

STATE OF MINNESOTA  
 DEPARTMENT OF HIGHWAYS  
 STORM SEWER, CONCRETE CURB & GUTTER, BITUMINOUS SURFACING.  
 CONSTRUCTION PLAN FOR

County State Aid Highway No. 18

Between CSAH. I And A PT. 140' N. OF CSAH. 11

From A PT. 346.16' S.W. OF THE NE. COR. OF THE SE 1/4 OF THE SW. 1/4, SEC. 16, T. 31 N., R. 24 W. To A PT. 140.14' N. OF THE S. 1/4 COR. OF SECTION 9, T. 31 N., R. 24 W.

Give proper reference to Sections, Township and Range

GROSS LENGTH	4,278.540	FEET	0.81	MILES
BRIDGES LENGTH	0.0	FEET	0.0	MILES
EXCEPTIONS LENGTH	0.0	FEET	0.0	MILES
NET LENGTH	4,278.540	FEET	0.81	MILES

INDEX OF SHEETS

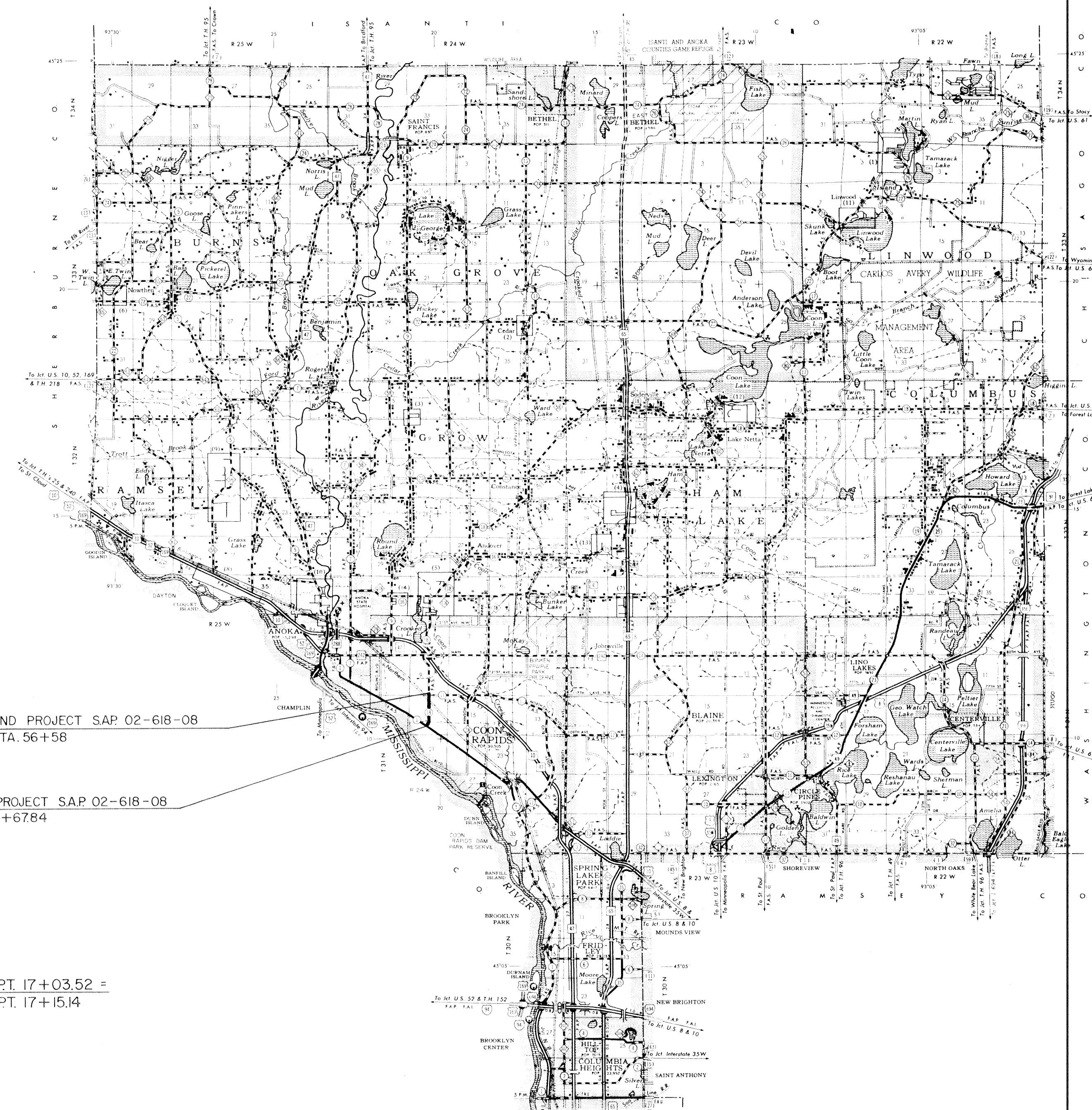
- Sheet No. 1 Title Sheet & Layout Map
- No. 2-3 EST. QUANT. & TYP. SEC.
- No. 4-7 PLAN & PROFILE
- No. 8-13 CROSS SECTIONS

SCALES

INDEX MAP	2 MI.
PLAN	100'
PROFILE	100' HORIZ. 10' VERT.
CROSS SECTIONS	10'

CONVENTIONAL SIGNS

STATE LINE	---
COUNTY LINE	---
TOWNSHIP OR RANGE LINE	---
SECTION LINE	---
QUARTER LINE	---
SIXTEENTH LINE	---
RIGHT OF WAY LINE	---
PRESENT RIGHT OF WAY LINE	---
CONTROL OF ACCESS LINE	---
PROPERTY LINE (Except Land Limb)	---
WALKED PLATTED PROPERTY	---
CORPORATE OR CITY LIMITS	---
TRUNK HIGHWAY CENTER LINE	---
RETAINING WALL	---
RAILROAD	---
RAILROAD RIGHT OF WAY LINE	---
RIVER OR CREEK	---
DRY RUN	---
DRAINAGE DITCH	---
ELECTRIC POWER LINE	---
TELEPHONE OR TELEGRAPH LINE	---
JOINT TELEPHONE AND POWER CONDUIT	---
TELEPHONE CABLE-AERIAL	---
TELEPHONE CABLE UNDERGROUND	---
POWER CABLE UNDERGROUND	---
GAS MAIN	---
CULVERT	---
DROP INLET	---
GUARD RAIL	---
BARBED WIRE FENCE	---
WOODEN WIRE FENCE	---
CHAIN LINK FENCE	---
RAILROAD SNOW FENCE	---
STONE WALL OR FENCE	---
HEDGE	---
WATER PIPE	---
SEWER PIPE	---
DRAIN TILE	---
SPRINGS	---
MARSH	---
TIMBER	---
ORCHARD	---
BLOSSOM	---
NURSERY	---
CATCH BASIN	---
MANHOLE	---
FIRE HYDRANT	---
STREET LIGHT	---
RAILROAD CROSSING SIGN	---
RAILROAD CROSSING BELL	---
ELECTRIC WARNING SIGN	---
CROSSING GATE	---
CATTLE GUARD	---
OVERPASS (Highway Over)	---
UNDERPASS (Highway Under)	---
BRIDGE	---
BUILDING (One Story Frame)	---
F. FRAME C. CONCRETE	---
S. STONE T. TILE	---
B. BRICK ST. STUCCO	---
IRON PIPE OR ROD	---
MONUMENT (STONE, CONCRETE, OR METAL)	---
WOODEN HUB	---
GRAVEL PIT	---
SAND PIT	---
BORROW PIT	---
ROCK QUARRY	---
MEANDER CORNER	---



END PROJECT S.A.P. 02-618-08  
 STA. 56+58

BEGIN PROJECT S.A.P. 02-618-08  
 STA. 13+67.84

E.Q.  $\frac{PT. 17+03.52}{PT. 17+15.14}$

DESIGN DESIGNATION

ADT (CURRENT YEAR) 7,700  
 ADT (FUTURE YEAR) 9,600 (20 YR.)  
 T (HEAVY COMMERCIAL) 300-600  
9 Ton Design A-3 Soil Factor 50%  
 Design Speed 30 MPH  
 Design Speed not achieved at:  
 STA. \_\_\_\_\_ TO STA. \_\_\_\_\_ MPH  
 STA. \_\_\_\_\_ TO STA. \_\_\_\_\_ MPH

SPECIFICATIONS

THE "STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION", DATED JAN. 1, 1972, AS AMENDED BY "SUPPLEMENTAL SPECIFICATIONS" DATED APRIL 1, 1976, SHALL GOVERN.

ALL APPLICABLE FEDERAL, STATE AND LOCAL LAWS AND ORDINANCES WILL BE COMPLIED WITH, IN THE CONSTRUCTION OF THIS PROJECT.

I HEREBY CERTIFY THAT THIS PLAN 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.

*Paul K. Kuntz* COUNTY ENGINEER DATE 6/16/77

ANOKA COUNTY REG. NO. 6549

RECOMMENDED FOR APPROVAL *E. J. Schell* 7-11-1977 DISTRICT STATE AID ENGINEER

RECOMMENDED FOR APPROVAL *Delbert D. Ostadahl* 7-13-1977

APPROVED 7/20 19 77 *William M. Grogan* STATE AID ENGINEER

Minn. Proj. No. \_\_\_\_\_ County Proj. No. \_\_\_\_\_  
 State Proj. No. \_\_\_\_\_ S.A.P. 02-618-08



STATEMENT OF ESTIMATED QUANTITIES

ITEM NO.	ITEM	UNIT	TOTAL ESTIMATED QUANTITIES	TOTAL FINAL QUANTITIES
2031.501	FIELD OFFICE TYPE B	EACH	1	
2101.501	CLEARING	ACRE	.10	
2101.502	CLEARING	TREE	7	
2101.506	GRUBBING	ACRE	.10	
2101.507	GRUBBING	TREE	8	
2104.501	REMOVE CURB & GUTTER	LIN. FT.	126	
2104.501	REMOVE PIPE SEWERS	LIN. FT.	28	
2104.505	REMOVE BITUMINOUS PAVEMENT	SQ. YD.	998	
2104.505	REMOVE CONCRETE PAVEMENT	SQ. YD.	51	
2104.509	REMOVE MANHOLES & CATCH BASINS	EACH	5	
2104.523	SALVAGE PULL BOX	EACH	1	
2105.501	COMMON EXCAVATION (P)	CU. YD.	2,450	
2130.501	WATER	M-GAL.	50	
2211.501	AGGREGATE BASE, CLASS 5	TON	255	
2331.504	BITUMINOUS MATERIAL FOR MIXTURE	TON	238	
2331.510	BINDER COURSE MIXTURE	TON	2,075	
2331.512	LEVELING COURSE MIXTURE	TON	1,925	
2331.514	BASE COURSE MIXTURE	TON	1,160	
2331.516	BITUMINOUS MIXTURE FOR DRIVEWAYS	TON	85	
2341.504	BITUMINOUS MATERIAL FOR MIXTURE	TON	135	
2341.506	WEARING COURSE MIXTURE	TON	2,075	
2357.502	BITUMINOUS MATERIAL FOR TACK COAT	GAL.	3,750	
2503.511	12" R.C. PIPE SEWER CL-2	LIN. FT.	284	
2503.511	12" R.C. PIPE SEWER CL-3	LIN. FT.	76	
2503.511	15" R.C. PIPE SEWER CL-2	LIN. FT.	16	
2503.511	4" C.I. PIPE SEWER EXTRA HEAVY	LIN. FT.	245	
2503.573	SANITARY SEWER SERVICE CONNECTION	EACH	4	
0504.610	1" COPPER WATER PIPE	LIN. FT.	128	
0504.610	2" COPPER WATER PIPE	LIN. FT.	136	
0504.631	1" WATER SERVICE CONNECTION	EACH	4	
0504.631	2" WATER SERVICE CONNECTION	EACH	3	
0504.677	ADJUST CURB STOP BOXES	EACH	6	
0504.601	F. & I. 6" WATERMAIN	LIN. FT.	20	
0504.674	MOVE HYDRANT	HYDRANT	3	
0504.685	ADJUST WATER GATE HOUSING	HOUSING	6	
2506.507	CONSTRUCT CATCH BASINS DES. C OR G	LIN. FT.	51.1	
2506.511	RECONSTRUCT MANHOLES	LIN. FT.	11.1	
2506.516	CASTING ASSEMBLIES	EACH	11	
2506.521	INSTALL CASTINGS	EACH	7	
2506.522	ADJUST FRAME & RING CASTINGS	EACH	24	
2521.501	4" CONCRETE WALK	SQ. FT.	14,753	
2521.501	6" CONCRETE WALK	SQ. FT.	2,760	
2521.501	8" CONCRETE WALK	SQ. FT.	700	
2531.501	CONCRETE CURB & GUTTER, DESIGN B-618	LIN. FT.	8,430	
2531.507	6" CONCRETE DRIVEWAY PAVEMENT	SQ. YD.	3805	
2531.507	7" CONCRETE DRIVEWAY PAVEMENT	SQ. YD.	30	
2531.507	8" CONCRETE DRIVEWAY PAVEMENT	SQ. YD.	450	
2545.521	3" RIGID STEEL CONDUIT	LIN. FT.	179	
2545.553	PULL BOXES	EACH	6	
2575.505	SODDING	SQ. YD.	8,995	
2575.531	COMMERCIAL FERTILIZER, ANALYSIS 10-10-10	TON	0.4	
2575.551	TOPSOIL BORROW	CU. YD. (VM)	550	
①	FOR REMOVAL OF BITUMINOUS DRIVEWAYS			
②	FOR REMOVAL OF CONCRETE DRIVEWAYS AND SIDEWALK			
③	FOR DUST CONTROL			
④	BASE FOR DRIVEWAYS			
⑤	INCLUDES 135 TON FOR STREET APPROACHES			
⑥	FOR PAVING DRIVEWAYS TO SIDEWALK OR PROPERTY LINE			
⑦	FOR CONSTRUCTION OF CONCRETE CROSS GUTTERS			
⑧	NON-PARTICIPATING			

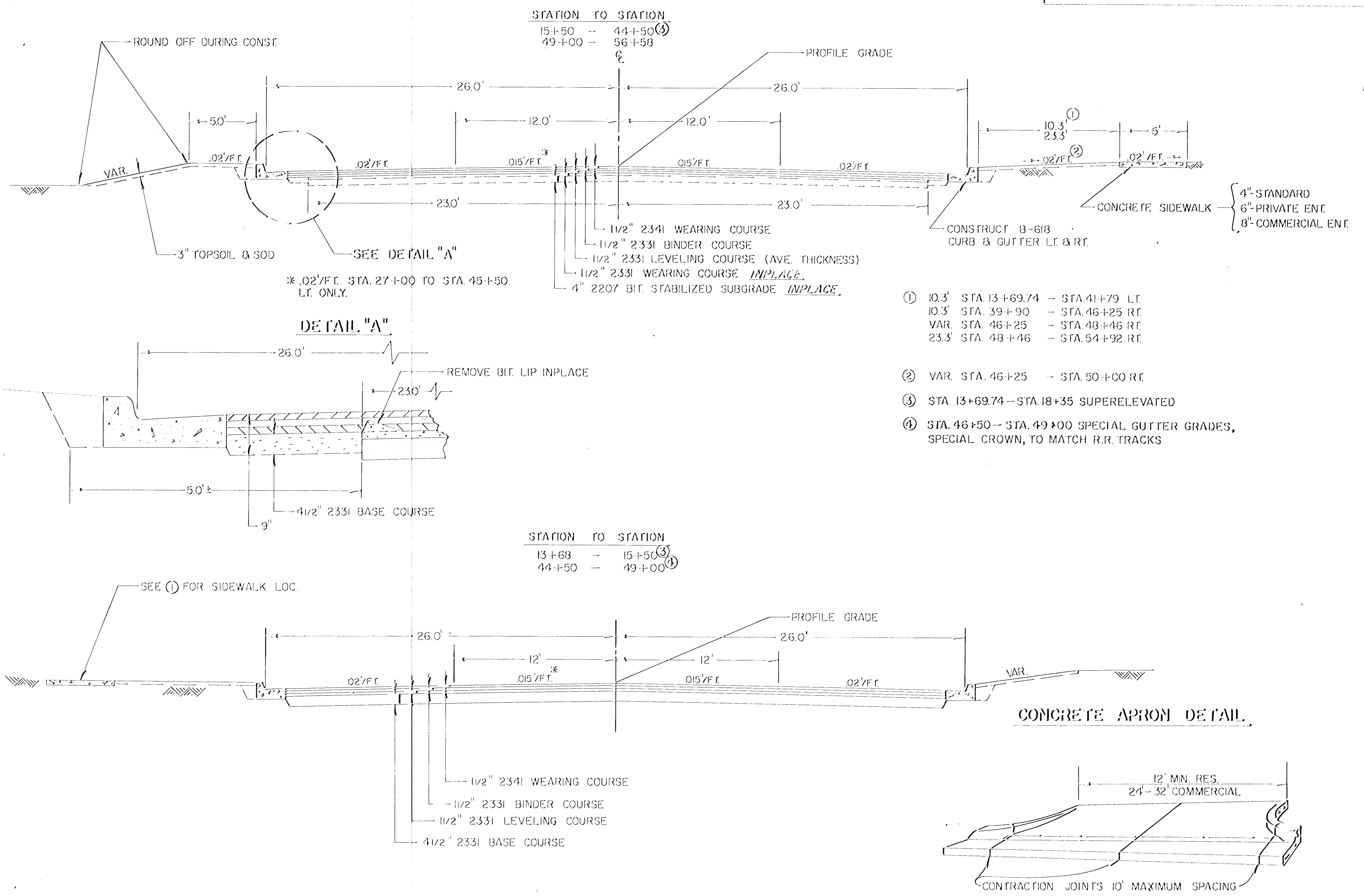
BASIS OF PLANNED QUANTITIES

2331 PLANT MIXED BITUMINOUS BASE, BINDER & LEVELING COURSES. BITUMINOUS MIXTURE 110 LBS. SQ. YD. PER INCH THICKNESS. BITUMINOUS MATERIAL FOR MIXTURE 4.5% BY WEIGHT

2341 PLANT MIXED BITUMINOUS WEARING COURSE. BITUMINOUS MIXTURE 110 LBS. SQ. YD. FOR INCH THICKNESS. BITUMINOUS MATERIAL FOR MIXTURE 6.5% BY WEIGHT

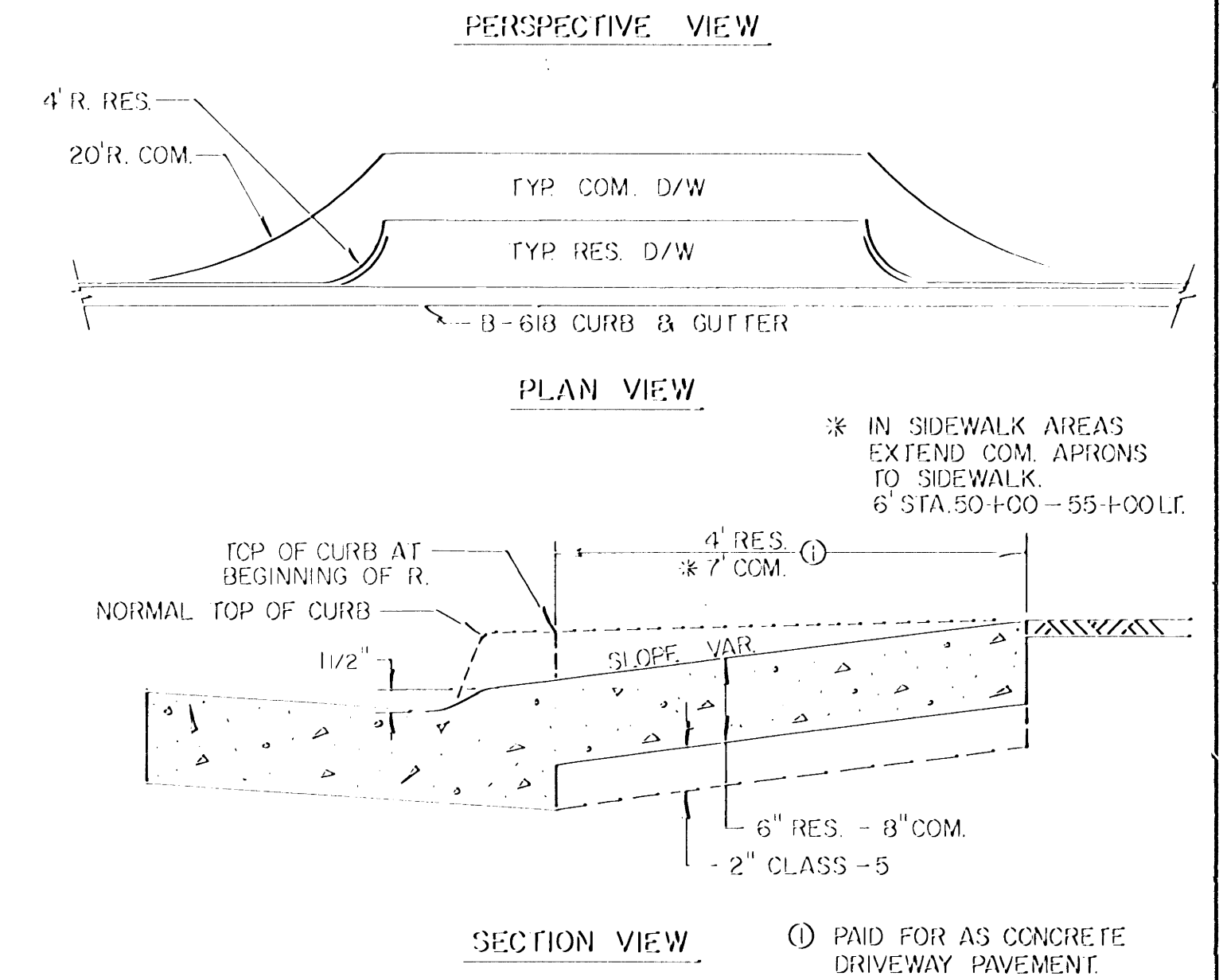
2357 BITUMINOUS MATERIAL FOR TACK COAT 0.05 GAL. PER SQ. YD.

TYPICAL SECTIONS



The following Standard Plates, approved by the Federal Highway Administration, shall apply on this project.

PLATE NO.	DESCRIPTION
0002 A	SPECIFICATIONS REFERENCE TO STANDARD PLATES
3000 G	REINFORCED CONCRETE PIPE
4002 D	MANHOLE OR CATCH BASIN DESIGN C
4006 H	MANHOLE OR CATCH BASIN DESIGN G OR H
4011 C	PRECAST CONCRETE BASE
4108 D	MANHOLE ADJUSTING RINGS
4126 D	CATCH BASINS FRAME CASTING
4149 C	GRATE CASTING FOR CATCH BASIN
4161 E	CURB BOX CASTING FOR CATCH BASIN
4180 F	MANHOLE STEP CASTING
7100 D	CONCRETE CURB AND GUTTER (DESIGN B)
7110 E	CURB AND GUTTER CONSTRUCTION AT CATCH BASIN
7111 E	INSTALLATION OF CATCH BASIN CASTINGS
8000 F	STANDARD BARRICADES
8117 E	PRECAST CONCRETE HANDHOLE (OR PULL BOX)



STA.	REMARKS	TYPE	ENT. WIDTH	REMOVAL BIT CONC	CONC. APRON 6"	8"	BIT. RE-PLMT. NEW	CONCRETE RE-PLMT. NEW		
13+60 LT.	TO BE CONSTRUCTED IN PROJ. 02-601-22	COM.								
13+95 RT.	MATCH APRON TO BIT. SURFACE INPLACE	COM.	32'	78		18.2	21			
14+45 RT.	MATCH APRON TO BIT. SURFACE INPLACE	COM.	25'	24		40.2	37			
15+18 LT.	NEW ENTRANCE	COM.	25'			40.2				
16+20 RT.	REMOVE BIT. TO 40' FROM C/L	RES.	14'	26	7.0		16			
18+07 LT.	NEW ENTRANCE	COM.	25'			40.2				
19+12 RT.	REMOVE BIT. TO 35'	RES.	20'	27	9.6		9			
20+23 LT.	RADIUS CURB & PAVE W/STREET PAVING	COM.	60'							
21+05 RT.	REMOVE BIT. TO 41'	RES.	8'	16	6.1		9			
21+37 RT.	REMOVE BIT. TO 40'	RES.	12'	23	6.1		12			
24+01 LT.	RADIUS CURB & PAVE W/STREET PAVING	COM.	30'							
25+27 RT.	REMOVE BIT. TO 41'	RES.	25'	48	12.9		28			
26+07 RT.	REMOVE BIT. & CONC. TO 43', PAVE W/CONC.	RES.	8'	16	2	6.1		2 9		
26+20 LT.	REMOVE BIT. TO 43', MATCH APRON TO ENT. GRADE	COM.	24'	49		39	16			
26+99 LT.	NEW ENTRANCE	COM.	25'			40.2				
27+04 RT.	REMOVE BIT. & CONC. TO 53', PAVE W/CONC.	RES.	8'	16	11	6.1		11 9		
27+83 LT.	NEW ENTRANCE	COM.	25'			40.2				
27+93 RT.	REMOVE BIT. TO 40', PAVE W/CONC.	RES.	8'	15		6.1		8		
30+05 RT.	GRAVEL ENT. INP., PAVE W/BIT. TO PROP. LINE	RES.	12'			6.1		25		
30+69 RT.	GRAVEL ENT. INP., PAVE W/CONC TO PROP. LINE	RES.	16'			8.0				
31+51 RT.	REMOVE BIT. & CONC. TO 50'	RES.	12'	20	16	6.1		16 34		
31+55 LT.	NEW ENT., VERIFY LOCATION W/OWNER	RES.	16'			8.0				
31+97 LT.	REMOVE BIT. TO 55', SET APRON .15' SLOPE TO GUTTER	RES.	16'	57		8.0	34			
32+36 RT.	REMOVE BIT. TO 33'	RES.	12'	13		6.1	3			
33+22 RT.	REMOVE BIT. TO 50'	RES.	10'	30		6.1	21			
33+26 LT.	REMOVE BIT. TO 55', SET APRON .15' SLOPE TO GUTTER	RES.	16'	57		8.0	34			
33+79 LT.	REMOVE BIT. TO 50', SET APRON .15' SLOPE TO GUTTER	RES.	16'	48		8.0	25			
33+96 RT.	REMOVE BIT. TO 50'	RES.	12'	36		6.1	25			
34+01 RT.	GRAVEL ENT. INP., PAVE TO PROP. LINE	RES.	10'			6.1		21		
34+02 LT.	REMOVE BIT. TO 45'	RES.	16'	39		8.0	16			
35+76 RT.	REMOVE BIT. TO 35', CONC. TO 5'	RES.	10'	13	18	6.1	4	18		
36+62 RT.	REMOVE BIT. TO 50'	RES.	12'	36		6.1	25			
37+34 RT.	PAVE W/BIT. TO PROP. LINE	RES.	12'			6.1		25		
38+30 RT.	PAVE W/BIT. TO PROP. LINE	RES.	12'			6.1		25		
39+81 LT.	RADIUS CURB & PAVE W/STREET PAVING	COM.	30'							
42+34 RT.	REMOVE BIT. TO 38', CONST. CONC. APRON TO MEET EXISTING CONC.	COM.	24'	40		25.9				
43+13 RT.	REMOVE BIT. TO 38', CONST. CONC. APRON TO MEET EXISTING CONC.	COM.	24'	40		25.9				
43+48 LT.	CONSTRUCT CONC. APRON ONLY	RES.	12'			6.1				
43+94 RT.	PAVE W/BIT. TO SIDEWALK	RES.	12'			6.1		8		
44+36 RT.	PAVE W/BIT. TO SIDEWALK	RES.	12'			6.1		8		
44+36 LT.	CONST. CONC. APRON ONLY	RES.	19'			9.2				
45+54 LT.	REMOVE BIT. TO 33'	RES.	12'	13		6.1	3			
46+37 LT.	REMOVE BIT. TO 40'	RES.	16.3'	31		8.1	17			
47+85 RT.	CONST. DROP CURB OPENING ONLY									
48+50 RT.	PLACE CL-5 GRAVEL FOR ENTRANCE	COM.	16'							
49+15 RT.	PAVE W/CONCRETE	RES.	8'			6.1		21		
49+93 RT.	REMOVE BIT. TO 56' TO 60'	RES.	8'	4		6.1	4	18		
49+93 RT.	REMOVE BIT. TO 60'	RES.	11'	45		6.1	29			
50+15 LT.	REMOVE BIT TO 34', CONST. CONC.									
50+73 RT.	APRON TO MEET EXISTING BIT. SURF. PAVE W/BIT TO SIDEWALK	COM.	25'	55		6.1	25	16		
51+07 LT.	REMOVE BIT. TO 34', CONST. CONC. APRON TO MEET EXISTING BIT. SURF.	COM.	12'			6.1		32		
51+57 RT.	PAVE W/BIT. TO SIDEWALK	RES.	25'			6.1		24		
52+42 RT.	REMOVE BIT. TO 60', PAVE TO SIDEWALK	RES.	12'	28		6.1	28	4		
52+64 LT.	NEW ENTRANCE	COM.	24'			23				
53+28 LT.	NEW ENTRANCE	COM.	24'			23				
53+77 RT.	PAVE W/BIT. TO SIDEWALK	RES.	12'			6.1		32		
53+92 LT.	NEW ENTRANCE	COM.	24'			23				
TOTAL S.Y.			998	47	252.5	459.0	157	222	47	81

NOTE: (O) MINIMUM APRON WIDTH 12'  
RES. = RESIDENTIAL  
COM. = COMMERCIAL  
6" CONC. DRIVEWAY PAVEMENT 380.5 S.Y.  
8" CONC. DRIVEWAY PAVEMENT 459.0 S.Y.  
BITUMINOUS PAVING ESTIMATED AT 250#/S.Y.  
679 S.Y. = 85 TON

STORM SEWER SYSTEM

NO.	STATION	LOCATION	REMARKS	TYPE	DESIGN	LIN. FT.	REMOVE SEWER PIPE	TOP	OUTLET	F&I CASTING ASSEMBLY	DRAINS TO	F&I R.C.P.P.E.
1	28+23	24.9' LT.		C.B.	C	3.3		869.39	865.89	A	M.H. 2	28'
2	28+46	40' LT.	INSTALL M.H. CASTING FROM 40	M.H.	INPL.				865.61	B	M.H. 4	8'
3	28+46	49' LT.		C.B.	C OR G	2.3		867.82	865.71			
4	28+83	40' LT.	ADJ. CASTING	M.H.	INP.				863.99			
5	28+93	49' LT.	INSTALL CASTING FROM #6	C.B.	C	3.2		867.87	864.50		M.H. 4	12'
6	28+93	40' LT.	REMOVE STRUCTURE	C.B.	INPL.		8'				M.H. 4	
7	28+34	24.9' RT.	INSTALL CASTING FROM #8	C.B.	C OR G	4.5		869.30	864.62		M.H. 9	16'
8	28+43	24' RT.	REMOVE STRUCTURE	C.B.	INPL.		4'				M.H. 9	
9	28+83	24' RT.	ADJ. CASTING	M.H.	INPL.				859.17		M.H. EAST	
10	32+23	24' RT.	ADJ. CASTING	C.B.	INPL.			869.71	859.95		M.H. 9	
11	32+23	22.2' LT.	REMOVE STRUCTURE	C.B.	INPL.		8'				C.B. 10	
12	32+23	24.9' LT.	INSTALL CASTING FROM #11	C.B.	C	2.9		869.62	866.50		C.B. 10	8'
13	35+53	23.8' RT.	ADJ. CASTING	C.B.	INPL.			870.80	860.59		C.B. 10	
14	35+53	24' LT.	ADJ. CASTING	C.B.	INPL.			870.80	860.64		C.B. 13	
15	38+86	23.9' RT.	ADJ. CASTING	C.B.	INPL.			871.90	861.27		C.B. 13	
16	38+86	22.1' LT.	REMOVE STRUCTURE	C.B.	INPL.		4'				C.B. 15	
17	38+86	24.9' LT.	INSTALL CASTING FROM #16	C.B.	C	3.1		871.81	868.50		C.B. 15	8'
17A	39+61	48' LT.		C.B.	C	2.8		871.55	868.89	B	C.B. 17	78'
18	41+96	24.9' RT.		C.B.	C OR G	3.8		872.45	868.50	A	M.H. 19	12'
19	42+08	23.5' RT.	ADJ. CASTING	M.H.	INPL.				861.80		C.B. 15	
20	42+08	40' LT.	ADJ. CASTING	C.B.	INPL.			871.85	861.98		M.H. 19	
21	41+79	49' LT.		C.B.	C OR G	4.6		871.80	867.00	A	C.B. 20	30'
22	54+69	24.9' RT.	CONNECT TO EXISTING 12" R.C.P.	C.B.	C	3.2		868.53	865.10	A	M.H. 25	8'
23	54+71	22' RT.	REMOVE STRUCTURE	C.B.	INPL.		4'				M.H. 25	
24	54+92	49' RT.		C.B.	C	2.6		867.84	865.40	B	C.B. 22	30'
25	54+85	20.9' LT.	ADJ. CASTING	M.H.	INPL.				863.20		M.H. 27	
26	54+68	24.9' LT.		C.B.	C OR G	4.3		868.53	864.00	A	M.H. 25	10'
27	55+33	27' LT.	SALVAGE C.B. CASTING, INSTALL M.H. CASTING FROM #13	M.H.	INPL.						C.B. 28	
28	55+42	49' RT.		C.B.	C	2.8		867.80	865.15	B	C.B. 27	76'
29	54+91	49' LT.		C.B.	C OR G	3.7		868.22	864.28	A	M.H. 25	28'
30	55+43	49' LT.		C.B.	C OR G	4.0		868.22	864.00	A	M.H. 27	24'
TOTALS =						51.1		28'		II		284' 16' 76'

NOTE: THE SALVAGE OF CASTING ASSEMBLIES SHALL BE INCIDENTAL TO SEWER CONSTRUCTION.

ADJUST FRAME & RING CASTINGS

NO.	ITEM	STATION	LOCATION
1	M.H.	14+55	12' RT.
2	M.H.	15+30	28' RT.
3	M.H.	17+85	21' RT.
4	M.H.	18+08	6'
5	M.H.	20+76	1' RT.
6	M.H.	28+71	2' RT.
7	M.H.	28+83	40' LT.
8	M.H.	28+83	24' RT.
9	C.B.	32+23	24' RT.
10	M.H.	32+59	6'
11	C.B.	35+53	24' RT.
12	C.B.	35+53	24' LT.
13	M.H.	38+53	1' RT.
14	C.B.	38+86	24' RT.
15	M.H.	40+14	1' RT.
16	M.H.	41+93	1' RT.
17	M.H.	42+08	23.5' RT.
18	C.B.	42+08	40' LT.
19	M.H.	45+94	1' RT.
20	M.H.	46+66	22' LT.
21	M.H.	46+73	33' LT.
22	M.H.	46+83	22' LT.
23	M.H.	54+85	20.9' LT.
24	M.H.	55+28	39' RT.

ADJUST CURB STOP BOXES

NO.	STATION	LOCATION
1	20+34	40' LT.
2	22+60	40' LT.
3	25+62	42' LT.
4	42+70	35' RT.
5	50+78	3' LT.
6	51+58	3' LT.

NOTE: THE ABOVE IS AN ESTIMATE ONLY. IT IS UNKNOWN THE EXACT BOXES WHICH WILL HAVE TO BE ADJUSTED WITHOUT DIGGING THEM UP.

CASTING ASSEMBLIES

FRAME	GRATE	CURB BOX
A 801	810	821 B
B	NEENAH R-3070 OR EQUAL	

ADJ. WATER GATE HOUSINGS

STATION	LOCATION
5 06	5' RT.
7 97	5' LT.
22 75	5' LT.
28 60	5' LT.
40 94	4' LT.
54 99	2' RT.

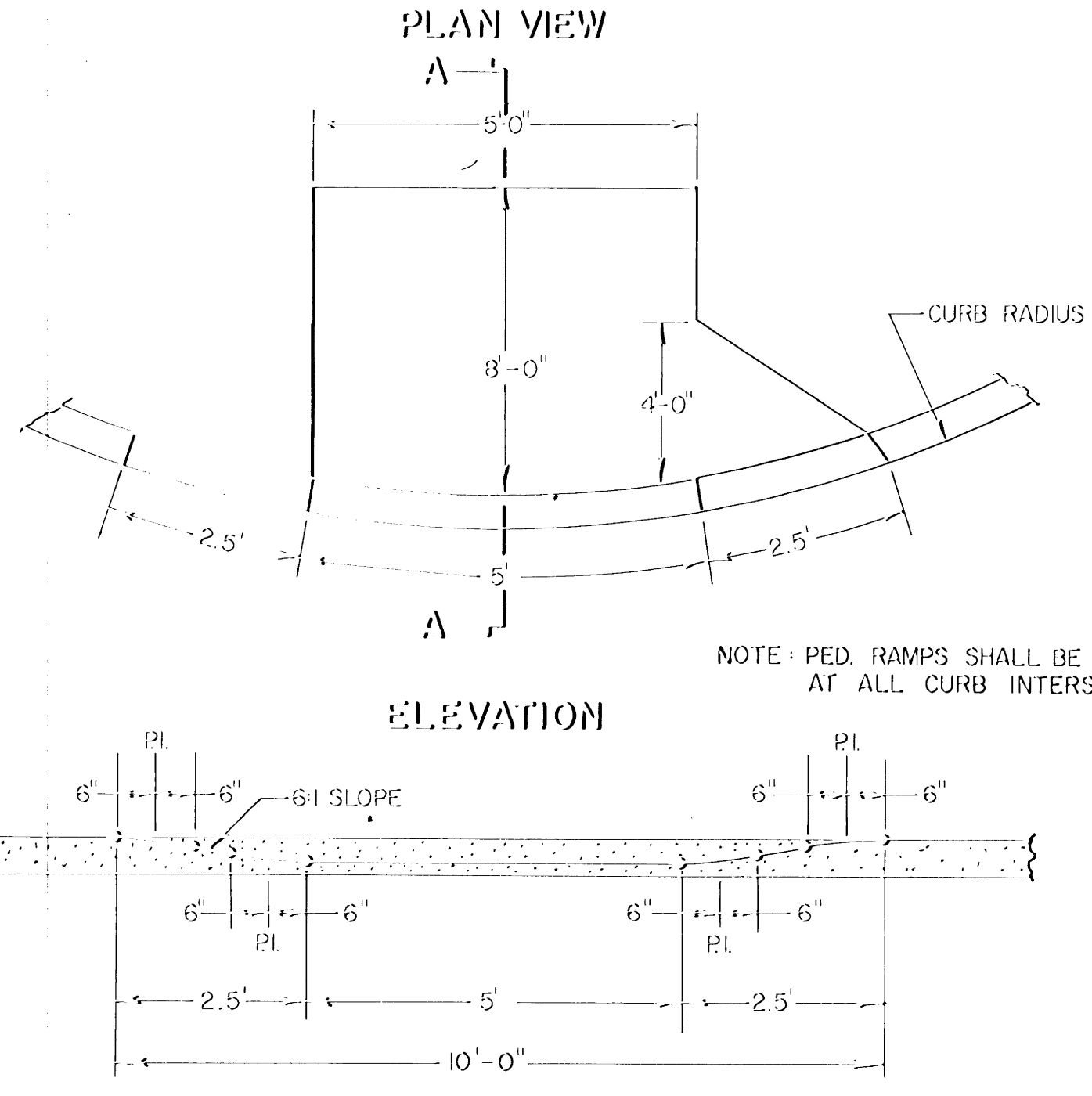
TOTAL = 6

RECONSTRUCT MANHOLES

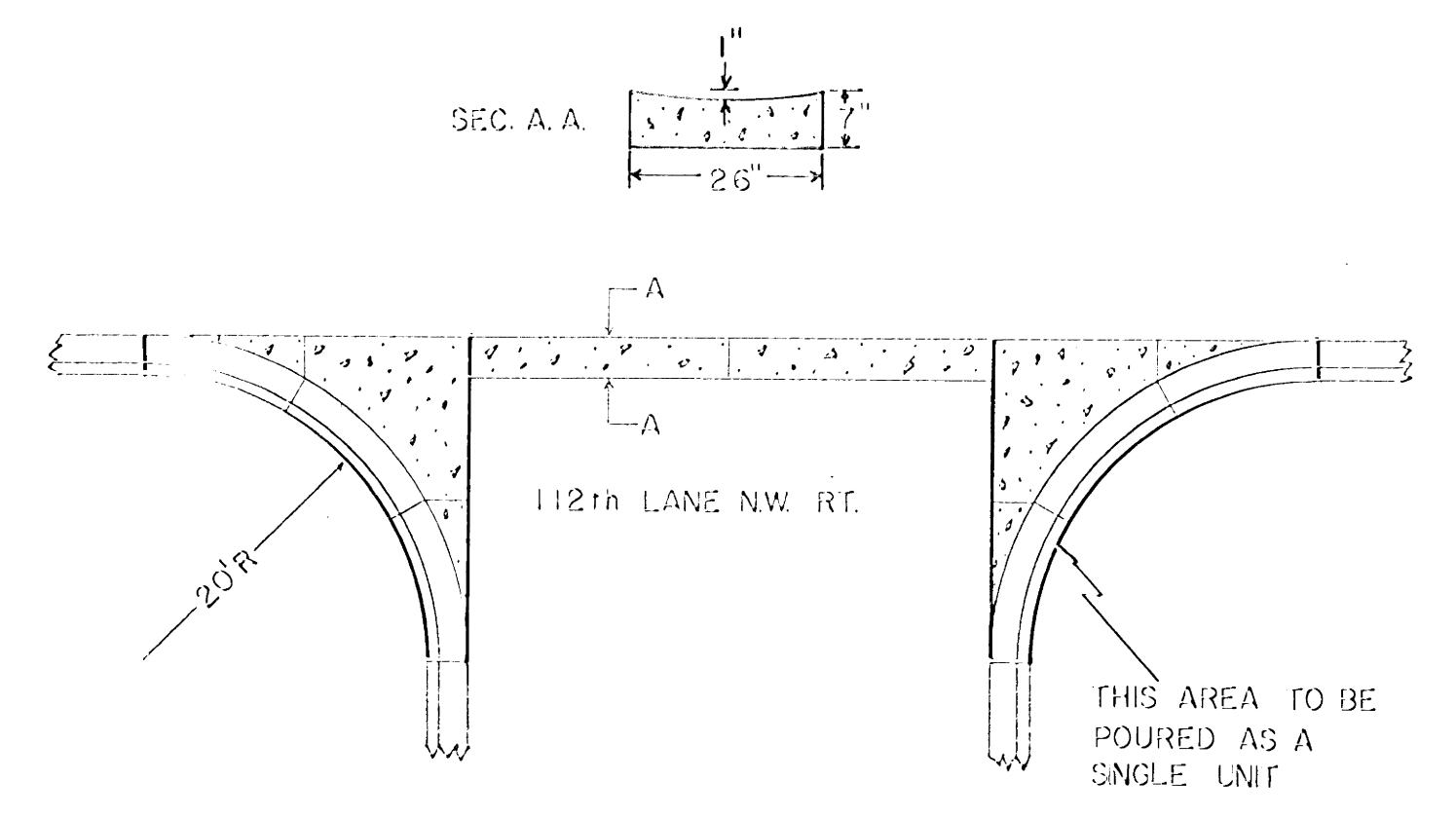
STATION	LOCATION	LIN. FT.	REMARKS
22+72	1' RT.	5.4	REMOVE CONE & F.&I.
25+74	1' RT.	5.7	16" PRECAST SECTION IN M.H. & INSTALL CASTINGS TO PLAN ELEV.

TOTAL = 11.1

PEDESTRIAN RAMP DETAIL



CONC. CROSS GUTTER DETAIL



ITEM NO. 2531807 7" CONC. DRIVEWAY PAVEMENT

CLEARING AND GRUBBING

STATION (TO STATION)	LOC.	CLEARING TREE ACRE	GRUBBING TREE ACRE
14+37	39' LT.	1	1
14+53	40' LT.	1	1
33+40 TO 35-73	30'-45' LT.	.05	.05
38+55	37'-42' LT.	3	3
39+17	42' LT.	1	1
43+69	38' RT.	1	1
44+21 TO 46+00	35'-45' RT.	.05	.05
48+94	53' RT.	1	1
TOTALS:		7 .10	8 .10



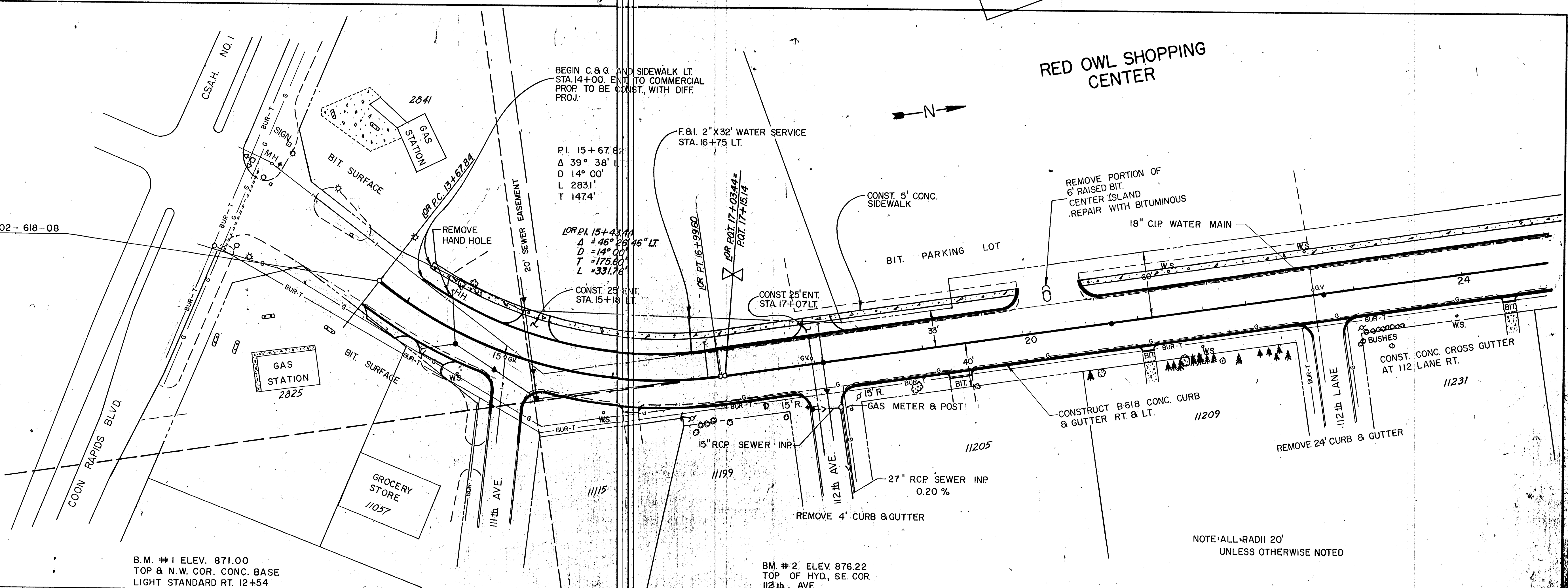
**PLAN**  
 SURVEYED \_\_\_\_\_  
 PLOTTED \_\_\_\_\_  
 NOTE BOOK \_\_\_\_\_  
 RT. OF WAY CHECKED \_\_\_\_\_  
 NO. \_\_\_\_\_

**PROFILE**  
 SURVEYED \_\_\_\_\_  
 PLOTTED \_\_\_\_\_  
 NOTE BOOK \_\_\_\_\_  
 GRADES CHECKED \_\_\_\_\_  
 E.M.T. NOTED \_\_\_\_\_  
 SIGNATURE/INITIALS CHKD \_\_\_\_\_

BEGIN PROJECT SAP 02-618-08  
 OR PC.13+6784

BEGIN C & G AND SIDEWALK LT.  
 STA. 14+00. END TO COMMERCIAL  
 PROP. TO BE CONST. WITH DIFF.  
 PROJ.

RED OWL SHOPPING  
 CENTER

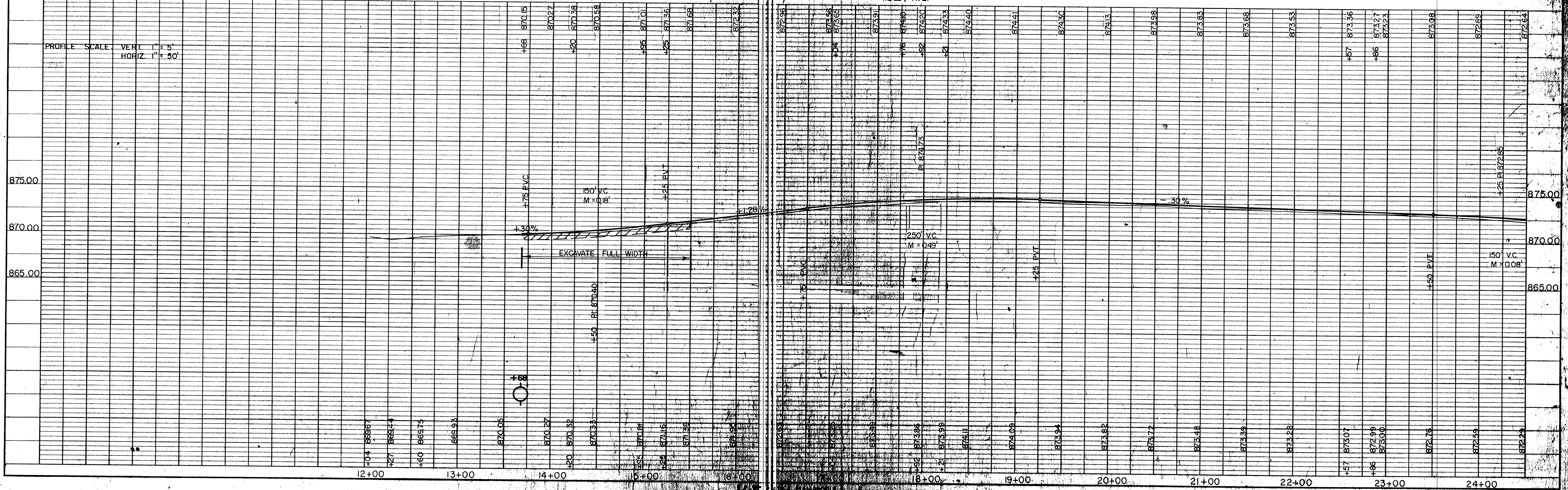


B.M. #1 ELEV. 871.00  
 TOP & N.W. COR. CONC. BASE  
 LIGHT STANDARD RT. 12+54

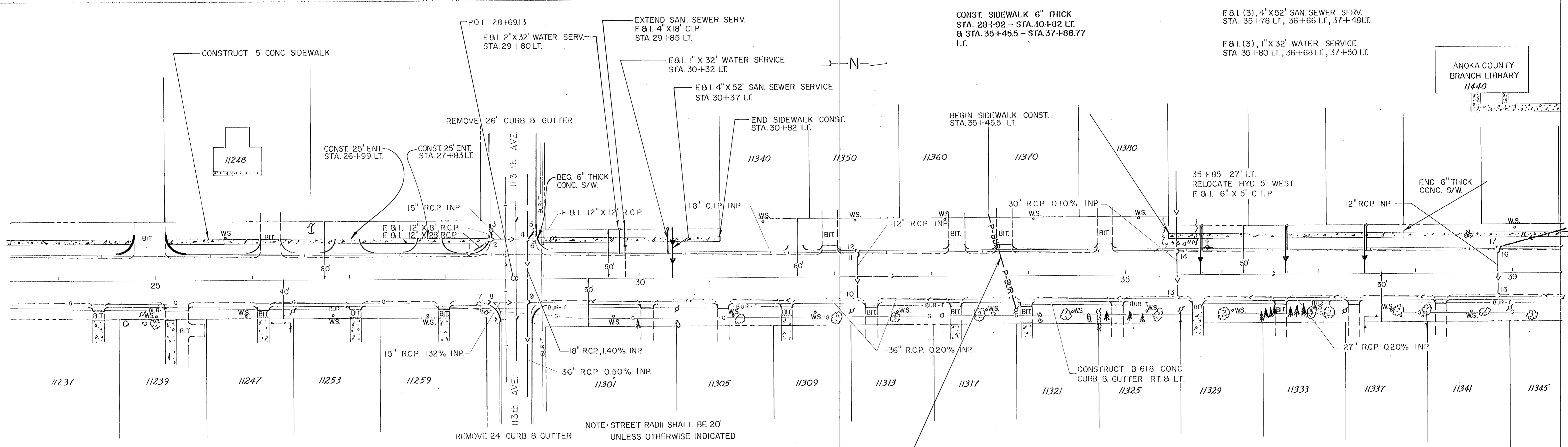
B.M. #2 ELEV. 876.22  
 TOP OF HYD. SE COR  
 112th AVE.

NOTE: ALL RADII 20'  
 UNLESS OTHERWISE NOTED

PROFILE SCALE VERT. 1" = 5'  
 HORIZ. 1" = 50'







NOTE: ALL R.C.P. SEWER LEADS ARE CLASS 2 WITH 1% GRADE UNLESS OTHERWISE INDICATED

--- STORM SEWER INPLACE  
 --- PROPOSED CONSTRUCTION

NOTE: STREET RADII SHALL BE 20' UNLESS OTHERWISE INDICATED

B.M. #4 ELEV. 873.75  
 TOP & N.W. COR. BOT.  
 STEP # 11313

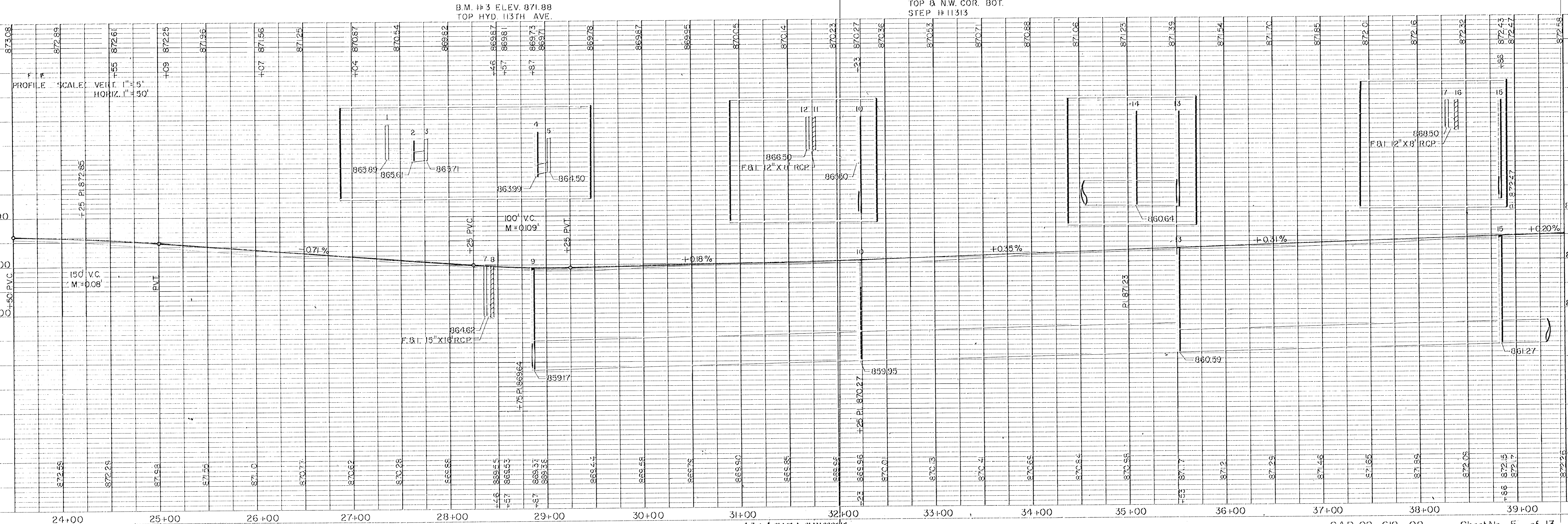


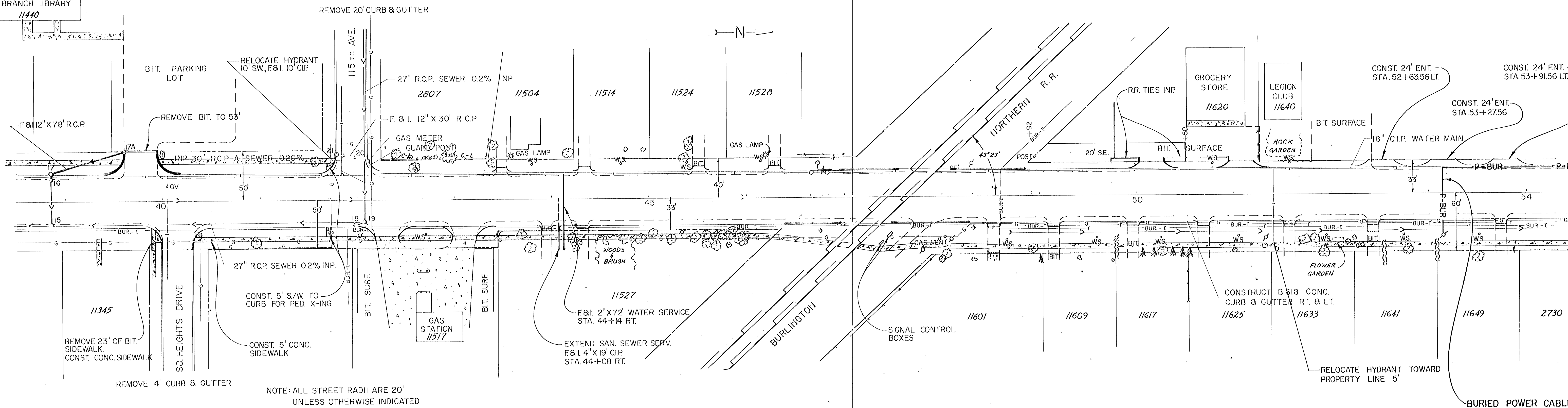
PLATE 1, PLAN-PROFILE  
 SHEET 5 OF 13

ANOKA COUNTY  
 BRANCH LIBRARY  
 11440



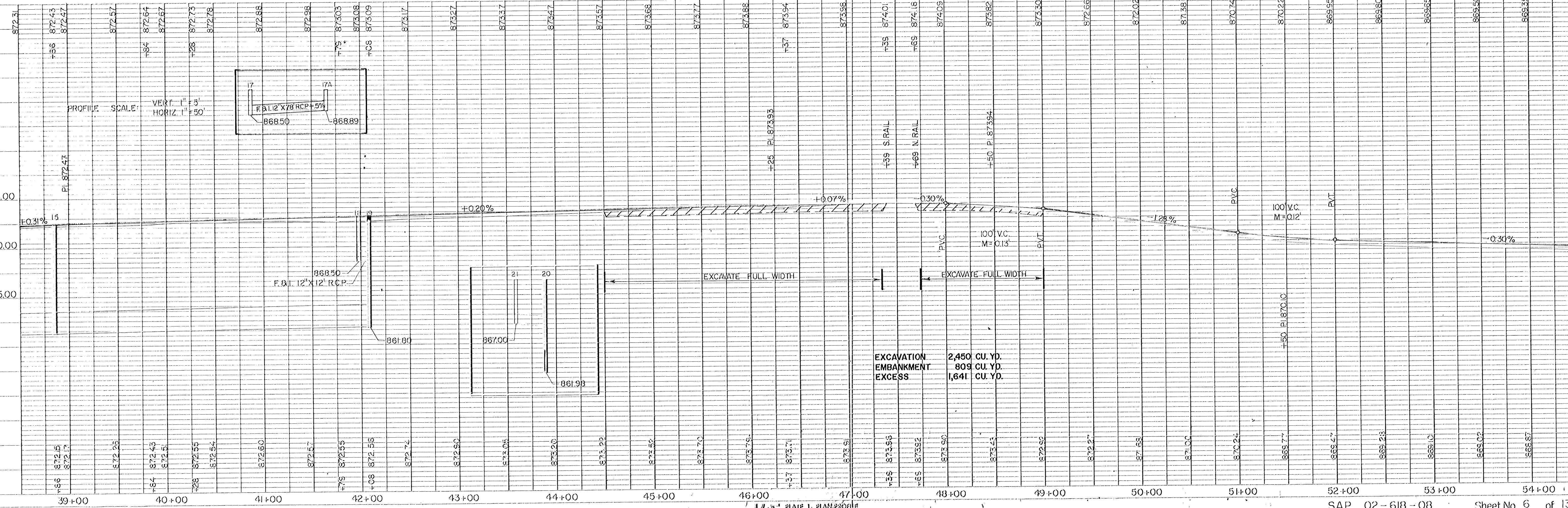
ANOKA COUNTY  
BRANCH LIBRARY  
11440

B.M. 5 ELEV. 875.19  
TOP & N.E. COR. BOT.  
STEP L.T. 43+75



NOTE: ALL STREET RADII ARE 20'  
UNLESS OTHERWISE INDICATED

B.M. #6 ELEV. 873.65  
TOP & N.W. COR. BOT. STEP # 11601



EXCAVATION  
EMBANKMENT  
EXCESS

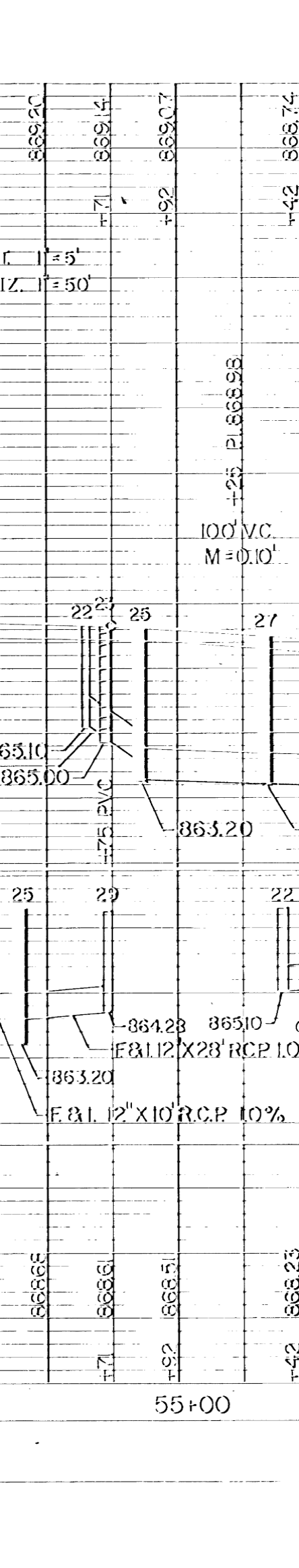
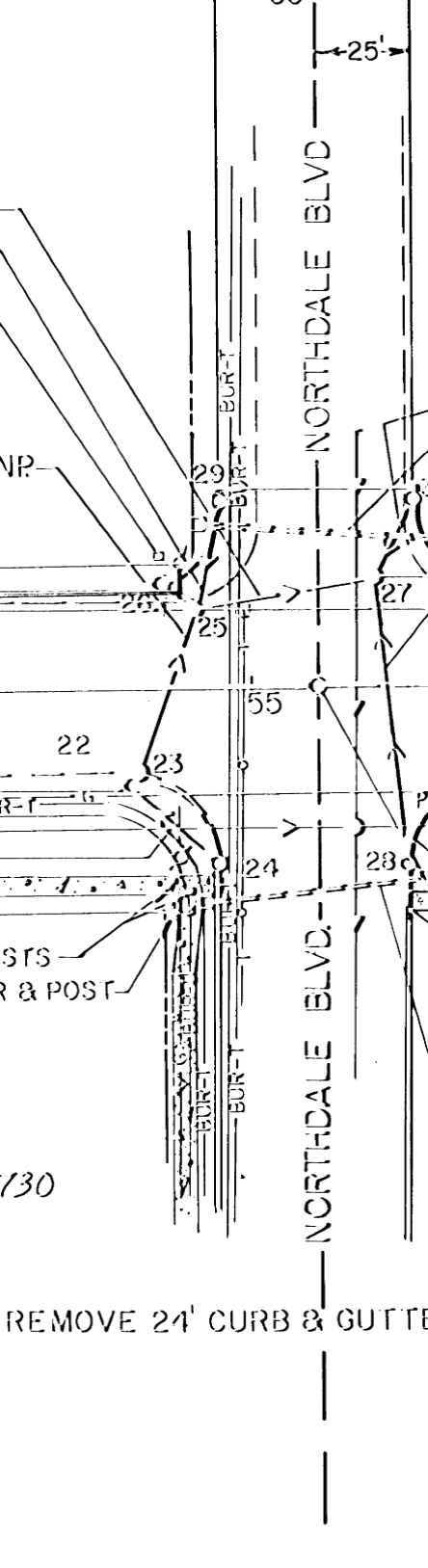
2,450 CU. YD.  
809 CU. YD.  
1,641 CU. YD.

PLATE 1, PLAN PROFILE

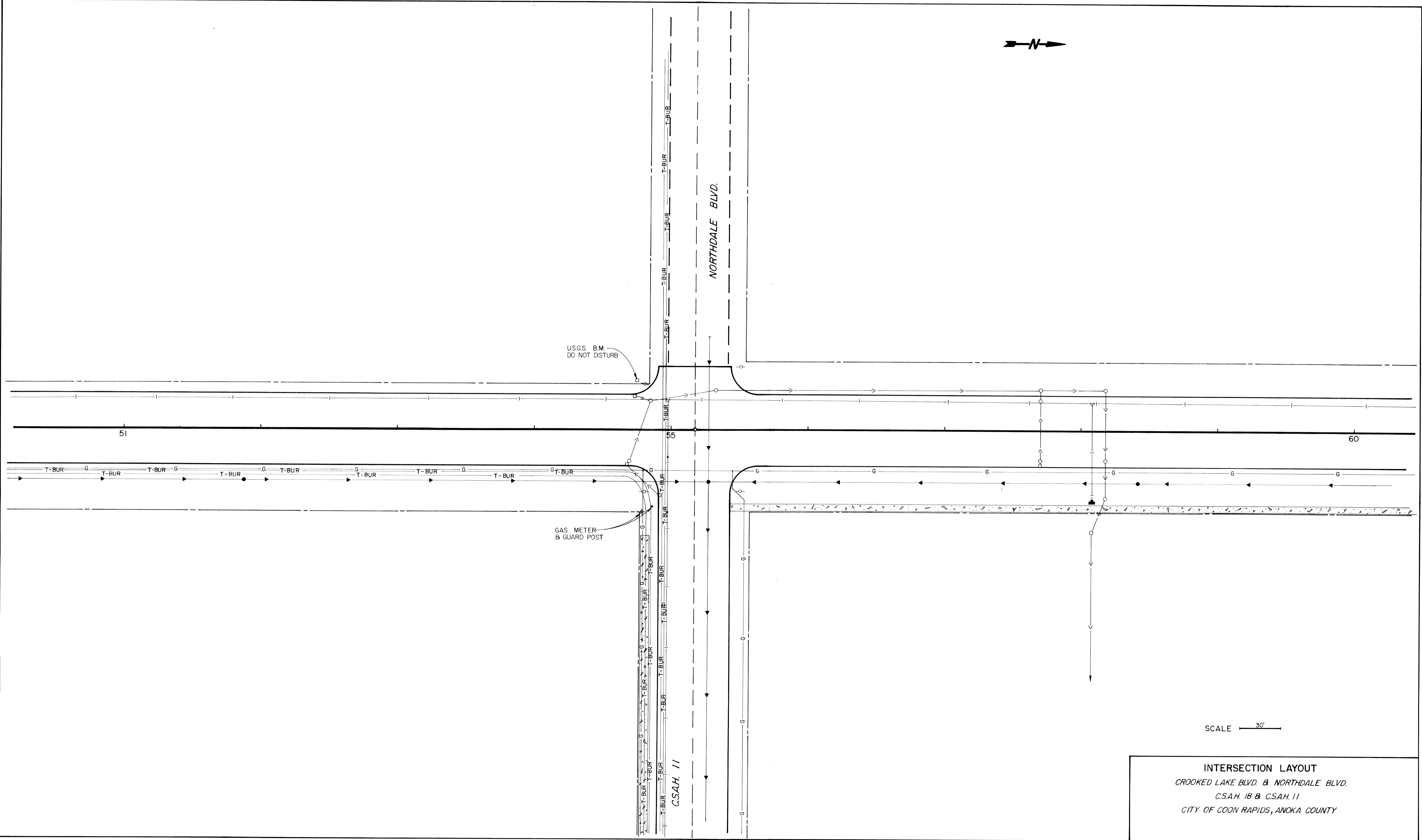
SAP 02-618-08 Sheet No. 6 of 13



B.M. 7 ELEV. 869.49  
 U.S. GEOLOGICAL SURVEY  
 S.W. QUAD. JCT. CSAH 18 & N







U.S.G.S. B.M.  
DO NOT DISTURB

GAS METER  
& GUARD POST

SCALE 30'

INTERSECTION LAYOUT  
CROOKED LAKE BLVD. & NORTHDAL E BLVD.  
C.S.A.H. 18 & C.S.A.H. 11  
CITY OF COON RAPIDS, ANOKA COUNTY