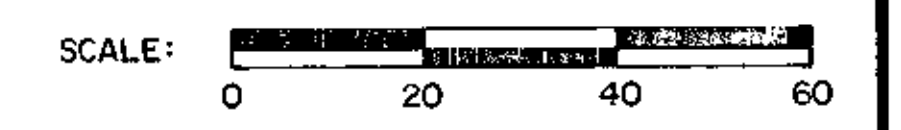


FACE	PHASE	FLASH	INDICATION SIZE		
			R	Y	G
A1-1	A1	Y	12"	12"	12"
A1-2	A1	Y	12"	12"	12"
A2-1	A2	Y	12"	12"	12"
A2-2	A2	Y	12"	12"	12"
A3-1	A3	R	12"	12"	12"
A3-2	A3	R	12"	12"	12"
A3-3	A3	R	12"	12"	12"
A3-4	A3	R	12"	12"	12"
A3-5	A3	R	12"	12"	12"
A3-6	A3	R	12"	12"	12"
B1*	B1	Y	12"	12"	12"
B2*	B2	Y	12"	12"	12"

\* OPTICALLY PROGRAMMED SIGNAL FACE



**bather ringrose wolsfeld inc.**  
 2222 north hennepin avenue phone 612 / 436 9999  
 55112

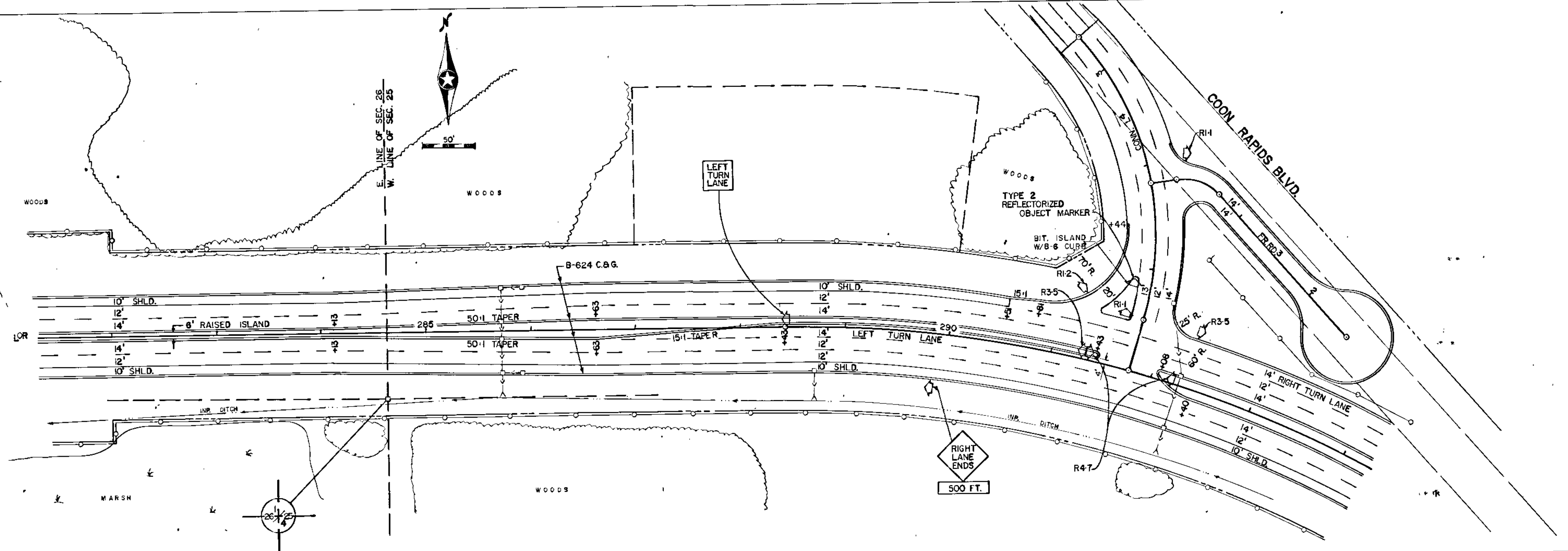
**SIGNAL SYSTEM LAYOUT**  
 COON RAPIDS BLVD. AT  
 EAST RIVER ROAD

AS BUILT  
 12-17-73  
 H.H. 5-2-74  
 J.M.

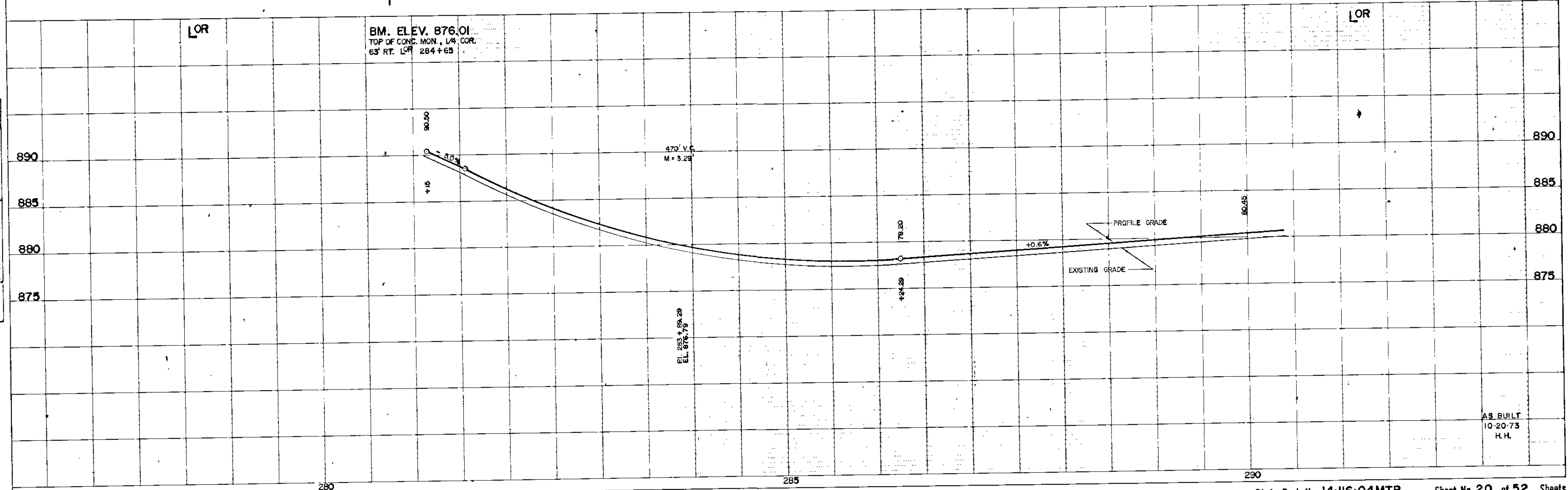




DATE: \_\_\_\_\_  
 BY: \_\_\_\_\_  
 CHECKED: \_\_\_\_\_  
 DATE: \_\_\_\_\_  
 PLAN  
 SURVEYED  
 PLOTTED  
 ALIGNED  
 CHECKED  
 IN CHARGE



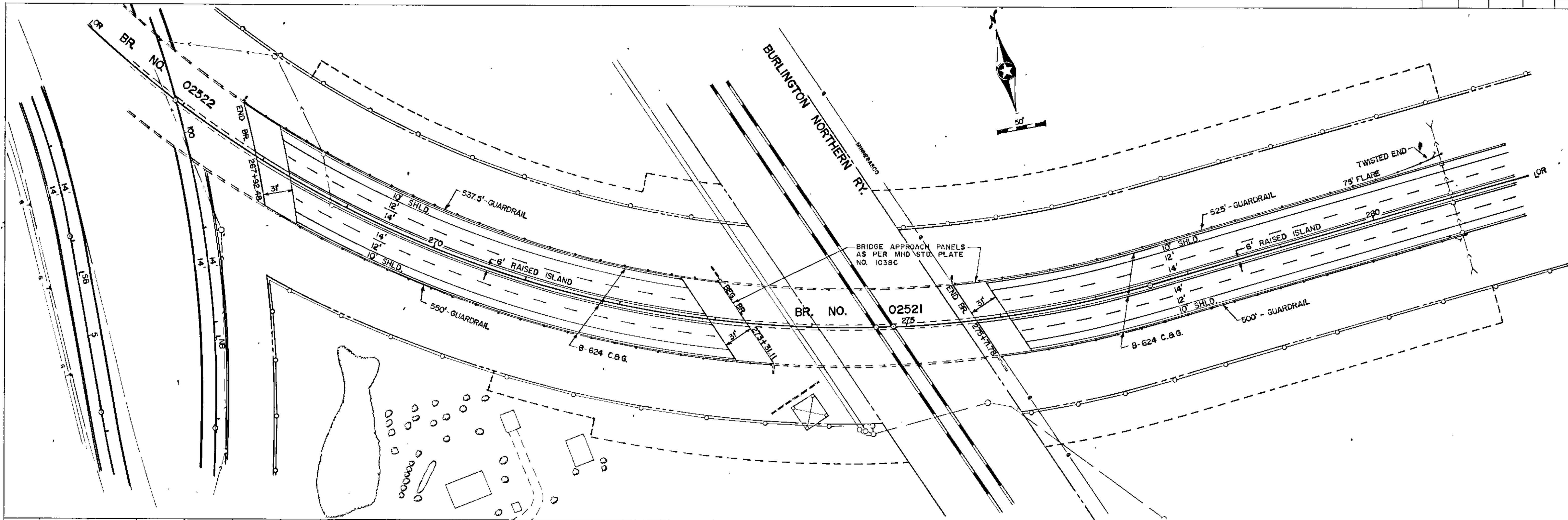
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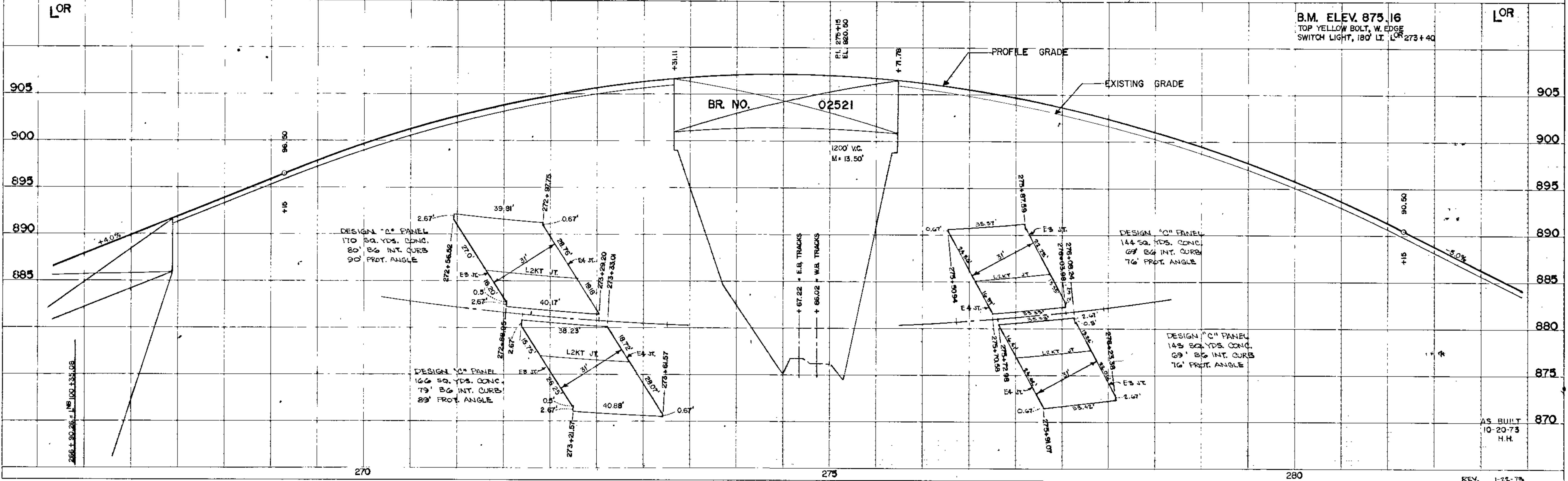
AS BUILT  
 10-20-73  
 H.H.



PLAN  
 CHECKED BY: \_\_\_\_\_  
 PLOTTED BY: \_\_\_\_\_  
 DATE: \_\_\_\_\_  
 ALTERNATE CHECKED AT UP: \_\_\_\_\_  
 DATE: \_\_\_\_\_



PROFILE  
 CHECKED BY: \_\_\_\_\_  
 PLOTTED BY: \_\_\_\_\_  
 DATE: \_\_\_\_\_  
 ALTERNATE CHECKED AT UP: \_\_\_\_\_  
 DATE: \_\_\_\_\_



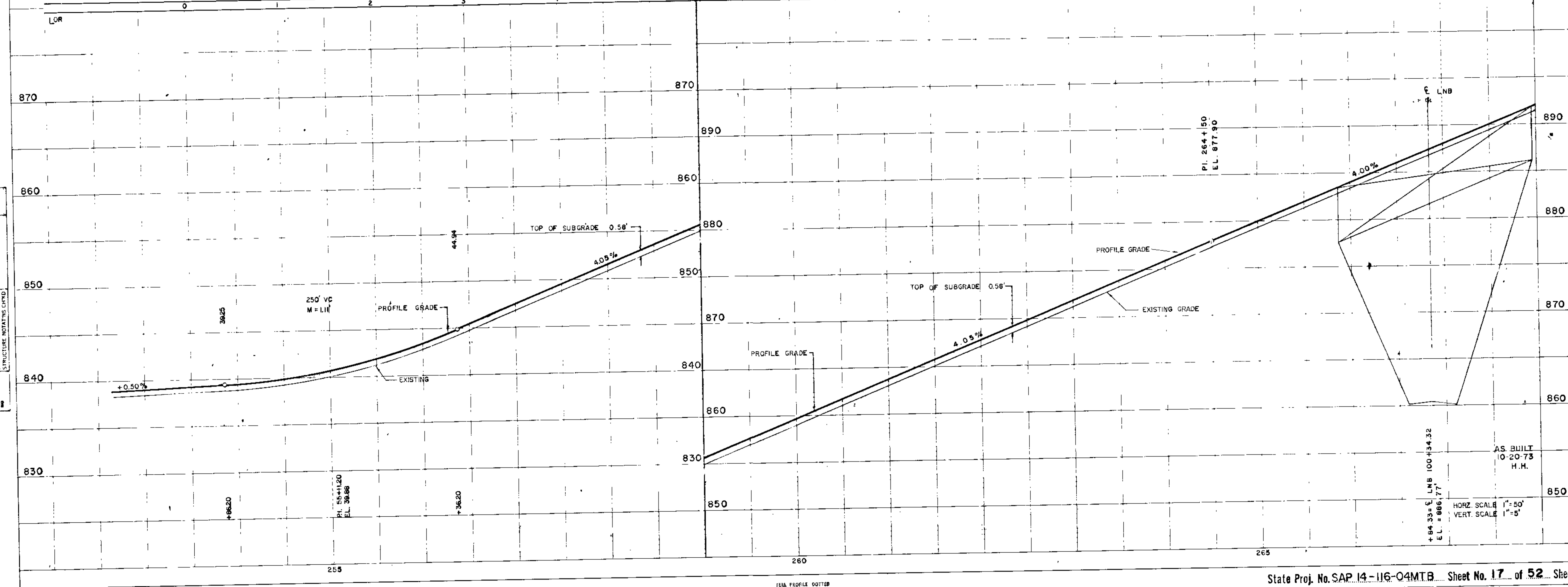
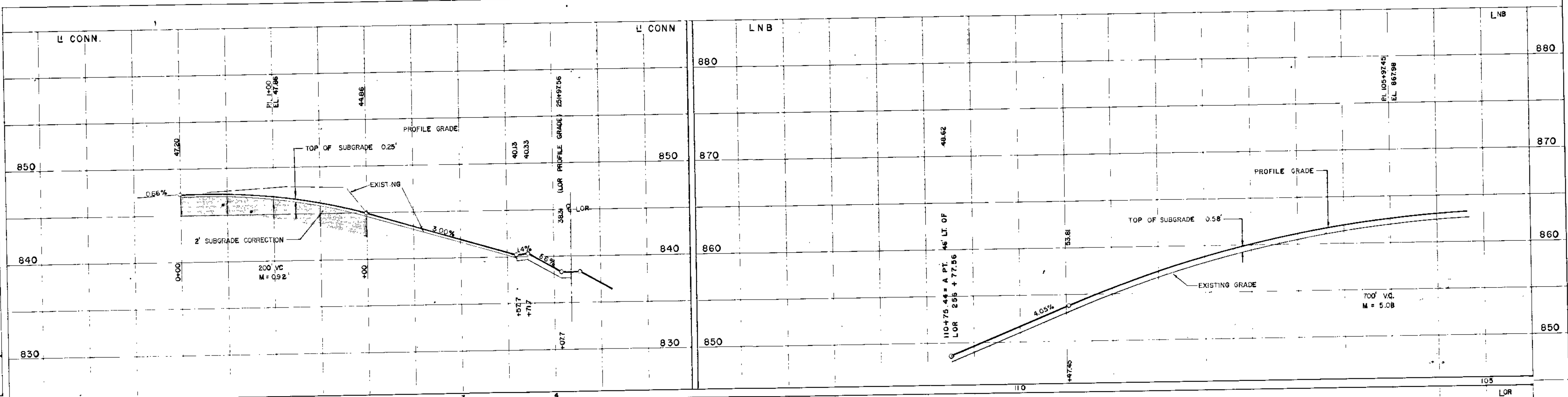
B.M. ELEV. 875.16  
 TOP YELLOW BOLT, W. EDGE  
 SWITCH LIGHT, 180' LT. LOR 273+40

SINGLE PLAN AND PROFILE - DOTTED  
 K. A. ROGERS CO. MINNEAPOLIS, ST. PAUL



PLAN  
 SURVEYED BY: [ ]  
 CHECKED BY: [ ]  
 DATE: [ ]

PROFILE  
 SURVEYED BY: [ ]  
 CHECKED BY: [ ]  
 DATE: [ ]

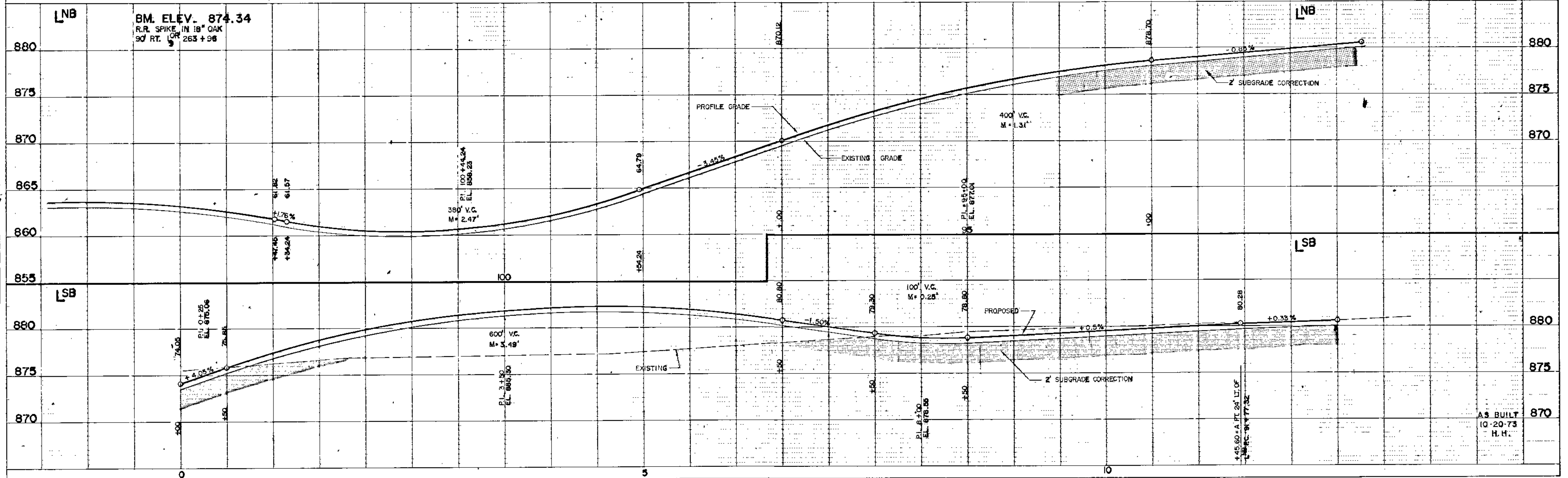
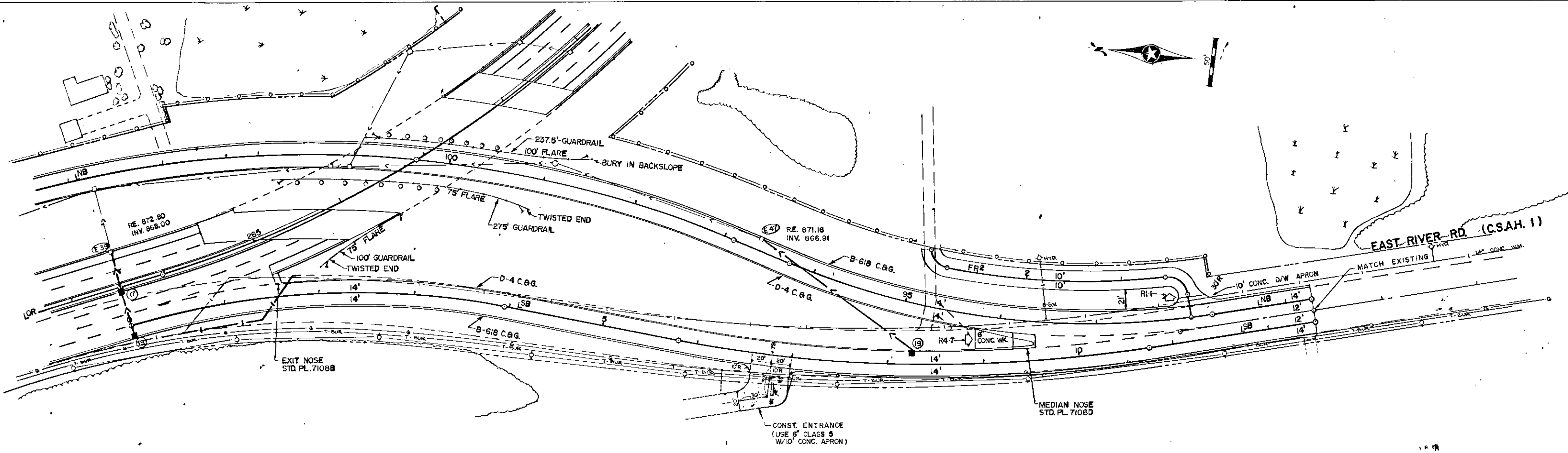


FULL PROFILE DOTTED  
 K. A. ROGERS CO. MINNEAPOLIS, ST. PAUL, DULUTH



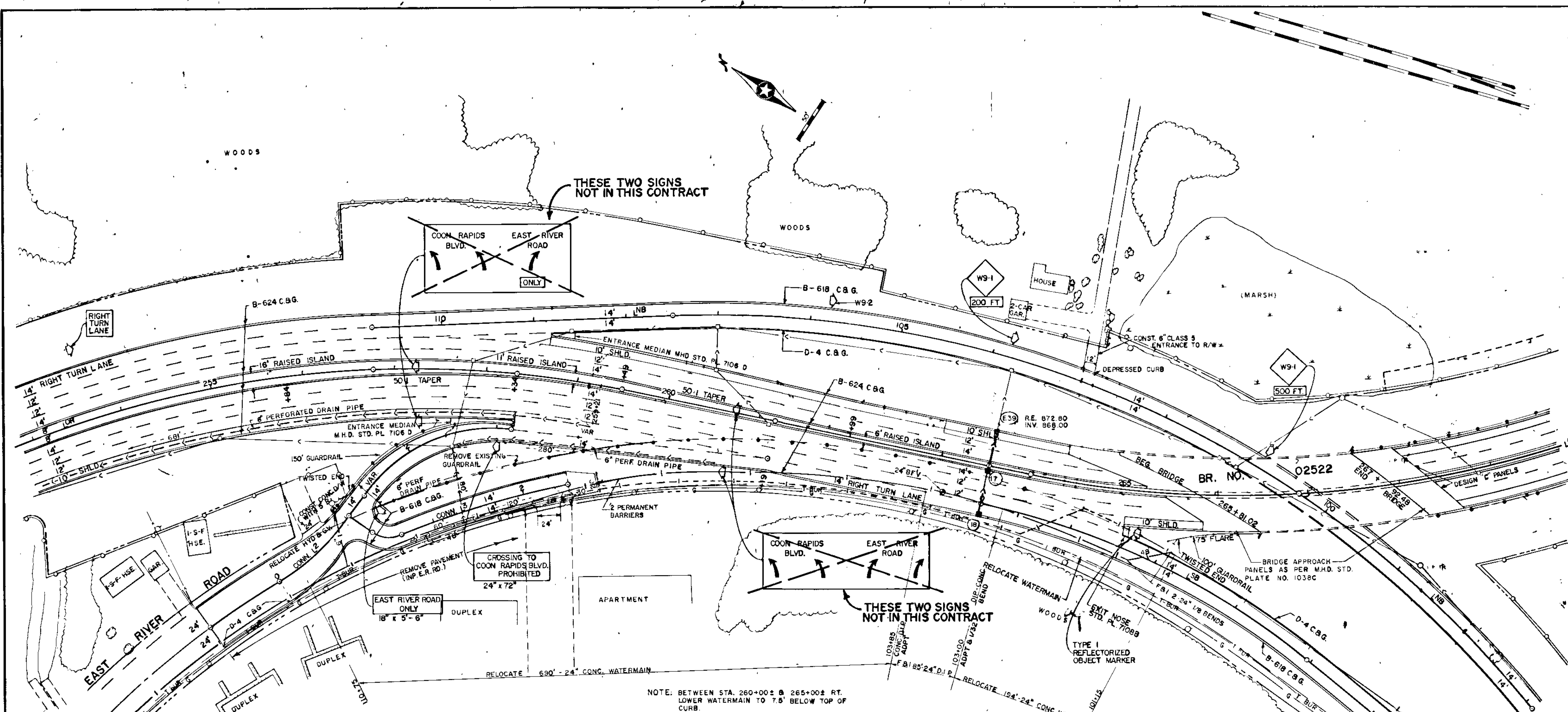
PLAN	DATE
BY	
CHECKED	
APPROVED	
NOTED	
REVISIONS	
NO.	

PROFILE	DATE
BY	
CHECKED	
APPROVED	
NOTED	
REVISIONS	
NO.	

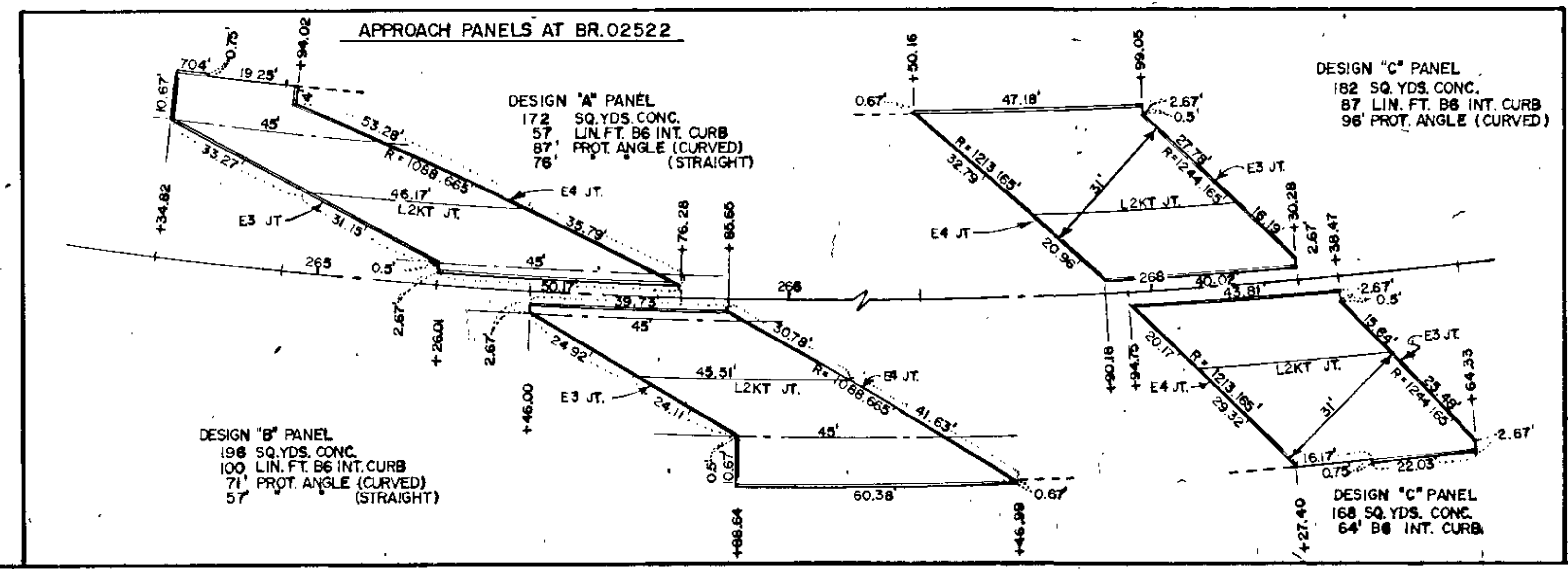


SINGLE PLAN AND PROFILE - DOTTED  
 H. A. ROGERS CO. MINNEAPOLIS - ST. PAUL





NOTE: BETWEEN STA. 260+00± & 265+00± RT. LOWER WATERMAIN TO 7.5' BELOW TOP OF CURB.



NOTE: SEE SHEETS 17 & 18 FOR PROFILES L<sup>1</sup> & L<sup>3</sup>.

COON RAPIDS BLVD. BY-PASS with LNB, LSB & L<sup>2</sup> EAST RIVER RD. INTERCHANGE

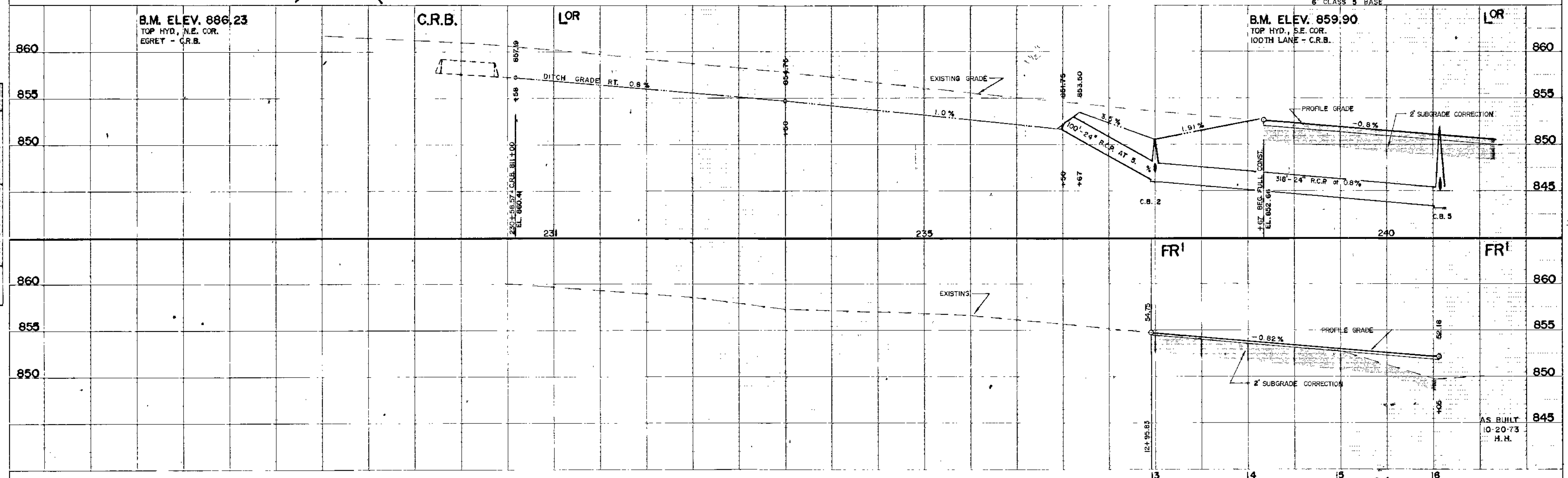
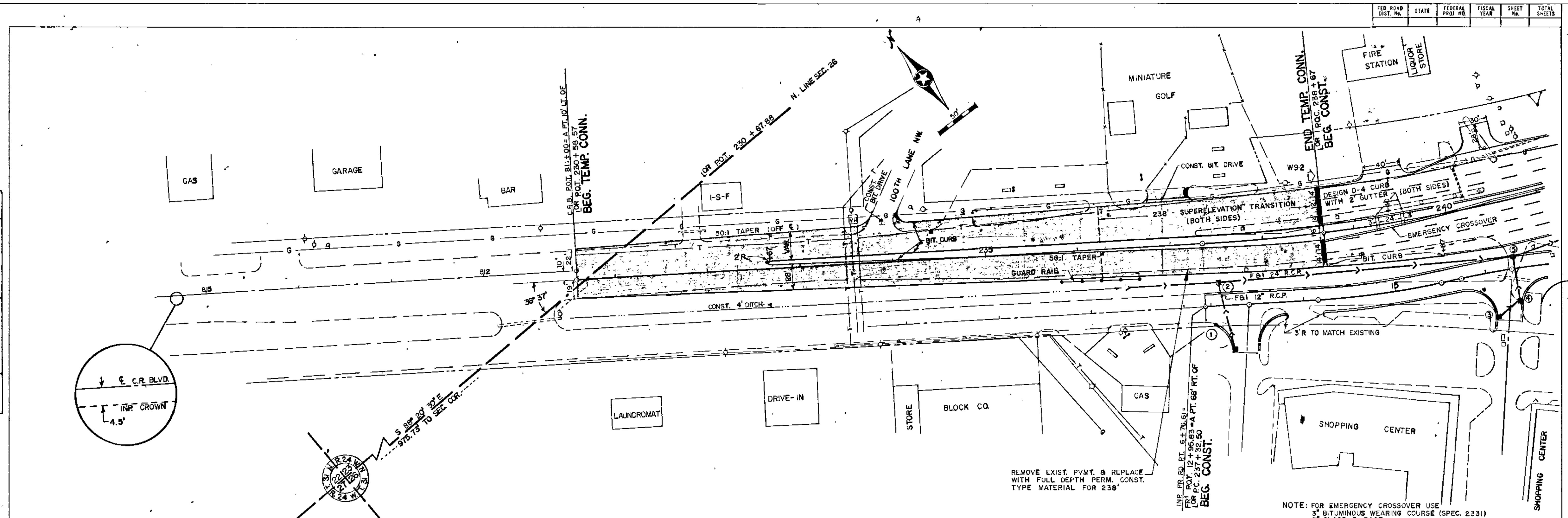
AS BUILT 10-20-73 H.H.



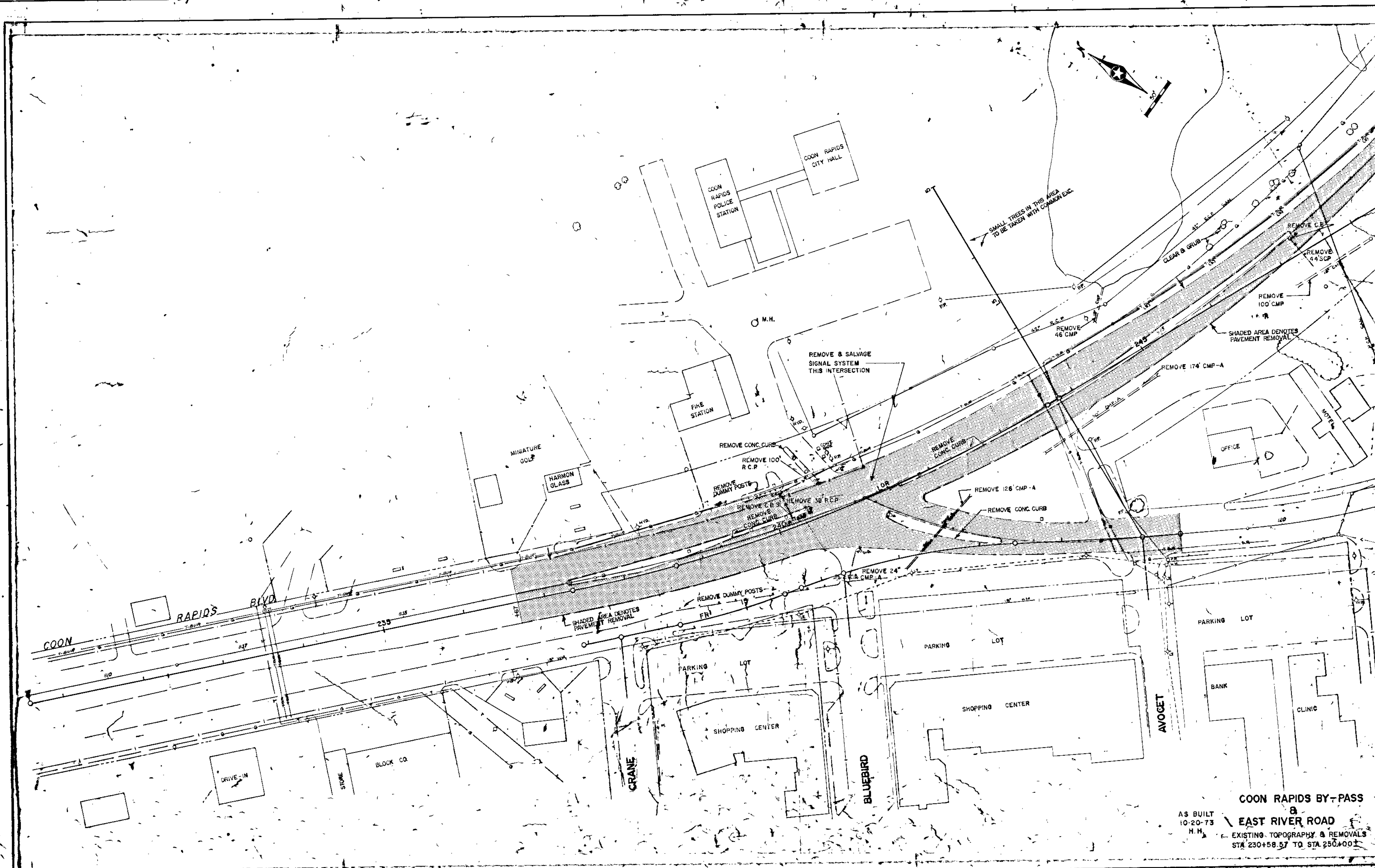


PLAN  
 SURVEYED  
 PLANNED  
 CHECKED  
 DATE

PROFILE  
 SURVEYED  
 PLANNED  
 CHECKED  
 DATE

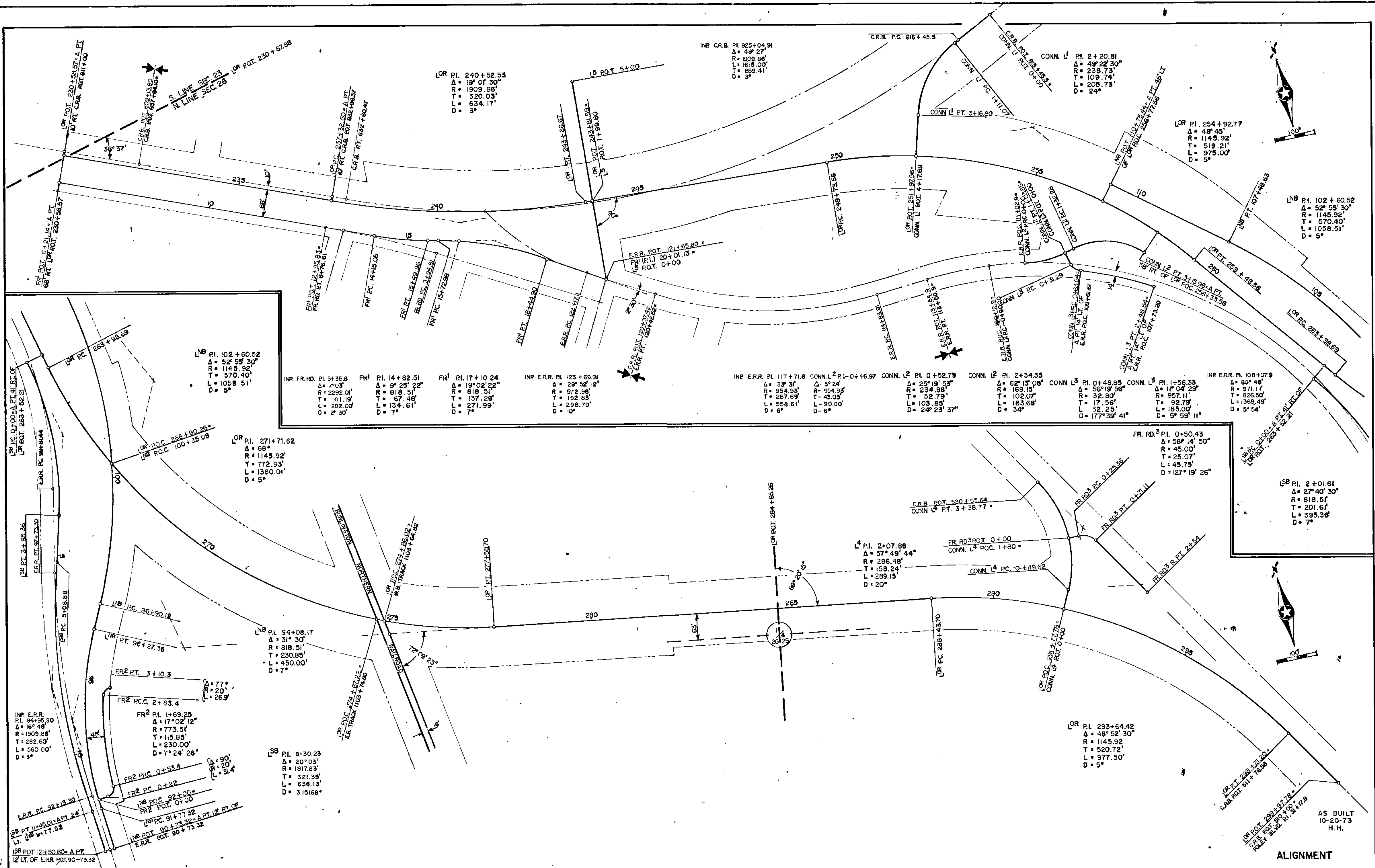






**COON RAPIDS BY-PASS**

AS BUILT  
10-20-73  
H.M.  
EXISTING TOPOGRAPHY & REMOVALS  
STA 230+58.57 TO STA 250+00



LOR PI. 240+52.53  
 $\Delta = 19^{\circ} 01' 30''$   
 $R = 1909.86'$   
 $T = 320.03'$   
 $L = 634.17'$   
 $D = 5^{\circ}$

INR C.R.B. PI. 825+04.91  
 $\Delta = 48^{\circ} 27'$   
 $R = 1909.86'$   
 $L = 1618.00'$   
 $T = 839.41'$   
 $D = 5^{\circ}$

CONN. L<sup>1</sup> PI. 2+20.81  
 $\Delta = 48^{\circ} 22' 30''$   
 $R = 238.73'$   
 $L = 205.73'$   
 $D = 24^{\circ}$

LOR PI. 254+92.77  
 $\Delta = 48^{\circ} 45'$   
 $R = 1145.92'$   
 $T = 519.21'$   
 $L = 975.00'$   
 $D = 5^{\circ}$

LNB PI. 102+60.52  
 $\Delta = 52^{\circ} 55' 30''$   
 $R = 1145.92'$   
 $T = 570.40'$   
 $L = 1058.51'$   
 $D = 5^{\circ}$

LNB PI. 102+60.52  
 $\Delta = 52^{\circ} 55' 30''$   
 $R = 1145.92'$   
 $T = 570.40'$   
 $L = 1058.51'$   
 $D = 5^{\circ}$

INR FR RD. PI. 54+35.8  
 $\Delta = 7^{\circ} 03'$   
 $R = 2292.01'$   
 $T = 141.19'$   
 $L = 282.00'$   
 $D = 2^{\circ} 30''$

FR<sup>1</sup> PI. 14+82.51  
 $\Delta = 9^{\circ} 25' 22''$   
 $R = 818.51'$   
 $T = 67.48'$   
 $L = 134.61'$   
 $D = 7^{\circ}$

FR<sup>1</sup> PI. 17+10.24  
 $\Delta = 19^{\circ} 02' 22''$   
 $R = 818.51'$   
 $T = 137.26'$   
 $L = 271.99'$   
 $D = 7^{\circ}$

INR E.R.R. PI. 123+69.91  
 $\Delta = 29^{\circ} 52' 12''$   
 $R = 572.98'$   
 $T = 152.83'$   
 $L = 298.70'$   
 $D = 10^{\circ}$

INR E.R.R. PI. 117+71.6  
 $\Delta = 37^{\circ} 31'$   
 $R = 954.93'$   
 $T = 267.69'$   
 $L = 558.61'$   
 $D = 6^{\circ}$

CONN. L<sup>2</sup> PI. 0+46.97  
 $\Delta = 5^{\circ} 24'$   
 $R = 954.93'$   
 $T = 43.03'$   
 $L = 90.00'$   
 $D = 6^{\circ}$

CONN. L<sup>2</sup> PI. 0+52.73  
 $\Delta = 25^{\circ} 19' 55''$   
 $R = 234.88'$   
 $T = 52.79'$   
 $L = 103.85'$   
 $D = 24^{\circ} 23' 37''$

CONN. L<sup>2</sup> PI. 2+34.35  
 $\Delta = 62^{\circ} 13' 08''$   
 $R = 169.15'$   
 $T = 102.07'$   
 $L = 183.68'$   
 $D = 34^{\circ}$

CONN. L<sup>3</sup> PI. 0+48.85  
 $\Delta = 56^{\circ} 19' 56''$   
 $R = 32.80'$   
 $T = 17.56'$   
 $L = 32.25'$   
 $D = 177^{\circ} 39' 41''$

CONN. L<sup>3</sup> PI. 1+56.33  
 $\Delta = 11^{\circ} 04' 23''$   
 $R = 957.11'$   
 $T = 92.79'$   
 $L = 185.00'$   
 $D = 5^{\circ} 59' 11''$

INR E.R.R. PI. 106+07.9  
 $\Delta = 90^{\circ} 48'$   
 $R = 971.11'$   
 $T = 826.50'$   
 $L = 1369.49'$   
 $D = 5^{\circ} 54'$

LOR PI. 271+71.62  
 $\Delta = 68^{\circ}$   
 $R = 1145.92'$   
 $T = 772.93'$   
 $L = 1360.01'$   
 $D = 5^{\circ}$

FR RD. PI. 0+50.43  
 $\Delta = 58^{\circ} 14' 50''$   
 $R = 45.00'$   
 $T = 25.07'$   
 $L = 45.75'$   
 $D = 127^{\circ} 19' 26''$

SB PI. 2+01.61  
 $\Delta = 27^{\circ} 40' 30''$   
 $R = 818.51'$   
 $T = 201.61'$   
 $L = 395.36'$   
 $D = 7^{\circ}$

LNB PI. 94+08.17  
 $\Delta = 31^{\circ} 30'$   
 $R = 818.51'$   
 $T = 230.85'$   
 $L = 450.00'$   
 $D = 7^{\circ}$

FR<sup>2</sup> PI. 1+69.25  
 $\Delta = 17^{\circ} 02' 12''$   
 $R = 773.51'$   
 $T = 115.85'$   
 $L = 230.00'$   
 $D = 7^{\circ} 24' 26''$

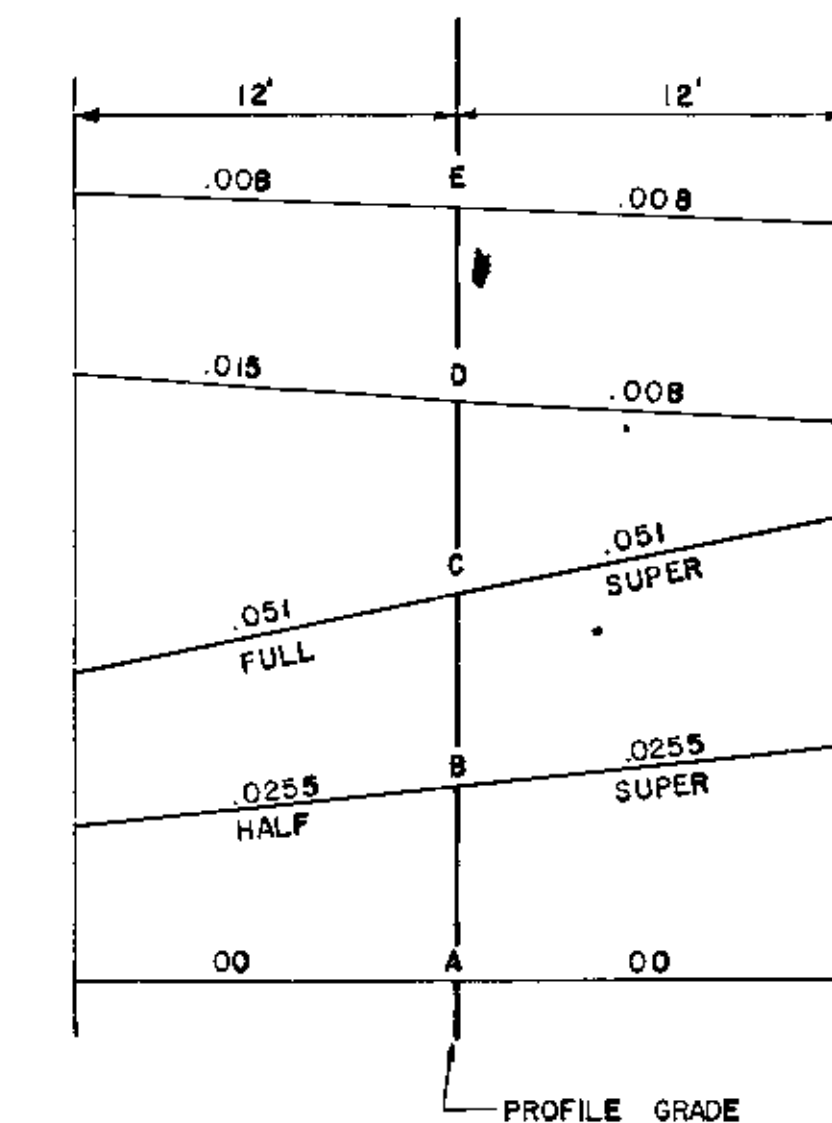
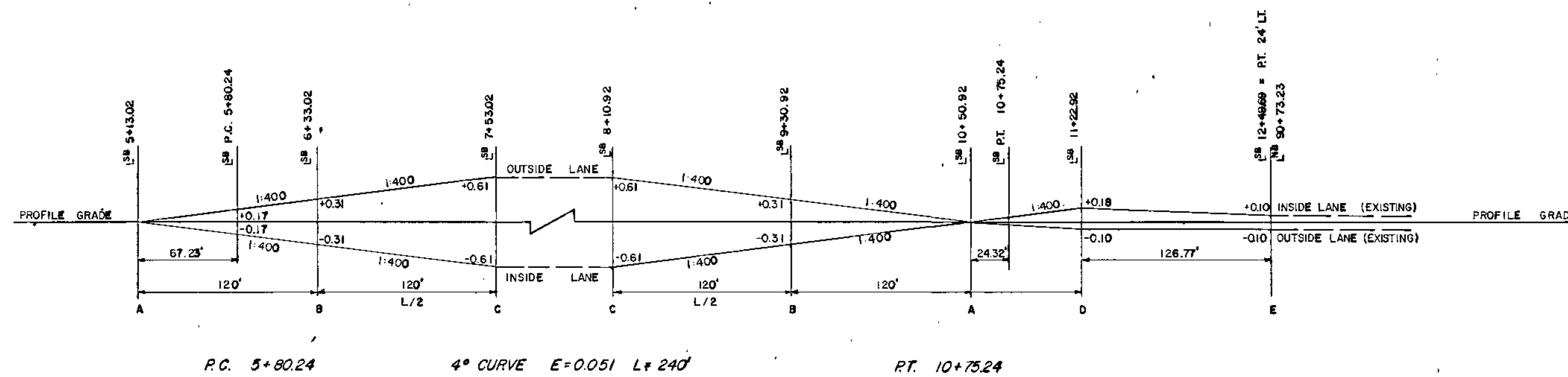
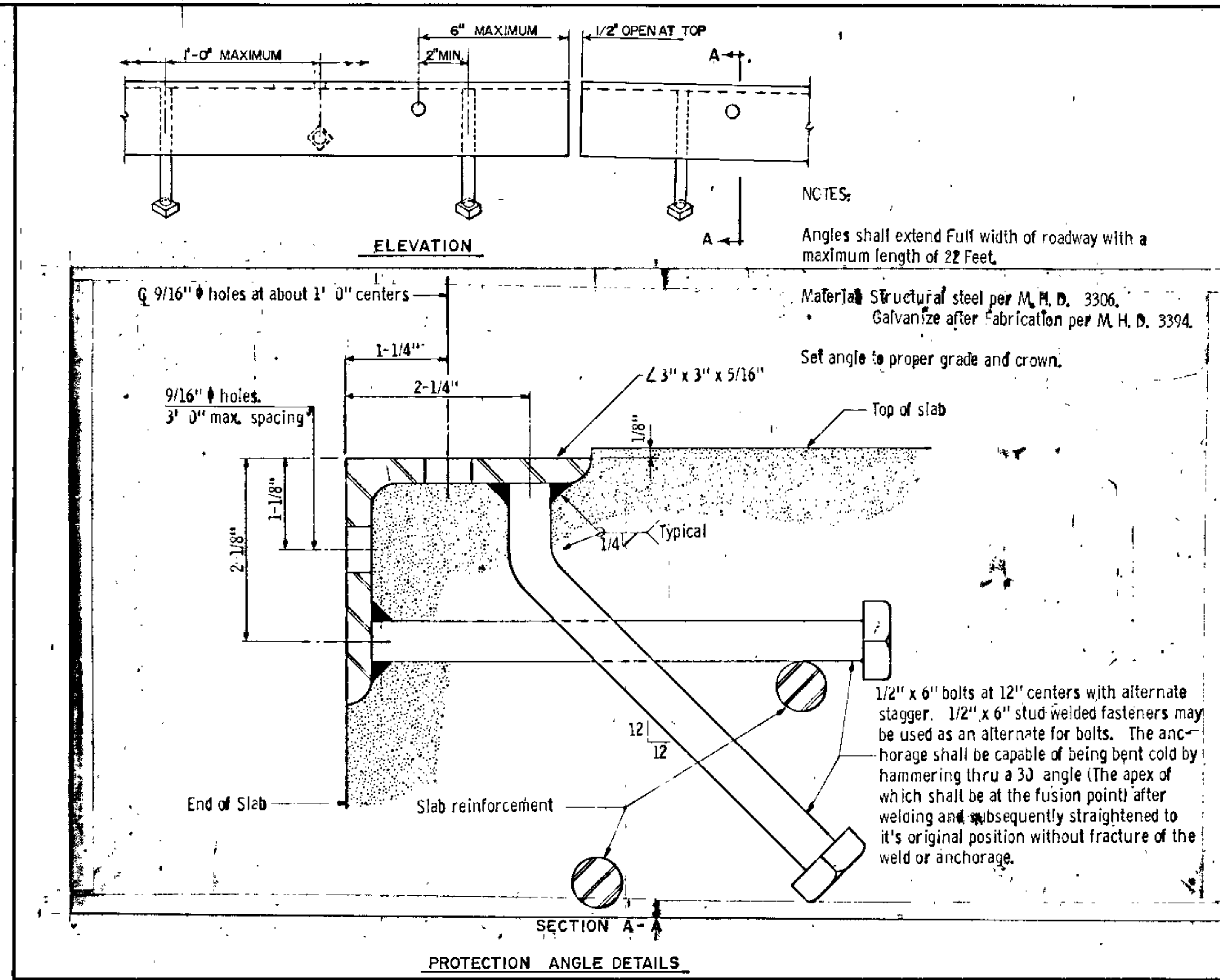
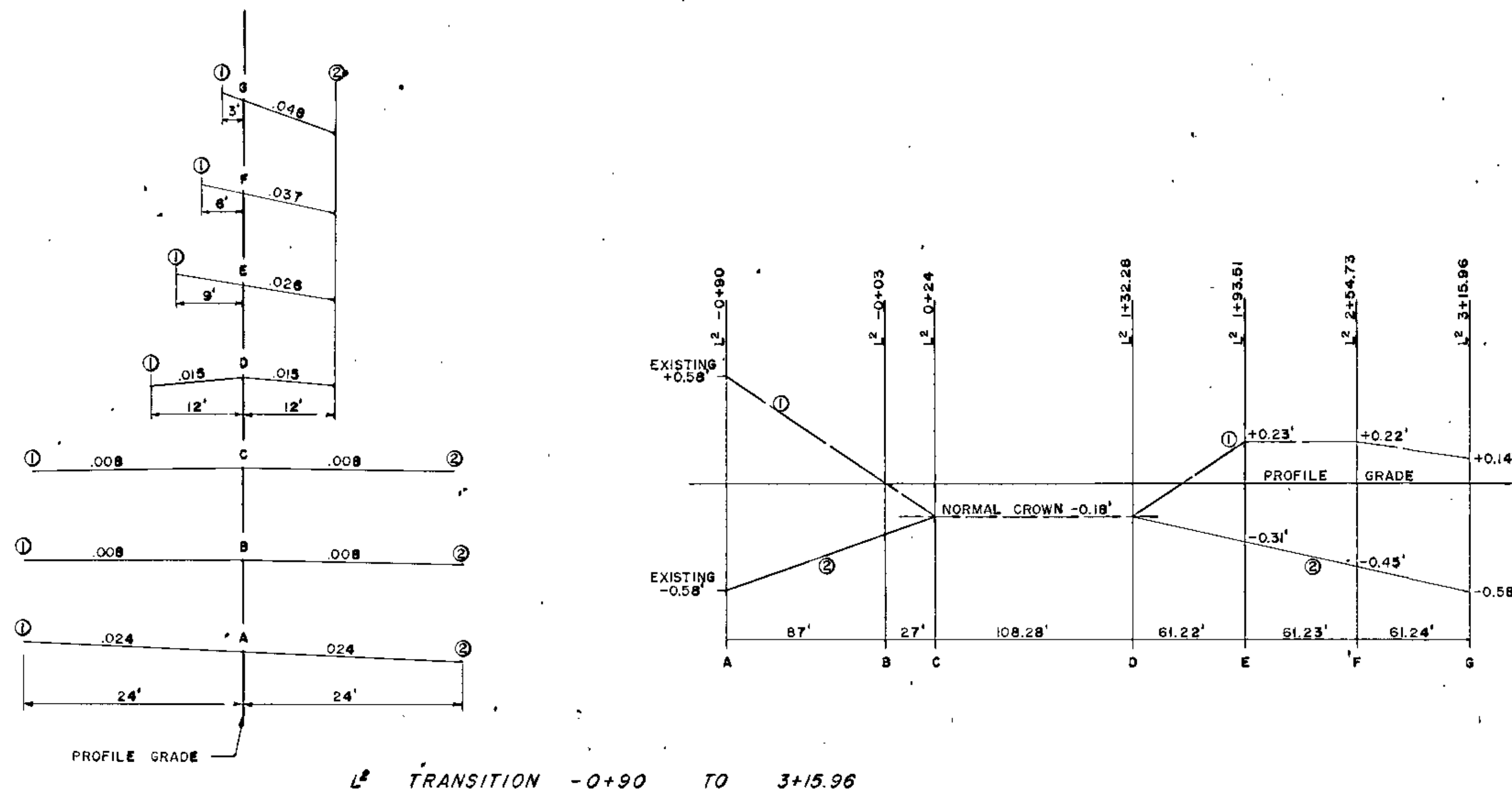
LSB PI. 6+30.23  
 $\Delta = 20^{\circ} 03'$   
 $R = 1817.83'$   
 $T = 321.35'$   
 $L = 638.13'$   
 $D = 3.15188^{\circ}$

LOR PI. 293+64.42  
 $\Delta = 48^{\circ} 52' 30''$   
 $R = 1145.92'$   
 $T = 520.72'$   
 $L = 977.50'$   
 $D = 5^{\circ}$

AS BUILT  
 10-20-73  
 H.H.

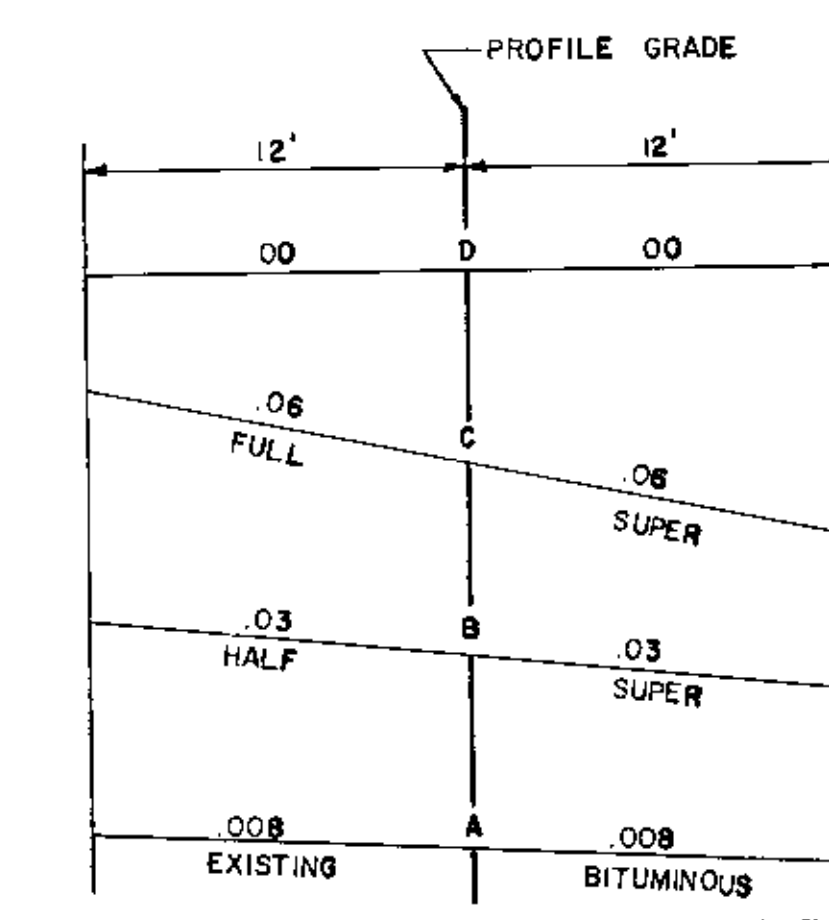
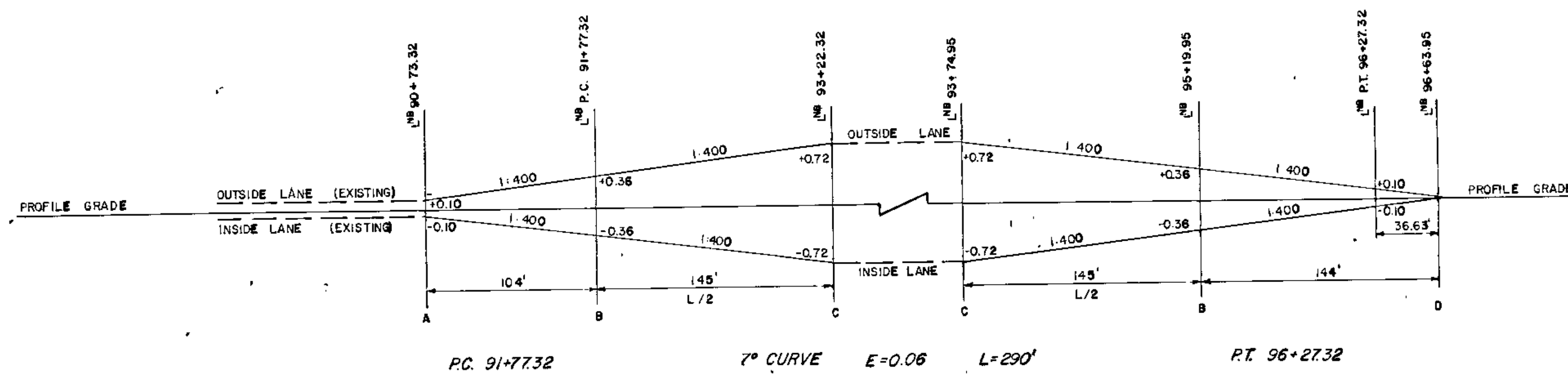
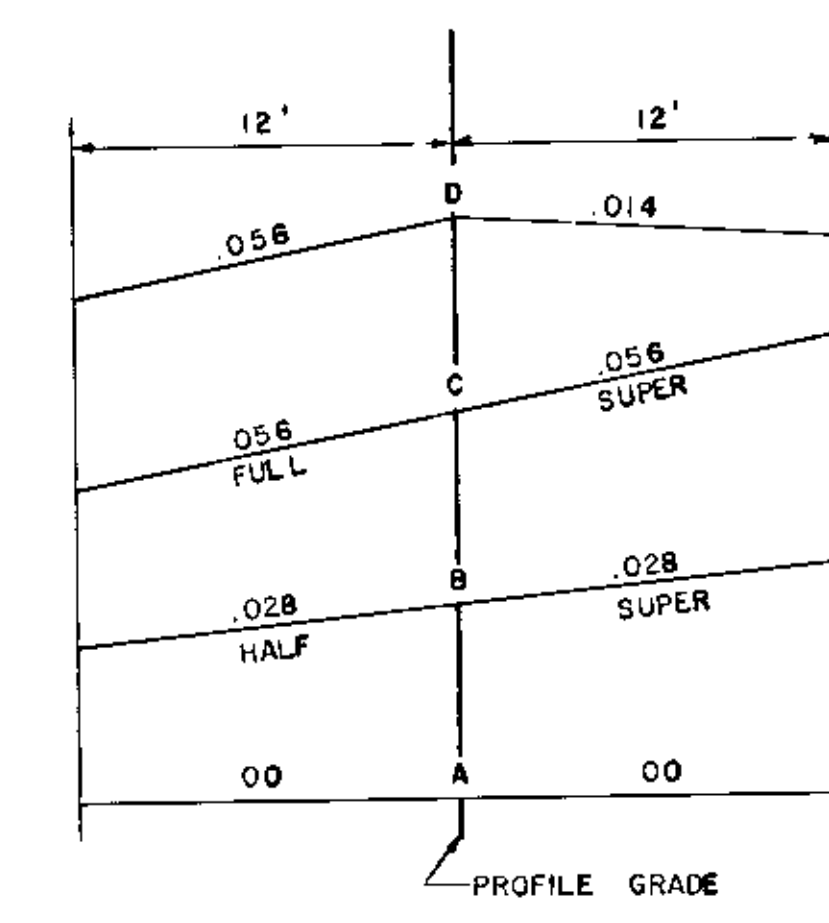
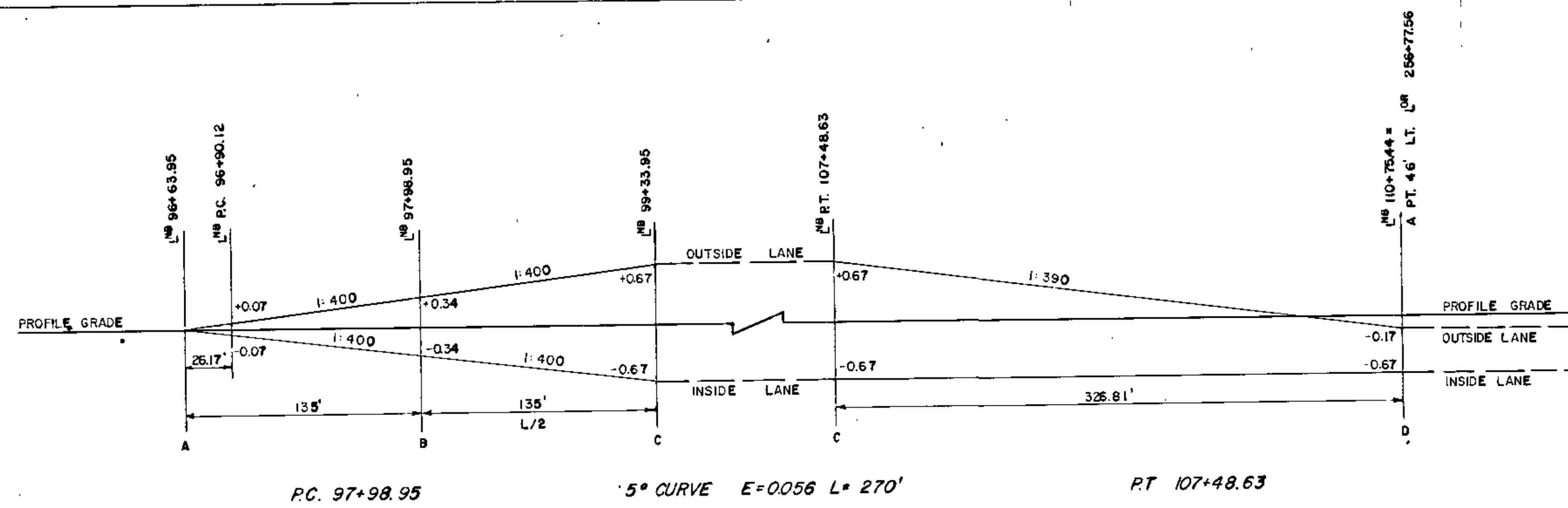
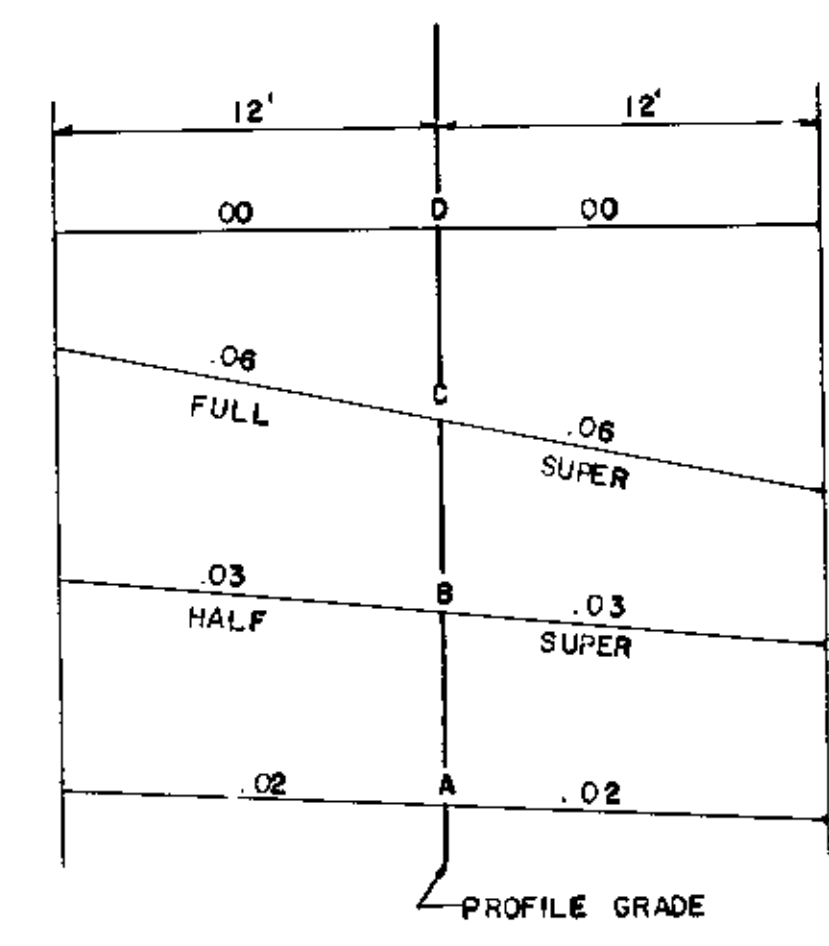
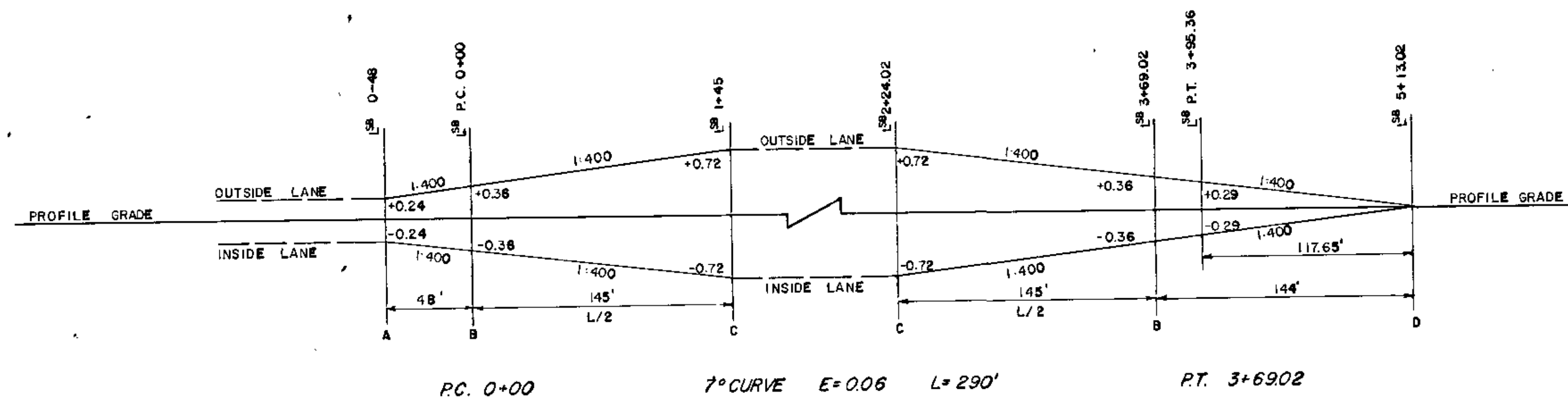
ALIGNMENT





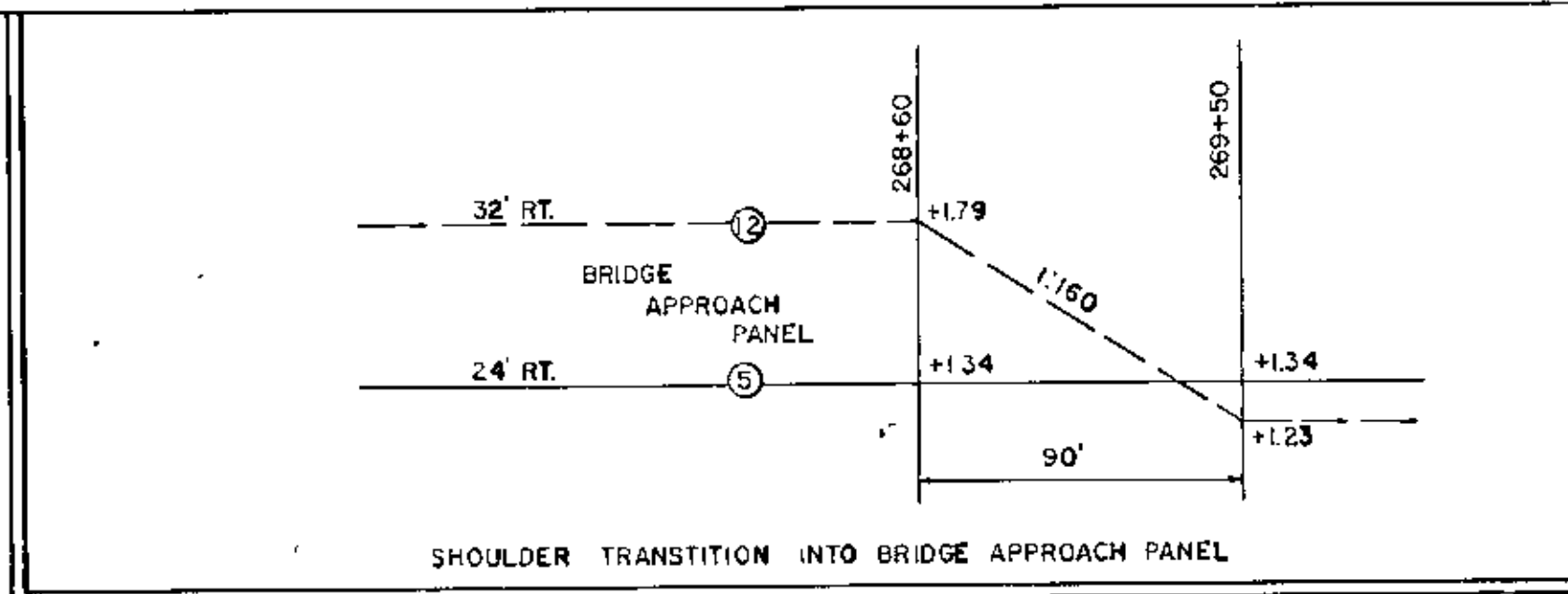
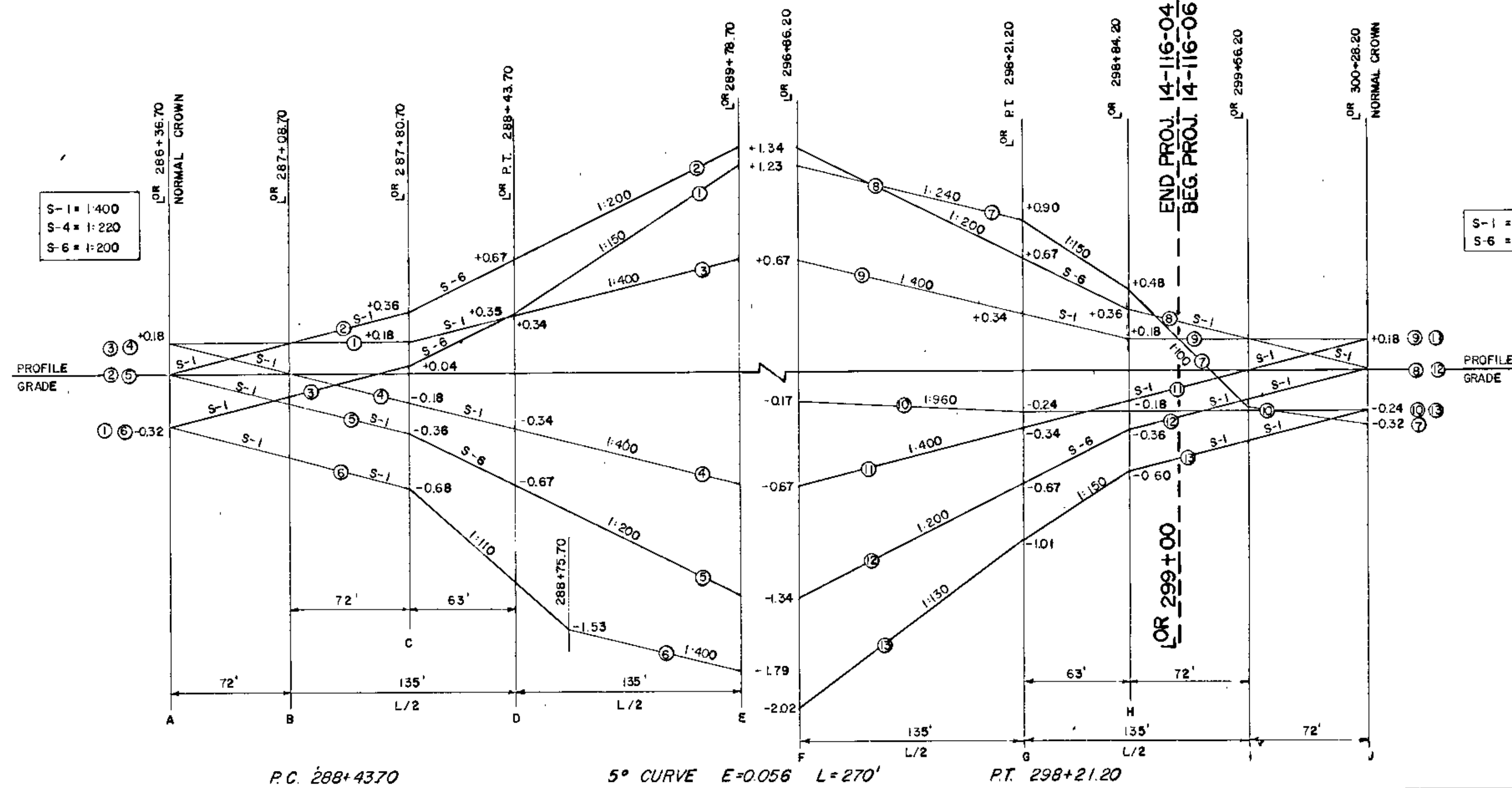
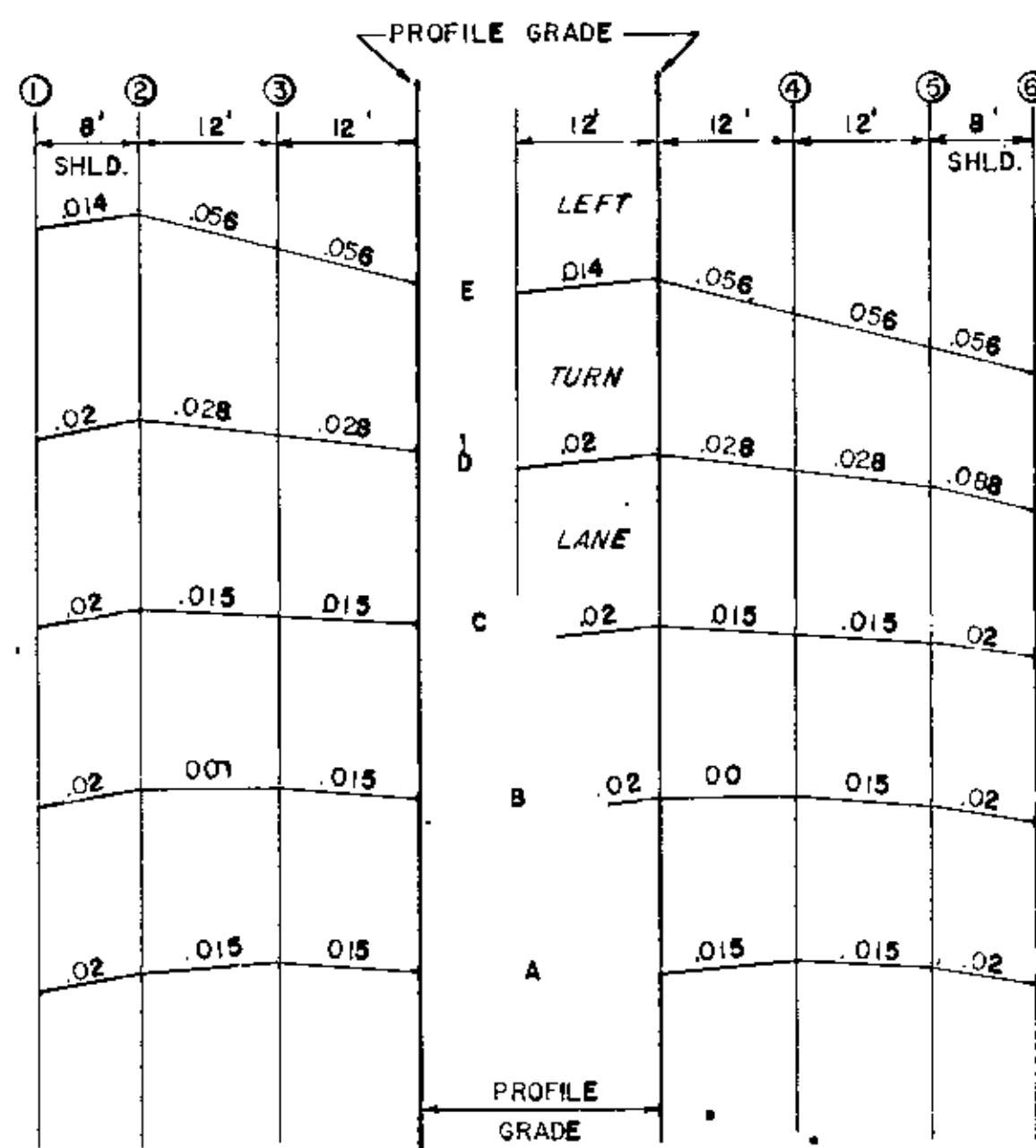
SUPERELEVATION CHART  
AXIS ROTATION AT CENTER LINE



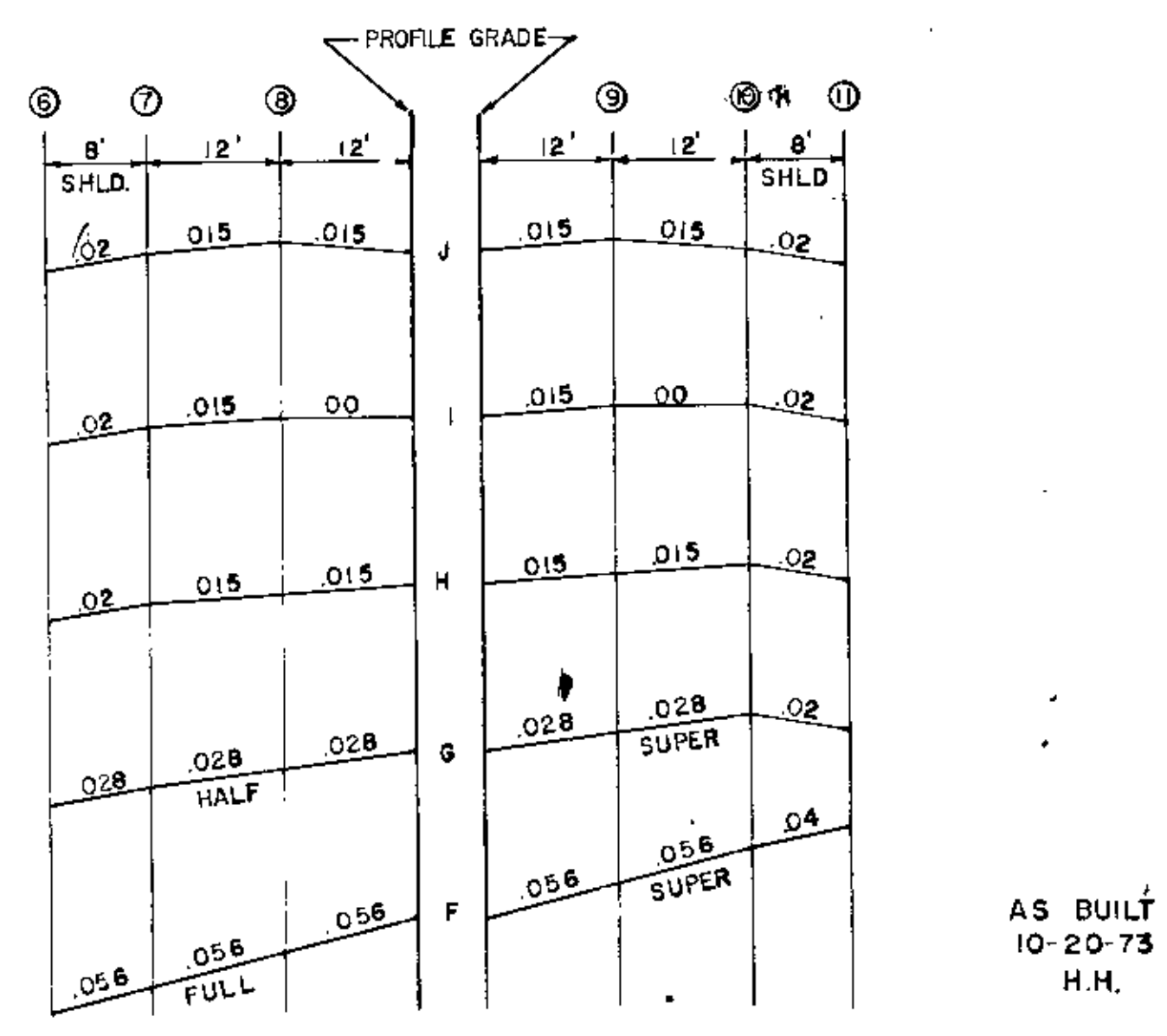
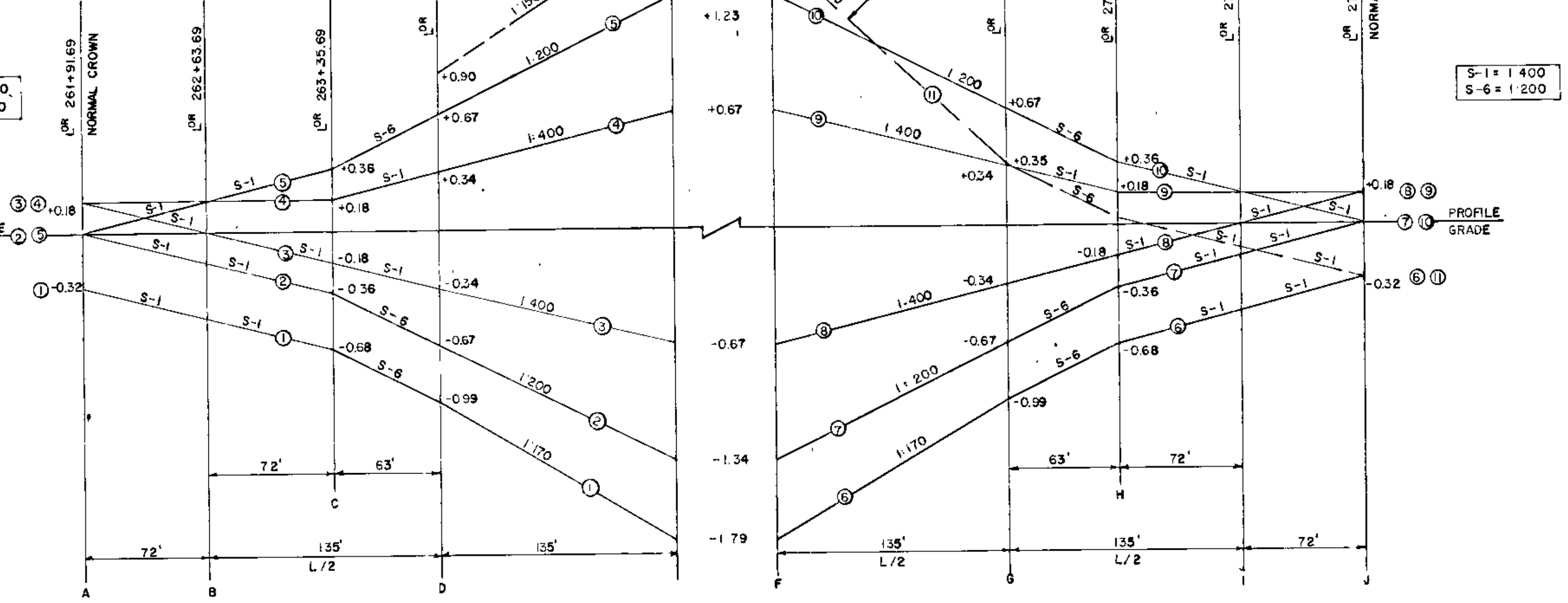
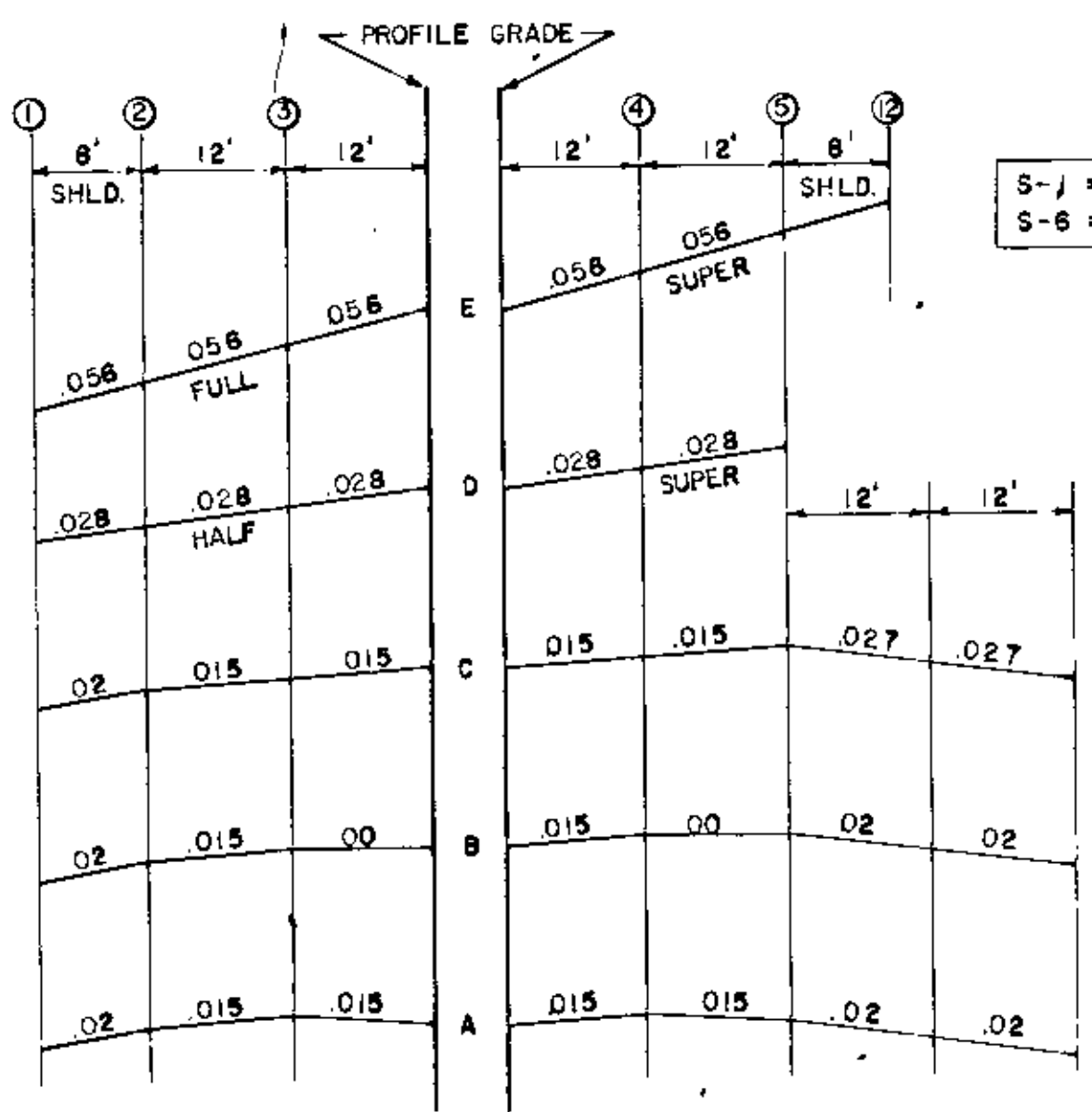
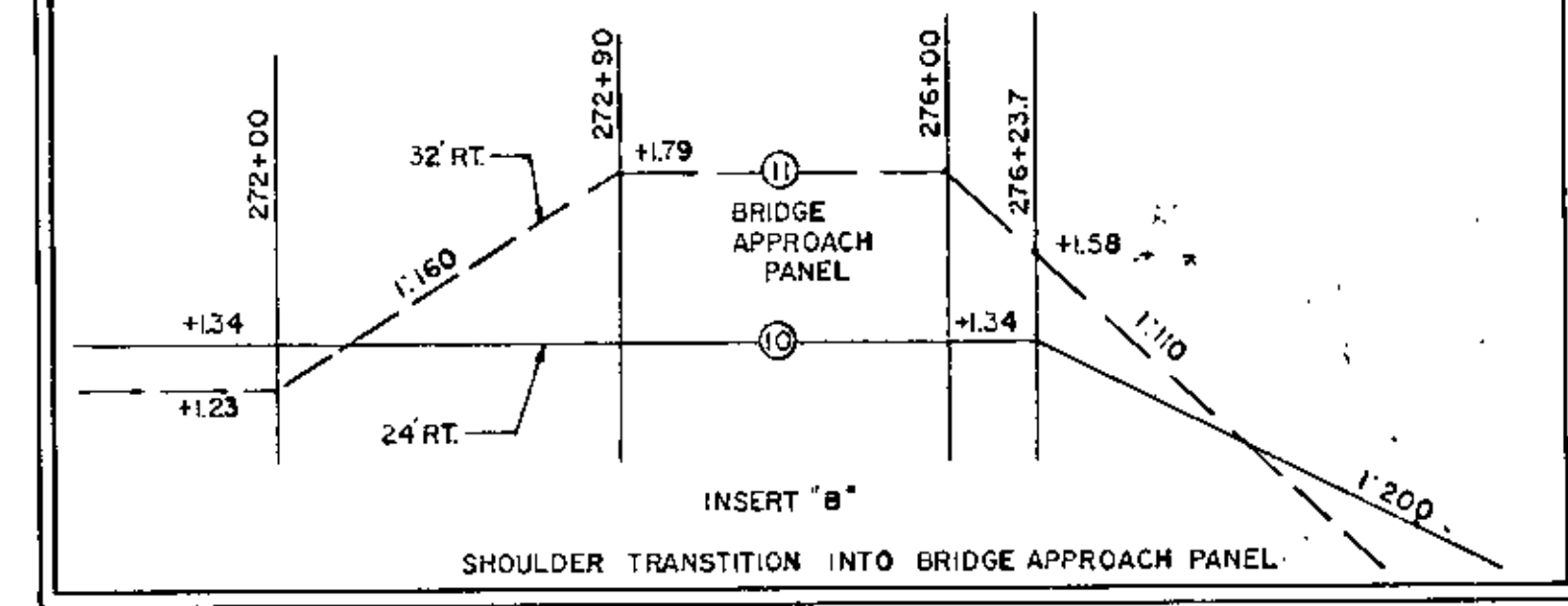


**SUPERELEVATION CHART**  
 AXIS ROTATION AT CENTER LINE

AS BUILT  
 10-20-73  
 H.H.

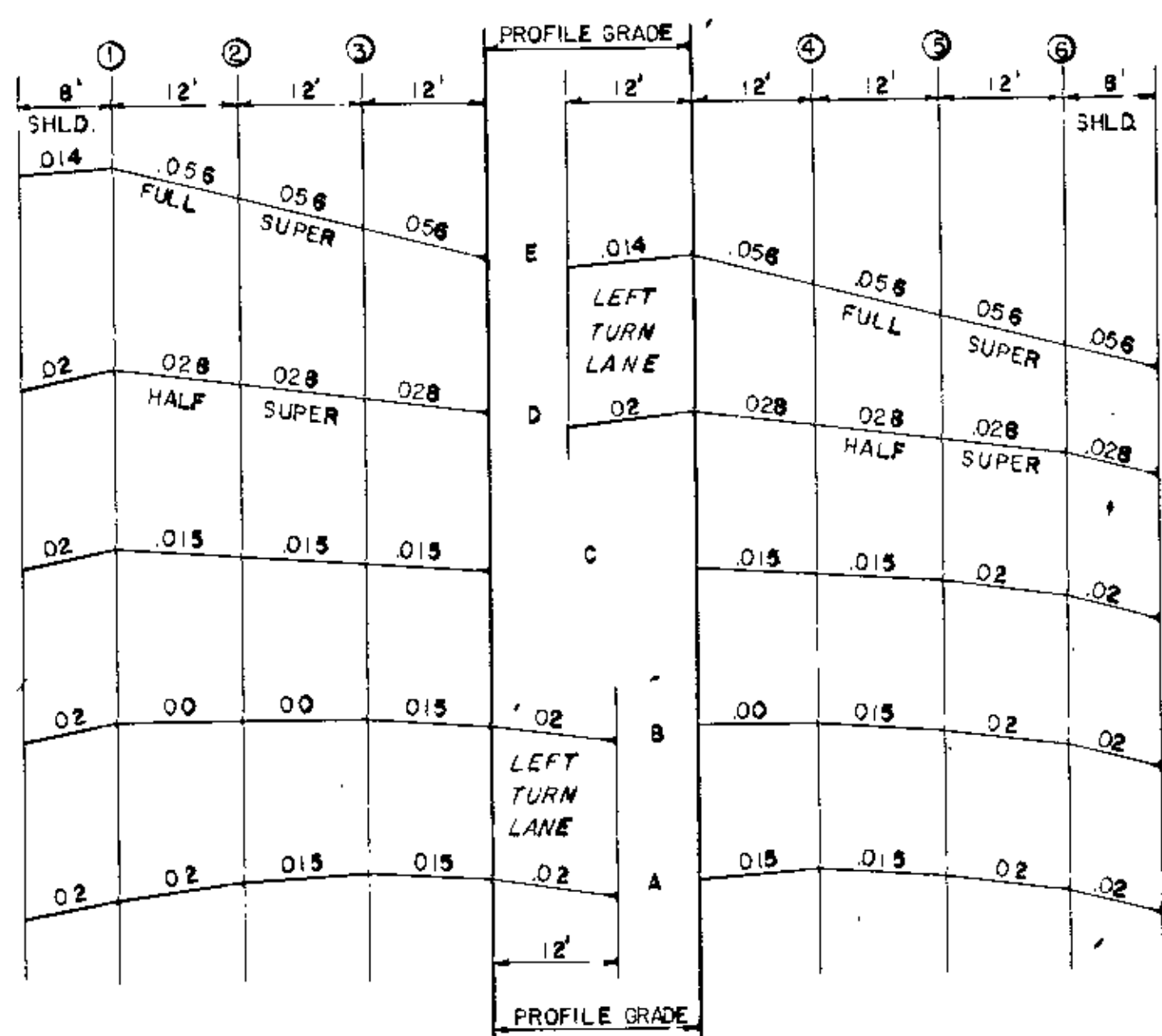


PC 263+98.69 5° CURVE E=0.056 L=270' PT 277+58.70

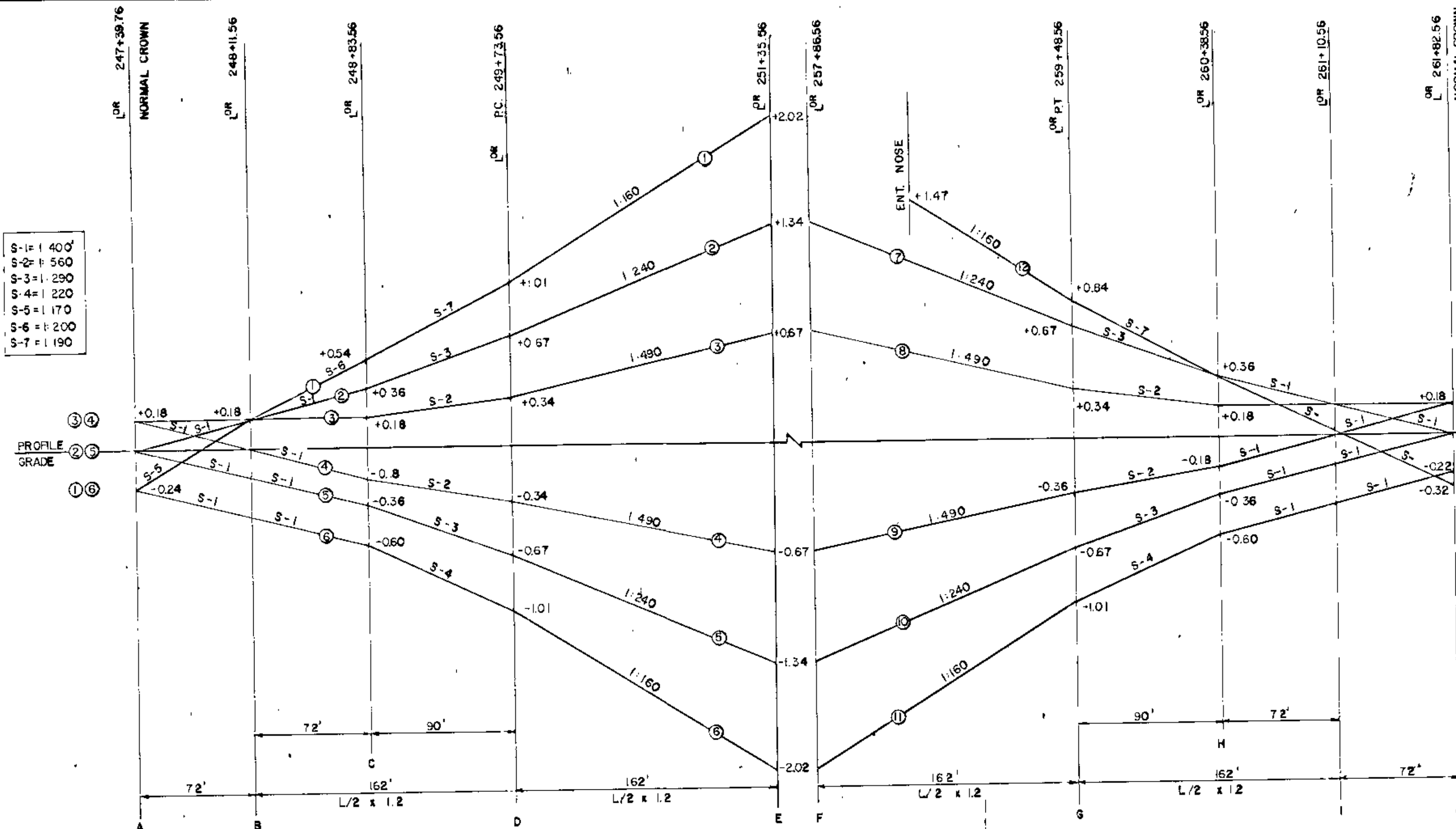


SUPERELEVATION CHART  
 AXIS ROTATION AT TOP EDGE OF GUTTER, RAISED MEDIAN.

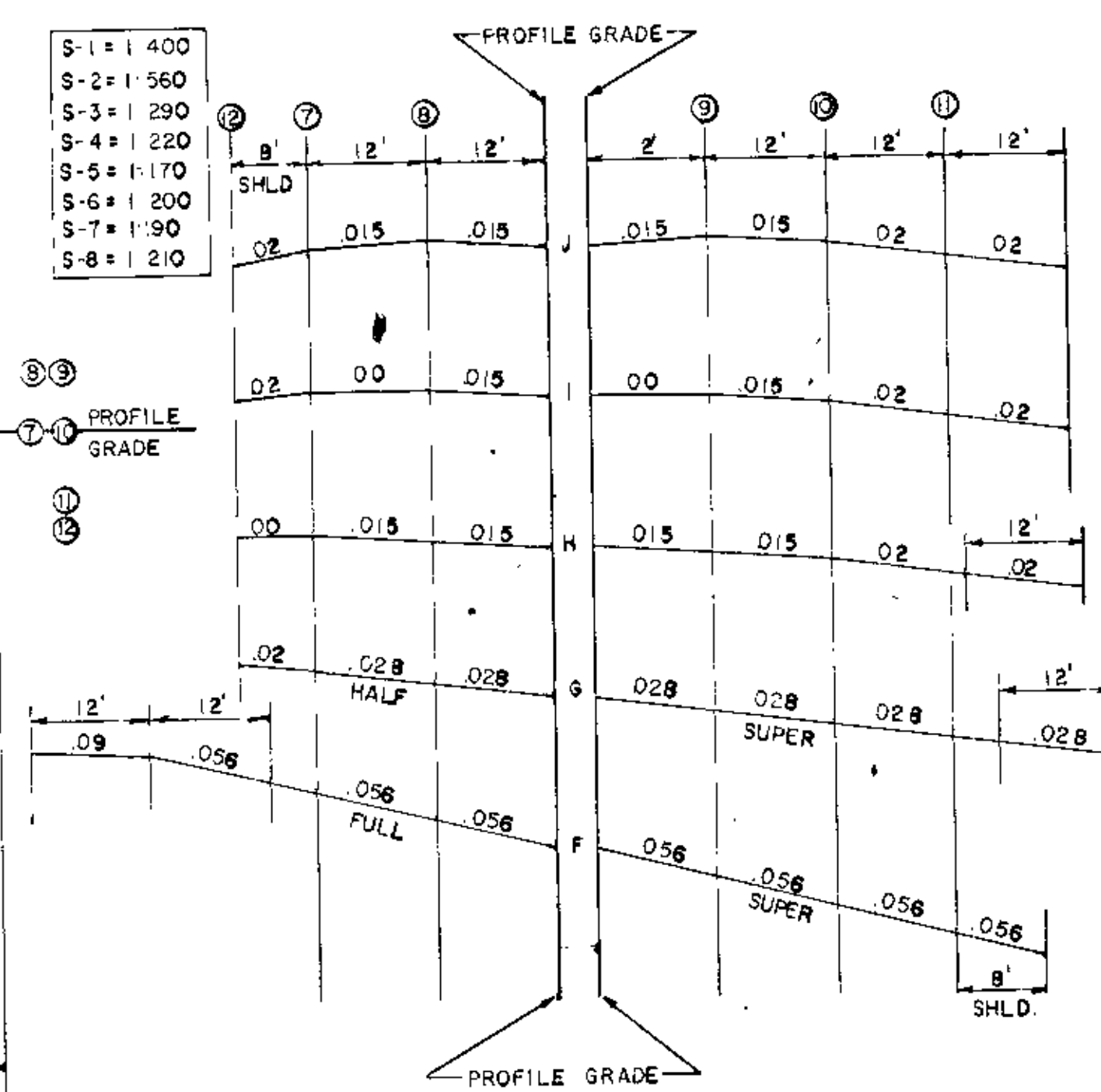
AS BUILT  
 10-20-73  
 H.M.



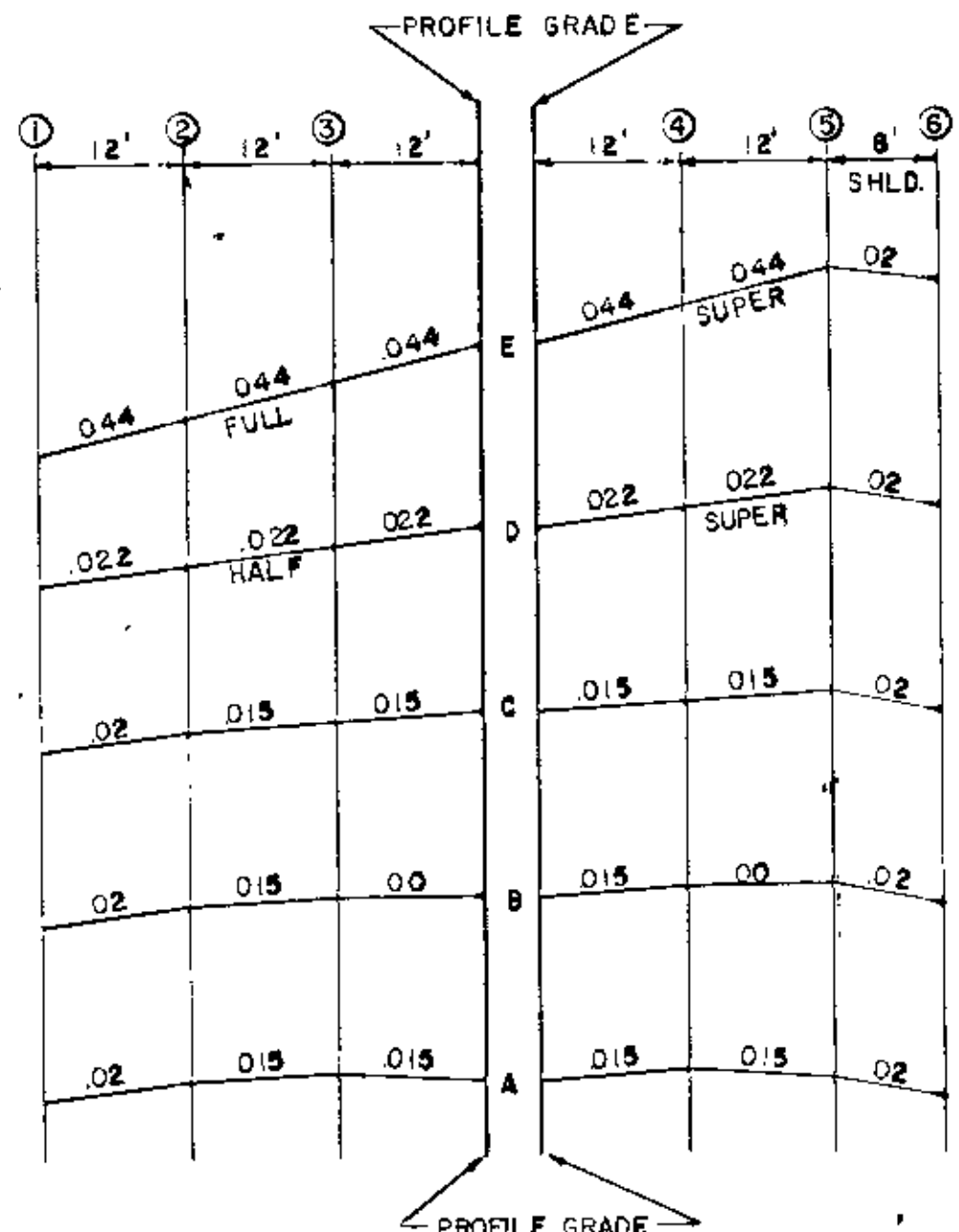
S-1 = 1.400
S-2 = 1.560
S-3 = 1.290
S-4 = 1.220
S-5 = 1.170
S-6 = 1.200
S-7 = 1.190



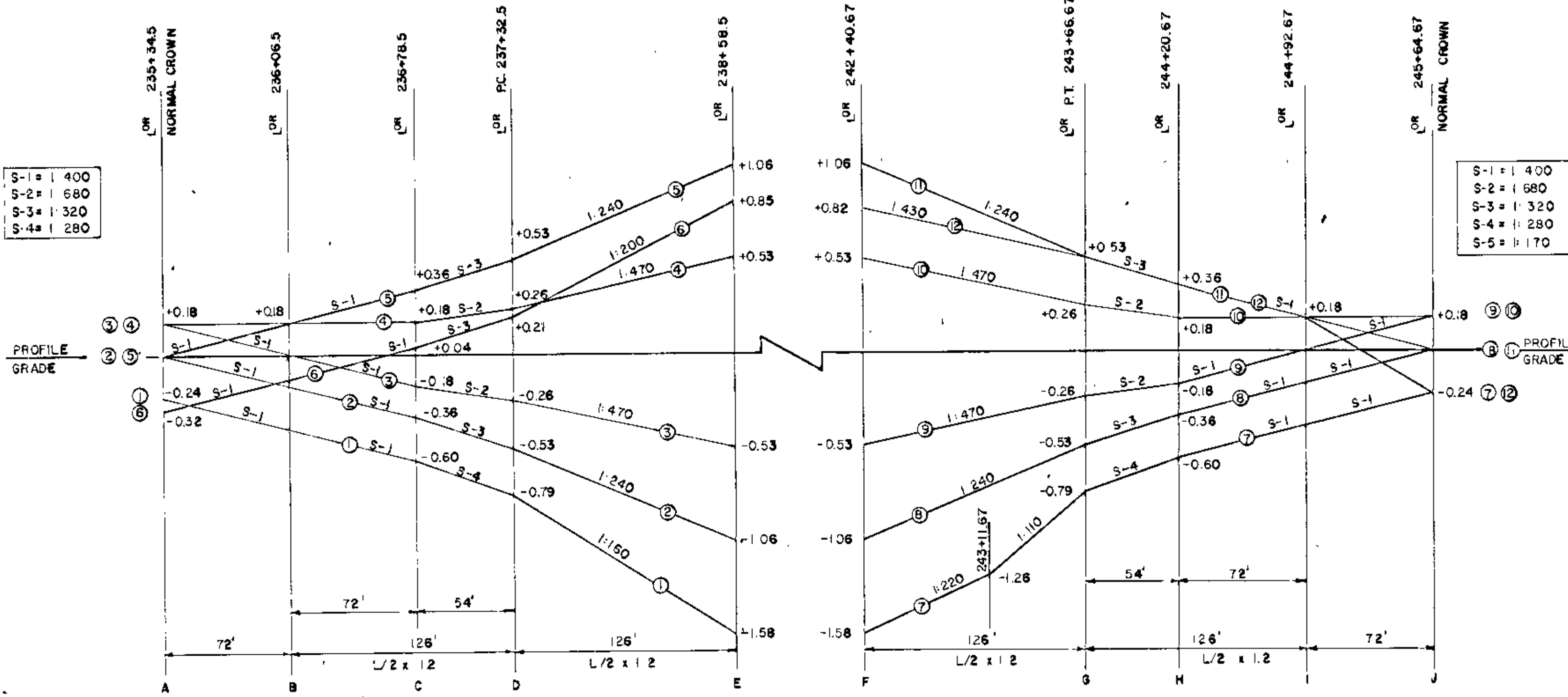
S-1 = 1.400
S-2 = 1.560
S-3 = 1.290
S-4 = 1.220
S-5 = 1.170
S-6 = 1.200
S-7 = 1.190
S-8 = 1.210



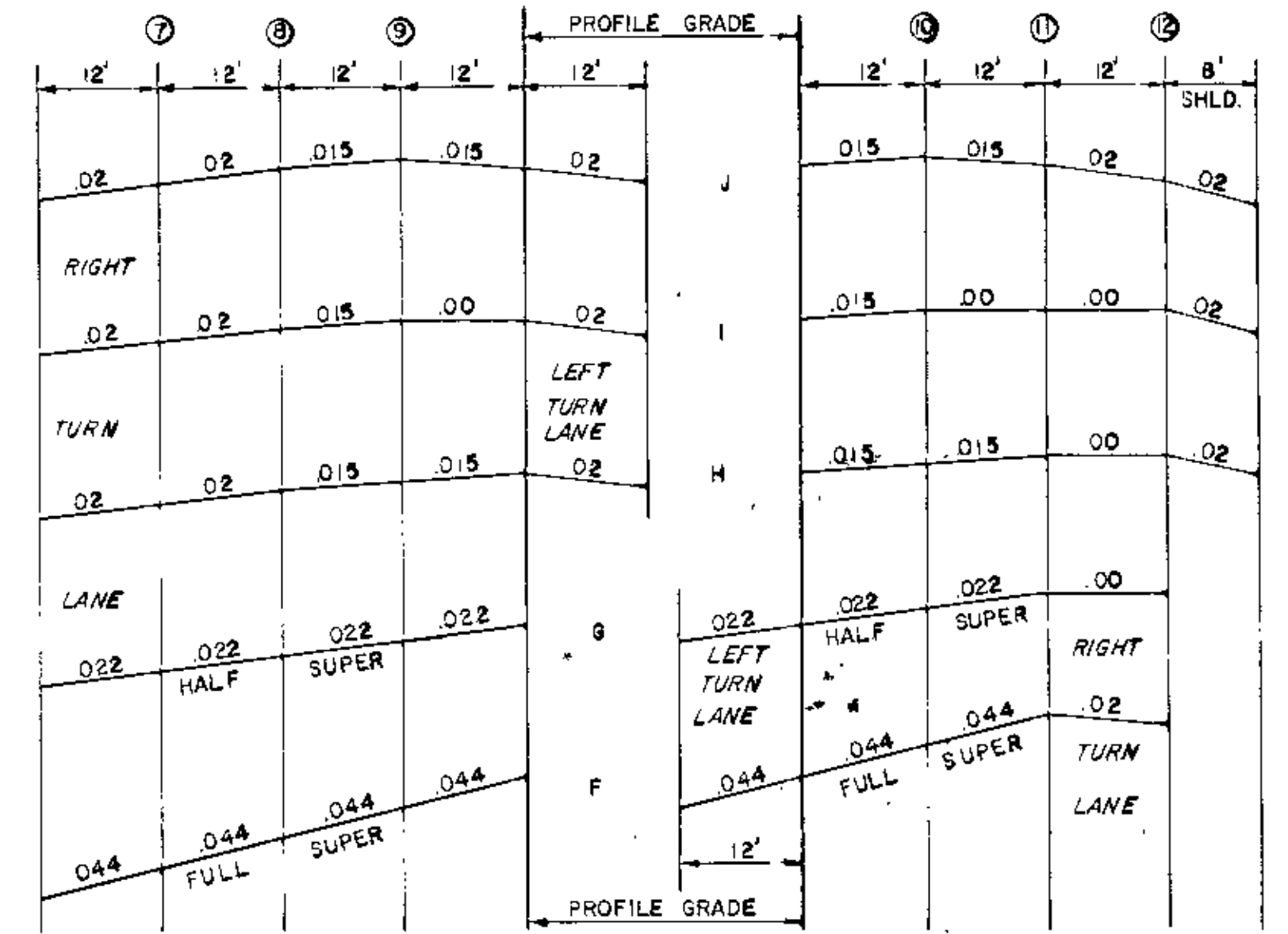
P.C. 249+73.56      5° CURVE E=0.056 L=270'      P.T. 259+48.56



S-1 = 1.400
S-2 = 1.680
S-3 = 1.320
S-4 = 1.280



S-1 = 1.400
S-2 = 1.680
S-3 = 1.320
S-4 = 1.280
S-5 = 1.170



P.C. 237+32.50      3° CURVE E=0.044 L=210'      P.T. 243+66.67

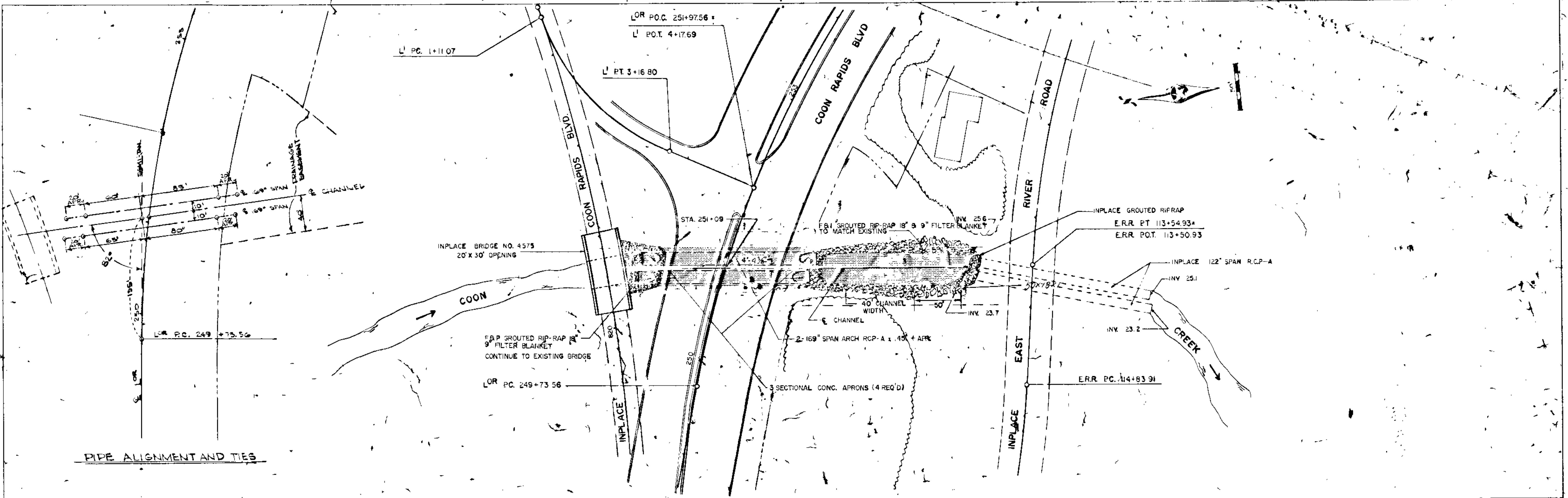
AS BUILT  
10-20-73  
H. H.

SUPERELEVATION CHART  
AXIS ROTATION AT TOP EDGE OF GUTTER, RAISED MEDIAN.

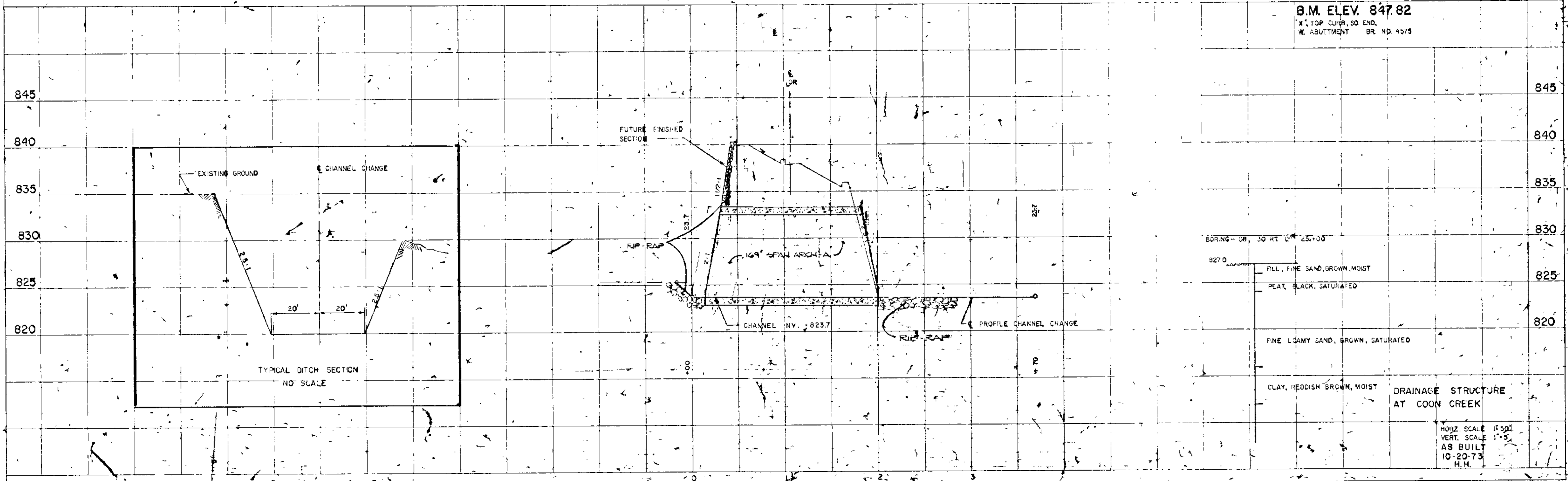


DATE: \_\_\_\_\_  
 BY: \_\_\_\_\_  
 CHECKED: \_\_\_\_\_  
 IN CHARGE: \_\_\_\_\_  
 DATE: \_\_\_\_\_

SCALE: \_\_\_\_\_  
 DATE: \_\_\_\_\_  
 CHECKED: \_\_\_\_\_  
 IN CHARGE: \_\_\_\_\_  
 DATE: \_\_\_\_\_



PIPE ALIGNMENT AND TIES



B.M. ELEV. 847.82  
 X, TOP CURB, SQ. END.  
 W. ABUTMENT BR. NO. 4575

BORING - 08, 30 FT. L<sub>25+00</sub>

- 827.0
  - 825.0
  - 820.0
- FILL, FINE SAND, BROWN, MOIST
  - PEAT, BLACK, SATURATED
  - FINE LOAMY SAND, BROWN, SATURATED
  - CLAY, REDDISH BROWN, MOIST

DRAINAGE STRUCTURE AT COON CREEK

HORIZ. SCALE 1"=50'  
 VERT. SCALE 1"=5'  
 AS BUILT  
 10-20-73  
 H.H.

PUBLIC UTILITIES						
LINE	SHEET NO.	LOCATION (Approximate)	ITEM IN PLACE	REMARKS	OWNERSHIP	
1		Lo <sup>r</sup> 230+60 - 243+90	LT. Tel. Cable - Buried	Leave as is	N.W. Bell	
2		230+60 - 251+00	LT. Gasmain	"	No. Cent. Gas Co.	
3		230+60 - 241+25	LT. Watermain	"	City of Coon Rapids	
4		230+60 - 238+60	RT. Watermain	"	"	
5		230+60 - 235+25	RT. Gasmain	"	No. Cent. Gas Co.	
6		233+65	E. Tel. Cables (2 Bur., 1 O.H.)	"	N.W. Bell	
7		234+25	LT. Hydrant	"	City of Coon Rapids	
8		236+40	RT. Hydrant	"	"	
9		238+30	LT. Hydrant	"	"	
10		243+90 - 251+00	LT. Tel. Cables (3 Buried)	"	N.W. Bell	
11		240+80 - 247+90	LT. 42" San. Sewer	"	City of Coon Rapids	
12		243+65	E. Gasmain	"	No. Cent. Gas Co.	
13		243+80	E. Tel. Cable (Buried)	"	N.W. Bell	
14		241+00	LT. Powerline (O.H.)	"	N.S.P.	
15		247+70	E. 42" San. Sewer	"	City of Coon Rapids	
16		FR <sup>1</sup> 14+20 - 20+50	RT. Watermain	"	"	
17		13+65 - 20+50	RT. Light STDS. (5) & Bur. Conduit	"	Coon Rapids Shopping Cen.	
18		19+60	E. Tel. Cable (Buried)	"	N.W. Bell	
19		19+70	E. Gasmain	"	No. Cent. Gas Co.	
20		L <sup>5</sup> 0+00 - 1+40	RT. Powerline (O.H.)	Leave as is	N.S.P.	
21		2+85	E. 42" San. Sewer	"	City of Coon Rapids	
22		3+93	E. Powerline (O.H.)	"	N.S.P.	
23		L <sup>4</sup> 0+00 - 3+00	RT. Tel Cables (3 Bur.)	Leave As is	N.W. Bell	
24		0+00 - 3+00	RT. Gasmain	"	No. Cent. Gas Co.	
25		0+00 - 3+00	RT. San. Sewer	"	City of Coon Rapids	

PUBLIC UTILITIES						
LINE	SHEET NO.	LOCATION	ITEM IN PLACE	REMARKS	OWNERSHIP	
1		Lo <sup>r</sup> 255+00 - 265+00	RT. Watermain (24" Conc.)	Relocate 600' * (see plan)	City of Coon Rapids	
2		255+00 - 265+00	RT. Tel. Cable (Buried)	Lower 600' * (see plan)	N.W. Bell	
3		255+00 - 265+00	RT. Gasmain	"	No. Cent. Gas Co.	
4		255+00 - 265+00	RT. Power Line (O.H.)	Leave as is	N.S.P.	
5		L <sup>2</sup> 0+70	E. 6" Watermain	Leave as is	City of Coon Rapids	
6		1+06	LT. Hydrant	Relocate	"	
7		L <sup>5b</sup> 0+32	RT. Hydrant	Relocate	City of Coon Rapids	
8		1+00 - 12+50	RT. Tel. Cable (Buried)	Leave as is	N.W. Bell	
9		1+00 - 12+50	RT. Gasmain	"	No. Cent. Gas Co.	
10		1+00 - 12+50	RT. Powerline (O.H.)	"	N.S.P.	
11		1+75 - 12+50	LT. Watermain (24" Conc.)	"	City of Coon Rapids	
12		9+70	LT. 6" Watermain, G.V. & Hyd.	"	"	
13		Lo <sup>r</sup> 273+40	E. 345 KV Transmission Lines	Leave as is	N.S.P.	
14		"	E. Transmission Tower	"	"	
15		275+70	E. Gasmain	"	Minnesacoo	
16		275+95	E. 69 KV. Transmission Lines	"	Rural CO-OP Power Ass.	
17		276+70	RT. San. Manhole	Reconstruct (+5.0')	Metro Sewer Board	
18		273+40 - 292+25	RT. Powerline (O.H.)	Leave as is	Anoka Elec. CO-OP	
19		295+00 - 300+25	RT. Tel. Cable (Buried)	"	N.W. Bell	
20		290+00 - 295+00	LT. " "	"	"	
21		FR <sup>3</sup> 0+00 - 3+00	LT. Gasmain	"	Northern Natural Gas	

CASTING SCHEDULE			
TYPE	NEENAH R-3250-1	MHD 804-813	MHD 700-7, 730-6
NO.	A	B	C
QUANT.	17	1	1

STORM SEWER																						
STRUCT. NO.	STATION	LOCATION	CONSTRUCTION			TOP OF CASTING OR INLET ELEV.	OUTLET ELEV.	F.B.I. CASTING ASSY. TYPE	FURNISH AND INSTALL PIPE SEWER.....						APRONS		DRAINS TO		SODDING SQ. YD.	CLASS A RANDOM RIFRAP CU. YD.	TYPE I FILTER BLANKET CU. YD.	
			DESIGN		RAY HEIGHT				12"	15"	18"	24"	27"	30"	R.C.P.	C.M.	STR. NO.	GRADE %				INL. EL.
			M.H.	C.B.	LIN. FT.				Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.				Lin. Ft.
1	Lo <sup>r</sup> 13+06	43' RT.	C-G	4.0	851.75	49.94	A	59								1	2	5.1	46.65			
2	Lo <sup>r</sup> 237+50	43' RT.	A-F	7.4	850.60	846.45	C										2	5.0	47.74			
3	FR <sup>1</sup> 16+05	40' RT.	C-G	4.0	851.75	47.58	A					317					5	0.8	43.91			
4	16+32	29' RT.	C-G	4.3	851.08	46.91	A					51					4	0.7	47.37			
5	16+32	12.87' LT.	A-F	7.7	851.43	843.66	A										5	4.4	44.80			
6	Lo <sup>r</sup> 243+07	44' LT.	C-G	3.7	847.07	43.37	A							256			8	1.2	40.61			
7	243+07	2.87' LT.	A-F	8.0	848.58	42.53	A					76					7	0.65	42.78			
8	243+07	46.87' RT.	A-F	8.9	849.36	40.36	A					49					8	0.7	42.18			
9	246+75	58.87' LT.	C-G	4.1	844.60	40.43	A										12	1.2	35.94			
10	246+75	2.87' RT.	A-F	5.1	844.84	39.75	A					61					10	0.7	40.00			
11	246+75	9.13' RT.	A-F	5.6	845.08	39.51	A					45					11	0.7	39.71			
12	246+75	54.87' RT.	A-F	8.9	844.68	35.74	A										12	1.0	39.05			
13	250+09	54.87' LT.	C-G	4.1	838.45	34.28	A										16	2.2	26.50			
14	250+51	9.13' LT.	C-G	4.1	837.34	33.17	A					62					14	1.4	33.42			
15	250+42	2.87' LT.	C-G	4.2	837.11	32.86	A					11					15	1.0	33.06			
16	250+95	54.87' RT.	A-F	7.2	835.22	28.00	A					78					16	2.0	31.30			
17	263+51	4.13' RT.	C-G	3.8	873.57	69.70	A										1	Channel	5.0	26.50		
18	L <sup>5b</sup> 0+00	12.87' RT.	H	3.1	873.49	70.15	A					41					E 39	3.7	68.15			
19	8+15	14' LT.	C-G	4.5	877.87	73.70	B					49					17	0.5	69.90			
												83					E 47	3.3	67.24			

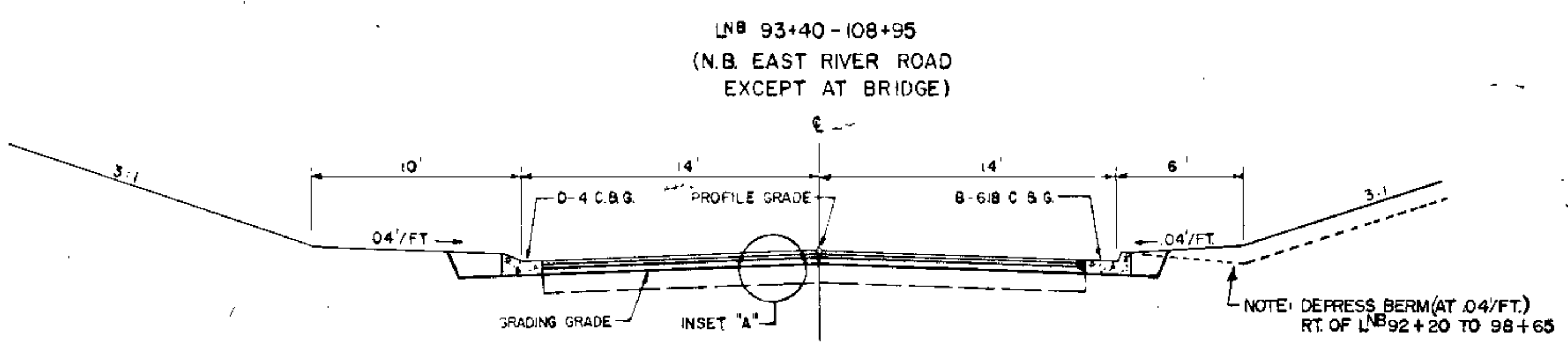
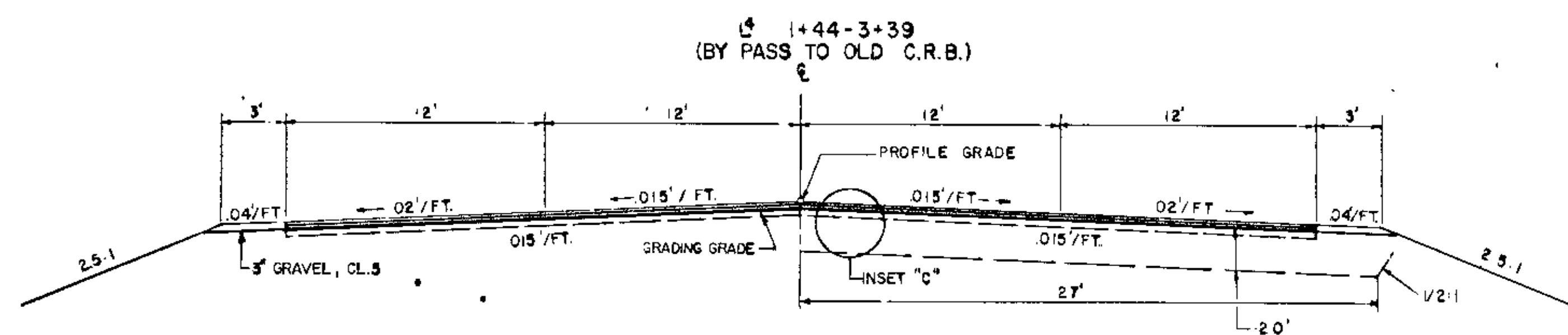
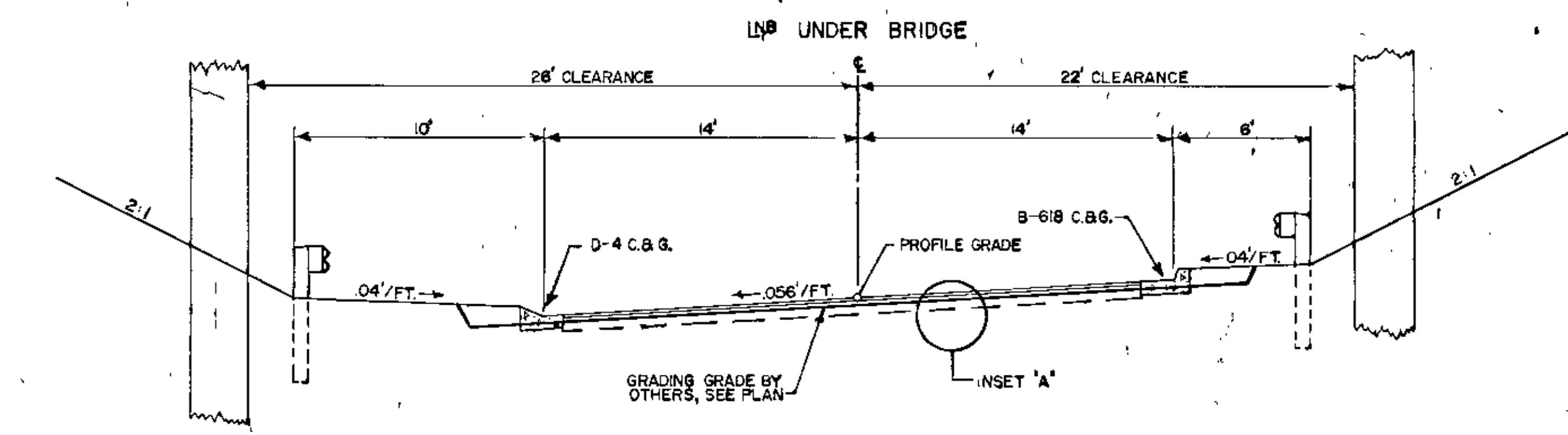
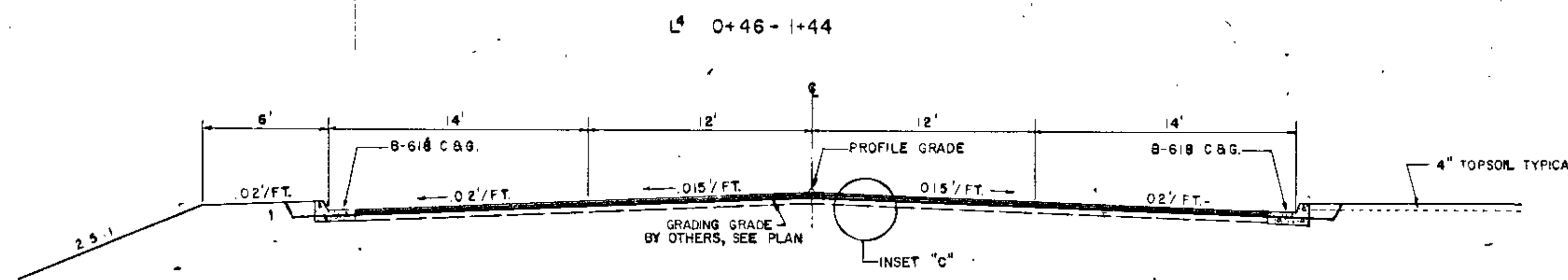
SIGN TABULATION	
DESCRIPTION	AMOUNT
TYPE II REFLECTORIZED OBJECT MARKER	2
CROSSING TO COON RAPIDS BOULEVARD PROHIBITED EAST RIVER ROAD ONLY	1
INTERCHANGE GUIDE SIGN	2
INTERCHANGE GUIDE SIGN	2
W 9-1 200 FT.	2
W 9-1 500 FT.	2
RIGHT TURN LANE	4
LEFT TURN LANE	5
R 1-1	7
R 1-2	3
R 3-5	10
R 4-7	8
W 9-2	3
W 12-1	1

NOTE: FOR SIGNING, STRIPING, & BARRICADES REFER TO MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" U. S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION.

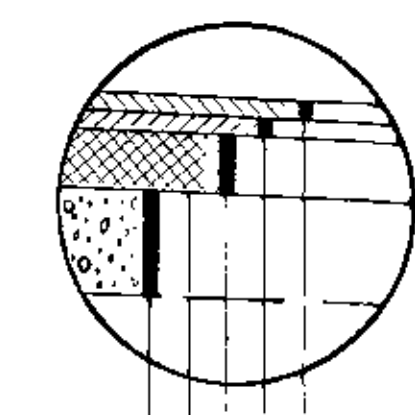
AS BUILT 10-20-73 H.H.

TABULATIONS



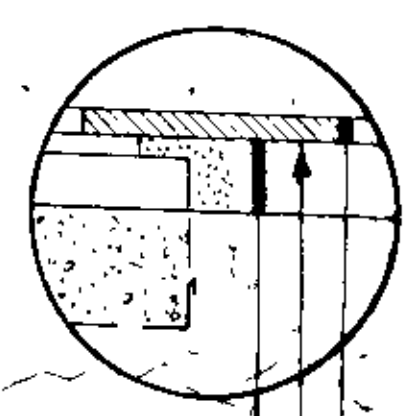
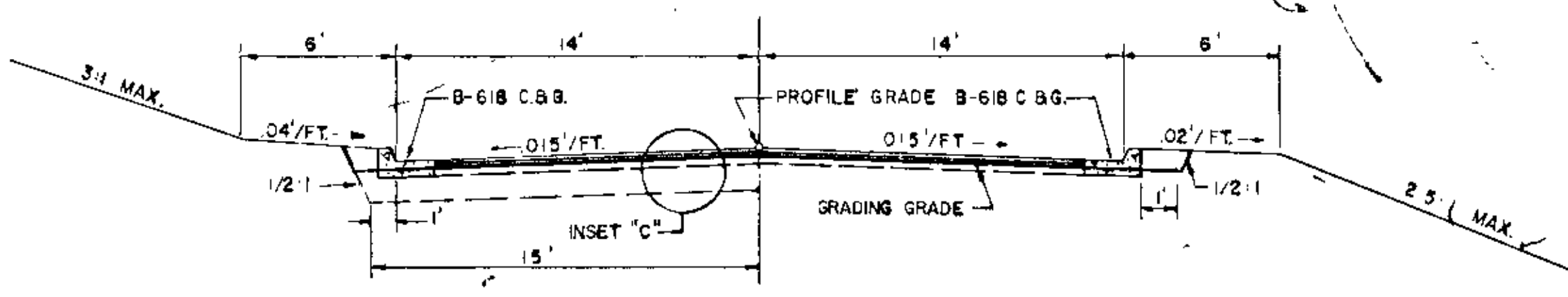
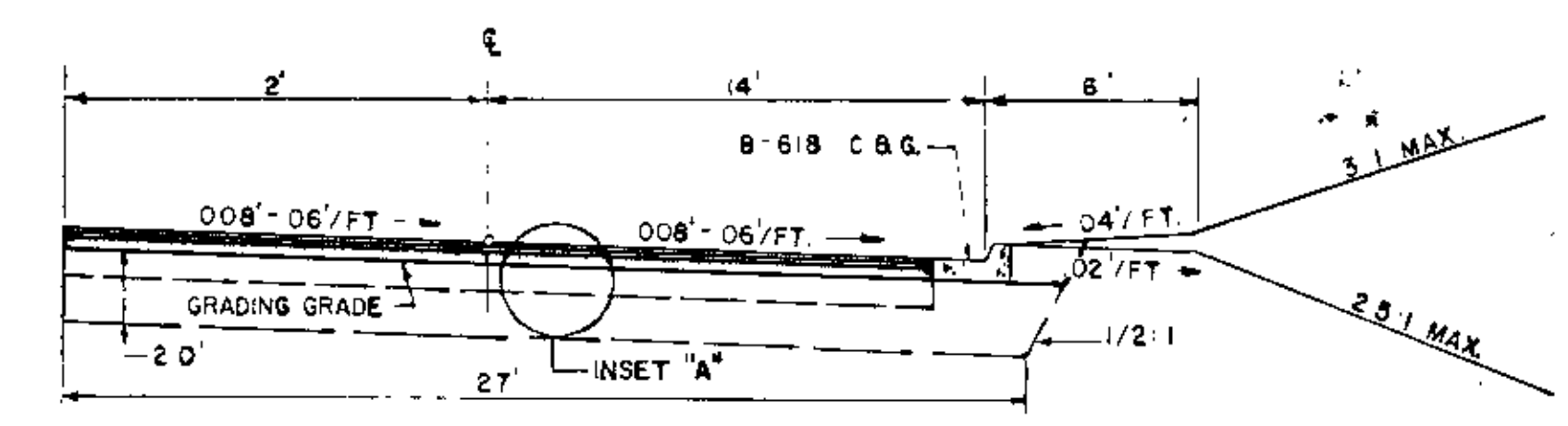


- L1 0+00-2+60 (C.R.B. TO BY PASS)
- L2 0+00-1+32 (E.R.R. TO BY PASS)
- L3 0+12-2+49 (APARTMENT ENT)
- L5 2+58-5+00 (BY PASS TO VILLAGE HALL)
- FR2 0+24-1+84 (C.R.B. TO L4)
- FR1 12+96-20+01 (SHOPPING CENTER)



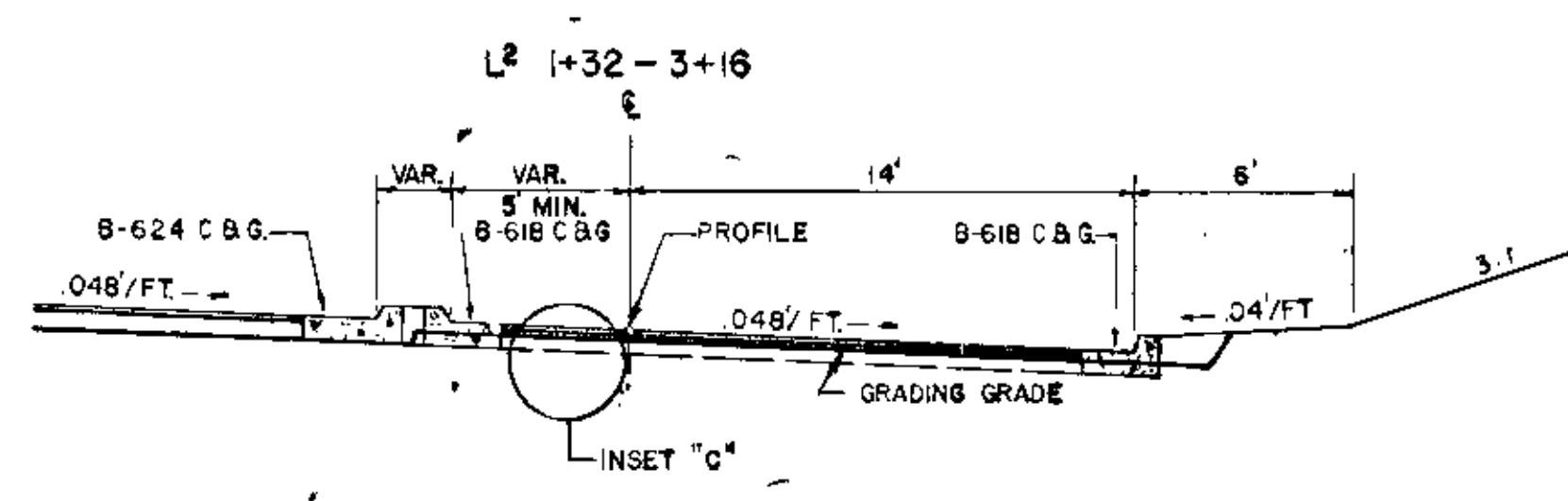
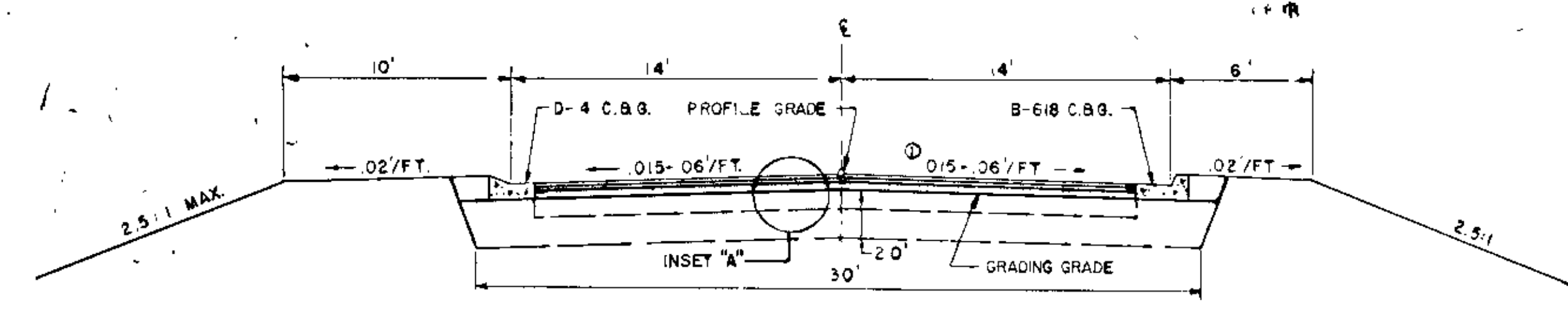
- 1 1/2" 2341 BIT. WEARING COURSE AND FILLER TACK COAT, SPEC. 2357
- 1 1/2" 2341 BIT. BINDER COURSE TACK COAT, SPEC. 2357
- 4" 2331 BITUMINOUS BASE
- FOG SEAL, SPEC. 2207
- 5" 2207 STABILIZED SUBGRADE, UNLESS NOTED

- LN8 90+73 - 93+40
- LSB 0+00 - 1+50
- LSB 3+80 - 12+50

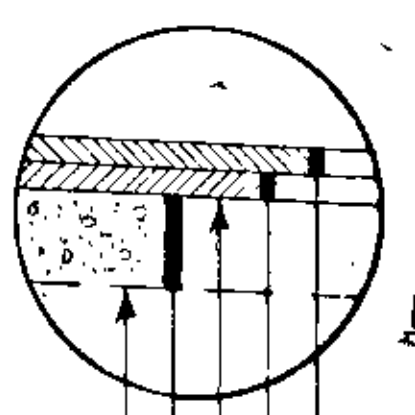
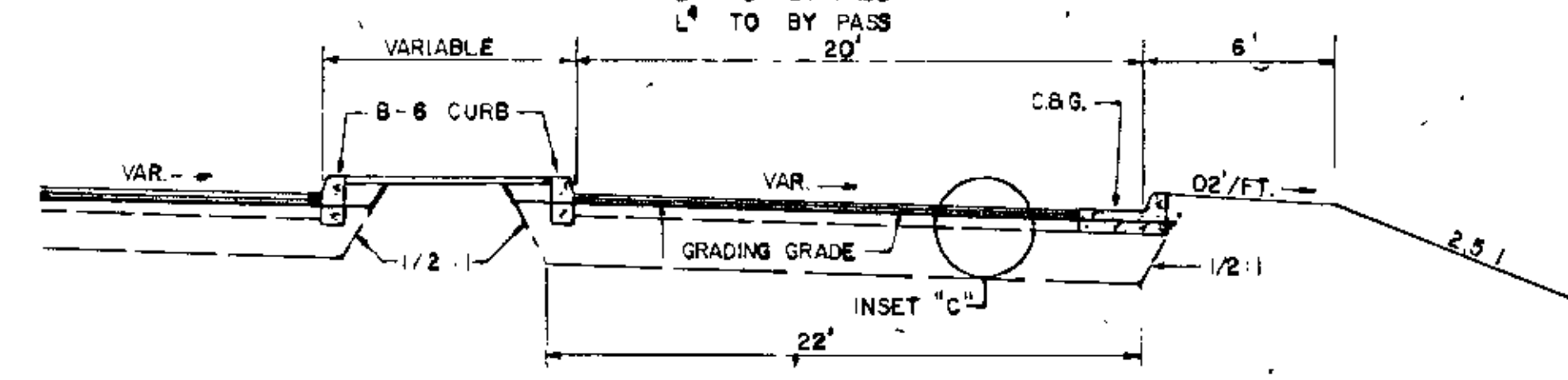


- 1/2" 2341 WEARING COURSE
- PENETRATION PRIME SPEC 2358
- VARIABLE DEPTH AGG. BASE, CL. 5

- LSB 1+50-9+80 (SB EAST RIVER ROAD)



- L3 TO BY PASS
- L4 TO BY PASS
- L5 TO BY PASS

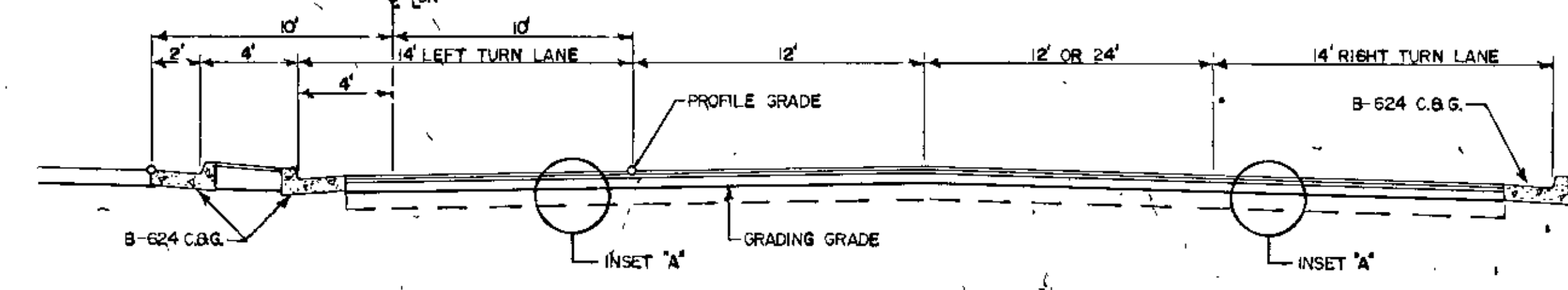
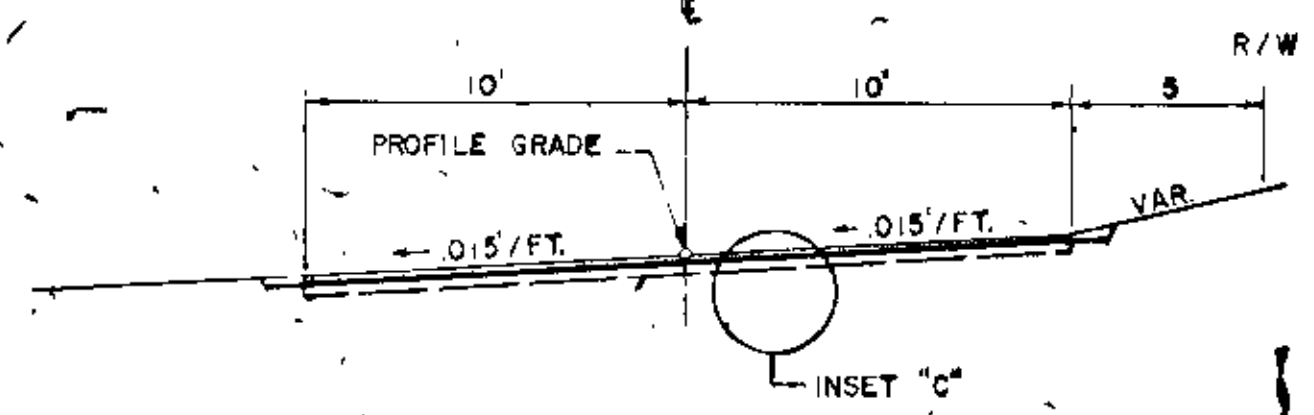


- 1 1/2" 2341 BIT. WEARING COURSE + FILLER TACK COAT, SPEC. 2357
- 1 1/2" 2341 BIT. BINDER COURSE
- FOG SEAL, SPEC. 2207
- 5" 2207 STABILIZED SUBGRADE
- A-3 COMPACTED SUBGRADE

- LEFT TURN LANE
- E.B.L. 240+47 - 243+37 + TAPER
  - W.B.L. 244+27 - 247+77 + TAPER
  - E.B.L. 247+77 - 251+63 + TAPER
  - E.B.L. 288+43 - 291+43 + TAPER
  - E.B.L. 296+63 - 299+00 + TAPER

- RIGHT TURN LANE
- E.B.L. 240+47 - 243+10 + TAPER
  - W.B.L. 240+76 - 242+56 (TAPER ONLY)
  - W.B.L. 244+47 - 247+17 + TAPER
  - W.B.L. 252+40 - 256+77 (FROM LN8)
  - W.B.L. 292+25 - 295+08 + TAPER
  - E.B.L. 296+63 - 299+00 + TAPER

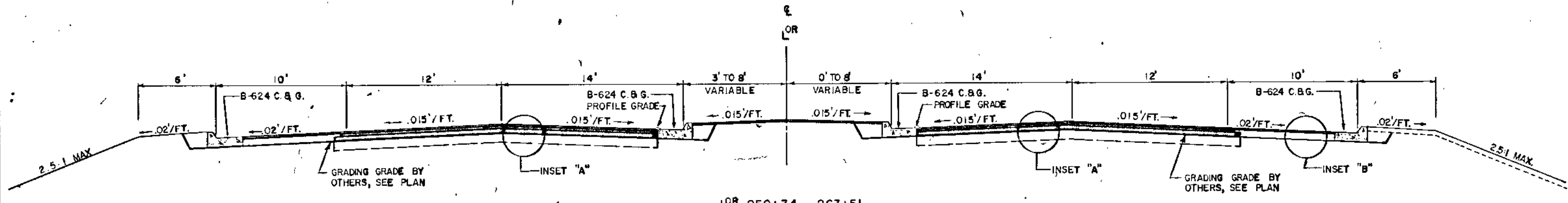
- FR2 0+14-3+10
- FRONTAGE ROAD 45' RT. LN8 92+00-95+00



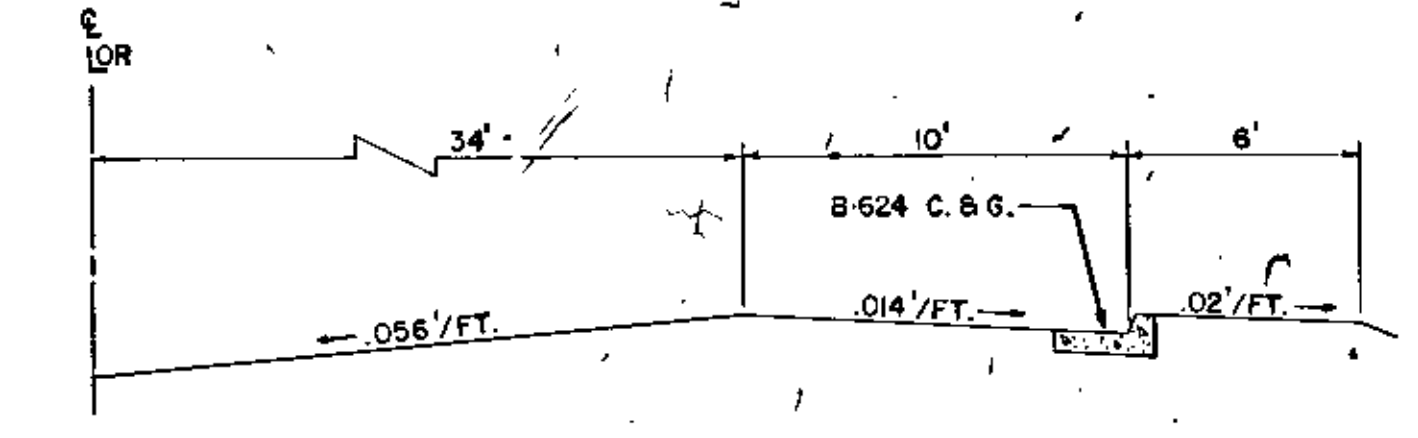
TYPICAL SECTIONS



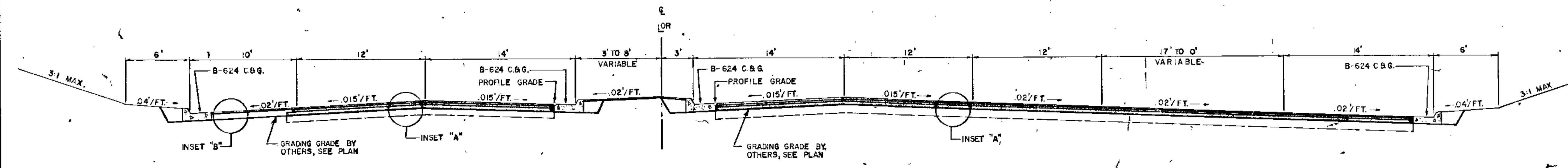
LOR 263+51 - 299+15  
COON RAPIDS BLVD. BY-PASS



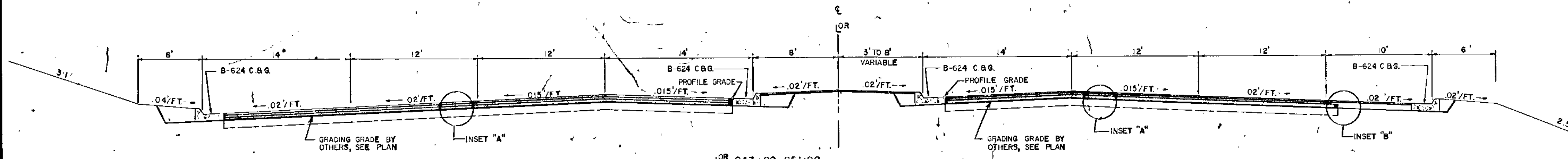
SHOULDER SECTION FOR FULL SUPER



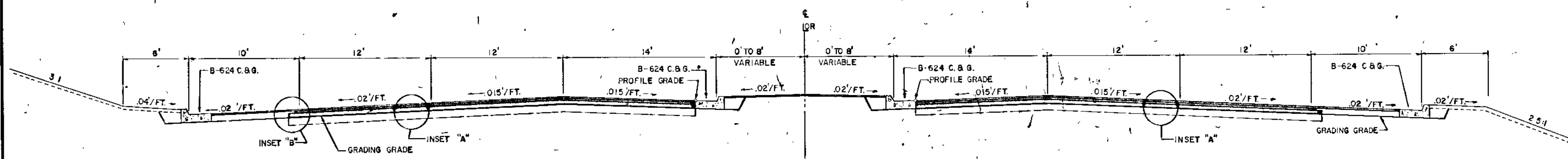
LOR 258+34 - 263+51  
COON RAPIDS BLVD. BY-PASS



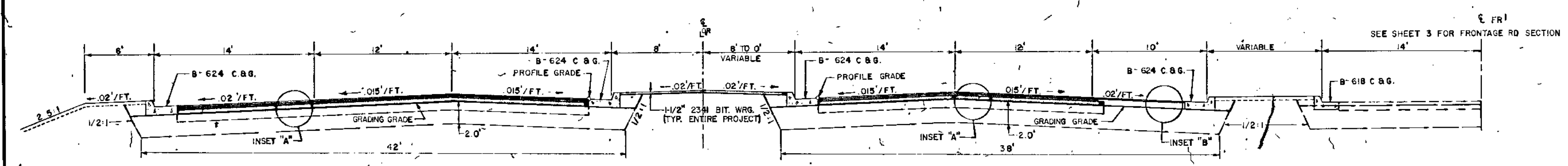
LOR 251+98 - 258+34  
COON RAPIDS BLVD. BY-PASS



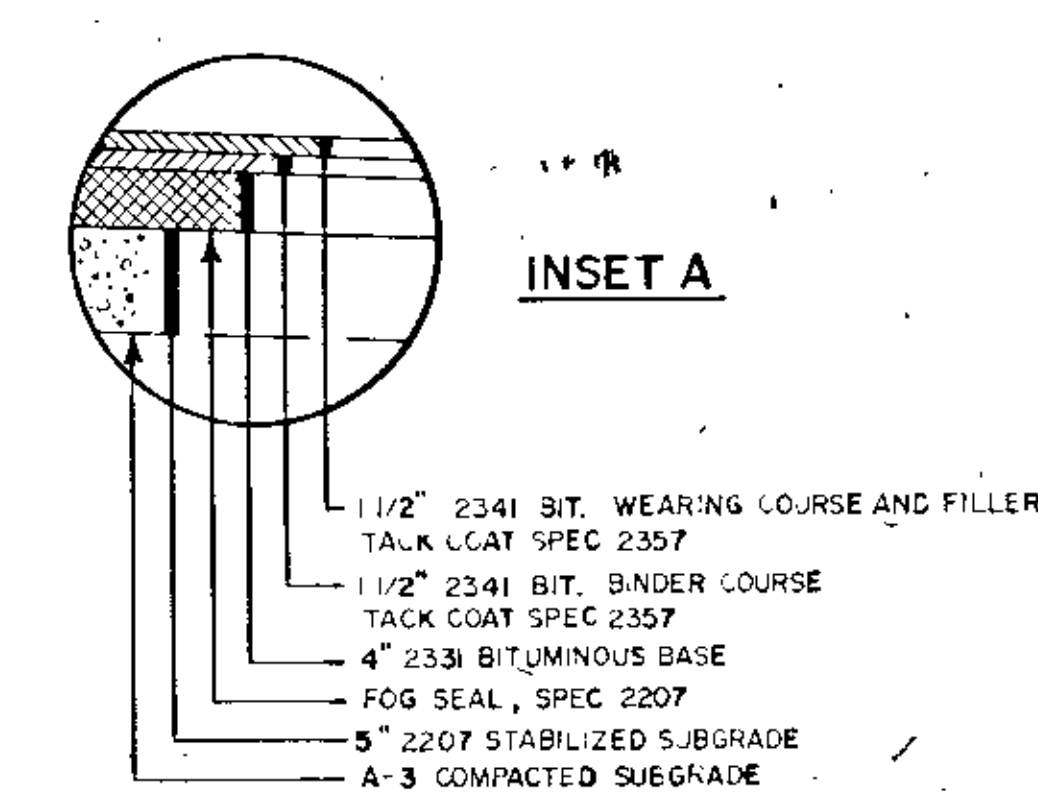
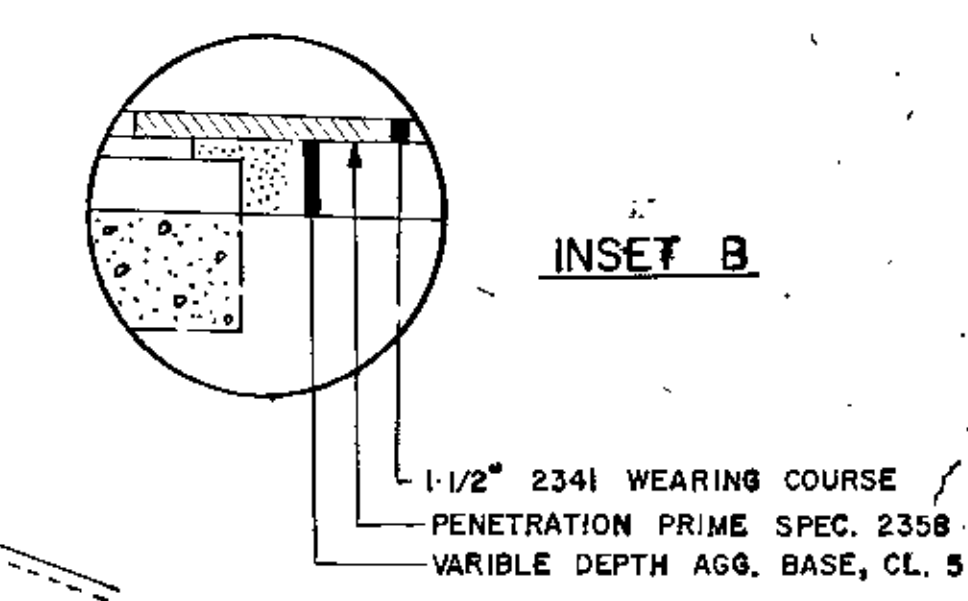
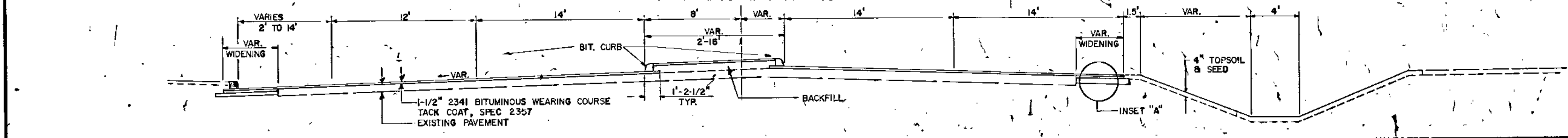
LOR 243+82 - 251+98  
COON RAPIDS BLVD. BY-PASS



LOR 238+67 - 243+82  
COON RAPIDS BLVD. BY-PASS



TEMPORARY PAVEMENT TO LOR 238+67  
COON RAPIDS BLVD. BY-PASS



MAINLINE  
TYPICAL SECTIONS

AS BUILT  
10-20-73  
H.H.

MISCELLANEOUS REMOVAL

STATION (TO STATION)	LOC	DESCRIPTION	UNIT		ADJAC
			LN FT	CU YD	
LOR 240+20	LT	Catch Basins		2	
240+20	LT	12" Concrete Pipe	38		
240+20 - 241+20	LT	12" Concrete Pipe	130		
244+30	LT	18" C. M. P.	36		
247+10 - 248+10	RL	18" C. M. P. & Surge Basin	130		1
247+30	E	18" Concrete Pipe	44		
247+30	LT	Catch Basin		1	
PR 16+30	RL	24" C. M. P.	36		
17+5	E	30" C. M. P.	126		
3 1-53	E	30" C. M. P.	174		
L1 2+30	E	Permanent Barricades	20		
L2 1+30	E	Permanent Barricades	20		
LNB 14+30	E	Permanent Barricades	20		
LOR 257+30 - 264+30	RL	Plate-Beam Guardrail	730		
274+30	E	Permanent Barricades	50		
297+30	RL	Manhole			1
L4 2+30	E	Permanent Barricades	30		

The following Standard Plates, approved by the Bureau of Public Roads, shall apply on this project.

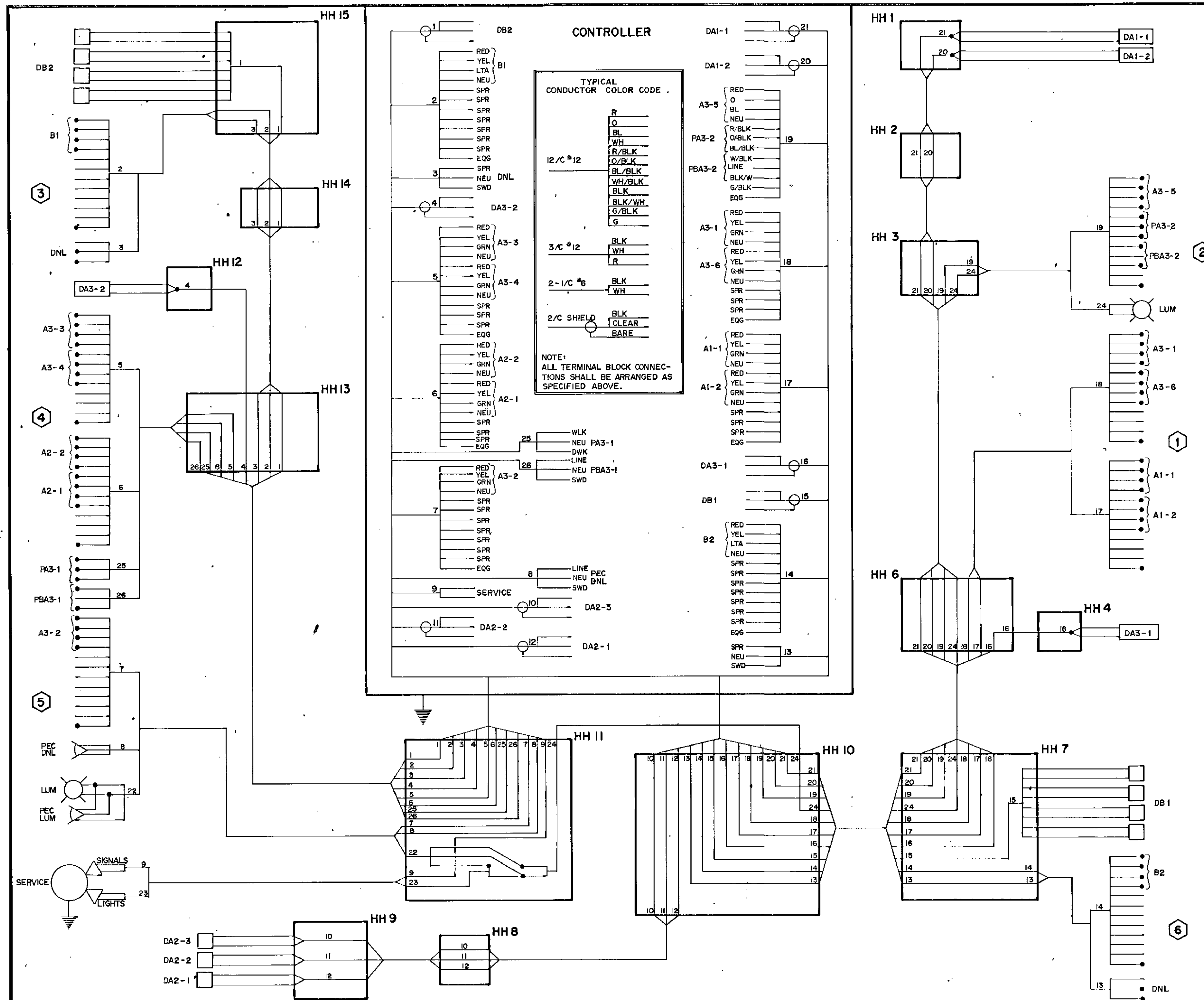
STANDARD PLATES

PLATE NO.	DESCRIPTION
1038 C	Bridge Approach Panel (Skew)
1130 I	Expansion Joints
1140 L	Longitudinal Joints
3030 F	Reinforced Concrete Pipe
3014 F	Reinforced Concrete Pipe Arch Detail
3130 F	Concrete Apron for Reinforced Concrete Pipe
3114 D	Sectional Concrete Apron for R. C. P. - Arch
3153 A	Riprap at R. C. P. Outlets
3145 A	Concrete Pipe Joint Ties
4030 G	Manhole or Catch Basin (Type A)
4002 D	Manhole or Catch Basin (Type C)
4025 I	Manhole or Catch Basin (Type F)
4036 H	Manhole or Catch Basin (Types C & H)
4010 D	Conc. Short Cone & Adjusting Ring
4011 C	Precast Concrete Base
4101 B	Ring Casting for Manhole or Catch Basin
4110 D	Cover Casting for Manhole
4131 B	Catch Basin Frame & Grate Casting
4142 D	Belted Grate Castings for Catch Basin
4130 F	Manhole Step Casting
7030 C	Integral Curbs
7020 F	Concrete Curbs
7065 C	Bituminous Curb
7100 D	Concrete Curb and Gutter
7102 D	Concrete Curb and Gutter
7106 D	Entrance Median
7108 B	Exit Nose
7109 A	Median Nose
7110 E	Curb & Gutter Construction at Catch Basin
7111 D	Installation of Catch Basin Castings
8000 D	Standard Barricades
8002 C	Permanent Barricade
8008 D	Contractor's sign
8110 B	Traffic Signal Bracketing
8111 A	Traffic Signal Bracketing
8112 B	Pedestal Foundation
8116 C	Steel Guard Post
8117 D	Precast Concrete Manhole
8118 B	Service Equipment & Pole
8119 B	Ground Mounted Cabinet Foundation
8120 D	Mast Arm Pole Foundation
8122 B	Pedestal & Pedestal Base
8123 A	Pole and Mast Mounts
8124 B	Signal Head Mounts
8130 B	Saw Cut Loop Detectors
8307 J	Structural Plate Beam Guardrail
8317 C	Guardrail Anchorage Assembly for Bridges
8319 C	Twisted End Treatment
9102 C	Seeding at Pipe Culvert Ends

AS BUILT  
10-20-73  
H H

STATEMENT OF ESTIMATED QUANTITIES

ITEM NO.	ITEM	UNIT	TOTAL ESTIMATED QUANTITIES	TOTAL FINAL QUANTITIES
2021.501	Mobilization	Lump Sum	1	
2031.501	Field Office Type D	Each	1	
2101.501	Clearing	Tree	3	
2101.507	Grubbing	Tree	3	
2104.501	Remove Curb	Lin. Ft.	2210	
2104.505	Remove Pavement	Sq. Yd.	24922	
2104.509	Remove Signal System	Each	1	
2104.523	Salvage Signal System	Each	1	
2104.500	Miscellaneous Removals (See Tabulation, This Sheet)	Lump Sum	1	
2105.501	Common Excavation	Cu. Yd.	1735	
2105.505	Muck Excavation	Cu. Yd.	1830	
2105.507	Subgrade Excavation	Cu. Yd.	13245	
2105.521	Granular Borrow (LV)	Cu. Yd.	27330	
2105.525	Topsoil Borrow (LV)	Cu. Yd.	5020	
2112.501	Subgrade Preparation	Road Station	74	
2207.503	Bituminous Material for Mixture	Cal.	135297	
2207.512	Bituminous Stabilized Subgrade, 5" Thick	Sq. Yd.	24091	
2211.502	Aggregate Base Class 5	Cu. Yd.	829	
2301.551	Bridge Approach Panels, Design A	Each	1	
2301.551	Bridge Approach Panels, Design B	Each	1	
2301.551	Bridge Approach Panels, Design C	Each	6	
2331.504	Bituminous Material for Mixture	Ton	497	
2331.514	Base Course Mixture	Ton	12417	
2341.504	Bituminous Material for Mixture	Ton	426	
2341.508	Wearing Course Mixture	Ton	6591	
2341.508	Wearing Course Mixture (for Medians)	Ton	435	
2341.510	Binder Course Mixture	Ton	5540	
2358.501	Bituminous Material for Prime Coat	Cal	3223	
2357.502	Bituminous Material for Tack Coat	Cal	5042	
2501.515	24" Reinforced Concrete Pipe Apron	Apron	1	
2501.515	30" Reinforced Concrete Pipe Apron	Apron	1	
2501.521	169" Span Concrete Pipe Arch Culvert Class III A	Lin. Ft.	230	
2501.525	169" Span Concrete Pipe Arch Aprons	Apron	4	
2503.511	12" Reinforced Concrete Sewer Class II	Lin. Ft.	457	
2503.511	15" Reinforced Concrete Sewer Class II	Lin. Ft.	215	
2503.511	18" Reinforced Concrete Sewer Class II	Lin. Ft.	38	
2503.511	24" Reinforced Concrete Sewer Class II	Lin. Ft.	418	
2503.511	27" Reinforced Concrete Sewer Class II	Lin. Ft.	24	
2503.511	30" Reinforced Concrete Sewer Class II	Lin. Ft.	824	
2506.506	Construct Catch Basins, Design A or F	Lin. Ft.	50.0	
2506.506	Construct Catch Basins, Design C or G	Lin. Ft.	4.0	
2506.506	Construct Catch Basins, Design H	Lin. Ft.	3.2	
2506.511	Reconstruct Manhole (Sanitary)	Lin. Ft.	5.0	
2506.516	Casting Assemblies	Each	19	
2511.501	Random Riprap Class A	Cu. Yd.	6.6	
2511.504	Filter Blanket Type 1	Cu. Yd.	3.3	
2511.503	Grouted Riprap	Cu. Yd.	130	
2511.504	Filter Blanket, Type 2	Cu. Yd.	50	
2521.501	6" Concrete Walk	Sq. Ft.	530	
2531.501	Concrete Curb and Gutter Design B 624	Lin. Ft.	20549	
2531.501	Concrete Curb and Gutter Design B 618	Lin. Ft.	8247	
2531.501	Concrete Curb and Gutter Design D	Lin. Ft.	2308	
2531.502	Concrete Curb, Design B 6	Lin. Ft.	35	
2531.503	Concrete Median	Sq. Yd.	130	
2531.507	7" Concrete Driveway Pavement	Sq. Yd.	244	
2535.501	Bituminous Curb	Lin. Ft.	2426	
2534.501	Traffic Barrier Design B 8307	Lin. Ft.	3150	
2534.521	Anchorage Assemblies	Assembly	20	
2534.505	Permanent Barricades	Lin. Ft.	20	
2575.501	Roadside Seeding	Acre	8	
2575.502	Seed Mixture 5	Pound	130	
2575.505	Seeding	Sq. Yd.	2653	
2575.511	Mulch Material Type 1 3)	Ton	17	
2575.512	Mulch Material Type 2 3)	Cal	7405	
2575.531	Commercial Fertilizer, Analysis 12-18-18	Ton	3.4	
W-1	Relocate Watermain	Lin. Ft.	600	
2565.501	Furnish and Install Signal System	System	1	
2565.510	Revise Signal System	System	1	
S-1	F & I Signs	Lump Sum	1	
2569.621	Delineation Treatment	Sq. Yd.	1300	



NOTES:

1. Terminate the white conductor of 3 conductor cables serving detectors, in the last handhole. Make splices of detector conductors to 3 conductor cables in handholes.
2. Provide terminal strips in the base of all standards with terminals for all conductors in standard with exception of conductors for street lights.
3. No splices are to be made in handholes except for detector connections and street light circuits.
4. Provide in-line fuses in base of each standard for street lights.
5. Ground conductors are not shown. Install grounding as specified.

EQUIPMENT AND INDICATIONS	
RED-RED	B3(eg)- SIGNAL HEAD-PHASE "B"
YEL-YELLOW	DA-4(eg)- DETECTOR-PHASE "A"
GRN-GREEN	HH- HANDHOLE
LTA- LEFT TURN ARROW	GR- GROUND ROD
RTA- RIGHT TURN ARROW	SERV- SERVICE
WLK- WALK	ST LHT- STREET LIGHT
NEU- NEUTRAL	SOP- SOURCE OF POWER
DWK- DON'T WALK	SPR- SPARE CONDUCTOR
LUM- LUMINAIRE	•- SPLICE
SWD- SWITCHED	PEC- PHOTOELECTRIC CELL
DNL- DOWNLIGHT	EGG- EQUIPMENT GROUND

CONDUCTOR COLOR ABBREVIATIONS	
R- RED	
O- ORANGE	
BL- BLUE	
WH- WHITE	
R/BLK- RED WITH BLACK TRACER	
O/BLK- ORANGE WITH BLACK TRACER	
BL/BLK- BLUE WITH BLACK TRACER	
WH/BLK- WHITE WITH BLACK TRACER	
BLK- BLACK	
BLK/WH- BLACK WITH WHITE TRACER	
G/BLK- GREEN WITH BLACK TRACER	
G- GREEN	

AS BUILT  
12-17-73  
H.H.

SIGNAL WIRING DIAGRAM  
COON RAPIDS BLVD. / EAST RIVER ROAD  
REV. 1-24-73