

**PROJECT: EB-4978**

**CONTRACT:**

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS  
PLAN FOR PROPOSED  
HIGHWAY EROSION CONTROL

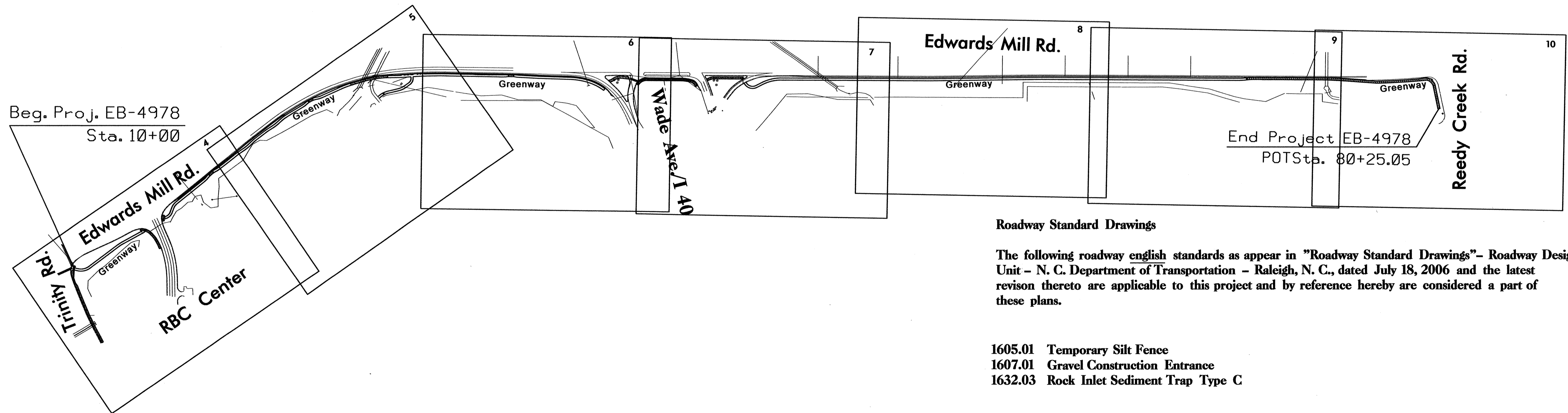
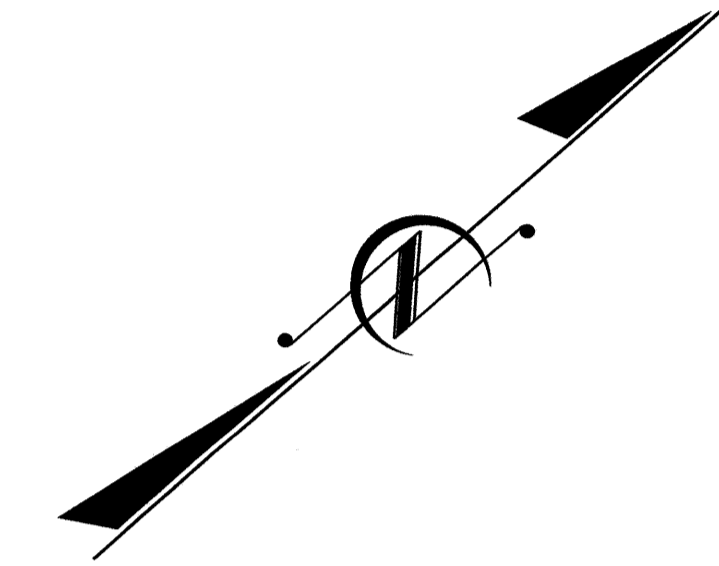
**WAKE COUNTY**

**LOCATION: Along Edwards Mill Road From Trinity Road  
To Existing Reedy Creek Road Greenway**

**TYPE OF WORK: Grading, Paving and Drainage**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	EB-4978	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	

Std. #	Description	Symbol
1605.01	Temporary Silt Fence	
1606.01	Special Sediment Control Fence	
1622.01	Temporary Berms and Slope Drains	
1630.02	Silt Basin Type B	
1630.03	Temporary Silt Ditch	
1630.05	Temporary Diversion	
1630.06	Special Stilling Basin	
1632.03	Rock Inlet Sediment Trap Type C	
1633.01	Temporary Rock Silt Check Type-A	
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	
	Temporary Rock Silt Check Type-B	
	Wattle	
	Wattle with Polyacrylamide (PAM)	
1634.02	Temporary Rock Sediment Dam Type-B	
1635.01	Rock Pipe Inlet Sediment Trap Type-A	

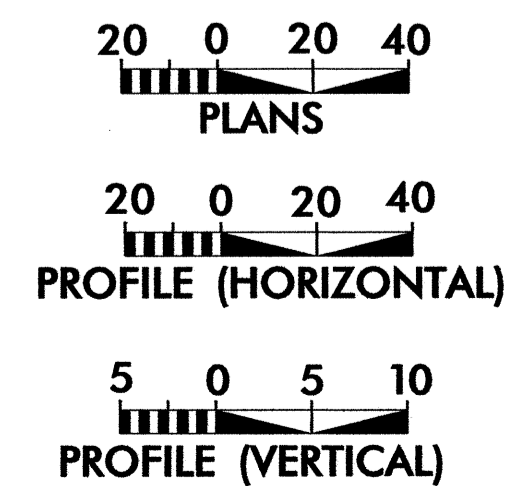


Roadway Standard Drawings

The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated July 18, 2006 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

- 1605.01 Temporary Silt Fence
- 1607.01 Gravel Construction Entrance
- 1632.03 Rock Inlet Sediment Trap Type C

**GRAPHIC SCALES**



**DESIGN DATA**

ADT 2010 = -  
ADT 2030 = -  
DHV = - %  
D = - %  
T = - %  
V = 20 MPH  
TTST = - %  
DUAL = - %

**PROJECT LENGTH**

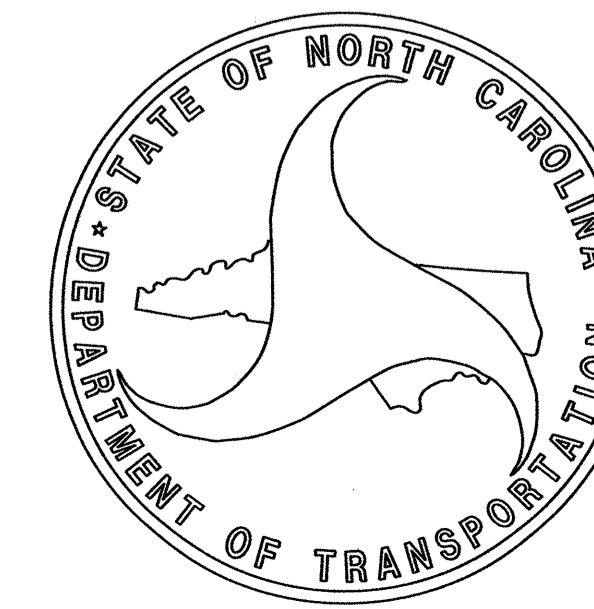
LENGTH GREENWAY TIP PROJECT EB-4978 = 1.33 MILES  
LENGTH STRUCTURE TIP PROJECT EB-4978 = 0.00 MILES  
TOTAL LENGTH OF TIP PROJECT EB-4978 = 1.33 MILES

2006 STANDARD SPECIFICATIONS

**RIGHT OF WAY DATE:**

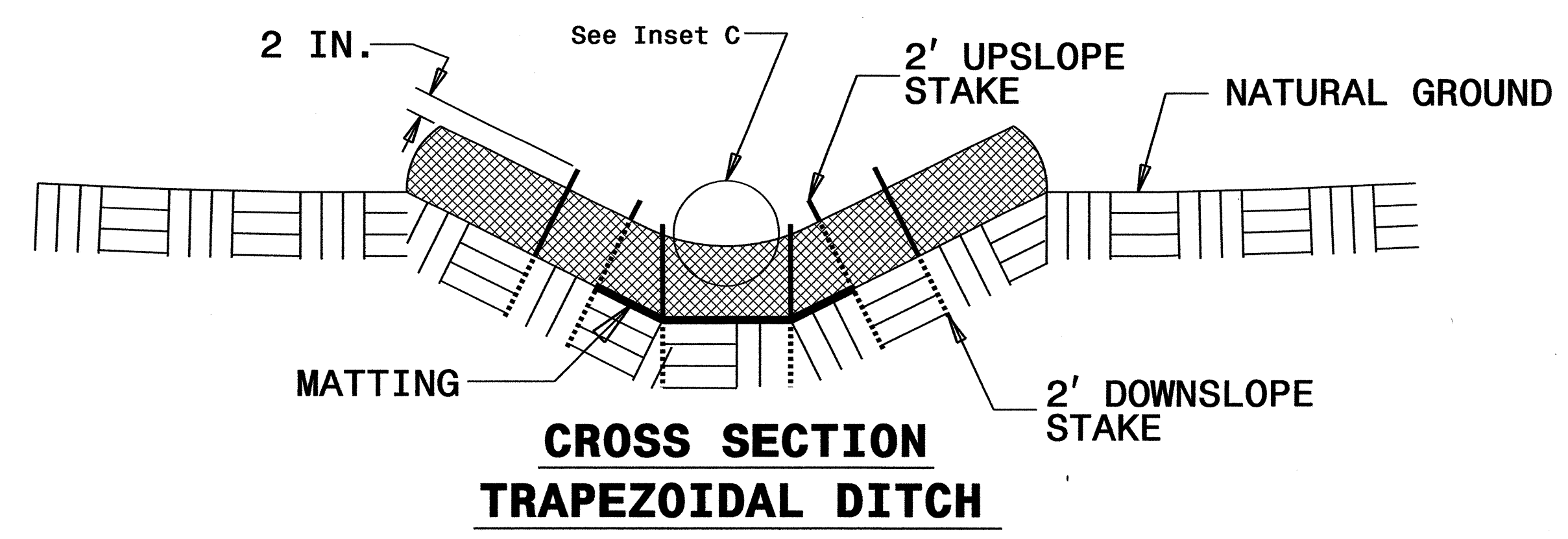
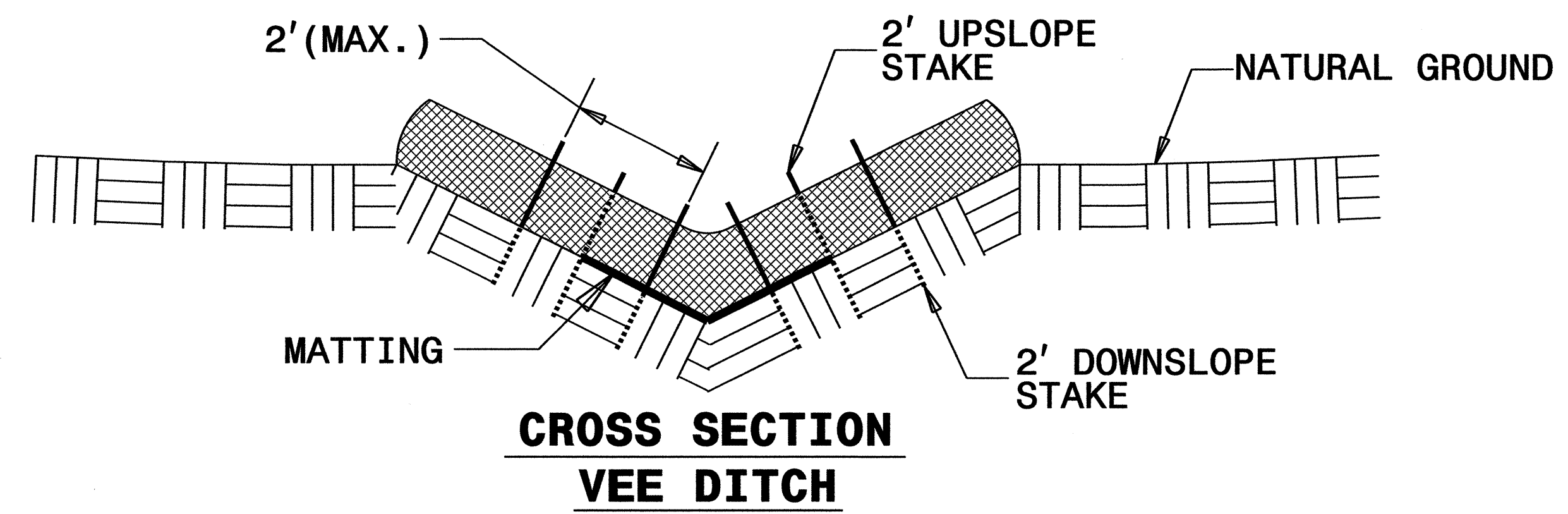
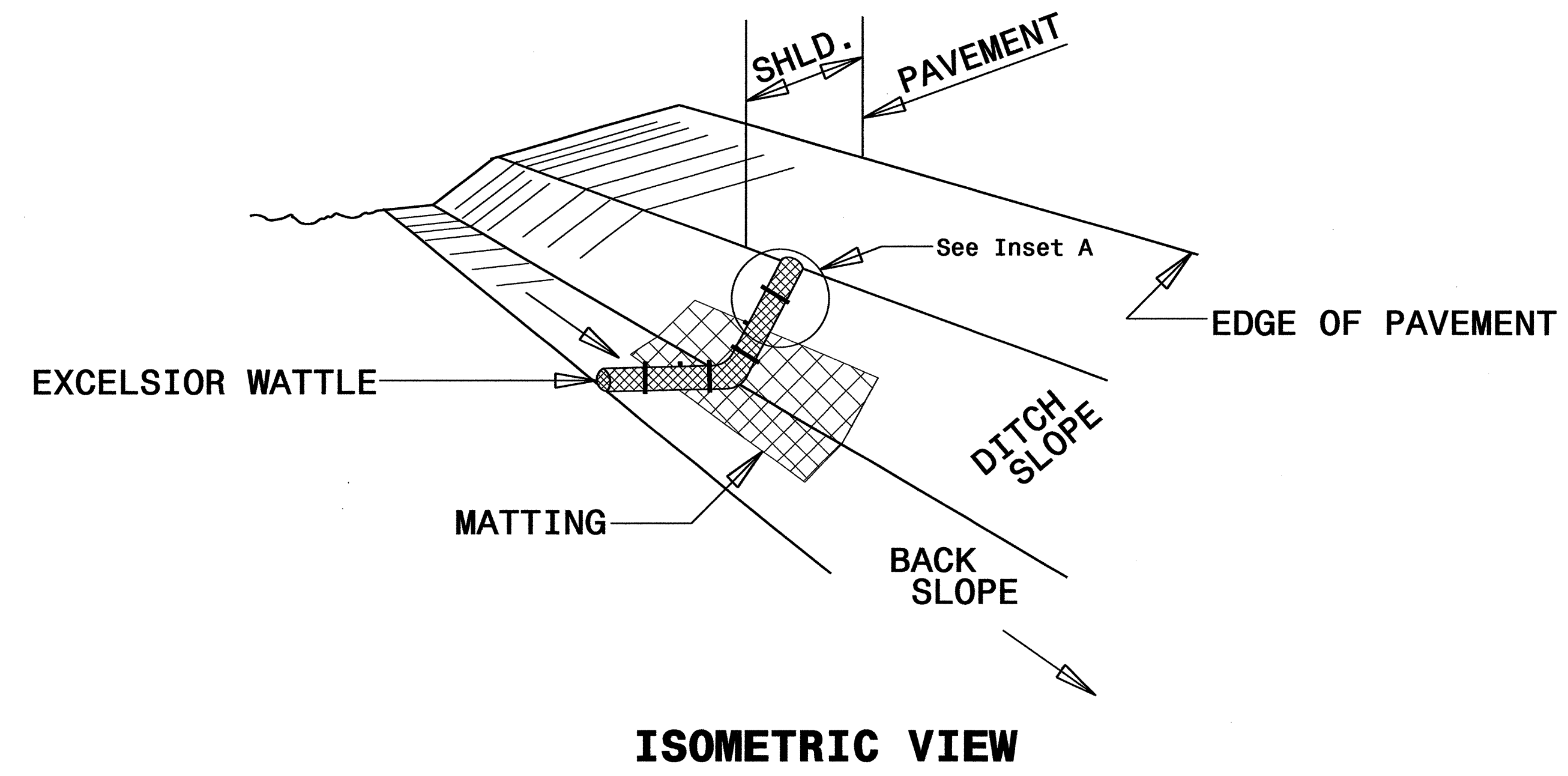
AUGUST 8, 2010

**LETTING DATE:**



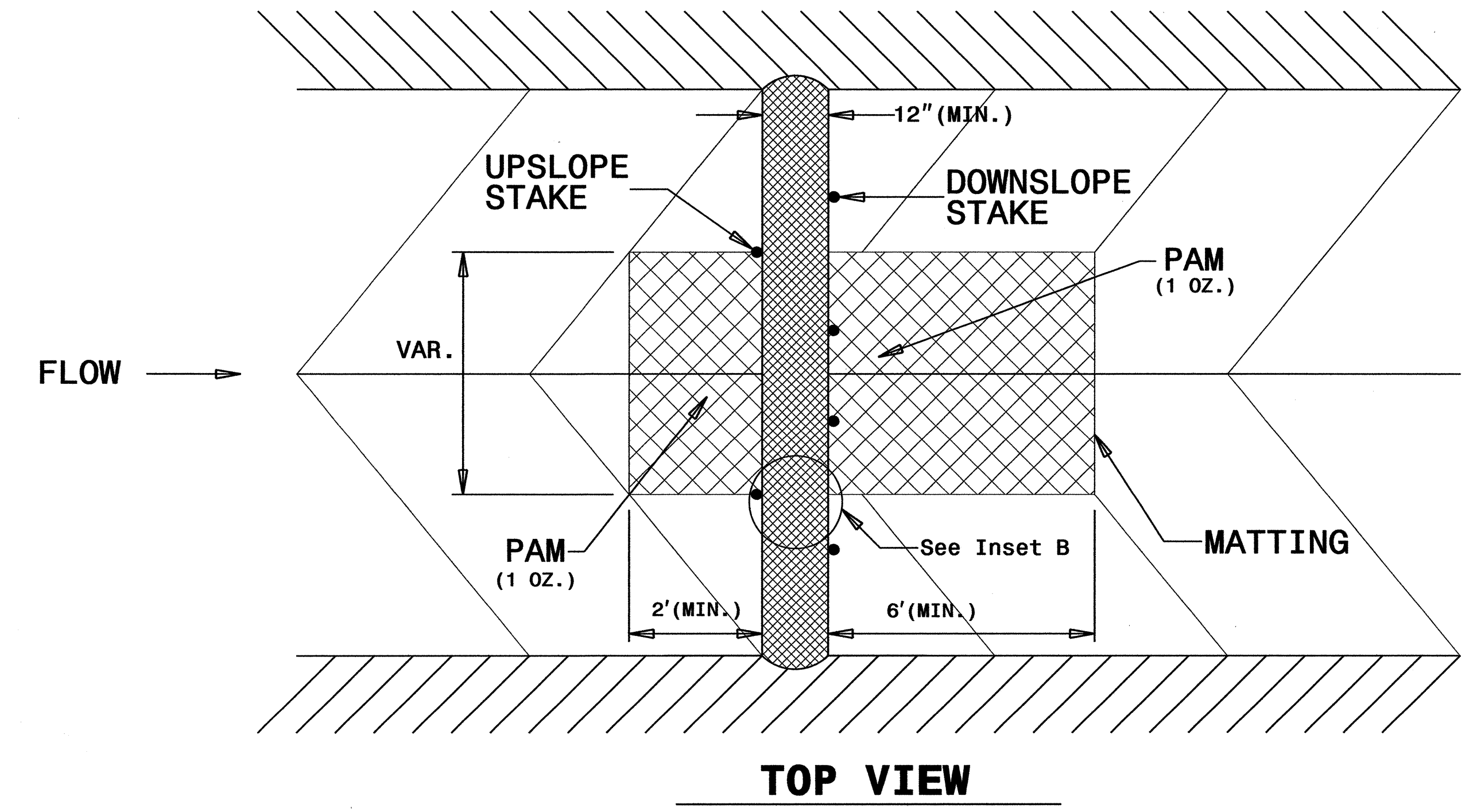
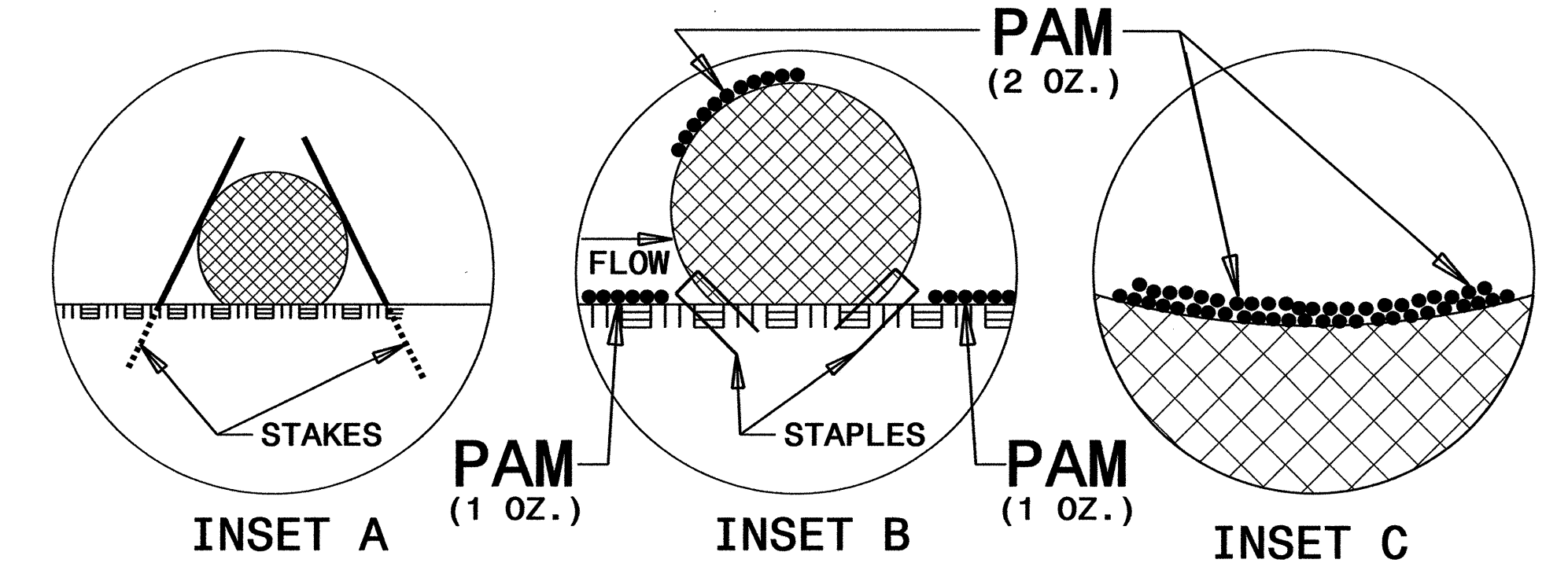
THOMAS P. NORMAN  
DIRECTOR

# WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL



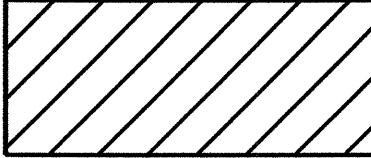
**NOTES:**

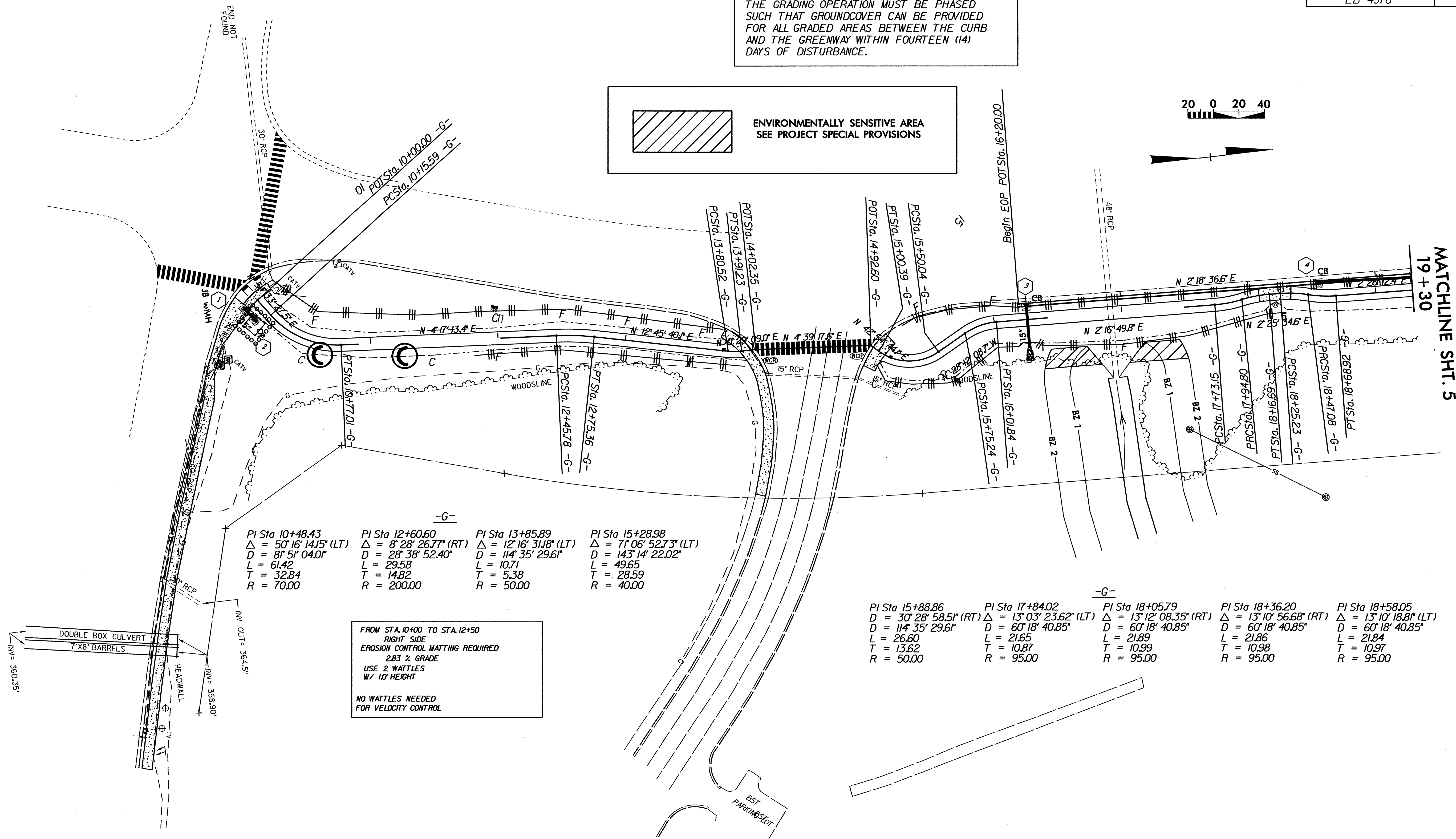
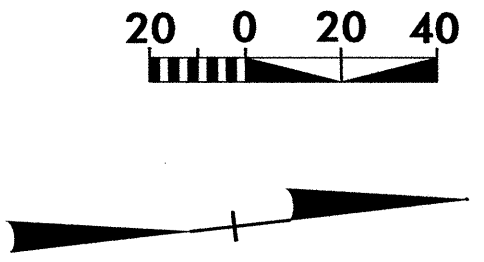
- USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.
- USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.
- ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.
- INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.
- PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.
- INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.
- INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.
- PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH WATTLE.
- INITIALLY APPLY 2 OUNCES OF ANIONIC OR NEUTRALLY CHARGED PAM OVER WATTLE WHERE WATER WILL FLOW AND 1 OUNCE OF PAM ON EACH SIDE OF WATTLE. REAPPLY PAM AFTER EVERY RAINFALL EVENT THAT IS EQUAL TO OR EXCEEDS 0.50 IN.





THE GRADING OPERATION MUST BE PHASED SUCH THAT GROUND COVER CAN BE PROVIDED FOR ALL GRADED AREAS BETWEEN THE CURB AND THE GREENWAY WITHIN FOURTEEN (14) DAYS OF DISTURBANCE.

 ENVIRONMENTALLY SENSITIVE AREA  
SEE PROJECT SPECIAL PROVISIONS

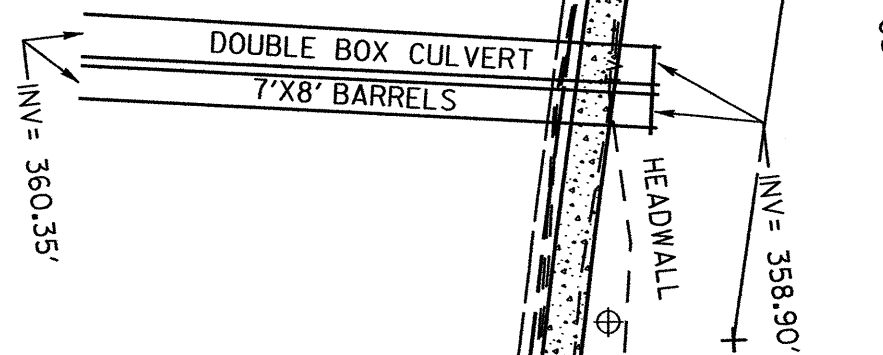


MATCHLINE SHT. 5  
19 + 30

PI Sta	Delta	D	L	T	R
10+48.43	50° 16' 14.15" (LT)	81' 51' 04.0"	61.42	32.84	70.00
12+60.60	8° 28' 26.77" (RT)	28' 38' 52.40"	29.58	14.82	200.00
13+85.89	12° 16' 31.18" (LT)	114' 35' 29.6"	10.71	5.38	50.00
15+28.98	71° 06' 52.73" (LT)	143' 14' 22.02"	49.65	28.59	40.00

PI Sta	Delta	D	L	T	R
15+88.86	30° 28' 58.51" (RT)	114' 35' 29.6"	26.60	13.62	50.00
17+84.02	13° 03' 23.62" (LT)	60' 18' 40.85"	21.65	10.87	95.00
18+05.79	13° 12' 08.35" (RT)	60' 18' 40.85"	21.89	10.99	95.00
18+36.20	13° 10' 56.68" (RT)	60' 18' 40.85"	21.86	10.98	95.00
18+58.05	13° 10' 18.81" (LT)	60' 18' 40.85"	21.84	10.97	95.00

FROM STA. 10+00 TO STA. 12+50  
RIGHT SIDE  
EROSION CONTROL MATTING REQUIRED  
2.83 % GRADE  
USE 2 WATTLES  
W/ 10' HEIGHT  
  
NO WATTLES NEEDED  
FOR VELOCITY CONTROL



### BIKE TRAIL ALONG EDWARDS MILL ROAD

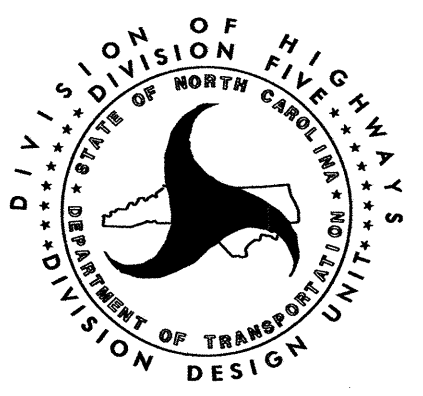
DIVISION 05 WAKE COUNTY RALEIGH

REVISIONS	INIT.	DATE

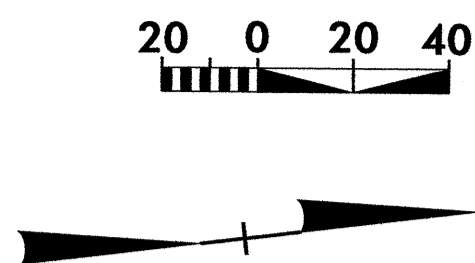
SCALE: \_\_\_\_\_

DATE: 9-22-2010

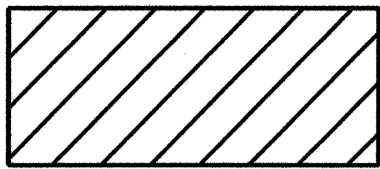
**N.C. DEPARTMENT of TRANSPORTATION**  
**DIVISION of HIGHWAYS**  
**DIVISION FIVE DESIGN UNIT**



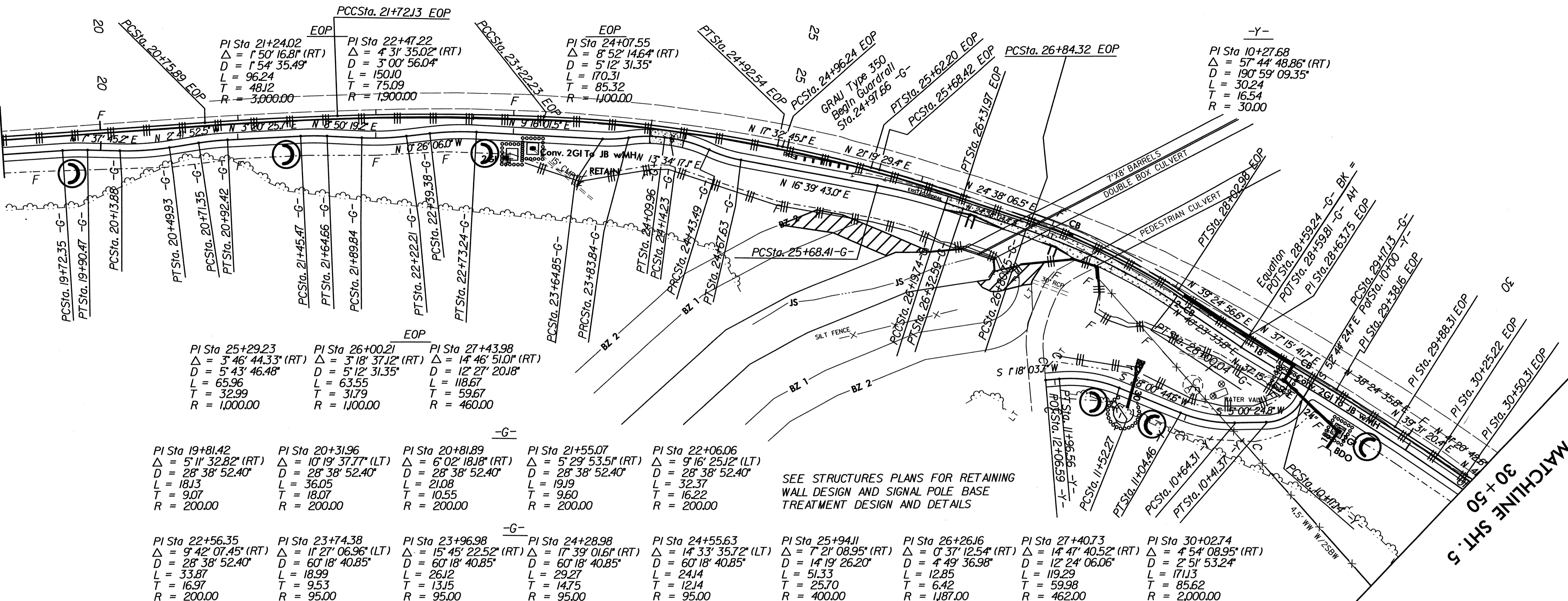
PREPARED BY: B. WILLIAMS  
REVIEWED BY: \_\_\_\_\_  
REVIEWED BY: \_\_\_\_\_



FROM STA. 18+30 TO STA. 23+00  
RIGHT SIDE  
EROSION CONTROL MATTING REQUIRED  
2 1/2% GRADE  
USE 3 WATTLES EVENLY SPACED  
W/ 10' HEIGHT

 ENVIRONMENTALLY SENSITIVE AREA  
SEE PROJECT SPECIAL PROVISIONS

MATCHLINE SHT. 5  
19 + 30



PI Sta 25+29.23  $\Delta = 3^{\circ} 46' 44.33''$  (RT)  $D = 5^{\circ} 43' 46.48''$   $L = 65.96$   $T = 32.99$   $R = 1,000.00$

PI Sta 26+00.21  $\Delta = 3^{\circ} 18' 37.12''$  (RT)  $D = 5^{\circ} 12' 31.35''$   $L = 63.55$   $T = 31.79$   $R = 1,000.00$

PI Sta 27+43.98  $\Delta = 1^{\circ} 46' 51.01''$  (RT)  $D = 12^{\circ} 27' 20.18''$   $L = 118.67$   $T = 59.67$   $R = 460.00$

PI Sta 19+81.42  $\Delta = 5^{\circ} 11' 32.82''$  (RT)  $D = 28^{\circ} 38' 52.40''$   $L = 18.13$   $T = 9.07$   $R = 200.00$

PI Sta 20+31.96  $\Delta = 10^{\circ} 19' 37.77''$  (LT)  $D = 28^{\circ} 38' 52.40''$   $L = 36.05$   $T = 18.07$   $R = 200.00$

PI Sta 20+81.89  $\Delta = 6^{\circ} 02' 18.18''$  (RT)  $D = 28^{\circ} 38' 52.40''$   $L = 21.08$   $T = 10.55$   $R = 200.00$

PI Sta 21+55.07  $\Delta = 5^{\circ} 29' 53.51''$  (RT)  $D = 28^{\circ} 38' 52.40''$   $L = 19.19$   $T = 9.60$   $R = 200.00$

PI Sta 22+06.06  $\Delta = 9^{\circ} 16' 25.12''$  (LT)  $D = 28^{\circ} 38' 52.40''$   $L = 32.37$   $T = 16.22$   $R = 200.00$

PI Sta 22+56.35  $\Delta = 9^{\circ} 42' 07.45''$  (RT)  $D = 28^{\circ} 38' 52.40''$   $L = 33.87$   $T = 16.97$   $R = 200.00$

PI Sta 23+74.38  $\Delta = 11^{\circ} 27' 06.96''$  (LT)  $D = 60^{\circ} 18' 40.85''$   $L = 18.99$   $T = 9.53$   $R = 95.00$

PI Sta 23+96.98  $\Delta = 15^{\circ} 45' 22.52''$  (RT)  $D = 60^{\circ} 18' 40.85''$   $L = 26.12$   $T = 13.15$   $R = 95.00$

PI Sta 24+28.98  $\Delta = 17^{\circ} 39' 01.61''$  (RT)  $D = 60^{\circ} 18' 40.85''$   $L = 29.27$   $T = 14.75$   $R = 95.00$

PI Sta 24+55.63  $\Delta = 14^{\circ} 33' 35.72''$  (LT)  $D = 60^{\circ} 18' 40.85''$   $L = 24.14$   $T = 12.14$   $R = 95.00$

PI Sta 25+94.11  $\Delta = 7^{\circ} 21' 08.95''$  (RT)  $D = 14^{\circ} 19' 26.20''$   $L = 51.33$   $T = 25.70$   $R = 400.00$

PI Sta 26+26.16  $\Delta = 0^{\circ} 37' 12.54''$  (RT)  $D = 4^{\circ} 49' 36.98''$   $L = 12.85$   $T = 6.42$   $R = 1,187.00$

PI Sta 27+40.73  $\Delta = 14^{\circ} 47' 40.52''$  (RT)  $D = 12^{\circ} 24' 06.06''$   $L = 119.29$   $T = 59.98$   $R = 462.00$

PI Sta 30+02.74  $\Delta = 4^{\circ} 54' 08.95''$  (RT)  $D = 2^{\circ} 51' 53.24''$   $L = 17.13$   $T = 85.62$   $R = 2,000.00$

SEE STRUCTURES PLANS FOR RETAINING WALL DESIGN AND SIGNAL POLE BASE TREATMENT DESIGN AND DETAILS

FROM STA. 10+10 TO STA. 11+40  
RIGHT SIDE  
EROSION CONTROL MATTING REQUIRED  
2 1/2% GRADE  
USE 2 WATTLES EVENLY SPACED  
W/ 10' HEIGHT

NO WATTLES NEEDED FOR VELOCITY CONTROL

FROM STA. 18+30 TO STA. 23+00  
RIGHT SIDE  
EROSION CONTROL MATTING REQUIRED  
2 1/2% GRADE  
USE 3 WATTLES EVENLY SPACED  
W/ 10' HEIGHT

NO WATTLES NEEDED FOR VELOCITY CONTROL

MATCHLINE SHT. 5  
30 + 50

### BIKE TRAIL ALONG EDWARDS MILL ROAD

DIVISION 05 WAKE COUNTY RALEIGH

REVISIONS	INT.	DATE

SCALE: \_\_\_\_\_


DATE: 9-22-2010

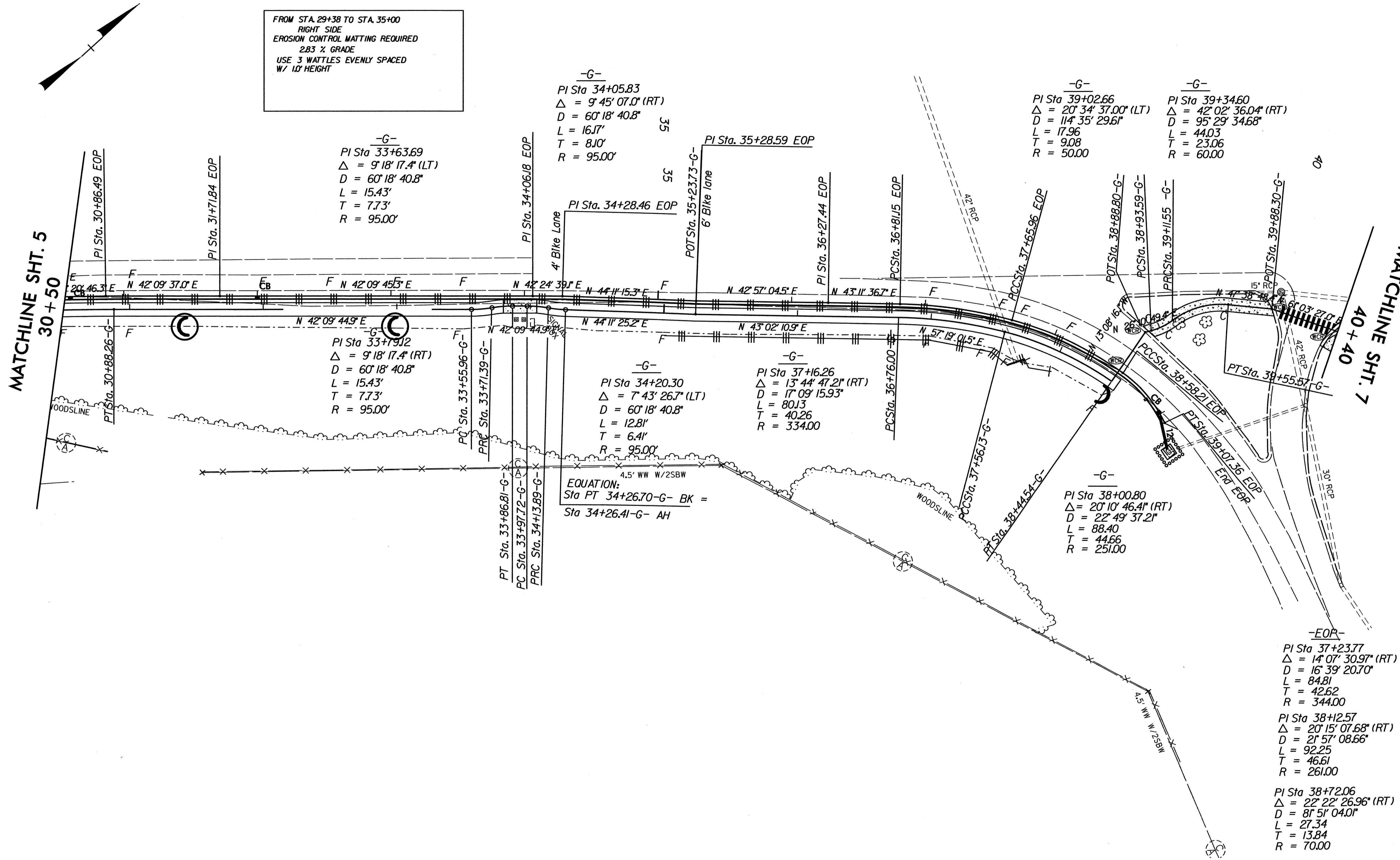
PREPARED BY: B. WILLIAMS

REVIEWED BY: \_\_\_\_\_

REVIEWED BY: \_\_\_\_\_

**N.C. DEPARTMENT of TRANSPORTATION**  
DIVISION of HIGHWAYS  
DIVISION FIVE DESIGN UNIT





### BIKE TRAIL ALONG EDWARDS MILL ROAD

DIVISION 05 WAKE COUNTY RALEIGH

REVISIONS	INT.	DATE

SCALE: \_\_\_\_\_

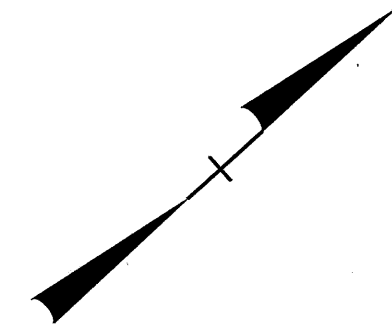
PREPARED BY: B. WILLIAMS

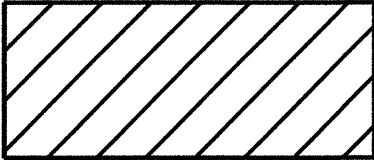
REVIEWED BY: \_\_\_\_\_

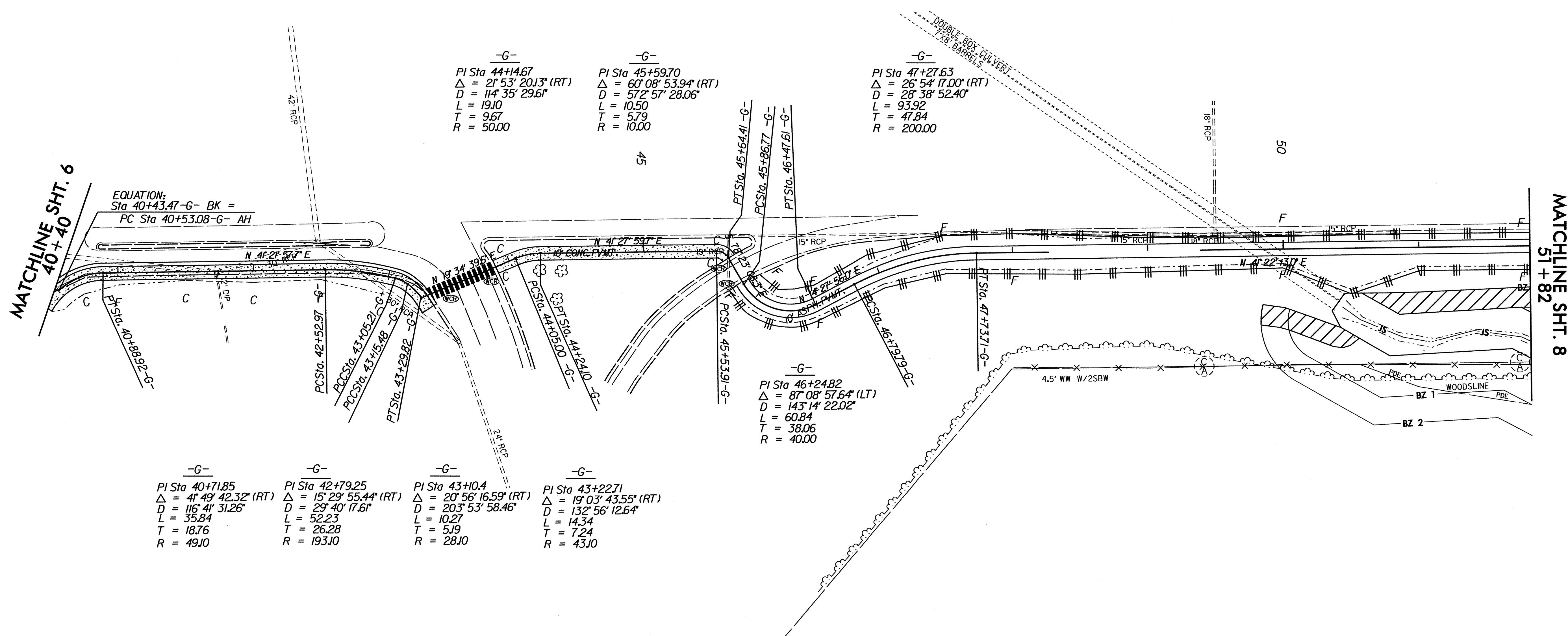
REVIEWED BY: \_\_\_\_\_

DATE: 9-22-2010

**N.C. DEPARTMENT of TRANSPORTATION**  
**DIVISION of HIGHWAYS**  
**DIVISION FIVE DESIGN UNIT**




**ENVIRONMENTALLY SENSITIVE AREA**  
 SEE PROJECT SPECIAL PROVISIONS



-G-

PI Sta 44+14.67  
 $\Delta = 27^{\circ} 53' 20.13''$  (RT)  
 $D = 114' 35'' 29.61''$   
 $L = 19.10$   
 $T = 9.67$   
 $R = 50.00$

-G-

PI Sta 45+59.70  
 $\Delta = 60^{\circ} 08' 53.94''$  (RT)  
 $D = 572' 57'' 28.06''$   
 $L = 10.50$   
 $T = 5.79$   
 $R = 10.00$

-G-

PI Sta 47+27.63  
 $\Delta = 26^{\circ} 54' 17.00''$  (RT)  
 $D = 28' 38'' 52.40''$   
 $L = 93.92$   
 $T = 47.84$   
 $R = 200.00$

EQUATION:  
 Sta 40+43.47-G- BK =  
 PC Sta 40+53.08-G- AH

MATCHLINE SHT. 6  
40+40

MATCHLINE SHT. 8  
51+82

-G-

PI Sta 40+71.85  
 $\Delta = 41^{\circ} 49' 42.32''$  (RT)  
 $D = 116' 41'' 31.26''$   
 $L = 35.84$   
 $T = 18.76$   
 $R = 49.10$

-G-

PI Sta 42+79.25  
 $\Delta = 15^{\circ} 29' 55.44''$  (RT)  
 $D = 29' 40'' 17.61''$   
 $L = 52.23$   
 $T = 26.28$   
 $R = 193.10$

-G-

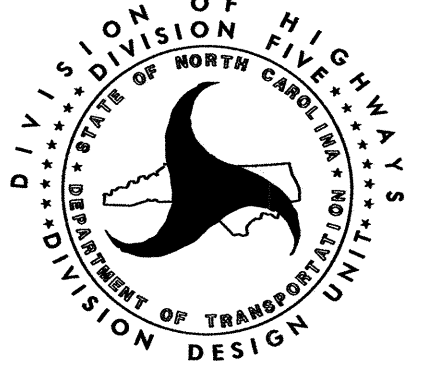
PI Sta 43+10.4  
 $\Delta = 20^{\circ} 56' 16.59''$  (RT)  
 $D = 203' 53'' 58.46''$   
 $L = 10.27$   
 $T = 5.19$   
 $R = 28.10$

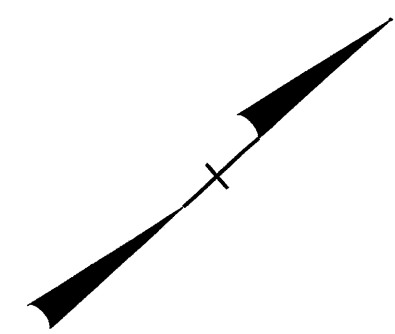
-G-

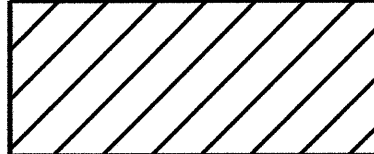
PI Sta 43+22.71  
 $\Delta = 19^{\circ} 03' 43.55''$  (RT)  
 $D = 132' 56'' 12.64''$   
 $L = 14.34$   
 $T = 7.24$   
 $R = 43.10$

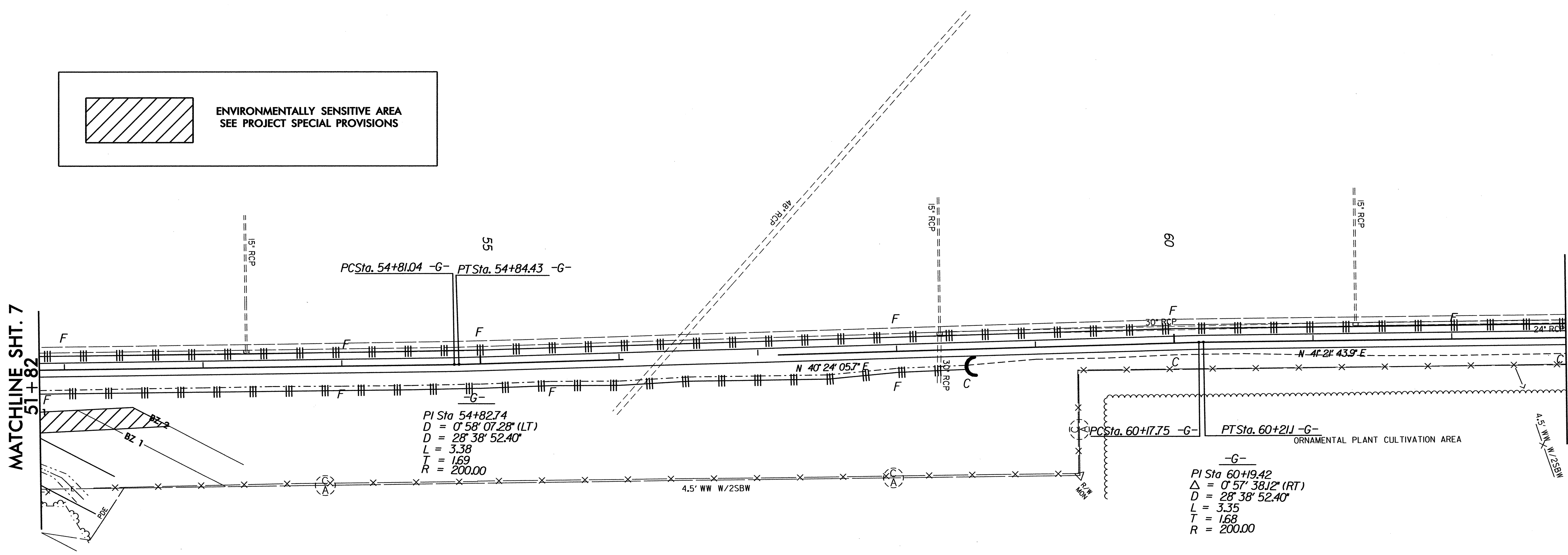
-G-

PI Sta 46+24.82  
 $\Delta = 87^{\circ} 08' 57.64''$  (LT)  
 $D = 143' 14'' 22.02''$   
 $L = 60.84$   
 $T = 38.06$   
 $R = 40.00$

<b>BIKE TRAIL ALONG EDWARDS MILL ROAD</b>			
DIVISION 05    WAKE COUNTY    RALEIGH			
REVISIONS	INIT.	DATE	SCALE: _____ DATE: 9-22-2010 PREPARED BY: B. WILLIAMS REVIEWED BY: _____ REVIEWED BY: _____
<b>N.C. DEPARTMENT of TRANSPORTATION</b> <b>DIVISION of HIGHWAYS</b> <b>DIVISION FIVE DESIGN UNIT</b>			



 ENVIRONMENTALLY SENSITIVE AREA  
SEE PROJECT SPECIAL PROVISIONS



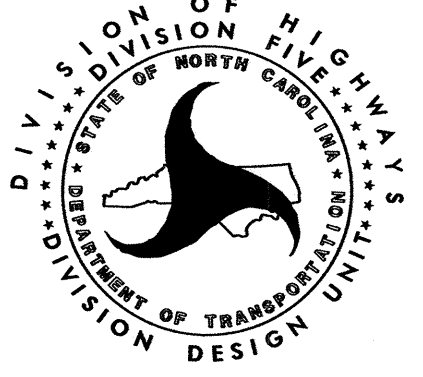
MATCHLINE SHT. 7  
51+82

MATCHLINE SHT. 9  
62+82

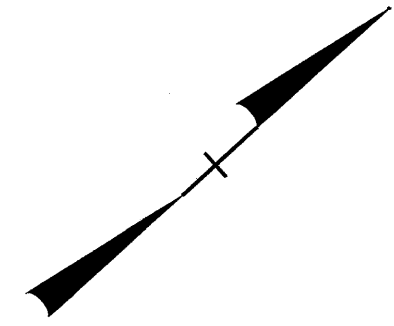
PCSta. 54+81.04 -G- PTSta. 54+84.43 -G-

PI Sta 54+82.74  
D = 0° 58' 07.28" (LT)  
D = 28° 38' 52.40"  
L = 3.38  
T = 1.69  
R = 200.00

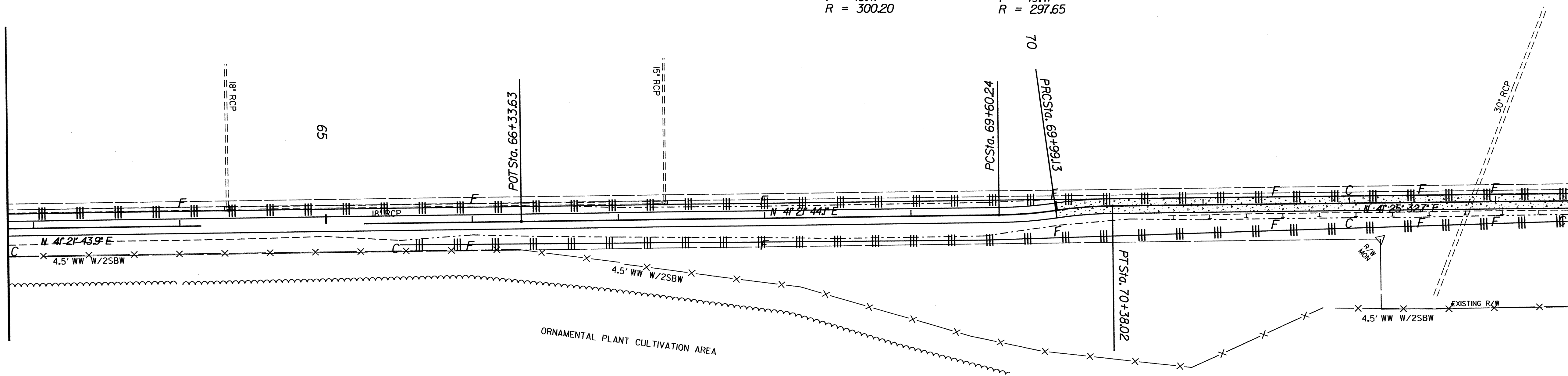
-G-  
PI Sta 60+19.42  
Δ = 0° 57' 38.12" (RT)  
D = 28° 38' 52.40"  
L = 3.35  
T = 1.68  
R = 200.00

<b>BIKE TRAIL ALONG EDWARDS MILL ROAD</b>		
DIVISION 05    WAKE COUNTY    RALEIGH		
REVISIONS	INIT.	DATE
<b>N.C. DEPARTMENT of TRANSPORTATION DIVISION of HIGHWAYS DIVISION FIVE DESIGN UNIT</b>		SCALE:    DATE: 9-22-2010 PREPARED BY: B. WILLIAMS REVIEWED BY: REVIEWED BY:





MATCH LINE SHT. 8  
62+82



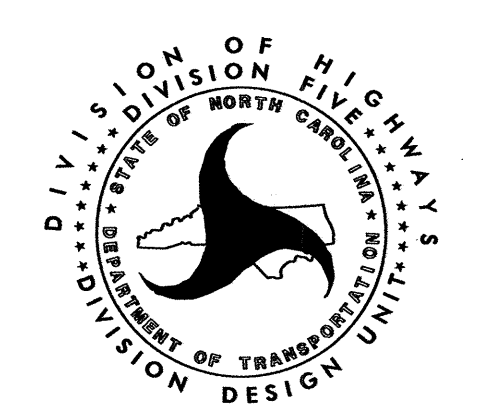
MATCH LINE SHT 9  
Sta. 73+50

**BIKE TRAIL ALONG  
EDWARDS MILL ROAD**

DIVISION 05 WAKE COUNTY RALEIGH

REVISIONS	INIT.	DATE

**N.C. DEPARTMENT of TRANSPORTATION  
DIVISION of HIGHWAYS  
DIVISION FIVE DESIGN UNIT**

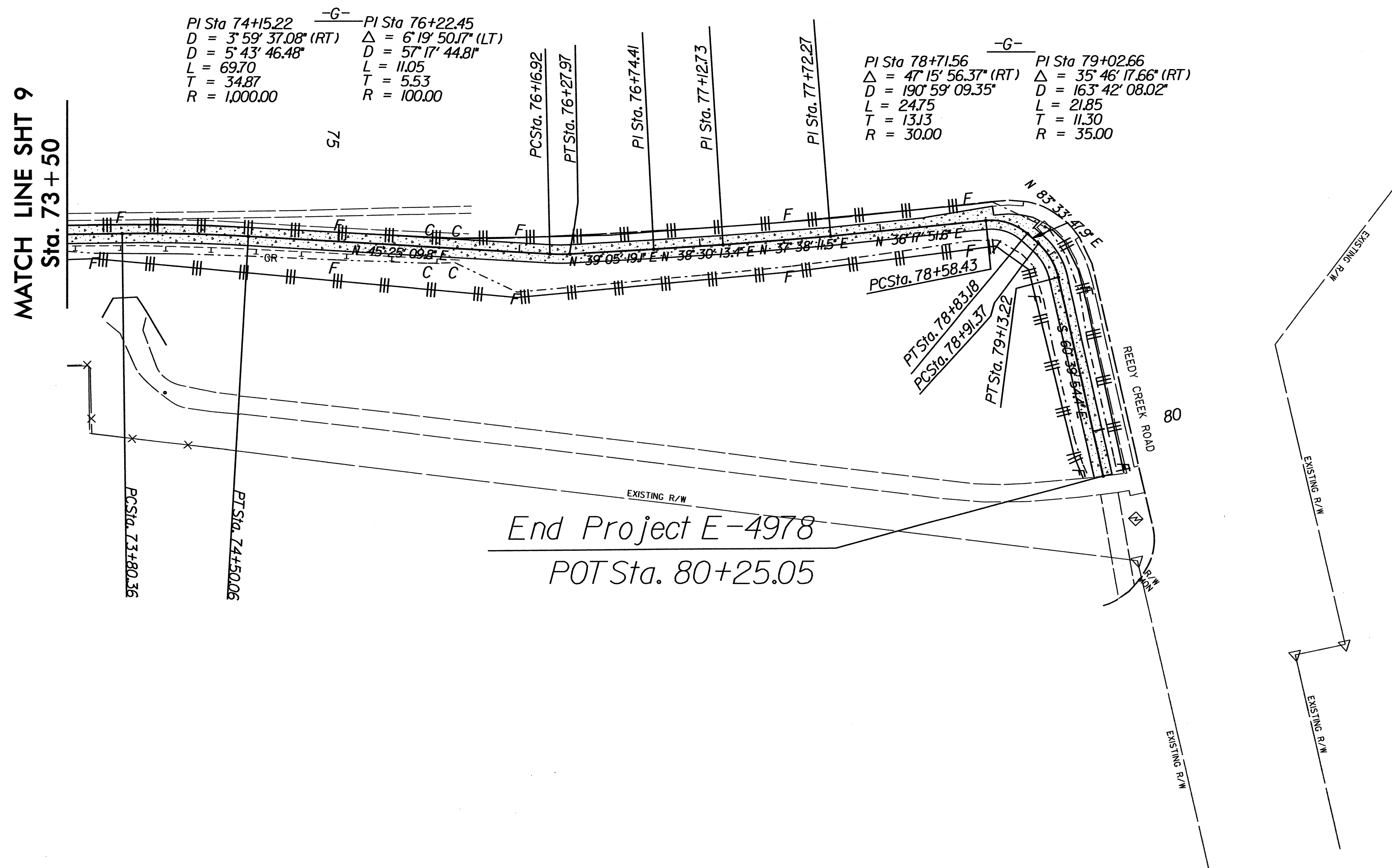
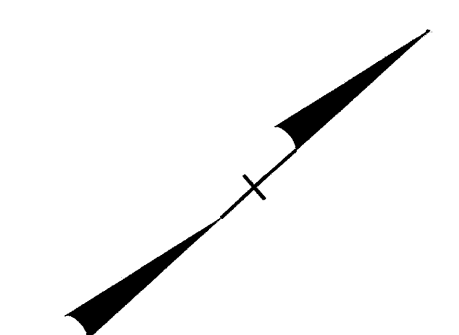


SCALE: DATE: 9-22-2010

PREPARED BY: B. WILLIAMS

REVIEWED BY:

REVIEWED BY:



-G-  
 PI Sta 74+15.22    PI Sta 76+22.45  
 D = 3° 59' 37.08" (RT)    Δ = 6° 19' 50.17" (LT)  
 D = 5° 43' 46.48"    D = 57° 17' 44.8"  
 L = 69.70    L = 11.05  
 T = 34.87    T = 5.53  
 R = 1,000.00    R = 100.00

-G-  
 PI Sta 78+71.56    PI Sta 79+02.66  
 Δ = 47° 15' 56.37" (RT)    Δ = 35° 46' 17.66" (RT)  
 D = 190° 59' 09.35"    D = 163° 42' 08.02"  
 L = 24.75    L = 21.85  
 T = 13.13    T = 11.30  
 R = 30.00    R = 35.00

End Project E-4978  
 POT Sta. 80+25.05

<b>BIKE TRAIL ALONG EDWARDS MILL ROAD</b>		
DIVISION 05    WAKE COUNTY    RALEIGH		
REVISIONS	INIT.	DATE
<b>N.C. DEPARTMENT of TRANSPORTATION DIVISION of HIGHWAYS DIVISION FIVE DESIGN UNIT</b>		SCALE:    DATE: 9-22-2010 PREPARED BY: B. WILLIAMS REVIEWED BY: REVIEWED BY: