

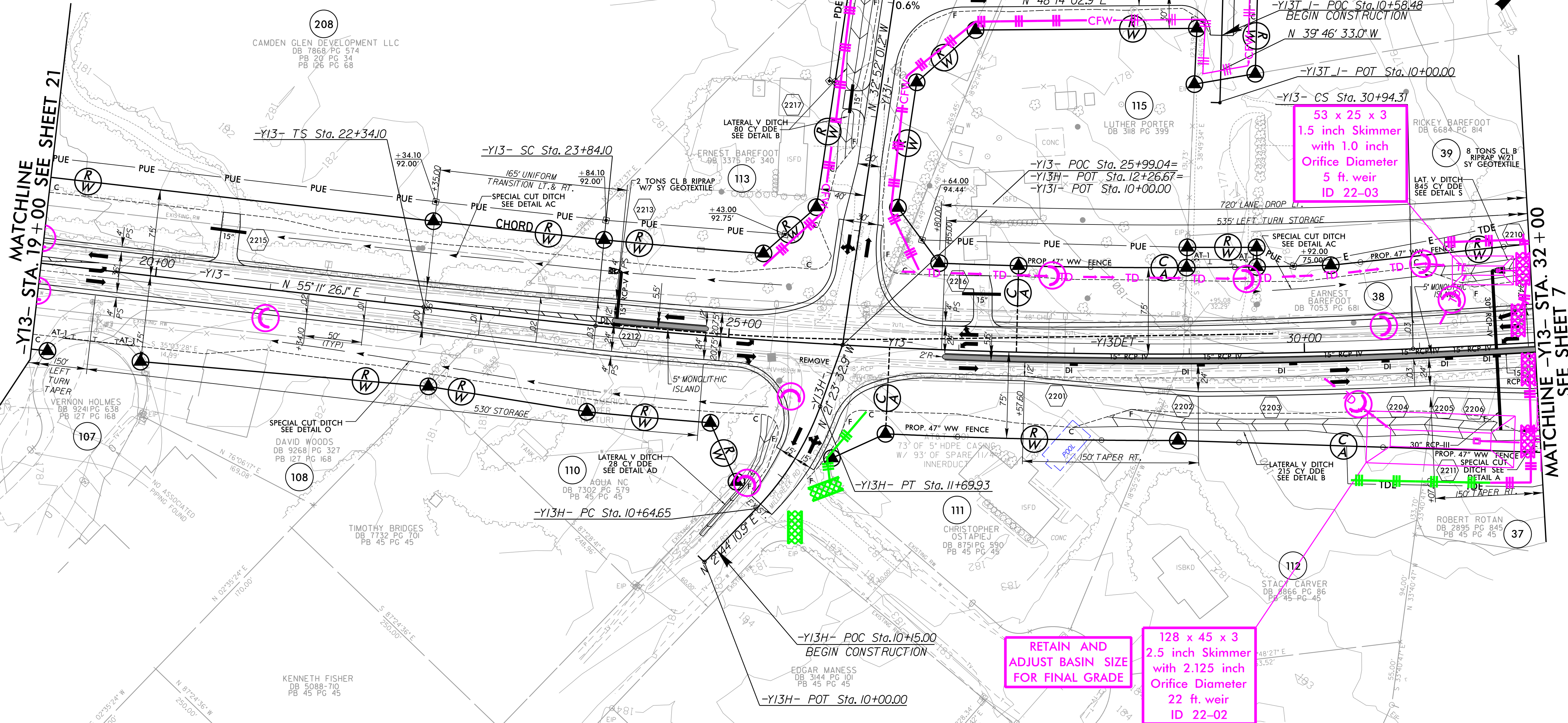
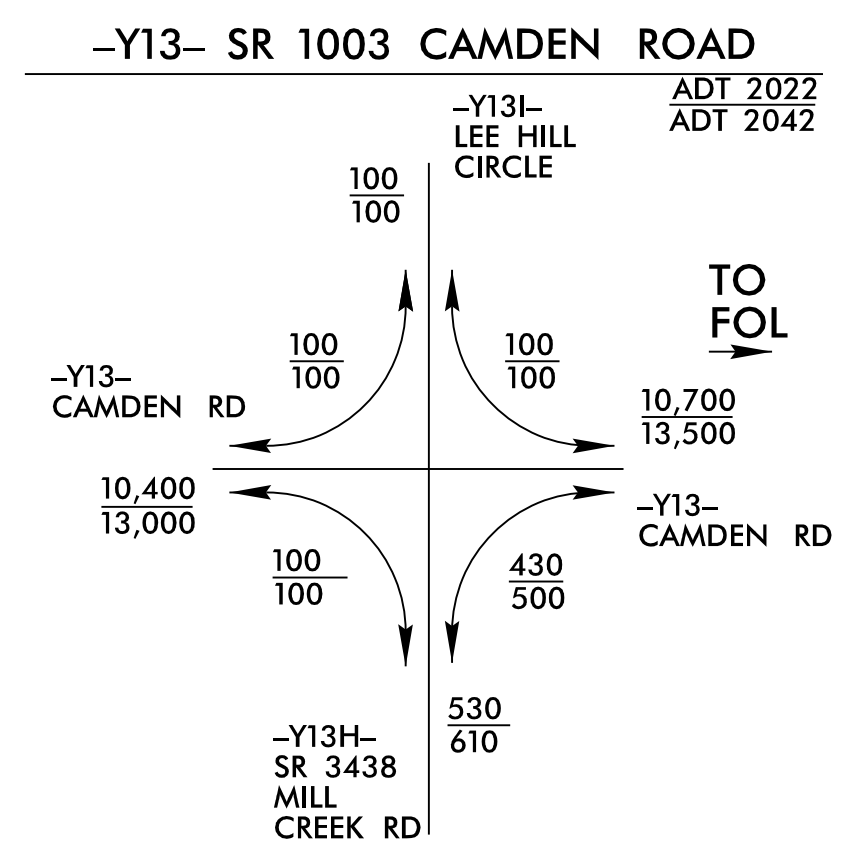
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NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 22



-Y13-			-Y13H-		
PIs Sta 23+34.10	PI Sta 27+39.80	PIs Sta 31+44.31	PI Sta 11+18.08		
Os = 0° 51' 34.0"	Δ = 8° 08' 18.2" (LT)	Os = 0° 51' 34.0"	Δ = 24° 07' 43.8" (LT)		
Ls = 150.00'	D = 1° 08' 45.3"	Ls = 150.00'	D = 22° 55' 05.9"		
LT = 100.00'	L = 710.21'	LT = 100.00'	L = 105.28'		
ST = 50.00'	T = 355.70'	ST = 50.00'	T = 53.43'		
	R = 5,000.00'		R = 250.00'		
	SE = 0.03		SE = SEE PLANS		

NOTE: ALL DRIVES ARE 16' WIDE WITH 10' RADII UNLESS OTHERWISE NOTED

RETAIN AND ADJUST BASIN SIZE FOR FINAL GRADE

128 x 45 x 3
2.5 inch Skimmer
with 2.125 inch
Orifice Diameter
22 ft. weir
ID 22-02

53 x 25 x 3
1.5 inch Skimmer
with 1.0 inch
Orifice Diameter
5 ft. weir
ID 22-03

FOR -Y13- PROFILE SEE SHTS. 38 & 39
FOR -Y13H- PROFILE SEE SHT. 46
FOR -Y13L- PROFILE SEE SHT. 46
FOR -Y13J- PROFILE SEE SHT. 46
FOR -Y13T 1- PROFILE SEE SHT. 52
FOR DITCH DETAILS SEE SHT. 2D-1 & 2D-2
FOR INTERSECTION DESIGN SEE SHT. 2B-11

PROJECT REFERENCE NO.	SHEET NO.
U-2519BA	EC-23/CONST.23
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

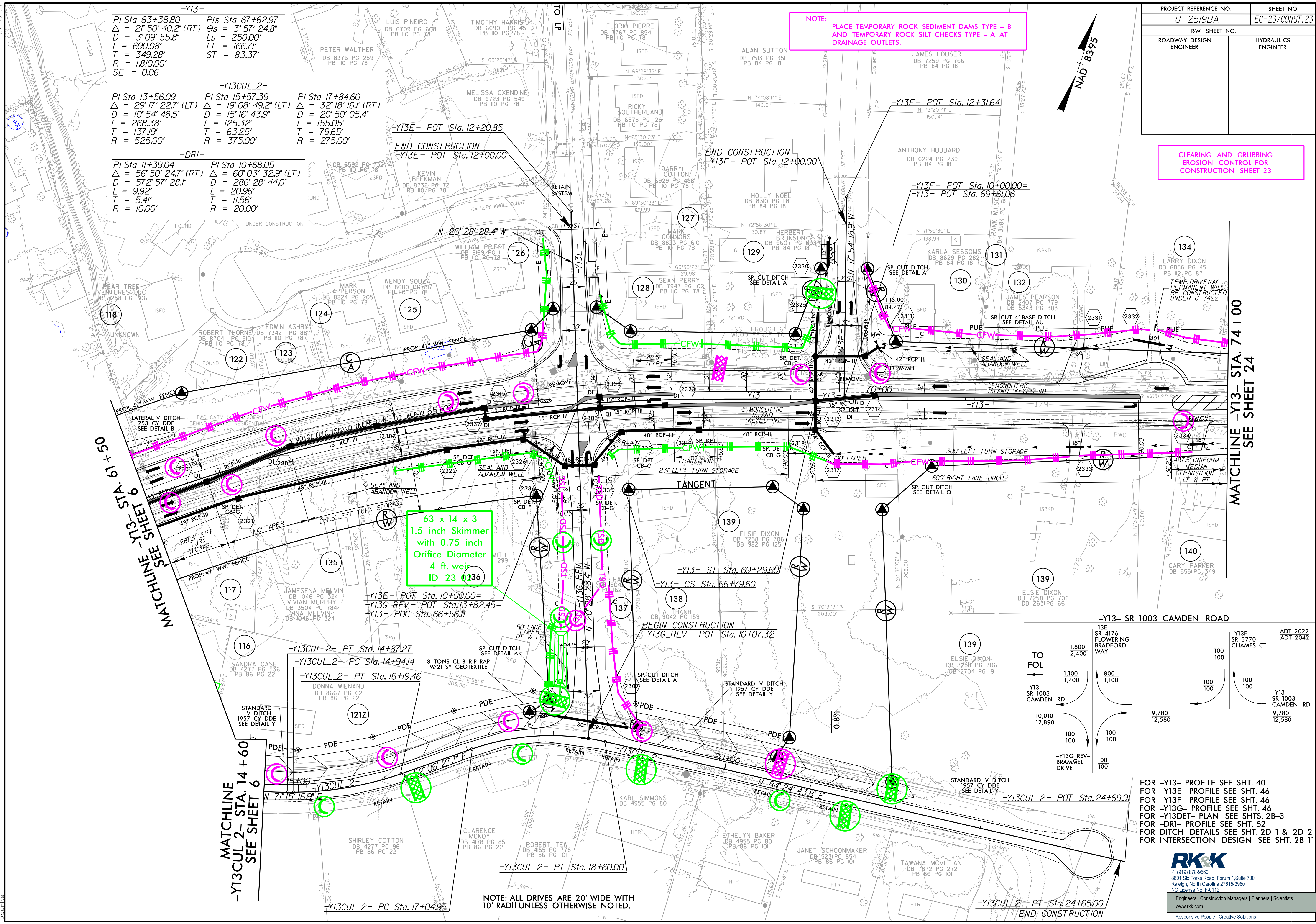
CLARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 23

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

-Y13-
 PI Sta 63+38.80 Δ = 21° 50' 40.2" (RT) D = 3' 09" 55.8" L = 690.08' T = 349.28' R = 1,810.00' SE = 0.06
 PIs Sta 67+62.97 Δs = 3' 57" 24.8" Ls = 250.00' LT = 166.71' ST = 83.37'

-Y13CUL_2-
 PI Sta 13+56.09 Δ = 29° 17' 22.7" (LT) D = 10' 54" 48.5" L = 268.38' T = 137.19' R = 525.00'
 PI Sta 15+57.39 Δ = 19° 08' 49.2" (LT) D = 15' 16" 43.9" L = 125.32' T = 63.25' R = 375.00'
 PI Sta 17+84.60 Δ = 32° 18' 16.1" (RT) D = 20' 50" 05.4" L = 155.05' T = 79.65' R = 275.00'

-DRI-
 PI Sta 11+39.04 Δ = 56° 50' 24.7" (RT) D = 57° 57' 28.1" L = 9.92' T = 5.41' R = 10.00'
 PI Sta 10+68.05 Δ = 60° 03' 32.9" (LT) D = 286° 28' 44.0" L = 20.96' T = 11.56' R = 20.00'



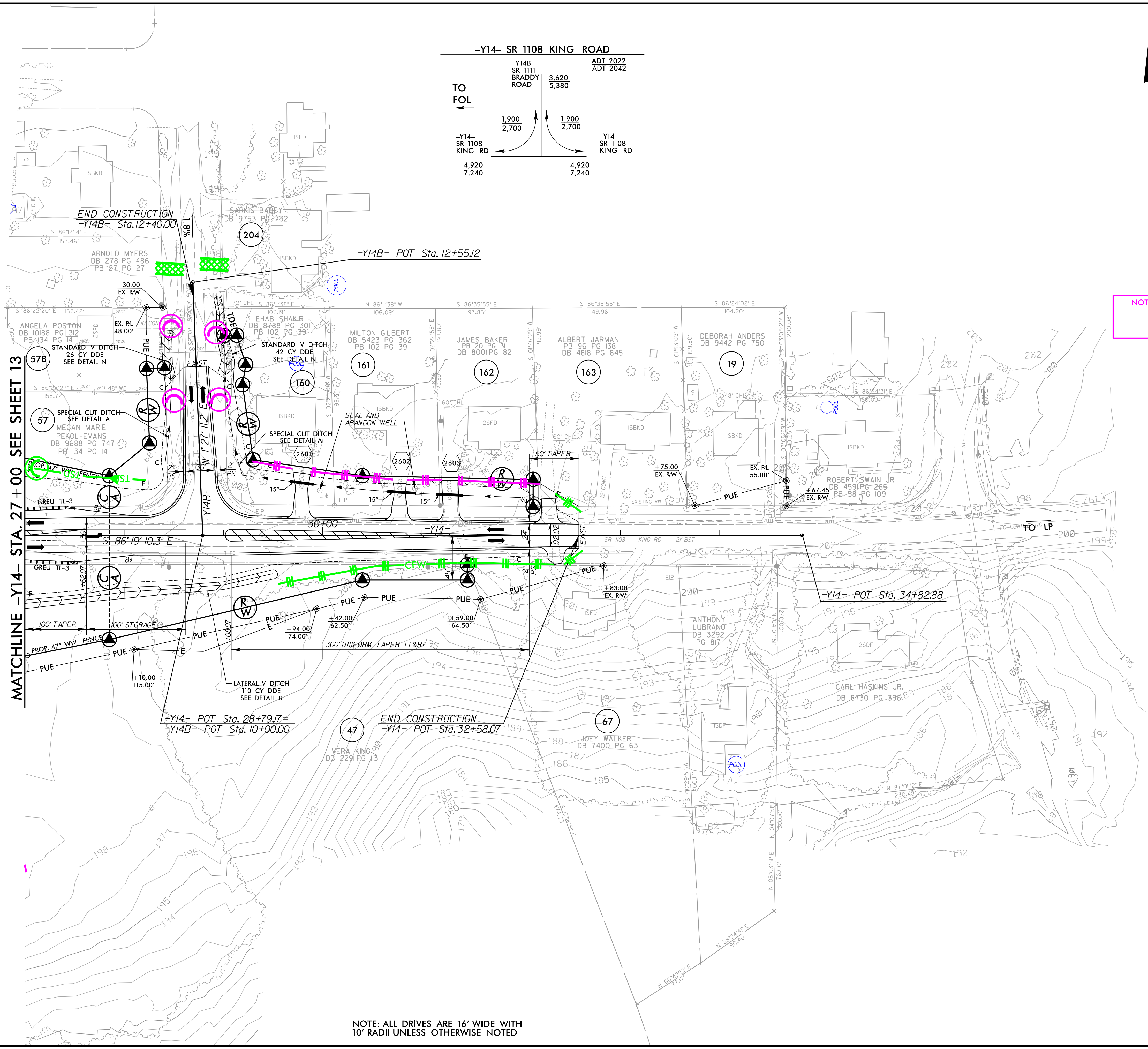
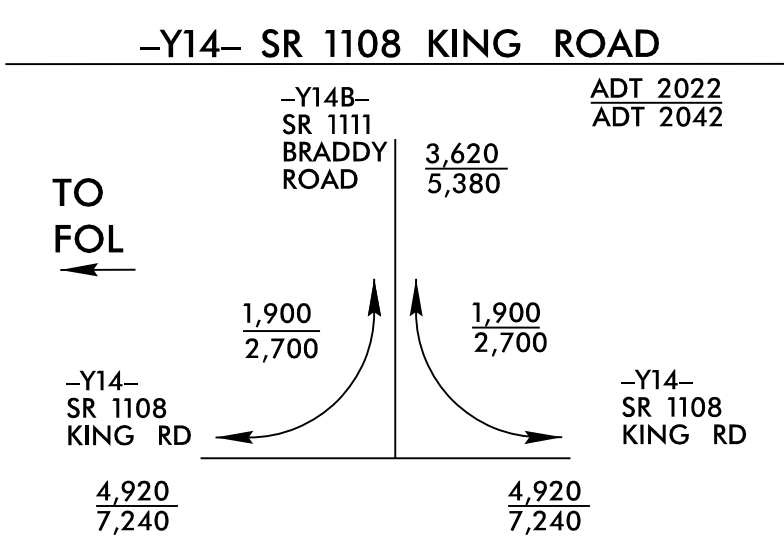
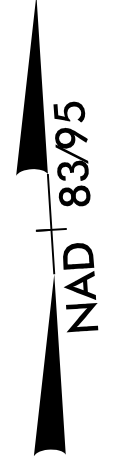
63 x 14 x 3
 1.5 inch Skimmer
 with 0.75 inch
 Orifice Diameter
 4 ft. weir
 ID 23-0136

FOR -Y13- PROFILE SEE SHT. 40
 FOR -Y13E- PROFILE SEE SHT. 46
 FOR -Y13F- PROFILE SEE SHT. 46
 FOR -Y13G- PROFILE SEE SHT. 46
 FOR -Y13DET- PLAN SEE SHTS. 2B-3
 FOR -DRI- PROFILE SEE SHT. 52
 FOR DITCH DETAILS SEE SHT. 2D-1 & 2D-2
 FOR INTERSECTION DESIGN SEE SHT. 2B-11

NOTE: ALL DRIVES ARE 20' WIDE WITH 10' RADII UNLESS OTHERWISE NOTED.

3/3/2022 R:\Projects\2022\U-2519BA\EC-23\CONST.23.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-2519BA	EC-26/CONST.26
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 26

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

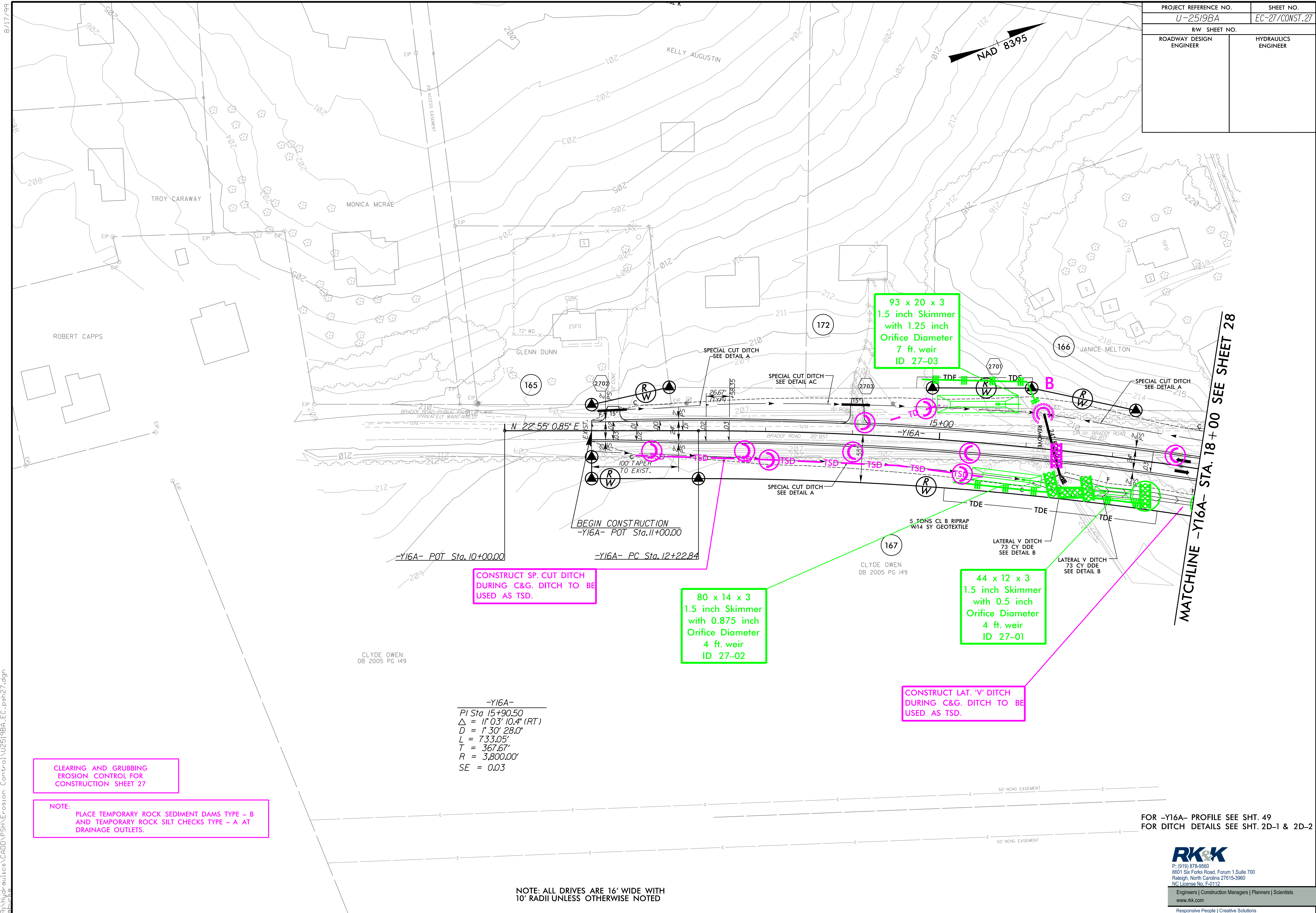
NOTE: ALL DRIVES ARE 16' WIDE WITH
10' RADII UNLESS OTHERWISE NOTED

FOR -Y14- PROFILE SEE SHT. 47
FOR -Y14B- PROFILE SEE SHT. 47
FOR -Y14DET- PLAN SEE SHTS. 2B-5
FOR DITCH DETAILS SEE SHT. 2D-1 & 2D-2
FOR INTERSECTION DESIGN SEE SHT. 2B-12



8/17/99
3/3/2022
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PROJECT REFERENCE NO. U-2519BA	SHEET NO. EC-27/CONST.27
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



MATCHLINE -Y16A- STA. 18+00 SEE SHEET 28

CONSTRUCT SP. CUT DITCH DURING C&G. DITCH TO BE USED AS TSD.

80 x 14 x 3
1.5 inch Skimmer
with 0.875 inch
Orifice Diameter
4 ft. weir
ID 27-02

44 x 12 x 3
1.5 inch Skimmer
with 0.5 inch
Orifice Diameter
4 ft. weir
ID 27-01

CONSTRUCT LAT. 'V' DITCH DURING C&G. DITCH TO BE USED AS TSD.

-Y16A-
PI Sta 15+90.50
Δ = 1' 03' 10.4" (RT)
D = 1' 30' 28.0"
L = 733.05'
T = 367.67'
R = 3,800.00'
SE = 0.03

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 27

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

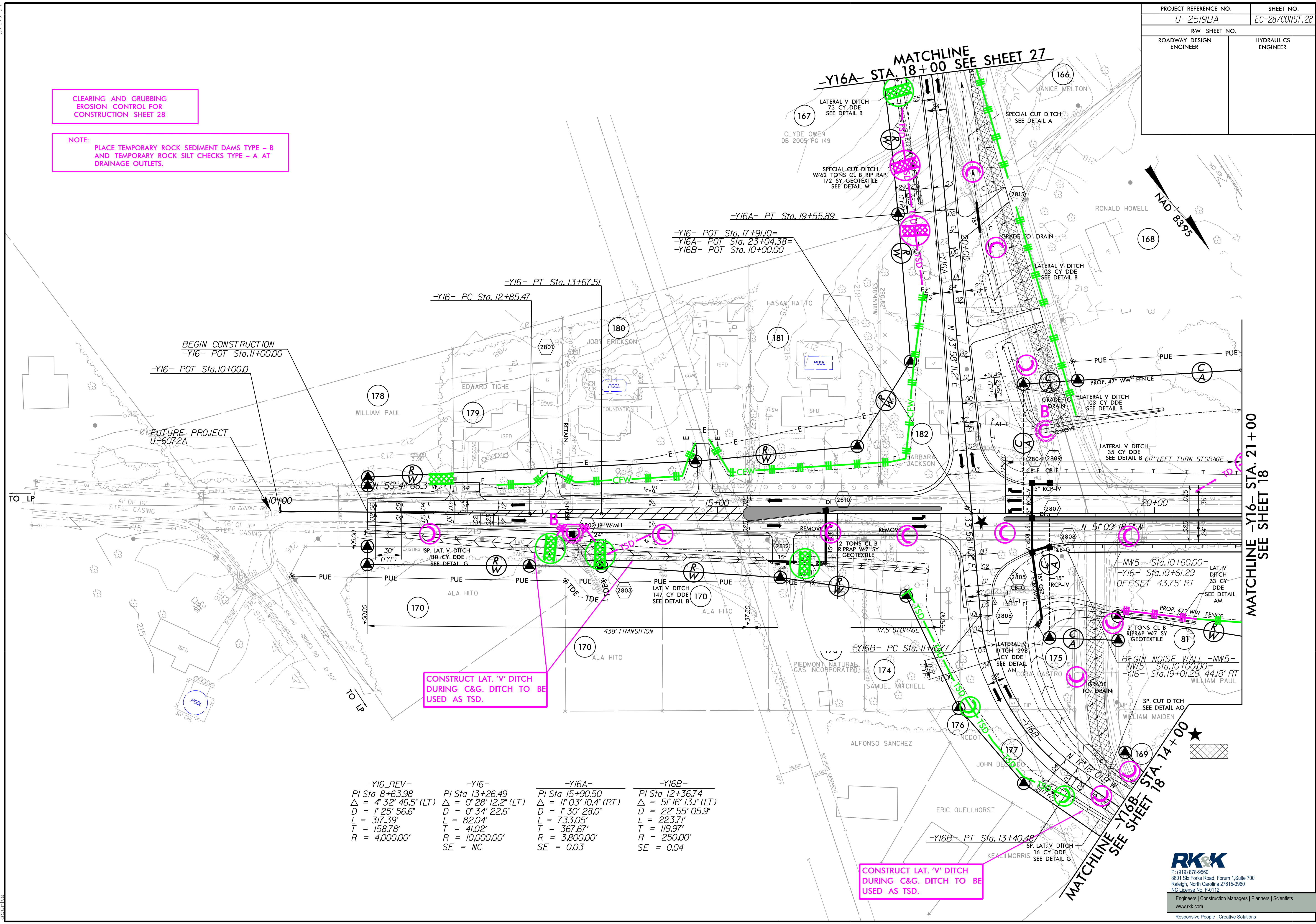
FOR -Y16A- PROFILE SEE SHT. 49
FOR DITCH DETAILS SEE SHT. 2D-1 & 2D-2

NOTE: ALL DRIVES ARE 16' WIDE WITH 10' RADII UNLESS OTHERWISE NOTED

3/3/2022 R:\Projects\2519BA\EROSION\Control\U2519BA_EC_psh27.dgn

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 28

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

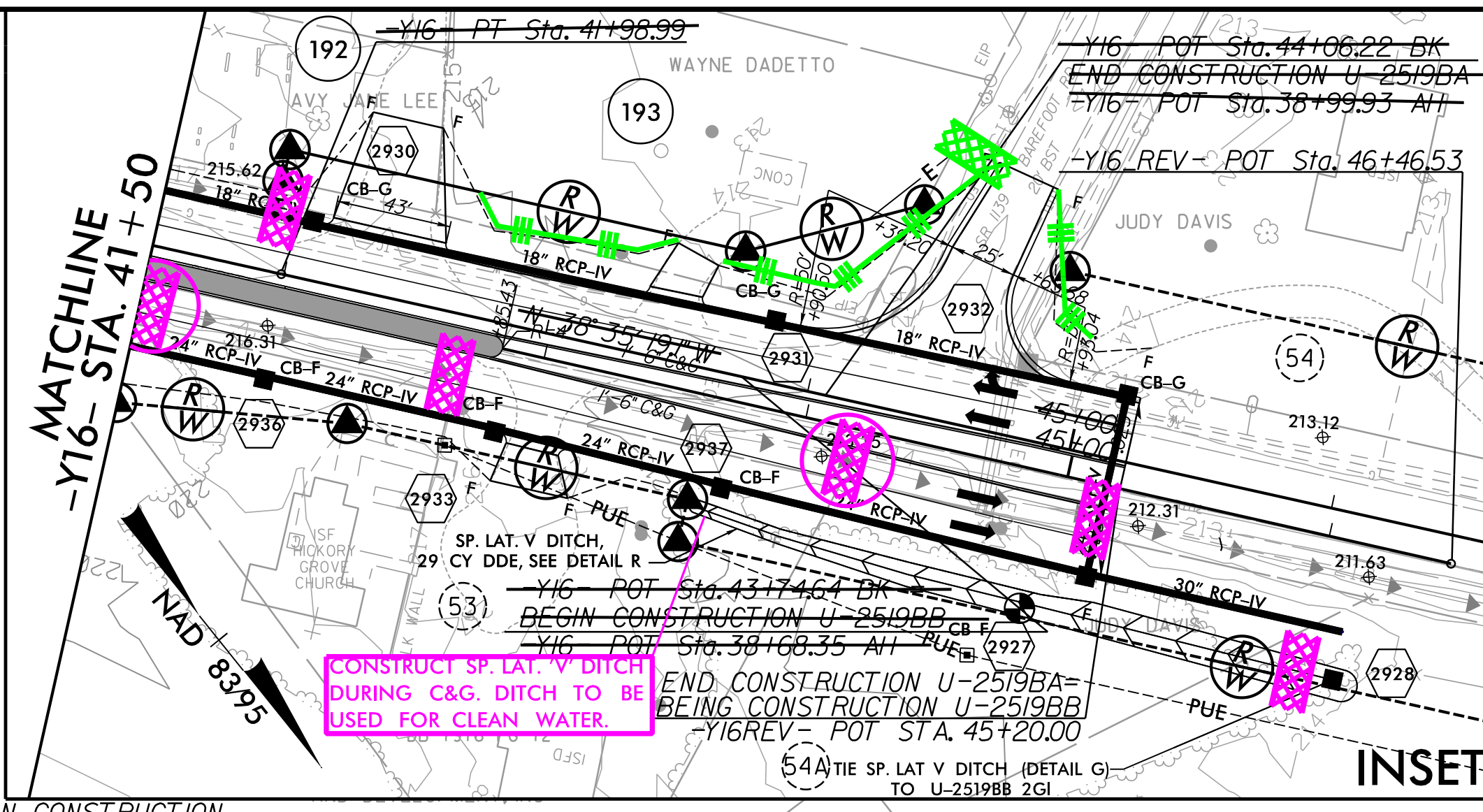
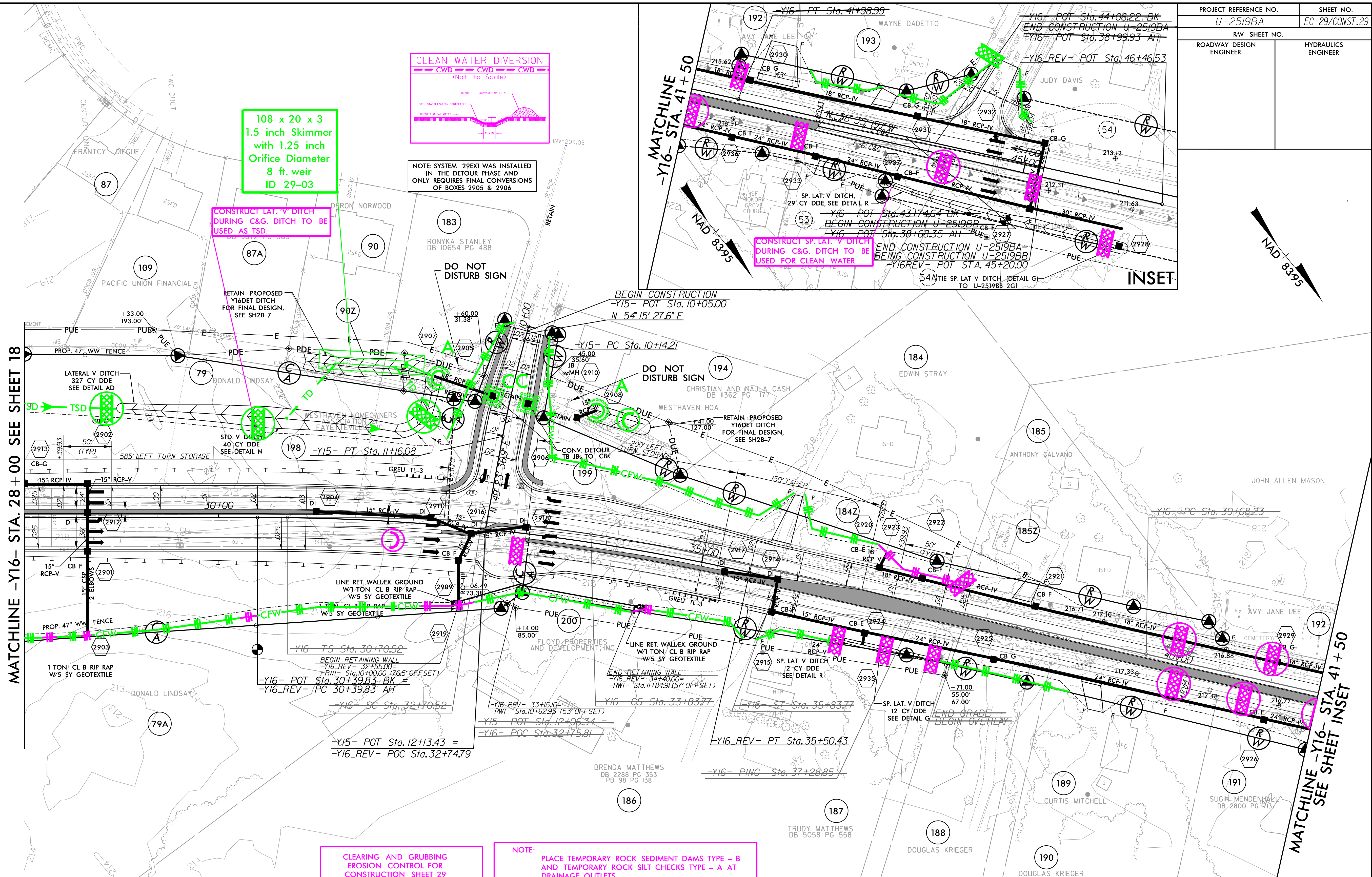


CONSTRUCT LAT. 'V' DITCH
DURING C&G. DITCH TO BE
USED AS TSD.

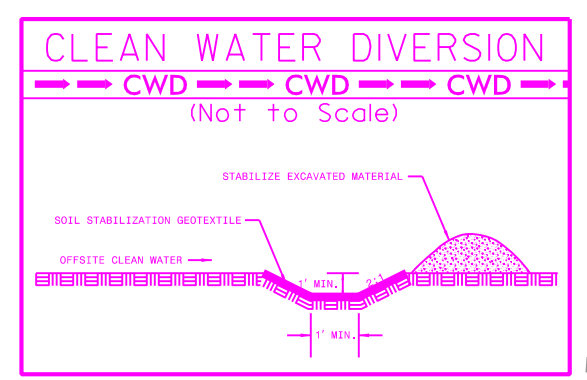
CONSTRUCT LAT. 'V' DITCH
DURING C&G. DITCH TO BE
USED AS TSD.

-Y16_REV-	-Y16-	-Y16A-	-Y16B-
PI Sta 8+63.98	PI Sta 13+26.49	PI Sta 15+90.50	PI Sta 12+36.74
$\Delta = 4' 32' 46.5''$ (LT)	$\Delta = 0' 28' 12.2''$ (LT)	$\Delta = 1' 03' 10.4''$ (RT)	$\Delta = 5' 16' 13.1''$ (LT)
$D = 1' 25' 56.6''$	$D = 0' 34' 22.6''$	$D = 1' 30' 28.0''$	$D = 22' 55' 05.9''$
$L = 317.39'$	$L = 82.04'$	$L = 733.05'$	$L = 223.71'$
$T = 158.78'$	$T = 41.02'$	$T = 367.67'$	$T = 119.97'$
$R = 4,000.00'$	$R = 10,000.00'$	$R = 3,800.00'$	$R = 250.00'$
	SE = NC	SE = 0.03	SE = 0.04

8/17/99
3/3/2022
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108 x 20 x 3
1.5 inch Skimmer
with 1.25 inch
Orifice Diameter
8 ft. weir
ID 29-03



NOTE: SYSTEM 29EX1 WAS INSTALLED IN THE DETOUR PHASE AND ONLY REQUIRES FINAL CONVERSIONS OF BOXES 2905 & 2906

CONSTRUCT LAT. V DITCH DURING C&G. DITCH TO BE USED AS TSD.

CONSTRUCT SP. LAT. V DITCH DURING C&G. DITCH TO BE USED FOR CLEAN WATER.

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 29

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

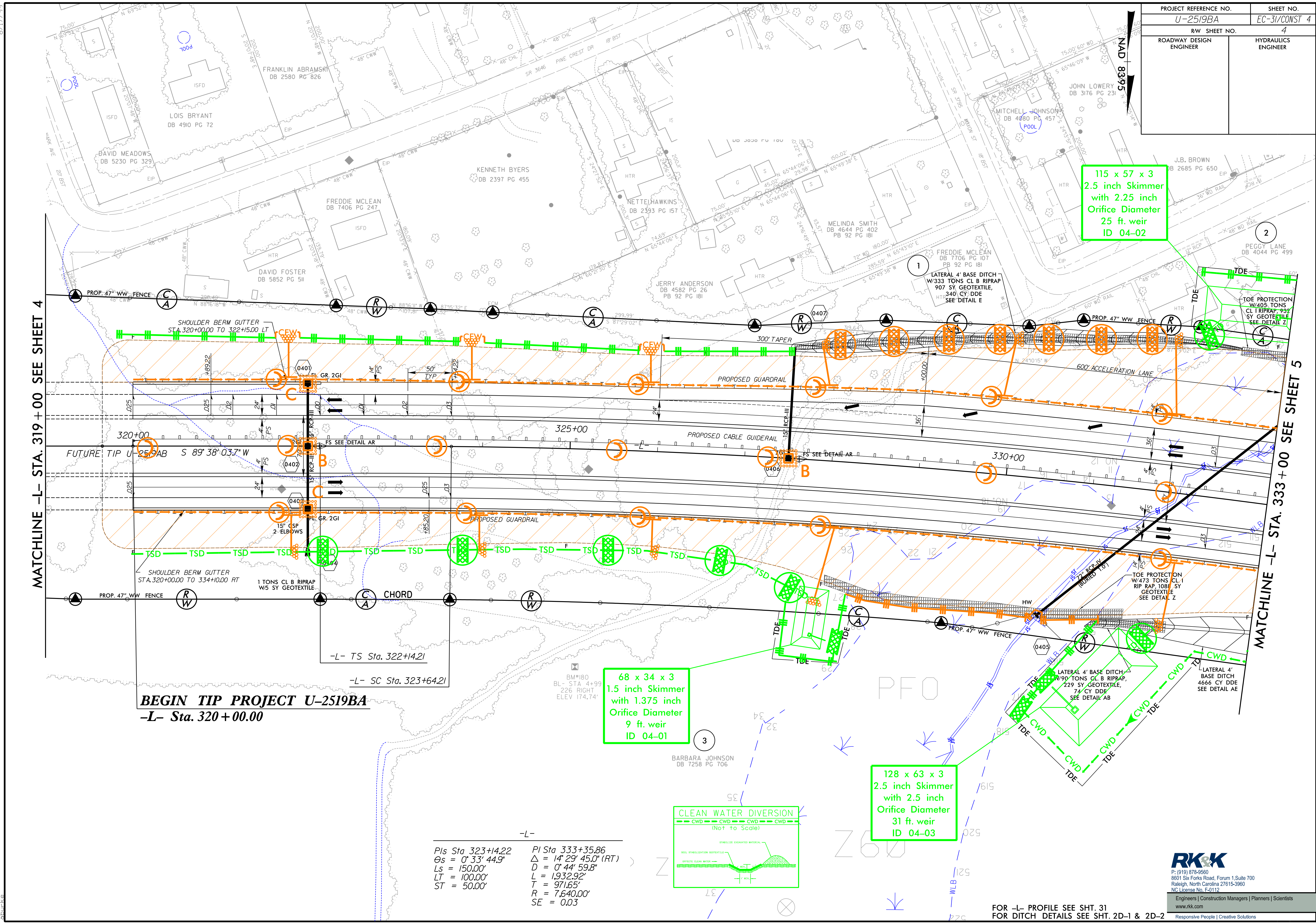
-Y15-		-Y16-		-Y16_REV-	
PI Sta 10+65.18	PI Sta 32+03.89	PI Sta 33+27.18	PI Sta 34+50.47	PI Sta 40+83.61	PI Sta 32+96.21
$\Delta = 4' 51'' 50.7''$ (LT)	$\Theta_s = 4' 02'' 05.7''$	$\Delta = 4' 34'' 10.9''$ (RT)	$\Theta_s = 4' 02'' 05.7''$	$\Delta = 0' 07'' 56.0''$ (LT)	$\Delta = 12' 46'' 33.7''$ (RT)
$D = 4' 46'' 28.7''$	$L_s = 200.00'$	$D = 4' 02'' 05.7''$	$L_s = 200.00'$	$D = 0' 03'' 26.3''$	$D = 2' 30'' 07.9''$
$L = 101.87'$	$L = 133.37'$	$L = 113.25'$	$L = 133.37'$	$L = 230.76'$	$L = 510.59'$
$T = 50.97'$	$ST = 66.70'$	$T = 56.65'$	$ST = 66.70'$	$T = 115.38'$	$T = 256.38'$
$R = 1,200.00'$	$R = 1,420.00'$	$R = 1,420.00'$	$R = 100,000.00'$	$R = 2,290.00'$	
	$SE = 0.06$				

NOTE: ALL DRIVES ARE 20' WIDE WITH UNLESS OTHERWISE NOTED

FOR -Y15- PROFILE SEE SHT. 50
FOR -Y16- & -Y16REV- PROFILE SEE SHT. 49
FOR -Y16DET- PLAN SEE SHTS. 2B-7
FOR DITCH DETAILS SEE SHT. 2D-1 & 2D-2
FOR INTERSECTION DESIGN SEE SHT. 2B-12

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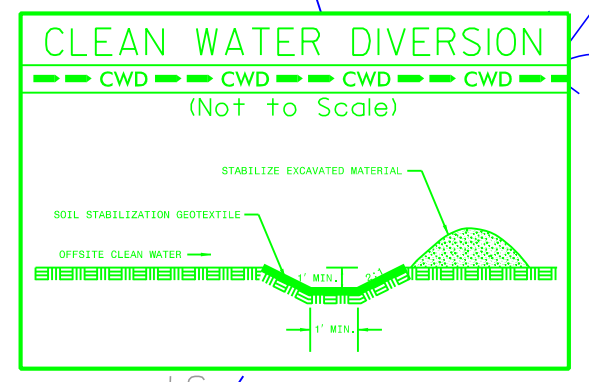
PROJECT REFERENCE NO. U-2519BA	SHEET NO. EC-31/CONST 4
RW SHEET NO. 4	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	



115 x 57 x 3
2.5 inch Skimmer
with 2.25 inch
Orifice Diameter
25 ft. weir
ID 04-02

68 x 34 x 3
1.5 inch Skimmer
with 1.375 inch
Orifice Diameter
9 ft. weir
ID 04-01

128 x 63 x 3
2.5 inch Skimmer
with 2.5 inch
Orifice Diameter
31 ft. weir
ID 04-03



MATCHLINE -L- STA. 319 + 00 SEE SHEET 4

MATCHLINE -L- STA. 333 + 00 SEE SHEET 5

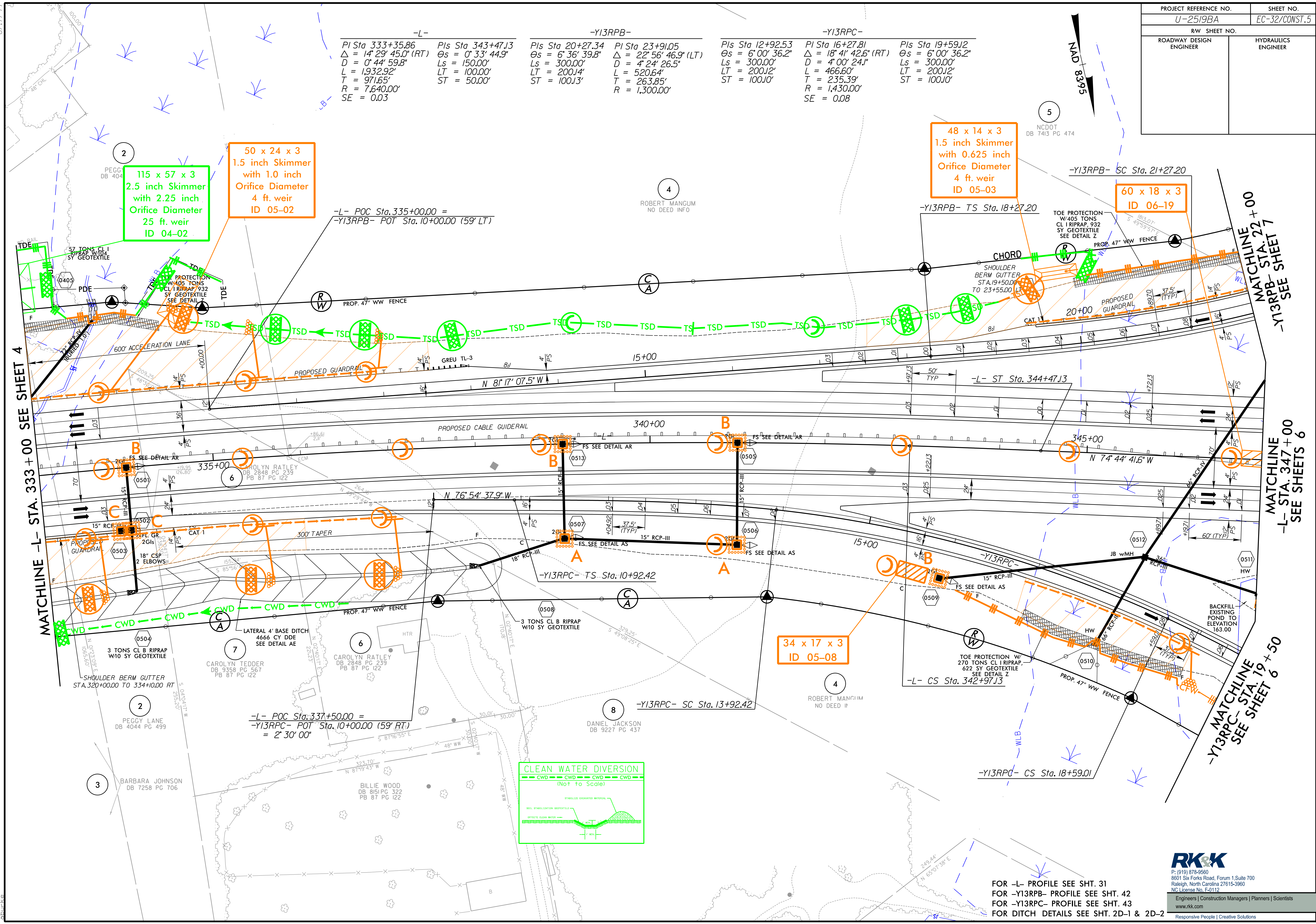
BEGIN TIP PROJECT U-2519BA
-L- Sta. 320+00.00

-L-
Pls Sta 323+14.22 Pl Sta 333+35.86
Os = 0° 33' 44.9" Δ = 14° 29' 45.0" (RT)
Ls = 150.00' D = 0° 44' 59.8"
LT = 100.00' L = 1,932.92'
ST = 50.00' T = 971.65'
R = 7,640.00'
SE = 0.03

PROJECT REFERENCE NO.	SHEET NO.
U-2519BA	EC-32/CONST.5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-L-		-Y13RPB-		-Y13RPC-	
PI Sta 333+35.86	PIs Sta 343+47.13	PIs Sta 20+27.34	PI Sta 23+91.05	PIs Sta 12+92.53	PI Sta 16+27.81
$\Delta = 14^{\circ} 29' 45.0''$ (RT)	$\Theta_s = 0^{\circ} 33' 44.9''$	$\Theta_s = 6^{\circ} 36' 39.8''$	$\Delta = 22^{\circ} 56' 46.9''$ (LT)	$\Theta_s = 6^{\circ} 00' 36.2''$	$\Theta_s = 6^{\circ} 00' 36.2''$
D = 0' 44' 59.8"	Ls = 150.00'	Ls = 300.00'	D = 4' 24' 26.5"	Ls = 300.00'	D = 4' 00' 24.1"
L = 1932.92'	LT = 100.00'	LT = 200.14'	L = 520.64'	L = 466.60'	Ls = 300.00'
T = 971.65'	ST = 50.00'	ST = 100.13'	T = 263.85'	T = 200.12'	LT = 200.12'
R = 7,640.00'	SE = 0.03	R = 1,300.00'	R = 1,300.00'	R = 1,430.00'	ST = 100.10'
				SE = 0.08	

NAD 83/95



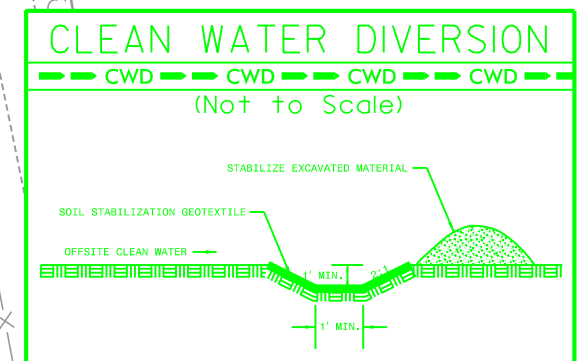
115 x 57 x 3
2.5 inch Skimmer
with 2.25 inch
Orifice Diameter
25 ft. weir
ID 04-02

50 x 24 x 3
1.5 inch Skimmer
with 1.0 inch
Orifice Diameter
4 ft. weir
ID 05-02

48 x 14 x 3
1.5 inch Skimmer
with 0.625 inch
Orifice Diameter
4 ft. weir
ID 05-03

60 x 18 x 3
ID 06-19

34 x 17 x 3
ID 05-08

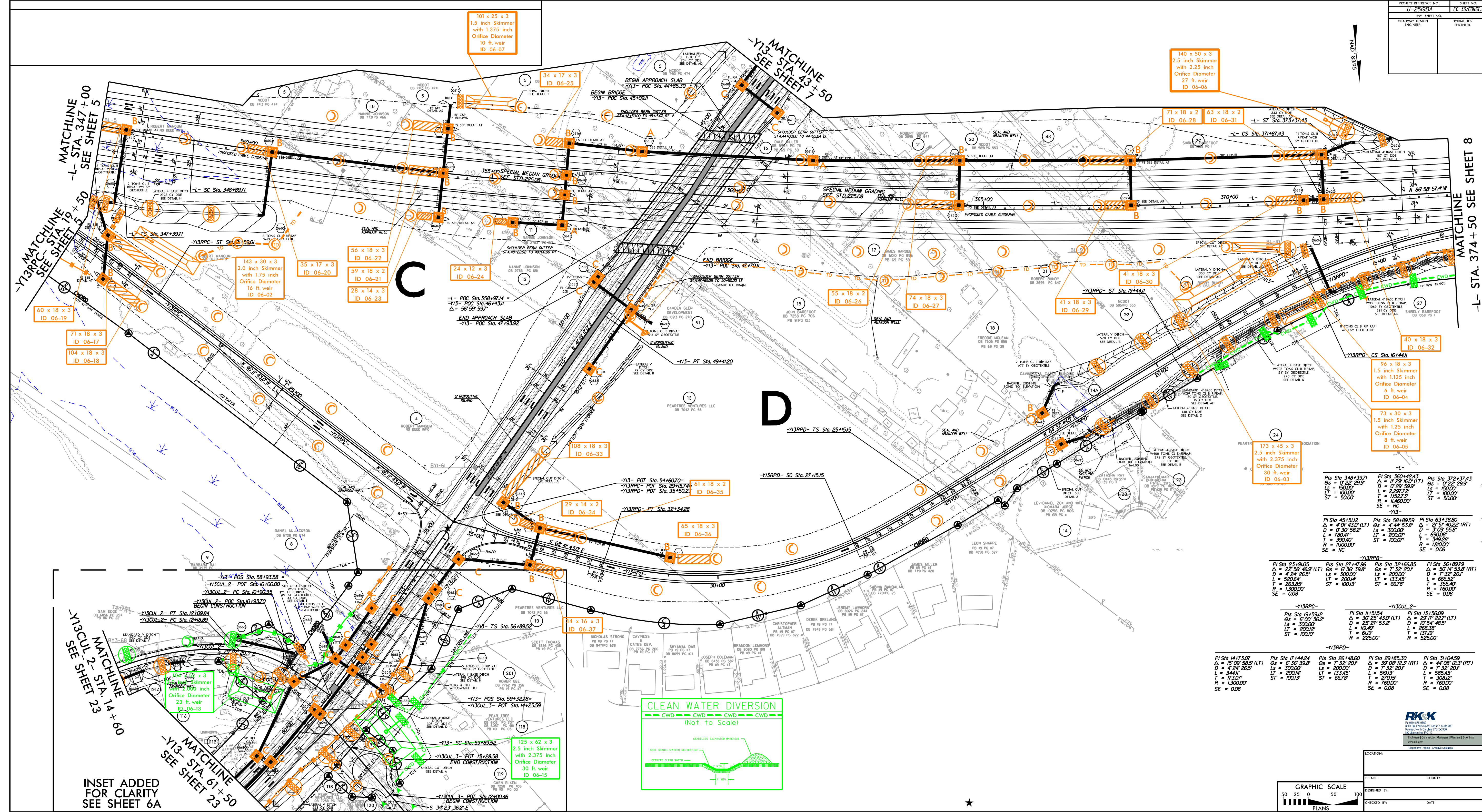


FOR -L- PROFILE SEE SHT. 31
FOR -Y13RPB- PROFILE SEE SHT. 42
FOR -Y13RPC- PROFILE SEE SHT. 43
FOR DITCH DETAILS SEE SHT. 2D-1 & 2D-2

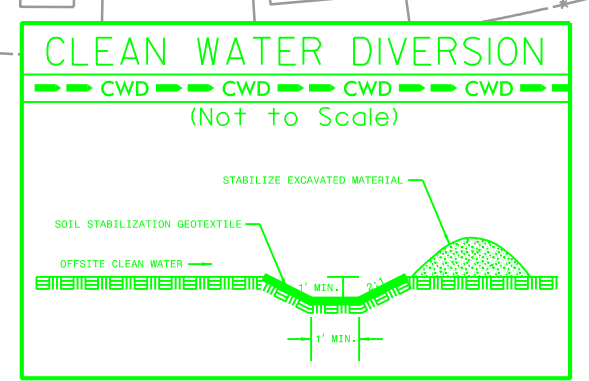
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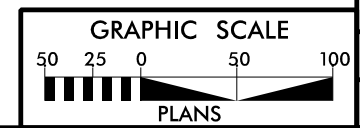
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INSET ADDED FOR CLARITY SEE SHEET 6A



<p>PI Sta. 348+397.1 $\Delta = 0' 22' 29.9"$ $D = 1500.0'$ $LT = 1000.0'$ $T = 500.0'$ $R = 114600.0'$ $SE = PC$</p>	<p>PI Sta. 360+424.1 $\Delta = 0' 29' 59.9"$ $D = 1500.0'$ $LT = 1000.0'$ $T = 500.0'$ $R = 114600.0'$ $SE = PC$</p>	<p>PI Sta. 372+374.3 $\Delta = 0' 22' 29.9"$ $D = 1500.0'$ $LT = 1000.0'$ $T = 500.0'$ $R = 114600.0'$ $SE = PC$</p>
<p>PI Sta. 45+50.2 $\Delta = 22' 50' 46.9"$ $D = 4' 24' 26.5"$ $LT = 500.0'$ $T = 250.0'$ $R = 13000.0'$ $SE = 0.08$</p>	<p>PI Sta. 58+89.99 $\Delta = 4' 04' 43.0"$ $D = 7' 30' 58.2"$ $LT = 2000.0'$ $T = 1000.0'$ $R = 22500.0'$ $SE = 0.08$</p>	<p>PI Sta. 63+38.80 $\Delta = 50' 14' 53.8"$ $D = 3' 09' 55.8"$ $LT = 1334.5'$ $T = 356.40'$ $R = 16000.0'$ $SE = 0.08$</p>
<p>PI Sta. 23+91.05 $\Delta = 22' 50' 46.9"$ $D = 4' 24' 26.5"$ $LT = 500.0'$ $T = 250.0'$ $R = 13000.0'$ $SE = 0.08$</p>	<p>PI Sta. 32+66.85 $\Delta = 7' 30' 58.2"$ $D = 3' 09' 55.8"$ $LT = 1334.5'$ $T = 356.40'$ $R = 16000.0'$ $SE = 0.08$</p>	<p>PI Sta. 36+89.79 $\Delta = 50' 14' 53.8"$ $D = 7' 32' 20.7"$ $LT = 1334.5'$ $T = 356.40'$ $R = 16000.0'$ $SE = 0.08$</p>
<p>PI Sta. 19+99.02 $\Delta = 0' 07' 35.2"$ $D = 3000.0'$ $LT = 2000.0'$ $T = 1000.0'$ $R = 22500.0'$</p>	<p>PI Sta. 1151.54 $\Delta = 25' 27' 53.2"$ $D = 108.82'$ $LT = 61.9'$ $T = 137.9'$ $R = 22500.0'$</p>	<p>PI Sta. 13+56.09 $\Delta = 29' 17' 22.7"$ $D = 10' 54' 48.5"$ $LT = 268.9'$ $T = 137.9'$ $R = 22500.0'$</p>
<p>PI Sta. 14+37.07 $\Delta = 15' 09' 58.5"$ $D = 4' 24' 26.5"$ $LT = 200.0'$ $T = 100.0'$ $R = 13000.0'$ $SE = 0.08$</p>	<p>PI Sta. 17+44.24 $\Delta = 5' 35' 39.8"$ $D = 7' 32' 20.7"$ $LT = 1334.5'$ $T = 356.40'$ $R = 16000.0'$ $SE = 0.08$</p>	<p>PI Sta. 26+48.60 $\Delta = 39' 08' 12.3"$ $D = 7' 32' 20.7"$ $LT = 1334.5'$ $T = 356.40'$ $R = 16000.0'$ $SE = 0.08$</p>
<p>PI Sta. 29+85.30 $\Delta = 39' 08' 12.3"$ $D = 7' 32' 20.7"$ $LT = 1334.5'$ $T = 356.40'$ $R = 16000.0'$ $SE = 0.08$</p>	<p>PI Sta. 31+04.59 $\Delta = 41' 05' 12.3"$ $D = 7' 32' 20.7"$ $LT = 1334.5'$ $T = 356.40'$ $R = 16000.0'$ $SE = 0.08$</p>	<p>PI Sta. 31+04.59 $\Delta = 41' 05' 12.3"$ $D = 7' 32' 20.7"$ $LT = 1334.5'$ $T = 356.40'$ $R = 16000.0'$ $SE = 0.08$</p>

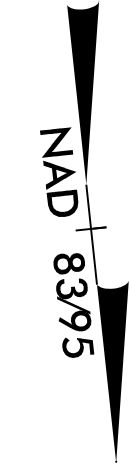
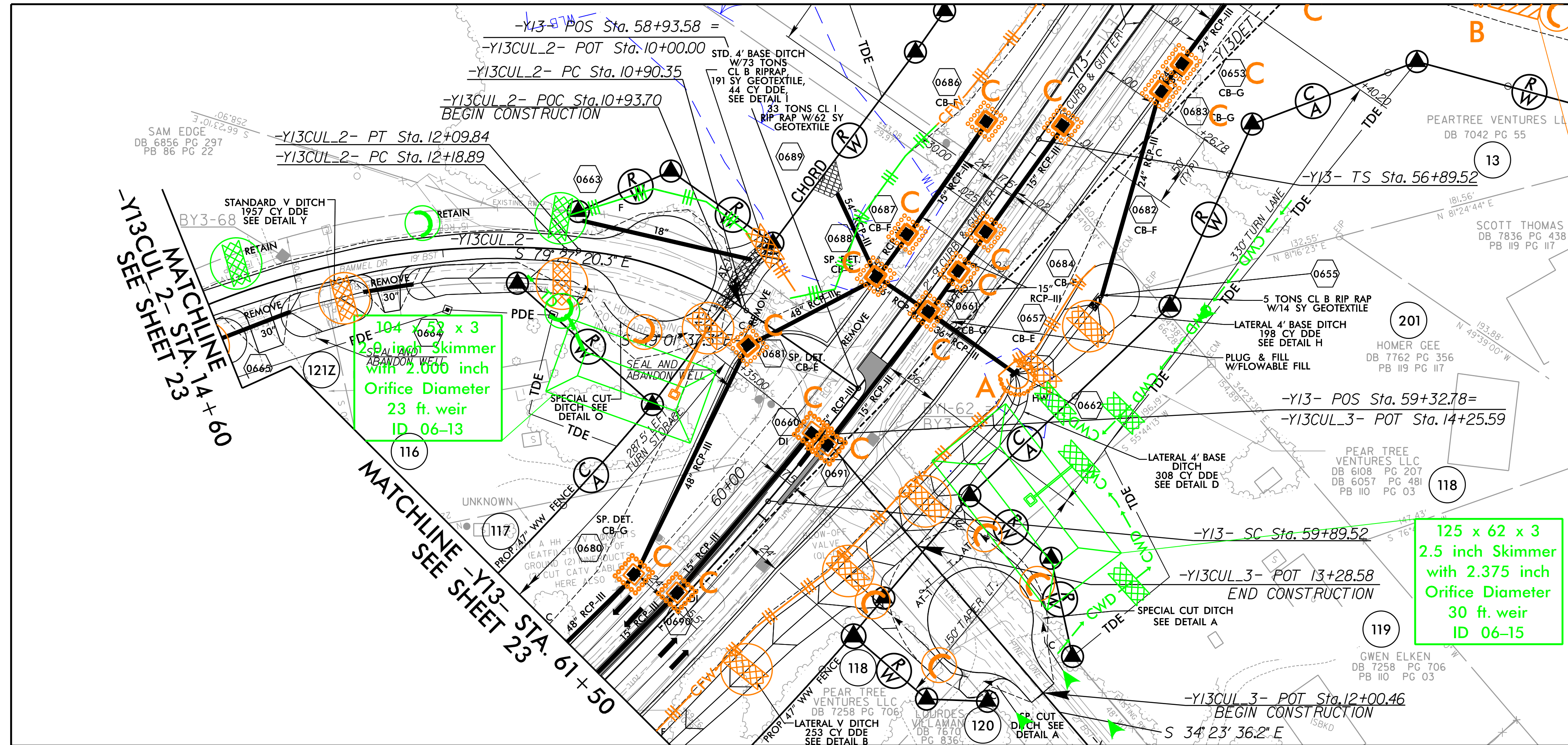


LOCATION:	COUNTY:
TR. NO.:	DESIGNED BY:
CHECKED BY:	DATE:



PROJECT REFERENCE NO.	SHEET NO.
U-2519BA	EC-33A/CONST.6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INSET FROM SHEET 6



-Y13-		-Y13CUL_2-	
PI Sta 58+89.59	PI Sta 63+38.80	PI Sta 11+51.54	PI Sta 13+56.09
$\Delta = 4' 44" 53.8"$	$\Delta = 21' 51" 40.22" (RT)$	$\Delta = 30' 25" 43.0" (LT)$	$\Delta = 29' 17" 22.7" (LT)$
$L_s = 300.00'$	$D = 3' 09" 55.8"$	$D = 25' 27" 53.2"$	$D = 10' 54" 48.5"$
$LT = 200.07'$	$L = 690.08'$	$L = 119.49'$	$L = 268.38'$
$ST = 100.07'$	$T = 349.28'$	$T = 61.9'$	$T = 137.19'$
	$R = 1,810.00'$	$R = 225.00'$	$R = 525.00'$
	$SE = 0.06$		

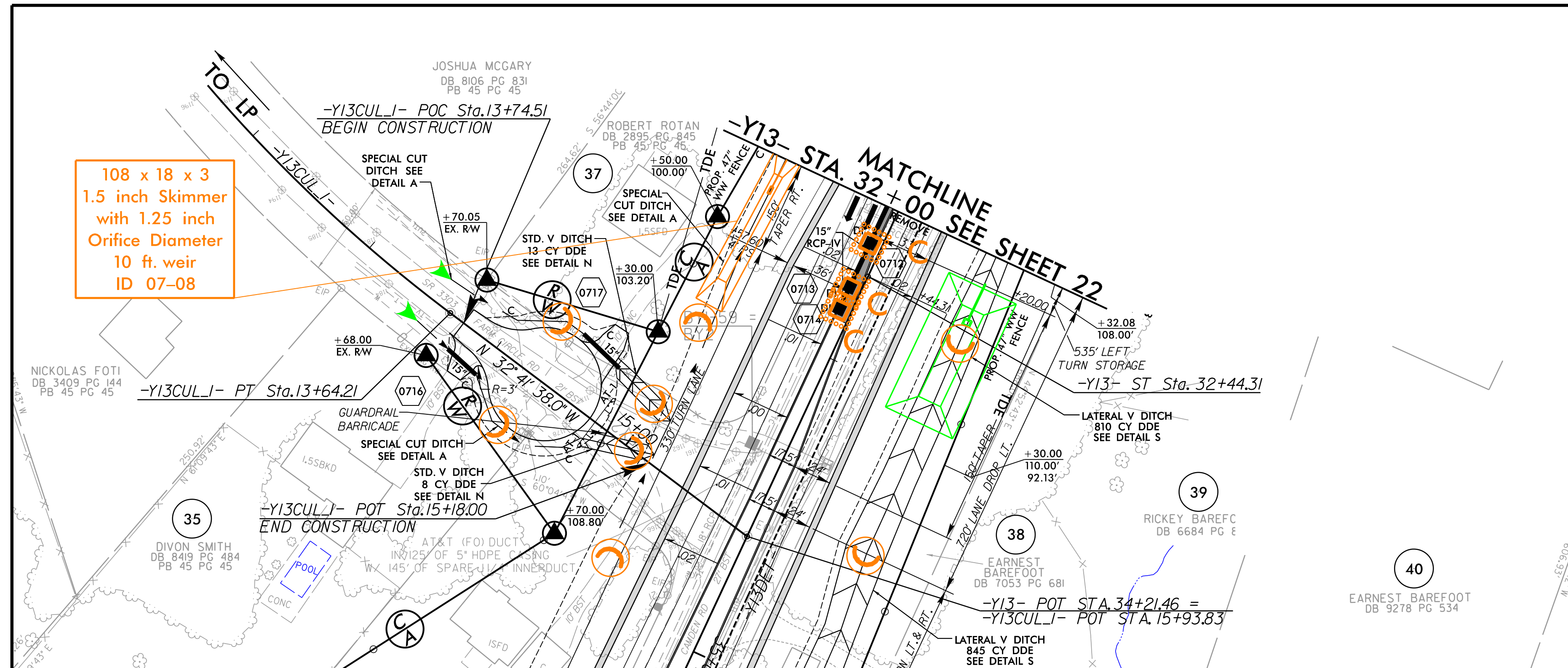
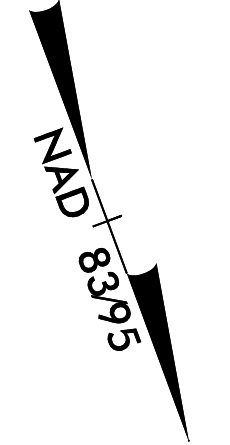
FOR -Y13- PROFILE SEE SHT. 39
 FOR -Y13CUL_2- PROFILE SEE SHT. 51
 FOR -Y13CUL_3- PROFILE SEE SHT. 51
 FOR -Y13DEF- PLAN SEE SHT. 2B-12.3
 FOR DITCH DETAILS SEE SHT. 2D-1 & 2D-2

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5/14/99
 C:\Users\jason\OneDrive\Documents\Control\U2519BA-EC_psh33A.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-2519BA	EC-34A/CONST.7
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INSET FROM SHEET 7



-Y13-	-Y13CUL-I-
PIs Sta. 31+44.31	PI Sta. 11+84.37
Os = 0° 51' 34.0"	Δ = 2° 57' 58.6" (LT)
Ls = 150.00'	D = 6' 01' 52.1"
LT = 100.00'	L = 364.21'
ST = 50.00'	T = 184.37'
	R = 950.00'

5/14/99

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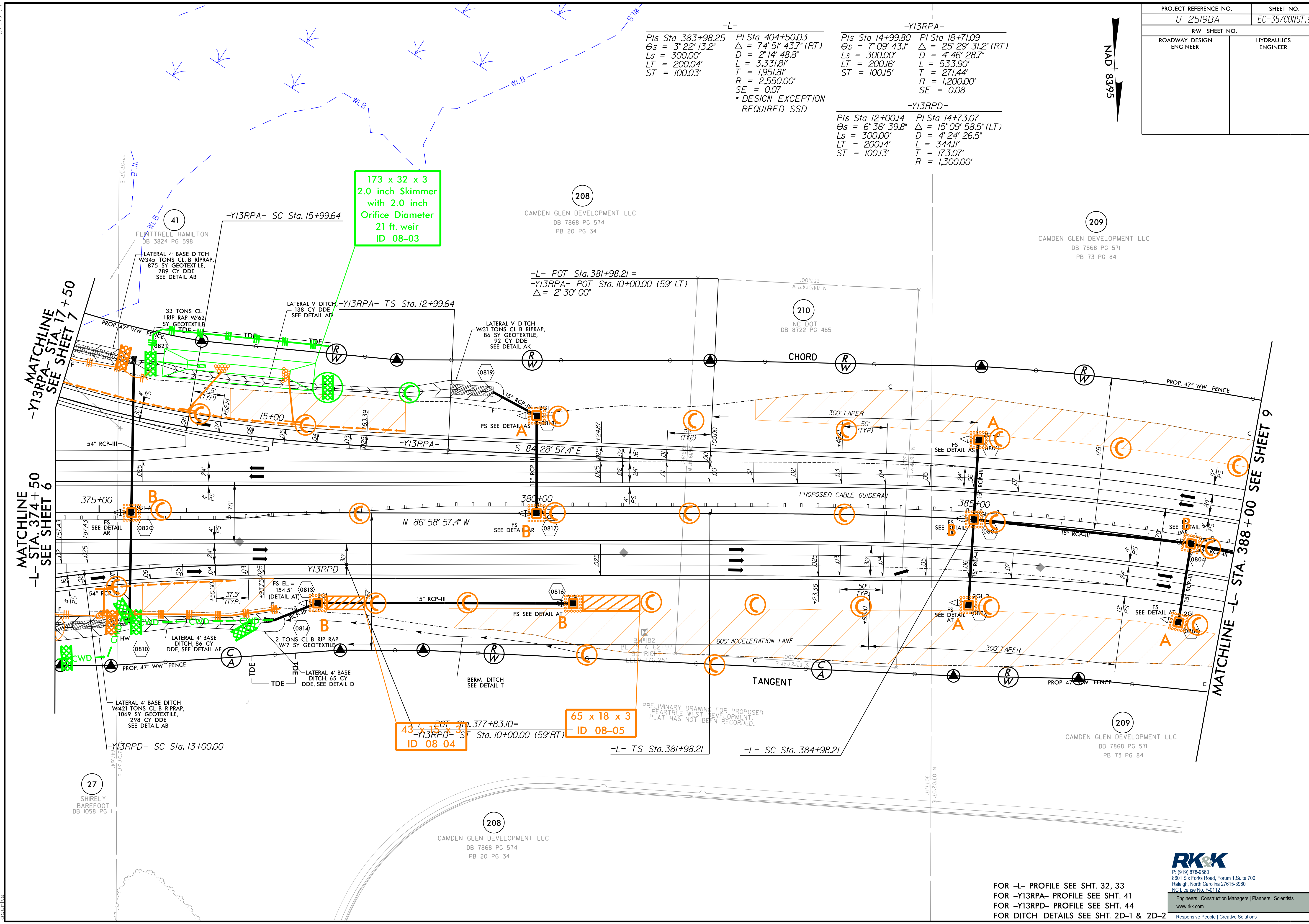
PROJECT REFERENCE NO.	SHEET NO.
U-2519BA	EC-35/CONST.8
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NAD 8395

-L-
 Pls Sta 383+98.25 PI Sta 404+50.03
 $\theta_s = 3^\circ 22' 13.2''$ $\Delta = 74' 51' 43.7''$ (RT)
 $L_s = 300.00'$ $D = 2' 14' 48.8''$
 $LT = 200.04'$ $L = 3,331.81'$
 $ST = 100.03'$ $T = 1,951.81'$
 $R = 2,550.00'$
 $SE = 0.07$
 * DESIGN EXCEPTION
 REQUIRED SSD

-Y13RPA-
 Pls Sta 14+99.80 PI Sta 18+71.09
 $\theta_s = 7^\circ 09' 43.1''$ $\Delta = 25' 29' 31.2''$ (RT)
 $L_s = 300.00'$ $D = 4' 46' 28.7''$
 $LT = 200.16'$ $L = 5,333.90'$
 $ST = 100.15'$ $T = 271.44'$
 $R = 1,200.00'$
 $SE = 0.08$

-Y13RPD-
 Pls Sta 12+00.14 PI Sta 14+73.07
 $\theta_s = 6^\circ 36' 39.8''$ $\Delta = 15' 09' 58.5''$ (LT)
 $L_s = 300.00'$ $D = 4' 24' 26.5''$
 $LT = 200.14'$ $L = 344.11'$
 $ST = 100.13'$ $T = 173.07'$
 $R = 1,300.00'$



173 x 32 x 3
 2.0 inch Skimmer
 with 2.0 inch
 Orifice Diameter
 21 ft. weir
 ID 08-03

43 L POT Sta. 377+83.10=
 -Y13RPD- ST Sta. 10+00.00 (59'RT)
 ID 08-04

65 x 18 x 3
 ID 08-05

MATCHLINE
 -L- STA. 374+50
 SEE SHEET 6

MATCHLINE
 -Y13RPA- STA. 17+50
 SEE SHEET 7

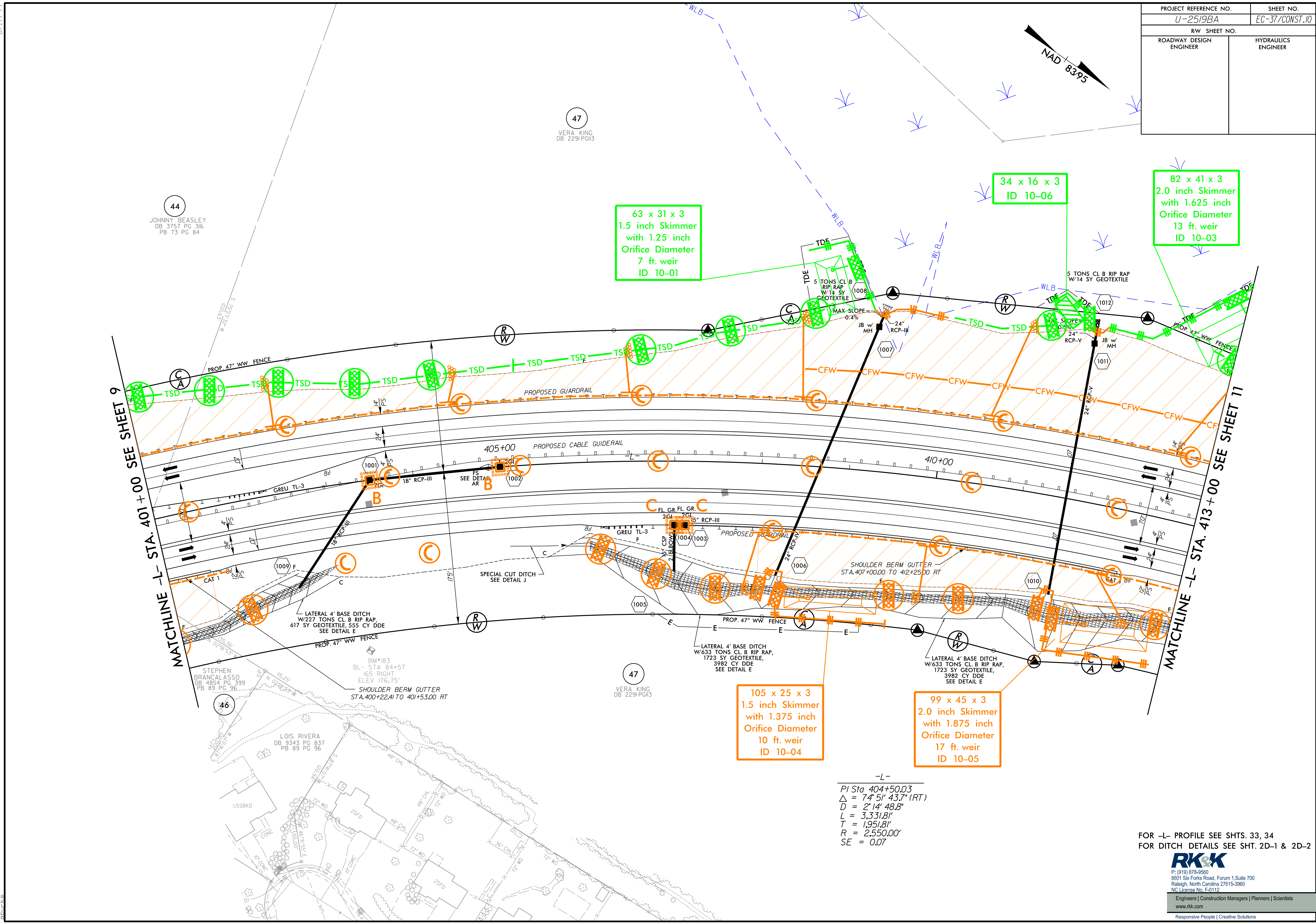
MATCHLINE -L- STA. 388+00
 SEE SHEET 9

8/17/99
 3/3/2022
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 SHIRELY BAREFOOT DB 1058 PG 1

FOR -L- PROFILE SEE SHT. 32, 33
 FOR -Y13RPA- PROFILE SEE SHT. 41
 FOR -Y13RPD- PROFILE SEE SHT. 44
 FOR DITCH DETAILS SEE SHT. 2D-1 & 2D-2

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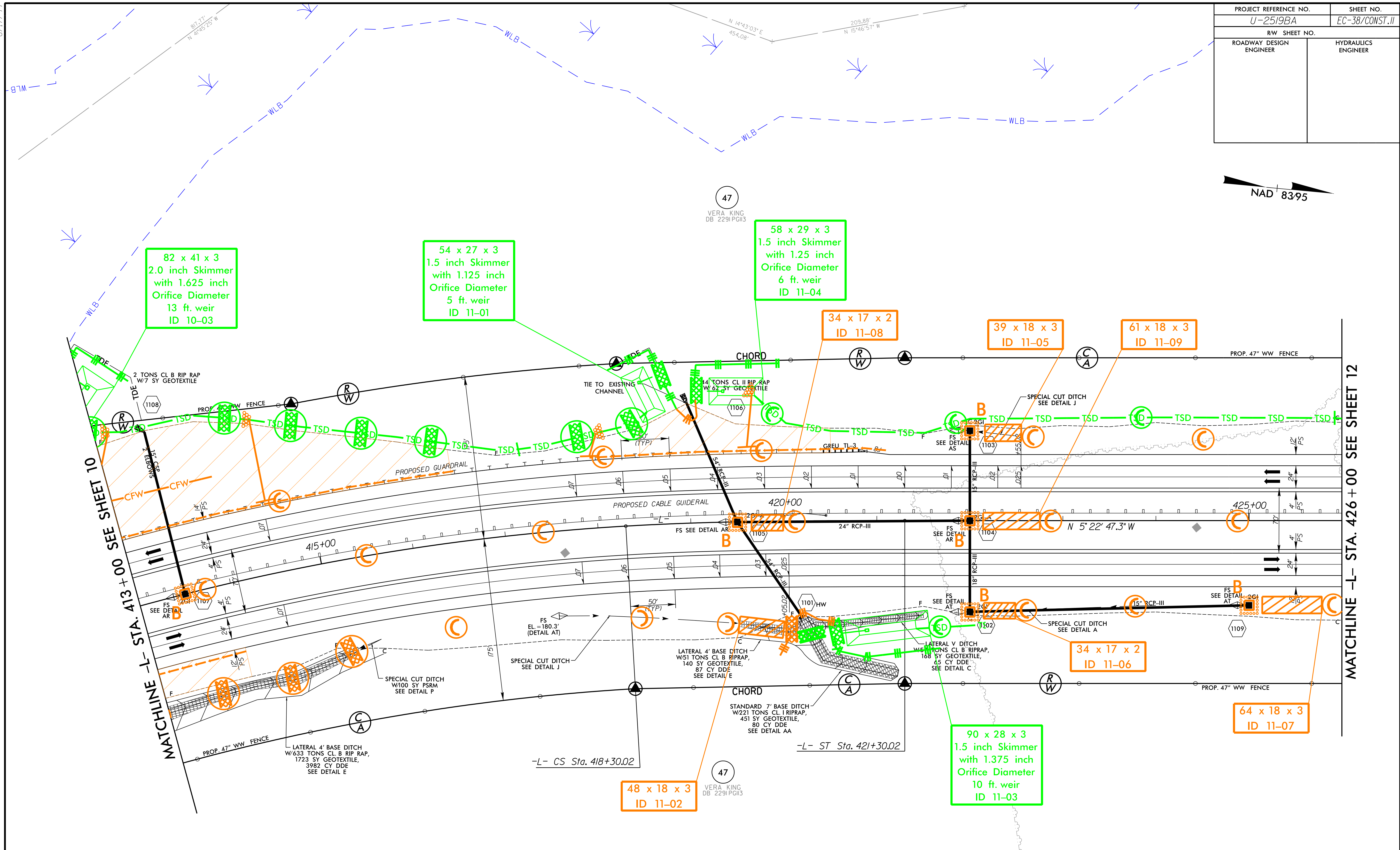
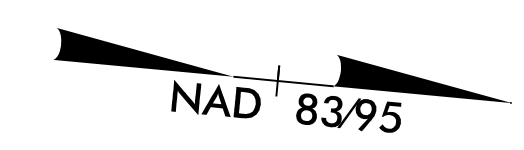
PROJECT REFERENCE NO.	SHEET NO.
U-2519BA	EC-37/CONST.10
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



-L-
 PI Sta 404+50.03
 $\Delta = 74' 5" 43.7" (RT)$
 $D = 2' 14' 48.8"$
 $L = 3,331.81'$
 $T = 1,951.81'$
 $R = 2,550.00'$
 $SE = 0.07$

FOR -L- PROFILE SEE SHTS. 33, 34
 FOR DITCH DETAILS SEE SHIT. 2D-1 & 2D-2

PROJECT REFERENCE NO.	SHEET NO.
U-2519BA	EC-38/CONST.11
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



MATCHLINE -L- STA. 413+00 SEE SHEET 10

MATCHLINE -L- STA. 426+00 SEE SHEET 12

48 x 18 x 3
ID 11-02

47
VERA KING
DB 2291PGI3

90 x 28 x 3
1.5 inch Skimmer
with 1.375 inch
Orifice Diameter
10 ft. weir
ID 11-03

-L-
PI Sta 404+50.03 Pls Sta 419+30.05
Δ = 7' 4" 51' 43.7" (RT) Θs = 3' 22' 13.2"
D = 2' 14' 48.8" Ls = 300.00'
L = 3,331.81' LT = 200.04'
T = 1,951.81' ST = 100.03'
R = 2,550.00'
SE = 0.07

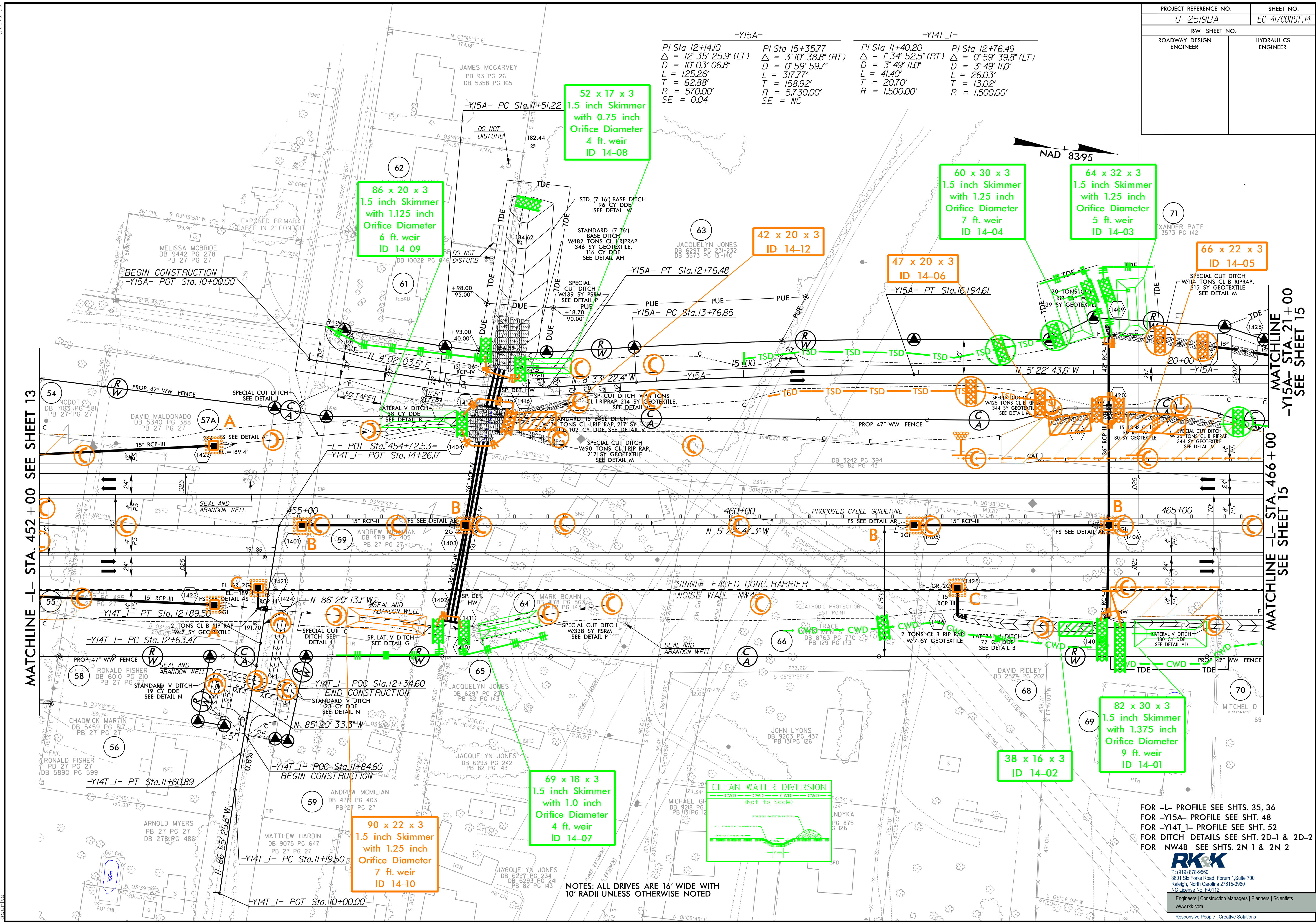
FOR -L- PROFILE SEE SHT. 34
FOR DITCH DETAILS SEE SHT. 2D-1 & 2D-2

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PROJECT REFERENCE NO.	SHEET NO.
U-2519BA	EC-41/CONST.14
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-Y15A-		-Y14T J-	
PI Sta 12+14.10	PI Sta 15+35.77	PI Sta 11+40.20	PI Sta 12+76.49
$\Delta = 12^{\circ}35'25.9"$ (LT)	$\Delta = 3^{\circ}10'38.8"$ (RT)	$\Delta = 1^{\circ}34'52.5"$ (RT)	$\Delta = 0^{\circ}59'39.8"$ (LT)
D = 10'03'06.8"	D = 0'59'59.7"	D = 3'49'11.0"	D = 3'49'11.0"
L = 125.26'	L = 317.77'	L = 41.40'	L = 26.03'
T = 62.88'	T = 158.92'	T = 20.70'	T = 13.02'
R = 570.00'	R = 5,730.00'	R = 1,500.00'	R = 1,500.00'
SE = 0.04	SE = NC		



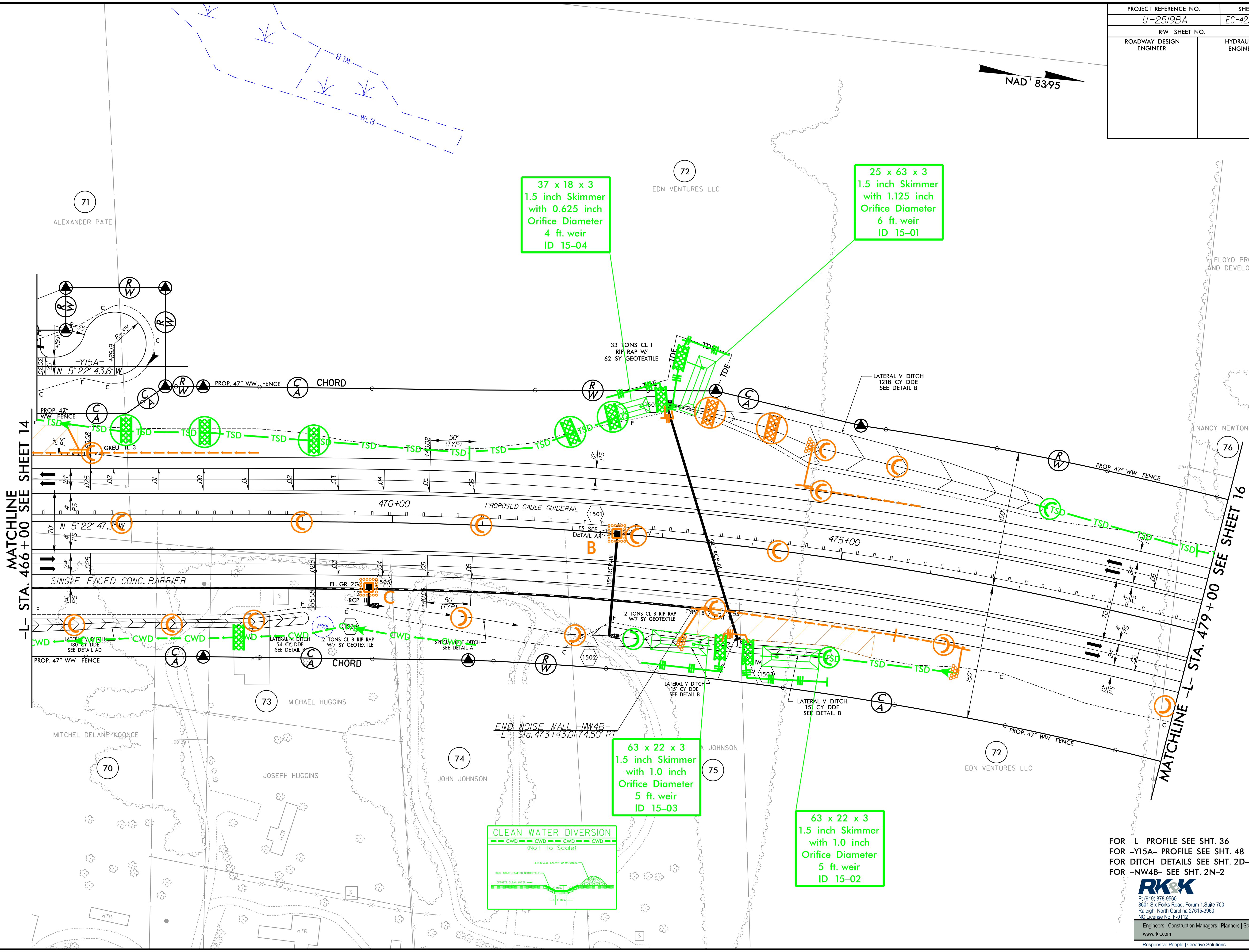
MATCHLINE -L- STA. 452 +00 SEE SHEET 13

MATCHLINE -L- STA. 466 +00 SEE SHEET 15

FOR -L- PROFILE SEE SHTS. 35, 36
 FOR -Y15A- PROFILE SEE SHT. 48
 FOR -Y14T J- PROFILE SEE SHT. 52
 FOR DITCH DETAILS SEE SHT. 2D-1 & 2D-2
 FOR -NW4B- SEE SHTS. 2N-1 & 2N-2

NOTES: ALL DRIVES ARE 16' WIDE WITH 10' RADII UNLESS OTHERWISE NOTED

PROJECT REFERENCE NO. U-2519BA	SHEET NO. EC-42/CONST.15
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

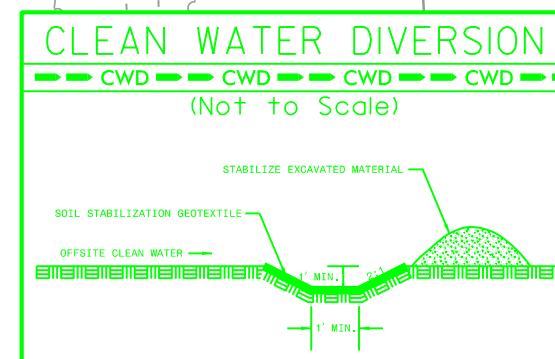


37 x 18 x 3
1.5 inch Skimmer
with 0.625 inch
Orifice Diameter
4 ft. weir
ID 15-04

25 x 63 x 3
1.5 inch Skimmer
with 1.125 inch
Orifice Diameter
6 ft. weir
ID 15-01

63 x 22 x 3
1.5 inch Skimmer
with 1.0 inch
Orifice Diameter
5 ft. weir
ID 15-03

63 x 22 x 3
1.5 inch Skimmer
with 1.0 inch
Orifice Diameter
5 ft. weir
ID 15-02



MATCHLINE -L- STA. 466+00 SEE SHEET 14

MATCHLINE -L- STA. 479+00 SEE SHEET 16

FOR -L- PROFILE SEE SHT. 36
FOR -Y15A- PROFILE SEE SHT. 48
FOR DITCH DETAILS SEE SHT. 2D-1 & 2D-2
FOR -NW4B- SEE SHT. 2N-2

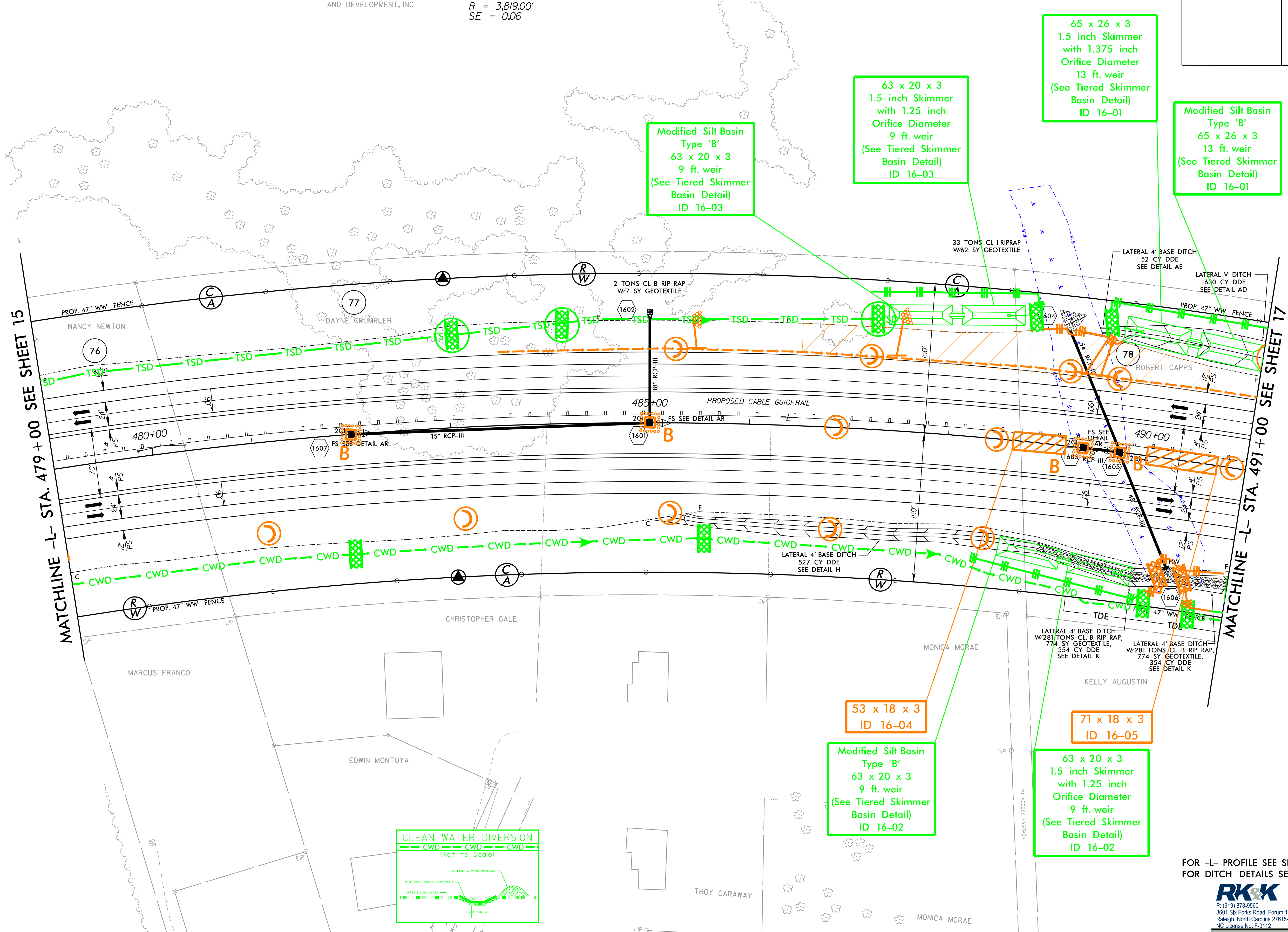
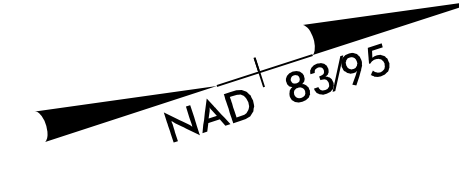
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3/3/2022
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PROJECT REFERENCE NO.	SHEET NO.
U-2519BA	EC-43/CONST.16
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-L-
 PI Sta 483+11.99
 $\Delta = 35^\circ 29' 05.2" (RT)$
 $D = 1,301.01'$
 $L = 2,365.21'$
 $T = 1,221.91'$
 $R = 3,819.00'$
 $SE = 0.06$

FLOYD PROPERTIES AND DEVELOPMENT, INC



Modified Silt Basin Type 'B'
 63 x 20 x 3
 9 ft. weir
 (See Tiered Skimmer Basin Detail)
 ID 16-03

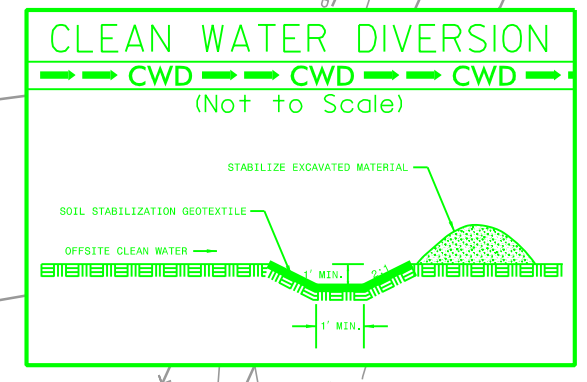
63 x 20 x 3
 1.5 inch Skimmer with 1.25 inch Orifice Diameter
 9 ft. weir
 (See Tiered Skimmer Basin Detail)
 ID 16-03

65 x 26 x 3
 1.5 inch Skimmer with 1.375 inch Orifice Diameter
 13 ft. weir
 (See Tiered Skimmer Basin Detail)
 ID 16-01

Modified Silt Basin Type 'B'
 65 x 26 x 3
 13 ft. weir
 (See Tiered Skimmer Basin Detail)
 ID 16-01

53 x 18 x 3
 ID 16-04
 Modified Silt Basin Type 'B'
 63 x 20 x 3
 9 ft. weir
 (See Tiered Skimmer Basin Detail)
 ID 16-02

71 x 18 x 3
 ID 16-05
 63 x 20 x 3
 1.5 inch Skimmer with 1.25 inch Orifice Diameter
 9 ft. weir
 (See Tiered Skimmer Basin Detail)
 ID 16-02

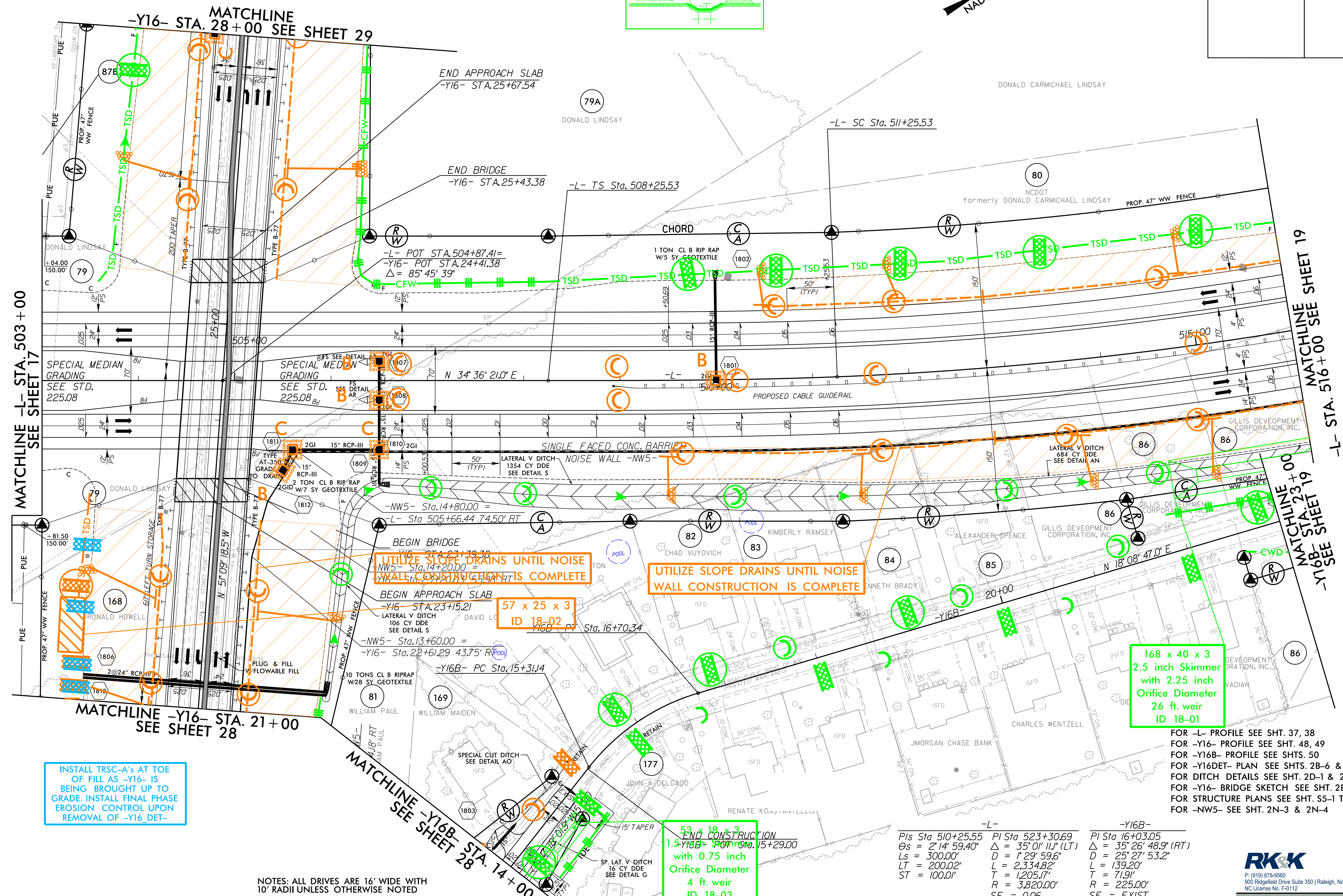
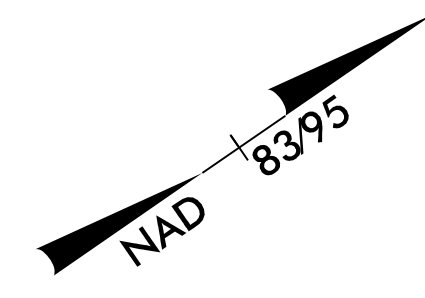
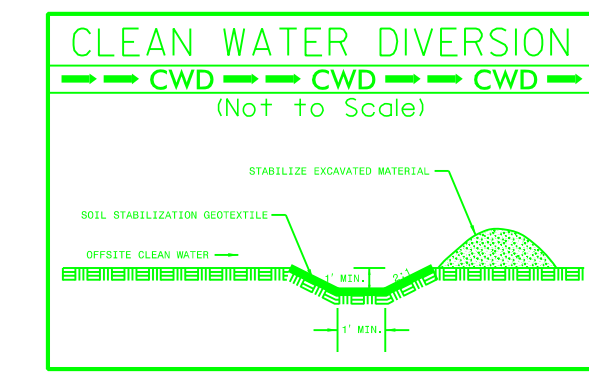


MATCHLINE -L- STA. 479+00 SEE SHEET 15

MATCHLINE -L- STA. 491+00 SEE SHEET 17

FOR -L- PROFILE SEE SHTS. 36, 37
 FOR DITCH DETAILS SEE SHTS. 2D-1 & 2D-2

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 3/3/2022
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INSTALL TRSC-A's AT TOE OF FILL AS -Y16- IS BEING BROUGHT UP TO GRADE. INSTALL FINAL PHASE EROSION CONTROL UPON REMOVAL OF -Y16- DET-

UTILIZE SLOPE DRAINS UNTIL NOISE WALL CONSTRUCTION IS COMPLETE

UTILIZE SLOPE DRAINS UNTIL NOISE WALL CONSTRUCTION IS COMPLETE

168 x 40 x 3
 2.5 inch Skimmer
 with 2.25 inch
 Orifice Diameter
 26 ft. weir
 ID 18-01

53 x 18 x 3
 1.5-Y16B- Promiss
 with 0.75 inch
 Orifice Diameter
 4 ft. weir
 ID 18-03

NOTES: ALL DRIVES ARE 16' WIDE WITH 10' RADII UNLESS OTHERWISE NOTED

-L-	-Y16-	-Y16B-
PI Sta 510+25.55	PI Sta 523+30.69	PI Sta 16+03.05
θs = 2° 14' 59.40"	Δ = 35° 01' 11.1" (LT)	Δ = 35° 26' 48.9" (RT)
Ls = 300.00'	D = 1° 29' 59.6"	D = 25° 27' 53.2"
LT = 200.02'	L = 2,334.82'	L = 139.20'
ST = 100.01'	T = 1,205.17'	T = 71.91'
	R = 3,820.00'	R = 225.00'
	SE = 0.06	SE = EXIST

FOR -L- PROFILE SEE SHT. 37, 38
 FOR -Y16- PROFILE SEE SHT. 48, 49
 FOR -Y16B- PROFILE SEE SHTS. 50
 FOR -Y16DET- PLAN SEE SHTS. 2B-6 & 2B-7
 FOR DITCH DETAILS SEE SHT. 2D-1 & 2D-2
 FOR -Y16- BRIDGE SKETCH SEE SHT. 2B-9
 FOR STRUCTURE PLANS SEE SHT. S5-1 THRU S5-39
 FOR -NW5- SEE SHT. 2N-3 & 2N-4

8/17/99
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 3/3/2022
 PSH

-L-	-Y16B-
PI Sta 523+30.69	PI Sta 27+13.33
$\Delta = 35^{\circ} 01' 11.1" (LT)$	$\Delta = 87^{\circ} 39' 17.1" (RT)$
$D = 1^{\circ} 29' 59.6"$	$D = 22^{\circ} 55' 05.9"$
$L = 2,334.82'$	$L = 382.47'$
$T = 1,205.17'$	$T = 239.97'$
$R = 3,820.00'$	$R = 250.00'$
$SE = 0.06$	$SE = 0.04$



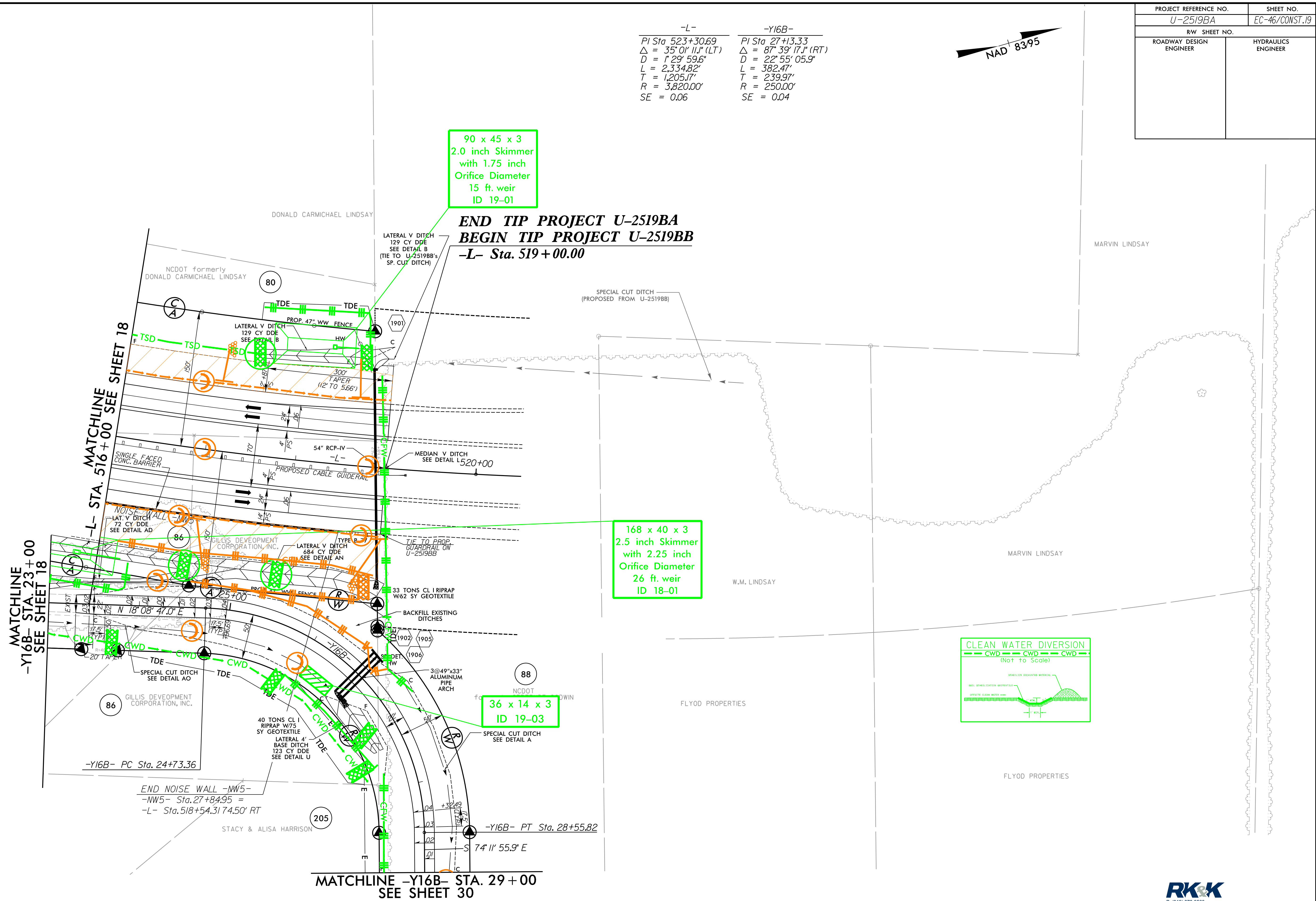
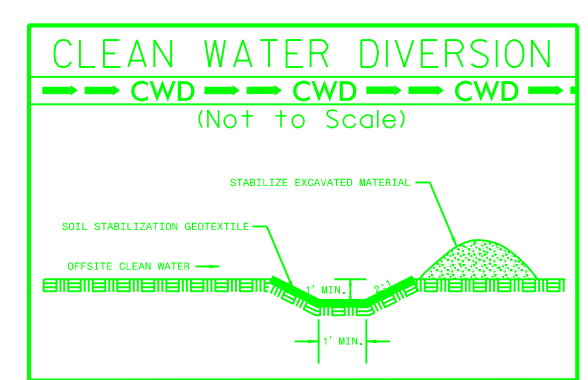
PROJECT REFERENCE NO. U-2519BA	SHEET NO. EC-46/CONST.19
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

90 x 45 x 3
 2.0 inch Skimmer
 with 1.75 inch
 Orifice Diameter
 15 ft. weir
 ID 19-01

END TIP PROJECT U-2519BA
BEGIN TIP PROJECT U-2519BB
-L- Sta. 519+00.00

168 x 40 x 3
 2.5 inch Skimmer
 with 2.25 inch
 Orifice Diameter
 26 ft. weir
 ID 18-01

36 x 14 x 3
 ID 19-03



MATCHLINE
 -Y16B- STA. 23+00
 SEE SHEET 18

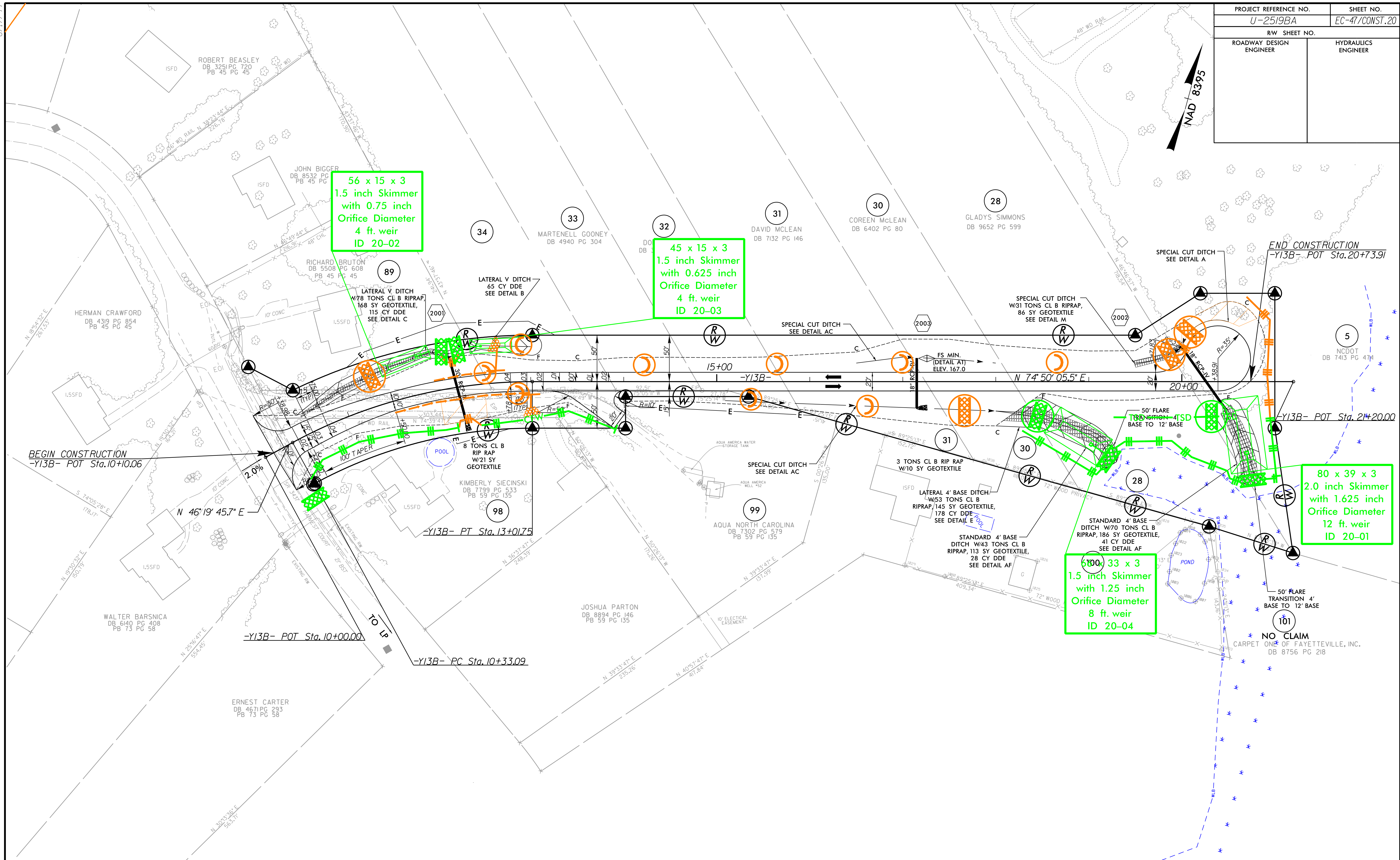
MATCHLINE
 -L- STA. 516+00
 SEE SHEET 18

MATCHLINE -Y16B- STA. 29+00
 SEE SHEET 30

FOR -L- PROFILE SEE SHT. 38
 FOR DITCH DETAILS SEE SHT. 2D-1 & 2D-2
 FOR -NW5- DETAILS SEE SHT. 2N-4

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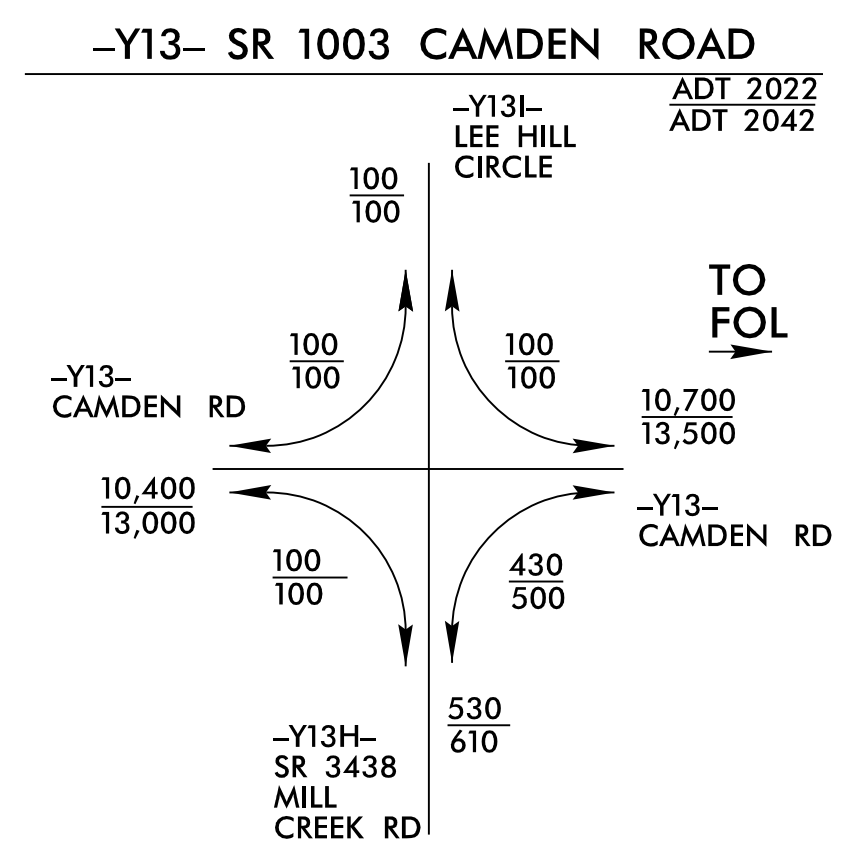
PROJECT REFERENCE NO.	SHEET NO.
U-2519BA	EC-47/CONST.20
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



-Y13B-
 PI Sta. 11+70.26
 $\Delta = 28^\circ 30' 19.8" (RT)$
 $D = 10^\circ 36' 37.2"$
 $L = 268.66'$
 $T = 137.17'$
 $R = 540.00'$
 $SE = 0.04$

FOR -Y13B- PROFILE SEE SHT. 45
 FOR DITCH DETAILS SEE SHT. 2D-1 & 2D-2

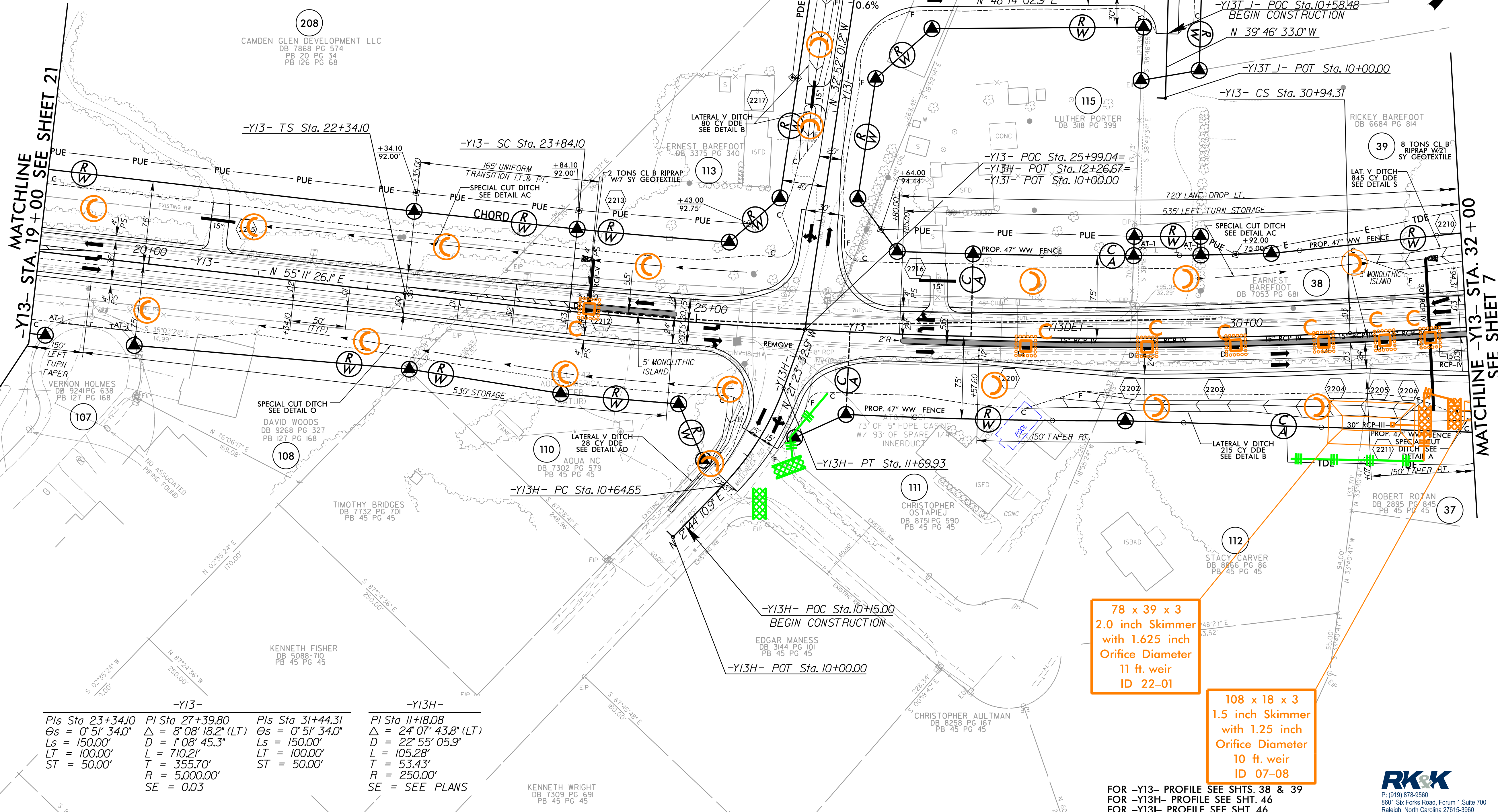
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70 x 30 x 3
1.5 inch Skimmer
with 1.25 inch
Orifice Diameter
8 ft. weir
ID 22-04

78 x 39 x 3
2.0 inch Skimmer
with 1.625 inch
Orifice Diameter
11 ft. weir
ID 22-01

108 x 18 x 3
1.5 inch Skimmer
with 1.25 inch
Orifice Diameter
10 ft. weir
ID 07-08



-Y13-			-Y13H-		
PIs Sta 23+34.10	PI Sta 27+39.80	PIs Sta 31+44.31	PI Sta 11+18.08		
Os = 0° 51' 34.0"	Δ = 8° 08' 18.2" (LT)	Os = 0° 51' 34.0"	Δ = 24° 07' 43.8" (LT)		
Ls = 150.00'	D = 1° 08' 45.3"	Ls = 150.00'	D = 22° 55' 05.9"		
LT = 100.00'	L = 710.21'	LT = 100.00'	L = 105.28'		
ST = 50.00'	T = 355.70'	ST = 50.00'	T = 53.43'		
	R = 5,000.00'		R = 250.00'		
	SE = 0.03		SE = SEE PLANS		

NOTE: ALL DRIVES ARE 16' WIDE WITH 10' RADII UNLESS OTHERWISE NOTED

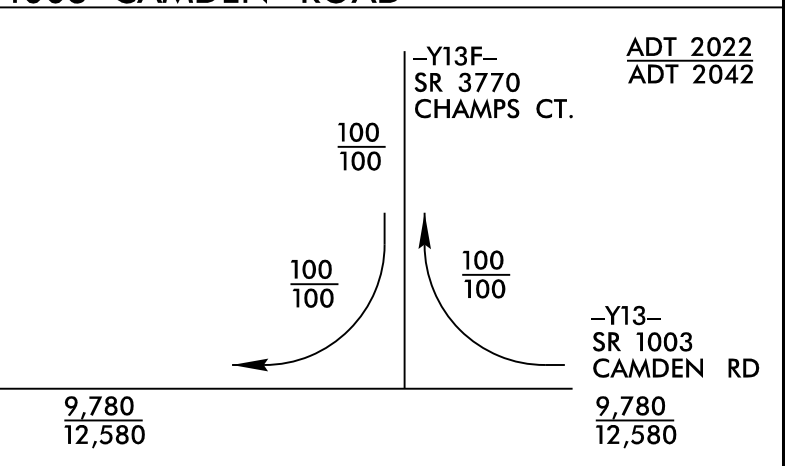
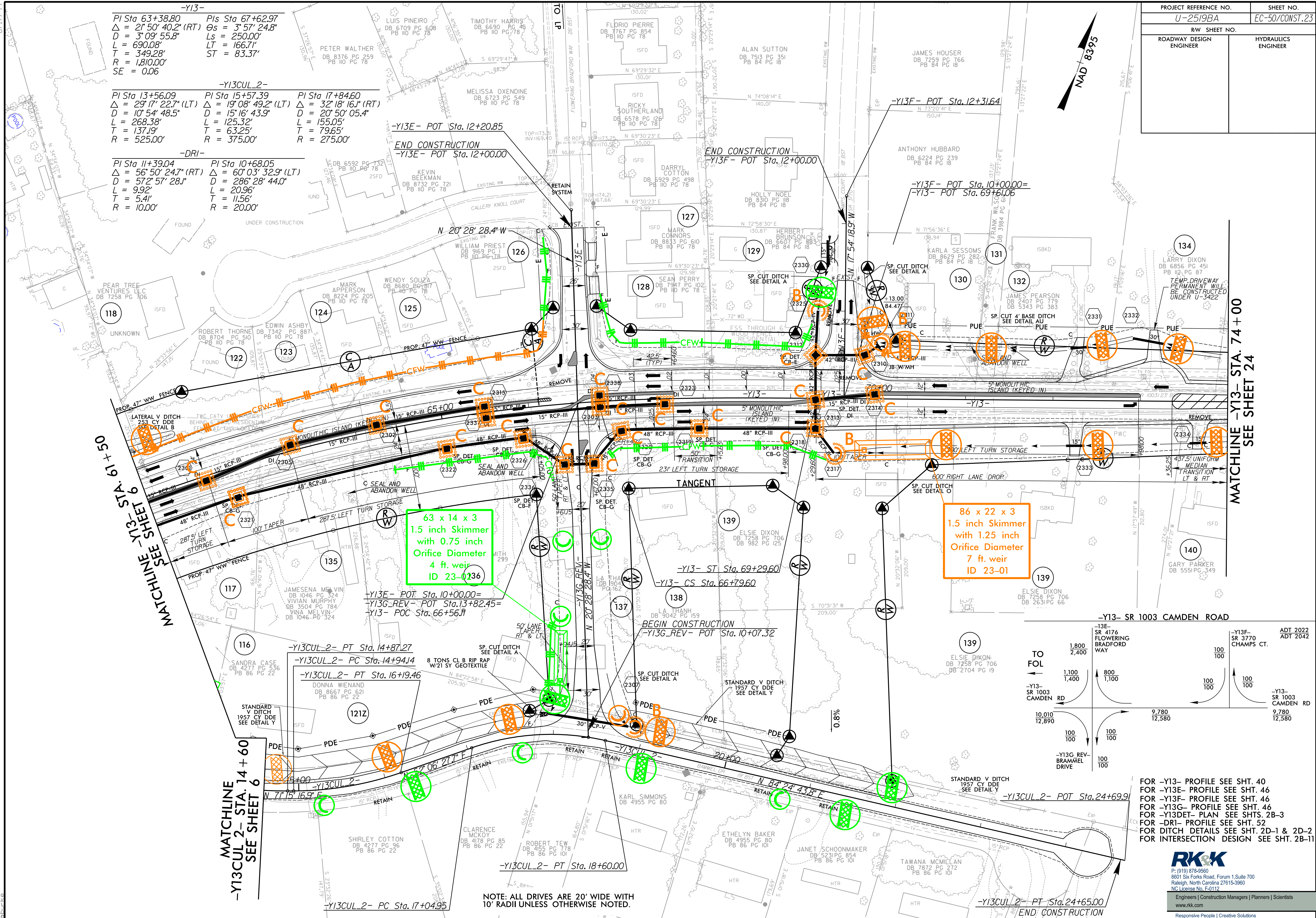
FOR -Y13- PROFILE SEE SHTS. 38 & 39
FOR -Y13H- PROFILE SEE SHT. 46
FOR -Y13I- PROFILE SEE SHT. 46
FOR -Y13J- PROFILE SEE SHT. 46
FOR -Y13T 1- PROFILE SEE SHT. 52
FOR DITCH DETAILS SEE SHT. 2D-1 & 2D-2
FOR INTERSECTION DESIGN SEE SHT. 2B-11

PROJECT REFERENCE NO.	SHEET NO.
U-2519BA	EC-50/CONST.23
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-Y13-
 PI Sta 63+38.80 Δ = 21° 50' 40.2" (RT) D = 3' 09" 55.8" L = 690.08' T = 349.28' R = 1,810.00' SE = 0.06
 PIs Sta 67+62.97 Δs = 3' 57" 24.8" Ls = 250.00' LT = 166.71' ST = 83.37'

-Y13CUL_2-
 PI Sta 13+56.09 Δ = 29° 17' 22.7" (LT) D = 10' 54" 48.5" L = 268.38' T = 137.19' R = 525.00'
 PI Sta 15+57.39 Δ = 19° 08' 49.2" (LT) D = 15' 16" 43.9" L = 125.32' T = 63.25' R = 375.00'
 PI Sta 17+84.60 Δ = 32° 18' 16.1" (RT) D = 20' 50" 05.4" L = 155.05' T = 79.65' R = 275.00'

-DRI-
 PI Sta 11+39.04 Δ = 56° 50' 24.7" (RT) D = 57° 57' 28.1" L = 9.92' T = 5.41' R = 10.00'
 PI Sta 10+68.05 Δ = 60° 03' 32.9" (LT) D = 286' 28" 44.0" L = 20.96' T = 11.56' R = 20.00'

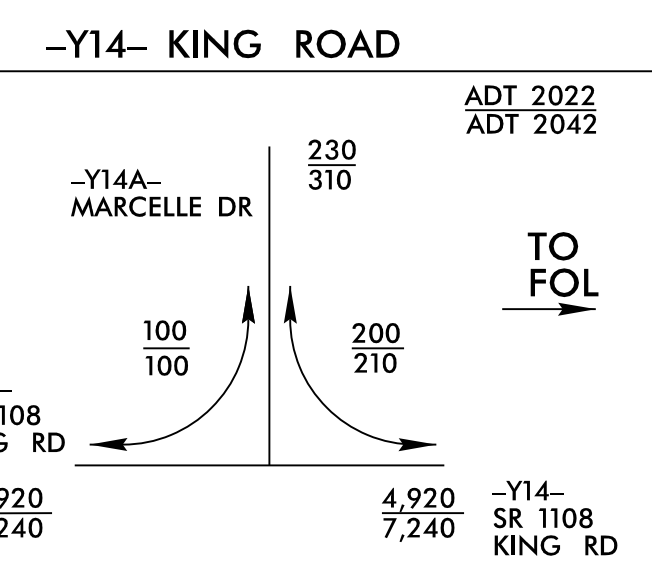
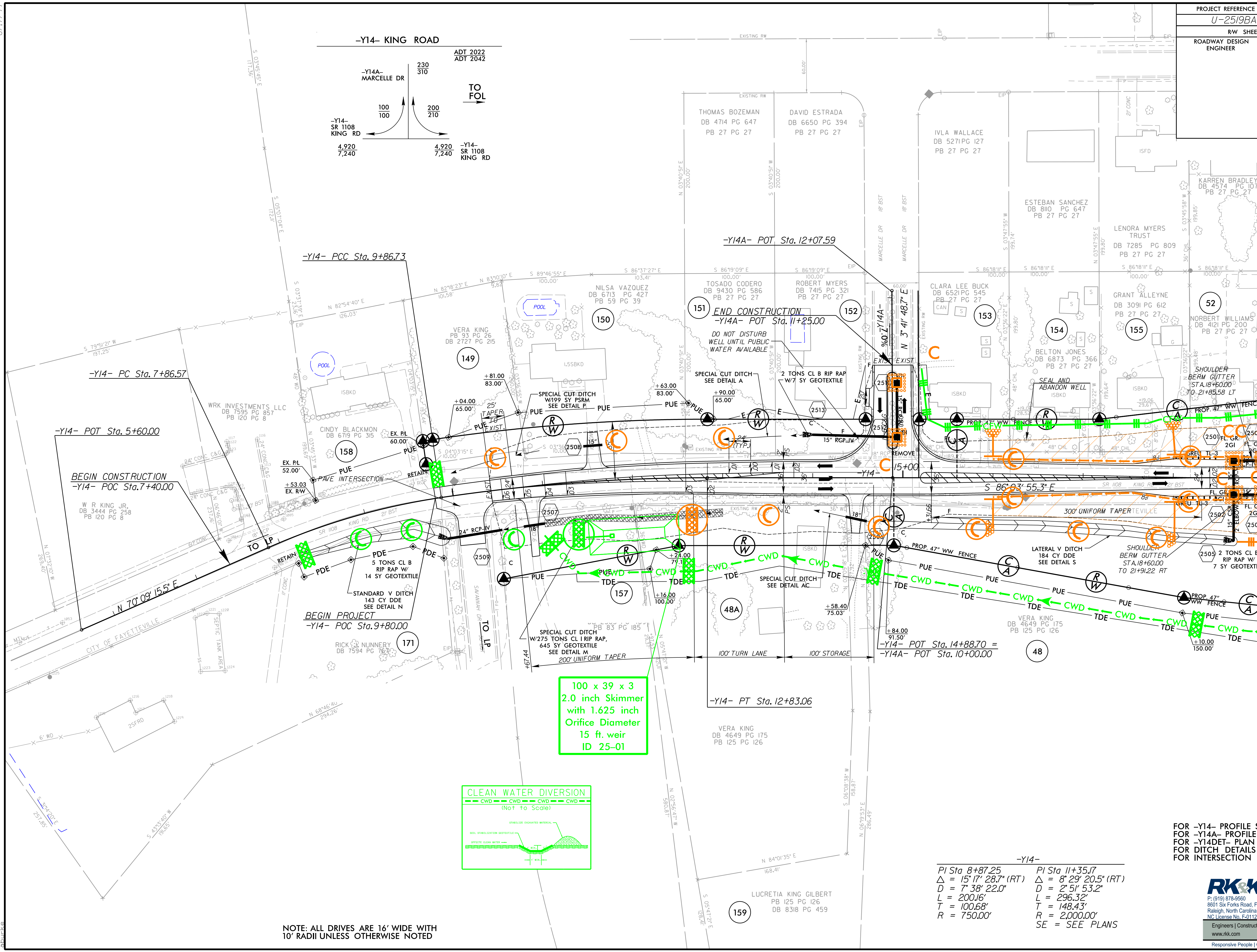


FOR -Y13- PROFILE SEE SHT. 40
 FOR -Y13E- PROFILE SEE SHT. 46
 FOR -Y13F- PROFILE SEE SHT. 46
 FOR -Y13G- PROFILE SEE SHT. 46
 FOR -Y13DET- PLAN SEE SHTS. 2B-3
 FOR -DRI- PROFILE SEE SHT. 52
 FOR DITCH DETAILS SEE SHT. 2D-1 & 2D-2
 FOR INTERSECTION DESIGN SEE SHT. 2B-11

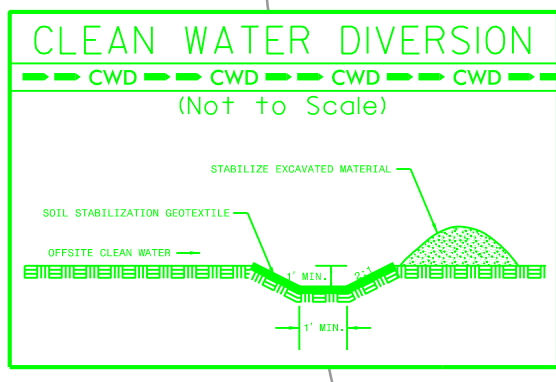
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NAD 8395

MATCHLINE -Y14- STA. 19 + 00 SEE SHEET 13



100 x 39 x 3
2.0 inch Skimmer
with 1.625 inch
Orifice Diameter
15 ft. weir
ID 25-01



-Y14-	
PI Sta 8+87.25	PI Sta 11+35.17
$\Delta = 15' 17" 28.7" (RT)$	$\Delta = 8' 29" 20.5" (RT)$
$D = 7' 38" 22.0"$	$D = 2' 51" 53.2"$
$L = 200.16'$	$L = 296.32'$
$T = 100.68'$	$T = 148.43'$
$R = 750.00'$	$R = 2,000.00'$
	$SE = \text{SEE PLANS}$

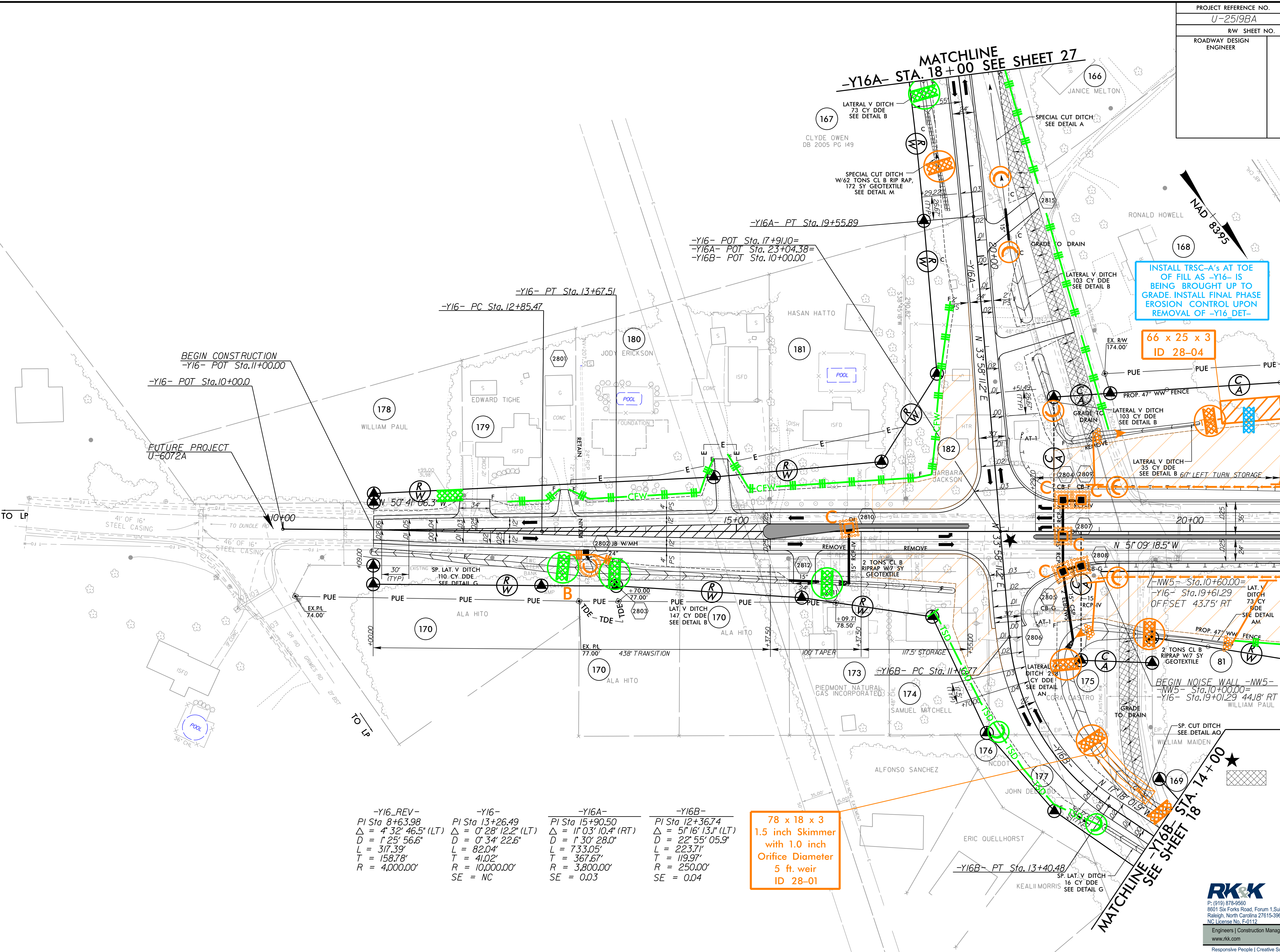
FOR -Y14- PROFILE SEE SHT. 47
FOR -Y14A- PROFILE SEE SHT. 47
FOR -Y14DET- PLAN SEE SHTS. 2B-4
FOR DITCH DETAILS SEE SHT. 2D-1 & 2D-2
FOR INTERSECTION DESIGN SEE SHT. 2B-12

NOTE: ALL DRIVES ARE 16' WIDE WITH 10' RADII UNLESS OTHERWISE NOTED

8.17.19
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3/3/2022
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PROJECT REFERENCE NO.	SHEET NO.
U-2519BA	EC-55/CONST.28
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

8/17/99
3/3/2022
R:\Projects\2022\192519BA\EC-55\Const\192519BA_EC_paf65.dgn



BEGIN CONSTRUCTION
-Y16- POT Sta.11+00.00
-Y16- POT Sta.10+00.00

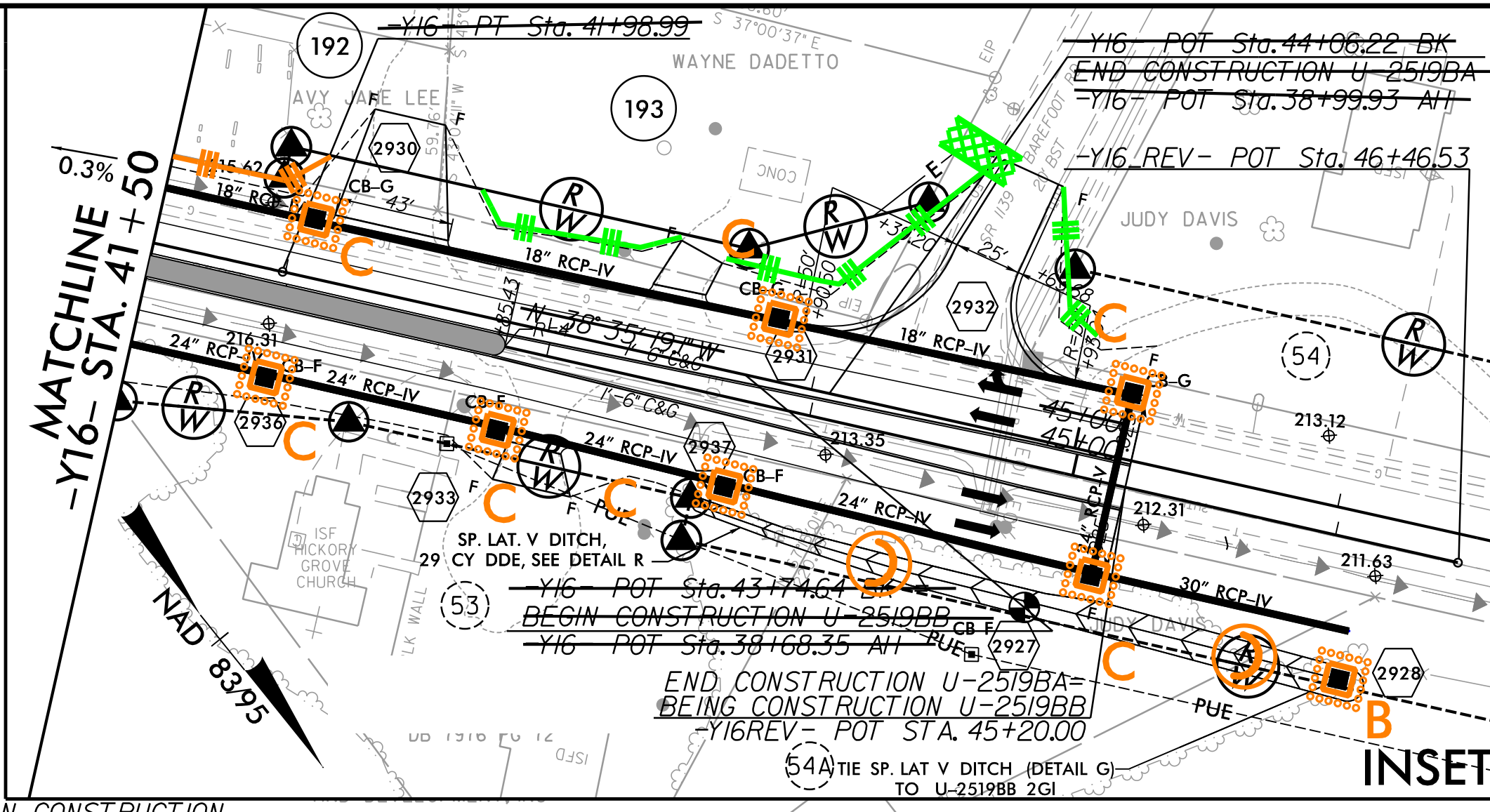
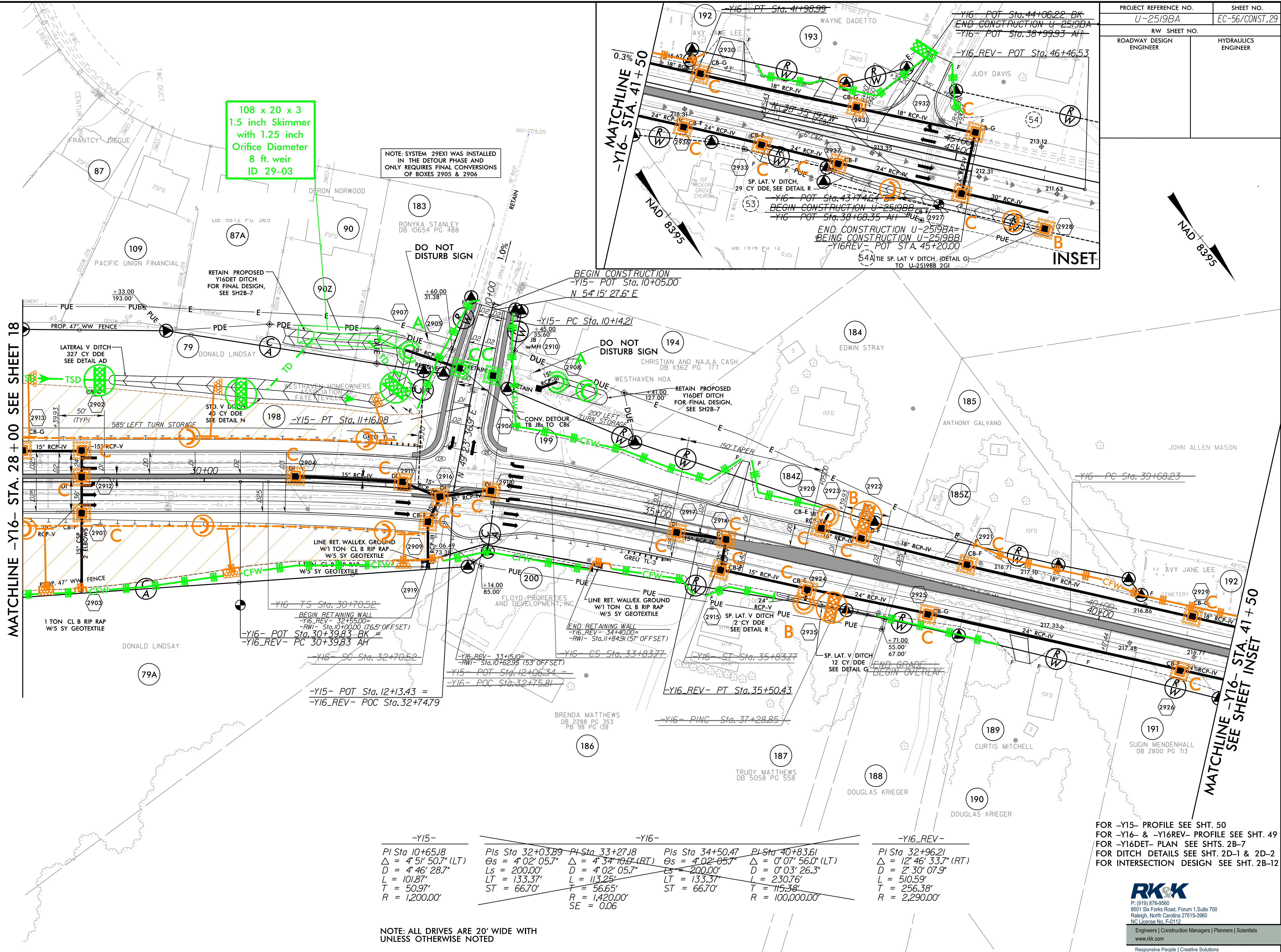
FUTURE PROJECT
U-6072A

INSTALL TRSC-A's AT TOE OF FILL AS -Y16- IS BEING BROUGHT UP TO GRADE. INSTALL FINAL PHASE EROSION CONTROL UPON REMOVAL OF -Y16 DET-

66 x 25 x 3
ID 28-04

78 x 18 x 3
1.5 inch Skimmer
with 1.0 inch
Orifice Diameter
5 ft. weir
ID 28-01

-Y16_REV-	-Y16-	-Y16A-	-Y16B-
PI Sta 8+63.98	PI Sta 13+26.49	PI Sta 15+90.50	PI Sta 12+36.74
$\Delta = 4' 32" 46.5" (LT)$	$\Delta = 0' 28" 12.2" (LT)$	$\Delta = 1' 03" 10.4" (RT)$	$\Delta = 5' 16" 13.1" (LT)$
$D = 1' 25" 56.6"$	$D = 0' 34" 22.6"$	$D = 1' 30" 28.0"$	$D = 22' 55" 05.9"$
$L = 317.39'$	$L = 82.04'$	$L = 733.05'$	$L = 223.71'$
$T = 158.78'$	$T = 41.02'$	$T = 367.67'$	$T = 119.97'$
$R = 4,000.00'$	$R = 10,000.00'$	$R = 3,800.00'$	$R = 250.00'$
	SE = NC	SE = 0.03	SE = 0.04



108 x 20 x 3
1.5 inch Skimmer
with 1.25 inch
Orifice Diameter
8 ft. weir
ID 29-03

NOTE: SYSTEM 29EX1 WAS INSTALLED IN THE DETOUR PHASE AND ONLY REQUIRES FINAL CONVERSIONS OF BOXES 2905 & 2906

MATCHLINE -Y16- STA. 28+00 SEE SHEET 18

MATCHLINE -Y16- STA. 41+50 SEE SHEET INSET

-Y15-		-Y16-		-Y16_REV-	
PI Sta 10+65.18	PI Sta 32+03.89	PI Sta 33+27.18	PI Sta 34+50.47	PI Sta 40+83.61	PI Sta 32+96.21
$\Delta = 4' 51'' 50.7''$ (LT)	$\Delta = 4' 02'' 05.7''$	$\Delta = 4' 34'' 10.9''$ (RT)	$\Delta = 4' 02'' 05.7''$	$\Delta = 0' 07'' 56.0''$ (LT)	$\Delta = 12' 46'' 33.7''$ (RT)
D = 4' 46'' 28.7"	Ls = 200.00'	D = 4' 02'' 05.7"	Ls = 200.00'	D = 0' 03'' 26.3"	D = 2' 30'' 07.9"
L = 101.87'	L = 133.37'	L = 113.25'	LT = 133.37'	L = 230.76'	L = 510.59'
T = 50.97'	ST = 66.70'	T = 56.65'	ST = 66.70'	T = 115.38'	T = 256.38'
R = 1,200.00'	R = 1,420.00'	SE = 0.06	R = 100,000.00'	R = 2,290.00'	

FOR -Y15- PROFILE SEE SHT. 50
FOR -Y16- & -Y16REV- PROFILE SEE SHT. 49
FOR -Y16DET- PLAN SEE SHTS. 2B-7
FOR DITCH DETAILS SEE SHT. 2D-1 & 2D-2
FOR INTERSECTION DESIGN SEE SHT. 2B-12

NOTE: ALL DRIVES ARE 20' WIDE WITH UNLESS OTHERWISE NOTED

8/17/99
3/3/2022
R:\Projects\2022\198A\PSH\Erosion_Control\198A_EC_psh56.dgn

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-2519BB	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
34817.1.FR8	NHF-0100(25)	PE	
34817.2.FR15	NHF-0100(025)	ROW	
34817.2.11	NHF-0100(025)	UTIL	
34817.3.15	NHF-0100(025)	CONST	

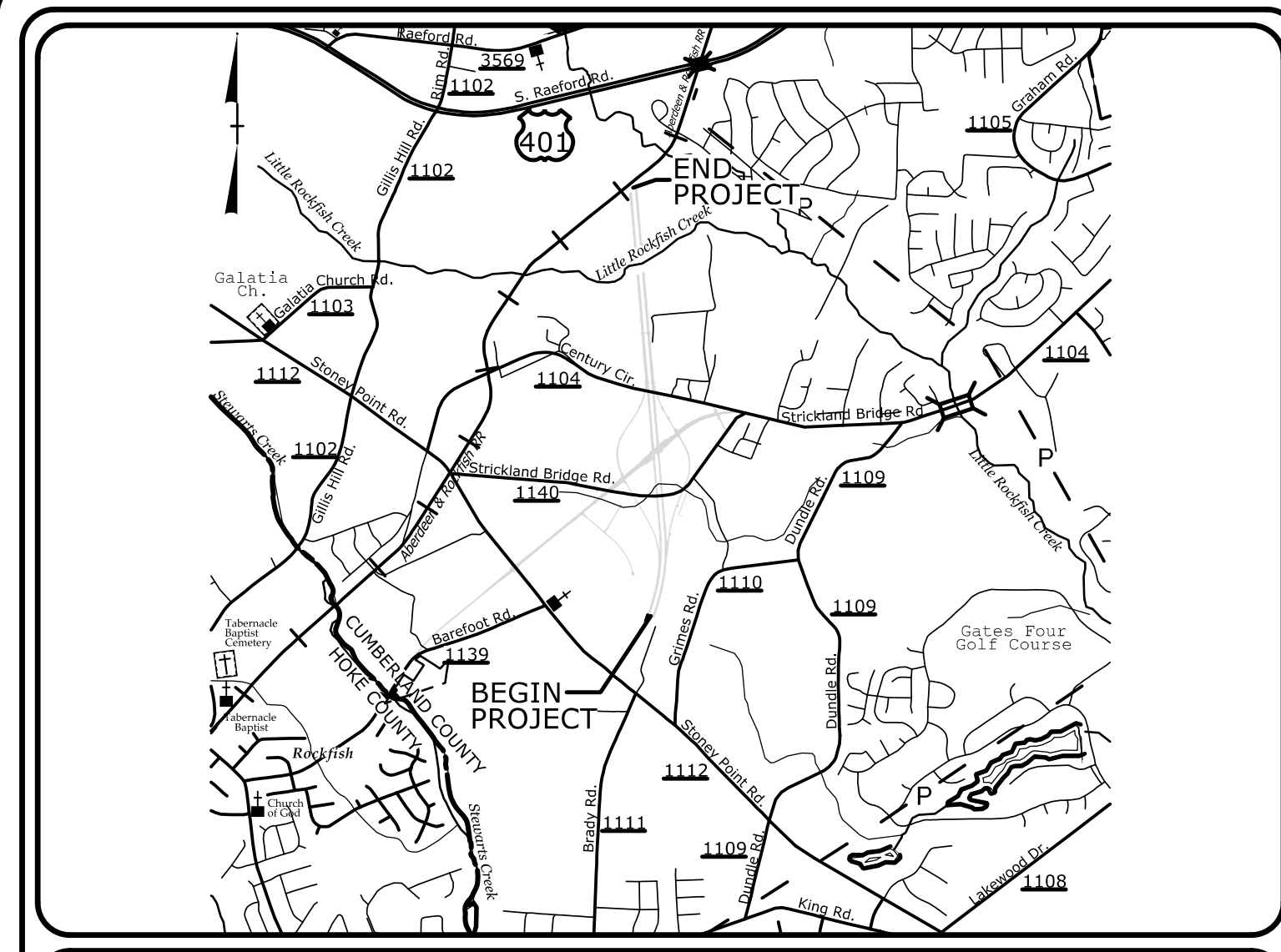
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL

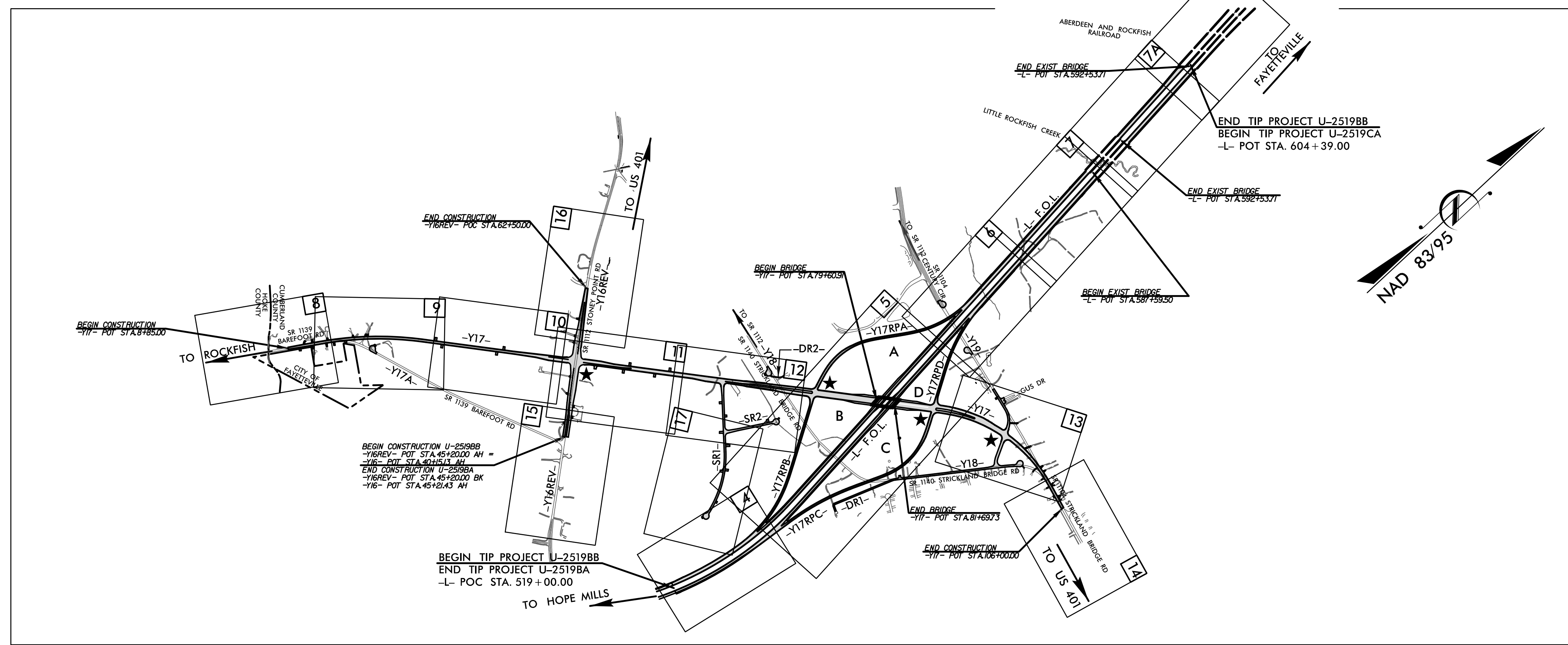
CUMBERLAND COUNTY

LOCATION: FAYETTEVILLE OUTER LOOP (F.O.L.) FROM SOUTH OF
SR 1104 (STRICKLAND BRIDGE ROAD) TO SOUTH OF US 401

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



VICINITY MAP
NOT TO SCALE

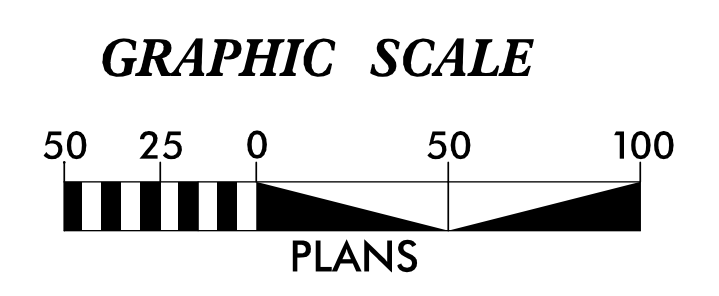


EROSION AND SEDIMENT CONTROL MEASURES

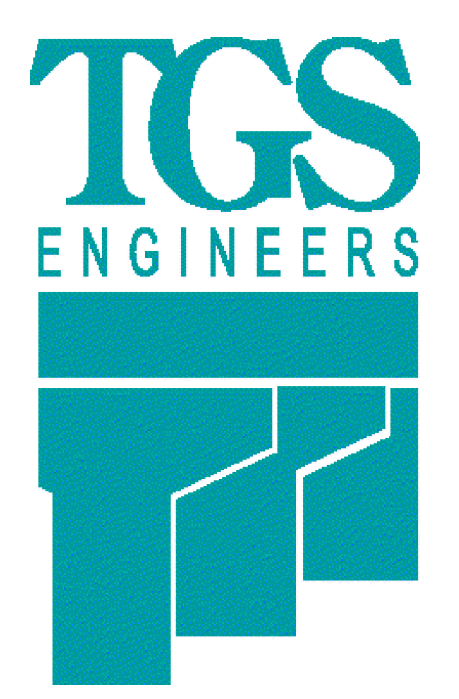
Std. #	Description	Symbol
1630.03	Temporary Silt Ditch	TD
1630.05	Temporary Diversion	TD
1605.01	Temporary Silt Fence	TSF
1606.01	Special Sediment Control Fence	SSCF
1622.01	Temporary Berms and Slope Drains	TBSD
1630.02	Silt Basin Type B	SB
1633.01	Temporary Rock Silt Check Type-A	TRSCA
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	TRSCA-PAM
1633.02	Temporary Rock Silt Check Type-B	TRSCB
	Wattle / Coir Fiber Wattle	WF
	Wattle / Coir Fiber Wattle with Polyacrylamide (PAM)	WF-PAM
1634.01	Temporary Rock Sediment Dam Type-A	TRSDA
1634.02	Temporary Rock Sediment Dam Type-B	TRSDB
1635.01	Rock Pipe Inlet Sediment Trap Type-A	RPISTRA
1635.02	Rock Pipe Inlet Sediment Trap Type-B	RPISTRB
1630.04	Stilling Basin	SB
1630.06	Special Stilling Basin	SSB
	Rock Inlet Sediment Trap:	
1632.01	Type A	A
1632.02	Type B	B
1632.03	Type C	C
	Skimmer Basin	SKB
	Tiered Skimmer Basin	TSKB
	Infiltration Basin	IB

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

CONTRACT: C204110 TIP PROJECT: U-2519BB



THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH
THE APPLICABLE REGULATIONS SET FORTH BY THE NCG-010000
GENERAL CONSTRUCTION PERMIT EFFECTIVE APRIL 1, 2019
AND ISSUED BY THE NORTH CAROLINA DEPARTMENT OF
ENVIRONMENTAL QUALITY DIVISION OF WATER RESOURCES.



Prepared In the Office of:
TGS ENGINEERS
201 W. MARION ST-STE 200
SHELBY, NC 28150

Designed by:
Andrew H. Cochran, PE 3015
NAME LEVEL III CERTIFICATION NO.

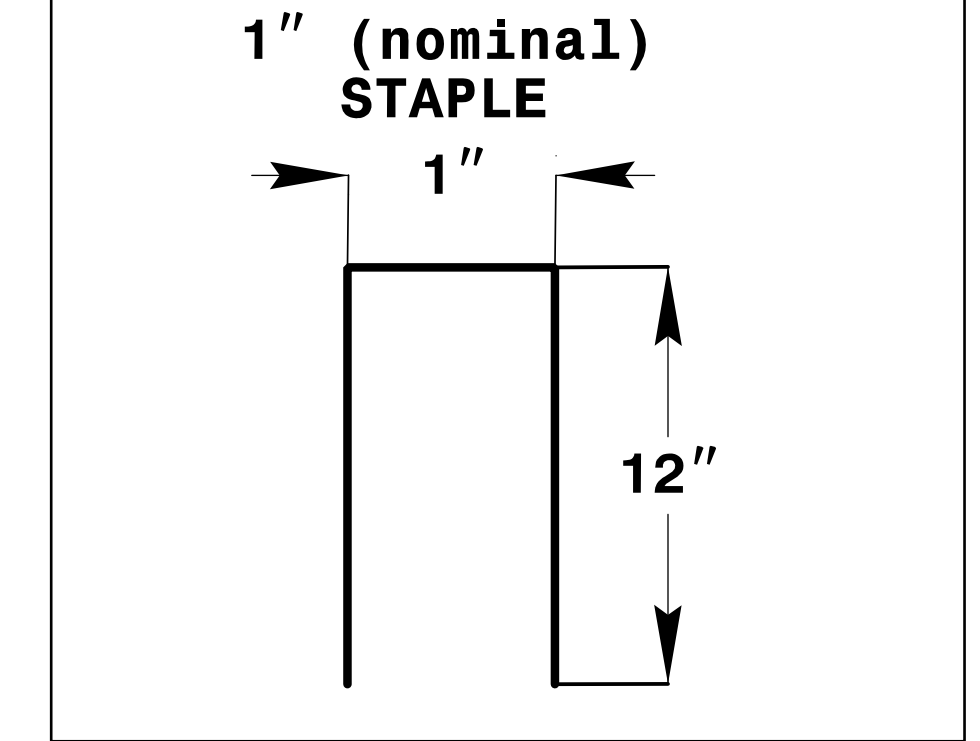
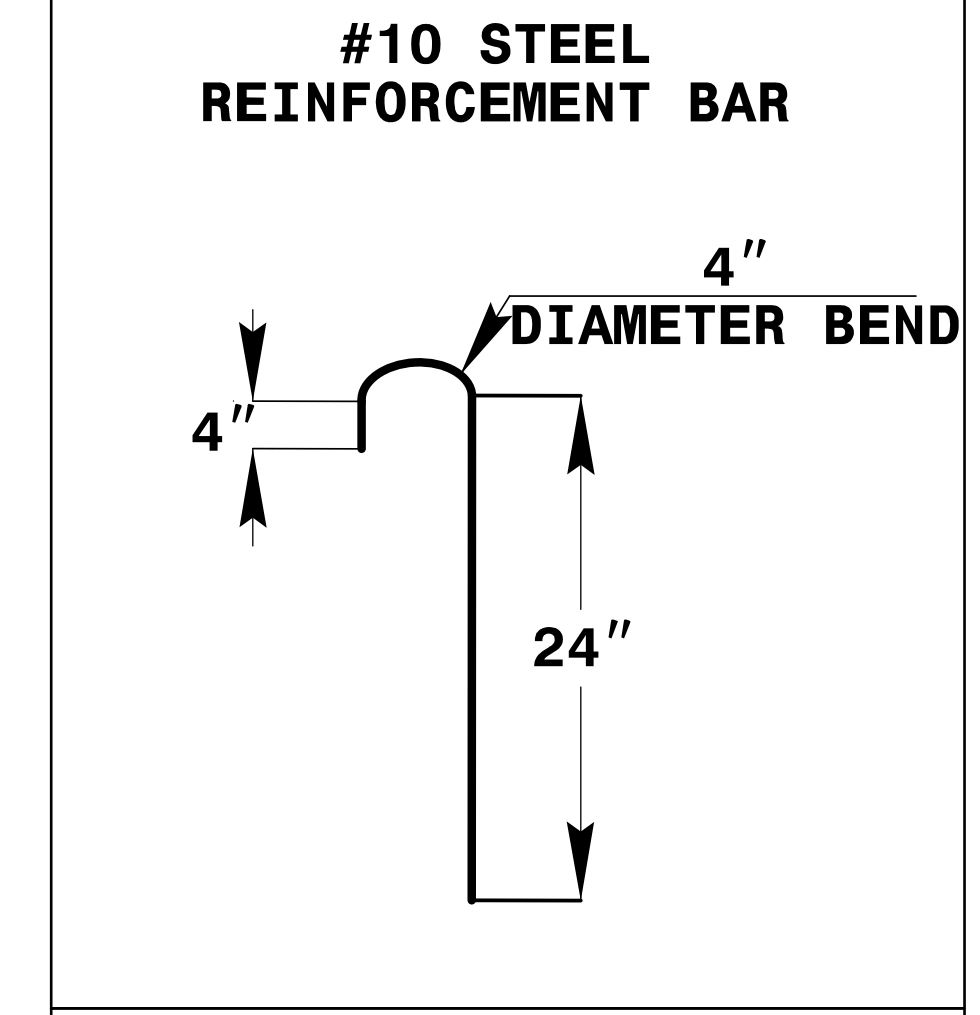
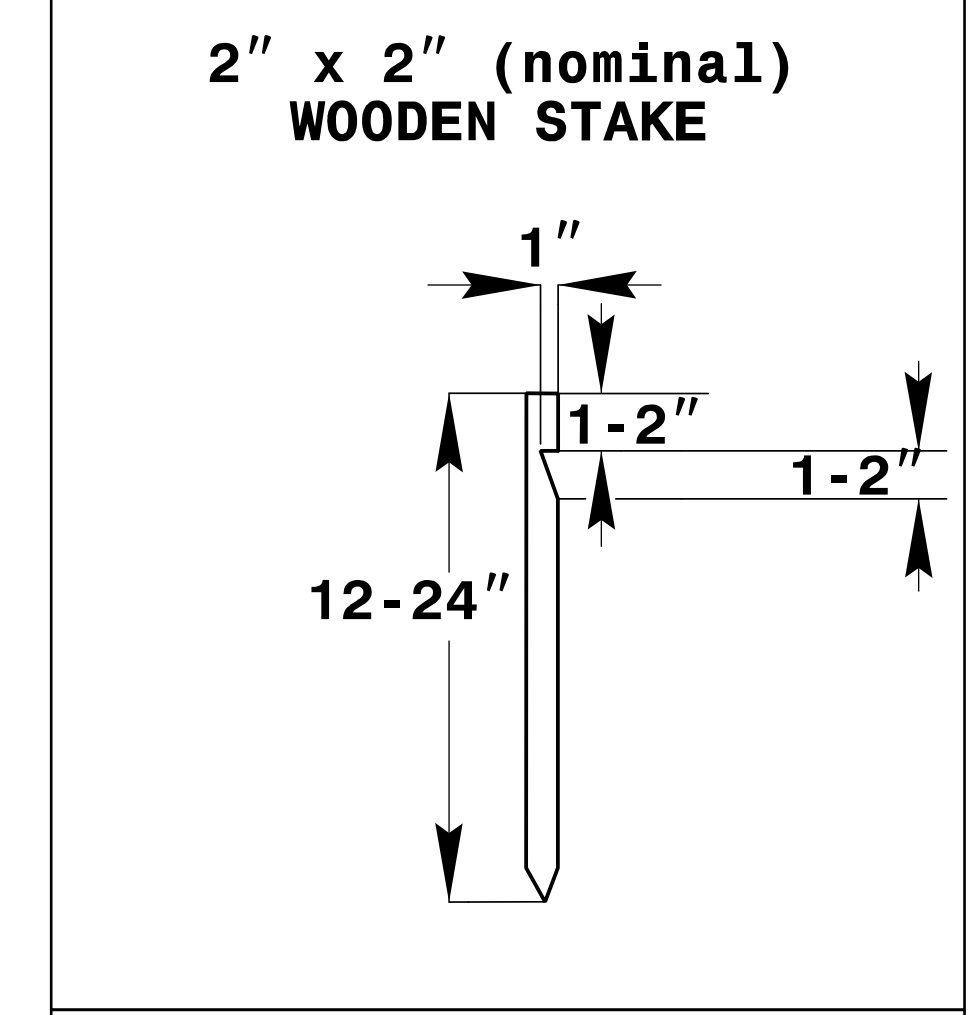
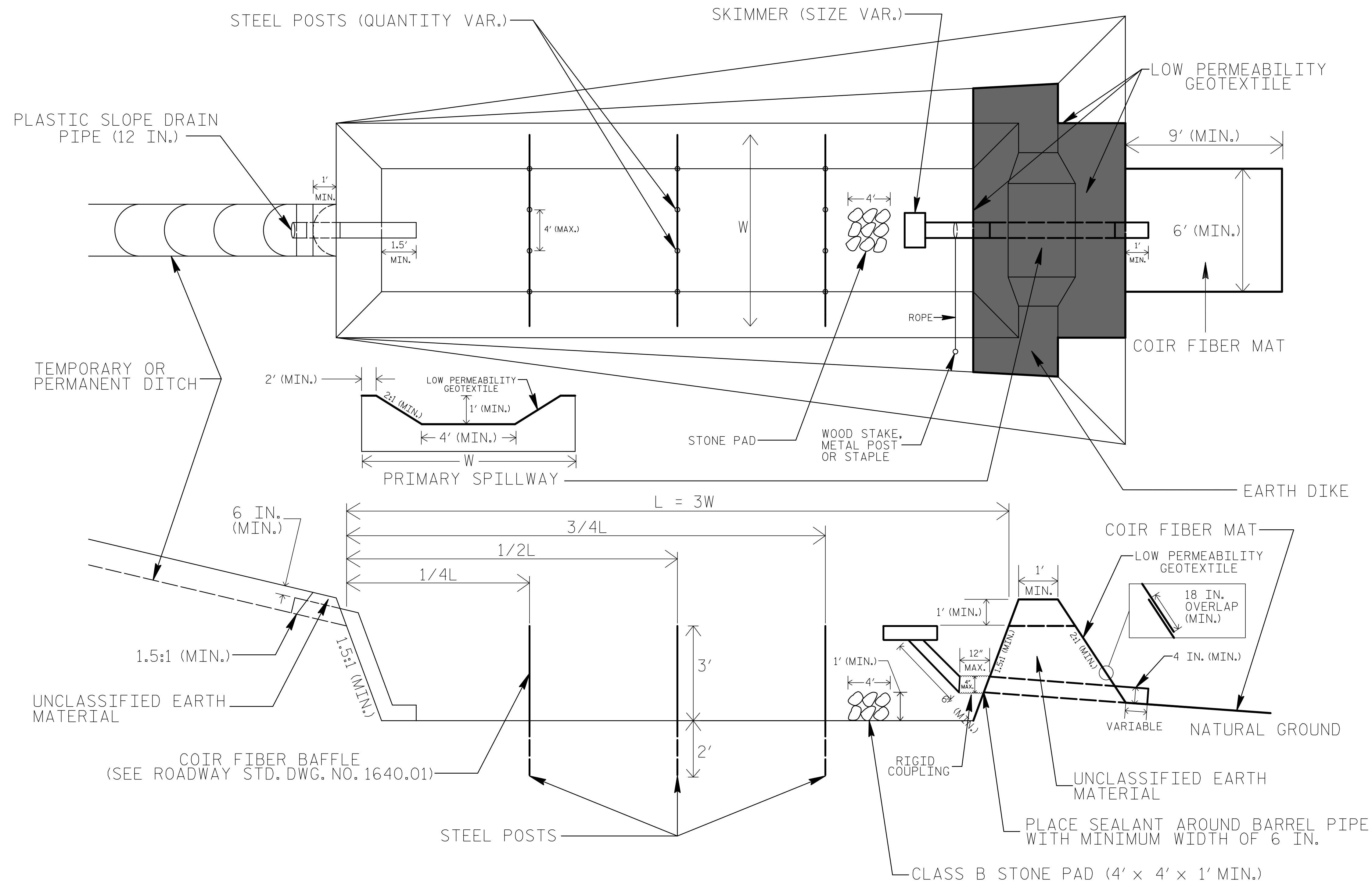
Roadway Standard Drawings

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. <i>U-2519BB</i>	SHEET NO. <i>EC-2</i>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SKIMMER BASIN WITH BAFFLES DETAIL (EAST)



COIR FIBER MAT ANCHOR OPTIONS

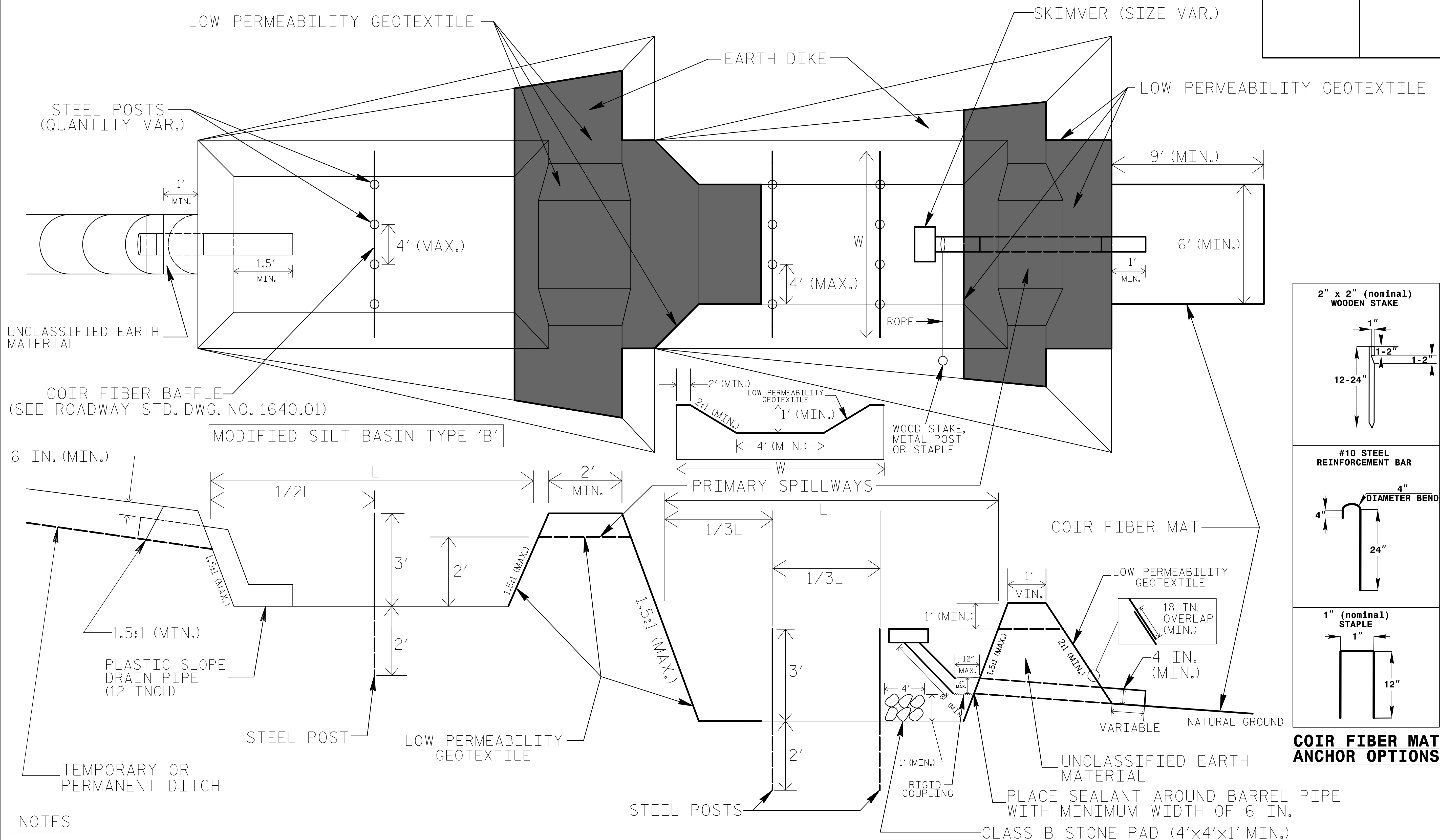
NOTES

1. SEED AND PLACE MATTING FOR EROSION CONTROL ON INTERIOR AND EXTERIOR SIDESLOPES.
2. LIMIT EARTH DIKE HEIGHT TO 5 FT.
3. FOR BASIN DEPTH OF 3 FT., THE MINIMUM BASIN WIDTH SHALL BE 9 FT.
4. DETERMINE PRIMARY SPILLWAY WEIR LENGTH (FT.) USING $Q/0.8$, WHERE Q IS FLOW RATE (CFS) INTO BASIN.
5. PLASTIC SLOPE DRAIN PIPE AT INLET OF BASIN MAY BE REPLACED BY FILTRATION GEOTEXTILE OR TARP AS DIRECTED.
6. LOW PERMEABILITY GEOTEXTILE FOR PRIMARY SPILLWAY SHALL BE ONE CONTINUOUS PIECE OF MATERIAL OR OVERLAPPED 18 IN. (MIN.).

NOT TO SCALE

TIERED SKIMMER BASIN DETAIL (EAST)

PROJECT REFERENCE NO. U-2519BB	SHEET NO. EC-2A
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



NOTES

1. SEED AND PLACE MATTING FOR EROSION CONTROL ON INTERIOR AND EXTERIOR SIDESLOPES OF BASINS.
2. LIMIT HEIGHT OF EARTH DIKES TO 5 FT.
3. ADDITIONAL MODIFIED SILT BASINS TYPE 'B' MAY BE NEEDED DEPENDING ON SLOPE.
4. FOR BASIN DEPTHS OF 3FT., THE MINIMUM BASIN WIDTHS SHALL BE 9 FT.
5. DETERMINE PRIMARY SPILLWAY WEIR LENGTHS (FT.) USING $Q/0.8$, WHERE Q IS FLOW RATE (CFS) INTO UPPER BASIN.
6. LOW PERMEABILITY GEOTEXTILE FOR PRIMARY SPILLWAYS SHALL BE ONE CONTINUOUS PIECE OF MATERIAL OR OVERLAPPED 18 IN. (MIN.).

NOT TO SCALE

BORROW PIT DEWATERING BASIN DETAIL

PROJECT REFERENCE NO. U-2519BB	SHEET NO. EC-2B
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

GENERAL NOTES:

DETERMINE BORROW PIT DEWATERING BASIN SIZE USING $V = 8.0203 * Q * T$, WHERE V IS VOLUME (FT³), Q IS PUMP FLOW RATE (GPM), AND T IS DEWATERING TIME (HR). USE MAXIMUM FLOW RATE OF 1000 GPM AND A MINIMUM DEWATERING TIME OF 2 HOURS.

RISER SHALL BE A NON-PERFORATED, SMOOTH OR CORRUGATED MATERIAL WITH A FLASHBOARD OPTION.

CONSTRUCT THE COIR FIBER BAFFLE IN ACCORDANCE WITH ROADWAY STANDARD DRAWING 1640.01 AND WITH MATERIAL THAT MEETS THE SPECIFICATIONS OF ROADWAY STANDARD 1640-14.

PROVIDE 5' STEEL POSTS OF THE SELF-FASTENER ANGLE STEEL TYPE. INSTALL STEEL POSTS WITH NO MORE THAN 3' OF THE POST APPEARING ABOVE THE GROUND.

ATTACH THE COIR FIBER MAT TO THE STEEL POSTS WITH WIRE OR OTHER ACCEPTABLE MEANS AND STAPLED INTO THE BOTTOM AND SIDE SLOPES OF THE BASIN WITH 12" STAPLES.

INSTALL TYPE 2 GEOTEXTILE ON SIDESLOPES AND BOTTOM OF BASIN AT INLET AS SHOWN IN THE DETAIL.

USE THE TYPICAL SECTION SHOWN FOR THE BORROW PIT DEWATERING BASIN AS A GUIDE. THE BASIN MAY HAVE ANY TYPE CONFIGURATION AS LONG AS SUFFICIENT VOLUME IS PROVIDED AND PROVISIONS ARE MADE FOR A NON-PERFORATED RISER.

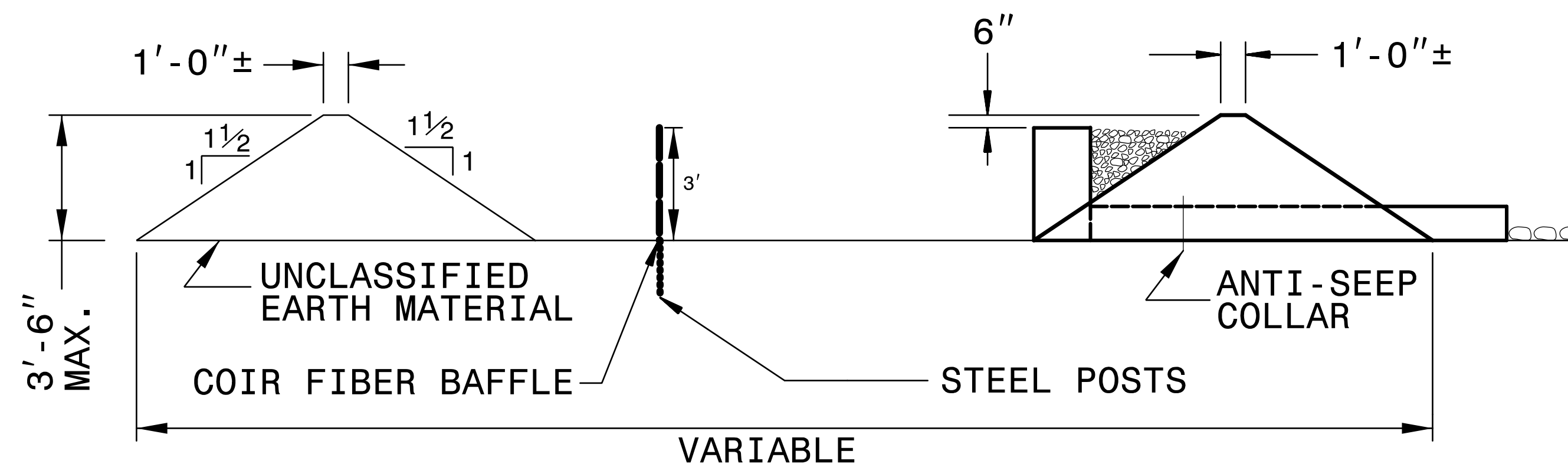
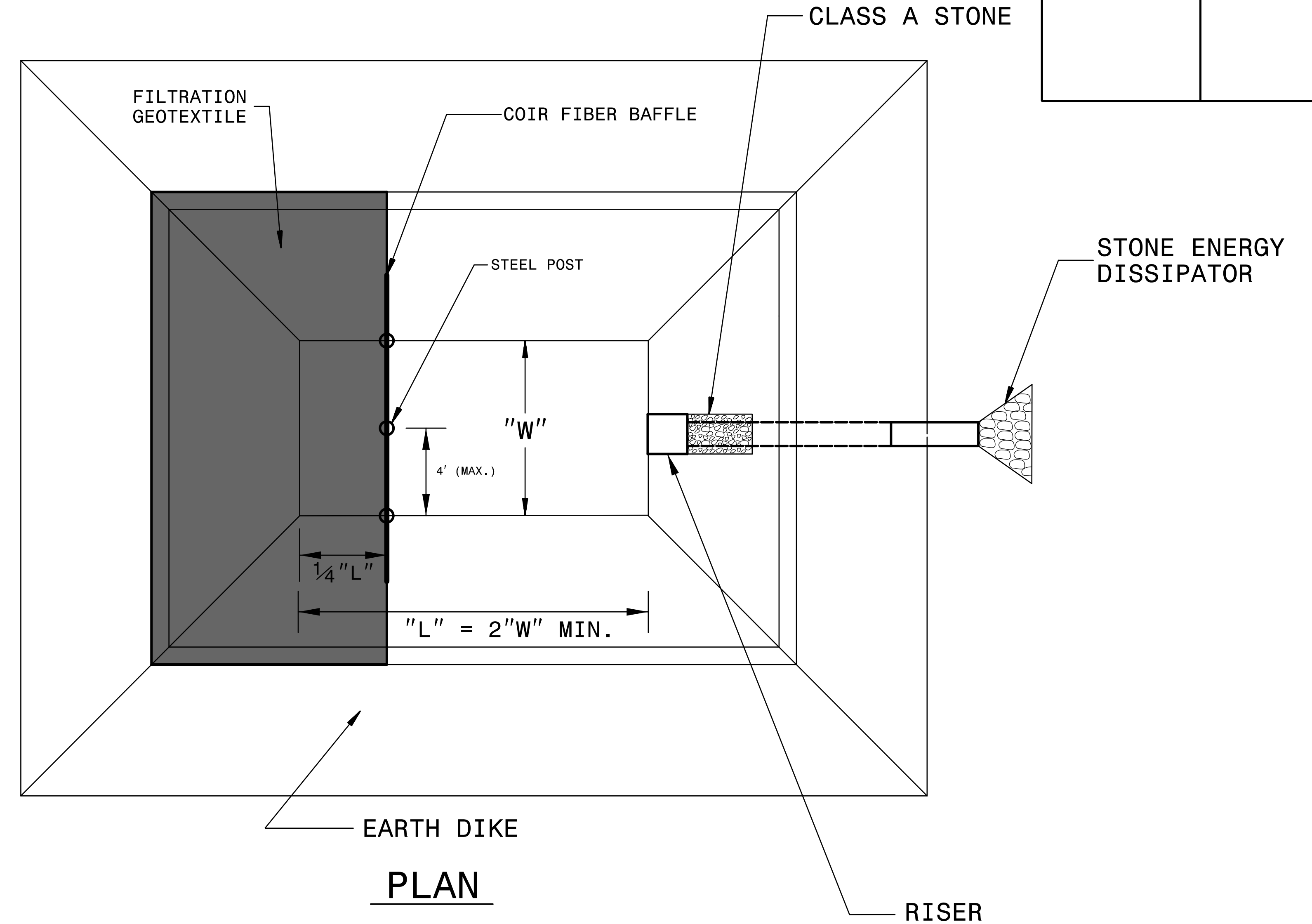
DO NOT EXCEED 3 1/2 FT. IN HEIGHT FOR THE EARTH DIKES REQUIRED FOR BORROW PIT DEWATERING BASIN.

THE BORROW PIT DEWATERING BASIN SIZE IS VARIABLE AND DEPENDENT ON SPECIFIC SITE REQUIREMENTS AS WELL AS PROPOSED CONSTRUCTION OPERATIONS.

SUBMIT THE SIZE, LOCATION AND RISER PIPE MATERIAL FOR APPROVAL PRIOR TO CONSTRUCTION.

PUMP THE EFFLUENT INTO THE BORROW PIT DEWATERING BASIN TO A MAXIMUM DEPTH OF 6 IN. BELOW TOP OF EARTH DIKE.

PROVIDE A STONE ENERGY DISSIPATOR PAD AT THE OUTLET OF THE PUMP DISCHARGE HOSE AND OUTLET OF THE RISER BARREL IN ACCORDANCE WITH ROADWAY STANDARD DRAWING 876.02 FOR OUTLET W/O DITCH.

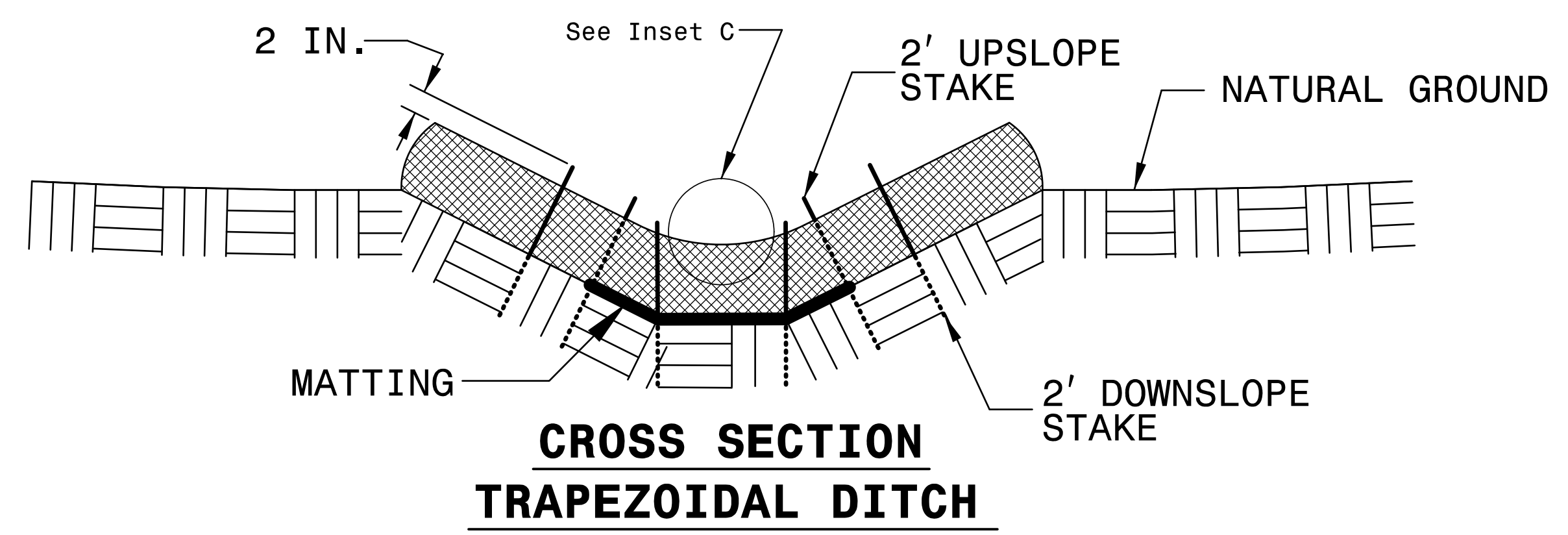
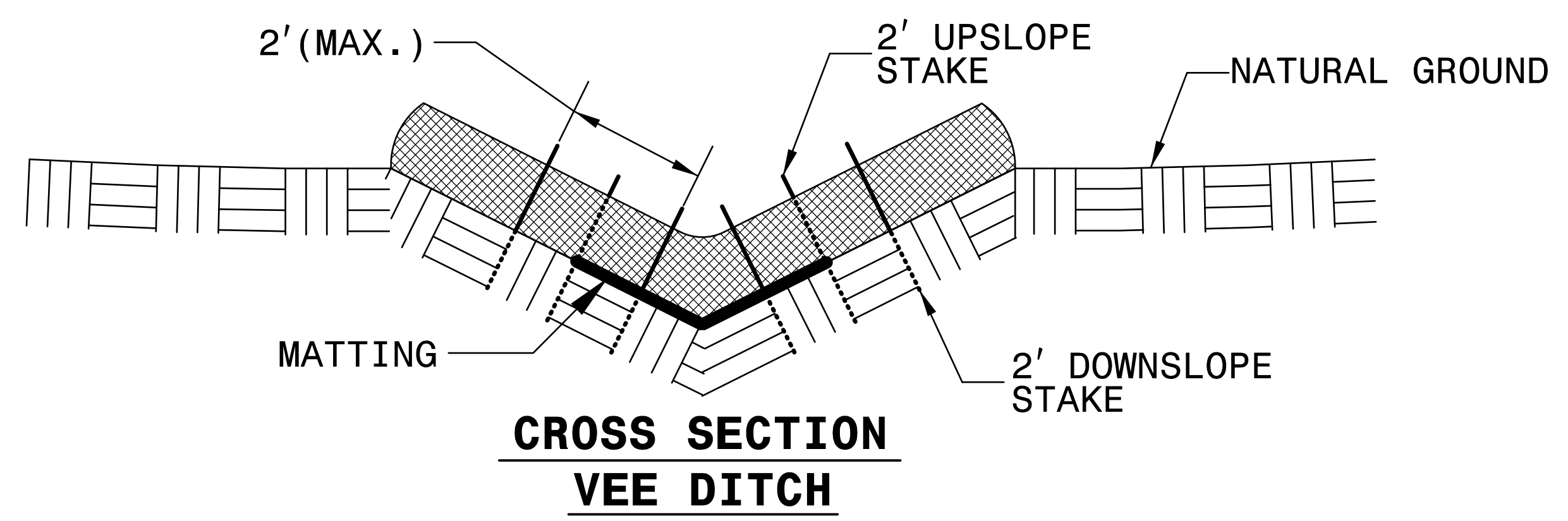
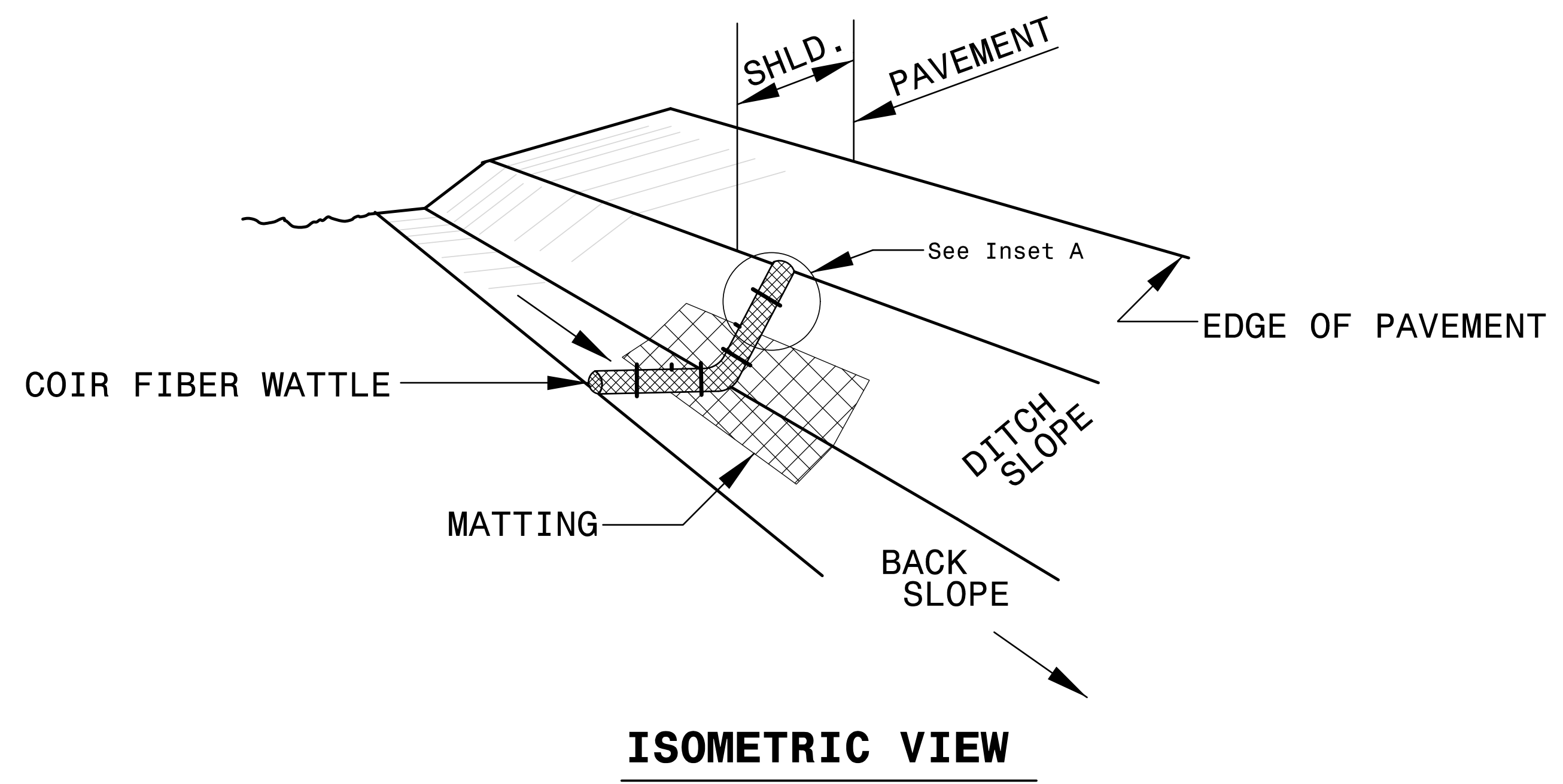


TYPICAL SECTION VIEW

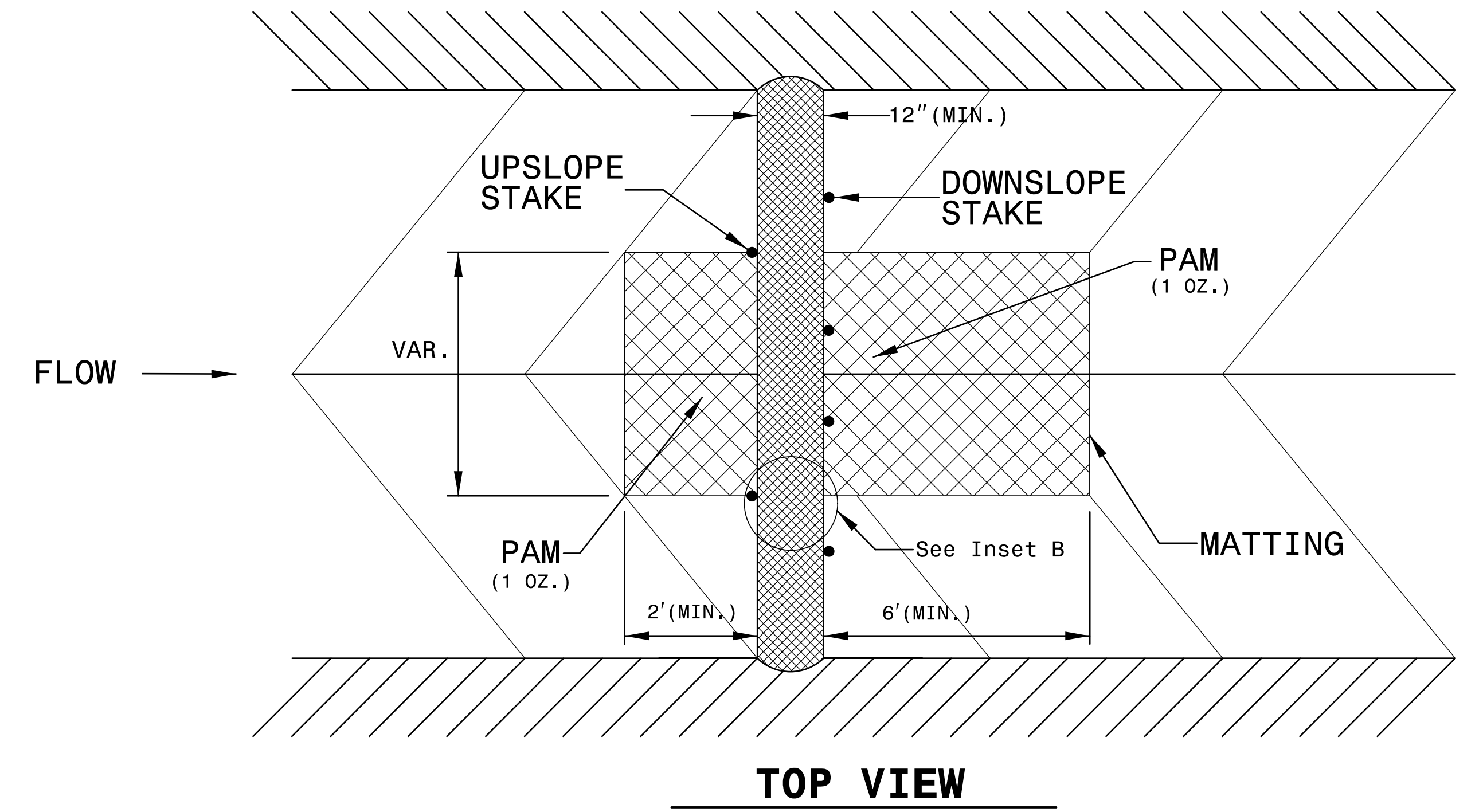
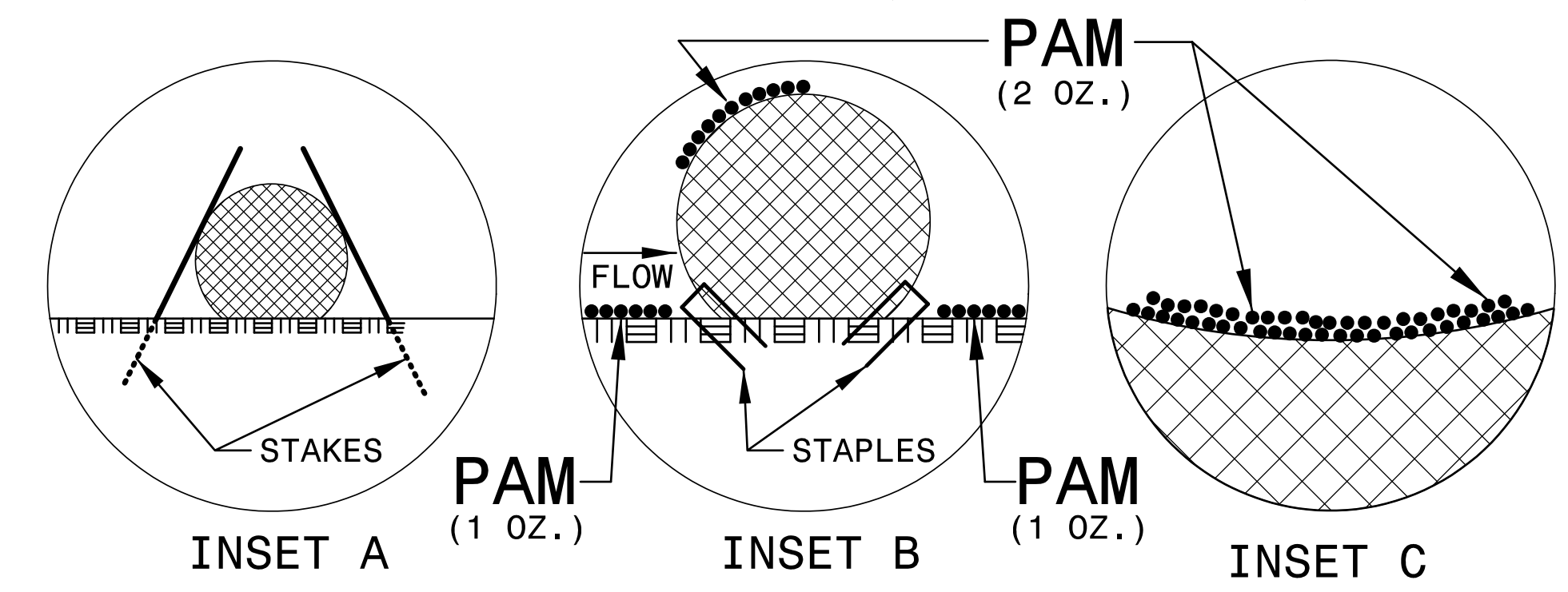
NOT TO SCALE

PROJECT REFERENCE NO. <i>U-2519BB</i>	SHEET NO. <i>EC-2C</i>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

COIR FIBER WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL

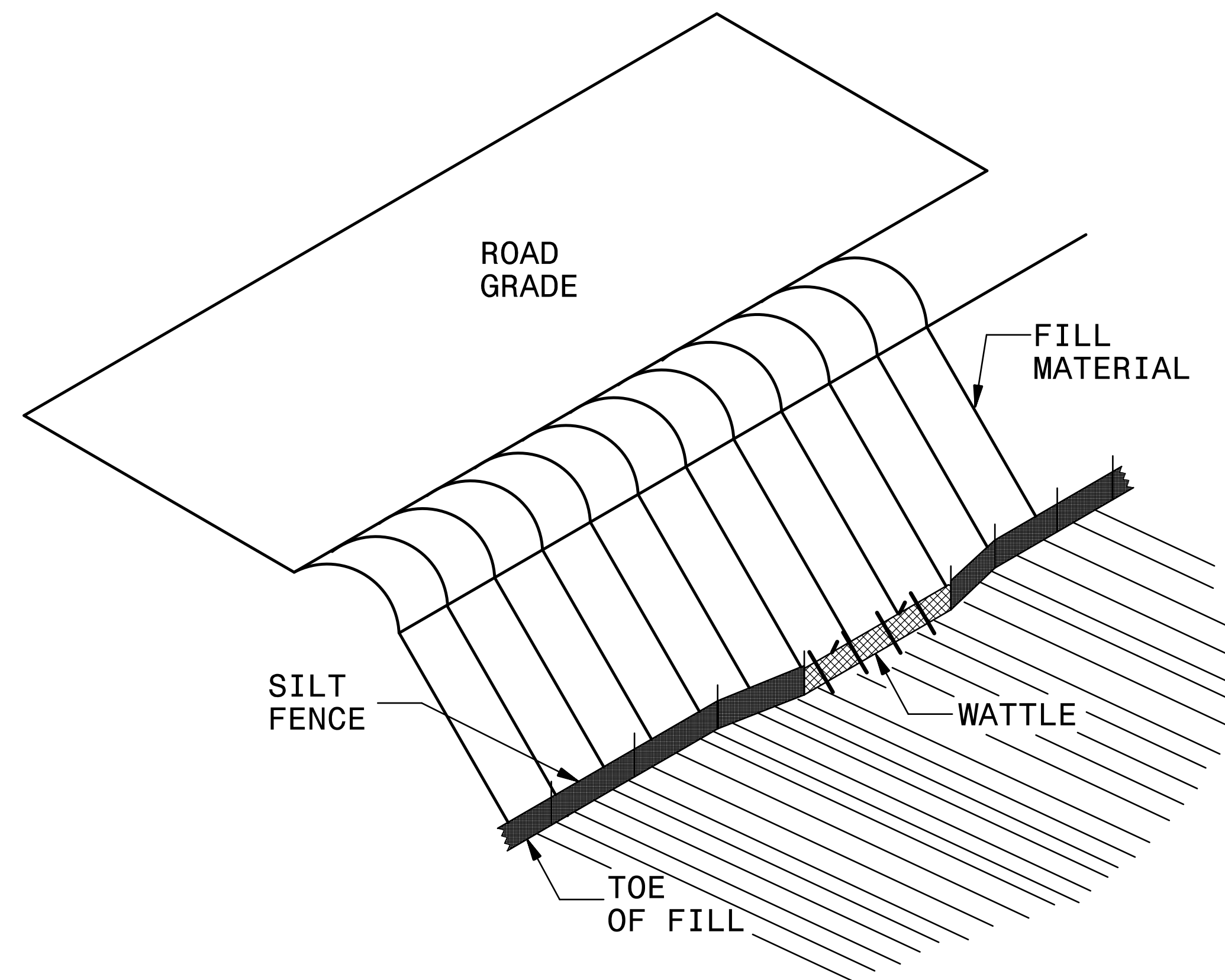


- NOTES:
- USE MINIMUM 12 IN. DIAMETER COIR FIBER (COCONUT FIBER) WATTLE.
 - USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.
 - ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.
 - INSTALL A MINIMUM OF 2 UPSLOPE 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.

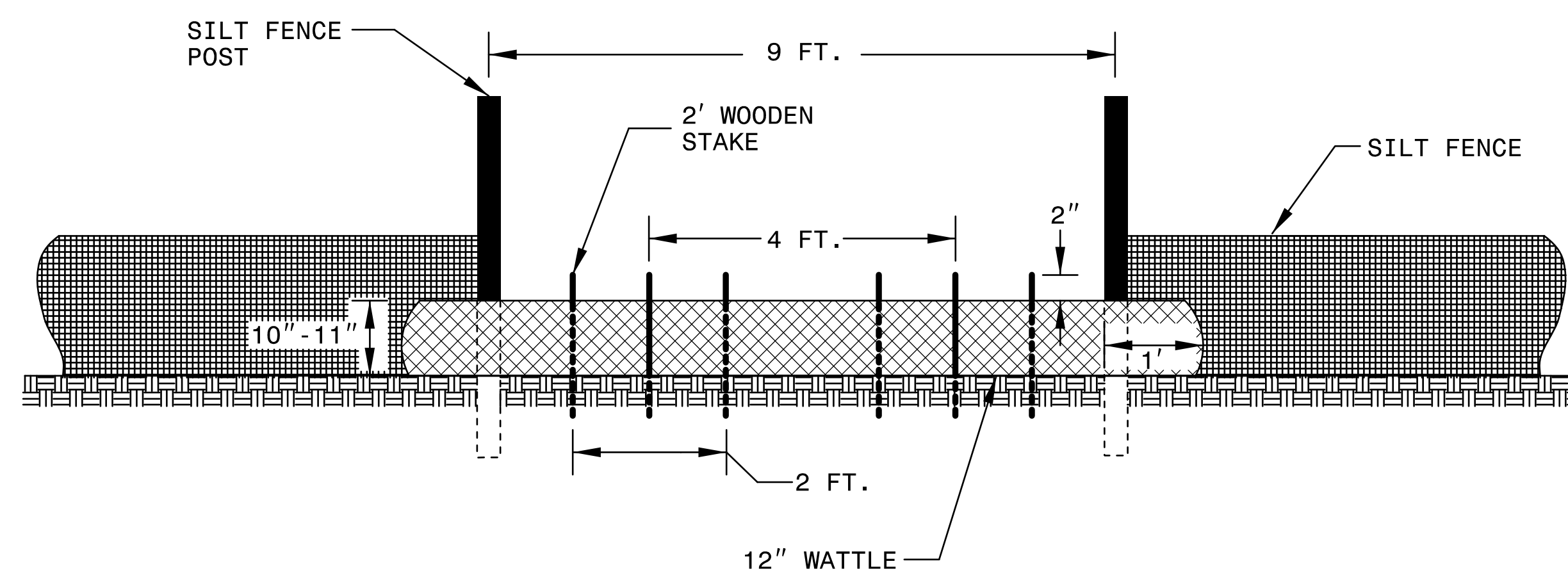


SILT FENCE COIR FIBER WATTLE BREAK DETAIL

PROJECT REFERENCE NO. <i>U-2519BB</i>	SHEET NO. <i>EC-2D</i>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



ISOMETRIC VIEW

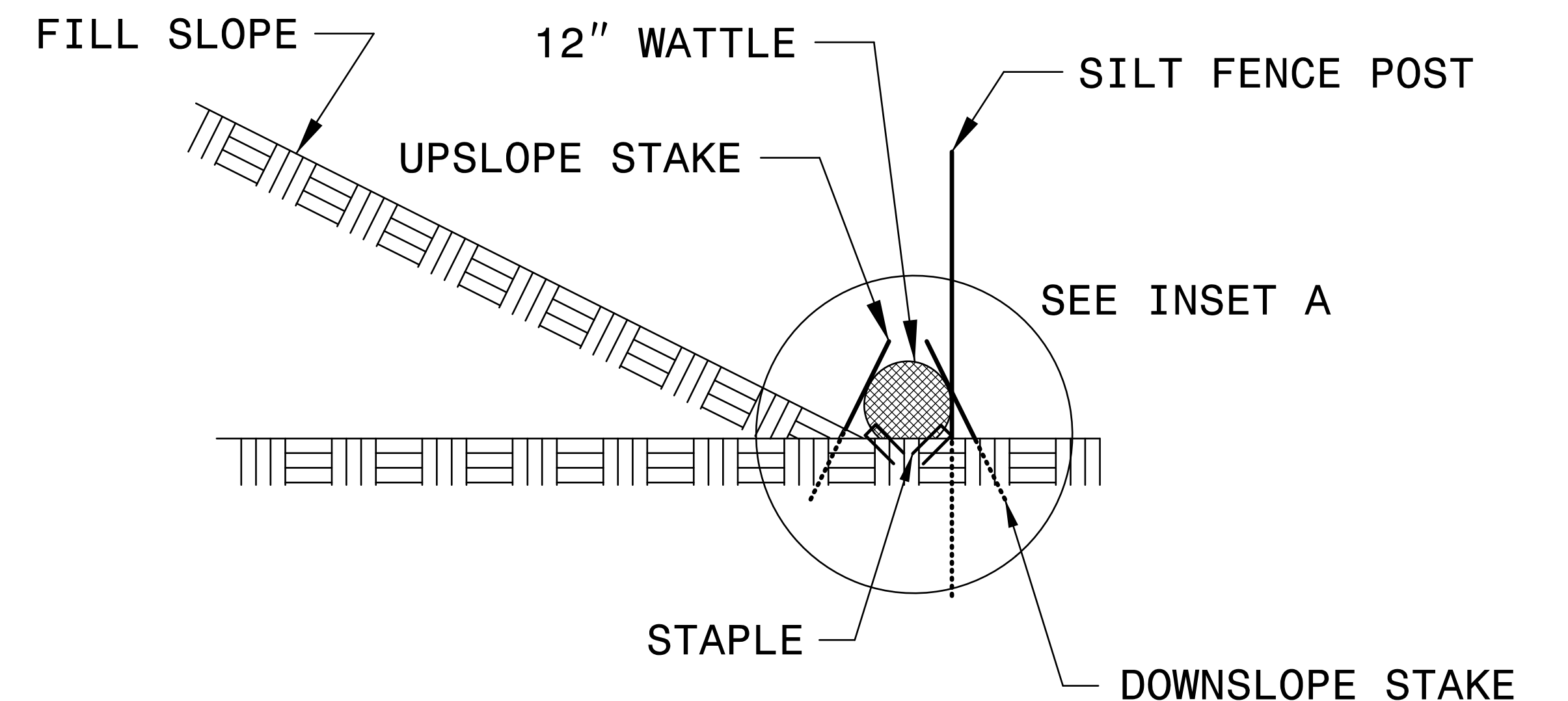
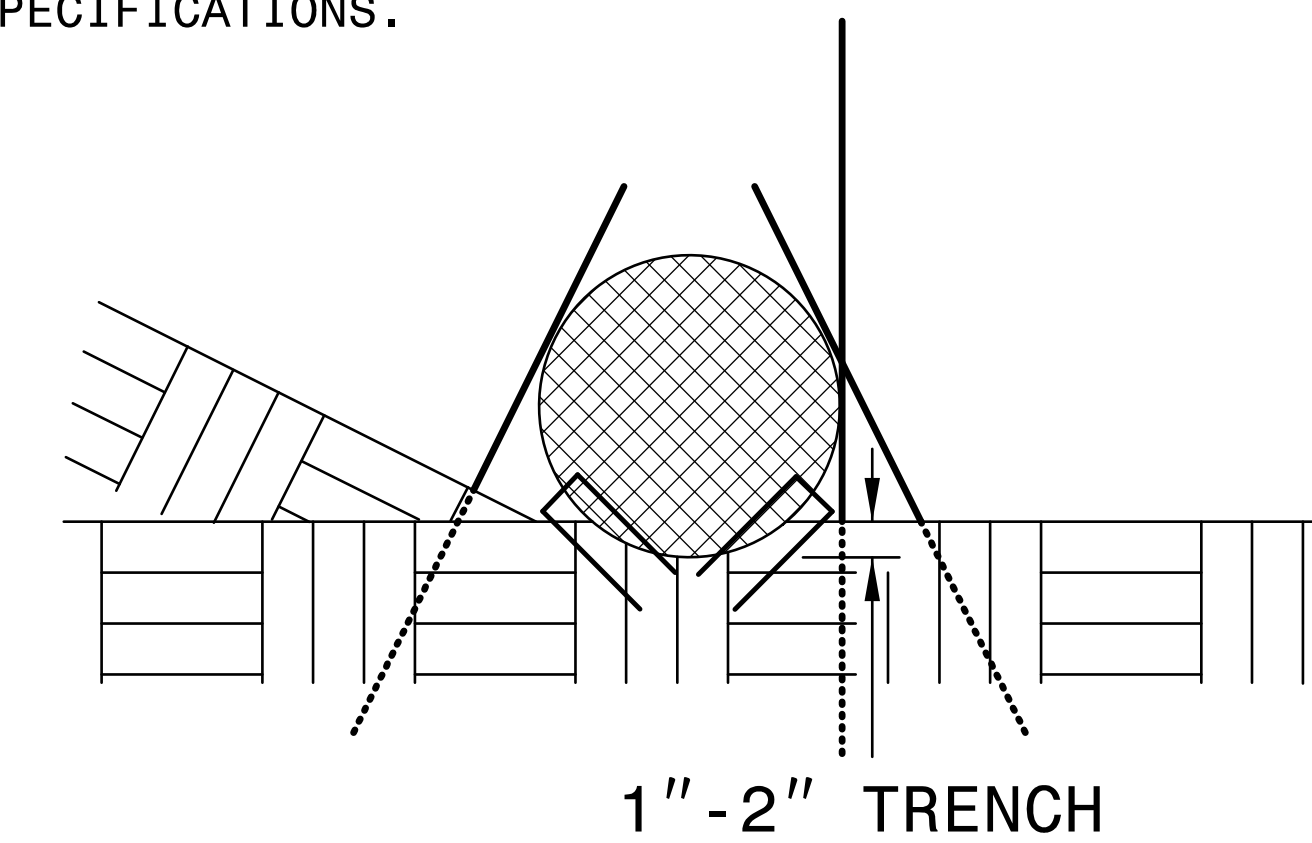


VIEW FROM SLOPE

NOTES:

- USE MINIMUM 12 IN. DIAMETER COIR FIBER (COCONUT FIBER) WATTLE AND LENGTH OF 10 FT.
- EXCAVATE A 1 TO 2 INCH TRENCH FOR WATTLE TO BE PLACED.
- DO NOT PLACE WATTLE ON TOE OF SLOPE.
- USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.
- INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO GROUND.
- 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.
- WATTLE INSTALLATION CAN BE ON OUTSIDE OF THE SILT FENCE AS DIRECTED.
- INSTALL TEMPORARY SILT FENCE IN ACCORDANCE WITH SECTION 1605 OF THE STANDARD SPECIFICATIONS.

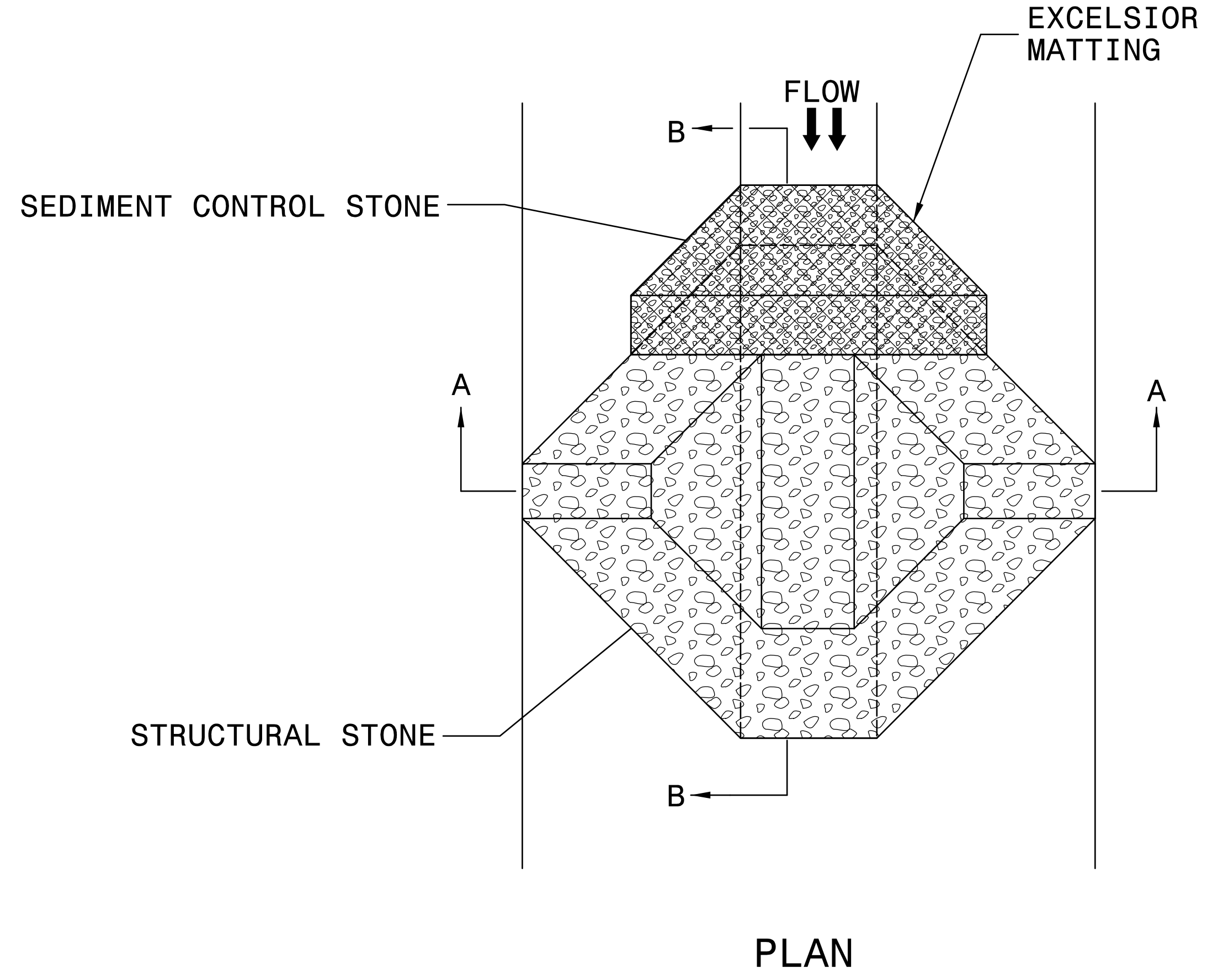
INSET A



SIDE VIEW

PROJECT REFERENCE NO. U-2519BB	SHEET NO. EC-2E
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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



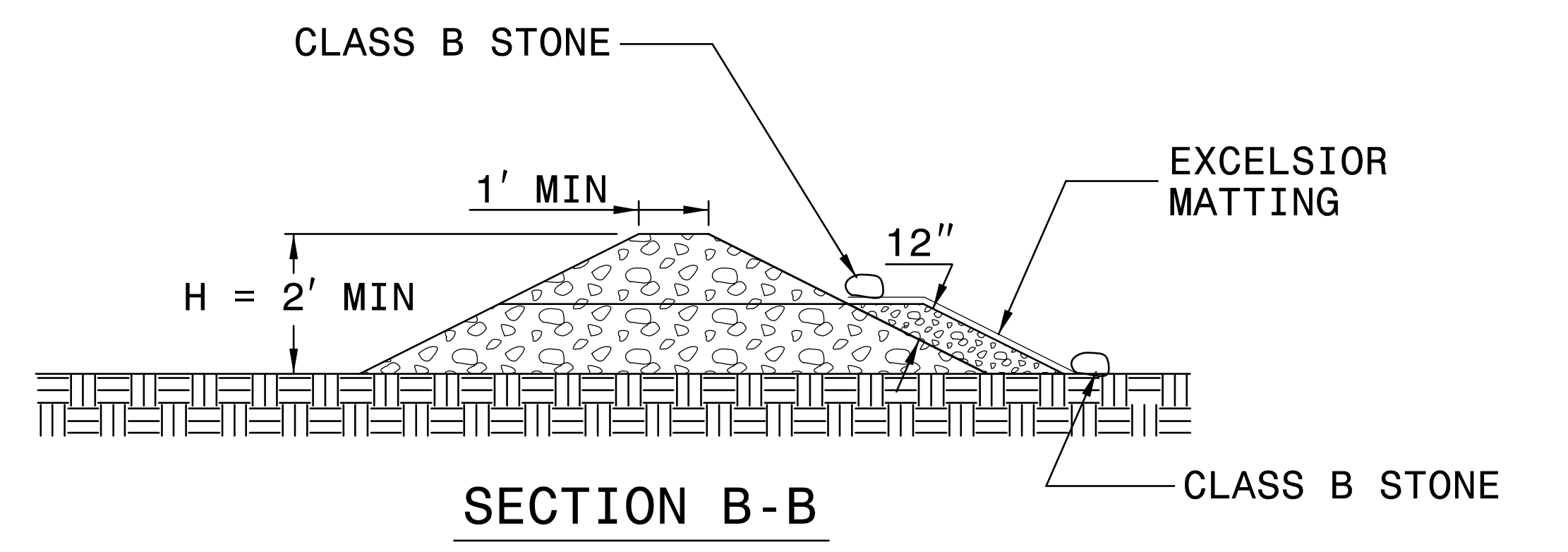
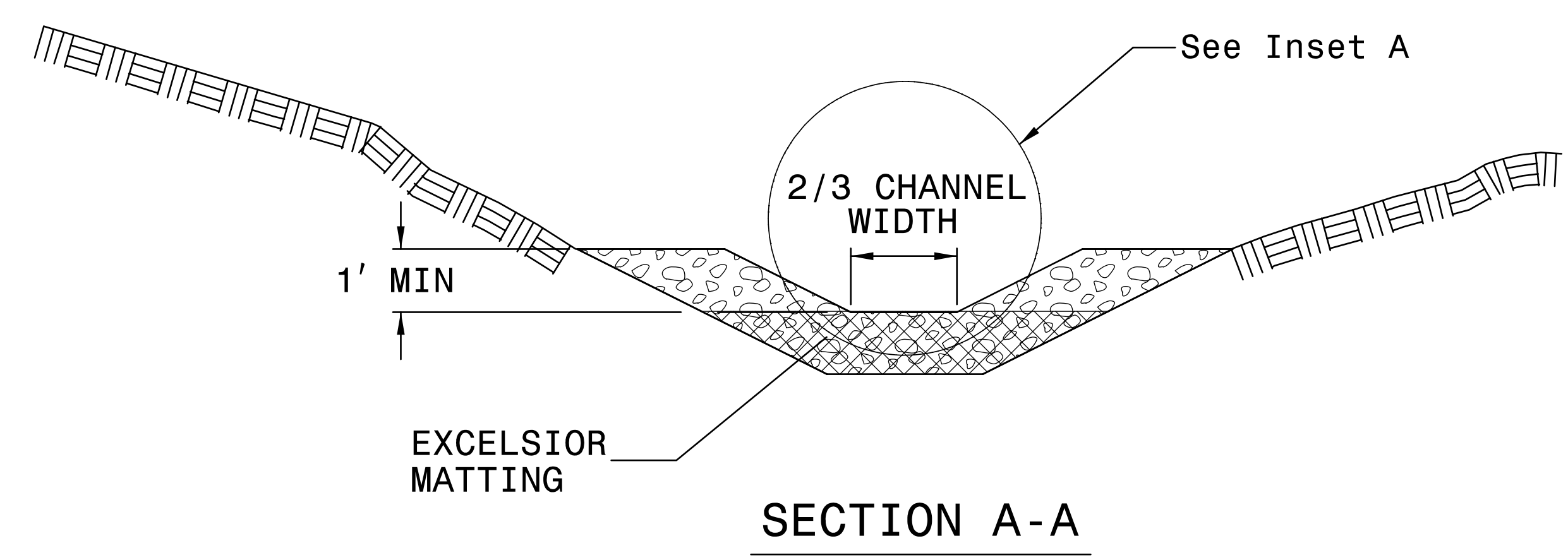
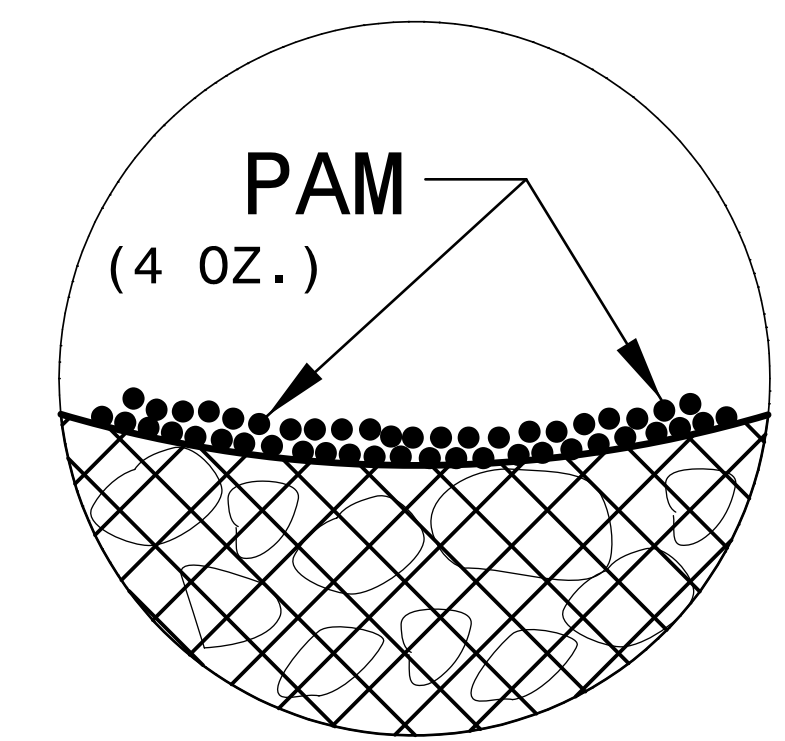
NOTES:

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.

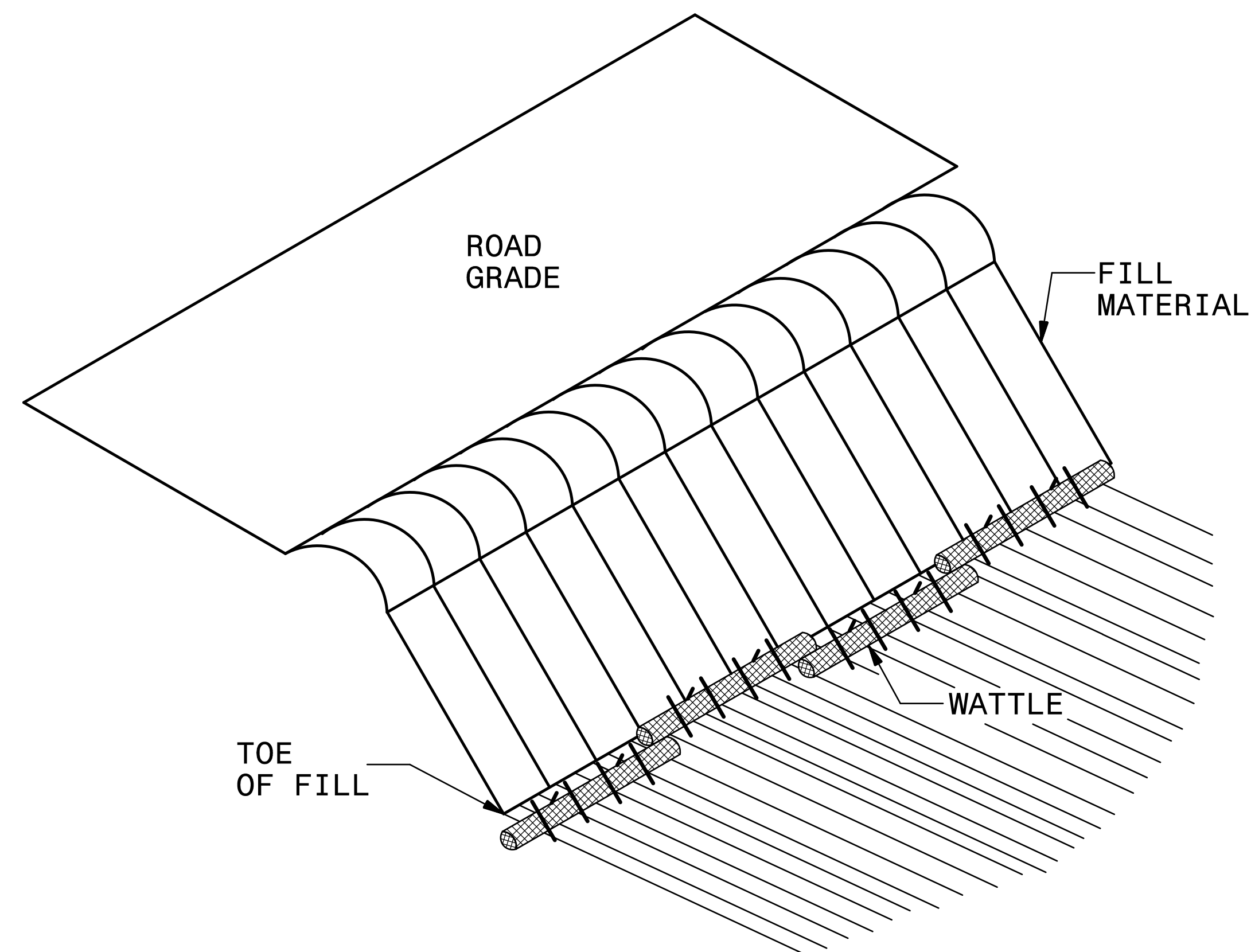
INITIALLY APPLY 4 OUNCES OF POLYACRYLAMIDE (PAM) TO TOP OF MATTING SECTION AND AFTER EVERY RAINFALL EVENT THAT EQUALS OR EXCEEDS 0.50 INCHES.



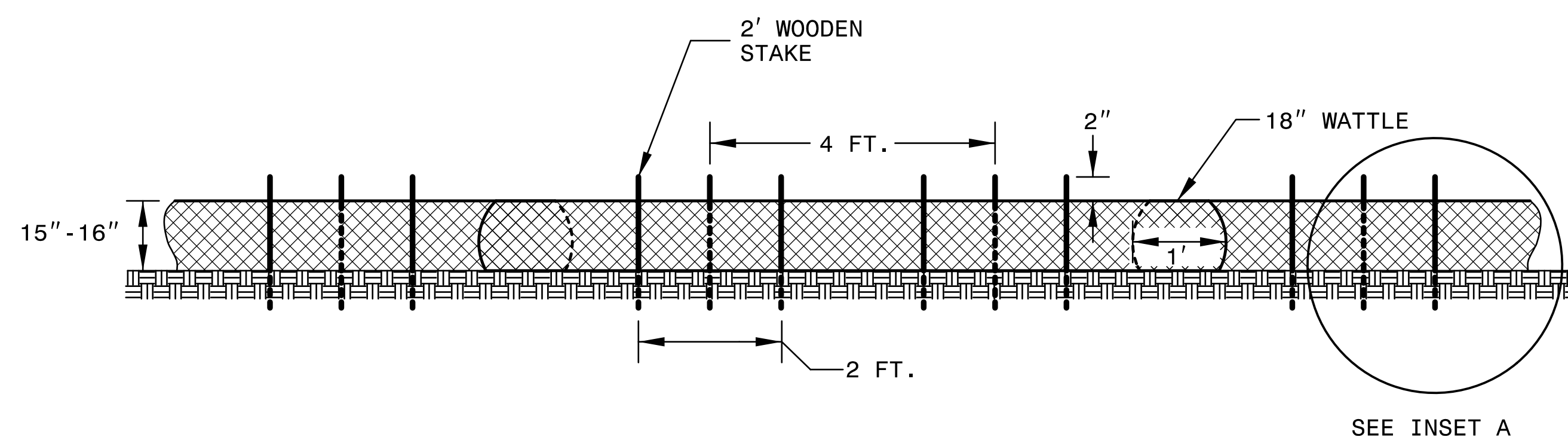
NOT TO SCALE

PROJECT REFERENCE NO. <i>U-2519BB</i>	SHEET NO. <i>EC-2F</i>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

COIR FIBER WATTLE BARRIER DETAIL



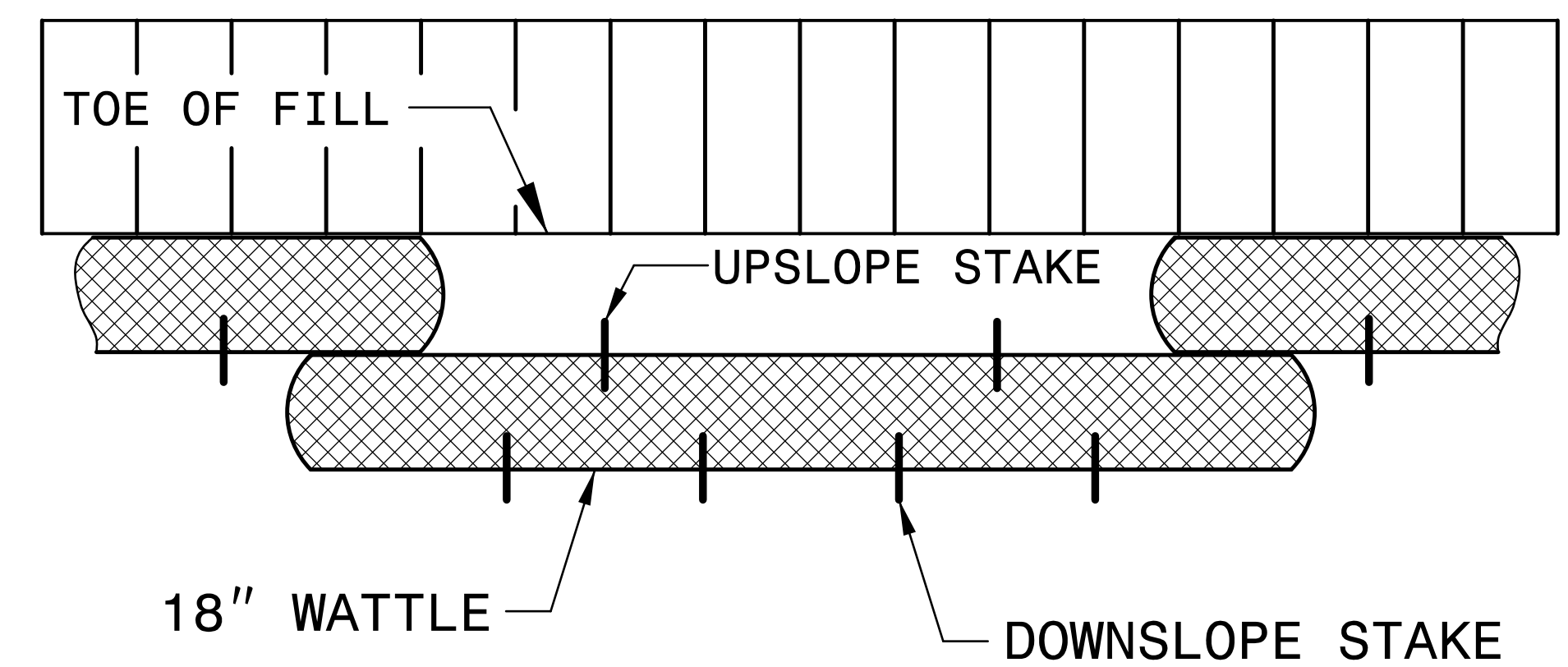
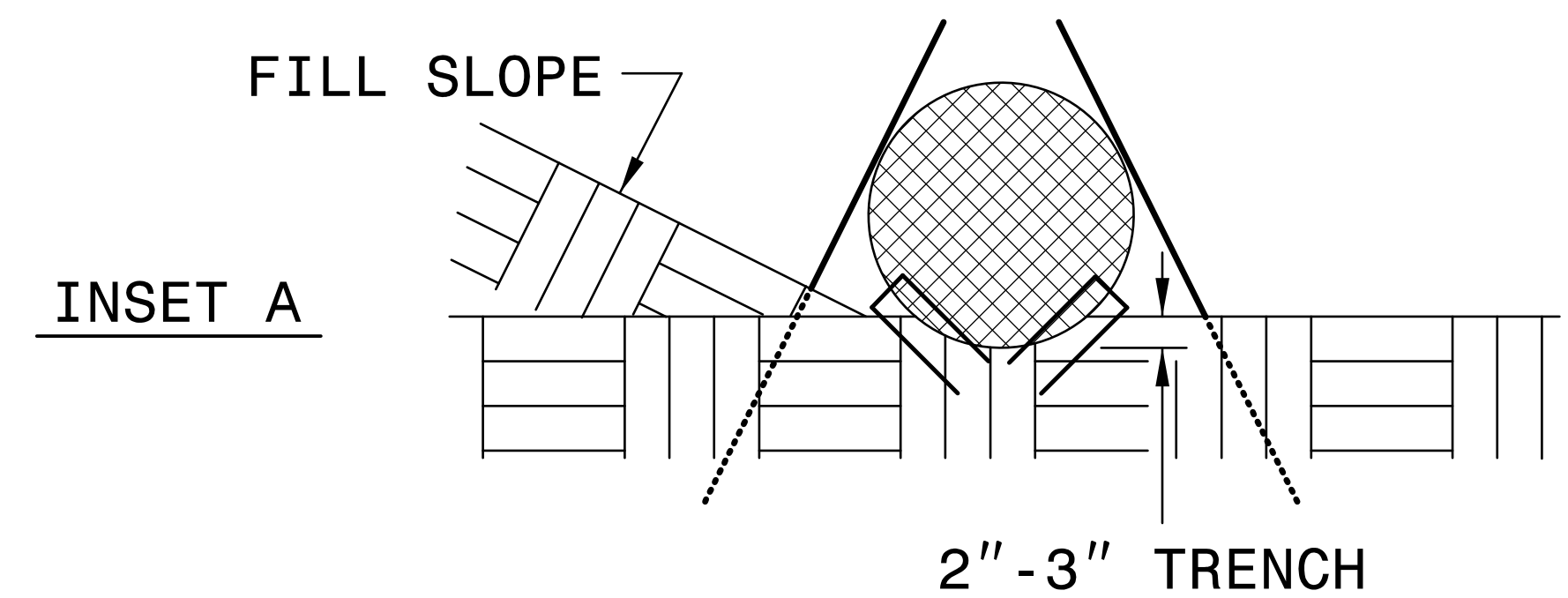
ISOMETRIC VIEW



FRONT VIEW

NOTES:

- USE MINIMUM 18 IN. NOMINAL DIAMETER COIR FIBER (COCONUT) WATTLE AND LENGTH OF 10 FT.
- EXCAVATE A 2 TO 3 INCH TRENCH FOR WATTLE TO BE PLACED.
- DO NOT PLACE WATTLES ON TOE OF SLOPE.
- USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.
- INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO GROUND.
- 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.
- FOR BREAKS ALONG LARGE SLOPES, USE MAXIMUM SPACING OF 25 FT.



TOP VIEW

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

PROJECT REFERENCE NO. <i>U-2519BB</i>	SHEET NO. <i>EC-3A</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.

PROJECT REFERENCE NO.	SHEET NO.
U-2519BB	EC-04/CONST.4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NAD 83/95

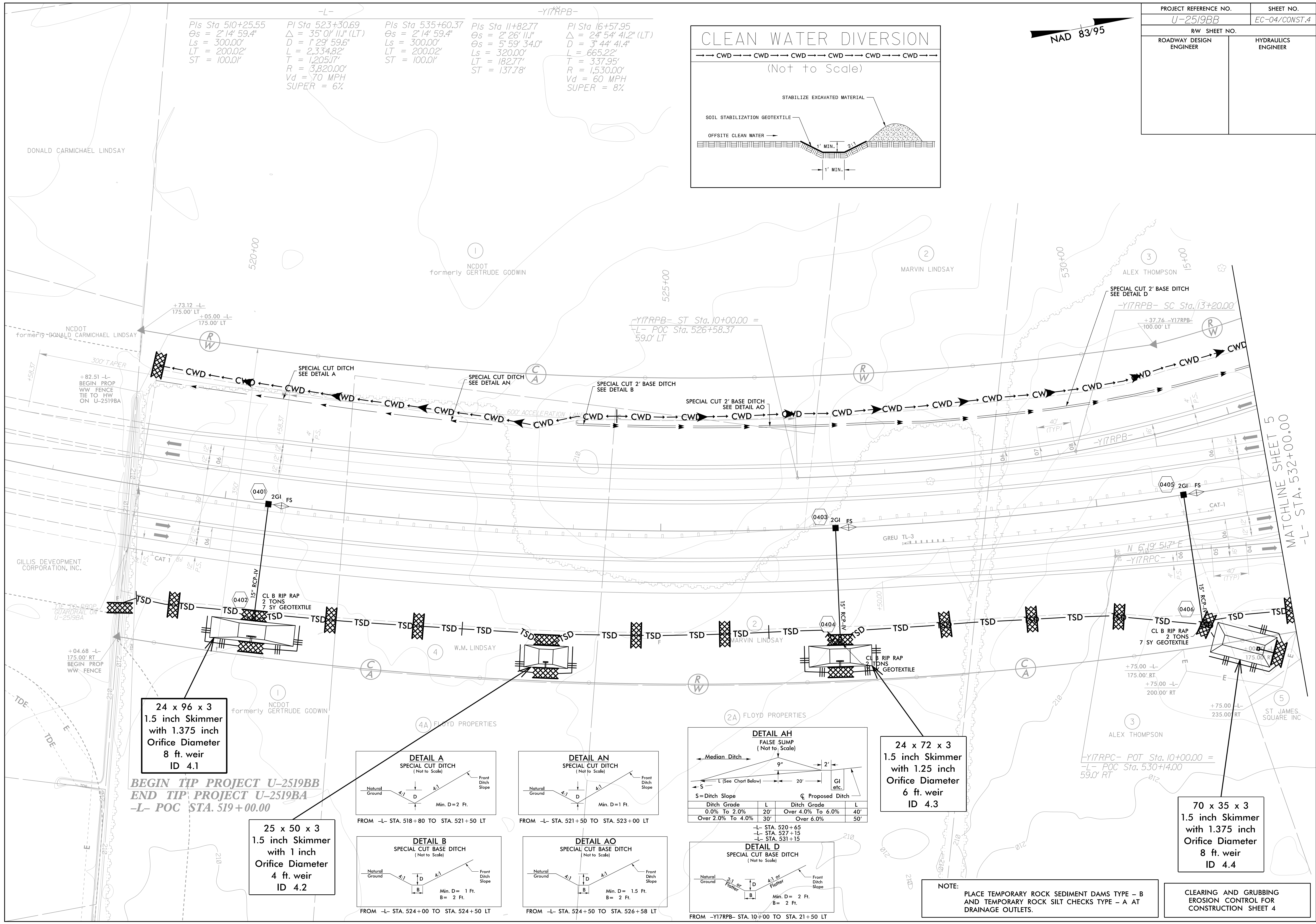
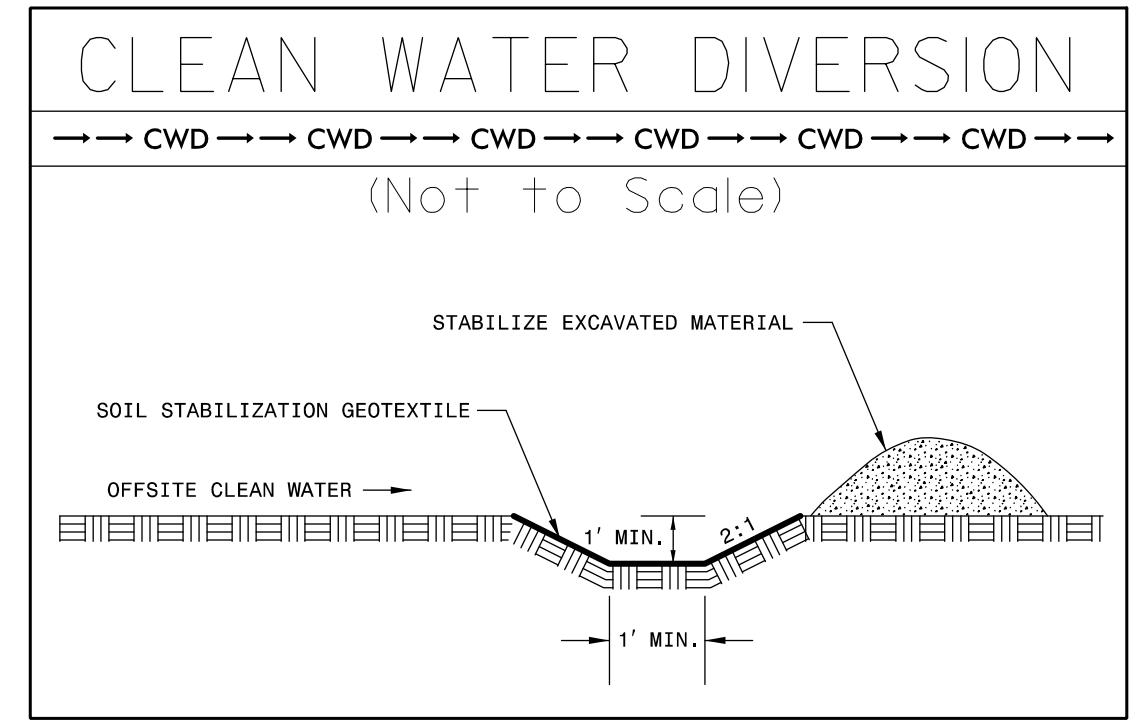
-L-
 Pls Sta 510+25.55 $\theta_s = 2' 14' 59.4''$
 $L_s = 300.00'$
 $LT = 200.02'$
 $ST = 100.01'$

-Y17RPB-
 Pls Sta 523+30.69 $\Delta = 35' 01' 11.1''$ (LT)
 $D = 1' 29' 59.6''$
 $L = 2,334.82'$
 $T = 1,205.17'$
 $R = 3,820.00'$
 $Vd = 70$ MPH
 $SUPER = 6\%$

Pls Sta 535+60.37 $\theta_s = 2' 14' 59.4''$
 $L_s = 300.00'$
 $LT = 200.02'$
 $ST = 100.01'$

Pls Sta 11+82.77 $\theta_s = 2' 26' 11.1''$
 $L_s = 320.00'$
 $LT = 182.77'$
 $ST = 137.78'$

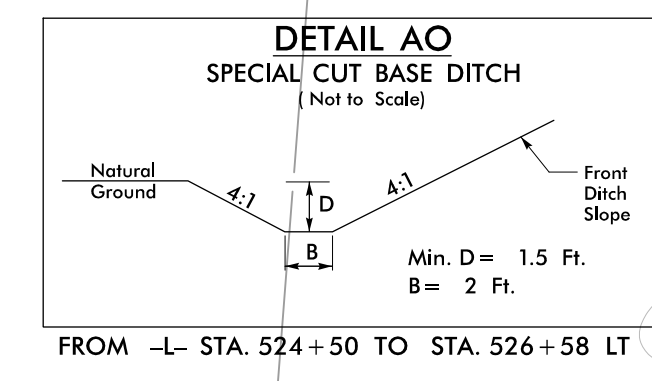
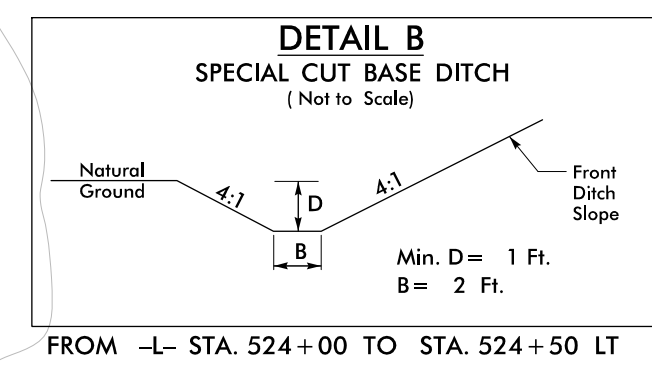
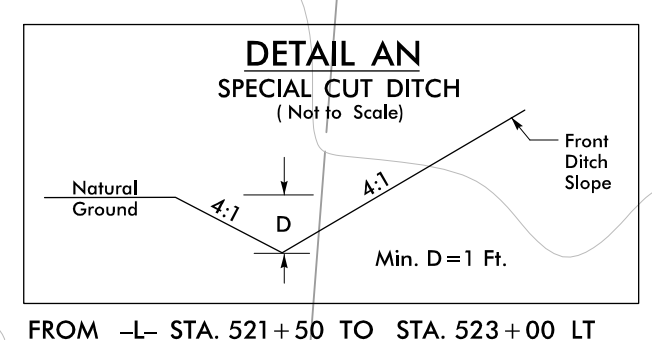
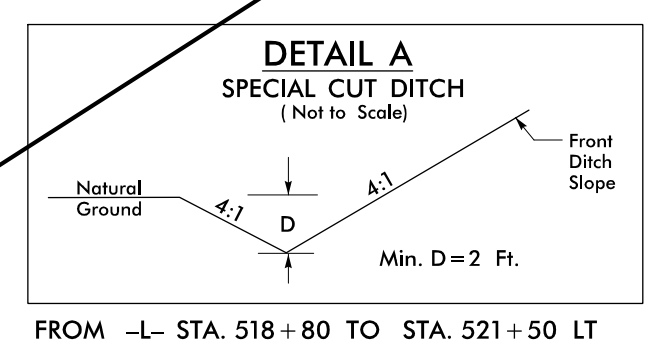
Pls Sta 16+57.95 $\Delta = 2' 54' 41.2''$ (LT)
 $D = 3' 44' 41.4''$
 $L = 665.22'$
 $T = 337.95'$
 $R = 1,530.00'$
 $Vd = 60$ MPH
 $SUPER = 8\%$



24 x 96 x 3
1.5 inch Skimmer
with 1.375 inch
Orifice Diameter
8 ft. weir
ID 4.1

BEGIN TIP PROJECT U-2519BB
END TIP PROJECT U-2519BA
-L- POC STA. 519+00.00

25 x 50 x 3
1.5 inch Skimmer
with 1 inch
Orifice Diameter
4 ft. weir
ID 4.2

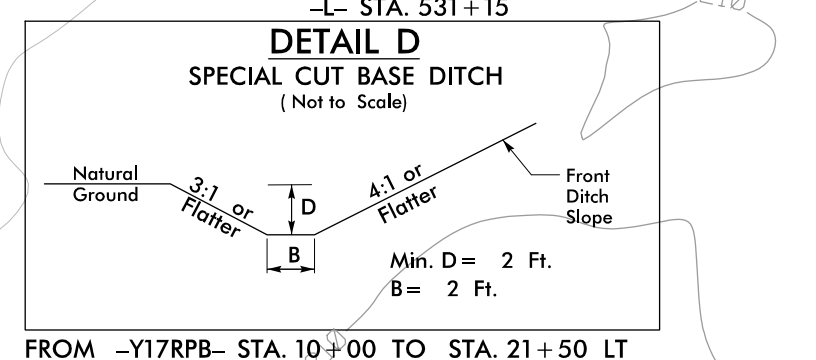


DETAIL AH
FALSE SUMP
(Not to Scale)

Ditch Grade	L	Ditch Grade	L
0.0% To 2.0%	20'	Over 4.0% To 6.0%	40'
Over 2.0% To 4.0%	30'	Over 6.0%	50'

-L- STA. 520+65
 -L- STA. 527+15
 -L- STA. 531+15

24 x 72 x 3
1.5 inch Skimmer
with 1.25 inch
Orifice Diameter
6 ft. weir
ID 4.3



70 x 35 x 3
1.5 inch Skimmer
with 1.375 inch
Orifice Diameter
8 ft. weir
ID 4.4

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

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 4