

# COUNTY OF ANOKA

## MINNESOTA DEPARTMENT OF TRANSPORTATION CONSTRUCTION PLANS FOR GRADING, PAVING, STORM SEWER AND SIGNALIZATION

### PROJECT NO.

COON RAPIDS BOULEVARD (C.S.A.H. 1)

### OFF-SYSTEM IMPROVEMENTS CITY OF COON RAPIDS

STATE PROJ. NO. 02-601-22-CTB MINN. PROJ. NO. M 5025 (4) STATE AID PROJ. NO. 114-010-01 CITY PROJ. NO. 76-15  
BETWEEN CRANE St. AND YUCCA St. BETWEEN CRANE St. AND 111th Ave. N.

GROSS LENGTH 21,156.43 FEET 4.007 MILES  
EXCEPTIONS 0 FEET 0 MILES  
NET LENGTH 21,156.43 FEET 4.007 MILES

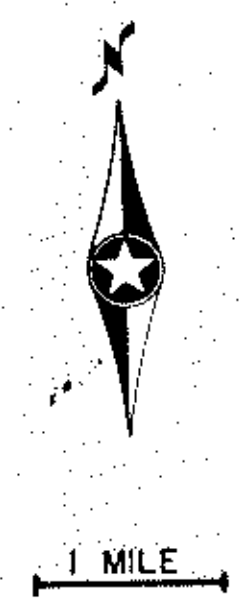
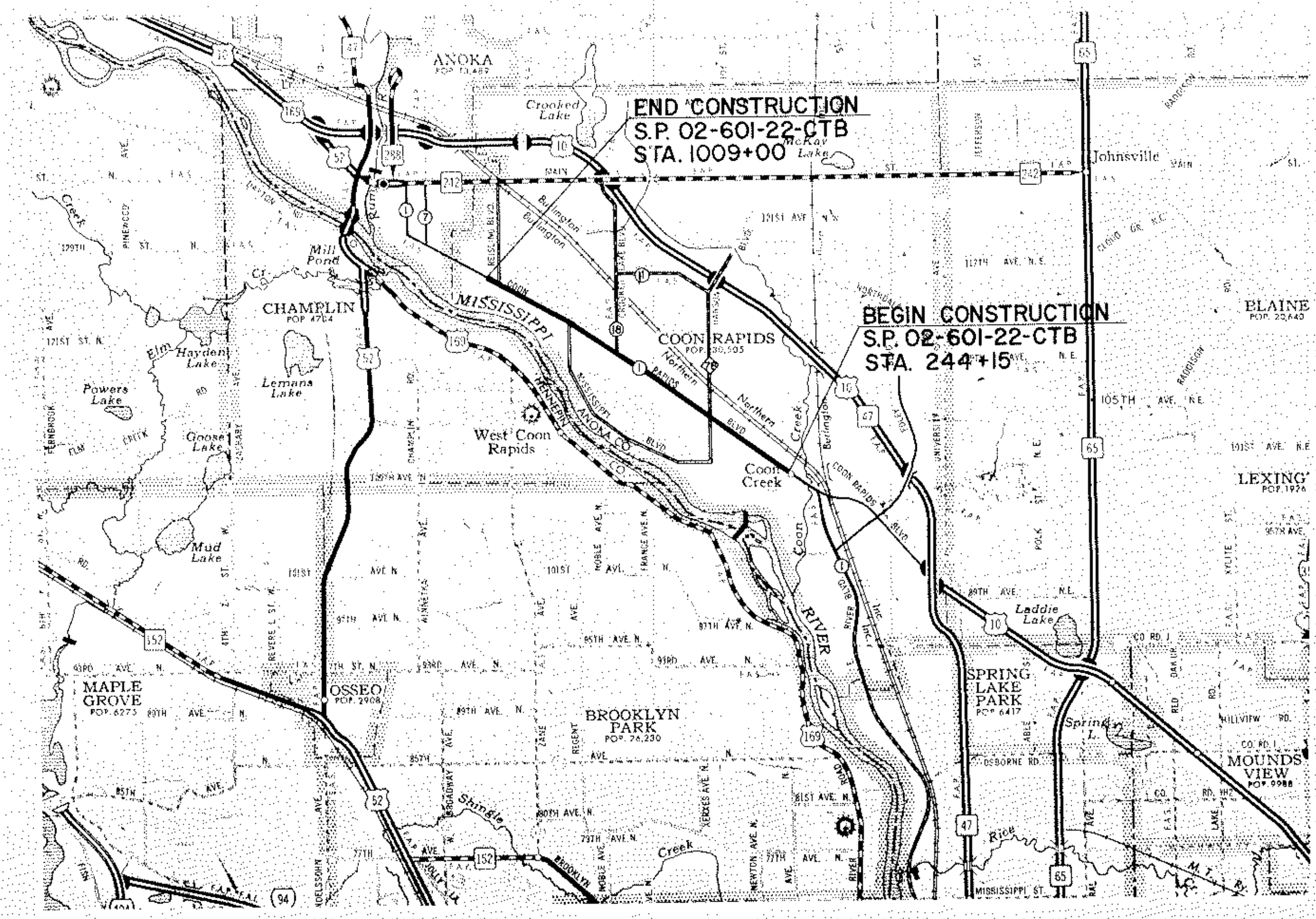
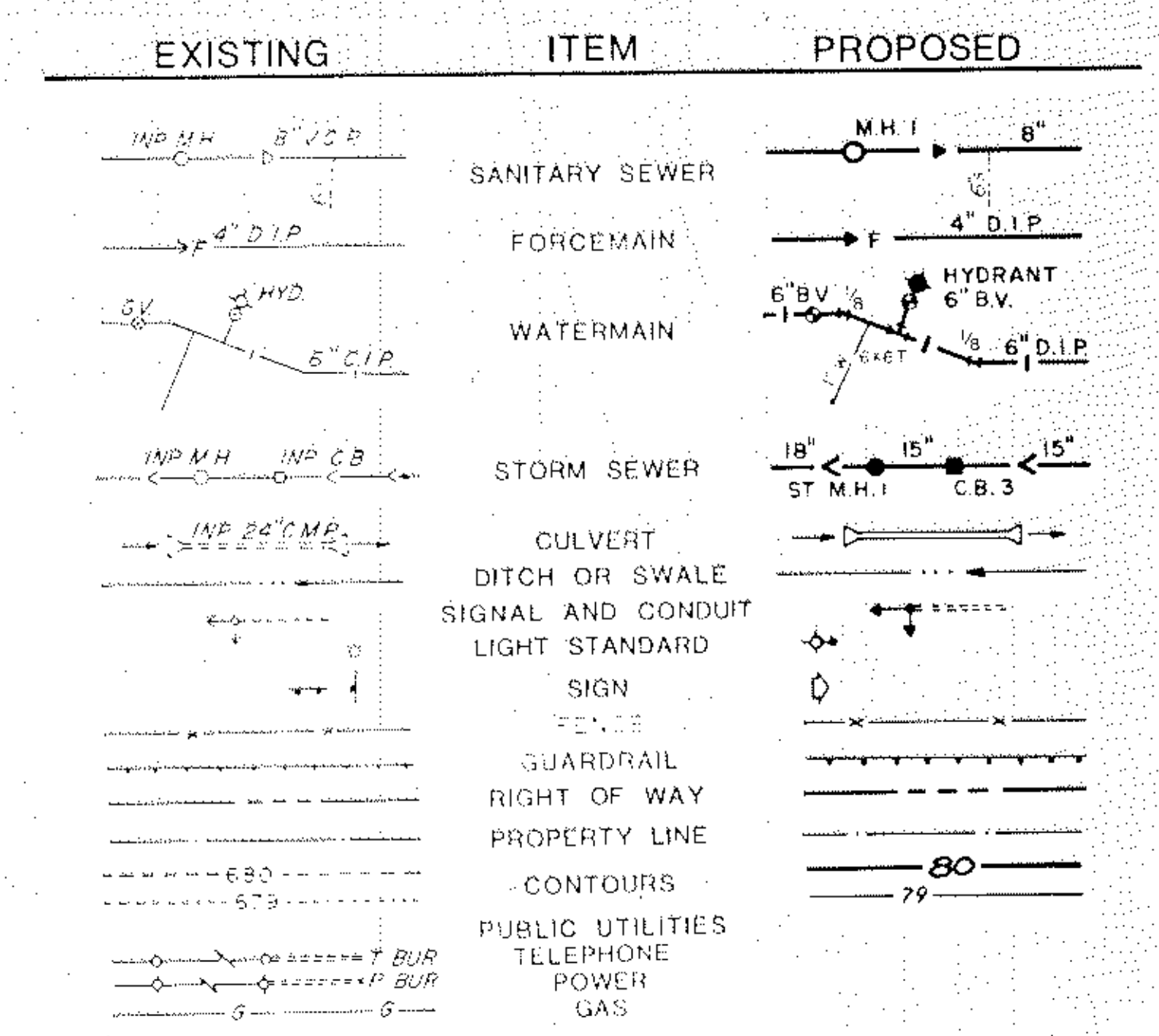
GROSS LENGTH 11,211.0 FEET 2.123 MILES  
EXCEPTIONS 0 FEET 0 MILES  
NET LENGTH 11,211.0 FEET 2.123 MILES

EQUATION: STA 238+67.0 = STA 802+91.57

#### SPECIFICATIONS

THE STATE OF MINNESOTA, DEPT. OF HIGHWAYS "STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION", DATED JANUARY 1, 1972 AND AMENDED BY "SUPPLEMENTAL SPECIFICATION" DATED APRIL 1, 1976 SHALL GOVERN.

#### CONVENTIONAL SYMBOLS



#### INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	ESTIMATED QUANTITIES
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10-11	PLANTING & MEDIAN DETAILS
12-18	TABULATIONS
19-31	SIGNAL PLANS & DIAGRAMS
32-53	PLAN & PROFILES
54-111	CROSS SECTIONS

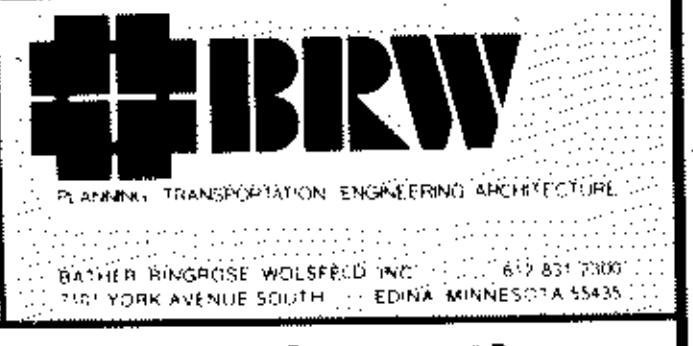
**DESIGN DATA**  
 COON RAPIDS BLVD.  
 ANTICIPATED ADT: 12,000-24,000  
 ANTICIPATED HCADT: OVER 1100  
 PAVEMENT DESIGN: 9 TON  
 SOIL FACTOR: A-3  
 DESIGN SPEED: 50 M.P.H.  
 POSTED SPEED: 45 M.P.H.

Recommended for Approval: *[Signature]* Date: 4-12-77  
 Recommended for Approval: *[Signature]* Date: 4/12/77  
 Recommended for Approval: *[Signature]* Date: 4-12-77  
 Recommended for Approval: *[Signature]* Date: 4-12-77  
 Approved: *[Signature]* Date: 4-12-77

DEPARTMENT OF TRANSPORTATION  
 FEDERAL HIGHWAY ADMINISTRATION  
 APPROVED: \_\_\_\_\_  
 DIVISION ADMINISTRATOR DATE

REVISIONS			
SHEET NO.	DATE	SHEET NO.	DATE

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.  
*[Signature]*  
 Date: 4/12/77 Reg. No. 9025



## STATEMENT OF ESTIMATED QUANTITIES

ITEM NO.	ITEM	UNIT	S.P. 02-601-22-CTB		S.A.P. 114-010-01		TOTAL	
			ESTIMATED QUANTITIES	FINAL QUANTITIES	ESTIMATED QUANTITIES	FINAL QUANTITIES	ESTIMATED QUANTITIES	FINAL QUANTITIES
2021.501	MOBILIZATION	LUMP SUM	0.9		0.1		1	
2031.501	FIELD OFFICE, TYPE "D"	EACH	0.9		0.1		1	
2101.501	CLEARING	ACRE	0.58		0.29		0.87	
2101.502	CLEARING	TREE	58		24		82	
2101.506	GRUBBING	ACRE	0.58		0.29		0.87	
2101.507	GRUBBING	TREE	48		24		72	
0041.606	TRAINEES	HR	4500				4500	
2104.501	REMOVE PIPE CULVERTS	LN.FT.	3717				3717	
2104.501	REMOVE PIPE SEWER	LN.FT.	464				464	
2104.501	REMOVE CURB	LN.FT.	1550				1550	
2104.501	REMOVE CURB AND GUTTER	LN.FT.	1883		556		2439	
2104.505	REMOVE PAVEMENT	SQ.YD.	1107				1107	
2104.505	REMOVE TRENCH PAVEMENT	SQ.YD.	4646				4646	
2104.505	REMOVE BITUMINOUS PAVEMENT	SQ.YD.	15928				15928	
2104.507	REMOVE MASONRY AND CONCRETE STRUCTURE	CU.YD.	4.6		40.6		45.2	
2104.509	REMOVE MANHOLES AND CATCH BASINS	EACH	6				6	
2104.521	SALVAGE PLATE BEAM GUARDRAIL	LN.FT.	224				224	
2104.521	SALVAGE CHAIN LINK FENCE	LN.FT.			95		95	
2104.523	SALVAGE TRAFFIC SIGNAL SYSTEM	EACH	5				5	
2104.523	SALVAGE HAZARD BEACON	EACH	2				2	
0105.643	SETTLEMENT PLATES	PLATE	5				5	
2105.501	COMMON EXCAVATION	CU.YD.	49874		4235		54109	
2105.507	SUBGRADE EXCAVATION	CU.YD.	3925				3925	
2105.521	GRANULAR BORROW LV	CU.YD.	1000				1000	
2105.525	TOPSOIL BORROW LV	CU.YD.	1160				1160	
2211.501	AGGREGATE BASE, CLASS 5	TON	51306		22841		74147	
2301.501	CONCRETE PAVEMENT	SQ.YD.	2610				2610	
2301.541	INTEGRANT CURB, DESIGN B6	LN.FT.	1740				1740	
2331.504	BITUMINOUS MATERIAL FOR MIXTURE	TON	1007		12		1019	
2331.514	BASE COURSE MIXTURE	TON	22483		265		22748	
2341.504	BITUMINOUS MATERIAL FOR MIXTURE	TON	2006		165		2171	
2341.508	WEARING COURSE MIXTURE	TON	17493		1607		19100	
2341.510	BINDER COURSE MIXTURE	TON	18472		1543		20015	
2341.518	BITUMINOUS MIXTURE FOR BIKEWAY	TON	2181				2181	
2357.502	BITUMINOUS MATERIAL FOR JACK COAT	GAL.	12906		914		13820	
2501.515	12" RC PIPE APRONS	EACH	8		1		9	
2501.515	18" RC PIPE APRONS	EACH	2		1		3	
2501.515	36" RC PIPE APRONS	EACH	1				1	
2501.515	48" RC PIPE APRONS	EACH	1				1	
2503.541	12" RC PIPE SEWER, DES 3006	LN.FT.	7922		743		8665	
2503.541	15" RC PIPE SEWER, DES 3006	LN.FT.	3060		359		3419	
2503.541	18" RC PIPE SEWER, DES 3006	LN.FT.	2138		183		2321	
2503.541	21" RC PIPE SEWER, DES 3006	LN.FT.	1390				1390	
2503.541	24" RC PIPE SEWER, DES 3006	LN.FT.	1979				1979	
2503.541	27" RC PIPE SEWER, DES 3006	LN.FT.	303		45		349	
2503.541	30" RC PIPE SEWER, DES 3006 CLASS III	LN.FT.	4660				4660	
2503.541	36" RC PIPE SEWER, DES 3006 CLASS IV	LN.FT.	4406				4406	
2503.541	42" RC PIPE SEWER, DES 3006 CLASS III	LN.FT.	143				143	
2503.541	48" RC PIPE SEWER, DES 3006 CLASS III	LN.FT.	310				310	
2506.506	CONSTRUCT MANHOLES, DESIGN A OR F	LN.FT.	5.80		4.98		10.78	
2506.506	CONSTRUCT MANHOLES, DESIGN C OR G	LN.FT.	4.55				4.55	
2506.506	CONSTRUCT MANHOLES, DESIGN G6-4019	LN.FT.			6.0		6.0	
2506.507	CONSTRUCT CATCH BASINS, DESIGN A OR F	LN.FT.	779.85		12.96		792.81	
2506.507	CONSTRUCT CATCH BASINS, DESIGN C OR G	LN.FT.	119.05		44.62		163.67	
2506.507	CONSTRUCT CATCH BASINS, DESIGN H	LN.FT.	246.48		31.6		278.08	
2506.508	CONSTRUCT MANHOLE DESIGN SP-3	EACH	1				1	
2506.508	CONSTRUCT MANHOLE DESIGN SP-2	EACH	1				1	
2506.509	CONSTRUCT CATCH BASIN, DESIGN SP-1	EACH	1				1	
2506.511	RECONSTRUCT MANHOLES	LN.FT.	168.6				168.6	
2506.516	CASTING ASSEMBLIES	EACH	198		27		225	
2506.521	INSTALL CASTINGS	EACH	31				31	
2506.522	ADJUST FRAME AND RING CASTINGS	EACH	45				45	
0511.603	GROUTED RIPRAP	SQ.YD.	131.8				131.8	
2511.504	FILTER BLANKET, TYPE 1	CU.YD.	12.4				12.4	
0451.602	TRENCH STABILIZATION MATERIAL	TON	2035		100		2135	
2521.501	4" CONCRETE WALK	SQ.FT.	70580		6250		76830	
2521.501	6" CONCRETE WALK	SQ.FT.	495				495	
2531.501	CONCRETE CURB AND GUTTER, DESIGN B612 MODIFIED	LN.FT.	36078				36078	
2531.501	CONCRETE CURB AND GUTTER, DESIGN B618	LN.FT.	46772		19741		66513	
2531.507	6" CONCRETE DRIVEWAY PAVEMENT	SQ.YD.	182		282		464	
2531.507	8" CONCRETE DRIVEWAY PAVEMENT	SQ.YD.	1676		252		1928	

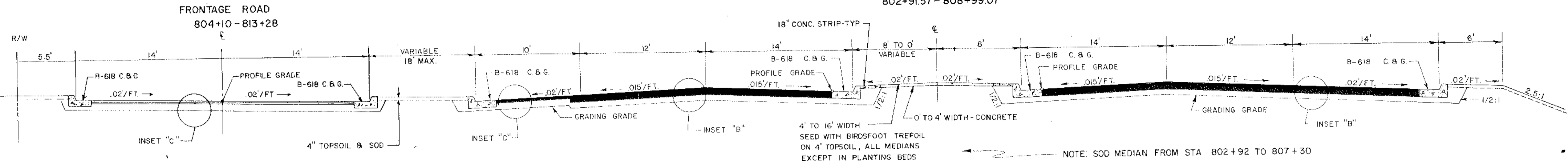
## STATEMENT OF ESTIMATED QUANTITIES

ITEM NO.	ITEM	UNIT	S.P. 02-601-22-CTB		S.A.P. 114-010-01		TOTAL	
			ESTIMATED QUANTITIES	FINAL QUANTITIES	ESTIMATED QUANTITIES	FINAL QUANTITIES	ESTIMATED QUANTITIES	FINAL QUANTITIES
0341.608	2" THICK WEARING COURSE PLACED	SQ.YD.	1030				1030	
2118.501	AGGREGATE SURFACING CLASS 2	TON	137		179		316	
2545.521	3" RIGID STEEL CONDUIT	LN.FT.	859				859	
2545.523	2" NONMETALLIC CONDUIT	LN.FT.	12055				12055	
2545.531	UNDERGROUND WIRE, 12 CONDUCTOR NO. 12	LN.FT.	12875				12875	
2545.553	PULL BOXES	EACH	70				70	
2564.531	FURNISH AND INSTALL SIGN PANELS TYPE D	SQ.FT.	161.3				161.3	
0557.604	INSTALL CHAIN LINK FENCE	LN.FT.			55		55	
2564.531	FURNISH AND INSTALL SIGN PANELS - TYPE C	SQ.FT.	2888		461.7		3349.7	
0565.649	SERVICE EQUIPMENT	LUMP SUM	1				1	
2565.501	FULL TRAFFIC - ACTUATED TRAFFIC CONTROL SYSTEM - SYSTEM A	SIG.SYSTEM	1				1	
2565.501	FULL TRAFFIC - ACTUATED TRAFFIC CONTROL SYSTEM - SYSTEM B	SIG.SYSTEM	1				1	
2565.501	FULL TRAFFIC - ACTUATED TRAFFIC CONTROL SYSTEM - SYSTEM C	SIG.SYSTEM	1				1	
2565.501	FULL TRAFFIC - ACTUATED TRAFFIC CONTROL SYSTEM - SYSTEM D	SIG.SYSTEM	1				1	
2565.501	FULL TRAFFIC - ACTUATED TRAFFIC CONTROL SYSTEM - SYSTEM E	SIG.SYSTEM	1				1	
2565.501	FULL TRAFFIC - ACTUATED TRAFFIC CONTROL SYSTEM - SYSTEM F	SIG.SYSTEM	1				1	
0565.649	INTERCONNECT COORDINATION EQUIPMENT - SYSTEM G	LUMP SUM	1				1	
0569.614	PAVEMENT MESSAGE	EACH	72				72	
2569.521	4" WIDE SOLID LINES	RD.STA.	492				492	
2569.521	8" WIDE SOLID LINES	RD.STA.	47				47	
2569.521	12" WIDE SOLID LINES	RD.STA.	6.2				6.2	
0569.601	4" WIDE STRIP LINES	RD.STA.	404				404	
2575.501	ROADSIDE SEEDING	ACRE	6.95		1.96		8.91	
2575.502	SEED, MIXTURE 5	POUND	270		98		368	
2575.505	SOODING	SQ.YD.	38578		3235		41813	
2575.511	MULCH MATERIAL, TYPE 1	TON	10.8		3.92		14.72	
2575.519	DISC ANCHORING	ACRE	5.4		1.96		7.36	
2575.531	COMMERCIAL FERTILIZER, ANALYSIS 12-12-12	TON	0.54		0.20		0.74	
2575.523	WOOD FIBER BLANKETS	SQ.YD.	3414				3414	
2575.502	SEED MIXTURE SPECIAL	POUND	135				135	
2571.505	GOLDEN MOCKORANGE 18"-24" HI POTTED	SHRUB	468				468	
2571.505	JAPANESE BARBERRY 18"-24" HI POTTED	SHRUB	546				546	
2575.513	MULCH MATERIAL, TYPE 6	CU.YD.	317				317	
0563.623	TRAFFIC CONTROL	LUMP SUM	1				1	
0504.672	24" X 8" WATERMAIN CONNECTION	EACH			1		1	
0504.672	16" X 10" WATERMAIN CONNECTION	EACH			1		1	
0504.672	16" X 8" WATERMAIN CONNECTION	EACH			3		3	
0504.601	10" WATERMAIN - DUCTILE IRON	LN.FT.			120		120	
0504.601	8" WATERMAIN - DUCTILE IRON	LN.FT.			497		497	
0504.672	8" BUTTERFLY VALVE AND BOX	EACH			1		1	
0504.620	CAST IRON FITTINGS	POUND			2095		2095	
0504.614	HYDRANT	HYDRANT			5		5	
0504.672	RELOCATE HYDRANT	EACH	34				34	
0504.655	HYDRANT EXTENSION	LN.FT.	10				10	
0504.668	MODIFY IRRIGATION SYSTEM	LUMP SUM	1				1	
0504.652	WATERMAIN INSULATION	SQ.YD.	333				333	
0504.601	6" WATERMAIN - DUCTILE IRON	LN.FT.			1029		1029	
0504.672	6" BUTTERFLY VALVE AND BOX	EACH			4		4	
0504.672	8" X 6" WATERMAIN CONNECTION	EACH			1		1	
0504.672	24" X 6" WATERMAIN CONNECTION	EACH			1		1	

- ① INCLUDES 1352 TONS FOR TRENCH RESTORATION. SP 02-601-22  
 ② INCLUDES 840 TONS FOR TRENCH RESTORATION. SP 02-601-22  
 ③ INCLUDES 705 TONS FOR STRIP IN FRONT OF B612M CURB AND GUTTER. SP 02-601-22

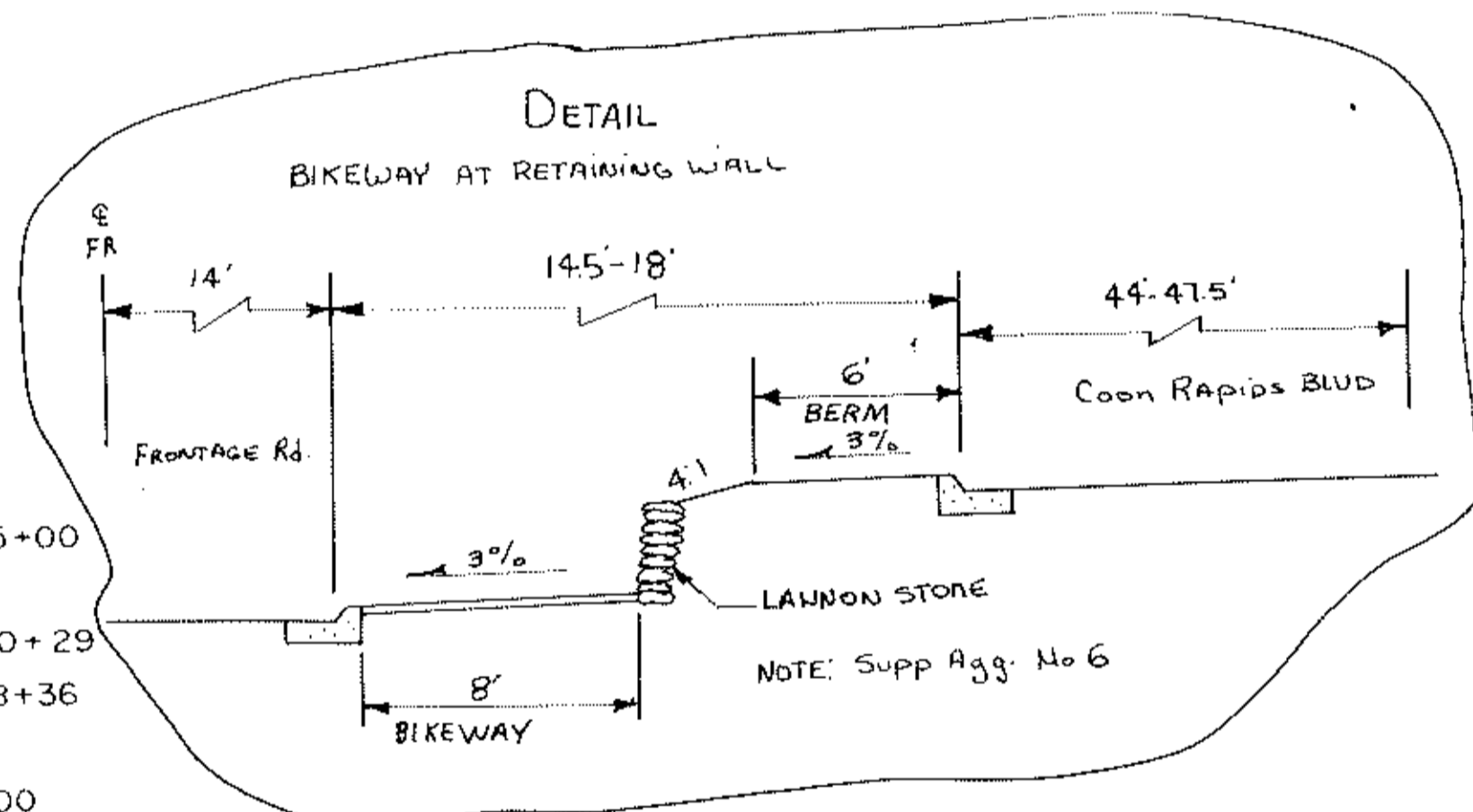
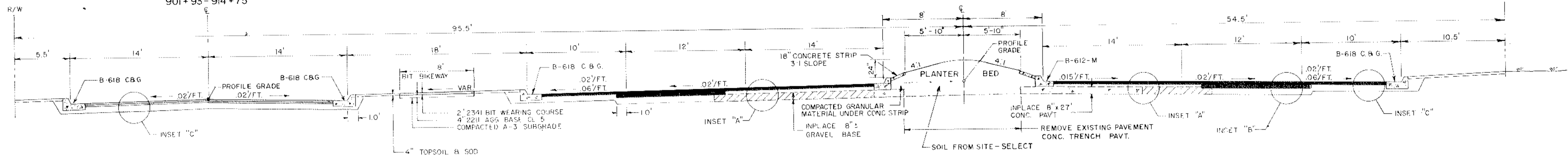
- ④ APPLIED AT THE RATE OF 200 POUNDS PER ACRE.  
 ⑤ TO BE INSTALLED BY CONT'R. UNDER DIRECT SUPERVISION OF THE ENGINEER.  
 ⑥ LANNON STONE RIPRAP.  
 ⑦ INCLUDES 54765 SQ. FT. FOR 4" CONCRETE MEDIAN. SP 02-601-22  
 ⑧ TO ALLOW INSTALLATION OF B612 MODIFIED CURB AND GUTTER.  
 ⑨ INCLUDES 2374 SQ. YDS FOR PLANTING BEDS  
 ⑩ REINFORCED  
 ⑪ 8" THICKNESS - STRUCTURAL CONCRETE IS INCIDENTAL.  
 ⑫ PPSURE TAPS  
 ⑬ AVOCET STREET INTERSECTION.  
 ⑭ FOR MEDIANS TO BE SEEDDED.

COON RAPIDS BLVD.  
802+91.57 - 808+99.07



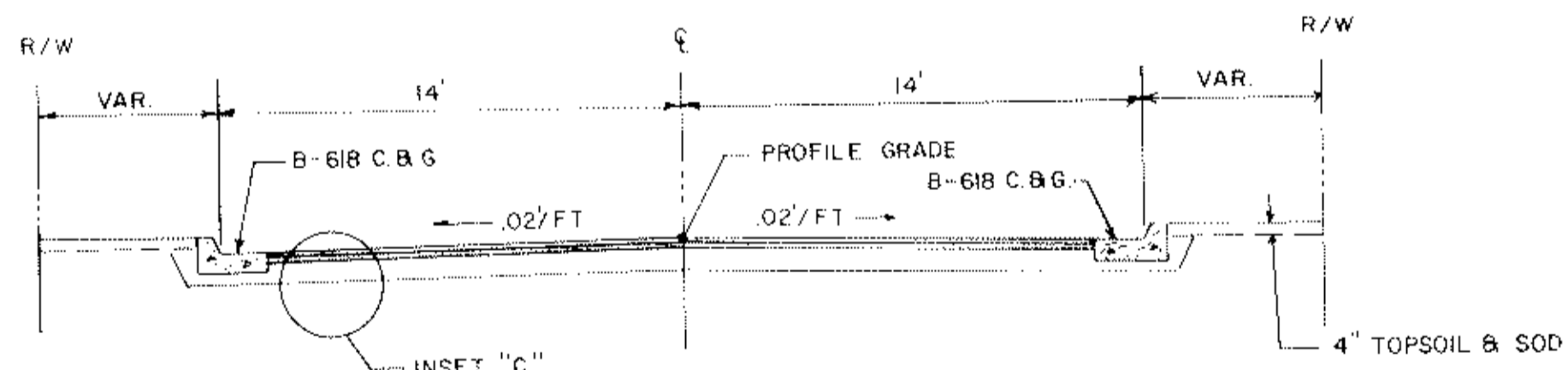
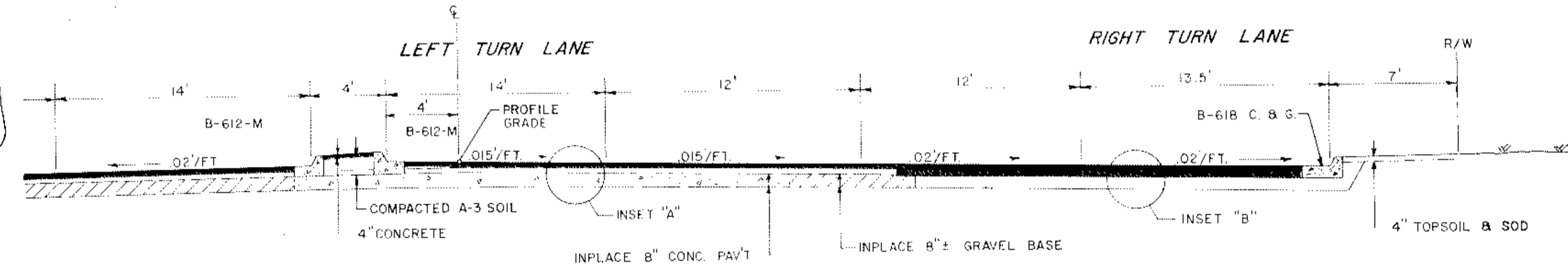
FRONTAGE ROAD  
826+05 - 829+12  
835+64 - 852+48  
860+29 - 893+72  
901+93 - 914+75

COON RAPIDS BLVD.  
808+99.07 - 1003+00  
SEE SPECIAL DITCH SECTION  
946+00 - 1003+00 LT.



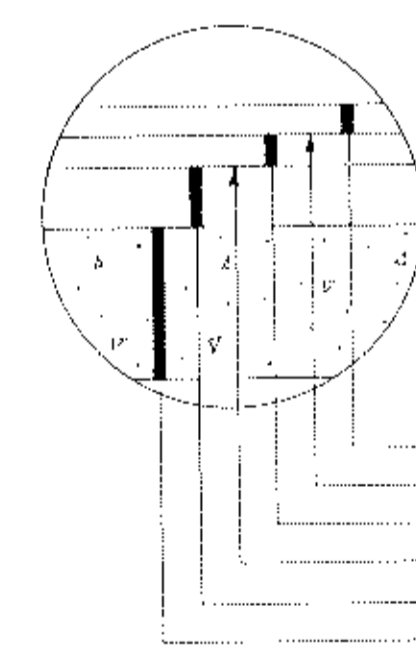
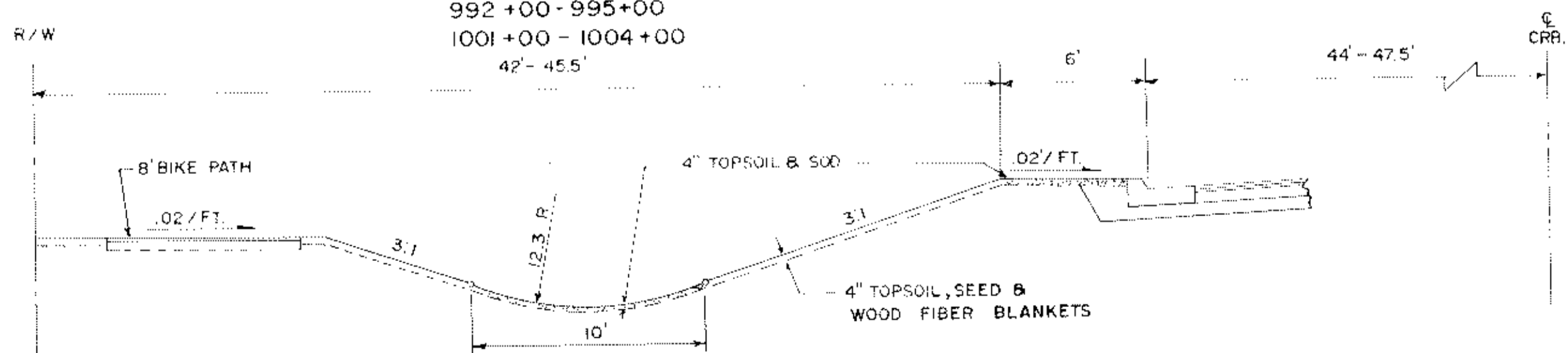
100th FR. 0+50-3+78  
EGRET FR. 0+00-7+86  
HANSON FR. 852+48-855+00  
HANSON FR. 0+00-7+39  
XAVIS FR. 858+00-860+29  
MIDAS FR. 0+00-4+50  
RED OWL FR. 0+60-6+00

COON RAPIDS BLVD.



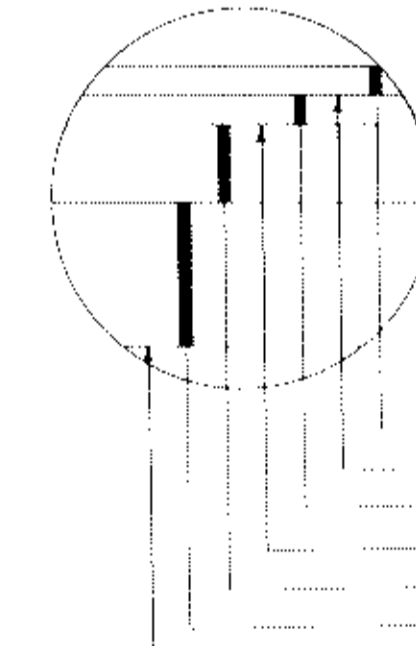
DITCH SECTION LT.

980+00 - 986+00  
987+00 - 988+00  
992+00 - 995+00  
1001+00 - 1004+00



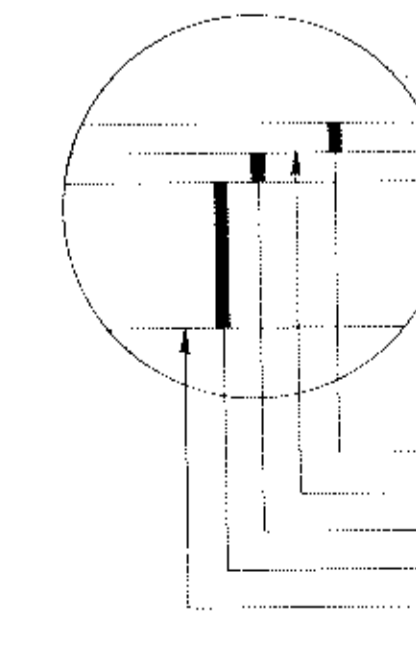
INSET "A"

- 1-1/2" - 2341 BIT WEARING COURSE
- TACK COAT
- 1-1/2" - 2341 BIT BINDER COURSE
- TACK COAT
- 4" - 2331 BIT. BASE COURSE
- 7 1/2" - 2211 AGGREGATE BASE CLASS 5
- INPLACE 3"± BIT. MAT.
- INPLACE 8" CONC. PAV'T OR GRAVEL BASE



INSET "B"

- 1-1/2" - 2341 BIT WEARING COURSE
- TACK COAT
- 1-1/2" - 2341 BIT BINDER COURSE
- TACK COAT
- 4" - 2331 BIT. BASE COURSE
- 7 1/2" - 2211 AGGREGATE BASE CLASS 5
- INPLACE 8" CONC. PAV'T OR GRAVEL BASE



INSET "C"

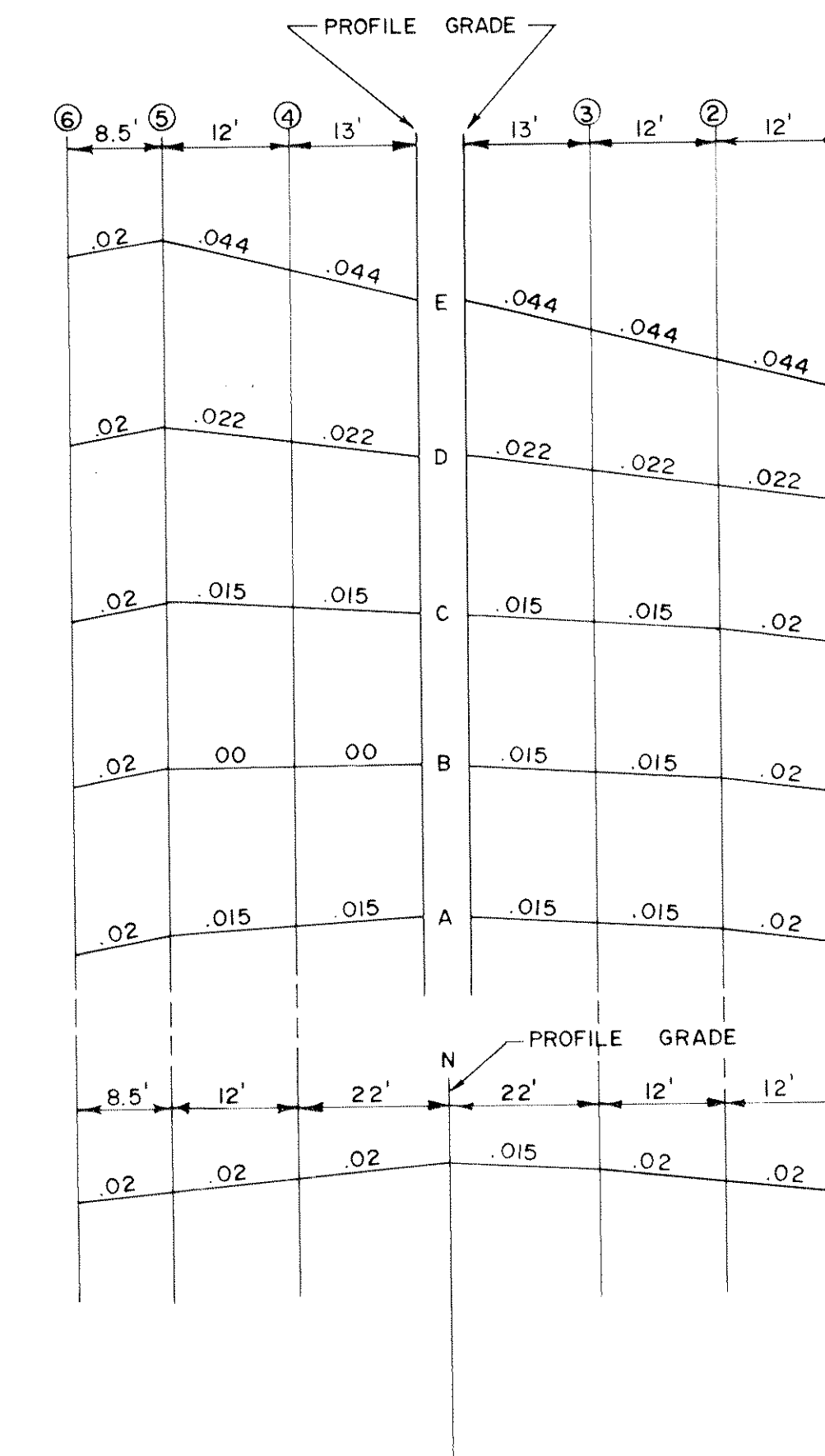
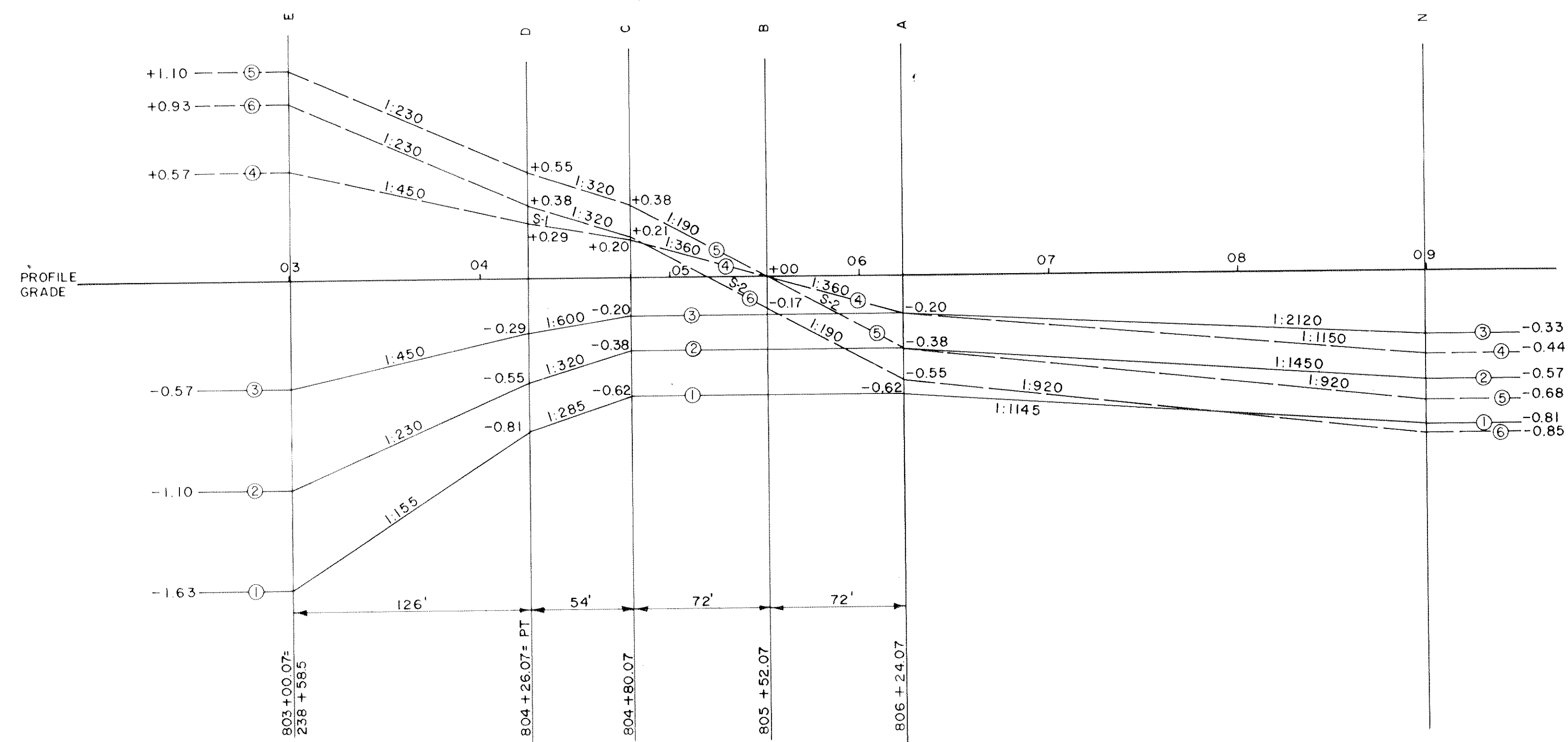
- 1-1/2" - 2341 WEARING COURSE
- TACK COAT
- 1-1/2" - 2341 BINDER COURSE
- 7-1/2" - 2211 AGGREGATE BASE CLASS 5
- COMPACTED A-3 SUBGRADE

NOTE: SEED AND MULCH (TYPE 1) ALL DISTURBED AREAS NOT SOCCDED.

REV. MAR. 1978

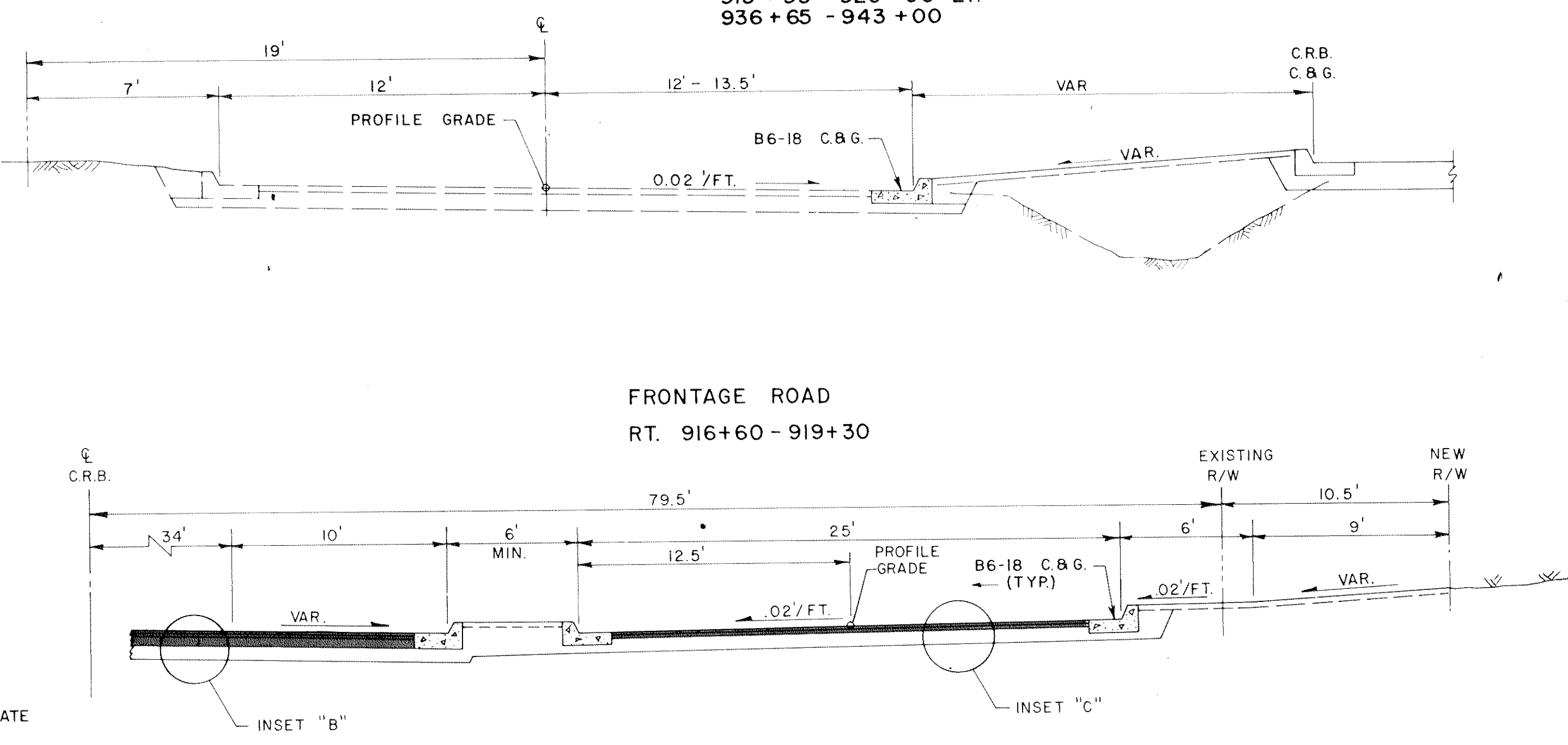
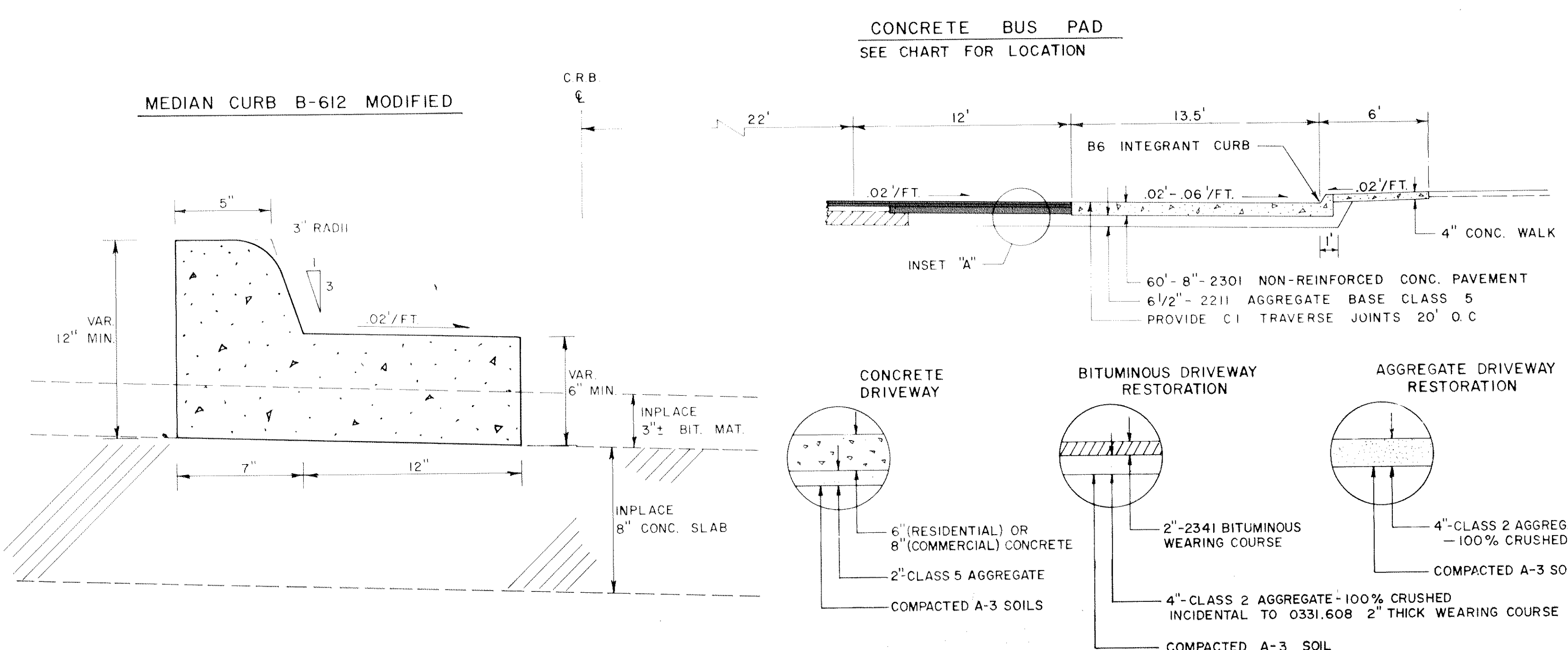
P.C. 802+91.57 3° CURVE E = 0.044 L = 210 P.T. 804+26.07

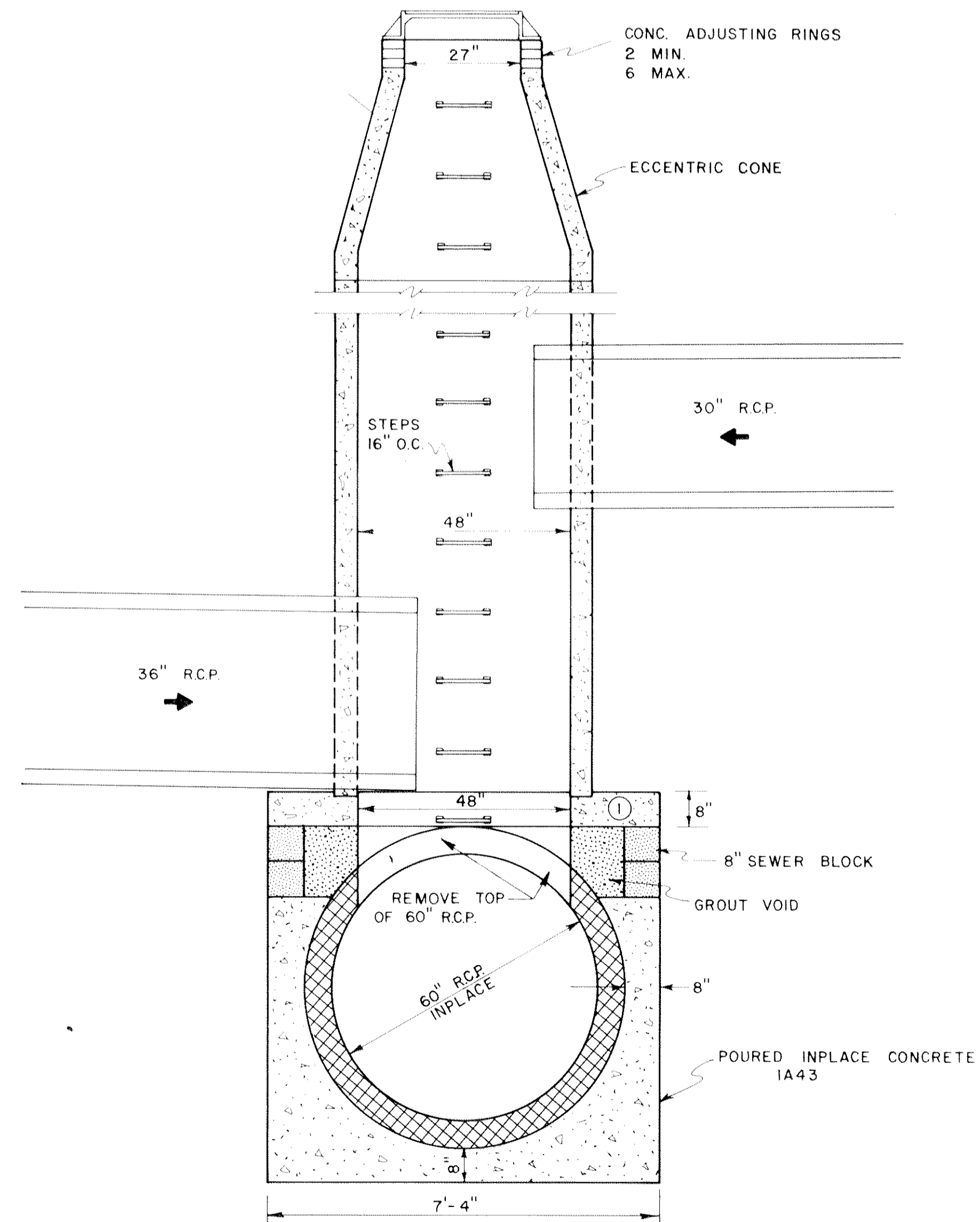
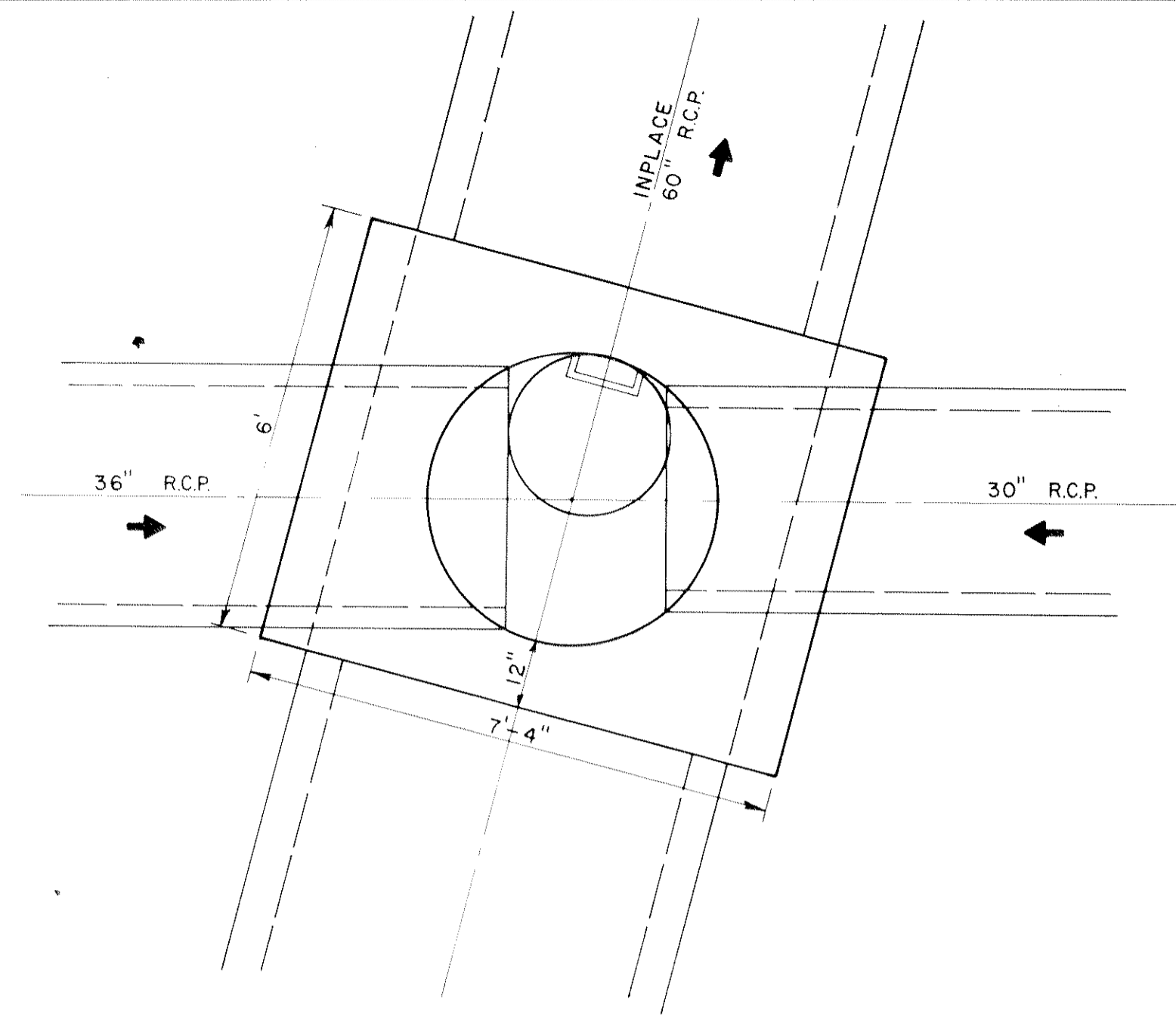
S-1 = 1:600  
S-2 = 1:190



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

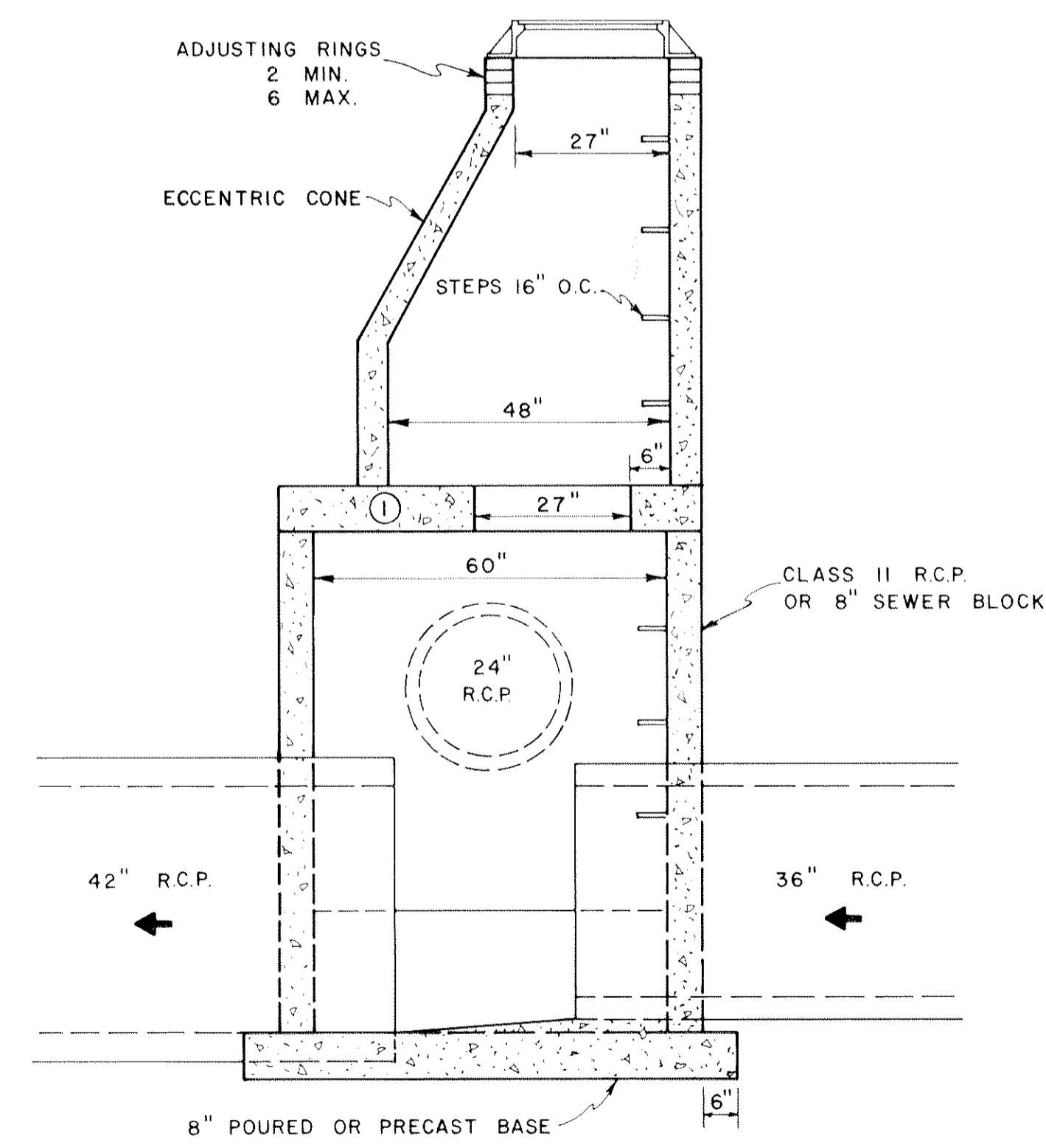
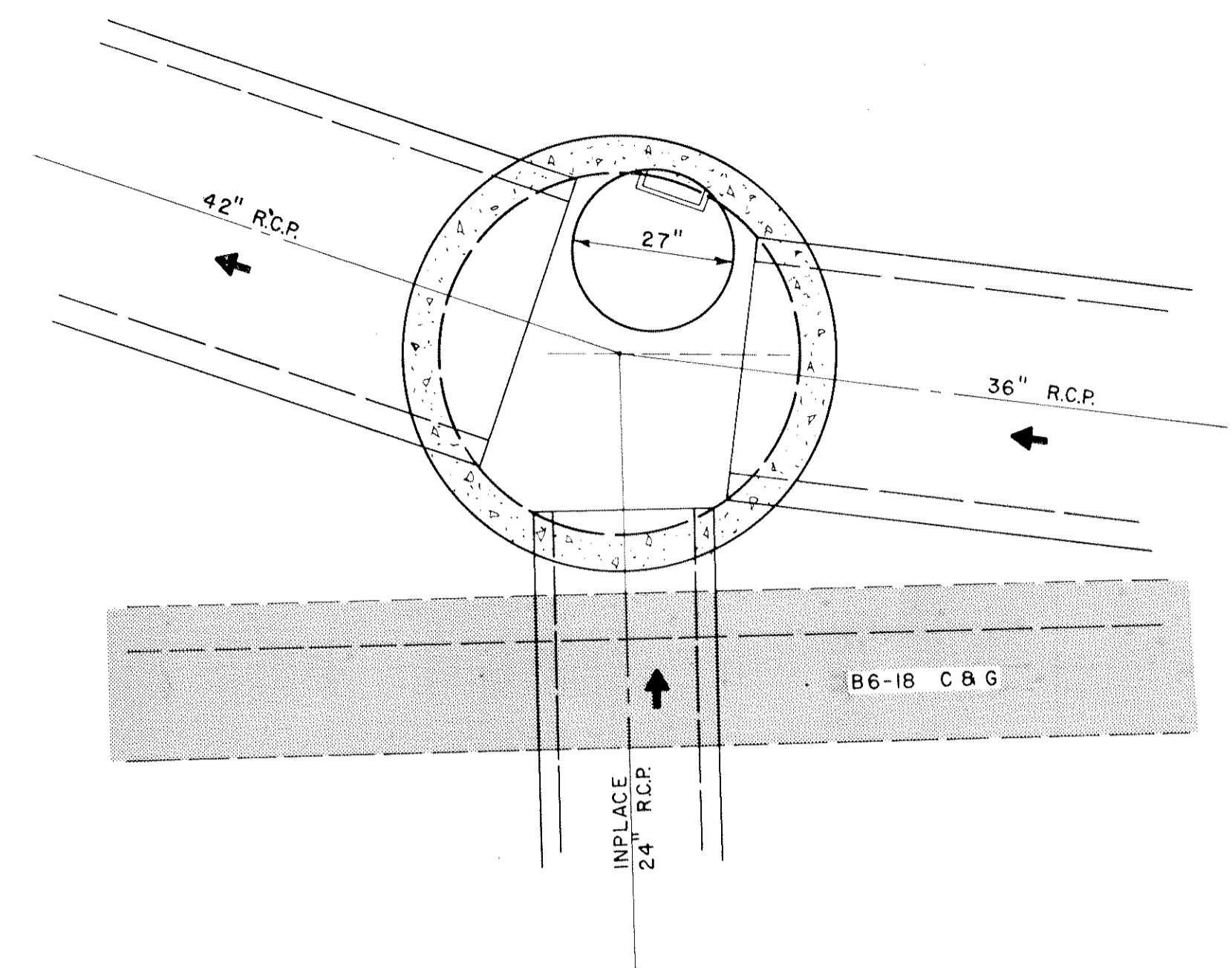
**FRONTAGE ROAD**  
874 + 27 - 890 + 55 RT.  
915 + 95 - 920 + 00 LT.  
936 + 65 - 943 + 00





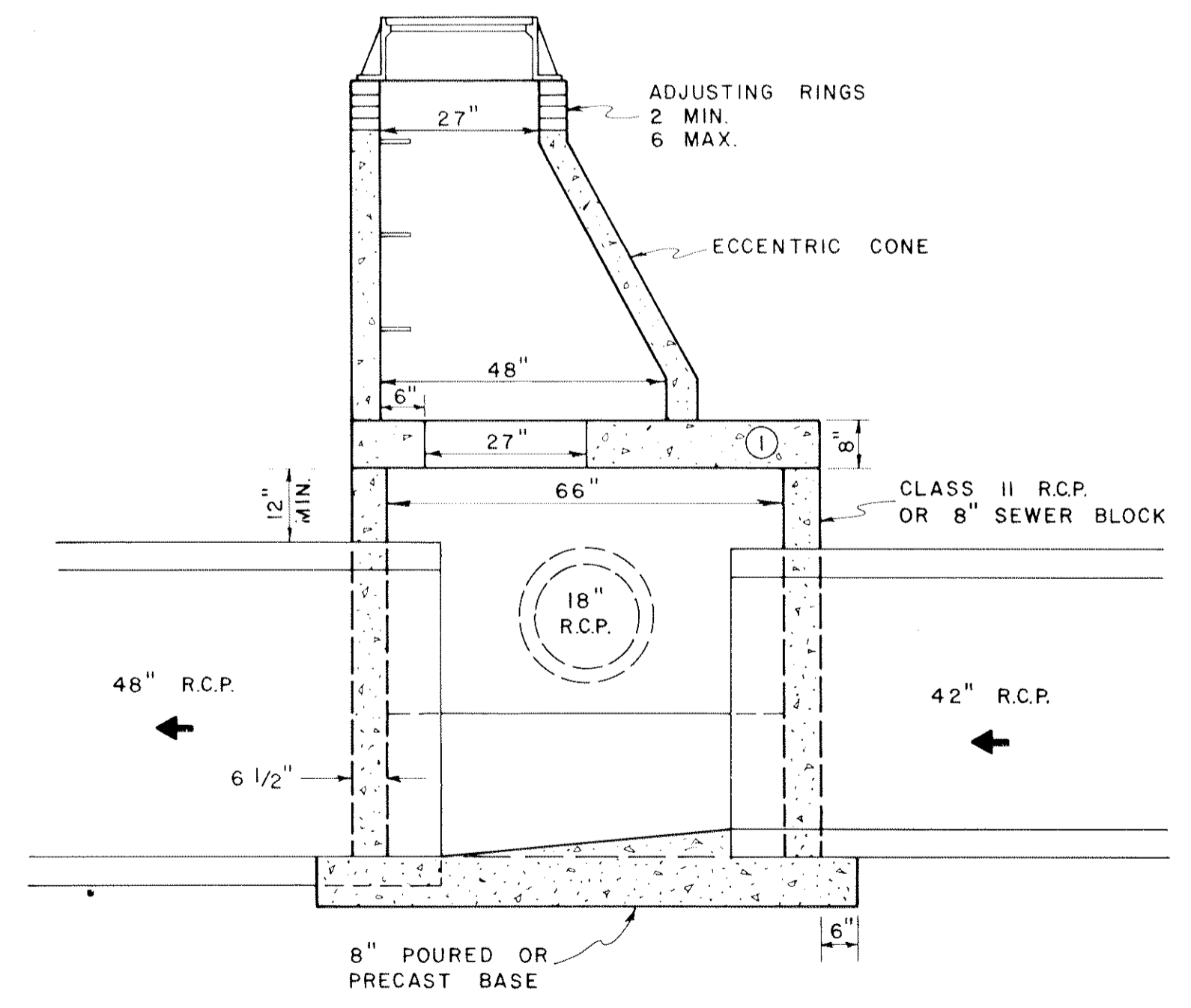
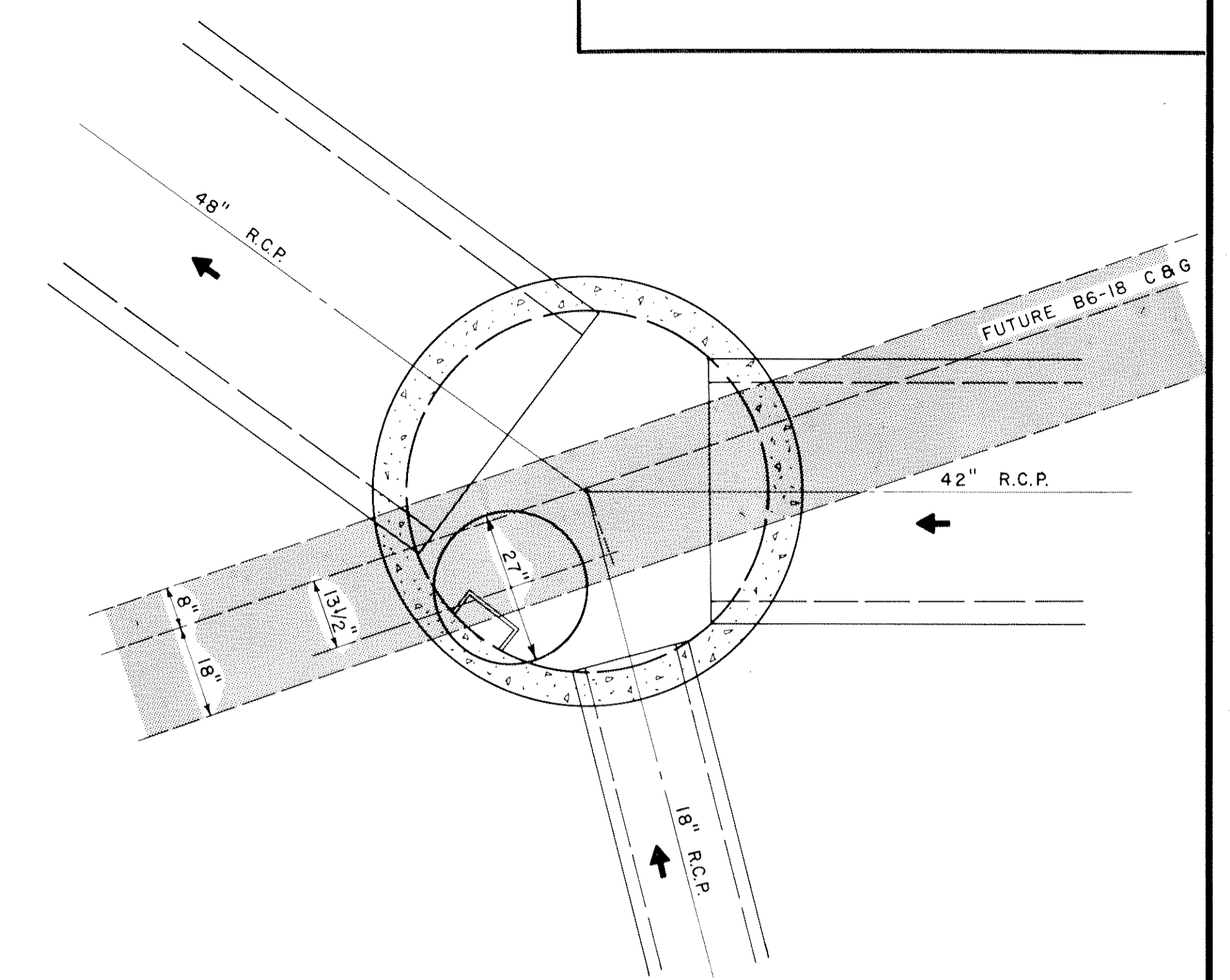
**MANHOLE  
STRUCTURE NO. 118  
DESIGN SP-3**

① SEE STANDARD PLATE 4019 FOR COVER DETAILS



**MANHOLE  
STRUCTURE NO. 23  
DESIGN SP-2**

① SEE STANDARD PLATES 4019 FOR COVER DETAILS

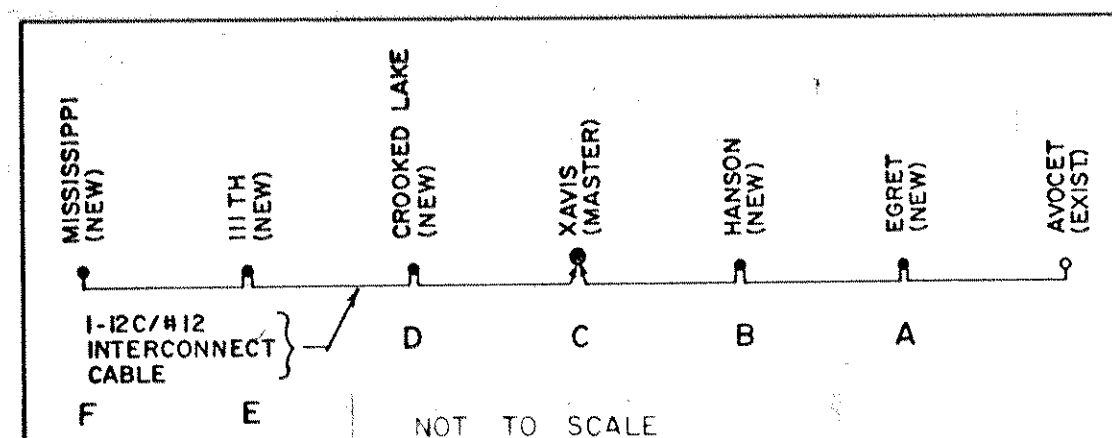


**CATCH BASIN  
STRUCTURE NO. 20  
DESIGN SP-1**

① SEE STANDARD PLATE 4019 FOR COVER DETAILS

SPECIAL DESIGN STRUCTURES

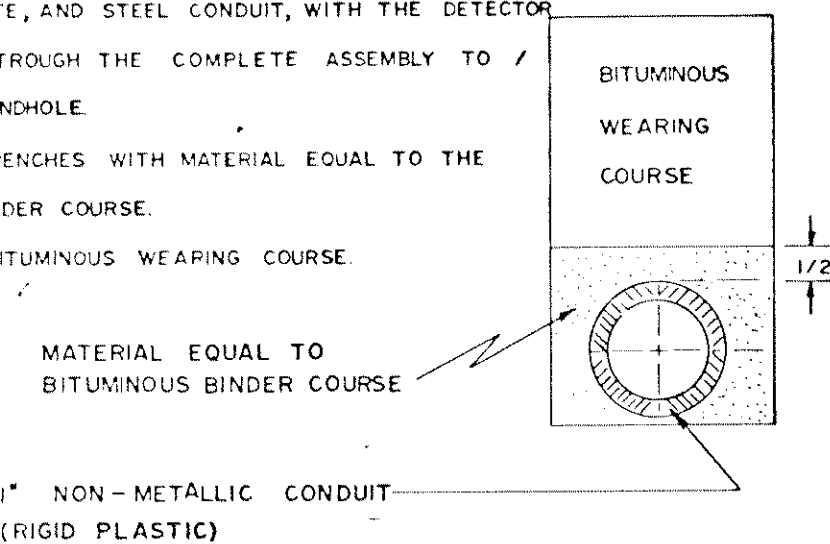
REV. MAR. 1978



**TYPICAL INTERCONNECT ROUTING  
DETAIL**

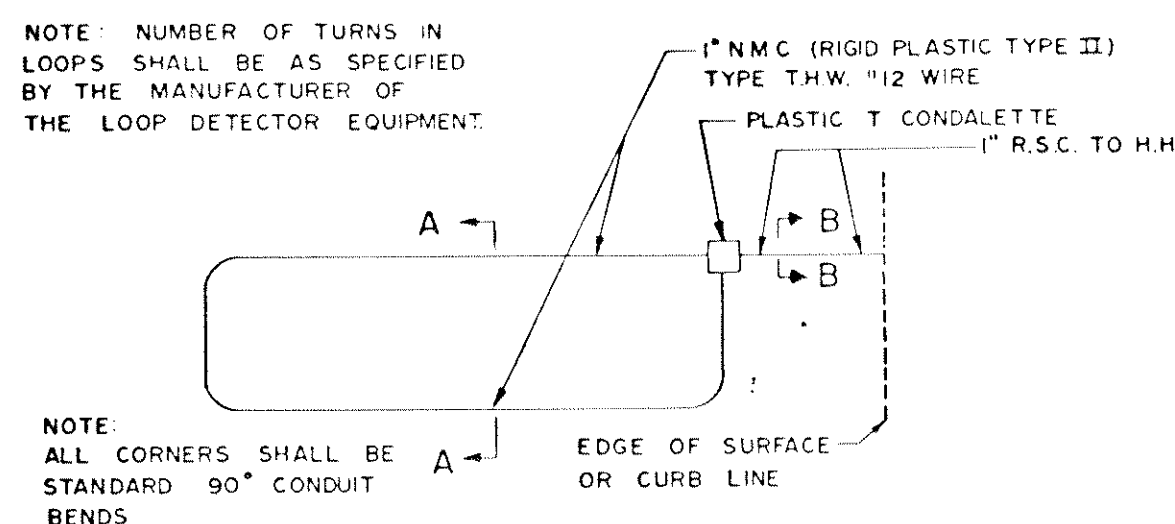
LOOP DETECTOR CONDUITS ARE TO BE INSTALLED AS FOLLOWS:

- 1) INSTALL THE BITUMINOUS BINDER COURSE.
- 2) CUT TRENCHES FOR ALL DETECTORS AND INSTALL EACH COMPLETE DETECTOR ASSEMBLY, INCLUDING WHERE SHOWN PLASTIC CONDUIT, "T" CONDALETTE, AND STEEL CONDUIT, WITH THE DETECTOR WIRE PULLED THROUGH THE COMPLETE ASSEMBLY TO / FROM THE HANDHOLE.
- 3) REFILL THE TRENCHES WITH MATERIAL EQUAL TO THE BITUMINOUS BINDER COURSE.
- 4) INSTALL THE BITUMINOUS WEARING COURSE.

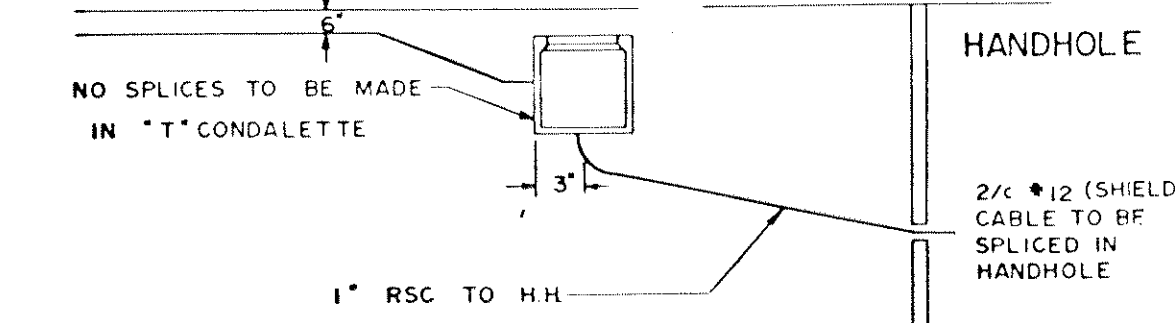
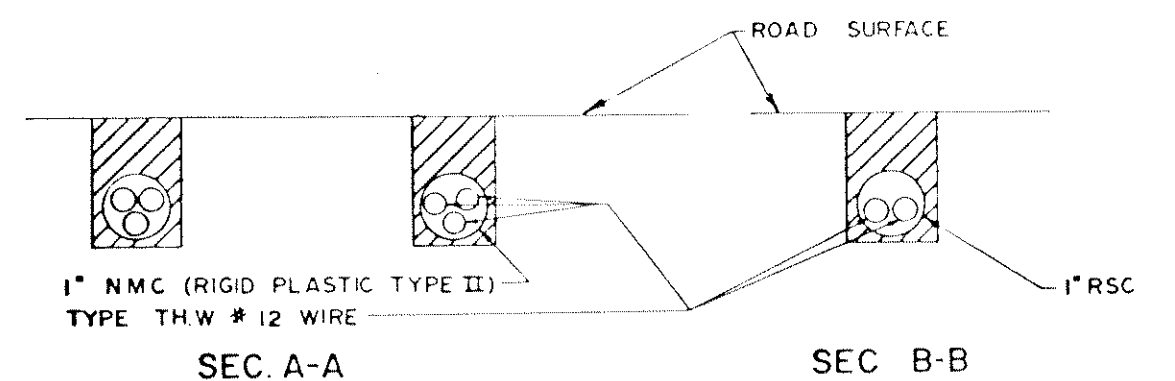


**DETAIL FOR INSTALLATION OF CONDUIT  
FOR LOOP DETECTOR**

NOTE: NUMBER OF TURNS IN LOOPS SHALL BE AS SPECIFIED BY THE MANUFACTURER OF THE LOOP DETECTOR EQUIPMENT.

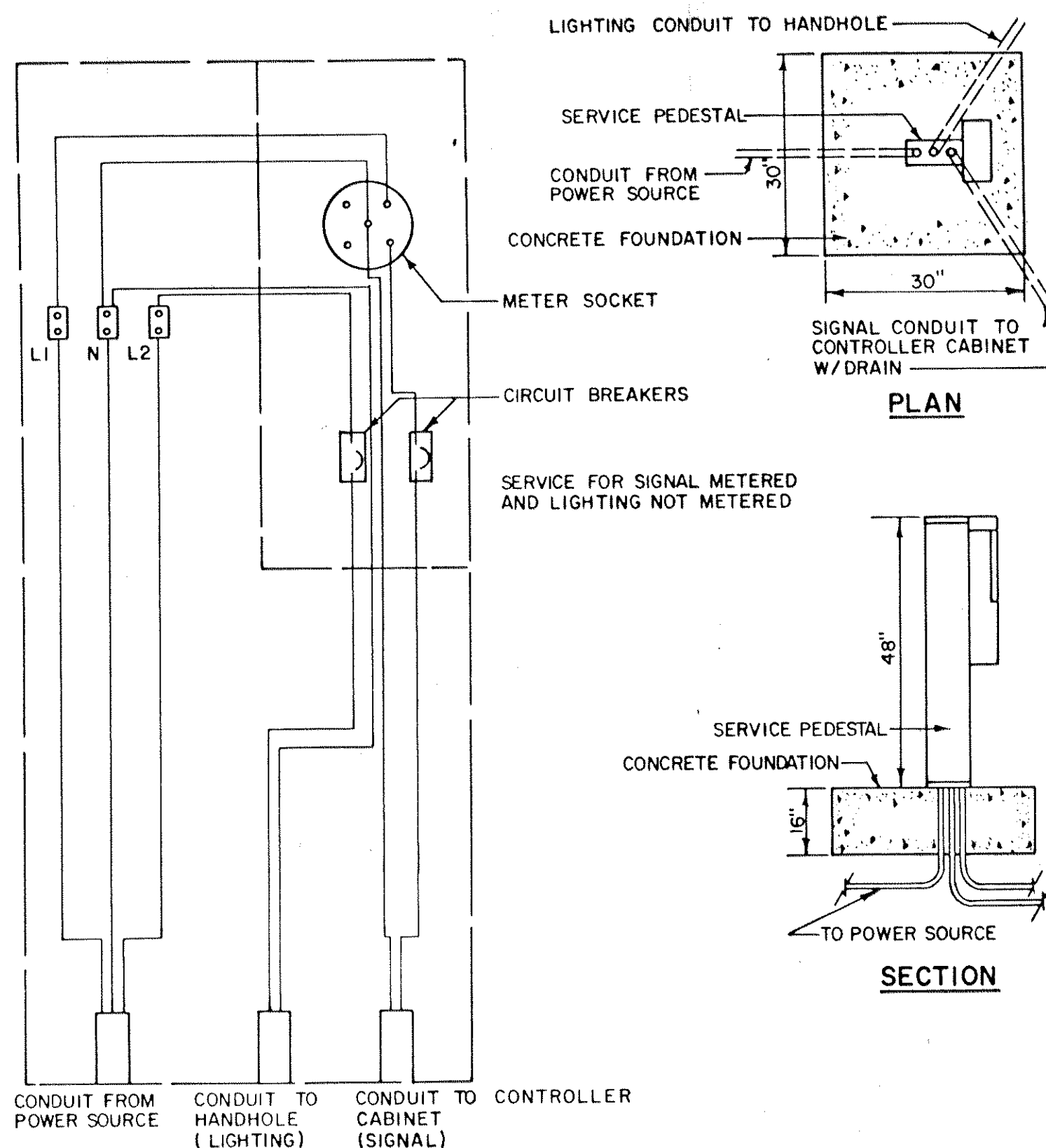


NOTE: ALL CORNERS SHALL BE STANDARD 90° CONDUIT BENDS



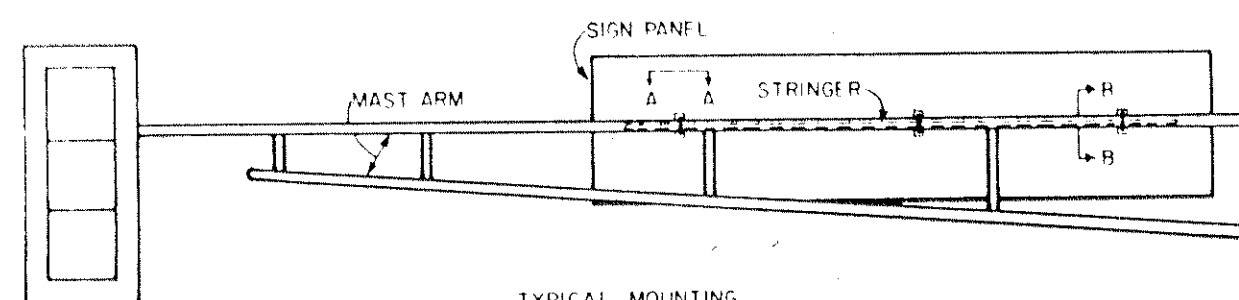
NOTE: LOOP CONDUIT SHALL SLOPE TOWARDS \"T\" CONDALETTE AND STEEL CONDUIT SHALL SLOPE TOWARDS HANDHOLE SUCH THAT ENTIRE DETECTOR INSTALLATION DRAINS INTO HANDHOLE.

**DETAIL FOR LOOP DETECTOR**

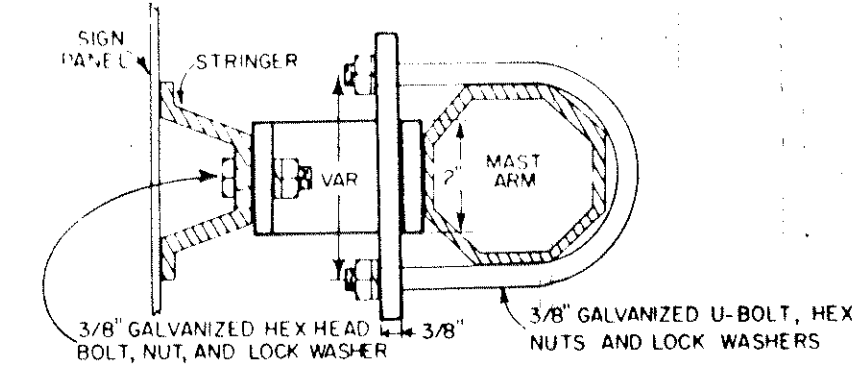
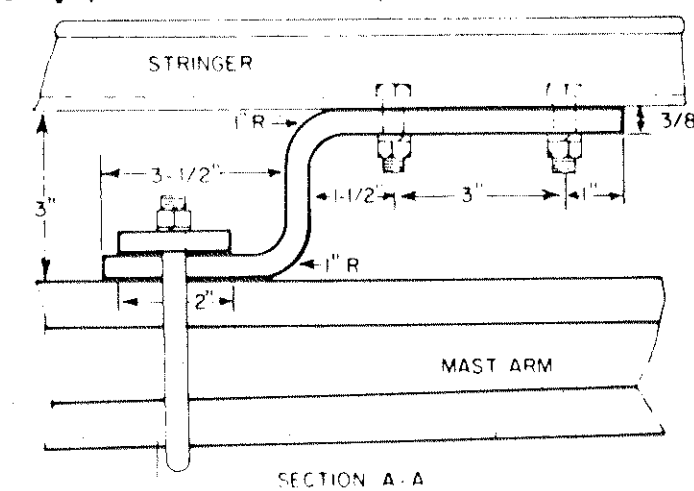


**CONNECTION DIAGRAM  
SERVICE PEDESTAL**

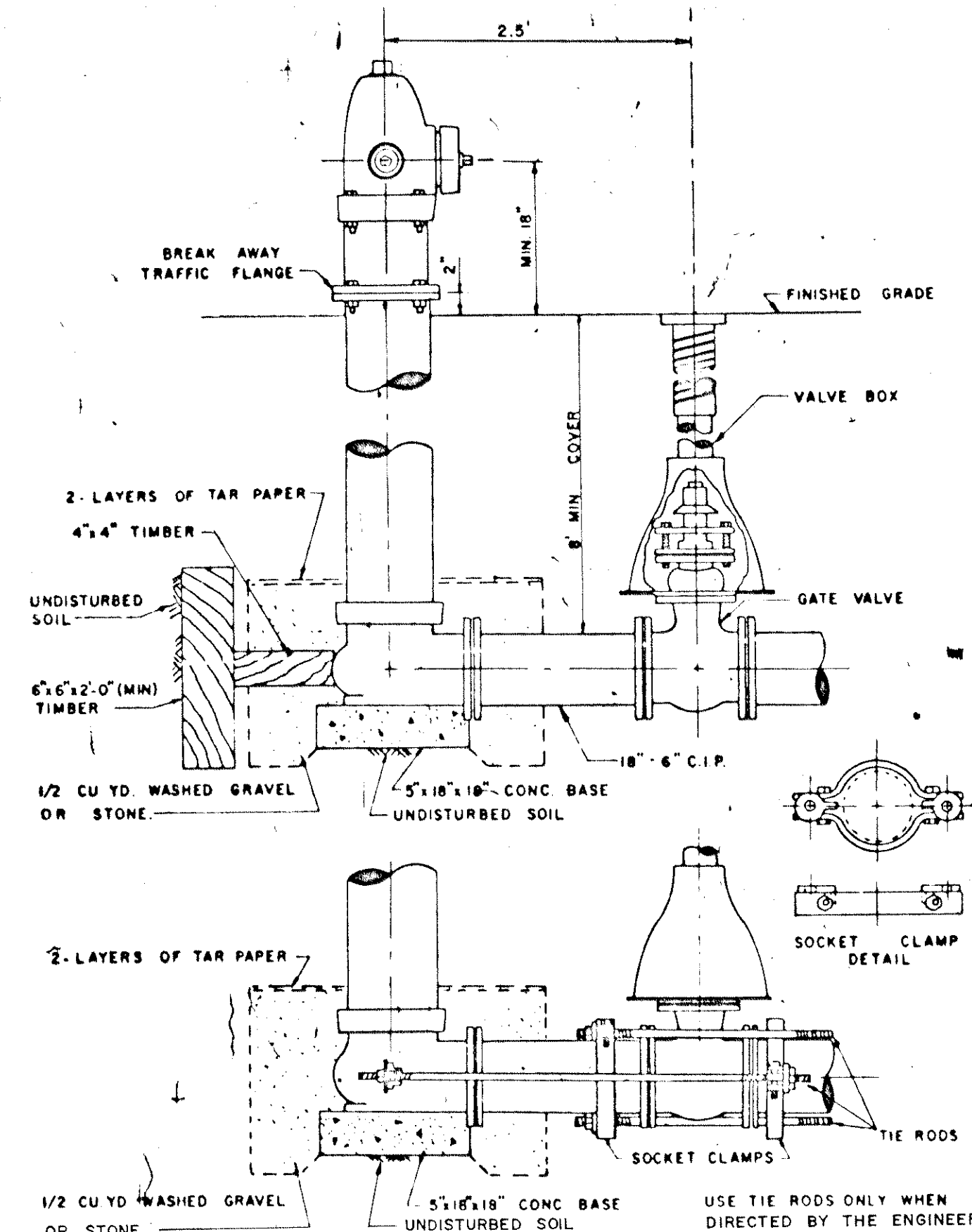
**SPECIAL DETAILS FOR SERVICE EQUIPMENT**



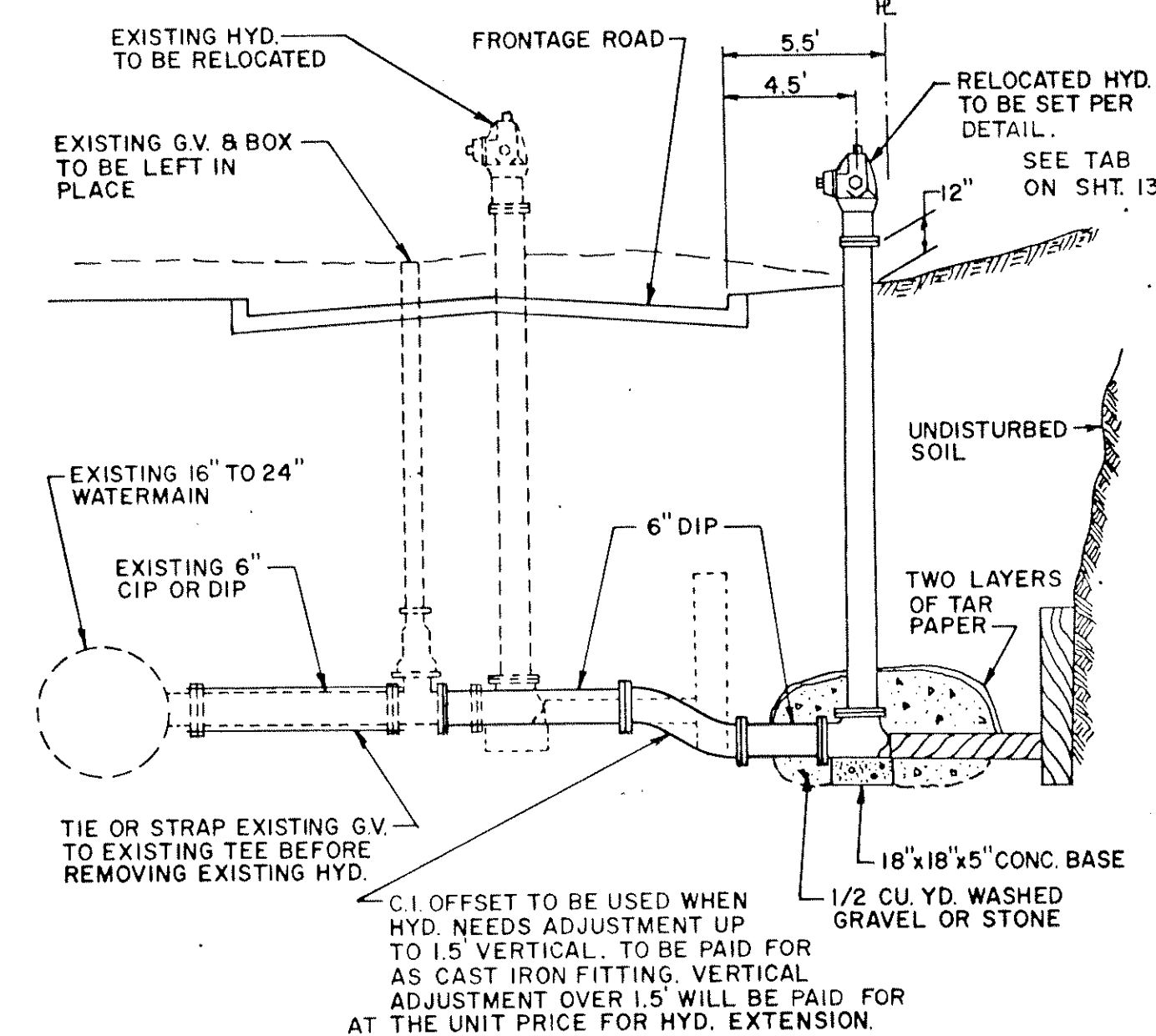
1. Stringers shall conform to MHD 3401 for 4\"/>



**TYPE \"D\" SIGNS DETAIL**



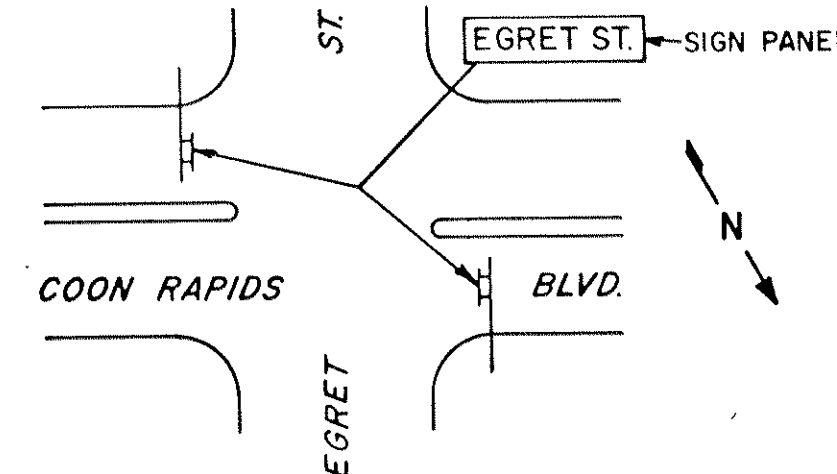
**TYPICAL HYDRANT SETTING DETAIL**



NOTE: HYDRANT RELOCATION SHALL INCLUDE ALL TOOLS, MATERIALS AND LABOR TO SECURE THE EXISTING GATE VALVE TO THE EXISTING TEE, REMOVE AND RELOCATE THE EXISTING HYDRANT WITHOUT SHUTTING DOWN THE EXISTING WATERMAIN.

**HYDRANT RELOCATION DETAIL**

**TYPICAL LAYOUT**

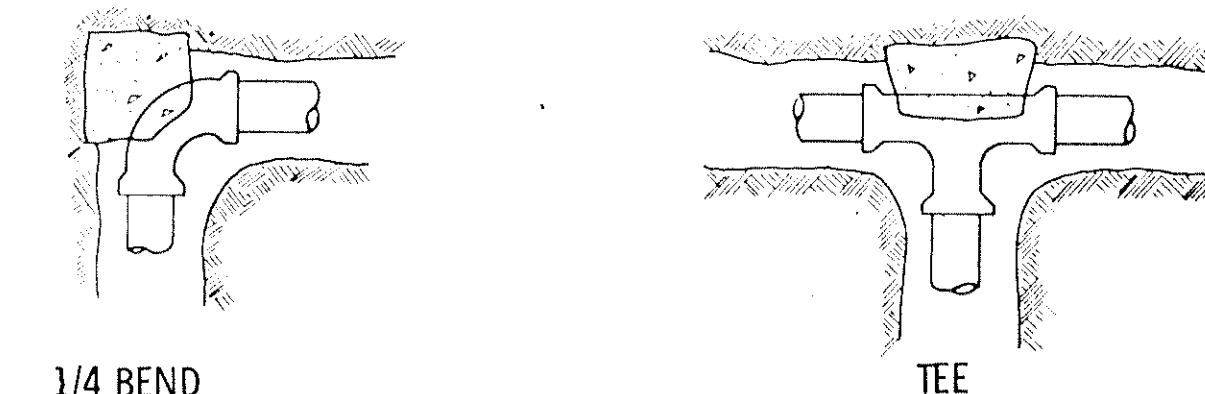


**SCHEDULE FOR STREET SIGNS TYPE \"D\"**

SIGN PANEL	SIZE	No. REQ.	TOTAL SQ.FT.
EGRET ST.	24\"x60"	2	20
HANSON BLVD.	24\"x84"	2	28
XAVIS ST.	24\"x60"	2	20
IIIth AVE.	24\"x66"	2	22
MISSISSIPPI AVE.	24\"x96"	2	32
CROOKED LAKE BLVD.	24\"x120"	2	40

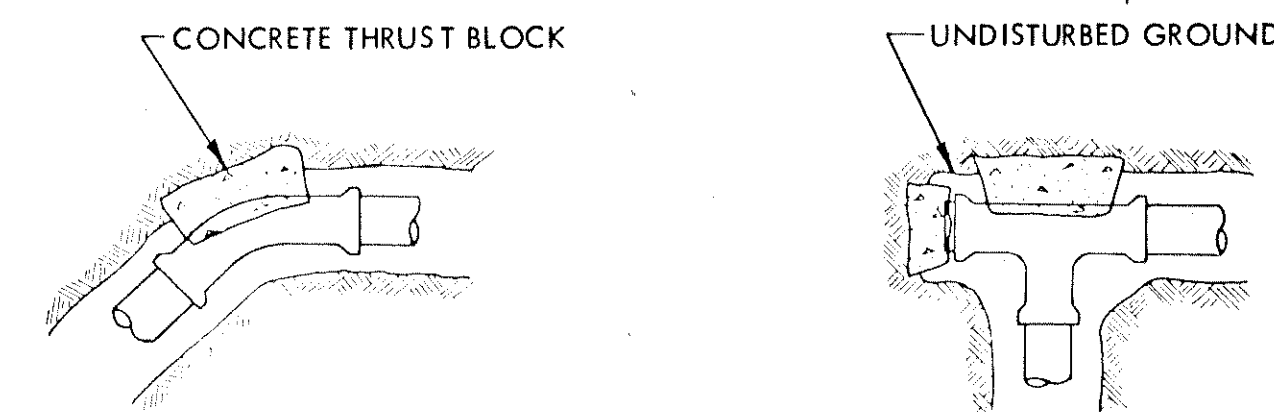
1. LETTERS - E MOD, 6\"/>

**TYPE \"D\" SIGNS DATA SHEET**



**1/4 BEND**

**TEE**



**1/8 BEND**

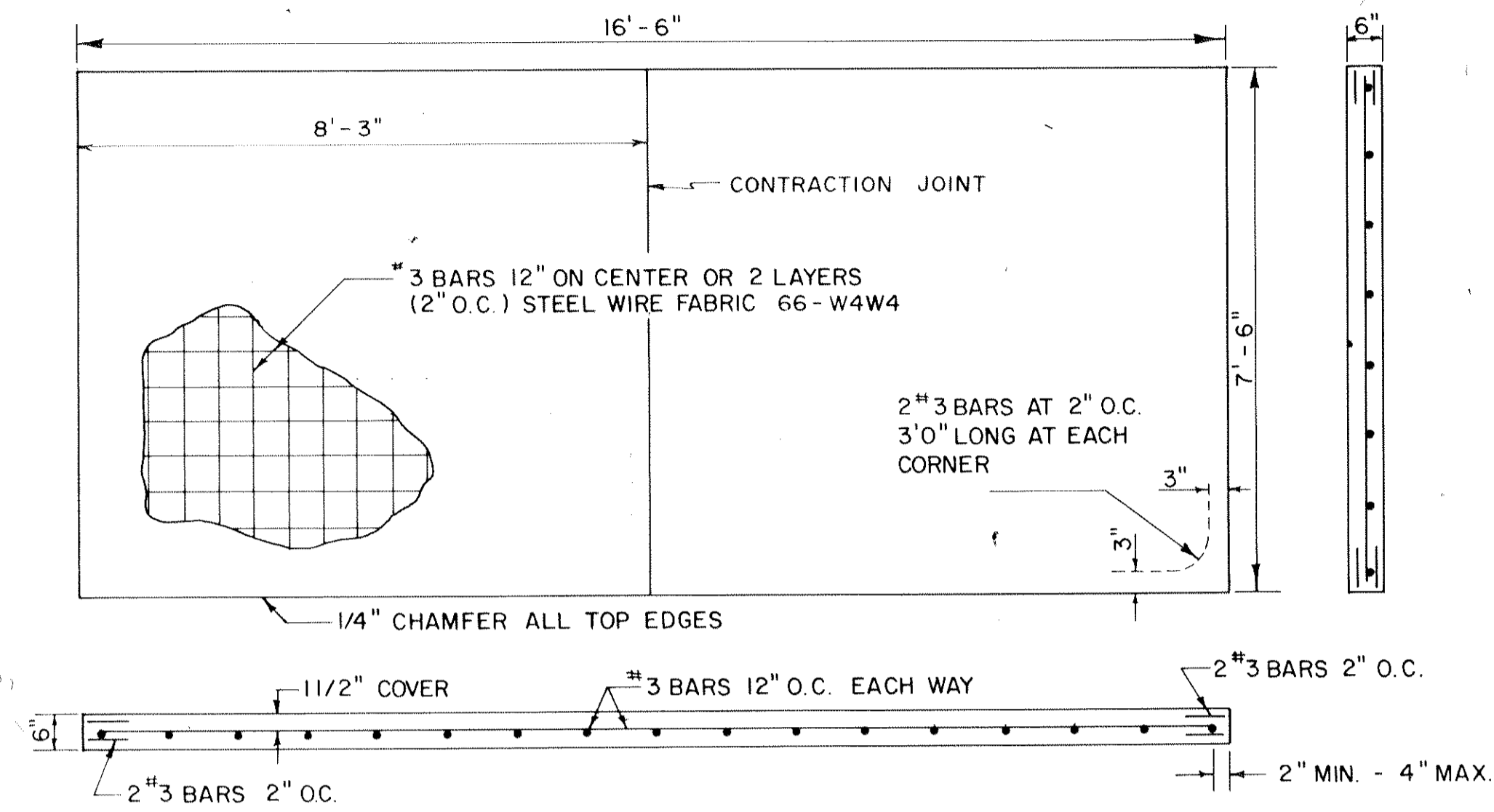
**PLUGGED TEE**

1. WRAP OR COAT FITTINGS SO AS NOT TO PRODUCE A BOND WITH THE CONCRETE.
2. CONCRETE FOR THE THRUST BLOCKS SHALL HAVE A MINIMUM 28 DAY STRENGTH OF 2000 POUNDS.
3. ALL VERTICAL BEARING AREAS OF THE THRUST BLOCKS SHALL BE POURED AGAINST UNDISTURBED GROUND.
4. DO NOT EXTEND CONCRETE BEYOND FITTING BELL.

THE VERTICAL BEARING AREA OF THE BLOCKING SHALL BE AS FOLLOWS:  
D= NOMINAL DIAMETER OF THE PIPE IN FACT, FOR TEES & 1/4 BENDS, AREA = 5D<sup>2</sup>  
FOR 1/8 OR LESS BENDS & SECONDARY BACKING AT PLUGGED TEES. AREA = 3D<sup>2</sup>

**THRUST BLOCK LOCATION**

REV. MAR. 1978



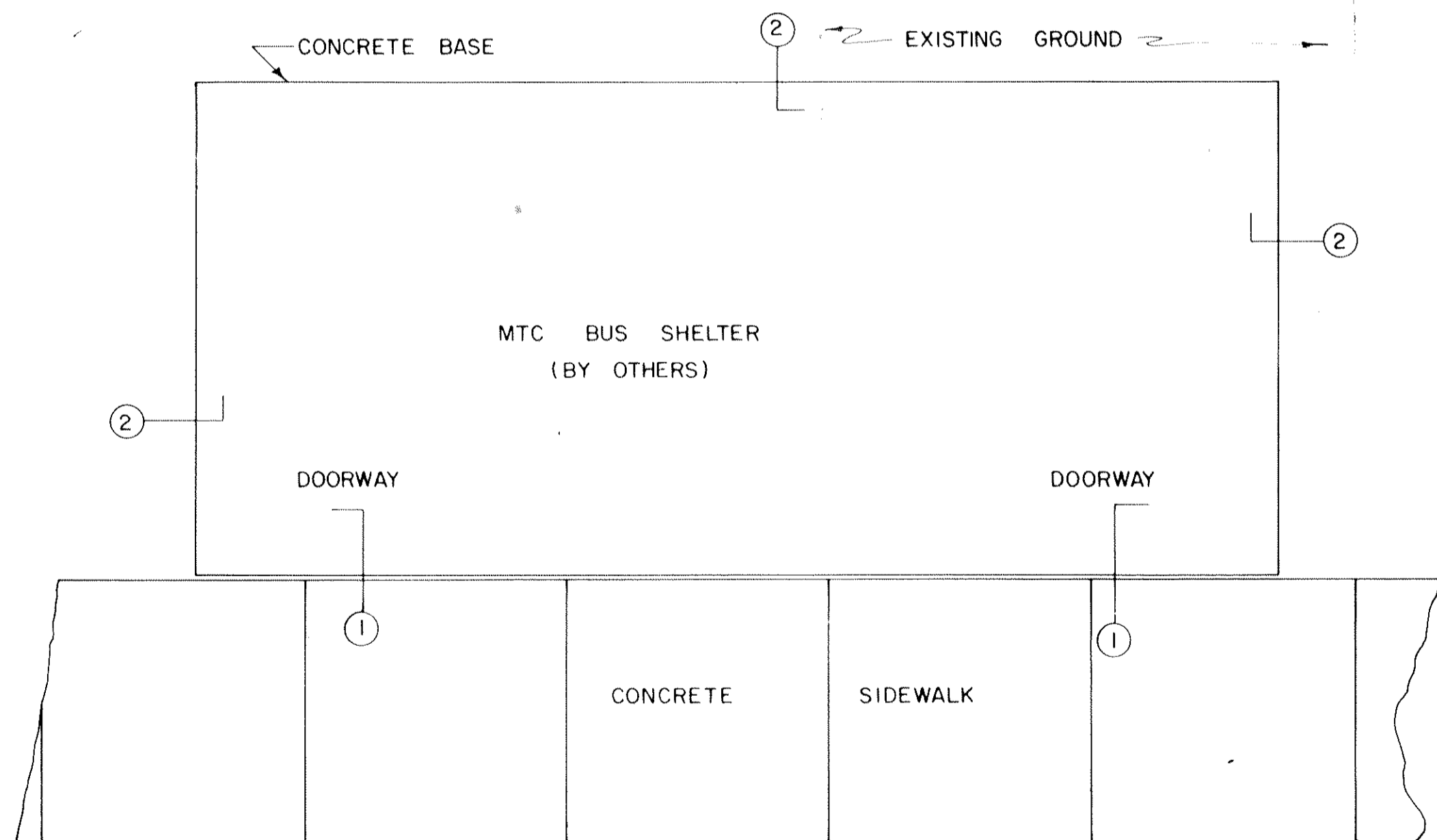
NOTES:

1. BROOM FINISH SURFACE
2. REINFORCING STEEL: 3301 GRADE 40
3. CONTRACTION JOINT AS SPECIFIED ABOVE.
4. ALL SLABS SHALL BE REINFORCED
5. DRAWING NOT TO SCALE

CONCRETE BUS SHELTER BASE

6" REINFORCED CONCRETE PADS

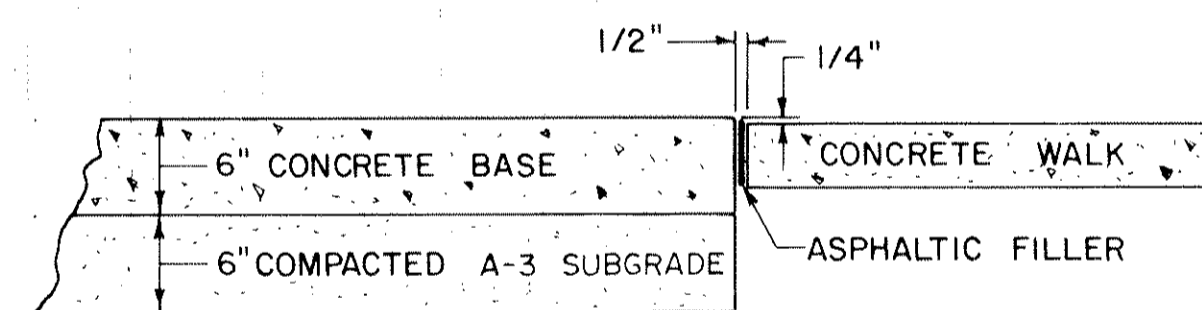
- 853+ 66 LT (HANSON)
- 894+ 86 LT (XAVIS)
- 921+ 73 LT (CROOKED L.K.)
- 944+ 35 LT (MISSISSIPPI)



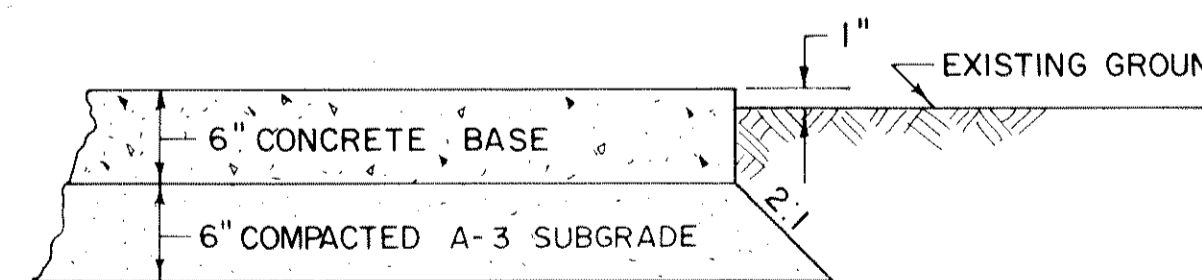
NOTES:

1. SET BASE AT LEAST 1/4" HIGHER THAN ADJACENT SIDEWALK
2. SHAPE EXISTING GROUND TO DRAIN AROUND BASE

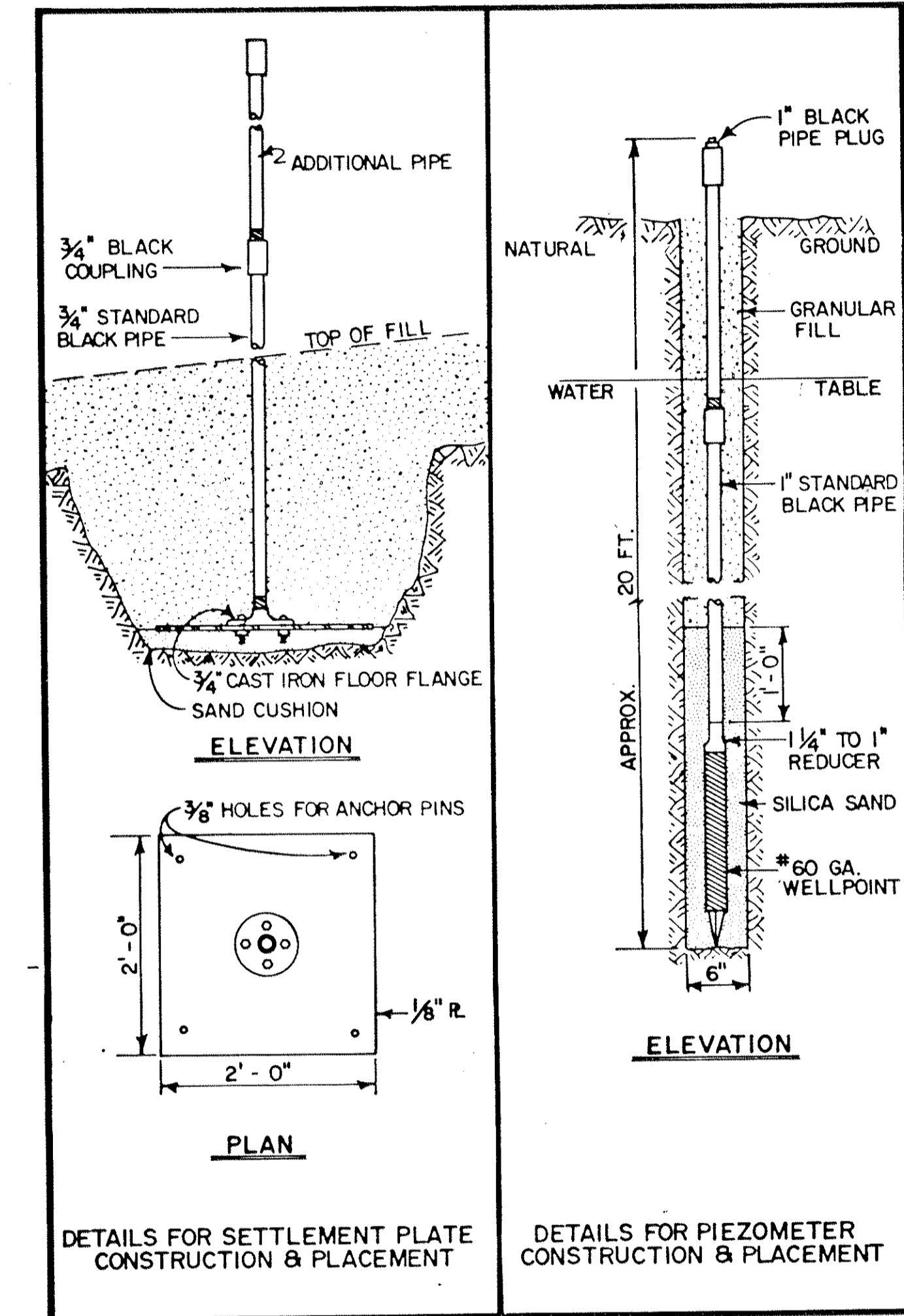
PLAN VIEW



SECTION ①



SECTION ②



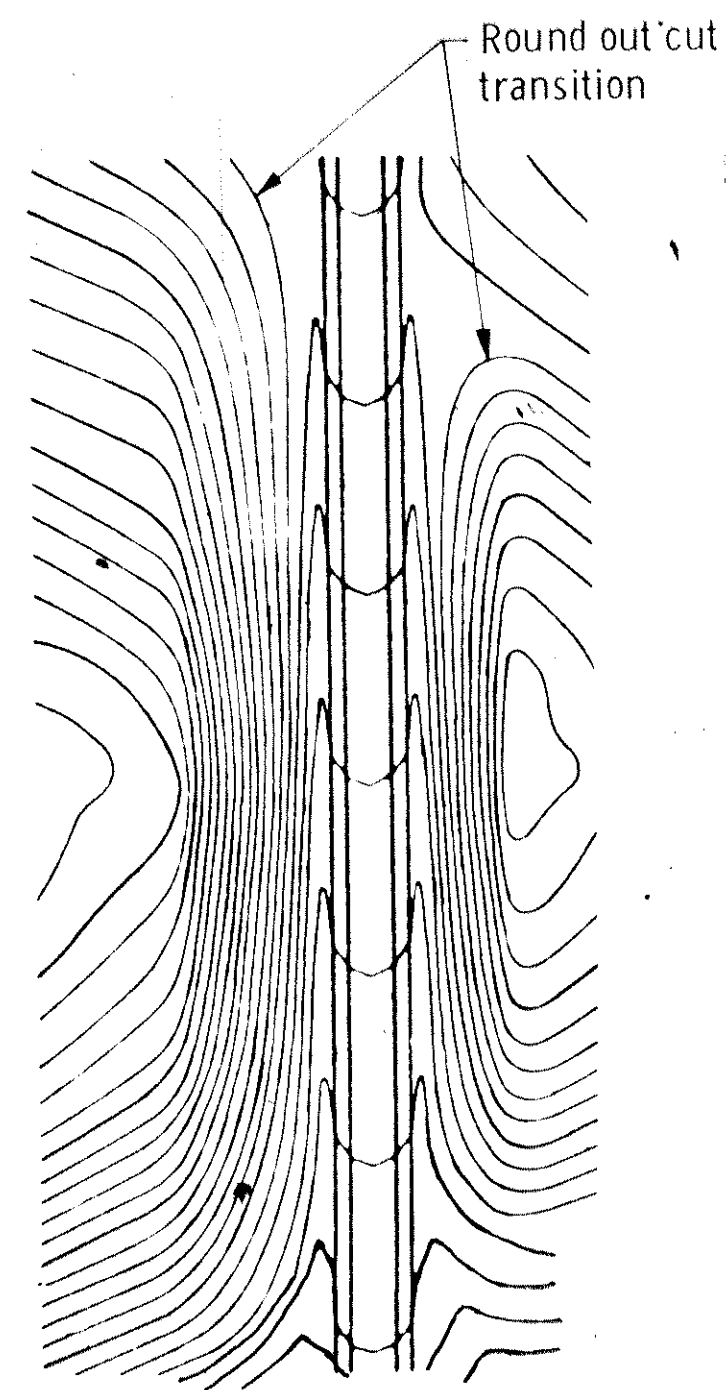
DETAILS FOR SETTLEMENT PLATE CONSTRUCTION & PLACEMENT

DETAILS FOR PIEZOMETER CONSTRUCTION & PLACEMENT

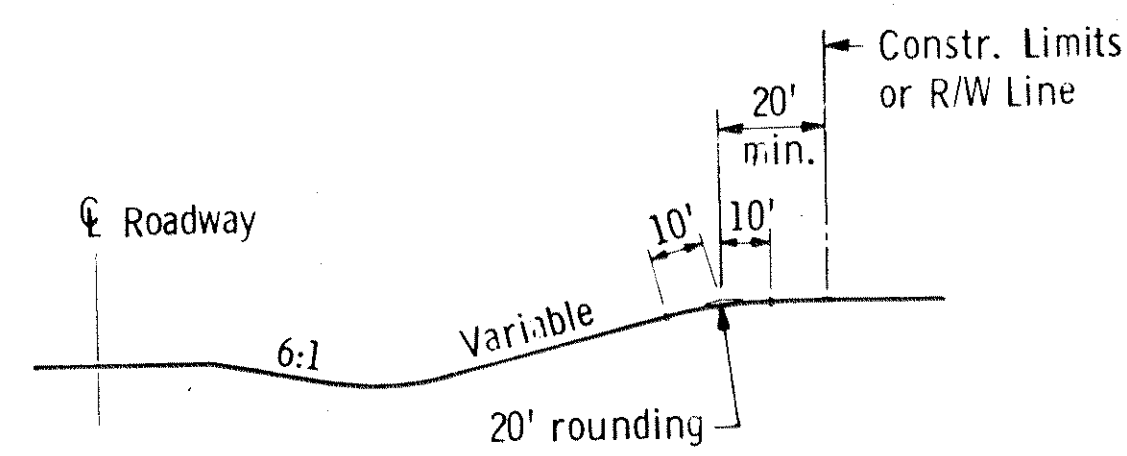
NOTE: SEE SHEET NO. 48 FOR LOCATION.

BUS SHELTER BASE  
SETTLEMENT PLATES  
PIEZOMETER

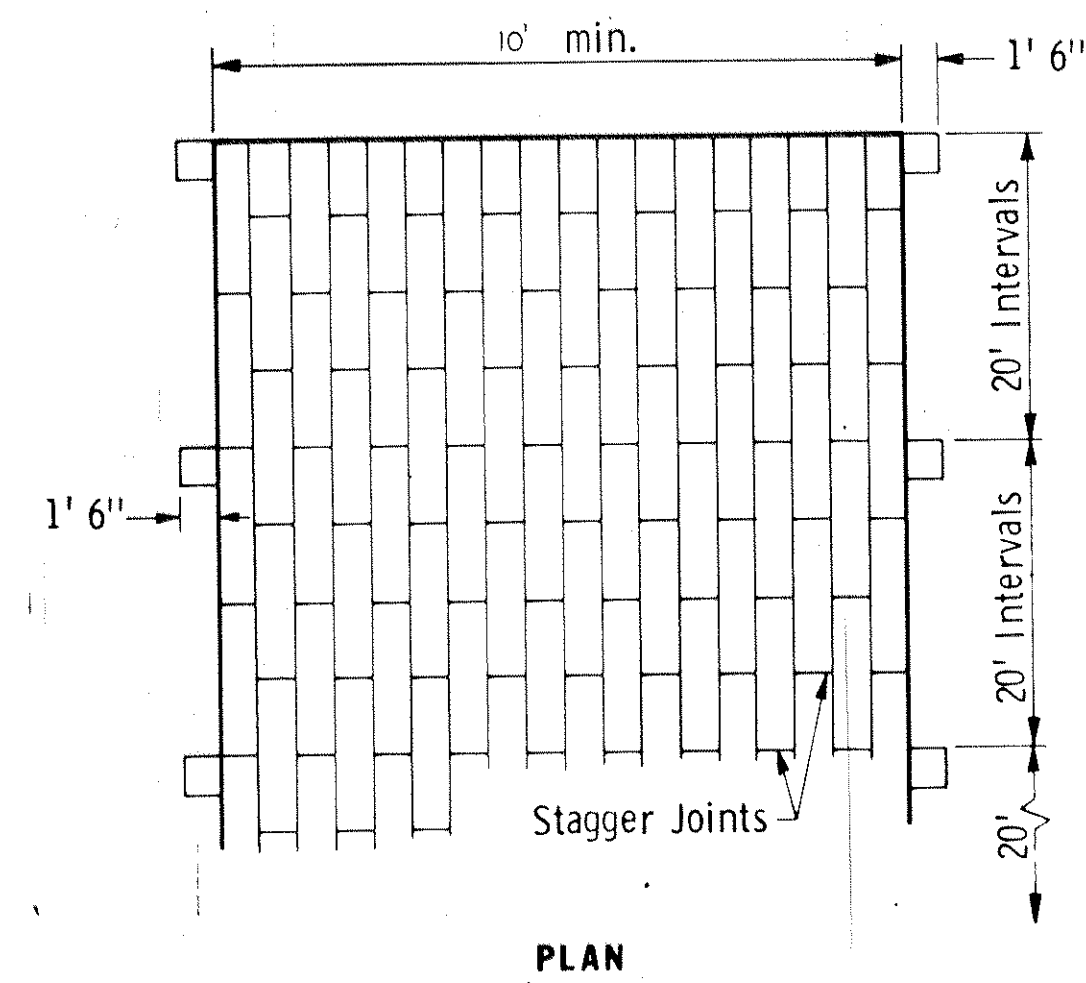
REV - MAR. 1978  
4-6-78



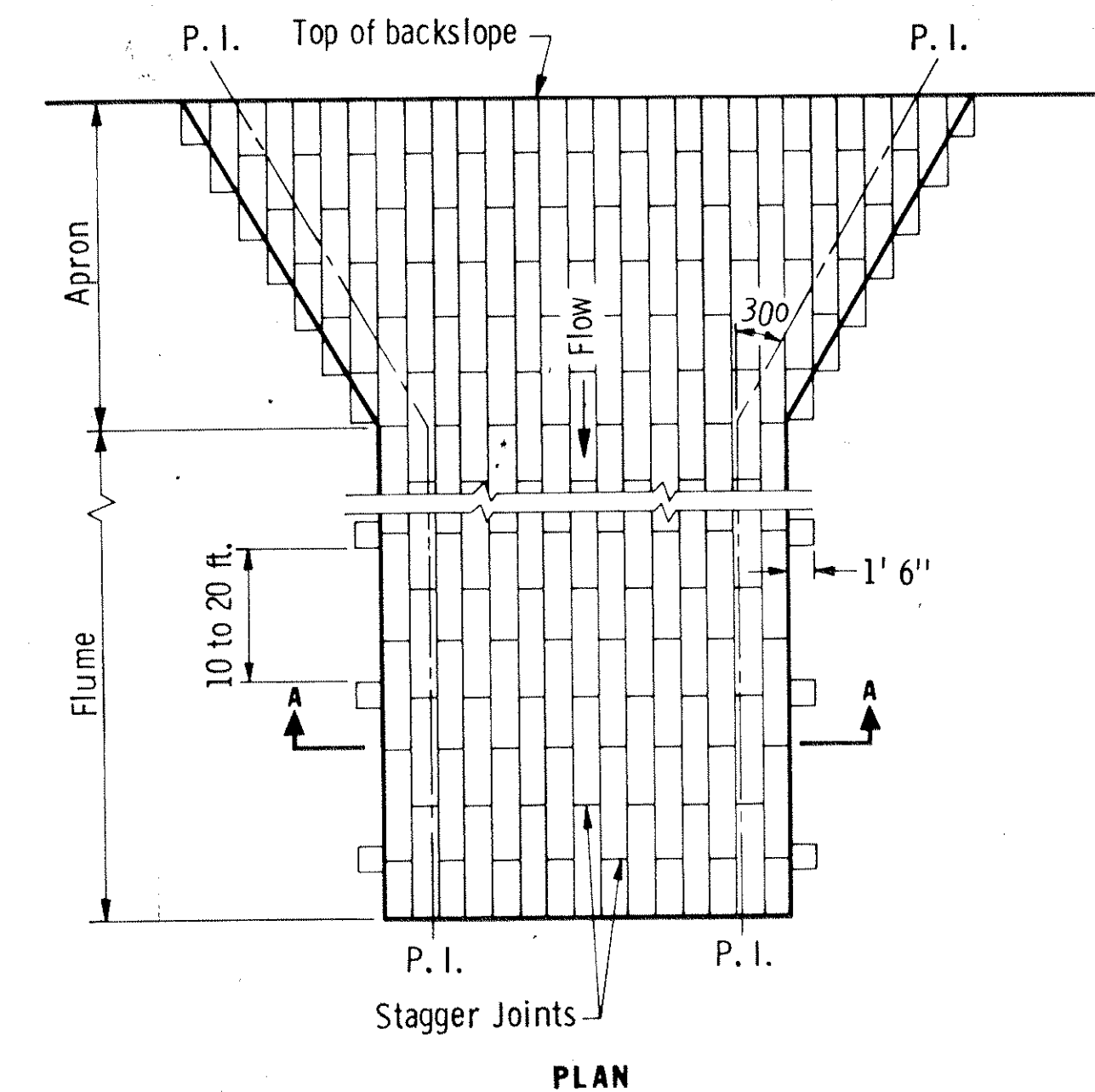
CONTOURING ROAD CUTS



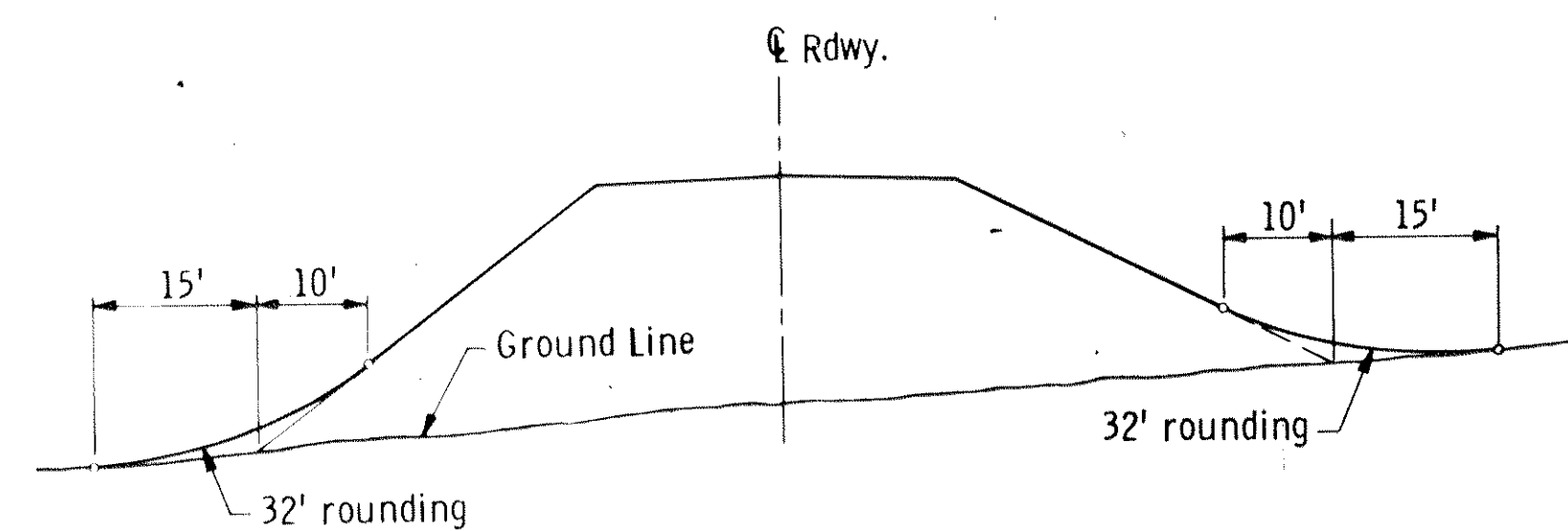
ROUNDING BACK SLOPES



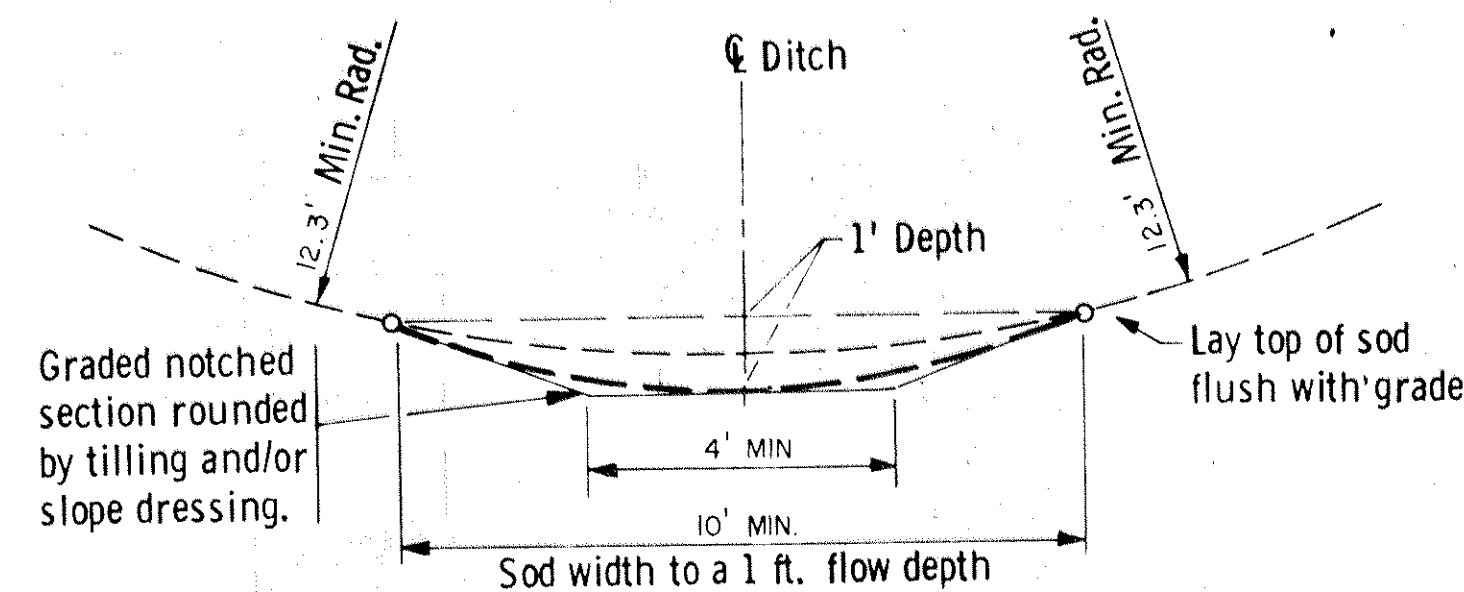
PLAN



PLAN

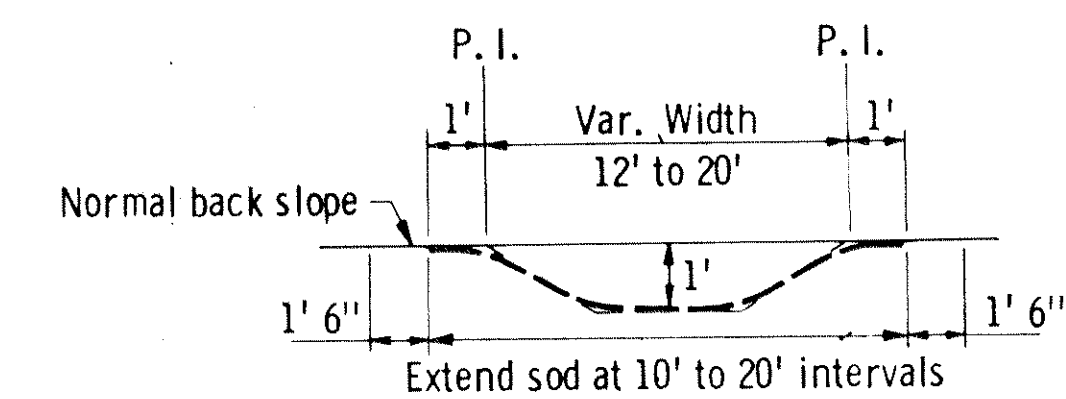


SHAPING FOR DRAINAGE ALONG THE TOE OF FILL SLOPES

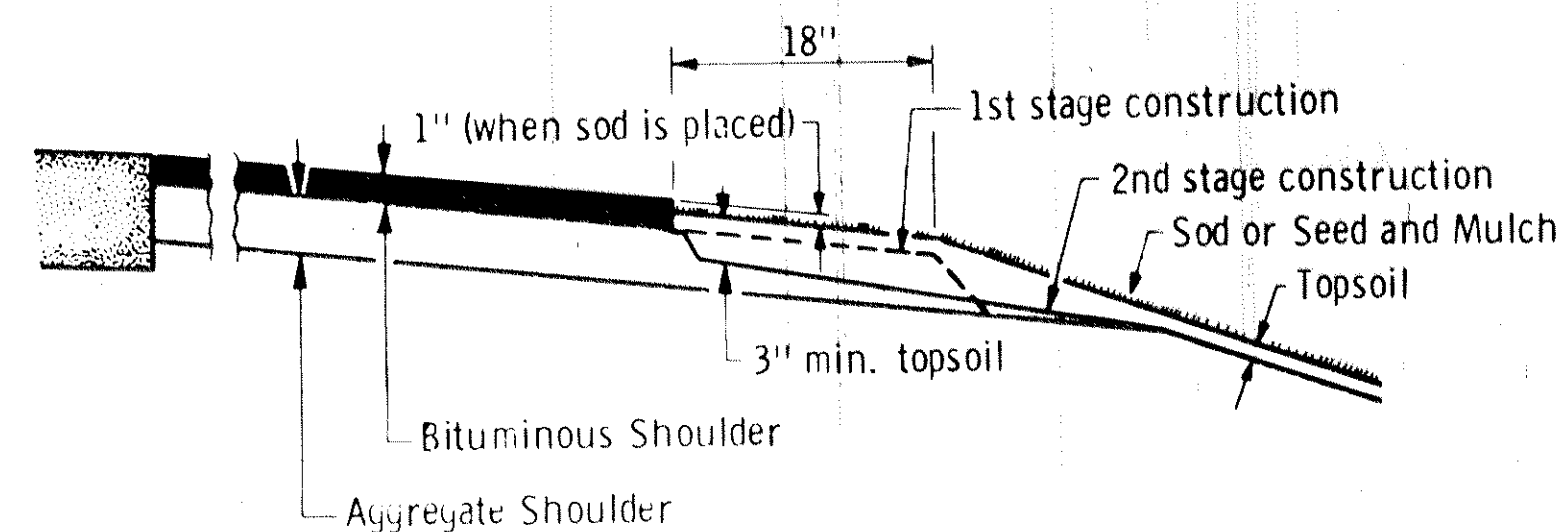


SODDED DITCH CROSS SECTION

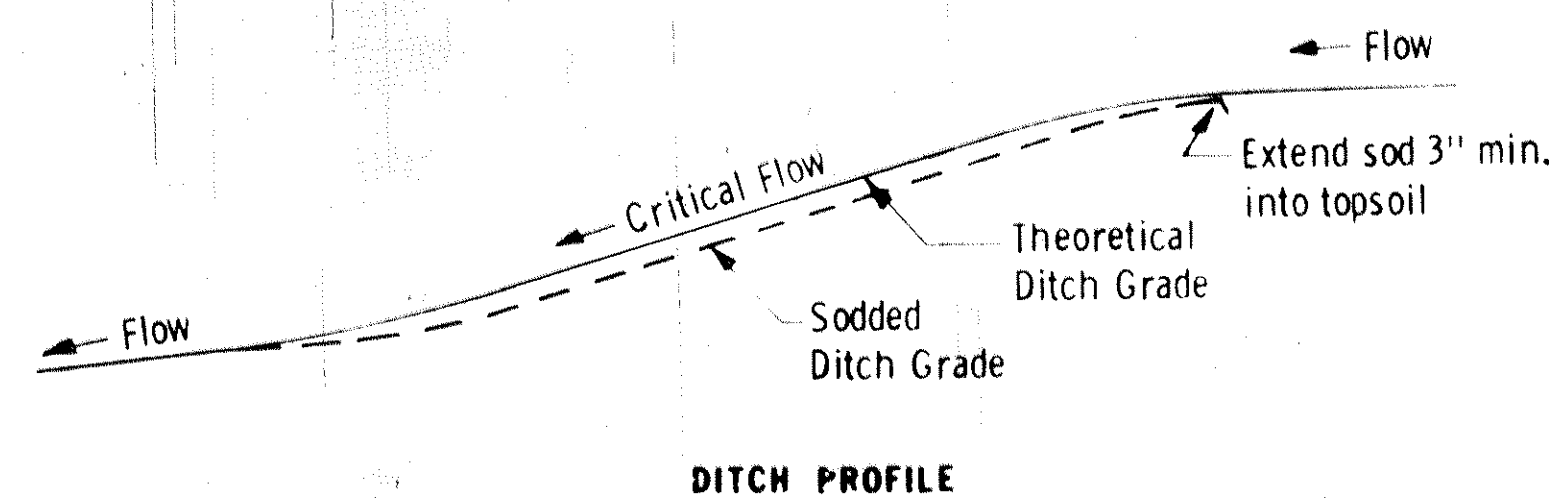
Ditches having a minimum radius of 12.3 feet and requiring sod shall be constructed according to the above details.



SECTION A-A

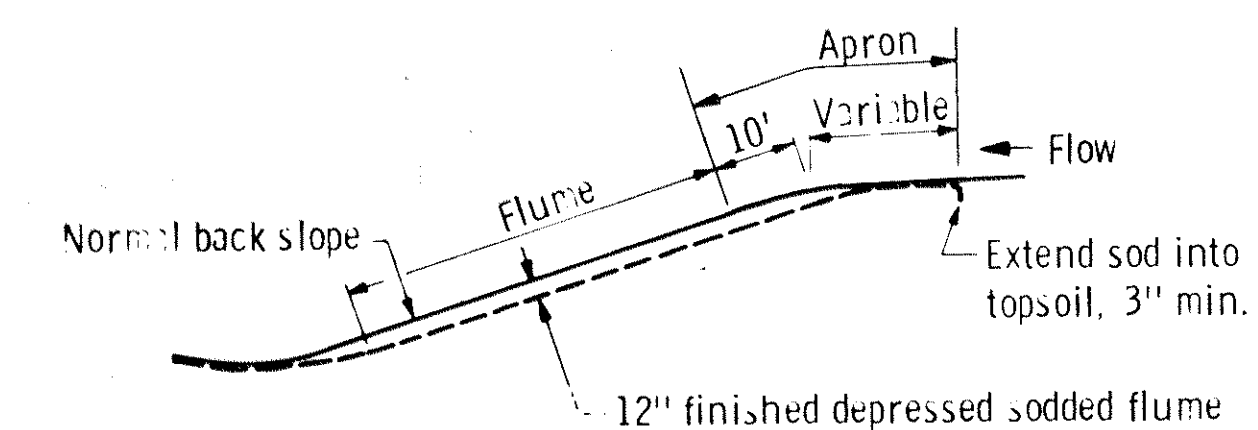


SHAPING AND TOPSOILING INSLOPES



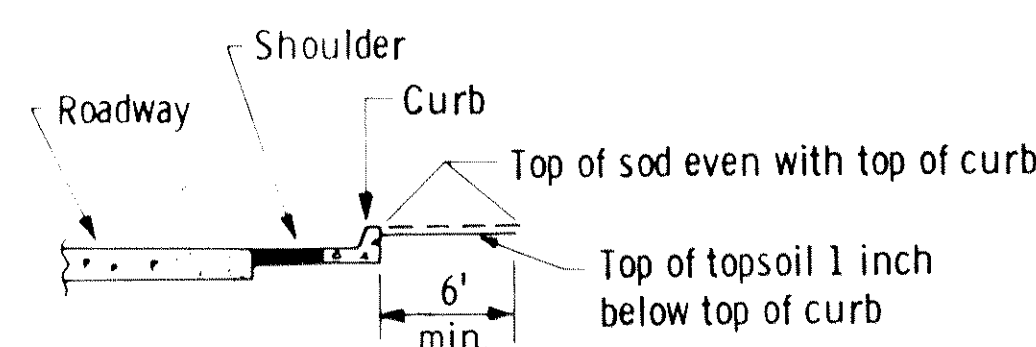
DITCH PROFILE

SODDED DITCH DETAILS



LONGITUDINAL CROSS SECTION

SODDED FLUME DETAILS

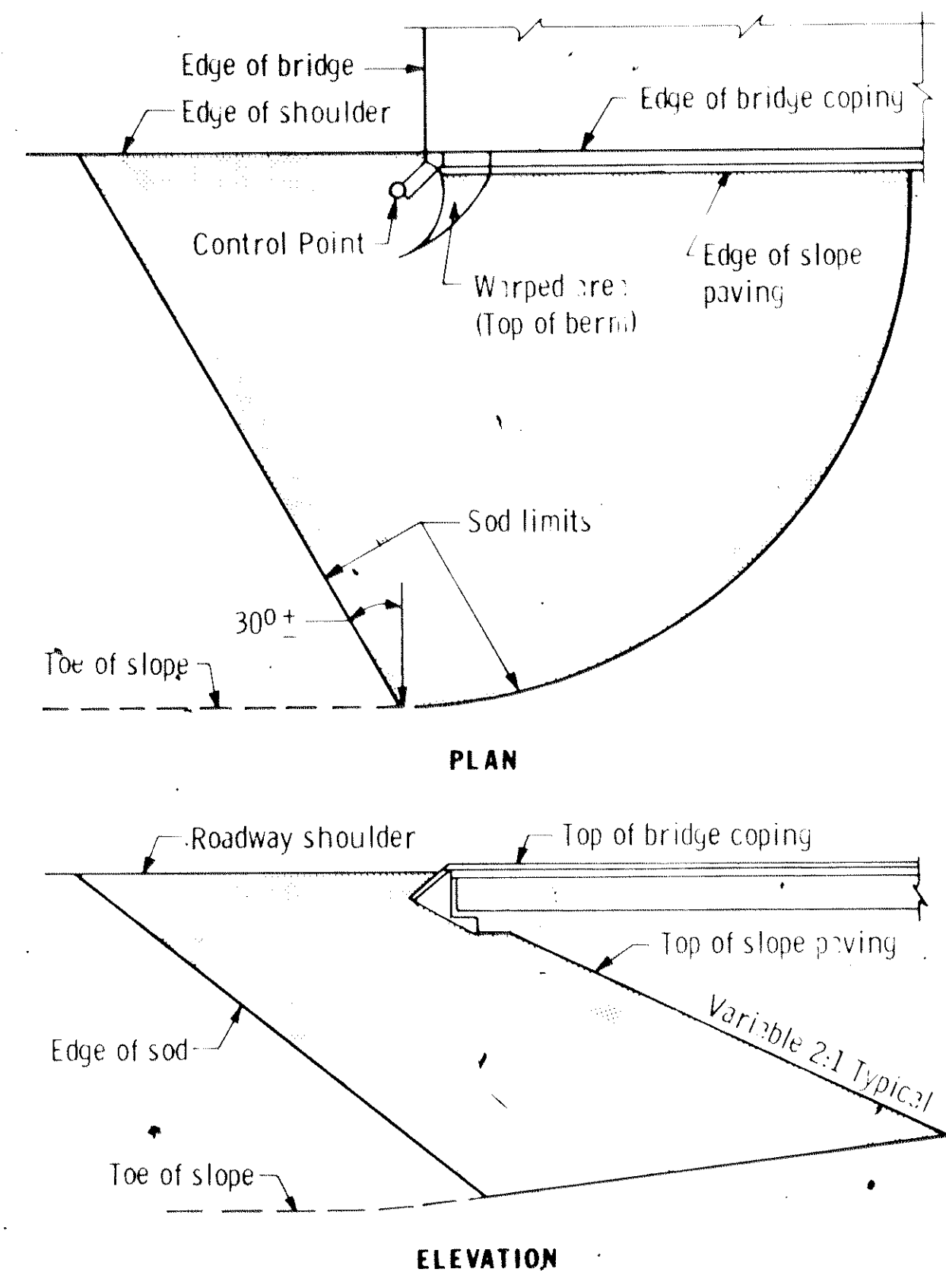


SHAPING ADJACENT TO CURBS WHEN SOD IS PLACED

EROSION CONTROL

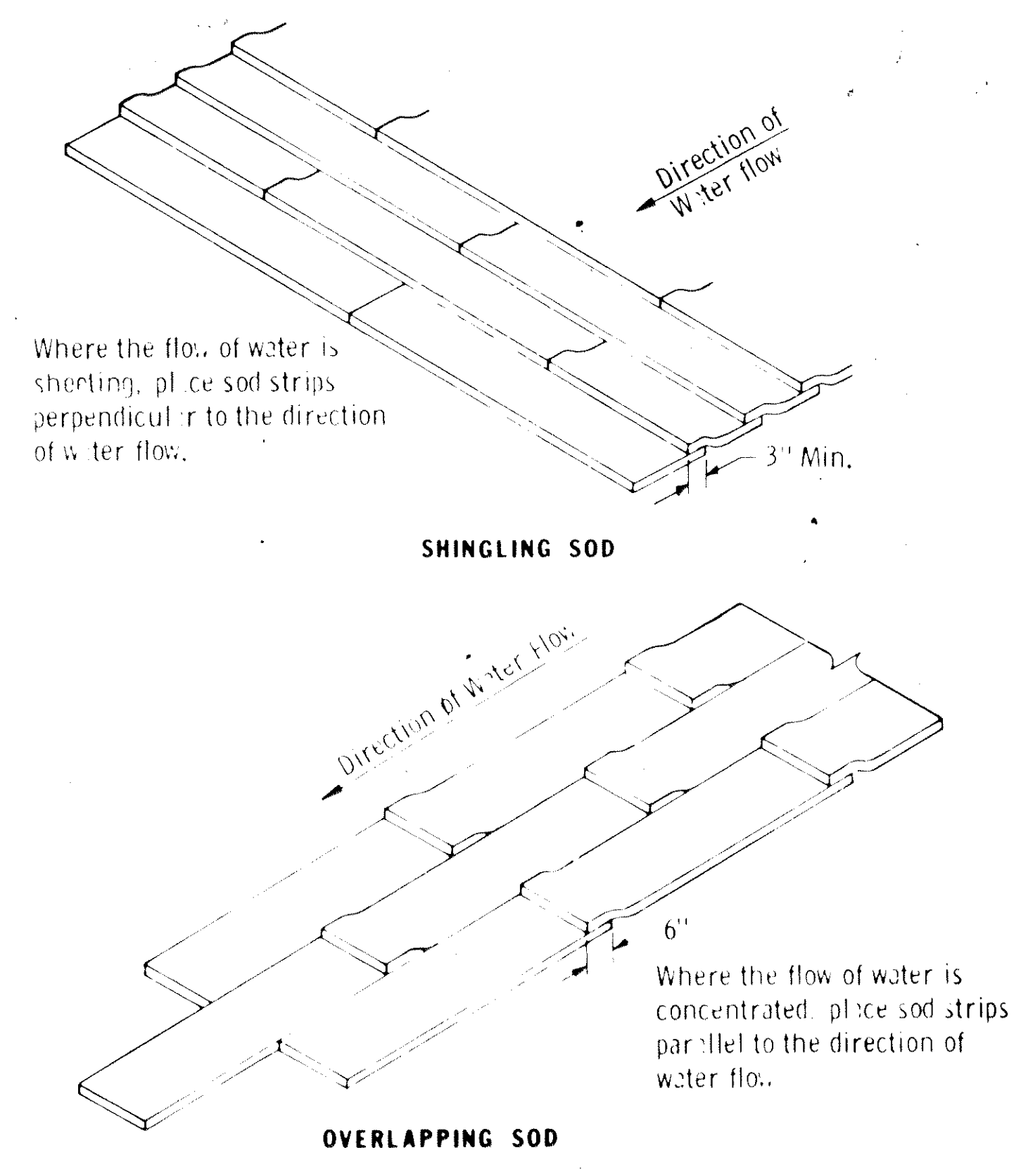
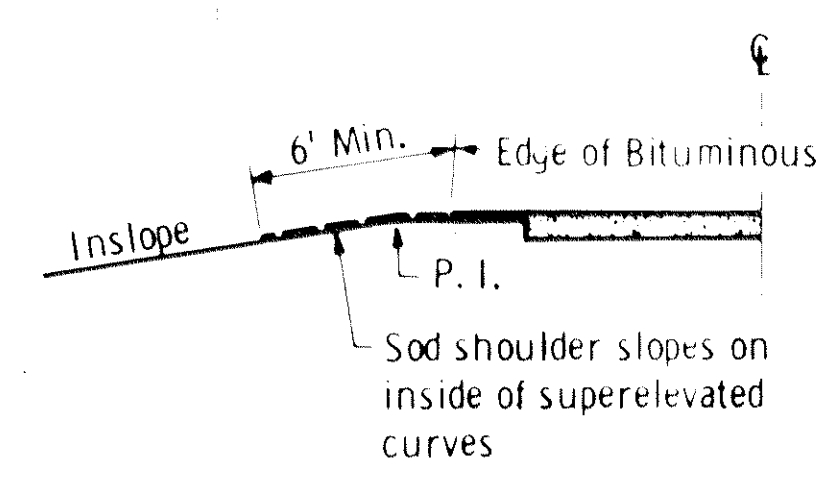
Leonard & Ertle



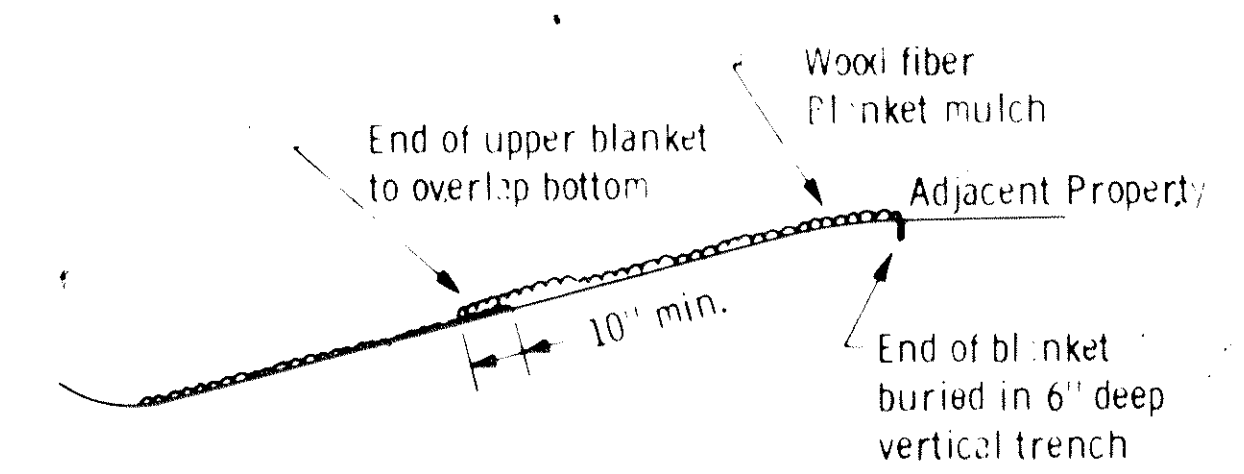


**SODDING LIMITS AT BRIDGE APPROACH FILLS**

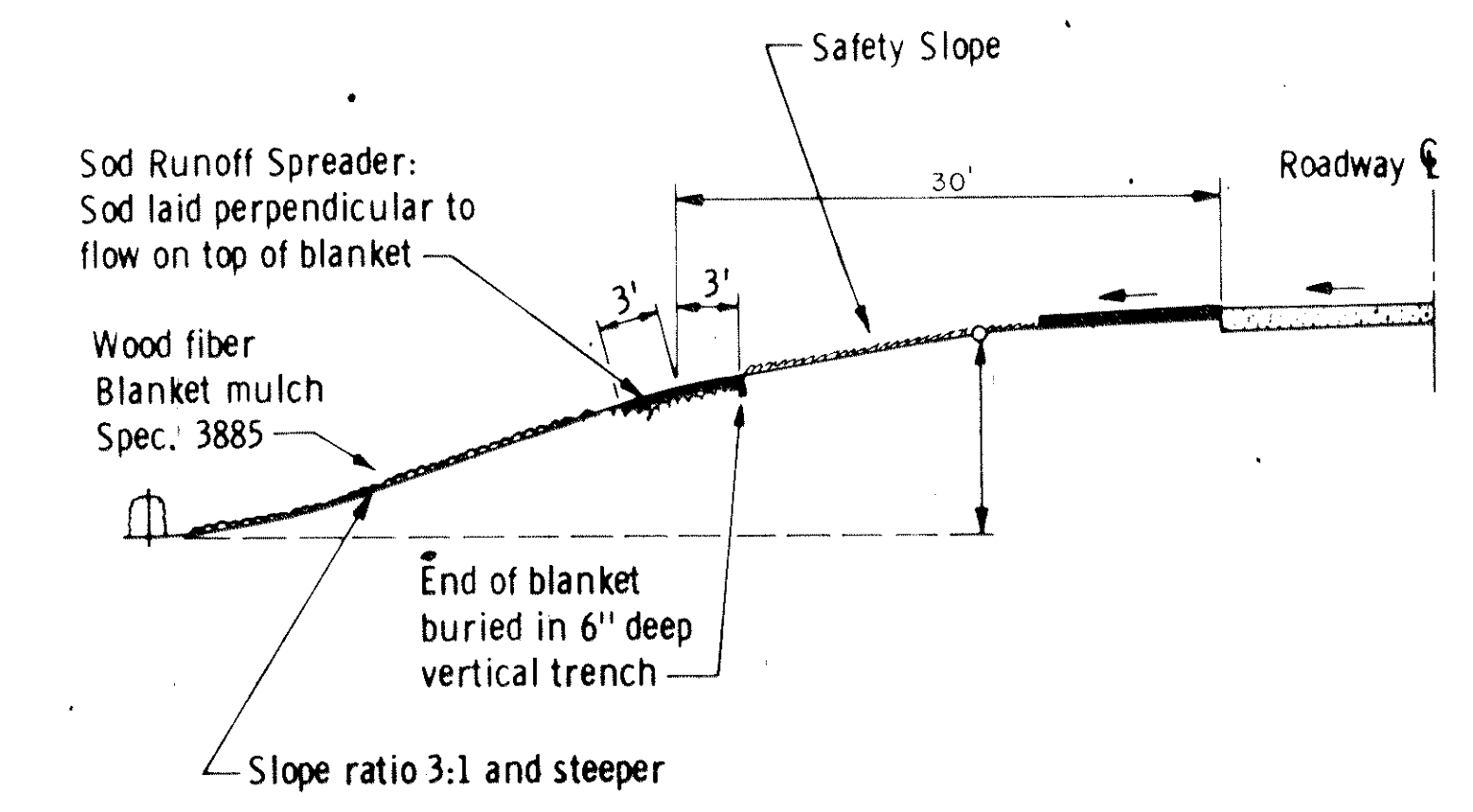
**SODDING INSLOPES OF SUPERELEVATED CURVES**



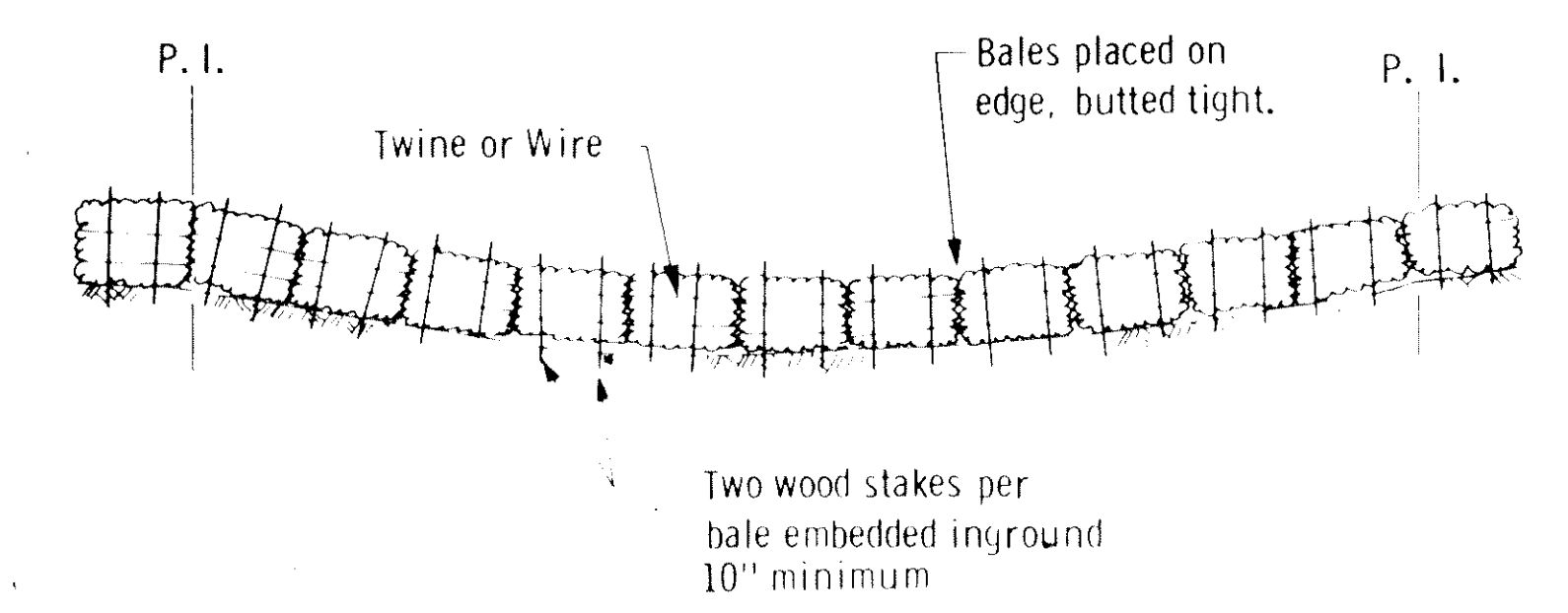
**SPECIAL SOD PLACEMENT TECHNIQUES**



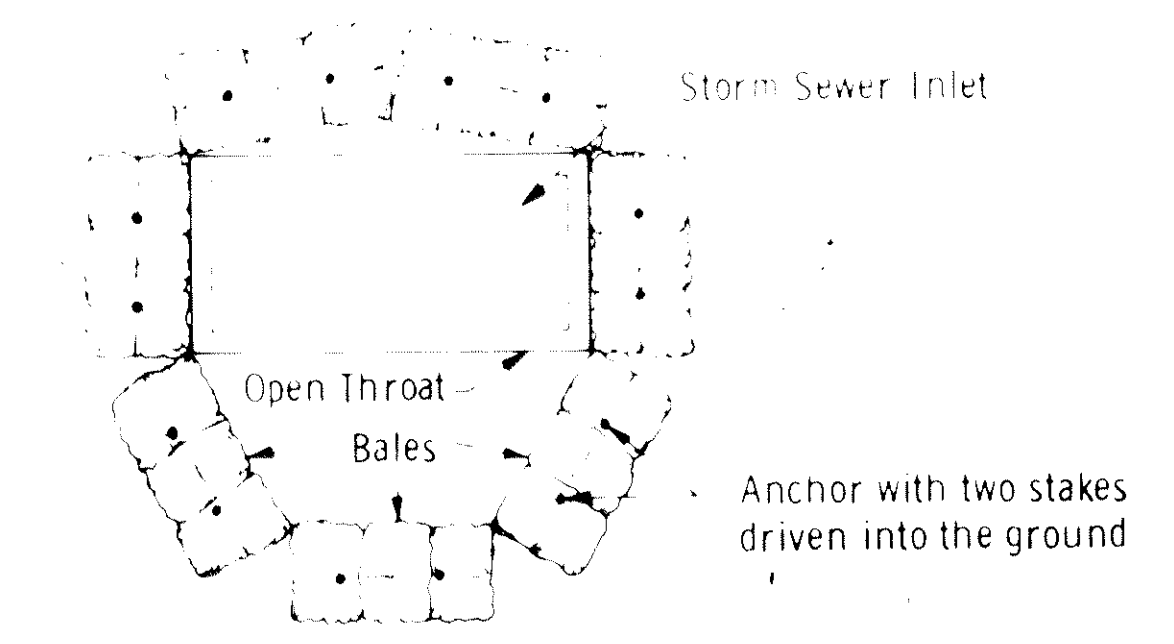
**WOOD FIBER BLANKET INSTALLATION ON A CUT SLOPE**



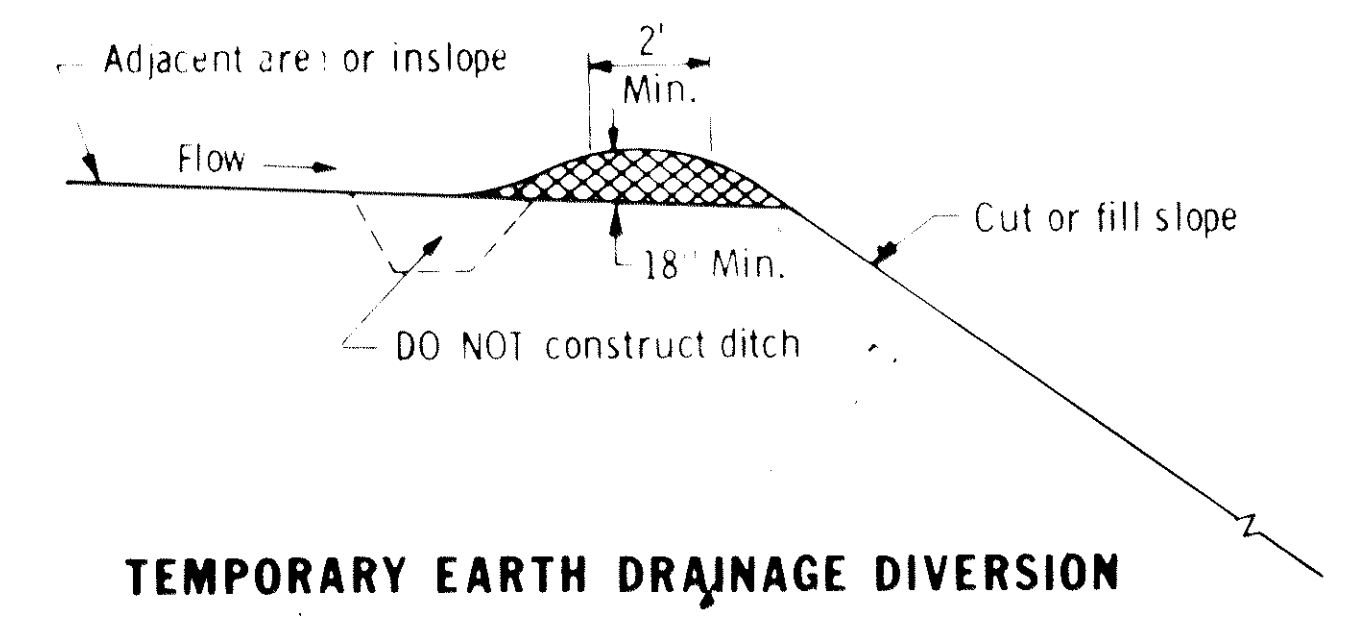
**WOOD FIBER BLANKET INSTALLATION ON A SAFETY FILL SLOPE**



**BALE HAY OR STRAW DITCH CHECK**

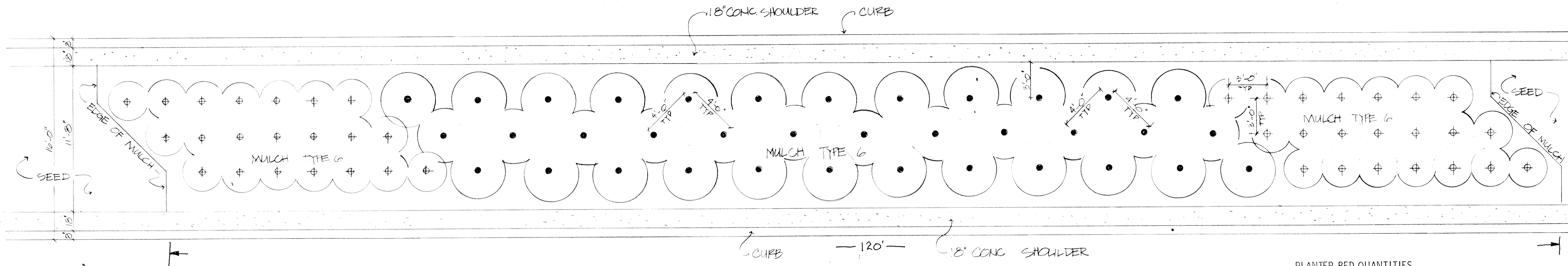


**BALE DIVERSION TO PROTECT STORM SEWER INLETS**



**TEMPORARY EARTH DRAINAGE DIVERSION**

APPROVED: Dec. 17, 1974  
Leonard E. Elter  
Engineering Standards Engineer  
MATERIALS, RESEARCH AND STANDARDS DIVISION



PLANTER BED DETAIL FOR MEDIAN



PLANTER BED QUANTITIES

Symbol	Botanical Name	Common Name	Size	Quantities (Each Planter bed area)	Quantities Total
●	Philadelphus coronarius 'Golden'	Golden Mockorange	18"-24" Ht Potted	36	468
⊕	Berberis thunbergii	Japanese Barberry	18"-24" Ht Potted	42	546

SPECIFICATIONS

- SEED MIXTURE - SPECIAL

JOB CONDITIONS:

- Existing Conditions: Perform seeding only after preceding work affecting ground surface is completed.
- Environmental Requirements:
  - Plant seed on unfrozen soil within appropriate range of moisture content for soil used on project.
  - Do not perform seeding when wind exceeds 10 mph.
  - Seed between calendar dates from June 1 to August 1.
- Protection: Restrict foot and vehicular traffic from seeded areas after planting to end of the establishment period.

Seed Mix:

Species	Rate of Application	% Purity	% Germination
Birdsfoot Trefoil 'Empire' or 'Carrol'	1/2 lb/1000 S. F.	97%	85%
Puccinellia distans 'Fults'	1 lb/1000 S. F.	95%	82%
Creeping Red Fescue 'Dawson'	1/2 lb/1000 S. F.	97%	80%

- Clean, dry, new crop seed.
- Innoculate Birdsfoot Trefoil seed with proper bacteria culture designed for this purpose and in the manner and within the time specified by the manufacturer.

FERTILIZER:

- Shall Conform to 3881
- Available nutrients by weight:
  - N: 20%
  - P<sub>2</sub>O<sub>5</sub>: 20%
  - K<sub>2</sub>O: 20%

MULCH: 3882, Type 1.

PREPARATION:

- Till fertilizer into top 5 inches of soil at rate of 20 lbs/1000 sq. ft. as recommended by the Engineer to conform to the recommendations of the soil test results.
- Water dry topsoil to depth of 4 inches at least 48 hours prior to seeding to obtain a loose friable seed bed.

APPLICATION:

- Broadcast half of seed with mechanical seeder.
- Broadcast remaining half of seed at right angles to first seeding pattern, using same broadcast method.
- Apply seed at specified rates.
- Cover seed as specified in 2757.3D.
- Roll seeded area with roller weighing maximum of 150 lbs./ft. of width.
- Spread mulch uniformly at 100 lbs./1000 sq. ft.
- Stabilize mulch with straight disk.
- Water seeded areas to a depth of 4 inches.

GROUND COVER ESTABLISHMENT:

- Watering:
  - Keep soil moist during seed germination period.
  - Supplement rainfall to produce a total of 1/10 to 1/4 inch per day during germination and establishment.
- Do not mow.
- Reseed and mulch spots larger than 1 sq. ft. not having uniform stand of groundcover.
- Establishment period to extend 60 days after emergence.

KEY: PLANTER BED LOCATIONS AS SHOWN ON PLAN-PROFILE SHEETS

PLANTER BED LOCATIONS

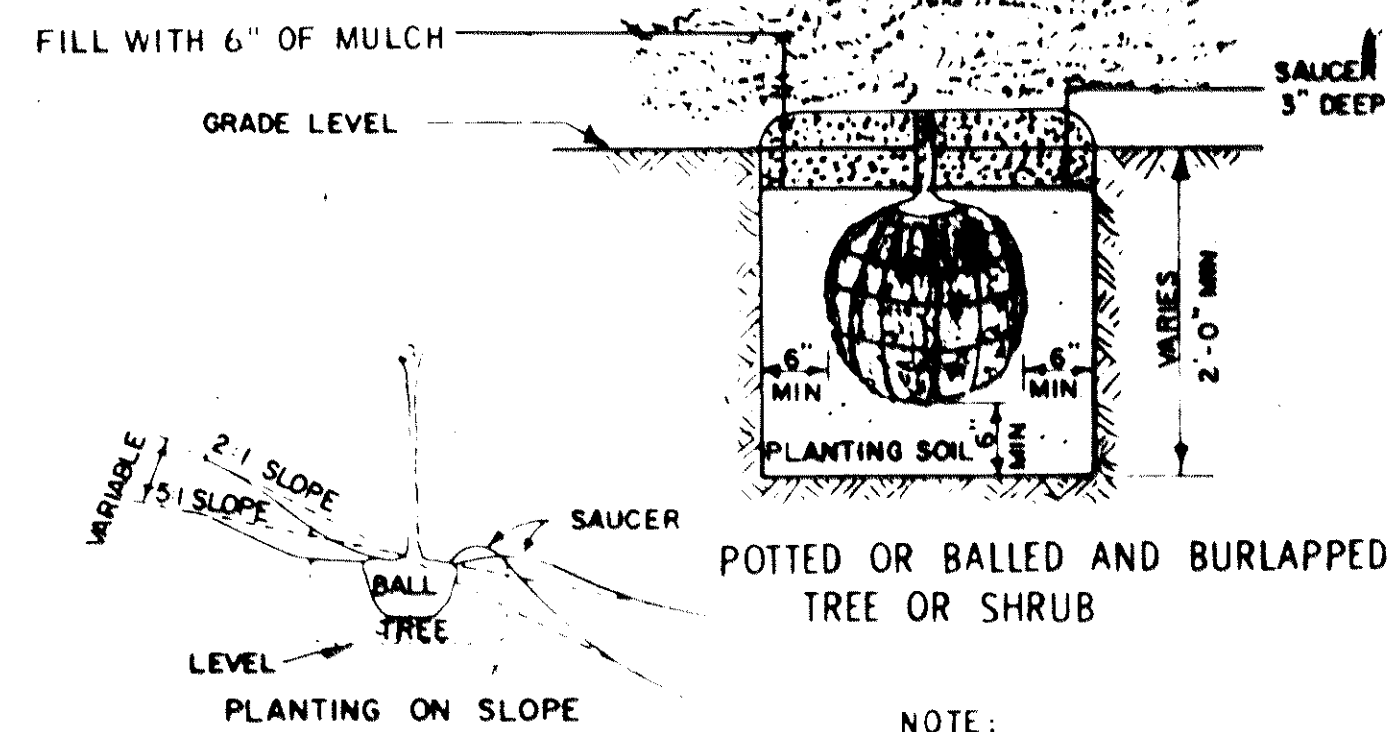
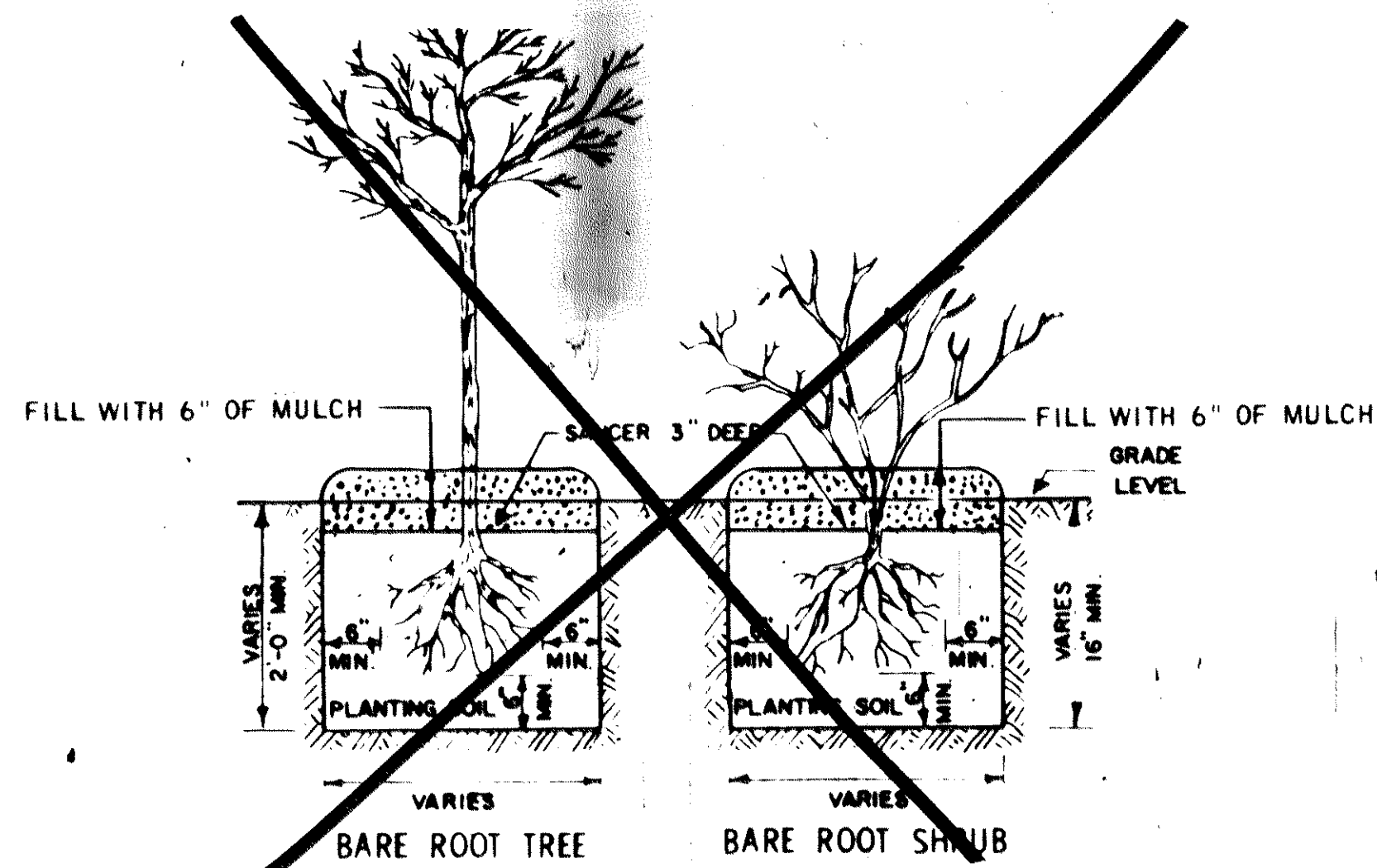
825+45      954+45  
 837+28      957+45  
 862+45      962+60  
 888+60      975+60  
 876+00      982+70  
 888+25      1001+45  
 930+40

PLANTER BEDS - 13'

825+40 — 826+60  
 837+70 — 838+90  
 861+80 — 863+00  
 867+98 — 869+19  
 875+41 — 876+61  
 887+65 — 888+85  
 929+79 — 930+99  
 953+85 — 955+05  
 956+85 — 958+05  
 961+90 — 963+10  
 974+90 — 976+10  
 982+10 — 983+20  
 1000+85 — 1002+05

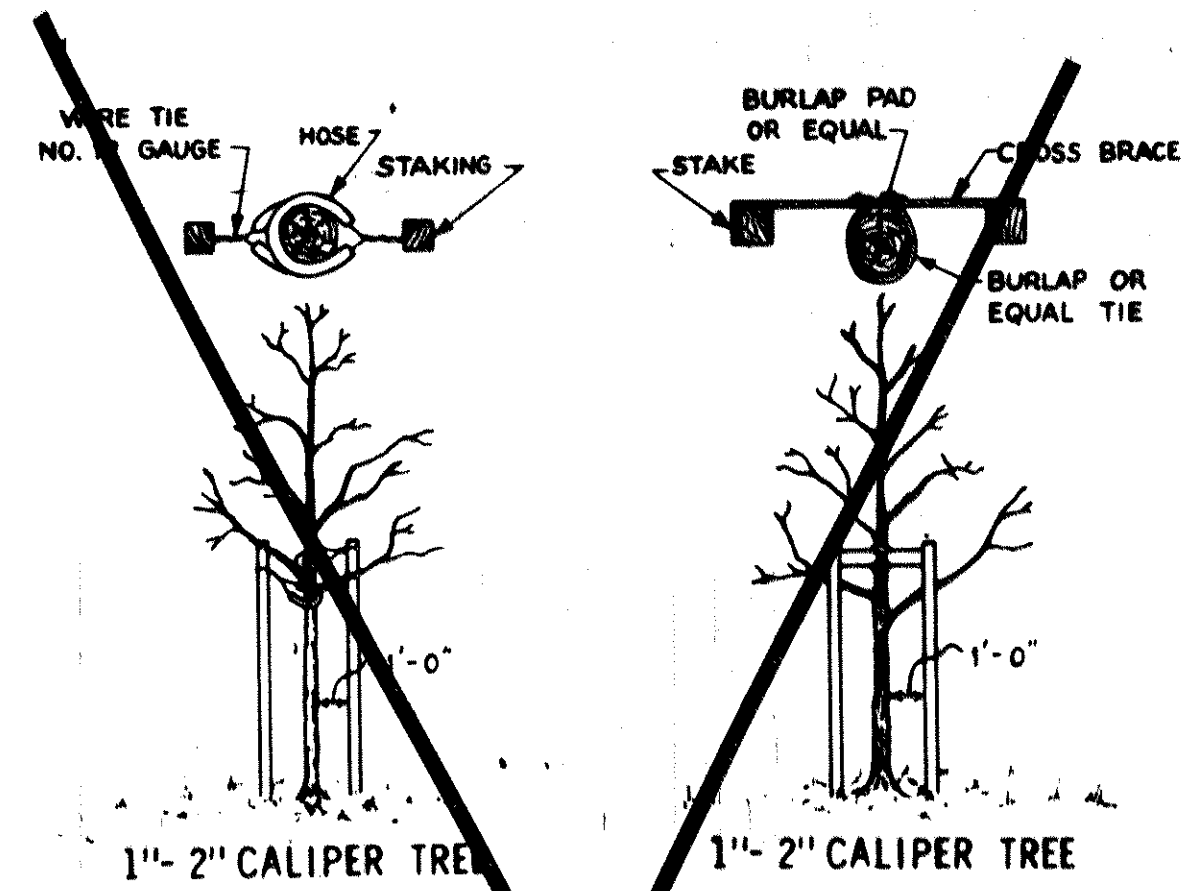
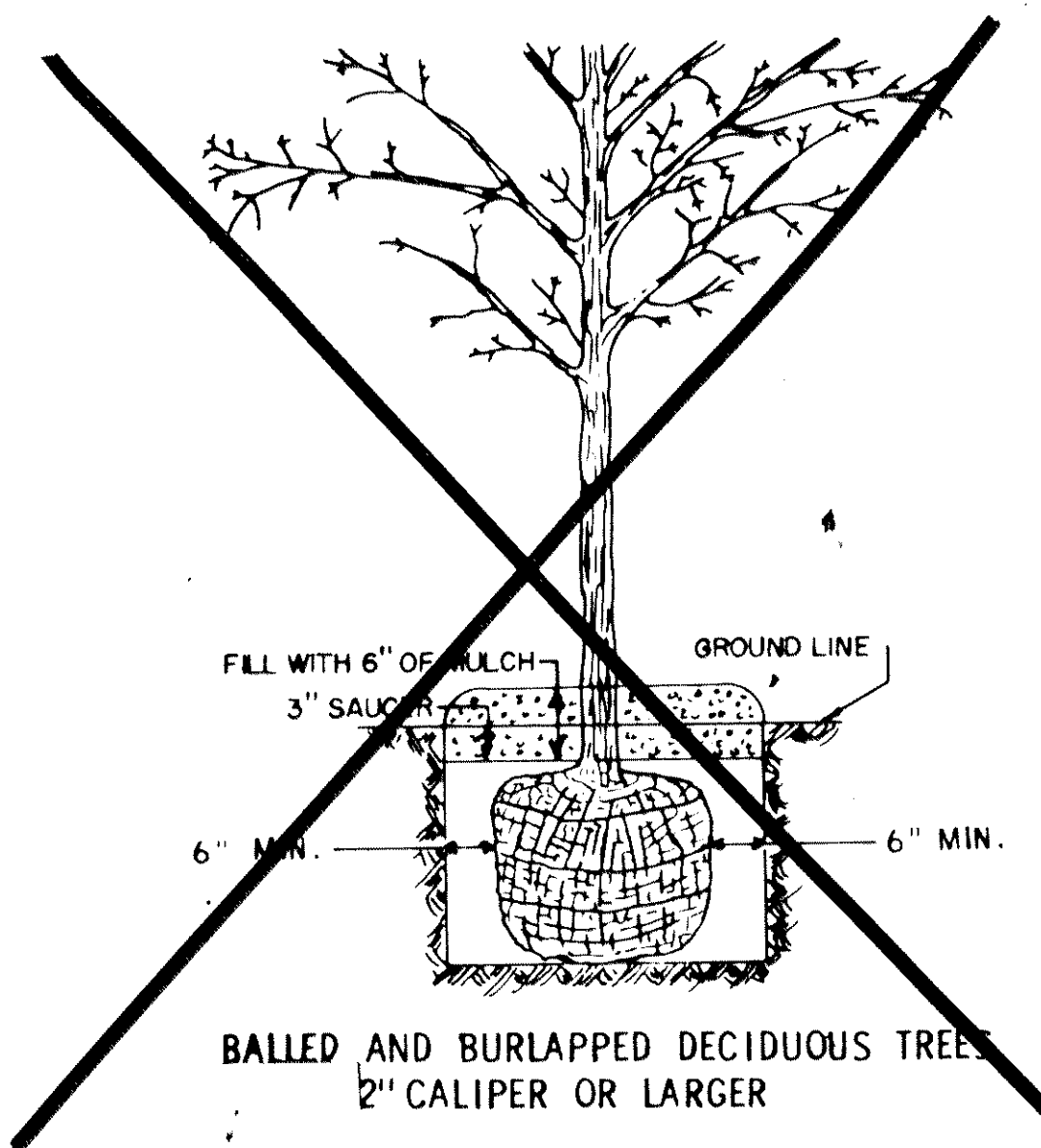
PLANTER BED

REV. MAR 1978

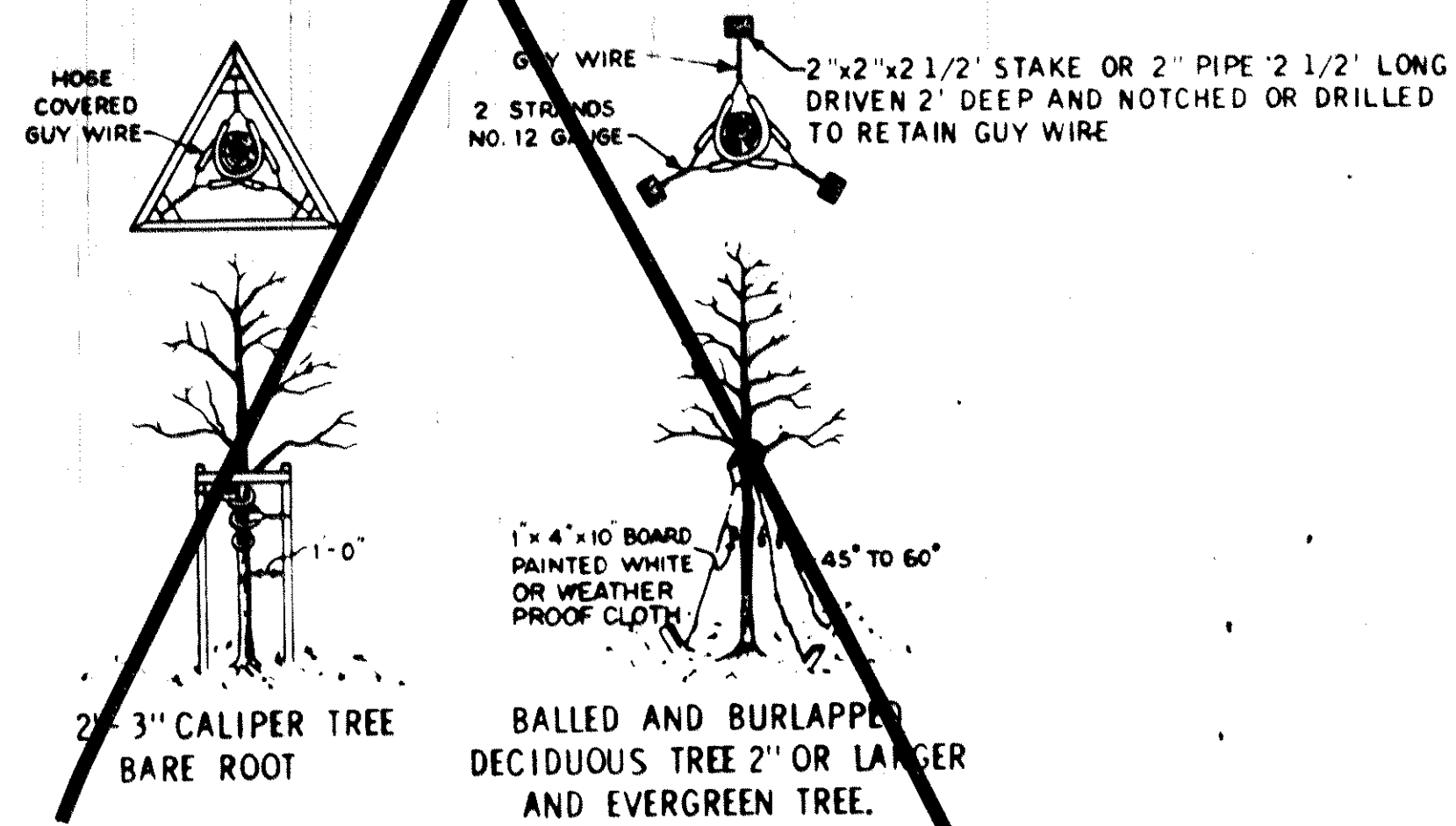


NOTE:  
SET PLANTS AT THE SAME OR SLIGHTLY  
LOWER DEPTH AS THEY GREW IN THE  
NURSERY OR FIELD. ALL PLANTS SHALL  
BE PLACED IN A PLUMB POSITION.

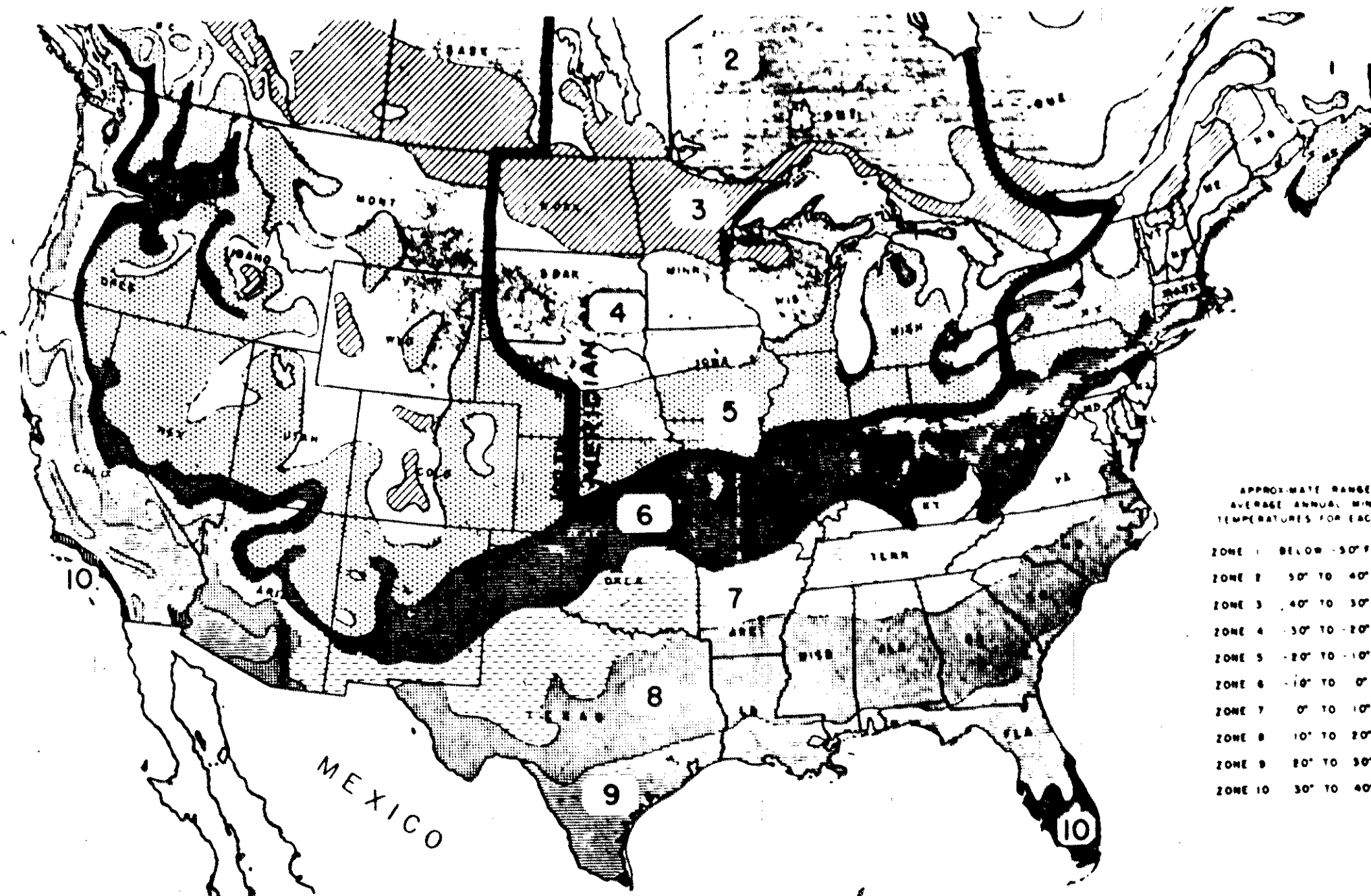
PLANTING METHODS



ALL STAKES ARE NOMINAL 2" OR 2 1/2" DIAMETER, 8' LONG WITH  
2' IN THE GROUND. CROSS BRACES ARE NOMINAL 1"x3" MATERIAL.



STAKING AND GUYING METHODS



The Zones of Plant Hardiness—This is an adapted version of the color map on the reverse side. It may be useful for small-scale reproduction in books, magazines, and nursery catalogs. This map is not copyrighted, and permission for reproducing it is not required.

GENERAL NOTES

FERTILIZER Shall be 10-6-4 analysis at the rate of 5 LB per cu yd of planting soil. Shall be considered incidental.

MULCH MATERIAL: All plant installations shall be mulched to a minimum depth of 6 inches and 24 inches in diameter with wood chips, unless noted otherwise on this plan.

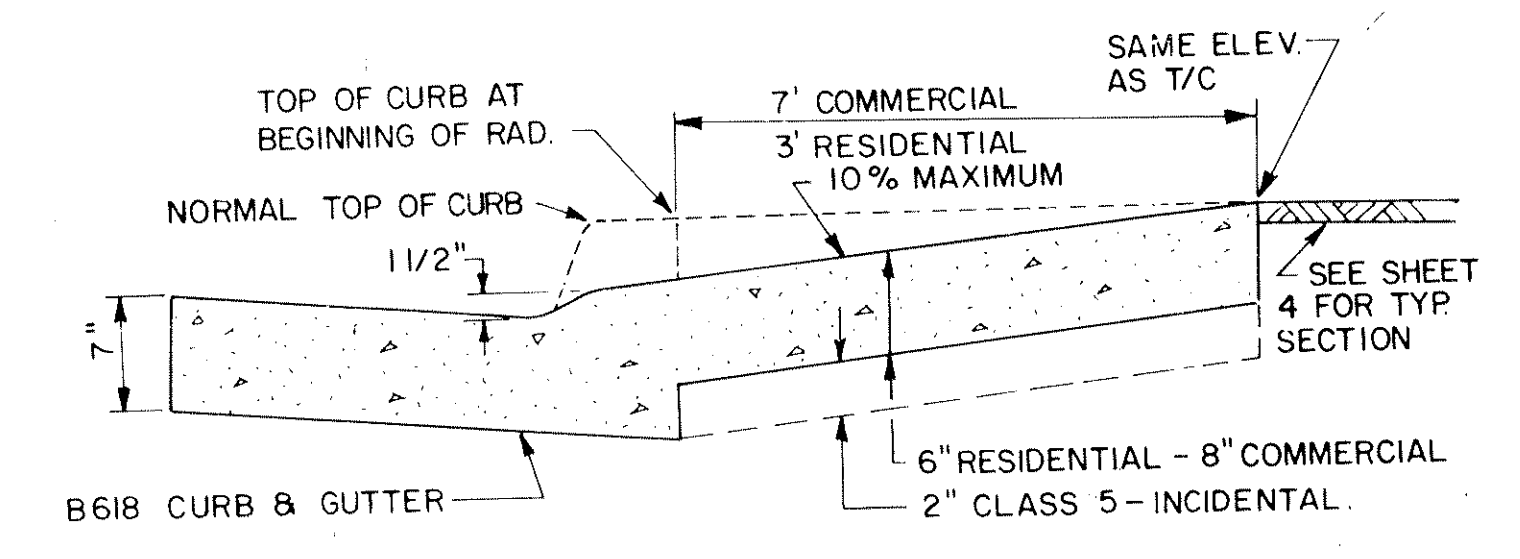
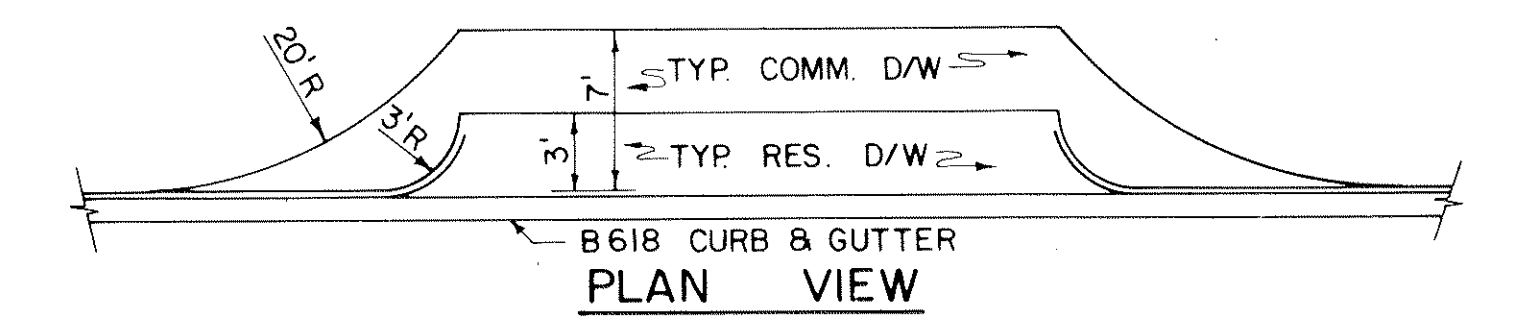
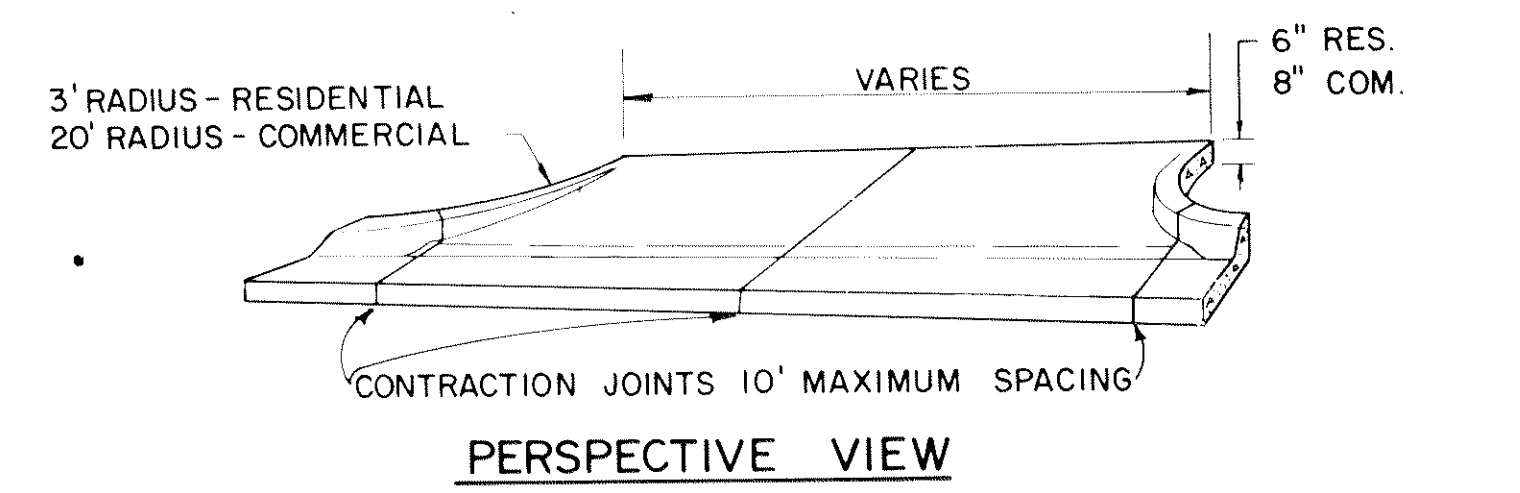
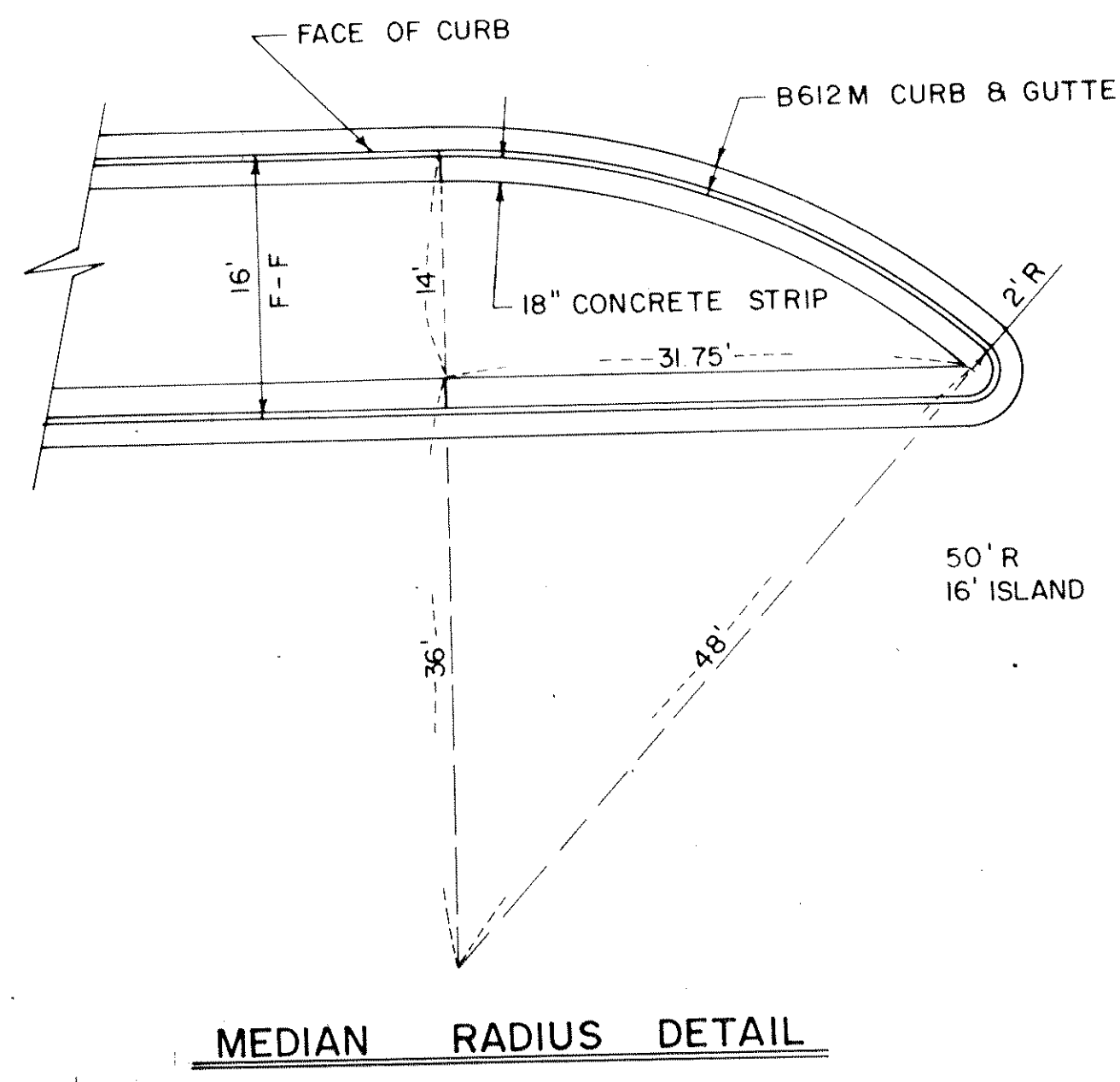
ROADSIDE DEVELOPMENT  
PLANTING DETAILS

REV. MAR 1978

CLEARING AND GRUBBING					
STATION (TO STATION)	LOC.	CLEARING		GRUBBING	
		TREE	ACRE	TREE	ACRE
820 + 08	SPO2-601-22 CTB	56'	RT.	1	1
823 + 40		52.5'	RT.	1	1
823 + 97.8		53'	RT.	1	1
824 + 01.5		53'	RT.	1	1
834 + 54		54.5'	RT.	1	1
836 + 62		61.5'	RT.	1	1
840 + 85		60'	RT.	2	2
844 + 03		54.5'	RT.	1	1
844 + 40		54.5'	RT.	1	1
844 + 61		54.5'	RT.	2	1
859 + 68		54'	LT.	1	1
899 + 21		54.5'	LT.	3	3
902 + 95		56.5'	RT.	1	1
903 + 48		53.5'	RT.	1	1
903 + 62		54.5'	RT.	1	1
910 + 78		54.5'	RT.	1	1
914 + 53.5		95.5'	LT.	1	1
926 + 58.5		80'	LT.	1	1
952 + 17		61'	LT.	2	1
956 + 21.5		65.5'	LT.	4	4
952 + 40 - 962 + 70		85'	LT.	0.24	0.24
965 + 28		71.5'	LT.	1	1
966 + 35		54.5'	RT.	4	1
966 + 43		65.5'	LT.	1	1
966 + 86		47.7'	RT.	3	1
975 + 19		62.5'	LT.	1	1
975 + 80		68.5'	LT.	1	1
976 + 01		82.5'	LT.	1	1
976 + 02		72'	LT.	1	1
976 + 33.5		72'	LT.	1	1
976 + 38.5		80.5'	LT.	1	1
978 + 20 - 980 + 20		80'	LT.	0.05	0.05
980 + 26.5		62'	LT.	1	1
980 + 34		79'	LT.	1	1
980 + 48		77.5'	LT.	1	1
980 + 96		63'	LT.	1	1
981 + 11		66.5'	LT.	1	1
981 + 42		65.5'	LT.	1	1
981 + 79		61.5'	LT.	1	1
987 + 77.5		64.5'	LT.	1	1
987 + 79.5		64.5'	LT.	1	1
988 + 05		58.5'	RT.	1	1
988 + 40		61.0'	RT.	1	1
988 + 82		53.5'	RT.	1	1
989 + 18.5		54.5'	RT.	1	1
989 + 20		80'	LT.	2	1
990 + 19		54.5'	RT.	1	1
991 + 20		54.5'	RT.	1	1
992 + 20		54'	RT.	3	1
992 + 70.5		51.5'	RT.	1	1
994 + 86.5		54.5'	RT.	1	1
1002 + 65		95.5'	LT.	1	1
1002 + 74.5		95.5'	LT.	1	1
EGRET FTG. RD.					
1+06-2+10				0.14	0.14
2+75-3+83				0.15	0.15
S.A.P. 114-010-01					
HANSON FTG. RD.					
853+50				1	1
3+63		16.5'	RT.	1	1
4+05				1	1
4+32		2.0'	LT.	1	1
4+55		14.0'	RT.	1	1
4+84		7.0'	RT.	1	1
5+22		13.0'	RT.	1	1
7+00		15.0'	RT.	3	3
7+10				3	3
862+40		70.0'	LT.	2	2
881+00-882+30				5	5
XAVIS FTG. RD.					
894+81		3.0'	LT.	1	1
895+11		9.0'	LT.	1	1
895+36		20.0'	LT.	1	1
896+35		8.0'	LT.	1	1
CROOKED LK. FTG. RD.					
0+89-4+10				0.29	0.29

SIGN TABULATION						
TYPE	SIZE	S.F.	QUANTITIES			TOTAL
			02-601-22	C.P. 76-15		
R1-1	STOP	36 X 36	9	44	26	70
R1-2	YIELD	36 X 36 X 36	3.90	5	1	6
R2-1	SPEED SIGN	24 X 30	5	4	7	11
R2-1	SPEED SIGN	36 X 48	12	14	0	14
R3-1	NO RIGHT TURN	24 X 24	4	1	1	2
R3-1P	NO RIGHT TURN	18 X 24	3	1	1	2
R3-2	NO LEFT TURN	24 X 24	4	1	0	1
R3-2P	NO LEFT TURN	18 X 24	3	1	0	1
R3-X1	RIGHT TURN LANE	30 X 30	6.25	39	0	39
R3-X2	LEFT TURN LANE	30 X 30	6.25	33	0	33
R4-7	KEEP RIGHT	24 X 30	5	1	0	1
R4-7	KEEP RIGHT	36 X 48	12	39	0	39
R4-7P	KEEP RIGHT	18 X 24	3	40	1	41
R5-1	DO NOT ENTER	30 X 30	6.25	45	4	49
R6-1L	ONE WAY ARROW	18 X 48	6	14	8	22
R6-1R	ONE WAY ARROW	18 X 48	6	65	1	66
R7-1A	NO PARKING	12 X 18	1.5	6	32	38
R7-1A	NO PARKING	18 X 20	3	36	0	36
W1-1L	TURN	30 X 30	6.25	0	2	2
W1-1R	TURN	30 X 30	6.25	0	2	2
W1-2L	CURVE	30 X 30	6.25	0	1	1
W1-3L	REVERSE TURN	30 X 30	6.25	0	2	2
W1-3R	REVERSE TURN	30 X 30	6.25	0	3	3
W1-3R	REVERSE TURN	36 X 36	9	1	0	1
W1-7	LARGE ARROW DBL. HE.	24 X 48	8	4	0	4
W3-1	STOP AHEAD	30 X 30	6.25	0	2	2
W3-3	SIGNAL AHEAD	36 X 36	9	2	0	2
W3-3P	SIGNAL AHEAD	24 X 18	3	2	0	2
W12-1	DOUBLE ARROW	30 X 30	6.25	1	0	1
W13-1	ADVISORY SPEED	18 X 18	2.25	1	9	10
W14-1	DEAD END	36 X 36	9	1	0	1
X4-2	HAZARD MARKER	18 X 18	2.25	47	2	49
X4-4	CLEARANCE MARKER	8 X 18	1	26	0	26
D11-1	BIKE ROUTE	18 X 24	3	25	0	25
R10-6L	STOP HERE ON RED	12 X 18	1.5	12	0	12

02-601-22-CTB EROSION CONTROL		
LOCATION	SOD	WOOD FIBER BLANKETS
802+92-855+00	MAINLINE	10485 S.Y.
853+00-854+75	POND	1306 S.Y.
855+00-898+00	MAINLINE	10420 S.Y.
898+00-936+00	MAINLINE	7259 S.Y.
915+75-920+00	POND	1805 S.Y.
936+00-1005+08	MAINLINE	10041 S.Y.
1003+27-1004+32	LT. DITCH	373 S.Y.
1003+27-1004+32	LT. DITCH AND SLOPE	303 S.Y.
S.A.P. 114-010-01		
100th LANE		359 S.Y.
HANSON FR. RD.		970 S.Y.
XAVIS FR. RD.		600 S.Y.
CROOKED LAKE FR. RD.		1000 S.Y.
RED OWL FR. RD.		306 S.Y.



SECTION VIEW

SEE STANDARD PLATE NO. 7035

DRIVEWAY DETAIL

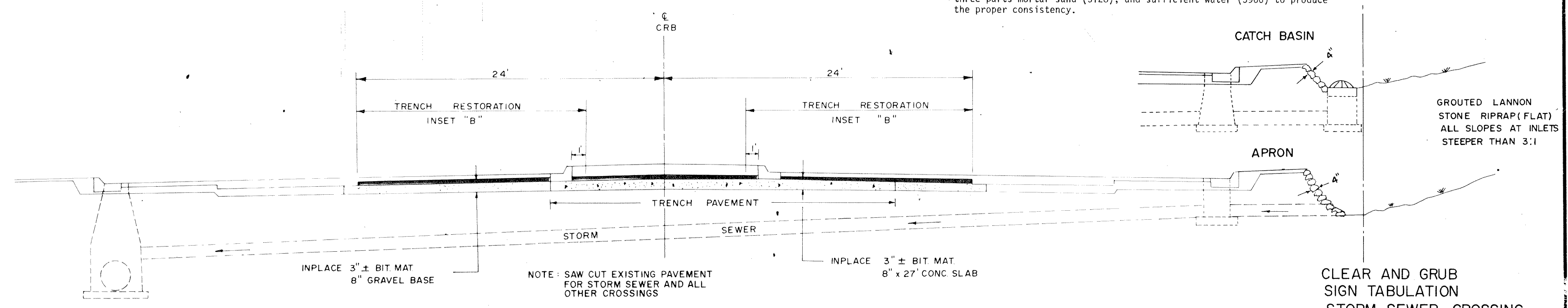
GRouted LANNON STONE RIPRAP

The stone shall be quarried Lannon stone of approved quality; dense, sound and durable; and free from segregations, seams, cracks, or other structural defects which would impair its resistance to the action of the weather.

The individual quarried stone shall be "quarry faced" stone and shall have a thickness of four inches and a depth of one foot minimum.

Mortar for stone masonry shall be a mixture of one part Portland cement (3101), 1/10 part hydrated lime (3106) or an approved equivalent, three parts mortar sand (3128), and sufficient water (3906) to produce the proper consistency.

STORM SEWER CROSSING DETAIL



CLEAR AND GRUB SIGN TABULATION STORM SEWER CROSSING





Summary table at the top left with columns: 55A, 842+50, 52.00 RT, H, 2.90, 62.39, 59.61, B, 10, 47, 1.00, 59.51. Below it: 57A, 849+04, 52.00 RT, H, 3.19, 63.60, 60.53, B, 10, 57, 1.00, 60.43.

STORM SEWER

Main data table with columns: STRUCT. NO., STATION, LOCATION, CONSTRUCTION (DESIGN, PAY HEIGHT, LIN. FT.), TOP OF CASTING OR INLET (ELEV.), OUTLET (ELEV.), F&I CASTING ASSY. (TYPE), FURNISH AND INSTALL SEWER PIPE (12" CL II to 48" CL III), APRONS (RCP, CM), DRAINS TO (STR. NO., GRADE %, INL. EL.), SODDING (SQ. YD.), GROUNDED LANNON STONE RIPRAP (SQ. YD.), TYPE I FILTER BLANKET (CU. YD.), REMARKS.

REV. MAR. 1978

F&I NEW CASTING  
ADJUST - F&I NEW CASTING









PAY ITEM 2545.523  
2" NON-METALLIC  
CONDUIT

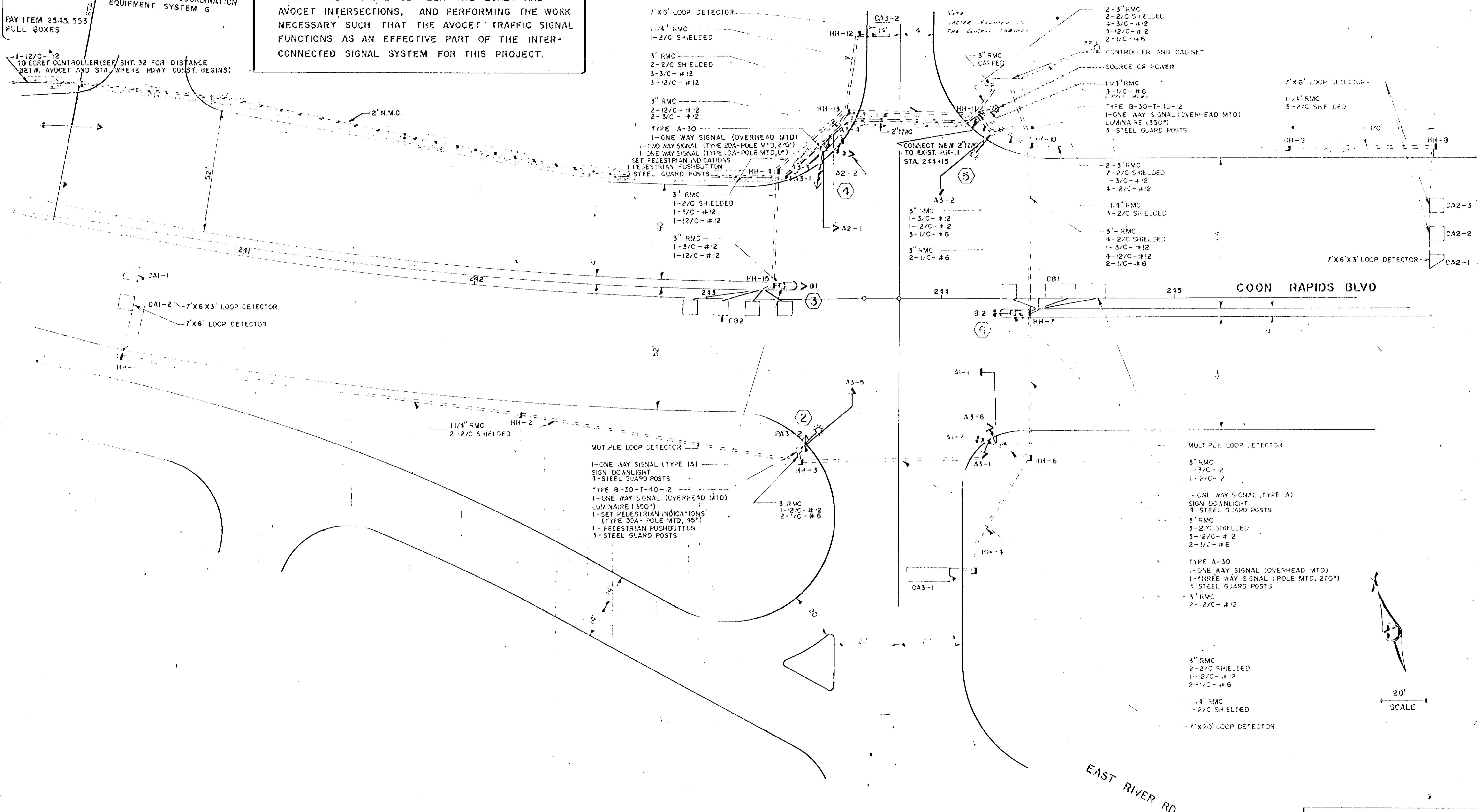
PAY ITEM 2545.531  
UNDERGROUND  
WIRE

PAY ITEM 2545.553  
PULL BOXES

PAY ITEM 0565.649  
INTERCONNECT COORDINATION  
EQUIPMENT SYSTEM G

WORK TO BE PERFORMED UNDER THIS PROJECT SHALL  
INCLUDE INSTALLING THE CONDUIT AND HANDHOLES  
SHOWN IN THE SHADED AREA, INSTALLING THE  
INTERCONNECT CABLE BETWEEN THE EGRET AND  
AVOCET INTERSECTIONS, AND PERFORMING THE WORK  
NECESSARY SUCH THAT THE AVOCET TRAFFIC SIGNAL  
FUNCTIONS AS AN EFFECTIVE PART OF THE INTER-  
CONNECTED SIGNAL SYSTEM FOR THIS PROJECT.

1-12/C-#12  
TO EGRET CONTROLLER (SEE SHT. 32 FOR DISTANCE  
BETW. AVOCET AND STA. WHERE RDWY. CONST. BEGINS)



INTERCONNECT TO EXISTING  
SYSTEM G  
AVOCET STREET  
SIGNAL SYSTEM

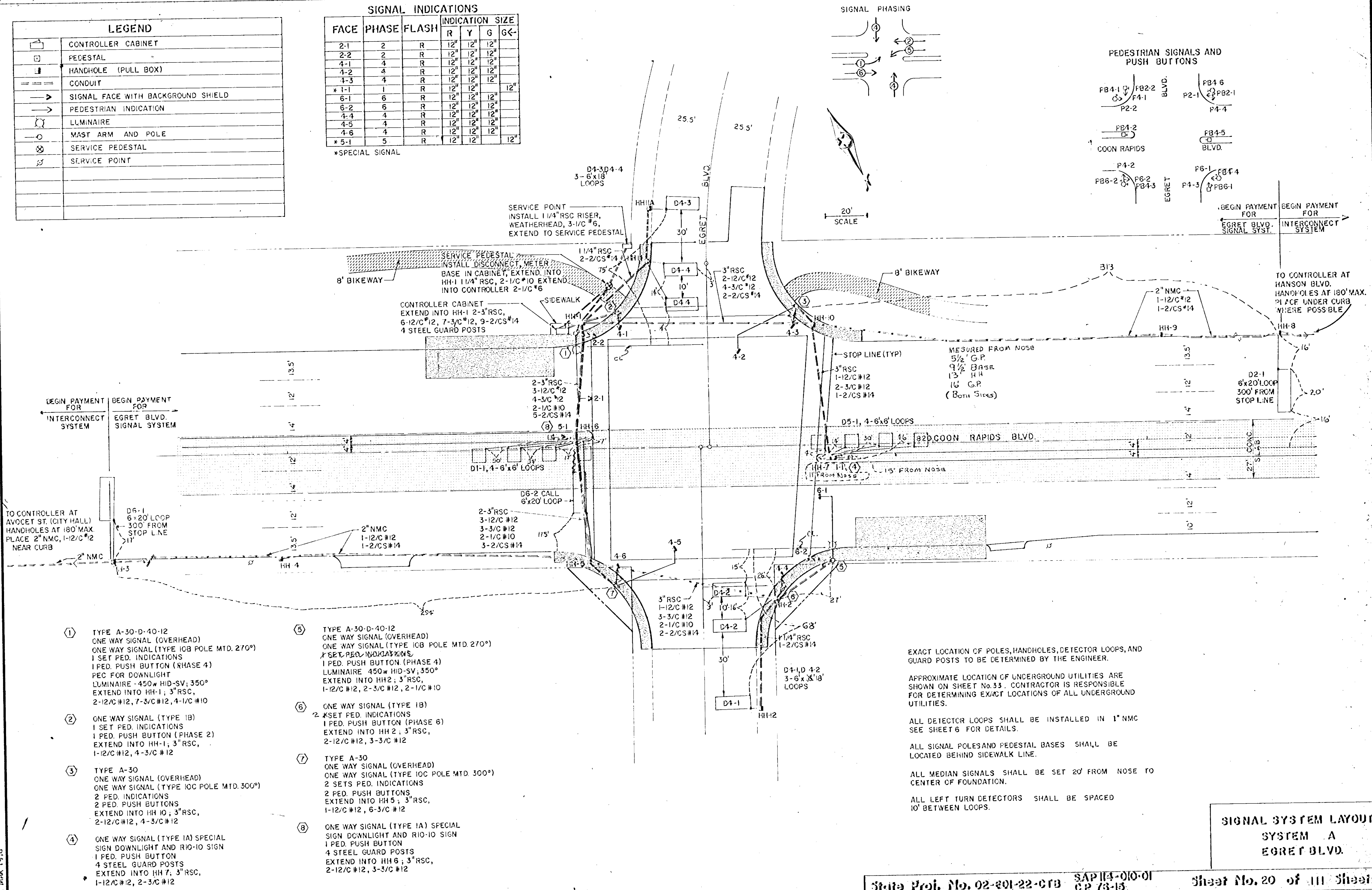
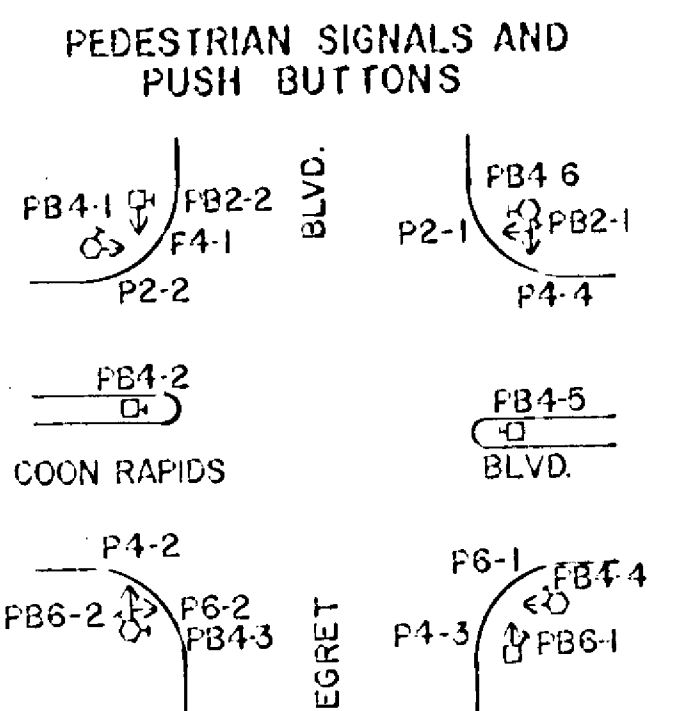
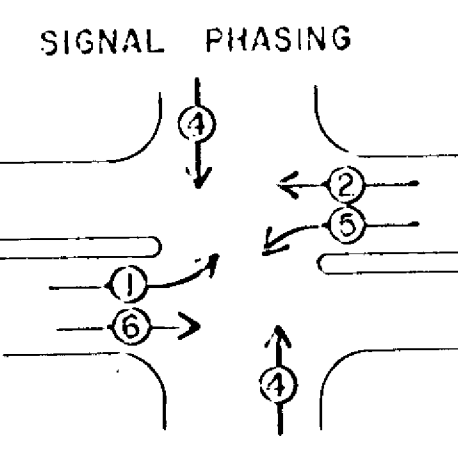
REV. MAR. 1973

JCB NO 3-105

LEGEND	
	CONTROLLER CABINET
	PEDESTAL
	HANDHOLE (PULL BOX)
	CONDUIT
	SIGNAL FACE WITH BACKGROUND SHIELD
	PEDESTRIAN INDICATION
	LUMINAIRE
	MAST ARM AND POLE
	SERVICE PEDESTAL
	SERVICE POINT

SIGNAL INDICATIONS						
FACE	PHASE	FLASH	INDICATION SIZE			G←
			R	Y	G	
2-1	2	R	12"	12"	12"	
2-2	2	R	12"	12"	12"	
4-1	4	R	12"	12"	12"	
4-2	4	R	12"	12"	12"	
4-3	4	R	12"	12"	12"	
* 1-1	1	R	12"	12"	12"	12"
6-1	6	R	12"	12"	12"	
6-2	6	R	12"	12"	12"	
4-4	4	R	12"	12"	12"	
4-5	4	R	12"	12"	12"	
4-6	4	R	12"	12"	12"	
* 5-1	5	R	12"	12"	12"	12"

\*SPECIAL SIGNAL



- ① TYPE A-30-D-40-12  
ONE WAY SIGNAL (OVERHEAD)  
ONE WAY SIGNAL (TYPE IOB POLE MTD. 270°)  
1 SET PED. INDICATIONS  
1 PED. PUSH BUTTON (PHASE 4)  
PEC FOR DOWNLIGHT  
LUMINAIRE - 450w HID-SV, 350°  
EXTEND INTO HH-1; 3" RSC,  
2-12/C #12, 7-3/C #12, 4-1/C #10
- ② ONE WAY SIGNAL (TYPE 1B)  
1 SET PED. INDICATIONS  
1 PED. PUSH BUTTON (PHASE 2)  
EXTEND INTO HH-1; 3" RSC,  
1-12/C #12, 4-3/C #12
- ③ TYPE A-30  
ONE WAY SIGNAL (OVERHEAD)  
ONE WAY SIGNAL (TYPE IOB POLE MTD. 300°)  
2 PED. INDICATIONS  
2 PED. PUSH BUTTONS  
EXTEND INTO HH-10; 3" RSC,  
2-12/C #12, 4-3/C #12
- ④ ONE WAY SIGNAL (TYPE 1A) SPECIAL  
SIGN DOWNLIGHT AND RIO-10 SIGN  
1 PED. PUSH BUTTON  
4 STEEL GUARD POSTS  
EXTEND INTO HH-7; 3" RSC,  
1-12/C #12, 2-3/C #12
- ⑤ TYPE A-30-D-40-12  
ONE WAY SIGNAL (OVERHEAD)  
ONE WAY SIGNAL (TYPE IOB POLE MTD. 270°)  
1 SET PED. INDICATIONS  
1 PED. PUSH BUTTON (PHASE 4)  
LUMINAIRE 450w HID-SV, 350°  
EXTEND INTO HH-2; 3" RSC,  
1-12/C #12, 2-3/C #12, 2-1/C #10
- ⑥ ONE WAY SIGNAL (TYPE 1B)  
2 SET PED. INDICATIONS  
1 PED. PUSH BUTTON (PHASE 6)  
EXTEND INTO HH-2; 3" RSC,  
2-12/C #12, 3-3/C #12
- ⑦ TYPE A-30  
ONE WAY SIGNAL (OVERHEAD)  
ONE WAY SIGNAL (TYPE IOB POLE MTD. 300°)  
2 SETS PED. INDICATIONS  
2 PED. PUSH BUTTONS  
EXTEND INTO HH-5; 3" RSC,  
1-12/C #12, 6-3/C #12
- ⑧ ONE WAY SIGNAL (TYPE 1A) SPECIAL  
SIGN DOWNLIGHT AND RIO-10 SIGN  
1 PED. PUSH BUTTON  
4 STEEL GUARD POSTS  
EXTEND INTO HH-6; 3" RSC,  
2-12/C #12, 3-3/C #12

EXACT LOCATION OF POLES, HANDHOLES, DETECTOR LOOPS, AND GUARD POSTS TO BE DETERMINED BY THE ENGINEER.

APPROXIMATE LOCATION OF UNDERGROUND UTILITIES ARE SHOWN ON SHEET No. 33. CONTRACTOR IS RESPONSIBLE FOR DETERMINING EXACT LOCATIONS OF ALL UNDERGROUND UTILITIES.

ALL DETECTOR LOOPS SHALL BE INSTALLED IN 1" NMC SEE SHEET 6 FOR DETAILS.

ALL SIGNAL POLES AND PEDESTAL BASES SHALL BE LOCATED BEHIND SIDEWALK LINE.

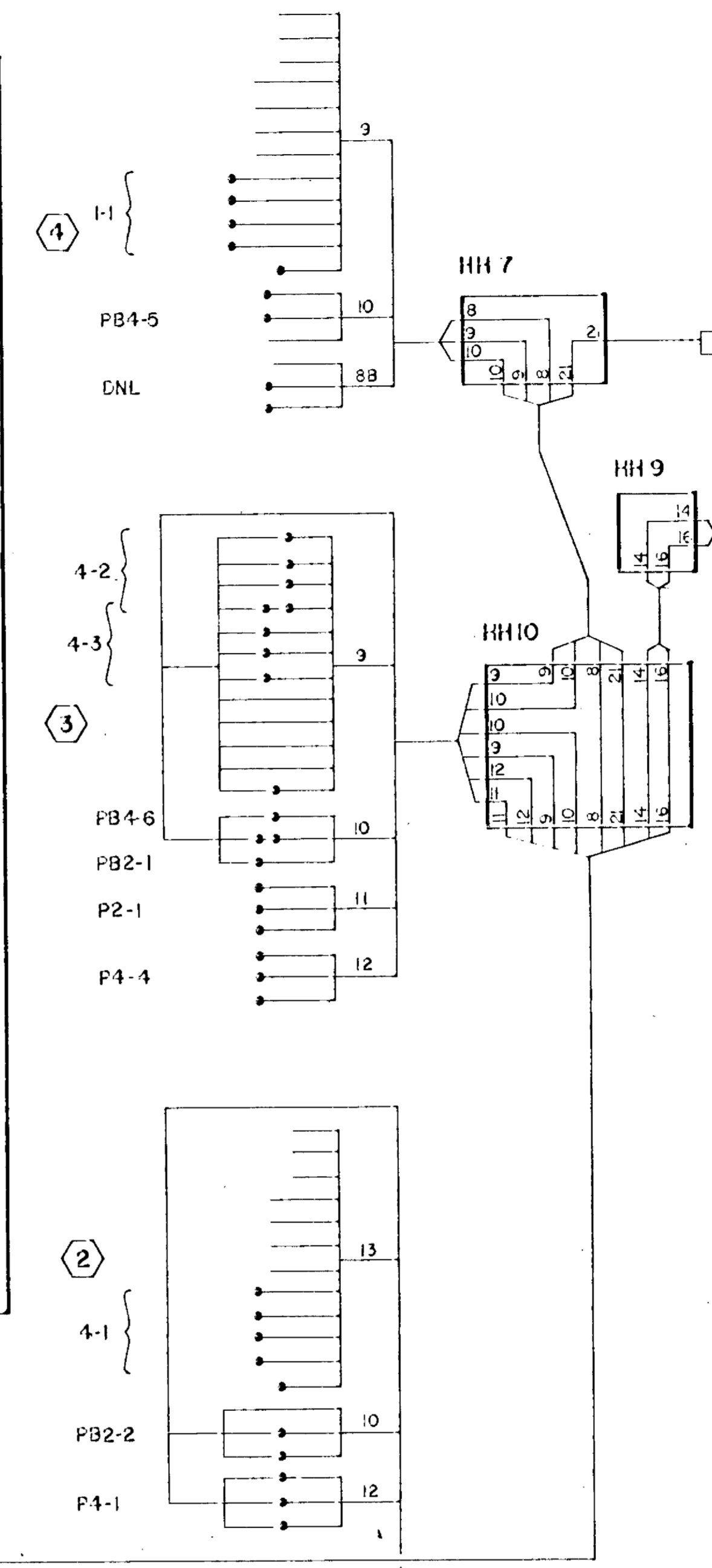
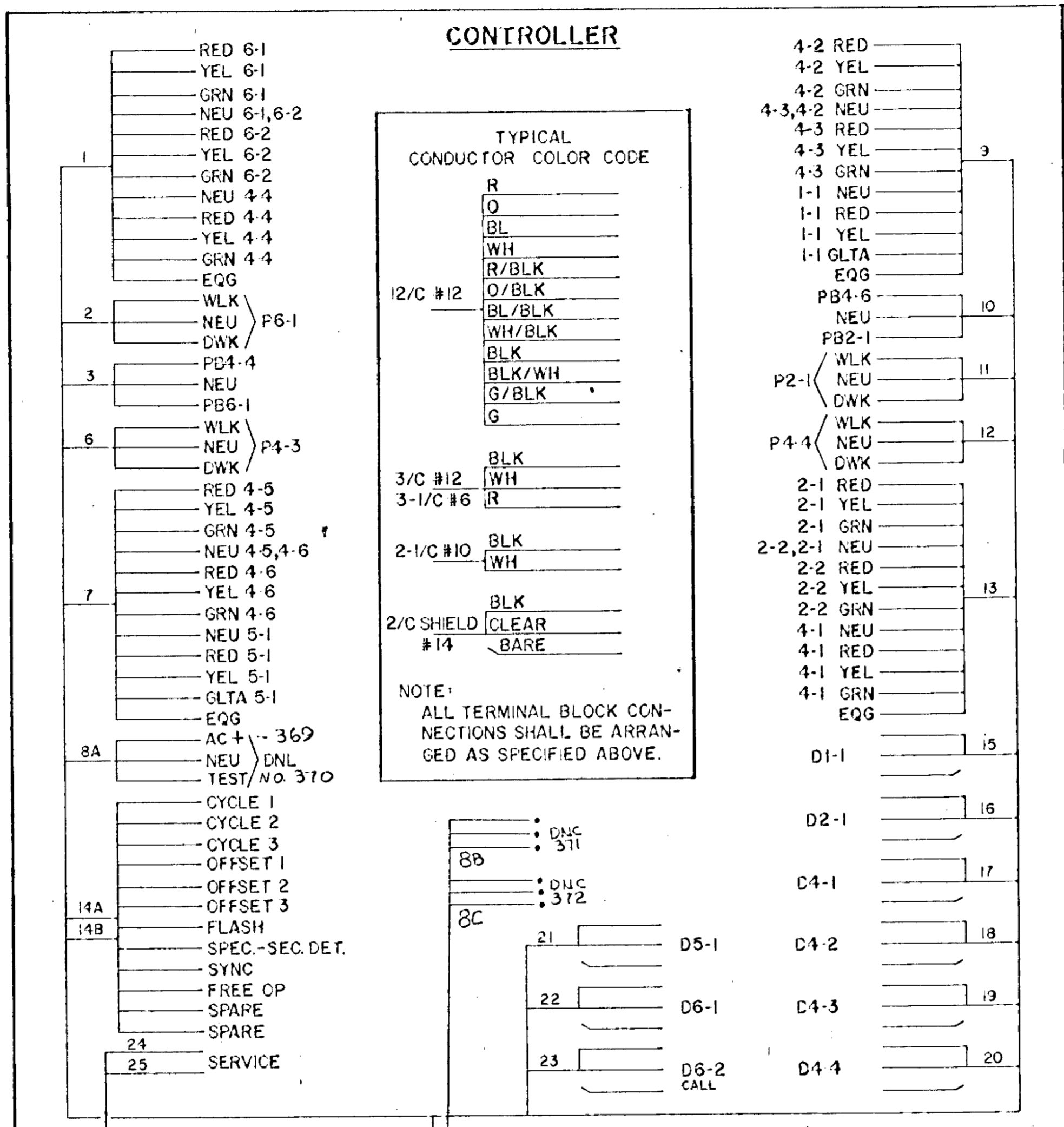
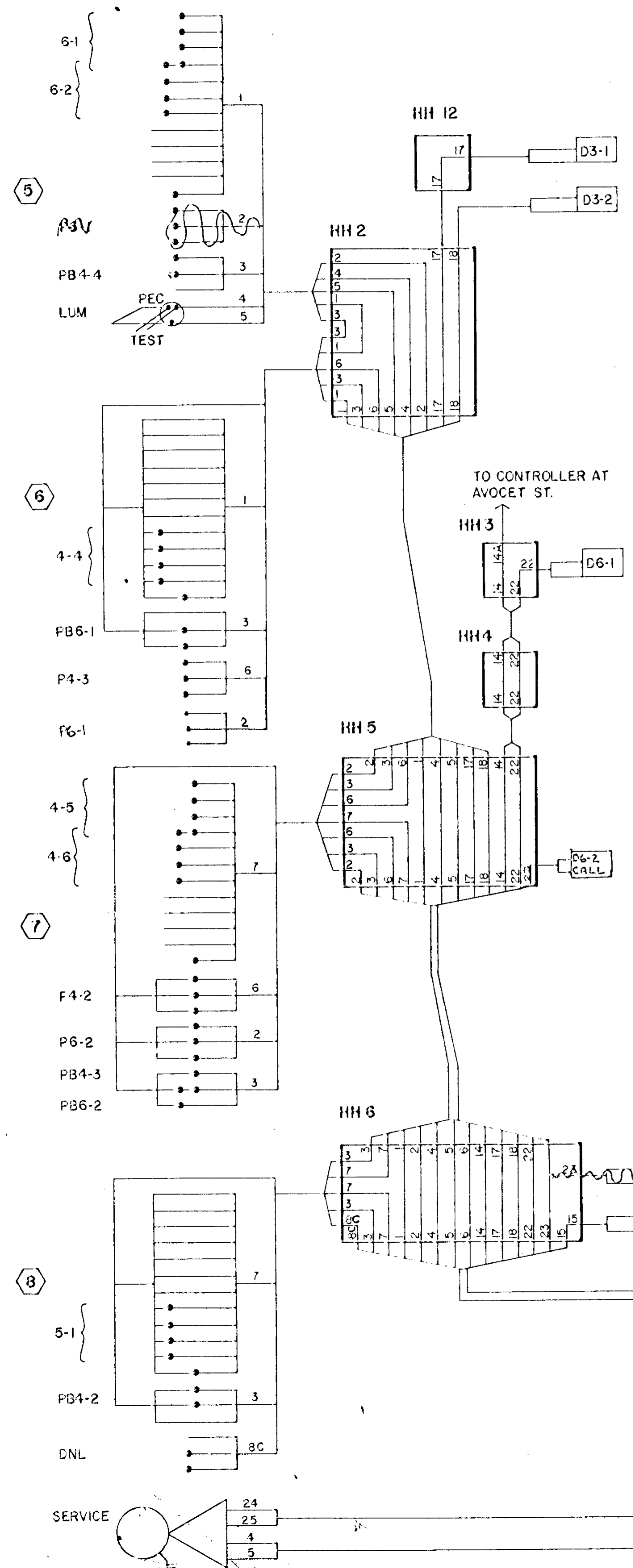
ALL MEDIAN SIGNALS SHALL BE SET 20' FROM NOSE TO CENTER OF FOUNDATION.

ALL LEFT TURN DETECTORS SHALL BE SPACED 10' BETWEEN LOOPS.

**SIGNAL SYSTEM LAYOUT  
SYSTEM A  
EGRET BLVD.**

REV. MARK 1975

REV. MAR 1978



- NOTES:
1. TERMINATE THE WHITE CONDUCTOR OF 3 CONDUCTOR CABLES SERVING DETECTORS, IN THE LAST MANHOLE. MAKE SPLICES OF DETECTOR CONDUCTORS TO 3 CONDUCTOR CABLES IN MANHOLE.
  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
  4. PROVIDE IN-LINE FUSES IN BASE OF EACH STANDARD FOR STREET LIGHTS.
  5. GROUND CONDUCTORS ARE NOT SHOWN. INSTALL GROUNDING AS SPECIFIED.
  6. SPARE CABLES ARE INCLUDED IN NUMBERS OF CABLES SHOWN ON LAYOUT, SHEET NO. 19. THOSE SPARE CABLES ARE NOT SHOWN IN DIAGRAM ON THIS SHEET. TERMINATE SPARE CABLES IN BASES OF PEDESTALS.

#### TYPICAL CONDUCTOR COLOR CODE INTERCONNECT CABLE

R	CYCLE 1
O	CYCLE 2
B	CYCLE 3
R/BLK	OFFSET 1
O/BLK	OFFSET 2
BL/BLK	OFFSET 3
WH/BLK	FLASH
BLK	SPEC-SEC.DET.
BLK/WH	SYNC
G/BLK	FREE
G	SPARE
WH	SPARE

THE CONTRACTORS ATTENTION IS DIRECTED TO SPECIAL PROVISIONS SS-1.35 FOR SPECIAL COMMENT REGARDING CABLE.

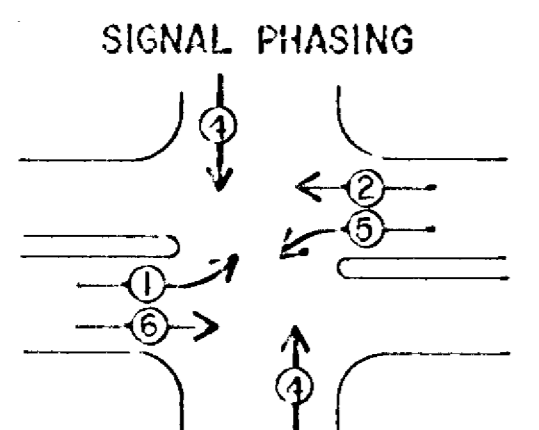
#### EQUIPMENT AND INDICATIONS

RED - RED	B3(eg) - SIGNAL HEAD - PHASE "B"
YEL - YELLOW	DA-1(eg) - DETECTOR - PHASE "A"
GRN - GREEN	HH - HANDHOLE
LTA - LEFT TURN ARROW	GRR - GROUND ROD
RTA - RIGHT TURN ARROW	SERV - SERVICE
WLK - WALK	ST. LHT. - STREET LIGHT
NEU - NEUTRAL	SCP - SOURCE OF POWER
DWK - DON'T WALK	SPR - SPARE CONDUCTOR
LUM - LUMINARE	— - SPLICE
SWD - SWITCHED	PEC - PHOTOELECTRIC CELL
DNL - DOWNLIGHT	EQG - EQUIPMENT GROUND

#### CONDUCTOR COLOR CODE

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

SYSTEM A  
EGRET BLVD.



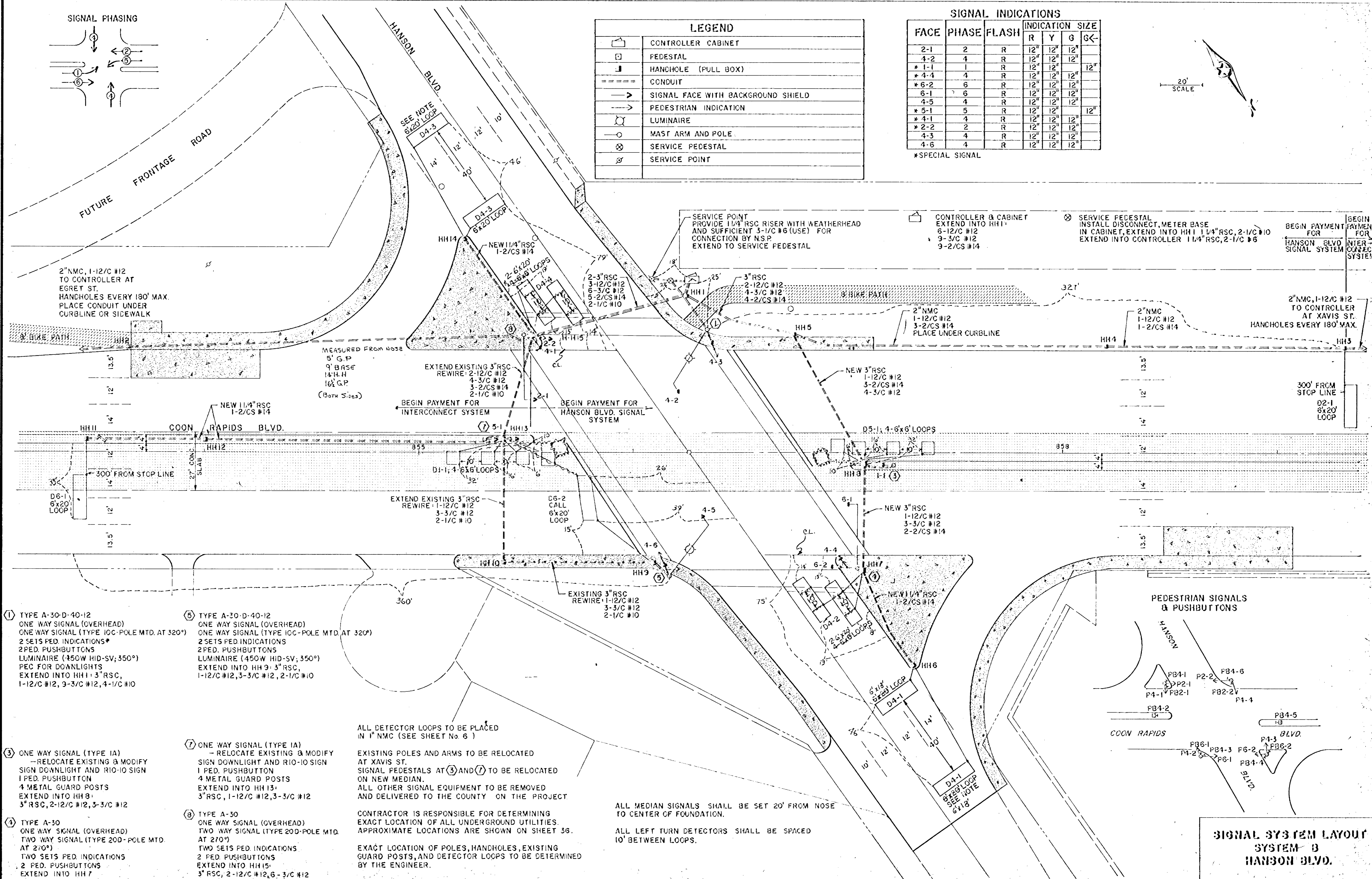
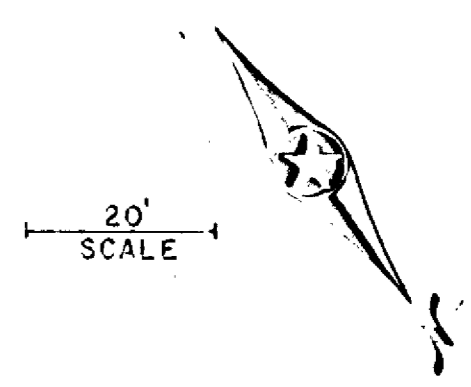
### LEGEND

	CONTROLLER CABINET
	PEDESTAL
	HANDHOLE (PULL BOX)
	CONDUIT
	SIGNAL FACE WITH BACKGROUND SHIELD
	PEDESTRIAN INDICATION
	LUMINAIRE
	MAST ARM AND POLE
	SERVICE PEDESTAL
	SERVICE POINT

### SIGNAL INDICATIONS

FACE	PHASE	FLASH	INDICATION SIZE			
			R	Y	G	G<
2-1	2	R	12"	12"	12"	
4-2	4	R	12"	12"	12"	
* 1-1	1	R	12"	12"	12"	12"
* 4-4	4	R	12"	12"	12"	
* 6-2	6	R	12"	12"	12"	
6-1	6	R	12"	12"	12"	
4-5	4	R	12"	12"	12"	
* 5-1	5	R	12"	12"	12"	12"
* 4-1	4	R	12"	12"	12"	
* 2-2	2	R	12"	12"	12"	
4-3	4	R	12"	12"	12"	
4-6	4	R	12"	12"	12"	

\*SPECIAL SIGNAL



- ① TYPE A-30-D-40-12  
ONE WAY SIGNAL (OVERHEAD)  
ONE WAY SIGNAL (TYPE IOC-POLE MTD. AT 320')  
2 SETS PED. INDICATIONS\*  
2 PED. PUSHBUTTONS  
LUMINAIRE (150W HID-SV; 350°)  
PEC FOR DOWNLIGHTS  
EXTEND INTO HH 1: 3" RSC,  
1-12/C #12, 3-3/C #12, 4-1/C #10
- ② TYPE A-30  
ONE WAY SIGNAL (OVERHEAD)  
TWO WAY SIGNAL (TYPE 20D-POLE MTD.  
AT 270°)  
TWO SETS PED. INDICATIONS  
2 PED. PUSHBUTTONS  
EXTEND INTO HH 7  
3" RSC, 1-12/C #12, 3-3/C #12
- ③ ONE WAY SIGNAL (TYPE 1A)  
-RELOCATE EXISTING & MODIFY  
SIGN DOWNLIGHT AND RIO-10 SIGN  
1 PED. PUSHBUTTON  
4 METAL GUARD POSTS  
EXTEND INTO HH 8:  
3" RSC, 2-12/C #12, 3-3/C #12
- ④ TYPE A-30-D-40-12  
ONE WAY SIGNAL (OVERHEAD)  
ONE WAY SIGNAL (TYPE IOC-POLE MTD. AT 320')  
2 SETS PED. INDICATIONS\*  
2 PED. PUSHBUTTONS  
LUMINAIRE (150W HID-SV; 350°)  
EXTEND INTO HH 9: 3" RSC,  
1-12/C #12, 3-3/C #12, 2-1/C #10
- ⑤ TYPE A-30-D-40-12  
ONE WAY SIGNAL (OVERHEAD)  
ONE WAY SIGNAL (TYPE IOC-POLE MTD. AT 320')  
2 SETS PED. INDICATIONS\*  
2 PED. PUSHBUTTONS  
LUMINAIRE (150W HID-SV; 350°)  
EXTEND INTO HH 9: 3" RSC,  
1-12/C #12, 3-3/C #12, 2-1/C #10
- ⑥ TYPE A-30  
ONE WAY SIGNAL (OVERHEAD)  
TWO WAY SIGNAL (TYPE 20D-POLE MTD.  
AT 270°)  
TWO SETS PED. INDICATIONS  
2 PED. PUSHBUTTONS  
EXTEND INTO HH 15:  
3" RSC, 2-12/C #12, 6-3/C #12
- ⑦ ONE WAY SIGNAL (TYPE 1A)  
-RELOCATE EXISTING & MODIFY  
SIGN DOWNLIGHT AND RIO-10 SIGN  
1 PED. PUSHBUTTON  
4 METAL GUARD POSTS  
EXTEND INTO HH 13:  
3" RSC, 1-12/C #12, 3-3/C #12
- ⑧ TYPE A-30  
ONE WAY SIGNAL (OVERHEAD)  
TWO WAY SIGNAL (TYPE 20D-POLE MTD.  
AT 270°)  
TWO SETS PED. INDICATIONS  
2 PED. PUSHBUTTONS  
EXTEND INTO HH 15:  
3" RSC, 2-12/C #12, 6-3/C #12

ALL DETECTOR LOOPS TO BE PLACED IN 1" NMC (SEE SHEET No. 6)

EXISTING POLES AND ARMS TO BE RELOCATED AT XAVIS ST. SIGNAL PEDESTALS AT ③ AND ⑦ TO BE RELOCATED ON NEW MEDIAN. ALL OTHER SIGNAL EQUIPMENT TO BE REMOVED AND DELIVERED TO THE COUNTY ON THE PROJECT

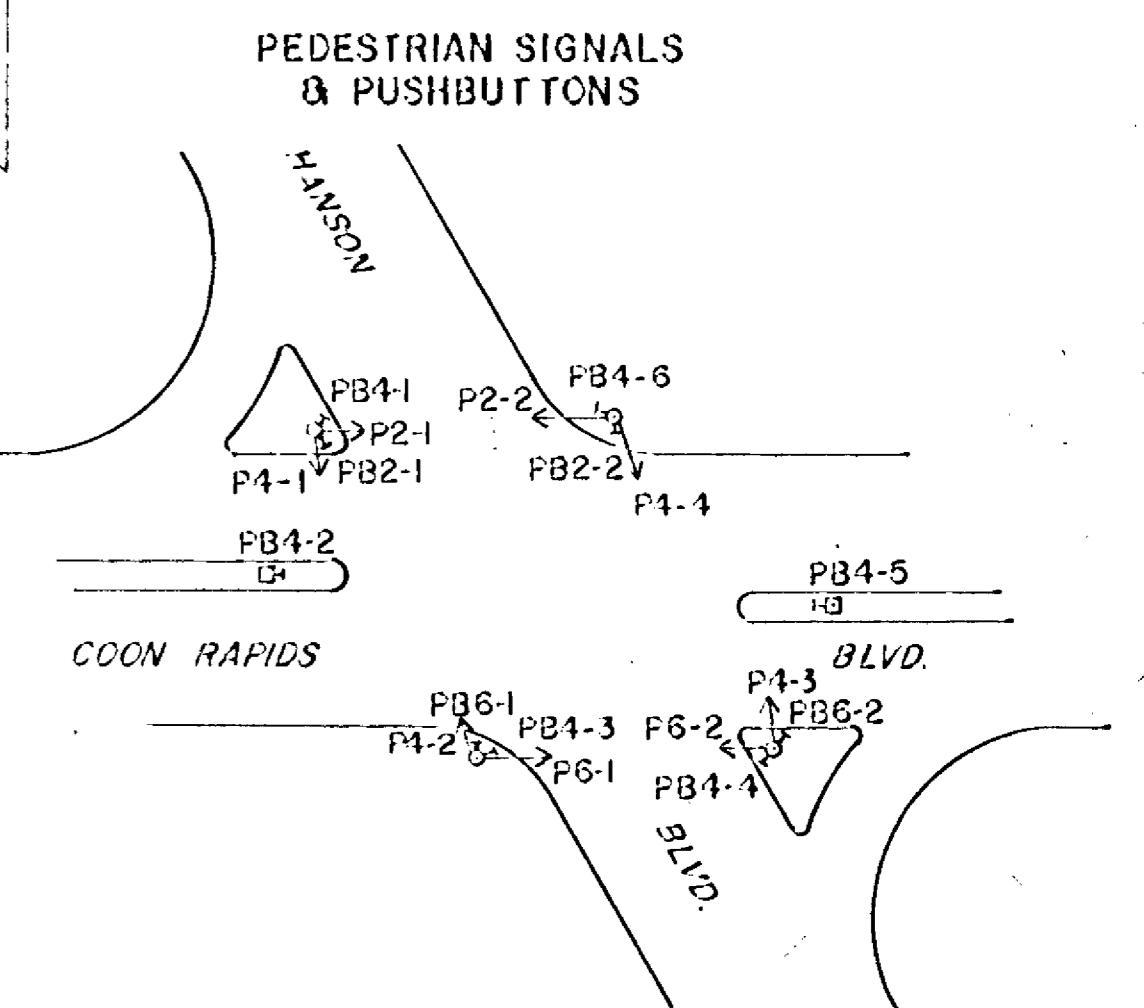
CONTRACTOR IS RESPONSIBLE FOR DETERMINING EXACT LOCATION OF ALL UNDERGROUND UTILITIES. APPROXIMATE LOCATIONS ARE SHOWN ON SHEET 36.

EXACT LOCATION OF POLES, HANDHOLES, EXISTING GUARD POSTS, AND DETECTOR LOOPS TO BE DETERMINED BY THE ENGINEER.

ADVANCE DETECTORS ON HANSON BLVD. NORTH AND SOUTH TO BE OPERABLE ONLY DURING PHASE 4 GREEN.

ALL MEDIAN SIGNALS SHALL BE SET 20' FROM NOSE TO CENTER OF FOUNDATION.

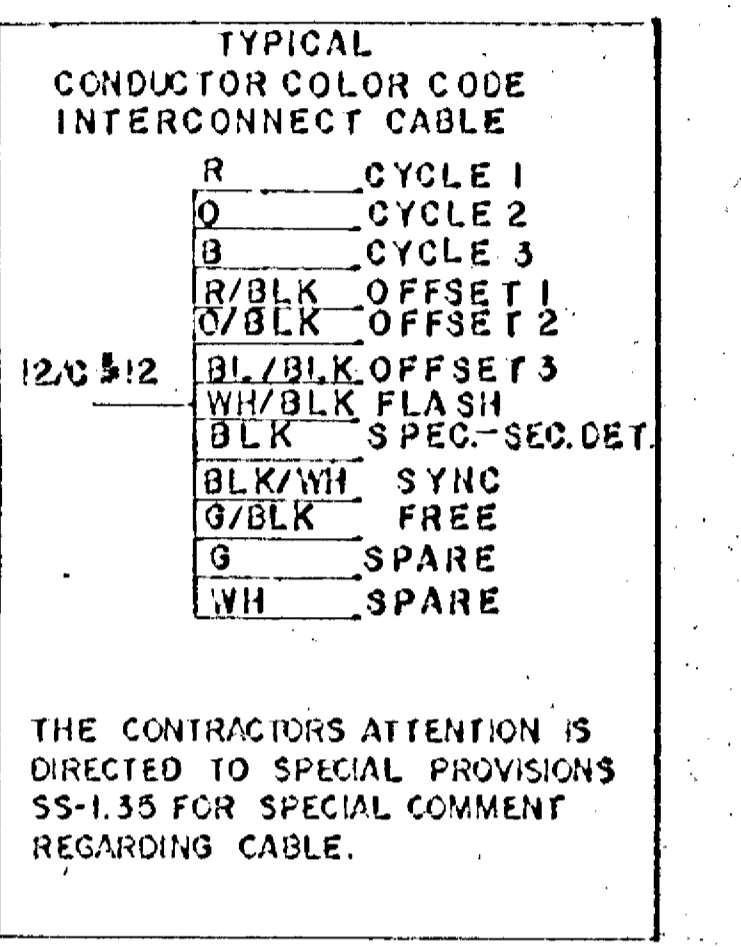
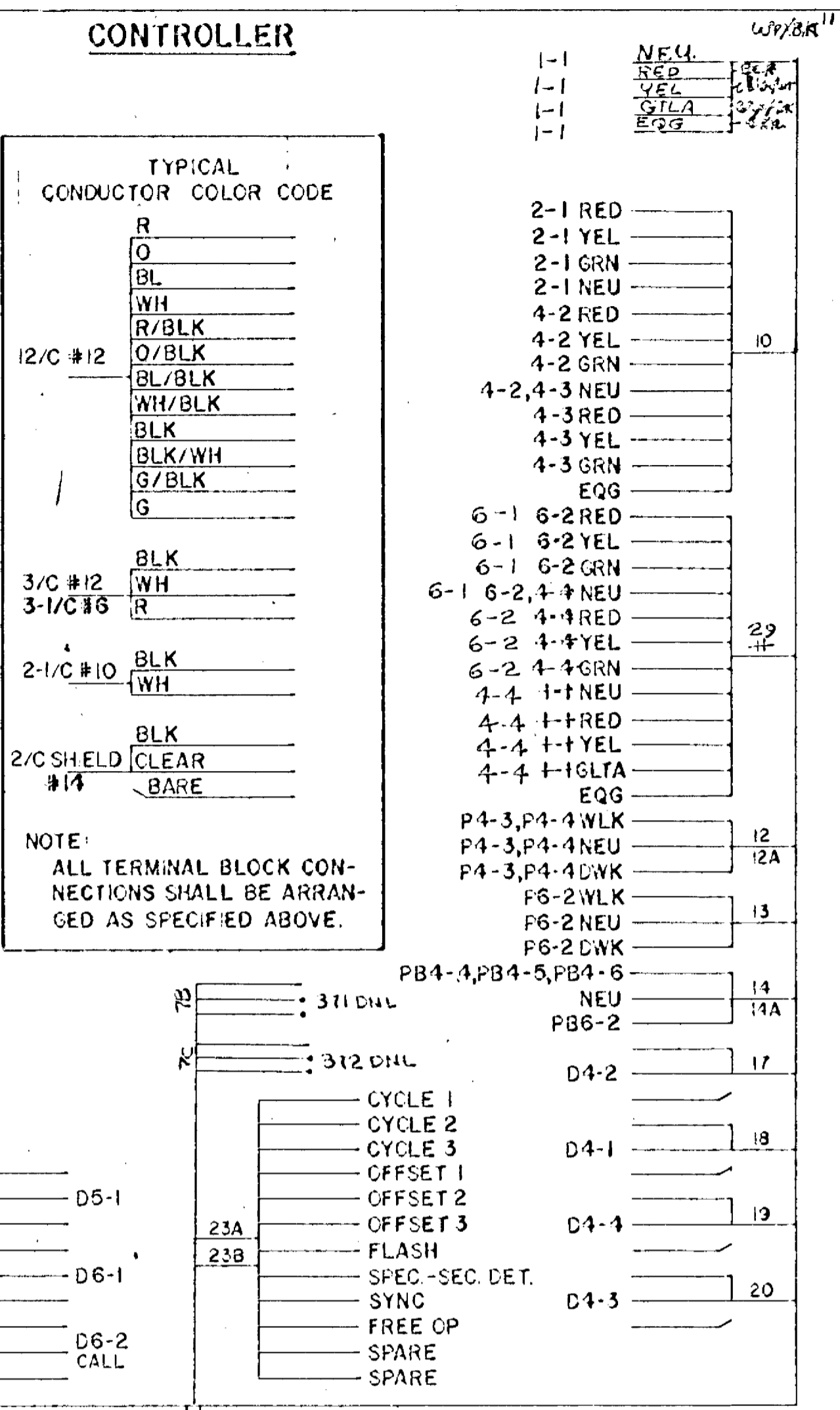
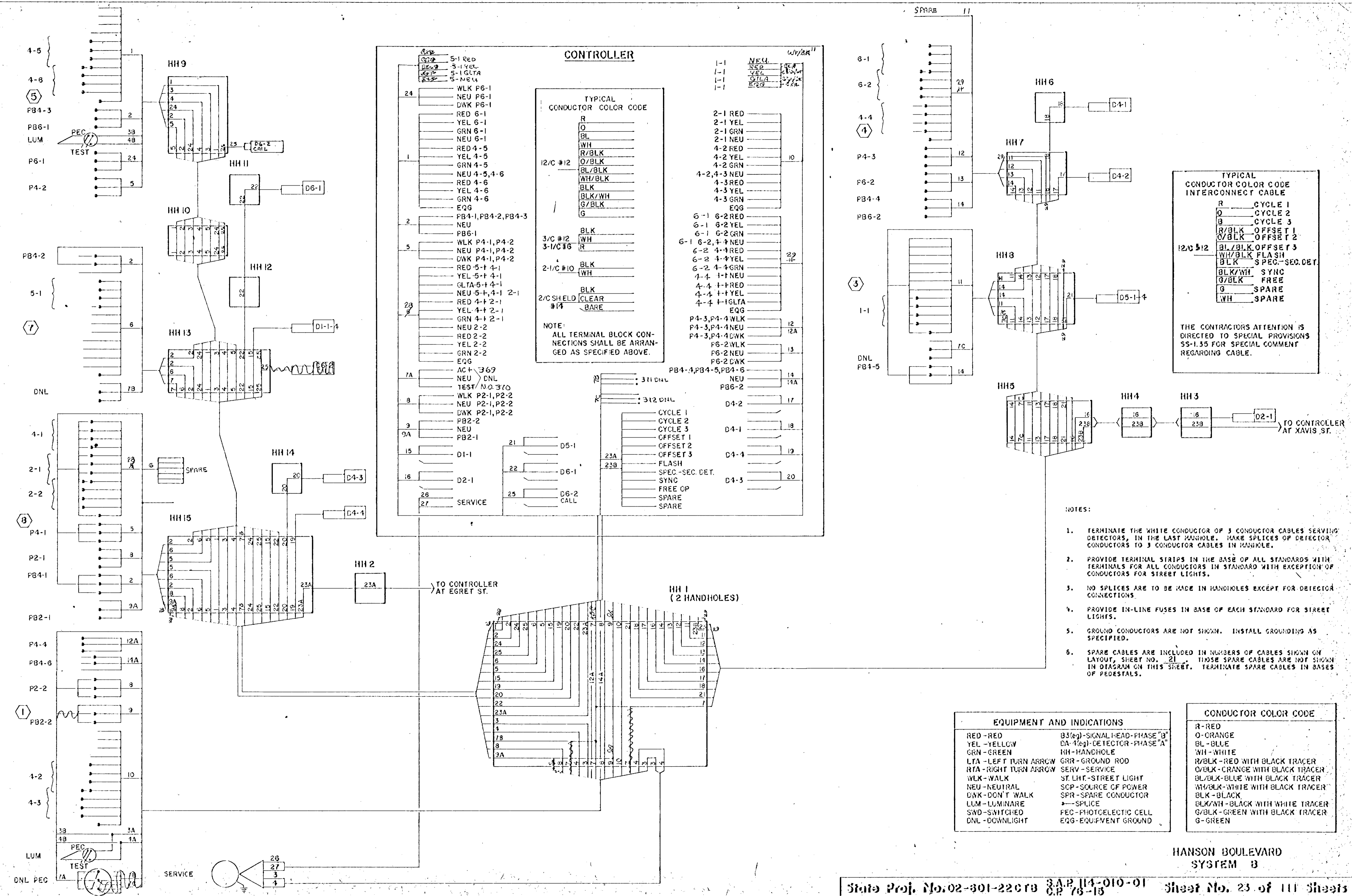
ALL LEFT TURN DETECTORS SHALL BE SPACED 10' BETWEEN LOOPS.



**SIGNAL SYSTEM LAYOUT SYSTEM B HANSON BLVD.**

REV. MAR. 15-76

REV. MAR 1973



- NOTES:
1. TERMINATE THE WHITE CONDUCTOR OF 3 CONDUCTOR CABLES SERVING DETECTORS, IN THE LAST MANHOLE. MAKE SPLICES OF DETECTOR CONDUCTORS TO 3 CONDUCTOR CABLES IN MANHOLE.
  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.
  4. PROVIDE IN-LINE FUSES IN BASE OF EACH STANDARD FOR STREET LIGHTS.
  5. GROUND CONDUCTORS ARE NOT SHOWN. INSTALL GROUNDING AS SPECIFIED.
  6. SPARE CABLES ARE INCLUDED IN NUMBERS OF CABLES SHOWN ON LAYOUT, SHEET NO. 21. THESE SPARE CABLES ARE NOT SHOWN IN DIAGRAM ON THIS SHEET. TERMINATE SPARE CABLES IN BASES OF PEDESTALS.

EQUIPMENT AND INDICATIONS	
RED - RED	B3(e) - SIGNAL HEAD - PHASE "B"
YEL - YELLOW	DA-1(e) - DETECTOR - PHASE "A"
GRN - GREEN	NH - HANDHOLE
LTA - LEFT TURN ARROW	GRR - GROUND ROD
RTA - RIGHT TURN ARROW	SERV - SERVICE
WLK - WALK	ST. LHT - STREET LIGHT
NEU - NEUTRAL	SCP - SOURCE OF POWER
DWK - DON'T WALK	SPR - SPARE CONDUCTOR
LUM - LUMINARE	— - SPLICE
SWD - SWITCHED	FEC - PHOTOELECTRIC CELL
DNL - DOWNLIGHT	EQG - EQUIPMENT GROUND

CONDUCTOR COLOR CODE	
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	

HANSON BOULEVARD  
SYSTEM B

02/25/80 JCB NO 9-7405

**SIGNAL INDICATIONS**

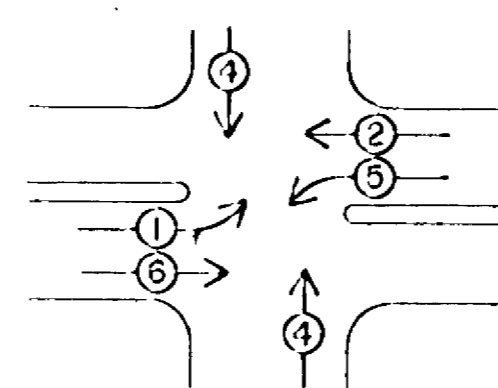
FACE	PHASE	FLASH	INDICATION SIZE					
			R	Y	G	R	Y	G
2-1	2	R	12	12	12			
2-2	2	R	12	12	12			
4-1	4	R	12	12	12			
4-2	4	R	12	12	12			
4-3	4	R	12	12	12			
* 1-1	1	R	12	12	12			12
6-1	6	R	12	12	12			
4-4	4	R	12	12	12			
6-2	6	R	12	12	12			
4-5	4	R	12	12	12			
4-6	4	R	12	12	12			
* 5-1	5	R	12	12	12			12

\* SPECIAL SIGNAL

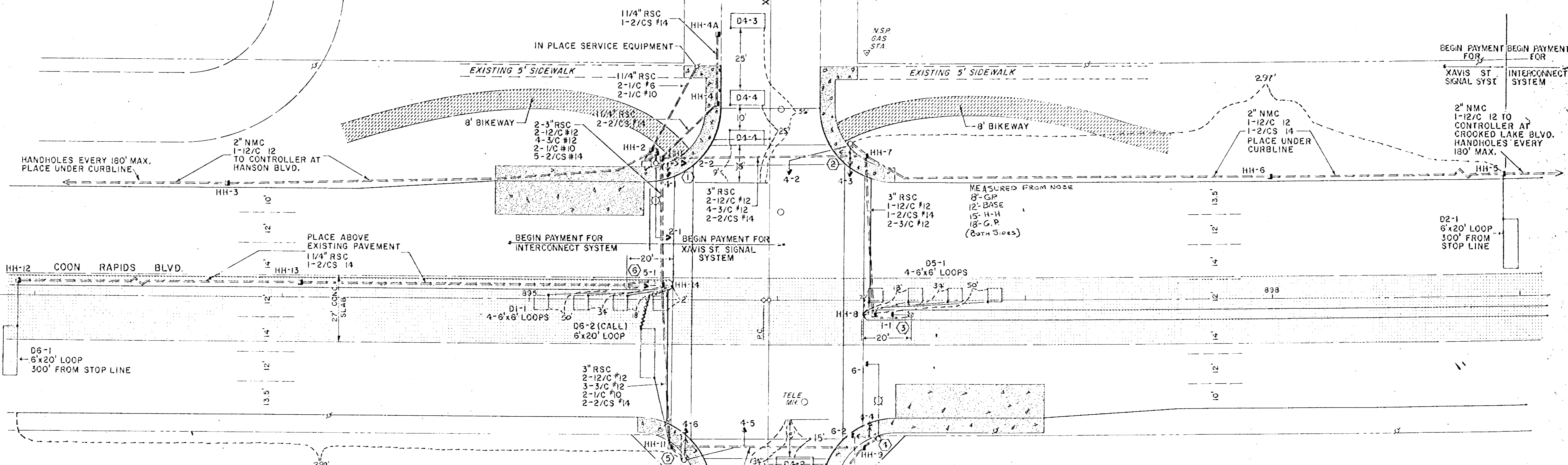
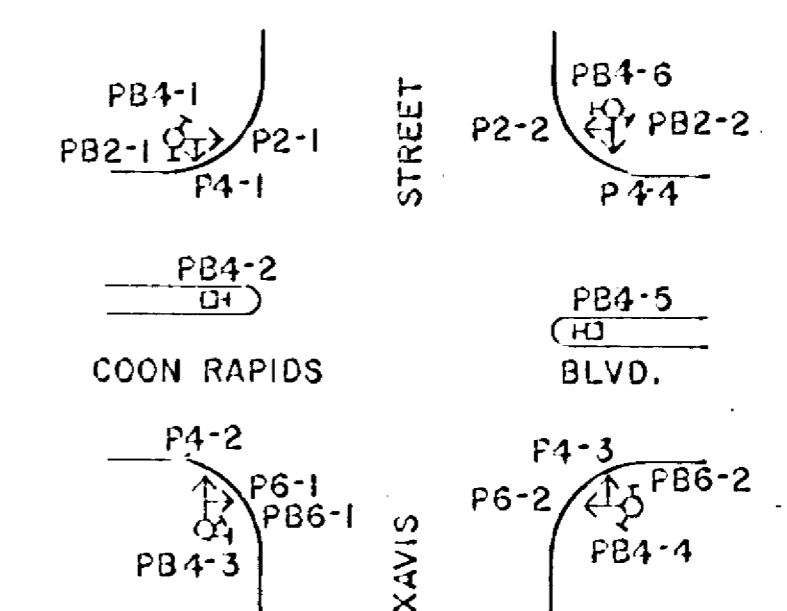
**LEGEND**

	CONTROLLER CABINET
	PEDESTAL
	HANDHOLE (PULL BOX)
	CONDUIT
	SIGNAL FACE WITH BACKGROUND SHIELD
	PEDESTRIAN INDICATION
	LUMINAIRE
	MAST ARM AND POLE
	SERVICE PEDESTAL
	SERVICE POINT

**SIGNAL PHASING**



**PEDESTRIAN SIGNALS AND PUSH BUTTONS**



① TYPE A-30-D-40-12 (TYPE A-30 RELOCATED FROM HANSON BLVD.)  
 ONE WAY SIGNAL (OVERHEAD)  
 TWO WAY SIGNAL (TYPE 20-D POLE MTD. AT 270°)  
 2-SETS PED. INDICATIONS  
 2-PED. PUSH BUTTONS  
 PEC FOR DOWNLIGHTS  
 LUMINAIRE (450 W HID-SV; 350°)  
 EXTEND INTO HH-1, 3" RSC  
 1-12/C #12, 3-3/C #12, 4-1/C #10

② TYPE A-25 (RELOCATED FROM HANSON BLVD.)  
 ONE WAY SIGNAL (OVERHEAD)  
 ONE WAY SIGNAL (TYPE 10-C POLE MTD. 290°)  
 2-SETS PED. INDICATIONS  
 2-PED. PUSH BUTTONS  
 EXTEND INTO HH-7, 3" RSC  
 2-12/C #12, 4-3/C #12

③ ONE WAY SIGNAL (TYPE 1A)  
 1 PED. PUSH BUTTON  
 SIGN DOWNLIGHT AND RIO-10 SIGN  
 4-GUARD POSTS  
 EXTEND INTO HH-8, 3" RSC  
 1-12/C #12, 3-3/C #12

④ TYPE A-30-D-40-12 (TYPE A-30 RELOCATED FROM HANSON BLVD.)  
 ONE WAY SIGNAL (OVERHEAD)  
 TWO WAY SIGNAL (TYPE 20-D POLE MTD. AT 270°)  
 2-SETS PED. INDICATIONS  
 2-PED. PUSH BUTTONS  
 LUMINAIRE (450 W HID-SV; 350°)  
 EXTEND INTO HH-9, 3" RSC  
 1-12/C #12, 3-3/C #12, 2-1/C #10

⑤ TYPE A-25 (RELOCATED FROM HANSON BLVD.)  
 ONE WAY SIGNAL (OVERHEAD)  
 ONE WAY SIGNAL (TYPE 10-C POLE MTD. AT 290°)  
 EXTEND INTO HH-11, 3" RSC  
 1-12/C #12, 6-3/C #12

⑥ ONE WAY SIGNAL (TYPE 1A)  
 1-PED. PUSH BUTTON  
 SIGN DOWNLIGHT AND RIO-10 SIGN  
 4-GUARD POSTS  
 EXTEND INTO HH-14, 3" RSC  
 2-12/C #12, 3-3/C #12

CONTROLLER CABINET (SYSTEM MASTER LOCATION)  
 EXTEND INTO HH-1, 2-3" RSC  
 6-12/C #12, 7-3/C #12, 9-2/C #14

ALL EXISTING SIGNAL EQUIPMENT ABOVE GRADE SHALL BE REMOVED AND DELIVERED TO THE COUNTY ON THE PROJECT.

EXACT LOCATION OF POLES, HANDHOLES, DETECTOR LOOPS, AND GUARD POSTS TO BE DETERMINED BY THE ENGINEER.

APPROXIMATE LOCATION OF UNDERGROUND UTILITIES ARE SHOWN ON SHEET NO. 39. CONTRACTOR IS RESPONSIBLE FOR DETERMINING EXACT LOCATIONS OF ALL UNDERGROUND UTILITIES.

ALL DETECTOR LOOPS SHALL BE INSTALLED IN 1" NMC SEE SHEET 6 FOR DETAILS.

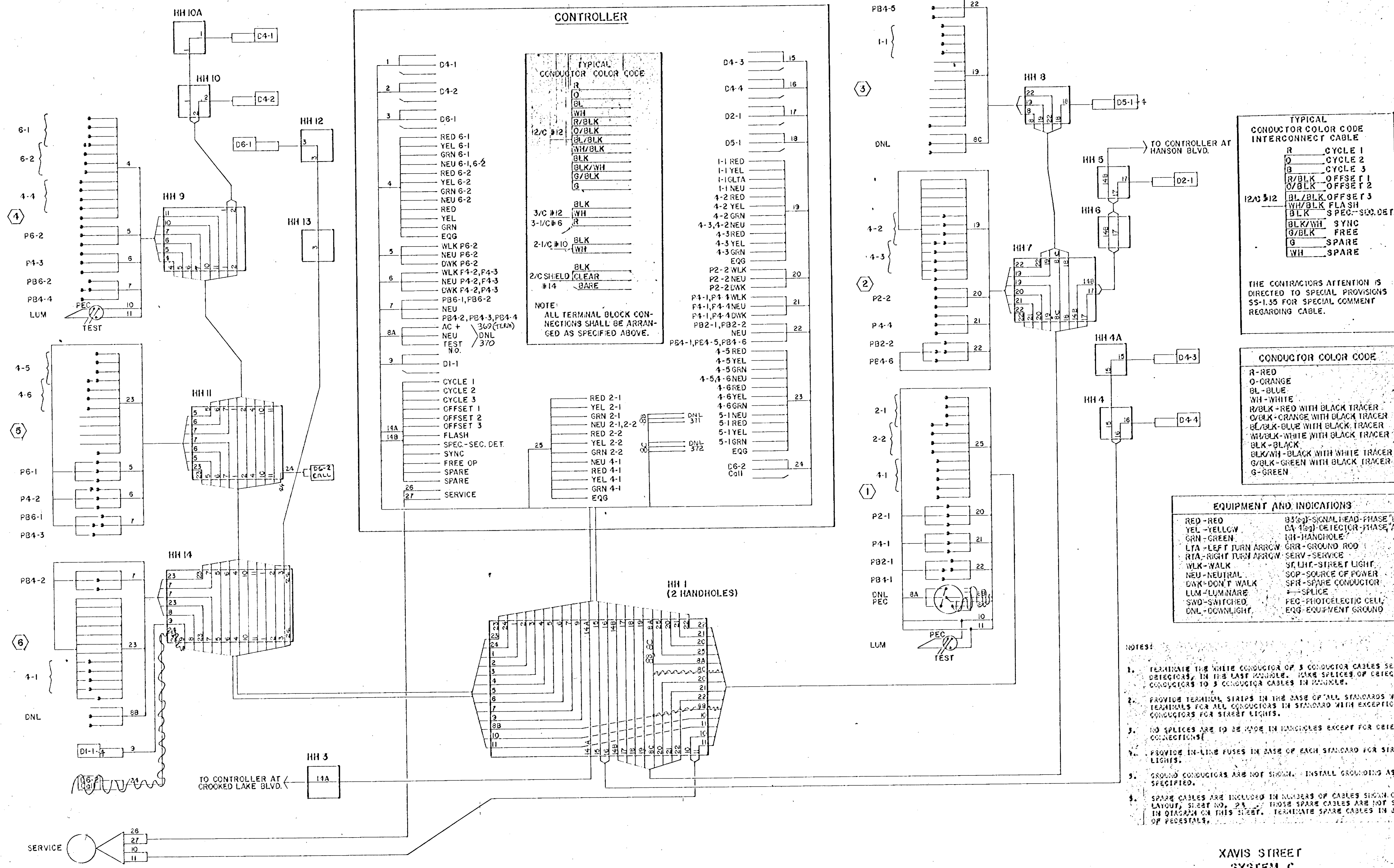
ALL SIGNAL POLES AND PEDESTAL BASES SHALL BE LOCATED BEHIND SIDEWALK LINE.

ALL MEDIAN SIGNALS SHALL BE SET 20' FROM NOSE TO CENTER OF FOUNDATION.

ALL LEFT TURN DETECTORS SHALL BE SPACED 10' BETWEEN LOOPS.

**SIGNAL SYSTEM LAYOUT  
 SYSTEM C  
 XAVIS ST.**





### CONTROLLER

<p>1 D4-1</p> <p>2 D4-2</p> <p>3 D6-1</p> <p>4 RED 6-1 YEL 6-1 GRN 6-1 NEU 6-1, 6-2 RED 6-2 YEL 6-2 GRN 6-2 NEU 6-2</p> <p>5 RED YEL GRN EQG</p> <p>6 WLK P6-2 NEU P6-2 DWK P6-2 WLK F4-2, F4-3 NEU P4-2, F4-3 DWK F4-2, F4-3</p> <p>7 PB6-1, PB6-2 NEU PB4-2, PB4-3, PB4-4 AC + 369 (TERM) NEU 370 TEST DNL No.</p> <p>8A</p> <p>9 DI-1</p> <p>10 CYCLE 1 CYCLE 2 CYCLE 3 OFFSET 1 OFFSET 2 OFFSET 3 FLASH SPEC.-SEC. DET. SYNC FREE OP SPARE SPARE</p> <p>11A 11B</p> <p>12A 12B</p> <p>13A 13B</p> <p>14A 14B</p> <p>15A 15B</p> <p>16A 16B</p> <p>17A 17B</p> <p>18A 18B</p> <p>19A 19B</p> <p>20A 20B</p> <p>21A 21B</p> <p>22A 22B</p> <p>23A 23B</p> <p>24A 24B</p> <p>25A 25B</p> <p>26A 26B</p> <p>27A 27B</p>	<p style="text-align: center;">TYPICAL CONDUCTOR COLOR CODE</p> <table style="width: 100%; border-collapse: collapse;"> <tr><td>R</td><td>RED</td></tr> <tr><td>O</td><td>ORANGE</td></tr> <tr><td>BL</td><td>BLUE</td></tr> <tr><td>WH</td><td>WHITE</td></tr> <tr><td>R/BLK</td><td>RED WITH BLACK TRACER</td></tr> <tr><td>O/BLK</td><td>ORANGE WITH BLACK TRACER</td></tr> <tr><td>BL/BLK</td><td>BLUE WITH BLACK TRACER</td></tr> <tr><td>WH/BLK</td><td>WHITE WITH BLACK TRACER</td></tr> <tr><td>BLK</td><td>BLACK</td></tr> <tr><td>BLK/WH</td><td>BLACK WITH WHITE TRACER</td></tr> <tr><td>G/BLK</td><td>GREEN WITH BLACK TRACER</td></tr> <tr><td>G</td><td>GREEN</td></tr> </table> <p>3/C #12</p> <p>3-1/C #6</p> <p>2-1/C #10</p> <p>2/C SHIELD CLEAR #14</p> <p style="text-align: center;">NOTE: ALL TERMINAL BLOCK CONNECTIONS SHALL BE ARRANGED AS SPECIFIED ABOVE.</p> <p>15 D4-3</p> <p>16 D4-4</p> <p>17 D2-1</p> <p>18 D5-1</p> <p>19 1-1 RED 1-1 YEL 1-1 LTA 1-1 NEU 4-2 RED 4-2 YEL 4-2 GRN 4-3, 4-2 NEU 4-3 RED 4-3 YEL 4-3 GRN EQG</p> <p>20 P2-2 WLK P2-2 NEU P2-2 DWK</p> <p>21 P4-1, P4-1 WLK P4-1, P4-1 NEU P4-1, P4-1 DWK PB2-1, PB2-2 NEU</p> <p>22 PB4-1, PE4-5, PB4-6 4-5 RED 4-5 YEL 4-5 GRN 4-5, 4-6 NEU 4-6 RED 4-6 YEL 4-6 GRN 5-1 NEU 5-1 RED 5-1 YEL 5-1 GRN EQG</p> <p>23 D6-2</p> <p>24 D6-2 Call</p>	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
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																								

#### TYPICAL CONDUCTOR COLOR CODE INTERCONNECT CABLE

R	CYCLE 1
O	CYCLE 2
B	CYCLE 3
R/BLK	OFFSET 1
O/BLK	OFFSET 2
BL/BLK	OFFSET 3
WH/BLK	FLASH
BLK	SPEC.-SEC. DET.
BLK/WH	SYNC
G/BLK	FREE
G	SPARE
WH	SPARE

THE CONTRACTOR'S ATTENTION IS DIRECTED TO SPECIAL PROVISIONS SS-1.35 FOR SPECIAL COMMENT REGARDING CABLE.

#### CONDUCTOR COLOR CODE

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

#### EQUIPMENT AND INDICATIONS

RED-RED	B3(9)-SIGNAL HEAD-PHASE "B"
YEL-YELLOW	DA-1(9)-DETECTOR-PHASE "A"
GRN-GREEN	HH-HANDHOLE
LTA-LEFT TURN ARROW	GRR-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-LUMINARE	SP-SPICE
SWD-SWITCHED	PEC-PHOTOELECTRIC CELL
DNL-DOWNLIGHT	EQG-EQUIPMENT GROUND

- NOTES:
- TERMINATE THE WHITE CONDUCTOR OF 3 CONDUCTOR CABLES SERVING DETECTOR IN THE LAST HANDHOLE. MAKE SPLICES OF DETECTOR CONDUCTORS TO 3 CONDUCTOR CABLES IN HANDHOLE.
  - PROVIDE TERMINAL STRIPS IN THE BASE OF ALL STANDARDS WITH TERMINALS FOR ALL CONDUCTORS IN STANDARD WITH EXCEPTION OF CONDUCTORS FOR STREET LIGHTS.
  - NO SPLICES ARE TO BE MADE IN HANDHOLES EXCEPT FOR DETECTOR CONNECTIONS.
  - PROVIDE IN-LINE FUSES IN BASE OF EACH STANDARD FOR STREET LIGHTS.
  - GROUND CONDUCTORS ARE NOT SHOWN. INSTALL GROUNDING AS SPECIFIED.
  - SPARE CABLES ARE INCLUDED IN NUMBERS OF CABLES SHOWN ON LAYOUT, SHEET NO. 24. THOSE SPARE CABLES ARE NOT SHOWN IN DIAGRAM ON THIS SHEET. TERMINATE SPARE CABLES IN BASES OF PEDESTALS.

**SIGNAL INDICATIONS**

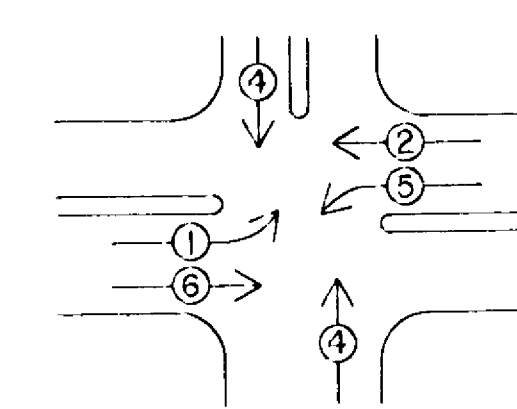
FACE	PHASE	FLASH	INDICATION SIZE					
			R	Y	G	R	Y	G
4-2	4	R	12	12	12			
4-3	4	R	12	12	12			
* 1-1	1	R	12	12	12			12
6-1	6	R	12	12	12			
6-2	6	R	12	12	12			
4-6	4	R	8	8	8			
4-4	4	R	12	12	12			
4-5	4	R	12	12	12			
4-7	4	R	12	12	12			
* 5-1	5	R	12	12	12			12
2-1	2	R	12	12	12			
2-2	2	R	12	12	12			
4-1	4	R	12	12	12			

REPLACE ALL EXISTING EXCEPT 4-6  
\* SPECIAL SIGNAL

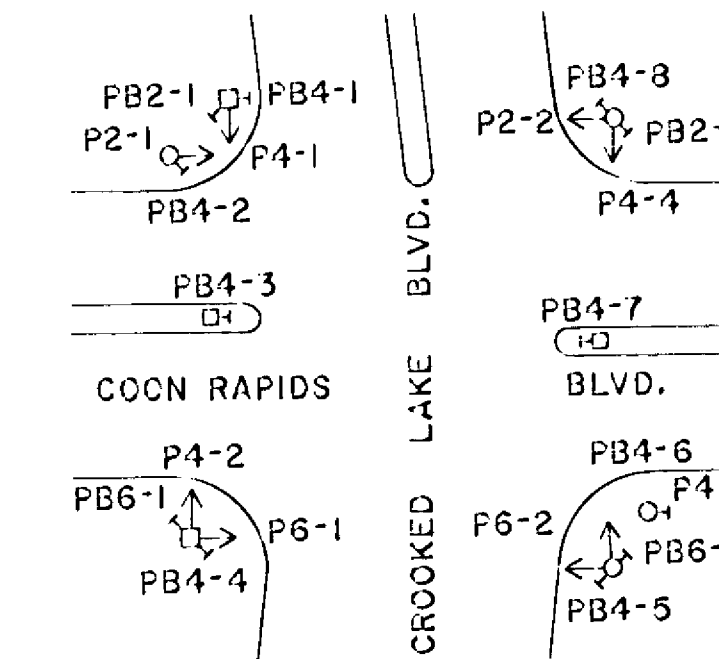
**LEGEND**

	CONTROLLER CABINET
	PEDESTAL
	HANDHOLE (PULL BOX)
	CONDUIT
	SIGNAL FACE WITH BACKGROUND SHIELD
	PEDESTRIAN INDICATION
	LUMINAIRE
	MAST ARM AND POLE
	SERVICE PEDESTAL
	SERVICE POINT

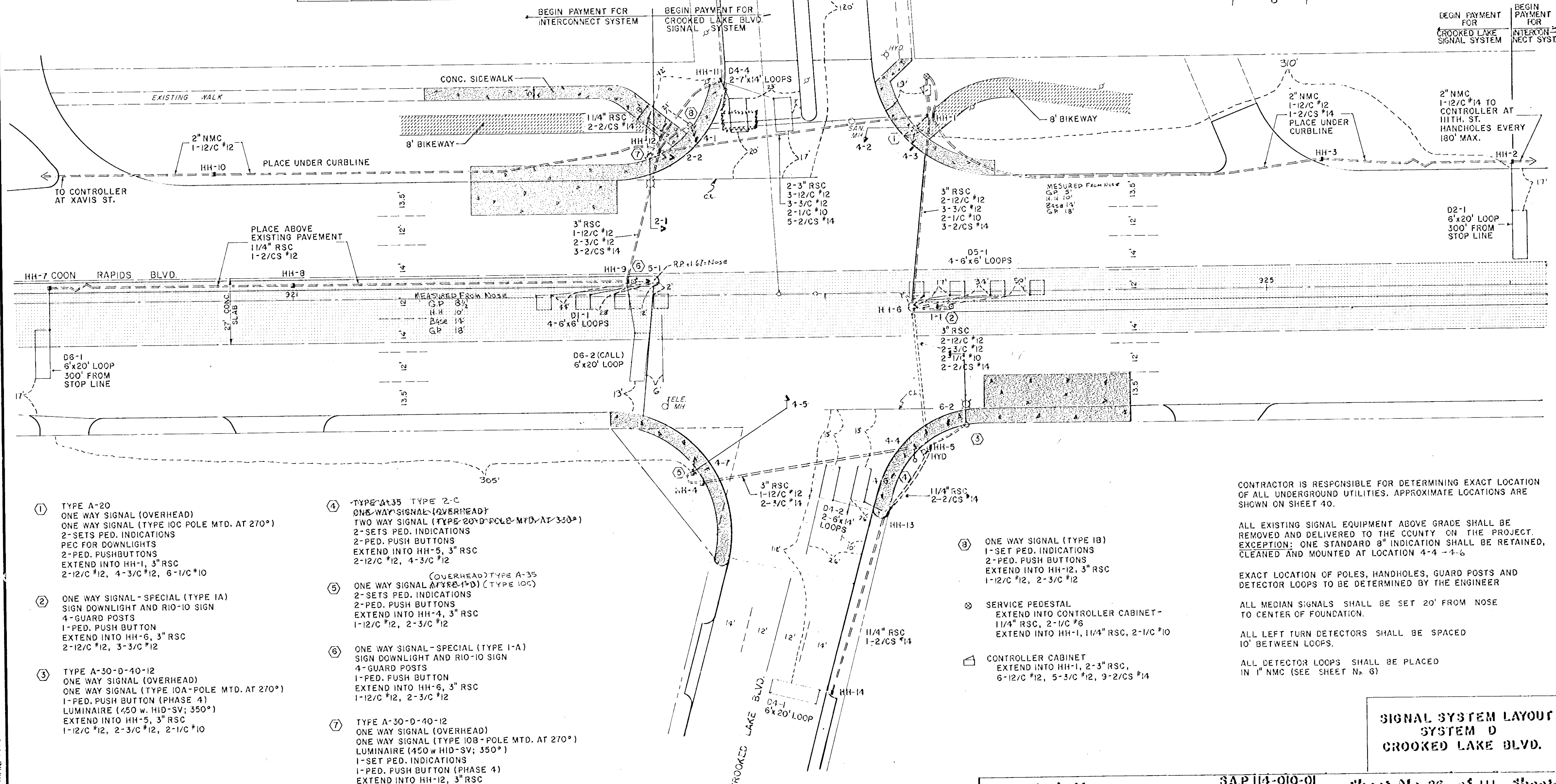
**SIGNAL PHASING**



**PEDESTRIAN SIGNALS AND PUSH BUTTONS**



20' SCALE



- ① TYPE A-20  
ONE WAY SIGNAL (OVERHEAD)  
ONE WAY SIGNAL (TYPE IOC POLE MTD. AT 270°)  
2-SETS PED. INDICATIONS  
PEC FOR DOWNLIGHTS  
2-PED. PUSHBUTTONS  
EXTEND INTO HH-1, 3" RSC  
2-12/C #12, 4-3/C #12, 6-1/C #10
- ② ONE WAY SIGNAL-SPECIAL (TYPE IA)  
SIGN DOWNLIGHT AND RIO-10 SIGN  
4-GUARD POSTS  
1-PED. PUSH BUTTON  
EXTEND INTO HH-6, 3" RSC  
2-12/C #12, 3-3/C #12
- ③ TYPE A-30-D-40-12  
ONE WAY SIGNAL (OVERHEAD)  
ONE WAY SIGNAL (TYPE IOA-POLE MTD. AT 270°)  
1-PED. PUSH BUTTON (PHASE 4)  
LUMINAIRE (450 w. HID-SV; 350°)  
EXTEND INTO HH-5, 3" RSC  
1-12/C #12, 2-3/C #12, 2-1/C #10

- ④ TYPE A-35 TYPE 2-C  
ONE WAY SIGNAL (OVERHEAD)  
TWO WAY SIGNAL (TYPE 20-D-POLE MTD. AT 330°)  
2-SETS PED. INDICATIONS  
2-PED. PUSH BUTTONS  
EXTEND INTO HH-5, 3" RSC  
2-12/C #12, 4-3/C #12
- ⑤ (OVERHEAD) TYPE A-35  
ONE WAY SIGNAL (TYPE 1-D) (TYPE IOC)  
2-SETS PED. INDICATIONS  
2-PED. PUSH BUTTONS  
EXTEND INTO HH-4, 3" RSC  
1-12/C #12, 2-3/C #12
- ⑥ ONE WAY SIGNAL-SPECIAL (TYPE 1-A)  
SIGN DOWNLIGHT AND RIO-10 SIGN  
4-GUARD POSTS  
1-PED. PUSH BUTTON  
EXTEND INTO HH-6, 3" RSC  
1-12/C #12, 2-3/C #12
- ⑦ TYPE A-30-D-40-12  
ONE WAY SIGNAL (OVERHEAD)  
ONE WAY SIGNAL (TYPE IOB-POLE MTD. AT 270°)  
LUMINAIRE (450 w. HID-SV; 350°)  
1-SET PED. INDICATIONS  
1-PED. PUSH BUTTON (PHASE 4)  
EXTEND INTO HH-12, 3" RSC  
2-12/C #12, 3-3/C #12, 2-1/C #10

- ⑧ ONE WAY SIGNAL (TYPE IB)  
1-SET PED. INDICATIONS  
2-PED. PUSH BUTTONS  
EXTEND INTO HH-12, 3" RSC  
1-12/C #12, 2-3/C #12
- ⊗ SERVICE PEDESTAL  
EXTEND INTO CONTROLLER CABINET -  
1 1/4" RSC, 2-1/C #6  
EXTEND INTO HH-1, 1 1/4" RSC, 2-1/C #10
- ▢ CONTROLLER CABINET  
EXTEND INTO HH-1, 2-3" RSC,  
6-12/C #12, 5-3/C #12, 9-2/C #14

CONTRACTOR IS RESPONSIBLE FOR DETERMINING EXACT LOCATION OF ALL UNDERGROUND UTILITIES. APPROXIMATE LOCATIONS ARE SHOWN ON SHEET 40.

ALL EXISTING SIGNAL EQUIPMENT ABOVE GRADE SHALL BE REMOVED AND DELIVERED TO THE COUNTY ON THE PROJECT. EXCEPTION: ONE STANDARD 8" INDICATION SHALL BE RETAINED, CLEANED AND MOUNTED AT LOCATION 4-4-4-6

EXACT LOCATION OF POLES, HANDHOLES, GUARD POSTS AND DETECTOR LOOPS TO BE DETERMINED BY THE ENGINEER

ALL MEDIAN SIGNALS SHALL BE SET 20' FROM NOSE TO CENTER OF FOUNDATION.

ALL LEFT TURN DETECTORS SHALL BE SPACED 10' BETWEEN LOOPS.

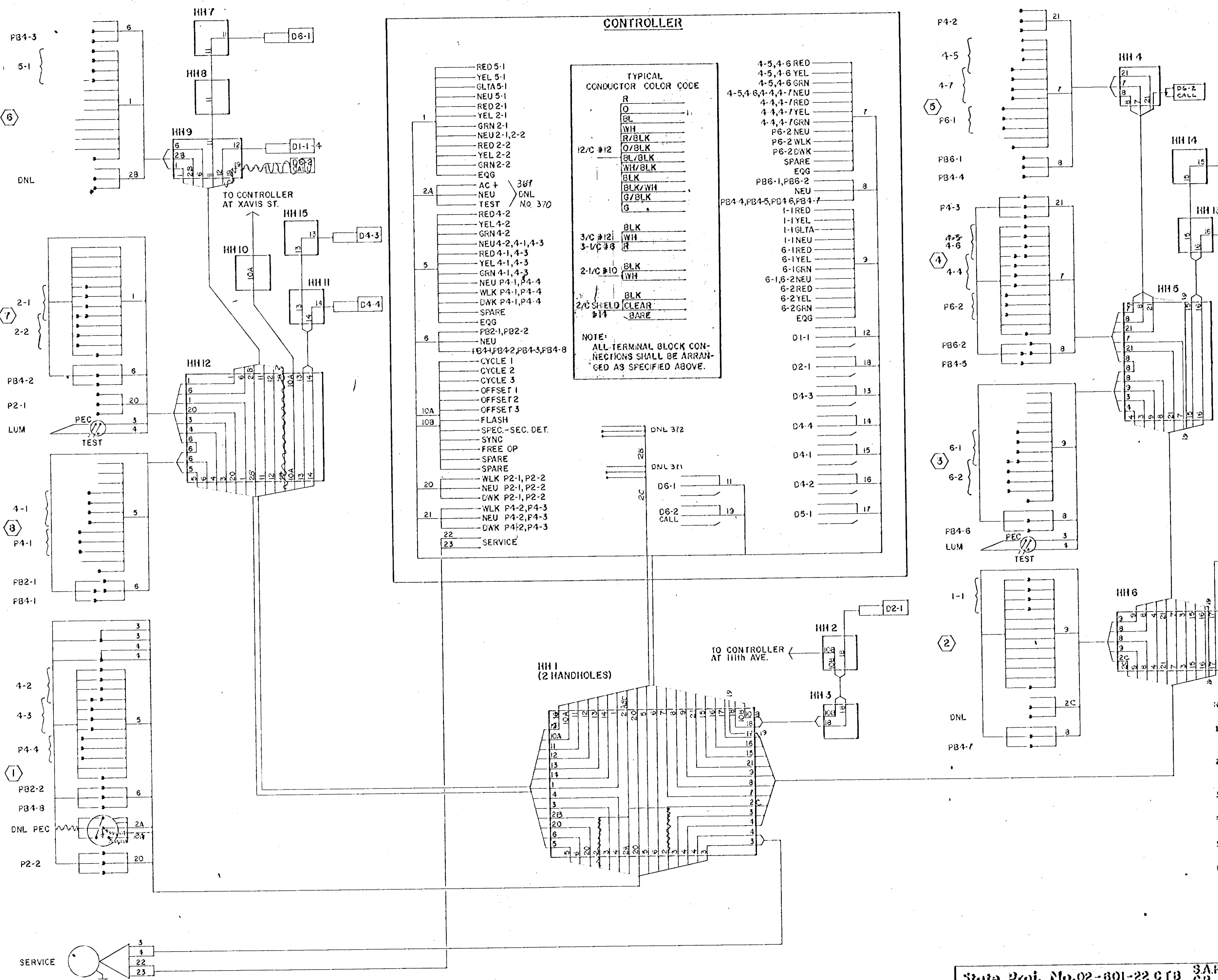
ALL DETECTOR LOOPS SHALL BE PLACED IN 1" NMC (SEE SHEET No. 6)

**SIGNAL SYSTEM LAYOUT  
SYSTEM D  
CROOKED LAKE BLVD.**

REV. MAR. 1978

1/25/80 JOB NO. 3-7405

REV. MAR 1976



### CONTROLLER

**TYPICAL CONDUCTOR COLOR CODE**

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

**NOTE:**  
ALL TERMINAL BLOCK CONNECTIONS SHALL BE ARRANGED AS SPECIFIED ABOVE.

**TYPICAL CONDUCTOR COLOR CODE INTERCONNECT CABLE**

R	CYCLE 1
O	CYCLE 2
B	CYCLE 3
R/BLK	OFFSET 1
O/BLK	OFFSET 2
BL/BLK	OFFSET 3
WH/BLK	FLASH
BLK	3 SEC.-SEC. DET.
BLK/WH	SYNC
G/BLK	FREE
G	SPARE
WH	SPARE

**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	GRR - GROUND ROD
RTA - RIGHT TURN ARROW	SERV - SERVICE
WLK - WALK	ST LIT - STREET LIGHT
NEU - NEUTRAL	SCP - SOURCE OF POWER
DWK - DON'T WALK	SPR - SPARE CONDUCTOR
LUM - LUMINARE	SP - SPICE
SWD - SWITCHED	PEC - PHOTOELECTRIC CELL
DNL - DOWNLIGHT	EGG - EQUIPMENT GROUND

**CONDUCTOR COLOR CODE**

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

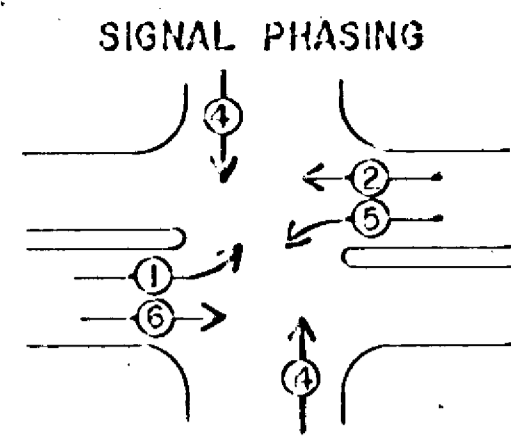
- NOTES:**
1. TERMINATE THE WHITE CONDUCTOR OF 3 CONDUCTOR CABLES SERVING DETECTORS, IN THE LAST HANDHOLE. MAKE SPLICES OF DETECTOR CONDUCTORS TO 3 CONDUCTOR CABLES IN HANDHOLE.
  2. PROVIDE TERMINAL STRIPS IN THE BASE OF ALL STANDARDS WITH TERMINALS FOR ALL CONDUCTORS IN STANDARD WITH EXCEPTION OF CONDUCTORS 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.
  6. SPARE CABLES ARE INCLUDED IN NUMBERS OF CABLES SHOWN ON LAYOUT, SHEET NO. 25. THOSE SPARE CABLES ARE NOT SHOWN IN DIAGRAM ON THIS SHEET. TERMINATE SPARE CABLES IN BASES OF PEDESTALS.

### CROOKED LAKE BOULEVARD SYSTEM D

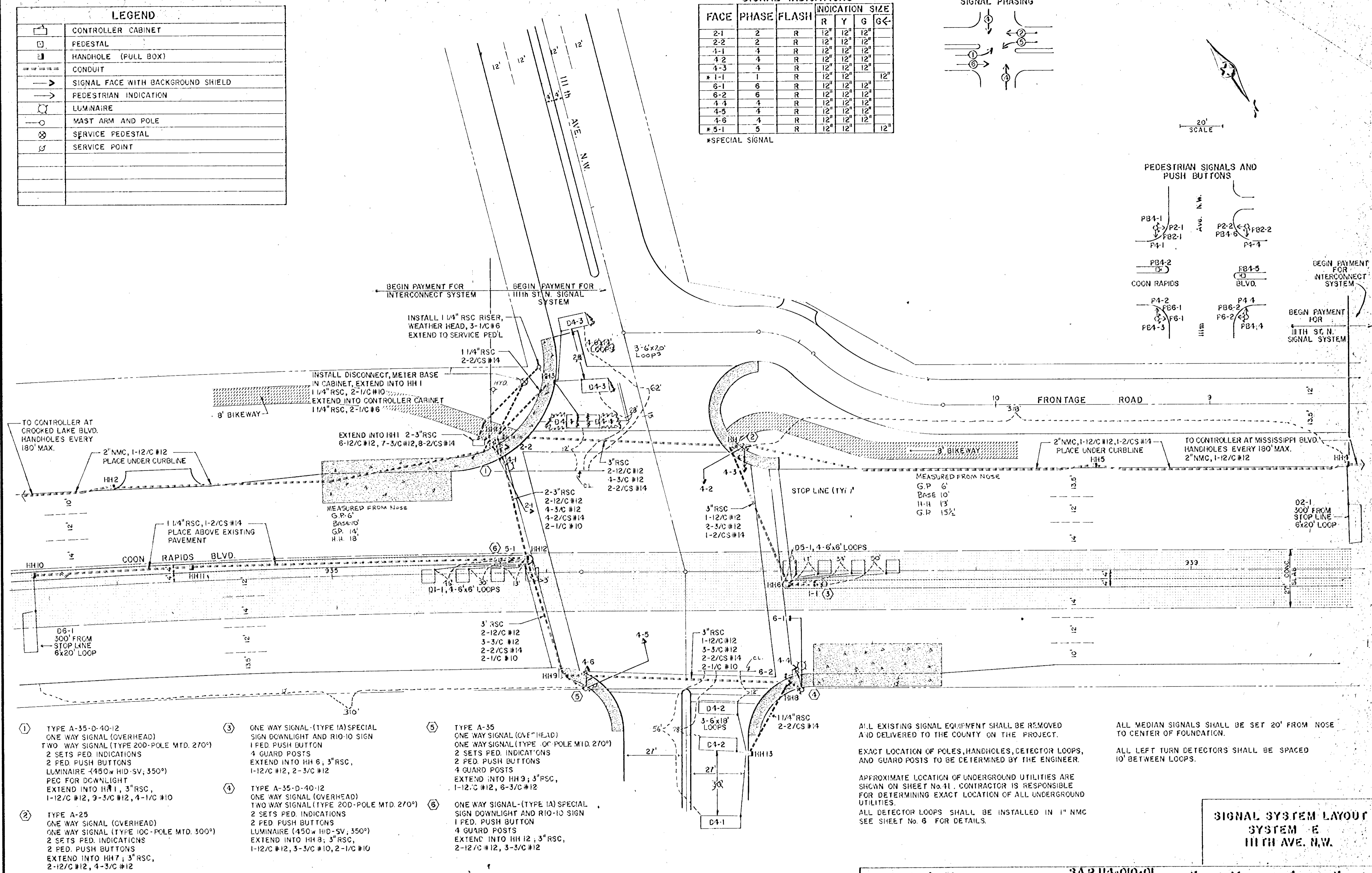
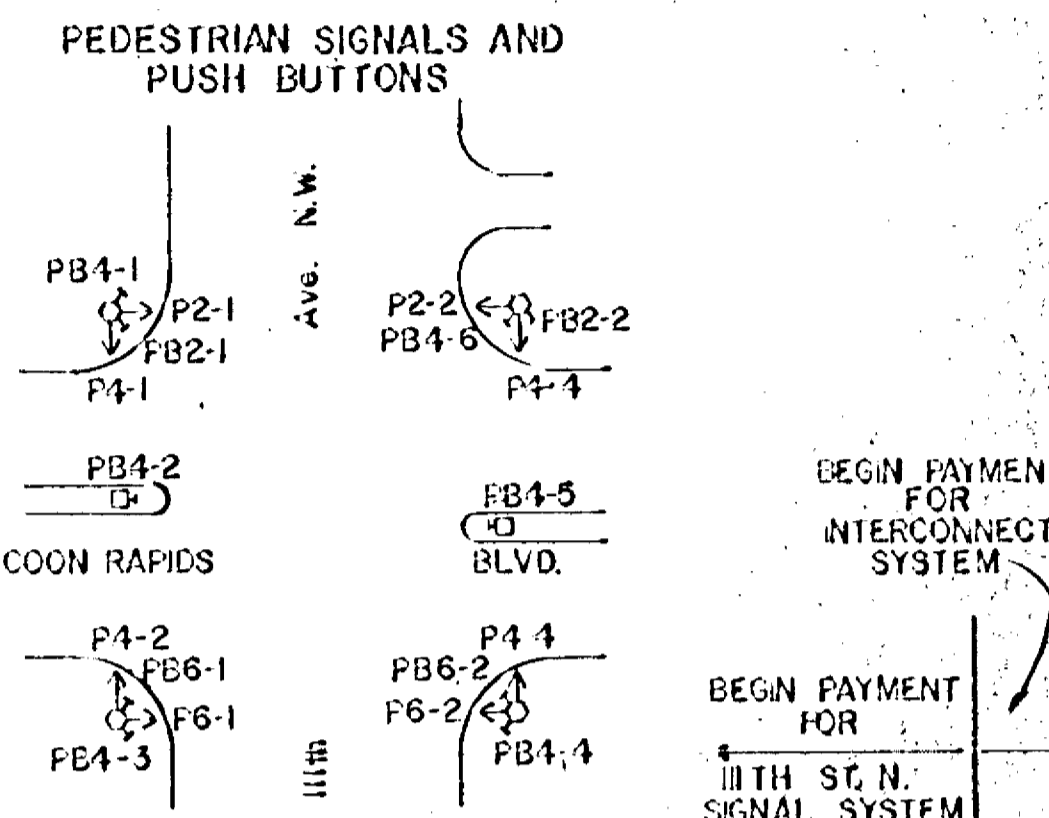
LEGEND	
	CONTROLLER CABINET
	PEDESTAL
	HANDHOLE (PULL BOX)
	CONDUIT
	SIGNAL FACE WITH BACKGROUND SHIELD
	PEDESTRIAN INDICATION
	LUMINAIRE
	MAST ARM AND POLE
	SERVICE PEDESTAL
	SERVICE POINT

SIGNAL INDICATIONS							
FACE	PHASE	FLASH	INDICATION SIZE			G<	
			R	Y	G		
2-1	2	R	12"	12"	12"		
2-2	2	R	12"	12"	12"		
4-1	4	R	12"	12"	12"		
4-2	4	R	12"	12"	12"		
4-3	4	R	12"	12"	12"		
* 1-1	1	R	12"	12"	12"	12"	
6-1	6	R	12"	12"	12"		
6-2	6	R	12"	12"	12"		
4-4	4	R	12"	12"	12"		
4-5	4	R	12"	12"	12"		
4-6	4	R	12"	12"	12"		
* 5-1	5	R	12"	12"	12"	12"	

\*SPECIAL SIGNAL



20'  
SCALE



- ① TYPE A-35-D-40-12  
ONE WAY SIGNAL (OVERHEAD)  
TWO WAY SIGNAL (TYPE 20D-POLE MTD. 270°)  
2 SETS PED. INDICATIONS  
2 PED. PUSH BUTTONS  
LUMINAIRE (450w HID-SV, 350°)  
PEC FOR DOWNLIGHT  
EXTEND INTO HH 1, 3" RSC,  
1-12/C #12, 3-3/C #12, 4-1/C #10
- ② TYPE A-25  
ONE WAY SIGNAL (OVERHEAD)  
ONE WAY SIGNAL (TYPE 10C-POLE MTD. 300°)  
2 SETS PED. INDICATIONS  
2 PED. PUSH BUTTONS  
EXTEND INTO HH 7, 3" RSC,  
2-12/C #12, 4-3/C #12
- ③ ONE WAY SIGNAL (TYPE IA) SPECIAL  
SIGN DOWNLIGHT AND RIO-10 SIGN  
1 PED. PUSH BUTTON  
4 GUARD POSTS  
EXTEND INTO HH 6, 3" RSC,  
1-12/C #12, 2-3/C #12
- ④ TYPE A-35-D-40-12  
ONE WAY SIGNAL (OVERHEAD)  
TWO WAY SIGNAL (TYPE 20D-POLE MTD. 270°)  
2 SETS PED. INDICATIONS  
2 PED. PUSH BUTTONS  
LUMINAIRE (450w HID-SV, 350°)  
EXTEND INTO HH 8, 3" RSC,  
1-12/C #12, 3-3/C #10, 2-1/C #10
- ⑤ TYPE A-35  
ONE WAY SIGNAL (OVERHEAD)  
ONE WAY SIGNAL (TYPE 10C-POLE MTD. 270°)  
2 SETS PED. INDICATIONS  
2 PED. PUSH BUTTONS  
4 GUARD POSTS  
EXTEND INTO HH 9, 3" RSC,  
1-12/C #12, 6-3/C #12
- ⑥ ONE WAY SIGNAL (TYPE IA) SPECIAL  
SIGN DOWNLIGHT AND RIO-10 SIGN  
1 PED. PUSH BUTTON  
4 GUARD POSTS  
EXTEND INTO HH 12, 3" RSC,  
2-12/C #12, 3-3/C #12

ALL EXISTING SIGNAL EQUIPMENT SHALL BE REMOVED AND DELIVERED TO THE COUNTY ON THE PROJECT.

EXACT LOCATION OF POLES, HANDHOLES, DETECTOR LOOPS, AND GUARD POSTS TO BE DETERMINED BY THE ENGINEER.

APPROXIMATE LOCATION OF UNDERGROUND UTILITIES ARE SHOWN ON SHEET No. 41. CONTRACTOR IS RESPONSIBLE FOR DETERMINING EXACT LOCATION OF ALL UNDERGROUND UTILITIES.

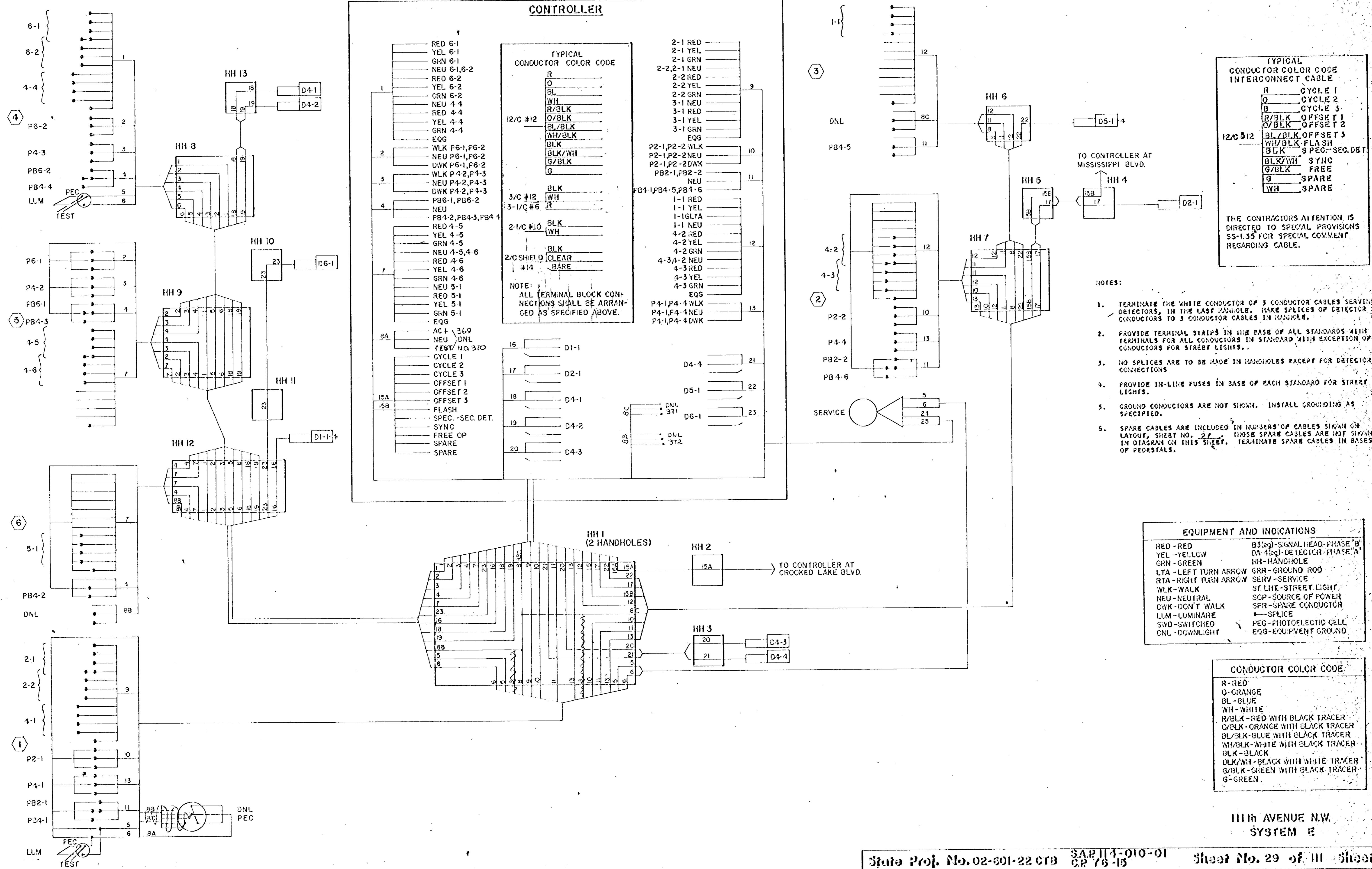
ALL DETECTOR LOOPS SHALL BE INSTALLED IN 1" NMC SEE SHEET No. 6 FOR DETAILS.

ALL MEDIAN SIGNALS SHALL BE SET 20' FROM NOSE TO CENTER OF FOUNDATION.

ALL LEFT TURN DETECTOR SHALL BE SPACED 10' BETWEEN LOOPS.

**SIGNAL SYSTEM LAYOUT  
SYSTEM E  
11TH AVE. N.W.**

REV. MAR 1975



**CONTROLLER**

1	RED 6-1	2-1 RED	12	
2	YEL 6-1	2-1 YEL	11	
3	GRN 6-1	2-1 GRN	10	
4	NEU 6-1,6-2	2-2,2-1 NEU	9	
5	RED 6-2	2-2 RED	8	
6	YEL 6-2	2-2 YEL	7	
7	GRN 6-2	2-2 GRN	6	
8	NEU 4-4	3-1 NEU	5	
9	RED 4-4	3-1 RED	4	
10	YEL 4-4	3-1 YEL	3	
11	GRN 4-4	3-1 GRN	2	
12	EQG	EQG	1	
13	WLK P6-1,P6-2	P2-1,P2-2 WLK		
14	NEU P6-1,P6-2	P2-1,P2-2 NEU		
15	DWK P6-1,P6-2	P2-1,P2-2 DWK		
16	WLK P4-2,P4-3	PB2-1,PB2-2		
17	NEU P4-2,P4-3	NEU		
18	DWK P4-2,P4-3	PB4-1,PB4-5,PB4-6		
19	PB6-1,PB6-2	1-1 RED		
20	NEU	1-1 YEL		
21	PB4-2,PB4-3,PB4-4	1-1GLTA		
22	RED 4-5	1-1 NEU		
23	YEL 4-5	4-2 RED		
24	GRN 4-5	4-2 YEL		
25	NEU 4-5,4-6	4-2 GRN		
26	RED 4-6	4-3,4-2 NEU		
27	YEL 4-6	4-3 RED		
28	GRN 4-6	4-3 YEL		
29	NEU 5-1	4-3 GRN		
30	RED 5-1	EQG		
31	YEL 5-1	P4-1,P4-4 WLK		
32	GRN 5-1	P4-1,P4-4 NEU		
33	EQG	P4-1,P4-4 DWK		
34	AC+ 369			
35	NEU DNL			
36	TEST NO. 370			
37	CYCLE 1			
38	CYCLE 2			
39	CYCLE 3			
40	OFFSET 1			
41	OFFSET 2			
42	OFFSET 3			
43	FLASH			
44	SPEC.-SEC. DET.			
45	SYNC			
46	FREE OP			
47	SPARE			
48	SPARE			

**TYPICAL CONDUCTOR COLOR CODE**

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

**NOTE:**  
ALL TERMINAL BLOCK CONNECTIONS SHALL BE ARRANGED AS SPECIFIED ABOVE.

**TYPICAL CONDUCTOR COLOR CODE INTERCONNECT CABLE**

R	CYCLE 1
O	CYCLE 2
B	CYCLE 3
R/BLK	OFFSET 1
O/BLK	OFFSET 2
BL/BLK	OFFSET 3
WH/BLK	FLASH
BLK	SPEC.-SEC. DET.
BLK/WH	SYNC
G/BLK	FREE
G	SPARE
WH	SPARE

THE CONTRACTOR'S ATTENTION IS DIRECTED TO SPECIAL PROVISIONS SS-1.35 FOR SPECIAL COMMENT REGARDING CABLE.

- 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 HANDHOLE.
  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.
  4. PROVIDE IN-LINE FUSES IN BASE OF EACH STANDARD FOR STREET LIGHTS.
  5. GROUND CONDUCTORS ARE NOT SHOWN. INSTALL GROUNDING AS SPECIFIED.
  6. SPARE CABLES ARE INCLUDED IN NUMBERS OF CABLES SHOWN ON LAYOUT, SHEET NO. 27. THOSE SPARE CABLES ARE NOT SHOWN IN DIAGRAM ON THIS SHEET. TERMINATE SPARE CABLES IN BASES OF PEDESTALS.

**EQUIPMENT AND INDICATIONS**

RED-RED	B3(eg)-SIGNAL HEAD-PHASE "B"
YEL-YELLOW	DA-1(eg)-DETECTOR-PHASE "A"
GRN-GREEN	HH-HANDHOLE
LTA-LEFT TURN ARROW	GRR-GROUND ROD
RTA-RIGHT TURN ARROW	SERV-SERVICE
WLK-WALK	ST.LHT-STREET LIGHT
NEU-NEUTRAL	SCP-SOURCE OF POWER
DWK-DON'T WALK	SPR-SPARE CONDUCTOR
LUM-LUMINARE	SP-SPLICE
SWD-SWITCHED	PEC-PHOTOELECTRIC CELL
DNL-DOWNLIGHT	EQG-EQUIPMENT GROUND

**CONDUCTOR COLOR CODE**

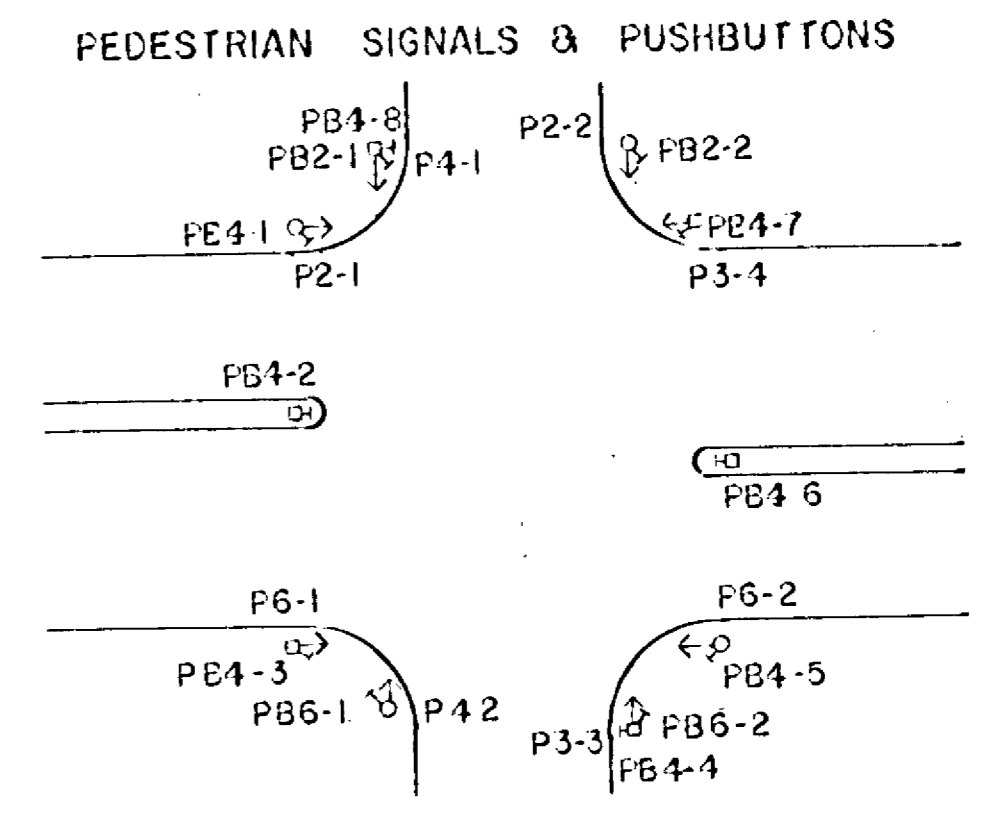
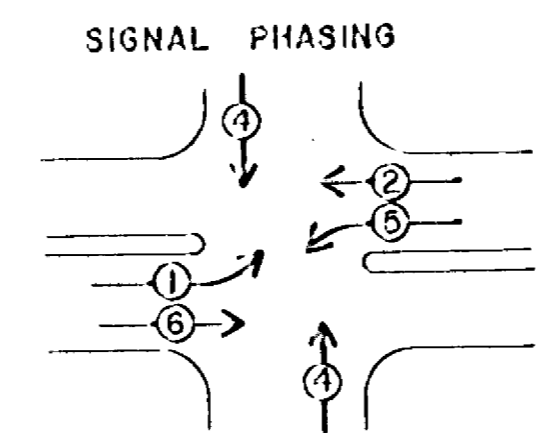
R-RED
O-ORANGE
BL-BLUE
WH-WHITE
R/BLK-RED WITH BLACK TRACER
O/BLK-ORANGE WITH BLACK TRACER
BL/BLK-BLUE WITH BLACK TRACER
WH/BLK-WHITE WITH BLACK TRACER
BLK-BLACK
BLK/WH-BLACK WITH WHITE TRACER
G/BLK-GREEN WITH BLACK TRACER
G-GREEN

REV. MAR 1978

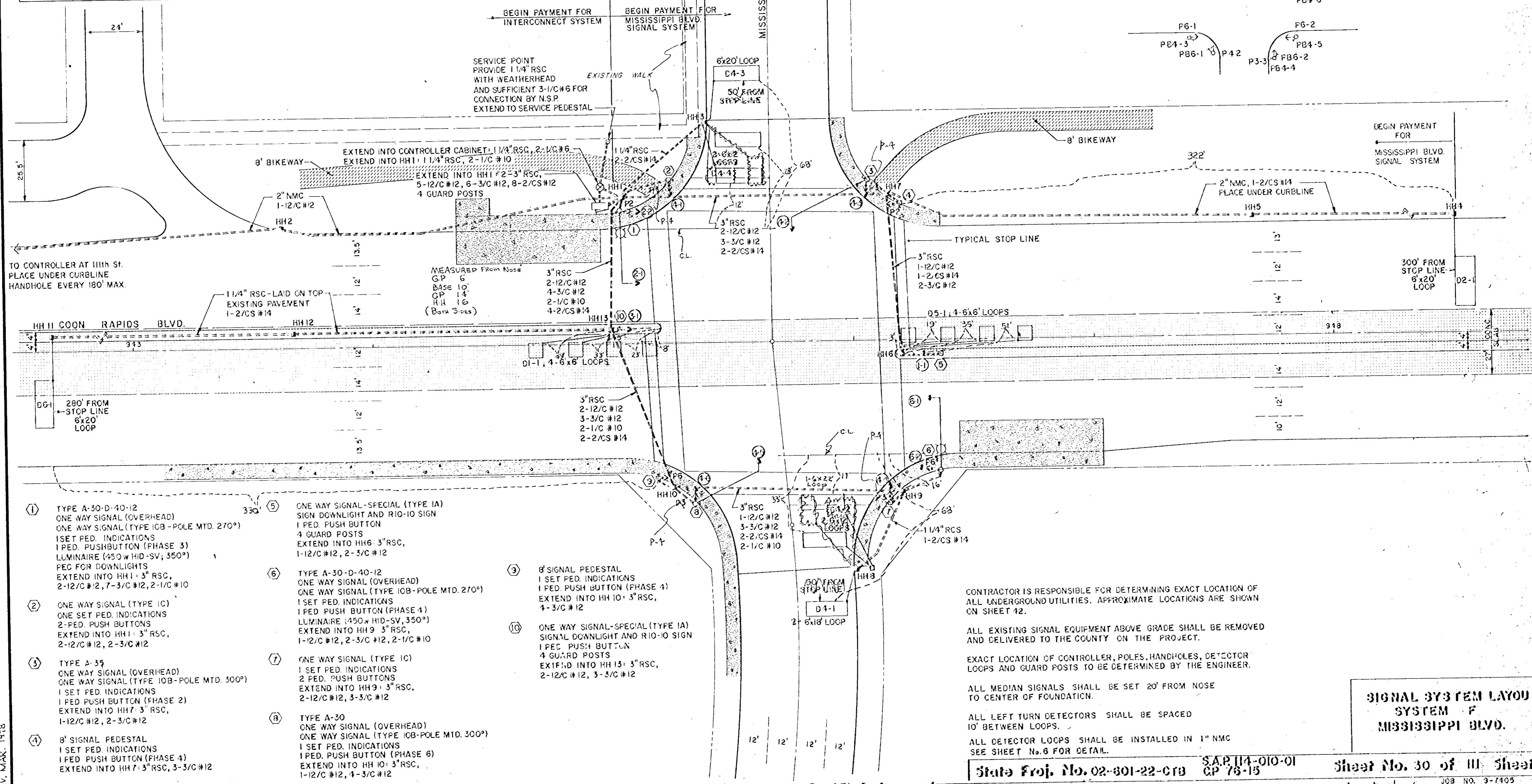
LEGEND	
	CONTROLLER CABINET
	PEDESTAL
	HANDHOLE (PULL BOX)
	CONDUIT
	SIGNAL FACE WITH BACKGROUND SHIELD
	PEDESTRIAN INDICATION
	LUMINAIRE
	MAST ARM AND POLE
	SERVICE PEDESTAL
	SERVICE POINT

SIGNAL INDICATIONS						
FACE	PHASE	FLASH	R	Y	G	G<
2-1	2	R	12"	12"	12"	
2-2	2	R	12"	12"	12"	
4-1	4	R	12"	12"	12"	
4-2	4	R	12"	12"	12"	
4-3	4	R	12"	12"	12"	
* 1-1	1	R	12"	12"	12"	12"
6-1	6	R	12"	12"	12"	
6-2	6	R	12"	12"	12"	
4-4	4	R	12"	12"	12"	
4-5	4	R	12"	12"	12"	
4-6	4	R	12"	12"	12"	
* 5-1	5	R	12"	12"	12"	12"

\*SPECIAL SIGNAL



20' SCALE



- ① TYPE A-30-D-40-12 ONE WAY SIGNAL (OVERHEAD) ONE WAY SIGNAL (TYPE IOB-POLE MTD. 270°) 1 SET PED. INDICATIONS 1 PED. PUSH BUTTON (PHASE 3) LUMINAIRE (450W HID-SV, 350°) PEC FOR DOWNLIGHTS EXTEND INTO HH1: 3" RSC, 2-12/C #12, 7-3/C #12, 2-1/C #10
- ② ONE WAY SIGNAL (TYPE IC) ONE SET PED. INDICATIONS 2-PED. PUSH BUTTONS EXTEND INTO HH1: 3" RSC, 2-12/C #12, 2-3/C #12
- ③ TYPE A-35 ONE WAY SIGNAL (OVERHEAD) ONE WAY SIGNAL (TYPE IOB-POLE MTD. 300°) 1 SET PED. INDICATIONS 1 PED. PUSH BUTTON (PHASE 2) EXTEND INTO HH7: 3" RSC, 1-12/C #12, 2-3/C #12
- ④ 8' SIGNAL PEDESTAL 1 SET PED. INDICATIONS 1 PED. PUSH BUTTON (PHASE 4) EXTEND INTO HH7: 3" RSC, 3-3/C #12
- ⑤ ONE WAY SIGNAL-SPECIAL (TYPE IA) SIGN DOWNLIGHT AND RIO-10 SIGN 1 PED. PUSH BUTTON 4 GUARD POSTS EXTEND INTO HH6: 3" RSC, 1-12/C #12, 2-3/C #12
- ⑥ TYPE A-30-D-40-12 ONE WAY SIGNAL (OVERHEAD) ONE WAY SIGNAL (TYPE IOB-POLE MTD. 270°) 1 SET PED. INDICATIONS 1 PED. PUSH BUTTON (PHASE 4) LUMINAIRE (450W HID-SV, 350°) EXTEND INTO HH9: 3" RSC, 1-12/C #12, 2-3/C #12, 2-1/C #10
- ⑦ ONE WAY SIGNAL (TYPE IC) 1 SET PED. INDICATIONS 2 PED. PUSH BUTTONS EXTEND INTO HH9: 3" RSC, 2-12/C #12, 3-3/C #12
- ⑧ TYPE A-30 ONE WAY SIGNAL (OVERHEAD) ONE WAY SIGNAL (TYPE IOB-POLE MTD. 300°) 1 SET PED. INDICATIONS 1 PED. PUSH BUTTON (PHASE 6) EXTEND INTO HH10: 3" RSC, 1-12/C #12, 4-3/C #12
- ⑨ 8' SIGNAL PEDESTAL 1 SET PED. INDICATIONS 1 PED. PUSH BUTTON (PHASE 4) EXTEND INTO HH10: 3" RSC, 4-3/C #12
- ⑩ ONE WAY SIGNAL-SPECIAL (TYPE IA) SIGNAL DOWNLIGHT AND RIO-10 SIGN 1 PED. PUSH BUTTON 4 GUARD POSTS EXTEND INTO HH13: 3" RSC, 2-12/C #12, 3-3/C #12

CONTRACTOR IS RESPONSIBLE FOR DETERMINING EXACT LOCATION OF ALL UNDERGROUND UTILITIES. APPROXIMATE LOCATIONS ARE SHOWN ON SHEET 42.

ALL EXISTING SIGNAL EQUIPMENT ABOVE GRADE SHALL BE REMOVED AND DELIVERED TO THE COUNTY ON THE PROJECT.

EXACT LOCATION OF CONTROLLER, POLES, HANDHOLES, DETECTOR LOOPS AND GUARD POSTS TO BE DETERMINED BY THE ENGINEER.

ALL MEDIAN SIGNALS SHALL BE SET 20' FROM NOSE TO CENTER OF FOUNDATION.

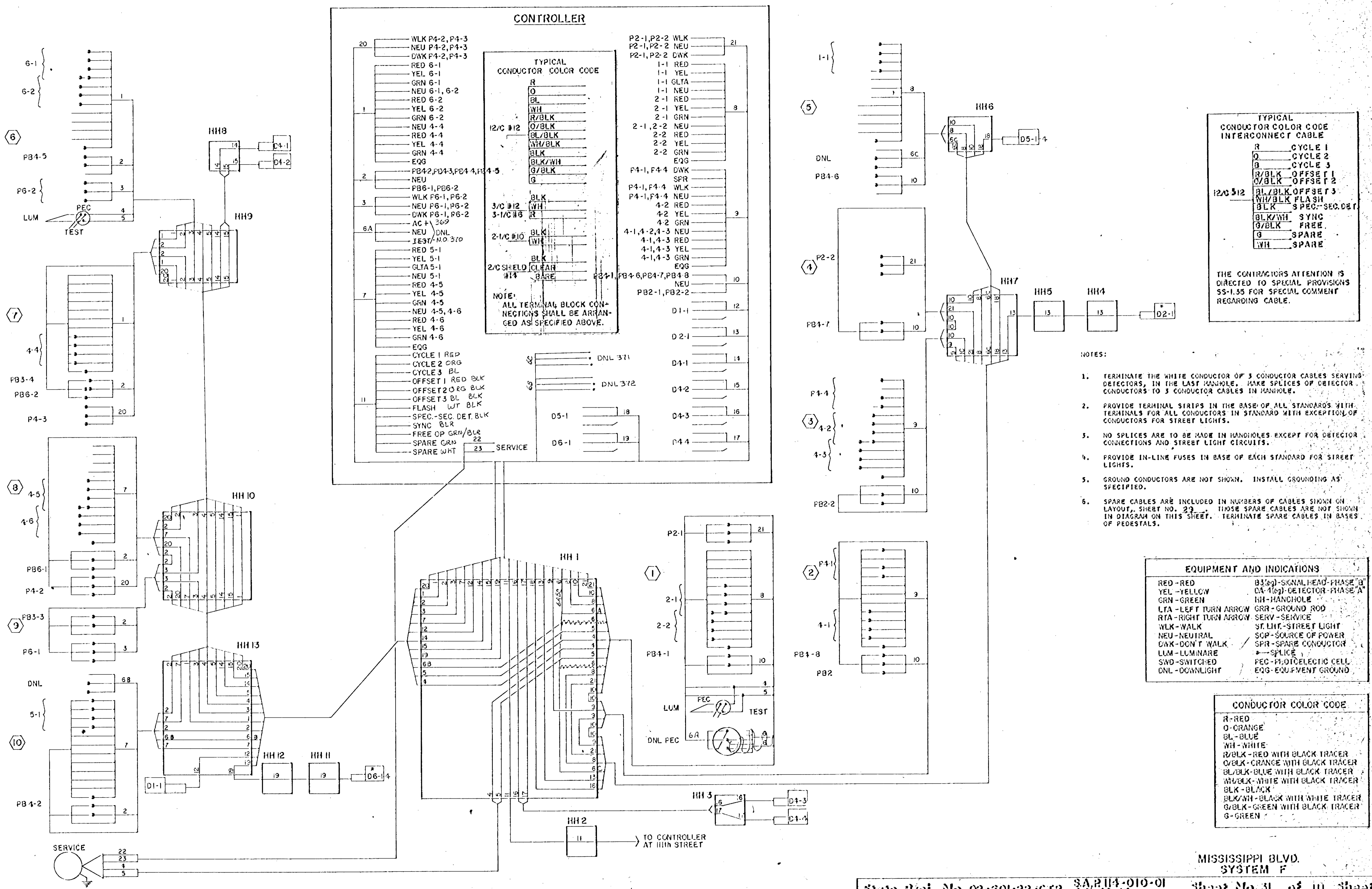
ALL LEFT TURN DETECTORS SHALL BE SPACED 10' BETWEEN LOOPS.

ALL DETECTOR LOOPS SHALL BE INSTALLED IN 1" NMC SEE SHEET No. 6 FOR DETAIL.

**SIGNAL SYSTEM LAYOUT  
MISSISSIPPI BLVD.**

REV. MAR. 1978

as built 1/25/80 JOB NO. 9-7405



**CONTROLLER**

**TYPICAL CONDUCTOR COLOR CODE**

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/WH	BLACK WITH WHITE TRACER
G/BLK	GREEN WITH BLACK TRACER
G	GREEN

**TYPICAL CONDUCTOR COLOR CODE INTERCONNECT CABLE**

R	CYCLE 1
O	CYCLE 2
B	CYCLE 3
R/BLK	OFFSET 1
O/BLK	OFFSET 2
BL/BLK	OFFSET 3
WH/BLK	FLASH
BLK	SPEC.-SEC.DET.
BLK/WH	SYNC
G/BLK	FREE
G	SPARE
WH	SPARE

THE CONTRACTOR'S ATTENTION IS DIRECTED TO SPECIAL PROVISIONS 55-1.35 FOR SPECIAL COMMENT REGARDING CABLE.

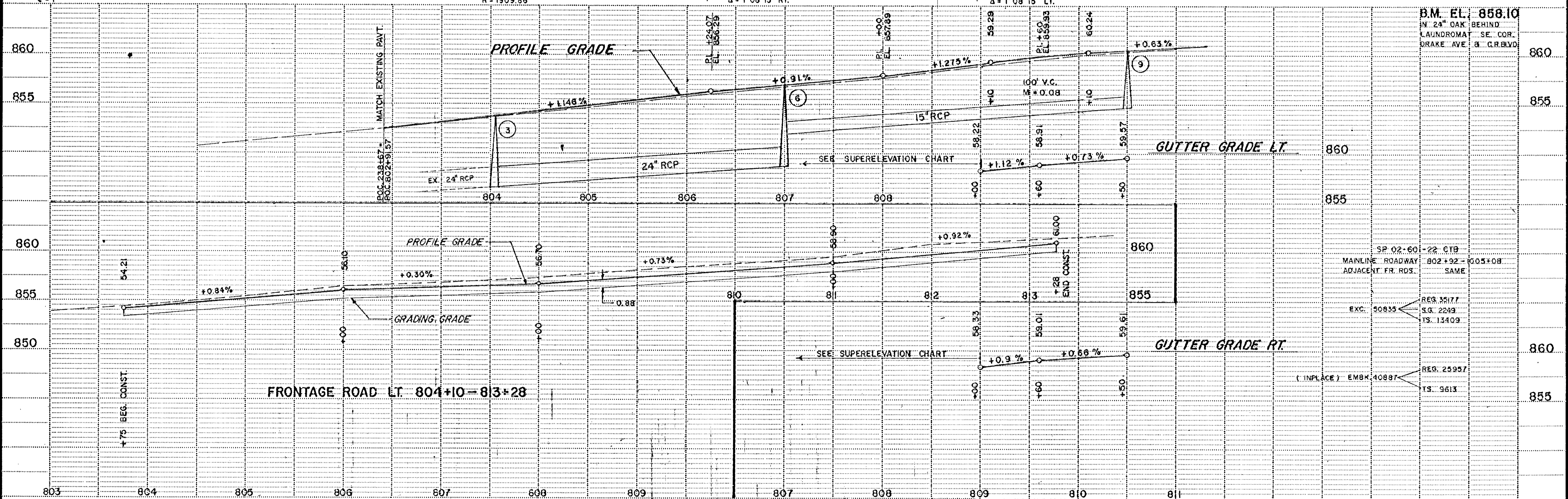
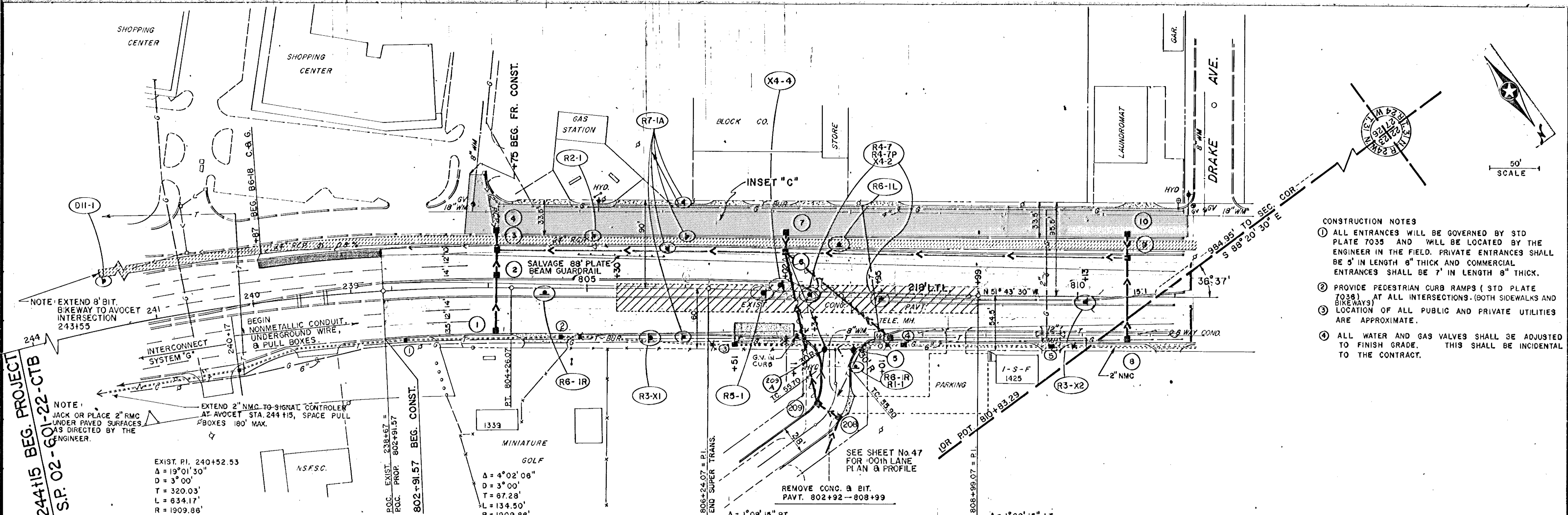
- NOTES:**
1. TERMINATE THE WHITE CONDUCTOR OF 3 CONDUCTOR CABLES SERVING DETECTORS, IN THE LAST HANDHOLE, MAKE SPLICES OF DETECTOR CONDUCTORS TO 3 CONDUCTOR CABLES IN HANDHOLE.
  2. PROVIDE TERMINAL STRIPS IN THE BASE OF ALL STANDARDS WITH TERMINALS FOR ALL CONDUCTORS IN STANDARD WITH EXCEPTION OF CONDUCTORS 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.
  6. SPARE CABLES ARE INCLUDED IN NUMBERS OF CABLES SHOWN ON LAYOUT, SHEET NO. 23. THOSE SPARE CABLES ARE NOT SHOWN IN DIAGRAM ON THIS SHEET. TERMINATE SPARE CABLES IN BASES OF PEDESTALS.

**EQUIPMENT AND INDICATIONS**

RED-RED	BL(g)-SIGNAL HEAD-PHASE 'B'
YEL-YELLOW	DA(1g)-DETECTOR-PHASE 'A'
GRN-GREEN	HH-HANDHOLE
LTA-LEFT TURN ARROW	GRR-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-LUMINARE	--- SPLICE
SWD-SWITCHED	PEC-PHOTOELECTRIC CELL
DNL-DOWNLIGHT	EQG-EQUIPMENT GROUND

**CONDUCTOR COLOR CODE**

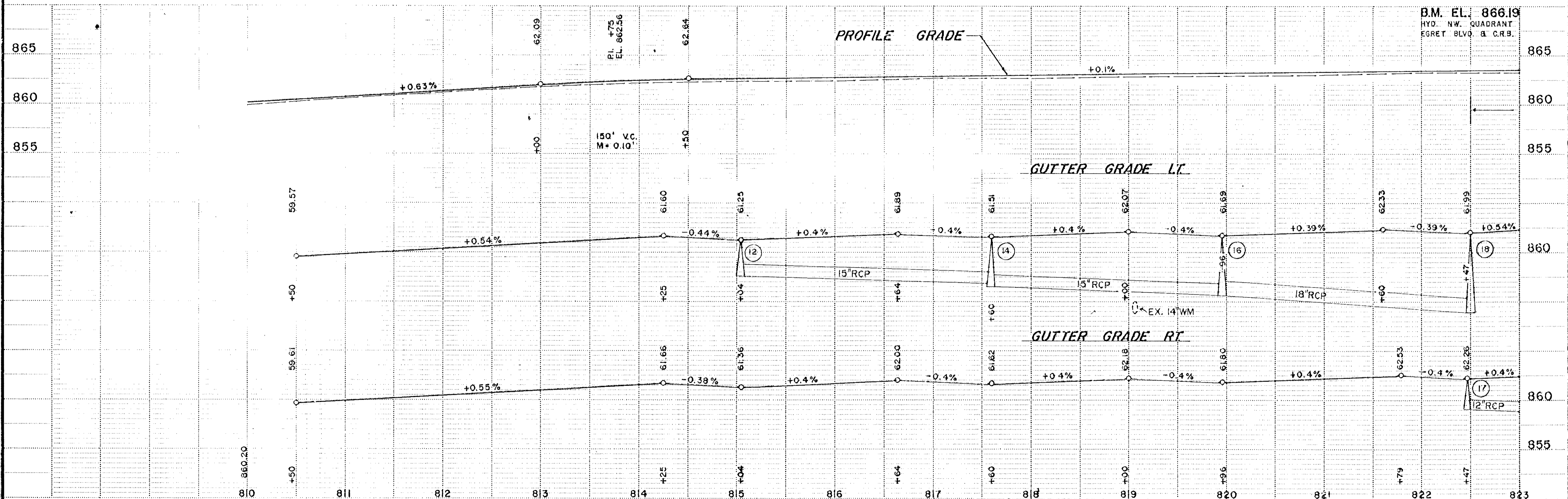
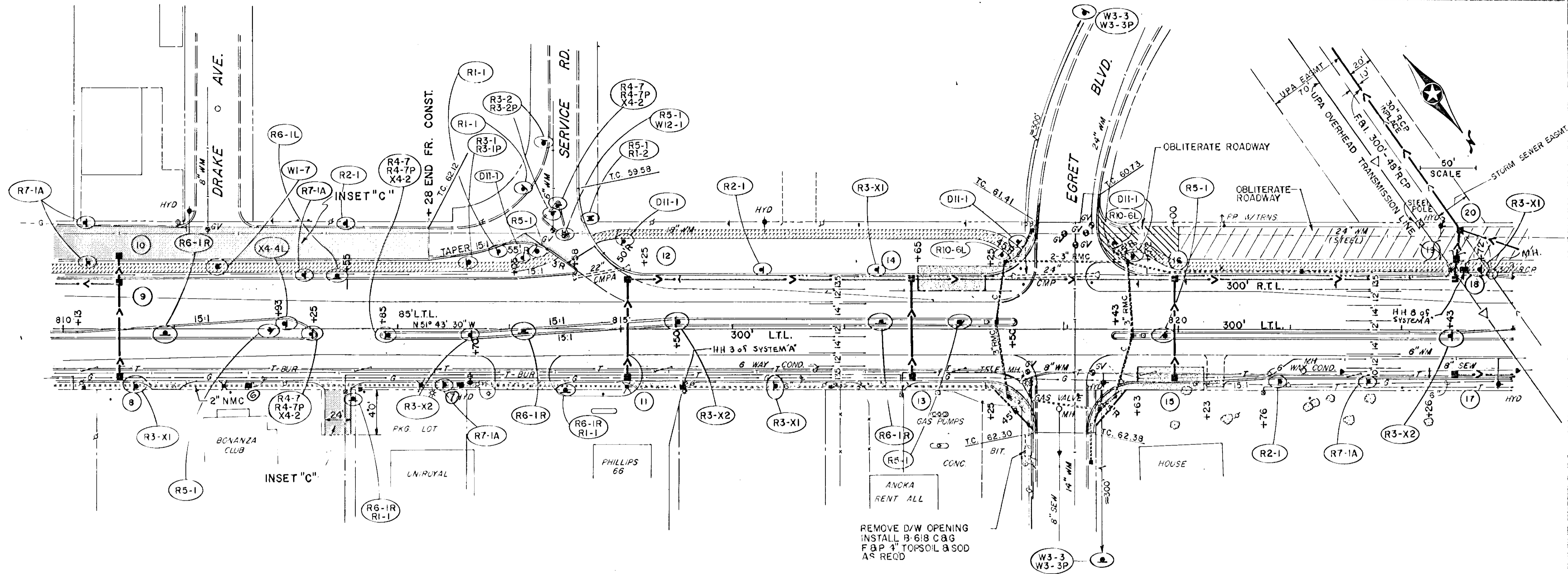
R-RED
O-ORANGE
BL-BLUE
WH-WHITE
R/BLK-RED WITH BLACK TRACER
O/BLK-ORANGE WITH BLACK TRACER
BL/BLK-BLUE WITH BLACK TRACER
WH/BLK-WHITE WITH BLACK TRACER
BLK-BLACK
BLK/WH-BLACK WITH WHITE TRACER
G/BLK-GREEN WITH BLACK TRACER
G-GREEN



REV. MAR 1978  
SINGLE PLAN-DOTTED  
K. A. HARRIS CO. - ANN ARBOR, MI. PAID

JOB NO. 9-7405  
AS BUILT 12-20-79

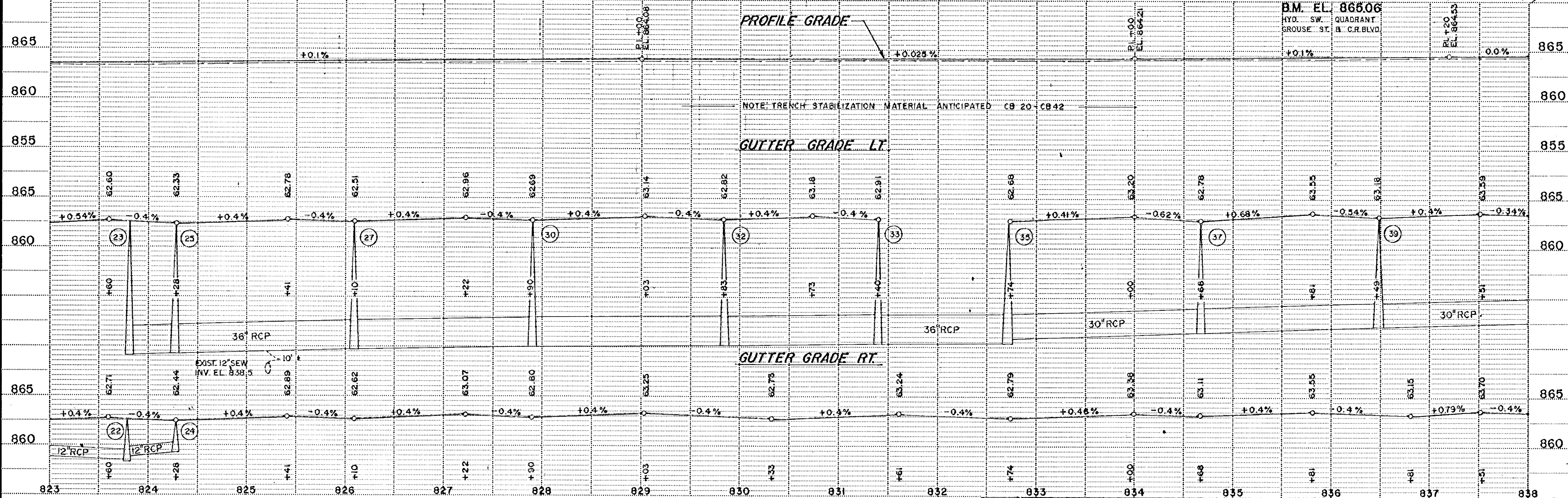
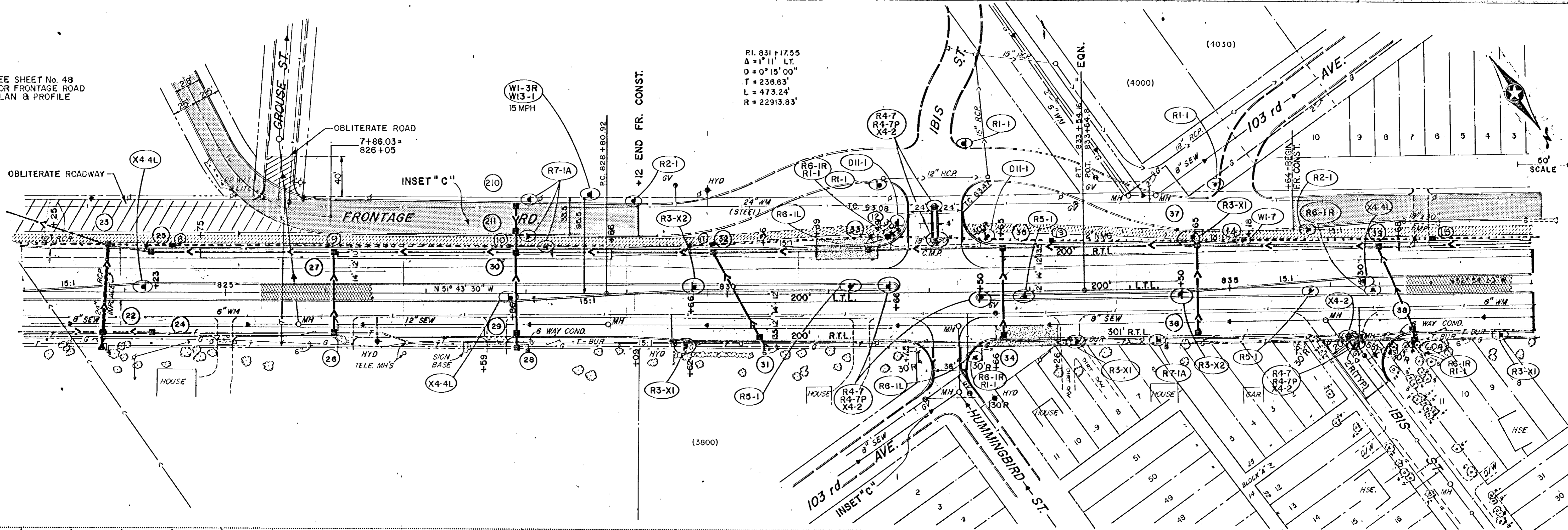




REV. MAR. 1974  
 SINGLE PLAN-DOTTED  
 H. A. BOHRS CO. - MINNEAPOLIS, ST. PAUL

SEE SHEET No. 48  
FOR FRONTAGE ROAD  
PLAN & PROFILE

RI. 831+17.55  
Δ = 1° 11' LT.  
D = 0° 15' 00"  
T = 238.63'  
L = 473.24'  
R = 22913.83'

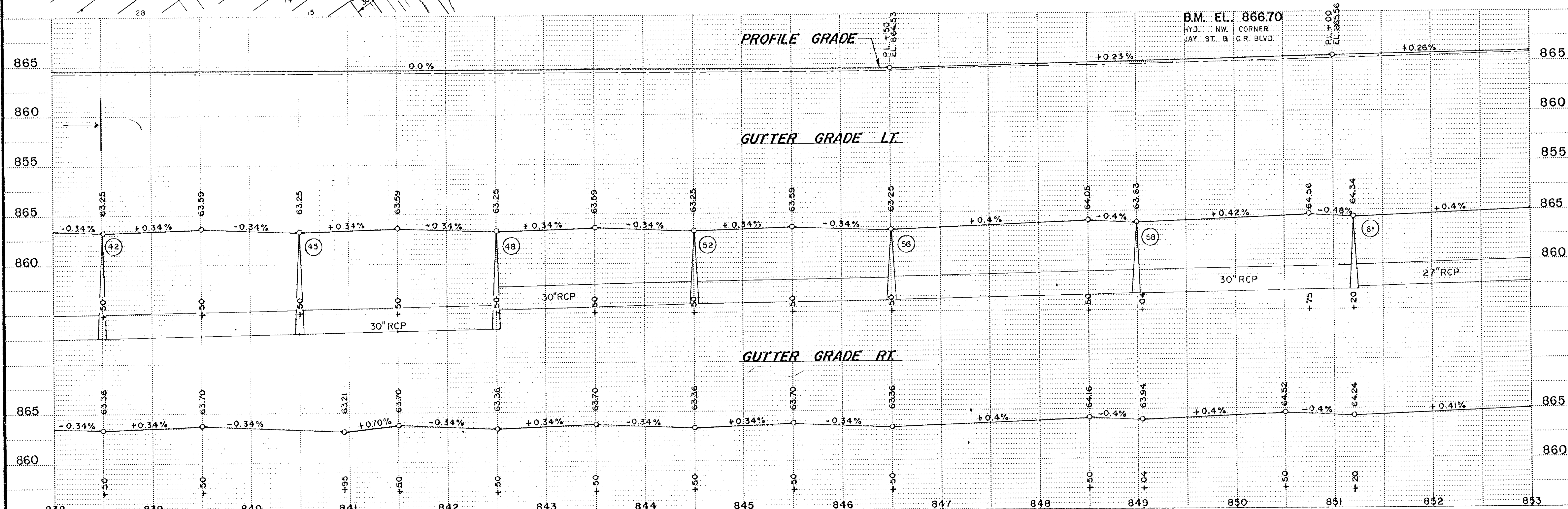
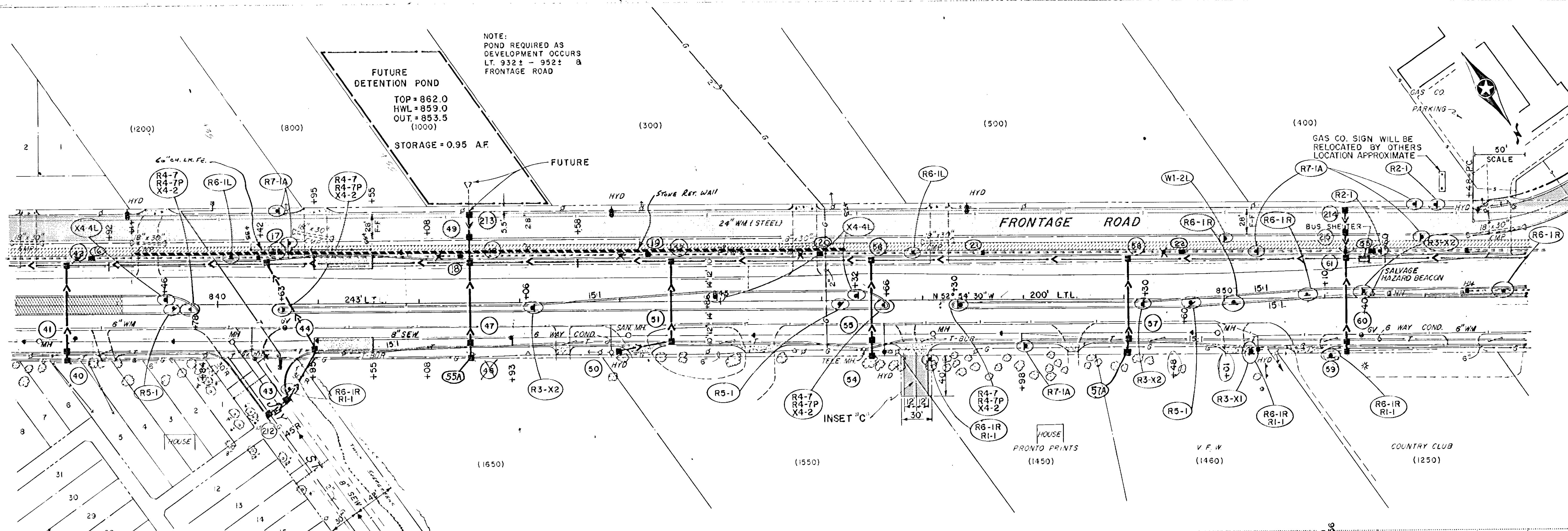


REV. MAR. 1978  
SINGLE PLAN - DOTTED  
S. A. HARRIS CO. - MINNEAPOLIS, ST. PAUL

JOB NO. 9-7405  
As Built 12-20-79

NOTE:  
POND REQUIRED AS  
DEVELOPMENT OCCURS  
LT. 932 ± - 952 ± @  
FRONTAGE ROAD

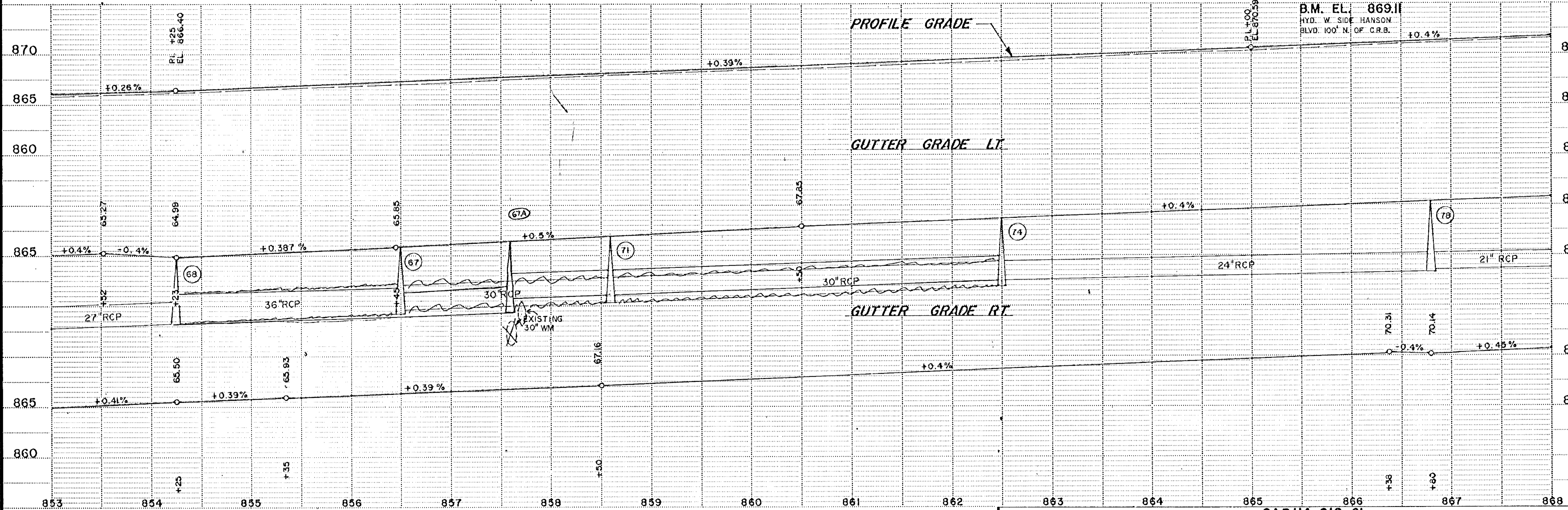
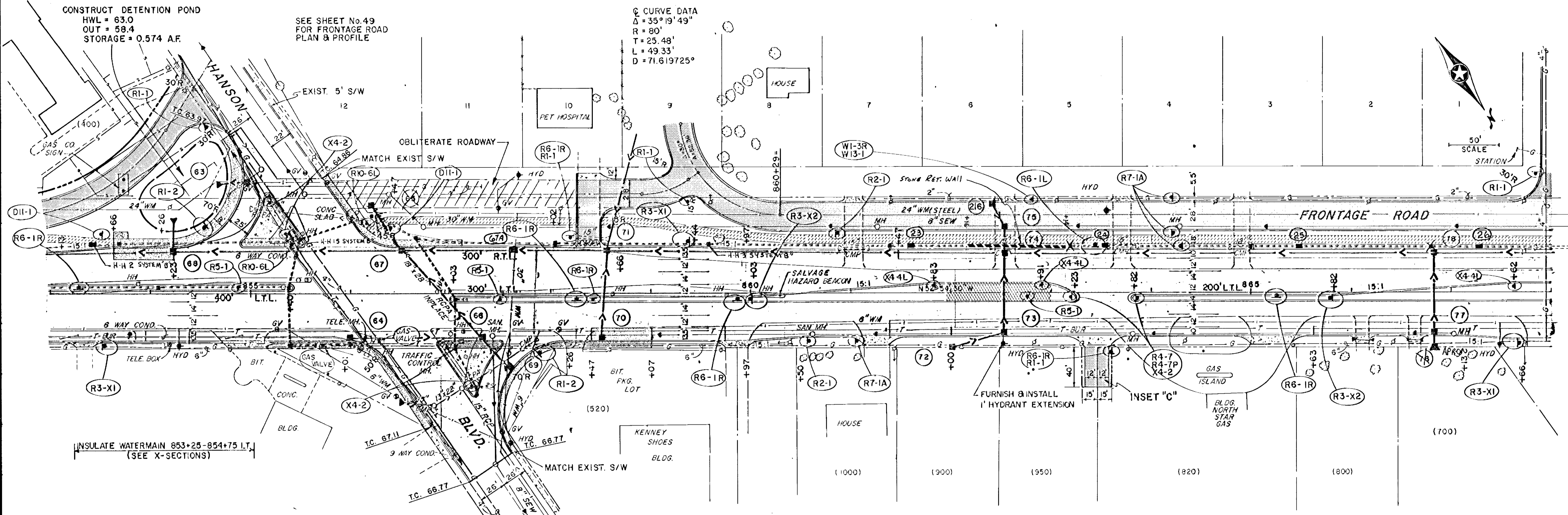
FUTURE  
DETENTION POND  
TOP = 862.0  
HWL = 859.0  
OUT. = 853.5  
(1000)  
STORAGE = 0.95 AF



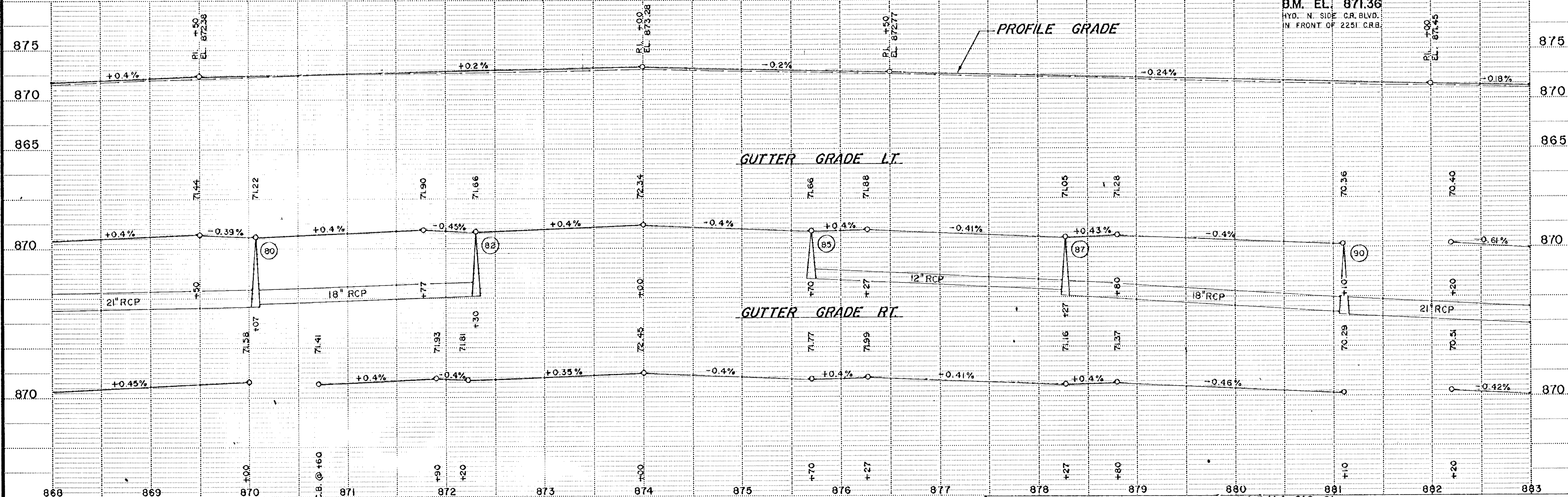
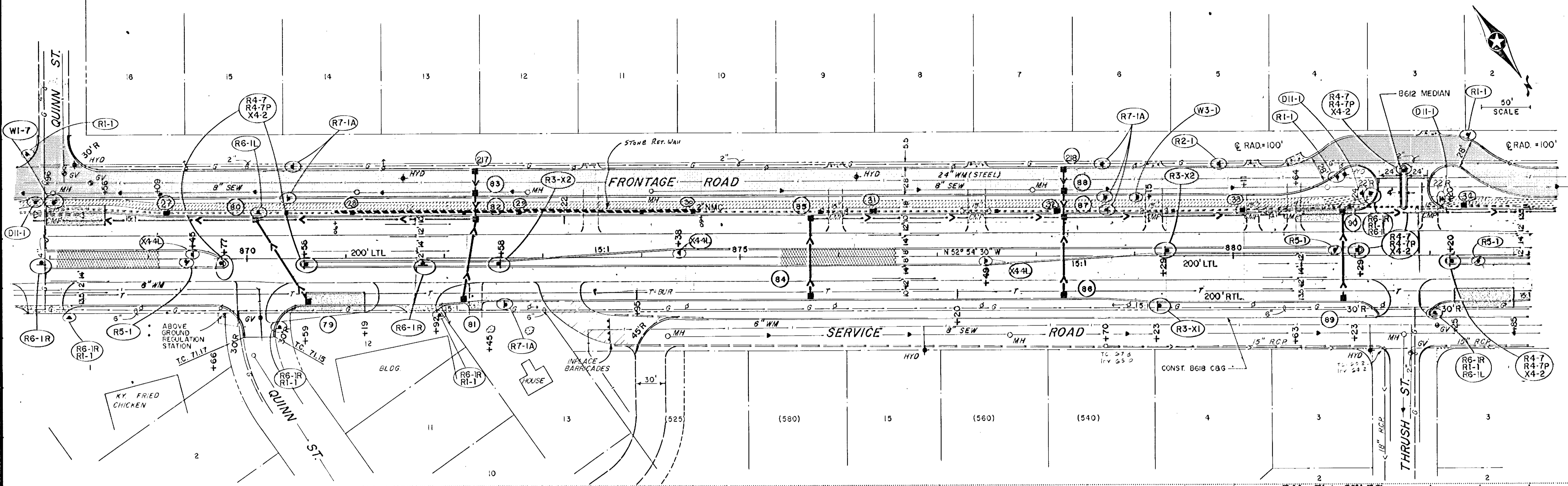
B.M. EL. 866.70  
HYD. NW. CORNER  
JAY ST. & C.R. BLVD.

P.I. +00  
EL. 865.56

REV. MAR. 1978  
SINGLE PLAN, DOTTED  
K. A. BOGGS CO., MINNEAPOLIS, ST. PAUL

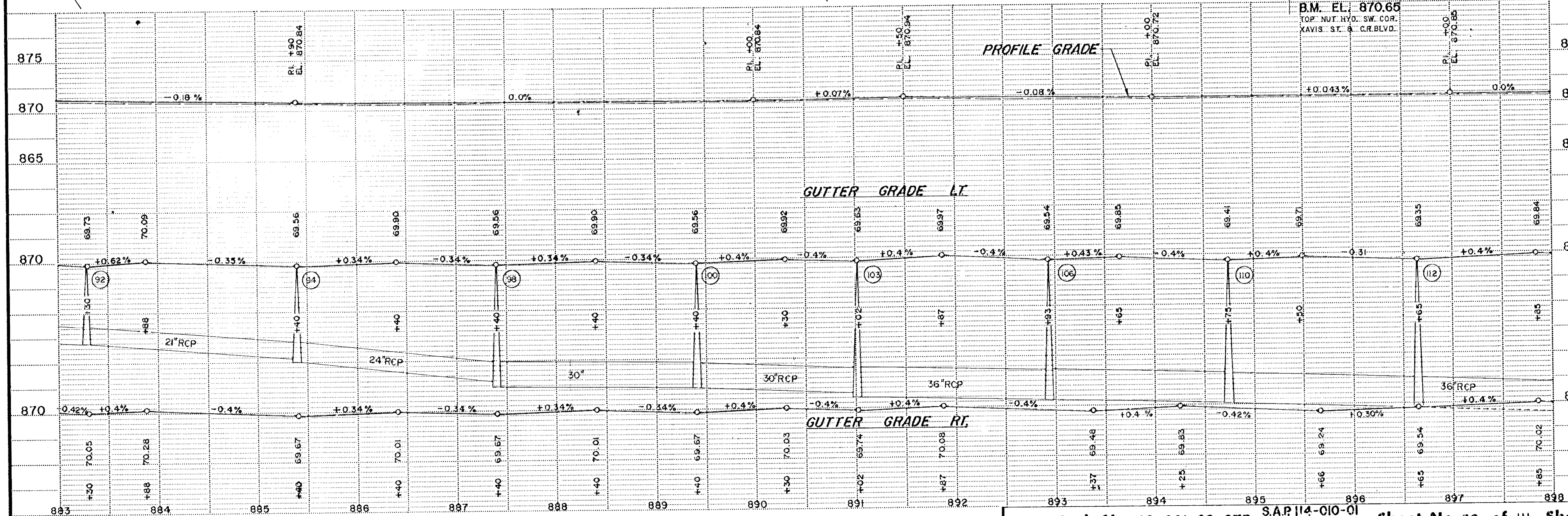
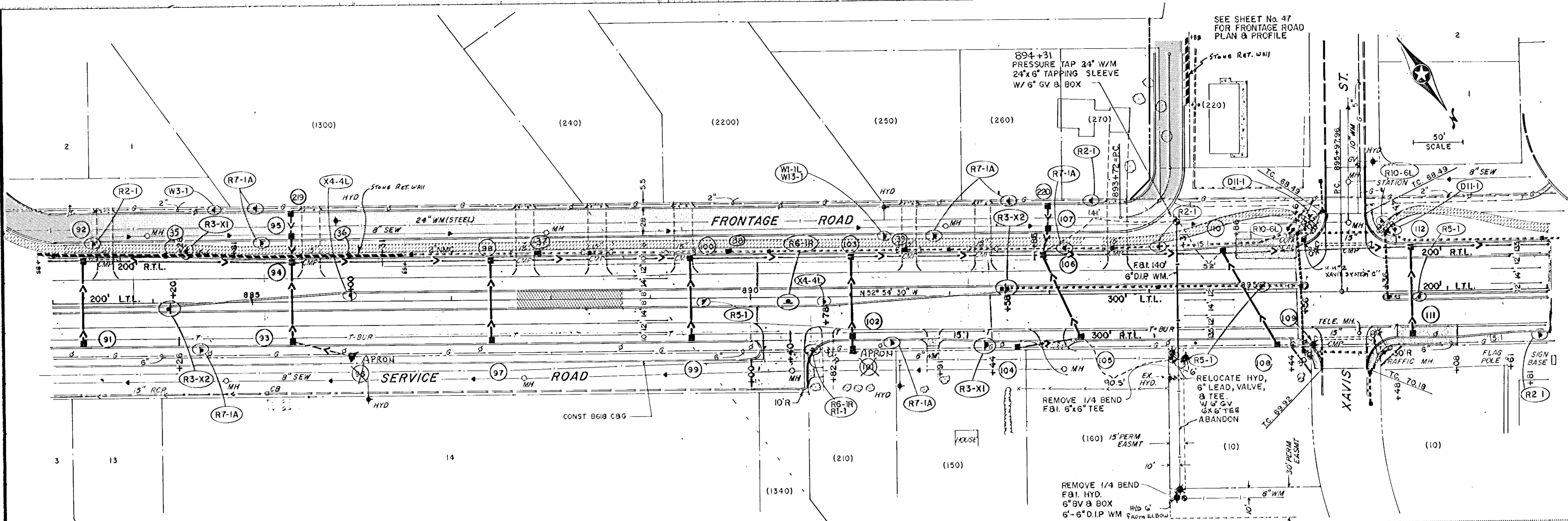


REV. MAK. 1976  
SINGLE PLAN-DOTTED  
A. A. ROGERS CO. MINNEAPOLIS, ST. PAUL



REV. MAR. 1978  
 SINGLE PLAN - DOTTED  
 M. A. ROSS & CO. - MINNEAPOLIS, ST. PAUL

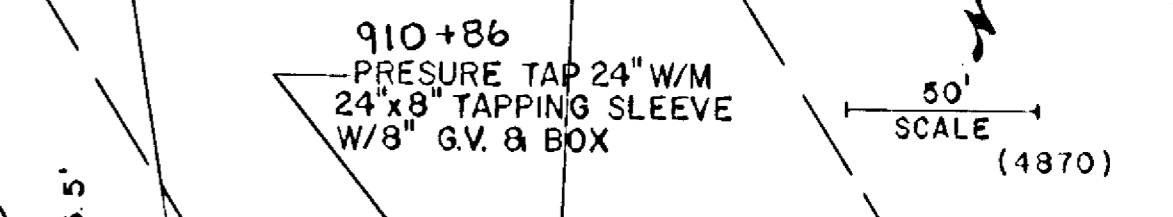
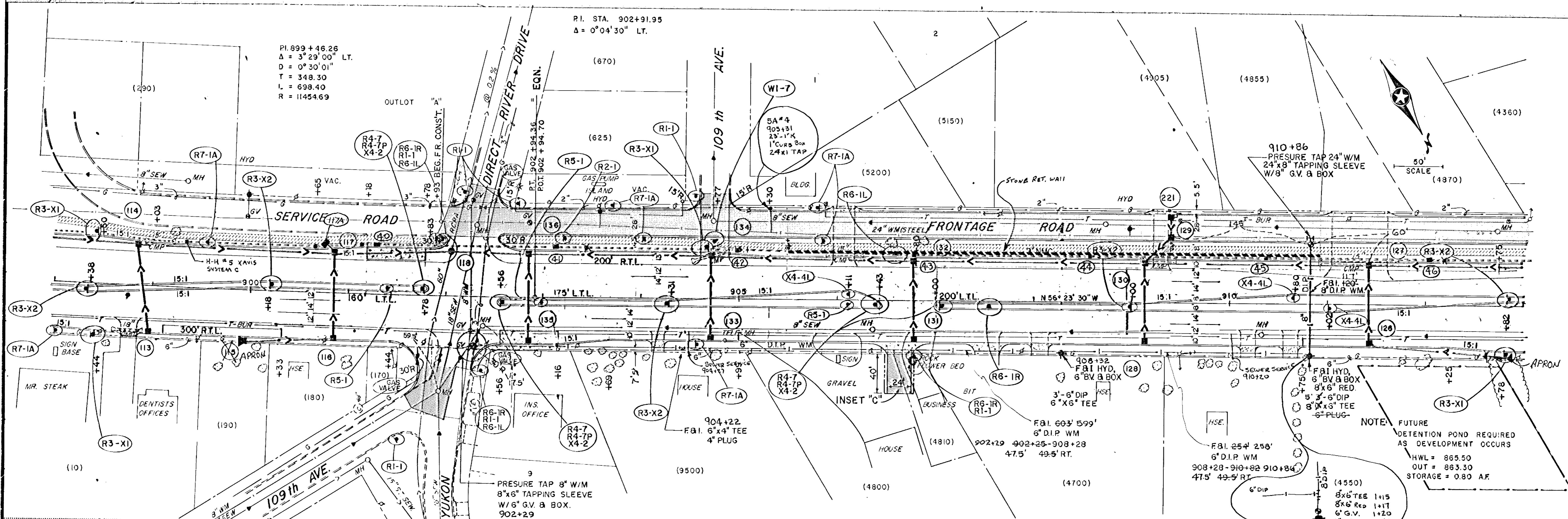
SEE SHEET No. 47  
FOR FRONTAGE ROAD  
PLAN & PROFILE



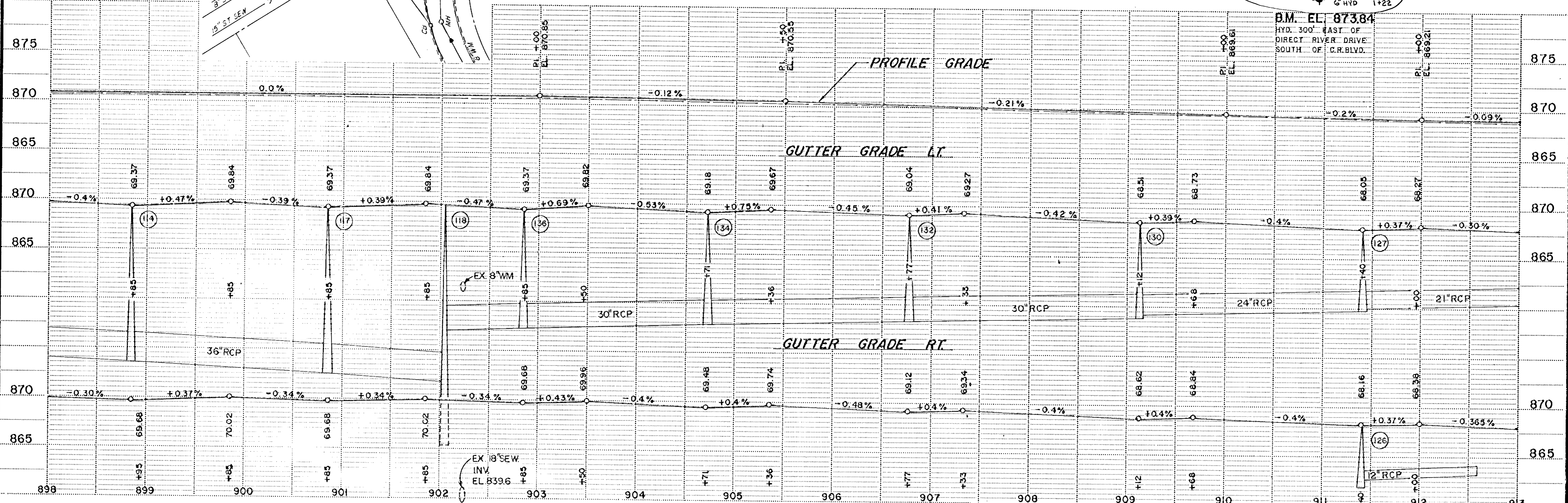
REV. MAR. 1978  
SINGLE PLAN - DOTTED  
S. A. BAKER CO. - ANN ARBOR, MI. PAUL

P.I. STA. 902+91.95  
 $\Delta = 0^{\circ}04'30''$  LT.

P.I. 899+46.26  
 $\Delta = 3^{\circ}29'00''$  LT.  
 $D = 0^{\circ}30'01''$   
 $T = 348.30$   
 $L = 698.40$   
 $R = 11454.69$



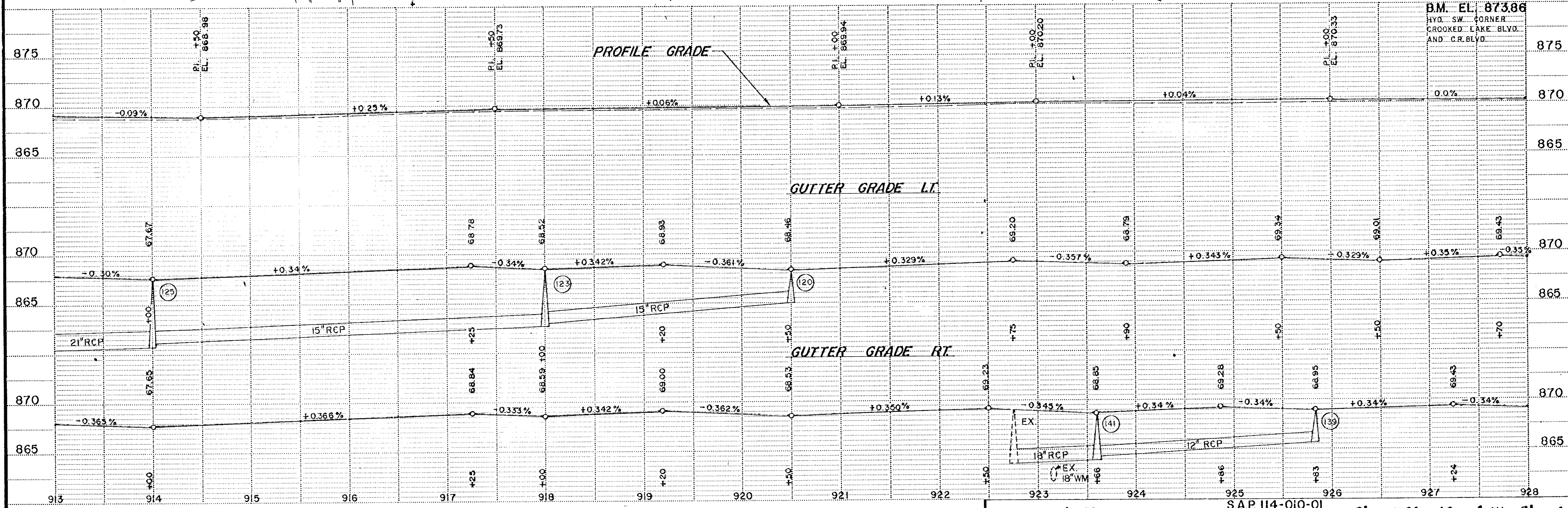
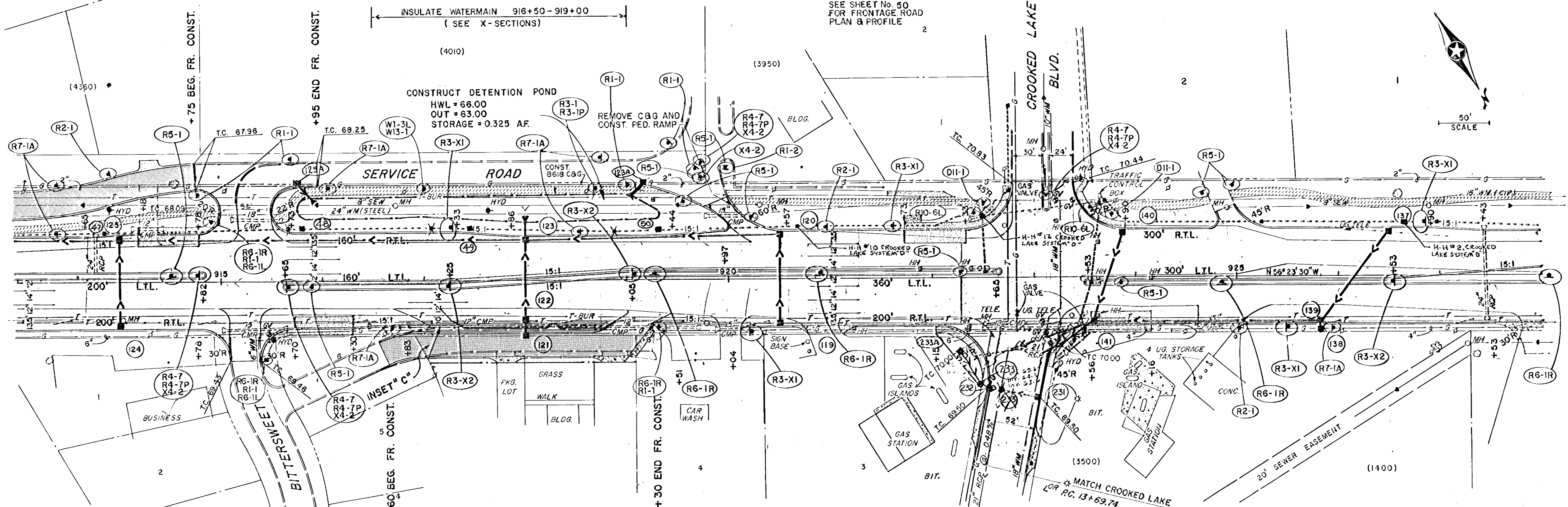
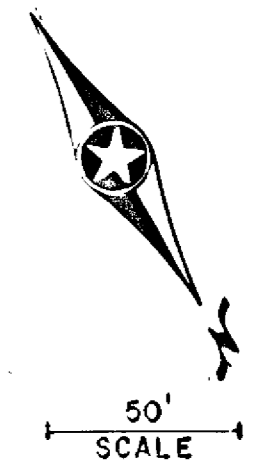
NOTE: FUTURE DETENTION POND REQUIRED AS DEVELOPMENT OCCURS  
 HWL = 865.50  
 OUT = 863.30  
 STORAGE = 0.80 A.F.



B.M. EL. 873.84  
 HYD. 300' EAST OF DIRECT RIVER DRIVE SOUTH OF C.R. BLVD.

REV. MAR. 1978  
 SINGLE PLAN DOTTED  
 H. A. ROSS CO. MINNEAPOLIS, ST. PAUL

SEE SHEET No. 50  
FOR FRONTAGE ROAD  
PLAN & PROFILE

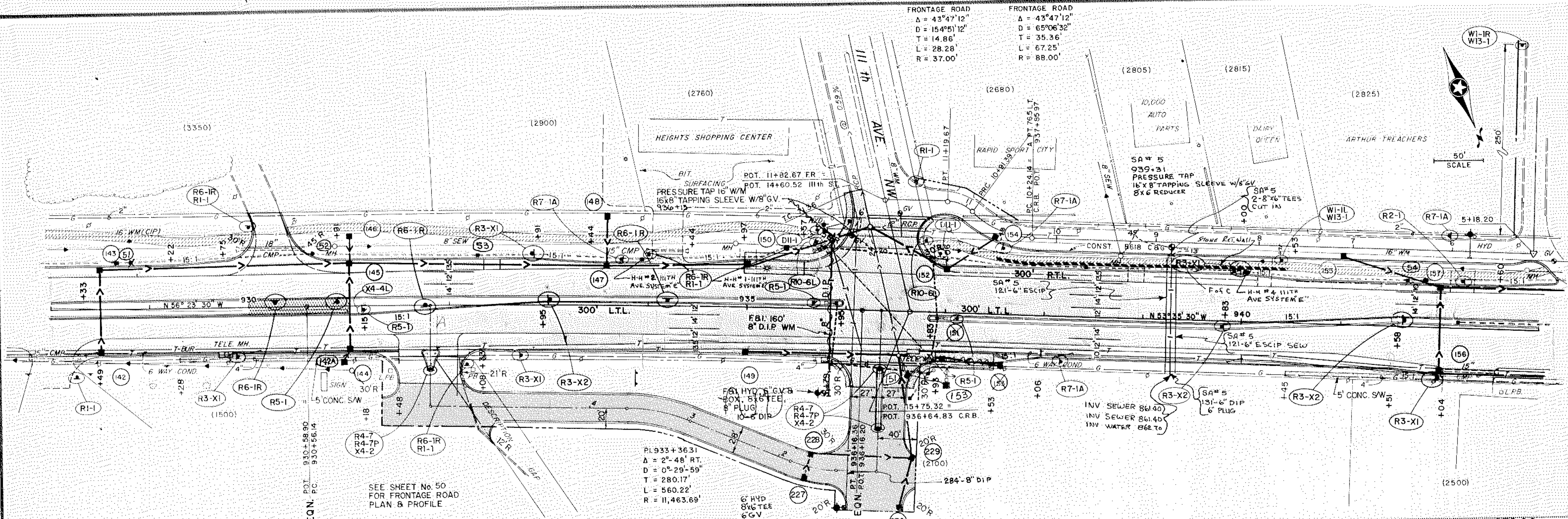


REV. 17, 1978  
REV. MAR. 1978  
SINGLE PLAN, DOTTED  
N. A. HIGGINS CO., MINNEAPOLIS, ST. PAUL



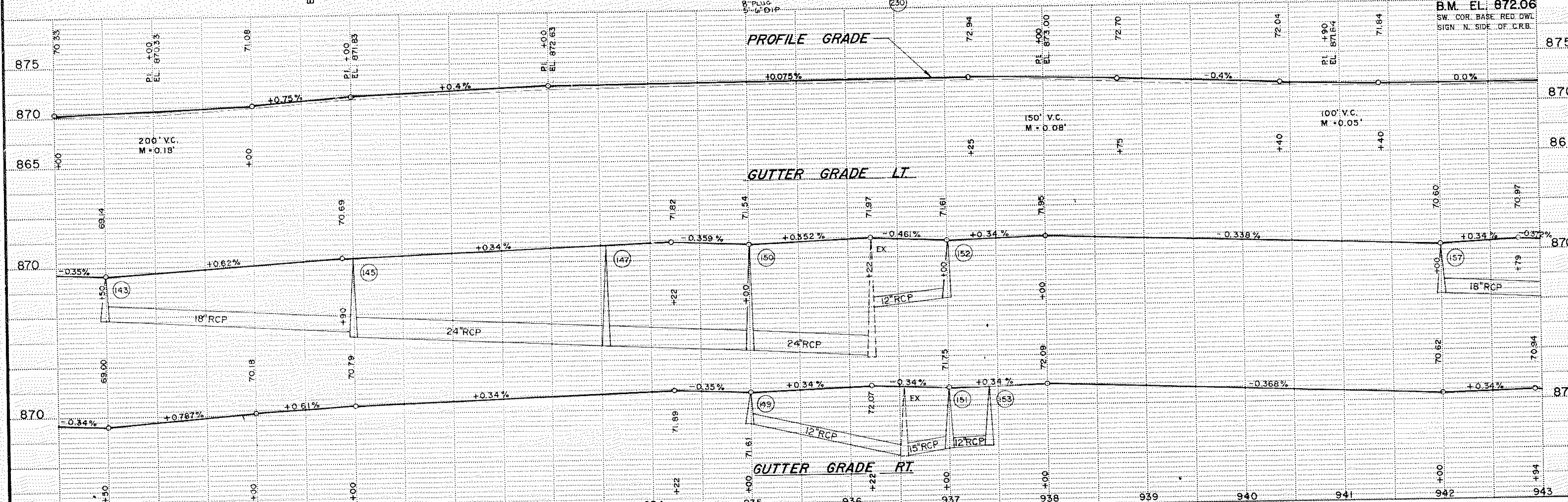
FRONTAGE ROAD  
 $\Delta = 43^\circ 47' 12''$   
 $D = 154^\circ 51' 12''$   
 $T = 14.86'$   
 $L = 28.28'$   
 $R = 37.00'$

FRONTAGE ROAD  
 $\Delta = 43^\circ 47' 12''$   
 $D = 65^\circ 06' 32''$   
 $T = 35.36'$   
 $L = 67.25'$   
 $R = 88.00'$



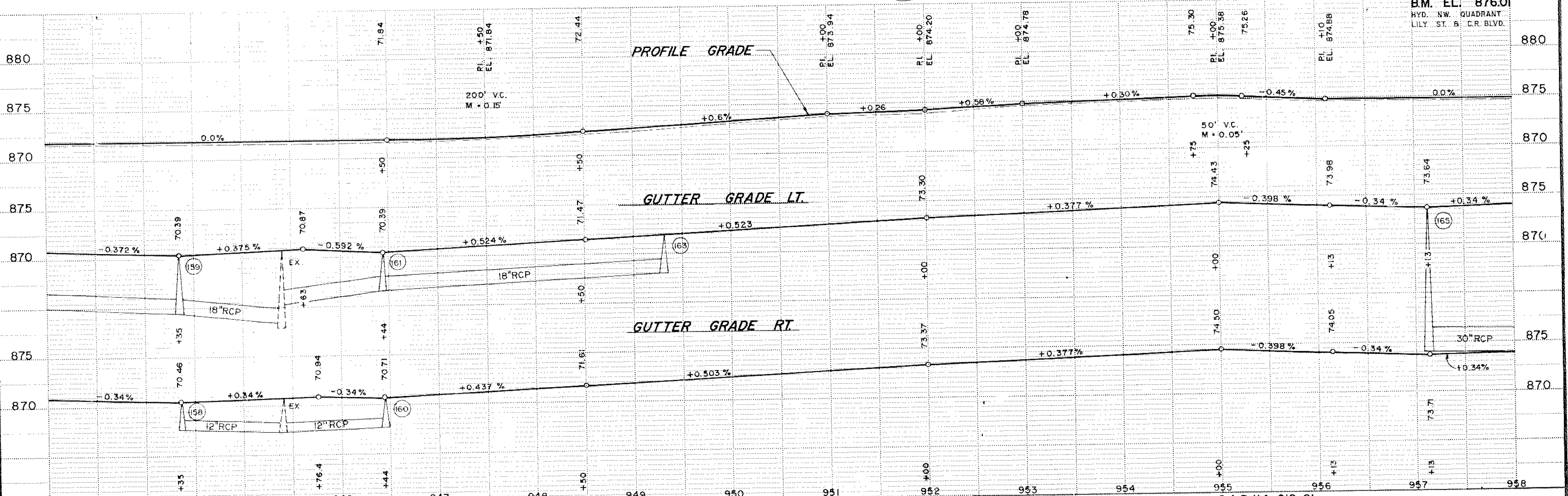
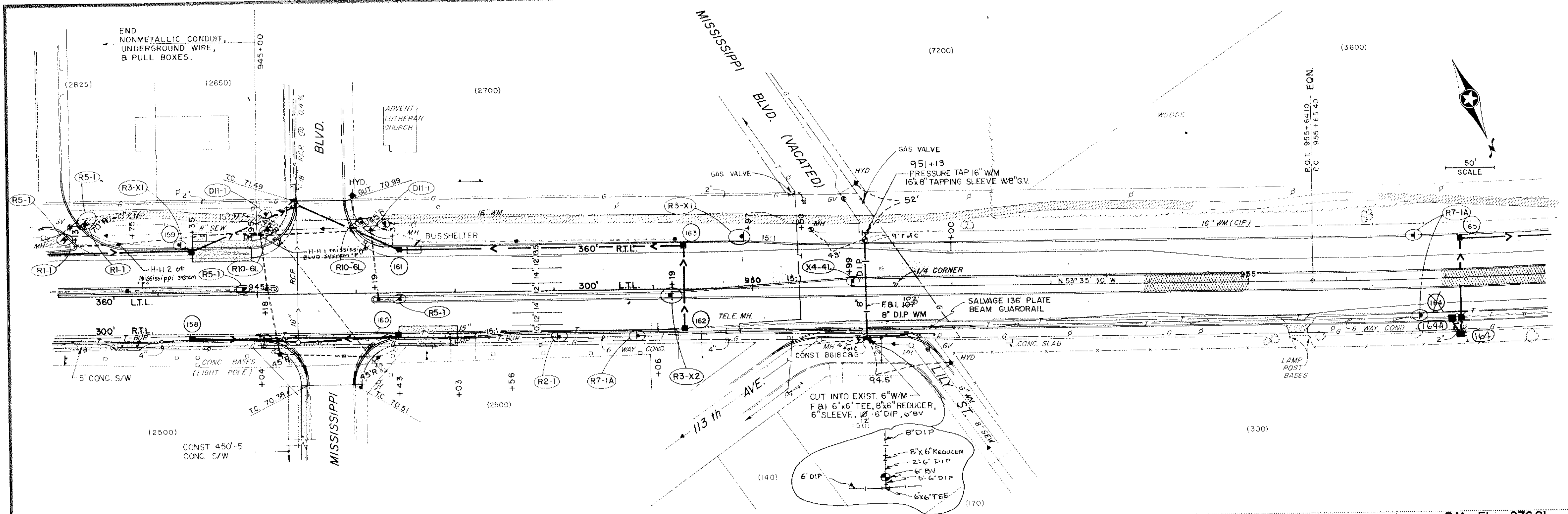
SEE SHEET No. 50  
 FOR FRONTAGE ROAD  
 PLAN & PROFILE

PI. 933+36.31  
 $\Delta = 2^\circ 48' RT.$   
 $D = 0^\circ 29' 59''$   
 $T = 280.17'$   
 $L = 560.22'$   
 $R = 11,463.69'$



B.M. EL. 872.06  
 SW. COR. BASE RED OWL  
 SIGN N. SIDE OF C.R.B.

REV. MAR. 1978  
 SINGLE PLAN, DOTTED  
 K.A. ROBERT CO., MINNEAPOLIS, ST. PAUL



April 17, 1978  
 REV. MAR. 1978  
 SINGLE PLAN - DOTTED  
 N. A. ROBERT CO. WINNEPESIS, ST. PAUL

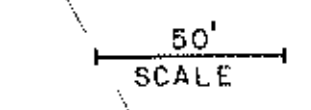
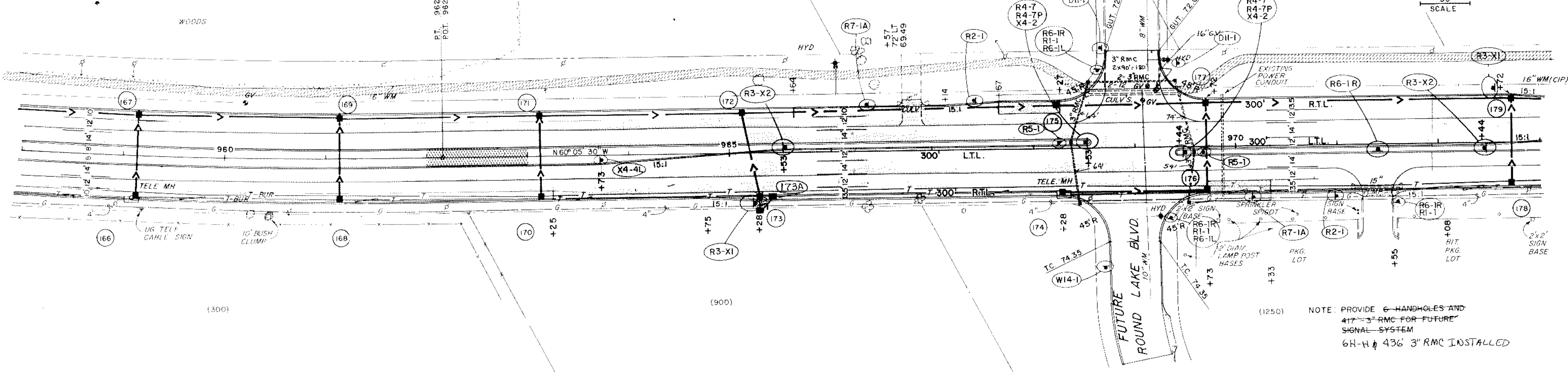
Δ = 6°-30' LT.  
 D = 1°-00'-28"  
 T = 325.09'  
 L = 649.49'  
 R = 5725.08

(3600)

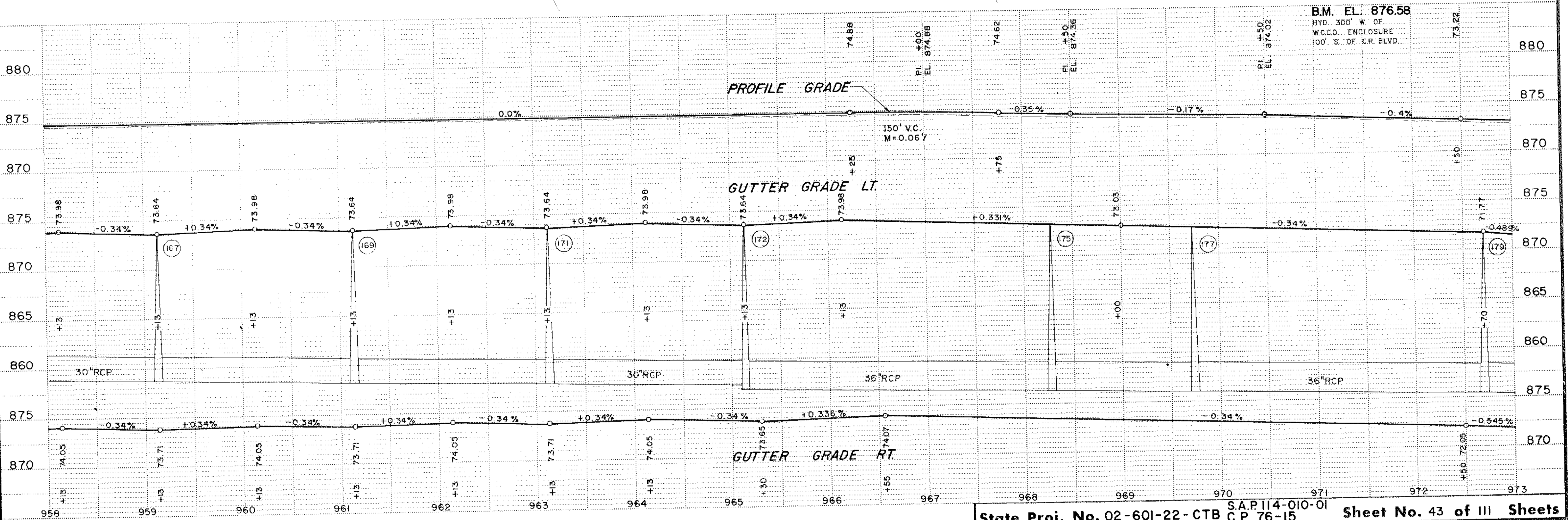
P.T. 962+16.65  
 P.O.T. 962+15.4  
 = EQN.

(3350)

(3050)

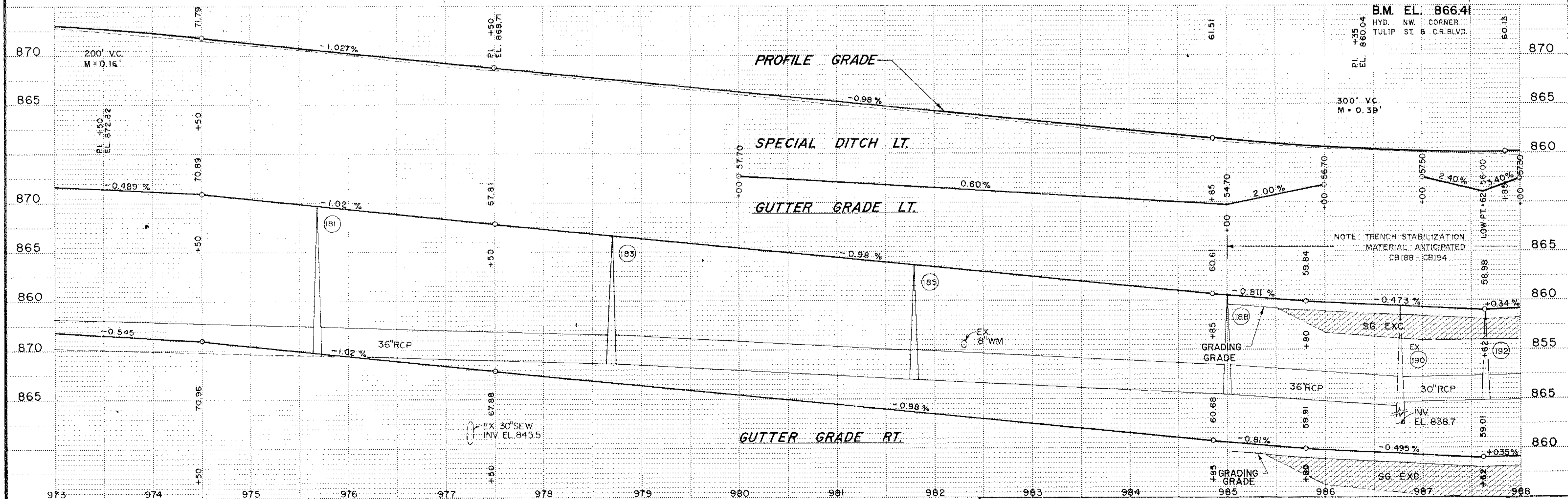
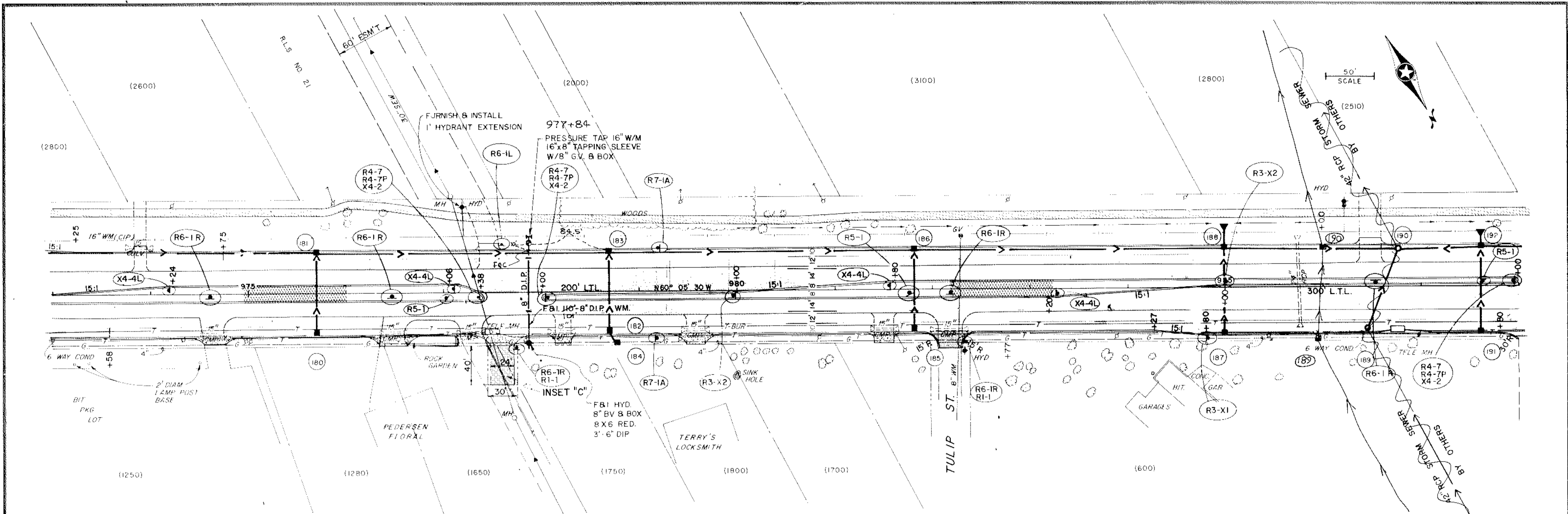


NOTE: PROVIDE 6 HANDHOLES AND  
 417-3" RMC FOR FUTURE  
 SIGNAL SYSTEM  
 6H-H & 436 3" RMC INSTALLED



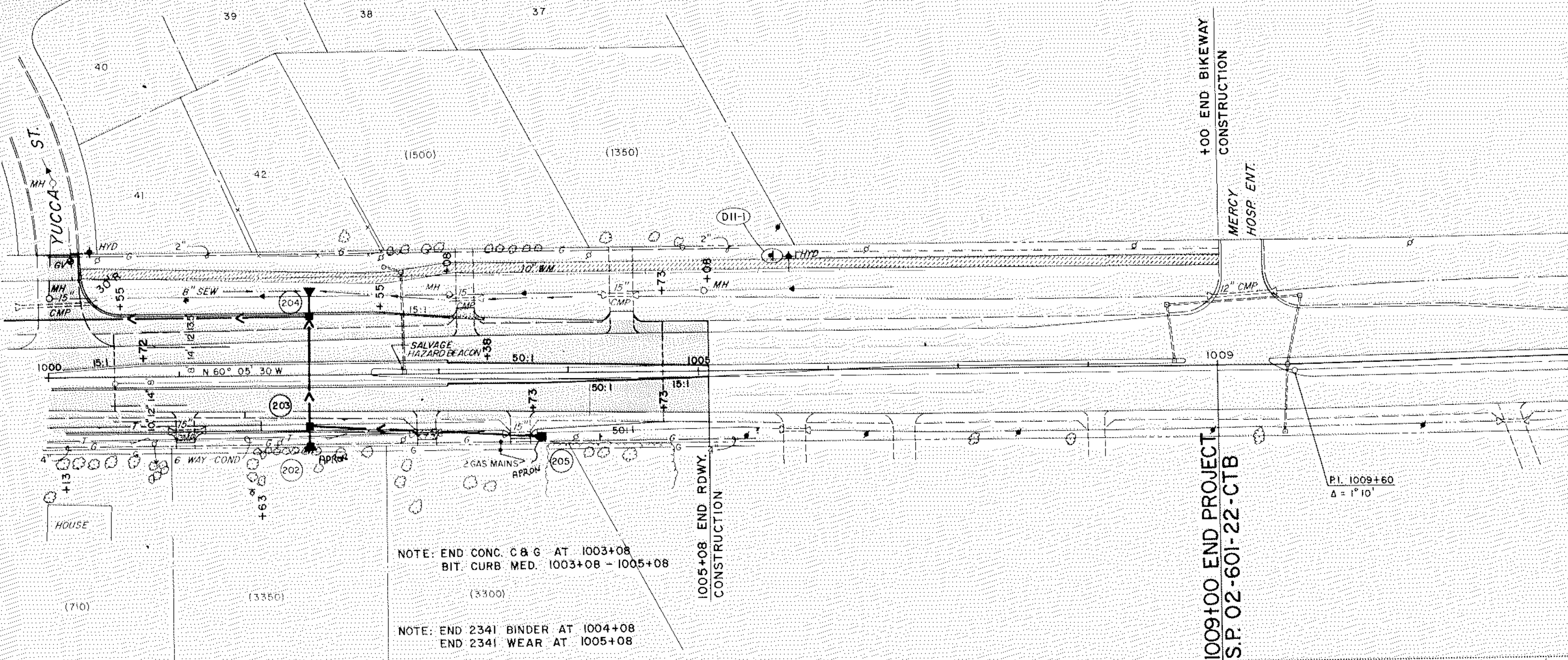
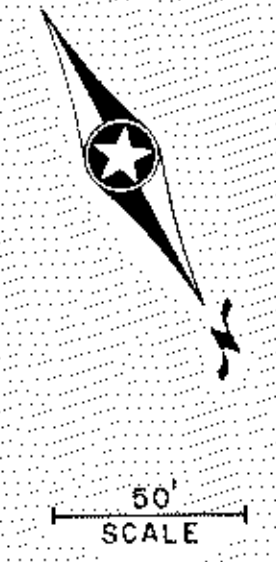
B.M. EL. 876.58  
 HYD. 300' W OF  
 W.C.C. ENCLOSURE  
 100' S. OF C.R. BLVD.

REV. MAR. 1975  
 SINGLE PLAN, DOTTED  
 W. A. ROBERT CO. MINNEAPOLIS, ST. PAUL



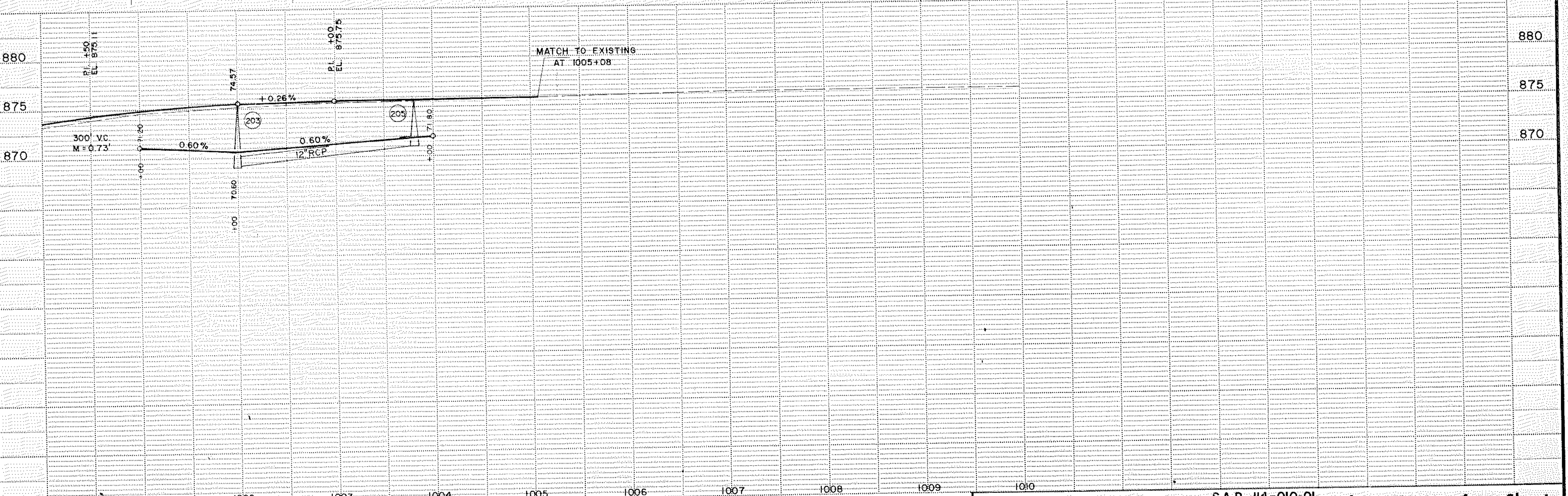
Rev. 10/1/78  
 SINGLE PLAN - DOTTED  
 K. A. ROBERT CO., INCORPORATED - ST. PAUL





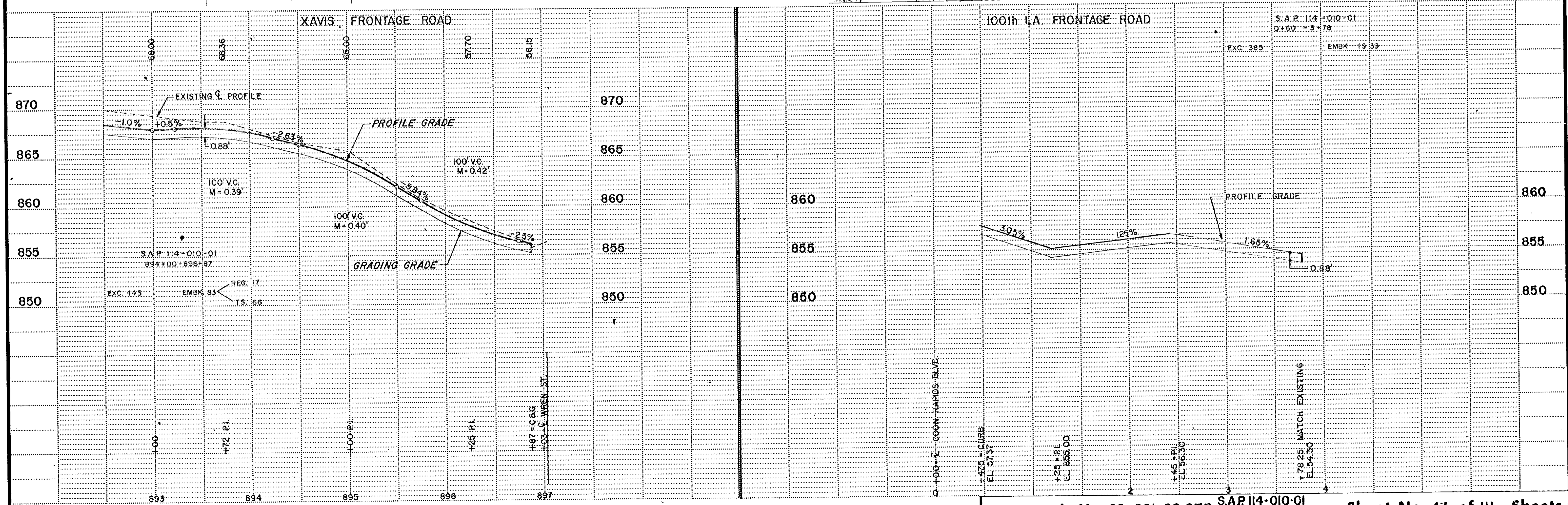
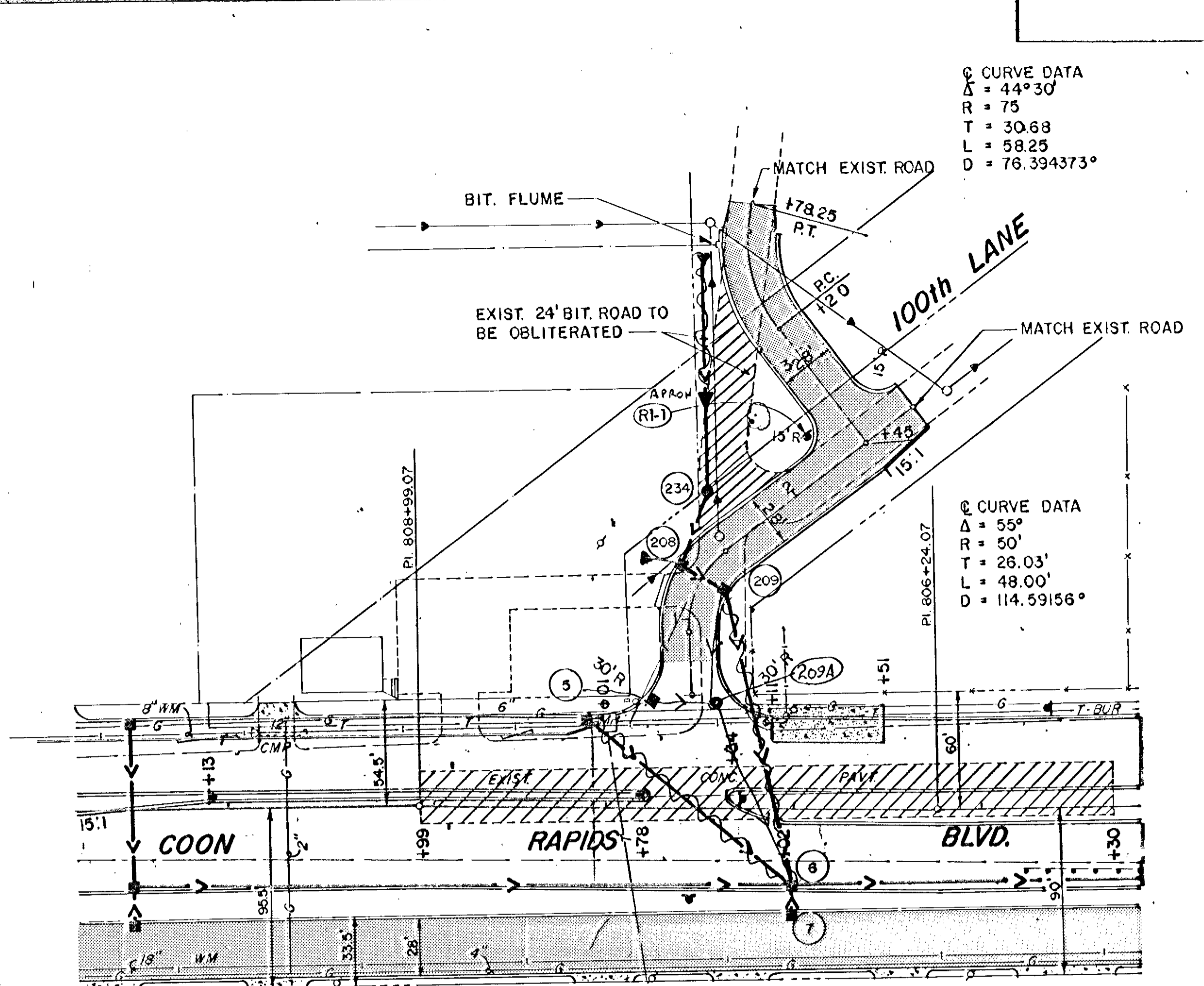
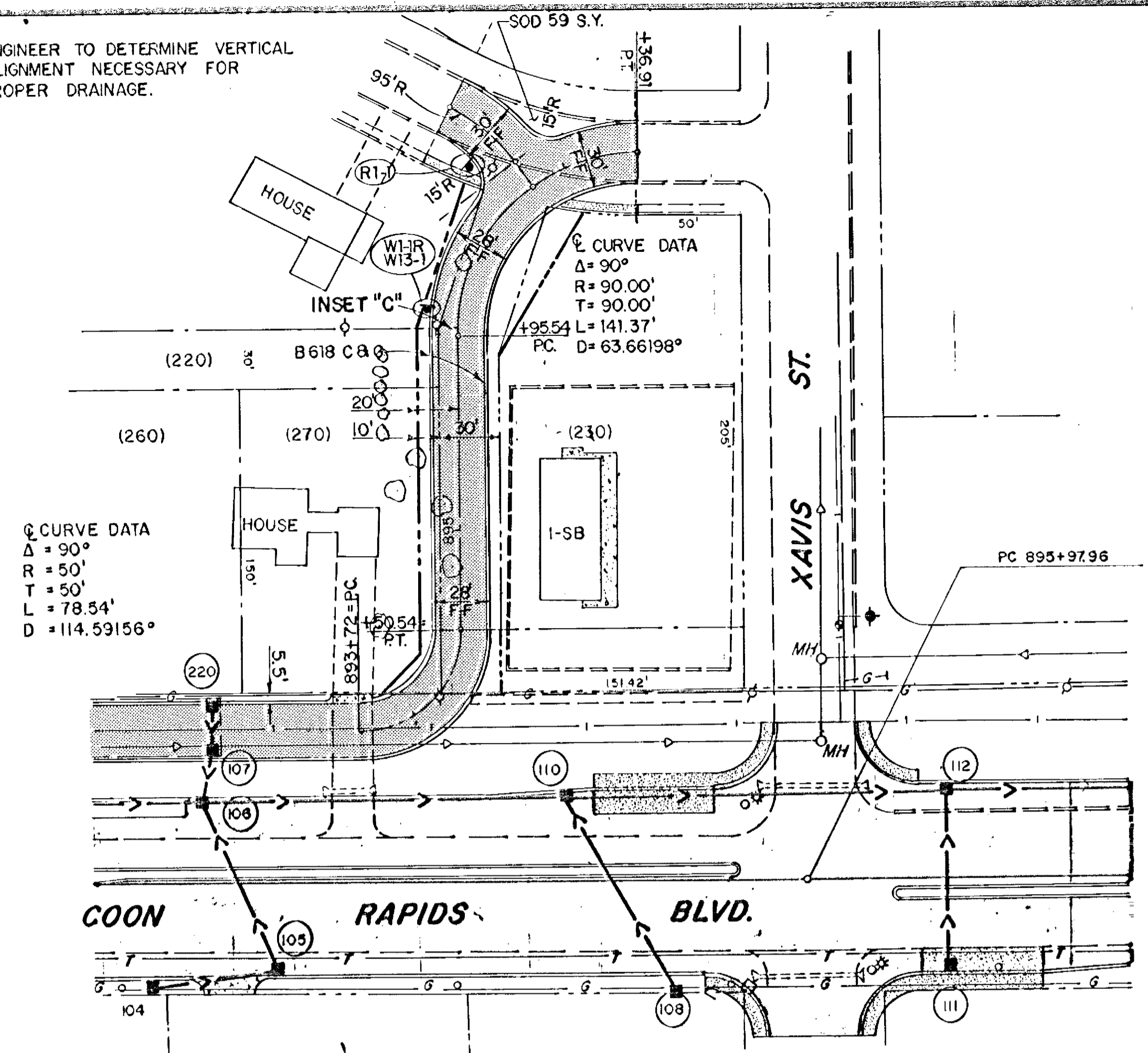
NOTE: END CONC. C & G AT 1003+08  
 BIT. CURB MED. 1003+08 - 1005+08

NOTE: END 2341 BINDER AT 1004+08  
 END 2341 WEAR AT 1005+08

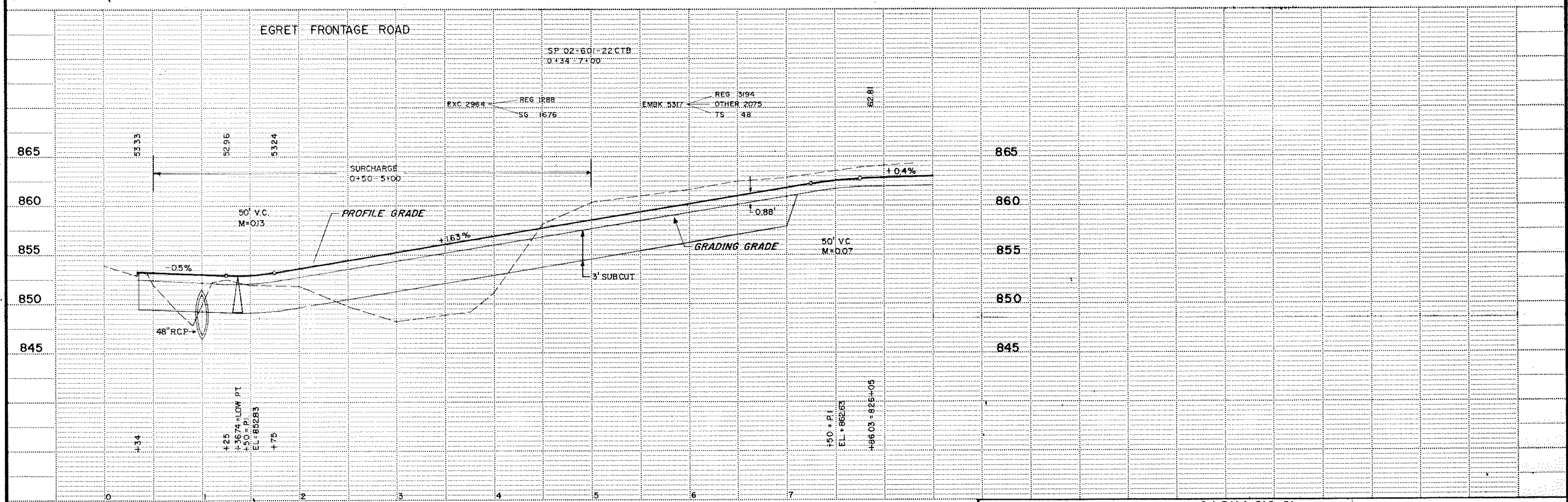
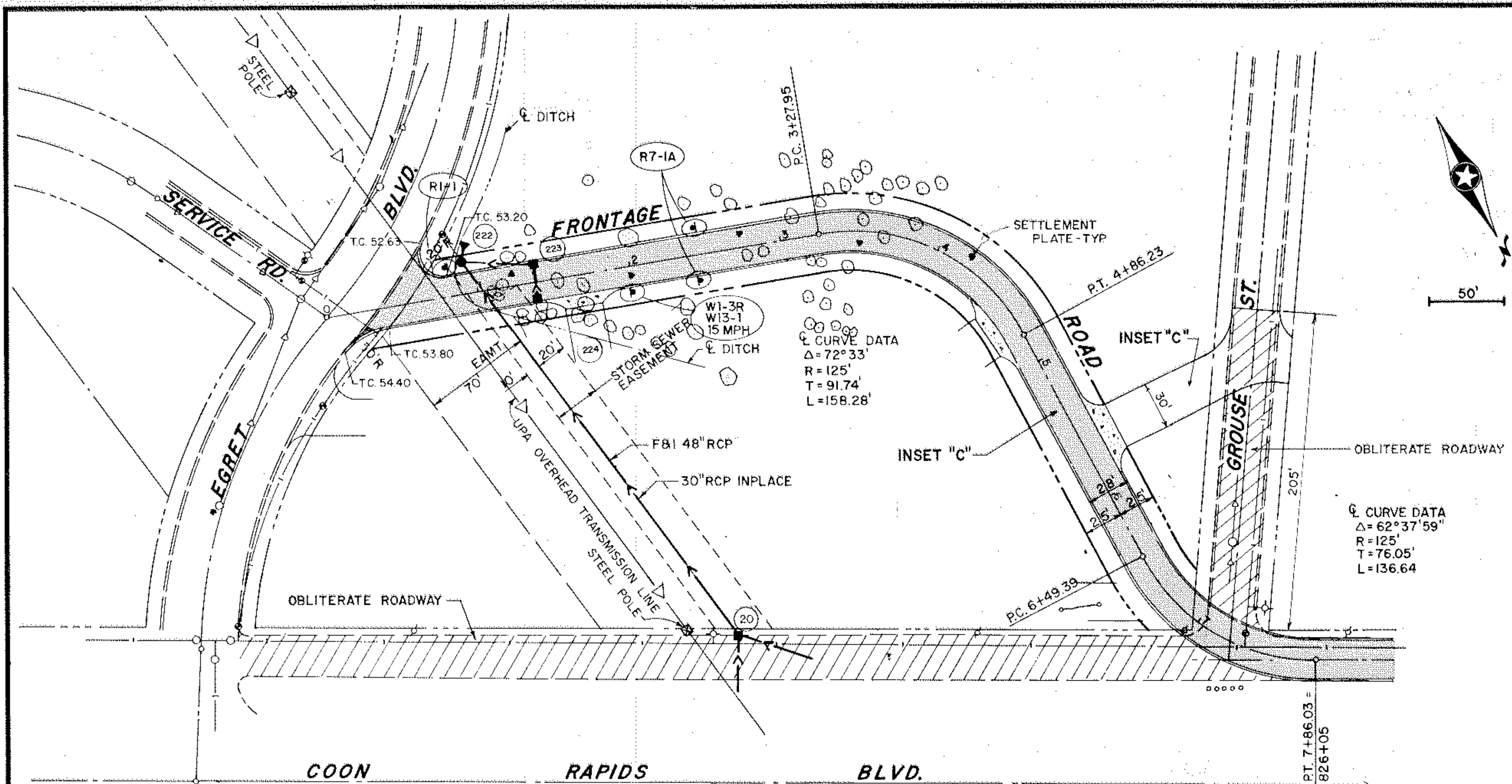


REV. MAR. 1973  
 SINGLE PLAN, DOTTED  
 A. ROBERT CO. MINNEAPOLIS, ST. PAUL

ENGINEER TO DETERMINE VERTICAL ALIGNMENT NECESSARY FOR PROPER DRAINAGE.

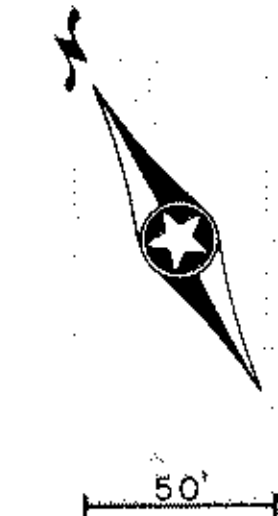
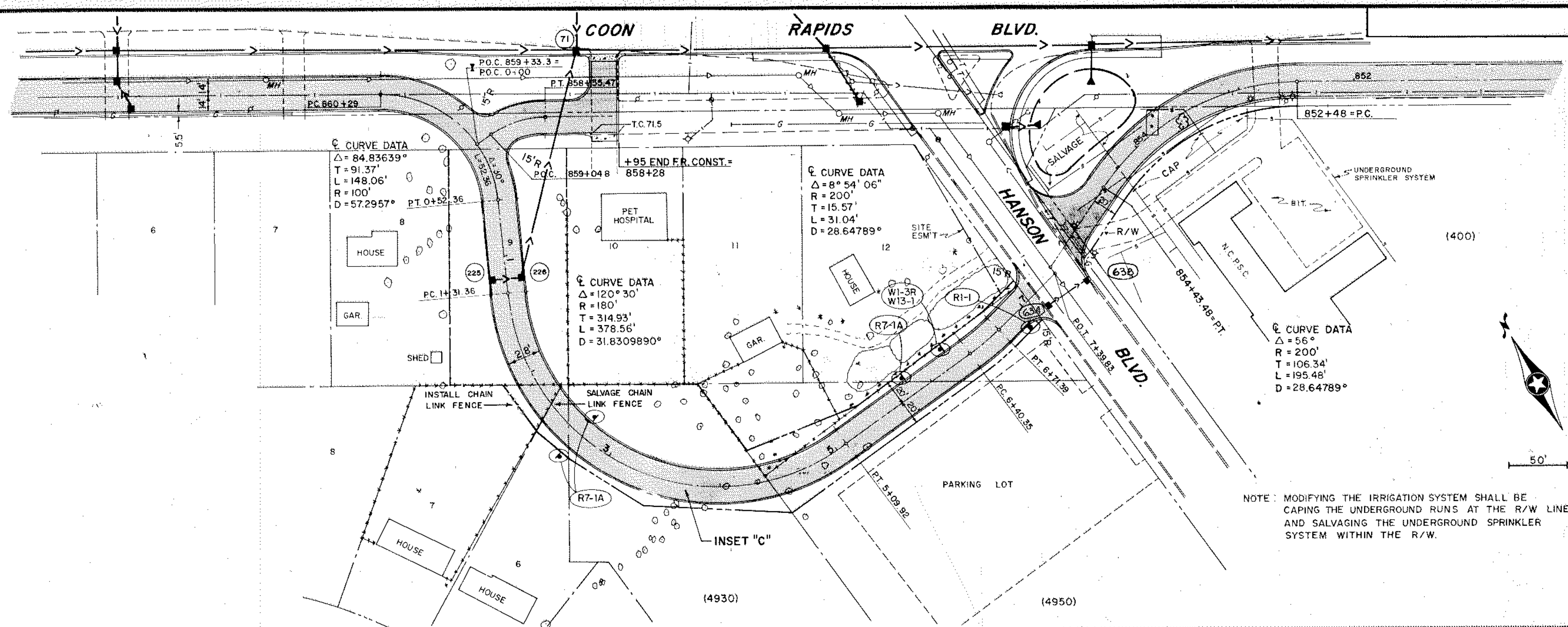


REV - M.A.C. 1975  
SINGLE PLAN - DOTTED  
K. A. ROGERS CO. - MINNEAPOLIS, ST. PAUL

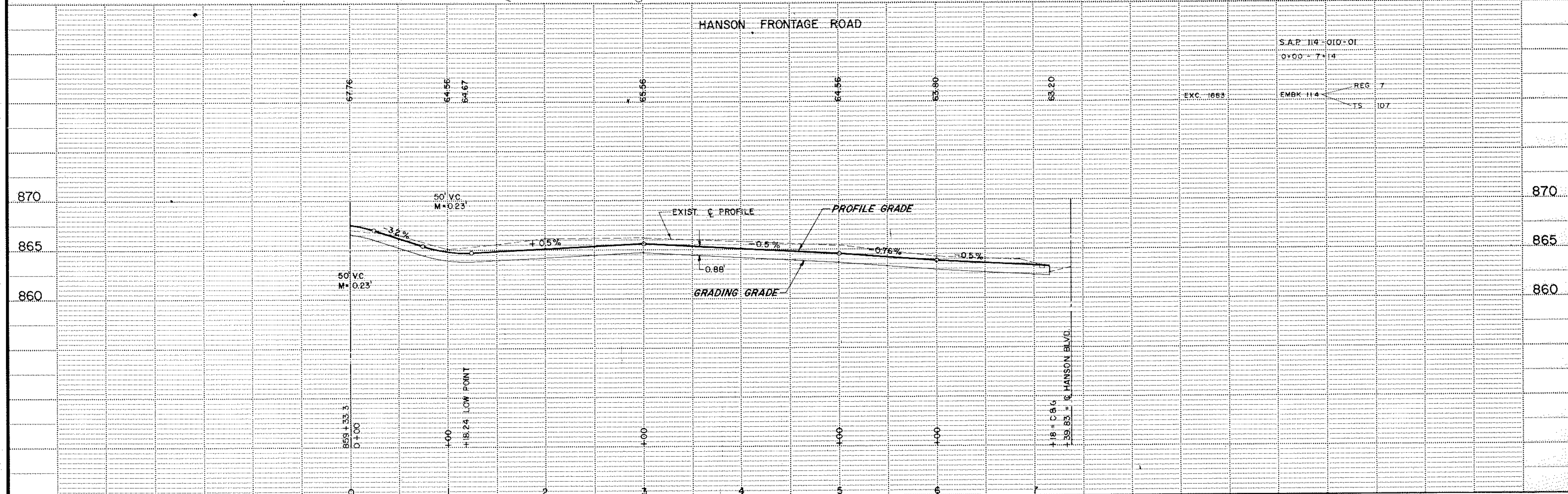


REV. MAR. 1978  
 SINGLE PLAN - DOTTED  
 W. A. ROBERT CO., MINNEAPOLIS, ST. PAUL



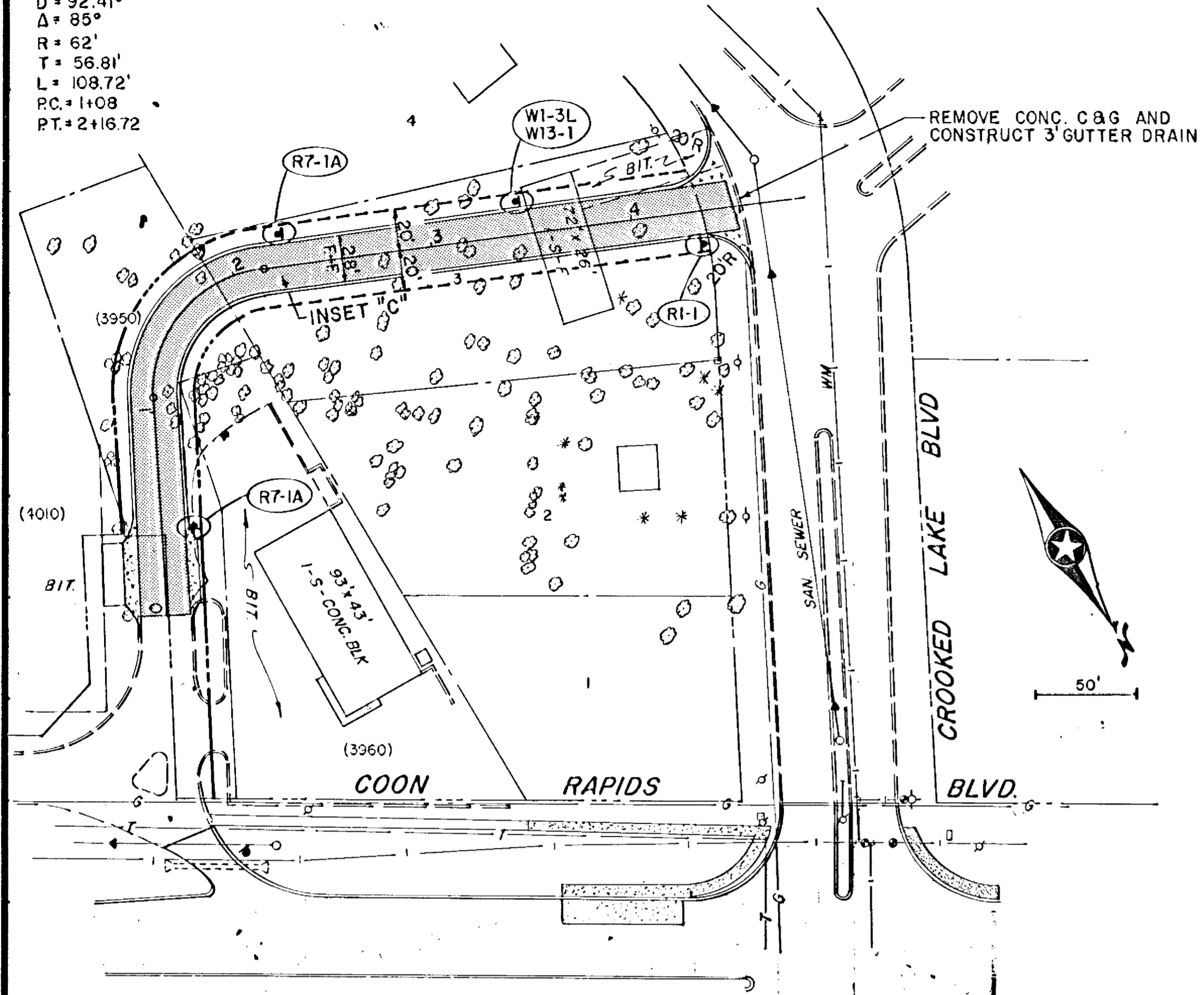


NOTE: MODIFYING THE IRRIGATION SYSTEM SHALL BE CAPING THE UNDERGROUND RUNS AT THE R/W LINE AND SALVAGING THE UNDERGROUND SPRINKLER SYSTEM WITHIN THE R/W.



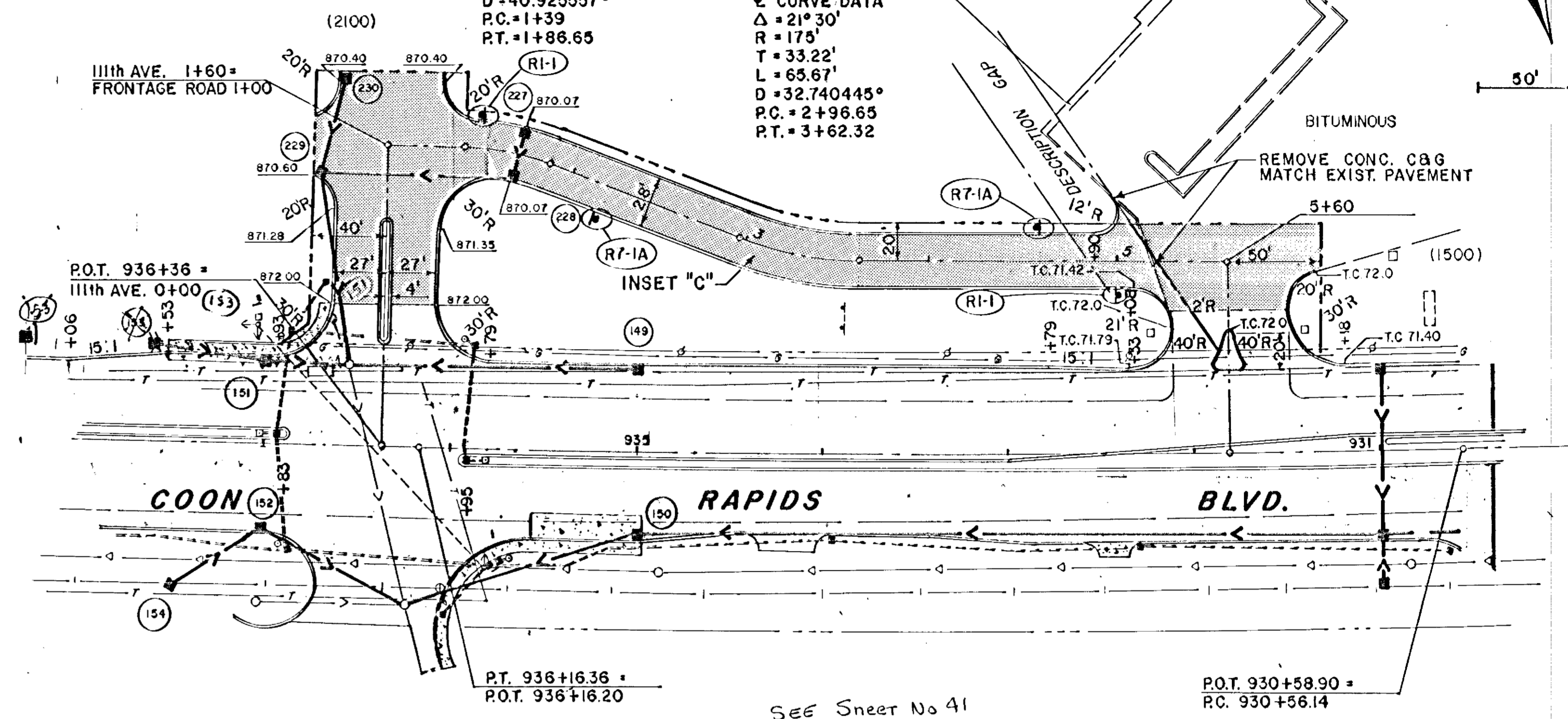
Rev. MAR 1978  
 SINGLE PLAN - DOTTED  
 L. A. ROBERT CO., WINNEPESIS, ST. PAUL

C CURVE DATA  
 D = 92.41'  
 Δ = 85°  
 R = 62'  
 T = 56.81'  
 L = 108.72'  
 P.C. = 1+08  
 P.T. = 2+16.72

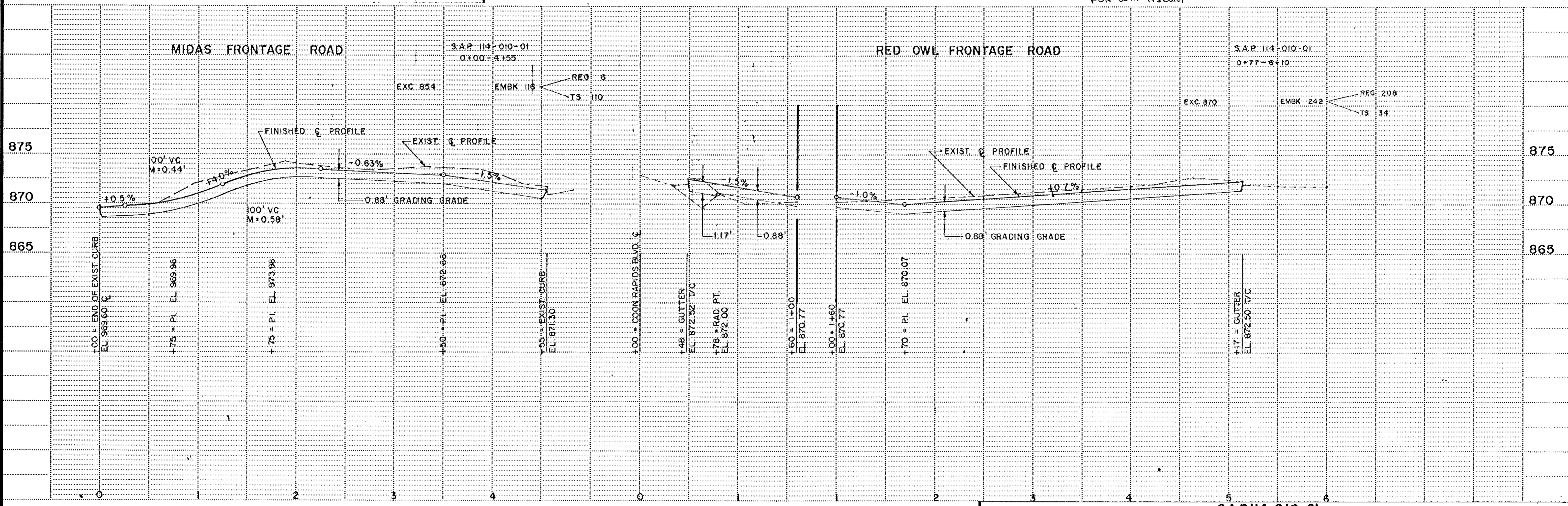


C CURVE DATA  
 Δ = 19° 30'  
 R = 140'  
 T = 24.06'  
 L = 47.65'  
 D = 40.925557°  
 P.C. = 1+39  
 P.T. = 1+86.65

C CURVE DATA  
 Δ = 21° 30'  
 R = 175'  
 T = 33.22'  
 L = 65.67'  
 D = 32.740445°  
 P.C. = 2+96.65  
 P.T. = 3+62.32



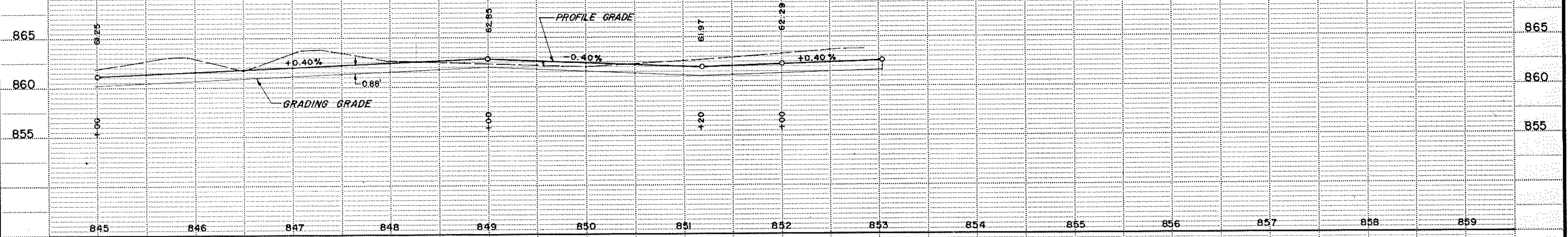
See Sheet No 41  
 For W.M. As Built



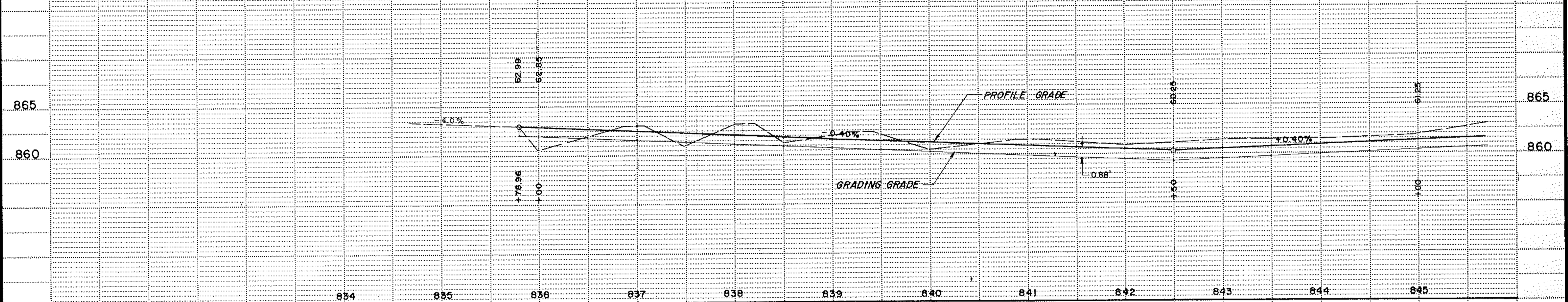
SINGLE PLAN - DOTTED  
 H. A. BORGES CO. - MINNEAPOLIS - ST. PAUL

EGRET BLVD TO HANSON BLVD

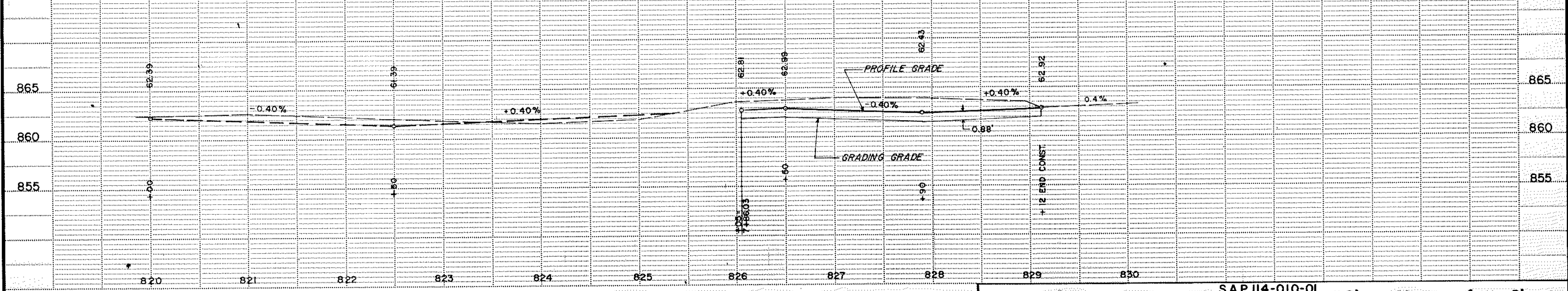
FRONTAGE ROAD LT. 845+00 - 853+00



FRONTAGE ROAD LT. 832+10 - 845+00



FRONTAGE ROAD LT. 820+00 - 832+10

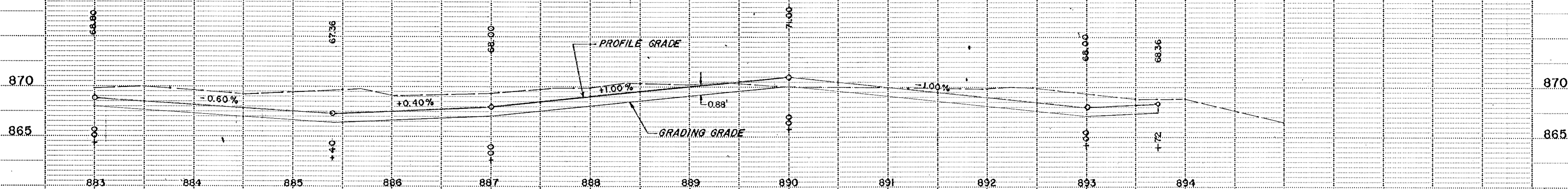


FILE PROFILE - DOTTED  
W. A. ROGERS CO. - MINNEAPOLIS, ST. PAUL

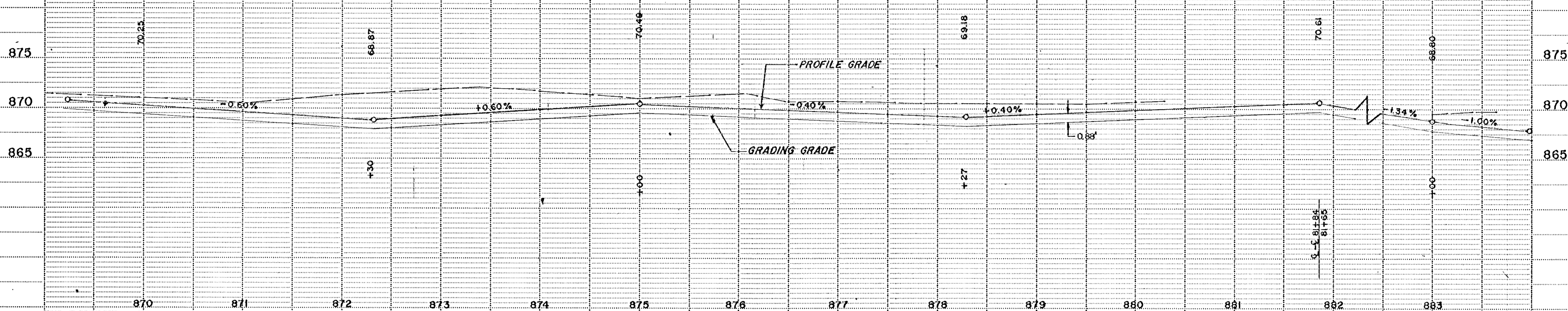
JOB NO. 9-7405

HANSON BLVD TO DIRECT RIVER DRIVE

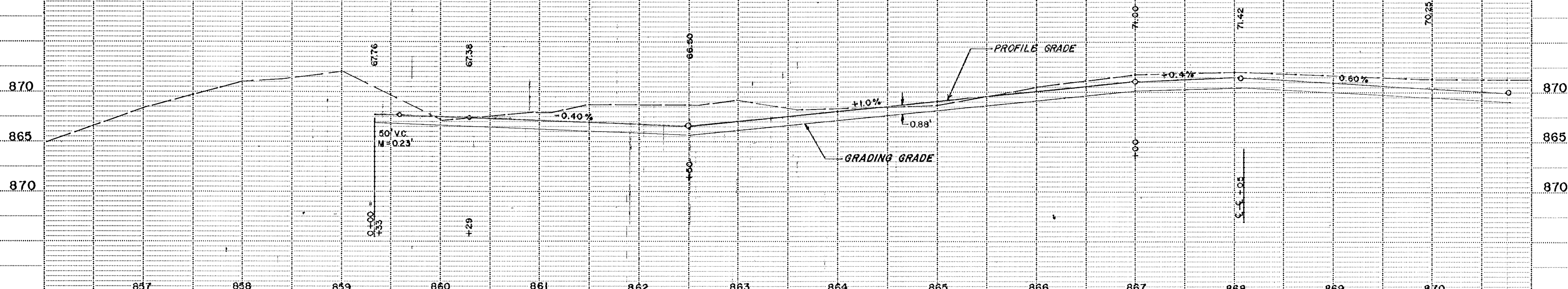
FRONTAGE ROAD LT. 883+00 - 894+00



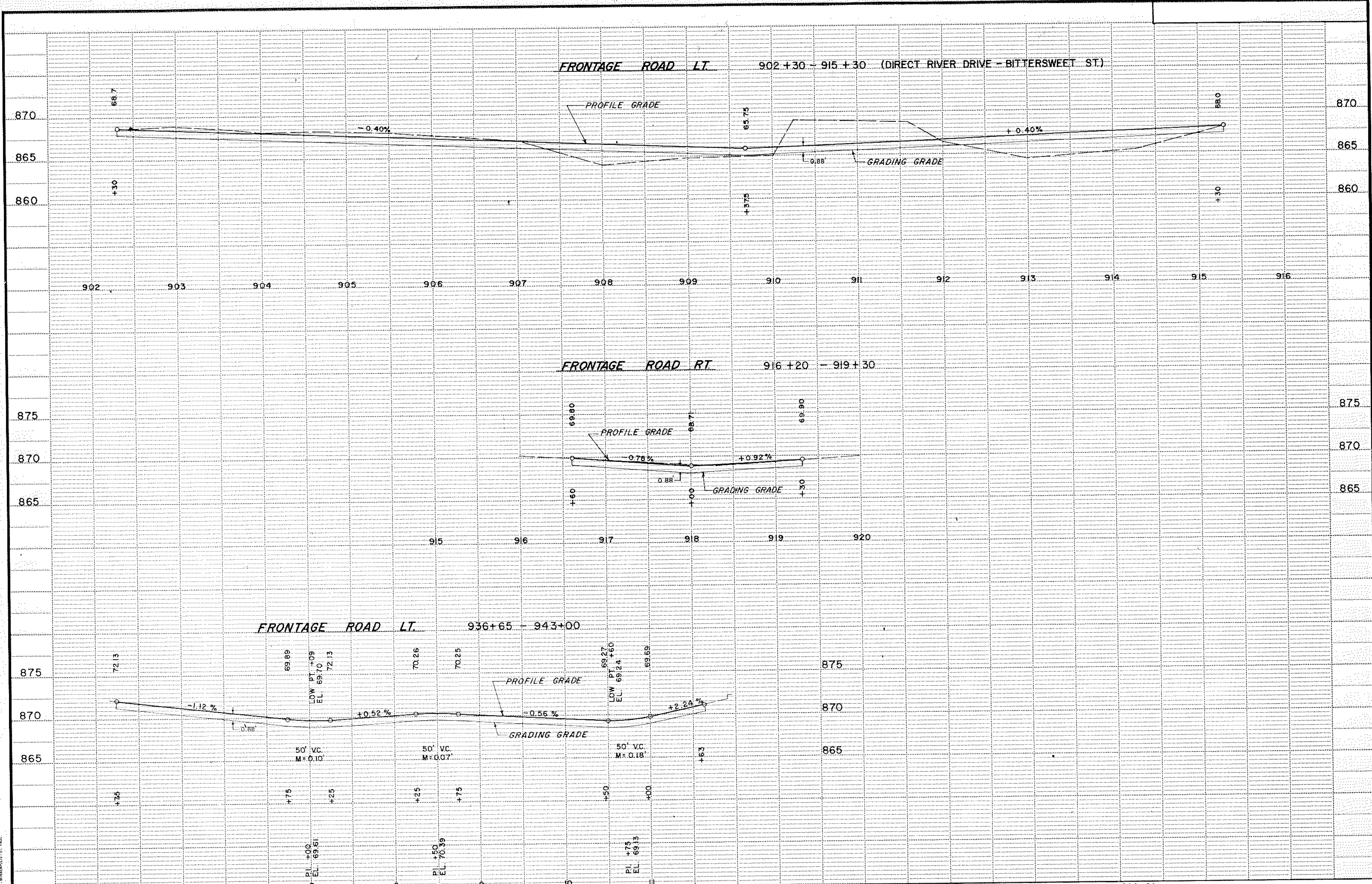
FRONTAGE ROAD LT. 870+00 - 883+00



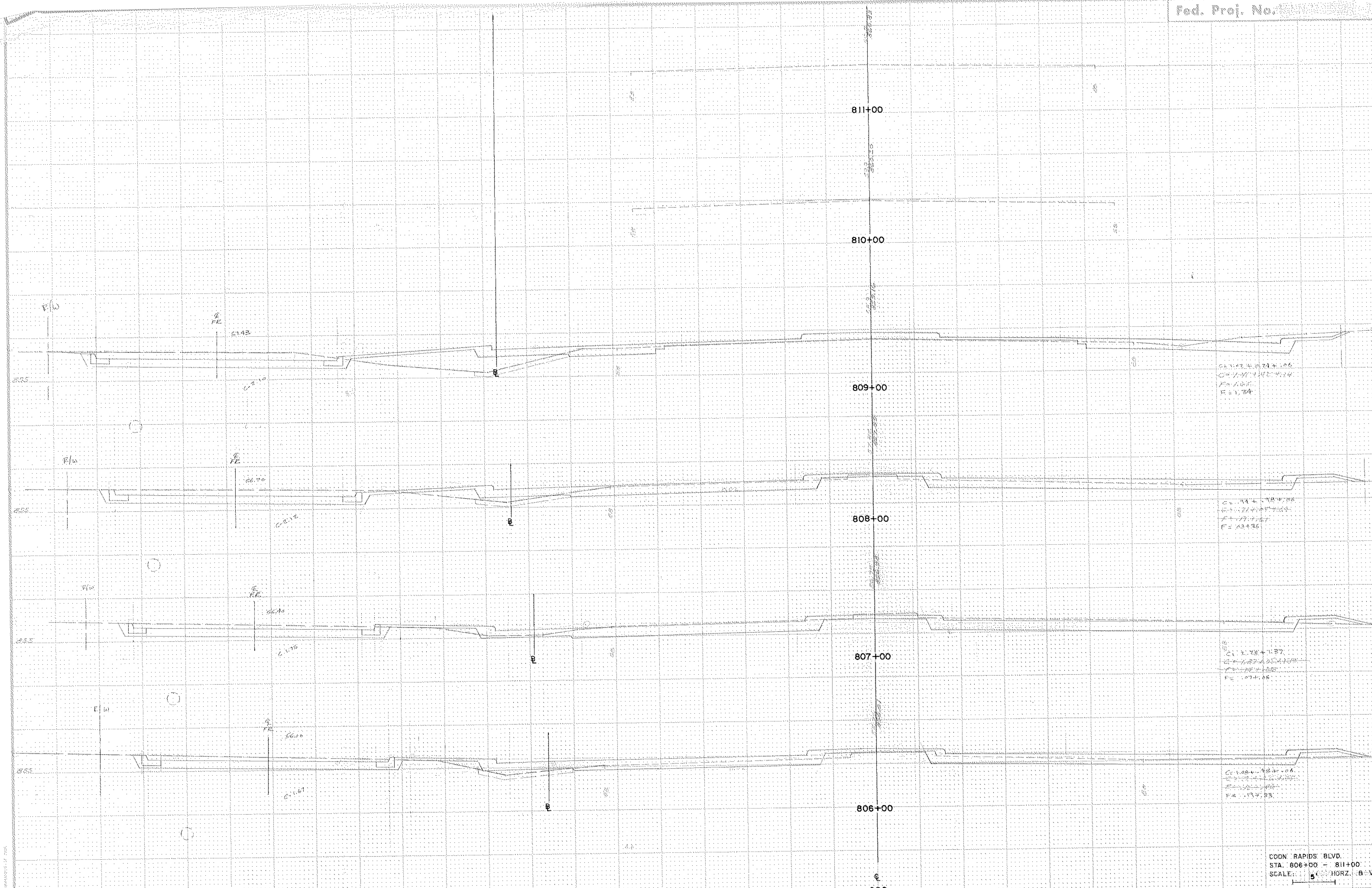
FRONTAGE ROAD LT. 857+20 - 870+00



FULL PROFILE DOTTED  
S. A. LINDSEY CO. CHICAGO, ILL. U.S.A.



FULL PROFILE DOTTED  
 L. A. ROGERS CO. MINNEAPOLIS - ST. PAUL



Sta 807+00 + 0.06  
 C = 1.07 + 1.07 + 1.07  
 E = 1.07  
 R = 1.34

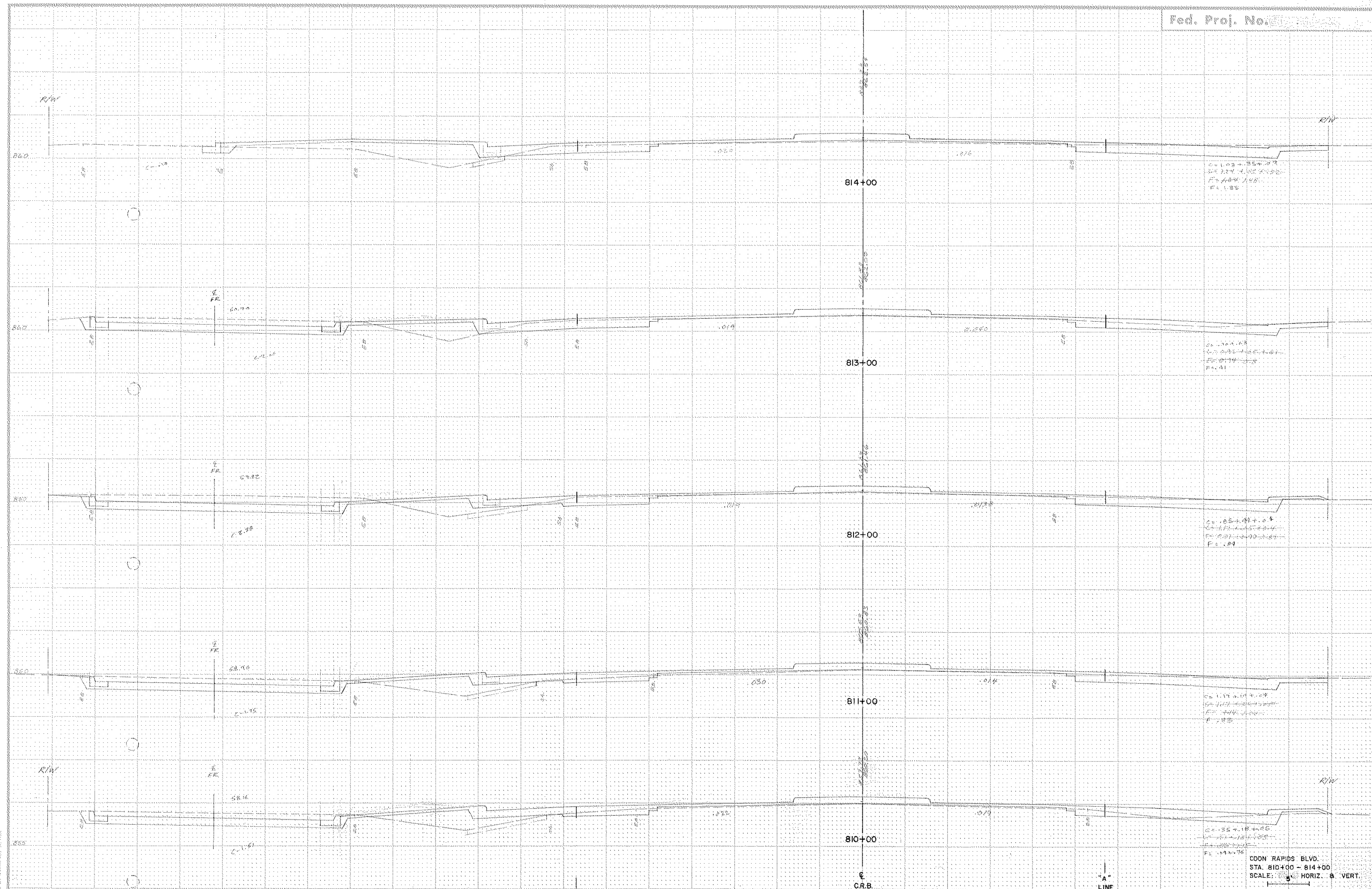
C = 1.14 + 1.08 + 1.08  
 C = 1.07 + 1.07 + 1.07  
 E = 1.07 + 1.07  
 R = 1.34

C = 1.07 + 1.07 + 1.07  
 C = 1.07 + 1.07 + 1.07  
 E = 1.07 + 1.07  
 R = 1.34

C = 1.07 + 1.07 + 1.07  
 C = 1.07 + 1.07 + 1.07  
 E = 1.07 + 1.07  
 R = 1.34

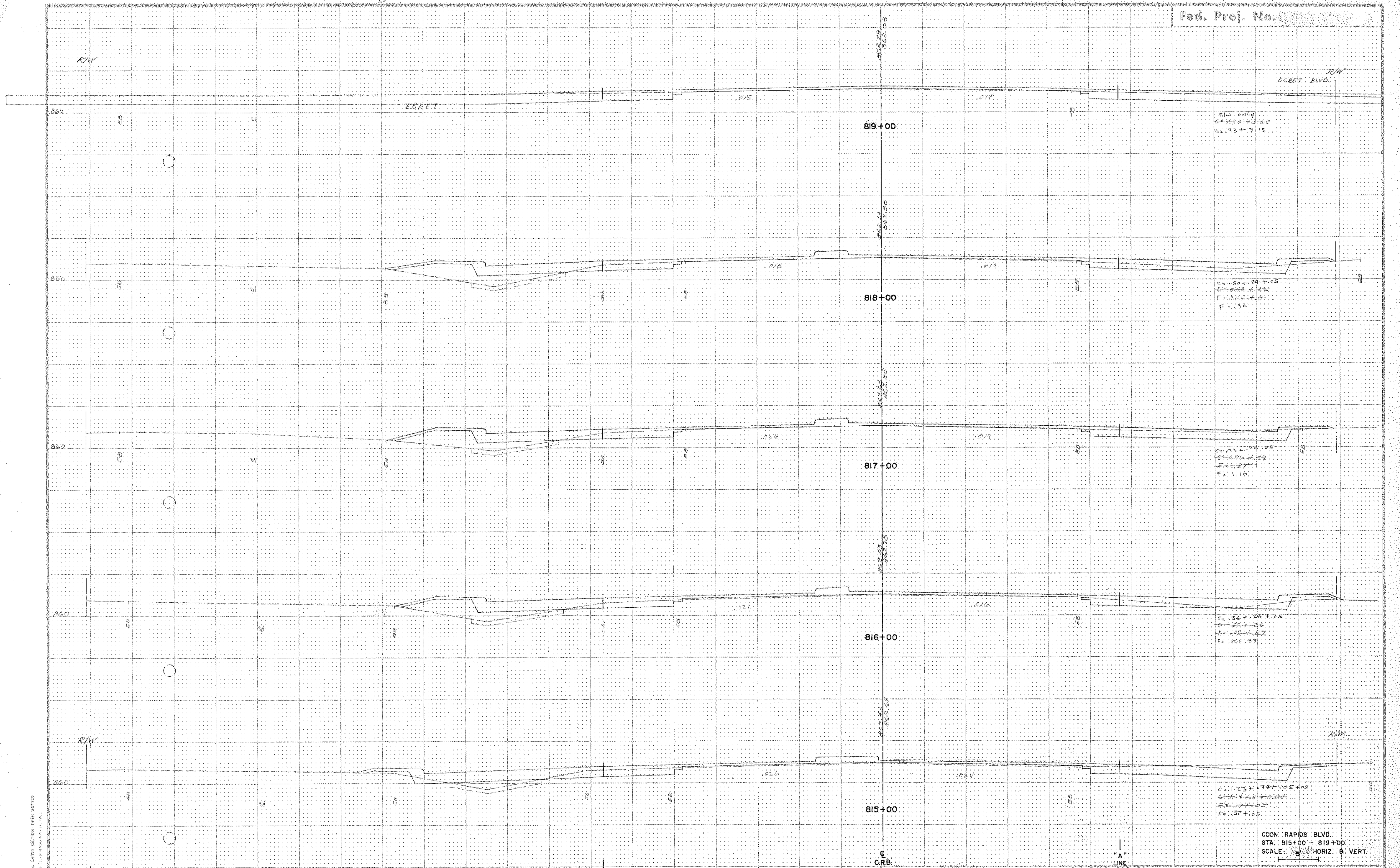
COON RAPIDS BLVD.  
 STA. 806+00 - 811+00  
 SCALE: 5' HORZ. : 1' VERT.

VERTICAL CROSS SECTION - OPEN DOTTED  
 A. A. PETERSON, INC., MINNEAPOLIS, MINN.



COON RAPIDS BLVD.  
 STA. 810+00 - 814+00  
 SCALE: 1" = 40' HORIZ. & VERT.

FUNCTIONAL CROSS SECTION DRAWING



R/W only  
 Sta. 815+00 to 819+00  
 C.S. 93+3.15

C.S. 50+24+05  
 C.S. 50+24+05  
 F.S. 110

C.S. 50+24+05  
 C.S. 50+24+05  
 F.S. 110

C.S. 36+24+05  
 C.S. 36+24+05  
 F.S. 110

C.S. 123+39+05+05  
 C.S. 123+39+05+05  
 F.S. 110

CONN. RAPIDS BLVD.  
 STA. 815+00 - 819+00  
 SCALE: 1" = 10' HORIZ. 1" = 1' VERT.

1" LINE

CRB

8" LINE

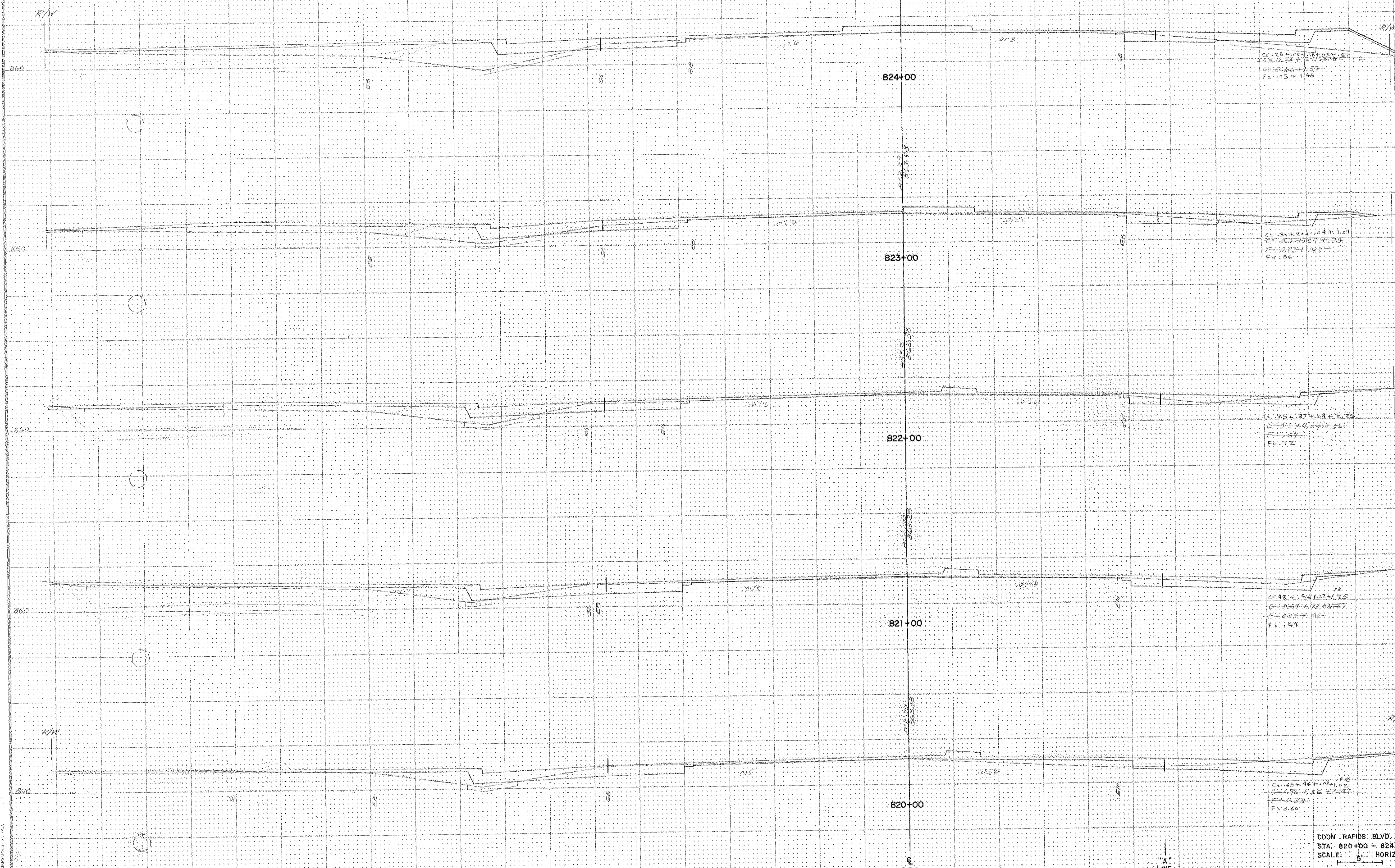
FUNCTIONAL CROSS SECTION (SPRINT)  
 H. A. 8/22/21 G. 8/22/21 G. 8/22/21

State Proj. No. 02-601-22 CTB S.A. P114-010-01  
 C.P. 76-15

Sheet No. 57 of 111 Sheets

JOB NO. 9-7405





Sta. 824+00  
 C = 28+60 = 18+00 + 10+60  
 E = 0.26 + 1.37  
 F = 1.5 + 1.46

Sta. 823+00  
 C = 30+24 = 04+00 + 26+24  
 E = 0.27 + 1.32  
 F = 1.6 + 1.48  
 F = 56

Sta. 822+00  
 C = 35+37 = 07+00 + 28+37  
 E = 0.34 + 1.36  
 F = 1.64  
 F = 72

Sta. 821+00  
 C = 48+56 = 27+00 + 21+56  
 E = 0.61 + 1.35  
 F = 1.82 + 1.32  
 F = 1.94

Sta. 820+00  
 C = 46+96 = 03+00 + 43+96  
 E = 0.92 + 1.6  
 F = 2.32  
 F = 60

COON RAPIDS BLVD.  
 STA. 820+00 - 824+00  
 SCALE: 5" HORIZ. 8" VERT.

PRACTICAL CROSS SECTION - OPEN DITCH  
 H. A. SMITH, CIVIL ENGINEER - ST. PAUL

"B" LINE

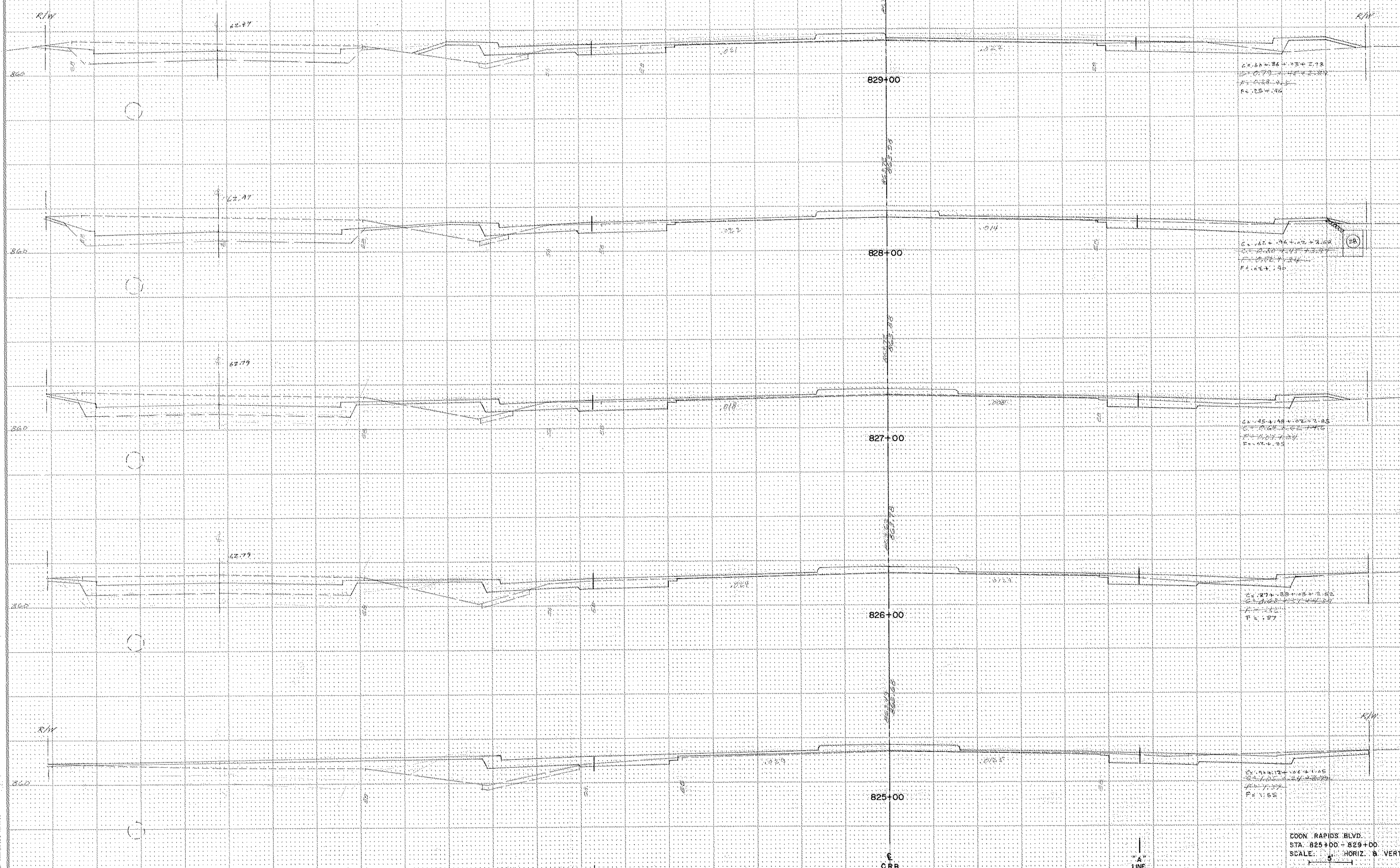
C.R.B.

"A" LINE

State Proj. No. 02-601-22 C.T.B. S.A. 114-010-01

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JOB NO. 9-7405



$C = 66 + 36 + 2.72$   
 $P = 0.79$   
 $E = 0.28 - 1.5$   
 $F = 2.5 + .90$

$C = 67 + 36 + 2.68$   
 $P = 0.80$   
 $E = 0.28 - 1.5$   
 $F = 2.5 + .90$

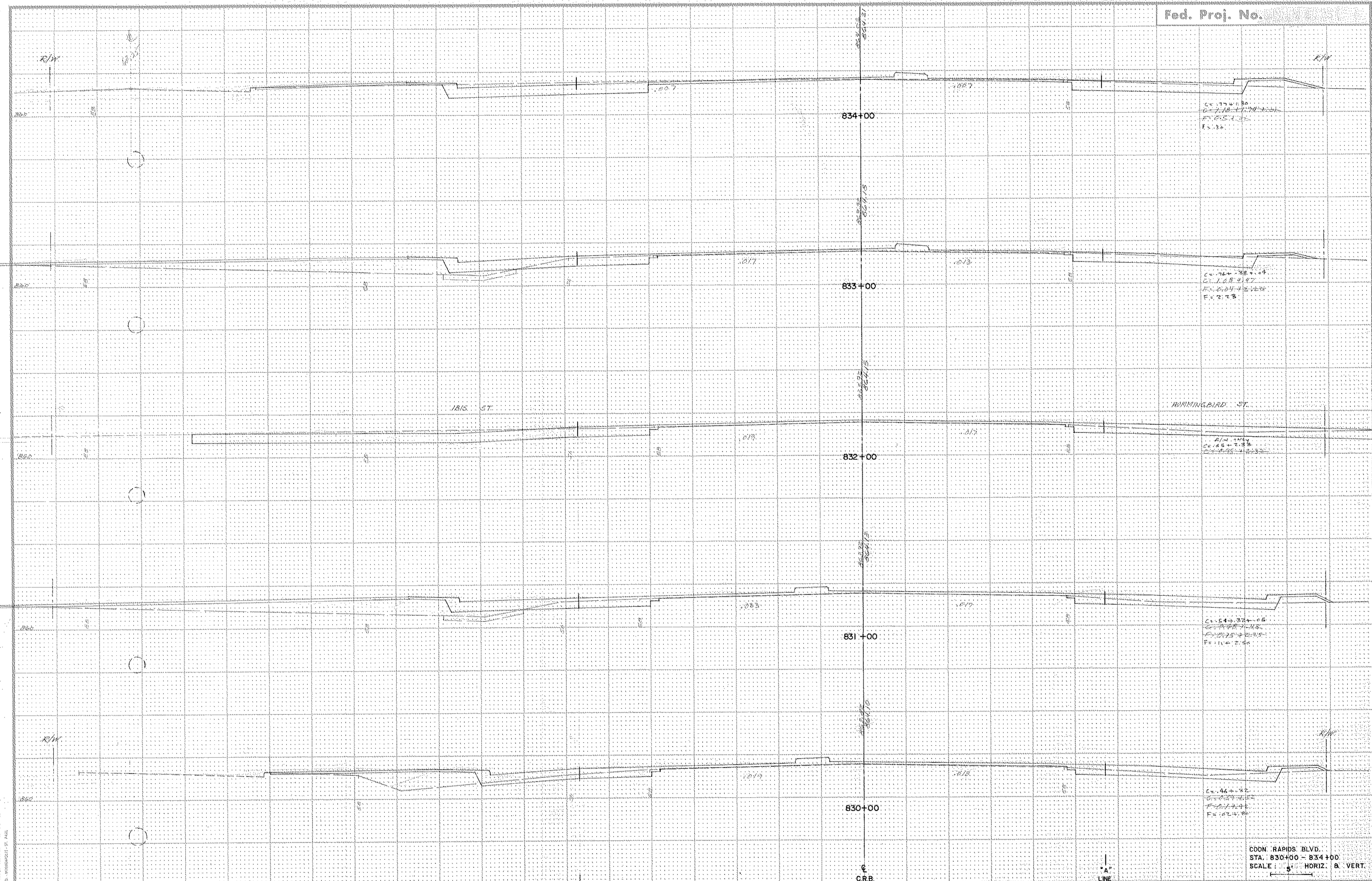
$C = 45 + 48 + 2.85$   
 $P = 0.67$   
 $E = 0.28 - 1.5$   
 $F = 0.2 + .93$

$C = 27 + 35 + 2.50$   
 $P = 1.46$   
 $E = 0.28 - 1.5$   
 $F = 1.87$

$C = 124.12 + 1.05$   
 $P = 1.55$   
 $E = 1.05$

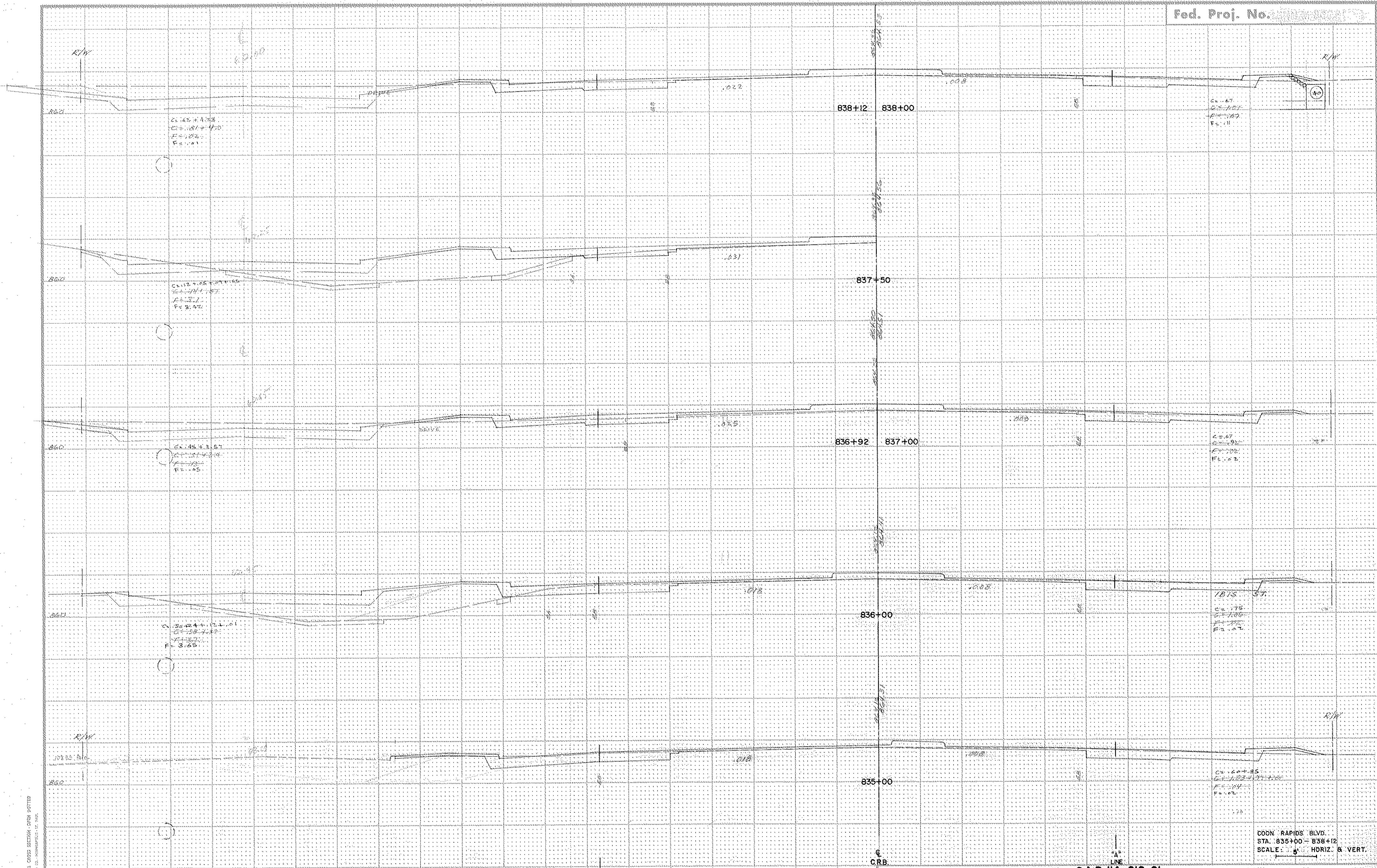
COON RAPIDS BLVD.  
 STA. 825+00 - 829+00  
 SCALE: 1" = 20' HORIZ. 8" VERT.

PROVISIONAL CROSS SECTION - OPEN DOTTED  
 N. E. 19343 (D. 1) - 19343 (D. 1)



COON RAPIDS BLVD.  
 STA. 830+00 - 834+00.  
 SCALE: 5' HORIZ. 8' VERT.

FUNCTIONAL CROSS SECTION - OPEN DOTTED  
 H. A. BROWN CO. - MINNEAPOLIS, ST. PAUL

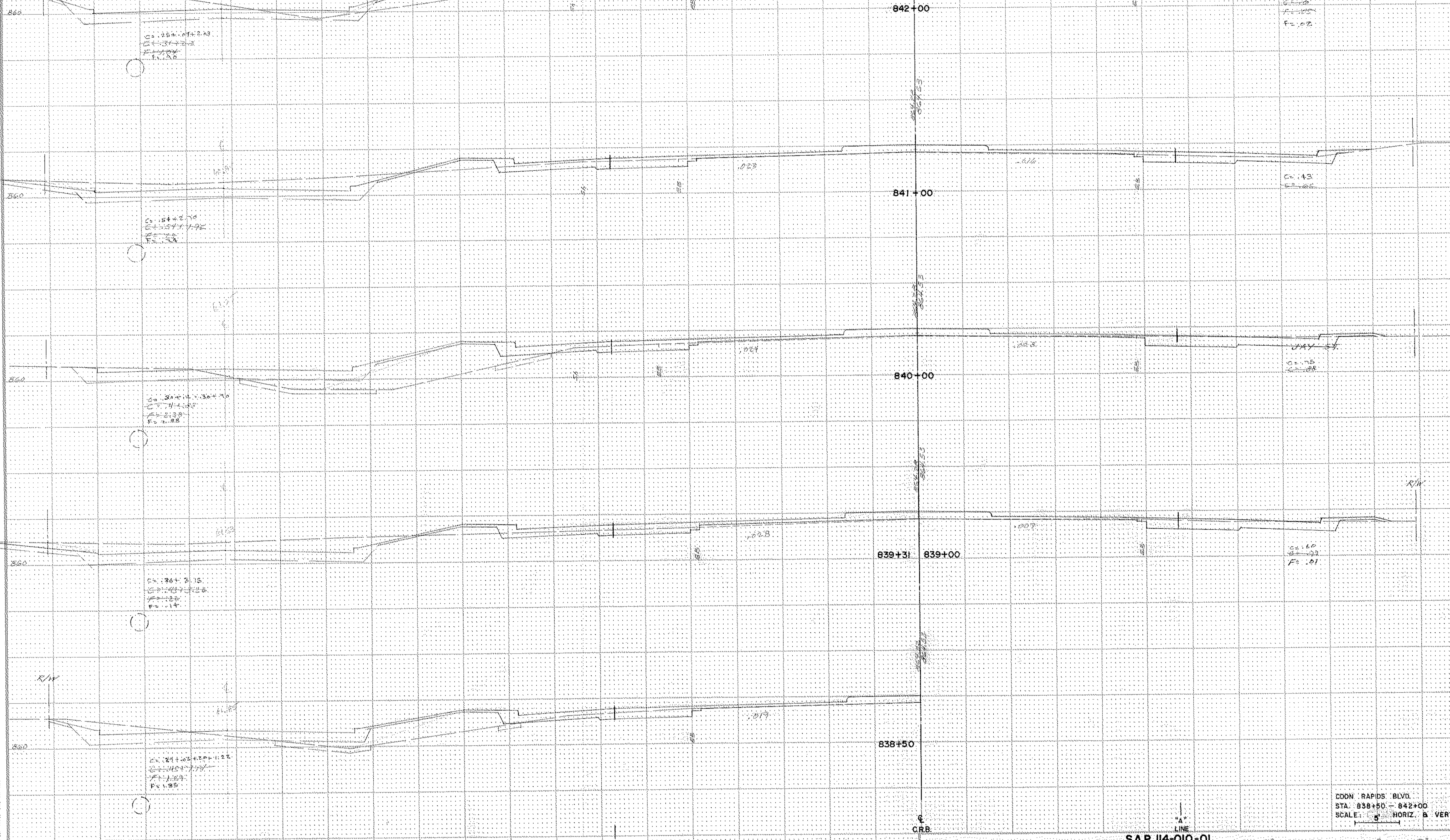


COON RAPIDS BLVD.  
 STA. 835+00 - 838+12  
 SCALE: 1" = 4' HORIZ. & VERT.

FUNCTIONAL CROSS SECTION OPEN PITCHED  
 S. A. 10/23/53 CO. 10/20/53-111-111

R/W

R/W



C=40  
E=1.60  
F=0.02

C=34  
E=2.54  
F=1.92

JAY ST  
C=30  
E=2.33  
F=2.88

C=36  
E=2.15  
F=1.14

C=29  
E=1.22  
F=1.25

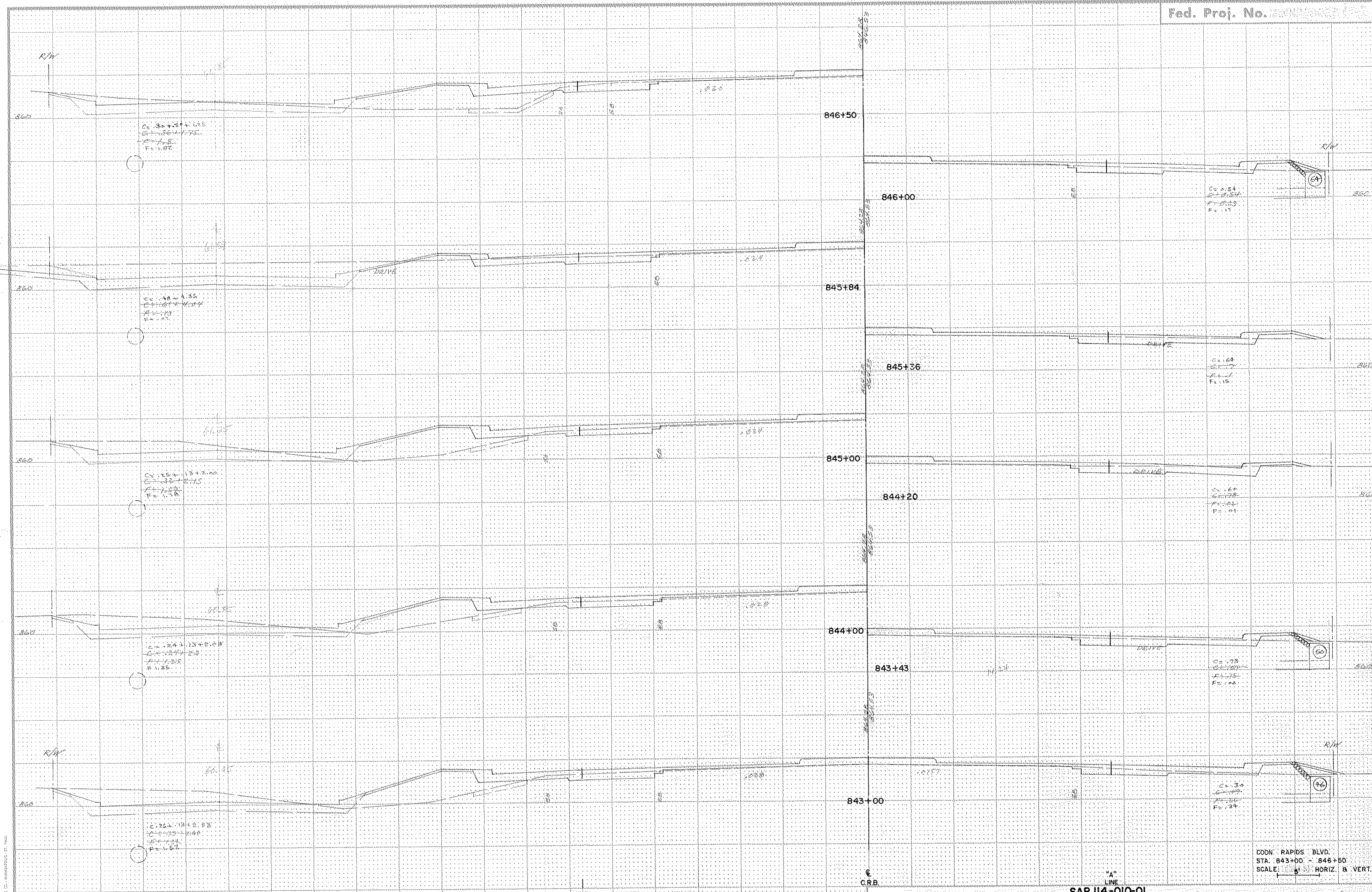
R/W

FUNCTIONAL CROSS SECTION - OPEN DOTTED  
P. 4. 42881 G. - HOUSTON, TEXAS

"B"  
LINE

CRB

"A"  
LINE



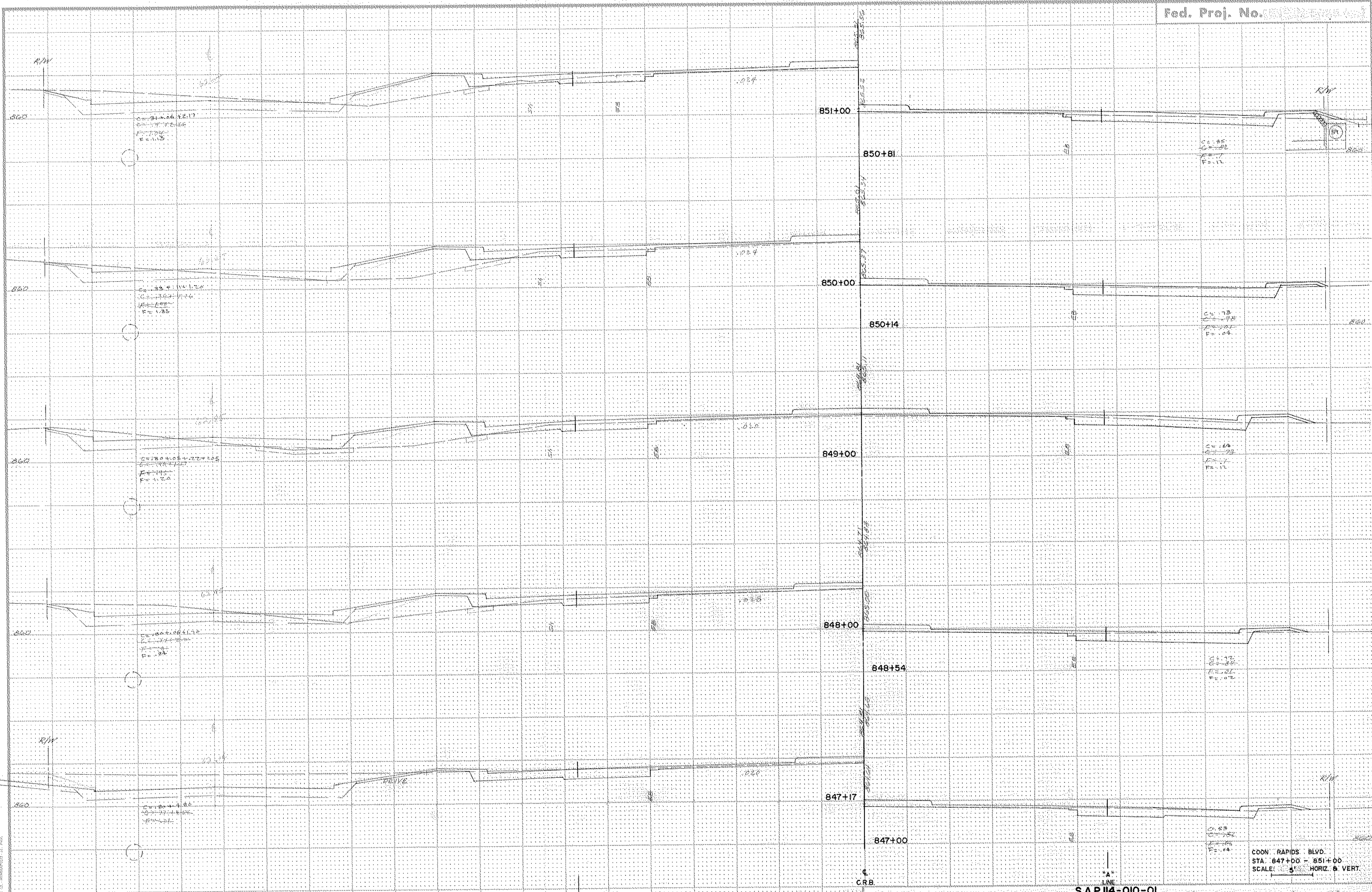
SECTIONAL CROSS SECTION - OVER DOTTED  
V. A. 87222 C. - 11/14/22 11. 11. 11.

COORD. RAPIDS BLVD.  
STA. 843+00 - 846+50  
SCALE: 1" = 40' HORIZ. & VERT.

State Proj. No. 02-601-22 C.T.B. SAP 114-010-01  
C.P. 76-15

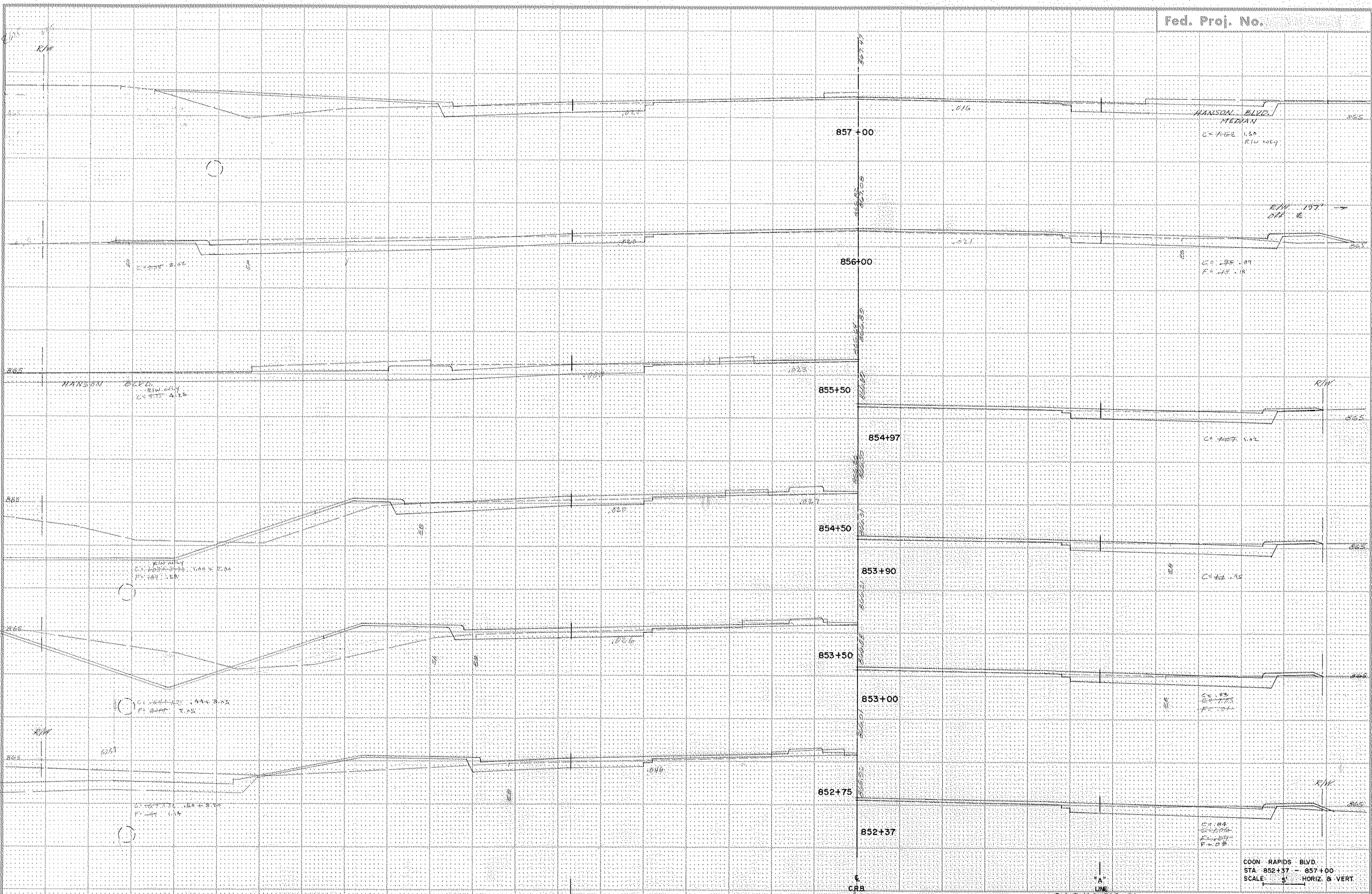
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JOB NO. 9-7405



FUNCTIONAL CROSS SECTION - OPEN DITCHES  
N. Z. KIRBY CO., ENGINEERS, ST. LOUIS

COON RAPIDS BLVD.  
STA. 847+00 - 851+00  
SCALE: 1" = 5' HORIZ. & VERT.



PROFESSIONAL CROSS SECTION - OPEN DITCHES  
C. A. BRIDGE CO. - MINNEAPOLIS - 1945

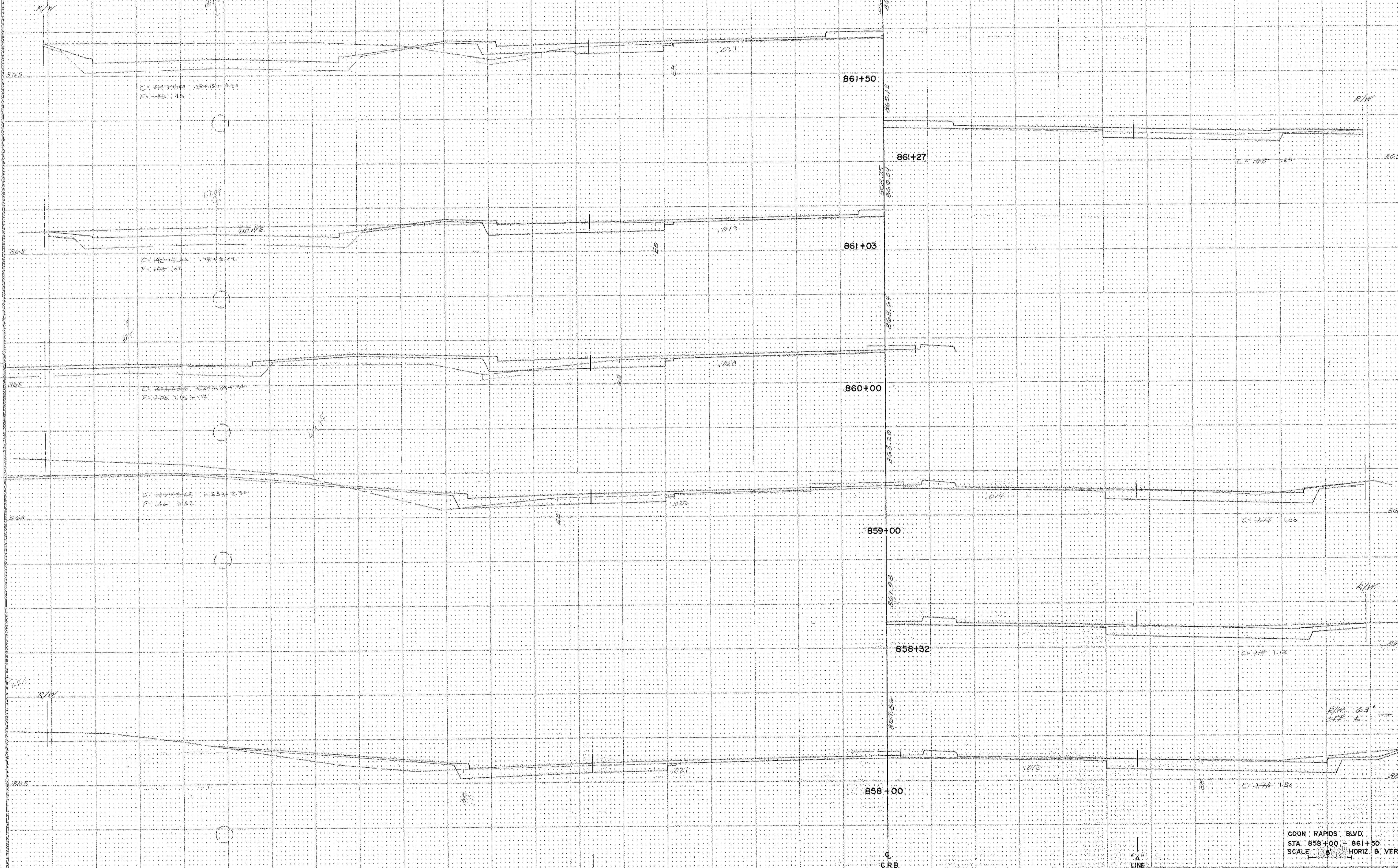
COON RAPIDS BLVD.  
STA. 852+37 - 857+00  
SCALE: 5' HORIZ. & VERT

State Proj. No. 02-601-22 CT.B S.A.P. 114-010-01  
C.P. 76-15

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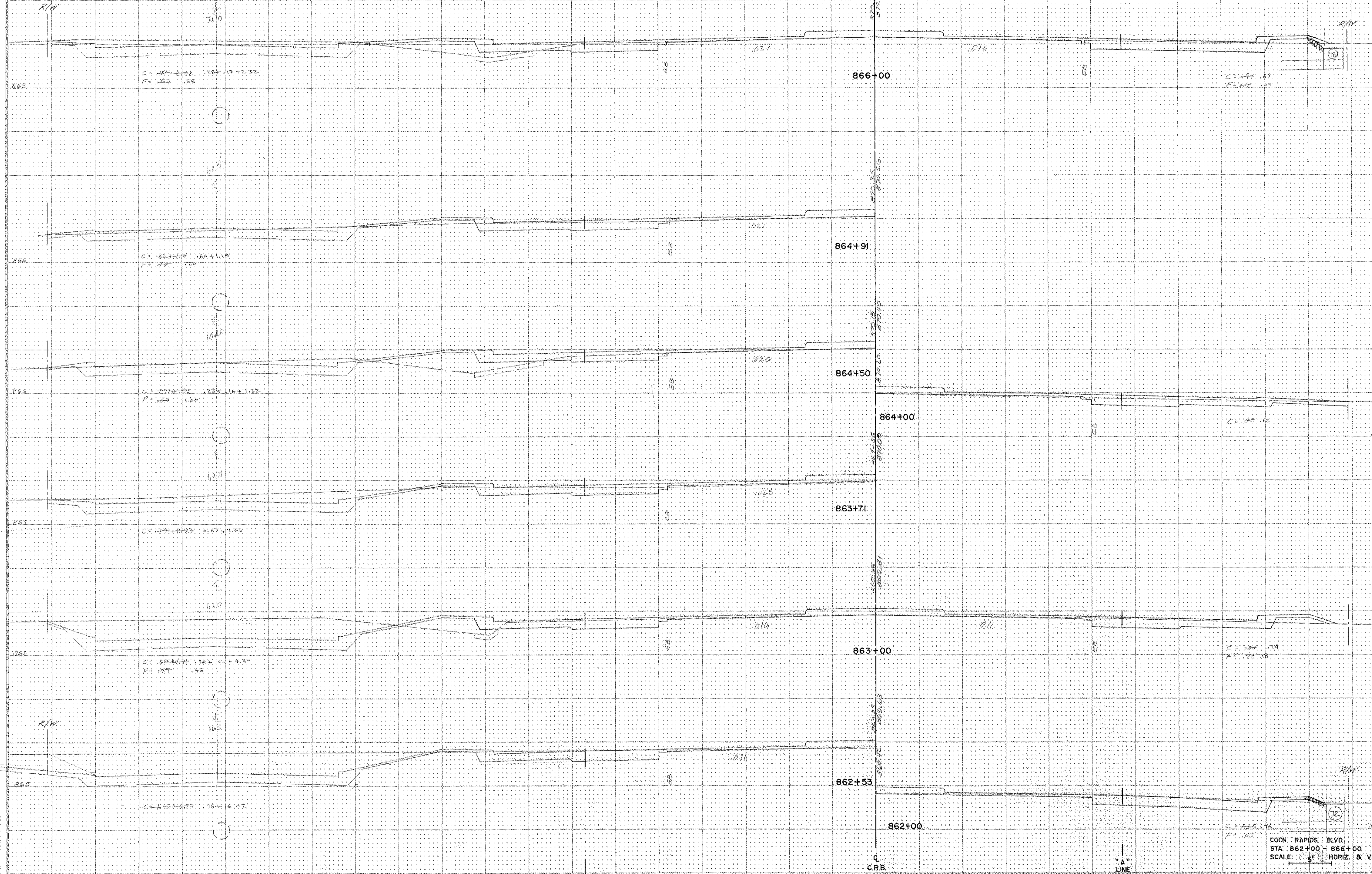
JOB NO. 9-7405





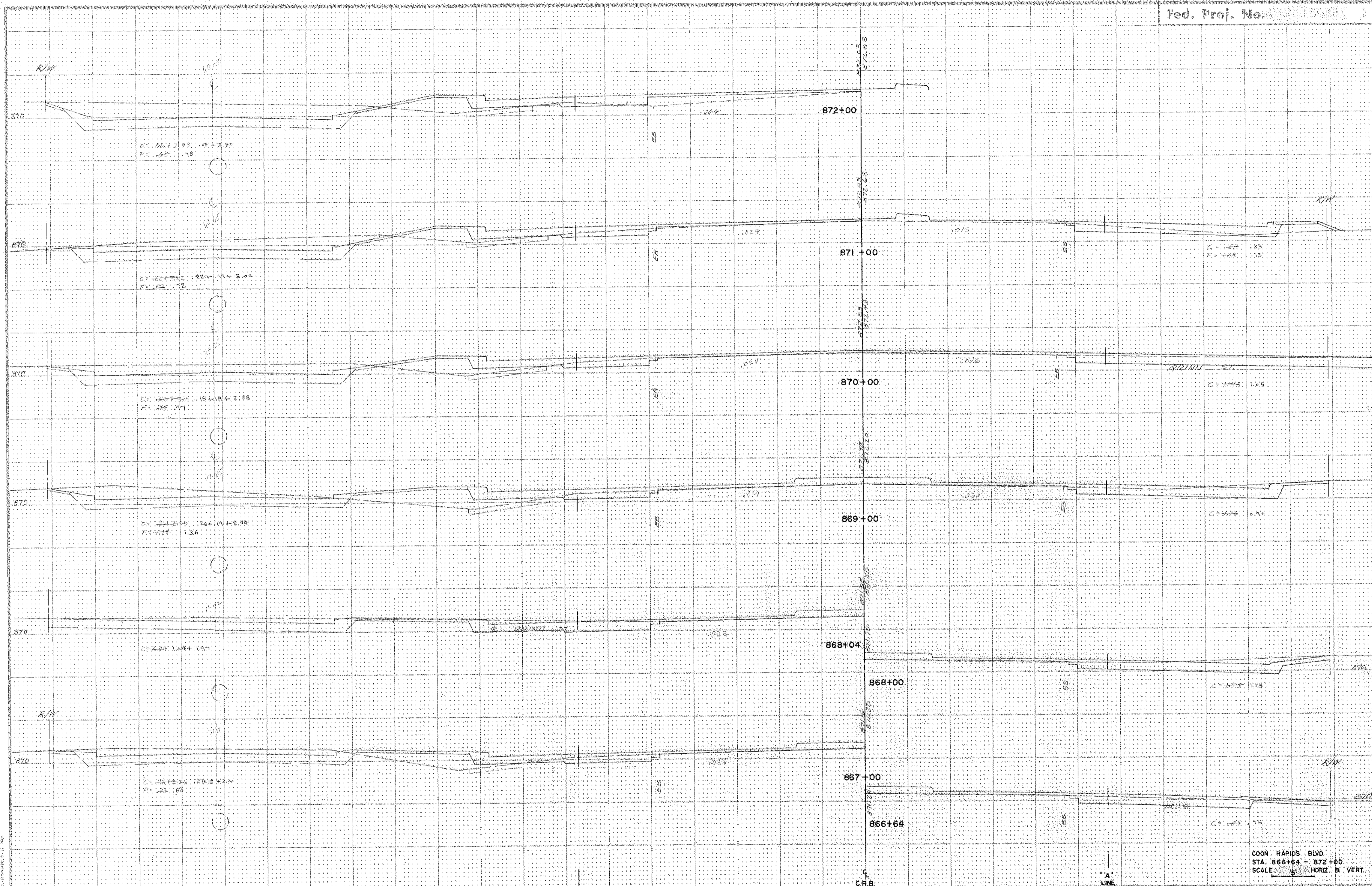
FUNCTIONAL CROSS SECTION - OPEN DOTTED  
 H. A. BOSTON CO. - WASHINGTON, D. C.

COON RAPIDS - BLVD.  
 STA. 858+00 - 861+50  
 SCALE: 5" HORIZ. B. VERT.



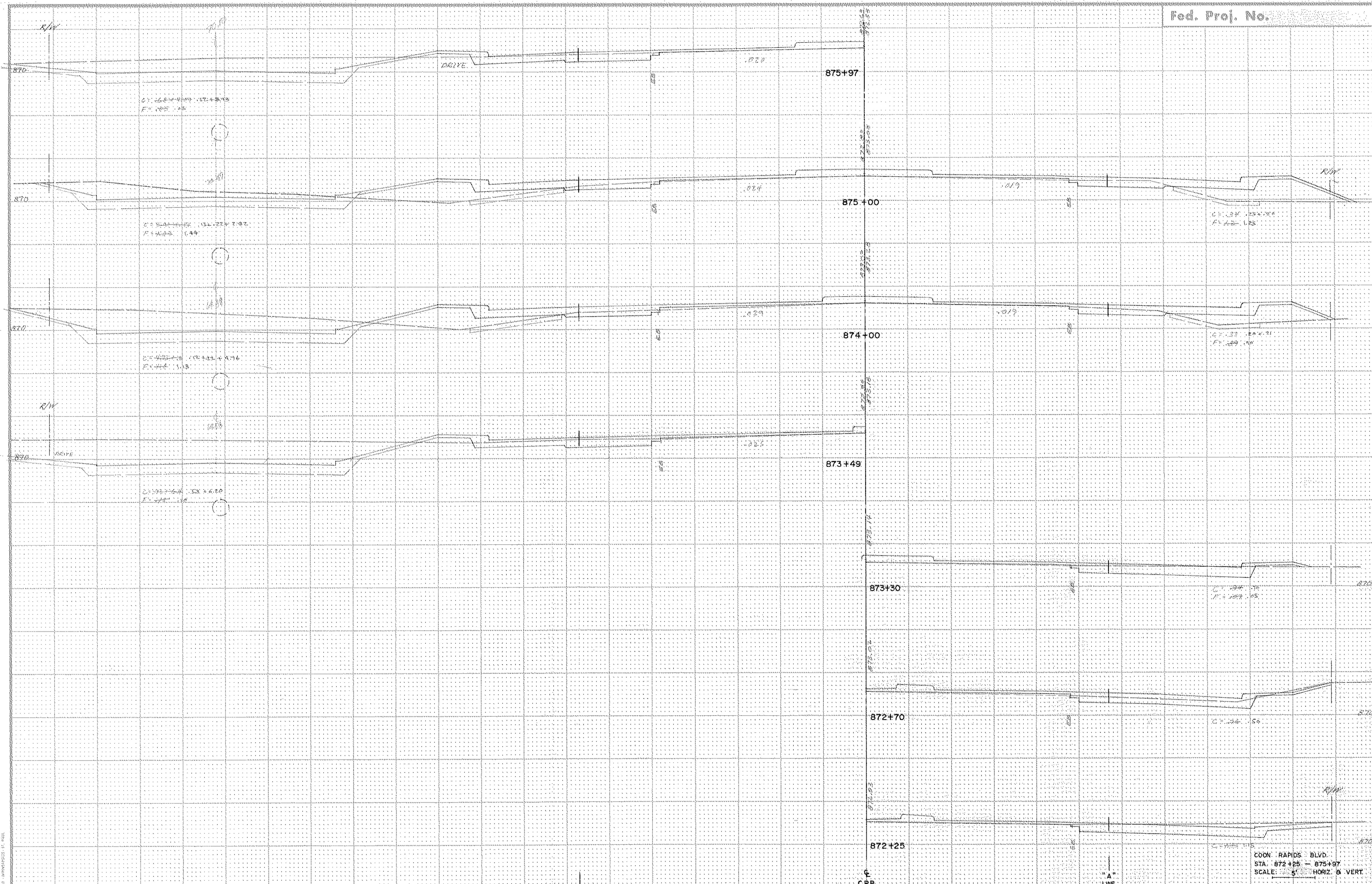
PARCELING CROSS SECTION - OPEN DOTTED  
A. S. 8/25/51, C. J. HANCOCK, ET AL.

CON: RAPIDS BLVD.  
STA: 862+00 - 866+00  
SCALE: 1" = 40' HORIZ. & VERT.



COON RAPIDS BLVD.  
 STA. 866+64 - 872+00  
 SCALE 5' HORIZ. B VERT.

PARTIAL CROSS SECTION JOHN BRYCE



FUNCTIONAL CROSS SECTION - OPEN DOTTED  
S. A. 100000 OF 1000000-21-11-101

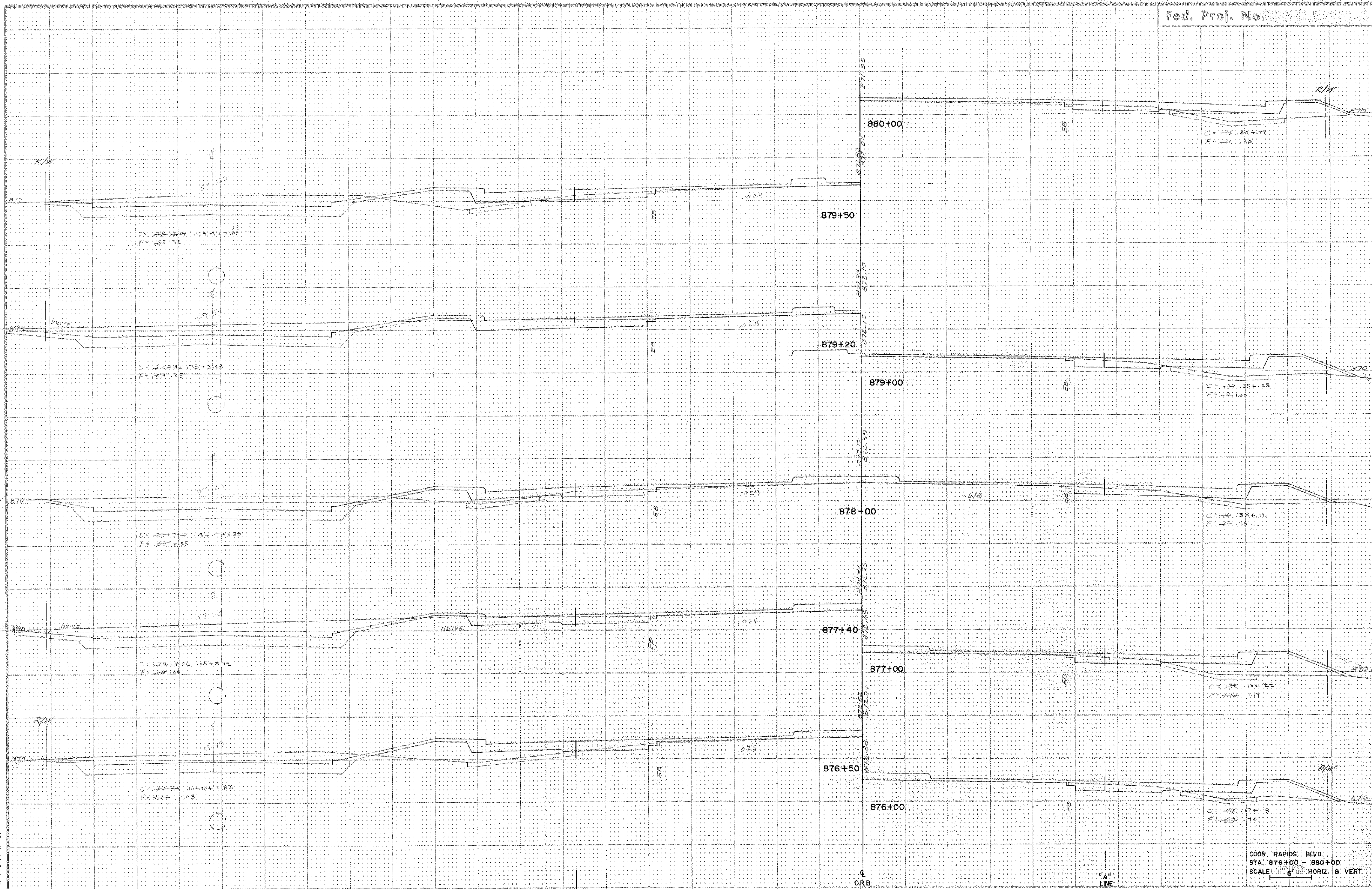
"B"  
LINE

"A"  
LINE

State Proj. No. 02-601-22 C.T.B. SAP 114-010-01 C.P. 76-15

COON RAPIDS BLVD.  
STA. 872+25 - 875+97  
SCALE: 1" = 5' HORIZ. & VERT.

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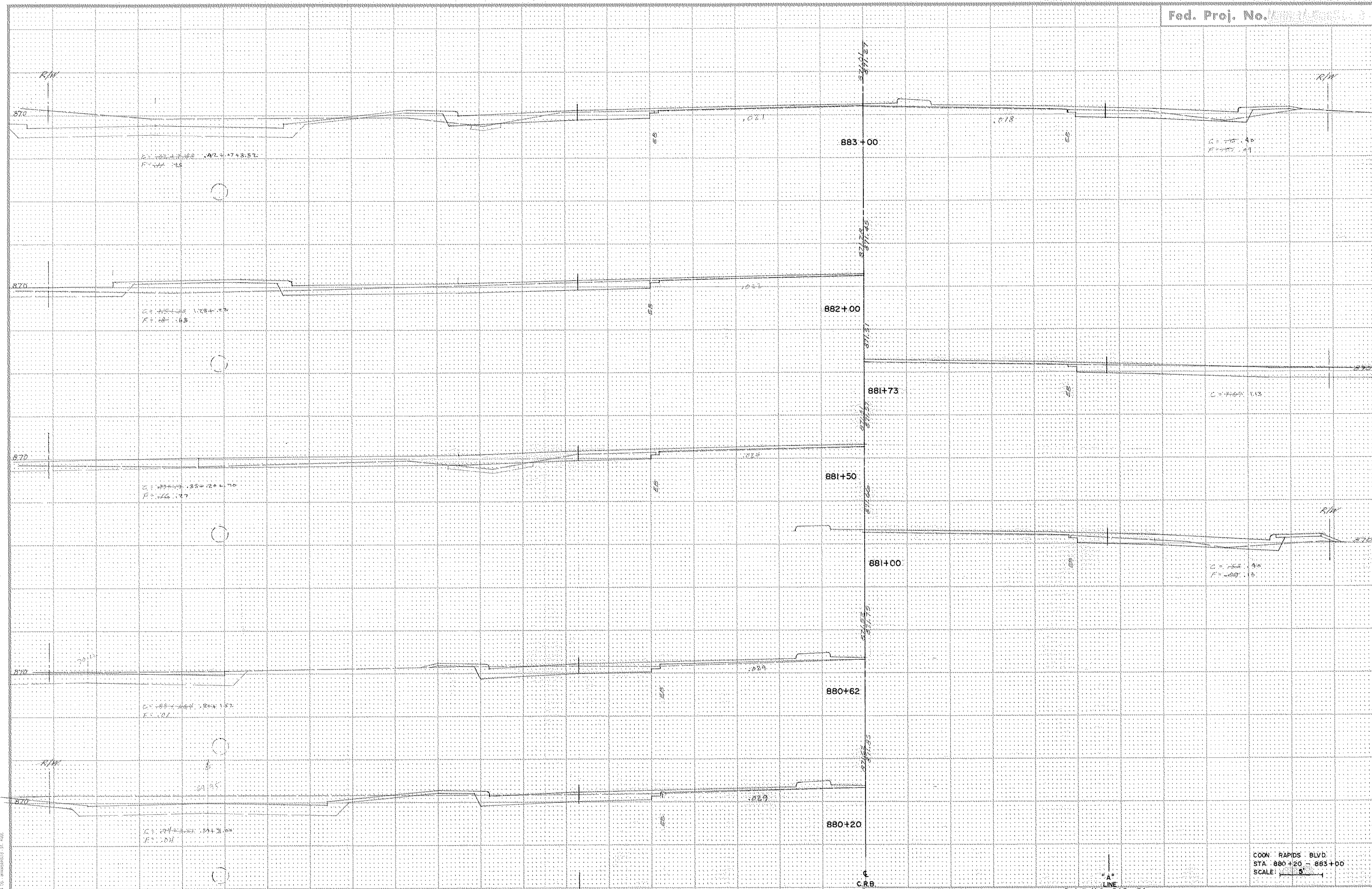


FUNCTIONAL CROSS SECTION OPEN DOTTED  
H. A. JAMES CO. MANAGER OF ART.

"B"  
LINE

"A"  
LINE  
C.R.B.

COON RAPIDS BLVD.  
STA. 876+00 - 880+00  
SCALE: 5' = 1' HORIZ. & VERT.



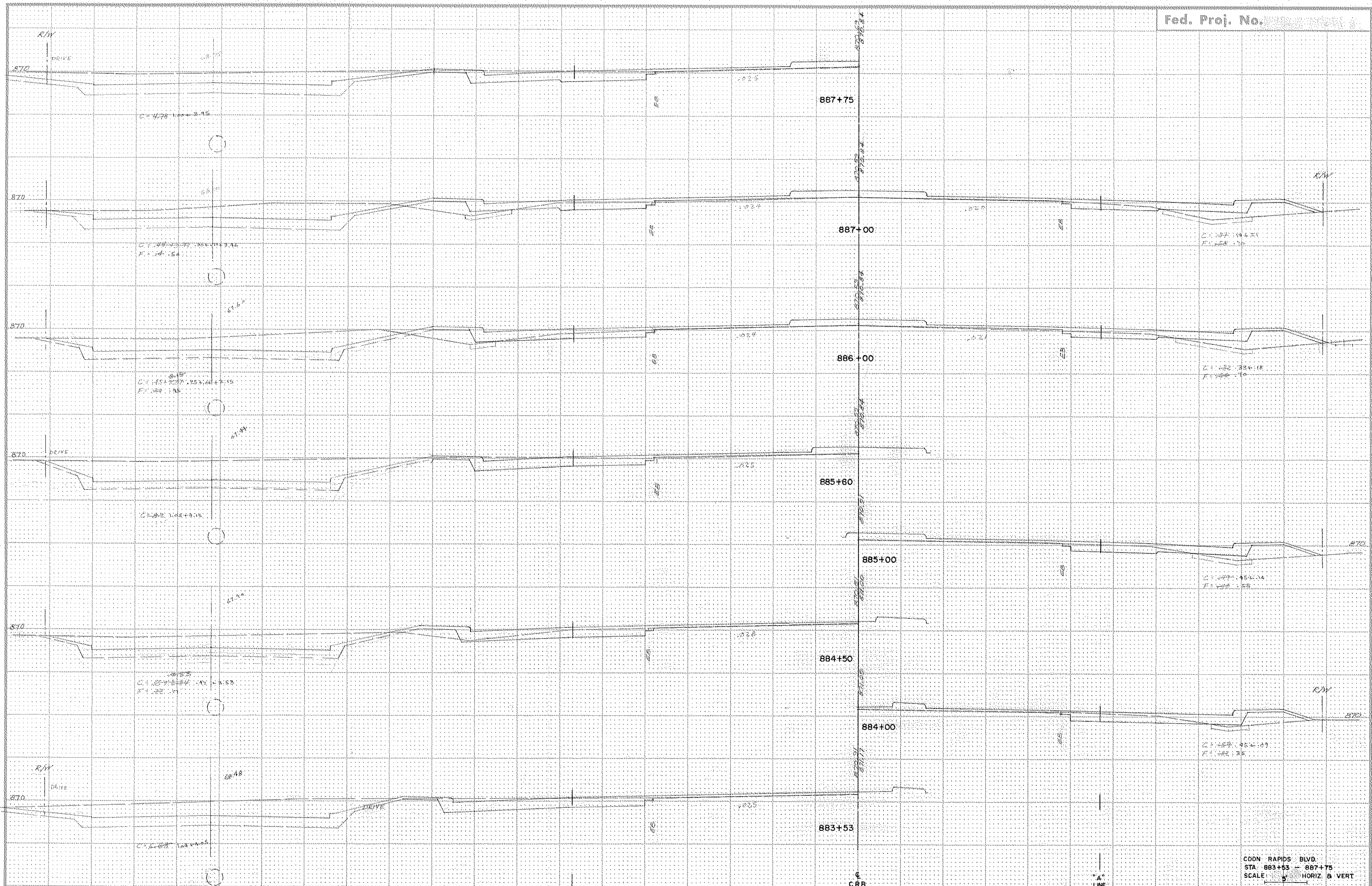
FUNCTIONAL CROSS SECTION OF ROAD PLOTTED  
BY A. S. 4/22/51 ON 111-1-100

COORD. RAPIDS BLVD.  
STA. 880+20 - 883+00  
SCALE: 1" = 5'

State Proj. No. 02 601 22CTB. S.A.P. 114-010-01  
C.P. 76-15

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JOB NO. 9-7405



"B" LINE

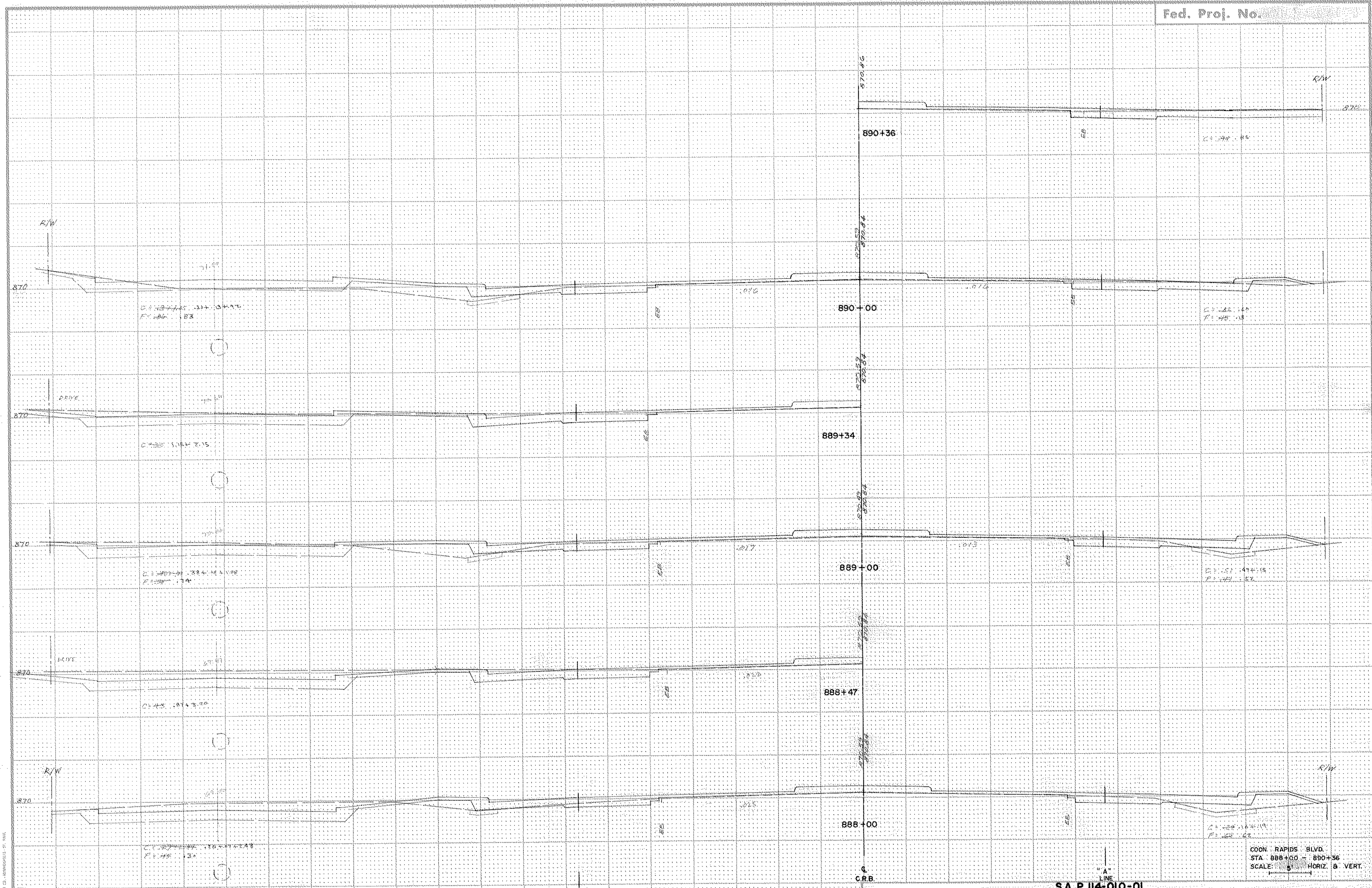
"A" LINE

COON RAPIDS BLVD.  
 STA. 883+53 - 887+75  
 SCALE: 1" = 40' HORIZ. 1" = 4' VERT.

State Proj. No. 02-601-22 C.T.B. SAP 114-010-01  
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FUNCTIONAL CROSS SECTION - PERM. POTTED  
 H. A. HOPKINSON, CIVIL ENGINEER, ILL. STATE



0.0000 1.334 0.417  
P.C. 888.83

0.0000 1.157 2.15

0.0000 1.384 0.417  
P.C. 889.174

0.0000 1.074 3.26

0.0000 1.764 1.43  
P.C. 888.30

890+36

890+00

889+34

889+00

888+47

888+00

C.S. 1.94 85

C.S. 1.87 1.10  
P.C. 889.13

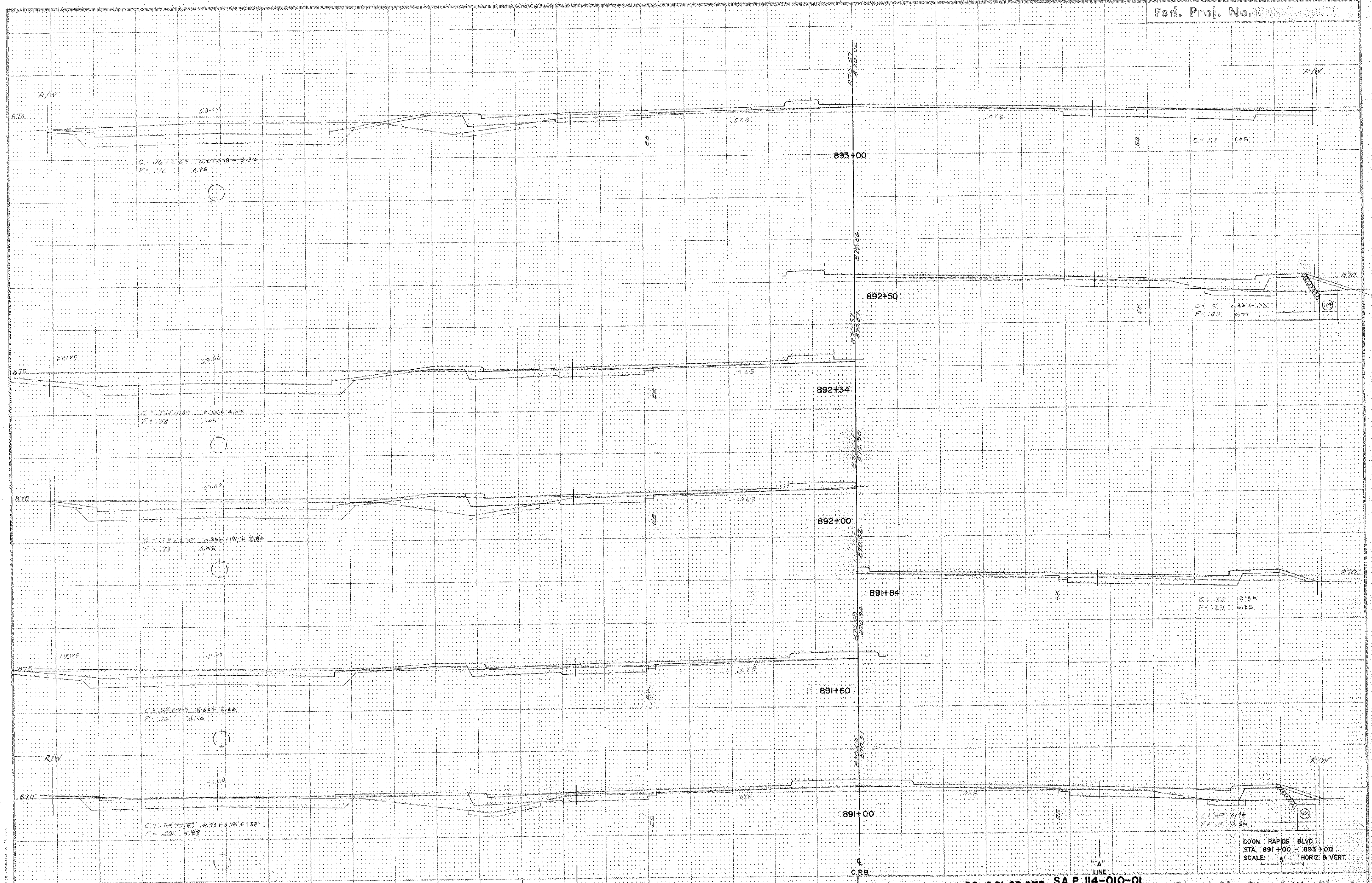
C.S. 1.57 1.16  
P.C. 889.57

C.S. 1.26 1.64 1.19  
P.C. 888.62

COON RAPIDS BLVD.  
STA. 888+00 - 890+36  
SCALE: 1" = 40' HORIZ. 1" = 4' VERT.

PROFESSIONAL CROSS SECTION - OPEN DITCH  
R. A. GOSSETT, CIVIL ENGINEER, ST. PAUL, MINN.





PROFESSIONAL CROSS SECTION / OPEN DOTTED

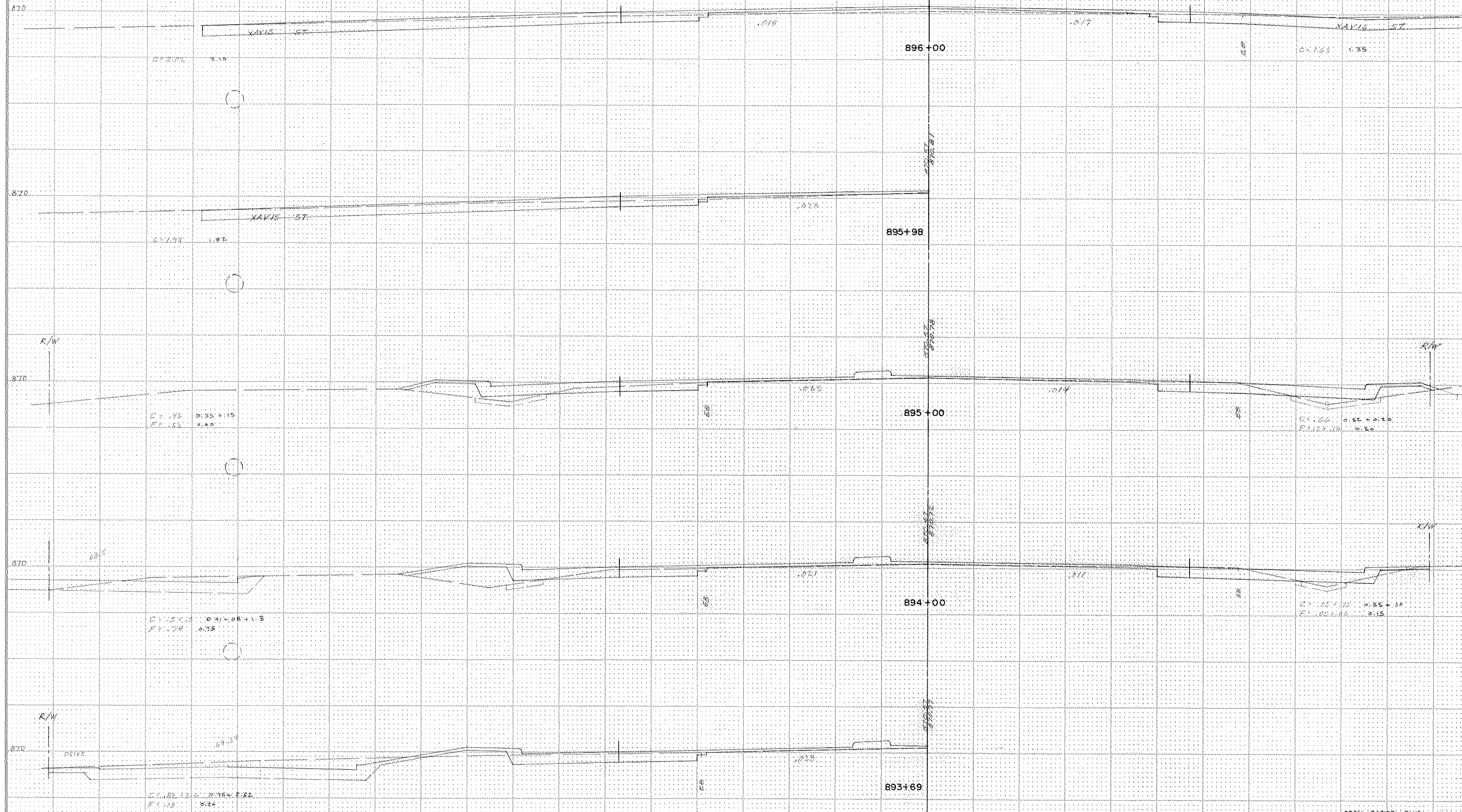
"B" LINE

State Proj. No 02-601-22 CTB. S.A.P. 114-010-01  
C.P. 76-15

COON RAPIDS BLVD.  
STA. 891+00 - 893+00  
SCALE: 5' HORIZ. & VERT.

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JOB NO. 9-7405



"B" LINE

C.R.B.

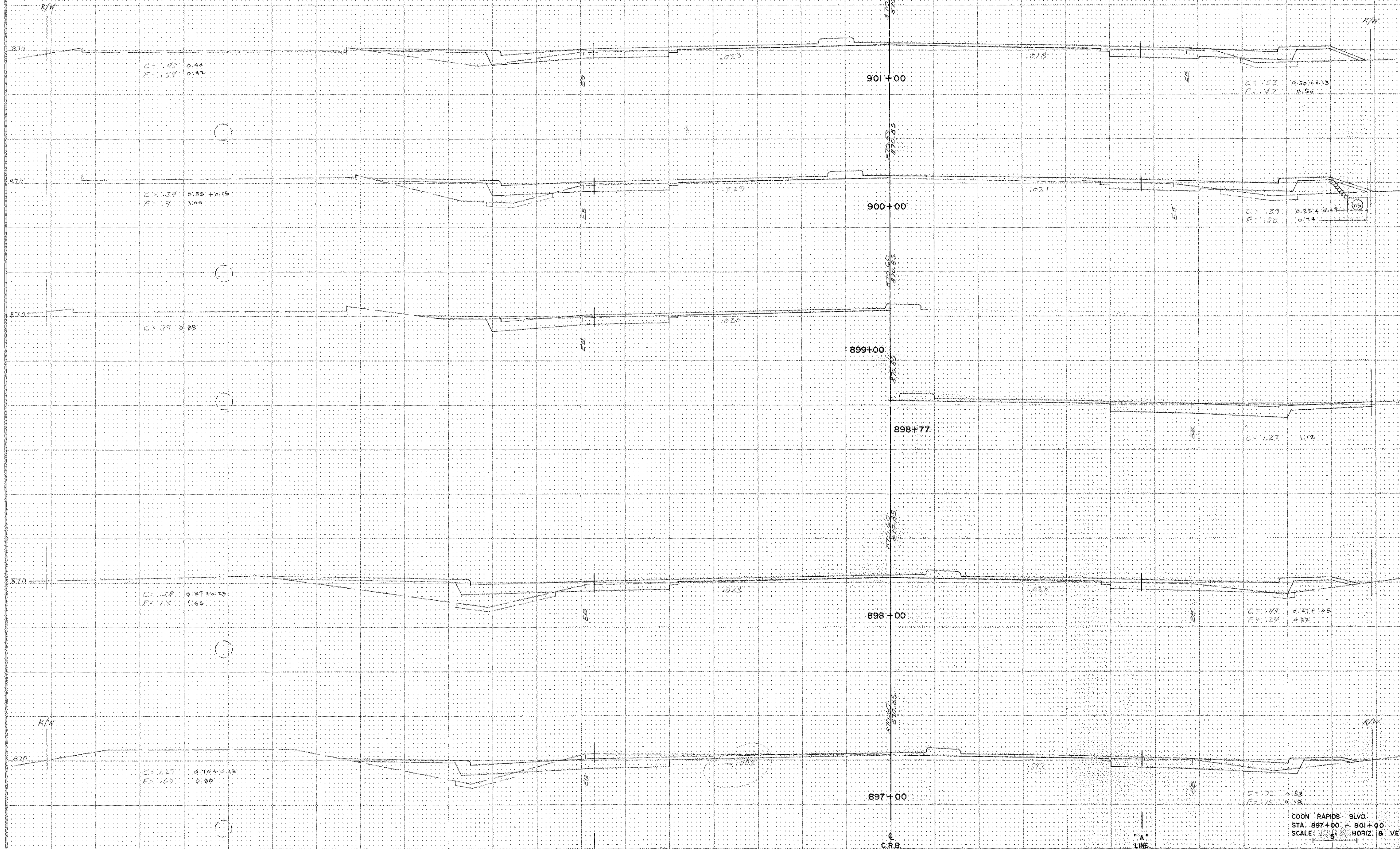
"A" LINE

FUNCTIONAL CROSS SECTION - OPEN DOTTED  
N.A. ROAD CO. - MEMPHIS, TN. 1941

State Proj. No. 02-601-22CTB S.A.P. 114-010-01  
C.P. 76-15

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COON RAPIDS BLVD.  
STA. 893+69 - 896+00  
SCALE: 5' HORIZ. B. VERT.



C=1.42  
F=1.54  
0.40  
0.42

C=1.34  
F=1.7  
0.55+0.15  
1.06

C=1.79  
F=0.82  
0.98

C=1.78  
F=1.18  
0.37+0.23  
1.65

C=1.27  
F=1.69  
0.18+0.13  
0.86

C=1.53  
F=1.47  
0.50+0.13  
0.56

C=1.59  
F=1.58  
0.25+0.17  
0.74

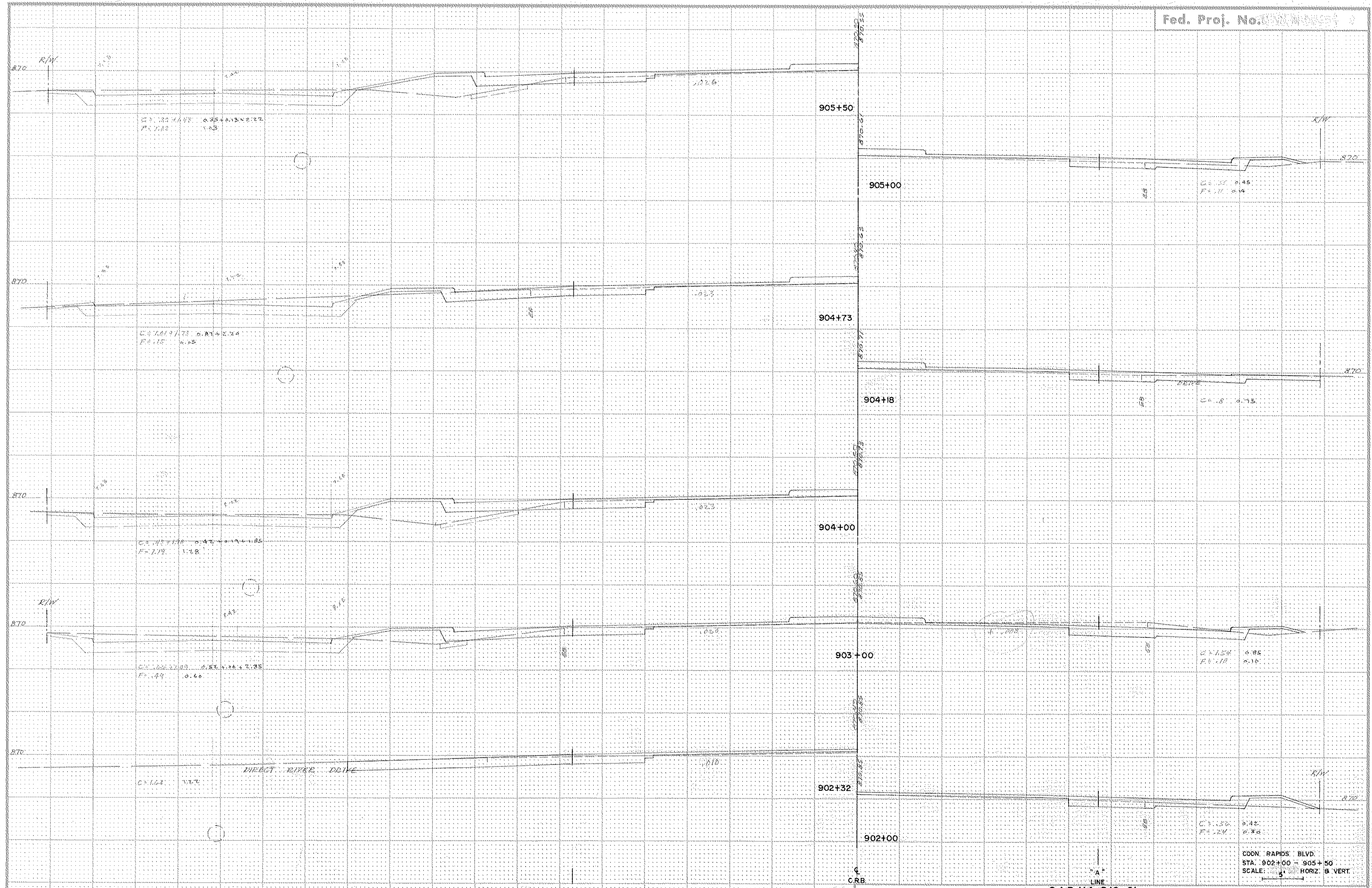
C=1.23  
F=1.18  
1.18

C=1.28  
F=1.24  
0.41+0.05  
0.82

C=1.72  
F=1.15  
0.58  
0.18

COON RAPIDS - BLVD.  
STA. 897+00 - 901+00  
SCALE: 1" = 5' HORIZ. 1" = 10' VERT.

FUNCTIONAL CROSS SECTION - OPEN DITCH



C=1.35 H=1.77  
F=1.12 1.23

C=1.61 H=1.73  
F=1.15 1.24

C=1.42 H=1.76  
F=1.17 1.28

C=1.66 H=1.70  
F=1.19 1.25

C=1.64 V.L.C.

C=1.35 H=1.45  
F=1.11 1.14

C=1.6 H=1.75

C=1.54 H=1.85  
F=1.18 1.16

C=1.56 H=1.42  
F=1.24 1.36

COORD. RAPIDS BLVD.  
STA. 902+00 - 905+50  
SCALE: 1" = 30' HORIZ. 1" = 10' VERT.

PHOTODUPLICATION SERVICE  
4. S. BRIDGE ST. MEMPHIS, TN 38102

R/W  
865

C=1.574.02 0.56+0.10+0.32  
P=1.34.71 0.26+1.15

909+29

865

C=1.571.44 0.77+0.56+0.37  
P=1.571.18 0.45+1.45

909+00

C=1.74 0.70  
P=1.74 0.72

865

C=1.39 0.35+0.44+0.60  
P=1.50 1.05 1.05+3.45

908+00

C=1.93 0.47

870

C=1.24+0.75 0.30+0.15+0.72+0.72  
P=1.92+0.71 1.10+0.90

907+00

C=1.80 0.15

870 R/W

C=1.83 0.65+1.25  
P=1.03 0.07

906+06

CRB

"A"  
LINE

"A"  
LINE

COON RAPIDS BLVD.  
STA. 906+00 - 909+29  
SCALE: 5' HORIZ. 8' VERT.

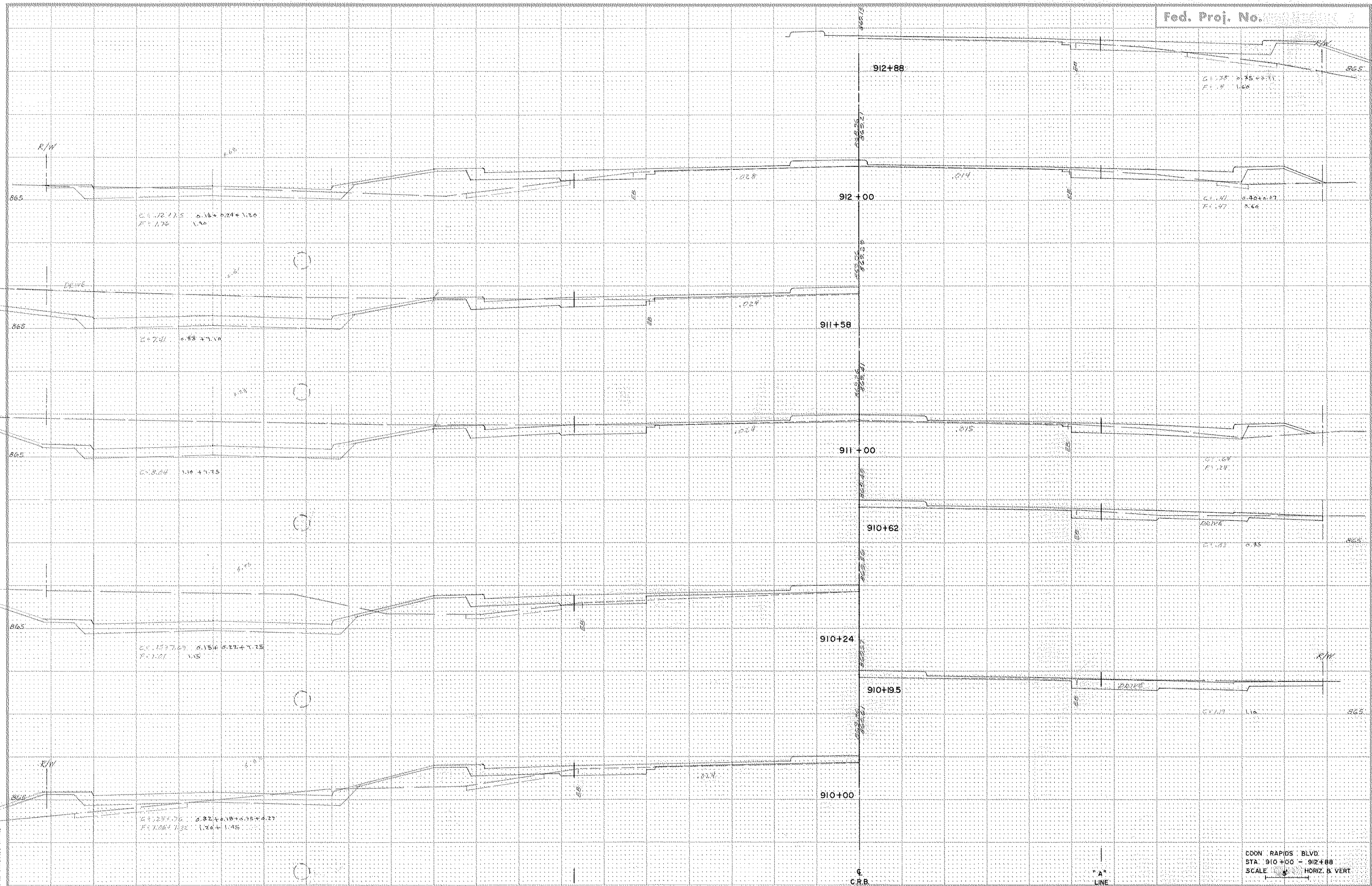
FUNCTIONAL CROSS SECTION DRESS BOTTOM  
4-4-1922 C. J. HENNINGSON, JR., A.S.C.

State Proj. No. 02-601-22 CTB. CP 76-15

SAP 114-010-01

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JOB NO. 9-7405

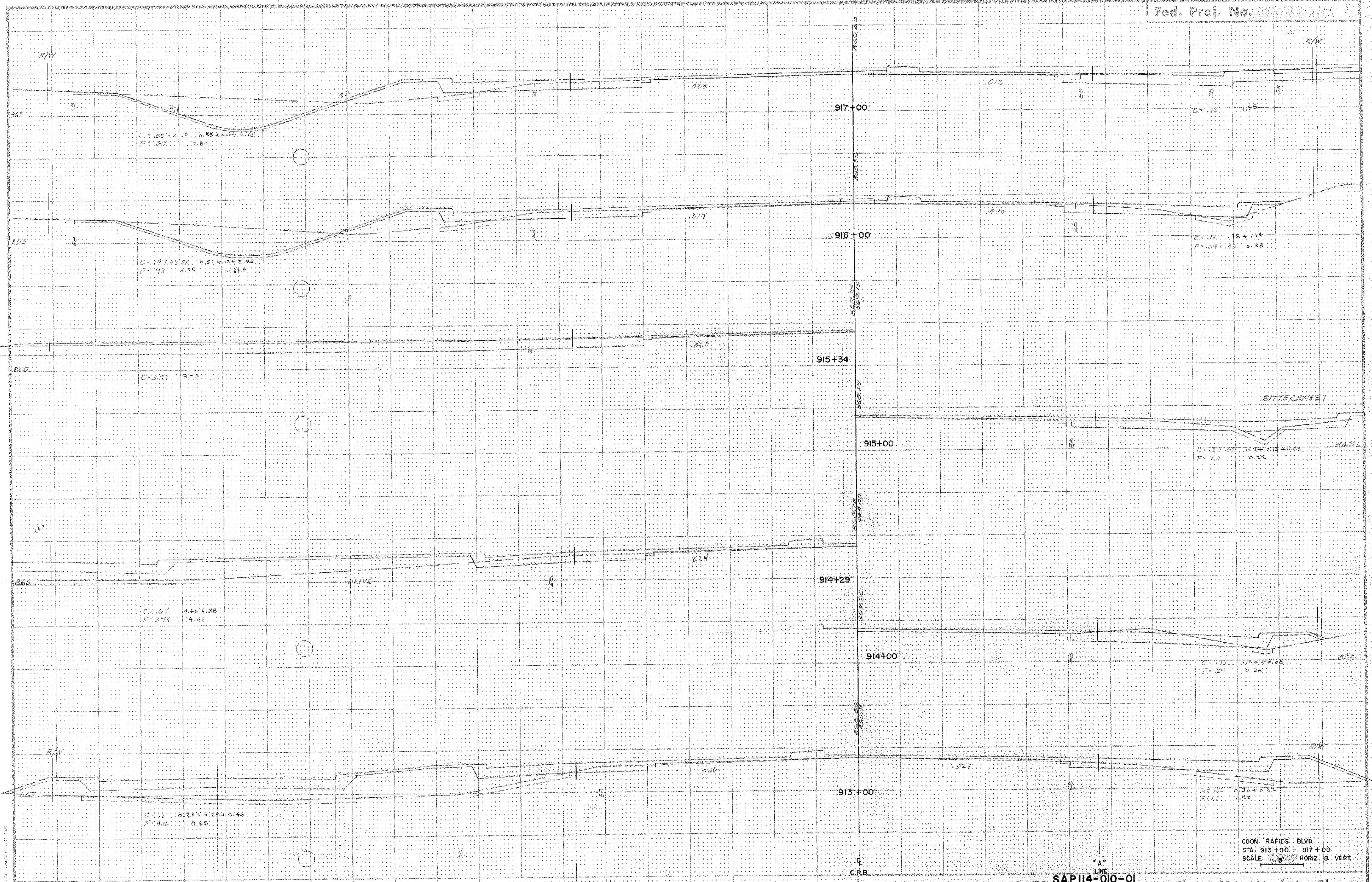


FUNCTIONAL CROSS SECTION, OPEN DITCH  
E. & S. 1950-55, 1960-1975, 1975-1980

COON RAPIDS BLVD.  
STA. 910+00 - 912+88  
SCALE 1" = 40' HORIZ. 1" = 4' VERT.

State Proj. No. 02-601-22 CTB S.A.P. 114-010-01  
C.P. 76-15

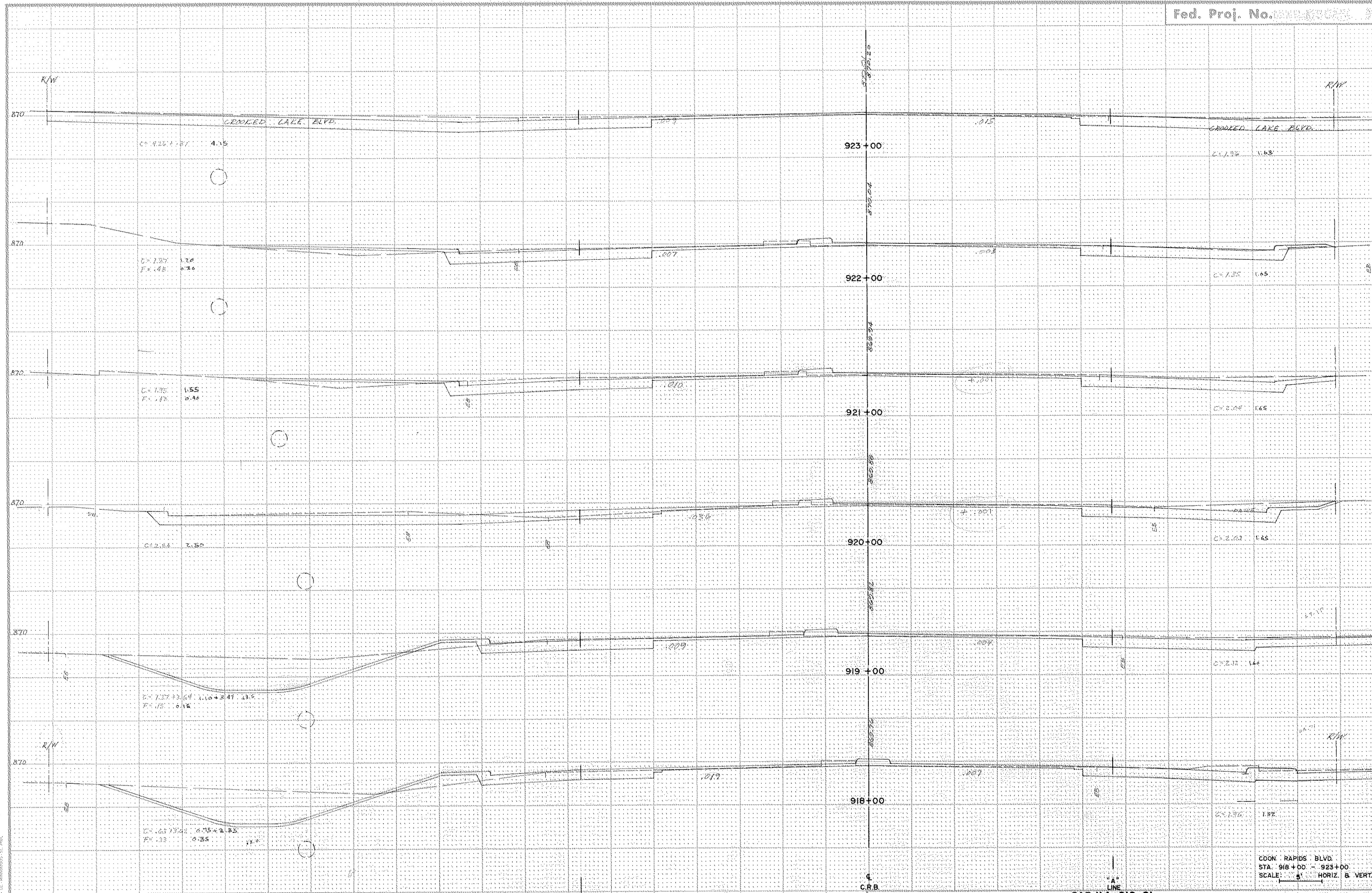
Sheet No. 79 of 111 Sheets



COON RAPIDS BLVD.  
 STA. 913+00 - 917+00  
 SCALE: 8" = 100' HORIZ. 8" = 10' VERT.

State Proj. No. 02-601-22 CT.B SAPI14-010-01  
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FUNCTIONAL CROSS SECTION - OPEN DOTTED  
C. A. 60005 (S. 10/10/50) (S. 10/10/50)

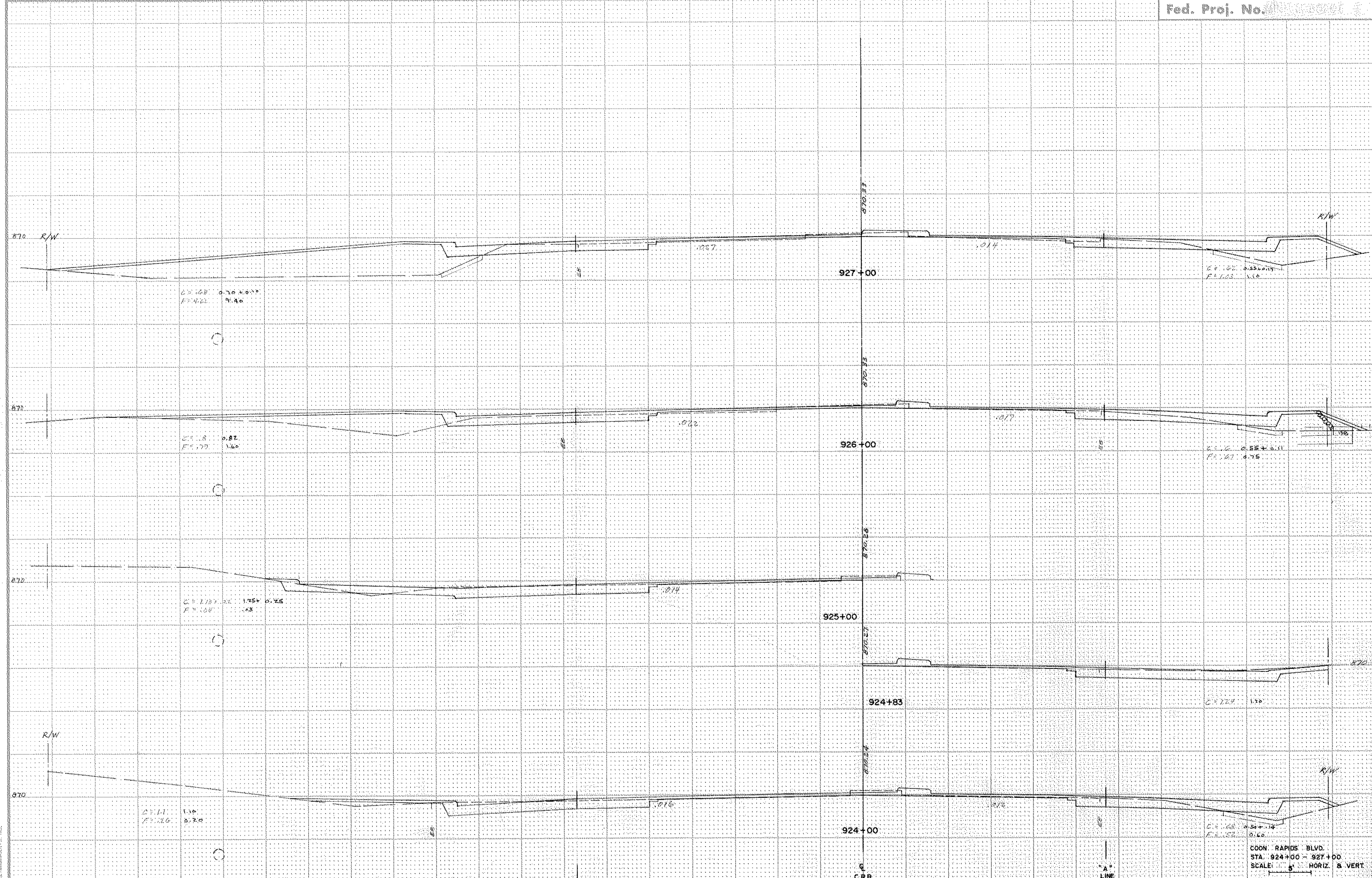
COON RAPIDS BLVD.  
STA. 918+00 - 923+00  
SCALE 5' HORIZ. & VERT.

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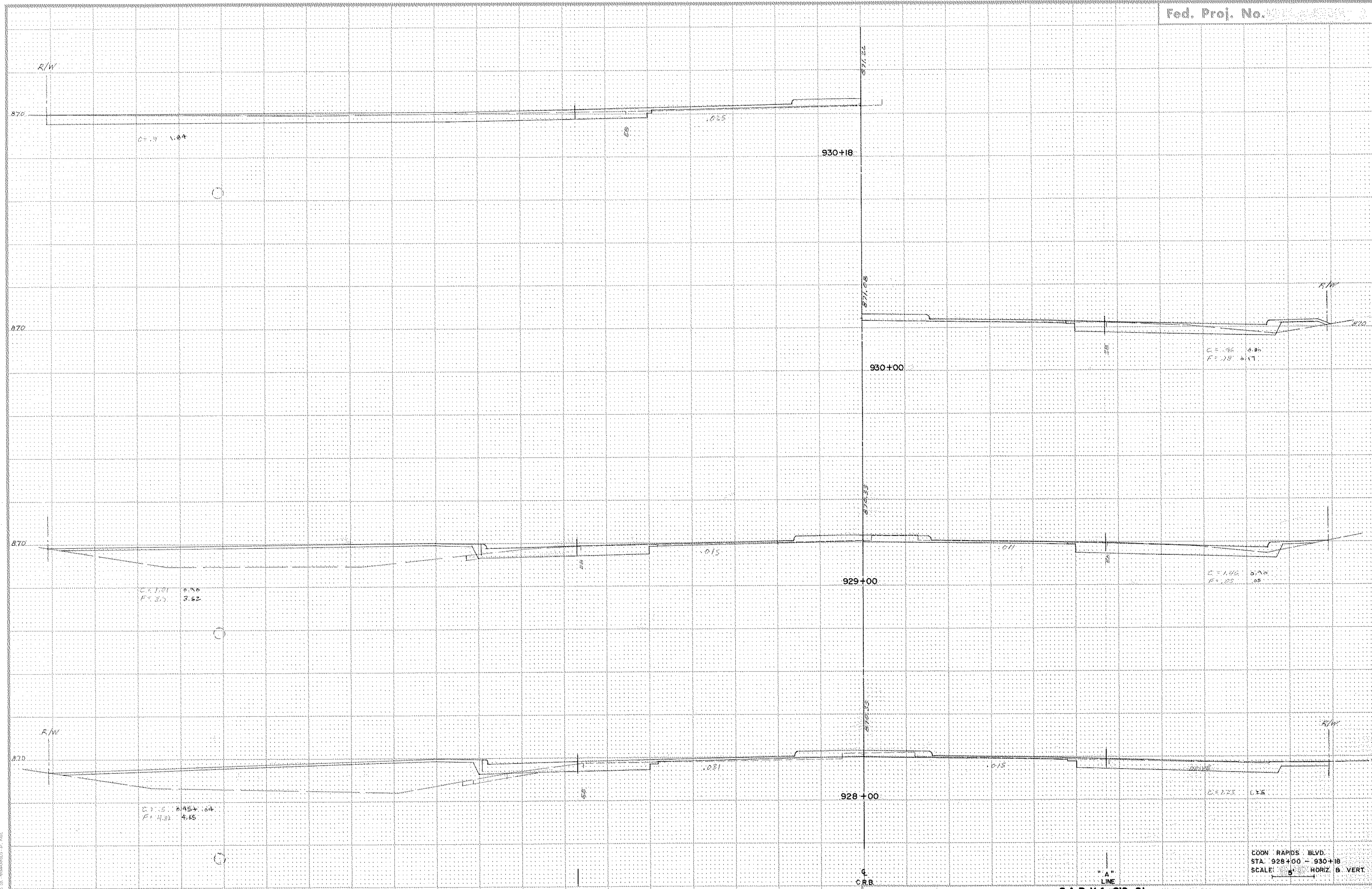
JOB NO. 9-7405





COON RAPIDS BLVD.  
 STA. 924+00 - 927+00  
 SCALE: 1" = 5' HORIZ. & VERT.

FUNCTIONAL CROSS SECTION OPEN DOTTED  
 N.C. 1950 (S. 1948) 11-10



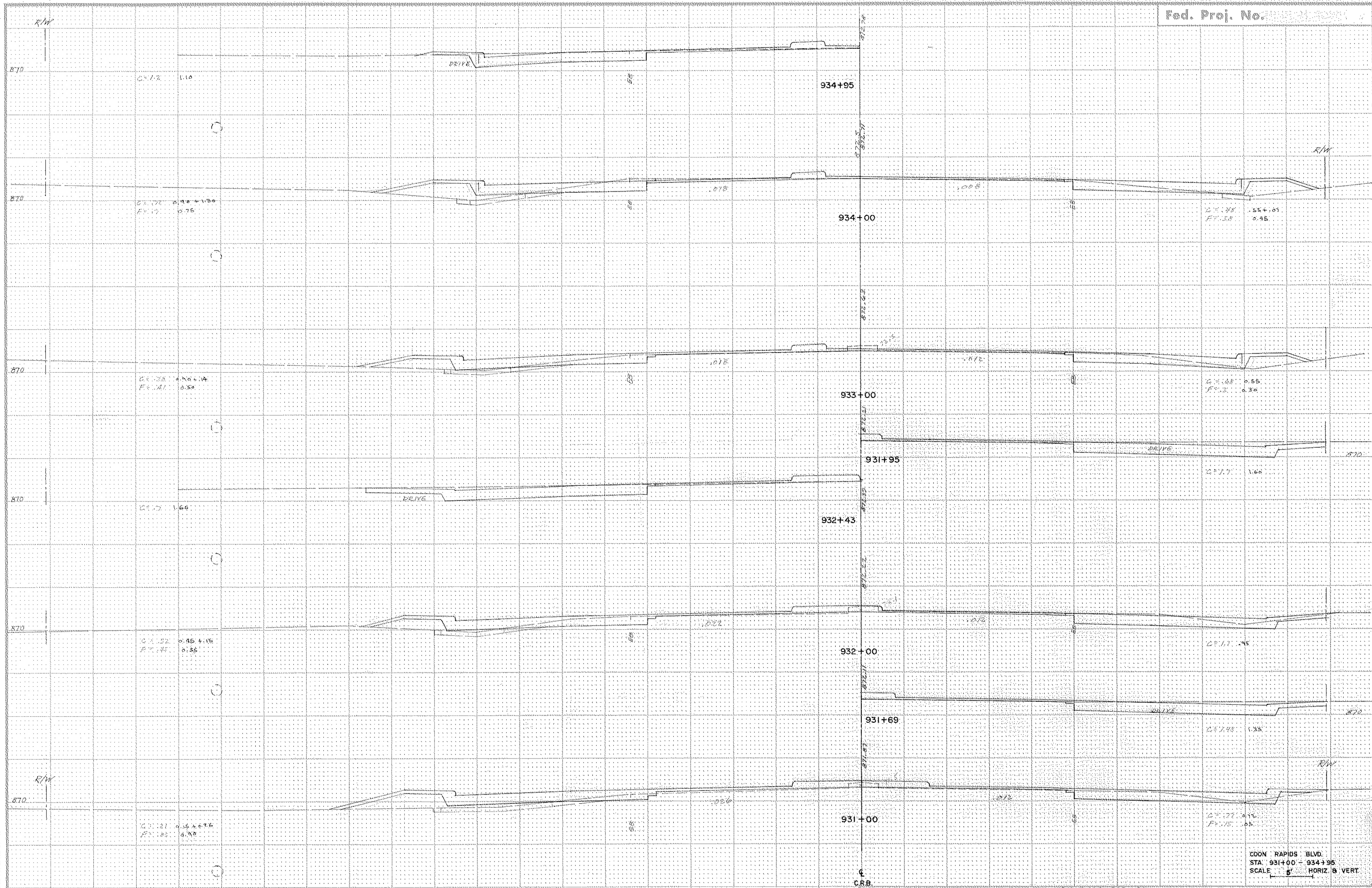
MICROFILM CROSS SECTION OVER NOTED

"B" LINE

State Proj. No. 02-601-22 CTB. S.A.P. 114-010-01 C.P. 76-15

COON RAPIDS BLVD.  
STA. 928+00 - 930+18  
SCALE: 1" = 5' HORIZ. 1" = 1' VERT.

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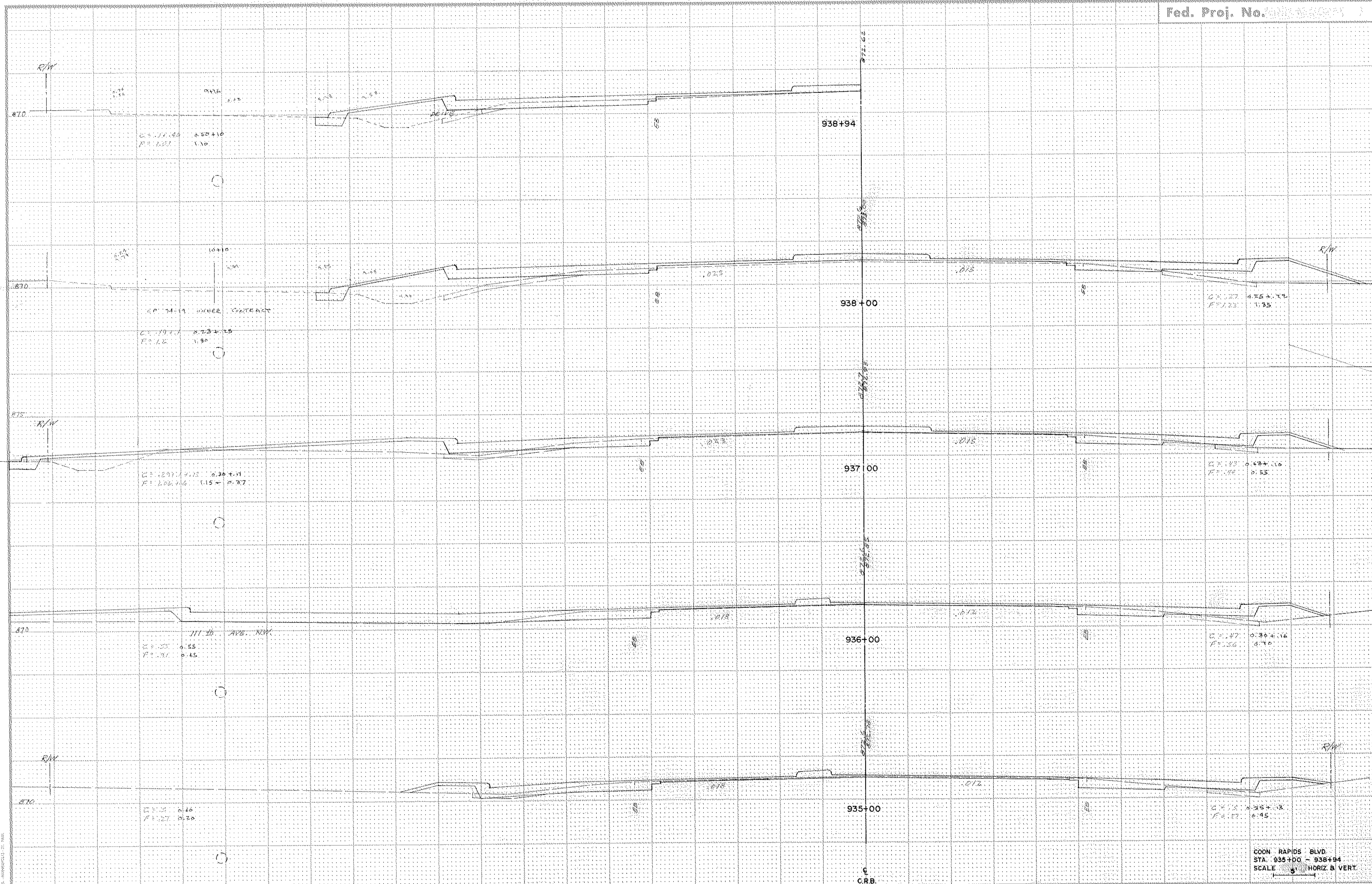


COON RAPIDS BLVD.  
 STA. 931+00 - 934+95  
 SCALE 5' HORIZ. & VERT.

State Proj. No. 02-601-22 CTB C P 76-15

Sheet No. 84 of 111 Sheets

PRACTICE CROSS SECTION OPEN DITCH  
 4. 1. 42088 25. 1480000111 31. 850



C.P. 77-49  
P.C. 77-49  
P.T. 77-49

C.P. 74-13 UNDER CONSTRUCTION  
C.P. 79-17  
P.C. 79-17  
P.T. 79-17

C.P. 77-49  
P.C. 77-49  
P.T. 77-49

711 1/2 AVE. N.W.  
C.P. 77-49  
P.C. 77-49  
P.T. 77-49

C.P. 77-49  
P.C. 77-49  
P.T. 77-49

C.P. 77-49  
P.C. 77-49  
P.T. 77-49

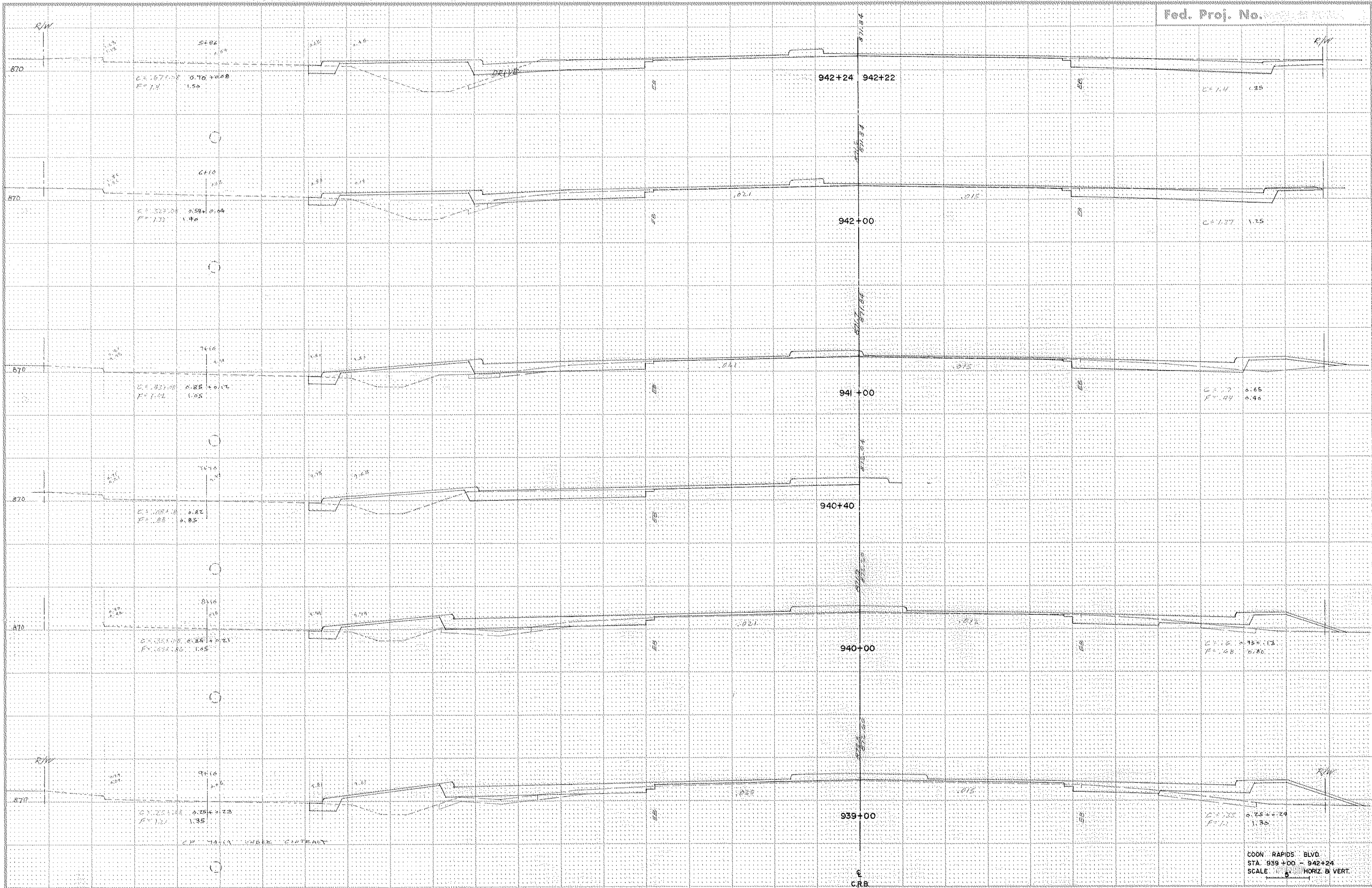
C.P. 77-49  
P.C. 77-49  
P.T. 77-49

C.P. 77-49  
P.C. 77-49  
P.T. 77-49

C.P. 77-49  
P.C. 77-49  
P.T. 77-49

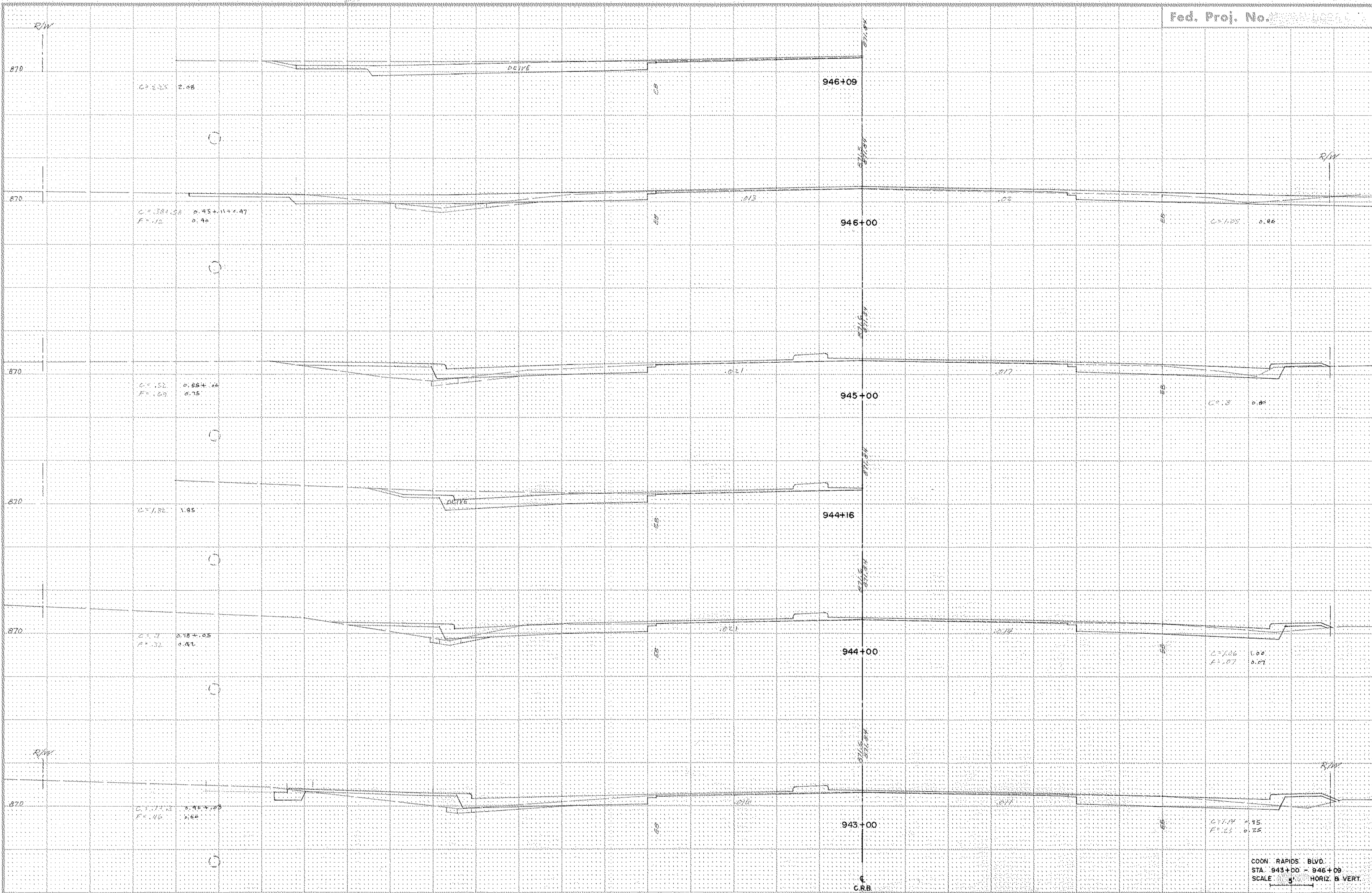
COORD. RAPIDS BLVD.  
STA. 935+00 - 938+94  
SCALE 5' HORIZ & VERT.

FUNCTIONAL CROSS SECTION - OPEN DITCH



PLACEMENT OF THIS SECTION BY THE DOTTED LINE IS APPROXIMATE. SEE PLAN SHEET FOR EXACT LOCATION.

COON RAPIDS BLVD  
STA. 939+00 - 942+24  
SCALE 1" = 40' HORIZ. & VERT.



C.P. 2.25 2.08

946+09

C.P. 1.38+08 0.95+11+0.47  
F.P. 1.02 0.40

946+00

C.P. 1.02 0.86

C.P. 1.52 0.85+10  
F.P. 1.09 0.75

945+00

C.P. 1.2 0.81

C.P. 1.82 1.95

944+16

C.P. 1.12 0.78+10.05  
F.P. 1.32 0.41

944+00

C.P. 2.06 1.00  
F.P. 1.07 0.67

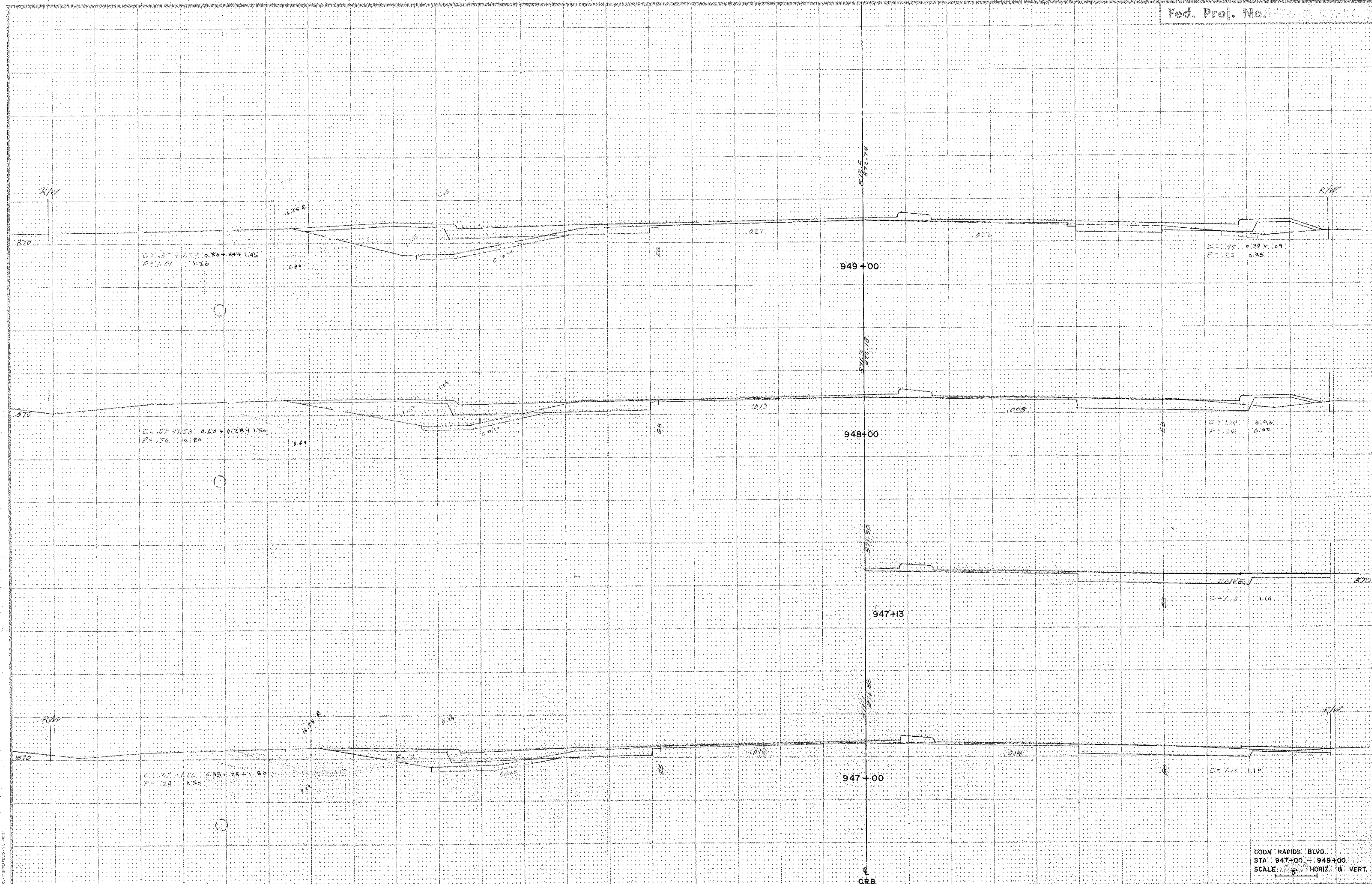
C.P. 1.12 0.46+10.05  
F.P. 1.16 1.64

943+00

C.P. 1.19 0.95  
F.P. 1.25 0.25

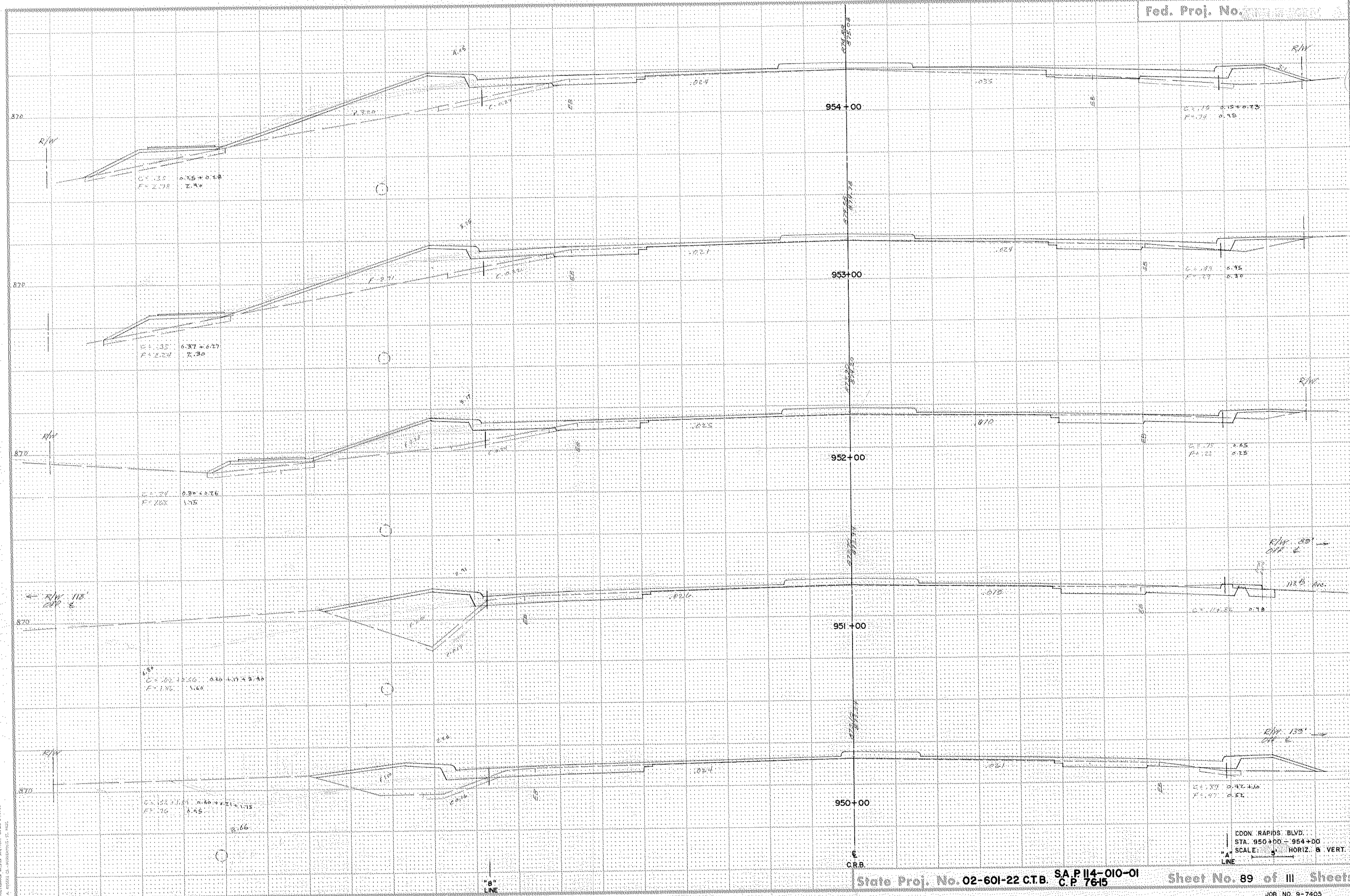
COON. RAPIDS. BLVD.  
STA. 943+00 - 946+00  
SCALE 1" = 40' HORIZ. & VERT.

FUNCTIONAL CROSS SECTION - OPEN DOTTED  
S. A. 2004 (2) - 11/15/2004 (2) - 37 - 401



FUNCTIONAL CROSS SECTION - OPEN DOTTED  
K. L. WOODS CO. - MINNEAPOLIS - ST. PAUL

CDON RAPIDS BLVD.  
STA. 947+00 - 949+00  
SCALE: 5' HORIZ. 8' VERT.



C.P. 33 475+0.18  
F=2.78 2.90

C.P. 35 637+0.27  
F=2.24 2.30

C.P. 34 830+0.26  
F=2.68 1.75

C.P. 36 417+2.40  
F=1.76 1.40

C.P. 32 106+0.21  
F=2.10 1.15

C.P. 38 815+0.23  
F=2.74 0.15

C.P. 37 815+0.15  
F=2.77 0.30

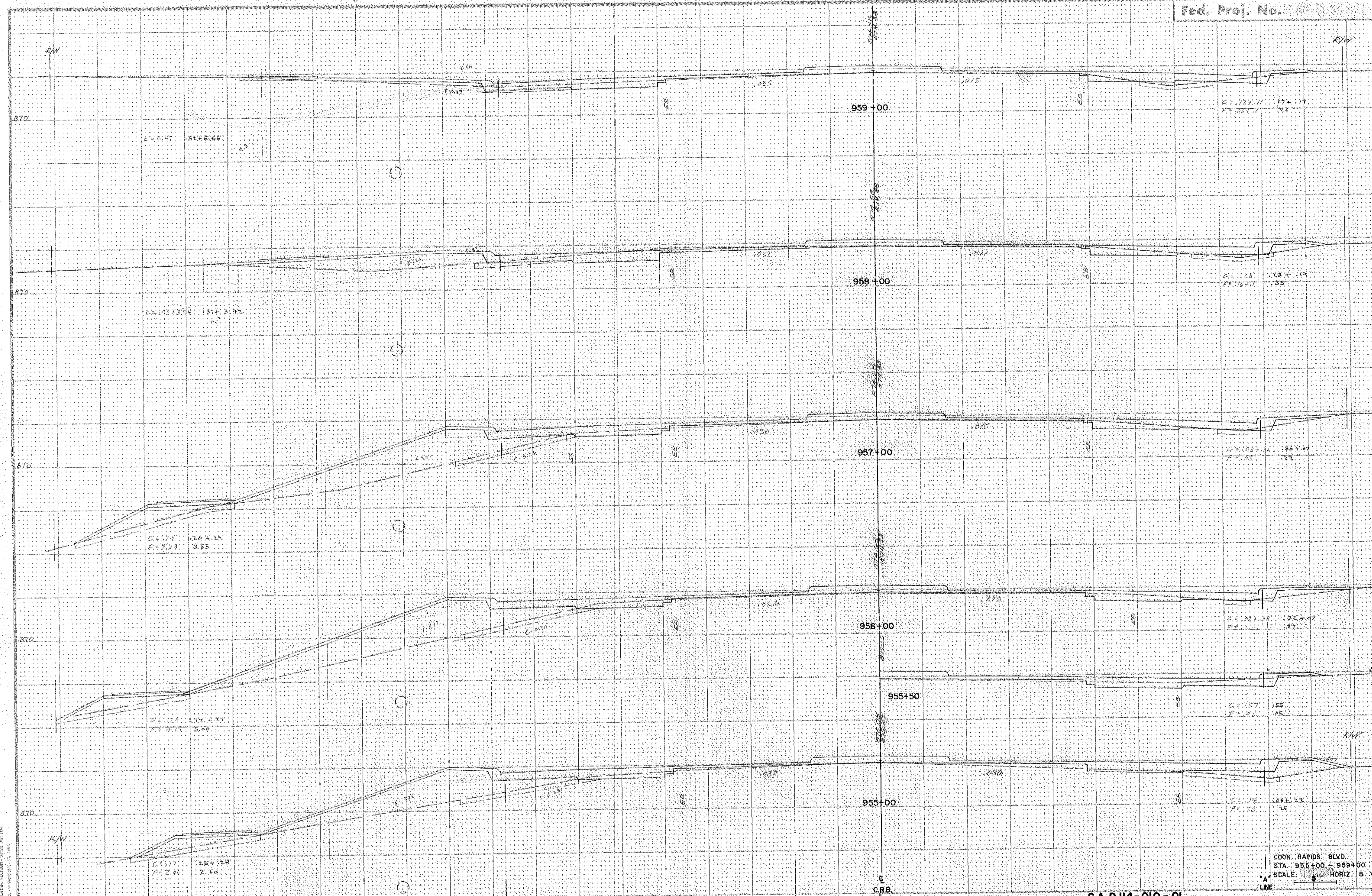
C.P. 35 865+0.65  
F=2.28 0.25

C.P. 34 870+0.70

C.P. 33 842+1.00  
F=2.47 0.52

CDON RAPIDS BLVD.  
STA. 950+00 - 954+00  
SCALE: 1" = 30' HORIZ. & VERT.





PROPOSED CROSS SECTION - OPEN DITCH  
IN A. S. CO. DISTRICT, ST. PAUL

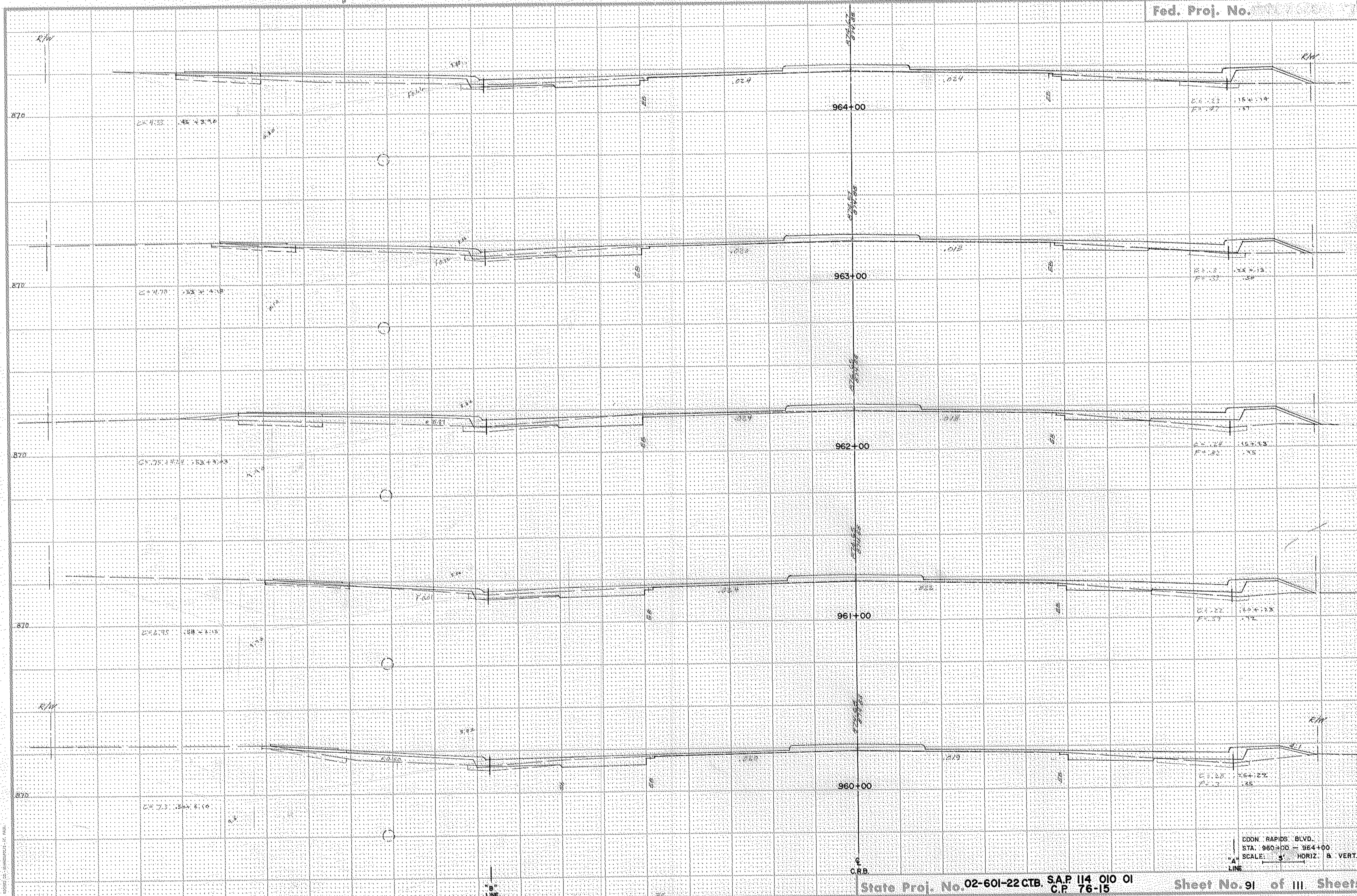
"B" LINE

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C.P. 76-15

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CDON. RAPIDS. BLVD.  
STA. 955+00 - 959+00  
SCALE: 5" HORIZ. & VERT.

JOB NO. 9-7405



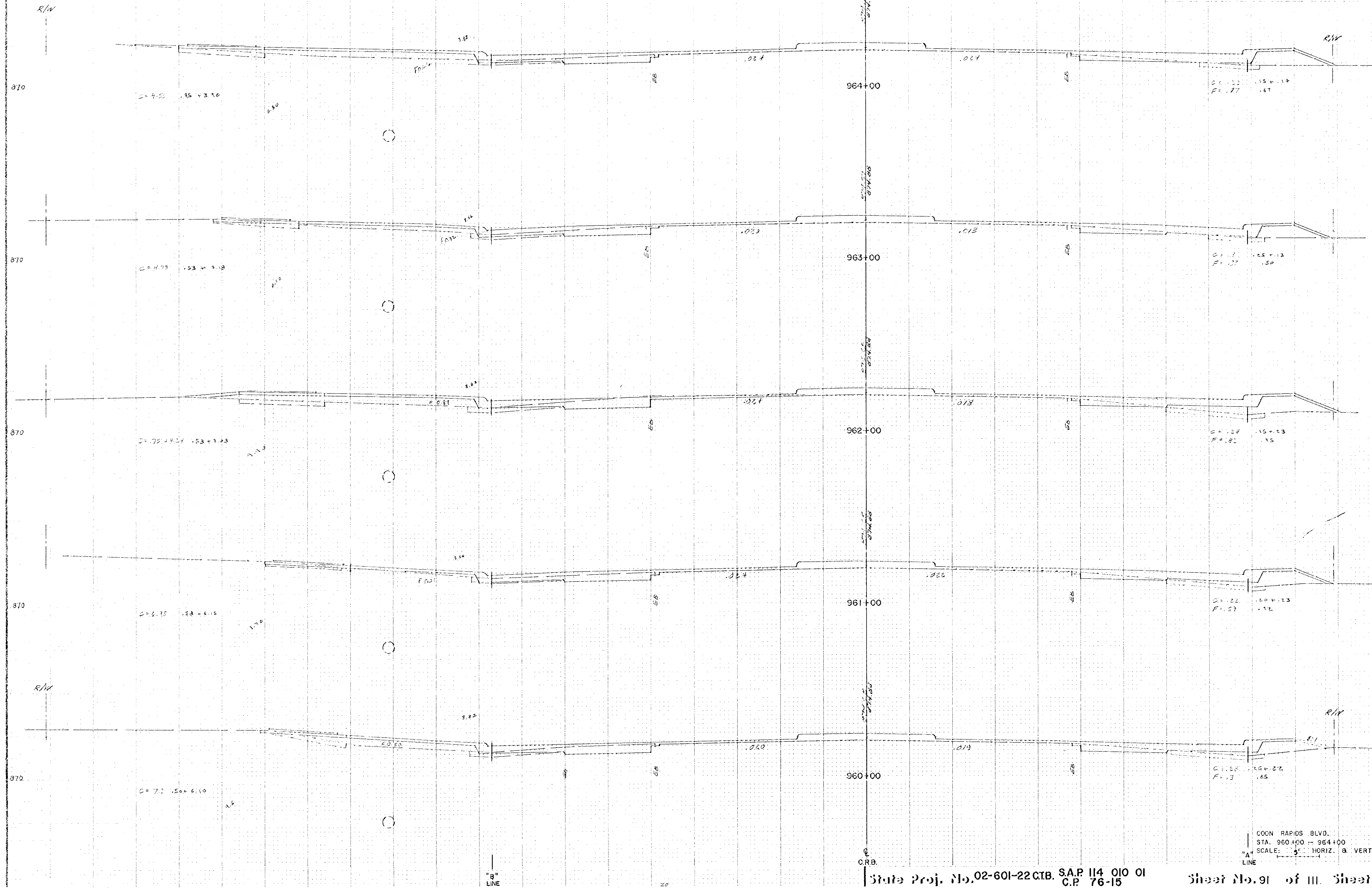
PROVIDE THIS SECTION - PER DOTTIS

COON RAPIDS BLVD.  
 STA. 960+00 - 964+00  
 SCALE: 5' HORIZ. 8' VERT.

State Proj. No. 02-601-22 CTB. S.A.P. 114 010 01  
 C.P. 76-15

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JOB NO. 5-7405

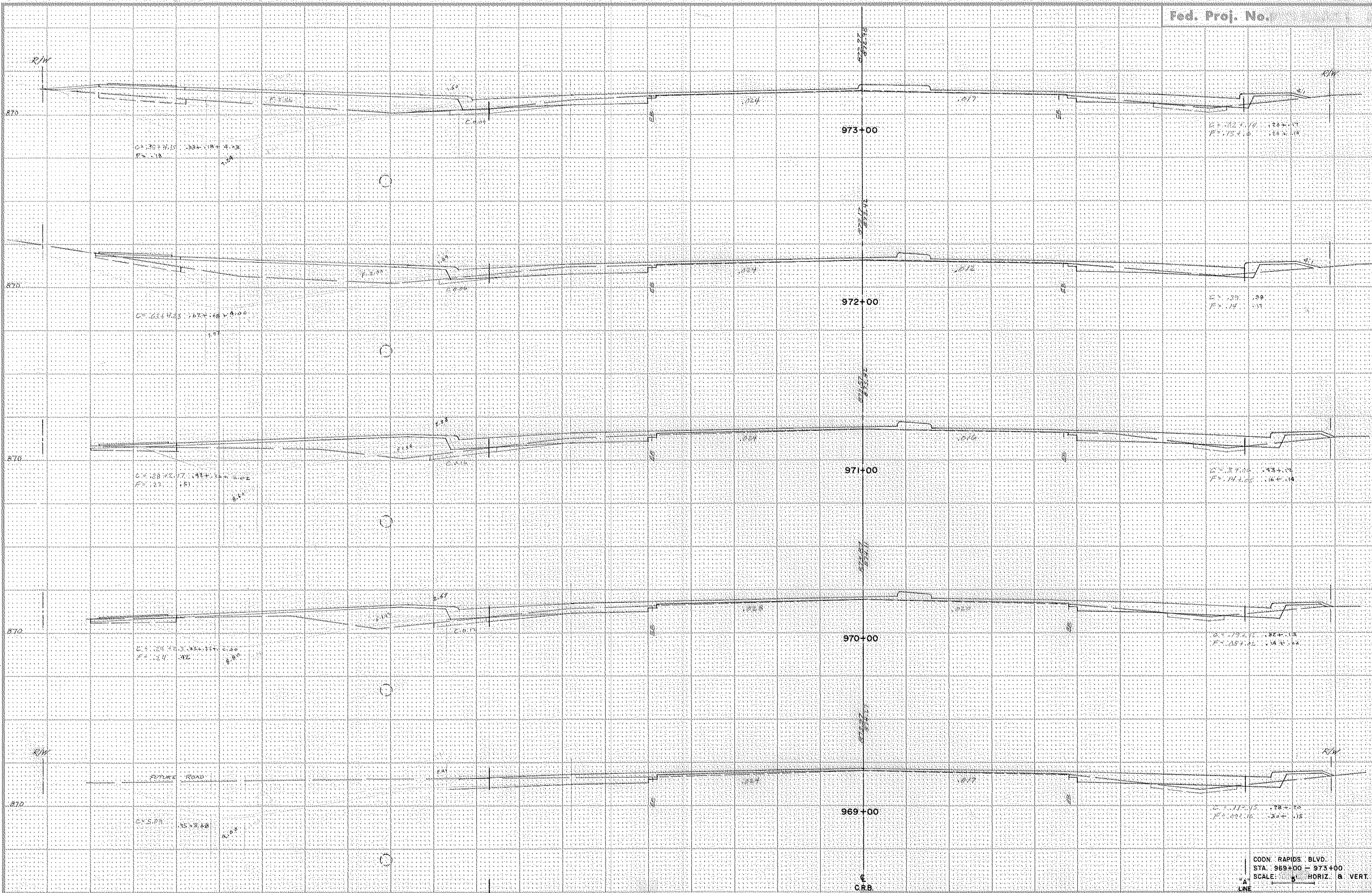


FUNCTIONAL CROSS SECTION WITH NOTES  
DATE: 12/1/76

COON RAPIDS BLVD.  
STA. 960+00 -- 964+00  
SCALE: 1" = 40' HORIZ. & VERT.  
LINE

State Proj. No. 02-601-22 CTB. S.A.P. 114 010 01  
C.P. 76-15

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FUNCTIONAL CROSS SECTION - OVER-DOTTED  
S. P. 114-010-01  
C. P. 75-15

C = 22.70  
F = 15.15

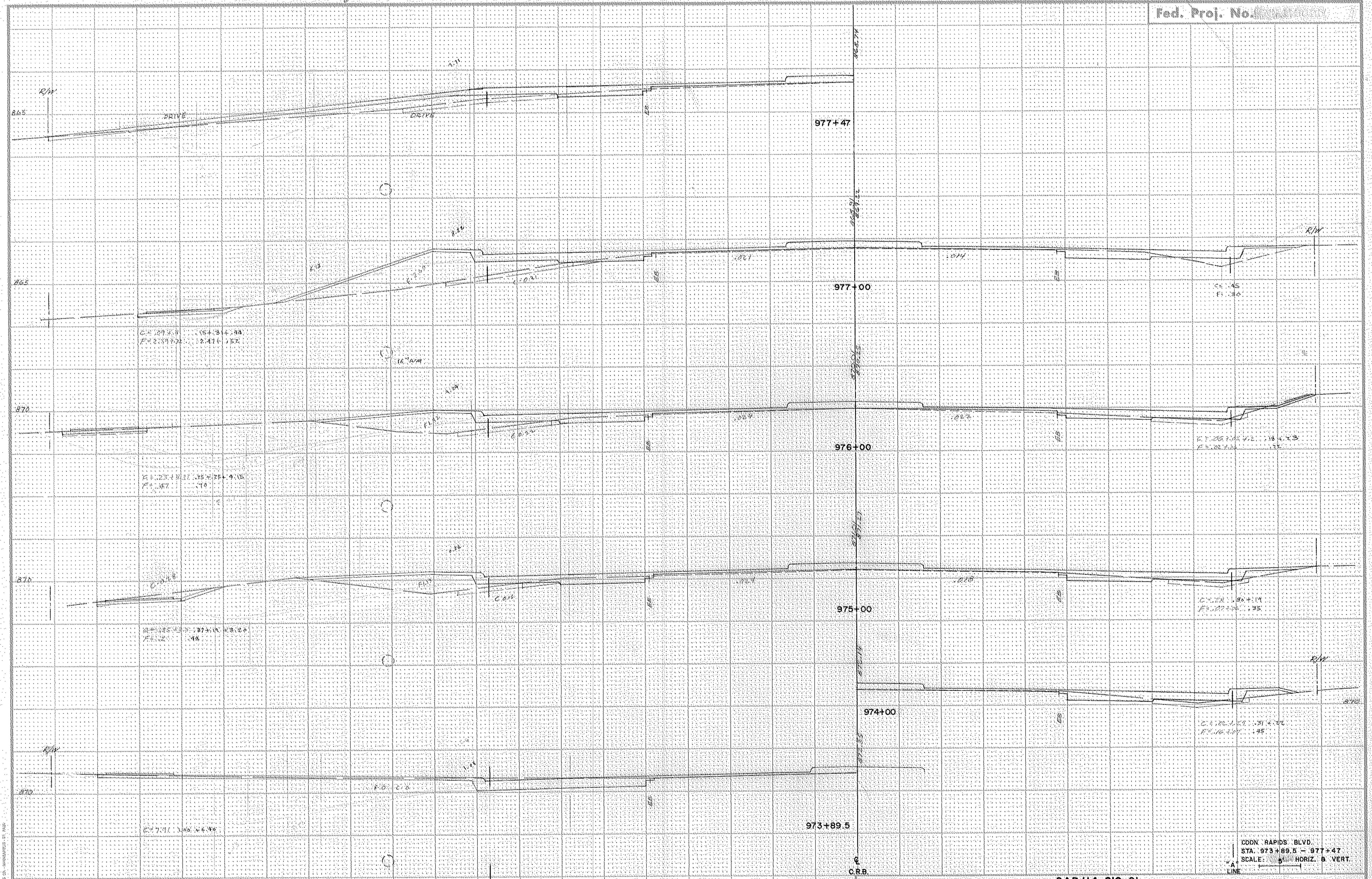
C = 23.10  
F = 15.15

C = 27.00  
F = 14.25

C = 29.20  
F = 14.25

C = 31.10  
F = 14.15

COND. RAPIDS BLVD.  
STA. 969+00 - 973+00  
SCALE: 1" = 100' HORIZ. & VERT.  
LINE



FRONTIER CROSS SECTION - OPEN DOTTING

"B" LINE

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COON RAPIDS BLVD.  
 STA. 973+89.5 - 977+47  
 SCALE: 1" = 5' HORIZ. 1" = 20' VERT.

R/W

981+50

981+00

980+00

979+58

979+00

978+00

865

865

865

865

R/W

R/W

865

865

865

R/W

C1.13

C = .16  
P = 1.15  
F = 1.00

C1.16

C = .16  
P = 1.15  
F = 1.00

C = .17  
P = 1.15  
F = 1.00

C = .16  
P = 1.15  
F = 1.00

F1.10

C1.17

F1.10

F1.10

C1.21

C1.21

C1.21

C1.21

ES

ES

ES

ES

865.77

865.28

865.22

865.27

865.24

865.13

865.08

PIPE

PIPE

PIPE

C1.21 1.64

C1.21 1.64  
F1.10 .64

C1.21 1.64  
F1.10 .64

C1.21 1.64  
F1.10 .64

C1.21 1.64  
F1.10 .64

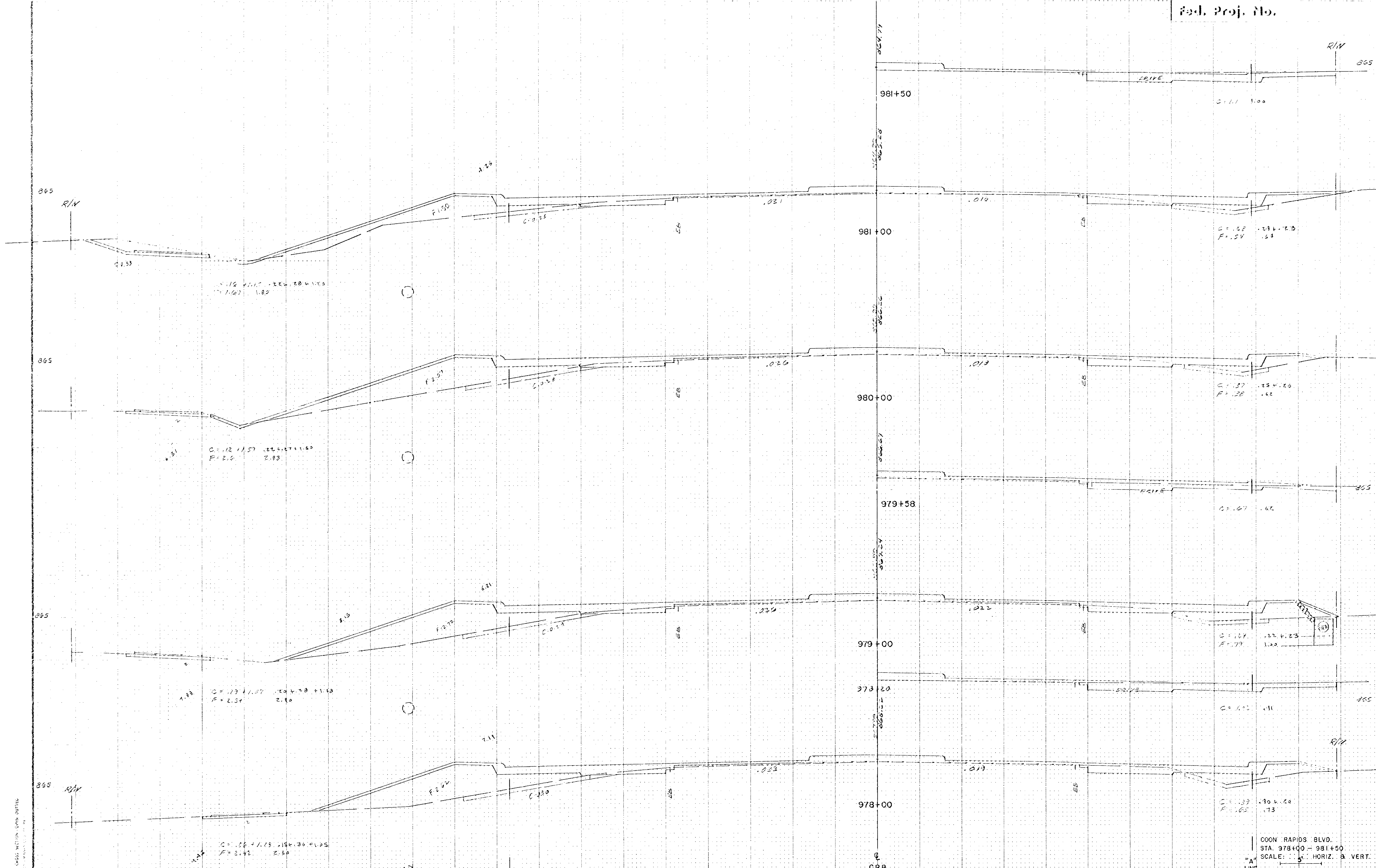
C1.21 1.64  
F1.10 .64

C1.21 1.64  
F1.10 .64

COON RAPIDS BLVD.  
STA. 978+00 - 981+50  
SCALE: 1" = 5' HORIZ. & VERT.

FRAGMENTAL CROSS SECTION OPEN DOTTED

"B" LINE



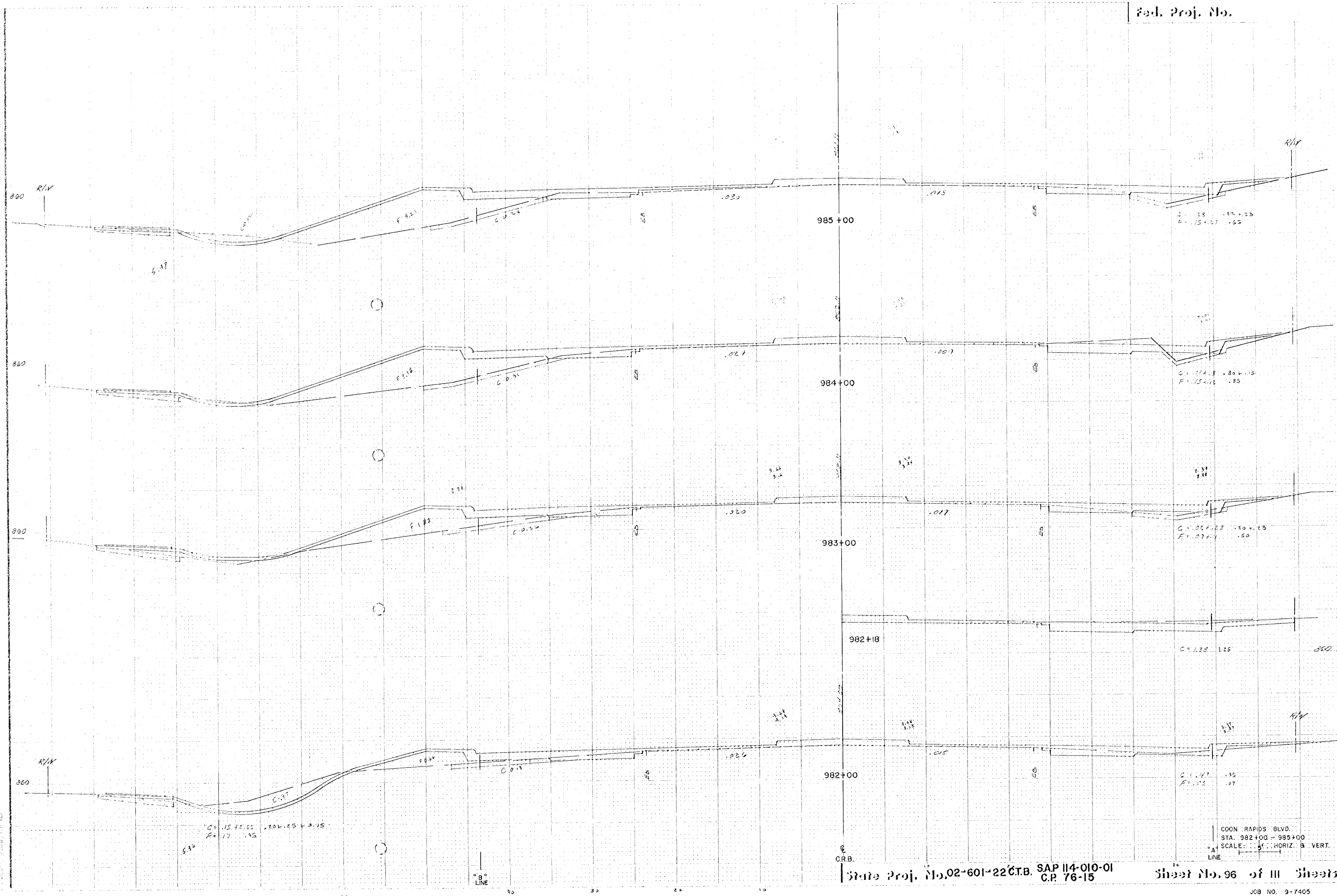
FUNCTIONAL CROSS SECTION - CONN. NOTES

1" = 8' LINE

COON RAPIDS BLVD.  
 STA. 978+00 - 981+50  
 SCALE: 1" = 8' HORIZ. & VERT.  
 "A" LINE

State Proj. No. 02-601-22 C.T.B. S.A.P. 114-010-01  
 C.P. 76-15

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PLAN VIEW, CROSS SECTION, 07/26/50

C = .1572 .55  
F = .17 .45

"B" LINE

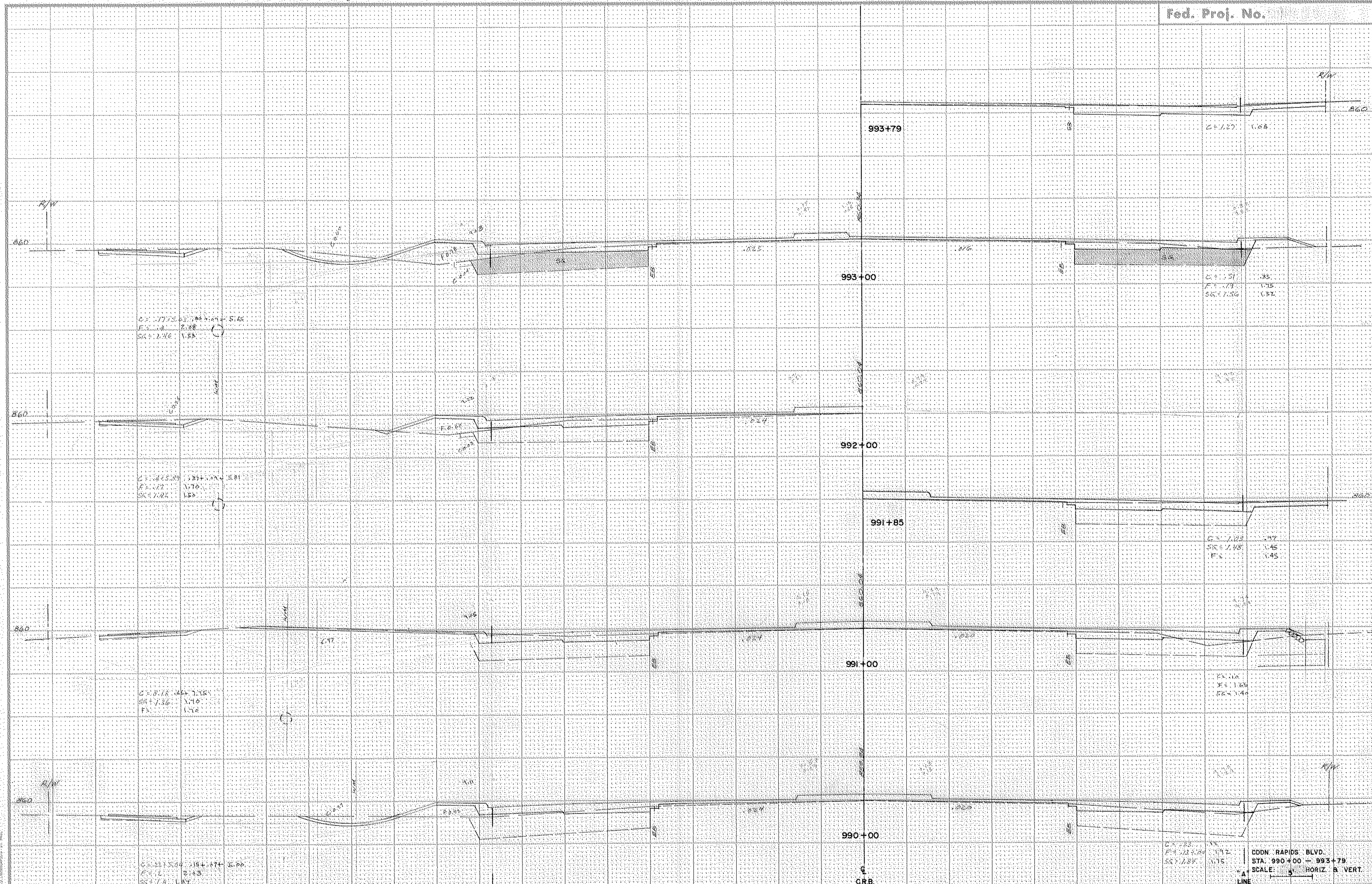
CR.B.

State Proj. No. 02-601-22 C.T.B. SAP 114-010-01  
C.P. 76-15

COON RAPIDS BLVD.  
STA. 982+00 - 985+00  
SCALE: 1" = 5' HORIZ. & VERT.

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C.P. 1775.00 + 5.45  
 F.S. 1.78  
 S.K. 1.96

C.P. 1815.00 + 5.81  
 F.S. 1.72  
 S.K. 1.92

C.P. 1818.45 + 7.15  
 F.S. 1.36  
 S.K. 1.44

C.P. 215.00 + 5.00  
 F.S. 1.83  
 S.K. 1.87

993+79

993+00

992+00

991+85

991+00

990+00

C.P. 1727.00 + 1.88  
 F.S. 1.79  
 S.K. 1.56

C.P. 1751.00 + 1.85  
 F.S. 1.79  
 S.K. 1.56

C.P. 1712.00 + 1.45  
 F.S. 1.48  
 S.K. 1.45

C.P. 1718.00 + 1.45  
 F.S. 1.45  
 S.K. 1.44

C.P. 23.00 + 1.15  
 F.S. 1.80  
 S.K. 1.87

CODN. RAPIDS BLVD.  
 STA. 990+00 - 993+79  
 SCALE: 1" = 30' HORIZ. B. VERT.

UNDESIGNED CROSS SECTION - JMS DATED  
 11/1/60 BY JMS

R/W

865

860

860

860

997+00

996+50

996+00

995+00

994+10

994+00

C=1.77  
F=1.25

C=1.85  
F=1.27

C=1.85  
F=1.52

C=1.94  
F=1.46

BEILING BLVD

C=1.65  
L=15

C=2.08  
L=18

C=1.58  
L=15

C=1.85  
F=1.21  
L=15

C=1.26  
F=1.26  
L=18

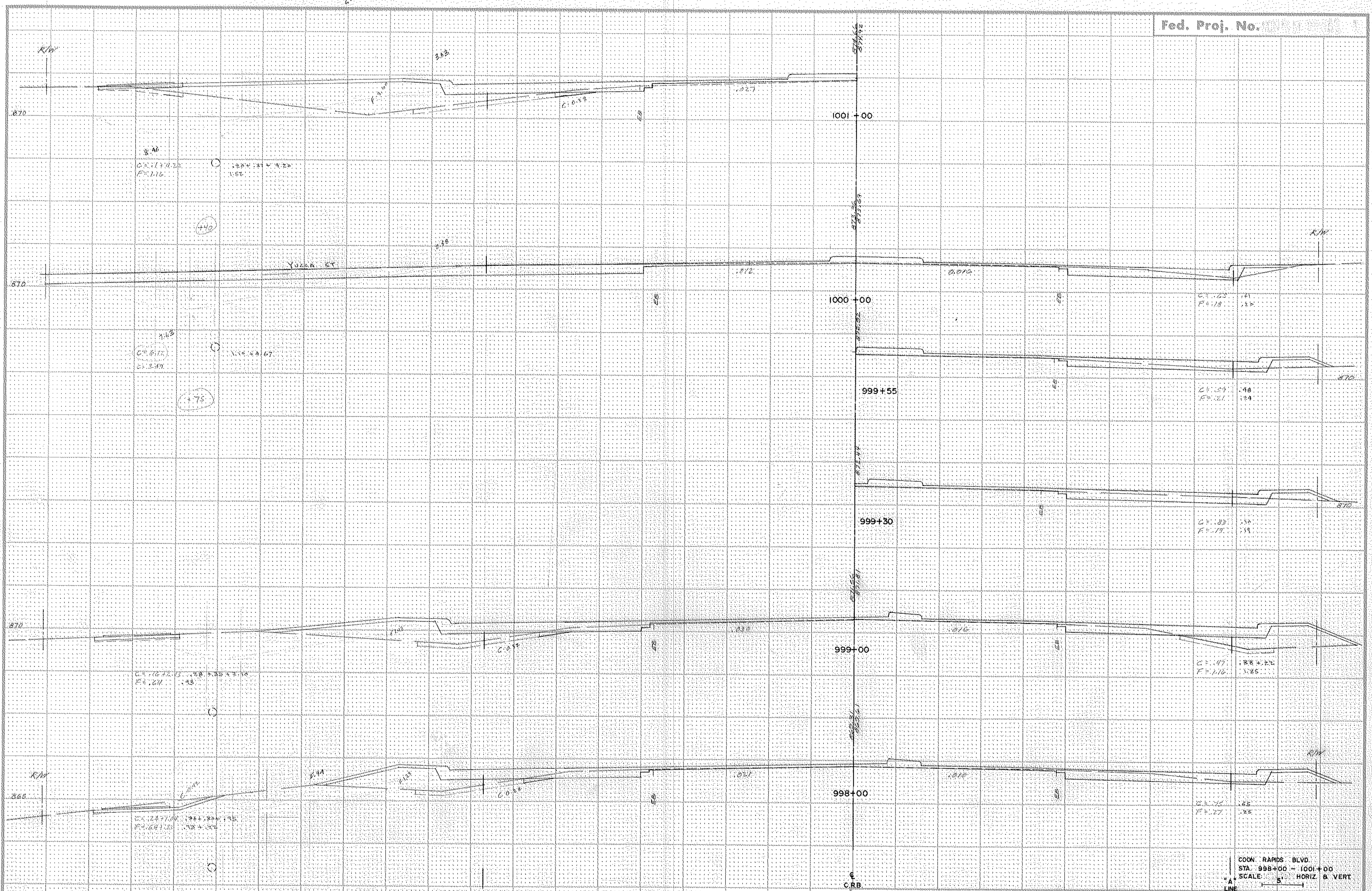
CDON RAPIDS BLVD.  
STA. 994+00 - 997+00  
SCALE: 5' HORIZ. B' VERT.

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PROCESSED CROSS SECTION - OPEN DOTTED

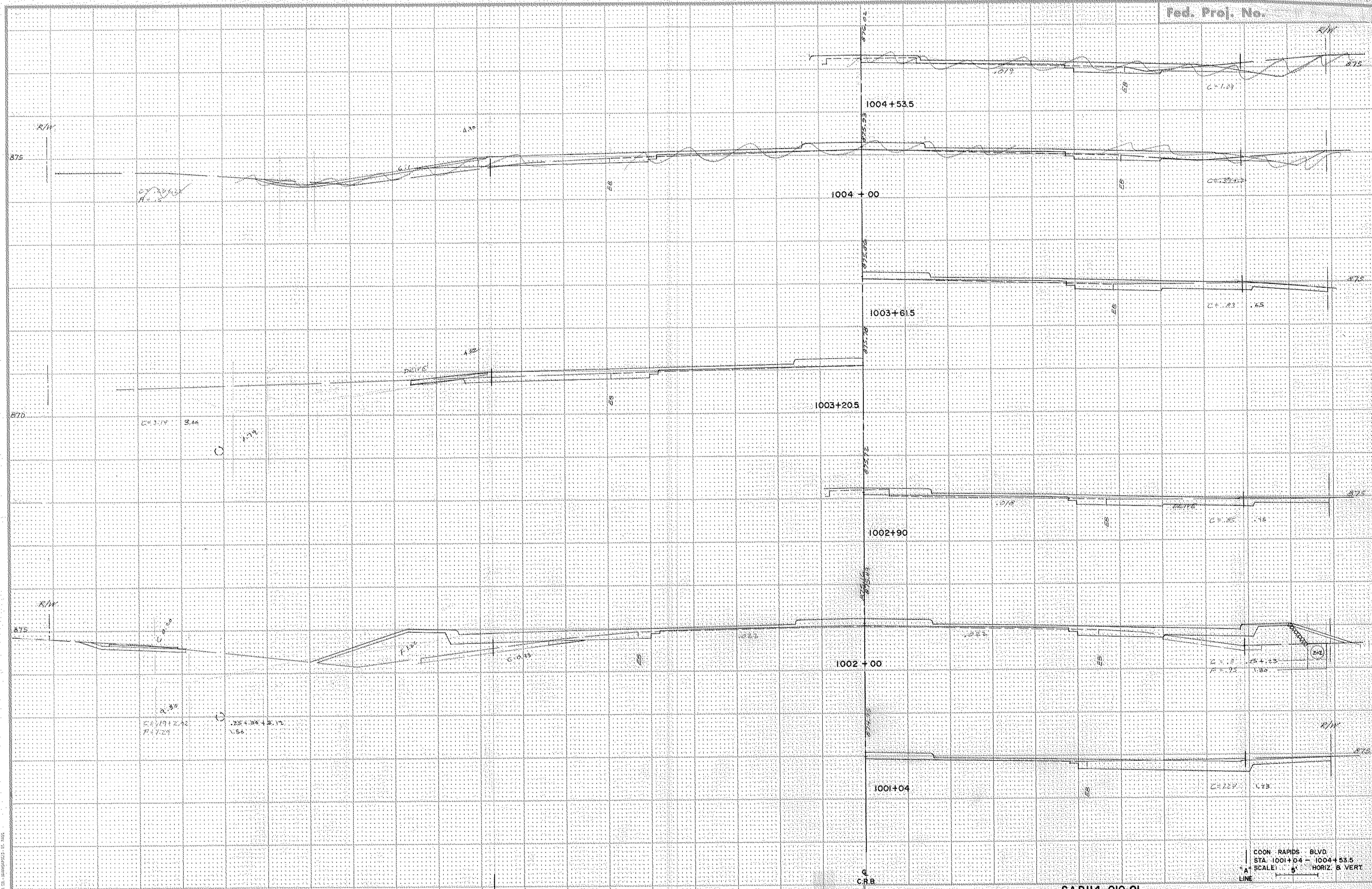


FUNCTIONAL DESIGN SECTION OPENED DATED  
J. 2. 2005 ON: 10/20/05-11-11

COORD. RAVES BLVD.  
 STA. 998+00 - 1001+00  
 SCALE: 1" = 5' HORIZ. & VERT.  
 "A" LINE

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COON RAPIDS BLVD.  
STA. 1001+04 - 1004+53.5  
SCALE: 1" = 5' HORIZ. & VERT.  
LINE

Fed.

875  
875  
875  
875  
875  
875  
875  
875

1009+00

1008+00

1007+00

1006+00

1005+00

1004+00

1003+00

CRB  
1003+00 - 1004+00  
1:10

CRB  
1004+00 - 1005+00  
1:10

CRB  
1005+00 - 1006+00  
1:10

CRB  
1006+00 - 1007+00  
1:10

CRB  
1007+00 - 1008+00  
1:10

CRB  
1008+00 - 1009+00  
1:10

FUNCTIONAL CROSS SECTION OPEN DOTTED

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875

875

875

875

875

875

875

1009+00

1008+00

1007+00

1006+00

1005+00

1004+00

1003+00

C.R.B.

C = .47  
F = .17

C = .30  
F = .10

C = .15  
F = .15

C = .64  
F = .27

COON RAPIDS BLVD.  
STA: 1003+00 - 1009+00  
SCALE: 1" = 40' HORIZ. 1" = 8'

75

50

25

E

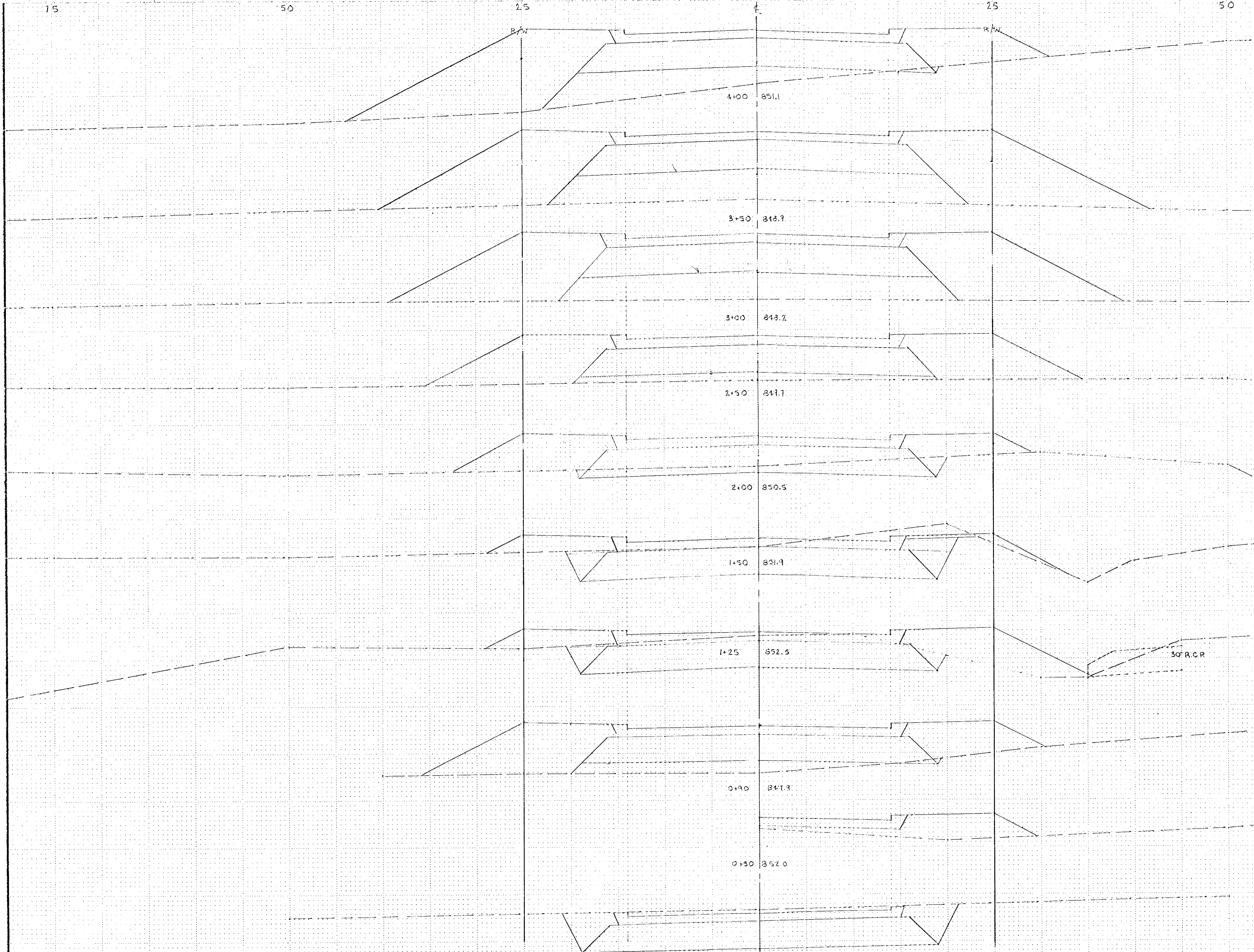
25

50

Rad. Proj. No.

75

Sta.	Gr. Elev.	Prop. Elev.	Gr. Elev.	Fill
4+00	851.1		184	153
3+50	848.7		230	221
3+00	848.7		222	197
2+50	841.7		137	125
2+00	850.5		40	105
1+50	851.9		32	114
1+25	852.5		13	96
0+90	841.3		12	2
0+50	852.0		51	119
0+34	853.33	TOP OF CURB		



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EGRET FRONTAGE ROAD  
 0+34 TO 4+00  
 SCALE 1" = 5' HORZ. & VERT.

JOB NO. 9-7405

R/W

R/W

C. 5X 5.4 GEN B. FILL

6+50 252.5

4+00 261.6

5+50 261.0

5+00 260.3

4+50 258.1

103 119 105 25

94 119 105 30

133 119 105 31

63 119 105 25

EGRET FRONTAGE ROAD  
4+50 TO 6+50  
SCALE 5' HORZ. & VERT.

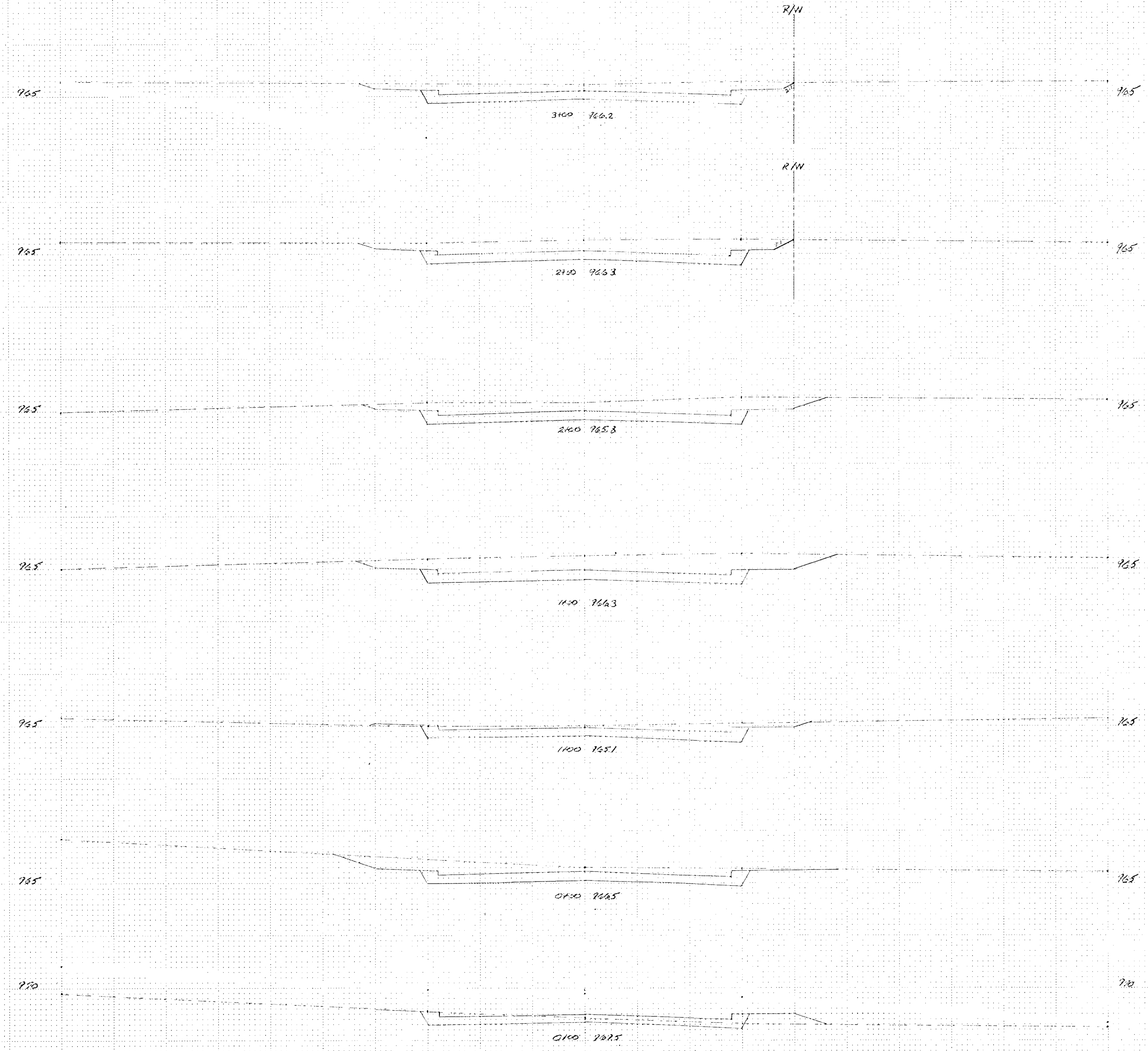
5000 Standard Form #1



50'

50'

Fac. Proj. No.



CUTS	FILL
58	0
65	0
63	0
37	0
43	1
53	0
20	1

HANSEN BLVD.  
(0+00 TO 3+00)

HANSEN FRONTAGE ROAD  
STATION 00 TO 3+00  
SCALE 5' HORZ & VERT

State Proj. No. S.A.114-010-01 C.P. 76-15

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JOB NO. 9-7405

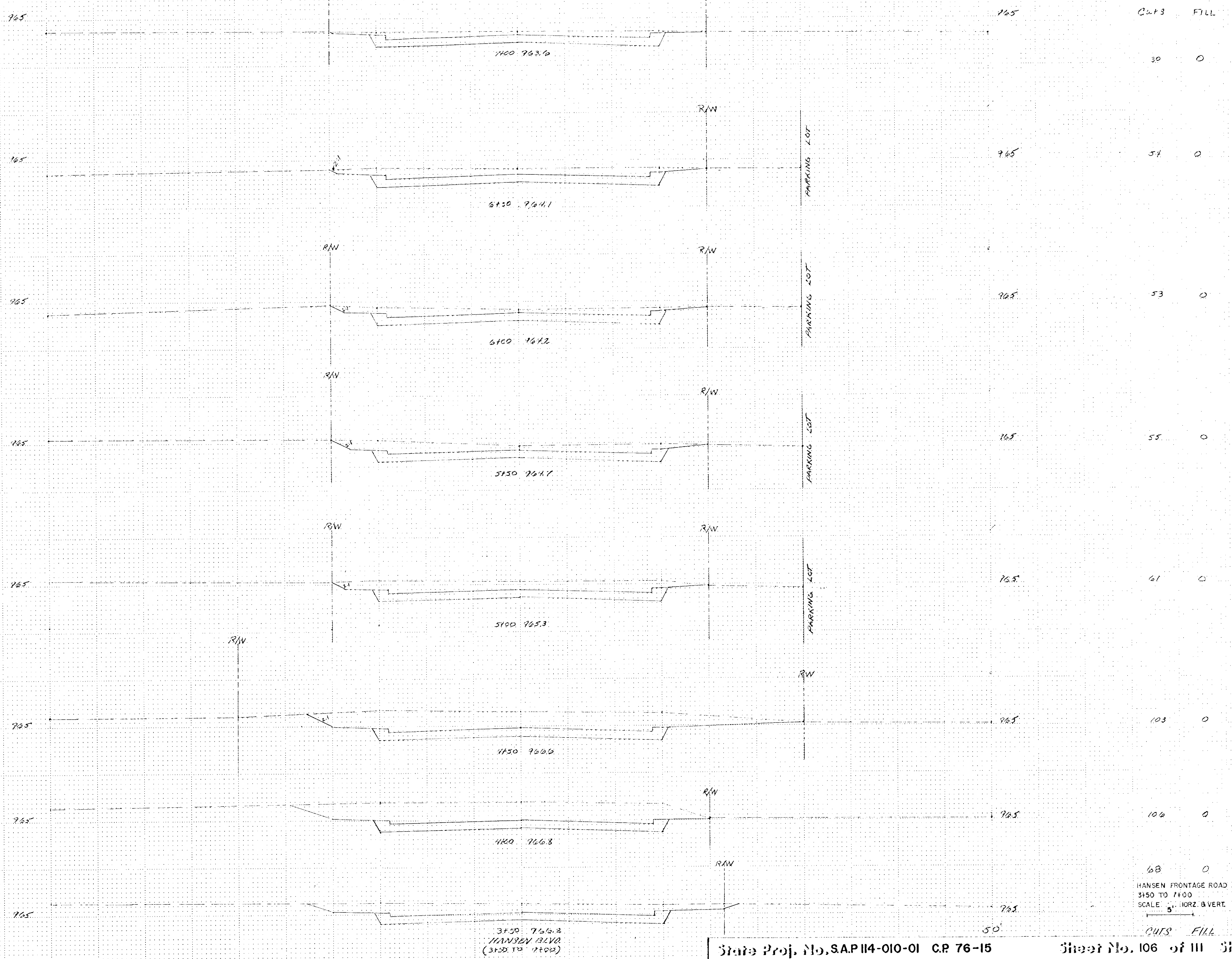
50'

50'

50'

50'

Fed. Proj. No.

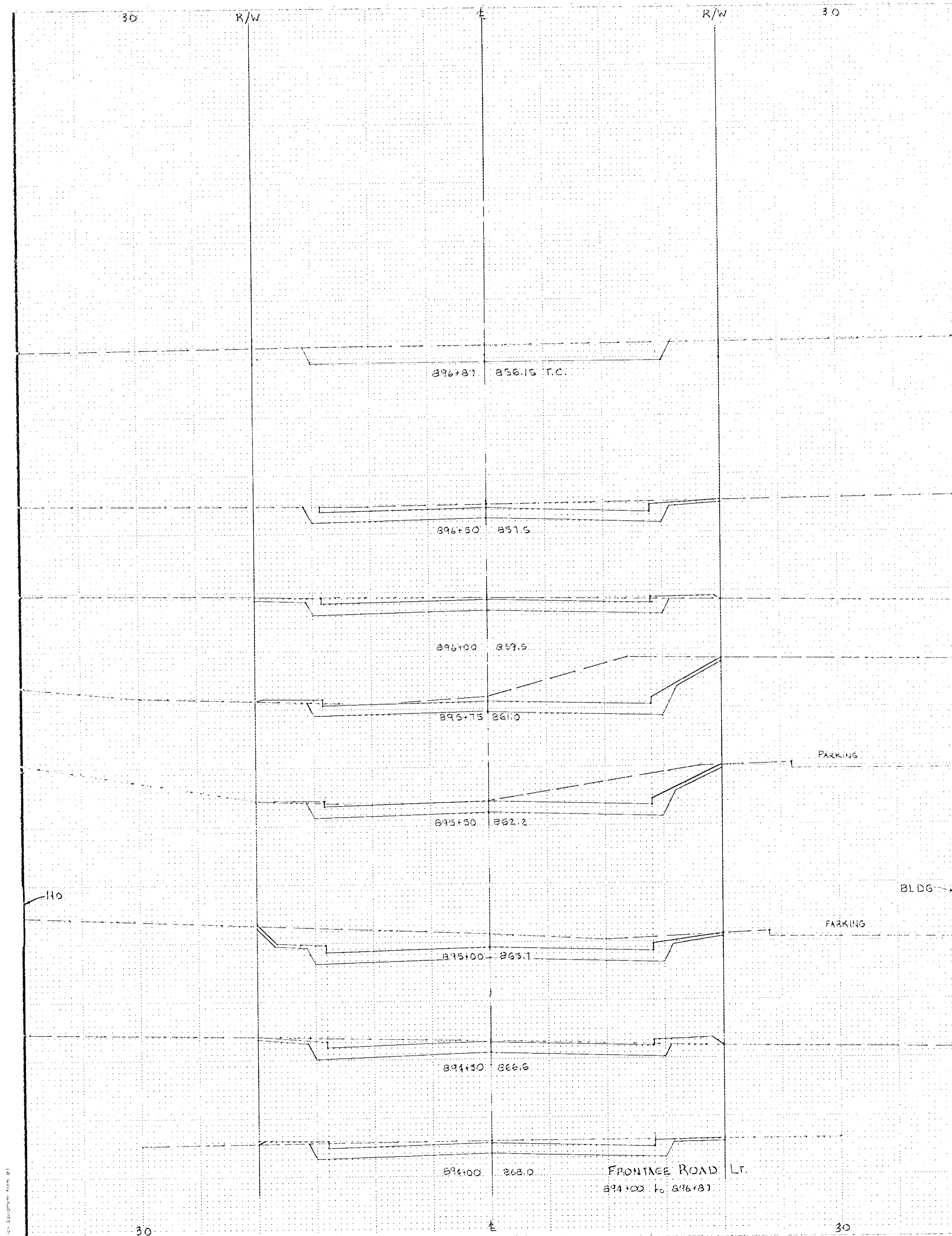


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JOB NO. 9-7405

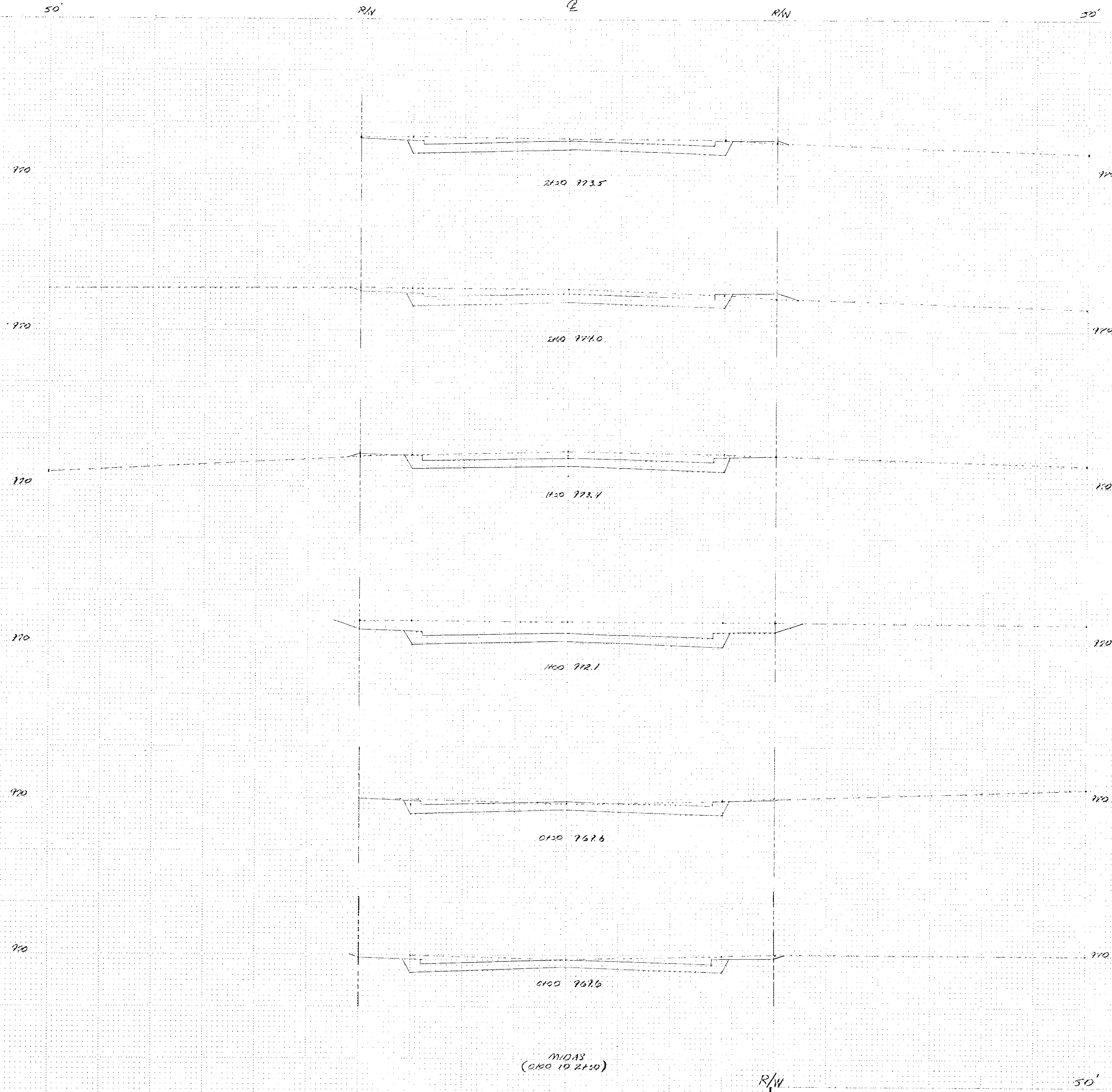
City Engineer's Sign



3	0
43	0
39	0
4	2
68	2
48	1
71	0
31	3
36	1
30	

XAVIS FRONTAGE ROAD  
 (FRONTAGE ROAD LEFT)  
 894+00 TO 896+87  
 SCALE 5' HORZ. & VERT.

Fed. Proj. No.



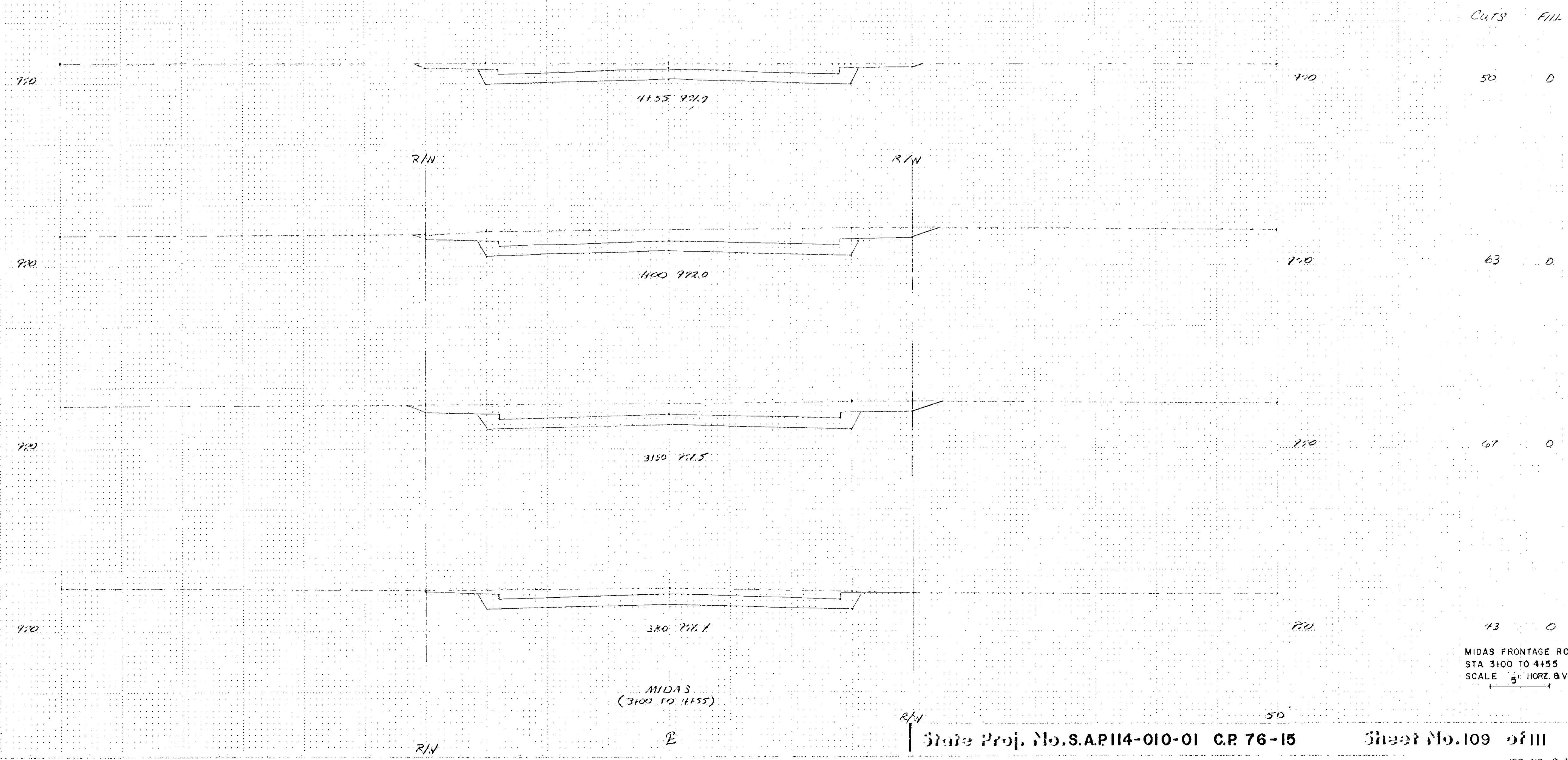
MIDAS  
(0100 TO 2150)

MIDAS FRONTAGE ROAD  
STA 0+00 TO 2+50  
SCALE 5' HORZ. & VERT

State Proj. No. SAP 114-010-01 C.P. 76-15

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JOB NO. 9-7405

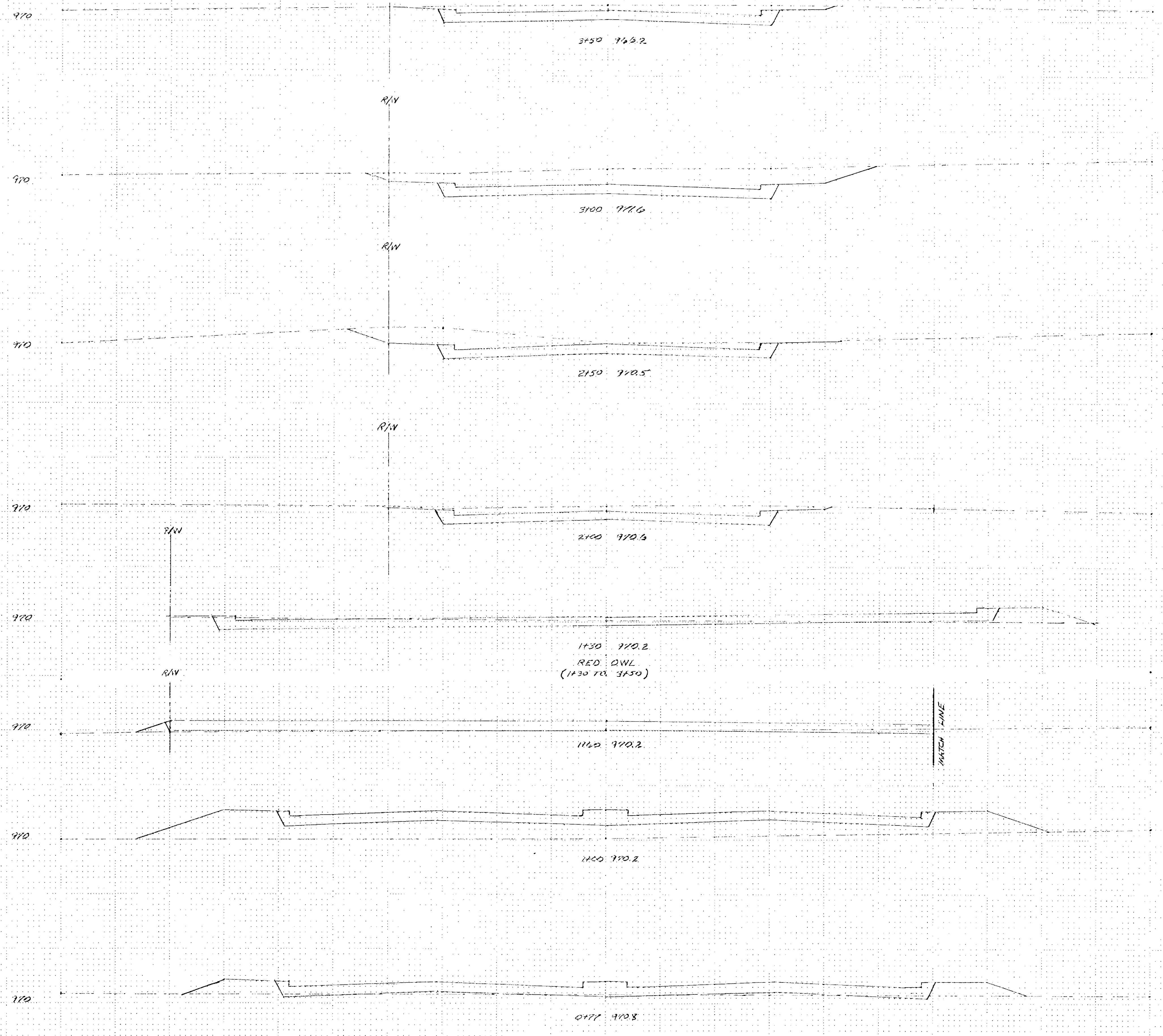


MIDAS  
(3+00 TO 4+55)

MIDAS FRONTAGE ROAD  
STA 3+00 TO 4+55  
SCALE 1/8" HORZ. 1/4" VERT.

Fed. Proj. No.

	CUT	FILL
970	48	0
970	77	0
970	54	0
970	43	0
970	33	10
970	6	1
970	0	119
970	3	17



1130 970.2  
RED DWL  
(1130 TO 3450)

MATCH LINE

11TH AVE. NR.  
(0477 TO 1160)

3 17  
11TH AVENUE NORTH  
STA 0470 TO 1160  
RED OWL FRONTAGE ROAD  
STA 1130 TO 3450  
SCALE 1" = 5' HORZ & VERT.

State Proj. No.

'10-01 C.P. 76-15

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JOB NO 9-7405

50'

50'

970

970

5+50 772.2

970

970

5+00 772.1

R/W

970

970

4+50 771.7

R/W

970

970

4+00 772.0

RED DWL  
(4+00 TO 5+50)

CUT FILL

58

40

47

RED OWL FRONTAGE ROAD  
4+00 TO 5+50  
SCALE 5' HORZ. & VERT.

CUT FILL

50'

50'

100' NAD 83