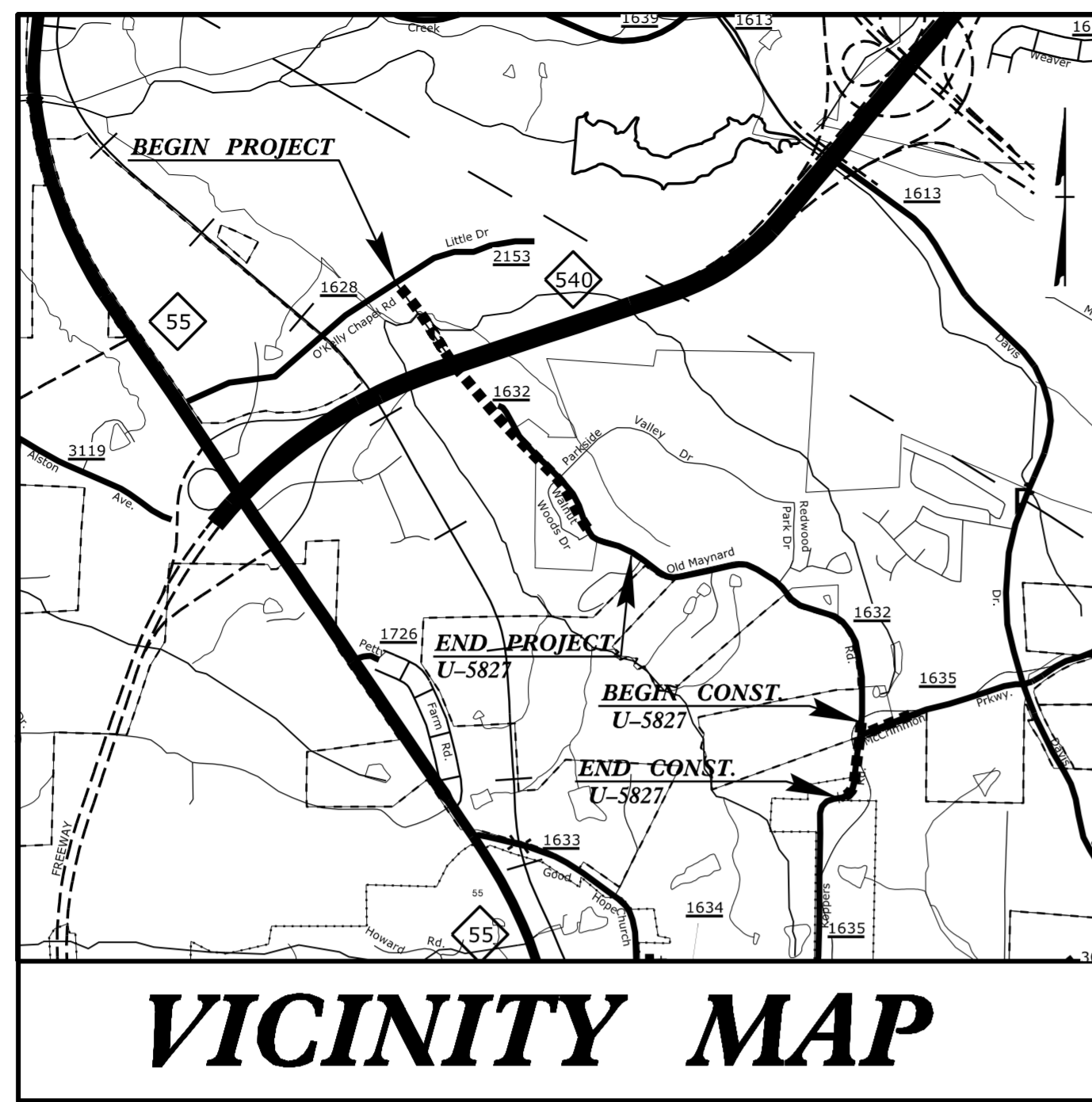


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TIP PROJECT: U-5827



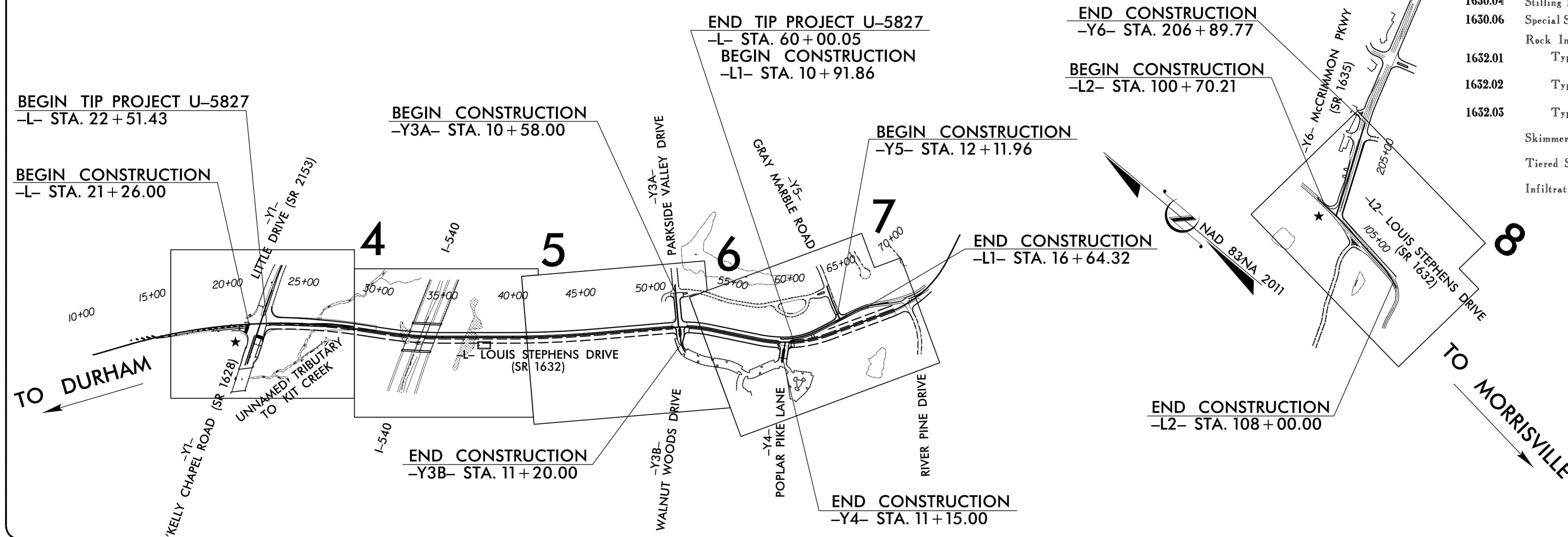
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL

WAKE COUNTY

**LOCATION: LOUIS STEPHENS DRIVE EXTENSION (SR 1632)
FROM O'KELLY CHAPEL ROAD (SR 1628)/LITTLE
DRIVE (SR 2153) IN RESEARCH TRIANGLE PARK
TO POPLAR PIKE LANE IN MORRISVILLE**

**TYPE OF WORK: GRADING, PAVING, DRAINAGE
& SIGNALS**



STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-5827	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
44400.1.1		PE	
44400.2.1		RW & UTIL	
44400.3.1		CONST	

EROSION AND SEDIMENT CONTROL MEASURES

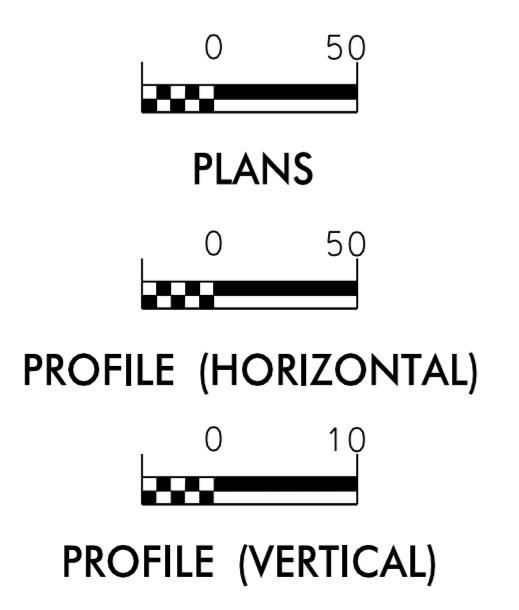
Std. #	Description	Symbol
1630.03	Temporary Silt Ditch	TD
1630.05	Temporary Diversion	TD
1605.01	Temporary Silt Fence	
1606.01	Special Sediment Control Fence	
1622.01	Temporary Berms and Slope Drains	TBD
1630.02	Silt Basin Type B	Silt Basin Symbol
1633.01	Temporary Rock Silt Check Type-A	Rock Silt Check Symbol
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	Rock Silt Check with PAM Symbol
1633.02	Temporary Rock Silt Check Type-B	Rock Silt Check Symbol
	Wattle/Coir Fiber Wattle	Wattle Symbol
	Wattle/Coir Fiber Wattle with Polyacrylamide (PAM)	Wattle with PAM Symbol
1634.01	Temporary Rock Sediment Dam Type-A	Rock Sediment Dam Symbol
1634.02	Temporary Rock Sediment Dam Type-B	Rock Sediment Dam Symbol
1635.01	Rock Pipe Inlet Sediment Trap Type-A	Rock Pipe Inlet Symbol
1635.02	Rock Pipe Inlet Sediment Trap Type-B	Rock Pipe Inlet Symbol
1630.04	Stilling Basin	Stilling Basin Symbol
1630.06	Special Stilling Basin	Special Stilling Basin Symbol
	Rock Inlet Sediment Trap:	
1632.01	Type A	Type A Symbol
1632.02	Type B	Type B Symbol
1632.03	Type C	Type C Symbol
	Skimmer Basin	Skimmer Basin Symbol
	Tiered Skimmer Basin	Tiered Skimmer Basin Symbol
	Infiltration Basin	Infiltration Basin Symbol

THIS PROJECT CONTAINS EROSION CONTROL PLANS FOR CLEARING AND GRUBBING PHASE OF CONSTRUCTION.

ENVIRONMENTALLY SENSITIVE AREA(S) EXIST ON THIS PROJECT
Refer To E. C. Special Provisions for Special Considerations.

THIS PROJECT HAS BEEN DESIGNED TO SENSITIVE WATERSHED STANDARDS.

GRAPHIC SCALE



THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH THE REGULATIONS SET FORTH BY THE NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE AUGUST 1, 2016 AND ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES DIVISION OF WATER RESOURCES.

Prepared in the Office of:
CH Engineering
3220 Glen Royal Road
Raleigh, NC 27617

Designed by:
Brian A Wiles, PE 3759
NAME LEVEL III CERTIFICATION NO.

Reviewed in the Office of:
ROADSIDE ENVIRONMENTAL UNIT
1 South Wilmington St.
Raleigh, NC 27611

2018 STANDARD SPECIFICATIONS

Reviewed by:
Wes Chandler, PE

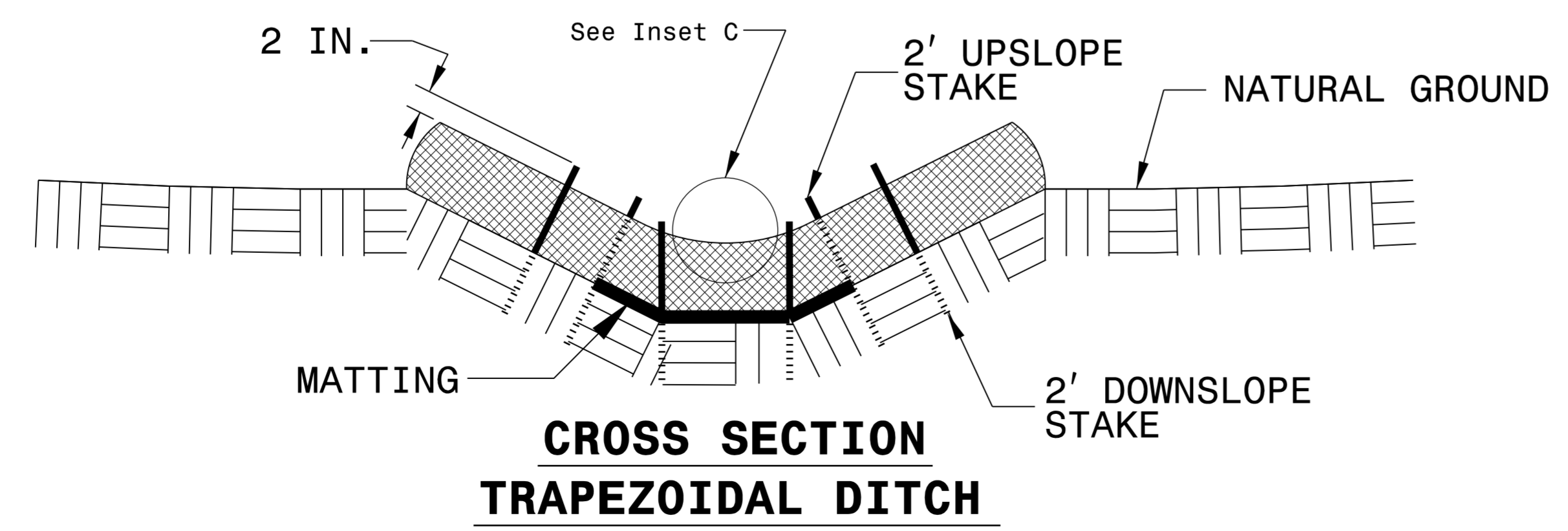
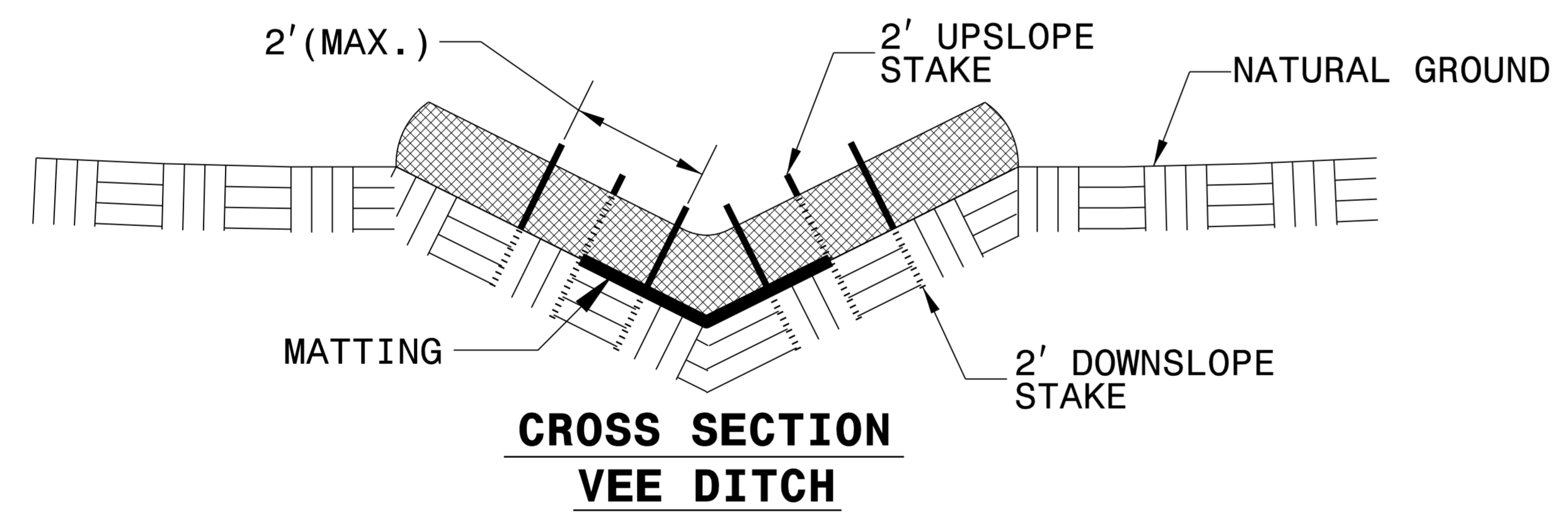
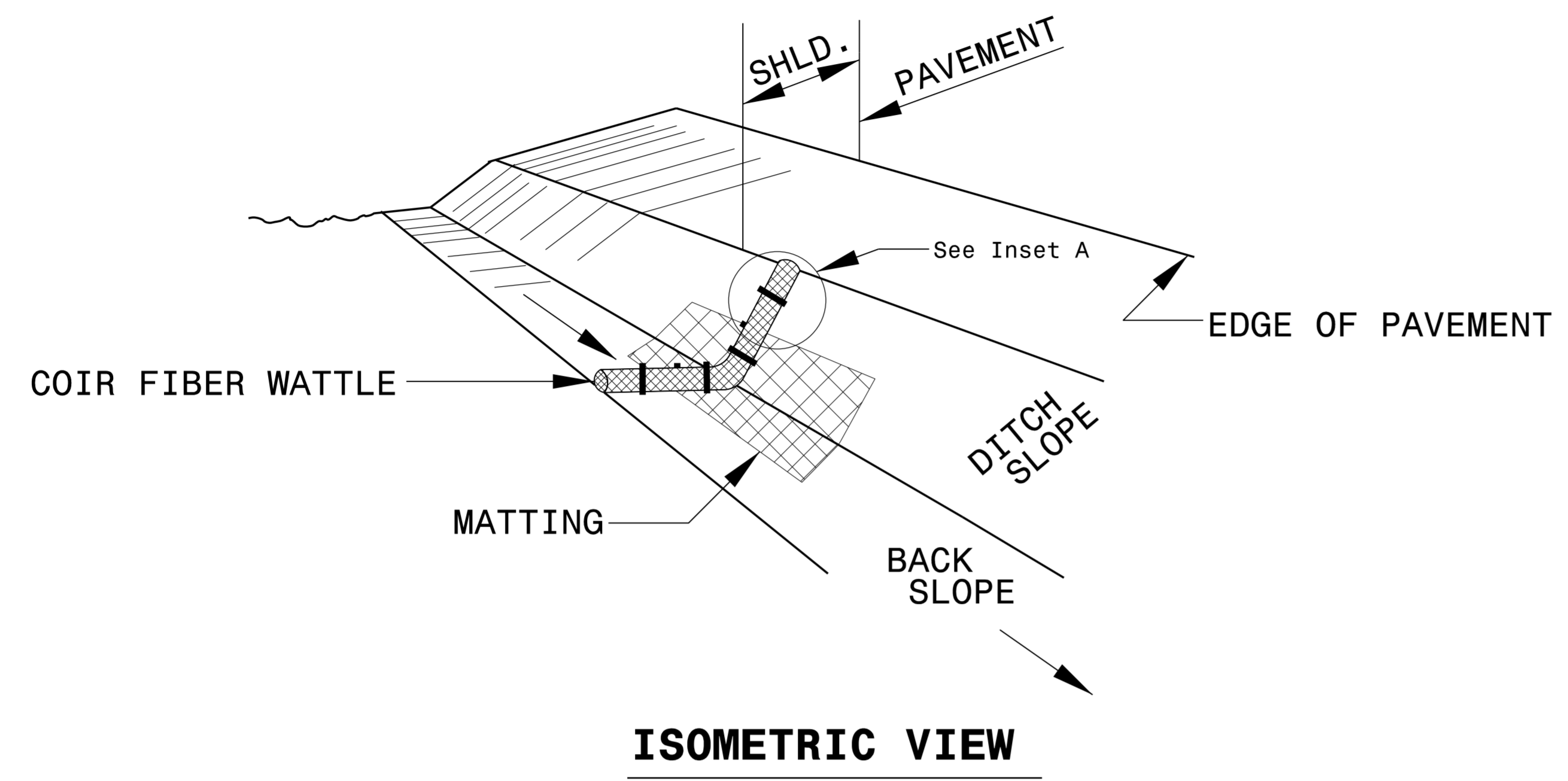
Roadway Standard Drawings

The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated January 2018 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

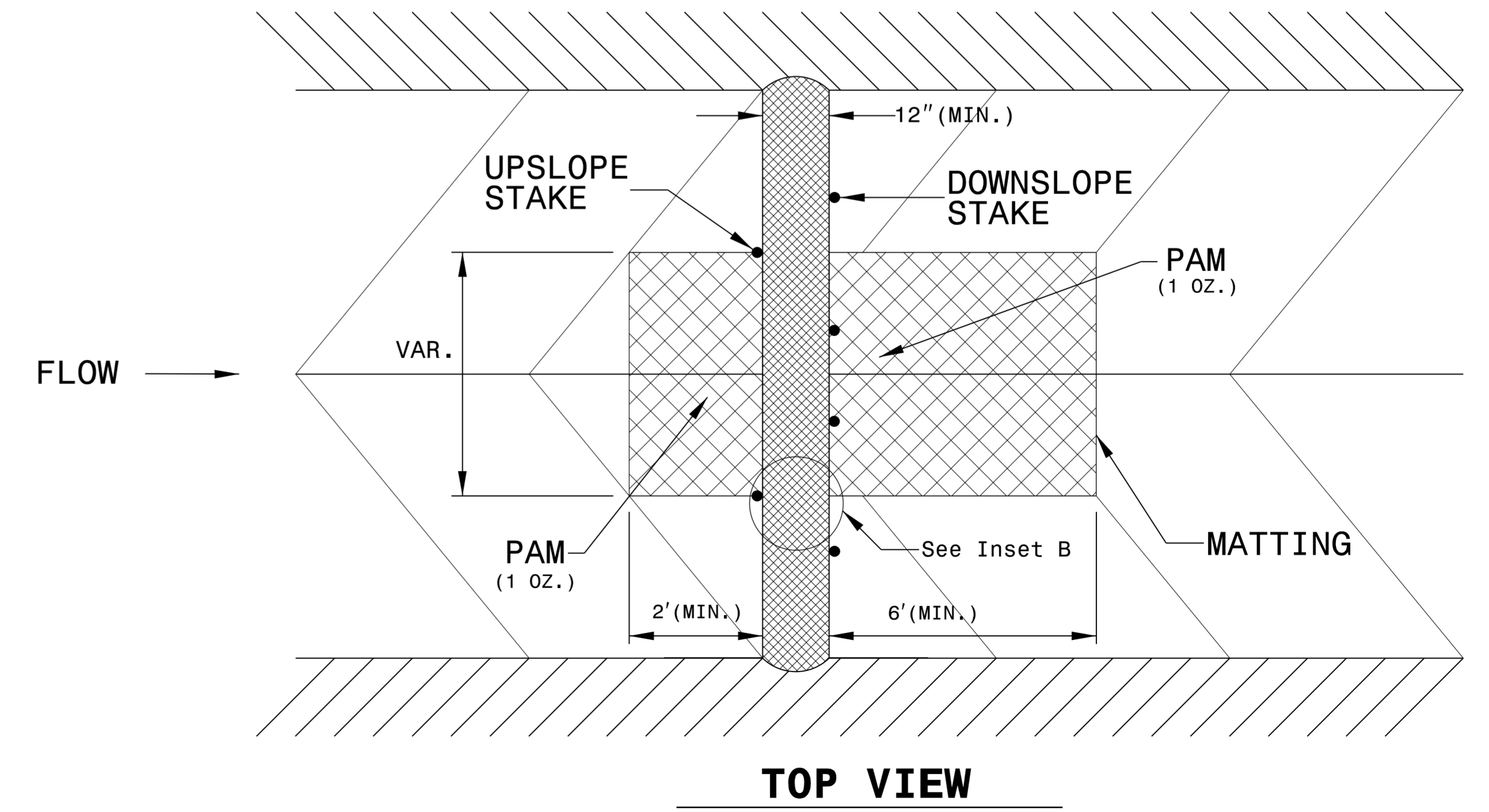
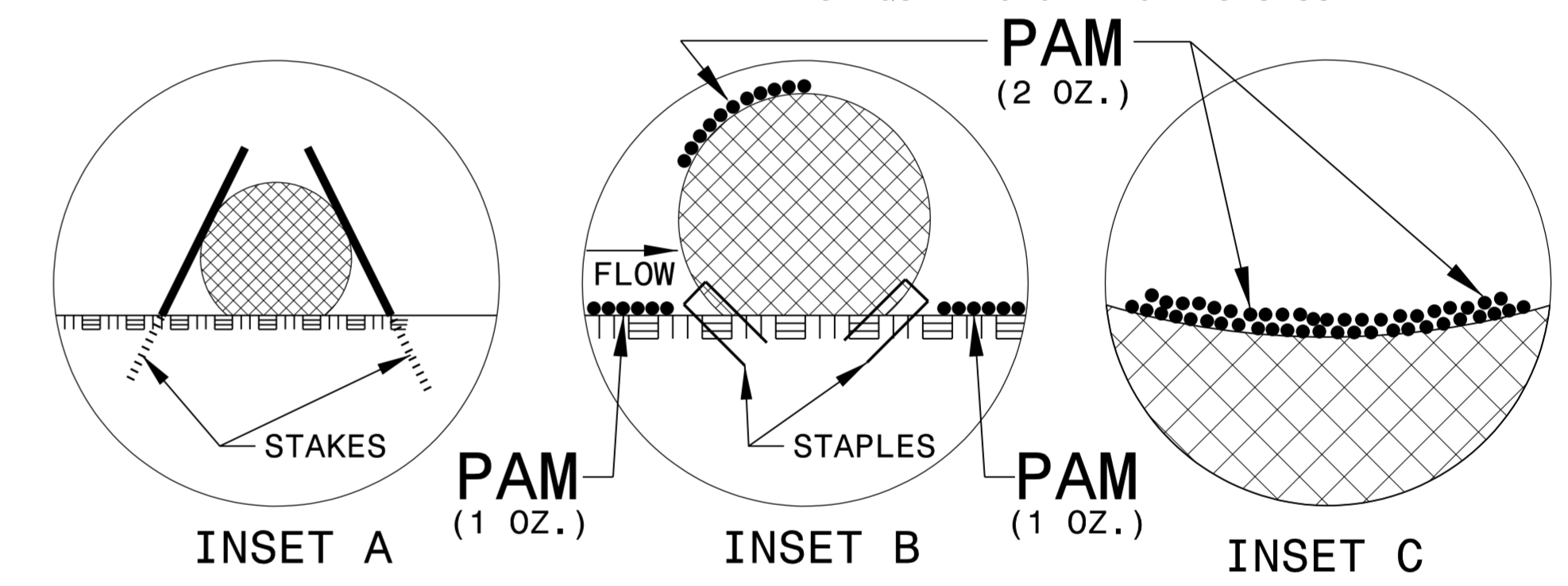
1604.01 Railroad Erosion Control Detail	1632.01 Rock Inlet Sediment Trap Type A
1605.01 Temporary Silt Fence	1632.02 Rock Inlet Sediment Trap Type B
1606.01 Special Sediment Control Fence	1632.03 Rock Inlet Sediment Trap Type C
1607.01 Gravel Construction Entrance	1633.01 Temporary Rock Silt Check Type A
1622.01 Temporary Berms and Slope Drains	1633.02 Temporary Rock Silt Check Type B
1630.01 Riser Basin	1634.01 Temporary Rock Sediment Dam Type A
1630.02 Silt Basin Type B	1634.02 Temporary Rock Sediment Dam Type B
1630.03 Temporary Silt Ditch	1635.01 Rock Pipe Inlet Sediment Trap Type A
1630.04 Stilling Basin	1635.02 Rock Pipe Inlet Sediment Trap Type B
1630.05 Temporary Diversion	1640.01 Coir Fiber Baffle
1630.06 Special Stilling Basin	1645.01 Temporary Stream Crossing
1631.01 Matting Installation	

PROJECT REFERENCE NO. U-5827	SHEET NO. EC-2A
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.	SHEET NO.
U-5827	EC-4/CONST.4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

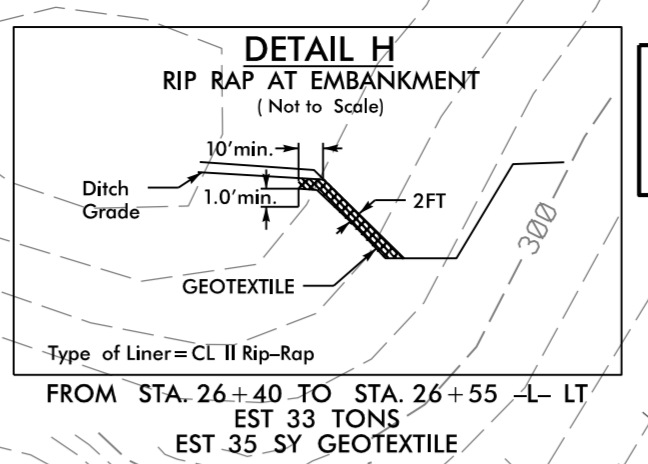
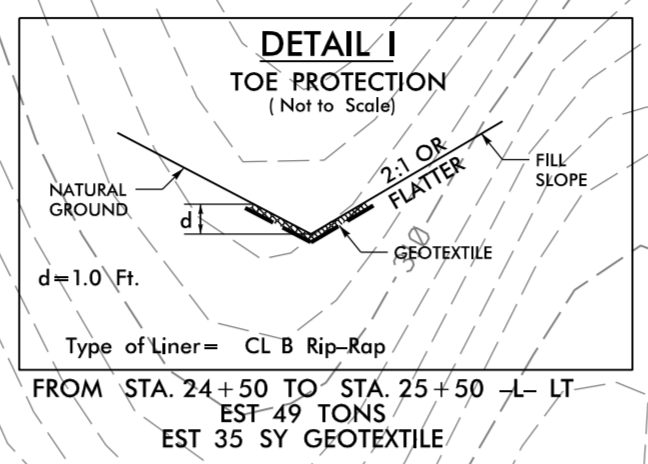
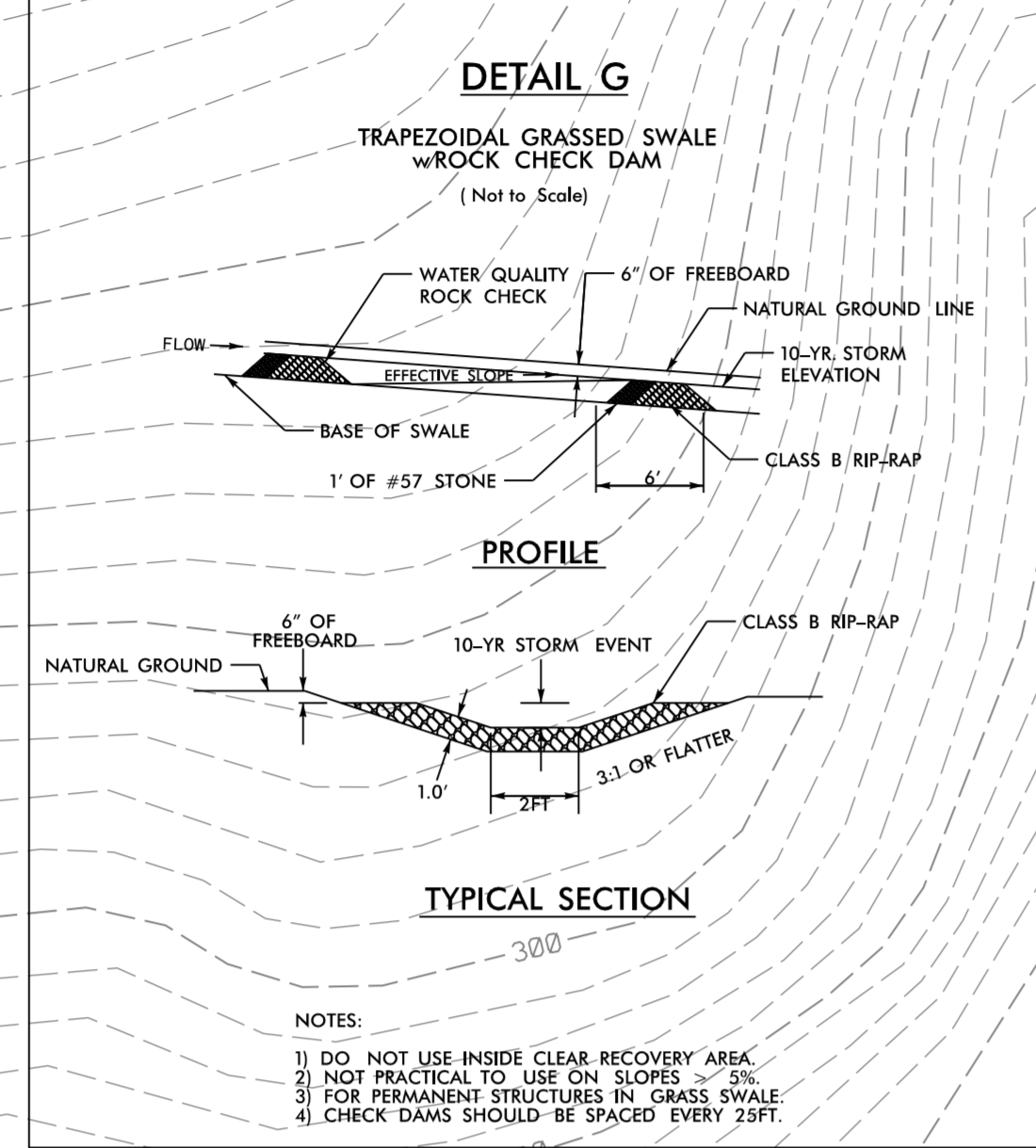
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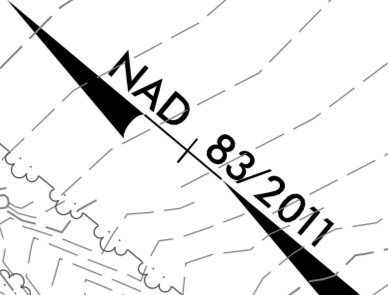
$PI\ Sta\ 20+95.82$
 $\Delta = 23^{\circ}17'59.4" (RT)$
 $D = 1^{\circ}30'00.0"$
 $L = 1,553.32'$
 $T = 787.54'$
 $R = 3,819.72'$
 $e = ex\ ist.$

$PI\ Sta\ 28+97.60$
 $\Delta s = 0^{\circ}48'36.0"$
 $Ls = 108.00'$
 $LT = 72.00'$
 $ST = 36.00'$
 $Runoff = 144$

$PI\ Sta\ 10+95.45$
 $\Delta = 2^{\circ}51'46.3" (LT)$
 $D = 1^{\circ}30'00.0"$
 $L = 190.86'$
 $T = 95.45'$
 $R = 3,819.72'$



CLEARING AND GRUBBING
 EROSION CONTROL FOR
 CONSTRUCTION SHEET 4



8/17/99
 REVISIONS
 8/2/2019
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BEGIN TIP PROJECT U-5827
 -L- STA. 22+51.43

-L- POC STA. 22+06.21
 -YI- POT STA. 12+54.33

BEGIN CONSTRUCTION
 -L- STA. 21+53.00

-YI- STA. 13+67.90
 BEGIN FUTURE CONSTRUCTION

-YI- POT STA. 15+54.33

SEE DETAIL F
 BASE GRASSED SWALE
 STA 26+65 - 27+50 -L- LT
 SLOPE=0.47%
 DDE=75 CY

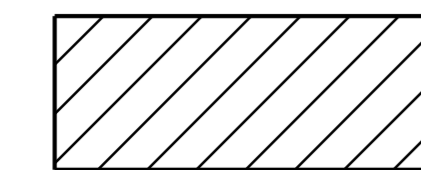
SEE DETAIL E
 2FT STD. BASE DITCH
 w/CL II RIP RAP
 STA. 26+55 - 26+65 -L- LT

SEE DETAIL H
 II RIP RAP AT EMBANKMENT
 STA. 26+40 - 26+55 -L- LT

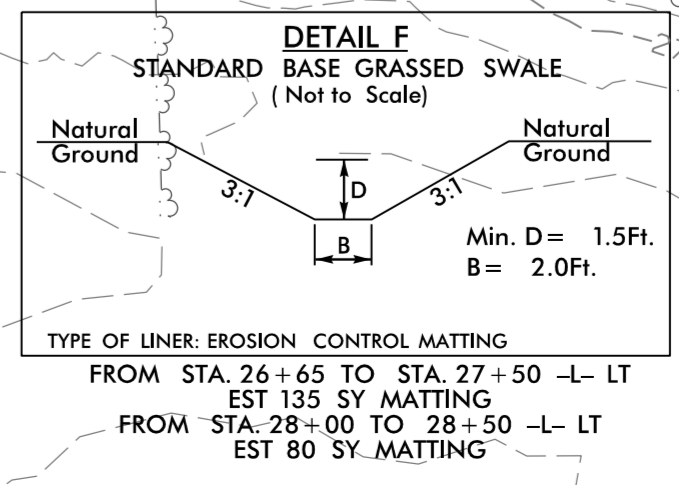
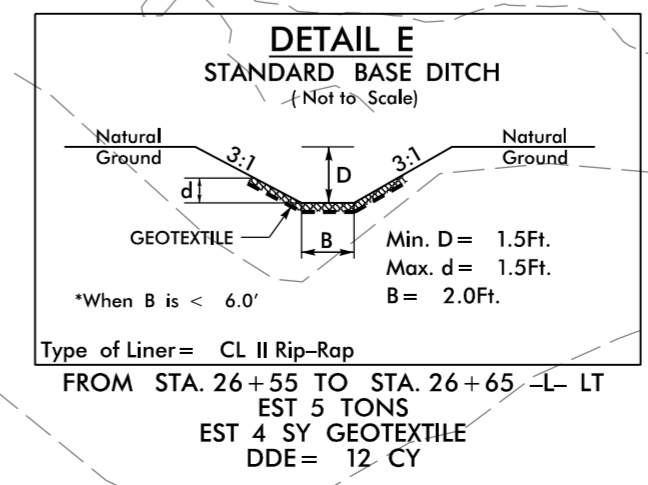
SEE DETAIL G
 ROCK CHECK DAM

EXTEND BACK SLOPE OF
 DITCH TO TIE TO FILL
 SLOPE TO ACT AS FALSE SUMP

SEE DETAIL F
 BASE GRASSED SWALE
 STA 28+00 - 28+50 -L- LT
 SLOPE=2.8%
 DDE=55 CY



ENVIRONMENTALLY SENSITIVE AREA
 SEE PROJECT SPECIAL PROVISIONS



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

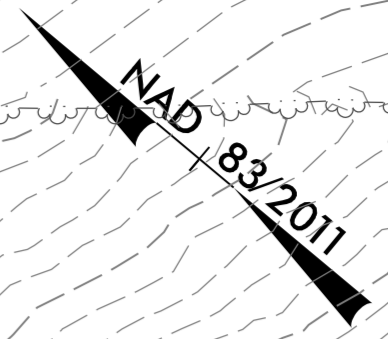
MATCHLINE -L- STA. 30+00.00
 SEE SHEET EC-5

PROJECT REFERENCE NO.	SHEET NO.
U-5827	EC-5/CONST.5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CH ENGINEERING

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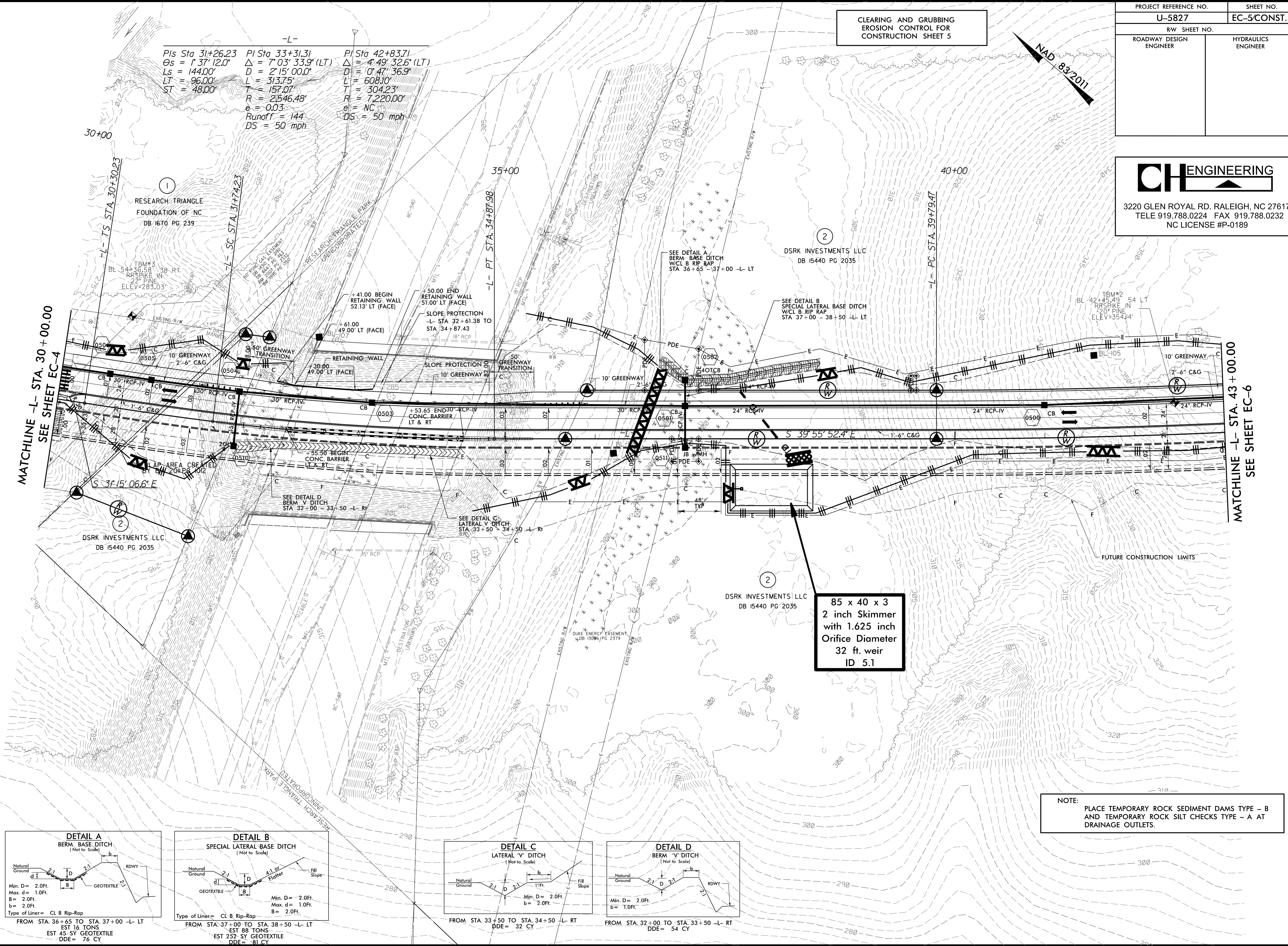
CLEARING AND GRUBBING
 EROSION CONTROL FOR
 CONSTRUCTION SHEET 5



Pi Sta 31+26.23 $\Delta = 1' 37'' 12.0''$
 $\Delta s = 144.00'$
 $LT = 96.00'$
 $ST = 48.00'$
 $R = 2,546.48'$
 $e = 0.03$
 Runoff = 144
 DS = 50 mph

Pi Sta 33+31.31 $\Delta = 7' 03'' 33.9'' (LT)$
 $D = 2' 15'' 00.0''$
 $L = 313.75'$
 $T = 157.07'$
 $R = 2,546.48'$
 $e = 0.03$
 Runoff = 144
 DS = 50 mph

Pi Sta 42+83.71 $\Delta = 4' 49'' 32.6'' (LT)$
 $D = 0' 47'' 36.9''$
 $L = 608.10'$
 $T = 304.23'$
 $R = 7,220.00'$
 $e = NC$
 DS = 50 mph

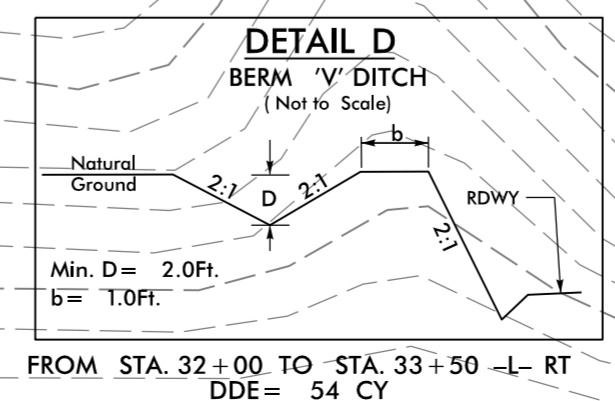
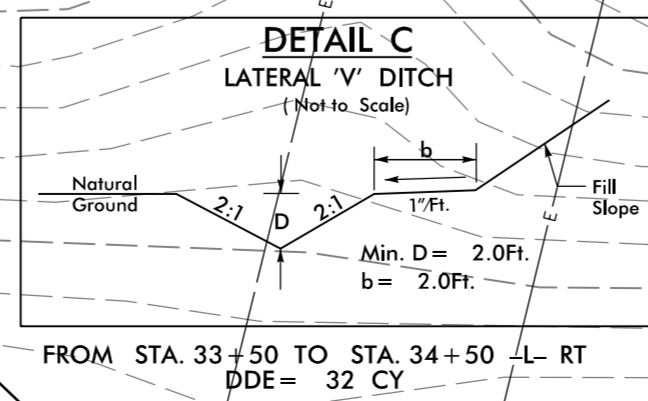
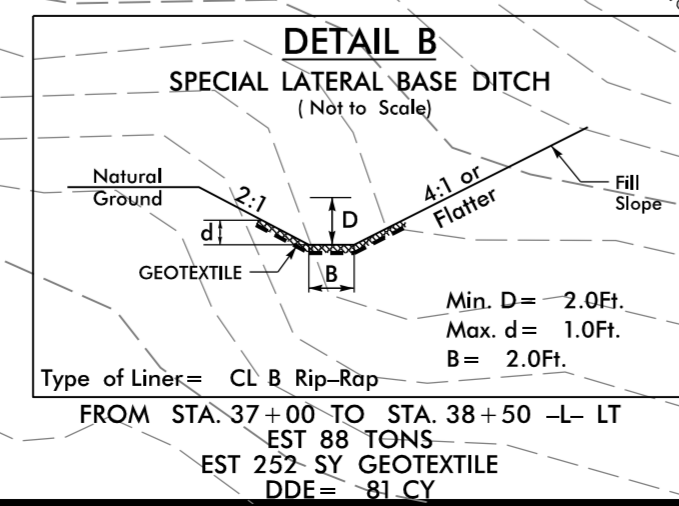
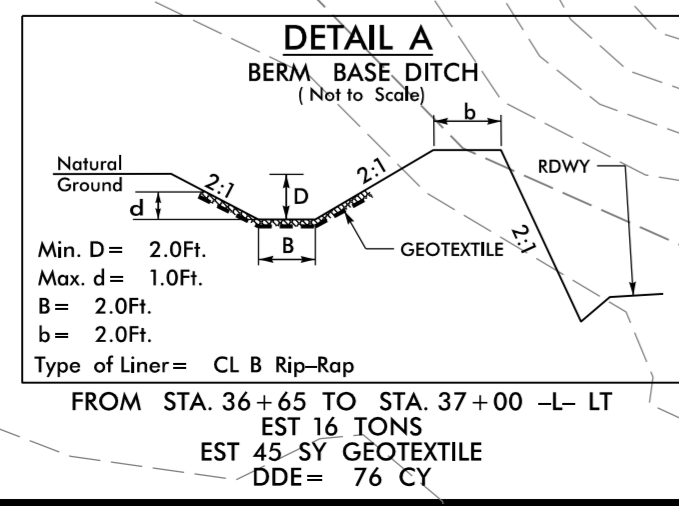


MATCHLINE -L- STA. 30+00.00
 SEE SHEET EC-4

MATCHLINE -L- STA. 43+00.00
 SEE SHEET EC-6

85 x 40 x 3
 2 inch Skimmer
 with 1.625 inch
 Orifice Diameter
 32 ft. weir
 ID 5.1

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



REVISIONS

8/17/99

8/2/2019
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PROJECT REFERENCE NO.	SHEET NO.
U-5827	EC-6/CONST.6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CH ENGINEERING

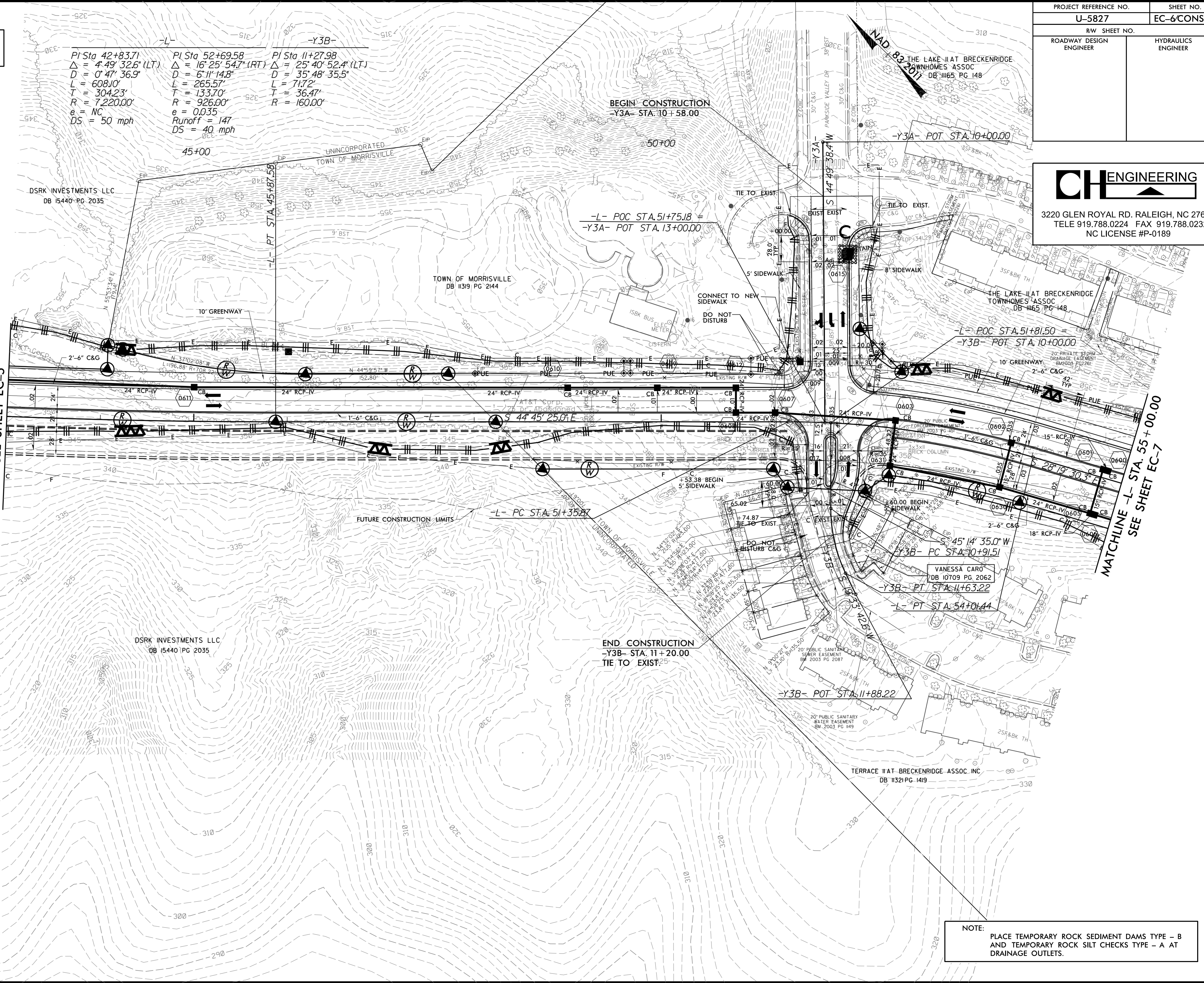
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CLEARING AND GRUBBING
 EROSION CONTROL FOR
 CONSTRUCTION SHEET 6

PI Sta 42+83.71 Δ = 4° 49' 32.6" (LT) D = 0° 47' 36.9" L = 608.10' T = 304.23' R = 7,220.00' e = NC DS = 50 mph	PI Sta 52+69.58 Δ = 16° 25' 54.7" (RT) D = 6° 11' 14.8" L = 265.57' T = 133.70' R = 926.00' e = 0.035 Runoff = 147 DS = 40 mph	PI Sta 11+27.98 Δ = 25° 40' 52.4" (LT) D = 35° 48' 35.5" L = 717.2' T = 36.47' R = 160.00'
--	--	---

MATCHLINE -L- STA. 43+00.00
 SEE SHEET EC-5

MATCHLINE -L- STA. 55+00.00
 SEE SHEET EC-7



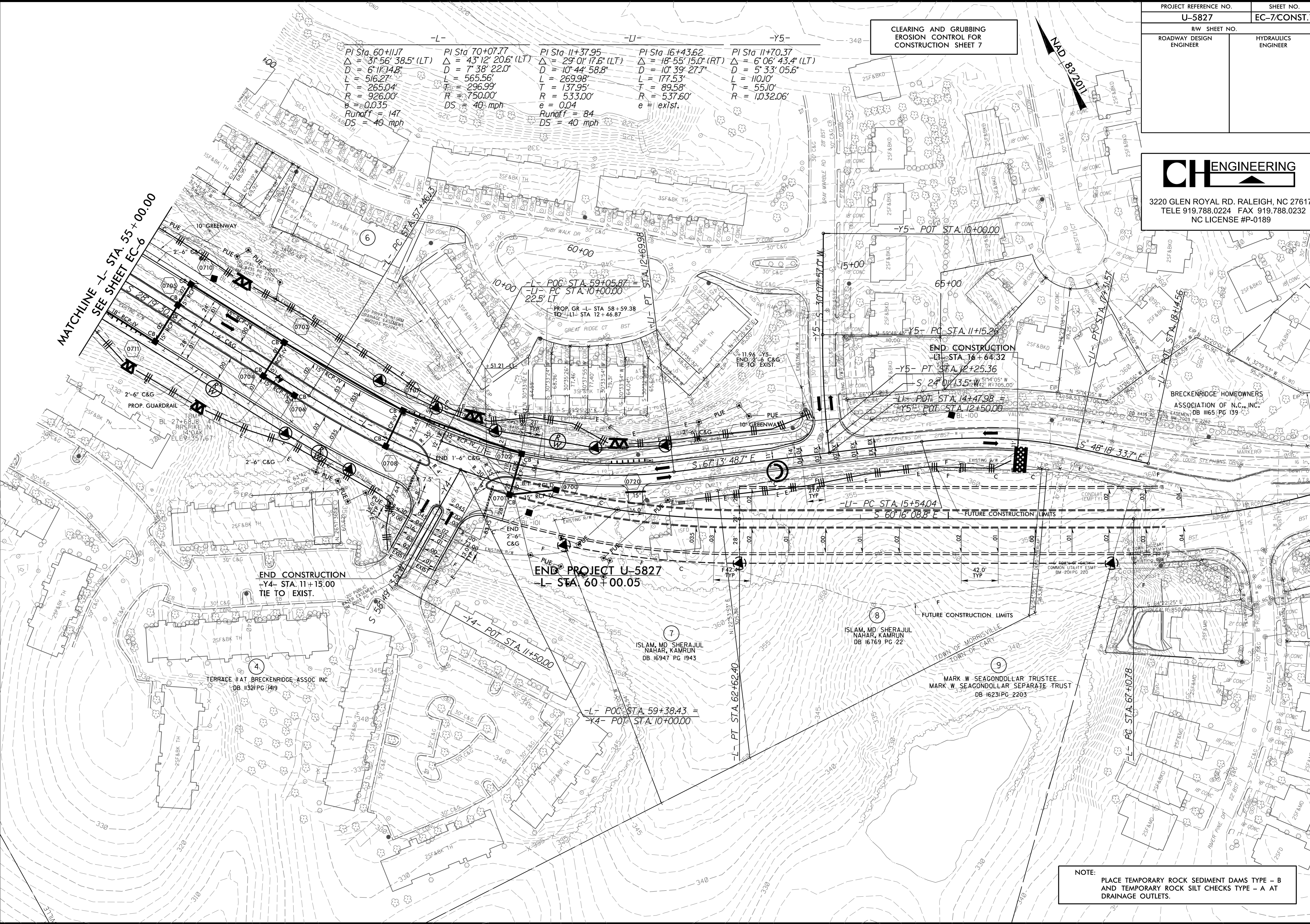
PROJECT REFERENCE NO.	SHEET NO.
U-5827	EC-7/CONST.7
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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 NC LICENSE #P-0189

CLEARING AND GRUBBING
 EROSION CONTROL FOR
 CONSTRUCTION SHEET 7

PI Sta. 60+11.7 $\Delta = 31^{\circ}56'38.5" (LT)$ $D = 6'11.148"$ $L = 516.27'$ $T = 265.04'$ $R = 926.00'$ $e = 0.035$ Runoff = 147 $DS = 40 \text{ mph}$	PI Sta. 70+07.77 $\Delta = 43^{\circ}12'20.6" (LT)$ $D = 7'38.220"$ $L = 565.56'$ $T = 296.99'$ $R = 750.00'$ $DS = 40 \text{ mph}$	PI Sta. 11+37.95 $\Delta = 29^{\circ}01'17.6" (LT)$ $D = 10'44.588"$ $L = 269.98'$ $T = 137.95'$ $R = 533.00'$ Runoff = 84 $DS = 40 \text{ mph}$	PI Sta. 16+43.62 $\Delta = 18^{\circ}55'15.0" (RT)$ $D = 10'39.277"$ $L = 177.53'$ $T = 89.58'$ $R = 537.60'$ $e = \text{exist.}$	PI Sta. 11+70.37 $\Delta = 6^{\circ}06'43.4" (LT)$ $D = 5'33.056"$ $L = 110.0'$ $T = 55.10'$ $R = 1,032.06'$
---	---	---	---	---

MATCHLINE -L- STA. 55+00.00
 SEE SHEET EC-6



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

REVISIONS

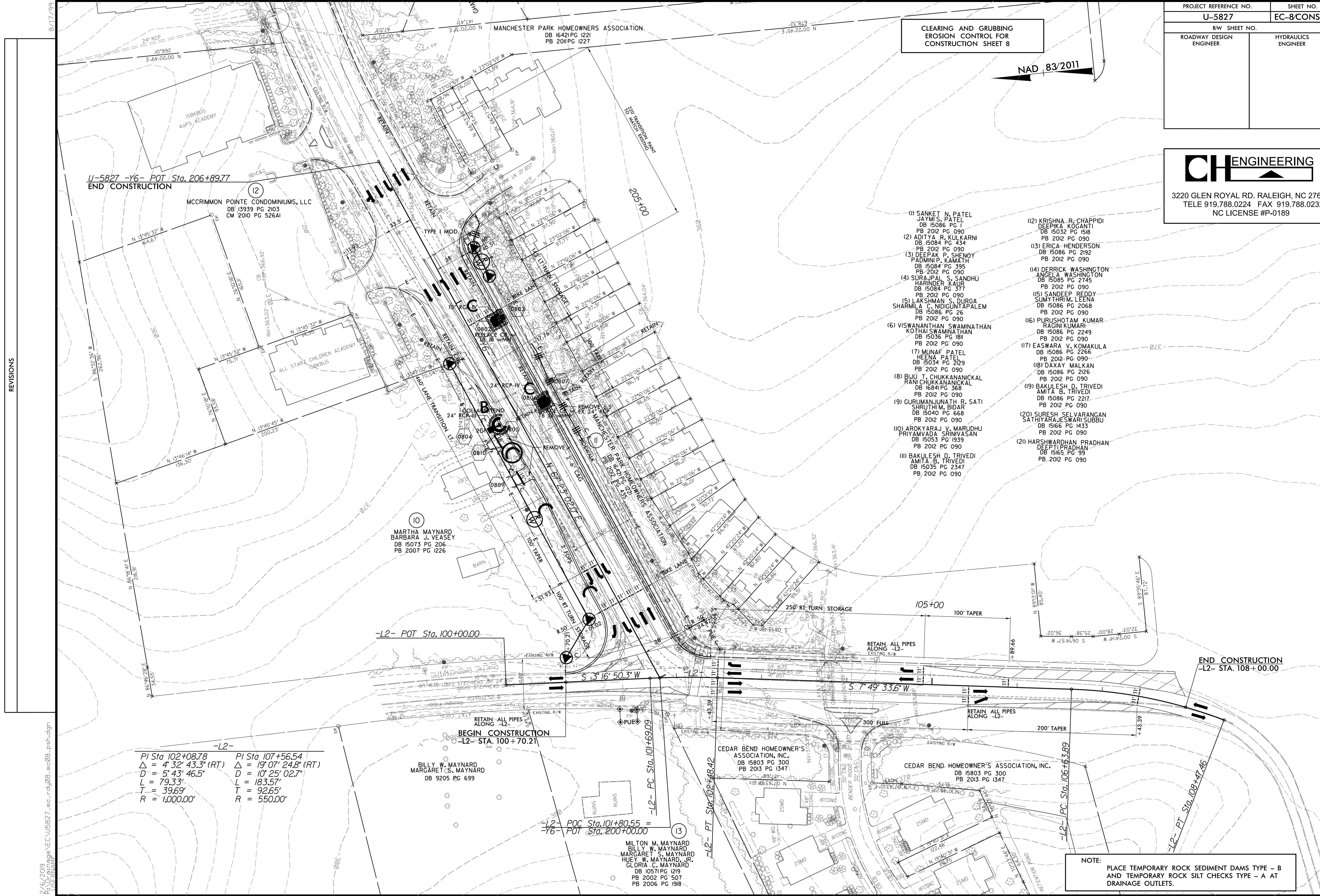
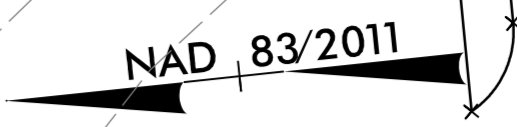
8/17/99

8/2/2019
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CH ENGINEERING

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 NC LICENSE #P-0189

**CLEARING AND GRUBBING
 EROSION CONTROL FOR
 CONSTRUCTION SHEET 8**



- | | |
|--|--|
| (1) SANKET N. PATEL
DB 15086 PG 1
PB 2012 PG 090 | (12) KRISHNA R. CHAPPIDI
DEEPIKA KOGANTI
DB 15032 PG 1518
PB 2012 PG 090 |
| (2) ADITYA R. KULKARNI
DB 15084 PG 434
PB 2012 PG 090 | (13) ERICA HENDERSON
DB 15086 PG 2192
PB 2012 PG 090 |
| (3) DEEPAK P. SHENOY
PADMINI P. KAMATH
DB 15084 PG 395
PB 2012 PG 090 | (14) DERRICK WASHINGTON
ANGELA WASHINGTON
DB 15085 PG 2745
PB 2012 PG 090 |
| (4) SURAJPAL S. SANDHU
HARINDER KAUR
DB 15084 PG 377
PB 2012 PG 090 | (15) SANDEEP REDDY
SUMYATHRI MEENA
DB 15086 PG 2068
PB 2012 PG 090 |
| (5) LAKSHMAN S. DURGA
SHARMILA S. NIDIGINTAPALEM
DB 15086 PG 26
PB 2012 PG 090 | (16) PURUSHOTAM KUMAR
RAGINI KUMARI
DB 15086 PG 2249
PB 2012 PG 090 |
| (6) VISWANATHAN SWAMINATHAN
KOTHAI SWAMINATHAN
DB 15036 PG 181
PB 2012 PG 090 | (17) EASWARA V. KOMAKULA
DB 15086 PG 2256
PB 2012 PG 090 |
| (7) MUNAF PATEL
HEENA PATEL
DB 15034 PG 2129
PB 2012 PG 090 | (18) DAXAY MALKAN
DB 15086 PG 2126
PB 2012 PG 090 |
| (8) BIJU T. CHUKKANANICKAL
RANI CHUKKANANICKAL
DB 15041 PG 368
PB 2012 PG 090 | (19) BAKULESH D. TRIVEDI
AMITA B. TRIVEDI
DB 15086 PG 2217
PB 2012 PG 090 |
| (9) GURUMANJUNATH R. SATI
SHRUTHI M. BIDAR
DB 15040 PG 668
PB 2012 PG 090 | (20) SURESH SELVARANGAN
SATHYARAJESWARI SUBBU
DB 15166 PG 1433
PB 2012 PG 090 |
| (10) AROKYARAJ V. MARUDHU
PRIYAMVADA SPANIVASAN
DB 15053 PG 1939
PB 2012 PG 090 | (21) HARSHWARDHAN PRADHAN
DEEPIKA PRADHAN
DB 15165 PG 99
PB 2012 PG 090 |
| (11) BAKULESH D. TRIVEDI
AMITA B. TRIVEDI
DB 15035 PG 2347
PB 2012 PG 090 | |

-L2-

PI Sta 102+08.78	PI Sta 107+56.54
Δ = 4' 32" 43.3" (RT)	Δ = 19' 07" 24.8" (RT)
D = 5' 43" 46.5"	D = 10' 25" 02.7"
L = 79.33'	L = 183.57'
T = 39.69'	T = 92.65'
R = 1,000.00'	R = 550.00'

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

REVISIONS

2/6/2019
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PROJECT REFERENCE NO.	SHEET NO.
U-5827	EC-9/CONST.4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

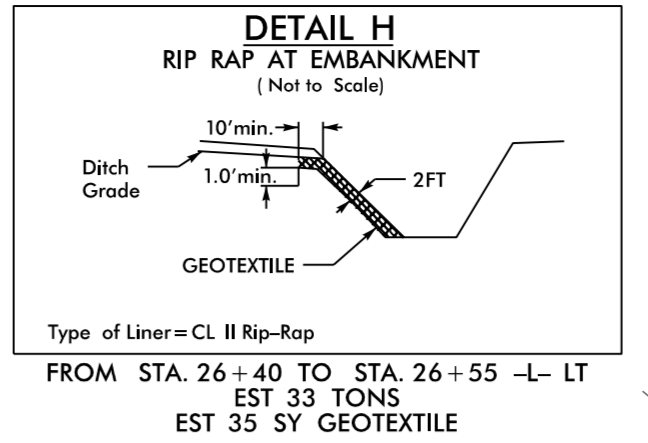
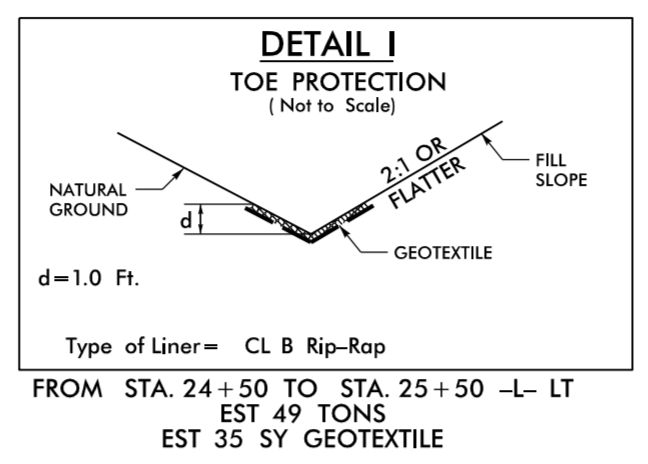
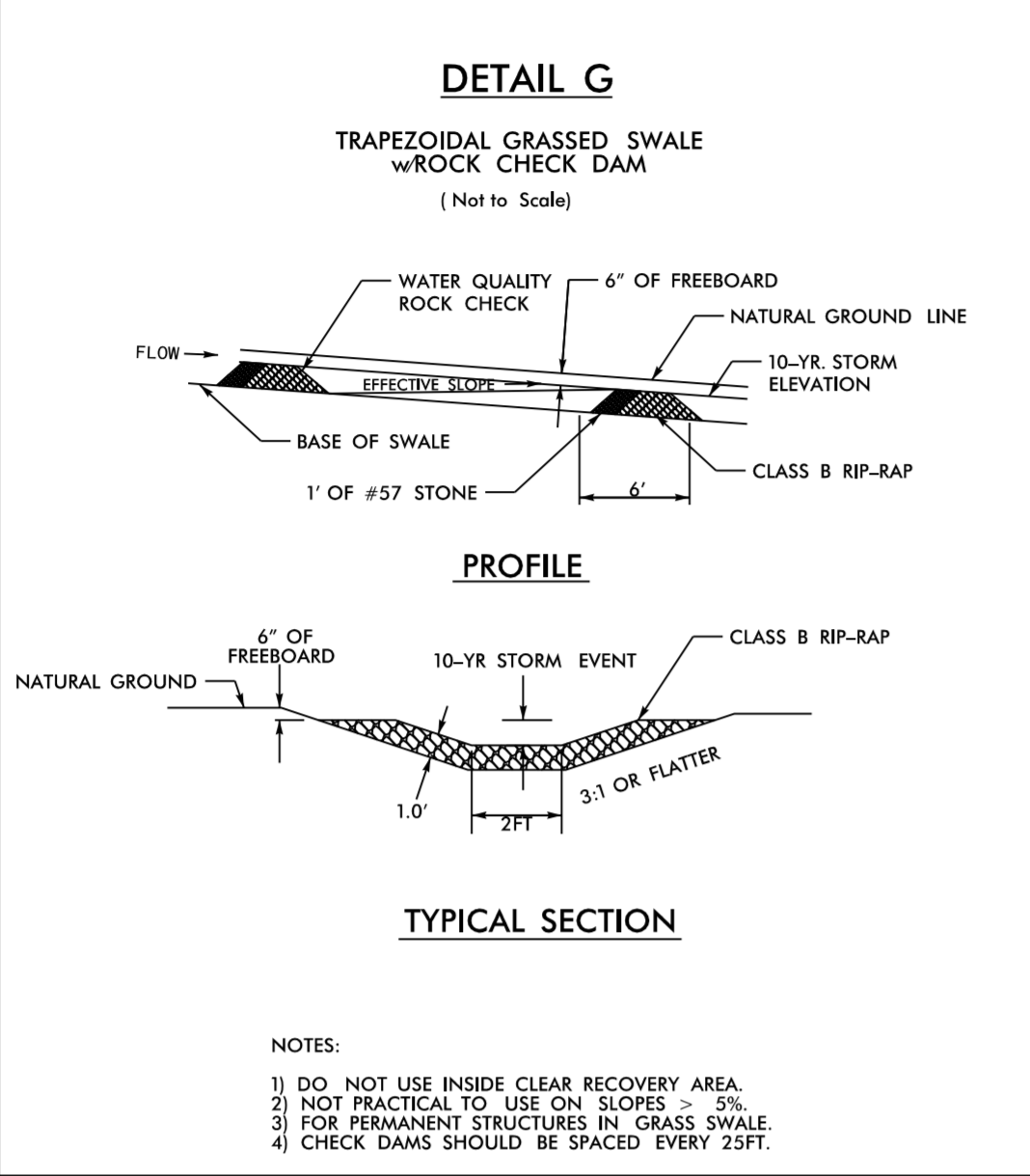
CH ENGINEERING

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 NC LICENSE #P-0189

-L-
 Pls Sta 20+95.82 Δ = 23° 17' 59.4" (RT)
 D = 1' 30' 00.0" Ls = 108.00'
 L = 1,553.32' LT = 72.00'
 T = 787.54' ST = 36.00'
 R = 3,819.72' e = ex1st.

-YI-
 Pls Sta 28+97.60 Δ = 0° 48' 36.0"
 D = 1' 30' 00.0" Ls = 108.00'
 L = 1,553.32' LT = 72.00'
 T = 787.54' ST = 36.00'
 R = 3,819.72' e = ex1st.

-YI-
 Pls Sta 10+95.45 Δ = 2° 51' 46.3" (LT)
 D = 1' 30' 00.0" Ls = 108.00'
 L = 1,553.32' LT = 72.00'
 T = 787.54' ST = 36.00'
 R = 3,819.72' e = ex1st.



REVISIONS

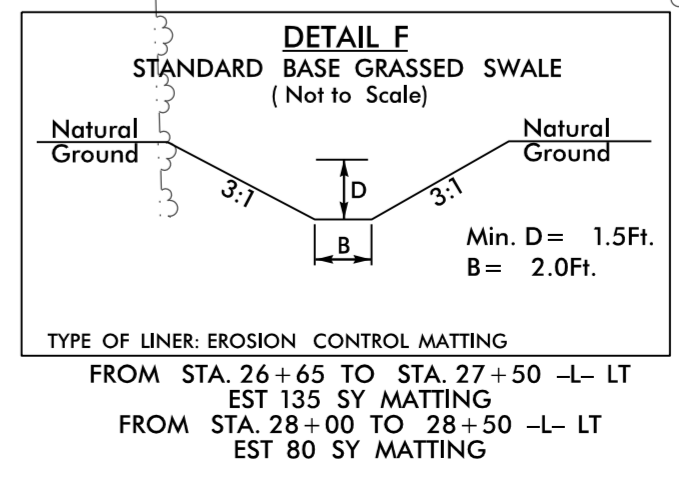
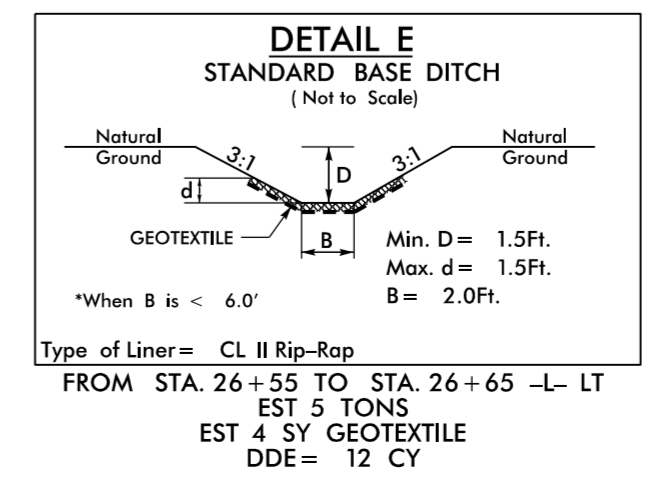
Place Matting for Erosion Control
 on Slope as Work Allows.
 Sta. 25+50 to Sta. 29+00 LT

BEGIN TIP PROJECT U-5827
 -L- STA. 22+51.43

BEGIN CONSTRUCTION
 -L- STA. 21+53.00

BEGIN FUTURE CONSTRUCTION
 -YI- STA. 13+67.90

MATCHLINE -L- STA. 30+00.00
 SEE SHEET EC-9



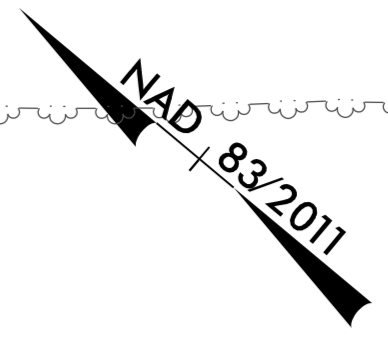
8/17/99

8/2/2019
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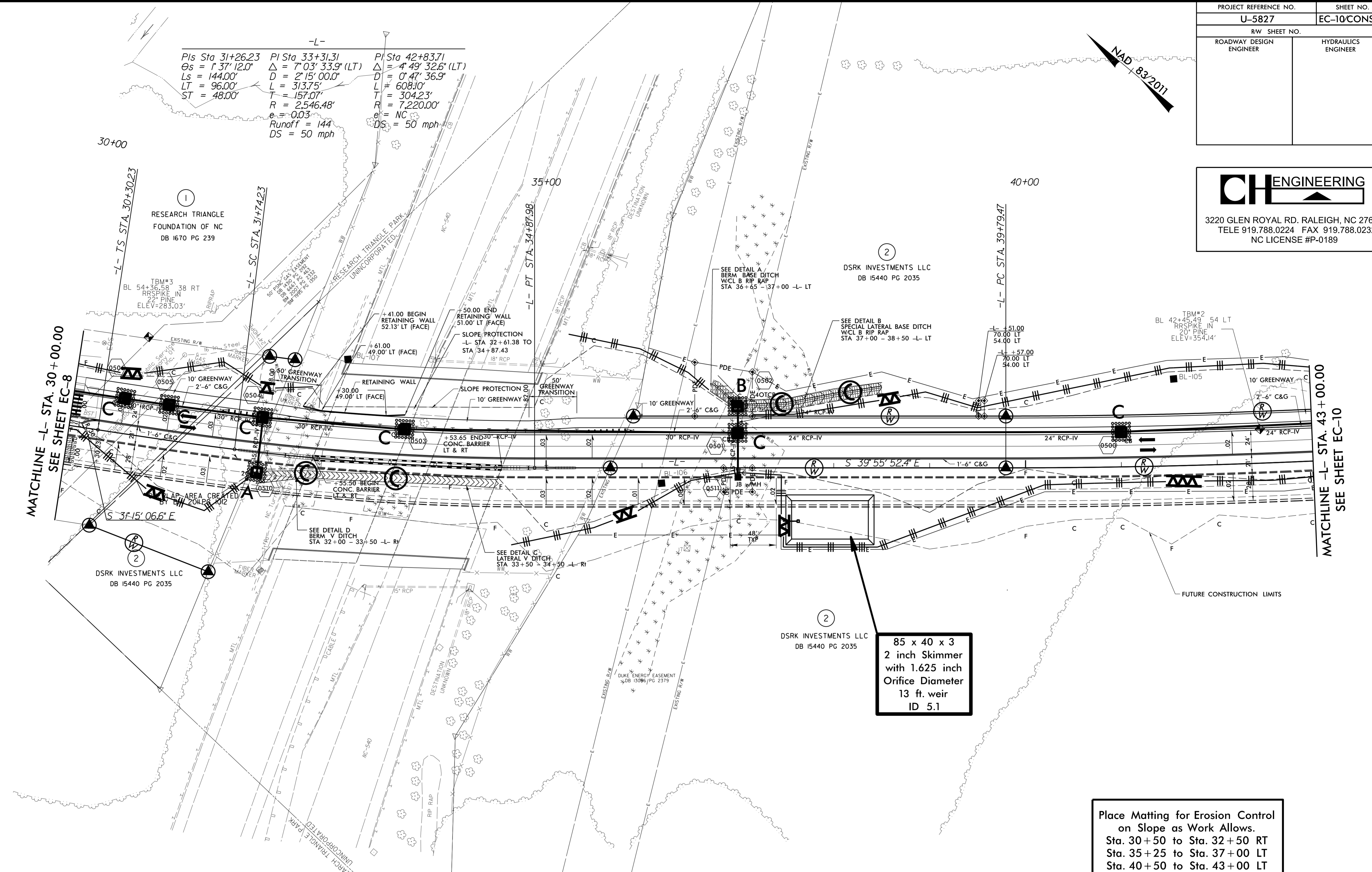
PROJECT REFERENCE NO.	SHEET NO.
U-5827	EC-10/CONST.5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CH ENGINEERING

3220 GLEN ROYAL RD. RALEIGH, NC 27617
 TELE 919.788.0224 FAX 919.788.0232
 NC LICENSE #P-0189



Pls Sta 31+26.23 $\Delta = 1' 37'' 12.0''$ $D = 144.00'$ $L = 96.00'$ $T = 48.00'$
 PI Sta 33+31.31 $\Delta = 7' 03'' 33.9''$ (LT) $D = 2' 15'' 00.0''$ $L = 313.75'$ $T = 157.07'$ $R = 2,546.48'$ $e = 0.03$ $Runoff = 144$ $DS = 50$ mph
 PI Sta 42+83.71 $\Delta = 4' 49'' 32.6''$ (LT) $D = 0' 47'' 36.9''$ $L = 608.10'$ $T = 304.23'$ $R = 7,220.00'$ $e = NC$ $DS = 50$ mph

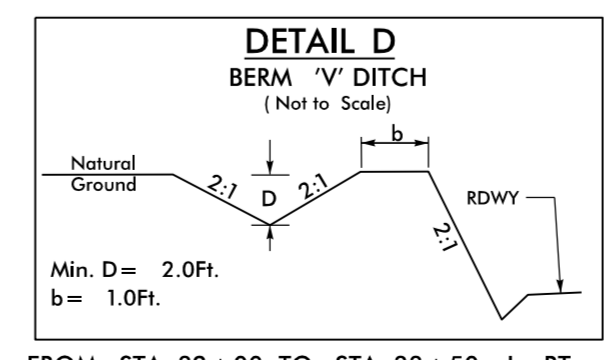
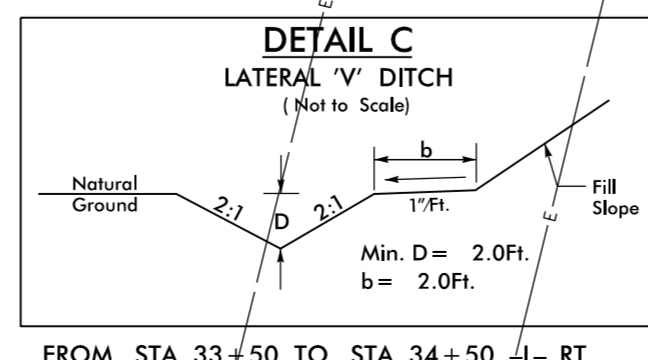
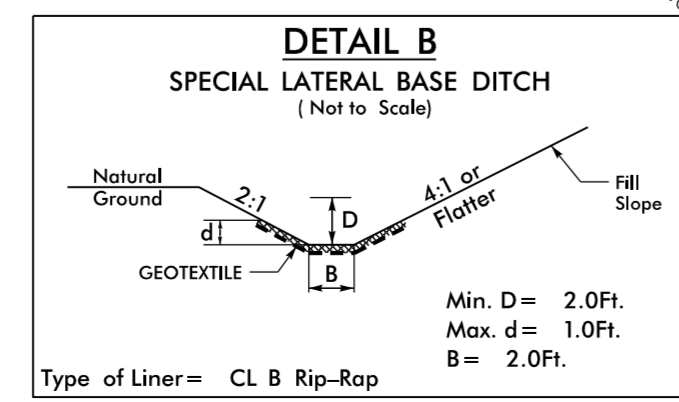
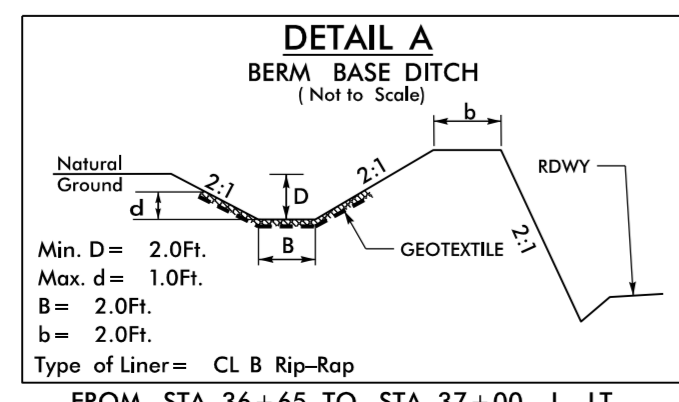


MATCHLINE -L- STA. 30+00.00
SEE SHEET EC-8

MATCHLINE -L- STA. 43+00.00
SEE SHEET EC-10

85 x 40 x 3
2 inch Skimmer
with 1.625 inch
Orifice Diameter
13 ft. weir
ID 5.1

Place Matting for Erosion Control
on Slope as Work Allows.
Sta. 30+50 to Sta. 32+50 RT
Sta. 35+25 to Sta. 37+00 LT
Sta. 40+50 to Sta. 43+00 LT
Sta. 40+50 to Sta. 43+00 RT



REVISIONS

8/17/99

8/2/2019
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PROJECT REFERENCE NO.	SHEET NO.
U-5827	EC-11/CONST.6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CH ENGINEERING

3220 GLEN ROYAL RD, RALEIGH, NC 27617
 TELE 919.788.0224 FAX 919.788.0232
 NC LICENSE #P-0189

-L-	-Y3B-
PI Sta 42+83.71 Δ = 4° 49' 32.6" (LT) D = 0' 47' 36.9" L = 608.10' T = 304.23' R = 7,220.00' e = NC DS = 50 mph	PI Sta 52+69.58 Δ = 16° 25' 54.7" (RT) D = 6' 11' 14.8" L = 265.57' T = 133.70' R = 926.00' e = 0.035 Runoff = 147 DS = 40 mph
	PI Sta 11+27.98 Δ = 25° 40' 52.4" (LT) D = 35' 48' 35.5" L = 71.72' T = 36.47' R = 160.00'

MATCHLINE -L- STA. 43+00.00
SEE SHEET EC-9

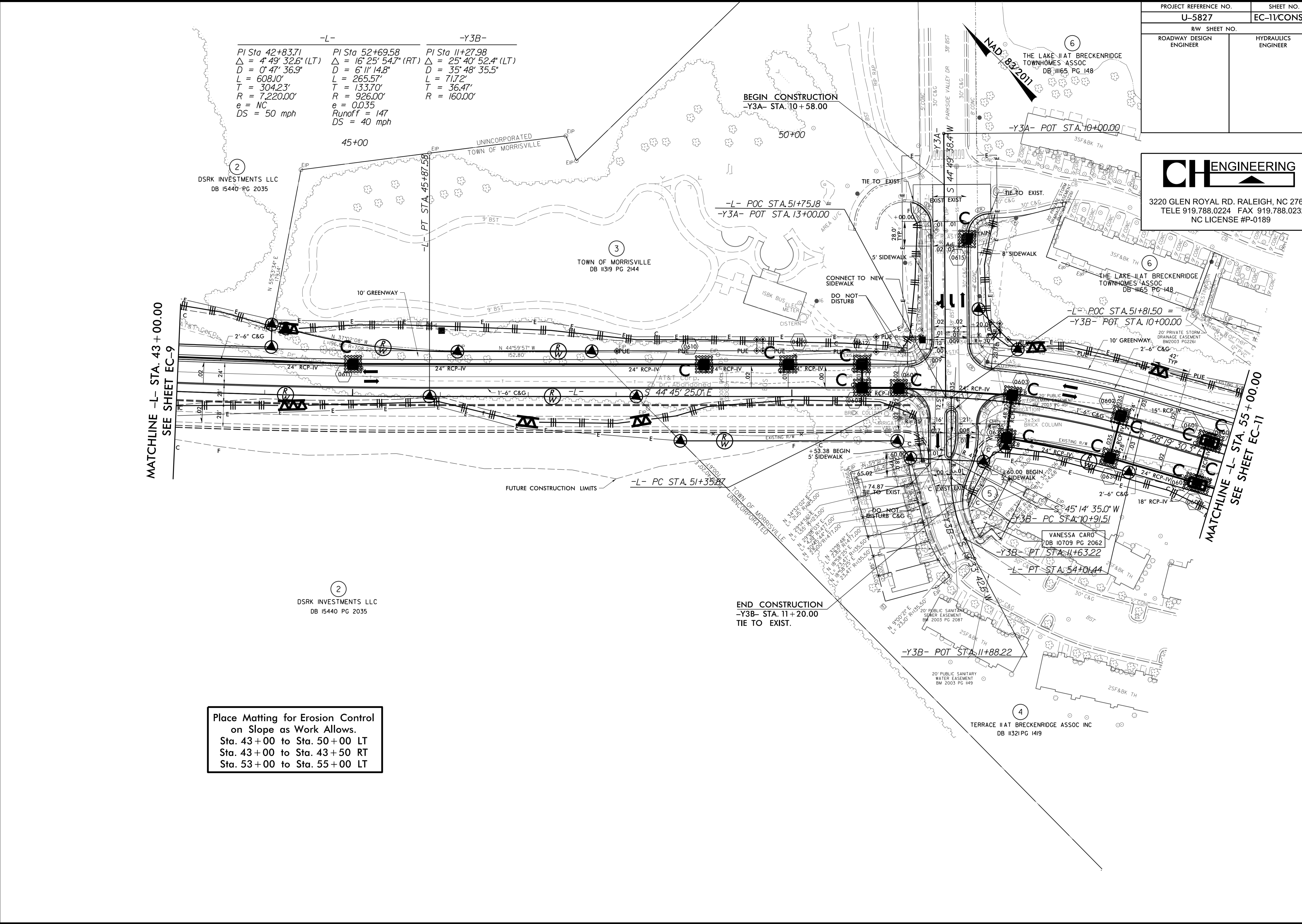
MATCHLINE -L- STA. 55+00.00
SEE SHEET EC-11

Place Matting for Erosion Control
on Slope as Work Allows.
Sta. 43+00 to Sta. 50+00 LT
Sta. 43+00 to Sta. 43+50 RT
Sta. 53+00 to Sta. 55+00 LT

REVISIONS

8/17/99

8/21/2019
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DSRK INVESTMENTS LLC
DB 15440 PG 2035

DSRK INVESTMENTS LLC
DB 15440 PG 2035

TOWN OF MORRISVILLE
DB 11319 PG 2144

END CONSTRUCTION
-Y3B- STA. 11+20.00
TIE TO EXIST.

TERRACE II AT BRECKENRIDGE ASSOC INC
DB 11321 PG 1419

VANESSA CARO
DB 10709 PG 2062

THE LAKE II AT BRECKENRIDGE
TOWNHOMES ASSOC
DB 1165 PG 148

THE LAKE II AT BRECKENRIDGE
TOWNHOMES ASSOC
DB 1165 PG 148

UNINCORPORATED
TOWN OF MORRISVILLE

FUTURE CONSTRUCTION LIMITS

BEGIN CONSTRUCTION
-Y3A- STA. 10+58.00

NAD 83/2011

-L- POC STA. 51+75.18
-Y3A- POT STA. 13+00.00

-L- POC STA. 51+81.50
-Y3B- POT STA. 10+00.00

-Y3B- POT STA. 11+88.22

-L- PC STA. 51+35.87

-L- PT STA. 54+01.44

-L- PT STA. 45+87.58

-Y3A- POT STA. 10+00.00

-Y3A- POT STA. 10+00.00

-Y3A- POT STA. 10+00.00

-Y3A- POT STA. 10+00.00

-Y3A- POT STA. 10+00.00

-Y3A- POT STA. 10+00.00

-Y3A- POT STA. 10+00.00

-Y3A- POT STA. 10+00.00

-Y3A- POT STA. 10+00.00

-Y3A- POT STA. 10+00.00

-Y3A- POT STA. 10+00.00

-Y3A- POT STA. 10+00.00

-Y3A- POT STA. 10+00.00

-Y3A- POT STA. 10+00.00

PROJECT REFERENCE NO.	SHEET NO.
U-5827	EC-12/CONST.7
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CH ENGINEERING

3220 GLEN ROYAL RD. RALEIGH, NC 27617
 TELE 919.788.0224 FAX 919.788.0232
 NC LICENSE #P-0189

-L- PI Sta 60+11.7 Δ = 31° 56' 38.5" (LT) D = 6' 11" 14.8 L = 516.27 T = 265.04 R = 926.00 e = 0.035 Runoff = .147 DS = 40 mph
 -LI- PI Sta 70+07.77 Δ = 43° 12' 20.6" (LT) D = 7' 38' 22.0 L = 565.56 T = 296.99 R = 750.00 DS = 40 mph
 -Y5- PI Sta 11+37.95 Δ = 29° 01' 17.6" (LT) D = 10' 44' 58.8 L = 269.98 T = 137.95 R = 533.00 Runoff = .84 DS = 40 mph
 -Y5- PI Sta 16+43.62 Δ = 18° 55' 15.0" (RT) D = 10' 39' 27.7 L = 177.53 T = 89.58 R = 537.60 e = exist.
 -Y5- PI Sta 11+70.37 Δ = 6° 06' 43.4" (LT) D = 5' 33' 05.6 L = 110.0 T = 55.10 R = 1,032.06

MATCHLINE -L- STA 55+00.00
 SEE SHEET EC-10

BEGIN CONSTRUCTION
 -Y5- STA. 12+11.96

END CONSTRUCTION
 -LI- STA. 16+64.32

END PROJECT U-5827
 -L- STA. 60+00.05

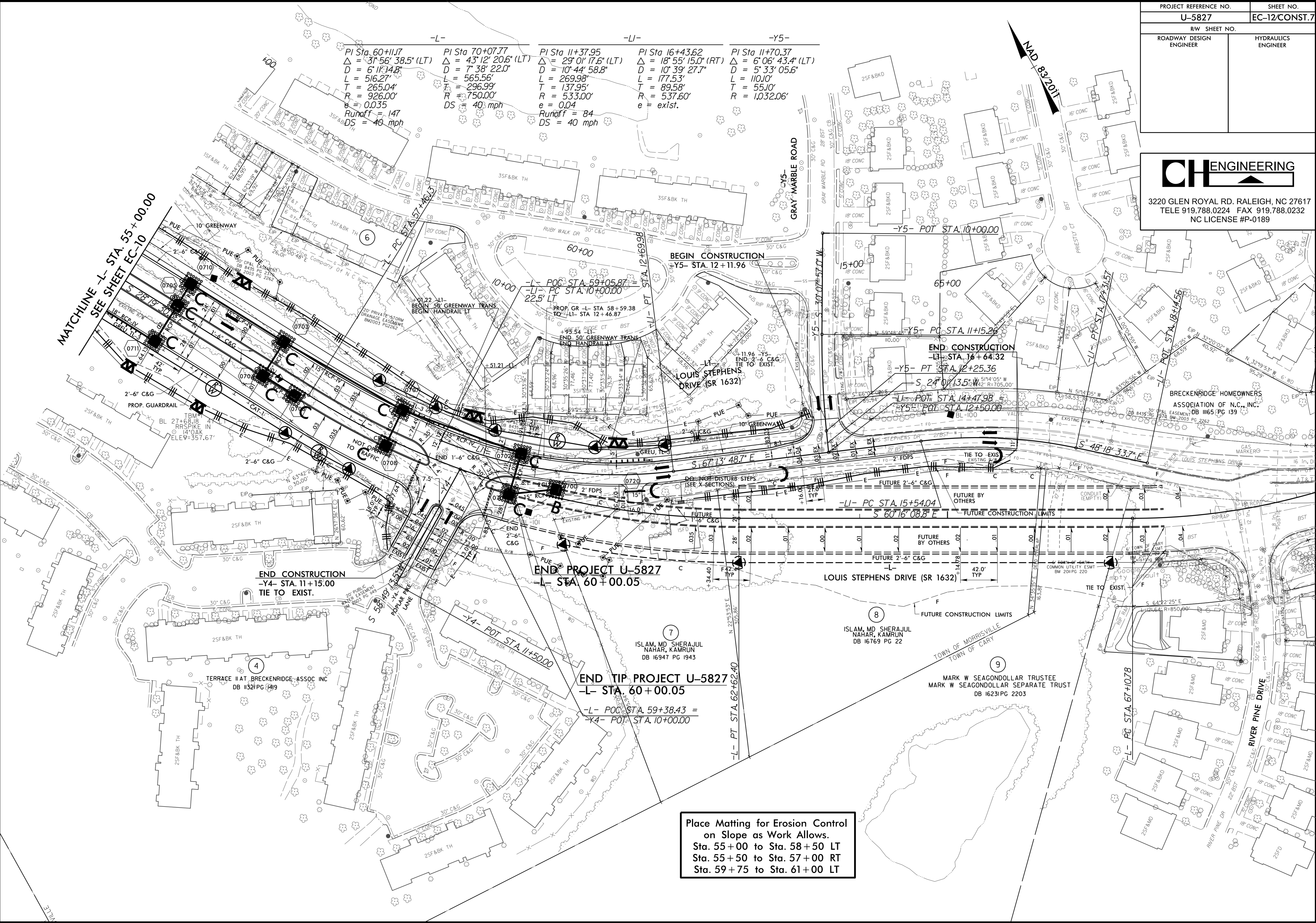
END TIP PROJECT U-5827
 -L- STA. 60+00.05

Place Matting for Erosion Control
 on Slope as Work Allows.
 Sta. 55+00 to Sta. 58+50 LT
 Sta. 55+50 to Sta. 57+00 RT
 Sta. 59+75 to Sta. 61+00 LT

REVISIONS

8/17/99

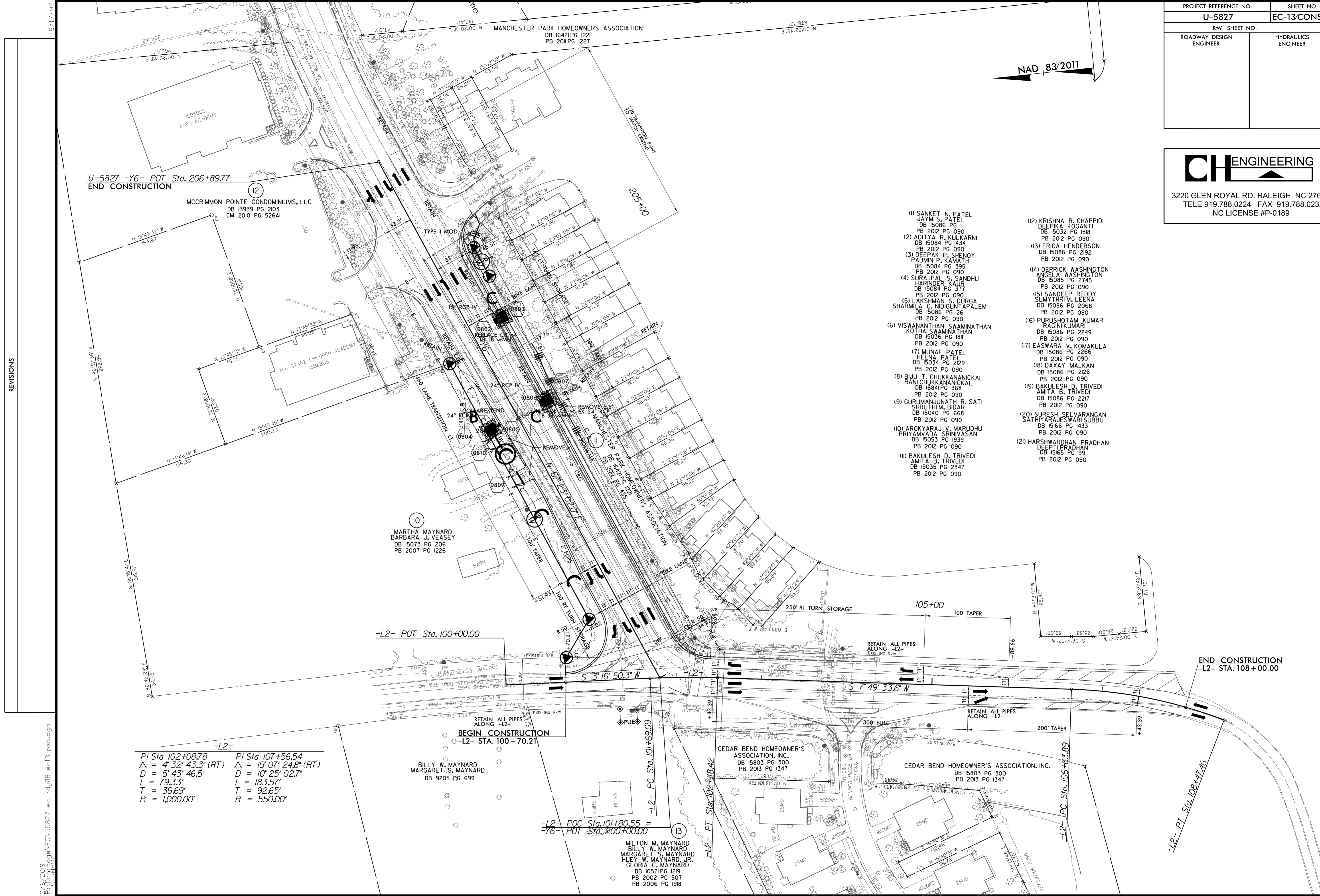
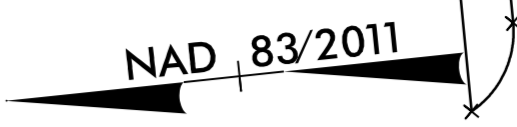
8/21/2019
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PROJECT REFERENCE NO.	SHEET NO.
U-5827	EC-13/CONST.8
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CH ENGINEERING

3220 GLEN ROYAL RD. RALEIGH, NC 27617
 TELE 919.788.0224 FAX 919.788.0232
 NC LICENSE #P-0189



- (1) SANKET N. PATEL
 DB 15086 PG 1
 PB 2012 PG 090
- (2) ADITYA R. KULKARNI
 DB 15084 PG 434
 PB 2012 PG 090
- (3) DEEPAK P. SHENOY
 PADMINIP. KAMATH
 DB 15084 PG 395
 PB 2012 PG 090
- (4) SURAJPAL S. SANDHU
 HARINDER KAUR
 DB 15084 PG 377
 PB 2012 PG 090
- (5) LAKSHMAN S. DURGA
 SHARMILA C. NIDIGUNTAPALEM
 DB 15086 PG 26
 PB 2012 PG 090
- (6) VISWANATHAN SWAMINATHAN
 KOTHAI SWAMINATHAN
 DB 15036 PG 181
 PB 2012 PG 090
- (7) MUNAF PATEL
 HEENA PATEL
 DB 15034 PG 2129
 PB 2012 PG 090
- (8) BIJU T. CHUKKANICKAL
 RANI CHUKKANICKAL
 DB 16841 PG 368
 PB 2012 PG 090
- (9) GURUMANJUNATH R. SATI
 SHRUTHI M. BIDAR
 DB 15040 PG 668
 PB 2012 PG 090
- (10) AROKYARAJ V. MARUDHU
 PRIYAMVADA SRINIVASAN
 DB 15053 PG 1939
 PB 2012 PG 090
- (11) BAKULESH D. TRIVEDI
 AMITA B. TRIVEDI
 DB 15035 PG 2347
 PB 2012 PG 090
- (12) KRISHNA R. CHAPPIDI
 DEEPIKA KOGANTI
 DB 15032 PG 1518
 PB 2012 PG 090
- (13) ERICA HENDERSON
 DB 15086 PG 2192
 PB 2012 PG 090
- (14) DERRICK WASHINGTON
 ANGELA WASHINGTON
 DB 15085 PG 2745
 PB 2012 PG 090
- (15) SANDEEP REDDY
 SUNYATHRI M. LEENA
 DB 15086 PG 2068
 PB 2012 PG 090
- (16) PURUSHOTAM KUMAR
 RAGINI KUMARI
 DB 15086 PG 2249
 PB 2012 PG 090
- (17) EASWARA V. KOMAKULA
 DB 15086 PG 2256
 PB 2012 PG 090
- (18) DAXAY MALKAN
 DB 15086 PG 2126
 PB 2012 PG 090
- (19) BAKULESH D. TRIVEDI
 AMITA B. TRIVEDI
 DB 15086 PG 2217
 PB 2012 PG 090
- (20) SURESH SELVARANGAN
 SATHIYARAJESWARI SUBBU
 DB 15166 PG 1433
 PB 2012 PG 090
- (21) HARSHWARDHAN PRADHAN
 DEEPTI PRADHAN
 DB 15165 PG 99
 PB 2012 PG 090

-L2-

PI Sta 102+08.78	PI Sta 107+56.54
$\Delta = 4' 32' 43.3''$ (RT)	$\Delta = 19' 07' 24.8''$ (RT)
$D = 5' 43' 46.5''$	$D = 10' 25' 02.7''$
$L = 79.33'$	$L = 183.57'$
$T = 39.69'$	$T = 92.65'$
$R = 1,000.00'$	$R = 550.00'$

REVISIONS

8/17/19
 2/6/2019
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