

STATE OF MINNESOTA  
DEPARTMENT OF HIGHWAYS

CONSTRUCTION PLAN FOR GRADING, BASE & BITUMINOUS SURFACING

County Highway No. 132

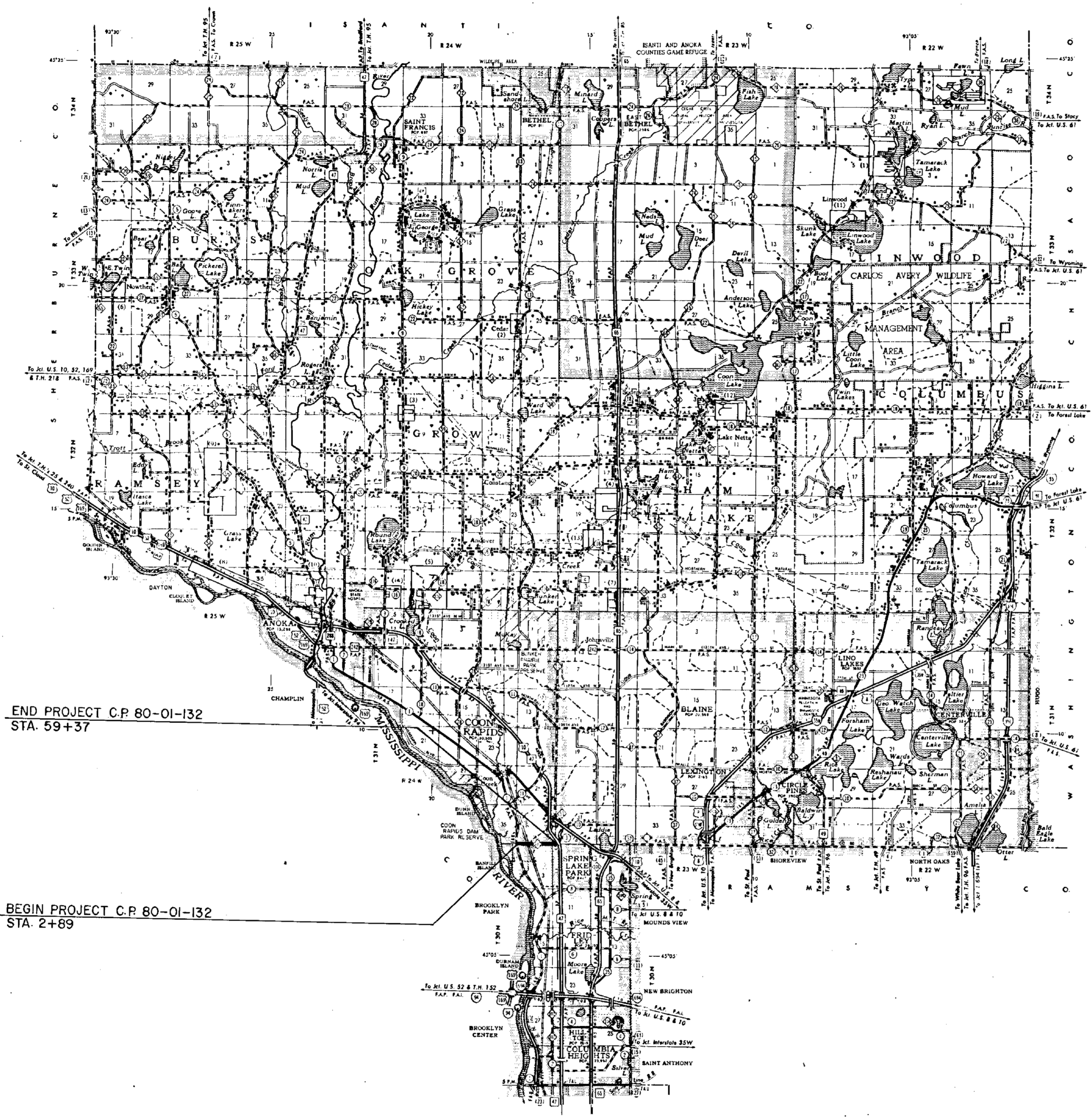
Between CSAH #1 \_\_\_\_\_ And TH #47 \_\_\_\_\_  
From A POINT 289' EAST OF SOUTHWEST CORNER SECTION 36, T31N, R24W To A POINT 615' EAST OF SOUTHEAST CORNER SECTION 36, T31N, R24W  
Give proper reference to Sections, Township and Range

GROSS LENGTH 5,648 FEET 1.07 MILES  
BRIDGES-LENGTH 0 FEET 0 MILES  
EXCEPTIONS-LENGTH 0 FEET 0 MILES  
NET LENGTH 5,648 FEET 1.07 MILES

- INDEX OF SHEETS
- Sheet No. 1 Title Sheet & Layout Map
  - No. 2 Est. Quantities & Typical Sec.
  - No. 3-5 Typical Sec. & Charts
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  - No. 10 Right Turn Lane Layout
  - No. 11 Signal Revision
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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 Line 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
- JOINT TELEPHONE AND TELEGRAPH LINE
- CONDUIT
- TELEPHONE CABLE-AERIAL
- TELEPHONE CABLE UNDERGROUND
- POWER CABLE UNDERGROUND
- 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
- S STONE
- B BRICK
- ST-STUCCO
- IRON PIPE OR ROD
- WOODEN PIPE (STONE, CONCRETE, OR METAL)
- WOODEN PILE
- GRAVEL PIT
- SAND PILE
- BORROW PIT
- ROCK QUARRY
- MEANDER CORNER



END PROJECT C.P. 80-01-132  
STA. 59+37

BEGIN PROJECT C.P. 80-01-132  
STA. 2+89

SCALE

INDEX MAP 2 Miles  
PLAN & PROFILE VERT. 5'  
HORIZ. 50'  
CROSS SECTIONS 10'

DESIGN DESIGNATION

ADT (CURRENT YEAR) 4550  
ADT (FUTURE YEAR) 7750 (20 YEAR)  
T (HEAVY COMMERCIAL) 150-300  
9 Ton Design Soil Factor A-3, 50%  
Design Speed 50 MPH  
Design Speed not achieved at:  
STA. \_\_\_\_\_ TO STA. \_\_\_\_\_ MPH \_\_\_\_\_  
STA. \_\_\_\_\_ TO STA. \_\_\_\_\_ MPH \_\_\_\_\_

SPECIFICATIONS

THE "STANDARD" SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, DATED JAN. 1, 1978, 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 DUTY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

*Paul K. Lund*  
COUNTY ENGINEER DATE 8-14-81

ANOKA COUNTY REG. NO. 6549

RECOMMENDED FOR APPROVAL \_\_\_\_\_ 19\_\_\_\_  
DISTRICT ENGINEER

RECOMMENDED FOR APPROVAL \_\_\_\_\_ 19\_\_\_\_

APPROVED \_\_\_\_\_ 19\_\_\_\_  
STATE AID ENGINEER

Minn. Proj. No. \_\_\_\_\_ County Proj. No. C.P. 80-01-132  
State Proj. No. \_\_\_\_\_ S.A.P. \_\_\_\_\_

STATEMENT OF ESTIMATED QUANTITIES

ITEM NO.	ITEM	UNIT	TOTAL EST. MATED QUANTITIES	TOTAL FINAL QUANTITIES
2031.503	FIELD LABORATORY, TYPE D	EACH	1	
2101.501	CLEARING	ACRE	0.5	
2101.502	CLEARING	TREE	6	
2101.506	GRUBBING	ACRE	0.5	
2101.507	GRUBBING	TREE	6	
2104.501	REMOVE CURB AND GUTTER	LIN. FT.	210	
2104.501	REMOVE SEWER PIPE	LIN. FT.	14	
2104.521	SALVAGE CULVERT PIPE	LIN. FT.	234	
2105.501	CUTMAN EXCAVATION	CU. YD.	2726 (P)	
2105.521	GRANULAR BORROW (E.V.)	CU. YD.	7544	
2105.525	TOPSOIL BORROW (L.V.)	CU. YD.	700	
2105.531	SALVAGED BITUMINOUS MIXTURE (E.V.)	CU. YD.	736 (P)	
2130.501	WATER	M. GAL.	125	
2211.501	AGGREGATE BASE, CLASS 5	TON	7300	
2331.504	BITUMINOUS MATERIAL FOR MIXTURE	TUN	275	
2331.510	BINDER COURSE MIXTURE	TUN	2875	
2331.514	BASE COURSE MIXTURE	TUN	3225	
2341.504	BITUMINOUS MATERIAL FOR MIXTURE	TUN	172	
2341.508	WEARING COURSE MIXTURE	TUN	2860	
2357.502	BITUMINOUS MATERIAL FOR TACK COAT	GALLON	3400	
2501.511	15" C.M. PIPE CULVERT	LIN. FT.	140	
2501.515	15" C.M. PIPE APKONS	EACH	8	
2501.515	36" C.M. PIPE APKONS	EACH	6	
2501.515	15" R.C. PIPE APKONS	EACH	2	
2501.521	57" SPAN C.M. PIPE-ARCH CULVERT	LIN. FT.	12	
2501.521	24" SPAN C.M. PIPE-ARCH CULVERT	LIN. FT.	66	
2501.525	57" SPAN C.M. PIPE-ARCH APKONS	EACH	1	
2501.525	24" SPAN C.M. PIPE-ARCH APKONS	EACH	2	
2503.511	15" R.C. PIPE SEWER CL. 4	LIN. FT.	151	
0504.602	ADJUST WATER GATE HOUSING	EACH	7	
2506.507	CONSTRUCT CATCH BASIN, DESIGN H	LIN. FT.	2.3	
2506.507	CONSTRUCT CATCH BASIN, DESIGN A OR F	LIN. FT.	5.0	
2506.516	CASTING ASSEMBLIES	EACH	2	
2506.516	GRATE (NEENAH R-3246 TYPE C)	EACH	2	
2506.522	ADJUST FRAME AND RING CASTINGS	EACH	9	
2521.501	4" CONCRETE WALK	SQ. FT.	798	
2531.501	CONCRETE CURB AND GUTTER, DESIGN B-618	LIN. FT.	110	
2531.501	CONCRETE CURB AND GUTTER, DESIGN D-612	LIN. FT.	1395	
2531.503	CONCRETE MEDIAN	SQ. YD.	11	
2575.501	ROADSIDE SLEDDING	ACRE	4.3 (P)	
2575.502	SEED, MIXTURE #5	POUND	215	
2575.505	SODDING	SQ. YD.	5496	
2575.511	MULCH MATERIAL, TYPE 1	TUN	8.5	
2575.519	DISC AMMORING	ACRE	4.3 (P)	
2575.531	COMMERCIAL FERTILIZER ANALYSIS 10-10-10	TUN	1.5	
2565.000	REVISE SIGNAL SYSTEM	SYSTEM	1	

- ① INCLUDES APKONS
- ② INCLUDES 359 TON FOR ENTRANCES & STREET APPROACHES
- ③ INCLUDES 155 TON FOR ENTRANCES & STREET APPROACHES, & 100 TON FOR LEVELLING
- ④ INCLUDES 78 TON FOR STREET APPROACHES
- ⑤ INCLUDES 150 TON FOR ENTRANCES & STREET APPROACHES, & 25 TON FOR MEDIAN
- ⑥ TO REPLACE DRAWN GRATES
- ⑦ FOR MEDIAN SECTION 56+28 TO 59+28
- ⑧ FOR REPLACING CURB AT STREET APPROACHES

CLEARING AND GRUBBING

STATION (TO STATION)	LOC.	CLEARING		GRUBBING	
		TREE	ACRE	TREE	ACRE
19+91	45' RT.	1		1	
22+25 TO 22+40	40'-45' RT.		.05		.05
27+21	41' RT.	1		1	
27+35	41' RT.	1		1	
28+30 TO 28+55	43'-47' RT.		.05		.05
38+65	47' LT.	1		1	
39+26	47' LT.	1		1	
39+54	47' LT.	1		1	
46+90 TO 52+00	32'-45' RT.		.40		.40
TOTALS		6	0.50	6	0.50

SPECIAL DETAILS

SALVAGED BITUMINOUS MIXTURE QUANTITIES ARE COMPUTED AS THE VOLUME OF BITUMINOUS IN IT'S ORIGINAL POSITION BASED ON AN AVERAGE DEPTH OF 0.17' AND AVERAGE WIDTH OF 24". THE CONTRACTOR SHALL REMOVE, AND STOCK-PILE IF NECESSARY, SUFFICIENT TOPSOIL MATERIAL WITHIN THE EXCAVATION AREAS ON WHICH EMBANKMENTS WILL BE PLACED, FOR TOPSOIL COVERING ON THE NEW SLOPES AND DITCH BOTTOMS. THIS WILL REQUIRE APPROXIMATELY 1515 CU. YDS. TO PROVIDE A MINIMUM COVER OF 3". THIS WORK SHALL BE CONSIDERED AS INCIDENTAL TO CUTMAN EXCAVATION.

THE CONTRACTOR SHALL COORDINATE WORK AT THE R.R. TRACKS WITH BURLINGTON NORTHWEST.

APPROXIMATELY 200 CU. YDS. OF TOPSOIL BORROW SHALL BE USED ON SLOPES IN AREAS TO BE DISTURBED BY CONSTRUCTION BETWEEN STA'S. 2+89 TO 17+96.

BASIS OF PLANNED QUANTITIES

- 2211 AGGREGATE BASE, CLASS 5  
145 LBS./CU. FT. COMPACTED
- 2331 PLANT MIXED BASE COURSE  
BITUMINOUS MIXTURE 220 LBS./S.Y. PER 2" THICKNESS  
BITUMINOUS MATERIAL FOR MIXTURE 4.5% BY WT.
- 2331 PLANT MIXED BINDER COURSE  
BITUMINOUS MIXTURE 165 LBS./S.Y. PER 1 1/2" THICKNESS  
BITUMINOUS MATERIAL FOR MIXTURE 4.5% BY WT.
- 2341 PLANT MIXED WEAR COURSE  
BITUMINOUS MIXTURE 165 LBS./S.Y. PER 1 1/2" THICKNESS  
BITUMINOUS MATERIAL FOR MIXTURE 6.0% BY WT.
- 2357 BITUMINOUS MATERIAL FOR TACK COAT - 0.05 GAL. PER S.Y.
- 2575 ROADSIDE SLEDDING BASED ON HORIZONTAL MEASUREMENTS PLUS 10%
- 2575 MULCH MATERIAL, TYPE 1 - 2 TONS PER ACRE
- 2575 SEED, MIXTURE NO. 5 - 50 LBS. PER ACRE
- 2575 COMMERCIAL FERTILIZER, ANALYSIS 10-10-10 - 500 LBS. PER ACRE

STANDARD PLATES

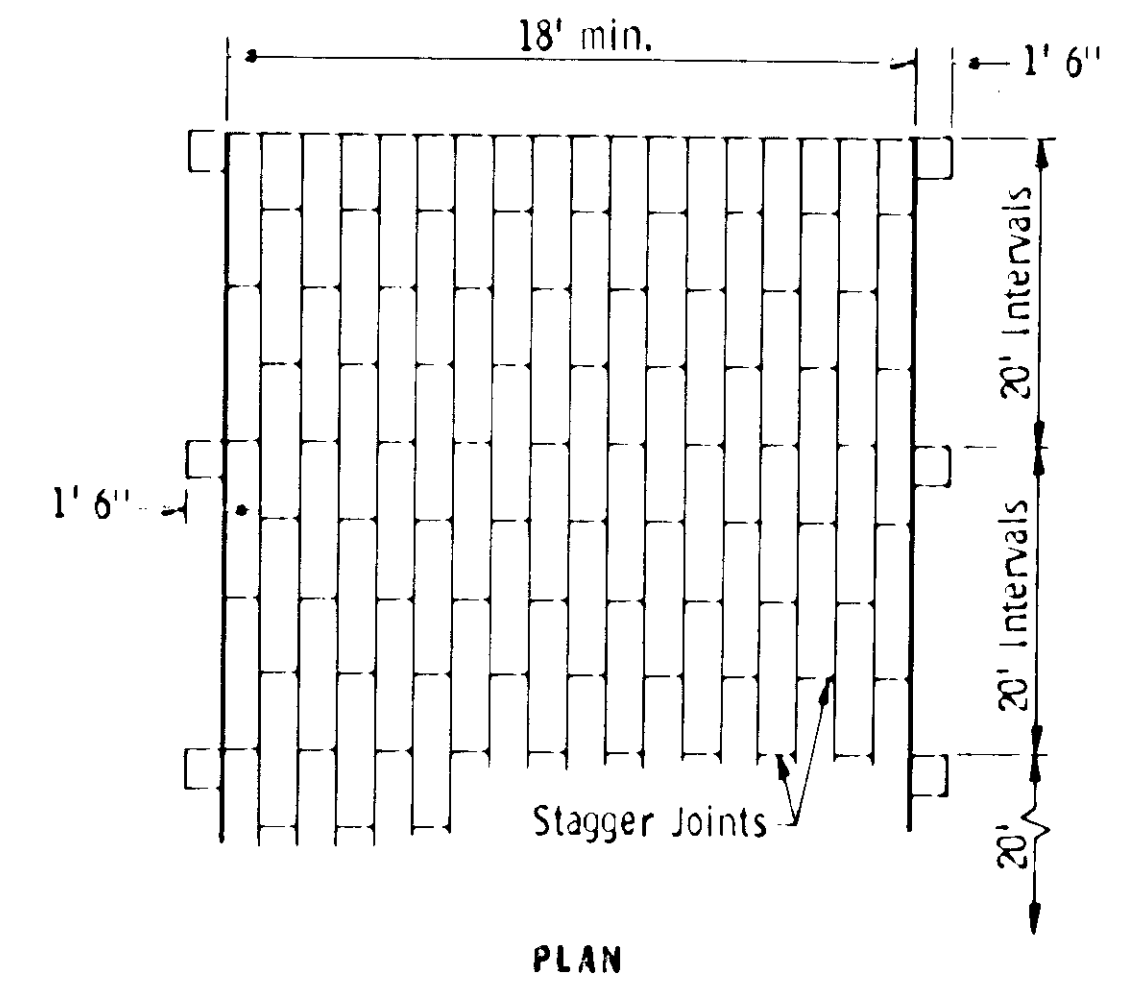
PLATE NO.	DESCRIPTION
0003A	SPECIFICATION REFERENCE TO STANDARD PLATES
3000I	REINFORCED CONCRETE PIPE
3006C	GASKET JOINT FOR R.C. PIPE
3040F	CORRUGATED METAL PIPE CULVERT
3100F	CONCRETE APRON FOR REINFORCED CONCRETE PIPE
3122I	METAL APRON FOR C.M. PIPE-ARCH CULVERT
3123H	METAL APRON FOR C.M. PIPE
4000H	MANHOLE OR CATCH BASIN
4005K	MANHOLE OR CATCH BASIN
4006K	MANHOLE OR CATCH BASIN
4010E	CONCRETE ADJUSTING RING
4011D	PRECAST CONCRETE BASE
4101B	RING CASTING FOR MANHOLE OR CATCH BASIN
4140D	SPECIAL GRATE CASTING FOR CATCH BASIN
7100E	CONCRETE CURB AND GUTTERS
7110E	CURB AND GUTTER CONSTRUCTION AT CATCH BASIN
8000H	STANDARD BARRICADES
8111B	TRAFFIC SIGNAL BRACKETING (PEDESTAL MOUNTED)
8112C	PEDESTAL FOUNDATION
8115C	PEDESTRIAN PUSH BUTTON INSTALLATION
8116C	STEEL GUARD POST
8117F	PRECAST CONCRETE MANHOLE OR PULLBOX
8122C	PEDESTAL AND PEDESTAL BASE
8124C	SIGNAL HEAD MOUNTS
8130D	SNOW CUT LOOP DETECTORS
9102C	SODDING AT PIPE CULVERT ENDS

SODDING

STATION	LOCATION	S.Y.
32+70 - 33+00	24' - 40' LT.	52
33+70 - 34+00	24' - 37' LT.	42
56+00 - 59+36	24' - 60' LT.	4770
32+94 - 33+19	24' - 59' RT.	96
33+45 - 33+70	24' - 59' RT.	97
RIGHT TURN ISLAND		170
CULVERT ENDS		269
TOTAL:		5496

DRAINAGE																							
STATION	LOCATION	IN PLACE	REMARKS	SALVAGE		PORTABLE CULVERTS																	
				PORT. CULV. STRUCT.	CONC. EXC.	SOD-DING	RIP-RAP	15" CMP		36" CMP		57" SPAN CMP-A		24" SPAN CMP-A									
				LN.FT.	CU.YD.	CU.YD.	SQ.YD.	CU.YD.	LN.FT.	AP	LN.FT.	AP	LN.FT.	AP	LN.FT.	AP							
17+65	℄ X-ING	36" X 74' RCP-2 AP	TO REMAIN IN PLACE			50																	
18+75	LT.					17			11	2													
18+90	RT.					17			11	2													
21+16	℄ X-ING	66" X 68' CMP-2 AP	TO REMAIN IN PLACE			95																	
28+05	℄ X-ING	57" SPAN CMP-A. CU	EXTENSION RT.			42								12	1								
31+35	RT.	15" X 40' CMP	REMOVE ENTRANCE	40'																			
33+32	RT.	15" X 56' CMP	TO REMAIN IN PLACE							2													
33+35	LT.	56" SPAN X 126' RCP-A	TO REMAIN IN PLACE																				
38+95	RT.	15" X 40' CMP	REMOVE ENTRANCE	40'																			
40+50	LT.	36" X 60' CMP	TO REMAIN IN PLACE											2									
43+15	LT.	36" X 60' CMP	TO REMAIN IN PLACE											2									
45+95	LT.	36" X 60' CMP	TO REMAIN IN PLACE											2									
52+83	LT.	24" X 64' CMP		64'			31													66	2		
56+28	LT.	18" X 60' CMP-2 AP	NO CULV. REQUIRED	60'																			
56+75	RT.	15" X 30' CMP		30'			17		52	2													
TOTALS:				234'			269		140	8				6	12	1	66	2					

ADJUST FRAME & RING CASTING AND WATER GATE VALVE		
ITEM	STA.	LOCATION
G.V.	3+14	28' LT.
C.B.	32+91	53' LT.
G.V.	33+26	50' LT.
M.H.	33+32	44' LT.
C.B.	33+32	61' LT.
G.V.	33+57	32' LT.
C.B.	33+62	52' LT.
G.V.	40+10	32' LT.
M.H.	40+50	38' LT.
G.V.	40+92	32' LT.
G.V.	43+15	32' LT.
G.V.	43+24	33' LT.
M.H.	43+24	32' LT.
M.H.	46+75	37' LT.
M.H.	49+73	37' LT.
M.H.	52+73	37' LT.



PLAN

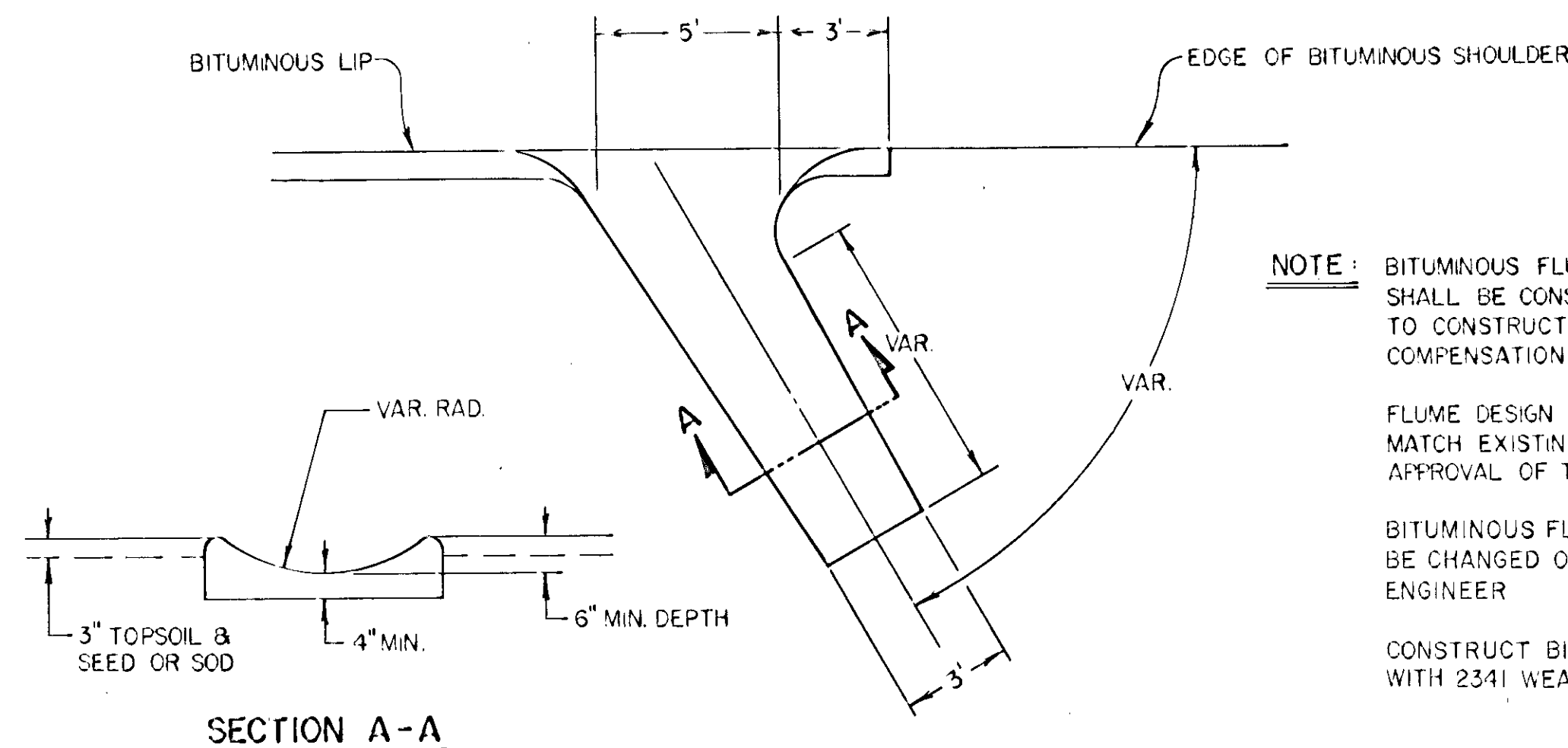
STORM SEWER SYSTEM

NO.	STATION	LOCATION	REMARKS	TYPE	DESIGN	LN. FT.	REMOVE SEWER PIPE	TOP	OUTLET	F&I CASTING ASSEMBLY	DRAINS TO	R.C.P. SEWER 15" CL.	R.C.P. APKRN 15"
1	56+65	52' LT.	EXCAVATE DITCH AT OUTLET FROM APKRN TO 55+00	CB	H	2.3		383.0	330.75	A	DITCH	92'	1
2	53+17	60' RT.	REMOVE 12" X 8' & APKRN OF IN PLACE RCP SEWER	CB	A OR F	5.0	14'	887.0	882.05	A	DITCH	59'	1
TOTAL:												151'	2

CASTING ASSEMBLIES

ASSEMBLY	ITEM	CASTING NO.	QUANTITY
A	FRAME GRADE	700-7 721	2

TYPICAL BITUMINOUS FLUME



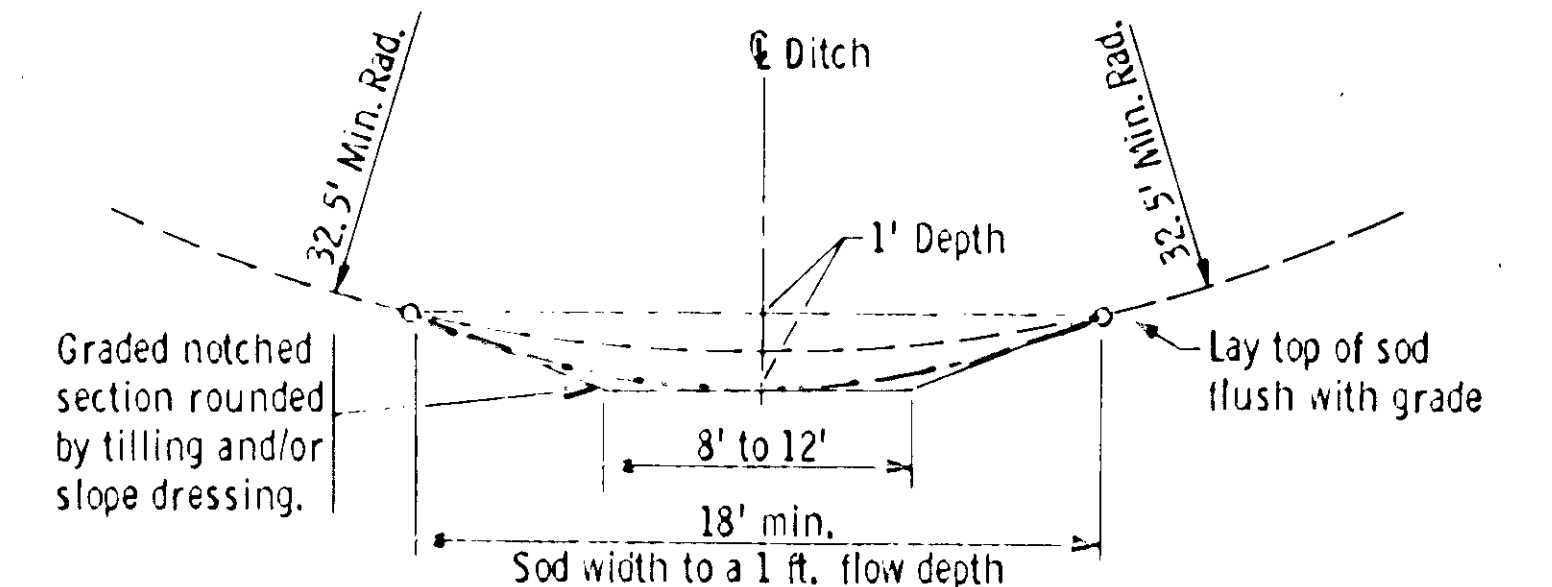
NOTE: BITUMINOUS FLUME CONSTRUCTION SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION AND NO ADDITIONAL COMPENSATION WILL BE MADE.

FLUME DESIGN MAY BE MODIFIED TO MATCH EXISTING CONDITIONS UPON APPROVAL OF THE ENGINEER.

BITUMINOUS FLUME LOCATIONS MAY BE CHANGED OR DELETED BY THE ENGINEER

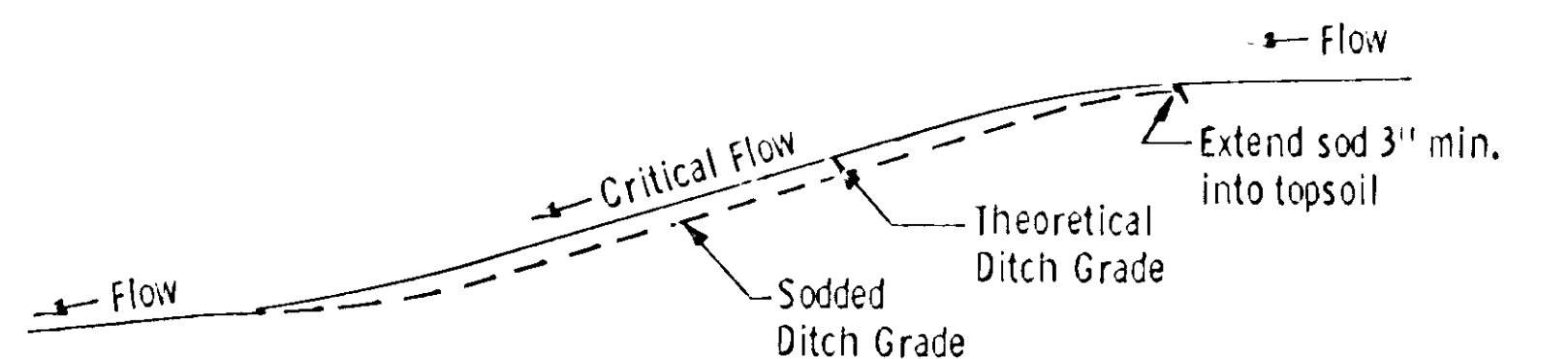
CONSTRUCT BITUMINOUS FLUMES WITH 234I WEAR COURSE

BITUMINOUS FLUMES	
STA.	LOCATION
2+89	74' LT. & RT.
32+43	24' LT.
32+91	24' LT.
33+18	47' RT.
33+42	47' RT.
40+35	47' RT.
40+66	47' RT.
43+22	53' RT.
43+64	58' RT.
52+57	58' RT.
53+09	59' RT.
56+14	58' RT.
56+42	58' RT.



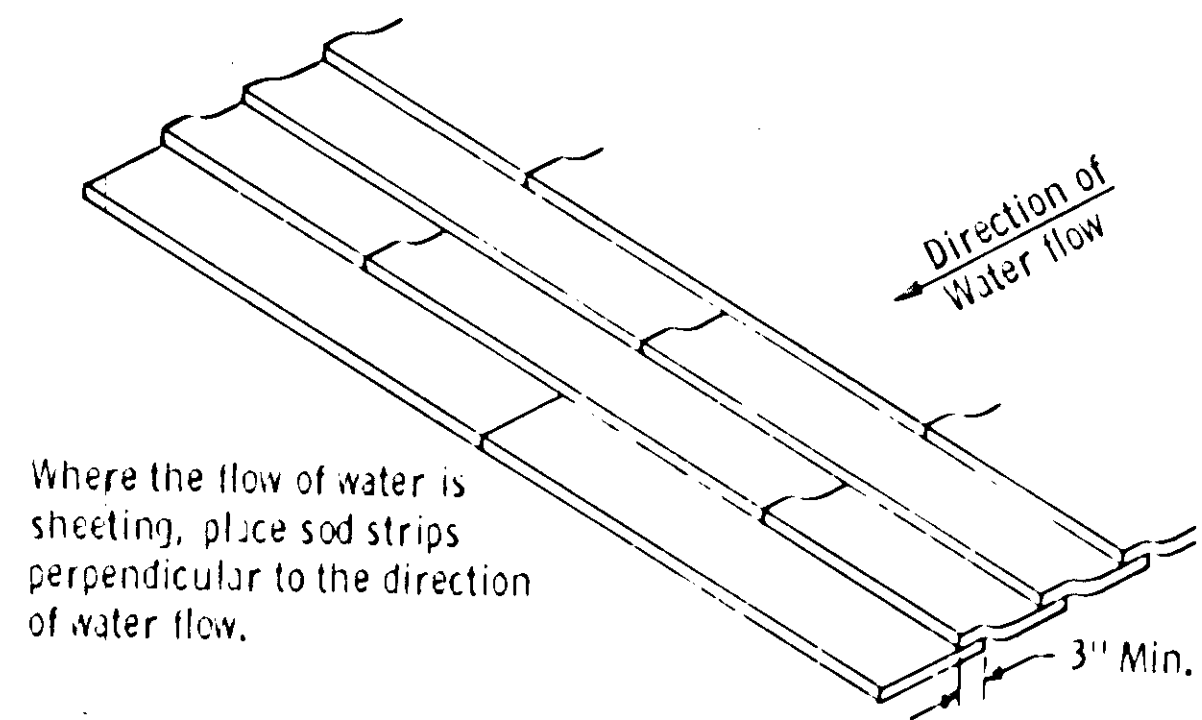
SODDED DITCH CROSS SECTION

Ditches having a minimum radius of 32.5 feet and requiring sod shall be constructed according to the above details. Where ditch radius is less than 32.5 feet, notching is not required. Sod a minimum of 18 feet in width.

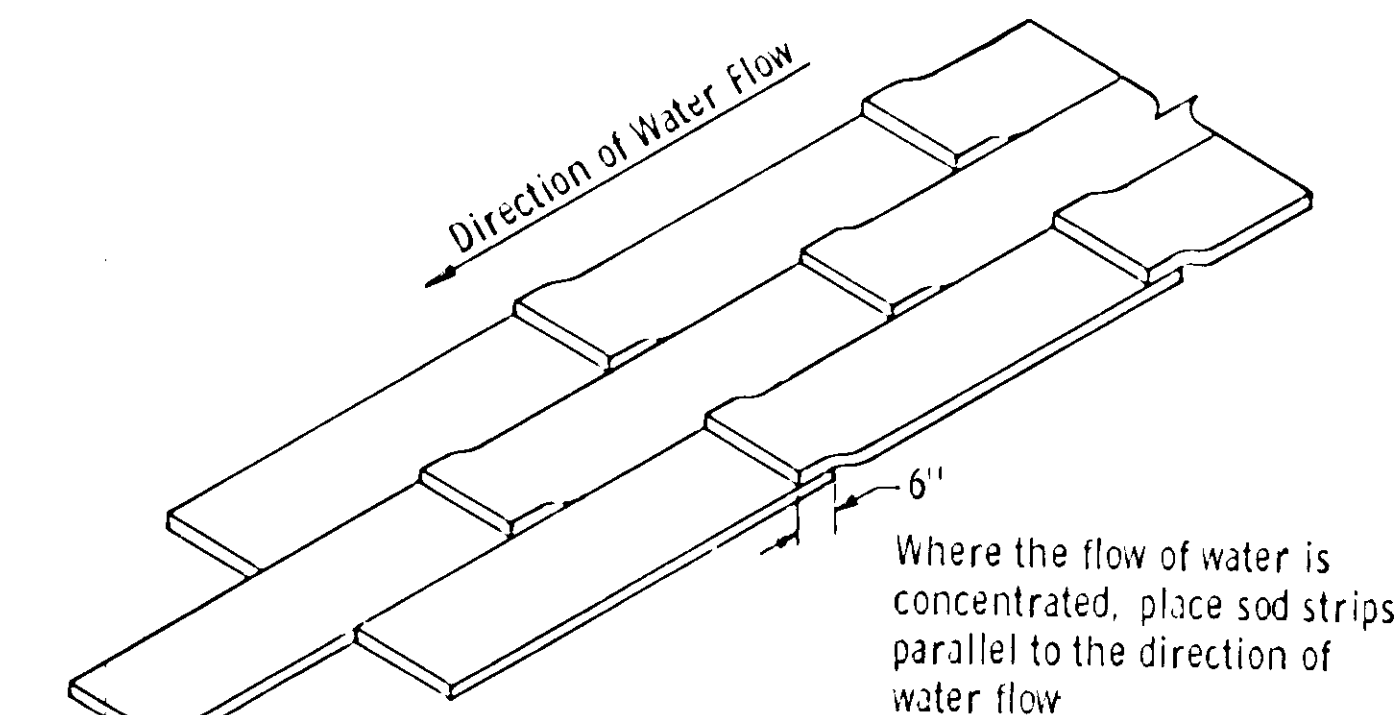


DITCH PROFILE

SODDED DITCH DETAILS



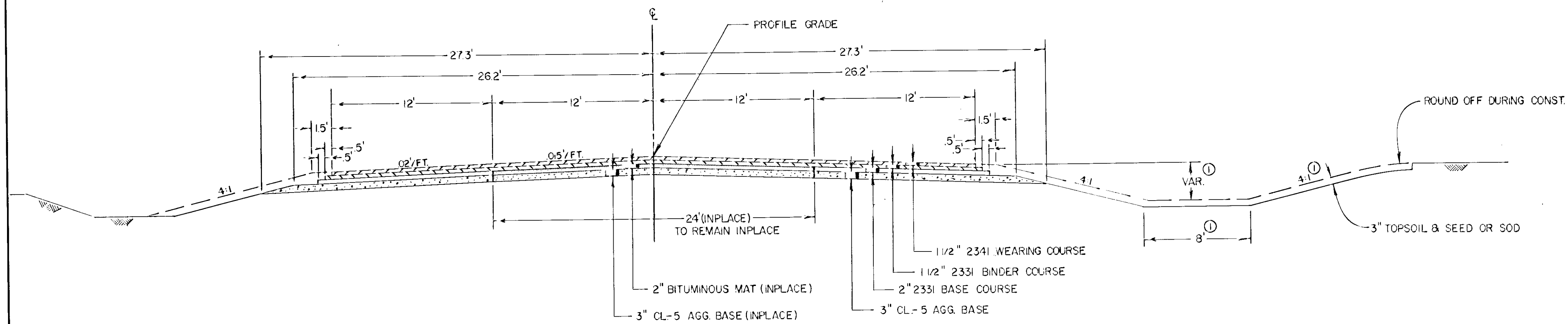
SHINGLING SOD



OVERLAPPING SOD

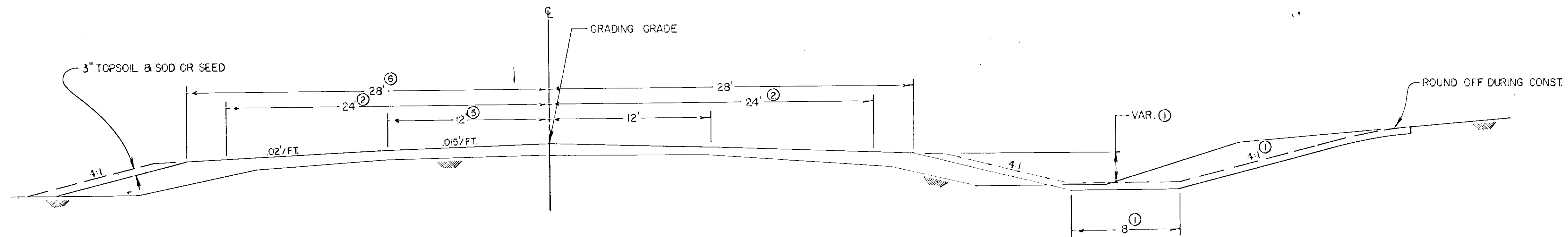
**TYPICAL GRADING & BITUMINOUS SECTION**

STA 2+89 - STA 17+96



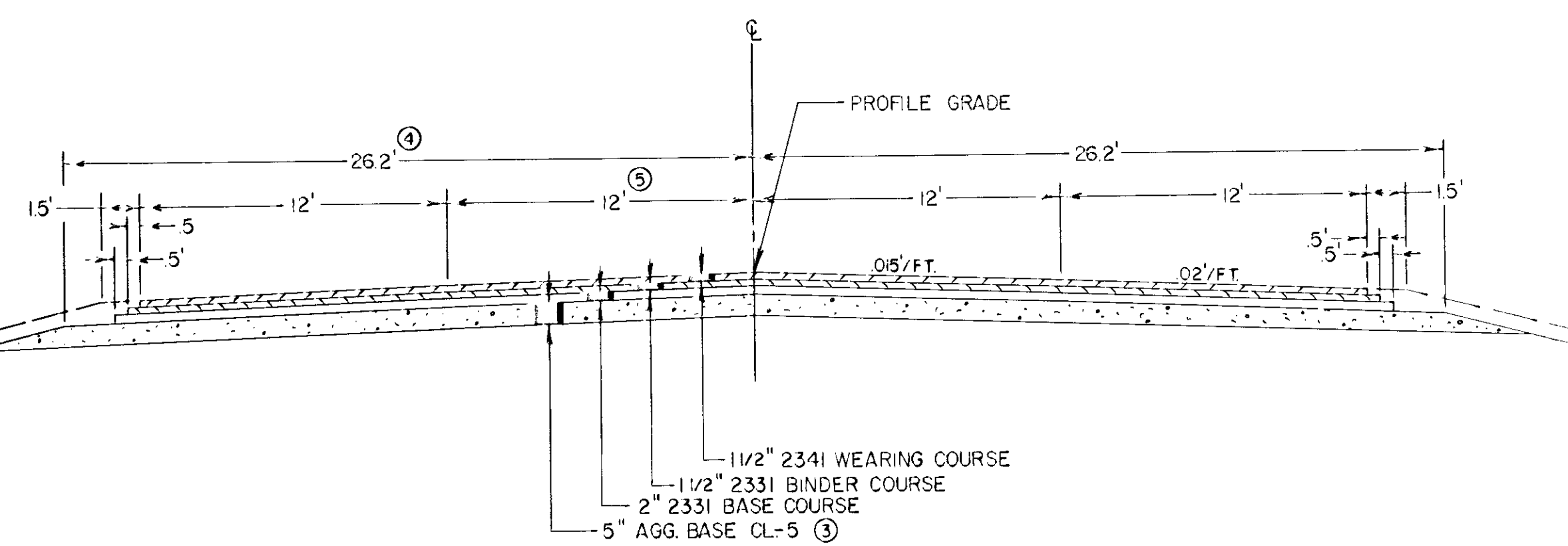
**TYPICAL GRADING SECTION**

STA 18+12 - STA 56+28



**TYPICAL BITUMINOUS SECTION**

STA 18+12 - STA 56+28



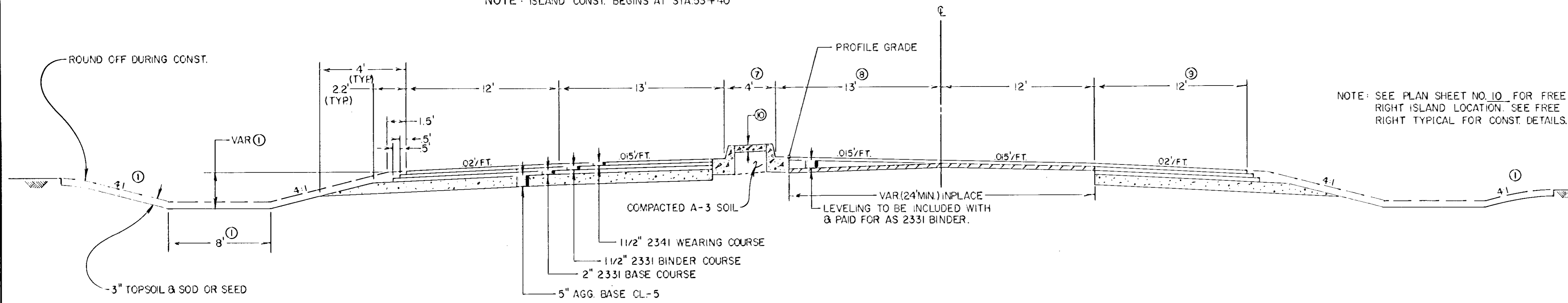
NOTE: BEGIN ISLAND CONST. STA 53+40

- ① SEE X-SECTIONS FOR DEPTH & WIDTH OF DITCHES AND MODIFIED BACK SLOPES.
- ② DENOTES LIMITS OF SALVAGED BITUMINOUS TO BE PLACED WITH BASE MATERIAL.
- ③ SALVAGE BITUMINOUS MIXTURE TO BE INCLUDED WITH CL-5 AS BASE MATERIAL.
- ④ TAPERS FROM 26.2' TO 44.2' STA.50+88 TO STA.56+28.
- ⑤ TAPERS FROM 12' TO 30' STA.50+88 TO STA.56+28.
- ⑥ TAPERS FROM 28' TO 46' STA.50+88 TO STA.56+28.

**TYPICAL GRADING & BITUMINOUS SECTION**

STA 56+28 - STA. 59+34

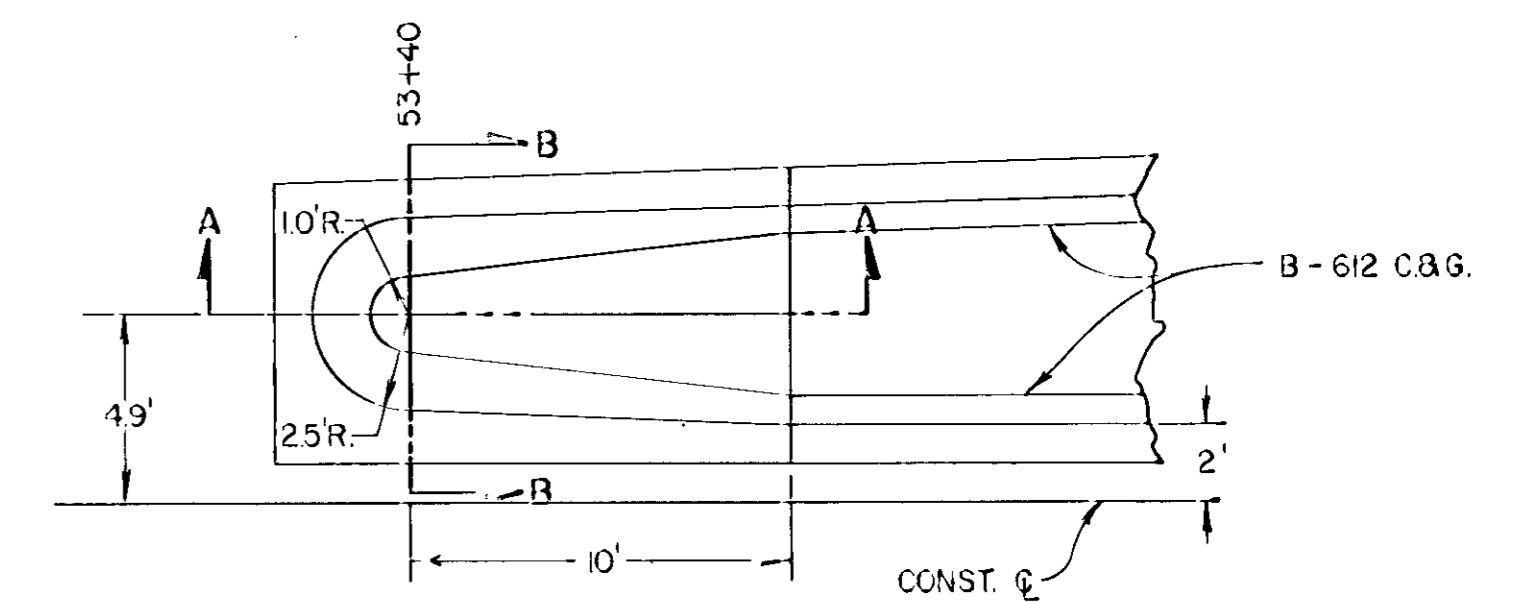
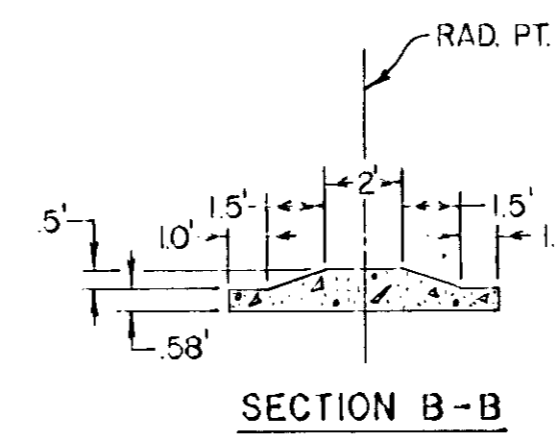
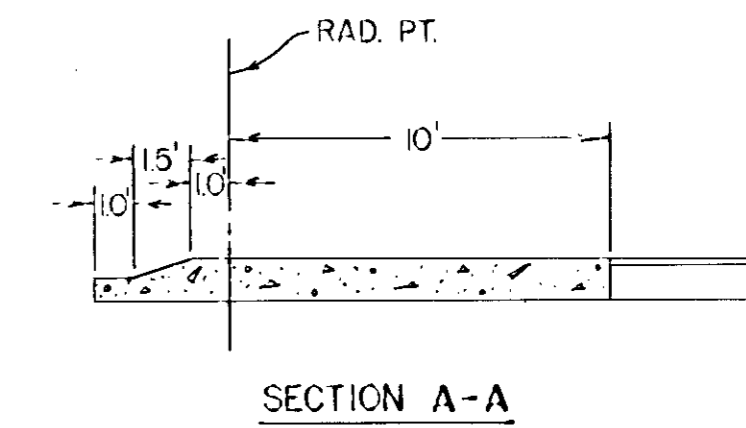
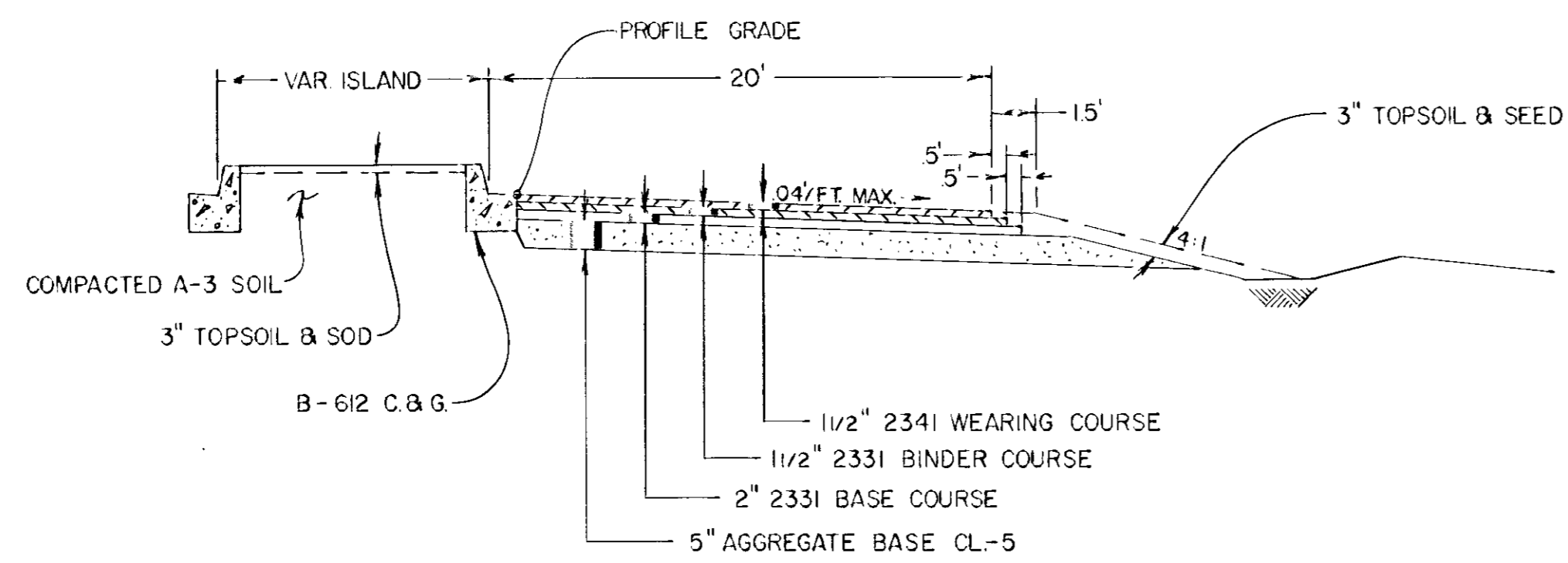
NOTE: ISLAND CONST. BEGINS AT STA. 53+40



NOTE: SEE PLAN SHEET NO. 10 FOR FREE RIGHT ISLAND LOCATION. SEE FREE RIGHT TYPICAL FOR CONST. DETAILS.

- ① SEE X-SECTIONS FOR DEPTH & WIDTH OF DITCHES AND MODIFIED BACK SLOPES.
- ⑦ VAR. WIDTH STA. 53+40 TO STA. 56+28 SEE PLAN & PROFILE SHEETS.
- ⑧ VARIES FROM 2' TO 13' STA. 53+40 TO STA. 56+28 SEE PLAN & PROFILE SHEETS.
- ⑨ TAPERS FROM 12' TO 24' STA. 55+70 TO STA. 57+50 24' WIDE STA. 57+50 TO STA. 58+27±
- ⑩ 4" CONC. STA. 56+28 TO STA. 59+28, 2" 2341 WEARING COURSE STA. 53+50 TO STA. 56+28.

**TYPICAL SECTION - RIGHT TURN**

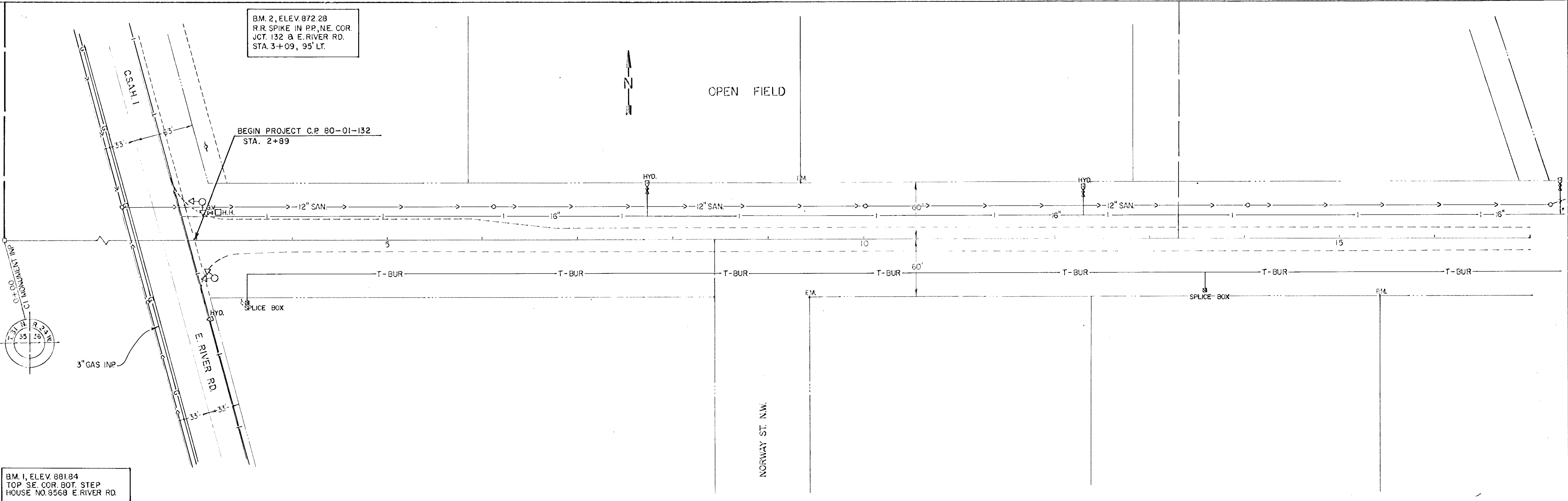


**MEDIAN NOSE DETAIL**

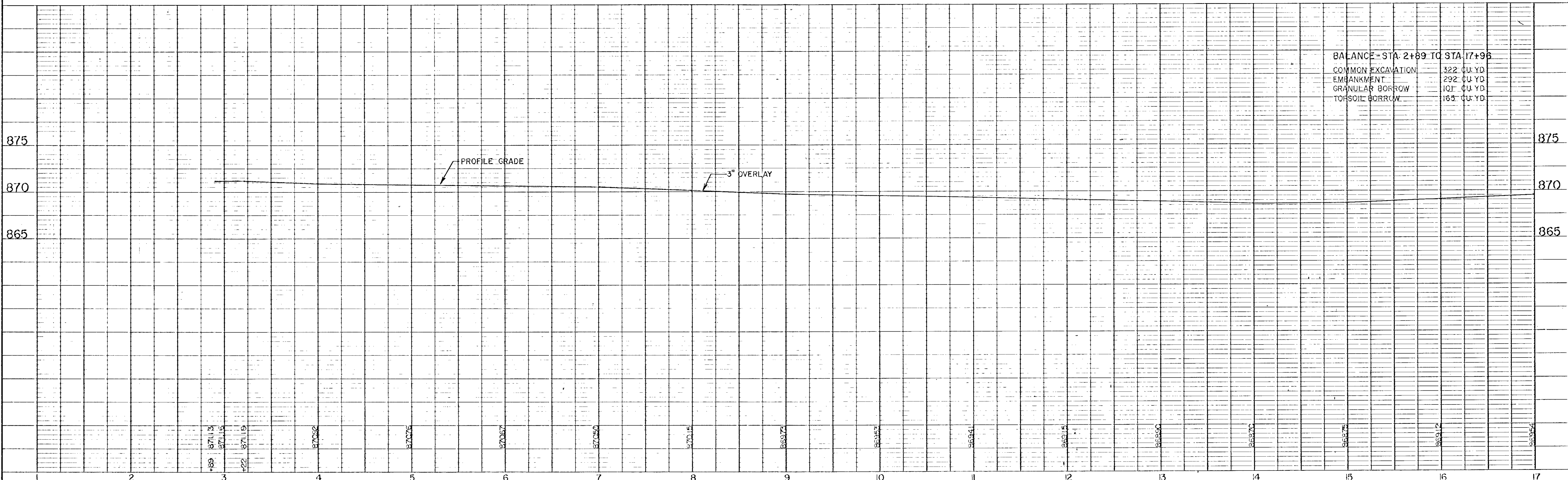
BM. 2, ELEV. 872.28  
 R.R. SPIKE IN PP, N.E. COR.  
 JCT. 132 & E. RIVER RD.  
 STA. 3+09, 95' LT.

BEGIN PROJECT C.P. 80-01-132  
 STA. 2+89

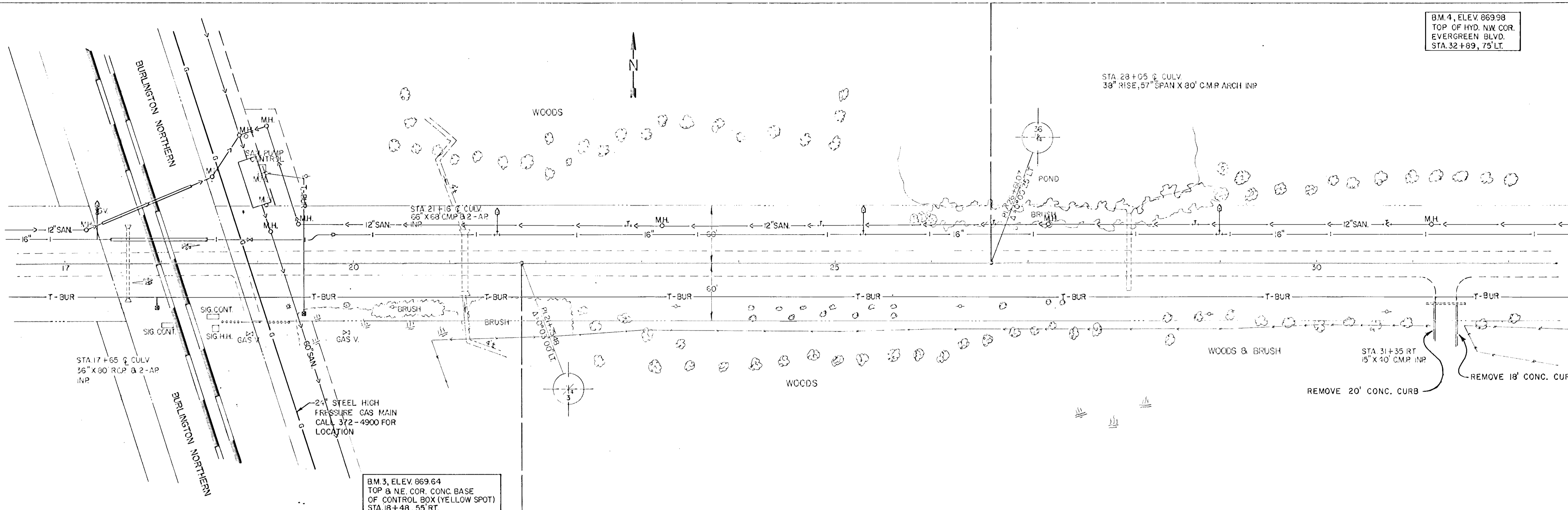
BM. 1, ELEV. 881.84  
 TOP S.E. COR. BOT. STEP  
 HOUSE NO. 8568 E. RIVER RD.



BALANCE - STA. 2+89 TO STA. 17+96	
COMMON EXCAVATION	322 CU. YD.
EMBANKMENT	292 CU. YD.
GRANULAR BORROW	101 CU. YD.
TORSOIL BORROW	163 CU. YD.



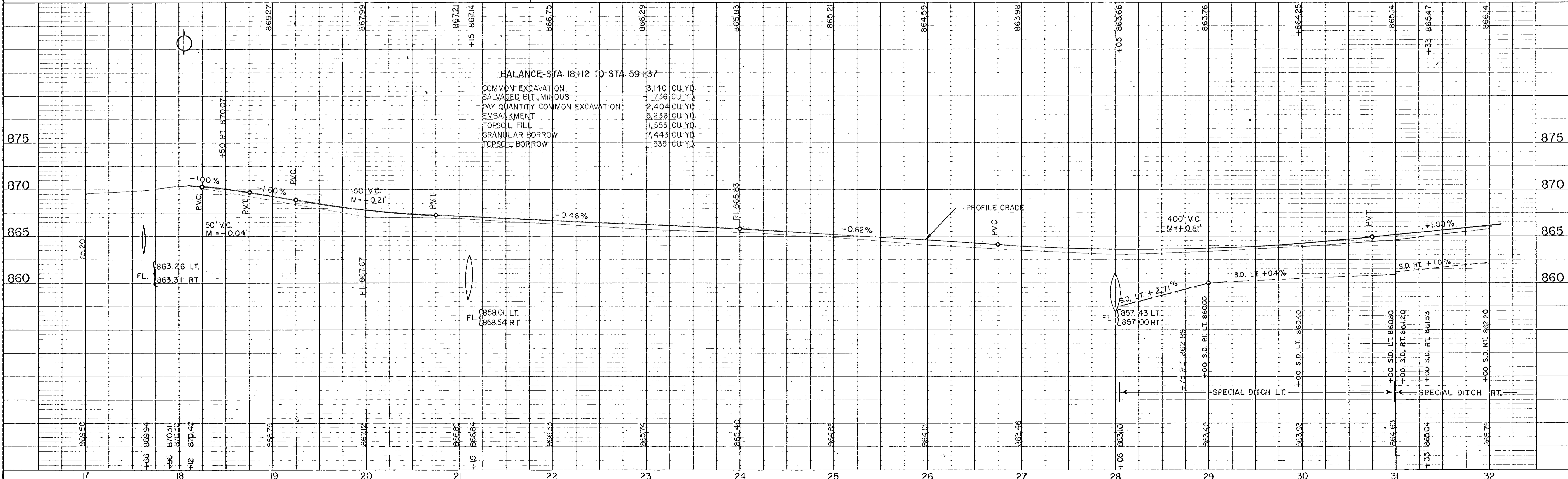
B.M. 4, ELEV. 869.98  
 TOP OF HYD. NW COR.  
 EVERGREEN BLVD.  
 STA. 32+89, 75' LT.

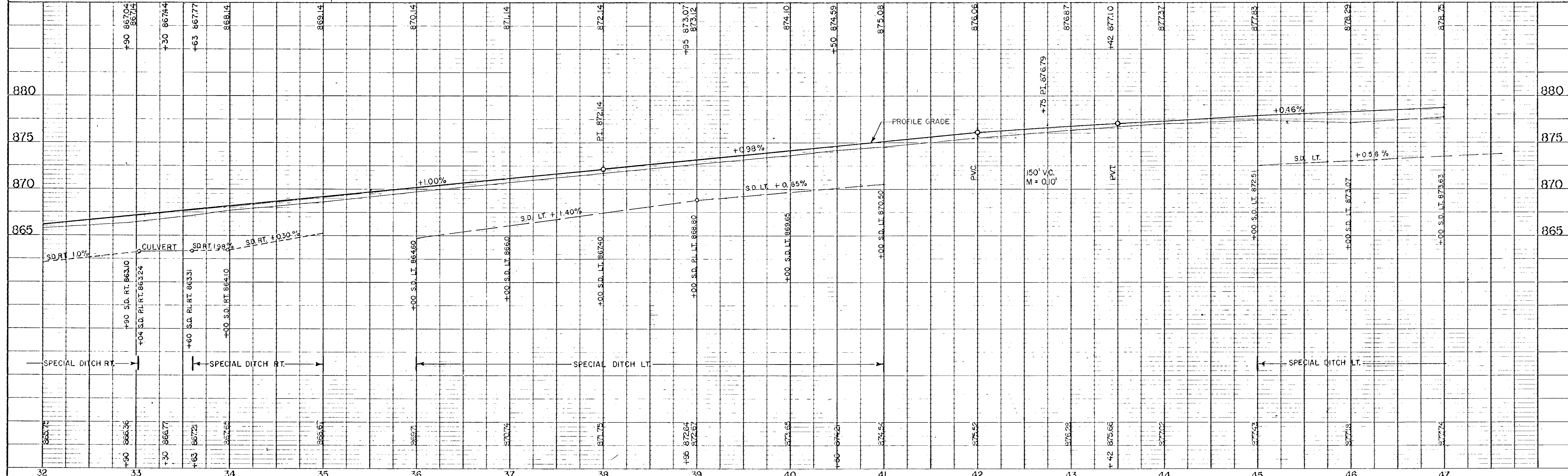
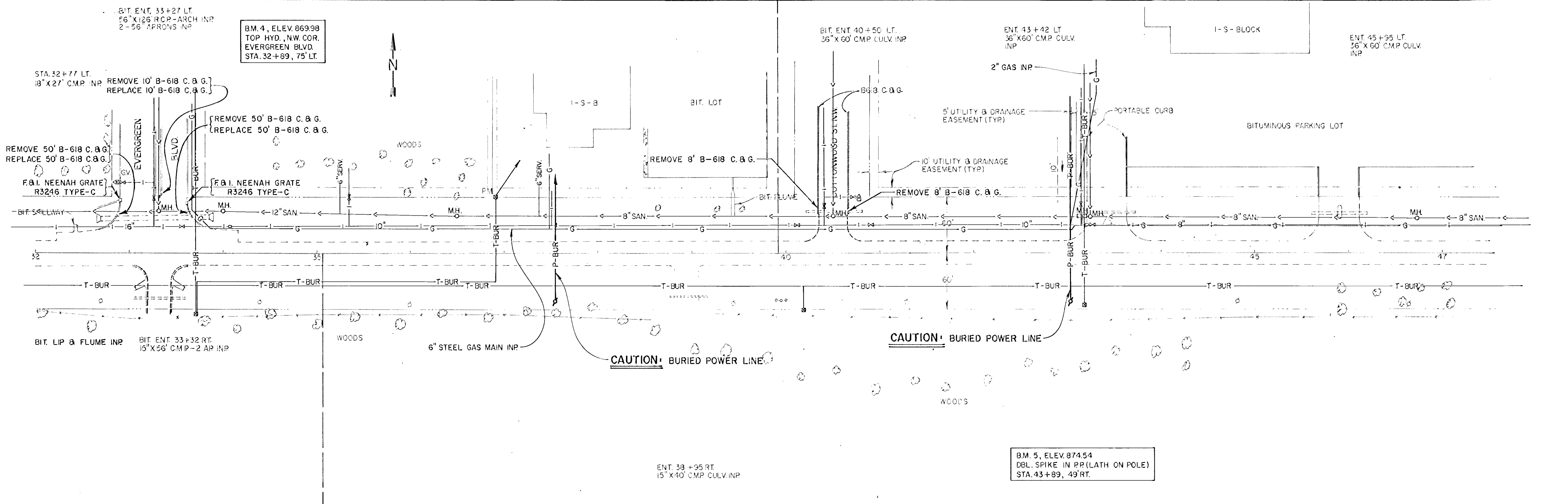


BM 3, ELEV. 869.64  
 TOP & NE. COR. CONC. BASE  
 OF CONTROL BOX (YELLOW SPOT)  
 STA. 18+48, 55' RT.

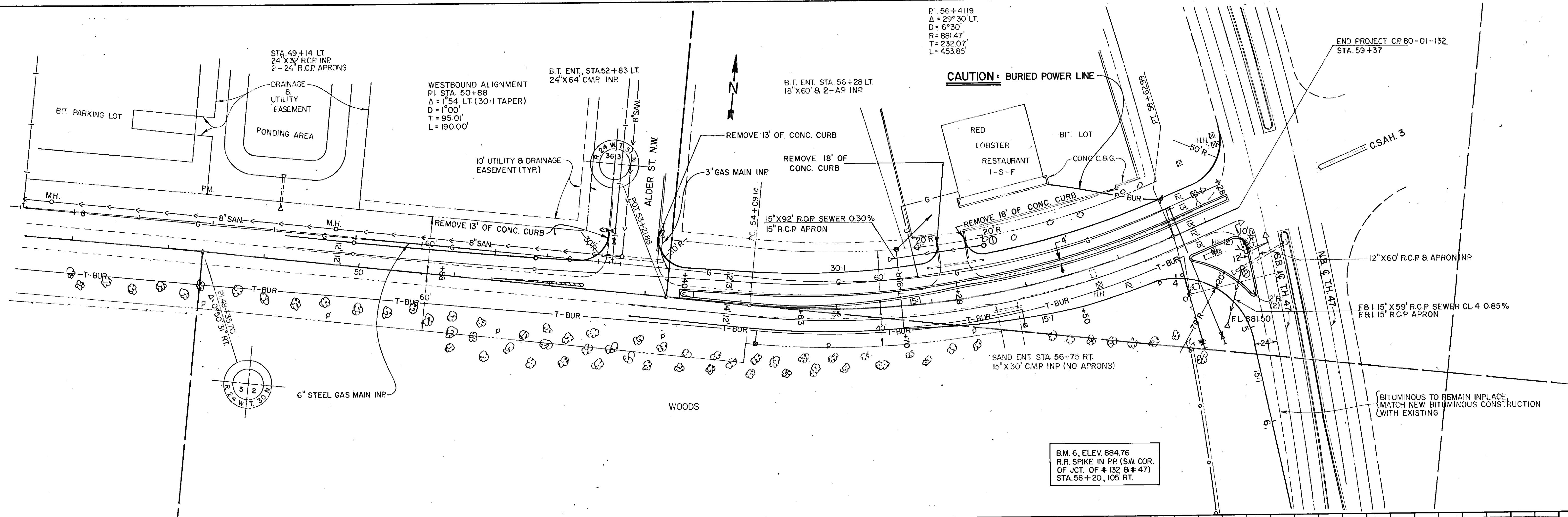
BALANCE STA 18+12 TO STA 59+37

COMMON EXCAVATION	3,140 CU. YD.
SALVAGED BITUMINOUS	736 CU. YD.
PAY QUANTITY COMMON EXCAVATION	2,404 CU. YD.
EMBANKMENT	5,236 CU. YD.
TOPSOIL FILL	1,555 CU. YD.
GRANULAR BORROW	7,443 CU. YD.
TOPSOIL BORROW	535 CU. YD.



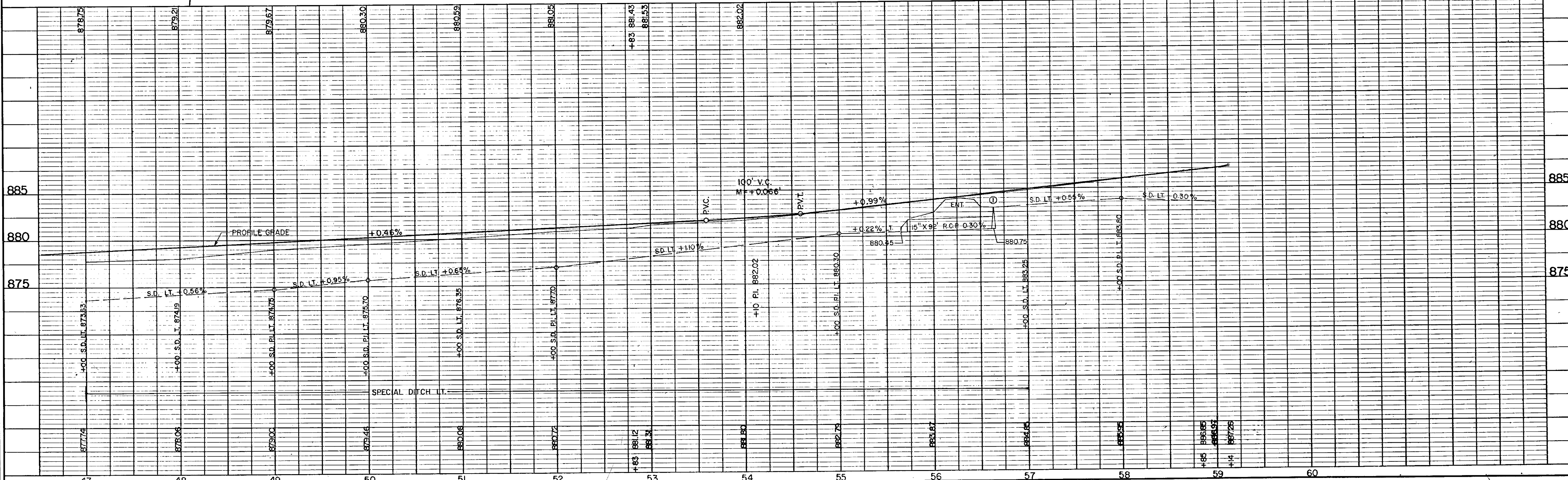




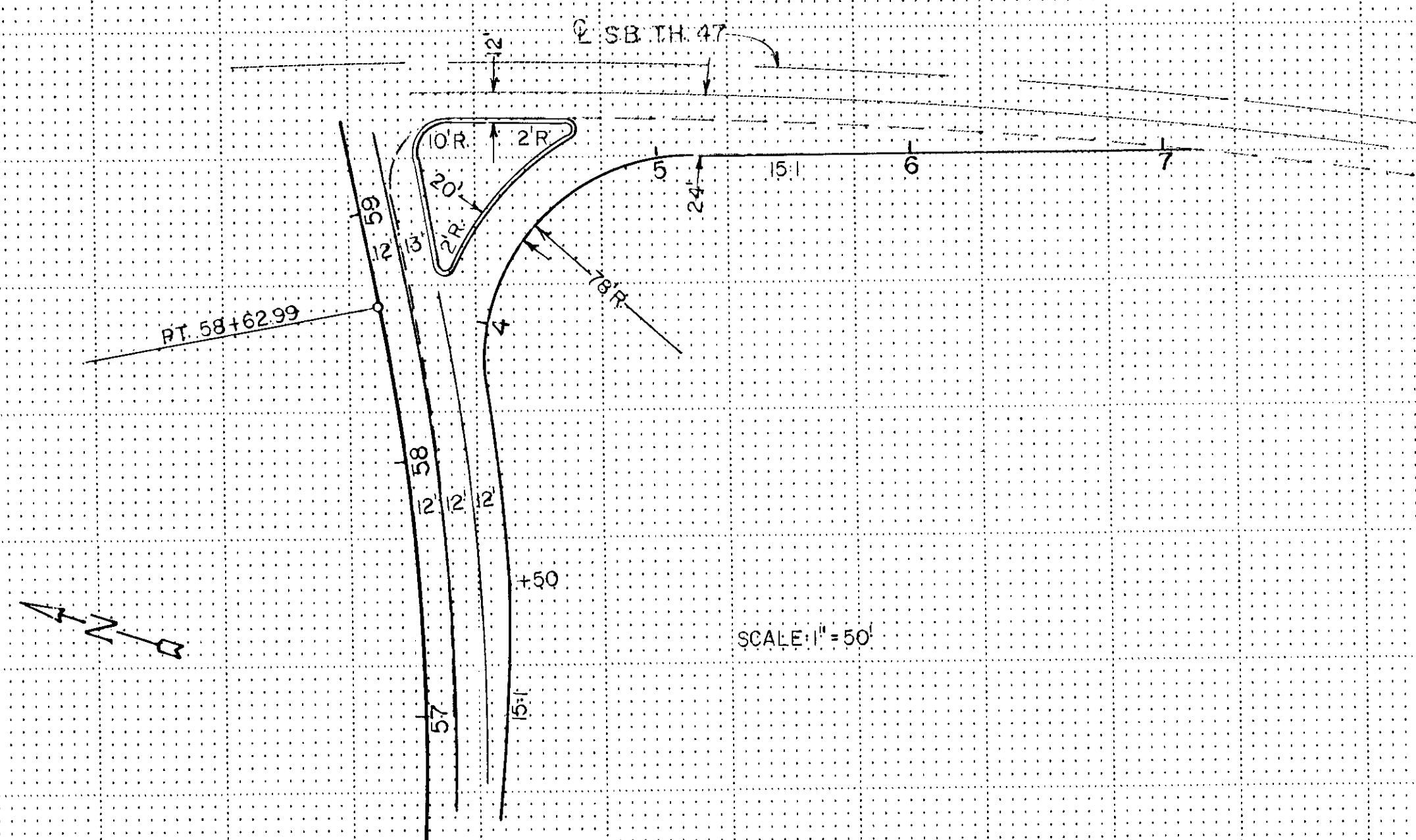


PI 56+41.9  
 $\Delta = 29^\circ 30' \text{ LT.}$   
 $D = 6^\circ 30'$   
 $R = 881.47'$   
 $T = 232.07'$   
 $L = 453.85'$

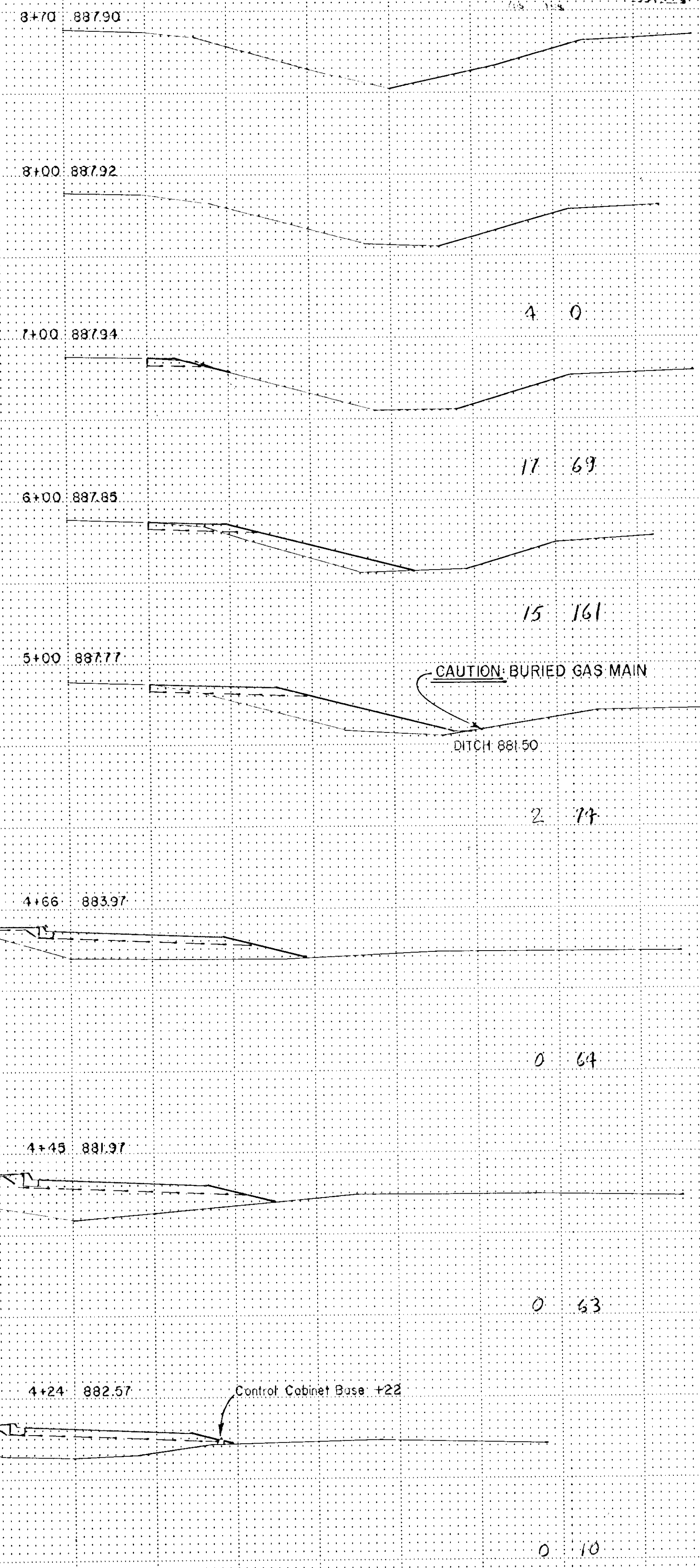
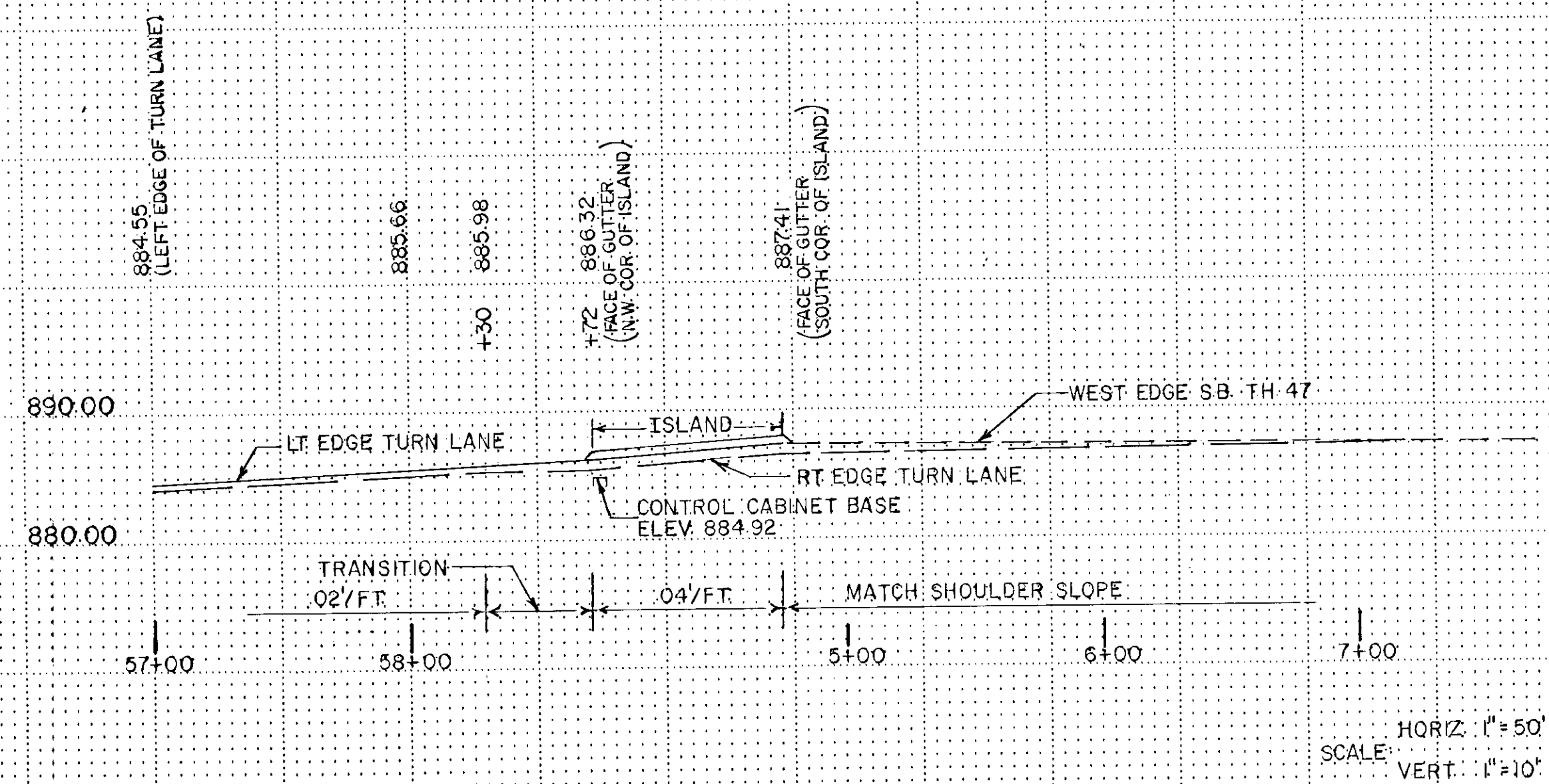
BM. 6, ELEV. 884.76  
 R.R. SPIKE IN PP. (SW COR.  
 OF JCT. OF # 132 & # 47)  
 STA. 58+20, 105' RT.



RIGHT TURN LANE C.R. 132 & T.H. 47

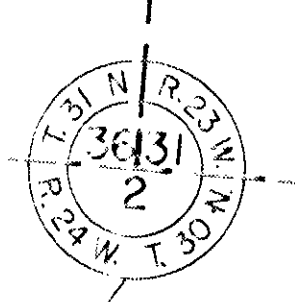
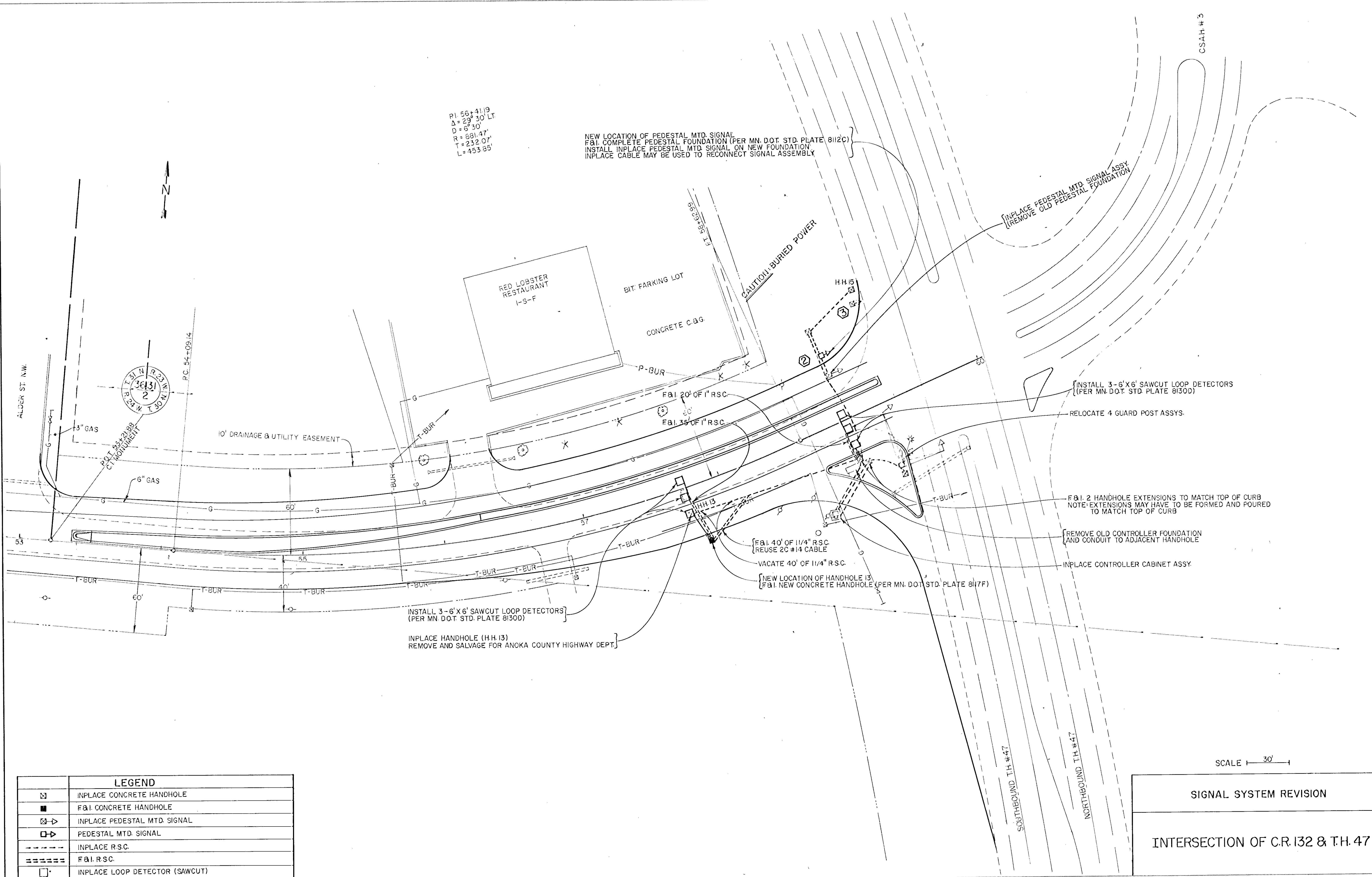


RIGHT TURN LANE C.R. 132 & T.H. 47



P.I. 56+41.19  
 $\Delta = 29^{\circ} 30' \text{ LT}$   
 $D = 67.30'$   
 $R = 681.47'$   
 $T = 232.07'$   
 $L = 453.85'$

NEW LOCATION OF PEDESTAL MTD. SIGNAL  
 F&I. COMPLETE PEDESTAL FOUNDATION (PER MN. DOT. STD. PLATE 8112C)  
 INSTALL INPLACE PEDESTAL MTD. SIGNAL ON NEW FOUNDATION  
 INPLACE CABLE MAY BE USED TO RECONNECT SIGNAL ASSEMBLY



LEGEND	
	INPLACE CONCRETE HANDHOLE
	F&I. CONCRETE HANDHOLE
	INPLACE PEDESTAL MTD. SIGNAL
	PEDESTAL MTD. SIGNAL
	INPLACE R.S.C.
	F&I. R.S.C.
	INPLACE LOOP DETECTOR (SAWCUT)
	F&I. LOOP DETECTOR (PER MN. DOT. STD. PLATE 8130D)

SCALE 1" = 30'

SIGNAL SYSTEM REVISION  
 INTERSECTION OF C.R. 132 & T.H. 47

Fed. Proj. No. 15 7

15	7
17	15
26	13
26	2
19	11
7	3
1	1
2	0

8+00 870.15

7+00 870.50

6+00 870.67

5+00 870.76

4+00 870.92

3+22 871.19

3+00 871.16

2+89 871.15

0.11  
1.5  
2.5  
3.4

VAR.

VAR.

VAR.

VAR.

VAR.

VAR.

T-BUR

T-BUR

0.11  
1.5  
2.5  
3.4

0.11  
1.5  
2.5  
3.4

0.11  
1.5  
2.5  
3.4

0.11  
1.5  
2.5  
3.4

0.11  
1.5  
2.5  
3.4

STA. 2+89 - STA. 3+00

State Proj. No.

C.P. 80-01-132

Sheet No. 12 of 18 Sheets

TELETYPE POST CROSS SECTION UNIT 1/76

Fed. Proj. No.

11 24

11 24

22 24

24 19

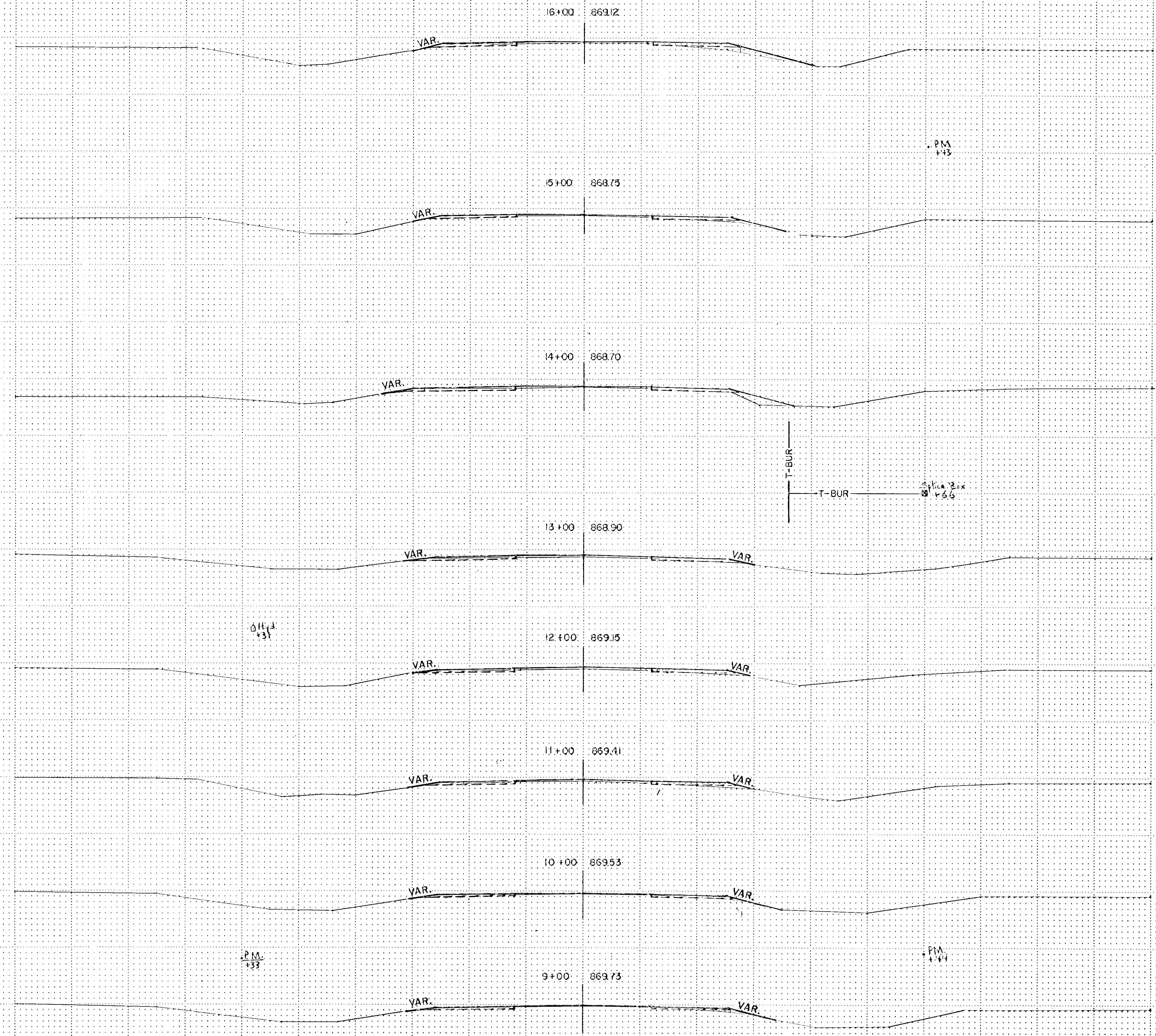
17 2

11 6

13 6

17 7

STA. 9+00 - STA. 16+00



TELEPHONE POST CROSS SECTION 10/11 9/76

State Proj. No. C.P. 80-01-132

Sheet No. 13 of 18 Sheets

Fed. Proj. No.

13 63  
1531

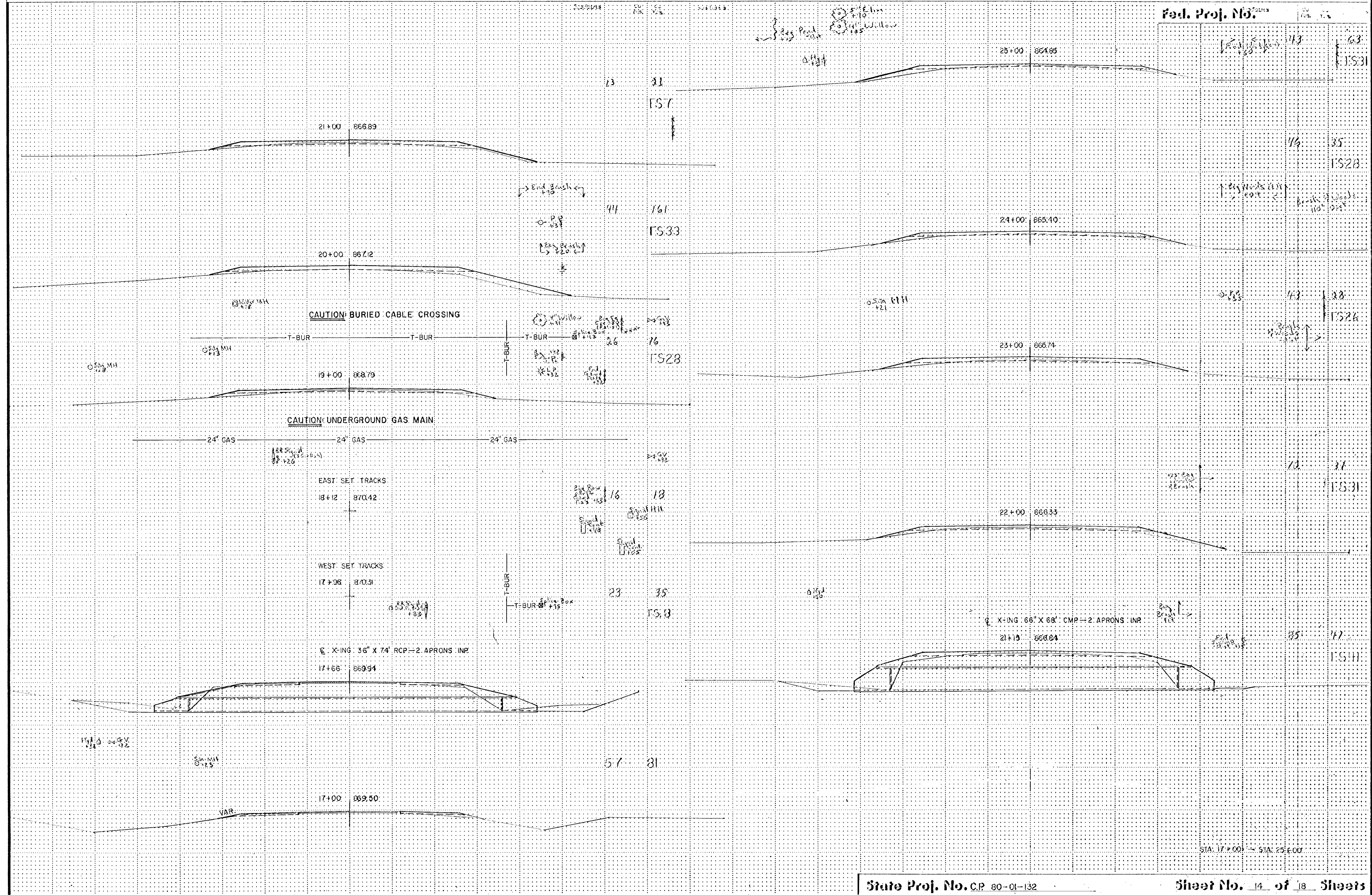
16 35  
1528

13 38  
1526

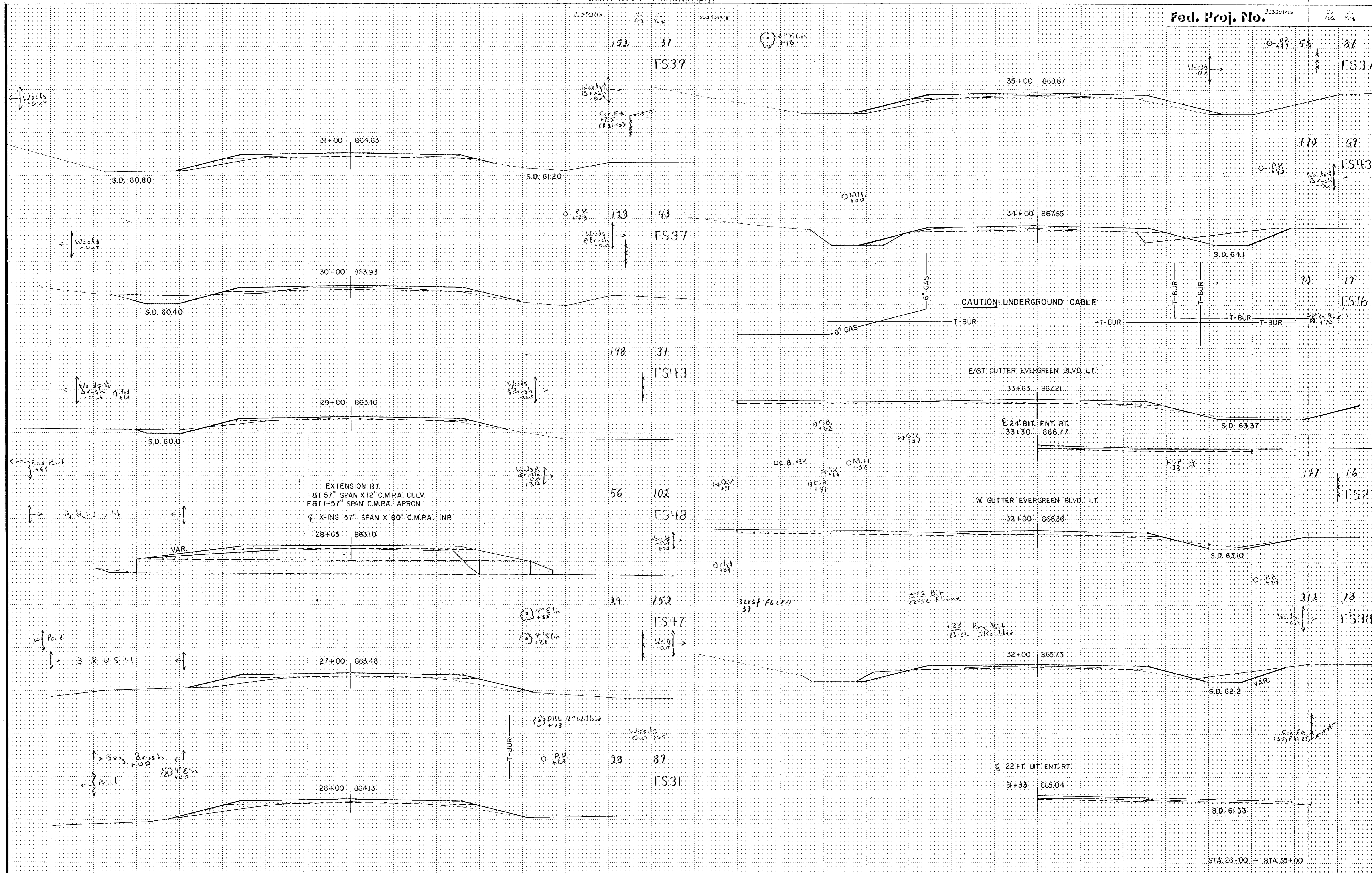
12 37  
1531

15 47  
1511

STA. 17+00 - STA. 25+00



VERTICAL CURVE SECTION: 100' 1/2"



152 37 FS37

133 43 FS37

178 31 FS43

56 102 FS48

29 152 FS47

28 87 FS31

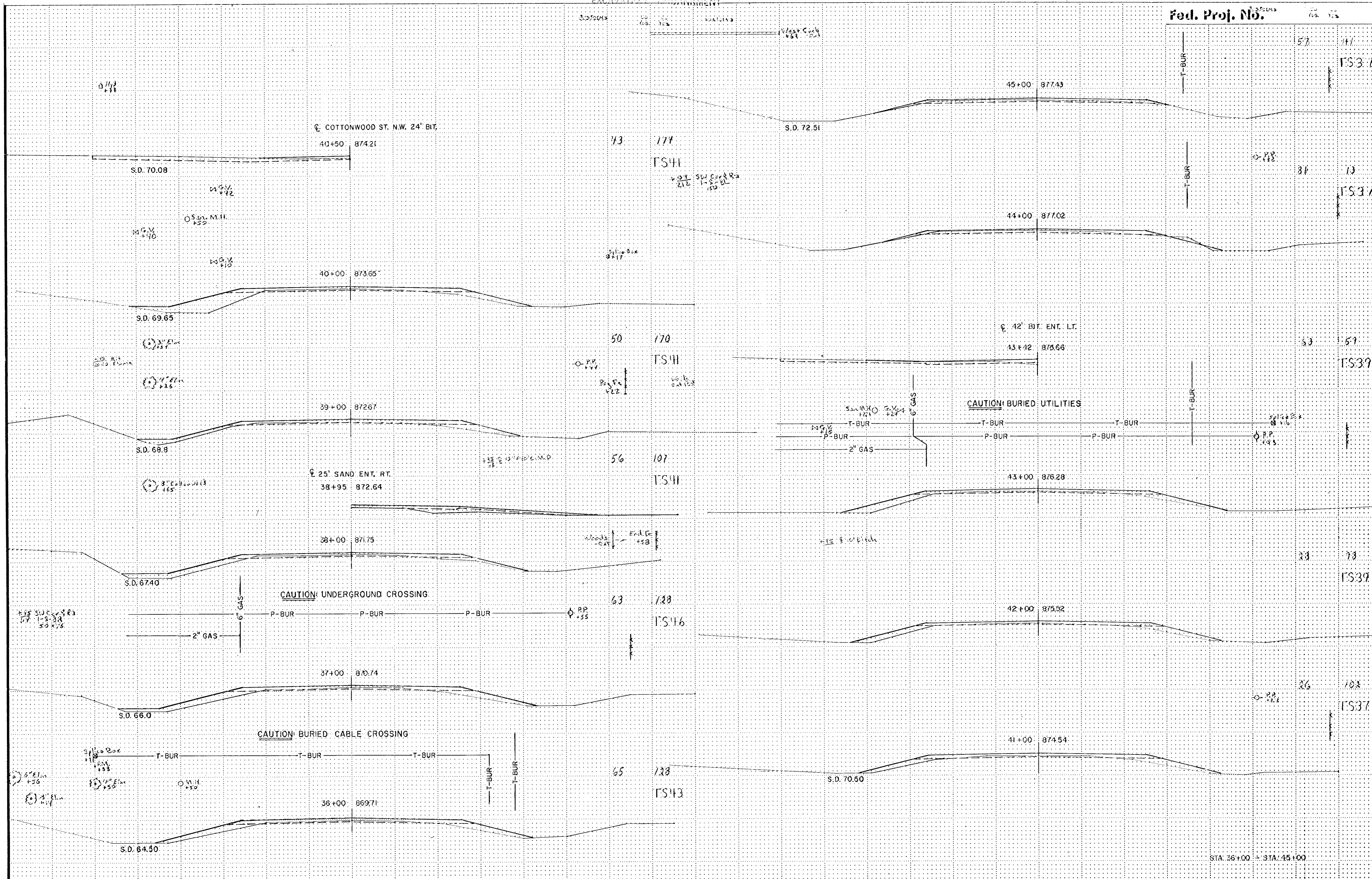
170 87 FS43

10 17 FS16

177 16 FS27

214 18 FS38

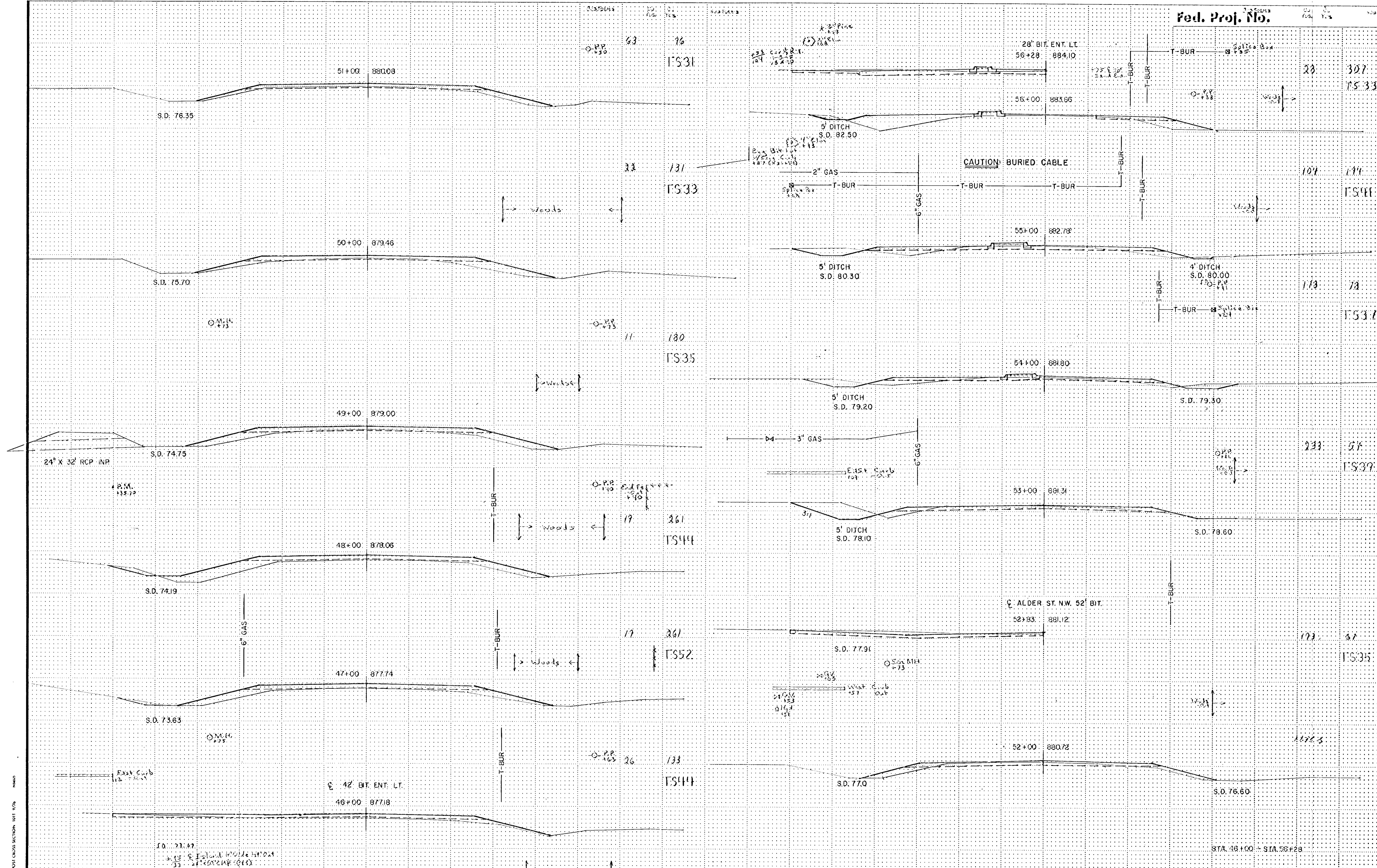
REDDING POST CROSS SECTION 1011 9/76



TELEPHONE POST CROSS SECTION UNIT 9/4



Fed. Proj. No.



VERTICAL POST CROSS SECTION, BUT 1/2\"/>

4	58	TS 1
6	63	TS 3
7	79	TS 3
27	207	TS 11
26	385	TS 22

WEST SH. SO. BOUND  
59+37 887.57

Pedestrian Path  
+1.00

59+14 887.26

Signal Base  
(Guard Posts)

59+00 886.97

5' DITCH  
S.D. 83.50

58+85 886.83

5' DITCH  
S.D. 83.55

CAUTION: UTILITIES CROSSING

6" GAS

6" GAS

6" GAS

5' DITCH  
S.D. 83.80

58+00 885.96

5' DITCH  
S.D. 83.25

57+00 884.85

STA. 57+00 - STA. 59+37

TELEPHONE POST CROSS SECTION - 1/11/76