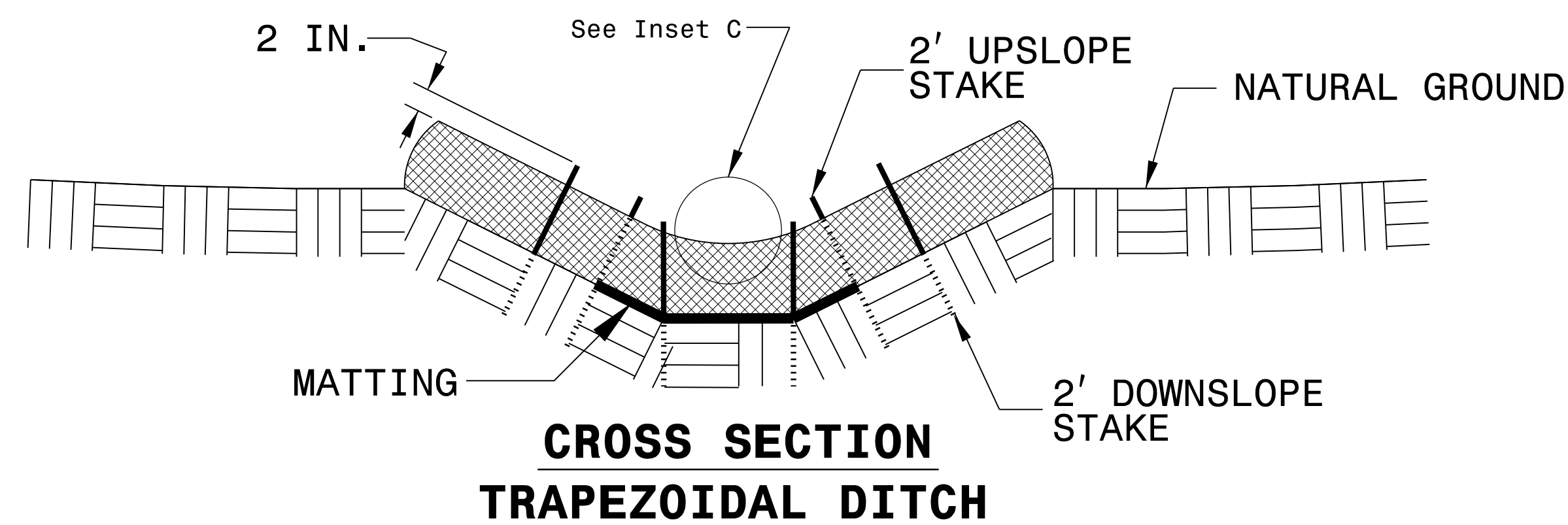
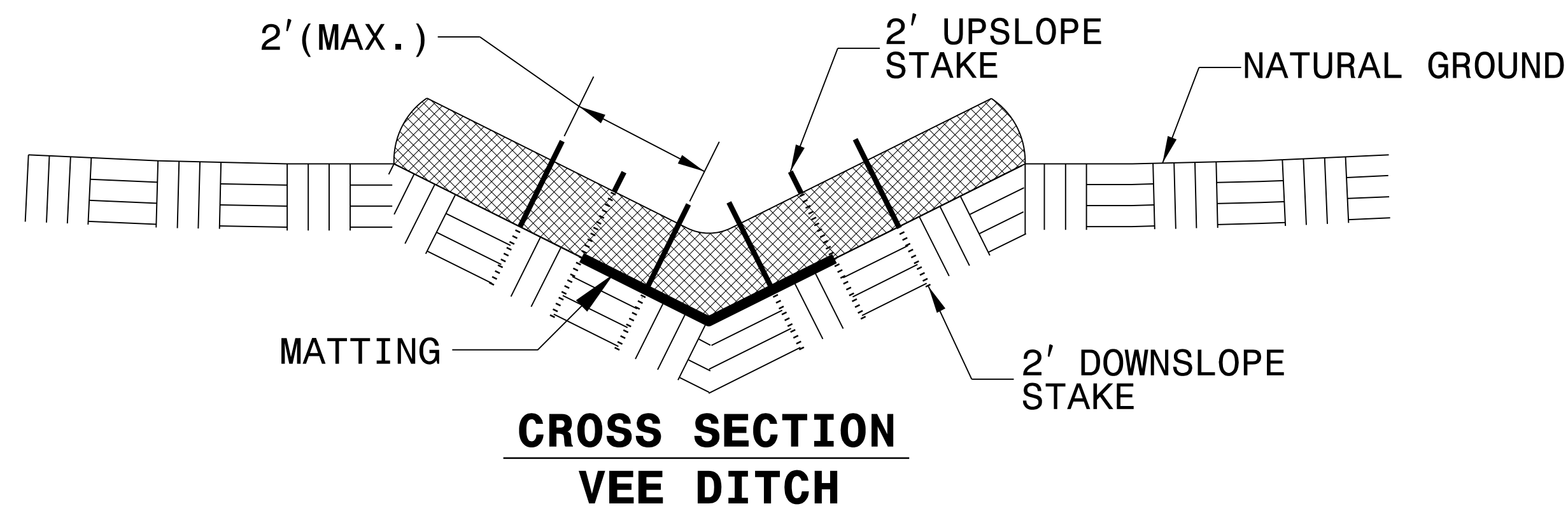
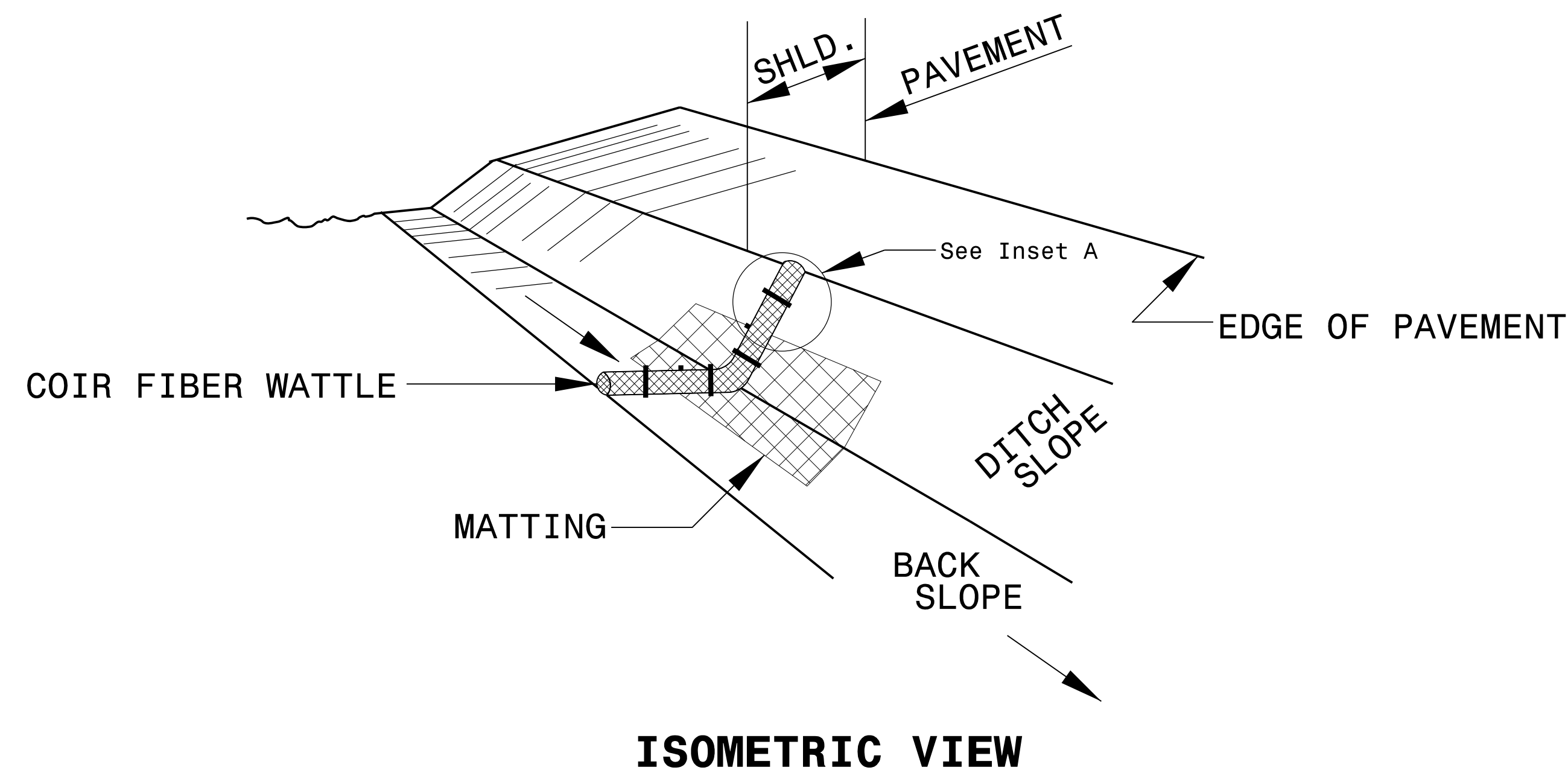




PROJECT REFERENCE NO. 1-5711	SHEET NO. EC-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# COIR FIBER WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL



**NOTES:**

USE MINIMUM 12 IN. DIAMETER COIR FIBER (COCONUT FIBER) 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.

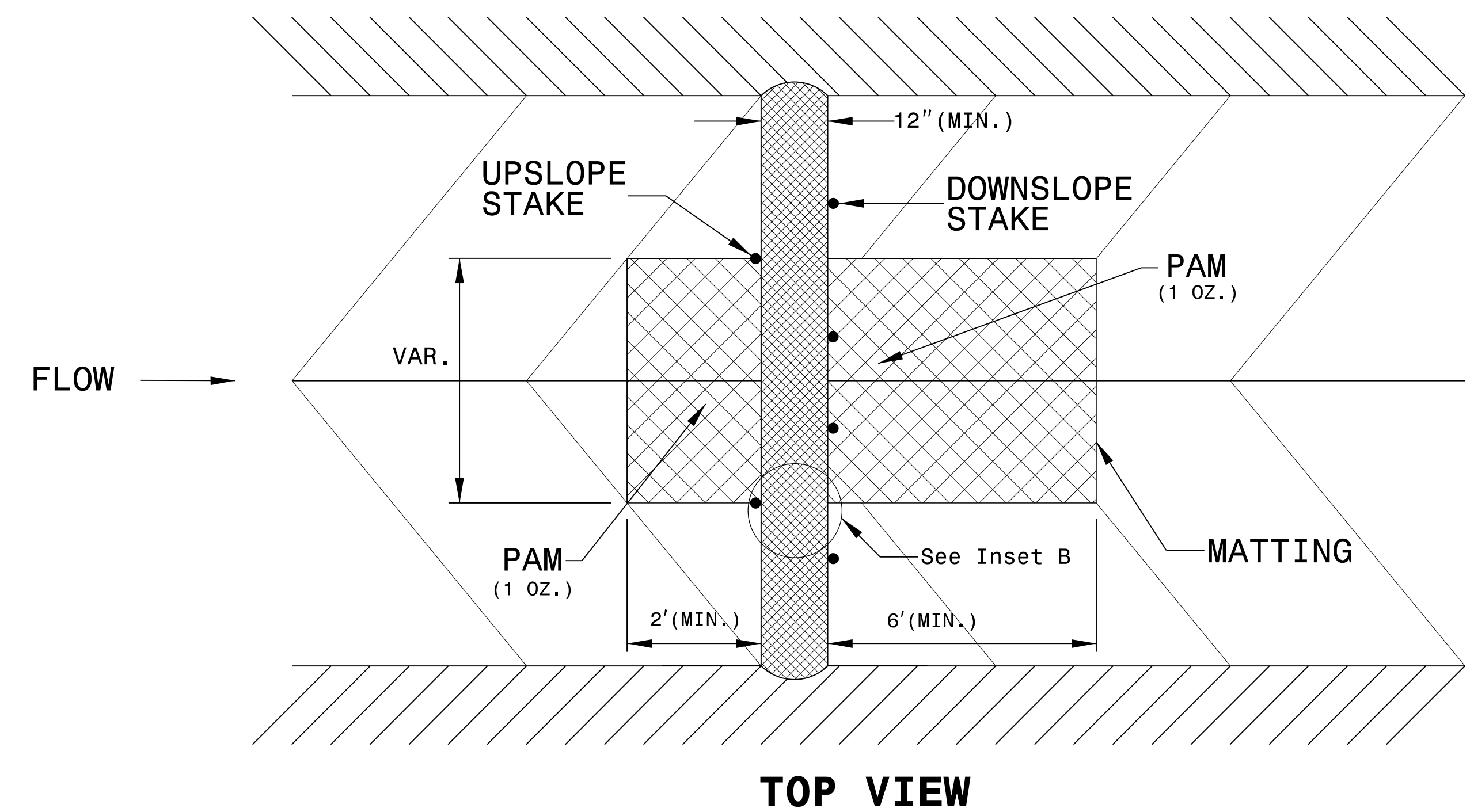
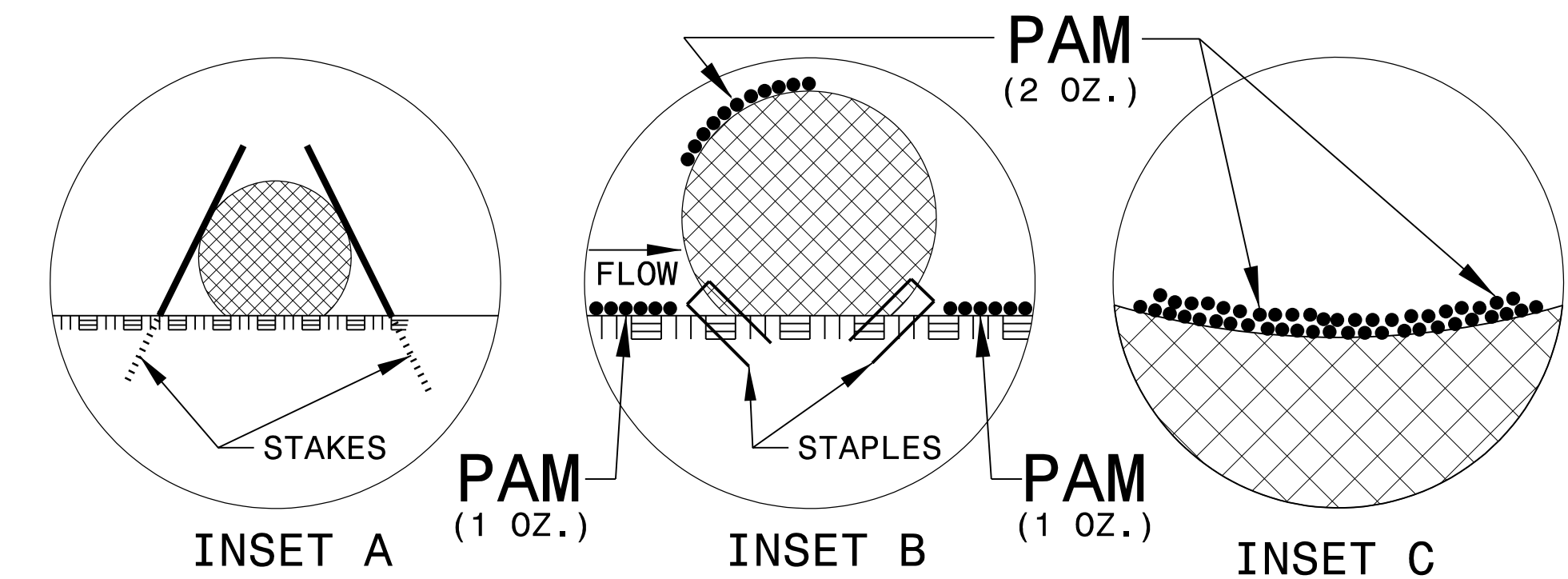
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

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.

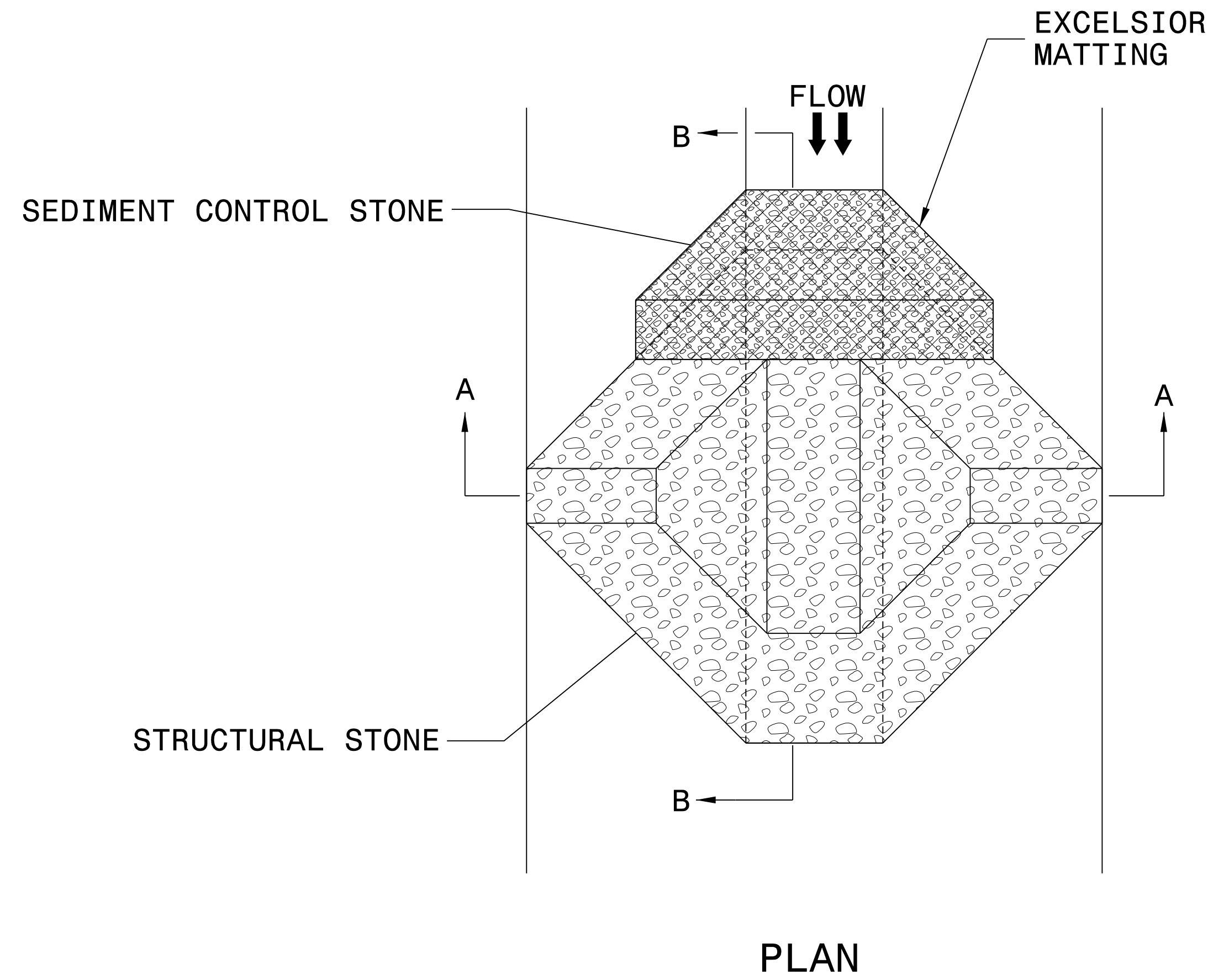
PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH WATTLE.

INITIALLY APPLY 2 OUNCES OF ANIONIC OR NEUTRALLY CHARGED PAM OVER WATTLE WHERE WATER WILL FLOW AND 1 OUNCE OF PAM ON MATTING ON EACH SIDE OF WATTLE. REAPPLY PAM AFTER EVERY RAINFALL EVENT THAT IS EQUAL TO OR EXCEEDS 0.50 IN.



PROJECT REFERENCE NO. 1-5711	SHEET NO. EC-2A
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# TEMPORARY ROCK SILT CHECK TYPE 'A' WITH EXCELSIOR MATTING AND POLYACRYLAMIDE (PAM)



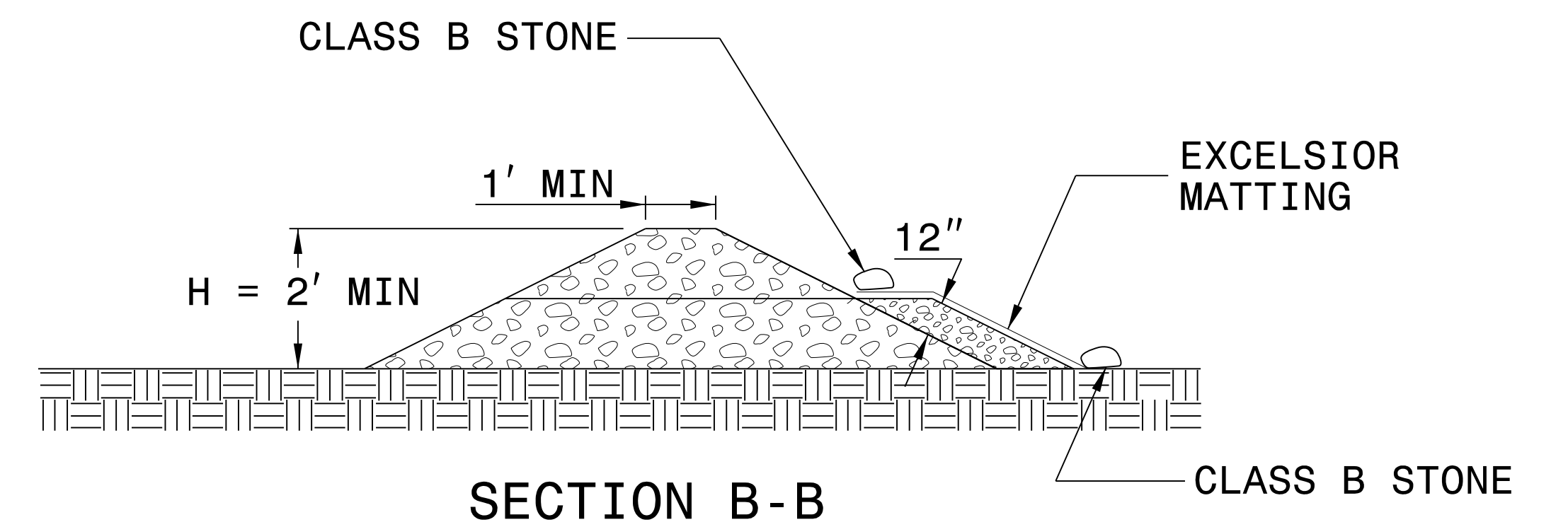
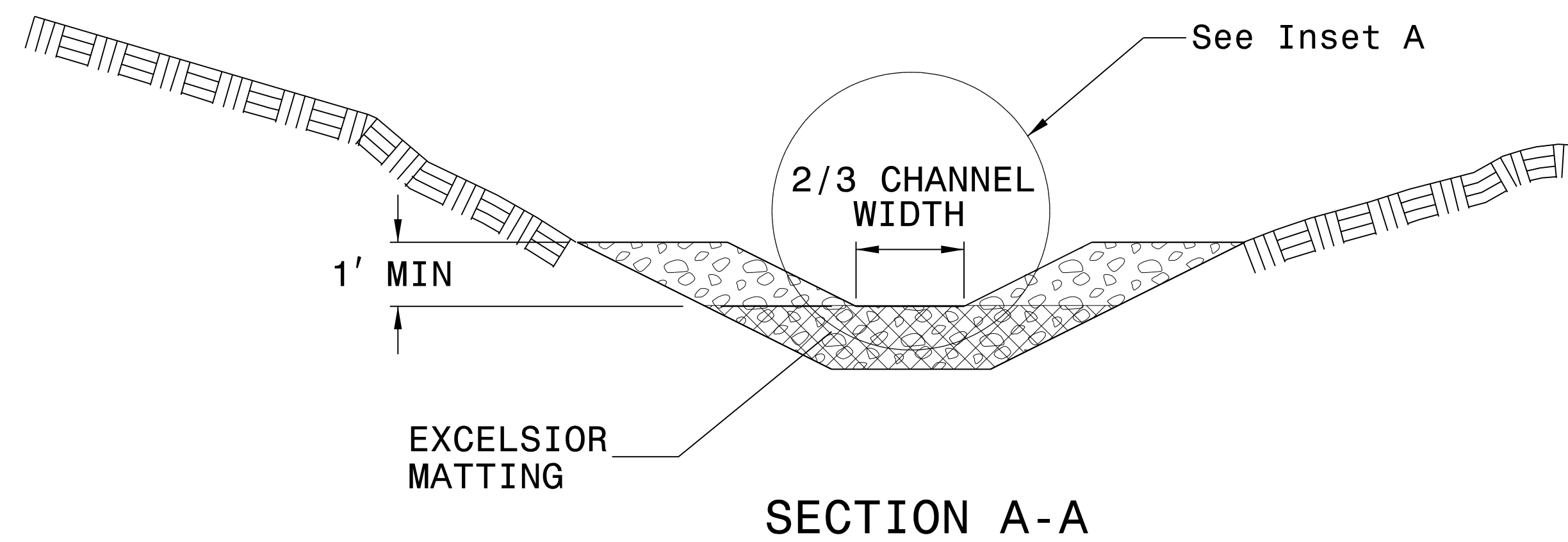
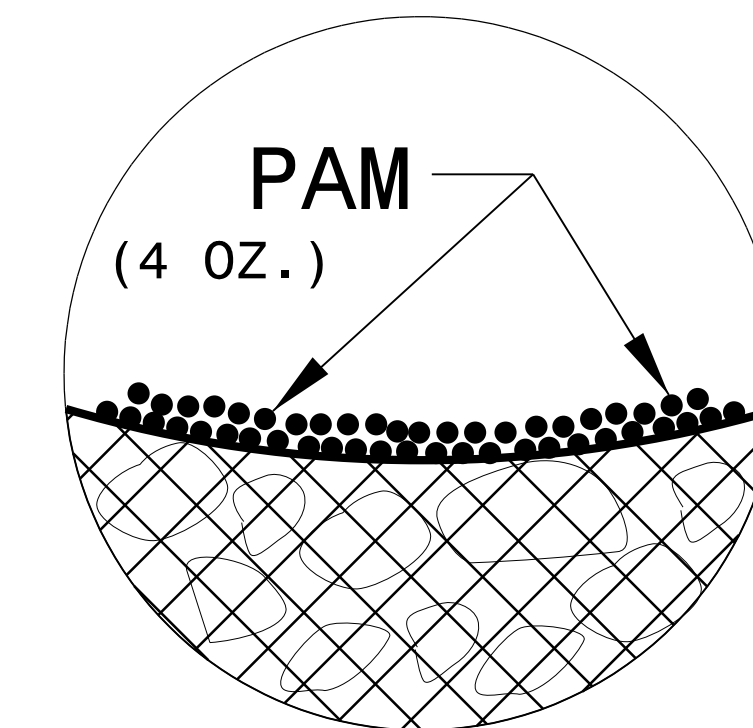
**NOTES:**

INSTALL TEMPORARY ROCK SILT CHECK TYPE A IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1633.01.

USE EXCELSIOR FOR MATTING MATERIAL AND ANCHOR MATTING SECTION AT TOP AND BOTTOM WITH CLASS B STONE.

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 ROCK SILT CHECK.

INITIALLY APPLY 4 OUNCES OF POLYACRYLAMIDE (PAM) TO TOP OF MATTING SECTION AND AFTER EVERY RAINFALL EVENT THAT EQUALS OR EXCEEDS 0.50 INCHES.



NOT TO SCALE

DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA

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PROJECT REFERENCE NO. <i>1-5711</i>	SHEET NO. <i>EC-3</i>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# ***SOIL STABILIZATION TIMEFRAMES***

<i>SITE DESCRIPTION</i>	<i>STABILIZATION TIME</i>	<i>TIMEFRAME EXCEPTIONS</i>
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH.
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE, EXCEPT FOR PERIMETERS AND HQW ZONES.



CLEARING AND GRUBBING  
EROSION CONTROL FOR  
CONSTRUCTION SHEET 4

NOTE:  
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B  
AND TEMPORARY ROCK SILT CHECKS TYPE - A AT  
DRAINAGE OUTLETS.

NOTE:  
UTILIZE FABRIC INSERT INLET PROTECTION  
DEVICES IN LIEU OF ROCK INLET SEDIMENT  
TRAPS, TYPE C TO AVOID IMPOUNDMENT  
OF WATER IN ROADWAY OPEN TO TRAFFIC

-L-  
PI Sta 19+55.91  
 $\Delta = 5' 55' 08.8''$  (LT)  
 $D = 1' 29' 59.6''$   
 $L = 394.64'$   
 $T = 197.49'$   
 $R = 3,820.00'$   
 $e = 3\%$  (Exist)  
 $R.O. = 265' (53' Inc)$

# LOCHNER

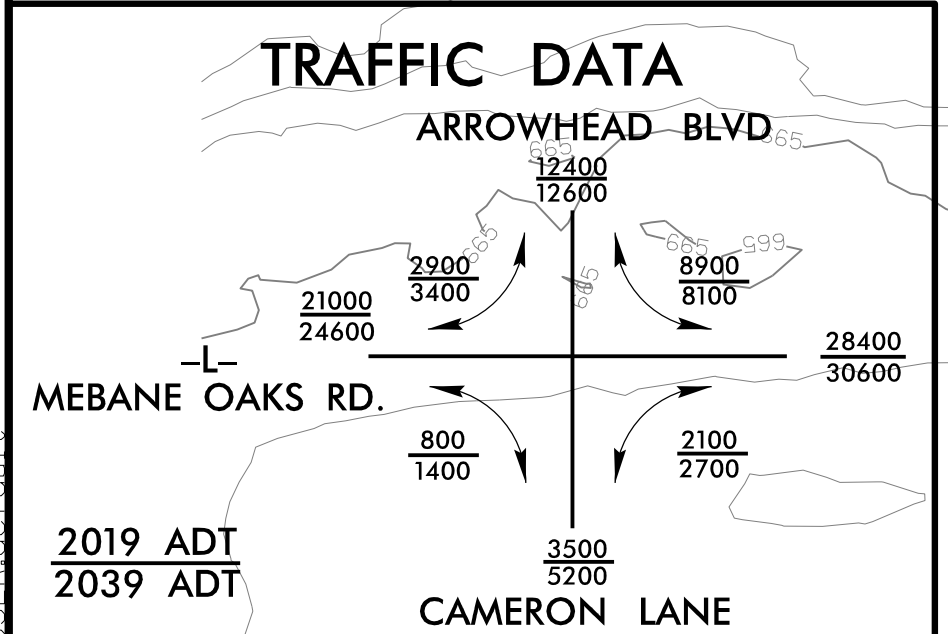
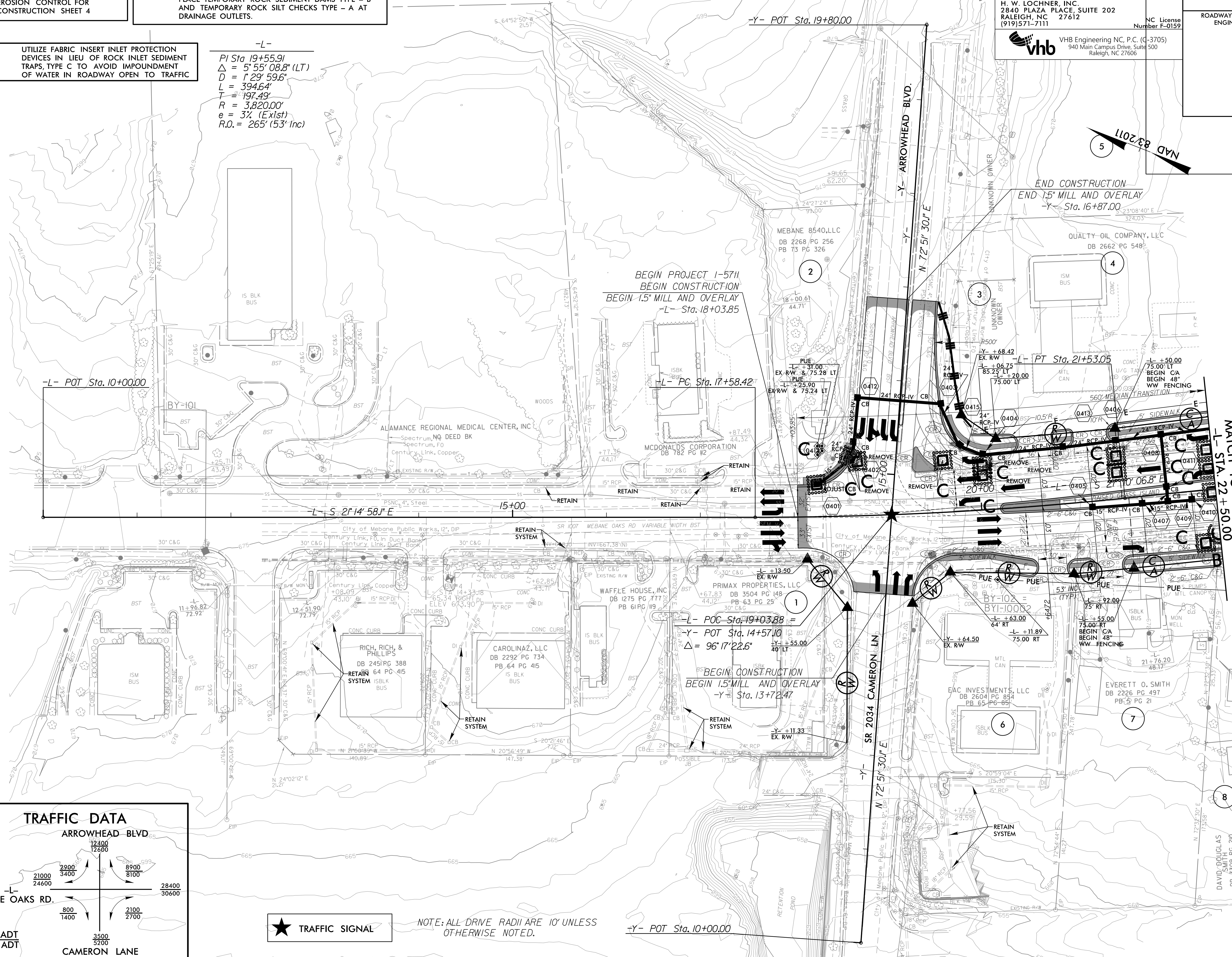
H. W. LOCHNER, INC.  
2840 PLAZA PLACE, SUITE 202  
RALEIGH, NC 27612  
(919) 571-7111

NC License  
Number E-0159



VHB Engineering NC, P.C. (C-3705)  
940 Main Campus Drive, Suite 500  
Raleigh, NC 27606

PROJECT REFERENCE NO. I-5711	SHEET NO. EC-04/CONST.04
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	



NOTE: ALL DRIVE RADII ARE 10' UNLESS OTHERWISE NOTED.

-Y- POT Sta. 10+00.00

MATCH TO SHEET 5  
-L- STA 22+50.00



CLEARING AND GRUBBING  
EROSION CONTROL FOR  
CONSTRUCTION SHEET 6

NOTE:  
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B  
AND TEMPORARY ROCK SILT CHECKS TYPE - A AT  
DRAINAGE OUTLETS.

NOTE:  
UTILIZE FABRIC INSERT INLET PROTECTION  
DEVICES IN LIEU OF ROCK INLET SEDIMENT  
TRAPS, TYPE C TO AVOID IMPOUNDMENT  
OF WATER IN ROADWAY OPEN TO TRAFFIC

# LOCHNER

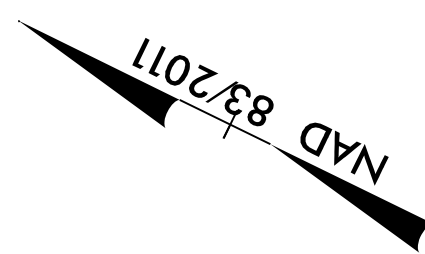
H. W. LOCHNER, INC.  
2840 PLAZA PLACE, SUITE 202  
RALEIGH, NC 27612  
(919) 571-7111

NC License  
Number F-0159



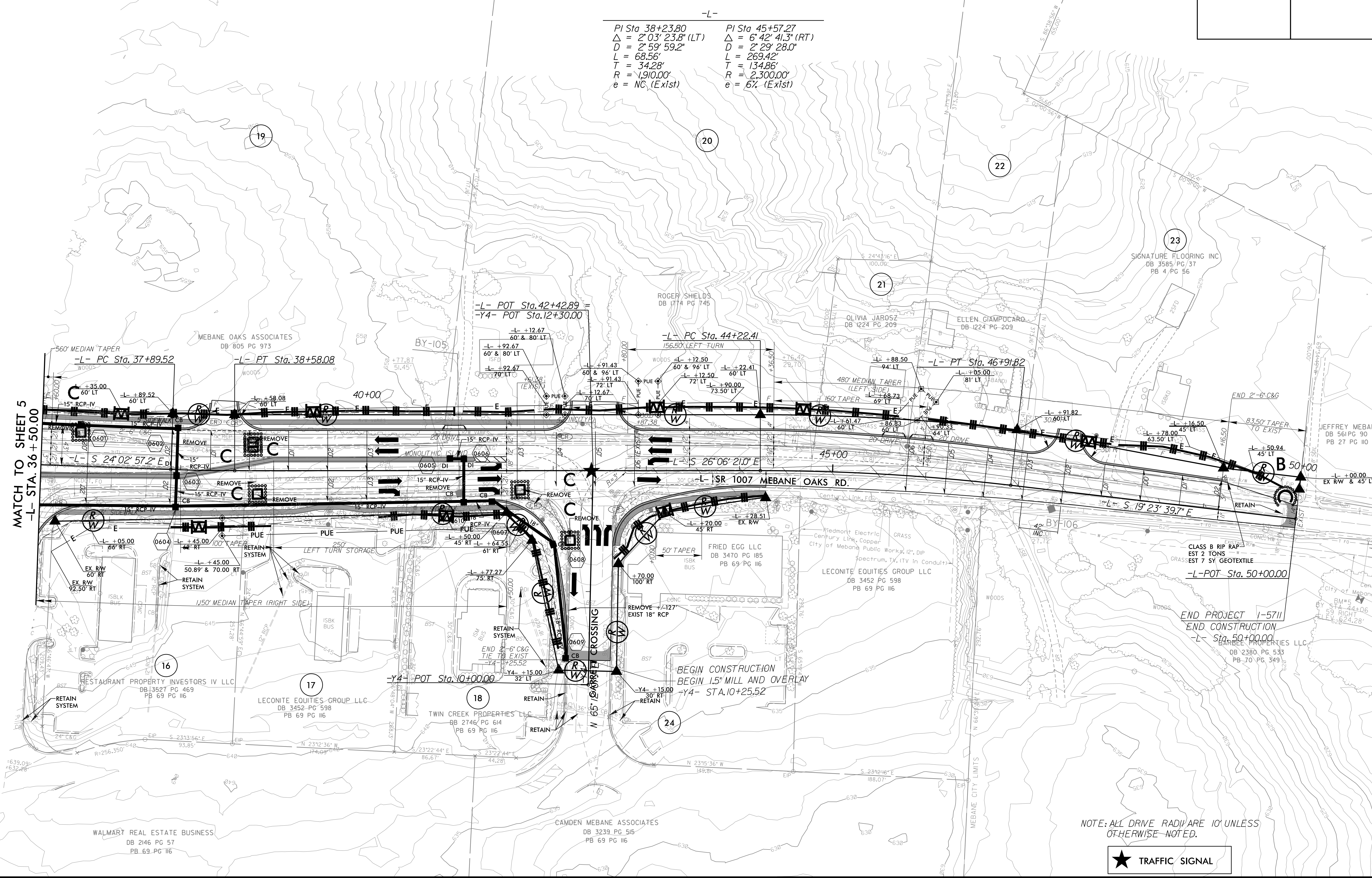
VHB Engineering NC, P.C. (C-3705)  
940 Main Campus Drive, Suite 500  
Raleigh, NC 27606

PROJECT REFERENCE NO. I-5711	SHEET NO. EC-06/CONST.06
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



-L-

PI Sta 38+23.80 Δ = 2° 03' 23.8" (LT) D = 2' 59' 59.2" L = 68.56' T = 34.28' R = 1,910.00' e = NC, (Exist)	PI Sta 45+57.27 Δ = 6° 42' 41.3" (RT) D = 2' 29' 28.0" L = 269.42' T = 134.86' R = 2,300.00' e = 6%, (Exist)
--	--



MATCH TO SHEET 5  
-L- STA. 36+50.00

END PROJECT I-5711  
END CONSTRUCTION  
-L- STA. 50+00.00

NOTE: ALL DRIVE RADII ARE 10' UNLESS  
OTHERWISE NOTED.



TRAFFIC SIGNAL



8.17.09

CLEARING AND GRUBBING  
EROSION CONTROL FOR  
CONSTRUCTION SHEET 7

NOTE:  
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B  
AND TEMPORARY ROCK SILT CHECKS TYPE - A AT  
DRAINAGE OUTLETS.

NOTE:  
UTILIZE FABRIC INSERT INLET PROTECTION  
DEVICES IN LIEU OF ROCK INLET SEDIMENT  
TRAPS, TYPE C TO AVOID IMPOUNDMENT  
OF WATER IN ROADWAY OPEN TO TRAFFIC

# LOCHNER

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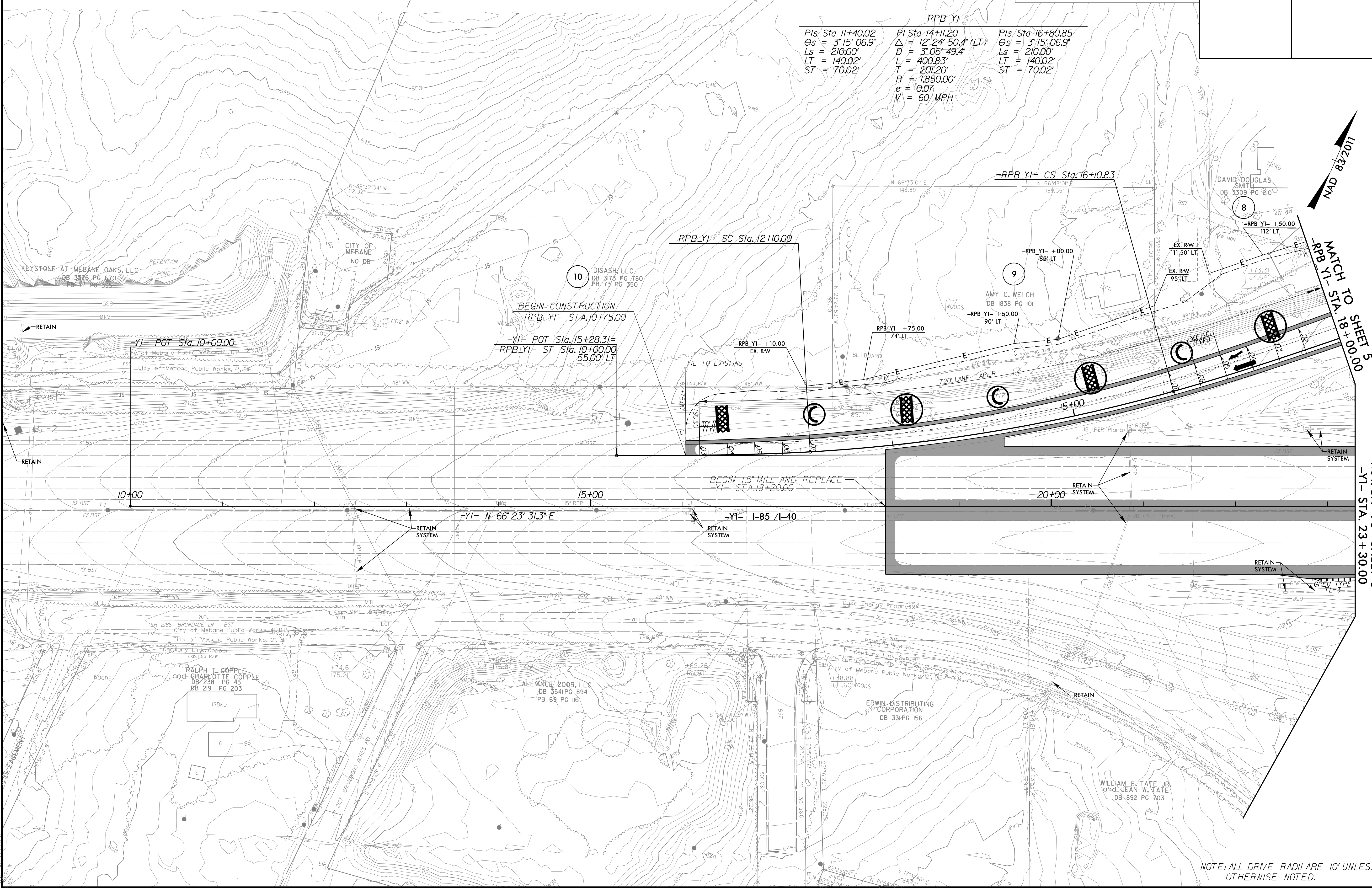


VHB Engineering NC, P.C. (C-3705)  
940 Main Campus Drive, Suite 500  
Raleigh, NC 27606

PROJECT REFERENCE NO. I-5711	SHEET NO. EC-07/CONST.07
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

**-RPB YI-**

PIs Sta 11+40.02 θs = 3°15'06.9" Ls = 210.00' LT = 140.02' ST = 70.02'	PI Sta 14+11.20 Δ = 12°24'50.4" (LT) D = 3°05'49.4" L = 400.83' T = 201.20' R = 1,850.00' e = 0.07 V = 60 MPH	PIs Sta 16+80.85 θs = 3°15'06.9" Ls = 210.00' LT = 140.02' ST = 70.02'
--	--	--



NOTE: ALL DRIVE RADII ARE 10' UNLESS OTHERWISE NOTED.

12/16/2019 12:58:11 PM I-5711.REU.CG.PSH07.dgn

NOTE: UTILIZE FABRIC INSERT INLET PROTECTION DEVICES IN LIEU OF ROCK INLET SEDIMENT TRAPS, TYPE C TO AVOID IMPOUNDMENT OF WATER IN ROADWAY OPEN TO TRAFFIC

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 8

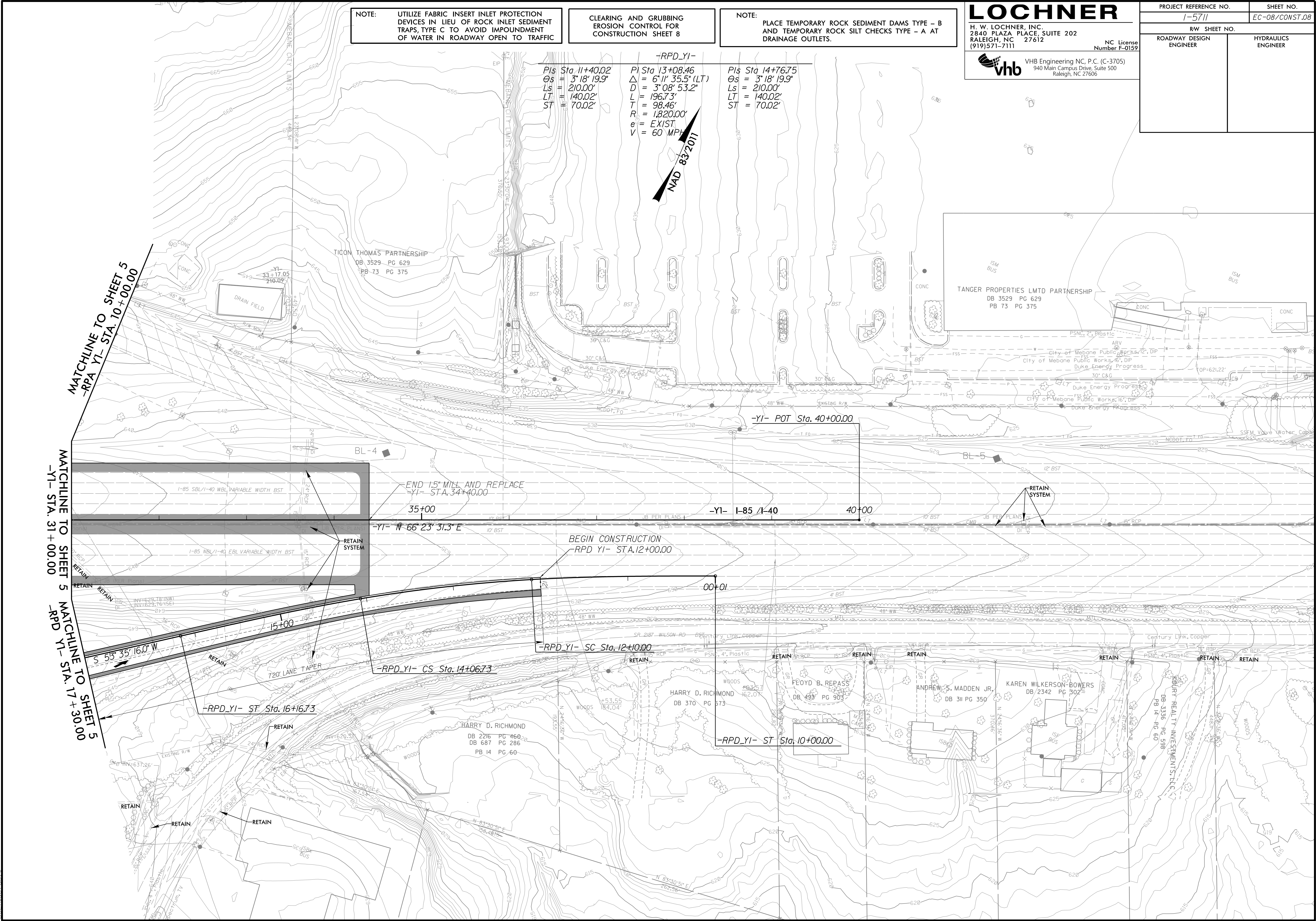
NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.

**LOCHNER**  
 H. W. LOCHNER, INC.  
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 RALEIGH, NC 27612  
 (919) 571-7111

NC License  
 Number E-0159

**vhb**  
 VHB Engineering NC, P.C. (C-3705)  
 940 Main Campus Drive, Suite 500  
 Raleigh, NC 27606

PROJECT REFERENCE NO. 1-5711	SHEET NO. EC-08/CONST.08
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



**-RPD\_YI-**

Pls Sta 11+40.02	Pls Sta 13+08.46	Pls Sta 14+76.75
Θs = 3° 18' 19.9"	Δ = 6° 11' 35.5" (LT)	Θs = 3° 18' 19.9"
Ls = 210.00'	D = 3° 08' 53.2"	Ls = 210.00'
LT = 140.02'	L = 196.73'	LT = 140.02'
ST = 70.02'	T = 98.46'	ST = 70.02'
	R <sub>i</sub> = 1,820.00'	
	e = EXIST	
	V = 60 MPH	

**NAD 83 2011**

MATCHLINE TO SHEET 5  
 -RPA YI- STA. 10+00.00

MATCHLINE TO SHEET 5  
 -YI- STA. 31+00.00

MATCHLINE TO SHEET 5  
 -RPD YI- STA. 17+30.00

END 1.5" MILL AND REPLACE  
 -YI- STA. 34+40.00

-YI- N 66° 23' 31.3" E

BEGIN CONSTRUCTION  
 -RPD YI- STA. 12+00.00

-RPD\_YI- SC Sta. 12+10.00

-RPD\_YI- CS Sta. 14+06.73

-RPD\_YI- ST Sta. 16+16.73

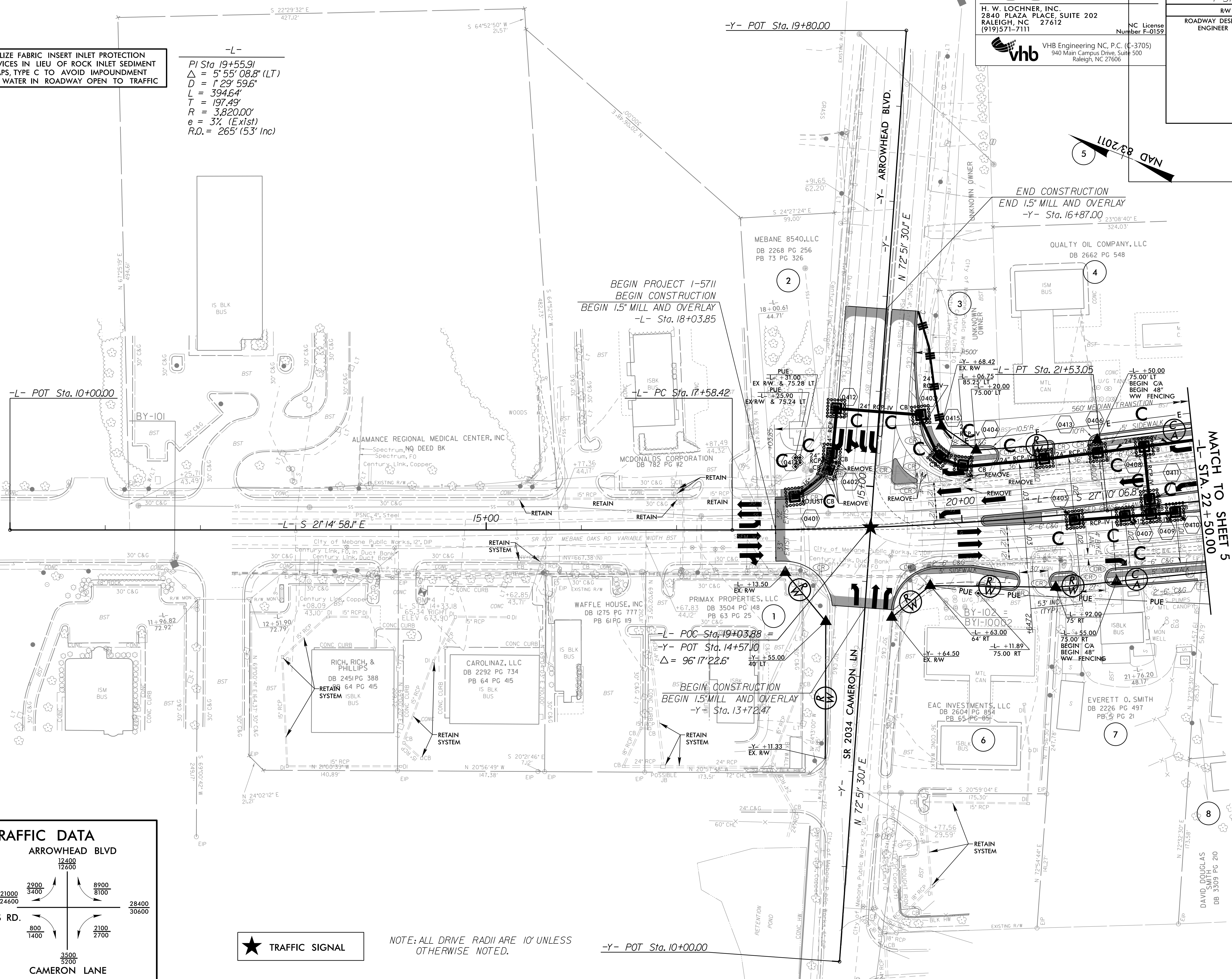
-RPD\_YI- ST Sta. 10+00.00



PROJECT REFERENCE NO. I-5711	SHEET NO. EC-09/CONST.04
R/W SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	

NOTE: UTILIZE FABRIC INSERT INLET PROTECTION DEVICES IN LIEU OF ROCK INLET SEDIMENT TRAPS, TYPE C TO AVOID IMPOUNDMENT OF WATER IN ROADWAY OPEN TO TRAFFIC

-L-  
PI Sta 19+55.91  
 $\Delta = 5' 55' 08.8" (LT)$   
 $D = 1' 29' 59.6"$   
 $L = 394.64'$   
 $T = 197.49'$   
 $R = 3,820.00'$   
 $e = 3\% (Exist)$   
 $R.O. = 265' (53' Inc)$



**TRAFFIC DATA**

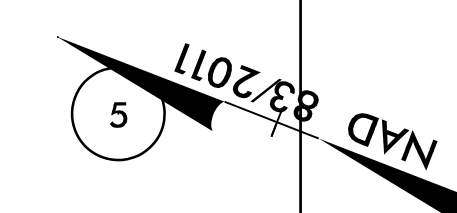
ARROWHEAD BLVD		12400 12600	
21000 24600	2900 3400	8900 8100	28400 30600
MEBANE OAKS RD.		800 1400	
3500 5200	2100 2700	CAMERON LANE	



NOTE: ALL DRIVE RADII ARE 10' UNLESS OTHERWISE NOTED.

-Y- POT Sta. 10+00.00

MATCH TO SHEET 5  
-L- STA. 22+50.00





8/17/99

# LOCHNER

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NC License  
Number F-0159

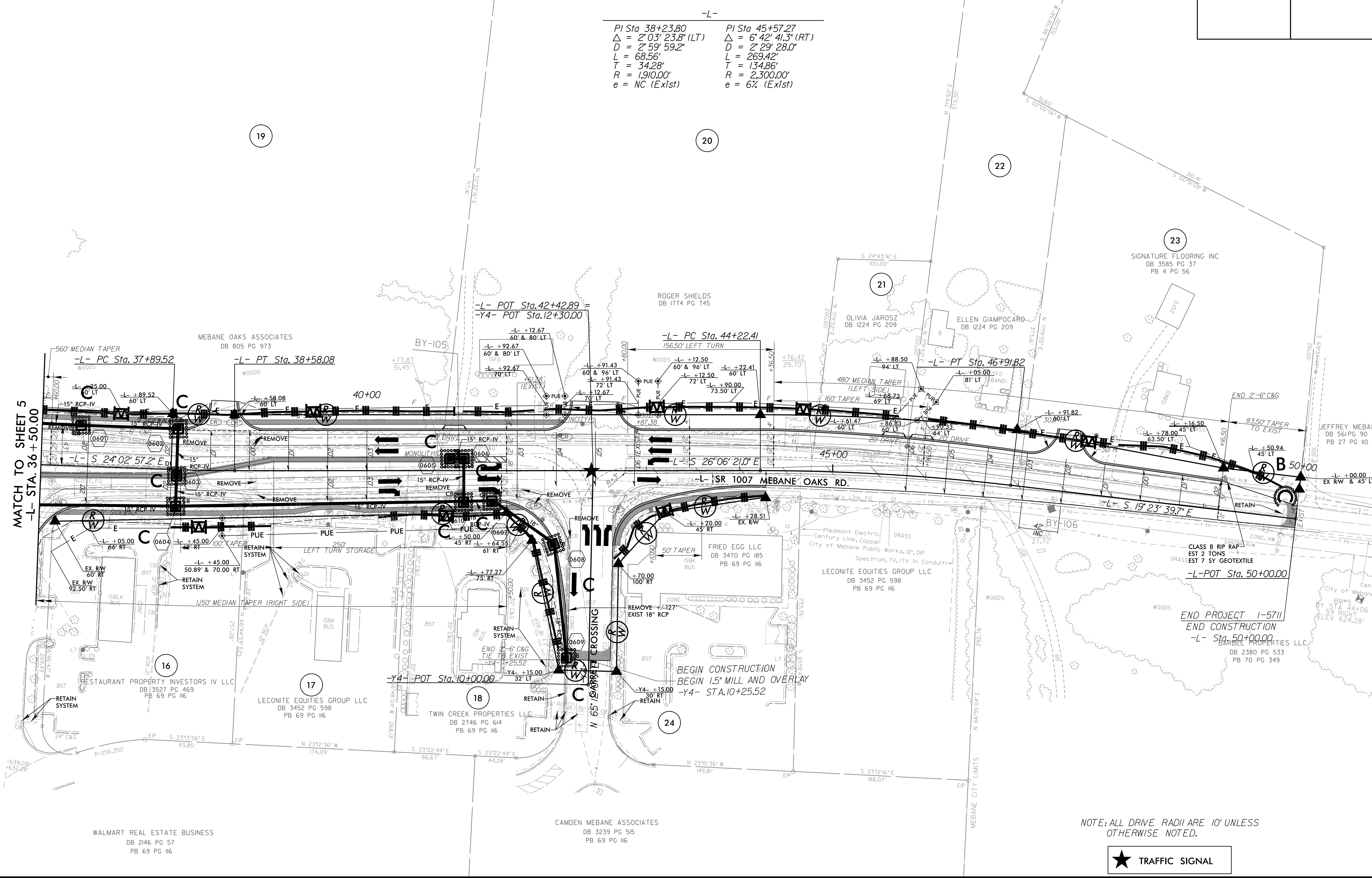
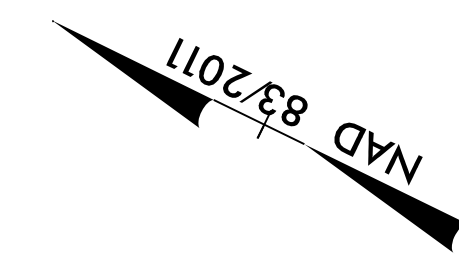


VHB Engineering NC, P.C. (C-3705)  
940 Main Campus Drive, Suite 500  
Raleigh, NC 27606

PROJECT REFERENCE NO. I-5711		SHEET NO. EC-II/CONST.06	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

NOTE: UTILIZE FABRIC INSERT INLET PROTECTION DEVICES IN LIEU OF ROCK INLET SEDIMENT TRAPS, TYPE C TO AVOID IMPOUNDMENT OF WATER IN ROADWAY OPEN TO TRAFFIC

-L-  
 PI Sta 38+23.80      PI Sta 45+57.27  
 $\Delta = 2^{\circ} 03' 23.8" (LT)$        $\Delta = 6^{\circ} 42' 41.3" (RT)$   
 $D = 2^{\circ} 59' 59.2"$        $D = 2^{\circ} 29' 28.0"$   
 $L = 68.56'$        $L = 269.42'$   
 $T = 34.28'$        $T = 134.86'$   
 $R = 1,910.00'$        $R = 2,300.00'$   
 $e = NC (Exist)$        $e = 6\% (Exist)$



MATCH TO SHEET 5  
-L- STA. 36+50.00

END PROJECT I-5711  
END CONSTRUCTION  
-L- Sta. 50+00.00

NOTE: ALL DRIVE RADII ARE 10' UNLESS OTHERWISE NOTED.



12/16/2019  
I:\Projects\I-5711\REV.FINAL\_PSH06.dgn  
PSH

WALMART REAL ESTATE BUSINESS  
DB 2146 PG 57  
PB 69 PG 116

CAMDEN MEBANE ASSOCIATES  
DB 3239 PG 515  
PB 69 PG 116

LECONITE EQUITIES GROUP LLC  
DB 3452 PG 598  
PB 69 PG 116

TWIN CREEK PROPERTIES LLC  
DB 2746 PG 614  
PB 69 PG 116

LECONITE EQUITIES GROUP LLC  
DB 3452 PG 598  
PB 69 PG 116

RESTAURANT PROPERTY INVESTORS IV LLC  
DB 3527 PG 469  
PB 69 PG 116

CLASS B RIP RAP  
EST 2 TONS  
EST 7 SY GEOTEXTILE

BEGIN CONSTRUCTION  
BEGIN 1.5" MILL AND OVERLAY  
-Y4- STA. 10+25.52

-Y4- POT Sta. 10+00.00

MEBANE OAKS ASSOCIATES  
DB 805 PG 973

ROGER SHIELDS  
DB 1774 PG 745

OLIVIA JAROSZ  
DB 1224 PG 209

ELLEN GIAMPOCARO  
DB 1224 PG 209

SIGNATURE FLOORING INC  
DB 3585 PG 37  
PB 4 PG 56

JEFFREY MEBANE  
DB 561 PG 90  
PB 27 PG 110

BARBLE PROPERTIES LLC  
DB 2380 PG 533  
PB 70 PG 349

8/17/99

NOTE: UTILIZE FABRIC INSERT INLET PROTECTION DEVICES IN LIEU OF ROCK INLET SEDIMENT TRAPS, TYPE C TO AVOID IMPOUNDMENT OF WATER IN ROADWAY OPEN TO TRAFFIC

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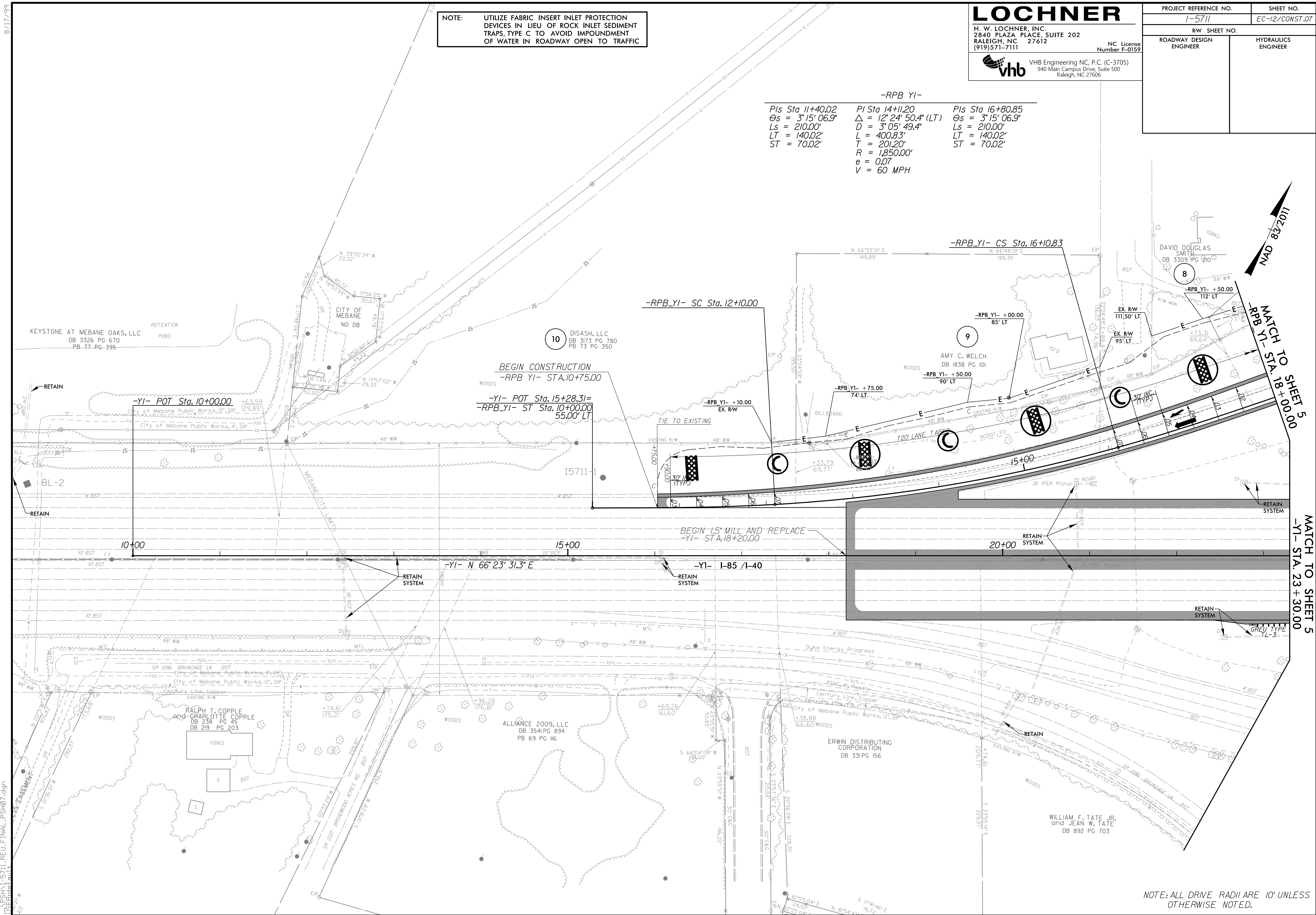


VHB Engineering NC, P.C. (C-3705)  
940 Main Campus Drive, Suite 500  
Raleigh, NC 27606

PROJECT REFERENCE NO. 1-5711	SHEET NO. EC-12/CONST.07
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-RPB YI-

Pls Sta 11+40.02 Θs = 3° 15' 06.9" Ls = 210.00' LT = 140.02' ST = 70.02'	Pls Sta 14+11.20 Δ = 12° 24' 50.4" (LT) D = 3° 05' 49.4" L = 400.83' T = 201.20' R = 1,850.00' e = 0.07 V = 60 MPH	Pls Sta 16+80.85 Θs = 3° 15' 06.9" Ls = 210.00' LT = 140.02' ST = 70.02'
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NOTE: ALL DRIVE RADII ARE 10' UNLESS OTHERWISE NOTED.

MATCH TO SHEET 5  
-YI- STA. 18+00.00  
MATCH TO SHEET 5  
-YI- STA. 23+30.00

