

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 76	133-B-CF	WINNEBAGO	70	1
STA.		TO STA.		
B. P. R. REG. NO. 4		ILLINOIS PROJECT		

STATE OF ILLINOIS

WINNEBAGO COUNTY HIGHWAY DEPARTMENT

PLANS FOR PROPOSED

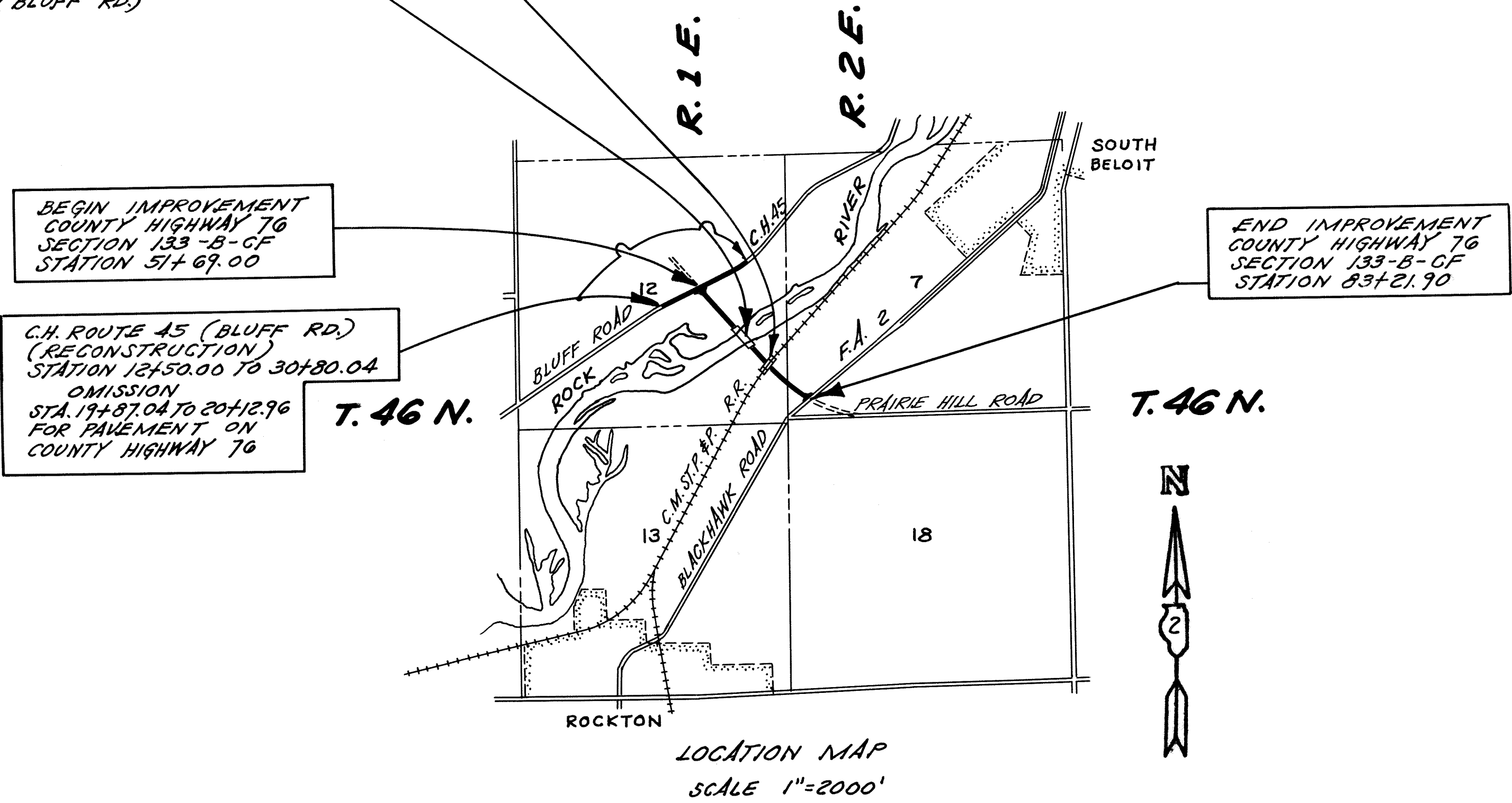
C.H. ROUTE 76

SECTION 133-B-CF

SECTION 133-B-CF CONSISTS OF :

1. FURNISHING OF ALL MATERIALS AND THE COMPLETE CONSTRUCTION, EXCEPT FOR BALLAST AND TRACKWORK, OF A THREE SPAN ROLLED BEAM STEEL DECK BRIDGE CARRYING ONE TRACK OF THE CHICAGO, MILWAUKEE, ST. PAUL AND PACIFIC RAILROAD COMPANY OVER C.H. 76 AT STA. 72+53.26 (STATIONING ALONG C.H. 76), AND THE CONSTRUCTION AND LATER THE REMOVAL OF A TEMPORARY RAILROAD RUNAROUND EMBANKMENT AND CONSTRUCTION OF A PERMANENT EMBANKMENT FOR THE TRACK RAISE OF THE MAIN LINE.
2. FURNISHING OF ALL MATERIALS AND THE COMPLETE CONSTRUCTION OF A FIVE SPAN ROLLED BEAM BRIDGE CARRYING C.H. 76 OVER THE ROCK RIVER AT STA. 65+47.50
3. FURNISHING OF ALL MATERIALS AND THE COMPLETE CONSTRUCTION OF A 24' P.C.C. PAVEMENT ON A GRANULAR SUBBASE AND ALL GRADING, DRAINAGE, AND THE RECONSTRUCTION OF C.H. ROUTE 45 (BLUFF RD.)

SEE INDEX SHEET No. 3



GROSS LENGTH OF IMPROVEMENT = 3,152.90 FEET = 0.5971 MILES

NET LENGTH OF IMPROVEMENT = 3,152.90 FEET = 0.5971 MILES

ALFRED BENESCH & CO.

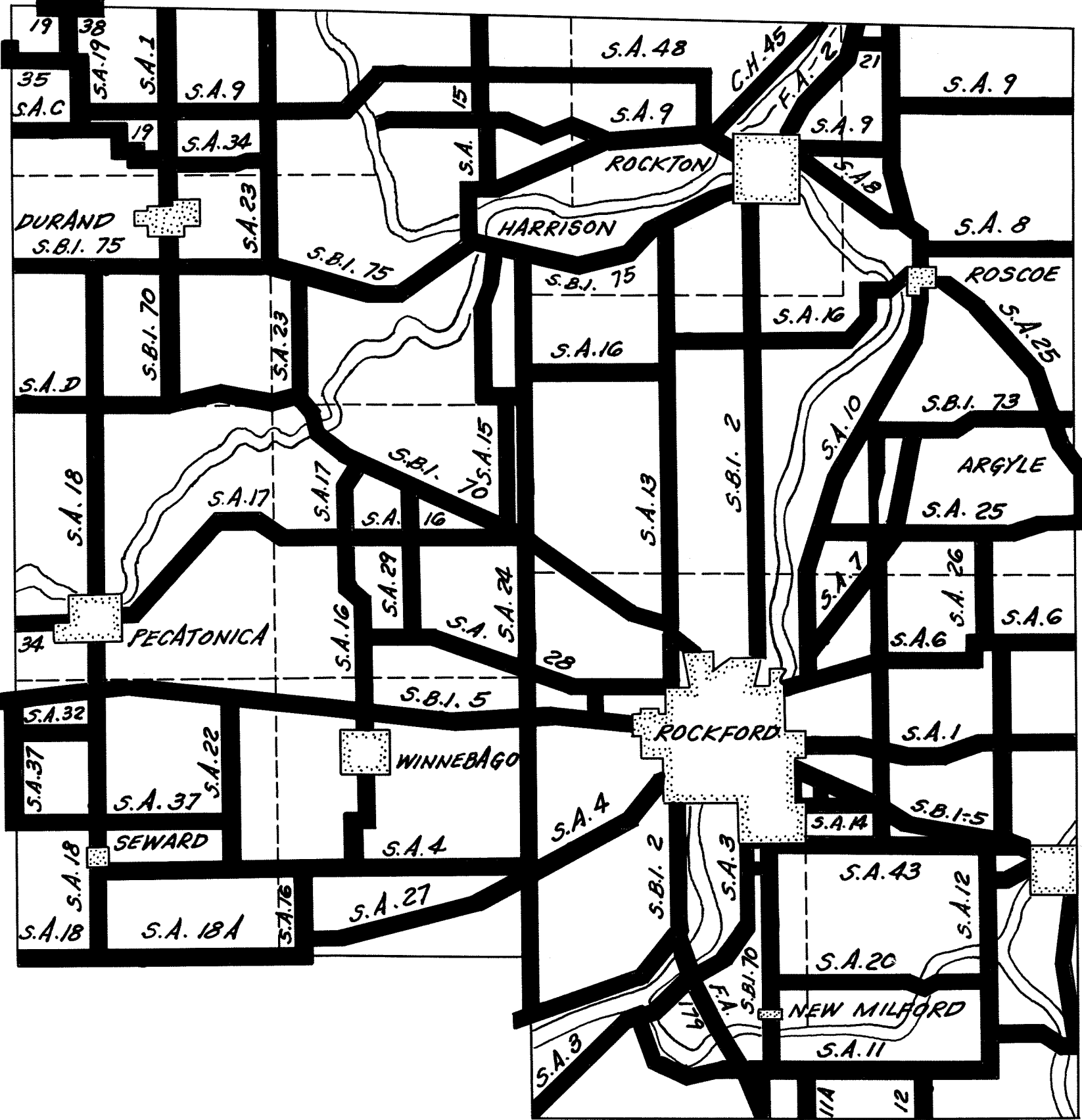
CONSULTING ENGINEERS

10 S. WABASH AVE.

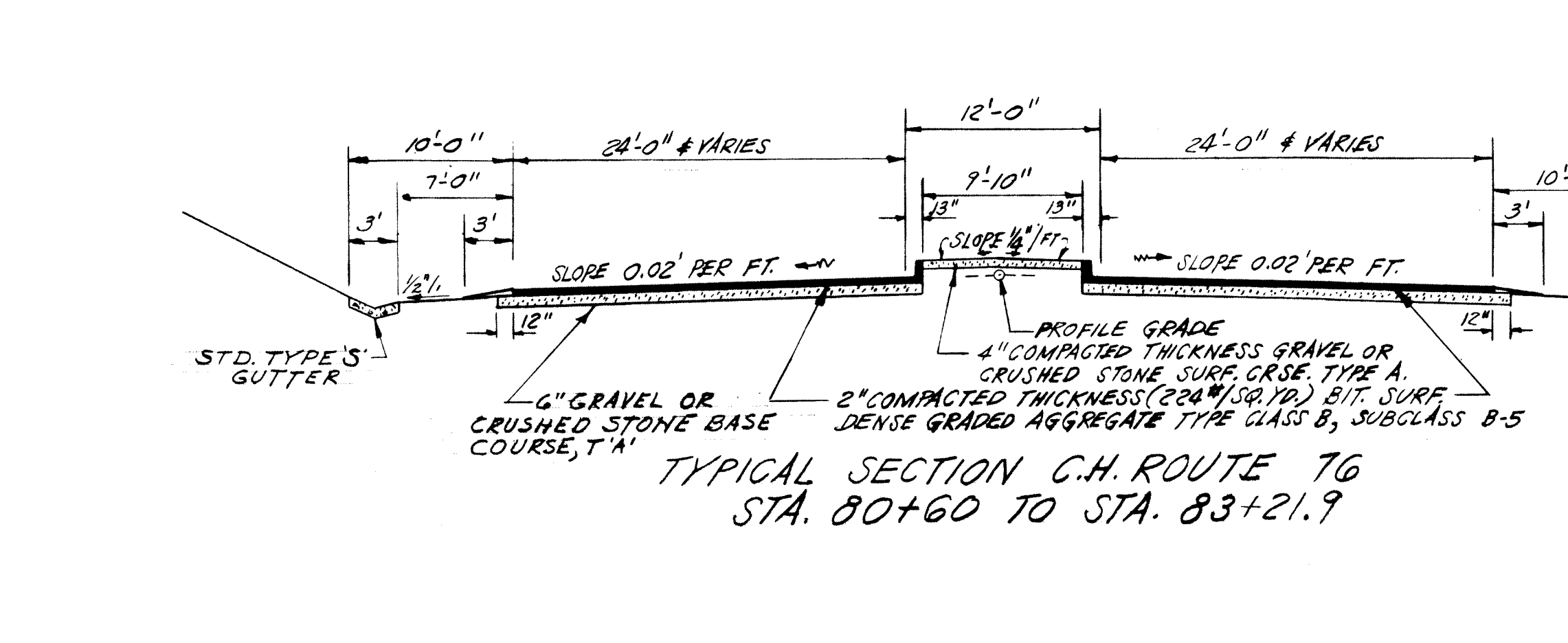
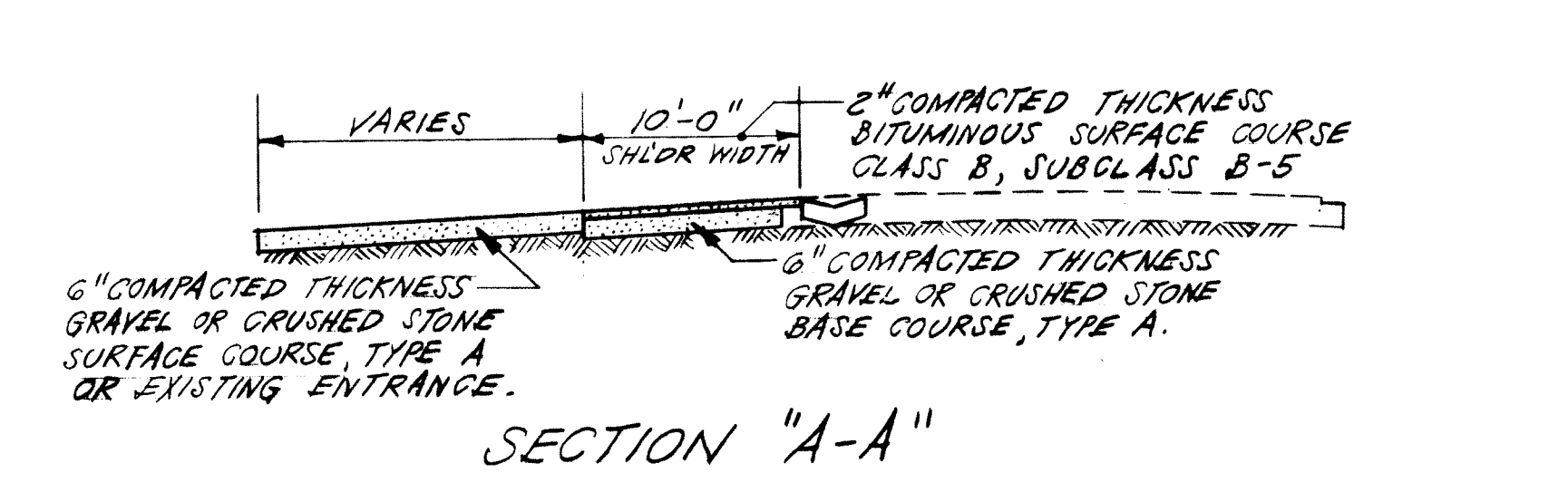
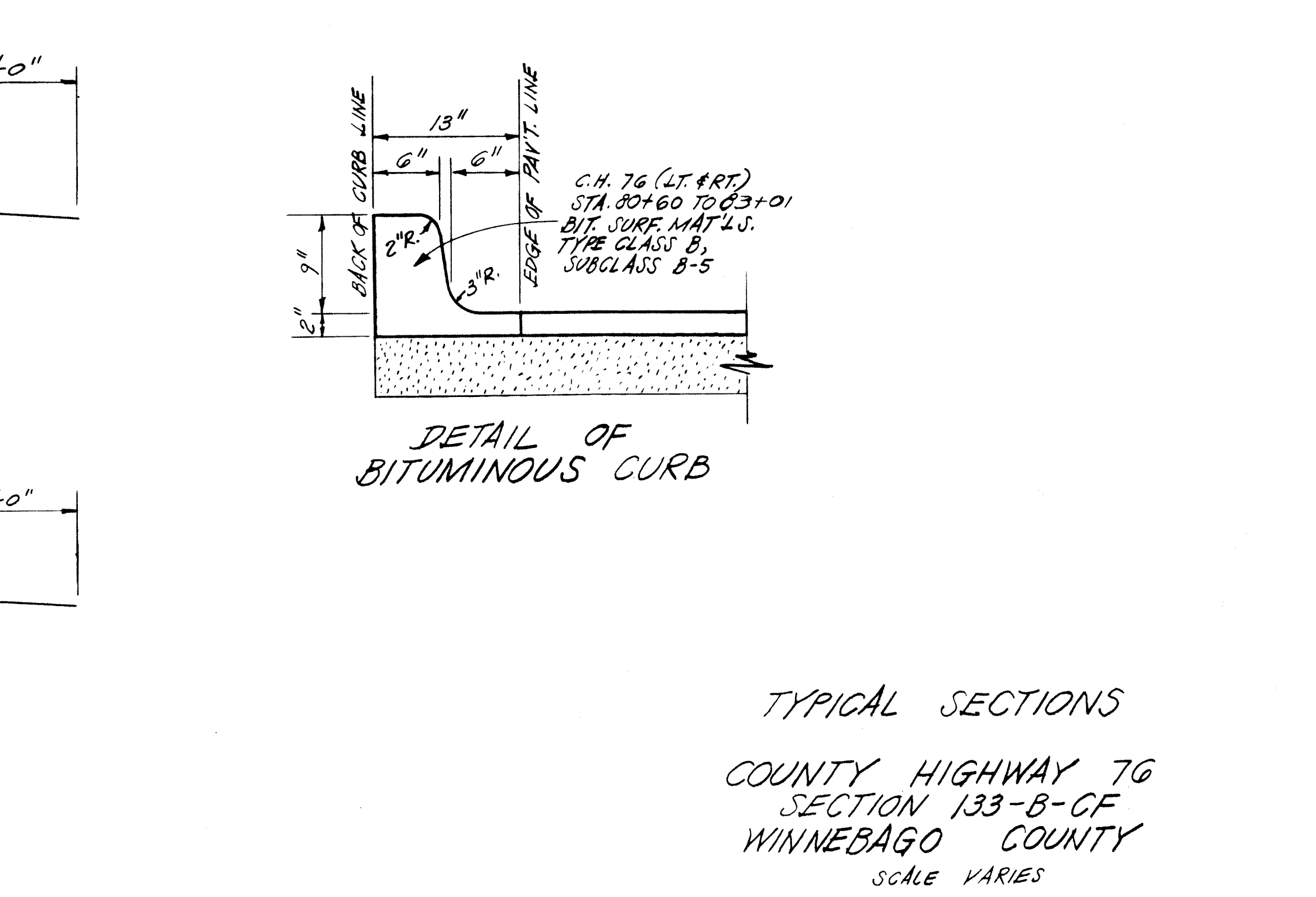
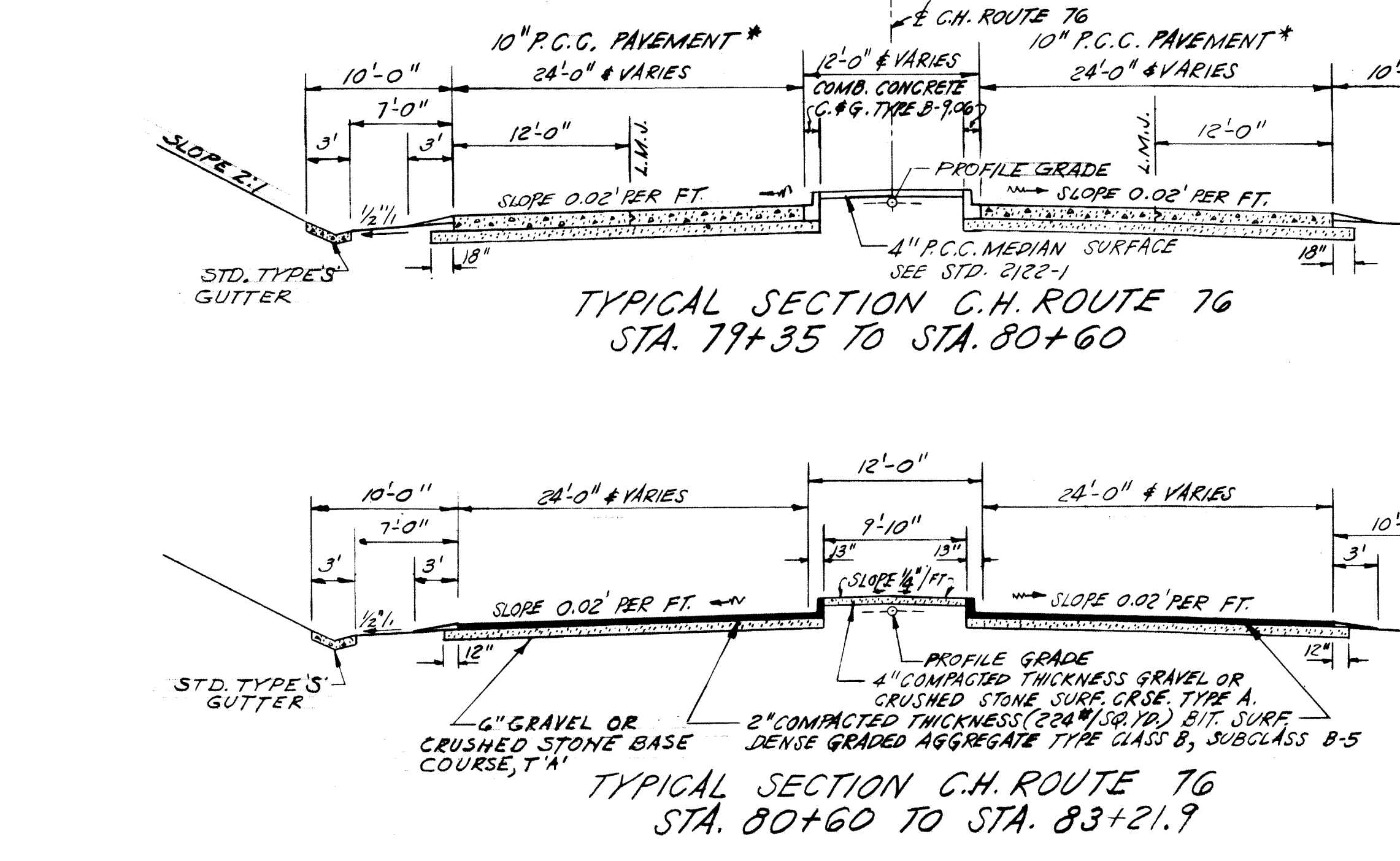
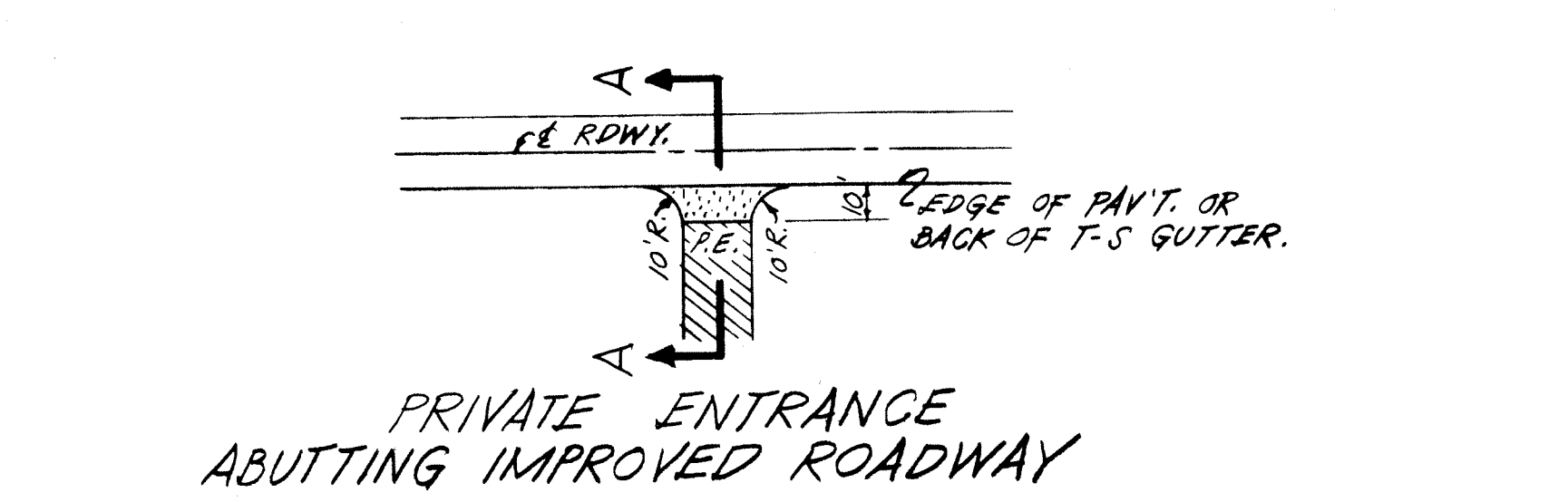
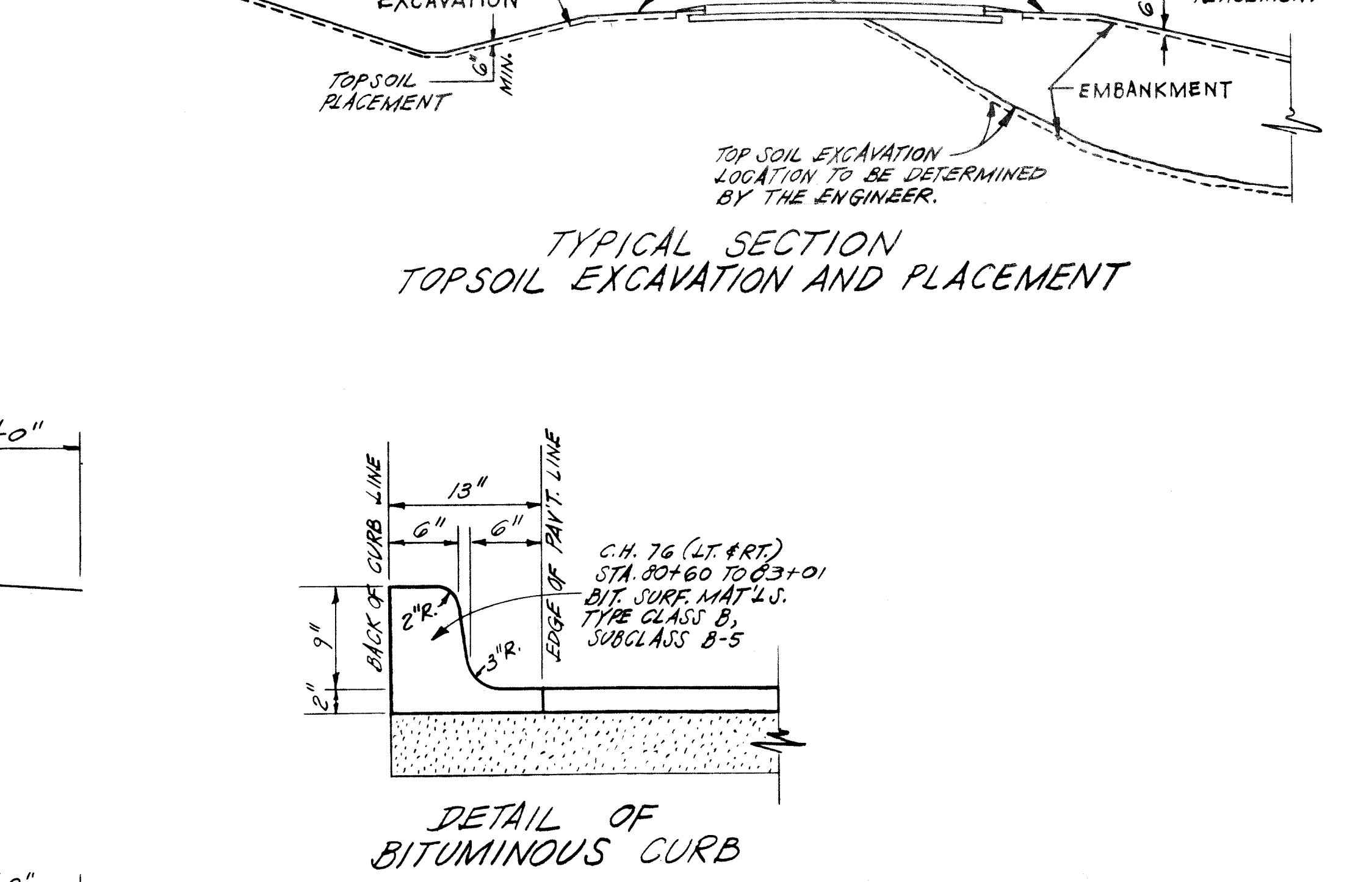
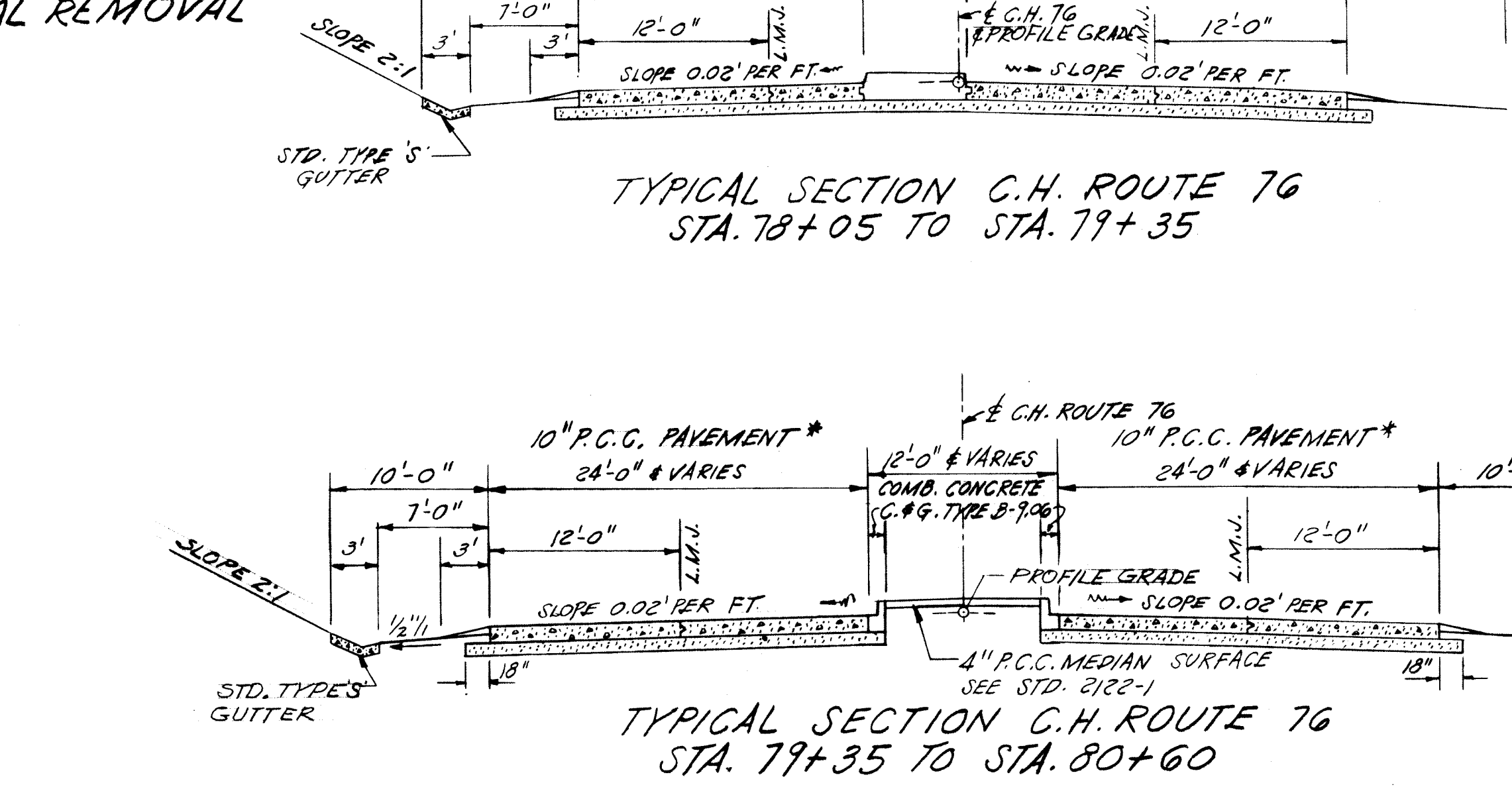
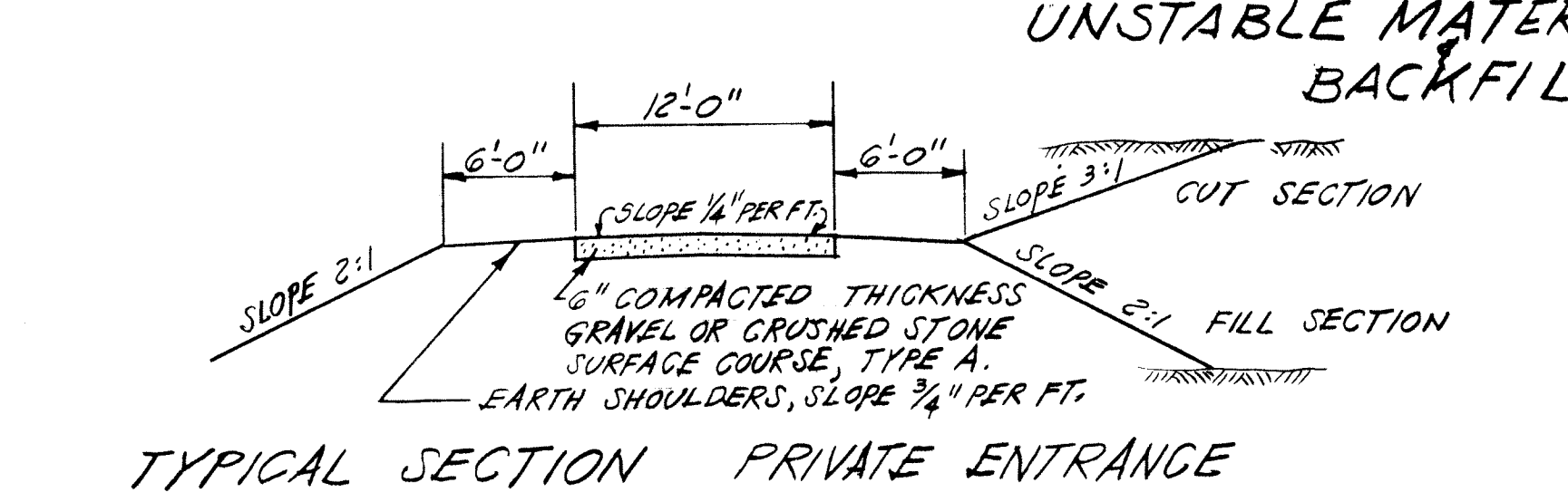
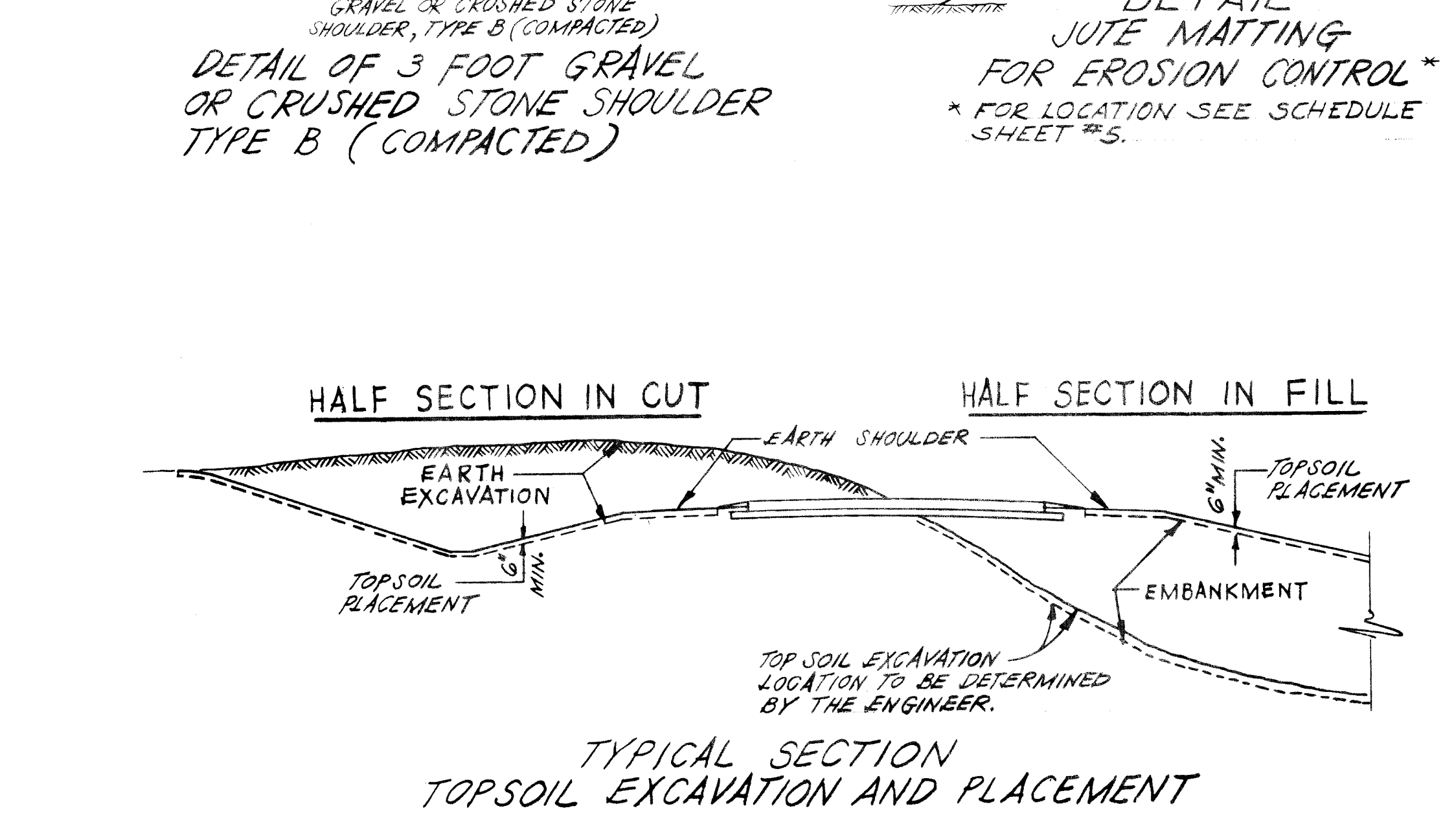
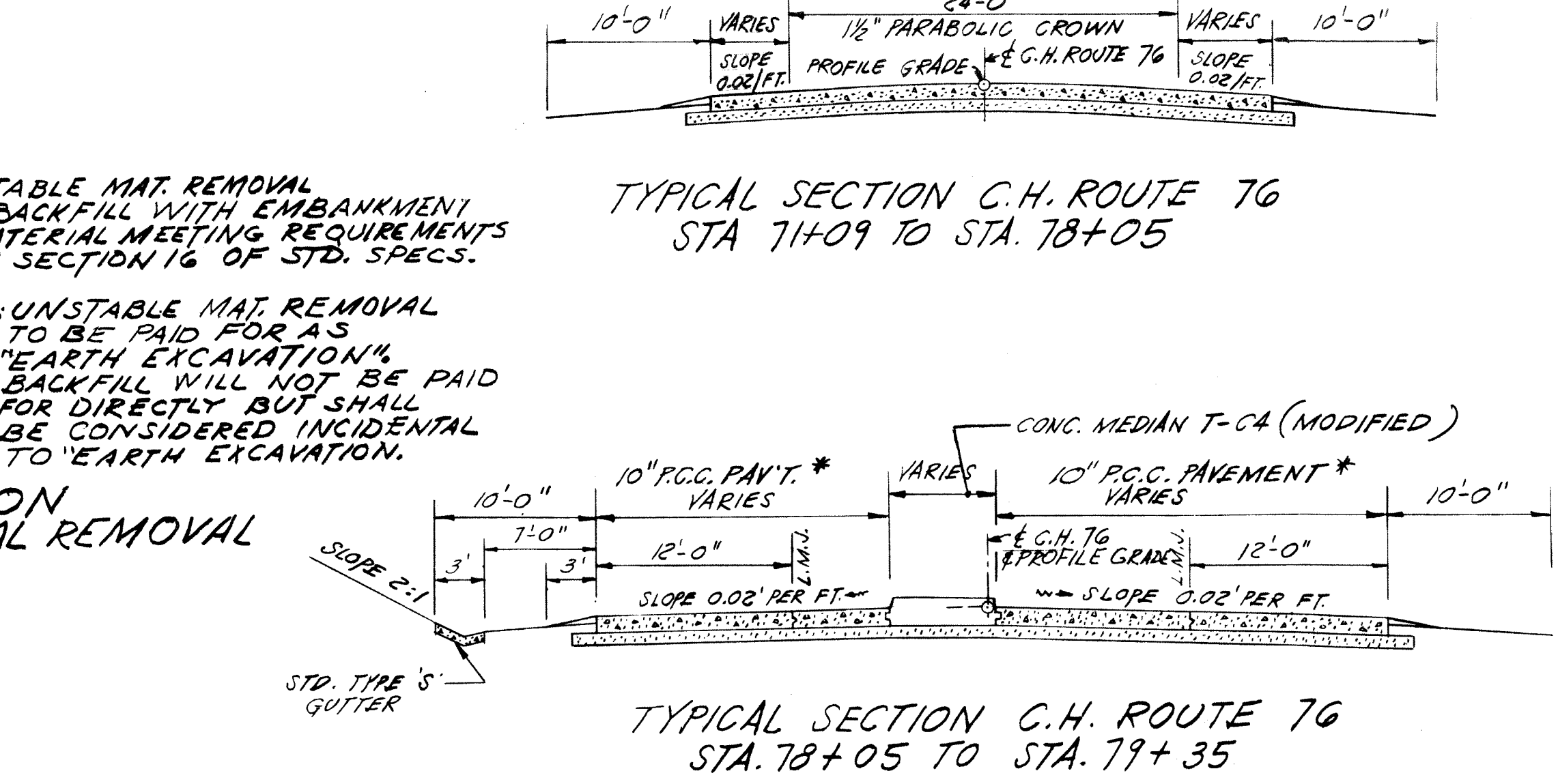
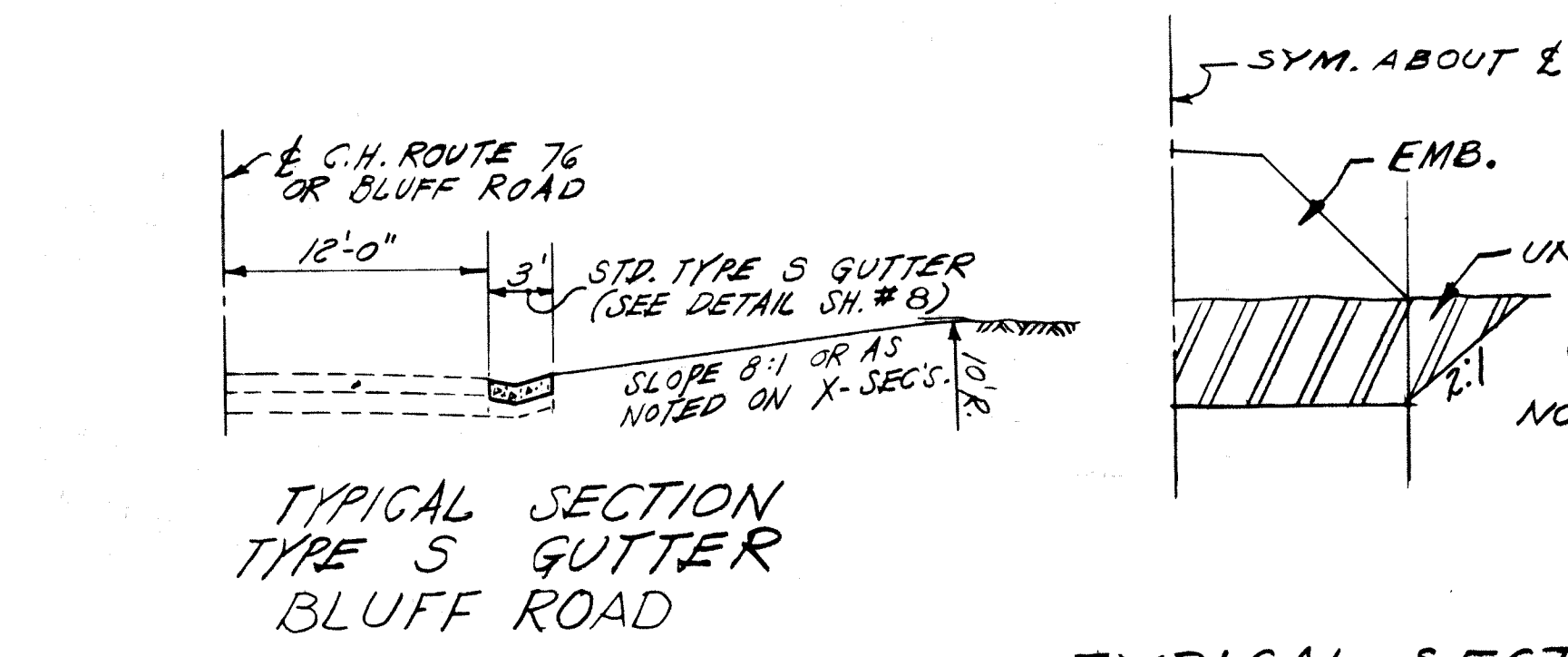
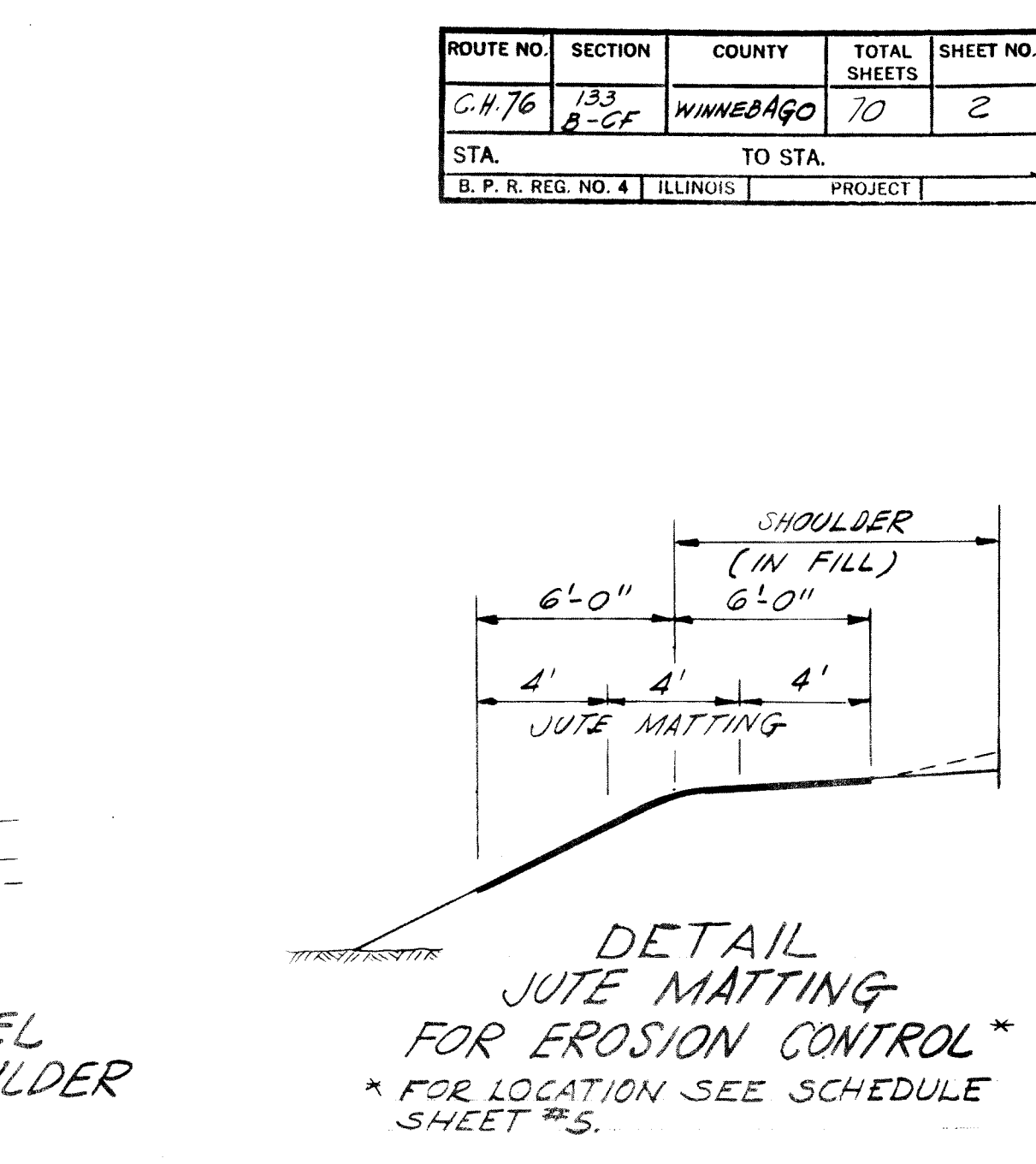
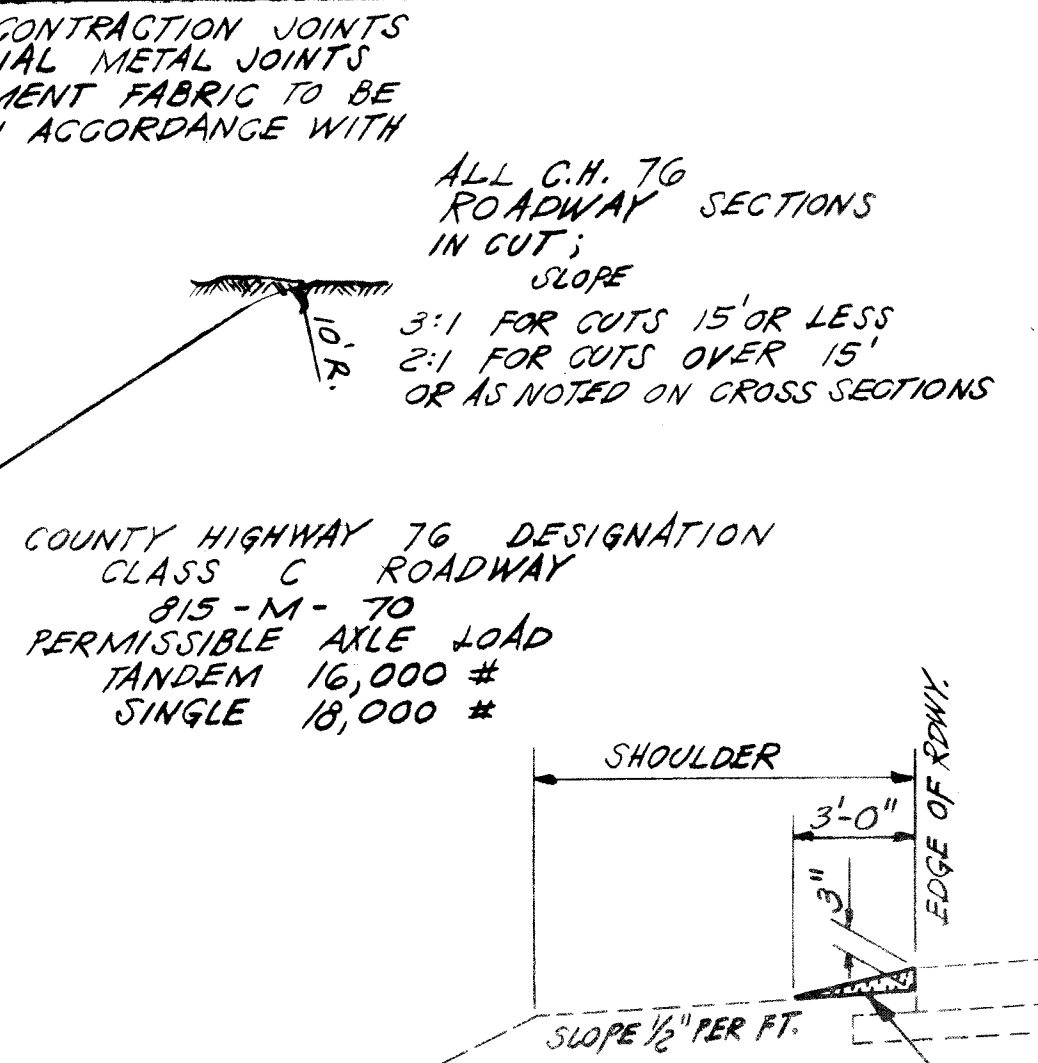
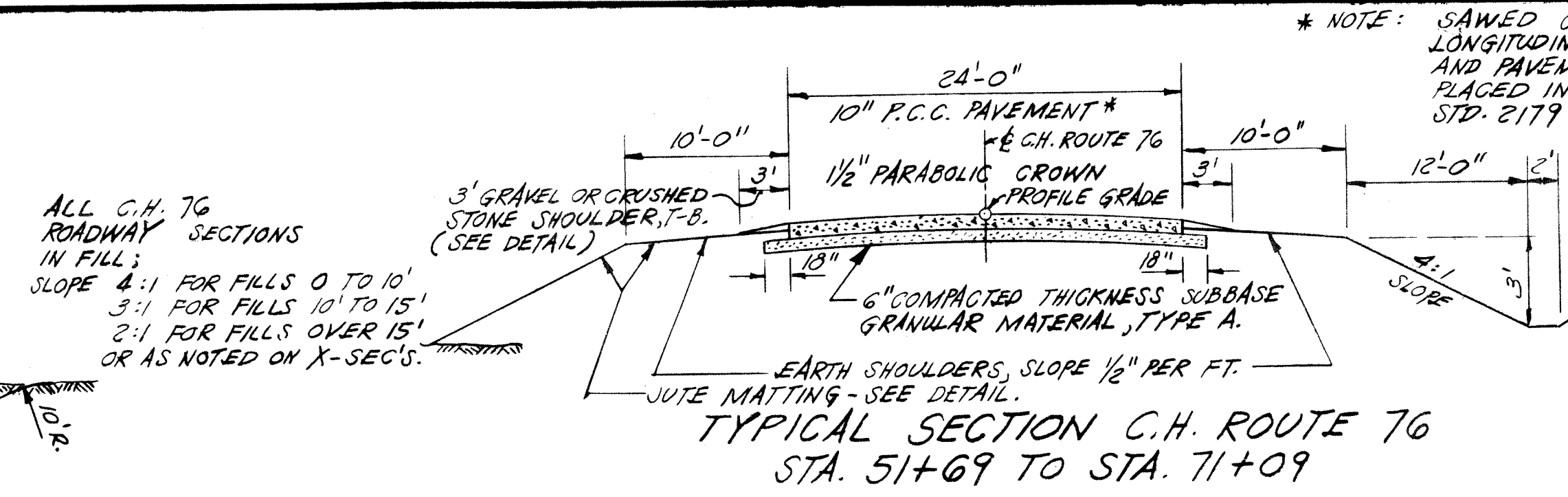
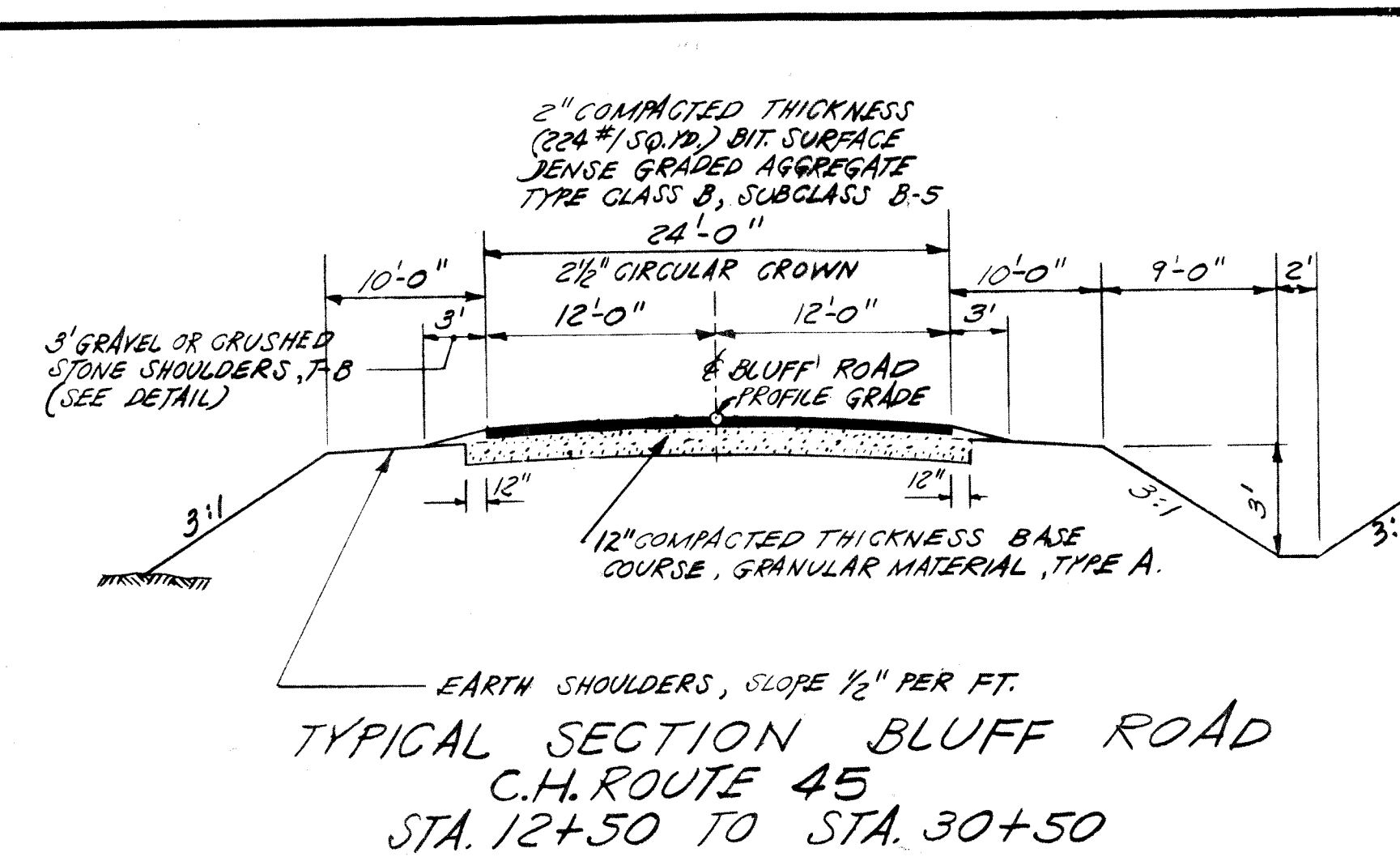
CHICAGO, ILLINOIS

#1300

Approved



ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 76	133-B-CF	WINNEBAGO	70	2
STA.		TO STA.		
B. P. R. REG. NO. 4		ILLINOIS PROJECT		



TYPICAL SECTIONS
COUNTY HIGHWAY 76
SECTION 133-B-CF
WINNEBAGO COUNTY
SCALE VARIES

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 76	133-B-CF	WINNEBAGO	70	3
STA.		TO STA.		
B. P. R. REG. NO. 4		ILLINOIS PROJECT		

GENERAL NOTES FOR ROADWAY CONSTRUCTION

THE ROADWAY SECTION FOR COUNTY HIGHWAY 76, SECTION 133B-CF, SHALL CONSIST OF 10 INCH PORTLAND CEMENT CONCRETE PAVEMENT FROM STA. 51+69 TO STA. 80+60 AND 2 INCH BITUMINOUS CONCRETE SURFACE, CLASS B, SUBCLASS B-5 FROM STA. 80+60 TO STA. 83+21.9' WIDTHS OF PAVEMENT VARY FROM A SINGLE 24'-0" ROADWAY TO DUAL 24'-0" ROADWAYS SEPARATED BY A 12'-0" MEDIAN.

THE ROADWAY SECTION FOR C. H. ROUTE 45 (BLUFF ROAD) SHALL CONSIST OF A UNIFORM 24'-0" WIDTH OF 2 INCH BITUMINOUS CONCRETE SURFACE, CLASS B, SUBCLASS B-5 FROM STA. 12+50 TO STA. 30+80.04

WHEREVER CONCRETE MASONRY WALLS ARE ENCOUNTERED, THEY SHALL BE REMOVED TO AN ELEVATION 9 INCHES BELOW THE ESTABLISHED GRADE OR SUBGRADE AS SHOWN ON THE PLANS. SUCH WORK SHALL BE CONSIDERED INCIDENTAL TO EARTH EXCAVATION UNLESS PLANS PROVIDE FOR PAYMENT AS A SEPARATE ITEM.

THE COST OF REMOVING HOUSE FOUNDATIONS OR PORTIONS THEREOF, ANY WALLS, STEPS, PUMP FOUNDATIONS, AND THE LIKE WHICH WERE A PART OF A RESIDENCE OR BUSINESS ESTABLISHMENT ORIGINALLY LOCATED ON THE NEW RIGHT OF WAY AND WHICH HAVE NOT BEEN ACCOUNTED FOR AS A PAY ITEM ON THE PLANS SHALL BE CONSIDERED INCIDENTAL TO THIS CONTRACT.

THE CONTRACTOR, AT HIS EXPENSE, WILL BE REQUIRED TO RELOCATE OR REMOVE AND REPLACE ALL ROAD SIGNS WHICH INTERFERE WITH HIS CONSTRUCTION OPERATIONS, AND TO TEMPORARILY RESET ALL SUCH SIGNS DURING CONSTRUCTION OPERATIONS. ALL WORK INVOLVING SIGNS SHALL BE COVERED BY THE FOLLOWING REQUIREMENTS:

- SIGNS SHALL NOT BE REMOVED UNTIL PROGRESS OF WORK NECESSITATES IT.
- EVERY SIGN REMOVED MUST BE RE-ERECTED AT A TEMPORARY LOCATION IN A WORKMANLIKE MANNER AND VISIBLE TO TRAFFIC ON THE HIGHWAY. ALL SUCH SIGNS MUST BE MAINTAINED STRAIGHT AND NEAT APPEARING FOR THE DURATION OF THE TEMPORARY SETTING.
- ALL SIGNS SHALL BE RE-ERECTED IN THEIR PERMANENT LOCATIONS SO THAT THERE IS A HORIZONTAL CLEARANCE OF 12 FEET FROM THE PAVEMENT EDGE TO THE SIGN, OR AS DESIGNATED BY THE ENGINEER, AS THE ROADWAY IS COMPLETED.
- AT SOME TEMPORARY AND PERMANENT SIGN LOCATIONS, IT WILL BE NECESSARY TO USE LONGER POSTS TO MAINTAIN PROPER SIGN ELEVATIONS, IN WHICH CASE THEY WILL BE FURNISHED BY THE STATE IN EXCHANGE FOR THE EXISTING POSTS.
- ALL UNUSED POSTS WILL BE STORED WITHIN THE R/W FOR PICKUP BY THE DIVISION OF HIGHWAYS. A CHARGE OF \$3.00 PER POST WILL BE MADE AGAINST THE CONTRACTOR FOR ALL POSTS NOT ACCOUNTED FOR.

WHEREVER IN THESE PLANS REFERENCE IS MADE TO THE "STANDARD SPECIFICATIONS", IT IS UNDERSTOOD TO INCLUDE THE "SUPPLEMENTAL SPECIFICATIONS", EFFECTIVE MARCH 2, 1964.

OVERHAUL QUANTITIES SHOWN ARE INFORMATIONAL ONLY AND IT IS HEREBY UNDERSTOOD THAT THE COST OF OVERHAUL SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE PER CUBIC YARD FOR EARTH EXCAVATION.

UNDERGROUND GASOLINE TANKS OR SEPTIC TANKS WITHIN THE LIMITS OF THE RIGHT OF WAY WHICH HAVE NOT BEEN REMOVED AND WILL NOT INTERFERE WITH CONSTRUCTION SHALL BE FILLED WITH A FREE FLOWING SAND AT THE DIRECTION OF THE ENGINEER. COST OF THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THIS CONTRACT.

THE CONTRACTOR WILL BE REQUIRED TO CONDUCT SOME OF HIS GRADING OPERATIONS AROUND TRANSMISSION POLES AND UNDER TRANSMISSION LINES. THE ADDED COST OF SO DOING SHALL BE CONSIDERED INCIDENTAL TO EARTH EXCAVATION.

THE COST OF REMOVAL OF EXISTING CONCRETE HEADWALLS, PIPE OR OTHER OBSTRUCTIONS WHICH INTERFERE WITH THE PROPOSED ROADWAY CONSTRUCTION AND WHICH ARE NOT TO BE REMOVED AS A SEPARATE PAY ITEM WILL BE CONSIDERED AS INCIDENTAL TO THE COST OF EARTH EXCAVATION.

THE REMOVAL OF BITUMINOUS SURFACING NOT ON A RIGID TYPE BASE REMOVED IN CONJUNCTION WITH THE BASE SHALL BE REMOVED AS EARTH EXCAVATION. THE REMOVAL OF BITUMINOUS SURFACING ON A RIGID TYPE BASE REMOVED IN CONJUNCTION WITH THE BASE, SHALL BE CONSIDERED INCIDENTAL TO PAVEMENT REMOVAL.

EXISTING OPEN WELL WALLS SHALL BE REMOVED TO A POINT ONE FOOT BELOW THE FINISHED ROADWAY OR BELOW THE SUB GRADE OR THE PROPOSED PAVEMENT AND THE WELL FILLED WITH FREE FLOWING SAND. WELL CASINGS SHALL BE CUT OFF AT COMPARABLE POINTS AND CAPPED. COST OF SUCH WORK SHALL BE CONSIDERED INCIDENTAL TO THIS CONTRACT.

THE COST OF REMOVING AND DISPOSING OF EXISTING DRAINAGE STRUCTURES, SHOWN ON THE PLANS TO BE REMOVED, SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

A QUANTITY OF 2,842 TONS OF SUBBASE, GRANULAR MATERIAL, TYPE A HAS BEEN INCLUDED IN THE SUMMARY OF QUANTITIES AND SUBBASE HAS BEEN SHOWN ON THE TYPICAL ROADWAY SECTIONS FOR C.H. 76. HOWEVER, IF IN THE OPINION OF THE ENGINEER, SUBGRADE MATERIAL IN CUT SECTIONS OR EMBANKMENT PLACED IN FILL SECTIONS MEETS THE REQUIREMENTS OF SUBBASE, GRANULAR MATERIAL, TYPE A; THE QUANTITY FOR SUBBASE, GRANULAR MATERIAL, TYPE A WILL BE REDUCED IN PART OR ELIMINATED COMPLETELY AND THE QUANTITY OF EARTH EXCAVATION WILL BE ADJUSTED ACCORDINGLY. NO ADDITIONAL COMPENSATION WILL BE ALLOWED THE CONTRACTOR FOR THIS CHANGE.

SHEET NO.	DESCRIPTION
1.	TITLE SHEET.
2.	ROADWAY TYPICAL SECTIONS.
3.	INDEX OF SHEETS & GENERAL NOTES FOR ROADWAY CONSTRUCTION.
4.	SUMMARY OF QUANTITIES.
5.	SCHEDULES OF ROADWAY QUANTITIES.
6.	PLAN & PROFILE, COUNTY HIGHWAY 76.
7.	PLAN & PROFILE, C. H. ROUTE 45 (BLUFF ROAD).
8.	SPECIAL DETAILS, TYPE S GUTTER, INTERSECTIONS & CHANNELIZATION TRANSITION.
9.	SPECIAL DETAILS, PAVED DITCH.

BRIDGE PLANS - C. H. 76 OVER ROCK RIVER

10.	GENERAL PLAN & ELEVATION.
11.	BORINGS, NAME PLATES, GENERAL NOTES & QUANTITIES.
12.	DECK REINFORCEMENT PLAN.
13.	DECK DETAILS.
14.	TOP OF SLAB ELEVATIONS.
15.	FRAMING PLAN.
16.	STEEL DETAILS.
17.	ALUMINUM HANDRAIL.
18.	WEST ABUTMENT.
19.	EAST ABUTMENT.
20.	PIER 1.
21.	PIER 2.
22.	PIER 3.
23.	PIER 4.
24.	SLOPE WALL DETAILS.
25.	ABUTMENT PILES.

BRIDGE PLANS - C. M. St. P. & P. R. R. OVER C. H. 76

26.	GENERAL PLAN & ELEVATION.
27.	BORINGS, PROFILES, DESIGN DATA & QUANTITIES.
28.	STEEL FRAMING PLAN.
29.	DECK CROSS SECTION & MISCELLANEOUS DETAILS.
30.	FLOOR PLATE DETAILS.
31.	BEARING DETAILS.
32.	PIERS 1 & 2.
33.	WEST & EAST ABUTMENTS.
34.	EXCAVATION & DRAINAGE.
35.	RUNAROUND - PLAN & PROFILE.
36.	RUNAROUND CROSS SECTION.
37.	RUNAROUND CROSS SECTION.
38.	RUNAROUND CROSS SECTION.

39 to 57.	CROSS SECTIONS, COUNTY HIGHWAY 76.
58 to 61.	CROSS SECTIONS, C. H. ROUTE 45 (BLUFF ROAD).
62.	STANDARDS 2130
63.	STANDARDS 1683-1, 1686-2 & 2176.
64.	STANDARDS 2115-1, 2122-1 & 2179.
65.	STANDARDS 2187-1, 2143-1, 1971-3, 1744-1.
66.	STANDARDS 2208-1, 1687-3.
67.	STANDARDS 2113-1, & 1766-3.
68.	STANDARDS 1976 & 1973.
69.	STANDARDS 2171 & 2114.
70.	STANDARDS 1909-6.

INDEX OF SHEETS
GENERAL NOTES FOR ROADWAY CONSTRUCTION

COUNTY HIGHWAY 76
SECTION 133-B-CF
WINNEBAGO COUNTY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CH 76	133-B-CF	WINNEBAGO	70	4
STA. TO STA.				
B. P. R. REG. NO. 4 ILLINOIS PROJECT				

CODE NO.	ITEM	LOCATION OF WORK CONSTRUCTION TYPE CODE	UNIT	TOTAL QUANTITY	HIGHWAY BRIDGE CH 76 STA. 65+47.50 X0	RAILROAD BRIDGE RR STA. 30+00 X631	ROAD CH 76 STA. 51+69 TO 83+21.90 7221	CODE NO.	ITEM	LOCATION OF WORK CONSTRUCTION TYPE CODE	UNIT	TOTAL QUANTITY	HIGHWAY BRIDGE CH 76 STA. 65+47.50 X031	RAILROAD BRIDGE RR STA. 30+00 X631	ROAD CH 76 STA. 51+69 TO 83+21.90 7221
010001	TREE REMOVAL (6 TO 15 INCH DIAMETER)		IN. DIA.	570			570	058206	PIPE CULVERTS, TYPE 1, 36"		LIN. FT.	36			36
010002	TREE REMOVAL (OVER 15 INCH DIAMETER)		IN. DIA.	54			54	059001	*REINFORCEMENT BARS		POUND	156,230	123,120	22,080	11,030
010005	TREE REMOVAL, ACRES		ACRES	3.6			3.6	060004	FURNISHING CREOSOTED PILES UP TO 20 FEET		LIN. FT.	96	96		
011001	EARTH EXCAVATION		CU. YD.	147,110			147,110	060008	DRIVING TIMBER PILES		LIN. FT.	96	96		
019001	POROUS GRANULAR EMBANKMENT		CU. YD.	110		110		060043	DRIVING CONCRETE PILES		LIN. FT.	270	270		
024001	SUB-BASE GRANULAR MATERIAL, TYPE A		TON	2,842			2,842	060044	FURNISHING CONCRETE PILE.		LIN. FT.	270	270		
026003	GRAVEL OR CRUSHED STONE SHOULDERS, TYPE B		TON	380			380	060047	TEST PILE CONCRETE		EACH	2	2		
029001	GRAVEL OR CRUSHED STONE BASE COURSE, TYPE A		TON	4,815			4,815	061001	NAME PLATES		EACH	2	1		
036001	GRAVEL OR CRUSHED STONE SURFACE COURSE, TYPE A		TON	170			170	063025	BITUMINOUS COATED CORRUGATED METAL PIPE, 8"		LIN. FT.	80		80	
044001	BITUMINOUS MATERIALS (PRIME COAT)		GAL.	2,787			2,787	063061	PERFORATED CORRUGATED METAL PIPE, BITUMINOUS COATED, 8"		LIN. FT.	52		52	
044002	COVER COAT MIXTURE, COMPLETE		TON	756			756	064008	CORRUGATED METAL PIPE ARCHES, SPAN 65, RISE 40		LIN. FT.	24			24
048008	PORTLAND CEMENT CONCRETE PAVEMENT, 10"		SQ. YD.	7,303			7,303	089009	P.C.C. MEDIAN SURFACE, 4 INCH		SQ. YD.	70			70
048011	PORTLAND CEMENT CONCRETE PAVEMENT, 16-1/2 - 10-1/2 - 16-1/2		SQ. YD.	186			186	080104	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-9.06		LIN. FT.	250			250
048019	PAVEMENT FABRIC		SQ. YD.	7,303			7,303	081054	P.C. CONCRETE MEDIAN, TYPE C-4 MODIFIED		LIN. FT.	188			188
050001	CLASS A EXCAVATION FOR STRUCTURES		CU. YD.	744	139	605		082001	PAVEMENT REMOVAL		SQ. YD.	397			397
050002	CLASS B EXCAVATION FOR STRUCTURES		CU. YD.	569	569			083002	SLOPE WALL, 4 INCH		SQ. YD.	200		200	
051006	DECK DRAINS		LIN. FT.	252		252		083003	SLOPE WALL, 6 INCH		SQ. YD.	756	756		
052002	CLASS A CONCRETE		CU. YD.	350.3	350.3			091002	PAVED DITCH, 3 FEET		LIN. FT.	3,400	72		3,328
052003	CLASS X CONCRETE		CU. YD.	922.1	548	361	13.1	094001	STEEL PLATE BEAM GUARD RAIL		LIN. FT.	2,100			2,100
052016	CLASS X CONCRETE, HEADWALLS		CU. YD.	7.0			7.0	100001	PIPE HANDRAIL		LIN. FT.	281		281	
052021	PROTECTIVE COAT		SQ. YD.	9,364	1,875		7,489	104001	FURNISHING AND ERECTING RIGHT OF WAY MARKERS		EACH	26			26
053001	MEMBRANE WATERPROOFING		SQ. FT.	1,820		1,820		110004	COMPLETE SEEDING		ACRE	10.2			10.2
054001	FURNISHING AND ERECTING STRUCTURAL STEEL		POUND	732,440	488,880	243,560		110005	FERTILIZER NUTRIENTS		TON	0.9			0.9
058034	PIPE CULVERTS, TYPE 2A, 36"		LIN. FT.	140			140	J11002	STRAW FOR ASPHALT COATED MULCH		TON	21			21
058199	PIPE CULVERTS, TYPE 1, 15"		LIN. FT.	32			32	111003	EMULSIFIED ASPHALT		GAL.	2,100			2,100
058202	PIPE CULVERTS, TYPE 1, 24"		LIN. FT.	34			34	Z00004	ALUMINUM HANDRAIL		LIN. FT.	834	834		
								Z00195	RAILROAD EMBLEMS		EACH	2		2	
								Z01065	RAILROAD PROTECTIVE SERVICES		LUMP SUM	1		1	
								Z01023	BRIDGE SEAT SEALANT		LUMP SUM	1 *			
								Z	JUTE MATTING		SQ. YD.	5,809			5,809
								Z	BITUMINOUS CURB		LIN. FT.	439			439
								Z	CONCRETE GUTTER, TYPE S		LIN. FT.	1,170			1,170
								Z	TOPSOIL EXCAVATION		CU. YD.	8,371			8,371
								Z	TOPSOIL PLACEMENT		CU. YD.	8,371			8,371
								Z	TEMPORARY PIPE CULVERT		L. SUM	1			1

* TO BE PROVIDED AT BOTH
THE RAILROAD AND HIGHWAY
BRIDGES.

SUMMARY OF QUANTITIES
COUNTY HIGHWAY 76
SECTION 133-B-CF
WINNEBAGO COUNTY

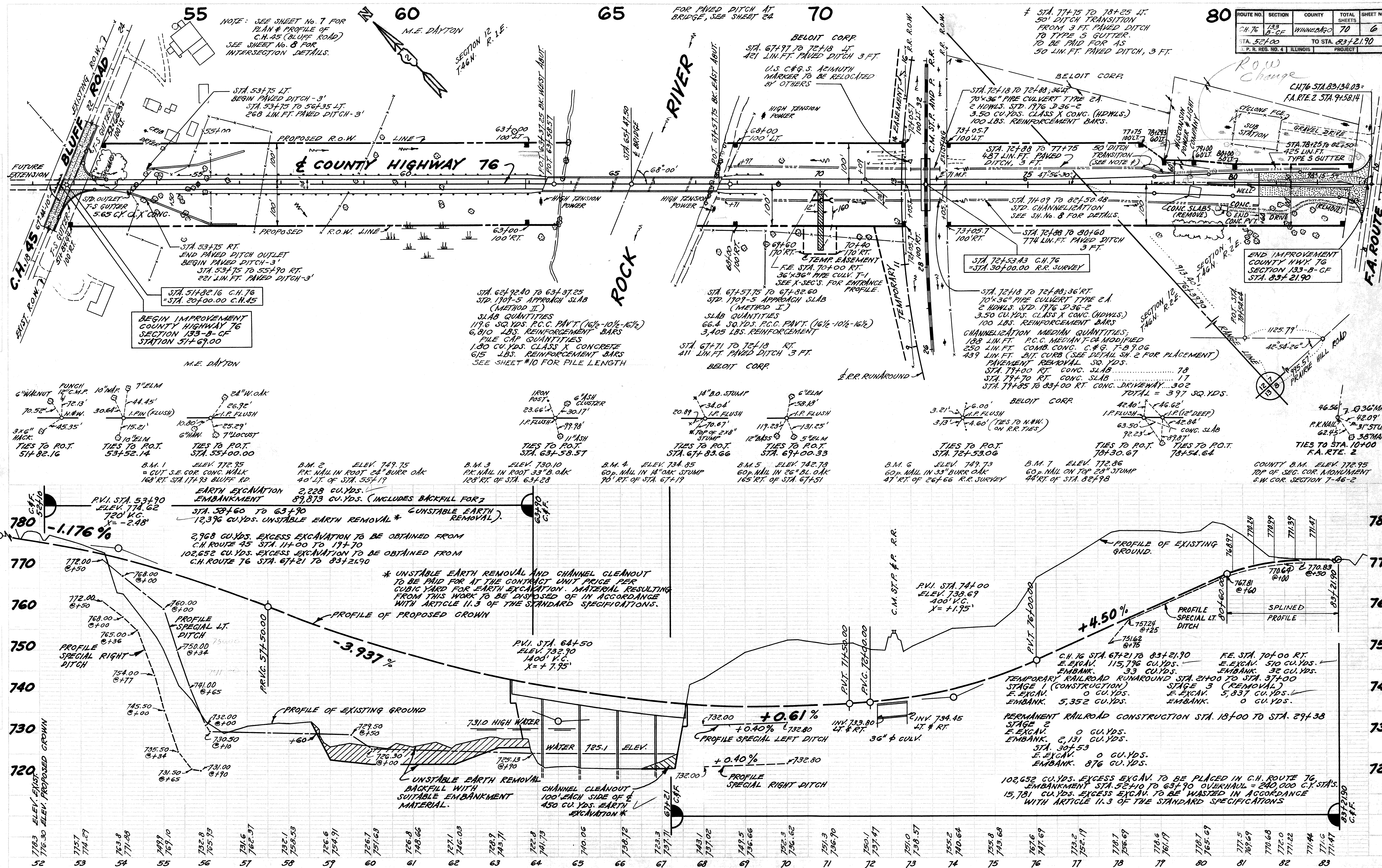
BASE AND SURFACE COURSES									JUTE MATTING						TREE REMOVAL (INCH DIAMETER)					
ROADWAY	STATION TO STATION		LENGTH	WIDTH	GRAVEL OR CRUSHED STONE SURFACE COURSE TYPE "A" TONS (0.057 T/S.Y./IN.)	GRAVEL OR CRUSHED STONE BASE CRSE, TYPE "A" TONS (0.057 T/S.Y./IN.)	BITUMINOUS MATERIALS PRIME COAT GAL.S. (0.375 GAL/S.Y.)	COVER COAT MIXTURE COMPLETE TONS (112#/S.Y./IN.)	ROADWAY	STA. TO STA.		LENGTH FEET	WIDTH FEET	SQUARE YARDS	REMARKS	STATION C.H. 76	LOCATION	INCH DIAMETER		
			FEET	FEET															6" TO 15"	OVER 15"
C.H. 76	70+00	F.E.	148	12	61 (6")	6 (6")	7	1.8 (2")	"	53+75	55+90	221	2 @ 4'	191	RT. DITCH	55+74	12' LT.	2 @ 10" = 20"	—	
C.H. 76 MEDIAN	79+36	80+60	124	VARIES	—	—	—	—	"	53+75	56+35	268	2 @ 4'	231	LT. DITCH	58+56	55' RT.	2 @ 12" = 24"	—	
C.H. 76 MEDIAN	80+60	82+72	212	VARIES	46 (4")	—	—	—	"	67+61	67+97	36	2 @ 4'	32	LT. DITCH	58+80	10' LT.	3 @ 7" = 21"	—	
C.H. 76	80+60	83+21.9	262	VARIES	—	1159 (12")	651	181.3 (2")	"	67+97	72+18	421	1 @ 12'	561	LT. DITCH	59+30	70' LT.	6"	—	
BLUFF ROAD	11+00	12+50	150	VARIES	—	11 (8")*	9	2.9 (2")	"	67+35	67+71	36	2 @ 4'	32	RT. DITCH	59+78	1' LT.	3 @ 9" = 27"	—	
"	12+50	30+80.04	180.4 *	24' SURFACE BASE	—	3474 (12")	1954	539.2 (2")	"	67+71	69+82	211	1 @ 12'	281	RT. DITCH	60+77	67' LT.	4 @ 14" = 56"	—	
"	30+80.04	32+30.04	180	VARIES	—	11 (8")*	9	2.9 (2")	"	70+18	72+18	200	1 @ 12'	267	RT. DITCH	60+87	44' RT.	2 @ 12" = 24"	—	
"	17+80 RT.	P.E.	25	22	12 (6")	8 (6")	66	2.8 (2")	C.H. 76	72+88	78+25	537	2 @ 4'	477	LT. DITCH	60+89	6' RT.	4 @ 10" = 40"	—	
"	20+00 RT.	RADII RETURNS	75	VARIES	—	128 (12")	70	19.5 (2")	"	72+88	80+60	774	2 @ 4'	688	RT. DITCH	61+60	65' RT.	7 @ 10" = 70"	—	
"	22+23 RT.	P.E.	25	12	7 (6")	6 (6")	7	1.8 (2")	BLUFF RD.	21+00	29+00	768	2 @ 4'	689	LT. DITCH	63+80	99' RT.	7"	—	
BLUFF ROAD	23+45 RT. LT.	P.E.(RT) F.E.(LT)	28 RT-35 LT.	12	18 (6")	12 (6")	14	3.6 (2")	C.H. 76	54+50	63+37.25	887.25	2 @ 12'	2,366	SHLDR. EROSION CONTROL	63+81	97' RT.	11"	—	
"	17+30	MAIL BOX T.O.	70	8	13 (6")	—	—	—								63+82	95' RT.	12"	—	
BLUFF ROAD	21+70	MAIL BOX T.O.	70	8	13 (6")	—	—	—								63+80	15' LT.	2 @ 15" = 30"	—	
TOTALS					170	4,315	2,787	755.8	TOTAL 5,809								63+86	60' LT.	9"	—
*DEDUCT 26' FOR C.H. 76 P.C.C. PVT.						*STD 2143+ TAPER										67+25	45' RT.	12"	—	
																67+30	30' RT.	2 @ 10" = 20"	—	
																67+35	17' RT.	—	18"	

P. C. C. PAVEMENT, 10"						SUB BASE GRANULAR MATERIAL TYPE A 6" COMPACTED THICKNESS			
ROADWAY	STATION TO STATION		LENGTH FEET	WIDTH FEET	SQ. YDS. 10"	SQ. YDS. 16 1/2-10 1/2-16 1/2	WIDTH FEET	SQ. YDS. 6"	TONS (0.057 T/SQ. YD./IN.)
C.H. 76	51+69.00	62+92.40	1,123.40	24	2996		27	3,370	1152.5
	62+92.40	63+37.25	44.85	24		119.6	27	135	46.0
	67+57.75	67+82.60	24.85	24		66.4	27	75	25.5
	67+82.60	71+09.00	326.40	VARIES	870		VARIES	979	335.0
	71+09.00	80+60.00	951.00	VARIES	3,437		VARIES	3,751	1283.0
TOTALS					7,303	186	TOTAL 2,842		

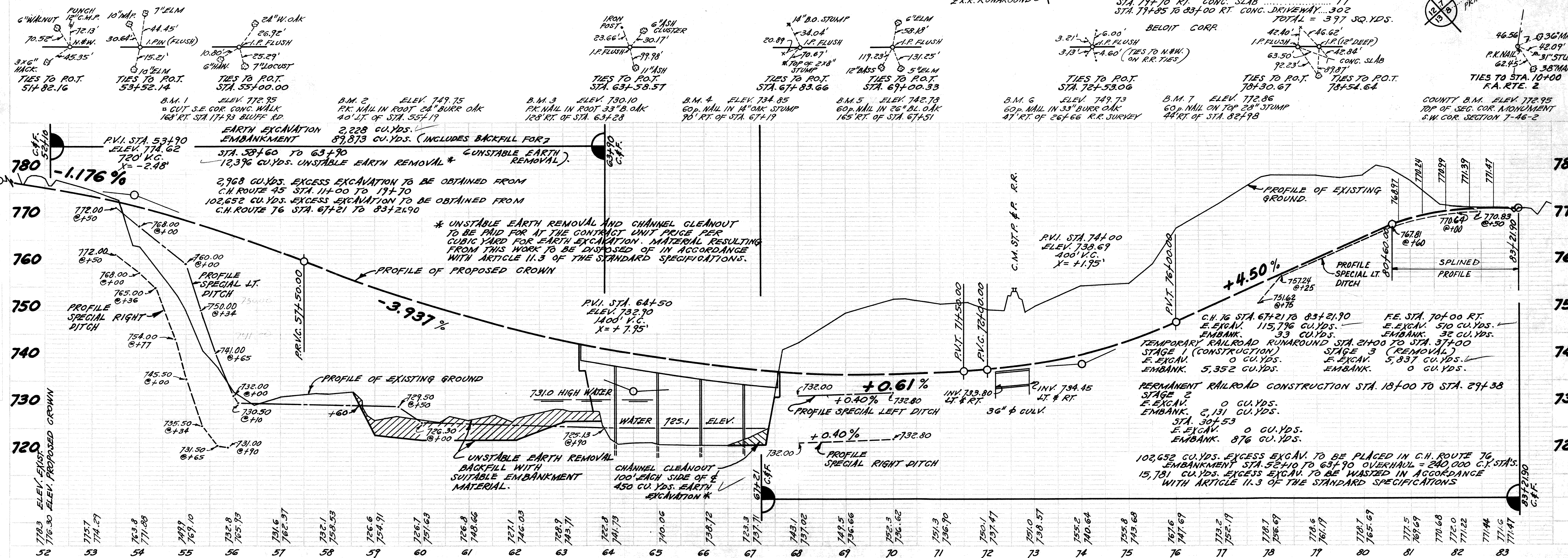
GRAVEL OR CRUSHED STONE SHOULDERS TYPE B						TREE REMOVAL (ACRES)	
ROADWAY	SIDE	STATION TO STATION		LENGTH FEET	WIDTH FEET	TONS @ 4.5 T/STA.	
C.H. 76	LT.	53+33	63+45	1012	1 @ 3'	45.5	C.H. 7 STA. 52+30 TO 55+35 1.4 ACRES
"	LT.	67+65	83+60	1595	1 @ 3'	71.8	C.H. 7 STA. 78+40 TO 83+21.9 2.2 ACRES
"	RT.	53+33	63+30	997	1 @ 3'	44.8	TOTAL = 3.6 ACRES
C.H. 76	RT.	67+50	83+20	1570	1 @ 3'	70.7	
BLUFF ROAD	LT.	11+00	30+80	1980	1 @ 3'	89.2	
"	RT.	12+50	16+00	350	1 @ 3'	15.8	
BLUFF ROAD	RT.	22+85	32+30	945	1 @ 3'	42.6	
TOTAL						380.4	

STEEL PLATE BEAM GUARD RAIL						
ROADWAY	SIDE	STATION TO STATION		LIN. FT.		
C.H. 76	LT. & RT.	51+60	—	50		
"	LT.	54+50	63+37.5	887.5		
"	LT.	67+60	68+60	100		
"	RT.	54+50	63+25	875		
"	RT.	67+50	68+50	100		
C.H. 76	LT. & RT.	83+44	—	87.5		
TOTAL				2,100		
IN ADDITION TO SCHEDULED ITEMS OF WORK AND ITEMS SHOWN ON THE PLAN AND PROFILE SHEETS, THE FOLLOWING ITEMS SHALL BE PROVIDED FOR THE CONSTRUCTION OF C.H. ROUTE 76 AND C.H. 45 (BLUFF ROAD)						
7,303	SQ. YDS.	PAVEMENT FABRIC				
9,364	SQ. YDS.	PROTECTIVE COAT				
26	EACH	FURNISHING AND ERECTING RIGHT OF WAY MARKERS				
10.2	ACRES	COMPLETE SEEDING				
0.9	TONS	FERTILIZER NUTRIENTS				
21	TONS	STRAW FOR ASPHALT COATED MULCH				
2,100	GALS.	EMULSIFIED ASPHALT				

SCHEDULES
ROADWAY QUANTITIES
COUNTY HIGHWAY 76
SECTION 133-B-CF
WINNEBAGO COUNTY

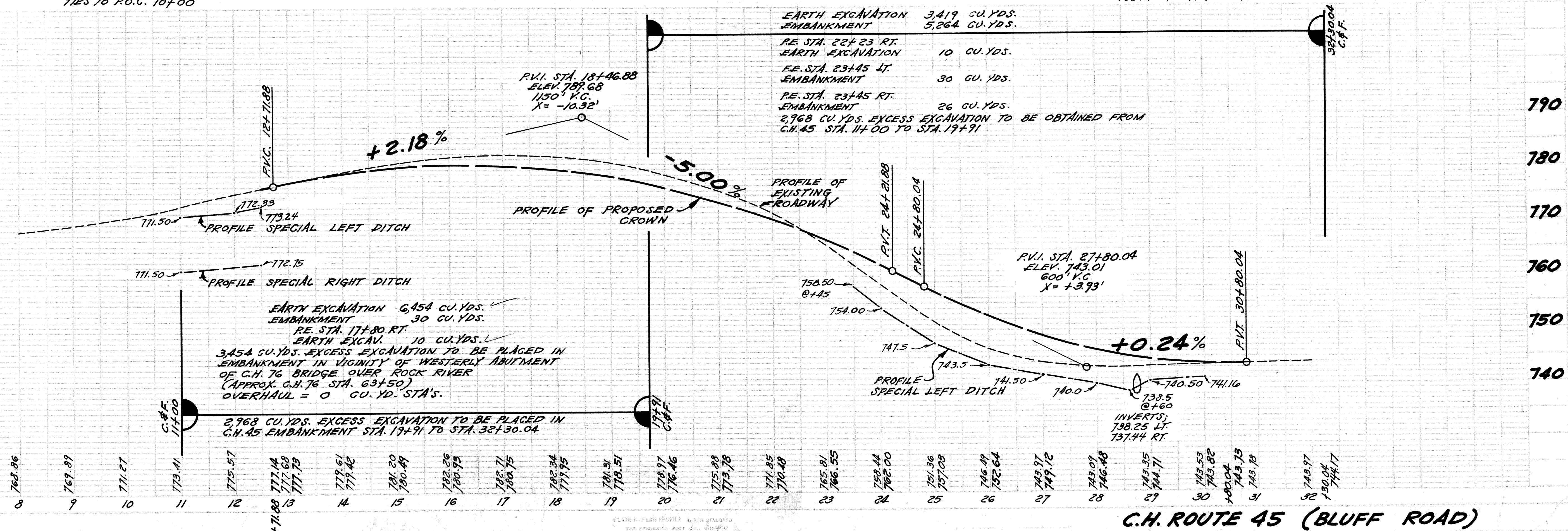
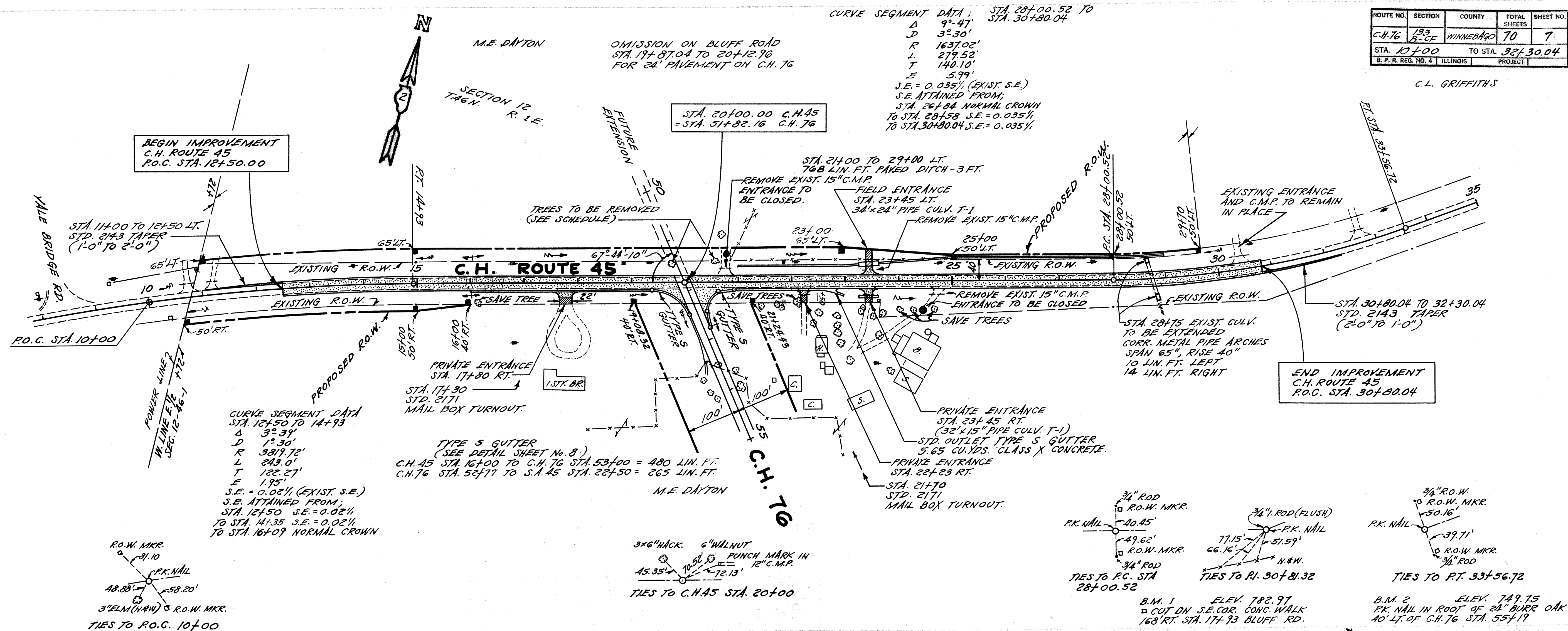


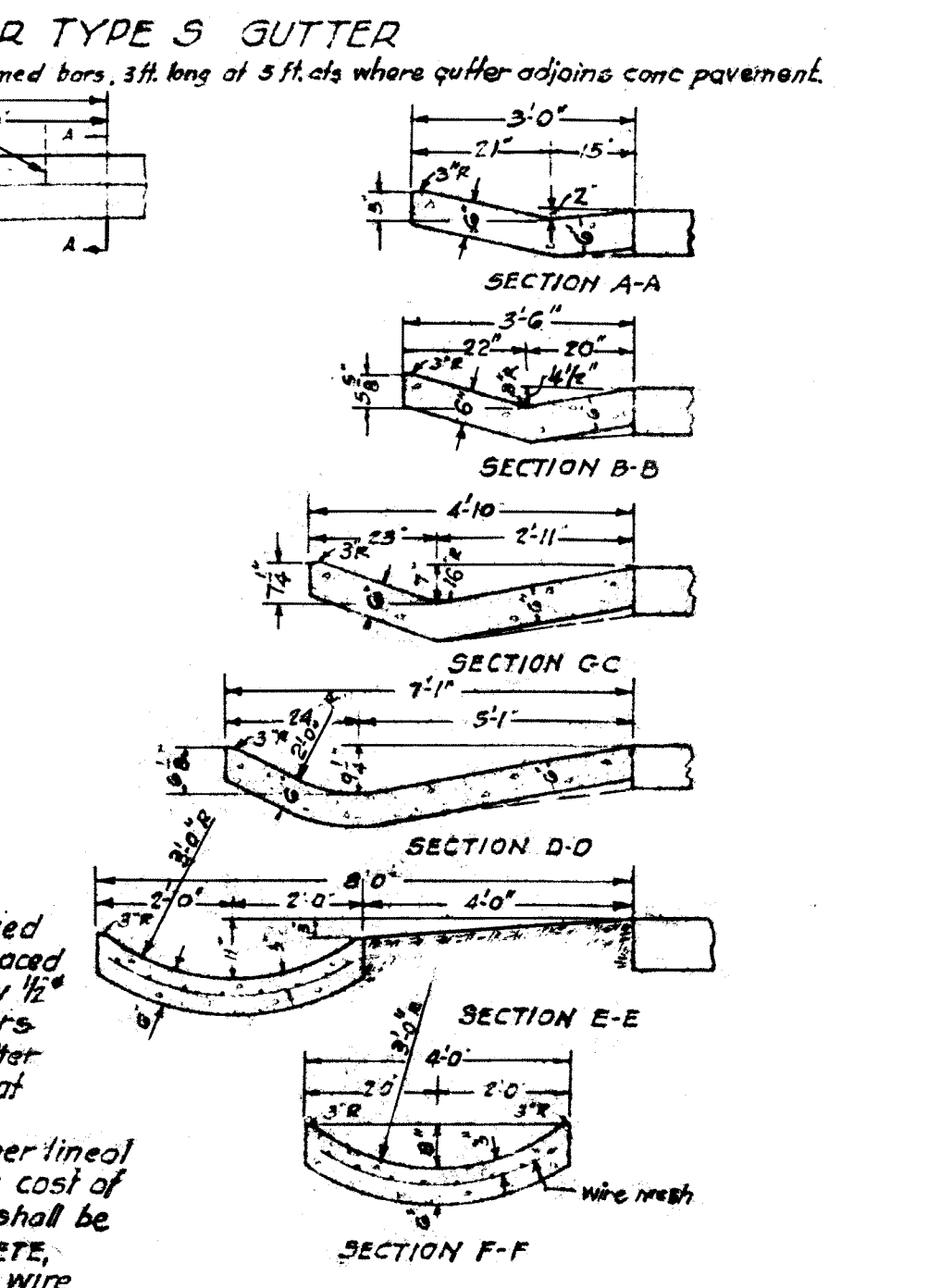
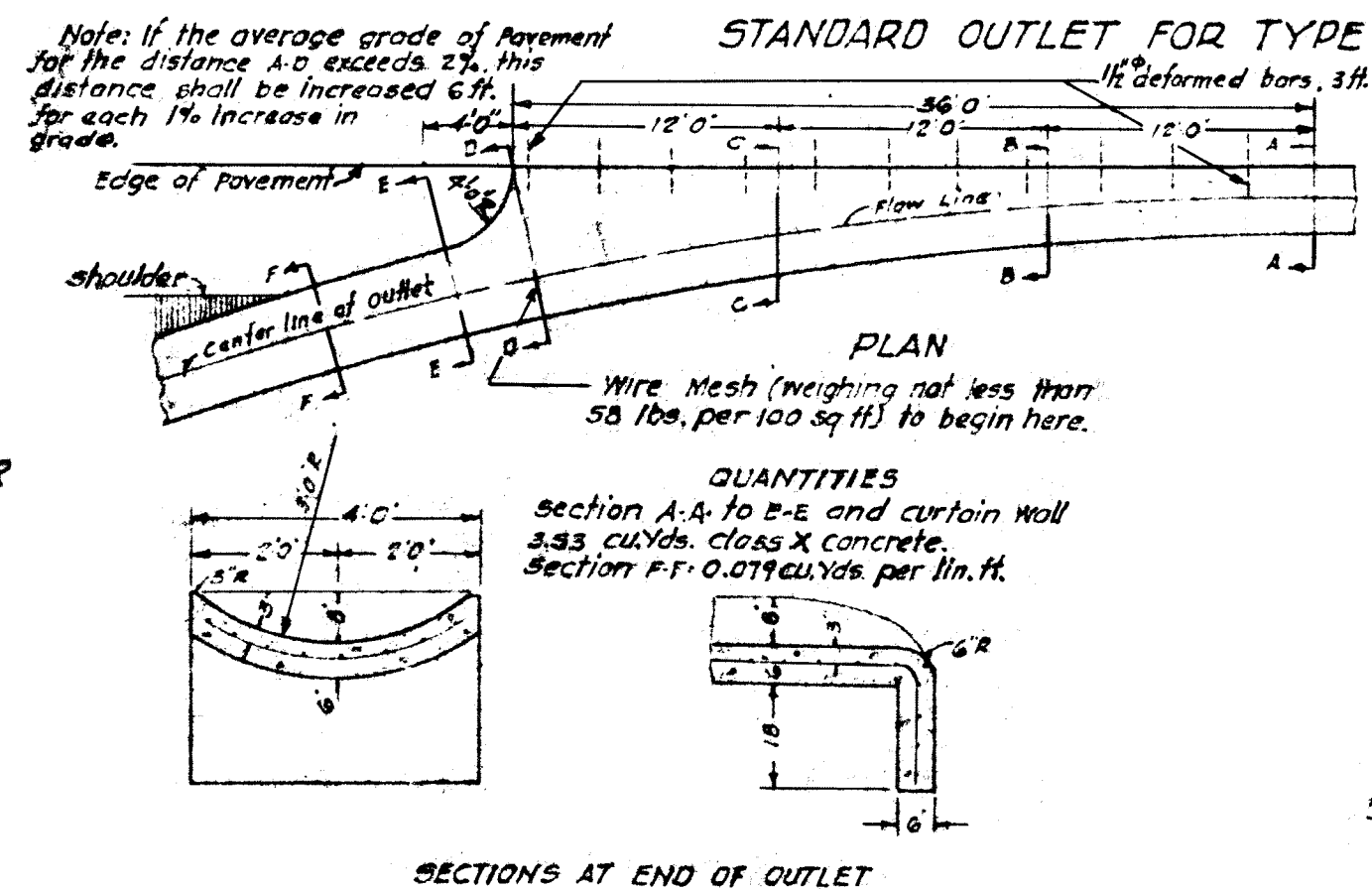
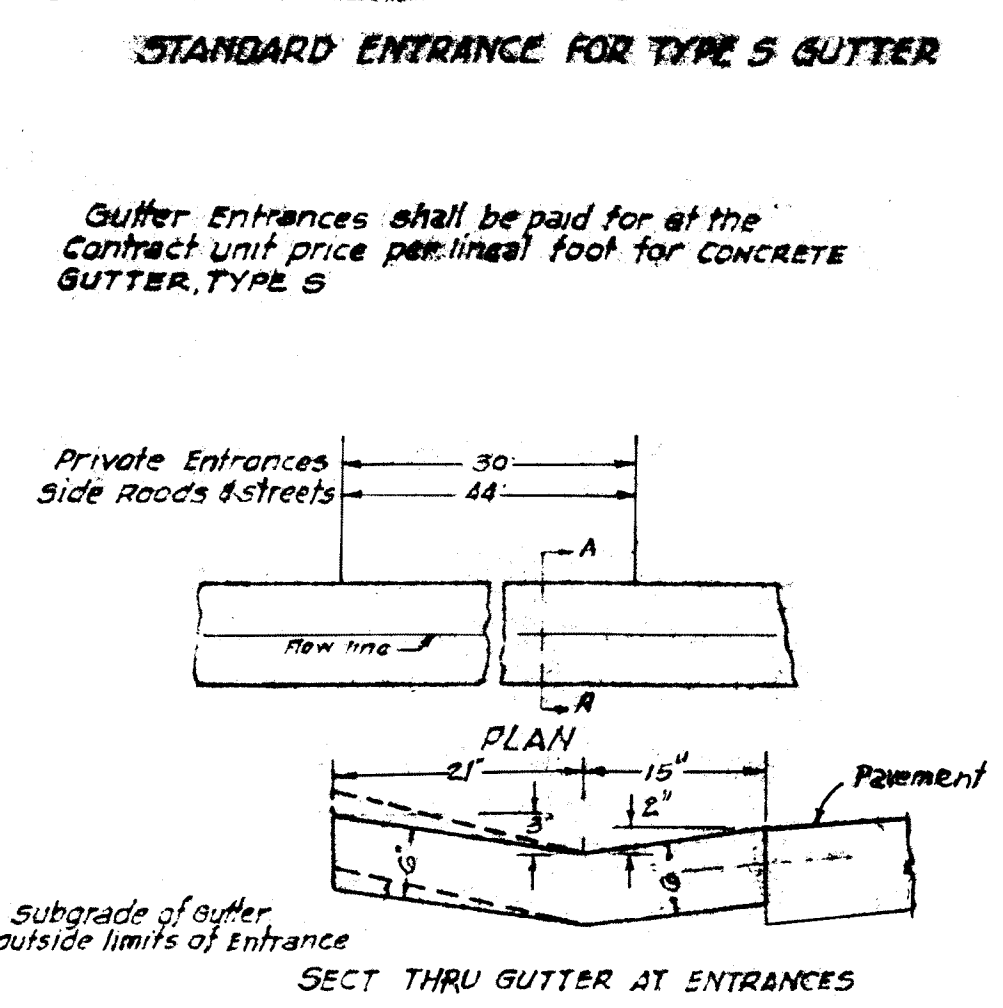
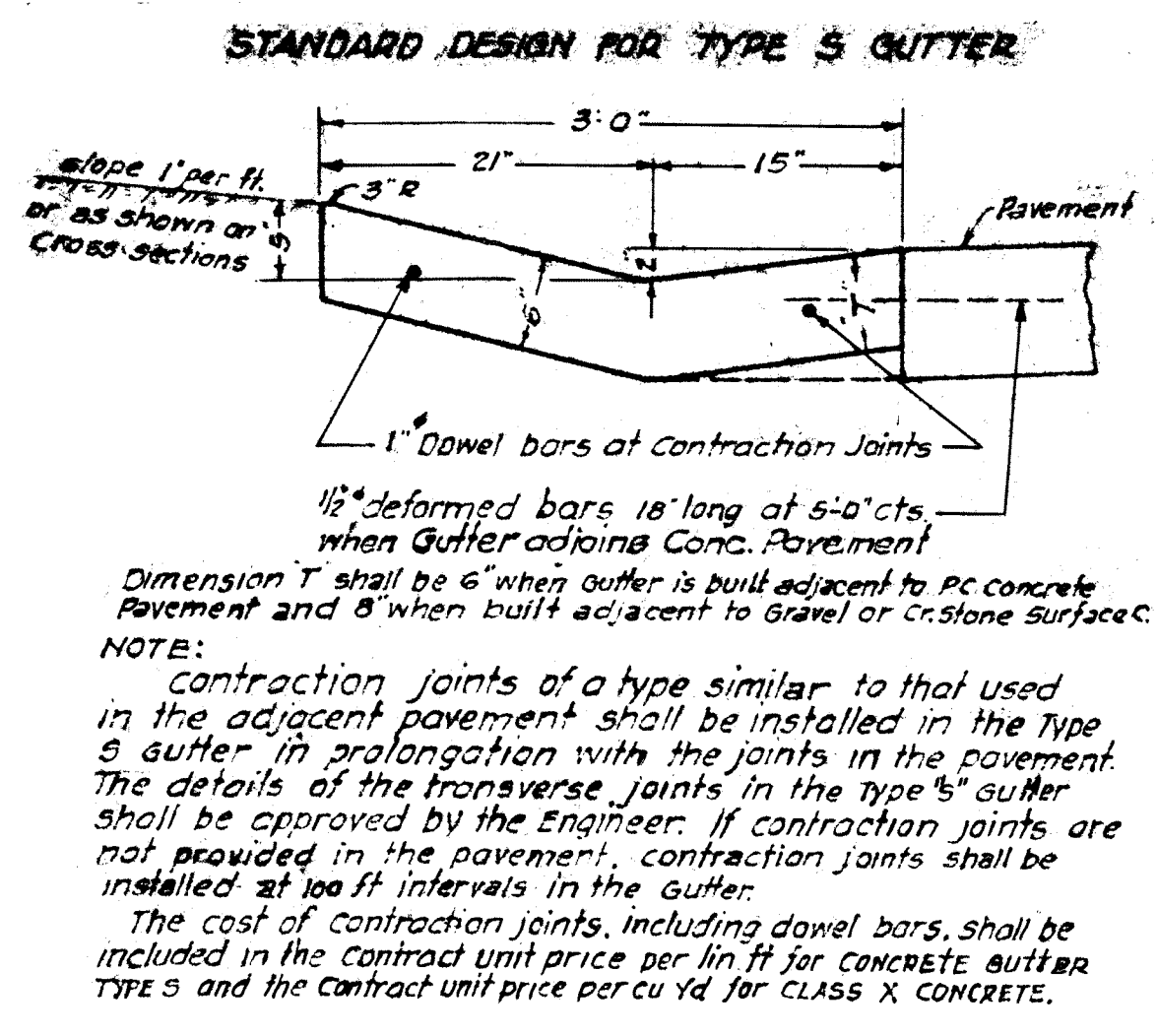
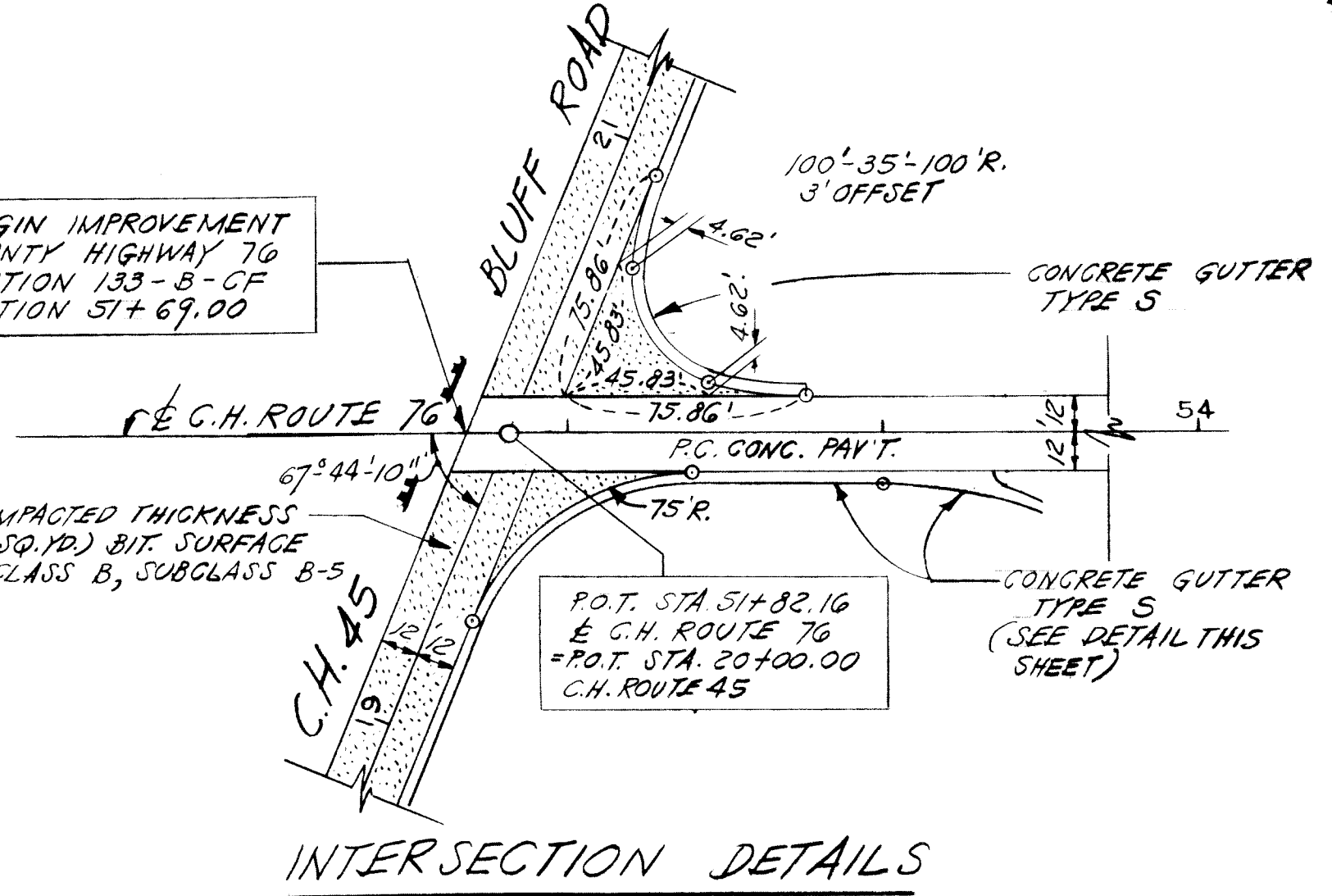
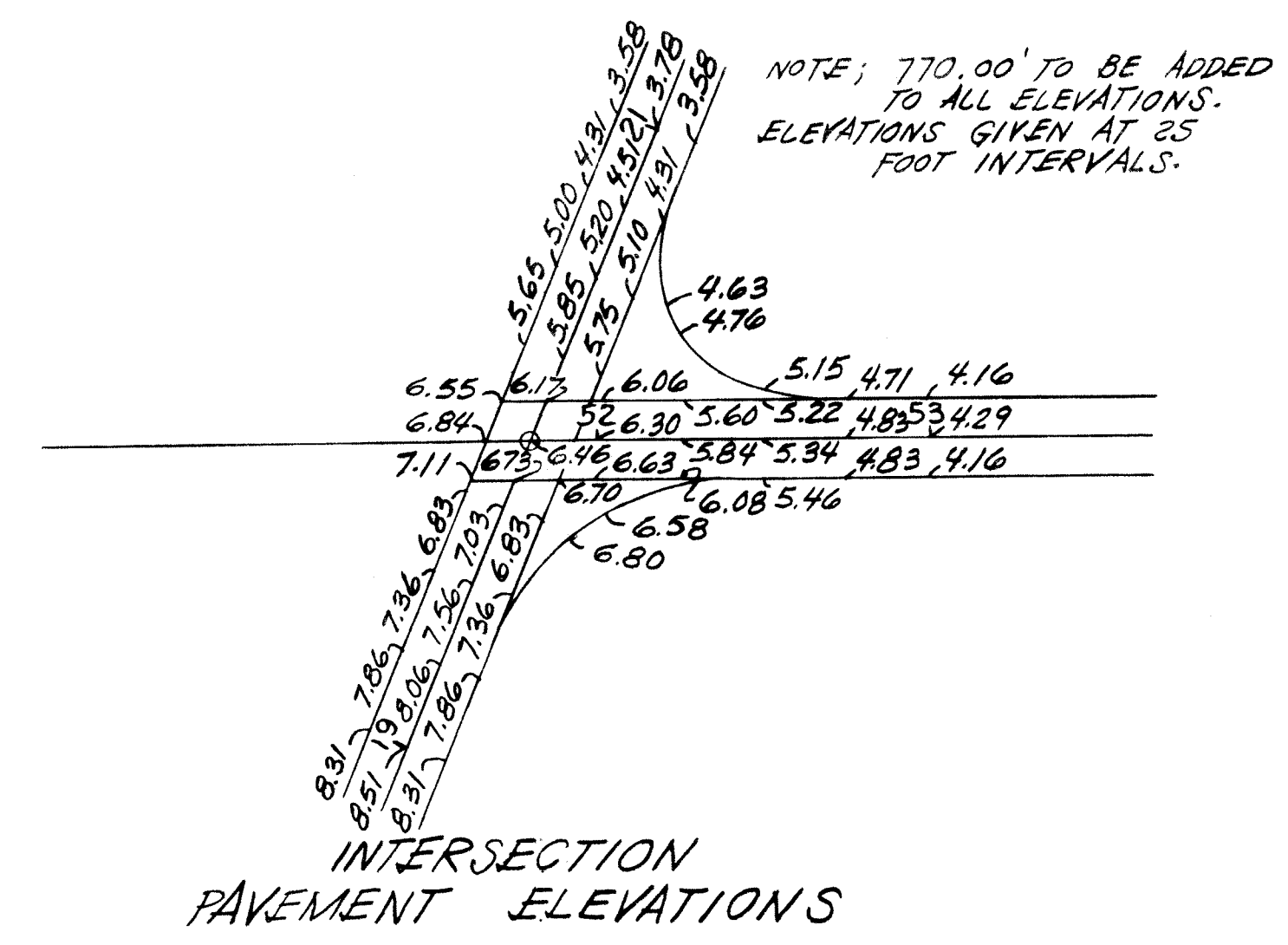
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CH. 76	133 B-CF	WINNEBAGO	70	6
STA. 52+00		TO STA. 83+21.90		
S. P. R. REG. NO. 4		ILLINOIS	PROJECT	



C.H. ROUTE 76

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 76	133 B-CF	WINNEBAGO	70	7
STA. 10+00		TO STA. 32+30.04		
B. P. R. REG. NO. 4	ILLINOIS	PROJECT		





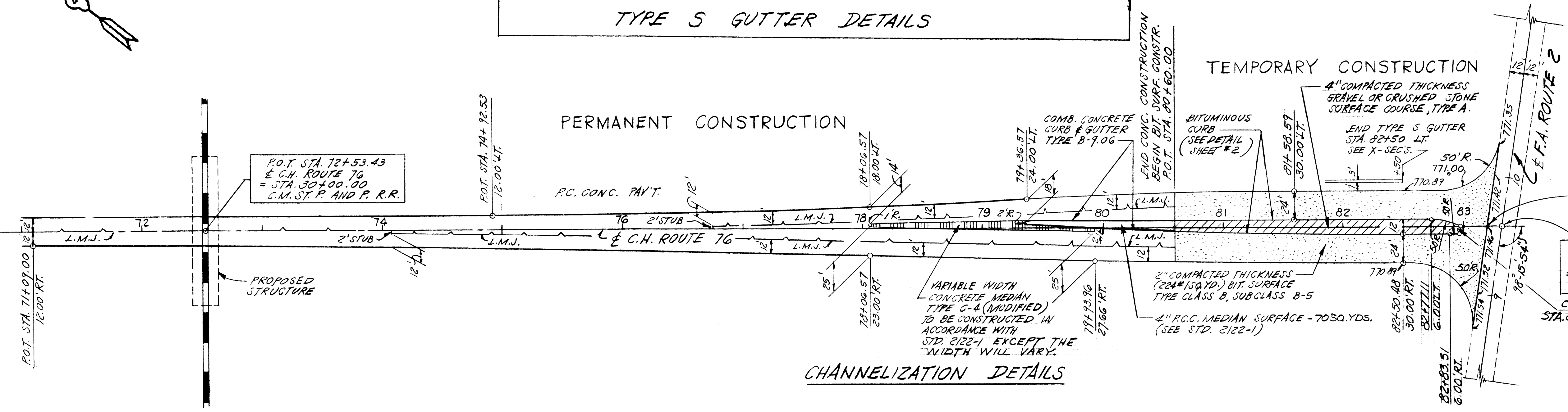
NOTES

Class X Concrete shall be used throughout. Gutter shall be tied to the pavement slab by 1/2" deformed bars 18 inches long and spaced 5 feet centers. Gutter outlet shall be tied to the pavement slab by 1/2" deformed bars 3 feet long and spaced 5 feet centers. These bars shall be billet steel, structural grade or intermediate grade. Gutter outlet shall be reinforced with wire mesh having a weight of at least 58 pounds per 100 square feet.

The gutter shall be paid for at the contract unit price per lineal foot for concrete gutter type S, which price shall include the cost of reinforcement bars. The gutter outlet shall be paid for at the contract unit price per cu yd. for CLX concrete, which price shall include the cost of the tie bars and the wire mesh reinforcement.

1/2" tie bars are not required where gutter adjoins Gravel or Cr. Stone Surface Course.

TYPE S GUTTER DETAILS



STANDARD CHANNELIZATION 24-24-12 (60)

TABLE OF STATION OFFSETS AND ELEVATIONS

C.H. 76 STATIONS	PAVEMENT	OFFSET TO LEFT EDGE	MEDIAN	ISLAND	OFFSET TO RIGHT EDGE	ISLAND	MEDIAN	PAVEMENT
71+09	12.00							12.00
71+34	12.00							12.01
71+59	12.00							12.06
71+84	12.00							12.13
72+09	12.00							12.23
72+34	12.00							12.35
72+59	12.00							12.51
72+84	12.00							12.69
73+09	12.00							12.90
73+34	12.00							13.14
73+59	12.00							13.41
73+84	12.00							13.71
74+09	12.00							14.03
74+34	12.00							14.39
74+59	12.00							14.77
74+84	12.00							15.18
74+92.53	12.00							15.32
75+09	12.02							15.62
75+34	12.10							16.08
75+59	12.27							16.58
75+84	12.51							17.10
76+09	12.83							17.65
76+34	13.22							18.23
76+59	13.69							18.84
76+84	14.23							19.47
77+09	14.85							20.14
77+34	15.55							20.83
77+59	16.32							21.55
77+84	17.17							22.30
78+06.57	18.00	4.00			-2.00			23.00
78+09	18.09	4.07			-1.92			23.08
78+34	19.09	4.76			-1.16			23.84
78+59	20.17	5.29			-0.44			24.56
78+84	21.33	5.67			0.23			25.23
79+09	22.56	5.91			0.86			25.86
79+34	23.86	6.00			1.44			26.44
79+36.57	24.00	6.00	6.00	-2.00	1.50			26.50
79+59	25.15	6.00	6.00	-0.90	1.98			26.98
79+84	26.29	6.00	6.00	0.24	2.48			27.48
79+93.96	26.70	6.00	6.00	0.66	2.66			27.66
80+09	27.28	6.00	6.00	1.27				27.93
80+34	28.11	6.00	6.00	2.20				28.34
80+59	28.79	6.00	6.00	3.02				28.70
80+84	29.32	6.00	6.00	3.75				29.02
81+09	29.70	6.00	6.00	4.38				29.29
81+34	29.93	6.00	6.00	4.90				29.52
81+58.59	30.00	6.00	6.00	5.31				29.70
81+59	30.00	6.00	6.00	5.32				29.70
81+84	30.00	6.00	6.00	5.64				29.84
82+09	30.00	6.00	6.00	5.86				29.94
82+34	30.00	6.00	6.00	5.98				29.99
82+50.48	30.00	6.00	6.00	6.00				30.00

END IMPROVEMENT COUNTY HIGHWAY 76 SECTION 133-B-CF STATION 83+21.90

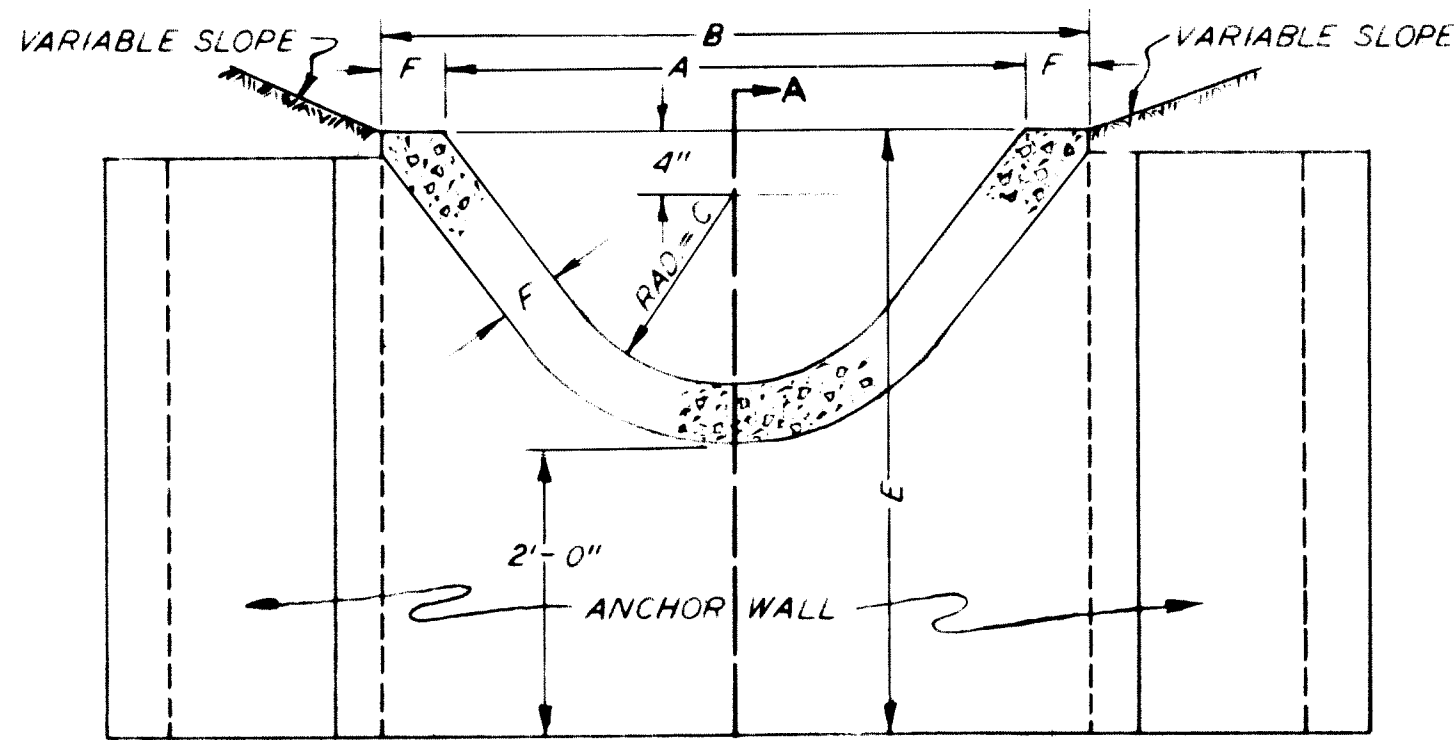
P.O.T. STA. 83+34.03 & C.H. ROUTE 76 = P.O.T. STA. 9+58.14 & F.A. ROUTE 2

CENTER 2' RADIUS STA. 82+99.00 - 1.43' RT.

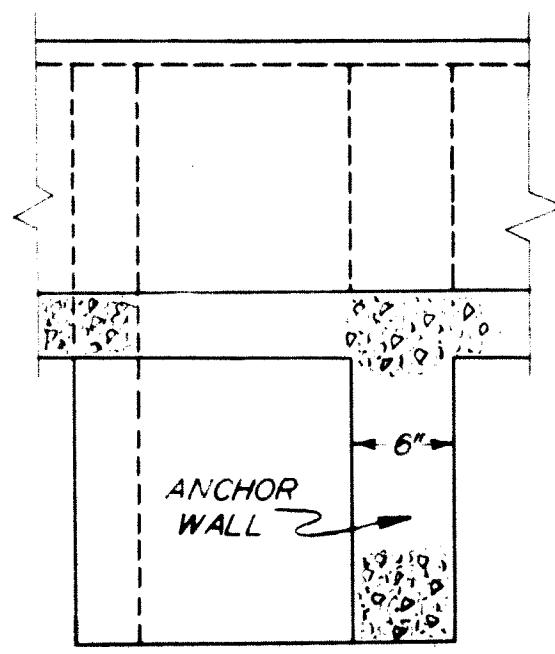
SPECIAL DETAILS
TYPE S GUTTER
INTERSECTIONS
CHANNELIZATION
COUNTY HIGHWAY 76
SECTION 133-B-CF
WINNEBAGO COUNTY
SCALE 1" = 50'

PAVED DITCH
DETAILS

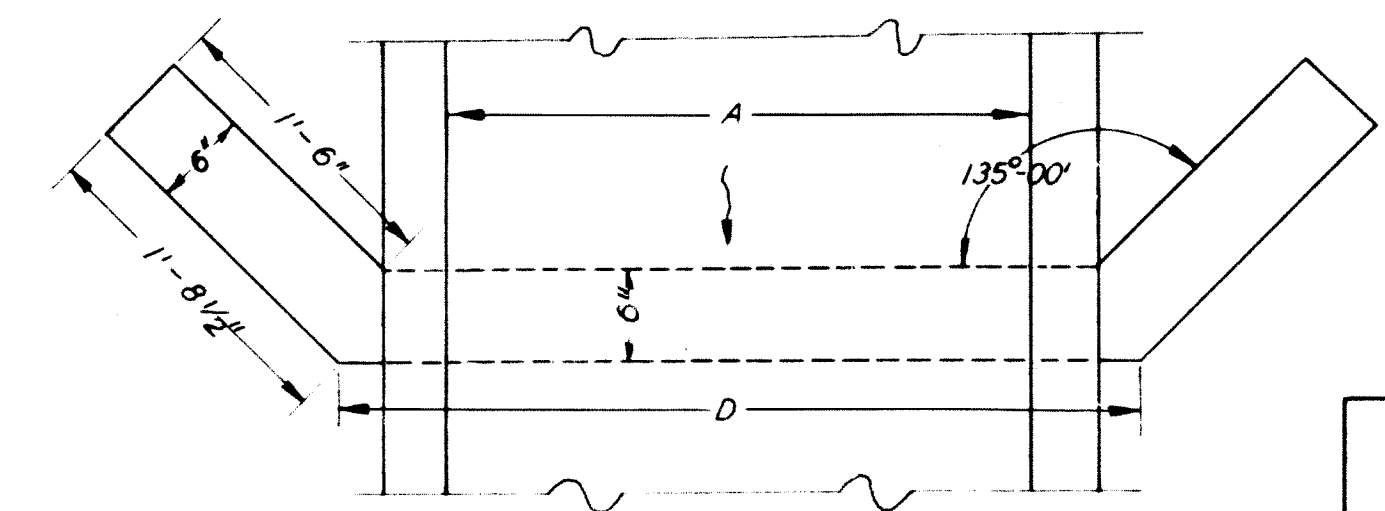
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 76	133-B-CF	WINNEBAGO	70	9
STA.	TO STA.			
B. P. R. REG. NO. 4	ILLINOIS PROJECT			



DOWNSTREAM ELEVATION



SEC. A-A



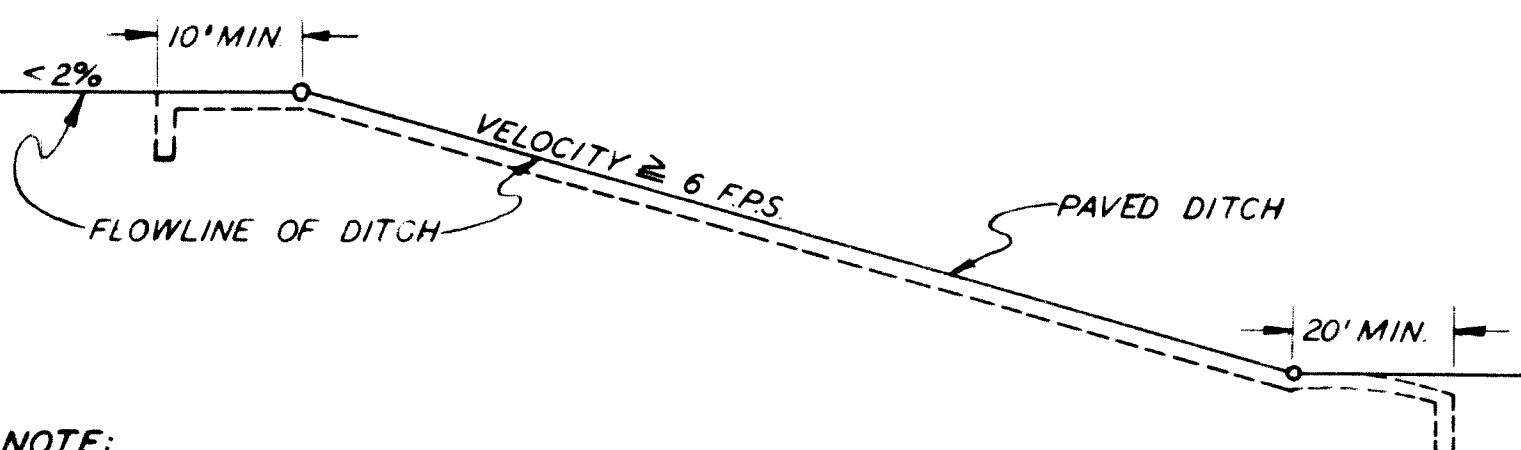
PLAN

NOTE:
CLASS X CONCRETE SHALL BE USED THROUGHOUT. ANCHOR WALLS SHALL BE PROVIDED AT CENTER OF EACH 50 FOOT UNIT AND AT UPPER END OF PAVED DITCH. ANCHOR WALLS SHALL BE CONSTRUCTED MONOLITHICALLY WITH THE DITCH. ONE-HALF INCH PREMOULDED JOINT FILLER SHALL BE INSTALLED AT END OF EACH 50 FOOT UNIT AND AT JUNCTION OF PAVED DITCH WITH ANY OTHER STRUCTURE.
COST OF ANCHOR WALLS AND JOINT FILLER SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE PER LINEAL FOOT FOR PAVED DITCHES.

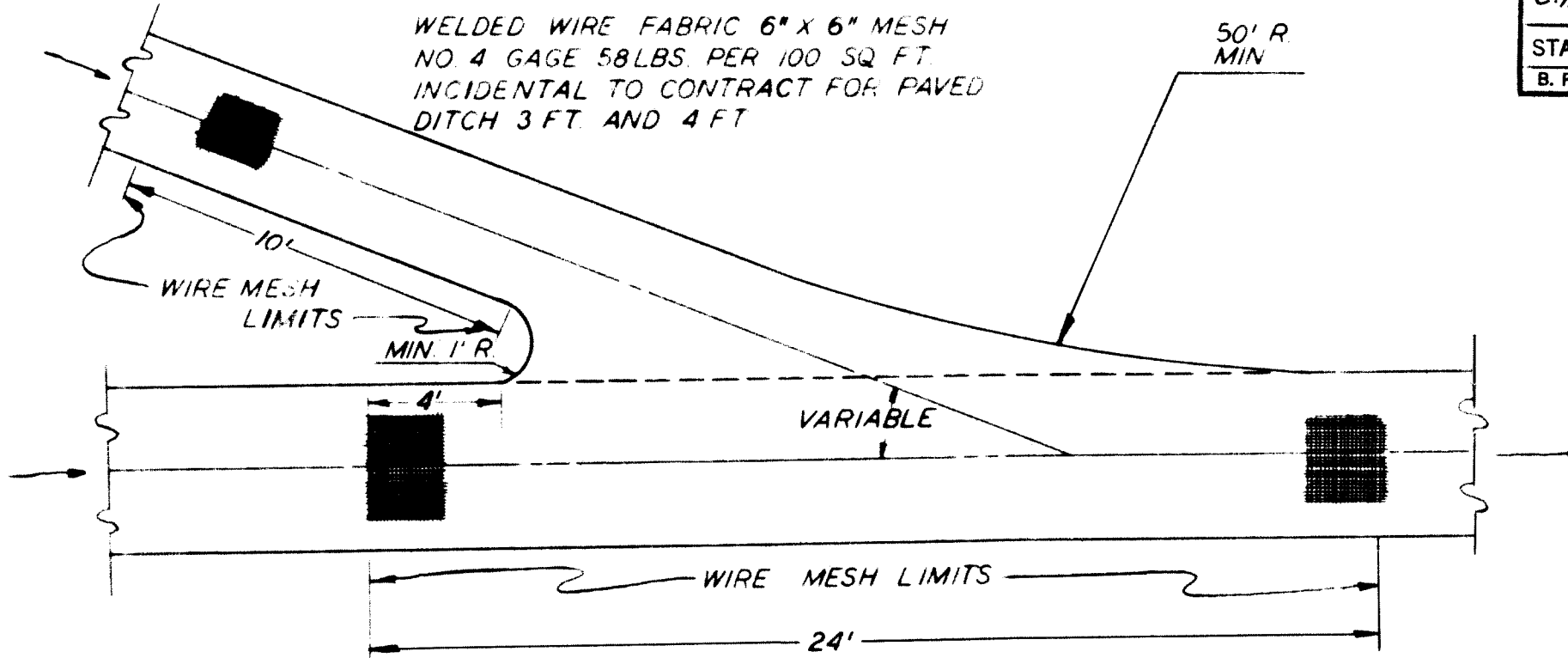
PAVED DITCH SIZE	A	B	C	D	E	F	WELDED WIRE FABRIC *
3 FEET	3'-0"	3'-0"	1'-0"	4'-1"	3'-8"	4"	NONE
4 FEET	4'-0"	4'-8"	1'-6"	5'-1"	4'-2"	4"	NONE
5 FEET	5'-0"	5'-8"	2'-0"	6'-1"	4'-8"	4"	YES
6 FEET	6'-0"	6'-10"	2'-6"	7'-3"	5'-3"	5"	YES
7 FEET	7'-0"	8'-0"	3'-0"	8'-5"	5'-10"	6"	YES

* 6"x6" MESH # 4 GAGE 58 LBS. PER 100 SQ. FT. SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR PAVED DITCH 5 FT., 6 FT., & 7 FT.

LOCATION & LIMITS FOR PAVED DITCH

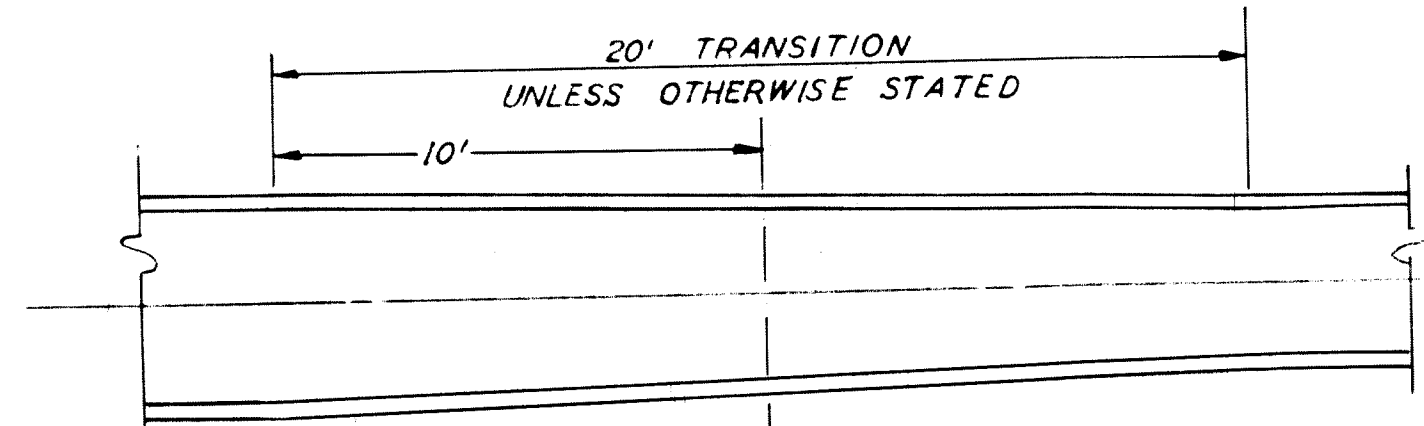


NOTE:
PAVED DITCH SHALL EXTEND FOR A MINIMUM DISTANCE OF 10' BACK AND 20' AHEAD AT POINTS OF ABRUPT GRADE CHANGE



TYPICAL PAVED DITCH INTERSECTION

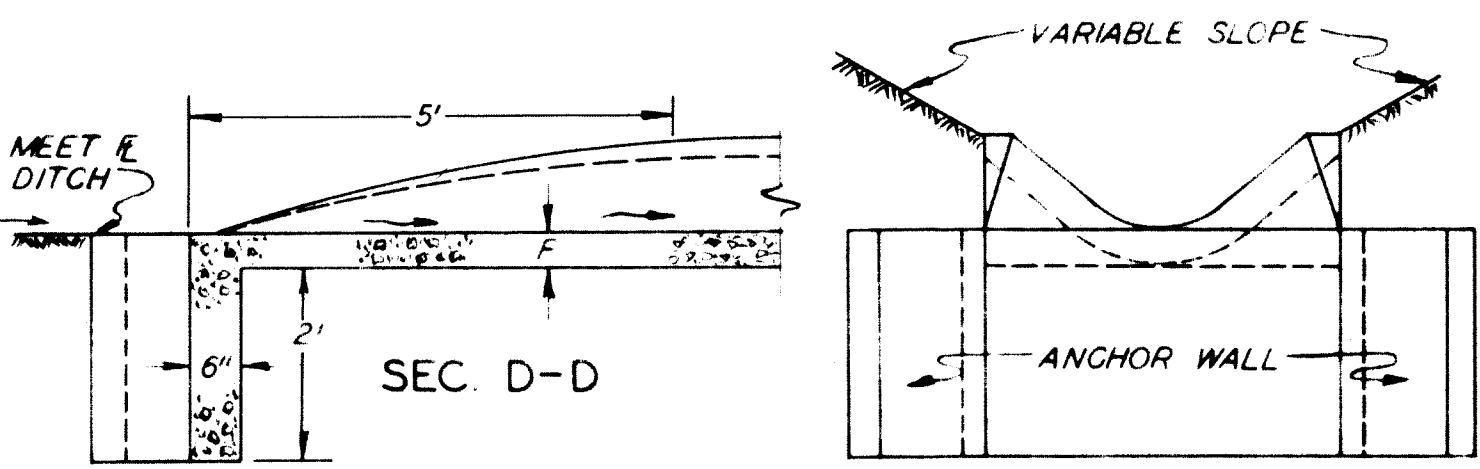
TYPICAL TRANSITION



LIMITS OF WELDED WIRE FABRIC IF REQUIRED FOR THE LARGER PAVED DITCH.

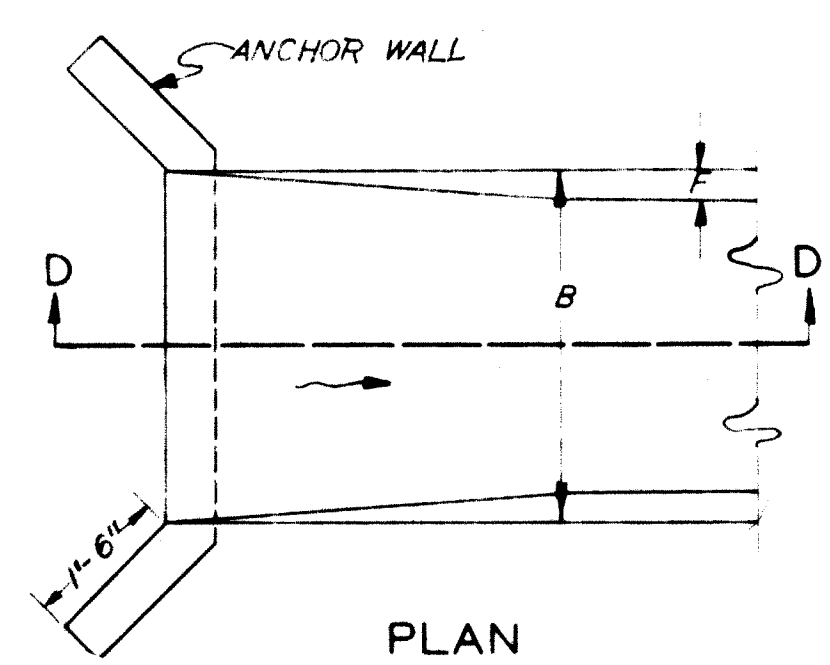
NOTE: TRANSITIONS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR PAVED DITCH OF THE LARGER SIZE

DETAIL OF INLET



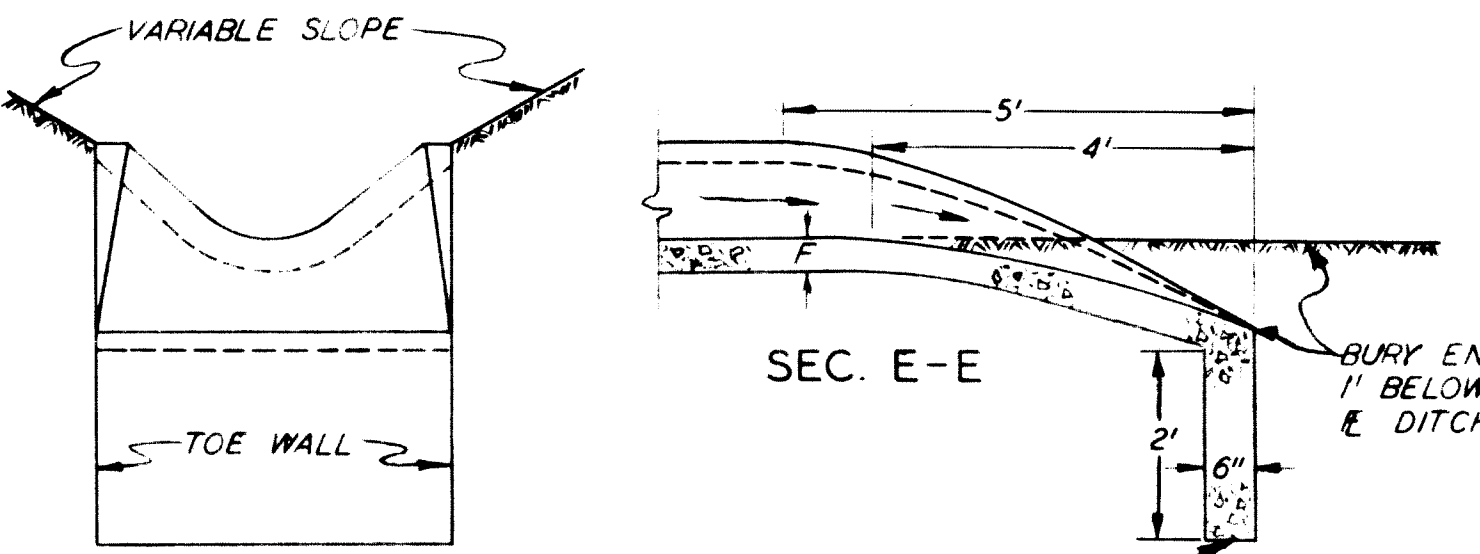
SEC. D-D

END VIEW



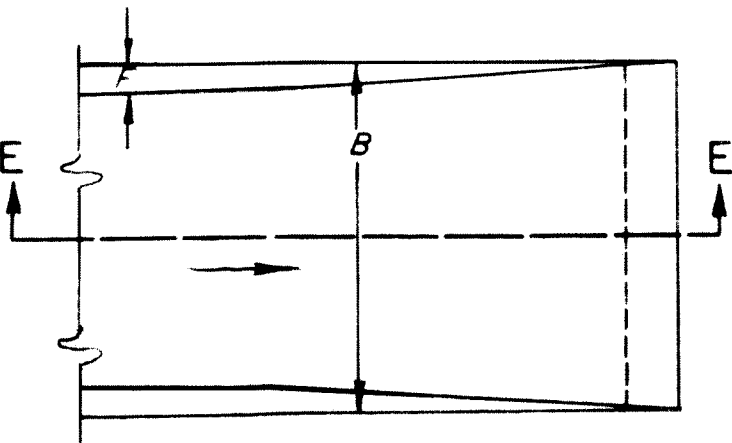
PLAN

DETAIL OF OUTLET



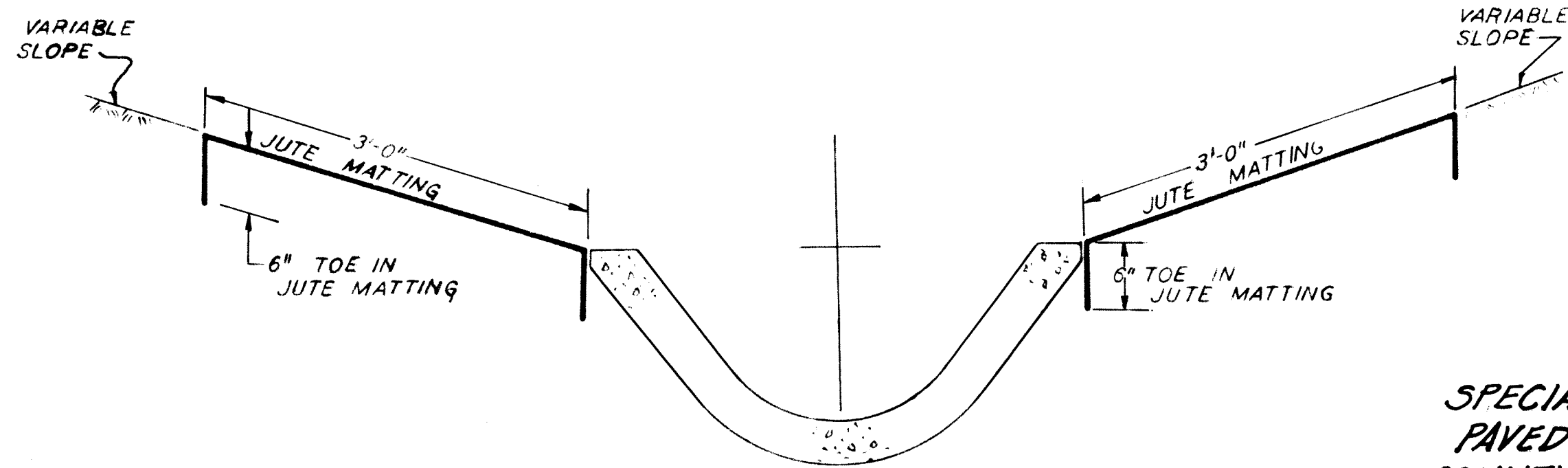
SEC. E-E

END VIEW



PLAN

NOTE:
CLASS X CONCRETE SHALL BE USED THROUGHOUT. INLETS AND OUTLETS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER LINEAL FOOT FOR PAVED DITCHES, WHICH PRICE SHALL INCLUDE THE COST OF TOE WALLS AND ANCHOR WALLS.

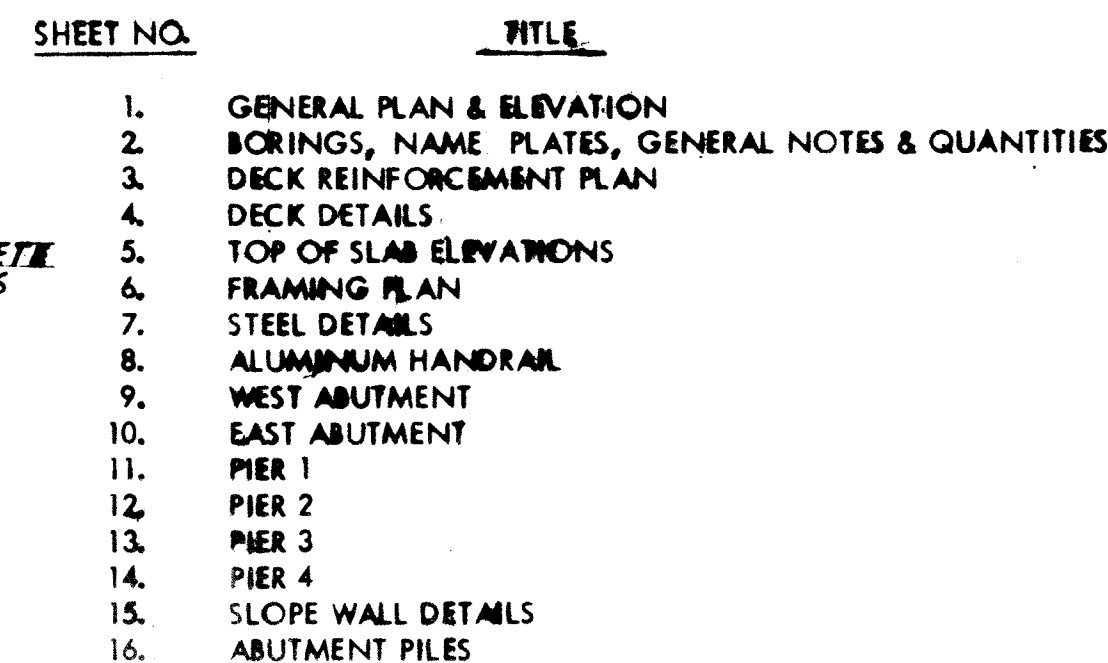


JUTE MATTING INSTALLATION AT EACH SIDE OF PAVED DITCH

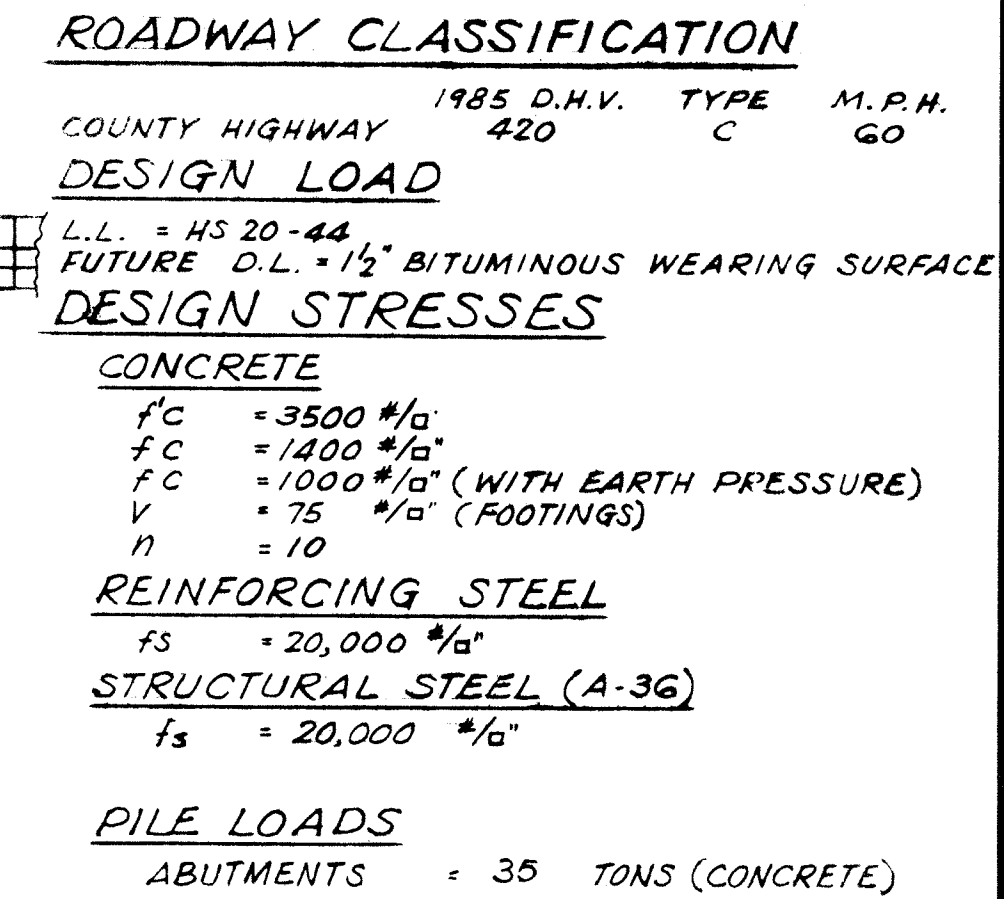
SPECIAL DETAILS
PAVED DITCH
COUNTY HIGHWAY 76
SECTION 133-B-CF
WINNEBAGO COUNTY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 76	133 B-CF	WINNEBAGO	70	10
STA. TO STA.				
B. P. R. REG. NO. 4	ILLINOIS	PROJECT		

INDEX OF SHEETS - ROCK RIVER BRIDGE



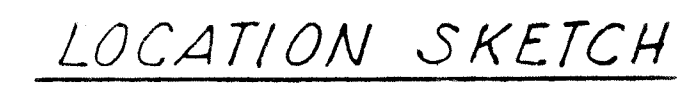
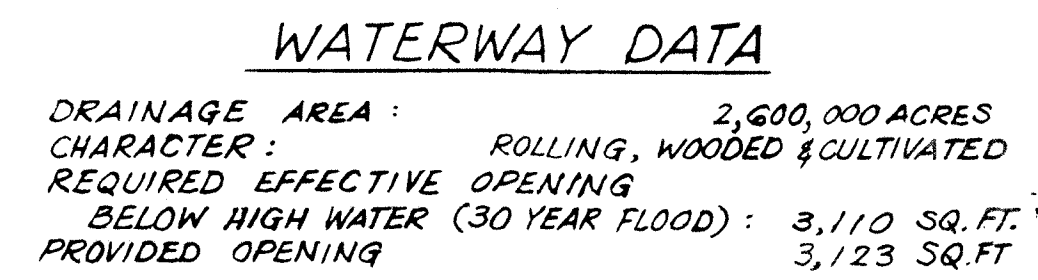
TYPICAL CROSS SECTION



MAXIMUM SOIL PRESSURE

PIER 1, 2 & 4	5,000	*#/ft ²
PIER 3	6,000	*#/ft ²

L.L. DEFLECTION

$$\Delta \leq \frac{L}{1200} \quad (\text{COMPOSITE})$$


GENERAL PLAN AND ELEVATION
COUNTY HIGHWAY RTE. 76 OVER
ROCK RIVER
SECTION 133-B-CF
WINNEBAGO COUNTY
STATION 65+47.50

Plans Prepared by:
ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
70 S. WABASH AVE. 1078 CHICAGO, ILLINOIS

SOIL TEST BORINGS

BRIDGE GENERAL NOTES

CLASS X CONCRETE SHALL BE USED THROUGHOUT. CONCRETE FOR FLOOR SLABS TO BE PLACED IN ONE CONTINUOUS OPERATION BETWEEN CONSTRUCTION JOINTS SHOWN, AND SHALL BE FINISHED IN ACCORDANCE WITH ARTICLE 51.19 OF THE STANDARD SPECIFICATIONS.

COARSE AGGREGATE TO BE USED IN PARAPET HANDRAILS AND WINGWALLS OF ABUTMENTS MUST BE ABSOLUTELY FREE OF CHERT, FLINT, LIMONITE, LIGNITE AND SOFT SANDSTONE.

PERMANENT FORMS WILL NOT BE PERMITTED IN FORMING THE CONCRETE FLOOR.

ALL REINFORCEMENT BARS SHALL BE LAPPED 20 DIAMETERS UNLESS OTHERWISE SHOWN.

ALL STRUCTURAL STEEL SHALL CONFORM TO A.S.T.M. A36 EXCEPT AS OTHERWISE SHOWN OR NOTED.

WELDING SHALL BE IN ACCORDANCE WITH CURRENT SPECIFICATIONS FOR WELDED HIGHWAY AND RAILWAY BRIDGES OF THE AMERICAN WELDING SOCIETY AND AS NOTED ON THE PLANS AND IN THE SPECIAL PROVISIONS.

ALL CONNECTIONS FOR STRUCTURAL STEEL SHALL BE RIVETED EXCEPT AS NOTED. ALL RIVETS SHALL BE 3/4" DIAMETER IN 13/16" HOLES EXCEPT IN BEAM FLANGE SPLICES WHICH SHALL BE 7/8" DIAMETER IN 15/16" HOLES. HOLES FOR SPLICES IN BEAMS AND SPLICE PLATES SHALL BE PUNCHED 11/16" DIAMETER AND REAMED TO CORRECT SIZE WITH BEAMS ASSEMBLED FULL LENGTH IN THE SHOP IN PROPER POSITION. ASSEMBLY OF BEAMS SHALL BE WITH OR WITHOUT DIAPHRAGMS. LEAVE ASSEMBLED FOR INSPECTION.

ALL ROCKERS, BOLSTERS, PINTLES, BEARING PLATES, LEAD PLATES AND ANCHOR BOLTS SHALL BE FABRICATED AND SET IN ACCORDANCE WITH ARTICLE 51.15 OF THE STANDARD SPECIFICATIONS AND ARE INCLUDED IN THE QUANTITY OF STRUCTURAL STEEL. ESTIMATED WEIGHT, 11,000 POUNDS.

ROADWAY EXPANSION ANGLES AND EXPANSION PLATES SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH ARTICLE 51.13(d) OF THE STANDARD SPECIFICATIONS AND ARE INCLUDED IN THE QUANTITY OF STRUCTURAL STEEL. THE EXPANSION DEVICE AT THE WEST ABUTMENT SHALL BE ASSEMBLED IN THE SHOP IN PROPER POSITION AND SHALL BE LEFT ASSEMBLED FOR SHOP INSPECTION. ESTIMATED WEIGHT OF EXPANSION ANGLES AND EXPANSION PLATES 5,210 LBS.

ANCHOR BOLTS SHALL BE SET BEFORE RIVETING DIAPHRAGMS OVER PIERS AND ABUTMENTS.

STRUCTURAL STEEL SHALL RECEIVE ONE SHOP COAT OF RED LEAD PAINT AND TWO FIELD COATS OF ALUMINUM PAINT EXCEPT AS OTHERWISE SPECIFIED. ALL PAINT TO BE FURNISHED AND APPLIED BY THE CONTRACTOR. SEE ARTICLES 56.1 TO 56.5 INCLUSIVE OF THE STANDARD SPECIFICATIONS.

THE EXPOSED SURFACES OF THE EXPANSION ANGLES AND EXPANSION PLATES SHALL BE GIVEN TWO SHOP COATS OF RED LEAD PAINT; THE CONTACT SURFACES SHALL BE GIVEN ONE SHOP COAT OF RED LEAD PAINT. ANCHOR STUDS SHALL NOT BE PAINTED.

SHOP INSPECTION OF STRUCTURAL STEEL BY ILLINOIS DIVISION OF HIGHWAYS BEFORE PAINTING.

THE CONTRACTOR SHALL DRIVE ONE CONCRETE TEST PILE IN A PERMANENT LOCATION AT THE EAST AND WEST ABUTMENTS AS DIRECTED BY THE ENGINEER BEFORE ORDERING THE REMAINDER OF THE CONCRETE PILES.

FOR DRIVING OF APPROACH PILES AT THE WEST ABUTMENT, SEE THE SPECIAL PROVISIONS.

CONCRETE PILES AT THE WEST ABUTMENT SHALL BE DRIVEN IN HOLES PRECORED THROUGH THE EMBANKMENT IN ACCORDANCE WITH ARTICLE 60.9(c) OF THE STANDARD SPECIFICATIONS.

BILL OF MATERIAL (ROCK RIVER BRIDGE)

CODE NO.	ITEM	UNIT	SUPER	SUB	TOTAL
050001	CLASS A EXCAVATION FOR STRUCTURES	CU.YD.	-	139	139
050002	CLASS B EXCAVATION FOR STRUCTURES	CU.YD.	-	562	562
052002	CLASS A CONCRETE	CU.YD.	-	350.3	350.3
052003	CLASS X CONCRETE	CU.YD.	460.2	87.8	548
052021	PROTECTIVE COAT	SQ.YD.	1,875	-	1,875
054001	FURNISHING & ERECTING STRUCTURAL STEEL	POUND	488,880	-	488,880
059001	REINFORCEMENT BARS	POUND	100,230	22,870	123,120
060004	FURNISHING CREOSOTED PILES UP TO 20 FT.	LIN.FT.	-	96	96
060008	DRIVING TIMBER PILES	LIN.FT.	-	96	96
060043	DRIVING CONCRETE PILES	LIN.FT.	-	270	270
060044	FURNISHING CONCRETE PILES	LIN.FT.	-	270	270
060047	TEST PILE CONCRETE	EACH	-	2	2
061001	NAME PLATES	EACH	-	1	1
083003	SLOPE WALL 6 INCH	SQ.YD.	-	756	756
0910	PAVED DITCH 3 FEET	LIN.FT.	-	72	72
Z00004	ALUMINUM HANDRAIL	LIN.FT.	834	-	834
Z01023	BRIDGE SEAT SEALANT	LUMP SUM	-	1	1

BORINGS, NAME PLATES,
GENERAL NOTES & QUANTITIES
COUNTY HIGHWAY RTE.76 OVER

ROCK RIVER
SECTION 133-B-CF
WINNEBAGO COUNTY
STATION 65+47.50

ALFRED BENESCH & ASSOCIATES
CONSULTING ENGINEERS
10 S. WABASH AVE. 1078 CHICAGO, ILLINOIS

BORING NO. 6
STA. 67+63.7 (21.5' LT.)
GROUND SURFACE EL. 741.62

MEDIUM BROWN FINE SAND	11	2'0"	740
MEDIUM BROWN MEDIUM SAND WITH COARSE GRAVEL, SOME LIMESTONE BOULDERS	12	3'0"	735
SEE NOTE A	15	11'0"	730
MEDIUM BROWN MEDIUM SAND, SOME GRAVEL	22	13'0"	725
DENSE BROWN MEDIUM SAND & GRAVEL	40	19'0"	720
VERY DENSE BROWN MEDIUM SAND & GRAVEL	100	21'0"	715
USED 28" OF 2-1/2" CASING 11/5/64	120	150'30"0"	710

NOTE A: DENSE BROWN & YELLOW MEDIUM SAND WITH COARSE GRAVEL, SOME LIMESTONE BOULDERS

NOTES:

FIGURES IN COLUMN MARKED "N" INDICATE NUMBER OF BLOW REQUIRED TO DRIVE 2" DIAMETER SPLIT SPOON SAMPLER ONE FOOT USING 140 LB. WEIGHT FALLING 30 INCHES.

* INDICATES LOST CIRCULATING WATER.

WATER LEVELS (WL²⁴). FIGURE INDICATES WATER LEVEL AT THE TIME OF READING (HOURS) AFTER COMPLETION OF BORING.

BORING DATA ARE SHOWN ONLY AS A GUIDE FOR BIDDERS IN ESTIMATING SOIL CONDITIONS WHICH MAY BE ENCOUNTERED IN THE WORK. FOR LOCATION OF BORINGS SEE GENERAL PLAN AND ELEVATION SHEET.

STATION 65+47.50
ROCK RIVER
BUILT 1965 BY
WINNEBAGO COUNTY
SEC 133-B-CF
LOADING HS 20

SEE STATE OF ILLINOIS STD. 2113-1
LETTERING FOR NAME PLATE
1 NAME PLATE REQUIRED

BORING NO. 1
STA. 63+34 (15' RT.)

GROUND SURFACE EL. 729.12	5	2'0"	725
LOOSE BROWN FINE TO MEDIUM SAND	5	6'0"	720
MEDIUM BROWN FINE TO MEDIUM SAND WITH SMALL TO MEDIUM GRAVEL	13	8'0"	715
SEE NOTE A	60	11'0"	710
HARDPAN	67	15'6"	705
VERY DENSE BROWN FINE TO MEDIUM SAND WITH SMALL TO LARGE GRAVEL	60	20'0"	700

USED 17'6" OF 3" CASING 11/5/64

NOTE A: VERY DENSE BROWN FINE-COARSE SAND WITH SMALL TO MEDIUM GRAVEL

BORING NO. 2
STA. 64+17 (15' LT.)

0.12

BARGE D

N 0'

WATER SURFACE

WATER

DENSE BROWN FINE TO COARSE SAND WITH SMALL TO LARGE GRAVEL

40

8'0"

VERY DENSE BROWN FINE TO COARSE SAND WITH SMALL TO LARGE GRAVEL

84*

73*

13'0"

HARDPAN

60

15'6"

MEDIUM BROWN FINE TO MEDIUM SILTY SAND WITH SMALL TO LARGE GRAVEL

22*

13*

20'6"

VERY STIFF BROWN SILTY CLAY

16

15

20

26

31'0"

HARD BROWN SILTY CLAY

42

33'8"

VERY STIFF BROWN CLAYEY SILT

20

22

38'0"

DENSE BROWN FINE TO MEDIUM SAND WITH SMALL TO MEDIUM GRAVEL

37

41'6"

SEE NOTE B

30

43'0"

HARD BROWN CLAYEY SILT

33

45'0"

APPROX. FIG. EL. PIER 1

N 0'

WATER SURFACE

WATER

SEE NOTE C

20

8'8"

8'8"

HARD BROWN SANDY CLAY WITH SMALL GRAVEL

34

11'8"

60

69

99'

65

80

23'6"

VERY HARD BROWN SANDY CLAY WITH SMALL TO LARGE GRAVEL

83*

60*

73*

30'8"

APPROX. FIG. EL. PIER 2

USED 27'6" OF 2-1/2" CASING 11/11-12/64

NOTE C: MEDIUM GRAY FINE-TO-MEDIUM SAND WITH SMALL-LARGE GRAVEL

USED 20'0" OF 2-1/2" CASING 10/10-11/64

NOTE B: DENSE BROWN FINE-MEDIUM SAND WITH SMALL-MEDIUM GRAVEL

BORING NO. 4
STA. 65+99 (15' LT.)

L. 7.27.92

		N° 0'
WATER SURFACE		2'10"
WATER		6'3"
MEDIUM BROWN & GRAY FINE TO MEDIUM SAND WITH SMALL TO LARGE GRAVEL	12	
	27	10'6"
VERY HARD BROWN SANDY CLAY WITH SMALL TO LARGE GRAVEL	60	
	99/6	
		16'0"
VERY DENSE BROWN SAND WITH SMALL TO MEDIUM GRAVEL	98	18'0"
MEDIUM BROWN FINE-MEDIUM SAND WITH SMALL-MEDIUM GRAVEL	17	21'0"
VERY STIFF BROWN SANDY CLAY WITH SMALL-LARGE GRAVEL	28	23'6"
		26'0"
STIFF BROWN SANDY CLAY WITH SMALL GRAVEL	12	
	14	28'0"
DENSE BROWN FINE TO COARSE SAND WITH SMALL TO MEDIUM GRAVEL	45°	
	80°	
	98°	
		36'6"
VERY DENSE BROWN SAND	71°	
	100°	40'0"

APPROX. FTG. EL. PIER 3

		N° 0'
WATER SURFACE		2'10"
WATER		5'6"
MEDIUM BROWN FINE-COARSE SAND WITH SMALL GRAVEL	15	
	19°	10'0"
DENSE BROWN FINE-COARSE SILTY SAND W/ SMALL GRAVEL, CLAY BINDER	40	12'6"
DENSE BROWN FINE-COARSE SAND TRACE MEDIUM GRAVEL	43°	15'0"
		48°
DENSE BROWN FINE TO COARSE SAND, TRACE SILT & SMALL GRAVEL	51°	
	58°	
	100°	VERY DENSE
	11	26'6"
VERY HARD BROWN CLAYEY SILT, TRACE SAND & SMALL GRAVEL	96	
	100	30'0"

APPROX. FTG. EL. PIER 4

USED 28'0" OF 3" CASING
11/17-18/84

AFTER 12'6", SAND BACKED UP INTO CASING AFTER WASHING OUT FOR EACH SAMPLE

USED 36'6" OF 3" CASING 11/16-17/64

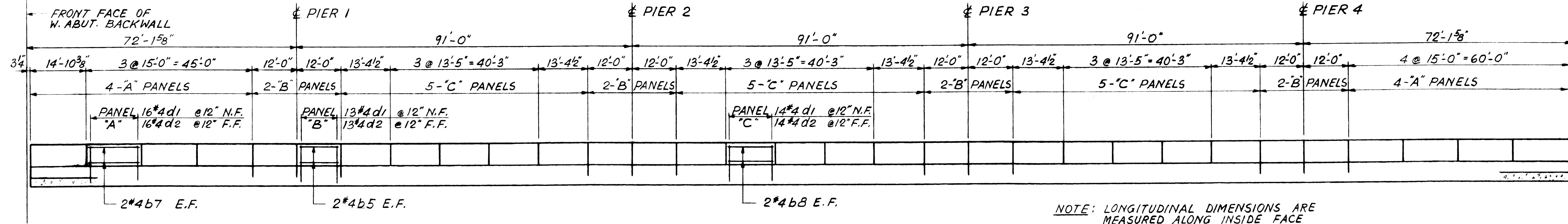
AFTER 28'0" SAND BACKED UP INTO CASING AFTER WASHING OUT FOR EACH SAMPLE

BORING NO. 5
STA. 66+78 (15' RT.)

		"N" 0°	
WATER SURFACE			2'10"
WATER			5'6"
MEDIUM BROWN FINE-COARSE SAND WITH SMALL GRAVEL	15		
	19*		10'0"
DENSE BROWN FINE-COARSE SILTY SAND W/ SMALL GRAVEL, CLAY BINDER	40		12'8"
DENSE BROWN FINE-COARSE SAND, TRACE SILT & SMALL GRAVEL	43*		15'0"
DENSE BROWN FINE TO COARSE SAND, TRACE SILT & SMALL GRAVEL	48*		
	51*		
	58*		
	100*	VERY DENSE	26'6"
VERY HARD BROWN CLAYEY SILT, TRACE SAND & SMALL GRAVEL	96		
	100		30'0"

USED 28'0" OF 3" CASING 11/17-18/64

AFTER 12'6" SAND BACKED UP INTO CASING AFTER WASHING OUT FOR EACH SAMPLE



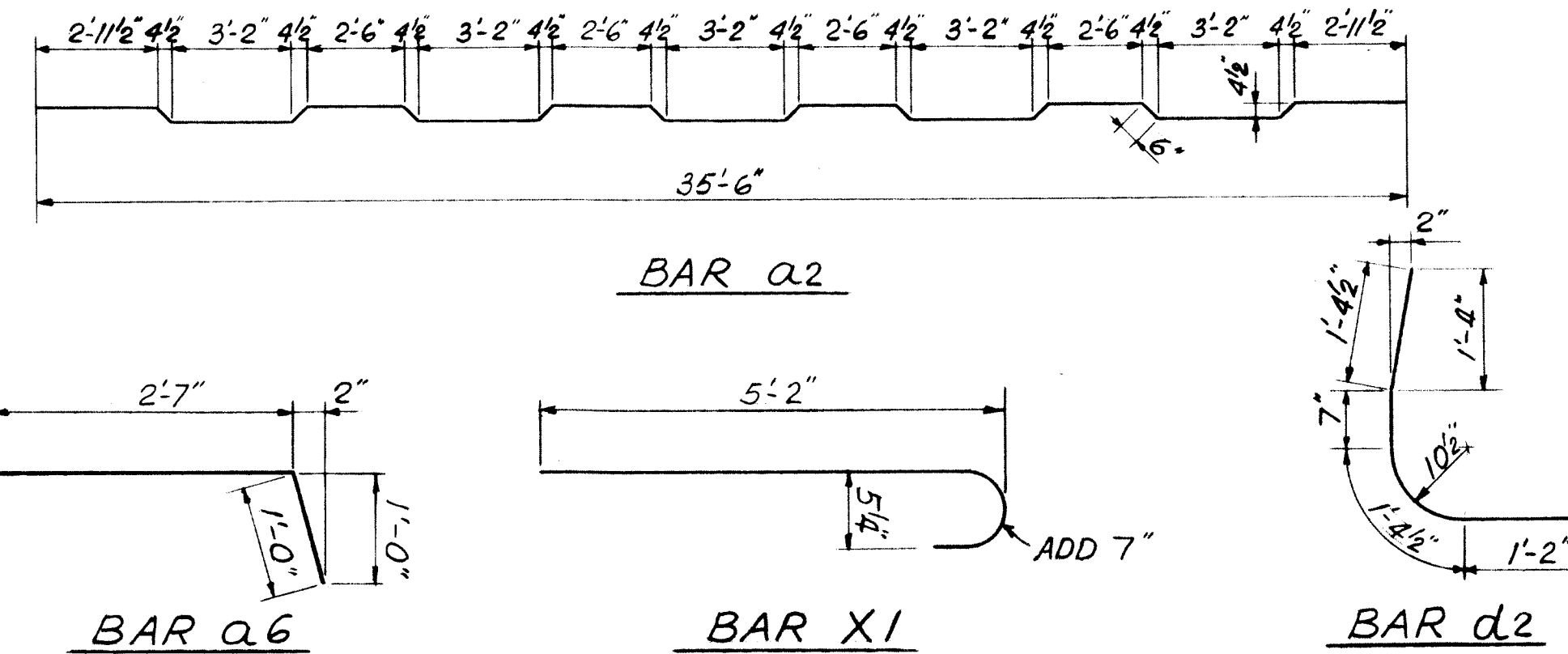
NOTE: LONGITUDINAL DIMENSIONS ARE MEASURED ALONG INSIDE FACE OF PARAPET RAIL.

PARAPET JOINTS & REINFORCEMENT

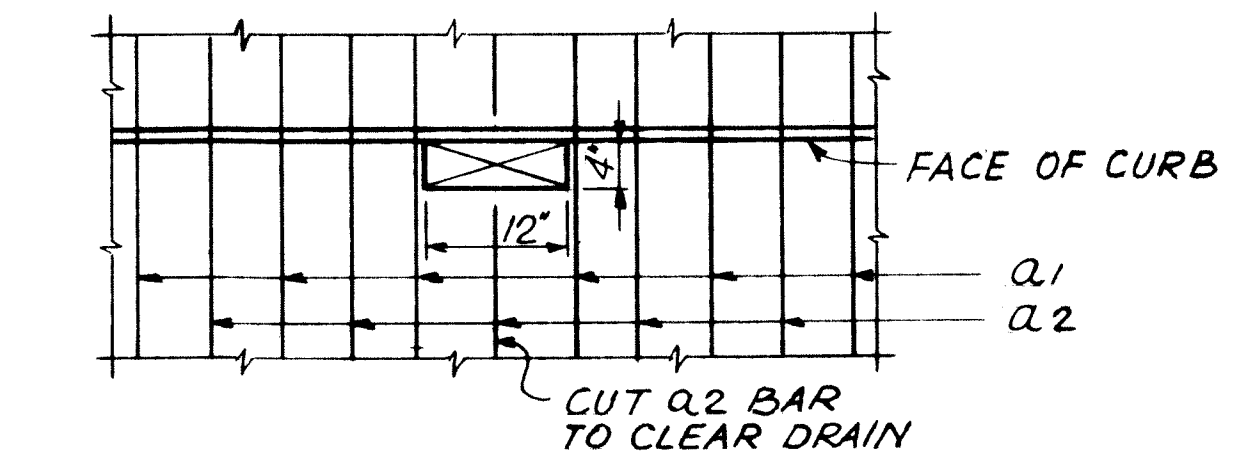
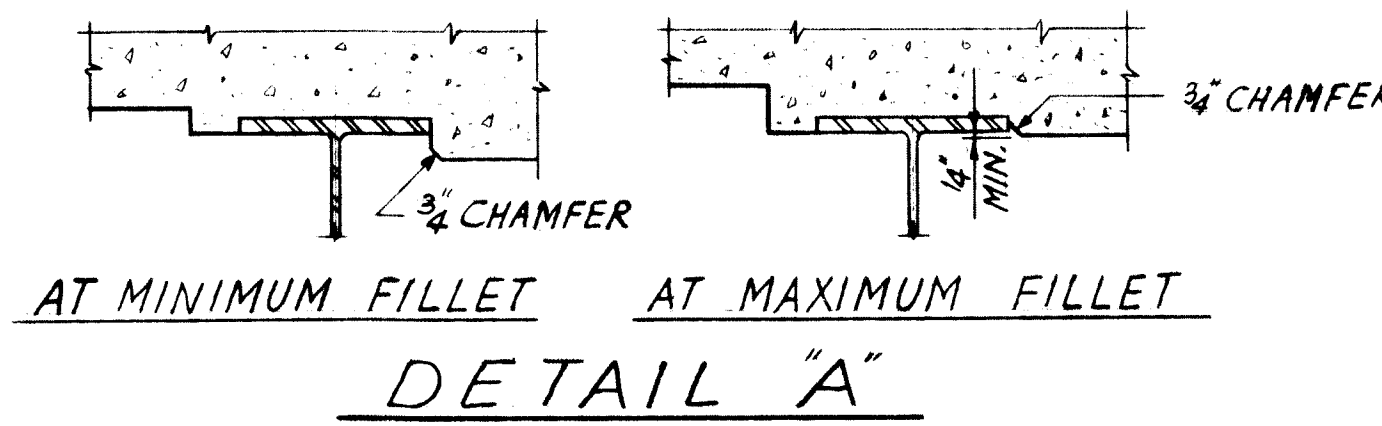
NORTH SIDE SHOWN - SOUTH SIDE SAME

BILL OF MATERIAL-DECK

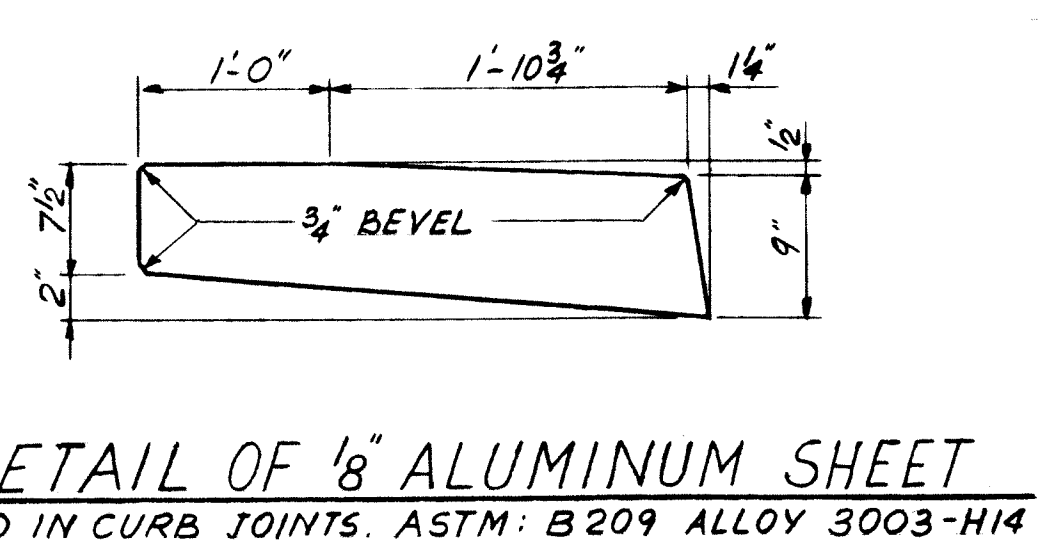
BAR	NO.	SIZE	LENGTH	SHAPE
b1	172	#6	27-0	—
x1	146	#6	5-9	C
a1	404	#5	35-6	—
a2	403	#5	36-9	—
a3	404	#5	34-9	—
a4	26	#5	38-9	—
a5	26	#5	38-0	—
b2	350	#5	31-0	—
b3	660	#5	29-0	—
a6	834	#4	3-7	—
b4	72	#4	20-9	—
b5	160	#4	11-9	—
b6	108	#4	23-3	—
b7	64	#4	14-8	—
b8	120	#4	13-2	—
d1	1,072	#4	3-6	L
d2	884	#4	4-6	C
ITEM	UNIT	QUANTITIES		
CLASS X CONCRETE	CU. YDS.	460.2		
REINFORCEMENT BARS	POUNDS	100,230		
STRUCTURAL STEEL	POUNDS	488,880		
ALUMINUM HANDRAIL	LIN. FT.	834		



NOTE: ALL BAR DIMENSIONS ARE OUT TO OUT.

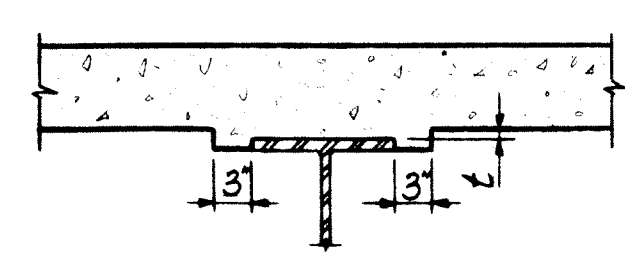


TYPICAL DETAIL AT DRAIN



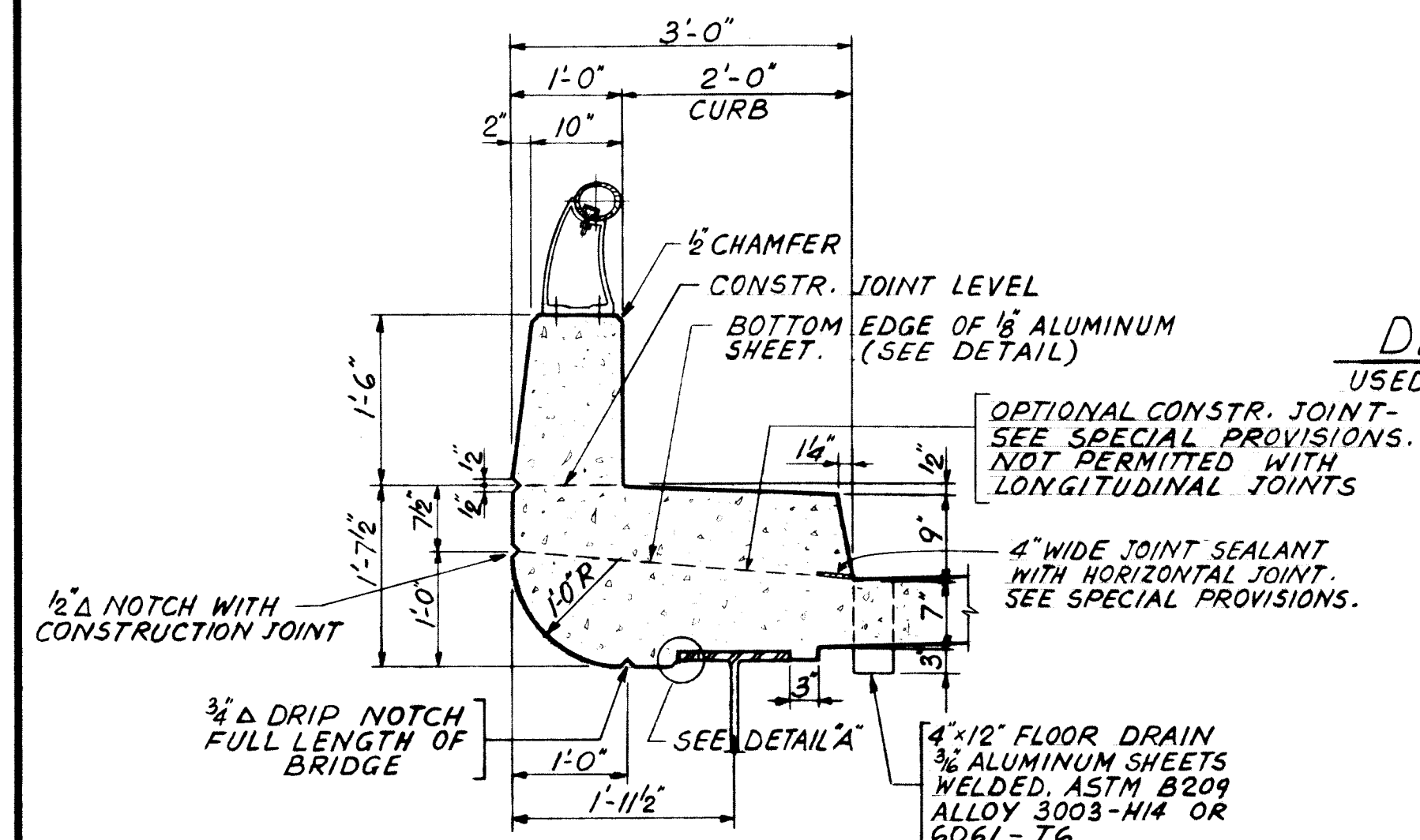
DETAIL OF 8" ALUMINUM SHEET

USED IN CURB JOINTS. ASTM: B209 ALLOY 3003-H14



STANDARD FILLET DETAIL

AFTER ALL STRUCTURAL STEEL HAS BEEN ERECTED, ELEVATIONS OF THE TOP FLANGES OF THE BEAMS SHALL BE TAKEN AT THE STATIONS SHOWN ON SHEET 5. THESE ELEVATIONS SUBTRACTED FROM THE "THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION" SHOWN ON SHEET 5, MINUS SLAB THICKNESS EQUALS THE FILLET HEIGHT "t" ABOVE TOP OF BEAM.



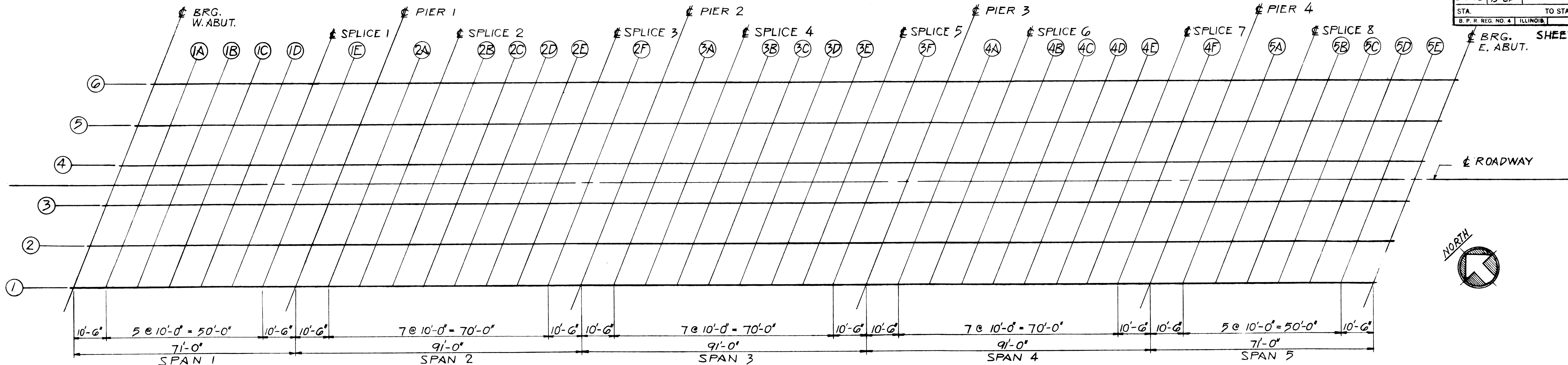
CURB DETAIL

SCALE: 3/4" = 1'-0"

NOTE: COST OF ALUMINUM SHEETS AND FLOOR DRAINS SHALL BE INCIDENTAL TO CLASS "X" CONCRETE.

DECK DETAILS
COUNTY HIGHWAY RTE. 76 OVER
ROCK RIVER
SECTION 133-B-CF
WINNEBAGO COUNTY
STATION 65+47.50

ALFRED BENESCH & ASSOCIATES
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS



PLAN

SPAN 1

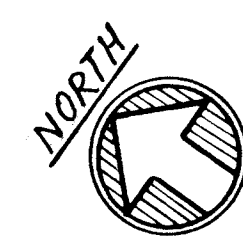
SPAN 2

SPAN 3

SPAN 4

SPAN 5

LINE BEAM	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION	LINE BEAM	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION	LINE BEAM	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION	LINE BEAM	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION	LINE BEAM	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
1	6333.519	16.041	742.796	742.796	1	6415.019	16.041	741.240	741.250	1	6506.019	16.041	739.757	739.764	1	6597.019	16.041	738.544	738.553	1	6688.019	16.041	737.599	737.606
2	6336.111	9.625	742.872	742.872	2	6417.611	9.625	741.323	741.329	2	6508.611	9.625	739.848	739.853	2	6599.611	9.625	738.642	738.648	2	6690.611	9.625	737.705	737.710
3	6338.704	3.208	742.891	742.891	3	6420.204	3.208	741.348	741.354	3	6511.204	3.208	739.881	739.886	3	6602.204	3.208	738.683	738.689	3	6693.204	3.208	737.753	737.758
4	6341.295	-	742.839	742.839	4	6422.796	-	741.303	741.309	4	6513.796	-	739.848	739.848	4	6604.796	-	738.652	738.658	4	6695.796	-	737.731	737.736
5	6343.889	-	742.715	742.715	5	6425.389	-	741.186	741.192	5	6516.389	-	739.734	739.739	5	6607.389	-	738.551	738.557	5	6698.389	-	737.637	737.642
6	6346.481	-	742.534	742.534	6	6427.981	-	741.012	741.022	6	6518.981	-	739.568	739.575	6	6609.981	-	738.393	738.402	6	6700.981	-	737.486	737.493
1A	6344.019	16.041	742.584	742.615	1A	6425.019	16.041	741.064	741.095	1A	6516.019	16.041	739.611	739.638	1A	6607.019	16.041	738.427	738.457	1A	6698.019	16.041	737.511	737.537
2	6346.611	9.625	742.660	742.679	2	6427.611	9.625	741.147	741.167	2	6518.611	9.625	739.702	739.719	2	6609.611	9.625	738.525	738.544	2	6700.611	9.625	737.618	737.634
3	6349.204	3.208	742.680	742.699	3	6430.204	3.208	741.174	741.194	3	6521.204	3.208	739.736	739.753	3	6612.204	3.208	738.567	738.586	3	6703.204	3.208	737.663	737.683
4	6351.796	-	742.629	742.648	4	6432.796	-	741.129	741.149	4	6523.796	-	739.699	739.716	4	6614.796	-	738.538	738.557	4	6705.796	-	737.646	737.662
5	6354.389	-	742.506	742.525	5	6435.389	-	741.013	741.033	5	6526.389	-	739.591	739.608	5	6617.389	-	738.437	738.456	5	6708.389	-	737.553	737.569
6	6356.981	-	742.326	742.357	6	6437.981	-	740.841	740.871	6	6528.981	-	739.426	739.453	6	6619.981	-	738.280	738.310	6	6710.981	-	737.403	737.429
1B	6354.019	16.041	742.384	742.435	1B	6435.019	16.041	740.891	740.944	1B	6526.019	16.041	739.468	739.516	1B	6617.019	16.041	738.313	738.365	1B	6708.019	16.041	737.427	737.472
2	6356.611	9.625	742.462	742.494	2	6437.611	9.625	740.975	741.008	2	6528.611	9.625	739.560	739.590	2	6619.611	9.625	738.413	738.446	2	6710.611	9.625	737.535	737.564
3	6359.204	3.208	742.483	742.515	3	6440.204	3.208	741.003	741.036	3	6531.204	3.208	739.595	739.625	3	6622.204	3.208	738.455	738.488	3	6713.204	3.208	737.585	737.614
4	6361.796	-	742.432	742.464	4	6442.796	-	740.959	740.992	4	6533.796	-	739.558	739.588	4	6624.796	-	738.427	738.460	4	6715.796	-	737.564	737.593
5	6364.389	-	742.310	742.342	5	6445.389	-	740.844	740.877	5	6536.389	-	739.451	739.481	5	6627.389	-	738.327	738.360	5	6718.389	-	737.472	737.501
6	6366.981	-	742.131	742.182	6	6447.981	-	740.672	740.725	6	6538.981	-	739.287	739.335	6	6629.981	-	738.170	738.222	6	6720.981	-	737.323	737.368
1C	6364.019	16.041	742.189	742.245	1C	6445.019	16.041	740.721	740.787	1C	6536.019	16.041	739.327	739.387	1C	6627.019	16.041	738.202	738.267	1C	6718.019	16.041	737.346	737.402
2	6366.611	9.625	742.267	742.302	2	6447.611	9.625	740.807	740.848	2	6538.611	9.625	739.420	739.458	2	6629.611	9.625	738.305	738.344	2	6720.611	9.625	737.455	737.490
3	6369.204	3.208	742.288	742.323	3	6450.204	3.208	740.835	740.876	3	6541.204	3.208	739.456	739.494	3	6632.204	3.208	738.347	738.388	3	6723.204	3.208	737.506	737.541
4	6371.796	-	742.239	742.274	4	6452.796	-	740.775	740.819	4	6543.796	-	739.421	739.459	4	6634.796	-	738.319	738.360	4	6725.796	-	737.486	737.521
5	6374.389	-	742.118	742.153	5	6455.389	-	740.675	740.719	5	6546.389	-	739.314	739.352	5	6637.389	-	738.220	738.261	5	6728.389	-	737.394	737.429
6	6376.981	-	741.939	741.995	6	6457.981	-	740.507	740.572	6	6548.981	-	739.151	739.211	6	6639.981	-	738.064	738.129	6	6730.981	-	737.246	737.302
1D	6374.019	16.041	741.996	742.041	1D	6455.019	16.041	740.555	740.620	1D	6546.019	16.041	739.191	739.251	1D	6637.019	16.041	738.095	738.161	1D	6728.019	16.041	737.269	737.320
2	6376.611	9.625	742.075	742.104	2	6457.611	9.625	740.641	740.682	2	6548.611	9.625	739.284	739.322	2	6639.611	9.625	738.197	738.238	2	6730.611	9.625	737.378	737.410
3	6379.204	3.208	742.097	742.126	3	6460.204	3.208	740.670	740.711	3	6551.204	3.208	739.321	739.359	3	6642.204	3.208	738.241	738.282	3	6733.204	3.208	737.430	737.462
4	6381.796	-	742.048	742.077	4	6462.796	-	740.628	740.669	4	6553.796	-	739.287	739.325	4	6644.796	-	738.214	738.255	4	6735.796	-	737.411	737.443
5	6384.389	-	741.928	741.957	5	6465.389	-	740.515	740.556	5	6556.389	-	739.181	739.219	5	6647.389	-	738.116	738.157	5	6738.389	-	737.320	737.352
6	6386.981	-	741.751	741.796	6	6467.981	-	740.344	740.409	6	6558.981	-	739.018	739.078	6	6649.981	-	737.961	738.027	6	6740.981	-	737.173	737.224
1E	6384.019	16.041	741.807	741.833	1E	6465.019	16.041	740.392	740.444	1E	6556.019	16.041	739.057	739.105	1E	6647.019	16.041	737.991	738.044	1E	6738.019	16.041	737.194	737.225
2	6386.611	9.625	741.887	741.903	2	6467.611	9.625	740.479	740.512	2	6558.611	9.625	739.152	739.182	2	6649.611	9.625	738.093	738.126	2	6740.611	9.625	737.304	737.323
3	6389.204	3.208	741.910	741.926	3	6470.204	3.208	740.509	740.542	3	6561.204	3.208	739.189	739.219	3	6652.204	3.208	738.139	738.172	3	6743.204	3.208	737.357	737.376
4	6391.796	-	741.862	741.878	4	6472.796	-	740.468	740.501	4	6563.796	-	739.156	739.186	4	6654.796	-	738.113	738.146	4	6745.796	-	737.339	737.358
5	6394.389	-	741.742	741.758	5	6475.389	-	740.355	740.388	5	6566.389	-	739.051	739.081	5	6657.389	-	738.015	738.048	5	6748.389	-	737.249	737.268
6	6396.981	-	741.566	741.592	6	6477.981	-	740.185	740.238	6	6568.981	-	738.889	738.937	6	6659.981	-	737.861	737.914	6	6750.981	-	737.103	737.134
1F	6394.019	16.041	741.620	741.627	1F	6475.019	16.041	740.232	740.262	1F	6566.019	16.041	738.927	738.954	1F	6657.019	16.041	737.890	737.922	1F	6748.019	16.041	737.120	737.120
2	6396.611	9.625	741.701	741.706	2	6477.611	9.625	740.320	740.339	2	6568.611	9.625	739.022	739.039	2	6659.611	9.625	737.994	738.014	2	6751.611	9.625	737.230	737.230
3	6399.204	3.208	741.725	741.730	3	6480.204	3.208	740.351	740.370	3	6571.204	3.208	739.061	739.078	3	6662.204	3.208	738.040	738.060	3	6753.204	3.208	737.284	737.284
4	6401.796	-	741.678	741.683	4	6482.796	-	740.310	740.329	4	6573.796	-	739.028	739.045	4	6664.796	-	738.015	738.035	4	6755.796	-	737.267	737.267
5	6404.389	-	741.559	741.564	5	6485.389	-	740.199	740.218	5	6576.389	-	738.924	738.941	5	6667.389	-	737.918	737.938	5	6758.389	-	737.178	737.178
6	6406.981	-	741.384	741.391	6	6487.981	-	740.030	740.060	6	6578.981	-	738.763	738.790	6	6669.981	-	737.765	737.796	6	6761.981	-	737.032	737.032
1G	6404.019	16.041	741.428	741.428	1G	6485.019	16.041	740.076	740.085	1G	6576.019	16.041	738.800	738.807	1G	6667.019	16.041	737.793	737.793	1G	6759.019	16.041	737.003	737.003
2	6407.611	9.625	741.510	741.510	2	6487.611	9.625	740.164	740.170	2	6578.611	9.625	738.896	738.901	2	6669.611	9.625	737.897	737.897	2	6761.611	9.625	737.003	737.003
3	6409.204	3.208	741.535	741.535	3	6490.204	3.208	740.196	740.202	3	6581.204	3.208	738.935	738.940	3	6672.204	3.208	737.944	737.944	3	6763.204	3.208	737.003	737.003



SCALE '8" = 10"

SCALE : $\frac{1}{8}'' = 1'-0''$

3/4" ϕ x 4" CR 1020 STL. GRANULAR OR
SOLID FLUX FILLED HEADED STUDS
AUTOMATICALLY END WELDED.
(EST. WT. = 4,700 LBS. INCLUDED
IN STRUCTURAL STEEL.)



NO SCALE

LOAD		MOMENTS				REACTIONS				
LOCATION		* D.L.	L.L.	IMP.	TOTAL	* D.L.	L.L.	IMP.	TOTAL	
	E.F.W. ABUTMENT	—	—	—	—	27	35	9	71	
	PIERS 1 & 4	-718	-401	-97	-1216	93	51	13	157	
	PIERS 2 & 3	-745	-445	-103	-1293	95	54	14	163	
MOMENTS & SHEARS @ 0.4 SPANS 1 & 5					MOMENTS & SHEARS @ 0.5 SPANS 2, 3 & 4					
STEEL SECTIONS					STEEL SECTIONS					
MAX. MOMENT (FT. KIPS)					MAX. MOMENT (FT. KIPS)					
D.L.	+236				D.L.	+227				
COMPOSITE SECTION					COMPOSITE SECTION					
MAX. MOMENTS (FT. KIPS)					MAX. MOMENT (FT. KIPS)					
S.D.L.	+102				S.D.L.	+113				
L.L.	+490				L.L.	+532				
IMP.	+125				IMP.	+123				
TOTAL	+717				TOTAL	+768				
SHEAR (KIPS)					SHEAR (KIPS)					
S.D.L.	SUP'T.	0.2 PT.	0.4 PT.	0.6 PT.	0.8 PT.	S.D.L.	0.2 PT.	0.4 PT.	0.6 PT.	0.8 PT.
L.L.	8	4	0	4	8	L.L.	8	2	3	8
IMP.	35	26	17	22	31	IMP.	31	21	20	30
TOTAL	9	6	4	6	8	TOTAL	7	5	5	7
	52	36	21	32	47		46	28	28	45
STEEL SECTION (IN ³)					STEEL SECTION (IN ³)					
I _s 9,012					I _s = MOMENT OF INERTIA STEEL SECTION					
S _{TS} 503					S _{TS} = SECTION MODULUS TOP STEEL SECTION					
S _{BS} 503					S _{BS} = SECTION MODULUS BOT. STEEL SECTION					
COMPOSITE SECTION (IN ³)					COMPOSITE SECTION (IN ³)					
I _c 20,500					I _c = MOMENT OF INERTIA COMP SECTION					
S _{TC} 1,526					S _{TC} = SECTION MODULUS TOP COMP SECTION					
S _{BC} 693					S _{BC} = SECTION MODULUS BOT. COMP SECTION					

PROPERTIES ALL SPANS IN COMPOSITE AREA	STEEL SECTION (IN ³)				
	I _s	9,012			
	S _{TS}	503			
	S _{BS}	503			
	COMPOSITE SECTION (IN ³)				
I _c	20,500				
S _{TC}	1,526				
S _{BC}	693				

* INCLUDES SUPERIMPOSED D.L.

FOR IDENTIFICATION ONLY						
BEAM						
LOCATION	1	2	3	4	5	6
£ W. ABUTMENT	742.150	742.226	742.245	742.193	742.069	741.888
£ SPLICE 1	741.161	741.241	741.264	741.216	741.096	740.920
£ PIER 1	740.790	740.871	740.896	740.850	740.732	740.558
£ SPLICE 2	740.418	740.501	740.528	740.483	740.367	740.195
£ SPLICE 3	739.586	739.674	739.705	739.664	739.553	739.384
£ PIER 2	739.276	739.365	739.398	739.359	739.249	739.082
£ SPLICE 4	738.965	739.056	739.090	739.053	738.945	738.780
£ SPLICE 5	738.281	738.376	738.415	738.382	738.278	738.117
£ PIER 3	738.031	738.128	738.168	738.137	738.035	737.876
£ SPLICE 6	737.781	737.879	737.921	737.892	737.791	737.634
£ SPLICE 7	737.244	737.348	737.394	737.369	737.272	737.119
£ PIER 4	737.055	737.160	737.208	737.185	737.090	736.938
£ SPLICE 8	736.865	736.972	737.021	737.000	736.907	736.757
£ E. ABUTMENT	736.474	736.584	736.638	736.621	736.532	736.384

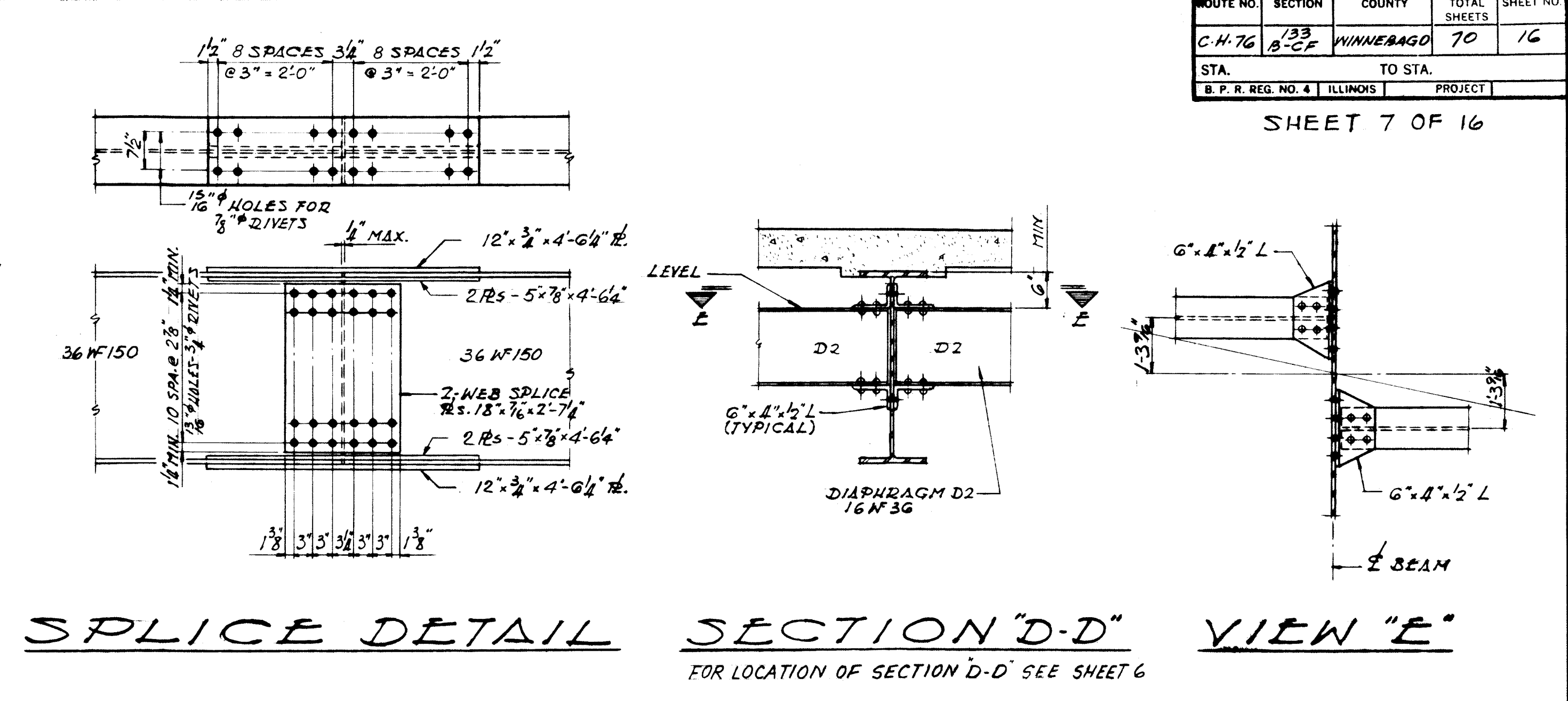
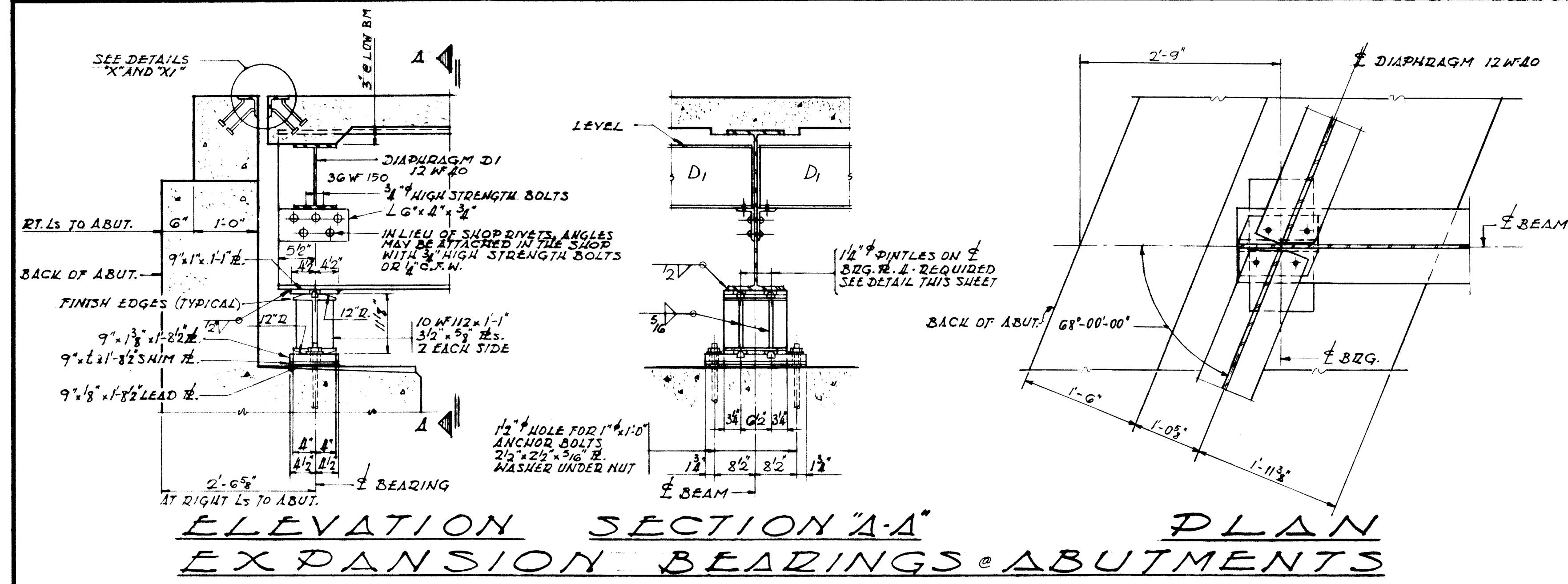
<i>t</i>	<i>LOCATION</i>
3_8^+	W. ABUT. @ BM 1
$7/6^-$	W. ABUT. @ BM 2
$7/6^+$	E. ABUT. @ BM 4
3_8^+	PIER 1 @ BM 2
3_8^+	PIER 2 @ BM 2
3_8^+	PIER 3 @ BM 3
3_8^+	PIER 4 @ BM 4



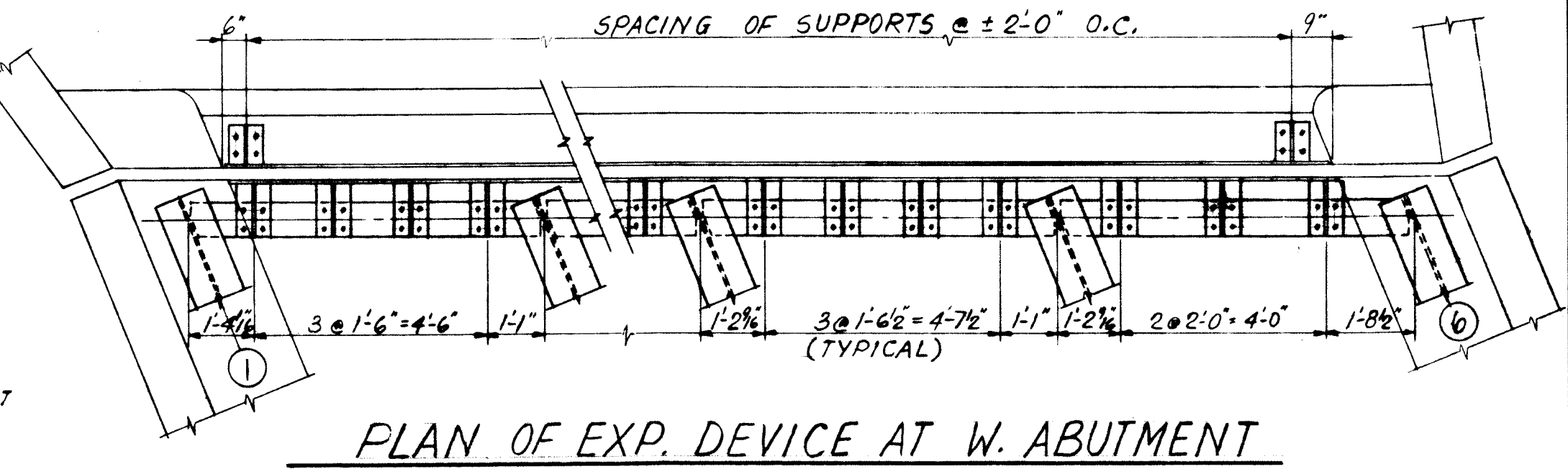
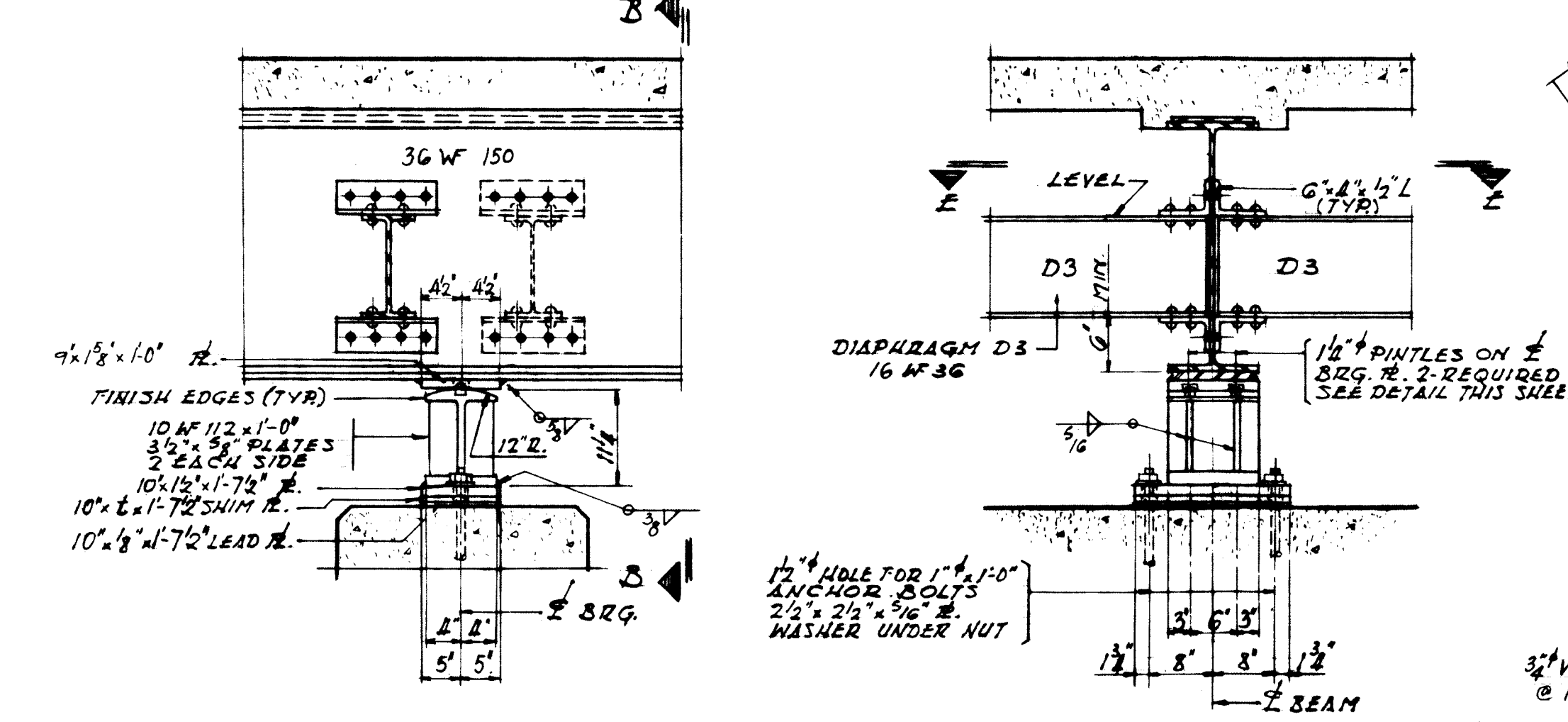
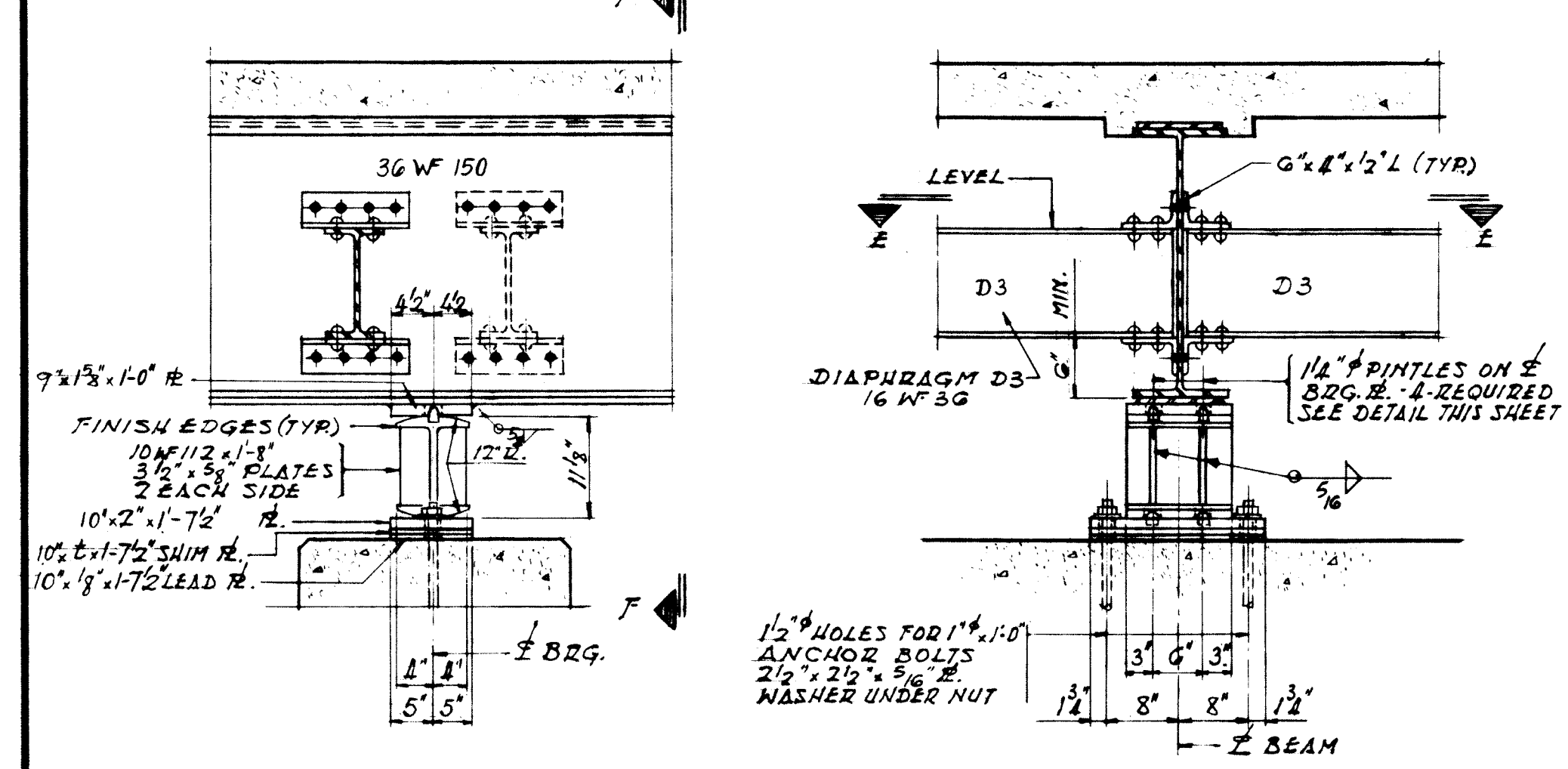
APPROVED
CHIEF HIGHWAY ENGINEER

FRAMING PLAN
COUNTY HIGHWAY RTE. 76 OVER
ROCK RIVER
SECTION 133-B-CF
WINNEBAGO COUNTY
STATION 65+ 47.50

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

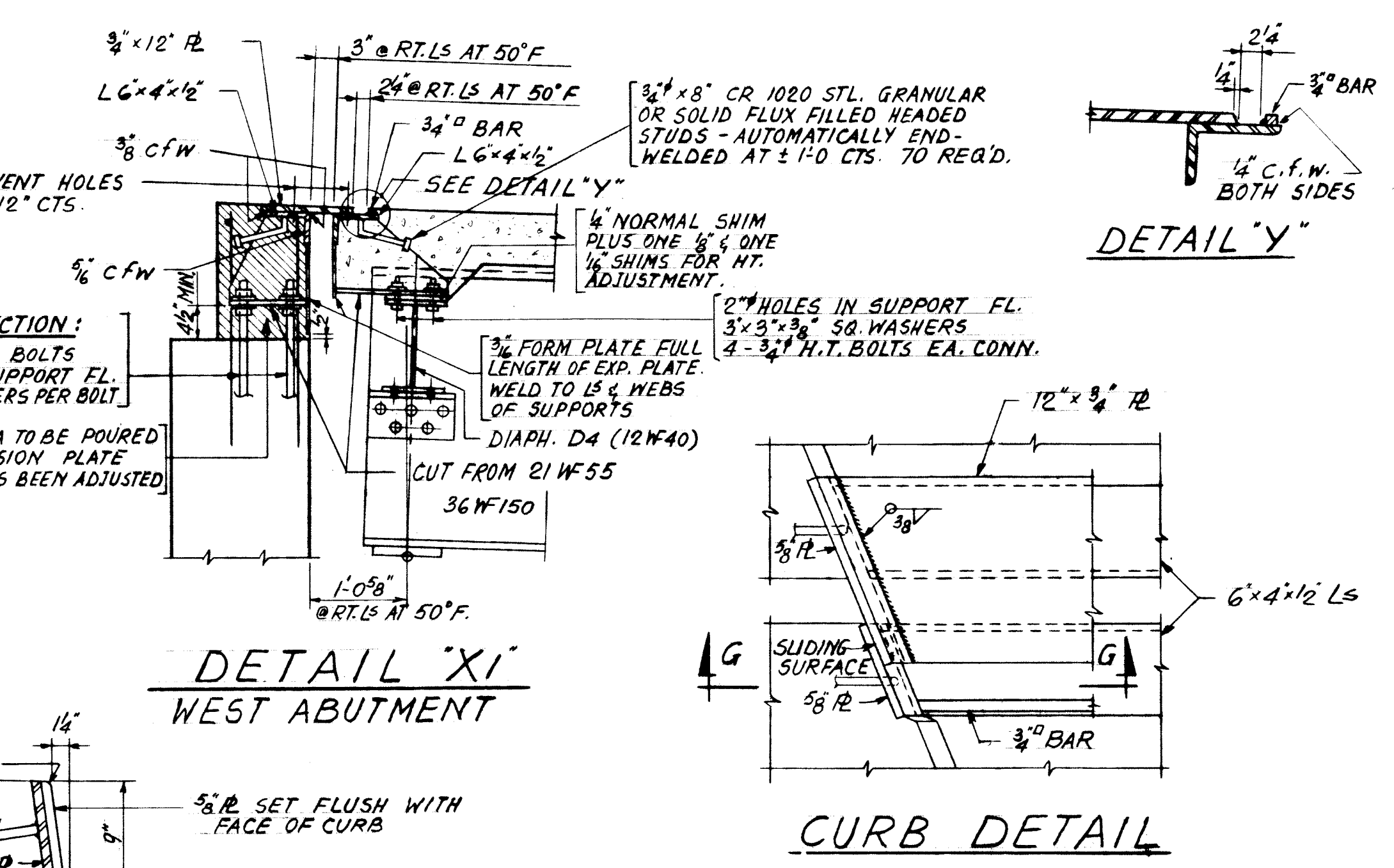


NOTE: FOR LOCATION AND THICKNESS OF SHIM PLATES SEE FRAMING PLAN, SHEET

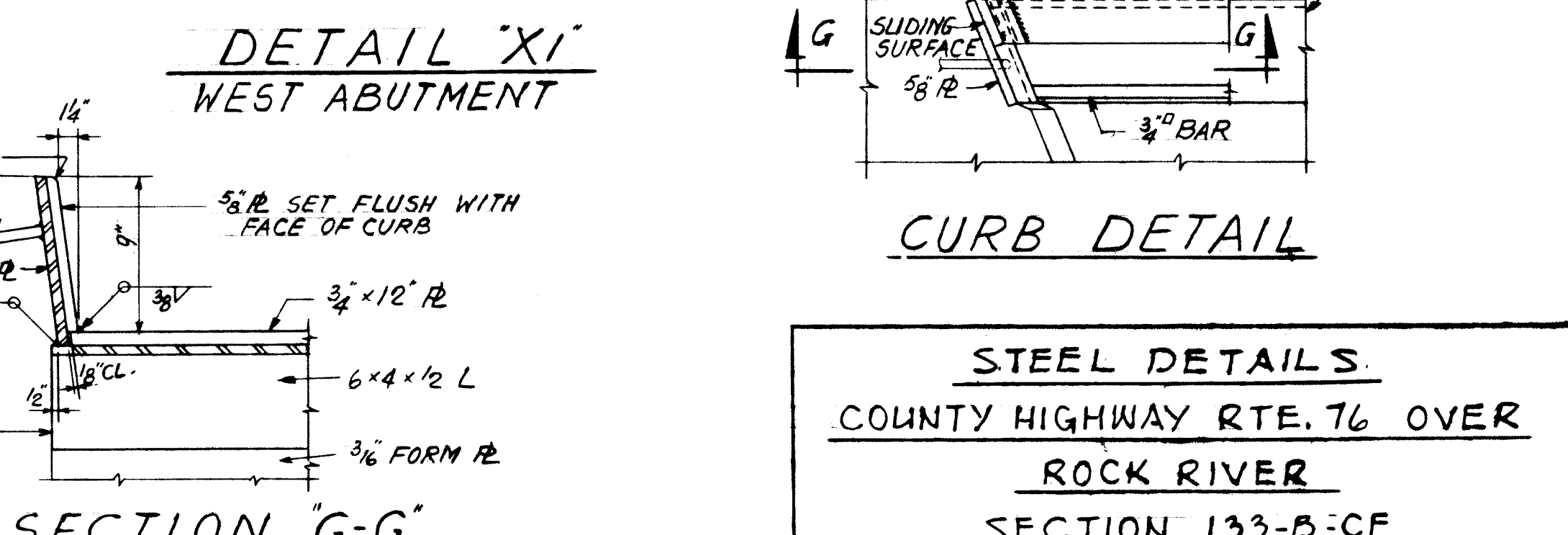
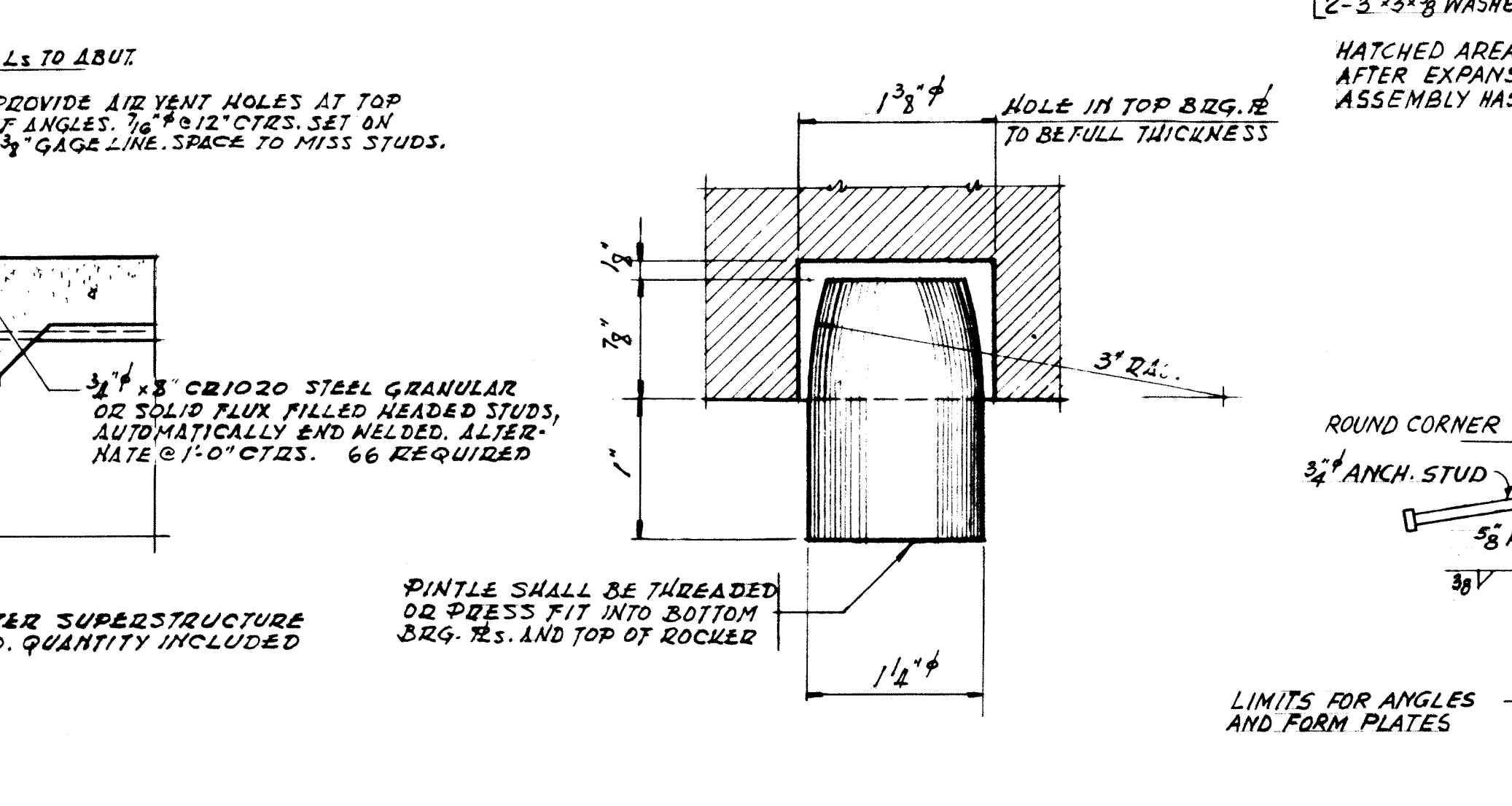
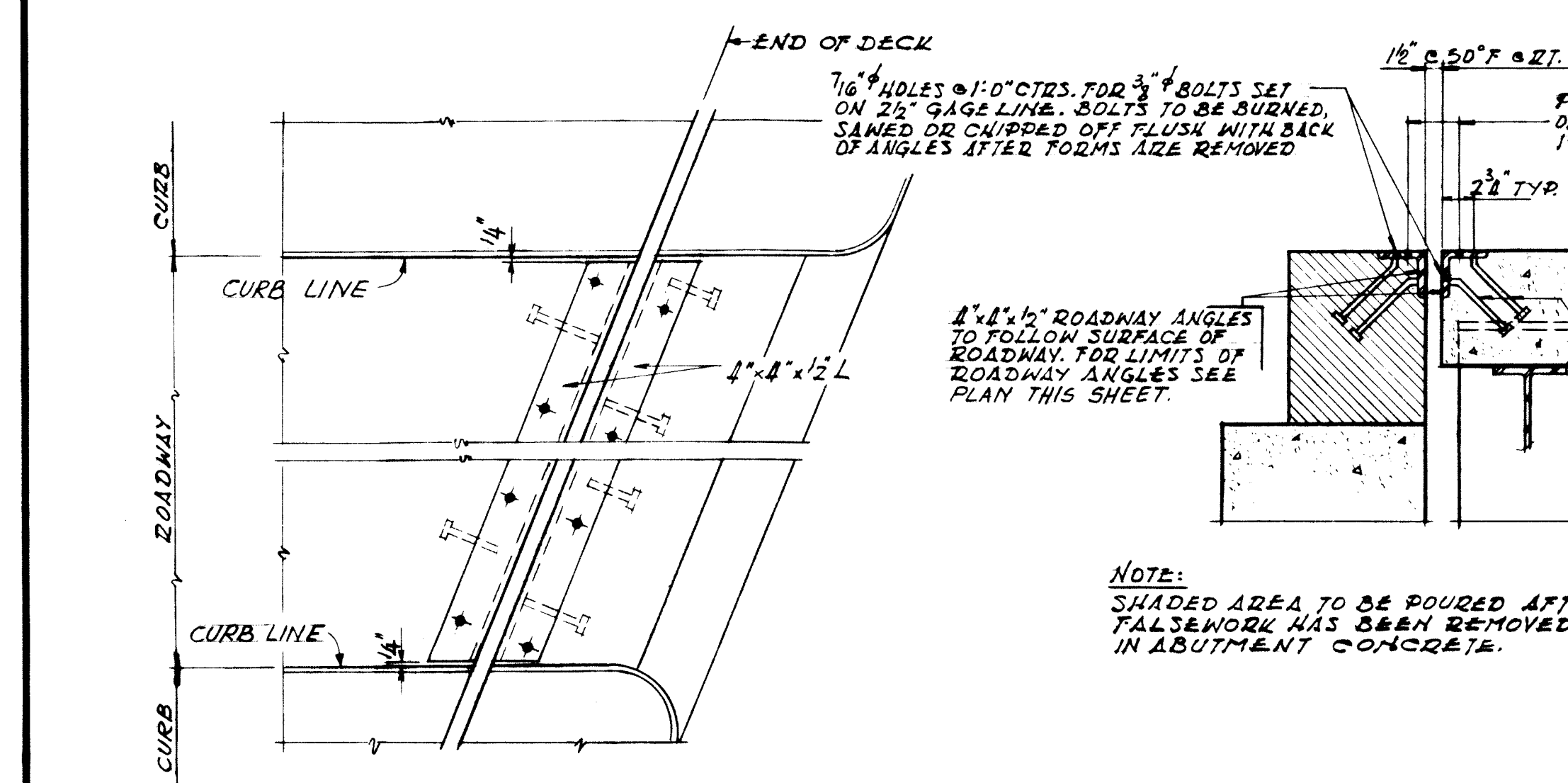


ELEVATION SECTION "F-F"
EXPANSION BEARINGS @ PIERS 1, 2 & 4

ELEVATION SECTION "B-B"
FIXED BEARINGS-PIER 3

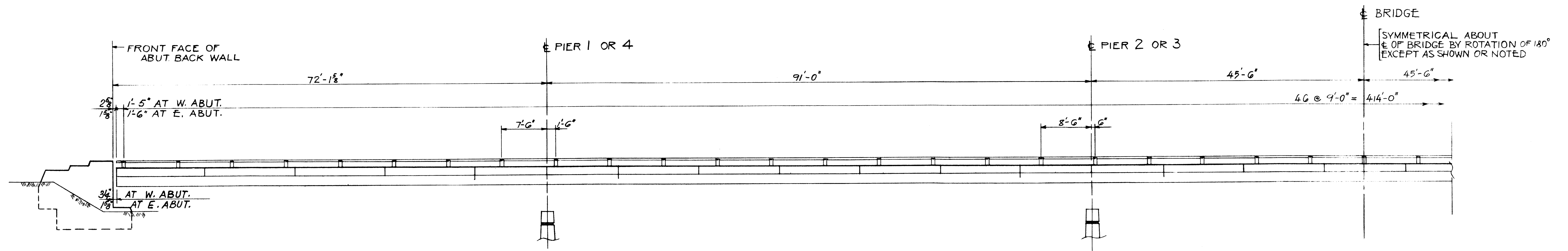


NOTE: FOR "C" DIMENSIONS SEE SHEET G

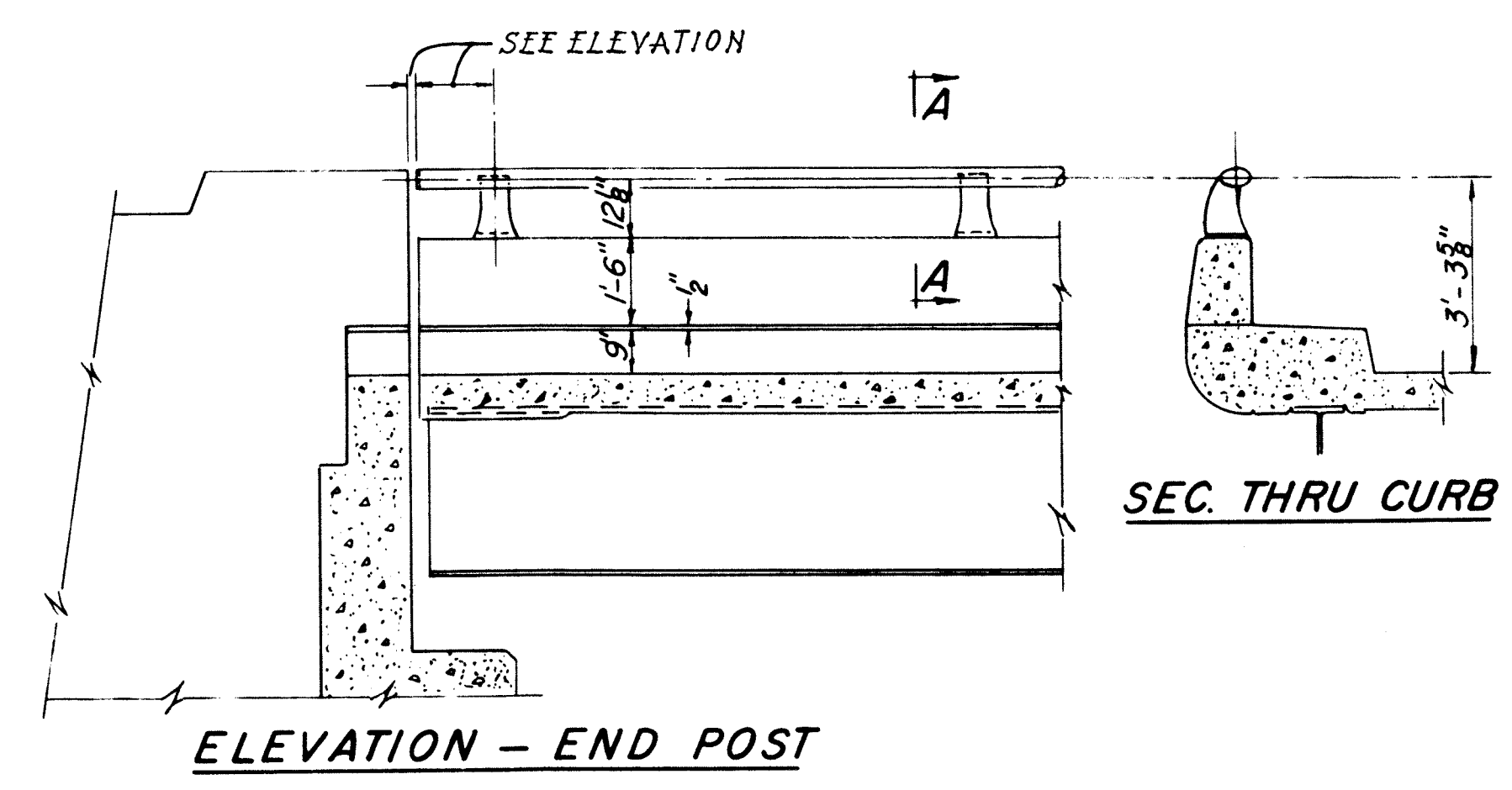
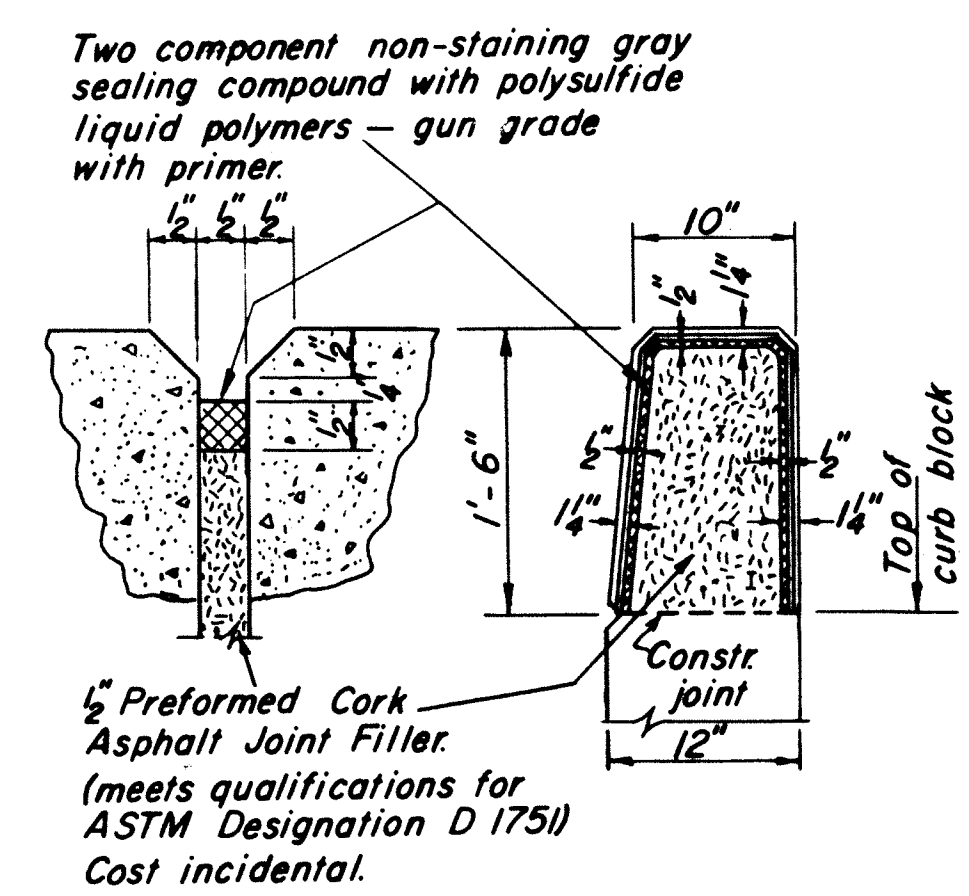
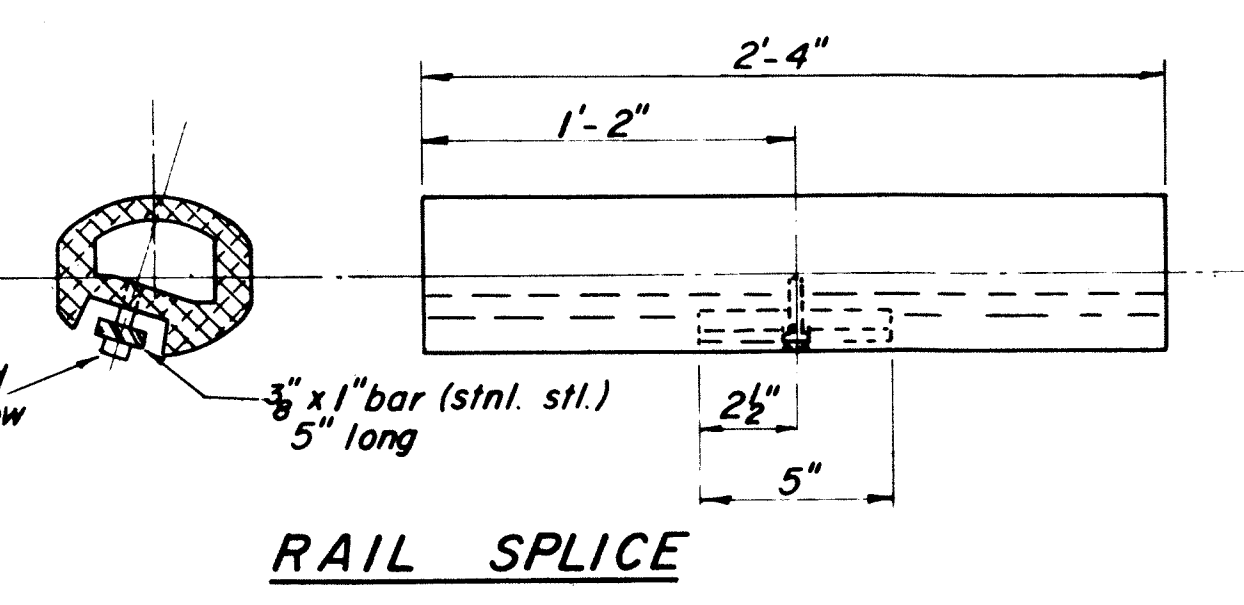
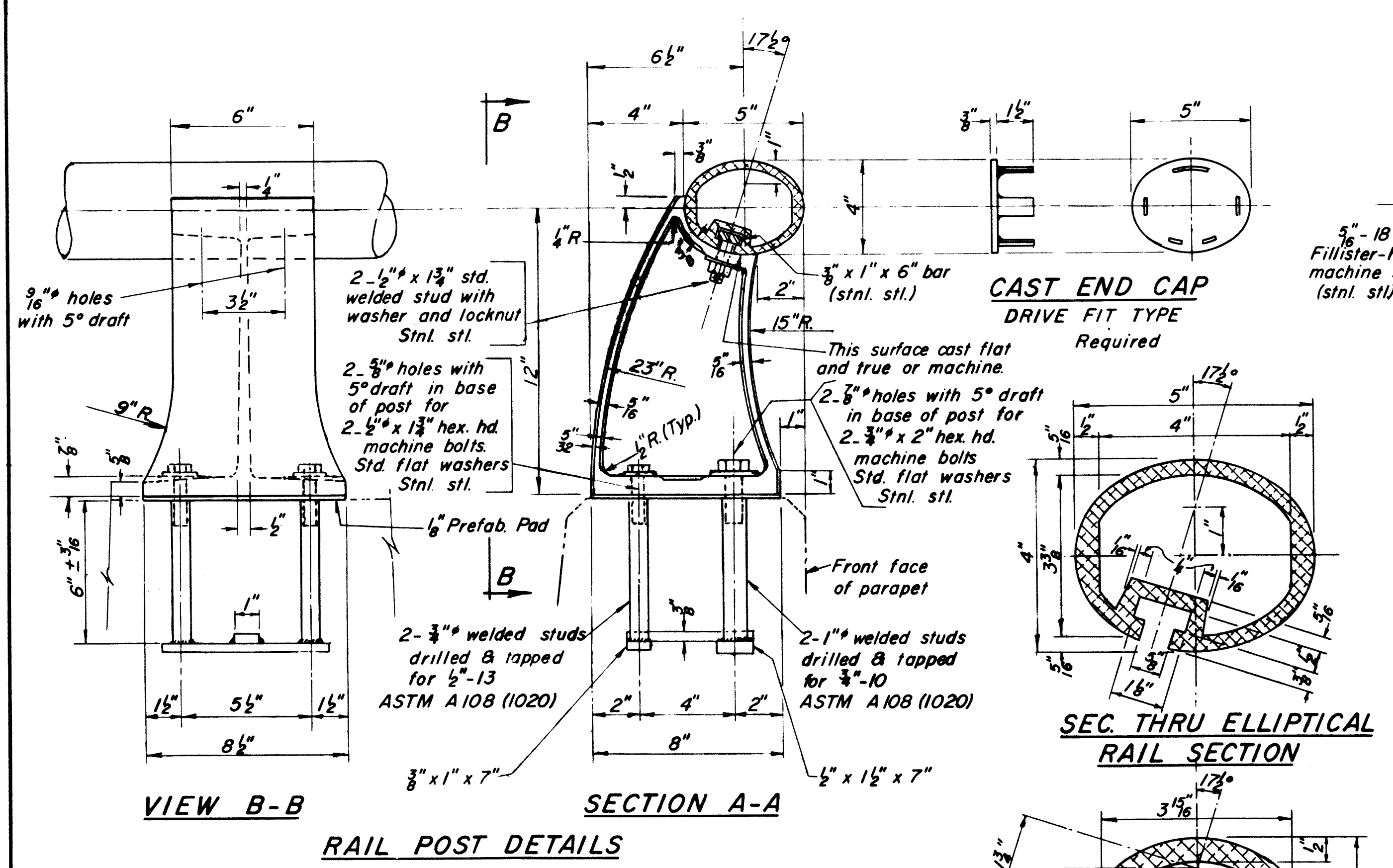


STEEL DETAILS
COUNTY HIGHWAY RTE. 76 OVER
ROCK RIVER
SECTION 133-B-CF
WINNEBAGO COUNTY
STATION 65+47.50

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. 1078 CHICAGO, ILLINOIS



DECK HANDRAIL ELEVATION
SCALE 1/8" = 1'-0"



NOTES:

All Posts shall be normal to parapet.

All Aluminum Alloy Extruded Rail shall conform to ASTM specification B-235 alloy 6061-T6, or 6062-T6, and shall extend a minimum of 2 panel lengths (attached to minimum of 3 posts) except at ends or at open joints where a minimum of 1 panel length is required. All joints in railing must be spliced per detail.

See Special Provisions for following Material Specifications:

Cast Aluminum Alloy Bridge Post— Alloy 344-T4.

Stainless Steel Welded Stud Bolts, Washers, and Locknuts.

For material composition of Prefabricated Pad, see Article 54.9(f), (Bearing and Anchorage), of the Standard Specifications.

METHOD of MEASUREMENT: Aluminum handrail shall be measured in lineal feet. The length paid for shall be the over all length along the top longitudinal railing member thru all posts and gaps.

BASIS of PAYMENT: Aluminum handrail shall be paid for at the contract unit price per lineal foot for ALUMINUM HANDRAIL, measured as specified, which price shall be payment in full for all materials, fabrication, transportation, and erection.

Cost of rail splice, end caps, and hardware to be incidental to item ALUMINUM HANDRAIL.

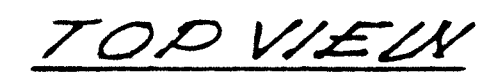
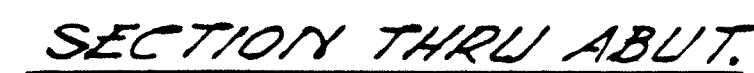
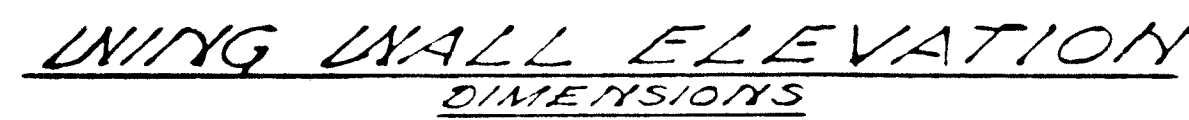
BILL OF MATERIAL

Item	Unit	Quantity
ALUMINUM HANDRAIL	Lin. Ft.	834

ALUMINUM HANDRAIL
COUNTY HIGHWAY RTE. 76 OVER
ROCK RIVER
SECTION 133-B-CF
WINNEBAGO COUNTY
STATION 65+47.50

APPROVED
COUNTY SUPERINTENDENT OF HIGHWAYS
EXAMINED
ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED
ENGINEER OF DESIGN
APPROVED
CHIEF HIGHWAY ENGINEER

ALFRED BENESCH & COMPANY CONSULTING ENGINEERS
10 SOUTH WABASH AVENUE
CHICAGO, ILLINOIS

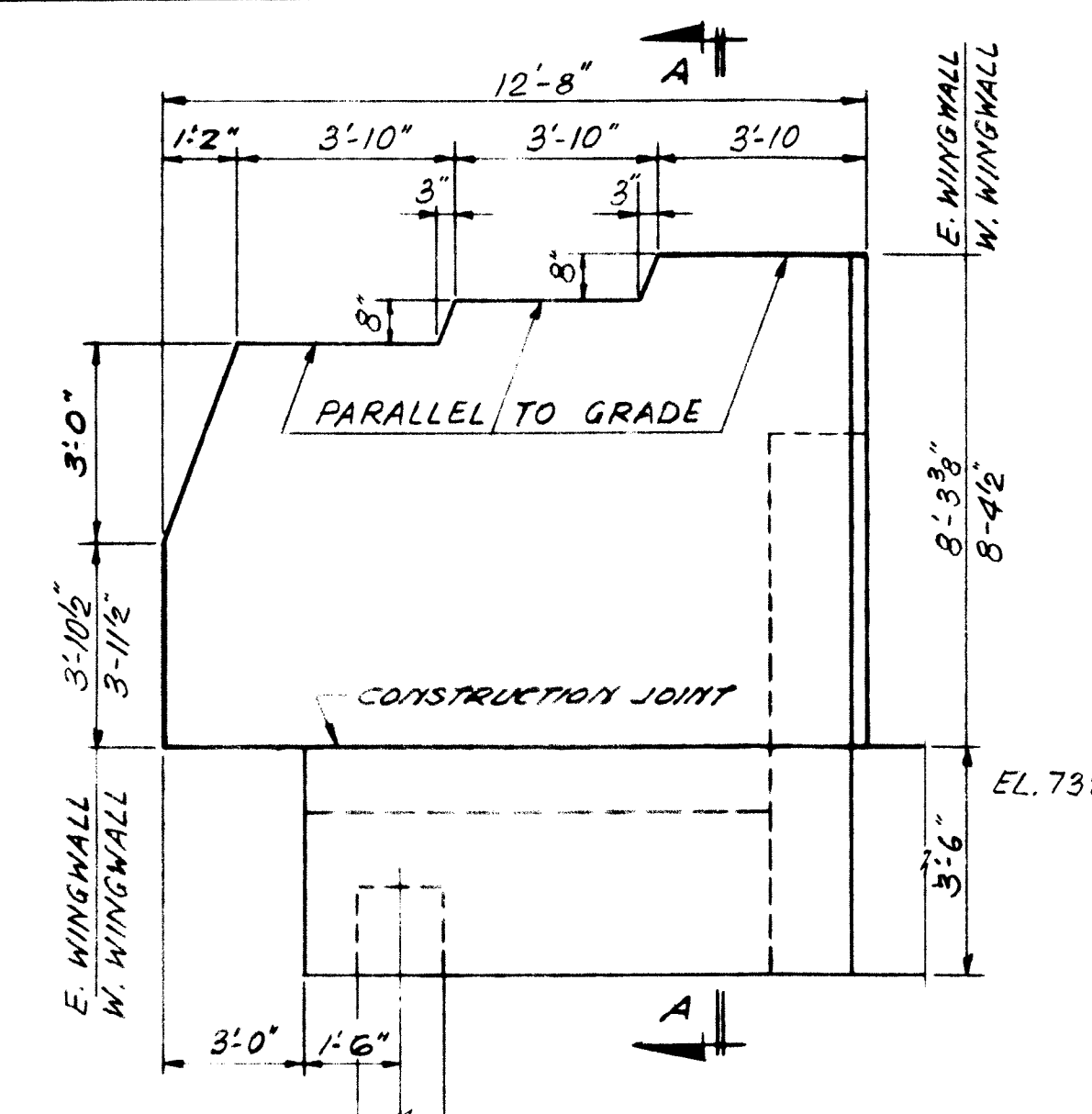


BAR	NO	SIZE	LENGTH	SHAPE
h11	8	# 7	38'-0"	—
h12	6	# 7	9'-3"	—
h13	6	# 7	10'-6"	—
h1	4	# 6	13'-3"	□
h2	4	# 6	9'-9"	┘
h15	2	# 6	4'-0"	—
h16	2	# 6	17'-0"	—
v6	33	# 6	2'-9"	—
v7	33	# 6	6'-3"	—
h14	16	# 5	19'-0"	—
h17	12	# 5	5'-3"	┘
h18	12	# 5	5'-0"	┘
h19	3	# 5	20'-3"	—
h20	4	# 4	9'-0"	—
h21	20	# 4	12'-1"	—
h22	12	# 4	11'-0"	—
h23	4	# 4	7'-1"	—
h24	4	# 4	3'-3"	—
s1	37	# 4	15'-6"	□
s2	20	# 4	9'-6"	□
u3	25	# 4	5'-3"	□
u4	20	# 4	8'-3"	□
v5	33	# 4	5'-0"	—
v8	26	# 4	7'-0"	—
v9	6	# 4	6'-9"	—
v10	16	# 4	8'-2"	—
v11	16	# 4	7'-6"	—
CLASS X CONCRETE		CU. YDS.		44.3
REINFORCEMENT BARS		LBS.		3,470
CONCRETE PILE		LIN. FT.		170
TEST PILE, CONCRETE		EACH		1 (ONE)

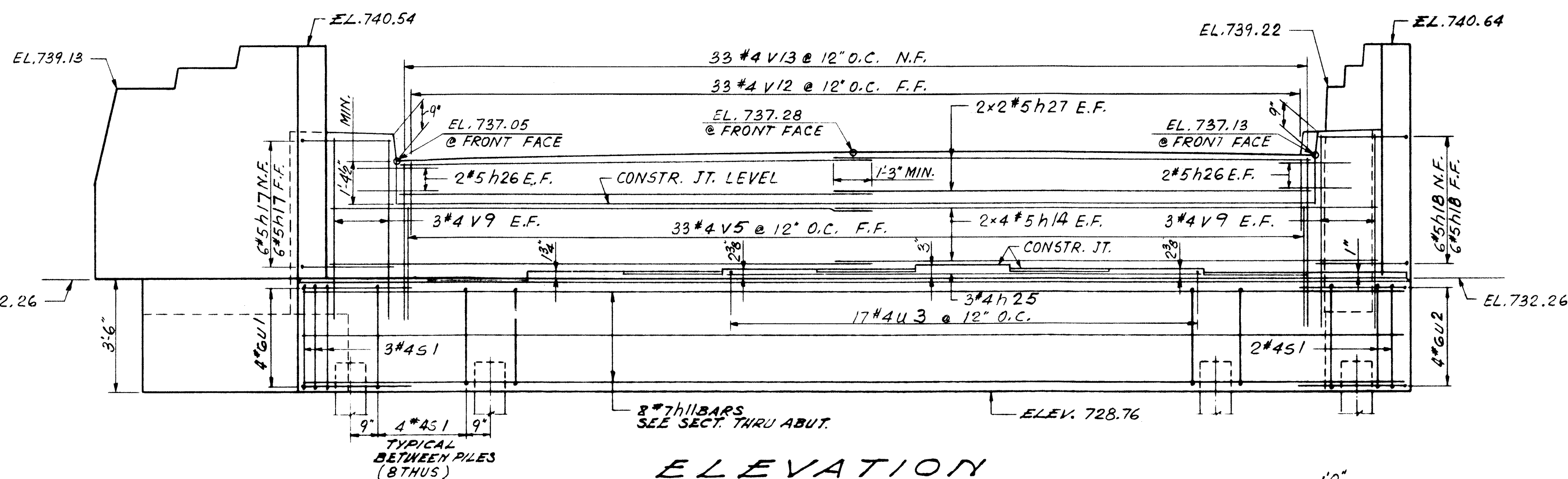
NOTE:
ALL BAR DIMENSIONS ARE OUT TO OUT.

APPROVED
COUNTY SUPERINTENDENT OF HIGHWAYS
EXAMINED
ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED
ENGINEER OF DESIGN
APPROVED
CHIEF HIGHWAY ENGINEER

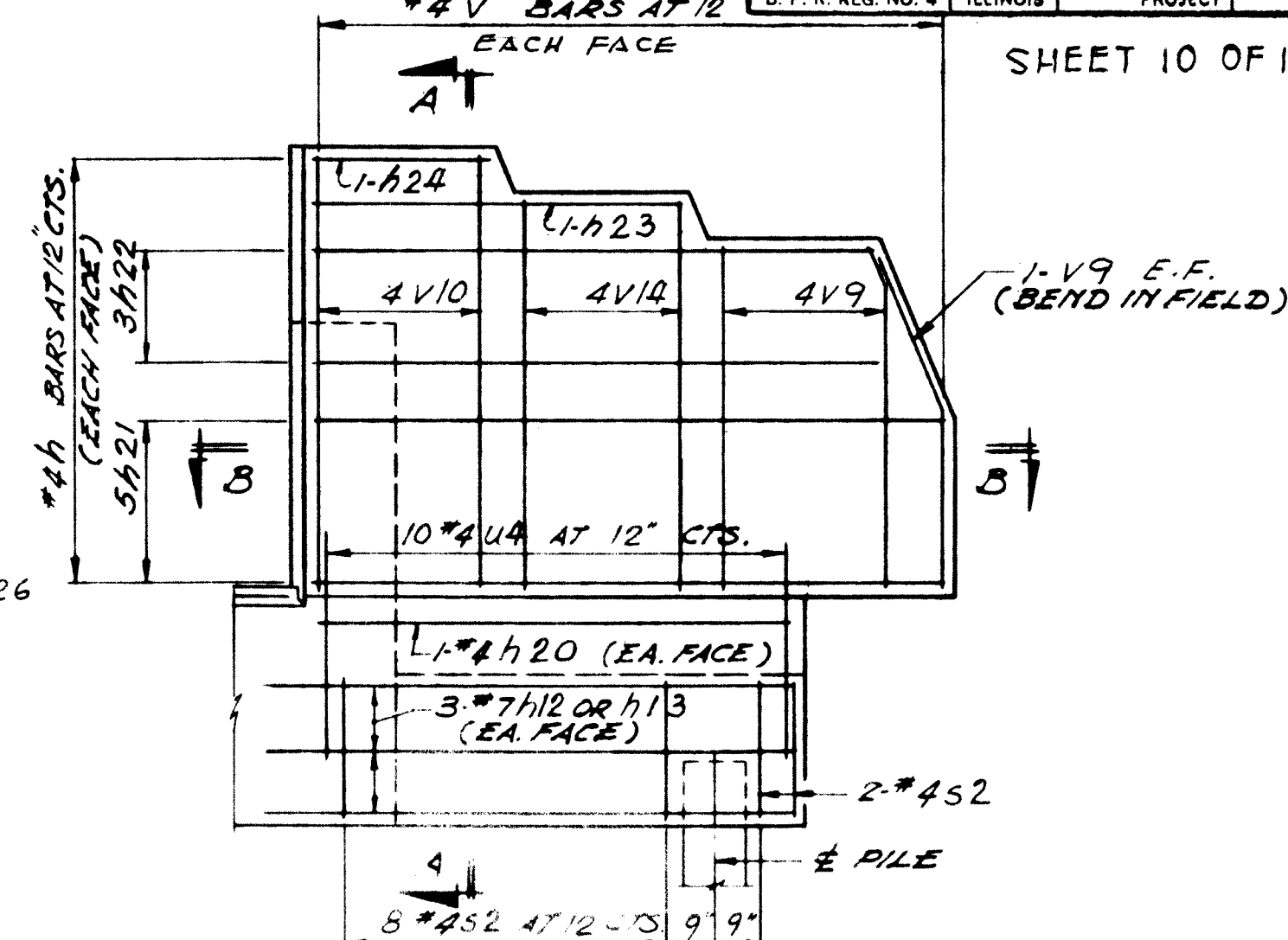
ALFRED BENESCH & ASSOCIATES
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS



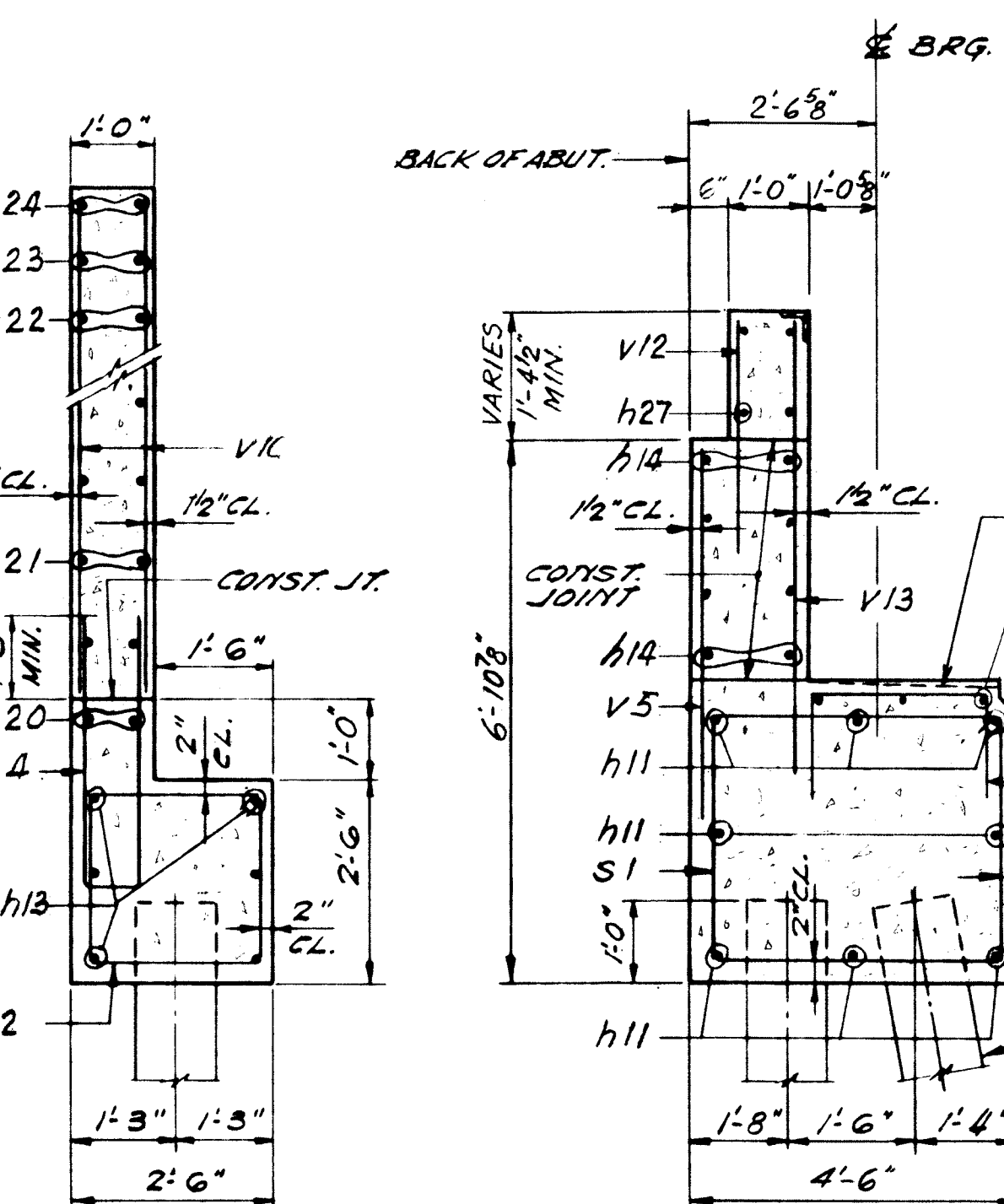
UNING WALL ELEVATION



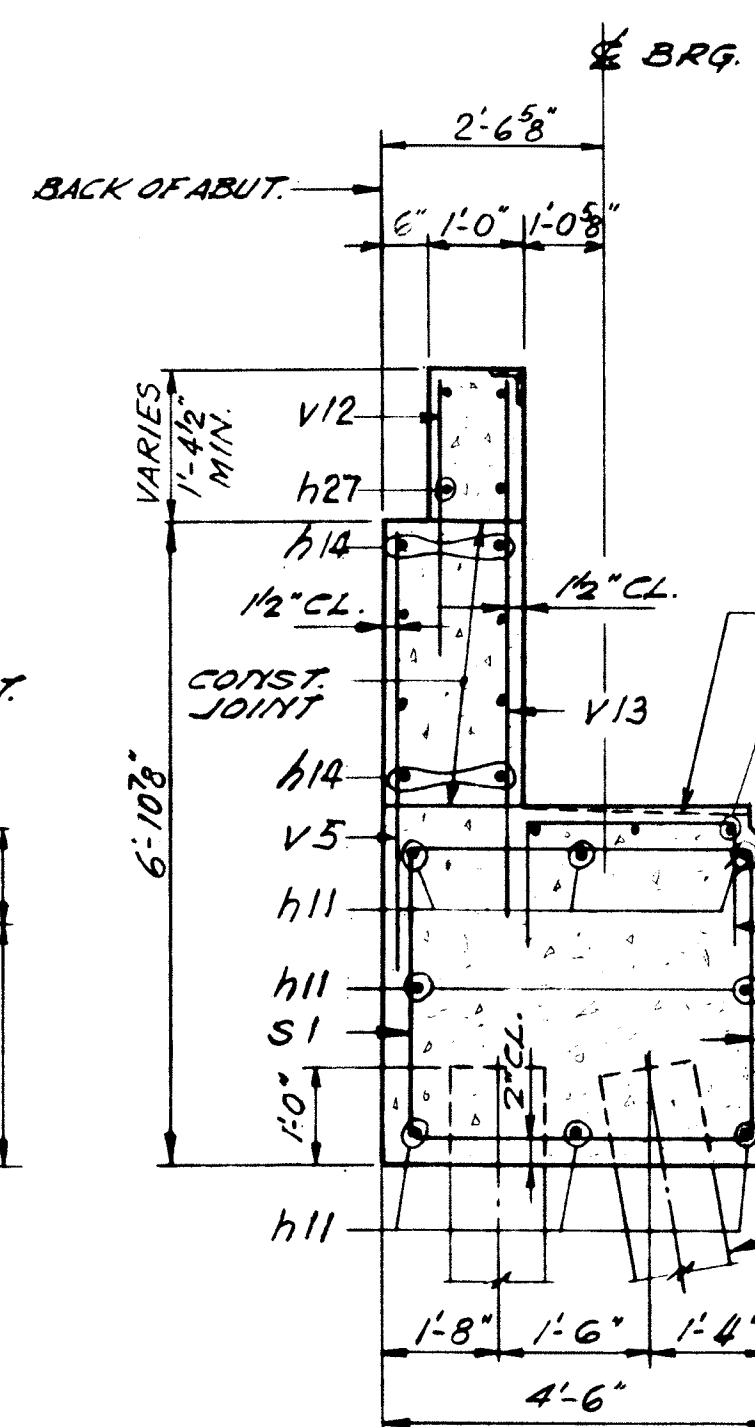
ELEVATION



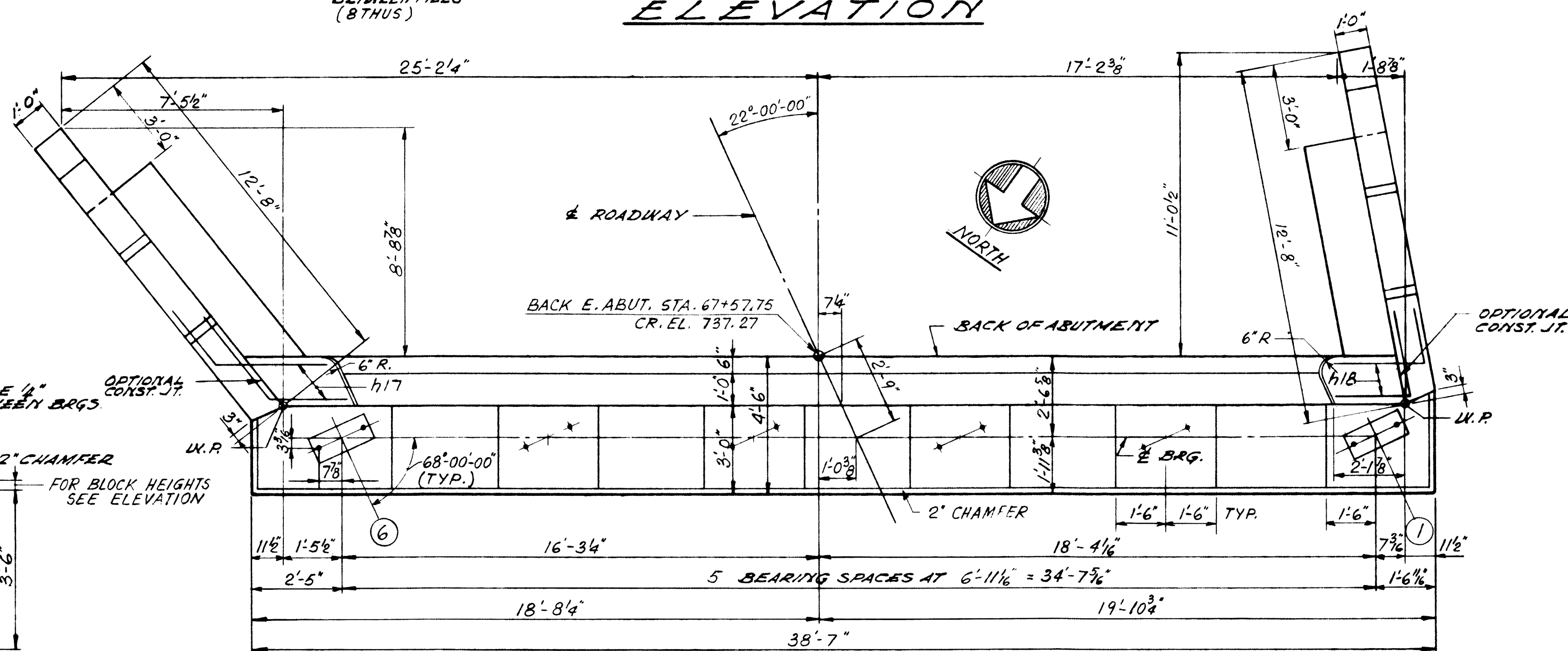
WINING WALL ELEVATION
REINFORCEMENT



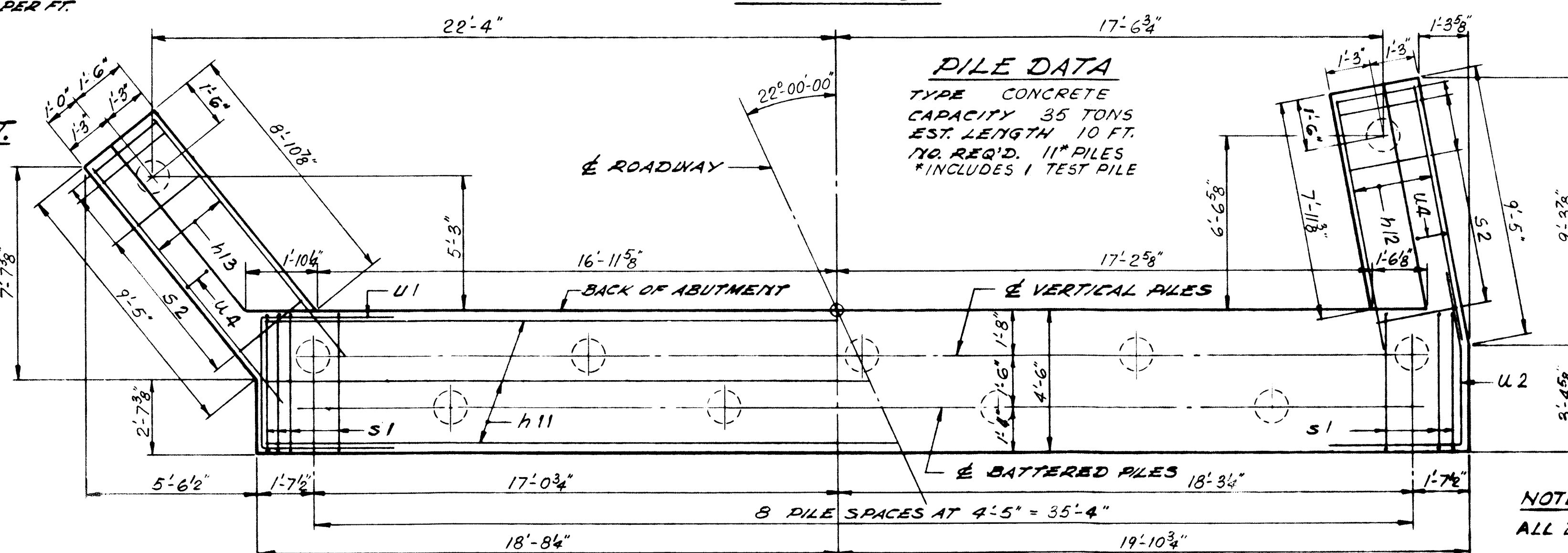
SECTION A-A



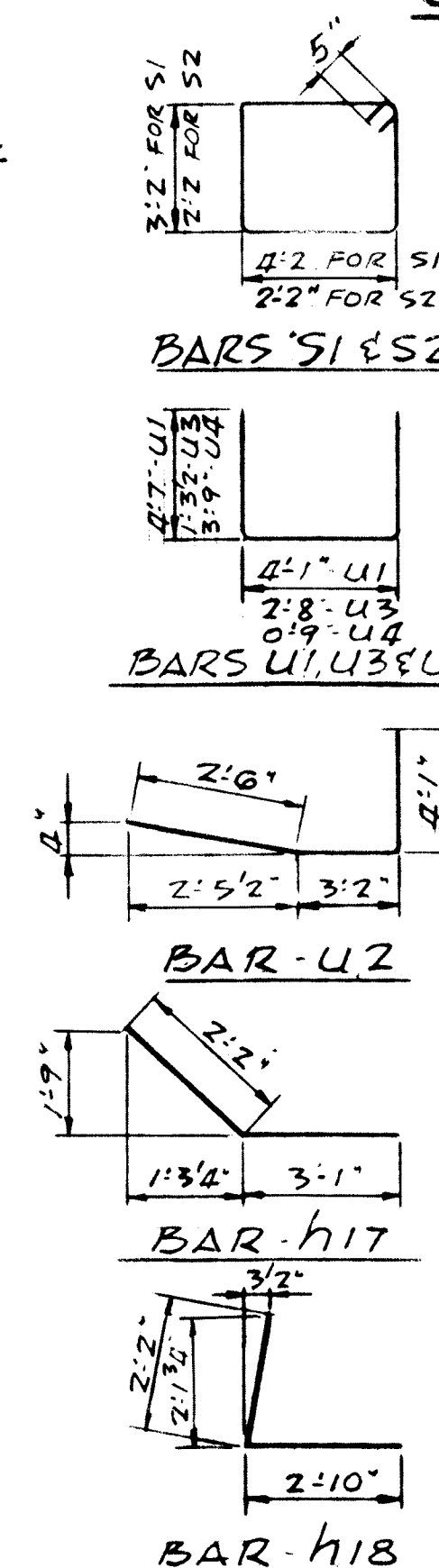
SECTION THRU ABUT.



TOP VIEW



PLAY-PILE CAP

BILL OF MATERIAL

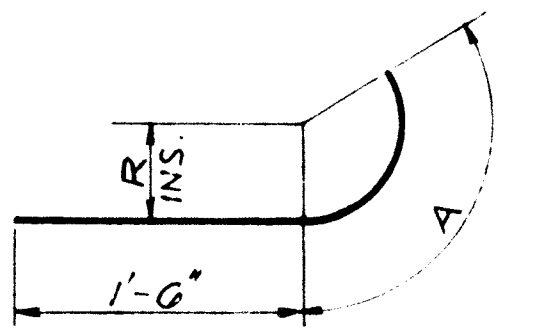
BAR	NO	SIZE	LENGTH	SHAPE
h 11	8	#7	38'-0"	—
h 12	6	#7	9'-3"	—
h 13	6	#7	10'-6"	—
u 1	4	#6	13'-3"	□
u 2	4	#6	9'-9"	□
h 14	19	#5	19'-0"	—
h 17	12	#5	5'-3"	□
h 18	12	#5	5'-0"	□
h 25	3	#5	16'-6"	—
h 26	8	#5	4'-0"	—
h 27	8	#5	17'-0"	—
h 20	4	#4	9'-0"	—
h 21	20	#4	12'-1"	—
h 22	12	#4	11'-0"	—
h 23	4	#4	7'-1"	—
h 24	4	#4	3'-3"	—
S 1	37	#4	15'-6"	□
S 2	20	#4	9'-6"	□
u 3	17	#4	5'-3"	□
u 4	20	#4	8'-3"	□
V 5	33	#4	5'-0"	—
V 9	32	#4	6'-9"	—
V 10	16	#4	8'-2"	—
V 12	33	#4	2'-9"	—
V 13	33	#4	6'-3"	—
V 14	16	#4	7'-3"	—
CLASS X CONCRETE			CU. YDS	43.5
REINFORCEMENT BARS			LBS.	3,270
CONCRETE PILES			LIN. FT.	100
TEST PILE, CONCRETE			EACH	1 (ONE)
CLASS 'A' EXCAV. FOR STRUCT.			CU. YDS.	96

EAST ABUTMENT
COUNTY HIGHWAY RTE. 76 OVER
ROCK RIVER
SECTION 133-B-CF
WINNEBAGO COUNTY
STATION 65+47.50

APPROVED
COUNTY SUPERINTENDENT OF HIGHWAYS
EXAMINED
ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED
ENGINEER OF DESIGN
APPROVED
CHIEF HIGHWAY ENGINEER

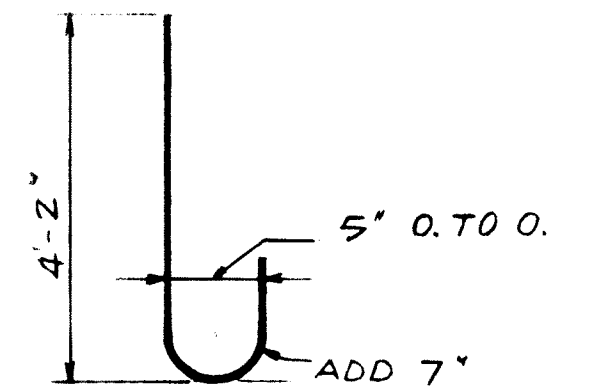
NOTE:
ALL BAR DIMENSIONS ARE OUT TO OUT.

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
102 S. WABASH AVE. CHICAGO, ILLINOIS



BAR	R	A
h2	10"	2-0
h3	11 1/2"	2-3
h4	1-1	2-6
h5	1-3	2-9
h6	1-2 1/2	3-0

DETAIL OF BARS
h2, h3, h4, h5 & h6



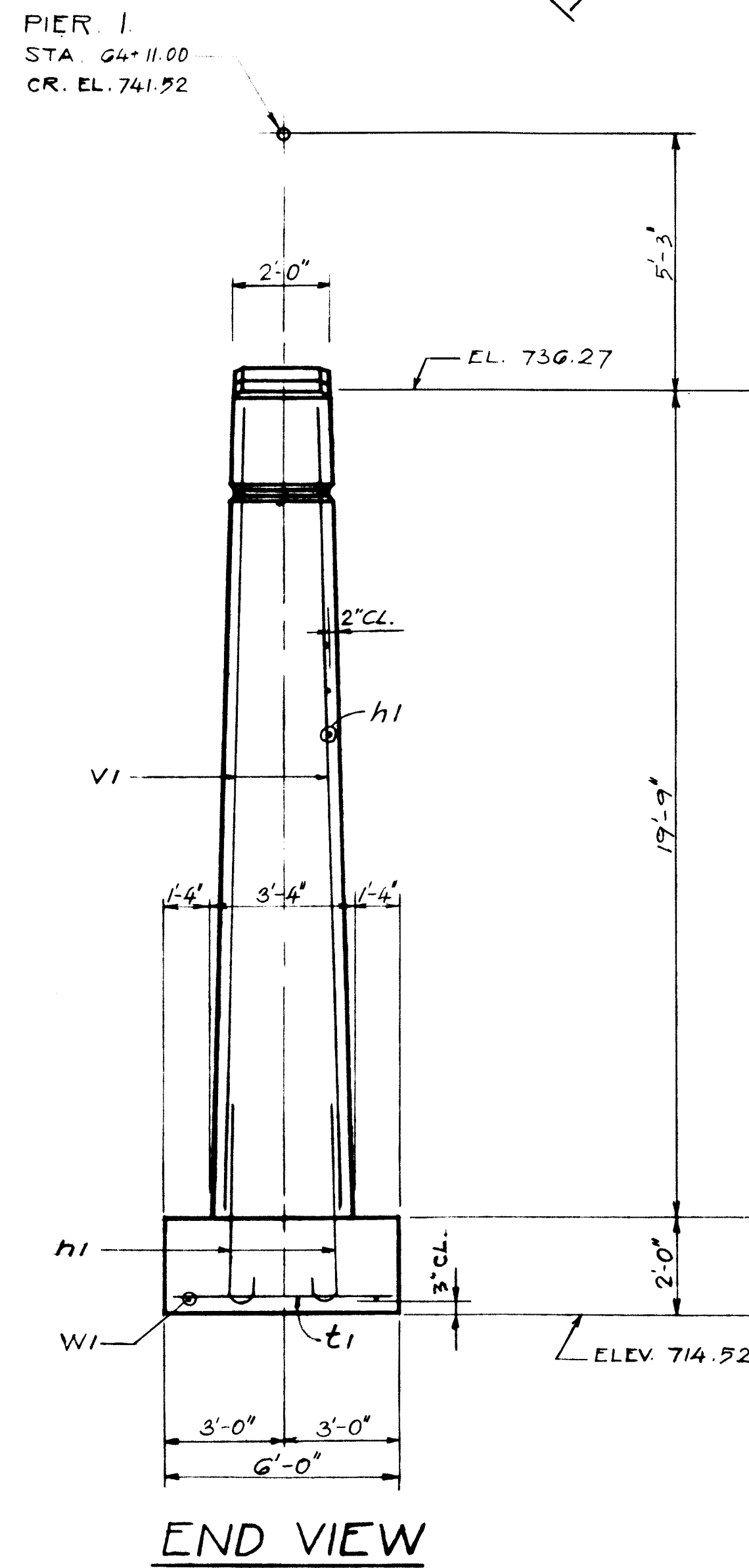
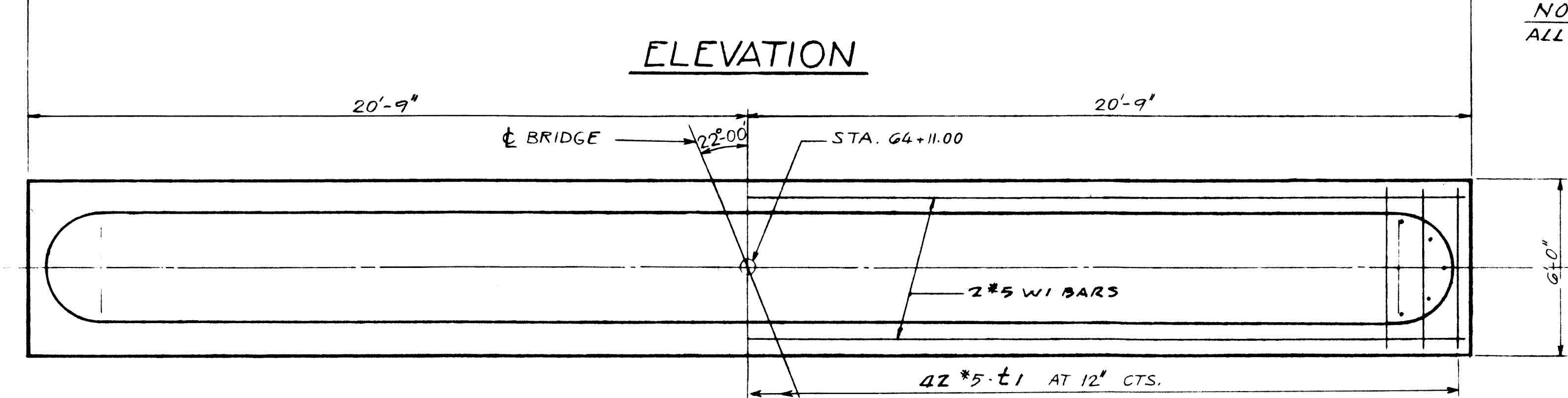
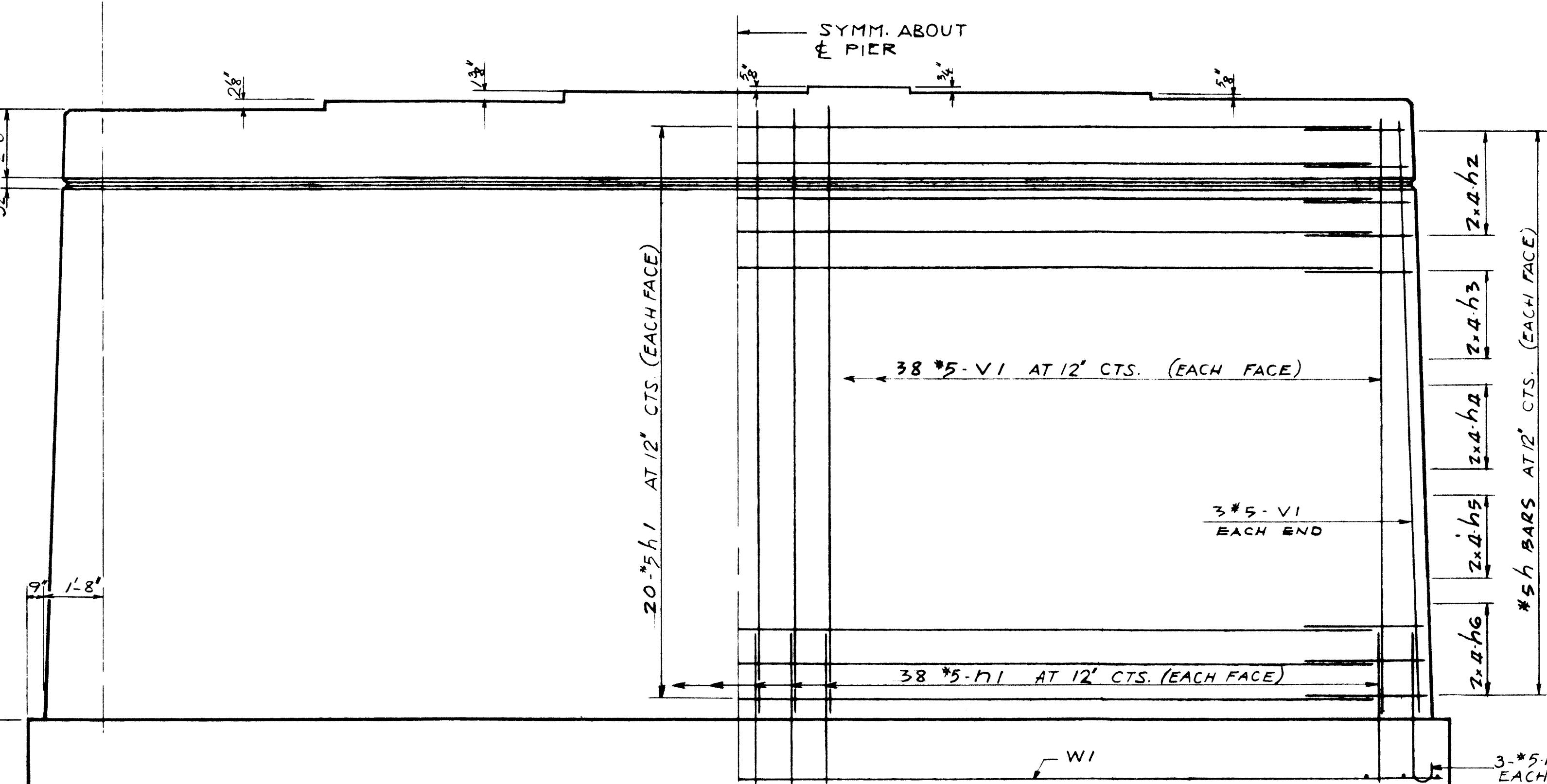
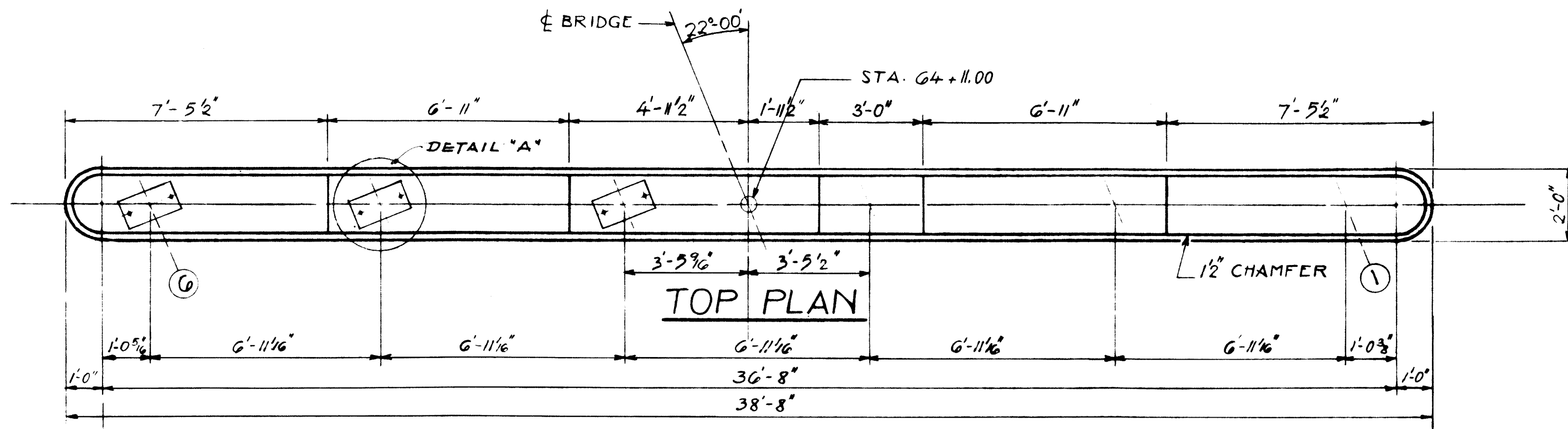
BAR h1

BILL OF MATERIAL

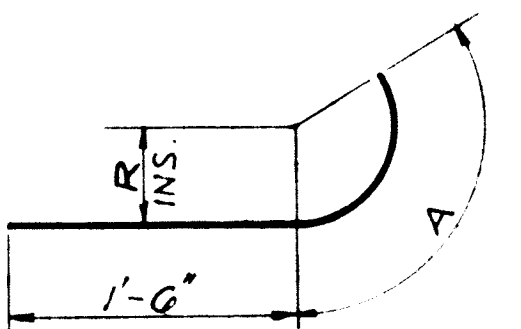
BAR	NO.	SIZE	LENGTH	SHAPE
h1	40	#5	36-9	—
h2	16	#5	3-6	—
h3	16	#5	3-9	—
h4	16	#5	4-0	—
h5	16	#5	4-3	—
h6	16	#5	4-6	—
h1	82	#5	4-9	—
t1	42	#5	5-6	—
v1	82	#5	19-6	—
w1	2	#5	41-0	—
CLASS A CONCRETE			CU YDS	94.7
REINFORCEMENT BARS			LBS.	4,270
CLASS B EXCAV. FOR STRUCT.			CU. YD.	142

PIER 1
COUNTY HIGHWAY RTE. 76 OVER
ROCK RIVER
SECTION 133-B-CF
WINNEBAGO COUNTY
STATION 65+47.50

ALFRED BENESCH & ASSOCIATES
CONSULTING ENGINEERS
100 N. WABASH AVE. CHICAGO, ILLINOIS

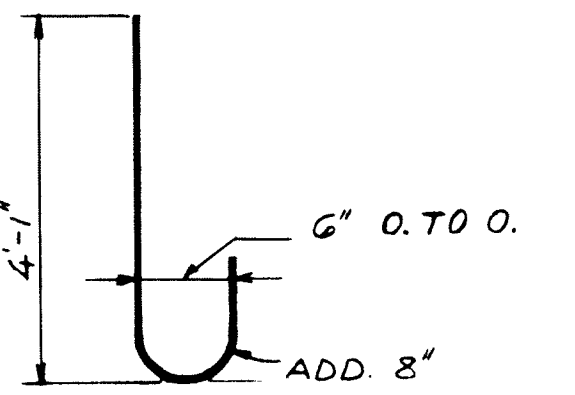


APPROVED
COUNTY SUPERINTENDENT OF HIGHWAYS
EXAMINED
ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED
ENGINEER OF DESIGN
APPROVED
CHIEF HIGHWAY ENGINEER



BAR	R	A
h2	10"	2-0
h3	11 1/2"	2-3
h4	1-1	2-6
h9	1-2 1/2	2-9

DETAIL OF BARS
h2, h3, h4 & h9



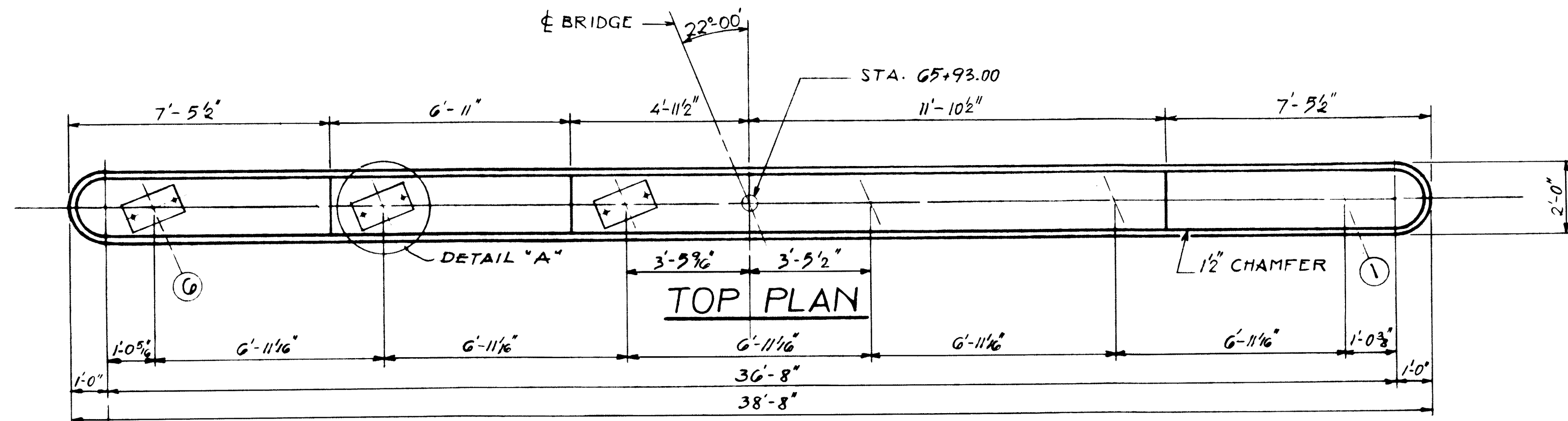
BAR h2

BILL OF MATERIAL

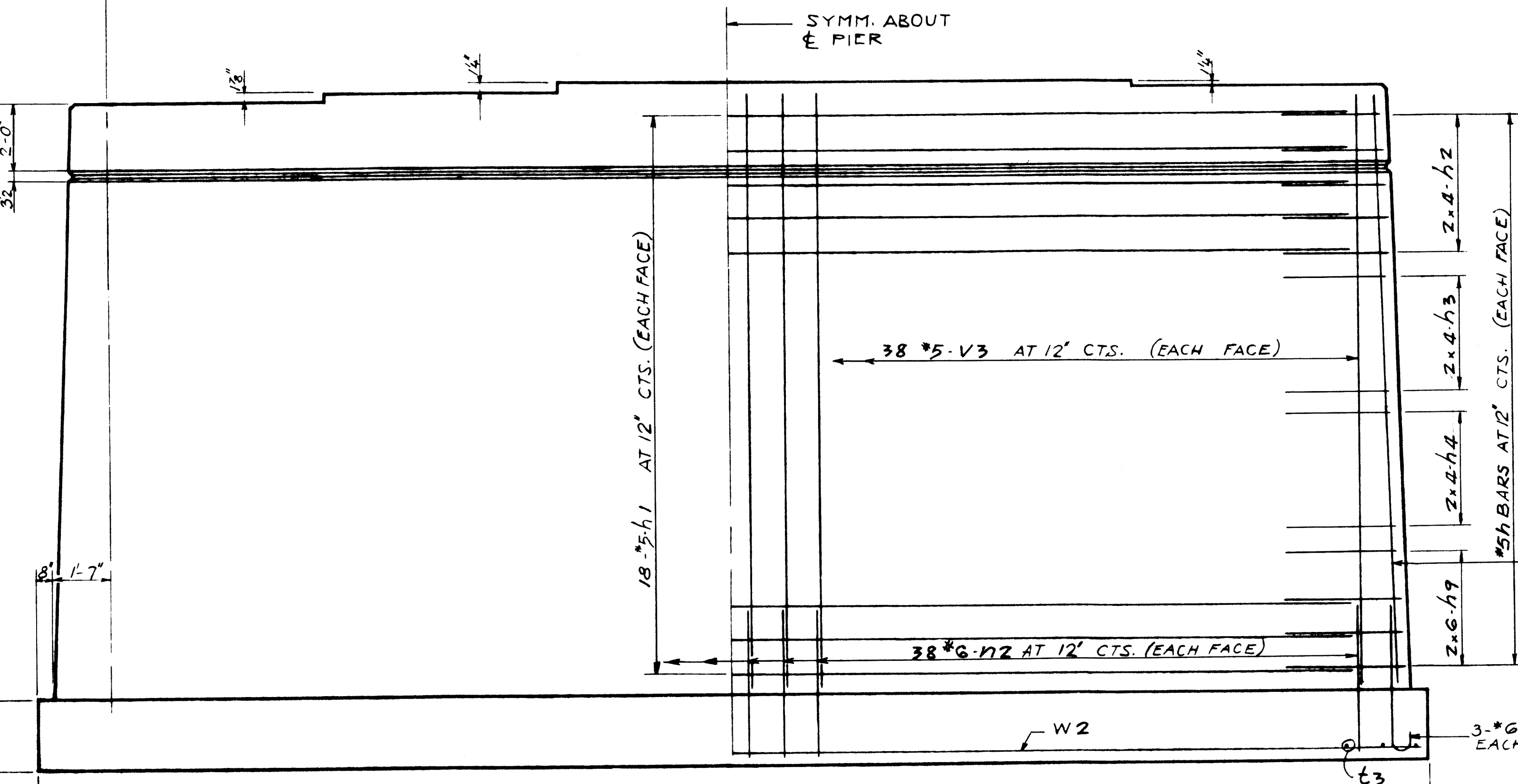
BAR	NO	SIZE	LENGTH	SHAPE
h2	82	#6	4-9	C
h1	36	#5	36-9	—
h2	16	#5	3-6	—
h3	16	#5	3-9	—
h4	16	#5	4-0	—
h9	24	#5	4-3	—
t3	42	#5	6-6	—
v3	82	#5	17-3	—
w2	2	#5	40-9	—
CLASS A CONCRETE				CU. YDS. 86.5
REINFORCEMENT BARS				LBS. 4,100
CLASS B EXCAV. FOR STRUCT.				CU. YD 139

PIER 3
COUNTY HIGHWAY RTE. 76 OVER
ROCK RIVER
SECTION 133-B-CF
WINNEBAGO COUNTY
STATION 65+47.50

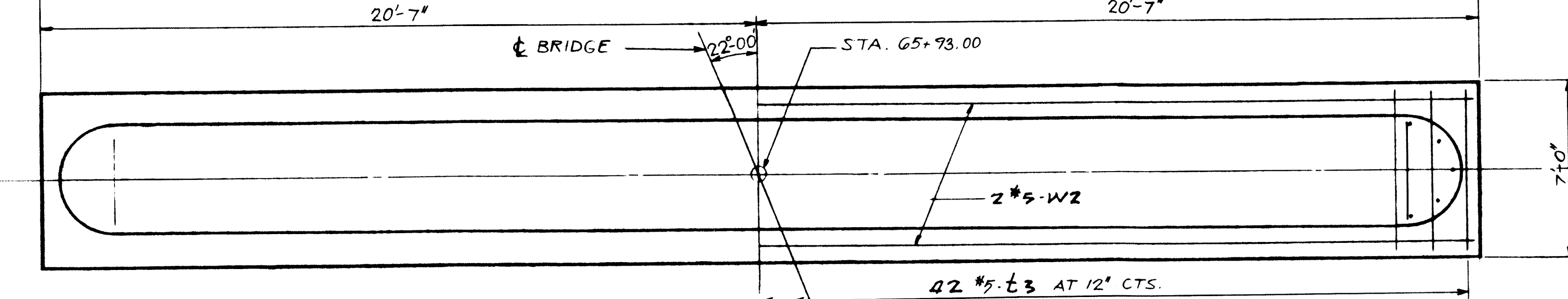
ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
103 S. WABASH AVE. CHICAGO, ILLINOIS



TOP PLAN

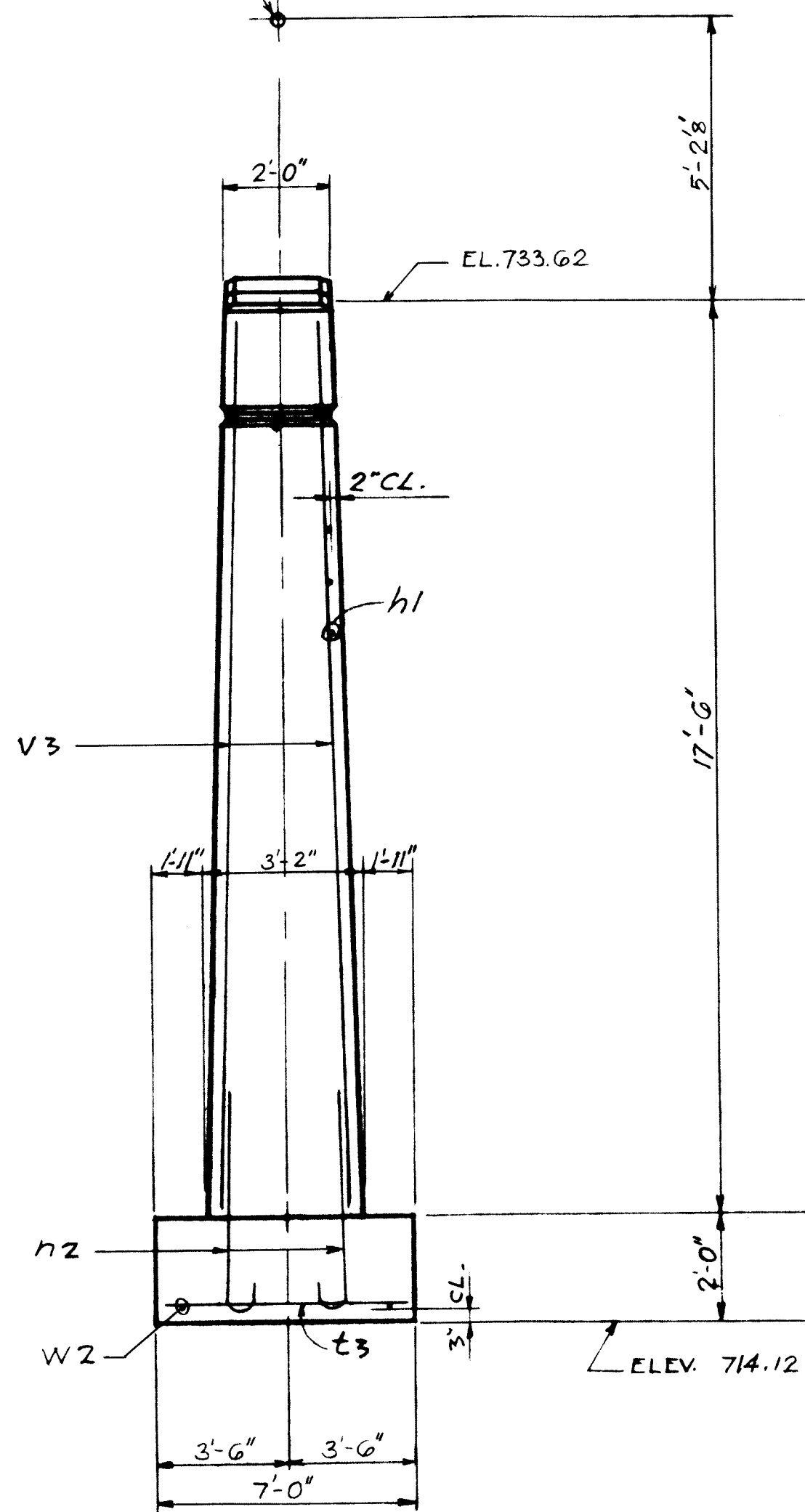


ELEVATION



FOOTING PLAN

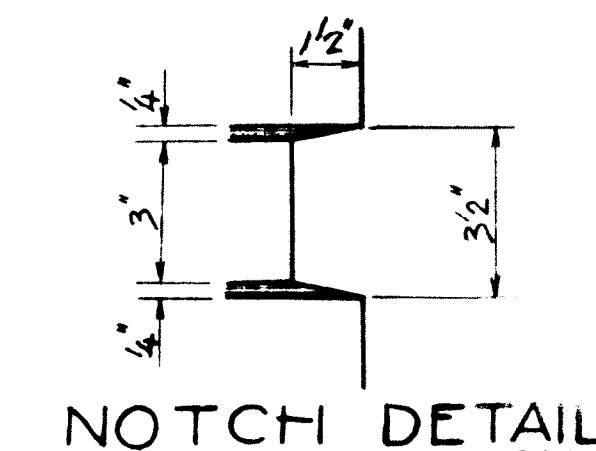
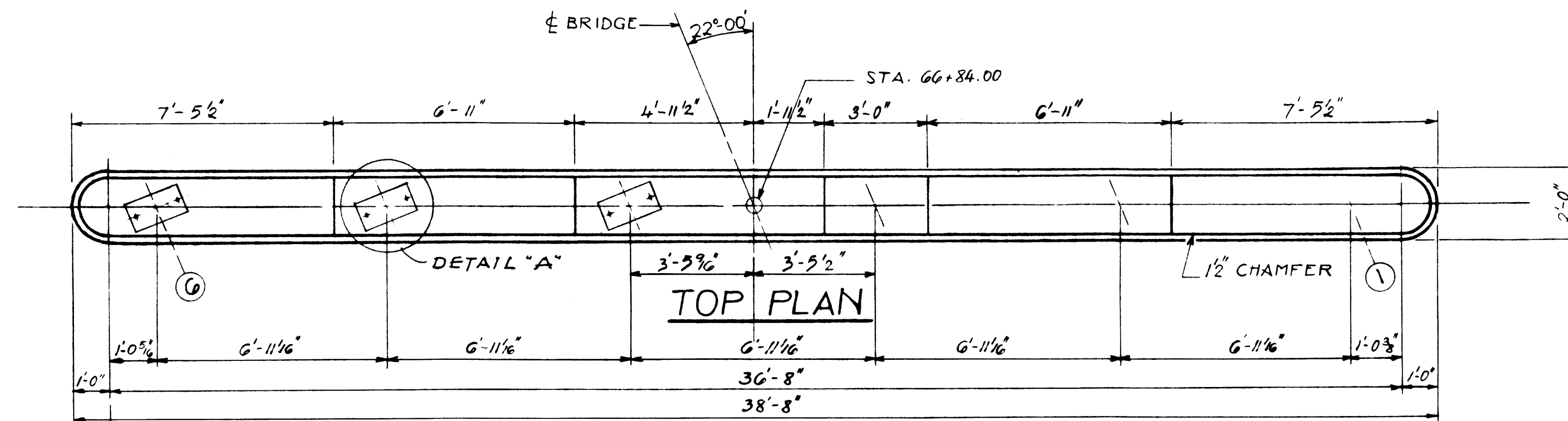
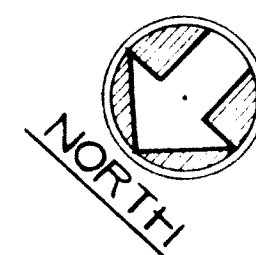
PIER 3.
STA. 65+93.00
CR. EL. 738.80



END VIEW

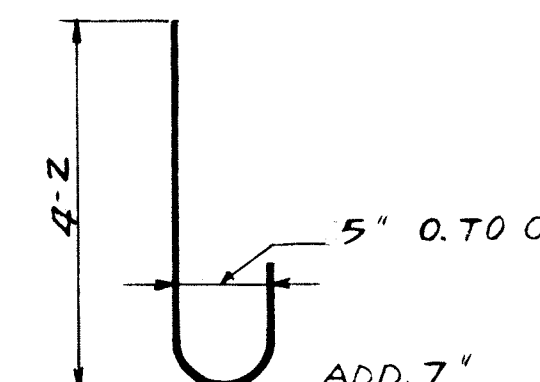
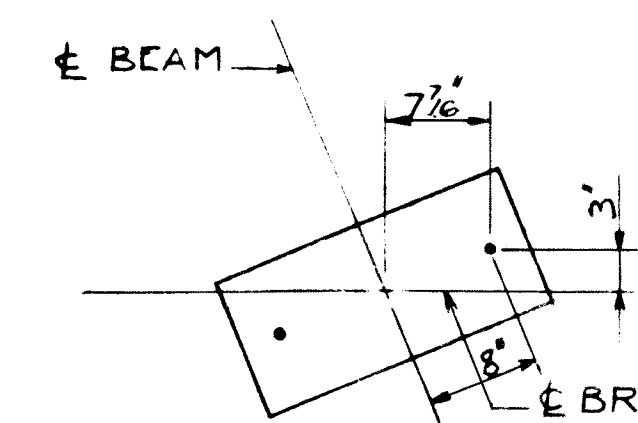
APPROVED
COUNTY SUPERINTENDENT OF HIGHWAYS
EXAMINED
ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED
ENGINEER OF DESIGN
APPROVED
CHIEF HIGHWAY ENGINEER

PIER 4
STA. 66+84.00
CR. EL. 737.84



BAR	R	A
h2	10"	2-0
h3	11/2"	2-3
h4	1-1	2-6
h9	1-2 1/2	2-9

DETAIL OF BARS
h2, h3, h4 & h9

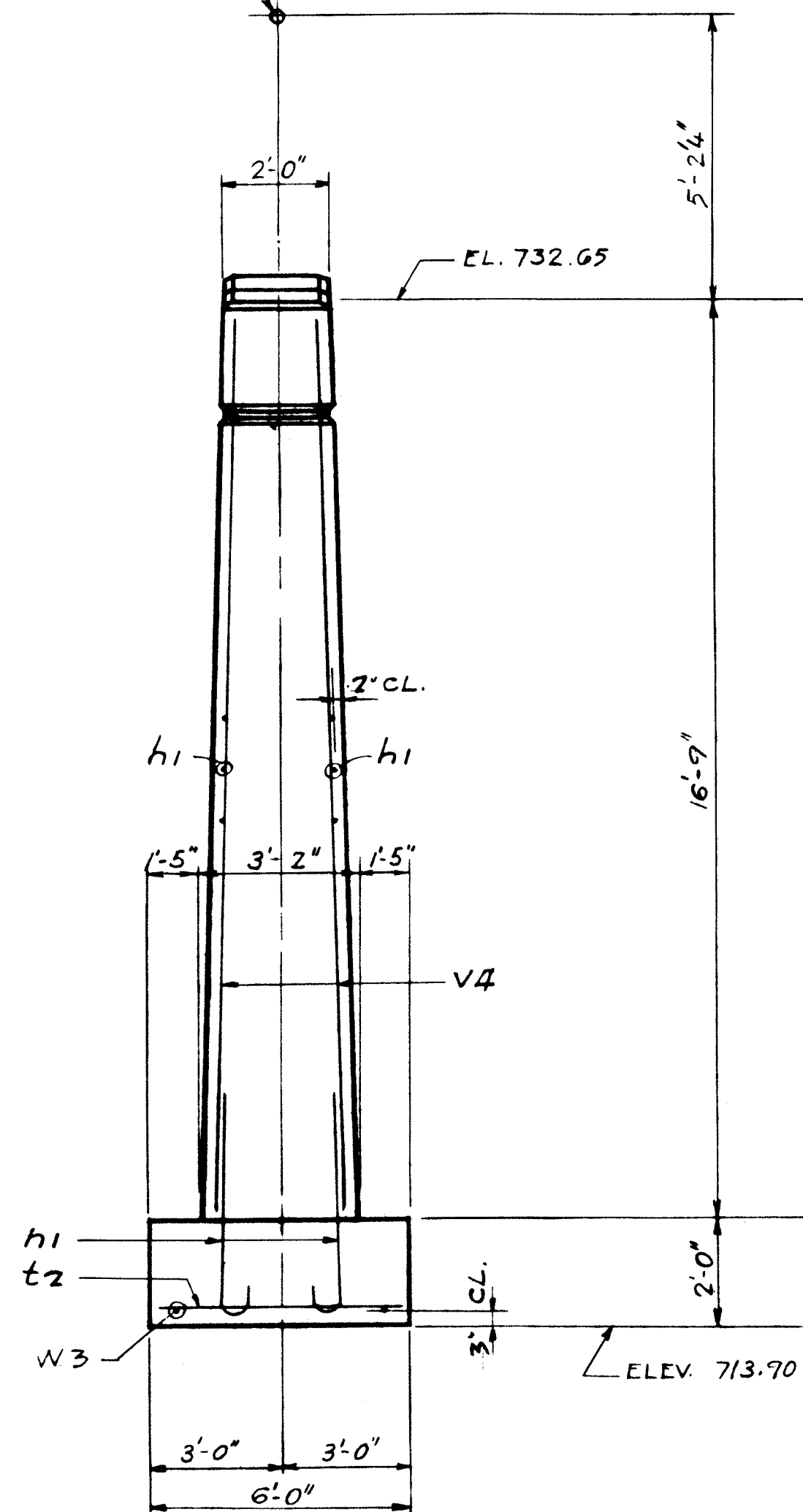


BAR n1

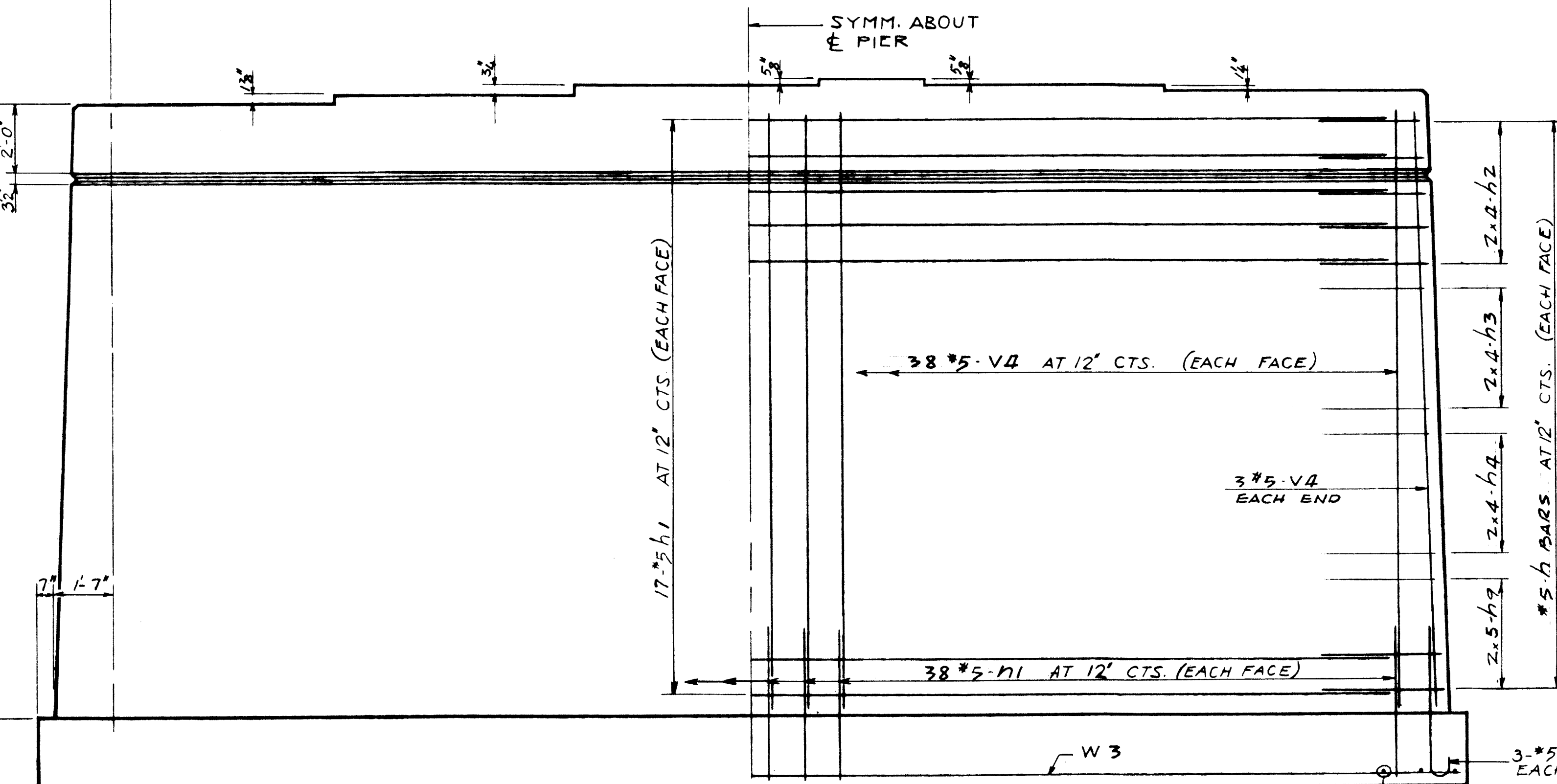
BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
h1	34	#5	36-9	—
h2	16	#5	3-6	—
h3	16	#5	3-9	—
h4	16	#5	4-0	—
h9	20	#5	4-3	—
n1	82	#5	4-9	C
t2	42	#5	5-6	—
v4	82	#5	16-6	—
w3	2	#5	40-6	—
CLASS A CONCRETE				CU. YDS. 80.6
REINFORCEMENT BARS				LBS. 3720
CLASS B EXCAV FOR STRUCT.				CU. YD. 14.2

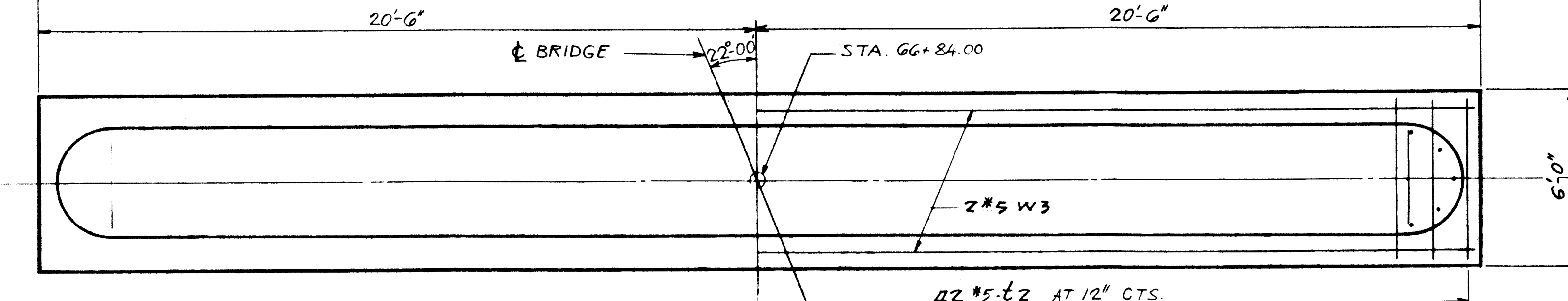
NOTE:
ALL BAR DIMENSIONS ARE OUT TO OUT.



END VIEW



ELEVATION

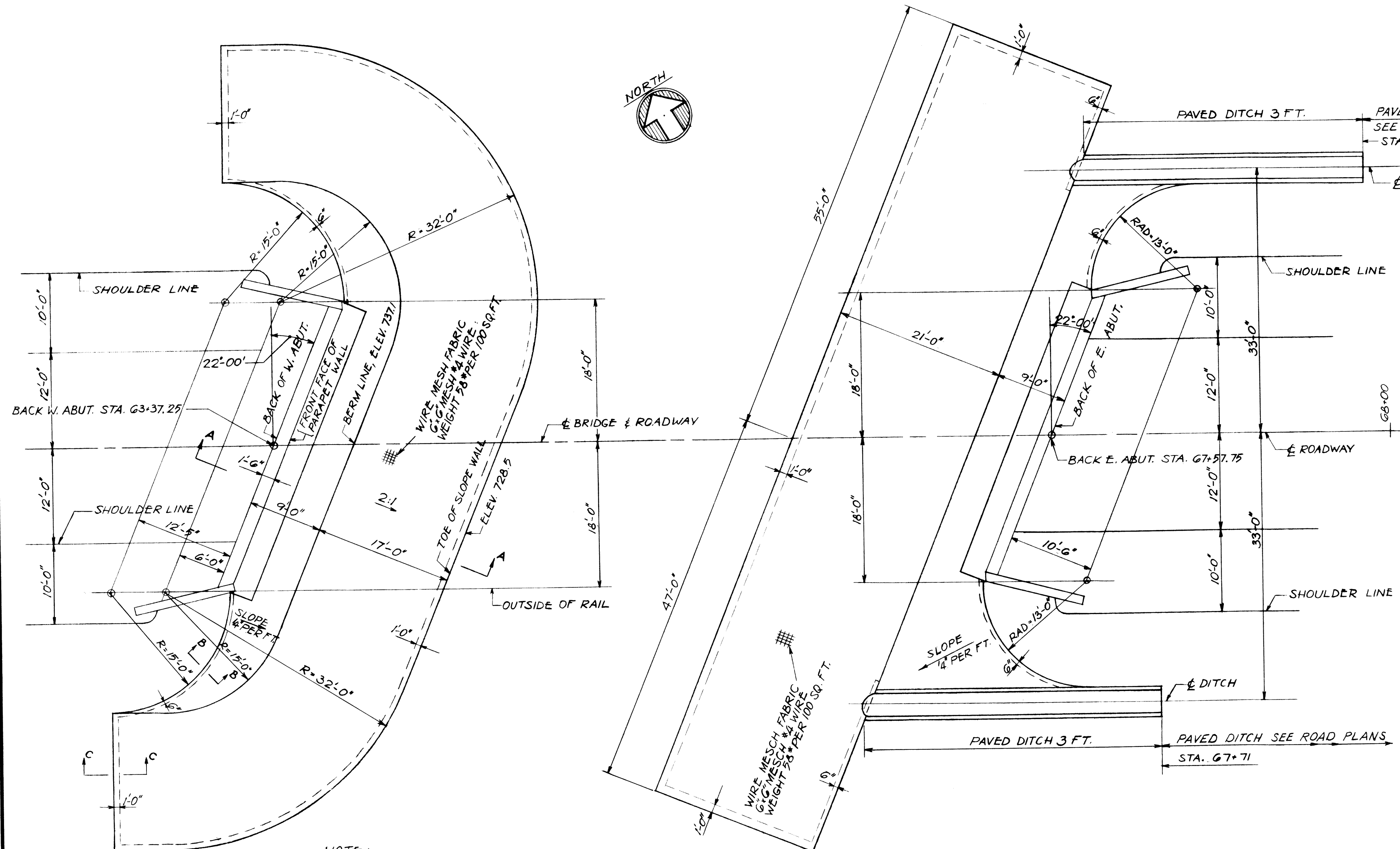


FOOTING PLAN

APPROVED
COUNTY SUPERINTENDENT OF HIGHWAYS
EXAMINED
ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED
ENGINEER OF DESIGN
APPROVED
CHIEF HIGHWAY ENGINEER

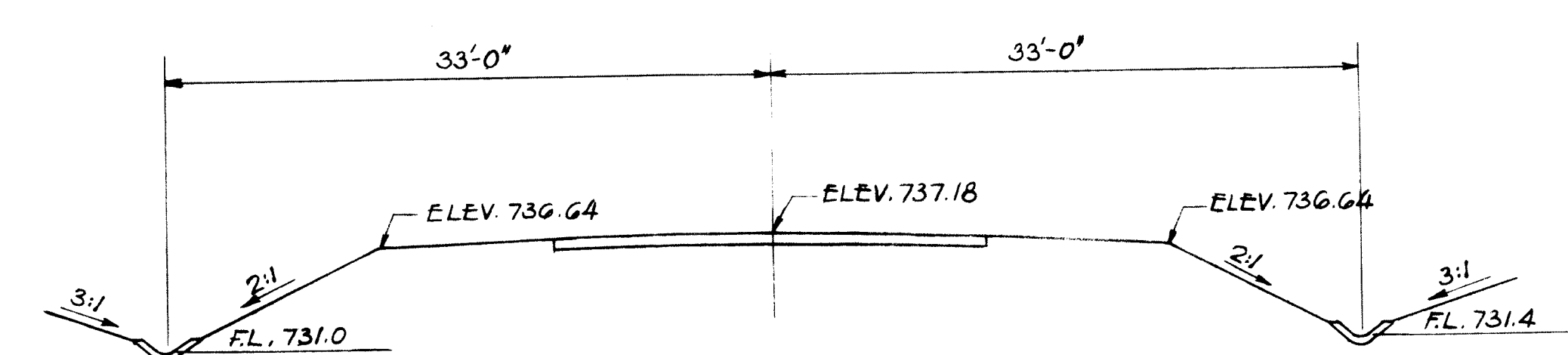
ALFRED BENESCH & ASSOCIATES
CONSULTING ENGINEERS
70 S. WABASH AVE. CHICAGO, ILLINOIS

PIER 4
COUNTY HIGHWAY RTE. 76 OVER
ROCK RIVER
SECTION 133-B-CF
WINNEBAGO COUNTY
STATION 65+47.50

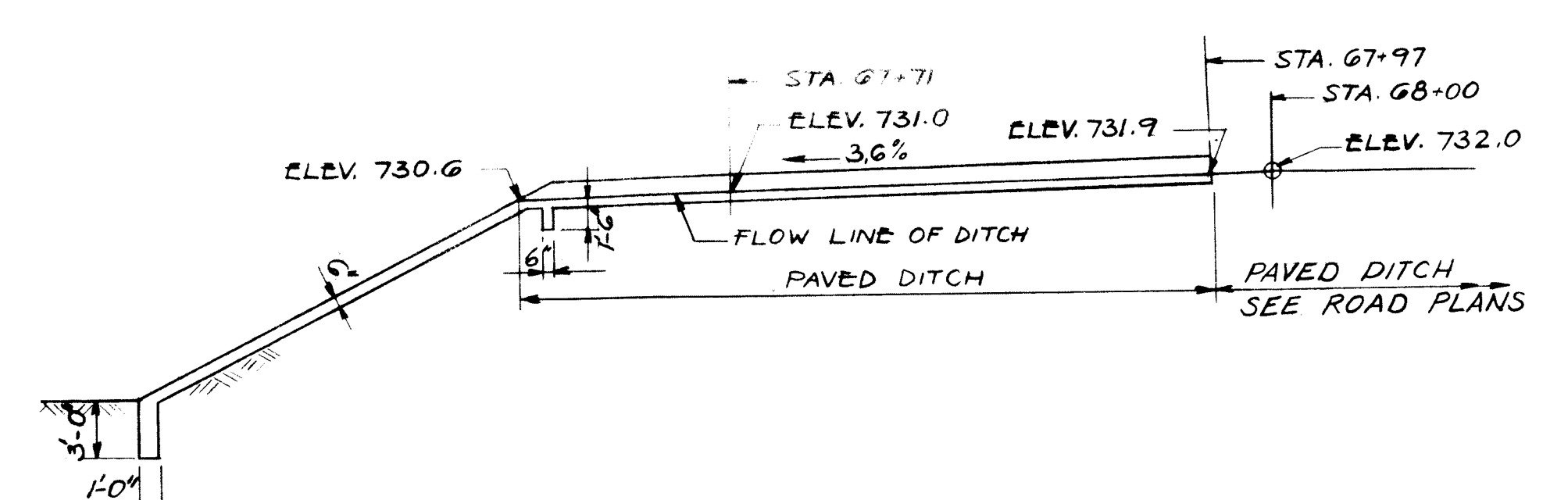


PLAN
SCALE: 3" = 1'-0"

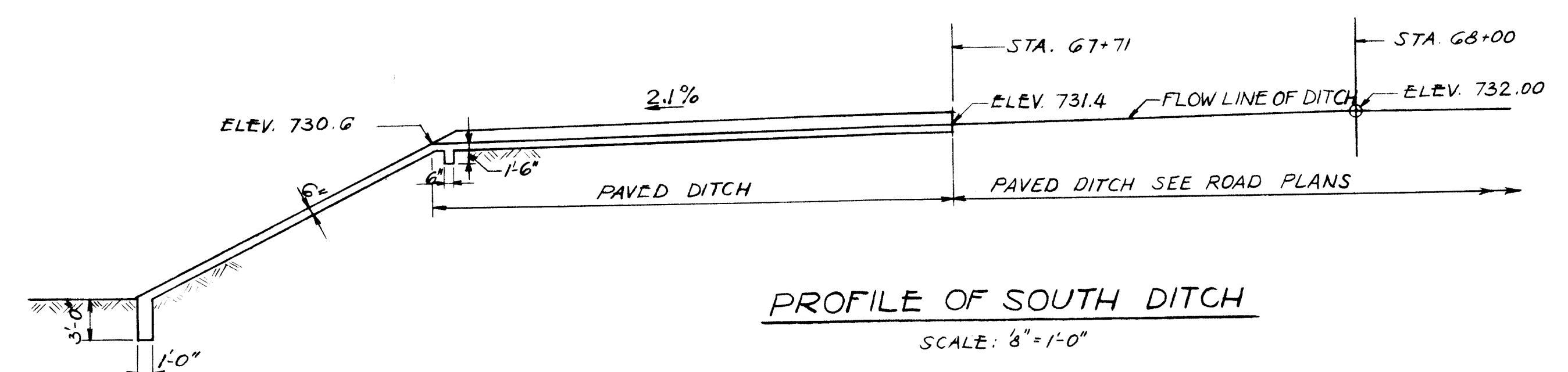
NOTE:
LAYOUT OF SLOPEWALLS MAY BE
VARIED TO SUIT GROUND CONDITIONS
IN THE FIELD, AS DIRECTED BY
THE ENGINEER.



SECTION AT STA. 67+71
SCALE: 1/2" = 1'-0"



PROFILE OF NORTH DITCH
SCALE: 1/8" = 1'-0"



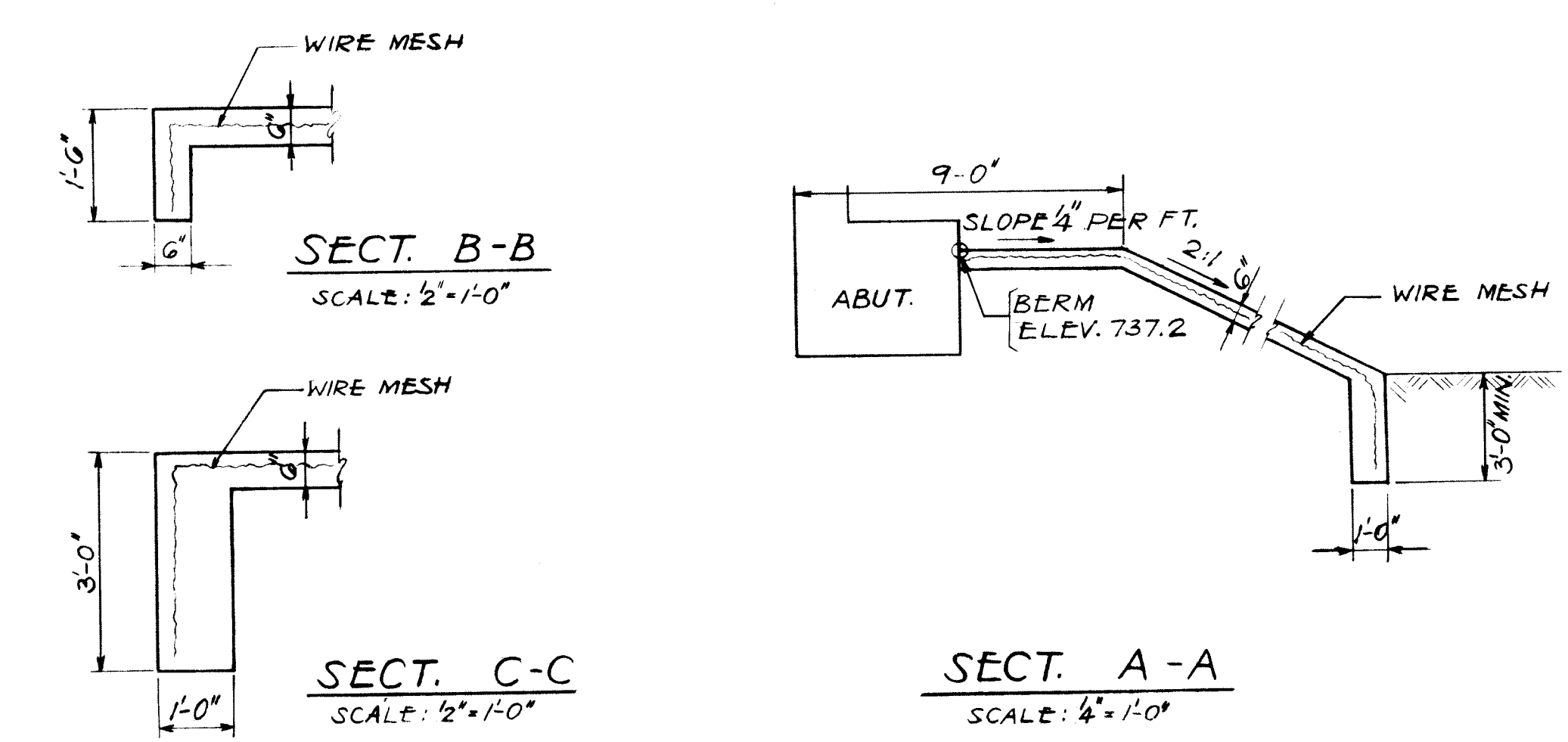
PROFILE OF SOUTH DITCH
SCALE: 1/8" = 1'-0"

BILL OF MATERIAL

ITEM	UNIT	QUANTITIES	
		W. ABUT.	E. ABUT.
6" CONC. SLOPEWALL	SQ. YD.	379	377
CLASS A EXCAV. FOR STRUCT.	CU. YD.	34	9
CLASS B EXCAV. FOR STRUCT.	CU. YD.	—	20

SLOPE WALL DETAILS
COUNTY HIGHWAY RTE. 76 OVER
ROCK RIVER
SECTION 133-B-CF
WINNEBAGO COUNTY
STATION 65+47.50

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. 1078 CHICAGO, ILLINOIS

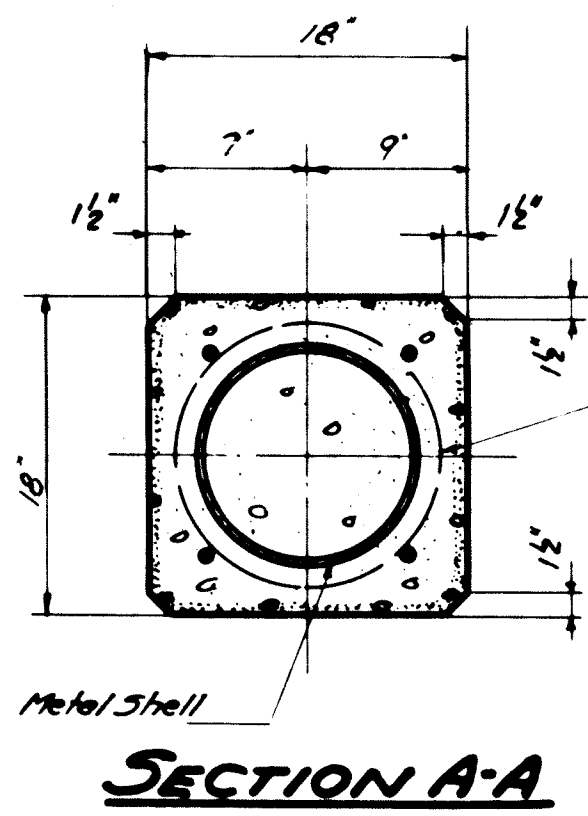
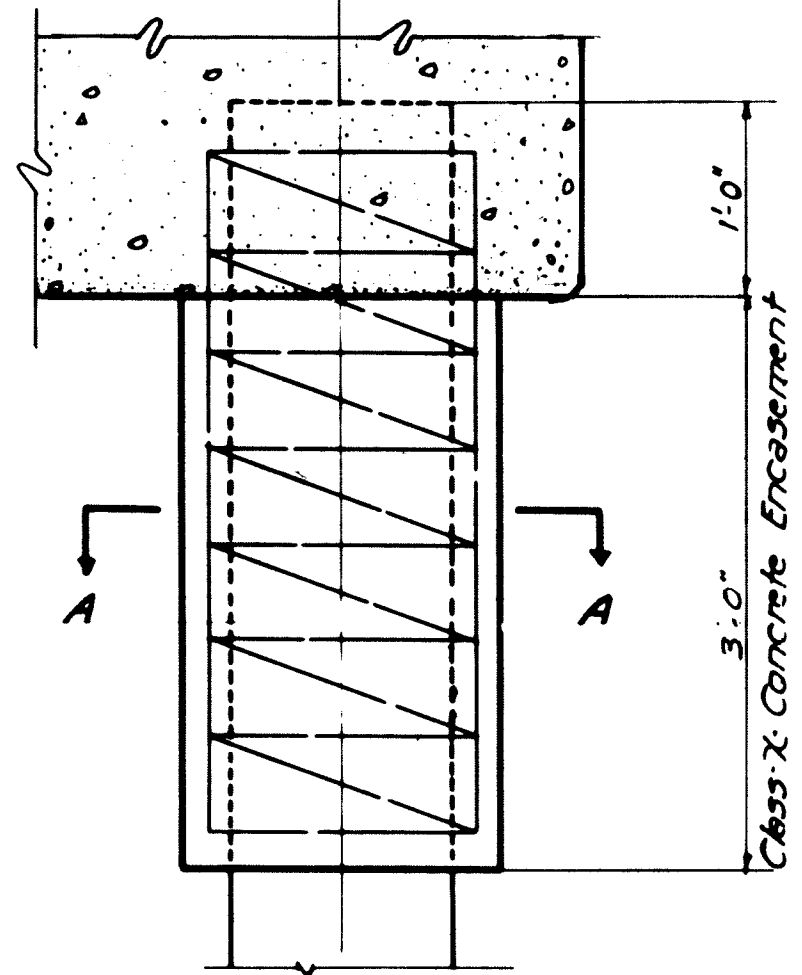
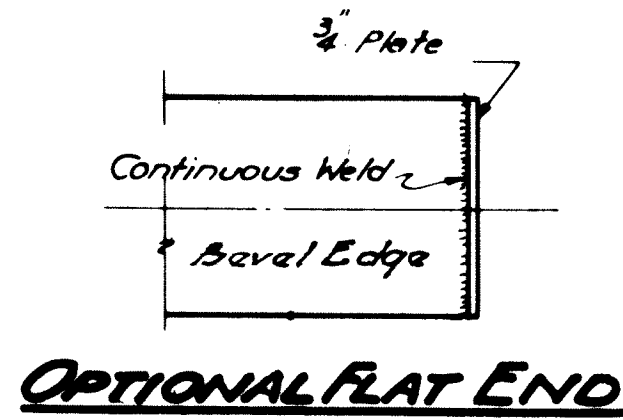
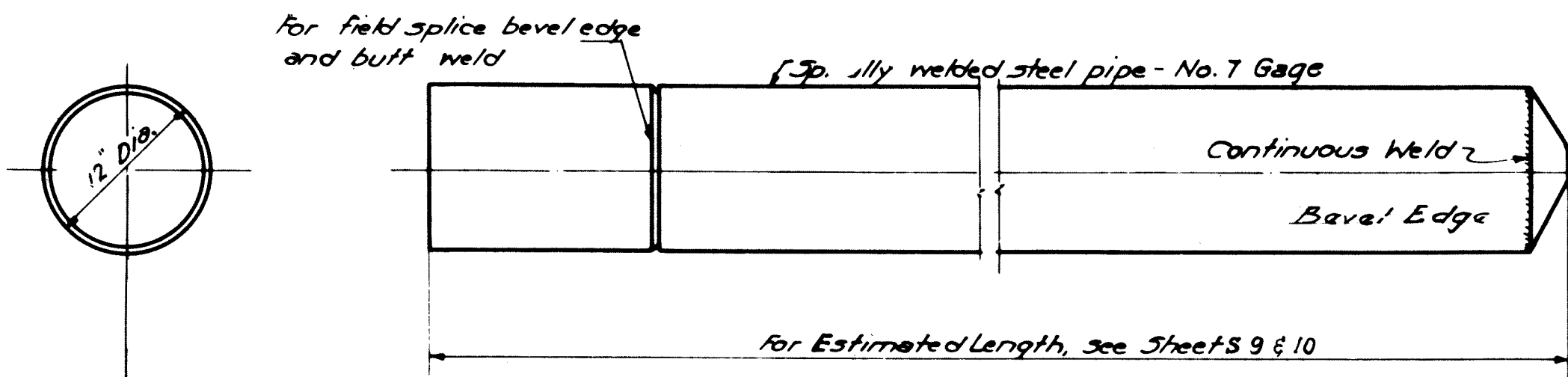


ABUTMENT PILES

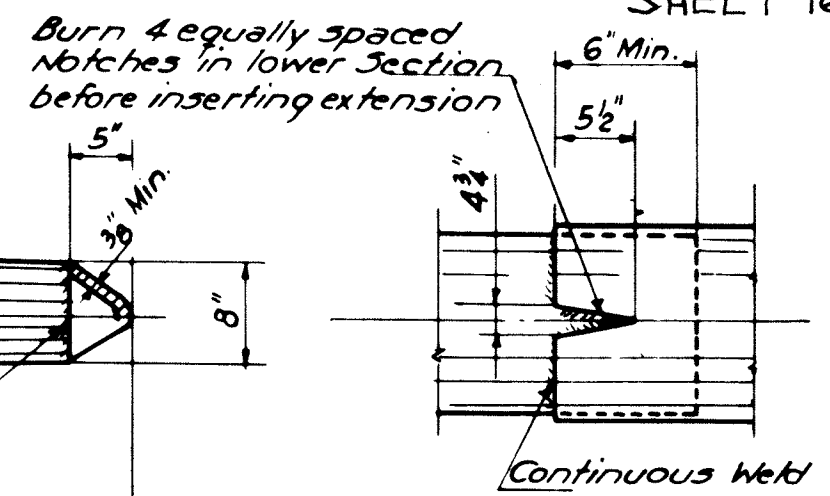
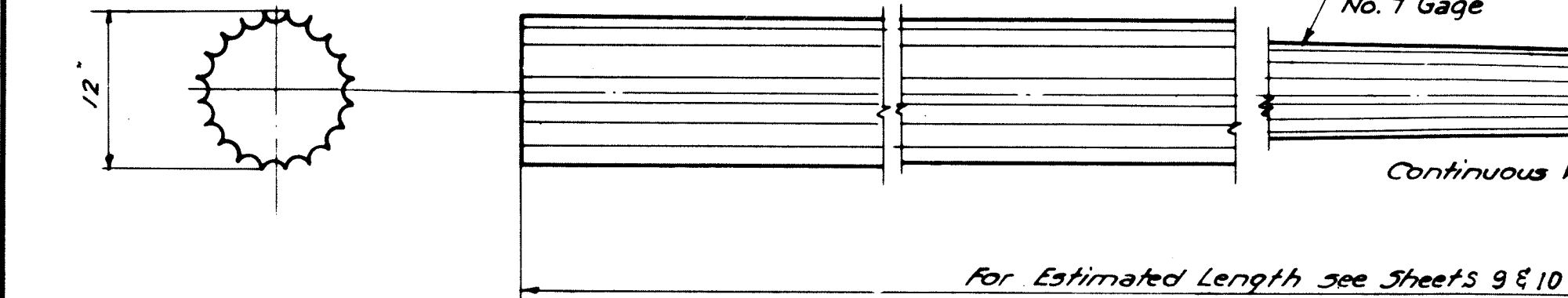
PILING TO BE USED AT THE ABUTMENTS SHALL BE ANY OF THE VARIOUS KINDS SHOWN BELOW

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 76	133-B-CF	WINNEBAGO	70	25
STA.	TO STA.		PROJECT	
B. P. R. REG. NO. 4	ILLINOIS			

SHEET 16 OF 16

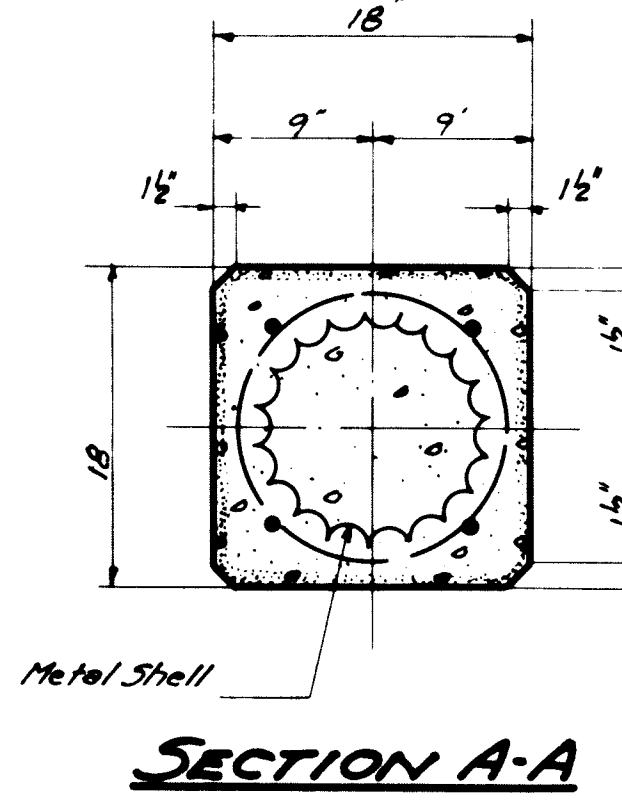
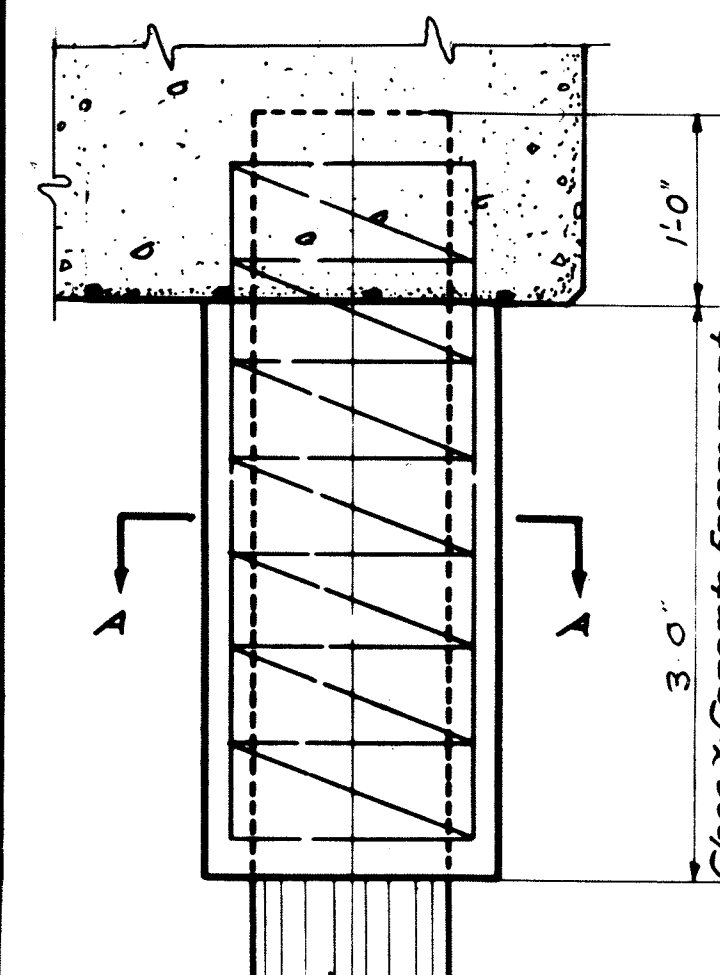


DETAIL OF SPIRALLY WELDED STEEL SHELL FOR CAST IN PLACE CONCRETE PILES

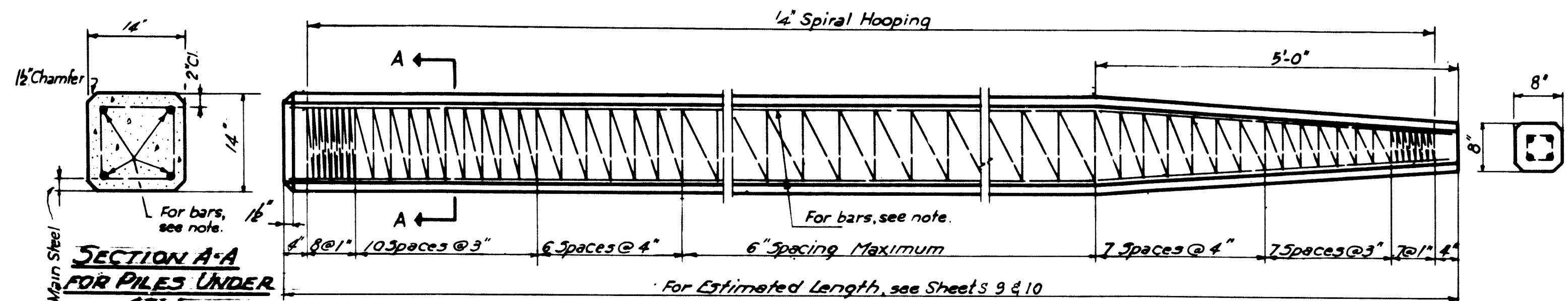


SPlice TO BE USED AS REQUIRED

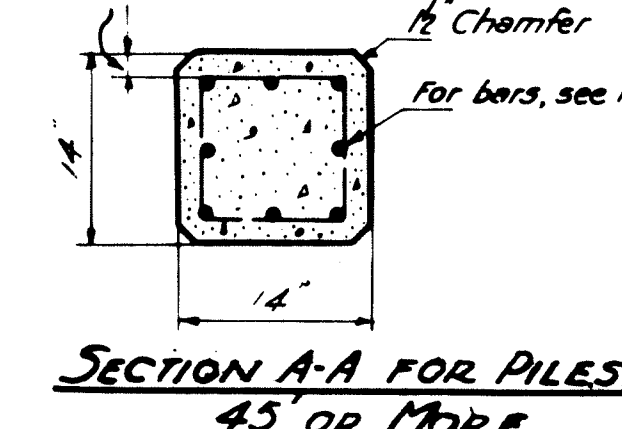
- ALLOWABLE TAPERS**
1. Taper 1/2" for 10' + 12' Cylindrical Section Extension
 2. Taper 1/4" for 17' + 12' Cylindrical Section Extension
 3. Taper 1/10" for 30' + 12' Cylindrical Section Extension
- 15 Dia. Spiral #2 Wire 6" Pitch. 2 extra turns top and bottom. 4 #4 Tie Bars. The cost of Class X Concrete Encasement and Reinforcement is incidental to the cost of furnishing Piles.



DETAIL OF METAL SHELL FOR CAST IN PLACE CONCRETE PILES



SECTION A-A FOR PILES UNDER 45' LONG

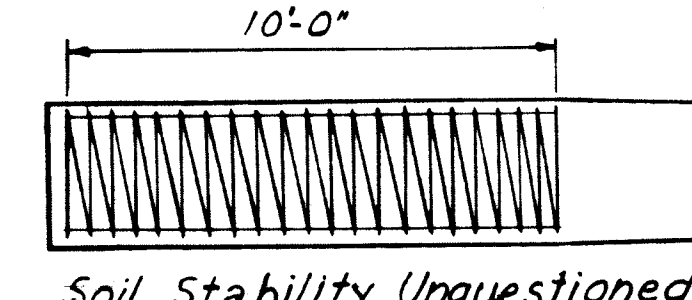
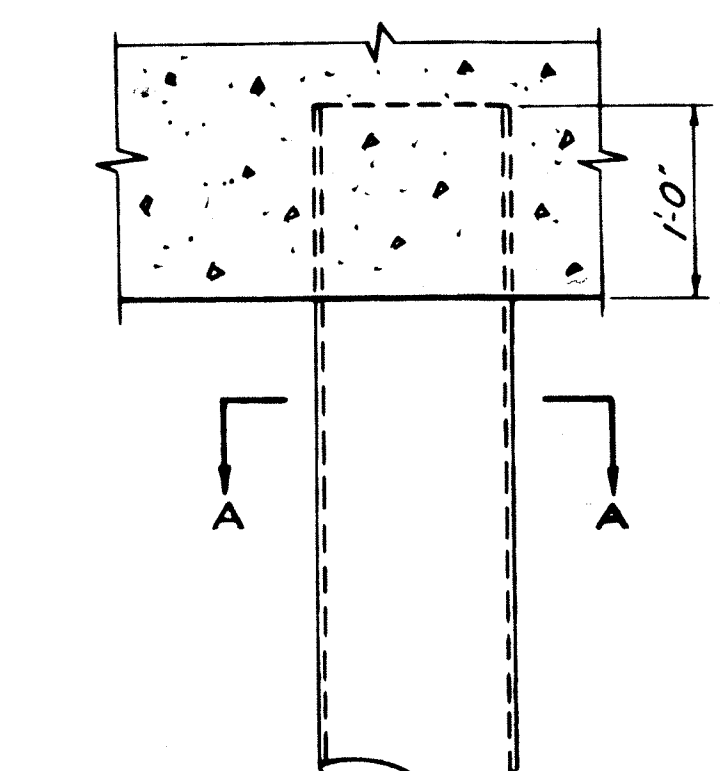
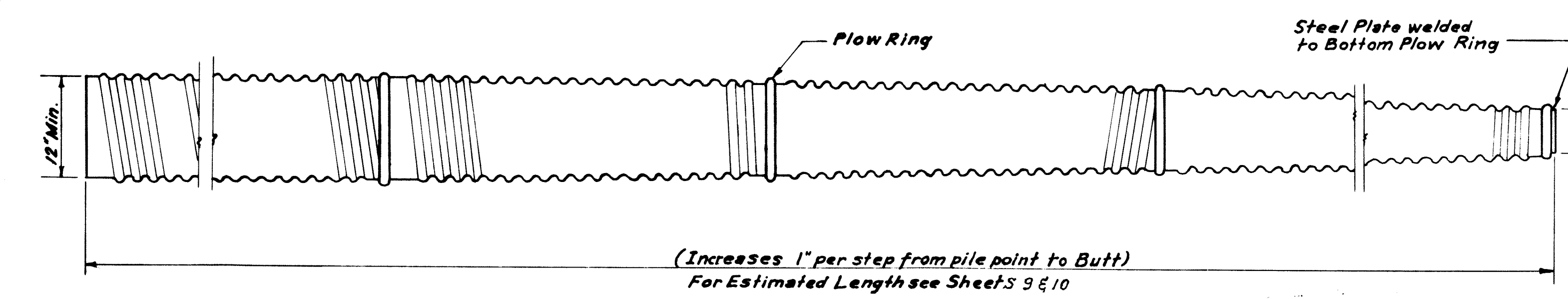


SECTION A-A FOR PILES 45 OR MORE

Note
For 14" Piles 45' long or more use 8" bars. 4 for the full length & 4 to the point of bevel.
For 14" Piles under 45' long use 4" bars the full length.

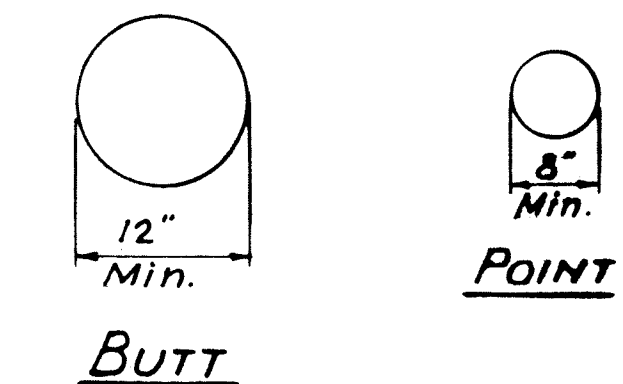
Handling
For pile lengths up to 45 ft. use two slings placed at a distance of 0.21 L from each end.
For Piles longer than 45 ft. use three slings placed at a distance of 0.12 L from each end and at mid-point of pile.
*L: Overall length of pile to be handled

DETAIL OF PRECAST CONCRETE PILES



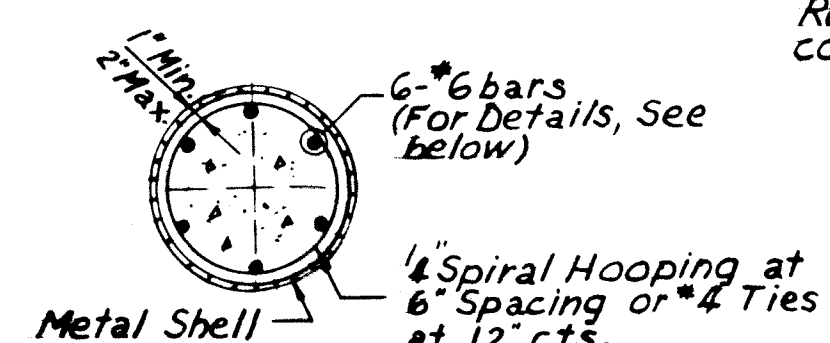
DETAIL OF MANDREL DRIVEN STRAIGHT OR STEP-TAPER PILES FOR CAST IN PLACE CONCRETE PILES

At least 1/4 of the length of pile shall have a Butt diameter equal to or greater than 12". Gages are furnished to suit soil conditions (14 Gage Min.)



BUTT

Reinforcement is incidental to the cost of furnishing piles.



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10 SOUTH WABASH AVENUE CHICAGO, ILLINOIS

ABUTMENT PILES
COUNTY HIGHWAY RTE. 76 OVER
ROCK RIVER
SECTION 133-B-CF
WINNEBAGO COUNTY
STATION 65 + 47.50

APPROVED
COUNTY SUPERINTENDENT OF HIGHWAYS
EXAMINED
ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED
ENGINEER OF DESIGN
APPROVED
CHIEF HIGHWAY ENGINEER

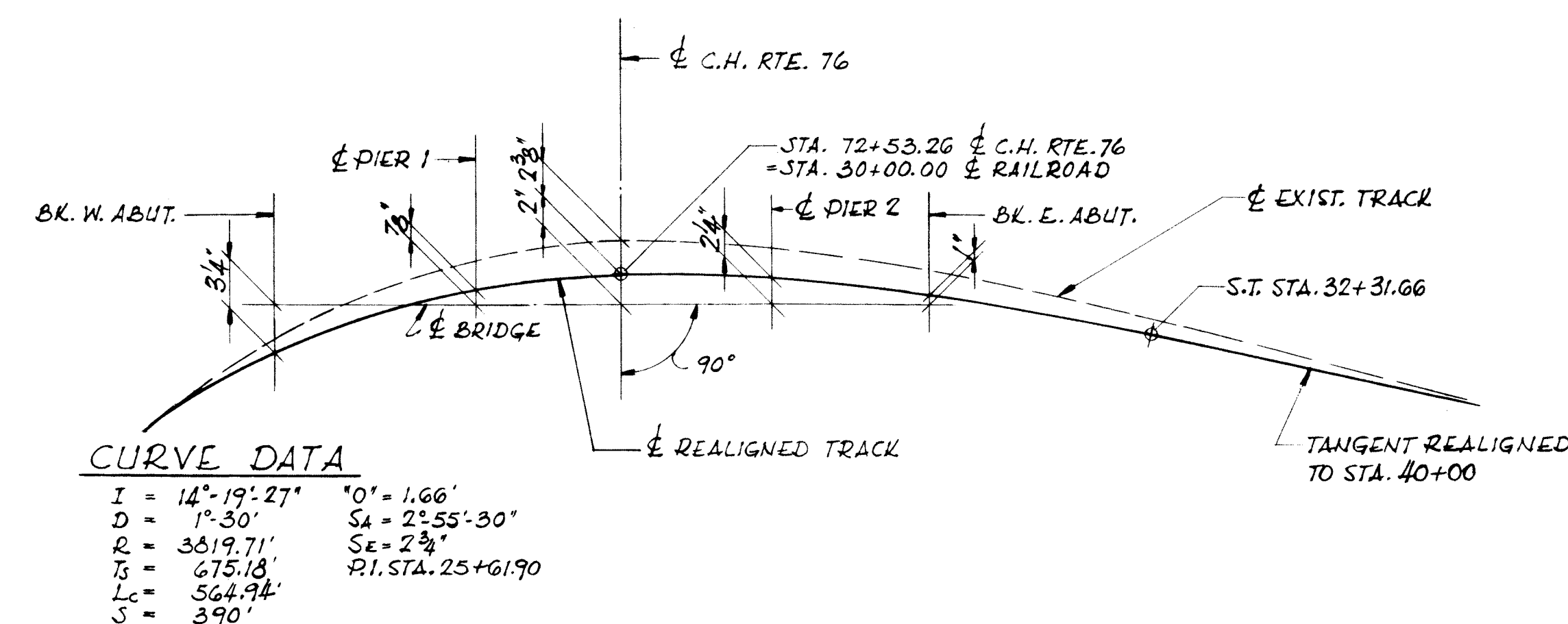
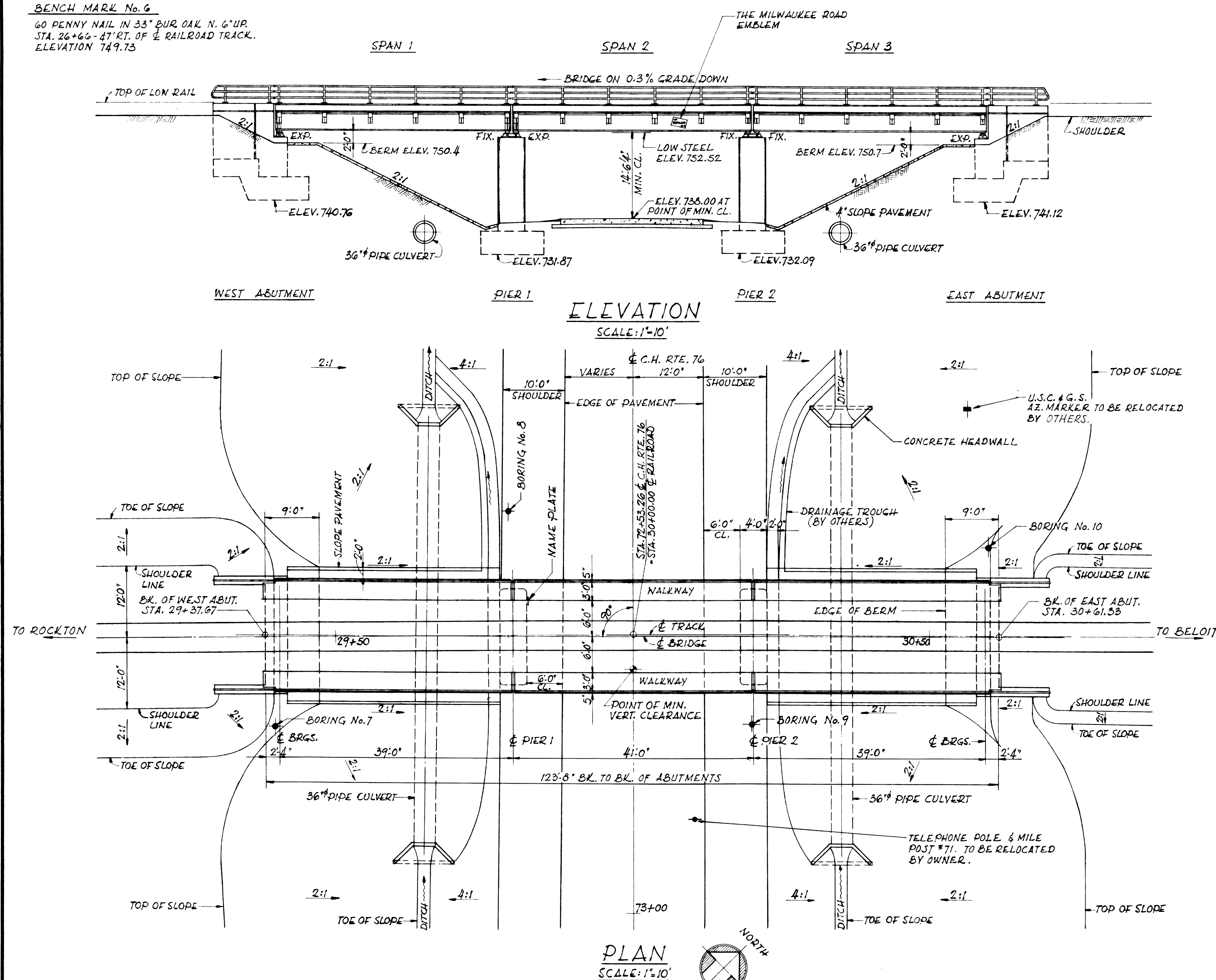
BENCH MARK No. 6
60 PENNY NAIL IN 33" BUR OAK N. 6" UP.
STA. 26+66-47' RT. OF & RAILROAD TRACK.
ELEVATION 749.73

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 76	133 B-CF	WINNEBAGO	70	26
STA.		TO STA.		
S. P. R. REG. NO. 4		ILLINOIS	PROJECT	

SHEET 1 OF 13

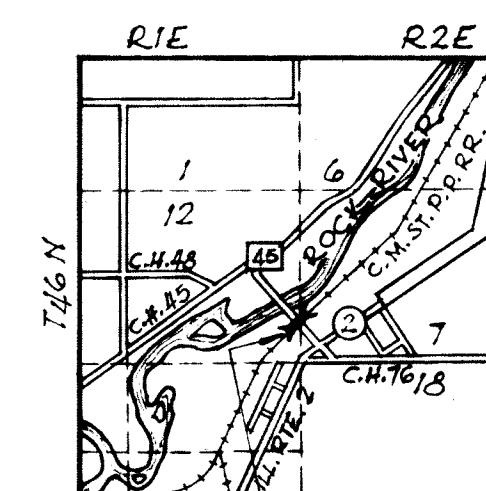
INDEX OF C.M.S.T.P. & P.R.R. BRIDGE DRAWINGS

SHEET NO.	TITLE
1.	GENERAL PLAN AND ELEVATION
2.	BORINGS, PROFILES, DESIGN DATA AND QUANTITIES
3.	STEEL FRAMING PLAN
4.	DECK CROSS SECTION AND MISCELLANEOUS DETAILS
5.	FLOOR PLATE DETAILS
6.	BEARING DETAILS
7.	PIERS 1 AND 2
8.	WEST AND EAST ABUTMENTS
9.	EXCAVATION AND DRAINAGE
10.	RUNAROUND - PLAN AND PROFILE
11.	RUNAROUND CROSS SECTION
12.	RUNAROUND CROSS SECTION
13.	RUNAROUND CROSS SECTION



CURVE DATA

I = 14°-19'-27"	"O" = 1.66'
D = 1°-30'	S _A = 2°-55'-30"
R = 3819.71'	S _E = 2°-34'
L = 675.18'	P.I. STA. 25+61.90
S = 390'	



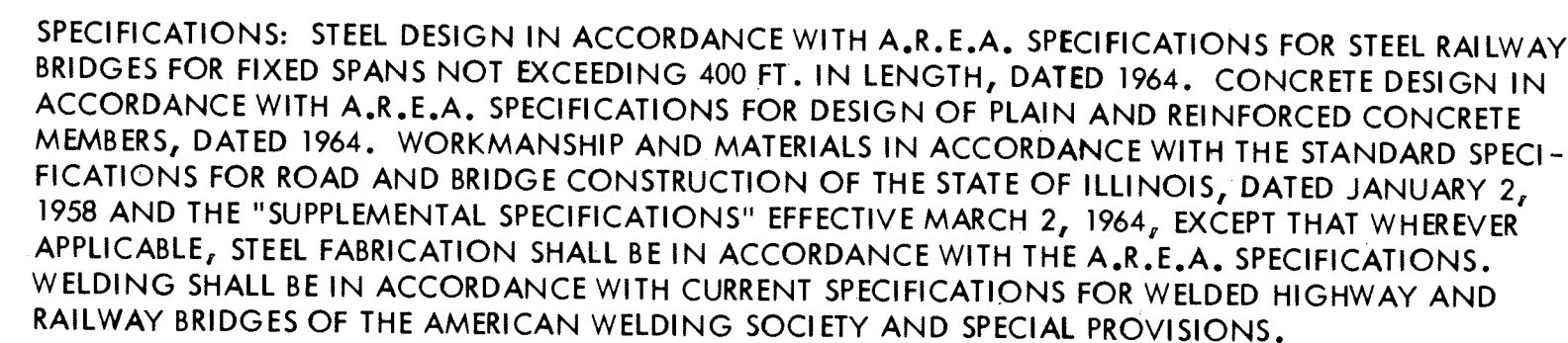
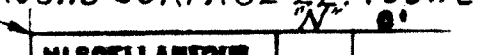
APPROVED
COUNTY SUPERINTENDENT OF HIGHWAYS
EXAMINED
ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED
ENGINEER OF DESIGN
APPROVED
CHIEF HIGHWAY ENGINEER

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GENERAL PLAN & ELEVATION
C.M.S.T.P. & P.R.R. SUBWAY
COUNTY HIGHWAY RTE. 76
SECTION 133-B-CF
WINNEBAGO COUNTY
STATION 72+53.26

BORING NO. 7	BORING NO. 8	BORING NO. 9	BORING NO. 10.
STA. 29+40 R.R. (15' RT.)	STA. 29+79 R.R. (21' LT.)	STA. 30+20 R.R. (15' RT.)	STA. 30+60 R.R. (15' LT.)

GROUND SURFACE EL. 752.22



CLASS X CONCRETE SHALL BE USED THROUGHOUT. ALL CORNERS SHALL BE CHAMFERED 3/4" UNLESS OTHERWISE SHOWN OR NOTED ON THE PLANS.

ALL STEEL SHALL BE STRUCTURAL STEEL UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIAL PROVISIONS. THE WEIGHT OF CORROSION RESISTANT STEEL (SEE SPECIAL PROVISIONS) AND GRAPH-ITED BRONZE EXPANSION BEARING PLATES ARE INCLUDED IN THE WEIGHT OF STRUCTURAL STEEL AND ARE TO BE PAID FOR AT THE CONTRACT UNIT PRICE PER POUND FOR "FURNISHING AND ERECTING STRUCTURAL STEEL".

ESTIMATED WEIGHT OF THESE ITEMS IS AS FOLLOWS:

STRUCTURAL STEEL	182,565 LB.
CORROSION RESISTANT STEEL	60,455 LB.
GRAPHITED BRONZE EXPANSION BEARING PLATES	540 LB.
TOTAL WEIGHT	243,560 LB.

ALL SHOP AND FIELD CONNECTIONS SHALL BE RIVETED EXCEPT WHERE OTHERWISE SHOWN OR NOTED ON THE DRAWINGS TO BE BOLTED OR WELDED. RIVETS AND BOLTS SHALL BE 7/8" Ø UNLESS OTHERWISE NOTED. HOLES SHALL BE 1/16" LARGER THAN RIVET SIZE. HOLES FOR SHOP BOLTS SHALL BE SUB-PUNCHED OR SUBDRILLED AND REAMED TO SIZE WITH PARTS ASSEMBLED AS REQUIRED BY A.R.E.A. SPECIFICATIONS AND SPECIAL PROVISIONS. HOLES FOR FIELD CONNECTIONS OF DIAPHRAGMS & BRKTS. SHALL BE SUBPUNCHED OR SUBDRILLED AS REQUIRED BY A.R.E.A. SPECIFICATIONS AND REAMED TO SIZE WHILE SHOP ASSEMBLED TO BEAMS. HOLES FOR FIELD CONNECTIONS OF FLOOR PLATES, BALLAST AND WALK PLATE CHANNELS AND WALK PLATES MAY BE PUNCHED FULL SIZE. ALL SHOP REAMED FIELD CONNECTIONS SHALL BE MATCH-MARKED. SEE SPECIAL PROVISIONS FOR ADDITIONAL REQUIREMENTS. STEEL SHALL BE SHOP INSPECTED BY THE ILLINOIS DIVISION OF HIGHWAYS BEFORE PAINTING. FOR FIELD AND SHOP PAINTING OF STEEL, SEE SPECIAL PROVISIONS. REINFORCEMENT BARS SHALL BE DEFORMED BARS OF NEW BILLET STEEL OF INTERMEDIATE GRADE CONFORMING TO A.S.T.M. SPECIFICATION A-15.

NOTES FOR BORINGS

FIGURES IN COLUMN MARKED "N" INDICATE NUMBER OF BLOWS REQUIRED TO DRIVE 2" DIAMETER SPLIT SPOON SAMPLER ONE FOOT USING 140 LB. WEIGHT FALLING 30 INCHES.

* INDICATES LOST CIRCULATING WATER.

WATER LEVELS (WL²⁴). FIGURE INDICATES WATER LEVEL AT THE TIME OF READING (HOURS) AFTER COMPLETION OF BORING.

BORING DATA ARE SHOWN ONLY AS A GUIDE FOR BIDDERS IN ESTIMATING SOIL CONDITIONS WHICH MAY BE ENCOUNTERED IN THE WORK. FOR LOCATION OF BORINGS SEE GENERAL PLAN AND ELEVATION SHEET 1.

BORING NO. 8 BORING NO. 9

NOTE B: VERY DENSE

BORING NO. 9

NOTE B: VERY DENSE
BROWN SILTY MEDIUM
SAND WITH COARSE
GRAVEL

NOTE: VERY DENSE
BROWN MEDIUM SAND,
TRACE GRAVEL

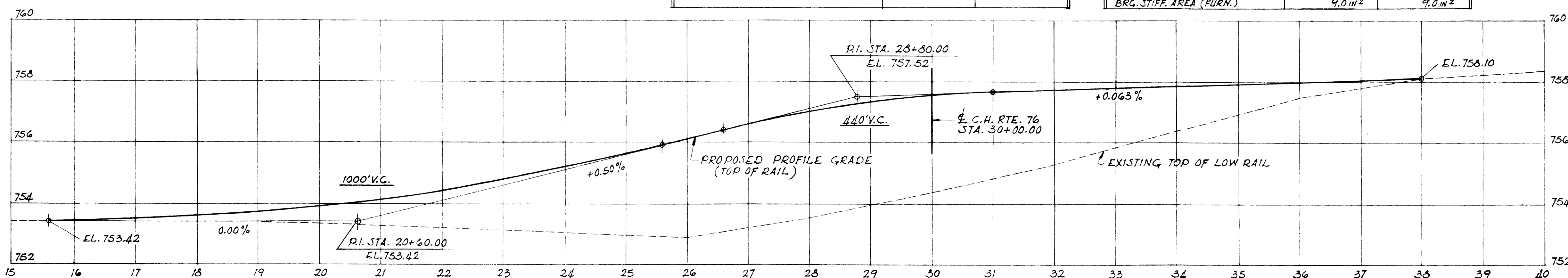
NOTE D: VERY DENSE
BROWN MEDIUM SAND,
SOME GRAVEL

MOMENT PER BEAM

DESCRIPTION	SPANS 1 & 3	SPAN 2
DEAD LOAD	150 ¹ / _K	162 ¹ / _K
LIVE LOAD	482 ¹ / _K	467 ¹ / _K
IMPACT & ROLLING	311 ¹ / _K	327 ¹ / _K
CENTRIFUGAL FORCE	52 ¹ / _K	48 ¹ / _K
TOTAL	936 ¹ / _K	1,004 ¹ / _K
NET SECTION MODULUS REQ'D.	573 in ³	602 in ³
SECTION	36 WF 182	36 WF 194
GROSS I (FURNISHED)	11,282 in ⁴	12,103 in ⁴
LESS HOLES	436 in ⁴	516 in ⁴
NET I (FURNISHED)	10,796 in ⁴	11,587 in ⁴
NET SECTION MODULUS FURN.	595 in ³	634 in ³
GROSS SECTION MODULUS FURN.	621 in ³	664 in ³

HIGHWAY PROFILE

SCALES: $1'' = 10' \text{ VERT.}$
 $1'' = 100' \text{ HORIZ.}$



RAILROAD PROFILE

SCALES: $1'' = 2'$ VERT.
 $1'' = 100'$ HORIZ.

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COUNTY SUPERINTENDENT OF HIGHWAYS
EXAMINED
ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED
ENGINEER OF DESIGN
APPROVED
CHIEF HIGHWAY ENGINEER

DESIGN DATA

LIVE LOAD
COOPER E72 PLUS STEAM IMPACT

ALLOWABLE STRESSES

f_s	(TENSION) STRUCTURAL CARBON STEEL (A36)	20,000 p.s.i.
f_s	(TENSION) REINFORCING BARS	20,000 p.s.i.
f_c'	(FLEXURE) CONCRETE	3,500 p.s.i.
f_c	(FLEXURE) CONCRETE WITHOUT EARTH PRESSURE	1,400 p.s.i.
f_c	(FLEXURE) CONCRETE WITH EARTH PRESSURE	1,000 p.s.i.
v	(SHEAR IN FOOTINGS)	75 p.s.i.
n		10

FOUNDATIONS

ABUTMENTS AND PIERS TO BE ON SPREAD FOOTINGS WITH
A MAXIMUM SOIL PRESSURE OF 6,000 p.s.f.

BORINGS, PROFILES, DESIGN DATA & QUANTITIES

C.M.ST.P. & P.R.R.

SUBWAY

COUNTY HIGHWAY RTE. 76

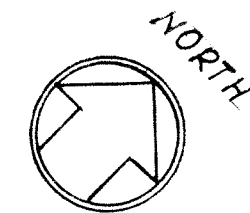
SECTION 133-B-CF

WINNEBAGO COUNTY

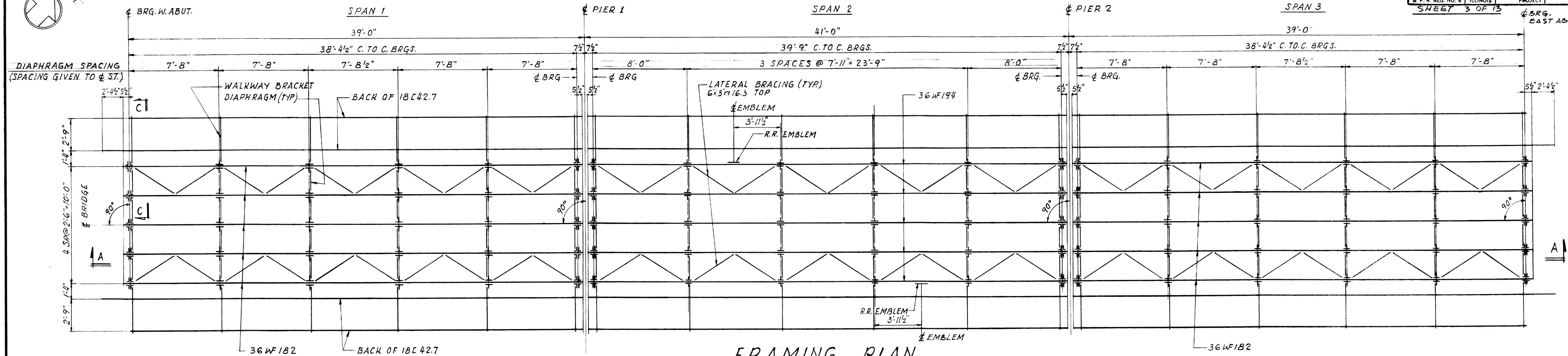
STATION 72+53.26

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS

10 S. WABASH AVE. CHICAGO, ILLINOIS

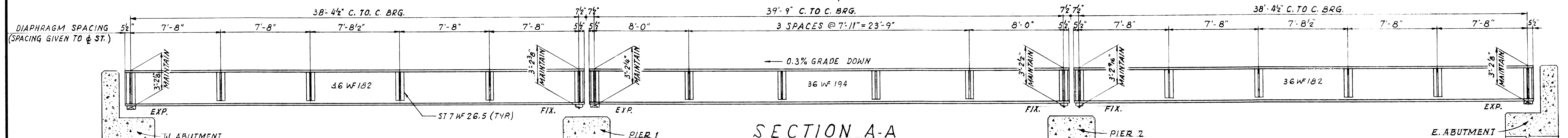


ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 76	133-B-CF	WINNEBAGO	70	28
STA. 72+53.26		TO STA. 72+53.26		
B. P. R. REG. NO. 4		ILLINOIS PROJECT		
SHEET 3 OF 13		EAST ABUT.		



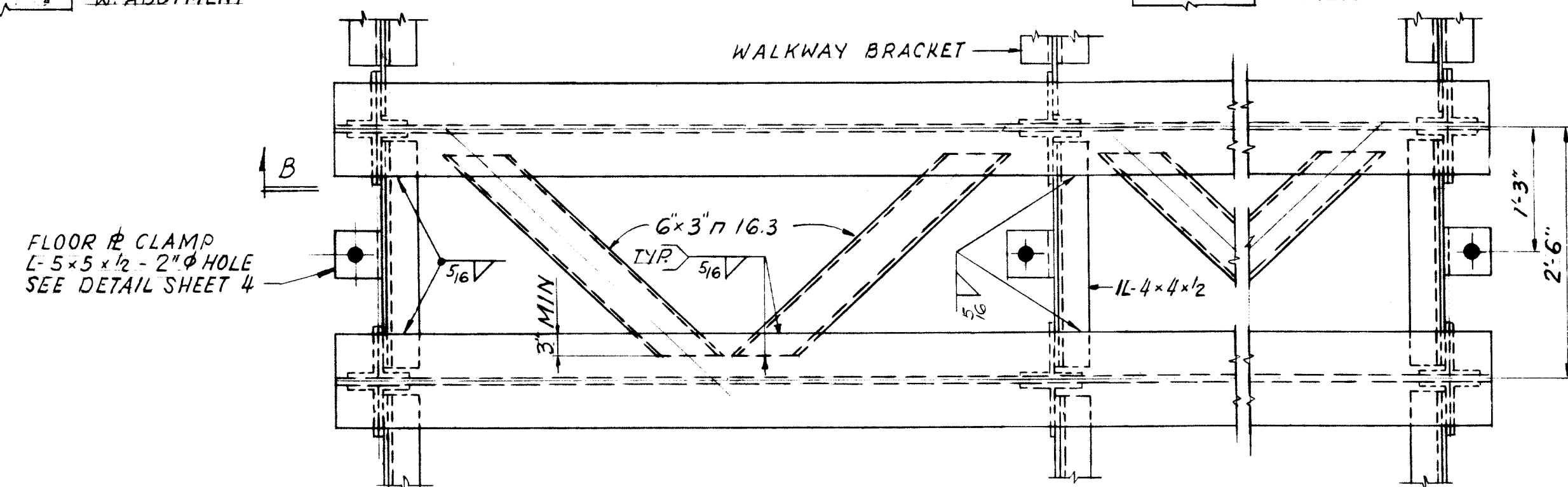
FRAMING PLAN

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



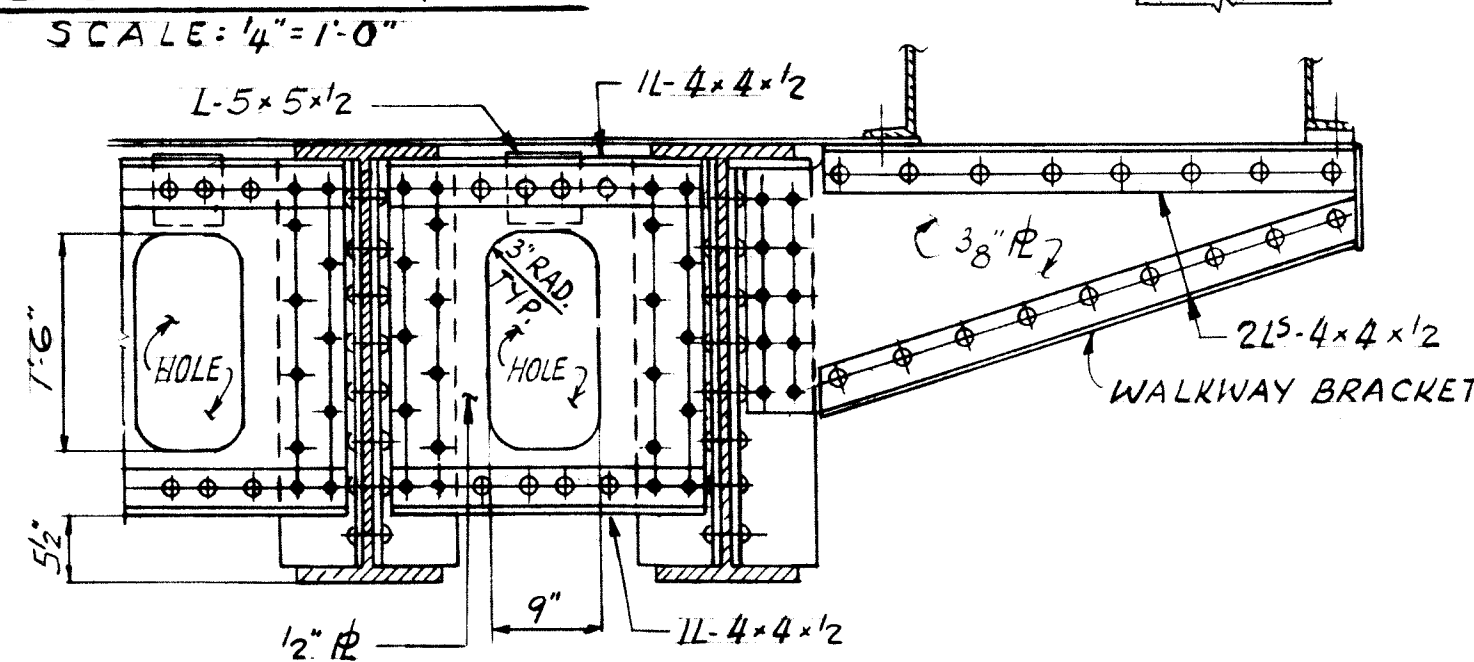
SECTION A-A

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



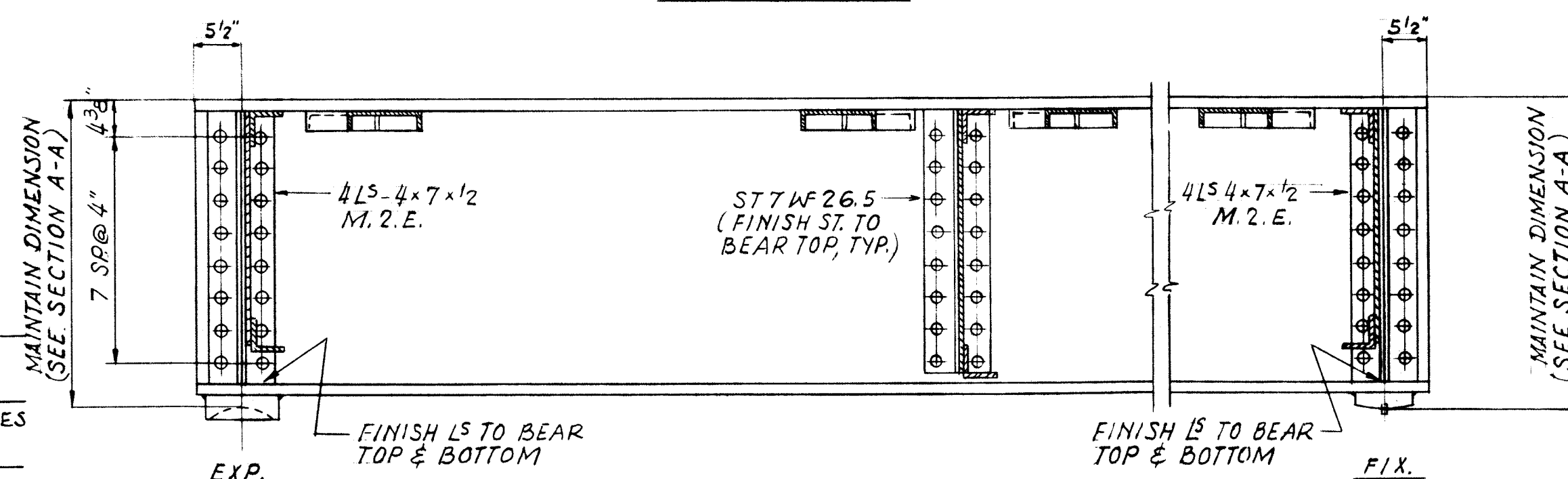
PLAN OF TOP LATERAL BRACING

SCALE: 3/4" = 1'-0"



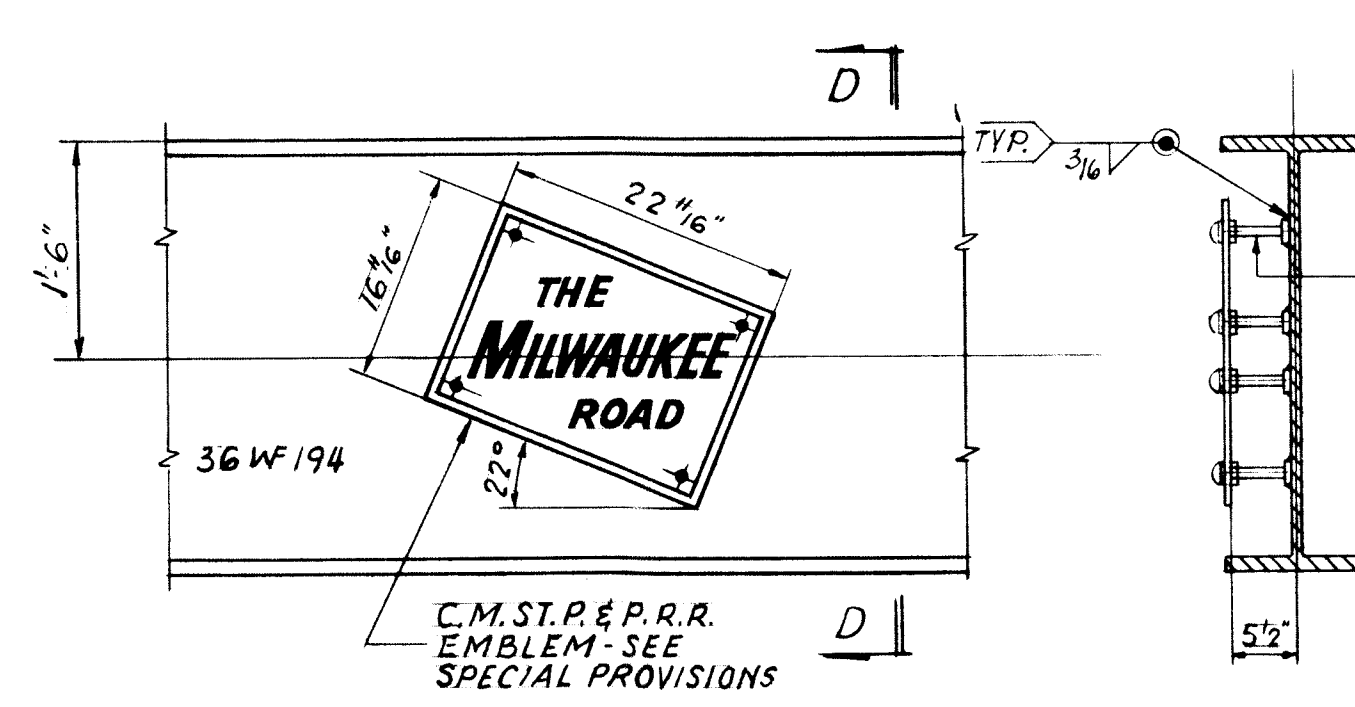
SECTION C-C

SCALE: 3/4" = 1'-0"



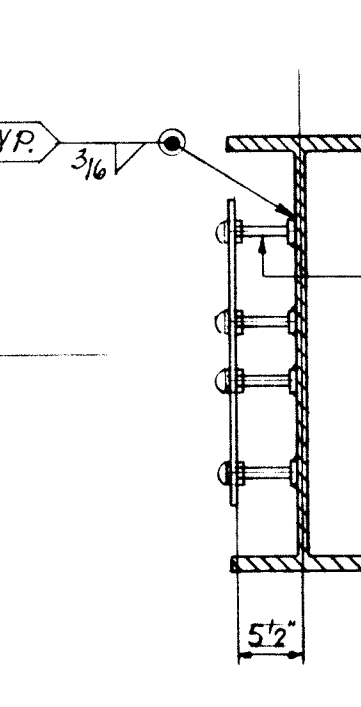
SECTION B-B

SCALE: 3/4" = 1'-0"



R.R. EMBLEM DETAILS

SCALE: 3/4" = 1'-0"



SECTION D-D

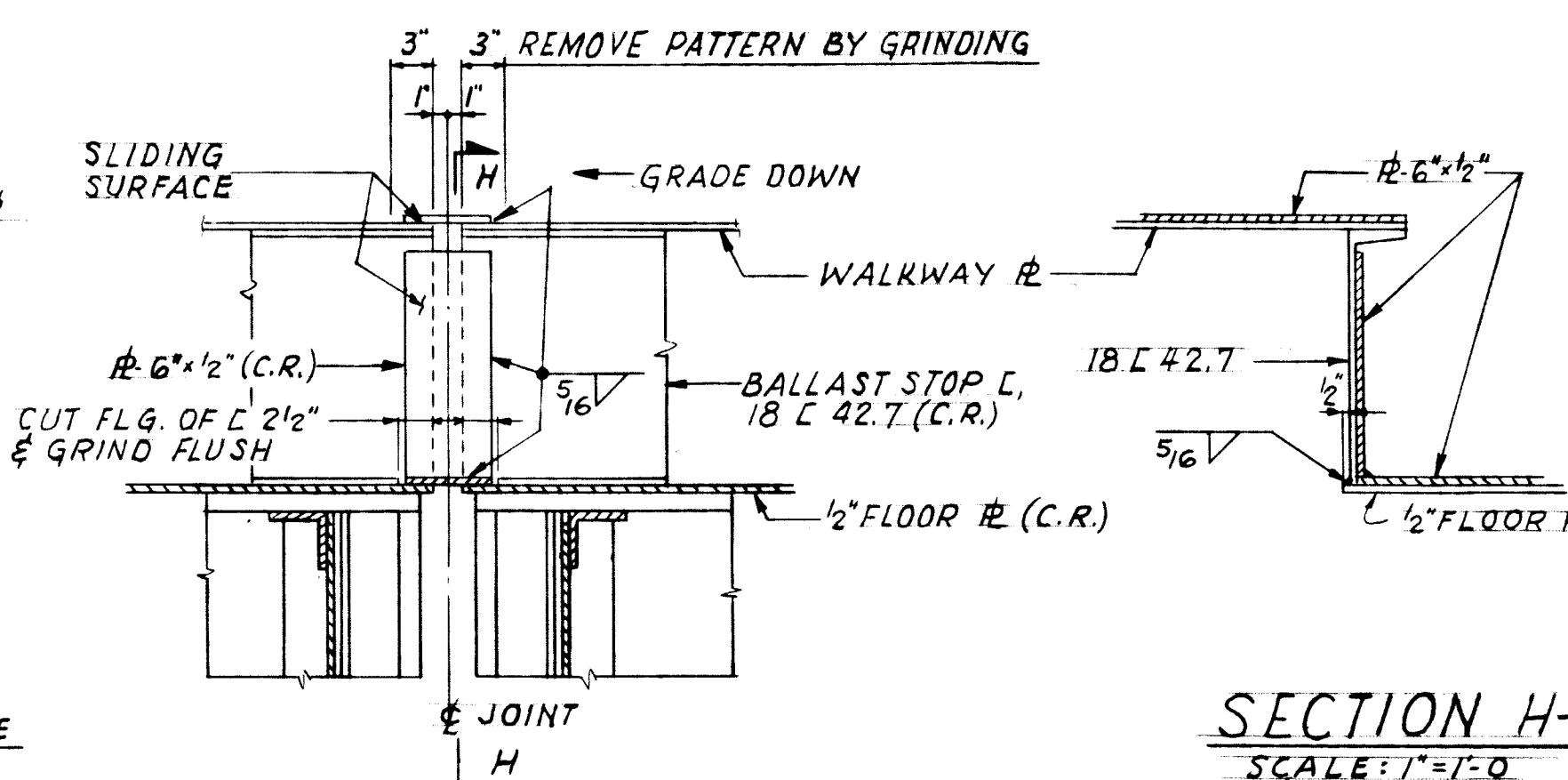
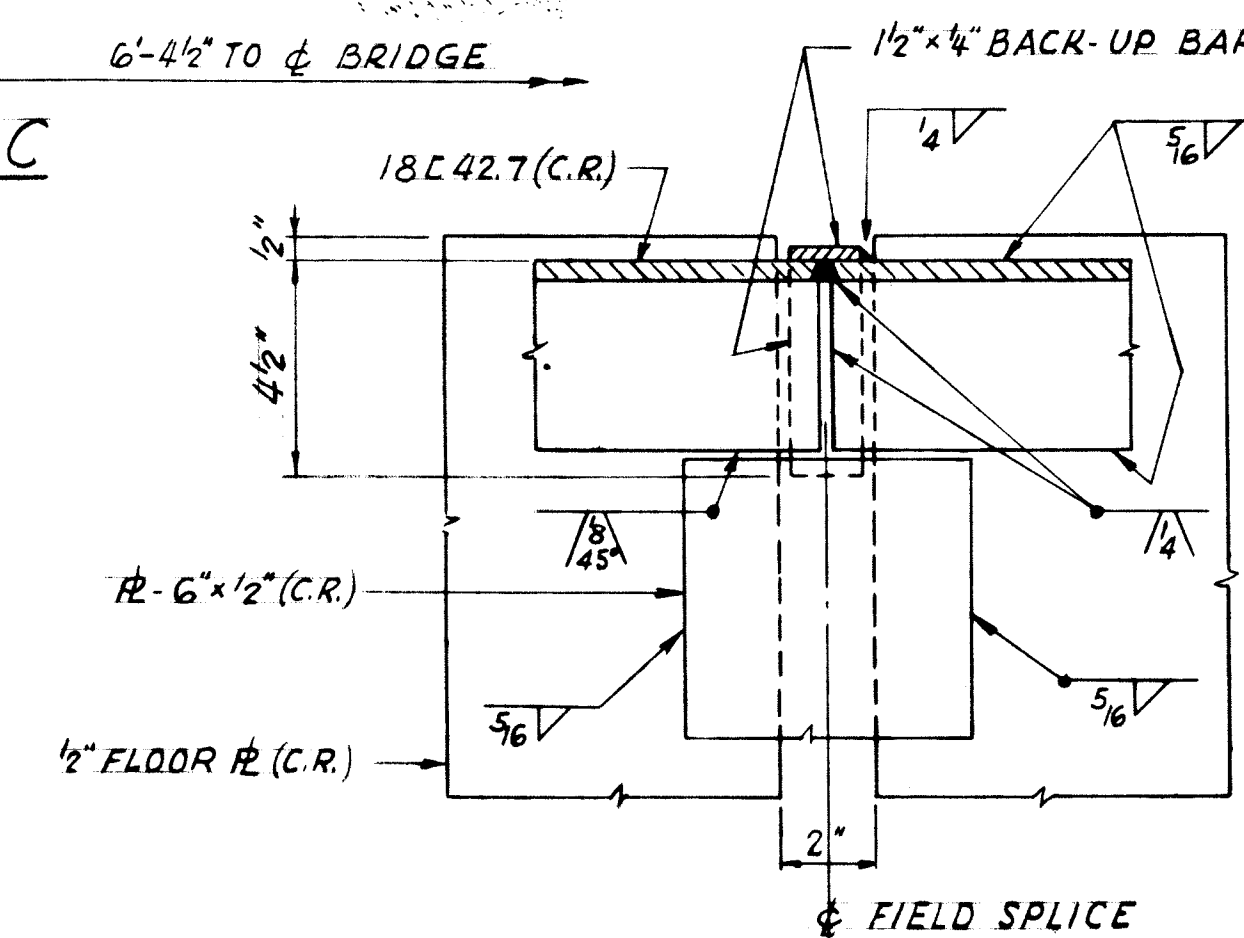
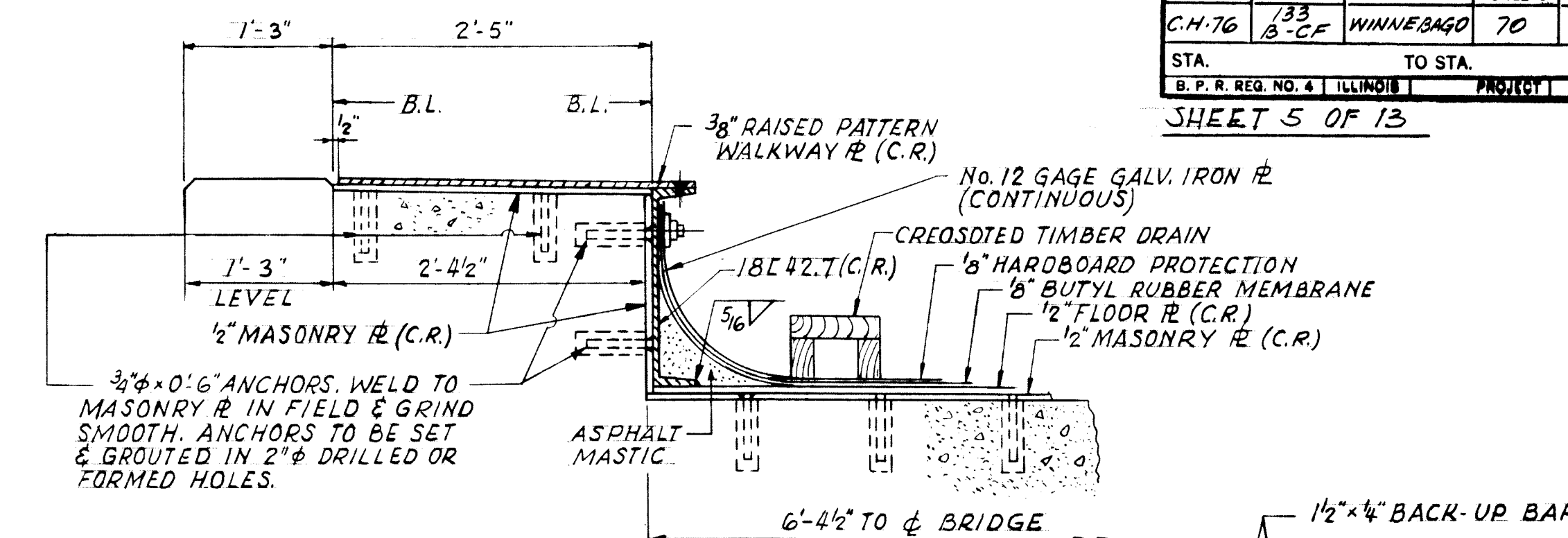
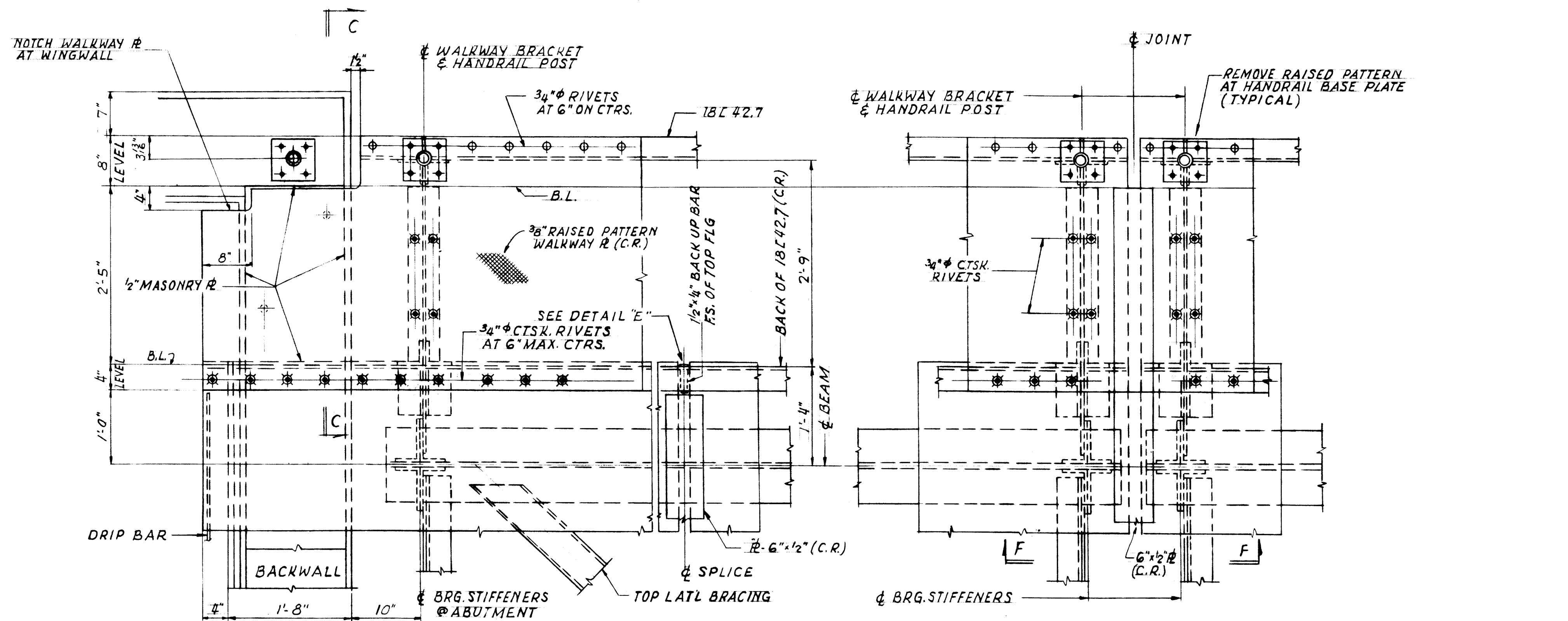
NOTE:

BEAMS SHALL BE SHOP RIVETED TOGETHER WITH DIAPHRAGMS AND BRACING AS SHOWN ON THE PLANS. FIELD CONNECTIONS OF BEAMS, DIAPHRAGMS AND WALKWAY BRACKETS SHALL BE RIVETED OR BOLTED WITH HIGH STRENGTH BOLTS, VARY THE THICKNESS OF THE SOLE PLATES IF NECESSARY TO KEEP GIRDER DIMENSIONS MARKED "MAINTAIN" AND TO KEEP THE SURFACES OF THE TOP FLANGES IN A TRUE HORIZONTAL PLANE ALONG LINES AT RIGHT ANGLES TO THE CENTERLINE OF BRIDGE. BOTTOM FLANGE OF BEAMS AT SOLE PLATE TO BE IN ONE PLANE PERPENDICULAR TO THE WEB.

APPROVED
COUNTY SUPERINTENDENT OF HIGHWAYS
EXAMINED
ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED
ENGINEER OF DESIGN
APPROVED
CHIEF HIGHWAY ENGINEER

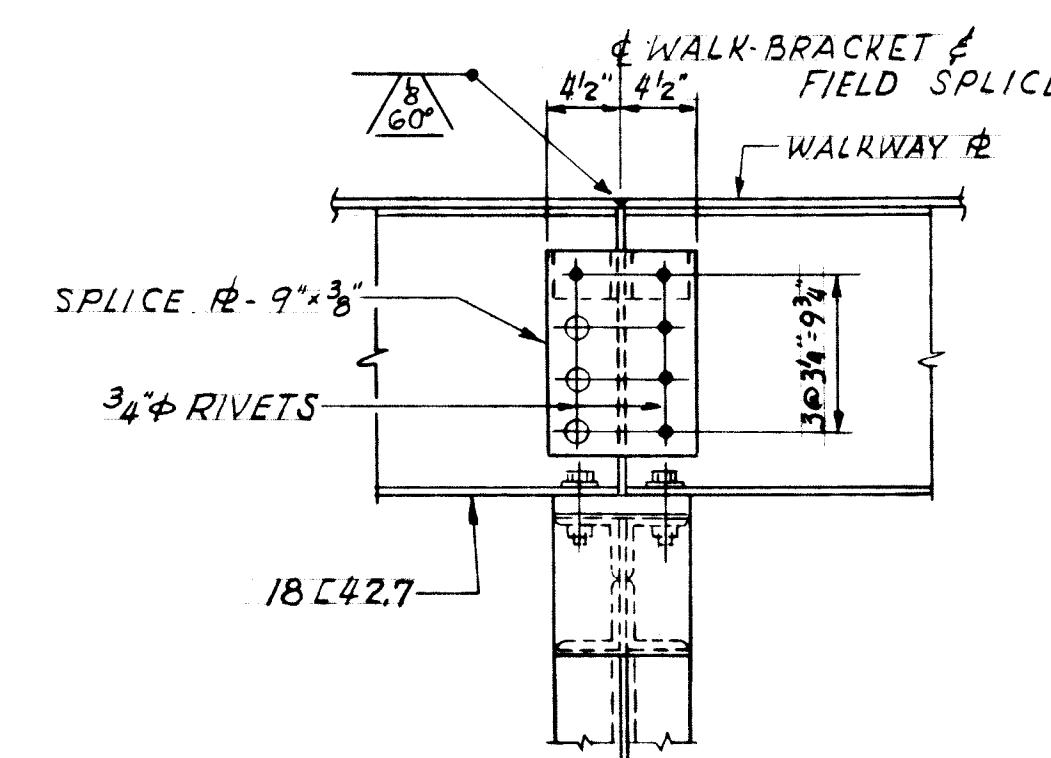
STEEL FRAMING PLAN
C.M. ST. & P.R.R. SUBWAY
COUNTY HIGHWAY RTE. 76
SECTION 133-B-CF
WINNEBAGO COUNTY
STATION 72+53.26

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS



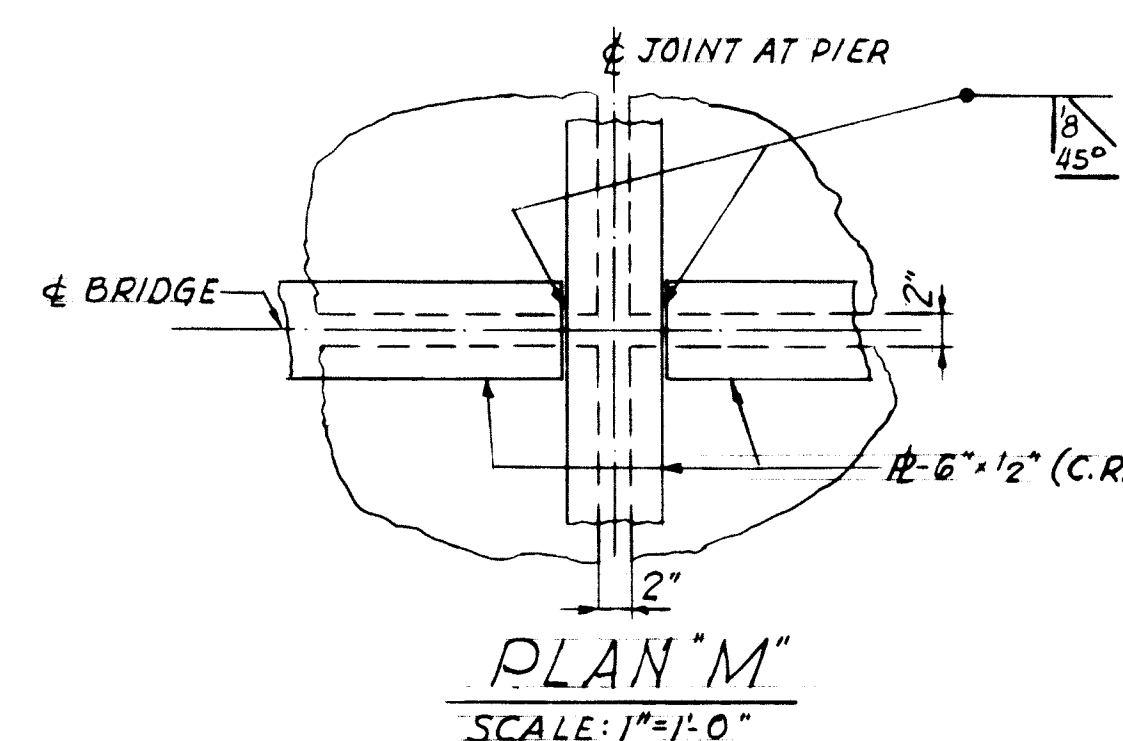
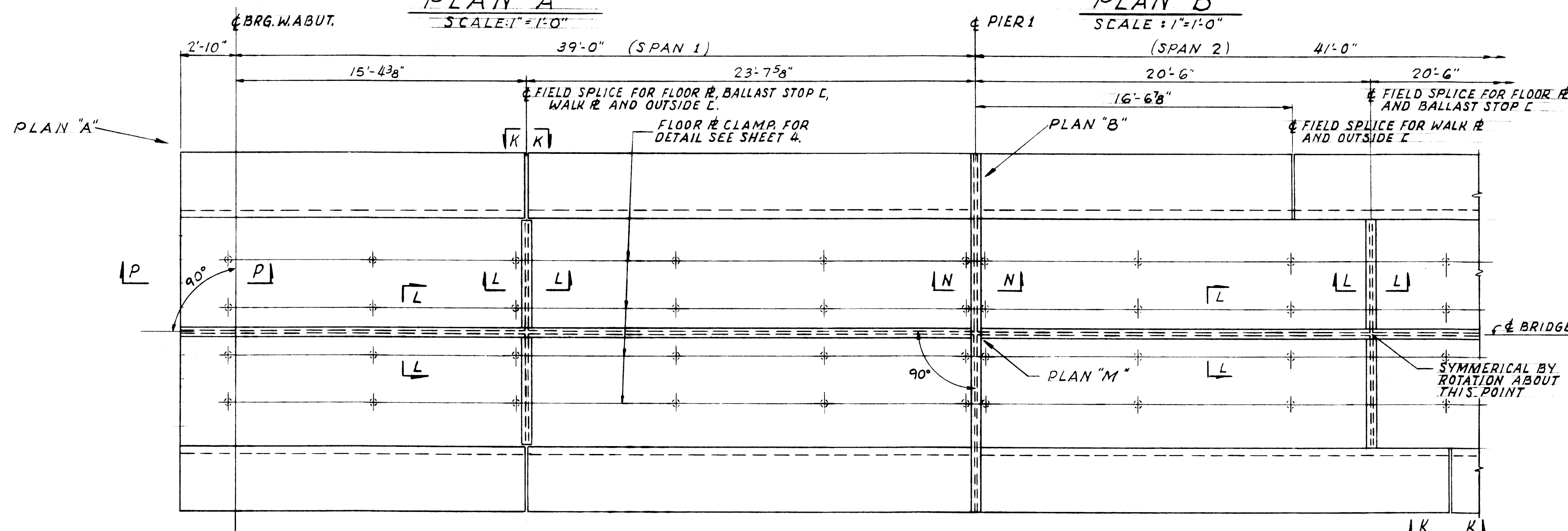
SECTION H-H

SCALE: 1" = 1'-0"



NOTE
REMOVE SHARP EDGES OR ANY PROJECTIONS FROM FLOOR AND SPLICE PLATES THAT MAY DAMAGE THE BUTYL RUBBER MEMBRANE.

ALL SHOP AND FIELD WELDS ON THE DECK TO BE CONTINUOUS RESULTING IN A WATERTIGHT DECK AND SHALL BE TESTED FOR WATERTIGHTNESS BEFORE THE BUTYL RUBBER MEMBRANE IS APPLIED.



NOTE: FOR SECTIONS L-L, N-N AND P-P SEE SHEET 4

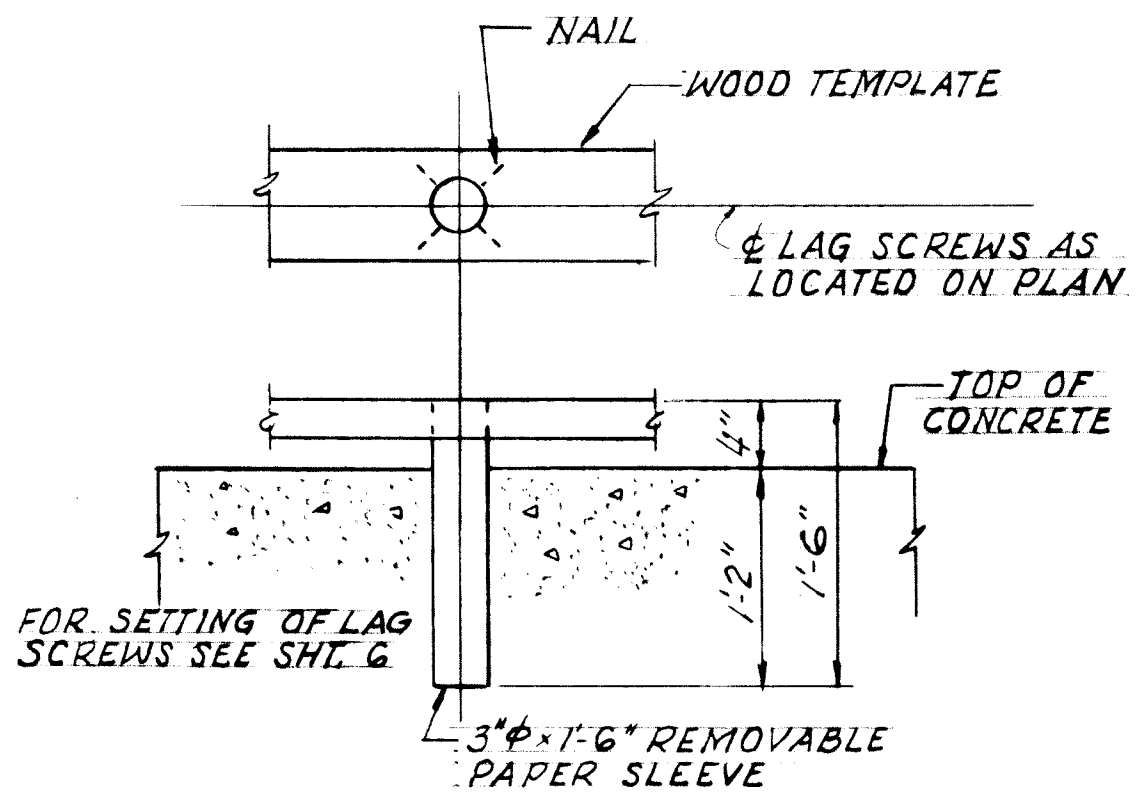
APPROVED
COUNTY SUPERINTENDENT OF HIGHWAYS
EXAMINED
ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED
ENGINEER OF DESIGN
APPROVED
CHIEF HIGHWAY ENGINEER

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
18 S. WABASH AVE. CHICAGO, ILLINOIS

FLOOR PLATE DETAILS
C.M.S.T.P. & P.R.R. SUBWAY
COUNTY HIGHWAY RTE. 76
SECTION 133-B-CF
WINNEBAGO COUNTY
STATION 72+53.26

BILL OF MATERIAL

BAR	No.	SIZE	LENGTH	SHAPE
	PIER 1	PIER 2		
E 100	16	16	#8	6'-6"
h 100	38	38	#7	9'-0"
h 101	10	10	#7	9'-0"
E 101	27	27	#7	11'-8"
h 100	16	16	#6	17'-0"
h 101	14	14	#6	15'-3"
h 102	4	4	#6	15'-0"
U 100	18	18	#6	6'-0"
U 101	32	32	#6	9'-0"
V 100	30	30	#6	15'-3"
V 101	10	10	#6	15'-6"
V 102	8	8	#6	13'-0"
W 100	11	11	#6	26'-0"
			PIER 1	PIER 2
REINFORCEMENT BARS			LBS	4,725
CLASS X CONCRETE			CU. YDS.	81.9
CLASS A EXCAVATION FOR STRUCTURES			CU. YDS.	90
				85



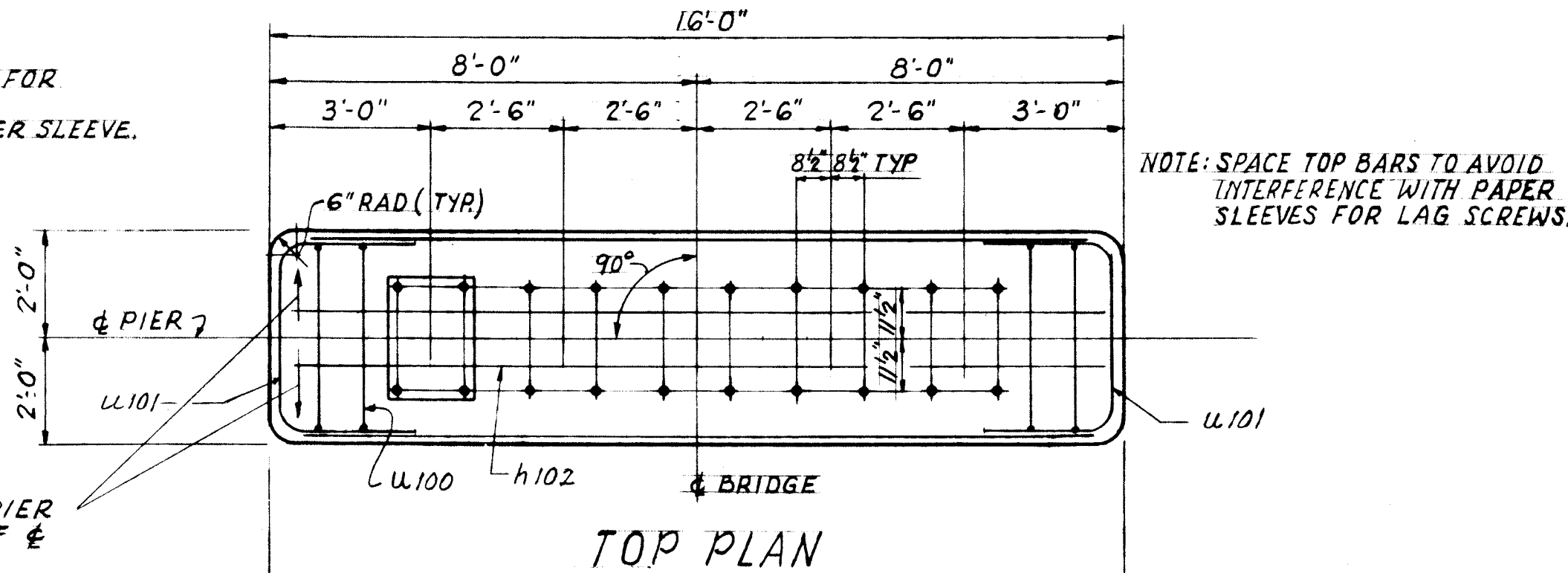
DETAIL OF PAPER SLEEVE

SCALE: 1"=1'-0"

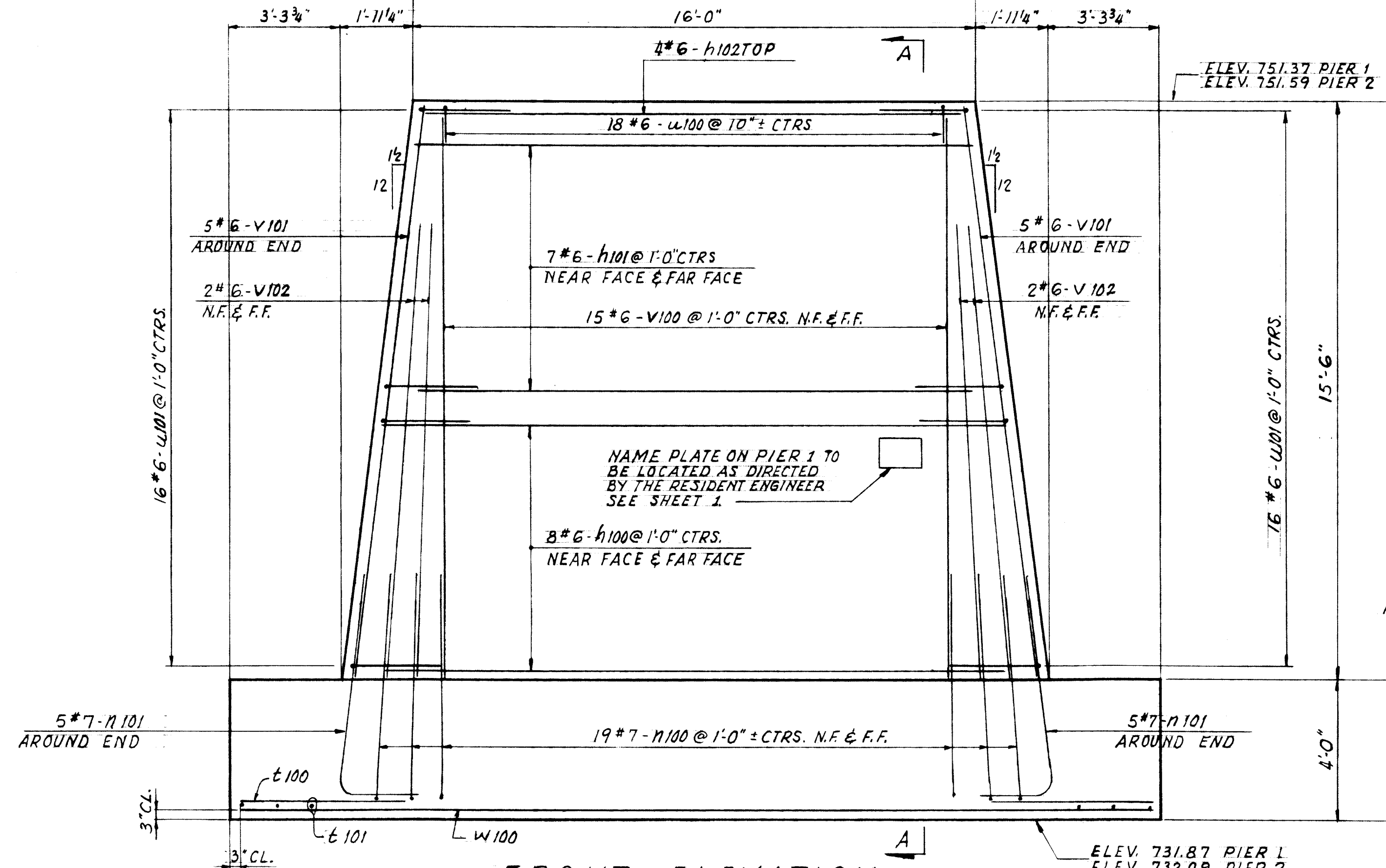
NOTE: PROVIDE SLEEVE AS SHOWN FOR ALL 1/4" x 1'-3" LAG SCREWS. PRESET ALL SLEEVES AS SHOWN IN DETAIL ABOVE. WHEN CONCRETE HAS SUFFICIENTLY HARDENED, COMPLETELY REMOVE ALL SLEEVES AND FIT WOOD PLUGS INTO TOP OF HOLES. DRIVE PLUGS TIGHT ENOUGH TO KEEP OUT DIRT AND WATER.

THE COST OF THE 3" REMOVABLE PAPER SLEEVES AND WOOD BLOCKS TO BE INCLUDED IN THE CONTRACT UNIT PRICE FOR CONCRETE MASONRY, BRIDGES.

NOTE: PRESET 20 SLEEVES FOR LAG SCREWS. SEE DETAIL OF PAPER SLEEVE.

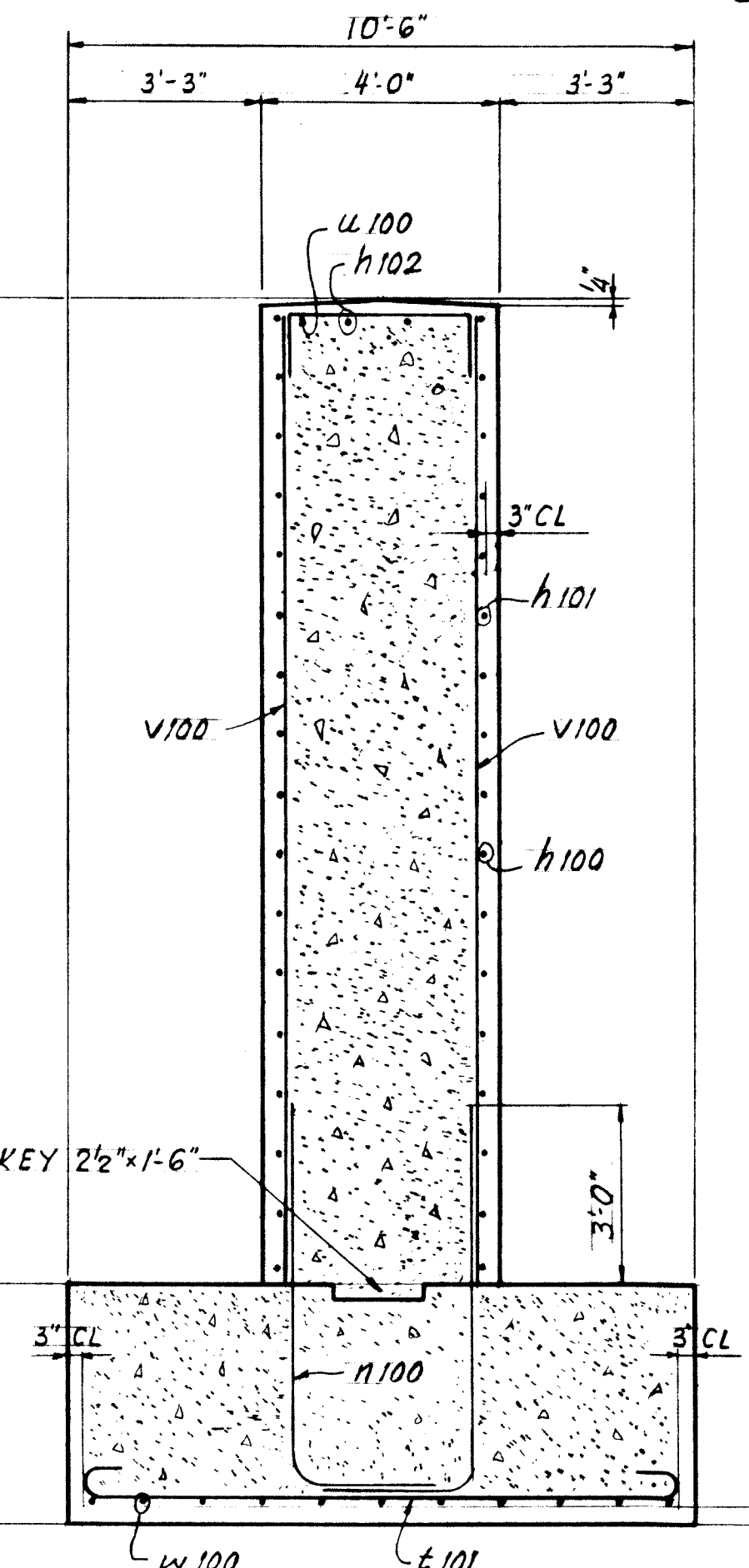


TOP PLAN



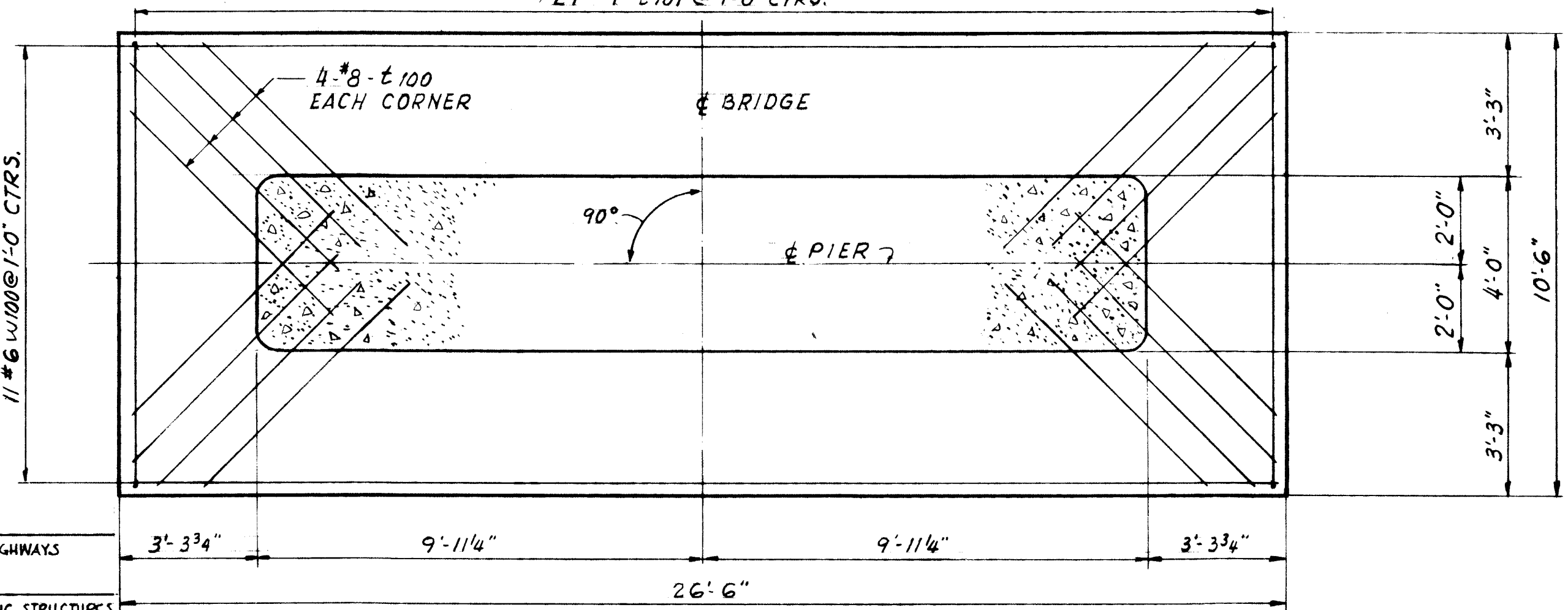
FRONT ELEVATION

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



SECTION A-A

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



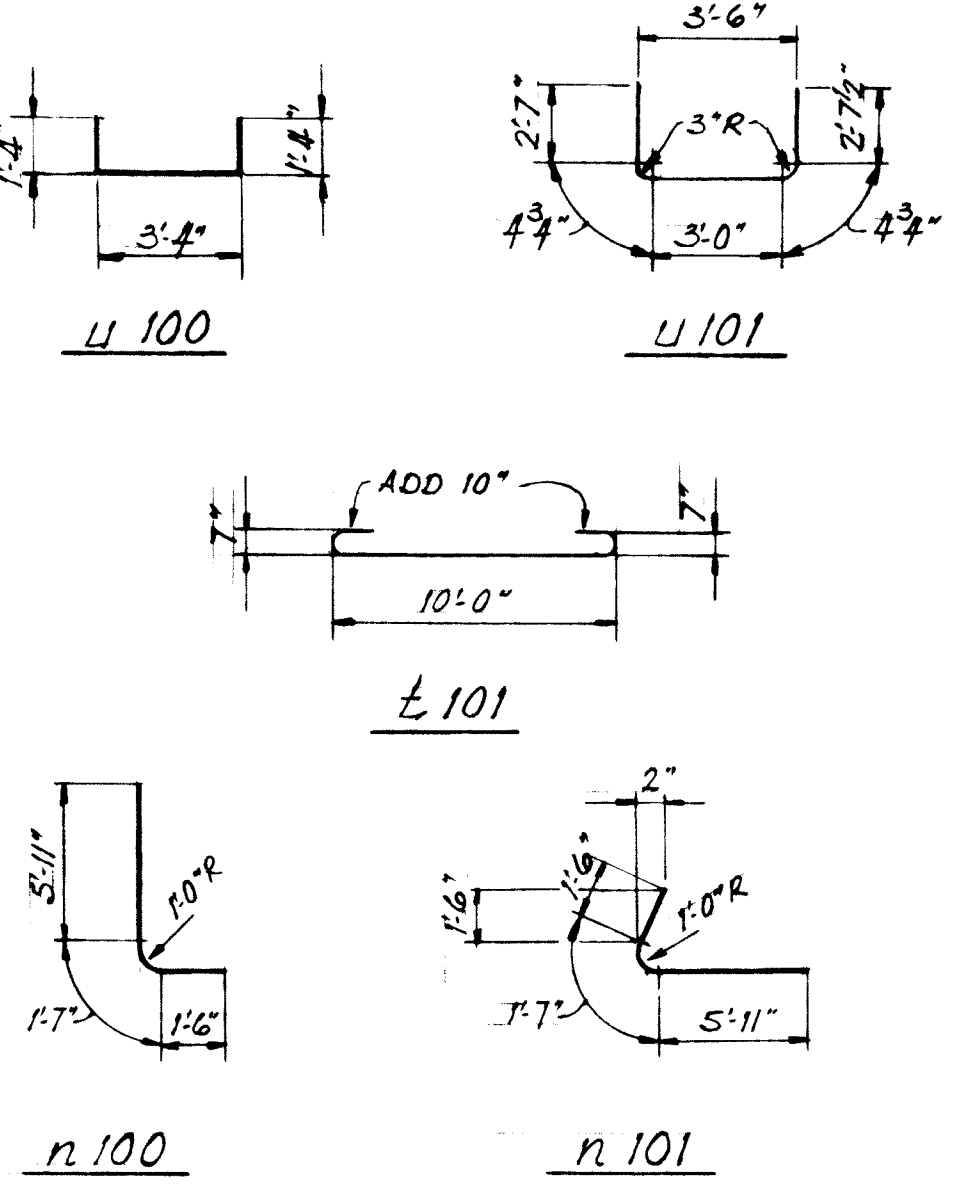
FOOTING PLAN

C.M. ST. P. & P.R.R.
BUILT 196 BY
WINNEBAGO COUNTY
SEC. 133-B-CF
STA. 72+53.26
LOADING COOPER E72

SEE STATE OF ILLINOIS STD. 2113-1

LETTERING FOR NAME PLATE

ONE NAME PLATE REQUIRED



NOTE: ALL DIMENSIONS ARE OUT TO OUT.

PIERS 1 & 2
C.M. ST. P. & P.R.R. SUBWAY
COUNTY HIGHWAY RTE. 76
SECTION 133-B-CF
WINNEBAGO COUNTY
STATION 72+53.26

APPROVED
COUNTY SUPERINTENDENT OF HIGHWAYS
EXAMINED
ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED
ENGINEER OF DESIGN
APPROVED
CHIEF HIGHWAY ENGINEER

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS

BILL OF MATERIAL

BAR	No.	SIZE	LENGTH	SHAPE
n.100	16	#7	9'-0"	L
n.102	16	#7	8'-0"	L
t.102	26	#7	11'-2"	C
t.103	16	#7	10'-2"	C
d.100	24	#6	5'-6"	—
h.104	26	#6	19'-6"	—
h.105	20	#6	5'-0"	—
h.106	8	#6	3'-0"	—
h.107	40	#6	6'-6"	—
m.100	24	#6	10'-0"	—
m.101	6	#6	6'-0"	—
m.102	16	#6	4'-6"	—
t.104	16	#6	8'-3"	—
u.103	8	#6	10'-6"	—
u.104	4	#6	20'-3"	—
u.105	6	#6	7'-0"	—
u.106	8	#6	7'-3"	—
u.107	12	#6	4'-6"	—
u.108	8	#6	3'-9"	—
u.109	12	#6	3'-6"	—
v.103	8	#6	12'-0"	—
v.104	12	#6	10'-6"	—
v.105	12	#6	5'-6"	—
v.106	8	#6	7'-3"	—
v.107	6	#6	12'-0"	—
v.108	32	#6	9'-0"	—
w.101	10	#6	25'-6"	—
w.102	16	#6	10'-6"	—
w.103	10	#6	7'-6"	—
				W. ABUT. E. ABUT.
REINFORCEMENT BARS		LBS.	6,135	6,135
CLASS X CONCRETE		CU. YDS.	96.6	96.6
CLASS A EXCAVATION FOR STRUCTURES		CU. YDS.	200	200

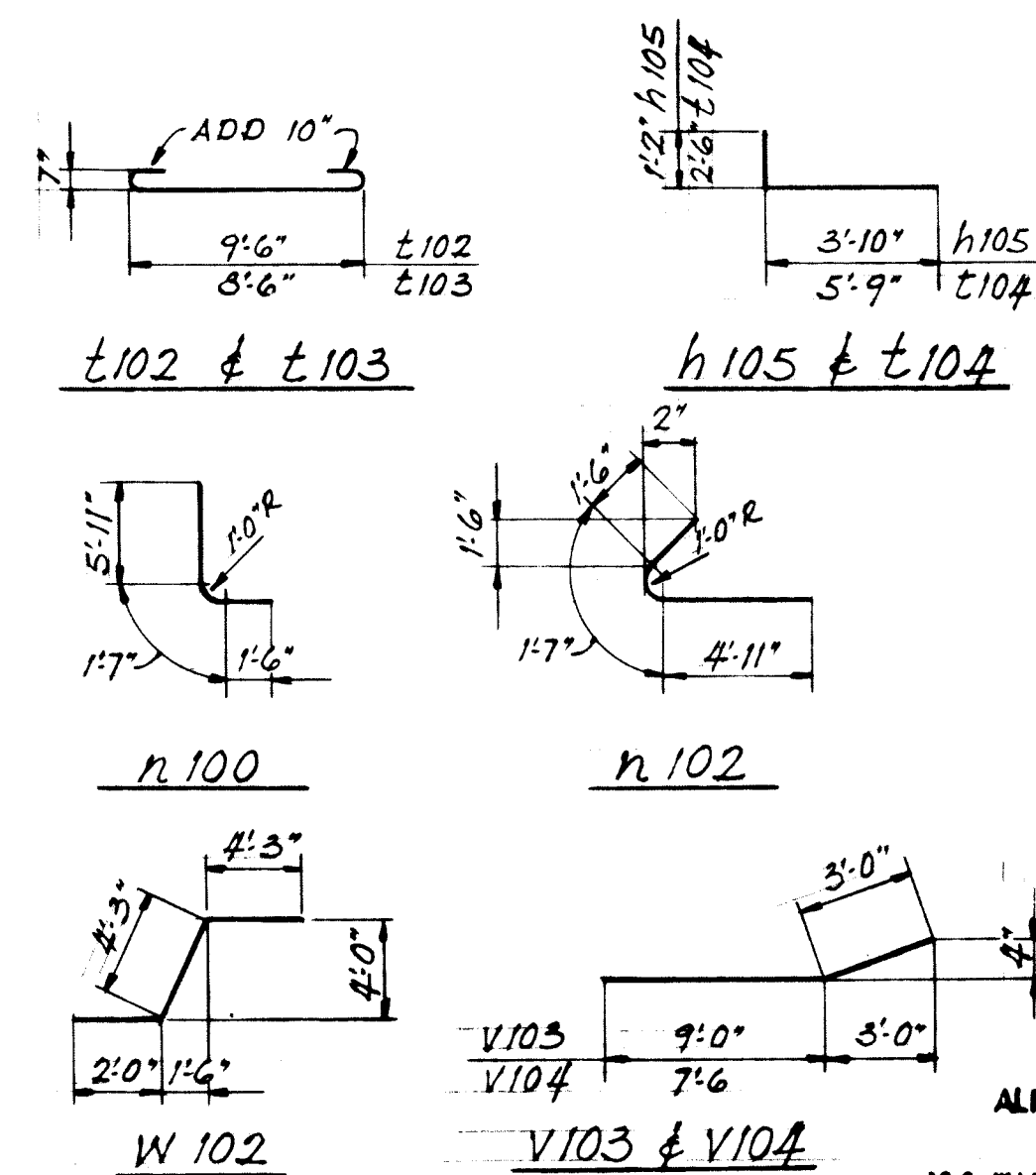
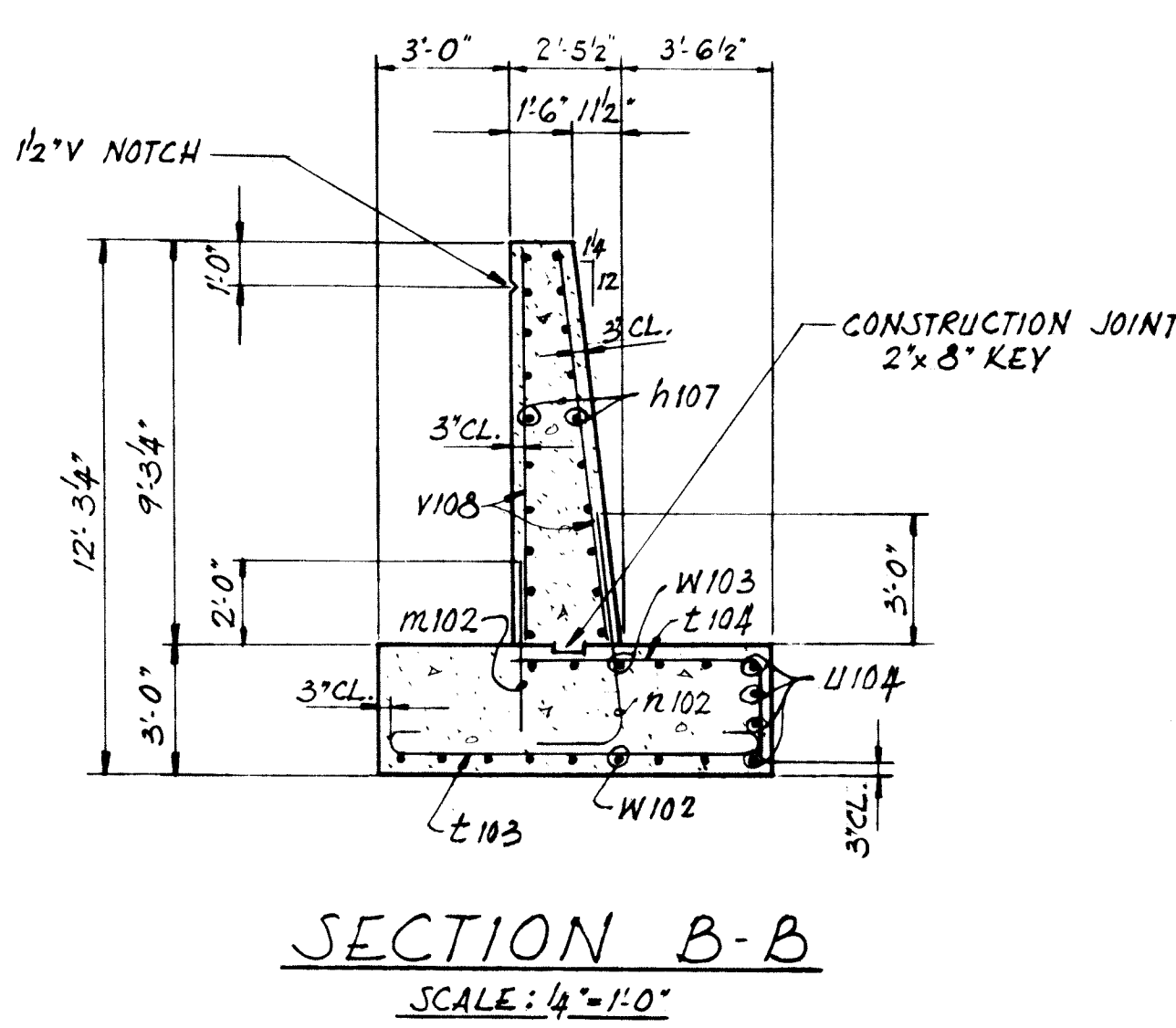
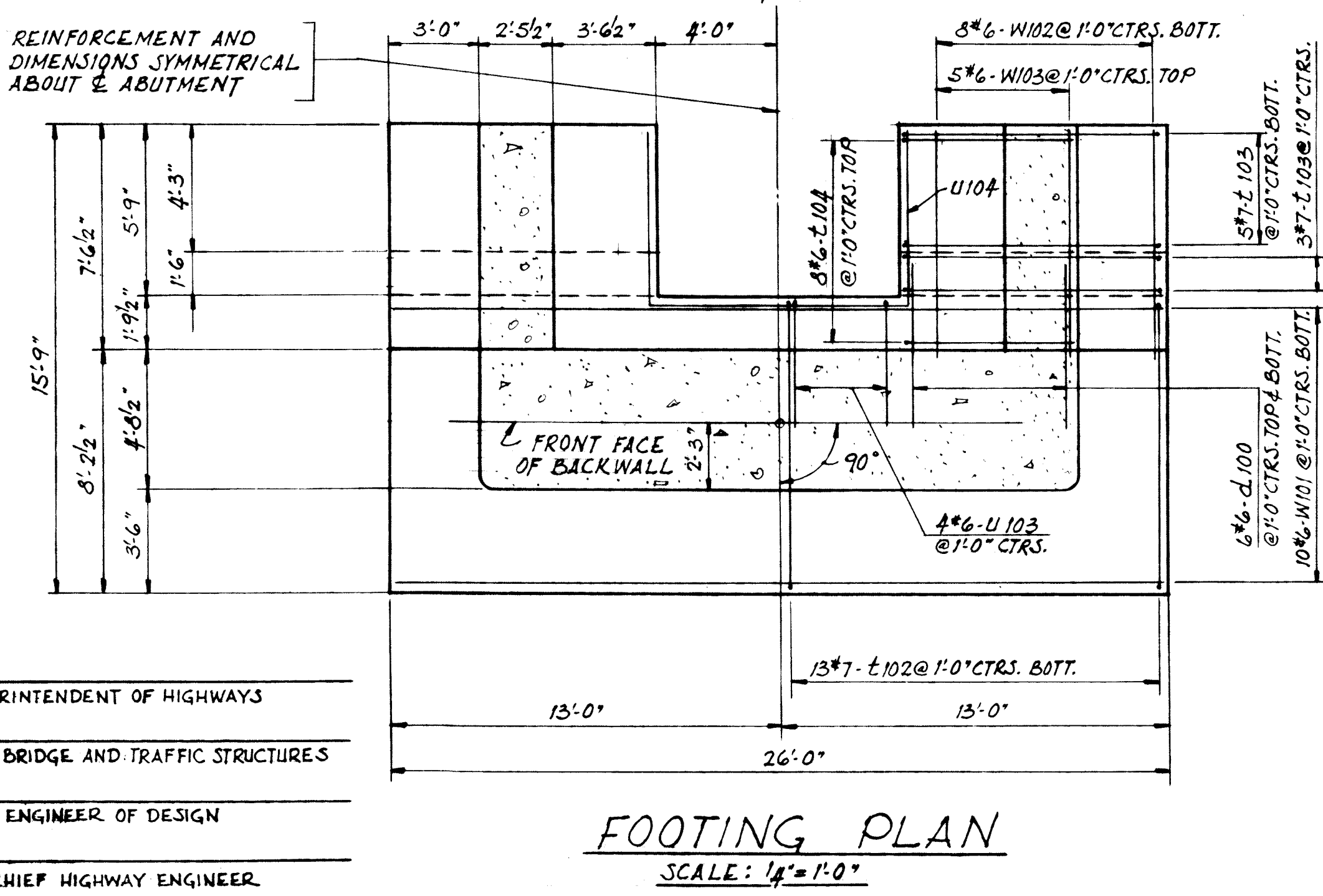
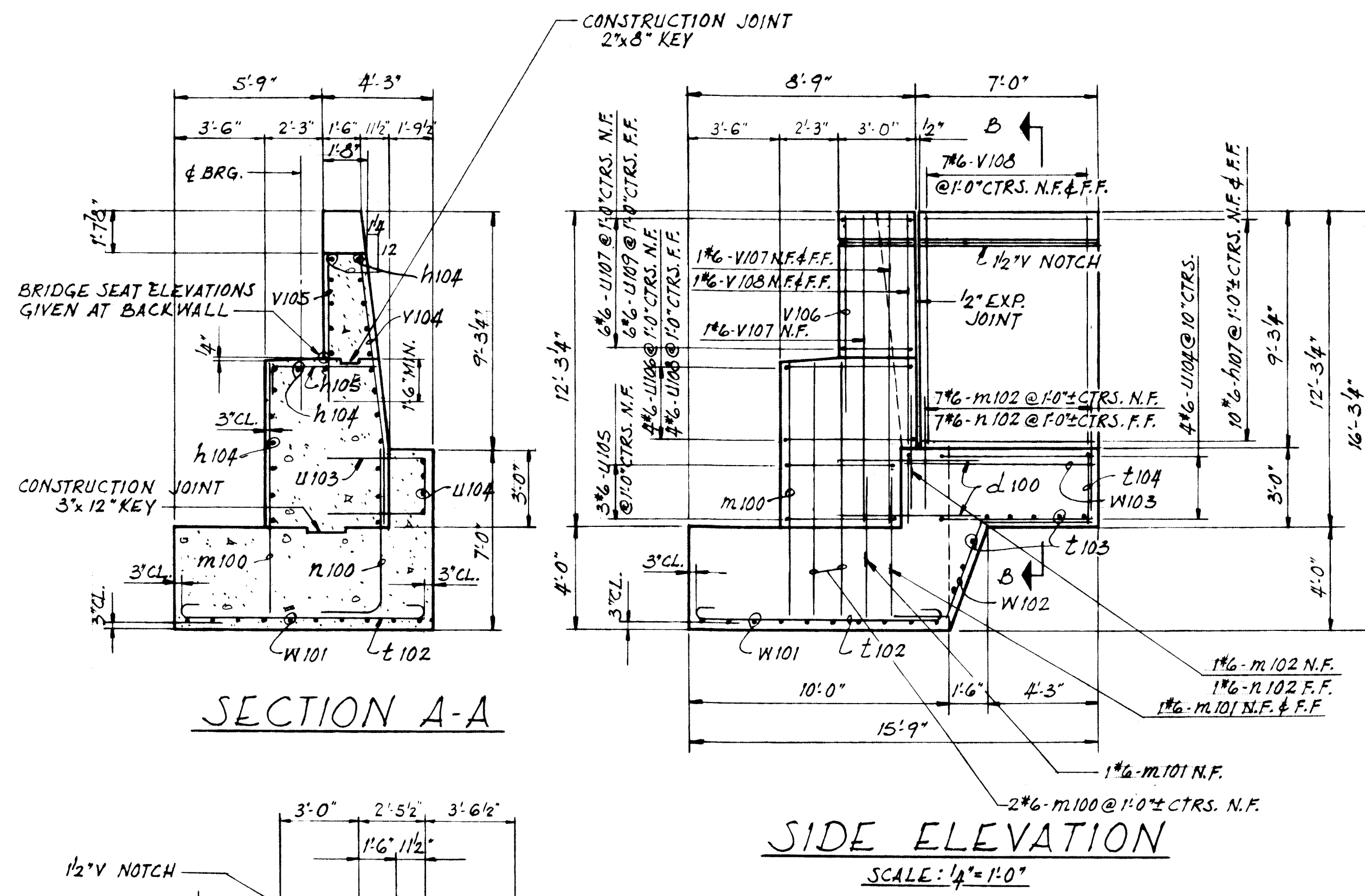
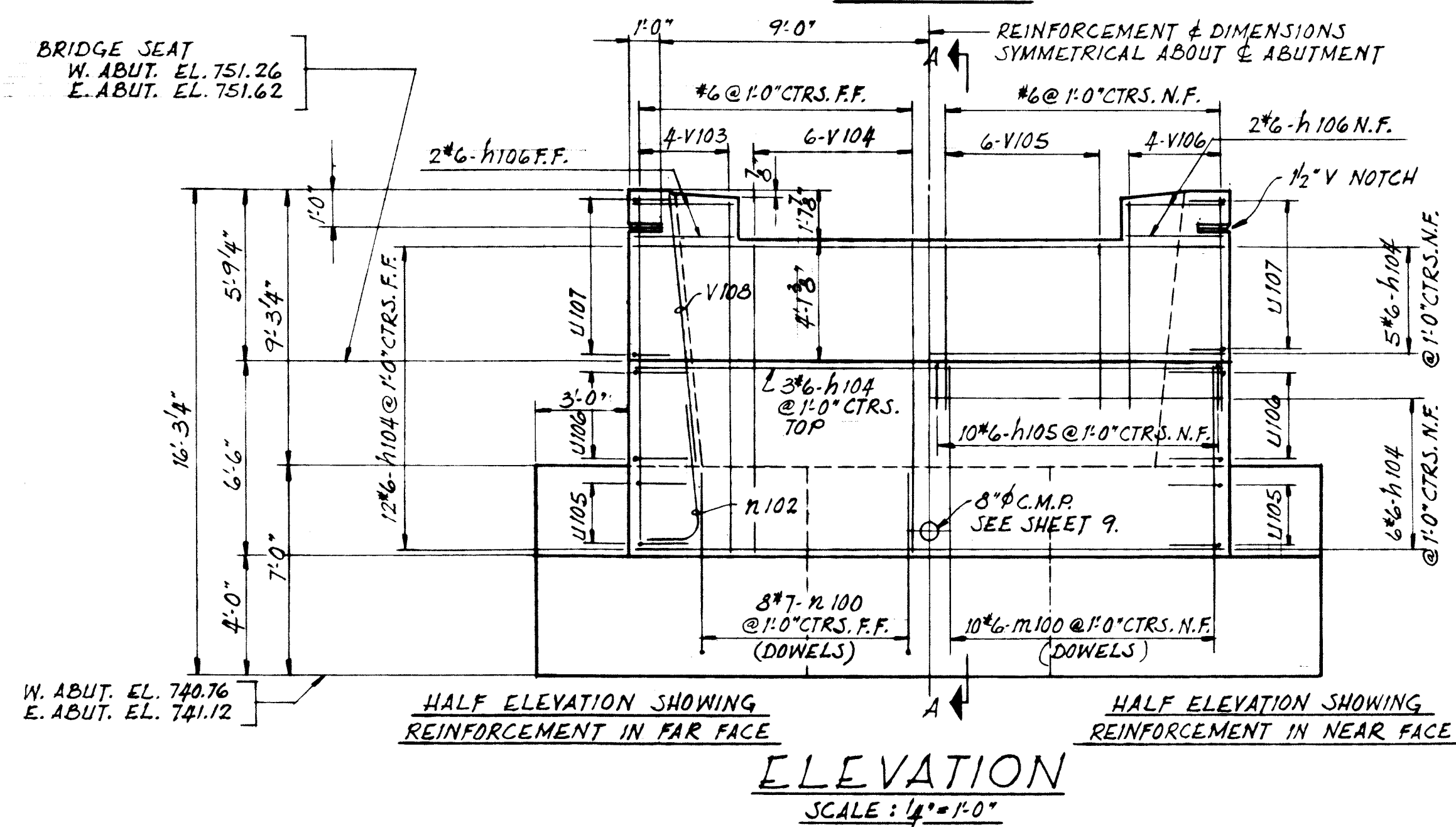
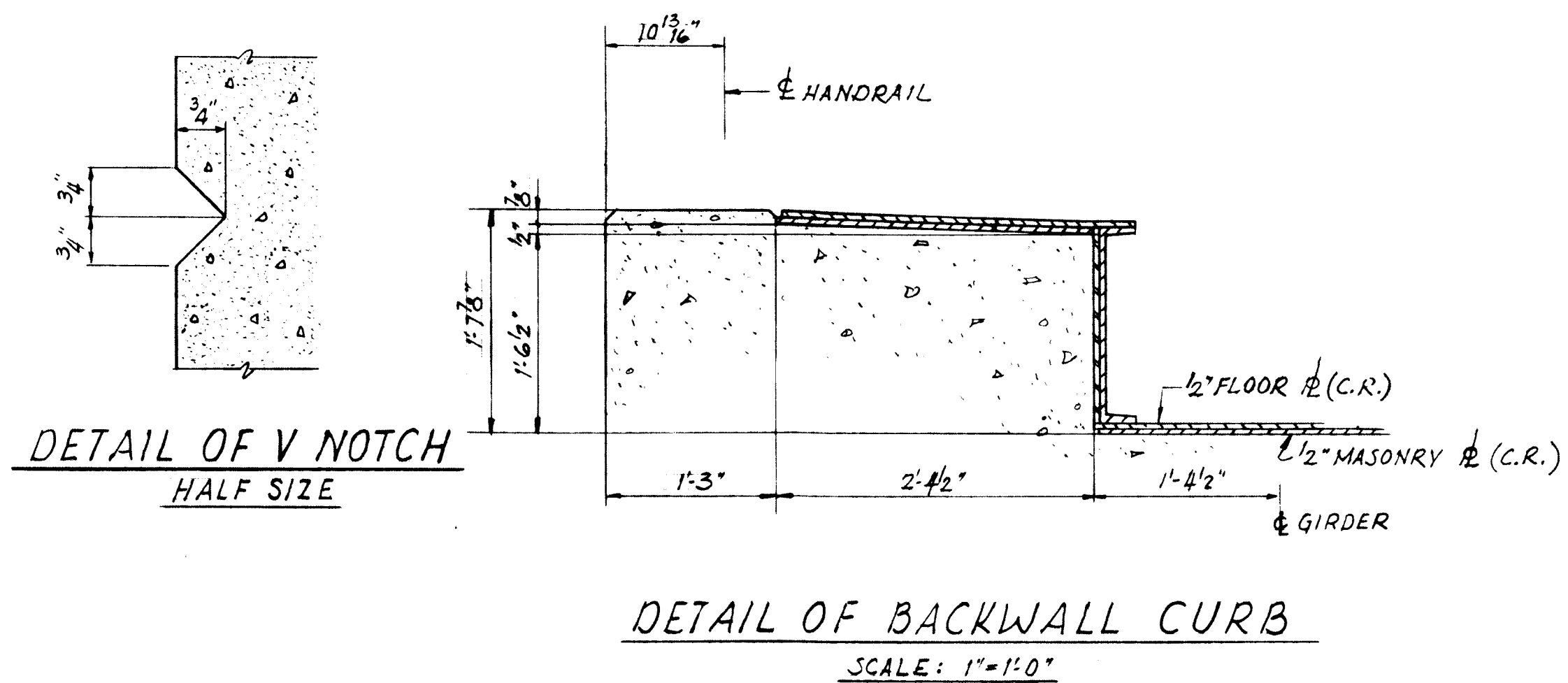
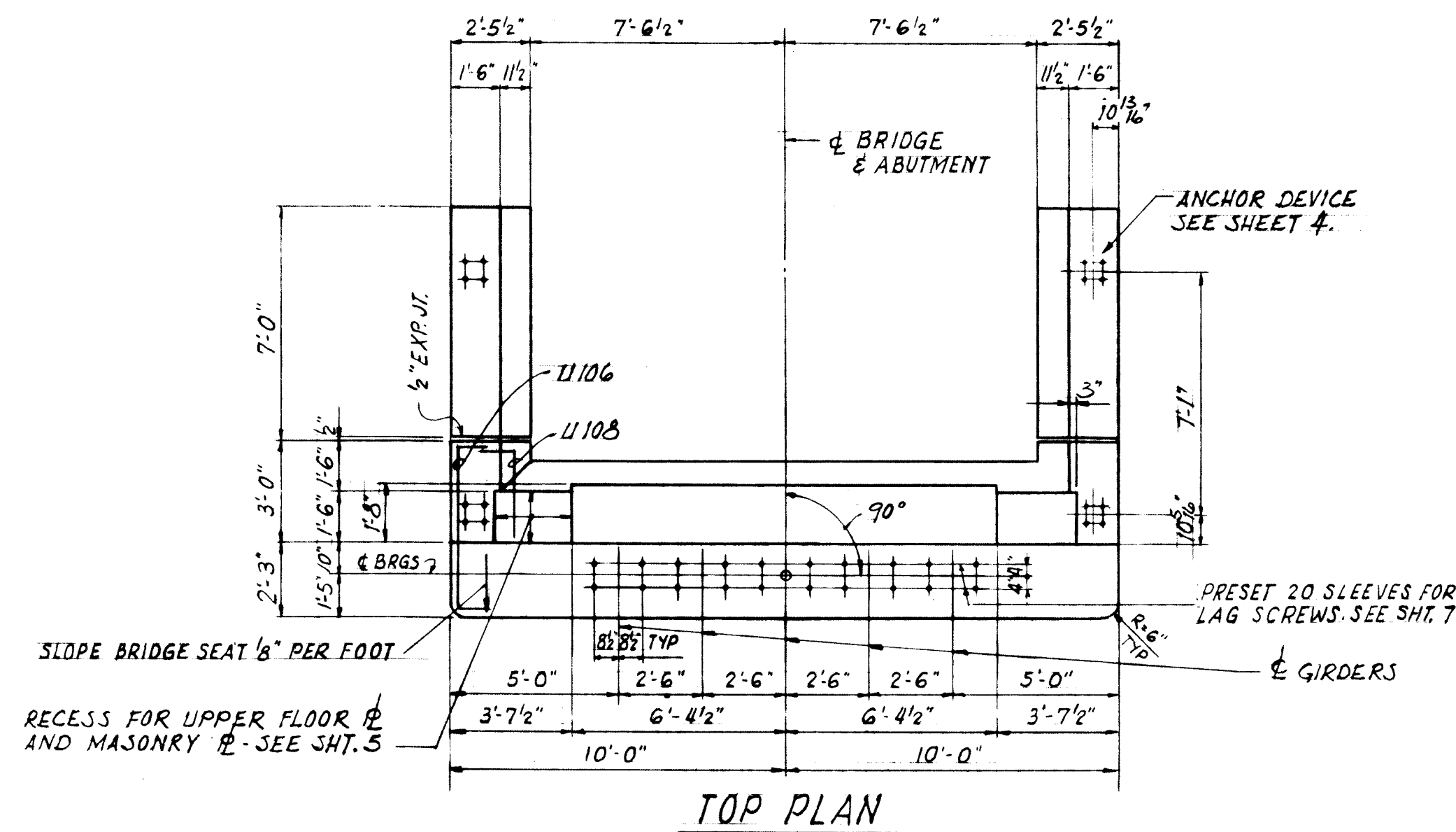
"U" BARS

BAR	a	b	c
u.103	4'-0"	2'-6"	4'-0"
u.104	5'-9"	8'-8"	5'-9"
u.105	1'-6"	4'-1"	1'-5"
u.106	1'-3"	4'-9"	1'-3"
u.107	1'-0"	2'-6"	1'-0"
u.108	—	2'-6"	1'-3"
u.109	—	2'-6"	1'-0"

"U" BARS
(SEE TABLE FOR LENGTHS)

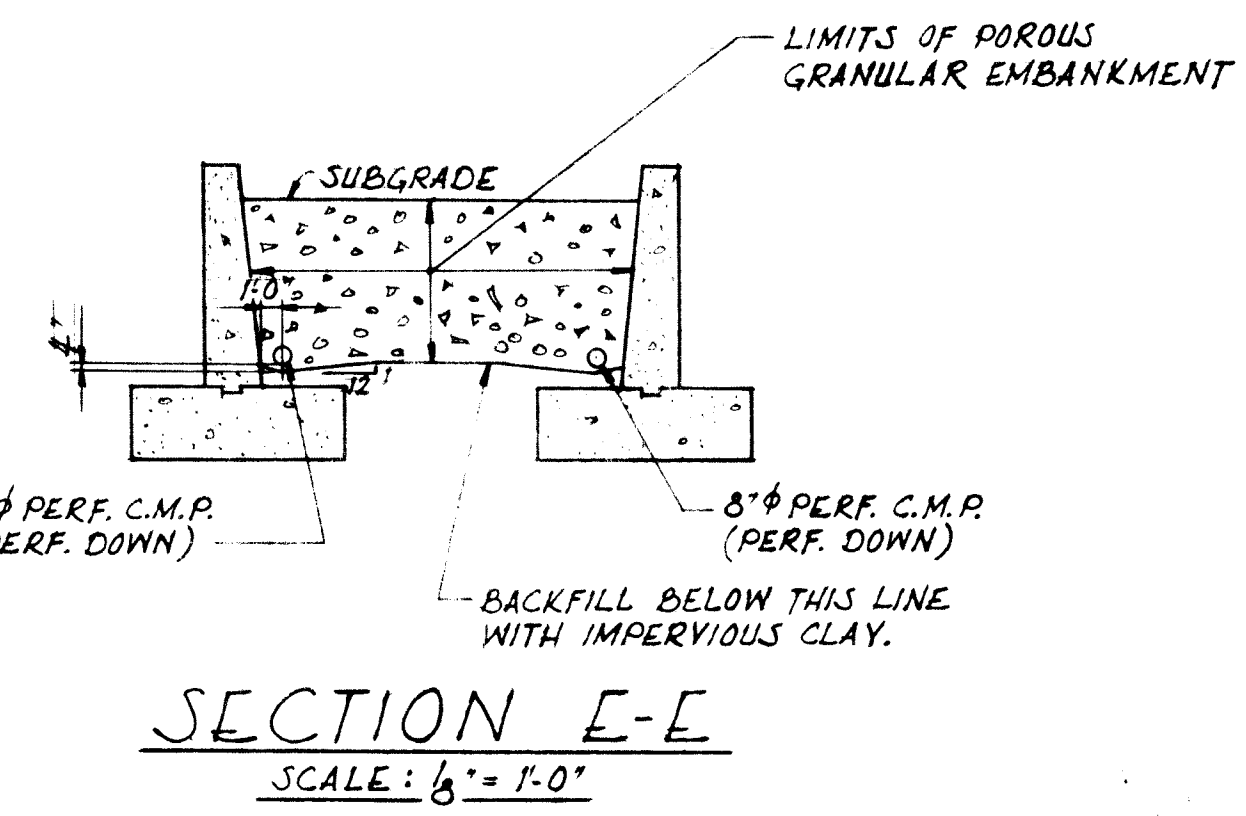
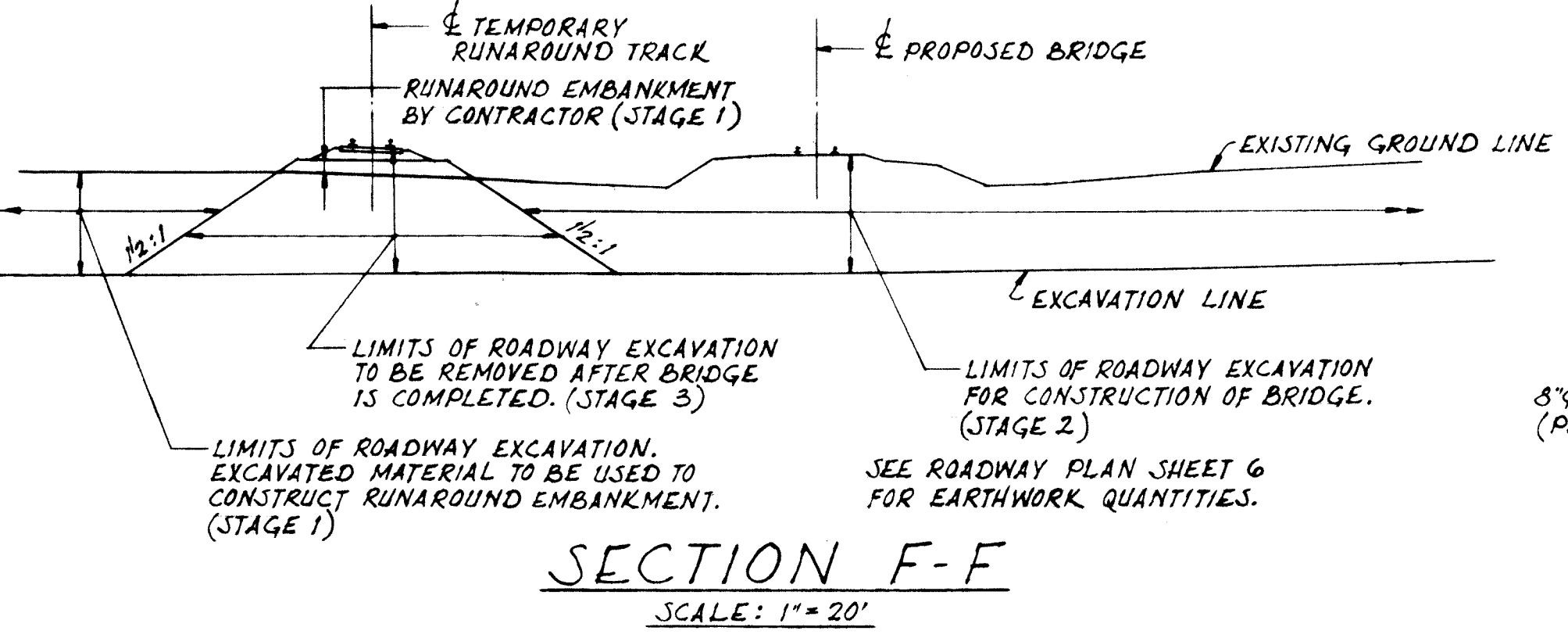
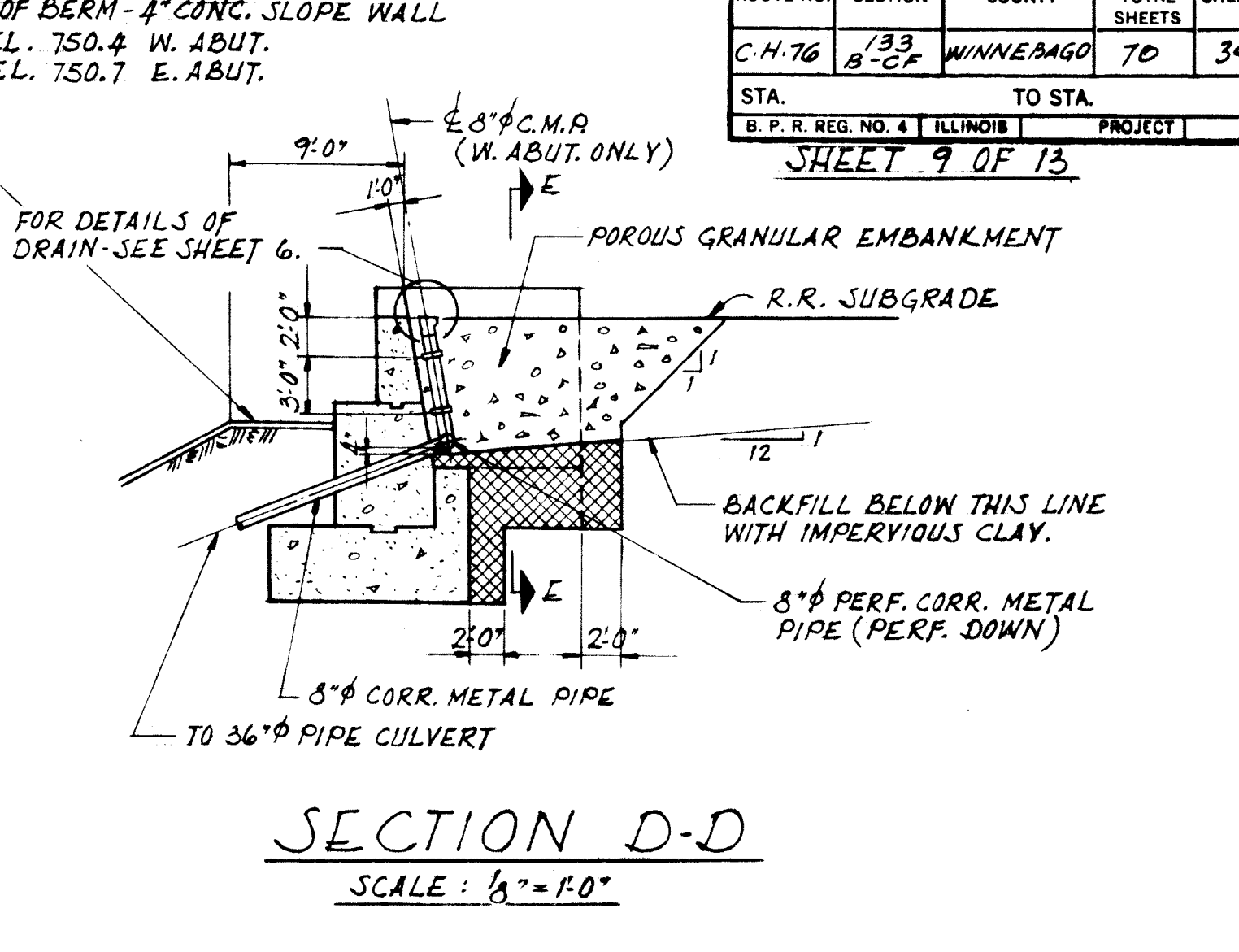
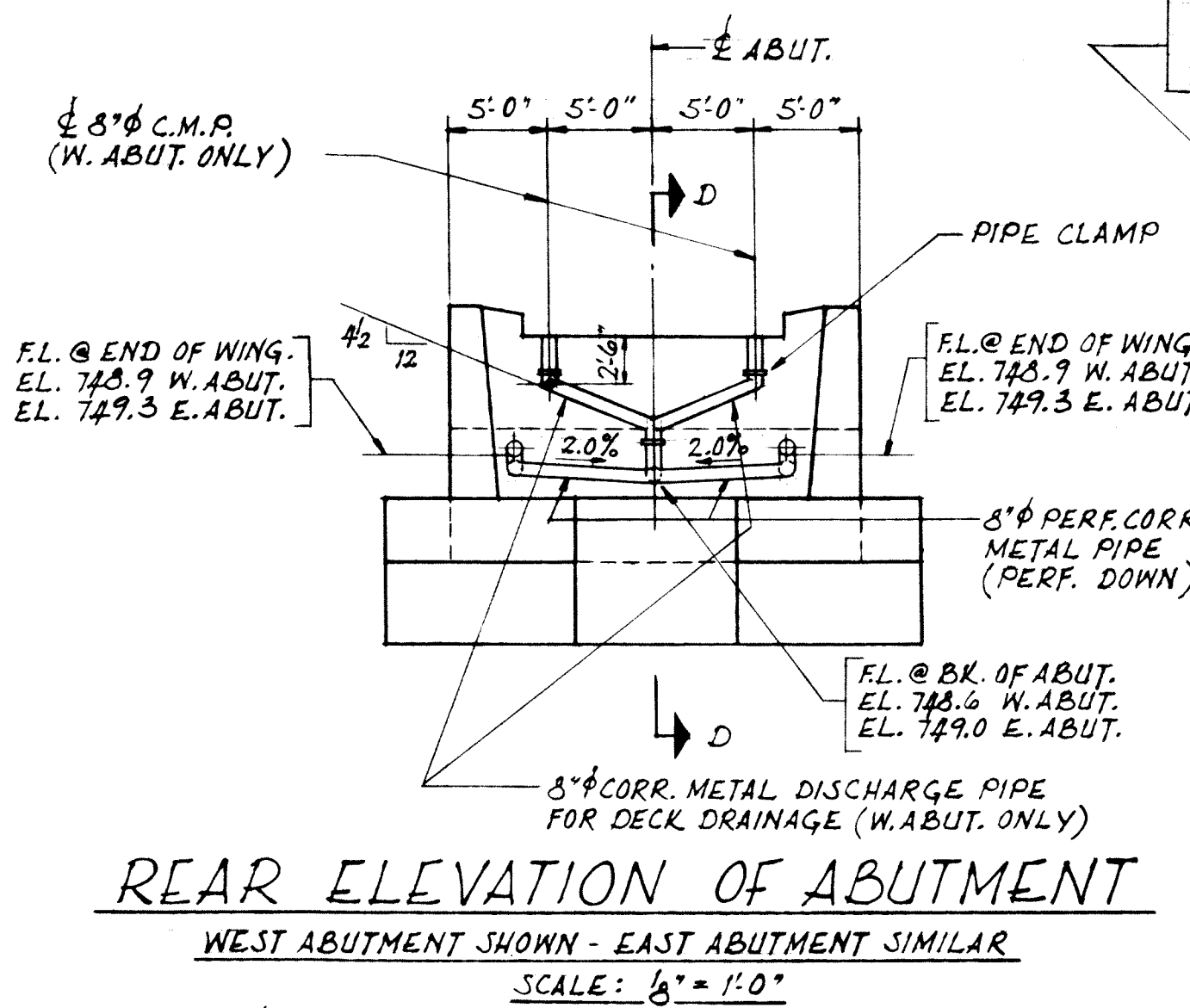
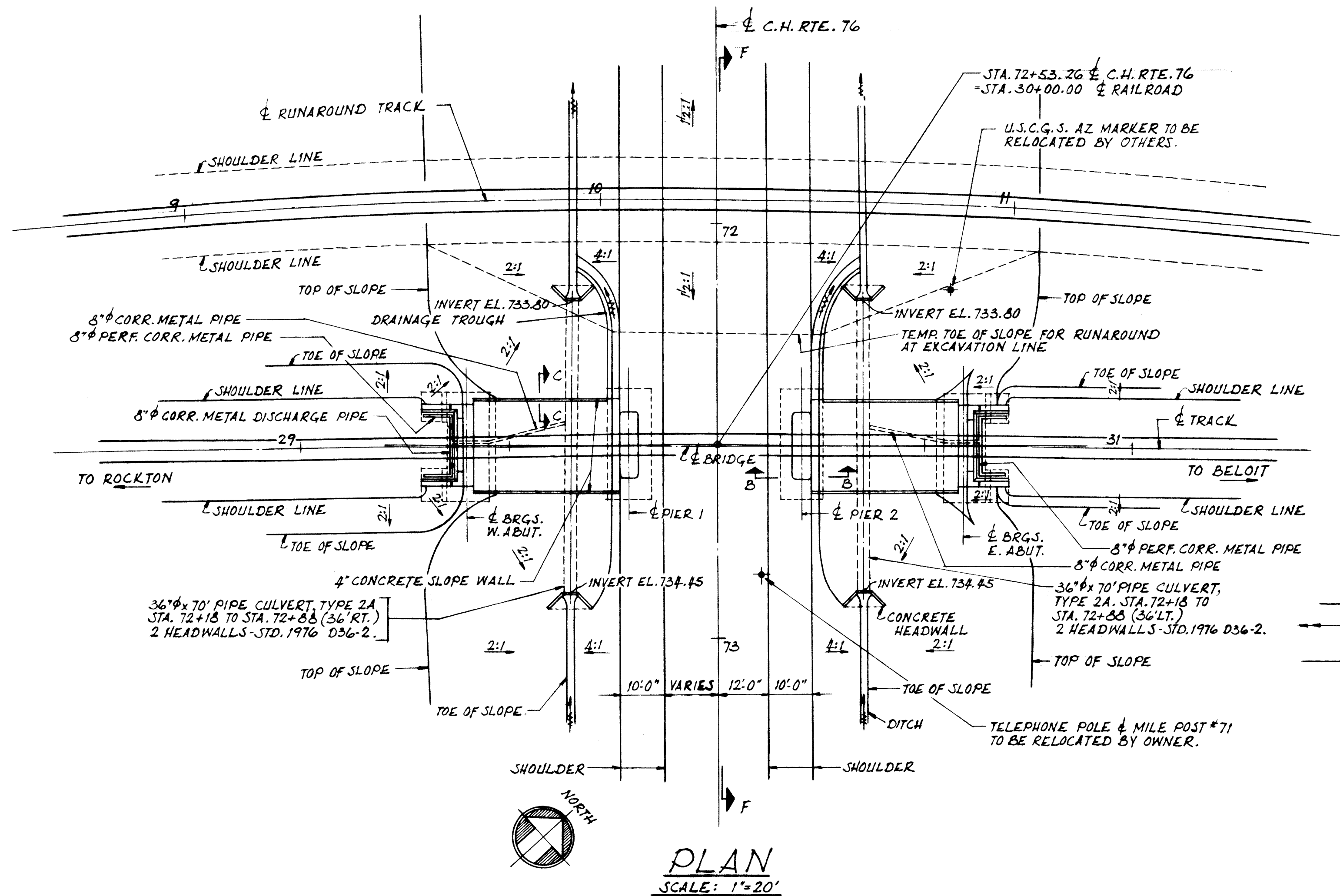
NOTE:
ALL DIMENSIONS ARE OUT TO OUT.

W. & E. ABUTMENTS
C.M. ST. P. & P.R.R. SUBWAY
COUNTY HIGHWAY RTE. 76
SECTION 133-B-CF
WINNEBAGO COUNTY
STATION 72+53.26

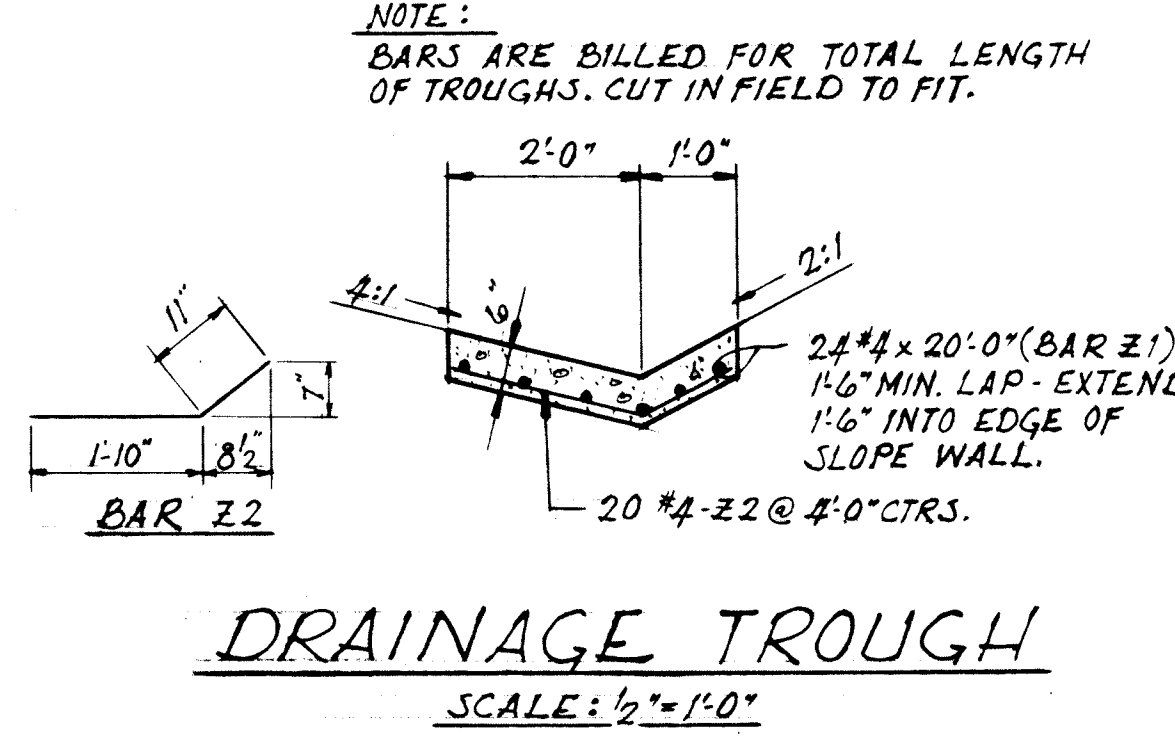
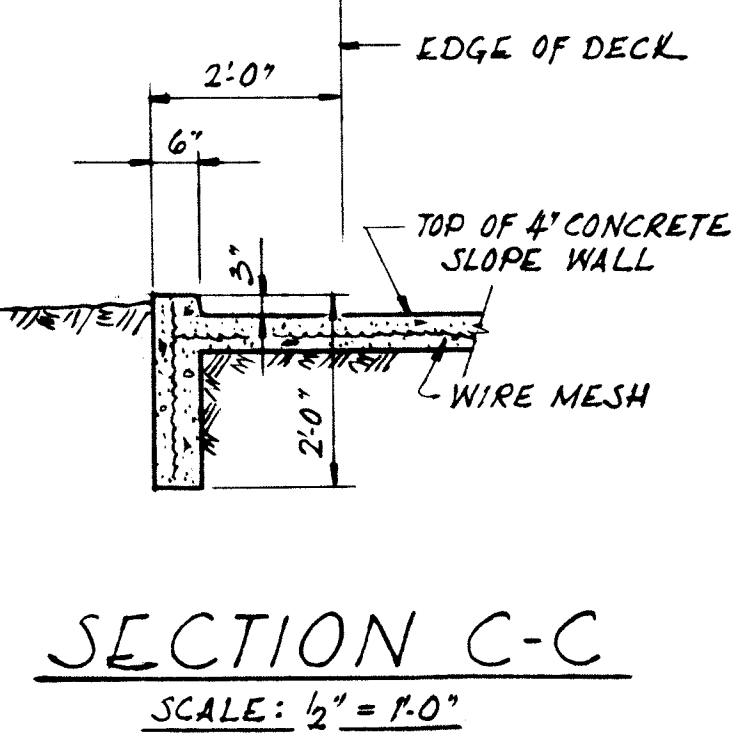
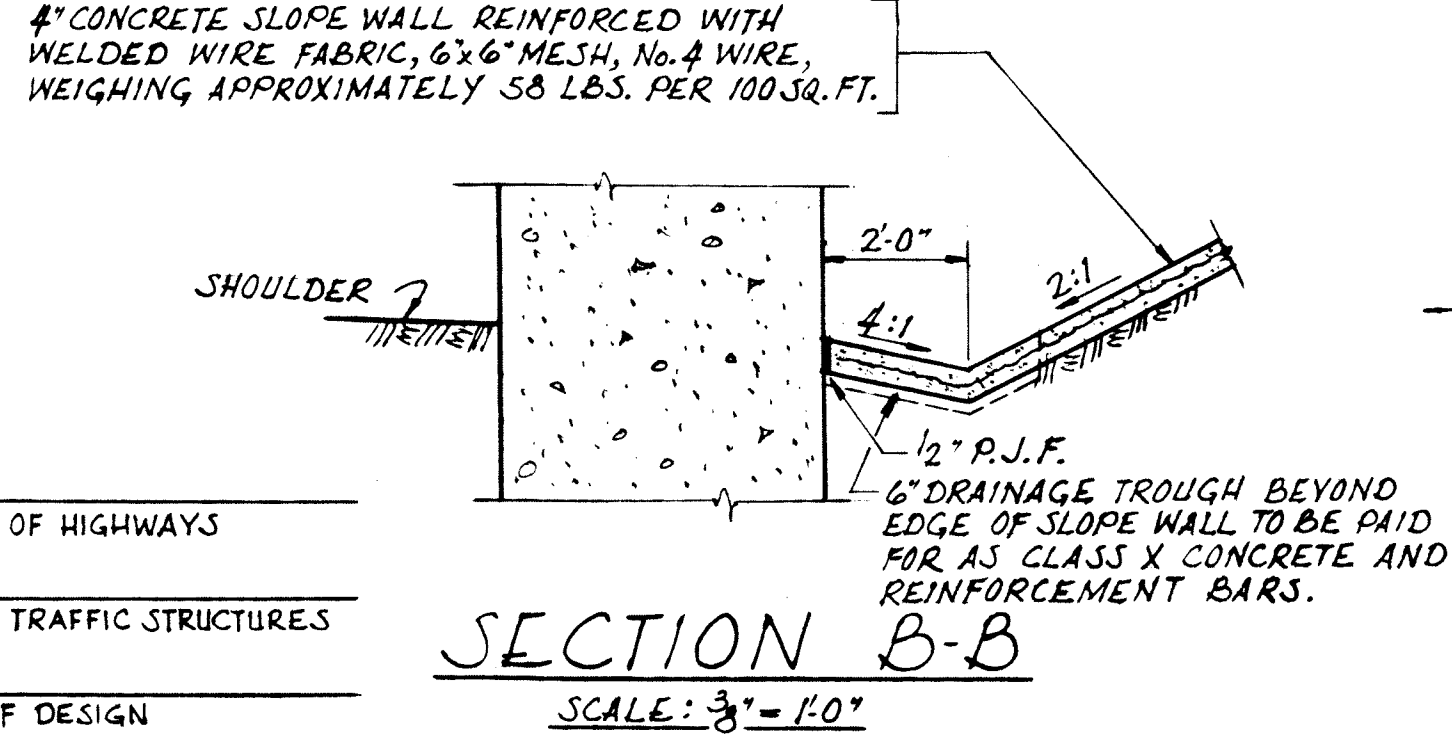
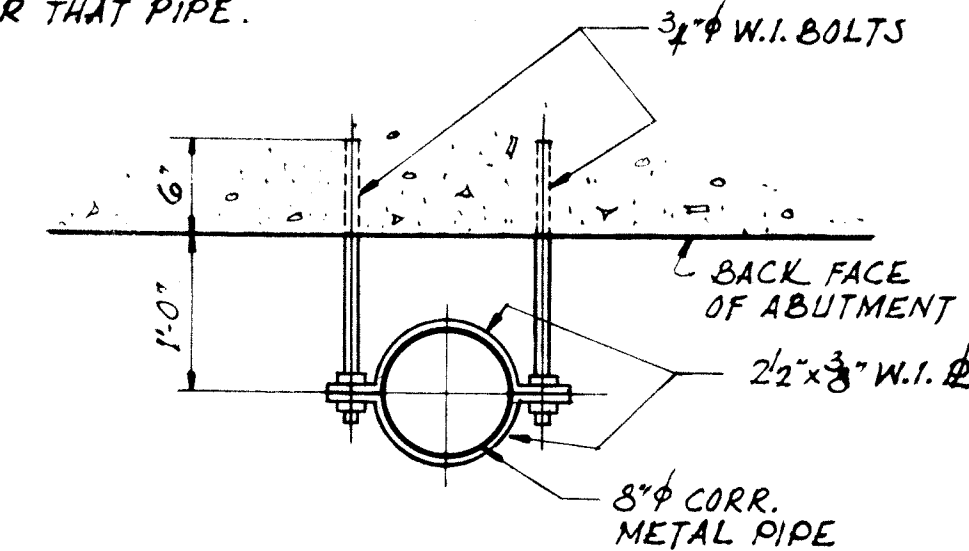
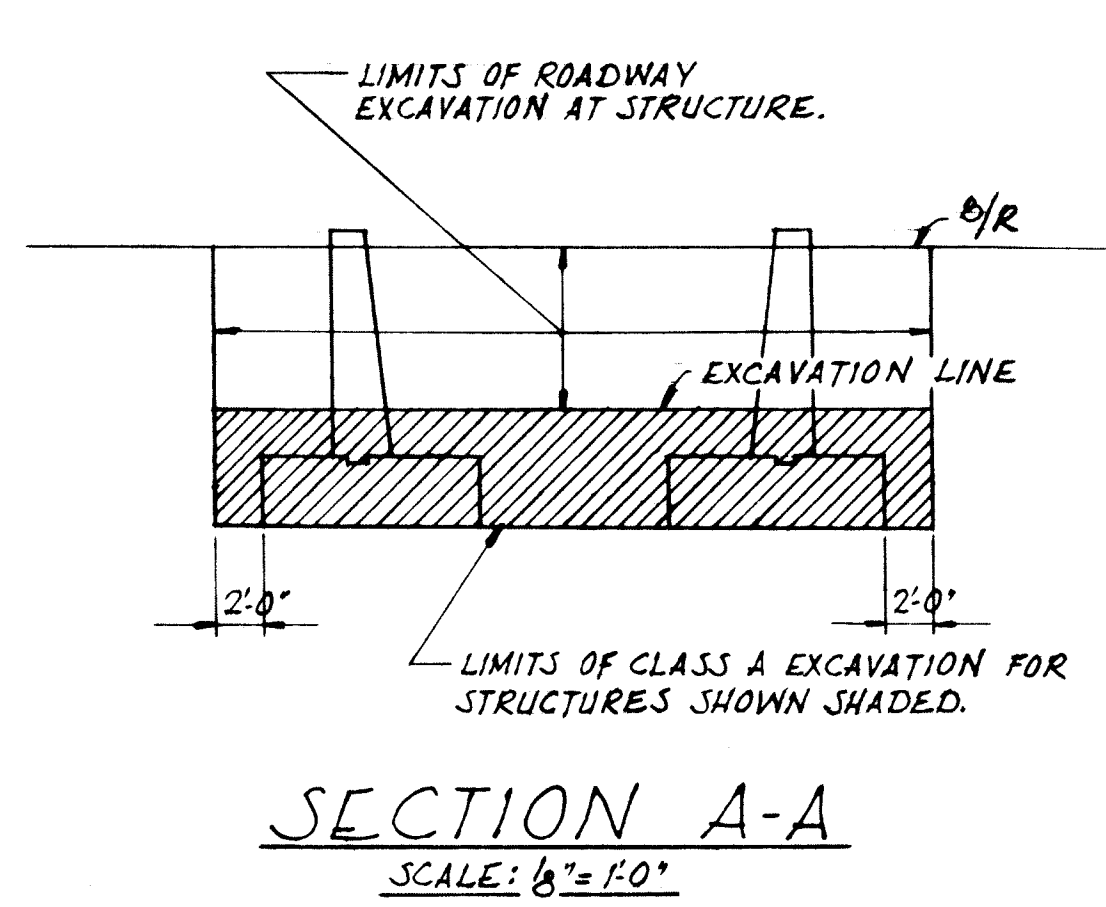
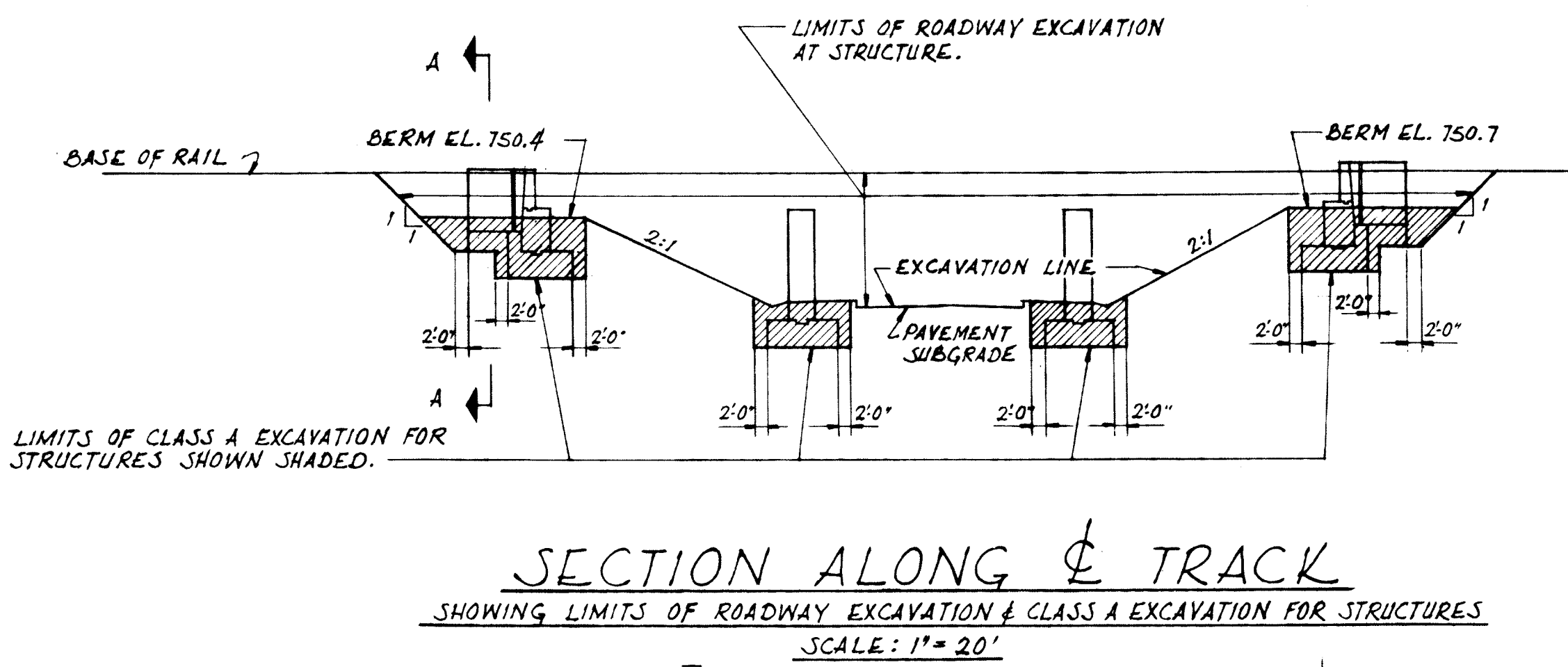


APPROVED
COUNTY SUPERINTENDENT OF HIGHWAYS
EXAMINED
ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED
ENGINEER OF DESIGN
CHIEF HIGHWAY ENGINEER

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS



NOTE:
IMPERVIOUS CLAY BACKFILL WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR CLASS A EXCAVATION FOR STRUCTURES. SEE SPECIAL PROVISIONS. EXCAVATION LINE TO BE AT THE FINISHED GRADE OF THE SLOPES AND TO THE SUBGRADE ELEVATION AT THE ROADWAY. ALL CORRUGATED METAL PIPES SHALL BE BITUMINOUS COATED, SEE SPECIAL PROVISIONS. THE COST OF FITTING AND FABRICATION OF 8" PERF. CORR. METAL PIPE AND THE 8" CORR. METAL PIPE WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR THAT PIPE.



BILL OF MATERIAL
DRAINAGE TROUGH & SLOPE WALL

ITEM	UNIT	QUANTITY	
		W. ABUT.	E. ABUT.
CLASS X CONCRETE	CU. YDS.	2.0	2.0
REINFORCEMENT BARS	LBS.	180	180
SLOPE WALL, 4 INCH	SQ. YDS.	100	100
CLASS A EXCAVATION FOR STRUCT.	CU. YDS.	15	15

EXCAVATION & DRAINAGE
C.M. ST. P. & P.R.R. SUBWAY
COUNTY HIGHWAY RTE. 76
SECTION 133-B-CF
WINNEBAGO COUNTY
STATION 72+53.26

APPROVED
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10 S. WABASH AVE. CHICAGO, ILLINOIS

BENCH MARK

60 PENNY NAIL IN 33" BUR OAK N. 6" UP
STA. 26+66 - 47' RT. OF & RAILROAD TRACK.
ELEVATION 749.73

CURVE DATA - CURVE 3

$I = 21^{\circ}07'17''$
 $D = 3^{\circ}00'$
 $R = 1909.86'$
 $TS = 484.16'$
 $LC = 543.05'$
 $S = 156.00'$
 $O' = 0.53'$
 $S_1 = 2^{\circ}20'24''$
 $S.E. = 2\frac{1}{2}''$
P.I. STA. 10+22.53

CURVE DATA - CURVE 2

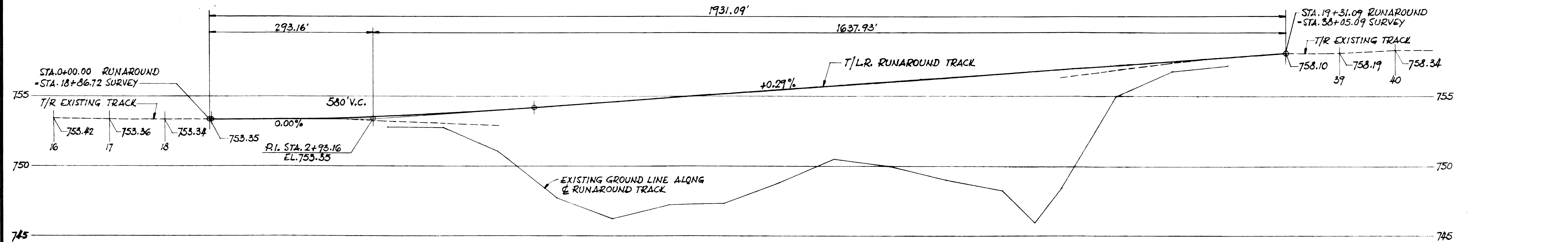
$I = 6^{\circ}48'$
 $D = 3^{\circ}00'$
 $R = 1909.86'$
 $TS = 191.50'$
 $LC = 70.67'$
 $S = 156.00'$
 $O' = 0.53'$
 $S_1 = 2^{\circ}20'24''$
 $S.E. = 2\frac{1}{2}''$
P.I. STA. 17+39.92

CURVE DATA - CURVE 1

$I = 14^{\circ}19'27''$
 $D = 1^{\circ}30'$
 $R = 3819.71'$
 $TS = 675.13'$
 $LC = 564.94'$
 $S = 390.00'$
 $O' = 1.66'$
 $S_1 = 2^{\circ}55'30''$
 $S.E. = 2\frac{3}{4}''$
P.I. STA. 25+61.90

PLAN OF TEMPORARY RUNAROUND

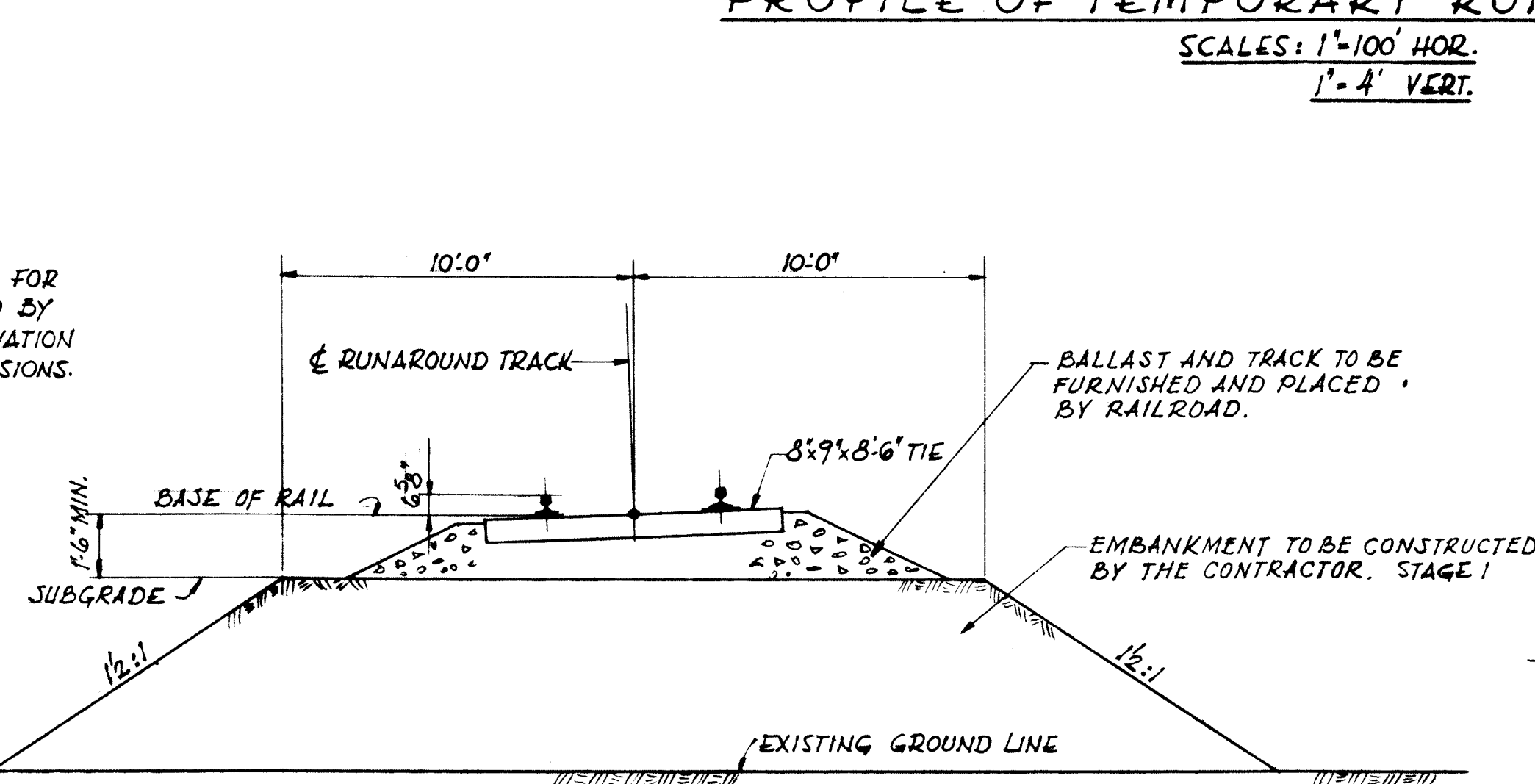
SCALE: 1"=100'



PROFILE OF TEMPORARY RUNAROUND TRACK

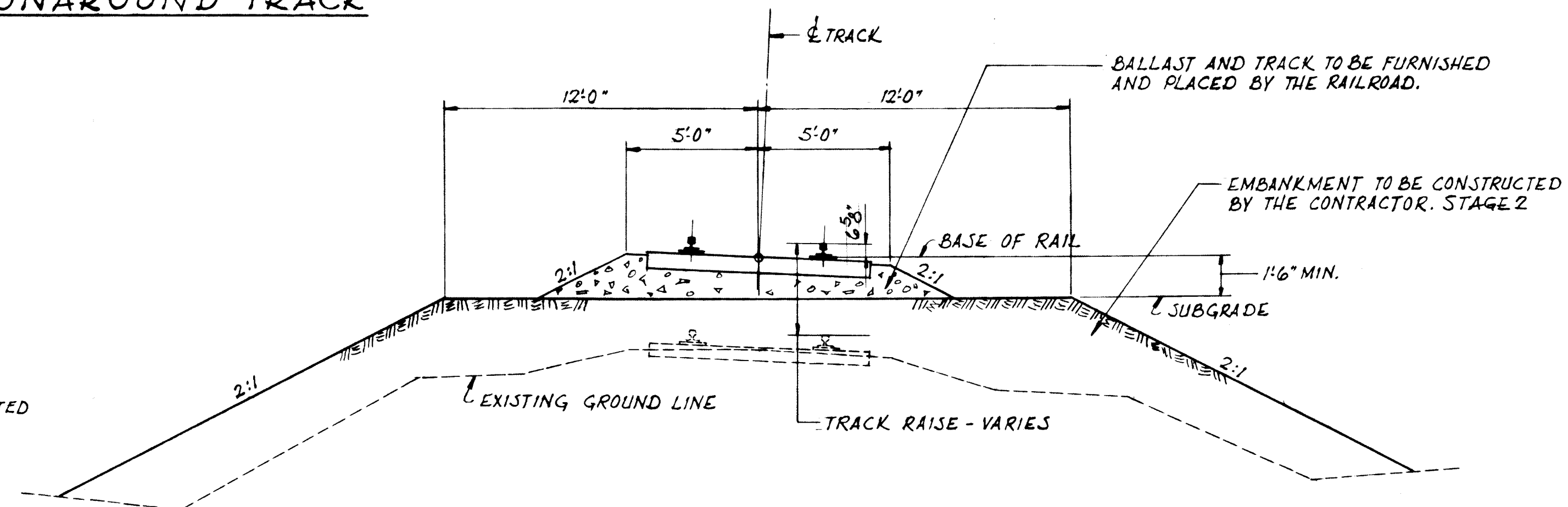
SCALE: 1"=100' HOR.
1"=4' VERT.

NOTE:
BALLAST AND EMBANKMENT FOR RUNAROUND TO BE REMOVED BY CONTRACTOR AS EARTH EXCAVATION (STAGE 3). SEE SPECIAL PROVISIONS.



TYPICAL SECTION THRU RUNAROUND

SCALE: 4"=1'0"



TYPICAL SECTION THRU MAIN-LINE TRACK

SCALE: 4"=1'0"

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ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED
ENGINEER OF DESIGN
APPROVED
CHIEF HIGHWAY ENGINEER

RUNAROUND - PLAN & PROFILE
C.M.S.T.R. & P.R.R. SUBWAY
COUNTY HIGHWAY RTE. 76
SECTION 133-B-CF
WINNEBAGO COUNTY
STATION 72+53.26

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 S. WABASH AVE. CHICAGO, ILLINOIS