

STATE OF MINNESOTA
DEPARTMENT OF HIGHWAYS

CONSTRUCTION PLAN FOR GRADING, BASE AND BITUMINOUS SURFACING

County State Aid Highway No. 18

Between C.S.A.H. 20 And T.H. 65

From A PT. 120' N. OF W. 1/4 COR. SEC. 13, T32N, R24W To A PT. 1323.14' N. & 85.76' W. OF S. 1/4 COR. SEC. 8, T32N, R25W
Give proper reference to Sections, Township and Range

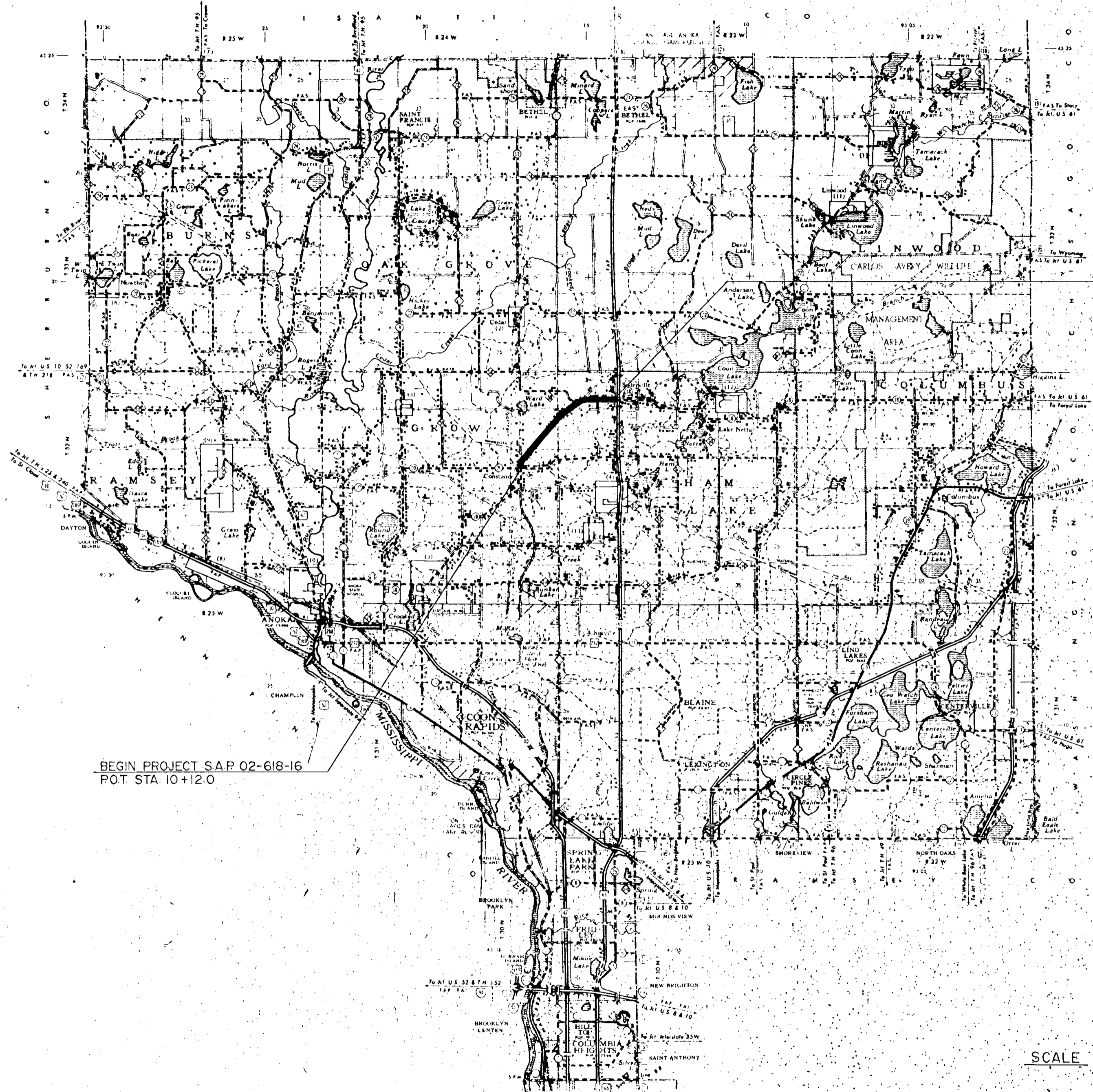
GROSS LENGTH 17,318.0 FEET 3.280 MILES
BRIDGES-LENGTH 0.0 FEET 0 MILES
EXCEPTIONS-LENGTH 0.0 FEET 0 MILES
NET LENGTH 17,318.0 FEET 3.280 MILES

INDEX OF SHEETS

- Sheet No. 1 Title Sheet & Layout Map
- " No. 2 To 5 Est. Quan. & Typicals
- " No. 6 To 12 Plan & Profile
- " No. 13 Retention Pond Construction
- " No. 14 CR 58 Construction
- " No. 15 Superelevation Charts
- " No. 16 To 41 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 (Easement Line)
- 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
- CONDUIT
- TELEPHONE CABLE - AERIAL
- TELEPHONE CABLE - UNDERGROUND
- POWER CABLE - UNDERGROUND
- GAS MAIN
- CULVERT
- DRAIN INLET
- GUARD RAIL
- BARBED WIRE FENCE
- WOVEN WIRE FENCE
- CHAIN LINK FENCE
- RAILROAD SHOW FENCE
- STONE WALL OR FENCE
- HEDGE
- WATER PIPE
- SEWER PIPE
- DRAIN TILE
- SPRINGS
- MARSH
- TIMBER
- ORCHARD
- BRUSH
- NURSERY
- CATCH BASIN
- MANHOLE
- PIPE 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
- 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. 02-618-16
P.O.T. STA. 183+30.0

BEGIN PROJECT S.A.P. 02-618-16
P.O.T. STA. 10+12.0

DESIGN DESIGNATION
 ADT (CURRENT YEAR) 2675
 ADT (FUTURE YEAR) 4300
 T (HEAVY COMMERCIAL) 300-600
9 Ton Design Soil Factor 50%
 Design Speed 55 MPH
 Design Speed not achieved at:
 STA _____ TO STA _____ MPH _____
 STA _____ TO STA _____ MPH _____

SPECIFICATIONS

THE "STANDARD SPECIFICATIONS FOR CONSTRUCTION," 1983 EDITION AND SUPPLEMENTAL SPECIFICATIONS, DATED AUGUST 29, 1985 SHALL GOVERN.

SCALE

- INDEX MAP
- PLAN & PROFILE
- CROSS SECTIONS

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. Lund DATE 12/23/85
COUNTY ENGINEER

ANOKA COUNTY REG. NO. 6548

RECOMMENDED FOR APPROVAL C. W. Wechselsbaum - 119 1986
DISTRICT STATE AID ENGINEER

RECOMMENDED FOR APPROVAL Julie Stallman 014 1986

APPROVED 2/5 1986 *William M. Hoy*
STATE AID ENGINEER

Minn. Proj. No. _____ County Proj. No. _____
State Proj. No. _____ S. A. P. 02-618-16

STATEMENT OF ESTIMATED QUANTITIES

ITEM NO.	ITEM	UNIT	TOTAL ESTIMATED QUANTITIES	TOTAL FINAL QUANTITIES
2021.501	MOBILIZATION	LUMP SUM	1	
2031.501	FIELD OFFICE, TYPE D	EACH	1	
2101.501	CLEARING	ACRE	5.75	
2101.502	CLEARING	TREE	119	
2101.506	GRUBBING	ACRE	5.95	
2101.507	GRUBBING	TREE	110	
2104.501	REMOVE CULVERT PIPE	LIN. FT.	280	
2104.505	REMOVE BITUMINOUS PAVEMENT	SQ. YD.	42,932	
2104.509	REMOVE STONE PILLARS	EACH	2	
2104.521	SALVAGE FENCE	LIN. FT.	5354	
0557.604	INSTALL FENCE	LIN. FT.	4917	
2105.501	COMMON EXCAVATION (P)	CU. YD.	58,474	
2105.505	MUCK EXCAVATION	CU. YD.	8688	
2105.521	GRANULAR BORROW (EV)	CU. YD.	14,000	
2105.525	TOPSOIL BORROW (LV)	CU. YD.	1825	
2130.501	WATER	M GAL.	300	
2211.503	AGGREGATE BASE PLACED, 5A	CU. YD.	15,230	
2331.504	BITUMINOUS MATERIAL FOR MIXTURE	TON	812	
2331.510	BINDER COURSE MIXTURE	TON	6725	
2331.514	BASE COURSE MIXTURE	TON	6080	
2331.516	SHOULDER MIXTURE	TON	3185	
2331.531	TEMPORARY LANE MARKING	RD. STA.	520	
0331.601	2" THICK WEARING COURSE MIXTURE PLACED	SQ. YD.	4760	
2341.504	BITUMINOUS MATERIAL FOR MIXTURE	TON	237	
2341.508	WEARING COURSE MIXTURE	TON	3825	
2357.502	BITUMINOUS MATERIAL FOR TACK COAT	GAL.	5300	
2501.511	15" C.M. PIPE CULVERT	LIN. FT.	1408	
2501.511	18" C.M. PIPE CULVERT	LIN. FT.	346	
2501.515	15" C.M. PIPE APRONS	EACH	74	
2501.515	18" C.M. PIPE APRONS	EACH	10	
2501.515	24" R.C. PIPE APRONS	EACH	2	
2501.515	48" R.C. PIPE APRONS	EACH	2	
2501.521	21" SPAN C.M. PIPE-ARCH CULVERT	LIN. FT.	78	
2501.521	28" SPAN R.C. PIPE-ARCH CULVERT	LIN. FT.	356	
2501.525	21" SPAN C.M. PIPE-ARCH APRONS	EACH	2	
2501.525	28" SPAN R.C. PIPE-ARCH APRONS	EACH	12	
2501.561	24" R.C. PIPE CULVERT, DESIGN 3006D	LIN. FT.	64	
2501.561	48" R.C. PIPE CULVERT, DESIGN 3006D	LIN. FT.	80	
2511.507	GROUTED RIPRAP	CU. YD.	5.2	
2535.501	BITUMINOUS CURB	LIN. FT.	3080	
2573.501	BALE CHECK	EACH	30	
2575.501	ROADSIDE SEEDING	ACRE	20.4	
2575.502	SEED, MIXTURE NO. 3	POUND	920	
2575.505	SODDING	SQ. YD.	17,532	
2575.511	MULCH MATERIAL, TYPE 1	TON	41	
2575.519	DISC. ANCHORING	ACRE	20.4	
2575.531	COMMERCIAL FERTILIZER, ANALYSIS 10-10-10	TON	5.6	

- FOR FRONT YARD AREAS TO BE SODDED.
- PROVIDED FOR DUST CONTROL AS DIRECTED BY THE ENGINEER.
- INCLUDES 810 CU. YD. FOR ROAD APPROACHES.
- INCLUDES 575 TON FOR ROAD APPROACHES AND 850 TON FOR RT. TURN AND BYPASS LANES.
- INCLUDES 575 TON FOR ROAD APPROACHES.
- INCLUDES 400 TON FOR ROAD APPROACHES AND 665 TON FOR RT. TURN AND BYPASS LANES.
- INCLUDES QUANTITY FOR WEARING COURSE.
- PROVIDED FOR DRIVEWAY PAVING, PAYMENT BY SQ. YD. INCLUDES BITUMINOUS MATERIAL AND 3" CL-5 AGG. BASE.
- PROVIDED FOR TEMPORARY EROSION CONTROL.

MHD 21166 (9/73)

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

STANDARD PLATES	
PLATE NO.	DESCRIPTION
0004 A	SPECIFICATION REFERENCE TO STANDARD PLATES
3000 K	REINFORCED CONCRETE PIPE
3006 D	GASKET JOINT FOR R.C. PIPE
3014 J	REINFORCED CONCRETE PIPE ARCH DETAIL
3040 F	CORRUGATED METAL PIPE CULVERT
3100 F	CONCRETE APRON FOR REINFORCED CONCRETE PIPE
3110 F	CONCRETE APRON FOR REINFORCED CONCRETE PIPE-ARCH
3123 I	METAL APRON FOR C.S. PIPE
3133 B	RIPRAP AT R.C.P. OUTLETS
3134 B	RIPRAP AT C.M.P. OUTLETS
3145 D	CONCRETE PIPE TIES
3221 C	CORRUGATED STEEL PIPE COUPLING BAND
7065 C	BITUMINOUS CURB
8000 I	STANDARD BARRICADES
9000 B	APPROACHES AND ENTRANCES
9102 C	SODDING AT PIPE CULVERT ENDS

BASIS OF PLANNED QUANTITIES

- 2331 PLANT MIXED BASE COURSE BITUMINOUS MIXTURE 110 LBS./S.Y. PER 1" THICKNESS BITUMINOUS MATERIAL FOR MIXTURE 4.8% BY WT.
- 2331 PLANT MIXED BINDER COURSE BITUMINOUS MIXTURE 110 LBS./ S.Y. PER 1" THICKNESS BITUMINOUS MATERIAL FOR MIXTURE 4.8% BY WT.
- 2331 PLANT MIXED SHOULDER COURSE BITUMINOUS MIXTURE 110 LBS./ S.Y. PER 1" THICKNESS BITUMINOUS MATERIAL FOR MIXTURE 6.2% BY WT.
- 2341 PLANT MIXED WEARING COURSE BITUMINOUS MIXTURE 110 LBS./ S.Y. PER 1" THICKNESS BITUMINOUS MATERIAL FOR MIXTURE 6.2% BY WT.
- 2357 BITUMINOUS MATERIAL FOR TACK COAT 0.05 GAL. PER S.Y.
- 2575 COMMERCIAL FERTILIZER ANALYSIS 10-10-10 500LBS./ACRE ON ALL SOD AREAS AND SEED AREAS
- 2575 ROADSIDE SEEDING BASED ON HORIZONTAL MEASUREMENTS PLUS 10% SEED MIXTURE NO. 3, 45 LBS. PER ACRE

SPECIAL DETAILS

THE CONTRACTOR SHALL REMOVE SUFFICIENT TOPSOIL MATERIAL WITHIN THE EXCAVATION AREAS AND AREAS ON WHICH EMBANKMENTS WILL BE PLACED, STOCKPILE IF NECESSARY, AND USE IT FOR TOPSOIL COVERING ON THE NEW SLOPES AND DITCH BOTTOMS. THIS WILL REQUIRE APPROXIMATELY 8742 CU. YDS. TO PROVIDE A MINIMUM COVER OF 3". SALVAGING AND REPLACING TOPSOIL SHALL BE CONSIDERED AS INCIDENTAL TO THE EXCAVATION ITEMS, AND NO ADDITIONAL COMPENSATION SHALL BE MADE.

MUCK EXCAVATION MATERIAL SHALL BE USED AS FILL TO CONSTRUCT INSLOPES AS SHOWN ON CROSS SECTIONS ADJACENT TO MUCK EXCAVATION AREAS. ANY EXCESS MUCK MATERIAL WILL BE USED AS TOPSOIL AND SPREAD UNIFORMLY ON SLOPES AND DITCH BOTTOMS OR DISPOSED OF IN OTHER AREAS AS APPROVED BY THE ENGINEER.

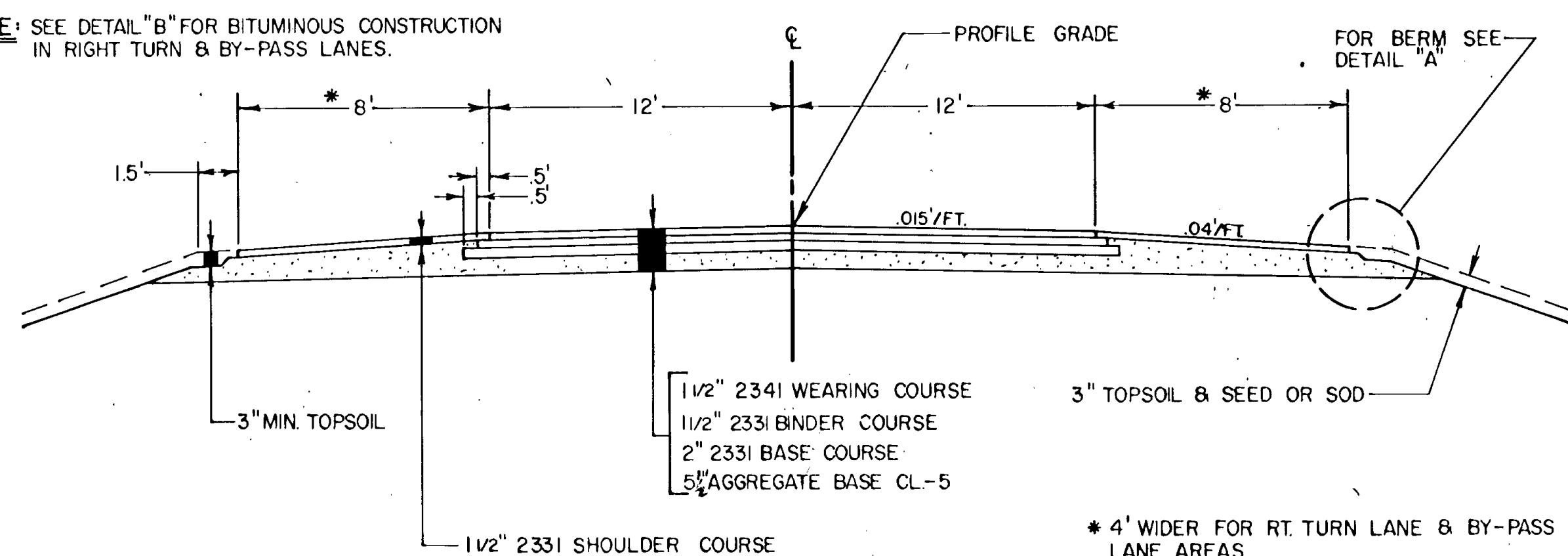
SALVAGE & INSTALL FENCE

STATION	LOC.	SALVAGE	INSTALL	REMARKS
33+00	21'RT	39'	0	LINE FENCE
40+85	38'RT	22'	0	LINE FENCE
40+85 - 45+57	32'RT	472'	472'	
57+78 - 60+15	31'RT	237'	237'	
60+15	31'RT	29'	0	LINE FENCE
62+05 - 65+74	32'RT	369'	369'	
64+81	33'RT	27'	0	LINE FENCE
65+98 - 68+89	38'RT	291'	291'	
68+89	27'RT	33'	0	LINE FENCE
69+00 - 74+15	27'RT	515'	515'	
70+47	27'RT	33'	0	LINE FENCE
74+40 - 74+55	25'RT	15'	15'	
74+55	25'RT	35'	0	LINE FENCE
80+53	33'RT	27'	0	LINE FENCE
81+12 - 87+85	34'RT	673'	673'	
96+94	29'LT	31'	0	LINE FENCE
96+94 - 97+79	29'LT	85'	85'	
97+79	29'LT	31'	0	LINE FENCE
97+79 - 98+89	46'LT	110'	110'	
98+89	46'LT	14'	0	LINE FENCE
100+35	36'LT	24'	0	LINE FENCE
100+35 - 102+72	36'LT	237'	237'	
102+72	27'LT	33'	0	LINE FENCE
104+95	38'LT	22'	0	LINE FENCE
104+95 - 111+10	38'LT	615'	615'	
111+10	45'LT	15'	0	LINE FENCE
115+30 - 127+13	29'LT	1183'	1183'	
145+43 - 145+59	52'RT	16'	16'	GATE
177+51	39'LT	11'	0	LINE FENCE
177+51 - 178+50	39'LT	99'	99'	
178+50	39'LT	11'	0	LINE FENCE

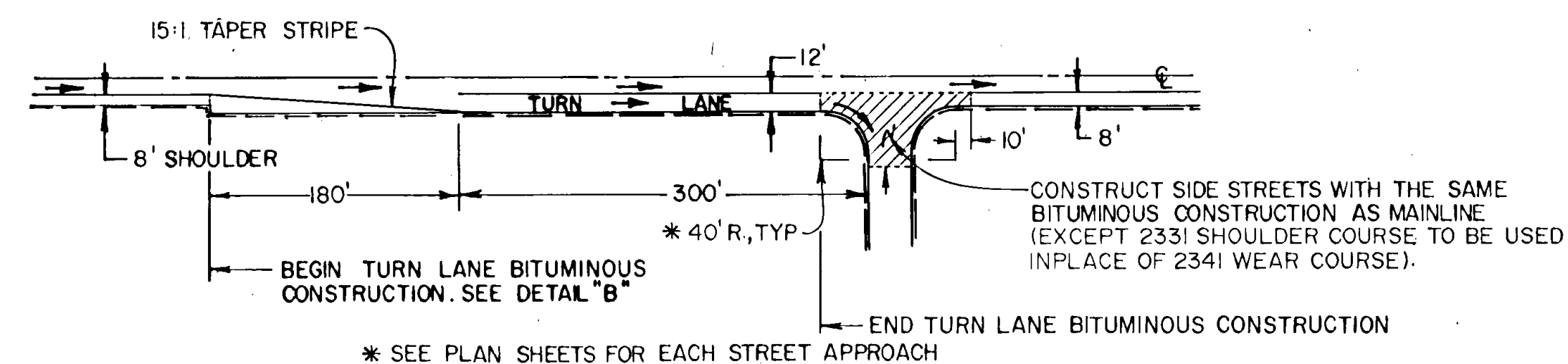
TOTALS: 5,354 4,917

TYPICAL BASE & SURFACING SECTION

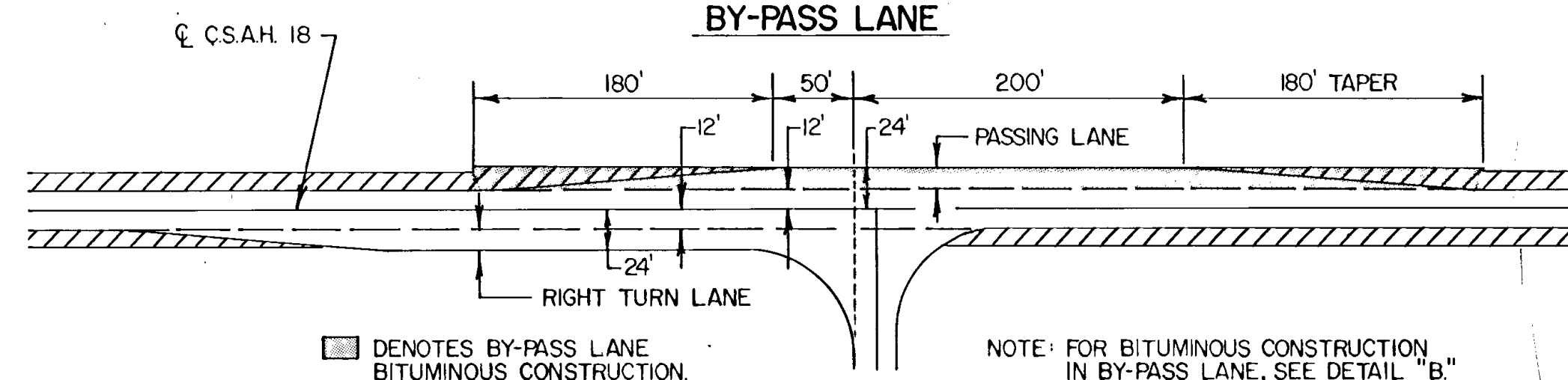
NOTE: SEE DETAIL "B" FOR BITUMINOUS CONSTRUCTION IN RIGHT TURN & BY-PASS LANES.



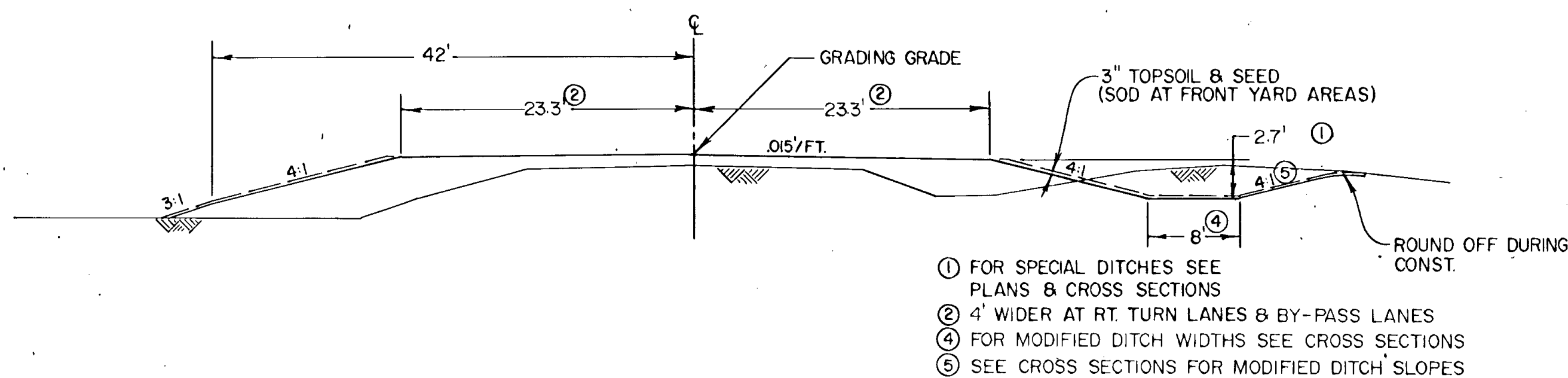
TYPICAL RIGHT TURN LANE



BY-PASS LANE

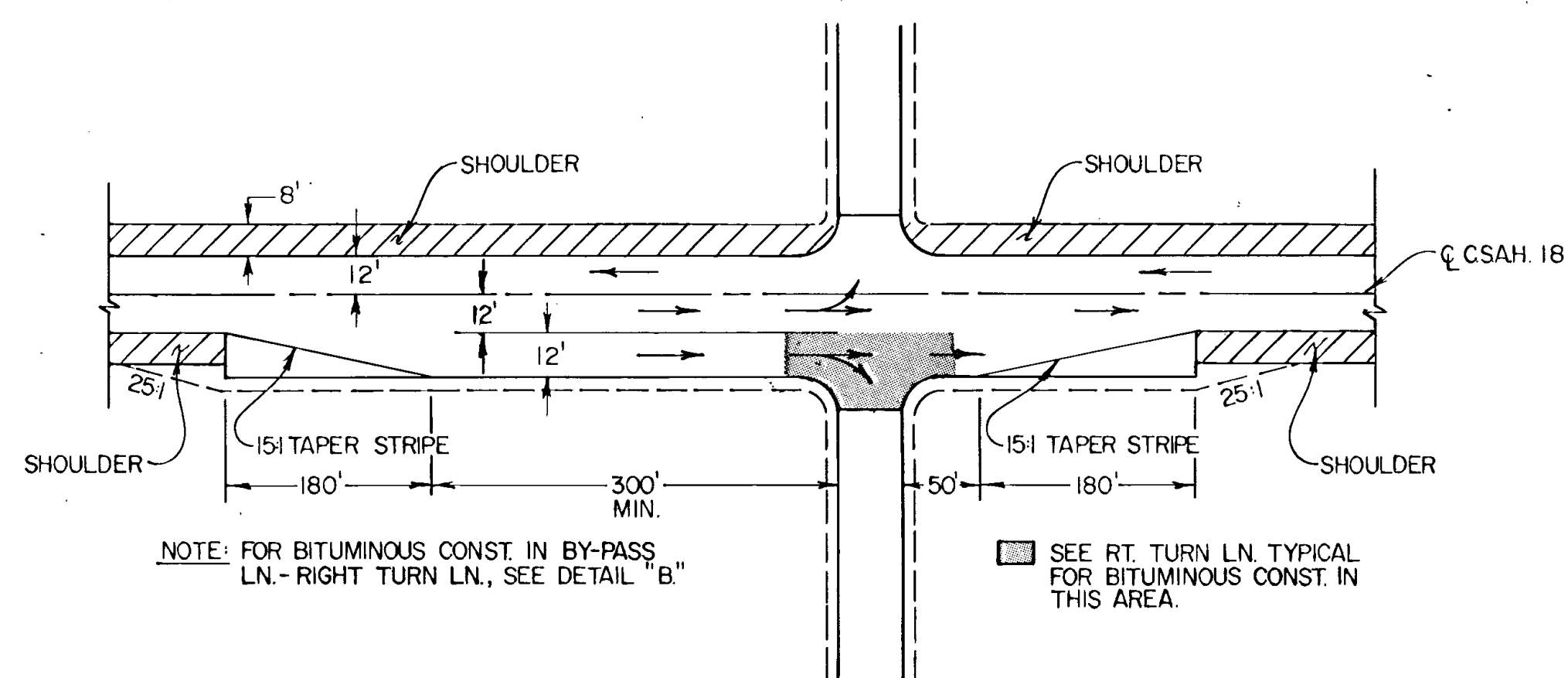


GRADING

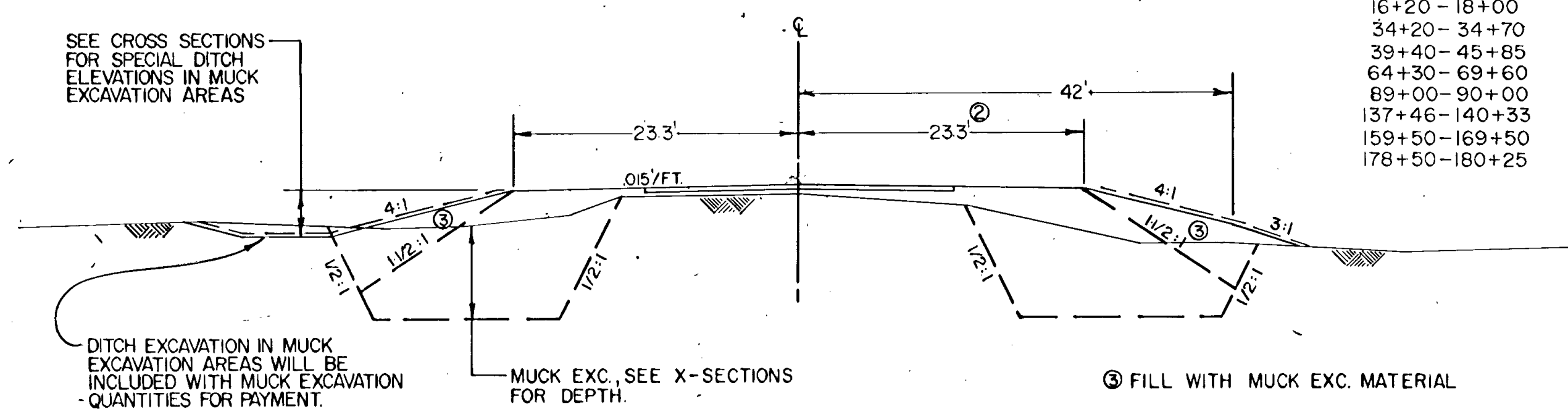


- ① FOR SPECIAL DITCHES SEE PLANS & CROSS SECTIONS
- ② 4' WIDER AT RT. TURN LANES & BY-PASS LANES
- ④ FOR MODIFIED DITCH WIDTHS SEE CROSS SECTIONS
- ⑤ SEE CROSS SECTIONS FOR MODIFIED DITCH SLOPES

COMBINED RIGHT TURN AND BY-PASS LANE



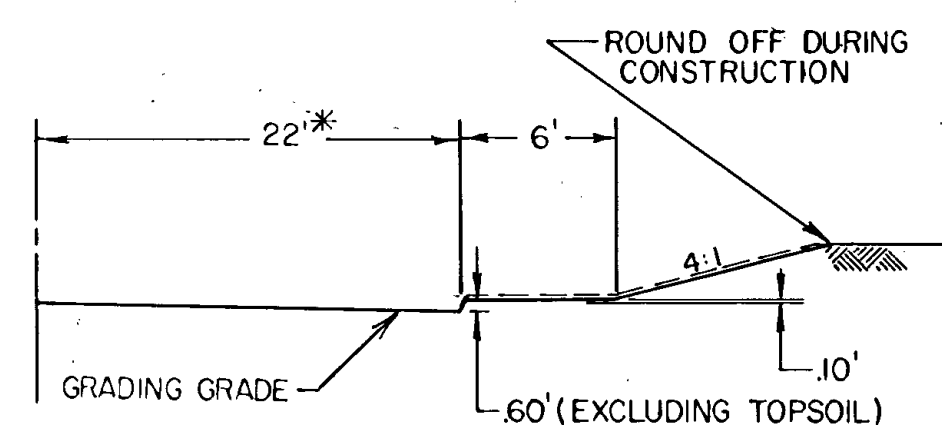
MUCK EXCAVATION



LOCATIONS

- 10+72 - 13+23
- 16+20 - 18+00
- 34+20 - 34+70
- 39+40 - 45+85
- 64+30 - 69+60
- 89+00 - 90+00
- 137+46 - 140+33
- 159+50 - 169+50
- 178+50 - 180+25

DETAIL "A"

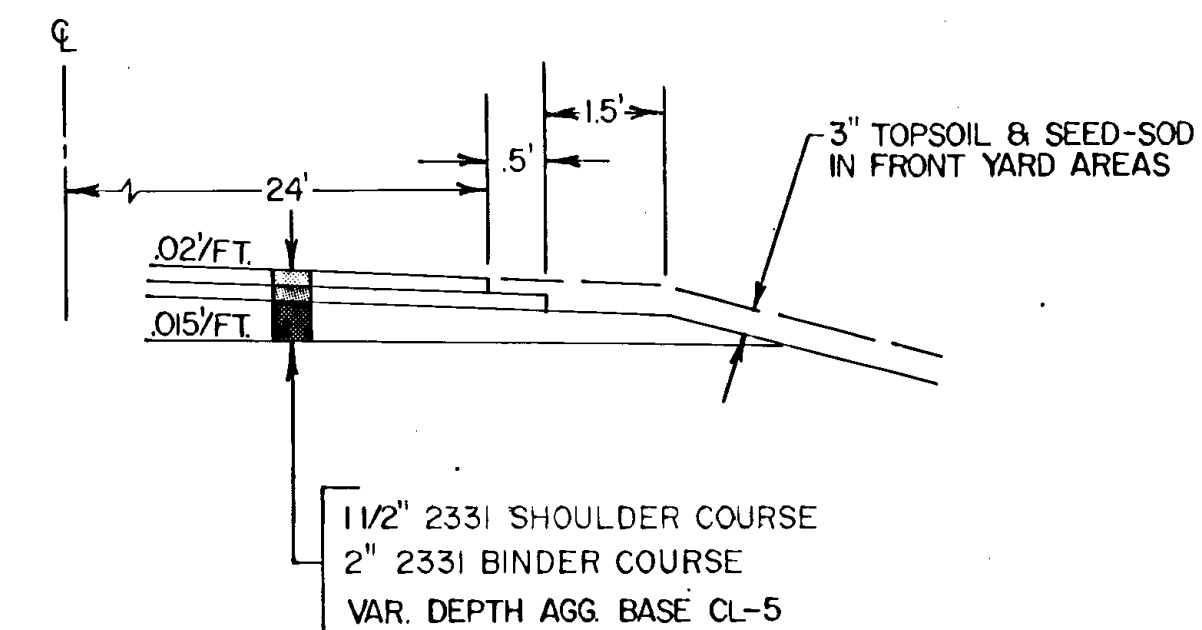


* 28' FOR RT. TURN LANES
NOTE: FACE OF BITUMINOUS CURB TO BE AT 20' IN BERM AREAS & 26' IN BERM-RIGHT TURN LANE AREAS.

BERM LOCATIONS

- 25+30 - 29+00 LT
- 74+25 - 76+25 LT
- 74+25 - 76+60 RT
- 89+70 - 90+70 RT
- 95+30 - 100+80 RT
- 95+30 - 100+00 LT
- 103+40 - 105+30 LT
- 111+50 - 113+25 RT
- 128+25 - 130+25 LT & RT
- 180+25 - 181+40 LT
- 182+30 - 183+30 LT
- 36+00 - 38+65 LT

DETAIL "B"



1 1/2" 2331 SHOULDER COURSE
2" 2331 BINDER COURSE
VAR. DEPTH AGG. BASE CL-5

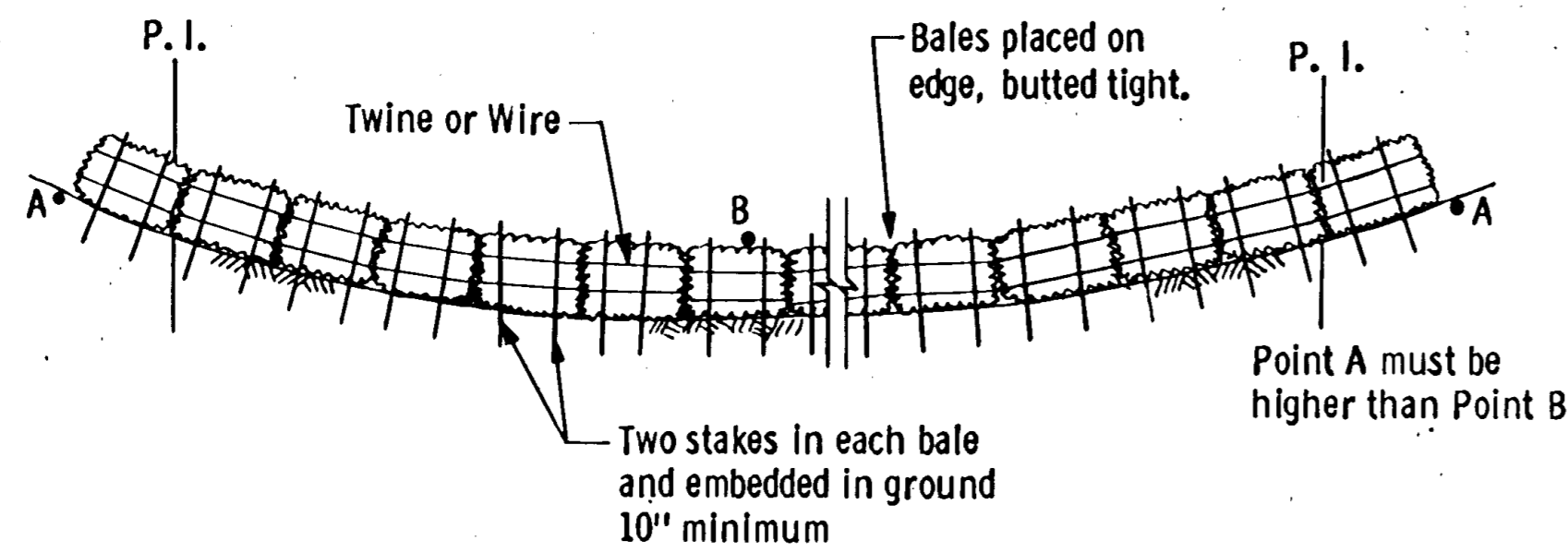
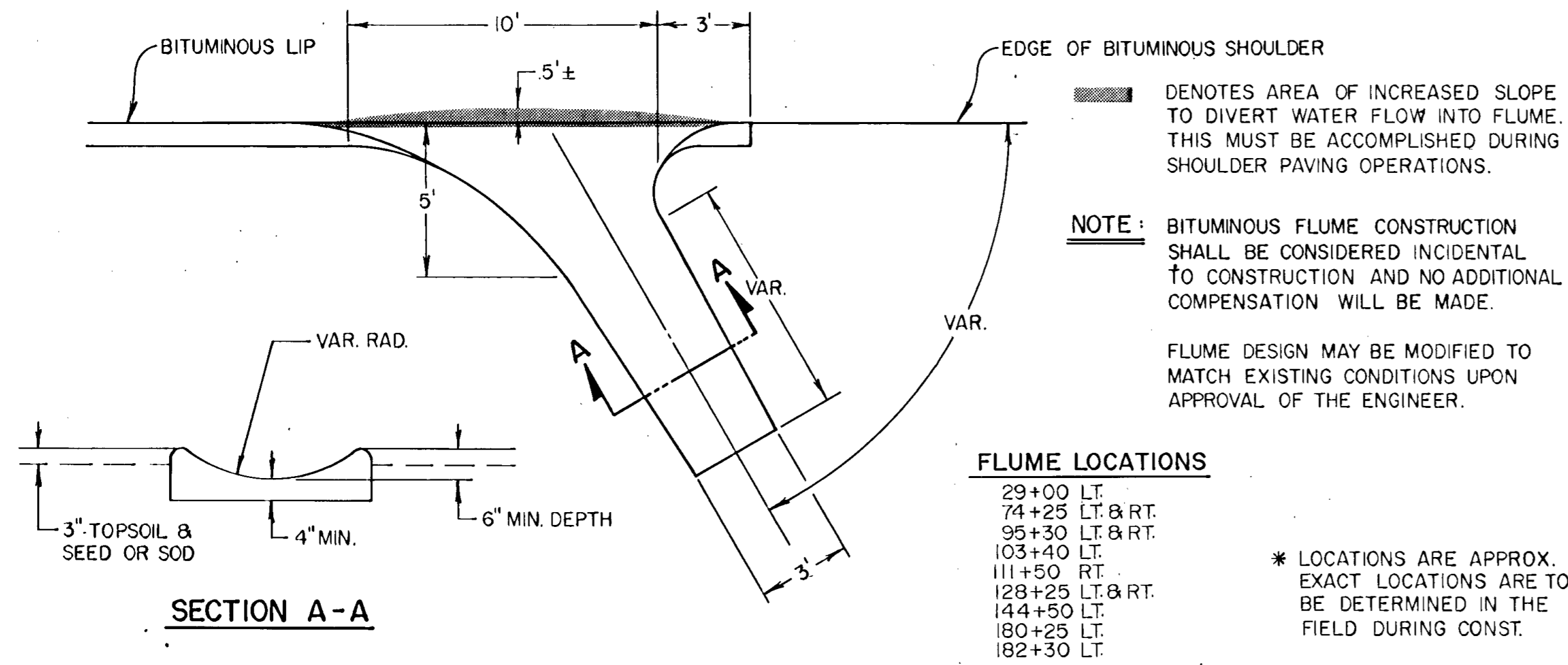
DRAINAGE

STATION	LOCATION	IN PLACE	REMARKS	REMOVE	SALVAGE	SODDING	PORTABLE CULVERTS								GROUTED RIPRAP	STATION			
				CULVERTS	CULVERTS	SQ. YD.	15" CMP	18" CMP	24" RCP	48" RCP	21" SPAN CMP-A	28" SPAN RCP-A							
				LIN. FT.	LIN. FT.		LIN. FT.	AP	LIN. FT.	AP	LIN. FT.	AP	LIN. FT.	AP			LIN. FT.	AP	
11+49	RT.					17	36	2								11+49			
14+55	RT.					17	36	2								14+55			
15+99	C/L	24"x72' CMP		72		29				64	2					15+99			
19+04	LT.					17	36	2								19+04			
20+28	LT.	15"x50' CMP	WARD LAKE ROAD	50		23			78	2						20+28			
21+63	RT.	15"x30' CMP		30		17	34	2								21+63			
23+49	LT.	12"x30' CMP	NO CULVERT REQ.	30												23+49			
25+73	LT.		NO CULVERT REQ.													25+73			
26+15	RT.					17	36	2								26+15			
27+78	LT.		NO CULVERT REQ.													27+78			
32+02	RT.					17	32	2								32+02			
33+47	RT.					17	34	2								33+47			
34+83	RT.					17	34	2								34+83			
36+02	LT.					17	32	2								36+02			
37+03	LT.		NO CULVERT REQ.													37+03			
38+67	LT.	12"x30' CMP		30		17	34	2								38+67			
39+15	RT.					17	34	2								39+15			
46+17	RT.		166TH AVE.			23			66	2						46+17			
65+85	RT.		NO CULVERT REQ.													65+85			
67+00	C/L					29										67+00			
69+08	RT.		FIELD ENT.			17	32	2						58	2	69+08			
74+27	RT.		NO CULVERT REQ.													74+27			
74+80	LT.		NO CULVERT REQ.													74+80			
80+84	RT.		170TH AVE.			23			66	2						80+84			
83+99	LT.					17	34	2								83+99			
87+33	LT.					17	32	2								87+33			
89+24	RT.					17	32	2								89+24			
91+94	LT.		BUTTERNUT ST.			23			70	2						91+94			
92+03	RT.					17	32	2								92+03			
92+50	C/L					29										92+50			
96+45	LT.		NO CULVERT REQ.											54	2	96+45			
97+02	RT.		NO CULVERT REQ.													97+02			
100+09	LT.		NO CULVERT REQ.													100+09			
100+82	RT.		3RD ST. NO CULVERT REQ.													100+82			
103+89	LT.		NO CULVERT REQ.													103+89			
104+45	LT.		NO CULVERT REQ.													104+45			
105+25	LT.		FIELD ENT. NO CULVERT REQ.													105+25			
105+52	RT.		NO CULVERT REQ.													105+52			
108+08	RT.					17	32	2								108+08			
109+17	LT.		C.R. 58 APPROACH			17	38	2								109+17			
109+33	C/L					29										109+33			
109+80	LT.					17	42	2						60	2	109+80			
109+93	RT.					17	36	2							1.7	109+93			
U 10+25	LT.		C.R. 58 APPROACH			17	42	2								U 10+25			
111+00	C/L					29										111+00			
113+37	RT.		173RD AVE. NO CULVERT REQ.											68	2	113+37			
113+46	LT.					17	36	2								113+46			
114+50	C/L					29										114+50			
125+40	RT.		FIELD ENT. NO CULVERT REQ.											50	2	125+40			
129+70	LT.		NO CULVERT REQ.													129+70			
130+00	RT.		NO CULVERT REQ.													130+00			
130+68	RT.		FIELD ENT.			17	32	2								130+68			
133+00	50' LT.		C.R. 58			23										133+00			
139+00	C/L					29										139+00			
142+96	LT.					17	32	2								142+96			
145+51	RT.		NO CULVERT REQ.													145+51			
146+42	LT.		NO CULVERT REQ.													146+42			
150+50	LT.		FIELD ENT.			17	32	2								150+50			
151+86	LT.					17	32	2								151+86			
155+50	LT.					17	32	2								155+50			
157+39	LT.					17	34	2								157+39			
157+96	RT.		POLK ST.			23			66	2						157+96			
161+97	C/L	42"x42' CMP		42		71										161+97			
164+18	LT.					17	34	2						80	2	164+18			
167+20	LT.	15"x 26' CMP		26		17	34	2								167+20			
168+51	LT.					17	36	2								168+51			
169+52	LT.					17	36	2								169+52			
171+16	LT.					17	34	2								171+16			
173+46	RT.		EXTEND CULVERT THRU													173+46			
173+63	RT.		BOTH ENTRANCES			17	38	2								173+63			
177+28	RT.		FUTURE STREET			17	44	2								177+28			
178+06	LT.		NO CULVERT REQ.													178+06			
180+74	LT.		⓪			17	140	2								180+74			
181+13	RT.		EXTEND CULVERT THRU			17	50	2								181+13			
181+31	RT.		BOTH ENTRANCES													181+31			
181+44	LT.		⓪													181+44			
182+24	LT.		NO CULVERT REQ.													182+24			
① PLACE 15" CMP CULV. 36' TO 34' LT. 180+20 TO 181+60.																			
TOTALS:				280		1041	1408	74	346	10	64	2	80	2	78	2	356	12	5.2

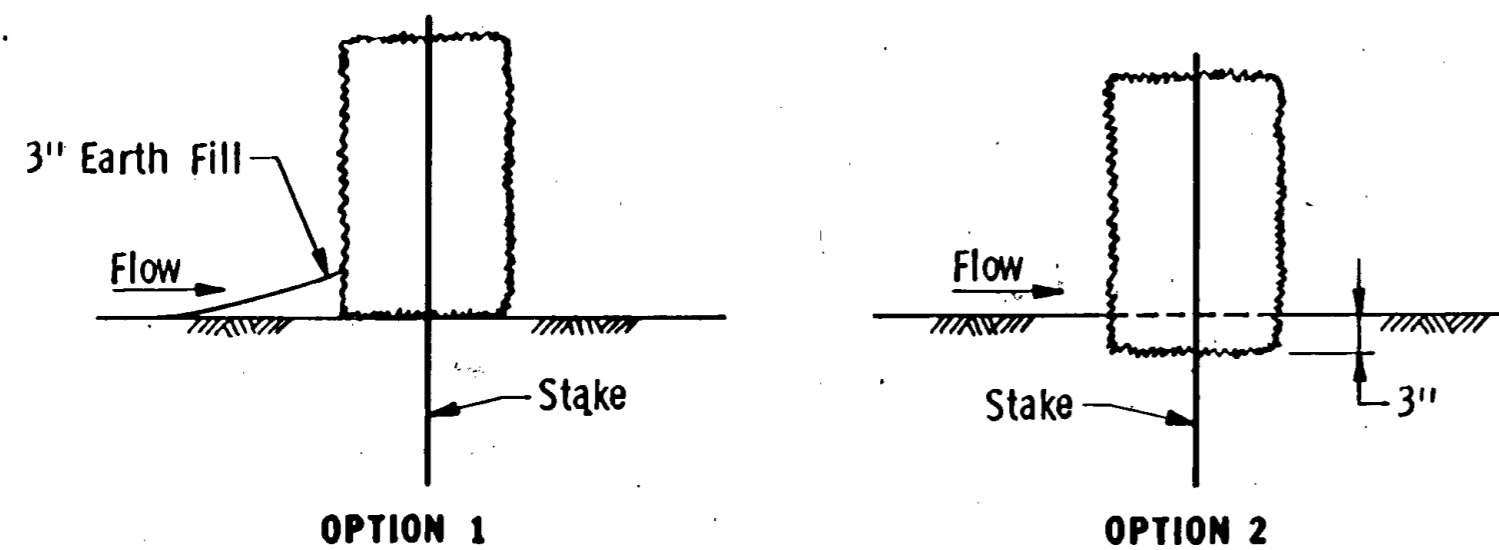
SODDING		
STATION	LOC.	S.Y.
14+00 - 15+00	RT.	194
23+00 - 29+00	LT.	991
35+00 - 39+00	LT.	978
74+00 - 76+00	LT.	421
82+50 - 84+35	LT.	730
86+43 - 88+00	LT.	337
88+00 - 92+50	RT.	1148
95+00 - 97+00	LT.	483
96+38 - 101+00	RT.	849
99+00 - 100+40	LT.	253
103+12 - 105+00	LT.	254
103+60 - 105+45	RT.	416
107+00 - 114+00	RT.	1849
127+00 - 130+00	LT.	740
128+70 - 131+00	RT.	385
142+00 - 147+00	LT.	1004
145+00 - 146+00	RT.	309
150+00 - 152+19	LT.	460
155+00 - 158+00	LT.	909
165+50 - 171+40	LT.	1496
172+00 - 174+00	RT.	335
176+55 - 178+00	LT.	507
180+15 - 183+30	LT.	633
180+48 - 183+30	RT.	714
CO. RD. 58	LT.	96
CULVERT APRONS		1041
TOTAL:		17,532

2535 BITUMINOUS CURB	
LOCATION	LIN. FT.
LT. 25+30 - 29+00	370'
LT. 74+25 - 76+00	175'
RT. 74+25 - 76+60	235'
RT. 89+70 - 90+70	100'
RT. 95+30 - 100+80	550'
LT. 95+30 - 100+00	470'
LT. 103+40 - 105+30	190'
RT. 111+50 - 113+25	175'
RT. 128+25 - 130+25	200'
LT. 128+25 - 130+25	200'
LT. 144+50 - 146+50	200'
LT. 180+25 - 181+40	115'
LT. 182+30 - 183+30	100'
TOTAL: 3080	

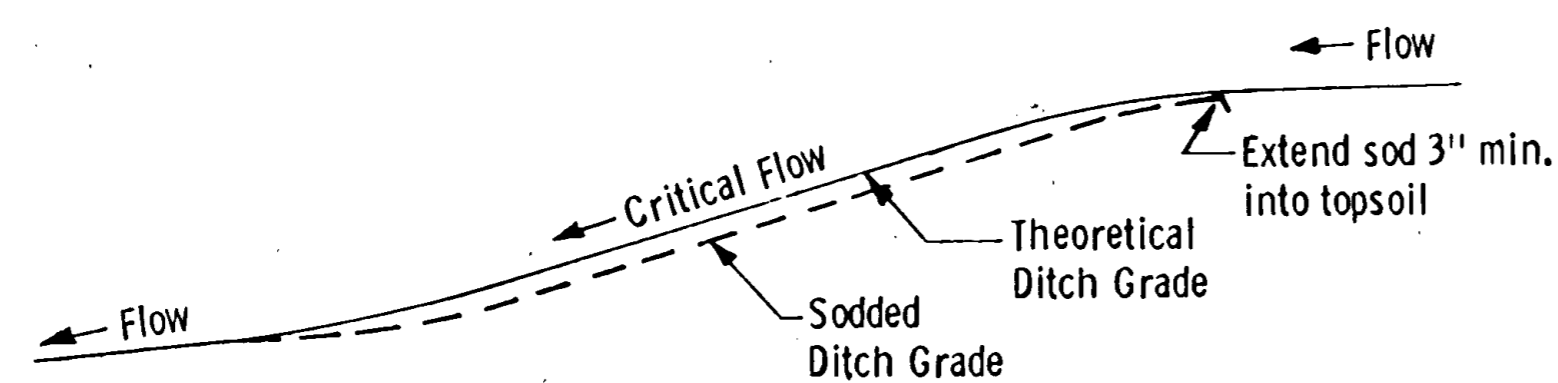
TYPICAL BITUMINOUS FLUME



BALE HAY OR STRAW DITCH CHECK



DITCH CHECK SECTIONS



DITCH PROFILE

SODDED DITCH DETAILS

CLEARING AND GRUBBING

STATION (TO STATION)	LOC.	CLEARING		GRUBBING	
		TREE	ACRE	TREE	ACRE
11+22	28' LT.	1		1	
11+63	33' RT.	1			
13+19 - 14+38	LT.		0.10		0.10
17+78 - 20+65	LT.		0.20		0.20
21+63 - 23+85	LT.		0.15		0.15
24+15 - 25+00	LT.		0.05		0.05
25+43	32' LT.	1		1	
26+02	57' LT.	1		1	
26+52	40' LT.	1		1	
26+83	48' RT.	1		1	
27+02	27' LT.	1		1	
27+25 - 30+81	LT.		0.25		0.25
28+07	27' RT.	1		1	
28+27	47' RT.	1		1	
28+36	42' RT.	1		1	
28+80	27' RT.	1		1	
28+91	27' RT.	1		1	
31+20 - 32+80	RT.		0.15		0.15
31+54	33' LT.	1		1	
32+75	34' LT.	2		1	
32+87 - 33+41	RT.		0.05		0.05
33+53 - 34+21	RT.		0.10		0.10
35+20	38' LT.	1		1	
39+07 - 39+62	RT.		0.05		0.05
40+85 - 41+05	RT.		0.05		0.05
41+29 - 42+60	RT.		0.10		0.10
43+49 - 44+30	RT.		0.10		0.10
52+42 - 54+62	LT.		0.25		0.25
56+17 - 56+58	LT.		0.05		0.05
57+47 - 65+73	RT.		0.70		0.70
61+38 - 61+70	LT.		0.05		0.05
62+30 - 64+30	LT.		0.15		0.15
65+97 - 68+77	RT.		0.25		0.25
66+20 - 67+65	LT.		0.10		0.10
74+08	RT.	1		1	
74+41	RT.	1		1	
74+55	RT.	3		1	
74+80	RT.	1		1	
75+10 - 77+64	RT.		0.20		0.20
77+31 - 77+59	LT.		0.05		0.05
79+34 - 79+60	RT.		0.05		0.05
82+70	35' RT.	1		1	
85+19	29' RT.	1		1	
86+16	31' RT.	1		1	
86+23	28' RT.	1		1	
86+72 - 86+98	LT.		0.05		0.05
86+80	38' RT.	1		1	
86+91	30' RT.	1		1	
86+97	43' RT.	0		1	
87+13	35' RT.	1		1	
88+02	32' RT.	1		1	
88+11 - 90+97	LT.		0.15		0.15
88+34	34' RT.	1		1	
88+44	27' RT.	1		1	
88+59	27' RT.	1		1	
89+49	45' RT.	0		1	
89+59	59' RT.	0		1	
90+31	30' RT.	1		1	
90+56	36' RT.	1		1	
90+61	36' RT.	0		1	
90+61	42' RT.	1		1	
90+71	36' RT.	1		1	
90+80	42' RT.	1		1	
90+97	42' RT.	1		1	
91+31	34' RT.	1		1	
91+41	34' RT.	0		1	
92+23	35' RT.	4		1	
94+56 - 96+60	RT.		0.20		0.20
97+19	28' RT.	1		1	
97+39	32' RT.	1		1	
97+79	35' RT.	1		1	
97+90	35' RT.	1		1	
98+03	35' RT.	1		1	
98+12	35' RT.	0		1	

CLEARING AND GRUBBING

STATION (TO STATION)	LOC.	CLEARING		GRUBBING	
		TREE	ACRE	TREE	ACRE
98+84	36' RT.	1		1	
98+93	36' RT.	1		1	
99+36	30' RT.	1		1	
102+25 - 102+61	LT.		0.05		0.05
103+61	40' RT.	1		1	
103+62	40' RT.	1		1	
103+72	40' RT.	1		1	
104+29	40' LT.	1		1	
104+64	32' LT.	1		1	
108+34	43' RT.	1		1	
109+28	38' RT.	1		1	
110+55	57' RT.	1		1	
110+96	36' RT.	1		1	
111+92	41' RT.	1		1	
112+09	39' RT.	1		1	
112+11	39' RT.	1		1	
112+88	42' RT.	1		1	
113+06	35' RT.	1		1	
113+37	59' RT.	1		1	
114+80 - 122+17	RT.		0.85		0.85
123+65	LT.	1		1	
125+61 - 128+58	RT.		0.15		0.15
125+89	39' RT.	2		1	
126+78	39' LT.	1		1	
127+02	39' LT.	1		1	
127+66	39' LT.	1		1	
127+84	39' LT.	1		1	
128+06	42' LT.	1		1	
128+27	42' LT.	1		1	
128+46	38' LT.	1		1	
129+85	38' LT.	0		1	
130+00	48' LT.	1		1	
130+13	38' LT.	1		1	
130+17	29' LT.	1		1	
130+33	33' LT.	1		1	
130+28	42' RT.	1		1	
130+64	46' LT.	1		1	
131+40 - 133+82	RT.		0.00		0.20
140+54 - 140+82	LT. & RT.		0.05		0.05
151+03	46' LT.	1		1	
151+13	46' LT.	1		1	
151+30	46' LT.	1		1	
151+39	46' LT.	3		1	
151+54	46' LT.	1		1	
151+67	46' LT.	1		1	
151+97	46' LT.	1		1	
152+46	47' LT.	5		1	
152+61	44' LT.	3		1	
153+05	52' LT.	0		1	
159+86 - 172+00	RT.		0.25		0.25
166+06	39' LT.	1		1	
172+18	44' RT.	0		1	
172+46	43' LT.	2		1	
172+58	38' RT.	1		1	
172+75	38' RT.	2		1	
172+89	34' RT.	1		1	
172+90	50' LT.	1		1	
173+15	32' RT.	1		1	
173+23	27' RT.	1		1	
174+13	36' RT.	1		1	
175+64	27' LT.	1		1	
175+80	53' LT.	2		1	
179+76 - 180+36	RT.		0.05		0.05
180+62	35' RT.	1		1	
180+72	34' RT.	1		1	
180+88	35' RT.	1		1	
181+39	40' RT.	1		1	
182+14 - 182+70	RT.		0.05		0.05
TOTALS:		119	5.75	110	5.95

BM 20 ELEV 90893
TOP NE COR BOTTOM STEP
EAST STEPS OF CHURCH

BM 22 ELEV 90600
DBL SPIKE IN 12' OAK
90' LT. STA 21+75

BM 23 ELEV 90966
TOP SE COR BOTTOM STEP
LT. 28+00 *16358

BM 24 ELEV 90310
DBL SPIKE IN DBL 10' BIRCH
75' LT. STA 35+30

BEGIN PROJECT S&P 02-618-16
POT STA 10+120

CONSTRUCT RT TURN LANE LT
STA 10+50 TO 15+00

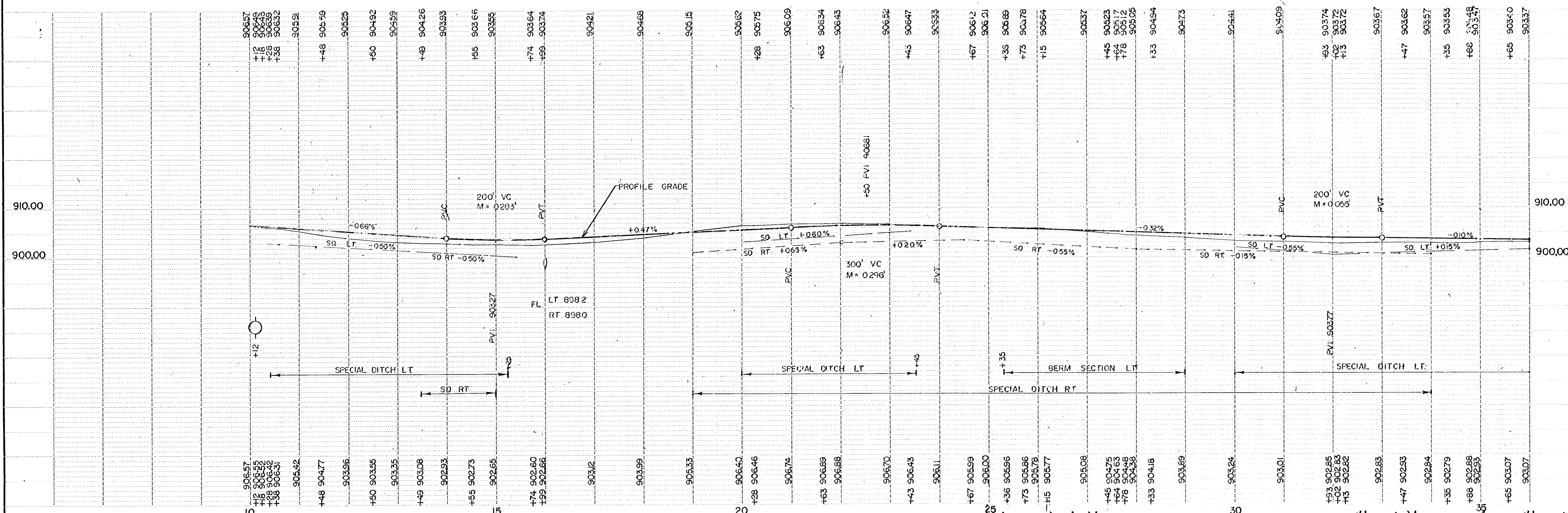
BM 21 ELEV 90284
DBL SPIKE IN PP
30' RT, 15+00

CONST BY PASS LANE
16+60 TO 22+70 RT
PI. 19+77.56
 $\Delta = 39^\circ - 24' - 10''$ RT
D = 4° - 30'
T = 455.92
L = 875.61

CONST RT TURN LANE
LT 20+40 TO 25+80

NOTE
NOTIFY MINN PIPELINE
WHEN GRADING IN AREA OF
PIPE CROSSING. CALL -
612-459-2424

STA 33+42 @ 33+59 42' RT.
REMOVE TWO STONE PILLARS

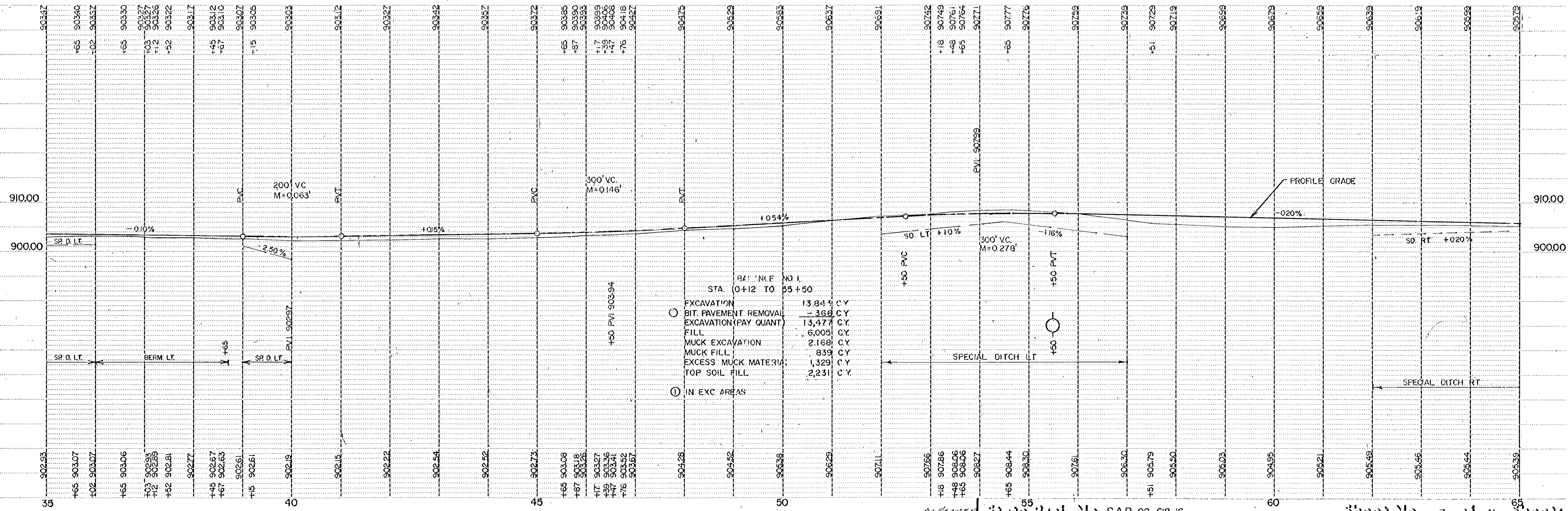
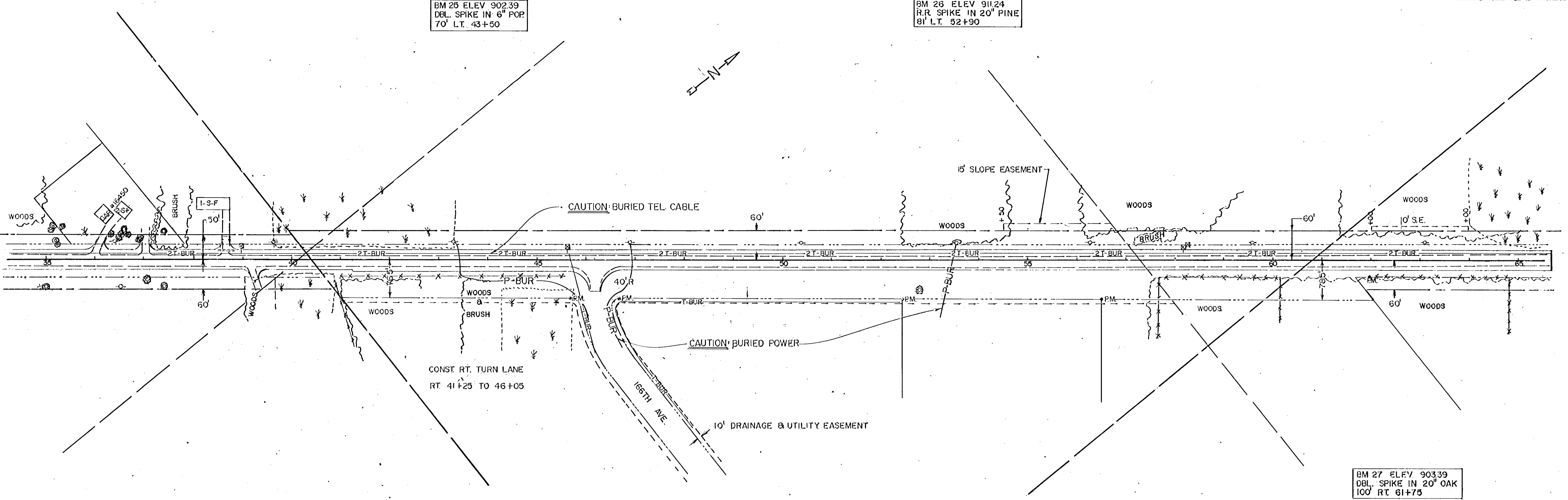


TRANSMITTED TO: JANSSEN PLAN - MAGALL - 1224
 DATE: 11/11/16

BM 25 ELEV 902.39
DBL. SPIKE IN 6" POP
70' LT. 43+50

BM 26 ELEV 911.24
R.R. SPIKE IN 20" PINE
81' LT. 52+90

BM 27 ELEV 903.39
DBL. SPIKE IN 20" OAK
100' RT. 61+75



BALANCE NO. 1
STA. 0+12 TO 55+50

EXCAVATION	13,843 C.Y.
BIT. PAVEMENT REMOVAL	366 C.Y.
EXCAVATION (PAY QUANT)	13,477 C.Y.
FILL	6,005 C.Y.
MUCK EXCAVATION	2,168 C.Y.
MUCK FILL	839 C.Y.
EXCESS MUCK MATERIAL	1,329 C.Y.
TOP SOIL FILL	2,231 C.Y.
IN EXC. AREAS	

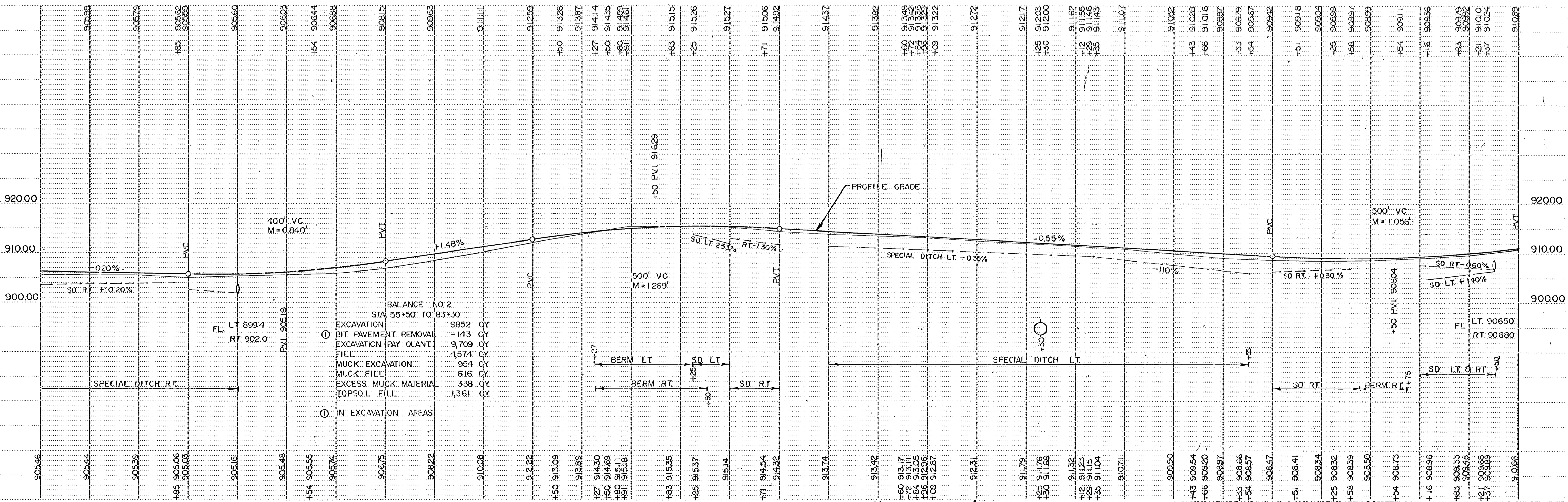
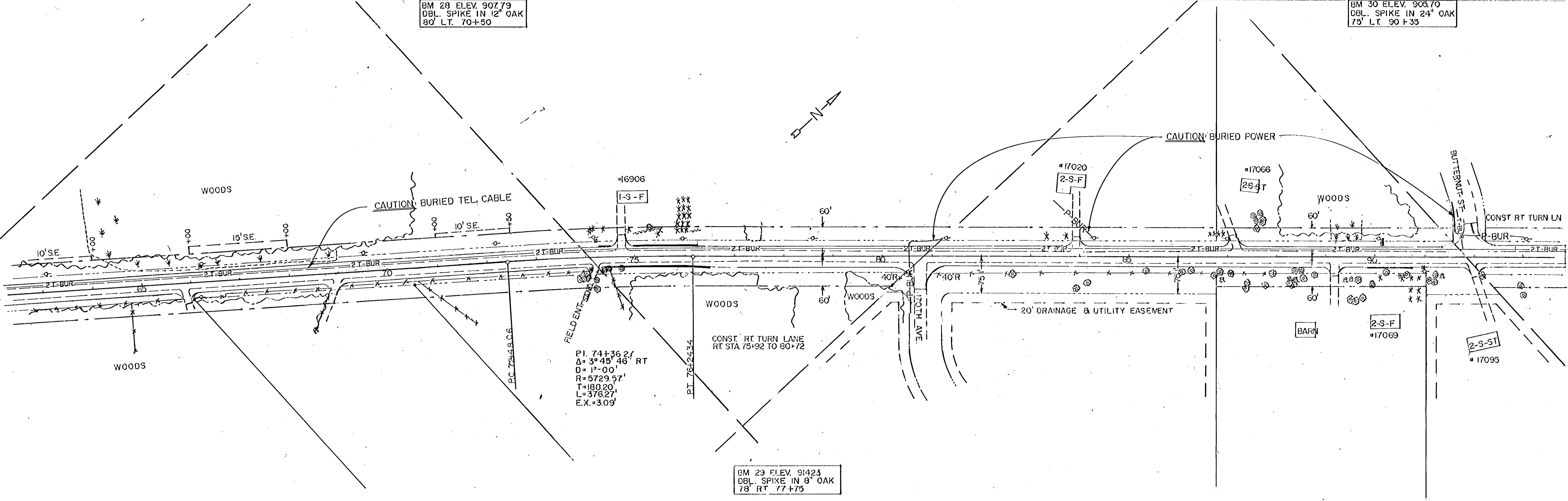
0.15

ILLUSTRATION: SANCHEZ, PARRINELLO, & ASSOCIATES, INC.

BM 28 ELEV. 907.79
DBL. SPIKE IN 12" OAK
80' LT. 70+50

BM 30 ELEV. 905.70
DBL. SPIKE IN 24" OAK
75' LT. 90+35

BM 29 ELEV. 914.23
DBL. SPIKE IN 8" OAK
78' RT. 77+75



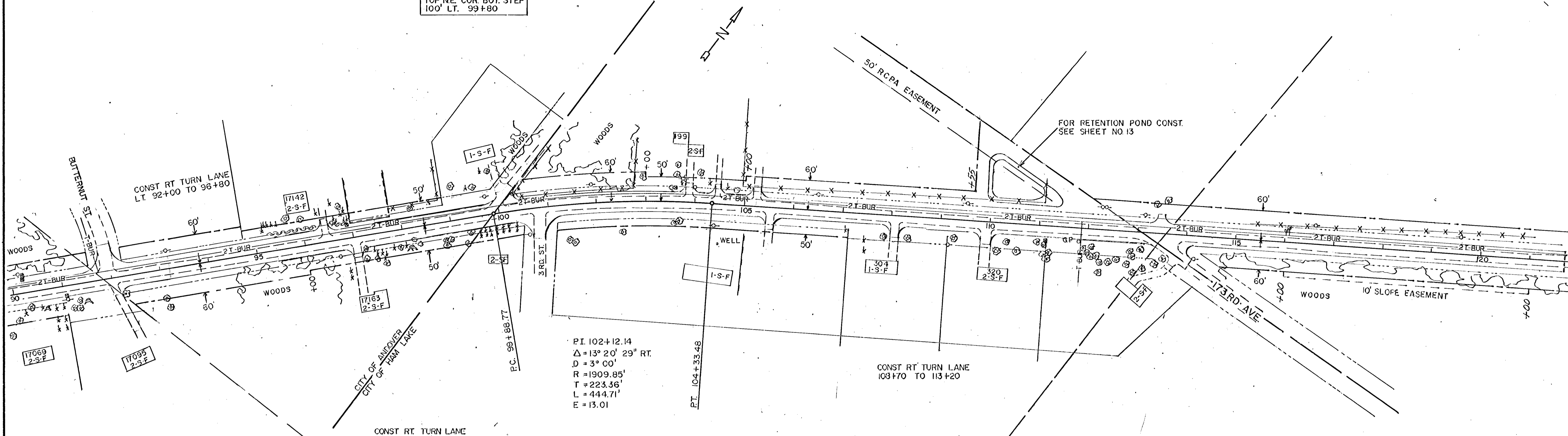
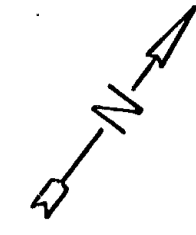
BALANCE NO. 2
STA. 55+50 TO 83+30

EXCAVATION	9852	CY
BIT. PAVEMENT REMOVAL	-143	CY
EXCAVATION PAY. QUANT.	9,709	CY
FILL	1,574	CY
MUCK EXCAVATION	954	CY
MUCK FILL	616	CY
EXCESS MUCK MATERIAL	338	CY
TOPSOIL FILL	1,361	CY
IN EXCAVATION AFFAS		

State Proj. No. S.A.P. 02-618-16 Sheet No. 8 of 41 Sheets

Rev. 11-2-82 17

BM 31 ELEV 921.33
TOP NE COR BOT STEP
100' LT. 99+80



PI. 102+12.14
Δ = 13° 20' 29" RT.
D = 3° 00'
R = 1909.85'
T = 223.36'
L = 444.71'
E = 13.01

BM 32 ELEV 915.49
TOP NW COR. BOT. STEP
75' RT. 107+00

BM 33 ELEV. 918.47
RR SPIKE IN 20' OAK
75' RT. 116+00

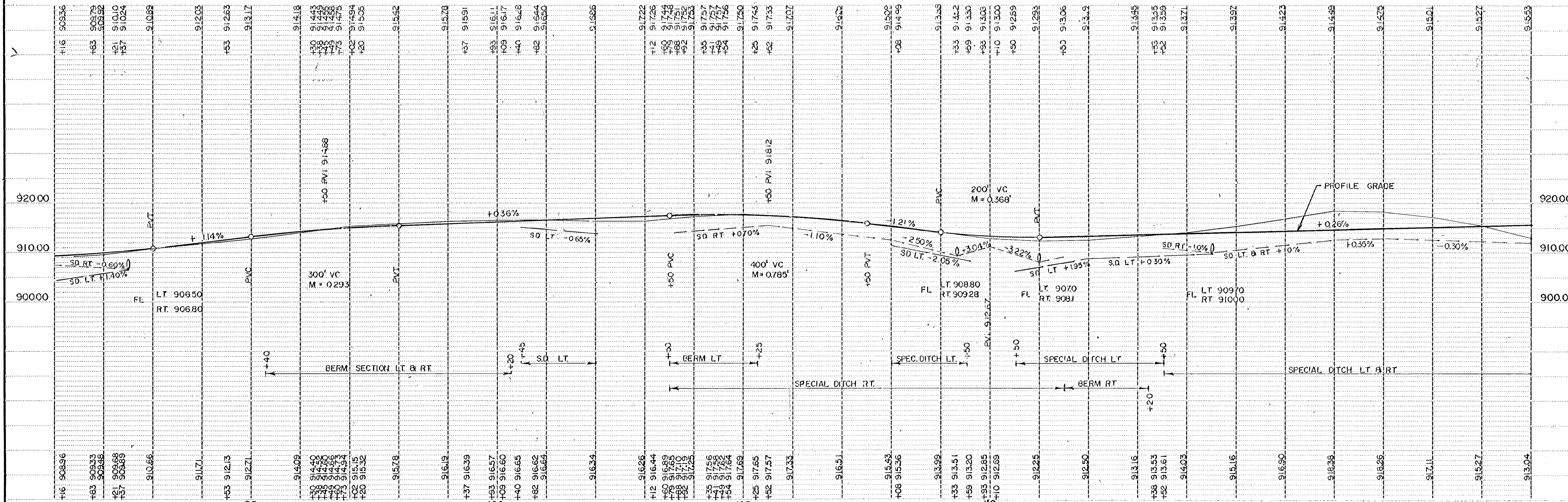
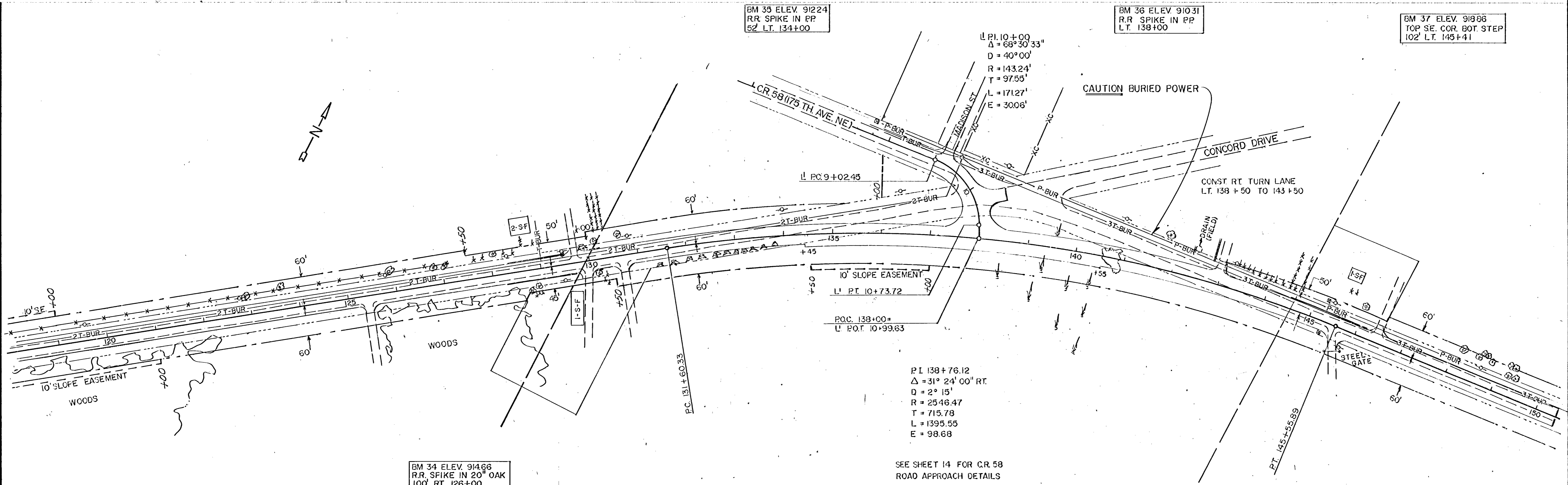


ILLUSTRATION: J. SANCHEZ, DRAWN: M. SCHULZ, 11/20/04

BM 35 ELEV. 91224
R.R. SPIKE IN PP
52' LT. 134+00

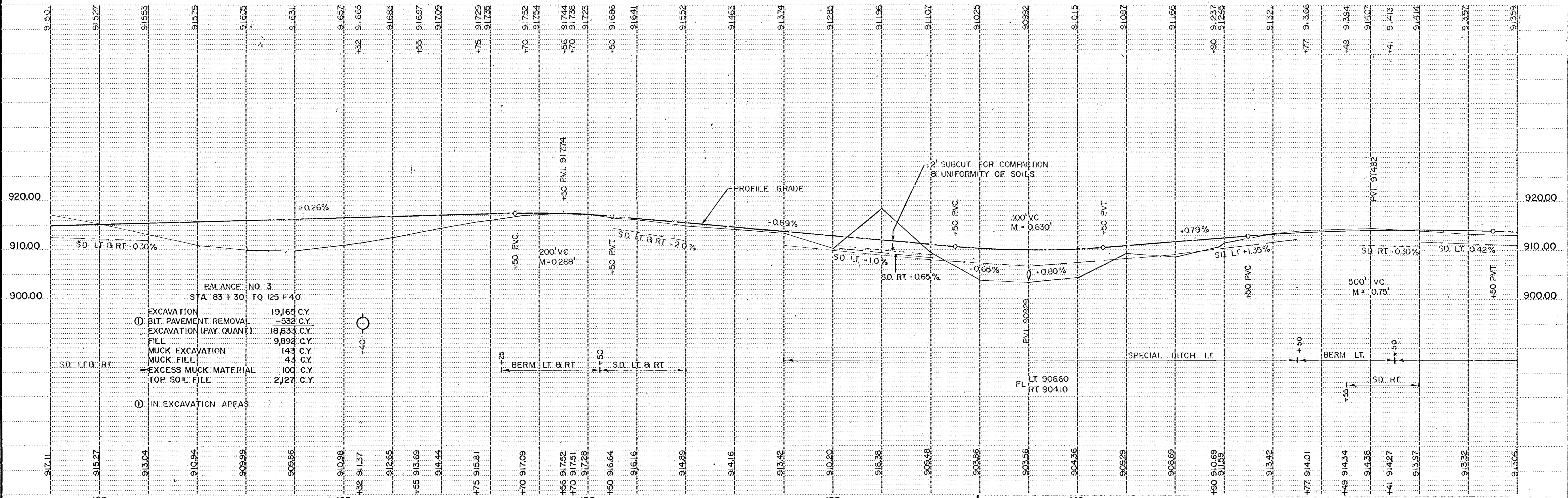
BM 36 ELEV. 91031
R.R. SPIKE IN PP
LT. 138+00

BM 37 ELEV. 91886
TOP SE. COR. BOT. STEP
102' LT. 145+41



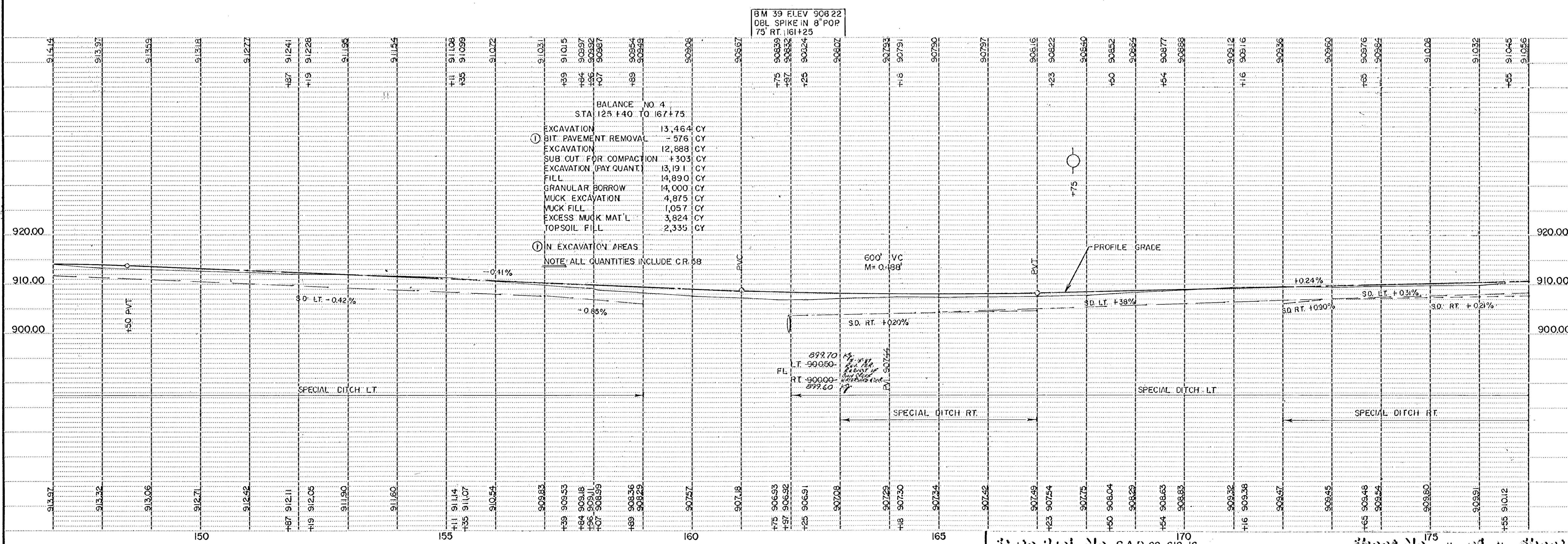
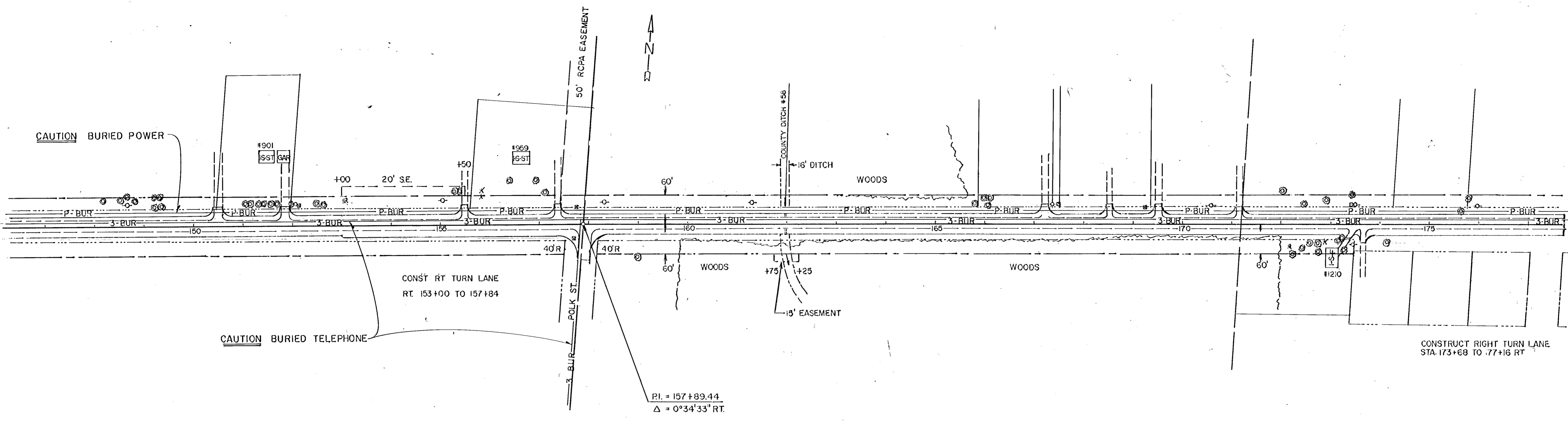
BM 34 ELEV. 91466
R.R. SPIKE IN 20" OAK
100' RT. 128+00

SEE SHEET 14 FOR CR 58
ROAD APPROACH DETAILS



BM 38 ELEV 916.31
TOP SE. COR. BOT. STEP
129' LT. STA. 151+30 # 901

BM 40 ELEV 915.10
TOP SE. COR. BOT. STEP
200' LT. STA. 168+36 # 1135



BALANCE NO. 4
STA. 128+40 TO 167+75

EXCAVATION	13,464	CY
BIT. PAVEMENT REMOVAL	-576	CY
EXCAVATION	12,888	CY
SUB. CUT. FOR COMPACTION	+303	CY
EXCAVATION (PAY QUANT)	13,191	CY
FILL	14,890	CY
GRANULAR BORROW	14,000	CY
MUCK EXCAVATION	4,875	CY
MUCK FILL	1,057	CY
EXCESS MUCK MAT'L	3,824	CY
TOPSOIL FILL	2,335	CY

① IN EXCAVATION AREAS
NOTE: ALL QUANTITIES INCLUDE C.R. 58

BM 39 ELEV 906.22
DBL SPIKE IN B' POP
75' RT. STA. 161+25

BM. 41 ELEV. 910.86
TOP SE COR. SILL OF BLDG.
LT 67 STA. 177+79

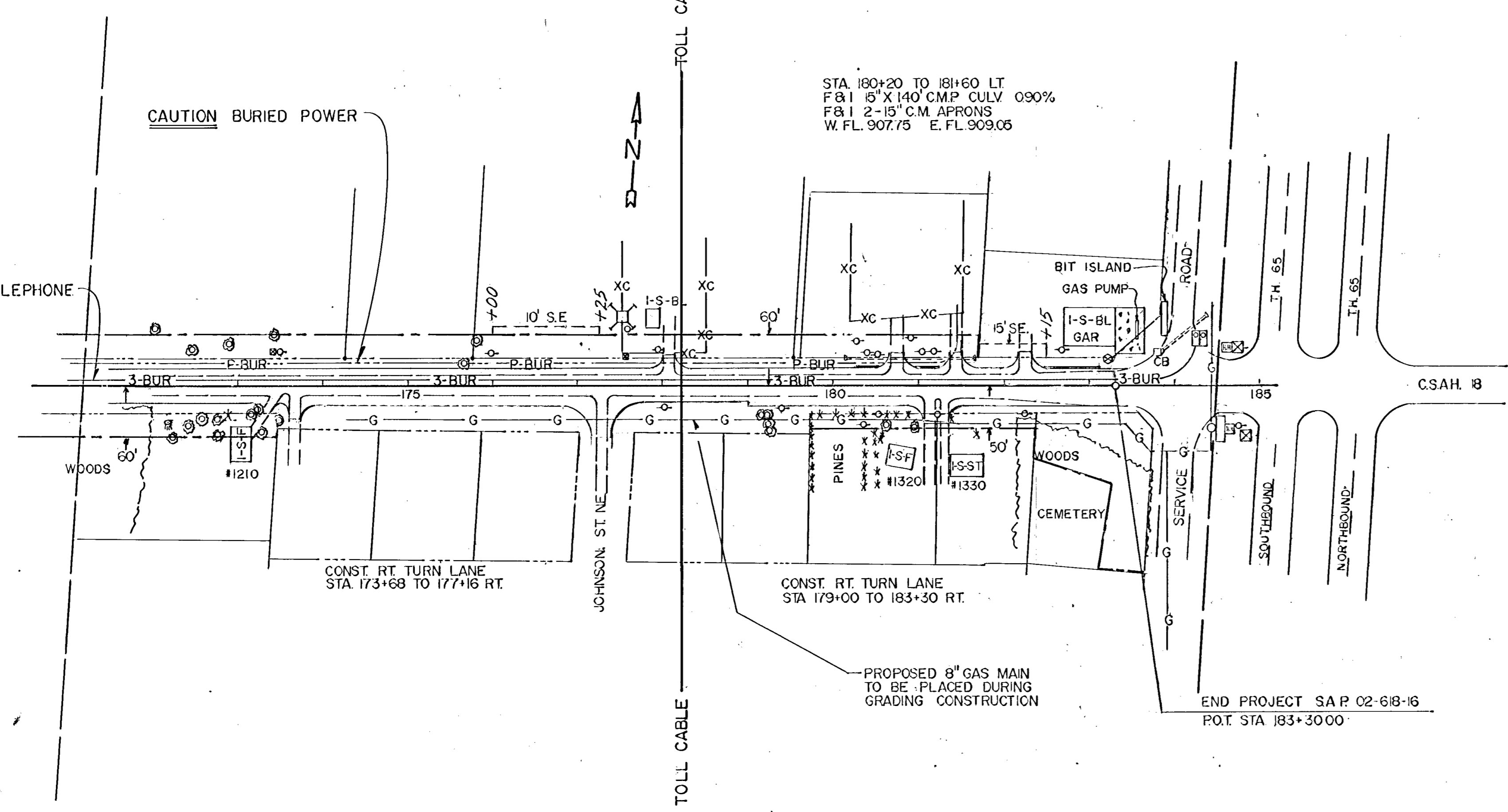
BM. 42 ELEV. 914.67
TOP SW COR WINDOW WELL
WEST WINDOW STA 182+75

STA 180+20 TO 181+60 LT
F&I 15" X 140' CMP CULV 0.90%
F&I 2-15" C.M. APRONS
W. FL. 907.75 E. FL. 909.05

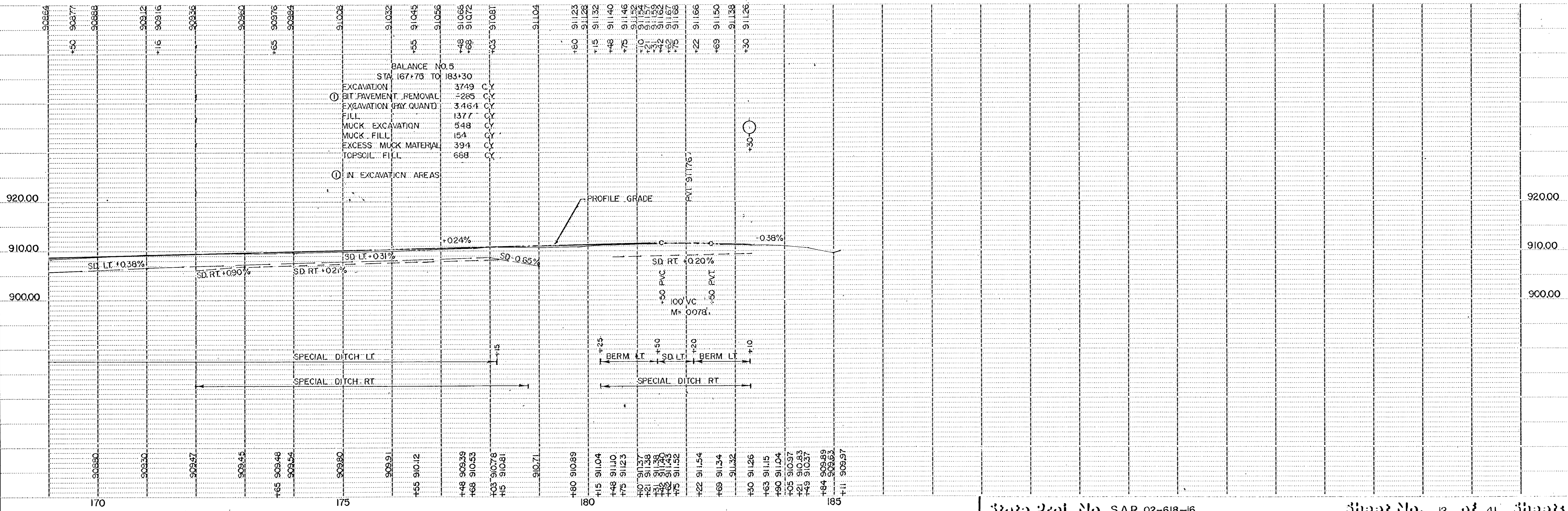
CAUTION BURIED TELEPHONE

CAUTION BURIED POWER

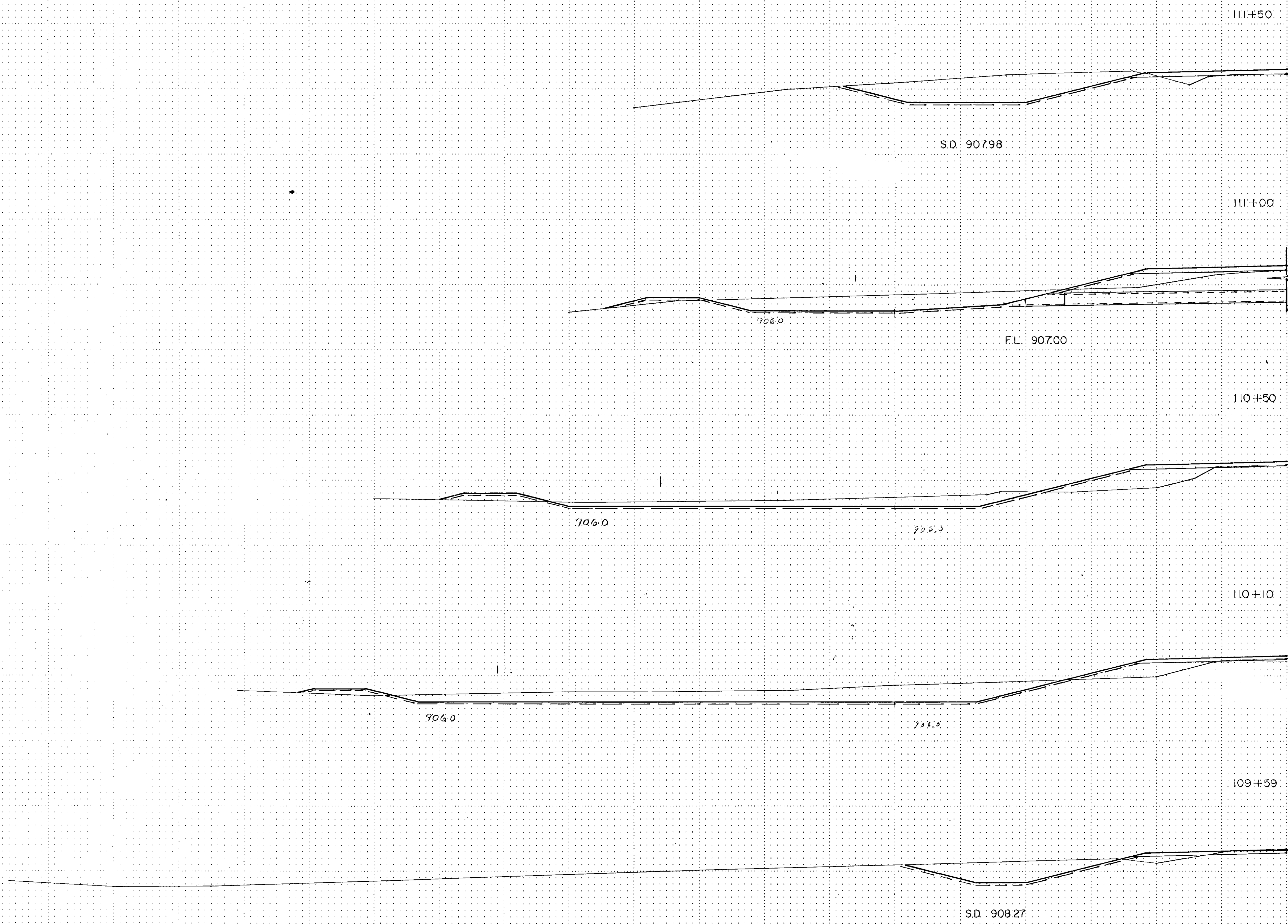
TOLL CABLE



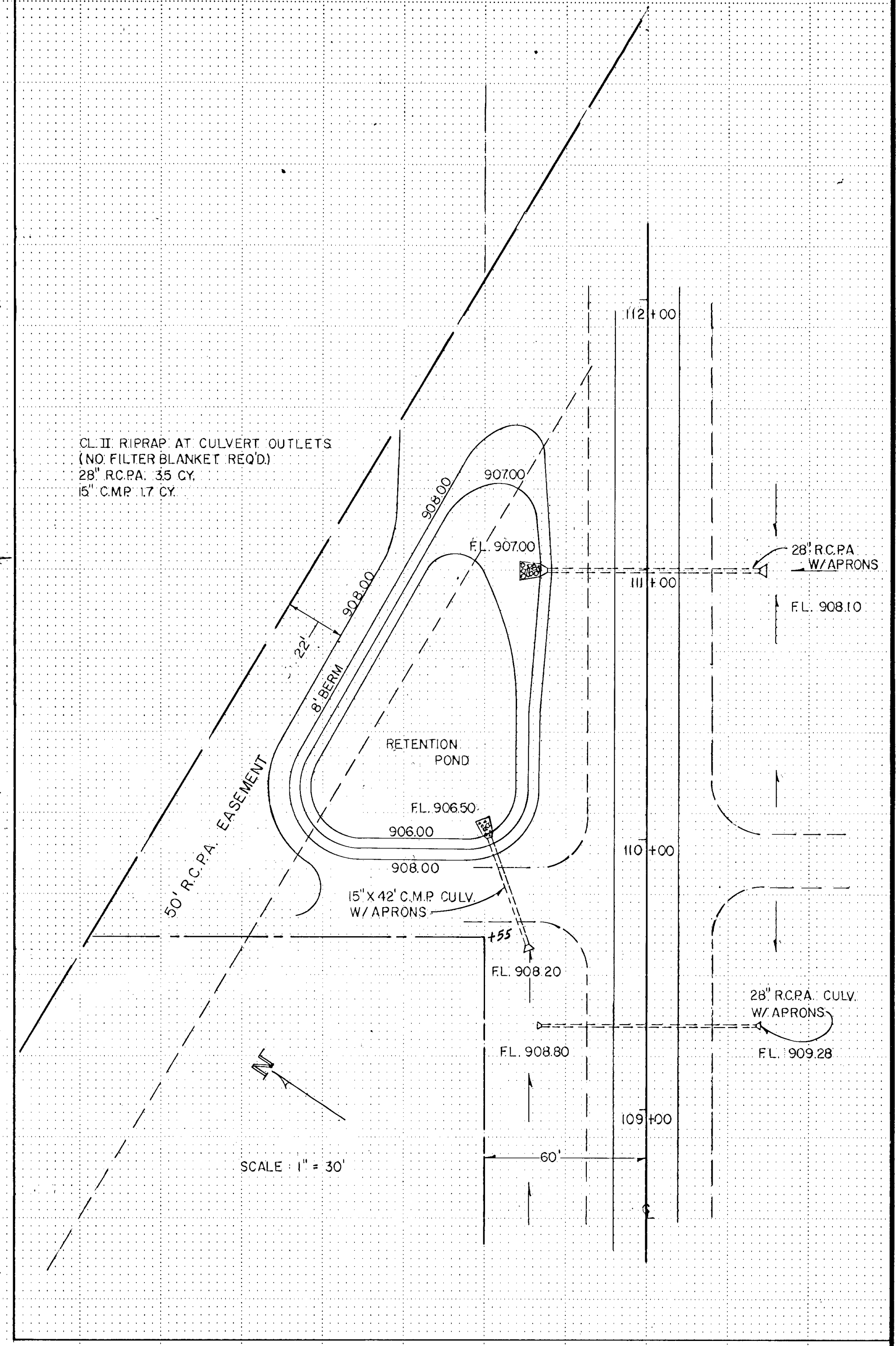
END PROJECT S.A.P. 02-618-16
P.O.T. STA 183+30.00



DRAWING POST - SANJUL KUAN - PADILL - 11/24

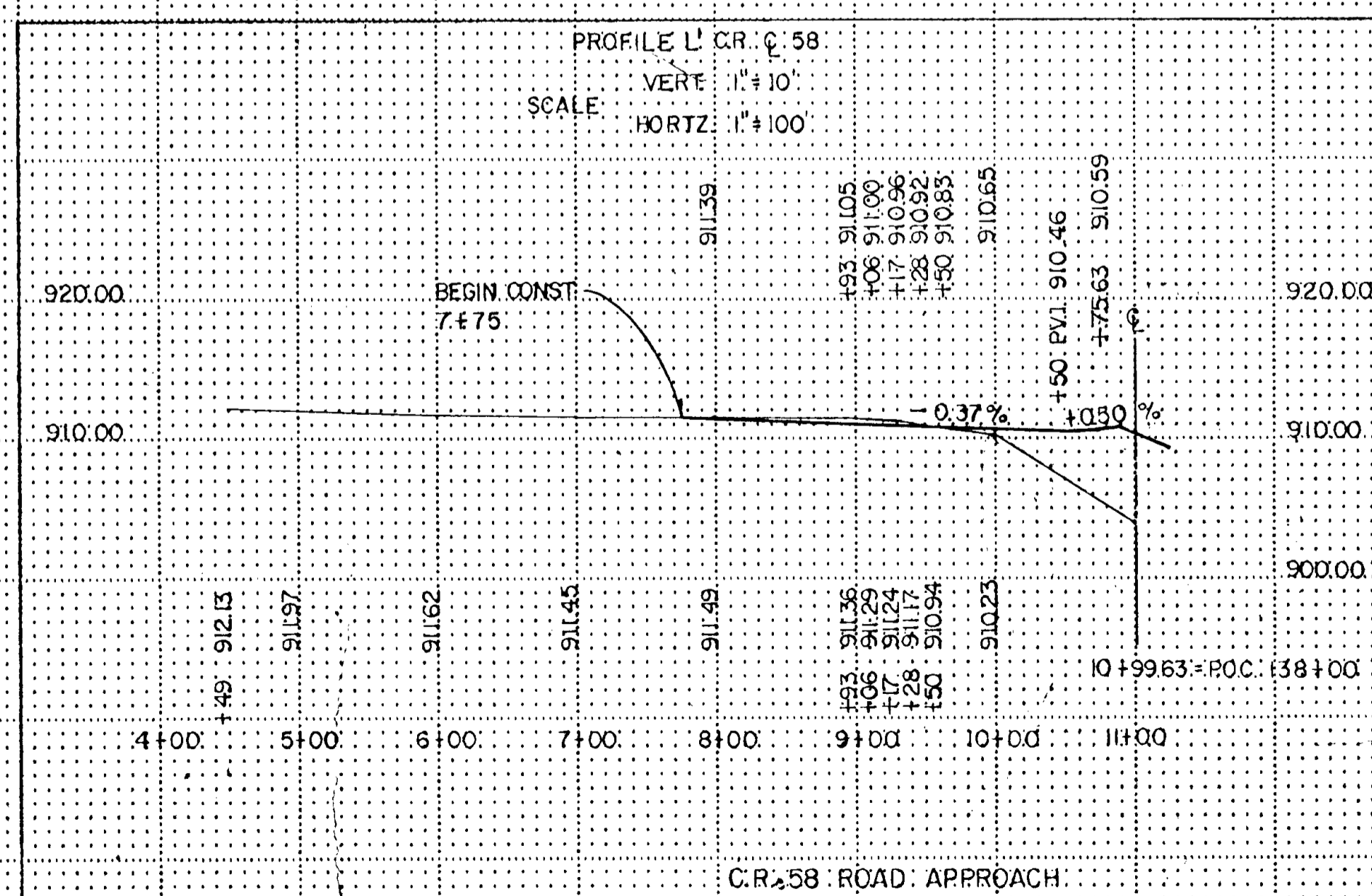
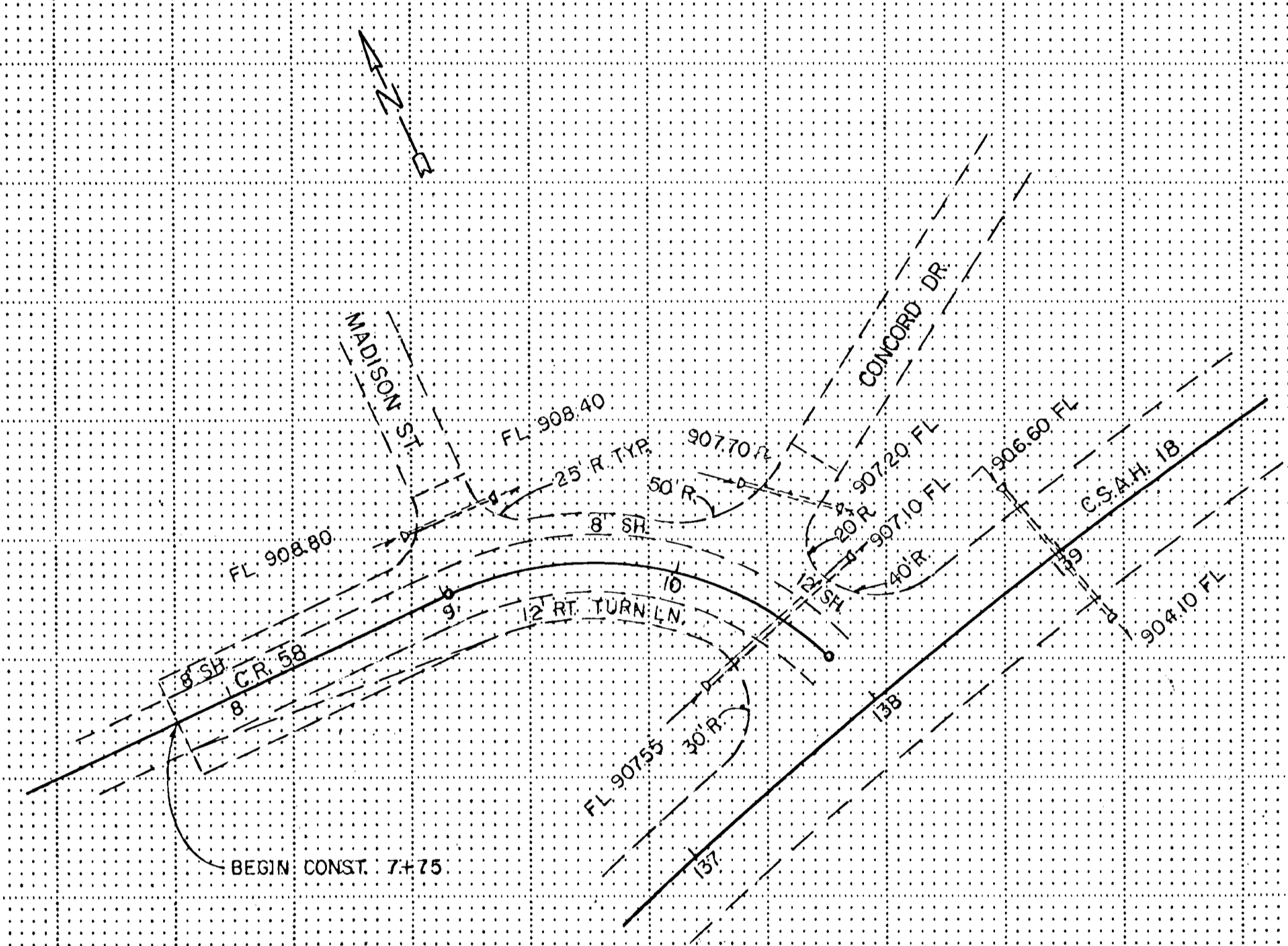
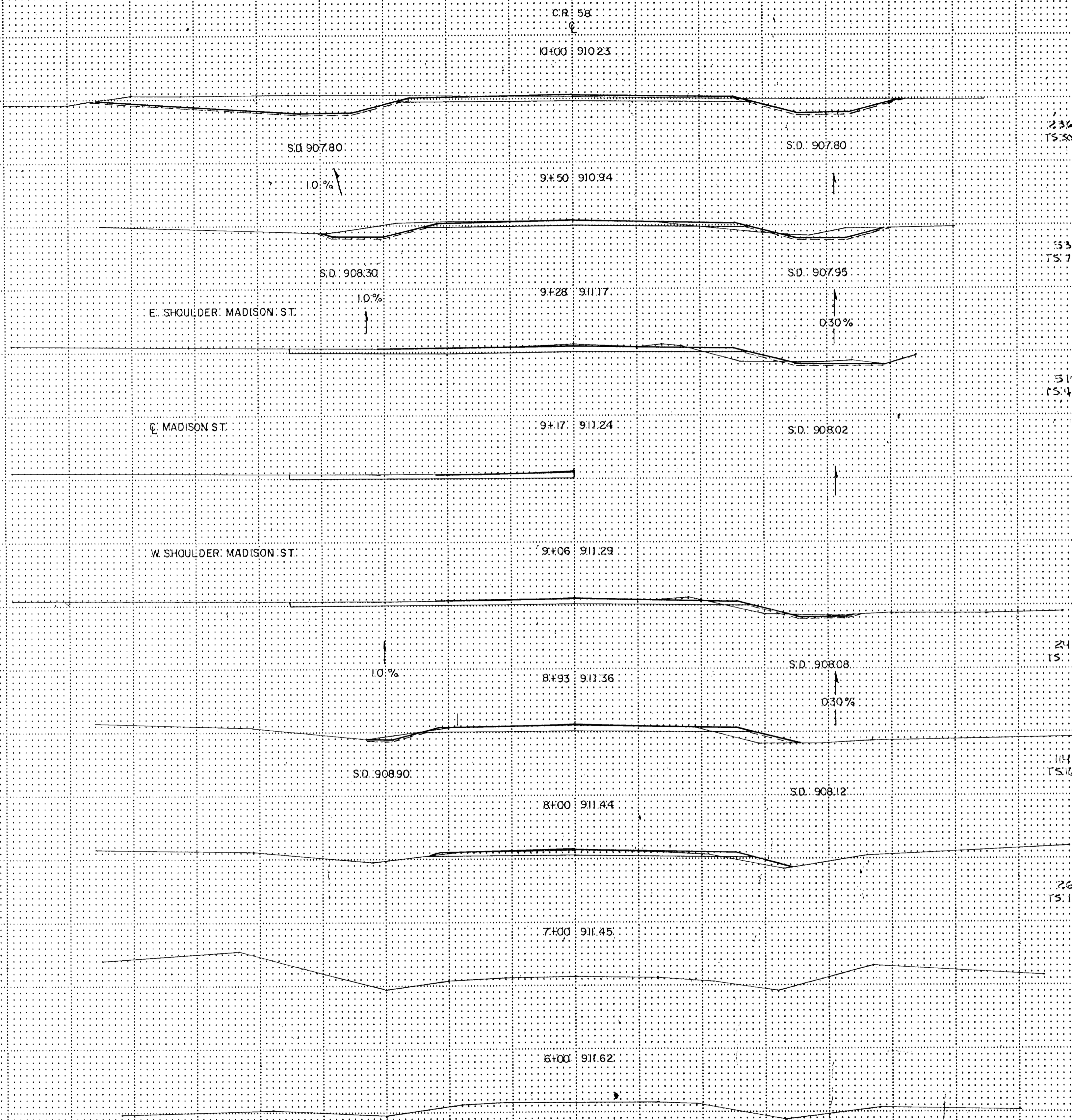


NOTE: ALL EXCAVATION QUANTITIES INCLUDED FOR PAYMENT WITH COMMON EXCAVATION, BALANCE NO. 3. EXCESS EXCAVATION MATERIAL SHALL BE USED AS ROADWAY FILL.

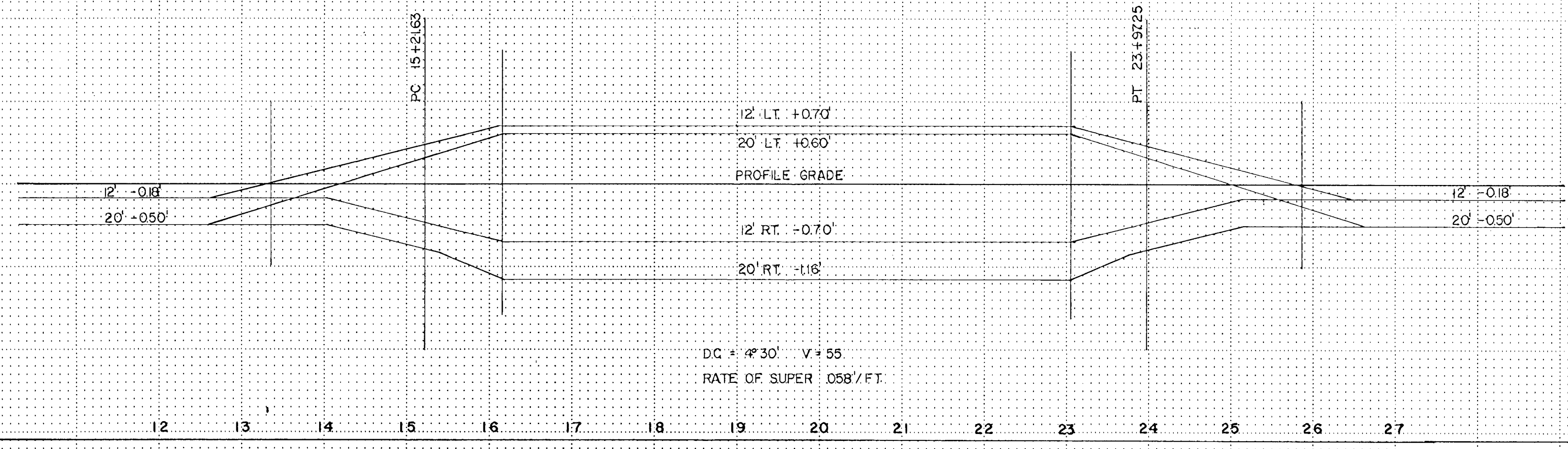
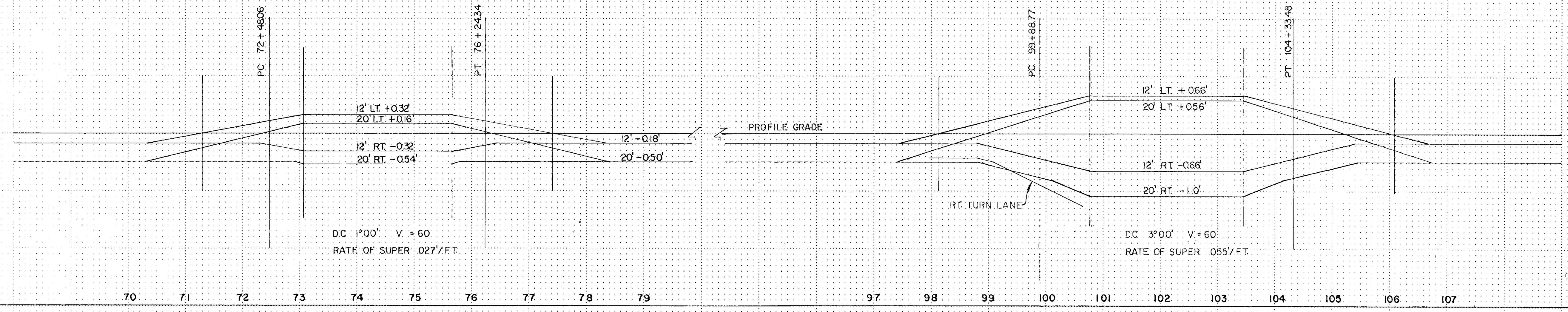
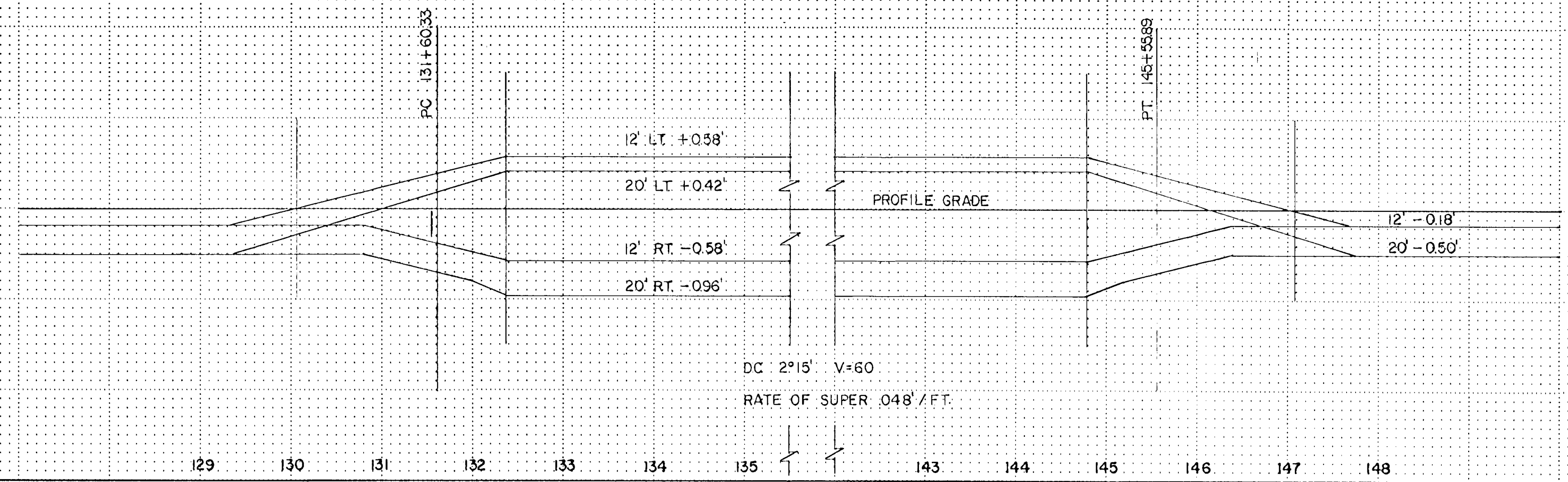


RETENTION POND, LT. 109+75 TO 111+50

EXCAVATION EMBANKMENT



SUPERELEV. CHARTS



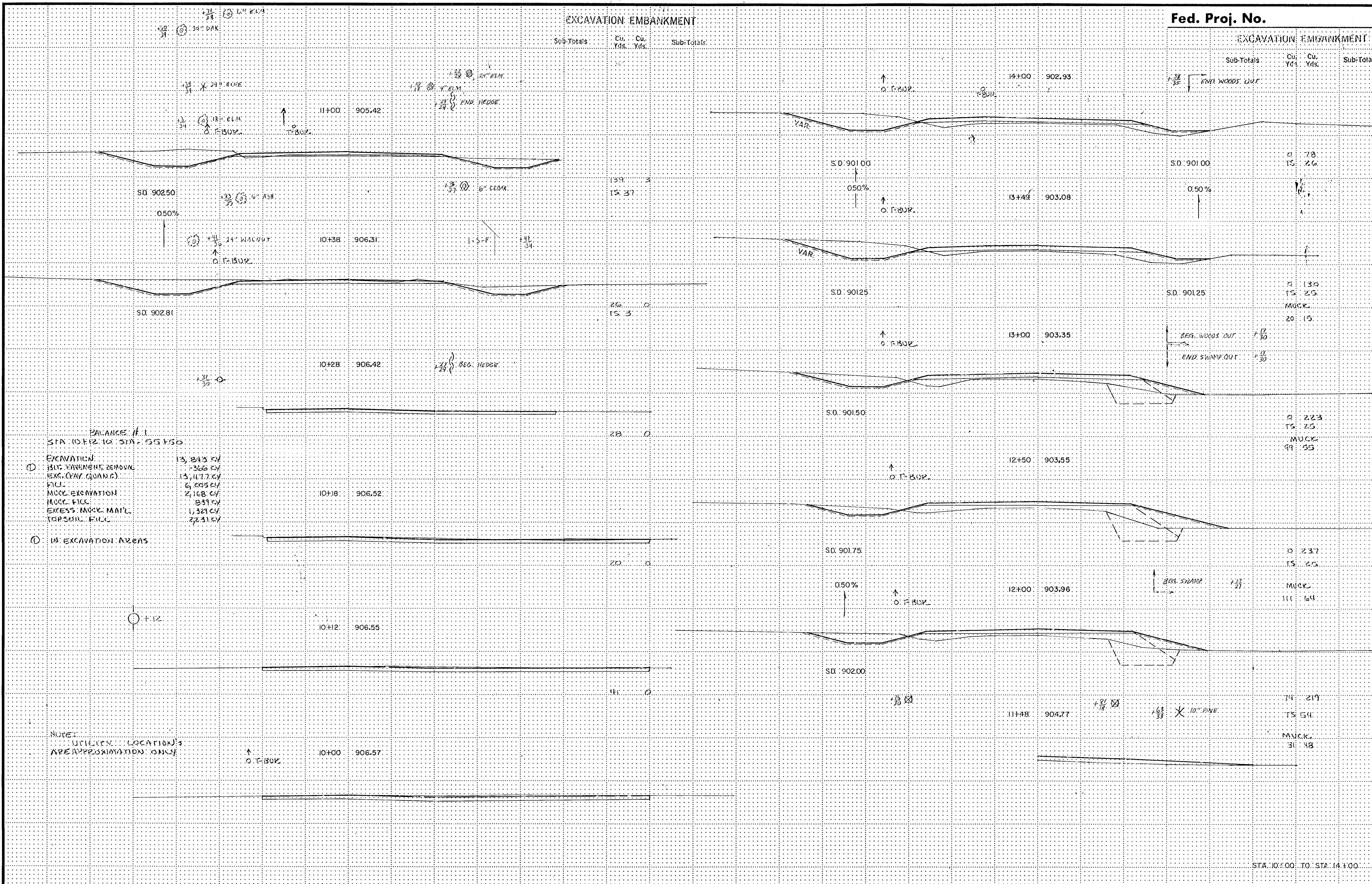
EXCAVATION EMBANKMENT

Fed. Proj. No.

Sub-Totals Cu. Yds. Cu. Yds. Sub-Totals

EXCAVATION EMBANKMENT

Sub-Totals Cu. Yds. Cu. Yds. Sub-Totals



BALANCE # 1
 STA. 10+12 TO STA. 55+50
 EXCAVATION
 BIT. FINEMENT, REMOVE
 EXG. (PAY QUANT.)
 FILL
 MUCK EXCAVATION
 MUCK FILL
 EXCESS MUCK MATL.
 TOPSOIL FILL

IN EXCAVATION AREAS

NOTE:
 UTILITY LOCATION'S
 ARE APPROXIMATION ONLY

STA. 10+00 TO STA. 14+00

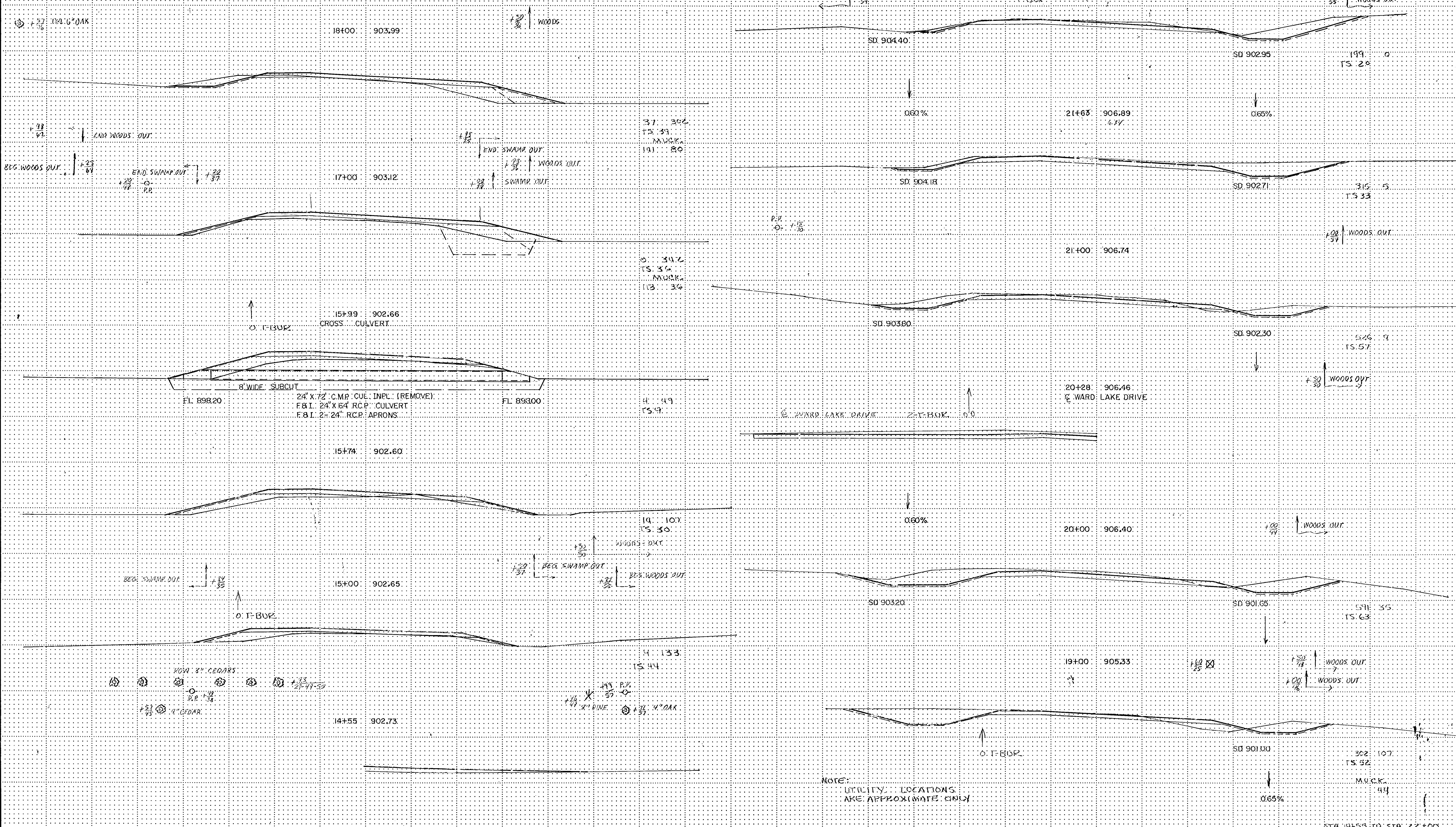
EXCAVATION EMBANKMENT

Fed. Proj. No.

EXCAVATION EMBANKMENT

Sub-Totals Cu. Yds. Cu. Yds. Sub-Totals

Sub-Totals Cu. Yds. Cu. Yds. Sub-Totals

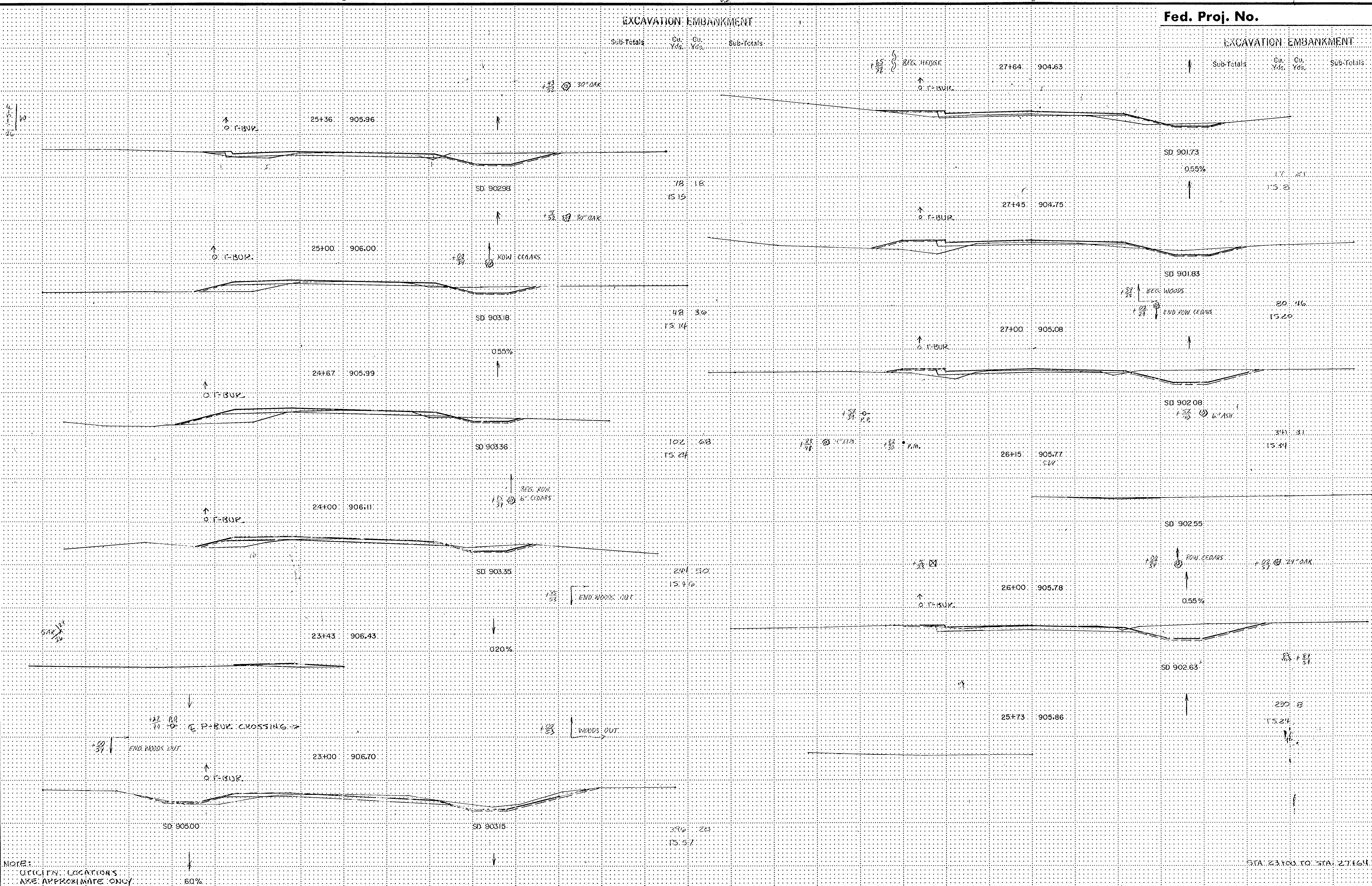


NOTE: UTILITY LOCATIONS ARE APPROXIMATE ONLY

STA. 14+55 TO STA. 22+00

EXCAVATION EMBANKMENT

Fed. Proj. No.



NOTE:
UTILITY LOCATIONS
ARE APPROXIMATE ONLY

STA. 23+00 TO STA. 27+64

State Proj. No. S.A.P. 02-618-16

Sheet No. 18 of 41 Sheets

EXCAVATION EMBANKMENT

Fed. Proj. No.

EXCAVATION EMBANKMENT

Sub-Totals Cu. Yds. Cu. Yds. Sub-Totals

Sub-Totals Cu. Yds. Cu. Yds. Sub-Totals

BEG. WOODS OUT

WOODS OUT

BEG. SWAMP OUT
END. WOODS OUT

O.T. BUR.

O.T. BUR.

31+00 903.01

34+00 902.84

S.D. 90135

S.D. 90108

S.D. 90110

S.D. 90063

0.55%

O.T. BUR.

30+00 903.24

33+47 902.93

S.D. 90190

89830 2" PIPE X-INGS STA. 29+57 & 29+73
MINN. PIPE LINE. CALL BEFORE DIGGING
459-2424 ASK FOR JEFF WOODBURN

S.D. 90123

WOODS OUT

O.T. BUR.

33+00 902.83

3'x3' STONE PILLER
TIME TAKE OUT

O.T. BUR.

29+00 903.89

WOODS OUT

S.D. 90095

S.D. 90078

BEG. ROW PINE 3"

6" ELM
3" ELM
2" ELM
4" ELM
8" ELM
16" BUSH

S.D. 90138

WOODS

O.T. BUR.

32+13 902.82

DBL 8" BIRCH
BEG. WOODS OUT
8" OAK

END HEDGE
BEG. HEDGE
12" ELM

12" ELM

S.D. 90148

S.D. 90082

S.D. 90091

12" ELM

O.T. BUR.

28+00 904.38

WOODS OUT

WOODS

O.T. BUR.

32+02 902.83

HEDGE OUT

S.D. 90153

O.T. BUR.

31+93 902.85

27+78 904.48

S.D. 90084

S.D. 90094

NOTE: UTILITY LOCATIONS ARE APPROXIMATION ONLY

209.90
TS 46
STA. 27+78 TO STA. 34+00

50

50

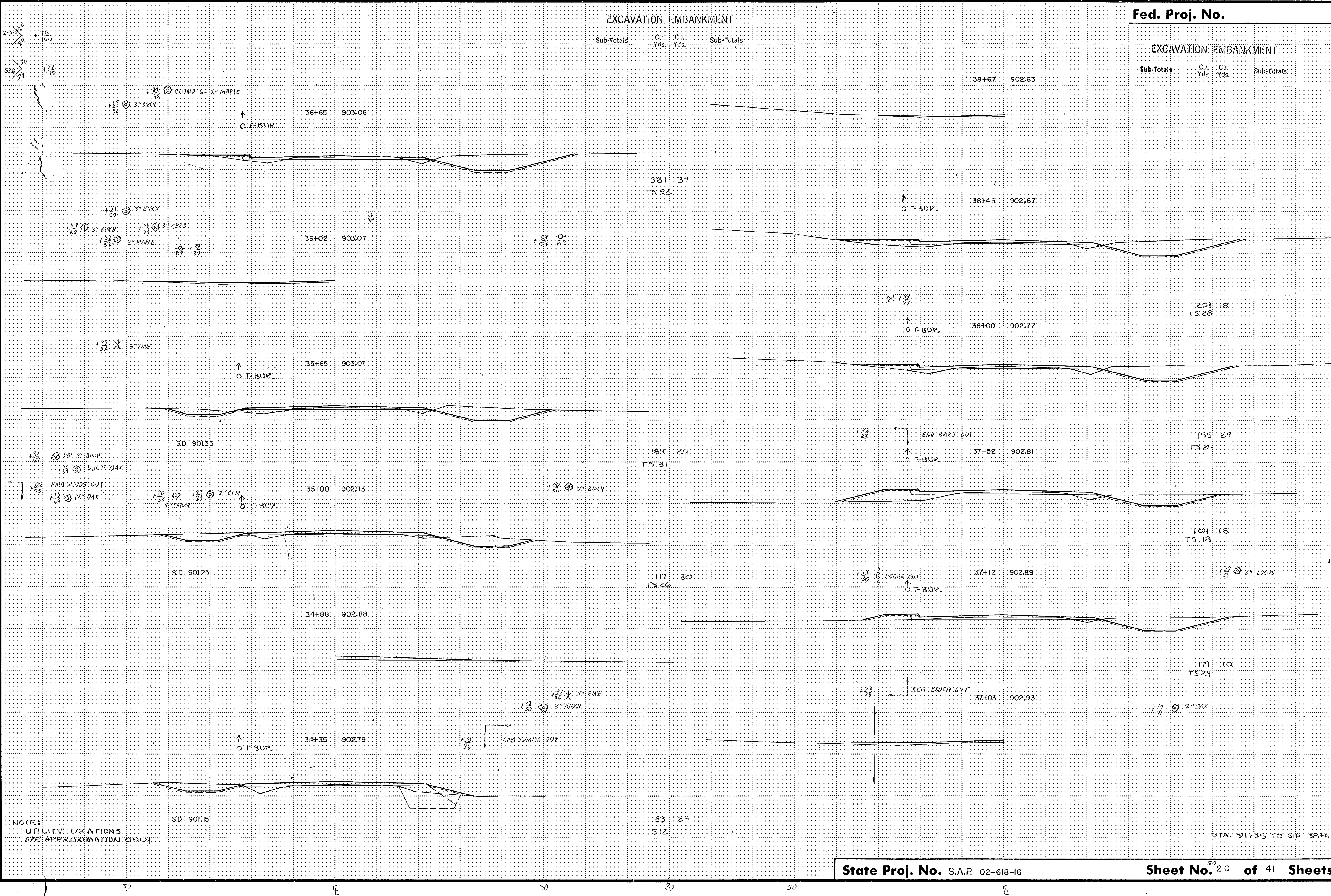
50

50

50

50

EXCAVATION EMBANKMENT



Sub-Totals	Cu. Yds.	Cu. Yds.	Sub-Totals

EXCAVATION EMBANKMENT

Sub-Totals	Cu. Yds.	Cu. Yds.	Sub-Totals

NOTE:
UTILITY LOCATIONS
ARE APPROXIMATION ONLY

STA. 34+35 TO STA. 38+67

EXCAVATION EMBANKMENT

Fed. Proj. No.

Sub-Totals Cu. Yds. Cu. Yds. Sub-Totals

EXCAVATION EMBANKMENT

Sub-Totals Cu. Yds. Cu. Yds. Sub-Totals

43+00 902.94
 O.T. BUR.
 P.B. CROSSING
 END SWAMP OUT

41+00 902.15
 FENCE
 END WOODS
 +50
 30-40

42+00 902.22
 SWAMP OUT
 O.T. BUR.

41+00 902.15
 FENCE
 WOODS
 +50
 37-50

41+00 902.15
 SWAMP OUT
 O.T. BUR.

40+00 902.19
 FENCE
 REG. SWAMP OUT
 END SWAMP
 SWAMP OUT

40+00 902.19
 O.T. BUR.

39+15 902.61
 REG. SWAMP OUT
 END SWAMP
 END WOODS OUT

39+15 902.61
 REG. SWAMP OUT

39+00 902.61
 O.T. BUR.
 REG. SWAMP OUT
 END WOODS OUT

39+00 902.61
 O.T. BUR.

44+00 902.52
 FENCE
 BEGIN SWAMP OUT
 WOODS BRUSH OUT

91 465
 1539
 MUCK
 281 78

0 350
 1533
 MUCK
 346 117

0 465
 1531
 MUCK
 322 131

143 263
 1543
 MUCK
 108 74

203 18
 1532

46+17 903.27

46+00 903.26
 O.T. BUR.

45+87 903.18

45+87 903.18
 O.T. BUR.
 KING

45+65 903.08
 O.T. BUR.

45+00 902.73
 O.T. BUR.
 END FENCE

44+00 902.52
 O.T. BUR.

98 55
 1518
 MUCK
 16 8

74 157
 END SWAMP OUT

171 184
 1533
 MUCK
 132 20

261 294
 1557
 MUCK
 221 19

108 274
 1548
 MUCK
 180 28

NOTE:
 OTHER LOCATIONS
 ARE APPROXIMATION ONLY

SD 90198

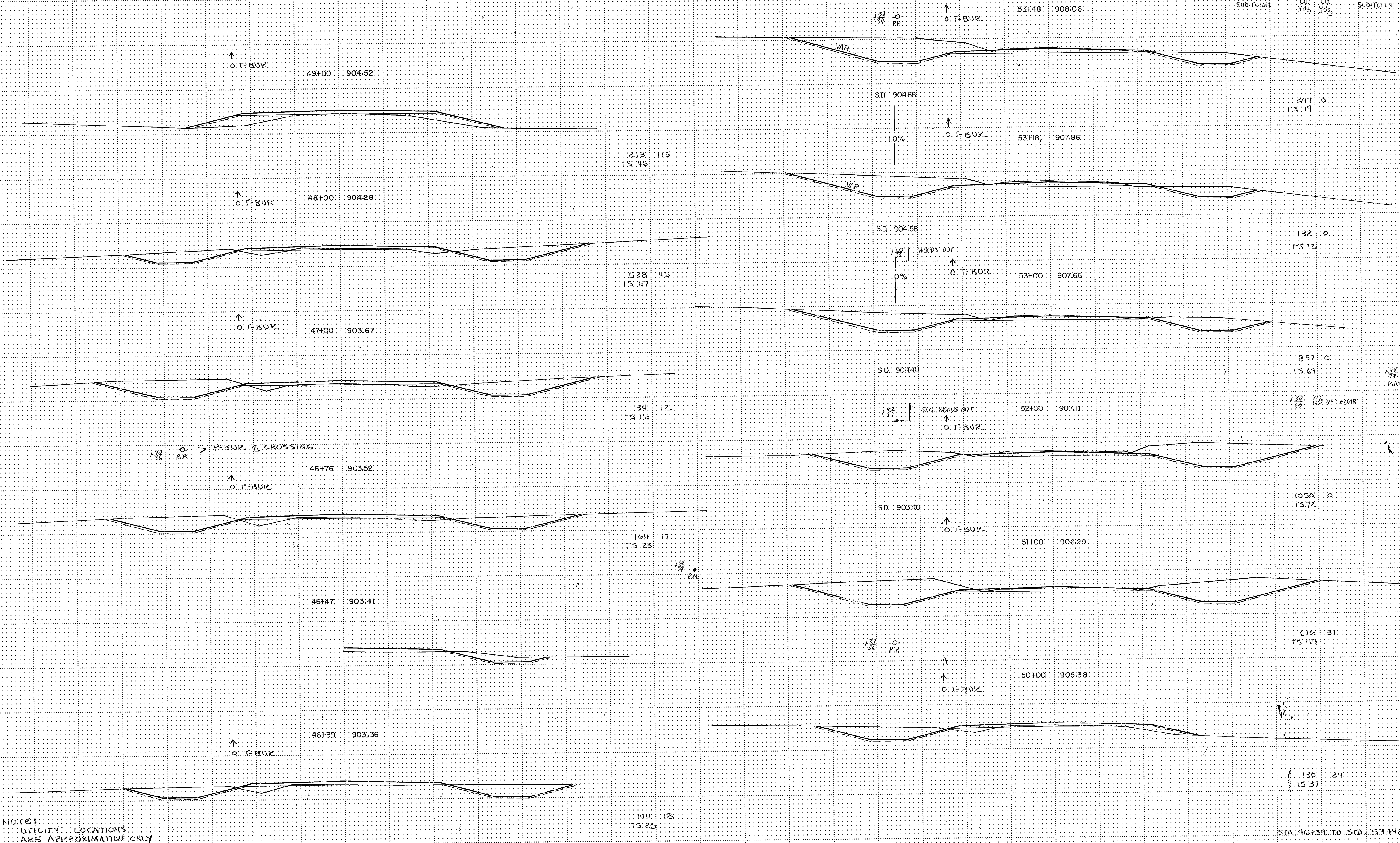
STA 39+00 TO STA 46+17

EXCAVATION EMBANKMENT

EXCAVATION EMBANKMENT

Sub-Totals Cu. Yds. Cu. Yds. Sub-Totals

Sub-Totals Cu. Yds. Cu. Yds. Sub-Totals



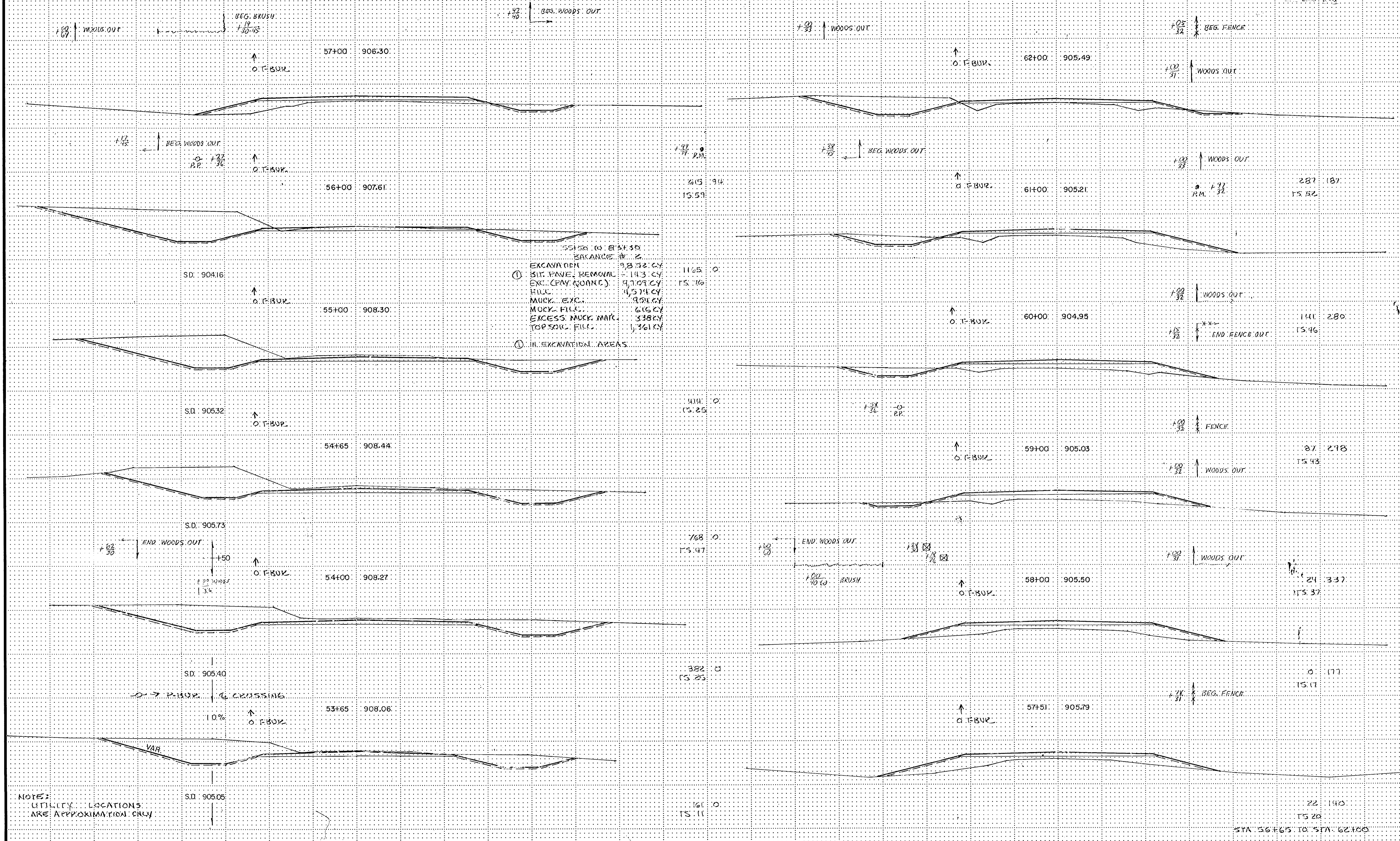
NOTE: UTILITY LOCATIONS ARE APPROXIMATION ONLY

TELEPHONE CROSS SECTION 1817 N.B.M.P.

EXCAVATION EMBANKMENT

Sub-Totals Cu. Yds. Cu. Yds. Sub-Totals

Sub-Totals Cu. Yds. Cu. Yds. Sub-Totals

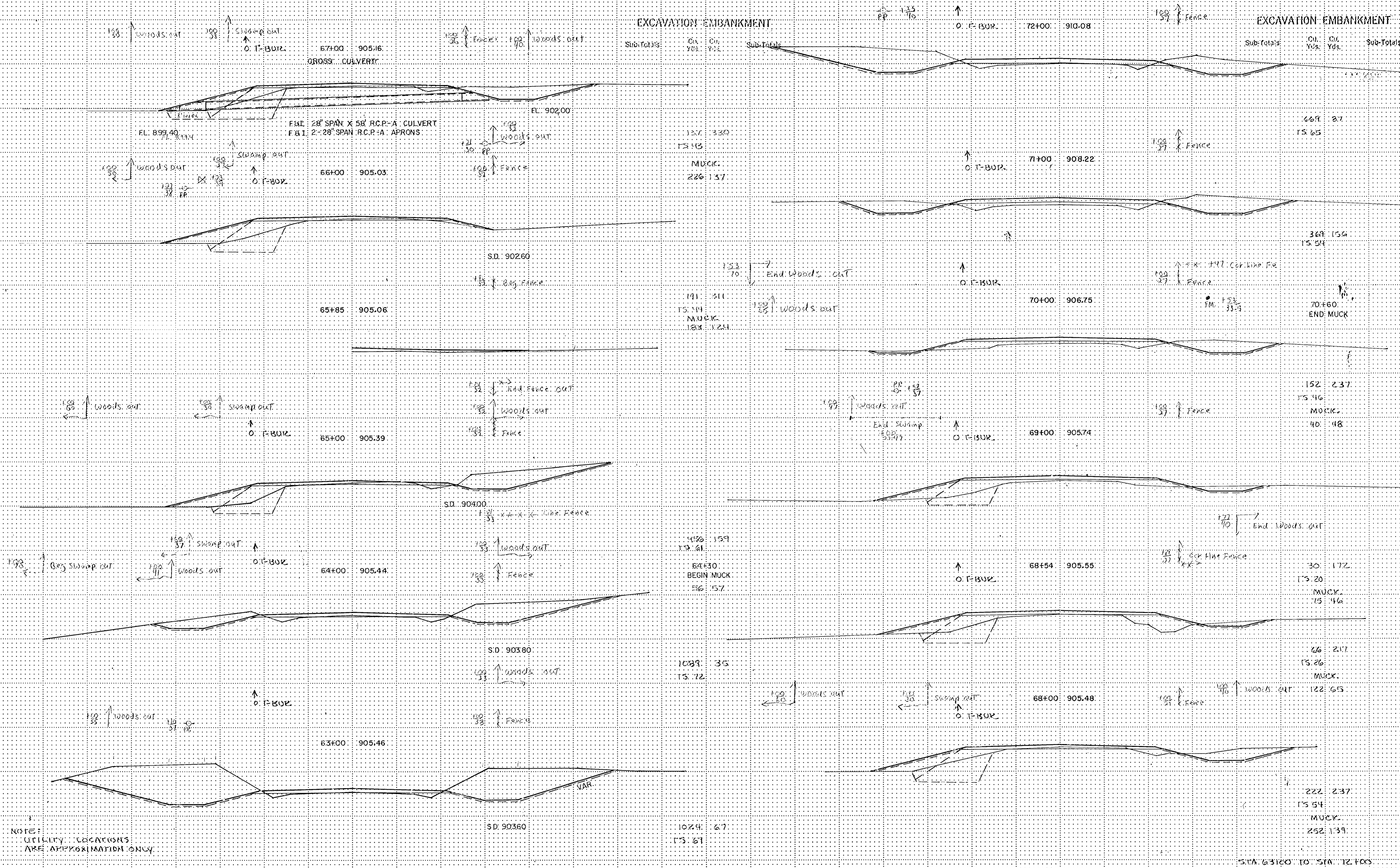


NOTE: UTILITY LOCATIONS ARE APPROXIMATION ONLY

TELETYPE POST CROSS SECTION UNIT INCHES

EXCAVATION EMBANKMENT

EXCAVATION EMBANKMENT



NOTE: UTILITY LOCATIONS ARE APPROXIMATION ONLY

EXCAVATION EMBANKMENT

Sub-Totals: Cu. Yds. Cu. Yds. Sub-Totals

Sub-Totals: Cu. Yds. Cu. Yds. Sub-Totals

End Woods
woods cut

74+80 915.11

78+00 914.32

0 T-BURK 74+50 914.69

0 T-BURK 77+71 914.54

74+27 914.30

77+00 915.14

74+00 915.89

76+25 915.37

73+50 913.09

75+83 915.35

73+00 912.22

74+91 915.18

NOTE:
UTILITY LOCATIONS
ARE APPROXIMATIONS ONLY

STA. 73+00 TO STA. 78+00

TELEPHONE POST CROSS SECTION - 1817

Rev. 11-6-66

EXCAVATION EMBANKMENT

EXCAVATION EMBANKMENT

Sub-Totals Cu. Yds. Cu. Yds. Sub-Totals

Sub-Totals Cu. Yds. Cu. Yds. Sub-Totals

80+96 912.96

84+00 911.32 ENT. LT.

100' Fence

100' Fence

80+84 913.05
↑
O.T. RW
C. 107TH AVE.

110' X 3" Pipe
131' X 3" Pipe
40'

83+30 911.68

BALANCE # 2
STA. 55+50 TO STA. 83+30
EXCAVATION 9852 CY
① BIT. PAVEMENT REMOVAL 143 CY
EXCAVATION (GNY. QUANT.) 9,709 CY
FILL 4,574 CY
MUCK EXCAVATION 954 CY
MUCK FILL 616 CY
EXPRESS MUCK MAT'L 338 CY
TOPSOIL FILL 1,361 CY
① IN EXCAVATION AREAS

286 12
TS 38

S.D. 91066

71 2
TS 10

S.D. 90979

31 1
TS 3

80+72 913.11

P-BUS. C. XING →

83+25 911.76

VAR

S.D. 90981

80+60 913.17

83+00 911.79

100' Fence

175 6
TS 16

S.D. 91074

S.D. 90990

80+00 913.42

153' 33" ↑
Cable Fence post
77'

108' 50" ↓
End Woodcut
152' 29" ↑
Woods cut

82+00 912.31

100' Fence

363 43
TS 64

S.D. 91095

S.D. 91025

79+00 913.74

134' 31" ↑
Big Woods cut

63 130
TS 35

0' PP 124 37

81+00 912.87

100' Bag Fence

361 42
TS 54

S.D. 91130

S.D. 91057

11 284
TS 28

185 7
TS 11

STA. 79+00 TO STA. 84+00

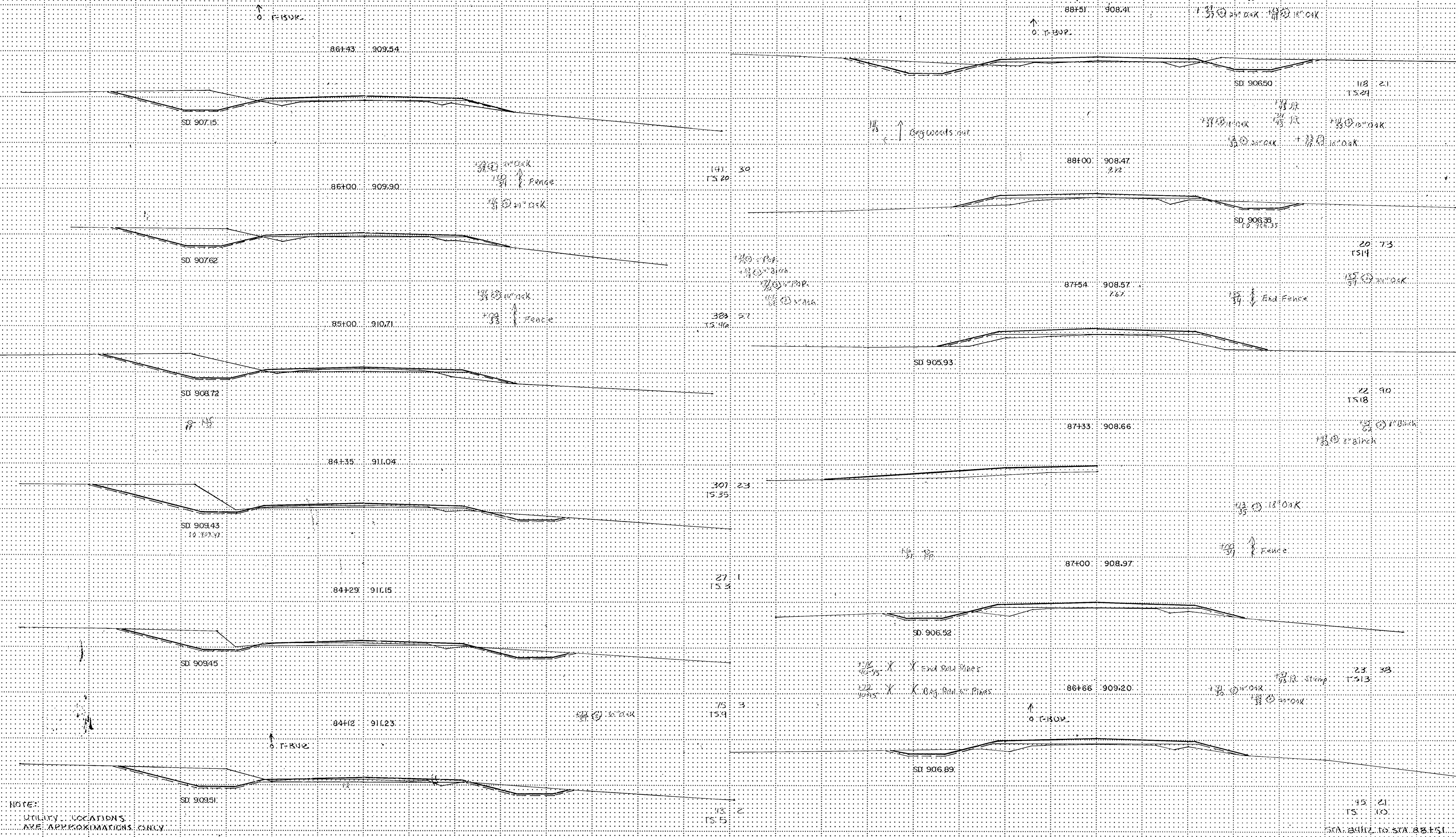
NOTE:
UTILITY LOCATIONS
ARE APPROXIMATION ONLY

EXCAVATION EMBANKMENT

EXCAVATION EMBANKMENT

Sub-Totals Cu. Yds. Cu. Yds. Sub-Totals

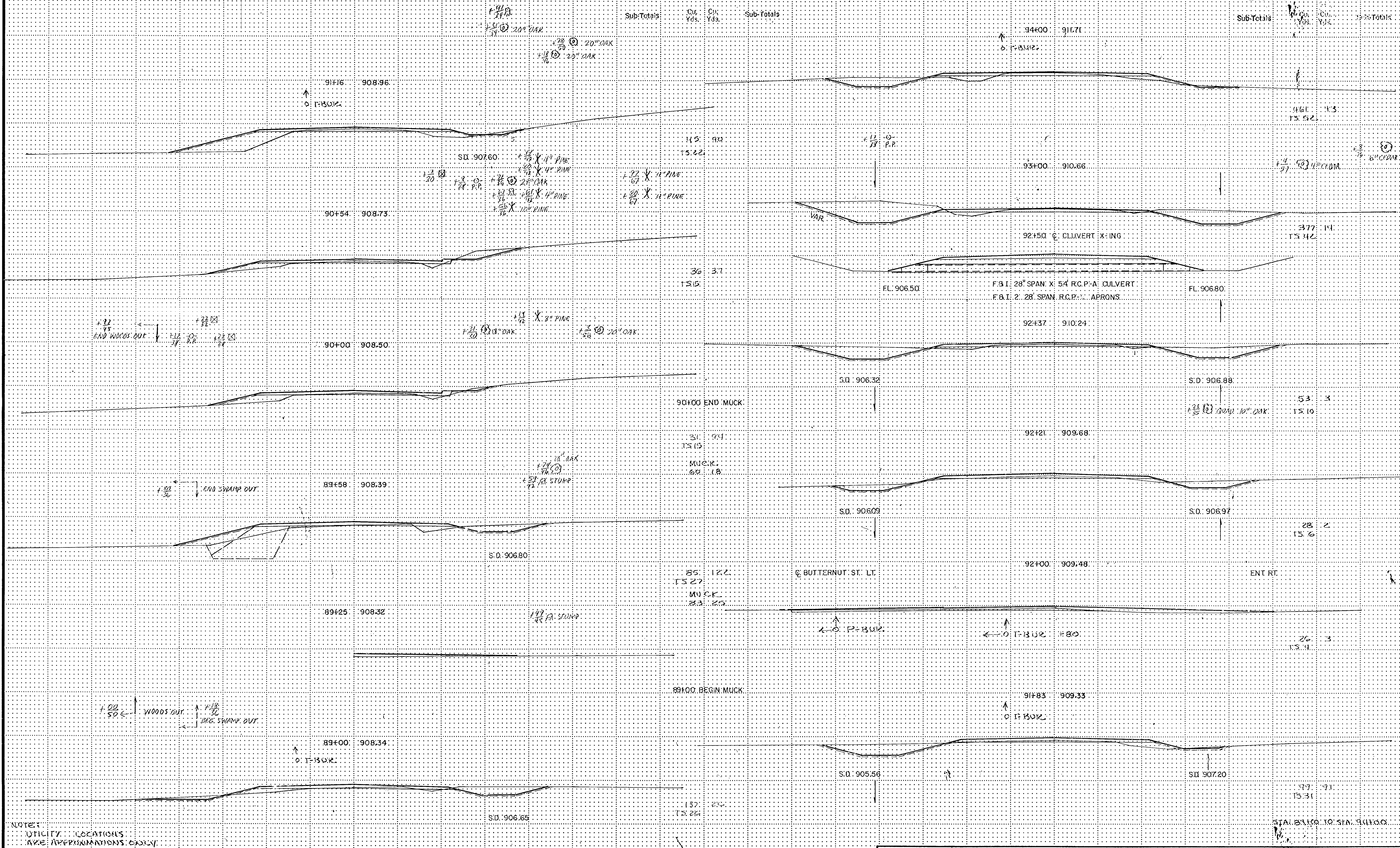
Sub-Totals Cu. Yds. Cu. Yds. Sub-Totals



NOTE: UTILITY LOCATIONS ARE APPROXIMATIONS ONLY.

EXCAVATION EMBANKMENT

EXCAVATION EMBANKMENT



NOTE: UTILITY LOCATIONS ARE APPROXIMATIONS ONLY.

TELETYPE NOT CROSS SECTION UNIT INCHES

EXCAVATION EMBANKMENT

EXCAVATION EMBANKMENT

Sub-Totals Cu. Yds. Cu. Yds. Sub-Totals

Sub-Totals Cu. Yds. Cu. Yds. Sub-Totals

96+45 914.60

98+00 915.78

96+38 914.52

97+20 915.32

96+30 914.40

97+02 915.15

96+00 914.09

96+73 914.94

95+00 912.71

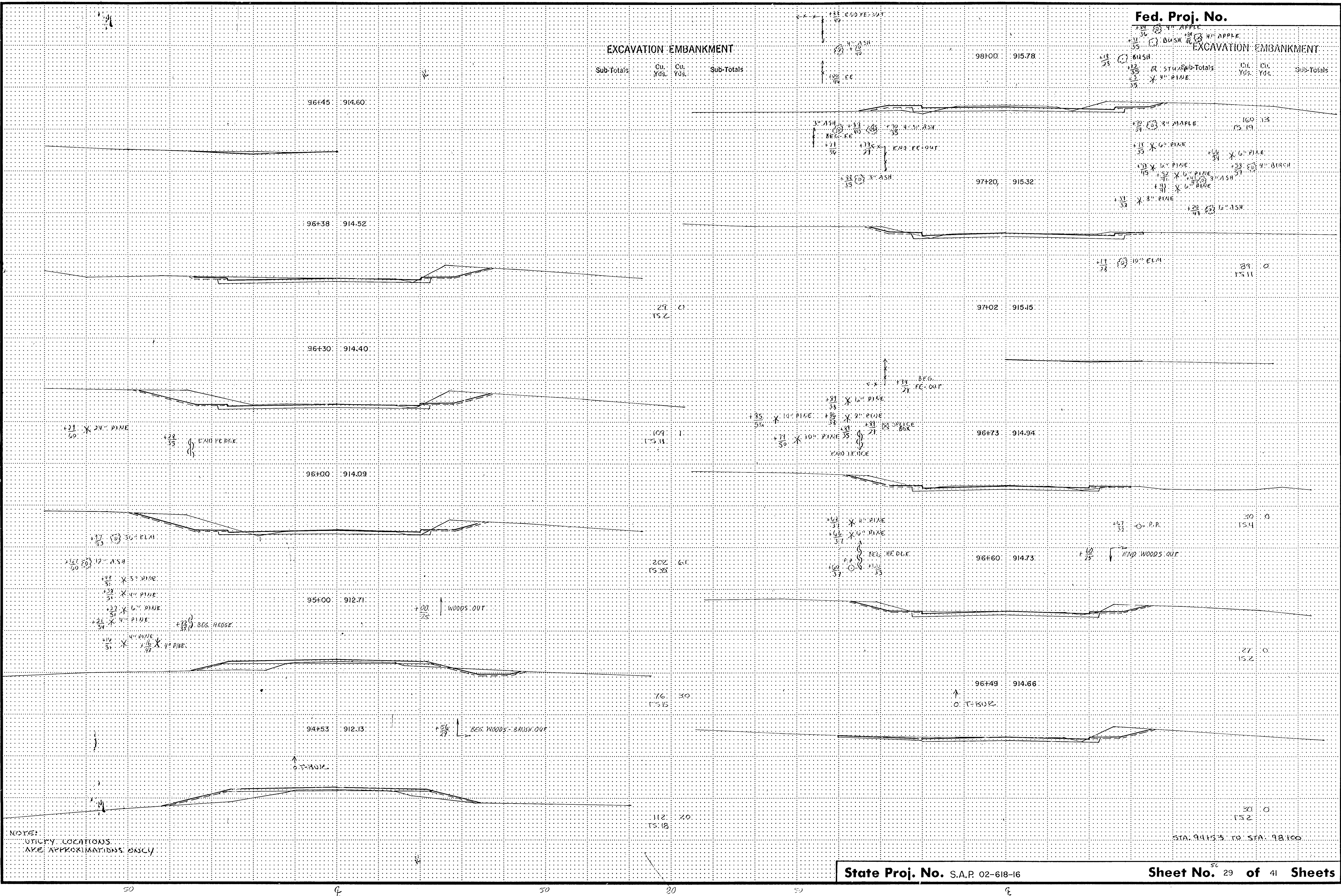
96+60 914.73

94+53 912.13

96+49 914.66

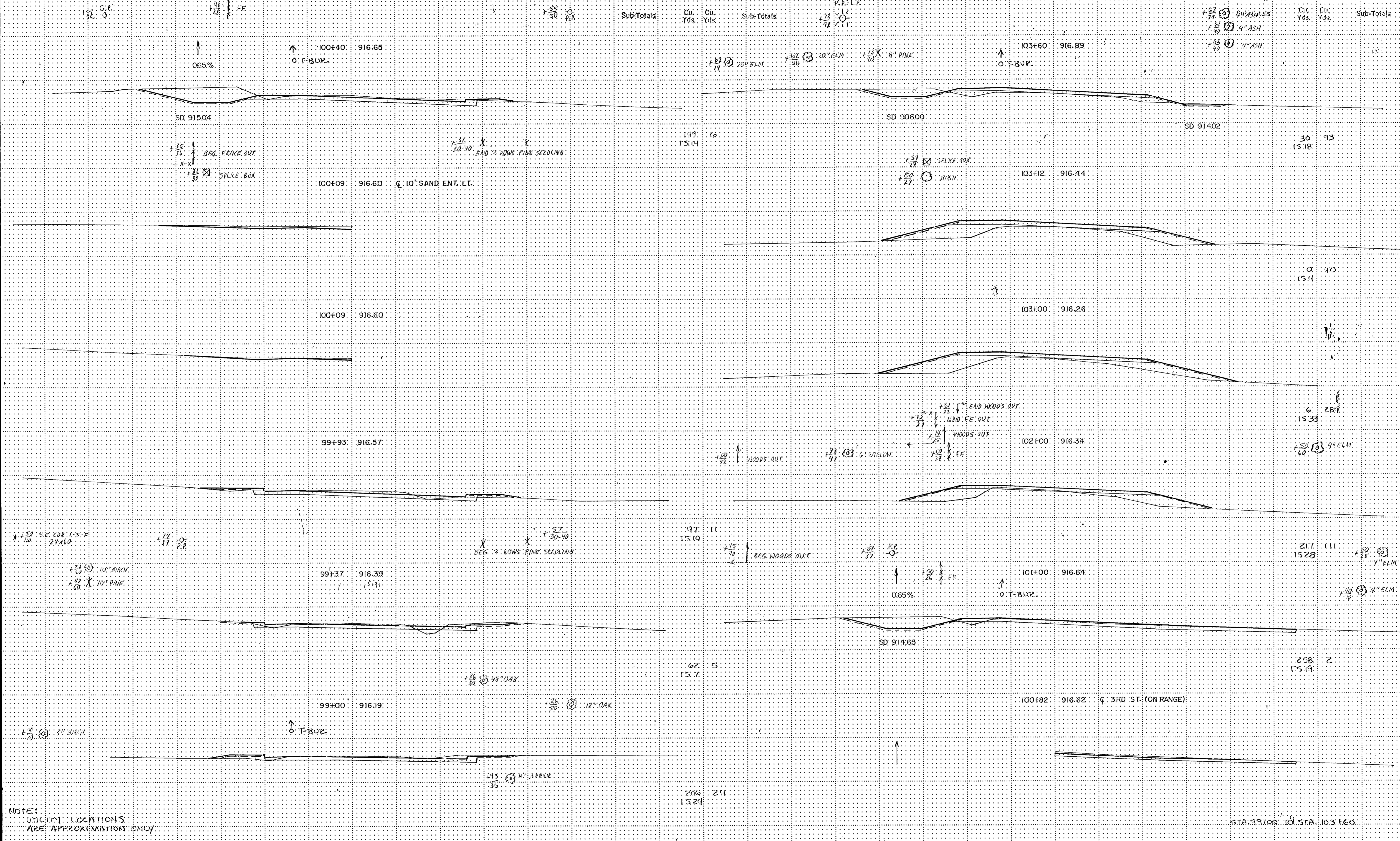
NOTE: UTILITY LOCATIONS ARE APPROXIMATIONS ONLY

TELEPHONE POLE CROSS SECTION 18T 14389



EXCAVATION EMBANKMENT

EXCAVATION EMBANKMENT



Sub-Totals	Cu. Yds.	Cu. Yds.	Sub-Totals	Sub-Totals	Cu. Yds.	Cu. Yds.	Sub-Totals
149	1504	6	149	149	1518	93	1518
206	1524	24	206	206	1519	2	1519

NOTES:
 1. ALL TREE LOCATIONS ARE APPROXIMATION ONLY.

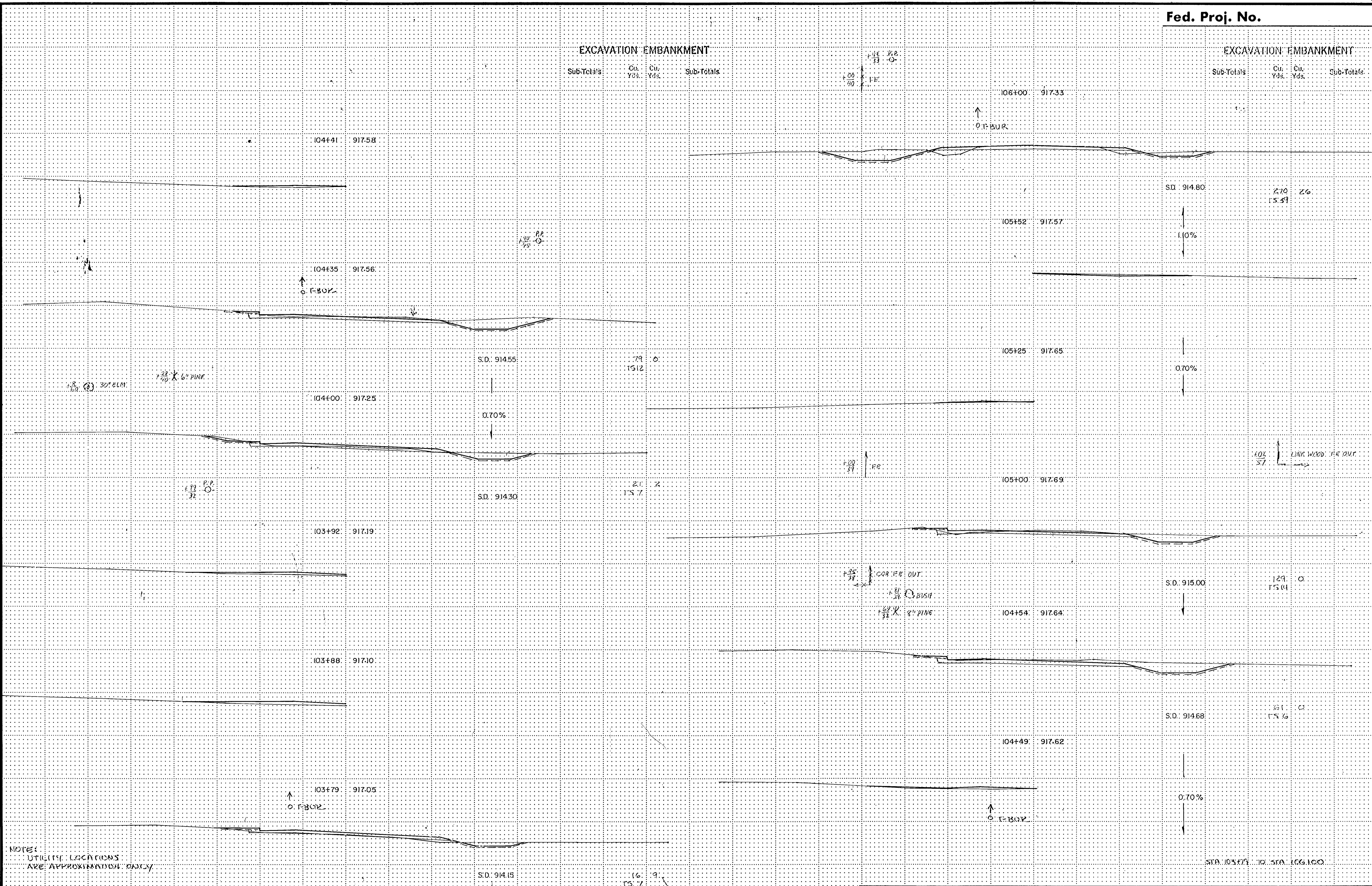
STA. 99+00 TO STA. 103+60

EXCAVATION EMBANKMENT

Sub-Totals Cu. Yds. Cu. Yds. Sub-Totals

EXCAVATION EMBANKMENT

Sub-Totals Cu. Yds. Cu. Yds. Sub-Totals



NOTE: UTILITY LOCATIONS ARE APPROXIMATE ONLY

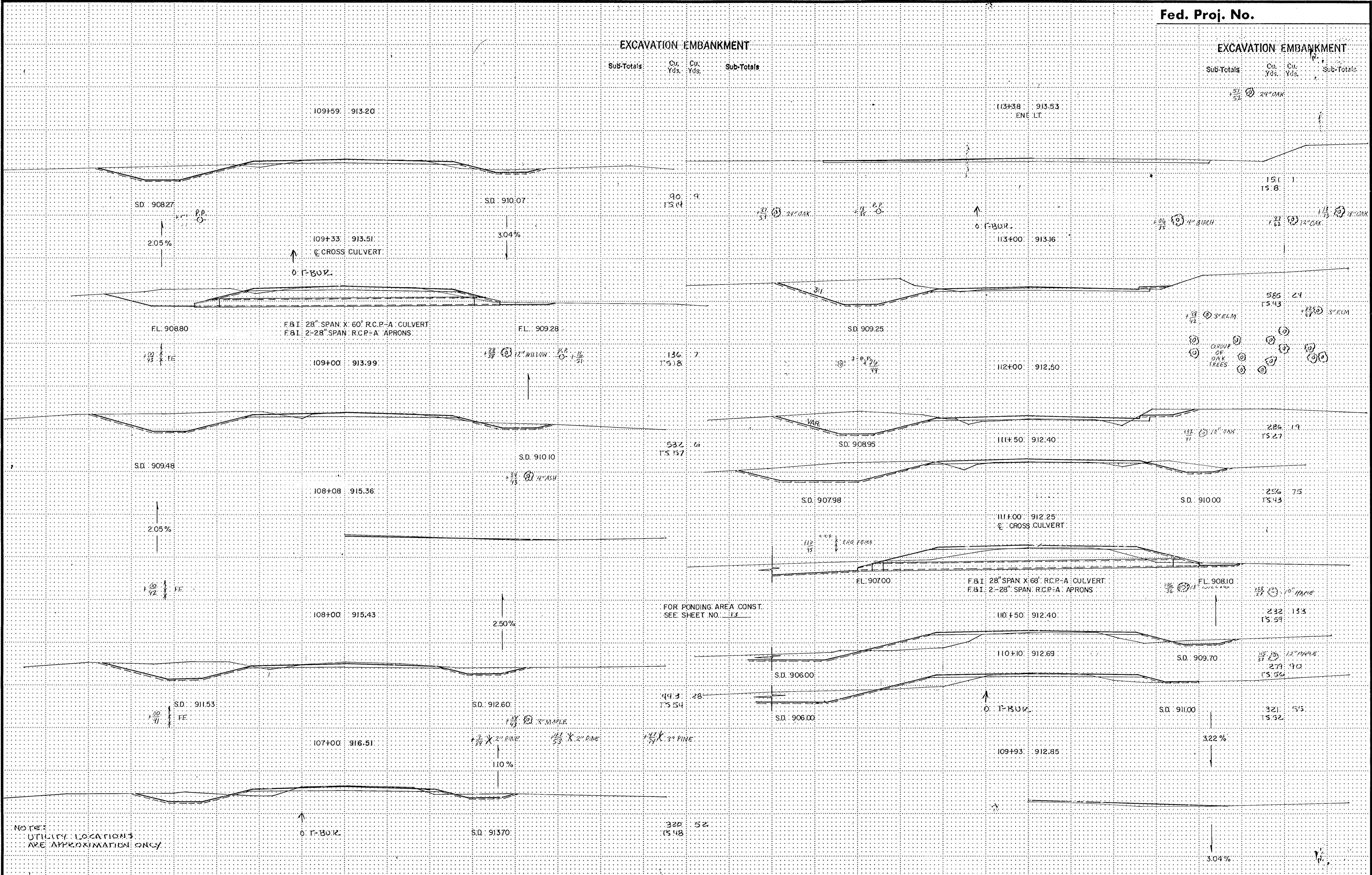
VERTICAL CURVE SECTION 1811

EXCAVATION EMBANKMENT

EXCAVATION EMBANKMENT

Sub-Totals Cu. Yds. Cu. Yds. Sub-Totals

Sub-Totals Cu. Yds. Cu. Yds. Sub-Totals



NOTE: UTILITY LOCATIONS ARE APPROXIMATION ONLY.

FOR PONDING AREA CONST. SEE SHEET NO. 13

TELEPHONE NOT CROSS SECTION UNIT IN 100'

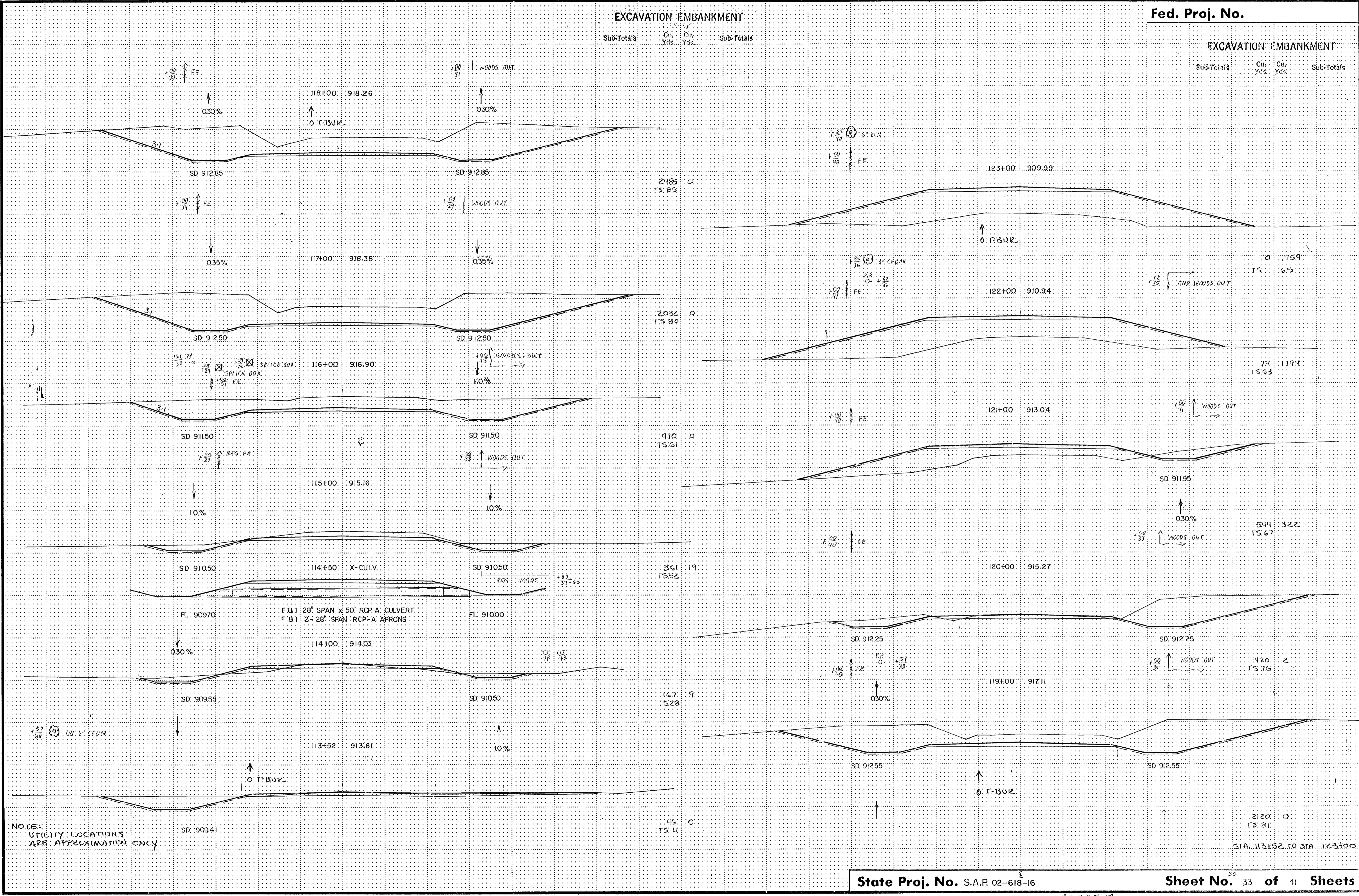
EXCAVATION EMBANKMENT

Sub-Totals	Cu. Yds.	Cu. Yds.	Sub-Totals

Fed. Proj. No.

EXCAVATION EMBANKMENT

Sub-Totals	Cu. Yds.	Cu. Yds.	Sub-Totals



118+00 918.26
0.75 BUR
0.30%

117+00 918.38
0.35%

116+00 916.90
WOODS OUT
10%

115+00 915.16
10%

114+50 X-CULV.
FL 90970
F.B. 1 28' SPAN x 50' RCP-A CULVERT.
F.B. 2 28' SPAN RCP-A APRONS
FL 91000
0.30%

113+52 913.61
10%

123+00 909.99
0.75 BUR

122+00 910.94
WOODS OUT

121+00 913.04
WOODS OUT

120+00 915.27
WOODS OUT

119+00 917.11
0.30%

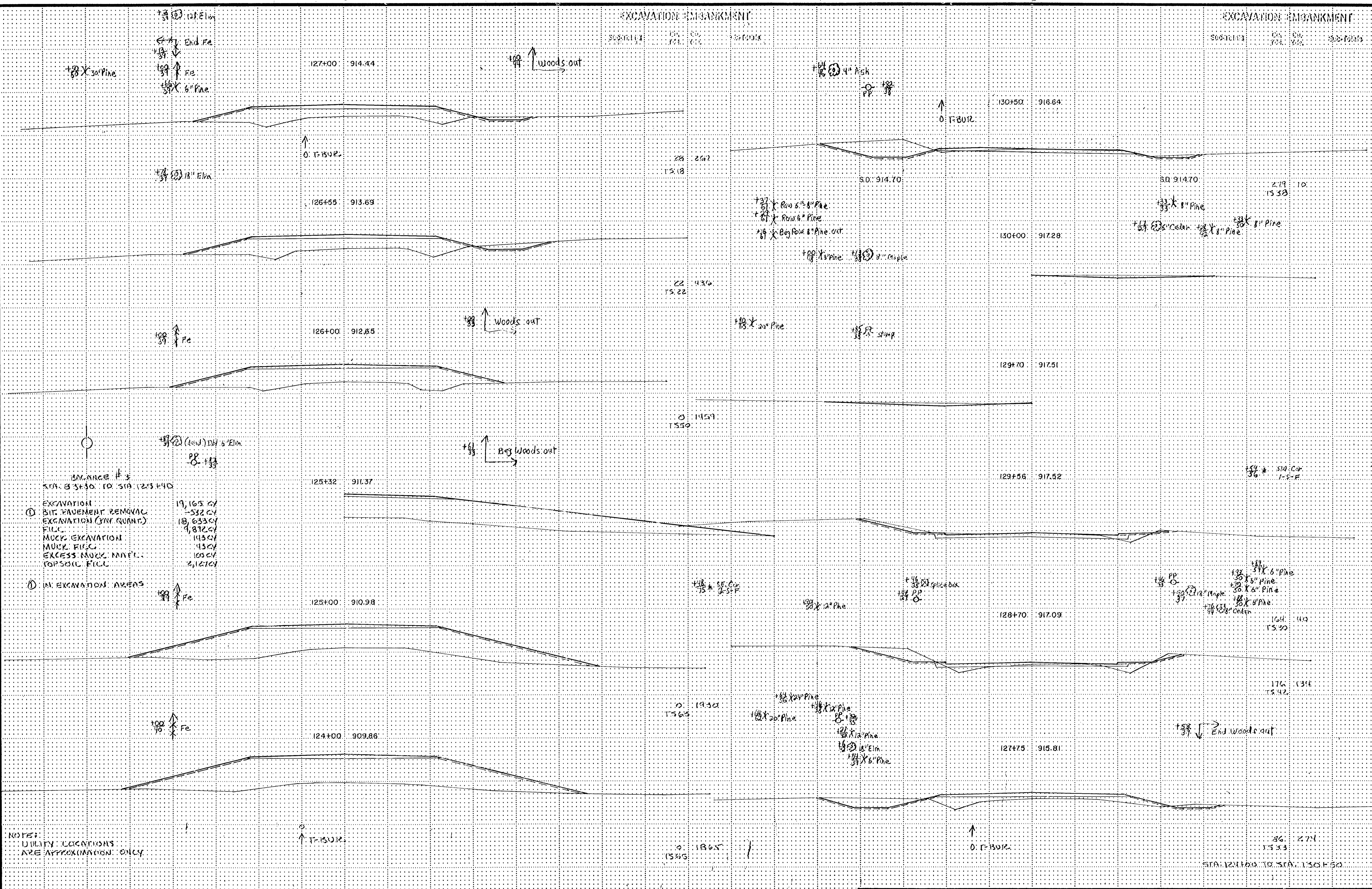
118+00 917.11
WOODS OUT

117+00 917.11
WOODS OUT

NOTE: UTILITY LOCATIONS ARE APPROXIMATION ONLY

EXCAVATION EMBANKMENT

EXCAVATION EMBANKMENT



SUMMARY # 3
STA. 124+30 TO STA. 125+40

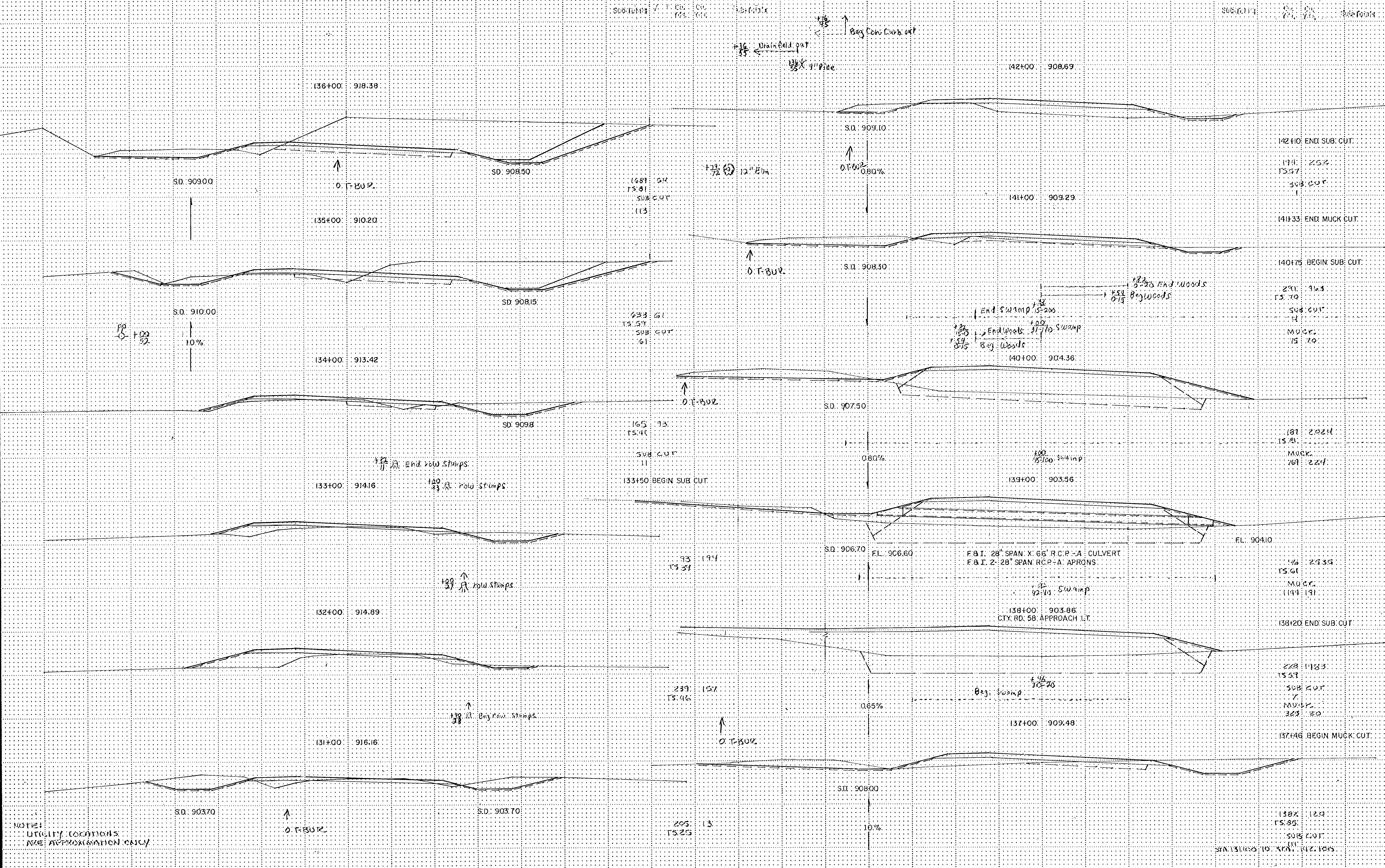
EXCAVATION	19,165 CY
BIT PAVEMENT REMOVAL	-532 CY
EXCAVATION (TYP. QUANT.)	18,633 CY
FILL	9,872 CY
MUCK EXCAVATION	143 CY
MUCK FILL	43 CY
EXCESS MUCK MAT'L.	100 CY
TOPSOIL FILL	2,127 CY

IN EXCAVATION AREAS

NOTE:
UTILITY LOCATIONS
ARE APPROXIMATION ONLY

EXCAVATION EMBANKMENT

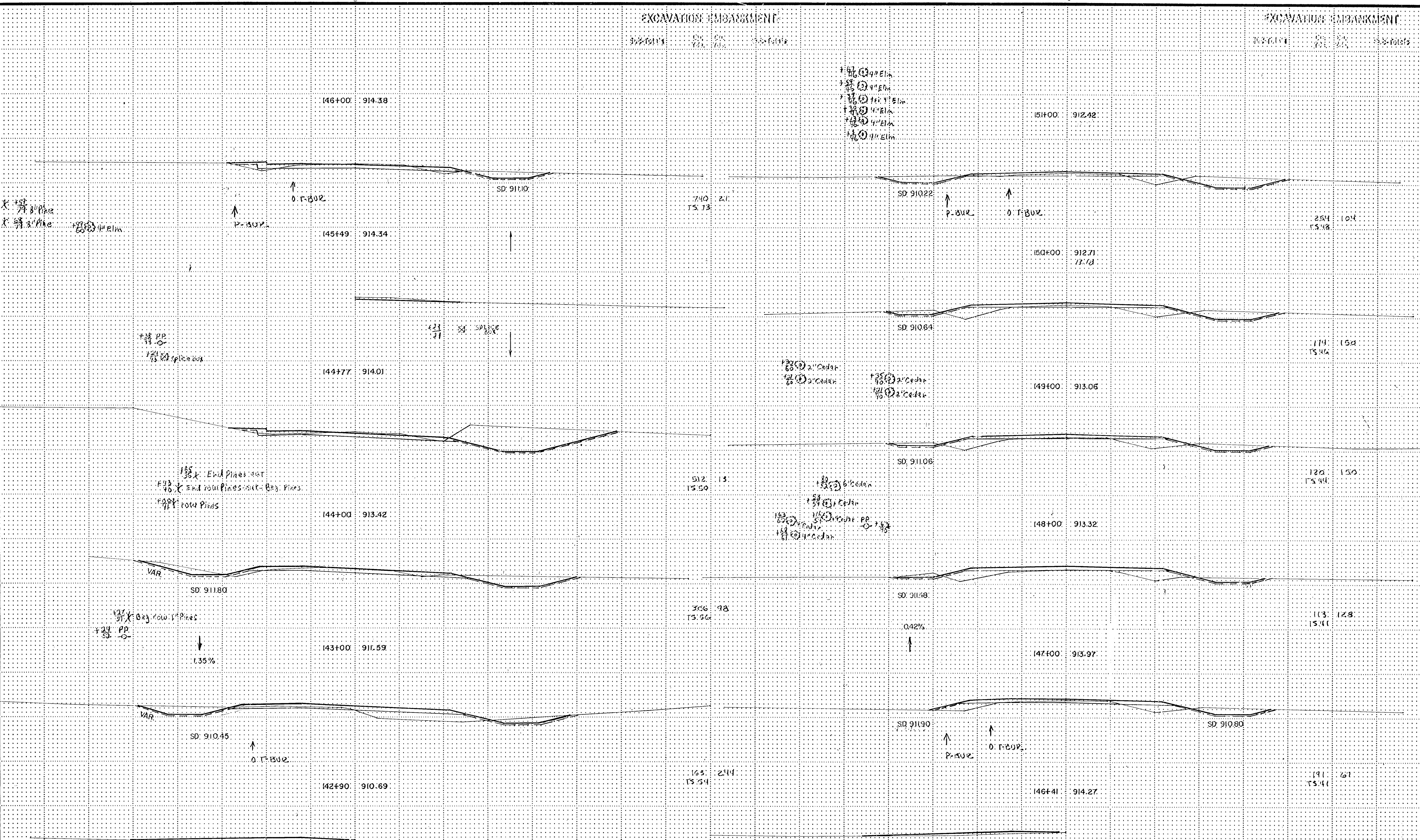
EXCAVATION EMBANKMENT



NOTES:
UTILITY LOCATIONS
ARE APPROXIMATION ONLY

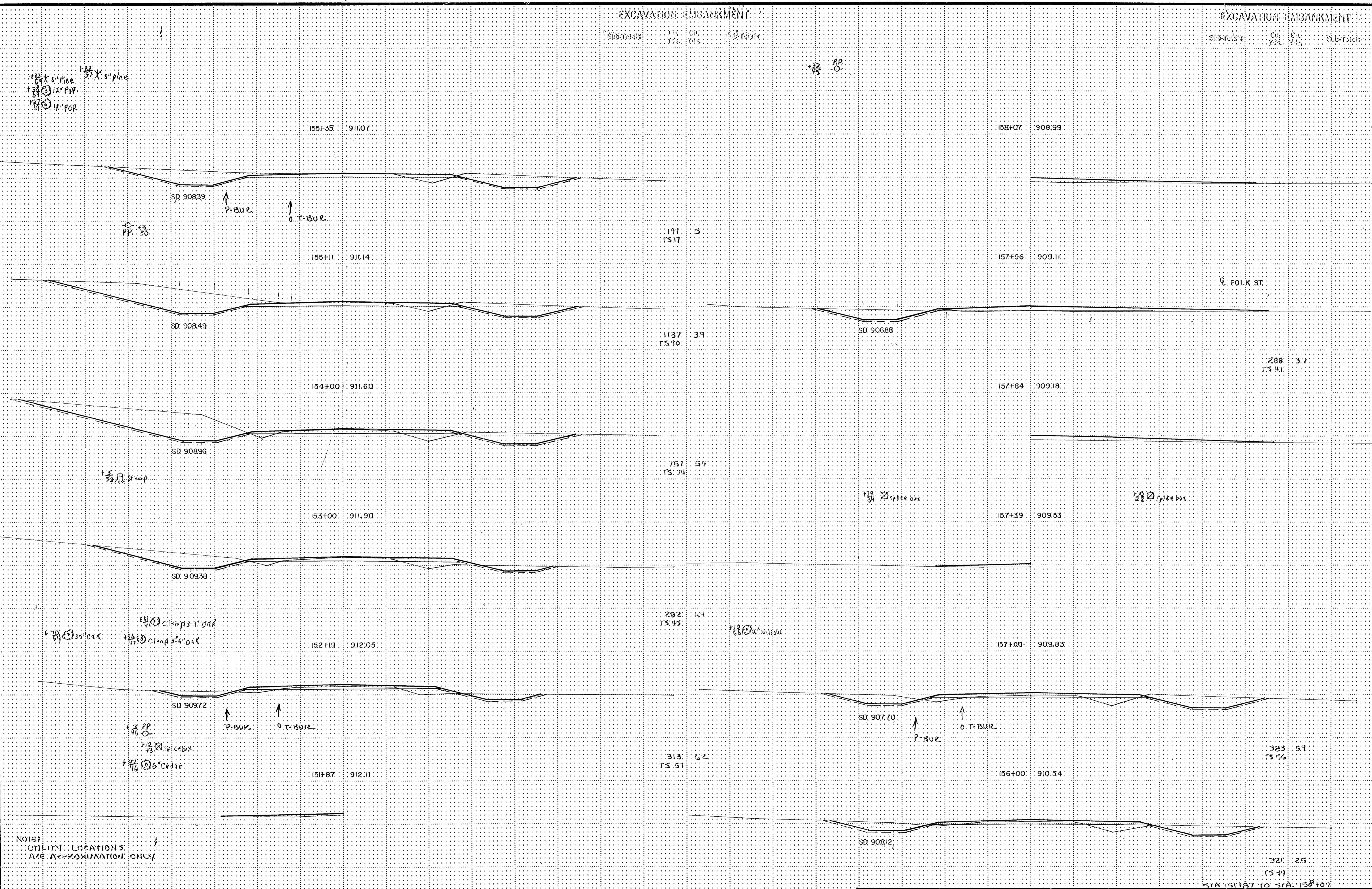
EXCAVATION EMBANKMENT

EXCAVATION EMBANKMENT



NOTE:
 UTILITY LOCATIONS
 ARE APPROXIMATION ONLY

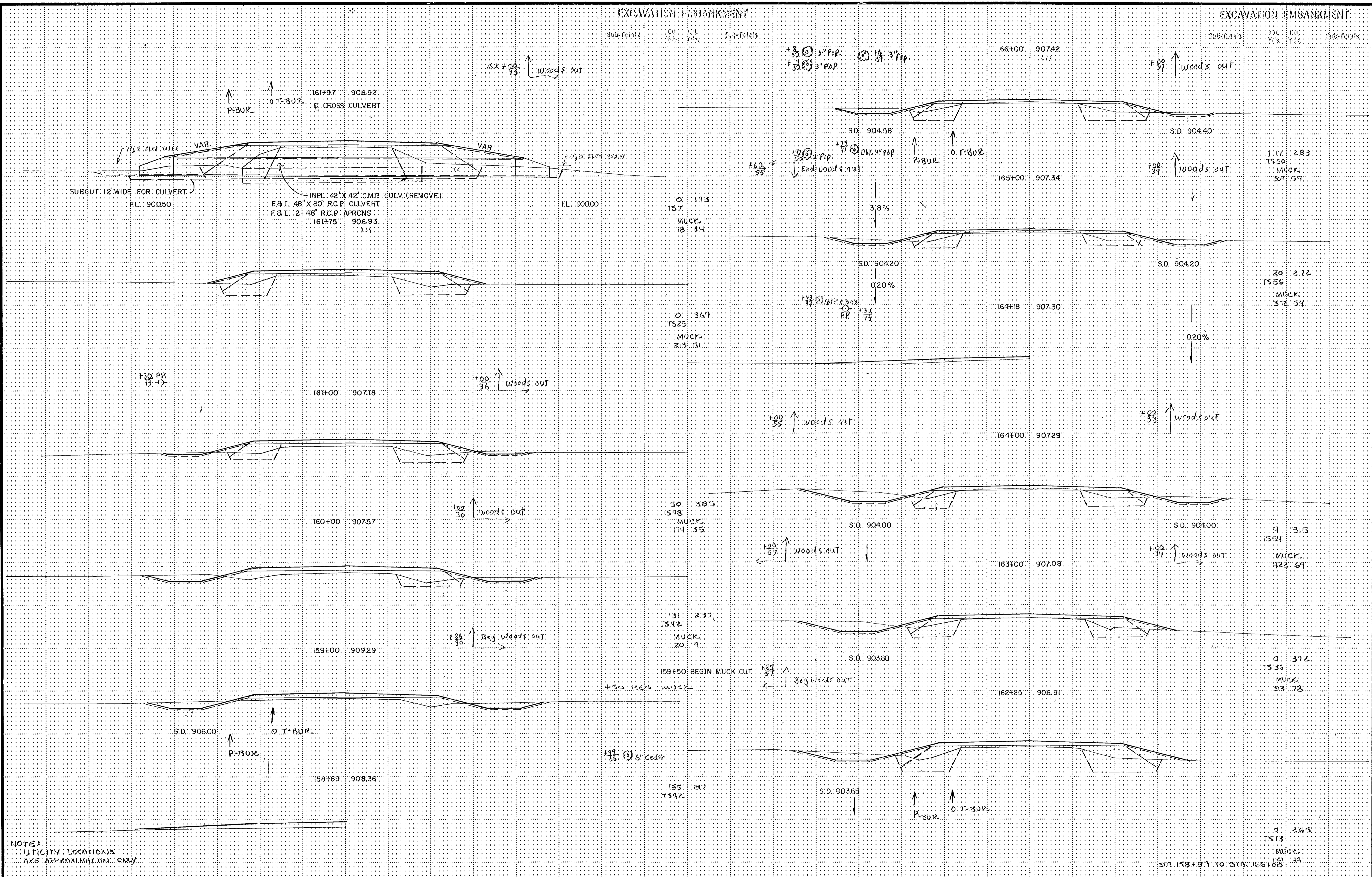
STA. 142+90 TO STA. 151+00



NOTE:
UTILITY LOCATIONS
ARE APPROXIMATION ONLY

EXCAVATION EMBANKMENT

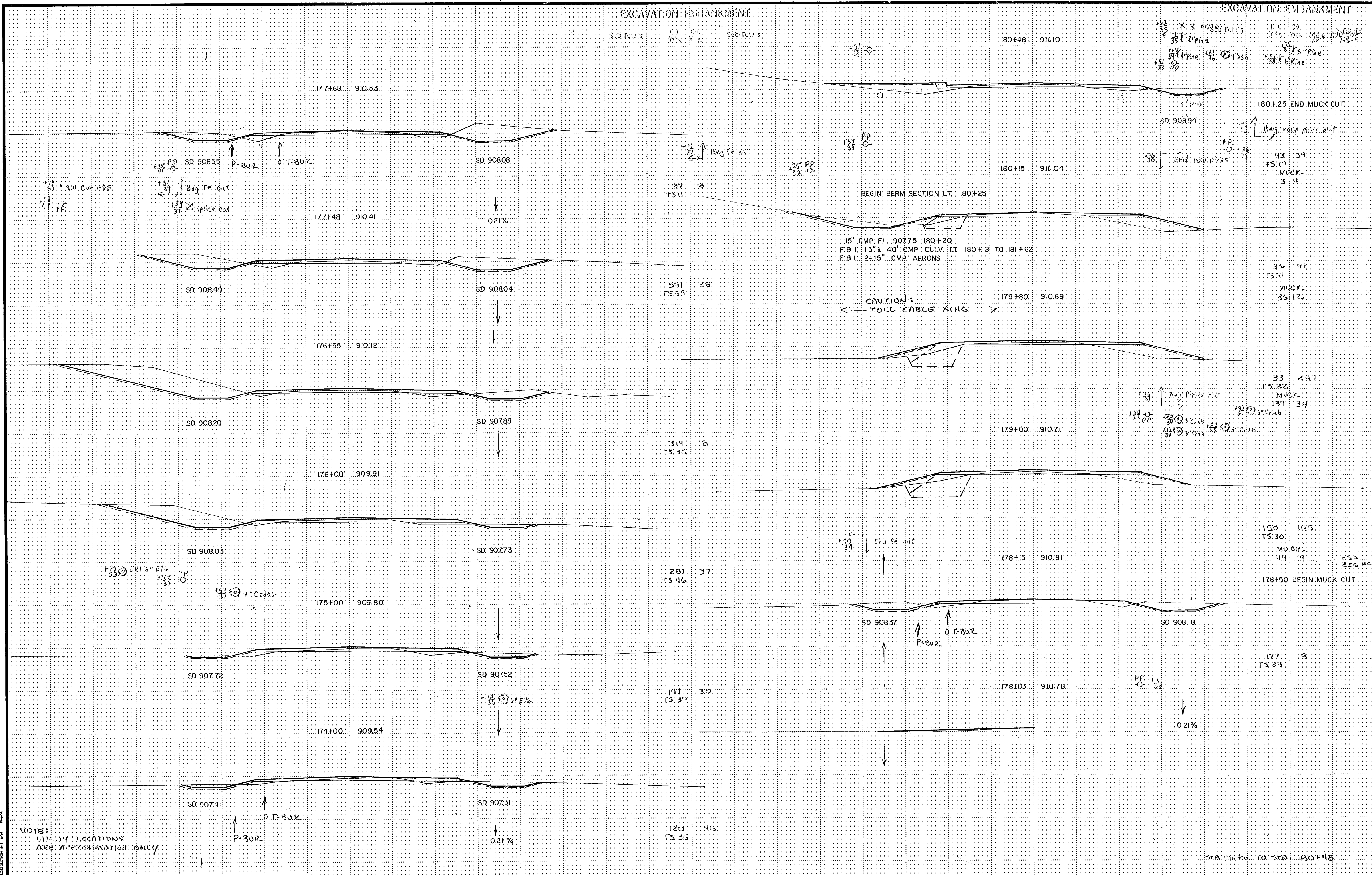
EXCAVATION EMBANKMENT



NOTE:
UTILITY LOCATIONS
AXE APPROXIMATION ONLY

EXCAVATION EMBANKMENT

EXCAVATION EMBANKMENT



EXCAVATION EMBANKMENT

EXCAVATION EMBANKMENT

Sub-Items Vol. C.Y. Totals

Sub-Items Vol. C.Y. Totals

6' Bit Island

170' X 3' Pipe

End Conc. Slab out

183+63 911.15

2.0%

181+62 911.43

15" CMR FL. 909.03

6' WIDE
S.D. 909.16

6' Bit Island (cont.)

183+30 911.26

BALANCE #5
STA. 181+15 TO STA. 183+30

EXCAVATION	3,749 CY
SUB PAVEMENT REMOVAL	-285 CY
EXCAVATION (BY QUOTE)	3,464 CY
FILL	1,317 CY
MUCK EXCAVATION	548 CY
MUCK FILL	154 CY
EXCESS MUCK MAT'L	394 CY
TOPSOIL FILL	688 CY

IN EXCAVATION AREAS

0.20%

S.D. 909.50

65
TS 9

Begin Conc. Slab out

170' X 3' Pipe

183+00 911.32

0.20%

100
62
↑ woods out

181+42 911.40

181+42 911.38

S.D. 909.44

73
TS 11

170' X 3' Pipe

182+69 911.34

181+21 911.38

170' X 3' Pipe

S.D. 909.38

226
TS 13

P-BUR

D.T. BUR

182+22 911.54

181+10 911.37

Begin woods out

170' X 3' Pipe

181+75 911.52

170' X 3' Pipe

0.20%

S.D. 909.30

P-BUR

D.T. BUR

6' WIDE
S.D. 909.19

40
TS 7

STA. 180+15 TO STA. 183+65

NOTES:
UTILITY LOCATIONS
ARE APPROXIMATION ONLY