

STATE OF MINNESOTA
DEPARTMENT OF HIGHWAYS

CONSTRUCTION PLAN FOR ANOKA

County State Aid Highway No. 78

Between C.S.A.H. NO. 1 And TOUCHDOWN PT. TH. NO. 10

A PT. 350' NORTH OF CENTER SEC. 22 A PT. 315' N.E. OF THE S.E. COR. - N.E. 1/4

From T31N R24W To OF N.W. 1/2 - SEC. 10 - T31N - R24W

Give proper reference to Section, Township and Range

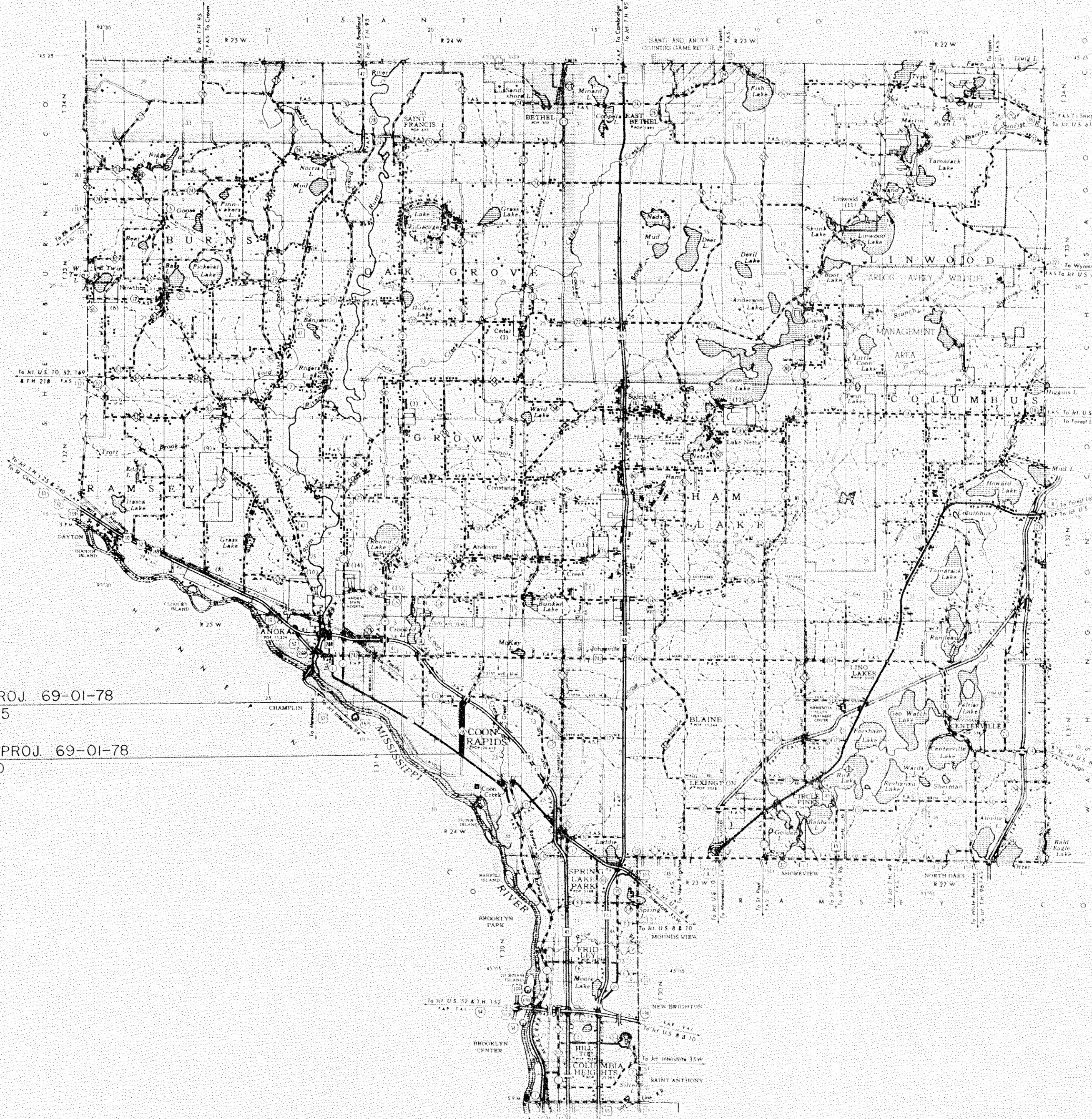
GROSS LENGTH 6875 FEET 1.23 MILES
BRIDGES LENGTH 0 FEET 0 MILES
EXCEPTIONS LENGTH 0 FEET 0 MILES
NET LENGTH 6875 FEET 1.23 MILES

INDEX OF SHEETS

- Sheet No. 1 Title Sheet & Layout Map
- No. 2 Est. Quantities & Typical Sec.
- No. 3 To Plan & Profile
- No. To Cross Sections

CONVENTIONAL SIGNS

- STATE LINE
- COUNTY LINE
- TOWNSHIP OR RANGE LINE
- SECTION LINE
- QUARTER LINE
- STATEMENT LINE
- RIGHT OF WAY LINE
- PRESENT RIGHT OF WAY LINE
- CONTROL OF ACCESS LINE
- PROPERTY LINE (Except Land Lines)
- VACATED 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
- LENDOUT
- TELEPHONE CABLE AERIAL
- TELEPHONE CABLE UNDERGROUND
- POWER CABLE UNDERGROUND
- GAS MAIN
- WELL
- DRAINAGE
- GUARD RAIL
- BARRIED WIRE FENCE
- WOODEN WIRE FENCE
- CHAIN LINK FENCE
- RAILROAD SNOW FENCE
- STONE WALL OR FENCE
- HERDGE
- WATER PIPE
- SEWER PIPE
- DRAIN TILE
- SPRINKLER
- MARSH
- TIMBER
- ORCHARD
- BRUSH
- NURSERY
- CATCH BASIN
- MANHOLE
- FIRE HYDRANT
- STREET LIGHT
- RAILROAD CROSSING SIGN
- RAILROAD CROSSING BELL
- ELECTRIC WARNING SIGN
- CROSSING GATE
- CATTLE GUARD
- DIVERPASS (Highway Over)
- UNDERPASS (Highway Under)
- BRIDGE
- BUILDING (One Story Frame)
- T FRAME
- CONCRETE
- STONE
- TILE
- BRICK
- STUCCO
- IRON PIPE OR ROD
- MONUMENT (STONE, CONCRETE, OR METAL)
- WOODEN HUB
- GRAVEL PIT
- SAND PIT
- BORROW PIT
- ROCK QUARRY
- MEASURE CORNER



END CO. PROJ. 69-01-78
STA. 84+75

BEGIN CO. PROJ. 69-01-78
STA. 16+00

DESIGN DESIGNATION

ADT (CURRENT YEAR) 2379

ADT (FUTURE YEAR) 3093

T (HEAVY COMMERCIAL)

9 Ton Design

Design Speed 45 MPH

Design Speed not achieved at:

STA. _____ TO STA. _____ MPH

STA. _____ TO STA. _____ MPH

--- SPECIFICATIONS ---

THE "STANDARD" SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, DATED JAN. 1, 1968, 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.

E. J. Lundheim
COUNTY ENGINEER DATE *May 23, 1969*

ANOKA COUNTY REG. NO. 2551

RECOMMENDED FOR APPROVAL _____ 19____
DISTRICT STATE AID ENGINEER

RECOMMENDED FOR APPROVAL _____ 19____

APPROVED _____ 19____
STATE AID ENGINEER

Minn. Proj. No. _____ County Proj. No. 69-01-78
State Proj. No. _____ S. A. P. _____

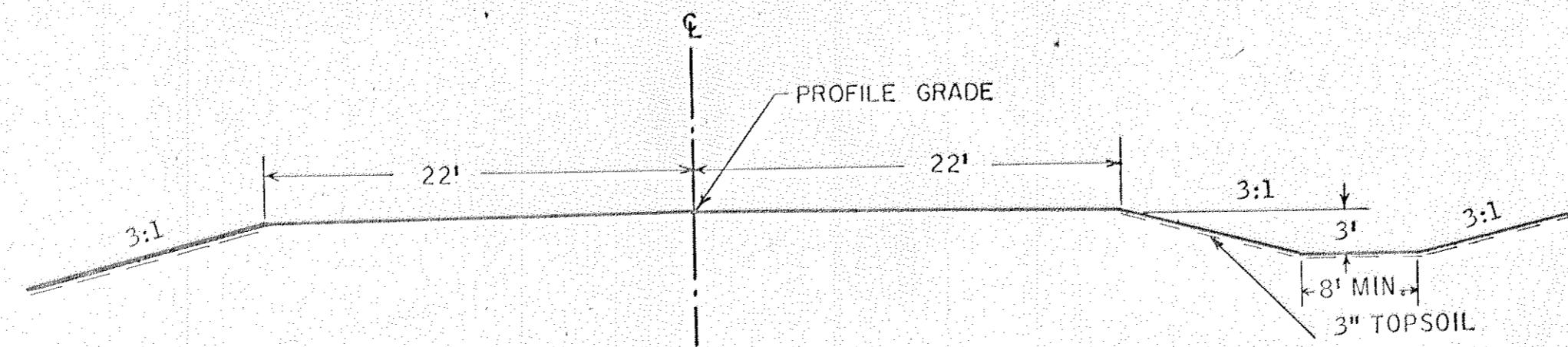
County, Minnesota. Plan No. _____ Sheet 1 of 10 Sheets

STATEMENT OF ESTIMATED QUANTITIES

ITEM NO.	ITEM	UNIT	TOTAL ESTIMATED QUANTITIES
2101.502	CLEARING	TREE	64
2101.507	GRUBBING	TREE	64
2104.503	REMOVE CURB & GUTTER	LIN.FT.	70
2104.501	REMOVE PORTABLE CULVERTS	LIN.FT.	40
2104.502	REMOVE PAVEMENT	SQ.YD.	6
2104.510	REMOVE FENCE	LIN.FT.	545
557.621	RESET FENCE	LIN.FT.	545
2105.501	COMMON EXCAVATION	CU.YD.	9,899
2105.525	TOPSOIL BORROW	CU.YD.(V.M.)	2,010
2105.531	SALVAGED BITUMINOUS MIXTURE	CU.YD.(V.M.)	3,000
2130.501	WATER	M - GAL.	85
2207.503	BIT. MATERIAL FOR MIXTURE	GAL.	98,510
2207.512	BIT. STAB. SUBGRADE (6" THICK)	SQ.YD.	31,775
2211.501	AGGREGATE BASE, CLASS 5	TON	225
2341.504	BIT. MATERIAL FOR MIXTURE	TON	263
2341.509	WEARING COURSE MIX. & FILLER	TON	2,630
2341.518	BIT. MIX FOR DRIVEWAY REPLMT	TON	30
2341.510	BINDER COURSE MIXTURE	TON	2,630
2357.502	BIT. MATERIAL FOR TACK COAT	GAL.	3,200
2501.523	24" CONCRETE CULVERT, CLASS 4	LIN.FT.	48
2501.536	24" CONCRETE APRONS	APRON	2
2503.502	12" REIN. CONCRETE SEWER, CLASS 4	LIN.FT.	376
2503.502	15" REIN. CONCRETE SEWER, CLASS 4	LIN.FT.	3,078
2503.502	18" REIN. CONCRETE SEWER, CLASS 4	LIN.FT.	61
2503.502	24" REIN. CONCRETE SEWER, CLASS 4	LIN.FT.	507
2503.502	27" REIN. CONCRETE SEWER, CLASS 4	LIN.FT.	43
2506.506	CONSTRUCT MANHOLES, DES. A or F	LIN.FT.	31,110
2506.507	CONST. CATCH BASINS, DES. A or F	LIN.FT.	86,440
2506.507	CONST. CATCH BASINS, DES. C or G	LIN.FT.	27,300
2506.516	CASTING ASSEMBLIES	ASSEMBLY	27
2506.522	ADJ. FRAME & RING CASTINGS	ASSEMBLY	27
504.685	ADJUST WATER HOUSING	HOUSING	11
2531.501	CON. CURB & GUTTER, DES. B-618	LIN.FT.	12,995
2531.507	8" CONCRETE DRIVEWAY PAVEMENT	SQ. YD.	6
2575.505	SODDING	SQ.YD.	20,102

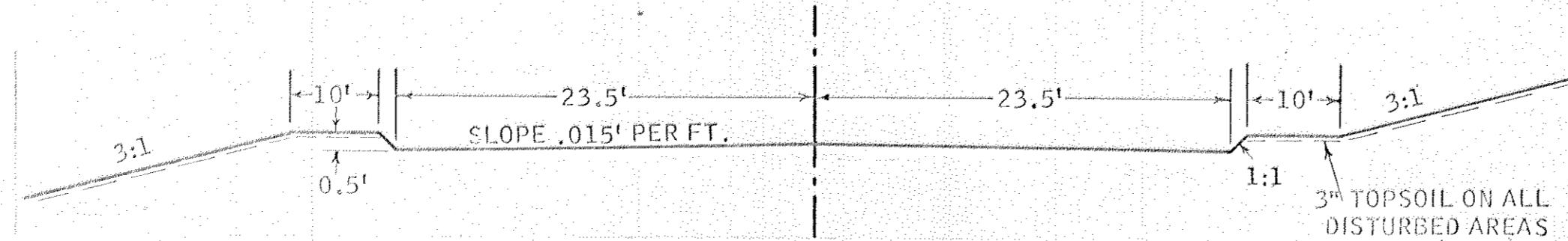
TYPICAL GRADING SECTIONS

STA. 81+50 TO STA. 84+75

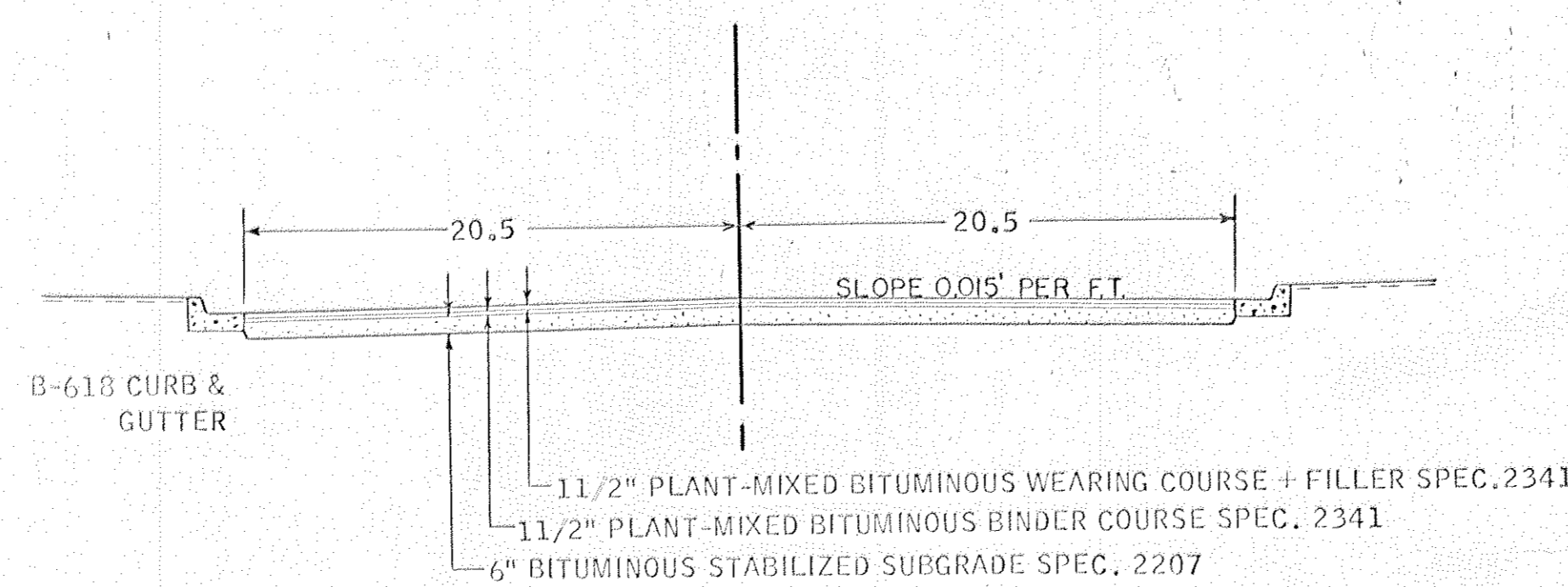


TYPICAL GRADING SECTION

STA. 16+00 TO STA. 81+50



TYPICAL BITUMINOUS SECTION



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

PLATE NO.	DESCRIPTION
3000 F	REINFORCED CONCRETE PIPE CLASS 4
3006 A	GASKET JOINT FOR R.C. PIPE
3100 E	CONCRETE APRON FOR REINFORCED CONCRETE PIPE
4000 G	MANHOLE OR CATCH BASIN
4002 D	MANHOLE OR CATCH BASIN
4005 H	MANHOLE OR CATCH BASIN
4006 F	MANHOLE OR CATCH BASIN
4101 B	RING CASTING FOR MANHOLE
4110 D	COVER CASTING FOR MANHOLE
4126 D	CATCH BASIN FRAME CASTING
4149 C	GRATE CASTING FOR CATCH BASIN
4161 E	CURB BOX CASTING FOR CATCH BASIN
7100 D	CONCRETE CURB GUTTER
7110 E	CURB AND GUTTER CONSTRUCTION AT CATCH BASIN
8000 C	STANDARD BARRICADES
8008 C	CONTRACTORS SIGN.

BASIS OF PLANNED QUANTITIES

- 2207 BITUMINOUS STABILIZED SUBGRADE BITUMINOUS MATERIAL FOR MIX 0.5 GAL. PER SQ. YD. PER INCH THICKNESS
- BITUMINOUS MATERIAL FOR FOG 0.10 GAL. PER SQ. YD.
- 2341 PLANT MIXED BITUMINOUS BINDER COURSE BITUMINOUS MIXTURE 165 LBS. PER SQ. YD. BITUMINOUS MATERIAL 4.5% OF MIXTURE BY WT.
- 2341 PLANT MIXED BITUMINOUS WEARING COURSE BITUMINOUS MIXTURE 165 LBS. PER SQ. YD. BITUMINOUS MATERIAL FOR TACK COAT 0.05 GAL. PER SQ. YD. BITUMINOUS MATERIAL 5.5% OF MIXTURE BY WT.
- 2357 BITUMINOUS MATERIAL FOR TACK COAT 0.05 GAL. PER SQ. YD.

* THE ITEM OF 1903 SHALL NOT APPLY TO THESE ITEMS. ALL AREAS TO BE SODDED SHALL BE COVERED WITH A MINIMUM OF 3 INCHES OF TOPSOIL.

NOTE: CROSS SECTIONS ARE TO BE CONSTRUCTED IN CONFORMANCE WITH TYPICAL SECTIONS ON THIS PAGE.

NOTE: ALL DIMENSIONS AND SLOPES SHOWN ON TYPICAL SECTIONS ARE APPROXIMATELY ONLY.

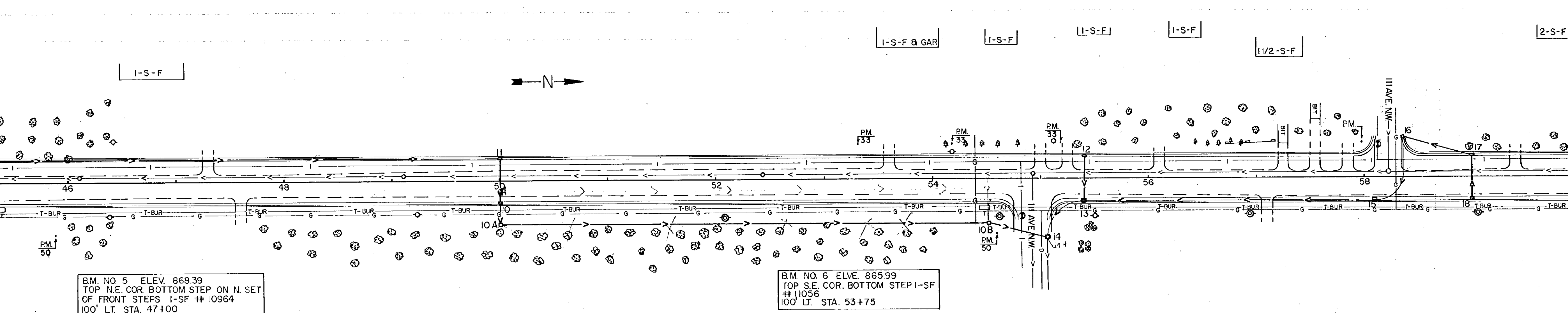
NOTE: WORKING AROUND MISC. UTILITY POLES WILL BE CONSIDERED INCIDENTAL TO COMMON EXCAVATION.

NO.	STATION	LOCATION	REMARKS	TYPE	DESIGN	LIN.FT.	TOP	OUTLET	CAST. ASSEM.	DRAINS TO	F. & I. R.C. PIPE				
											12"	15"	18"	24"	27"
1A	16+00	21.5' LT.		M.H.	A or F	5.0	866.42	861.45	B	OUTLET					
1	20+00	21.5' LT.		C.B.	C or G	3.4	865.56	862.18	A	C.B. #2	43'				
2	20+00	21.5' LT.		C.B.	C or G	3.8	865.56	861.75	A	C.B. #3		212'			
2	20+00	21.5' LT.		-	-	-	-	862.25	-	M.H. 1A		400'			
2A	21+93	39' LT.		C.B.	A or F	4.6	866.07	861.44	A	C.B. #3	24'				
2B	21+63	39' LT.		C.B.	A or F	4.5	866.19	861.74	A	C.B.#2A					
3	22+12	21.5' LT.		C.B.	A or F	5.4	866.58	861.20	A	C.B.#3A	30'				
3A	26+10	21.5' LT.		C.B.	A or F	5.0	865.14	860.17	A	C.B.#5		398'			
3B	26+36	39' LT.		C.B.	A or F	4.2	865.73	861.50	A	C.B.#3A	32'				
4	28+50	21.5' RT.		C.B.	A or F	4.4	864.06	859.68	A	C.B.#5	43'				
5	28+50	21.5' LT.		C.B.	A or F	4.5	864.06	859.55	A	C.B.#5A		115'			
5A	29+65	21.5' LT.		M.H.	A or F	5.7	865.02	859.29	B	C.B.#6		25'			
6	29+65	45' LT.	INP.	C.B.	-	-	-	859.27	-	OUTLET					
7	39+50	21.5' RT.		C.B.	C or G	2.8	864.82	862.00	A	C.B.#8	75'				
8	40+25	21.5' RT.		C.B.	C or G	3.2	864.72	861.50	A	C.B.#9	43'				
9	40+25	21.5' LT.		C.B.	C or G	3.5	864.72	861.25	A	C.B.#11		975'			
10	50+00	21.5' RT.		C.B.	A or F	6.1	862.13	856.00	A	C.B.#10A			18'		
10A	50+00	40' RT.		M.H.	A or F	8.2	863.30	855.14	B	C.B.#10B				450'	
10B	54+50	40' RT.		M.H.	A or F	12.2	865.50	853.29	B	C.B.#14				57'	
11	50+00	21.5' LT.		C.B.	A or F	4.1	862.13	858.00	A	C.B.#10			43'		
12	55+40	21.5' LT.		C.B.	C or G	3.5	863.47	860.00	A	C.B.#13				43'	
13	55+40	21.5' RT.	INP. ADJ.	C.B.	-	-	863.47	852.80	-	C.B.#14					
14	55+05	55' RT.	INP.	C.B.	-	-	-	852.10	-	OUTLET	IN	PLACE			
15	58+10	21' RT.	INP. ADJ.	C.B.	-	-	864.28	853.22	-	C.B.#13	IN	PLACE			
16	58+35	35' LT.	INP. ADJ.	C.B.	-	-	865.50	853.31	-	C.B.#15	IN	PLACE			
17	59+00	21.5' LT.		C.B.	A or F	4.6	864.55	860.00	A	C.B.#16		65'			
18	59+00	21.5' LT.		C.B.	A or F	4.3	864.55	860.22	A	C.B.#17	43'				
19	68+65	51' LT.		C.B.	-	-	-	862.00	-	OUTLET					
20	68+62	21.5' LT.		C.B.	A or F	5.2	867.38	862.20	A	C.B.#19		35'			
22	74+75	21.5' LT.		C.B.	C or G	3.8	867.30	863.50	A	C.B.#20		613'			
23	74+75	21.5' RT.		C.B.	C or G	3.3	867.30	864.00	A	C.B.#22	43'				
24	37+88	21.5' LT.		C.B.	A or F	14.5	865.45	851.00	A	INP. STORM					
25	37+88	21.5' RT.		C.B.	A or F	15.0	865.45	850.50	A	INP. STORM					

ITEM	STATION	LOCATION
M.H.	16+66	5' LT.
M.H.	17+66	5' LT.
M.H.	21+78	5' LT.
M.H.	24+15	5' LT.
M.H.	26+52	5' LT.
M.H.	29+50	5' LT.
M.H.	33+33	5' LT.
M.H.	36+55	5' LT.
M.H.	39+77	5' LT.
M.H.	43+10	5' LT.
M.H.	46+10	5' LT.
M.H.	49+10	5' LT.
M.H.	52+42	5' LT.
M.H.	54+90	5' LT.
C.B.	55+40	21.5' RT.
C.B.	58+10	21' RT.
M.H.	58+25	5' LT.
C.B.	58+35	35' LT.
M.H.	61+94	5' LT.
M.H.	65+25	5' LT.
M.H.	68+30	5' LT.
M.H.	71+60	5' LT.
M.H.	74+90	5' LT.
M.H.	78+20	5' LT.
M.H.	81+60	CL
M.H.	21+40	16' RT.
M.H.	29+16	22' RT.

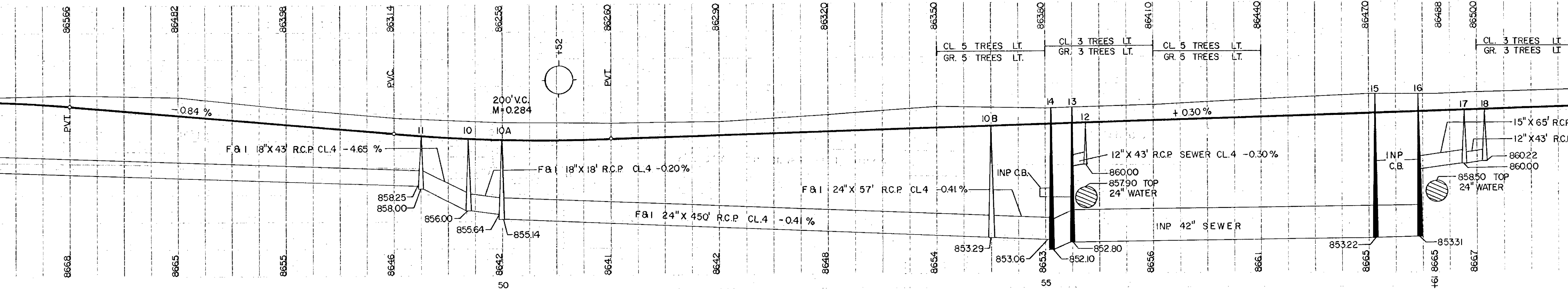
KEY	GRATE	FRAME	CURB BOX	HEIGHT	TYPE
A	810	801	831 B	0.87	C.B.
B	711	700-7		0.58	M.H.

STATION	LOCATION
21+67	33' LT.
26+41	33' LT.
29+36	33' LT.
39+67	45' RT.
54+82	35' RT.
58+12	33' LT.
68+20	33' LT.
81+25	12' LT.
81+45	50' LT.

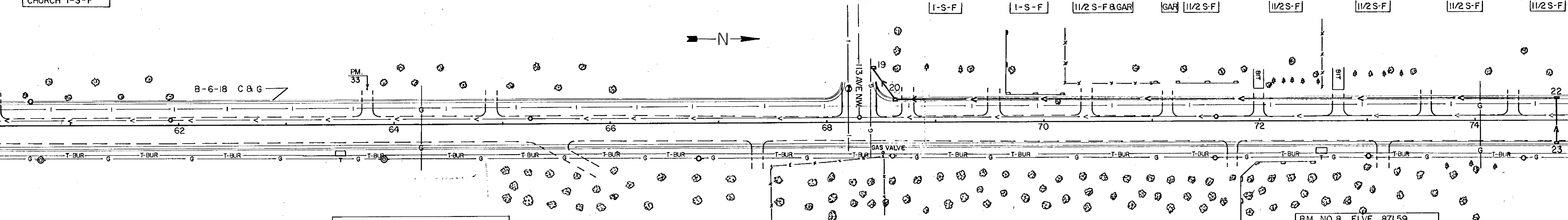


BM. NO. 5 ELEV. 868.39
TOP N.E. COR. BOTTOM STEP ON N. SET
OF FRONT STEPS I-SF # 10964
100' LT. STA. 47+00

BM. NO. 6 ELEV. 865.99
TOP S.E. COR. BOTTOM STEP I-SF
11056
100' LT. STA. 53+75

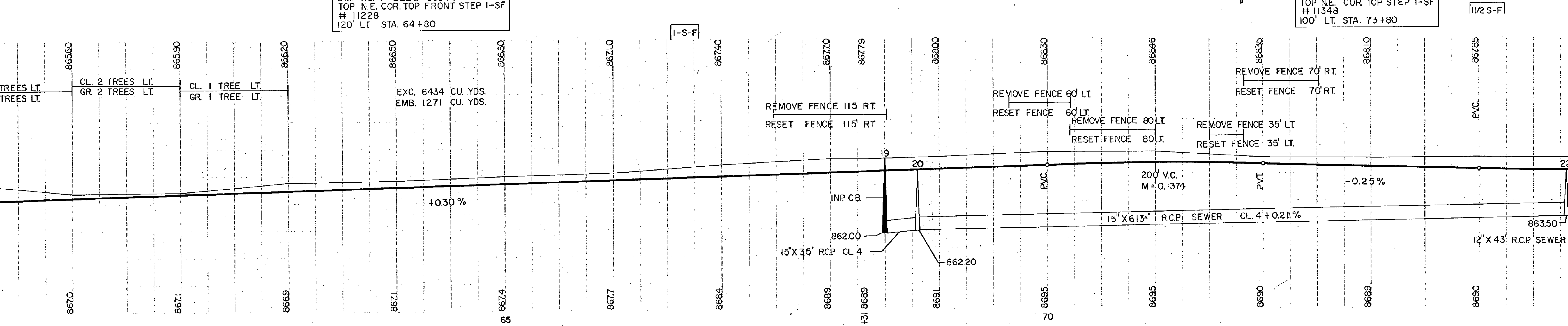


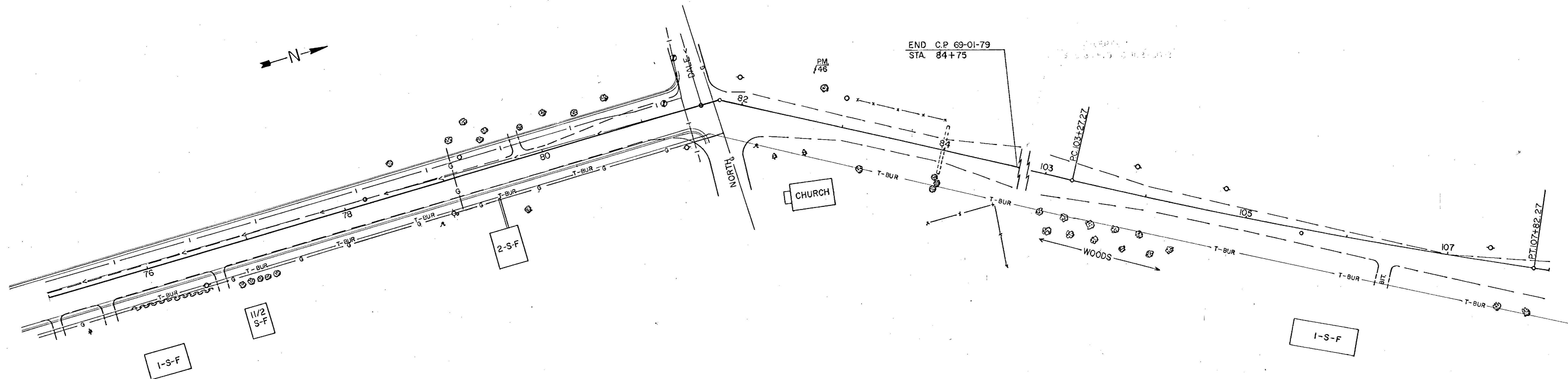
CHURCH I-S-F



BM. NO. 7 ELEV. 869.77
TOP N.E. COR. TOP FRONT STEP I-SF
11228
120' LT. STA. 64+80

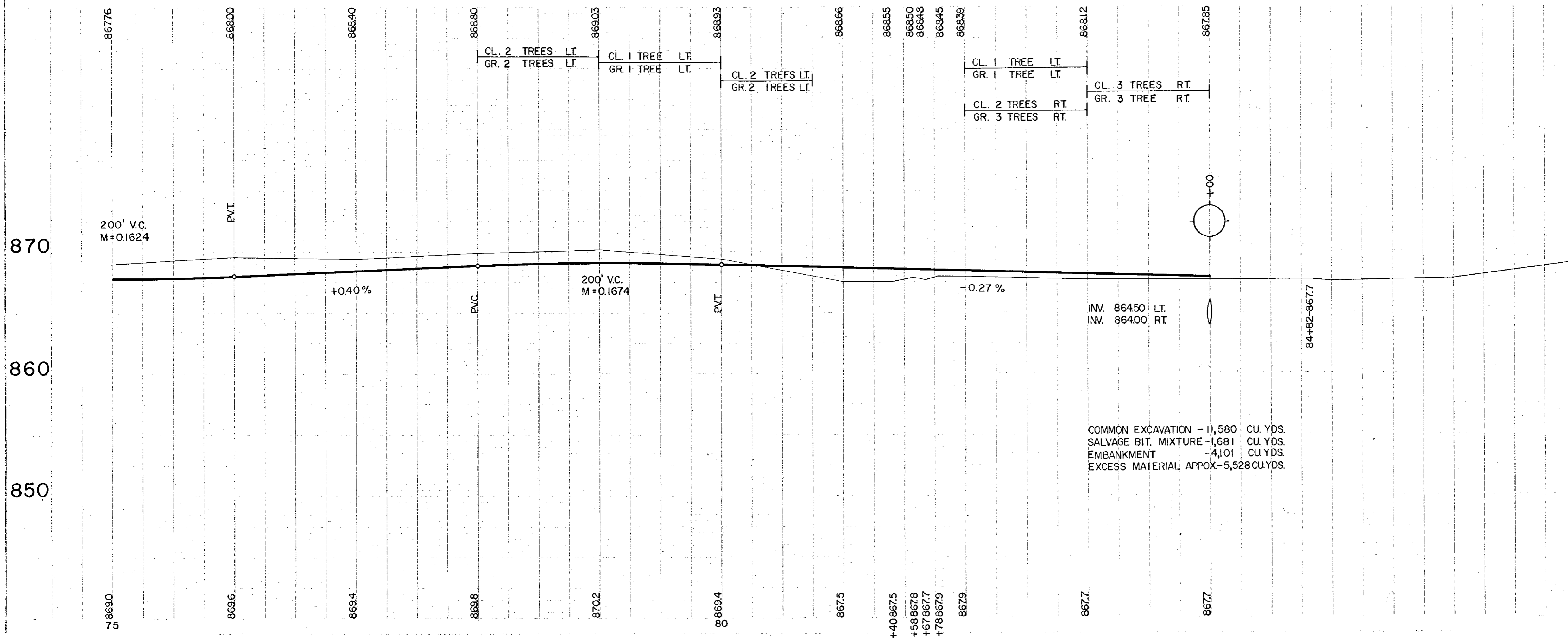
BM. NO. 8 ELEV. 871.59
TOP N.E. COR. TOP STEP I-SF
11348
100' LT. STA. 73+80





BM. NO. 9 ELVE. 867.93
 TOP & SW. COR. BOTTOM STEP OF CHURCH
 70' RT. STA. 82+50

84+00 C.
 24" X 48" RCP CL. 4
 2- 24" APRONS

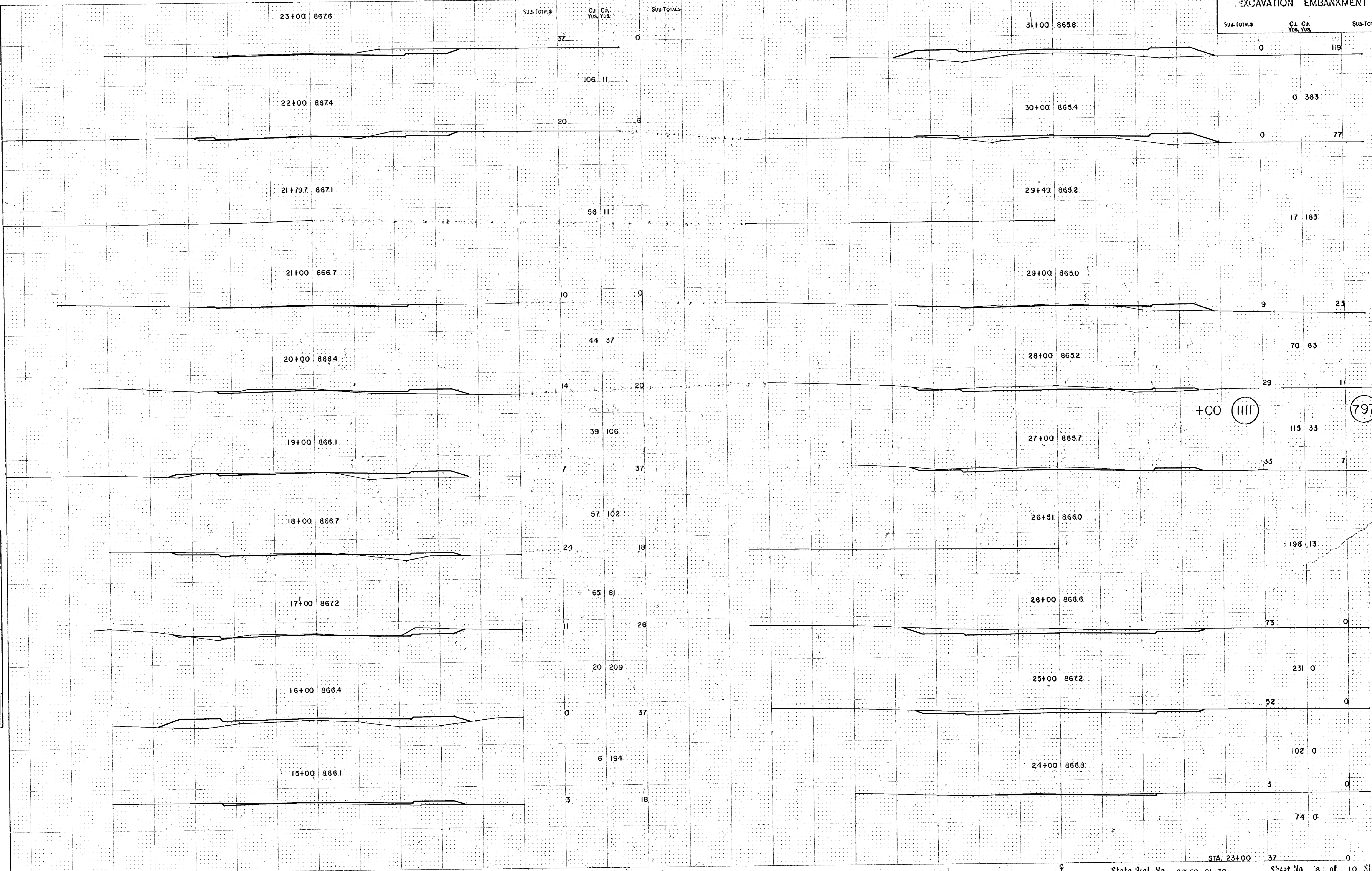


EXCAVATION EMBANKMENT

EXCAVATION		EMBANKMENT	
SUB-TOTALS	CU. YDS.	CU. YDS.	SUB-TOTALS

FINAL SURVEY
 SURVEYED
 DATE: 11/22/58
 BY: J. J. S.
 CHECKED: J. J. S.
 NO. 100

FINAL SURVEY
 SURVEYED
 DATE: 11/22/58
 BY: J. J. S.
 CHECKED: J. J. S.
 NO. 100



+00 (III)

(797)

FUNCTIONAL CROSS SECTION - OPEN DOTTED
 HUGGINS CO., ST. LOUIS, MO.

EXCAVATION EMBANKMENT

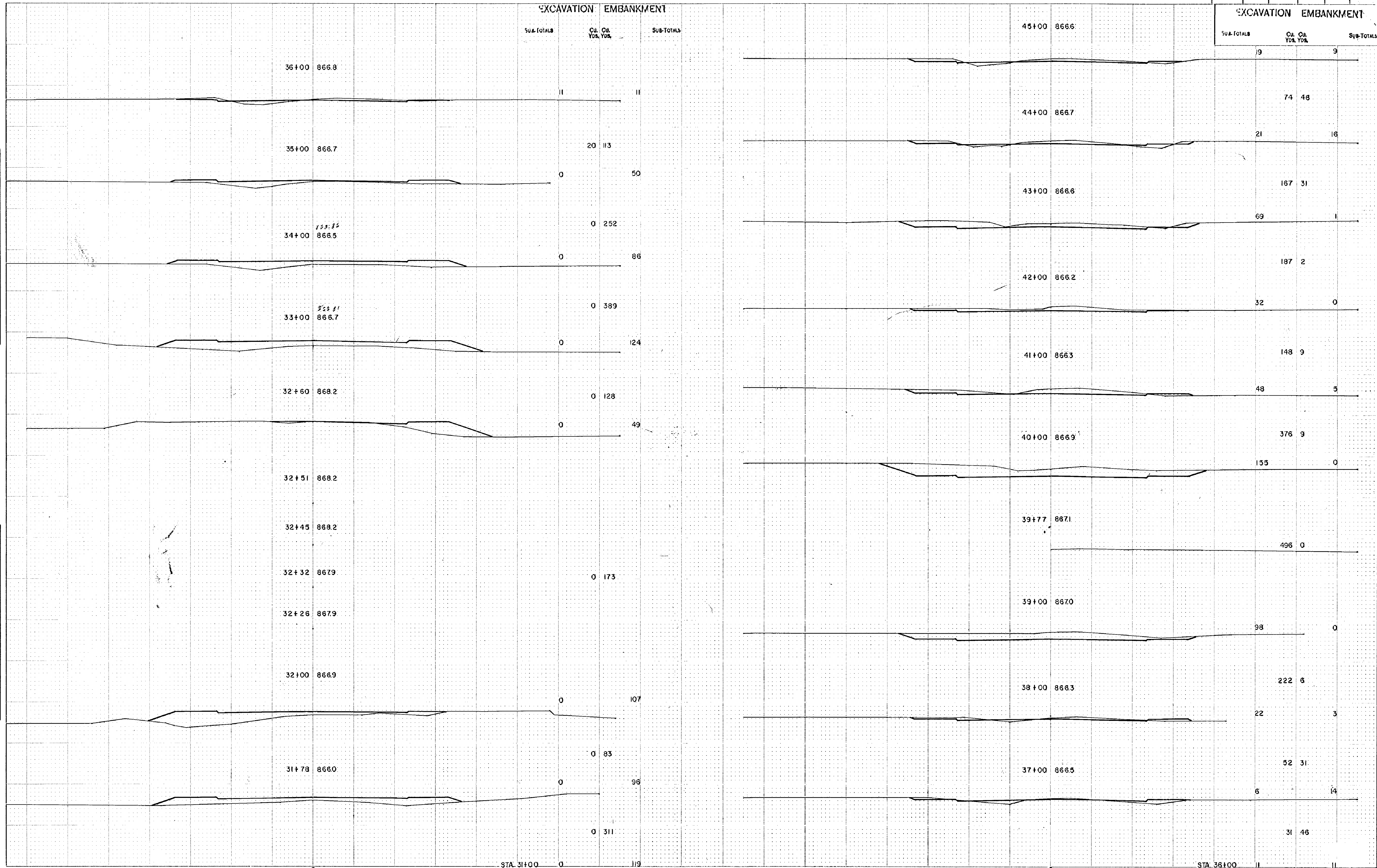
SUB-TOTALS	CU. YDS.	CU. YDS.	SUB-TOTALS
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EXCAVATION EMBANKMENT

SUB-TOTALS	CU. YDS.	CU. YDS.	SUB-TOTALS
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DATE: _____
 BY: _____
 DRAWN: _____
 CHECKED: _____
 SURVEYED: _____
 PLAN: _____
 NOTE BOOK: _____
 NO. _____
 AREA CHECKED: _____

DATE: _____
 BY: _____
 DRAWN: _____
 CHECKED: _____
 SURVEYED: _____
 PLAN: _____
 NOTE BOOK: _____
 NO. _____
 AREA CHECKED: _____



STA 31+00 0 119

STA 36+00 11 11

FUNCTIONAL CROSS SECTION - OPEN DOTTED
 BOOKS (S. MONTAGNOLI & ST. LAURE)

EXCAVATION EMBANKMENT

STA.	CU. YDS.	CU. YDS.	SUB-TOTALS	STA.	CU. YDS.	CU. YDS.	SUB-TOTALS
55+00	865.3		90 0	64+00	867.1		65 0
54+00	865.4		352 0	63+00	866.9		148 13
53+00	864.8		100 0	62+00	867.1		15 7
52+00	864.2		326 0	61+00	867.0		94 13
51+00	864.1		76 0	60+00	866.9		36 0
50+00	864.2		+52 (3426) 12 } 233 { 5 (2294) 6	59+00	866.7		207 0
49+00	864.6		50 6	58+00	866.5		76 0
48+00	863.5		193 17	57+00	866.1		343 0
47+00	866.5		54 3	56+00	865.6		109 0
46+00	866.8		227 6				409 0
			69 0				112 0
			222 2				
			51 1				417 0
			206 2				
			60 0				113 0
			254 0				413 0
			77 0				110 0
			248 2				333 0
			57 1				70 0
			140 19				296 0
STA. 45+00			19 9	STA. 55+00			90 0

EXCAVATION EMBANKMENT

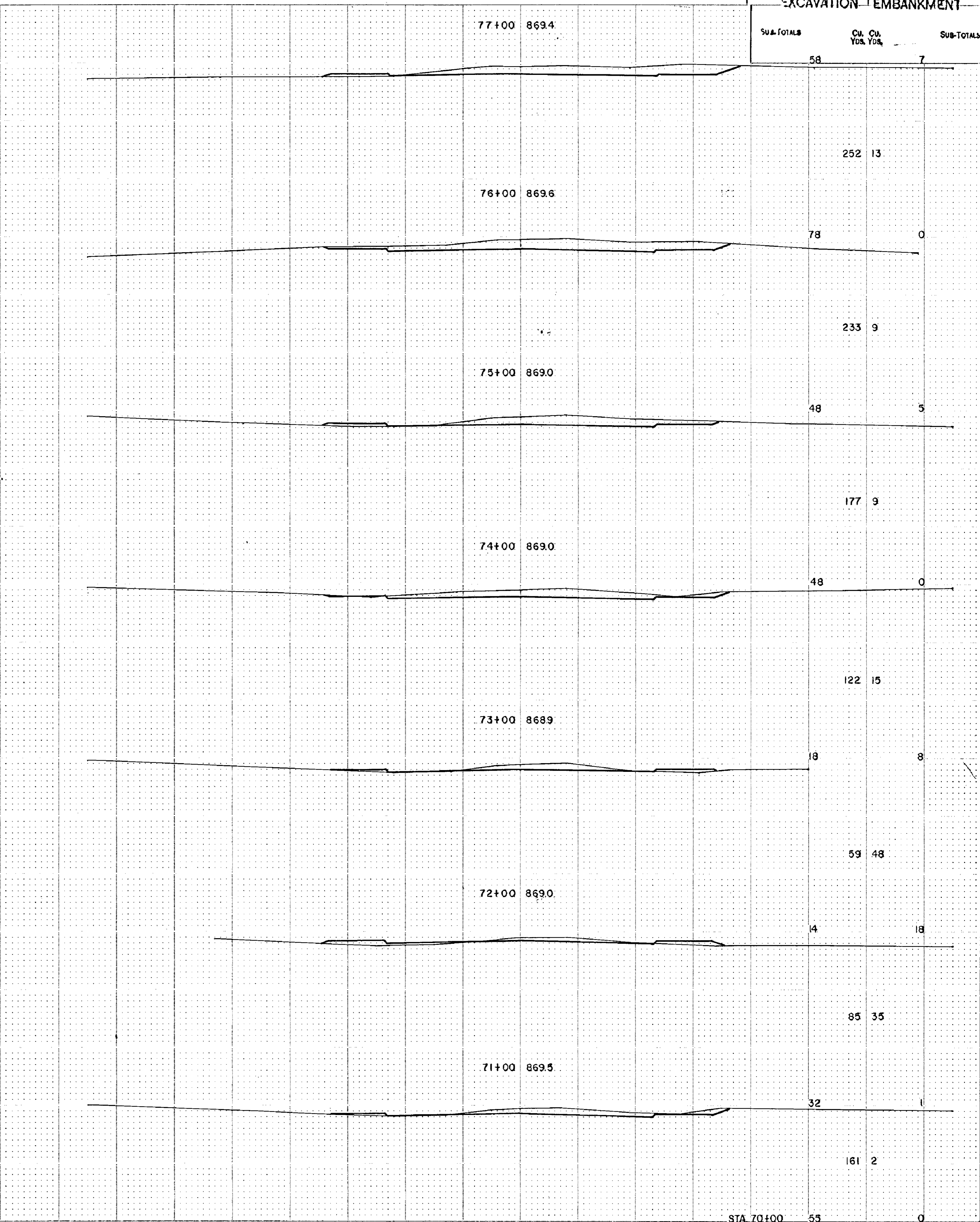
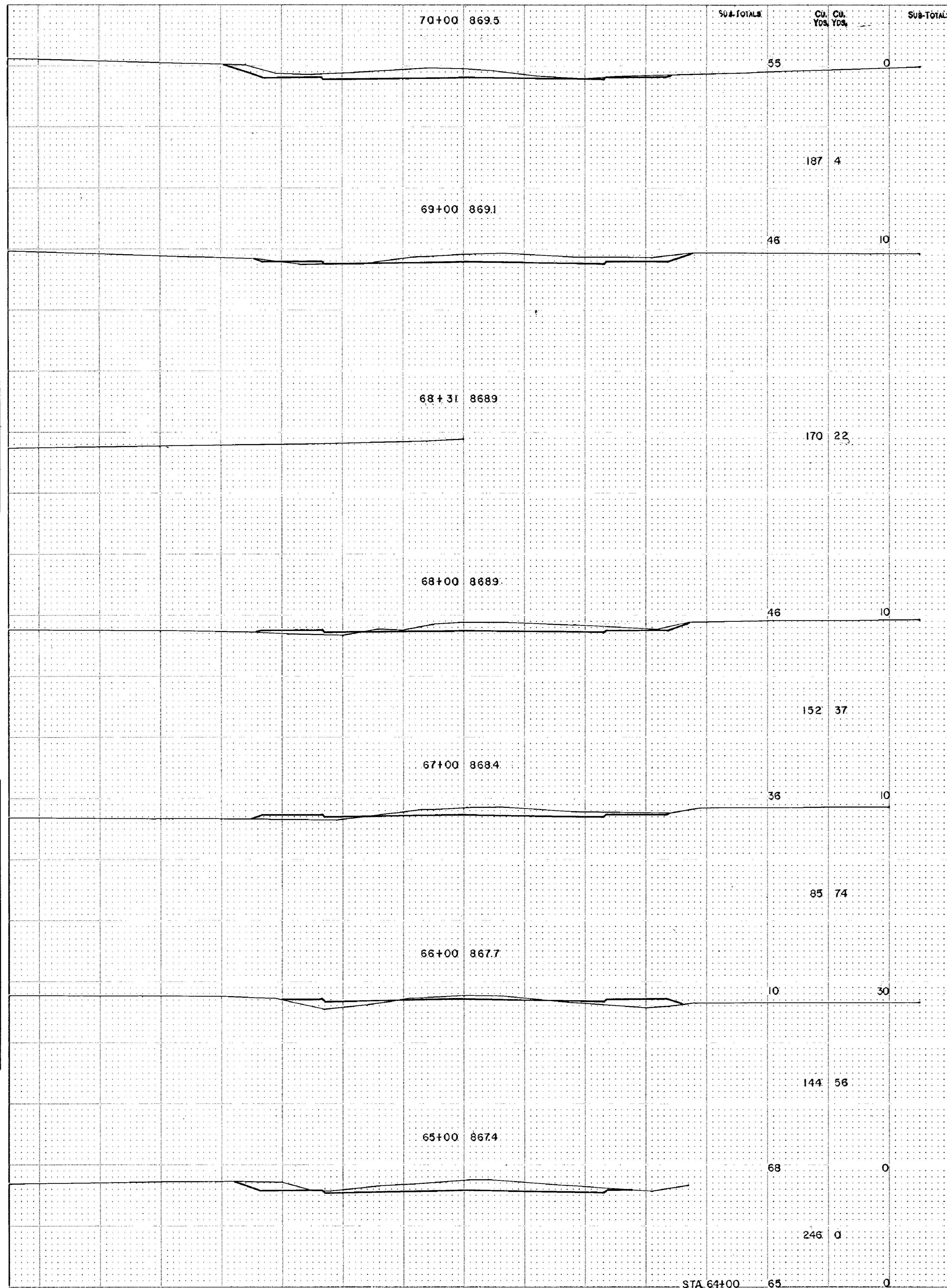
FUNCTIONAL CROSS SECTION - OPEN DOTTED
ROUCHS CO., MINNEAPOLIS, ST. PAUL

EXCAVATION EMBANKMENT

FED. ROAD DIST. NO.	STATE	FEDERAL PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
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EXCAVATION EMBANKMENT

SUB-TOTALS	Cu. Yds.	Cu. Yds.	SUB-TOTALS
------------	----------	----------	------------



DATE: _____
 BY: _____
 DRAWN BY: _____
 CHECKED BY: _____
 APPROVED BY: _____
 TITLE: _____
 NO. _____

DATE: _____
 BY: _____
 DRAWN BY: _____
 CHECKED BY: _____
 APPROVED BY: _____
 TITLE: _____
 NO. _____

EXCAVATION EMBANKMENT

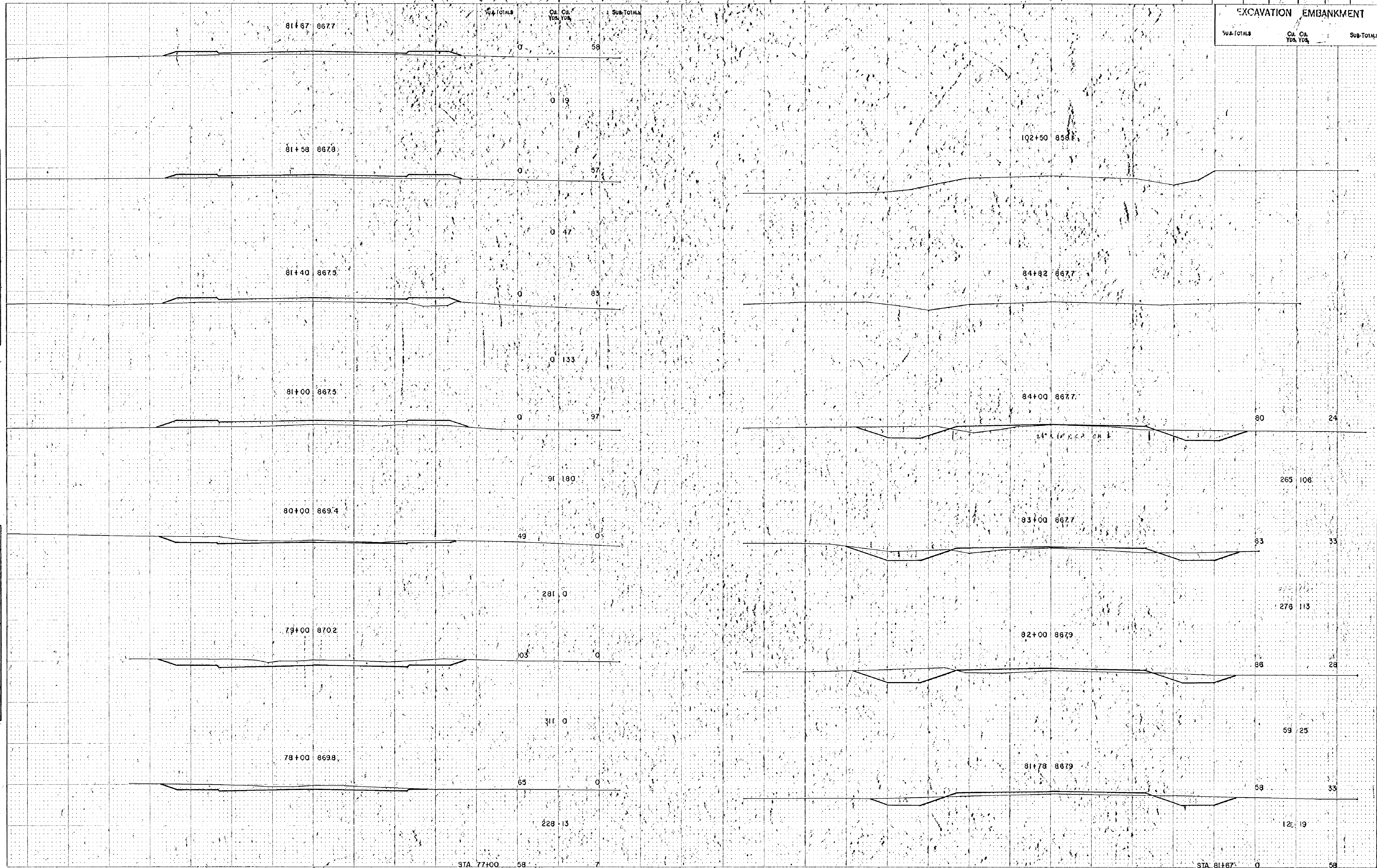
FED. ROAD DIST. NO.	STATE	FEDERAL PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
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EXCAVATION EMBANKMENT

Sub-TOTALS	Exc. Yds.	Emb. Yds.	Sub-TOTALS
------------	-----------	-----------	------------

DATE	
BY	
CHIEF ENGINEER	
IN CHARGE	
NO.	

DATE	
BY	
CHIEF ENGINEER	
IN CHARGE	
NO.	



STA. 77+00 58 7

STA. 81+67 0 58

FUNCTIONAL CROSS SECTION - OPEN DOTTED
ROGERS CO. - MINNEAPOLIS - ST. PAUL