

CONTRACT NO. R-7201

INDEX

PROJECT: U-78 (48) 41-E9-5090 CONT. R.C. SLAB 85080J
 STATION: MAIN ST. ROAD 576 +52.00 "K"
 CONTRACT NO: R-7201

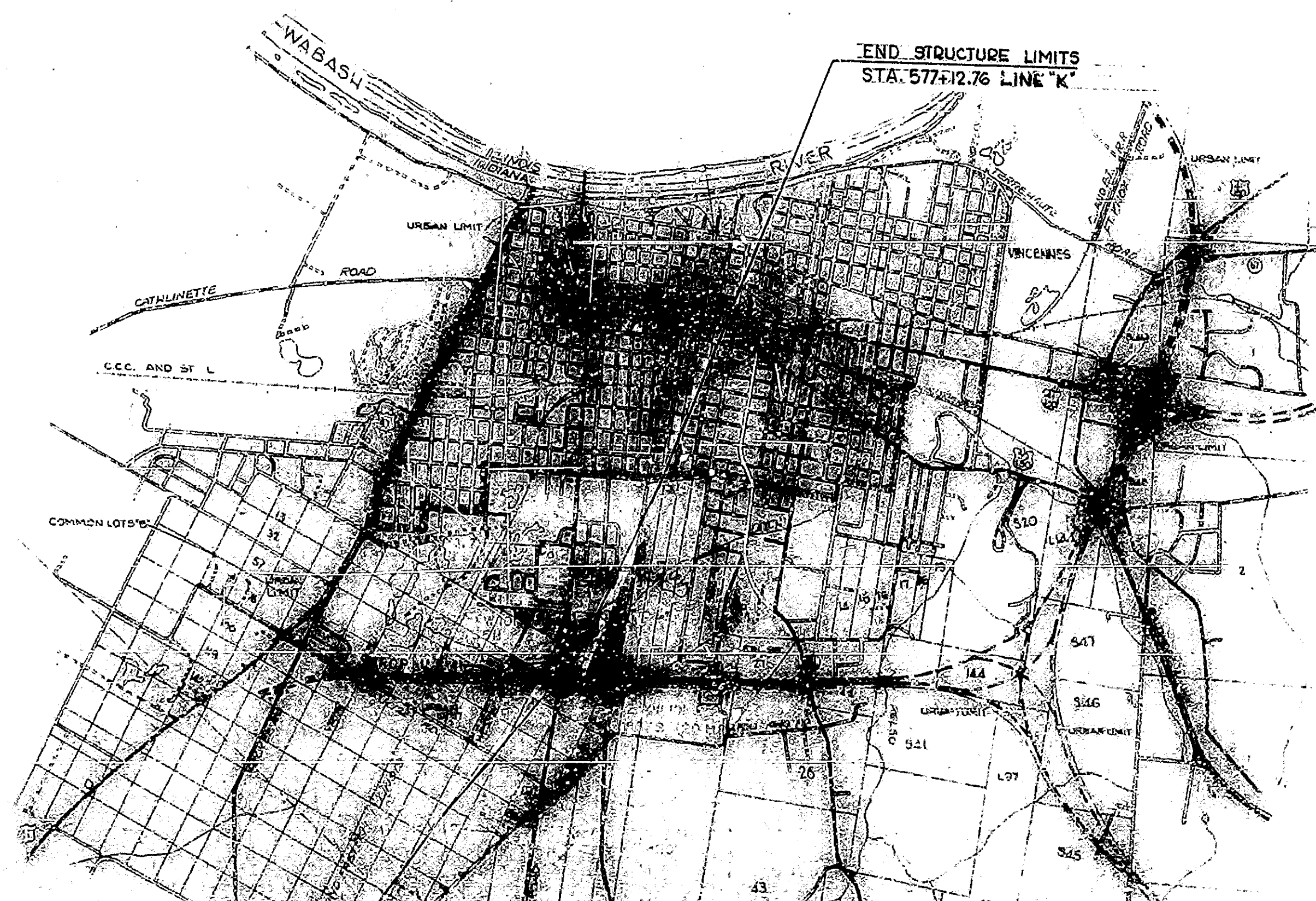
SHEET NO.	SHEET DESIGNATION	SUBJECT
1	ONE SHEET	TITLE SHEET & INDEX
2	ONE SHEET	TYPICAL GRADING SECTION, LINE "K"
3	ONE SHEET	TYPICAL GRADING SECTION, RAMP
4	ONE SHEET	ROAD PLAN & PROFILE SHEET NO. PROJECT U-78(48) STA. 500 TO 590
5	ONE SHEET	ALIGNMENT DATA, HART STREET INTERCHANGE, PROJECT U-78(48)
6	ONE SHEET	RIGHT-OF-WAY, HART STREET INTERCHANGE, PROJECT U-78(48)
7	ONE SHEET	NW-R & SW-R GRADES, HART STREET INTERCHANGE, PROJ. U-78(48)
8	ONE SHEET	SOIL BOUNDINGS LAYOUT
9	C1	GENERAL PLAN
10	C2	BENT NO. 1 & NO. 4 DETAILS, SOUTHBOUND STRUCTURE
11	C3	BENT NO. 1 & NO. 4 DETAILS, NORTHBOUND STRUCTURE
12	C4	BENT NO. 2 & NO. 3 DETAILS, SOUTHBOUND STRUCTURE
13	C5	BENT NO. 2 & NO. 3 DETAILS, NORTHBOUND STRUCTURE
14	C6	BILL OF MATERIALS & BENDING DIAGRAMS, BENTS NO. 2 & NO. 3
15	C7	SUPERSTRUCTURE DETAILS, SOUTHBOUND STRUCTURE
16	C8	SUPERSTRUCTURE DETAILS, NORTHBOUND STRUCTURE
17	C9	SUPERSTRUCTURE DETAILS, SOUTH & NORTHBOUND STRUCTURES
18	C10	SUPERSTRUCTURE DETAILS, BILLS OF MATERIALS, AND BENDING DIAGRAM.
19	C11	

STATE OF INDIANA
 STATE HIGHWAY DEPARTMENT

BRIDGE PLANS FOR SPANS OVER 20 FEET ON

U.S. ROUTE 41 SECTION E9
 PROJECT U-78 (25) P.E.
 PROJECT U-78 (48) CONST.
 U.S. ROUTE 41 OVER MAIN ST. ROAD
 BEGINNING AT A POINT 253.7 FEET NORTHEAST OF THE SOUTH LINE
 OF LOT NO. 3, VINCENNES COMMON LANDS, DIVISION "B", AND RUNNING IN A NORTHEASTERLY DIRECTION
 A DISTANCE OF 121.52 FEET TO A POINT 28 FEET SOUTHWEST OF THE WEST
 LINE OF LOT NO. 2, VINCENNES COMMON LANDS, DIVISION "B", ALL IN T3N, R10W, VINCENNES TWP.,
 KNOX COUNTY.

ROADWAY LENGTH=0.000 MILES
 BRIDGE LENGTH=0.023 MILES
 TOTAL LENGTH=0.023 MILES
 MAX. GRADE=0.69%



REVISIONS

NO.	DATE	DESCRIPTION
1	9-11-64	1, 9, 10, 11, 12, 13, 14, 15, 20 & 35
2	1-25-65	1, 25, 26, 31 & 35A Added

BRIDGE NO.	SPAN	DATE	SHEET NO.	TOTAL SHEETS
U-78 (48)	20'	1964	44	44

INDEX CONTINUED
 STANDARD DRAWINGS

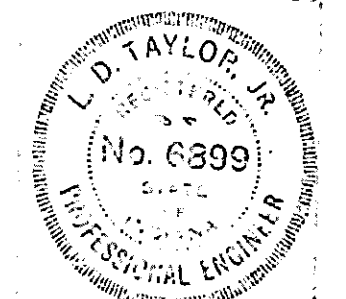
SHEET NO.	SHEET DESIGNATION	SUBJECT	DATE	BY
20	ONE SHEET	LINE "K" PROJECT U-78(48)		
30	BRIDGE STD. J	STANDARD MISCELLANEOUS DETAILS	R-5-20-66	
30A	BRIDGE STD. J	EXPANSION JOINTS	3-1-66	R-7-29-65
31	BRIDGE STD. M5	MINIMUM RAILING TYP-5	3-1-66	12-15-65
32	BRIDGE STD. R1-C	STEEL RAILING TYP-C	8-12-65	4-27-65
33	BRIDGE STD. R1-F	TYPICAL DETAIL FOR PLACING SPECIAL TYP-1		4-22-66
34	BRIDGE STD. T	STANDARD TEMPORARY BRIDGE	5-28-63	R-2-18-65
35	ROAD STD. SHEET PA	STANDARD PAVEMENT JOINTS		
36A	ROAD STD. SHEET PA	MISCELLANEOUS STANDARDS		
36B	ROAD STD. SHEET PA	MISCELLANEOUS STANDARDS		
36C	ROAD STD. SHEET PA	MISCELLANEOUS STANDARDS		
36D	ROAD STD. SHEET PA	MISCELLANEOUS STANDARDS		
36E	ROAD STD. SHEET PA	MISCELLANEOUS STANDARDS		
36F	ROAD STD. SHEET PA	MISCELLANEOUS STANDARDS		
36G	ROAD STD. SHEET PA	MISCELLANEOUS STANDARDS		
36H	ROAD STD. SHEET PA	MISCELLANEOUS STANDARDS		
36I	ROAD STD. SHEET PA	MISCELLANEOUS STANDARDS		
36J	ROAD STD. SHEET PA	MISCELLANEOUS STANDARDS		
36K	ROAD STD. SHEET PA	MISCELLANEOUS STANDARDS		
36L	ROAD STD. SHEET PA	MISCELLANEOUS STANDARDS		
36M	ROAD STD. SHEET PA	MISCELLANEOUS STANDARDS		
36N	ROAD STD. SHEET PA	MISCELLANEOUS STANDARDS		
36O	ROAD STD. SHEET PA	MISCELLANEOUS STANDARDS		
36P	ROAD STD. SHEET PA	MISCELLANEOUS STANDARDS		
36Q	ROAD STD. SHEET PA	MISCELLANEOUS STANDARDS		
36R	ROAD STD. SHEET PA	MISCELLANEOUS STANDARDS		
36S	ROAD STD. SHEET PA	MISCELLANEOUS STANDARDS		
36T	ROAD STD. SHEET PA	MISCELLANEOUS STANDARDS		
36U	ROAD STD. SHEET PA	MISCELLANEOUS STANDARDS		
36V	ROAD STD. SHEET PA	MISCELLANEOUS STANDARDS		
36W	ROAD STD. SHEET PA	MISCELLANEOUS STANDARDS		
36X	ROAD STD. SHEET PA	MISCELLANEOUS STANDARDS		
36Y	ROAD STD. SHEET PA	MISCELLANEOUS STANDARDS		
36Z	ROAD STD. SHEET PA	MISCELLANEOUS STANDARDS		
37	ROAD STD. SHEET PA	MISCELLANEOUS STANDARDS	5-9-61	R-4-11-61
38	ROAD STD. SHEET PA	MISCELLANEOUS STANDARDS	6-4-64	R-11-20-65
39	ROAD STD. SHEET PA	MISCELLANEOUS STANDARDS	6-1-61	R-11-20-65
40	ROAD STD. SHEET PA	MISCELLANEOUS STANDARDS		
41	ROAD STD. SHEET PA	MISCELLANEOUS STANDARDS		
42	ROAD STD. SHEET PA	MISCELLANEOUS STANDARDS		
43	ROAD STD. SHEET PA	MISCELLANEOUS STANDARDS		
44	ROAD STD. SHEET PA	MISCELLANEOUS STANDARDS		

TRAFFIC DATA - U.S. 41 MAIN STREET

A.D.T. (1962)	10,210 V.P.D.	954 V.P.D.
A.D.T. (1962) PROJECTED	25,350 V.P.D.	1858 V.P.D.
TRUCKS	11%	
DESIGN SPEED	70 M.P.H.	
ACCESS CONTROL	FULL	

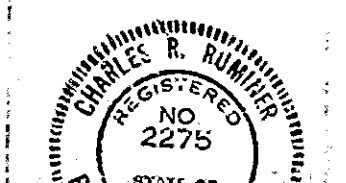
R/W FOR THIS PROJECT TO BE SECURED UNDER U-PROJECT 78(47)

THESE PLANS PREPARED BY
 BOYD E. PHELPS, INC.
 ENGINEERS
 INDIANAPOLIS & MICHIGAN CITY, IND.
 BY: *L.D. Taylor*
 DATE: *January 23, 1964*

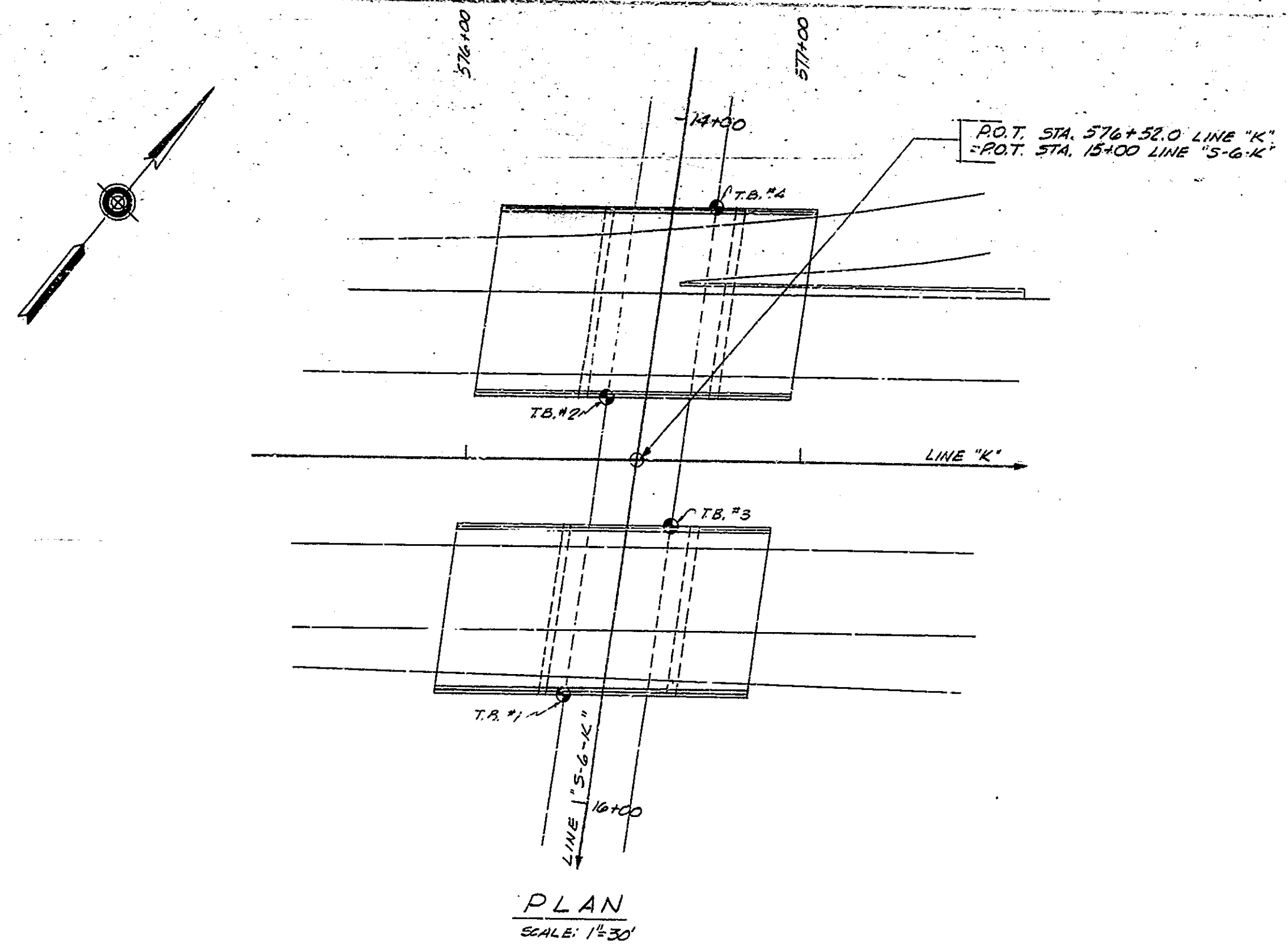


APPROVED: *L.D. Taylor*
 2-4-64

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



DEPARTMENT OF HIGHWAYS
 BUREAU OF PUBLIC ROADS
 APPROVED: _____



BORING NO.	T. B. #1	T. B. #2	T. B. #3	T. B. #4
STATION	15+70	14+82	13+5' LT.	14+24
OFFSET	12' RT.	24' RT.	13.5' LT.	14.5' LT.
GROUND ELEV.	413.2	411.6	412.8	414.3
415	413.2		414.8	414.3
	1		1	1
	411.7		413.3	412.8
410	2		2	2
	409.7		409.3	410.8
	407.1		408.3	408.3
405	4		3	4
	405.7		405.3	405.3
	402.7		402.3	402.3
400	5		4	6
	399.2		398.8	398.8
	397.7		397.8	397.8
395	6		5	7
	392.7		392.8	391.3
390	7		6	8
	389.9		389.8	389.8
	388.9		388.8	388.8
385	8		7	9
	382.6		382.6	382.6
380	9		8	10
	379.6		379.6	379.6
375	10		9	
	374.6		374.6	
370				
365				

NOTE: ▼ = DENOTES GROUND WATER TABLE.
 N = INDICATES THE NUMBER OF BLOWS REQUIRED TO DRIVE A 1 3/8" I.D., 2" O.D. SPLIT SPOON SAMPLER 12" BY MEANS OF A 140# WEIGHT FALLING 30" UNLESS OTHERWISE NOTED.
 NXM = NXM CORE BARREL
 SEE ART. A 203 OF SPECIFICATIONS REGARDING TEST PIT DATA

SOIL BORINGS

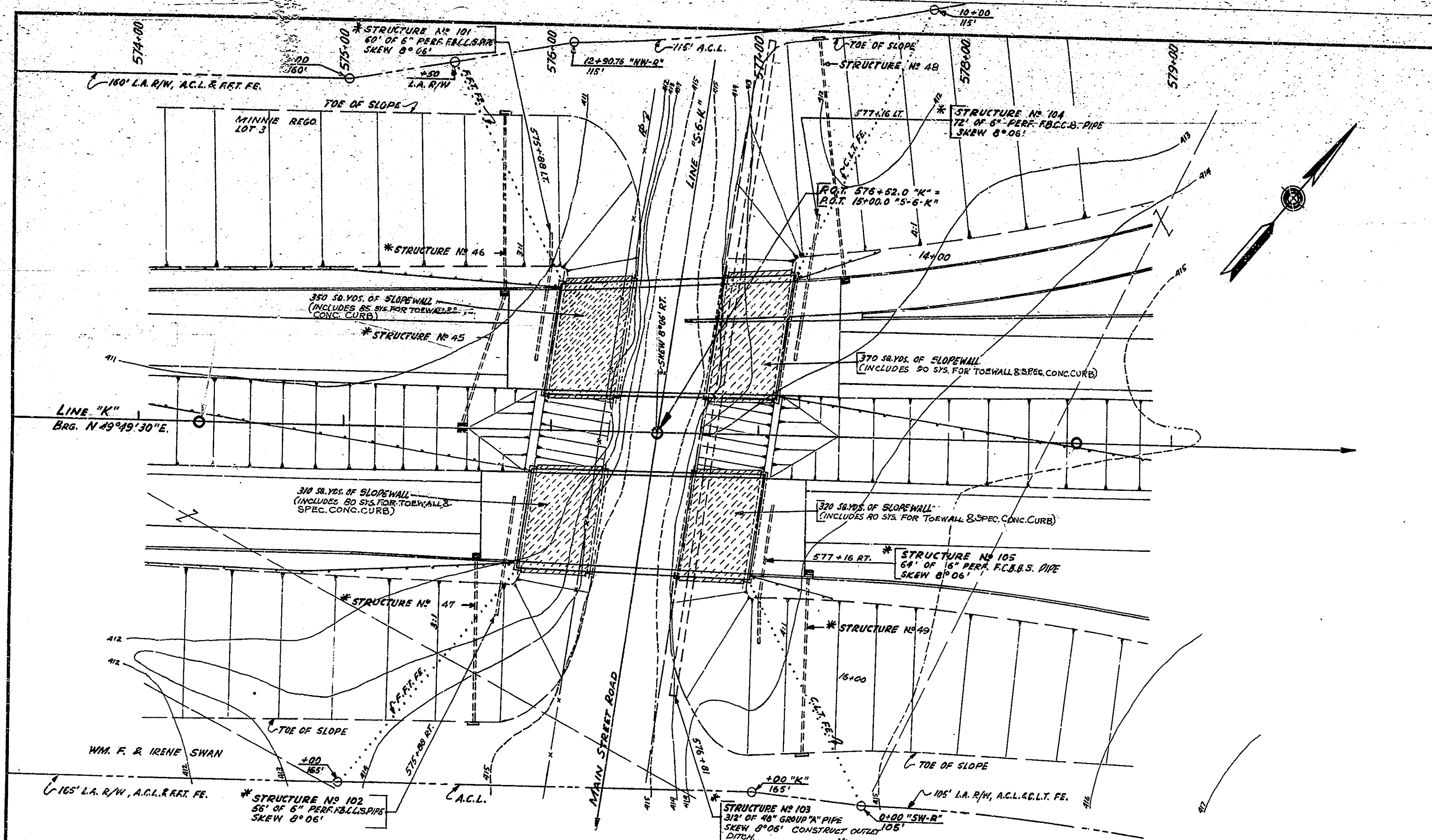
SCALE: HORIZ. 1"=30'-0" VERT. 1"=5'-0"

SUBMITTED FOR APPROVAL: *L. D. Taylor*

PROJECT: U-78(48) & STA. 576+52.0 LINE "K"

DATE: JAN 23, 1964

NO. 8899



SITUATION PLAN
SCALE: 1"=30'
CONTOUR INTERVAL = 1'

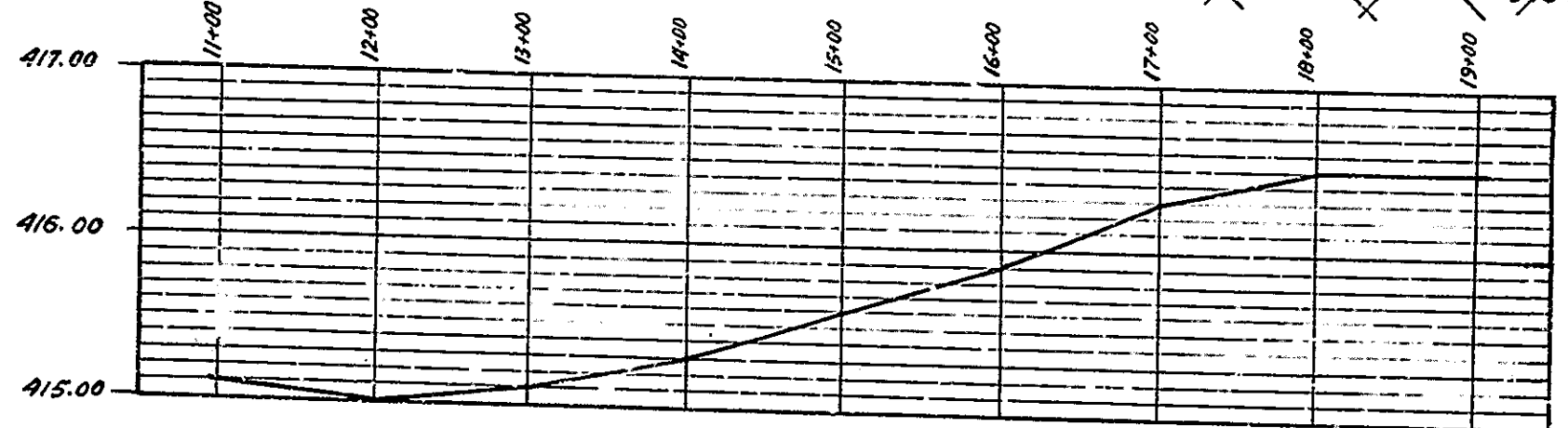
BRIDGES OVER 20' SPAN					
PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	U 78 (48)	1964	9	44

NOTE: SEE ROAD PLANS FOR REFERENCES & ADDITIONAL DETAILS.
APPROACH DETAILS AS SHOWN ARE FOR FINISHED PAVING PROJECT.

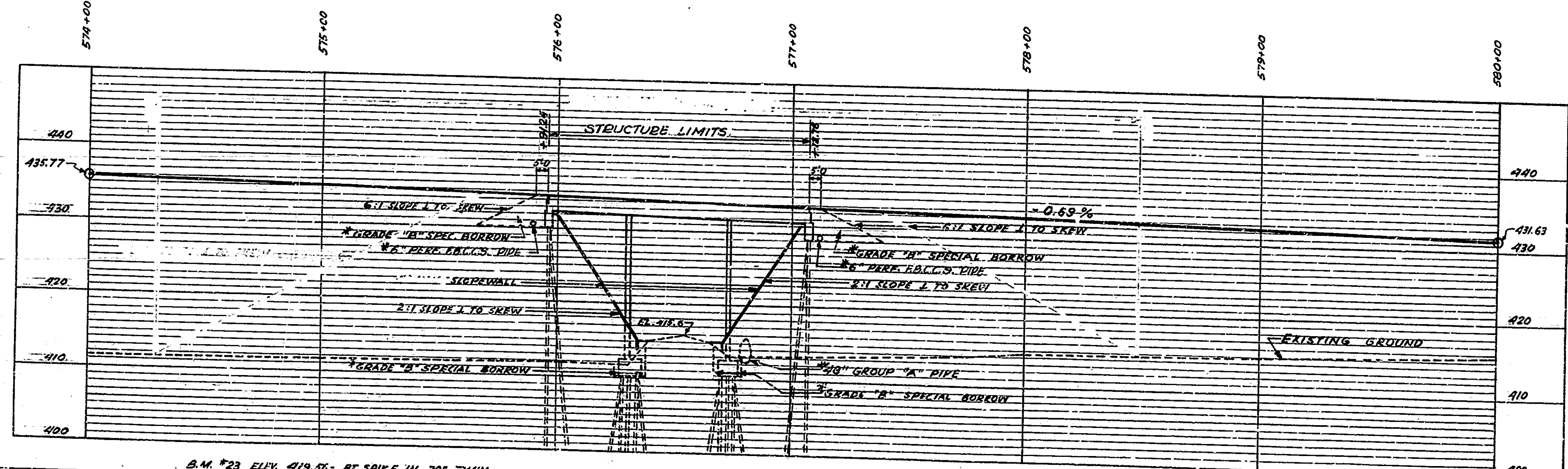
STANDARD DRAWINGS		PURPOSE
ROAD STD.	BRIDGE STD.	
	C1	BAR BENDING DETAILS, TEST BAR SAMPLES, SPLICING PILE SHEETS, 1" EXPANSION JOINTS
MA		PAVEMENT CONCRETE
MB-2		SLOPEWALL
	RIC	A UNIVERSAL RAILING TYPE 5
	RIF	STEEL RAILING TYPE C
	J	EXPANSION JOINTS
	RIE	MINIMUM RAILING DETAILS

UTILITIES	
POWER LINES	- PUBLIC SERVICE CO. OF INDIANA MAIN ST., VINNEMES, INDIANA
TELEPHONE LINES	- INDIANA BELL TELEPHONE CO. 4TH & BURSERON ST., VINNEMES, IND.

EARTHWORK TABULATION
 FULL + 15.0' = 37,932 CYS.
 COMMON EXCAVATION = 1,991 CYS.
 SURPLUS EXCAVATION = 707 CYS.
 SPECIAL BORROW = 37,625 CYS.
 NOTE: ABOVE QUANTITIES INCLUDE 1991 CY OF EXCAVATED UNDESIRABLE MATERIAL WHICH SHALL BE WASTED IN DUMP LIMITS BETWEEN STA 576+00 & 570+00



PROFILE MAIN STREET
HORIZONTAL SCALE: 1"=100'
VERTICAL SCALE: 1"=5'



PROFILE ON SURVEY
HORIZONTAL SCALE: 1"=30'
VERTICAL SCALE: 1"=10'

MAIN STREET TYPICAL SECTION

LAYOUT
CONT. REINF. CONCRETE SLAB BRIDGE
TWO STRUCTURES

3-SPANS: 1@38'6", 1@43'0", 1@38'6" VARIABLE RDWY.
SKEW: 8°06' RT. 6" CURB INSIDE
2'0" WALK OUTSIDE OVER MAIN ST. ROAD

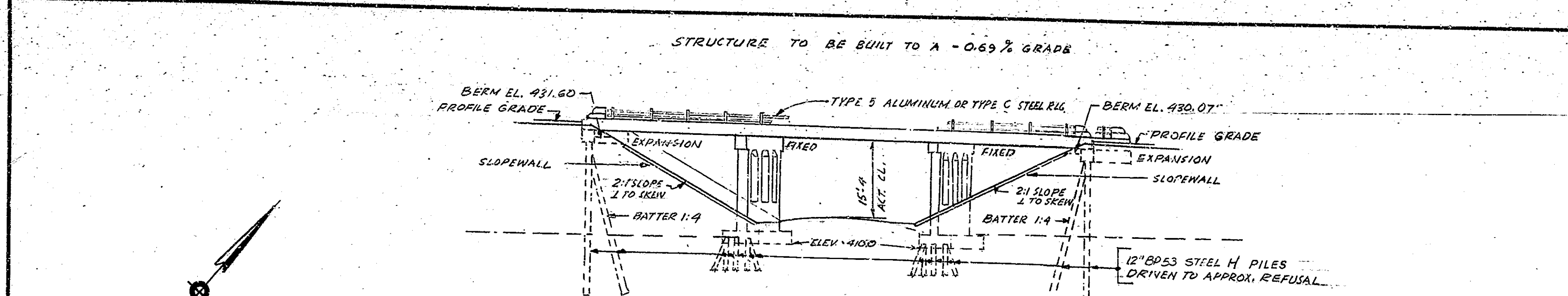
US 41
INDIANA STATE HIGHWAY COMMISSION
KNOX COUNTY

SCALE: AS NOTED
SUBMITTED FOR APPROVAL: *L. D. Taylor*
DESIGNED: ELM CKD
DRAWN: KEM CKD
TRACED: CKD

DATE: JAN. 23, 1964
DRAWING: C1 OF 11
PROJECT: U 78 (48) # STA. 576+52.0 LINE "K"
No. 6899

NOTE: SEE FIELD BOOK 7495 L
SEE FIELD BOOK 7994 T

B.M. #23 ELEV. 419.56 - BY SPIKE IN 30" TWIN
SKEW 278' RT. STA. 576+00 "K"



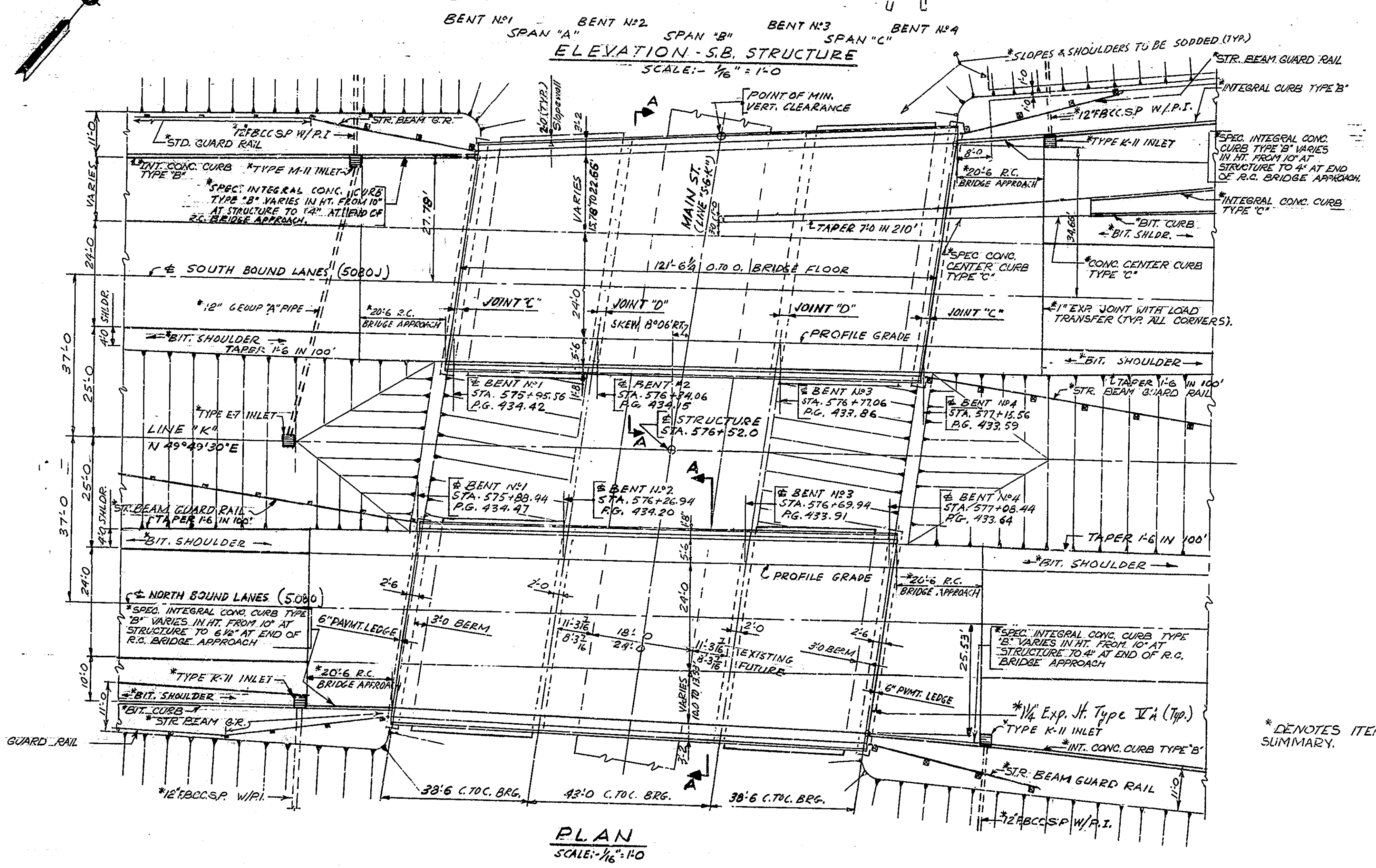
TYPICAL CROSS SECTION
SEE SHEET NO'S 2 & 3

BRIDGES OVER 20' SPAN					
PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	U-75 (K.)	1964	10	44

UNIT STRESSES

STEEL	20,000 P.S.I.
CONCRETE	3,000 P.S.I.
FC	1,200 P.S.I.

DESIGN DATA
DESIGNED FOR HS20-44 LOADING IN ACCORDANCE WITH 1961 A.A.S.H.O SPECIFICATIONS.



GENERAL NOTES

NO. PRESENT STRUCTURE AT PROPOSED BRIDGE SITE FOR DETAILS OF STEEL BEAM BRIDGES. PILES SEE BRIDGE STD. C1, & APPLICABLE ARTICLES IN THE SPECIFICATIONS. PILES SHALL HAVE MIN. BEARING VALUE SHOWN ON DETAIL DRWS. DETERMINE PILE LENGTHS BY ART. F-103 & F-203 OF SPECIFICATIONS. CENTER STEEL COVERINGS SHALL BE 1 1/2" IN TOP & 1" IN BOTTOM OF FLOOR SLABS, 3" IN FOOTINGS EXCEPT BOTTOM STEEL WHICH SHALL BE 4" AND 2" IN ALL OTHER PARTS UNLESS OTHERWISE NOTED. CONCRETE IN SUPERSTRUCTURE INCLUDING RAILING, CENTER CURB AND BENT CAPS TO BE CLASS "F".

CONK. IN HEADWALLS & COLUMNS TO BE CLASS "D" CONTINUOUS CONK. JOINTS SHALL BE REQUIRED BETWEEN CONSTRUCTION JOINTS AS SHOWN ON DETAIL PLANS. CONCRETE IN FOOTINGS & COLLISION WALLS TO BE CLASS "E". BEVEL EDGES 1/4" UNDER COPINGS, AND CHAMFER EXPOSED EDGES 1/4" UNLESS NOTED. TOLERANCE IN POSITION OF STEEL PILE HEAD MAX. 2 INCHES IN END BENTS ALL RAILINGS TO BE CONSTRUCTED PERPENDICULAR TO GRADE.

THREE 1 INCH EXPANSION JOINTS WITH LOAD TRANSFER TO BE PLACED IN THE APPROACH PAVEMENT. SEE BRIDGE STD. M-3 SEE SPECIAL PROVISIONS FOR ITEMS INCLUDED IN THIS CONTRACT. EXPANSION JOINT ARMOR TO BE SHAPED IN SHOP TO CONFORM TO TRANSV. SECTION OF STRUCTURE. Coat top of Bent Cap with Epoxy Resin. Included in cost of other items. Construct 4" concrete edge wall or alternate 2" precast concrete riprap at locations as shown on Layout. For pay items covering this structure see "Bridge Summary."

JOINT LEGEND

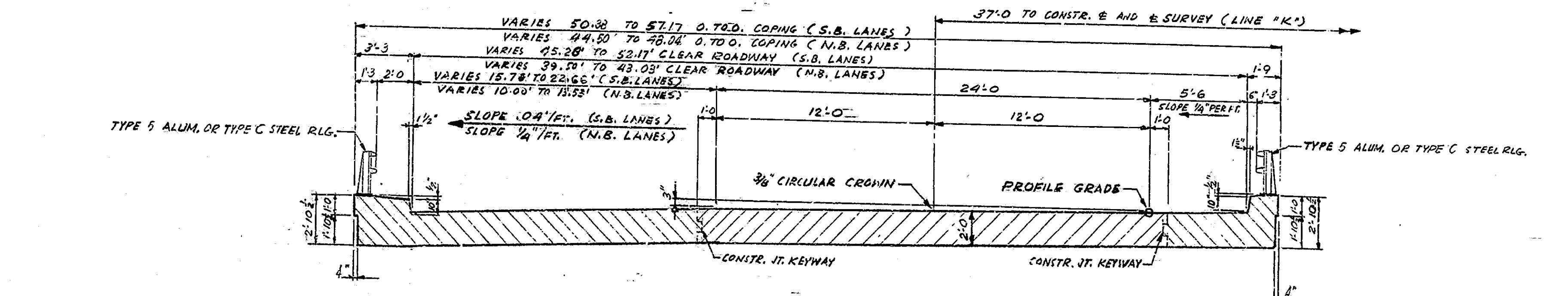
JOINT "C" INDICATES 1/2" PREFORMED JOINT FILLER UNDER FRONT 6" AT END BENTS OF SLAB BEARING AREA AND FRONT 3" OF INTERIOR PARTS OF SLAB BEARING AREA WITH ONE LAYER OF MEDIUM WEIGHT ROOFING FELT UNDER REMAINDER OF BEARING AREA AND ON VERTICAL FACES OF KEYWAY.

JOINT "D" INDICATES 1/2" PREFORMED JOINT FILLER PLACED LONGITUDINALLY ON EACH OF THE OUTER 3" PORTIONS OF THE BENT BEARING AREA WITH ONE LAYER OF MEDIUM WEIGHT ROOFING FELT UNDER THE REMAINING OUTER PORTIONS OF BEARING AREA. SEE DRAWINGS C5 & C6.

1 1/2" EXPANSION JOINT - SEE BRIDGE STANDARD

NOTE
APPROACH DETAILS AS SHOWN ARE FOR FINISHED PAVING PROJECT.

* DENOTES ITEMS NOT INCLUDED IN BRIDGE SUMMARY.



GENERAL PLAN
CONT. REINF. CONCRETE SLAB BRIDGE
TWO STRUCTURES

3 SPANS: 10.38'-6", 10@43'-0", 10.38'-6"
SKEW 8° 06' RT.

VARIABLE RDWY.
6" CURB INSIDE
2'-0" WALK OUTSIDE
OVER MAIN ST. ROAD

U.S. 41

INDIANA STATE HIGHWAY COMMISSION
KNOX COUNTY

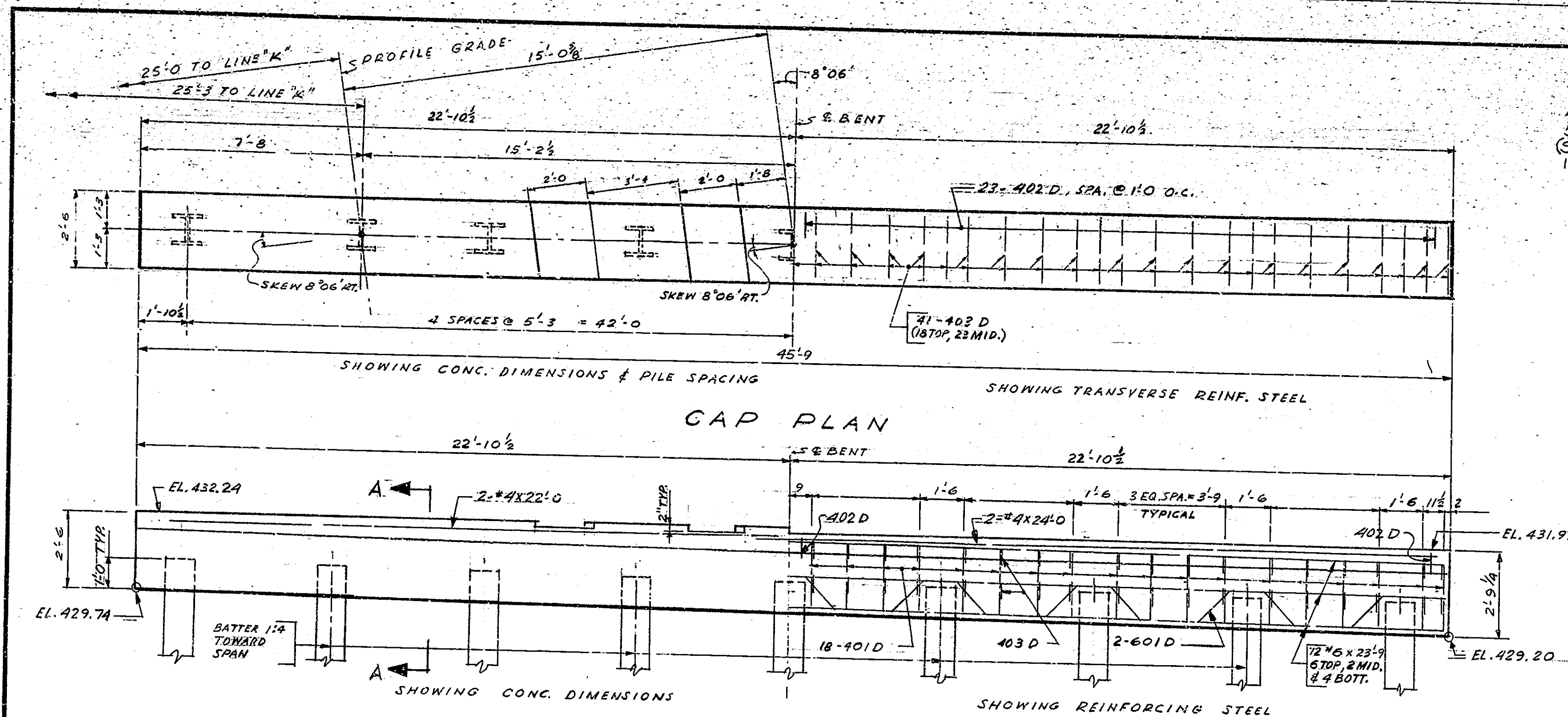
SCALE: AS NOTED
SUBMITTED FOR APPROVAL: *L. D. Taylor*
JAN 23, 1964

DRAWING: C2 OF 11
PROJECT: 11-78100-1 & STA 576+00.00 LINE 100'

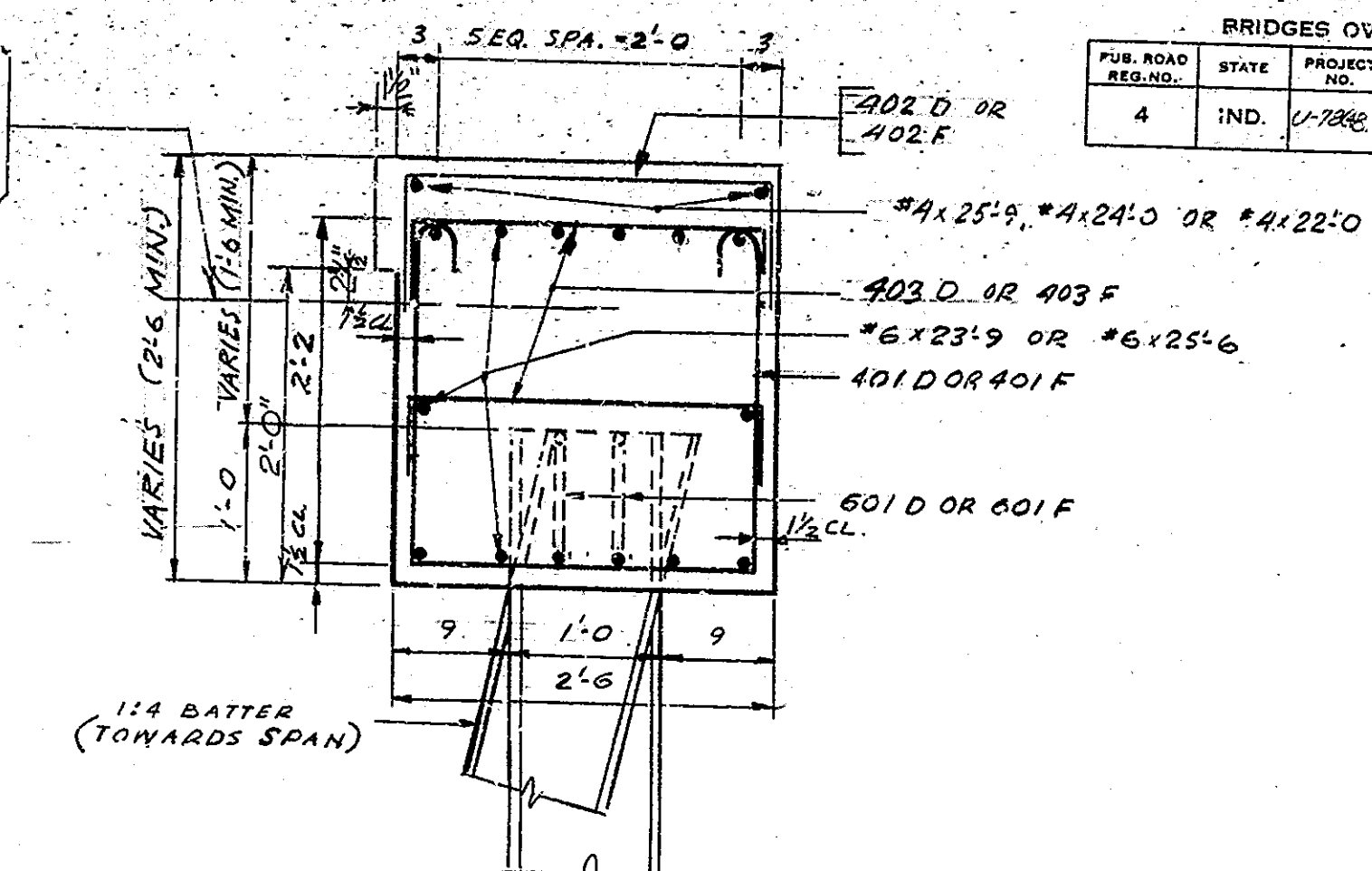
DESIGNED: R.E. C.K.D.J.E.
DRAWN: R.E. C.K.D.J.E.
TRACED: C.K.D.

SECTION A-A (S.B. & N.B. LANES)
SCALE: 1/4" = 1'-0"

Rev. 5-16-66 Center Curb



46-#4x3'-0" Bent No. 1
50-#4x3'-0" Bent No. 4
(Spa. @ 1'-0" c.t.c. Embed
1'-6" in Cap.)



BRIDGES OVER 20' SPAN					
PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	U-788	1964	12	45

SECTION A-A
SCALE: 1"=1'-0"

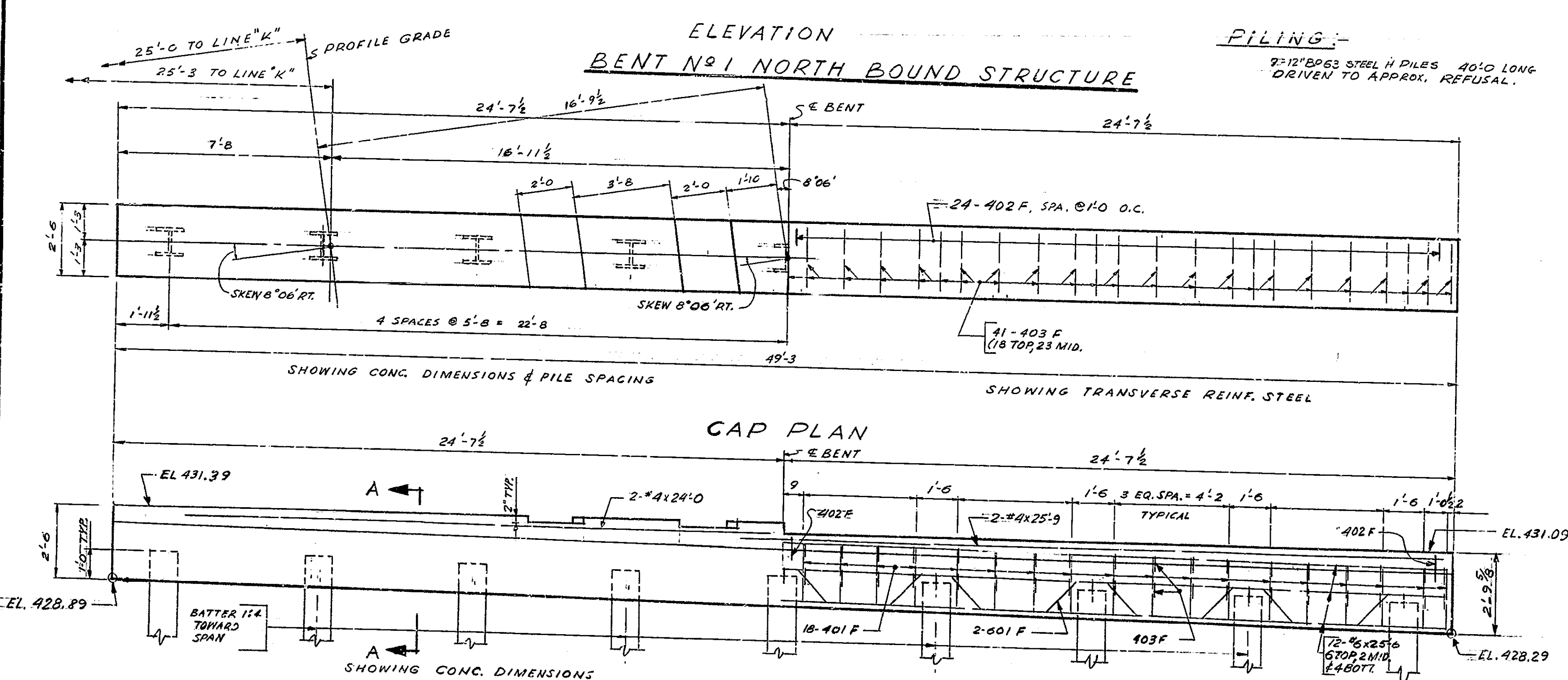
BILL OF MATERIALS

BENT NO. 1

REINFORCING STEEL			
SIZE & MARK	NO. OF BARS	LENGTH	WEIGHT LBS.
601D	4	27'-1"	
#6	24	23'-9"	
TOTAL #6			1,019
#4	46	3'-0"	
401D	18	7'-7"	
402D	46	4'-9"	
403D	41	3'-2"	
#4	2	24'-0"	
#4	2	22'-0"	
TOTAL #4			480
TOTAL STEEL			1,499
CONCRETE			
CLASS "F"			11.0 CYS.
MISCELLANEOUS			
9-12" BPS3 STEEL H PILES X 40'-0" LONG 360 L.F.			

BENT NO. 4

REINFORCING STEEL			
SIZE & MARK	NO. OF BARS	LENGTH	WEIGHT LBS.
601F	4	28'-10"	
#6	24	25'-6"	
TOTAL #6			1,092
#4	50	3'-0"	
401F	18	7'-7"	
402F	48	4'-9"	
403F	41	3'-2"	
#4	2	24'-0"	
#4	2	22'-0"	
TOTAL #4			199
TOTAL STEEL			1,591
CONCRETE			
CLASS "F"			12.0 CYS.
MISCELLANEOUS			
9-12" BPS3 STEEL H PILE X 35'-0" LONG 315 L.F.			



PILING:-
9-12" BPS3 STEEL H PILES 40'-0" LONG
DRIVEN TO APPROX. REFUSAL.

PILING:-
9-12" BPS3 STEEL H PILES 35'-0" LONG
DRIVEN TO APPROX. REFUSAL.

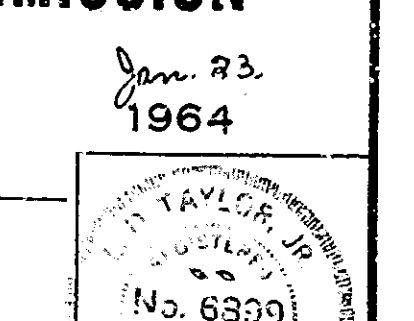
NOTES:-
CAPS NOT TO BE POURED UNTIL FILL HAS BEEN COMPLETED UP TO THE APPROXIMATE ELEVATION OF BOTTOM OF THE CAP.
FOR REINF. BAR NOTES SEE BRIDGE STD. C-1.

BENT NO. 1 & NO. 4 DETAILS
NORTH BOUND STRUCTURE
INDIANA STATE HIGHWAY COMMISSION

SCALE: 3/8" = 1'-0" UNLESS NOTED

SUBMITTED FOR APPROVAL: *[Signature]*

DRAWING: CA OF 11
PROJECT: U-78 (42)
BRIDGE CONTRACT NO. R-7201



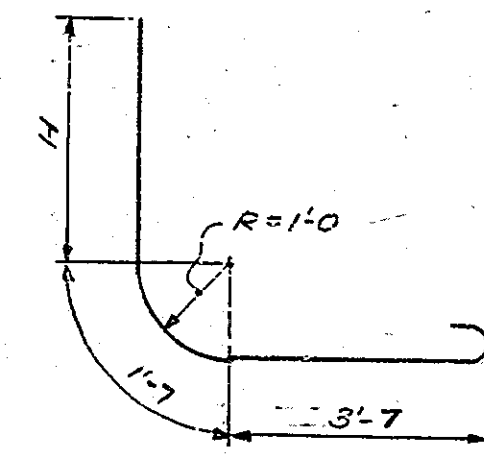
DESIGNED: ZIC CKD
DRAWN: ZIC CKD
TRACED: CKD

MARK	1-7 1/2	1'-0"	2'-1"	1'-0"	1'-2"	1'-0"	2'-1"	1'-0"	1'-2"	1'-0"	2'-1"	1'-0"	1'-2"	1'-0"	2'-1"	1'-0"	2'-3 1/2"
601D																	
601F																	
601D																	
601F																	
28'-9"																	
25'-6"																	

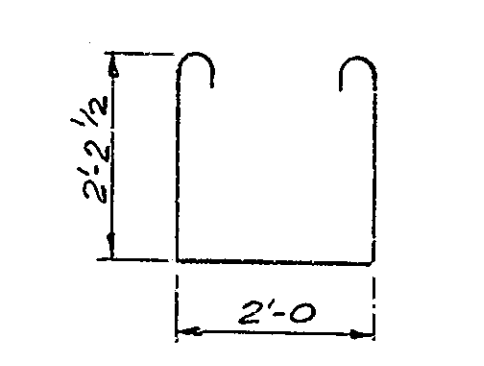
401D x 7'-7"
401F x 7'-7"
402D x 4'-9"
402F x 4'-9"
403D x 3'-3"
403F x 3'-3"

BRIDGES OVER 20' SPAN						
PUB. ROAD NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS	
4	IND.	U-78(2)	1964	15	44	

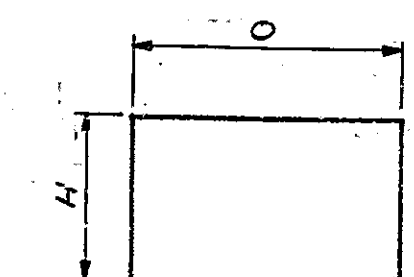
BILL OF MATERIALS
SOUTH BOUND STRUCTURES **NORTH BOUND STRUCTURES**
BENT #2 **BENT #3**



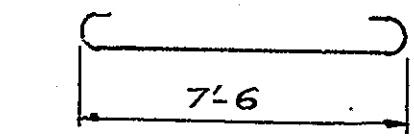
SIZE & MARK	H	LENGTH
801 B	2'-10"	9'-1"
801 E	2'-10"	9'-1"
802 B	1'-10"	8'-1"
802 E	1'-10"	8'-1"



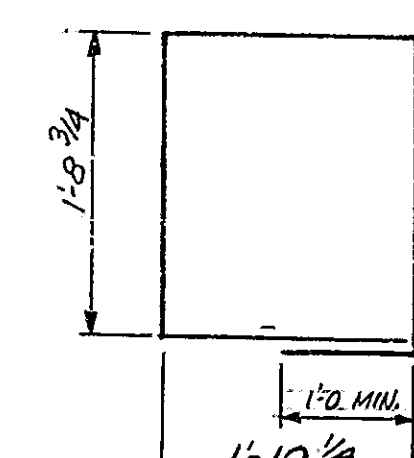
401 B = 401 E x 7'-5"



SIZE & MARK	O	H	LENGTH
501 B	1'-0"	3'-9"	8'-6"
501 E	1'-0"	3'-3"	7'-6"
502 B	1'-9"	2'-2"	6'-3"
502 E	1'-9"	1'-6"	4'-9"
503 B	1'-9"	1'-9"	5'-2"
503 E	1'-9"	1'-9"	5'-2"
402 B	2'-0"	0'-6"	3'-0"
402 E	2'-0"	0'-6"	3'-0"



601 B = 601 E x 9'-10"



301 B = 301 E x 8'-2"

REINFORCING STEEL			
MARK & SIZE	NO OF BARS	LENGTH	WEIGHT LBS.
801 B	40	9'-1"	
802 B	72	8'-1"	
#8	20	28'-3"	
#8	50	12'-9"	
#8	50	10'-3"	
TOTAL #8			7,102
#7	8	24'-6"	401
601 B	2	9'-10"	
#6	30	6'-0"	
TOTAL #6			300
501 B	8	8'-6"	
502 B	41	6'-3"	
503 B	18	5'-3"	
#5	10	26'-9"	
"	28	24'-6"	
"	2	16'-9"	
"	2	14'-9"	
"	2	10'-9"	
#5	72	7'-3"	
TOTAL #5			2,069
401 B	74	7'-5"	
402 B	58	3'-0"	
TOTAL #4			483
301 B	110	8'-2"	338
TOTAL STEEL			10,688
CONCRETE			
CLASS "F" (CAP)		11.6 cu. yds.	
CLASS "D" (5 @ 2.96 cyl.)		12.8 cu. yds.	
CLASS "E" ABOVE FTGS.		26.1 cu. yds.	
CLASS "E" IN FTGS.		35.6 cu. yds.	
MISCELLANEOUS			
33-12" Ø P.S. STEEL H		660 LIN. FT.	
PILES x 20'-0"			

REINFORCING STEEL			
MARK & SIZE	NO OF BARS	LENGTH	WEIGHT LBS.
801 B	40	9'-1"	
802 B	72	8'-1"	
#8	20	29'-6"	
#8	50	12'-9"	
#8	50	8'-9"	
TOTAL #8			6,969
#7	8	25'-6"	417
601 B	2	9'-10"	
#6	30	6'-0"	
TOTAL #6			300
501 B	8	8'-6"	
502 B	41	6'-3"	
503 B	16	5'-3"	
#5	10	26'-9"	
"	24	25'-6"	
"	2	16'-9"	
"	2	14'-9"	
"	2	12'-0"	
#5	72	6'-9"	
TOTAL #5			1,866
401 B	74	7'-5"	
402 B	58	3'-0"	
TOTAL #4			483
301 B	110	8'-2"	338
TOTAL STEEL			10,373
CONCRETE			
CLASS "F" (CAP)		12.2 cu. yds.	
CLASS "D" (5 @ 2.96 cyl.)		12.8 cu. yds.	
CLASS "E" ABOVE FTGS.		21.8 cu. yds.	
CLASS "E" IN FTGS.		37.5 cu. yds.	
MISCELLANEOUS			
36-12" Ø P.S. STEEL H		720 LIN. FT.	
PILES x 20'-0"			

REINFORCING STEEL			
MARK & SIZE	NO OF BARS	LENGTH	WEIGHT LBS.
801 E	40	9'-1"	
802 E	56	8'-1"	
#8	20	24'-9"	
#8	50	13'-6"	
#8	50	8'-6"	
TOTAL #8			6,427
#7	8	21'-6"	352
601 E	2	9'-10"	
#6	30	6'-0"	
TOTAL #6			300
501 E	7	7'-6"	
502 E	23	4'-9"	
503 E	14	5'-3"	
#5	2	22'-9"	
"	10	21'-9"	
"	20	21'-3"	
#5	56	5'-7"	
TOTAL #5			1,289
401 E	62	7'-5"	
402 E	48	3'-0"	
TOTAL #4			483
301 E	120	8'-2"	369
TOTAL STEEL			9,149
CONCRETE			
CLASS "F" (CAP)		9.0 cu. yds.	
CLASS "D" (5 @ 2.73 cyl.)		13.7 cu. yds.	
CLASS "E" ABOVE FTGS.		17.0 cu. yds.	
CLASS "E" IN FTGS.		30.6 cu. yds.	
MISCELLANEOUS			
30-12" Ø P.S. STEEL H		600 LIN. FT.	
PILES x 20'-0"			

REINFORCING STEEL			
MARK & SIZE	NO OF BARS	LENGTH	WEIGHT LBS.
801 E	40	9'-1"	
802 E	56	8'-1"	
#8	20	25'-3"	
#8	50	13'-6"	
#8	50	8'-6"	
TOTAL #8			6,427
#7	8	21'-6"	352
601 E	2	9'-10"	
#6	30	6'-0"	
TOTAL #6			300
501 E	7	7'-6"	
502 E	23	4'-9"	
503 E	14	5'-3"	
#5	2	22'-9"	
"	10	21'-9"	
"	20	21'-3"	
#5	56	5'-7"	
TOTAL #5			1,289
401 E	62	7'-5"	
402 E	48	3'-0"	
TOTAL #4			483
301 E	120	8'-2"	369
TOTAL STEEL			9,150
CONCRETE			
CLASS "F" (CAP)		9.3 cu. yds.	
CLASS "D" (5 @ 2.73 cyl.)		13.7 cu. yds.	
CLASS "E" ABOVE FTGS.		17.5 cu. yds.	
CLASS "E" IN FTGS.		31.1 cu. yds.	
MISCELLANEOUS			
30-12" Ø P.S. STEEL H		600 LIN. FT.	
PILES x 20'-0"			

NOTES:-
 FOR DETAILS SEE DRWS. C-5 & C-6
 FOR REINFORCING BAR NOTES SEE BRIDGE STR. C-1

BILL OF MATERIALS & BENDING DIAGRAMS
BENTS No. 2 AND No. 3

INDIANA STATE HIGHWAY COMMISSION

SCALE:- NO SCALE

SUBMITTED FOR APPROVAL: *L. A. Taylor*

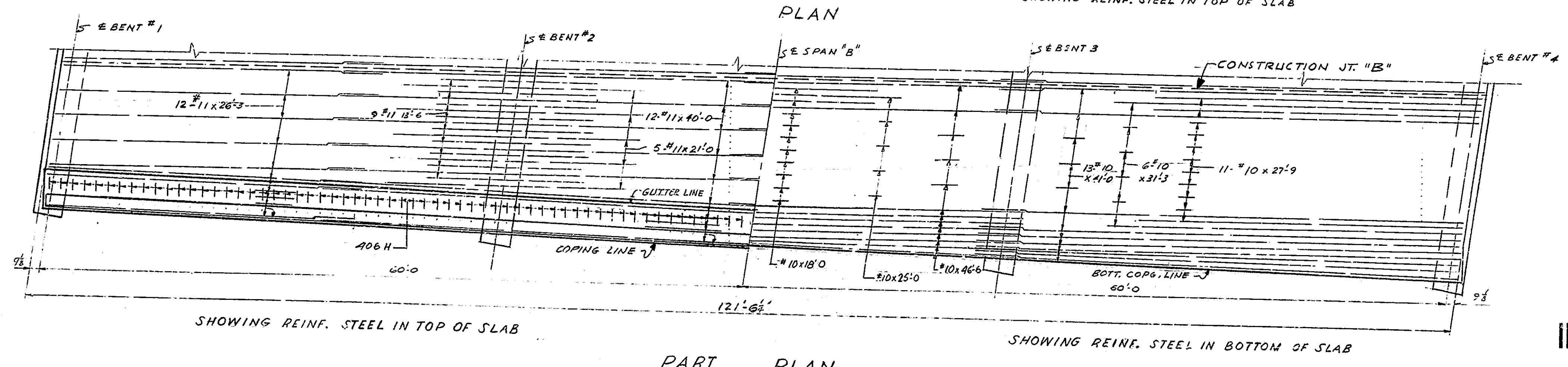
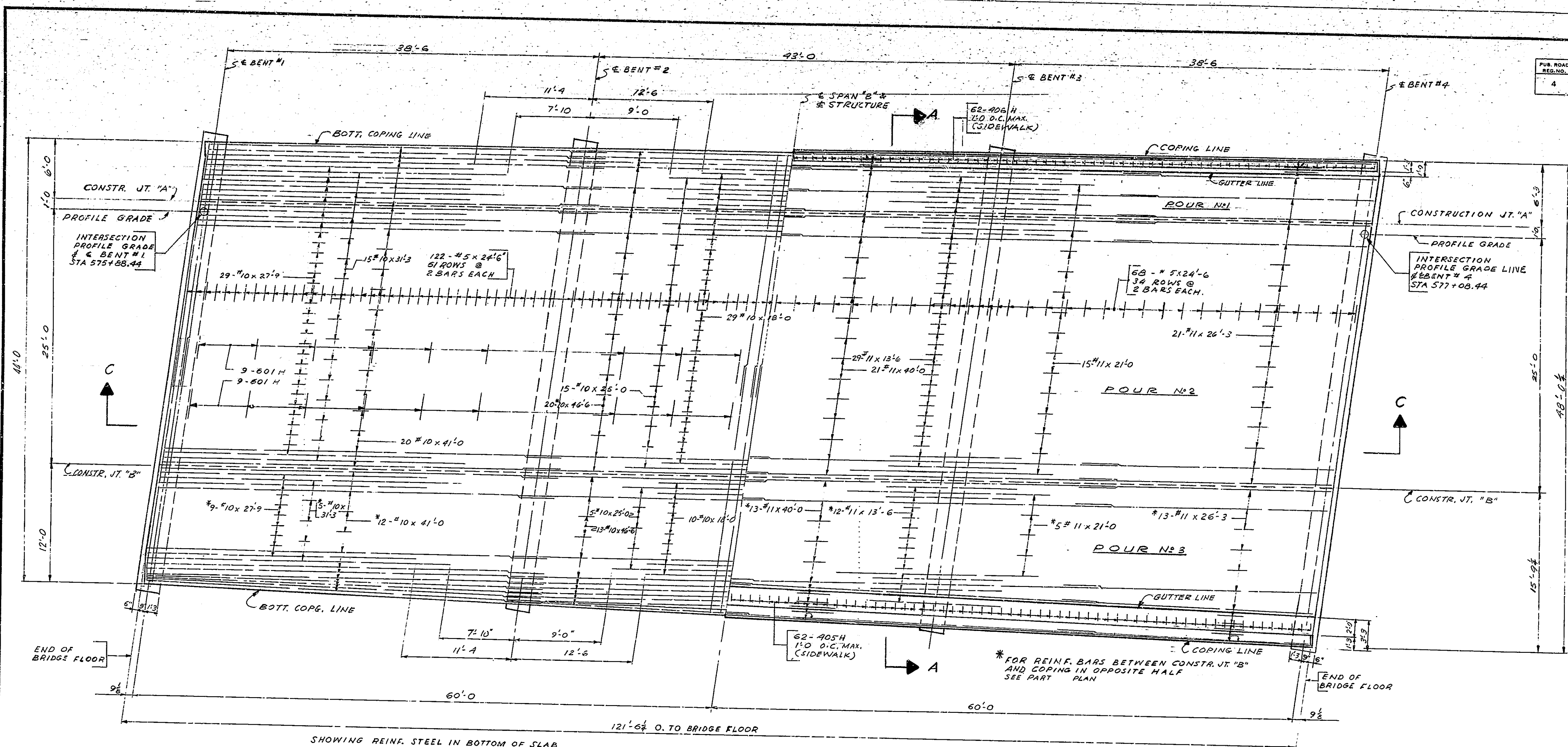
DRAWING: C-7 OF 11
 PROJECT: U-78 (IND.)

Jan 23, 1964



DESIGNED: *E.S.* CKD: *T.S.*
 DRAWN: *E.S.* CKD: *T.S.*

BRIDGES OVER 20' SPAN					
PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	0-7846	1964	17	44



**SUPERSTRUCTURE DETAILS
NORTH BOUND STRUCTURE
INDIANA STATE HIGHWAY COMMISSION**

SCALE: 3/16" = 1'-0"

SUBMITTED FOR APPROVAL: *E. D. Taylor*

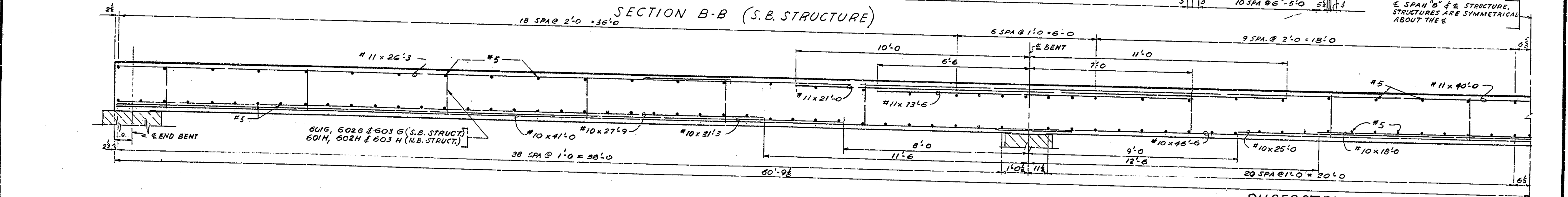
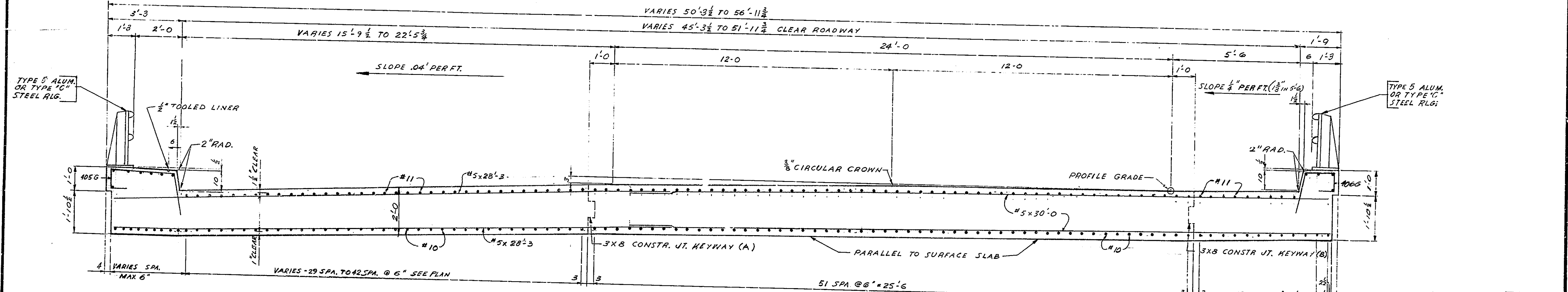
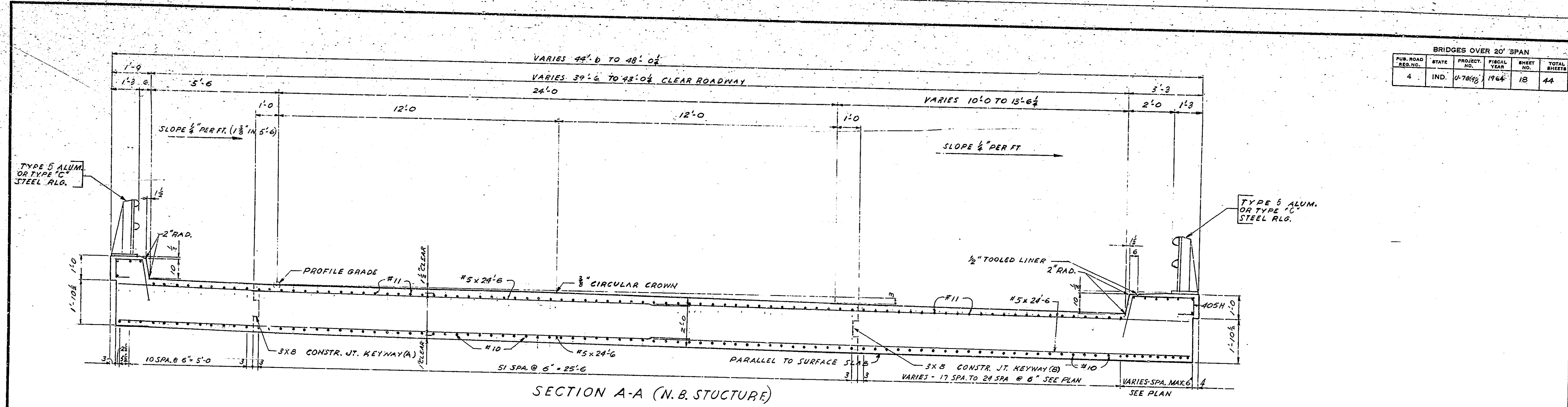
DRAWING: C9 OF 11

Jan 23, 1964



DESIGNED: KS CKD: J.J.
DRAWN: Z/C CKD: J.S.

BRIDGES OVER 20' SPAN					
PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	0-7849	1964	18	44



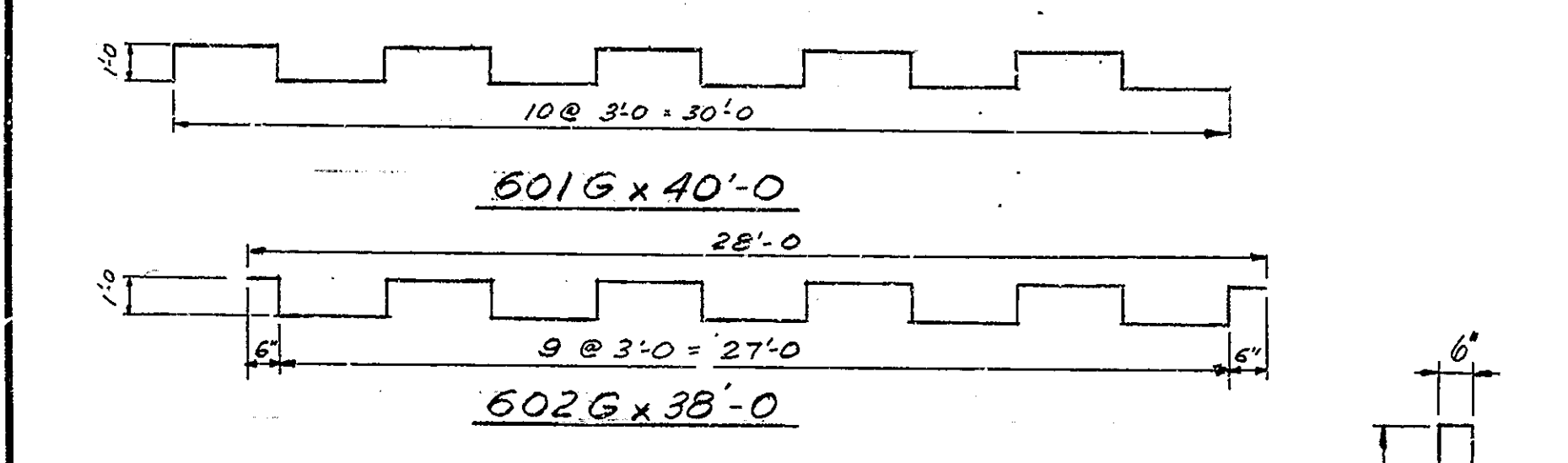
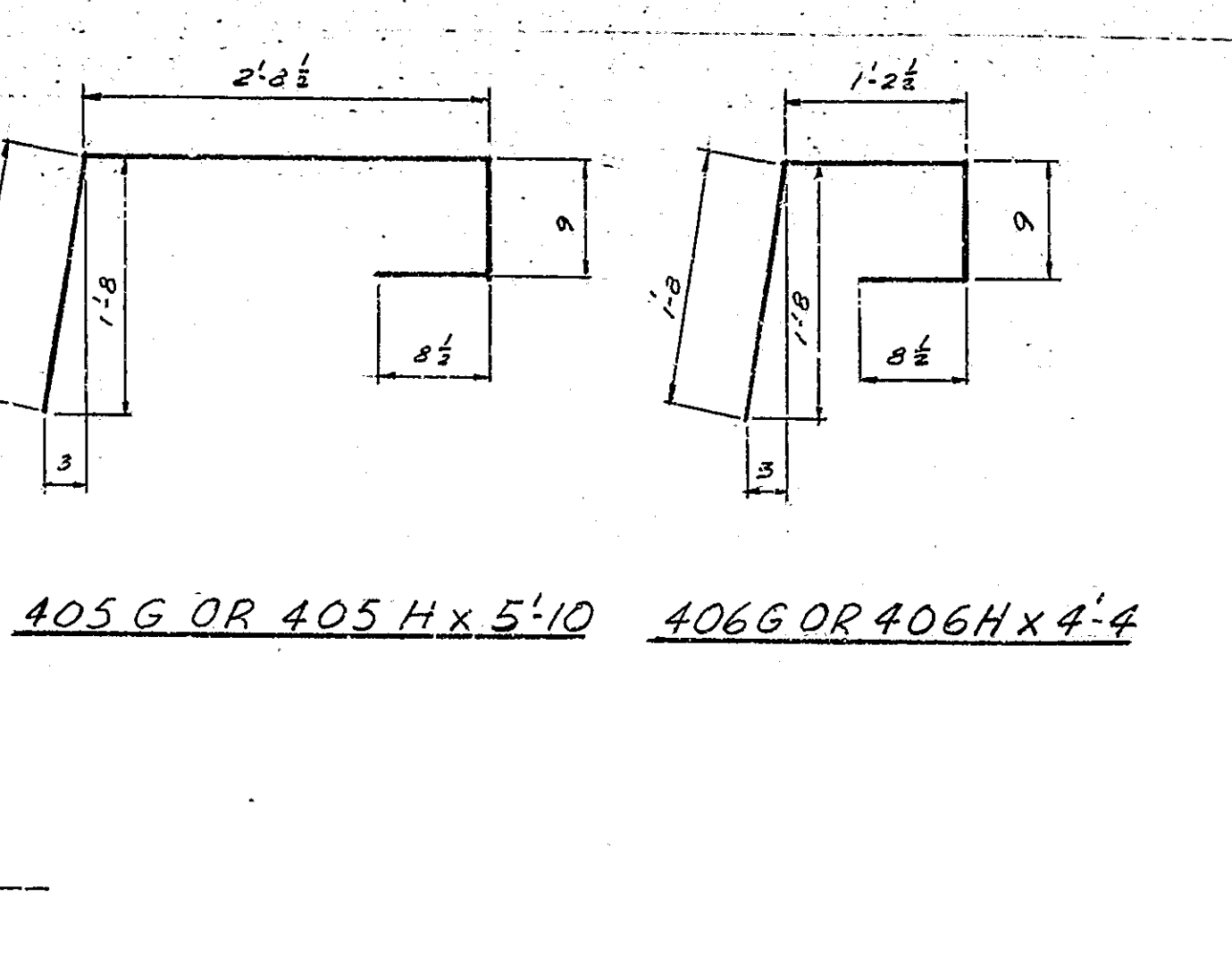
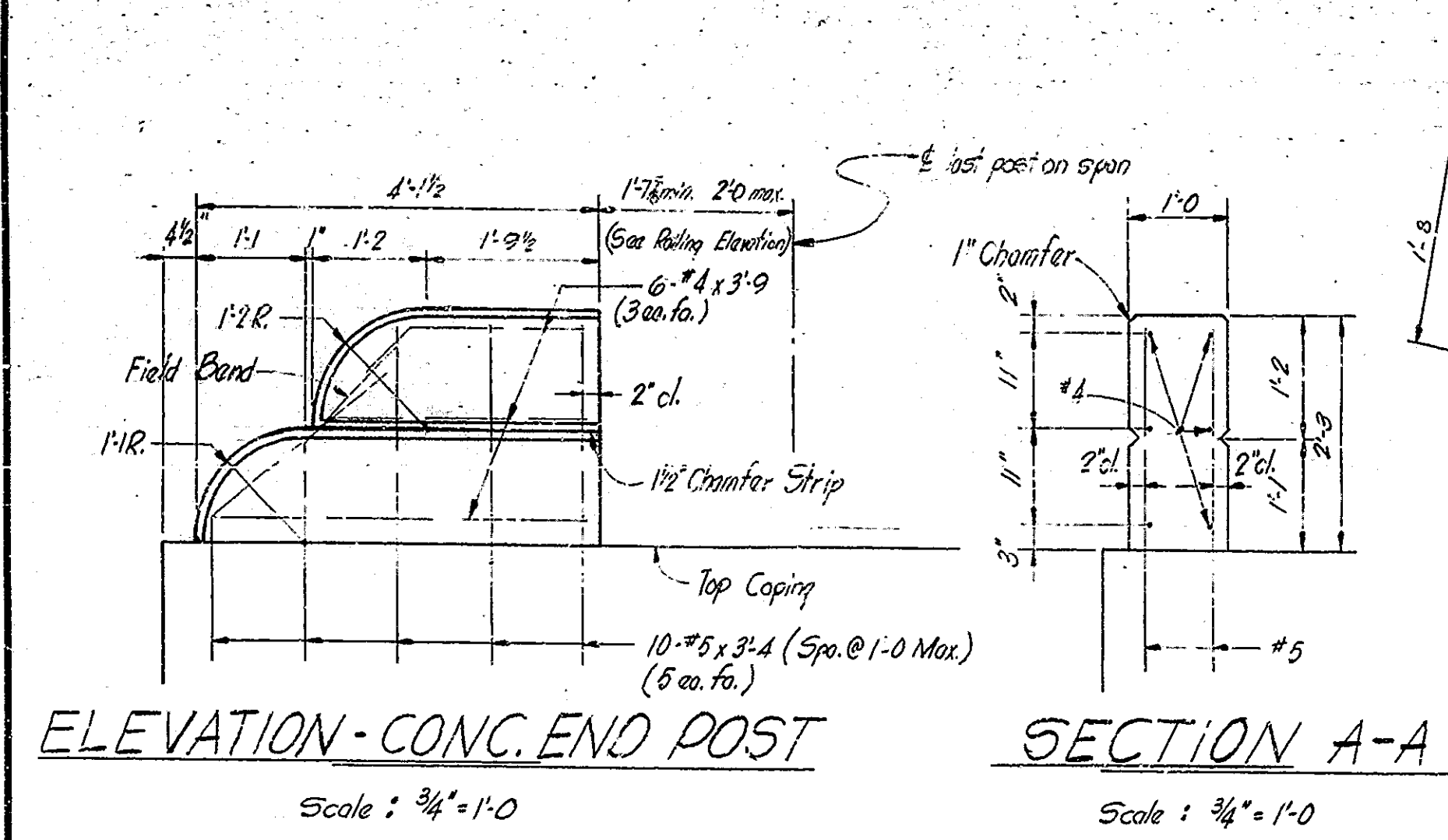
SUPERSTRUCTURE DETAILS
SOUTH-NORTHBOUND STRUCTURES
INDIANA STATE HIGHWAY COMMISSION

NOTES:-
FOR LOCATION OF SEC. A-A SEE DRWG. C-9
FOR LOCATION OF SEC. B-B SEE DRWG. C-8
FOR LOCATION OF SEC. C-C SEE DRWG. C-3 & C-9
FOR BILL OF MATERIALS SEE DRWG. C-11
FOR BENDING DIAGRAMS SEE DRWG. C-11
FOR REINF. BAR NOTES SEE BRIDGE STD. C-1

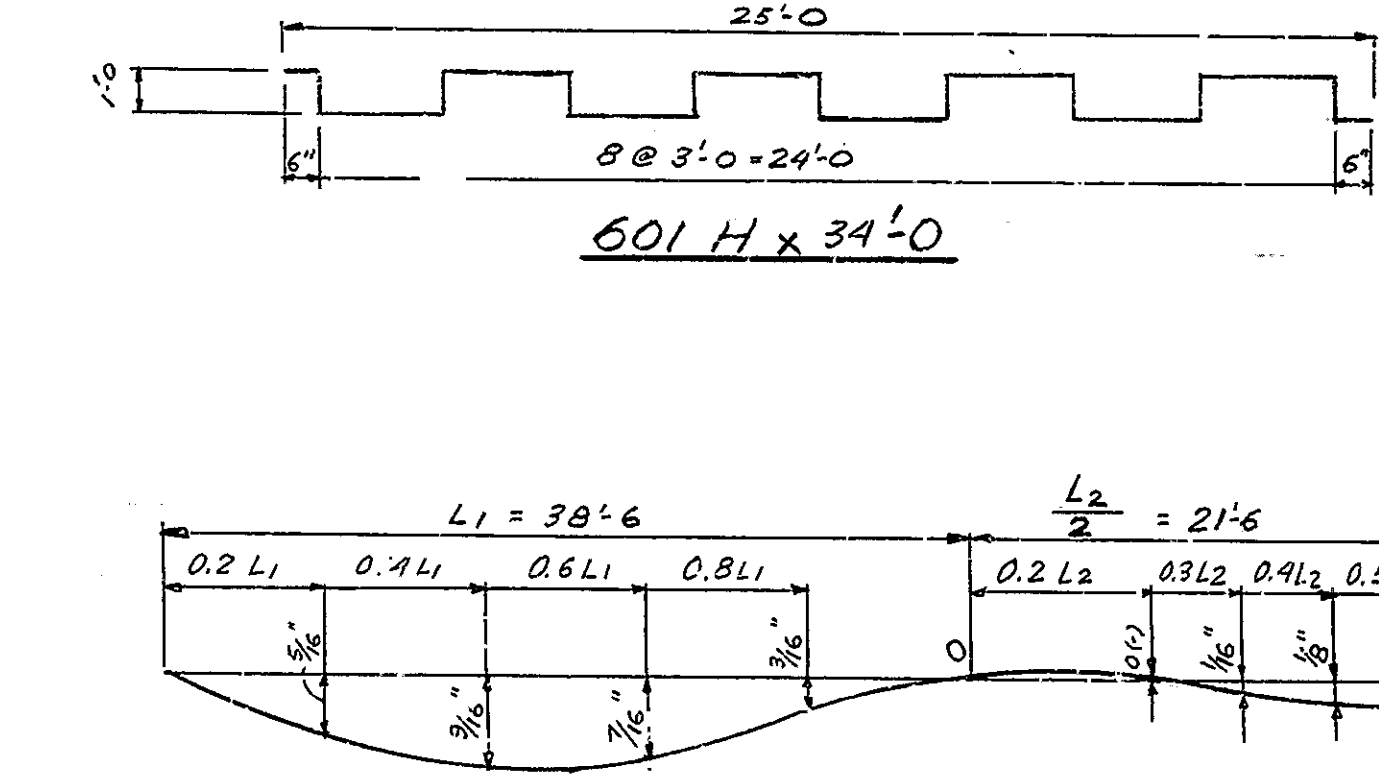
SCALE: - 1/2" = 1'-0"
SUBMITTED FOR APPROVAL: *L.D. Taylor*
DRAWING: C-10 OF 11
Jan. 23, 1964
L.D. TAYLOR JR.
REGISTERED PROFESSIONAL ENGINEER

DESIGNED: CKD
DRAWN: CKD

BRIDGES OVER 20' SPAN					
PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	U-78(48)	1964	19	44



DESIGN DATA
 Unit Stresses $P_s = 20,000 \text{ psi}$, $P_c = 1200 \text{ psi}$
 Live Load HS 20-44 with impact with distribution of loads in accordance with 1961 AASHTO Specifications
 Dead Load increased 35% of Roadway for future wearing surface
 S/slab designed with 1/8" wearing surface

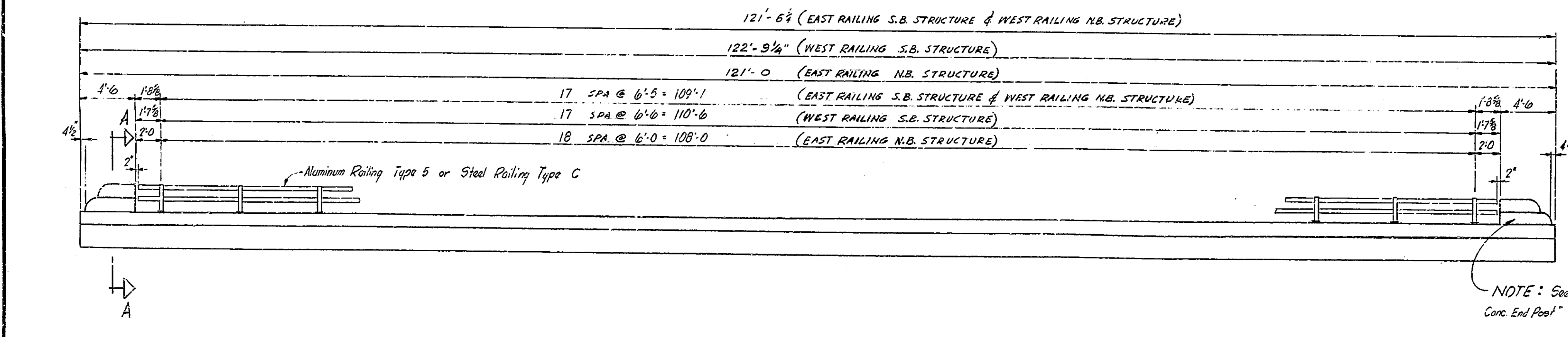


DEAD LOAD DEFLECTION DIAGRAM
 HORIZONTAL SCALE = 1/8" = 1'-0
 VERTICAL SCALE = 1/8" = 1/4"

BILL OF MATERIALS
 (S. B. SUPERSTRUCTURE) (N.B. SUPERSTRUCTURE)

REINFORCING BARS			
MARK # SIZE	NR OF BARS	LENGTH	WEIGHT LBS.
#11	74	40'-0	
	23	26'-9	
	52	26'-3	
	46	27'-0	
#11	91	13'-6	
TOTAL #11			37,907
#10	38	46'-6	
	26	47'-6	
	52	41'-0	
	47	31'-3	
	93	27'-9	
	24	25'-0	
#10	46	18'-0	
TOTAL #10			44,930
601 G	27	40'-0	
602 G	9	38'-0	
TOTAL #6			2,136
#5	189	30'-0	
#5	95	28'-3	
#5	95	27'-0	
#8	40	3'-4	
TOTAL #5			11,827
405 G	123	5'-10	
406 G	123	4'-4	
407 G	110	3'-6	
#4	24	3'-9	
TOTAL #4			1,153
TOTAL STEEL			91,713
CONCRETE			
CLASS "F"			
POUR #1	201.6 Cu.Yds		
POUR #2	234.0 "		
POUR #3	60.0 "		
Center Cur.	2.7 Cu.Yds		
Total Class "F"	498.3 Cu.Yds		
RAILING CONCRETE			
1.1 Cu.Yds			
MISCELLANEOUS			
RAILING (TYPE 5 or 6)	225.6 Lin.Ft.		

REINFORCING BARS			
MARK # SIZE	NR OF BARS	LENGTH	WEIGHT LBS.
#11	87	40'-0	
	87	28'-3	
	40	27'-0	
#11	79	13'-6	
TOTAL #11			33,649
#10	33	46'-6	
	65	41'-0	
	47	31'-3	
	78	27'-9	
	20	25'-0	
#10	39	18'-0	
TOTAL #10			38,070
601 H	36	34'-0	
TOTAL #6			1,838
#5	378	24'-0	
#8	40	3'-4	
Total #5			9,198
405 H	123	5'-10	
406 H	123	4'-4	
#4	24	3'-9	
Total #4			895
TOTAL STEEL			81,210
CONCRETE			
CLASS "F"			
POUR #1	67.0 Cu.Yds		
POUR #2	234.0 "		
POUR #3	170.3 "		
Total Class "F"	471.3 Cu.Yds		
RAILING CONCRETE			
1.1 Cu.Yds			
MISCELLANEOUS			
RAILING (TYPE 5 or 6)	223.9 Lin.Ft.		



SUPERSTRUCTURE DETAILS, BILL OF MATERIALS & BENDING DIAGRAMS
INDIANA STATE HIGHWAY COMMISSION

SCALE: NO SCALE, UNLESS NOTED.
 SUBMITTED FOR APPROVAL: *[Signature]*
 DRAWING: C 11 of 11
 PROJECT: U-78(48)
 BRIDGE CONTRACT NO. B-7201

DESIGNED: C.K.D.
 DRAWN: C.K.D.

