

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION

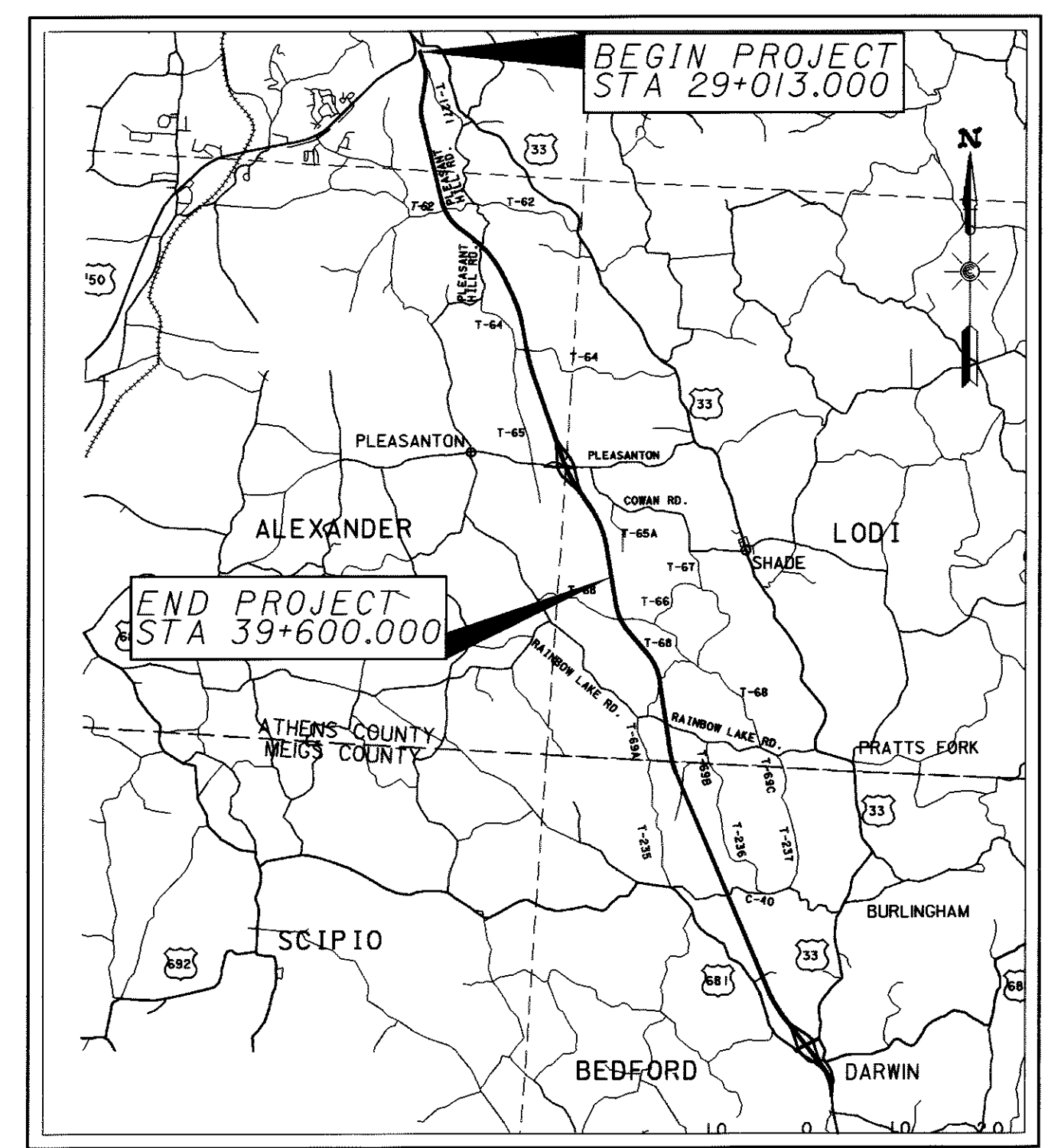
**ATH-33-30.981**  
**ATHENS, ALEXANDER,**  
**AND LODI TOWNSHIPS**  
**ATHENS COUNTY**

**PROJECT DESCRIPTION**  
CONSTRUCTION OF 10.587 KILOMETERS OF ROADWAY FOR THE RELOCATION OF US 33 FROM THE INTERCHANGE WITH US 50 TO STA 39+600 WHERE THIS PROJECT ENDS, AND THE PROJECT DESIGNED AS ATH 33-40.981 BEGINS. THIS PROJECT INCLUDES A DIAMOND INTERCHANGE WITH ALBANY ROAD, TWO AT-GRADE INTERSECTIONS, FOUR BRIDGES, AND A RETAINING WALL.

**LIMITED ACCESS**  
THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02 OF THE REVISED CODE OF OHIO.

**1997 SPECIFICATIONS**  
THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE SET FORTH ON THE PLANS AND ESTIMATES.



LOCATION MAP

LATITUDE: N40°00'11" LONGITUDE: W83°07'50"  
SCALE IN KILOMETERS



PORTION TO BE IMPROVED  
STATE & FEDERAL ROUTES  
OTHER ROADS

**DESIGN DESIGNATION (US33)**

CURRENT ADT (2001)	4540
DESIGN YEAR ADT (2021)	7690
DESIGN HOURLY VOLUME (2021)	692
DIRECTIONAL DISTRIBUTION (2021)	50%
TRUCKS (24 HOUR B & C)	7%
DESIGN SPEED	110 km/h
LEGAL SPEED	90 km/h
DESIGN FUNCTIONAL CLASSIFICATION	RURAL EXPRESSWAY

FOR CROSS ROAD DESIGN DESIGNATIONS AND DESIGN EXCEPTIONS (SEE SHEET 2)

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SHEETS 923, 924 AND 881 ARE NOT USED

**UNDERGROUND UTILITIES**  
TWO WORKING DAYS  
**BEFORE YOU DIG**  
CALL 1-800-362-2764 (TOLL FREE)  
OHIO UTILITIES PROTECTION SERVICE  
NON-MEMBERS  
MUST BE CALLED DIRECTLY

PLAN PREPARED BY:  
**GANNETT FLEMING**  
SUITE 350  
4151 EXECUTIVE PARKWAY  
WESTERVILLE, OHIO 43081

APPROVED *George M. Collins*  
DATE 4-23-01  
DISTRICT DEPUTY DIRECTOR OF TRANSPORTATION

APPROVED *London Proctor*  
DATE 6-20-01  
DIRECTOR, DEPARTMENT OF TRANSPORTATION

ATH - USR 33-30.981  
010425 PID - 18287  
Dist 10 10/3/01

FEDERAL PROJECT NO. **TE21-G010(172)**  
PID NO. **18287**  
CONSTRUCTION PROJECT NO. **18287**  
RAILROAD INVOLVEMENT **NONE**  
**ATH-33-30.981**  
956

ENGINEERS SEAL:			STANDARD CONSTRUCTION DRAWINGS												SUPPLEMENTAL SPECIFICATIONS					
 SIGNED: <i>Joseph Rikk, Jr.</i> DATE: <u>2/6/01</u> ROADWAY AND BRIDGE PLANS ON SHEETS: 1-40 62-79 90-704 865-866B 884-908 925-938	 SIGNED: <i>Terry Winebrenner</i> DATE: <u>2/6/01</u> ROADWAY PLANS ON SHEETS: 41-61 80-89 705-864 939-956	 SIGNED: <i>Joseph Rikk, Jr.</i> DATE: <u>2/6/01</u> RETAINING WALL AND BRIDGE PLANS ON SHEETS: 867-883 909-924	BP-1.1m	7-28-00	CB-3.4m	7-12-95	GR-1.3m	11-30-94	HL-10.12m	5-1-95	HL-60.31m	5-1-95	TC-21.10m	12-10-96	TC-52.20m	7-29-94	806	9-9-97	906	5-5-98
			BP-2.1m	7-28-00	CB-4.1m	7-12-95	GR-2.1m	4-14-98	HL-10.13m	5-1-95			TC-21.20m	12-10-96	TC-61.10m	3-31-94	814	6-2-98	907	10-21-98
			BP-2.2m	7-28-00	DM-1.1m	10-21-97	GR-3.1m	10-21-97	HL-10.31m	5-1-95	HW-1.1m	7-12-95	TC-22.10m	3-13-97	TC-65.10m	11-1-95	821	4-13-99	908	3-28-00
			BP-2.3m	7-28-00	DM-1.2m	10-21-97	GR-3.2m	10-21-97	HL-20.11m	5-1-95	HW-2.1m	7-12-95	TC-22.20m	2-1-94	TC-65.11m	11-1-95	828	7-28-98	932	10-2-96
			BP-3.1m	7-28-00	DM-4.1m	6-30-95	GR-4.1m	11-30-94	HL-20.21m	5-1-95	HW-2.2m	7-12-95	TC-31.21m	3-31-94	TC-65.12m	11-1-95	839	6-14-95		
			BP-4.1m	7-28-00	DM-4.2m	6-30-95	GR-4.2m	10-21-97									840	7-17-95		
			BP-5.1m	7-28-00	DM-4.3m	4-29-99			HL-20.22m	5-1-95	MH-1.2m	9-6-95	TC-32.10m	3-31-94	TC-71.10m	9-1-93	842	1-6-99		
			BP-6.1m	7-28-00	DM-4.4m	4-29-99	GR-4.5m	4-29-99	HL-20.23m	5-1-95	MH-1.3m	9-6-95	TC-41.10m	3-31-94	TC-72.20m	9-1-93	844	1-6-99		
			BP-7.1m	7-28-00			GR-5.1m	4-21-95	HL-30.11m	5-1-95	RM-1.1m	4-29-99	TC-41.20m	7-1-94	TC-81.20m	5-1-00	865	2-22-00		
			BP-8.1m	7-28-00	F-2.1m	7-28-00	GR-5.2m	11-30-94	HL-30.21m	5-1-95	RM-4.2m	10-21-97	TC-41.40m	3-31-94	TC-82.20m	1-19-99	870	8-10-99		
			BP-9.1m	7-28-00	F-3.1m	7-28-00	GR-5.3m	11-30-94	HL-30.22m	5-1-95	RM-4.3m	10-21-97	TC-41.50m	7-1-94	TC-82.11m	1-19-99	877	4-13-99		
			CB-1.1m	7-12-95	F-3.2m	7-28-00					RM-4.5m	10-21-97					878	5-11-99		
			CB-1.2m	7-12-95	F-3.3m	7-28-00	GR-6.1m	1-3-96	HL-40.10m	5-1-95			TC-42.10m	3-31-94	TC-83.20m	5-1-00	884	9-14-99		
			CB-2.1m	7-12-95	F-3.4m	7-28-00	GR-6.2m	1-3-96	HL-60.11m	5-1-95	TC-7.65m	2-1-94	TC-42.20m	3-31-94	TC-85.10m	5-1-00	894	10-12-99		
			CB-3.1m	7-12-95	GR-1.1m	10-21-97			HL-60.12m	5-1-95	TC-9.30m	2-1-94	TC-51.11m	9-30-94	TC-85.20m	5-1-00	899	10-21-98		
			CB-3.2m	7-12-95	GR-1.2m	1-3-96	HL-10.11m	5-1-95	HL-60.21m	5-1-95	TC-12.30m	2-1-94	TC-52.10m	7-29-94			905	4-1-98		

**SPECIAL PROVISIONS**  
MSE RETAINING WALLS  
REINFORCED EARTH WALLS  
P-11-01

**DESIGN DESIGNATION**

	RICHLAND AVENUE/ ALBANY ROAD	TR55	CR2 I	TR64	CR16
CURRENT ADT (2005)	10400	240	1040	80	160
DESIGN YEAR ADT (2025)	13990	300	1430	120	240
DESIGN HOURLY VOLUME (2025)	910	27	129	11	22
DIRECTIONAL DISTRIBUTION	52%	50%	51%	50%	50%
TRUCKS (24 HOUR B&C)	5%	5%	5%	5%	5%
DESIGN SPEED (KM/HR)		90	90	90	90
LEGAL SPEED (KM/HR)		90	90	90	90
DESIGN FUNCTIONAL CLASSIFICATION	URBAN COLLECTOR	RURAL COLLECTOR	RURAL COLLECTOR	RURAL COLLECTOR	RURAL COLLECTOR

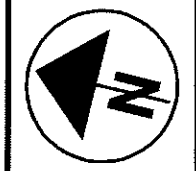
**DESIGN EXCEPTIONS**

PROJECT DESIGN AREA	STATUS	APPROVAL DATE CATEGORIES						
		VERTICAL ALIGNMENT	HORIZONTAL ALIGNMENT	GRADES	SSD	SHOULDER WIDTH	LANE WIDTH	SUPERELEVATION
ALBANY ROAD	ROADWAY DESIGN EXCEPTIONS	N/A	<b>2-14-01</b>	N/A	N/A	N/A	N/A	N/A
(TR 1271) FRUM ROAD	ROAD CLOSED WITH CUL DE SAC-NO DESIGN EXCEPTIONS	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TR 55	ROADWAY DESIGN EXCEPTIONS	2-25-99	2-25-99	N/A	2-25-99	N/A	2-25-99	2-25-99
CR2 I	ROADWAY DESIGN EXCEPTIONS	3-8-99	3-8-99	N/A	3-8-99	N/A	3-8-99	3-8-99
TR 64	ROADWAY DESIGN EXCEPTIONS	2-25-99	2-25-99	N/A	2-25-99	N/A	2-25-99	2-25-99
CR 16	ROADWAY DESIGN EXCEPTIONS	3-1-99	3-1-99	N/A	3-1-99	N/A	3-1-99	3-1-99
SERVICE ROADS	DESIGN EXCEPTIONS TO COVER ONLY TO ROADWAYS	N/A	N/A	N/A	N/A	N/A	N/A	N/A
US 33 MAINLINE	NO DESIGN EXCEPTIONS	N/A	N/A	N/A	N/A	N/A	N/A	N/A

NOTE: FOR US 33 DESIGN DESIGNATION SEE SHEET I.

**DESIGN DESIGNATION AND EXCEPTIONS**

**ATH-33-30.981**



SCALE 1:2000  
HORIZONTAL  
SCALE IN METERS

IS CURVE DATA US 33 EB (SCSCS)

P.I. STA 29+369.824  
 $\Delta = 98^\circ 18' 36''$  LT.  
 BT = 519.500m  
 AT = 410.157m  
 L<sub>s</sub> = 108.500m  
 O<sub>s</sub> = 6° 27' 44"  
 LT = 72.382m  
 ST = 36.211m  
 R = 481.000m  
 $\Delta = 39^\circ 25' 28''$  LT.  
 T = 172.339m  
 L = 330.970m  
 E = 29.942m  
 L<sub>s</sub> = 50.000m  
 O<sub>s</sub> = 9° 43' 07"  
 LT = 28.286m  
 ST = 21.830m  
 R = 212.500m  
 $\Delta = 23^\circ 49' 51''$  RT.  
 T = 44.841m  
 L = 88.385m  
 E = 4.680m  
 L<sub>s</sub> = 140.000m  
 O<sub>s</sub> = 18° 52' 26"  
 LT = 93.869m  
 ST = 47.154m

I CURVE DATA US 33

P.I. STA 29+927.354  
 $\Delta = 27^\circ 06' 50''$  RT.  
 R = 600.000m  
 L<sub>s</sub> = 110.000m  
 O<sub>s</sub> = 5° 15' 08"  
 LT = 73.366m  
 ST = 36.696m  
 L<sub>c</sub> = 173.936m  
 T<sub>s</sub> = 199.865m  
 E<sub>s</sub> = 6.358m  
 e<sub>max</sub> = 0.078

IN

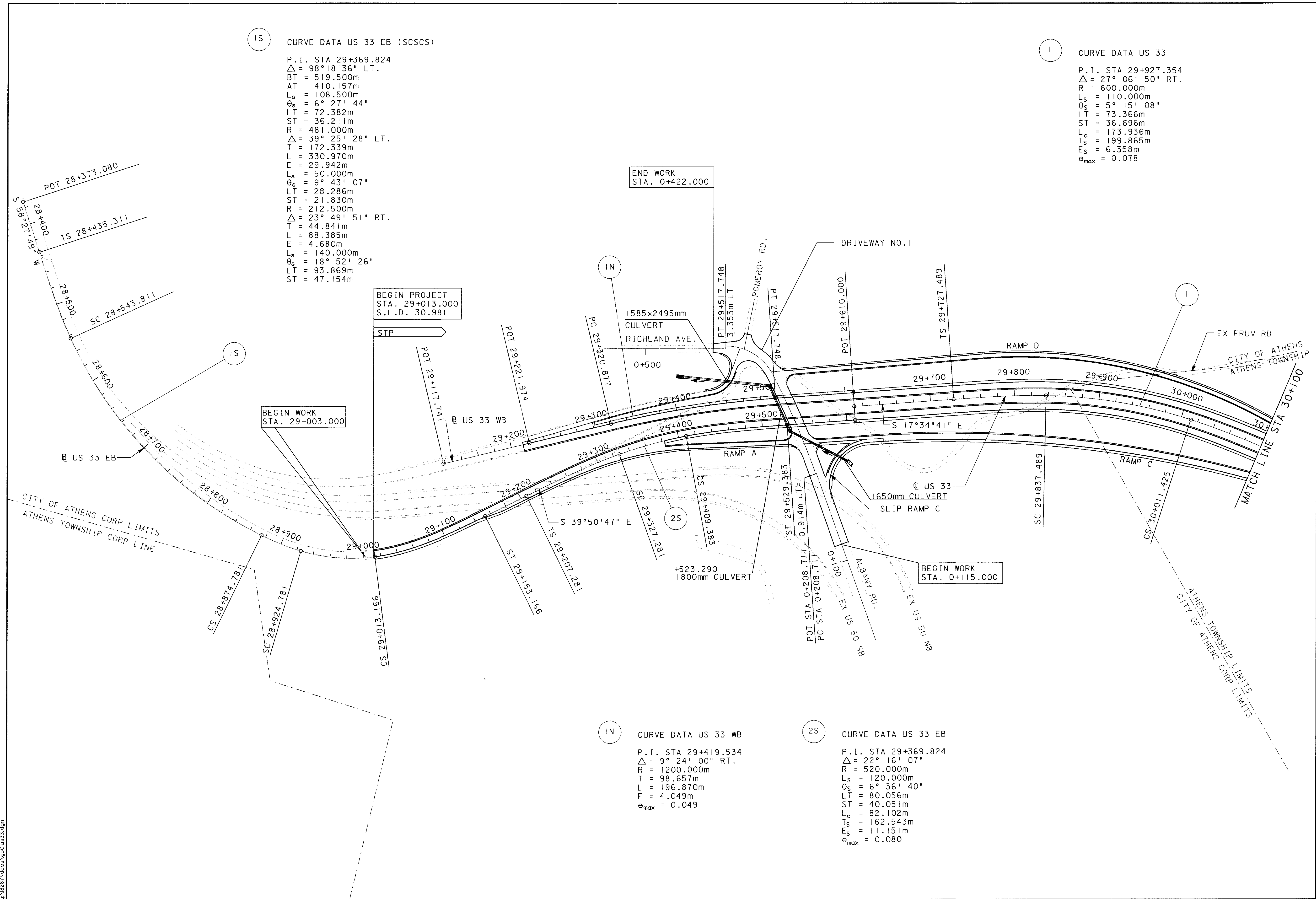
IN CURVE DATA US 33 WB

P.I. STA 29+419.534  
 $\Delta = 9^\circ 24' 00''$  RT.  
 R = 1200.000m  
 T = 98.657m  
 L = 196.870m  
 E = 4.049m  
 e<sub>max</sub> = 0.049

2S

2S CURVE DATA US 33 EB

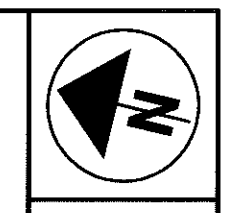
P.I. STA 29+369.824  
 $\Delta = 22^\circ 16' 07''$   
 R = 520.000m  
 L<sub>s</sub> = 120.000m  
 O<sub>s</sub> = 6° 36' 40"  
 LT = 80.056m  
 ST = 40.051m  
 L<sub>c</sub> = 82.102m  
 T<sub>s</sub> = 162.543m  
 E<sub>s</sub> = 11.151m  
 e<sub>max</sub> = 0.080



SCHEMATIC PLAN  
STA 29+013 TO STA 30+100

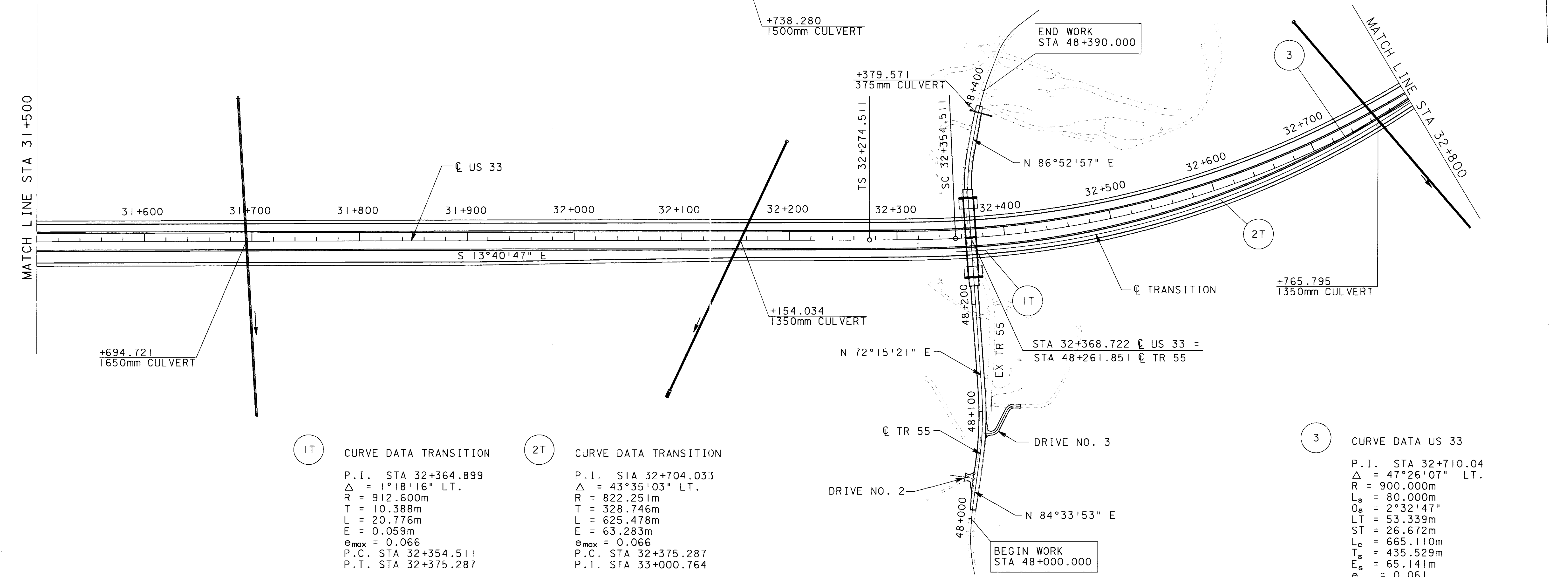
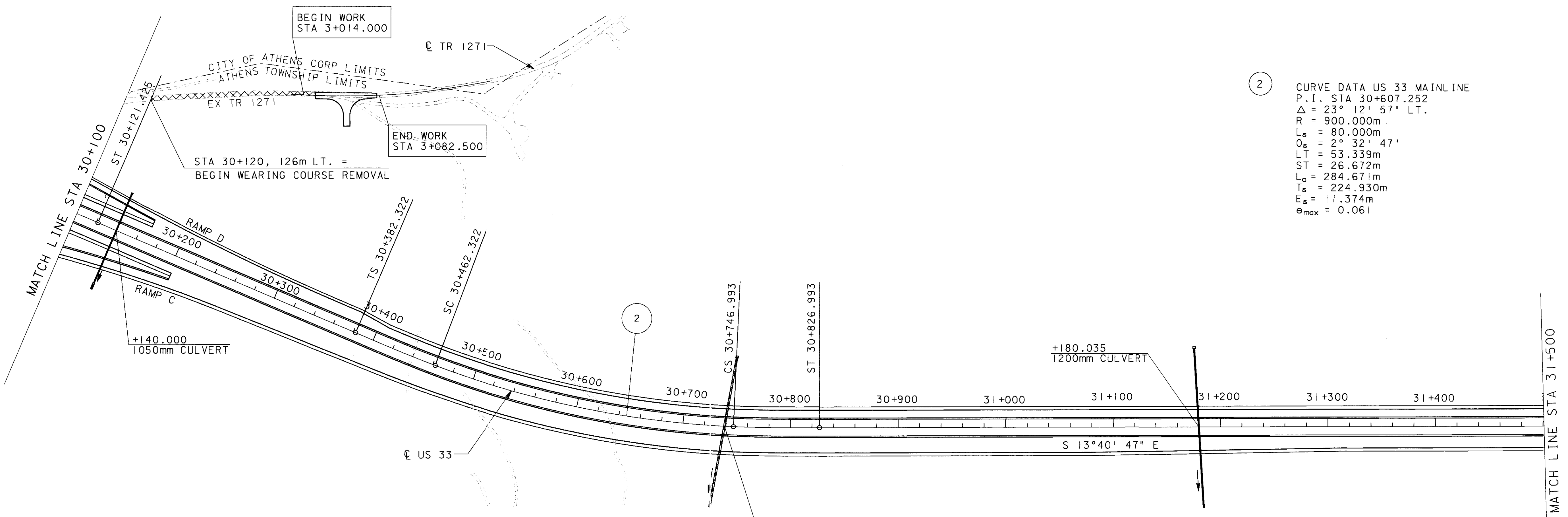
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HORIZONTAL SCALE IN METERS

2 CURVE DATA US 33 MAINLINE  
 P.I. STA 30+607.252  
 $\Delta = 23^\circ 12' 57''$  LT.  
 R = 900.000m  
 $L_s = 80.000$ m  
 $O_s = 2^\circ 32' 47''$   
 LT = 53.339m  
 ST = 26.672m  
 $L_c = 284.671$ m  
 $T_s = 224.930$ m  
 $E_s = 11.374$ m  
 $e_{max} = 0.061$



1T CURVE DATA TRANSITION  
 P.I. STA 32+364.899  
 $\Delta = 1^\circ 18' 16''$  LT.  
 R = 912.600m  
 T = 10.388m  
 L = 20.776m  
 E = 0.059m  
 $e_{max} = 0.066$   
 P.C. STA 32+354.511  
 P.T. STA 32+375.287

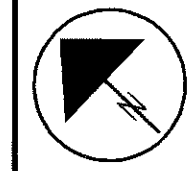
2T CURVE DATA TRANSITION  
 P.I. STA 32+704.033  
 $\Delta = 43^\circ 35' 03''$  LT.  
 R = 822.251m  
 T = 328.746m  
 L = 625.478m  
 E = 63.283m  
 $e_{max} = 0.066$   
 P.C. STA 32+375.287  
 P.T. STA 33+000.764

3 CURVE DATA US 33  
 P.I. STA 32+710.04  
 $\Delta = 47^\circ 26' 07''$  LT.  
 R = 900.000m  
 $L_s = 80.000$ m  
 $O_s = 2^\circ 32' 47''$   
 LT = 53.339m  
 ST = 26.672m  
 $L_c = 665.110$ m  
 $T_s = 435.529$ m  
 $E_s = 65.141$ m  
 $e_{max} = 0.061$

**SCHEMATIC PLAN**  
**STA 30+100 TO STA 32+800**

**ATH-33-30.981**

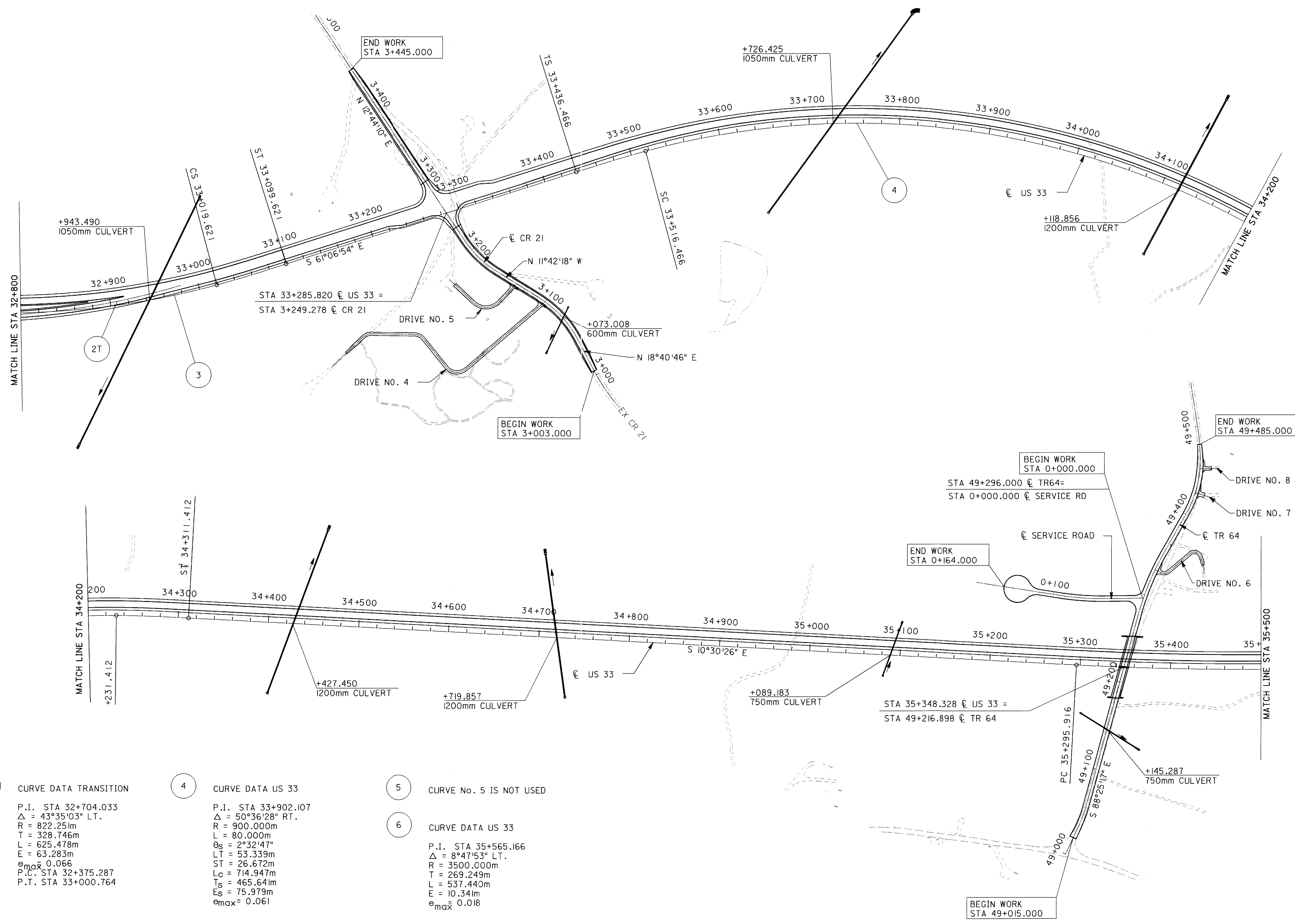
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HORIZONTAL  
SCALE IN METERS

**SCHEMATIC PLAN  
STA 32+800 TO STA 35+500**

**ATH-33-30.981**



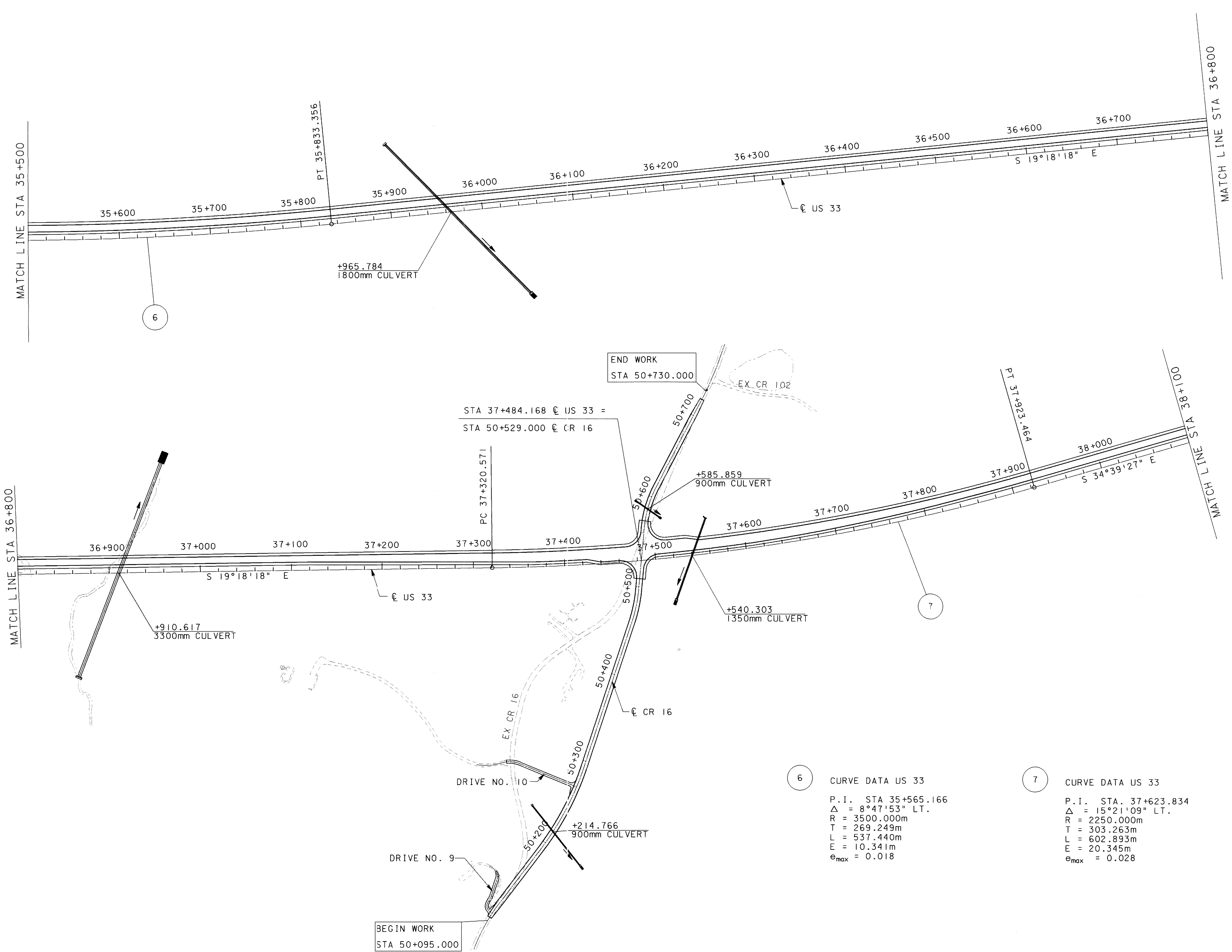
2T CURVE DATA TRANSITION  
 P.I. STA 32+704.033  
 $\Delta = 43^{\circ}35'03''$  LT.  
 R = 822.251m  
 T = 328.746m  
 L = 625.478m  
 E = 63.283m  
 $e_{max} = 0.066$   
 P.C. STA 32+375.287  
 P.T. STA 33+000.764

4 CURVE DATA US 33  
 P.I. STA 33+902.107  
 $\Delta = 50^{\circ}36'28''$  RT.  
 R = 900.000m  
 L = 80.000m  
 $\theta_s = 2^{\circ}32'47''$   
 LT = 53.339m  
 ST = 26.672m  
 $L_c = 714.947m$   
 $T_s = 465.641m$   
 $E_s = 75.979m$   
 $e_{max} = 0.061$

5 CURVE No. 5 IS NOT USED

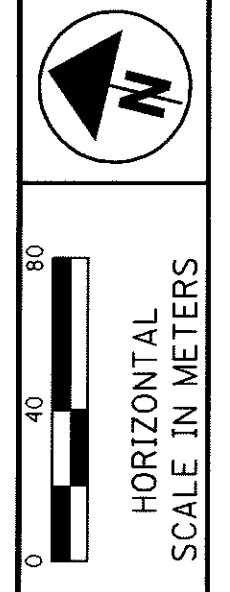
6 CURVE DATA US 33  
 P.I. STA 35+565.166  
 $\Delta = 8^{\circ}47'53''$  LT.  
 R = 3500.000m  
 T = 269.249m  
 L = 537.440m  
 E = 10.341m  
 $e_{max} = 0.018$

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6 CURVE DATA US 33  
 P.I. STA 35+565.166  
 $\Delta = 8^{\circ}47'53"$  LT.  
 R = 3500.000m  
 T = 269.249m  
 L = 537.440m  
 E = 10.341m  
 $e_{max} = 0.018$

7 CURVE DATA US 33  
 P.I. STA 37+623.834  
 $\Delta = 15^{\circ}21'09"$  LT.  
 R = 2250.000m  
 T = 303.263m  
 L = 602.893m  
 E = 20.345m  
 $e_{max} = 0.028$

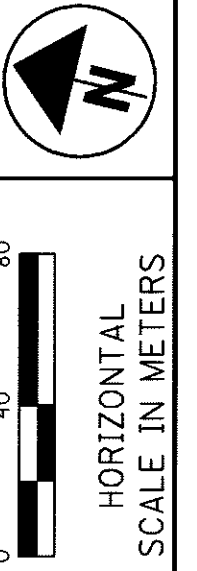
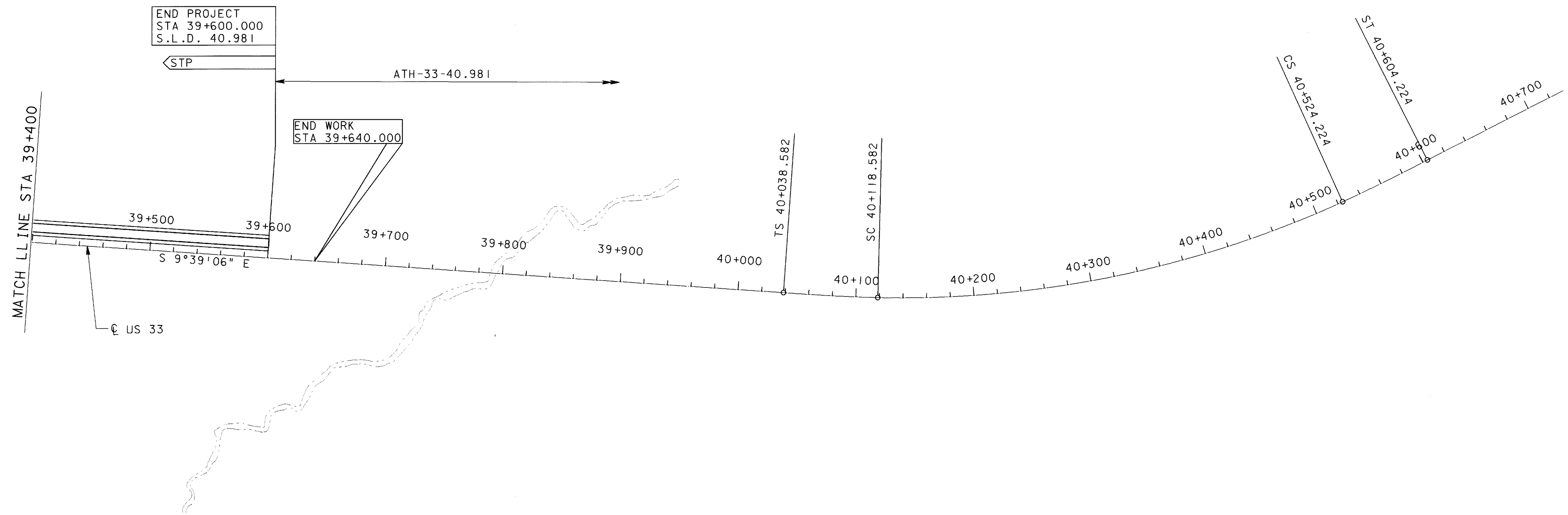
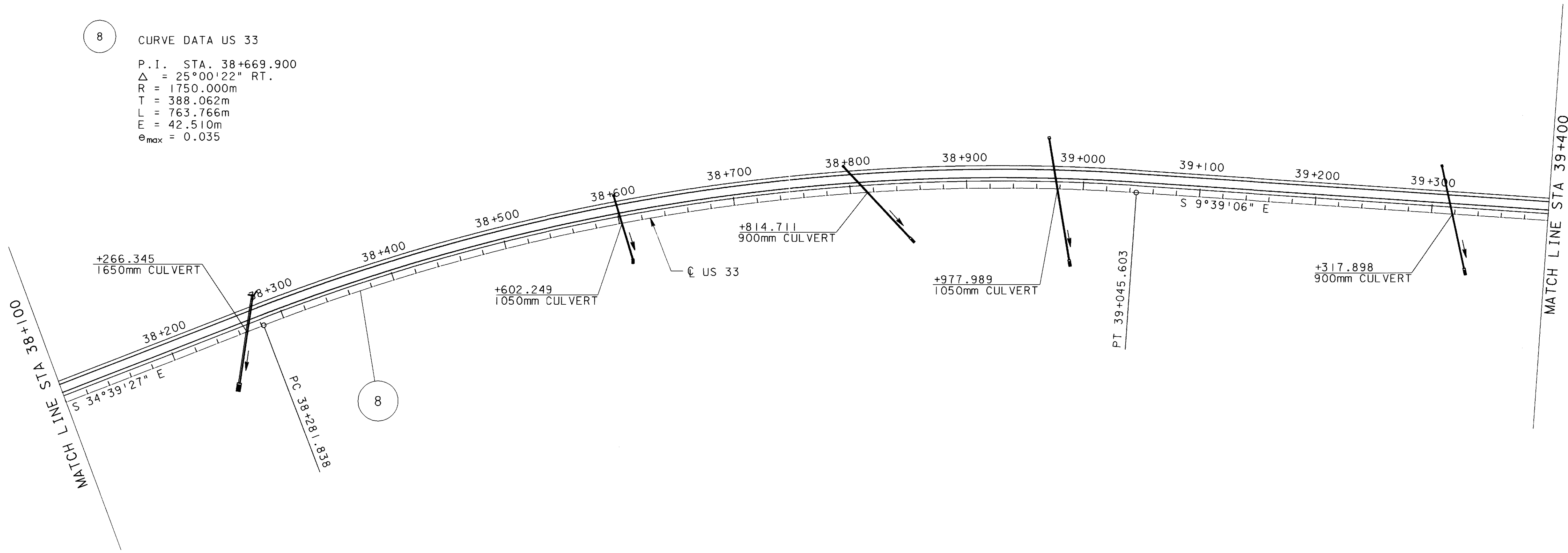


**SCHEMATIC PLAN**  
**STA 35+500 TO STA 38+100**

**ATH-33-30.981**

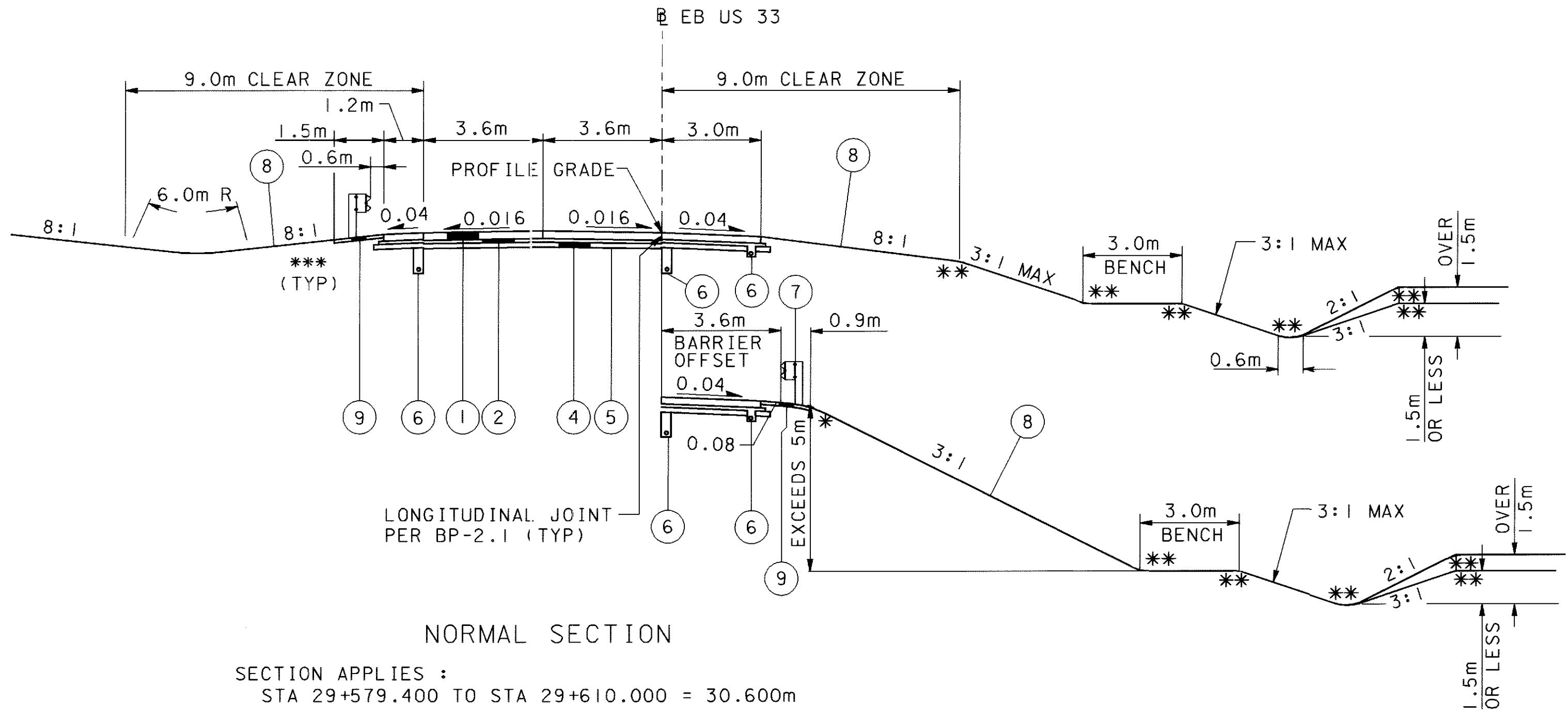
8

CURVE DATA US 33  
 P.I. STA. 38+669.900  
 $\Delta = 25^{\circ}00'22''$  RT.  
 R = 1750.000m  
 T = 388.062m  
 L = 763.766m  
 E = 42.510m  
 $e_{max} = 0.035$

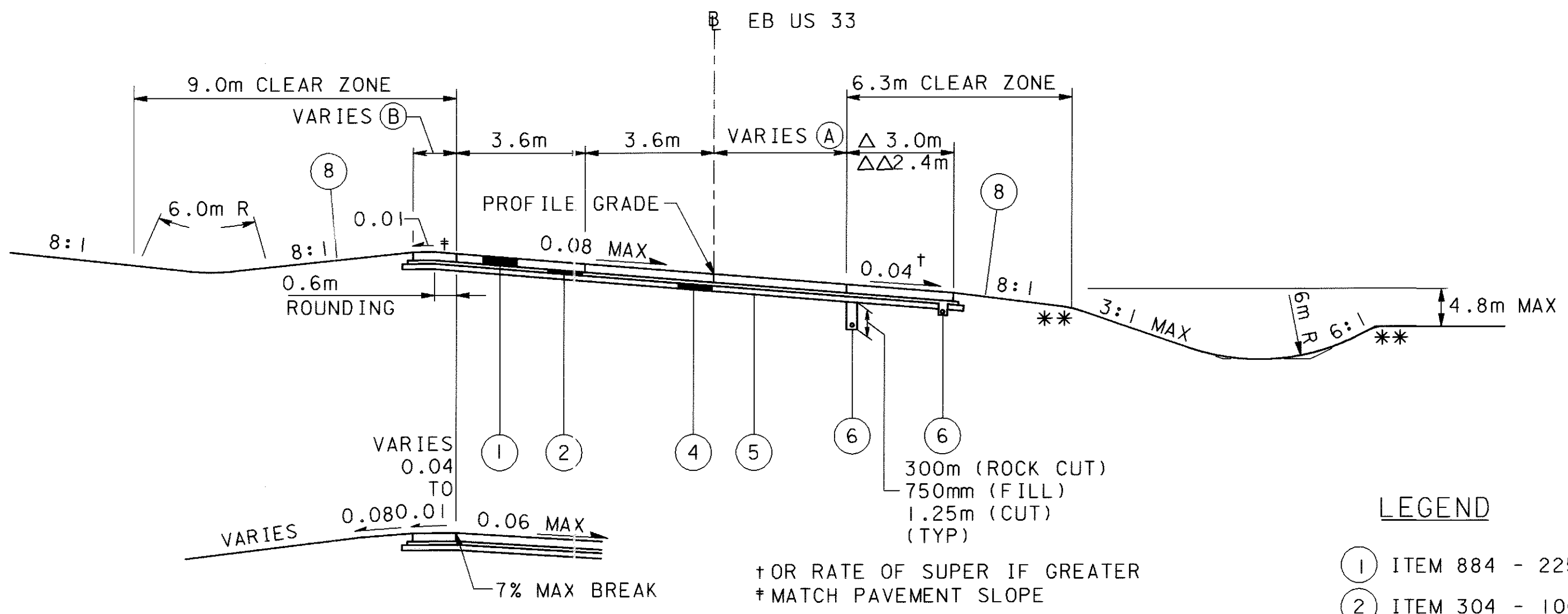


**SCHEMATIC PLAN**  
**STA 38+100 TO STA 39+600**

**ATH-33-30.981**



\* 3.0m ROUNDING  
\*\* 1.2m ROUNDING  
\*\*\* SEE EDGE COURSE DETAIL ON SHEET 12

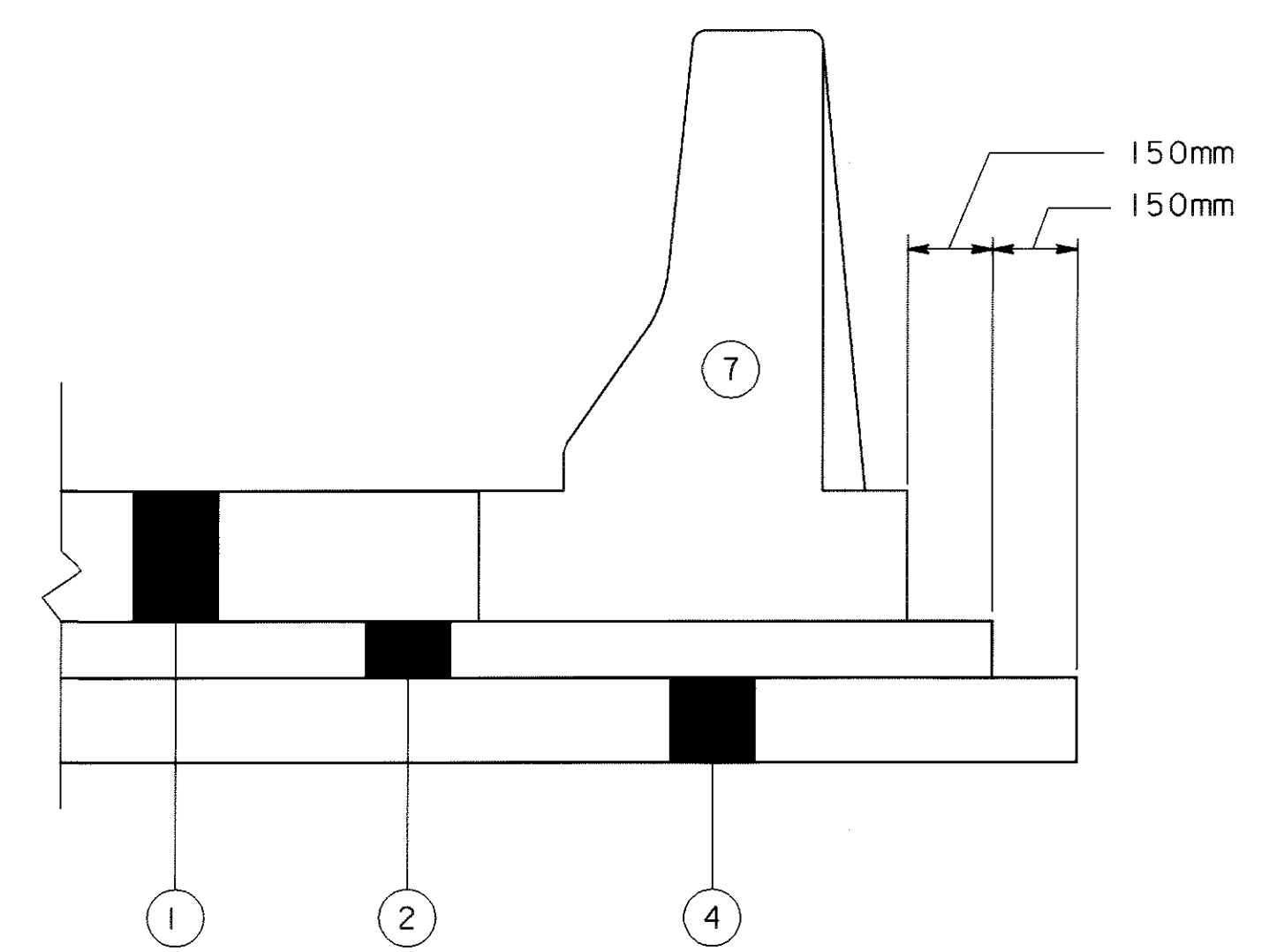
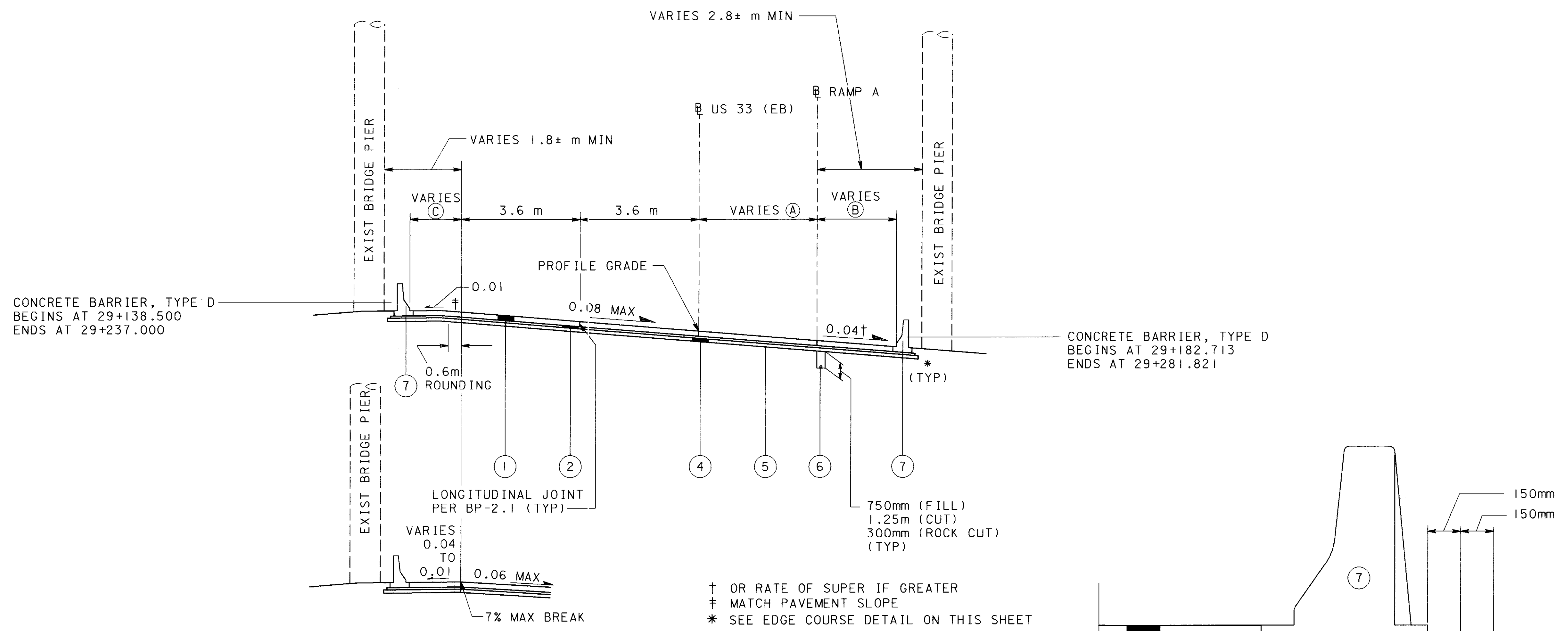


LEGEND

- ① ITEM 884 - 225mm CONCRETE PAVEMENT WITH WARRANTY
- ② ITEM 304 - 100mm AGGREGATE BASE
- ③ NOT USED
- ④ ITEM 304 - 150mm AGGREGATE BASE
- ⑤ ITEM 203 - SUBGRADE COMPACTION
- ⑥ ITEM 605 - 100mm SHALLOW (OR DEEP) PIPE UNDERDRAIN
- ⑦ ITEM 606 - GUARDRAIL, TYPE 5
- ⑧ ITEM 870 - SEEDING AND MULCHING
- ⑨ ITEM 448 - 50mm ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG64-22 (UNDER GUARDRAIL)

STATION		A (m)	B (m)
FROM	TO		
29+013.166	29+133.500	0.000	1.200
29+133.500	29+138.500	0.000	1.200 TO 1.500
29+281.821	29+382.781	4.488 TO 11.848	1.200
29+382.781	29+579.400	0.000	1.200





BARRIER EDGE COURSE DETAIL  
 N.T.S.

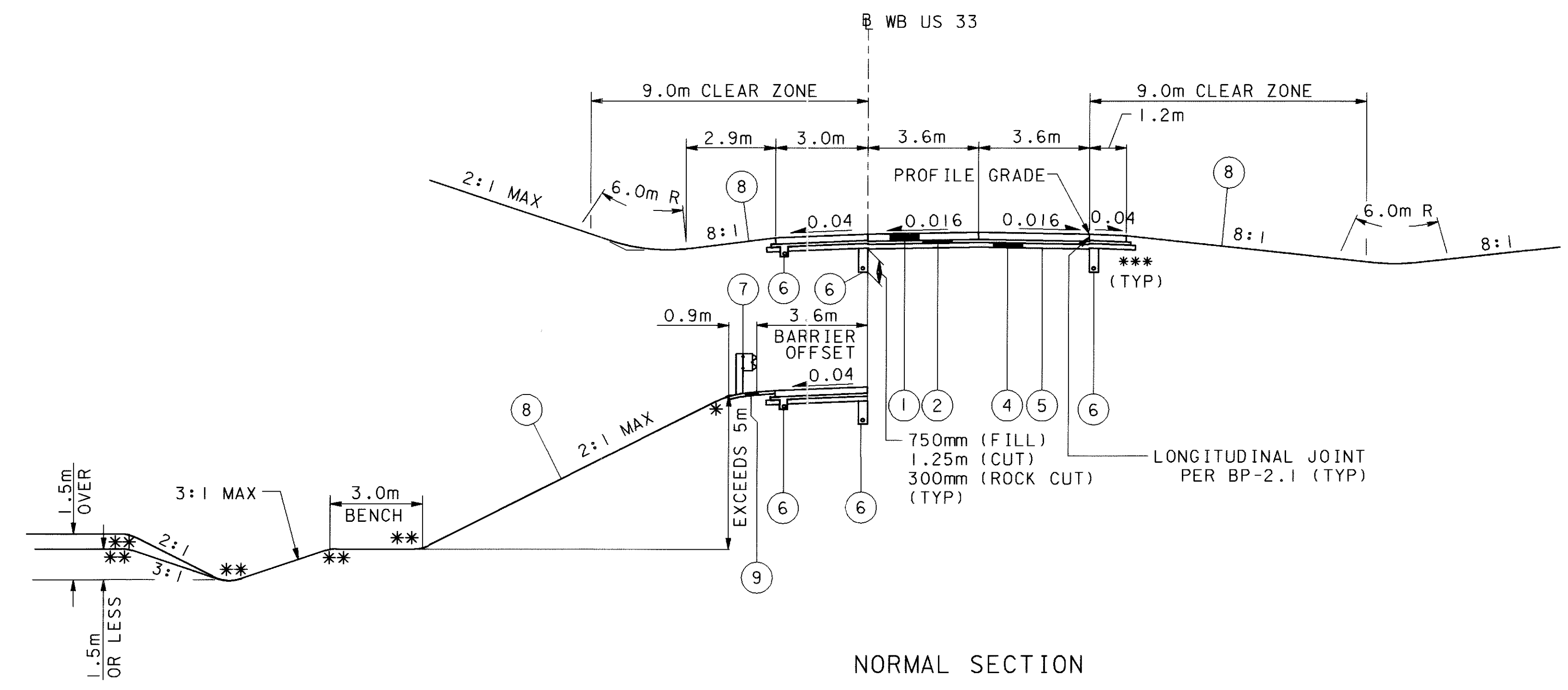
STATION		A (m)	B (m)	C (m)
FROM	TO			
29+138.500	29+142.781	0.000	3.000	1.500
29+142.781	29+172.781	0.000 TO 3.600	3.000 TO 2.400	1.500
29+172.781	29+237.000	3.600 TO 3.697	2.400	1.500
29+237.000	29+242.000	3.697 TO 3.738	2.400	1.500 TO 1.200
29+242.000	29+281.821	3.738 TO 4.488	2.400	1.200

SJPERELEVATED SECTION

SECTION APPLIES :  
 STA 29+138.500 TO STA 29+281.821 = 143.321m

LEGEND

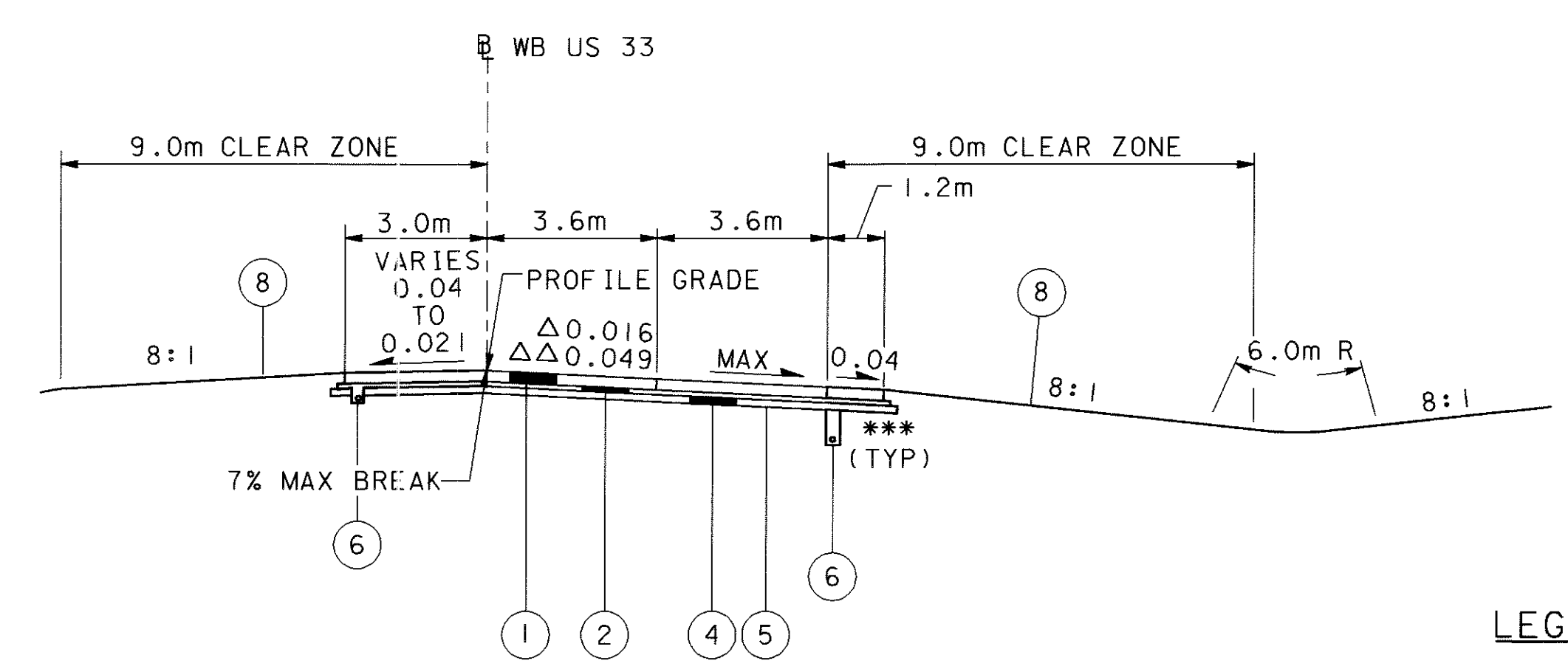
- ① ITEM 884 - 225mm CONCRETE PAVEMENT WITH WARRANTY
- ② ITEM 304 - 100mm AGGREGATE BASE
- ③ NOT USED
- ④ ITEM 304 - 150mm SHALLOW (OR DEEP) PIPE UNDERDRAIN
- ⑤ ITEM 203 - SUBGRADE COMPACTION
- ⑥ ITEM 605 - 100mm PIPE UNDERDRAIN
- ⑦ ITEM 622 - CONCRETE BARRIER, TYPE D



NORMAL SECTION

SECTION APPLIES :  
 STA 29+606.400 TO STA 29+610.000 = 3.600m

\* 3.0m ROUNDING  
 \*\* 1.2m ROUNDING  
 \*\*\* SEE EDGE COURSE DETAIL ON SHEET 12



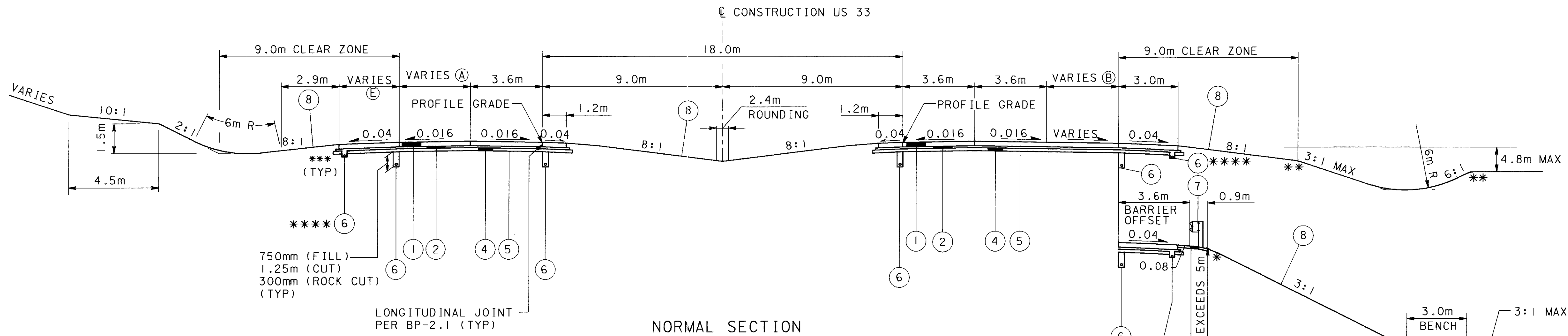
+OR RATE OF SUPER IF GREATER

SUPERELEVATED SECTION

SECTION APPLIES :  
 Δ STA 29+214.291 TO STA 29+281.000 = 66.709m  
 ΔΔ STA 29+281.000 TO STA 29+496.499 = 215.499m  
 ΔΔΔ STA 29+564.329 TO STA 29+606.400 = 42.071m  
 324.279m

LEGEND

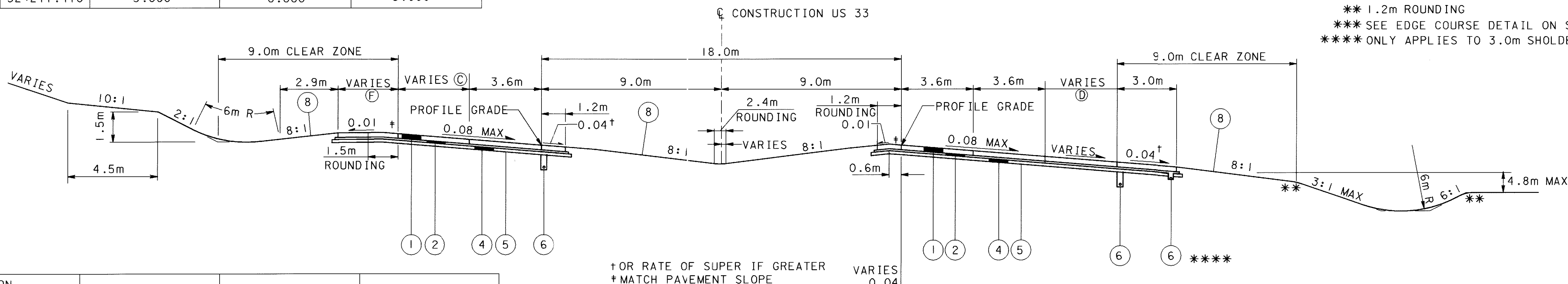
- ① ITEM 884 - 225mm CONCRETE PAVEMENT WITH WARRANTY
- ② ITEM 304 - 100mm AGGREGATE BASE
- ③ NOT USED
- ④ ITEM 304 - 150mm AGGREGATE BASE
- ⑤ ITEM 203 - SUBGRADE COMPACTION
- ⑥ ITEM 605 - 100mm SHALLOW (OR DEEP) PIPE UNDERDRAIN
- ⑦ ITEM 606 - GUARDRAIL, TYPE 5
- ⑧ ITEM 870 - SEEDING AND MULCHING
- ⑨ ITEM 448 - 50mm ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG64-22 (UNDER GUARDRAIL)



NORMAL SECTION

STATION		(A) (m)	(B) (m)	(E) (m)
FROM	TO			
29+610.000	29+670.487	3.600	0.000	3.000
30+178.513	30+202.642	14.643 TO 12.790	0.000	2.400
30+202.642	30+325.410	12.790 TO 7.461	14.200 TO 10.412	2.400
30+884.590	31+080.000	3.600	7.200	3.000
31+080.000	31+317.000	3.600	7.200 TO 3.600	3.000
31+317.000	31+917.600	3.600	3.600	3.000
31+917.600	32+155.200	3.600	3.600 TO 0.000	3.000
32+155.200	32+217.410	3.600	0.000	3.000

SECTION APPLIES :  
 STA 29+610.000 TO STA 29+670.487 = 60.487m  
 STA 30+178.513 TO STA 30+325.410 = 146.897m  
 STA 30+884.590 TO STA 32+217.410 = 132.820m  
 1540.204m



SUPERELEVATED SECTION

STATION		(C) (m)	(D) (m)	(E) (m)
FROM	TO			
29+670.487	30+154.346	3.600	0.000	3.000
30+154.346	30+169.346	3.600	0.000	3.000 TO 2.400
30+169.346	30+178.513	15.418 TO 14.643	0.000	2.400
30+325.410	30+359.325	7.461 TO 7.200	10.412 TO 9.706	2.400
30+359.325	30+380.000	7.200	9.706 TO 9.290	2.400
30+380.000	30+410.000	7.200 TO 3.600	9.290 TO 8.654	2.400 TO 3.000
30+410.000	30+480.000	3.600	8.654 TO 7.200	3.000
30+480.000	30+884.590	3.600	7.200	3.000
32+217.410	32+354.511	3.600	0.000	3.000

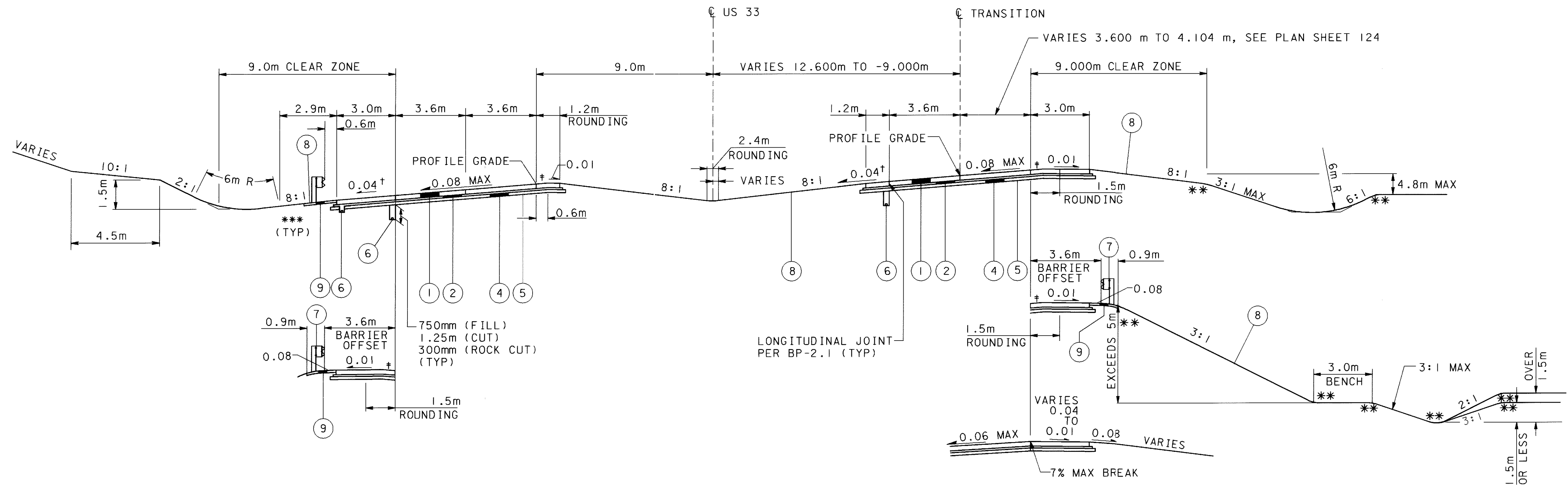
SECTION APPLIES :  
 STA 29+670.487 TO STA 30+178.513 = 508.026m  
 STA 30+325.410 TO STA 30+884.590 = 559.180m  
 STA 32+217.410 TO STA 32+354.511 = 137.101m  
 1204.307m

\* 3.0m ROUNDING  
 \*\* 1.2m ROUNDING  
 \*\*\* SEE EDGE COURSE DETAIL ON SHEET 12  
 \*\*\*\* ONLY APPLIES TO 3.0m SHOULDER

† OR RATE OF SUPER IF GREATER  
 ‡ MATCH PAVEMENT SLOPE

LEGEND

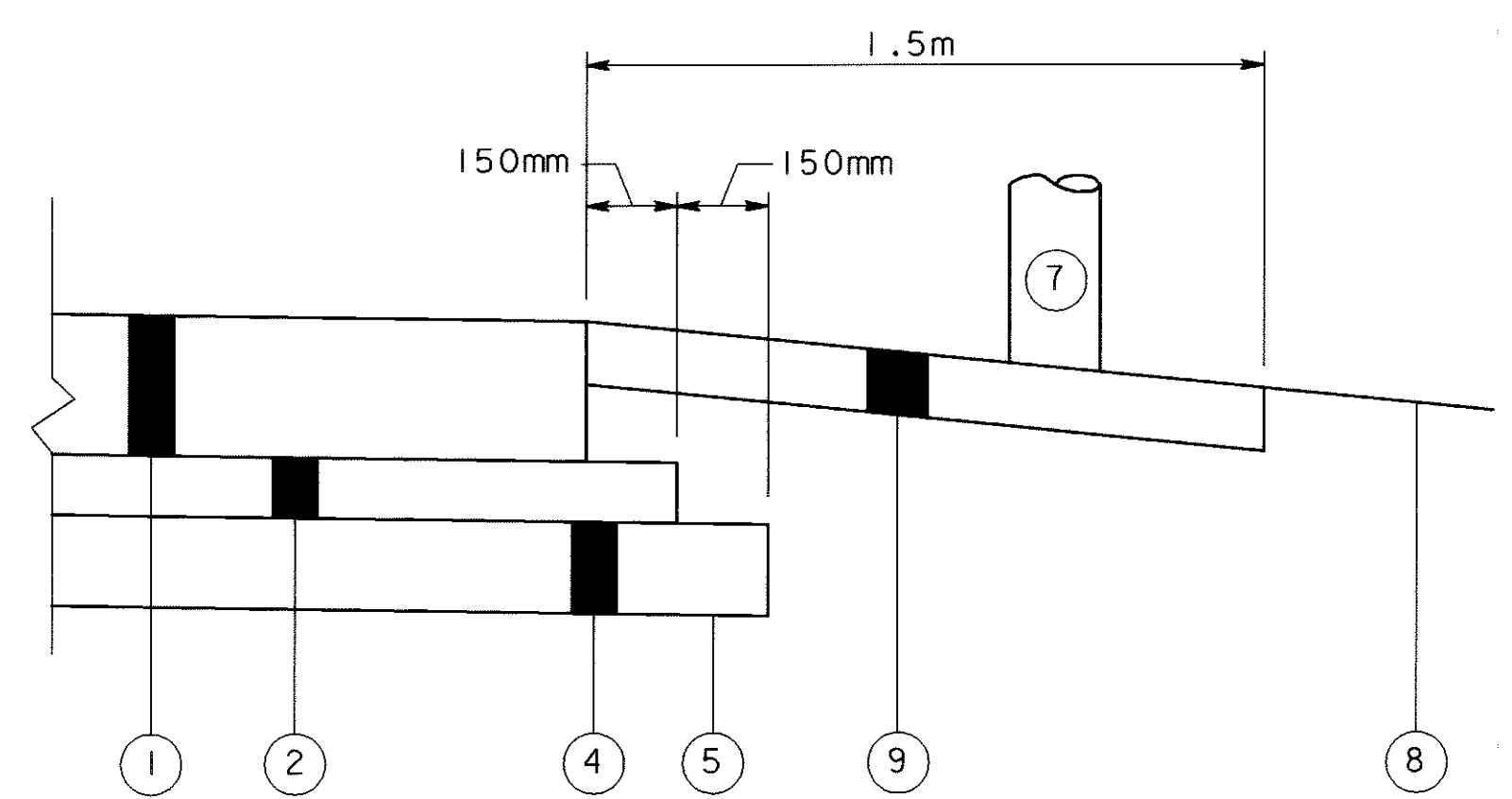
- (1) ITEM 884 - 225mm CONCRETE PAVEMENT WITH WARRANTY
- (2) ITEM 304 - 100mm AGGREGATE BASE
- (3) NOT USED
- (4) ITEM 304 - 150mm AGGREGATE BASE
- (5) ITEM 203 - SUBGRADE COMPACTION
- (6) ITEM 605 - 100mm SHALLOW (OR DEEP) PIPE UNDERDRAIN
- (7) ITEM 606 - GUARDRAIL, TYPE 5
- (8) ITEM 870 - SEEDING AND MULCHING
- (9) ITEM 448 - 50mm ASHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG64-22 (UNDER GUARDRAIL)



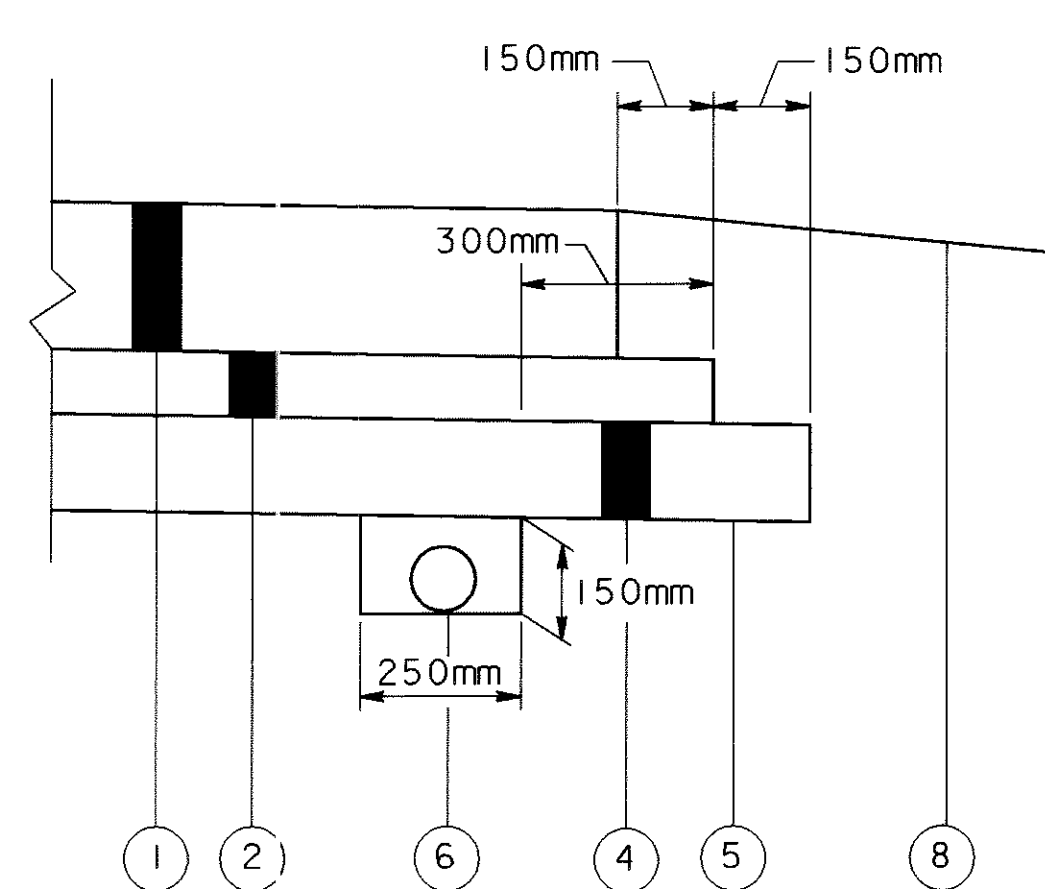
SUPERELEVATED SECTION

SECTION APPLIES :  
 STA 32+354.511 TO STA 32+980.243 = 625.732m

- \* 3.0m ROUNDING
- \*\* 1.2m ROUNDING
- \*\*\* SEE EDGE COURSE DETAIL THIS SHEET
- † OR RATE OF SUPER IF GREATER
- ‡ MATCH PAVEMENT SLOPE



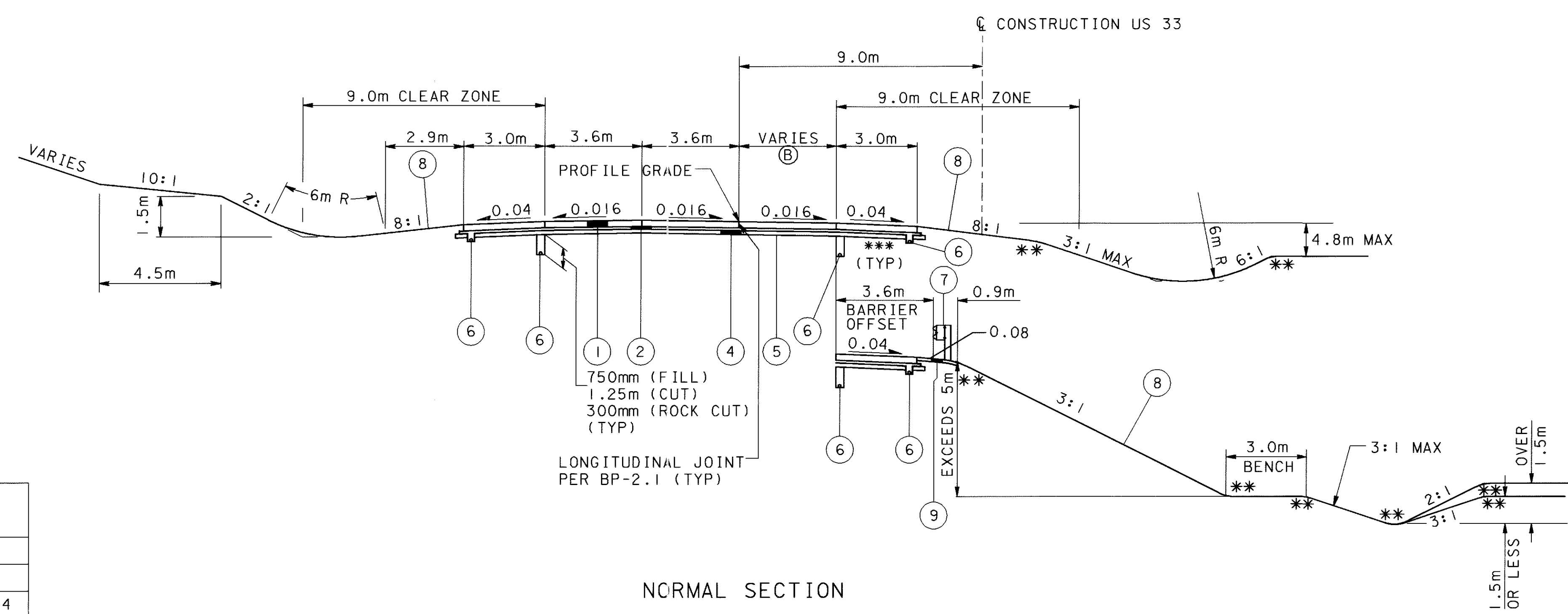
EDGE COURSE DETAIL  
 (N.T.S.)



SHOULDER UNDERDRAIN DETAIL  
 (N.T.S.)

LEGEND

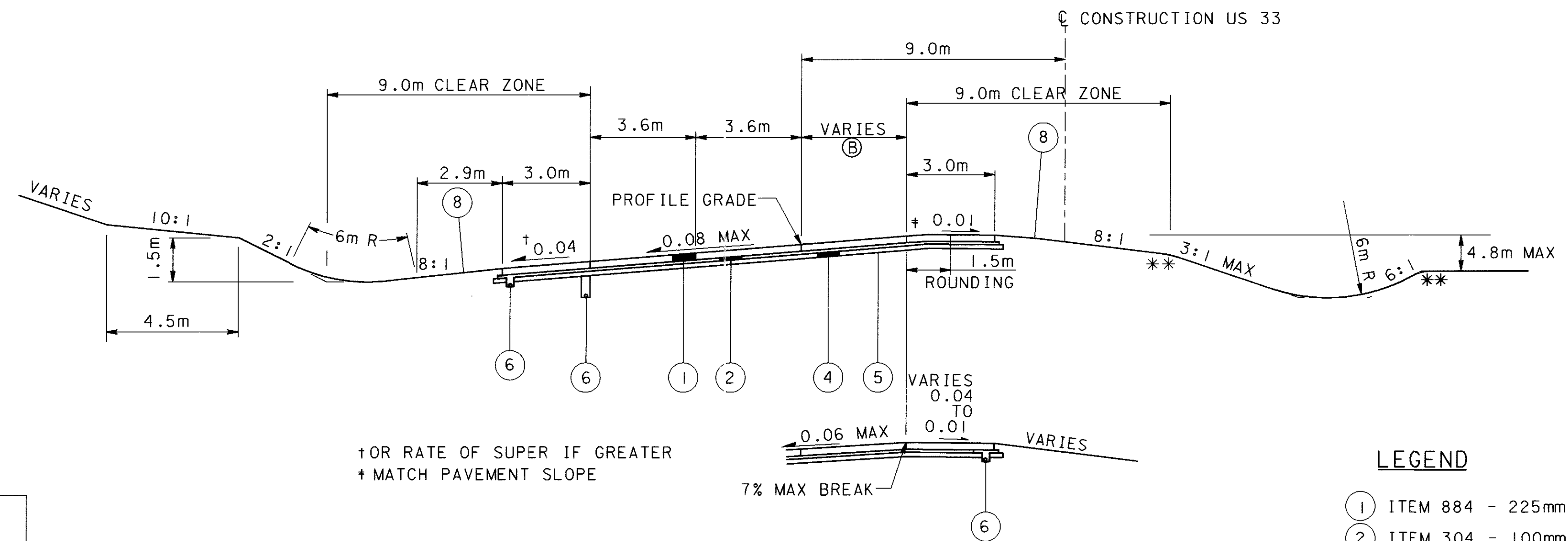
- ① ITEM 884 - 225mm CONCRETE PAVEMENT WITH WARRANTY
- ② ITEM 304 - 100mm AGGREGATE BASE
- ③ NOT USED
- ④ ITEM 304 - 150mm AGGREGATE BASE
- ⑤ ITEM 203 - SUBGRADE COMPACTION
- ⑥ ITEM 605 - 100mm SHALLOW (OR DEEP) PIPE UNDERDRAIN
- ⑦ ITEM 606 - GUARDRAIL, TYPE 5
- ⑧ ITEM 870 - SEEDING AND MULCHING
- ⑨ ITEM 448 - 50mm ASHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG64-22 (UNDER GUARDRAIL)



STATION		B (m)
FROM	TO	
33+156.590	33+220.000	3.600
33+345.000	33+375.000	3.600
33+375.000	33+379.410	3.600 TO 3.534
37+125.000	37+253.429	0.000 TO 1.674

NORMAL SECTION

SECTION APPLIES :  
 STA 33+156.590 TO STA 33+220.000 = 63.410m  
 STA 33+345.000 TO STA 33+379.410 = 34.410m  
 STA 37+125.000 TO STA 37+253.429 = 128.429m  
 226.249m



STATION		B (m)
FROM	TO	
32+980.243	33+010.450	4.104 TO 3.600
33+010.450	33+156.590	3.600
33+379.410	33+615.000	3.534 TO 0.000
37+253.429	37+365.000	1.674 TO 3.600
37+365.000	37+425.000	3.600
37+550.000	37+610.000	3.600
37+610.000	37+850.000	3.600 TO 0.000

SUPERELEVATED SECTION

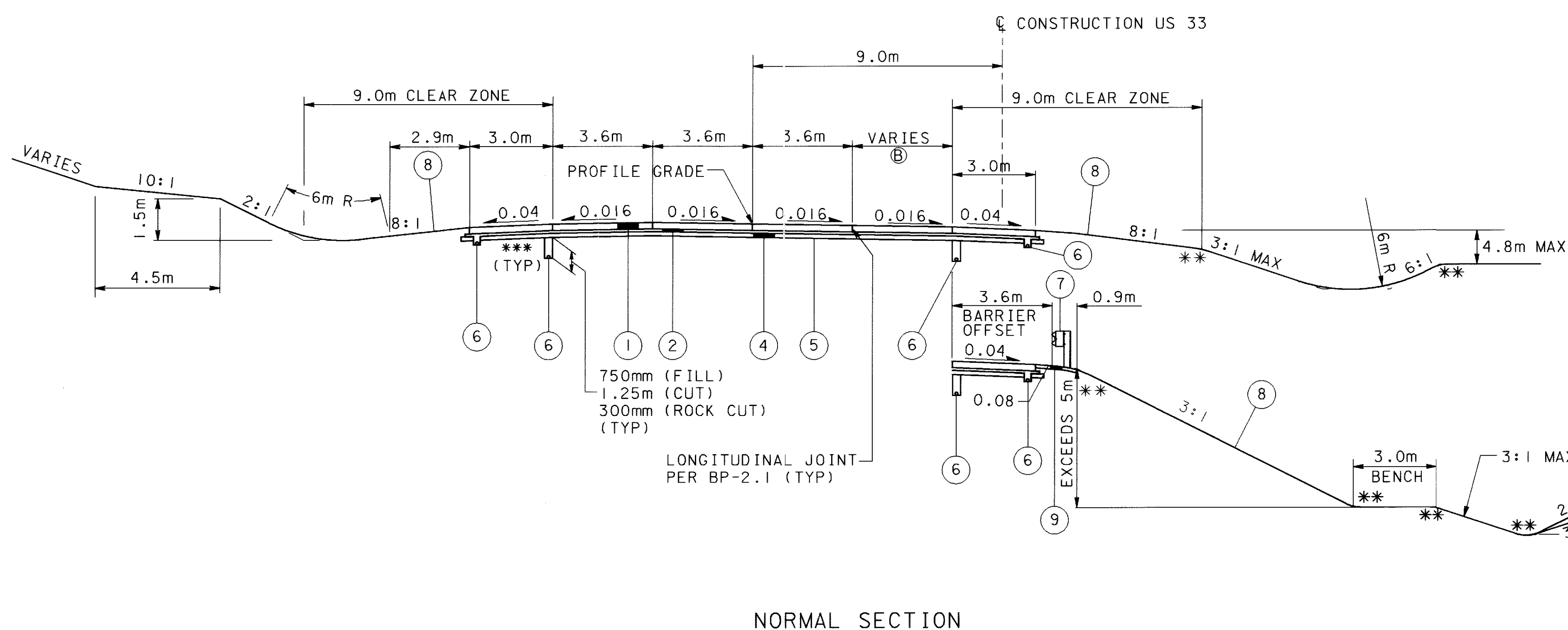
SECTION APPLIES :  
 STA 32+980.243 TO STA 33+156.590 = 176.347m  
 STA 33+379.410 TO STA 33+615.000 = 235.590m  
 STA 37+253.429 TO STA 37+425.000 = 171.571m  
 STA 37+550.000 TO STA 37+850.000 = 300.000m  
 883.508m

LEGEND

- ① ITEM 884 - 225mm CONCRETE PAVEMENT WITH WARRANTY
- ② ITEM 304 - 100mm AGGREGATE BASE
- ③ NOT USED
- ④ ITEM 304 - 150mm AGGREGATE BASE
- ⑤ ITEM 203 - SUBGRADE COMPACTION
- ⑥ ITEM 605 - 100mm SHALLOW (OR DEEP) PIPE UNDERDRAIN
- ⑦ ITEM 606 - GUARDRAIL, TYPE 5
- ⑧ ITEM 870 - SEEDING AND MULCHING
- ⑨ ITEM 448 - 50mm ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG64-22 (UNDER GUARDRAIL)

\* 3.0m ROUNDING  
 \*\* 1.2m ROUNDING  
 \*\*\* SEE EDGE COURSE DETAIL ON SHEET 12

† OR RATE OF SUPER IF GREATER  
 † MATCH PAVEMENT SLOPE

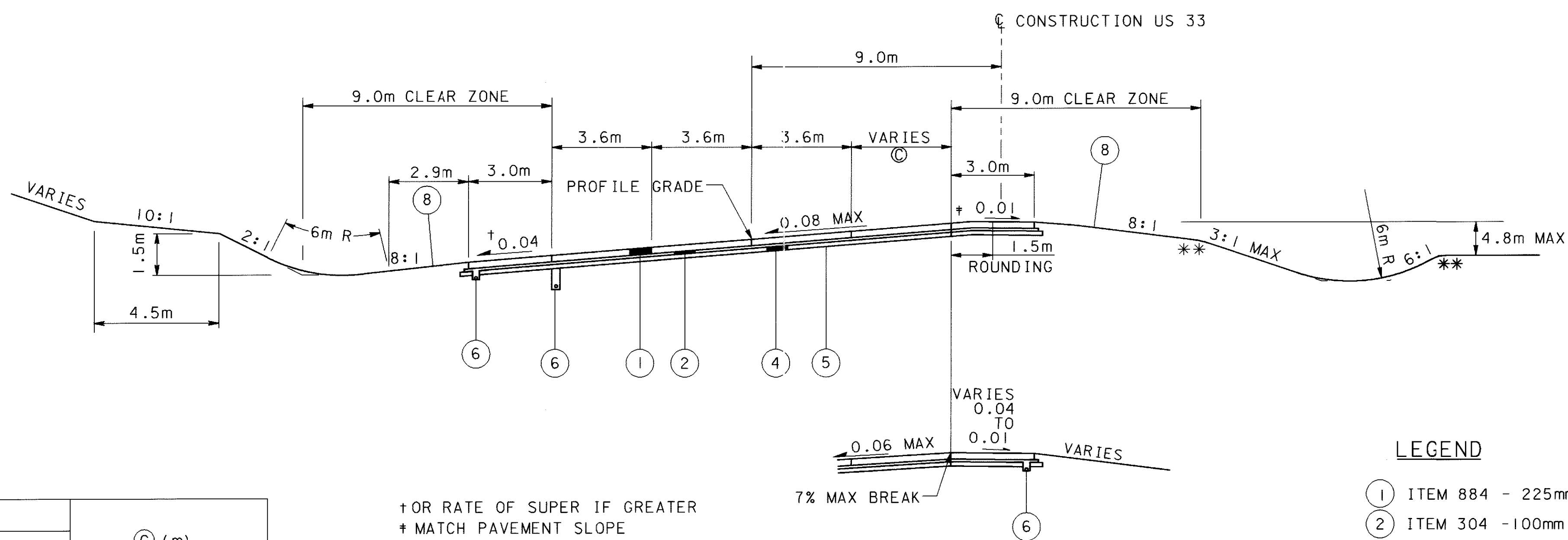


STATION		B (m)
FROM	TO	
33+220.000	33+235.000	0.000 TO 3.600
33+235.000	33+285.820	3.600

NORMAL SECTION

SECTION APPLIES :  
STA 33+220.000 TO STA 33+285.820 = 65.820m

\* 3.0m ROUNDING  
\*\* 1.2m ROUNDING  
\*\*\* SEE EDGE COURSE DETAIL ON SHEET 12



STATION		C (m)
FROM	TO	
37+425.000	37+440.000	0.000 TO 3.600
37+440.000	37+484.168	3.600

+ OR RATE OF SUPER IF GREATER  
+ MATCH PAVEMENT SLOPE

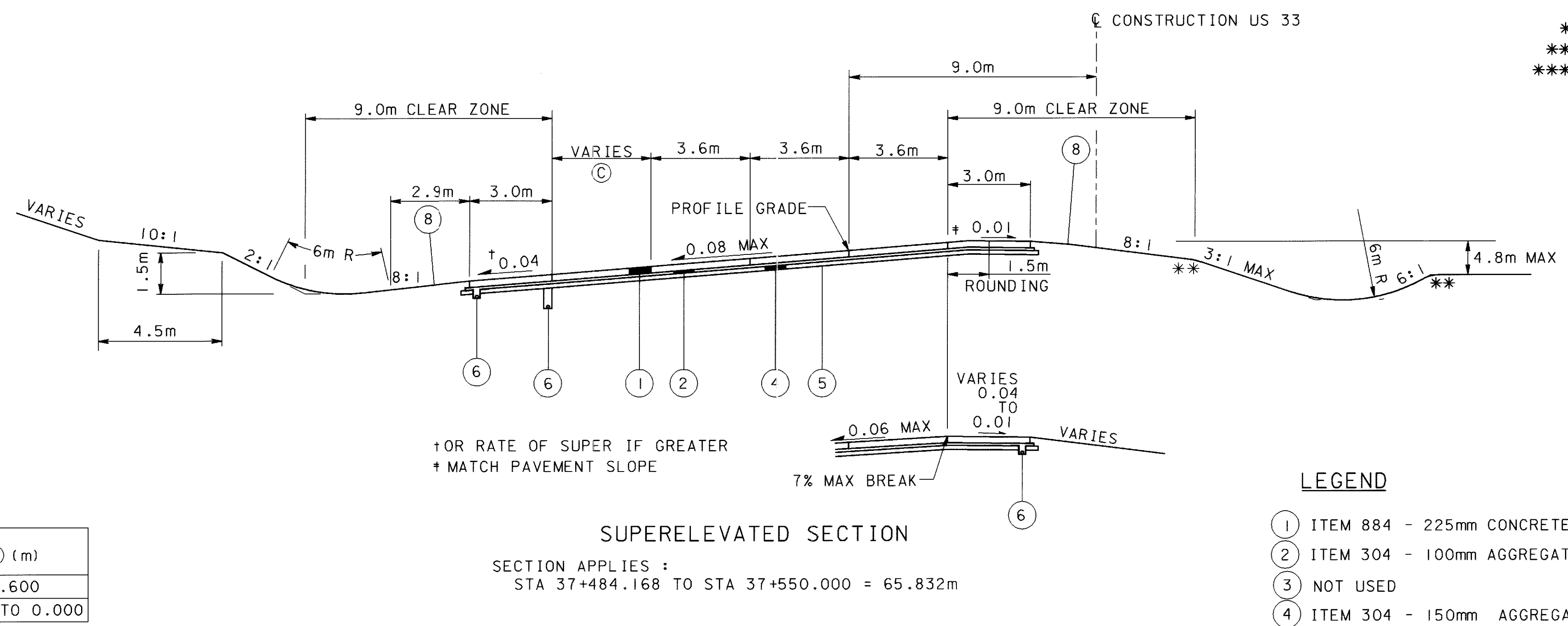
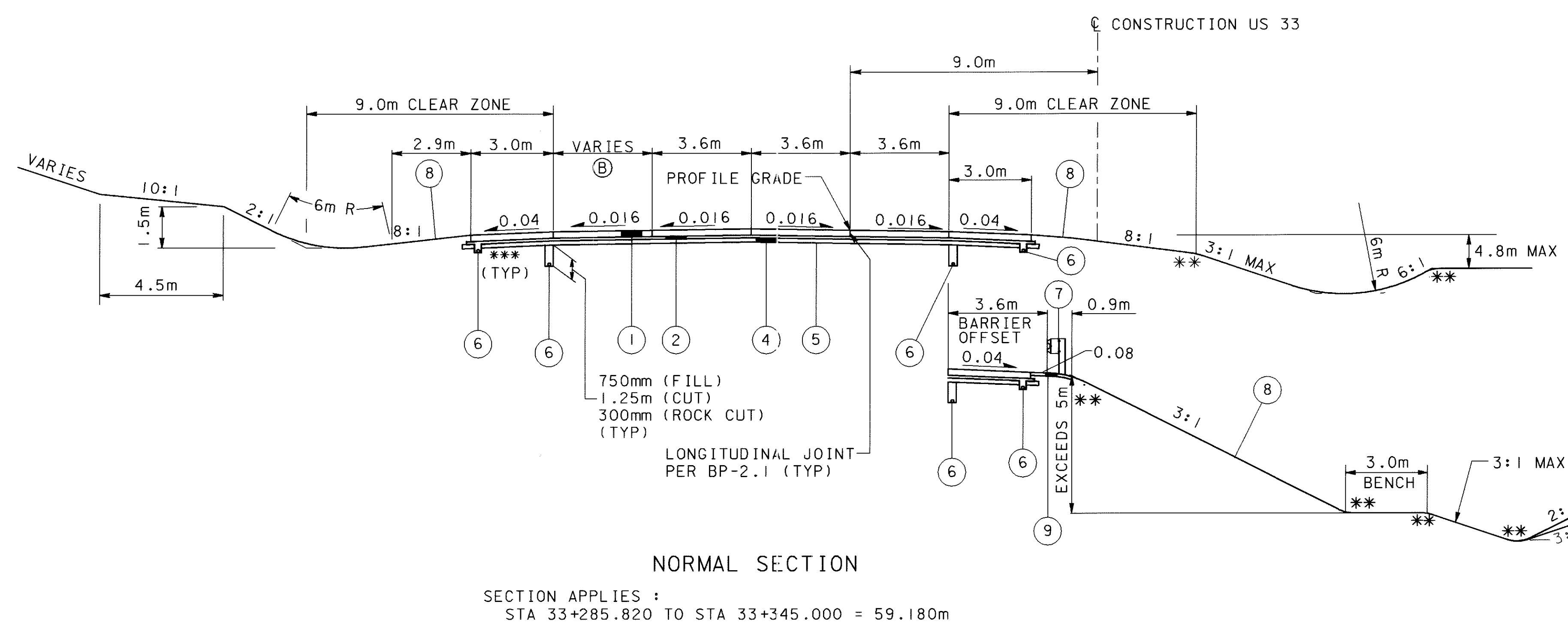
SUPERELEVATED SECTION

SECTION APPLIES :  
STA 37+425.000 TO STA 37+484.168 = 59.168m

LEGEND

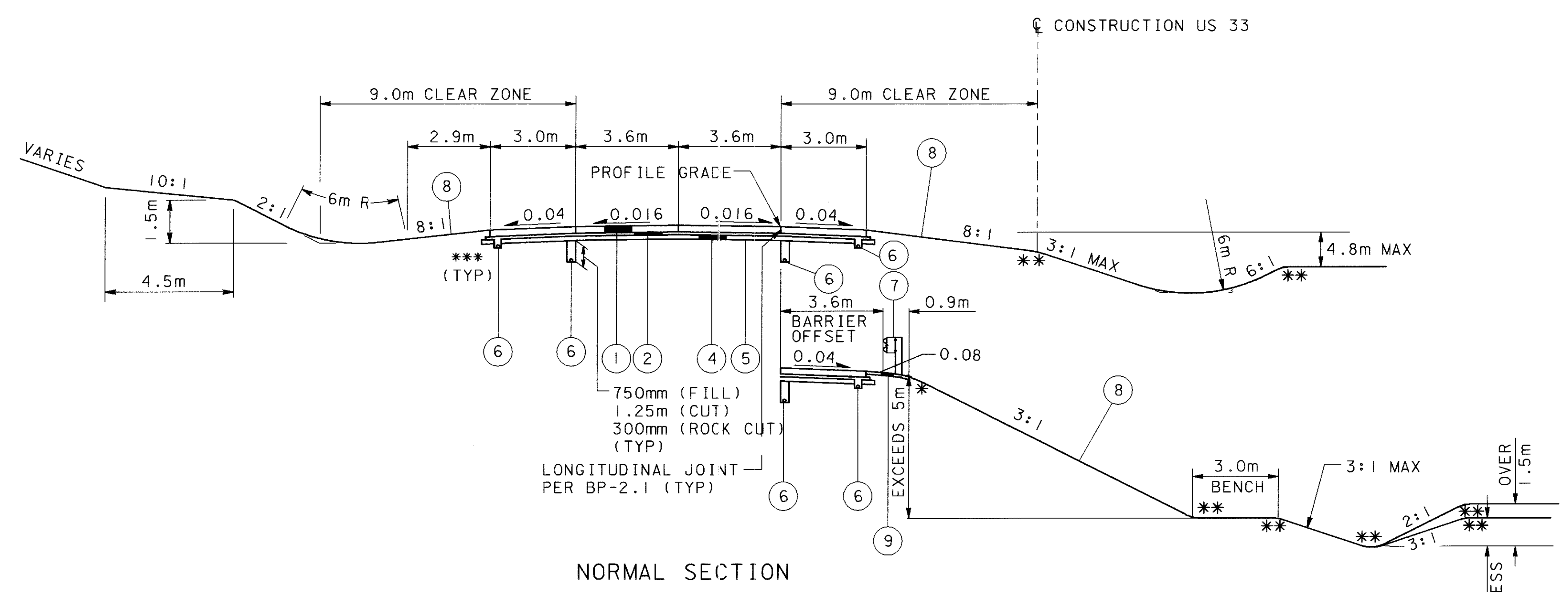
- 1 ITEM 884 - 225mm CONCRETE PAVEMENT WITH WARRANTY
- 2 ITEM 304 - 100mm AGGREGATE BASE
- 3 NOT USED
- 4 ITEM 304 - 150mm AGGREGATE BASE
- 5 ITEM 203 - SUBGRADE COMPACTION
- 6 ITEM 605 - 100mm SHALLOW (OR DEEP) PIPE UNDERDRAIN
- 7 ITEM 606 - GUARDRAIL, TYPE 5
- 8 ITEM 870 - SEEDING AND MULCHING
- 9 ITEM 448 - 50mm ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG64-22 (UNDER GUARDRAIL)

SUPER TWO INTERSECTIONS  
US 33 MAINLINE



31 JAN 2001 10:04:59  
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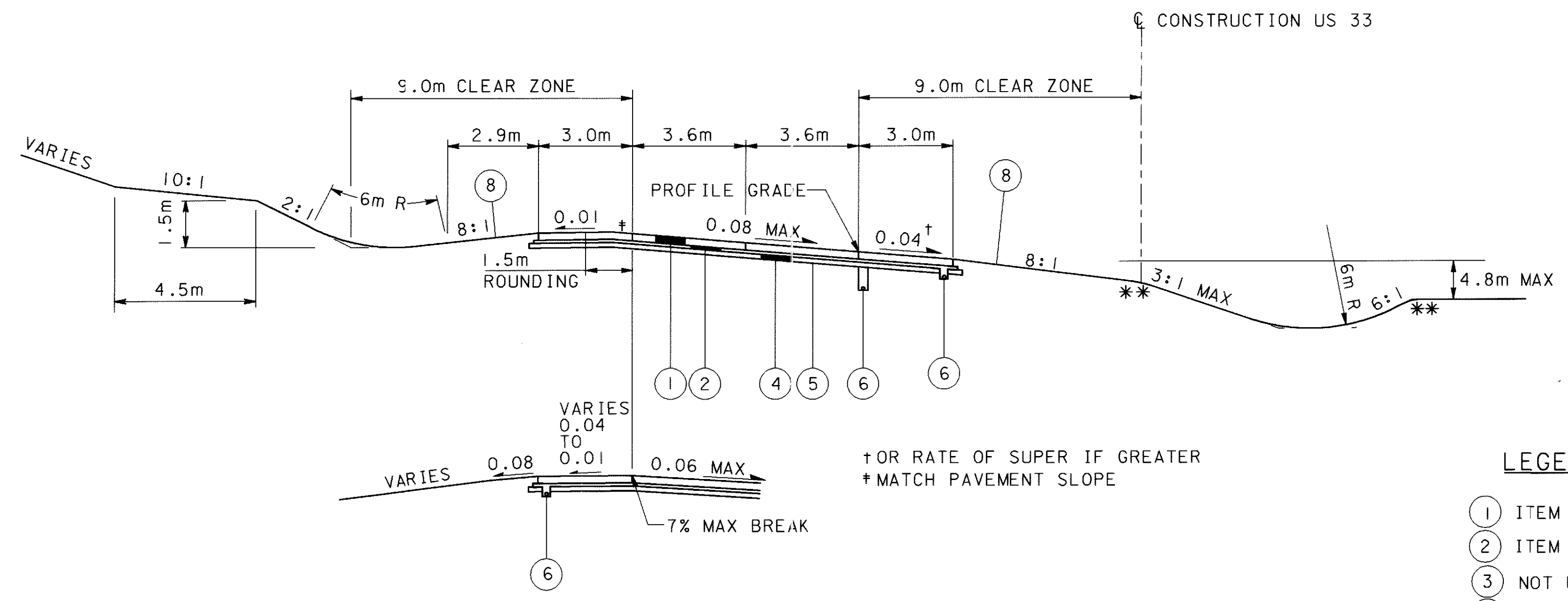
SUPER TWO INTERSECTIONS  
US 33 MAINLINE



NORMAL SECTION

SECTION APPLIES :  
 STA 34+368.590 TO STA 35+241.556 = 872.966m  
 STA 35+888.444 TO STA 37+125.000 = 1236.556m  
 STA 37+990.571 TO STA 38+205.657 = 216.086m  
 STA 39+121.343 TO STA 39+600.000 = 478.657m  
 2804.265m

\* 3.0m ROUNDING  
 \*\* 1.2m ROUNDING  
 \*\*\* SEE EDGE COURSE DETAIL ON SHEET 12



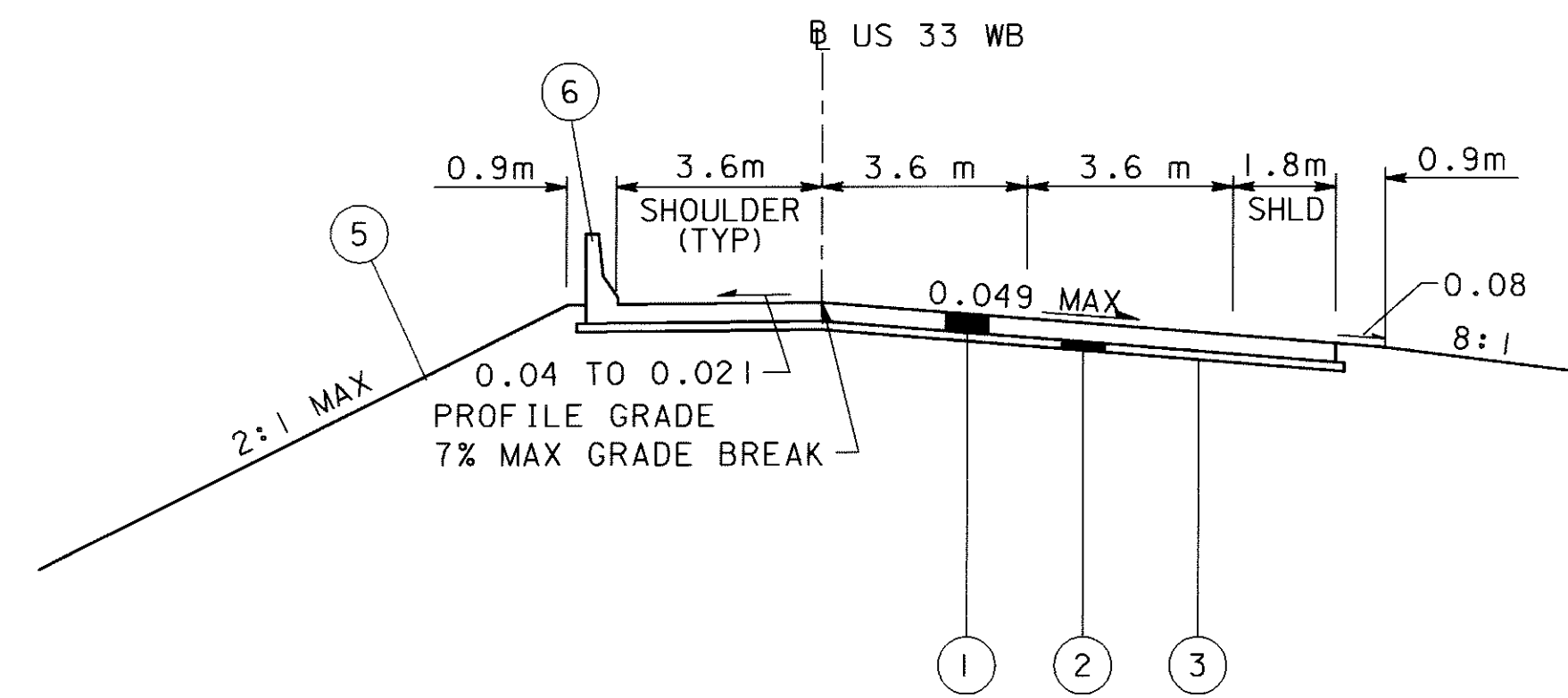
SUPERELEVATED SECTION

SECTION APPLIES :  
 STA 33+615.000 TO STA 34+368.590 = 753.590m  
 STA 35+241.556 TO STA 35+888.444 = 646.888m  
 STA 37+850.000 TO STA 37+990.571 = 140.571m  
 STA 38+206.657 TO STA 39+ 21.343 = 914.686m  
 2455.735m

LEGEND

- ① ITEM 884 - 225mm CONCRETE PAVEMENT WITH WARRANTY
- ② ITEM 304 - 100mm AGGREGATE BASE
- ③ NOT USED
- ④ ITEM 304 - 150mm AGGREGATE BASE
- ⑤ ITEM 203 - SUBGRADE COMPACTION
- ⑥ ITEM 605 - 100mm SHALLOW (OR DEEP) PIPE UNDERDRAIN
- ⑦ ITEM 606 - GUARDRAIL, TYPE 5
- ⑧ ITEM 870 - SEEDING AND MULCHING
- ⑨ ITEM 448 - 50mm ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG64-22 (UNDER GUARDRAIL)

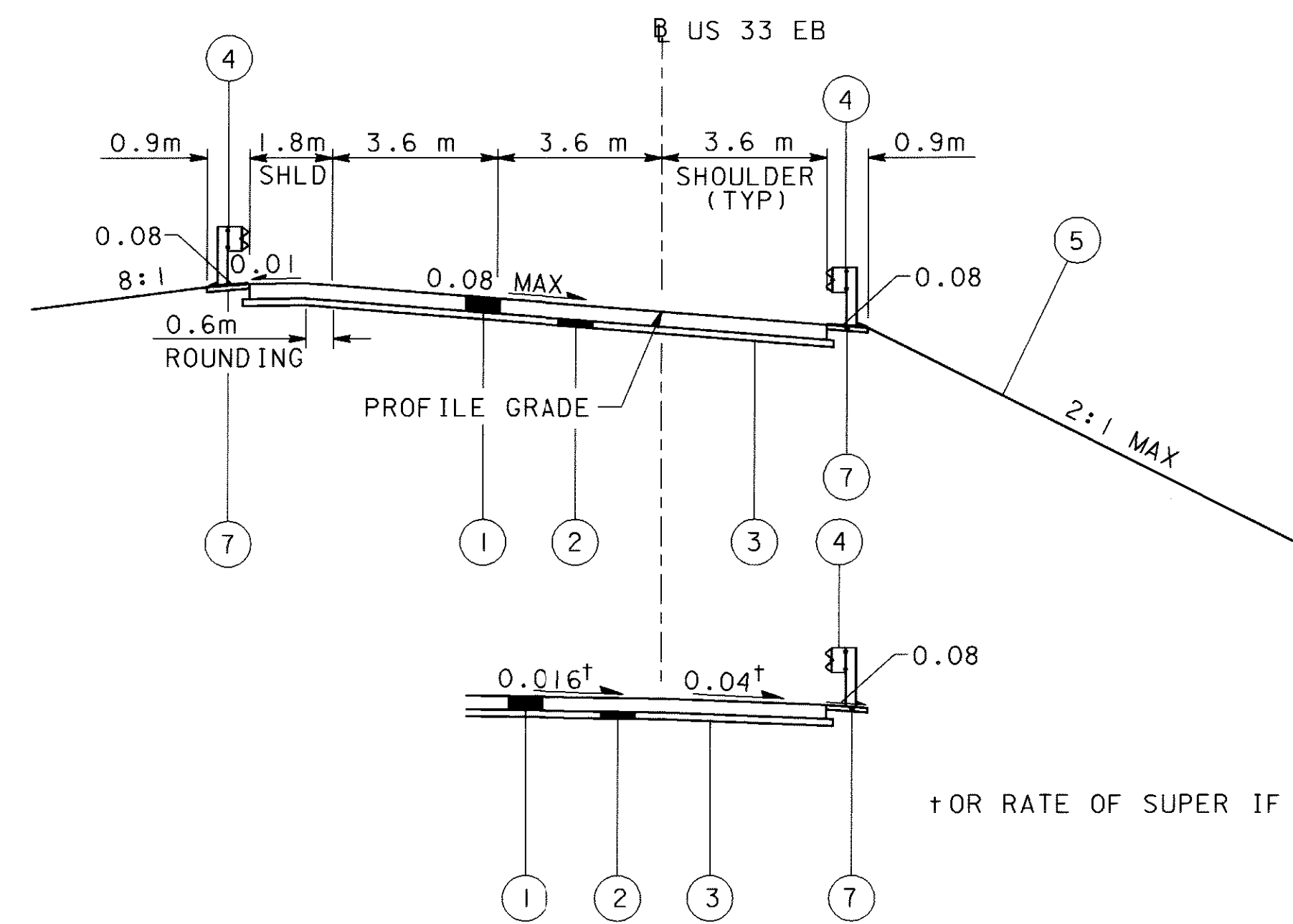




SUPERELEVATED SECTION

SECTION APPLIES:  
 STA 29+496.499 TO STA 29+504.099 = 7.600m

BRIDGE LIMITS:  
 STA 29+504.099 TO STA 29+556.729 = 52.630m

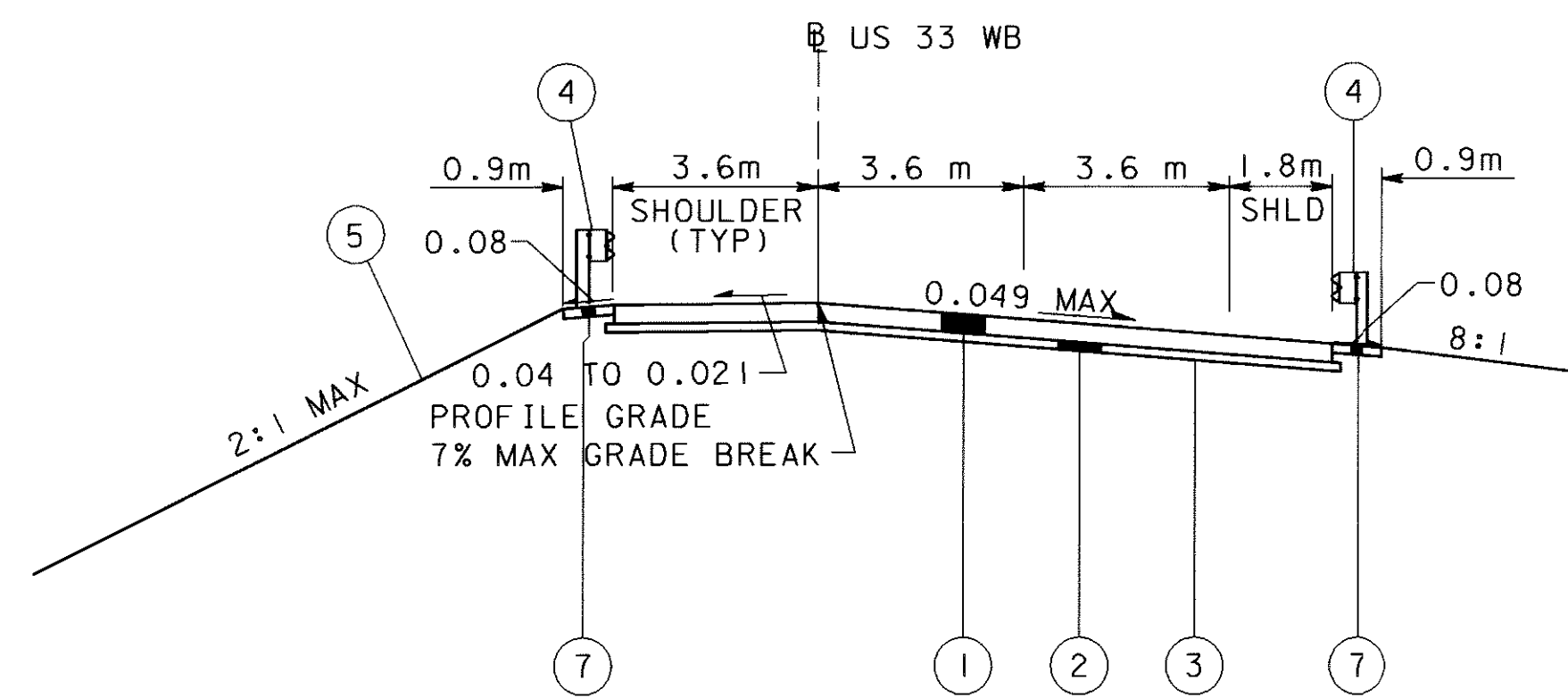


SUPERELEVATED SECTION

SECTION APPLIES:  
 STA 29+508.373 TO STA 29+515.973 = 7.600m  
 STA 29+568.629 TO STA 29+576.229 = 7.600m  
 15.200m

BRIDGE LIMITS:  
 STA 29+515.973 TO STA 29+568.629 = 52.656m

† OR RATE OF SUPER IF GREATER



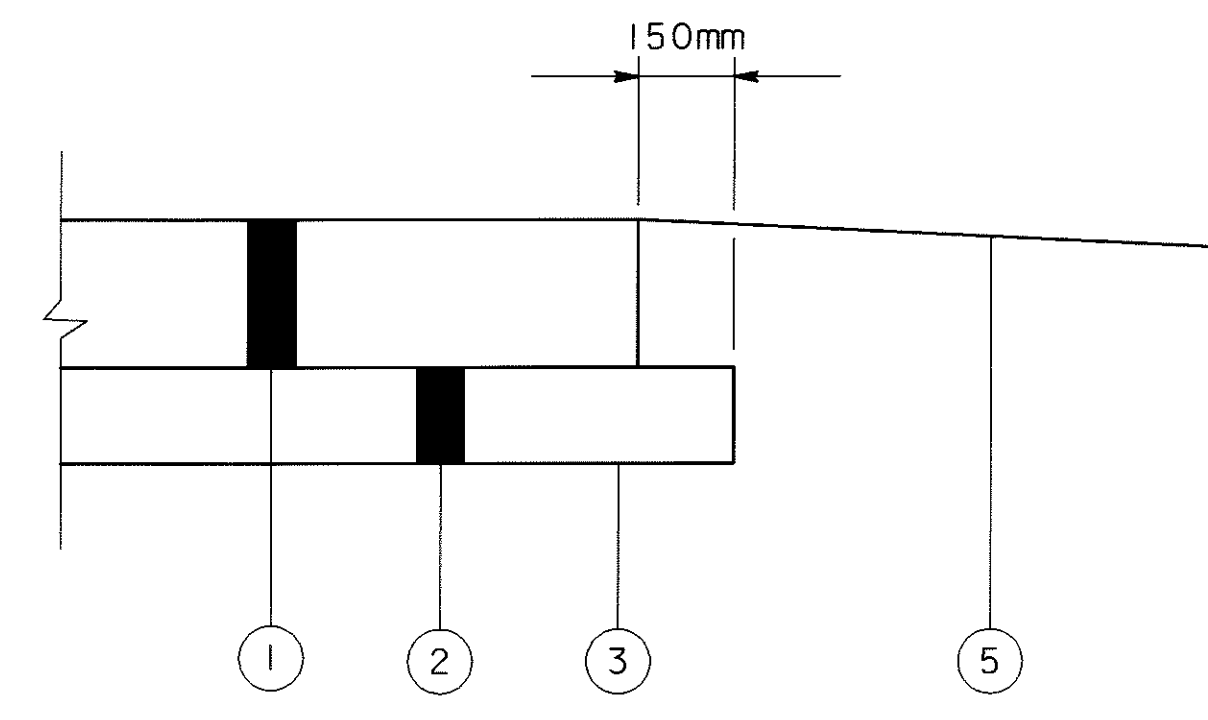
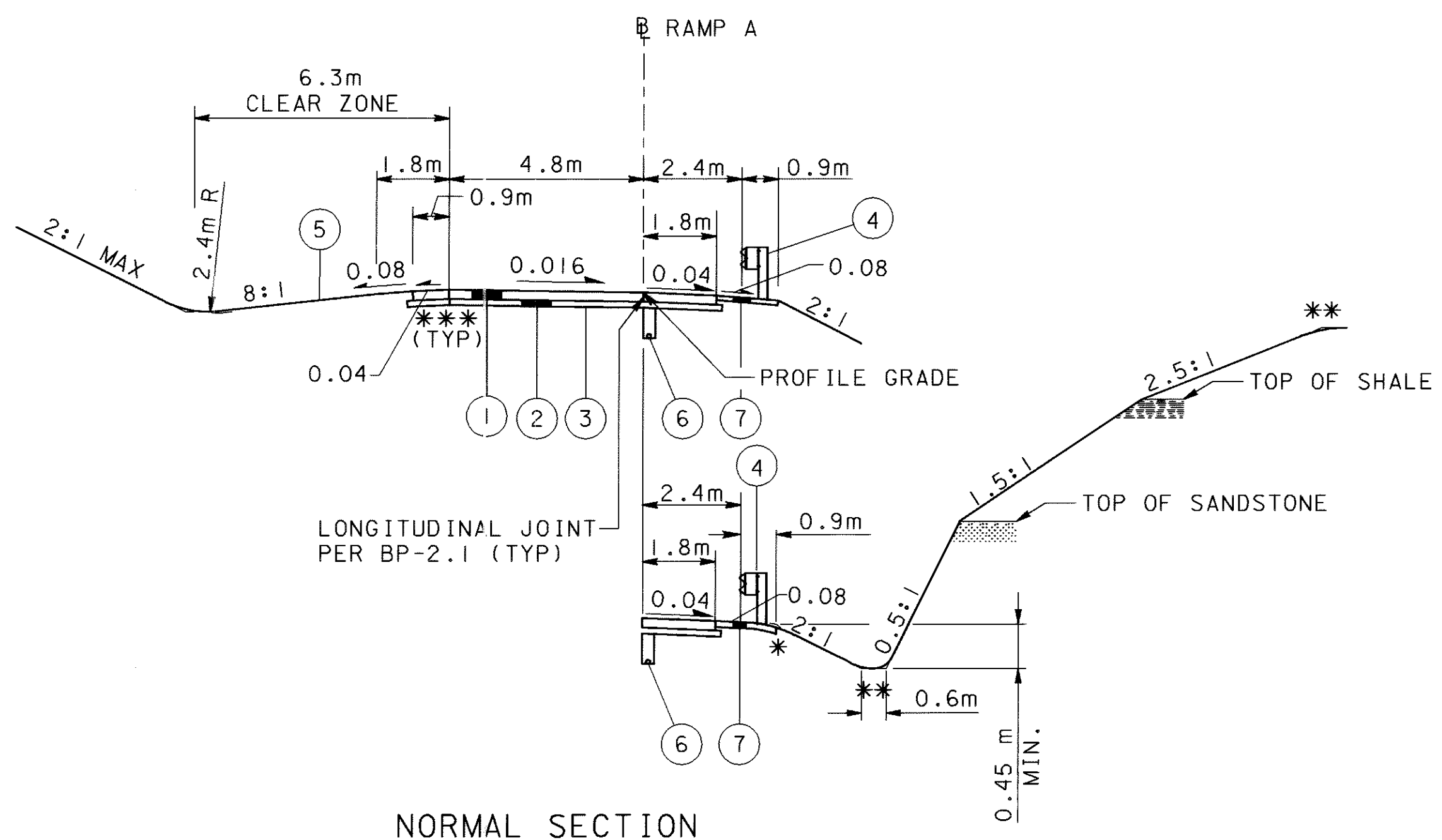
SUPERELEVATED SECTION

SECTION APPLIES:  
 STA 29+556.729 TO STA 29+564.329 = 7.600m

\* 3.0m ROUNDING  
 \*\* 1.2m ROUNDING

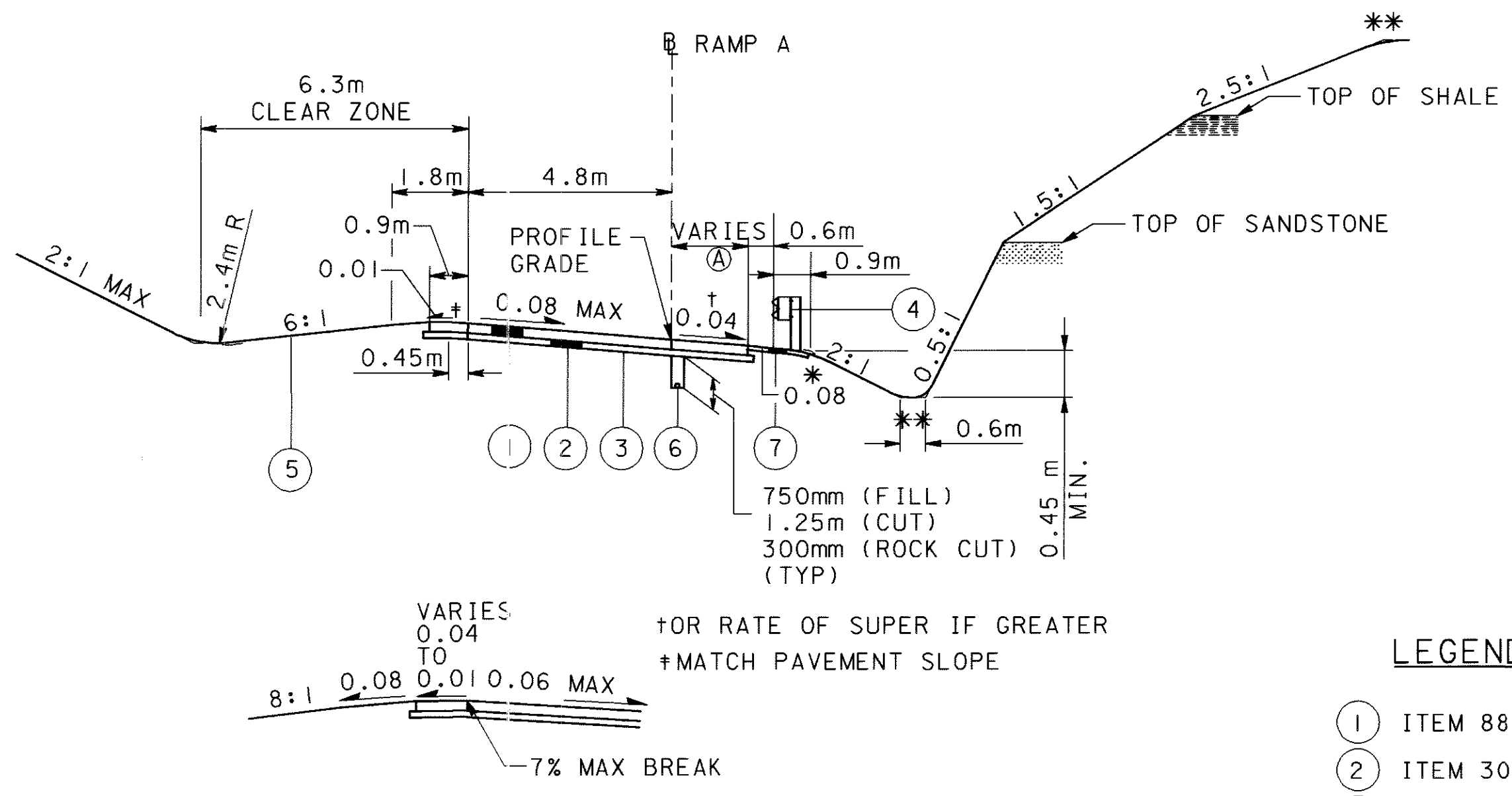
LEGEND

- ① ITEM 611 - 380mm REINFORCED CONCRETE APPROACH SLAB, AS PER PLAN
- ② ITEM 304 - 150mm AGGREGATE BASE
- ③ ITEM 203 - SUBGRADE COMPACTION
- ④ ITEM 606 - GUARDRAIL, TYPE 5
- ⑤ ITEM 870 - SEEDING AND MULCHNG
- ⑥ ITEM 622 - CONCRETE BARRIER, TYPE D
- ⑦ ITEM 448 - 50mm ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG64-22 (UNDER GUARDRAIL)



RAMP EDGE COURSE DETAIL (N.T.S.)

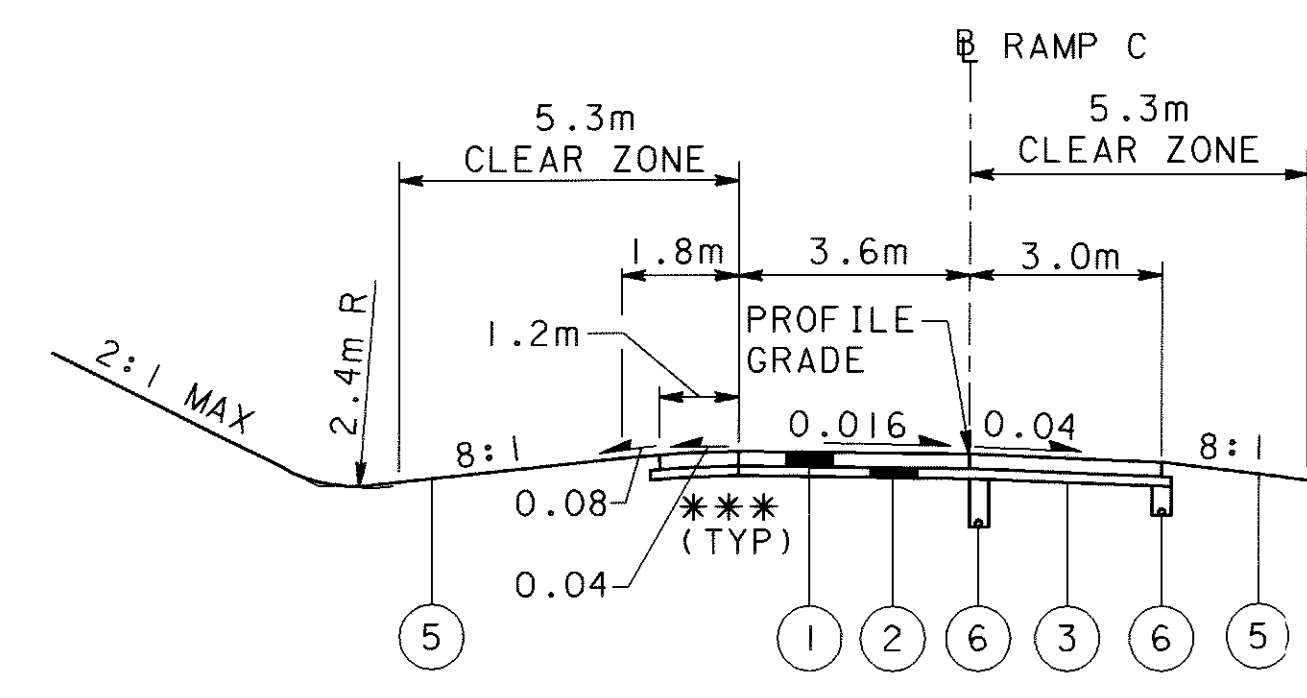
STATION		(A) (m)
FROM	TO	
1+382.781	1+397.781	2.400 TO 1.800
1+397.781	1+454.000	1.800



**LEGEND**

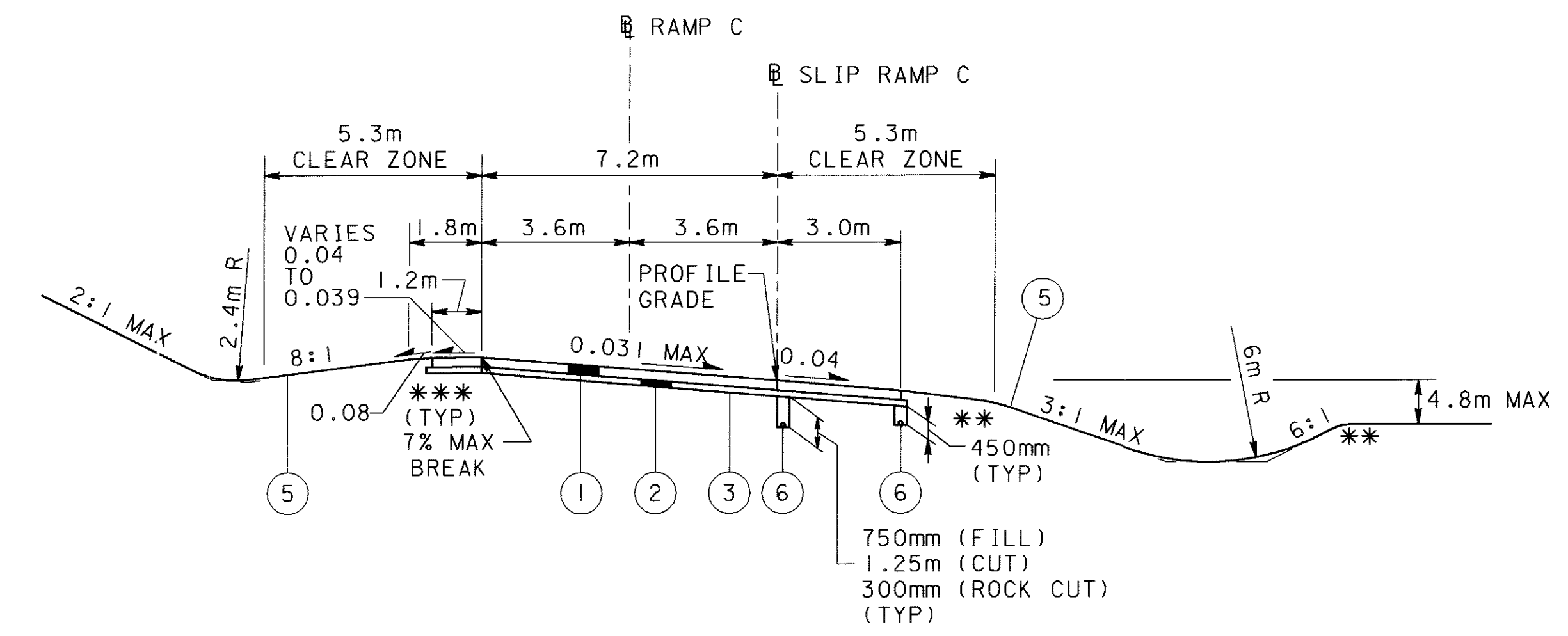
- ① ITEM 884 - 225mm CONCRETE PAVEMENT WITH WARRANTY
- ② ITEM 304 - 150mm AGGREGATE BASE
- ③ ITEM 203 - SUBGRADE COMPACTION
- ④ ITEM 606 - GUARDRAIL, TYPE 5
- ⑤ ITEM 870 - SEEDING AND MULCHING
- ⑥ ITEM 605 - 100mm SHALLOW (OR DEEP) PIPE UNDERDRAIN
- ⑦ ITEM 448 - 50mm ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG64-22 (UNDER GUARDRAIL)

\* 3.0m ROUNDING  
 \*\* 1.2m ROUNDING  
 \*\*\* SEE RAMP EDGE COURSE DETAIL ON THIS SHEET



NORMAL SECTION

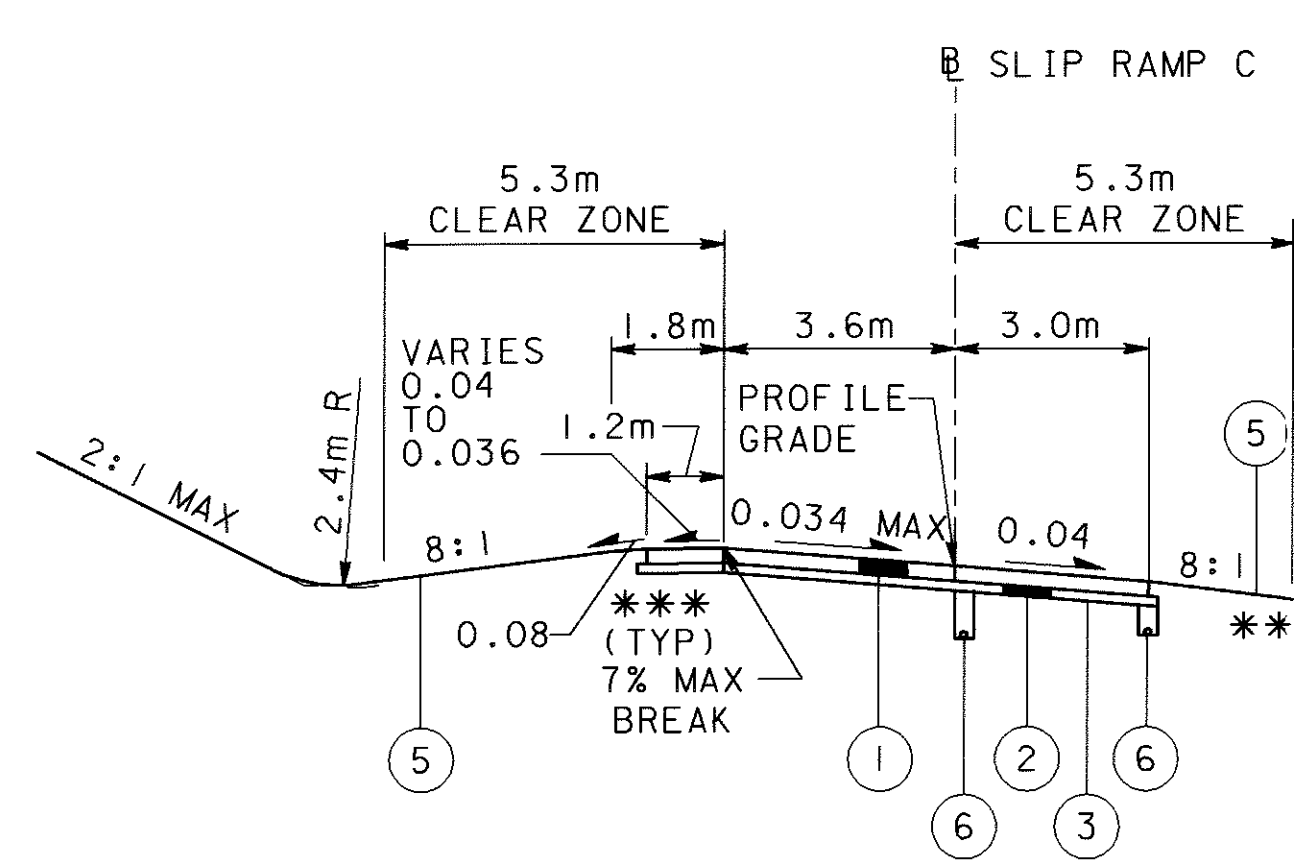
SECTION APPLIES :  
RAMP C: STA 3+571.668 TO STA 3+649.759 = 78.091 m



NORMAL SECTION

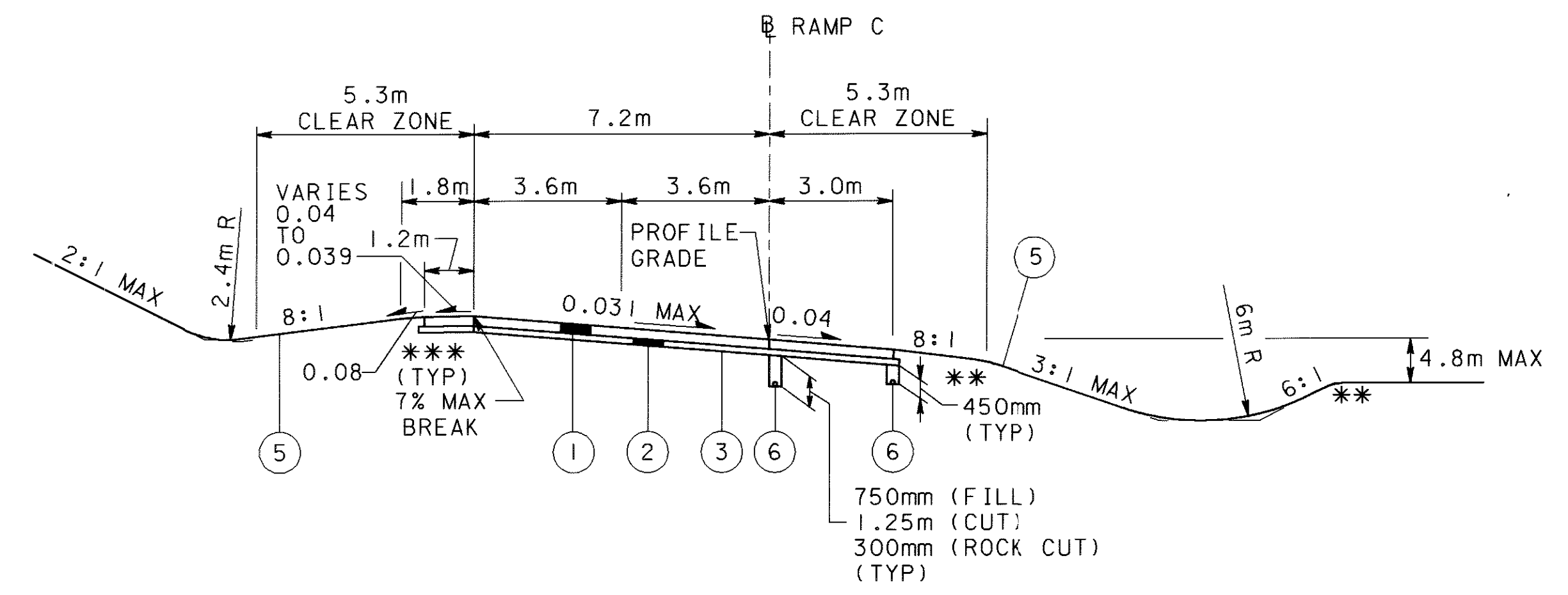
SECTION APPLIES :  
RAMP C: STA 3+649.759 TO STA 3+665.000 = 15.241 m  
SLIP RAMP C: STA 2+649.799 TO STA 2+665.000

\* 3.0m ROUNDING  
\*\* 1.2m ROUNDING  
\*\*\* SEE RAMP EDGE COURSE DETAIL ON SHEET 18



SUPERELEVATED SECTION

SECTION APPLIES :  
SLIP RAMP C: STA 2+555.935 TO STA 2+649.799 = 93.864 m

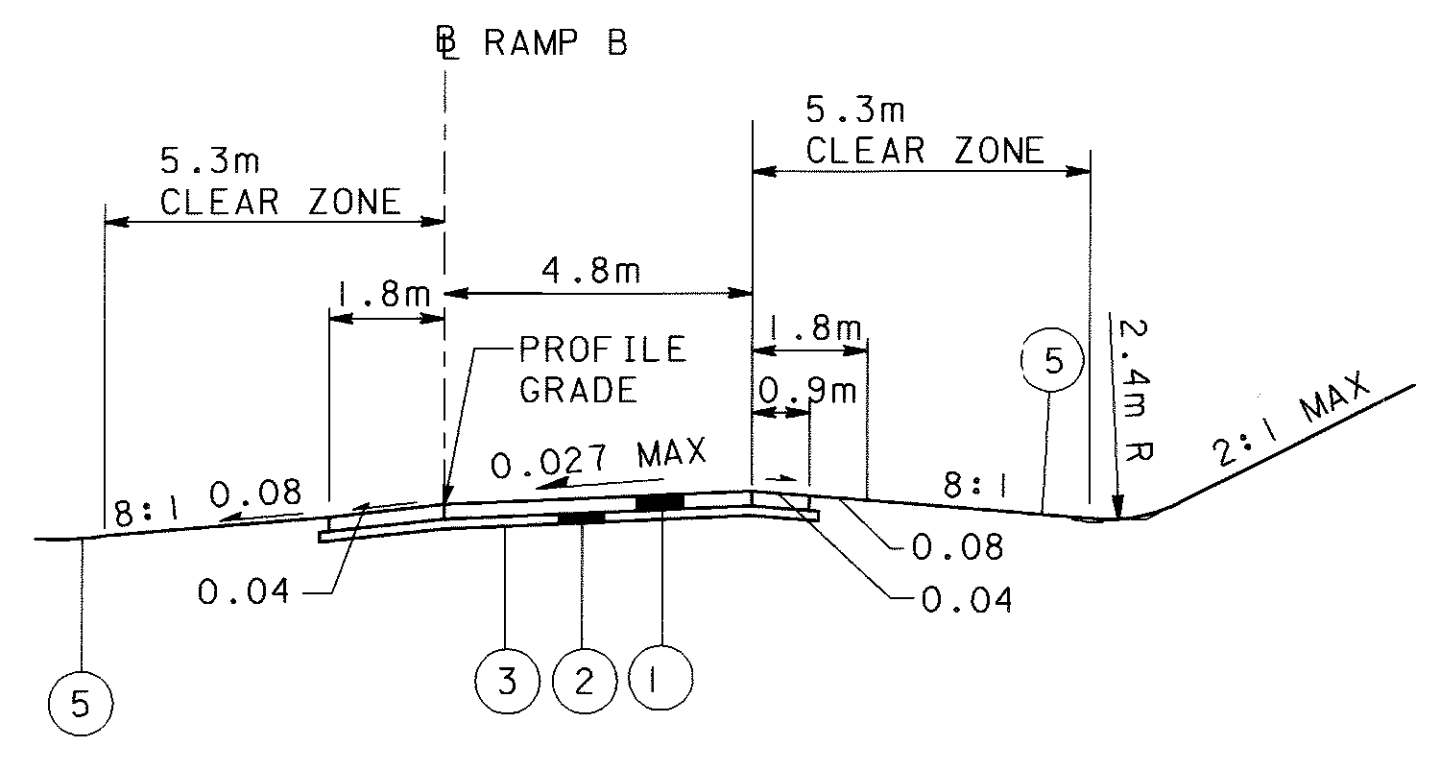


SUPERELEVATED SECTION

SECTION APPLIES :  
RAMP C: STA 3+665.000 TO STA 4+203.023 = 538.068 m

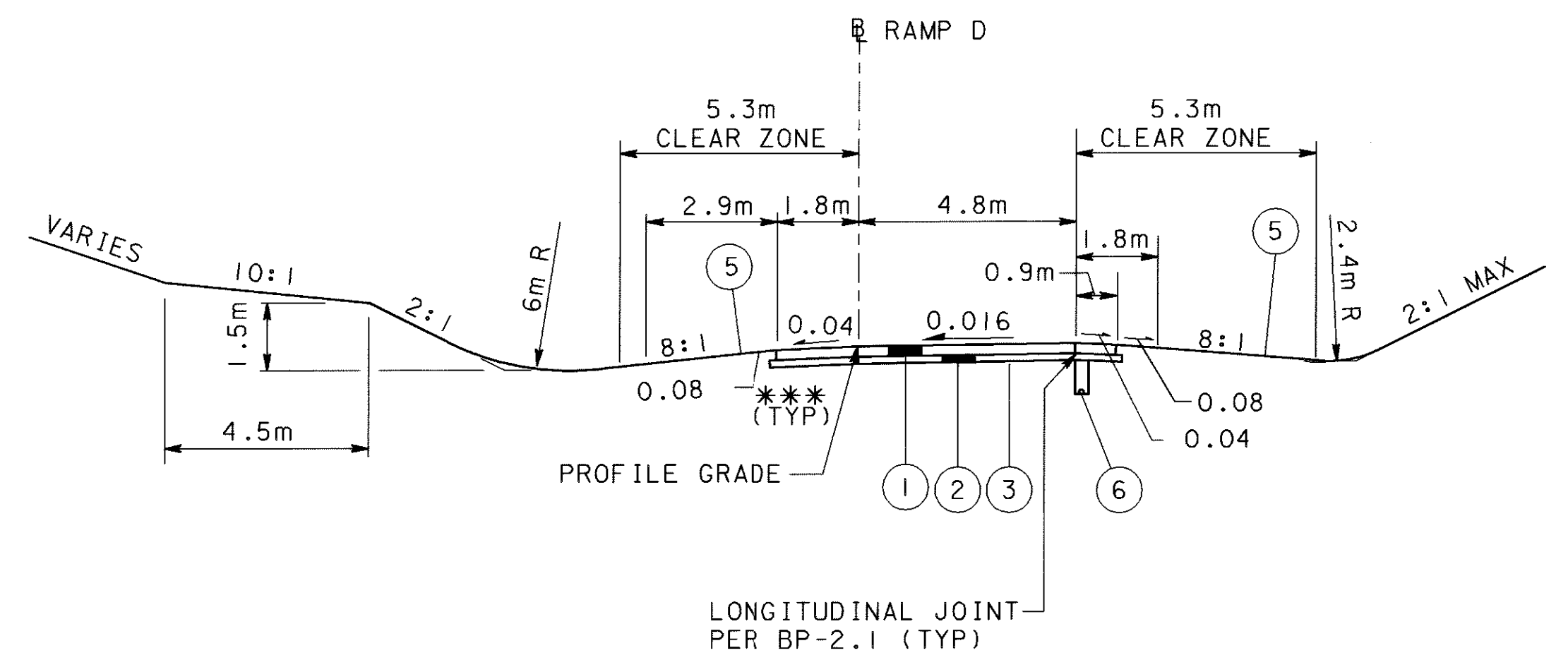
LEGEND

- ① ITEM 884 - 225mm CONCRETE PAVEMENT WITH WARRANTY
- ② ITEM 304 - 150mm AGGREGATE BASE
- ③ ITEM 203 - SUBGRADE COMPACTION
- ④ ITEM 606 - GUARDRAIL, TYPE 5
- ⑤ ITEM 870 - SEEDING AND MULCHING
- ⑥ ITEM 605 - 100mm SHALLOW (OR DEEP) PIPE UNDERDRAIN



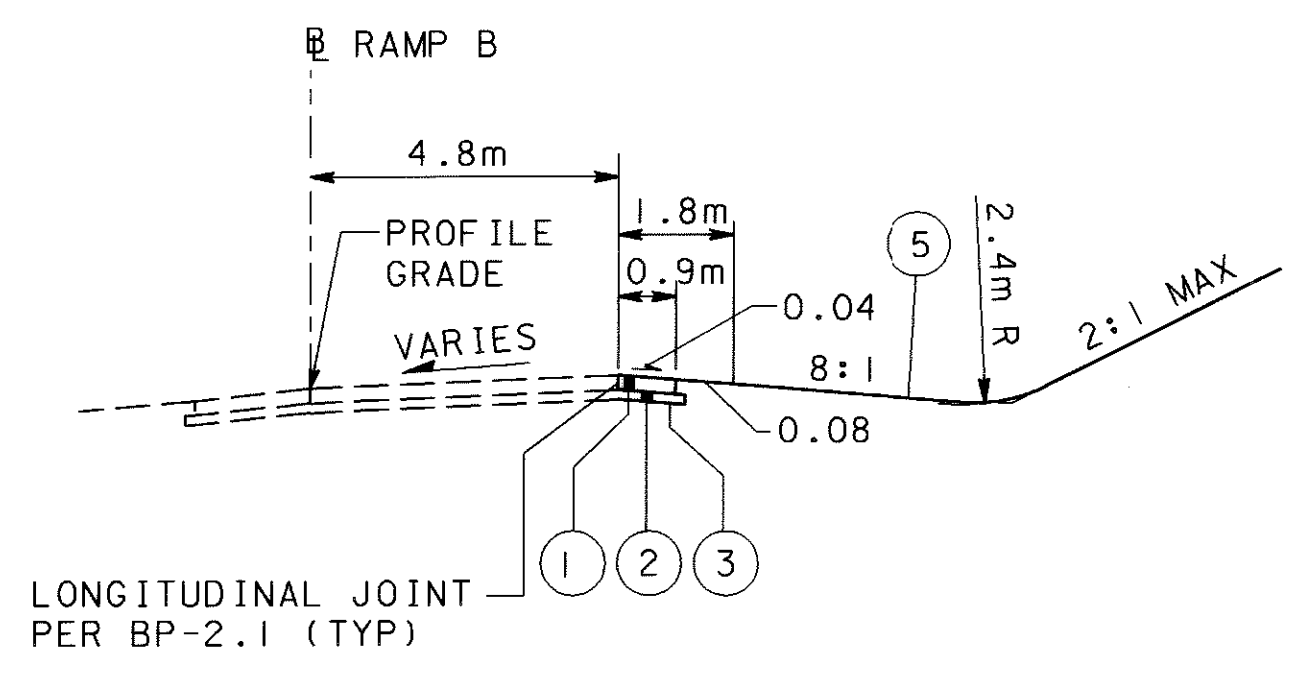
**SUPERELEVATED SECTION**

SECTION APPLIES :  
RAMP B: STA 0+930.000 TO STA 0+990.000 = 60.000 m



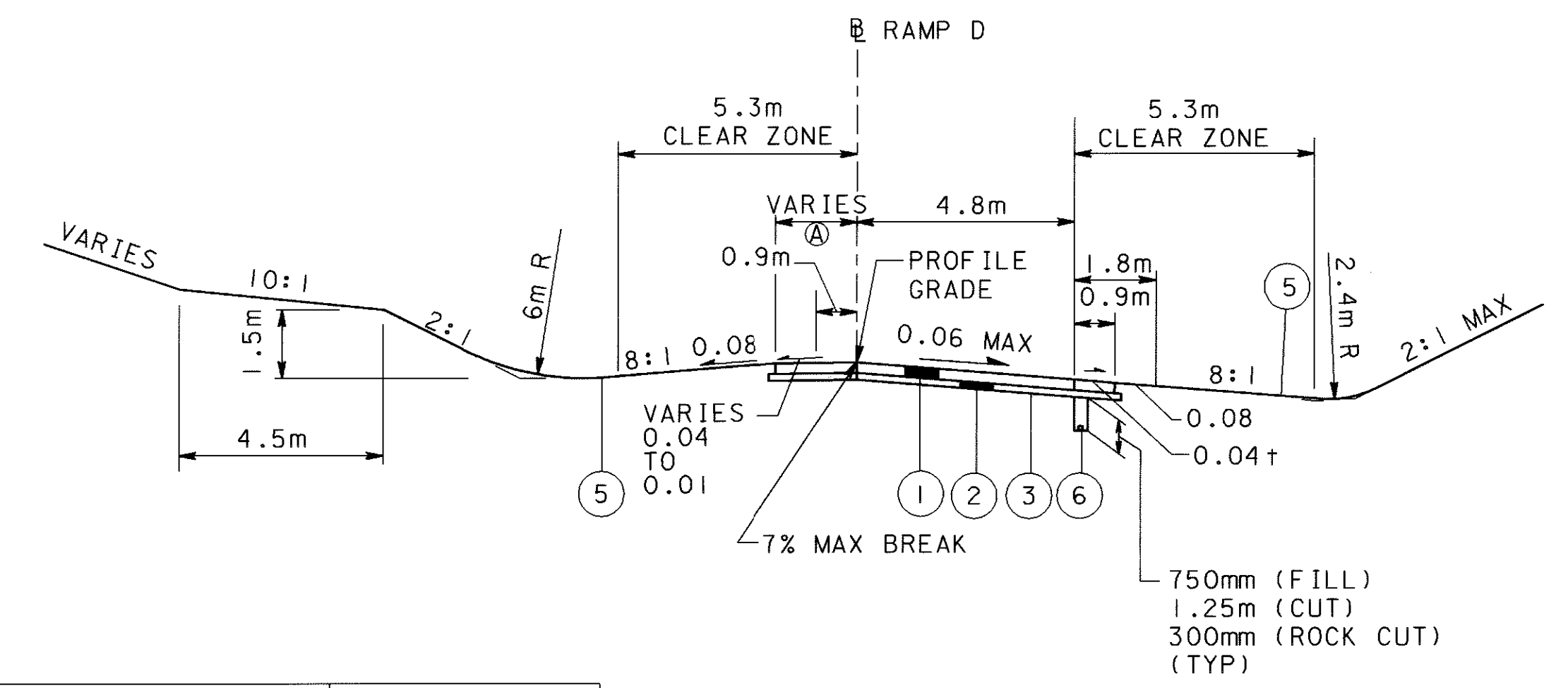
**NORMAL SECTION**

SECTION APPLIES :  
RAMP D: STA 4+518.805 TO STA 4+671.000 = 152.394 m



**SUPERELEVATED SECTION**

SECTION APPLIES :  
RAMP B: STA 0+792.393 TO STA 0+930.000 = 137.607 m



STATION		(A) (m)
FROM	TO	
4+671.000	5+154.346	1.800
5+154.346	5+169.346	1.800 TO 2.400

↑OR RATE OF SUPER IF GREATER

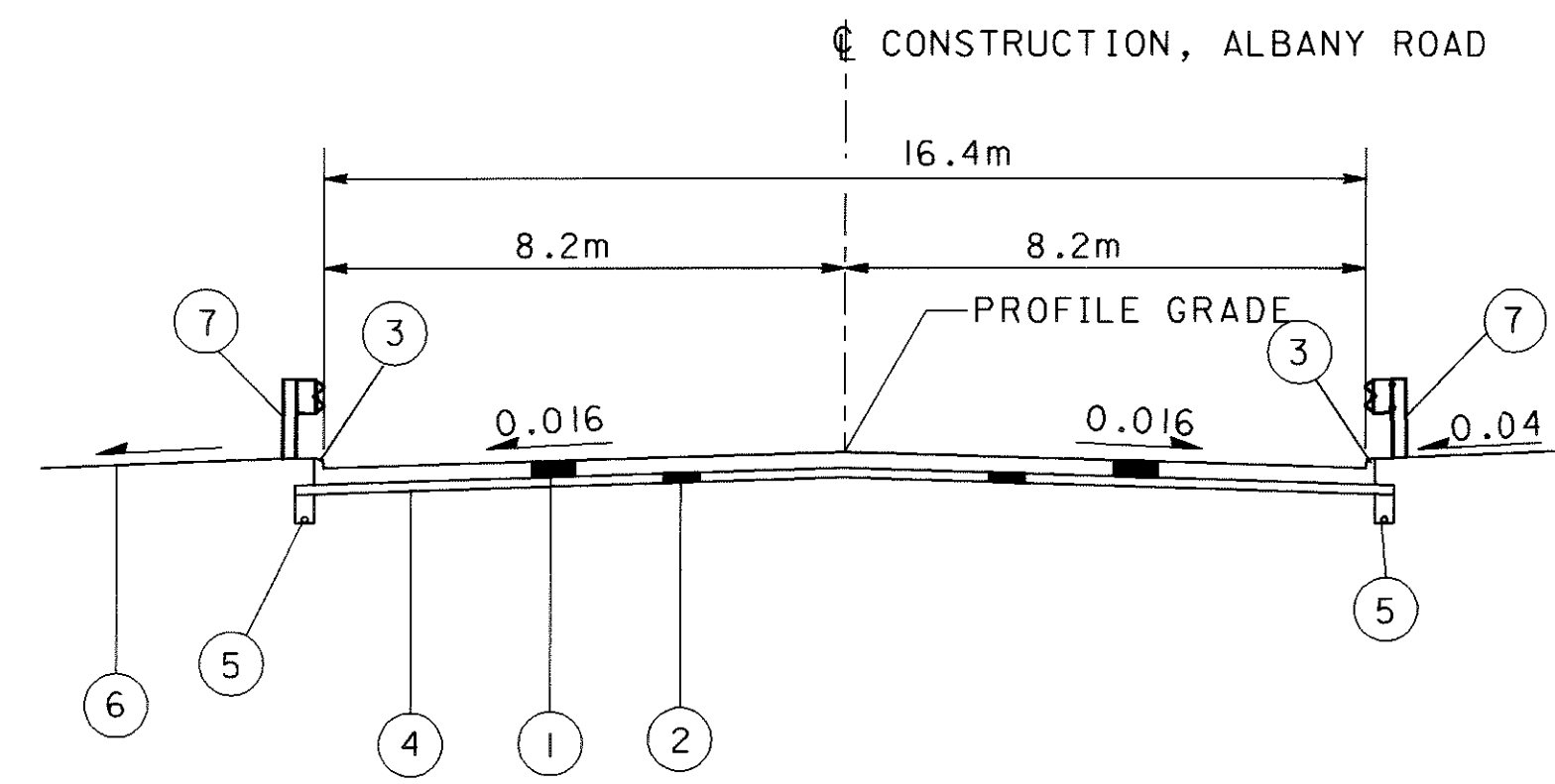
**SUPERELEVATED SECTION**

SECTION APPLIES :  
RAMP D: STA 4+671.000 TO STA 5+169.346 = 498.346 m

**LEGEND**

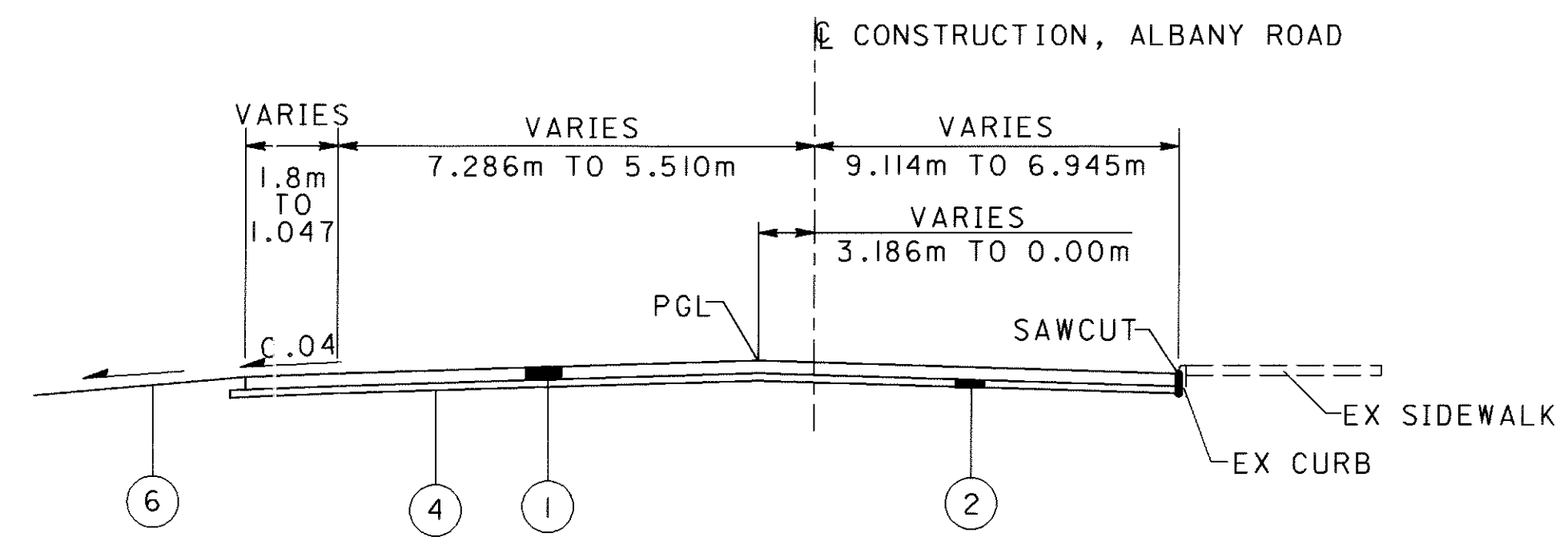
- (1) ITEM 884 - 225mm CONCRETE PAVEMENT WITH WARRANTY
- (2) ITEM 304 - 150mm AGGREGATE BASE
- (3) ITEM 203 - SUBGRADE COMPACTION
- (4) ITEM 606 - GUARDRAIL, TYPE 5
- (5) ITEM 870 - SEEDING AND MULCHING
- (6) ITEM 605 - 100mm SHALLOW (OR DEEP) PIPE UNDERDRAIN

- \* 3.0m ROUNDING
- \*\* 1.2m ROUNDING
- \*\*\* SEE RAMP EDGE COURSE DETAIL ON SHEET 18



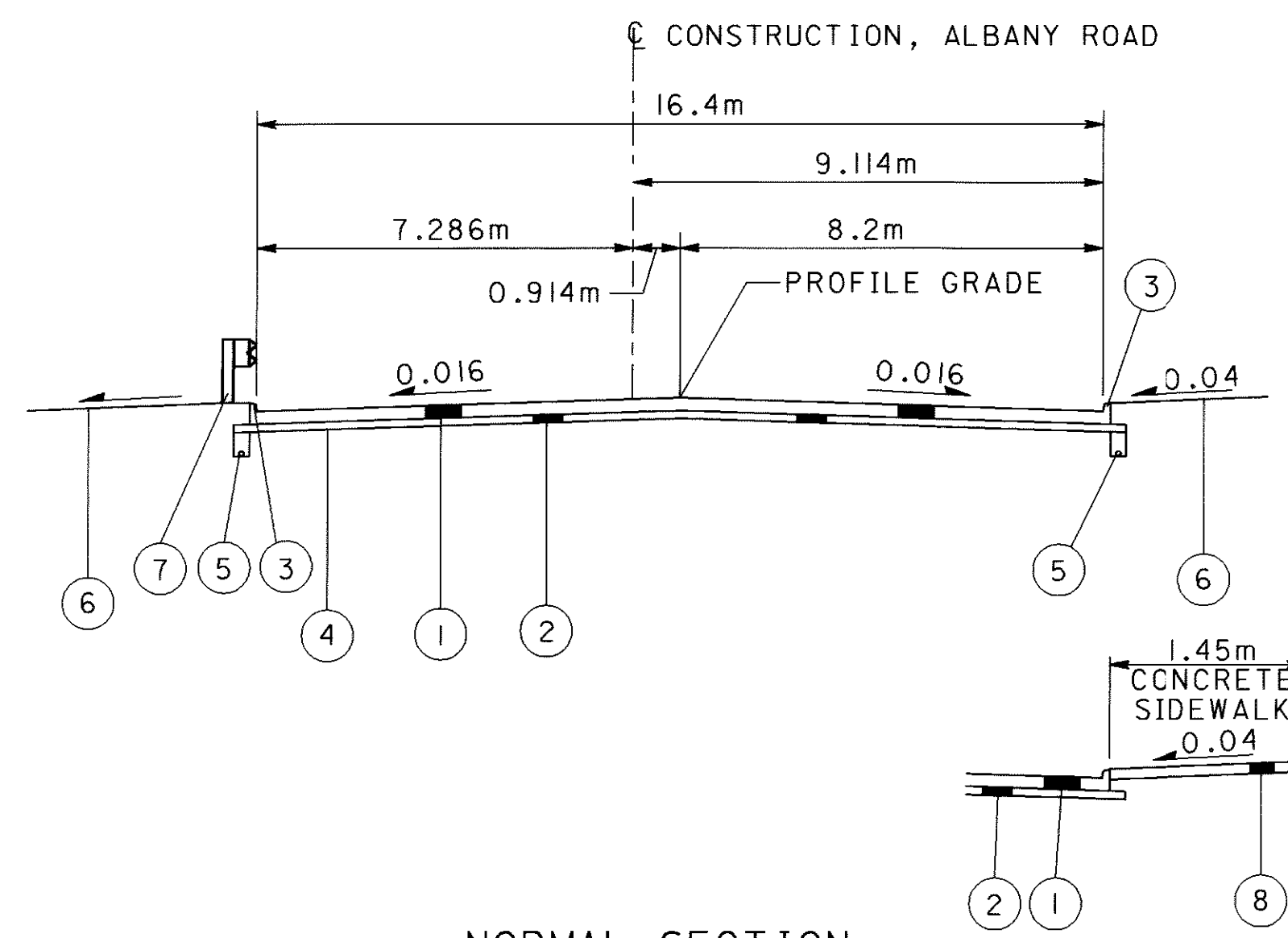
NORMAL SECTION

SECTION APPLIES :  
STA 0+120.000 TO STA 0+208.711 = 88.711m



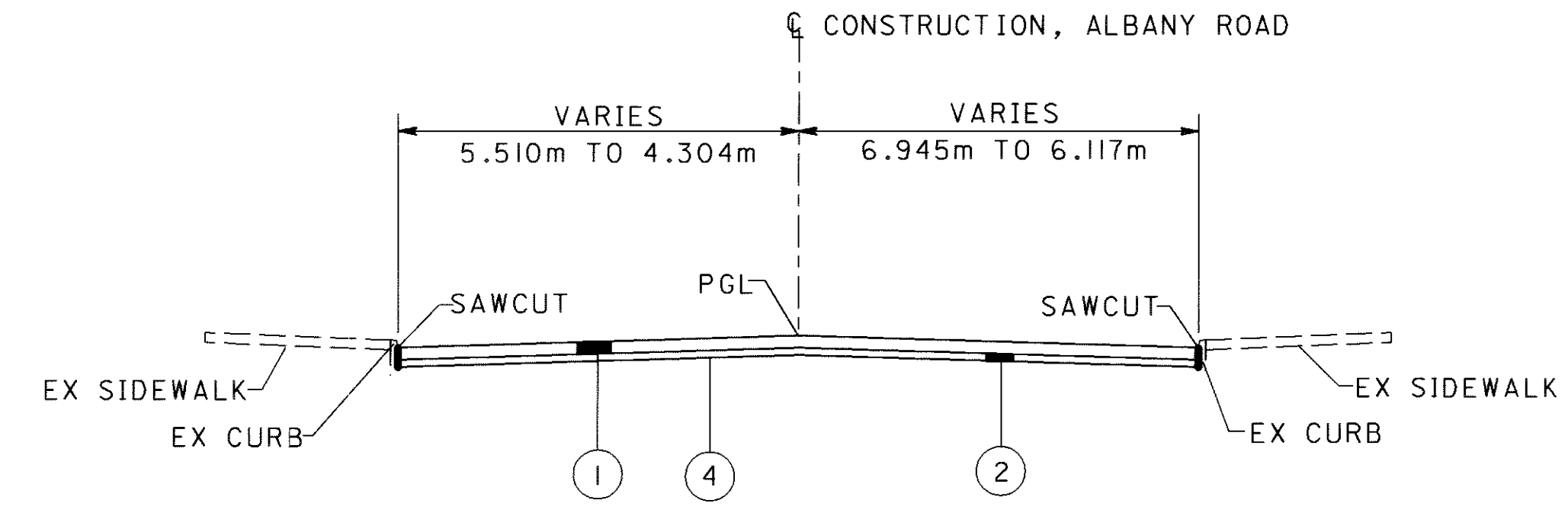
NORMAL SECTION

SECTION APPLIES :  
STA 0+385.000 TO STA 0+411.141 = 26.141m



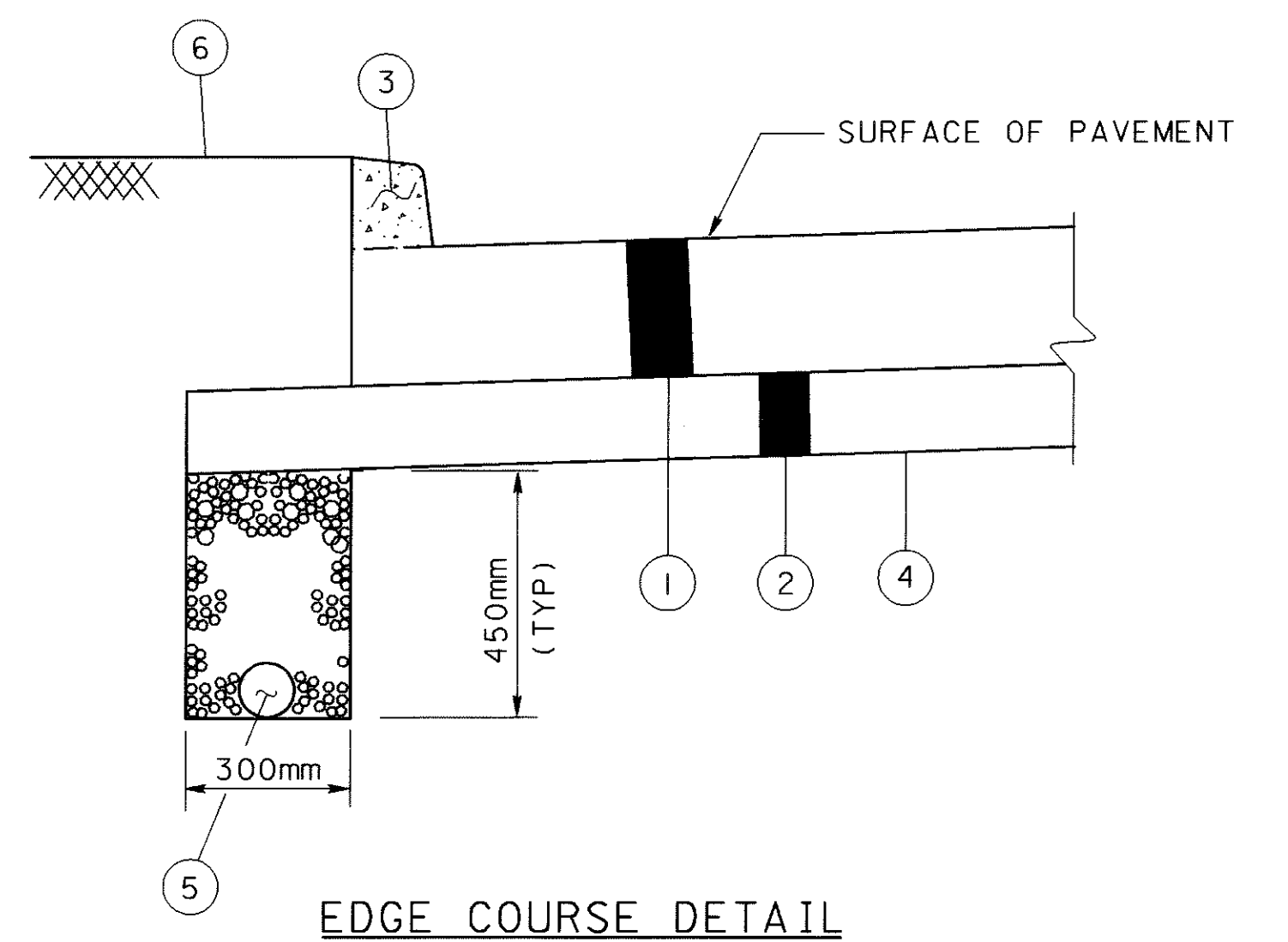
NORMAL SECTION

SECTION APPLIES :  
STA 0+208.711 TO STA 0+370.000 = 161.289m

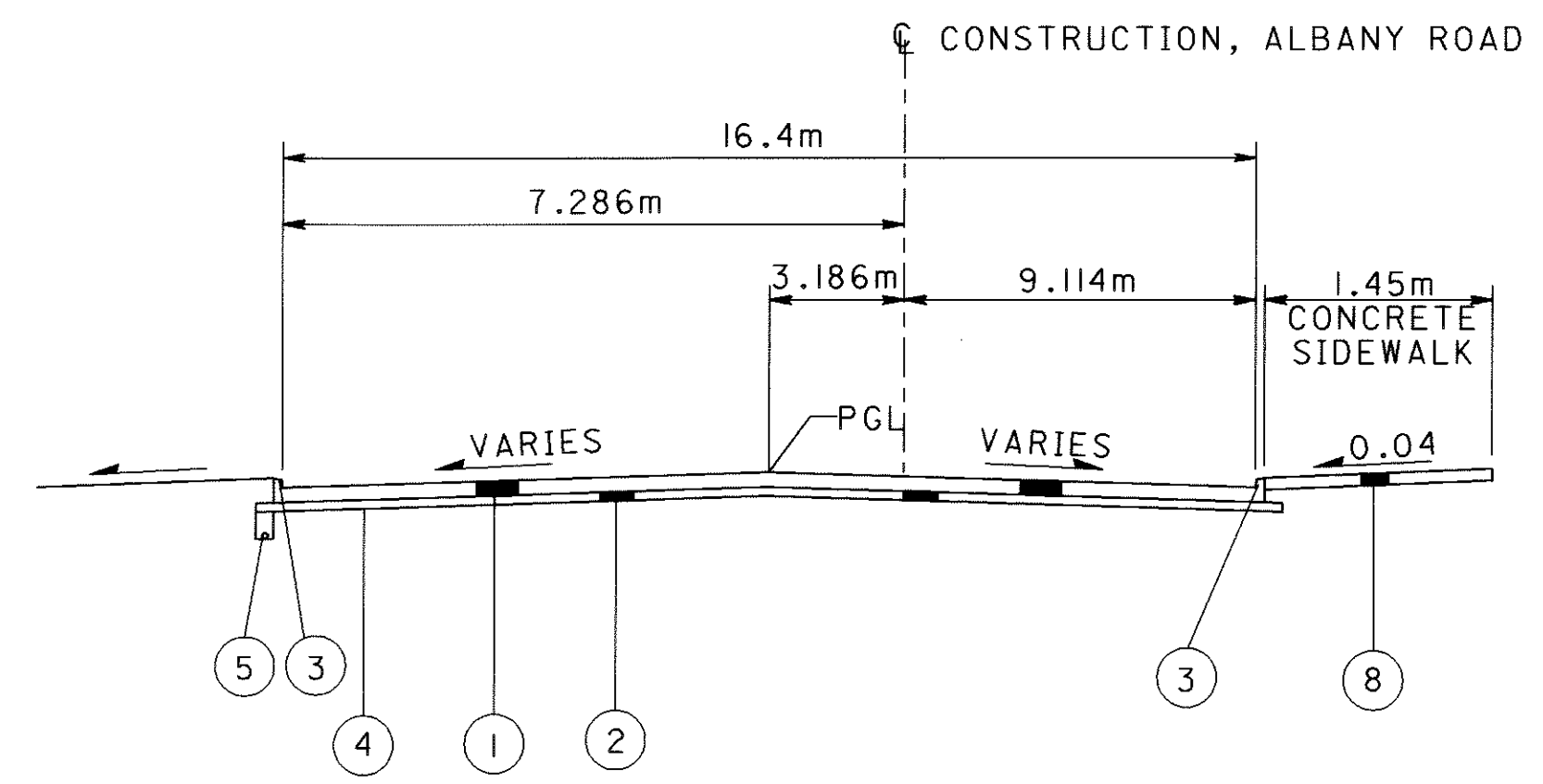


NORMAL SECTION

SECTION APPLIES :  
STA 0+411.141 TO STA 0+420.000 = 8.859m



EDGE COURSE DETAIL

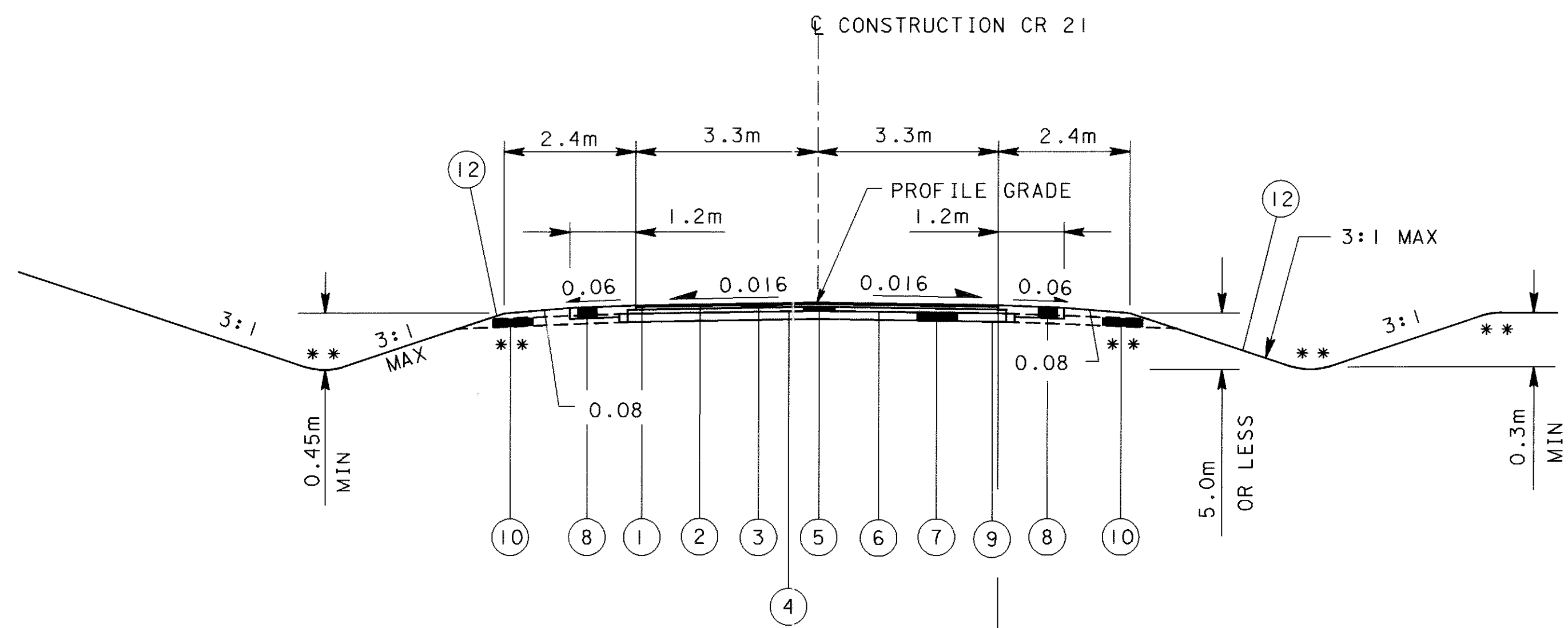


NORMAL SECTION

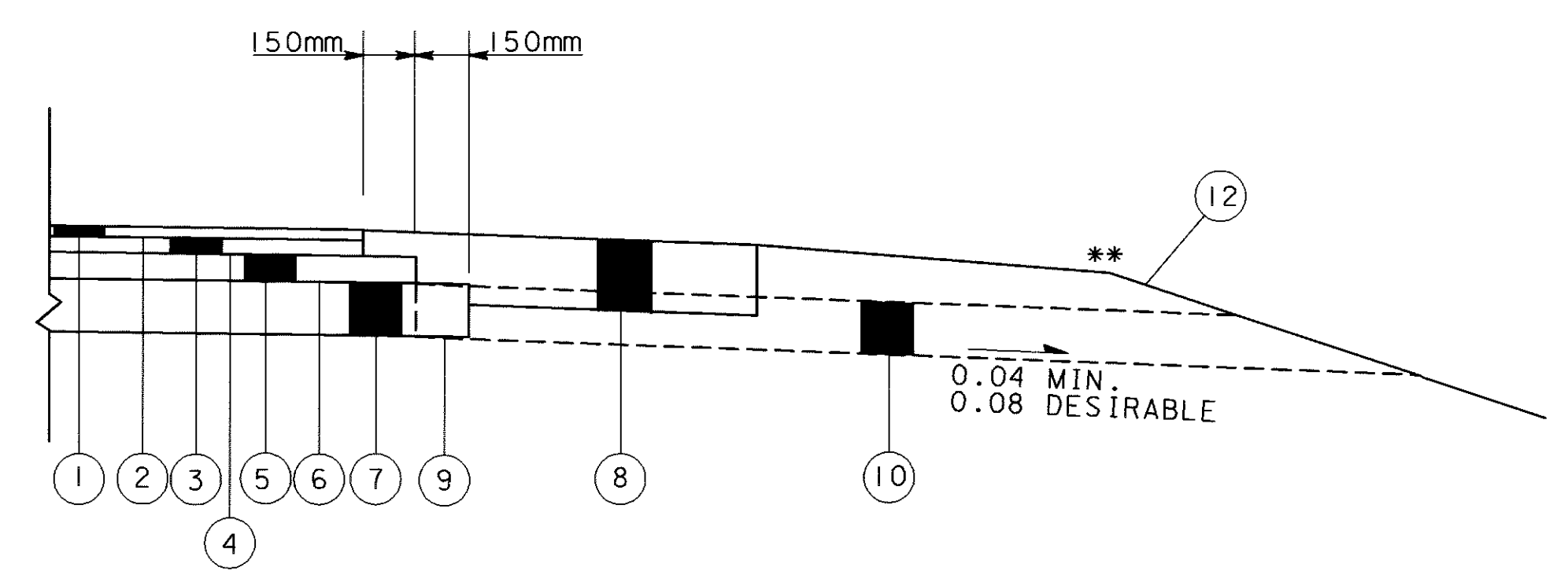
SECTION APPLIES :  
STA 0+370.000 TO STA 0+385.000 = 15.000m

LEGEND

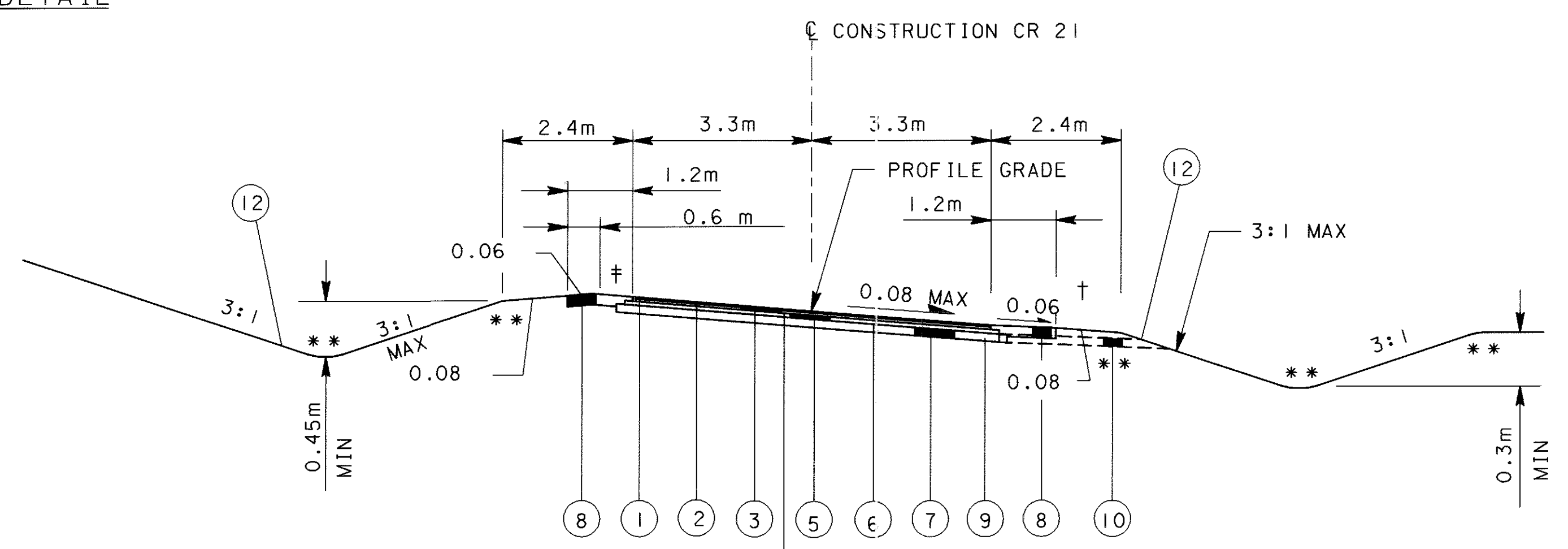
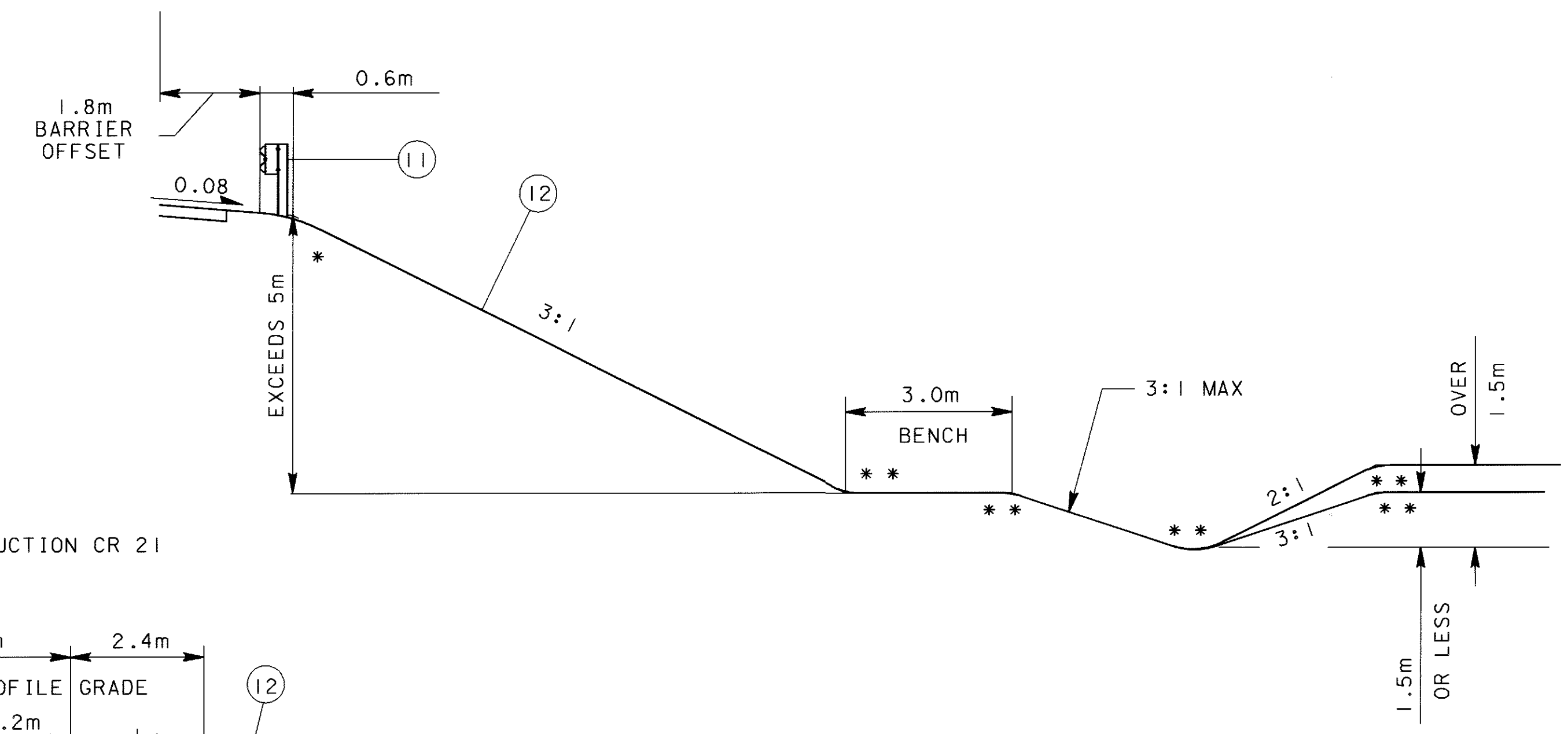
- ① ITEM 884 - 250mm PORTLAND CEMENT CONCRETE PAVEMENT (WITH 7 YEAR WARRANTY)
- ② ITEM 304 - 150mm AGGREGATE BASE
- ③ ITEM 830 - CURB, TYPE 2-A
- ④ ITEM 203 - SUBGRADE COMPACTION
- ⑤ ITEM 605 - 100mm SHALLOW PIPE UNDERDRAIN
- ⑥ ITEM 870 - SEEDING AND MULCHING
- ⑦ ITEM 606 - GUARDRAIL, TYPE 5
- ⑧ ITEM 608 - 200mm CONCRETE WALK



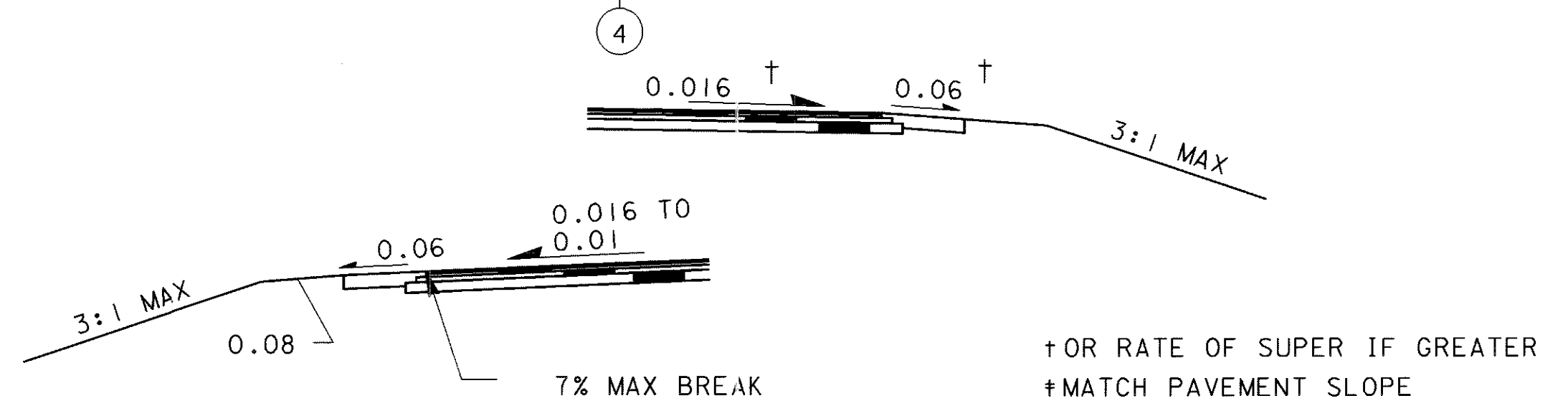
**NORMAL SECTION**  
 SECTION APPLIES:  
 STA 3+005.000 TO STA 3+006.000 = 1.000 m  
 STA 3+147.000 TO STA 3+229.993 = 82.993 m  
 STA 3+291.051 TO STA 3+440.000 = 148.949 m  
 231.942 m



**CR 21 EDGE COURSE DETAIL**  
 (N.T.S.)



\* 3.0m ROUNDING  
 \*\* 1.2m ROUNDING



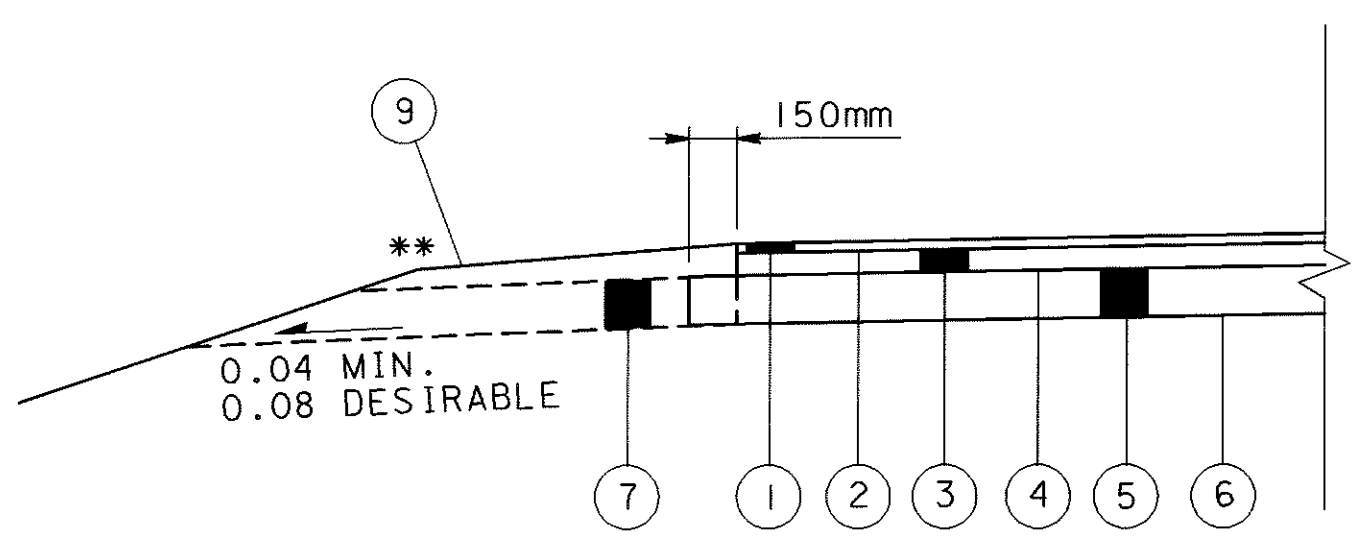
**SUPERELEVATED SECTION**

SECTION APPLIES:  
 STA 3+006.000 TO 3+147.000 = 141.000 m

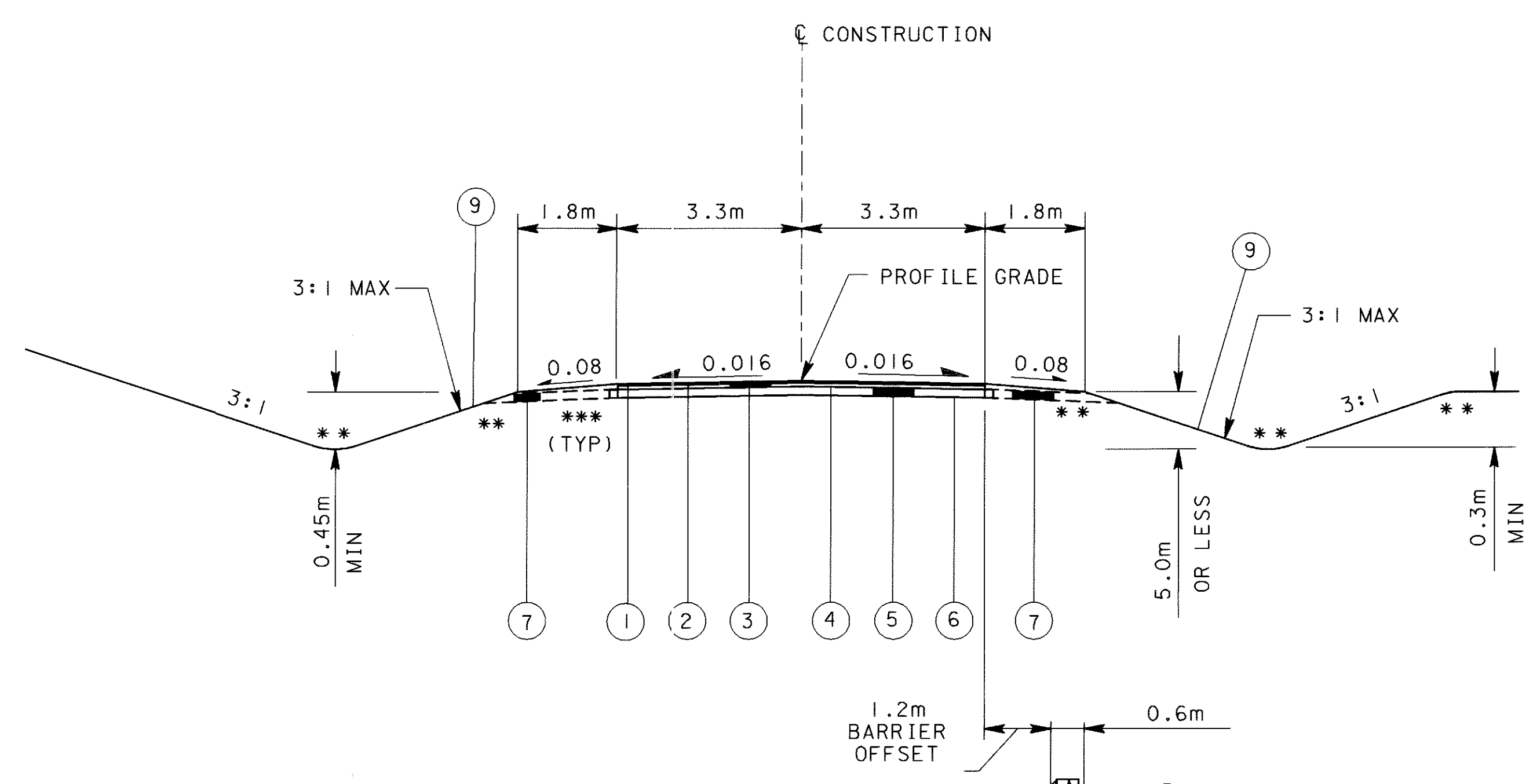
**LEGEND**

- ① ITEM 448 - 30mm ASPHALT CONCRETE SURFACE COURSE, TYPE I PG64-22
- ② ITEM 407 - TACK COAT
- ③ ITEM 448 - 45mm ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I PG64-22
- ④ ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE
- ⑤ ITEM 301 - 75mm BITUMINOUS AGGREGATE BASE
- ⑥ ITEM 408 - BITUMINOUS PRIME COAT
- ⑦ ITEM 304 - 150mm AGGREGATE BASE
- ⑧ ITEM 617 - 200mm COMPACTED AGGREGATE, APP
- ⑨ ITEM 203 - SUBGRADE COMPACTION
- ⑩ ITEM 605 - AGGREGATE DRAIN
- ⑪ ITEM 606 - GUARDRAIL, TYPE 5
- ⑫ ITEM 870 - SEEDING AND MULCHING



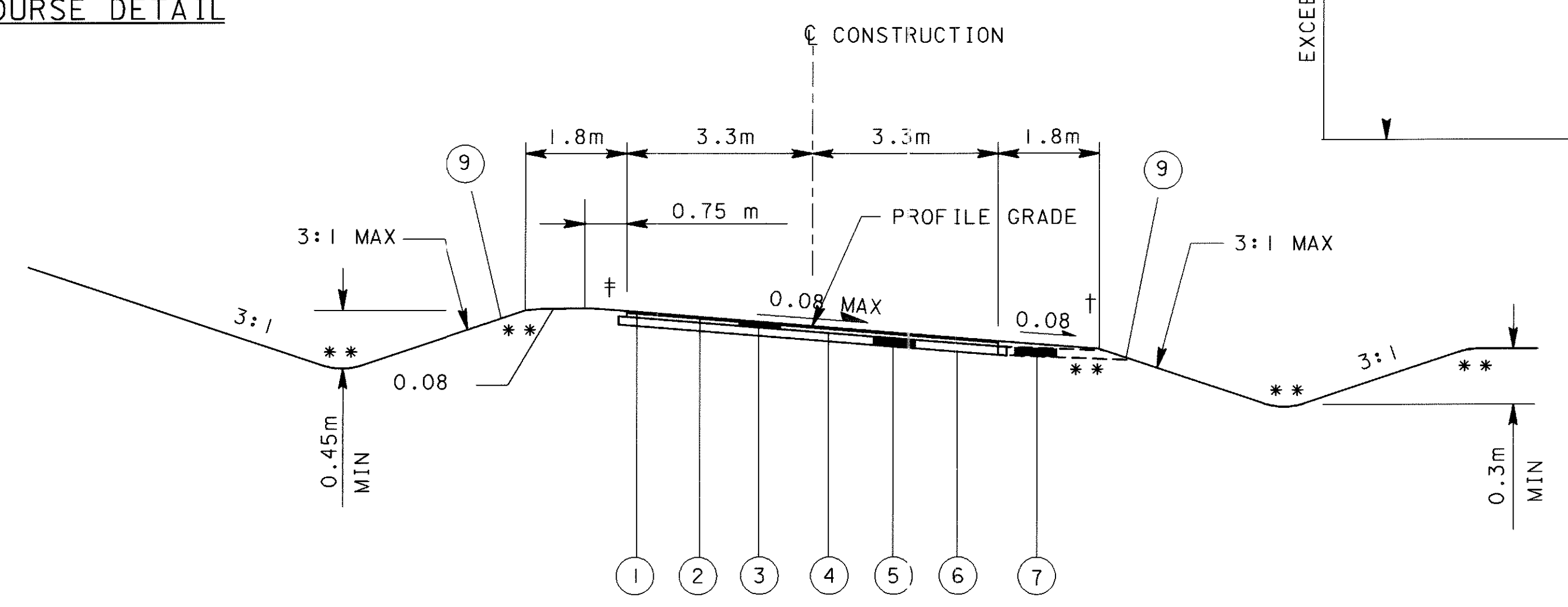


TOWNSHIP ROAD EDGE COURSE DETAIL  
(N.T.S.)



NORMAL SECTION

SECTION APPLIES:  
 TR 55: STA 48+168.000 TO STA 48+216.531 = 48.531 m  
 TR 64: STA 49+099.000 TO STA 49+173.467 = 74.467 m  
 122.998 m



SUPERELEVATED SECTION

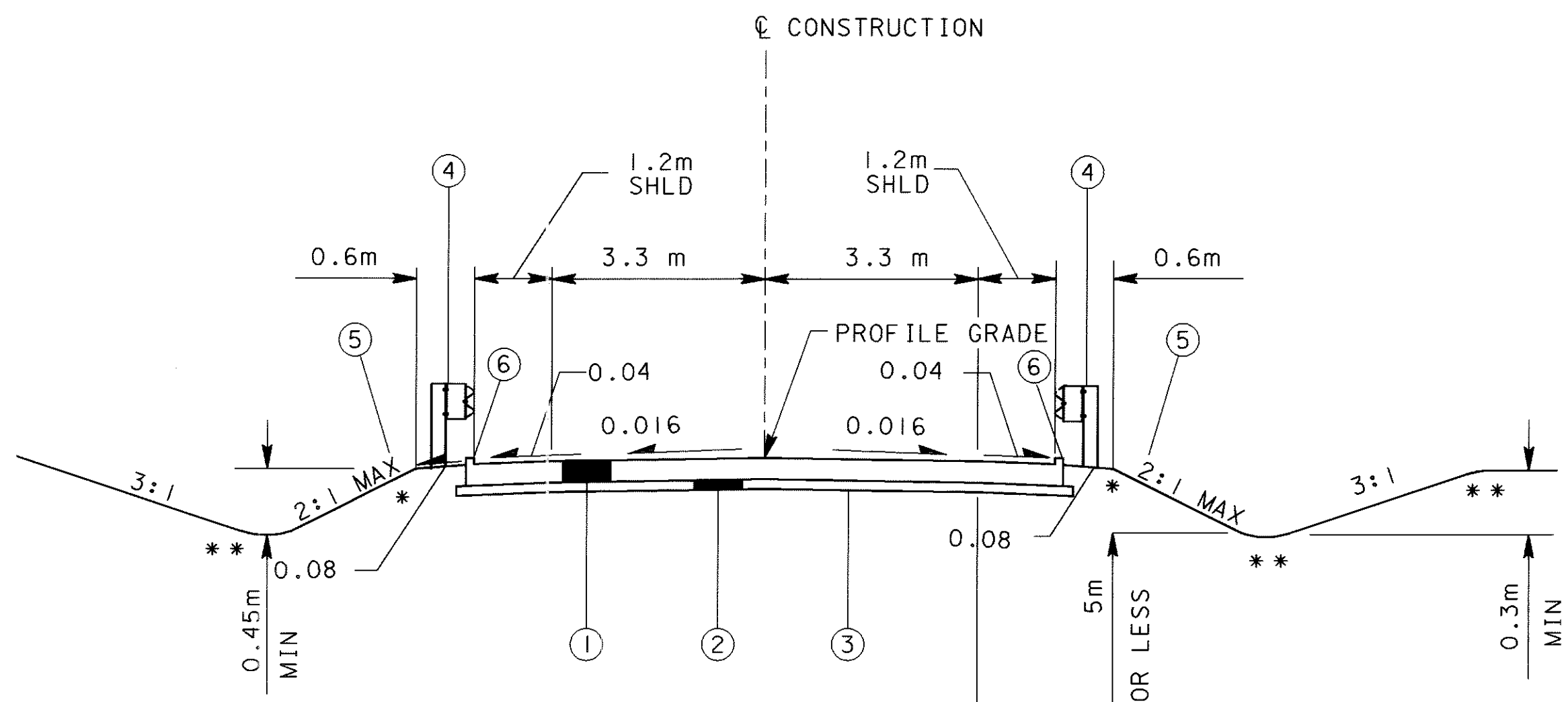
SECTION APPLIES:  
 TR 55: STA 48+008.000 TO STA 48+168.000 = 160.000 m  
 STA 48+307.171 TO STA 48+385.000 = 77.829 m  
 TR 64: STA 49+020.000 TO STA 49+099.000 = 79.000 m  
 STA 49+260.329 TO STA 49+480.000 = 219.671 m  
 536.500 m

\* 3.0m ROUNDING  
 \*\* 1.2m ROUNDING  
 \*\*\* SEE TOWNSHIP ROAD EDGE COURSE  
 DETAIL THIS SHEET

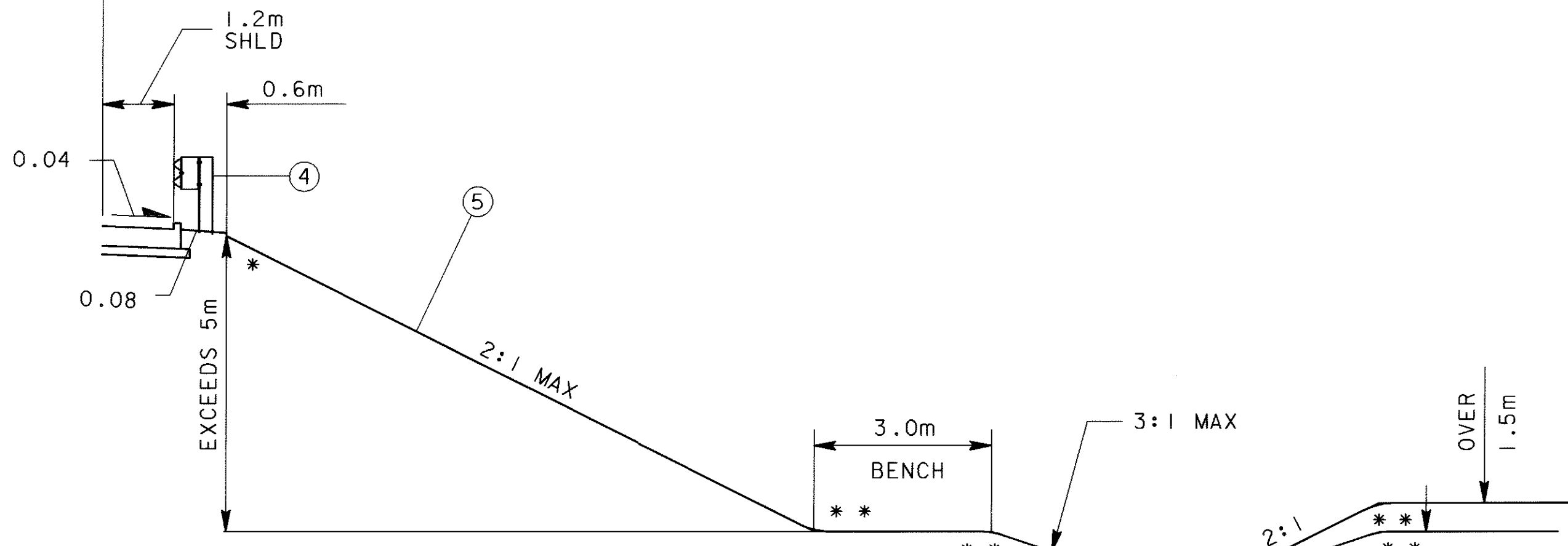
LEGEND

- (1) ITEM 448 - 30mm ASPHALT CONCRETE SURFACE COURSE, TYPE 1 PG64-22
- (2) ITEM 407 - TACK COAT
- (3) ITEM 448 - 70mm ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1 PG64-22
- (4) ITEM 408 - BITUMINOUS PRIME COAT
- (5) ITEM 304 - 150mm AGGREGATE BASE
- (6) ITEM 203 - SUBGRADE COMPACTION
- (7) ITEM 605 - AGGREGATE DRAIN
- (8) ITEM 606 - GUARDRAIL, TYPE 5
- (9) ITEM 870 - SEEDING AND MULCHING

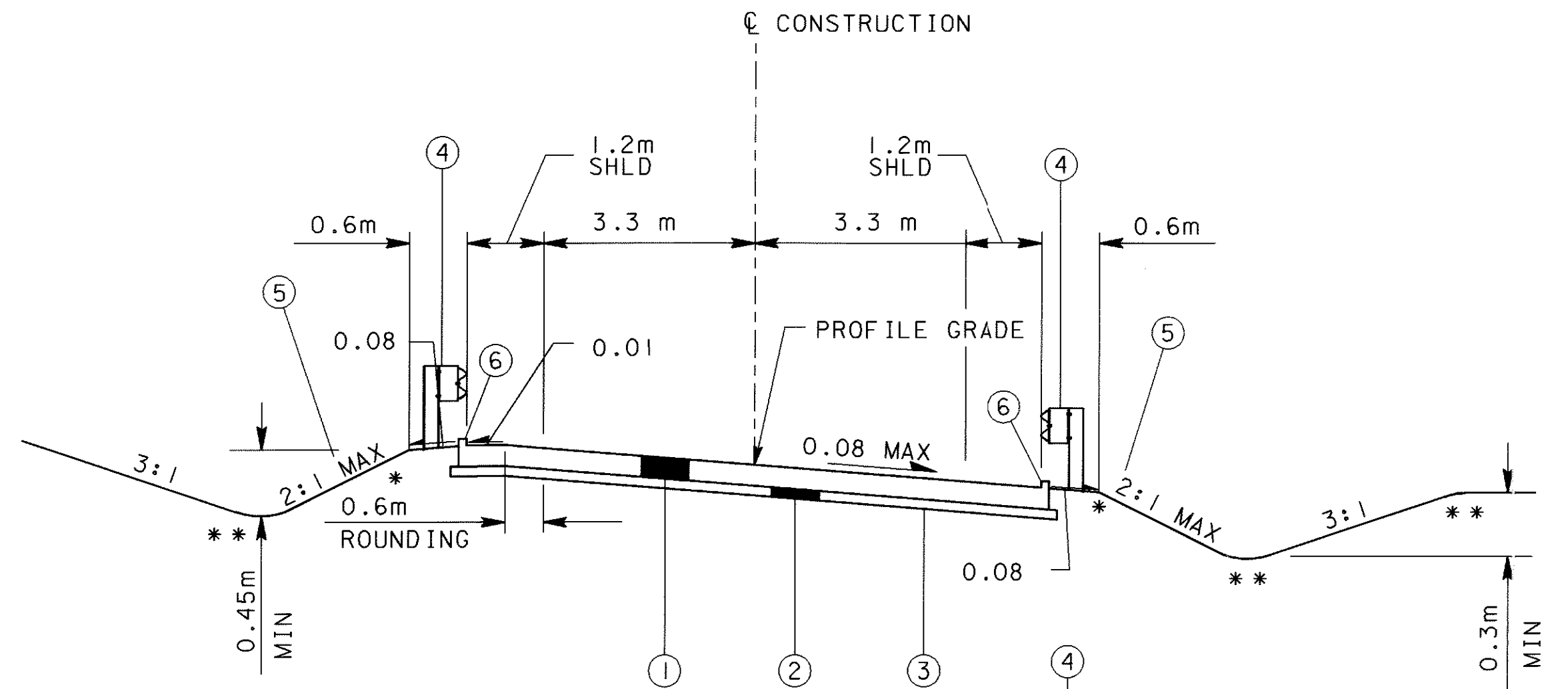




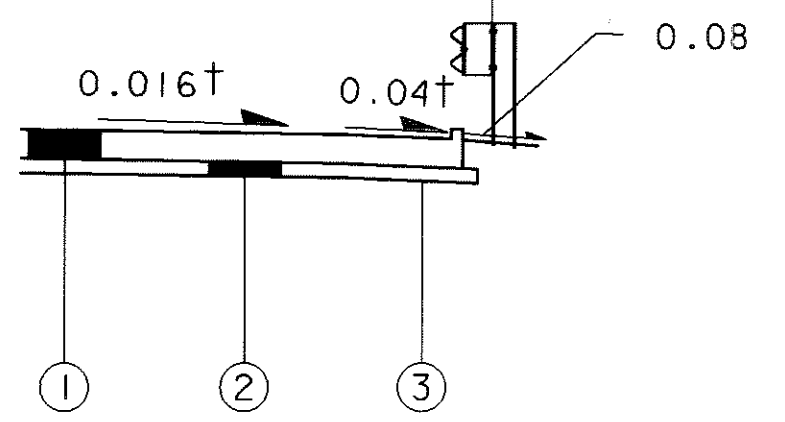
**NORMAL  
 APPROACH SLAB SECTION**  
 SECTION APPLIES:  
 TR 55: STA 48+216.531 TO STA 48+224.131 = 7.600 m  
 TR 64: STA 49+173.467 TO STA 49+181.067 = 7.600 m  
 15.200 m



**BRIDGE LIMITS:**  
 TR 55: STA 48+224.131 TO STA 48+299.571 = 75.440 m  
 TR 64: STA 49+181.067 TO STA 49+252.729 = 71.662 m  
 147.102 m



**SUPERELEVATED  
 APPROACH SLAB SECTION**  
 SECTION APPLIES:  
 TR 55: STA 48+299.571 TO STA 48+307.171 = 7.600 m  
 TR 64: STA 49+252.729 TO STA 49+260.329 = 7.600 m  
 15.200 m

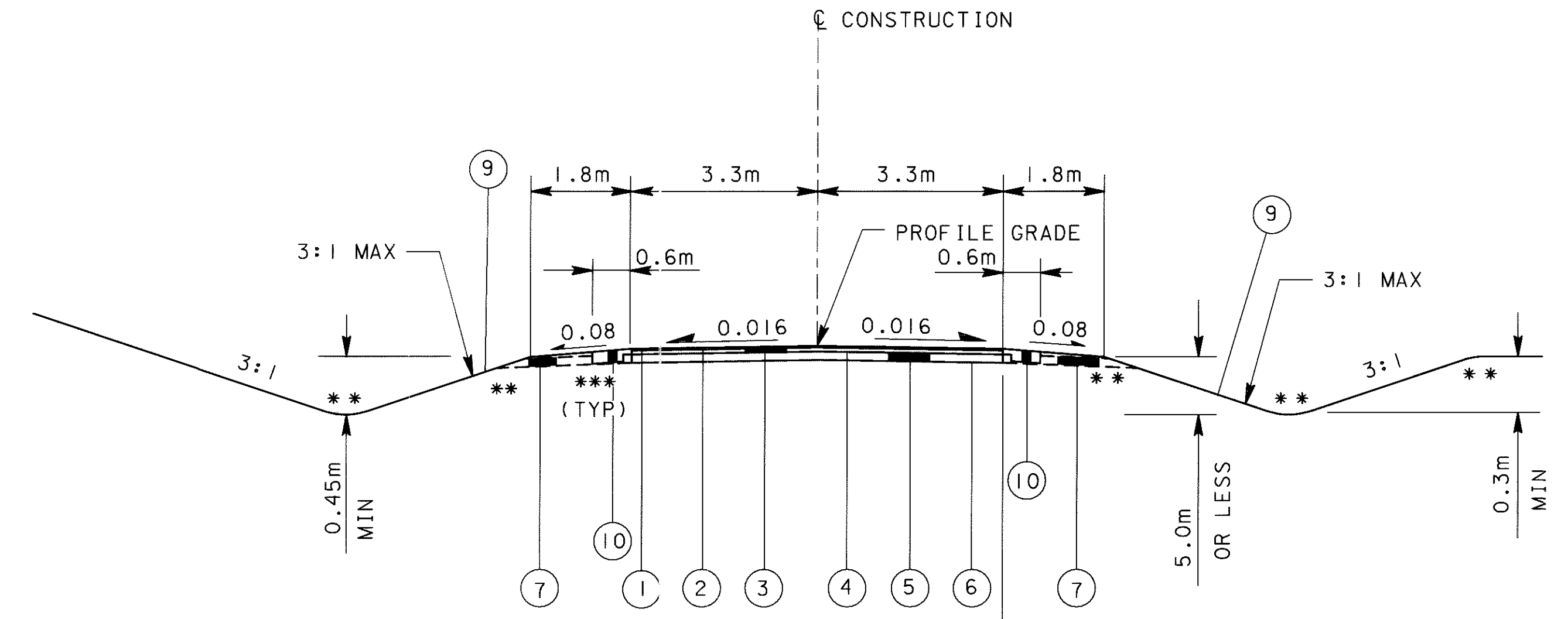


†OR RATE OF SUPER IF GREATER

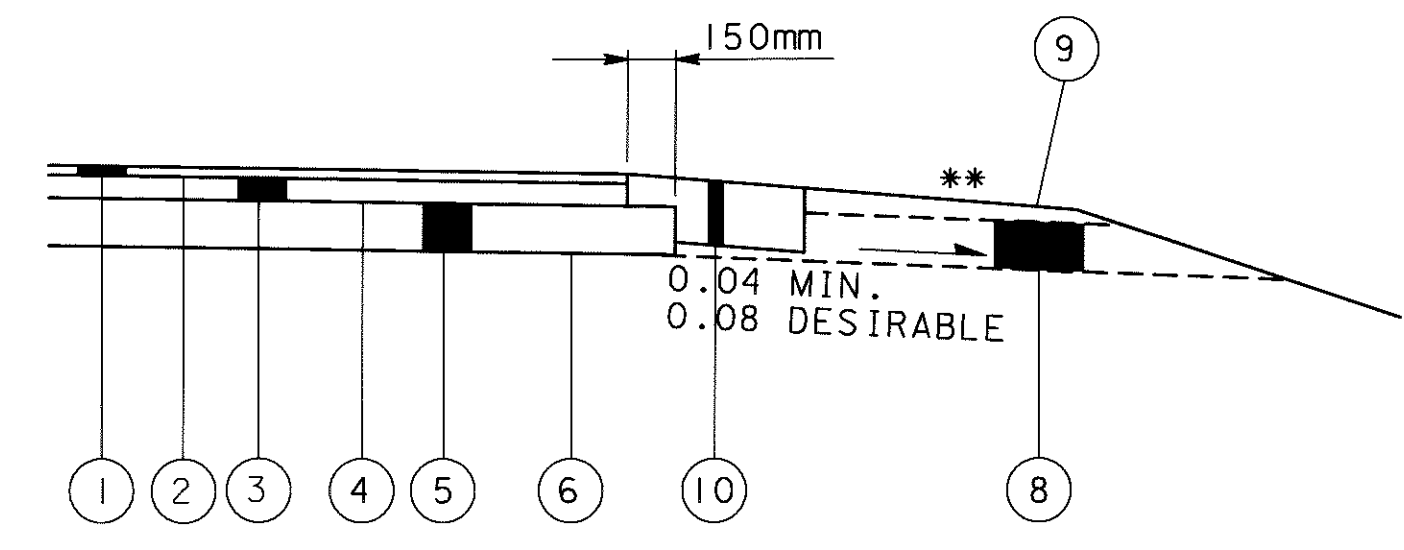
\* 3.0m ROUNDING  
 \*\* 1.2m ROUNDING

**LEGEND**

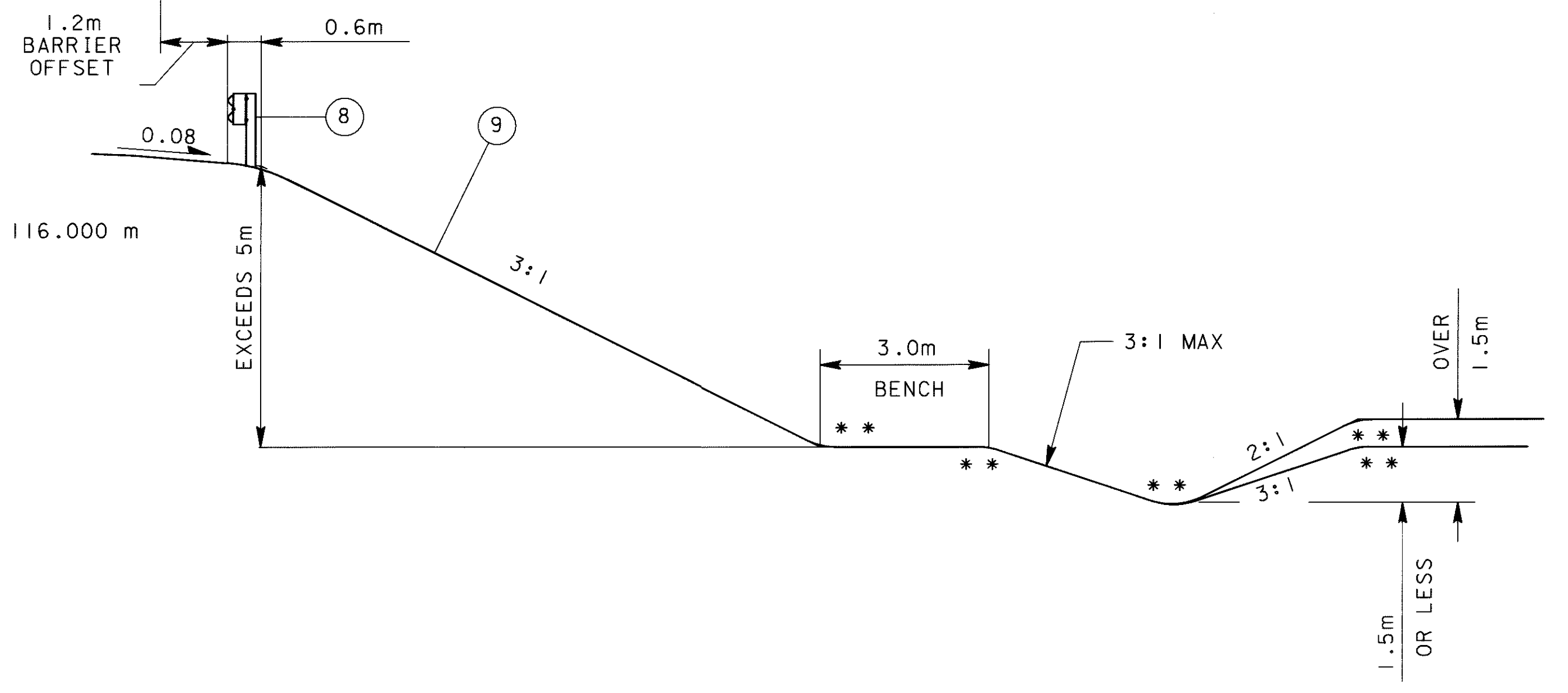
- ① ITEM 611 - 380mm REINFORCED CONCRETE APPROACH SLAB, AS PER PLAN
- ② ITEM 304 - 150mm AGGREGATE BASE
- ③ ITEM 203 - SUBGRADE COMPACTION
- ④ ITEM 606 - GUARDRAIL, TYPE 5
- ⑤ ITEM 870 - SEEDING AND MULCHNG
- ⑥ ITEM 830 - CURB, TYPE 4-A



NORMAL SECTION  
SECTION APPLIES:  
SERVICE ROAD: STA 0+000.000 TO STA 0+116.000 = 116.000 m



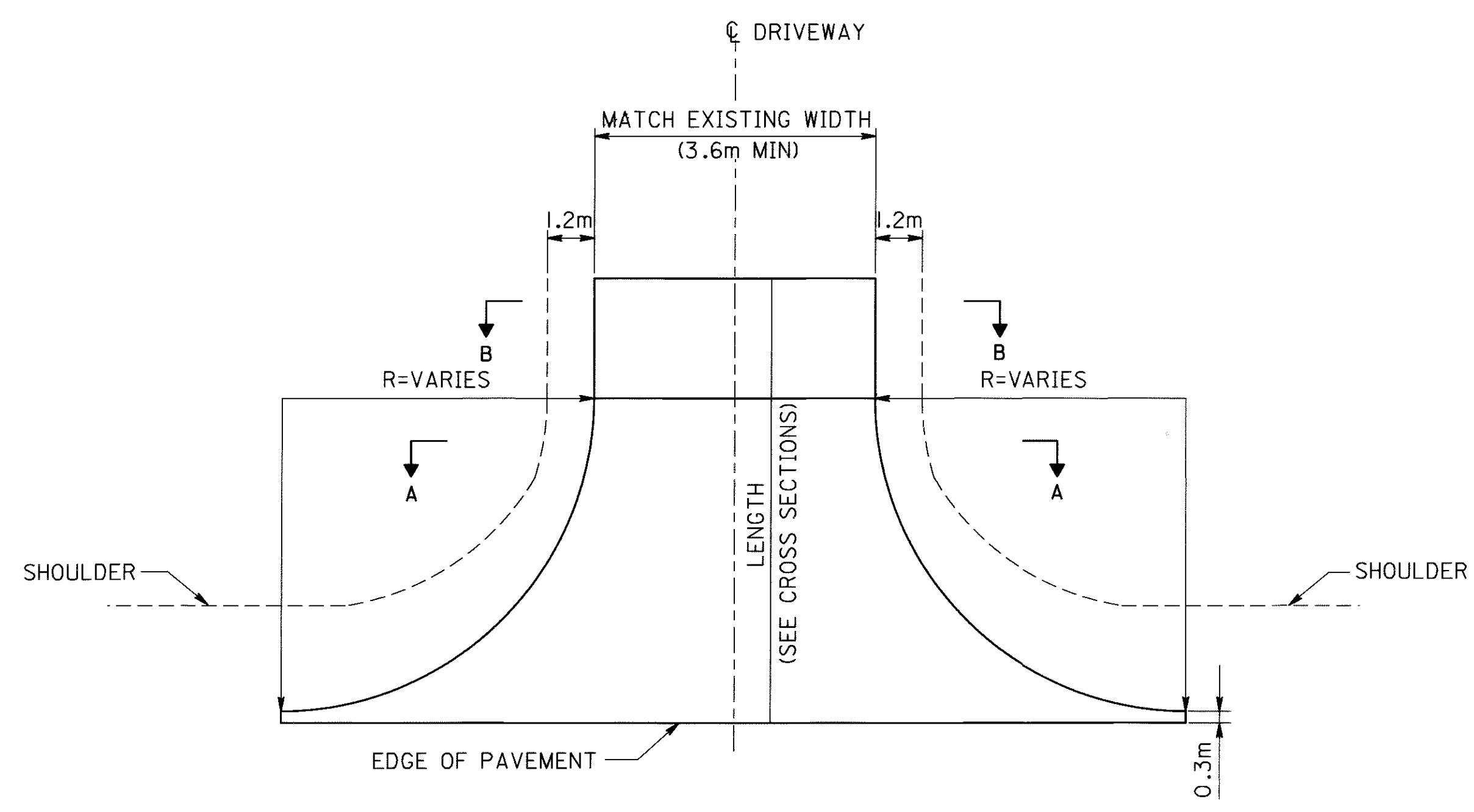
EDGE COURSE DETAIL  
(N.T.S.)



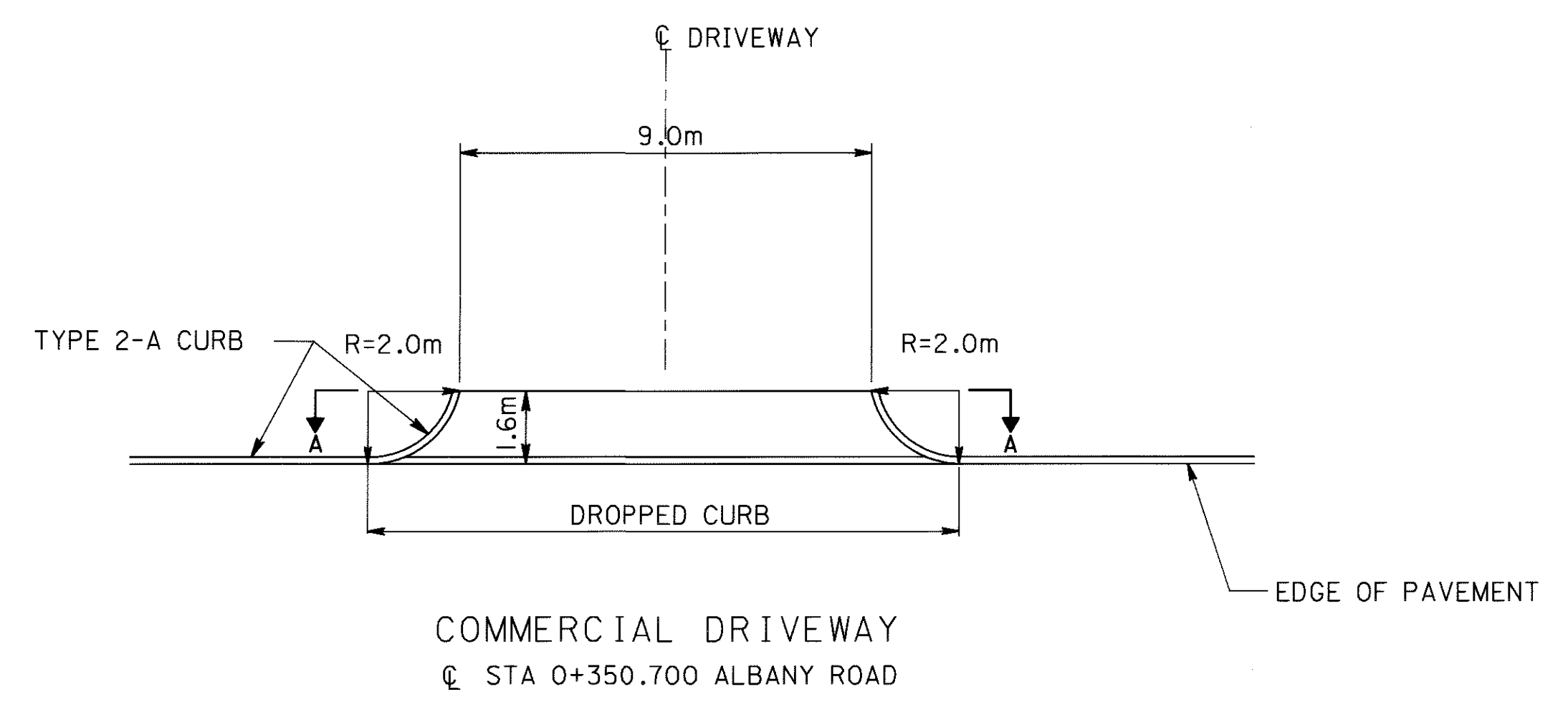
NORMAL SECTION  
SECTION APPLIES:  
TR 1271: STA 3+023.000 TO STA 3+080.000 = 57.000 m

\* 3.0m ROUNDING  
\*\* 1.2m ROUNDING  
\*\*\* SEE EDGE COURSE DETAIL THIS SHEET

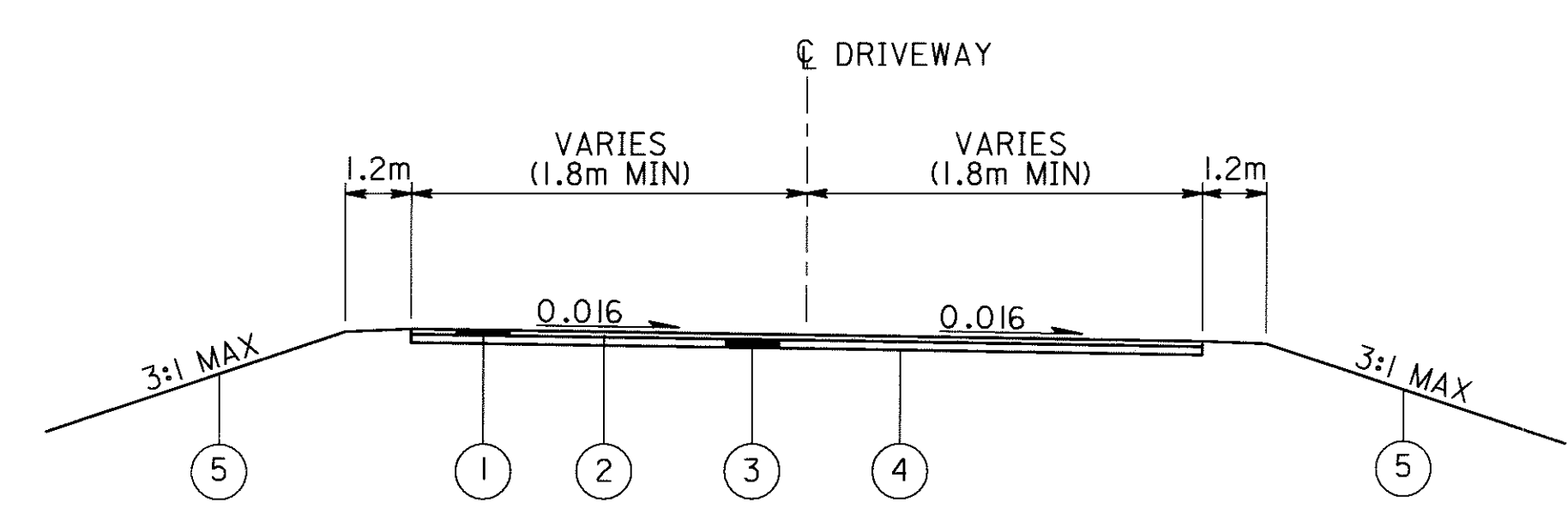
- LEGEND**
- ① ITEM 448 - 30mm ASPHALT CONCRETE SURFACE COURSE, TYPE I PG64-22
  - ② ITEM 407 - TACK COAT
  - ③ ITEM 448 - 70mm ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I PG64-22
  - ④ ITEM 408 - BITUMINOUS PRIME COAT
  - ⑤ ITEM 304 - 150mm AGGREGATE BASE
  - ⑥ ITEM 203 - SUBGRADE COMPACTION
  - ⑦ ITEM 605 - AGGREGATE DRAIN
  - ⑧ ITEM 606 - GUARDRAIL, TYPE 5
  - ⑨ ITEM 870 - SEEDING AND MULCHING
  - ⑩ ITEM 617 - 200mm COMPACTED AGGREGATE, TYPE A, APP



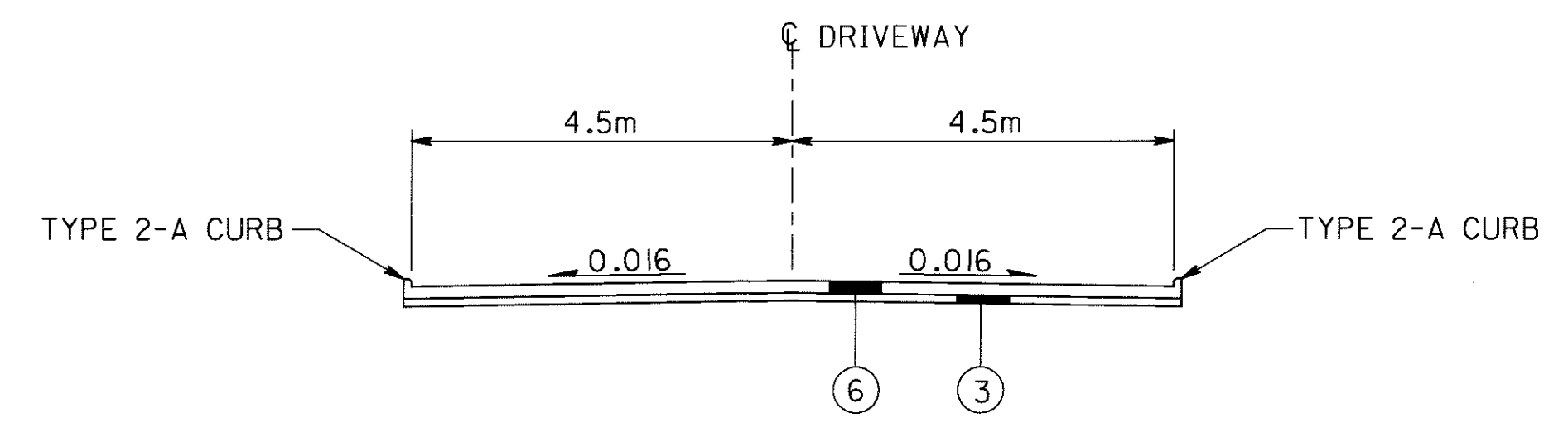
PLAN



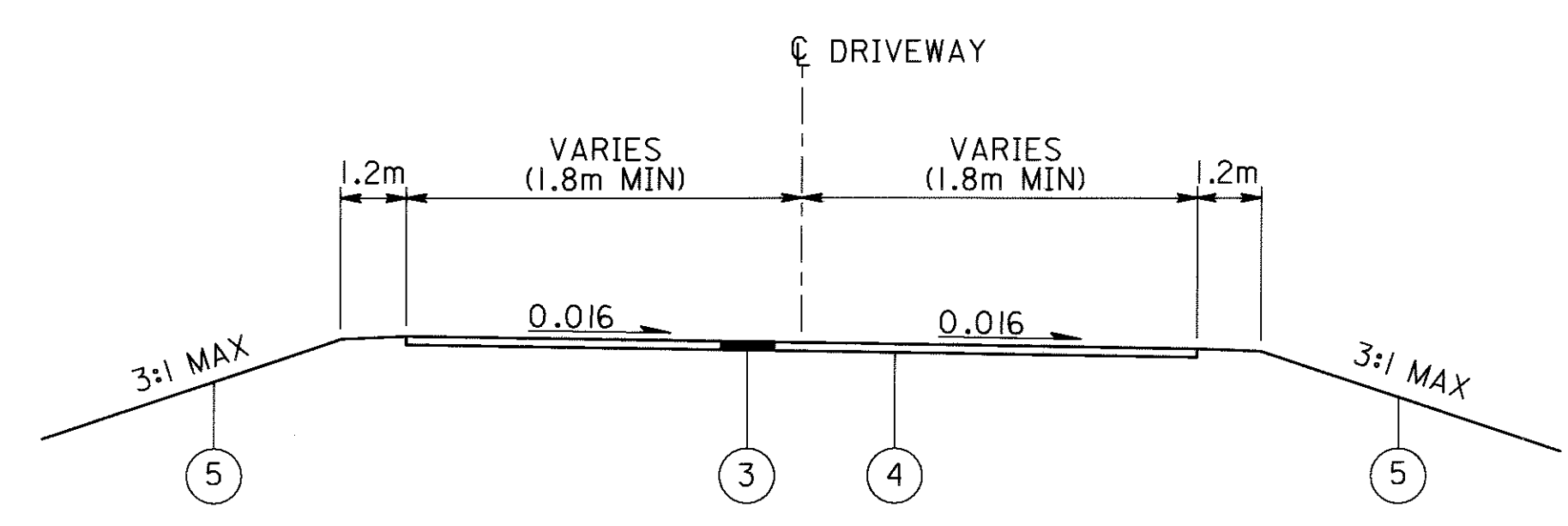
COMMERCIAL DRIVEWAY  
 STA 0+350.700 ALBANY ROAD



SECTION A-A



DRIVEWAY SECTION A-A  
 COMMERCIAL DRIVE  
 (CURBED DRIVEWAY ALONG CURBED HIGHWAY)



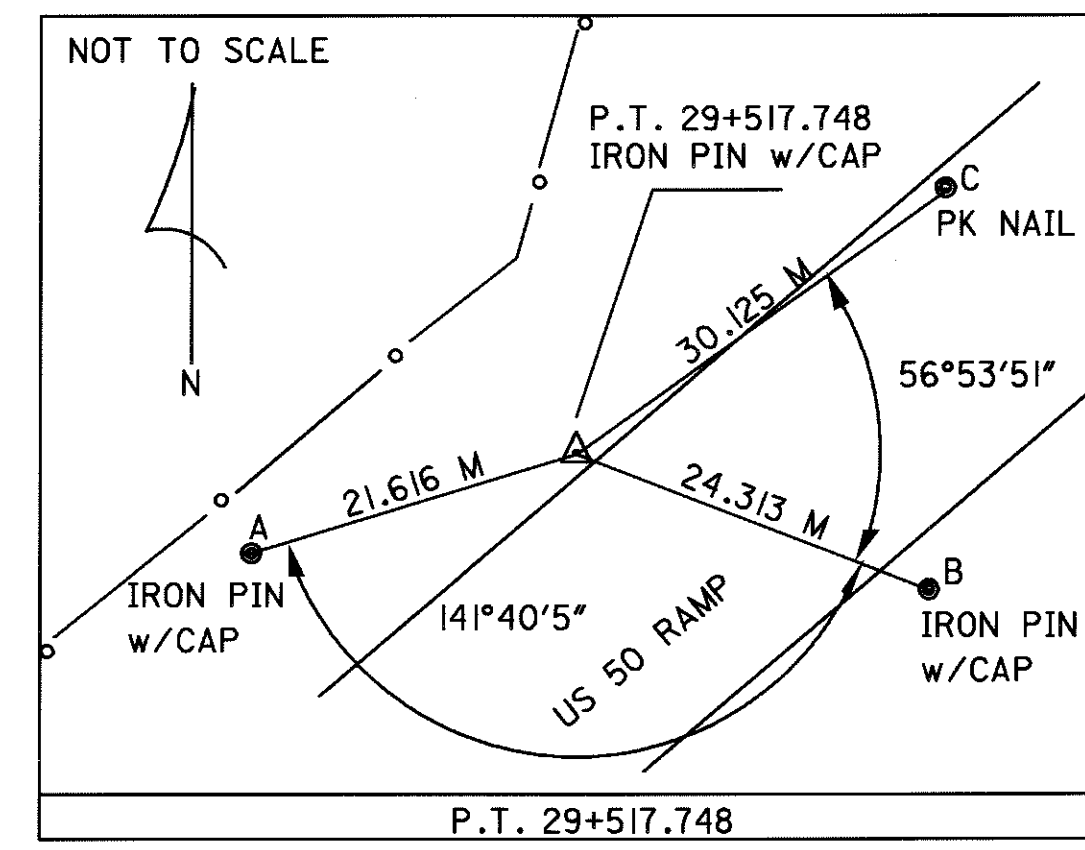
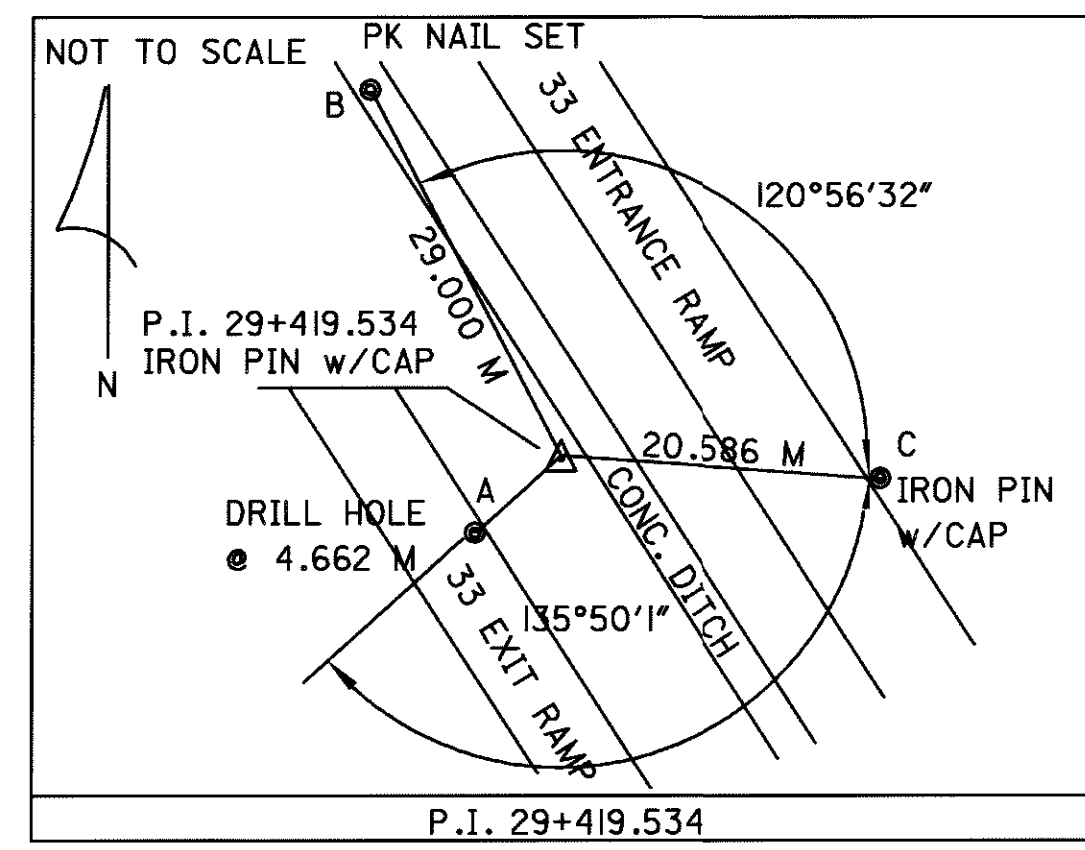
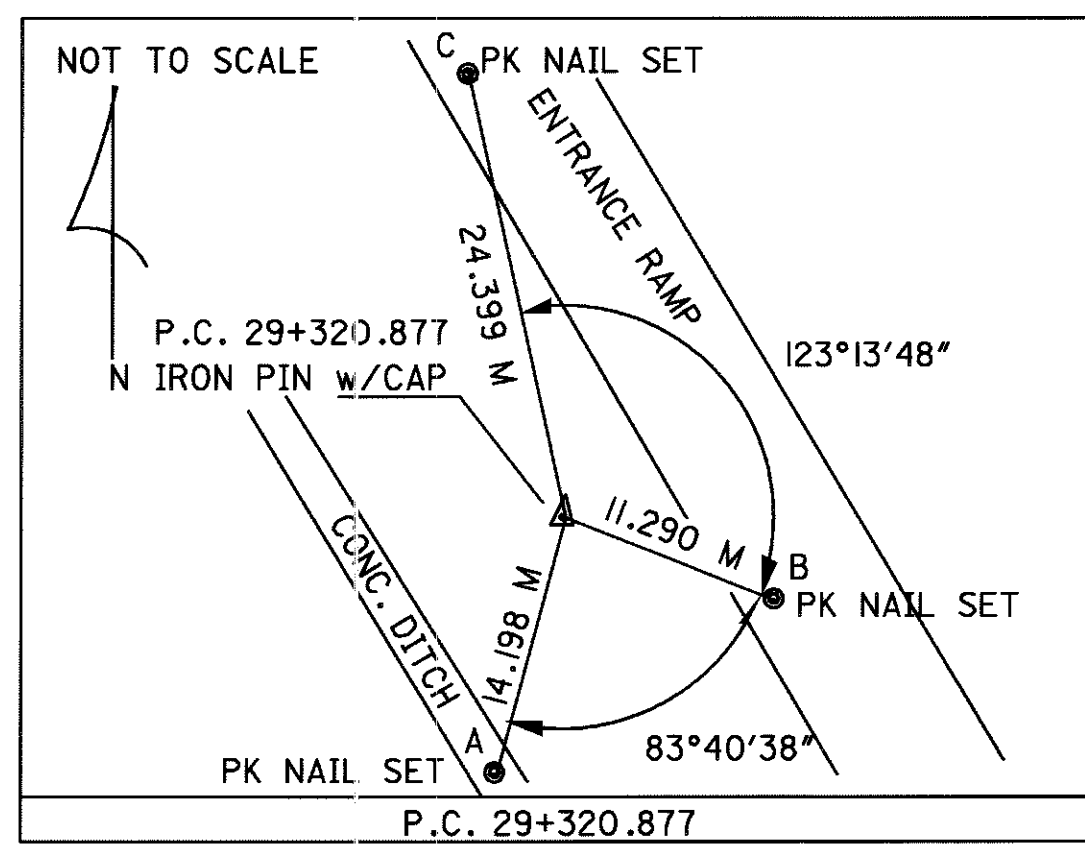
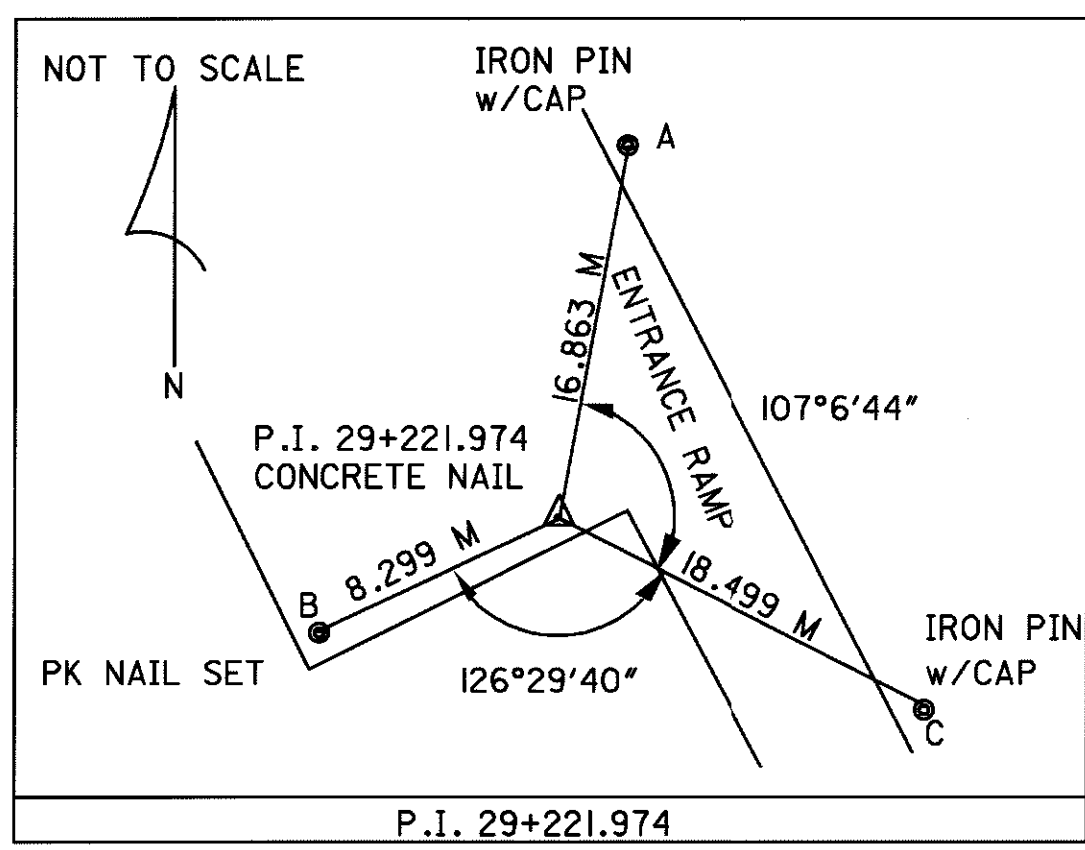
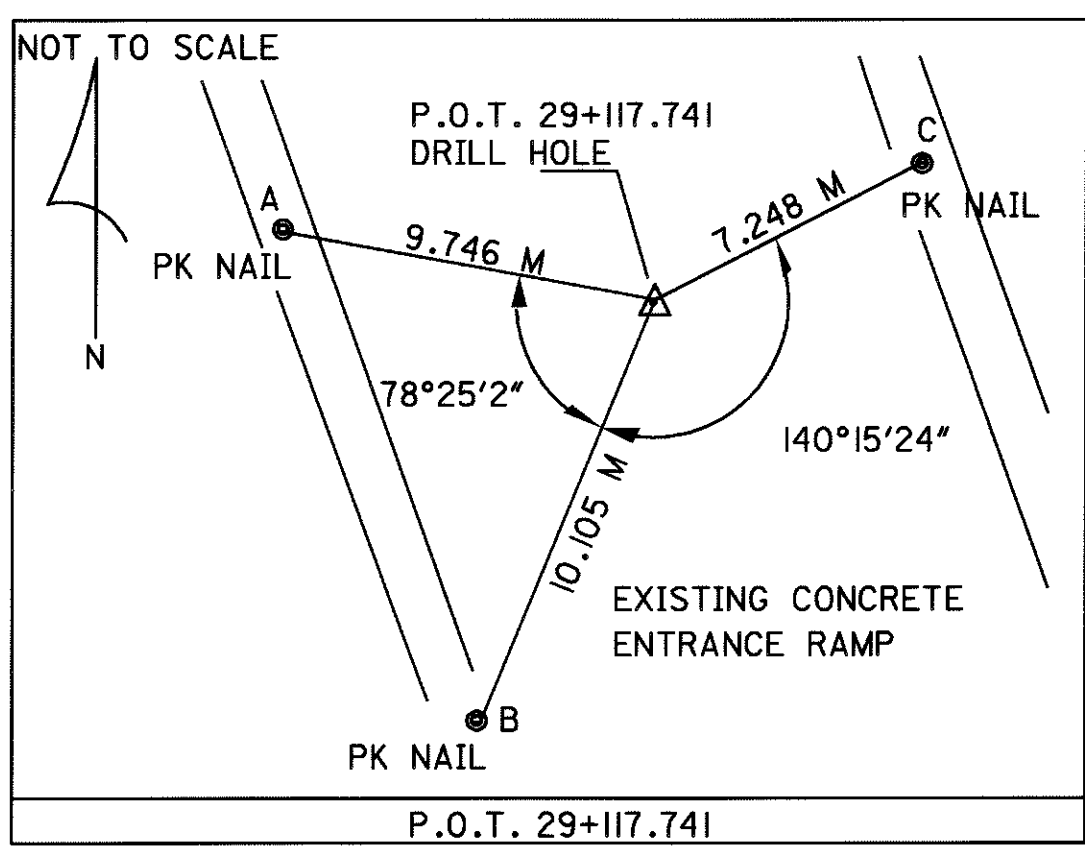
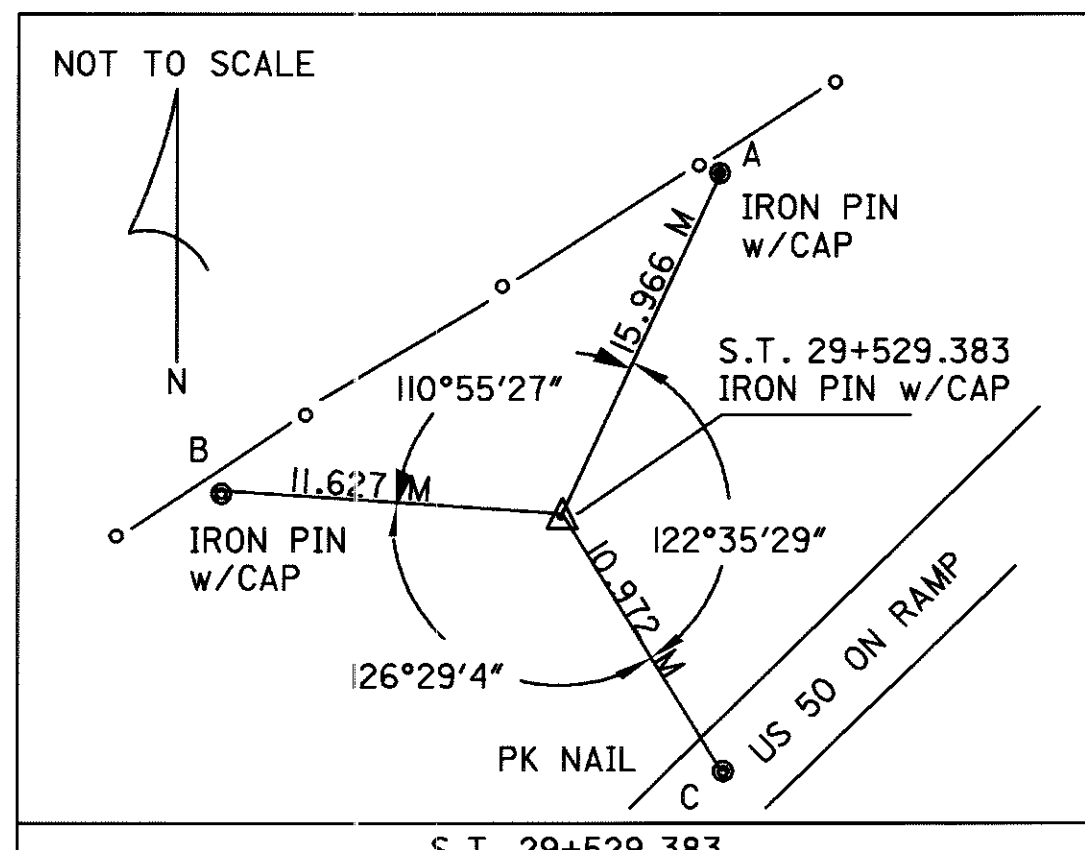
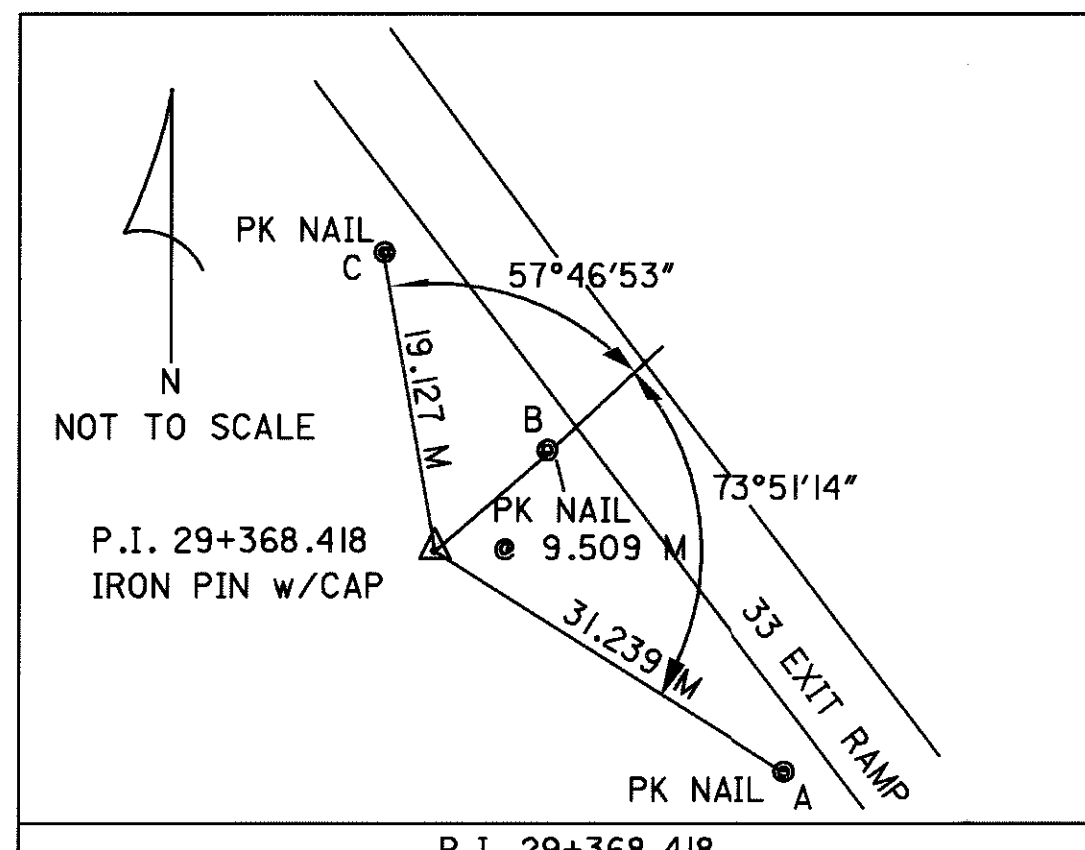
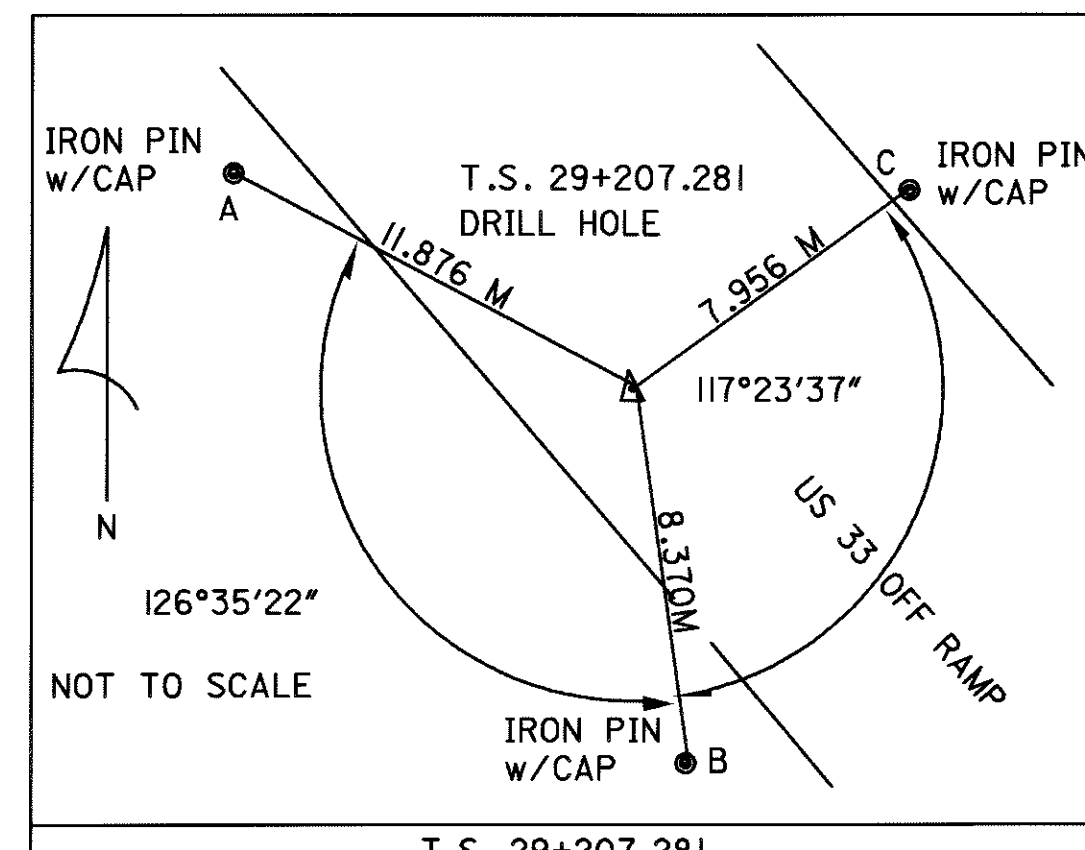
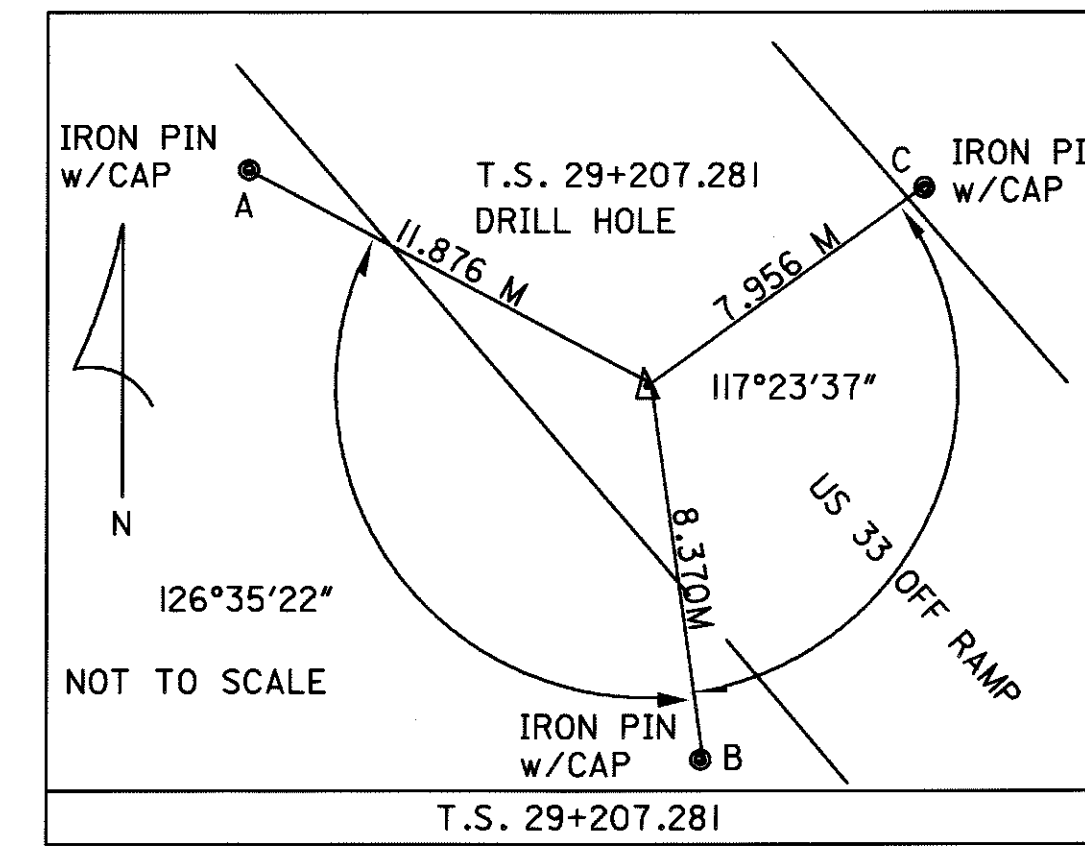
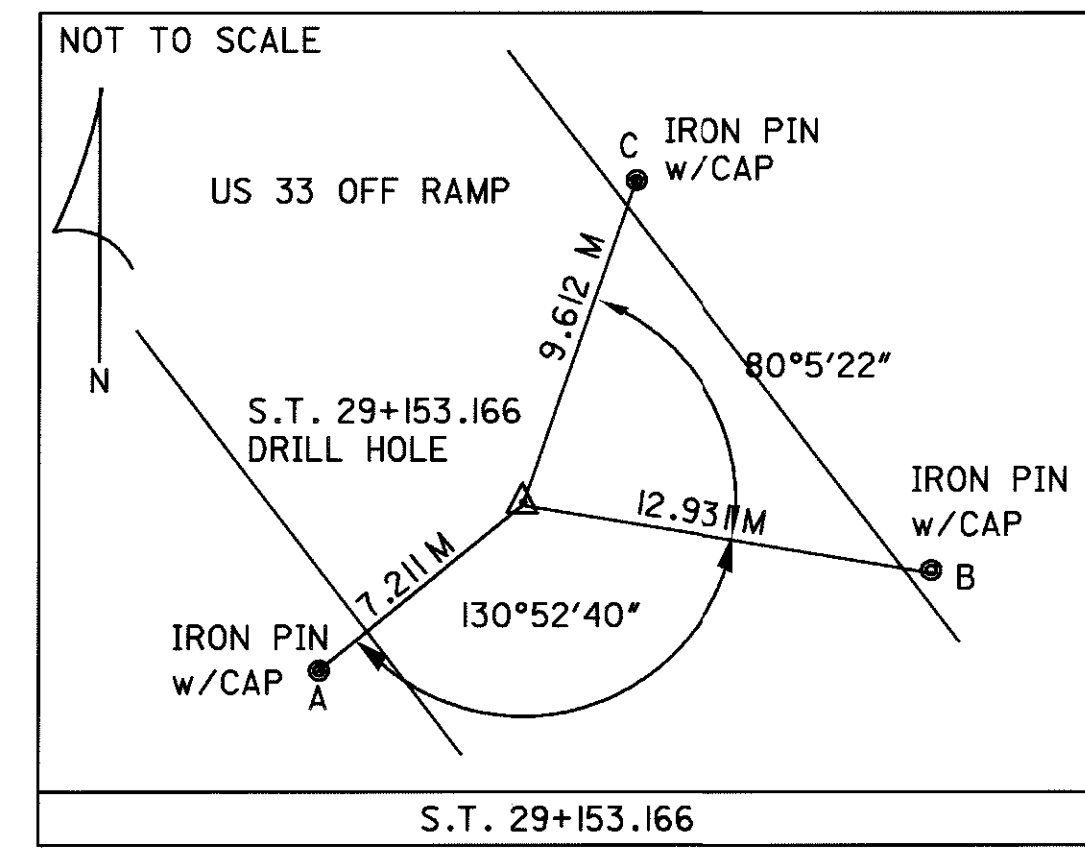
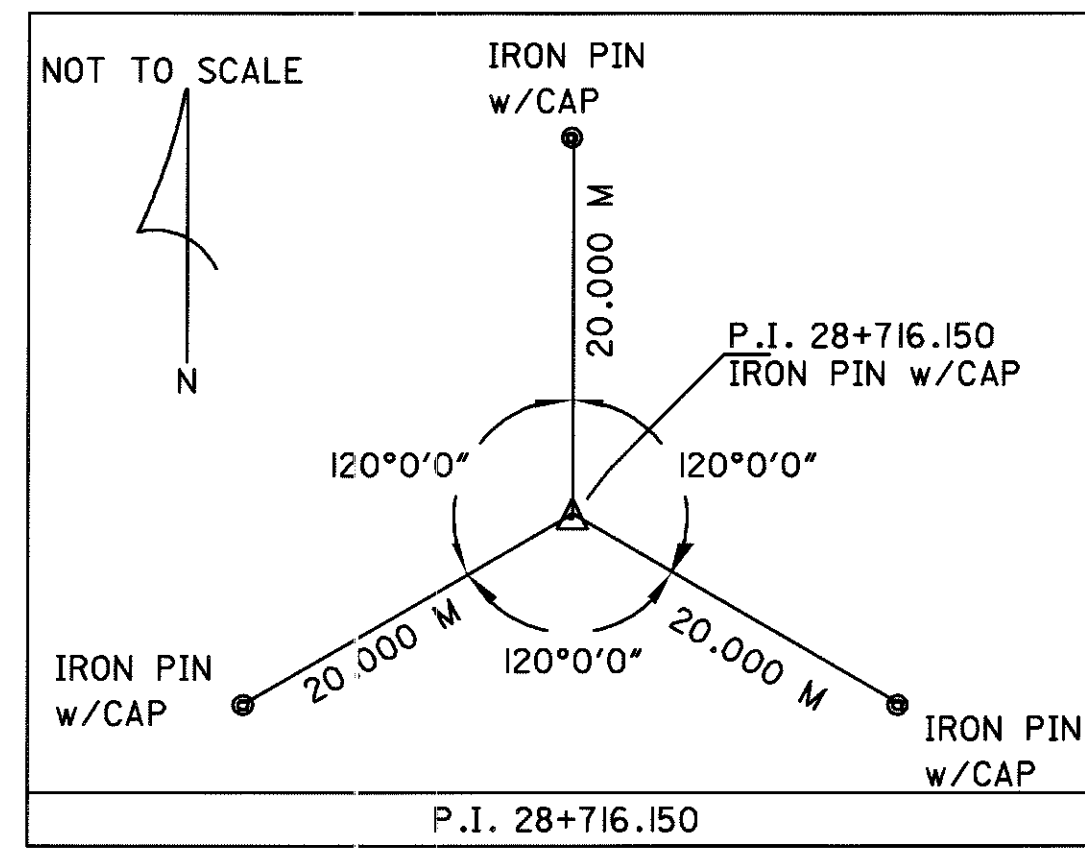
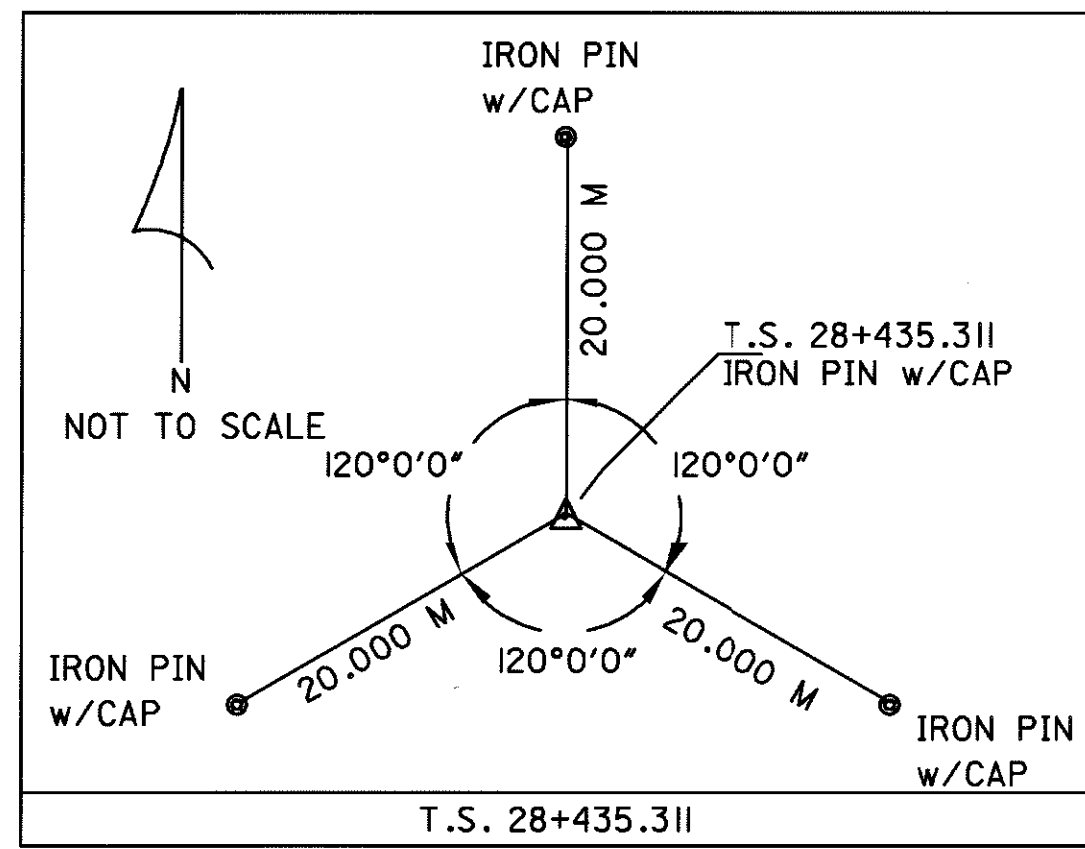
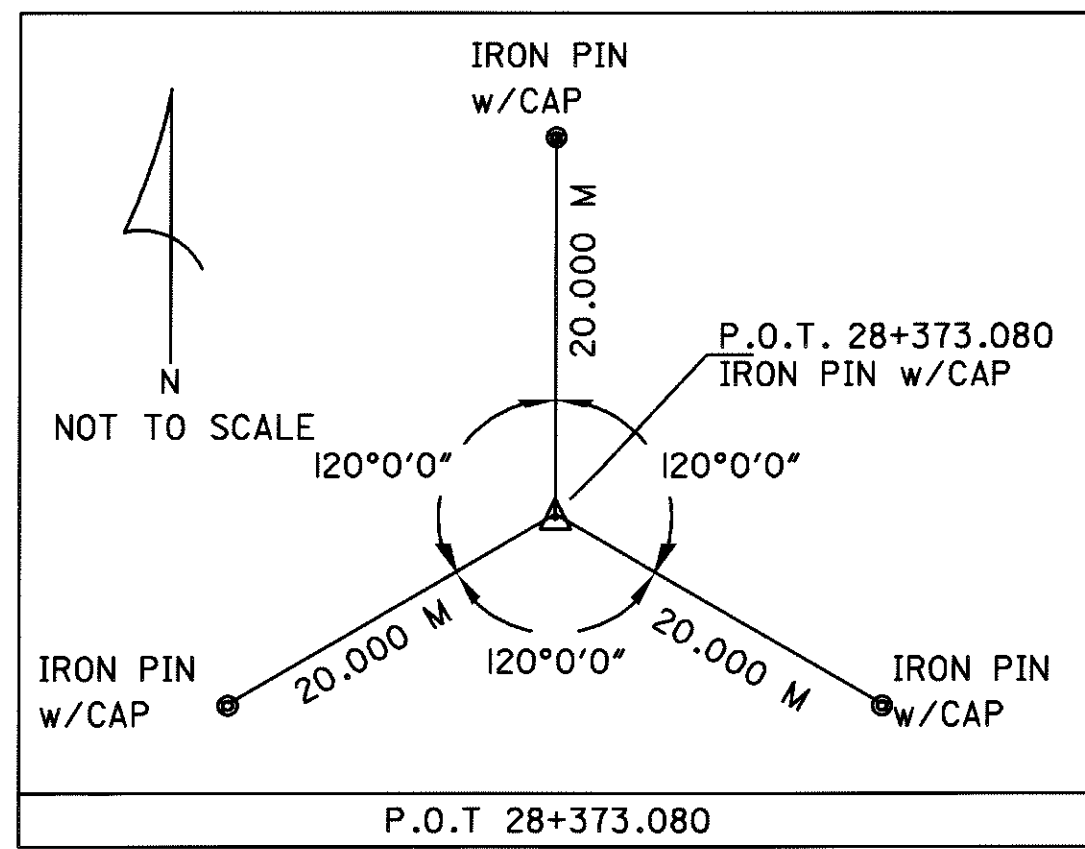
SECTION B-B

PRIVATE DRIVE / FIELD ENTRANCE

LEGEND

- ① ITEM 448 - 100mm ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22 (DRIVEWAY)
- ② ITEM 408 - BITUMINOUS PRIME COAT
- ③ ITEM 304 - 150mm AGGREGATE BASE
- ④ ITEM 203 - SUBGRADE COMPACTION
- ⑤ ITEM 870 - SEEDING AND MULCHNG
- ⑥ ITEM 452 - 230mm PORTLAND CEMENT CONCRETE PAVEMENT (WITH 7 YEAR WARRANTY)

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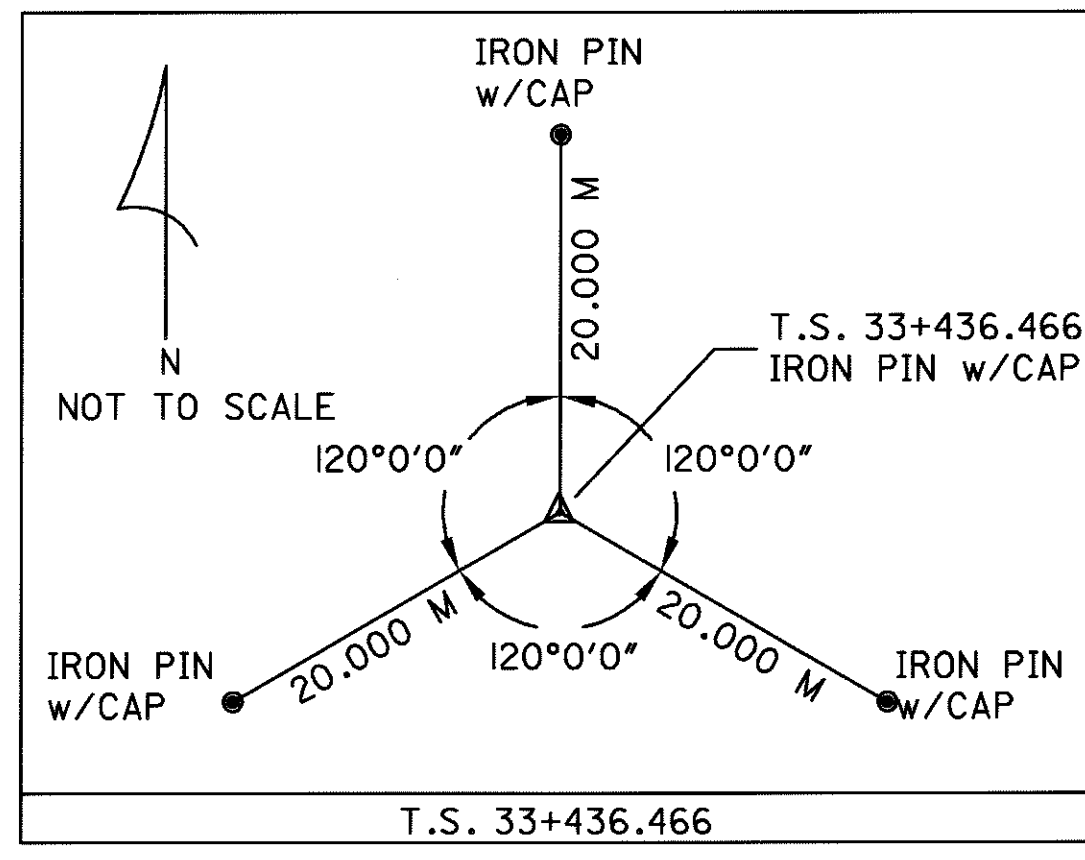
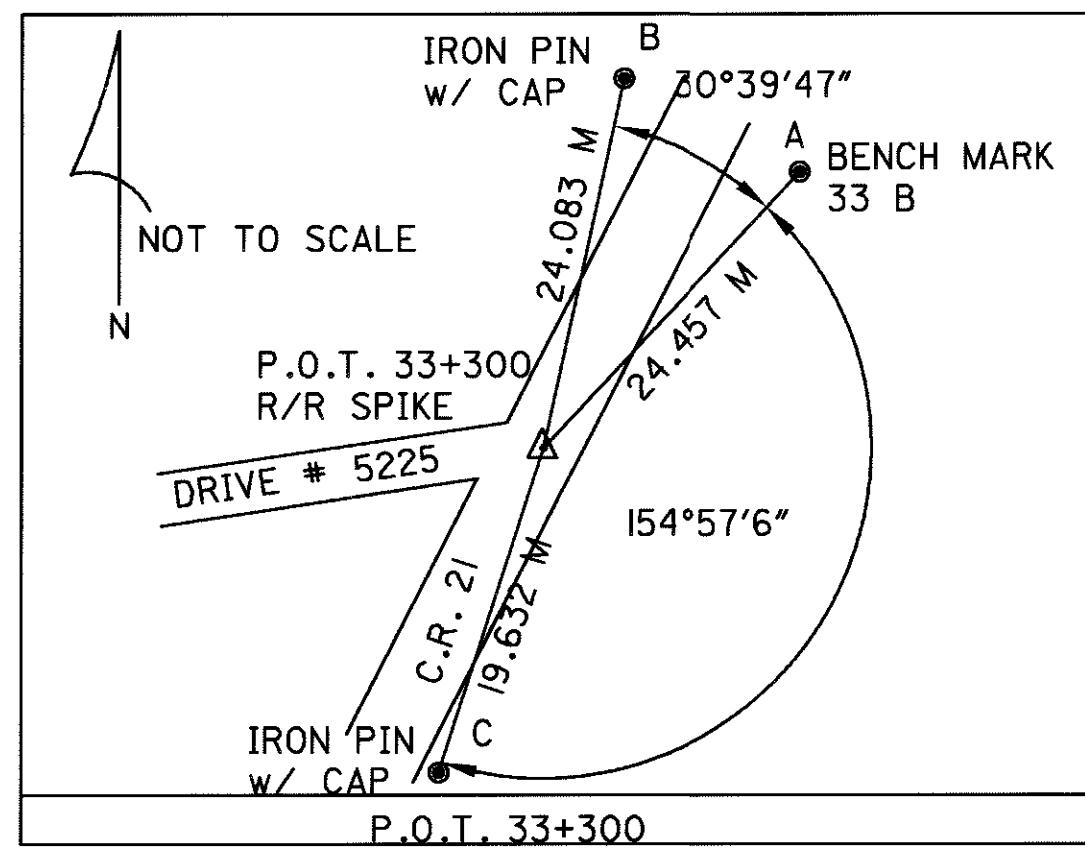
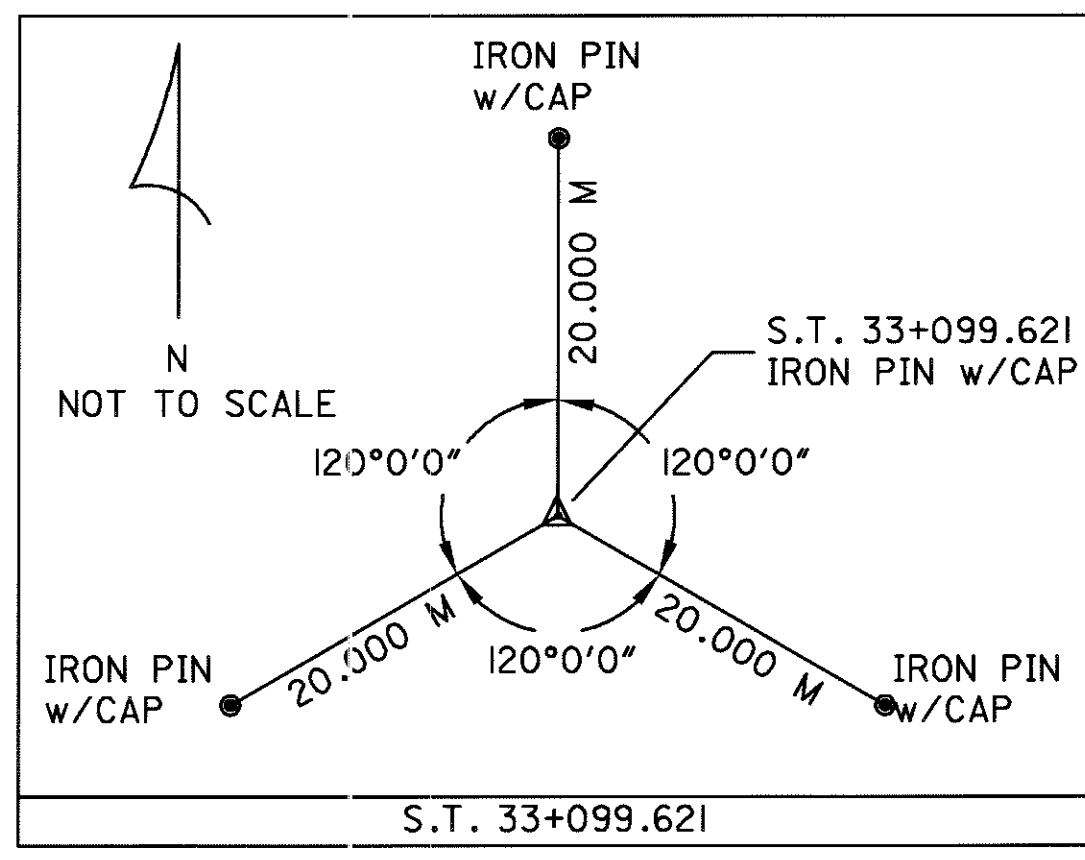
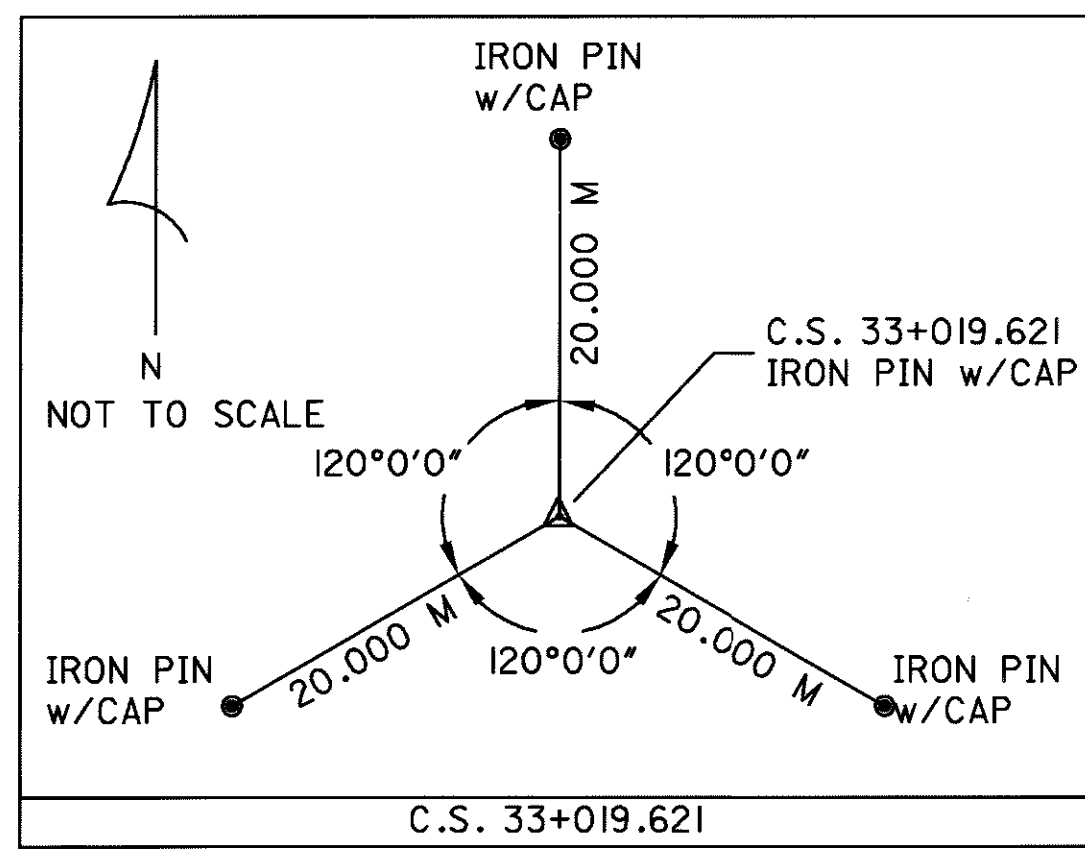
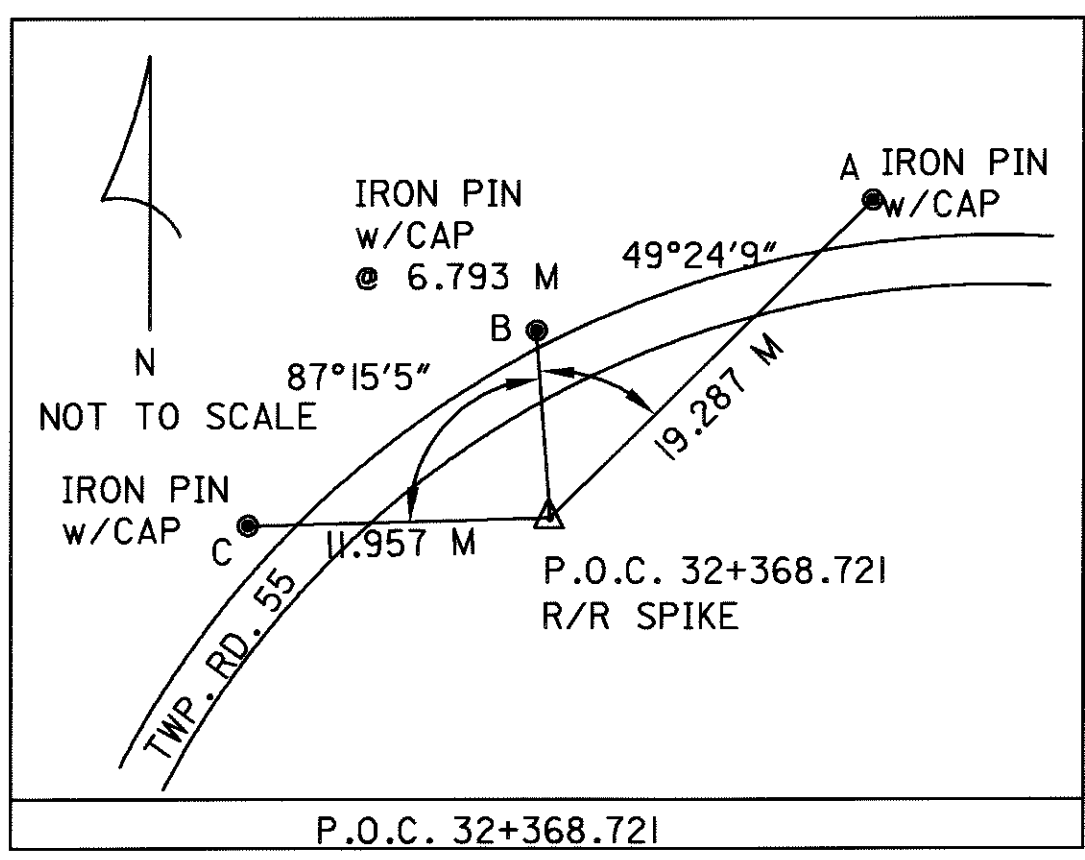
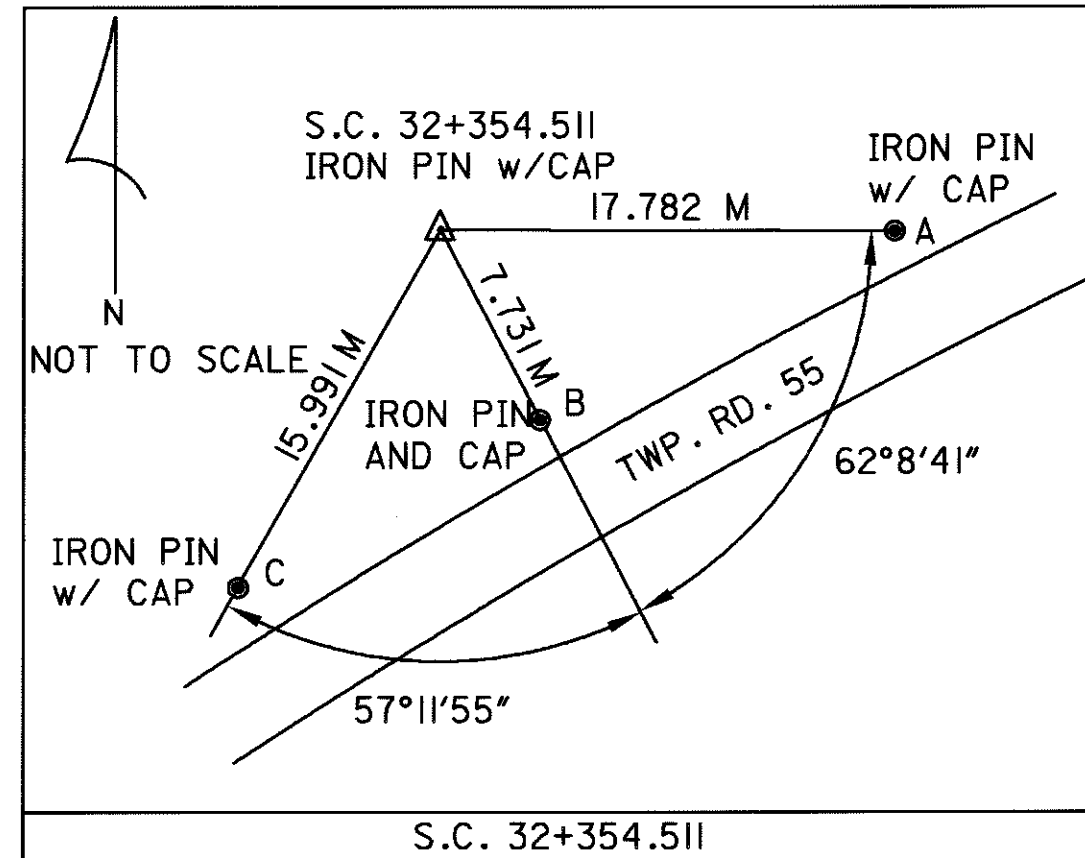
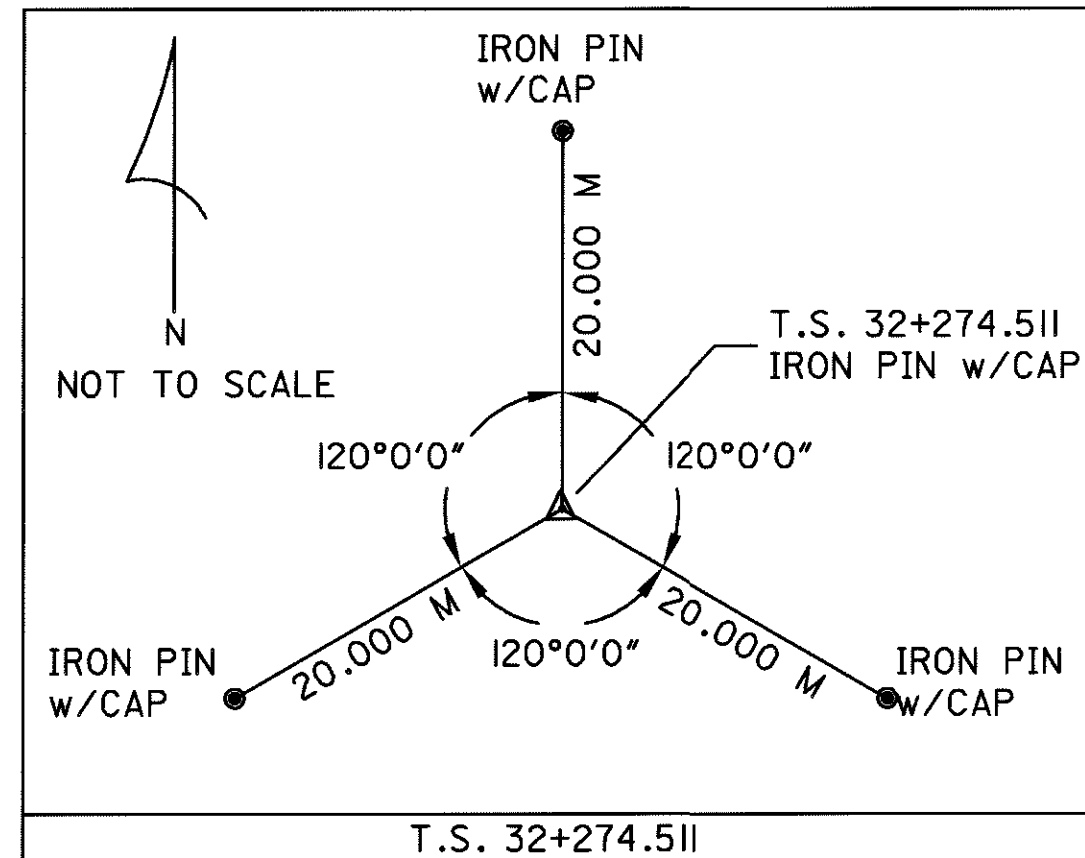
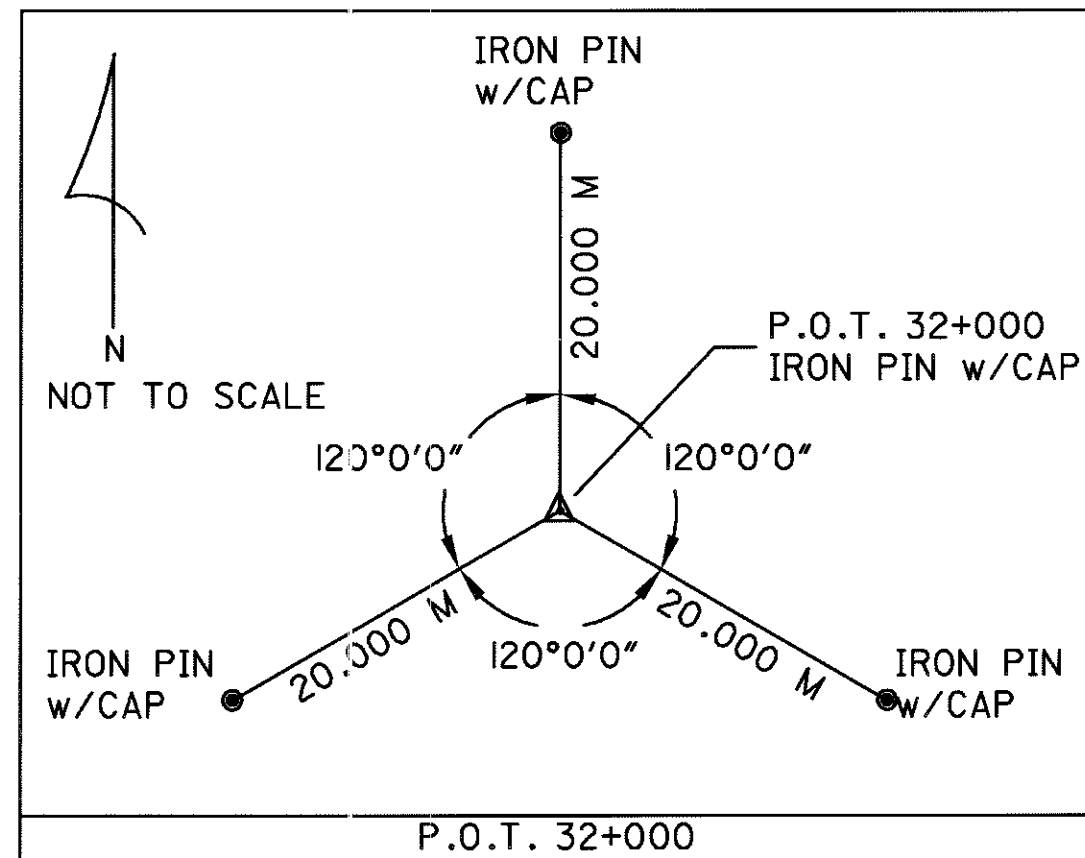
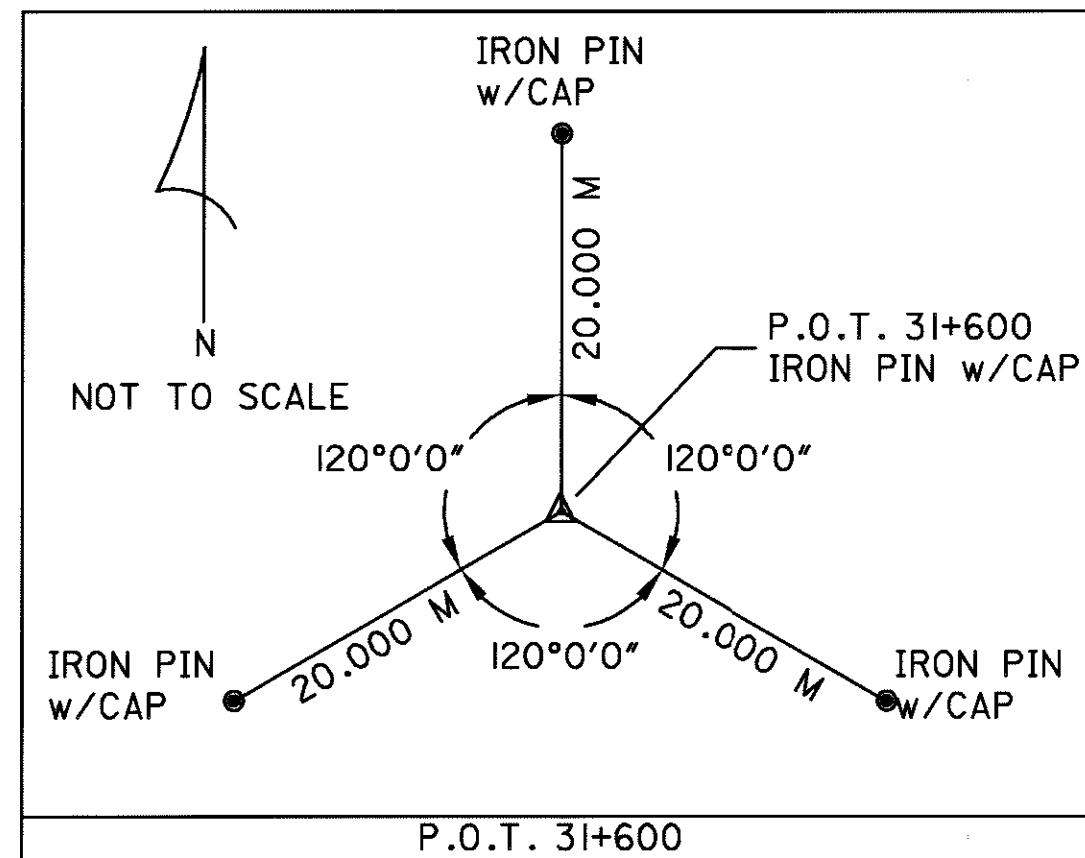
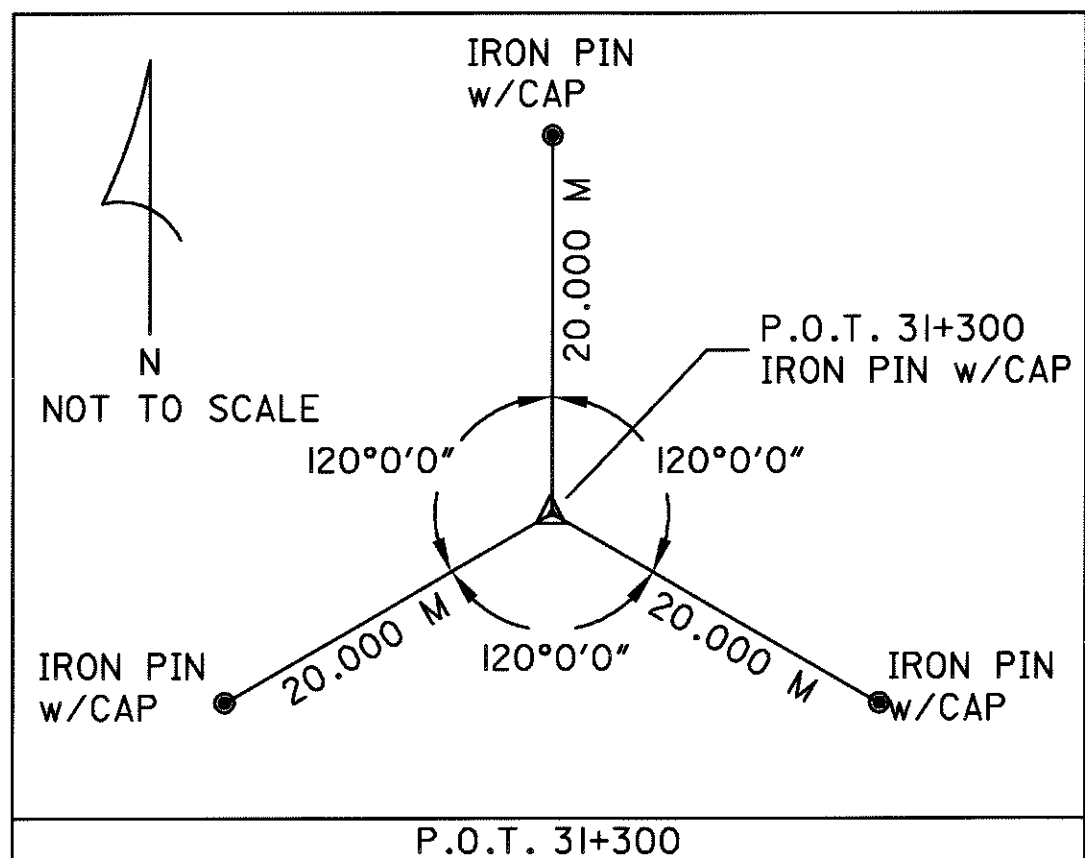
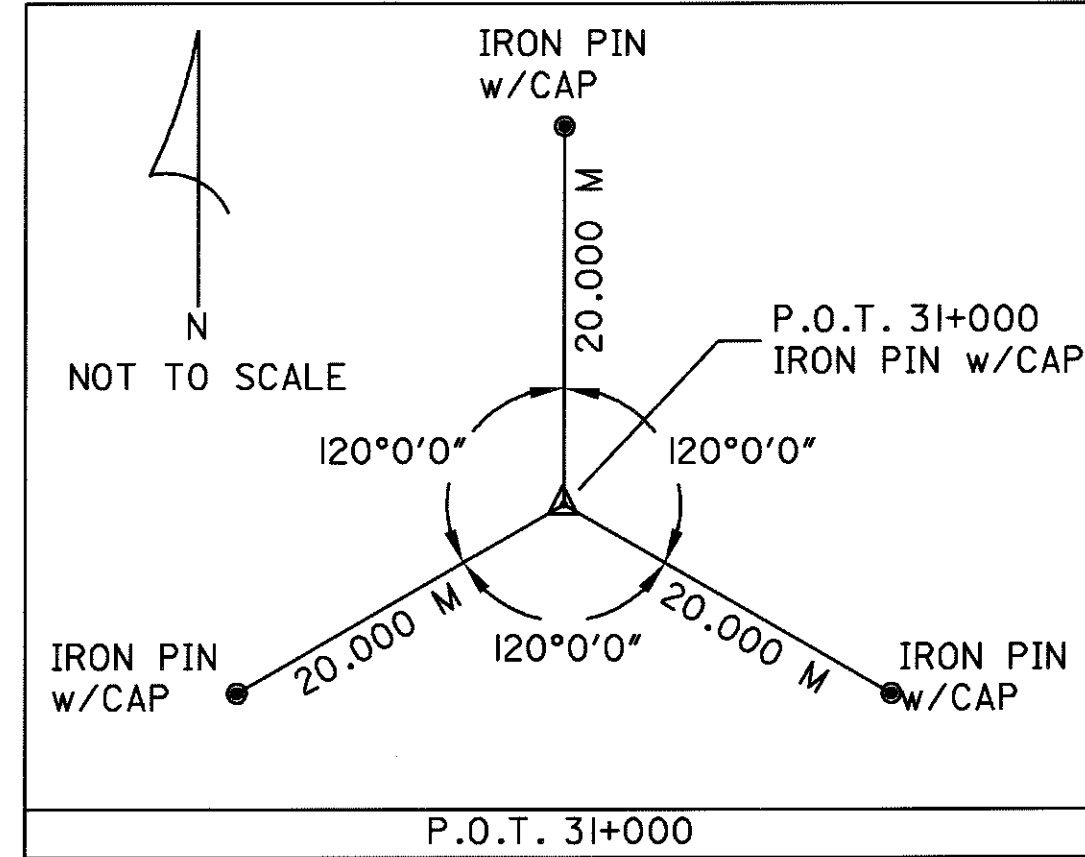
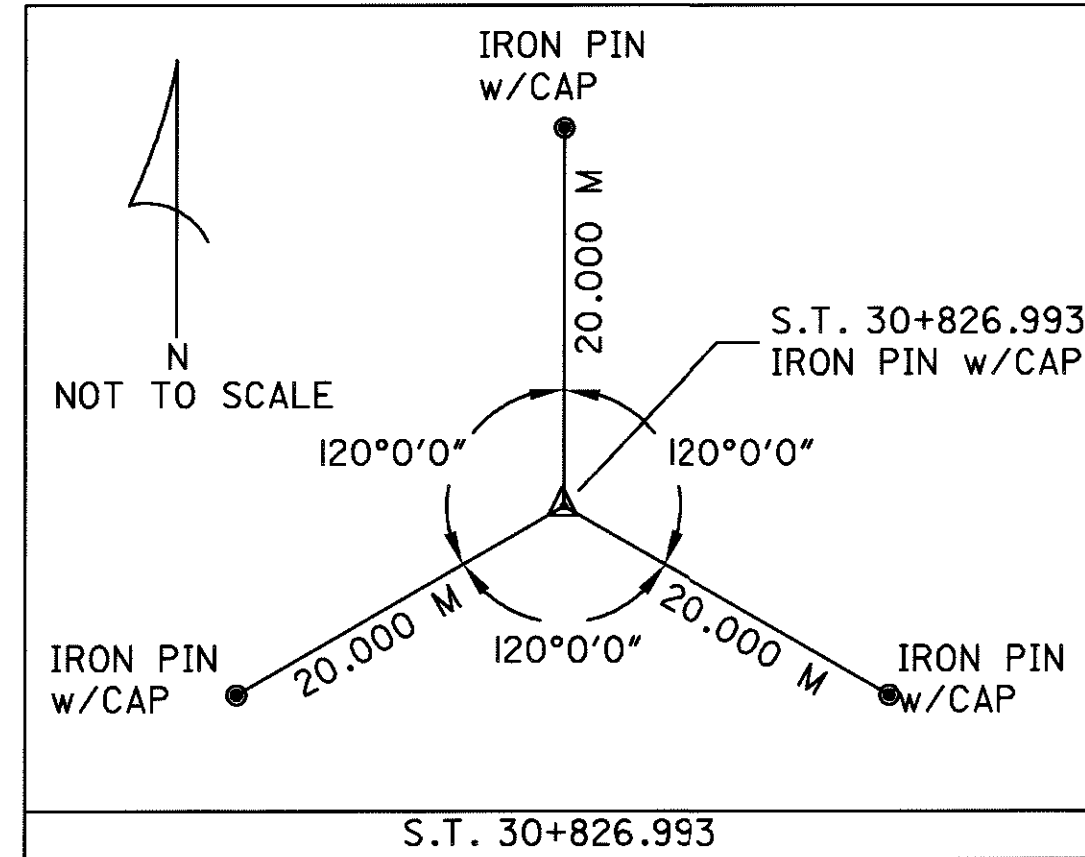
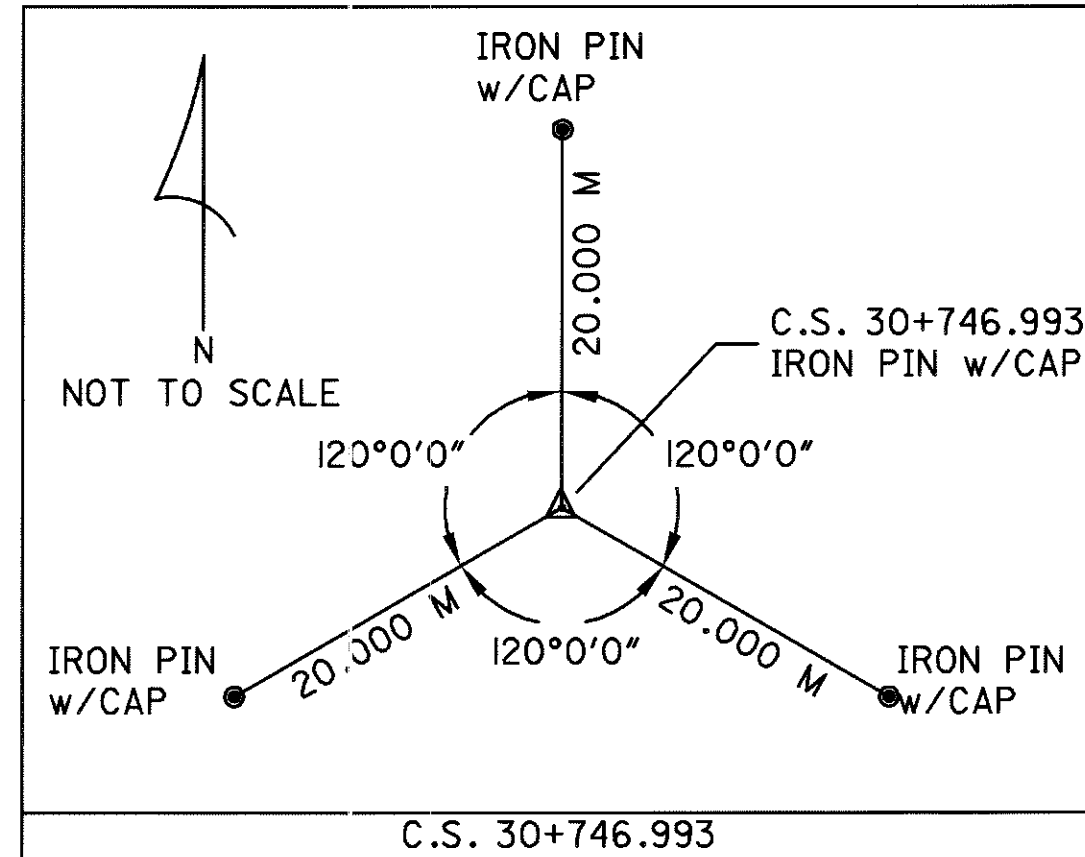
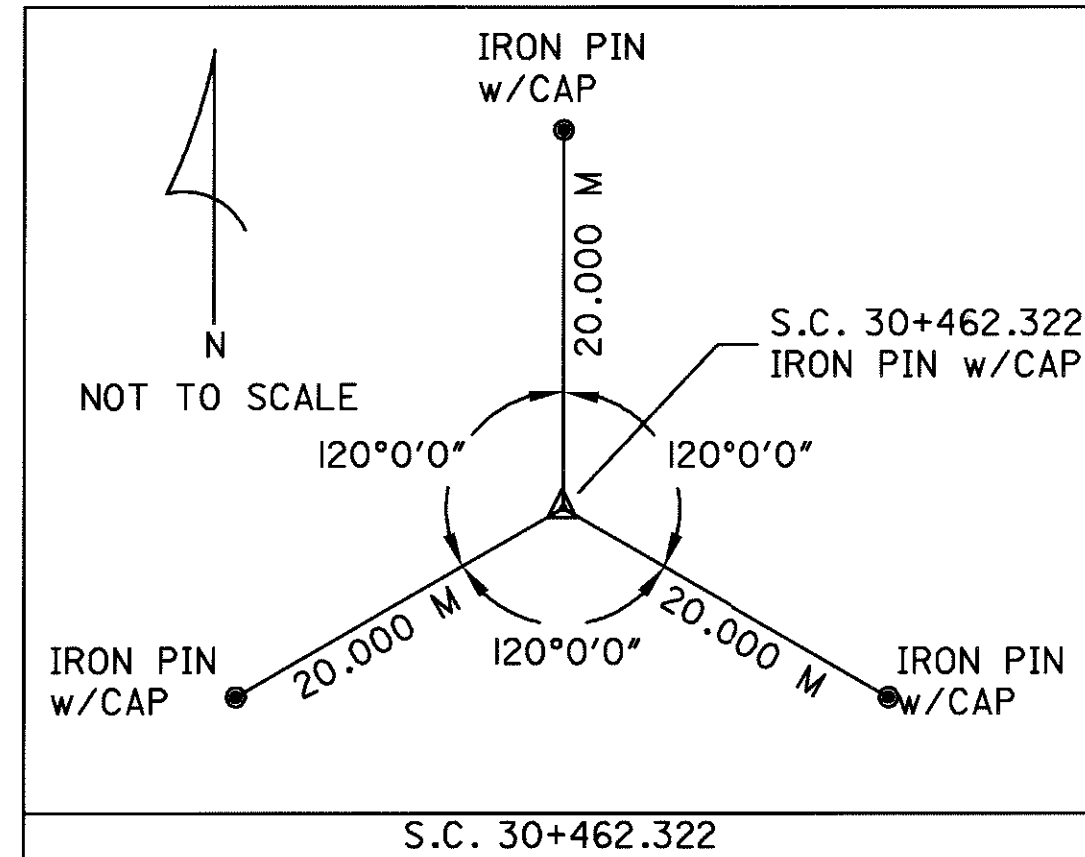
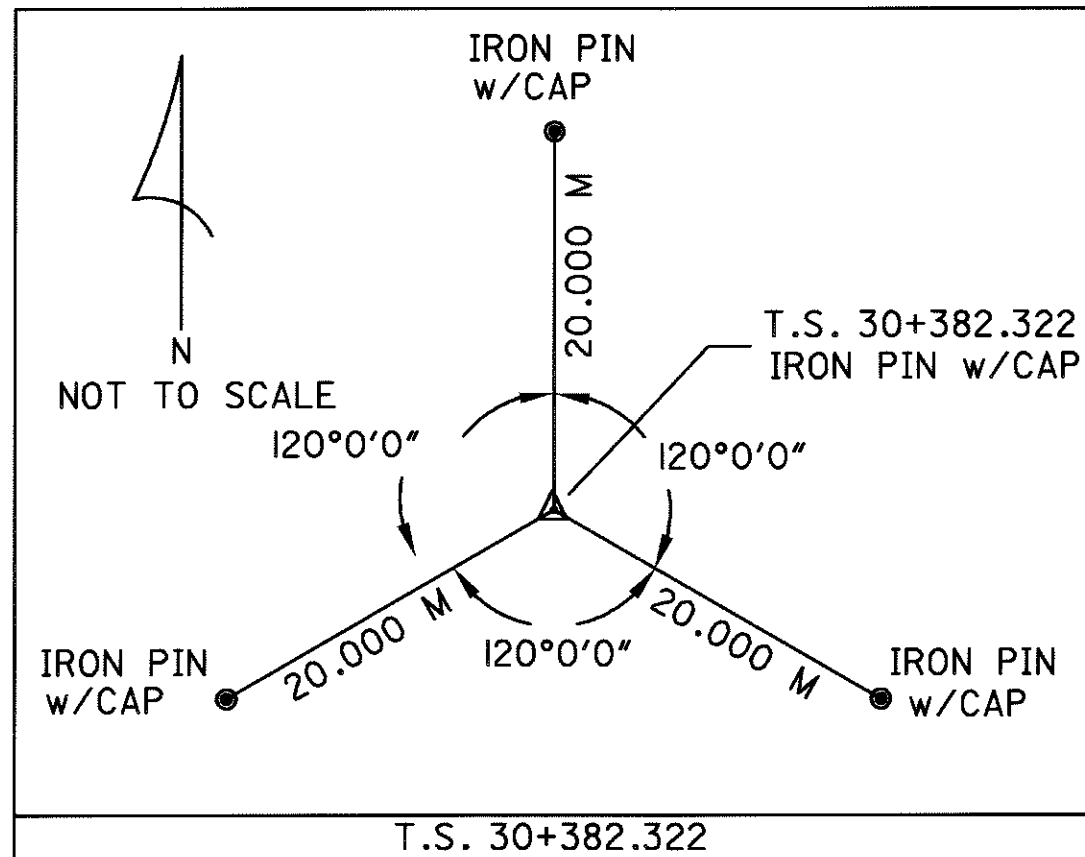
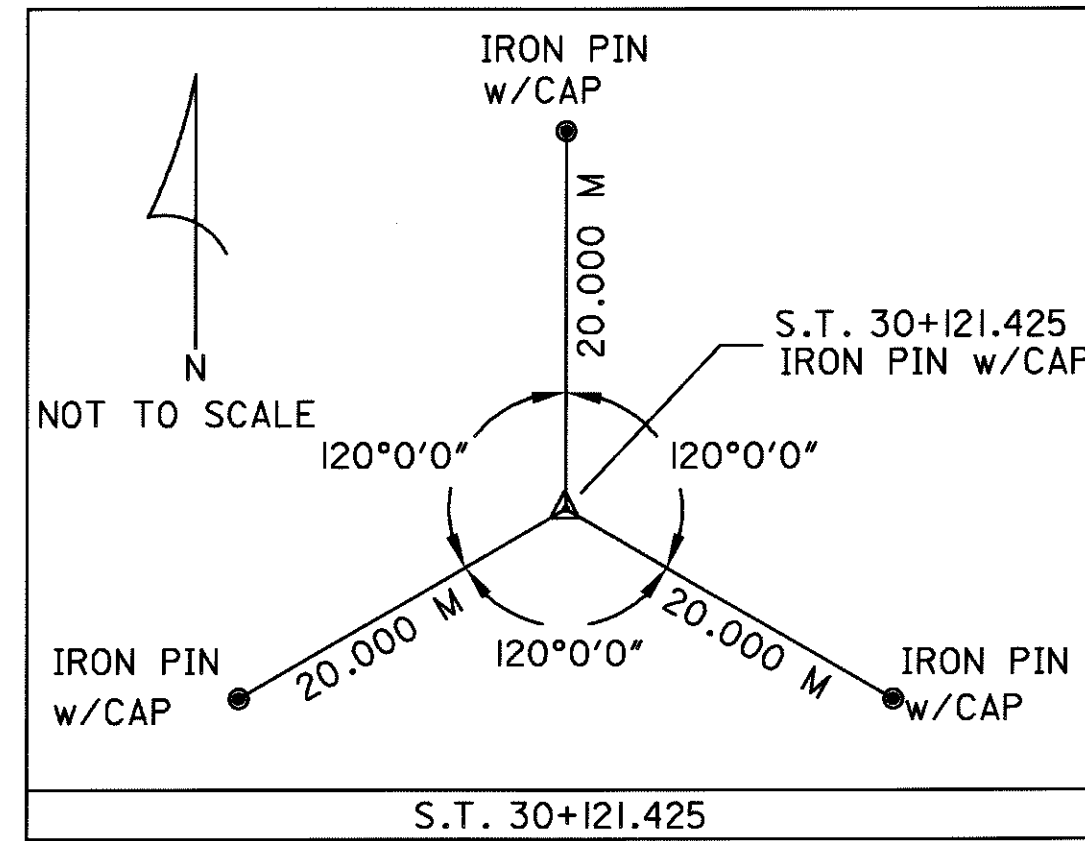
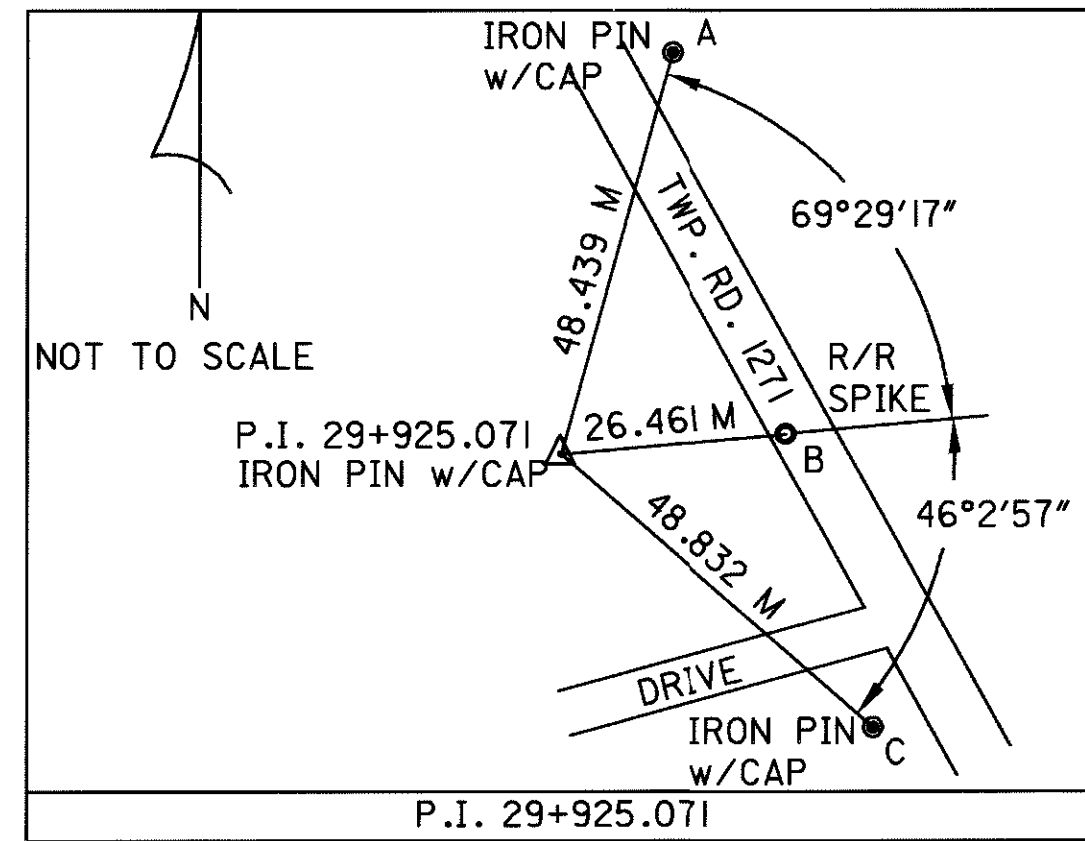
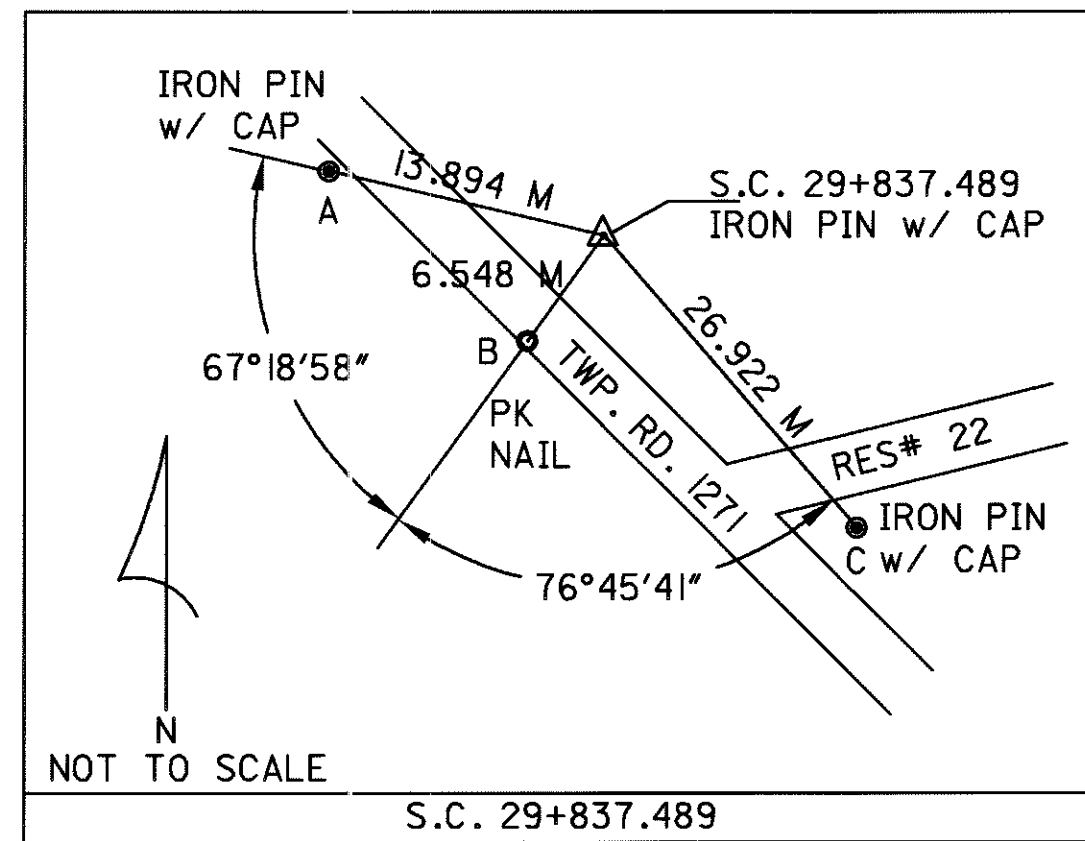
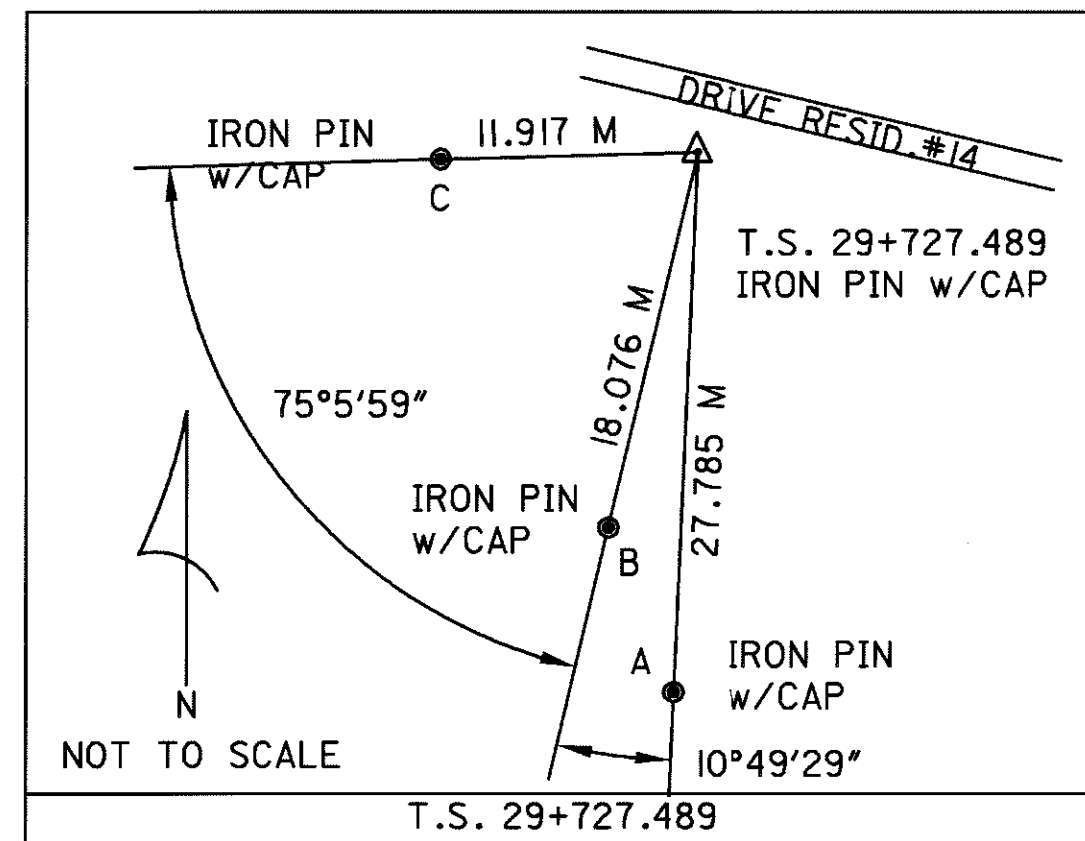
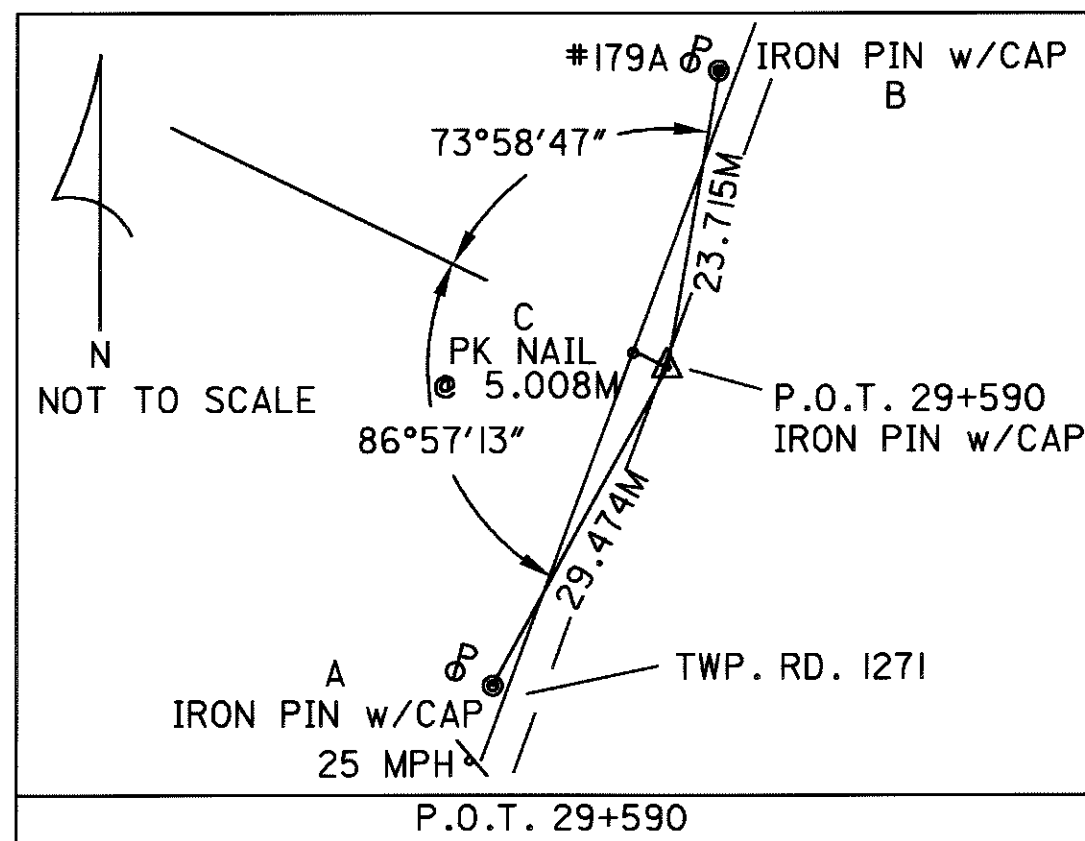
NOTE: SEE COORDINATE TABLE

CALCULATED  
JMK  
CHECKED  
KC

US 33 CENTERLINE REFERENCES

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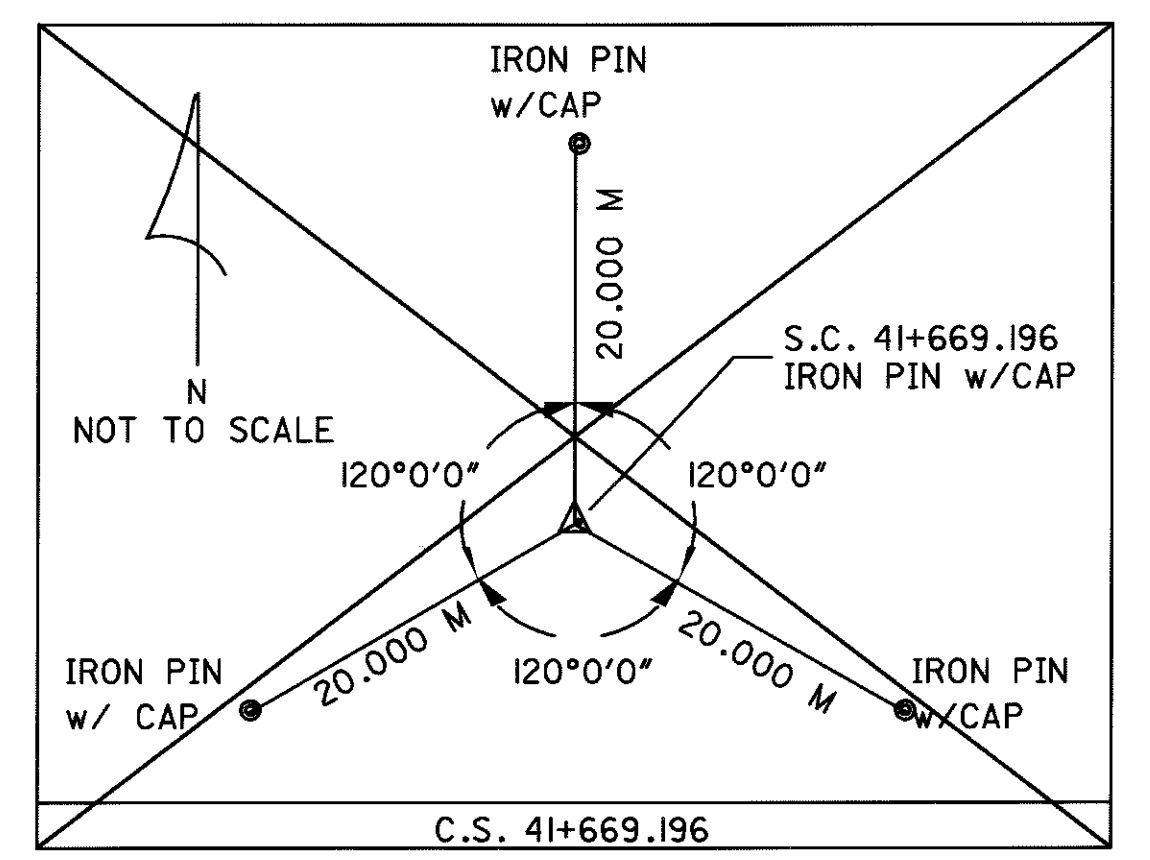
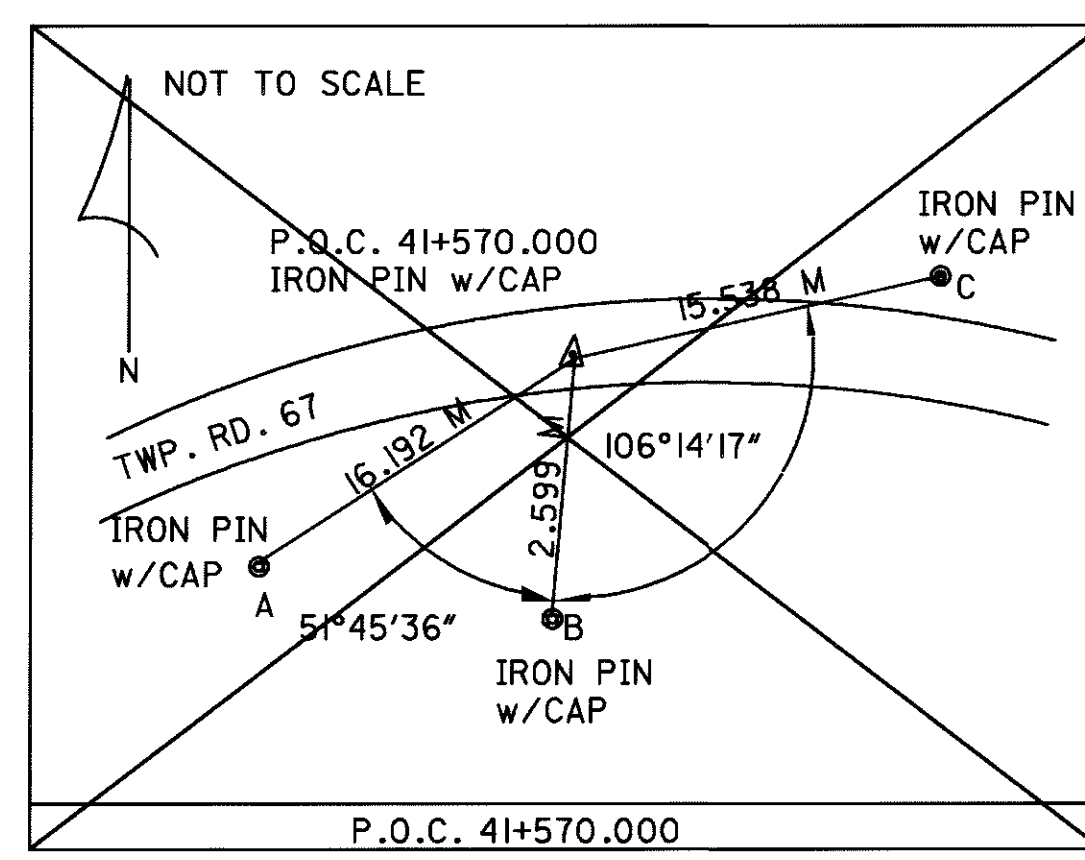
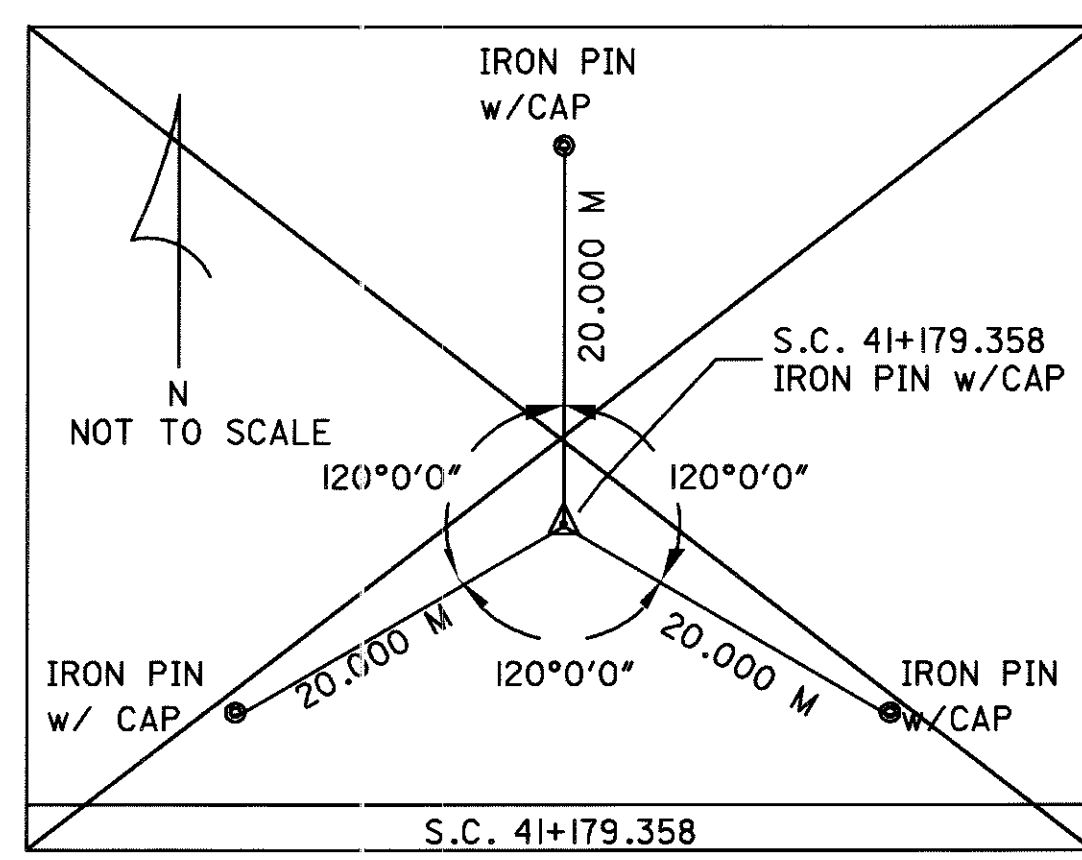
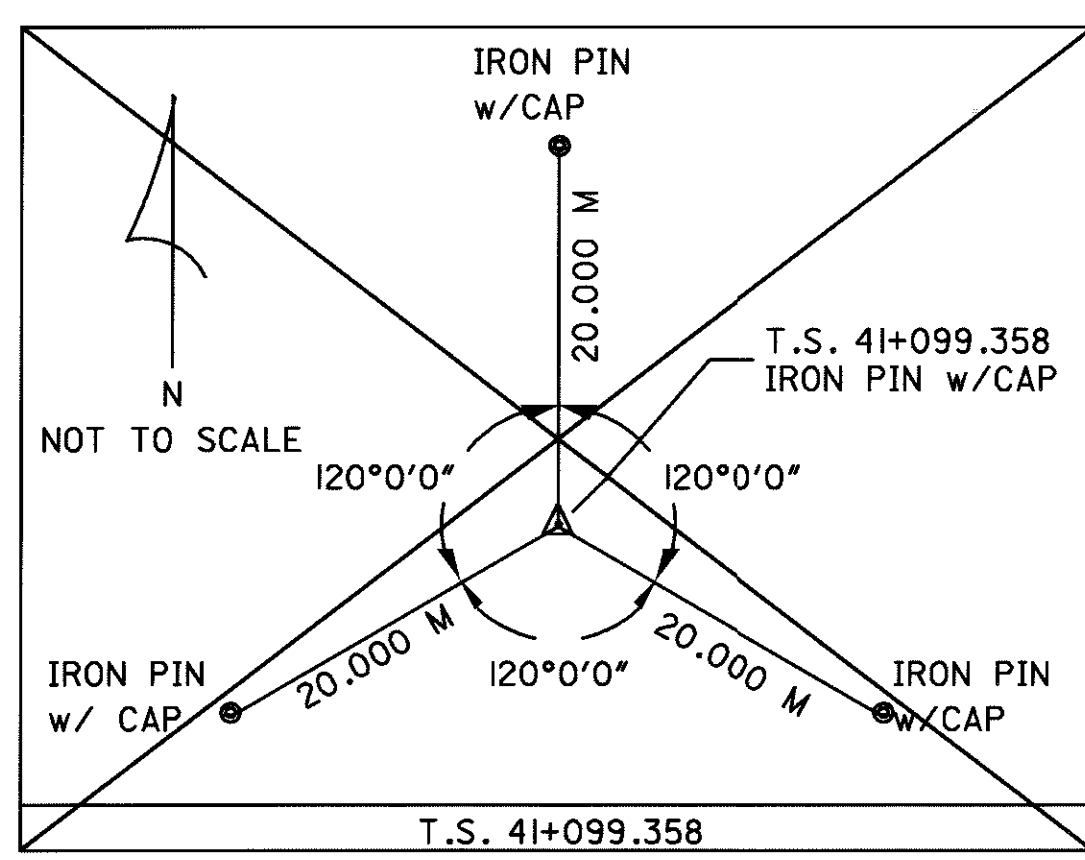
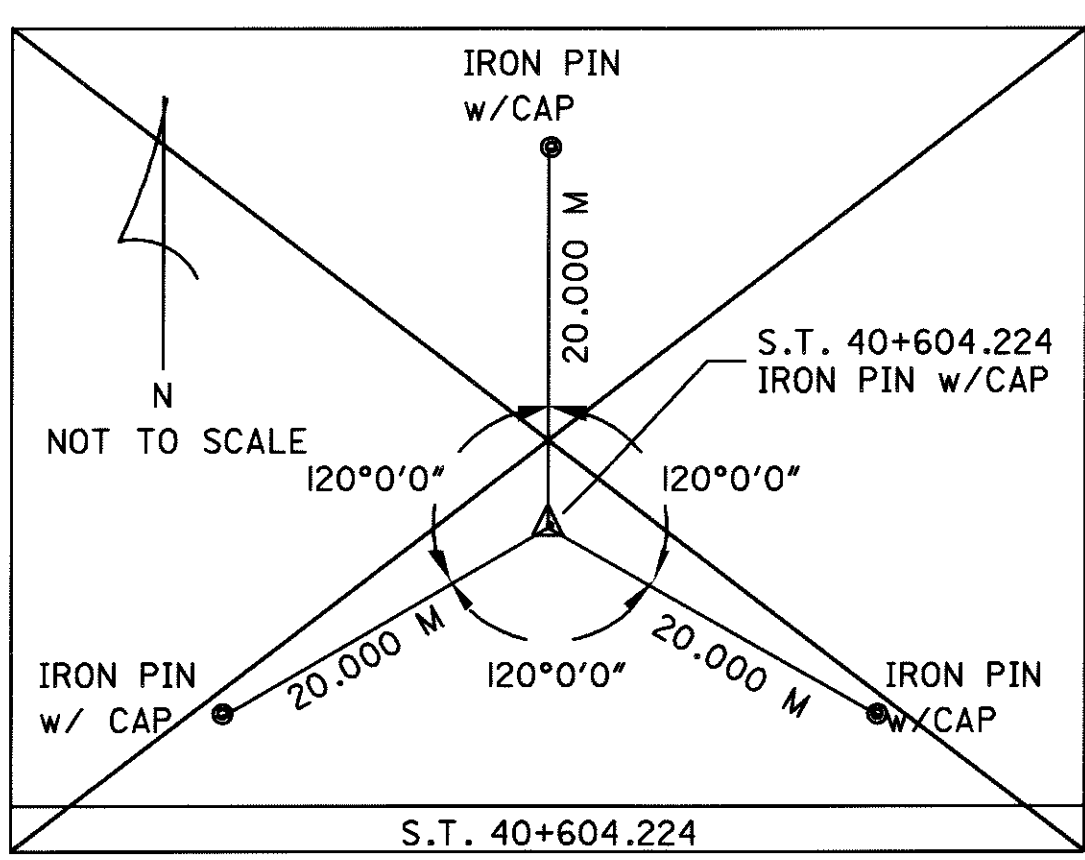
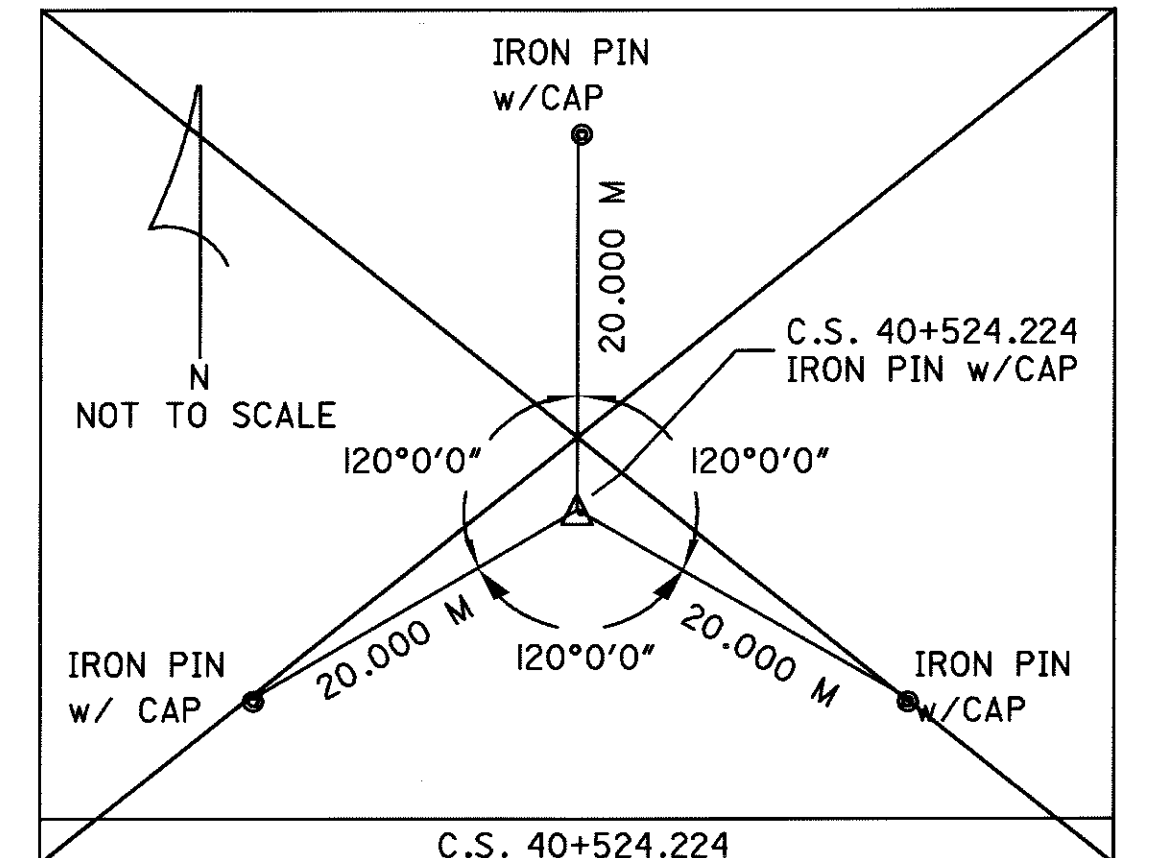
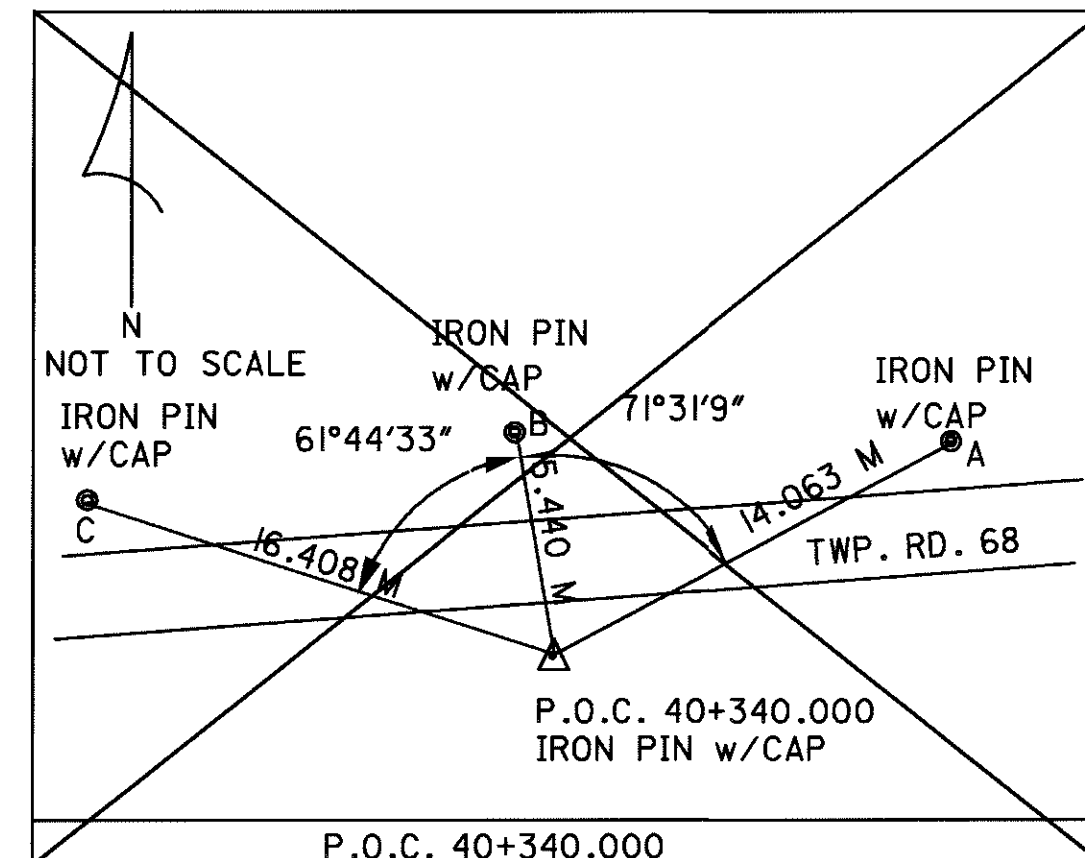
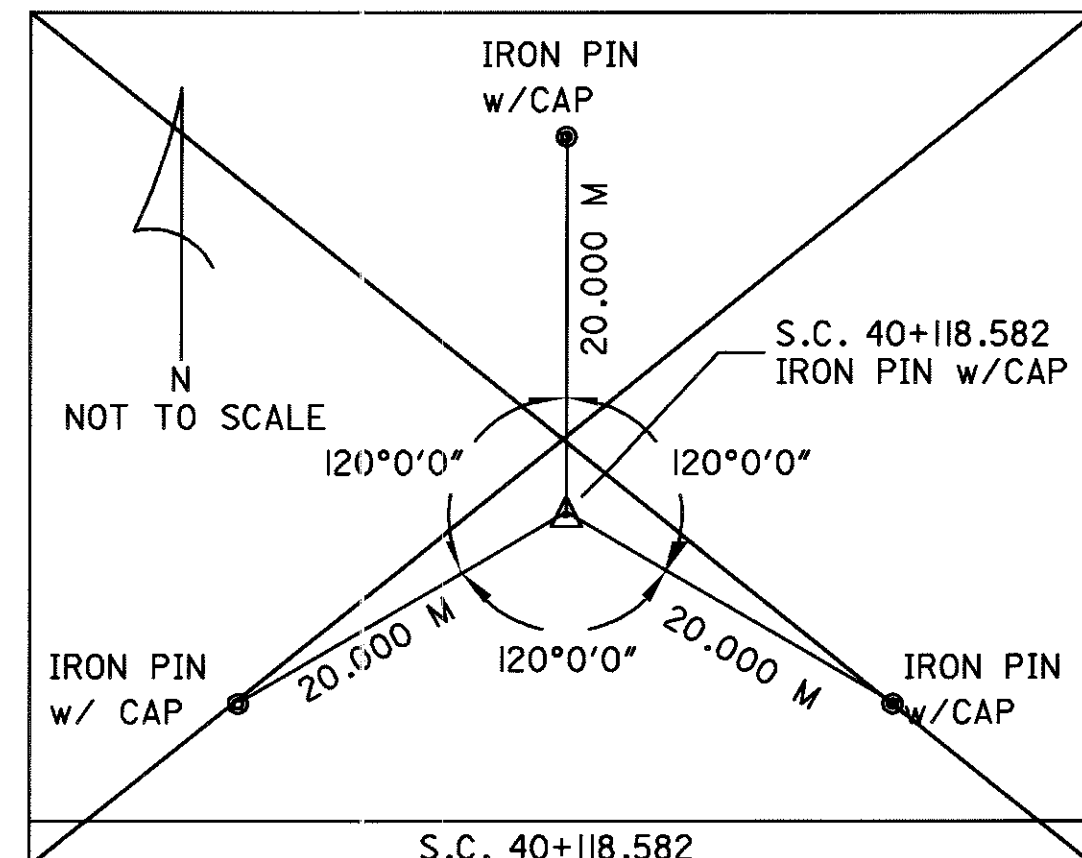
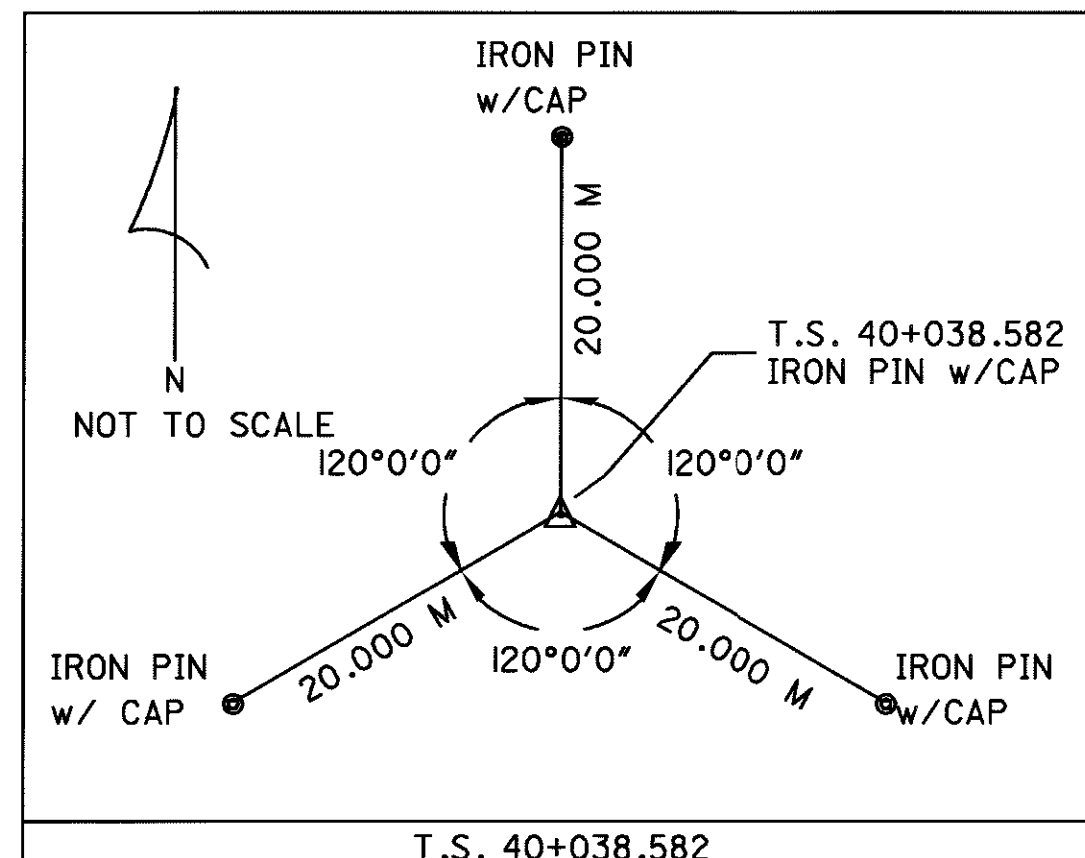
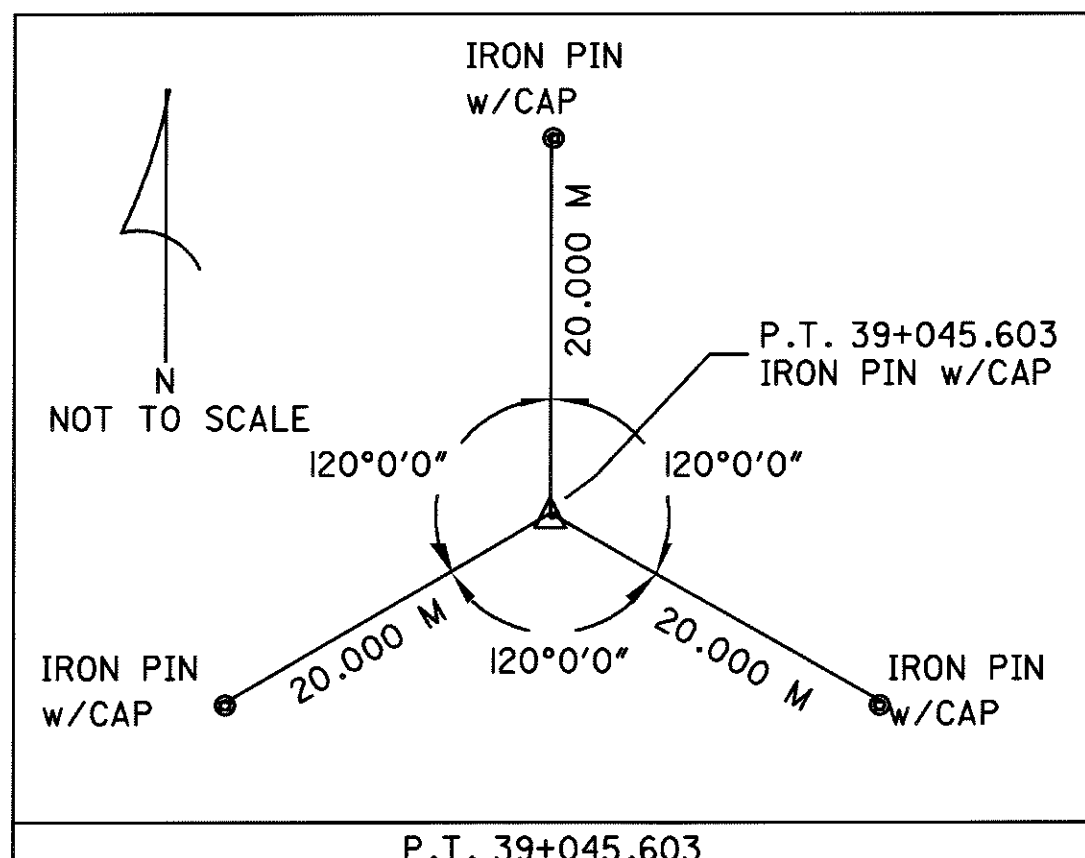
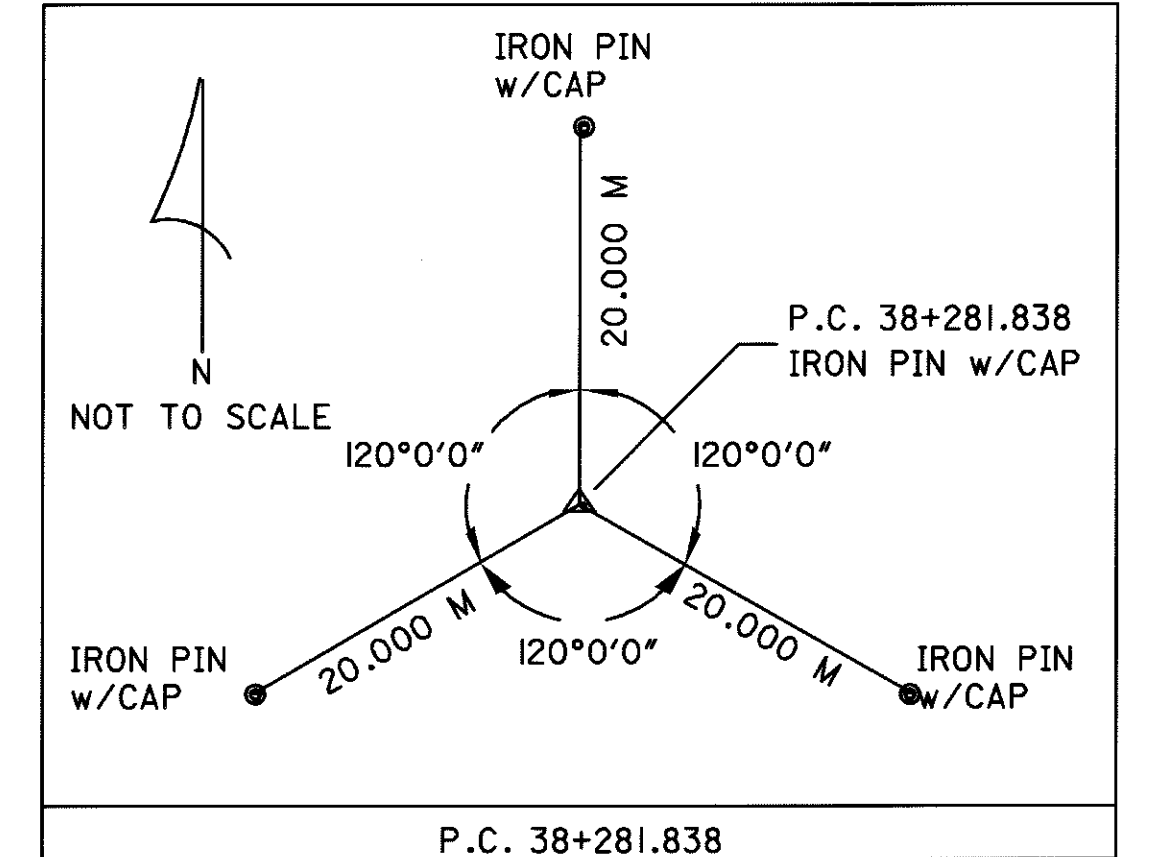
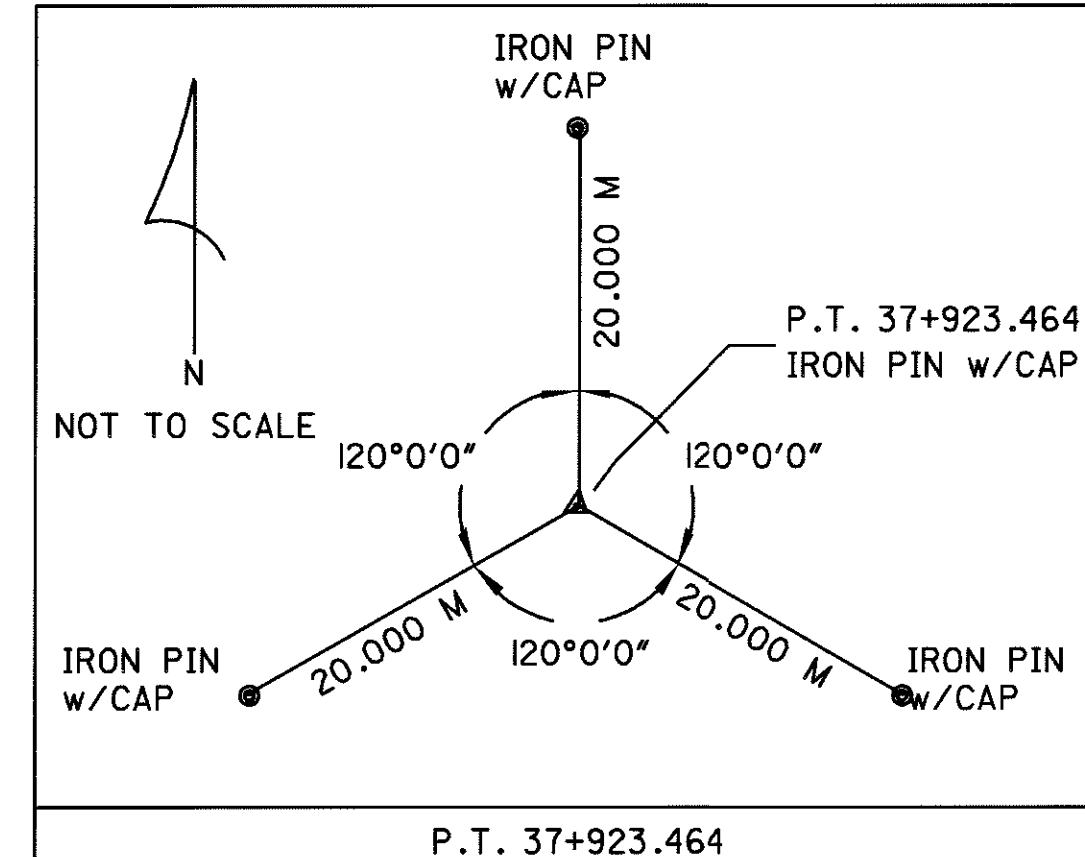
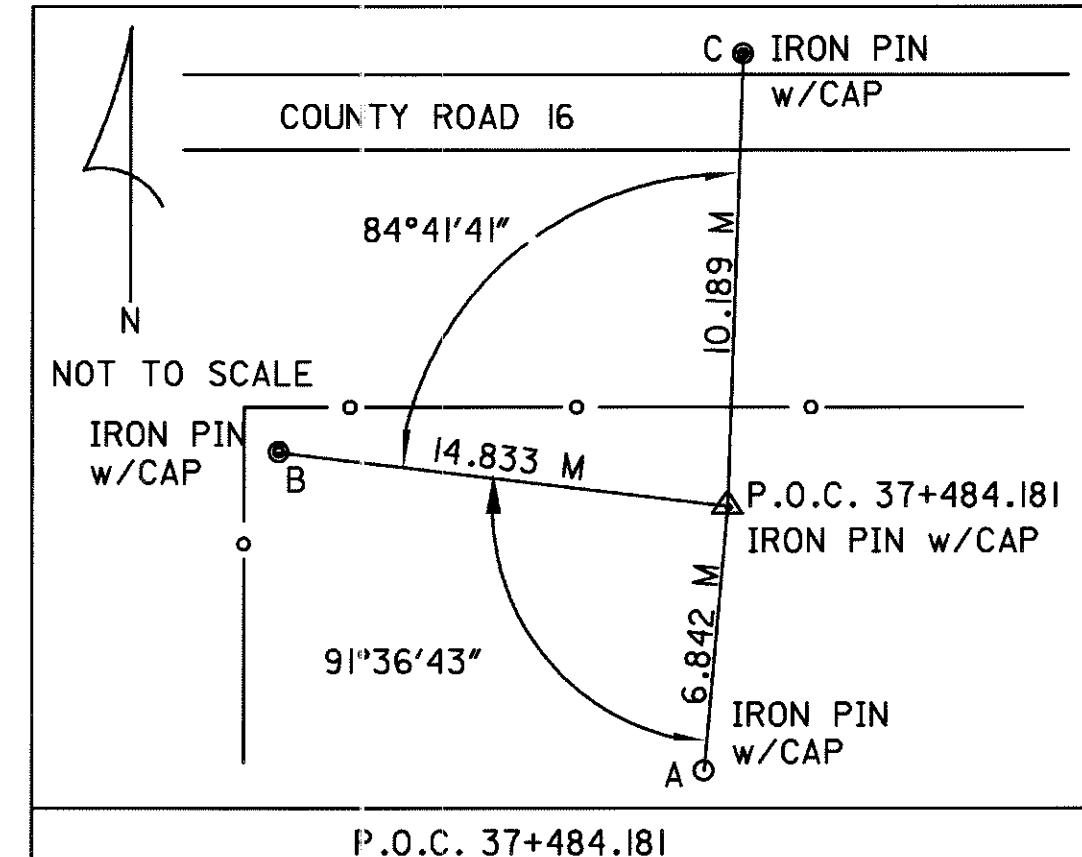
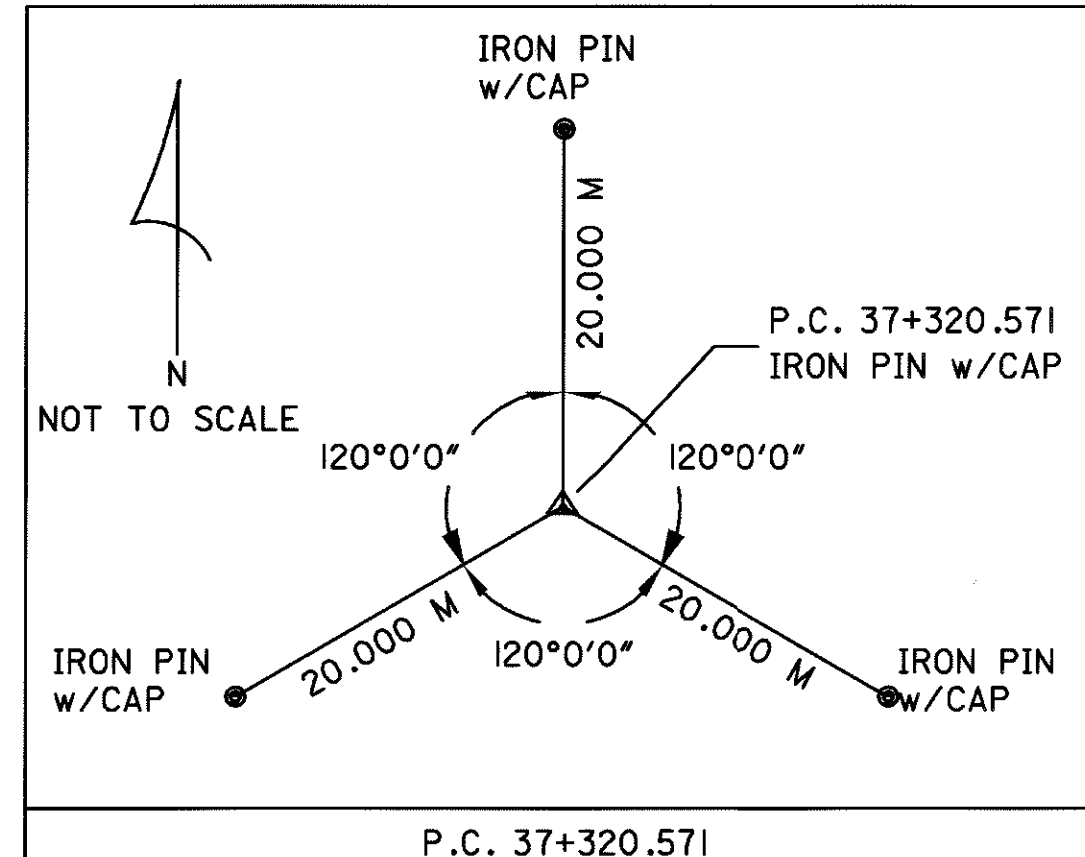
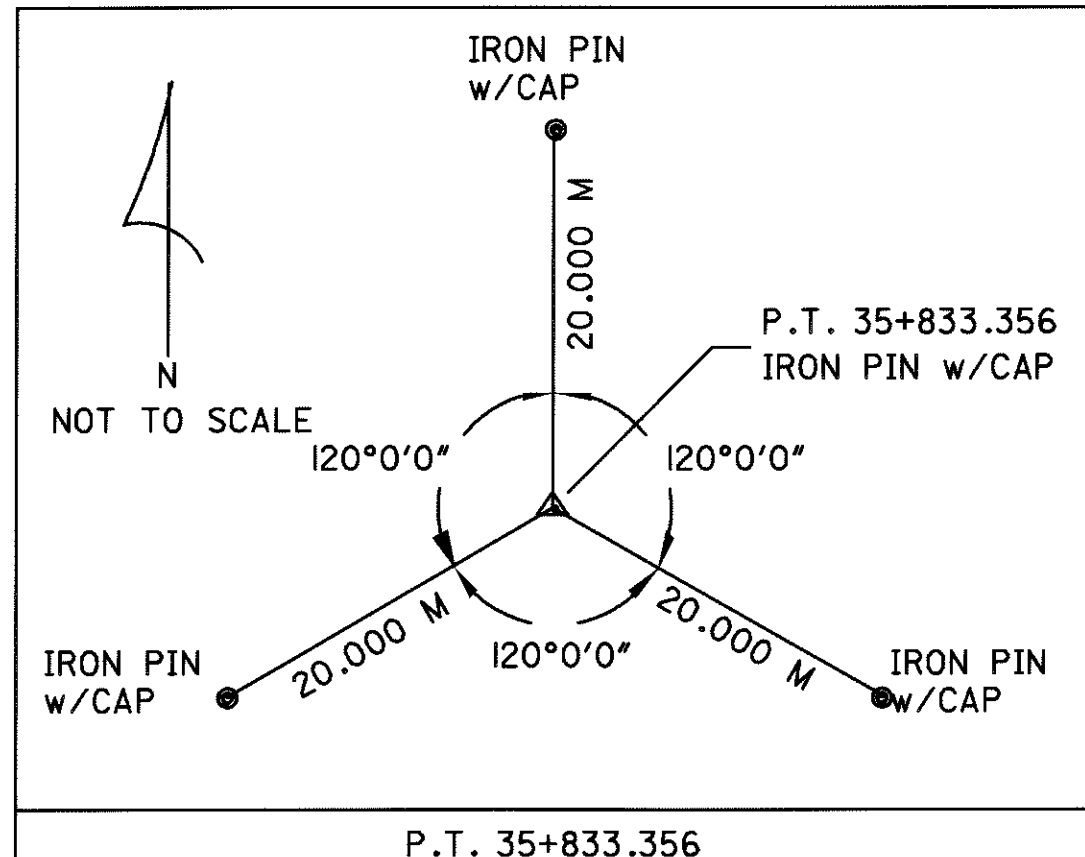
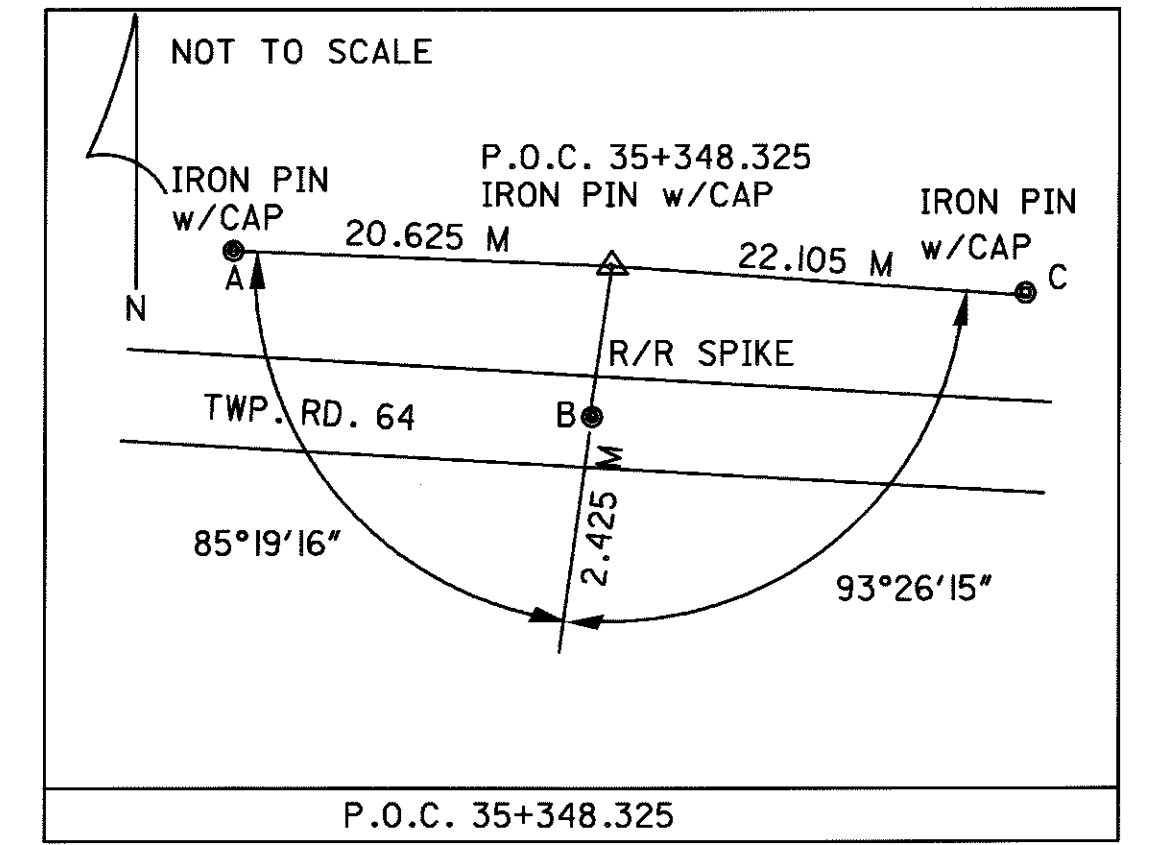
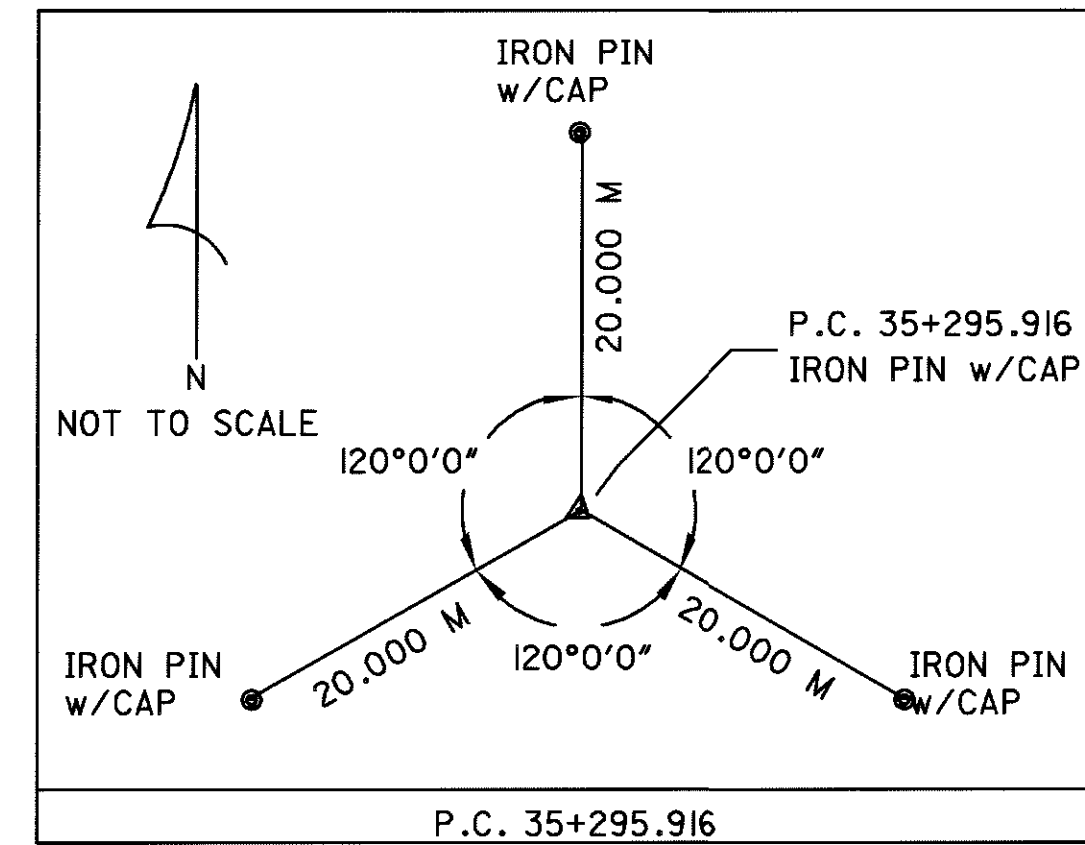
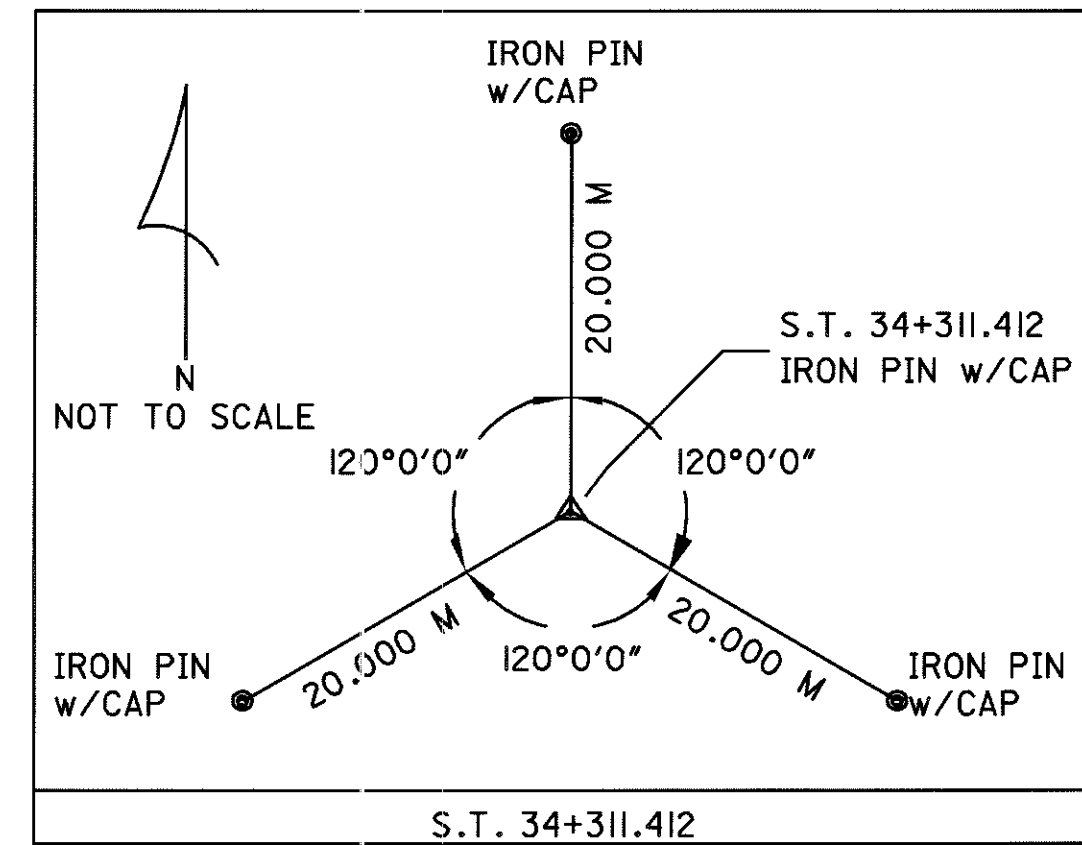
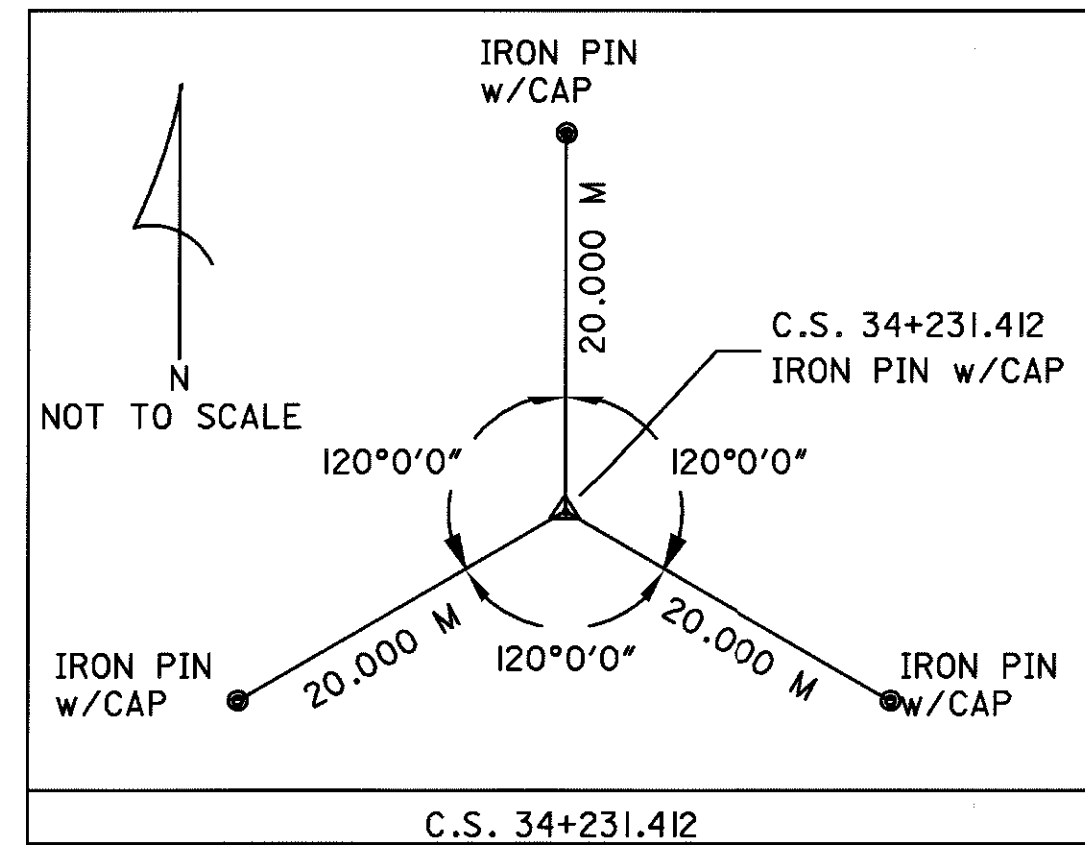
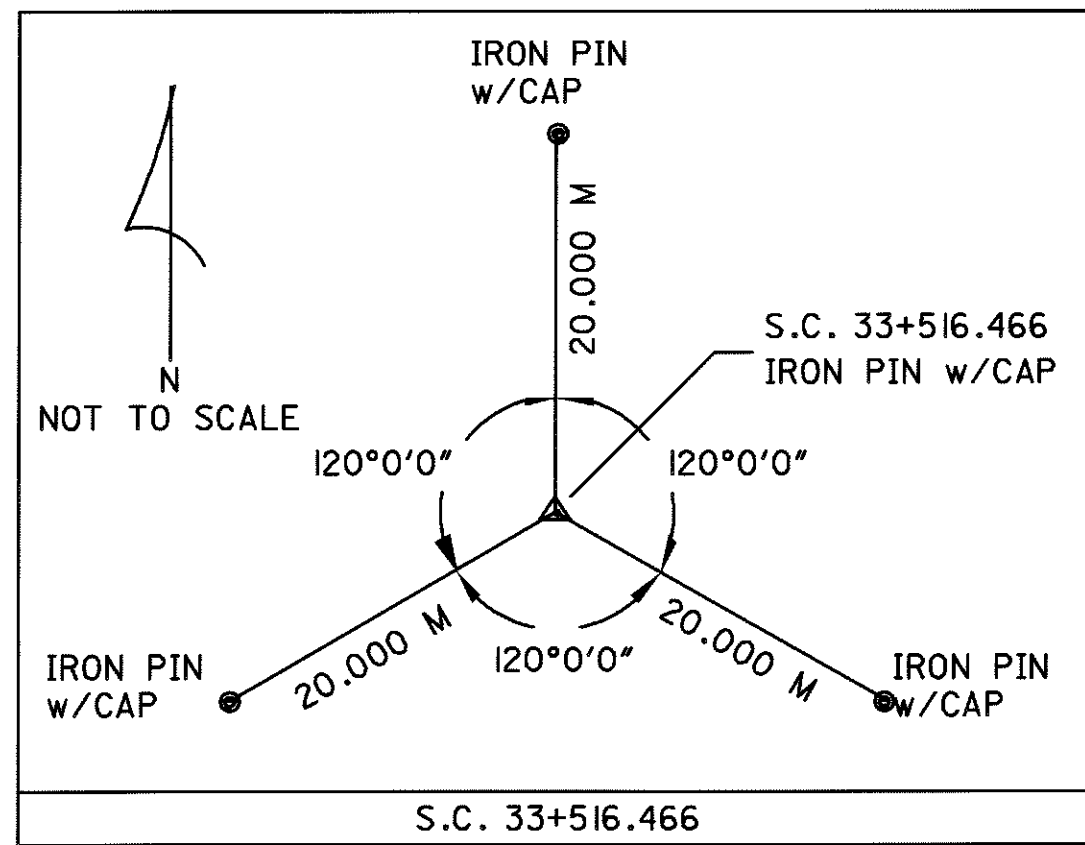
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**US 33 CENTERLINE REFERENCES**

**ATH-33-30.981**

NOTE: SEE COORDINATE TABLE



NOTE: SEE COORDINATE TABLE

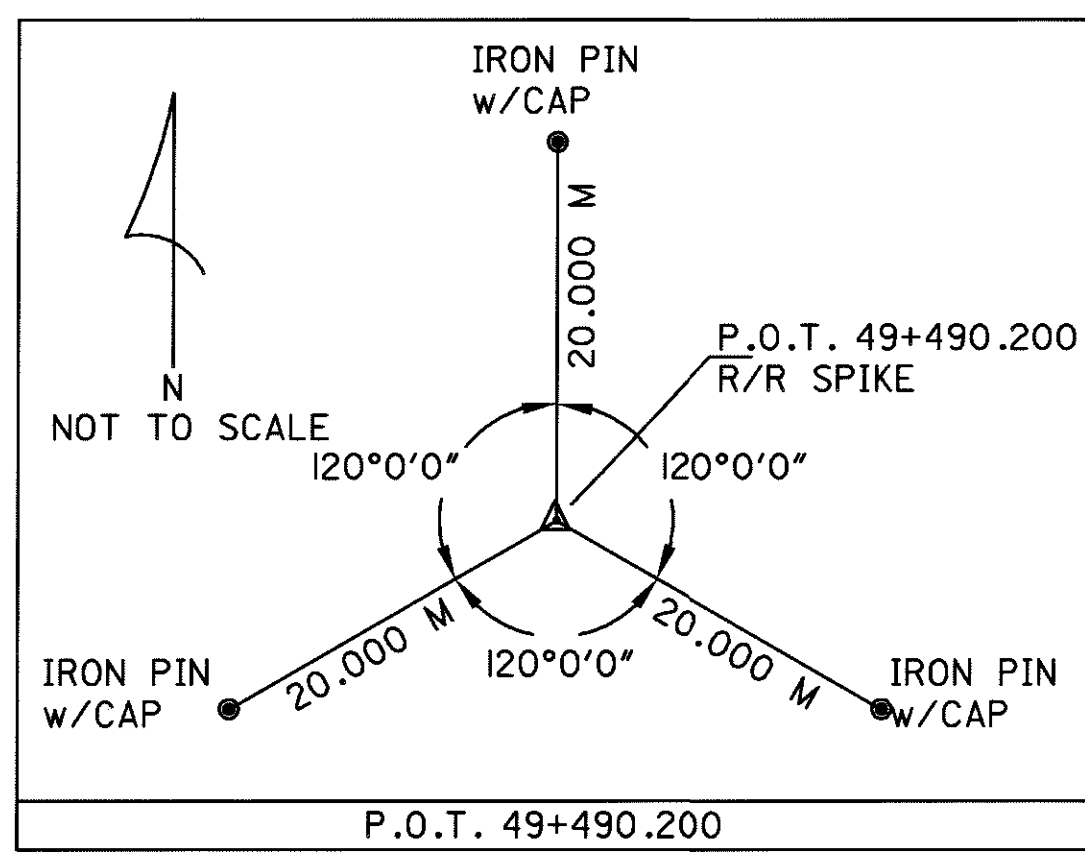
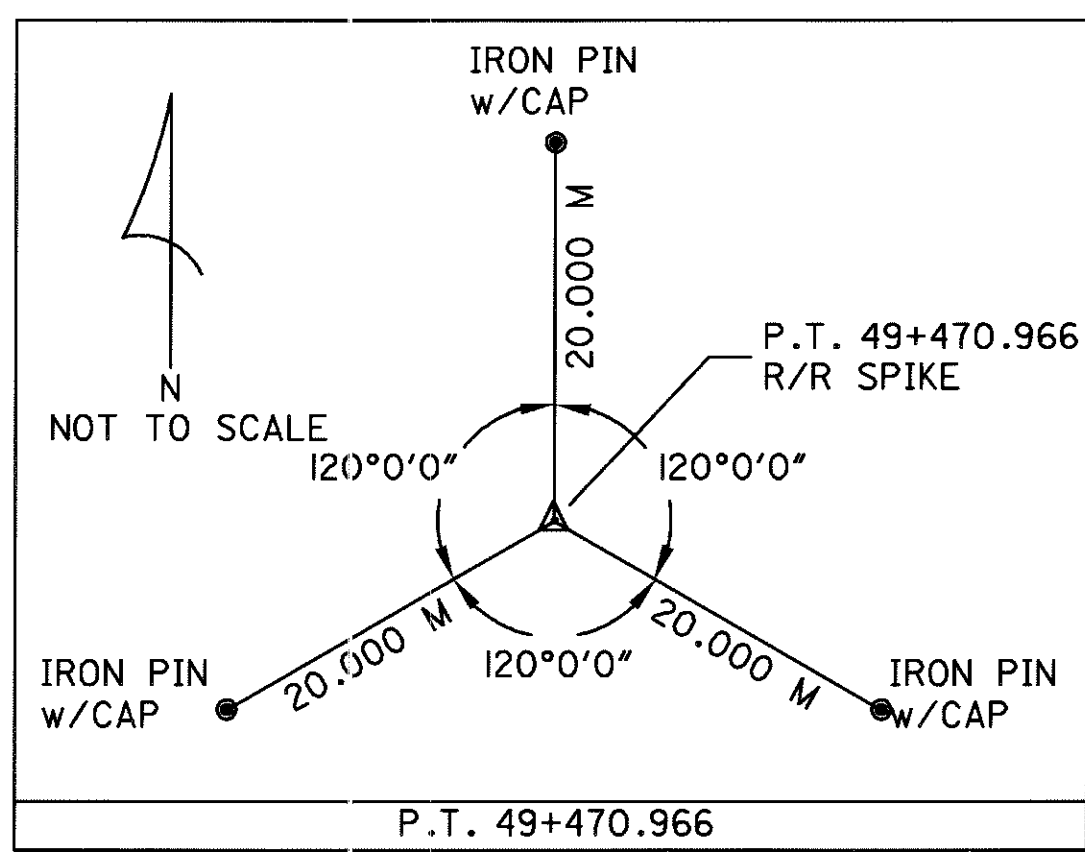
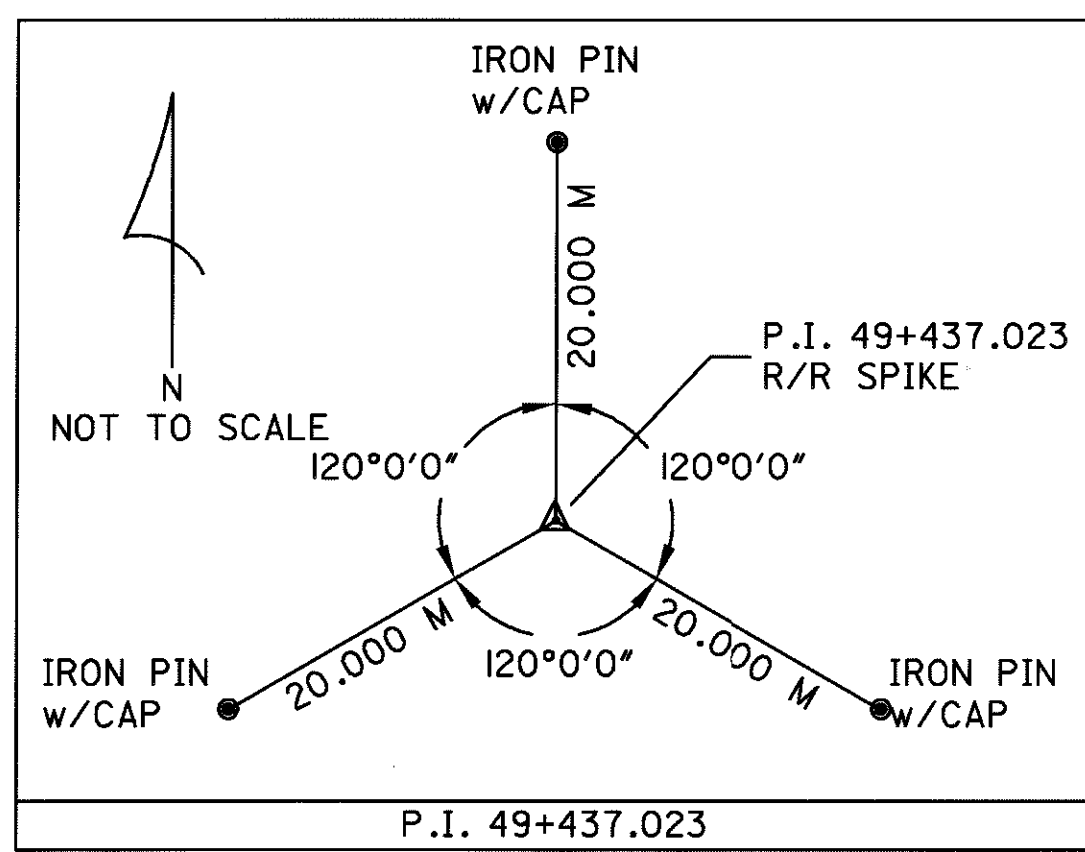
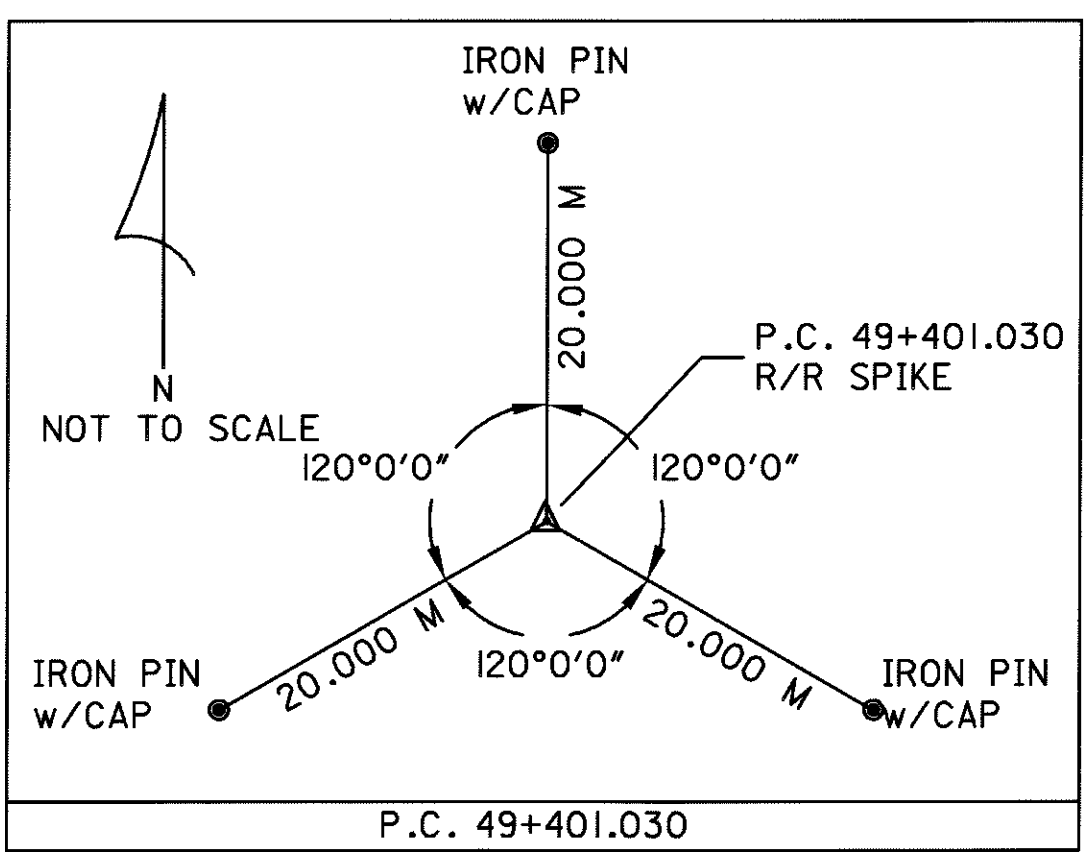
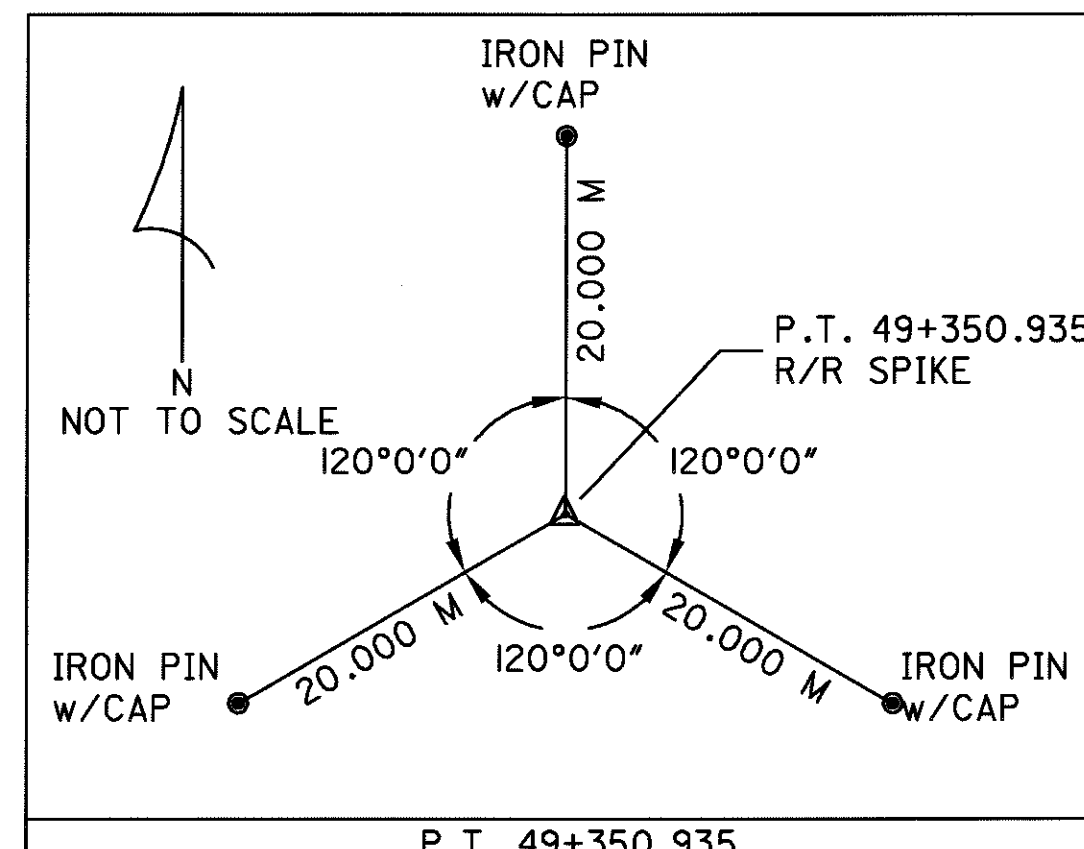
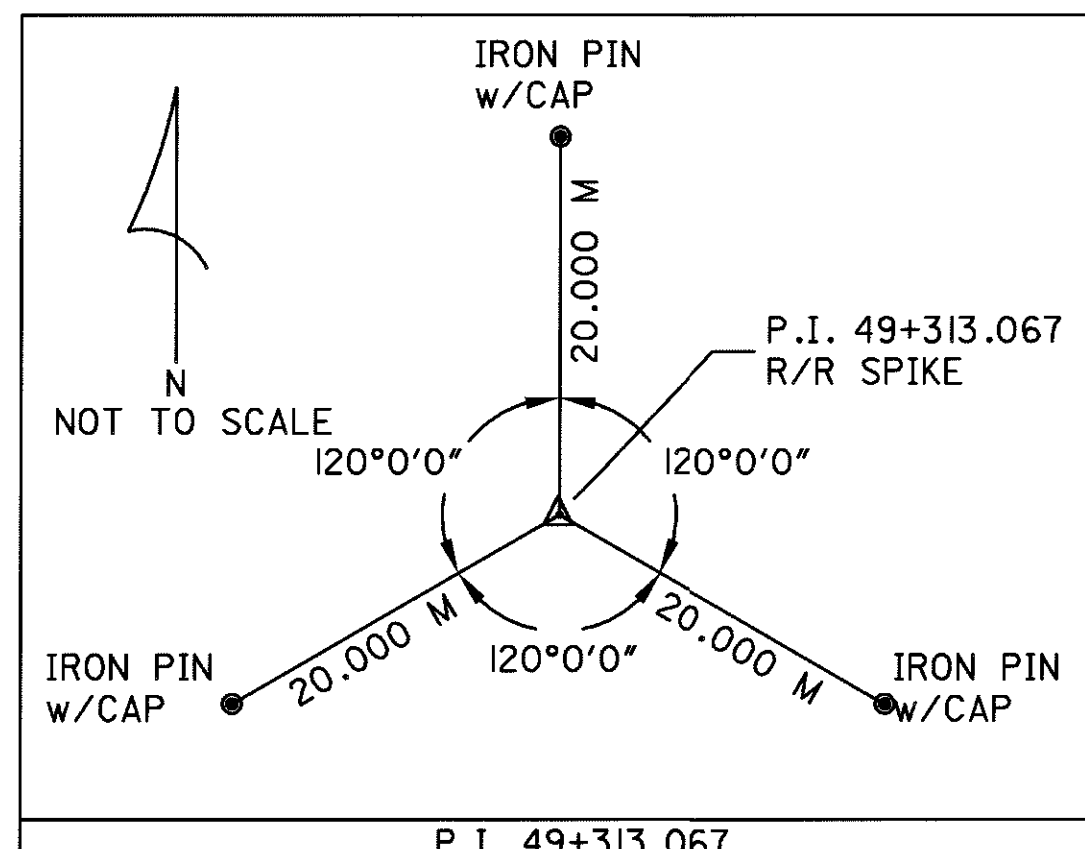
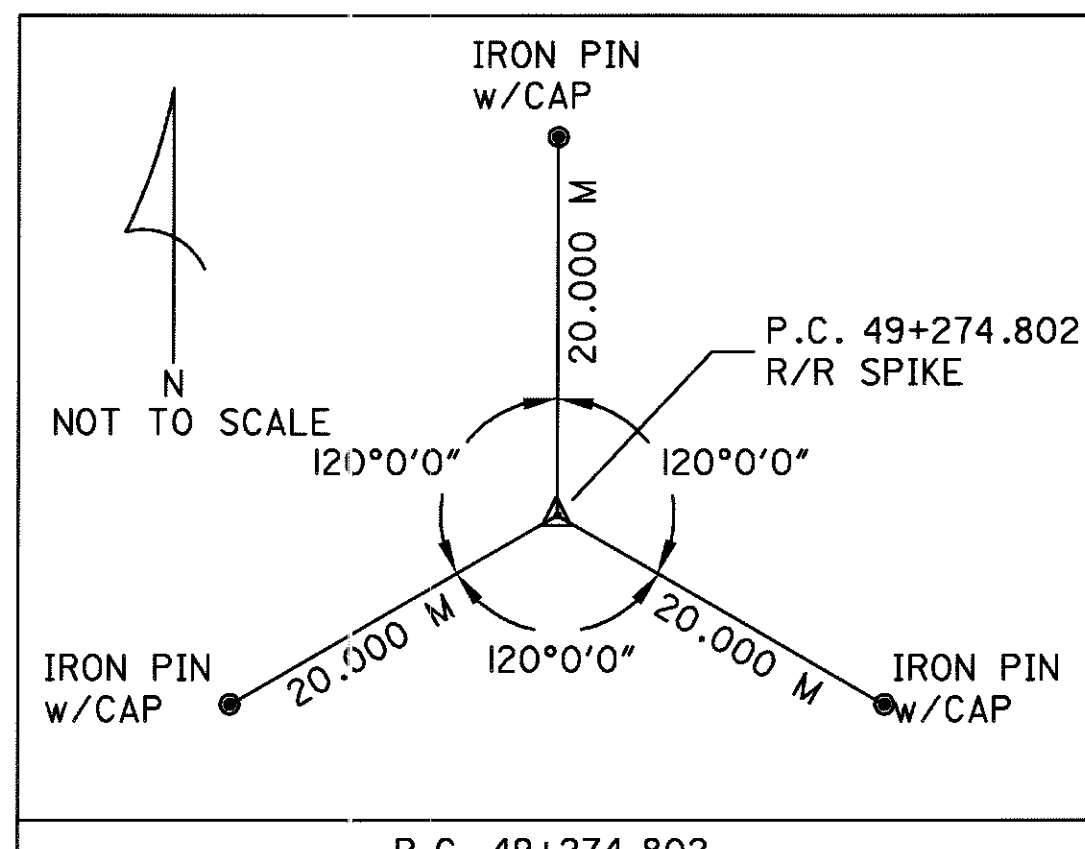
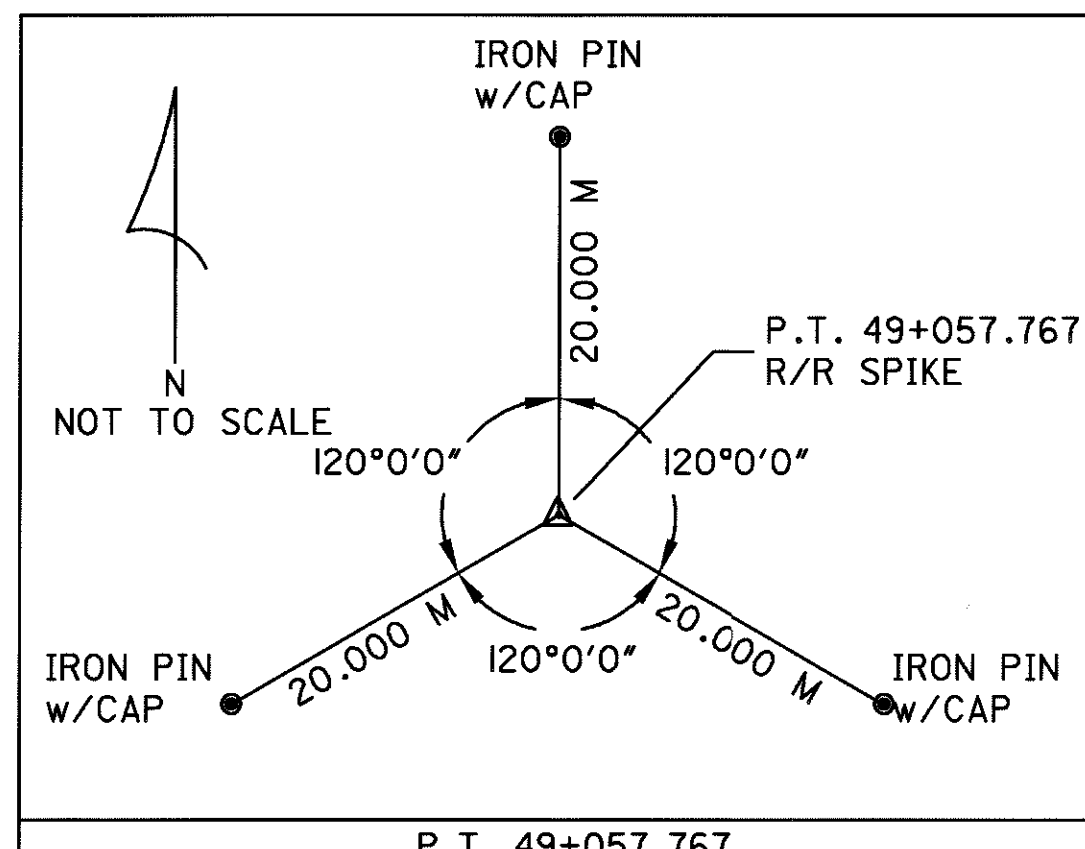
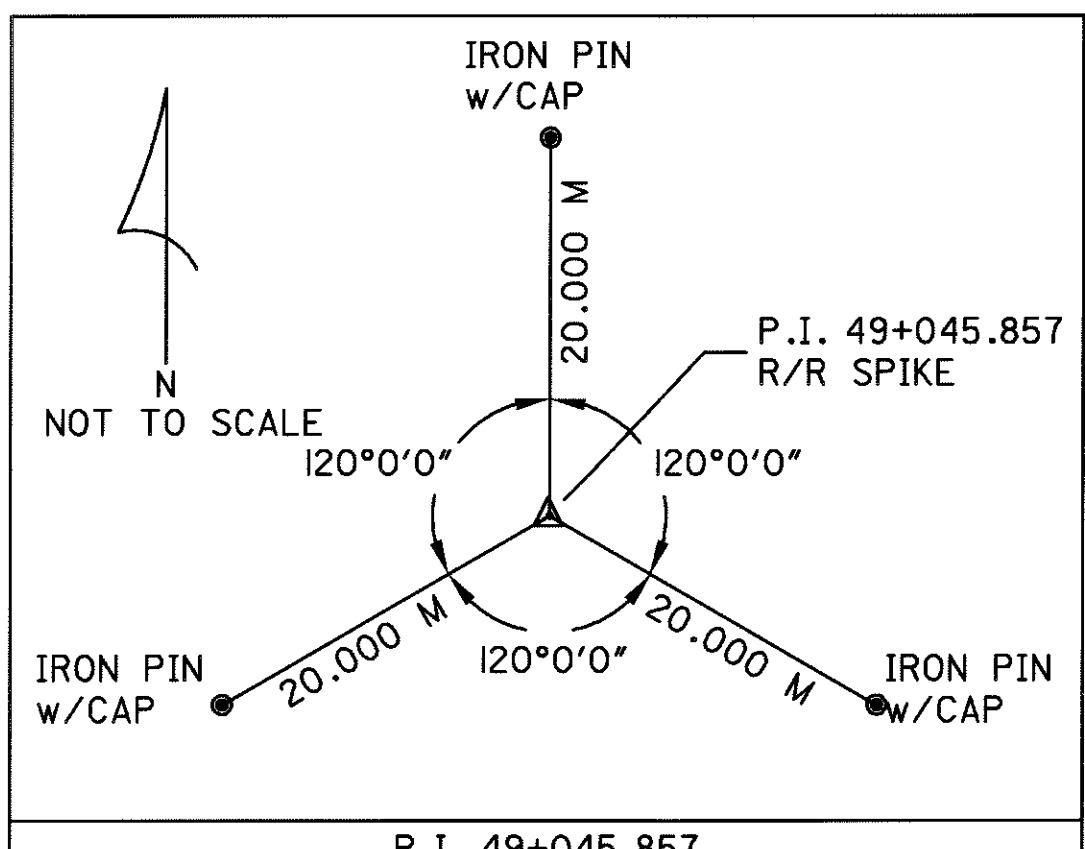
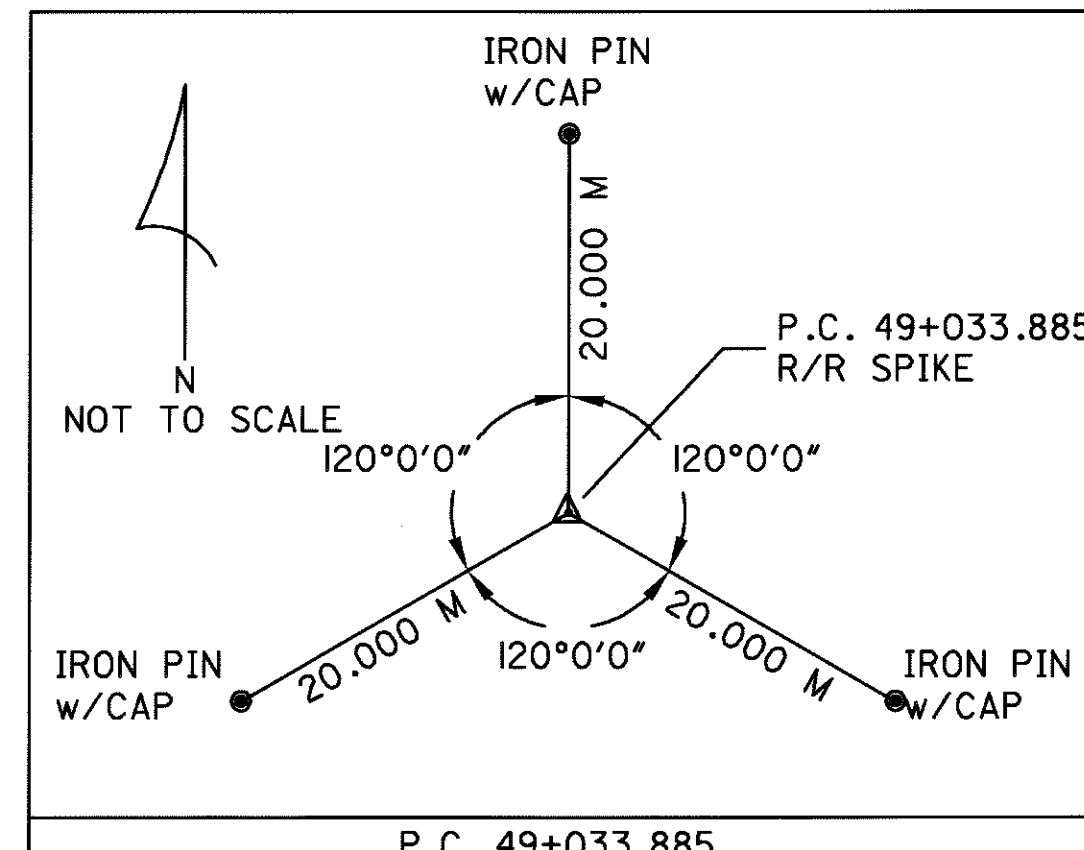
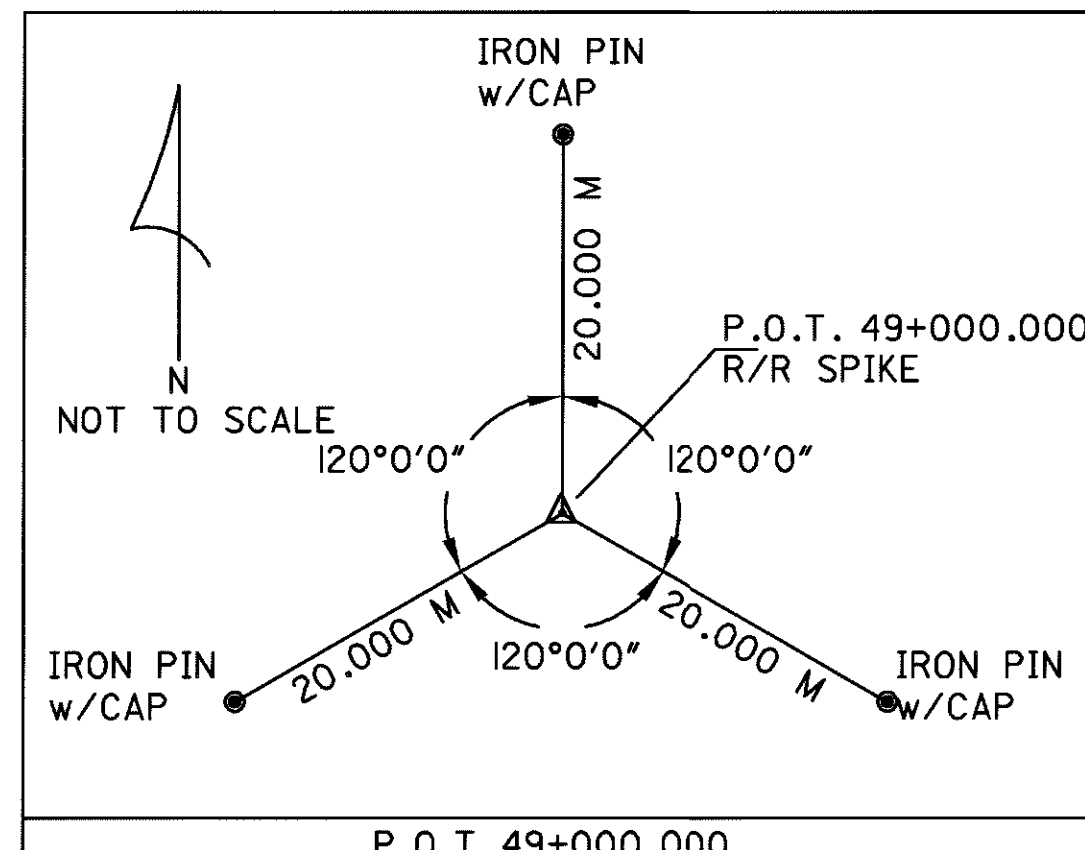
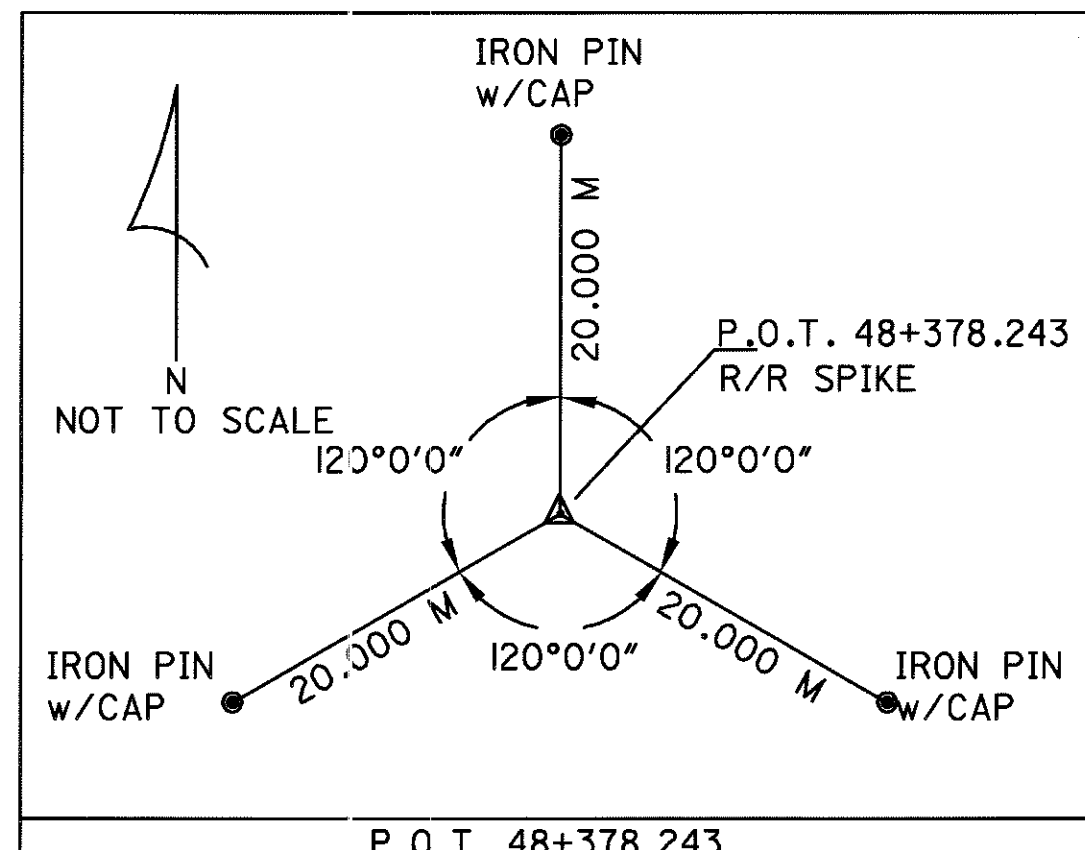
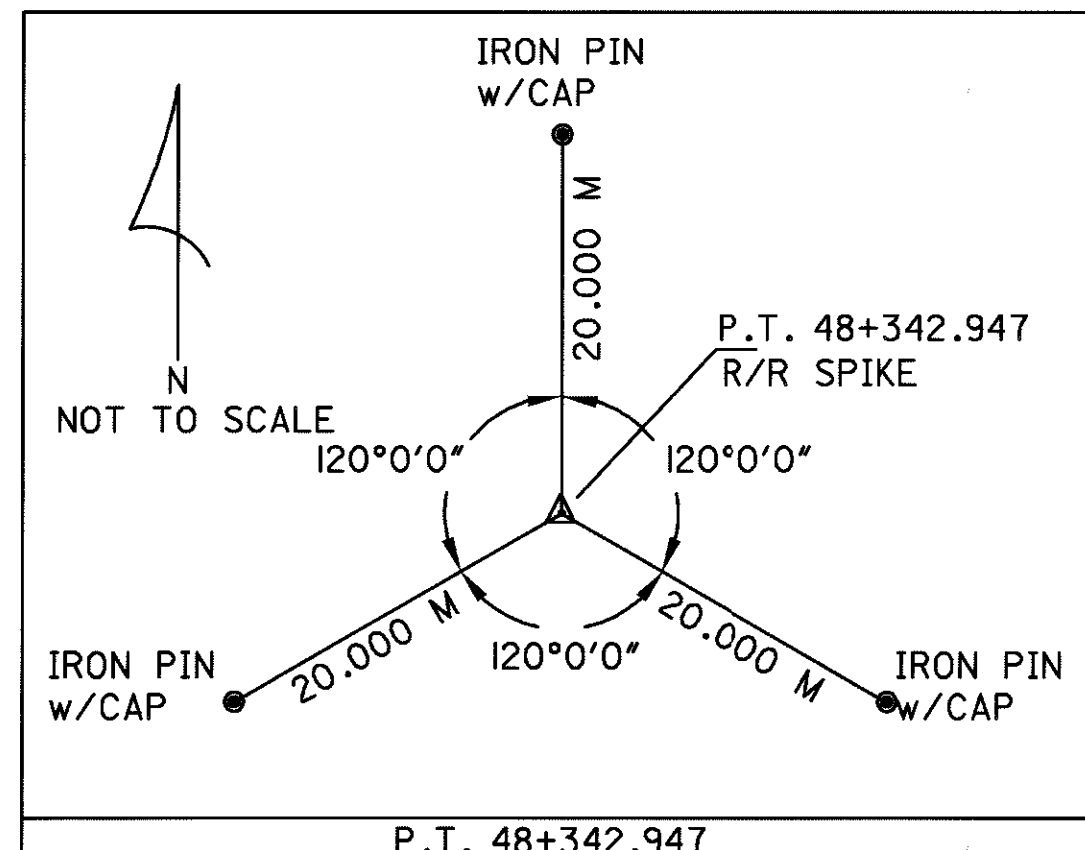
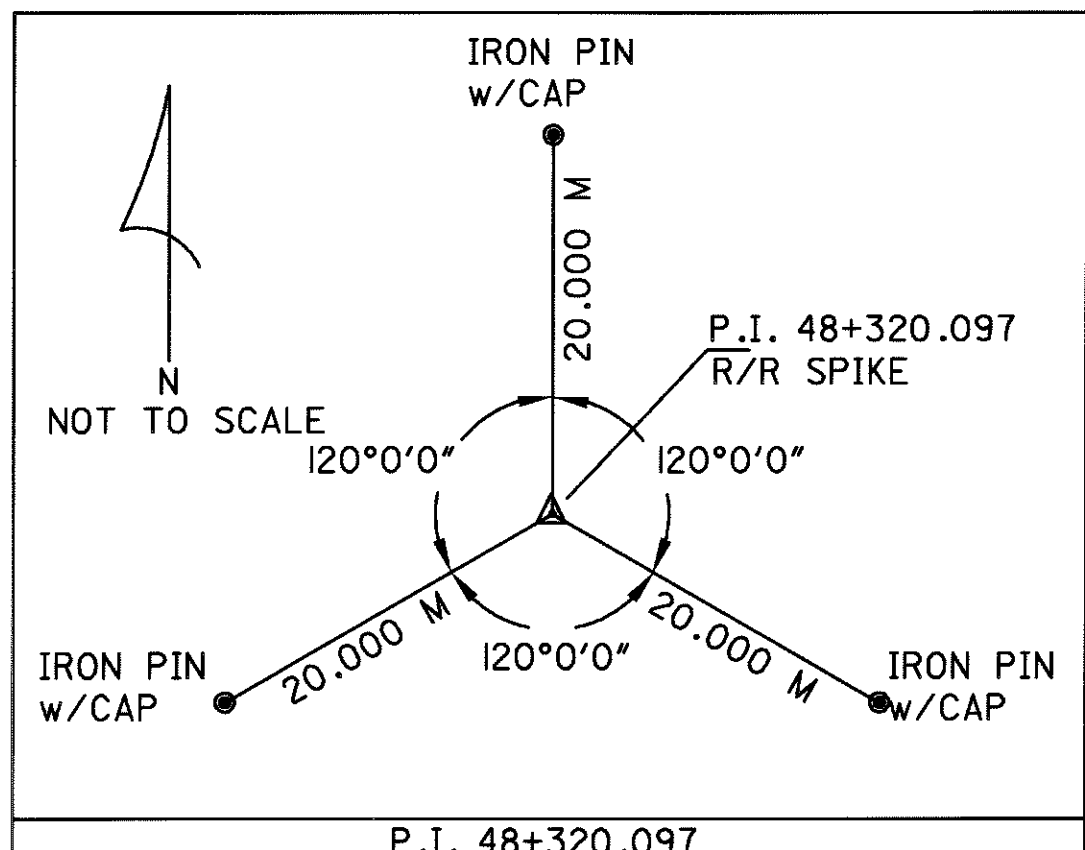
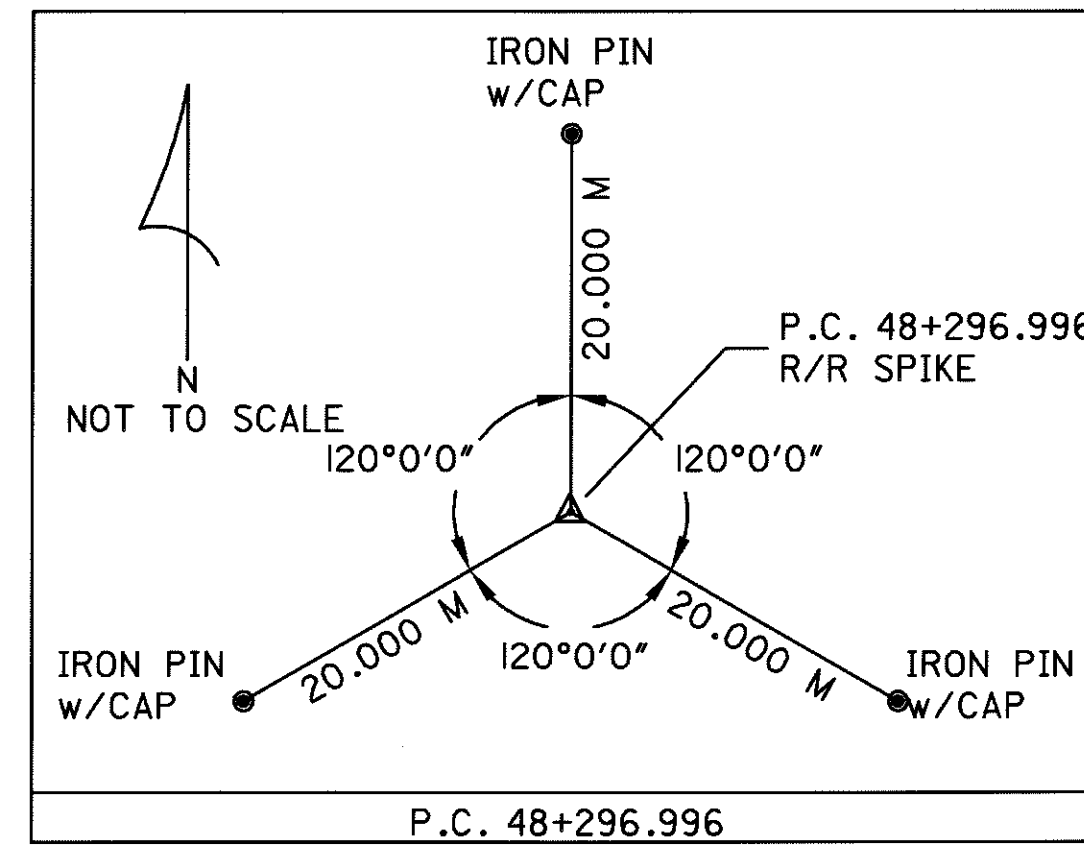
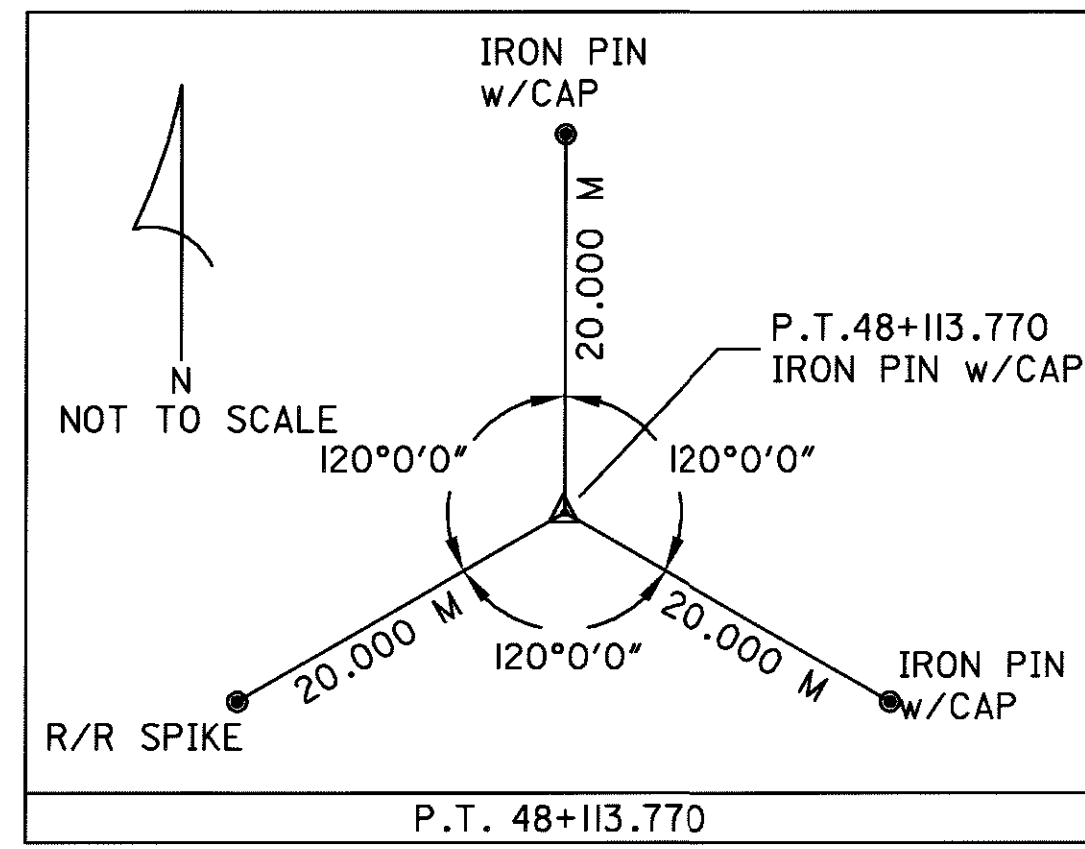
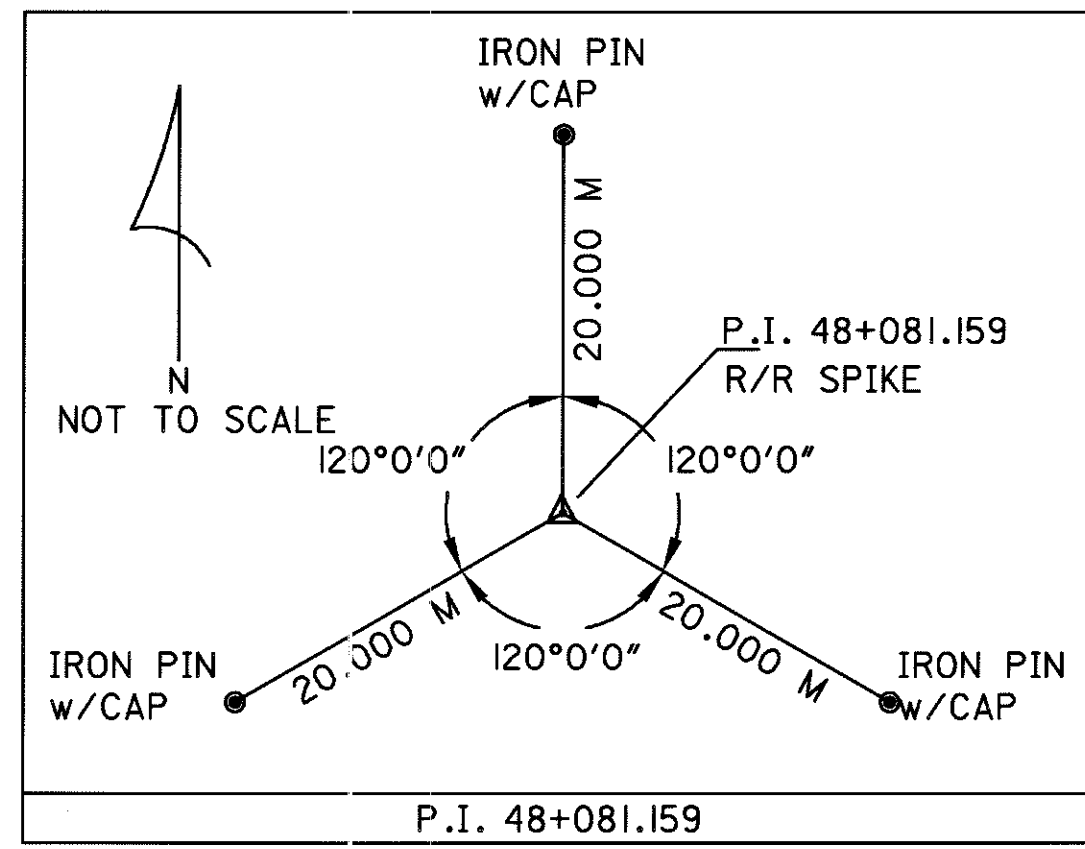
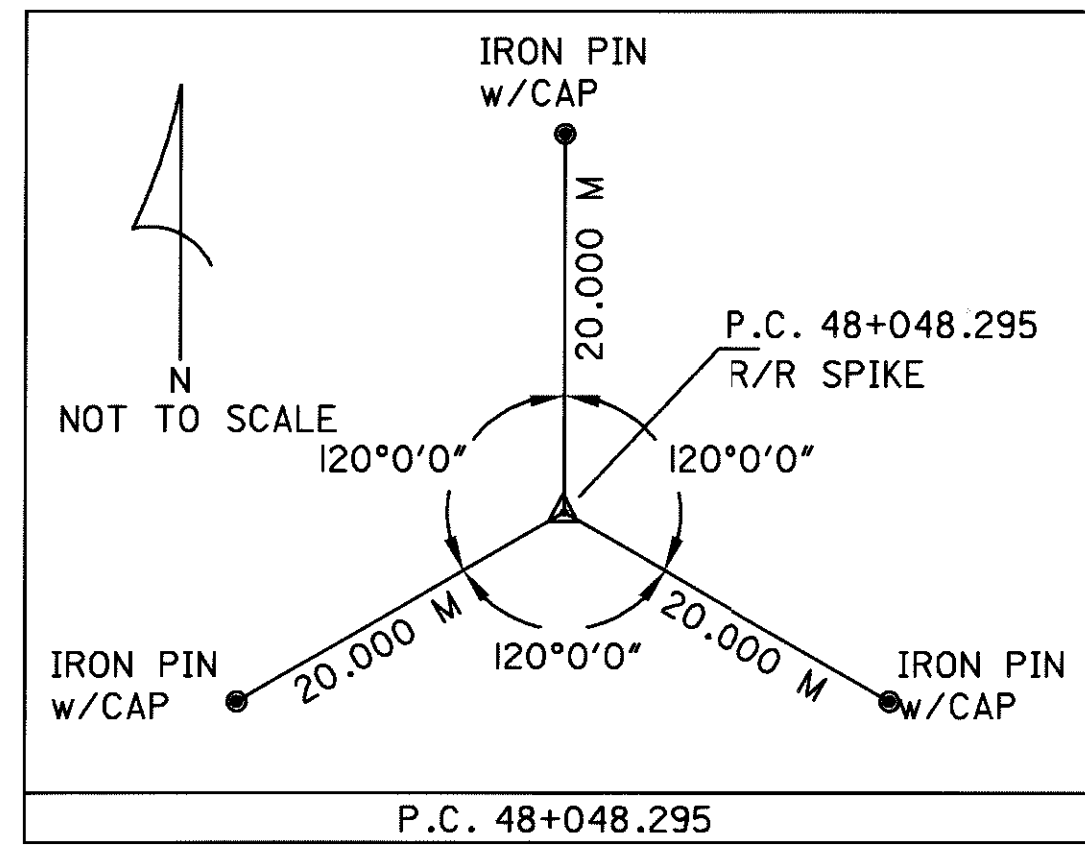
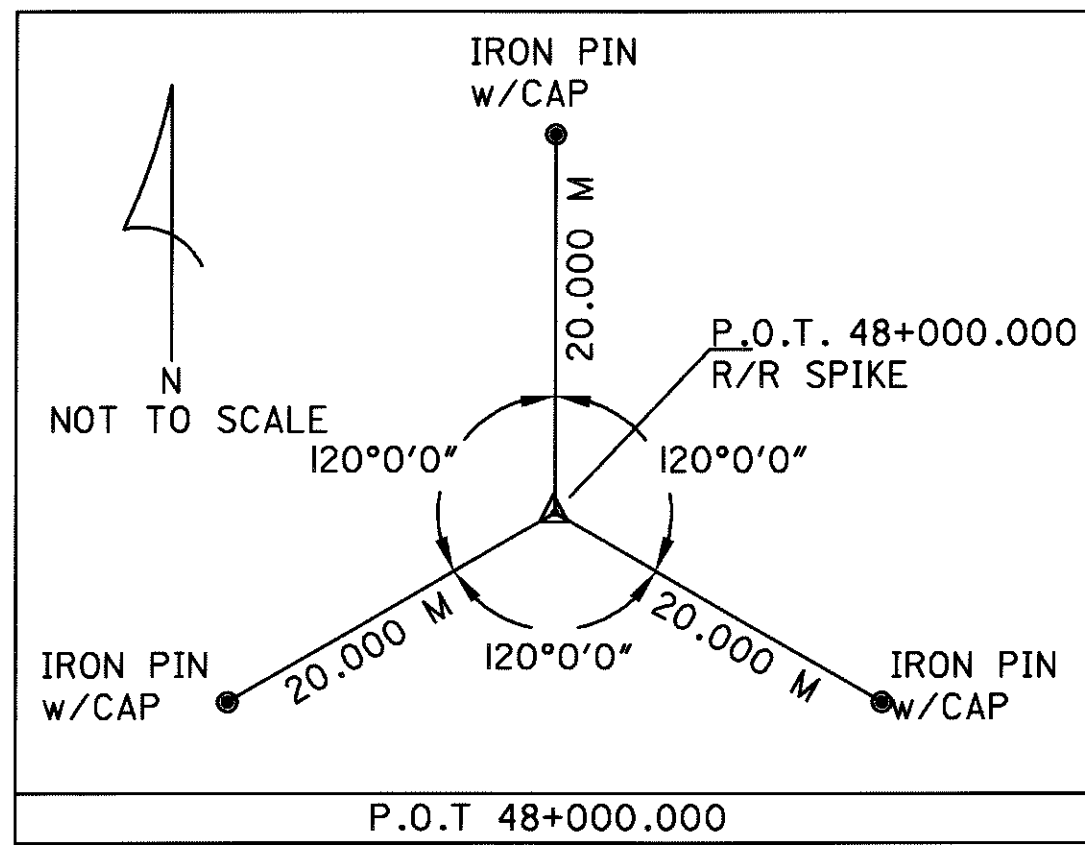
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US 33 CENTERLINE REFERENCES

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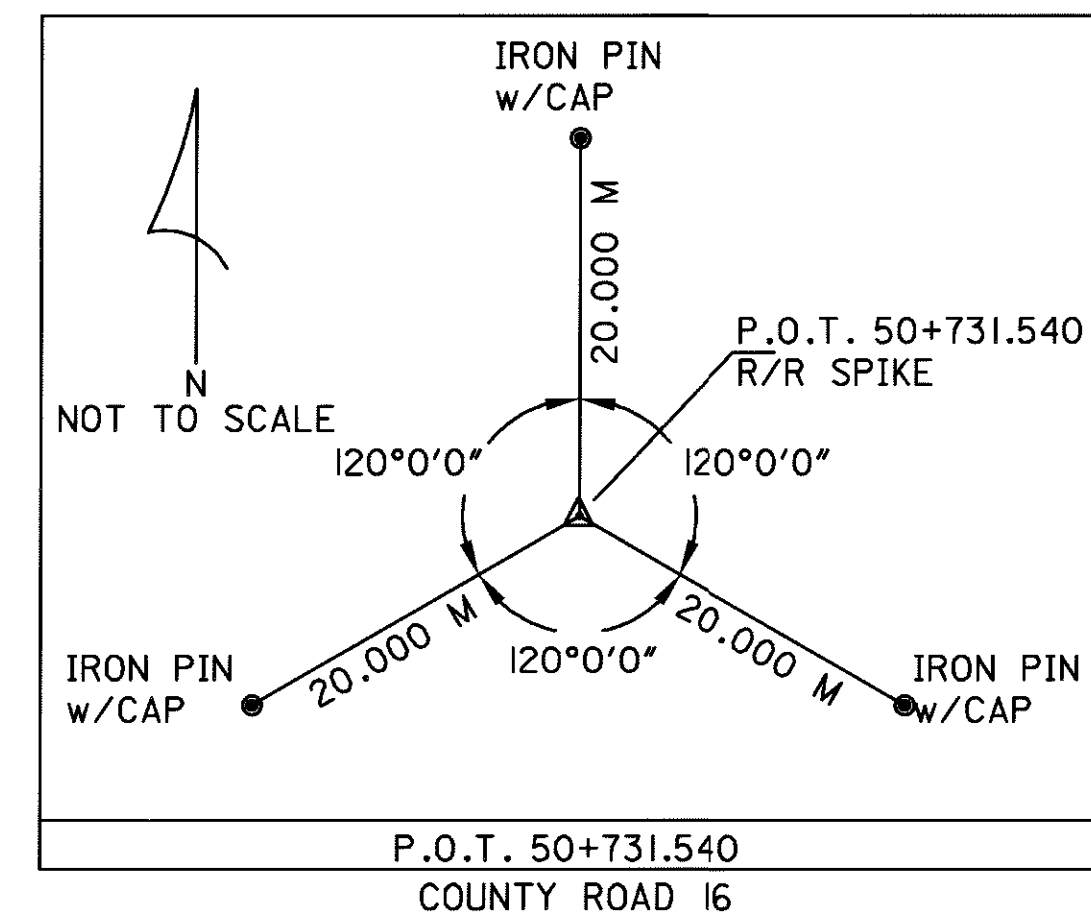
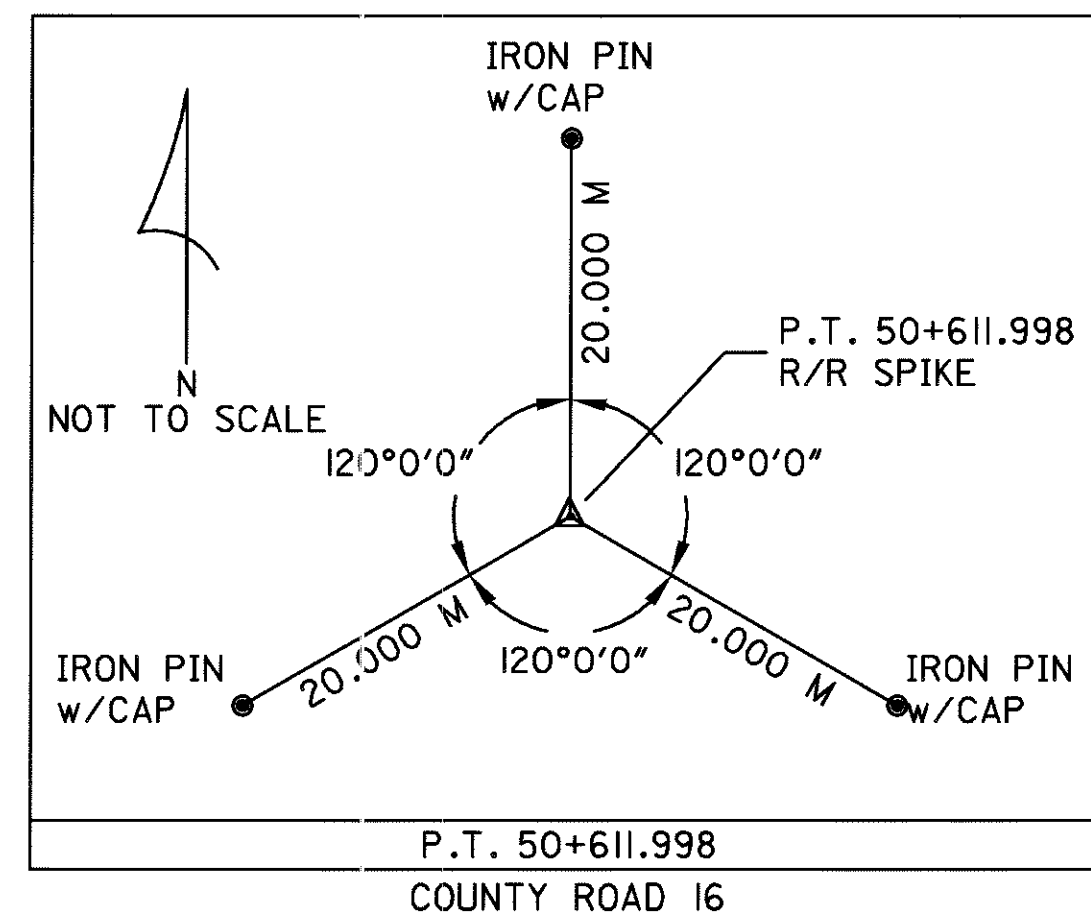
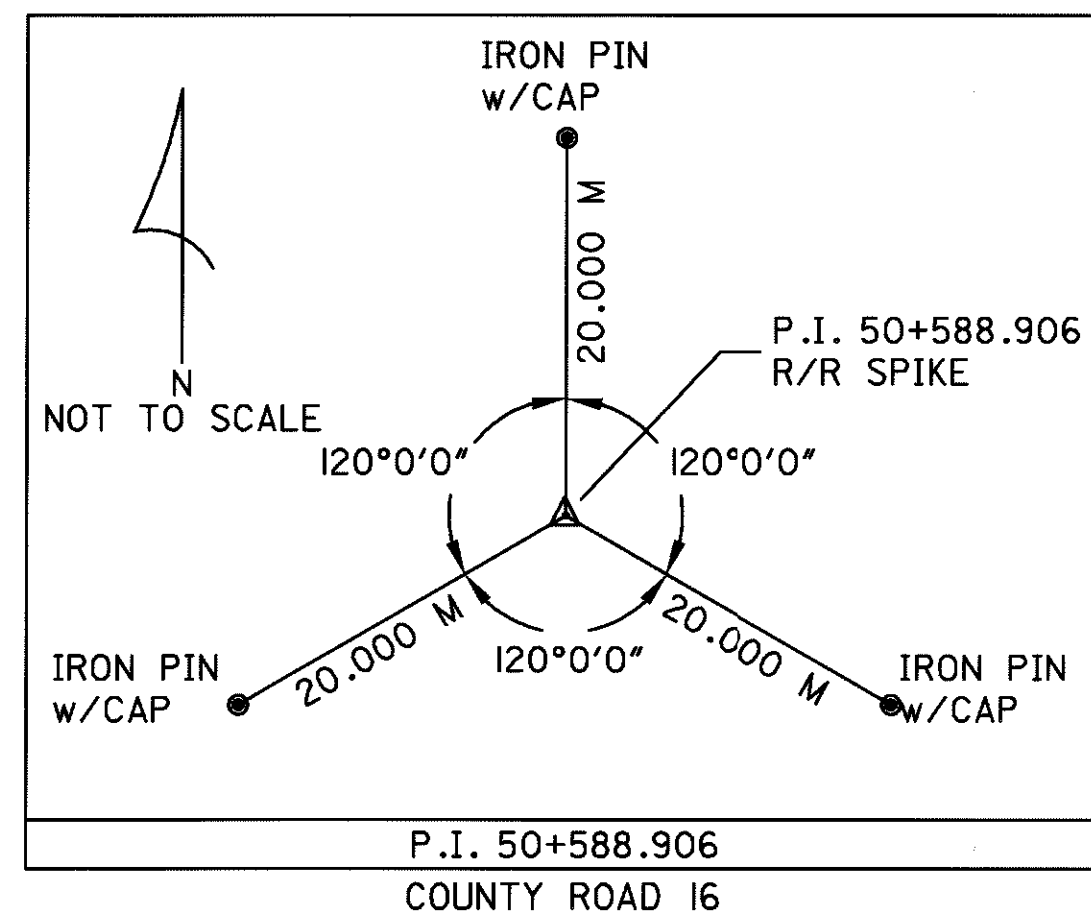
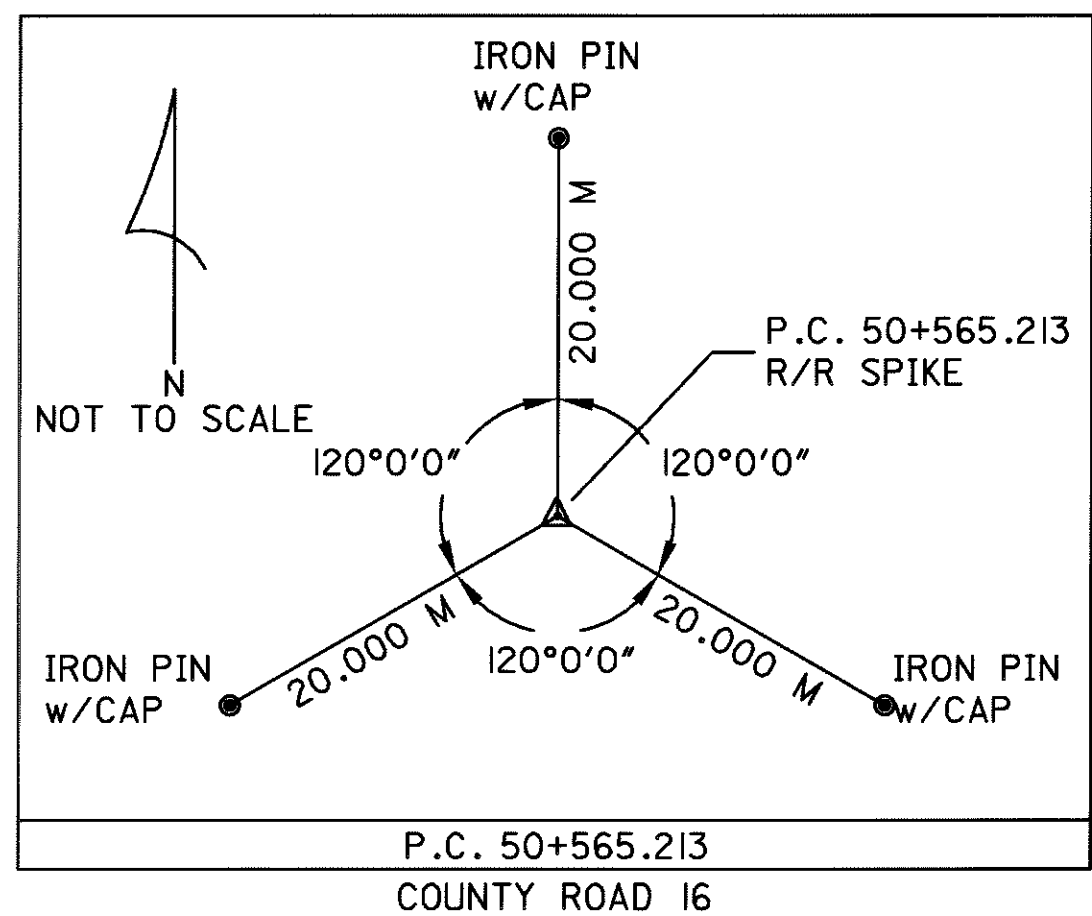
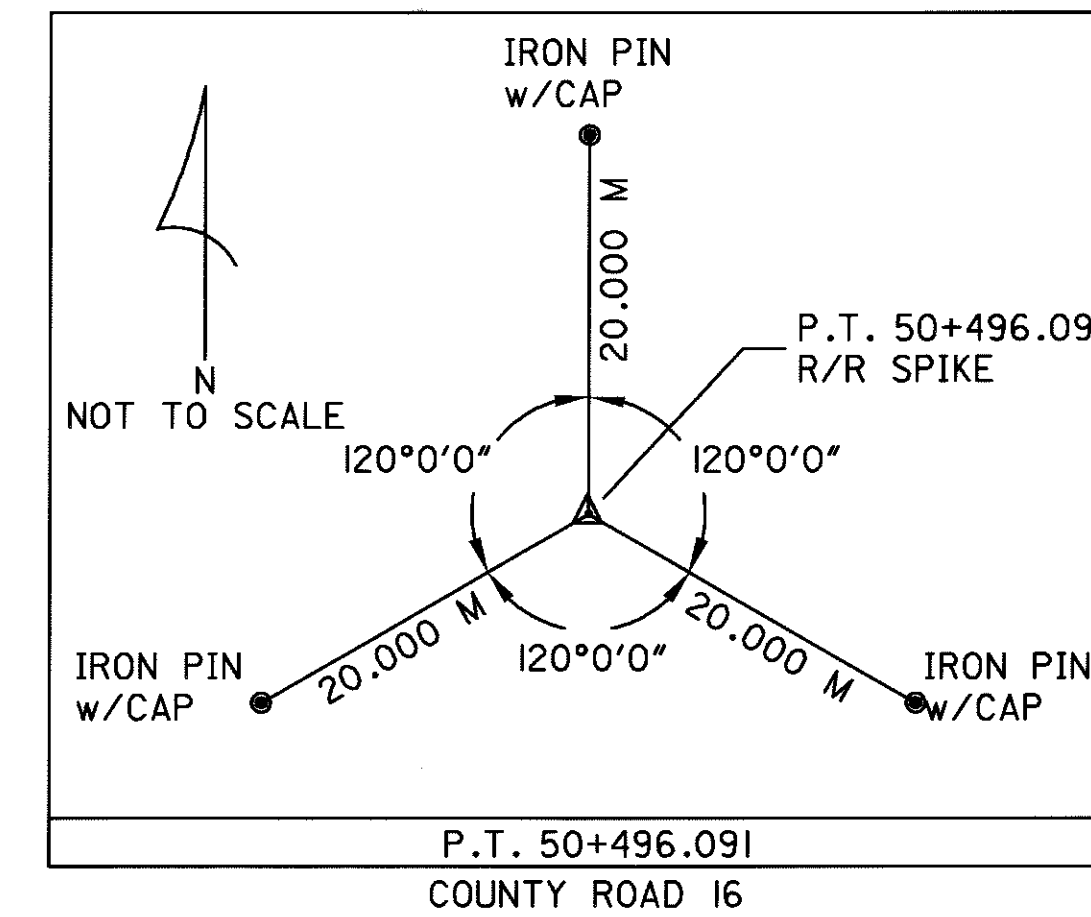
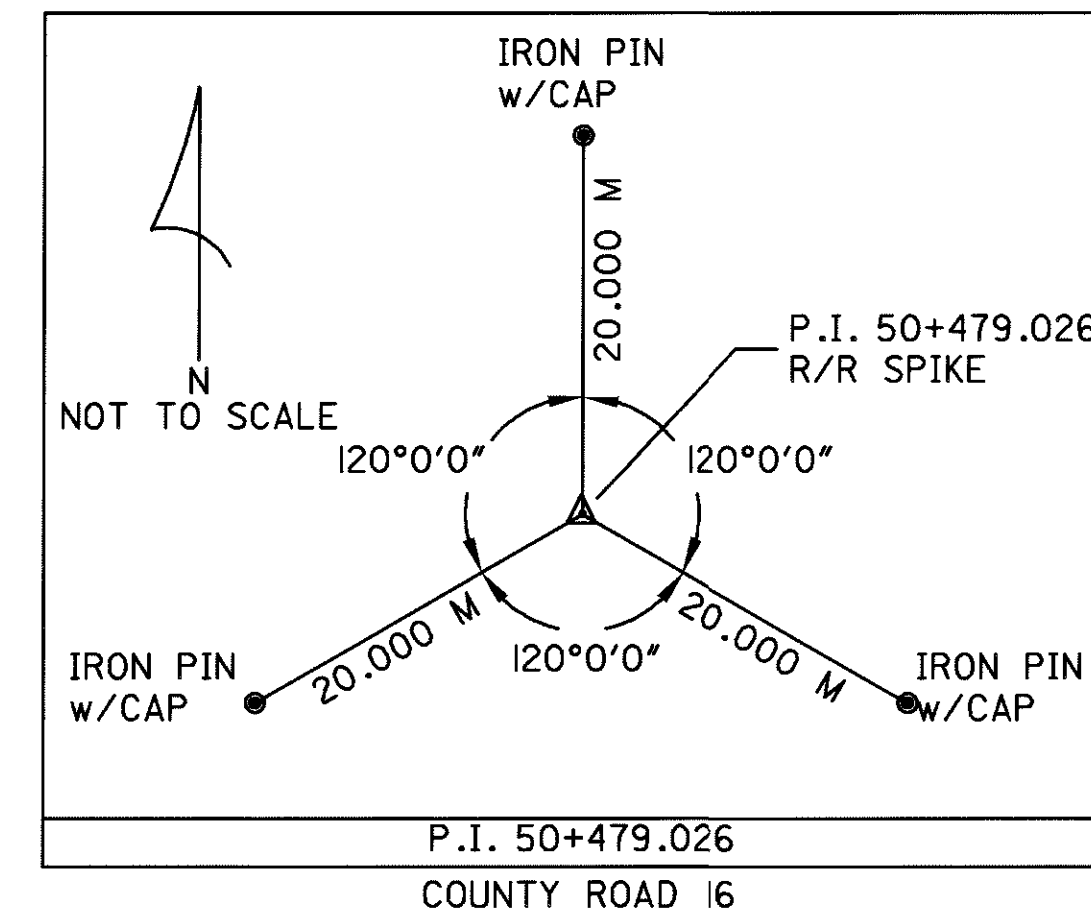
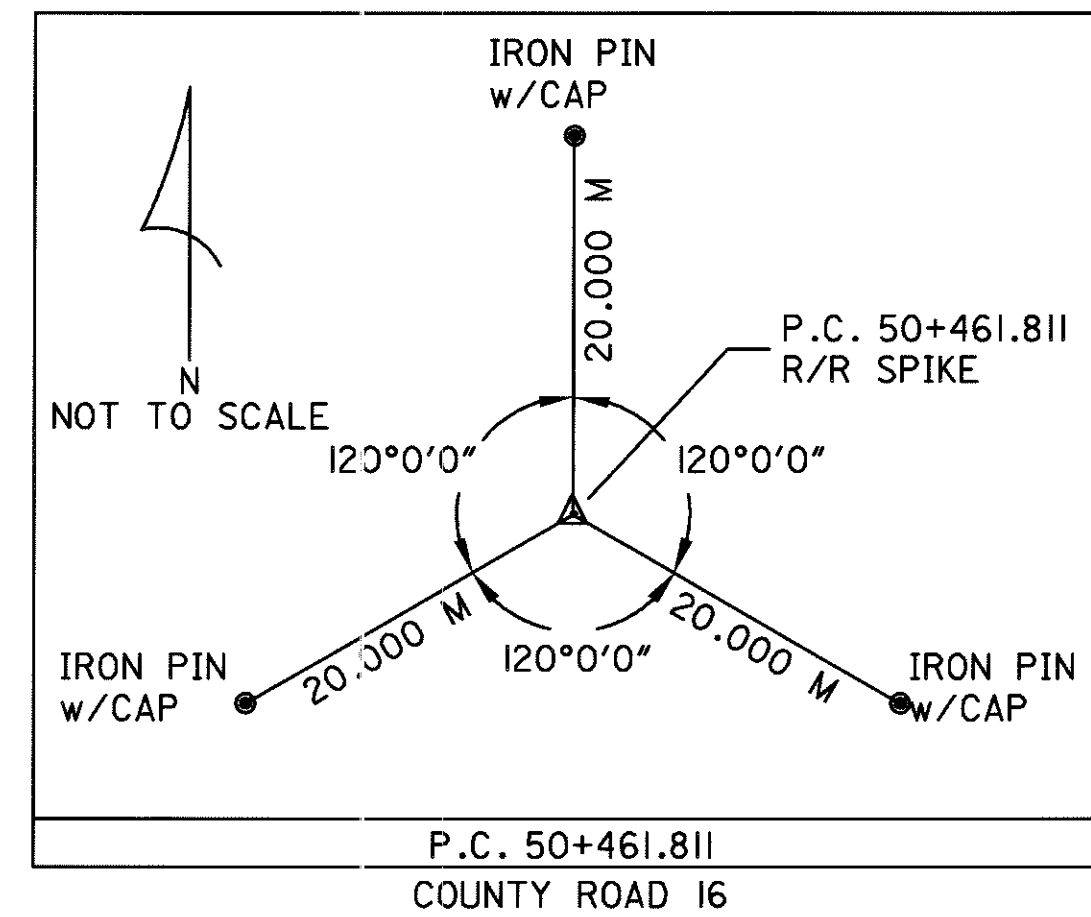
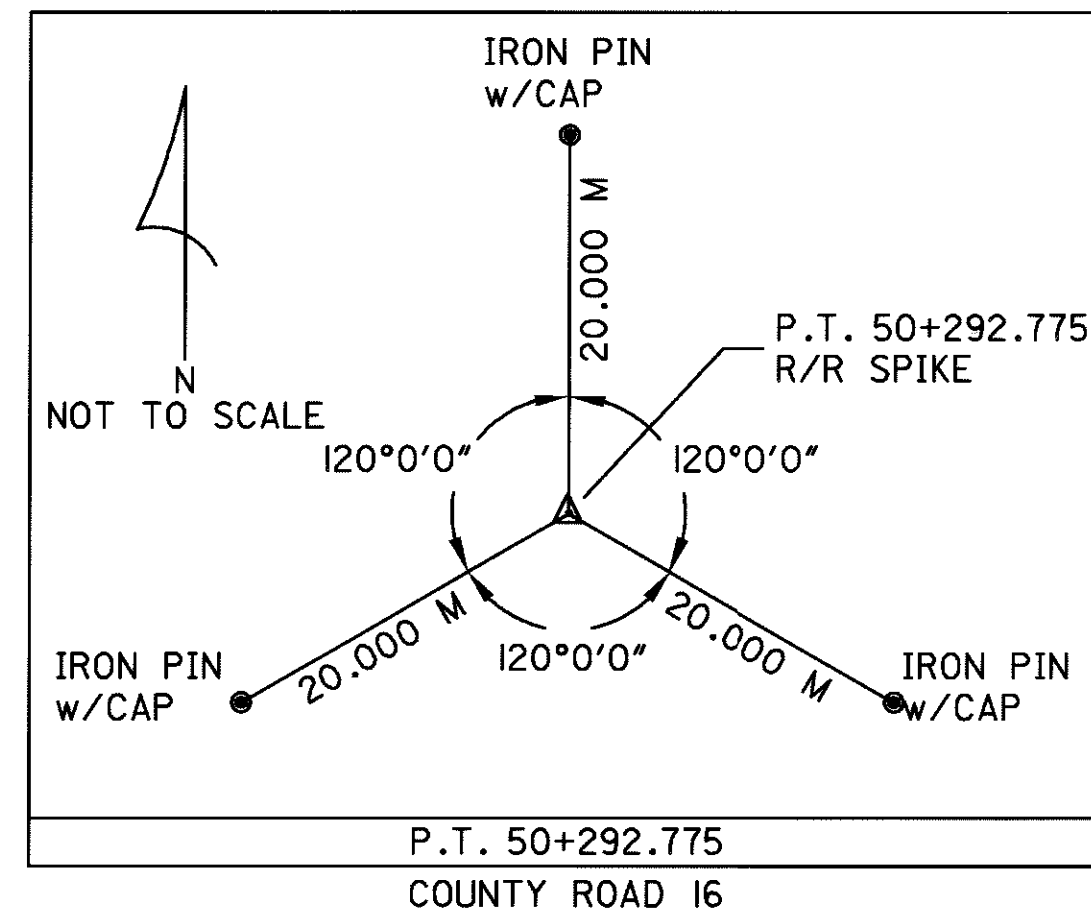
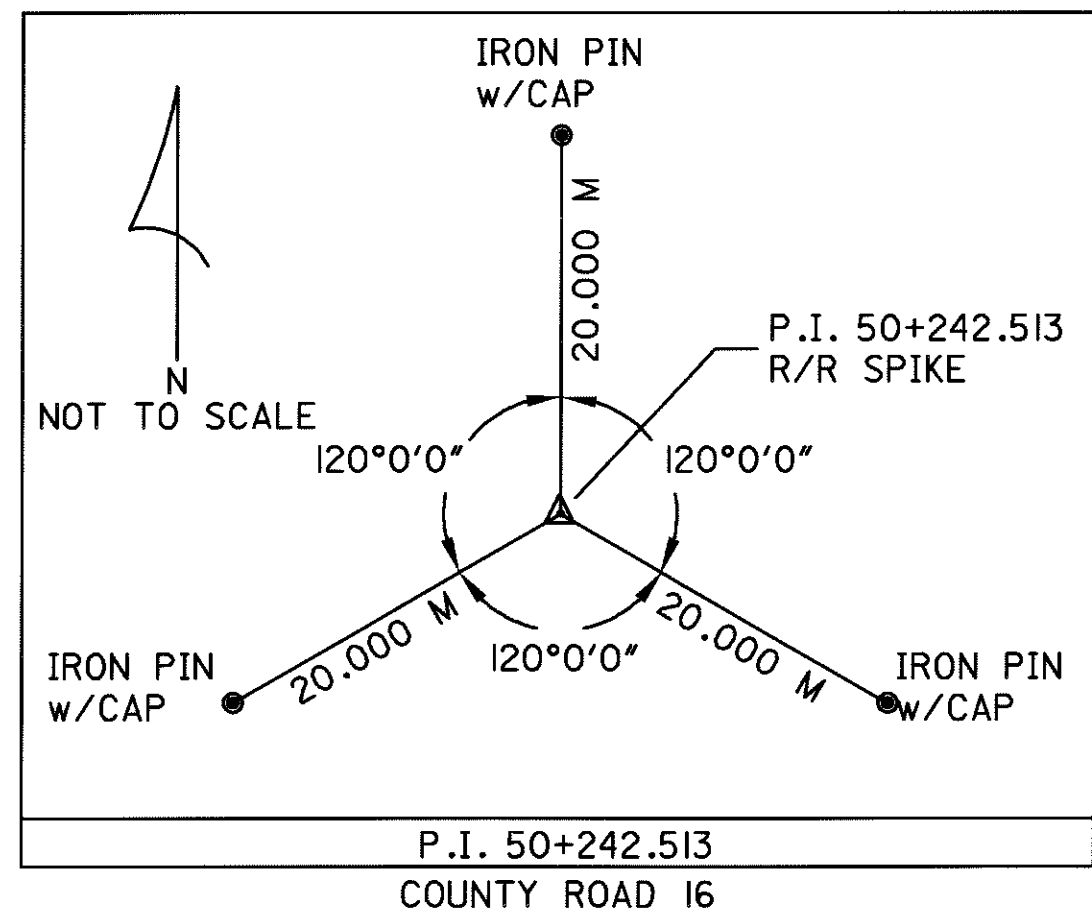
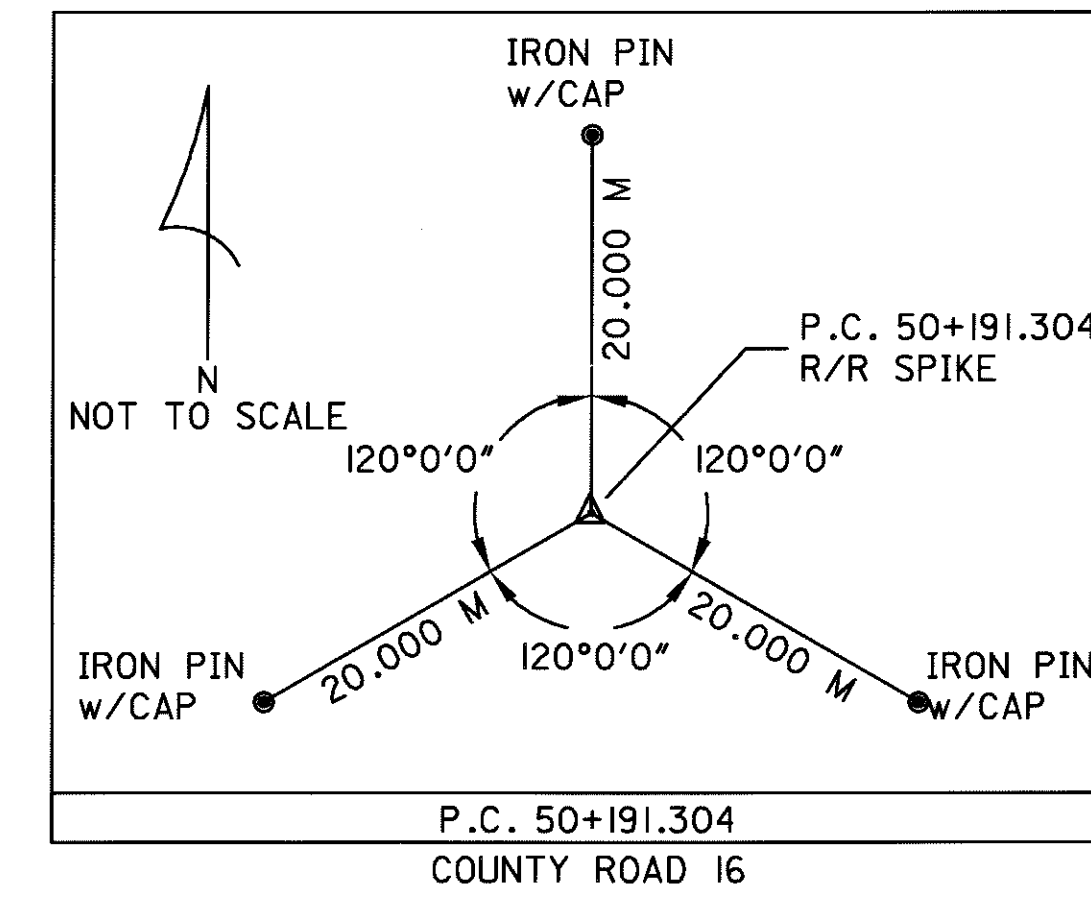
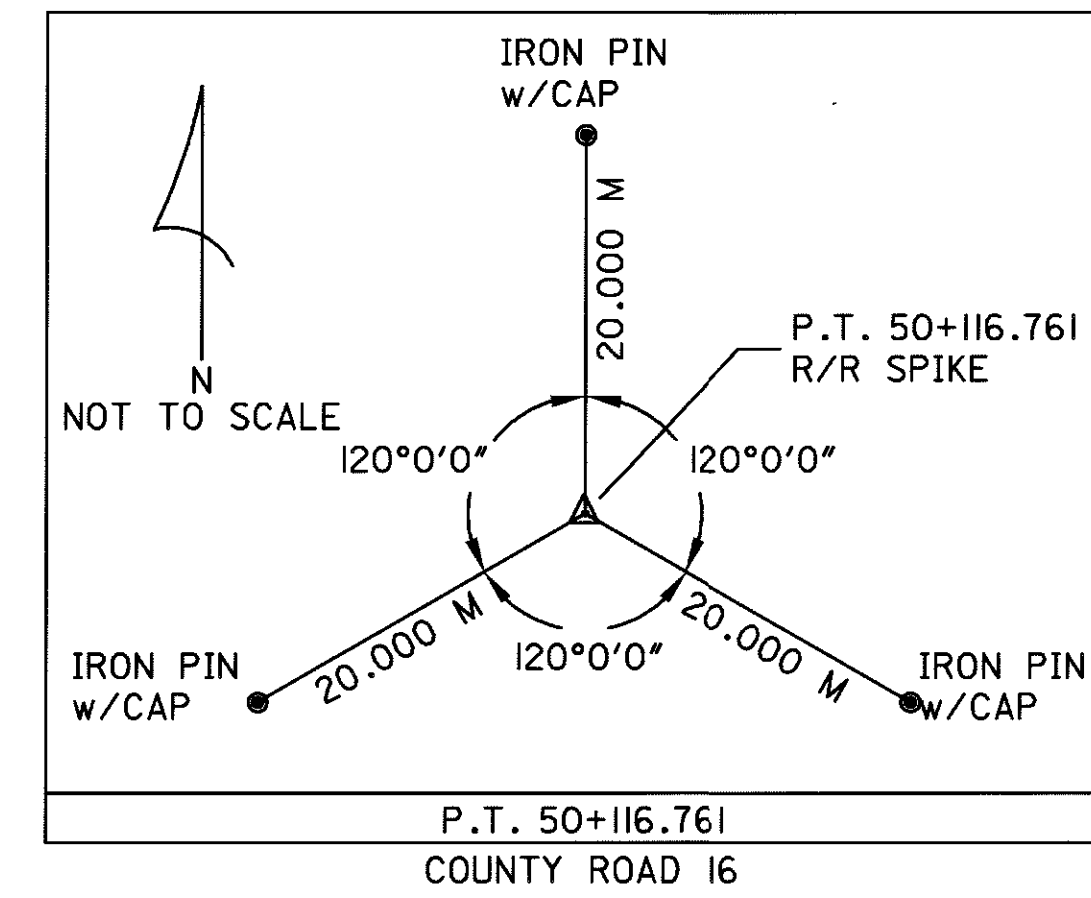
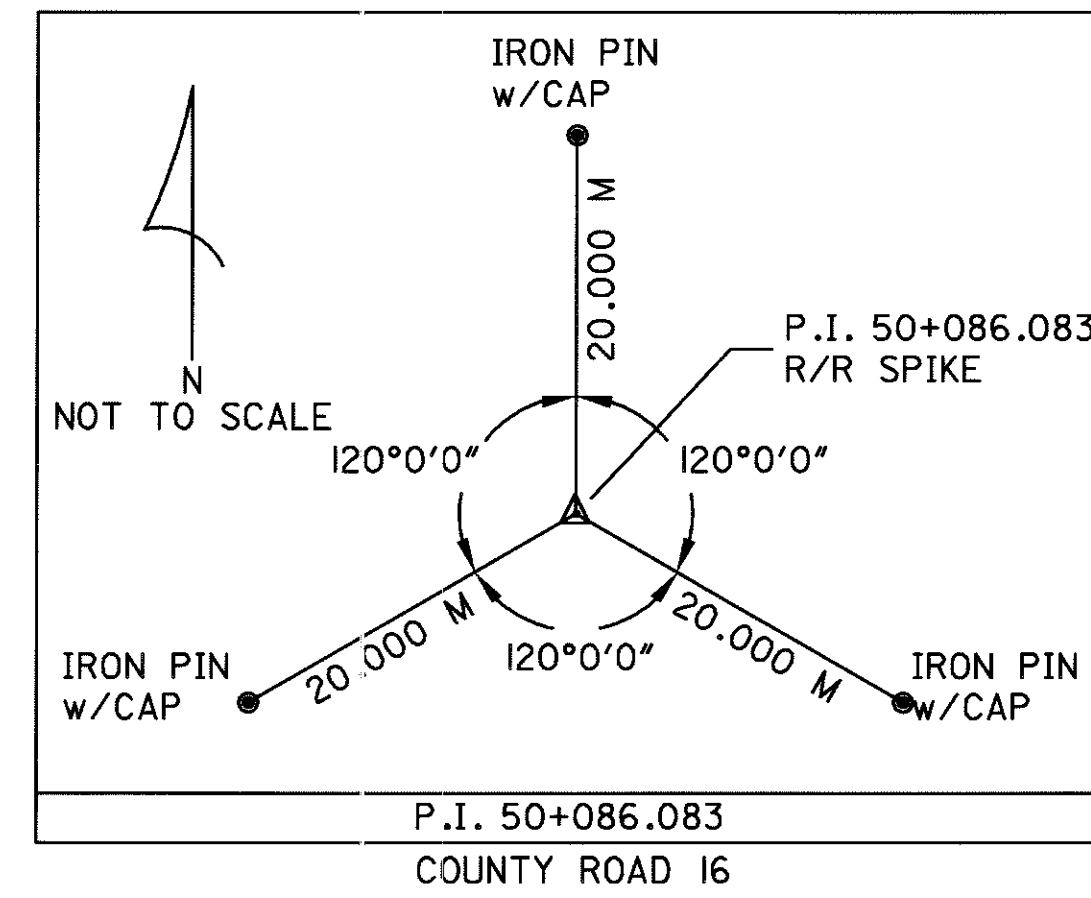
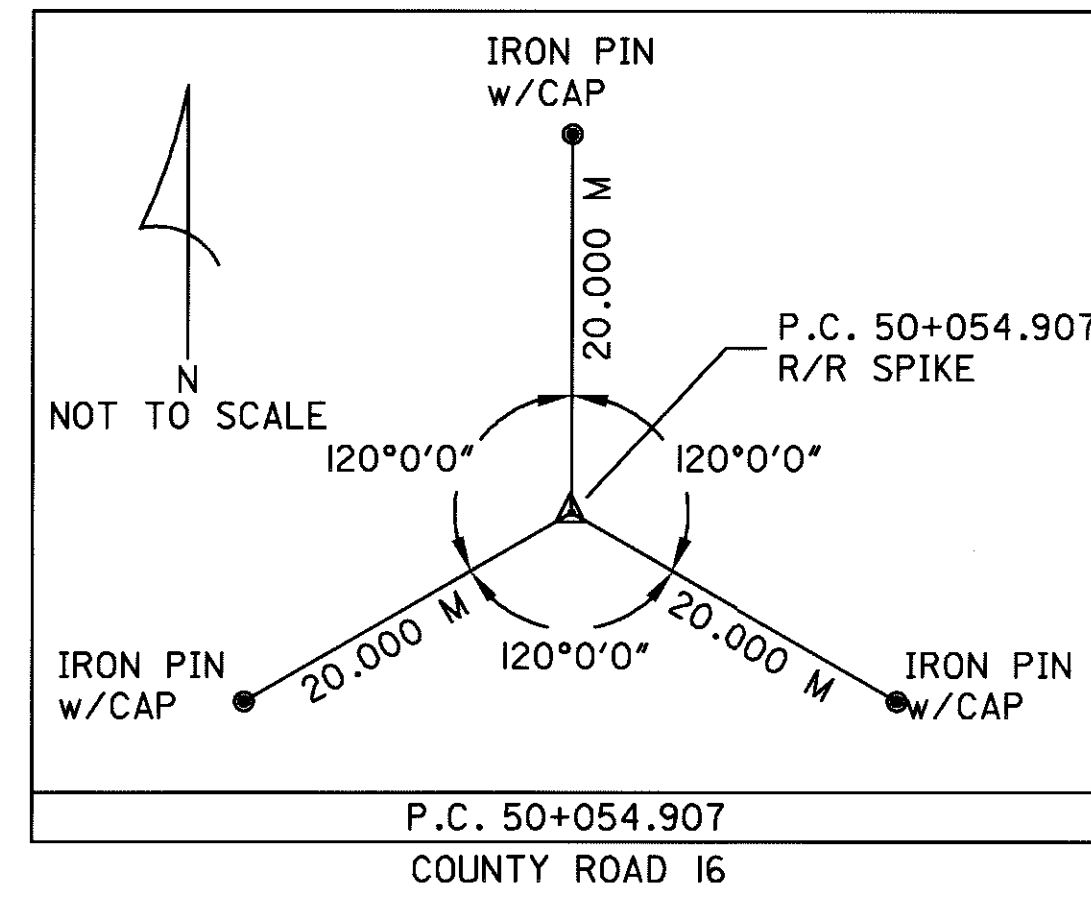
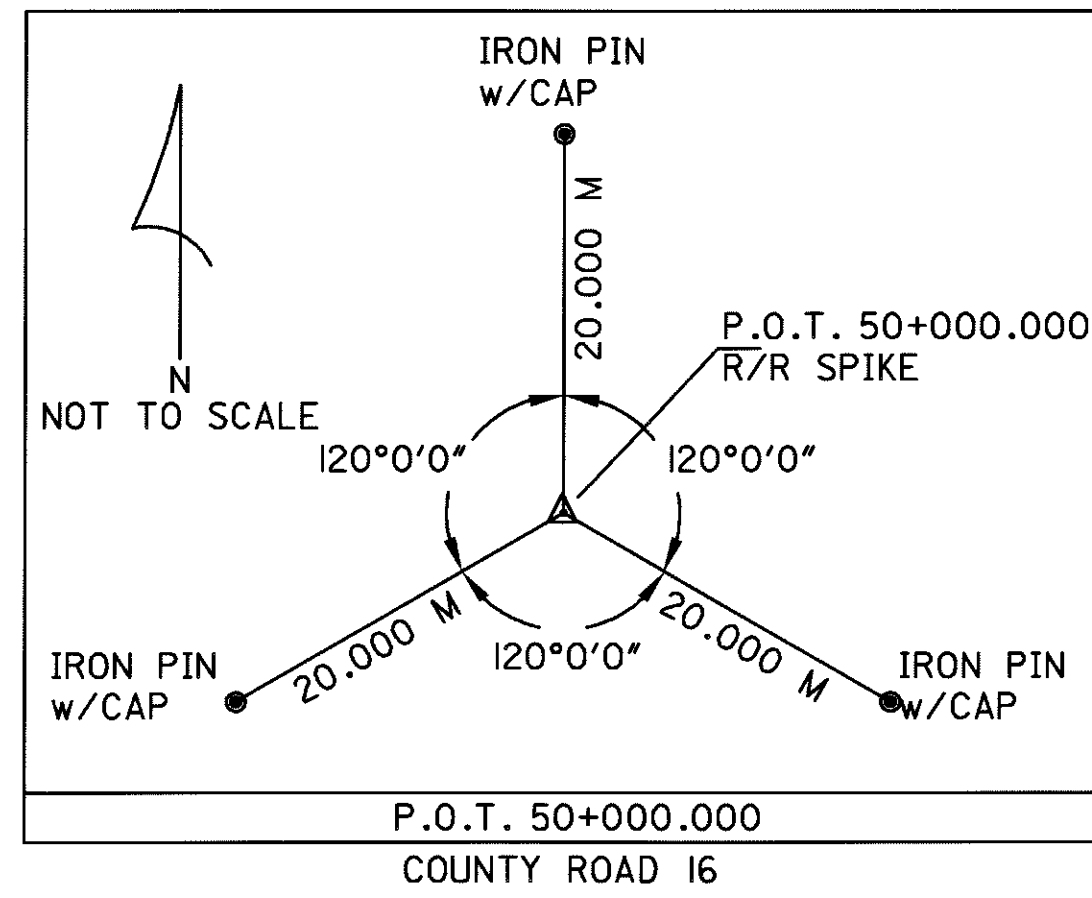
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**CENTERLINE REFERENCES**

**ATH-33-30.981**

NOTE: SEE COORDINATE TABLE



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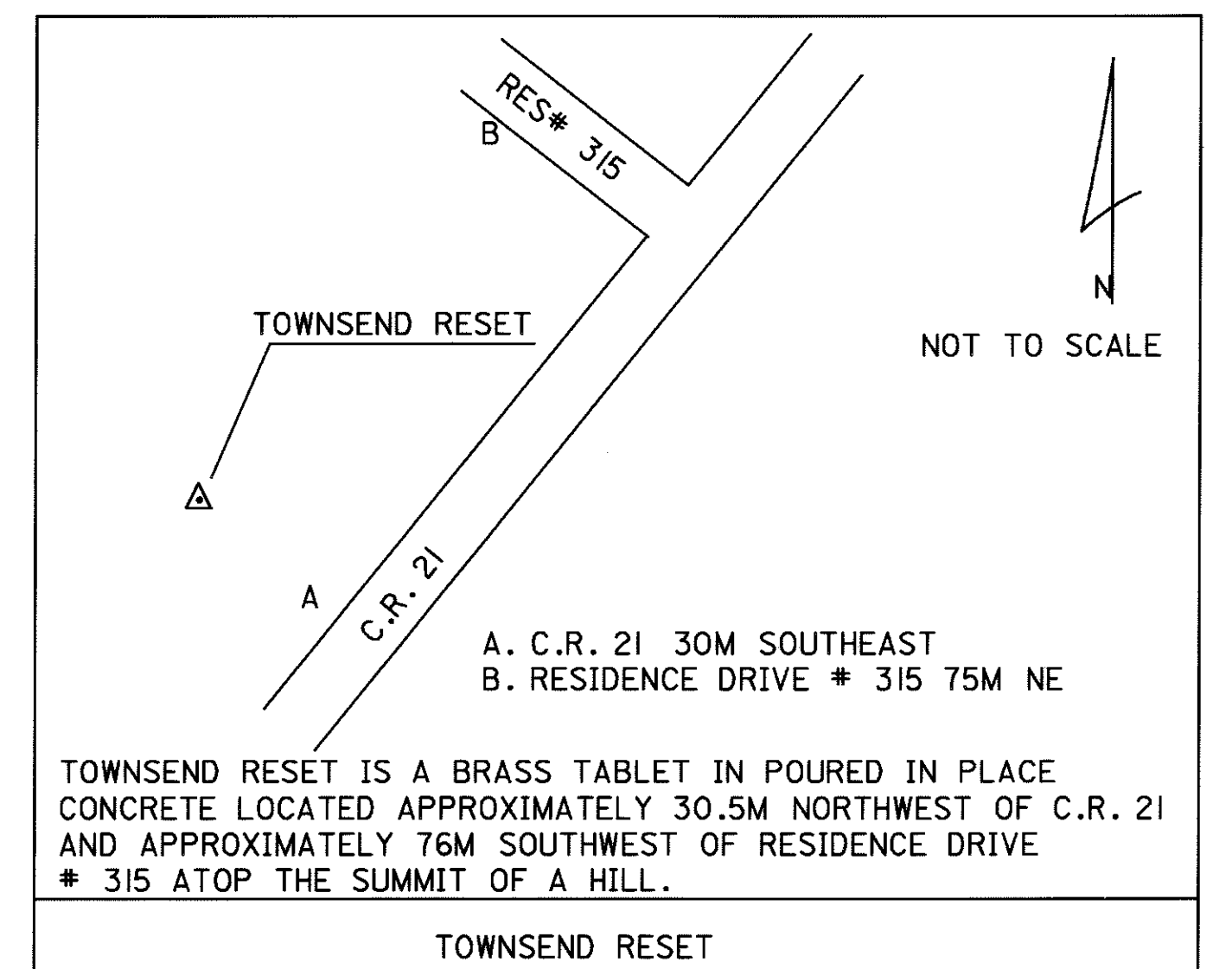
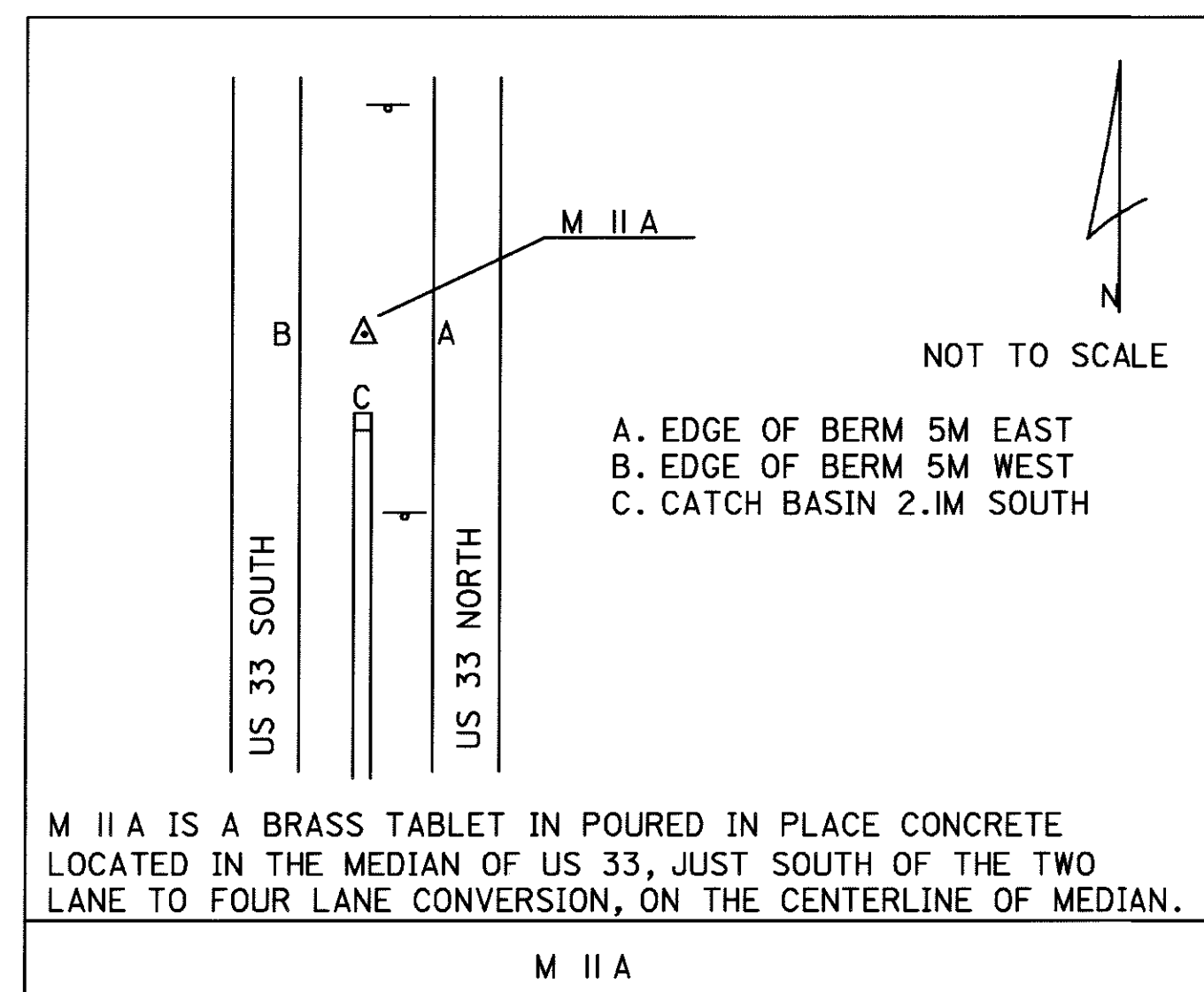
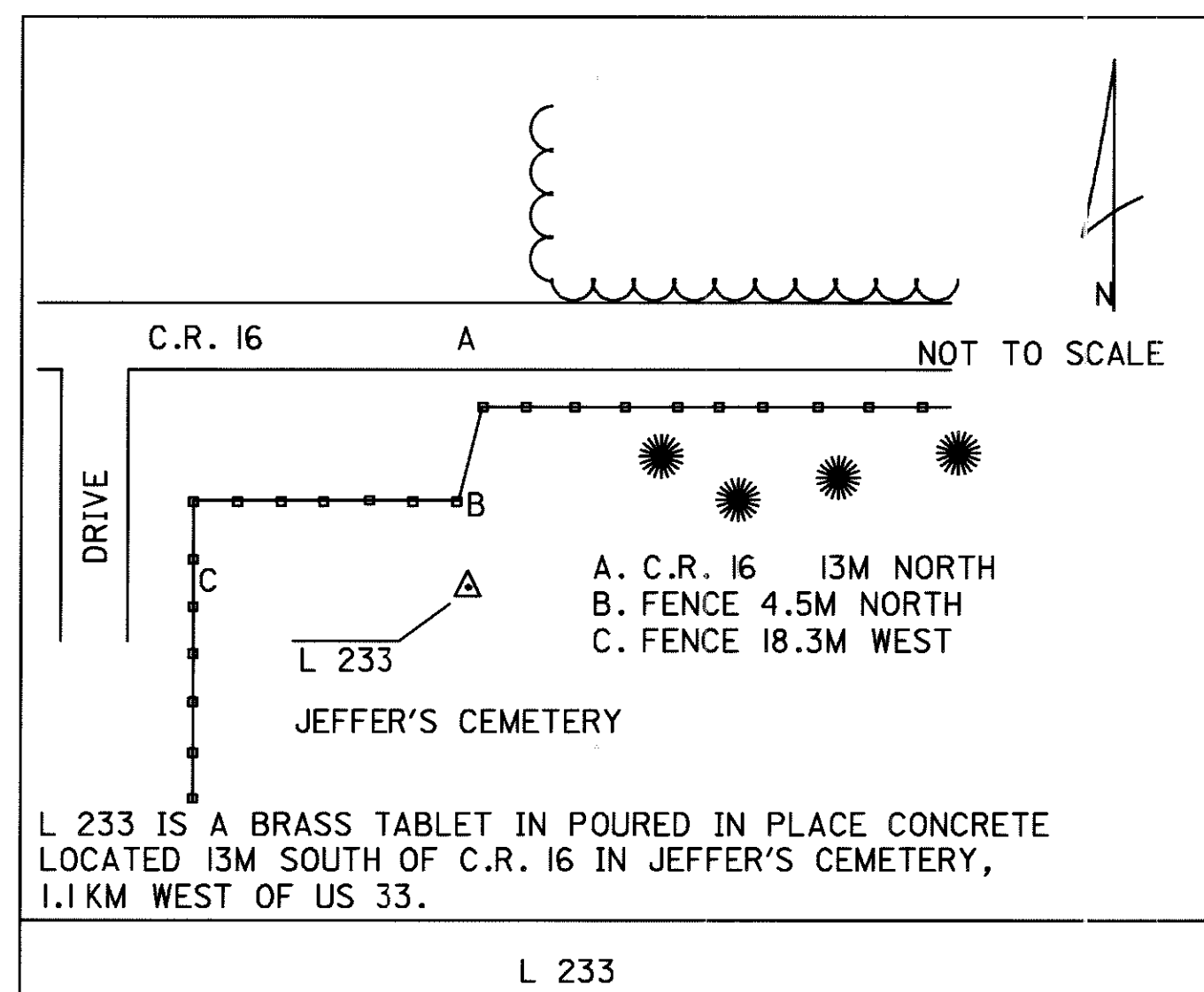
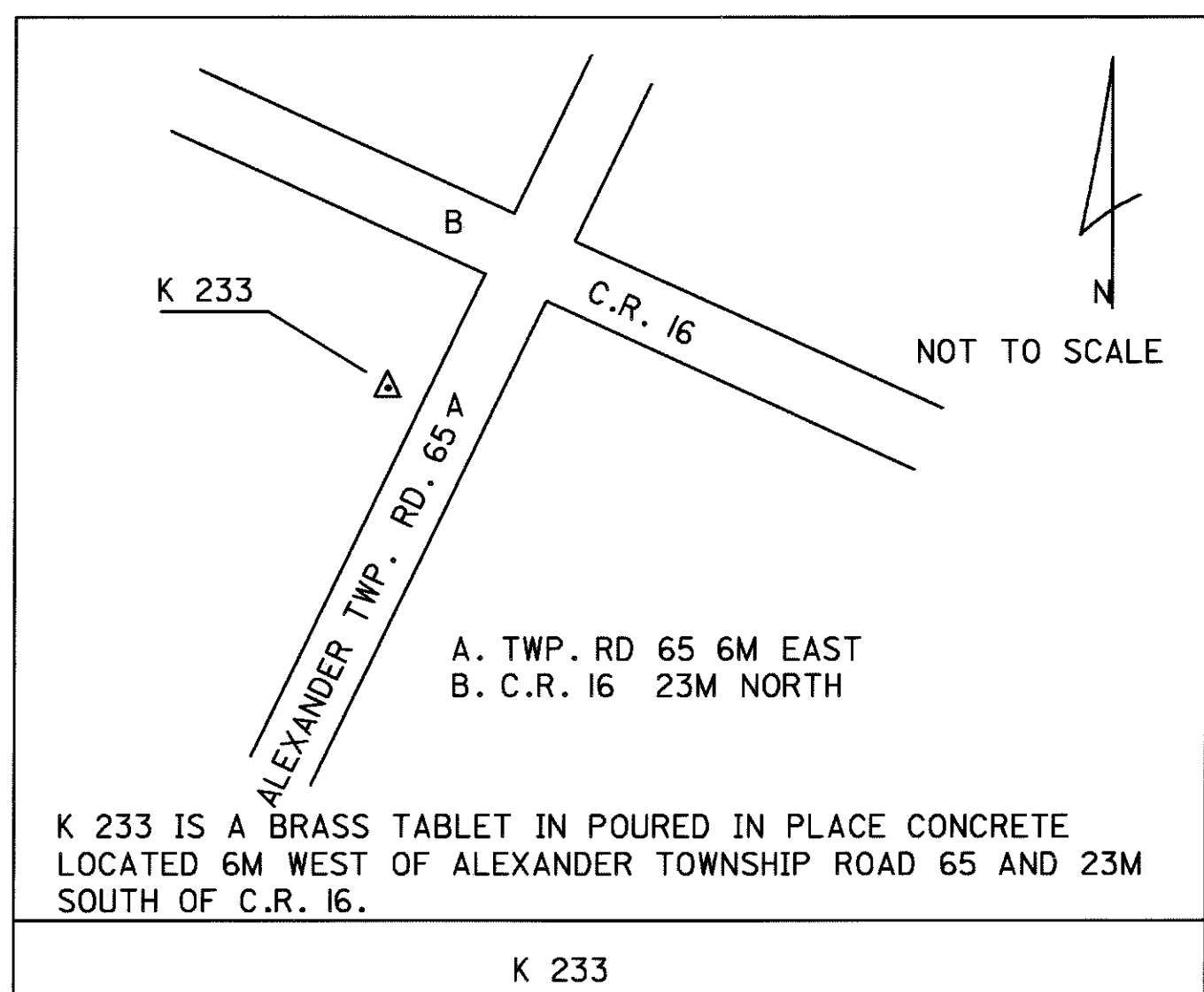
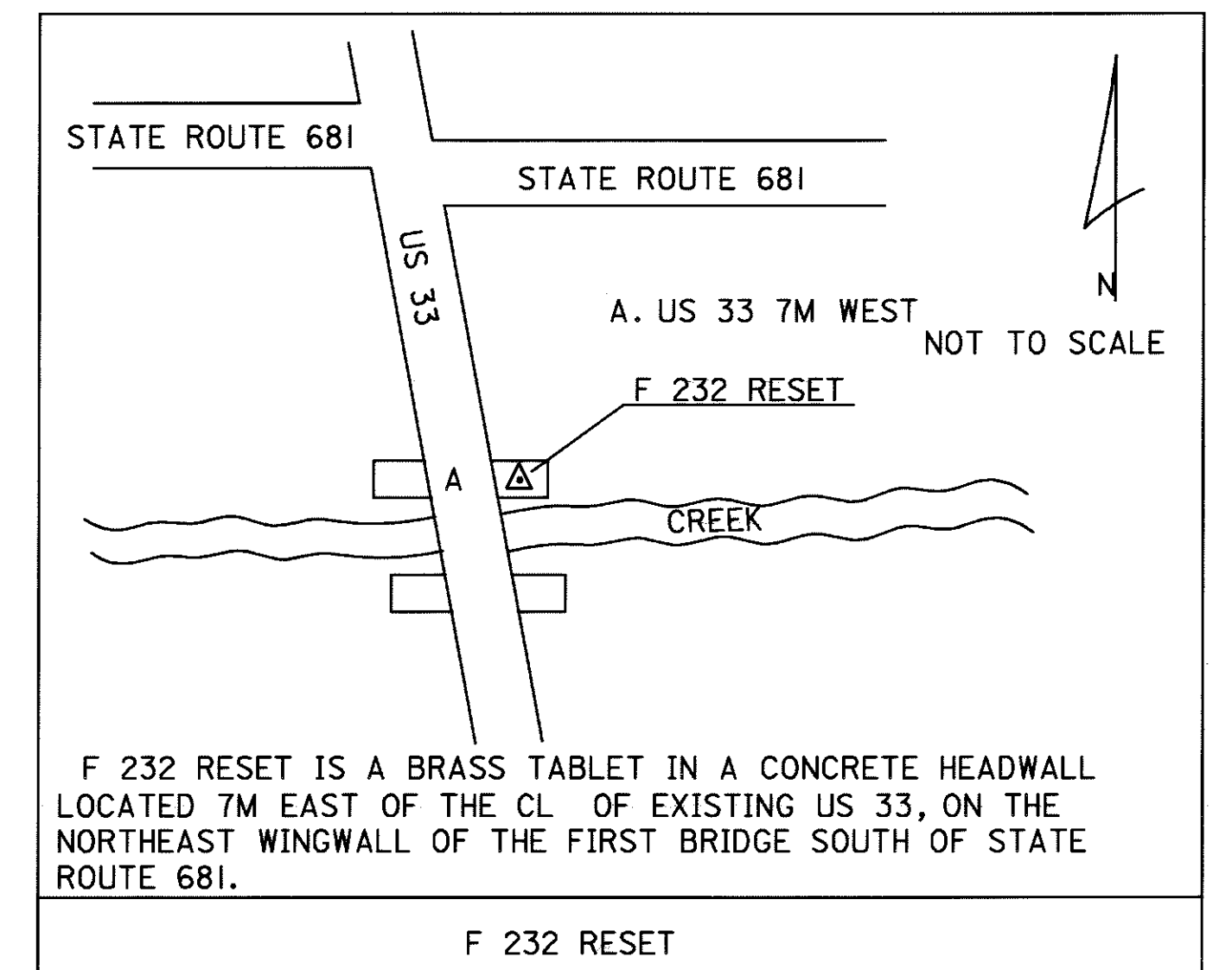
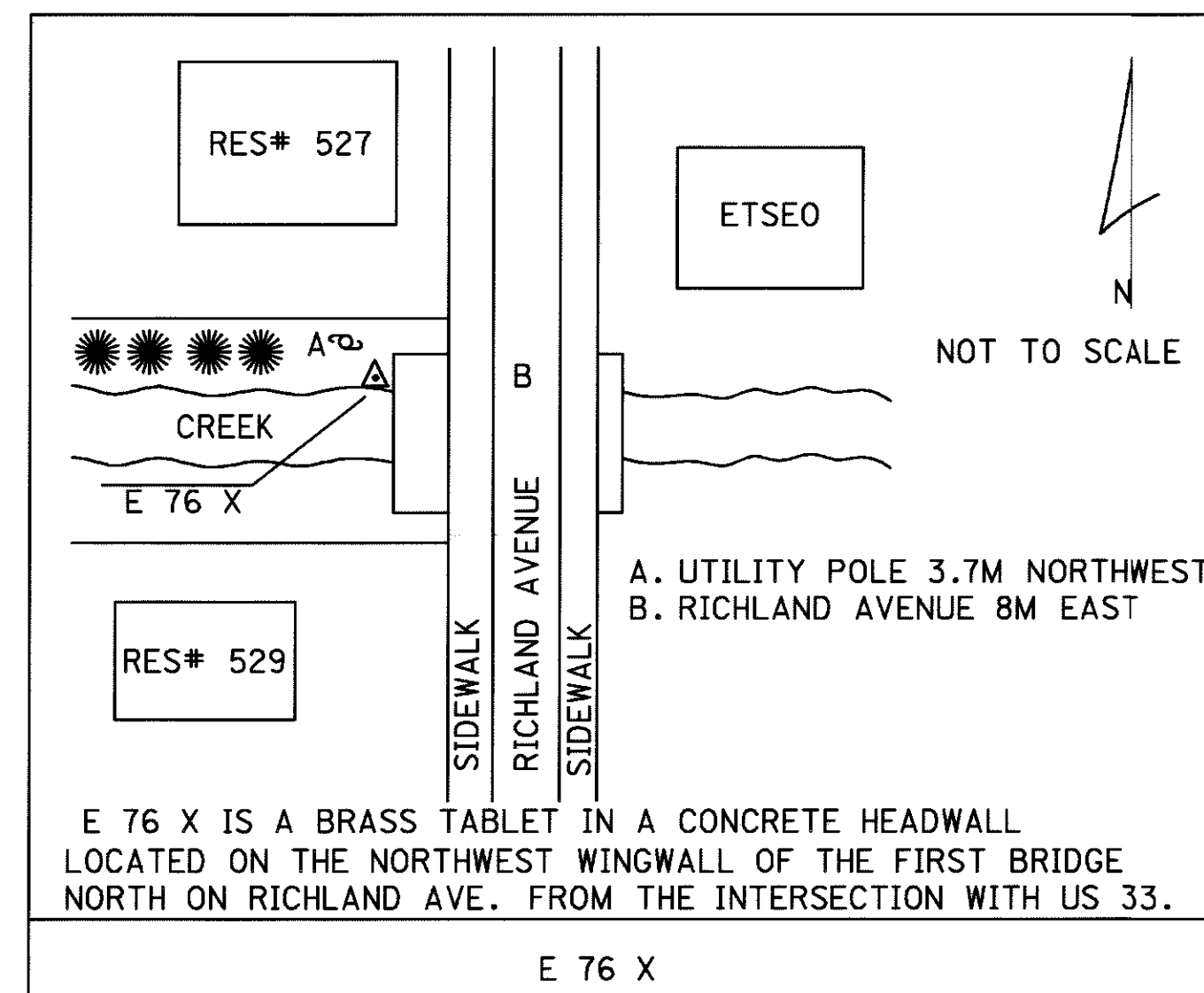
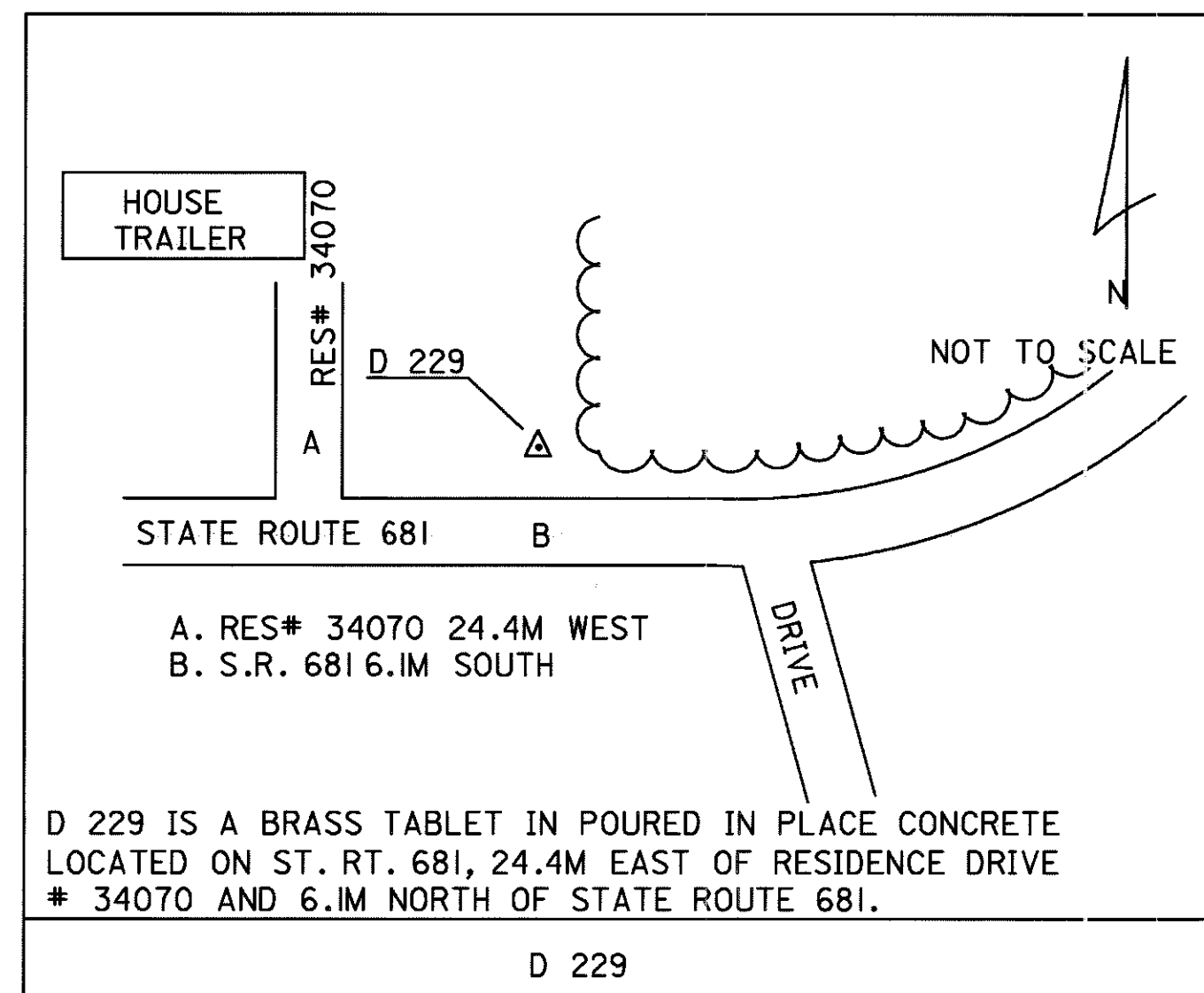
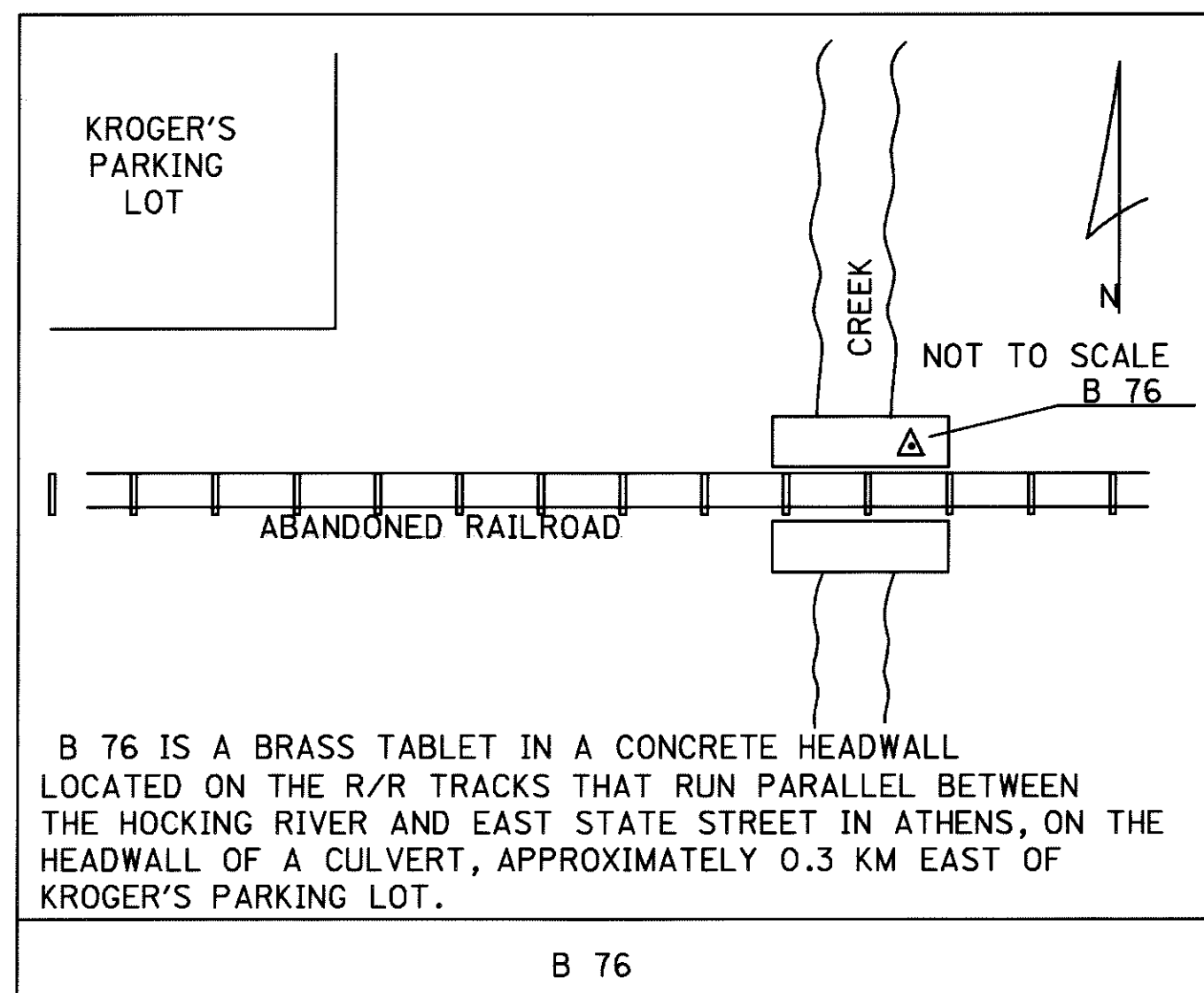
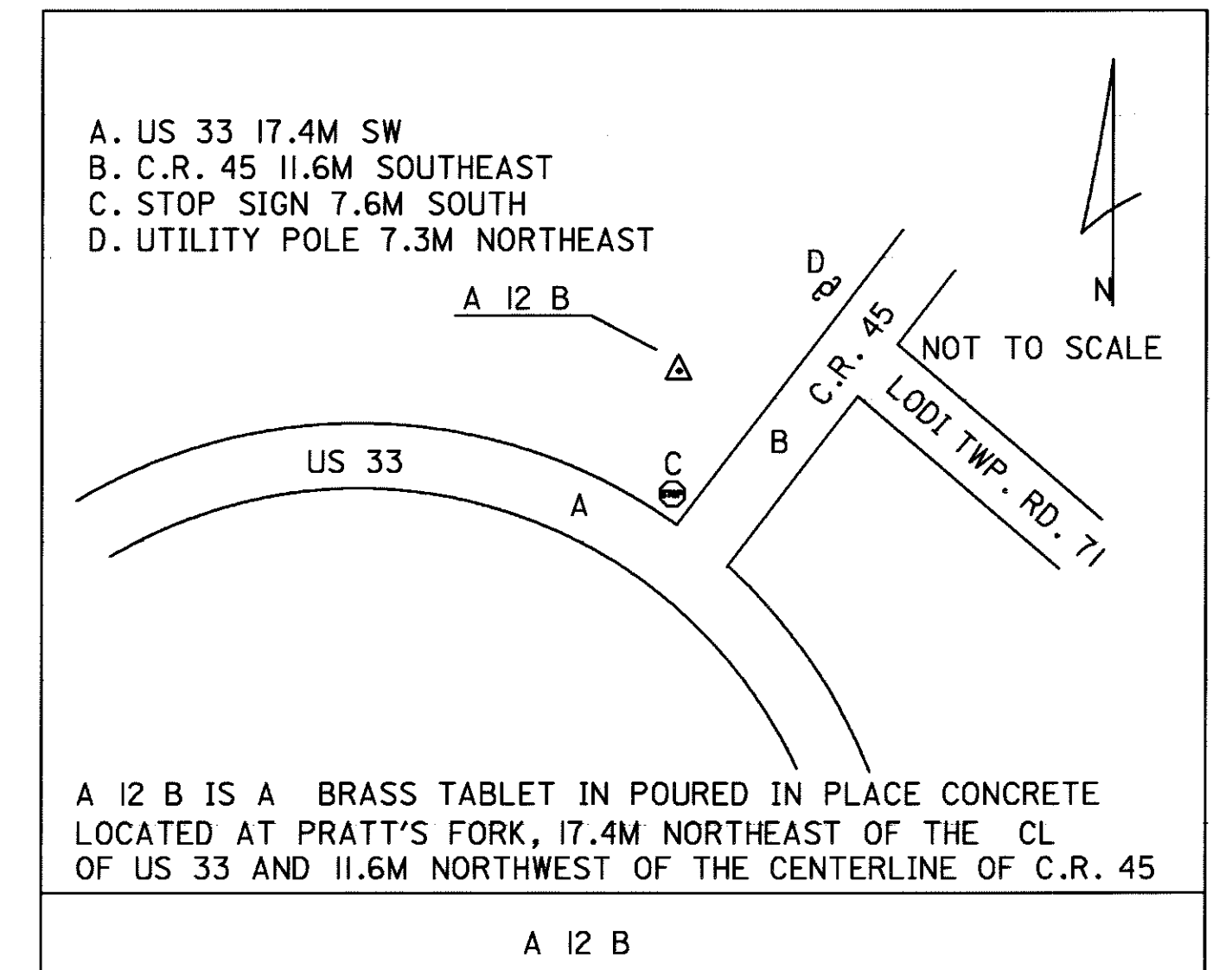
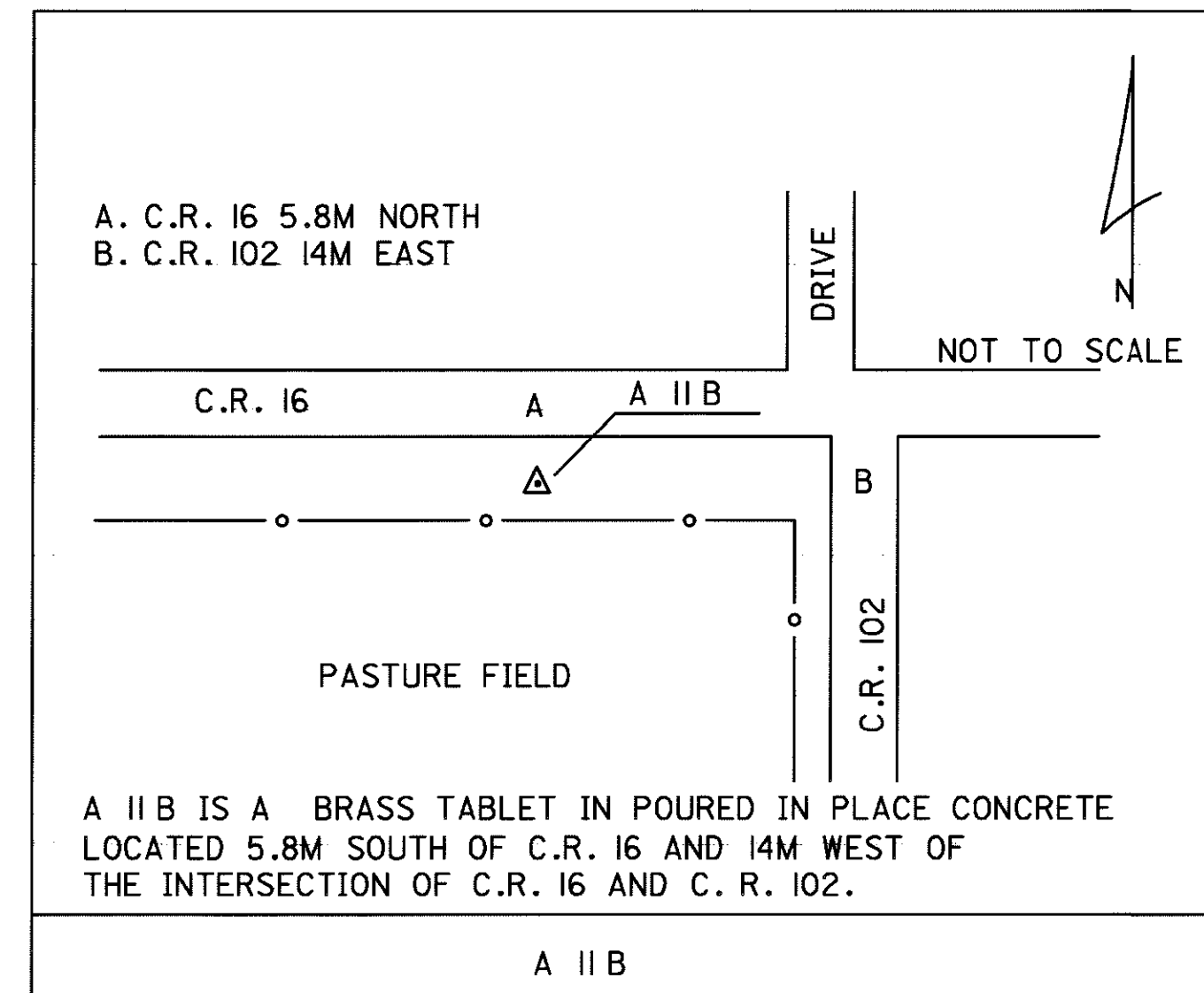
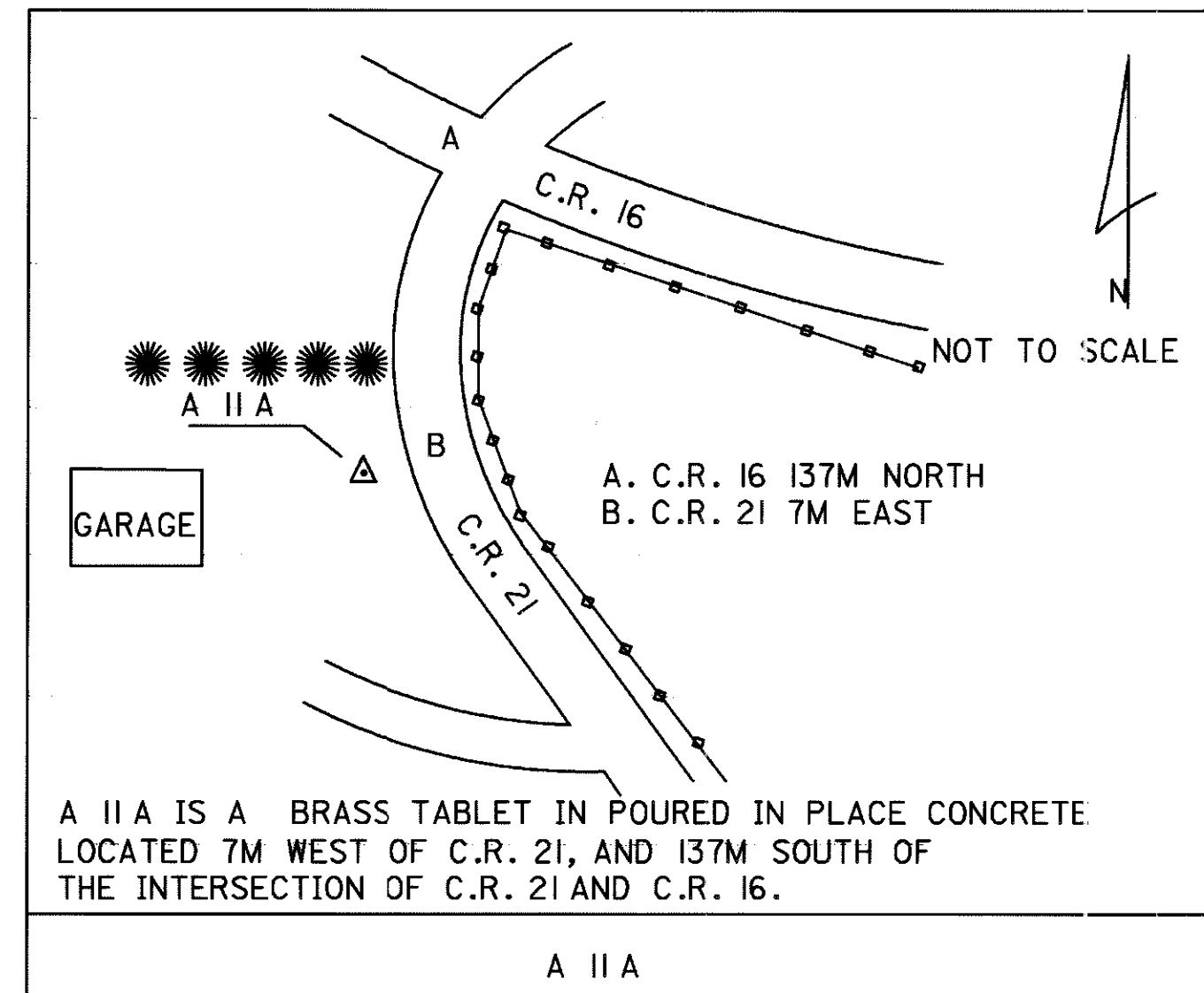
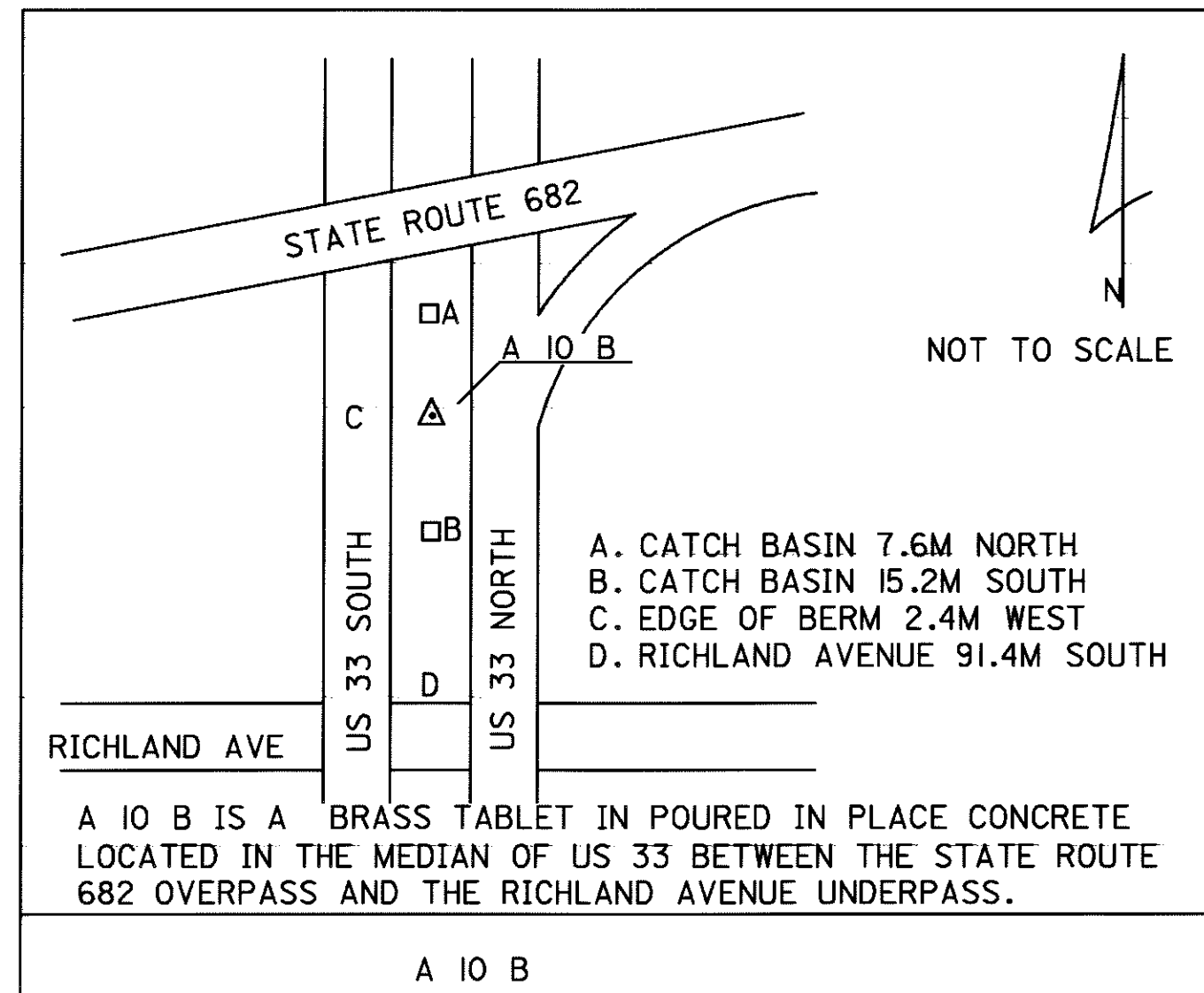
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ATH-33-30.981

NOTE: SEE COORDINATE TABLE

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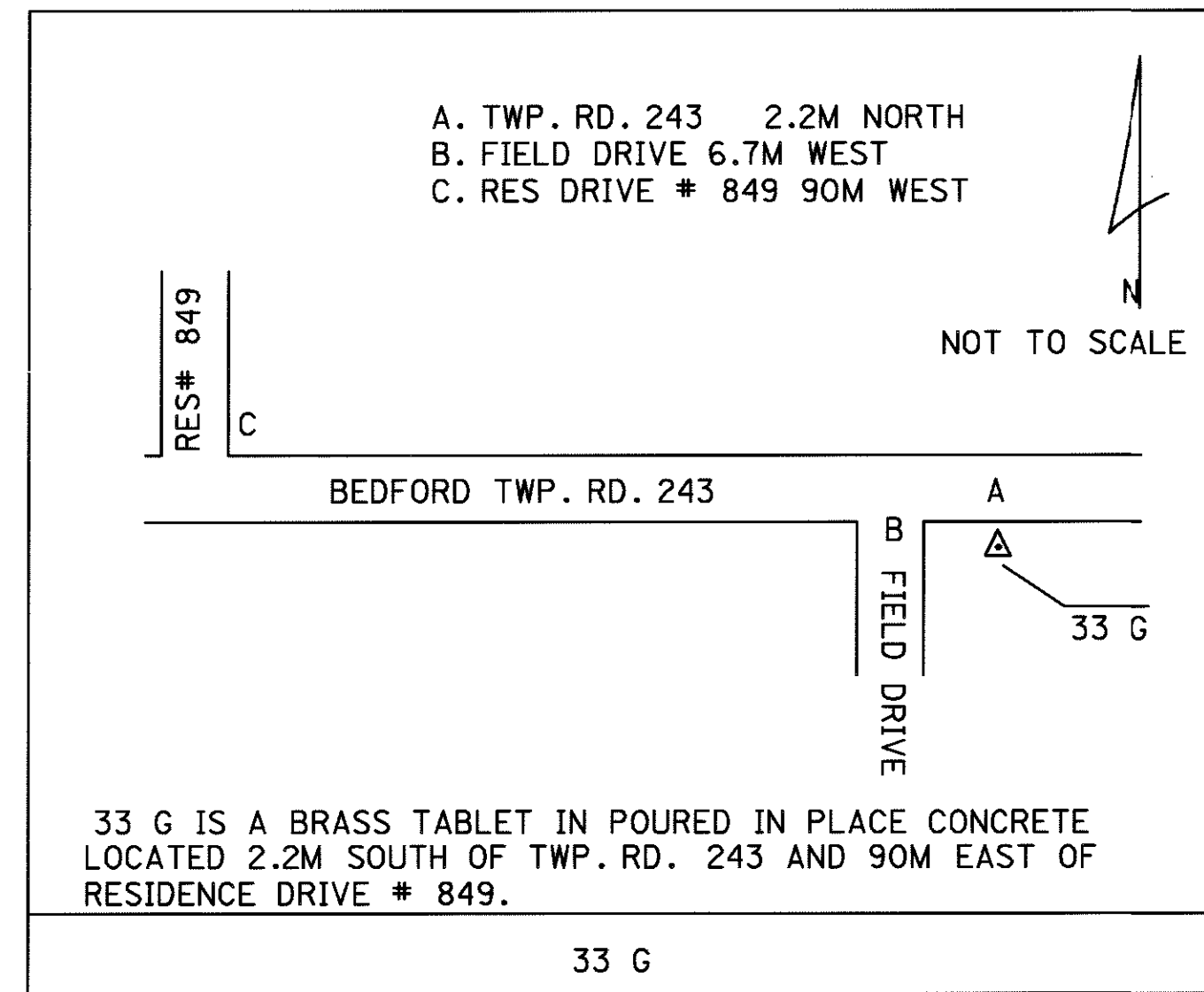
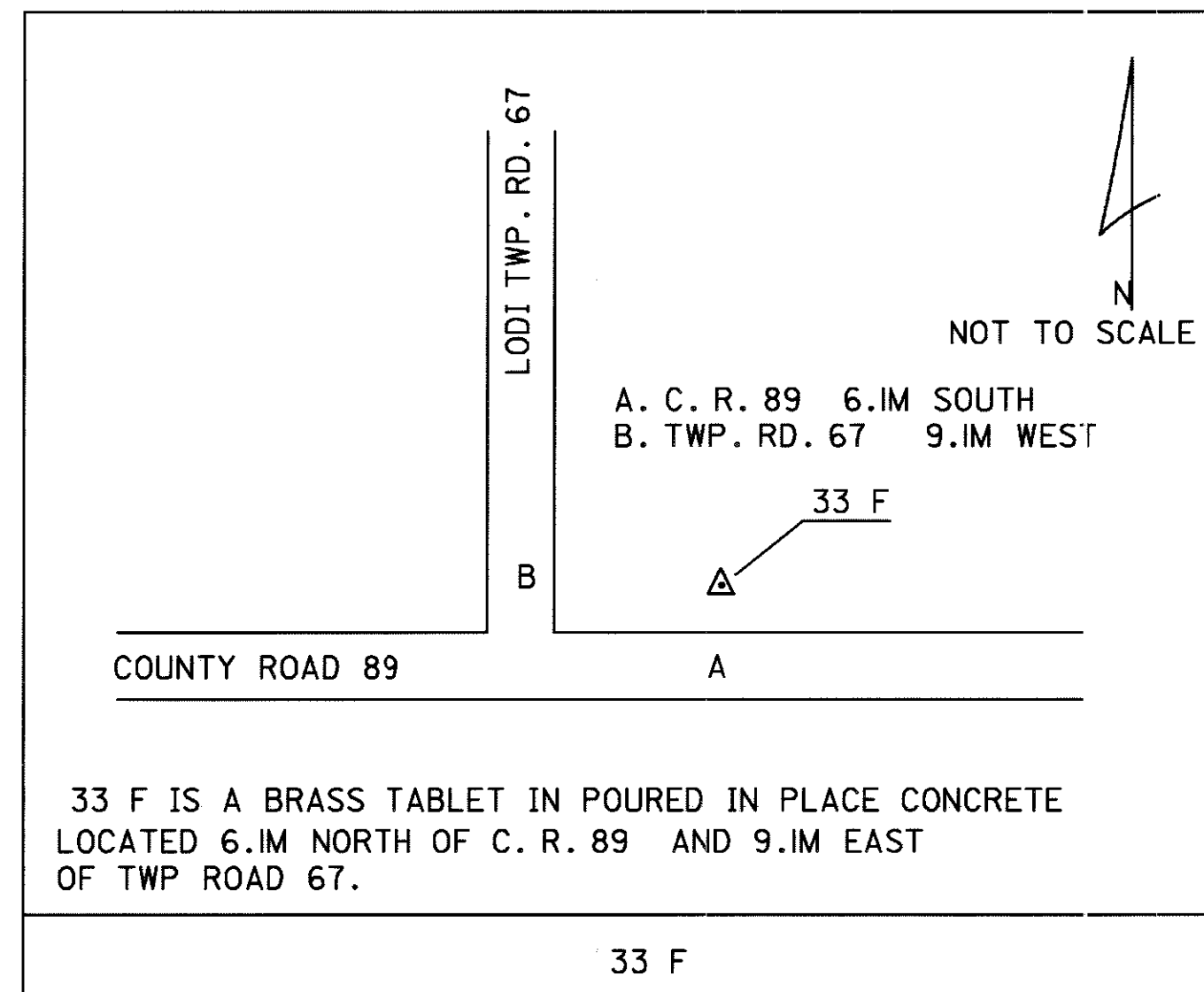
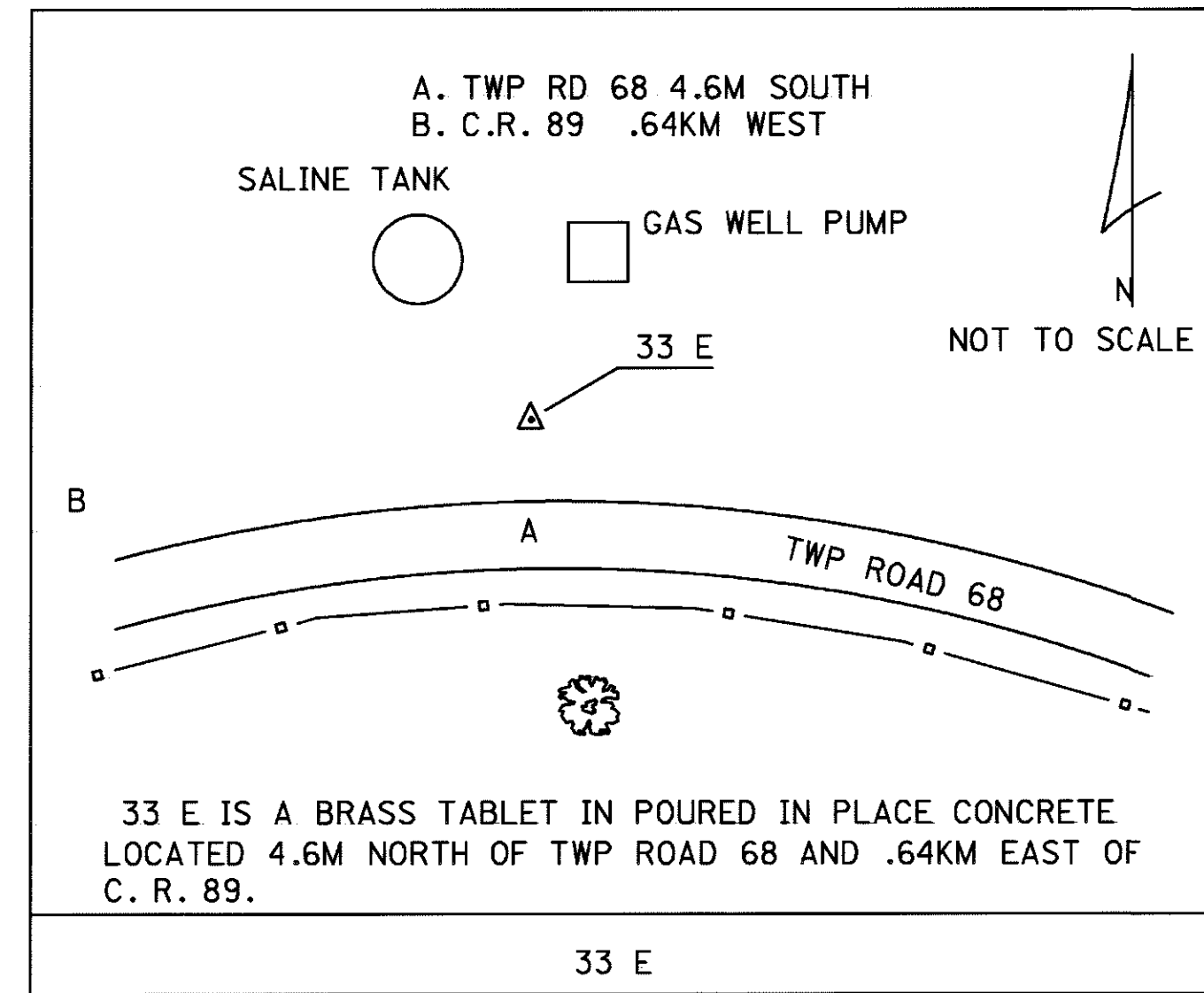
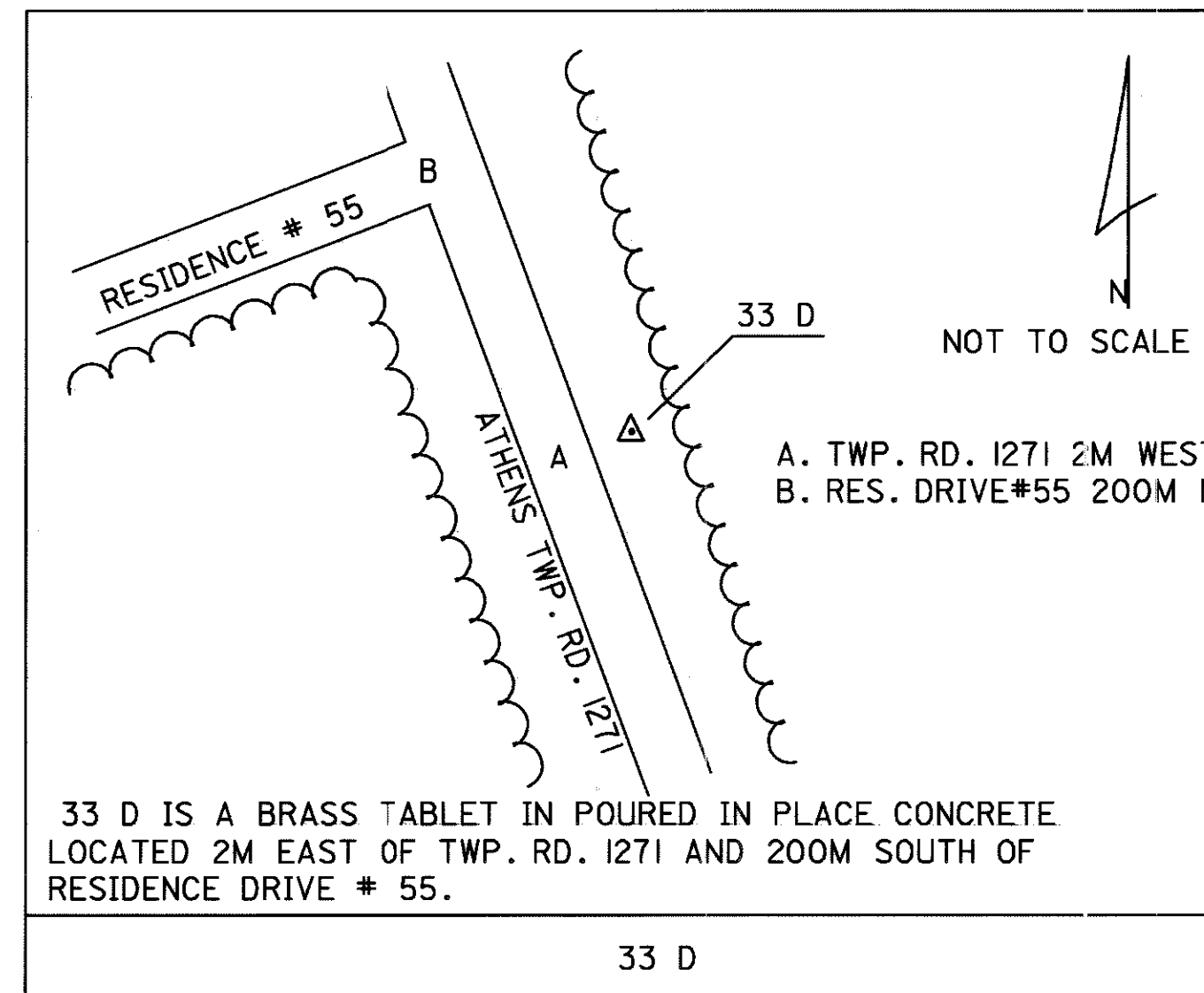
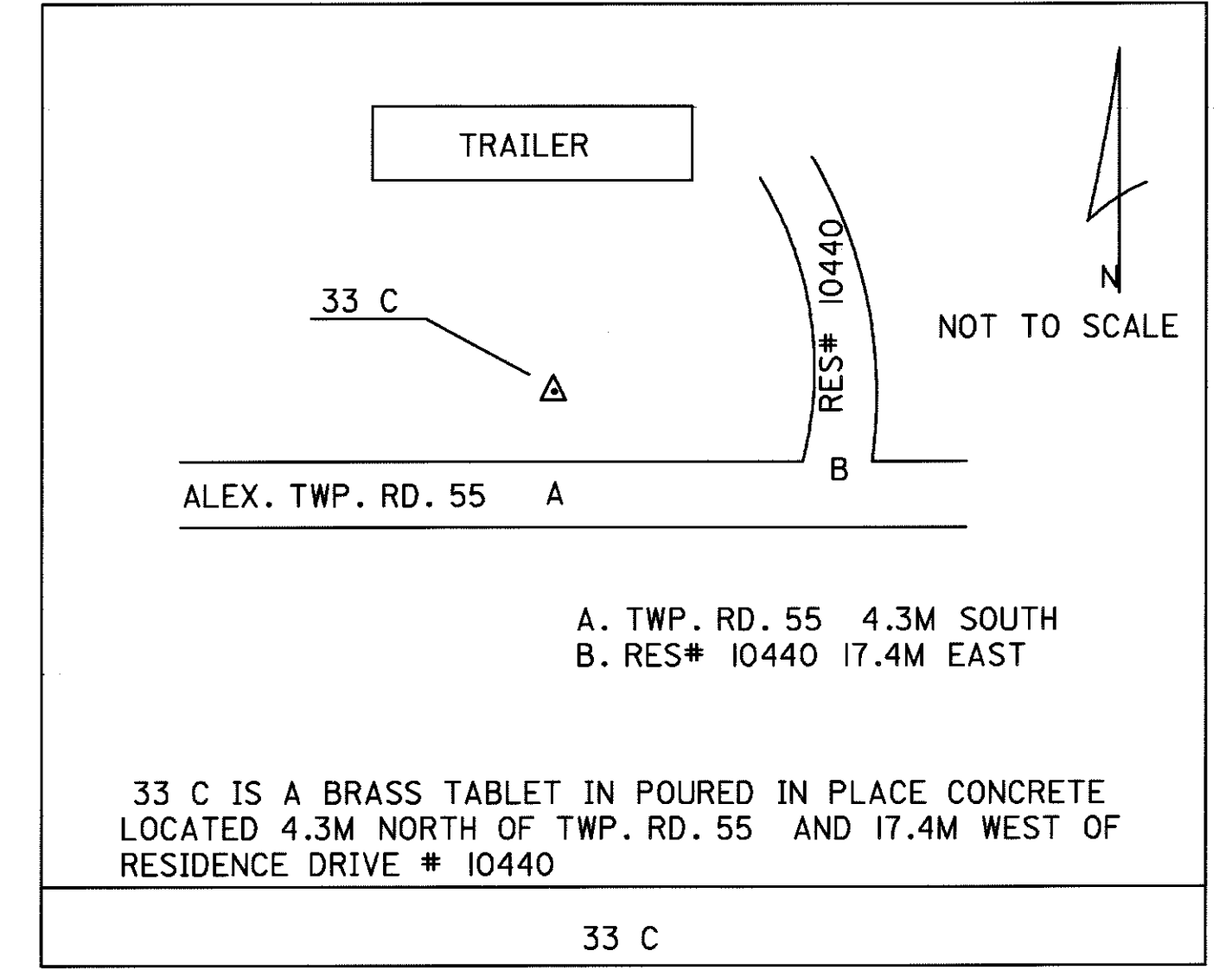
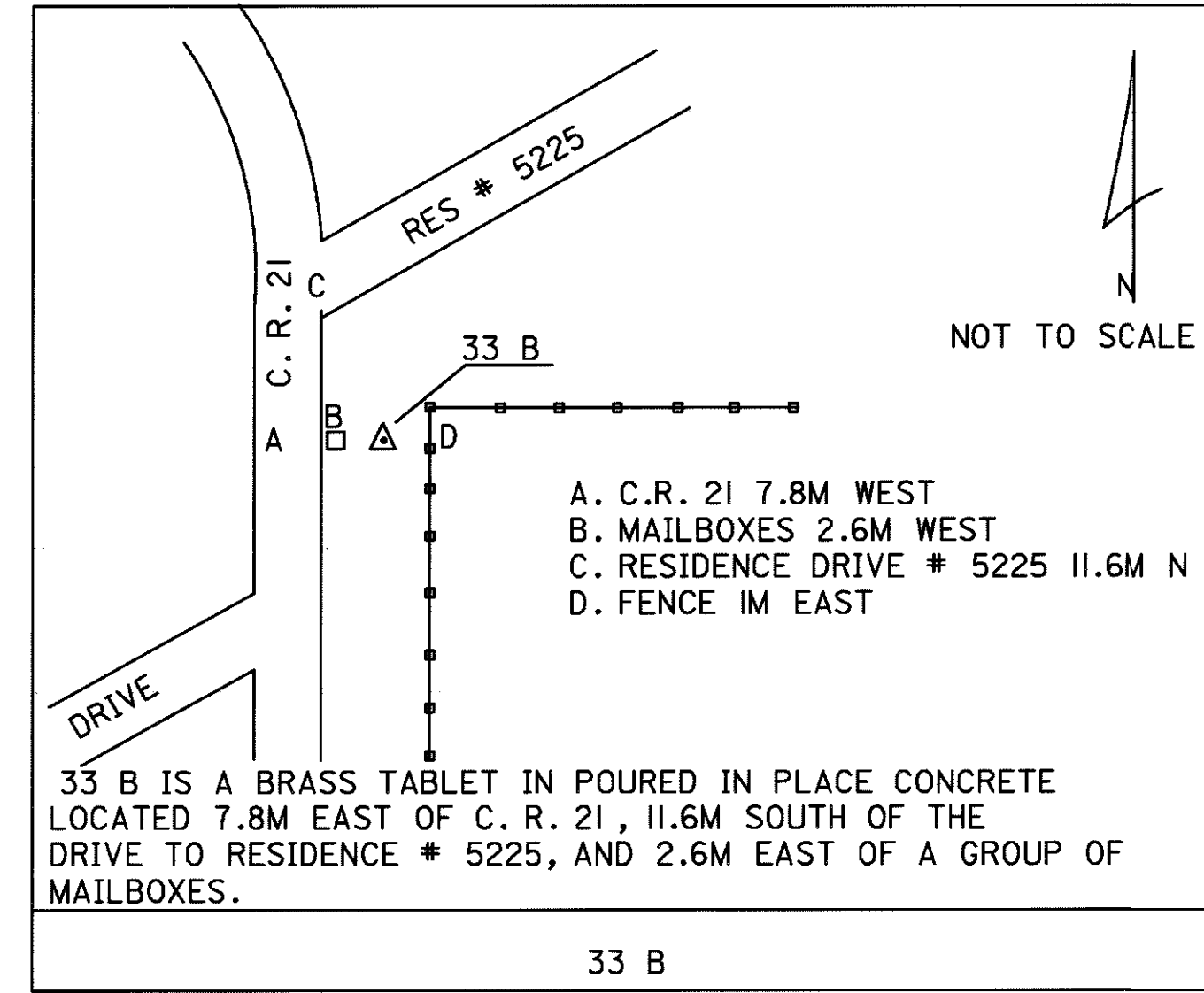
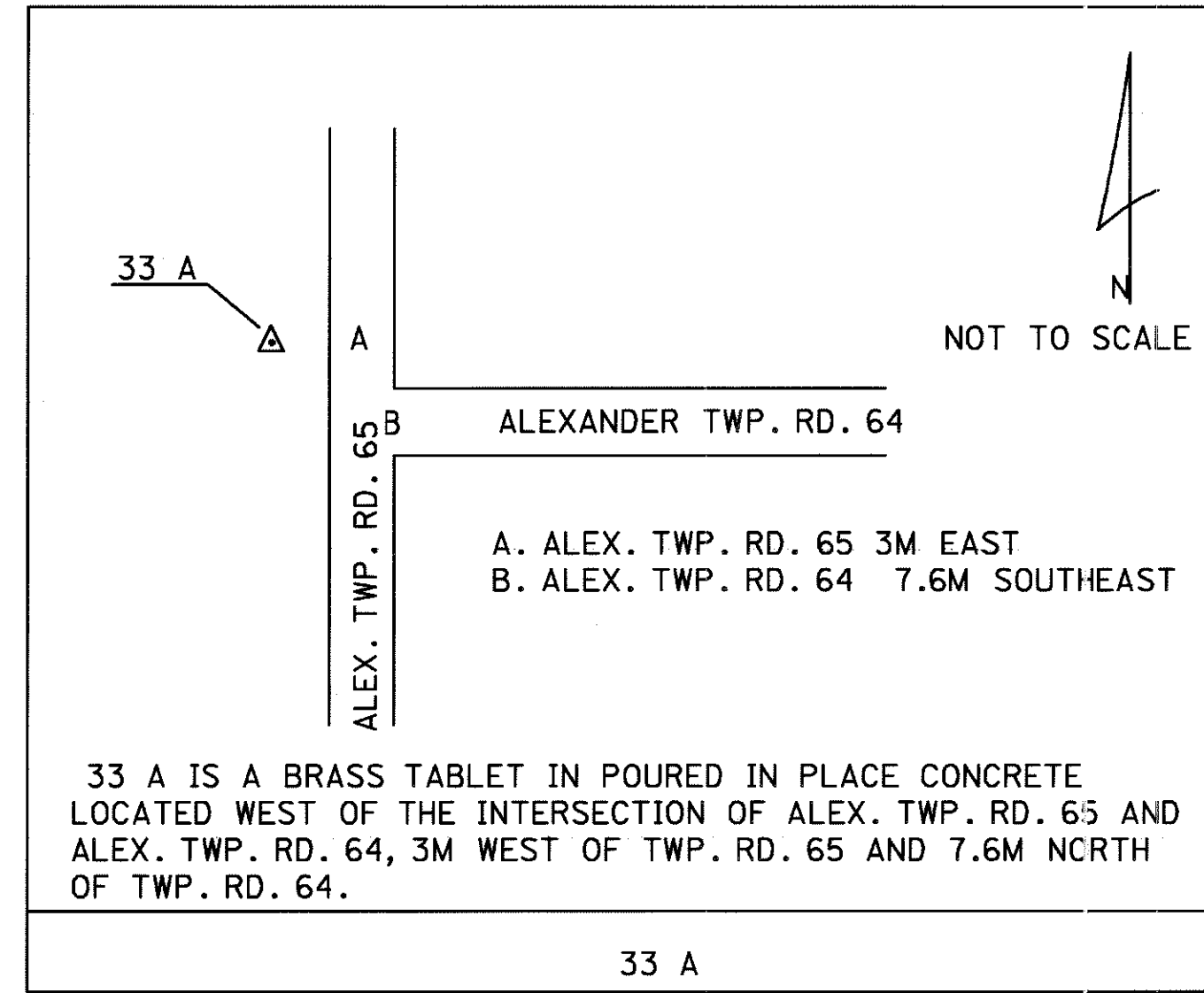
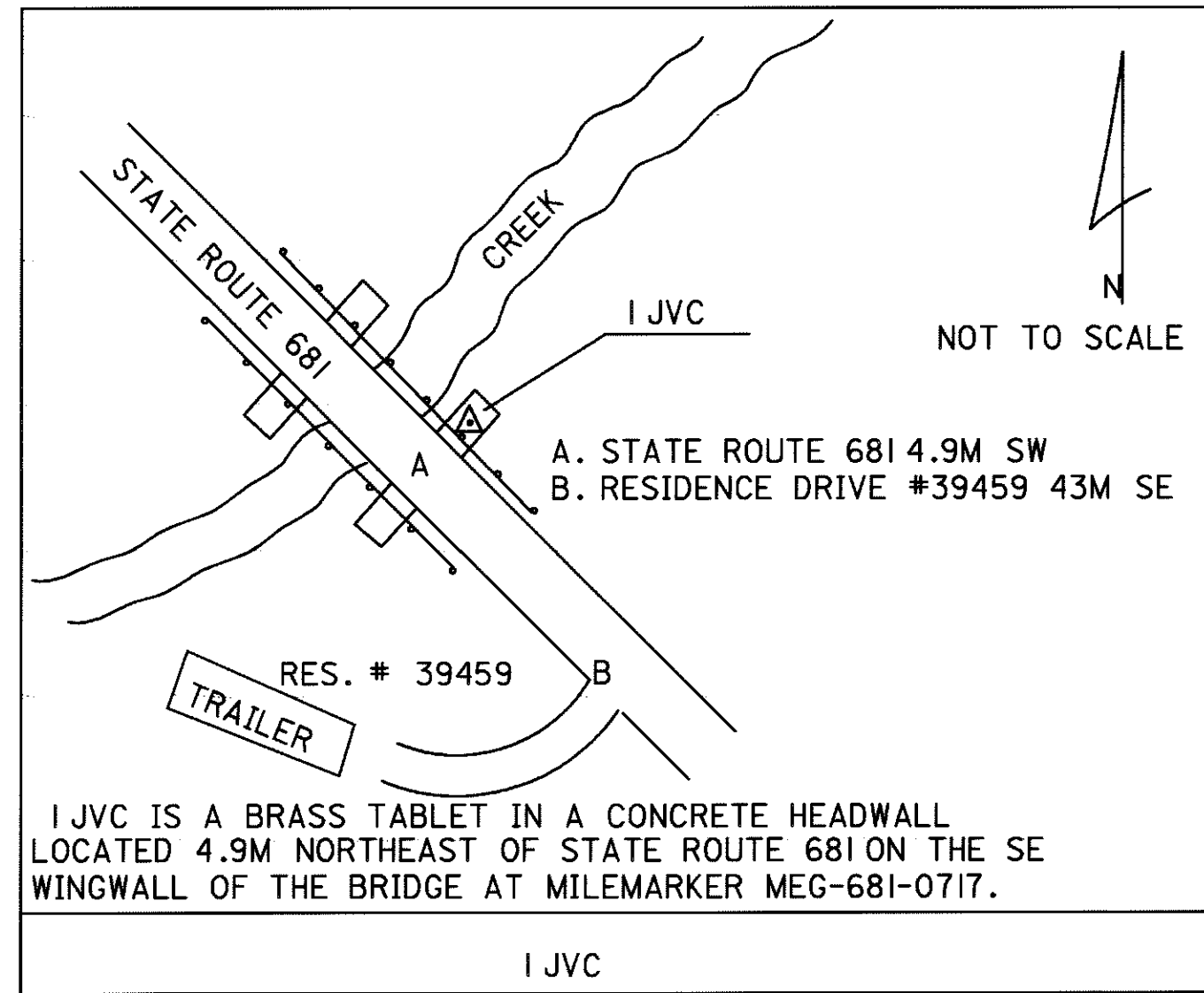
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PRIMARY HORIZONTAL CONTROL AND BENCHMARKS

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NOTE: SEE COORDINATE TABLE



NOTE: SEE COORDINATE TABLE

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PRIMARY HORIZONTAL CONTROL  
AND BENCHMARKS

ATH-33-30.981

**PRIMARY HORIZONTAL CONTROL AND BENCHMARKS**

MONUMENT	NORTHING	EASTING	ELEVATION	DESCRIPTION
A 10 B	145745.1970	634333.7563	202.75	BRASS TAB. IN CONC.
A 11 A	137681.9494	635136.4957	298.534	BRASS TAB. IN CONC.
A 11 B	137563.3787	637182.9008	293.675	BRASS TAB. IN CONC.
A 12 B	132478.9160	641744.2992	242.69	BRASS TAB. IN CONC.
B 76	148281.6535	637430.7401	193.750	BRASS TAB. IN CONC.
D 229	132508.7509	630094.0522	294.01	BRASS TAB. IN CONC.
E 76 X			205.451	BRASS TAB. IN CONC.
F 232 RESET	127225.9160	641335.4195	201.014	BRASS TAB. IN CONC.
K 233	137602.5703	636196.0682	265.070	BRASS TAB. IN CONC.
L 233	137650.6594	637827.7344	291.435	BRASS TAB. IN CONC.
M 11 A	126094.5612	641484.7955	232.07	BRASS TAB. IN CONC.
TOWNSEND RESET	143181.1271	634828.3600	313.525	BRASS TAB. IN CONC.
I JVC	130057.6506	638877.9555	287.286	BRASS TAB. IN CONC.
33 A	139630.4006	635882.4270	290.100	BRASS TAB. IN CONC.
33 B	141393.8213	635318.9826	298.488	BRASS TAB. IN CONC.
33 C	141961.1867	634432.5684	285.254	BRASS TAB. IN CONC.
33 D	144192.6507	634455.3443	270.823	BRASS TAB. IN CONC.
33 E	135325.1491	636962.3021	274.048	BRASS TAB. IN CONC.
33 F	133279.5739	638194.4318	277.366	BRASS TAB. IN CONC.
33 G	128853.8502	640321.0074	248.572	BRASS TAB. IN CONC.

**CENTERLINE REFERENCES**

MONUMENT	NORTHING	EASTING	ELEVATION	DESCRIPTION
P.O.T. 29+590.000	144729.078	634258.722	217.9	I.P. w/CAP
REF A	144703.245	634244.533	220.9	I.P. w/CAP
REF B	144752.454	634262.722	215.0	I.P. w/CAP
REF C	144731.253	634254.211	218.0	I.P. w/CAP
T.S. 29+727.489	144598.009	634300.244	244.5	I.P. w/CAP
REF A	144570.251	634299.031	244.6	I.P. w/CAP
REF B	144580.421	634296.078	245.1	I.P. w/CAP
REF C	144597.683	634288.332	243.7	I.P. w/CAP
S.C. 29+837.489	144492.218	634330.234	249.3	I.P. w/CAP
REF A	144495.384	634316.706	248.1	I.P. w/CAP
REF B	144486.911	634326.399	248.6	P.K. NAIL
REF C	144471.871	634347.864	250.4	I.P. w/CAP
P.I. 29+925.071	144406.655	634348.930	248.1	I.P. w/CAP
REF A	144453.718	634361.956	251.2	I.P. w/CAP
REF B	144419.273	634372.189	253.0	R/R SPIKE
REF C	144374.871	634385.483	257.4	I.P. w/CAP
S.T. 30+121.425	144210.372	634327.493		I.P. w/CAP
T.S. 30+382.322	143953.081	634284.271		I.P. w/CAP
S.C. 30+462.322	143874.005	634272.189		I.P. w/CAP
C.S. 30+746.993	143590.704	634282.438		I.P. w/CAP
S.T. 30+826.993	143512.709	634300.203		I.P. w/CAP
P.O.T. 31+000.000	143344.610	634341.118		I.P. w/CAP
P.O.T. 31+300.000	143053.120	634412.067		I.P. w/CAP
P.O.T. 31+600.000	142761.630	634483.015		I.P. w/CAP
P.O.T. 32+000.000	142372.977	634577.614		I.P. w/CAP
T.S. 32+274.511	142106.254	634642.534		I.P. w/CAP
S.C. 32+354.511	142028.819	634662.602	289.7	I.P. w/CAP
REF A	142028.763	634680.386	286.0	I.P. w/CAP
REF B	142021.974	634666.195	286.9	I.P. w/CAP
REF C	142014.909	634654.723	287.8	I.P. w/CAP
P.O.C. 32+368.721 =	142015.206	634666.680	286.8	R/R SPIKE
P.O.T. 48+261.775 T55				
REF A	142028.776	634680.385	286.0	I.P. w/CAP
REF B	142021.981	634666.192	286.9	I.P. w/CAP
REF C	142014.920	634654.726	287.8	I.P. w/CAP
C.S. 33+019.621	141512.369	635057.420		I.P. w/CAP
S.T. 33+099.621	141472.695	635126.881		I.P. w/CAP
P.O.T. 33+300.000	141375.901	635302.331	298.0	R/R SPIKE
REF A	141393.809	635318.990	298.5	BRASS TAB. IN CONC.
REF B	141399.435	635307.449	297.7	I.P. w/CAP
REF C	141357.219	635296.303	297.6	I.P. w/CAP
T.S. 33+436.466	141309.981	635421.819		I.P. w/CAP
S.C. 33+516.466	141270.306	635491.280		I.P. w/CAP
C.S. 34+231.412	140705.645	635898.692		I.P. w/CAP
S.T. 34+311.412	140627.218	635914.443		I.P. w/CAP
P.C. 35+295.916	139659.221	636093.975		I.P. w/CAP
P.O.C. 35+348.325 =	139607.762	636103.918	288.9	I.P. w/CAP
P.O.C. 49+216.905 T64				
REF A	139608.639	636083.310	287.1	I.P. w/CAP
REF B	139605.356	636103.616	289.0	R/R SPIKE
REF C	139606.346	636125.976	291.4	I.P. w/CAP
P.T. 35+833.356	139140.377	636232.087		I.P. w/CAP
P.C. 37+320.571	137736.786	636733.756		I.P. w/CAP

**NOTE: ALL COORDINATES ARE PROJECT GROUND COORDINATES. TO OBTAIN OH-S (NAD83) STATE PLANE COORDINATES, DIVIDE BOTH NORTHING AND EASTING BY P.A.F. P.A.F. = 1.00010239 PROJECT MEAN LATITUDE: 39-14-21, PROJECT MEAN ELEVATION: 264.4M**

**ELEVATIONS GIVEN FOR CENTERLINE REFERENCE MONUMENTS ARE ACCURATE TO NEAREST 0.1M AND ARE INTENDED FOR SURVEYING OPERATIONS WHICH WOULD NOT REQUIRE MORE PRECISE VALUES.**

**CENTERLINE REFERENCES**

MONUMENT	NORTHING	EASTING	ELEVATION	DESCRIPTION
P.O.C. 37+484.181=	137584.469	636783.410	272.5	I.P. w/CAP
P.O.T. 50+529.695 C16				
REF A	137577.657	636782.771	271.7	I.P. w/CAP
REF B	137586.269	636768.686	273.1	I.P. w/CAP
REF C	137594.654	636783.706	272.0	I.P. w/CAP
P.T. 37+923.464	137201.121	636996.471		I.P. w/CAP
P.C. 38+281.838	136906.335	637200.268		I.P. w/CAP
P.T. 39+045.603	136204.558	637486.008		I.P. w/CAP
T.S. 40+038.582	135225.635	637652.486		I.P. w/CAP
S.C. 40+118.582	135146.982	637667.064		I.P. w/CAP
P.O.C. 40+340.000	134938.478	637739.859	231.7	I.P. w/CAP
REF A	134945.130	637752.245	231.5	I.P. w/CAP
REF B	134943.838	637738.933	231.9	I.P. w/CAP
REF C	134943.685	637724.295	232.5	I.P. w/CAP
C.S. 40+524.224	134782.776	637837.749		I.P. w/CAP
S.T. 40+604.224	134721.247	637888.867		I.P. w/CAP
T.S. 41+099.358	134345.129	638210.881		I.P. w/CAP
S.C. 41+179.358	134283.600	638261.999		I.P. w/CAP
P.O.C. 41+570.000	133934.031	638429.396	282.8	I.P. w/CAP
REF A	133924.979	638415.968	282.3	I.P. w/CAP
REF B	133931.440	638429.201	282.8	I.P. w/CAP
REF C	133937.259	638444.592	282.4	I.P. w/CAP
C.S. 41+669.196	133836.388	638446.601		I.P. w/CAP
S.T. 41+749.196	133756.717	638453.768		I.P. w/CAP
P.O.T. 42+334.969 =	133172.590	638497.605	271.8	I.P. w/CAP
P.O.T. 2+245.338 C89				
REF A	133156.151	638501.003	268.9	I.P. w/CAP
REF B	133175.620	638492.803	271.8	I.P. w/CAP
REF C	133157.773	638479.821	269.0	I.P. w/CAP
P.C. 42+568.029	132940.179	638515.042		I.P. w/CAP
P.T. 43+058.644	132465.567	638630.403		I.P. w/CAP
P.O.T. 43+430.000	132123.812	638775.692	263.9	I.P. w/CAP
REF A	132100.846	638775.952	264.4	I.P. w/CAP
REF B	132146.668	638775.856	264.0	I.P. w/CAP
REF C	132146.404	638781.096	264.0	I.P. w/CAP
P.O.T. 44+000.000	131599.249	638998.698		I.P. w/CAP
P.O.T. 44+500.000	131139.104	639194.318		I.P. w/CAP
P.O.T. 45+000.000	130678.960	639389.937		I.P. w/CAP
P.O.T. 45+525.000	130195.807	639595.338	207.0	R/R SPIKE
REF A	130197.985	639614.221	206.6	I.P. w/CAP
REF B	130190.933	639596.917	207.0	I.P. w/CAP
REF C	130186.079	639581.098	207.0	I.P. w/CAP
P.O.T. 46+000.000	129758.671	639781.176		I.P. w/CAP
P.O.T. 46+500.000	129298.526	639976.796		I.P. w/CAP
P.O.T. 47+060.000	128783.163	640195.890	246.3	R/R SPIKE
REF A	128790.317	640201.140	247.3	I.P. w/CAP
REF B	128792.009	640214.923	247.8	I.P. w/CAP
REF C	128797.721	640212.137	248.0	I.P. w/CAP
P.C. 47+299.691	128562.578	640289.667		I.P. w/CAP
P.I. 47+568.971	128314.763	640395.019		I.P. w/CAP
P.T. 47+835.701	128098.808	640555.876		I.P. w/CAP
P.O.T. 48+000.000	127967.045	640654.021		I.P. w/CAP
P.O.T. 48+500.000	127566.058	640952.701		I.P. w/CAP
P.C. 48+830.628	127300.902	641150.205	204.3	I.P. w/CAP
REF A	127307.010	641121.505	207.1	I.P. w/CAP
REF B	127310.712	641159.719	206.4	I.P. w/CAP
REF C	127320.049	641172.701	206.4	I.P. w/CAP
P.I. 49+148.317	127046.124	641339.979	205.5	I.P. w/CAP
REF A	127064.656	641386.610	201.6	I.P. w/CAP
REF B	127039.760	641349.607	204.0	I.P. w/CAP
REF C	127072.707	641358.790	201.6	I.P. w/CAP
P.T. 49+451.757	126730.819	641378.829	208.2	I.P. w/CAP
REF A	126735.244	641395.762	207.6	I.P. w/CAP
REF B	126719.060	641377.983	208.3	I.P. w/CAP
REF C	126706.089	641397.385	208.4	I.P. w/CAP
P.C. 49+694.214	126490.182	641408.480	216.7	R/R SPIKE
REF A	126504.198	641425.153	215.8	I.P. w/CAP
REF B	126555.326	641401.986	213.4	I.P. w/CAP
REF C	126498.691	641388.106	216.4	I.P. w/CAP
P.I. 49+763.070	126421.842	641416.900	218.7	I.P. w/CAP
REF A	126410.548	641402.073	219.7	I.P. w/CAP
REF B	126430.423	641415.704	218.6	I.P. w/CAP
REF C	126400.798	641438.773	219.8	I.P. w/CAP
P.T. 49+831.856	126354.377	641430.675	221.3	I.P. w/CAP
REF A	126369.981	641444.030	221.2	I.P. w/CAP
REF B	126362.811	641411.451	221.7	I.P. w/CAP
REF C	126400.798	641438.773	219.8	I.P. w/CAP

**REFERENCE DATUMS: VERTICAL NAVD88 (NGS L233: 291.440M) HORIZONTAL NAD83 (85) (NGS TOWNSEND RESET: 39-17-20.173620 N, 82-05-49.498020 W)**

CALCULATED  
REC  
CHECKED  
NMC

**CENTERLINE REFERENCE  
COORDINATE TABLE**

**ATH-33-30.981**

**CENTERLINE REFERENCES**

MONUMENT	NORTHING	EASTING	ELEVATION	DESCRIPTION
P.O.T. 49+888.103	126299.267	641441.927	223.6	I.P. w/CAP
REF A	126286.287	641462.170	224.7	I.P. w/CAP
REF B	126282.747	641445.594	224.4	I.P. w/CAP
REF C	126264.992	641431.135	225.4	I.P. w/CAP

**U.S. 33 EASTBOUND RAMP**

MONUMENT	NORTHING	EASTING	ELEVATION	DESCRIPTION
P.O.T. 28+373.080	145722.440	634270.077		I.P. w/CAP
T.S.28+435.311	145689.890	634217.037		I.P. w/CAP
P.I. 28+969.622	145261.238	633943.990	221.5	I.P. w/CAP
REF A	145250.115	633947.752	221.5	I.P. w/CAP
REF B	145263.224	633956.763	221.1	R/R SPIKE
REF C	145281.018	633941.840	221.6	I.P. w/CAP
S.T. 29+153.166	145103.268	634037.063	217.7	DRILL HOLE
REF A	145098.664	634031.514	217.4	I.P. w/CAP
REF B	145101.149	634049.819	217.2	I.P. w/CAP
REF C	145112.337	634040.247	217.7	I.P. w/CAP
T.S. 29+207.281	145061.720	634071.736	215.9	DRILL HOLE
REF A	145067.367	634061.286	216.1	I.P. w/CAP
REF B	145053.438	634072.929	215.6	I.P. w/CAP
REF C	145066.354	634078.203	215.7	I.P. w/CAP
P.I. 29+368.418	144932.349	634167.520	209.9	I.P. w/CAP
REF A	144915.742	634193.981	209.6	P.K. NAIL
REF B	144938.679	634174.616	210.5	P.K. NAIL
REF C	144951.211	634164.356	211.1	P.K. NAIL
S.T. 29+529.383	144781.972	634224.972	209.4	I.P. w/CAP
REF A	144796.464	634231.677	208.6	I.P. w/CAP
REF B	144782.761	634213.376	208.7	I.P. w/CAP
REF C	144772.728	634230.885	209.6	P.K. NAIL

**U.S. 33 WESTBOUND RAMP**

MONUMENT	NORTHING	EASTING	ELEVATION	DESCRIPTION
P.O.T. 29+117.741	145165.851	634085.643	219.5	DRILL HOLE
REF A	145167.747	634076.084	219.7	P.K. NAIL
REF B	145156.535	634081.727	219.3	P.K. NAIL
REF C	145169.193	634092.074	219.3	P.K. NAIL
P.I. 29+221.974	145072.960	634132.928	216.3	P.K. NAIL
REF A	145089.539	634136.008	216.4	I.P. w/CAP
REF B	145064.379	634149.316	215.4	I.P. w/CAP
REF C	145069.339	634125.460	216.1	P.K. NAIL
P.C. 29+320.877	144984.820	634177.790	211.9	I.P. w/CAP
REF A	144971.090	634174.177	210.0	P.K. NAIL
REF B	144980.762	634188.326	211.8	P.K. NAIL
REF C	145008.672	634172.648	213.2	P.K. NAIL
P.I. 29+419.534	144896.899	634222.550	208.3	I.P. w/CAP
REF A	144893.861	634219.014	208.7	DRILL HOLE
REF B	144922.635	634209.184	208.5	P.K. NAIL
REF C	144895.643	634243.098	207.8	I.P. w/CAP
P.T. 29+517.748	144802.849	634252.340	208.4	I.P. w/CAP
REF A	144796.472	634231.687	208.6	I.P. w/CAP
REF B	144794.068	634275.012	208.6	I.P. w/CAP
REF C	144820.439	634276.796	207.7	P.K. NAIL

**TOWNSHIP ROAD 55**

MONUMENT	NORTHING	EASTING	ELEVATION	DESCRIPTION
P.O.T. 48+000.000	141952.359	634413.551		R/R SPIKE
P.C. 48+048.295	141956.941	634461.620		R/R SPIKE
P.I. 48+081.159	141960.060	634494.340		R/R SPIKE
P.T. 48+113.770	141970.075	634525.640		I.P. w/CAP
P.C. 48+296.996	142025.916	634700.150		R/R SPIKE
P.I. 48+320.097	142032.957	634722.150		R/R SPIKE
P.T. 48+342.947	142034.213	634745.220		R/R SPIKE
P.O.T. 48+378.243	142036.133	634780.466		R/R SPIKE

**TOWNSHIP ROAD 64**

MONUMENT	NORTHING	EASTING	ELEVATION	DESCRIPTION
P.O.T. 49+000.000	139621.716	635887.964		R/R SPIKE
P.C. 49+033.885	139614.888	635921.150		R/R SPIKE
P.I. 49+045.857	139612.475	635932.880		R/R SPIKE
P.T. 49+057.767	139612.146	635944.840		R/R SPIKE
P.C. 49+274.802	139606.167	636161.790		R/R SPIKE
P.I. 49+313.067	139605.113	636200.050		R/R SPIKE
P.T. 49+350.935	139594.642	636236.850		R/R SPIKE
P.C. 49+401.030	139580.934	636285.030		R/R SPIKE
P.I. 49+437.023	139571.085	636319.650		R/R SPIKE
P.T. 49+470.966	139581.916	636353.980		R/R SPIKE
P.O.T. 49+490.200	139587.703	636372.324		R/R SPIKE

**COUNTY ROAD 16**

MONUMENT	NORTHING	EASTING	ELEVATION	DESCRIPTION
P.O.T. 50+000.000	137622.885	636262.499		R/R SPIKE
P.C. 50+054.907	137621.970	636317.390		R/R SPIKE
P.I. 50+086.083	137621.451	636348.570		R/R SPIKE
P.T. 50+116.761	137611.469	636378.100		R/R SPIKE
P.C. 50+191.304	137587.601	636448.720		R/R SPIKE
P.I. 50+242.513	137571.205	636497.230		R/R SPIKE
P.T. 50+292.775	137571.551	636548.440		R/R SPIKE
P.C. 50+461.811	137572.694	636717.470		R/R SPIKE
P.I. 50+479.026	137572.810	636734.690		R/R SPIKE
P.T. 50+496.091	137576.824	636751.430		R/R SPIKE
P.C. 50+565.213	137592.938	636818.640		R/R SPIKE
P.I. 50+588.906	137598.461	636841.680		R/R SPIKE
P.T. 50+611.998	137594.813	636865.090		R/R SPIKE
P.O.T. 50+731.540	137576.407	636983.216		R/R SPIKE

**COUNTY ROAD 89**

MONUMENT	NORTHING	EASTING	ELEVATION	DESCRIPTION
P.C. 2+007.120	133268.036	638280.75		R/R SPIKE
P.I. 2+061.575	133253.482	638333.230		R/R SPIKE
P.T. 2+115.364	133225.429	638379.900		R/R SPIKE
P.C. 2+171.264	133196.633	638427.810		R/R SPIKE
P.I. 2+187.381	133188.330	638441.620		R/R SPIKE
P.T. 2+203.306	133183.967	638457.140		I.P. w/CAP
P.C. 2+286.018	133161.573	638536.760		R/R SPIKE
P.I. 2+313.147	133154.228	638562.880		R/R SPIKE
P.T. 2+339.379	133136.363	638583.290		R/R SPIKE
P.C. 2+404.591	133093.420	638632.370		R/R SPIKE
P.I. 2+425.502	133079.650	638468.110		I.P. w/CAP
P.T. 2+445.997	133072.015	638667.580		R/R SPIKE
P.I. 2+473.330	133062.034	638693.025		R/R SPIKE
P.C. 2+516.764	133046.878	638733.720		R/R SPIKE
P.T. 2+548.074	133037.112	638763.460		R/R SPIKE
P.O.T. 2+608.091	133020.632	638821.178		R/R SPIKE

NOTE: ALL COORDINATES ARE PROJECT GROUND COORDINATES. TO OBTAIN OH-S (NAD83) STATE PLANE COORDINATES DIVIDE BOTH NORTHING AND EASTING BY P.A.F. P.A.F. = 1.00010239 PROJECT MEAN LATITUDE: 39-14-21, PROJECT MEAN ELEVATION: 264.4M

REFERENCE DATUMS: VERTICAL NAVD88 (NGS L233: 291.440M)  
HORIZONTAL NAD83 (85) (NGS TOWNSEND RESET: 39-17-20.173620 N, 82-05-49.498020 W)

ELEVATIONS GIVEN FOR CENTERLINE REFERENCE MONUMENTS ARE ACCURATE TO NEAREST 0.1M AND ARE INTENDED FOR SURVEYING OPERATIONS WHICH WOULD NOT REQUIRE MORE PRECISE VALUES.

CALCULATED  
RCC  
CHECKED  
RMC

**CENTERLINE REFERENCE  
COORDINATE TABLE**

ATH-33-30.981

**UTILITIES**

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

**ELECTRIC:**

AEP (OHIO POWER COMPANY)  
95 EAST MAIN STREET  
CHILLICOTHE, OHIO 45601-0468  
(740) 774-7136

**GAS:**

COLUMBIA GAS OF OHIO, INC.  
843 PIATT AVENUE  
CHILLICOTHE, OHIO 45601  
(740) 772-9131

DUKE ENERGY (TEXAS EASTERN GAS PIPELINE CO.)  
9375 HARNER ROAD  
ATHENS, OHIO 45701  
(740) 593-7533

**TELEPHONE:**

VERIZON NORTH (GTE)  
754 W. UNION STREET  
ATHENS, OHIO 45701  
(740) 594-5318

AT&T COMMUNICATIONS, INC.  
229 W. 7TH STREET, 10TH FLOOR  
CINCINNATI, OHIO 45202  
(513) 784-3238

**WATER:**

LE-AX WATER DISTRICT  
P.O. BOX 97  
THE PLAINS, OHIO 45780  
(740) 594-0123

**STORM/SEWER/WATER:**

CITY OF ATHENS  
CITY BUILDING 3RD. FLOOR  
8 E. WASHINGTON AVENUE  
ATHENS, OHIO 45701  
(740) 593-7636

**CABLE:**

TIME WARNER COMMUNICATIONS (MEDIA ONE)  
28 STATION STREET  
ATHENS, OHIO 45701  
(740) 594-3777

**OIL:**

ROBERT MURPHY  
STARR OIL AND GAS COMPANY  
45421 EAGLE RIDGE ROAD  
RACINE, OHIO 45771  
(740) 992-2427

PETRO QUEST, INC.  
P.O. BOX 268  
3 W. STIMSON AVENUE  
ATHENS, OHIO 45701  
(740) 554-5888

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C.

ALL UTILITY ADJUSTMENTS AND RELOCATIONS ARE BY OTHERS EXCEPT AS SHOWN ON SHEETS 865 & 866.

**WORK LIMITS**

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. THE INSTALLATION AND OPERATION OF ALL TEMPORARY TRAFFIC CONTROL AND TEMPORARY TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS SHALL BE PROVIDED BY THE CONTRACTOR WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

THE CONTRACTOR, WITH THE APPROVAL OF THE ENGINEER, MAY BORROW, WASTE, OR STORE EMBANKMENT MATERIALS WITHIN THE PROPOSED LIMITS OF CONSTRUCTION FOR FUTURE 4-LANE EXPRESSWAY IDENTIFIED ON THE US 33 MAINLINE CROSS SECTIONS. ALL EXPOSED SOIL AREAS USED FOR THESE PURPOSES SHALL BE GRADED IN A MANNER SO THERE IS NO COLLECTION OF PONDING WATER AND PROVIDE PERMANENT SEEDING AND MULCHING ACCORDING TO ITEM 870. ANY ADDITIONAL COST FOR THIS WORK SHOULD BE INCLUDED IN THE UNIT PRICE FOR ITEM 203, EXCAVATION AND ITEM 203, EMBANKMENT.

THE CONTRACTOR SHALL NOT BE ALLOWED TO WORK OUTSIDE THE WORK LIMITS AS SHOWN ON THE PLANS FROM STA. 36+980 TO STA. 37+360, INCLUDING CLEARING AND GRUBBING.

**ARCHAEOLOGICAL SITES ADJACENT TO RIGHT OF WAY**

AS A RESULT OF A CULTURAL RESOURCE SURVEY, ARCHAEOLOGICALLY SENSITIVE AREAS HAVE BEEN IDENTIFIED ADJACENT TO THE PROPOSED RIGHTS OF WAY. THESE ARCHAEOLOGICALLY SENSITIVE AREAS HAVE BEEN DENOTED ON MAPPING THAT IS AVAILABLE FOR REVIEW AT THE OHIO HISTORIC PRESERVATION OFFICE (567 E. HUDSON AVENUE, COLUMBUS, OHIO 43211), ODOT'S OFFICE OF ENVIRONMENTAL SERVICES, AND THE ODOT DISTRICT 10 OFFICE (338 MUSKINGUM DRIVE, MARIETTA, OHIO 45750). THESE IDENTIFIED AREAS CANNOT BE USED FOR BORROW AREAS, WASTE, OR ANY OTHER PROJECT RELATED ACTIVITIES, SUCH AS TEMPORARY OFF SITE STORAGE OR FIELD OFFICE PLACEMENT, ETC., UNLESS PRIOR APPROVAL IS OBTAINED FROM THE OHIO HISTORIC PRESERVATION OFFICE IN COLUMBUS.

**REVIEW OF DRAINAGE FACILITIES**

BEFORE ANY WORK IS STARTED ON THE PROJECT AND AGAIN BEFORE FINAL ACCEPTANCE BY THE STATE, REPRESENTATIVES OF THE STATE AND THE CONTRACTOR, ALONG WITH LOCAL REPRESENTATIVES, SHALL MAKE AN INSPECTION OF ALL EXISTING SEWERS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCE SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION SHALL BE KEPT IN WRITING BY THE STATE.

ALL NEW CONDUITS, INLETS, CATCH BASINS, AND MANHOLES CONSTRUCTED AS A PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN A CLEAN CONDITION BEFORE THE PROJECT WILL BE ACCEPTED BY THE STATE.

ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 603 CONDUIT ITEM.

**MONUMENTS**

MONUMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH DETAILS AS SHOWN ON THE STANDARD CONSTRUCTION DRAWINGS AND AT THE LOCATIONS SHOWN ON THE R/W PLANS.

**ITEM 605 - AGGREGATE DRAINS**

AGGREGATE DRAINS SHALL BE PLACED AT 10 METER INTERVALS ON EACH SIDE OF NORMAL CROWNED SECTIONS, STAGGERED SO THAT EACH DRAIN IS 5 METERS FROM THE ADJACENT DRAIN ON THE OPPOSITE SIDE, AND AT 5 METER INTERVALS ON THE LOW SIDE ONLY OF SUPERELEVATED SECTIONS. AN AGGREGATE DRAIN SHALL BE PLACED AT THE LOW POINT OF EACH SAG VERTICAL CURVE. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY.

**ESTIMATED QUANTITIES FOR ITEM 605 - AGGREGATE DRAINS IS AS FOLLOWS:**

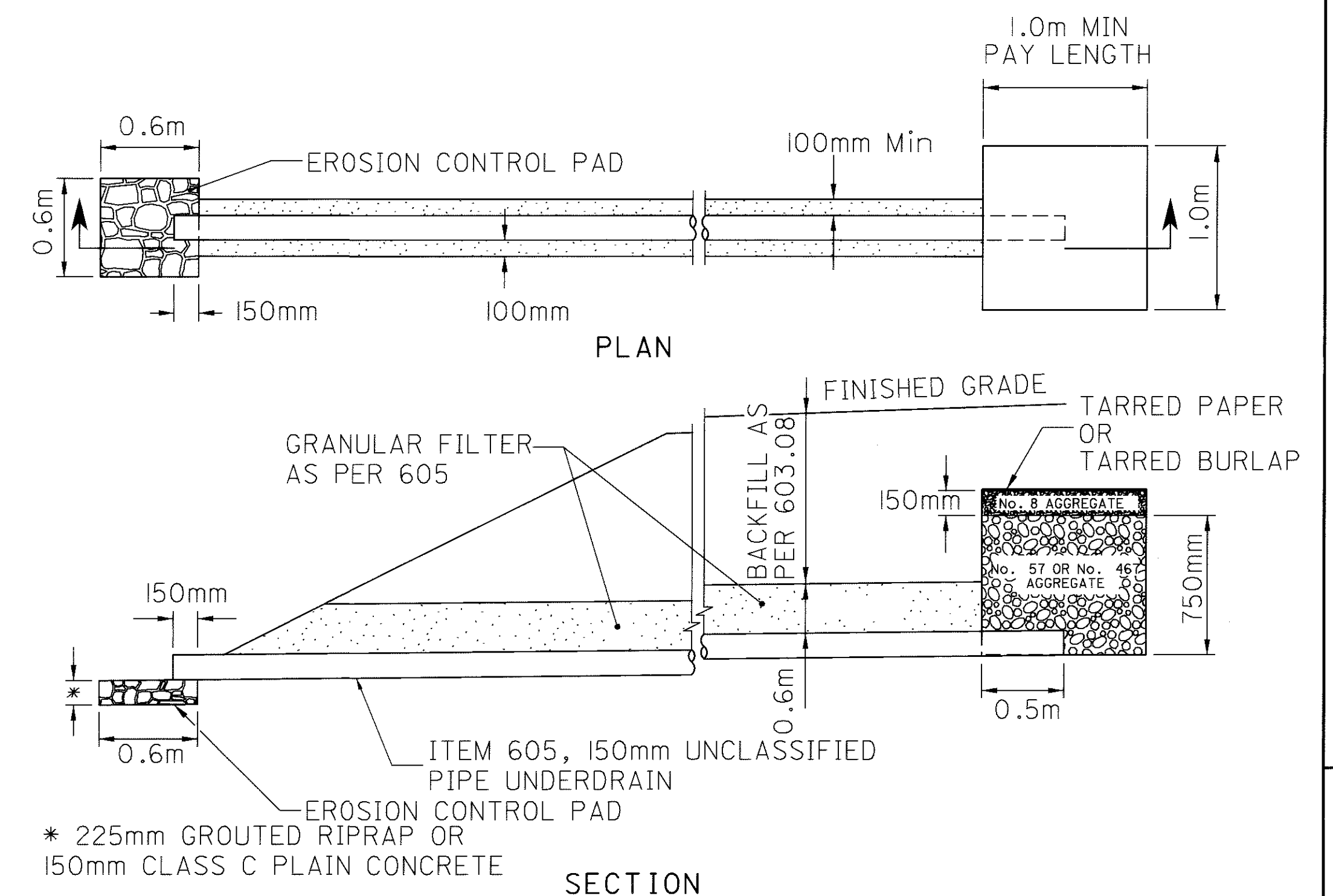
TR 1271	45m
TR 55	146m
CR 21	238m
TR 64	196m
SERVICE ROAD	115m
CR 16	315m
<b>TOTAL =</b>	<b>1055m</b>

**SPRING DRAINS**

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR DRAINING ANY SPRINGS SHOWN IN THE PLAN OR ENCOUNTERED DURING CONSTRUCTION. THE FOLLOWING TYPES OF PIPES MAY BE USED: 707.33, 707.41, 707.42 or 707.45 PERFORATED PER 707.31.

SPRING DRAINS SHALL BE CONSTRUCTED AS SHOWN BELOW AND PAID FOR AT THE CONTRACT PRICE FOR:

605	150mm UNCLASSIFIED PIPE UNDERDRAIN, FOR SPRINGS	300 METERS
605	AGGREGATE DRAIN, FOR SPRINGS	300 METERS



\* 225mm GROUTED RIPRAP OR 150mm CLASS C PLAIN CONCRETE

AGGREGATES, TARRD PAPER OR TARRD BURLAP, EROSION CONTROL PAD, BACKFILL AND NECESSARY EXCAVATION FOR SPRING DRAINS SHALL BE INCLUDED FOR PAYMENT IN THE UNIT PRICE BID PER FOOT FOR ITEM 605, AGGREGATE DRAINS FOR SPRINGS. NOTE: A PRECAST REINFORCED CONCRETE OUTLET MAY BE USED FOR AN EROSION CONTROL PAD. IT WILL BE PAID FOR UNDER THE CONDUIT ITEM.

**STREAM CHANNEL EXCAVATION**

THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT ANY INCIDENTAL DISCHARGES ASSOCIATED WITH THE EXCAVATION AND HAULING OF MATERIAL FROM THE STREAM CHANNEL. THIS PERTAINS TO ANY EXCAVATION OPERATIONS SUCH AS, FOUNDATION PIER OR ABUTMENT EXCAVATION, CHANNEL CLEANOUT, EXCAVATION FOR ROCK CHANNEL PROTECTION AND REMOVAL OF ANY TEMPORARY FILL ASSOCIATED WITH CONSTRUCTION OPERATIONS.

**ITEM 407 - TACK COAT AND ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE**

THE RATE OF APPLICATION OF THE 407 TACK COAT SHALL BE SUBJECT TO ADJUSTMENT AS DIRECTED BY THE ENGINEER. FOR ESTIMATING PURPOSES ONLY, THE PLAN QUANTITIES INDICATE AN AVERAGE APPLICATION RATE OF:

407, TACK COAT	0.05 L/m <sup>2</sup>
407, TACK COAT FOR INTERMEDIATE COURSE	0.03 L/m <sup>2</sup>

**ITEM 870 - SEEDING AND MULCHING**

THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS:

870, COMMERCIAL FERTILIZER	194086 KILOGRAM
870, AGRICULTURAL LIME	582257 KILOGRAM
870, WATER	6315 CU. METERS
870, MOWING	323476 SQ. METER

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT. QUANTITY CALCULATIONS FOR SEEDING AND MULCHING, ARE BASED ON THESE LIMITS.

**ADDITIONAL SEEDING NOT SHOWN ON CROSS SECTION QUANTITY SHEETS:**

US 33	29+700 TO 29+720	RT	147 SQ M
US 33	32+460 TO 32+580	LT	1767 SQ M
US 33	33+310 TO 33+660	RT	34163 SQ M
US 33	33+540 TO 33+620	LT	1952 SQ M
US 33	37+380 TO 37+480	LT	6409 SQ M
TR 55	48+120 TO 48+150	RT	444 SQ M
TR 55	48+170 TO 48+240	RT	1281 SQ M
CR 16	50+190 TO 50+520	LT	14373 SQ M
TR 64	49+280 TO 49+330	RT	527 SQ M
TR 55	48+320 TO 48+330	LT	221 SQ M

TOTAL = 61284 SQ M

**ITEM 870**

THE CONTRACTOR SHALL MAINTAIN ALL SEEDED AND MULCHED AREAS UNTIL THE PROJECT IS FINALIZED. THE REPAIRS SHALL BE MADE PRIOR TO COMPLETION OF THE PROJECT BY THE USE OF REPAIR SEEDING AND MULCHING AND INTER-SEEDING. PERFORMANCE BY SUPPLEMENTAL AGREEMENT SHALL BE WAIVED.

**CLEARING AND GRADING - R/W FENCE**

THE CONTRACTOR SHALL PERFORM SUCH CLEARING AND GRADING AS MAY BE NECESSARY TO CONSTRUCT THE FENCE TO THE REQUIRED ALIGNMENT AND SHALL PROVIDE A REASONABLY SMOOTH GROUND PROFILE AT THE FENCE LINE.

**EROSION CONTROL**

ITEMS 601, 670, AND 672 ARE PROVIDED IN THE PLANS FOR EROSION CONTROL. ROCK OF A STABLE NATURE SHALL NOT BE REMOVED IN ORDER TO PLACE ANY OF THESE ITEMS AND TURF OF A STABLE NATURE SHALL NOT BE REMOVED IN ORDER TO PLACE 660, 667, 668, 671, 672, OR 673. THE ENGINEER SHALL CHECK AND NON-PERFORM QUANTITIES OR ADJUST LOCATIONS AND QUANTITIES OF THESE ITEMS WHERE INDICATED BY FIELD CONDITIONS DURING CONSTRUCTION. IN ADDITION, THESE ITEMS SHALL MEET THE REQUIREMENT OF 108.04.

**WILDLIFE SEEDING AND TREE PLANTINGS**

AT ALL STREAM CROSSINGS, WILDLIFE MIX WILL BE USED TO RESTORE AND STABILIZE DISTURBED AREAS WITHIN THE CONSTRUCTION LIMITS BOTH UPSTREAM AND DOWNSTREAM FROM THE BRIDGE OR CULVERT. IN ADDITION, AT THE DISCRETION OF THE ENGINEER, SYCAMORE AND OR WILLOW SEEDLINGS WILL BE PLANTED NEAR THE STREAM BANK/WATER INTERFACE TO FURTHER STABILIZE THE AREA.

**TEMPORARY SOIL EROSION AND SEDIMENT CONTROL**

THE FOLLOWING ESTIMATED QUANTITIES ARE TO BE PLACED BY THE CONTRACTOR WITH THE ENGINEER'S CONCURRENCE FOR TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES:

877, TEMPORARY SEEDING AND MULCHING	258781 SQ. METER
877, TEMPORARY SLOPE DRAINS	1096 METER
877, TEMPORARY SEDIMENT BASINS AND DAMS	115903 CU. METER
877, TEMPORARY PERIMETER FILTER FABRIC FENCE	9253 METER
877, TEMPORARY DITCH CHECK FILTER FABRIC FENCE	9253 METER
877, TEMPORARY INLET PROTECTION FILTER FABRIC FENCE	1233 METER
877, TEMPORARY DIKES	21920 CU. METER
877, TEMPORARY DITCH PROTECTION	2747 SQ. METER
877, SEDIMENT REMOVAL	86927 CU. METER
601, ROCK CHANNEL PROTECTION, TYPE C (WITH FILTER)	23181 CU. METER
601, ROCK CHANNEL PROTECTION, TYPE C (WITHOUT FILTER)	1986 CU. METER
870, COMMERCIAL FERTILIZER	57934 KILOGRAM
870, REPAIR SEEDING AND MULCHING	60814 SQ. METER
870, WATER	2588 CU. METER
870, INTER-SEEDING	64695 SQ. METER

**CONTRACTION AND/OR EXPANSION JOINTS**

ALTHOUGH SPECIFIC LOCATIONS OF CERTAIN CONTRACTION AND EXPANSION JOINTS HAVE BEEN DETAILED ON THIS PLAN, NO WAIVER OF THE SPECIFICATIONS IS INTENDED. PROVISION OF EXPANSION JOINTS AT ALL MAJOR STRUCTURES AND THE MAXIMUM SPACING BETWEEN CONTRACTION JOINTS SHALL, IN ALL CASES, BE IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING BP-2.2M AND THE SPECIFICATIONS.

**CONTRACTION JOINTS IN CONCRETE PAVEMENT OR BASE WIDENING**

WHERE NEW CONCRETE IS PLACED ADJACENT TO EXISTING CONCRETE, CONTRACTION JOINTS SHALL BE PROVIDED IN THE NEW CONCRETE AS TO FORM CONTINUOUS JOINTS WITH THOSE IN THE EXISTING CONCRETE.

THE MAXIMUM DISTANCE BETWEEN THE JOINTS IN THE NEW CONCRETE SHALL BE IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING BP-2.2M, IF NECESSARY, ADDITIONAL JOINTS SHALL BE PROVIDED IN THE NEW CONCRETE AT APPROXIMATELY EQUAL INTERVALS BETWEEN EXISTING JOINTS THAT EXCEED THE MAXIMUM SPACING.

**ITEM 201 - CLEARING AND GRUBBING, AS PER PLAN**

TREES AND STUMPS INSIDE THE WORK LIMITS SHALL BE REMOVED IN ACCORDANCE WITH 201. A LUMP SUM QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING, A.P.P.. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING, AS PER PLAN.

THE CONTRACTOR SHALL NOT CUT DOWN ANY INDIANA BAT HABITAT TREES FROM APRIL 1 THROUGH SEPTEMBER 15. TREES THAT HAVE BEEN CUT DOWN OUTSIDE OF THIS TIME LIMIT MAY BE LEFT ON THE GROUND DURING THIS TIME PERIOD AS LONG AS NO PART OF THE TREE IS MORE THAN 9 FEET ABOVE THE GROUND. CLEARING FOR FENCE BUILDING SHALL ALSO BE SUBJECT TO THIS REQUIREMENT.

BAT TREES HAVE A DIAMETER OF 9 INCHES OR GREATER AT 4 FEET ABOVE THE GROUND AND HAVE EXFOLIATED (SHAGGY) BARK AND/OR CAVITIES IN THE TRUNK.

THIS ITEM SHALL ALSO INCLUDE PAYMENT FOR FENCE REMOVAL. THE PROVISIONS OF ITEM 202 SHALL APPLY FOR FENCE REMOVAL EXCEPT THAT PAYMENT SHALL BE INCLUDED IN THE LUMP SUM FOR ITEM 201.

**ITEM 203 - PROOF ROLLING**

AN ESTIMATED QUANTITY FOR THIS ITEM HAS BEEN PROVIDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER.

203, PROOF ROLLING

90 HOURS

**ADDITIONAL SOIL INFORMATION**

THE SOIL PROFILE AND/OR STRUCTURE FOUNDATION INVESTIGATION SHEETS CONTAIN ALL AVAILABLE SOIL AND BEDROCK INFORMATION WHICH CAN BE CONVENIENTLY SHOWN. ADDITIONAL SUBSURFACE INVESTIGATIONS MAY HAVE BEEN MADE TO STUDY SOME ASPECT OF THE PROJECT. MORE INFORMATION, IF ANY, MAY BE OBTAINED IN DISTRICT 10, THE OFFICE OF MATERIALS MANAGEMENT OR THE OFFICE OF STRUCTURAL ENGINEERING.

**ITEM SPECIAL - DRILLED WATER WELL ABANDONED**

THE EXISTING CONCRETE OR STONE SLAB WELL COVER AND PUMPING EQUIPMENT SHALL BE REMOVED AND DISPOSED. THE CASING SHALL BE CUT OFF AT LEAST 500 MILLIMETERS BELOW THE PROPOSED FINISHED GRADE OUTSIDE PROPOSED PAVEMENT AREAS OR AT LEAST 500 MILLIMETERS BELOW THE PROPOSED SUBGRADE ELEVATION INSIDE PROPOSED PAVEMENT AREAS. THE WELL SHALL BE FILLED FROM BOTTOM TO TOP WITH BENTONITE SLURRY PELLETS, CHIPS OR CONCRETE MEETING ASTM C 150, TYPE I PORTLAND CEMENT WITH NO AIR ENTRAINMENT, AND THEN CAPPED IN ACCORDANCE WITH THE DETAIL SHOWN ON SHEET 865.

THE CONTRACTOR SHALL FILE WELL LOG AND ABANDONMENT FORMS WITH THE OHIO DEPARTMENT OF NATURAL RESOURCES (ODNR) AS REQUIRED BY THE OHIO REVISED CODE. ANY ADDITIONAL MATERIALS REQUIRED BY ODNR SHALL BE CONSIDERED INCIDENTAL. ODNR'S ADDRESS IS AS FOLLOWS:

OHIO DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF WATER  
1939 FOUNTAIN SQUARE, BUILDING E  
COLUMBUS, OHIO 43224  
TELEPHONE: (614) 265-6739

A COUNTY ISSUED PLUGGING PERMIT MAY ALSO BE REQUIRED.

THE CONTRACT UNIT PRICE FOR ITEM SPECIAL, DRILLED WATER WELL ABANDONED, SHALL INCLUDE PAYMENT FOR ALL LABOR, TOOLS, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM.

AN ESTIMATED QUANTITY FOR THIS ITEM HAS BEEN PROVIDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER.

ITEM SPECIAL - DRILLED WATER WELL ABANDONED

20 EACH

**BENCHING OF FOUNDATION SLOPES**

ALTHOUGH CROSS-SECTIONS INDICATE SPECIFIC DIMENSIONS FOR PROPOSED BENCHING OF THE EMBANKMENT FOUNDATIONS IN CERTAIN AREAS, NO WAIVER OF THE SPECIFICATIONS IS INTENDED. ALL OTHER SLOPED EMBANKMENT AREAS SHALL BE BENCHED AS SET FORTH IN 203.09. NO ADDITIONAL PAYMENT WILL BE MADE FOR BENCHING REQUIRED UNDER THE PROVISIONS OF 203.09.

**ROUNDING**

THE ROUNDING AT SLOPE BREAKPOINTS SHOWN ON THE TYPICAL SECTIONS APPLY TO ALL CROSS-SECTIONS EVEN THOUGH OTHERWISE SHOWN.

**ITEM 606 - ANCHOR ASSEMBLY, TYPE E-98**

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING EITHER OF THE FOLLOWING GUARDRAIL END TERMINALS.

- 1.) THE ET-2000 (1997) MANUFACTURED BY SYRO, INC., 1170 N. STATE STREET, GIRARD, OHIO 44420 (TELEPHONE: 330-545-4373)

THE LENGTH OF THE ET-2000 (1997) SYSTEM IS CONSIDERED TO BE 15.24m, INCLUSIVE OF TWO 7.62m LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DWG. NO.	DRAWING NAME	DWG./REV. DATE	ODOT APPROVAL DATE
SS265M	ET-2000 (1997) PLAN, ELEVATION & SECTIONS	6/20/97	3/6/98

- 2.) THE SKT-350 MANUFACTURED BY ROAD SYSTEMS, INC., 7631 NEW CASTLE DRIVE, FRANKFORT, IL 60423 (TELEPHONE: 815-464-5917).

THE LENGTH OF THE SKT-350 SYSTEMS IS CONSIDERED TO BE 15.24m, INCLUSIVE OF FOUR 3.81m LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DWG. NO.	DRAWING NAME	DWG./REV. DATE	ODOT APPROVAL DATE
SKT-4M	SEQUENTIAL KINKING TERMINAL (SKT-350) ASSEMBLY WITH 4 FOUNDATION TUBES	12/11/97	3/6/98

THE FACE OF THE TYPE E-98 IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19, APPROXIMATELY 450mm X 450mm.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY, TYPE E-98, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING ALL RELATED TRANSITIONS, REFLECTIVE SHEETING, HARDWARE, GRADING, EMBANKMENT AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

**GUARDRAIL REPLACEMENT**

NO HAZARD SHALL BE LEFT UNPROTECTED EXCEPT FOR THE ACTUAL TIME NECESSARY TO REMOVE THE EXISTING GUARDRAIL. PREPARE THE SITE, AND INSTALL NEW GUARDRAIL IN A CONTINUOUS OPERATION. THE REMOVAL OF ALL GUARDRAIL SHALL AT ALL TIMES BE AS DIRECTED BY THE ENGINEER. NO GUARDRAIL SHALL BE REMOVED UNTIL THE REPLACEMENT MATERIAL IS ON THE SITE, READY FOR INSTALLATION. FAILURE TO COMPLY WITH THIS REQUIREMENT SHALL BE DEEMED SUFFICIENT CAUSE TO ORDER WORK SUSPENDED UNTIL SUCH TIME AS THE ENGINEER IS ASSURED OF COMPLIANCE.

**CONNECTION BETWEEN EXISTING AND PROPOSED GUARDRAIL**

WHEN IT IS NECESSARY TO SPLICE PROPOSED GUARDRAIL TO EXISTING GUARDRAIL, ONLY THE EXISTING GUARDRAIL SHALL BE CUT, DRILLED, OR PUNCHED. THE CONNECTION SHALL BE MADE USING A "W-BEAM RAIL SPLICE" AS SHOWN IN AASHTO M 180. PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE GUARDRAIL ITEMS

**ITEM SPECIAL - MAILBOX SUPPORT**

THIS WORK SHALL CONSIST OF FURNISHING AND ERECTING MAILBOX SUPPORTS AND ANY ASSOCIATED MOUNTING HARDWARE IN ACCORDANCE WITH PLAN DETAILS, AND ATTACHING AN OWNER SUPPLIED MAILBOX AT LOCATIONS SPECIFIED IN THE PLAN, OR OTHERWISE ESTABLISHED BY THE ENGINEER.

WOOD POSTS SHALL BE NOMINAL 100mm BY 100mm SQUARE OR 115mm DIAMETER ROUND, AND CONFORM TO 710.14.

STEEL POSTS SHALL BE NOMINAL PIPE SIZE 60.3mm I.D., AND CONFORM TO AASHTO M 181.

HARDWARE (PLATES, SCREWS, BOLTS, ETC.) SHALL BE COMMERCIAL GRADE GALVANIZED STEEL.

POSTS SHALL BE SET PER THE FIRST PARAGRAPH OF 606.03, AND SHALL IN NO INSTANCE BE ENCASED IN CONCRETE.

SUPPORT HARDWARE SHALL ACCOMMODATE EITHER A SINGLE OR A DOUBLE MAILBOX INSTALLATION, AND NO MORE THAN TWO BOXES MAY BE MOUNTED ON A SINGLE POST.

THE MAILBOX SHALL BE SECURELY AND NEATLY ATTACHED BY THE CONTRACTOR TO THE NEW SUPPORT. THE CONTRACTOR SHALL FURNISH ALL NECESSARY ATTACHMENT HARDWARE (NUTS, BOLTS, PLATES, SPACERS, AND WASHERS) AS NECESSARY TO ACCOMMODATE THE COMPLETE INSTALLATION.

IN THE ABSENCE OF A NEW BOX SUPPLIED BY THE OWNER, THE CONTRACTOR SHALL SALVAGE THE EXISTING BOX AND PLACE IT ON THE NEW SUPPORT. DUE CARE SHALL BE EXERCISED IN SUCH AN OPERATION, AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING ANY BOX DAMAGED BY IMPROPER HANDLING ON HIS PART, AS JUDGED AND DIRECTED BY THE ENGINEER.

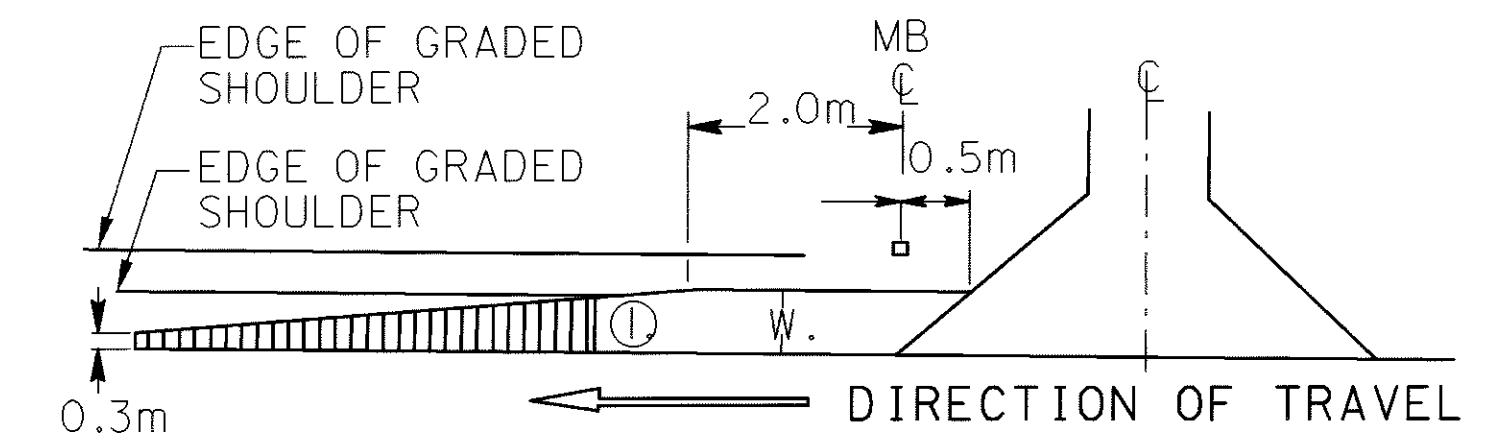
THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE LOCAL POST MASTER REGARDING THE TIMING OF THE MOVEMENT OF ANY MAILBOX TO A NEW LOCATION.

PAYMENT UNDER THIS ITEM SHALL BE LIMITED TO FINAL PERMANENT INSTALLATIONS. TEMPORARY INSTALLATIONS SHALL BE IN ACCORDANCE WITH 107.12. HOWEVER, THE SAME MATERIAL AND SIZE LIMITATIONS AS FOR PERMANENT INSTALLATIONS SHALL APPLY.

MAILBOX SUPPORTS, COMPLETE IN PLACE, WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH, FOR ITEM SPECIAL MAILBOX SUPPORT, SINGLE.

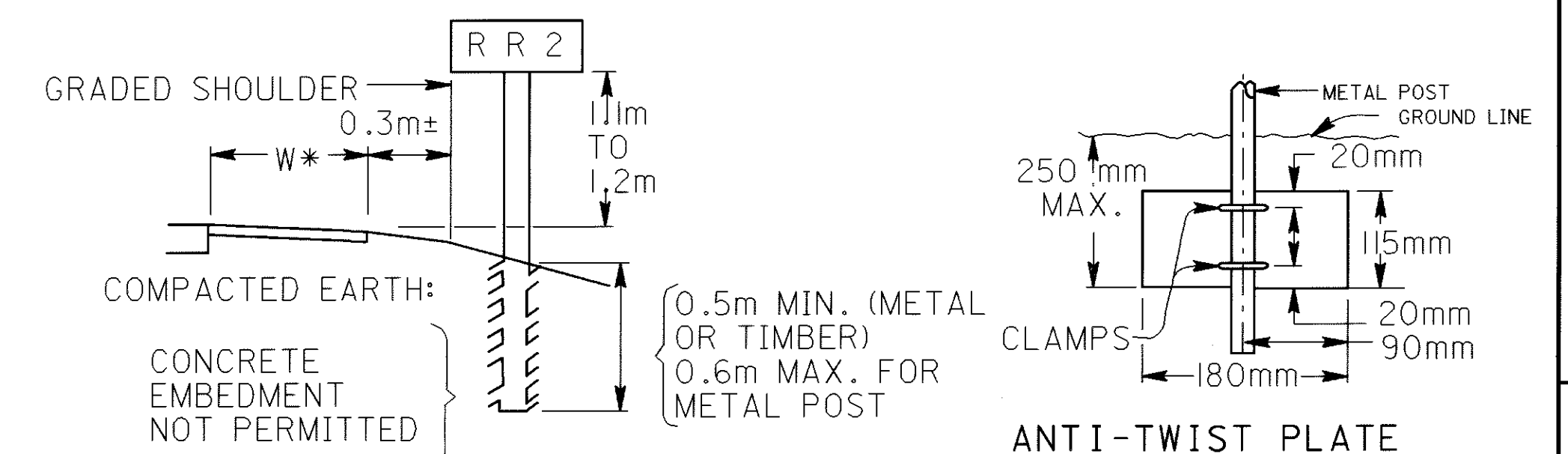
ITEM SPECIAL, MAILBOX SUPPORT

9 EACH



① END MAILBOX TURNOUT AT EDGE OF TREATED SHOULDER OR 0.3m WHICH EVER IS GREATER.

\* WHERE POSTS ARE BEHIND GUARDRAIL, TURNOUT SHALL EXTEND TO FACE OF GUARDRAIL. WHERE NO GUARDRAIL IS REQUIRED, TURNOUT WIDTH SHALL BE 1.8m MINIMUM.



**FOSSILIZED WOOD**

THE CONTRACTOR SHALL CONTACT DR. MICHAEL C. HANSEN AT THE OHIO DEPARTMENT OF NATURAL RESOURCES, DIVISION OF GEOLOGICAL SURVEY, 4383 FOUNTAIN SQUARE DRIVE, COLUMBUS, OHIO 43224-1362 TEL. (614)-265-6580 AS FOLLOWS:

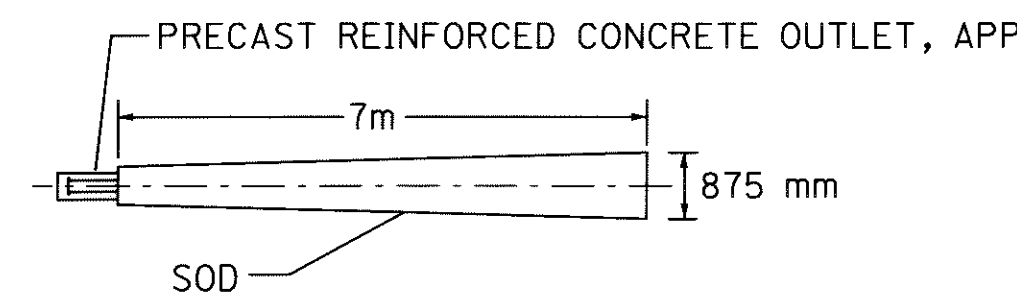
- 1) PRIOR TO THE START OF ANY EARTHWORK ACTIVITY.
- 2) IF "SIGNIFICANT QUANTITIES" OF FOSSILIZED PETRIFIED WOOD ARE ENCOUNTERED DURING CONSTRUCTION.

**CONTINGENCY QUANTITIES**

THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK FOR ITEMS DESIGNATED BY PLAN NOTE TO BE USED "AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE ENGINEER. THE ACTUAL WORK LOCATIONS AND QUANTITIES USED FOR SUCH ITEMS SHALL BE INCORPORATED INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT.

**PRECAST REINFORCED CONCRETE OUTLET, AS PER PLAN**

INSTALLATION OF THE PRECAST REINFORCED CONCRETE OUTLET, AS PER PLAN SHALL BE AS PER STANDARD DRAWING DM-1.1M EXCEPT THAT THE SOD PLACED ON THE SLOPE BELOW THE OUTLET SHALL BE MODIFIED IN LENGTH AND WIDTH AS PER THE FOLLOWING DETAIL. PAYMENT SHALL INCLUDE THE COST OF ALL THE SOD AND WIRE CLOTH.



**ITEM 203 - EMBANKMENT USING ROCK, AS PER PLAN**

GRANULAR STABILITY BLANKET MATERIALS SHALL BE PLACED IN ACCORDANCE WITH THE SPECIFICATIONS SET FORTH IN THE ODOT CMS FOR ROCK FILL (SEC.203.09d WITH THE FOLLOWING EXCEPTIONS:

- 1.) LIFT THICKNESSES ARE NOT TO EXCEED 50cm (0.5m) IN THICKNESS AND INDIVIDUAL ROCK FRAGMENTS ARE NOT TO EXCEED 25cm (.25m) IN ANY DIMENSION.
- 2.) THE ROCK FILL MATERIAL IS TO BE PLACED IN THE INTERIOR OF THE EMBANKMENTS AS INDICATED ON THE CROSS SECTION SHEETS.
- 3.) NO SHALE MATERIALS ARE TO BE PLACED IN THE GRANULAR BLANKETS.
- 4.) THE OUTER 2 METERS OF THE EMBANKMENTS IS TO CONSIST OF SUITABLE EMBANKMENT MATERIAL OTHER THAN ROCK FILL, SUCH AS SOIL OR SHALE MATERIAL THAT HAS BEEN BROKEN DOWN AND AND PLACED IN AS A SOIL.

SHALE, WHICH INCLUDES MATERIALS DESCRIBED AS CLAY-SHALE, MUDSTONE, CLAYSTONE, AND MUDROCK SHALL BE PLACED IN ACCORDANCE WITH THE ODOT CMS GUIDELINES FOR SOIL EMBANKMENTS. ANY SHALE FRAGMENTS LARGER THAN 15cm (.15m) IN THICKNESS MUST BE BROKEN DOWN BEFORE PLACEMENT AND SUBSEQUENT COMPACTION.

**ITEM 203 - EMBANKMENT USING ROCK, AS PER PLAN (BRIDGE APPROACH)**

GRANULAR MATERIALS SHALL BE PLACED IN ACCORDANCE WITH THE SPECIFICATIONS SET FORTH IN THE ODOT CMS FOR ROCK FILL (SEC. 203.09d WITH THE FOLLOWING EXCEPTIONS:

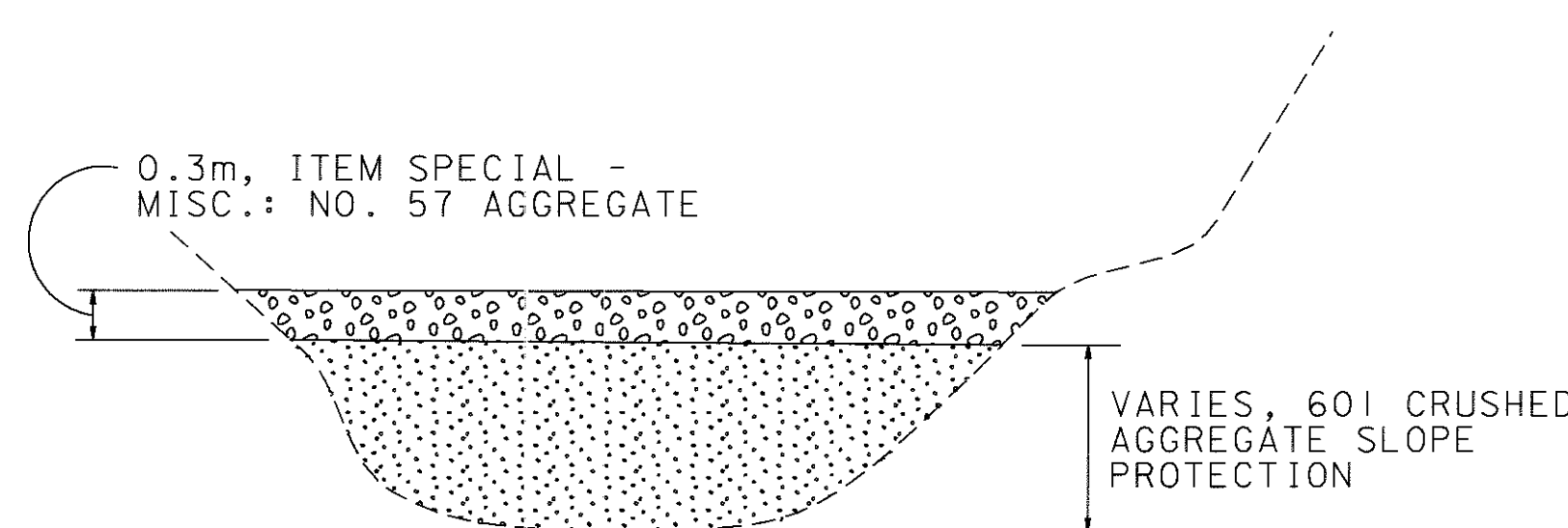
- 1.) INDIVIDUAL ROCK FRAGMENTS ARE NOT TO EXCEED 10cm (0.10m) IN ANY DIMENSION AND NO MORE THAN 20% OF THE BRIDGE APPROACH FILL CAN PASS #200 SIEVE.
- 2.) LIFT THICKNESSES ARE NOT TO EXCEED 30cm (0.3m)
- 3.) THE ROCK FILL BRIDGE APPROACH MATERIAL IS TO BE PLACED IN THE INTERIOR OF THE EMBANKMENTS AS INDICATED ON THE CROSS SECTION SHEETS.
- 4.) NO SHALE MATERIALS ARE TO BE PLACED IN THE FILL.

SHALE, WHICH INCLUDES MATERIALS DESCRIBED AS CLAY-SHALE, MUDSTONE, CLAYSTONE, AND MUDROCK SHALL BE PLACED IN ACCORDANCE WITH THE ODOT CMS GUIDELINES FOR SOIL EMBANKMENTS. ANY SHALE FRAGMENTS LARGER THAN 15cm (.15m) IN THICKNESS MUST BE BROKEN DOWN BEFORE PLACEMENT AND SUBSEQUENT COMPACTION.

**GRANULAR DRAINAGE LAYER (TYPICAL)**

GRANULAR DRAINAGE LAYER SHALL CONSIST OF 30cm (0.3m) OF No. 57 AGGREGATE UNDERLAIN BY CRUSHED No. 1 AND No. 2 (MATERIAL TYPE 601.05, CRUSHED AGGREGATE SLOPE PROTECTION.)

IN AREAS WHERE GRANULAR FILL DRAINAGE MATERIAL PLACED ALONG PRE-EXISTING SWALES INTERSECTS CULVERT PIPES OR THE CULVERT OUTLET WING WALLS, THE CONTRACTOR SHALL GRADE THE DRAINAGE MATERIAL TO PROVIDE A CONTINUOUS SEEPAGE PATH INTO THE GRANULAR PIPE AND HEAD WALL BACKFILL (SEC. 603.02)



**ITEM SPECIAL - MISC.: No. 57 AGGREGATE**

MATERIALS FURNISHED FOR THIS ITEM SHALL BE DEFINED IN 703.01. THE AGGREGATE SHALL BE PLACED AT A THICKNESS OF 0.3m (30cm) AS DETAILED IN THE PLANS.

PAYMENT SHALL INCLUDE ALL LABOR, MATERIAL, AND EQUIPMENT NECESSARY TO PERFORM THE WORK AS NOTED ABOVE AND SHALL BE PAID FOR AT THE CONTRACT PRICE PER CUBIC METER FOR ITEM SPECIAL - MISC.: No. 57 AGGREGATE.

**FENCE LENGTHS**

THE LENGTHS OF FENCE SHOWN IN THE PLANS ARE HORIZONTAL DIMENSIONS. MEASUREMENTS OF THE FINAL QUANTITIES SHALL BE MADE IN ACCORDANCE WITH ITEM 607.

**DUST CONTROL**

THE CONTRACTOR SHALL FURNISH AND APPLY WATER AND CALCIUM CHLORIDE FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED FOR DUST CONTROL PURPOSES:

616, WATER	35500 CU. METER
616, CALCIUM CHLORIDE	75 METRIC TON

**ITEM 604 - CATCH BASIN NO. 7, AS PER PLAN**

THIS CATCH BASIN SHALL BE CONSTRUCTED IN CONFORMANCE WITH ITEM 604 EXCEPT THAT THE GRATE SHALL BE NEENAH R-4055-18 GRATE "B", EAST JORDAN IRON WORKS 6318, OR APPROVED EQUAL.

**ITEM 604 - CATCH BASIN NO. 2-2B, AS PER PLAN**

THIS CATCH BASIN SHALL BE CONSTRUCTED IN CONFORMANCE WITH ITEM 604 EXCEPT THAT THE GRATE AND FRAME SHALL BE NEENAH R-3588, OR APPROVED EQUAL.

**ELEVATION DATUM**

ALL ELEVATIONS ARE BASED ON U.S.G.S. DATUM.

**CROSSINGS AND CONNECTIONS TO EXISTING PIPES AND UTILITIES**

WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO BE CONNECTED TO, OR CROSS OVER OR UNDER AN EXISTING SEWER OR UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING PIPES OR UTILITIES AS TO BOTH LINE AND GRADE BEFORE STARTING TO LAY THE PROPOSED CONDUIT.

IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING CONDUIT, OR EXISTING APPURTENANCE TO BE CONNECTED, DIFFERS FROM THE PLAN ELEVATION OR RESULTS IN A CHANGE IN THE PLAN CONDUIT SLOPE, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATIONS.

IF IT IS DETERMINED THAT THE PROPOSED CONDUIT WILL INTERSECT AN EXISTING SEWER OR UNDERGROUND UTILITY IF CONSTRUCTED AS SHOWN ON THE PLAN, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION ON ANY PORTION OF THE PROPOSED CONDUIT WHICH WOULD BE AFFECTED BY THE INTERFERENCE WITH AN EXISTING FACILITY.

PAYMENT FOR ALL THE OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 603 AND 638 CONDUIT ITEMS.

**WATER LINES**

THIS WORK CONSISTS OF CONSTRUCTING WATER MAINS AND SERVICE BRANCHES, INCLUDING FIRE HYDRANTS, WATER METERS, SERVICE STOPS, VALVES, FITTINGS AND BOXES. THE CONTRACTOR SHALL PROVIDE ALL TOOLS AND EQUIPMENT REQUIRED FOR INSTALLING THESE ITEMS. THE WORK ALSO INCLUDES FURNISHING ALL MATERIALS, EXCAVATING, BEDDING, LAYING PIPE, JOINTING, BACKFILLING, HYDROSTATIC TESTING, DISINFECTION, RESTORATION OF DISTURBED FACILITIES AND SURFACES, DISPOSAL OF ALL SURPLUS EXCAVATION AND DISCARDED MATERIALS, AND OTHER WORK NECESSARY TO COMPLETE THE ITEMS.

GENERAL NOTES

ATH-33-30.981



**VALVE SUPPORTS**

CONCRETE SUPPORTS SHALL BE PROVIDED AT ALL VALVES AS DIRECTED BY THE ENGINEER, AS SHOWN ON THE PLANS.

**ALL VALVES**

IF THE TOP OF THE OPERATING NUT IS MORE THAN 900mm BELOW FINISHED GRADE, AN EXTENSION STEM SHALL BE FURNISHED TO BRING THE TOP OF THE OPERATING NUT WITHIN 600mm OF FINISHED GRADE ELEVATION. COST IS TO BE INCLUDED UNDER ITEM 638.

**FLUSHING AND DISINFECTING WATER MAINS**

ALL WATER MAINS SHALL BE FLUSHED IN ACCORDANCE WITH THE APPLICABLE SECTIONS OF A.W.W.A. SPECIFICATIONS. CHLORINATING OF THE VALVES AND HYDRANTS WILL BE PERFORMED BY THE CITY OF ATHENS. THE CONTRACTOR SHALL NOTIFY THE CITY OF ATHENS 3 DAYS PRIOR TO THE DESIRED TREATMENT DATE, AT (740)593-3502

**TESTING PROCEDURE**

EACH VALVE SECTION OF WATER MAIN SHALL BE TESTED INDEPENDENTLY OF ONE ANOTHER UNLESS OTHERWISE APPROVED BY THE ENGINEER. PRESSURE TEST SHALL BE CONDUCTED WITH ALL WATCH VALVES OPEN AND HYDRANT FOOT VALVES CLOSED. ANY TESTING PERFORMED AGAINST EXISTING VALVES SHALL BE AT THE CONTRACTOR'S RISK AND IN STRICT COMPLIANCE WITH THE REQUIREMENTS OF THE ENGINEER. IF SATISFACTORY RESULTS CANNOT BE OBTAINED AGAINST EXISTING VALVE, THE NEW LINE SHALL BE DISCONNECTED FROM THE EXISTING, PLUGGED AND RETESTED. DAMAGE CAUSED TO EXISTING LINES, VALVES AND SERVICE CONNECTIONS SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE.

**ITEM 623 - CONSTRUCTION LAYOUT STAKES, AS PER PLAN**

AT THE TERMINATION OF THE PROJECT, THE CONTRACTOR SHALL SET ALL MISSING OR OBLITERATED IRON PINS SHOWN ON THE RIGHT OF WAY PLAN. THE PINS SHALL BE SET UNDER THE SUPERVISION OF A REGISTERED SURVEYOR HIRED BY THE CONTRACTOR. THE PINS SHALL BE 3/4" BY 36" REINFORCING ROD WITH AN ALUMINUM CAP STAMPED WITH THE SURVEYOR'S NAME AND REGISTRATION NUMBER.

**ITEM 617 - COMPACTED AGGREGATE, AS PER PLAN**

ALL QUALITY REQUIREMENTS EXCEPT SHALE WILL BE WAIVED. GRADATION REQUIREMENTS WILL BE AS SPECIFIED EXCEPT THE PLASTICITY INDEX WILL BE WAIVED. MATERIAL WILL MEET THE APPROVAL OF THE TESTING ENGINEER.

**EARTHWORK FOR SLOUGHING, SLIDES, AND BREAKAGES**

THE FOLLOWING QUANTITIES ARE FOR USE AS DIRECTED BY THE ENGINEER FOR REMEDIATION OF SLOUGHING, SLIDES, AND BREAKAGES AND ADDITIONAL UNDERCUTTING.

- 203, EXCAVATION NOT INCLUDING EMBANKMENT: 100000 cu. METER
  - 203, EMBANKMENT: 10000 cu.METER
- QUANTITIES CARRIED TO SHEET 62

**ITEM 606 - ANCHOR ASSEMBLY, TYPE B-98**

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING EITHER OF THE FOLLOWING GUARDRAIL END TERMINALS.

- 1) THE SRT-350, GUARDRAIL END TERMINAL AS MANUFACTURED BY SYRO INC., 1170 N. STATE STREET, GIRARD, OHIO 44420 (TELEPHONE: 330-545-4373).

THE LENGTH OF THE SRT-350 SYSTEM IS CONSIDERED TO BE 11.43m, INCLUSIVE OF THREE 3.81m LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DWG#	DRAWING NAME	DWG./REV. DATE	ODOT APPROVAL DATE
SS444	SLOTTED RAIL TERMINAL POST LAYOUT AND ERECTION DETAILS SRT-350 (12.5, 8 POST)	7/12/99	8/27/99 REV. 1
SS425M	SLOTTED RAIL TERMINAL SRT-350 POST LAYOUT AND ERECTION DETAILS SRT-350 (12.5, 9 POST)	6/21/97 REV. 1	3/6/98

- 2) THE FLEAT-350 MANUFACTURED BY ROAD SYSTEMS, INC., 7631 NEW CASTLE DRIVE, FRANKFORT, IL 60423 (TELEPHONE: 815-464-5917).

THE LENGTH OF THE FLEAT-350 IS CONSIDERED TO BE 11.43m, INCLUSIVE OF THREE 3.81m LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DWG#	DRAWING NAME	DWG./REV. DATE	ODOT APPROVAL DATE
FLT-M	FLARED ENERGY ABSORBING TERMINAL (FLEAT-350) ASSEMBLY	4/16/98	7/31/98

GRADING SHALL BE IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING GR-4.3M.

THE FACE OF THE TYPE B-98 IMPACT HEAD SHALL BE COVERED WITH TYPE G REFLECTIVE SHEETING, PER CMS 730.19: APPROXIMATELY 36" W X 12" H FOR THE SRT-350 AND 14" W X 20" H FOR THE FLEAT.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY, TYPE B-98, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING REFLECTIVE SHEETING AND ALL RELATED HARDWARE, GRADING, EMBANKMENT AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

**ITEM 202 - PLUGGING OIL AND/OR GAS WELLS**

ALL OIL AND GAS WELLS LOCATED WITHIN THE LIMITS OF THE RIGHT OF WAY SHALL BE PLUGGED AND/OR VENTED BY THE CONTRACTOR BEFORE ANY OTHER CONSTRUCTION IS STARTED IN THE VICINITY OF THE WELLS. ALL WORK CONNECTED WITH PLUGGING AND/OR VENTING OF THE WELLS SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE STATE OF OHIO, DEPARTMENT OF NATURAL RESOURCES, DIVISION OF OIL AND GAS. ALL WORK MUST BE PERFORMED UNDER THE SUPERVISION OF A REPRESENTATIVE OF THE DIVISION OF OIL AND GAS OR DIVISION OF MINES AND RECLAMATION (IN COAL-BEARING AREAS) WHO MUST BE CONTACTED AT LEAST 2 WORKING DAYS IN ADVANCE OF THE DATE ON WHICH WORK IS EXPECTED TO BEGIN. PLUGGING SHALL BE ACCOMPLISHED WITH TYPE I PORTLAND CEMENT MEETING THE REQUIREMENTS OF ASTM C 150 WITH NO AIR ENTRAINMENT OR API STANDARDS FOR PORTLAND CEMENT.

THE CONTRACTOR SHALL FILE WELL LOG AND ABANDONMENT FORMS WITH THE OHIO DEPARTMENT OF NATURAL RESOURCES (ODNR) AS REQUIRED BY THE OHIO REVISED CODE. ANY ADDITIONAL MATERIALS REQUIRED BY ODNR SHALL BE CONSIDERED INCIDENTAL. ODNR'S ADDRESS IS AS FOLLOWS:

OHIO DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL AND GAS  
1939 FOUNTAIN SQUARE - BUILDING A  
COLUMBUS, OH 43224  
TELEPHONE: (614) 265-6912

A COUNTY ISSUED PLUGGING PERMIT MAY ALSO BE REQUIRED

ALL OIL AND GAS WELLS LOCATED WITHIN THE RIGHT OF WAY, WHETHER PREVIOUSLY PLUGGED TO THE SATISFACTION OF THE DEPARTMENT OF NATURAL RESOURCES OR TO BE PLUGGED AS PART OF THIS PROJECT, SHALL BE VENTED AS DETAILED ON SHEET 39A

PAYMENT FOR THIS WORK SHALL BE MADE AT THE CONTRACT UNIT PRICE FOR ITEM SPECIAL, PLUGGING AND VENTING GAS AND OIL WELL, WHICH PRICE AND PAYMENT SHALL CONSTITUTE FULL COMPENSATION FOR FURNISHING ALL MATERIAL, LABOR, TOOLS AND EQUIPMENT, AND ALL INCIDENTALS NECESSARY TO COMPLETE THIS ITEM.

IN ADDITION TO WELLS SPECIFICALLY MARKED ON THE PLAN, THE FOLLOWING QUANTITY FOR THIS ITEM HAS BEEN CARRIED TO THE GENERAL SUMMARY, TO BE USED AS DIRECTED BY THE ENGINEER.

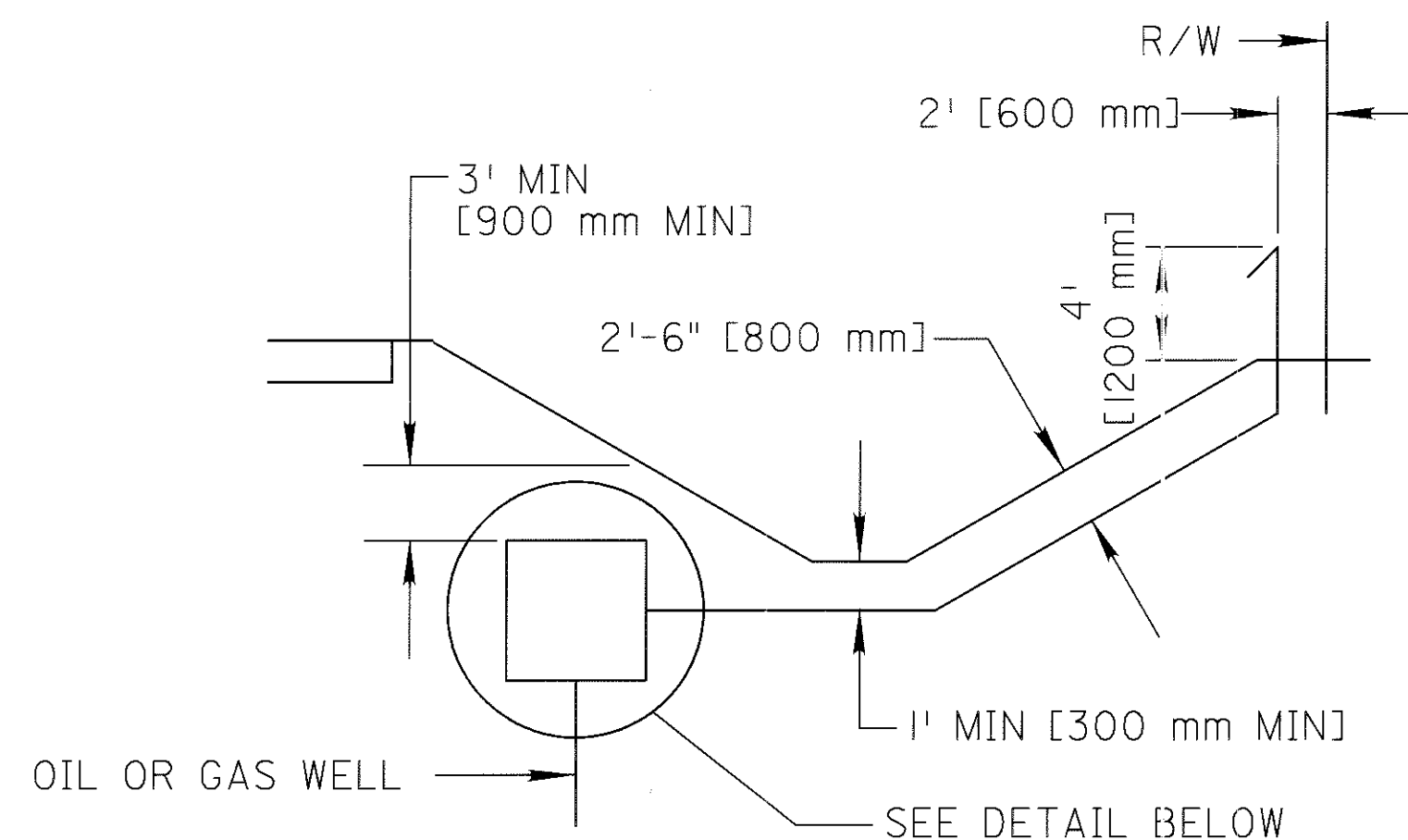
- ITEM SPECIAL, PLUGGING OIL AND/OR GAS WELLS 5 EACH

**ITEM 202 - RAISED PAVEMENT MARKER REMOVAL FOR STORAGE**

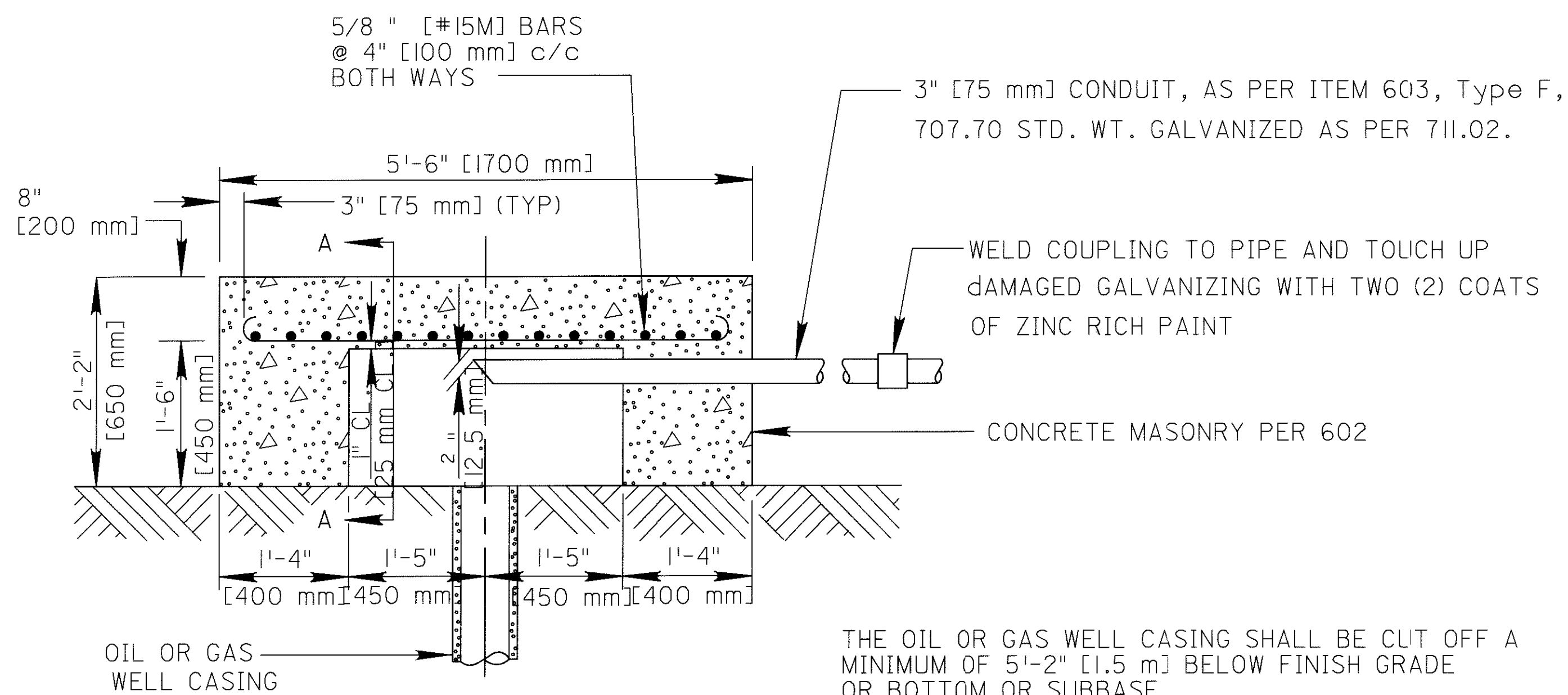
ALL EXISTING RAISED PAVEMENT MARKERS SHALL BE REMOVED FOR STORAGE. THE FOLLOWING IS AN ESTIMATED QUANTITY.

- ITEM 202, RAISED PAVEMENT MARKER REMOVAL FOR STORAGE 100 EACH

IF THE VENT PIPE IS WITHIN 20' [6 m] OF A BUILDING, THE PIPE SHALL EXTEND 14' [4.2 m] ABOVE THE GROUND LINE OR 2' [0.6 m] ABOVE THE PEAK, WHICHEVER IS GREATER, AND SHALL BE ANCHORED IN A CONCRETE FOOTING 18" [0.45 m] IN DIAMETER AND 36" [0.9 m] DEEP. THE PIPE SHALL HAVE A 2" [18.75 mm] THREADED PLUG LOCATED 3" [75 mm] ABOVE THE GROUND LINE.

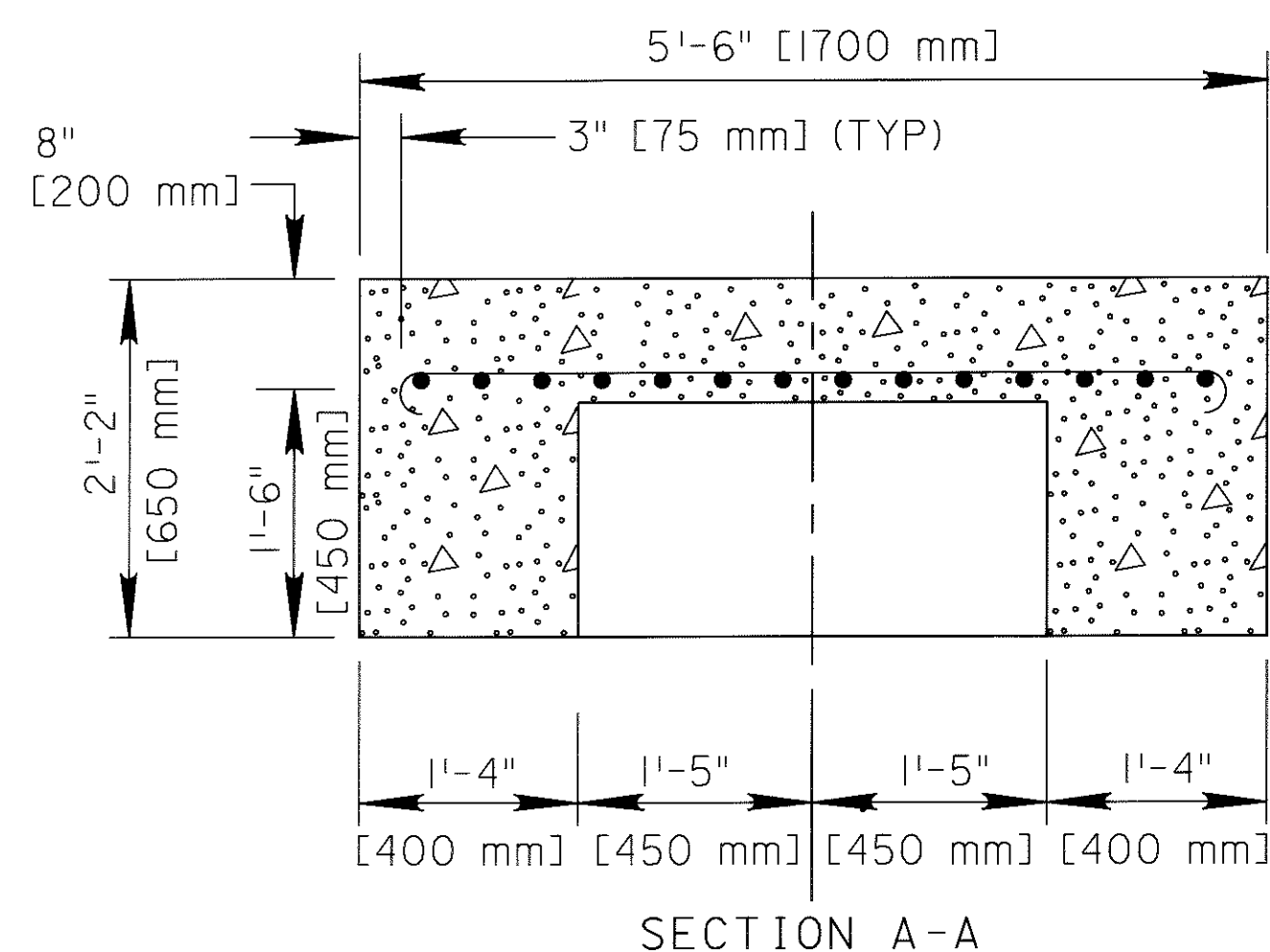


THE VENT PIPE OPENING SHALL BE PROTECTED WITH A WIRE SCREEN.



THE OIL OR GAS WELL CASING SHALL BE CUT OFF A MINIMUM OF 5'-2" [1.5 m] BELOW FINISH GRADE OR BOTTOM OF SUBBASE.

PAYMENT FOR THE WORK NECESSARY TO COMPLETE THE ABOVE SHALL BE INCLUDED IN: ITEM SPECIAL, EACH, PLUGGING AND VENTING GAS(AND/OR) OIL WELL



**PART-WIDTH CONSTRUCTION**

BECAUSE OF THE NECESSITY TO BUILD THIS PROJECT UNDER TRAFFIC AND TO CONSTRUCT THE FULL PAVEMENT WIDTH IN STAGES, EXTREME CARE SHALL BE TAKEN TO PREVENT THE CONSTRUCTION OF A BUTT JOINT IN THE BASE COURSES. LONGITUDINAL JOINTS SHALL BE LAPPED AS SHOWN ON STANDARD CONSTRUCTION DRAWING BP-3.IM.

**FARM DRAINS**

ALL FARM DRAINS, WHICH ARE ENCOUNTERED DURING CONSTRUCTION, SHALL BE PROVIDED WITH UNOBSTRUCTED OUTLETS. EXISTING COLLECTORS WHICH ARE LOCATED BELOW THE ROADWAY DITCH ELEVATIONS, AND WHICH CROSS THE ROADWAY, SHALL BE REPLACED WITHIN THE RIGHT OF WAY LIMITS BY ITEM 603 CONDUIT, TYPE B, ONE COMMERCIAL SIZE LARGER THAN THE EXISTING CONDUIT.

EXISTING COLLECTORS AND ISOLATED FARM DRAINS, WHICH ARE ENCOUNTERED ABOVE THE ELEVATION OF ROADWAY DITCHES, SHALL BE OUTLETTED INTO THE ROADWAY DITCH BY 603 TYPE F CONDUIT. THE OPTIMUM OUTLET ELEVATION SHALL BE 300m ABOVE THE FLOWLINE ELEVATION OF THE DITCH. LATERAL FIELD TILES WHICH CROSS THE ROADWAY SHALL BE INTERCEPTED BY 603, TYPE E CONDUIT, AND CARRIED IN A LONGITUDINAL DIRECTION TO AN ADEQUATE OUTLET OR ROADWAY CROSSING.

THE LOCATION, TYPE, SIZE AND GRADE OF REPLACEMENTS SHALL BE DETERMINED BY THE ENGINEER AND PAYMENT SHALL BE MADE ON FINAL MEASUREMENTS.

EROSION CONTROL PADS AND ANIMAL GUARDS SHALL BE PROVIDED AT THE OUTLET END OF ALL FARM DRAINS AS PER STANDARD CONSTRUCTION DRAWING DM-1.IM, EXCEPT WHEN THEY OUTLET INTO A DRAINAGE STRUCTURE. PAYMENT FOR THE EROSION CONTROL PADS AND ANIMAL GUARDS AND ANY NECESSARY BENDS OR BRANCHES SHALL BE INCLUDED FOR PAYMENT IN THE PERTINENT CONDUIT ITEMS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

- 603, 150mm CONDUIT, TYPE B: 100 METER
- 603, 150mm CONDUIT, TYPE E: 100 METER
- 603, 150mm CONDUIT, TYPE F: 100 METER
- 601, ROCK CHANNEL PROTECTION TYPE C WITH FILTER 5 CU. METERS

**ITEM 878 ROCK BLASTING**

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED FOR ROCK BLASTING PURPOSES:

- |                                       |             |
|---------------------------------------|-------------|
| 878, PRE-BLAST CONDITION SURVEY       | LUMP        |
| 878, BLASTING CONSULTANT              | LUMP        |
| 878, AIR BLAST AND NOISE CONTROL      | LUMP        |
| 878, VIBRATION CONTROL AND MONITORING | LUMP        |
| 878, PRESPLITTING                     | 1700 SQ. M. |
| 878, HYDROLOGIST                      | LUMP        |

**TEMPORARY STREAM CROSSING FORDS**

WHERE STREAM CROSSING FORDS ARE REQUIRED FOR EQUIPMENT CROSSING, THE CROSSING SHALL CONSIST OF CLEAN NON-TOXIC GRANULAR OR ROCK MATERIAL, PROPERLY MAINTAINED TO PREVENT EROSION, WITH PROVISIONS FOR CONVEYANCE OF ANTICIPATED HIGH FLOWS, AND SHALL NOT IMPEDE THE MOVEMENT OF AQUATIC LIFE. ROCK OR GRANULAR MATERIAL SHALL BE ROCK AS PER 203.02 OR DUMP ROCK FILL TYPE A, B, C OR D AS PER 601.07, EXCEPT ALL MATERIALS SHALL BE RETAINED ON THE 12.5 MM SIEVE. CONSTRUCTION SHALL BE IN ACCORDANCE WITH PART 330, APPENDIX A, SPECIFIC CATEGORIES OF DISCHARGES - NATIONALLY PERMITTED, PARAGRAPH (A14), MINOR ROAD CROSSING FILLS - THE FEDERAL REGISTER - CORPS OF ENGINEERS FINAL REGULATIONS, CURRENT EDITION.

**UNSUITABLE SUBGRADE**

DUE TO THE POSSIBILITY OF POOR SOILS ON THE PROJECT AN ESTIMATED QUANTITY OF ITEM 203 EXCAVATION AND ITEM 203 EMBANKMENT USING GRANULAR MATERIAL AS PER 203.02 HAS BEEN INCLUDED IN THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER.

THE STATE OF OHIO RESERVES THE RIGHT TO NON-PERFORM 100% OF THESE ITEMS.

ITEM 203 EXCAVATION, NOT INCLUDING EMBANKMENT CONSTRUCTION	20,000 CU. METERS
ITEM 203 EMBANKMENT USING GRANULAR MATERIAL	20,000 CU. METERS
ITEM 203 EMBANKMENT	10,000 CU. METERS

**ITEM 448 ASPHALT INTERMEDIATE COURSE TYPE I PG 64-22 (UNDER GUARDRAIL)**

PAVING UNDER THE GUARDRAIL SHALL CONSIST OF PLACING ITEM 448 TO THE DEPTH SPECIFIED USING THE FOLLOWING METHOD.

- 1) PLACE ITEM 448 (SEE TYPICAL SECTIONS)
- 2) BORE ASPHALT AT POSTS LOCATIONS
- 3) SET GUARDRAIL POSTS
- 4) PATCH AROUND POSTS

THE MATERIALS USED FOR PATCHING SHALL BE A BITUMINOUS CONCRETE APPROVED BY THE ENGINEER. PATCHED AREAS SHALL BE COMPACTED USING EITHER HAND OR MECHANICAL METHODS. FINISHED SURFACES SHALL BE SMOOTH AND SLOPED TO DRAIN AWAY FROM THE POSTS.

ALL EQUIPMENT, MATERIALS AND LABOR REQUIRED TO PERFORM THE WORK OUTLINED ABOVE, WITH THE EXCEPTION OF SETTING GUARDRAIL POSTS, SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 448, ASPHALT CONCRETE, INTERMEDIATE COURSE, TYPE I, PG64-22 (UNDER GUARDRAIL).

**ITEM 607 - FENCE MISC: SEDIMENT BASIN FENCE**

THIS ITEM IS FOR ENCLOSING SEDIMENT PONDS NEAR RESIDENTIAL AREAS. THE FENCING MAY BE PLASTIC CONSTRUCTION FENCE, CHAIN LINK, OR WOVEN WIRE. THE HEIGHT OF THE FENCE SHALL BE AT LEAST 3 FEET TALL. POSTS SHALL BE SPACED CLOSE ENOUGH TO KEEP THE BOTTOM OF THE FENCE FROM BEING LIFTED UP. THIS ITEM SHALL BE USED WITH THE CONCURRENCE OF THE ENGINEER.

**TREATED SEPTIC CONNECTIONS**

TREATED SEPTIC FLOW MAY BE DISCHARGED INTO THE HIGHWAY DRAINAGE SYSTEM PROVIDED THE OWNER HAS ACQUIRED AN OFFICIAL PERMIT FROM THE OHIO DEPARTMENT OF TRANSPORTATION.

IN EACH CASE WHERE A PERMIT HAS BEEN ISSUED FOR MAKING A TREATED SEPTIC CONNECTION INTO A HIGHWAY DRAINAGE CONDUIT, AN INSPECTION WELL SHALL BE PROVIDED IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING DM-3,IM.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE THE ABOVE CONNECTIONS:

603, 300 MM CONDUIT, TYPE C	65 METER
604, INSPECTION WELL	4 EACH

**CHANNEL EMBANKMENTS**

PORTIONS OF THE EXISTING CHANNEL SHALL BE FILLED AND SLOPED TO DRAIN AS SHOWN IN THESE PLANS. IN CHANNEL EMBANKMENT AREAS WHICH WILL NOT SUPPORT ANY PORTION OF THE NEW ROAD BED OR STRUCTURAL EMBANKMENTS, THE CONTRACTOR MAY UTILIZE EMBANKMENT METHODS MEETING THE FOLLOWING REQUIREMENTS:

AREAS WHERE CHANNEL EMBANKMENTS ARE TO BE PLACED SHALL BE CLEARED OF WEEDS AND BRUSH. THE REQUIREMENTS FOR MOISTURE, DENSITY CONTROL, BENCHING AND SUITABLE MATERIALS SHALL BE WAIVED. IN LIEU OF THE REQUIREMENTS OF ITEM 203, THE DEPTH OF LAYERS IN WHICH THE EMBANKMENTS ARE TO BE PLACED, AND THEIR COMPACTION, SHALL CONFORM WITH ACCEPTABLE CONSTRUCTION PRACTICES AS DETERMINED BY THE ENGINEER.

PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR ITEM 203, EMBANKMENT.

**ITEM 603 - EARTH BOTTOM CULVERTS**

THE CULVERT DETAILS ON SHEETS 852, 853, 854, AND 855 SHOW AN EARTH BOTTOM FOR THE PROPOSED CULVERTS. THE CONTRACTOR DOES NOT HAVE TO PLACE ANY SOIL IN THE CULVERT. THE FLOWLINE ELEVATIONS OF THE CULVERTS WERE PLACED BELOW THE EXISTING ELEVATIONS OF THE STREAM BEDS WITH THE EXPECTATION THAT THE CULVERT BOTTOMS WOULD SILT UP ON THEIR OWN.

**BORROW THE WASTE AREAS**

IN THE FUTURE, THIS HIGHWAY WILL BE WIDENED INTO A FOUR LANE, DIVIDED ROADWAY. THE LANES BEING CONSTRUCTED FOR THIS PROJECT WILL BECOME THE EAST BOUND LANES IN THE FUTURE. THE FUTURE LANES HAVE BEEN SHOWN ON THE CROSS SECTION SHEETS.

THE CONTRACTOR IS ALLOWED TO USE SOIL THAT WILL NEED TO BE EXCAVATED IN THE FUTURE FOR THE ADDITIONAL LANES AS BORROW MATERIAL FOR THIS PROJECT. ALSO, THE CONTRACTOR MAY DISPOSE OF WASTE MATERIAL BY PLACING IT IN AREAS WHERE EMBANKMENTS WILL BE BUILT IN THE FUTURE. ALL MATERIAL WASTED IN THIS WAY MUST MEET THE REQUIREMENTS OF ITEM 203, EMBANKMENT (INCLUDING COMPACTION).

NO SLOPES MAY BE LEFT STEEPER THAN THE LINES SHOWN ON THE CROSS SECTIONS,. ALL BORROW AND WASTE AREAS ON THE RIGHT OF WAY SHALL BE SLOPED TO DRAIN AND SEEDED.

**ITEM 606 - IMPACT ATTENUATOR, TYPE I-98 (UNIDIRECTIONAL)**

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING EITHER OF THE FOLLOWING IMPACT ATTENLATORS:

- 1) THE C-A-T MANUFACTURED BY SYRO, INC., 1170 N. STATE STREET, GIRARD, OHIO 44420 (TELEPHONE: 330-545-4373).

THE LENGTH OF THE C-A-T SYSTEM IS CONSIDERED TO BE 31' 3" (9525 MM) LONG. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS. IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS.

**ITEM 611 - REINFORCED CONCRETE APPROACH SLAB (T=380mm), AS PER PLAN**

CONCRETE FOR THIS ITEM SHALL BE SUPPLEMENTAL SPEC. 844, HIGH PERFORMANCE CONCRETE, MIX 3 OR 4. THE REQUIREMENTS FOR PERFORMING A TRIAL MIX AND TESTING, AS DESCRIBED IN SUPPLEMENTAL SPEC. 844, SHALL BE WAIVED.

DWG#	DRAWING NAME	DWG./REV. DATE	ODOT APPROVAL DATE
SS245M	CRASH-CUSHION ATTENUATING TERMINAL PLAN, ELEVATION & SECTIONS FOR USE AS A LONGITUDINAL MEDIAN BARRIER TERMINAL OR CRASH CUSHION ATTENUATOR	4/10/97 Rev. 4	3/6/98
SS224M	C-A-T TRANSITION TO MEDIAN BARRIER GUARDRAIL PLAN, ELEVATION & SECTIONS	4/26/96	3/6/98
SS226M	C-A-T TRANSITION TO VERTICAL WALL OR PIER PLAN, ELEVATION & SECTIONS	4/26/96	3/6/98

THE BRAKEMASTER MANUFACTURED BY ENERGY ABSORPTION SYSTEMS, INC., ONE EAST WACKER DRIVE, CHICAGO, IL 60601 (TELEPHONE: 312-467-6750).

THE LENGTH OF THE BRAKEMASTER SYSTEM IS CONSIDERED TO BE 32' 8" (9957 MM) LONG. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS.

DWG#	DRAWING NAME	DWG./REV. DATE	ODOT APPROVAL DATE
92-00-01	BRAKEMASTER GENERAL ASSEMBLY (UNIDIRECTIONAL SYSTEM)	3/6/97 REV. K	3/6/98
92-00-81	BRAKEMASTER (UNIDIRECTIONAL) WITH FOUNDATION TUBES	2/9/98	3/6/98
92-00-02	BRAKEMASTER GENERAL ASSEMBLY (BIDIRECTIONAL SYSTEM)	3/10/97 REV. K	3/6/98
92/00/82	BRAKEMASTER (BIDIRECTIONAL) WITH FOUNDATION TUBES	2/9/98	3/6/98
92/2/24	ANCHOR ASSEMBLY, FOUNDATION TUBE 6.5 FT., BRS	6/12/97 REV.D	3/6/98

THE FACE OF THE TYPE I-98 IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, OPR CMS 730-19, APPROXIMATELY 36" X 12" (91.5 MM W X 305 MM H). PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, IMPACT ATTENUATOR, TYPE I-98 (UNIDIRECTIONAL), EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED TRANSITIONS, HARDWARE, REFLECTIVE SHEETING AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

CALCULATED  
PRS  
CHECKED  
AM

**GENERAL NOTES**

**ATH-33-30.981**

MAINTAINING TRAFFIC, AS PER PLAN

BEFORE WORK IS STARTED ON THIS PROJECT, THE CONTRACTOR SHALL HIRE A CONSULTANT THAT IS AT LEAST PRE-QUALIFIED TO PREPARE NON COMPLEX ROADWAY PLANS. THIS CONSULTANT SHALL PREPARE A DETAILED MAINTENANCE OF TRAFFIC (MOT) PLAN AND SCHEDULE OF OPERATIONS FOR MAINTENANCE OF TRAFFIC. SECTION 1306.2 OF THE OHIO DEPARTMENT OF TRANSPORTATION'S LOCATION AND DESIGN MANUAL, VOLUME THREE, HIGHWAY PLANS, LISTS SEVERAL SOURCES OF INFORMATION AVAILABLE TO THE DESIGNER TO ASSIST IN THE PREPARATION OF THE DETAILED MAINTENANCE OF TRAFFIC PLAN. PRIOR TO IMPLEMENTING ANY MAINTENANCE OF TRAFFIC PLAN, APPROVAL SHALL BE OBTAINED FROM THE DISTRICT 10 PRODUCTION AND CONSTRUCTION DEPARTMENTS. THIS PLAN SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER

A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES BY USE OF THE EXISTING PAVEMENT, THE COMPLETED PAVEMENT, TEMPORARY PAVEMENT AND TEMPORARY ROADS.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

PAYMENT FOR ALL LABOR, EQUIPMENT, MATERIALS, AND PREPARATION OF THE DETAILED MAINTENANCE OF TRAFFIC PLAN SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR 614, MAINTAINING TRAFFIC, AS PER PLAN.

DESIGNATED LOCAL DETOUR ROUTES

THE CONCEPTUAL MAINTENANCE OF TRAFFIC PLAN PROVIDED ALLOWS FOR TWO LOCAL ROUTES TO BE DETOURED. DURING THE TIME THAT TRAFFIC IS DETOURED, THE CONTRACTOR SHALL MAINTAIN THE LOCAL DETOUR ROUTES IN A CONDITION WHICH IS REASONABLY SMOOTH AND FREE FROM HOLES, RUTS, RIDGES, BUMPS, DUST AND STANDING WATER. ONCE THE DETOUR IS REMOVED AND TRAFFIC RETURNED TO ITS NORMAL PATTERN, THE DESIGNATED LOCAL DETOUR ROUTES SHALL BE RESTORED TO A CONDITION THAT IS EQUIVALENT TO THAT WHICH EXISTED PRIOR TO THEIR USE FOR THIS PURPOSE. ALL WORK SHALL BE PERFORMED WHEN AND AS DIRECTED BY THE ENGINEER.

CONCEPTUAL MAINTENANCE OF TRAFFIC PLAN/ SEQUENCE OF CONSTRUCTION

THE FOLLOWING IS A LIST OF GENERAL PROVISIONS FOLLOWED BY A CONCEPTUAL MAINTENANCE OF TRAFFIC PLAN FOR THE CONCEPTUAL SEQUENCE OF CONSTRUCTION. THE CONTRACTOR'S CONSULTANT HAS THE OPTION OF TAKING THIS PROVIDED CONCEPT OR DEVELOPING AN ALTERNATIVE CONCEPT FROM WHICH HE/SHE SHALL PREPARE THE DETAILED MAINTENANCE OF TRAFFIC PLAN AND SEQUENCE OF CONSTRUCTION. NO MATTER WHICH CONCEPT IS DEVELOPED, THE DETAILED MOT PLAN SHALL INSURE THE SAFETY AND MINIMUM INCONVENIENCE TO THE TRAVELING PUBLIC. NO PLAN SHALL BE PLACED INTO EFFECT UNTIL SUCH PLAN HAS BEEN REVIEWED AND APPROVAL HAS BEEN GRANTED, IN WRITING, BY THE DIRECTOR.

IT IS ANTICIPATED THAT THIS PROJECT CAN BE BUILT IN THREE PHASES. THE FIRST PHASE, WHICH WILL CONTAIN THE BULK OF THE WORK, WILL HAVE A MINIMAL EFFECT ON TRAFFIC. ALL TRAFFIC MOVEMENTS THAT EXIST TODAY, EXCEPT FOR FRUM ROAD, WILL BE MAINTAINED THROUGHOUT THIS PHASE. THE WORK WILL BE BROKEN DOWN AS FOLLOWS:

PHASE 1 MAINLINE:

US 33: SEE SHEETS 42-43A  
CONSTRUCT THE MAINLINE BETWEEN A POINT IMMEDIATELY SOUTH OF THE EXISTING EASTBOUND EXIT RAMP FROM US-50 TO THE EAST END OF THE PROJECT. ALSO CONSTRUCT AS MUCH OF THE PROPOSED EASTBOUND RAMP AND MAINLINE AS POSSIBLE WITHOUT ENCROACHING ON THE EXISTING EASTBOUND RAMP.

PHASE 2 MAINLINE:

US 33: SEE SHEET 44-45A  
CONSTRUCT THE REMAINDER OF RAMP "A", STILL MAINTAINING THE EXISTING EASTBOUND RAMP TO RICHLAND AVENUE. THE EXISTING RAMP WILL REMAIN OPEN AT ALL TIMES. THIS PHASE SHALL BE LIMITED TO 30 DAYS.

CONSTRUCTION OF THE RELOCATED US-33 MAINLINE SOUTH OF ALBANY ROAD SHALL CONTINUE DURING THIS PHASE, UNLESS NOTED OTHERWISE

PHASE 3 MAINLINE:

US 33: SEE SHEET NO. 46  
TRANSFER ALL US-33 TRAFFIC TO RAMP "A" AND CLOSE THE EXISTING EASTBOUND RAMP. CONSTRUCT RAMP B RETAINING WALL AND THE REMAINDER OF THE WESTBOUND MAINLINE AND THE WESTBOUND RAMP FROM RICHLAND AVE. THIS PHASE SHALL BE LIMITED TO 60 DAYS.

CONSTRUCTION OF THE RELOCATED US-33 MAINLINE SOUTH OF ALBANY ROAD SHALL CONTINUE DURING THIS PHASE, UNLESS NOTED OTHERWISE.

MAINLINE OPENING:

AT THE END OF PHASE 3, ALL TRAFFIC CAN BE TRANSFERRED TO THE NEW MAINLINE IF THE CONNECTION AT THE EAST END IS READY. THIS INCLUDES THE CONNECTION TO EXISTING US-33 AT DARWIN, OHIO (MEIGS COUNTY) AND THE RELOCATED US-33 MAINLINE FROM STATION 39+600 THROUGH STATION 49+890.950.

IF THIS PROJECT IS COMPLETED BEFORE THE ADJOINING PROJECT TO THE EAST, AN INTERIM SIGNAL PATTERN WILL BE NEEDED FOR THE TRAFFIC SIGNALS ALONG ALBANY ROAD, TO ADDRESS A PREDOMINANTLY NORTH/SOUTH FLOW RATHER THAN THE EAST/WEST FLOW THAT WILL TAKE PLACE WHEN US-33 TRAFFIC IS ON THE NEW MAINLINE. THE TEMPORARY TRAFFIC SIGNAL PATTERN SHALL BE DEVELOPED BY THE CONTRACTOR AND APPROVED BY THE CITY OF ATHENS ELECTRICIAN, CHUCK MEYERS.

CROSSROAD CONSTRUCTION

CONSTRUCTION OF ALL PHASES OF RICHLAND AVENUE/ALBANY ROAD, T.R. 1271, T.R. 55, C.R. 21, T.R. 64, AND C.R. 16 SHALL BE SUBSTANTIALLY CONSTRUCTED DURING PHASE 1 MAINLINE CONSTRUCTION. ALL OUTSTANDING ITEMS OF WORK ON THE CROSSROADS (IF ANY) SHALL BE COMPLETED DURING PHASE 2 AND PHASE 3 MAINLINE CONSTRUCTION. THE CROSSROAD CONSTRUCTION SHALL BE AS FOLLOWS:

ALBANY ROAD/RICHLAND AVENUE

IT IS ANTICIPATED THAT ALBANY ROAD/RICHLAND AVENUE CAN BE BUILT BY PART WIDTH CONSTRUCTION, MAINTAINING TWO LANE, TWO WAY TRAFFIC ON ONE HALF OF THE EXISTING PAVEMENT WHILE CONSTRUCTING THE OTHER HALF. TWO WAY, TWO LANE TRAFFIC WILL BE MAINTAINED ON THE FIRST HALF OF THE PROPOSED PAVEMENT WHILE THE SECOND HALF IS BEING CONSTRUCTED.

TWO WAY ONE LANE TRAFFIC MAY BE MAINTAINED IN ACCORDANCE WITH MT-97.10M DURING WORKING HOURS FOR CULVERT AND UTILITY CROSSINGS AND OTHER SHORT TERM OPERATIONS APPROVED BY THE ENGINEER.

ANY DROP-OFF GREATER THAN 75MM AND LESS THAN 300MM SHALL BE FILLETED WITH A WEDGE OF COMPACTED MATERIAL PLACED AT A 3:1 SLOPE AND PROTECTED BY DRUMS DURING NON-WORKING HOURS. ANY DROP-OFF GREATER OR EQUAL TO 300MM SHALL BE PROTECTED BY PORTABLE CONCRETE BARRIER DURING NON-WORKING HOURS.

THE EXISTING OR PROPOSED SIGNAL AT POMEROY ROAD SHALL BE KEPT IN SERVICE AT ALL TIMES. THE SIGNAL HEADS SHALL BE SHIFTED ON THE EXISTING SPAN TO A LOCATION WHERE THEY WILL BE ABOVE THE LANES OF TRAFFIC. AN EASTBOUND LOW LEVEL HEAD SHALL BE ADDED TO THE EXISTING SIGNAL IF VISIBILITY OF THE EXISTING HEADS ARE BLOCKED BY THE PROPOSED STRUCTURAL STEEL OR EQUIPMENT WORKING OVER ALBANY ROAD. TEMPORARY DETECTION SHALL BE MAINTAINED AT ALL TIMES. PLACING ANY SIGNAL PHASE ON RECALL IS NOT PERMITTED.

NO WORK SHALL TAKE PLACE WHICH WILL NOT PERMIT TWO WAY, TWO LANE TRAFFIC ON ALBANY ROAD/RICHLAND AVENUE, AND FULL USE OF THE POMEROY ROAD INTERSECTION BETWEEN THE HOURS OF 7:00AM AND 9:00AM AND BETWEEN THE HOURS OF 3:00PM AND 6:00PM WEEKDAYS.

NO WORK SHALL TAKE PLACE WHICH WILL NOT PERMIT TWO WAY, TWO LANE TRAFFIC ON ALBANY ROAD/RICHLAND AVENUE, AND FULL USE OF THE POMEROY ROAD INTERSECTION ON DAYS OF OHIO UNIVERSITY HOME FOOTBALL OR BASKETBALL GAMES, ON DAYS OF OHIO UNIVERSITY COMMENCEMENTS OR ANY OTHER MAJOR UNIVERSITY FUNCTION AS DETERMINED BY THE ENGINEER.

TR-127 (FRUM ROAD): SEE SHEETS NO. 47-48

THIS ROAD WILL BE PERMANENTLY CLOSED AT THE BEGINNING OF THE PROJECT. SIGNS WILL BE POSTED ANNOUNCING THE CLOSURE 30 DAYS PRIOR TO THE EVENT. PERMANENT TERMINATION AND TRAFFIC CONTROL WILL BE INSTALLED WITHIN 30 DAYS OF CLOSURE.

THE CONSTRUCTION OF THE RELOCATED US33 MAINLINE PERMANENTLY CLOSES THIS EXISTING ROAD.

ACCESS TO THE PROPERTIES FROM THE REMAINING PORTION OF THIS ROAD SHALL BE PROVIDED TO THE OWNERS, SERVICE VEHICLES AND EMERGENCY VEHICLES AT ALL TIMES.

TR-55 (OXLEY ROAD): SEE SHEETS NO. 49-51

THIS ROAD WILL BE CLOSED TO TRAFFIC FOR THE CONSTRUCTION OF THE PROPOSED BRIDGE OVER RELOCATED US-33. THE PERIOD OF CLOSURE SHALL BE LIMITED TO NO MORE THAN 200 DAYS.

THE DETAILED MAINTENANCE OF TRAFFIC PLANS WILL INCLUDE A LOCAL DETOUR PLAN SPECIFYING ALL NECESSARY DETOUR TRAFFIC CONTROL IN ACCORDANCE WITH THE OMTCD, FOR THE PROJECT SITE AS WELL AS THE LAST CROSSROAD PRIOR TO THE PROJECT SITE IN EACH DIRECTION.

ACCESS TO PROPERTIES ON EITHER SIDE OF THE PROJECT SITE SHALL BE PROVIDED TO THE OWNERS, SERVICE VEHICLES AND EMERGENCY VEHICLES AT ALL TIMES.

CR-21 (PLEASANT HILL ROAD): SEE SHEETS NO. 52-55

TRAFFIC WILL BE MAINTAINED WITH A RUNAROUND AS SHOWN ON THE PLANS WHILE THE PROPOSED INTERSECTION IS BUILT. TRAFFIC WILL BE MAINTAINED THROUGH THE PROPOSED INTERSECTION AS SHOWN IN PHASE 1, PART B, PRIOR TO PROPOSED MAINLINE US-33 BEING OPENED TO TRAFFIC, THE TEMPORARY TRAFFIC CONTROL AT THE INTERSECTION SHALL BE REMOVED AND PERMANENT TRAFFIC CONTROL PROVIDED.

TWO LANE, TWO WAY TRAFFIC ON CR 21 SHALL BE MAINTAINED USING A COMBINATION OF THE EXISTING PAVEMENT, TEMPORARY ROADS OR TEMPORARY WIDENING AND NEWLY CONSTRUCTED CR 21 PAVEMENT. ALL TEMPORARY ROADS SHALL BE DESIGNED AT A MINIMUM DESIGN SPEED OF 40 KM/H (25 MPH). ACCESS TO ALL PROPERTIES REMAINING WITHIN THE AREA OF CONSTRUCTION SHALL BE PROVIDED TO THE OWNERS, SERVICE VEHICLES, AND EMERGENCY VEHICLES AT ALL TIMES.

TR-64 (HAWKS NEST ROAD): SEE SHEETS NO. 56-57

THIS ROAD WILL BE CLOSED TO TRAFFIC FOR THE CONSTRUCTION OF THE PROPOSED BRIDGE OVER RELOCATED US-33. THE PERIOD OF CLOSURE SHALL BE LIMITED TO NO MORE THAN 200 DAYS.

THE DETAILED MAINTENANCE OF TRAFFIC PLANS WILL INCLUDE A LOCAL DETOUR PLAN SPECIFYING ALL NECESSARY DETOUR TRAFFIC CONTROL IN ACCORDANCE WITH THE OMTCD, FOR THE PROJECT SITE AS WELL AS THE LAST CROSSROAD PRIOR TO THE SITE IN EACH DIRECTION.

ACCESS TO PROPERTIES ON EITHER SIDE OF THE PROJECT SITE SHALL BE PROVIDED TO THE OWNERS, SERVICE VEHICLES AND EMERGENCY VEHICLES AT ALL TIMES.

CR-16 (PLEASANTON ROAD): SEE SHEETS NO. 58-61

TRAFFIC WILL BE MAINTAINED BY USING THE EXISTING ROADWAY AND TEMPORARY RUNAROUNDS SHOWN ON THE PLANS WHILE THE PROPOSED INTERSECTION IS BUILT. TRAFFIC WILL BE MAINTAINED THROUGH THE PROPOSED INTERSECTION AS SHOWN IN PHASE 2. PRIOR TO PROPOSED MAINLINE US-33 BEING OPENED TO TRAFFIC, THE TEMPORARY TRAFFIC CONTROL AT THE INTERSECTION SHALL BE REMOVED AND PERMANENT TRAFFIC CONTROL PROVIDED.

TWO LANE, TWO WAY TRAFFIC ON CR 16 SHALL BE MAINTAINED USING A COMBINATION OF THE EXISTING PAVEMENT, TEMPORARY ROADS OR TEMPORARY WIDENING AND NEWLY CONSTRUCTED C.R. 16 PAVEMENT. ALL TEMPORARY ROADS SHALL BE DESIGNED AT A MINIMUM DESIGN SPEED OF 40 KM/H (25 MPH). ACCESS TO ALL PROPERTIES REMAINING WITHIN THE AREA OF CONSTRUCTION SHALL BE PROVIDED TO THE OWNERS, SERVICE VEHICLES AND EMERGENCY VEHICLES AT ALL TIMES.

MAINTENANCE OF EXISTING TRAFFIC SIGNAL

THE OPERATION OF THE EXISTING TRAFFIC SIGNAL AT RICHLAND AVENUE/ALBANY ROAD AND EXISTING US-33 SHALL BE MAINTAINED AT ALL TIMES. THE DETECTION ON ALL APPROACHES SHALL BE MAINTAINED USING THE EXISTING LOOP DETECTORS, TEMPORARY MICROWAVE DETECTORS OR BY THE PROPOSED REPLACEMENT LOOP DETECTORS. FIXED TIME OR RECALL OPERATION IS NOT ACCEPTABLE.

THE CONTRACTOR SHALL NOTIFY CHUCK MEYERS, CITY OF ATHENS, ELECTRICIAN, (PAGER) 740-576-8175, OR ROY HAZLETT, ASSISTANT CITY SERVICE SAFETY DIRECTOR, 740-592-3340, A MINIMUM OF (7) DAYS PRIOR TO THE BEGINNING OF ANY OF THE FOLLOWING EVENTS:

1. STARTING ANY WORK AT THE INTERSECTION
2. REMOVING OR DISABLING ANY EXISTING LOOP DETECTORS AND PLACING ANY TEMPORARY MICROWAVE DETECTORS IN SERVICE.
3. RELOCATING ANY SIGNAL HEADS.
4. PLACING THE REPLACEMENT LOOP DETECTORS IN SERVICE.

TEMPORARY EARTHWORK

ALL TEMPORARY ROADS SHALL BE BUILT WITH CLASS B PAVEMENT AS PER 615.05 OF ODOT'S CMS. THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED IN THE PLAN FOR INFORMATION ONLY.

TEMPORARY EARTHWORK EXCAVATION	27,000 CU METERS
TEMPORARY EARTHWORK EMBANKMENT	7,000 CU METERS
TEMPORARY PAVEMENT, CLASS B	8,000 SQ METERS

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CONCEPTUAL MAINTENANCE OF TRAFFIC GENERAL NOTES

ATH-33-30.981

ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR

IN ADDITION TO THE REQUIREMENTS OF 614 AND THE LATEST EDITION OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD), A UNIFORMED LAW ENFORCEMENT OFFICER (AND OFFICIAL PATROL CAR WITH WORKING TOP MOUNTED EMERGENCY FLASHING LIGHTS) SHALL BE PROVIDED FOR CONTROLLING TRAFFIC FOR THE FOLLOWING TASKS:

FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED.

DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.

DURING A TRAFFIC SIGNAL INSTALLATION.

LAW ENFORCEMENT OFFICERS (LEO'S) SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED. THE LEO'S ARE CONSIDERED TO BE EMPLOYED BY THE CONTRACTOR AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR ACTIONS. ALTHOUGH THEY ARE EMPLOYED BY THE CONTRACTOR, THE PROJECT ENGINEER SHALL HAVE CONTROL OVER THEIR PLACEMENT. THE OFFICIAL PATROL CAR SHALL BE PUBLIC SAFETY VEHICLE AS REQUIRED BY THE OHIO REVISED CODE.

THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR THESE SERVICES WITH:

OHIO STATE HIGHWAY PATROL  
COLUMBUS ROAD  
ATHENS, OHIO 45701  
PHONE 740-593-6611

OR

ATHENS POLICE DEPARTMENT  
11 NORTH COLLEGE STREET  
ATHENS, OHIO 45701  
PHONE 740-592-3313

LAW ENFORCEMENT OFFICERS WITH PATROL CAR REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR. THE FOLLOWING ESTIMATED QUANTITIES HAS BEEN PROVIDED FOR INFORMATION ONLY:

ITEM 614 - LAW ENFORCEMENT OFFICER 250 HOURS

ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR 50 HOURS

THE HOURS PAID SHALL INCLUDE MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED.

IF THE CONTRACTOR WISHES TO UTILIZE LEO'S FOR FLAGGING AND TRAFFIC CONTROL OTHER THAN FOR THAT REQUIRED IN THESE PLANS, HE MAY DO SO AT HIS OWN EXPENSE. PAYMENT FOR THE EXCESS ABOVE THE CONTRACT REQUIREMENTS WILL BE INCLUDED UNDER ITEM 614 MAINTAINING TRAFFIC.

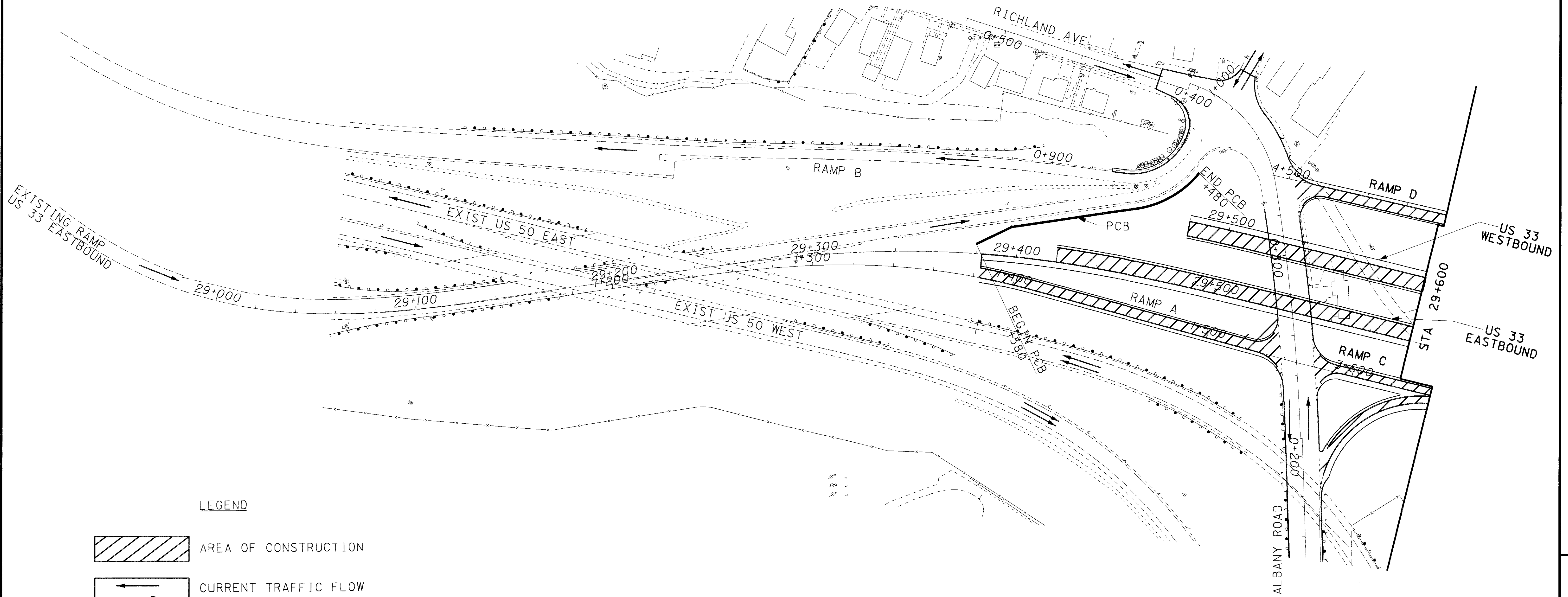
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CONCEPTUAL MAINTENANCE OF TRAFFIC GENERAL NOTES



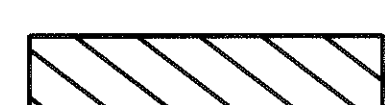

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LEGEND

-  AREA OF CONSTRUCTION
-  CURRENT TRAFFIC FLOW
-  TEMPORARY PAVEMENT
-  PAVEMENT REMOVED

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SCALE IN METERS

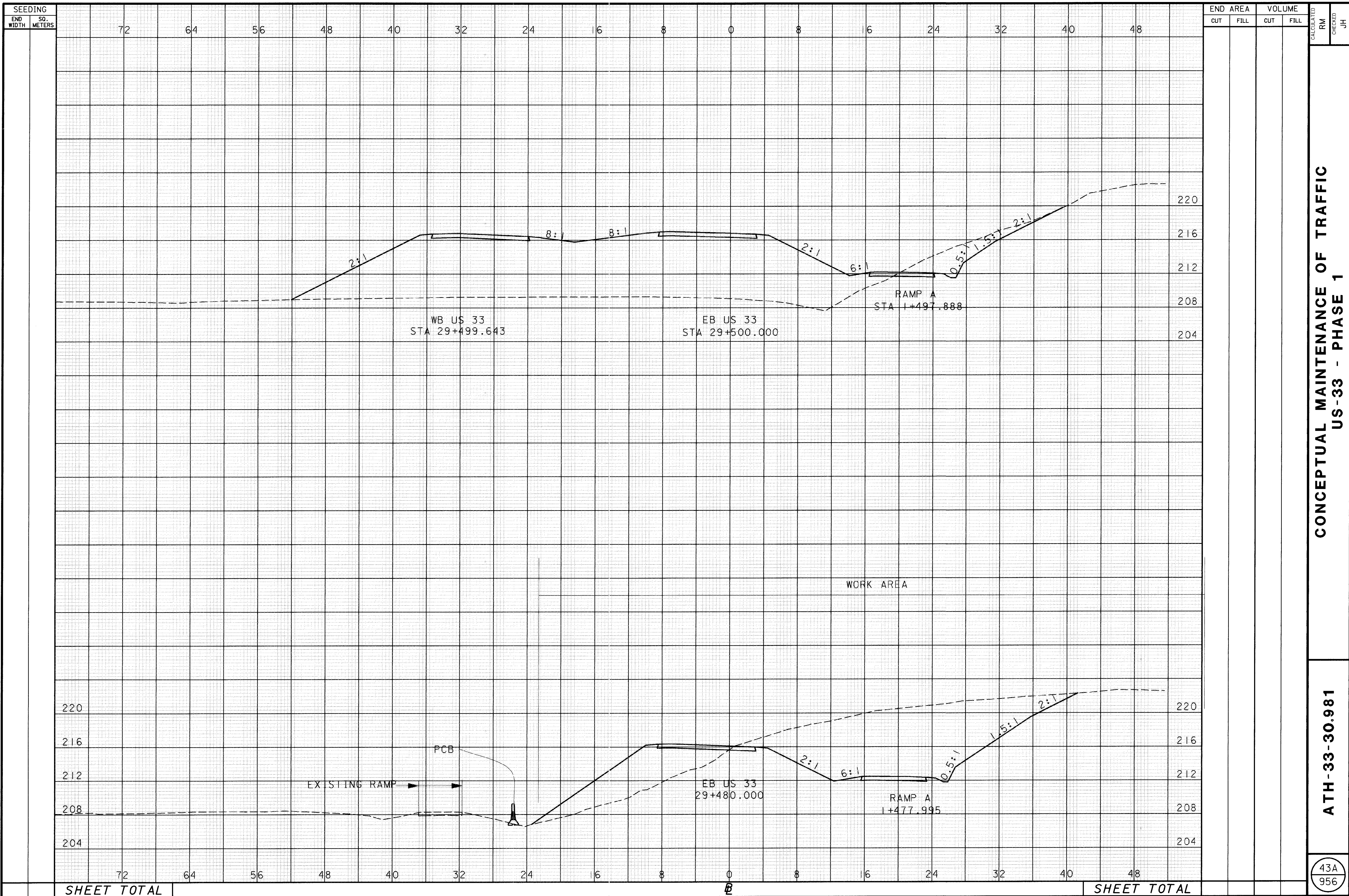
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CONCEPTUAL MAINTENANCE OF TRAFFIC  
US-33, PHASE 1

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CONCEPTUAL MAINTENANCE OF TRAFFIC  
 US-33 - PHASE 1

ATH-33-30.981

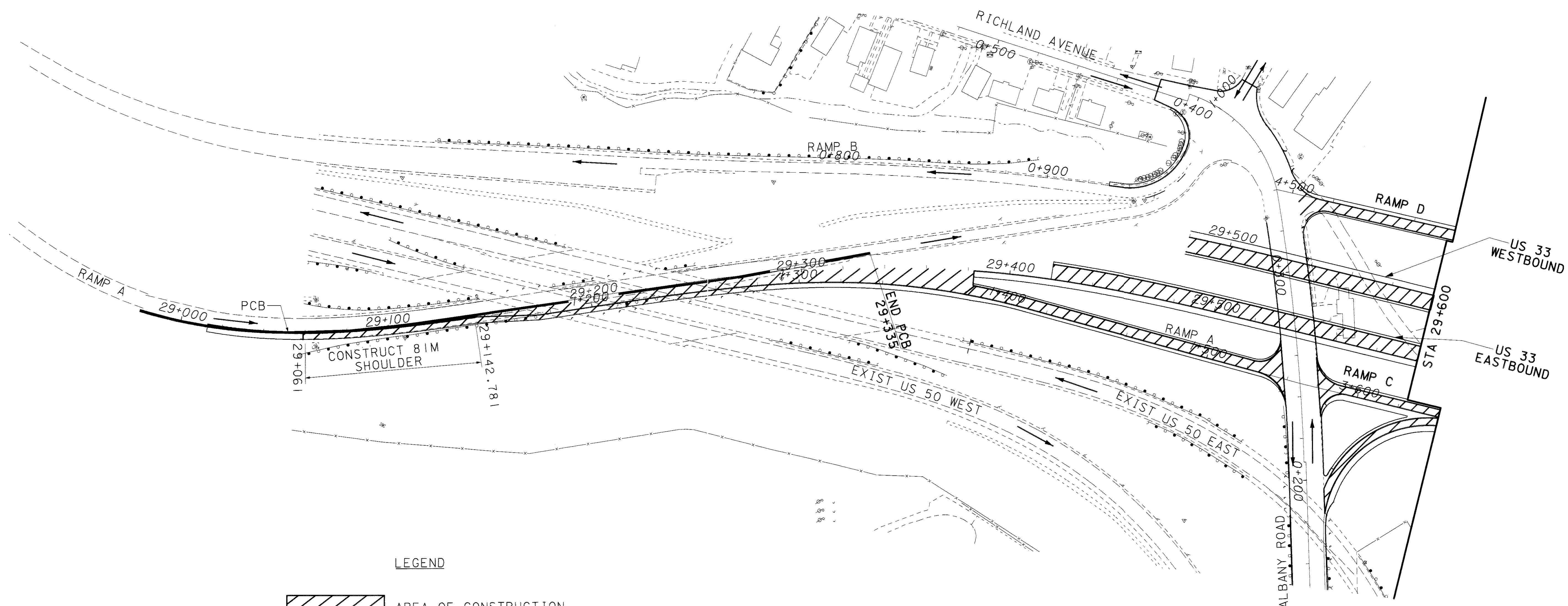
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SHEET TOTAL


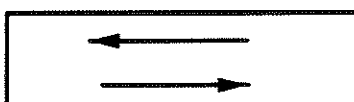


SHEET TOTAL

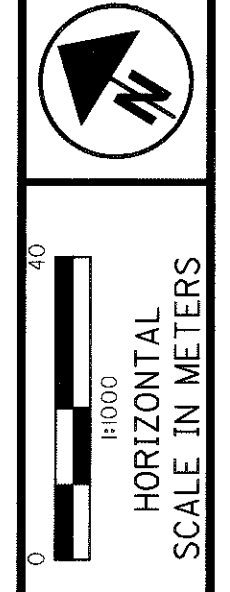


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LEGEND

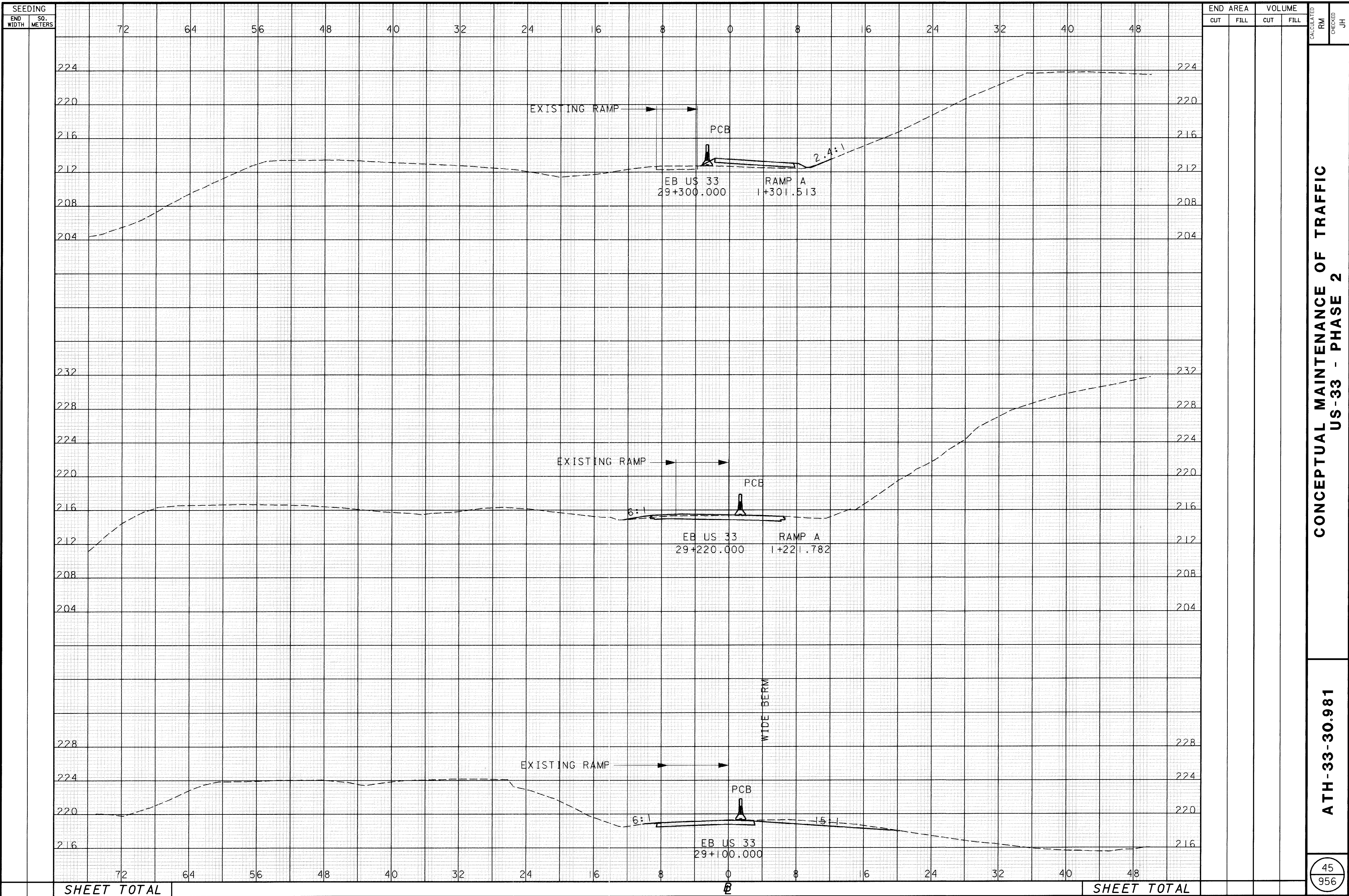
-  AREA OF CONSTRUCTION
-  CURRENT TRAFFIC FLOW
-  TEMPORARY PAVEMENT
-  PAVEMENT REMOVED



CALCULATED RM  
 CHECKED JH

CONCEPTUAL MAINTENANCE OF TRAFFIC  
 US-33, PHASE 2

ATH-33-30.981



SEEDING		END AREA		VOLUME		CALCULATED RM	CHECKED JH																										
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL																												
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SHEET TOTAL																																	

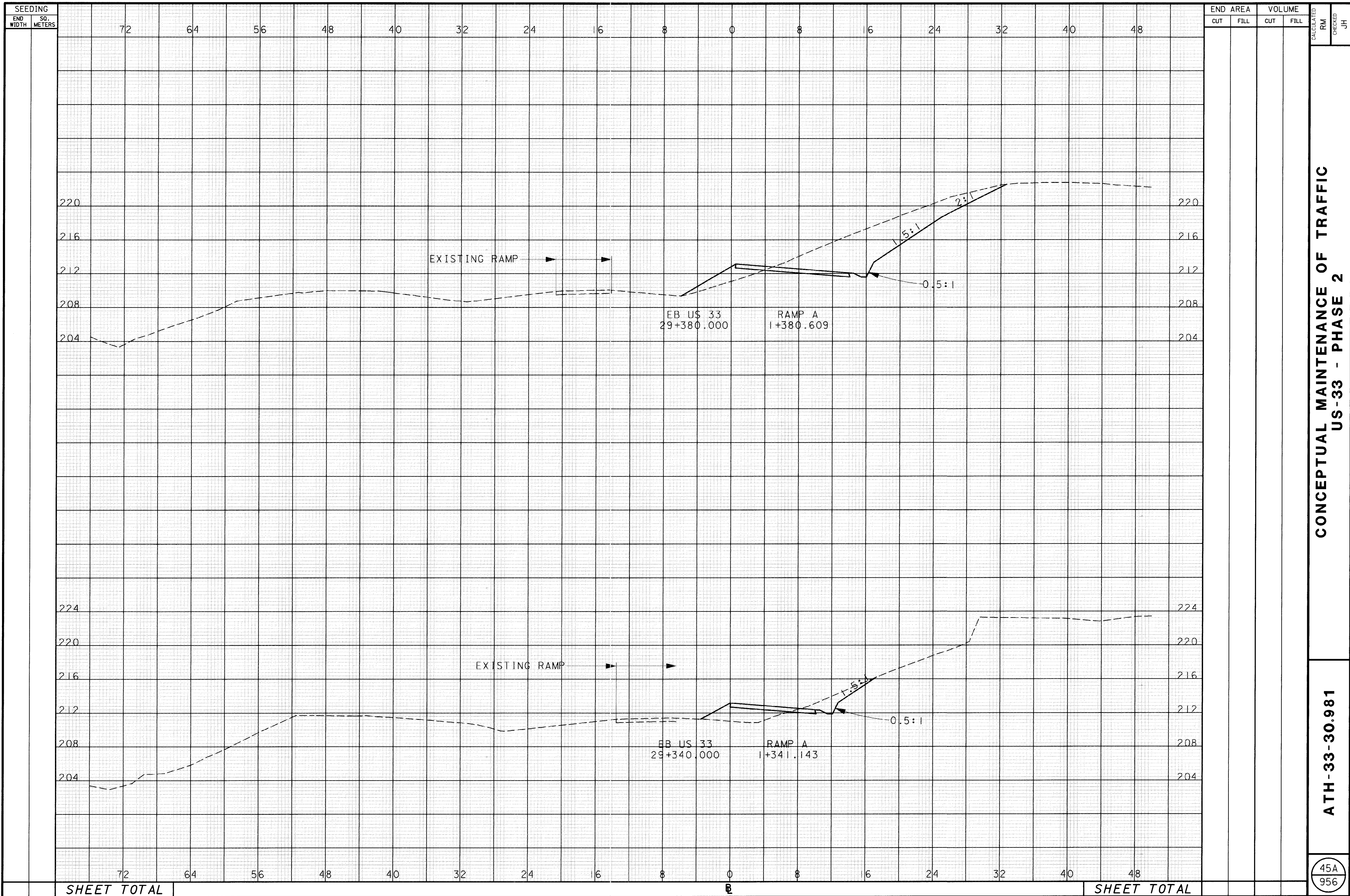
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**CONCEPTUAL MAINTENANCE OF TRAFFIC  
 US-33 - PHASE 2**

**ATH-33-30.981**

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**CONCEPTUAL MAINTENANCE OF TRAFFIC**  
**US-33 - PHASE 2**

**ATH-33-30.981**

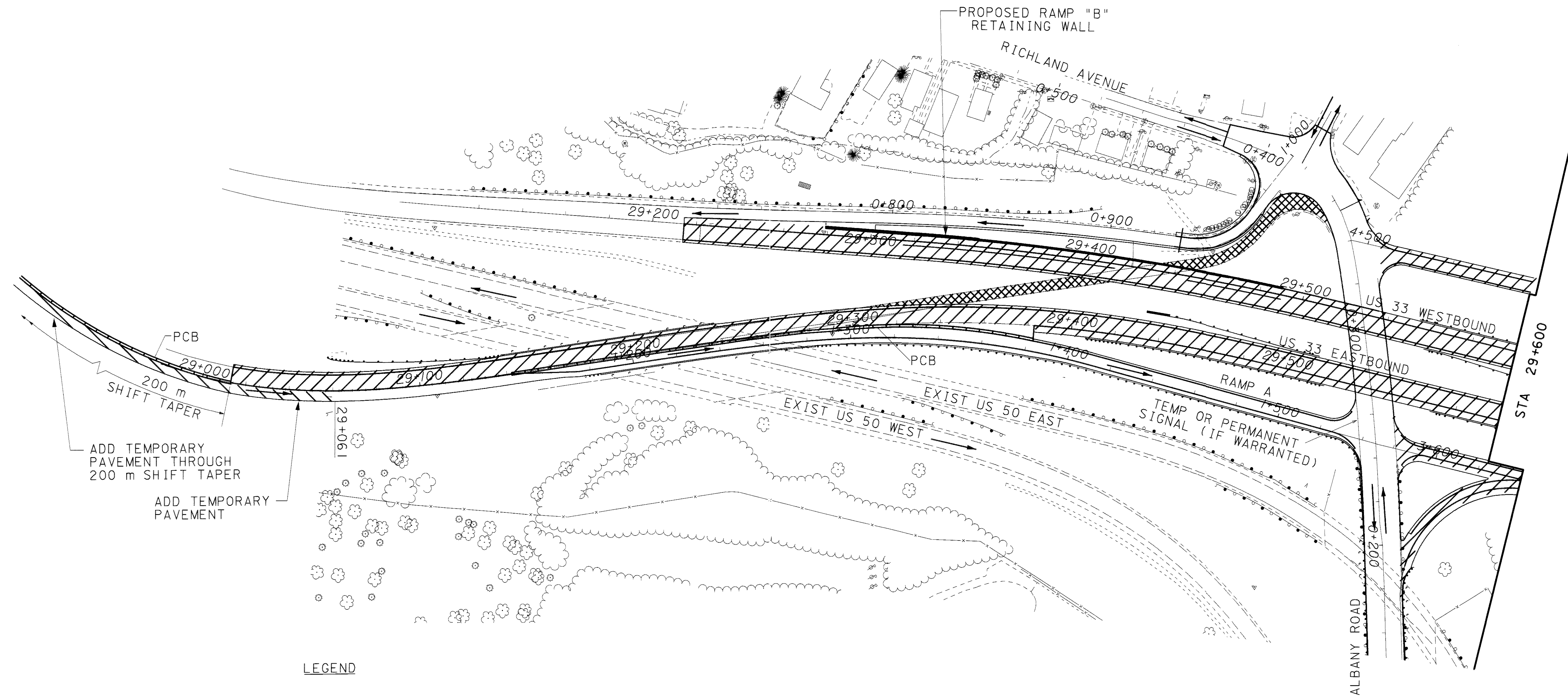


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CONCEPTUAL MAINTENANCE OF TRAFFIC  
US-33 - PHASE 3





ATH-33-30.981



ADD TEMPORARY PAVEMENT THROUGH 200 m SHIFT TAPER

ADD TEMPORARY PAVEMENT

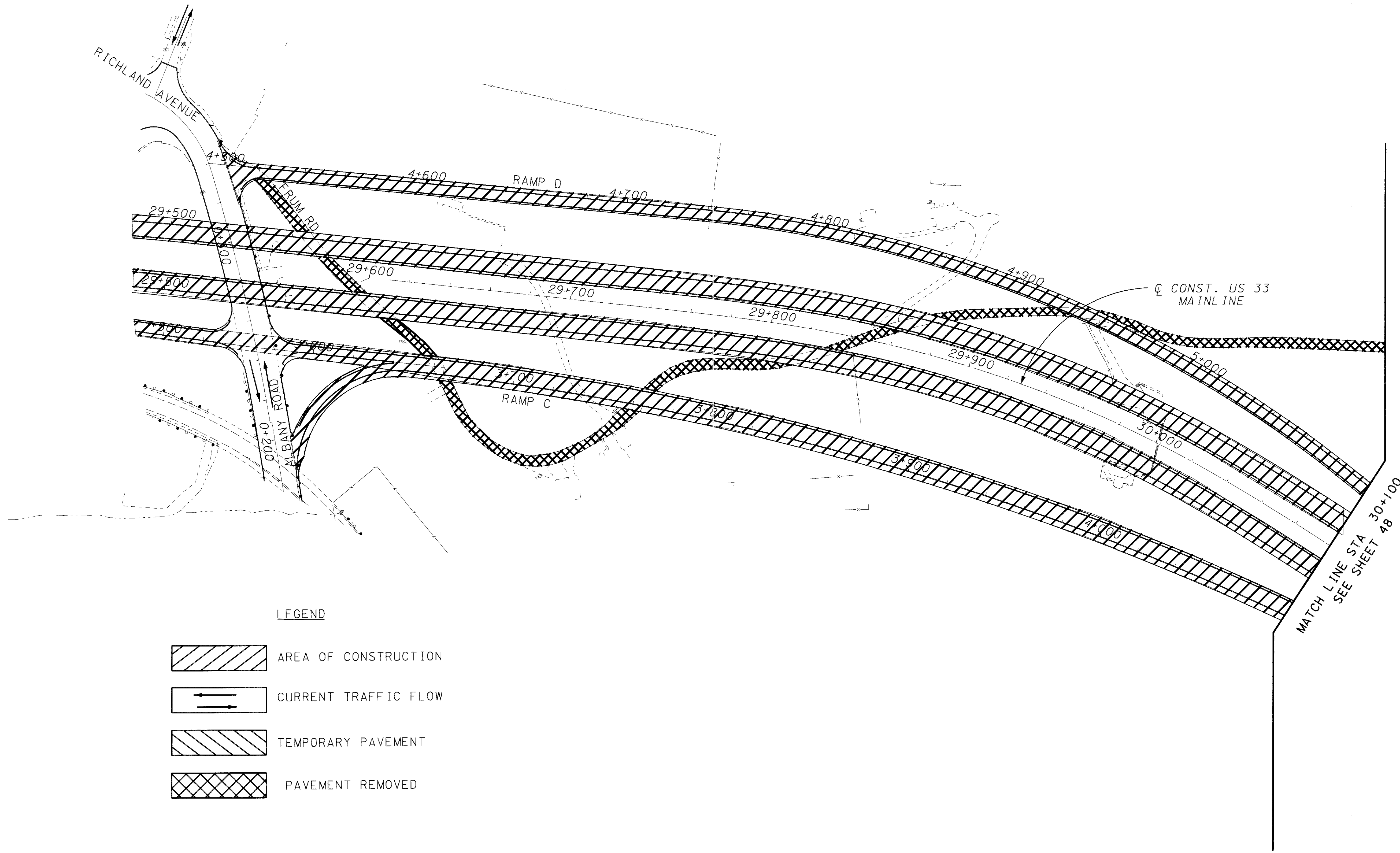
LEGEND

-  AREA OF CONSTRUCTION
-  CURRENT TRAFFIC FLOW
-  TEMPORARY PAVEMENT
-  PAVEMENT REMOVED





NOTE: THIS PHASE IS INTENDED TO TAKE PLACE WITHIN THE LAST 30 DAYS PRIOR TO OPENING THE MAINLINE

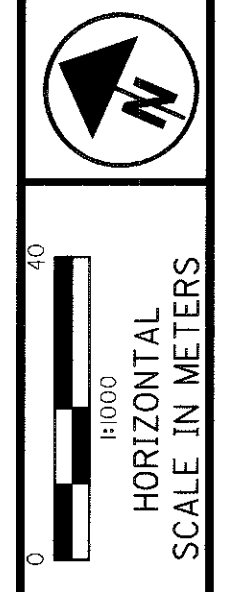
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LEGEND

-  AREA OF CONSTRUCTION
-  CURRENT TRAFFIC FLOW
-  TEMPORARY PAVEMENT
-  PAVEMENT REMOVED

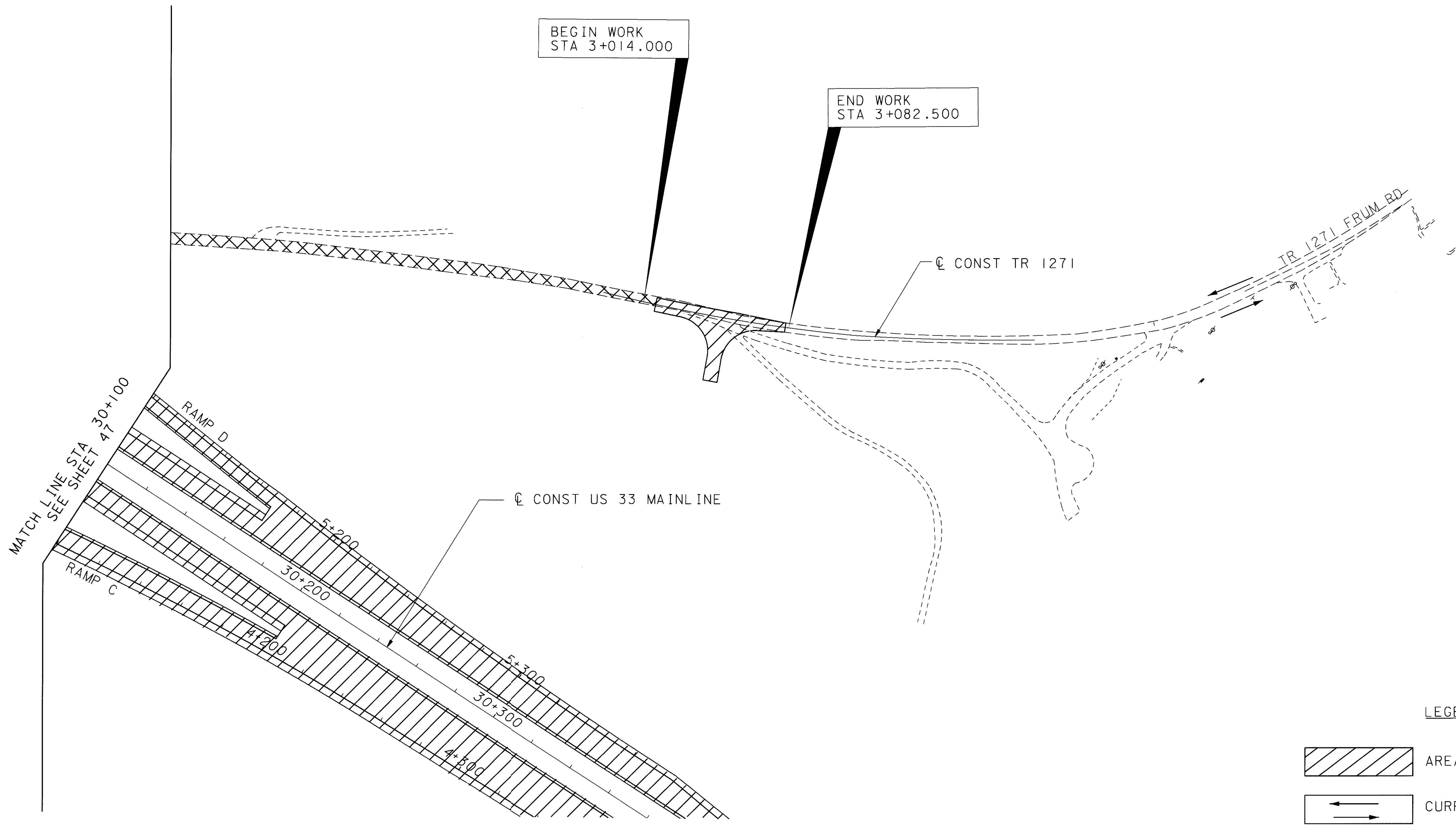


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CONCEPTUAL MAINTENANCE OF TRAFFIC  
TR 1271 (FRUM RD)

ATH-33-30.981

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☉ CONST TR 1271

☉ CONST US 33 MAINLINE

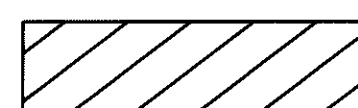
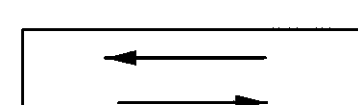
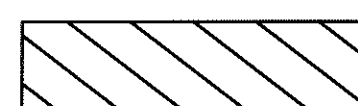

MATCH LINE STA 30+100  
SEE SHEET 47

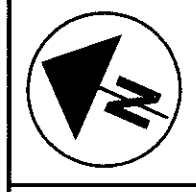
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RAMP C

TR 1271 FRUM RD

LEGEND

-  AREA OF CONSTRUCTION
-  CURRENT TRAFFIC FLOW
-  TEMPORARY PAVEMENT
-  PAVEMENT REMOVED



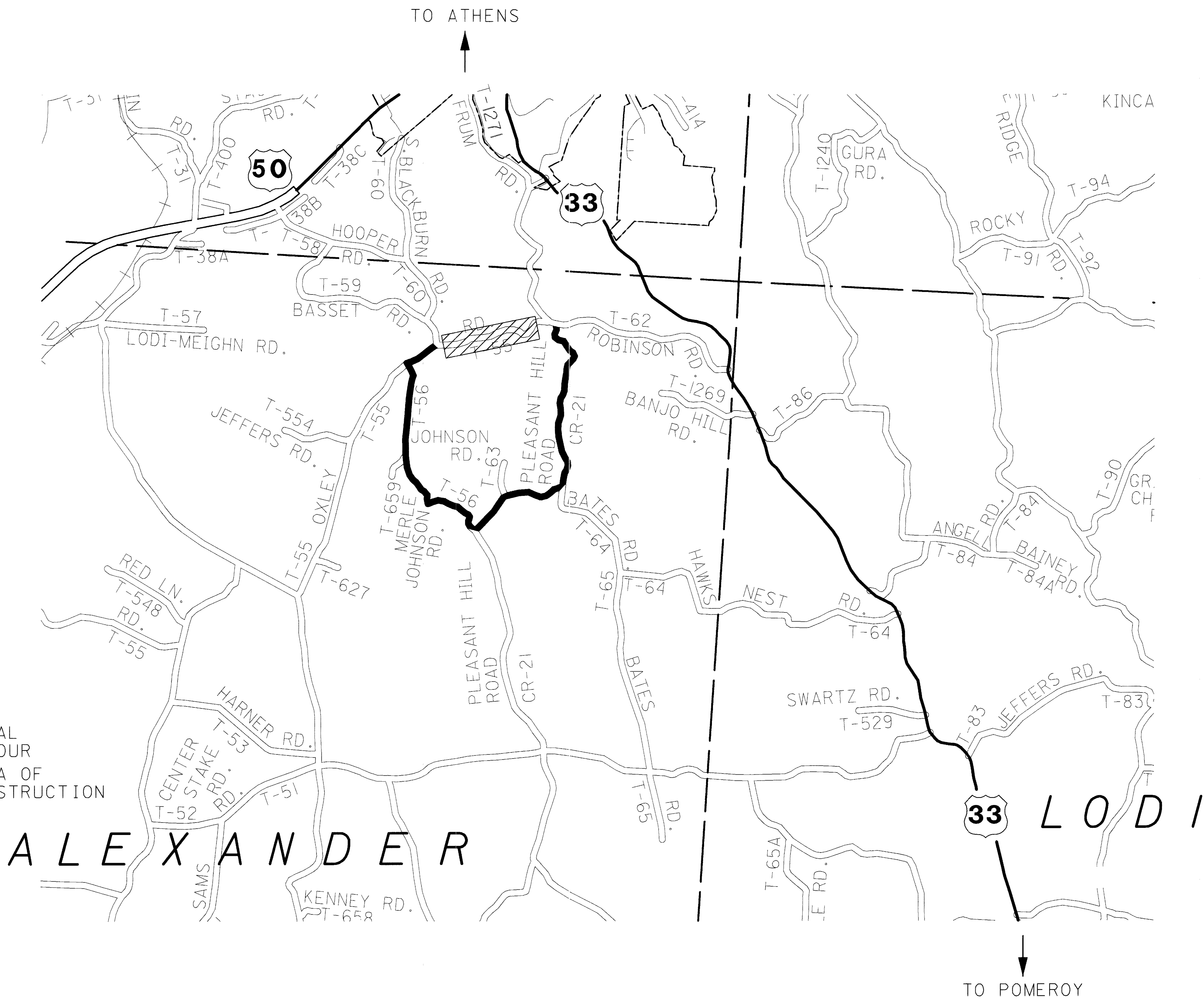
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CONCEPTUAL MAINTENANCE OF TRAFFIC  
TR 1271 (FRUM RD)

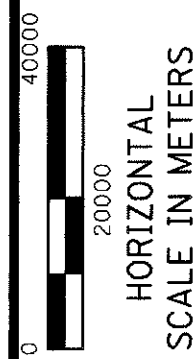
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LEGEND

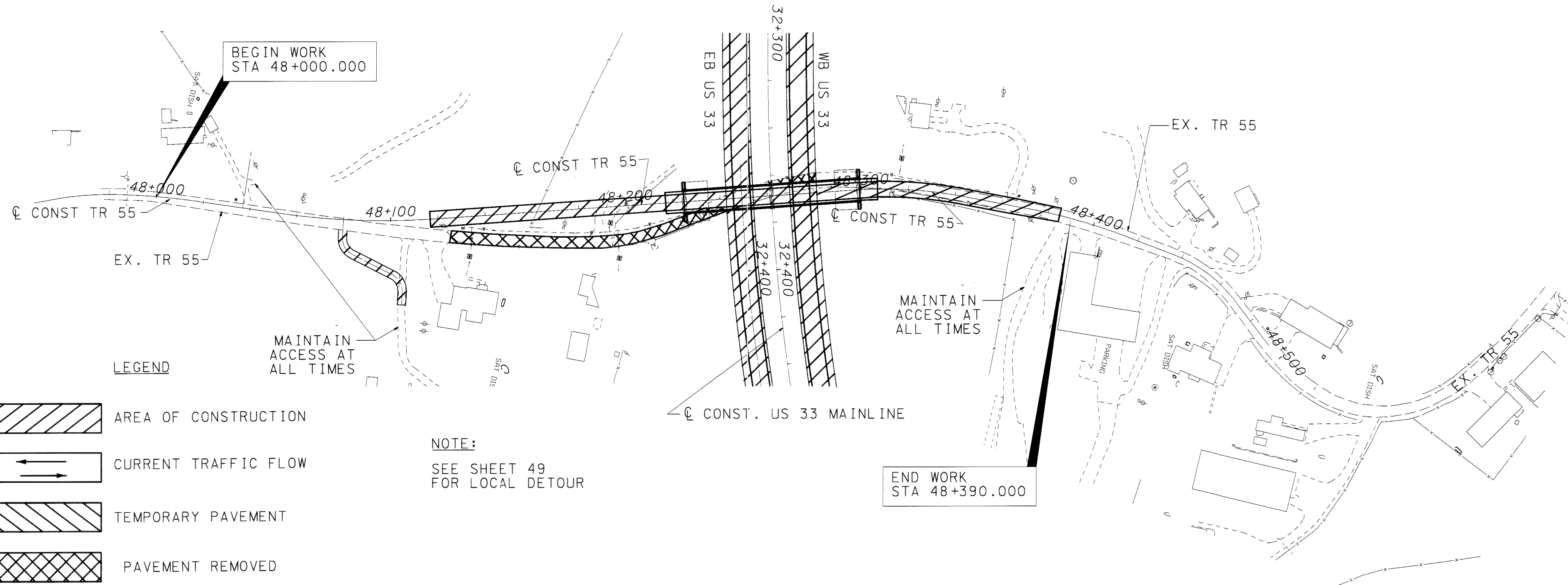
- LOCAL DETOUR
- ▨ AREA OF CONSTRUCTION



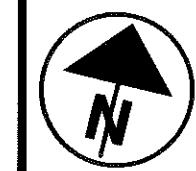
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CONCEPTUAL MAINTENANCE OF TRAFFIC  
TR-55 PHASE 1 & PHASE 2

ATH-33-30.981







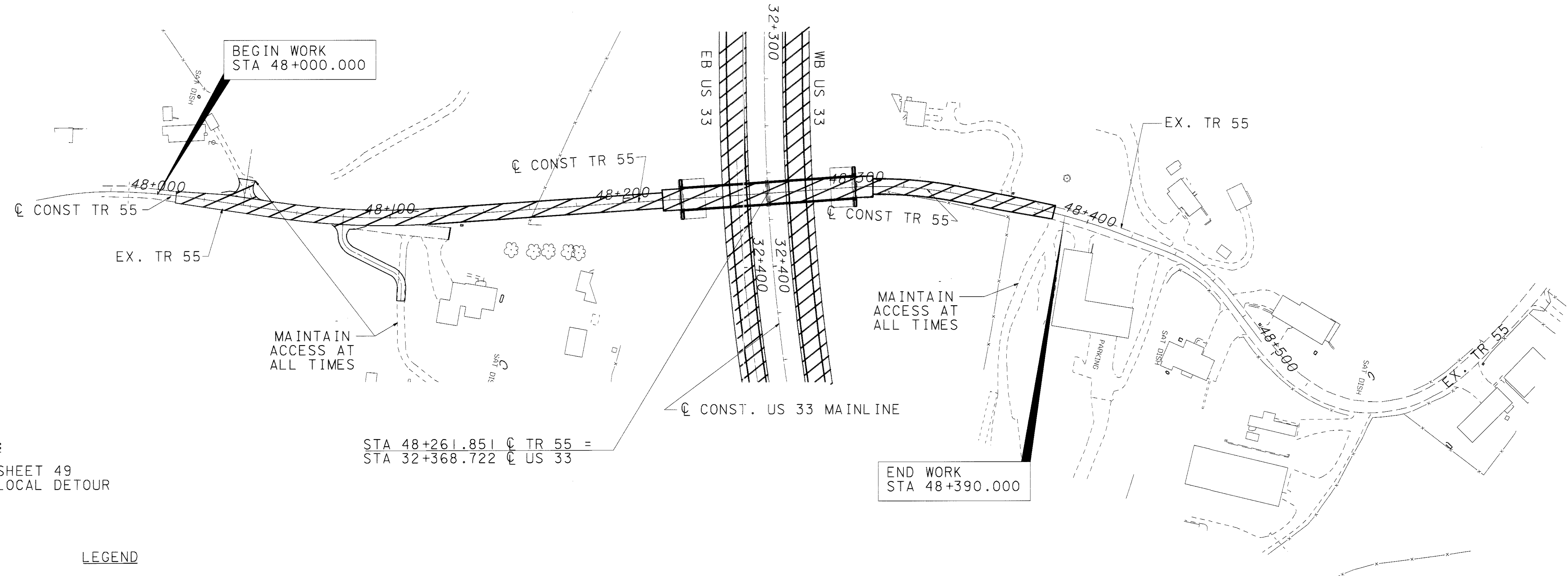
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SCALE IN METERS

CALCULATED  
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CONCEPTUAL MAINTENANCE OF TRAFFIC  
TR-55 - PHASE 2

ATH-33-30.981

51  
956







BEGIN WORK  
STA 48+000.000

END WORK  
STA 48+390.000

NOTE:  
SEE SHEET 49  
FOR LOCAL DETOUR

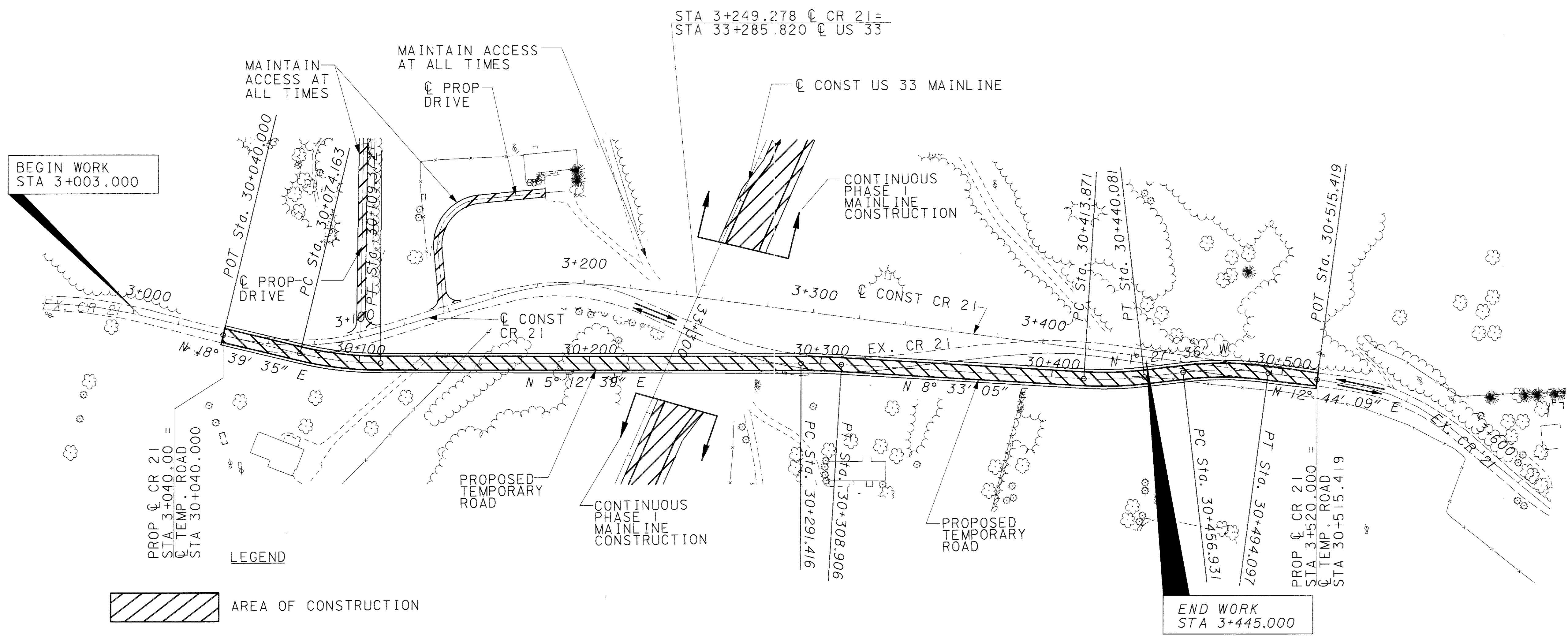
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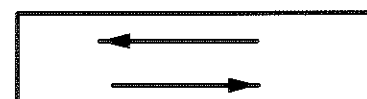


LEGEND

-  AREA OF CONSTRUCTION
-  CURRENT TRAFFIC FLOW
-  TEMPORARY PAVEMENT
-  PAVEMENT REMOVED

NOTE: THE INTENT OF THIS PHASE IS  
TO CONSTRUCT TR-55 BETWEEN 48+000  
AND 48+118 DURING THE LAST  
30 DAYS, PRIOR TO OPENING TR-55

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- LEGEND**
-  AREA OF CONSTRUCTION
  -  CURRENT TRAFFIC FLOW
  -  TEMPORARY PAVEMENT
  -  PAVEMENT REMOVED

**TIE IN PROCEDURE**

DURING THE PROCESS OF CONNECTING THE EXISTING ROAD TO EITHER THE PROPOSED TEMPORARY PAVEMENT OR TO THE PROPOSED RELOCATED PAVEMENT, TWO WAY, TWO LANE TRAFFIC SHALL BE MAINTAINED AT ALL TIMES. A 3.0 METER WIDE, 400 MM THICK, ITEM 410 TRAFFIC COMPACTED SURFACE, TYPE C, SHALL BE USED TO MAINTAIN TRAFFIC DURING NON-WORKING HOURS.

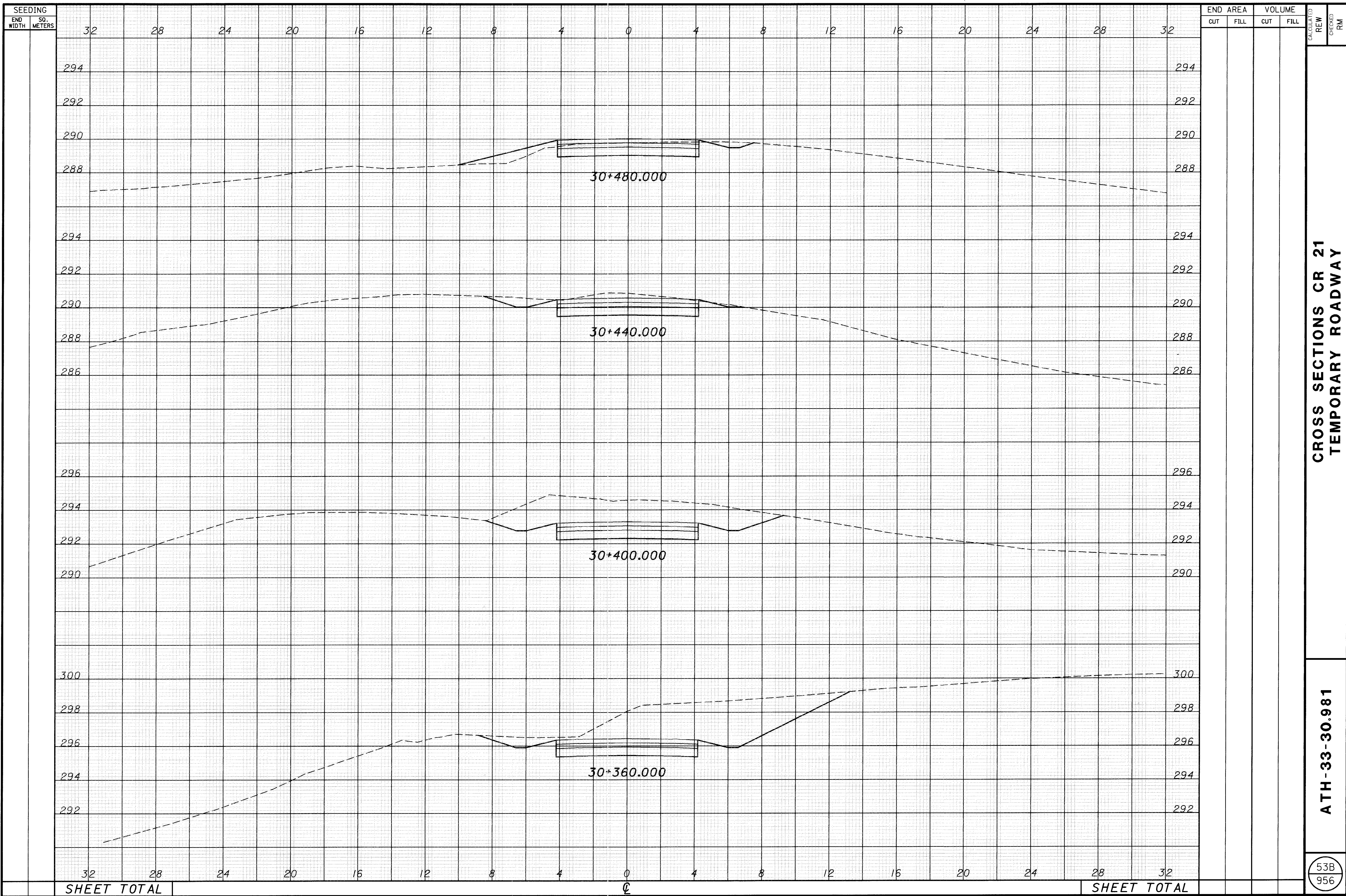
DURING WORKING HOURS, TWO WAY, ONE LANE TRAFFIC MAY BE MAINTAINED AS PER MT-97.10M OR MT-98.11M.

A QUANTITY OF 120 CUBIC METERS OF ITEM 410, TRAFFIC COMPACTED SURFACE, TYPE C, HAS BEEN PROVIDED FOR INFORMATION ONLY.





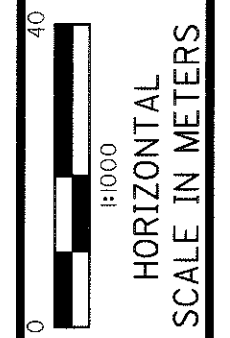
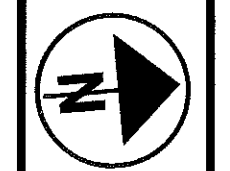
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**CROSS SECTIONS CR 21  
 TEMPORARY ROADWAY**

**ATH-33-30.981**

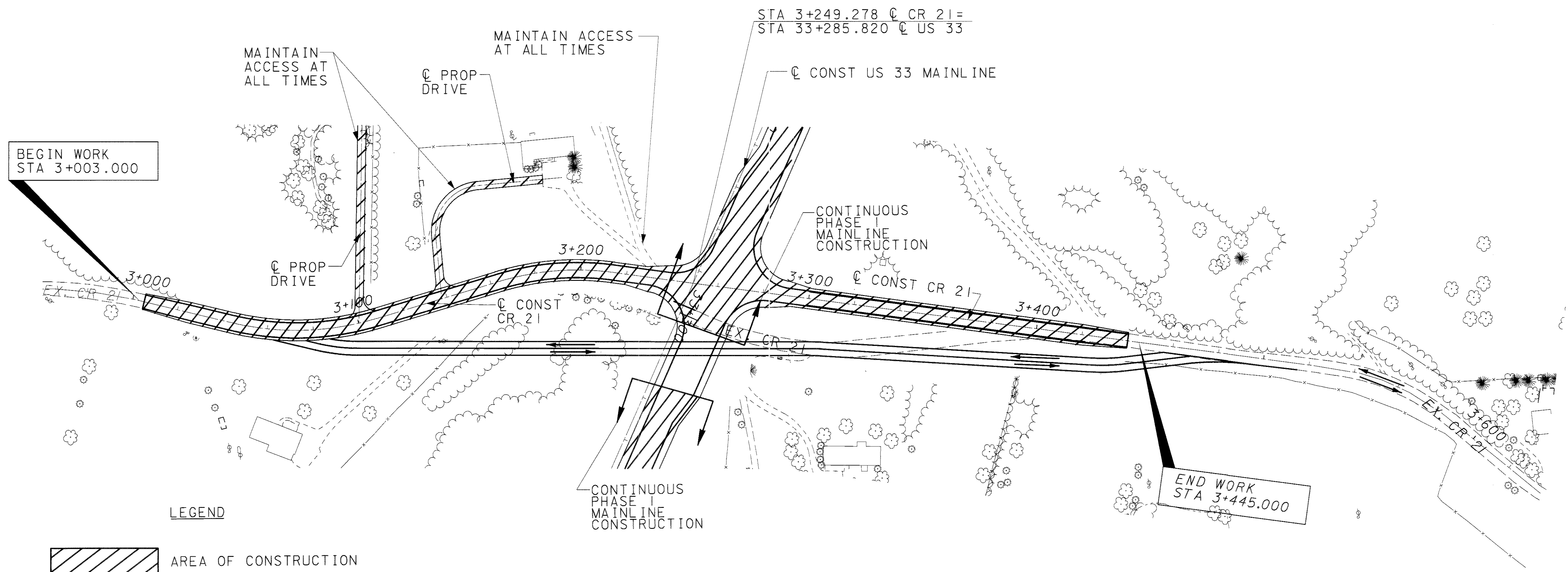








CALCULATED RM  
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**CONCEPTUAL MAINTENANCE OF TRAFFIC  
CR-21 - PHASE 1, PART B**

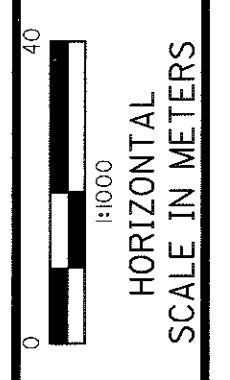
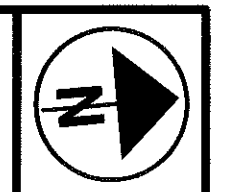
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**LEGEND**

-  AREA OF CONSTRUCTION
-  CURRENT TRAFFIC FLOW
-  TEMPORARY PAVEMENT
-  PAVEMENT REMOVED

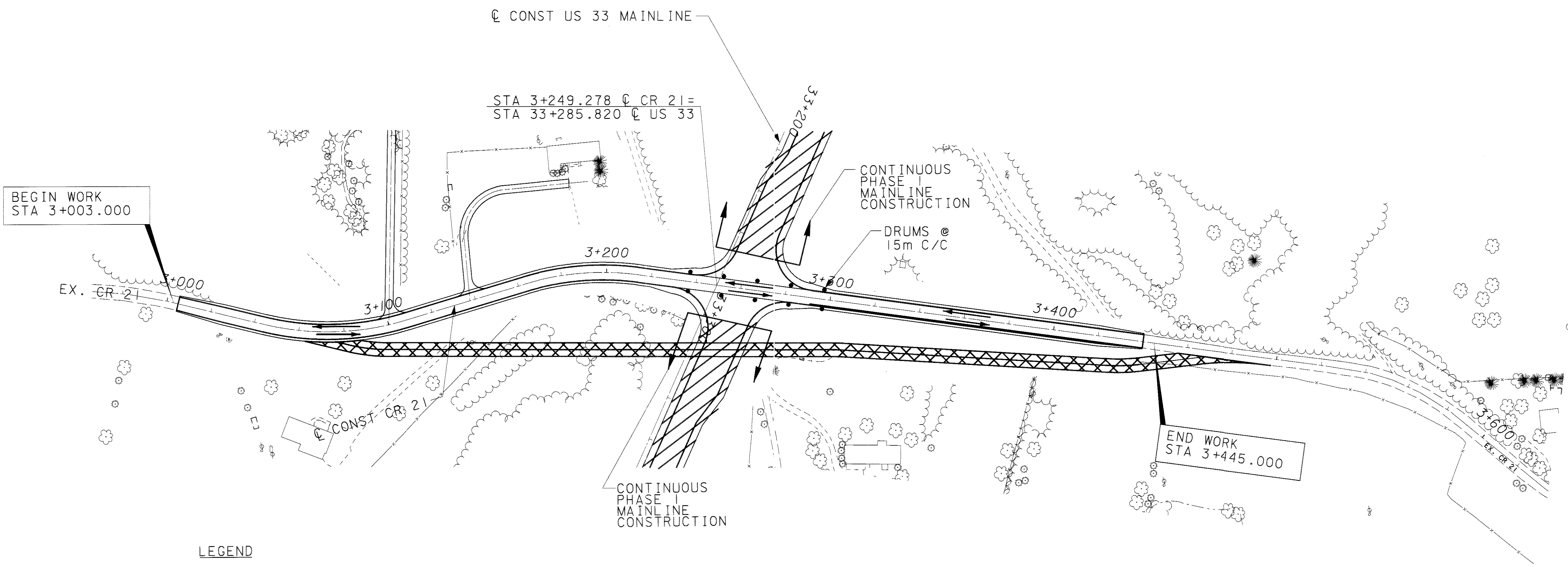
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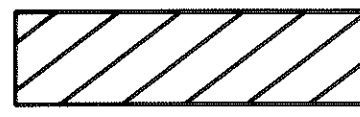



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**CONCEPTUAL MAINTENANCE OF TRAFFIC  
CR-21 - PHASE 2**

**ATH-33-30.981**



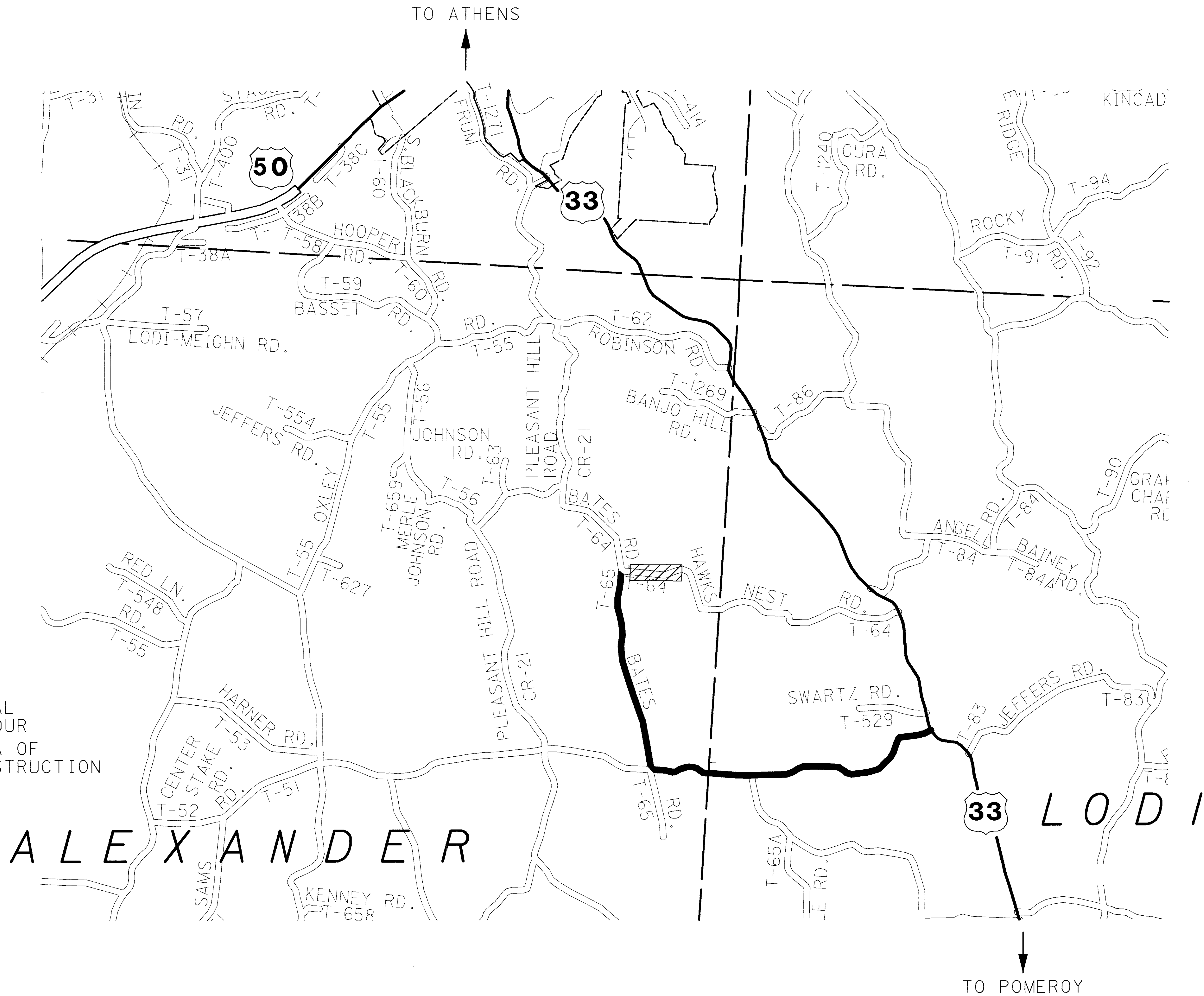
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-  AREA OF CONSTRUCTION
-  CURRENT TRAFFIC FLOW
-  TEMPORARY PAVEMENT
-  PAVEMENT REMOVED

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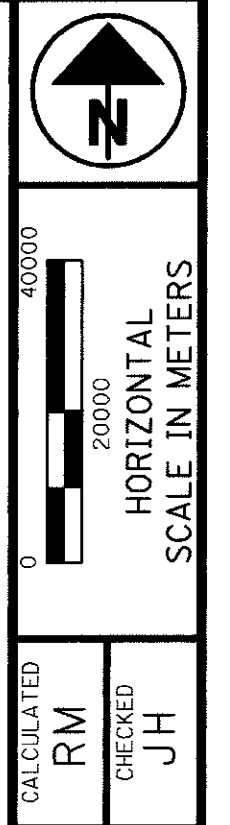


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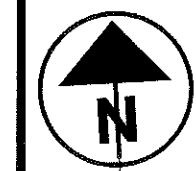
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- LOCAL DETOUR
- ▨ AREA OF CONSTRUCTION



CONCEPTUAL MAINTENANCE OF TRAFFIC  
TR-64

ATH-33-30.981



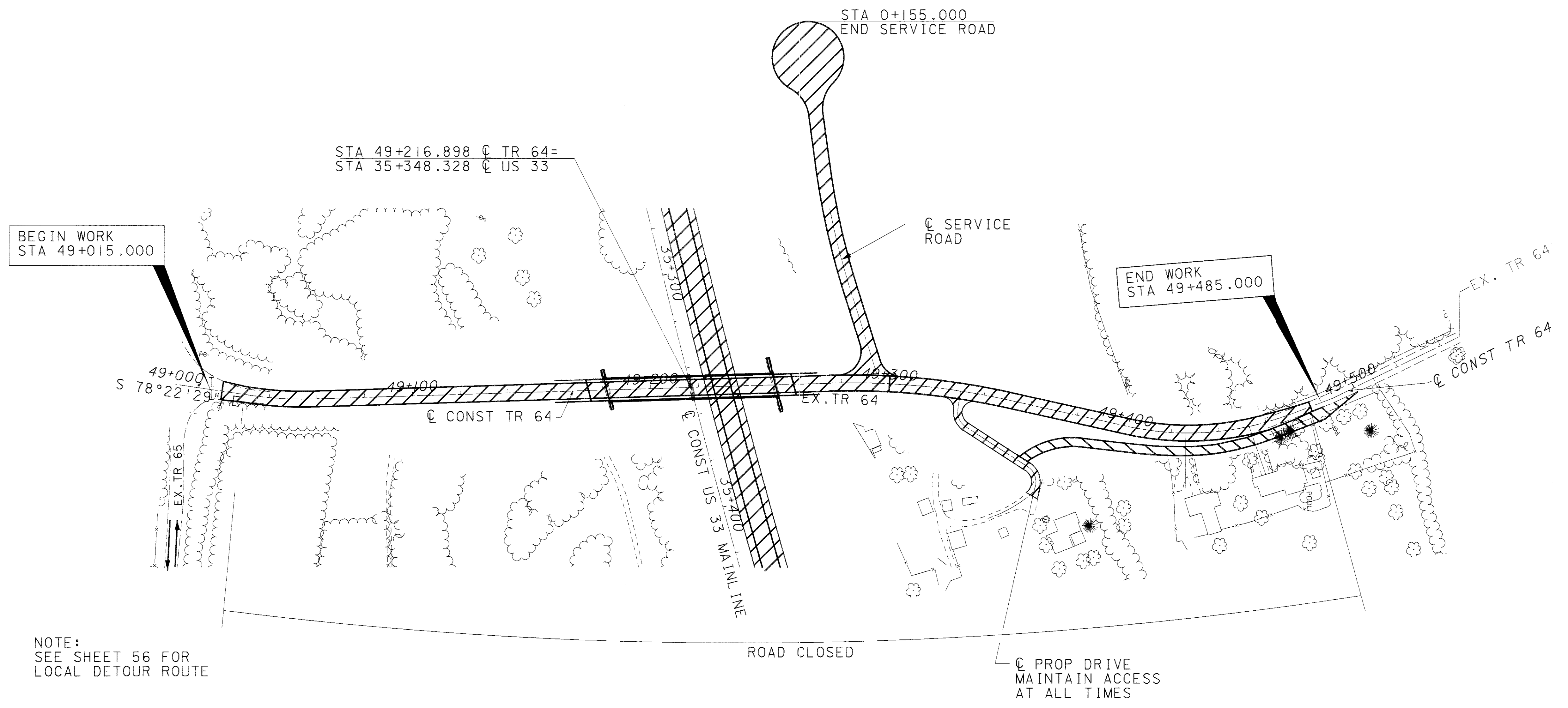
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SCALE IN METERS

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**CONCEPTUAL MAINTENANCE OF TRAFFIC  
TR-64**





**ATH-33-30.981**

57  
956

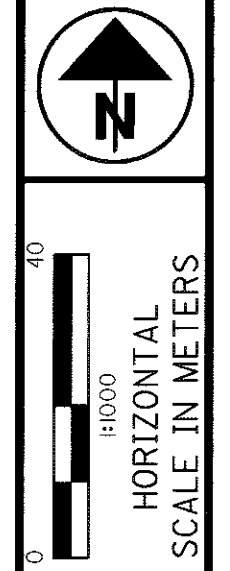


NOTE:  
SEE SHEET 56 FOR  
LOCAL DETOUR ROUTE

**LEGEND**

-  AREA OF CONSTRUCTION
-  CURRENT TRAFFIC FLOW
-  TEMPORARY PAVEMENT
-  PAVEMENT REMOVED

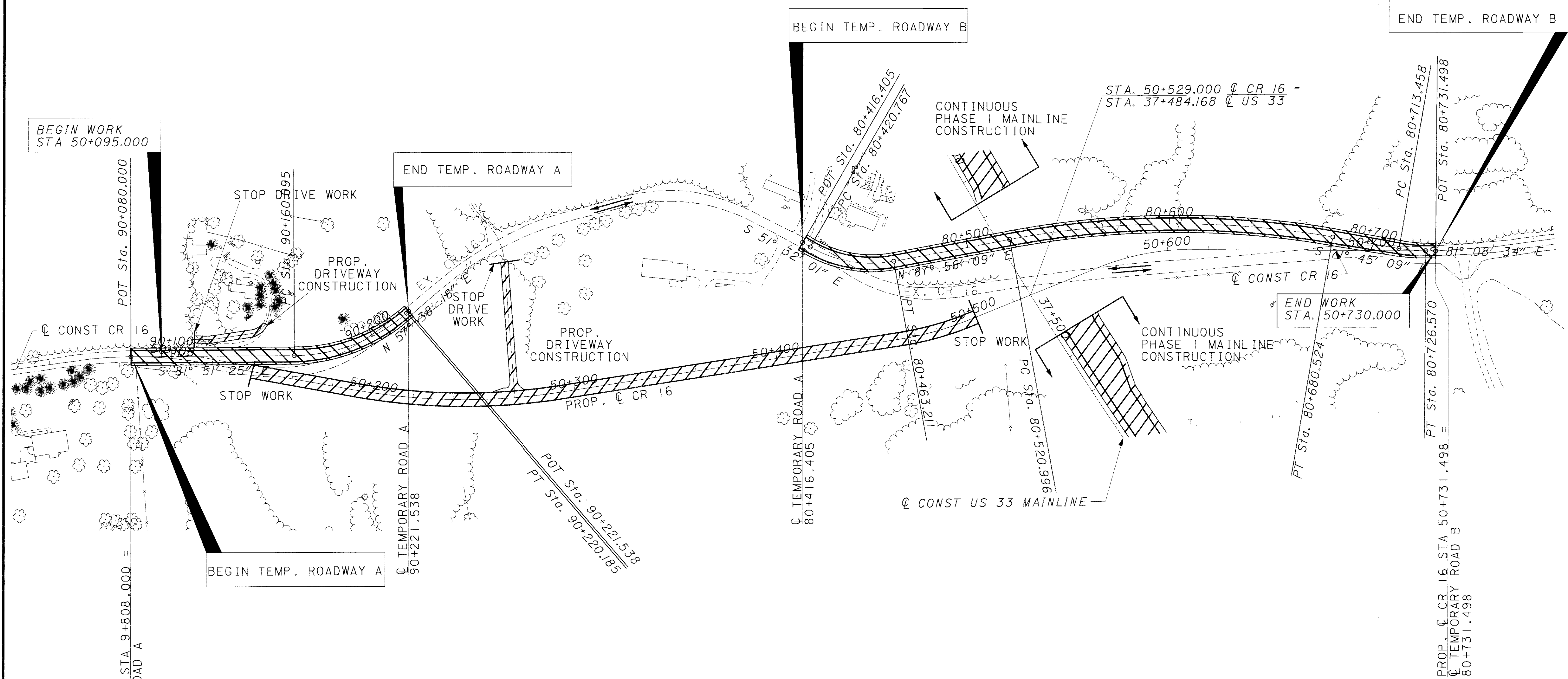
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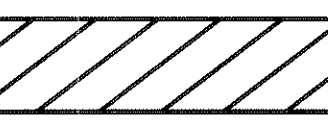
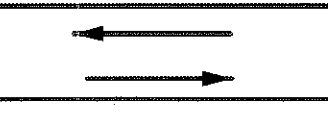


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CHECKED EC

**CONCEPTUAL MAINTENANCE OF TRAFFIC  
CR-16 PHASE 1, PART A**

**ATH-33-30.981**



**LEGEND**

	AREA OF CONSTRUCTION
	CURRENT TRAFFIC FLOW
	TEMPORARY PAVEMENT
	PAVEMENT REMOVED

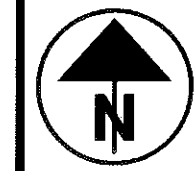
**TIE IN PROCEDURE**

DURING THE PROCESS OF CONNECTING THE EXISTING ROAD TO EITHER THE PROPOSED TEMPORARY PAVEMENT OR TO THE PROPOSED RELOCATED PAVEMENT, TWO WAY, TWO LANE TRAFFIC SHALL BE MAINTAINED AT ALL TIMES. A 3.0 METER WIDE, 400 MM THICK, ITEM 410 TRAFFIC COMPACTED SURFACE, TYPE C, SHALL BE USED TO MAINTAIN TRAFFIC DURING NON-WORKING HOURS.

DURING WORKING HOURS, TWO WAY, ONE LANE TRAFFIC MAY BE MAINTAINED AS PER MT-97.10M OR MT-98.11M.

A QUANTITY OF 120 CUBIC METERS OF ITEM 410, TRAFFIC COMPACTED SURFACE, TYPE C, HAS BEEN PROVIDED FOR INFORMATION ONLY.

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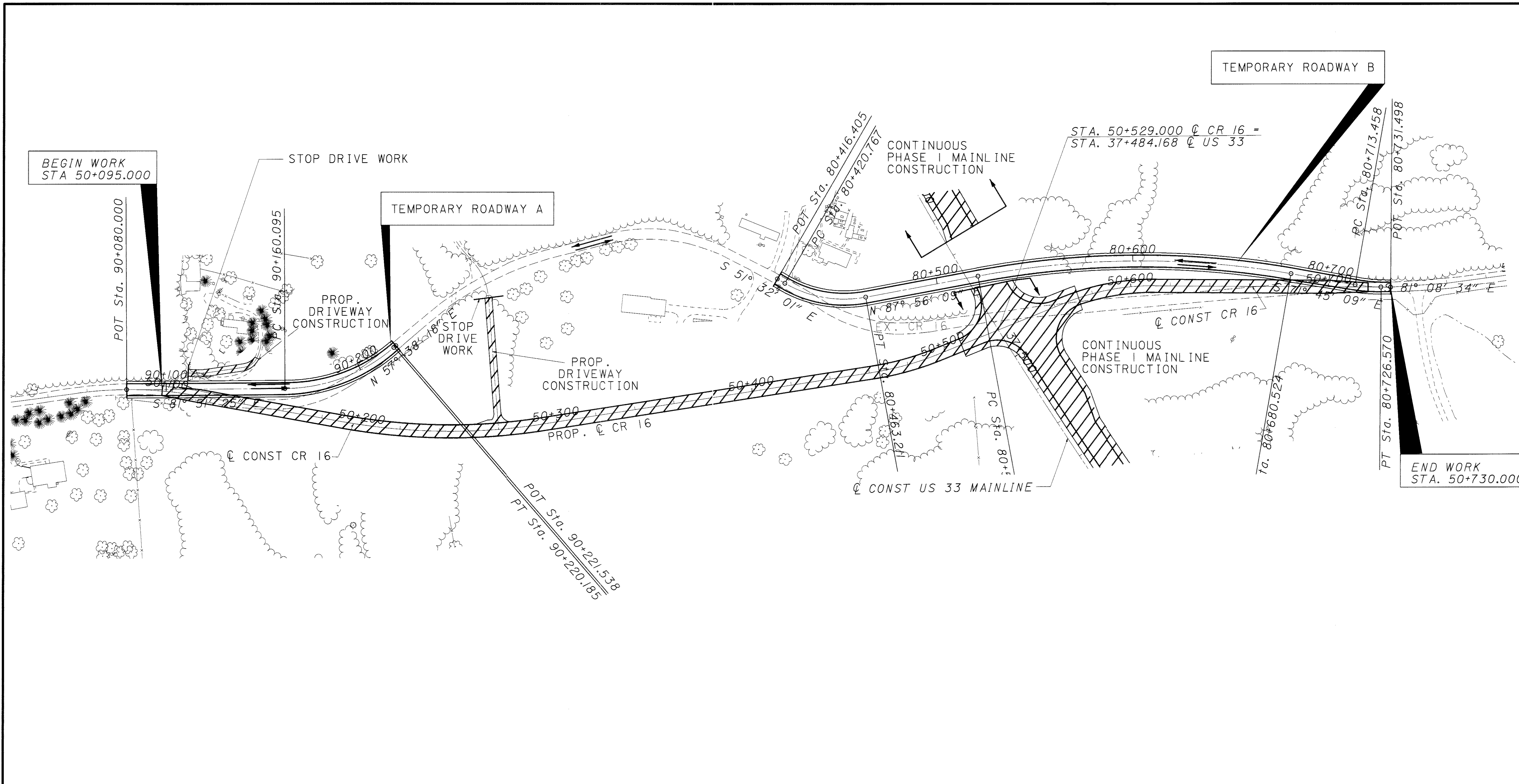
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SCALE IN METERS

CALCULATED RM  
CHECKED EC





CONCEPTUAL MAINTENANCE OF TRAFFIC  
CR-16 PHASE 1, PART B

ATH-33-30.981

59  
956

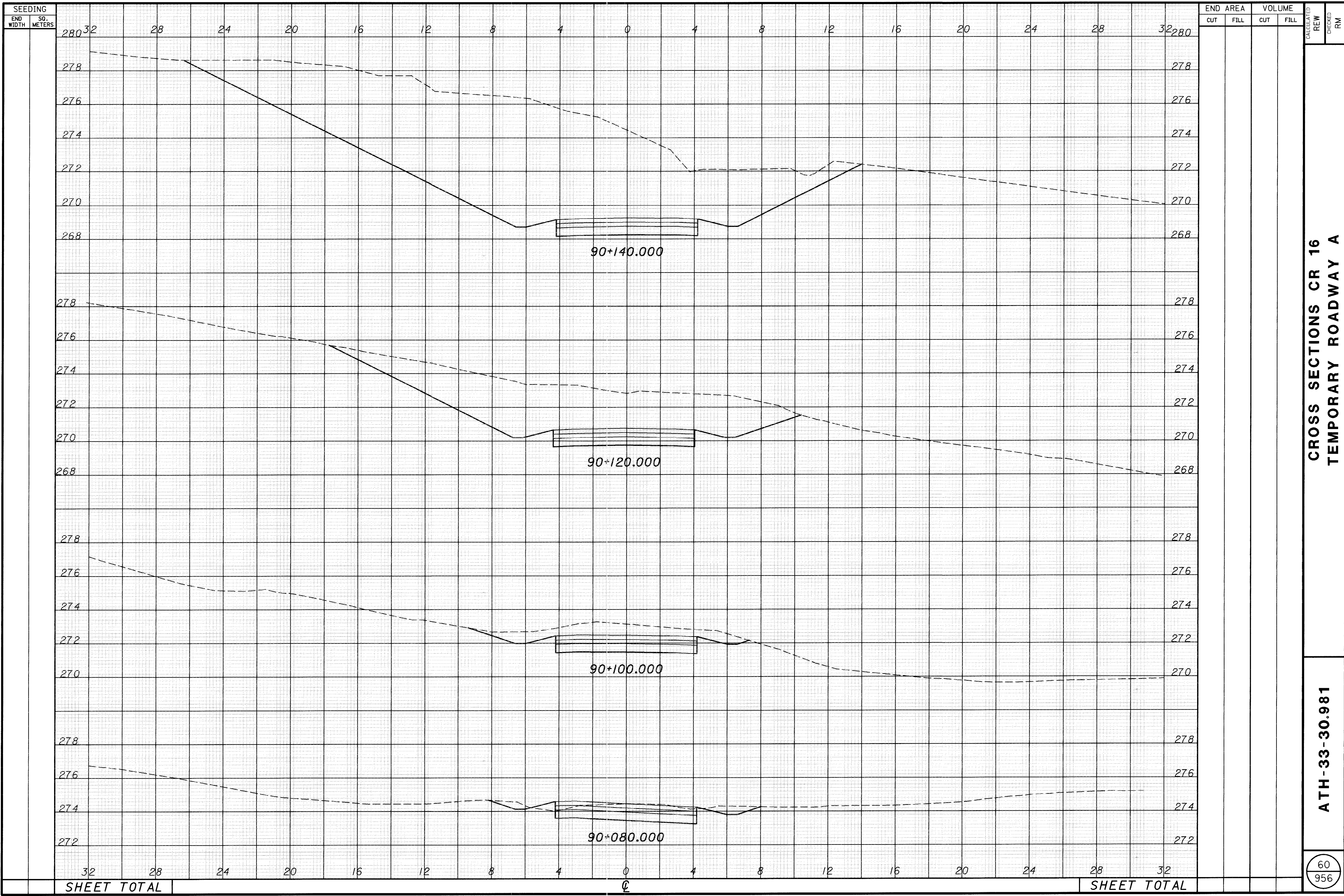


LEGEND

-  AREA OF CONSTRUCTION
-  CURRENT TRAFFIC FLOW
-  TEMPORARY PAVEMENT
-  PAVEMENT REMOVED

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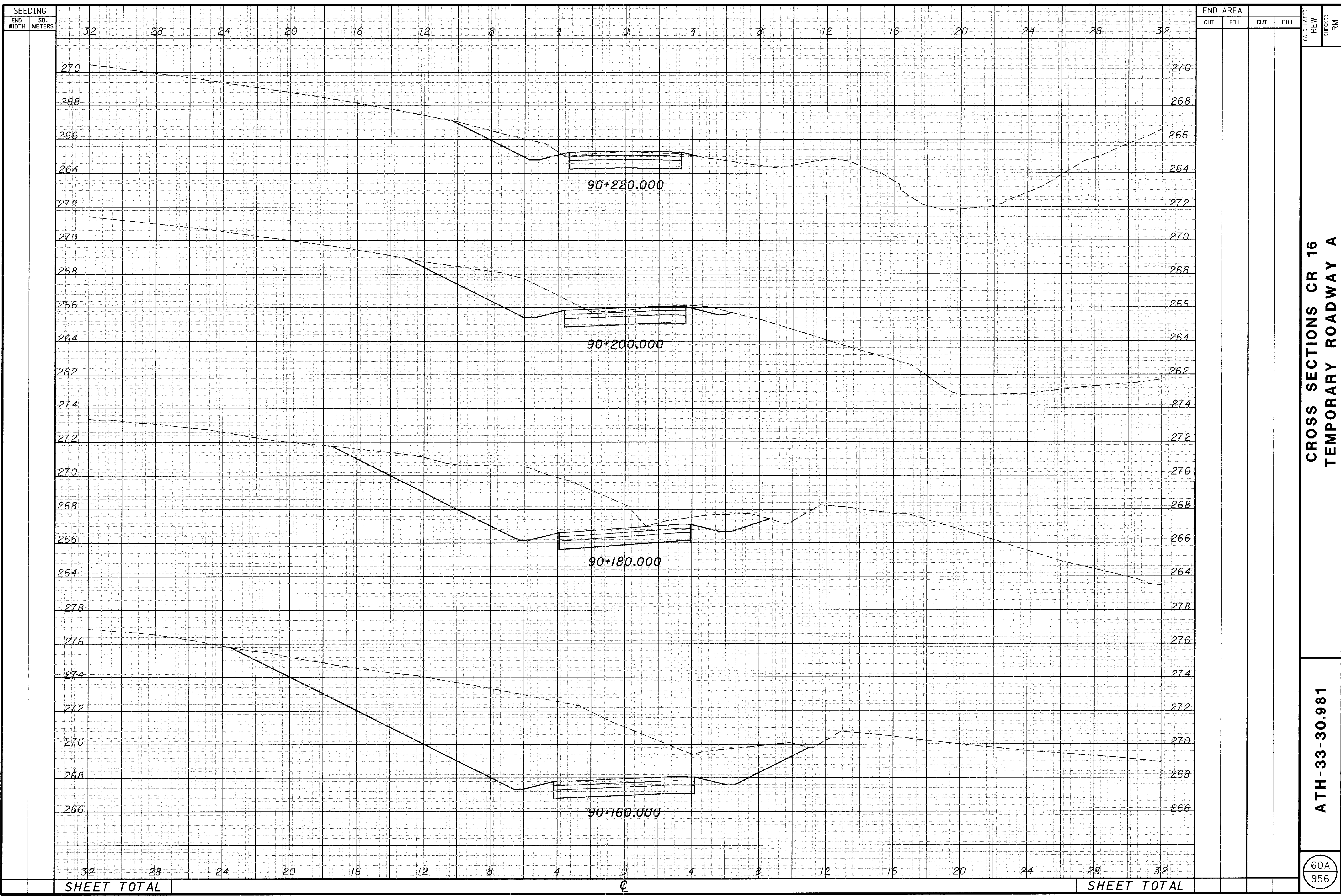
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**CROSS SECTIONS CR 16  
 TEMPORARY ROADWAY A**

**ATH-33-30.981**

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CROSS SECTIONS CR 16  
 TEMPORARY ROADWAY A

ATH-33-30.981

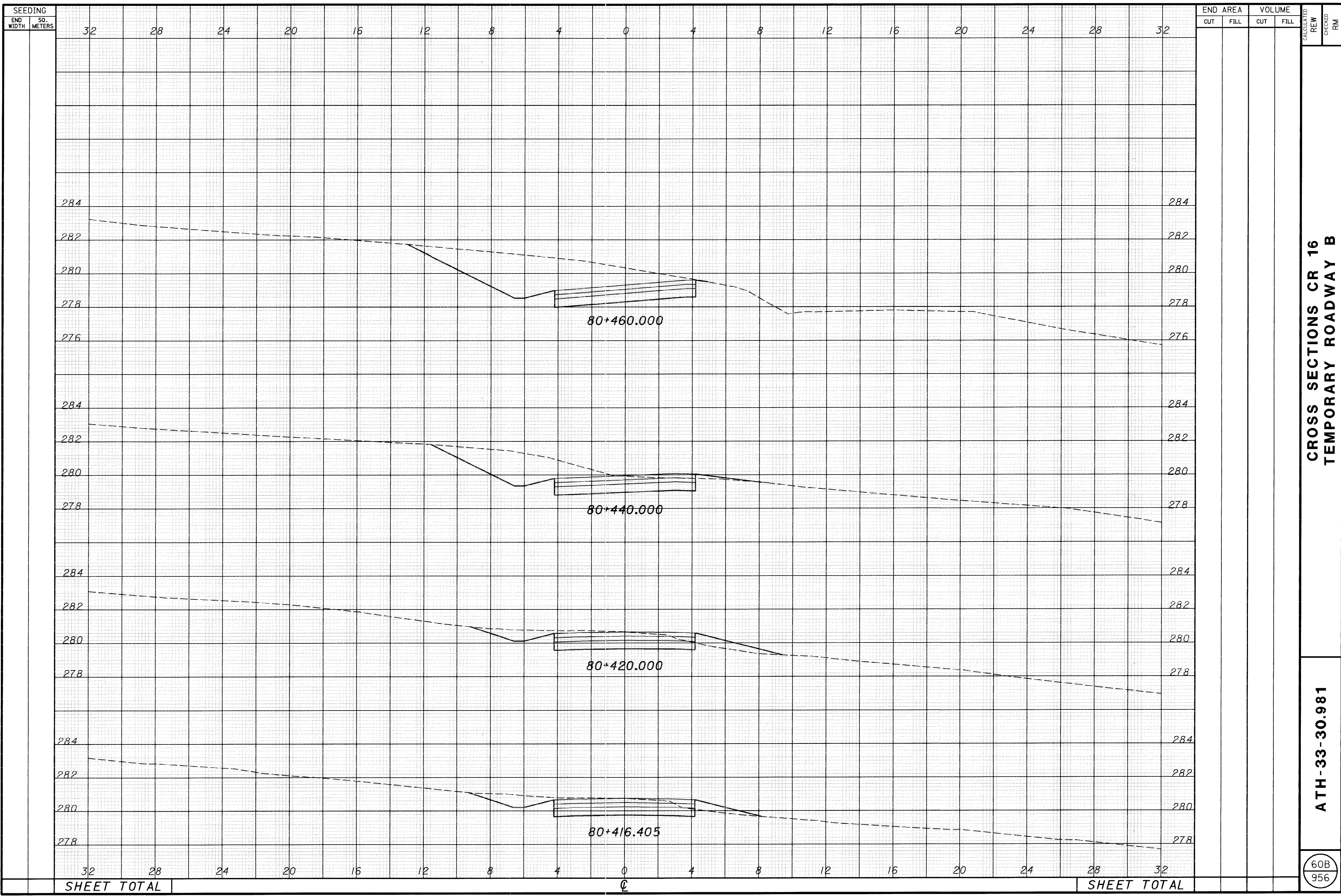
60A  
 956

SHEET TOTAL

SHEET TOTAL

0

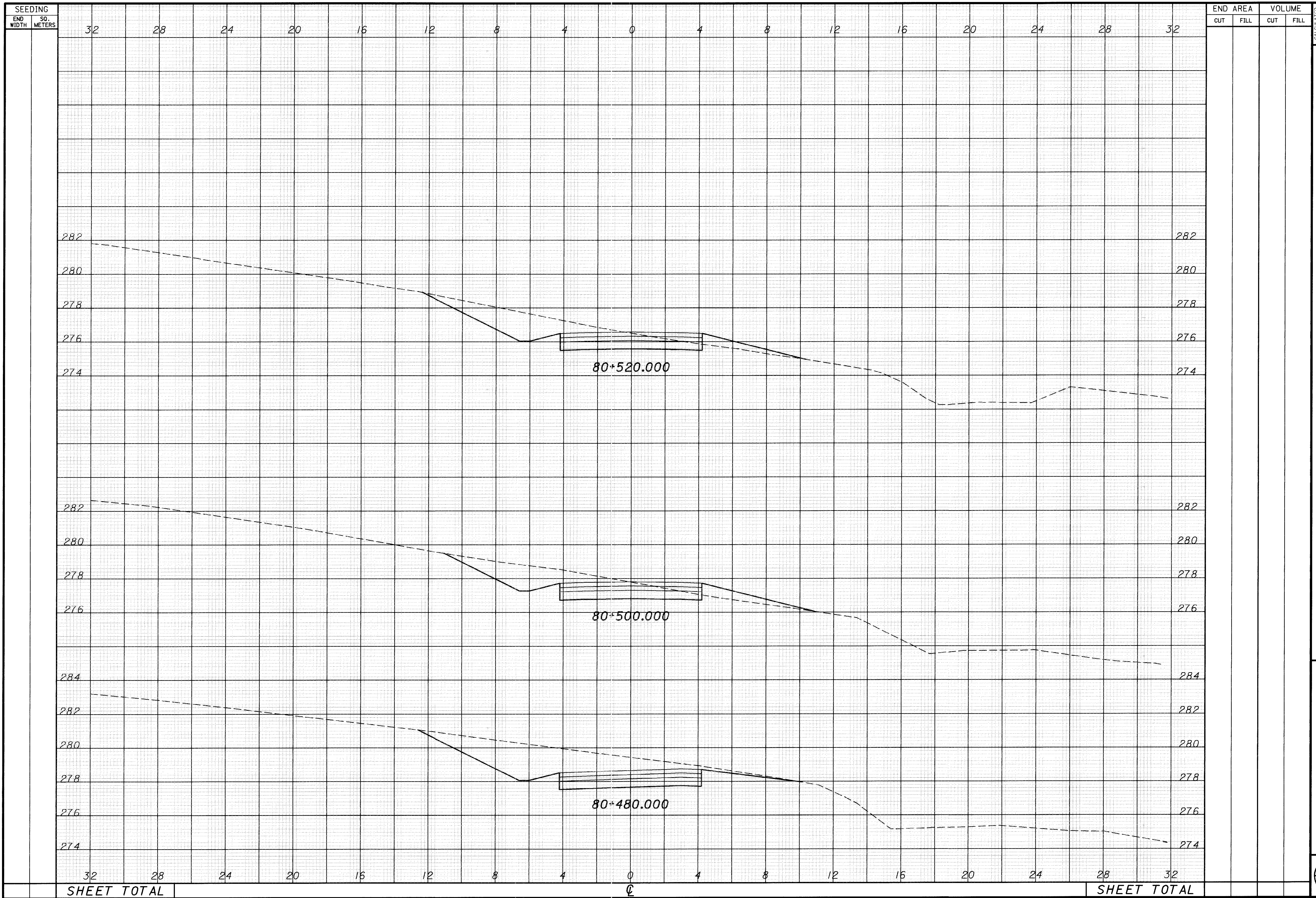
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**CROSS SECTIONS CR 16  
 TEMPORARY ROADWAY B**

**ATH-33-30.981**

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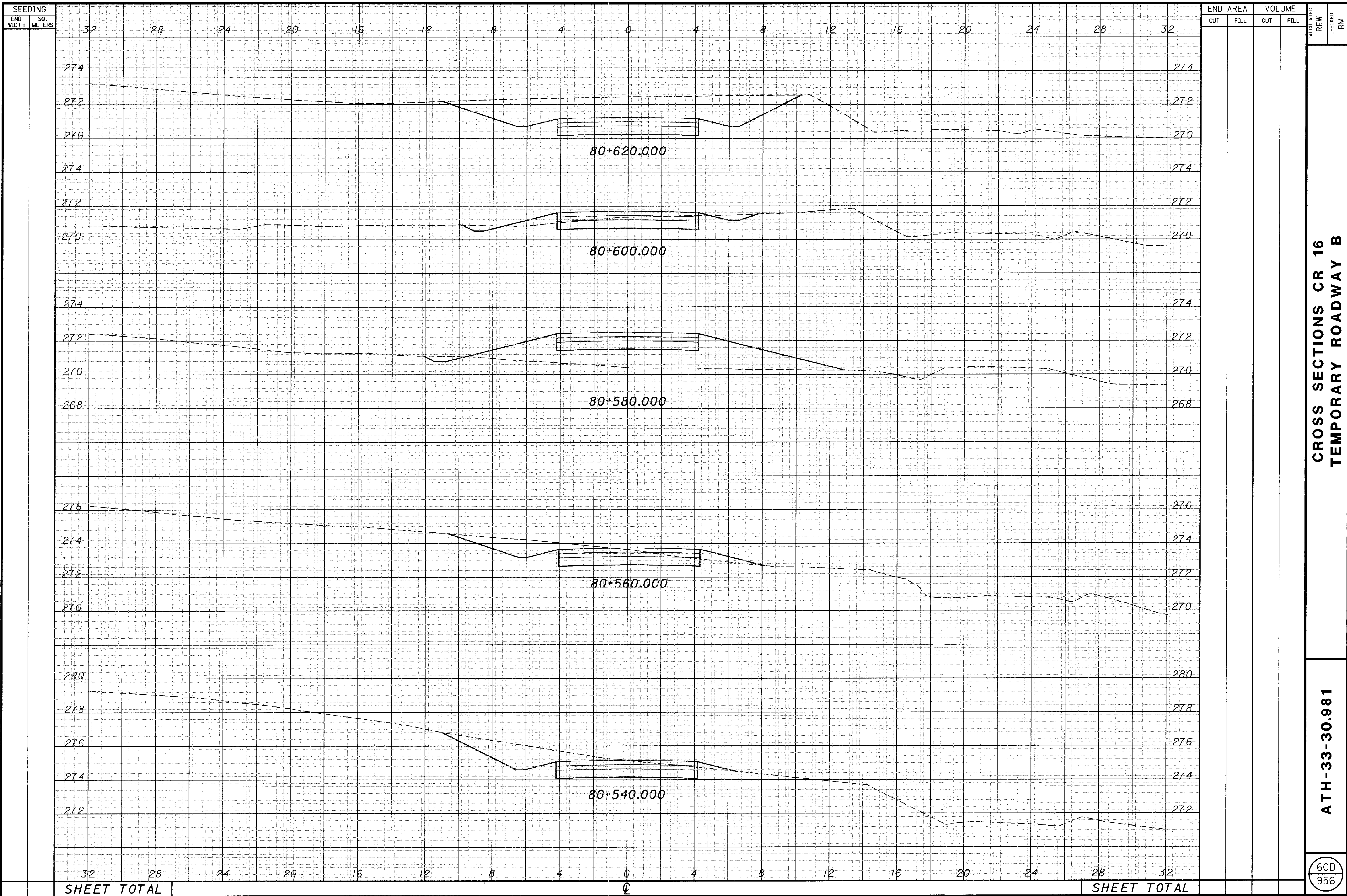


**CROSS SECTIONS CR 16  
TEMPORARY ROADWAY B**

**ATH-33-30.981**



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**CROSS SECTIONS CR 16  
 TEMPORARY ROADWAY B**

**ATH-33-30.981**

600  
956





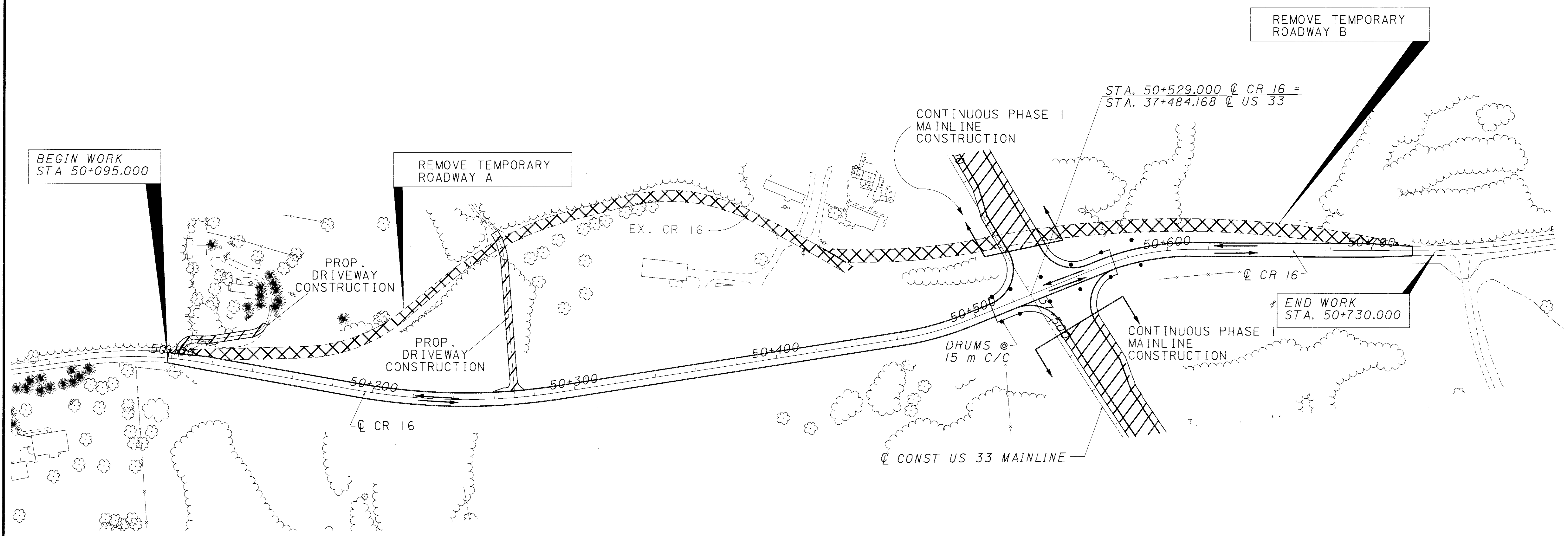
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SCALE IN METERS

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CHECKED EC


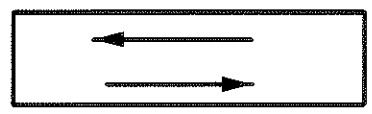


CONCEPTUAL MAINTENANCE OF TRAFFIC  
CR-16 PHASE 2

ATH-33-30.981

61  
956



LEGEND

-  AREA OF CONSTRUCTION
-  CURRENT TRAFFIC FLOW
-  TEMPORARY PAVEMENT
-  PAVEMENT REMOVED

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SHEET NUMBER																					ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION *AND VENTING	CALCULATED AML	CHECKED AM	
37A	38	39	39A	40	66	67	79	80	581	582A	592	599	610	622	633	639	656	665	668	837								939
LUMP																						201	11001	LUMP	LUMP	ROADWAY CLEARING AND GRUBBING, AS PER PLAN		
					8757																	202	23000	8757	SQ. METER	PAVEMENT REMOVED		
						3935																202	23500	3935	SQ. METER	WEARING COURSE REMOVED		
					182																	202	30000	182	SQ. METER	WALK REMOVED		
						124																202	30600	124	SQ. METER	CONCRETE MEDIAN REMOVED		
					530																	202	32000	530	METER	CURB REMOVED		
						31																202	32800	31	SQ. METER	CONCRETE SLOPE PROTECTION REMOVED		
					69																	202	35100	69	METER	PIPE REMOVED, 600mm AND UNDER		
					98.5																	202	35200	98.5	METER	PIPE REMOVED, OVER 600mm		
					472																	202	38000	472	METER	GUARDRAIL REMOVED		
		100																				202	54100	100	EACH	RAISED PAVEMENT MARKER REMOVED FOR STORAGE		
					53																	202	56100	53	EACH	BUILDING DEMOLISHED		
					5																	202	58100	5	EACH	CATCH BASIN REMOVED		
						1																202	62600	1	EACH	PRIVY VAULT REMOVED		
						19																202	62700	19	EACH	SEPTIC TANK REMOVED		
		5																				SPECIAL	20264000	5	EACH	SPECIAL - PLUGGING OIL AND/OR GAS WELL		
20																						SPECIAL	20266000	20	EACH	SPECIAL - DRILLED WATER WELL ABANDONED		
		100000		20000					5206469	625	1212	1386	15105	20400	19447	9492	28300	3207	2093		203	12000	5427736	CU. METER	EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION			
		10000		10000					6227884	1541	844	127	297	6844	23992	240	19651	116	1		203	20000	6301537	CU. METER	EMBANKMENT			
				20000					151659		1934		843	89	3651		38				203	21000	20000	CU. METER	EMBANKMENT USING GRANULAR MATERIAL			
																						203	21201	158214	CU. METER	EMBANKMENT USING ROCK, AS PER PLAN		
90																						203	45000	90	HOUR	PROOF ROLLING		
																						203	50000	228466	SQ. METER	SUBGRADE COMPACTION		
					9094.47																	606	13000	9094.47	METER	GUARDRAIL, TYPE 5		
					788.67																	606	14000	788.67	METER	GUARDRAIL, TYPE 8		
					9																	606	17500	9	EACH	POST END ANCHOR (OR CONCRETE BLOCK END ANCHOR)		
					3																	606	22000	3	EACH	ANCHOR ASSEMBLY, TYPE B-98		
					5																	606	22010	5	EACH	ANCHOR ASSEMBLY, TYPE E-98		
					14																	606	25000	14	EACH	ANCHOR ASSEMBLY, TYPE A		
					24																	606	26500	24	EACH	ANCHOR ASSEMBLY, TYPE T		
					15																	606	35000	15	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 1		
					1																	606	35100	1	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 2		
					2																	606	60000	2	EACH	IMPACT ATTENUATOR, TYPE I-98 (UNIDIRECTIONAL)		
																					20425	607	15000	20425	METER	FENCE, TYPE 47		
					1																	608	49000	1	EACH	CURB RAMP		
					39																	608	52000	39	SQ. METER	CURB RAMP		
					48																	608	15000	48	SQ. METER	200mm CONCRETE WALK		
						203																622	24000	203	METER	CONCRETE BARRIER, TYPE D		
						1																638	10800	1	EACH	VALVE BOX ADJUSTED TO GRADE		
9																						SPECIAL	69050000	9	EACH	SPECIAL - MAILBOX SUPPORT		
																										EROSION CONTROL		
																					190	601	10000	190	SQ. METER	RIPRAP		
									79862													601	20500	79862	CU. METER	CRUSHED AGGREGATE SLOPE PROTECTION		
																					198	601	32000	198	CU. METER	ROCK CHANNEL PROTECTION, TYPE A WITH FILTER		
																					133	601	32100	133	CU. METER	ROCK CHANNEL PROTECTION, TYPE B WITH FILTER		
23181			5			5844															11	601	32200	29041	CU. METER	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER		
									1095													601	32204	1095	CU. METER	ROCK CHANNEL PROTECTION, TYPE C WITH FABRIC FILTER		
1986									156													601	34200	2142	CU. METER	ROCK CHANNEL PROTECTION, TYPE C WITHOUT FILTER		
						10987																670	40000	10987	SQ. METER	DITCH EROSION PROTECTION		
						13257																672	10000	13257	SQ. METER	SEEDING AND MULCHING WITH EROSION CONTROL NETTING		
						6451																SPECIAL	69098200	6451	SQ. METER	SPECIAL - MISC.: SEEDING AND EROSION CONTROL WITH TURF		
																										REINFORCING MAT, TYPE 1		
						4028																SPECIAL	69098200	4028	SQ. METER	SPECIAL - MISC.: SEEDING AND EROSION CONTROL WITH TURF		
																										REINFORCING MAT, TYPE 2		
						172																SPECIAL	69098200	172	SQ. METER	SPECIAL - MISC.: SEEDING AND EROSION CONTROL WITH TURF		
																										REINFORCING MAT, TYPE 3		
									9127													SPECIAL	69098700	9127	CU. METER	SPECIAL - MISC.: NO. 57 AGGREGATE		
61284									1154238	1554	2933	1688	9868	14166	14477	4138	22299	3559	1618		870	10000	1291822	SQ. METER	SEEDING AND MULCHING			
60814																						870	14000	60814	SQ. METER	REPAIR SEEDING AND MULCHING		
64695																						870	15000	60695	SQ. METER	INTER-SEEDING		

GENERAL SUMMARY

ATH-33-30.981

62  
956

SHEET NUMBER														ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
37A	39A	40		66	67		75		80		789	837	838						
EROSION CONTROL (continued)																			
252020														870	20000	252020	KILOGRAM	COMMERCIAL FERTILIZER	
582257														870	30000	582257	KILOGRAM	AGRICULTURAL LIME	
8903														870	35000	8903	CU. METER	WATER	
323476														870	40000	323476	SQ. METER	MOWING	
258781														877	10000	258781	SQ. METER	TEMPORARY SEEDING AND MULCHING	
9253									18186					877	30100	27439	METER	TEMPORARY PERIMETER FILTER FABRIC FENCE	
9253									680					877	30200	9933	METER	TEMPORARY DITCH CHECK FILTER FABRIC FENCE	
1233									160					877	30300	1393	METER	TEMPORARY INLET PROTECTION FILTER FABRIC FENCE	
1096														877	40000	1096	METER	TEMPORARY SLOPE DRAINS	
115903									10680					877	50000	126583	CU. METER	TEMPORARY SEDIMENT BASINS AND DAMS	
21920														877	55000	21920	CU. METER	TEMPORARY DIKES	
2747									14160					877	55500	16907	SQ. METER	TEMPORARY DITCH PROTECTION	
86927														877	60000	86927	CU. METER	SEDIMENT REMOVAL	
DRAINAGE																			
					2.4									602	20000	87.9	CU. METER	CONCRETE MASONRY	
														603	00100	226.5	METER	100mm CONDUIT, TYPE B, 707.31	
														603	00400	70.0	METER	100mm CONDUIT, TYPE E	
														603	00406	1154.0	METER	100mm CONDUIT, TYPE F, 707.31	
	100													603	00900	100.0	METER	150mm CONDUIT, TYPE B	
	100													603	01400	100.0	METER	150mm CONDUIT, TYPE E	
	100													603	01500	100.0	METER	150mm CONDUIT, TYPE F	
														603	04400	33.5	METER	300mm CONDUIT, TYPE B	
		65												603	04600	3339.5	METER	300mm CONDUIT, TYPE C	
														603	05900	349.5	METER	375mm CONDUIT, TYPE B	
														603	05900	17.0	METER	375mm CONDUIT, TYPE B, 706.02 50 D-LOAD OR 707.33	860
														603	06100	1991.0	METER	375mm CONDUIT, TYPE C	
														603	06400	50.0	METER	375mm CONDUIT, TYPE D	
														603	07400	117.5	METER	450mm CONDUIT, TYPE B	
														603	07600	21.0	METER	450mm CONDUIT, TYPE C	
														603	10200	54.5	METER	600mm CONDUIT, TYPE A, 706.02 75 D-LOAD OR 707.01 (2.01mm), 707.05 (1.63mm), 707.04 (1.63mm) (13mm CORR)	861
														603	13200	71.5	METER	750mm CONDUIT, TYPE A, 706.02 130 D-LOAD, OR 707.01 (2.01mm), 707.05 (1.63mm) OR 707.04 (1.63mm) (13mm CORR)	862
														603	13400	17.0	METER	750mm CONDUIT, TYPE B	
														603	13400	61.5	METER	750mm CONDUIT, TYPE B, 706.02 62.5 D-LOAD	851
														603	16200	83.5	METER	900mm CONDUIT, TYPE A, 706.02 140 D-LOAD OR 707.01 (2.77mm), 707.05 (2.77mm) OR 707.04 (2.77mm) (13mm CORR)	863
														603	16200	31.0	METER	900mm CONDUIT, TYPE A, 706.02 50 D-LOAD OR 707.01 (2.01mm), 707.05 (1.63mm) OR 707.04 (1.63mm) (13mm CORR)	864
														603	16400	32.0	METER	900mm CONDUIT, TYPE B	
														603	16400	83.5	METER	900mm CONDUIT, TYPE B, 706.02 62.5 D-LOAD	857
														603	16400	89.5	METER	900mm CONDUIT, TYPE B, 706.02 87.5 D-LOAD	859
														603	19200	105.5	METER	1050mm CONDUIT, TYPE A, 707.01 (2.77mm), 707.05 (2.01mm) OR 707.04 (2.01mm) (13mm CORR)	858
														603	19201	270.0	METER	1050mm CONDUIT, TYPE A, 706.02 130 D-LOAD INDUCED TRENCH OR 707.01 (3.51mm) ALUMINUM COATED, 707.05 (3.51mm) OR 707.04 (3.51mm) (13mm CORR), AS PER PLAN	847
														603	19201	302.5	METER	1050mm CONDUIT, TYPE A, 707.02 (3.51mm) WITH CONCRETE FIELD PAVING, 707.07 (3.51mm) OR 707.04 (3.51 mm) (25mm CORR), AS PER PLAN	846
														603	19400	57.0	METER	1050mm CONDUIT, TYPE B, 706.02 50 D-LOAD	856
														603	19400	22.5	METER	1050mm CONDUIT, TYPE B	
														603	19400	90.0	METER	1050mm CONDUIT, TYPE B, 706.02 62.5 D-LOAD	840
														603	20700	159.0	METER	1200mm CONDUIT, TYPE A, 707.02 ALUMINUM COATED WITH BITUMINOUS PAVED INVERT (3.51mm)	850
														603	20701	588.5	METER	1200mm CONDUIT, TYPE A, 707.01 ALUMINUM COATED WITH BITUMINOUS PAVED INVERT (4.27mm), AS PER PLAN	836
														603	22200	95.0	METER	1350mm CONDUIT, TYPE A, 707.02 (3.51mm), 707.07 (2.77mm) OR 707.04 (2.77mm) (25mm CORR)	854
														603	22201	255.0	METER	1350mm CONDUIT, TYPE A, 707.01 WITH CONCRETE FIELD PAVING (3.51mm), AS PER PLAN	844

GENERAL SUMMARY

ATH-33-30.981

63  
956

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SHEET NUMBER														ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.			
37		38A		40		66	67		75		79	837	838								865	
																		DRAINAGE (continued)				
												278.0					603	22201	278.0	METER	1350mm CONDUIT, TYPE A, 707.02 (3.51mm) WITH CONCRETE FIELD PAVING, 707.07 (3.51mm) OR 707.04 (3.51mm) (25 mm CORR), AS PER PLAN	845
												156.0					603	23601	156.0	METER	1500mm CONDUIT, TYPE A, 707.01 WITH CONCRETE FIELD PAVING (2.77mm), AS PER PLAN	841
													76.5				603	25000	76.5	METER	1650mm CONDUIT, TYPE A, 707.02 (2.77mm), 707.07 (2.01mm) OR 707.04 (2.01mm) (25mm CORR)	855
													308.5				603	25001	308.5	METER	1650mm CONDUIT, TYPE A, 707.03 (4.27mm) WITH CONCRETE FIELD PAVING, AS PER PLAN	843
													77.5				603	25200	77.5	METER	1650mm CONDUIT, TYPE B, 706.02 50 D-LOAD	839
													228.5				603	26000	228.5	METER	1800mm CONDUIT, TYPE A, 707.03 (4.27mm)	852
													59.5				603	26200	59.5	METER	1800mm CONDUIT, TYPE B, 706.02 50 D-LOAD	839
													251.5				603	36001	251.5	METER	3300mm CONDUIT, TYPE A, 707.03 (7.11mm) WITH SLOTTED JOINTS, AS PER PLAN	853
													101.5				603	53510	101.5	METER	1585mm x 2495mm CONDUIT, TYPE B, 706.04 50 D-LOAD	839
						6											604	00400	6	EACH	CATCH BASIN, NO. 3	
						1											604	00800	1	EACH	CATCH BASIN, NO. 3A	
						23											604	01200	23	EACH	CATCH BASIN, NO. 4	
						1											604	01400	1	EACH	CATCH BASIN, NO. 4A	
						1											604	01600	2	EACH	CATCH BASIN, NO. 5	
						1											604	01800	6	EACH	CATCH BASIN, NO. 5A	
						36											604	02401	36	EACH	CATCH BASIN, NO. 7, AS PER PLAN	38A
						4											604	04500	5	EACH	CATCH BASIN, NO. 2-2B	
						2											604	04501	2	EACH	CATCH BASIN, NO. 2-2B, AS PER PLAN	38A
						1											604	05300	1	EACH	CATCH BASIN, NO. 2-4	
							3										604	31500	3	EACH	MANHOLE, NO. 3	
																	604	32100	2	EACH	MANHOLE, NO. 5	
																	604	36600	26	EACH	PRECAST REINFORCED CONCRETE OUTLET	
																	604	36601	34	EACH	PRECAST REINFORCED CONCRETE OUTLET, AS PER PLAN	38A
																	604	37000	4	EACH	INSPECTION WELL	
																	605	05100	19624	METER	100mm SHALLOW PIPE UNDERDRAIN, 707.31	
																	605	05150	797	METER	100mm DEEP PIPE UNDERDRAIN, 707.31	
																	605	05200	1135.5	METER	100mm UNCLASSIFIED PIPE UNDERDRAIN, 707.31	
																	605	05220	17610	METER	100mm ROCK CUT UNDERDRAIN, 707.31	
300																	605	13402	300	METER	150mm UNCLASSIFIED PIPE UNDERDRAIN FOR SPRINGS	
1055																	605	31100	1055	METER	AGGREGATE DRAIN	
300																	605	32200	300	METER	AGGREGATE DRAIN FOR SPRINGS	
																		PAVEMENT				
																	301	46000	479	CU. METER	BITUMINOUS AGGREGATE BASE, PG 64-22	
																	304	20000	55489	CU. METER	AGGREGATE BASE	
																	407	10000	625	LITER	TACK COAT	
																	407	14000	184	LITER	TACK COAT FOR INTERMEDIATE COURSE	
																	408	10000	22954	LITER	BITUMINOUS PRIME COAT	
																	448	46020	723	CU. METER	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I, PG 64-22	
						625											448	46060	625	CU. METER	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I, PG64-22 (UNDER GUARDRAIL)	
																	448	47020	410	CU. METER	ASPHALT CONCRETE SURFACE COURSE, TYPE I, PG 64-22	
																	611	25001	657	SQ. METER	REINFORCED CONCRETE APPROACH SLABS (T=380mm), AS PER PLAN	40
																	616	10000	35500	CU. METER	WATER	
																	616	20000	75	METRIC TON	CALCIUM CHLORIDE	
																	617	10101	377	CU. METER	COMPACTED AGGREGATE, TYPE A, AS PER PLAN	39
																	618	40300	28467	METER	RUMBLE STRIP, TYPE 3	
																	630	14000	493	METER	CURB, TYPE 2-A	
																	630	24000	61	METER	CURB, TYPE 4-A	
																	684	10050	207490	SQ. METER	225mm PORTLAND CEMENT CONCRETE PAVEMENT (7 YEAR WARRANTY)	
																	684	10100	4984	SQ. METER	250mm PORTLAND CEMENT CONCRETE PAVEMENT (7 YEAR WARRANTY)	

GENERAL SUMMARY

ATH-33-30.981



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SHEET NO.	202	202	202	202	202	202	202	202	603	603	603	603	603	603	603	603	603	603	604	604	604	604	604	604	604	604	604	608	608	608						
	BUILDING DEMOLISHED	PAVEMENT REMOVED	WALK REMOVED	CURB REMOVED	GUARDRAIL REMOVED	CATCH BASIN REMOVED	PIPE REMOVED, 600mm AND UNDER	PIPE REMOVED, OVER 600mm	300mm CONDUIT, TYPE B	300mm CONDUIT, TYPE C	375mm CONDUIT, TYPE B	375mm CONDUIT, TYPE C	375mm CONDUIT, TYPE D	450mm CONDUIT, TYPE B	450mm CONDUIT, TYPE C	750mm CONDUIT, TYPE B	900mm CONDUIT, TYPE B	1050mm CONDUIT, TYPE B	CATCH BASIN, NO. 2-2B	CATCH BASIN, NO. 2-4	CATCH BASIN, NO. 3	CATCH BASIN, NO. 3A	CATCH BASIN, NO. 2-2B, AS PER PLAN	CATCH BASIN, NO. 4	CATCH BASIN, NO. 4A	CATCH BASIN, NO. 5	CATCH BASIN, NO. 5A	CATCH BASIN, NO. 7, AS PER PLAN	CURB RAMP	200mm CONCRETE WALK	CURB RAMP					
	EACH	SQ.METER	SQ.METER	METER	METER	EACH	METER	METER	METER	METER	METER	METER	METER	METER	METER	METER	METER	METER	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	SQ.METER	SQ.METER					
96		3315.73			199	2	15	51																												
97										339.5	77.1	46.5		37.0	21.0	17.0							2	2			1	6								
104	17						33			790.1	50.0	720.0		20.0										6		1		7								
105																																				
112											107.0	540.0		48.0													7									
120	10										64.0	600.0															7									
128	5											50.0														1										
135																																				
142	2										335.5																				4					
149											280.0																					2				
156	3										336.2																					4				
163	5								15.9	431.0																						5				
170											492.4																						5			
175											212.8																						3			
585	1	5441	146	512	273	3		47.5	17.5	57.0		34.5		2		32.0	22.5	2	1	6																
585A			35.94	17.25																			1			1				1	48		38.54			
594																																				
602	1												27																							
613	4											22.5	14						1																	
625	1											13.5	9						1																	
635																																				
643	4						21					15.0		10.5																						
SHEET TOTAL	53	8756.73	181.94	529.25	472	5	69	98.5	33.4	3274.5	349.1	1991.0	50.0	117.5	21.0	17.0	32.0	22.5	4	1	6	1	2	23	1	1	1	36	1	48		38.54				
TOTALS CARRIED TO GENERAL SUMMARY	53	8757	182	530	472	5	69	98.5	33.5	3274.5	349.5	1991.0	50.0	117.5	21.0	17.0	32.0	22.5	4	1	6	1	2	23	1	1	1	36	1	48		39				

ROADWAY SUBSUMMARY

ATH-33-30.981

CALCULATED  
 AML  
 CHECKED  
 AM

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 956



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SHEET NO.	202	202	202	202	202	448	601	602	604	606	606	606	606	606	606	606	606	606	606	622	626	626	626	626	638	670	672	SPECIAL	SPECIAL	SPECIAL	
	WEARING COURSE REMOVED	CONCRETE MEDIAN REMOVED	CONCRETE SLOPE PROTECTION REMOVED	PRIVY VAULT REMOVED	SEPTIC TANK REMOVED	50mm ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I, PG64-22 (UNDER GUARDRAIL)	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	CONCRETE MASONRY	MANHOLE, NO. 3	GUARDRAIL, TYPE 5	GUARDRAIL, TYPE 8	ANCHOR ASSEMBLY, TYPE A	POST END ANCHOR (OR CONCRETE BLOCK END ANCHOR)	ANCHOR ASSEMBLY, TYPE B-98	ANCHOR ASSEMBLY, TYPE E-98	ANCHOR ASSEMBLY, TYPE T	BRIDGE TERMINAL ASSEMBLY, TYPE 2	BRIDGE TERMINAL ASSEMBLY, TYPE 1	IMPACT ATTENUATOR TYPE I-98 (UNIDIRECTIONAL)	CONCRETE BARRIER, TYPE D	BARRIER REFLECTORS, TYPE A	BARRIER REFLECTORS, TYPE A2	BARRIER REFLECTORS, TYPE B	BARRIER REFLECTORS, TYPE B2	VALVE BOX ADJUSTED TO GRADE	DITCH EROSION PROTECTION	SEEDING AND MULCHING WITH EROSION CONTROL NETTING	MISC.: SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 1	MISC.: SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 2	MISC.: SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 3	
	SQ. METER	SQ. METER	SQ. METER	EACH	EACH	CU. METER	CU. METER	CU. METER	EACH	METER	METER	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	SQ. METER	SQ. METER	SQ. METER	SQ. METER	SQ. METER		
96		124	31			36.4				689.893			2	1	1	1	7	1	202.2	31		26									
97							6.0	0.27	2															1	650.9						
104						43.0	2.4	0.22		571.217	97.26				1	2															
105					6							2														1140.8	8037	193.5		171.8	
112						124.8	1307.82	0.93	1	1638.36	165.63	1		1	3											1383	360	190.9	773.9		
120				1	3	119.2	1419.96	0.44		1642.12	175.26	2	2		4											1280.7		894.4	213.9		
128					1	131.1	878.3			1743.54		3			5											920.2		879.6	1239.5		
135					1	94.5	1251.4			1259.85	87.63	1														584.7		734.5	386.4		
142					1	21.4	315.8			326.48		1		1	1											96.8	188.0	752.1	29.4		
149						19.5	286.1			243.84	87.63	1		1												46.0	1054.0	959.1	214.1		
156						34.6	311.8			461.01	175.26	2															759.6	804.0	1170.7		
163					2																					1127.0	1376.0	412.0			
170						64.4																				404.6	1297.6	381.8			
175																										165.6	184.0	149.5			
585																															
585A										148.59				1	3																
594	710									114.30					4																
602					1					102.87		4															92				
613					2																						310.5				
625					1					152.40		4			1		4										804.6				
635																											629.6				
643	3225				1			0.54																		1349.3		98.9			
SHEET TOTAL	3935	124	31	1	19	624.5	5843.98	2.40	3	9094.47	788.67	14	9	3	5	24	1	15	2	202.2	210	173	26	1	10986.3	13256.2	6450.3	4027.9	171.8		
TOTALS CARRIED TO GENERAL SUMMARY	3935	124	31	1	19	625	5844	2.4	3	9094.47	788.67	14	9	3	5	24	1	15	2	203	210	173	26	1	10987	13257	6451	4028	172		

CALCULATED	AML		
	CHECKED		
AM			
<b>ROADWAY SUBSUMMARY</b>			
<b>ATH-33-30.981</b>			
<table border="1"> <tr> <td>67</td> </tr> <tr> <td>956</td> </tr> </table>		67	956
67			
956			



















STATION TO STATION		SIDE	LENGTH L	AVERAGE WIDTH W	SURFACE AREA A A=LxW	203	301	304	304	407	407	408	448	448	448	448	611	617	618	830	830	884	884	CALCULATED SSC	CHECKED TAL
						SUBGRADE COMPACTION	75mm BITUMINOUS AGGREGATE BASE	150mm AGGREGATE BASE	100mm AGGREGATE BASE	TACK COAT (0.05 L/m <sup>2</sup> )	TACK COAT FOR INTERMEDIATE COURSE (0.03 L/m <sup>2</sup> )	BITUMINOUS PRIME COAT (1.5 L/m <sup>2</sup> )	30mm ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 64-22	100mm ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 64-22	45mm ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG 64-22	70mm ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG 64-22	380 mm REINFORCED CONCRETE APPROACH SLABS, AS PER PLAN	200 mm COMPACTED AGGREGATE TYPE A, AS PER PLAN	RUMBLE STRIP, TYPE 3	CURB, TYPE 2-A	CURB, TYPE 4-A	225mm PORTLAND CEMENT CONCRETE PAVEMENT (7 YEAR WARRANTY)	250mm PORTLAND CEMENT CONCRETE PAVEMENT (7 YEAR WARRANTY)		
			METER	METER	SQ. METER	SQ. METER	CU. METER	CU. METER	CU. METER	LITER	LITER	LITER	CU. METER	CU. METER	CU. METER	CU. METER	SQ. METER	CU. METER	METER	METER	METER	SQ. METER	SQ. METER		
EASTBOUND US33																									
29+013.000	29+133.500	LT.-RT.	120.500	11.400	1373.700	1373.700		216.900	140.985																
29+133.500	29+138.500	LT.-RT.	5.000	11.550	57.750	57.750		9.113	5.925																
29+138.500	29+142.781	LT.-RT.	4.281	11.550	49.446	49.446		8.096	5.073																
29+142.781	29+172.781	LT.-RT.	30.000	13.050	391.500	391.500		63.482	40.050																
29+172.781	29+182.713	LT.-RT.	9.932	14.550	144.511	144.511		23.251	14.749																
29+182.713	29+207.281	LT.-RT.	24.568	14.400	353.779	353.779		60.857	36.115																
29+207.281	29+237.000	LT.-RT.	29.719	14.436	429.022	429.022		73.777	43.794																
29+237.000	29+242.000	LT.-RT.	5.000	14.464	72.321	72.321		11.641	7.382																
29+242.000	29+281.821	LT.-RT.	39.821	14.808	589.677	589.677		94.765	60.162																
29+281.821	29+382.781	LT.-RT.	100.960	18.126	1829.955	1829.955		283.580	186.024																
29+382.781	29+508.923	LT.-RT.	126.142	11.400	1438.019	1438.019		227.056	147.586																
29+508.923	29+516.523	LT.-RT.	7.600	12.600	95.760	95.760		14.706									95.760								
29+516.523	29+567.677	LT.-RT.	7.600	12.600	95.760	95.760		14.706									95.760								
29+567.677	29+575.277	LT.-RT.	7.600	12.600	95.760	95.760		14.706																	
29+575.277	29+610.000	LT.-RT.	34.723	11.400	395.842	395.842		62.501	40.626																
29+610.000	30+202.594	RT.	592.594	11.400	6755.572	6755.572		1066.669	693.335																
30+202.594	30+480.000	RT.	277.406	21.677	6013.330	6013.330		926.966	609.655																
30+480.000	31+080.000	RT.	600.000	18.600	11160.000	11160.000		1728.000	1134.000																
31+080.000	31+317.000	RT.	237.000	16.800	3981.600	3981.600		618.570	405.270																
31+317.000	31+917.600	RT.	600.600	15.000	9009.000	9009.000		1405.404	918.918																
31+917.600	32+155.200	RT.	237.600	13.200	3136.320	3136.320		491.832	320.760																
32+155.200	32+875.380	LT.-RT.	720.180	11.400	8210.052	8210.052		1296.324	842.611																
WESTBOUND US33																									
29+214.291	29+301.669	LT.-RT.	87.378	11.400	996.109	996.109		153.348	102.232																
29+301.669	29+496.900	LT.-RT.	195.231	11.400	2225.633	2225.633		351.416	228.420																
29+496.900	29+504.500	LT.-RT.	7.600	12.600	95.760	95.760		14.706									95.760								
29+504.500	29+555.654	LT.-RT.	7.600	12.600	95.760	95.760		14.706									95.760								
29+555.654	29+563.254	LT.-RT.	7.600	12.600	95.760	95.760		14.706																	
29+563.254	29+610.000	LT.-RT.	46.746	11.400	532.904	532.904		84.143	54.693																
29+610.000	30+154.346	LT.	544.346	11.400	6205.544	6205.544		979.823	636.885																
30+154.346	30+169.346	LT.	15.000	11.700	175.500	175.500		27.675	18.000																
30+169.346	30+359.325	LT.	189.979	16.959	3221.860	3221.860		500.377	327.885																
30+359.325	30+380.000	LT.	20.675	14.400	297.720	297.720		46.519	30.392																
30+380.000	30+410.000	LT.	30.000	12.900	387.000	387.000		60.750	39.600																
30+410.000	32+875.380	LT.	2465.380	11.400	28105.332	28105.332		4437.684	2884.495																
US33																									
32+875.380	33+010.450	LT.-RT.	135.070	19.313	2608.580	2608.580		403.443	264.910																
33+010.450	33+220.000	LT.	209.550	16.800	3520.440	3520.440		546.926	358.331																
33+220.000	33+235.000	LT.-RT.	15.000	18.600	279.000	279.000		43.200	28.350																
33+235.000	33+253.742	LT.-RT.	18.742	20.400	382.337	382.337		59.037	38.796																
33+253.742	33+311.643	LT.-RT.	57.901	CADD	1929.863	1929.863		295.766	195.089																
33+311.643	33+330.000	LT.	18.357	20.400	374.483	374.483		57.825	37.999																
33+330.000	33+345.000	LT.	15.000	18.600	279.000	279.000		43.200	28.350																
33+345.000	33+375.000	LT.	30.000	16.800	504.000	504.000		78.300	51.300																
<b>SHEET TOTALS CARRIED TO SHEET 79</b>						107937.560	0.000	279.5476		0.000	0.000	0.000	0.000	0.000	0.000	383.040	0.000	16016.318	0.000	0.000	107554.520	0.000			
<b>TOTALS TO GENERAL SUMMARY</b>																									

PAVEMENT CALCULATIONS

ATH-33-30.981

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STATION TO STATION		SIDE	LENGTH L	AVERAGE WIDTH W	SURFACE AREA A A = L x W	203	301	304	304	407	407	408	448	448	448	448	611	617	618	830	830	884	884	
						SUBGRADE COMPACTION	75mm BITUMINOUS AGGREGATE BASE	150mm AGGREGATE BASE	100mm AGGREGATE BASE	TACK COAT (0.05 L/m <sup>2</sup> )	TACK COAT FOR INTERMEDIATE COURSE (0.03 L/m <sup>2</sup> )	BITUMINOUS PRIME COAT (1.5 L/m <sup>2</sup> )	30mm ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 64-22	100mm ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 64-22	45mm ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG 64-22	70mm ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG 64-22	380 mm REINFORCED CONCRETE APPROACH SLABS, AS PER PLAN	200 mm COMPACTED AGGREGATE TYPE A, AS PER PLAN	RUMBLE STRIP, TYPE 3	CURB, TYPE 2-A	CURB, TYPE 4-A	225mm PORTLAND CEMENT CONCRETE PAVEMENT (7 YEAR WARRANTY)	250mm PORTLAND CEMENT CONCRETE PAVEMENT (7 YEAR WARRANTY)	
			METER	METER	SQ. METER	SQ. METER	CU. METER	CU. METER	CU. METER	LITER	LITER	LITER	CU. METER	CU. METER	CU. METER	CU. METER	SQ. METER	CU. METER	METER	METER	METER	SQ. METER	SQ. METER	
33+375.000	33+615.000	LT.	240.000	15.000	3600.000	3600.000		561.600	367.200										480.000			3600.000		
33+615.000	37+125.000	LT.	3510.000	13.200	46332.000	46332.000		7265.700	4738.500										7020.000			46332.000		
37+125.000	37+365.000	LT.	240.000	15.000	3600.000	3600.000		561.600	367.200										480.000			3600.000		
37+365.000	37+425.000	LT.	60.000	16.800	1008.000	1008.000		156.600	102.600										120.000			1008.000		
37+425.000	37+440.000	LT.	15.000	18.600	279.000	279.000		43.200	28.350										30.000			279.000		
37+440.000	37+459.884	LT.-RT.	19.884	20.400	405.634	405.634		62.635	41.160										39.768			405.634		
37+459.884	37+513.166	LT.-RT.	53.282	CADD	1794.259	1794.259		276.077	181.741										106.564			1794.259		
37+513.166	37+535.000	LT.	21.834	20.400	445.414	445.414		68.777	45.196										43.668			445.414		
37+535.000	37+550.000	LT.	15.000	18.600	279.000	279.000		43.200	28.350										30.000			279.000		
37+550.000	37+610.000	LT.	60.000	16.800	1008.000	1008.000		156.600	102.600										120.000			1008.000		
37+610.000	37+850.000	LT.	240.000	15.000	3600.000	3600.000		561.600	367.200										480.000			3600.000		
37+850.000	39+600.000	LT.	1750.000	13.200	23100.000	23100.000		3622.500	2362.500										3500.000			23100.000		
TOWNSHIP ROAD 55																								
48+008.000	48+028.000	LT.-RT.	20.000	5.662	113.230	113.230		17.885		5.662		169.845	3.397			7.926								
48+028.000	48+216.531	LT.-RT.	188.531	6.600	1244.305	1244.305		195.130		62.215		1866.457	37.329			87.101								
48+216.531	48+224.131	LT.-RT.	7.600	9.000	68.400	68.400		10.944				102.600				68.400				15.200				
48+299.571	48+307.171	LT.-RT.	7.600	9.000	68.400	68.400		10.944				102.600				68.400				15.200				
48+307.171	48+365.000	LT.-RT.	57.829	6.600	381.671	381.671		59.853		19.084		572.507	11.450			26.717								
48+365.000	48+385.000	LT.-RT.	20.000	6.184	123.670	123.670		19.451		6.184		185.505	3.710			8.657								
DRIVE NO. 2		LT.	6.000	CADD	71.660	71.660		10.749				107.490		7.166										
DRIVE NO. 3		RT.	6.000	CADD	184.905	184.905		27.736				277.358		3.592										
COUNTY ROAD 21																								
3+005.000	3+025.000	LT.-RT.	20.000	6.293	125.861	125.861	9.890	20.679		6.293	3.776	188.792	3.776		5.664									
3+025.000	3+229.993	LT.-RT.	204.993	6.600	1352.954	1352.954	106.084	221.392		67.648	40.589	2029.431	40.589		60.883									
3+291.051	3+420.000	LT.-RT.	128.949	6.600	851.063	851.063	66.731	139.265		42.553	25.532	1276.595	25.532		38.298									
3+420.000	3+440.000	LT.-RT.	20.000	6.252	125.033	125.033	9.827	20.555		6.252	3.751	187.550	3.751		5.626									
3+005.000	3+025.000	LT.	20.000	0.850	17.000																		3.400	
3+005.000	3+025.000	RT.	20.000	0.850	17.000																		3.400	
3+025.000	3+229.993	LT.	204.993	2.400	491.983																		98.397	
3+025.000	3+220.000	RT.	195.000	2.400	468.000																		93.600	
3+220.000	3+229.993	RT.	9.993	2.700	26.981																		5.396	
3+291.051	3+300.000	LT.	8.949	3.000	26.847																		5.369	
3+300.000	3+420.000	LT.	120.000	2.400	288.000																		57.600	
3+291.051	3+420.000	RT.	128.949	2.400	309.478																		61.896	
3+420.000	3+440.000	LT.	20.000	0.850	17.000																		3.400	
3+420.000	3+440.000	RT.	20.000	0.850	17.000																		3.400	
DRIVE NO. 4		LT.	6.000	CADD	996.127	996.127		149.419				1494.191		3.510										
DRIVE NO. 5		LT.	6.000	CADD	317.701	317.701		47.655				476.552		3.209										
TOWNSHIP ROAD 64																								
49+020.000	49+030.000	LT.-RT.	10.000	7.133	71.330	71.330		11.150		3.567		106.995	2.140		4.993									
49+030.000	49+173.467	LT.-RT.	143.467	6.600	946.882	946.882		148.488		47.344		1420.323	28.406		66.282									
<b>SHEET TOTALS CARRIED TO SHEET 79</b>						92494.499	192.532	23223.979		266.800	73.647	10564.789		177.557		312.147	136.800	335.858	12450.000	0.000	30.400	85451.306	0.000	
<b>TOTALS TO GENERAL SUMMARY</b>																								

**PAVEMENT CALCULATIONS**

**ATH-33-30.981**

CALCULATED  
SSC  
CHECKED  
TAL

STATION TO STATION		SIDE	LENGTH L	AVERAGE WIDTH W	SURFACE AREA A A=L x W	203	301	304	304	407	407	408	448	448	448	448	611	617	618	830	830	884	884
						SUBGRADE COMPACTION	75mm BITUMINOUS AGGREGATE BASE	150mm AGGREGATE BASE	100mm AGGREGATE BASE	TACK COAT (0.05 L/m <sup>2</sup> )	TACK COAT FOR INTERMEDIATE COURSE (0.03 L/m <sup>2</sup> )	BITUMINOUS PRIME COAT (1.5 L/m <sup>2</sup> )	30mm ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 64-22	100mm ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 64-22	45mm ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG 64-22	70mm ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG 64-22	380 mm REINFORCED CONCRETE APPROACH SLABS, AS PER PLAN	200 mm COMPACTED AGGREGATE TYPE A, AS PER PLAN	RUMBLE STRIP, TYPE 3	CURB, TYPE 2-A	CURB, TYPE 4-A	225mm PORTLAND CEMENT CONCRETE PAVEMENT (7 YEAR WARRANTY)	250mm PORTLAND CEMENT CONCRETE PAVEMENT (7 YEAR WARRANTY)
			METER	METER	SQ. METER	SQ. METER	CU. METER	CU. METER	CU. METER	LITER	LITER	LITER	CU. METER	CU. METER	CU. METER	CU. METER	SQ. METER	CU. METER	METER	METER	METER	SQ. METER	SQ. METER
49+173.467	49+181.067	LT.-RT.	7.600	9.000	68.400	68.400		10.944									68.400					15.200	
49+252.729	49+260.329	LT.-RT.	7.600	9.000	68.400	68.400		10.944									68.400					15.200	
49+260.329	49+460.000	LT.-RT.	199.671	6.600	1317.829	1317.829		206.659		65.891		1976.743	39.535			92.248							
49+460.000	49+480.000	LT.-RT.	20.000	5.500	110.000	110.000		17.400		5.500		165.000	3.300			7.700							
DRIVE NO. 6		RT.	6.000	CADD	264.044	264.044		39.607				396.066		3.716									
DRIVE NO. 7		RT.	6.000	CADD	52.483	52.483		7.872				78.725		4.458									
DRIVE NO. 8		RT.	6.000	CADD	300.599	300.599		45.090				450.899		3.556									
COUNTY ROAD 16																							
50+098.000	50+116.761	LT.-RT.	18.761	5.746	107.792	107.792	8.507	17.857		5.390	3.234	161.688	3.234		4.851								
50+116.761	50+508.903	LT.-RT.	392.142	6.600	2588.137	2588.137	202.933	423.513		129.407	77.644	3882.206	77.644		116.466								
50+572.648	50+700.000	LT.-RT.	127.352	6.600	840.523	840.523	65.905	137.540		42.026	25.216	1260.785	25.216		37.824								
50+700.000	50+720.000	LT.-RT.	20.000	5.594	111.885	111.885	8.841	18.583		5.594	3.357	167.828	3.357		5.035								
DRIVE NO. 9		LT.	6.000	CADD	179.142	179.142		26.871				268.713		2.041									
DRIVE NO. 10		LT.	6.000	CADD	302.482	302.482		45.372				453.723		3.744									
SERVICE ROAD																							
0+000.000	0+018.267	LT.-RT.	18.267	CADD	139.430	139.430		21.798		6.972		209.145	4.183			9.760					4.741		
0+018.267	0+116.000	LT.-RT.	97.733	6.000	586.398	586.398		92.358		29.320		879.597	17.592			41.048					23.456		
0+116.000	0+155.000	LT.-RT.	39.000	CADD	785.430	785.430		120.132		39.272		1178.145	23.563			54.980					12.331		
TOWNSHIP ROAD 1271																							
3+023.000	3+060.000	LT.	37.000	3.000	111.000	111.000		17.483		5.550		166.500	3.330			7.770							
3+023.000	3+068.290	RT.	45.290	3.000	135.870	135.870		21.400		6.793		203.805	4.076			9.511							
3+034.349	3+068.290	RT.	33.941	CADD	246.714	246.714		38.621		12.336		370.071	7.401			17.270							
3+060.000	3+080.000	LT.	20.000	2.500	50.000	50.000		7.950		2.500		75.000	1.500			3.500							
3+068.290	3+080.000	RT.	11.710	2.530	29.626	29.626		4.707		1.481		44.439	0.889			2.074							
RAMP A																							
1+382.781	1+397.781	LT.-RT.	15.000	7.800	117.000	117.000		18.225														117.000	
1+397.781	1+522.449	LT.-RT.	124.668	7.500	935.010	935.010		145.862														935.010	
1+522.449	1+538.576	LT.-RT.	16.127	CADD	198.700	198.700		30.995														198.700	
SLIP RAMP C																							
2+565.000	2+580.515	LT.-RT.	15.515	CADD	77.342	77.342		11.672														77.342	
2+580.515	2+626.764	LT.-RT.	46.249	7.800	360.742	360.742		56.193														360.742	
2+626.764	2+649.799	LT.-RT.	23.035	CADD	115.609	115.609		17.762														115.609	
RAMP C																							
3+576.000	3+594.558	LT.-RT.	18.558	CADD	169.550	169.550		26.189														169.550	
3+594.558	3+649.759	LT.-RT.	55.201	7.800	430.568	430.568		67.069														430.568	
3+649.759	4+203.068	LT.-RT.	553.309	11.400	6307.723	6307.723		971.057														6307.723	
RAMP D																							
4+498.000	4+518.606	LT.-RT.	20.606	CADD	193.240	193.240		30.143														193.240	
4+518.606	5+154.346	LT.-RT.	635.740	7.500	4768.050	4768.050		743.816														4768.050	
5+154.346	5+169.346	LT.-RT.	15.000	7.800	117.000	117.000		18.225														117.000	
<b>SHEET TOTALS CARRIED TO SHEET 79</b>						22186.718	286.186	3469.906	358.032	109.450	12389.076	232.334	410.036	136.800	40.528	0.000	0.000	30.400	13790.534	0.000			
<b>TOTALS TO GENERAL SUMMARY</b>																							

PAVEMENT CALCULATIONS

ATH-33-30.981

CALCULATED  
SSC  
CHECKED  
TAL

STATION TO STATION	SIDE	LENGTH L	AVERAGE WIDTH W	SURFACE AREA A A = L x W	203	301	304	304	407	407	408	448	448	448	448	611	617	618	830	830	884	884	
					SUBGRADE COMPACTION	75mm BITUMINOUS AGGREGATE BASE	150mm AGGREGATE BASE	100mm AGGREGATE BASE	TACK COAT (0.05 L/m <sup>2</sup> )	TACK COAT FOR INTERMEDIATE COURSE (0.03 L/m <sup>2</sup> )	BITUMINOUS PRIME COAT (1.5 L/m <sup>2</sup> )	30mm ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 64-22	100mm ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 64-22	45mm ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG 64-22	70mm ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG 64-22	380 mm REINFORCED CONCRETE APPROACH SLABS, AS PER PLAN	200 mm COMPACTED AGGREGATE TYPE A, AS PER PLAN	RUMBLE STRIP, TYPE 3	CURB, TYPE 2-A	CURB, TYPE 4-A	225mm PORTLAND CEMENT CONCRETE PAVEMENT (7 YEAR WARRANTY)	250mm PORTLAND CEMENT CONCRETE PAVEMENT (7 YEAR WARRANTY)	
		METER	METER	SQ. METER	SQ. METER	CU. METER	CU. METER	CU. METER	LITER	LITER	LITER	CU. METER	CU. METER	CU. METER	CU. METER	SQ. METER	CU. METER	METER	METER	METER	SQ. METER	SQ. METER	
ALBANY ROAD																							
0+120.000	0+336.179	LT.-RT.	216.179	16.400	3545.336	3545.336	531.800															3610.189	
0+336.179	0+420.000	LT.-RT.	83.821	16.039	1344.405	1344.405	214.795															1373.510	
0+120.000	0+244.636	LT.	124.974																	124.636			
0+120.000	0+189.135	RT.	70.252																	70.252			
0+201.000	0+235.253	RT.	39.799																	39.799			
0+249.844	0+322.915	RT.	75.256																	75.256			
0+262.468	0+382.882	LT.	128.957																	128.957			
0+338.681	0+381.013	RT.	53.343																	53.343			
0+350.000	(DRIVE)	LT.	18.500	3.600	41.800	41.800	6.270																
0+350.700	(DRIVE)	RT.	1.600		14.400	14.400	2.160														14.4		
RAMP B																							
0+792.393	0+930.000	RT.	137.607	0.900	123.846	123.846	21.673														123.846		
0+930.000	0+990.000	LT.-RT.	60.000	9.247	554.820	554.820	102.142														554.820		
<b>SHEET TOTAL</b>					5624.607	0.000	878.840	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	492.581	0.000	693.066	4983.699	
<b>SUB TOTAL</b>					228243.384	478.718	55488.201	624.832	183.097	22953.865	409.891	722.183	656.640	376.386	28466.318	492.581	60.8	207489.426	4983.699				
<b>TOTALS TO GENERAL SUMMARY</b>					228244	479	55489	625	184	22954	410	723	657	377	28467	493	61	207490	4984				

CALCULATED SSC  
 CHECKED TAL  
**PAVEMENT CALCULATIONS**  
**ATH-33-30.981**  
 79  
 956

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ITEM NO.	SHEET NO.																	ITEM NO.	EXT	TOTAL	UNIT	DESCRIPTION
	81	81A	82	82A	83	83A	84	84A	85	85A	86	86A	87	87A	88	88A	89					
601	60	45	105	30	135	90	105	105	105	45	75		45	30		90	30	601	32204	1095	CU m	ROCK CHANNEL PROTECTION, TYPE C WITH FABRIC FILTER
601			24	3	3	6	3		3	9	18	30	6	24	27			601	34200	156	CU m	ROCK CHANNEL PROTECTION, TYPE C WITHOUT FILTER
877	630	1380	1376	1400	1300	1400	1220	1400	1200	600	440	1000	1200	1520	660	1000	460	877	30100	18186	METER	TEMPORARY PERIMETER FILTER FABRIC FENCE
877	48	90	48	48	18	44	60	30	36	72	18	6	30	54	18	48	12	877	30200	680	METER	TEMPORARY DITCH CHECK FILTER FABRIC FENCE
877	40	24	24	16	16	24				4						8	4	877	30300	160	METER	TEMPORARY INLET PROTECTION FILTER FABRIC FENCE
877	666	462	588	516	1530	972	1026	1032	924	450	720		618	114		720	342	877	50000	10680	CU m	TEMPORARY SEDIMENT BASINS AND SEDIMENT DAMS
877			2520	240	300	540	360		180	720	1320	2580	480	2040	2880			877	55500	14160	SQ m	TEMPORARY DITCH PROTECTION
																						QUANTITIES CARRIED TO SHEETS 62 AND 63

CALCULATED  
 C.H.C.  
 CHECKED  
 J.D.H.  
**SUBSUMMARY**  
**STORM WATER POLLUTION PREVENTION PLAN**  
**ATH-033-30.981**  
 80  
 956

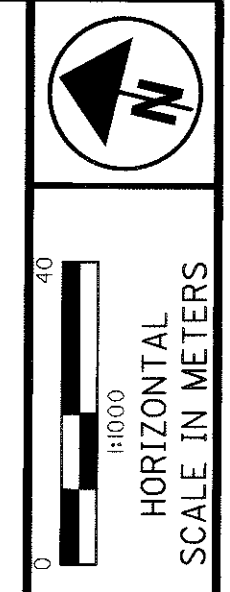
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ESTIMATED QUANTITIES

LOCATION	SIDE	877			601	
		TEMPORARY PERIMETER FILTER FABRIC FENCE	TEMPORARY DITCH CHECK FILTER FABRIC FENCE	TEMP. INLET PROTECTION FILTER FABRIC FENCE	TEMPORARY SEDIMENT BASINS AND SEDIMENT DAMS	ROCK CHANNEL PROTECTION, TYPE C WITH FABRIC FILTER
		m	m	m	CU m	CU m
29+180 TO 29+450	LT	270				
4+540 TO 4+600 (D)	L&R	100				
3+600 TO 3+640 (C)	LT	40				
1+300 TO 1+520 (A)	RT	220				
29+300 TO 29+600	L&R		48			
29+340 TO 29+560	L&R			40		
29+260, SB US33	LT				162	15
4+540, RAMP D	LT				258	15
4+530, RAMP D	RT				132	15
1+500, RAMP A	RT				114	15
<b>TOTAL</b>		<b>630</b>	<b>48</b>	<b>40</b>	<b>666</b>	<b>60</b>

PROJECT DATA	
TOTAL AREA (RIGHT OF WAY)	230.21 HA
AREA TO UNDERGO EXCAVATION, FILLING OR GRADING	141.28 HA
RUNOFF COEFFICIENT FOR PRE-CONSTRUCTION SITE	0.35
RUNOFF COEFFICIENT FOR POST-CONSTRUCTION SITE	0.70
SOIL DATA	SEE SOIL PROFILE
IMMEDIATE RECEIVING WATERS	UN-NAMED TRIBUTARIES
SUBSEQUENT RECEIVING WATERS	PRATTS FORK & MIDDLE BRANCH SHADE RIVER

USGS QUADRANT NO. 39082-CI-TF-024  
 ATHENS, OH  
 LONGITUDE: 40°00'11" W  
 LATITUDE: 83°07'50" N  
 LONGITUDE AND LATITUDE TO APPROXIMATE MIDDLE OF PROJECT.



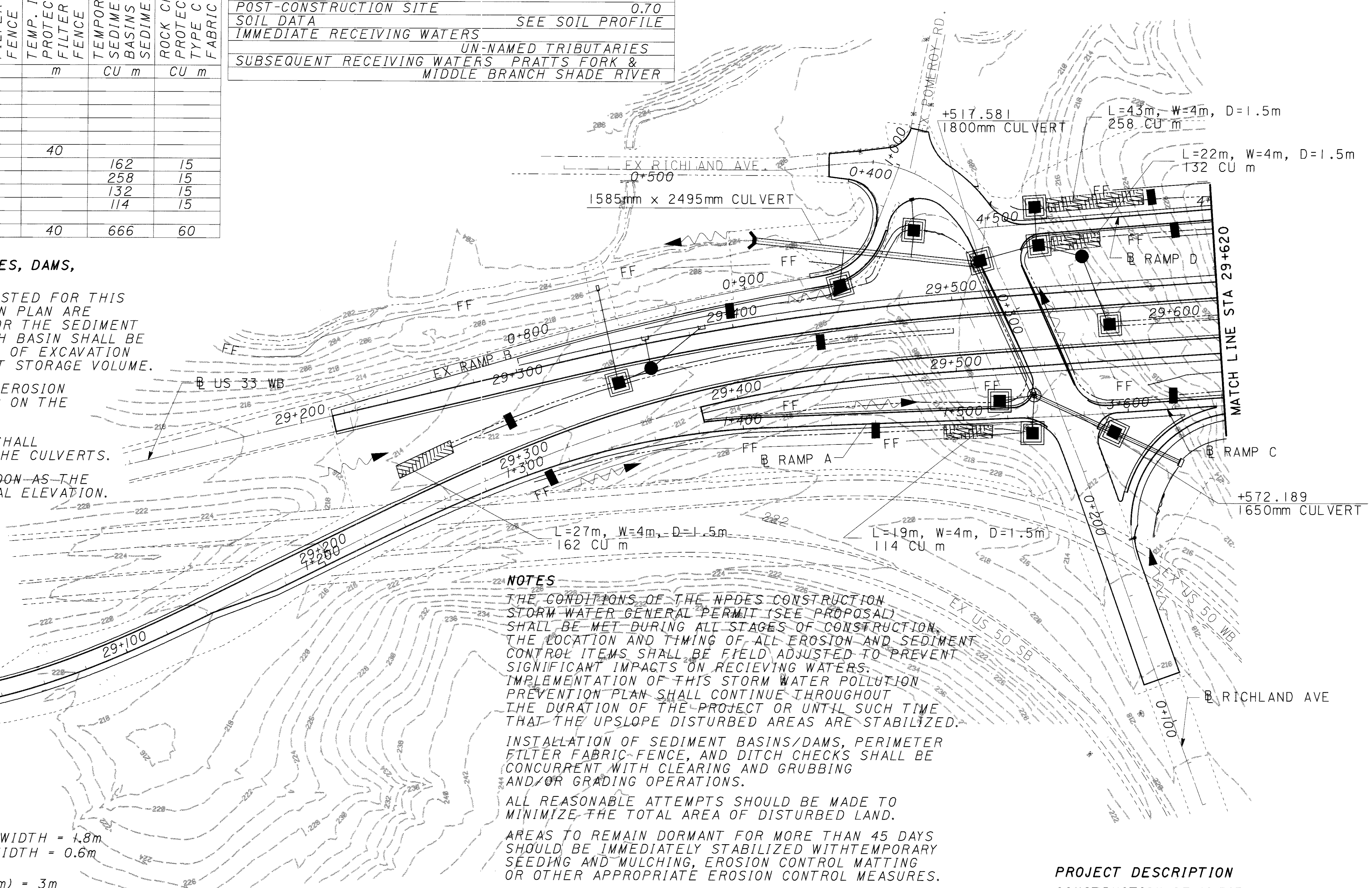
**ITEM 877, TEMPORARY BENCHES, DIKES, DAMS, & SEDIMENT BASINS**

THE SEDIMENT BASIN QUANTITIES LISTED FOR THIS STORM WATER POLLUTION PREVENTION PLAN ARE THE STORAGE VOLUMES REQUIRED FOR THE SEDIMENT BASIN. THE PAY QUANTITY FOR EACH BASIN SHALL BE DETERMINED AS THE ACTUAL AMOUNT OF EXCAVATION OF EMBANKMENT REQUIRED FOR THAT STORAGE VOLUME.

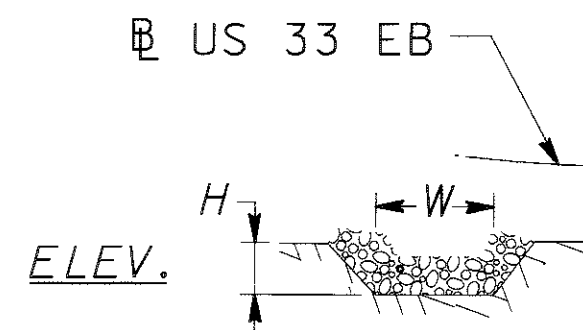
ITEMS 601 AND 670 ARE PERMANENT EROSION CONTROL DEVICES AND ARE PAID FOR ON THE PLAN AND PROFILE SHEETS.

OUTLET ROCK CHANNEL PROTECTION SHALL BE INSTALLED CONCURRENTLY WITH THE CULVERTS.

ITEM 670 SHALL BE INSTALLED AS SOON AS THE DITCHES ARE GRADED TO THEIR FINAL ELEVATION.

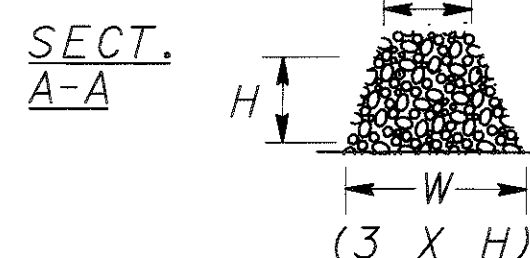


BEGIN PROJECT  
 STA 29+013.000



PLAN VIEW

AVERAGE DITCH WIDTH = 1.8m  
 BOTTOM DITCH WIDTH = 0.6m  
 H = 1m  
 W = 3H = (3 x 1m) = 3m



**TEMPORARY ROCK CHECK DAM DETAIL**

THE ESTIMATED QUANTITIES FOR ROCK CHECK DAM IS BASED ON THE DIMENSIONS OF THE DETAIL ABOVE. THE CONTRACTOR SHALL BE PAID FOR THE ACTUAL QUANTITY USED.

**LEGEND**

- MANHOLE
- INLET PROTECTION FILTER FABRIC FENCE
- FF — TEMP PROTECTION FILTER FABRIC FENCE
- ▬ TEMP DITCH CHECK
- ▨ SEDIMENT BASIN
- ▧ TEMP DITCH PROTECTION
- TEMPORARY ROCK CHECK DAM

**NOTES**

THE CONDITIONS OF THE NPDES CONSTRUCTION STORM WATER GENERAL PERMIT (SEE PROPOSAL) SHALL BE MET DURING ALL STAGES OF CONSTRUCTION. THE LOCATION AND TIMING OF ALL EROSION AND SEDIMENT CONTROL ITEMS SHALL BE FIELD ADJUSTED TO PREVENT SIGNIFICANT IMPACTS ON RECEIVING WATERS. IMPLEMENTATION OF THIS STORM WATER POLLUTION PREVENTION PLAN SHALL CONTINUE THROUGHOUT THE DURATION OF THE PROJECT OR UNTIL SUCH TIME THAT THE UPSLOPE DISTURBED AREAS ARE STABILIZED.

INSTALLATION OF SEDIMENT BASINS/DAMS, PERIMETER FILTER FABRIC FENCE, AND DITCH CHECKS SHALL BE CONCURRENT WITH CLEARING AND GRUBBING AND/OR GRADING OPERATIONS.

ALL REASONABLE ATTEMPTS SHOULD BE MADE TO MINIMIZE THE TOTAL AREA OF DISTURBED LAND.

AREAS TO REMAIN DORMANT FOR MORE THAN 45 DAYS SHOULD BE IMMEDIATELY STABILIZED WITH TEMPORARY SEEDING AND MULCHING, EROSION CONTROL MATTING OR OTHER APPROPRIATE EROSION CONTROL MEASURES.

ADDITIONAL QUANTITIES OF TEMPORARY SOIL EROSION AND SEDIMENT CONTROL ITEMS ARE GIVEN IN THE GENERAL NOTES.

CONSTRUCTION OPERATIONS SHALL FOLLOW 877.

THE CONTRACTOR SHALL COMPLY WITH CMS 105.152. DEPENDING ON THE SIZE OF THE CONTRACTOR'S WORK OUTSIDE THE PROJECT LIMITS (I.E. WASTE AREA), THE CONTRACTOR MAY NEED TO OBTAIN A STORM WATER PERMIT FOR THE AREA NOT COVERED BY ODOT'S PERMIT.

INSTEAD OF ONE LARGE SEDIMENT BASIN, SEVERAL SMALLER BASINS MAY BE USED IN A SERIES. SMALLER BASINS CAN BE USED IN A STAIR STEP FASHION ON GRADES.

**PROJECT DESCRIPTION**

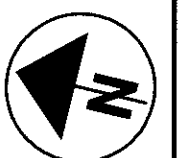
CONSTRUCTION OF 10.587 KM OF ROADWAY FOR THE RELOCATION OF US 33 FROM THE INTERCHANGE WITH US-50 TO STA 39+600 WHERE THIS PROJECT ENDS AND THE PROJECT DESIGNED AS ATH-33-40.981 BEGINS. TO INCLUDE A DIAMOND INTERCHANGE WITH RICHLAND AVE., TWO AT-GRADE INTERSECTIONS, AND FOUR BRIDGES.

STORM WATER POLLUTION PREVENTION PLAN  
 STA 29+013 TO STA 29+620

ATH-33-30.981





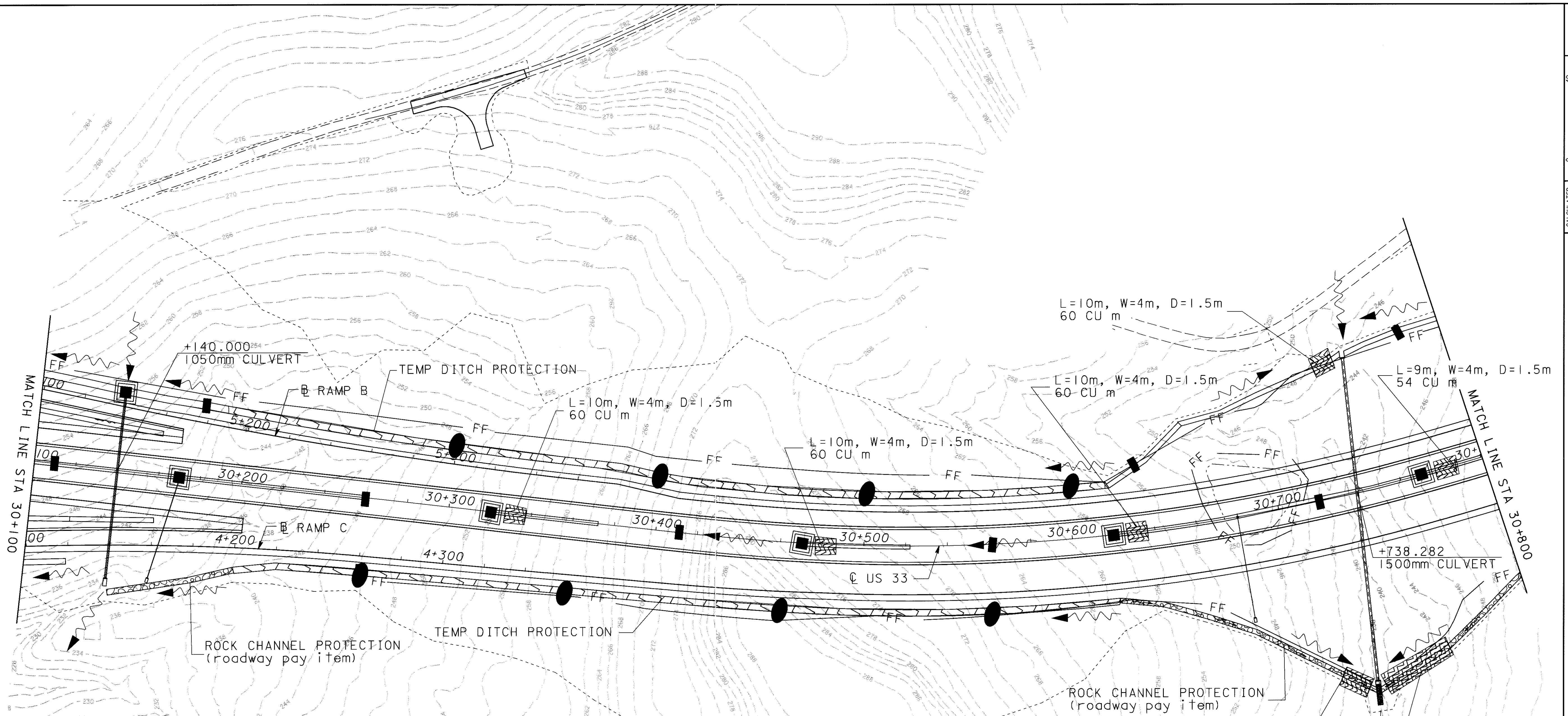


0 1000  
HORIZONTAL  
SCALE IN METERS

CALCULATED  
CHC  
CHECKED  
JDH

**STORM WATER POLLUTION PREVENTION PLAN  
STA 30+100 TO STA 30+800**

**ATH-33-30.981**



ESTIMATED QUANTITIES

LOCATION	SIDE	877					601	
		TEMPORARY PERIMETER FILTER FABRIC FENCE m	TEMPORARY DITCH CHECK FILTER FABRIC FENCE m	TEMP. INLET PROTECTION FILTER FABRIC FENCE m	TEMPORARY SEDIMENT BASINS AND DAMS CU m	TEMPORARY DITCH PROTECTION SQ m	ROCK CHANNEL PROTECTION, TYPE C WITH FABRIC FILTER CU m	ROCK CHANNEL PROTECTION, TYPE C WITHOUT FILTER CU m
30+100 TO 30+800	LT	700						
30+280 TO 30+800	RT	520						
30+660 TO 30+720	L&R	156						
30+110 TO 30+780	L&R		48					
30+140 TO 30+770	LT&R			24				
30+340	C				60	15		
30+480	C				60	15		
30+640	C				60	15		
30+720	RT				84	15		
30+740	LT				60	15		
30+760	RT				210	15		
30+780	C				54	15		
30+200 TO 30+620	LT					1260	12	
30+200 TO 30+620	RT					1260	12	
<b>TOTAL</b>		<b>1376</b>	<b>48</b>	<b>24</b>	<b>588</b>	<b>2520</b>	<b>105</b>	<b>24</b>

LEGEND

- MANHOLE
- INLET PROTECTION FILTER FABRIC FENCE
- FF — TEMP PROTECTION FILTER FABRIC FENCE
- TEMP DITCH CHECK
- ▨ SEDIMENT BASIN
- ▨▨▨ TEMP DITCH PROTECTION
- TEMPORARY ROCK CHECK DAM



0 1000 2000  
HORIZONTAL SCALE IN METERS

CALCULATED CHC  
CHECKED JDH

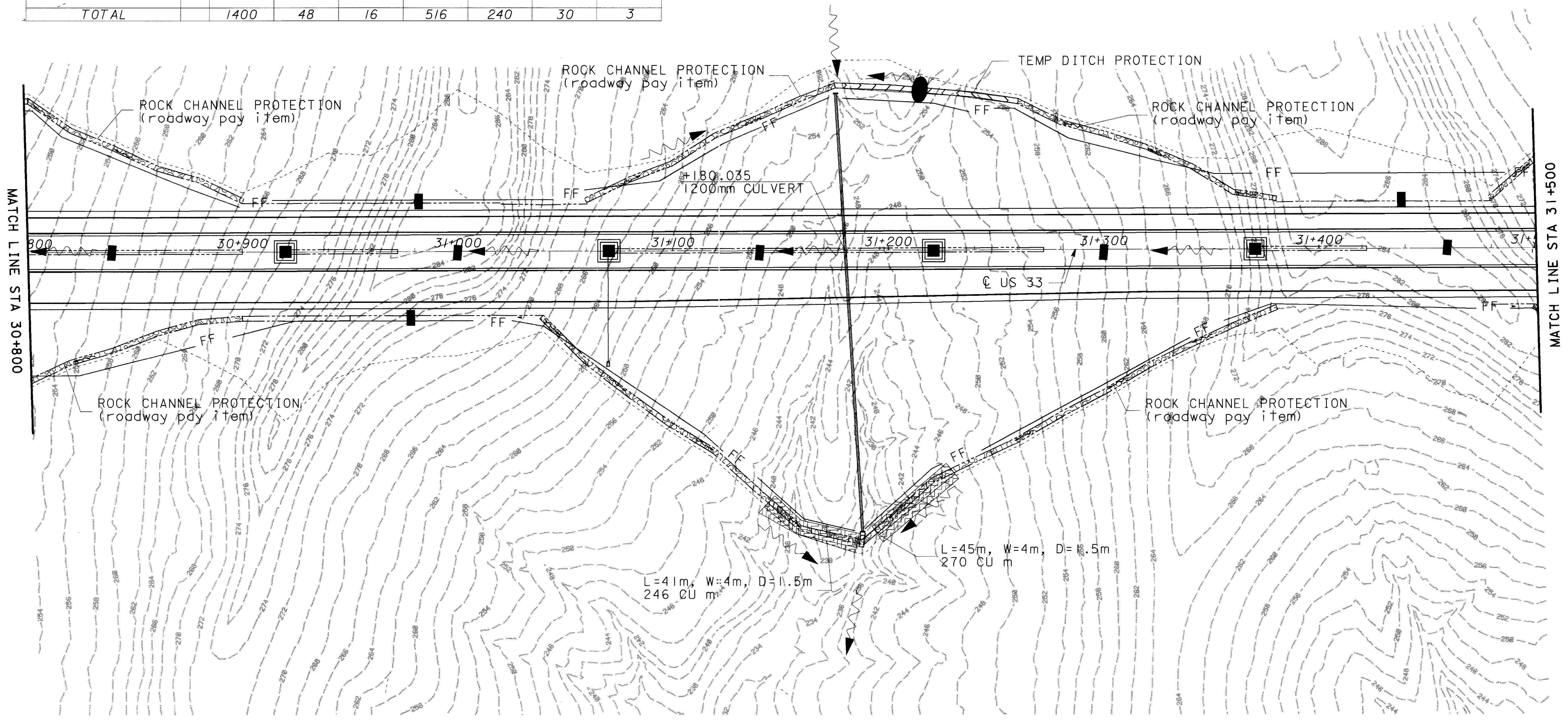
**STORM WATER POLLUTION PREVENTION PLAN**  
STA 30+800 TO STA 31+500

**ATH-33-30.981**

82A  
956

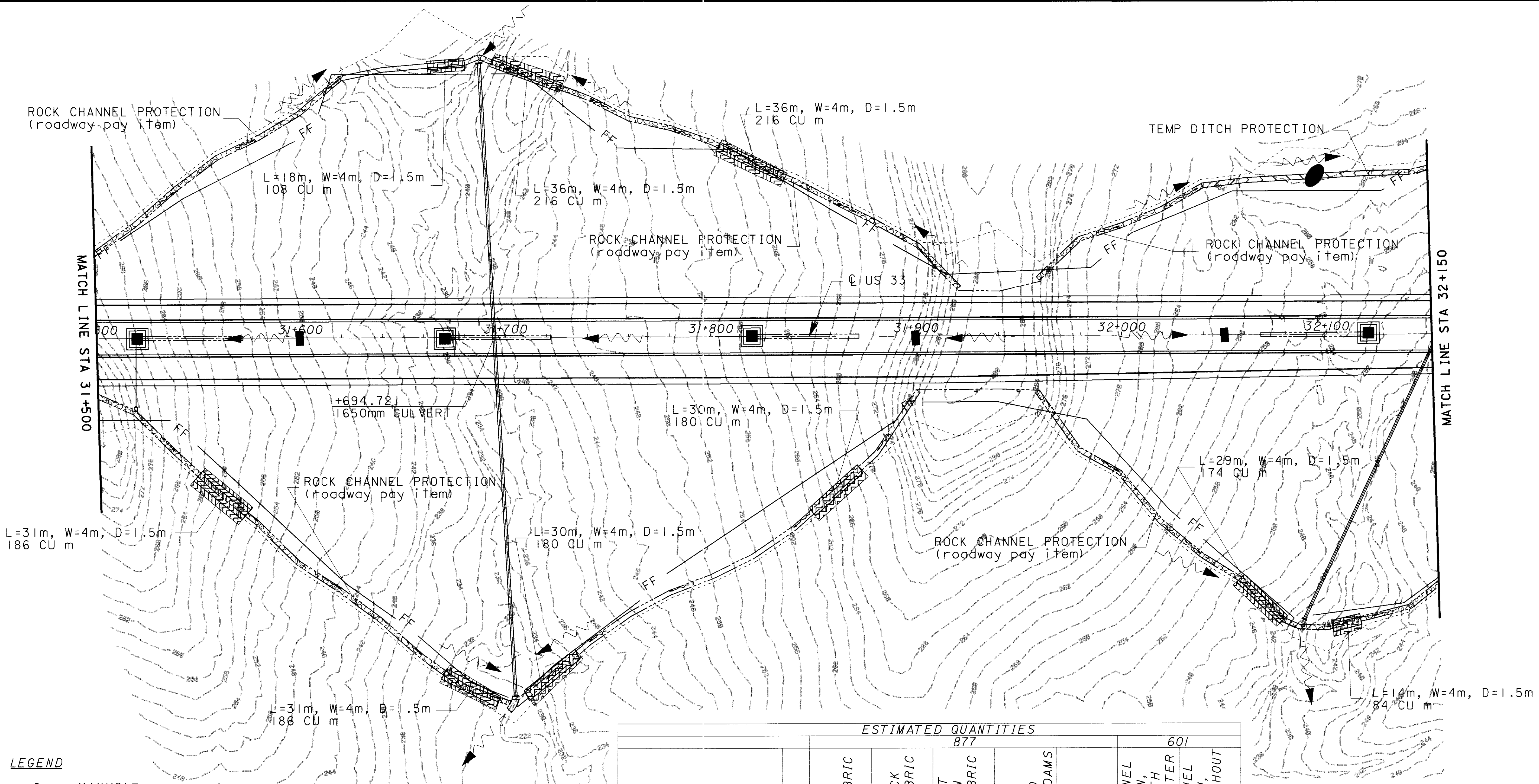
		ESTIMATED QUANTITIES						
		877				601		
LOCATION	SIDE	TEMPORARY PERIMETER FILTER FABRIC FENCE	TEMPORARY DITCH CHECK FILTER FABRIC FENCE	TEMP. INLET PROTECTION FILTER FABRIC FENCE	TEMPORARY SEDIMENT BASINS AND SEDIMENT DAMS	TEMPORARY DITCH PROTECTION	ROCK CHANNEL PROTECTION, TYPE C WITH FABRIC FILTER	ROCK CHANNEL PROTECTION, TYPE C WITHOUT FILTER
		m	m	m	CU m	SQ m	CU m	CU m
30+800 TO 31+500	L&R	1400						
30+840 TO 31+450	L&R		48					
30+920 TO 31+370	C			16				
31+160	RT				246		15	
31+220	RT				270		15	
31+180 TO 31+260	LT					240		3
<b>TOTAL</b>		<b>1400</b>	<b>48</b>	<b>16</b>	<b>516</b>	<b>240</b>	<b>30</b>	<b>3</b>

- LEGEND**
- MANHOLE
  - INLET PROTECTION FILTER FABRIC FENCE
  - FF — TEMP PROTECTION FILTER FABRIC FENCE
  - TEMP DITCH CHECK
  - ▨ SEDIMENT BASIN
  - ▧ TEMP DITCH PROTECTION
  - TEMPORARY ROCK CHECK DAM



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- LEGEND**
- MANHOLE
  - INLET PROTECTION FILTER FABRIC FENCE
  - FF — TEMP PROTECTION FILTER FABRIC FENCE
  - TEMP DITCH CHECK
  - ▨ SEDIMENT BASIN
  - ◀◀◀ TEMP DITCH PROTECTION
  - TEMPORARY ROCK CHECK DAM

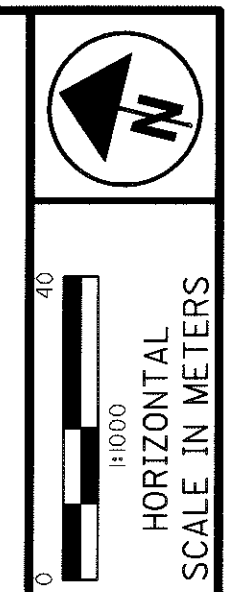
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		877						
LOCATION	SIDE	TEMPORARY PERIMETER FILTER FABRIC FENCE	TEMPORARY DITCH CHECK FILTER FABRIC FENCE	TEMP. INLET PROTECTION FILTER FABRIC FENCE	TEMPORARY SEDIMENT BASINS AND SEDIMENT DAMS	TEMPORARY DITCH PROTECTION	ROCK CHANNEL PROTECTION, TYPE C WITH FABRIC FILTER	ROCK CHANNEL PROTECTION, TYPE C WITHOUT FILTER
		m	m	m	CU m	SQ m	CU m	CU m
31+500 TO 32+150	L&R	1300						
31+600 TO 32+050	C		18					
31+520 TO 32+120				16				
31+560	RT				186		15	
31+660	LT				108		15	
31+680	RT				186		15	
31+720	LT				216		15	
31+720	RT				180		15	
31+820	LT				216		15	
31+860	RT				180		15	
32+060	RT				174		15	
32+100	RT				84		15	
32+040 TO 32+140	LT					300		3
<b>TOTAL</b>		<b>1300</b>	<b>18</b>	<b>16</b>	<b>1530</b>	<b>300</b>	<b>135</b>	<b>3</b>

CALCULATED: CHC  
 CHECKED: JDH

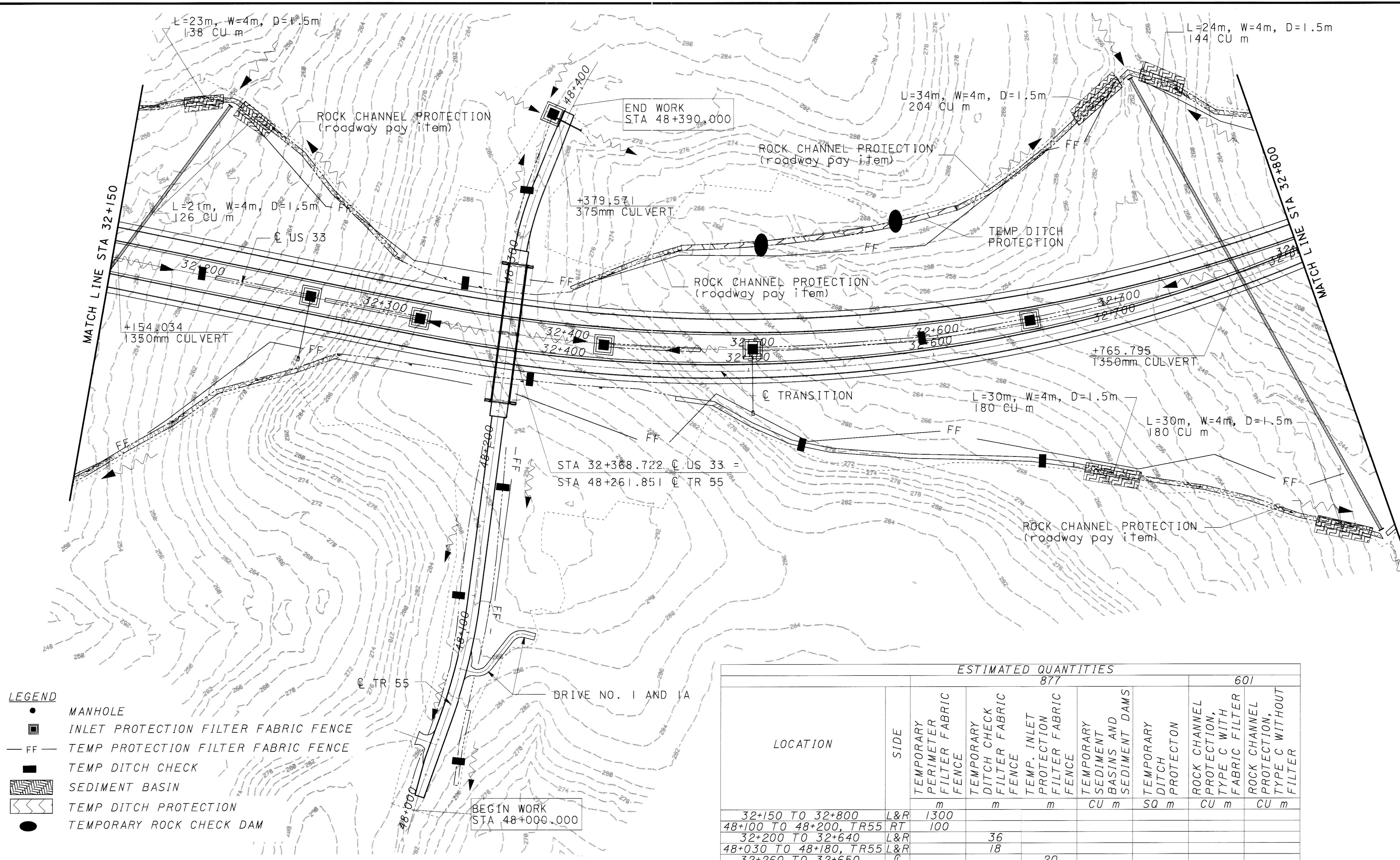
**STORM WATER POLLUTION PREVENTION PLAN**  
**STA 31+500 TO STA 32+150**

**ATH-33-30.981**

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CALCULATED CHC  
 CHECKED JDH



- LEGEND**
- MANHOLE
  - INLET PROTECTION FILTER FABRIC FENCE
  - FF — TEMP PROTECTION FILTER FABRIC FENCE
  - TEMP DITCH CHECK
  - ▨ SEDIMENT BASIN
  - ▤ TEMP DITCH PROTECTION
  - TEMPORARY ROCK CHECK DAM

LOCATION	SIDE	ESTIMATED QUANTITIES							
		TEMPORARY PERIMETER FILTER FABRIC FENCE	TEMPORARY DITCH CHECK FILTER FABRIC FENCE	TEMP. INLET PROTECTION FILTER FABRIC FENCE	TEMPORARY SEDIMENT BASINS AND SEDIMENT DAMS	TEMPORARY DITCH PROTECTION	ROCK CHANNEL PROTECTION, TYPE C WITH FABRIC FILTER	ROCK CHANNEL PROTECTION, TYPE C WITHOUT FILTER	
		m	m	m	CU m	SQ m	CU m	CU m	
32+150 TO 32+800	L&R	1300							
48+100 TO 48+200, TR55	RT	100							
32+200 TO 32+640	L&R		36						
48+030 TO 48+180, TR55	L&R		18						
32+260 TO 32+650	℄			20					
38+380, TR55	LT			4					
32+180	LT				138		15		
32+220	LT				126		15		
32+680	RT				180		15		
32+720	LT				204		15		
32+760	LT				144		15		
32+780	RT				180		15		
32+460 TO 32+640	LT					540		6	
<b>TOTAL</b>		<b>1400</b>	<b>44</b>	<b>24</b>	<b>972</b>	<b>540</b>	<b>90</b>	<b>6</b>	

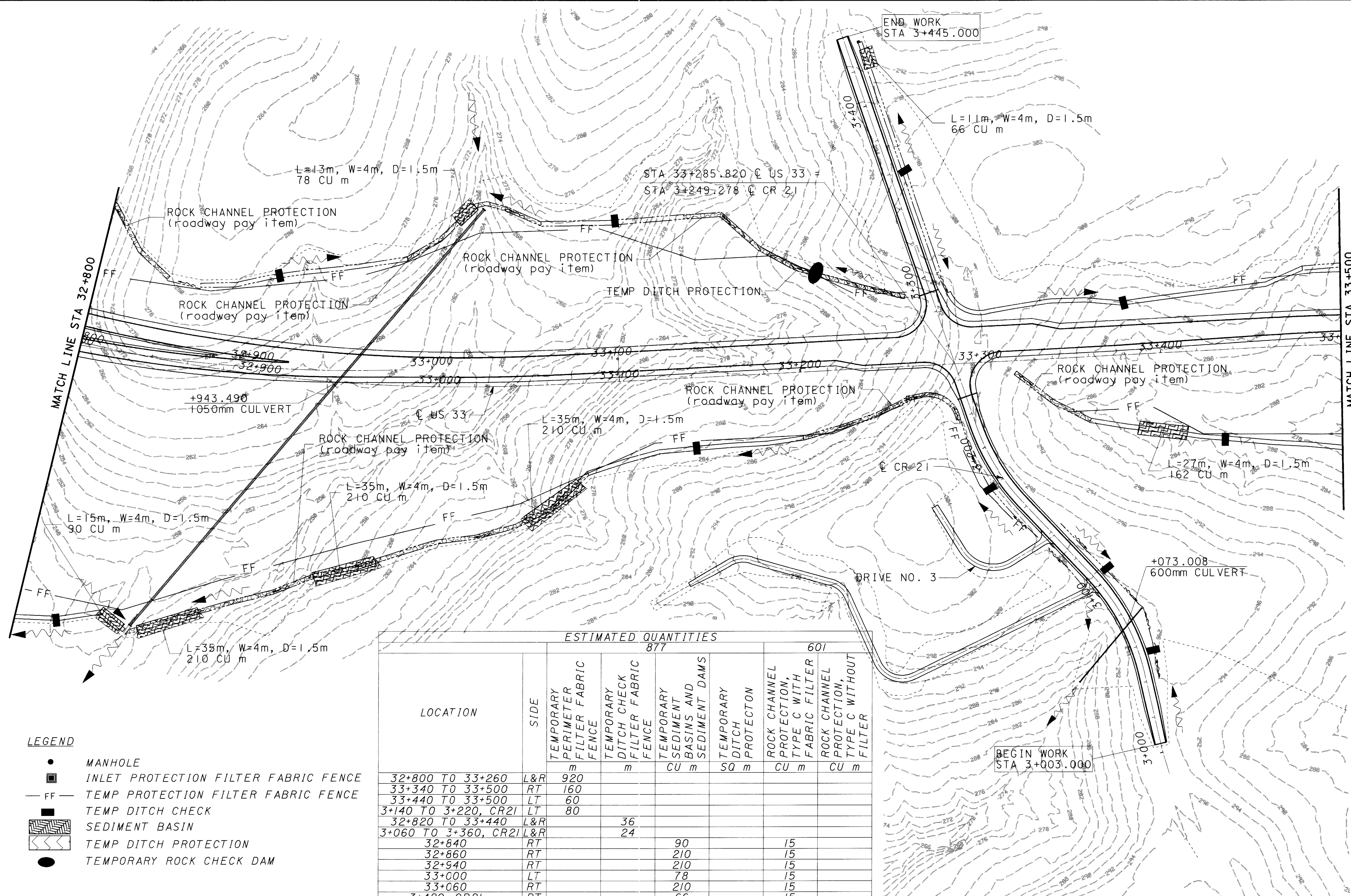


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HORIZONTAL  
SCALE IN METERS

CALCULATED CHC  
CHECKED JDH

**STORM WATER POLLUTION PREVENTION PLAN  
STA 32+800 TO STA 33+500**

**ATH-33-30.981**

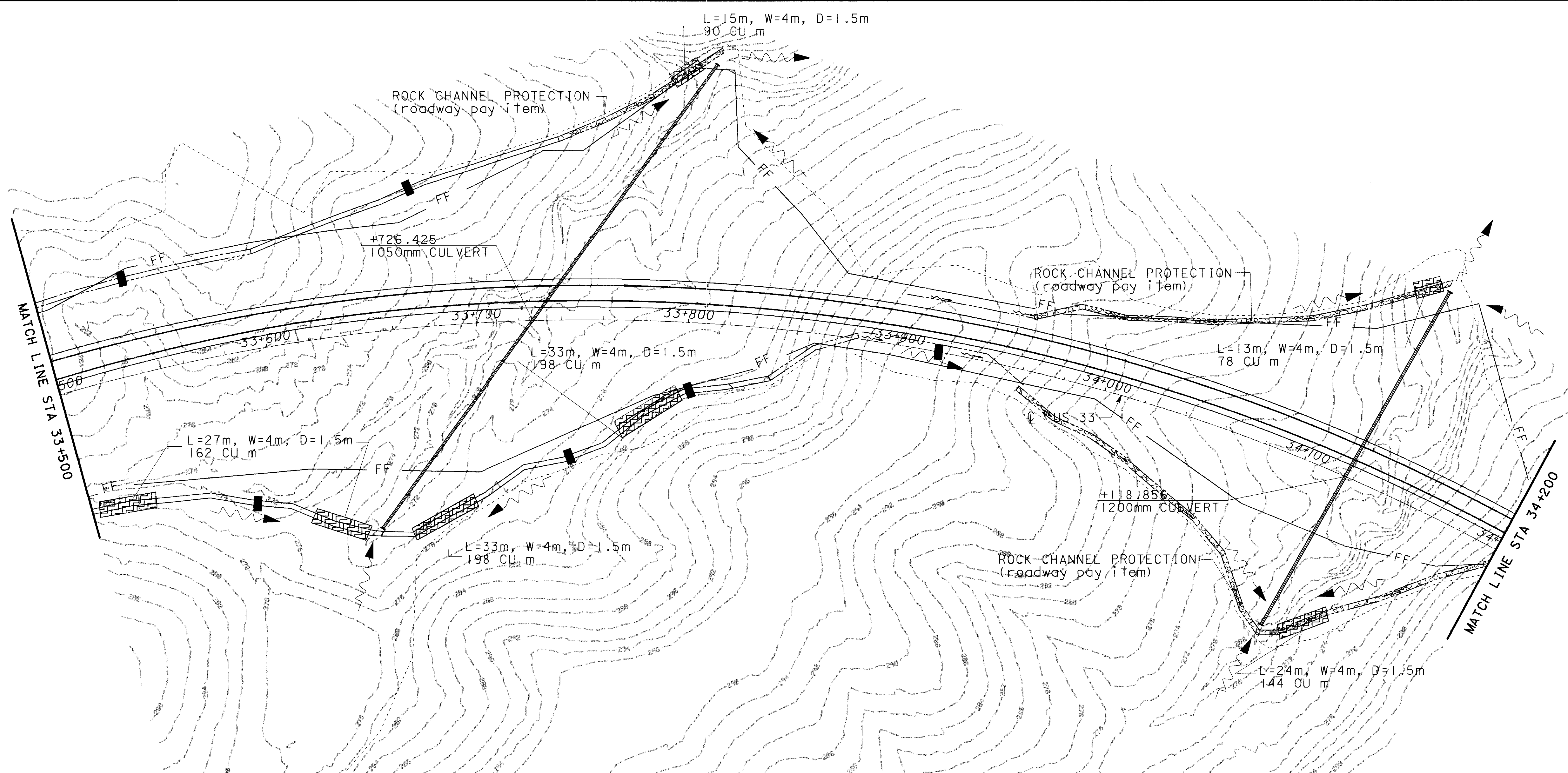


**LEGEND**

- MANHOLE
- INLET PROTECTION FILTER FABRIC FENCE
- FF — TEMP PROTECTION FILTER FABRIC FENCE
- TEMP DITCH CHECK
- ▨ SEDIMENT BASIN
- ▤ TEMP DITCH PROTECTION
- TEMPORARY ROCK CHECK DAM

LOCATION	SIDE	ESTIMATED QUANTITIES					601	
		TEMPORARY PERIMETER FILTER FABRIC FENCE m	TEMPORARY DITCH CHECK FILTER FABRIC FENCE m	TEMPORARY SEDIMENT BASINS AND SEDIMENT DAMS CU m	TEMPORARY DITCH PROTECTION SQ m	ROCK CHANNEL PROTECTION, TYPE C WITH FABRIC FILTER CU m	ROCK CHANNEL PROTECTION, TYPE C WITHOUT FILTER CU m	
32+800 TO 33+260	L&R	920						
33+340 TO 33+500	RT	160						
33+440 TO 33+500	LT	60						
3+140 TO 3+220, CR21	LT	80						
32+820 TO 33+440	L&R		36					
3+060 TO 3+360, CR21	L&R		24					
32+840	RT			90		15		
32+860	RT			210		15		
32+940	RT			210		15		
33+000	LT			78		15		
33+060	RT			210		15		
3+420, CR21	RT			66		15		
33+400	RT			162		15		
33+160 TO 33+280					360		3	
<b>TOTAL</b>		<b>1220</b>	<b>60</b>	<b>1026</b>	<b>360</b>	<b>105</b>	<b>3</b>	

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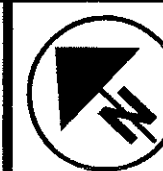


**LEGEND**

- MANHOLE
- INLET PROTECTION FILTER FABRIC FENCE
- FF — TEMP PROTECTION FILTER FABRIC FENCE
- TEMP DITCH CHECK
- ▨ SEDIMENT BASIN
- ▧ TEMP DITCH PROTECTION
- TEMPORARY ROCK CHECK DAM

**ESTIMATED QUANTITIES**

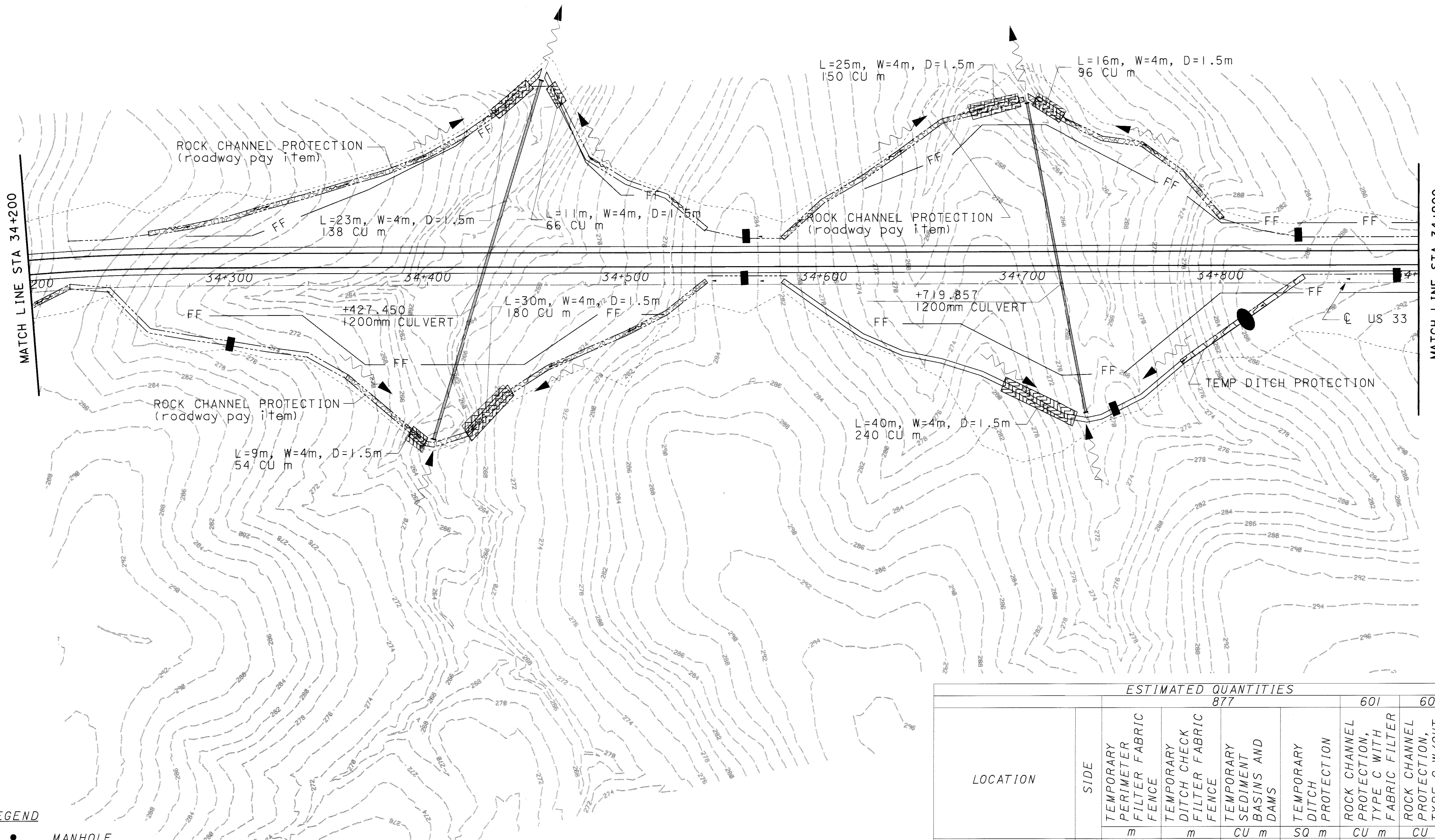
LOCATION	SIDE	877			
		TEMPORARY PERIMETER FILTER FABRIC FENCE m	TEMPORARY DITCH CHECK FILTER FABRIC FENCE m	TEMPORARY SEDIMENT BASINS AND SEDIMENT DAMS CU m	ROCK CHANNEL PROTECTION, TYPE C WITH FABRIC FILTER CU m
33+500 TO 34+200	L&R	1400			
33+540 TO 33+920	L&R		30		
33+520	RT			162	15
33+620	RT			162	15
33+680	RT			198	15
33+780	RT			198	15
33+780	LT			90	15
34+120	LT			78	15
34+140	RT			144	15
<b>TOTAL</b>		<b>1400</b>	<b>30</b>	<b>1032</b>	<b>105</b>

  
 0 1000 2000  
 HORIZONTAL SCALE IN METERS  
 CALCULATED BY CHC  
 CHECKED BY JDH  
**STORM WATER POLLUTION PREVENTION PLAN**  
**STA 33+500 TO STA 34+200**  
**ATH-33-30.981**  
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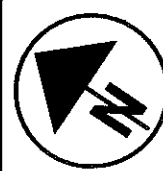
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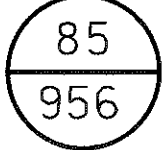
- MANHOLE
- INLET PROTECTION FILTER FABRIC FENCE
- FF — TEMP PROTECTION FILTER FABRIC FENCE
- TEMP DITCH CHECK
- ▨ SEDIMENT BASIN
- ▤ TEMP DITCH PROTECTION
- TEMPORARY ROCK CHECK DAM



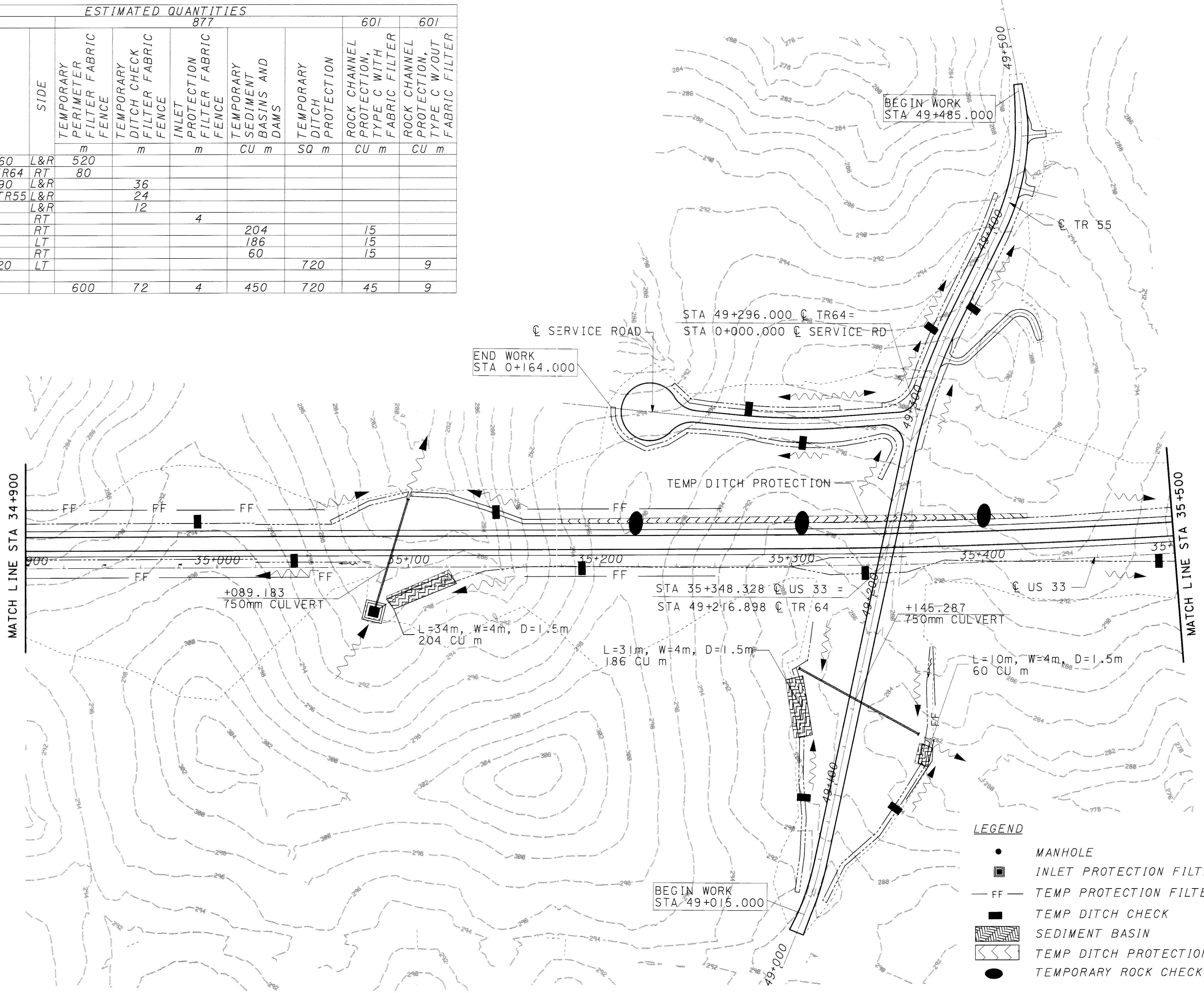
**ESTIMATED QUANTITIES**

LOCATION	SIDE	ESTIMATED QUANTITIES					
		TEMPORARY PERIMETER FILTER FABRIC FENCE (m)	TEMPORARY DITCH CHECK FILTER FABRIC FENCE (m)	TEMPORARY SEDIMENT BASINS AND DAMS (CU m)	TEMPORARY DITCH PROTECTION (SQ m)	ROCK CHANNEL PROTECTION, TYPE C WITH FABRIC FILTER (CU m)	ROCK CHANNEL PROTECTION, TYPE C W/OUT FABRIC FILTER (CU m)
34+200 TO 34+900	L&R	1200					
34+300 TO 34+890	L&R		36				
34+400	RT			54		15	
34+420	RT			180		15	
34+440	LT			138		15	
34+460	LT			66		15	
34+680	LT			150		15	
34+720	RT			240		15	
34+720	LT			96		15	
34+780 TO 34+840	RT				180		3
<b>TOTAL</b>		<b>1200</b>	<b>36</b>	<b>924</b>	<b>180</b>	<b>105</b>	<b>3</b>

  
 0 1000 2000  
 HORIZONTAL SCALE IN METERS  
 CALCULATED CHC  
 CHECKED JDH  
**STORM WATER POLLUTION PREVENTION PLAN**  
**STA 34+200 TO STA 34+900**

**ATH-33-30.981**  


ESTIMATED QUANTITIES								
LOCATION	SIDE	877					601	
		TEMPORARY PERIMETER FILTER FABRIC FENCE	TEMPORARY DITCH CHECK FILTER FABRIC FENCE	INLET PROTECTION FILTER FABRIC FENCE	TEMPORARY SEDIMENT BASINS AND DAMS	TEMPORARY DITCH PROTECTION	ROCK CHANNEL PROTECTION, TYPE C WITH FABRIC FILTER	ROCK CHANNEL PROTECTION, TYPE C W/OUT FABRIC FILTER
		m	m	m	CU m	SQ m	CU m	CU m
34+900 TO 35+260	L&R	520						
49+100 TO 49+180, TR64	RT	80						
34+990 TO 34+490	L&R		36					
49+090 TO 49+360, TR55	L&R		24					
SERVICE RD	L&R		12					
35+080	RT			4				
35+100	RT				204		15	
49+140	LT				186		15	
49+120	RT				60		15	
35+180 TO 35+420	LT					720		9
<b>TOTAL</b>		<b>600</b>	<b>72</b>	<b>4</b>	<b>450</b>	<b>720</b>	<b>45</b>	<b>9</b>



- LEGEND**
- MANHOLE
  - INLET PROTECTION FILTER FABRIC FENCE
  - FF — TEMP PROTECTION FILTER FABRIC FENCE
  - TEMP DITCH CHECK
  - ▨ SEDIMENT BASIN
  - ▤▤▤ TEMP DITCH PROTECTION
  - TEMPORARY ROCK CHECK DAM

HORIZONTAL SCALE IN METERS

CALCULATED	CHC	JDK

**STORM WATER POLLUTION PREVENTION PLAN**

**STA 34+900 TO STA 35+500**

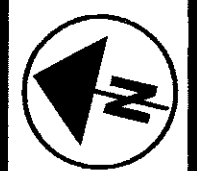
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HORIZONTAL  
SCALE IN METERS

CALCULATED  
CHC  
CHECKED  
JDH

**STORM WATER POLLUTION PREVENTION PLAN**  
**STA 35+500 TO STA 36+200**

**ATH-33-30.981**

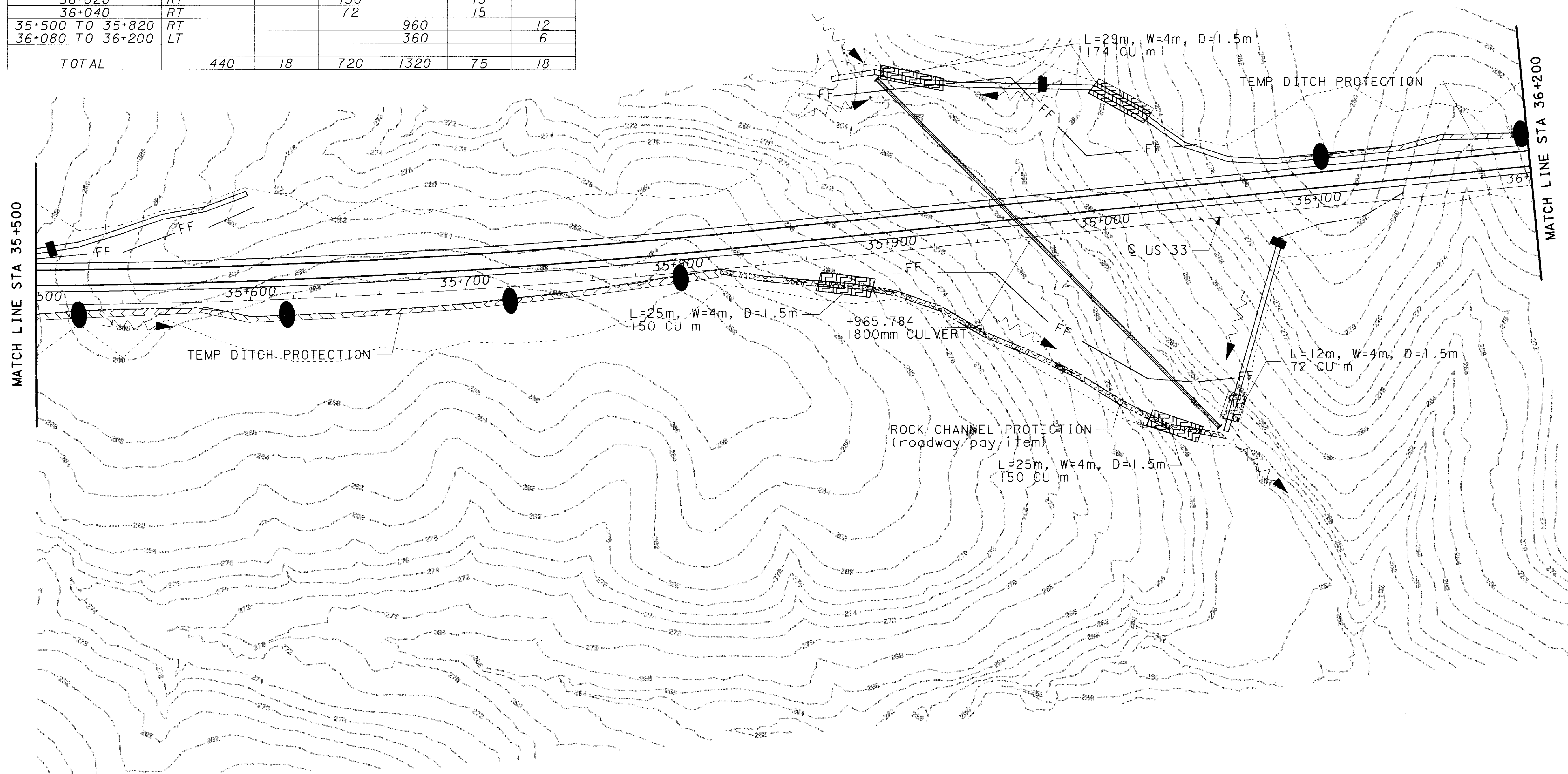
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**ESTIMATED QUANTITIES**

LOCATION	SIDE	877				601	601
		TEMPORARY PERIMETER FILTER FABRIC FENCE	TEMPORARY DITCH CHECK FILTER FABRIC FENCE	TEMPORARY SEDIMENT BASINS AND DAMS	TEMPORARY DITCH PROTECTION	ROCK CHANNEL PROTECTION, TYPE C WITH FABRIC FILTER	ROCK CHANNEL PROTECTION, TYPE C W/OUT FABRIC FILTER
		m	m	CU m	SQ m	CU m	CU m
35+500 TO 36+200	LT	280					
35+900 TO 36+060	RT	160					
35+510 TO 36+080	L&R		18				
35+880	RT			150		15	
35+920	LT			174		15	
36+000	LT			174		15	
36+020	RT			150		15	
36+040	RT			72		15	
35+500 TO 35+820	RT				960		12
36+080 TO 36+200	LT				360		6
<b>TOTAL</b>		<b>440</b>	<b>18</b>	<b>720</b>	<b>1320</b>	<b>75</b>	<b>18</b>

**LEGEND**

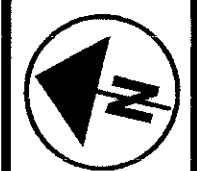
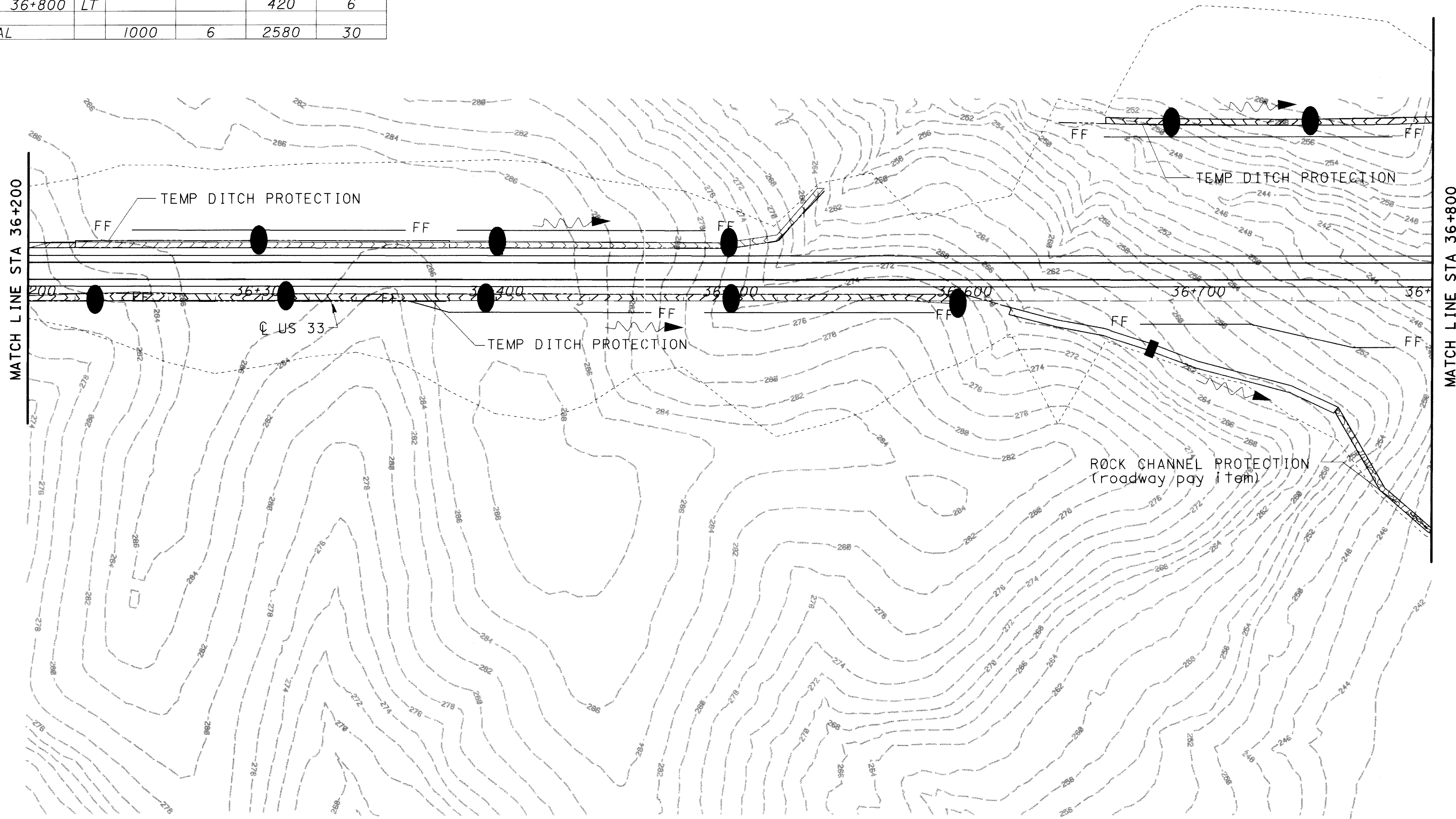
- MANHOLE
- INLET PROTECTION FILTER FABRIC FENCE
- FF — TEMP PROTECTION FILTER FABRIC FENCE
- TEMP DITCH CHECK
- ▨ SEDIMENT BASIN
- ◀◀◀ TEMP DITCH PROTECTION
- TEMPORARY ROCK CHECK DAM



ESTIMATED QUANTITIES					
LOCATION	SIDE	877		601	
		TEMPORARY PERIMETER FILTER FABRIC FENCE	TEMPORARY DITCH CHECK FILTER FABRIC FENCE	TEMPORARY DITCH PROTECTION	ROCK CHANNEL PROTECTION, TYPE C W/OUT FABRIC FILTER
		m	m	SQ m	CU m
36+240 TO 36+800	LT	560			
36+360 TO 36+800	RT	440			
36+680	RT		6		
36+200 TO 36+520	LT			960	9
36+200 TO 36+300	RT			1200	15
36+660 TO 36+800	LT			420	6
<b>TOTAL</b>		<b>1000</b>	<b>6</b>	<b>2580</b>	<b>30</b>

LEGEND

- MANHOLE
- INLET PROTECTION FILTER FABRIC FENCE
- FF — TEMP PROTECTION FILTER FABRIC FENCE
- TEMP DITCH CHECK
- ▨ SEDIMENT BASIN
- ◁ ▷ TEMP DITCH PROTECTION
- TEMPORARY ROCK CHECK DAM



CALCULATED  
CHC  
CHECKED  
JDH

STORM WATER POLLUTION PREVENTION PLAN  
STA 36+200 TO STA 36+800

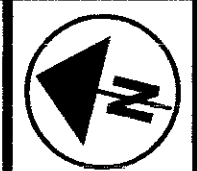
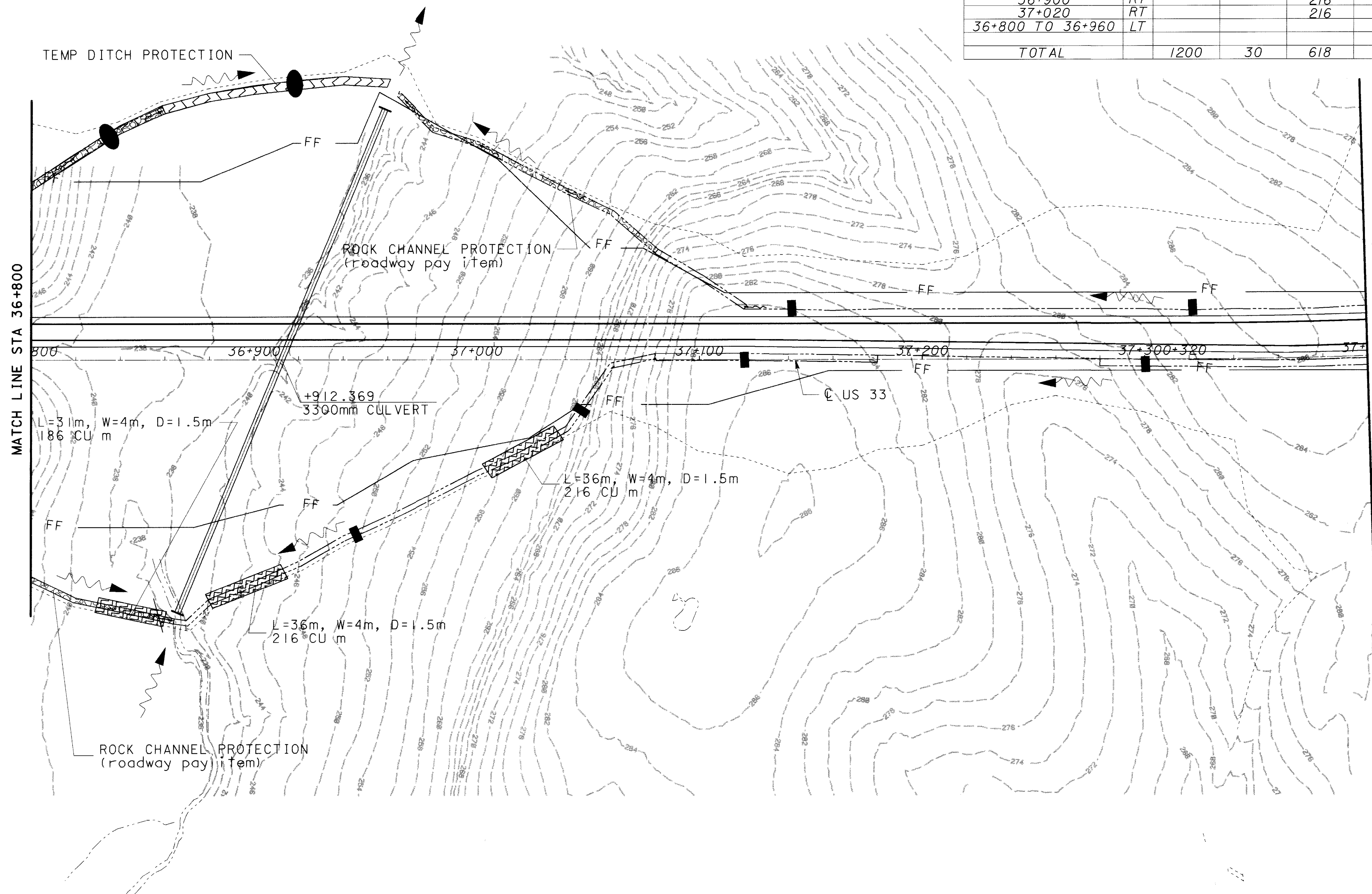
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**LEGEND**

- MANHOLE
- INLET PROTECTION FILTER FABRIC FENCE
- FF — TEMP PROTECTION FILTER FABRIC FENCE
- TEMP DITCH CHECK
- ▨ SEDIMENT BASIN
- ◀◀◀ TEMP DITCH PROTECTION
- TEMPORARY ROCK CHECK DAM

		ESTIMATED QUANTITIES					
		877					
LOCATION	SIDE	TEMPORARY PERIMETER FILTER FABRIC FENCE	TEMPORARY DITCH CHECK FILTER FABRIC FENCE	TEMPORARY SEDIMENT BASINS AND DAMS	TEMPORARY DITCH PROTECTION	ROCK CHANNEL PROTECTION, TYPE C WITH FABRIC FILTER	ROCK CHANNEL PROTECTION, TYPE C W/OUT FABRIC FILTER
		m	m	CU m	SQ m	CU m	CU m
36+800 TO 37+400	L&R	1200					
36+940 TO 37+320	L&R		30				
36+840	RT			186		15	
36+900	RT			216		15	
37+020	RT			216		15	
36+800 TO 36+960	LT				480		6
<b>TOTAL</b>		<b>1200</b>	<b>30</b>	<b>618</b>	<b>480</b>	<b>45</b>	<b>6</b>



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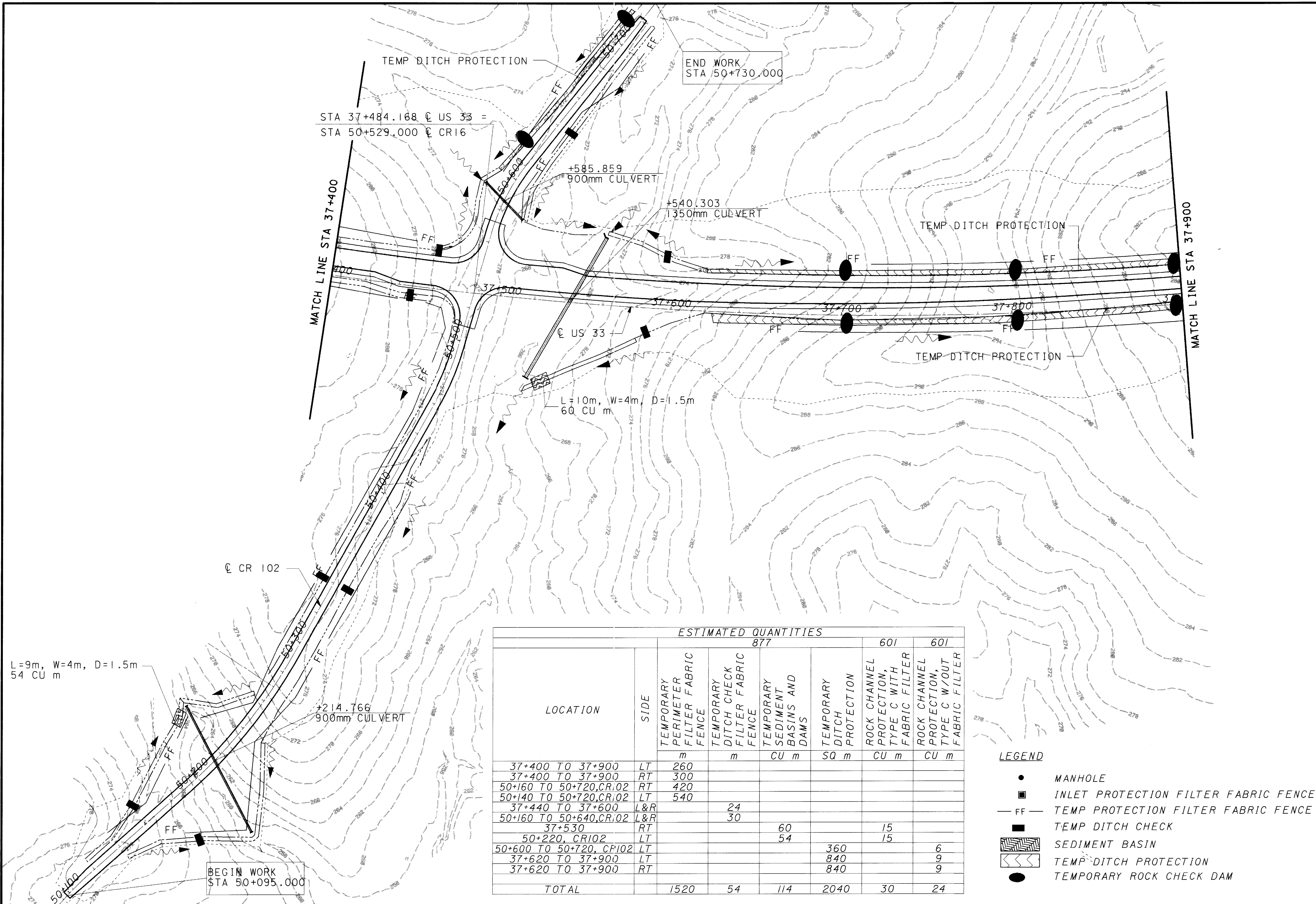
CALCULATED CHC  
CHECKED JDH

**STORM WATER POLLUTION PREVENTION PLAN**  
**STA 36+800 TO STA 37+400**

**ATH-33-30.981**

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END WORK  
STA 50+730.000

STA 37+484.168 @ US 33 =  
STA 50+529.000 @ CR16

+585.859  
900mm CULVERT

+540.303  
1350mm CULVERT

L=10m, W=4m, D=1.5m  
60 CU m

@ CR 102

+214.766  
900mm CULVERT

L=9m, W=4m, D=1.5m  
54 CU m

BEGIN WORK  
STA 50+095.000

ESTIMATED QUANTITIES

LOCATION	SIDE	877					
		TEMPORARY PERIMETER FILTER FABRIC FENCE	TEMPORARY DITCH CHECK FILTER FABRIC FENCE	TEMPORARY SEDIMENT BASINS AND DAMS	TEMPORARY DITCH PROTECTION	ROCK CHANNEL PROTECTION, TYPE C WITH FABRIC FILTER	ROCK CHANNEL PROTECTION, TYPE C W/OOUT FABRIC FILTER
		m	m	CU m	SQ m	CU m	CU m
37+400 TO 37+900	LT	260					
37+400 TO 37+900	RT	300					
50+160 TO 50+720, CR102	RT	420					
50+140 TO 50+720, CR102	LT	540					
37+440 TO 37+600	L&R		24				
50+160 TO 50+640, CR102	L&R		30				
37+530	RT			60		15	
50+220, CR102	LT			54		15	
50+600 TO 50+720, CR102	LT				360		6
37+620 TO 37+900	LT				840		9
37+620 TO 37+900	RT				840		9
TOTAL		1520	54	114	2040	30	24

LEGEND

- MANHOLE
- INLET PROTECTION FILTER FABRIC FENCE
- FF — TEMP PROTECTION FILTER FABRIC FENCE
- TEMP DITCH CHECK
- ▨ SEDIMENT BASIN
- ◀◀◀ TEMP DITCH PROTECTION
- TEMPORARY ROCK CHECK DAM



0 10000 HORIZONTAL SCALE IN METERS

CALCULATED CHC  
CHECKED JDH

**STORM WATER POLLUTION PREVENTION PLAN**  
**STA 37+400 TO STA 37+900**

**ATH-33-30.981**

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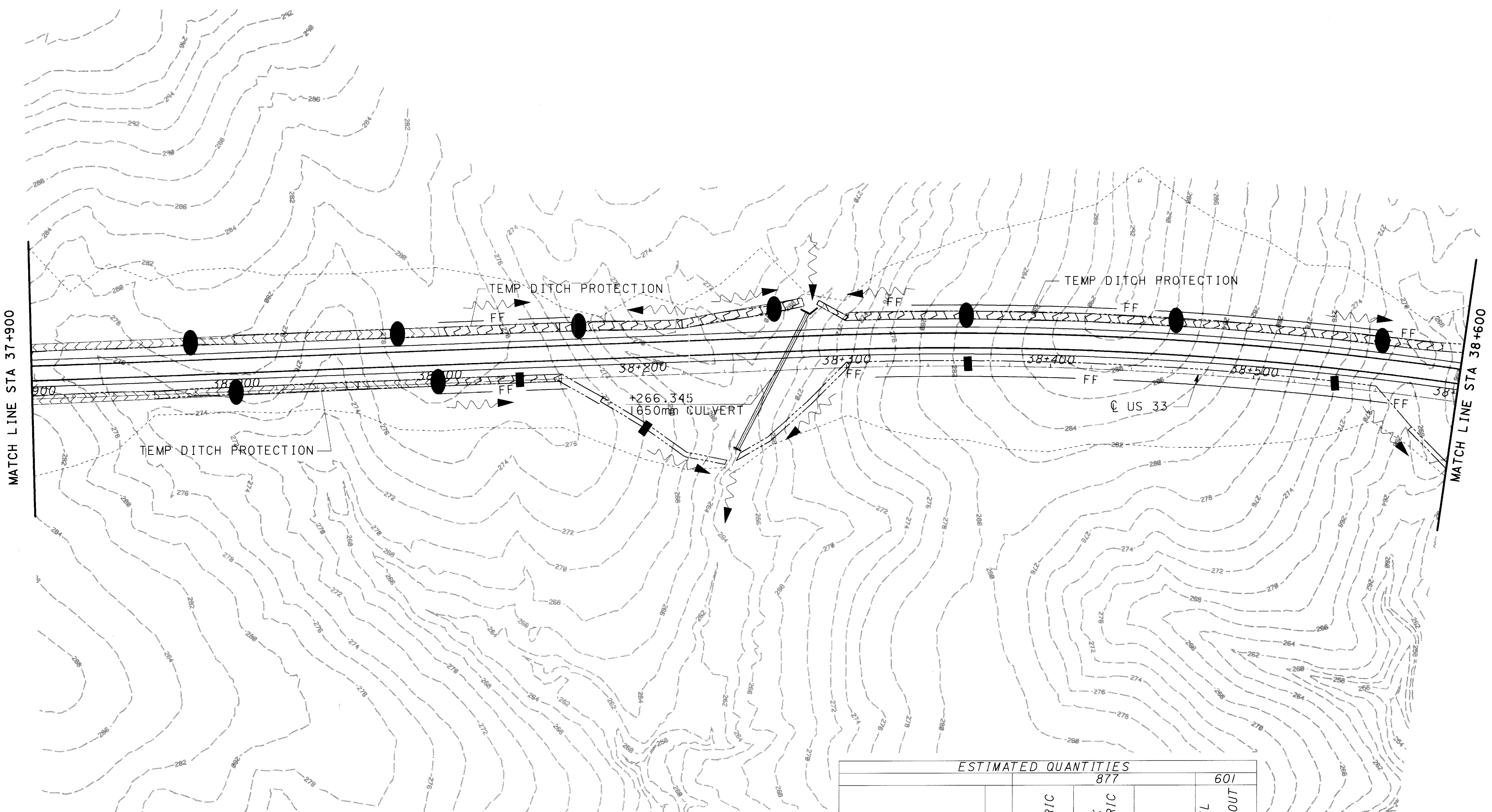


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 HORIZONTAL  
 SCALE IN METERS

CALCULATED CHC  
 CHECKED JDH

**STORM WATER POLLUTION PREVENTION PLAN  
 STA 37+900 TO STA 38+600**

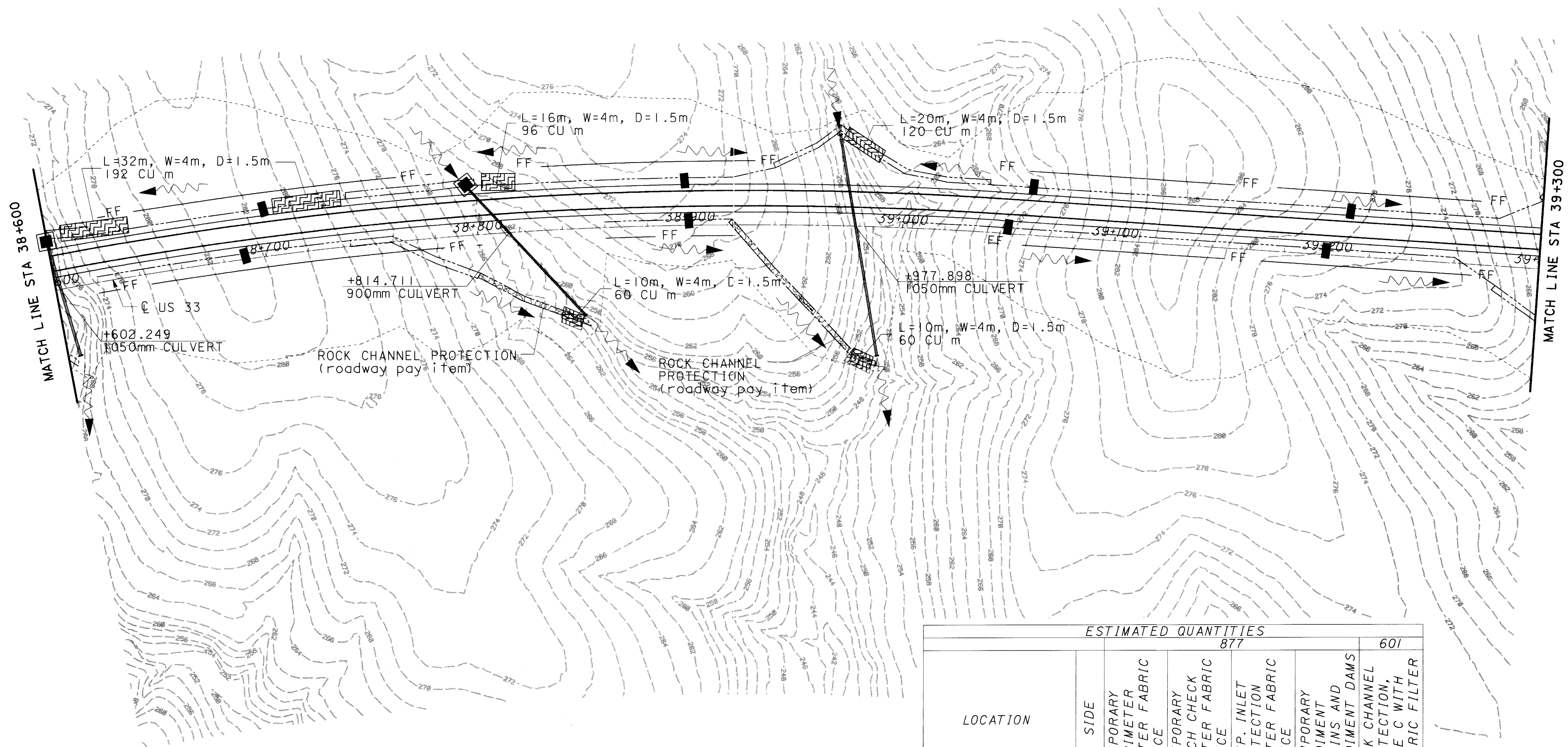
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- LEGEND**
- MANHOLE
  - INLET PROTECTION FILTER FABRIC FENCE
  - FF — TEMP PROTECTION FILTER FABRIC FENCE
  - TEMP DITCH CHECK
  - ▨ SEDIMENT BASIN
  - ▧ TEMP DITCH PROTECTION
  - TEMPORARY ROCK CHECK DAM

ESTIMATED QUANTITIES				
		877		601
LOCATION	SIDE	TEMPORARY PERIMETER FILTER FABRIC FENCE	TEMPORARY DITCH CHECK FILTER FABRIC FENCE	TEMPORARY DITCH PROTECTION
		m	m	SQ m
37+900 TO 38+600	L&R	660		
38+200 TO 38+540	RT		18	
37+900 TO 38+600	LT			2100
37+900 TO 38+160	RT			780
<b>TOTAL</b>		660	18	2880
				27

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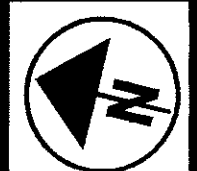


**LEGEND**

- MANHOLE
- INLET PROTECTION FILTER FABRIC FENCE
- FF — TEMP PROTECTION FILTER FABRIC FENCE
- TEMP DITCH CHECK
- ▨ SEDIMENT BASIN
- ▨ TEMP DITCH PROTECTION
- TEMPORARY ROCK CHECK DAM

**ESTIMATED QUANTITIES**

LOCATION	SIDE	877				
		TEMPORARY PERIMETER FILTER FABRIC FENCE m	TEMPORARY DITCH CHECK FILTER FABRIC FENCE m	TEMP. INLET PROTECTION FILTER FABRIC FENCE m	TEMPORARY SEDIMENT BASINS AND SEDIMENT DAMS CU m	ROCK CHANNEL PROTECTION, TYPE C WITH FABRIC FILTER CU m
38+600 TO 39+280	L&R	1000				601
38+690 TO 39+210	L&R		48			
38+600 TO 38+800	LT			8		
38+620	LT				192	15
38+720	LT				192	15
38+810	LT				96	15
38+840	RT				60	15
38+980	RT				60	15
38+980	LT				120	15
<b>TOTAL</b>		<b>1000</b>	<b>48</b>	<b>8</b>	<b>720</b>	<b>90</b>



0 10000  
 HORIZONTAL SCALE IN METERS

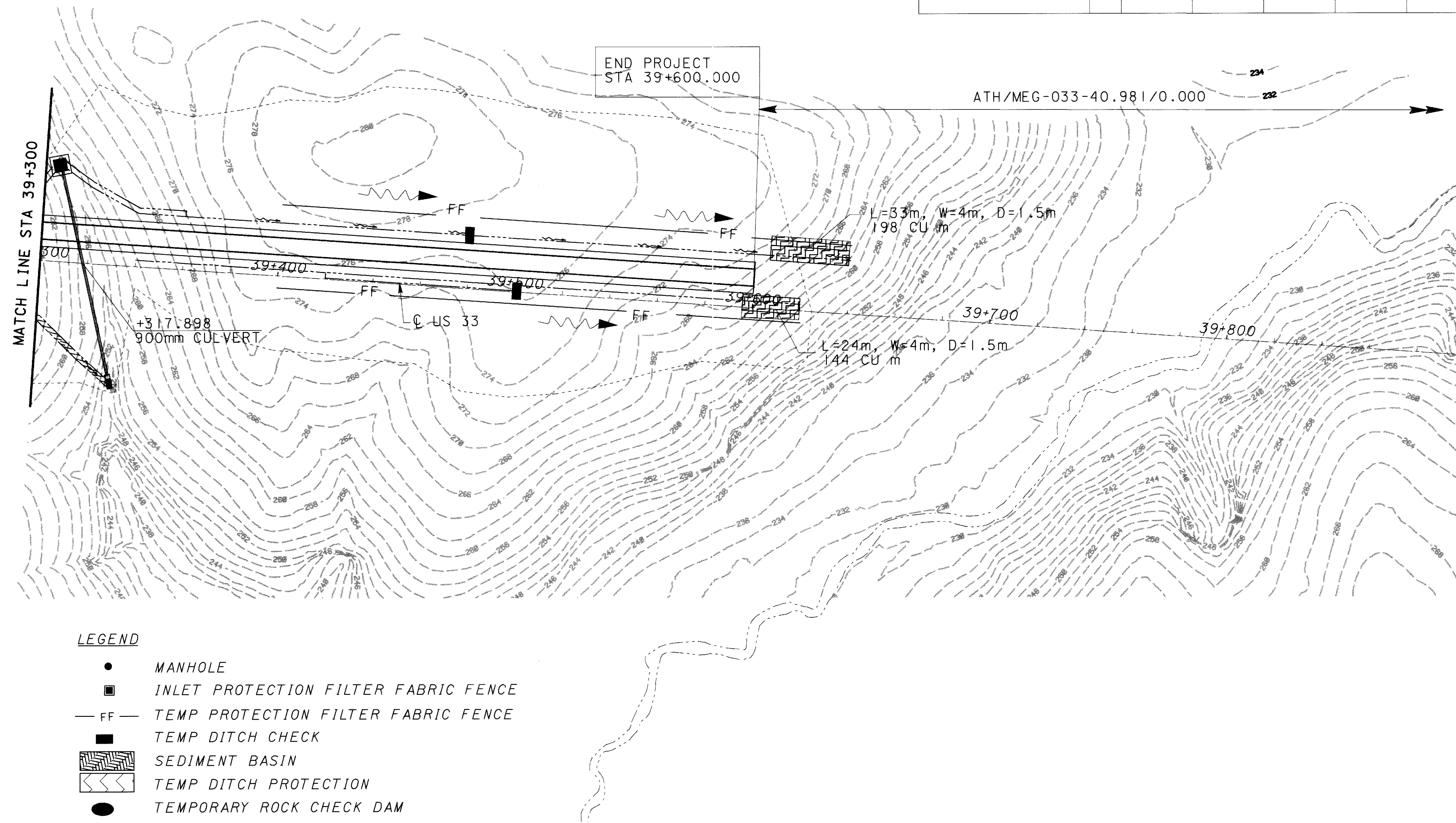
CALCULATED CHC  
 CHECKED JDH

**STORM WATER POLLUTION PREVENTION PLAN  
 STA 38+600 TO STA 39+300**

**ATH-33-30.981**

88A  
 956

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 02/05/2001  
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**LEGEND**

- MANHOLE
- INLET PROTECTION FILTER FABRIC FENCE
- FF — TEMP PROTECTION FILTER FABRIC FENCE
- TEMP DITCH CHECK
- ▨ SEDIMENT BASIN
- ◀◀◀ TEMP DITCH PROTECTION
- TEMPORARY ROCK CHECK DAM

ESTIMATED QUANTITIES						
		877			601	
LOCATION	SIDE	TEMPORARY PERIMETER FILTER FABRIC FENCE	TEMPORARY DITCH CHECK FILTER FABRIC FENCE	TEMP. INLET PROTECTION FILTER FABRIC FENCE	TEMPORARY SEDIMENT BASINS AND SEDIMENT DAMS	ROCK CHANNEL PROTECTION, TYPE C WITH FABRIC FILTER
		m	m	m	CU m	CU m
39+400 TO 39+640	L&R	460				
39+580 TO 39+600	L&R		12			
39+310	LT			4		
39+600	RT				144	15
39+620	LT				198	15
<b>TOTAL</b>		<b>460</b>	<b>12</b>	<b>4</b>	<b>342</b>	<b>30</b>

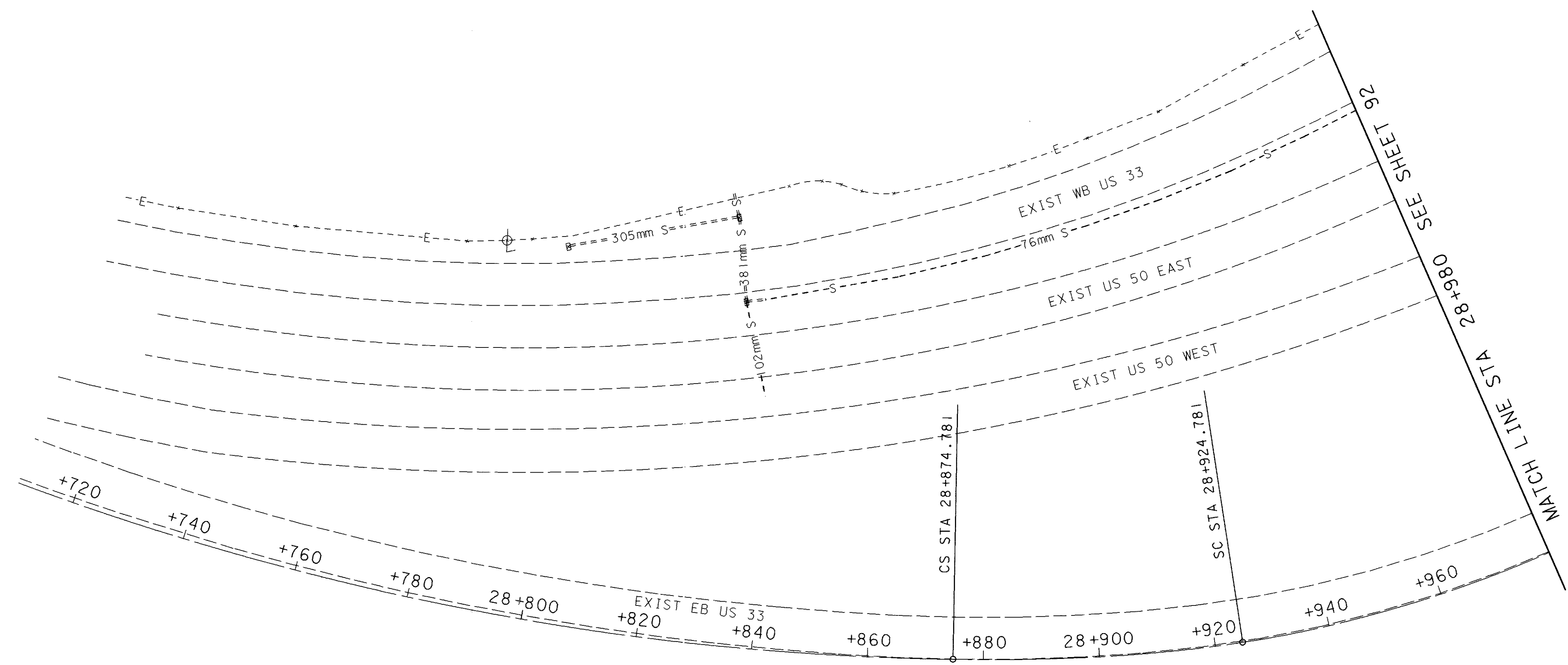
HORIZONTAL SCALE IN METERS

CALCULATED: CHC  
 CHECKED: JDH

**STORM WATER POLLUTION PREVENTION PLAN**  
**STA 39+300 TO STA 39+600**

**ATH-33-30.981**

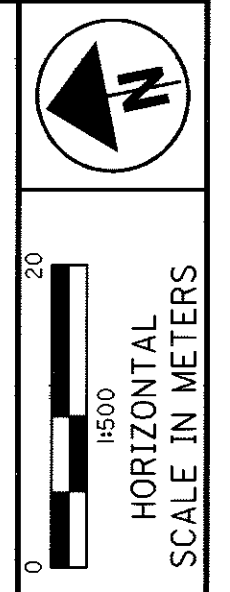
89  
 956



CURVE DATA US 33 MAINLINE EB (SCSCS)

P. I. STA 29+369.824  
 $\Delta$  = 98° 18' 36" LT.  
 BT = 519.500m  
 AT = 410.157m  
 Ls = 108.500m  
 $\phi_s$  = 6° 27' 44"  
 LT = 72.382m  
 ST = 36.211m  
 R = 481.000m  
 $\Delta$  = 39° 25' 28" LT.  
 T = 172.339m  
 L = 330.970m  
 E = 29.942m  
 Ls = 50.000m  
 $\phi_s$  = 9° 43' 07"  
 LT = 28.286m  
 ST = 21.830m  
 R = 212.500m  
 $\Delta$  = 23° 49' 51" LT.  
 T = 44.841m  
 L = 88.385m  
 E = 4.680m  
 Ls = 140.000m  
 $\phi_s$  = 18° 52' 26"  
 LT = 93.869m  
 ST = 47.154m

CALCULATED  
 PRS  
 CHECKED  
 AM

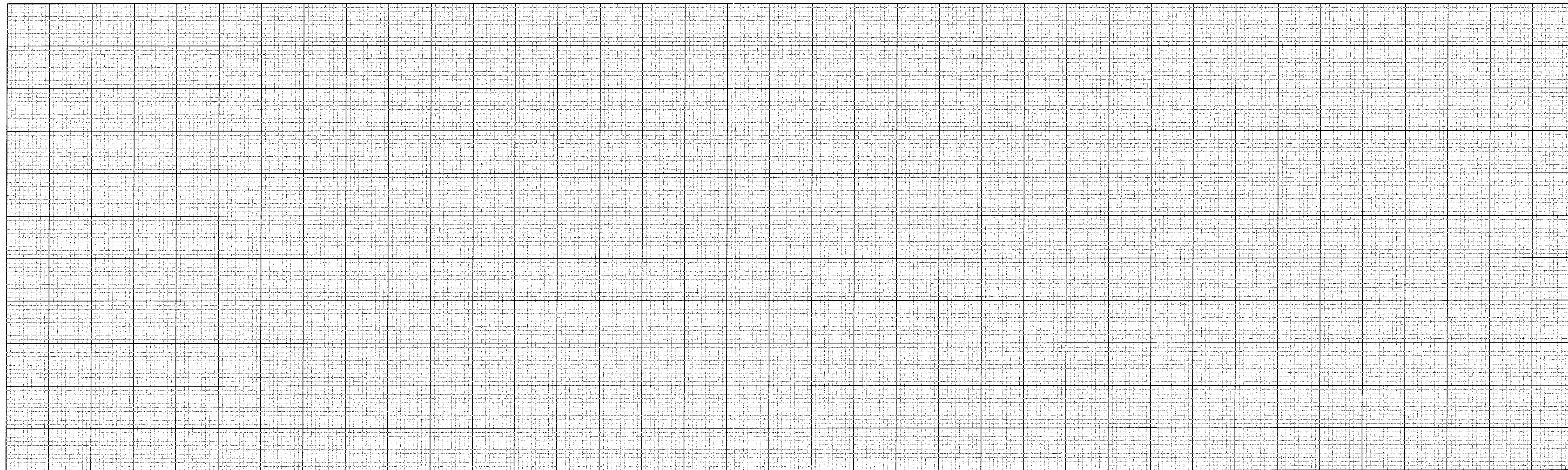
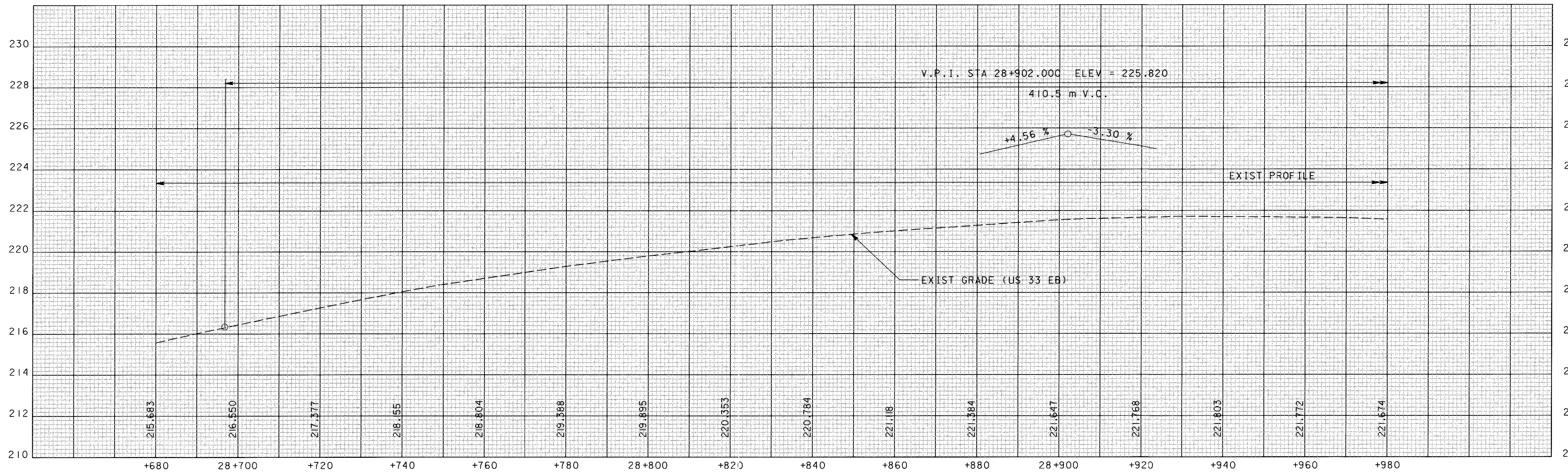


US 33 MAINLINE PLAN  
 STA 28+710 TO STA 28+980

ATH-33-30.981



23 JAN 2001 05:34:16  
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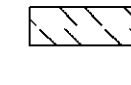
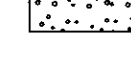



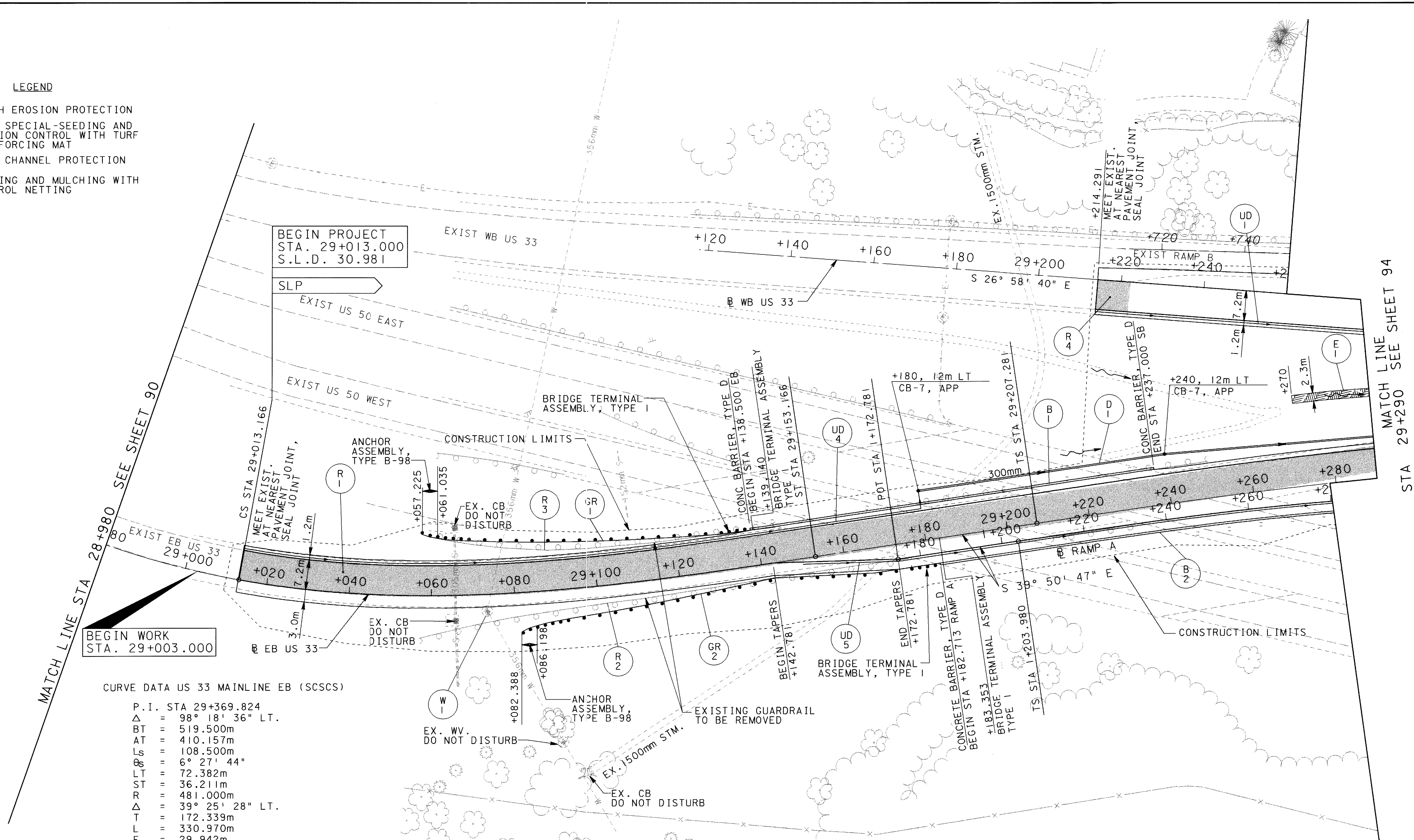
CALCULATED  
PPS  
CHECKED  
AM

PROFILE - US 33  
STA 28+680.000 TO STA 28+980.000

ATH-33-30.981

91  
956

- LEGEND**
-  DITCH EROSION PROTECTION
  -  ITEM SPECIAL-SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT
  -  ROCK CHANNEL PROTECTION
  -  SEEDING AND MULCHING WITH CONTROL NETTING



MATCH LINE STA 28+980 SEE SHEET 90

BEGIN PROJECT STA. 29+013.000 S.L.D. 30.981

BEGIN WORK STA. 29+003.000

MATCH LINE STA 29+290 SEE SHEET 94

**CURVE DATA US 33 MAINLINE EB (SCSCS)**

P.I.	STA 29+369.824
Δ	= 98° 18' 36" LT.
BT	= 519.500m
AT	= 410.157m
Ls	= 108.500m
θs	= 6° 27' 44"
LT	= 72.382m
ST	= 36.211m
R	= 481.000m
Δ	= 39° 25' 28" LT.
T	= 172.339m
L	= 330.970m
E	= 29.942m
Ls	= 50.000m
θs	= 9° 43' 07"
LT	= 28.286m
ST	= 21.830m
R	= 212.500m
Δ	= 23° 49' 51" LT.
T	= 44.841m
L	= 88.385m
E	= 4.680m
Ls	= 140.000m
θs	= 18° 52' 26"
LT	= 93.869m
ST	= 47.154m

CURVE DATA US 33 MAINLINE EB		CURVE DATA RAMP A	
P.I.	STA 29+369.824	P.I.	STA 1+334.276
Δ	= 22° 16' 07" RT.	Δ	= 23° 56' 33" RT.
R	= 520.000m	R	= 350.000m
Ls	= 120.000m	Ls	= 120.000m
θs	= 6° 36' 40"	θs	= 9° 49' 20"
LT	= 80.056m	LT	= 80.123m
ST	= 40.051m	ST	= 40.112m
L	= 82.102m	Lc	= 86.257m
TS	= 162.543m	T1	= 130.296m
ES	= 11.151m	T2	= 78.431m
e <sub>max</sub>	= 0.080	E	= 2.674m
		e <sub>max</sub>	= 0.080


FOR ESTIMATED QUANTITIES, SEE SHEETS 96 AND 97

FOR UNDERDRAIN DETAILS, SEE SHEETS 68 TO 75, AND 191

FOR PAVEMENT QUANTITIES, SEE SHEETS 76 TO 79

FOR STORM SEWER DETAILS, SEE SHEET 93

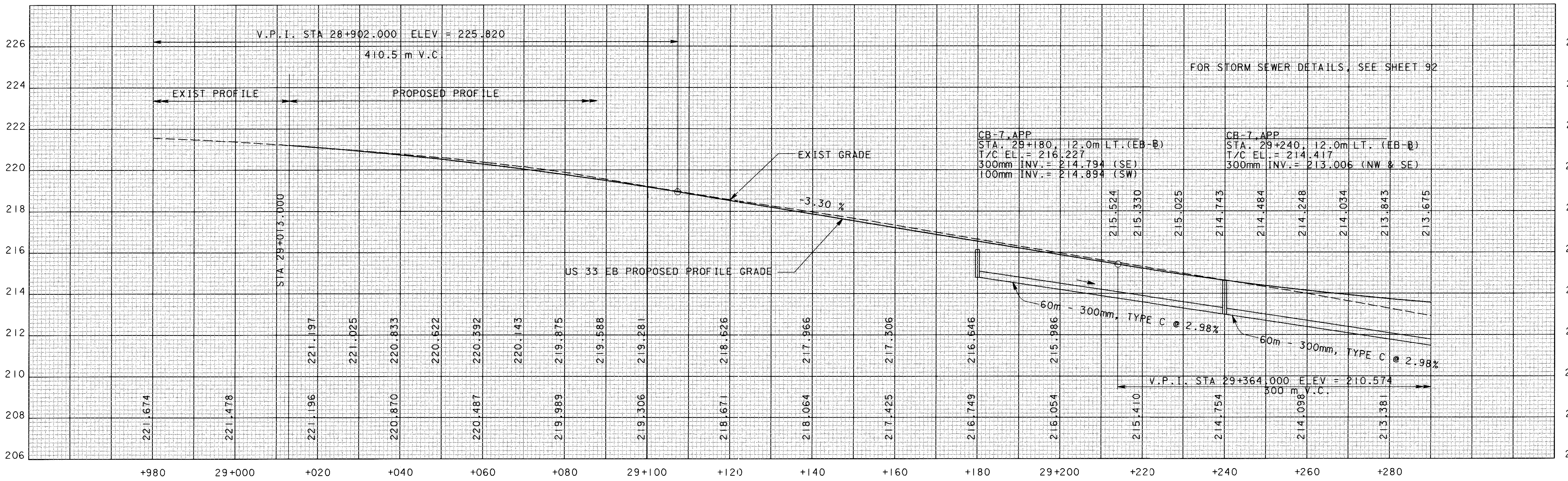
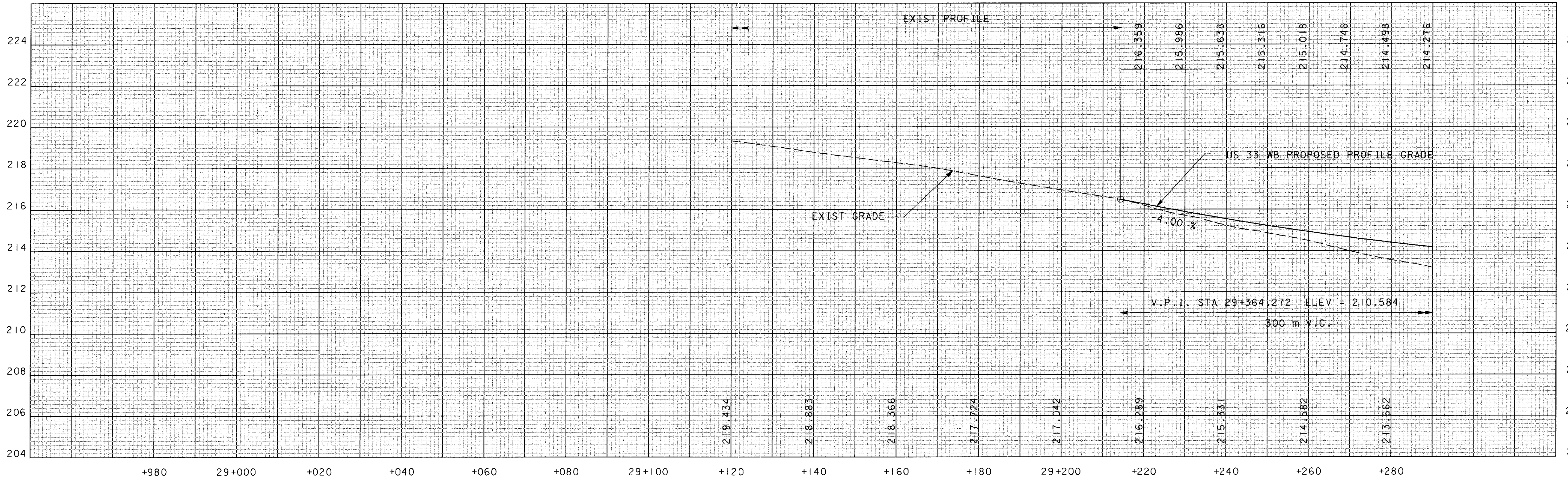
FOR RAMP A PROFILE, SEE SHEET 176 AND 177

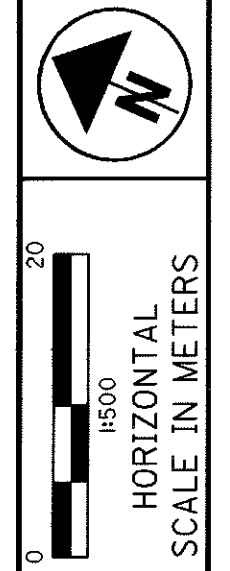
 CONCRETE PAVEMENT TO BE REMOVED

**US 33 MAINLINE PLAN**  
**STA 28+980 TO STA 29+290**

**ATH-33-30.981**

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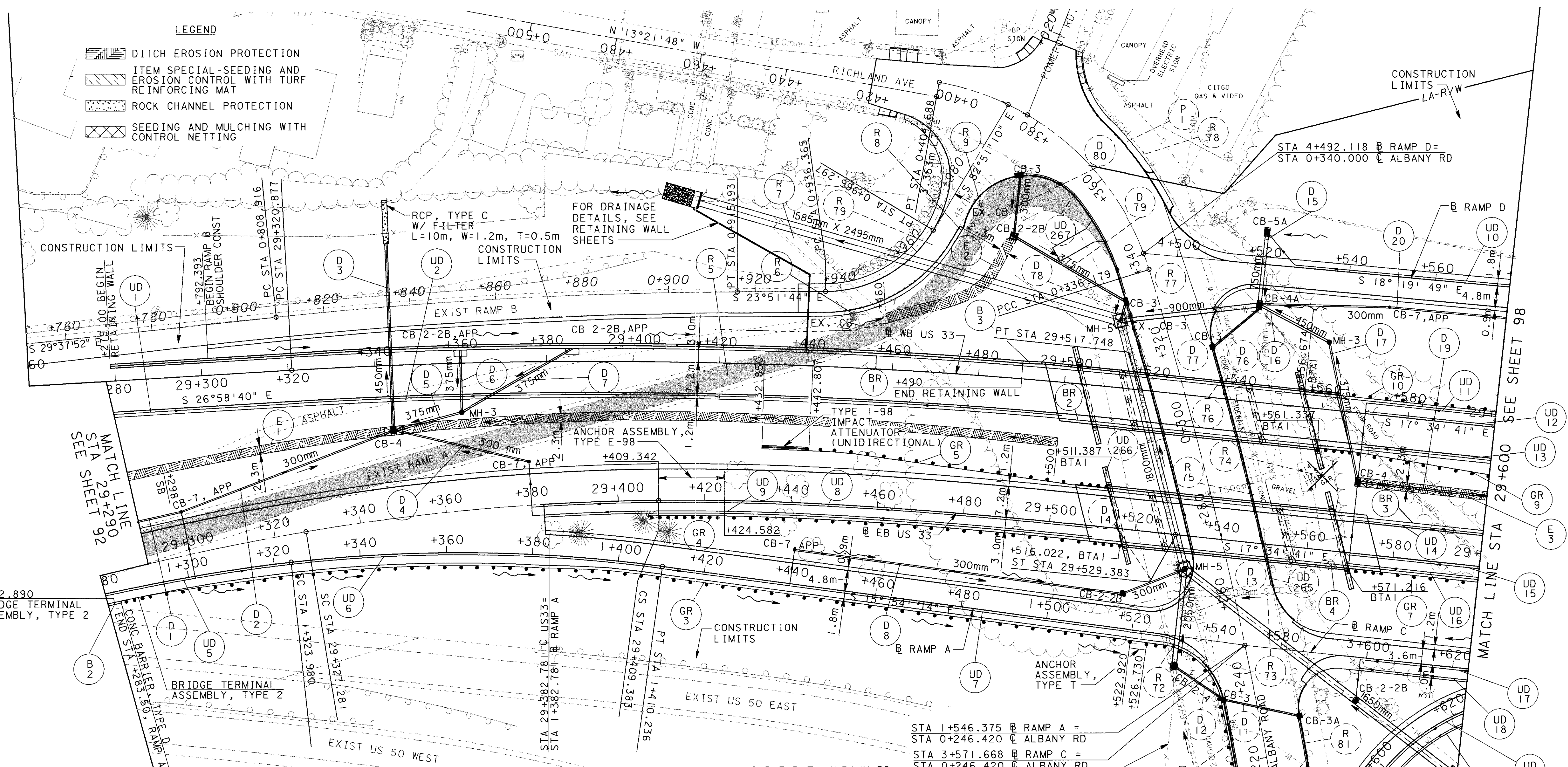


CALCULATED  
PERS  
CHECKED  
AM

**US 33 MAINLINE PLAN  
STA 29+290 TO STA 29+600**

**ATH-33-30.981**

- LEGEND**
- DITCH EROSION PROTECTION
  - ITEM SPECIAL-SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT
  - ROCK CHANNEL PROTECTION
  - SEEDING AND MULCHING WITH CONTROL NETTING



**PROPOSED STRUCTURE**

TYPE: PRESTRESSED CONCRETE I-BEAMS (AASHTO TYPE 4) MADE CONTINUOUS FOR LIVE LOAD WITH COMPOSITE REINFORCED CONCRETE DECK ON INTEGRAL ABUTMENTS AND CAP AND COLUMN PIERS ON DRILLED SHAFTS.

SPANS: 9700 - 29 600 - 12 400 mm c/c  
SUBSTRUCTURES ALONG REFERENCE TANGENT

ROADWAY: 12 700 mm t/t PARAPETS.  
LOADING: MS 22.5 AND ALTERNATE MILITARY LOADING  
ALIGNMENT: TANGENT AND HORIZ. CURVE WEST BOUND TANGENT AND SPIRAL CURVE EAST BOUND

SKREW: 20°10'00" RIGHT FORWARD TO TANGENT  
WEARING SURFACE: MONOLITHIC CONCRETE  
APPROACH SLABS: AS-1-81M (7600 mm ALONG REF. TANGENT)

SUPERELEVATION: VARIES  
LATITUDE: N 39°18'11"  
LONGITUDE: W 82°06'13"

**CURVE DATA US 33 MAINLINE WB**

P.I. STA 29+419.534  
Δ = 9°24'00" RT  
R = 1200.000m  
L = 98.657m  
Ts = 196.870m  
E = 4.049m  
e<sub>max</sub> = 0.049

**CURVE DATA RAMP B**

P.I. STA 0+862.468  
Δ = 5°46'08" RT  
R = 1062.836m  
L = 53.553m  
Ts = 107.015m  
E = 1.348m  
e<sub>max</sub> = EXISTING

**CURVE DATA RAMP A**

P.I. STA 1+334.276  
Δ = 23°56'33" RT  
R = 350.000m  
Ls = 120.000m  
Ts = 9°49'20"  
LT = 80.123m  
ST = 40.112m  
Lc = 86.257m  
Tl = 130.296m  
T2 = 78.431m  
E = 2.674m  
e<sub>max</sub> = 0.080

**CURVE DATA US 33 MAINLINE EB**

P.I. STA 29+369.824  
Δ = 22°16'07" RT  
R = 520.000m  
Ls = 120.000m  
Ts = 6°36'40"  
LT = 80.056m  
ST = 40.051m  
Lc = 82.102m  
Ts = 162.543m  
ES = 11.151m  
e<sub>max</sub> = 0.080

**CURVE DATA ALBANY RD.**

P.I. STA 0+272.536  
Δ = 7°28'30" LT  
R = 977.042m  
L = 63.824m  
L = 127.467m  
E = 2.082m  
e<sub>max</sub> = NC

**CURVE DATA ALBANY RD.**

P.I. STA 0+374.311  
Δ = 62°38'52" LT  
R = 62.655m  
L = 38.131m  
L = 68.508m  
E = 10.691m  
e<sub>max</sub> = NC

**CURVE DATA SLIP RAMP C**

P.I. STA 2+621.586  
Δ = 105°39'45" RT  
R = 50.000m  
L = 65.947m  
L = 92.208m  
E = 32.759m  
e<sub>max</sub> = 0.080

STA 1+546.375 @ RAMP A =  
STA 0+246.420 @ ALBANY RD

STA 3+571.668 @ RAMP C =  
STA 0+246.420 @ ALBANY RD

REMOVE EXISTING CHAIN LINK FENCE

BTAI = BRIDGE TERMINAL ASSEMBLY, TYPE I

CONCRETE PAVEMENT TO BE REMOVED EX. CB

FOR CULVERT DETAILS, SEE SHEET 839

FOR ESTIMATED QUANTITIES, SEE SHEET 96 AND 97

FOR UNDERDRAIN DETAILS, SEE SHEETS 68 TO 75, 194 TO 197, 201, AND 582

FOR PAVEMENT QUANTITIES, SEE SHEETS 76 TO 79

FOR STORM SEWER DETAILS, SEE SHEET 95

FOR INTERSECTION DETAILS, SEE SHEETS 696, 697, 701 AND 702

FOR STRUCTURE DETAILS, SEE SHEETS 884 TO 908

FOR RAMP PROFILES, SEE SHEETS 176 TO 185

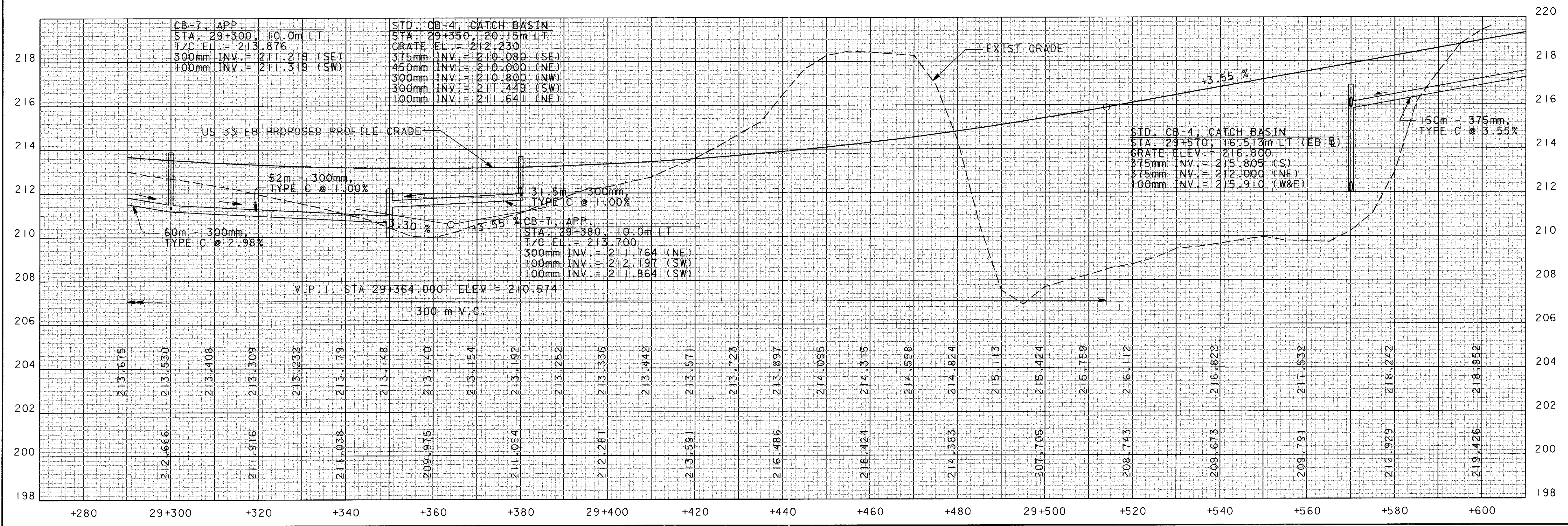
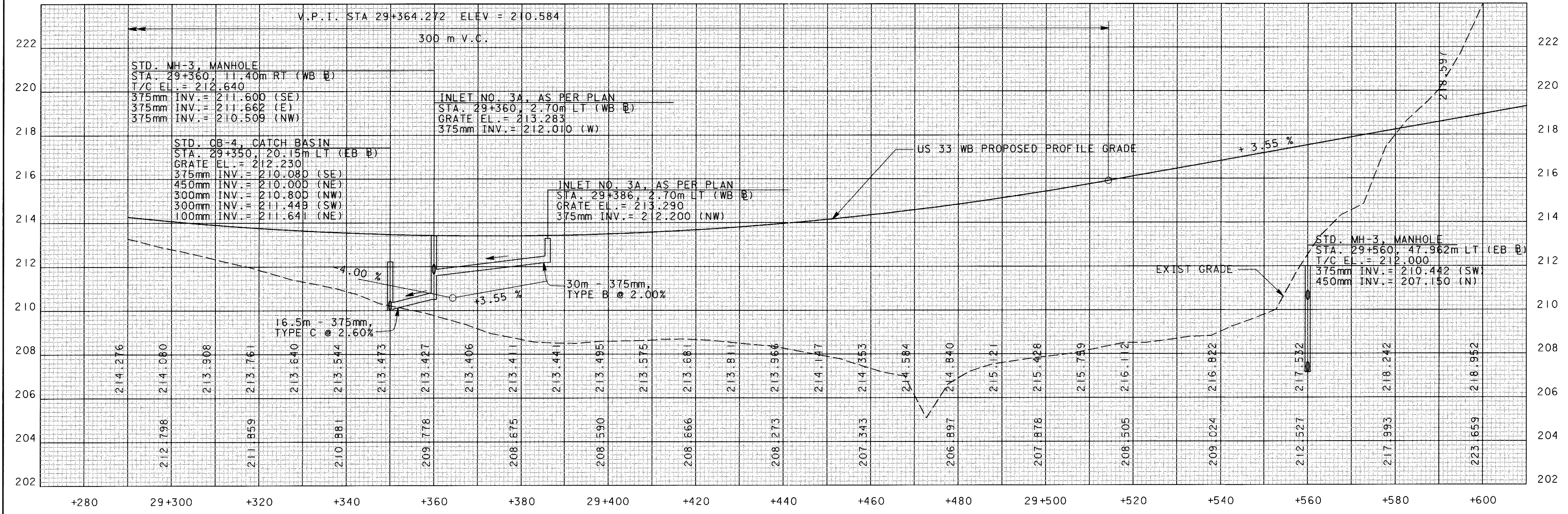
FOR ALBANY ROAD DETAILS, SEE SHEETS 583 TO 585A

FOR RETAINING WALL DETAILS, SEE SHEET 867 TO 883

06 FEB 2001 18:35:49  
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**PROFILE - US 33  
STA 29+290.000 TO STA 29+600.000**

**ATH-33-30.981**



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04 FEB 2001 10:43:39  
 G:\8287\docs\033950.dgn

REF NO.	SHEET NO.	STATION (ALL STATIONS ALONG EB US 33 UNLESS OTHERWISE NOTED)		SIDE	202	202	202	202	202	202	202	448	606	606	606	606	606	606	622	626	626	
		FROM	TO		PAVEMENT REMOVED	CONCRETE MEDIAN REMOVED	CONCRETE SLOPE PROTECTION REMOVED	PIPE REMOVED, 600mm AND UNDER	PIPE REMOVED, OVER 600mm	GUARDRAIL REMOVED	CATCH BASIN REMOVED	50mm ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG64-22 (UNDER GUARDRAIL)	GUARDRAIL, TYPE 5	ANCHOR ASSEMBLY, TYPE B-98	ANCHOR ASSEMBLY, TYPE E-98	ANCHOR ASSEMBLY, TYPE T	IMPACT ATTENUATOR TYPE I-98 (UNIDIRECTIONAL)	BRIDGE TERMINAL ASSEMBLY, TYPE 1	BRIDGE TERMINAL ASSEMBLY, TYPE 2	CONCRETE BARRIER, TYPE D	BARRIER REFLECTOR, TYPE A	BARRIER REFLECTOR, TYPE B
		SQ. METER	SQ. METER		SQ. METER	METER	METER	METER	EACH	CU. METER	METER	EACH	EACH	EACH	EACH	EACH	EACH	EACH	METER	EACH	EACH	
B1	92	29+138.500	29+237.000	LT															98.5		3	
B2	92,94	1+185.000 (RAMP A)	1+283.520 (RAMP A)	RT															98.5		3	
B3	94	29+490.000(WB B)	29+495.219(WB B)	LT															5.219		1	
GR1	92	29+057.225	29+139.140	LT						0.6	78.105										4	
GR2	92	29+082.388	29+183.353	RT						3.2	97.155										5	
GR3	94	1+282.890 (RAMP A)	1+526.730 (RAMP A)	RT						18.3	243.84										9	
GR4	94	29+409.342	29+516.022	RT						8.0	91.44										4	
GR5	94	29+432.85	29+511.387	LT						0.4	68.58										4	
GR6		NOT USED																				
GR7	94	29+571.216	29+600.000	RT						2.2	28.784										1	
GR8		NOT USED																				
GR9	94	29+561.337(WB B)	29+600.000	LT						0.4	38.663										2	
GR10	94	29+556.674	29+600.000	LT						3.3	43.326										2	
R1	92	29+013.166	29+290.000	LT	1994.40																	
R2	92	29+055.000	29+173.000	RT					118													
R3	92	29+062.000	29+143.000	LT					81													
R4	92	29+214.291	29+222.094 (WB B)	LT/RT	56.33																	
R5	94	29+290.000	29+510.000	LT	1265.00																	
R6	94	29+453.000		LT																		
R7	94	29+435.000	29+480.000	LT			31	51														
R8	94	29+456.000	29+487.000	LT		124.00																
R9	94	29+480.000		LT				15														
BR1	94	29+279.000 (WB B)	29+556.674 (WB B)	LT																	10	
BR2	94	29+500.000 (WB B)	29+561.337 (WB B)	RT																	3	
BR3	94	29+511.387	29+572.000	LT																	3	
BR4	94	29+516.022	29+571.216	RT																	3	
<b>TOTALS CARRIED TO ROADWAY SUBSUMMARY</b>					3315.73	124.0	31	15	51	199	2	36.4	689.893	2				7		202.219	31	26

CALCULATED AML  
 CHECKED AM  
**ESTIMATED QUANTITIES**  
**STA. 28+710 TO STA. 29+600**  
**ATH-33-30.981**  
 96  
 956

REF NO.	SHEET NO.	STATION (ALL STATIONS ALONG EB US 33 UNLESS OTHERWISE NOTED)		SIDE	601	602	603	603	603	603	603	603	603	604	604	604	604	604	638	670				
		FROM	TO		ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	CONCRETE MASONRY	300mm CONDUIT, TYPE C	375mm CONDUIT, TYPE B	375mm CONDUIT, TYPE C	450mm CONDUIT, TYPE B	450mm CONDUIT, TYPE C	750mm CONDUIT, TYPE B	CATCH BASIN, NO. 7, AS PER PLAN	CATCH BASIN NO. 2-2B AS PER PLAN	CATCH BASIN, NO. 4	CATCH BASIN, NO. 5A	MANHOLE, NO. 3	VALVE BOX ADJUSTED TO GRADE	DITCH EROSION PROTECTION					
					CU. METER	CU. METER	METER	METER	METER	METER	METER	METER	METER	EACH	EACH	EACH	EACH	EACH	EACH	SQ. METER				
D1	92,94	29+180.000	29+300.000	LT			120							2										
D2	94	29+300.000	29+350.000	LT			52							1										
D3	94	29+350.000	29+350.000	LT	6.00	0.27					37					1								
D4	94	29+350.000	29+380.000	LT			31.5							1										
D5	94	29+350.000	29+360.000 (WB B)	LT						16.5										1				
D6	94	29+360.000 (WB B)	29+360.000 (WB B)	LT/RT					14.1															
D7	94	29+360.000 (WB B)	29+386.000 (WB B)	LT/RT					30															
D8	94	1+440.000 (RAMP A)	1+516.664 (RAMP A)	LT			76							1										
D15	94	4+520.000 (RAMP D)	4+520.000 (RAMP D)	LT/RT									17							1				
D16	94	4+520.000 (RAMP D)	29+560.000	LT							21									1				
D17	94	29+560.000	29+570.000	LT					33															
D19	94	29+570.000	29+600.000	LT/CL						30														
D20	94	4+520.000 (RAMP D)	29+600.000	RT			60							1										
E1	92,94	29+270.000	29+500.000	LT																			529	
E2	94	29+460.000	0+364 (ALBANY RD)	LT																			84.1	
E3	94	29+572.000	29+600.000	CL																			64.4	
W1	92	29+074.000		RT																1				
<b>TOTALS CARRIED TO ROADWAY SUBSUMMARY</b>					6.00	0.27	339.5	77.1	46.5	37	21	17	6	2	2	1	2	1		650.9				

CALCULATED AML CHECKED AM	<b>ESTIMATED QUANTITIES</b> <b>STA. 28+710 TO STA. 29+600</b>	<b>ATH-33-30.981</b>	97 956
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LEGEND

- DITCH EROSION PROTECTION
- ITEM SPECIAL-SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT
- ROCK CHANNEL PROTECTION
- SEEDING AND MULCHING WITH CONTROL NETTING

CURVE DATA RAMP D

P.I. STA 4+918.463  
 $\Delta = 33^\circ 34' 42''$  RT.  
 R = 600.000m  
 T = 181.026m  
 L = 351.630m  
 E = 26.714m  
 $e_{max} = 0.060$

CURVE DATA SLIP RAMP C

P.I. STA 2+621.594  
 $\Delta = 105^\circ 25' 14''$  RT.  
 R = 50.000m  
 T = 65.659m  
 L = 91.997m  
 E = 32.529m  
 $e_{max} = 0.034$

CURVE DATA SLIP RAMP C

P.I. STA 2+657.400  
 $\Delta = -0^\circ 38' 42''$  RT.  
 R = 1350.000m  
 T = 7.600m  
 L = 15.201m  
 E = 0.021m  
 $e_{max} = 0.031$

CURVE DATA RAMP C

P.I. STA 3+657.379  
 $\Delta = 0^\circ 38' 42''$  RT.  
 R = 1353.600m  
 T = 7.621m  
 L = 15.241m  
 E = 0.021m  
 $e_{max} = 0.031$

CURVE DATA RAMP C

P.I. STA 3+967.691  
 $\Delta = 25^\circ 16' 31''$  RT.  
 R = 1350.000m  
 T = 302.692m  
 L = 595.534m  
 E = 33.518m  
 $e_{max} = 0.031$

CURVE DATA US 33 MAINLINE

P.I. STA 29+927.354  
 $\Delta = 27^\circ 06' 50''$  RT.  
 R = 600.000m  
 Ls = 110.000m  
 $\theta_s = 5^\circ 55' 08''$   
 LT = 73.366m  
 ST = 36.696m  
 L = 173.936m  
 Ts = 199.865m  
 ES = 6.358m  
 $e_{max} = 0.078$

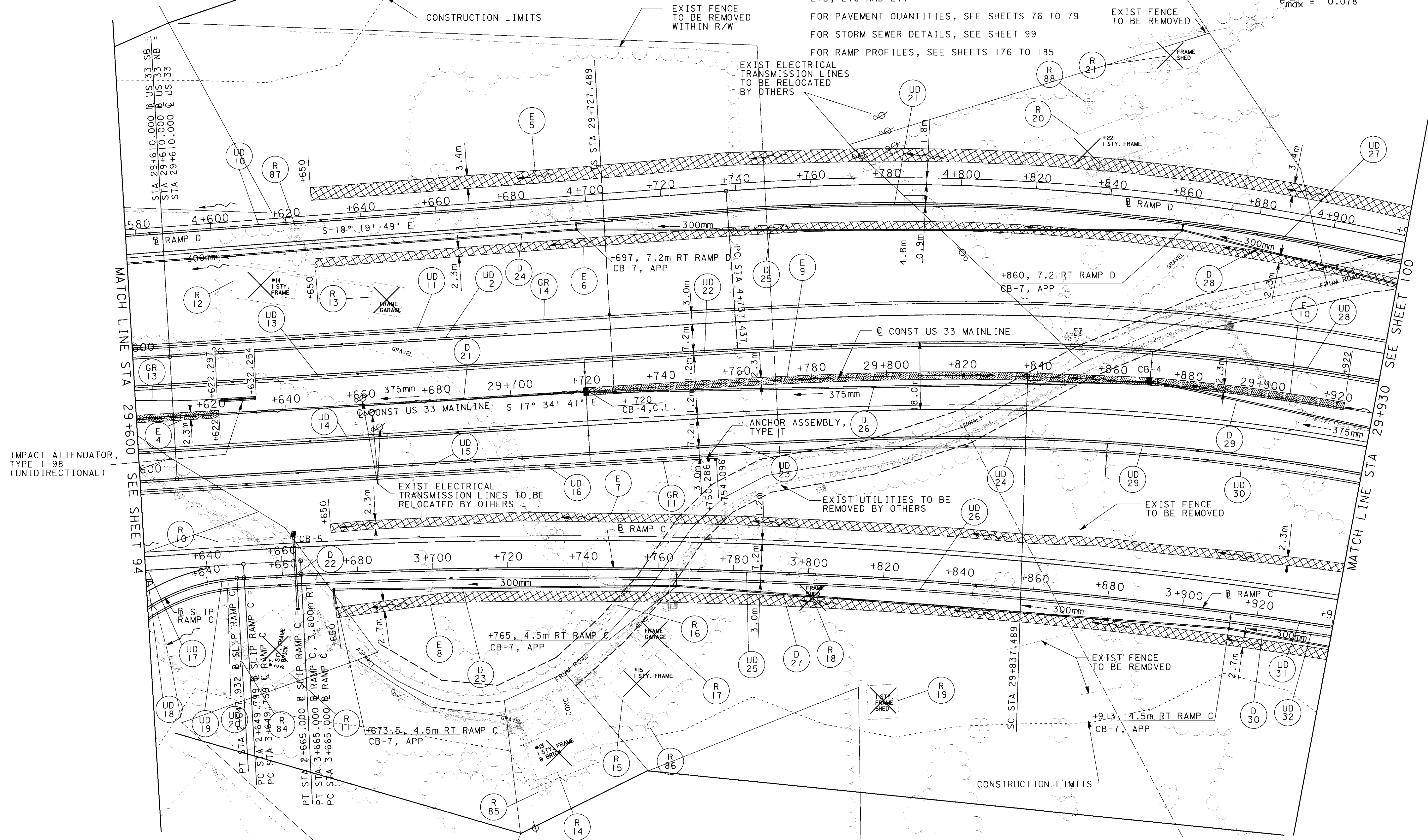
FOR ESTIMATED QUANTITIES, SEE SHEETS 104 AND 105

FOR UNDERDRAIN DETAILS, SEE SHEETS 68 TO 75, 208, 209, 215, 216 AND 217

FOR PAVEMENT QUANTITIES, SEE SHEETS 76 TO 79

FOR STORM SEWER DETAILS, SEE SHEET 99

FOR RAMP PROFILES, SEE SHEETS 176 TO 185



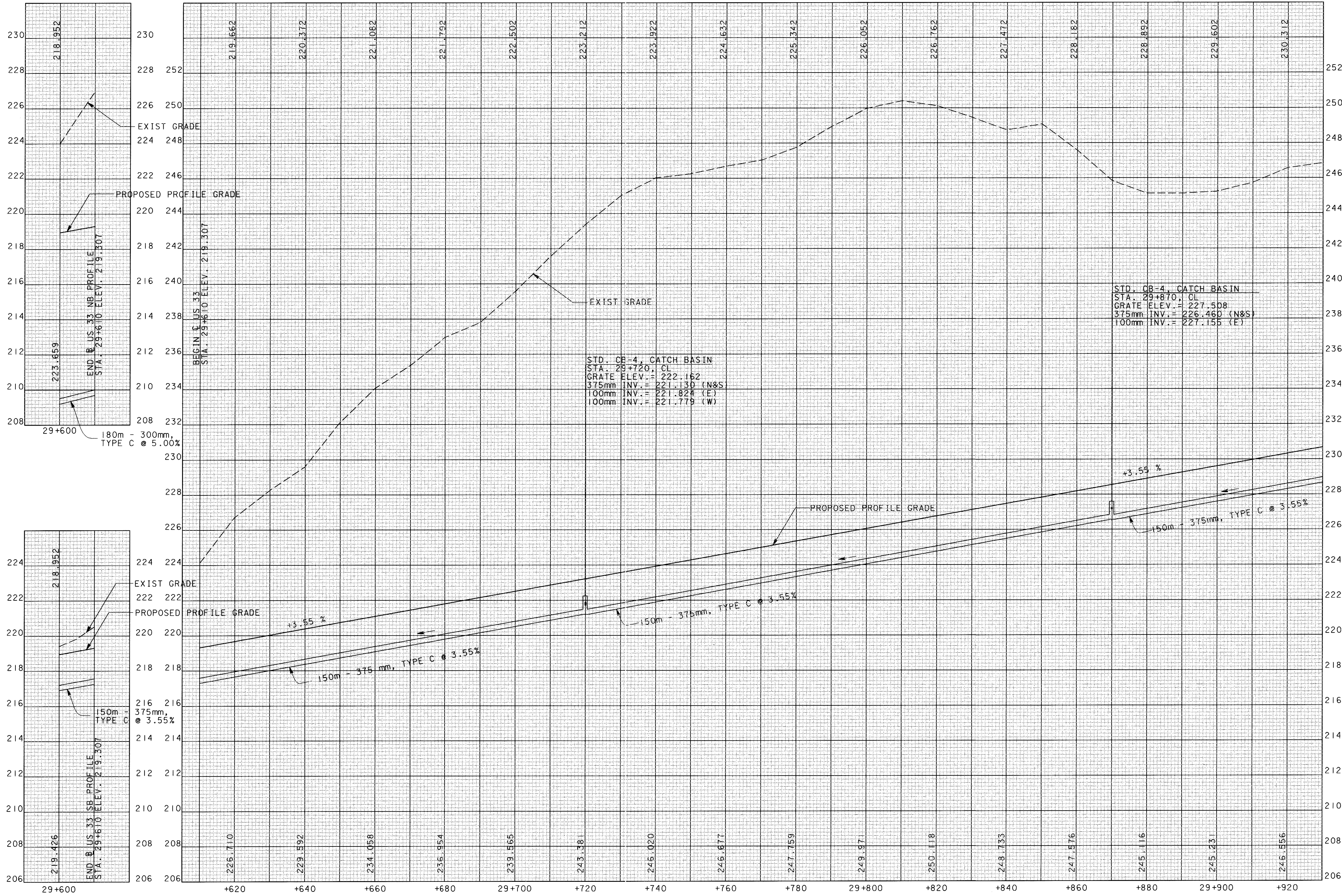
CALCULATED PRS  
 CHECKED AM

US 33 MAINLINE PLAN  
 STA 29+600 TO STA 29+930

ATH-33-30.981

16 APR 2001 14:54:07  
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CALCULATED PRS CHECKED AM  
**PROFILE - US 33**  
**STA 29+600.000 TO STA 29+930.000**

**ATH-33-30.981**