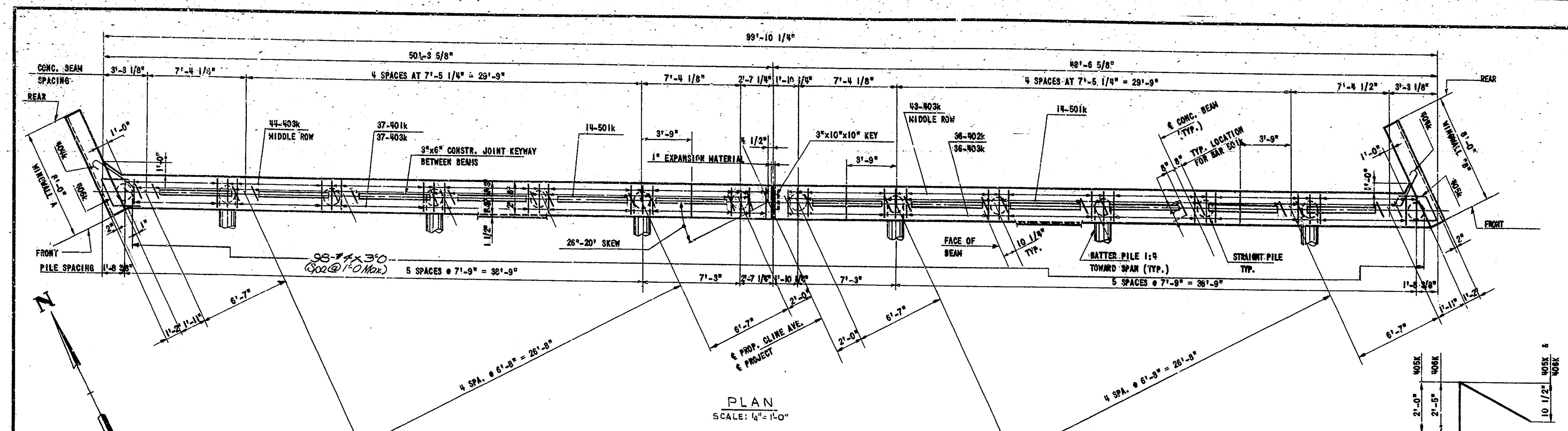
REV. 12-15-67
J.D.W.

DESIGNED BY: CKD L.A.A.
DRAWN BY: CKD D.M.P.
TRACED BY: CKD

Rev. 9-11-70: Concrete Class

Rev. 12-15-67 Notes & Reinf.
Rev. 9-25-66 Bridge Seal Elev.

INDIANA STATE HIGHWAY COMMISSION
SCALE: AS NOTED
MAY 27, 1964
SUBMITTED FOR APPROVAL: Carl Wade Westphal
DRAWING NO. OF 18
PROJECT: U.S. - 83 (15)
BRIDGE CONTRACT NO. B-8438
BRIDGE FILE: 312-25-9000



BRIDGES OVER 20' SPAN				
PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.
4	IND.	US 831(5)	1964	16
				TOTAL SHEETS
				50

BILL OF MATERIAL			
REINFORCING STEEL			
SIZE & MARK	NO. OF BARS	LENGTH	WEIGHT (LBS.)
70k	1	28'-11"	
70k	2	28'-9"	
70k	2	28'-6"	
#7	32	25'-9"	
#7 TOTAL			2,189
50k	28	10'-5"	
#5	22	7'-8"	
#5 TOTAL			476
40k	37	7'-8"	
40k	36	8'-8"	
40k	160	3'-2"	
40k	6	8'-8"	
40k	3	8'-0"	
40k	3	8'-5"	
40k	24	8'-8"	
#4	98	3'-0"	
#4	2	28'-6"	
#4	16	7'-6"	
#4	12	7'-0"	
#4	12	6'-6"	
#4 TOTAL			1,262
TOTAL STEEL			3,897
CONCRETE			
CLASS 3" CAP AND			
MINIMUMS 32.8 CU. YDS.			
MISCELLANEOUS			
14-14" # 7 GA. STEEL SHELL			
PILES 14"-0" = 1,626 LIN. FT.			
14-16" # 7 GA. STEEL PILE			
SHELLS 50'-0" = 826 LIN. FT.			

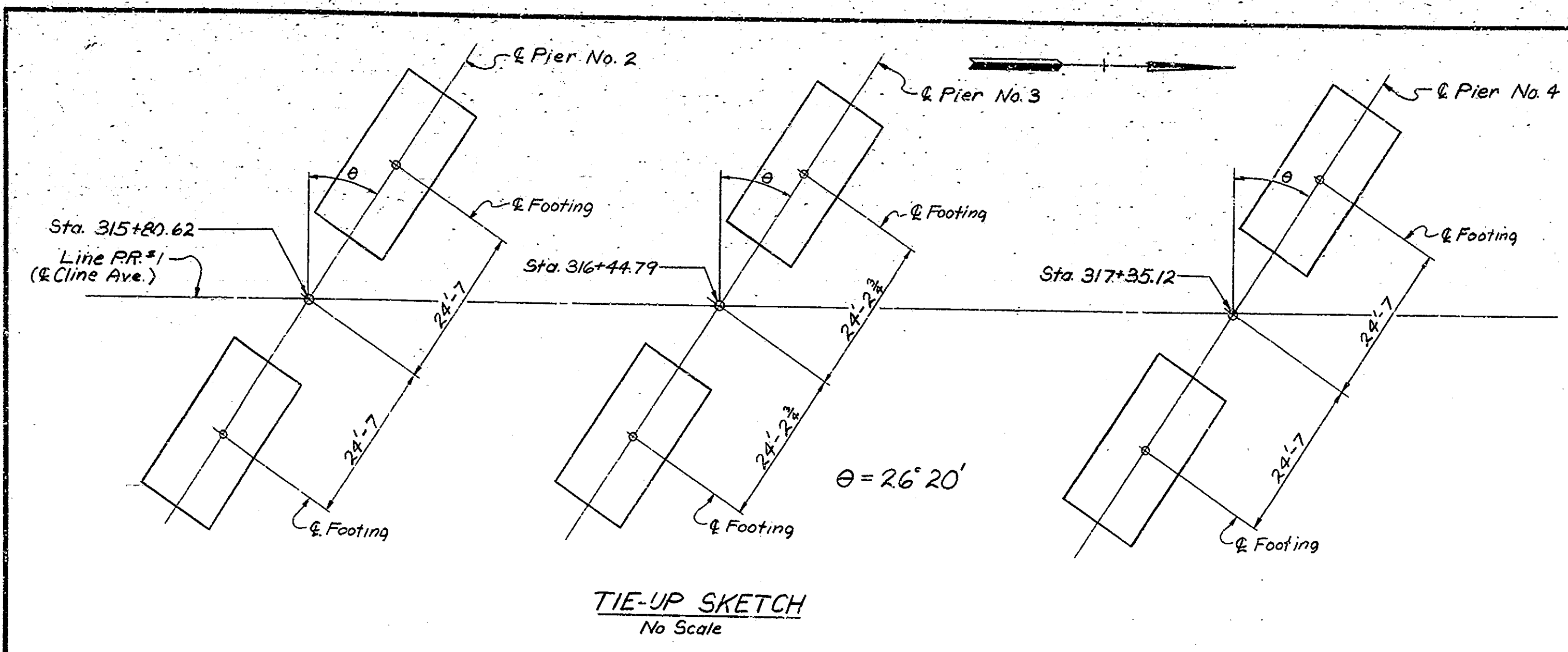
DESIGNED: E.W. CKD. I.A.A.
 DRAWN: J.V.P. CKD. D.M.P.
 TRACED: CKD

Rev. 9-11-70: Concrete Class
 Rev. 12-15-67 Notes of Reinf.
 Rev. 9-25-64 Reinf. Steel

INDIANA STATE HIGHWAY COMMISSION
 SCALE: AS NOTED
 SUBMITTED FOR APPROVAL: Carl Wells Westphal
 DRAWING: 54 OF 17
 PROJECT: U.S. - 831 (15)
 BRIDGE CONTRACT NO. B-3403
 BRIDGE FILE: 915-49-3088
 MAY 27, 1964

REV. 12-15-67
 J.V.P.
 12-15-67

BRIDGES OVER 20' SPAN						
PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS	
4	IND.	US-831(9)	1965	16A	50	



BILL OF MATERIAL PIER No. 2 N.B. (S.B. SAME)

REINFORCING STEEL			
SIZE AND MARK	NO. OF BARS	LENGTH	WEIGHT
#8	32	14'-6"	
#8	31	10'-0"	
Total #8			2067
601d	62	6'-11"	
602d	4	3'-0"	
#6	9	30'-6"	
#6	6	28'-6"	
Total #6			1331
Total Steel			3398

CONCRETE	
Class 'E' in Ftg.	34.4 Cys.
Class 'E' above Ftg.	5.9 Cys.
*Special Concrete	4.8 Cys.

MISCELLANEOUS	
Foundation Excavation (Unclassified)	257 Cys.

BILL OF MATERIAL PIER No. 3 N.B. (S.B. SAME)

REINFORCING STEEL			
SIZE AND MARK	NO. OF BARS	LENGTH	WEIGHT
#8	31	14'-0"	
#8	30	10'-0"	
Total #8			1960
601e	58	6'-11"	
602e	4	3'-0"	
#6	8	29'-6"	
#6	6	27'-6"	
Total #6			1223
Total Steel			3183

CONCRETE	
Class 'E' in Ftg.	32.2 Cys.
Class 'E' above Ftg.	5.7 Cys.
*Special Concrete	4.7 Cys.

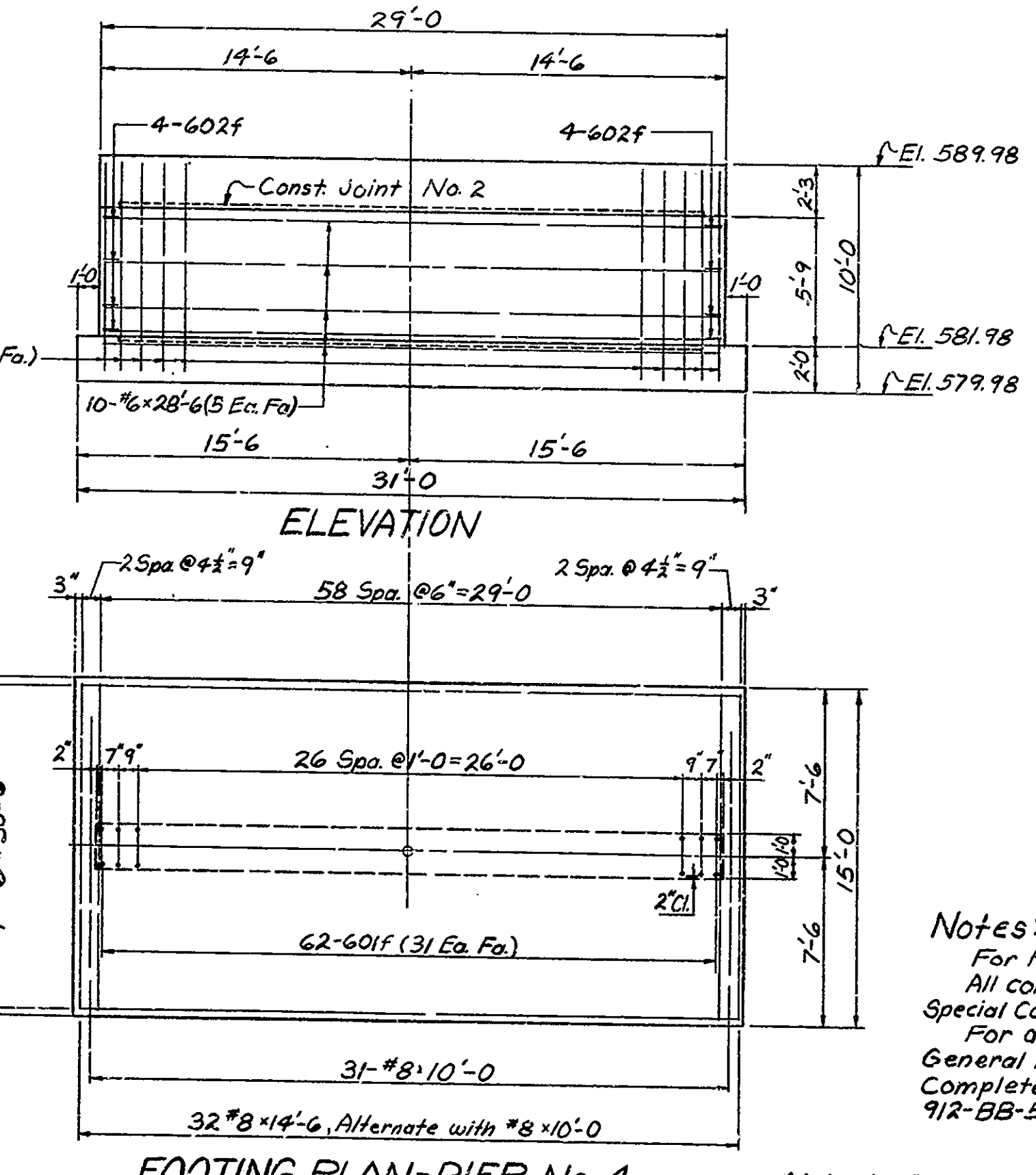
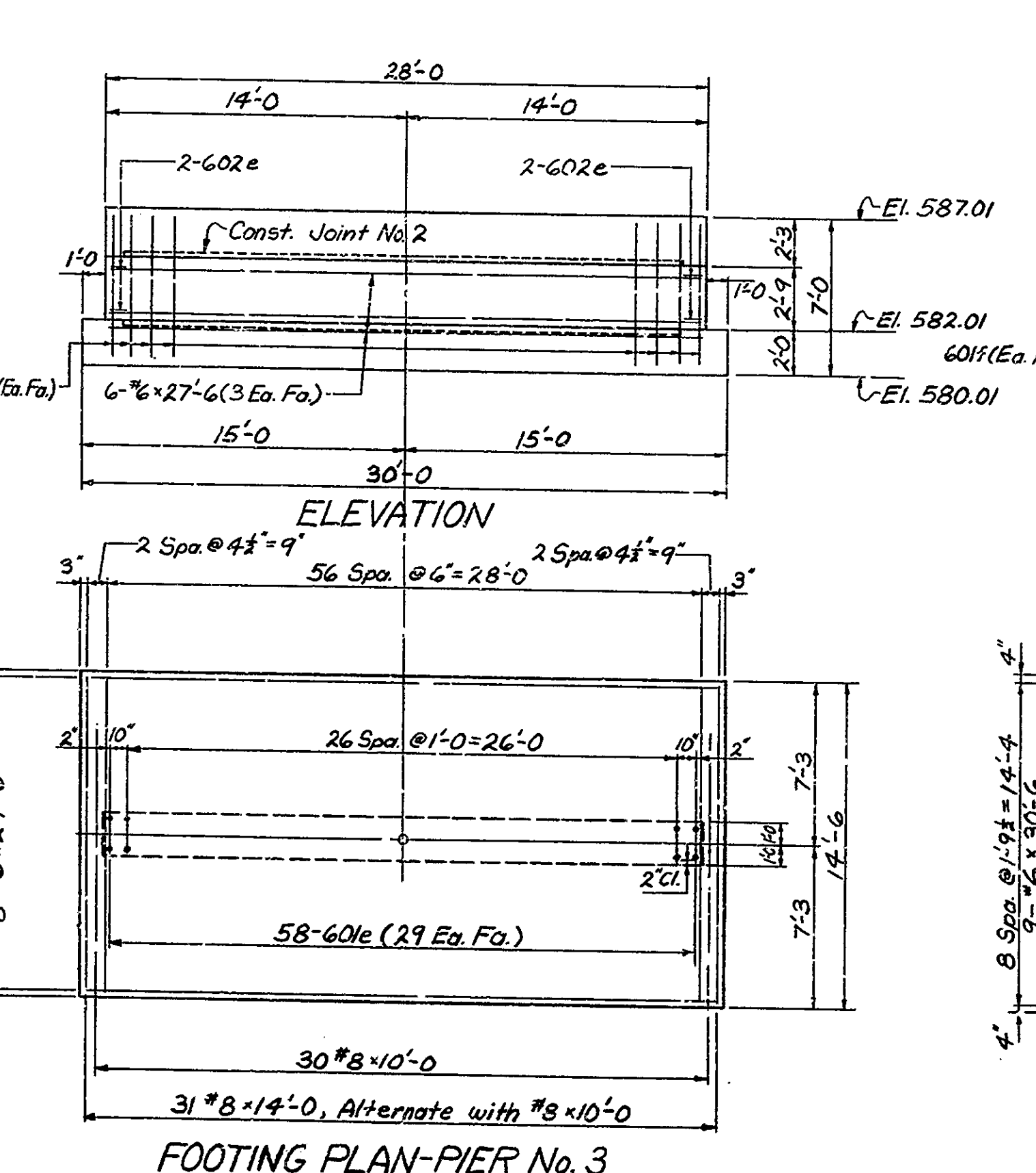
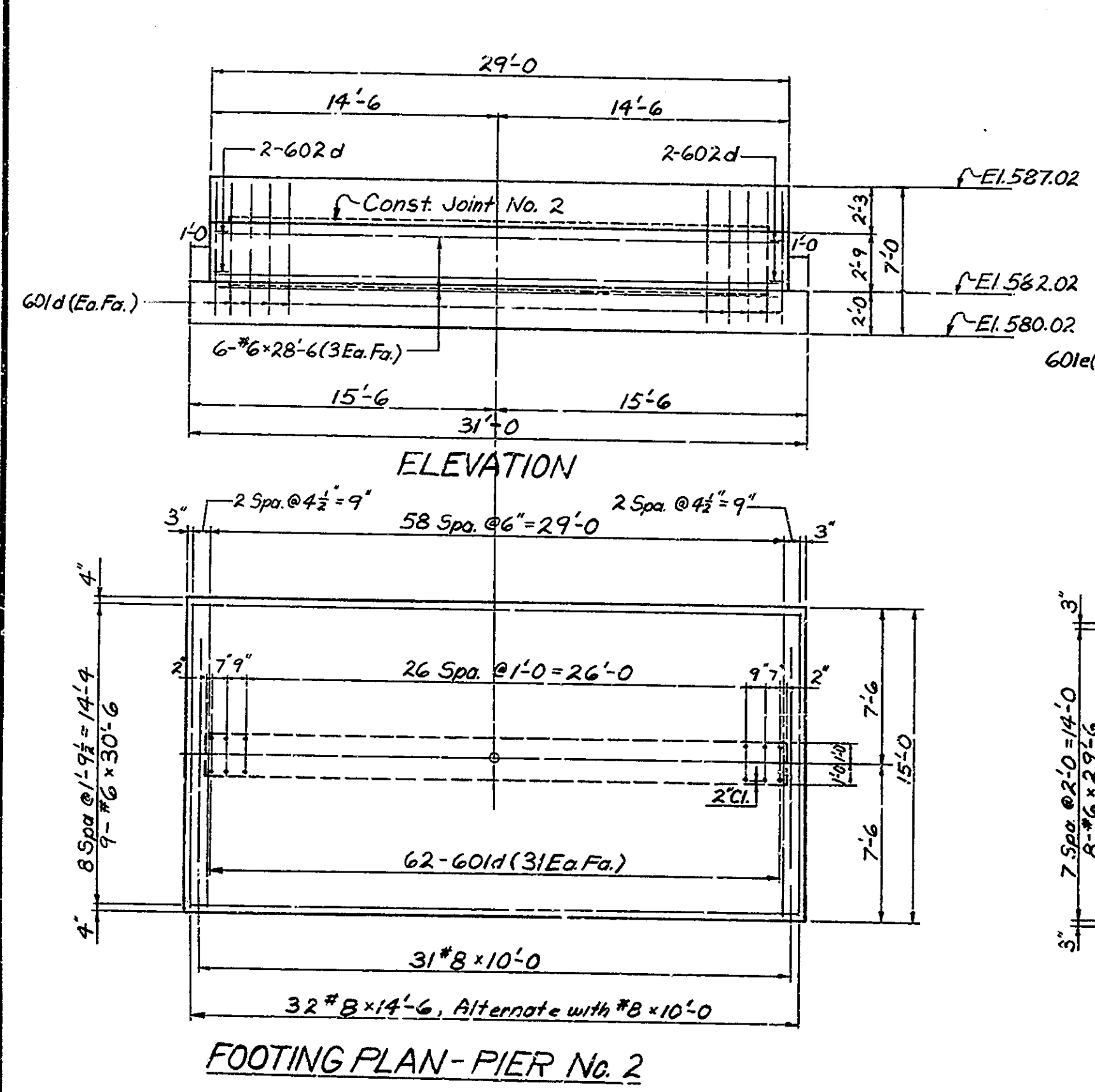
MISCELLANEOUS	
Foundation Excavation (Unclassified)	230 Cys.

BILL OF MATERIAL PIER No. 4 N.B. (S.B. SAME)

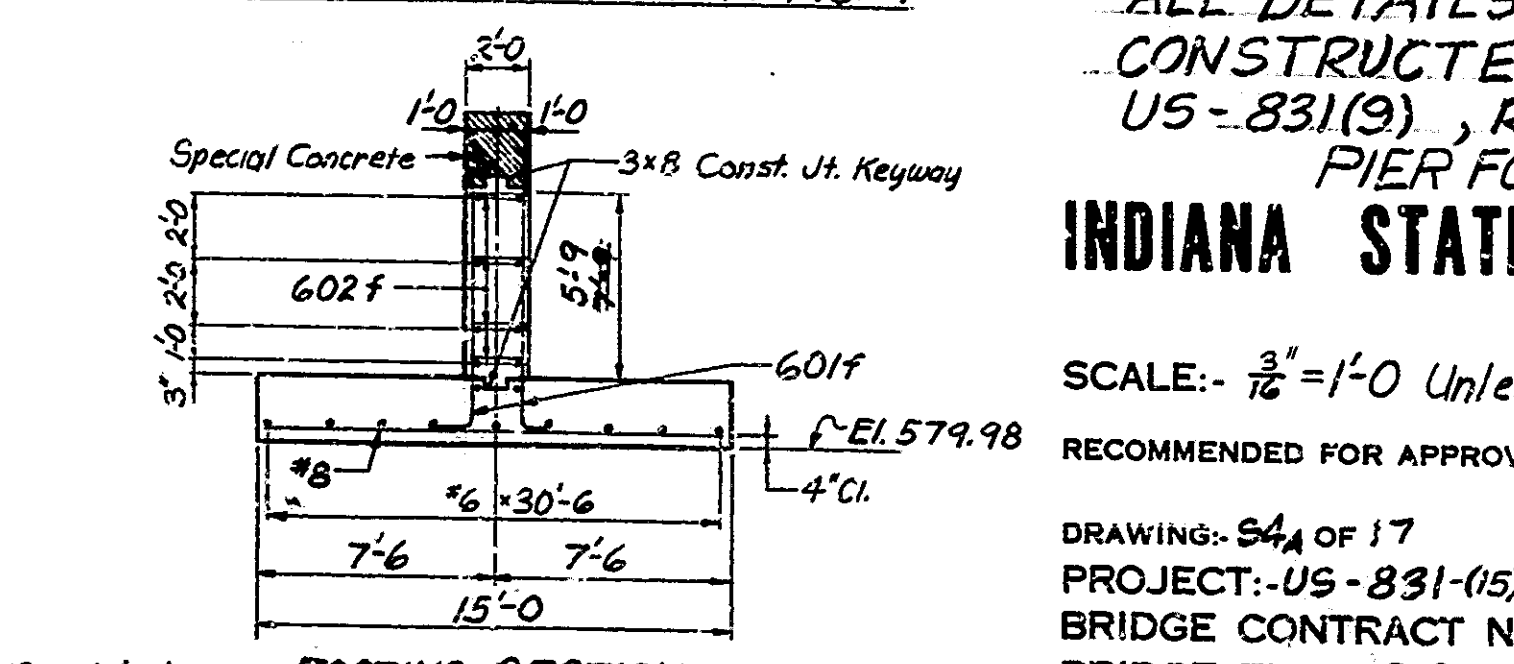
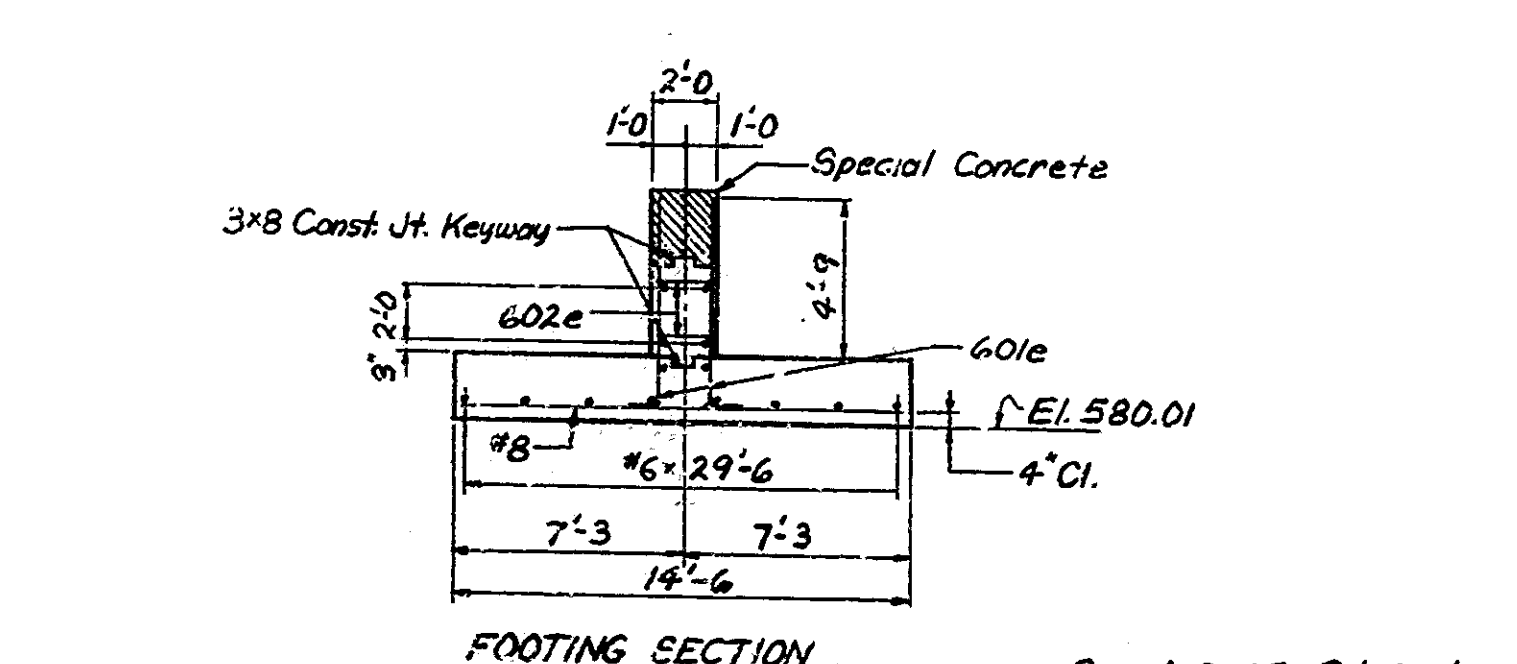
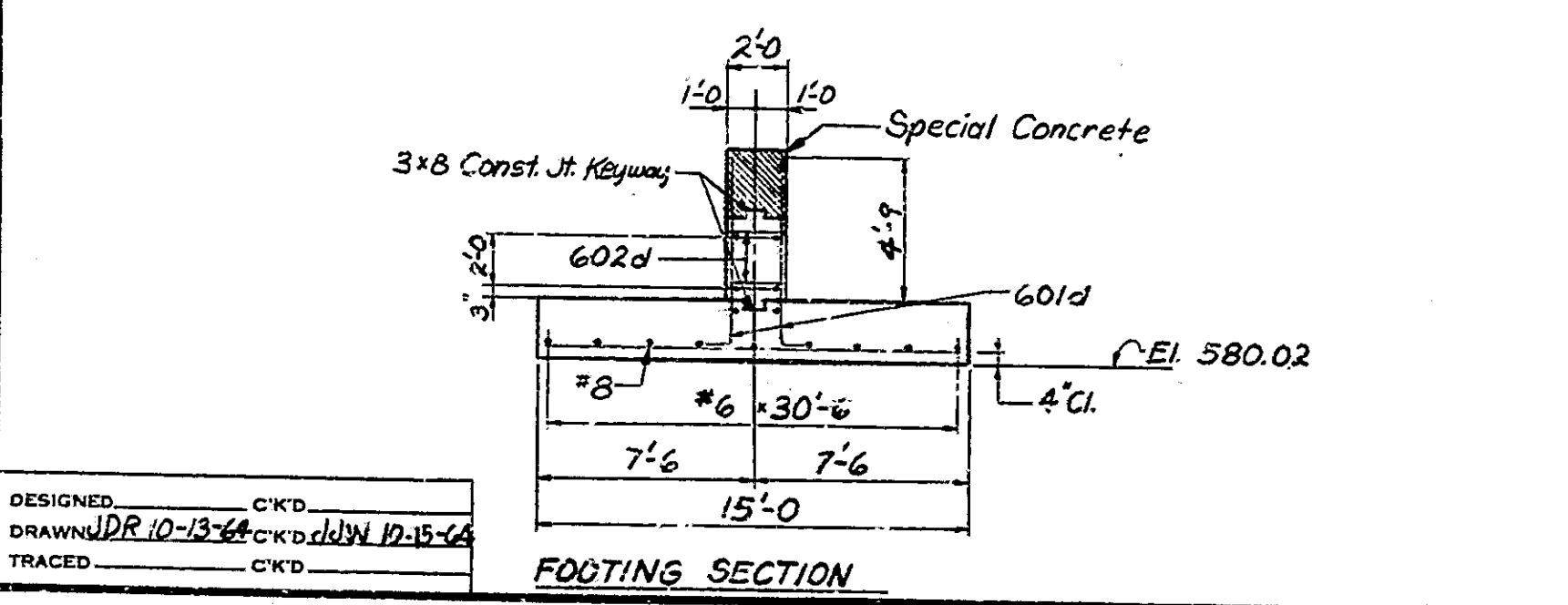
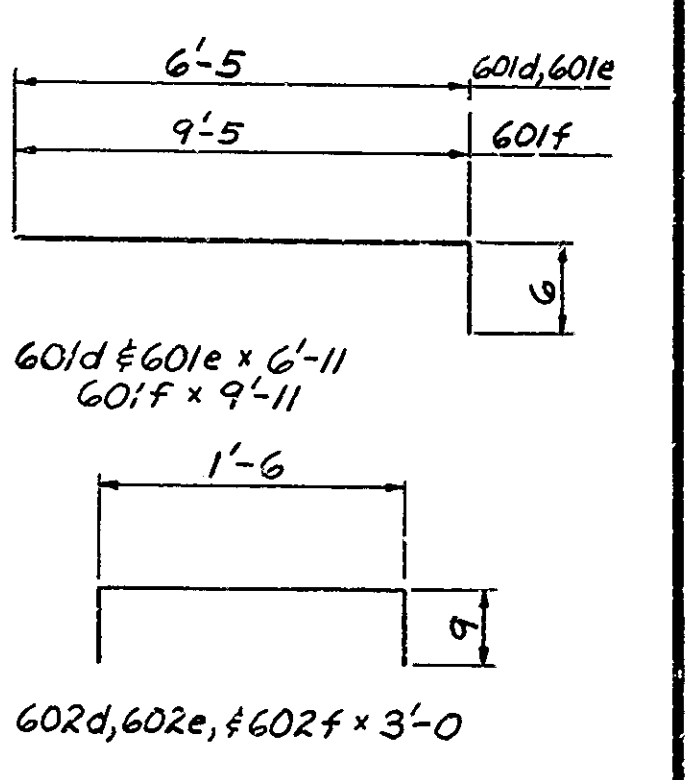
REINFORCING STEEL			
SIZE AND MARK	NO. OF BARS	LENGTH	WEIGHT
#8	32	14'-6"	
#8	31	10'-0"	
Total #8			2067
601f	62	9'-11"	
602f	8	3'-0"	
#6	9	30'-6"	
#6	10	28'-6"	
Total #6			1800
Total Steel			3867

CONCRETE	
Class 'E' in Ftg.	34.4 Cys.
Class 'E' above Ftg.	12.4 Cys.
*Special Concrete	4.8 Cys.

MISCELLANEOUS	
Foundation Excavation (Unclassified)	218 Cys.



* Special Concrete to be low strength mix of 3 bags of cement per cu. yd. and 8 gallons of water per bag of cement.



Notes:
For Reinforcing Bar Notes see Br. Std. C1
All concrete above Const. Joint No. 2 to be Special Concrete.
For additional General Notes, see the General Plan for Structure 912-BB-5088. Complete detailed plans for Structure 912-BB-5088 on file in central office.

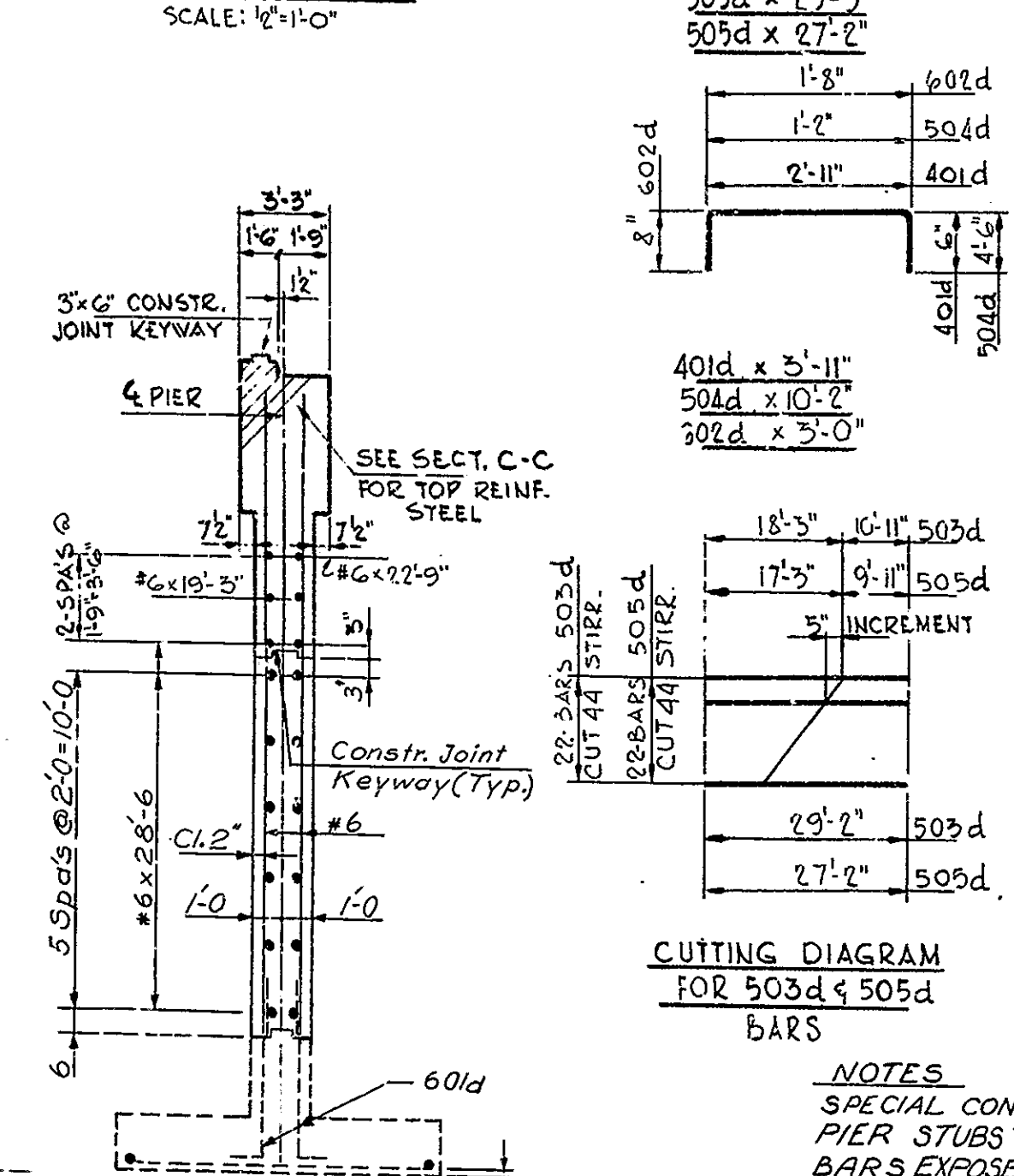
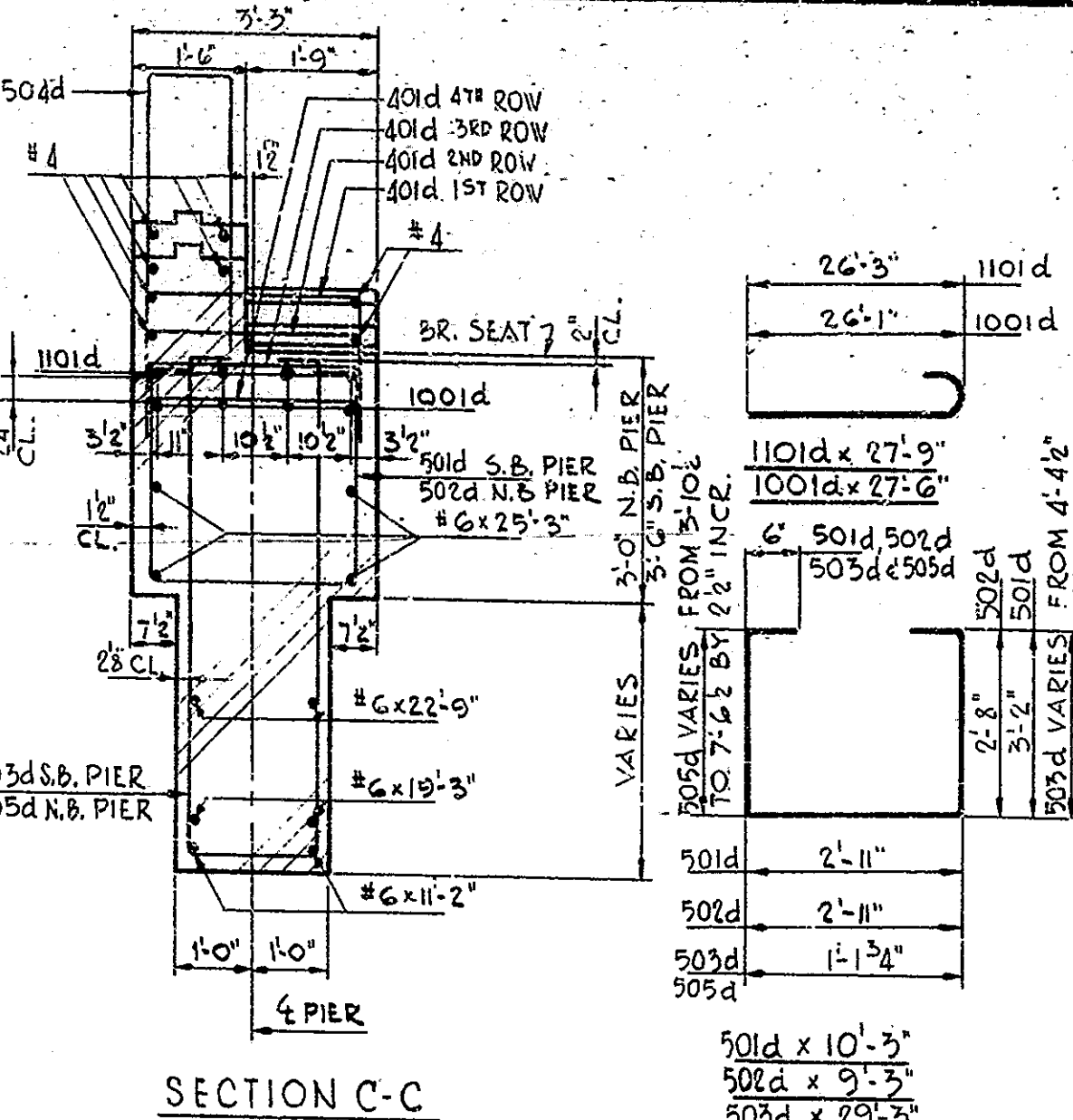
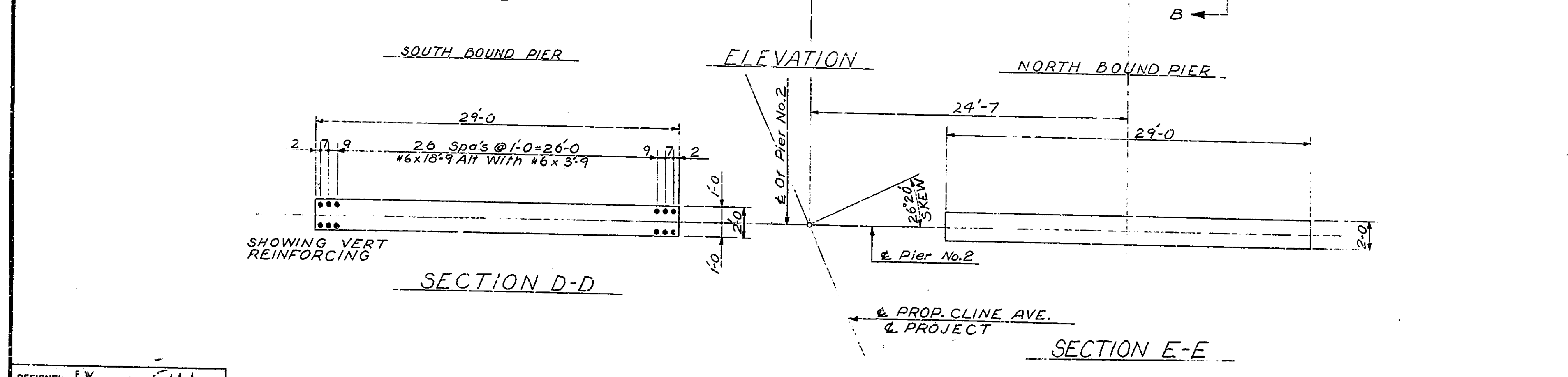
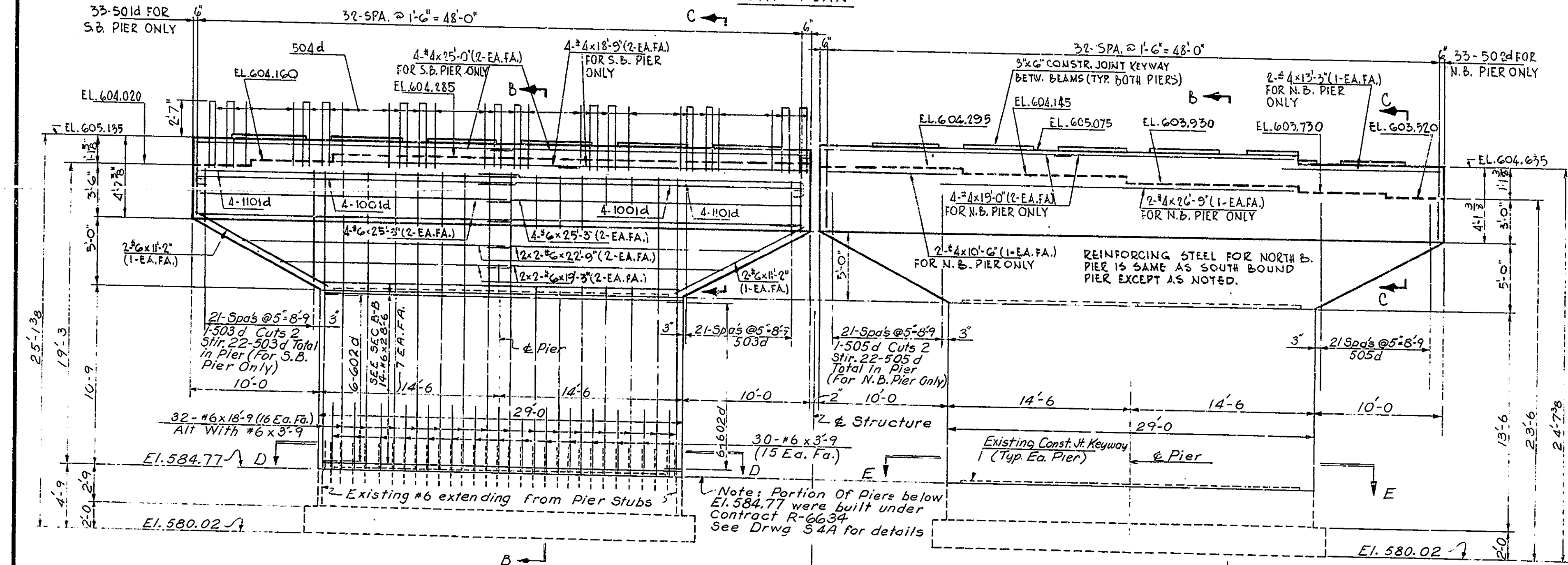
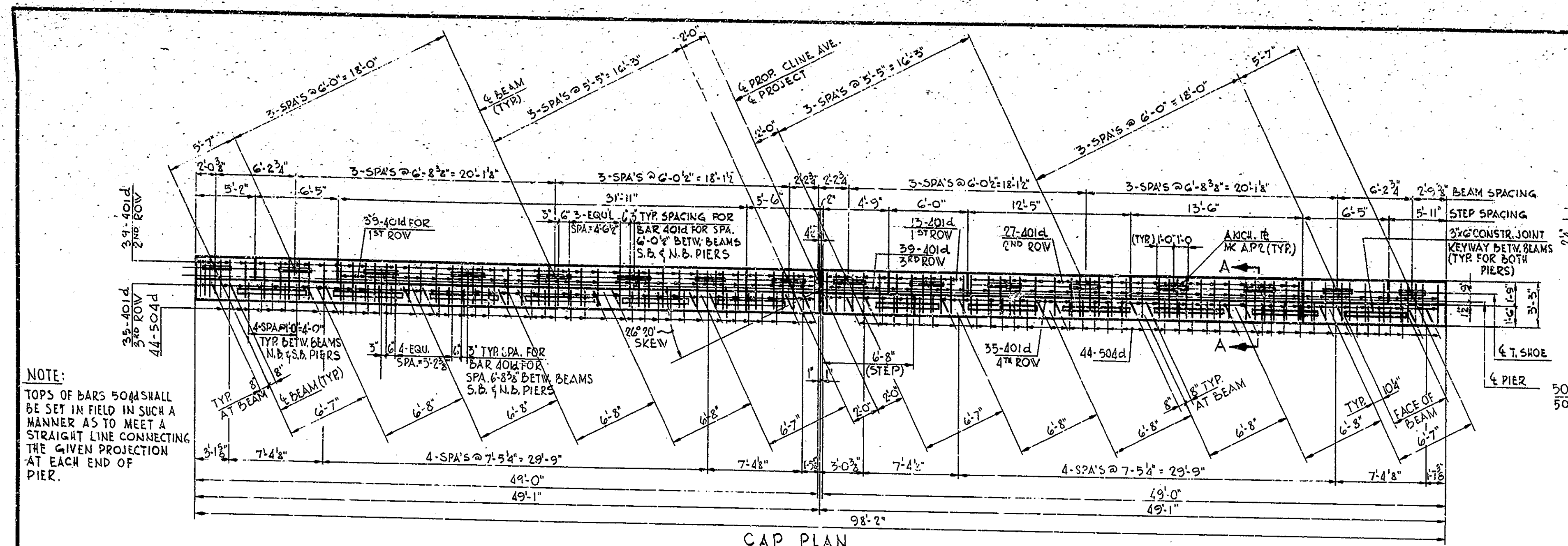
ALL DETAILS SHOWN THIS SHEET WERE CONSTRUCTED AS PART OF PROJECT US-831(9), ROAD CONTRACT R-6634 PIER FOOTING DETAILS INDIANA STATE HIGHWAY COMMISSION

SCALE: $\frac{3}{8}'' = 1'-0''$ Unless Noted OCT. 16 1964

RECOMMENDED FOR APPROVAL: *[Signature]*
DRAWING: 84 OF 17
PROJECT: US-831(9)
BRIDGE CONTRACT NO. 8-849B
BRIDGE FILE: 912-45-5088

DESIGNED: C.K.D.
DRAWN: DR. 10-13-64
TRACED: C.K.D.

Rev. 4-9-65 Rd. Contr. N^o Added



BRIDGES OVER 20' SPAN					
PUB. ROAD RES. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	U.S. 35(4)	1965	17A	50

BILL OF MATERIAL			
REINFORCING STEEL			
SIZE & MARK	No. OF BARS	LENGTH	WEIGHT LBS.
1001d	16	27'-9"	2550
1001d	16	27'-6"	1895
602d	24	3'-0"	
#6	64	18'-9"	
#6	28	28'-6"	
#6	16	25'-3"	
#6	8	22'-9"	
#6	60	3'-9"	
#6	8	17'-3"	
#6	8	11'-2"	
#6 Total			4693
501d	33	10'-3"	
502d	33	9'-3"	
503d	22	29'-3"	
504d	88	10'-2"	
505d	22	27'-2"	
#5 Total			2898
401d	227	3'-11"	
#4	2	26'-9"	
#4	4	25'-0"	
#4	4	19'-0"	
#4	4	18'-9"	
#4	2	13'-3"	
#4	2	10'-6"	
#4 Total			831
TOTAL STEEL			12674
CONCRETE (CU. YDS.)			
CLASS B above ftg.			46.2
CLASS A			76.1
MISCELLANEOUS			
ANCHOR PLATE #2			16
SPECIAL CONC. REMOVAL			9.7 Cu. Yds.

CUTTING DIAGRAM FOR 503d & 505d BARS

NOTES:
SPECIAL CONCRETE ABOVE EL. 584.77 OF EXISTING PIER STUBS TO BE REMOVED AND THE #6 BARS EXPOSED ARE TO REMAIN IN PLACE. SEE DRWG S4A FOR DETAILS OF EXISTING PIER STUBS.

NOTES:
SEE DWG. S2 FOR GENERAL NOTES FOR REINFORCING BAR NOTES SEE BR. STD. C.1.
FOR DET. OF ANCHOR PLATE #2 SEE DWG. S-6.
ANCHOR PLATE #2 TO BE PRE-SET IN CONCRETE.

PIER No. 2 DETAILS
INDIANA STATE HIGHWAY COMMISSION

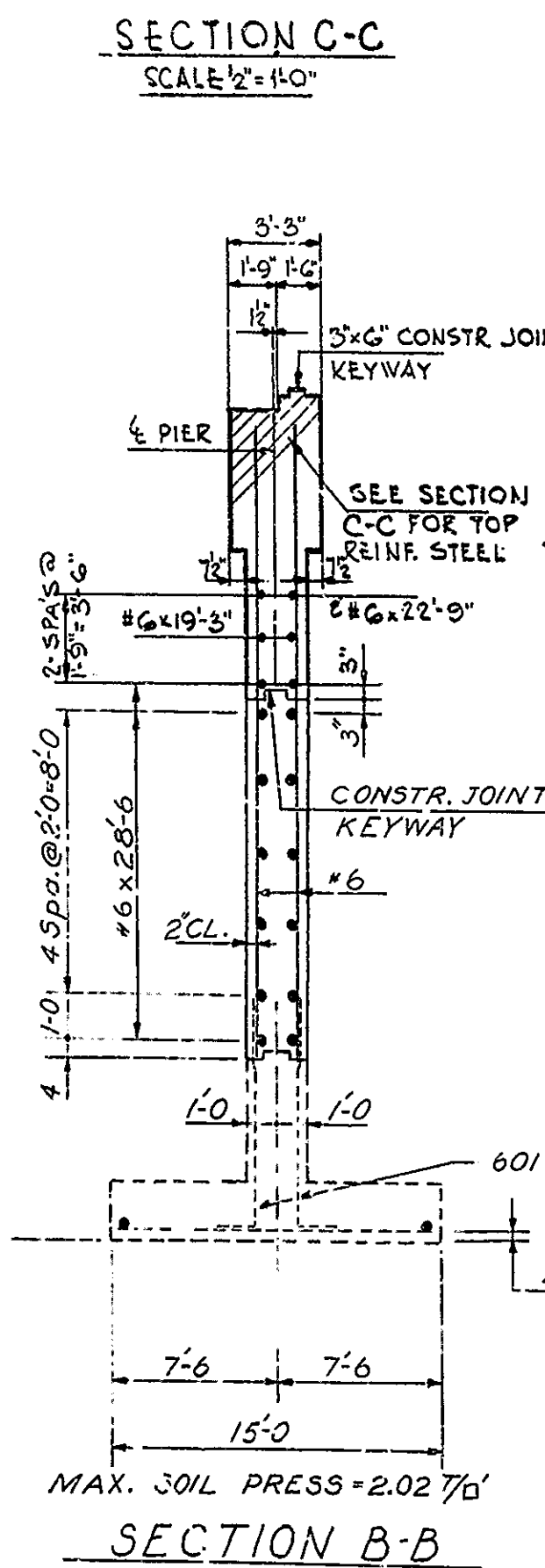
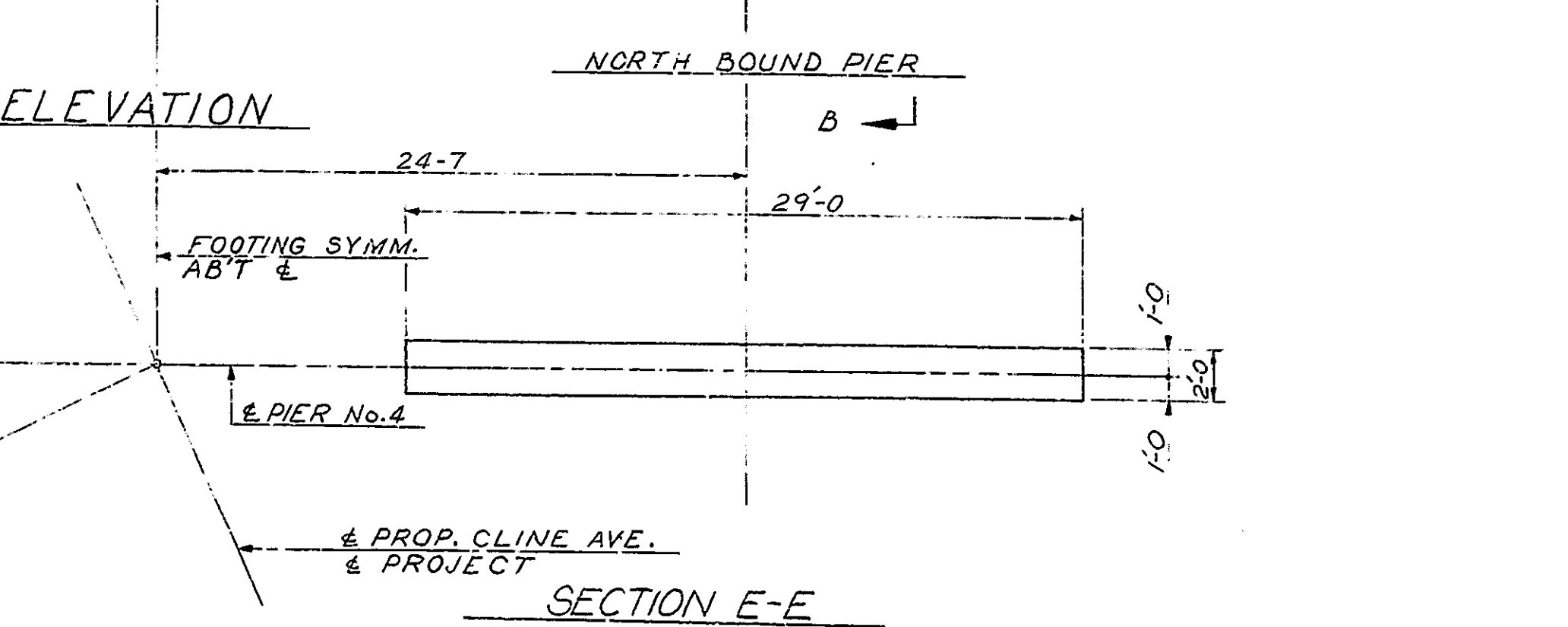
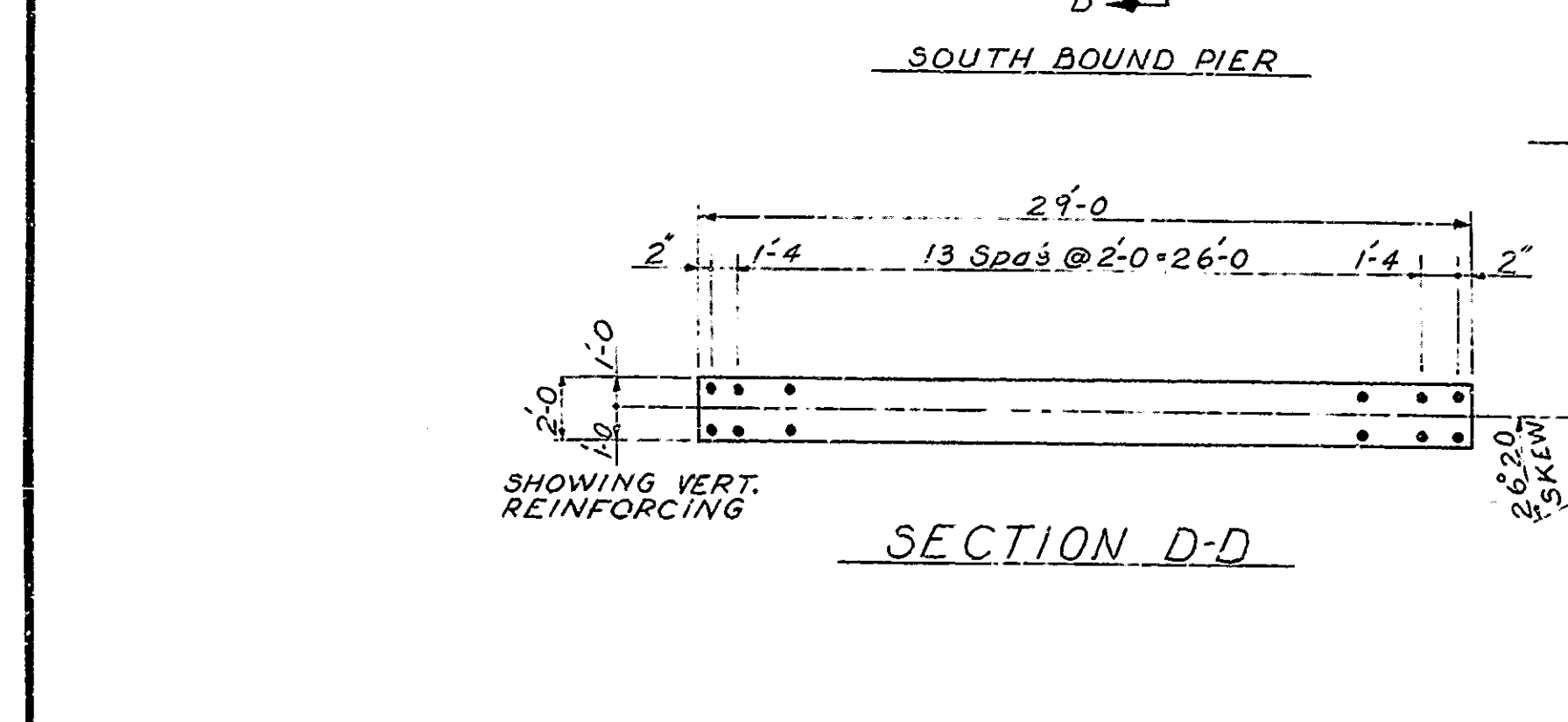
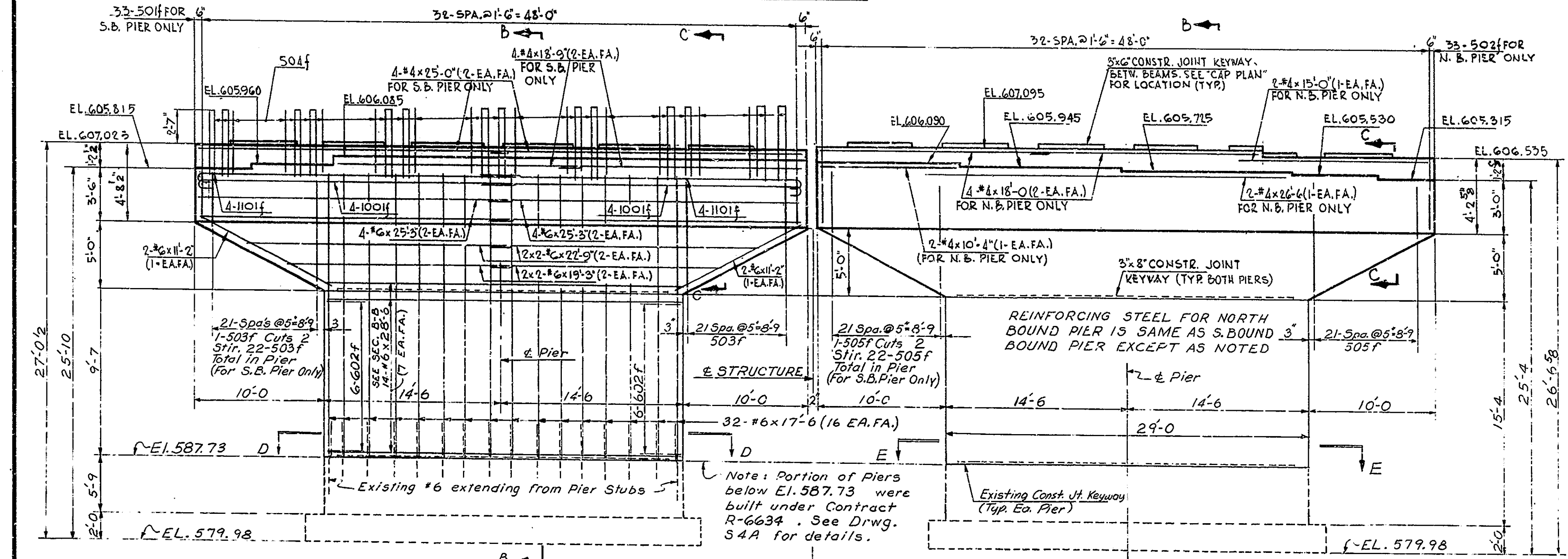
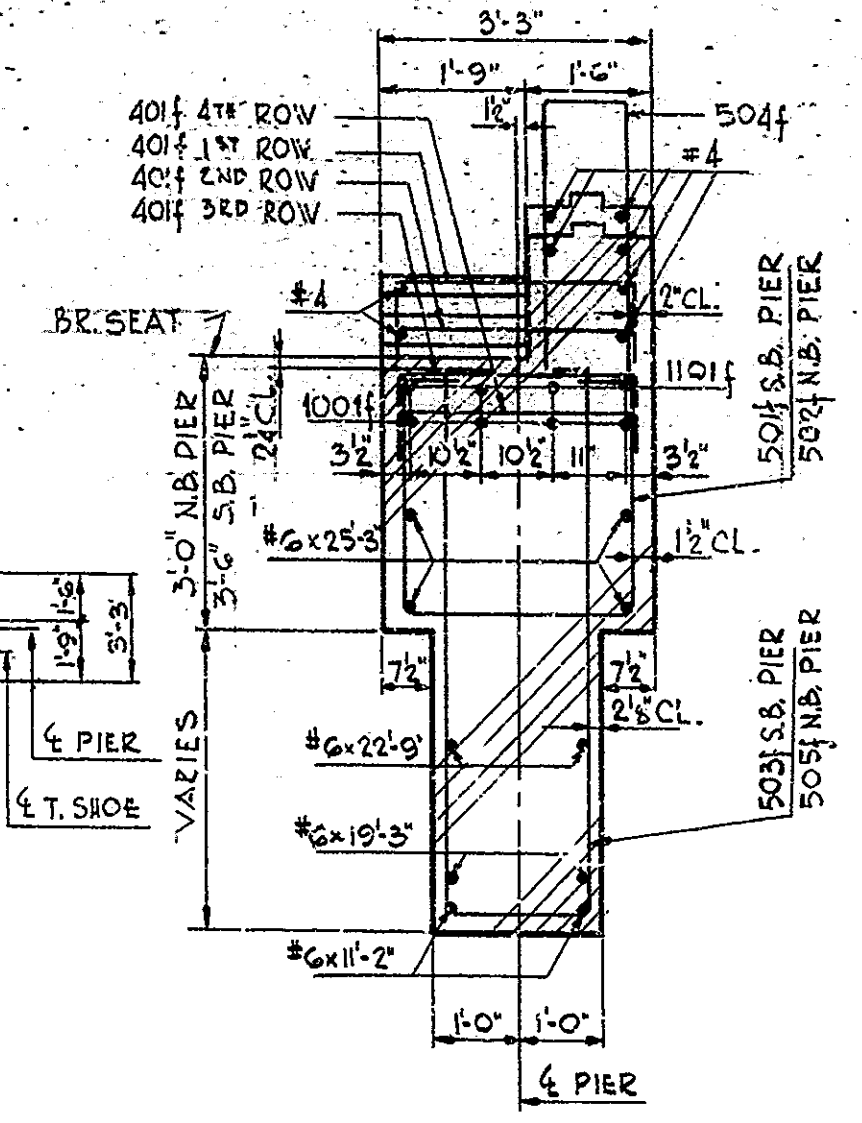
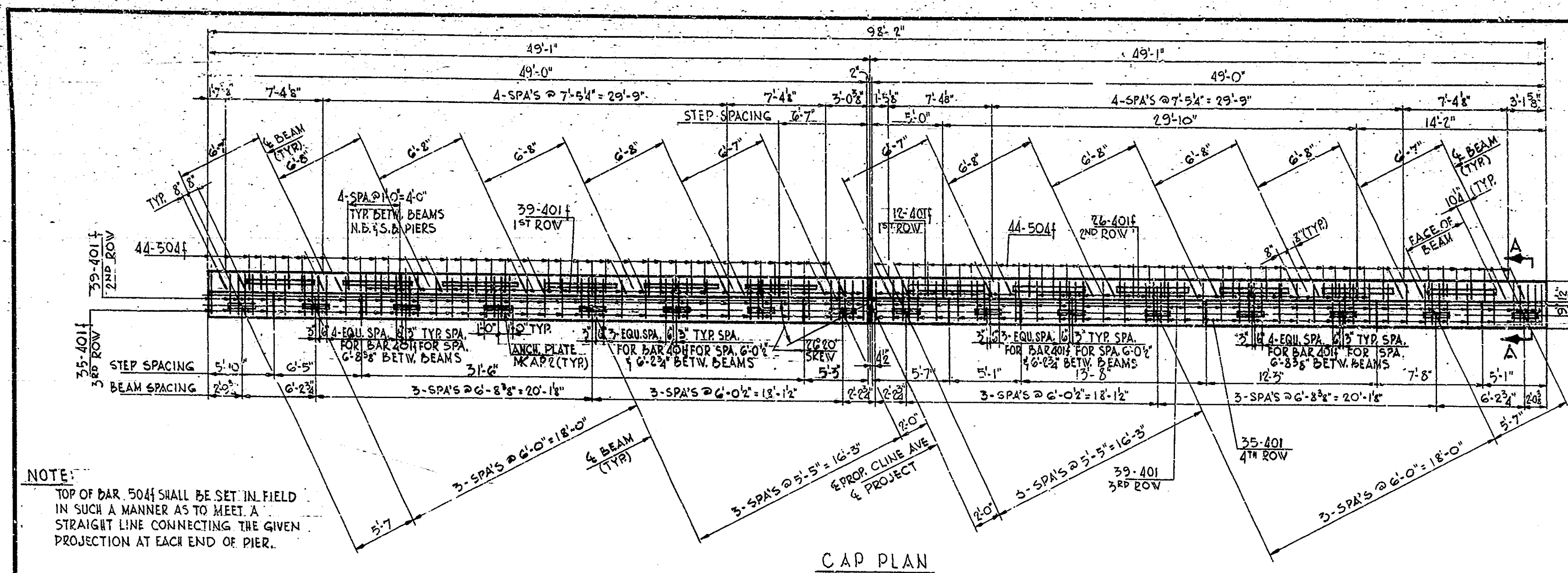
SCALE: 3/8"=1'-0" UNLESS NOTED
APRIL 9, 1965

SUBMITTED FOR APPROVAL: *R.P. Rimmer*

DRAWING: S-5A OF 18
PROJECT: U.S.-831 (15)
BRIDGE CONTRACT NO. B-349B
BRIDGE FILE: 912-45-5088

DESIGNED BY	E.W.	CHECKED BY	L.A.A.
DRAWN BY	V.P.	CHECKED BY	D.M.P.
TRACED BY	CMD		

BRIDGES OVER 20' SPAN					
PUB. ROAD RES. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	US831(5)	1965	19A	50



BILL OF MATERIAL

REINFORCING STEEL

SIZE & MARK	No. OF BARS	LENGTH	WEIGHT LBS.
100f	16	27'-9"	2359
100f	16	27'-6"	1893
602f	24	3'-0"	
#6	64	17'-6"	
#6	28	28'-6"	
#6	16	25'-3"	
#6	8	22'-9"	
#6	8	19'-3"	
#6	8	11'-2"	
#6 Total			4235
501f	33	10'-3"	
502f	33	9'-3"	
503f	22	29'-3"	
504f	88	10'-2"	
505f	22	27'-2"	
#5 Total			2898
401f	225	3'-11"	
#4	2	26'-6"	
#4	4	25'-0"	
#4	4	18'-9"	
#4	4	18'-0"	
#4	2	15'-0"	
#4	2	10'-4"	
#4	2	6'-3"	
#4	2	4'-8"	
#4 Total			825
Total Steel			12210

CONCRETE (Cu. Yds.)

Class "B" Above 14	41.2
Class "A"	77.6

MISCELLANEOUS

Anchor PL MK AP2	16
SPECIAL CONC. REMOVAL	9.7 Cu. Yds.

NOTES:

SEE DWG. S-2 FOR GENERAL NOTES

FOR REINFORCING BAR NOTES SEE BR. STD. CI

FOR DETAIL OF ANCHOR PLATE MK AP2 SEE DWG. S-6

ANCHOR PLATE MK AP2 TO BE PRE-SET IN CONCRETE

SPECIAL CONCRETE ABOVE EL. 587.73 OF EXISTING PIER STUBS TO BE REMOVED AND THE #6 BARS WHICH ARE EXPOSED ARE TO REMAIN IN PLACE. SEE DRWG. S-4A FOR DETAILS OF EXISTING PIER STUBS

PIER No. 4 DETAILS

INDIANA STATE HIGHWAY COMMISSION

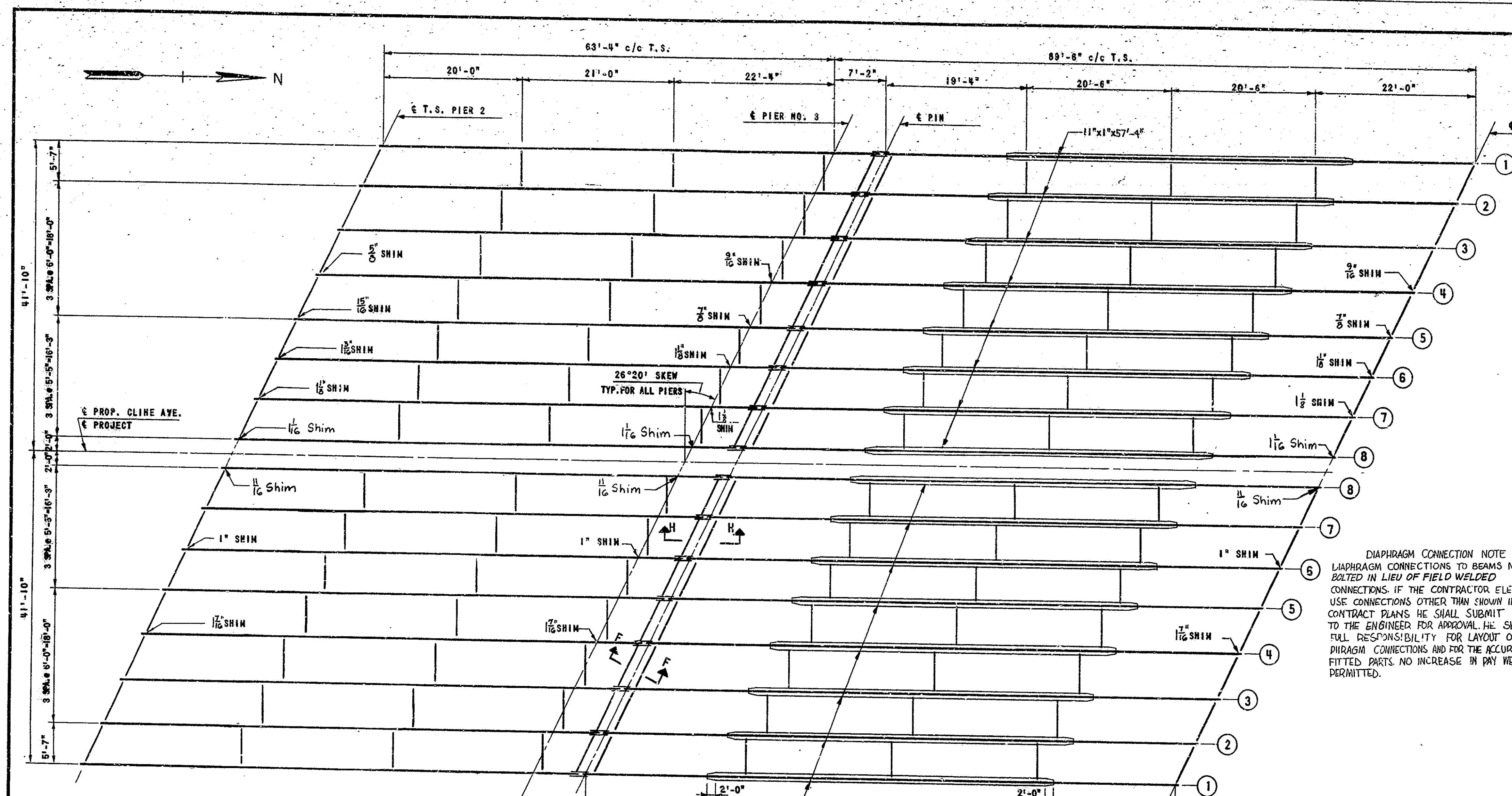
SCALE: 1/2" = 1'-0" UNLESS NOTED APRIL 9, 1965

SUBMITTED FOR APPROVAL: *C.R. Rimmer*

DRAWING: S-7 of 18
PROJECT: U.S. 831 (5)
BRIDGE CONTRACT NO. B-8498
BRIDGE FILE: 912-45-5068

DESIGNED: E.W. CKD I.A.A.
DRAWN: V.P. CKD S.M.P.
TRACED: CKD

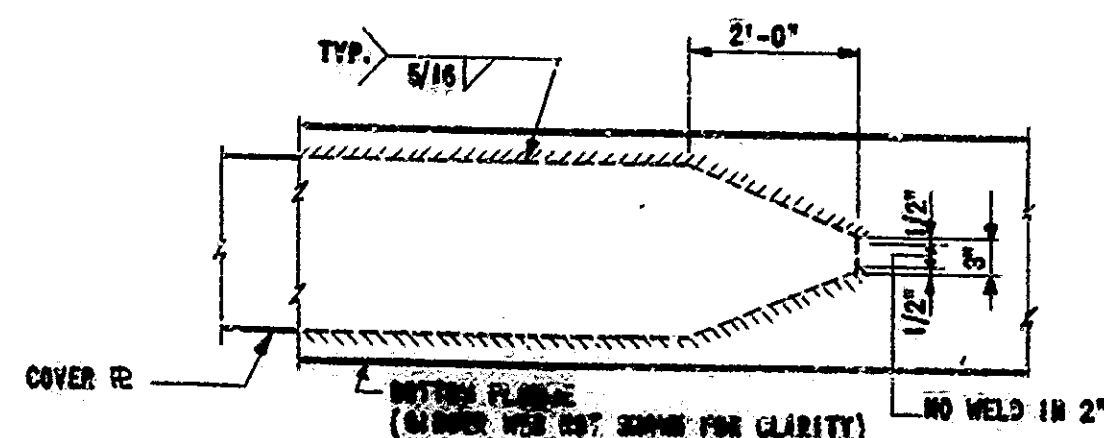
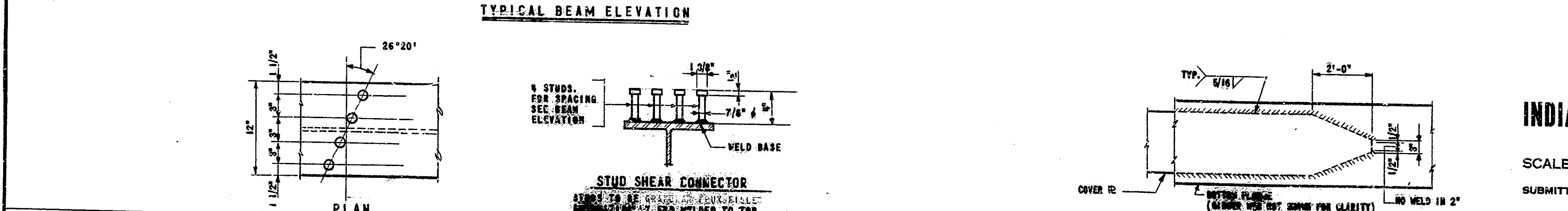
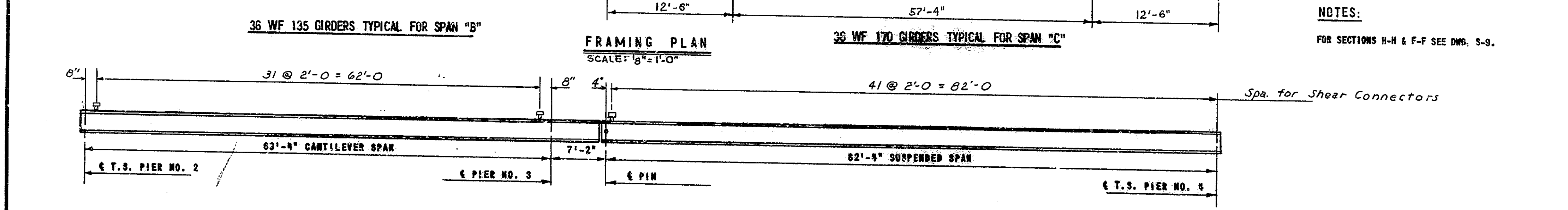
BRIDGES OVER 20' SPAN					
PUB. ROAD DIST. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	U.S. 831 (US)	1964	20	50



- NOTES**
- HS. BOLTS - 7/8" ϕ .
 - OPEN HOLES - 15/16" ϕ UNLESS NOTED.
 - PAINT - ALL PAINT SHALL BE IN ACCORDANCE WITH CURRENT STATE HIGHWAY SPEC'S.
SHOP { BASIC LEAD SILICO-CHROMATE.
FIELD
 - THE CONTRACTOR SHALL PREPARE DETAILED WORKING OR SHOP DRAWINGS TO ENABLE HIM TO FABRICATE, ERECT, AND CONSTRUCT ALL PARTS OF THE WORK IN CONFORMITY WITH THE ENGINEER'S DRAWINGS AND SPECIFICATIONS AND SHALL SUBMIT FIVE (5) COPIES OF THESE TO THE ENGINEER. SEE ART. 210.2 OF THE SPEC'S.
 - BEAMS 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 DIRECTION OF CAMBER. CAMBER TO BE CHECKED AFTER WELDING OF COVER RISTS COMPLETED.
 - DIAMETER OF HOLES IN ALL MATERIAL CONNECTING TOP SHOES TO BEAM FLANGES SHALL BE 1/8" IN. BOLTS CONNECTING BEAM FLANGE TO TOP SHOE SHALL EXTEND INTO TOP SHOE A MINIMUM OF 1/2".
 - SHIMS BETWEEN BEAMS AND TOP SHOES MAY BE BUILT-UP. NO SHIM SHALL BE LESS THAN 1/8" IN THICKNESS.
 - AS SOON AS THE ENGINEER HAS APPROVED THE FIELD WELDS, ALL WELDS AND ANY SURFACE FROM WHICH THE SHOP COAT HAS BEEN REMOVED OR WHICH IS NOT TO BE REWELDED SHALL BE REPAINTED WITH AN APPROVED PAINT OR ANOTHER MATERIAL AND COMPLETELY COVERED WITH ONE COAT OF SHOP PAINT.
 - ALL WELDING SHALL CONFORM TO THE CURRENT AWS SPEC'S. FOR WELDED HIGHWAY AND BRIDGE BRIDGES (UNLESS NOTED). WEIGHT OF STRUCTURAL STEEL (ESTIMATED) = 428,000#
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.

DIAPHRAGM CONNECTION NOTE
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 THE ACCURACY OF ALL FITTED PARTS. NO INCREASE IN PAY WEIGHT WILL BE PERMITTED.

- DATA USED FOR DESIGN AND DETAILS**
- LIVE LOAD - HS20-44 WITH IMPACT & DISTRIBUTION OF LOADS IN ACCORDANCE WITH 1969 A.A.S.H.O. SPECIFICATIONS.
 - DEAD LOAD - ACTUAL WEIGHT PLUS 35 LBS. PER SQ. FT. TO PROVIDE FOR FUTURE WEARING SURFACE.
 - SLAB DESIGNED FOR 16,000 LB. WHEEL PLUS IMPACT AND WITH 1/2" WEARING SURFACE.
 - Allowable Stresses: To be in accordance with 1969 AASHO Specifications.



INDIANA STATE HIGHWAY COMMISSION

SCALE: AS NOTED

MAY 27, 1964

SUBMITTED FOR APPROVAL: Carl W. ...

DRAWING: S-8 OF 18

PROJECT: U.S. - 831 (15)

BRIDGE CONTRACT NO. 2-8498

BRIDGE FILE: 912-45-5038

DESIGNED: S.W. CKD, J.L.E.
DRAWN: M.L. CKD, J.A.A.
TRACED: CKD

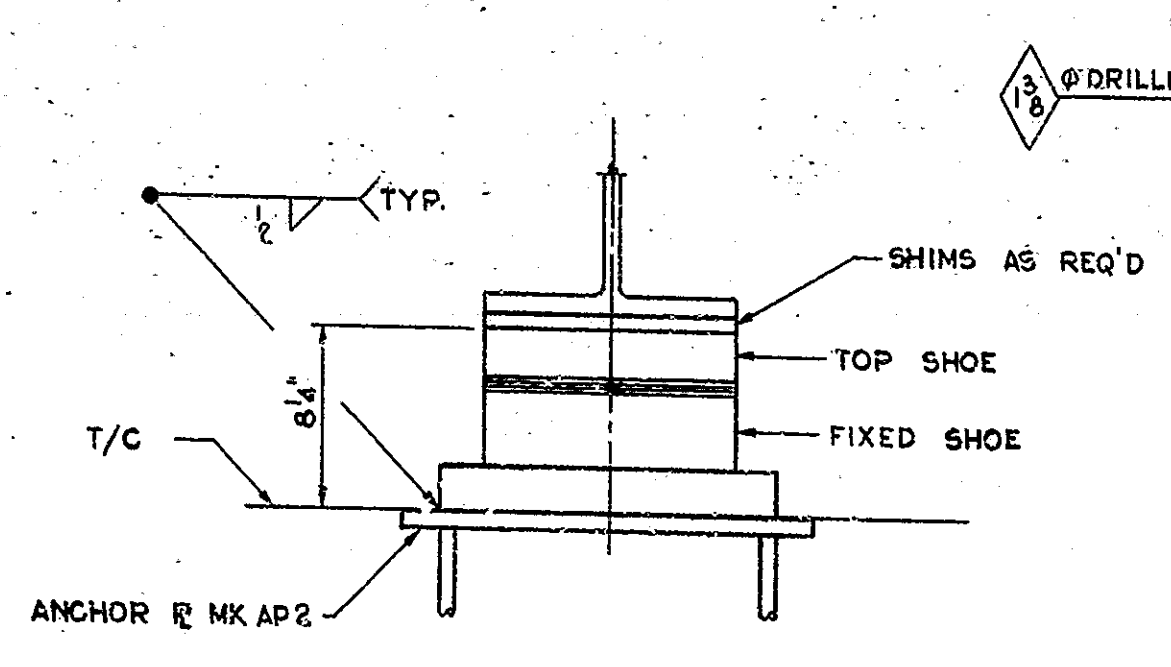
SHEAR CONNECTOR DETAILS
SCALE: 1 1/2" = 1'-0"

Rev. 9-16-70 Design Spec
Rev. 9-11-70: N.C. ss
Rev. 12-15-67 PLATES, NOTES, DESIGN DATA, STR. ST. WEIGHT.
Rev. 9-25-66 Shims

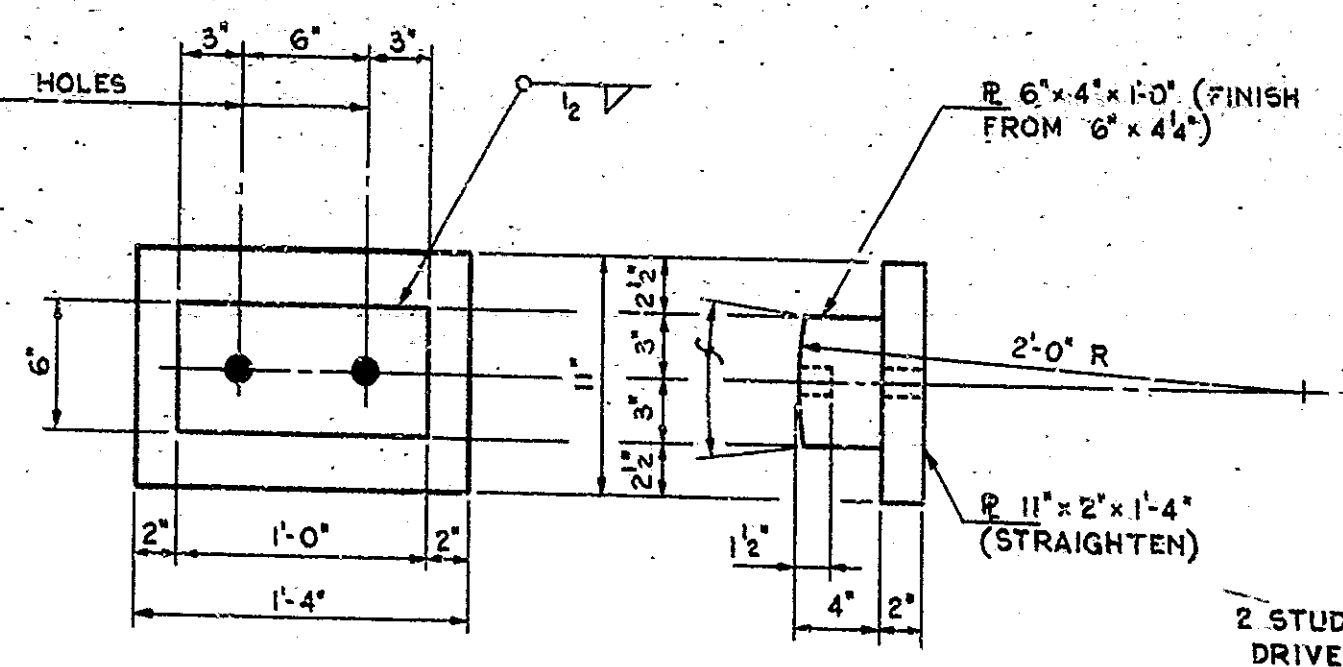
COVER P.L. DETAIL
NOT TO SCALE

REV. 11-21-64 12-15-67 C.H.E. J.C.M.

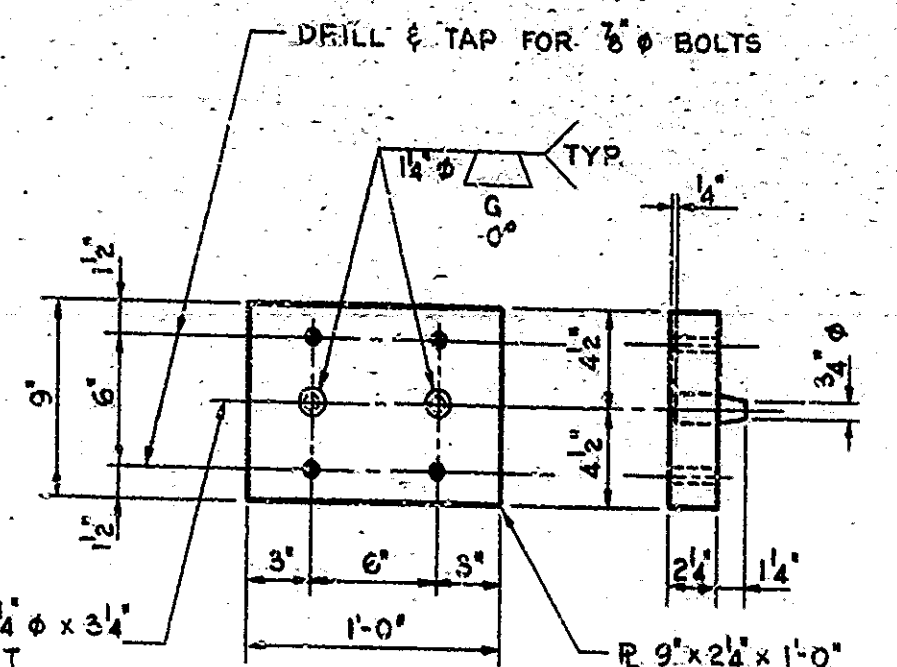
BRIDGES OVER 20' SPAN					
PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	U.S. 851(15)	1964	22	50



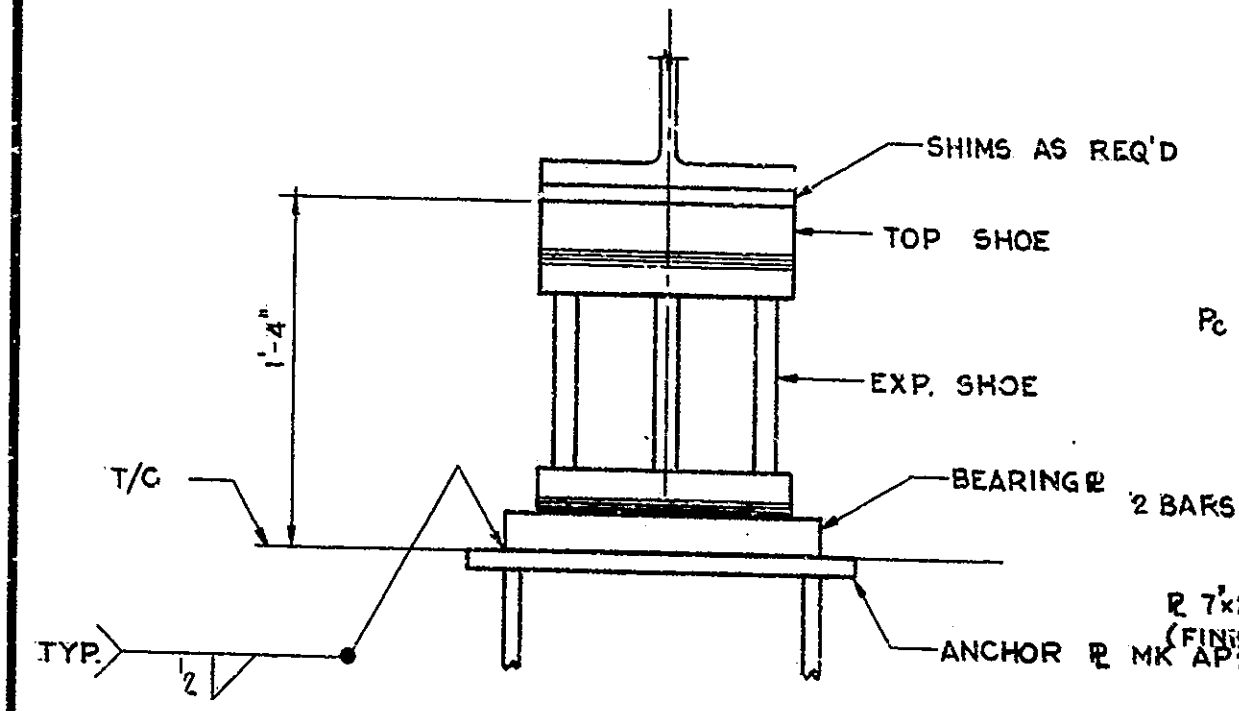
FIXED SHOE ASSEMBLY



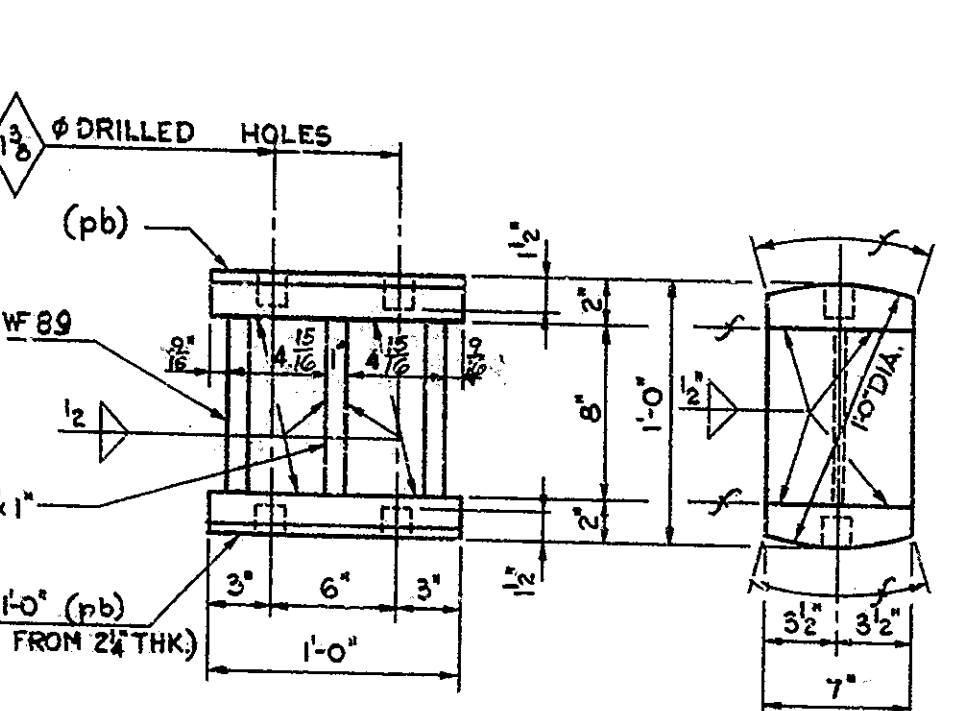
FIXED SHOE - PIER NO. 3
CURVED SURFACES OF SHOES TO BE MACHINED AFTER WELDMENTS HAVE BEEN COMPLETED.



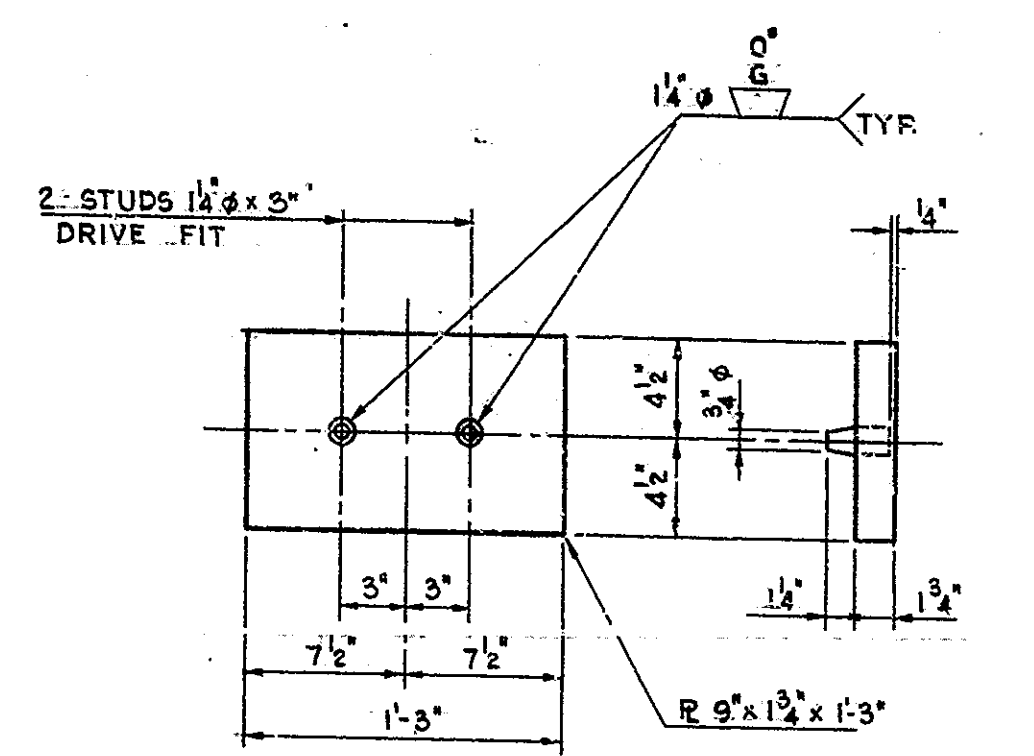
TOP SHOES



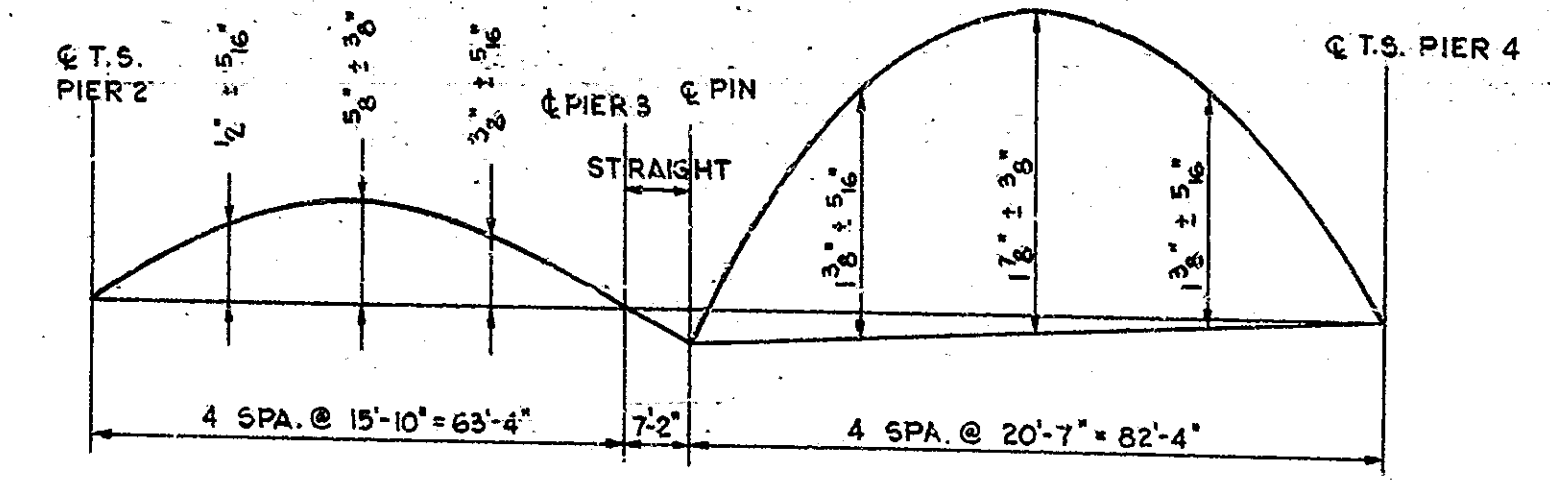
EXPANSION SHOE ASSEMBLY



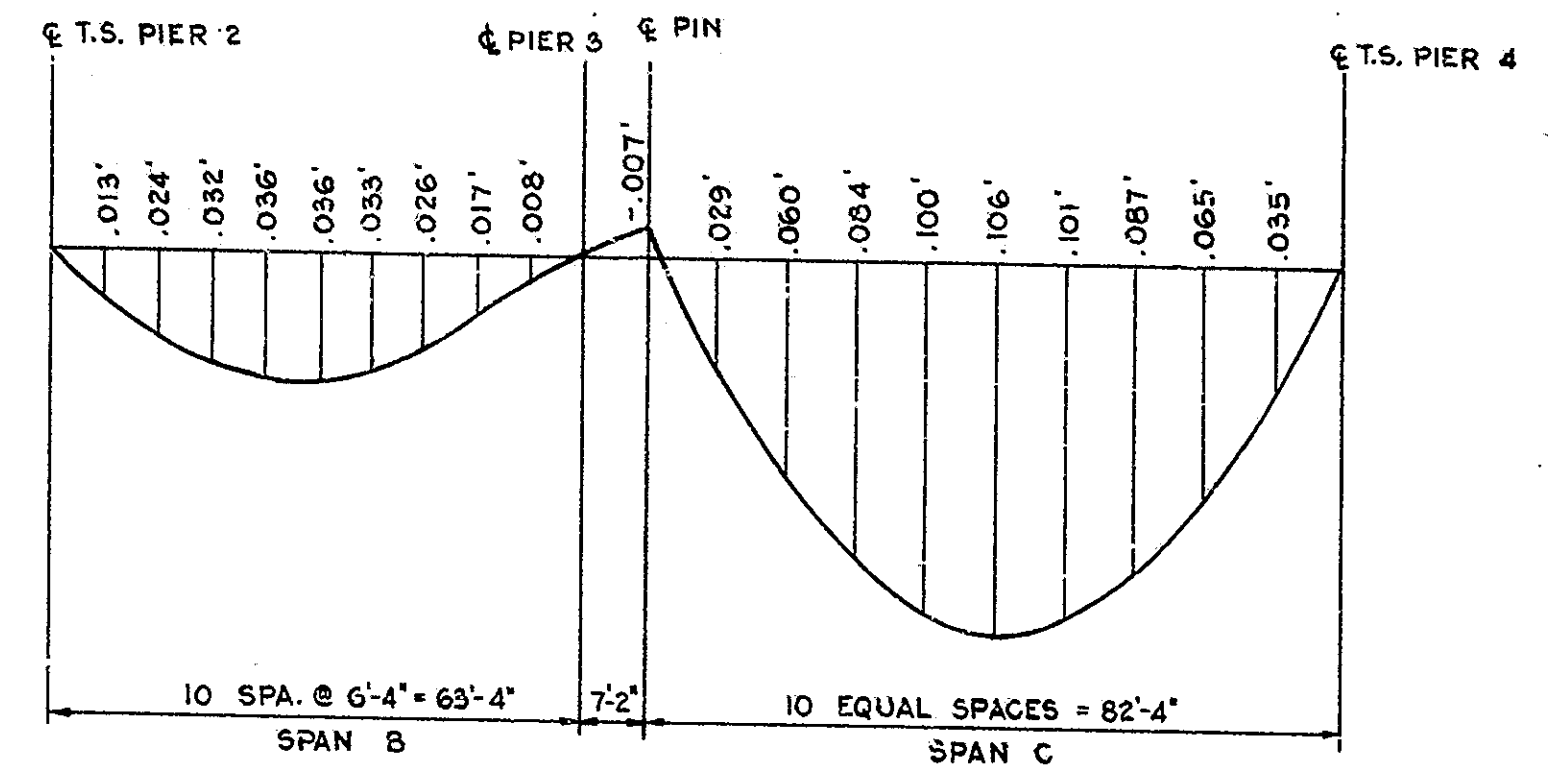
EXPANSION SHOE PIERS NO. 2 & 4



BEARING PLATE



CAMBER DIAGRAM
NO SCALE



CONCRETE DEAD LOAD DEFLECTIONS - SPANS B & C
NO SCALE

NOTE:
SEE DWG. 52 FOR GENERAL NOTES.

STRUCTURAL DETAILS
INDIANA STATE HIGHWAY COMMISSION

SCALE: 1/2" = 1'-0" UNLESS NOTED
MAY 17, 1964

SUBMITTED FOR APPROVAL: Carl Wells Westphal

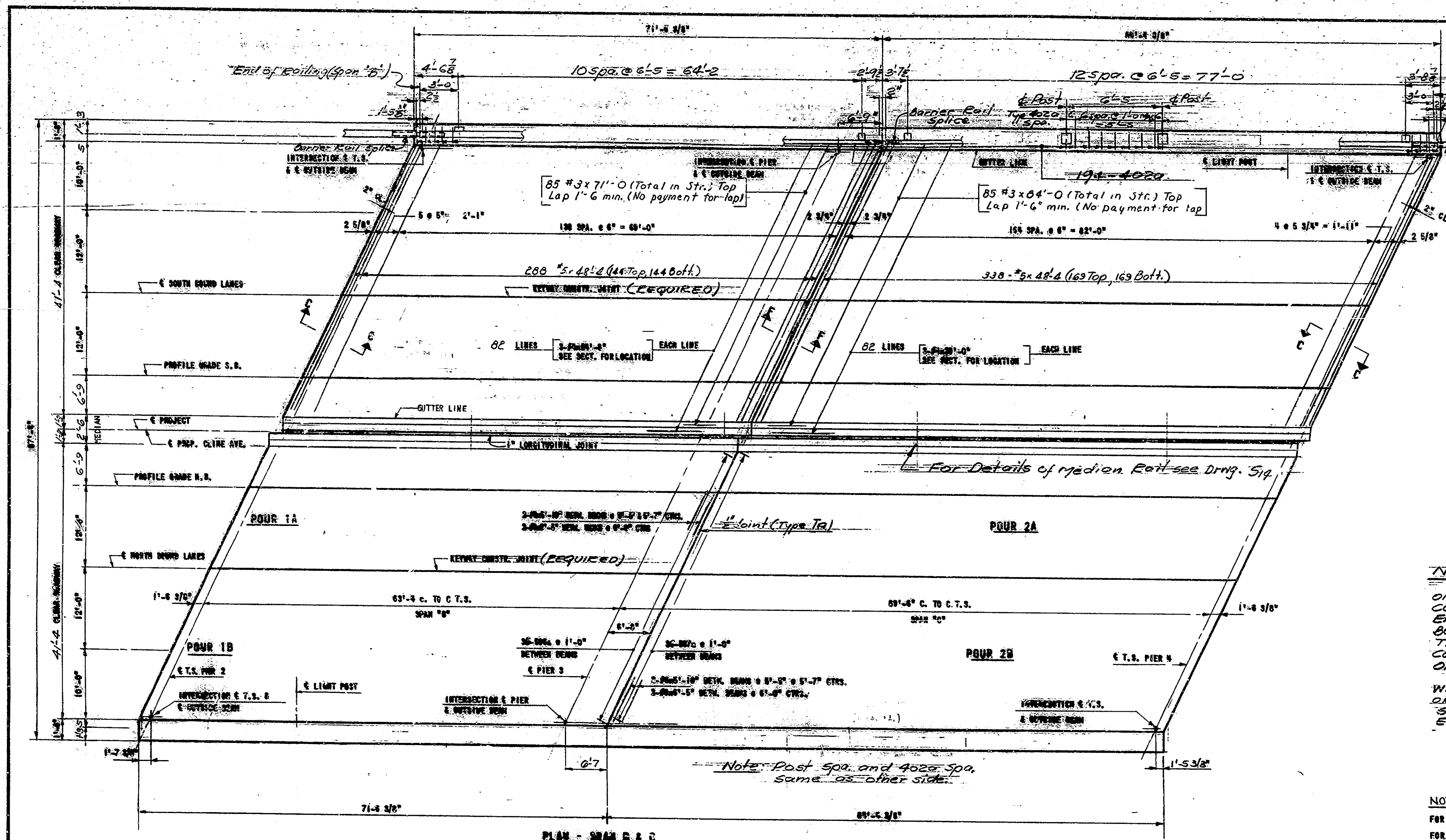
DRAWING: 5-10 OF 18
PROJECT: U.S. 851 (15)
BRIDGE CONTRACT NO. B-3498
BRIDGE FILE: 912-45-5088

DESIGNED	Z.L.F.	CK'D	L.A.A.
DRAWN	T.L.	CK'D	D.N.P.
TRACED		CK'D	

Rev. 9-11-70: Notes
REV. 12-15-62 SHOES

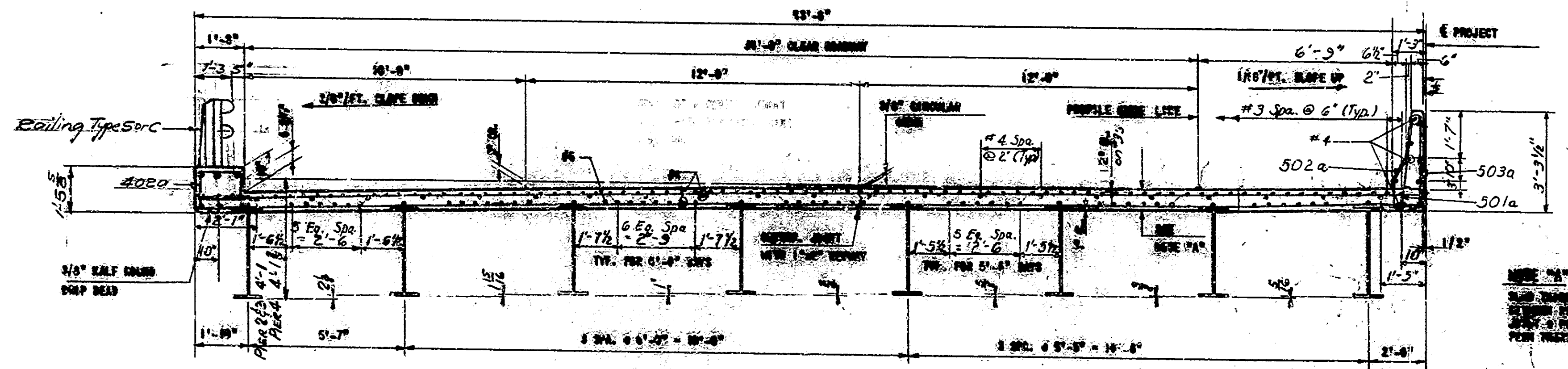
Rev. 12-15-62 L.P.M. C.H. J.J.W.

BRIDGED OVER 20' SPAN					
PUR. ROAD	STATE	PROJECT	FISCAL	SHEET	TOTAL
NO.		NO.	YEAR	NO.	SHEETS
4	IND.	US831(15)	1964	23	50



NOTES:
 SEQUENCE OF POURS TO BE MADE IN ORDER OF POUR NUMBER. ALL SUPERSTRE CONSTRUCTION JOINTS ARE OPTIONAL EXCEPT AS NOTED, AND POURS MAY BE MADE CONTINUOUS PROVIDED THE POUR TERMINATES AT A CONSTRUCTION JOINT INDICATED ON THE PLANS.
 THE CONTRACTOR MAY CHANGE THE WIDTH OF POURS, SEQUENCE OF POURS, OR LOCATION OF CONSTRUCTION JOINTS SUBJECT TO THE APPROVAL OF THE ENGINEER.

NOTES:
 FOR SECTIONS C-C, D-D, & E-E SEE DWG. - S-14.
 FOR SECTIONS F-F SEE DWG. - S-9.
 FOR REINFORCING BAR DETAILS SEE DWG. - S-13.
 FOR RAILING DETAILS SEE BRIDGE SITE PLAN, THRU. BEG.
 AFTER STRUCTURAL STEEL HAS BEEN ERECTED, CONCRETE FORMS SHALL NOT BE REMOVED AGAINST THE EXTERIOR END OF THE STEEL IN MAKING ANY POURS ADJACENT TO STEEL SPANS.
 SEE DWG. S-2 FOR GENERAL NOTES.
 FOR REINFORCING BAR NOTES SEE BE. STD. C1

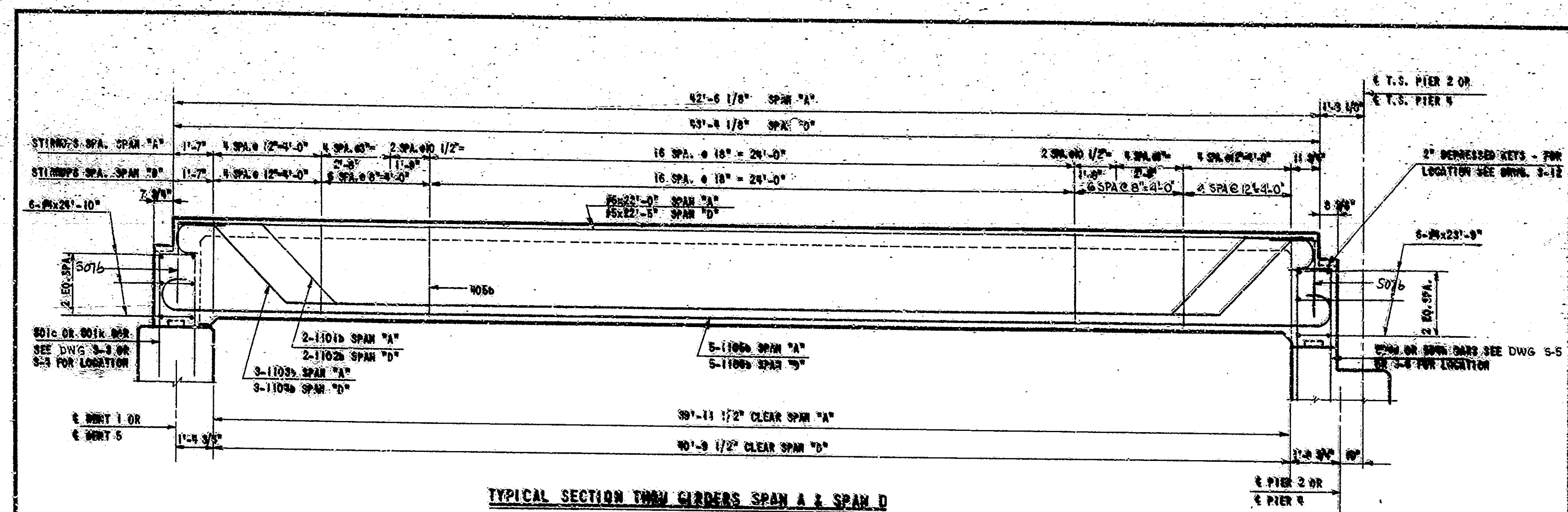


FLOOR DETAILS - SPANS B & C
INDIANA STATE HIGHWAY COMMISSION
 SCALE:- AS NOTED
 SUBMITTED FOR APPROVAL: Carl Wark Westphal
 DRAWING: 3-11 OF 18
 PROJECT:- U.S. - 201 (15)
 BRIDGE CONTRACT NO. B-8496
 BRIDGE FILE:- 312-45-9800
 MAY 17, 1964

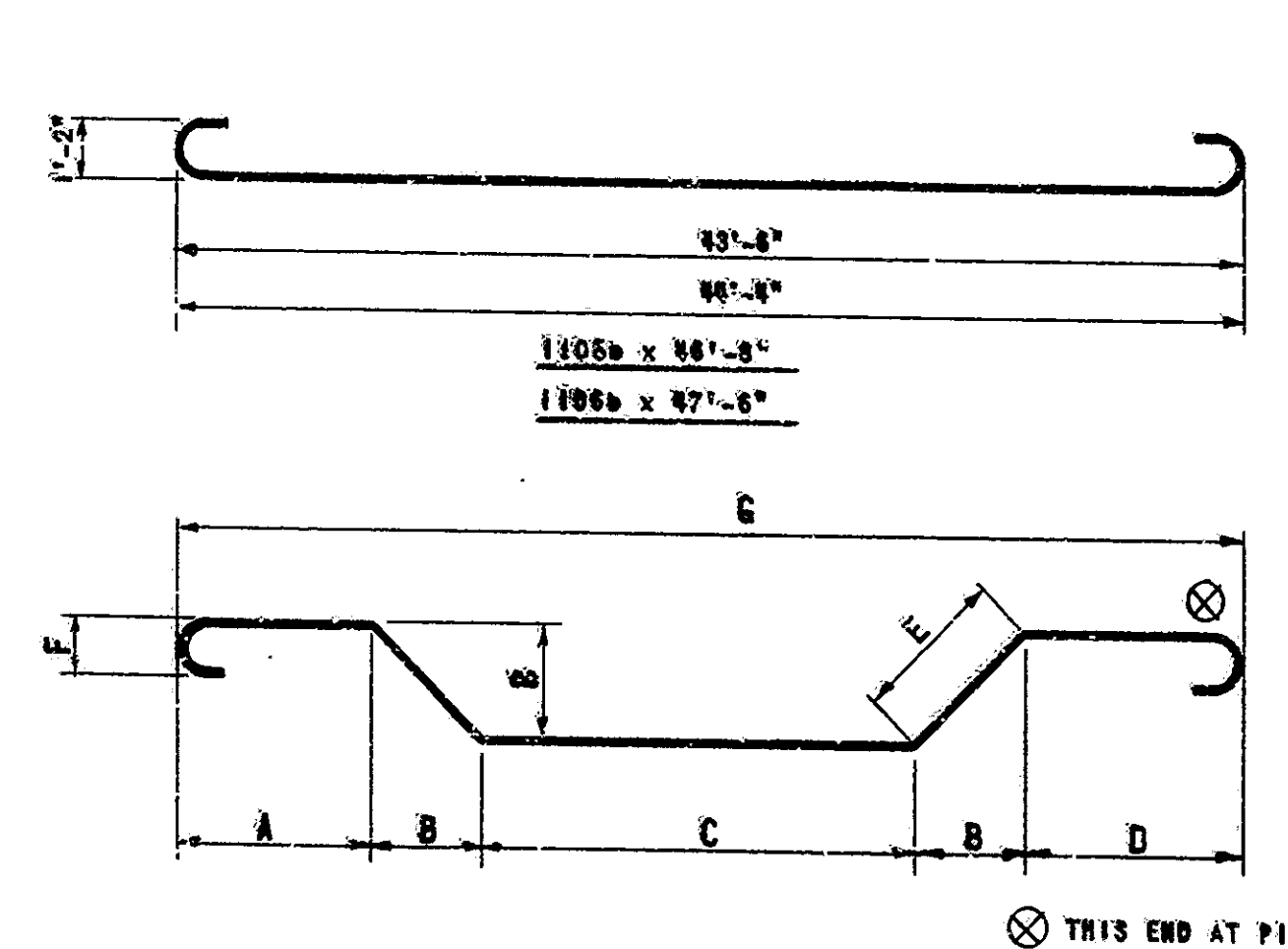
DESIGNED	M.L.	CWD, DMB
DRAWN	M.L.	CWD, DMB
TRACED	CWD	

Rev. 12-15-67 E.B. CHK. J.W.N.

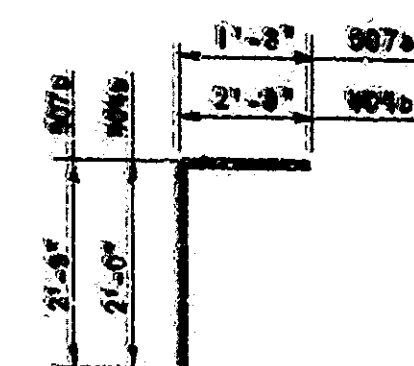
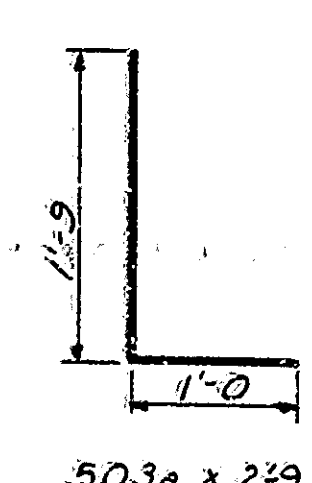
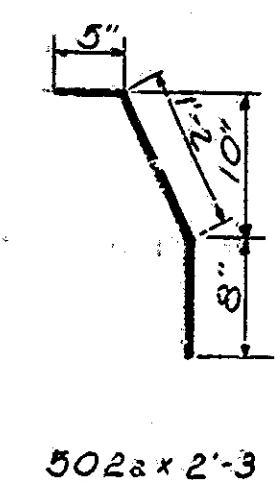
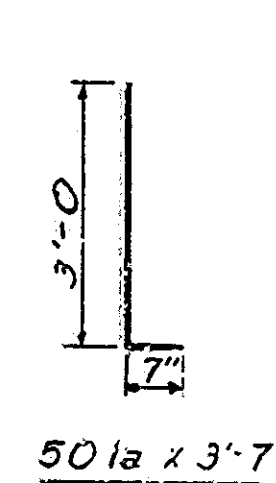
BRIDGES OVER 20' SPAN					
PUR. ROAD	STATE	PROJECT	FISCAL	SHEET	TOTAL
NO.	NO.	NO.	YEAR	NO.	SHEETS
4	IND.	U.S. 50	1964	75	50



TYPICAL SECTION THRU GIRDERS SPAN A & SPAN D
SCALE: 3/8" = 1'-0"



MARK	A	B	C	D	E	F	G	LENGTH
1101b	8'-2"	21'-0"	21'-0"	21'-0"	21'-0"	21'-0"	21'-0"	84'-0"
1102b	8'-2"	21'-0"	21'-0"	21'-0"	21'-0"	21'-0"	21'-0"	84'-0"
1103b	8'-2"	21'-0"	21'-0"	21'-0"	21'-0"	21'-0"	21'-0"	84'-0"
1104b	8'-2"	21'-0"	21'-0"	21'-0"	21'-0"	21'-0"	21'-0"	84'-0"



BILL OF MATERIAL (CONT)		CU. YDS.
RAILING CONCRETE		
SPAN "A"		6.3
Median SPAN "B" & "C"		23.2
SPAN "D"		6.5
TOTAL		36.0
MISCELLANEOUS		
RAILING TYPE SORC		
SPAN "A"	111 FT	
SPAN "B" & "C"	37.5	
SPAN "D"	37.5	
TOTAL		86.0
1" STEEL CONDUIT		
SPAN "A"	87.0	
SPAN "B" & "C"	316.0	
SPAN "D"	89.0	
TOTAL		492.0
ANCHOR BOLTS - A325		
SPAN "A"	4	
SPAN "B" & "C"	8	
SPAN "D"	4	
TOTAL		16
REIN. STEEL OF LIGHT POST		
		358 lbs

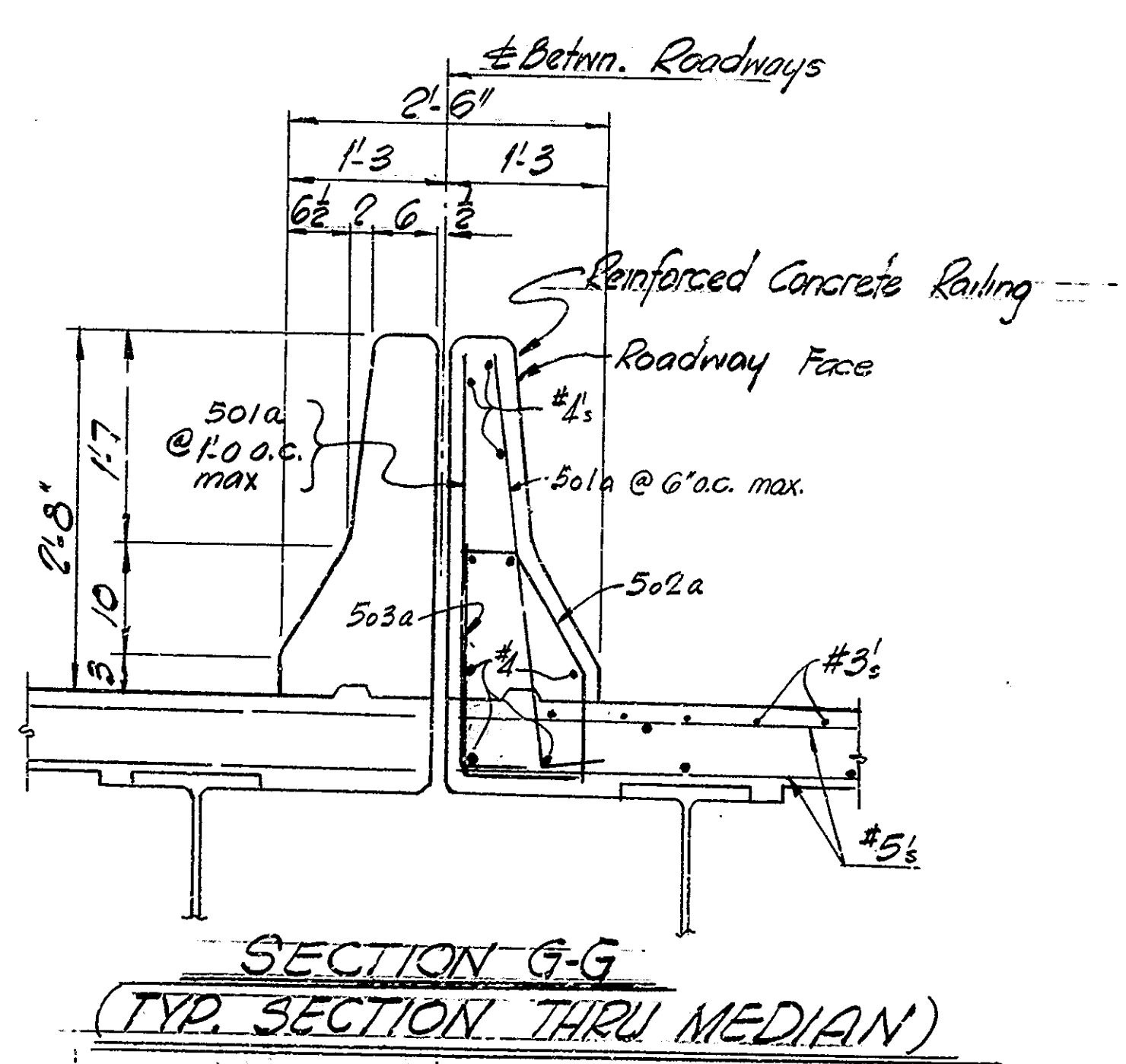
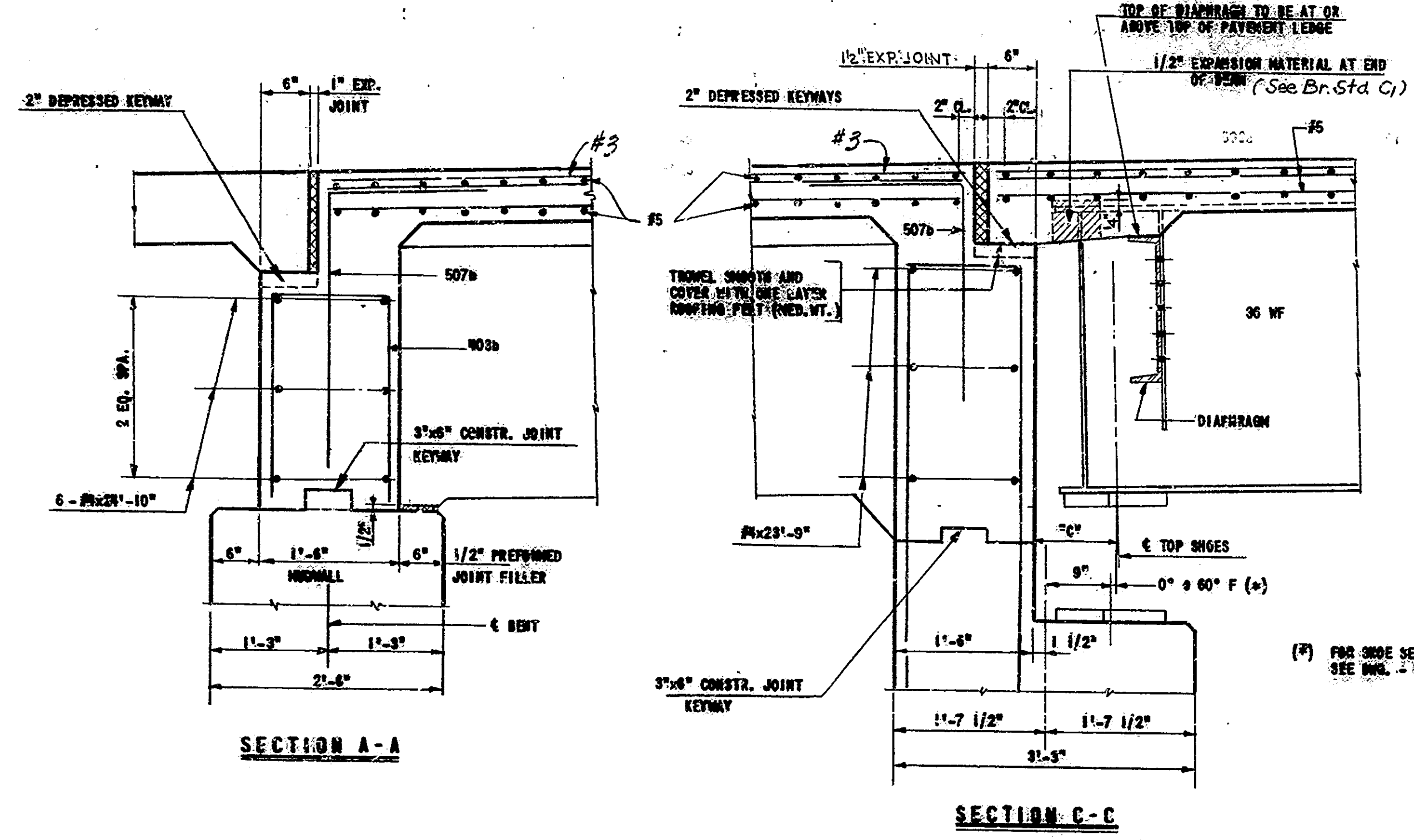
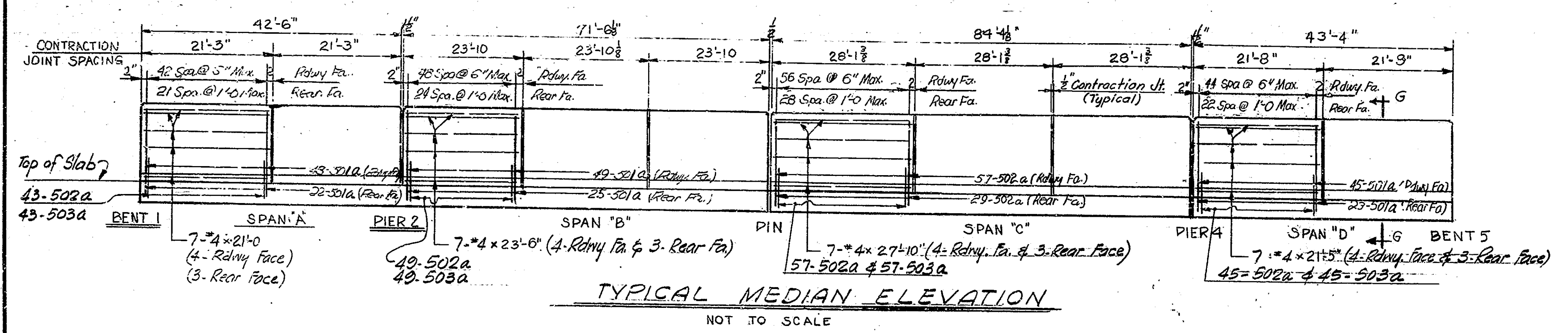
BILL OF MATERIAL - SUPERSTRUCTURE			
REINFORCING STEEL			
SIZE & MARK	NO. OF BARS	LENGTH	WEIGHT (LBS.)
SPAN "A"			
#4	24	61.5	117.6
#5	32	51.0	117.6
TOTAL			235.2
SPAN "B" & "C"			
#4	72	21.0	151.2
#5	1252	48.4	6041.0
TOTAL			6192.2
SPAN "D"			
#4	24	27.0	64.8
#5	24	27.0	64.8
TOTAL			129.6
TOTAL			6457.0
REINFORCING STEEL			
SIZE & MARK	NO. OF BARS	LENGTH	WEIGHT (LBS.)
SPAN "A"			
1101b	28	871.8"	117.6
1102b	32	871.8"	117.6
1103b	32	871.8"	117.6
1104b	32	871.8"	117.6
TOTAL			472.8
SPAN "B" & "C"			
507b	182	41.5	151.2
#5	400	48.4	6041.0
#5	4	47.9	64.8
#5	4	46.9	64.8
TOTAL			6782.8
SPAN "D"			
402b	102	31.9	131.2
403b	48	51.7	117.6
404b	4	41.0	102.4
405b	518	91.0	6041.0
406b	344	22.0	151.2
#4	24	27.0	64.8
#4	24	27.0	64.8
#4	2	41.0	102.4
#4	2	41.0	102.4
TOTAL			9570.8
TOTAL			21,570
CONCRETE			
CLASS: 4000 (40 YRS)			
FORM LIT. & 1 FT. 1" 2.504 100.8			
2 FT. & 2 IN. 2.646 129.2			
SPAN "A" TOTAL 230.0			
SPAN "B" & "C" TOTAL 6192.2			
SPAN "D" TOTAL 129.6			
TOTAL 6551.8			
FORM LIT. & 1 FT. 1" 2.504 100.8			
2 FT. & 2 IN. 2.646 129.2			
TOTAL 6551.8			
SPAN "B" & "C" TOTAL 331.6			
TOTAL 6883.4			
TOTAL STEEL SPAN A 68,347			
TOTAL STEEL SPAN D 69,535			

FLOOR DETAILS
INDIANA STATE HIGHWAY COMMISSION
 SCALE: AS SHOWN
 SUBMITTED FOR APPROVAL: Carl W. ...
 MAY 27, 1964
 DRAWING: 3-100
 PROJECT: U.S. 50 (15)
 BRIDGE CONTRACT NO. B-8498
 BRIDGE FILE: 50-100

DESIGNED: RIF CWD IAA
 DRAWN: M.L. CWD DMP
 TRACED: CWD

42'-6" 71'-6" 84'-4" 43'-4"

BRIDGES OVER 20' SPAN					
PUB. ROAD DIST. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	U.S. 63(15)	1964	26	50



NOTE:
SEE DWG. S-2 FOR GENERAL NOTES.

FLOOR DETAILS
INDIANA STATE HIGHWAY COMMISSION

SCALE: 1" = 1'-0" MAY 27, 1964

SUBMITTED FOR APPROVAL: *Carl Wells Westphal*

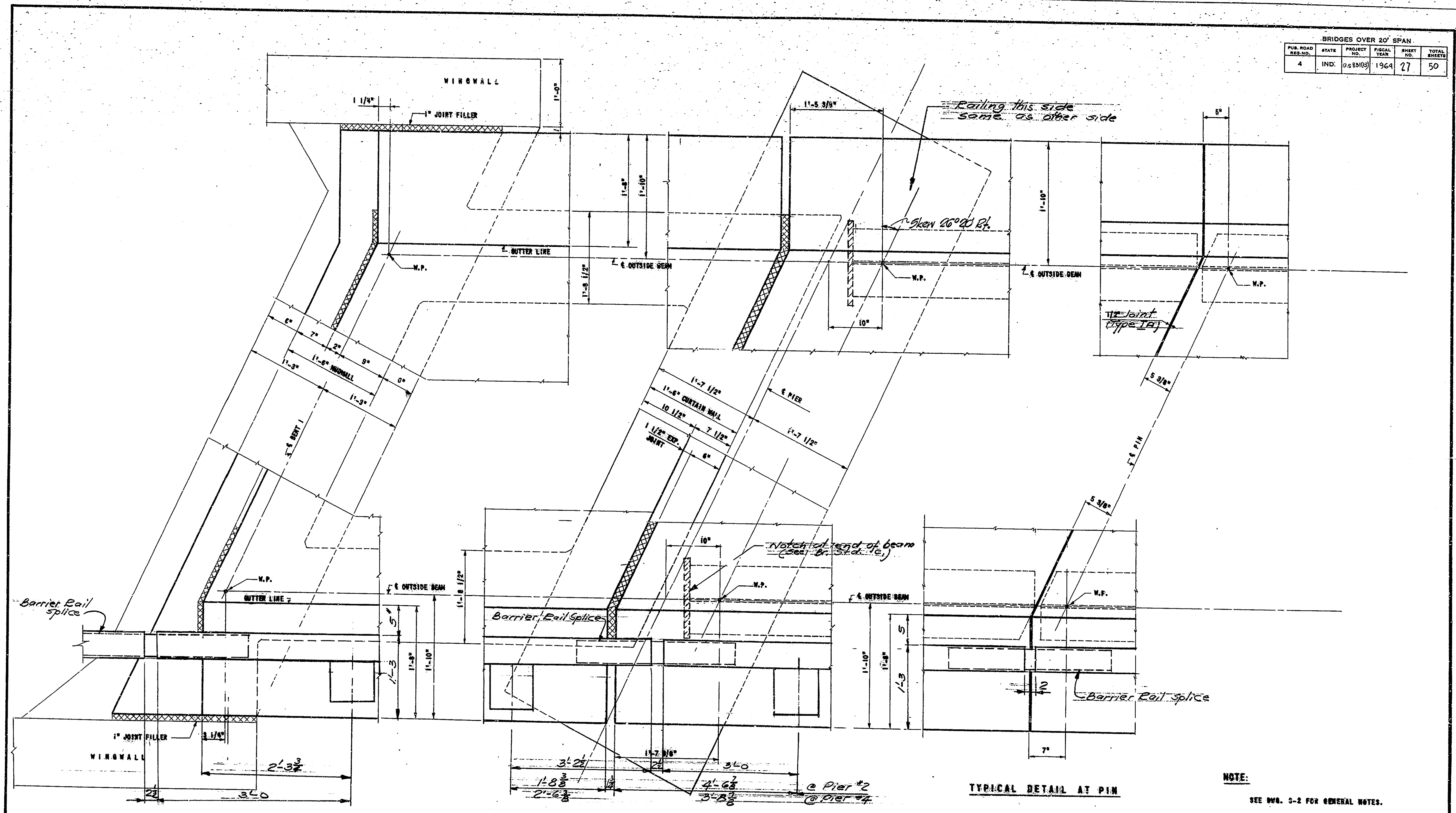
DRAWING: 5-24 OF 18
PROJECT: U.S. 63(15)
BRIDGE CONTRACT NO. B-349B
BRIDGE FILE: 63-2-300

Rev. 9-16-70 Note
Rev. 2-11-70 MEDIAN RAIL
Rev. 12-15-67 Median Rail
Rev. 9-25-64 Median

DESIGNED: M.L. CKD DMP
DRAWN: M.L. CKD DMP
TRACED: CKD

REV. 12-15-67 W.P.M. CHK. J.W.W.

BRIDGES OVER 20' SPAN					
PUB. ROAD DIST. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	0583(19)	1964	27	50



TYPICAL CORNER DETAILS
(DEPT 1 SIMILAR, DEPT 4 SIMILAR)

TYPICAL DETAIL AT PIER 2
PIER 4 SIMILAR

TYPICAL DETAIL AT PIN

NOTE:
SEE DWG. 3-2 FOR GENERAL NOTES.

FLOOR DETAILS
INDIANA STATE HIGHWAY COMMISSION

SCALE: - 1 1/8" = 1'-0" MAY 17, 1964

SUBMITTED FOR APPROVAL: Carl Wade Westphal

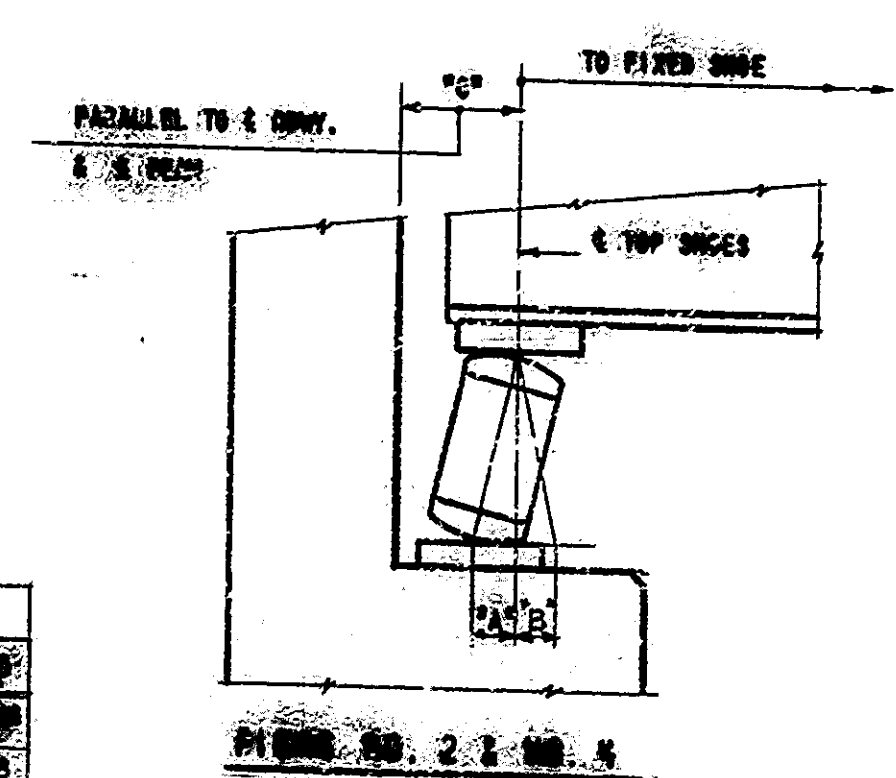
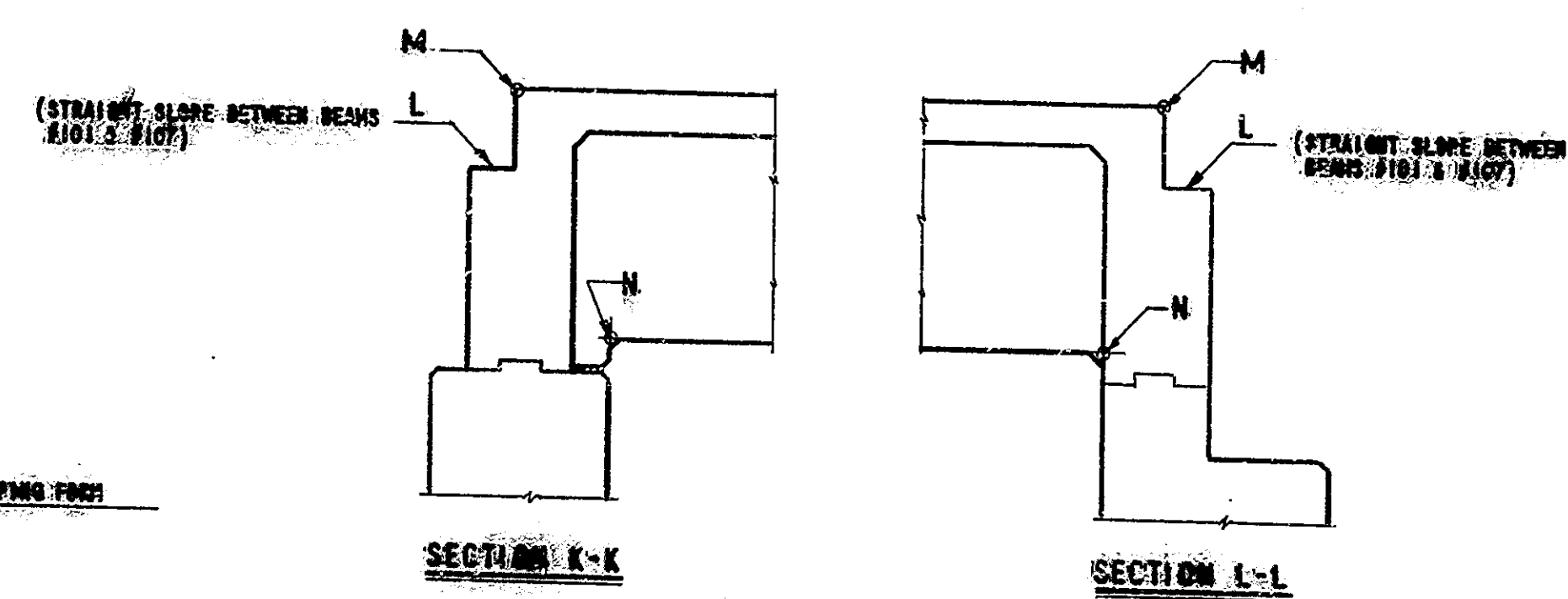
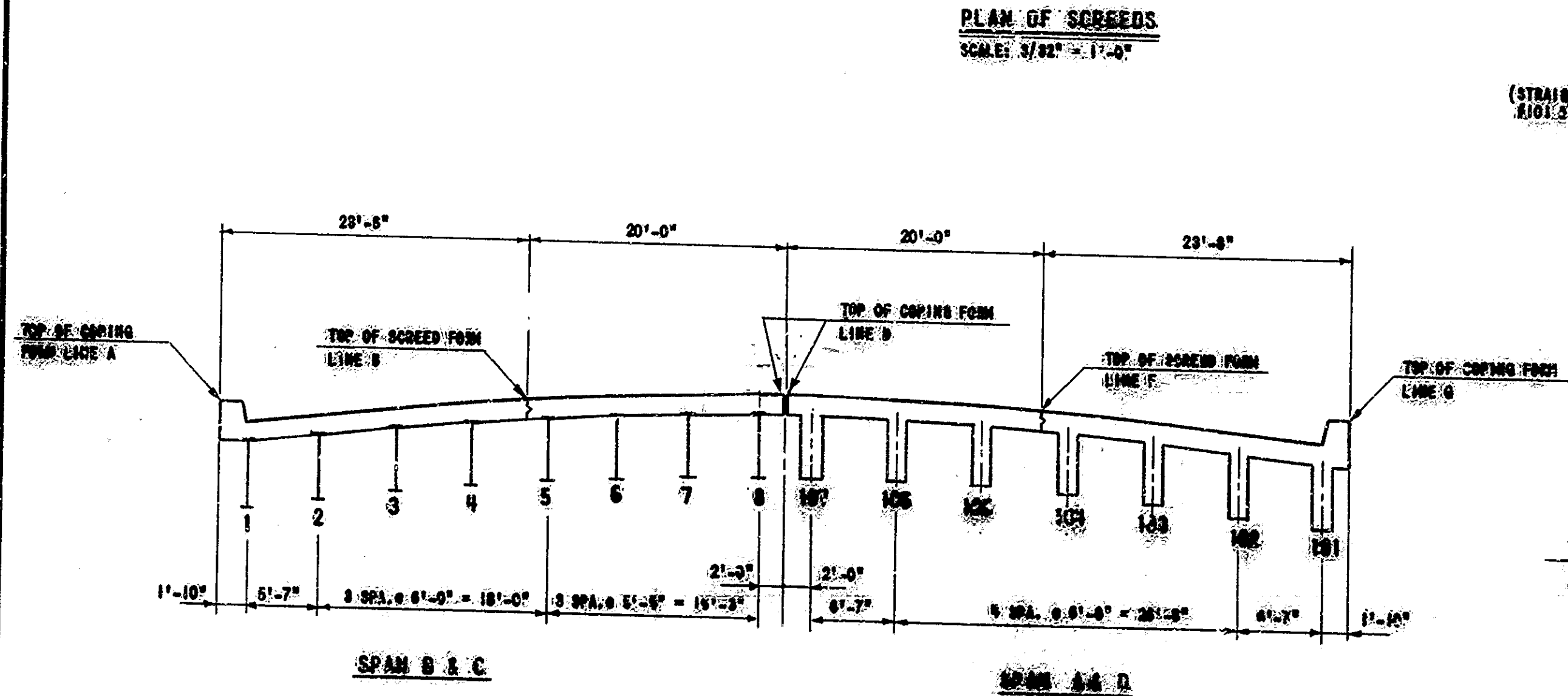
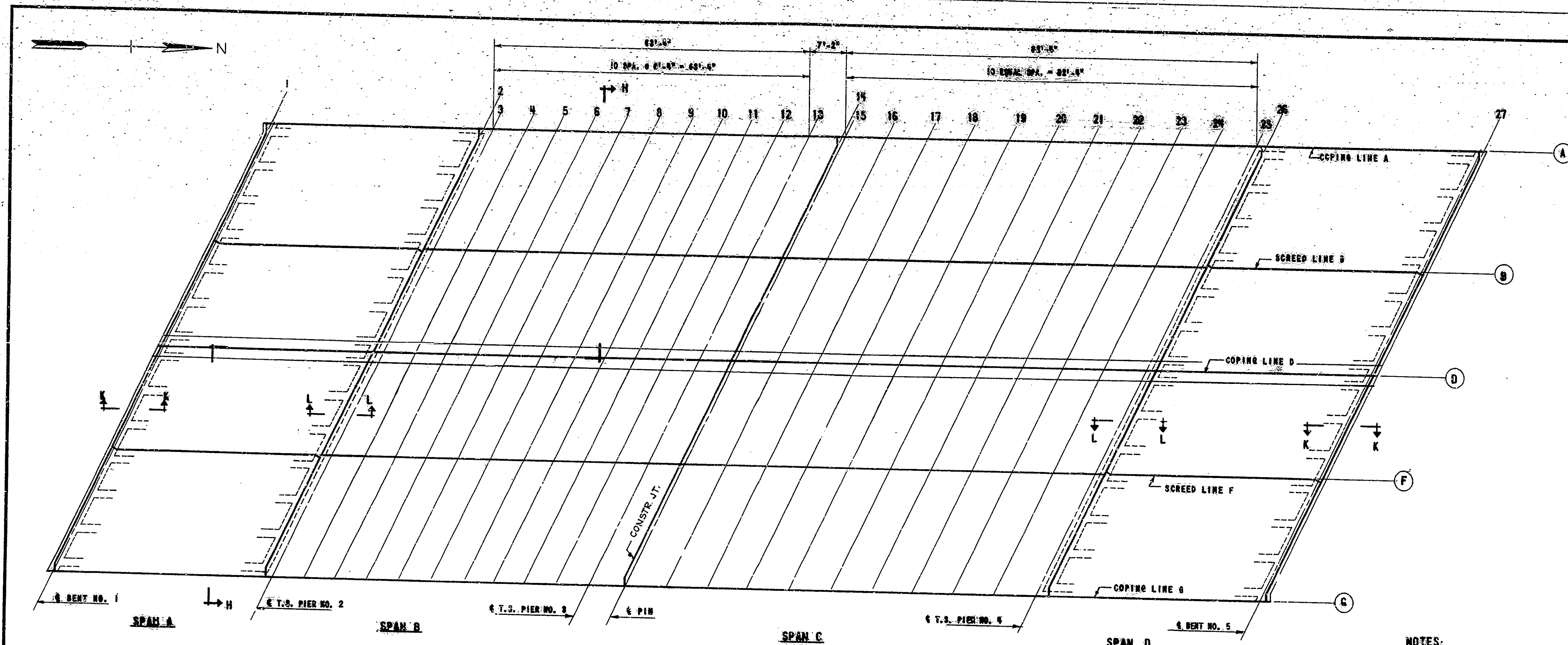
DRAWING: 3 OF 8
PROJECT: U.S. 40 (15)
BRIDGE CONTRACT NO. B-8498
BRIDGE FILE: 916-2-30

DESIGNED: M.L. CKD I.A.A.
DRAWN: M.L. CKD I.A.A.
TRACED: CKD

Rev. 9-11-70 - Sken L
Rev. 12-15-67 - Corner Details

Rev. 12-15-67 E.B. CHL. J.W.W.

BRIDGES OVER 20' SPAN					
PUB. ROAD DIST. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	U.S. 51 (S)	1964	29	50



NOTES:

PURPOSE:

"PLAN OF SCREEDS" SHOWS LOCATION OF SCREEDS. "TABLE OF ELEVATIONS" SHOWS DATA FOR SETTING SCREEDS AND COPING FORMS. SEE EXPLANATION AND DIMENSIONS ON SHEET 28 FOR THE FINAL GRADE ELEVATIONS. APPLY ALL TO CONCRETE AND REBAR FORMS.

GENERAL PROCEDURE:

1. WITH SCREEDS AND COPING FORMS IN PLACE, ADJUST THE SCREEDS TO THE REQUIRED ELEVATIONS. TAKE ELEVATIONS AT ALL SCREED POINTS. SUBTRACT THESE ELEVATIONS FROM THE ELEVATIONS CORRECTED FOR DEFLECTION 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 BY LEVELING.
2. SET THE SCREEDS TO THE ADJUSTED POSITION MARKED POINT (1), WITH THE PILES SET TO THE MARK.
3. SET THE SCREEDS TO THE ADJUSTED POSITION MARKED POINT (1), WITH THE PILES SET TO THE MARK.
4. SCREED ELEVATIONS SHALL BE DETERMINED BY ADDING THE CONCRETE DEAD LOAD DEFLECTIONS TO THE REQUIRED FINAL CONCRETE ELEVATIONS AT ALL SCREED POINTS. TAKE ELEVATIONS AT ALL SCREED POINTS ON TOP OF BEAM ADJACENT TO SCREED POINT. SUBTRACT THESE ELEVATIONS FROM THE ELEVATIONS CORRECTED FOR DEFLECTION 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 BY LEVELING.
5. NO CONCRETE IN THE FLOOR IS TO BE POURED UNTIL THE ABOVE OPERATIONS ARE COMPLETED. SCREED ELEVATIONS WILL BE FURNISHED ON REQUEST.

INDIANA STATE HIGHWAY COMMISSION

SCALE: AS NOTED

MAY 27, 1964

SUBMITTED FOR APPROVAL: *Carl Wade Westphal*

DRAWING: 317 OF 318

PROJECT: U.S. 51 (S)

BRIDGE CONTRACT NO. D-28493

BRIDGE FILE: 28493

DESIGNED R.L.F. CKD. I.A.A.
DRAWN M.L. CKD. I.A.A.
TRACED CKD.

SCREED ELEVATIONS - FEET	
SCREED POINT	ELEVATION
1	101.20
2	101.20
3	101.20
4	101.20
5	101.20
6	101.20
7	101.20
8	101.20
9	101.20
10	101.20
11	101.20
12	101.20
13	101.20
14	101.20
15	101.20
16	101.20
17	101.20
18	101.20
19	101.20
20	101.20
21	101.20
22	101.20
23	101.20
24	101.20
25	101.20
26	101.20
27	101.20

Rev. 9-11-70: Notes, Median Rail
Rev. 7-15-67: Notes
Rev. 9-25-64: Median

BRIDGES OVER 20' SPAN					
PUB. ROAD DIST. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	U.S. 31 (15)	1964	50	50

CONCRETE BEAM ELEVATIONS

BEAM NO.	SOUTH BOUND														NORTH BOUND																	
	101		102		103		104		105		106		107		101		102		103		104		105		106		107					
LOCATION	ELEV. N	ELEV. N	ELEV. N	ELEV. N	ELEV. N	ELEV. N	ELEV. N	ELEV. N	ELEV. N	ELEV. N	ELEV. N	ELEV. N	ELEV. N	ELEV. N	ELEV. N	ELEV. N	ELEV. N	ELEV. N	ELEV. N	ELEV. N	ELEV. N	ELEV. N	ELEV. N	ELEV. N	ELEV. N	ELEV. N	ELEV. N	ELEV. N				
BENT NO. 1	608.34	604.78	609.50	604.54	608.62	606.06	608.66	605.10	608.69	606.18	609.69	605.18	608.70	605.13	607.84	604.28	608.09	604.52	608.28	605.72	608.40	604.84	608.51	604.88	608.59	605.08	608.67	605.11	607.47	607.82	608.97	607.30
PIER NO. 2	608.85	606.26	609.02	606.42	609.13	606.54	608.17	605.58	609.20	606.61	609.21	606.61	609.21	605.61	608.35	604.78	608.60	605.00	608.79	605.30	608.91	605.32	609.02	606.58	608.10	608.61	609.18	605.59	607.98	608.34	607.48	608.51
PIER NO. 4	610.72	607.15	610.69	607.32	611.00	607.44	611.05	607.46	611.08	607.61	611.08	607.61	611.08	607.51	610.62	606.69	610.47	606.83	610.66	607.10	610.79	607.22	610.90	607.33	610.98	607.41	611.05	607.49	608.85	610.21	608.35	610.18
BENT NO. 5	611.24	607.64	611.41	607.61	611.52	607.83	611.57	607.97	611.60	608.00	611.60	608.00	611.60	608.00	610.75	607.18	610.99	607.30	611.19	607.68	611.31	607.71	611.42	607.82	611.50	607.90	611.57	607.98	610.37	610.73	609.88	610.70

SCREED & COPING ELEVATIONS

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
A	ELEVATION - TOP OF COPING FORM																										
	ELEVATION - TOP OF OUTSIDE BEAM																										
	DISTANCE - TOP OF BEAM TO TOP OF COPING																										
B	ELEVATION - TOP OF SCREED																										
	ELEVATION - TOP OF ADJACENT BEAM																										
	DISTANCE - TOP OF BEAM TO TOP OF SCREED																										
C	ELEVATION - TOP OF SCREED																										
	ELEVATION - TOP OF ADJACENT BEAM																										
	DISTANCE - TOP OF BEAM TO TOP OF SCREED																										
D	ELEVATION - TOP OF COPING FORM																										
	ELEVATION - TOP OF ADJACENT BEAM																										
	DISTANCE - TOP OF BEAM TO TOP OF COPING																										
D	ELEVATION - TOP OF COPING FORM																										
	ELEVATION - TOP OF ADJACENT BEAM																										
	DISTANCE - TOP OF BEAM TO TOP OF COPING																										
E	ELEVATION - TOP OF SCREED																										
	ELEVATION - TOP OF ADJACENT BEAM																										
	DISTANCE - TOP OF BEAM TO TOP OF SCREED																										
F	ELEVATION - TOP OF SCREED																										
	ELEVATION - TOP OF ADJACENT BEAM																										
	DISTANCE - TOP OF BEAM TO TOP OF SCREED																										
G	ELEVATION - TOP OF COPING FORM																										
	ELEVATION - TOP OF OUTSIDE BEAM																										
	DISTANCE - TOP OF BEAM TO TOP OF COPING																										

Rev. 12-15-67 E.B. Chk. J. W.

**SCREED ELEVATIONS
INDIANA STATE HIGHWAY COMMISSION**

SCALE:- NONE MAY 27, 1964

SUBMITTED FOR APPROVAL: *Carl Walle Watchel*

DRAWING- S-18 OF 18
PROJECT:- U.S. 31 (15)
BRIDGE CONTRACT NO. B-84-98
BRIDGE FILE:- 312-45-508

*Rev. 9-11-70: Notes
Rev. 12-15-67: Notes
Rev. 9-25-64 Elev. Screeds.*

DESIGNED	E.L.F.	CKD	J.A.A.
DRAWN	M.L.	CKD	J.A.A.
TRACED		CKD	

