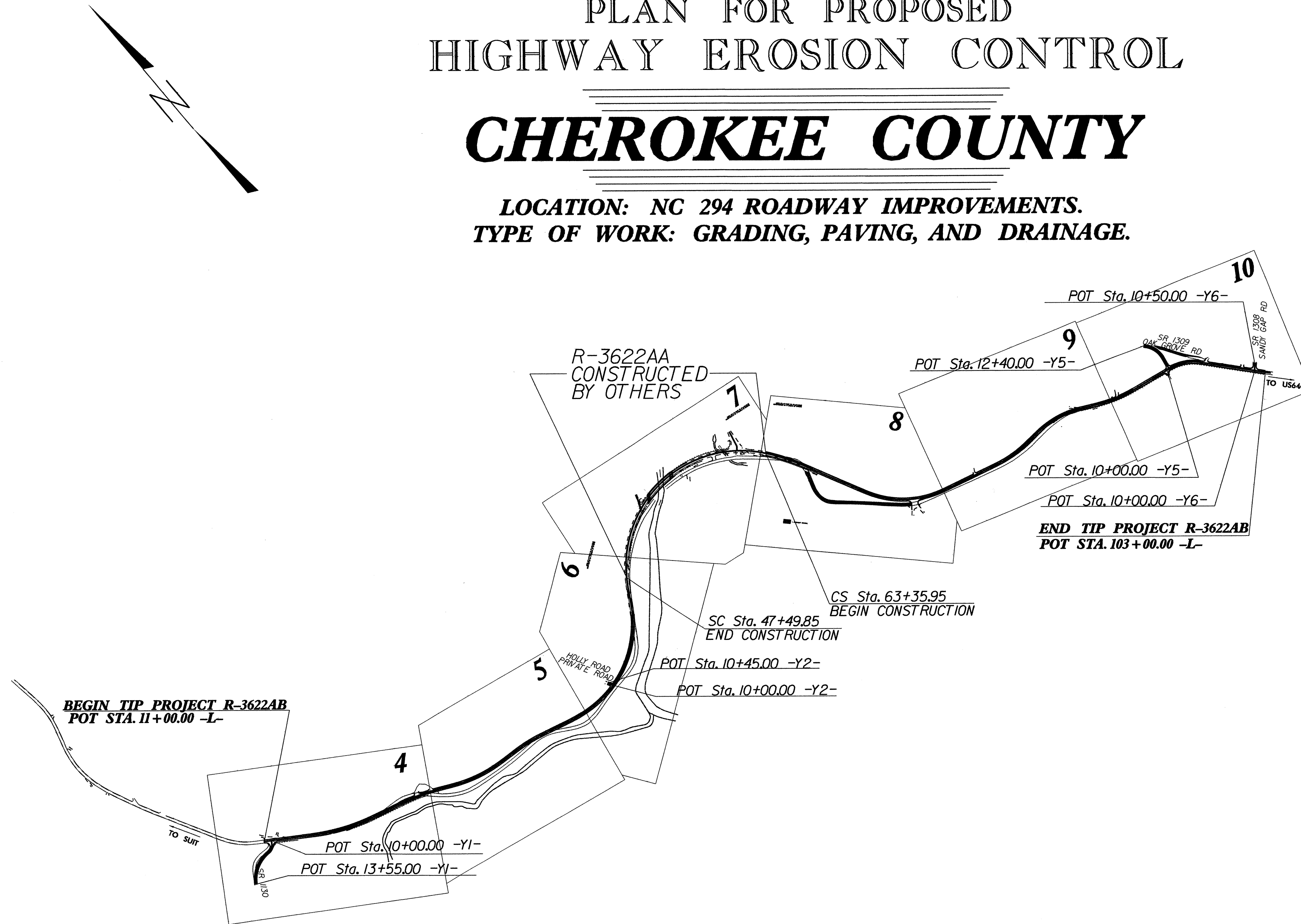


TIP PROJECT: R-3622AB

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

**LOCATION: NC 294 ROADWAY IMPROVEMENTS.
 TYPE OF WORK: GRADING, PAVING, AND DRAINAGE.**



STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-3622AB	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	

EROSION AND SEDIMENT CONTROL MEASURES

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

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

GRAPHIC SCALE

0

PLANS

0

PROFILE (HORIZONTAL)

0

PROFILE (VERTICAL)

ROADSIDE ENVIRONMENTAL UNIT
 DIVISION OF HIGHWAYS
 STATE OF NORTH CAROLINA

Prepared in the Office of:
ROADSIDE ENVIRONMENTAL UNIT
 1 South Wilmington St.
 Raleigh, NC 27611
2006 STANDARD SPECIFICATIONS

Roadway Standard Drawings

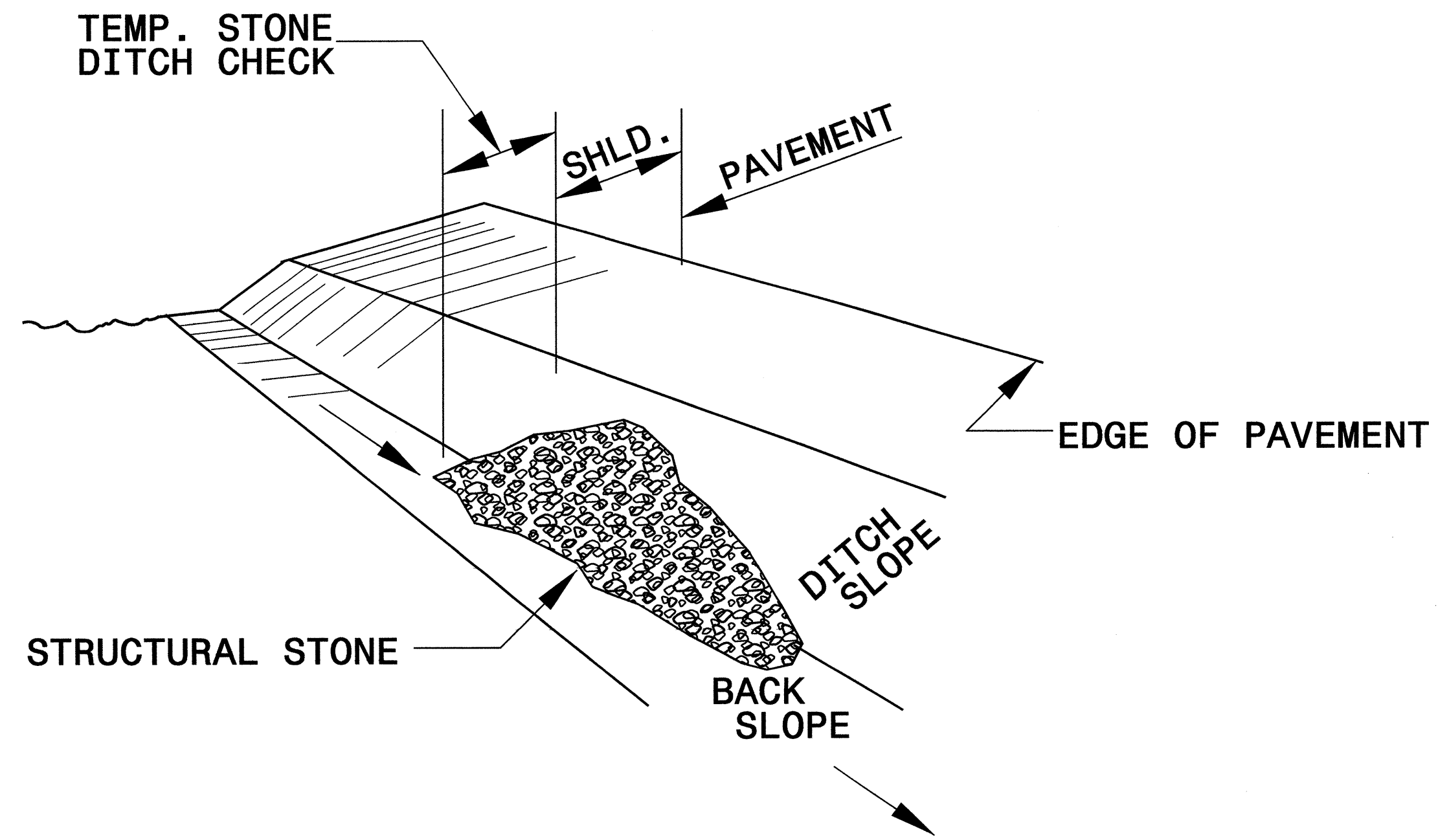
The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated July 18, 2006 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

1605.01 Temporary Silt Fence	1630.06 Special Stilling Basin
1606.01 Special Sediment Control Fence	1632.02 Rock Inlet Sediment Trap Type B
1607.01 Gravel Construction Entrance	1632.03 Rock Inlet Sediment Trap Type C
1622.01 Temporary Berms and Slope Drains	1633.01 Temporary Rock Silt Check Type A
1630.03 Temporary Silt Ditch	1634.01 Temporary Rock Sediment Dam Type A
1630.05 Temporary Diversion	1634.02 Temporary Rock Sediment Dam Type B
	1635.01 Rock Pipe Inlet Sediment Trap Type A
	1635.02 Rock Pipe Inlet Sediment Trap Type B

RA:ENV:R3622AB-EC-dan.ttle.dgn
 12/28/06 10:40 AM
 jennifera@ncdot.gov

PROJECT REFERENCE NO. R-3622AB	SHEET NO. EC-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TEMPORARY ROCK SILT CHECK TYPE 'B' DETAIL

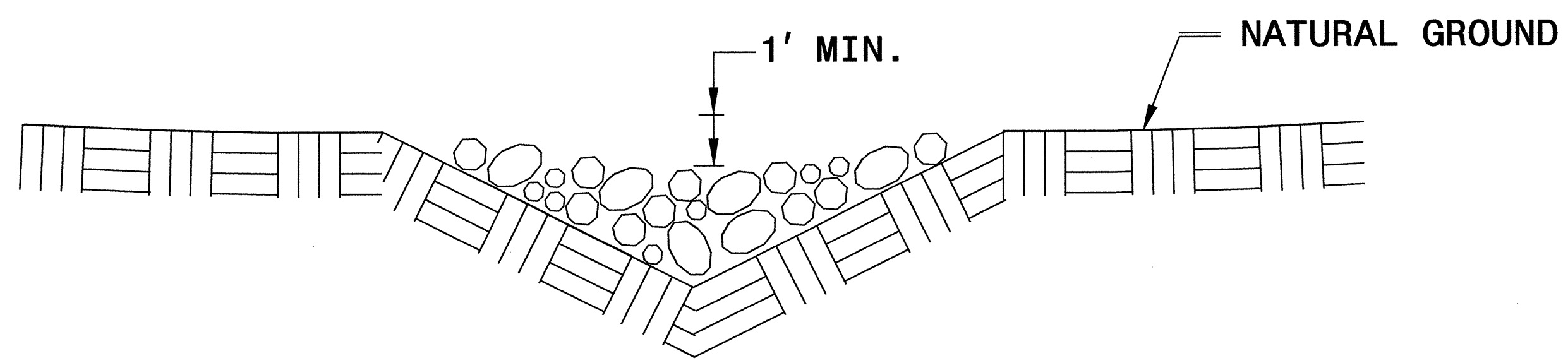


ISOMETRIC VIEW

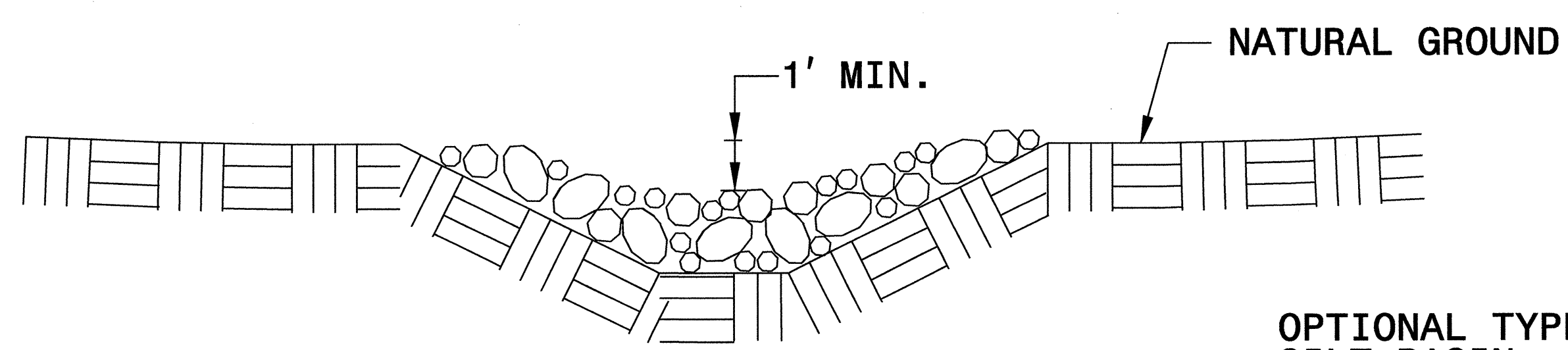
NOTES:

USE CLASS 'B' EROSION CONTROL STONE FOR STRUCTURAL STONE.

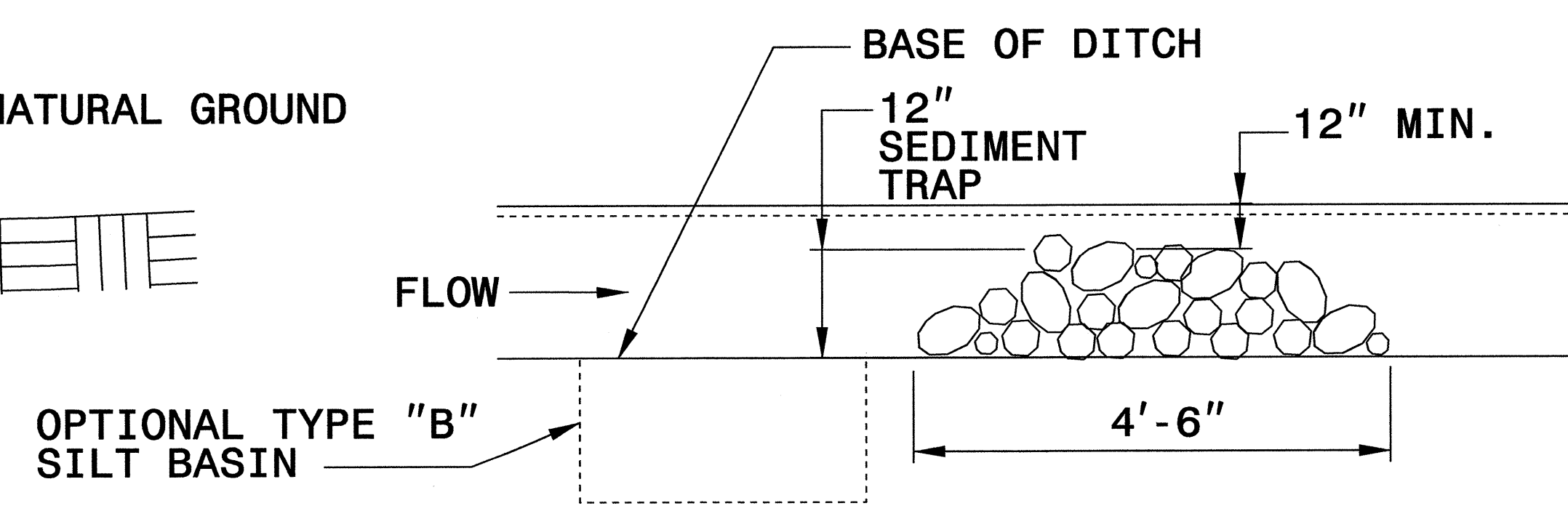
THE ENGINEER MAY DIRECT THE OPTION OF CLASS "A" STONE FOR SITES HAVING LESS THAN ONE (1) ACRE DRAINAGE AREA AND A DITCH GRADE LESS THAN 3%.



CROSS SECTION VEE DITCH



CROSS SECTION TRAPEZOIDAL DITCH

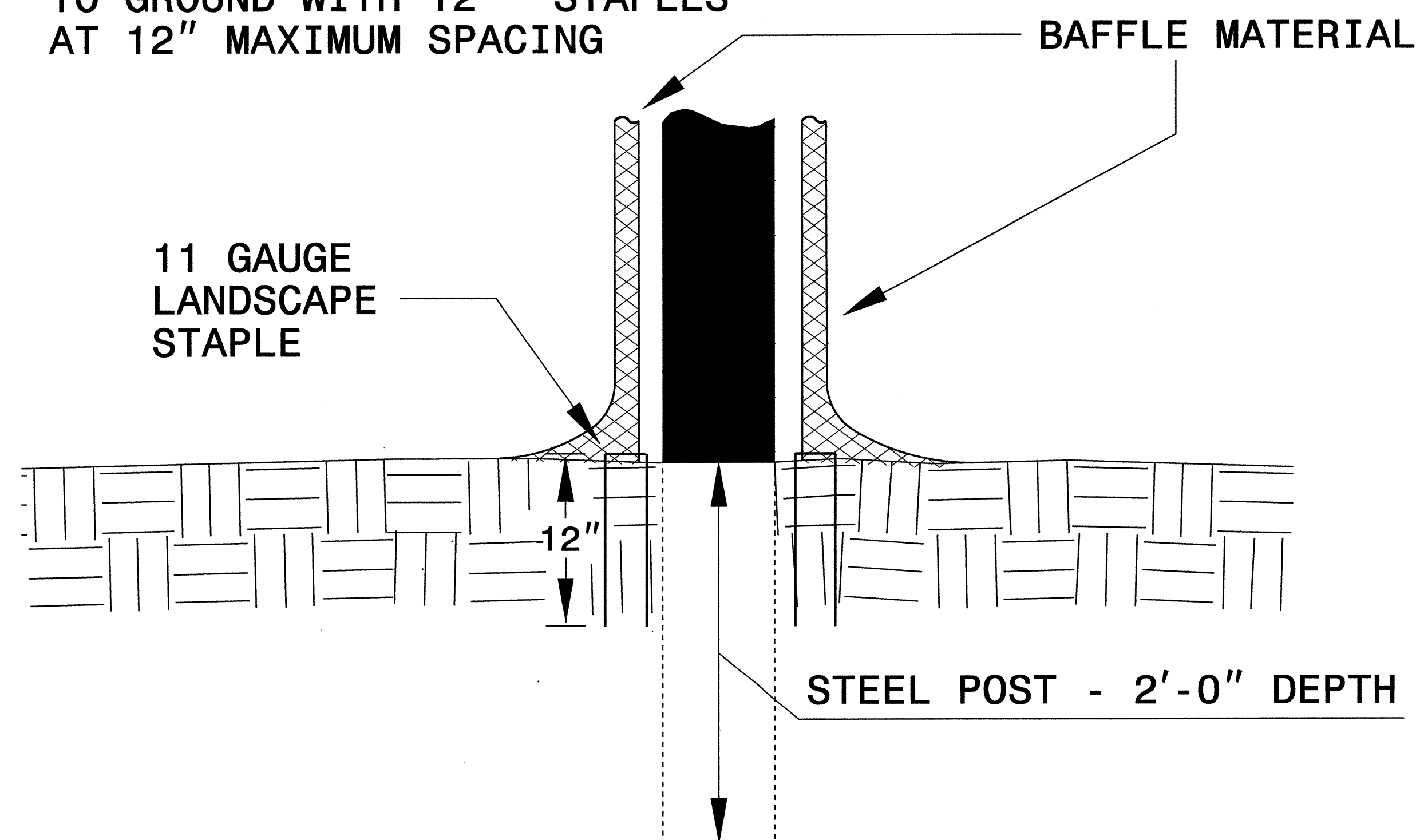
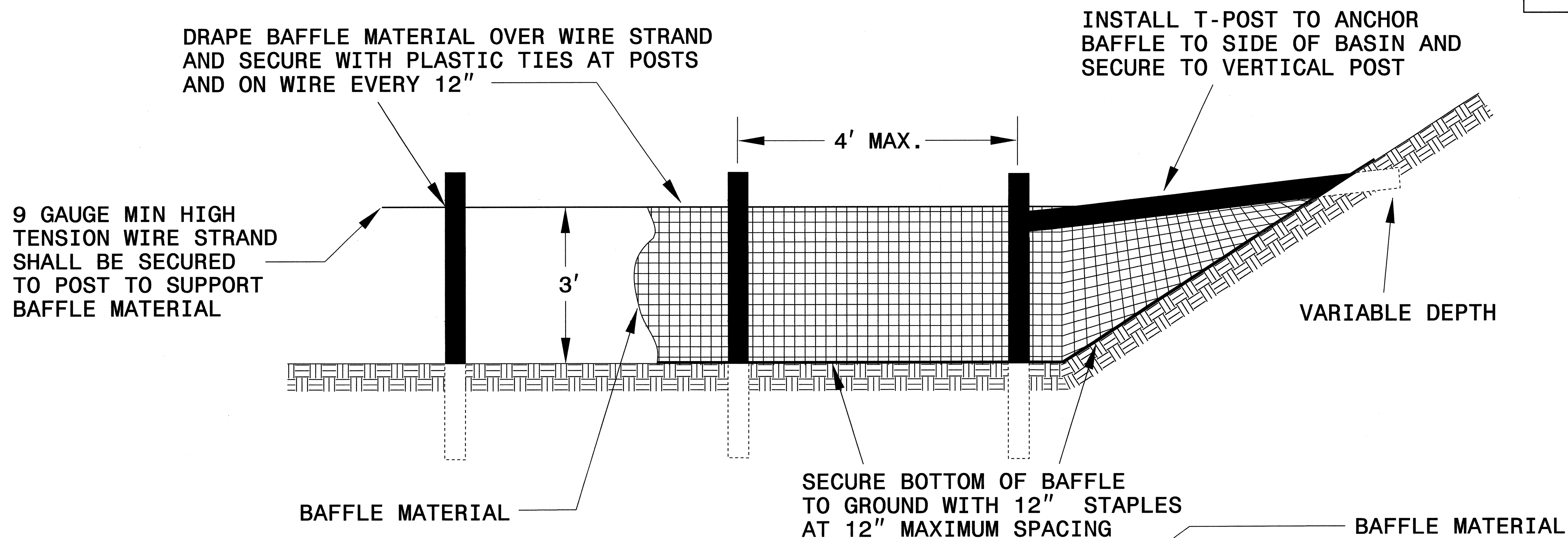


ELEVATION VIEW

OPTIONAL TYPE "B" SILT BASIN

PROJECT REFERENCE NO. R-3622AB	SHEET NO. EC-2A
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

COIR FIBER BAFFLE DETAIL



NOTES:

1. INSTALL THREE (3) COIR FIBER BAFFLES IN SILT BASINS AND SEDIMENT DAMS AT DRAINAGE OUTLETS WITH A SPACING OF $\frac{1}{4}$ THE BASIN LENGTH.

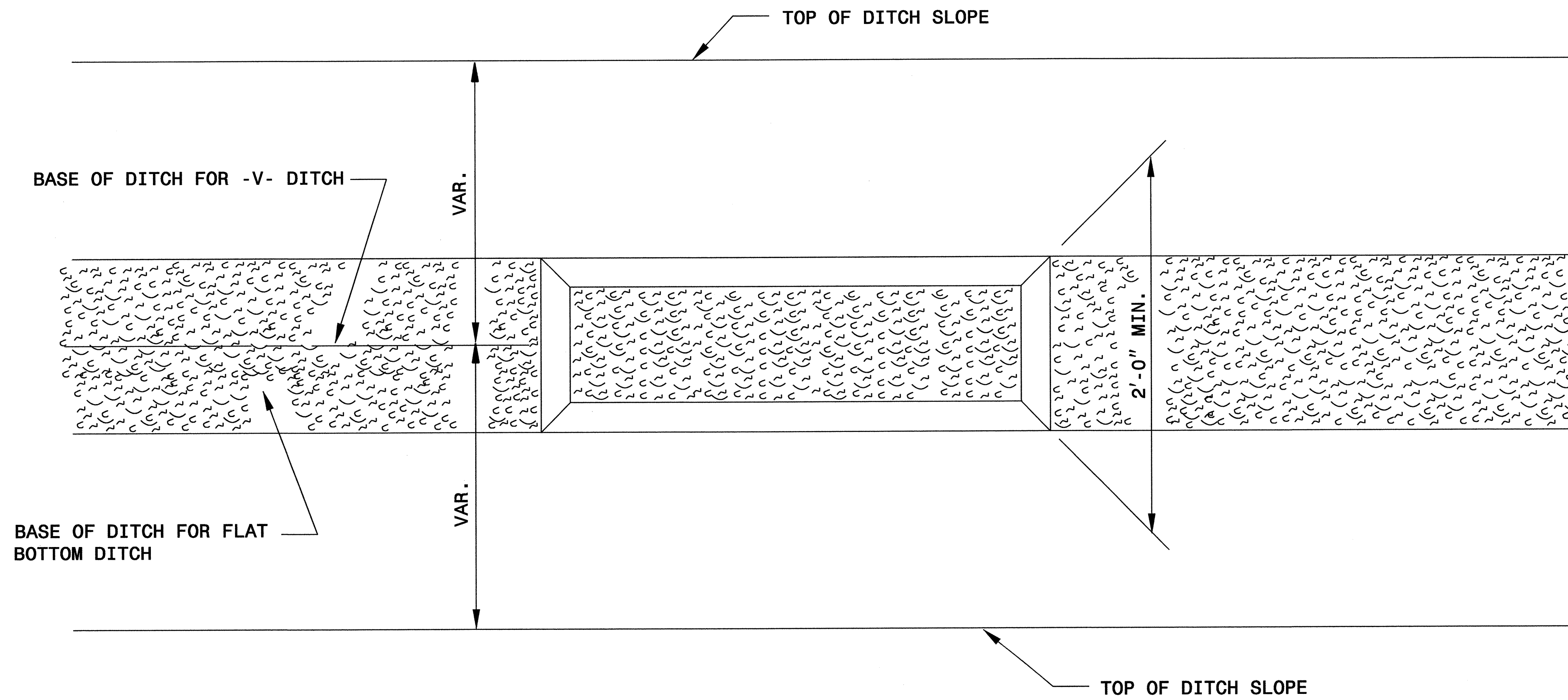
2. TWO (2) COIR FIBER BAFFLES CAN BE INSTALLED IN SILT BASINS AND DAMS LESS THAN 20 FT. IN LENGTH WITH A SPACING OF $\frac{1}{3}$ THE BASIN LENGTH.

3. TOP HEIGHT OF COIR FIBER BAFFLES SHALL NOT BE BELOW BASE OF EMERGENCY SPILLWAY ELEVATION.

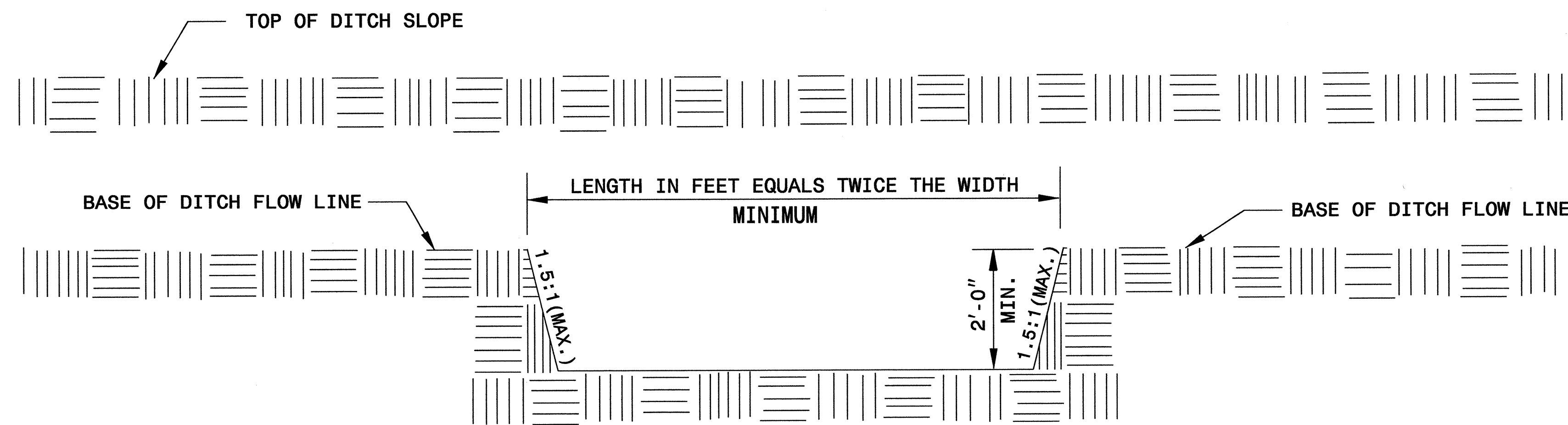
BAFFLE MATERIAL SHALL BE SECURED TO THE BOTTOM AND SIDES OF BASIN USING 12" LANDSCAPE STAPLES

PROJECT REFERENCE NO. R-3622AB	SHEET NO. EC-2B
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SILT BASIN 'B' DETAIL



PLAN



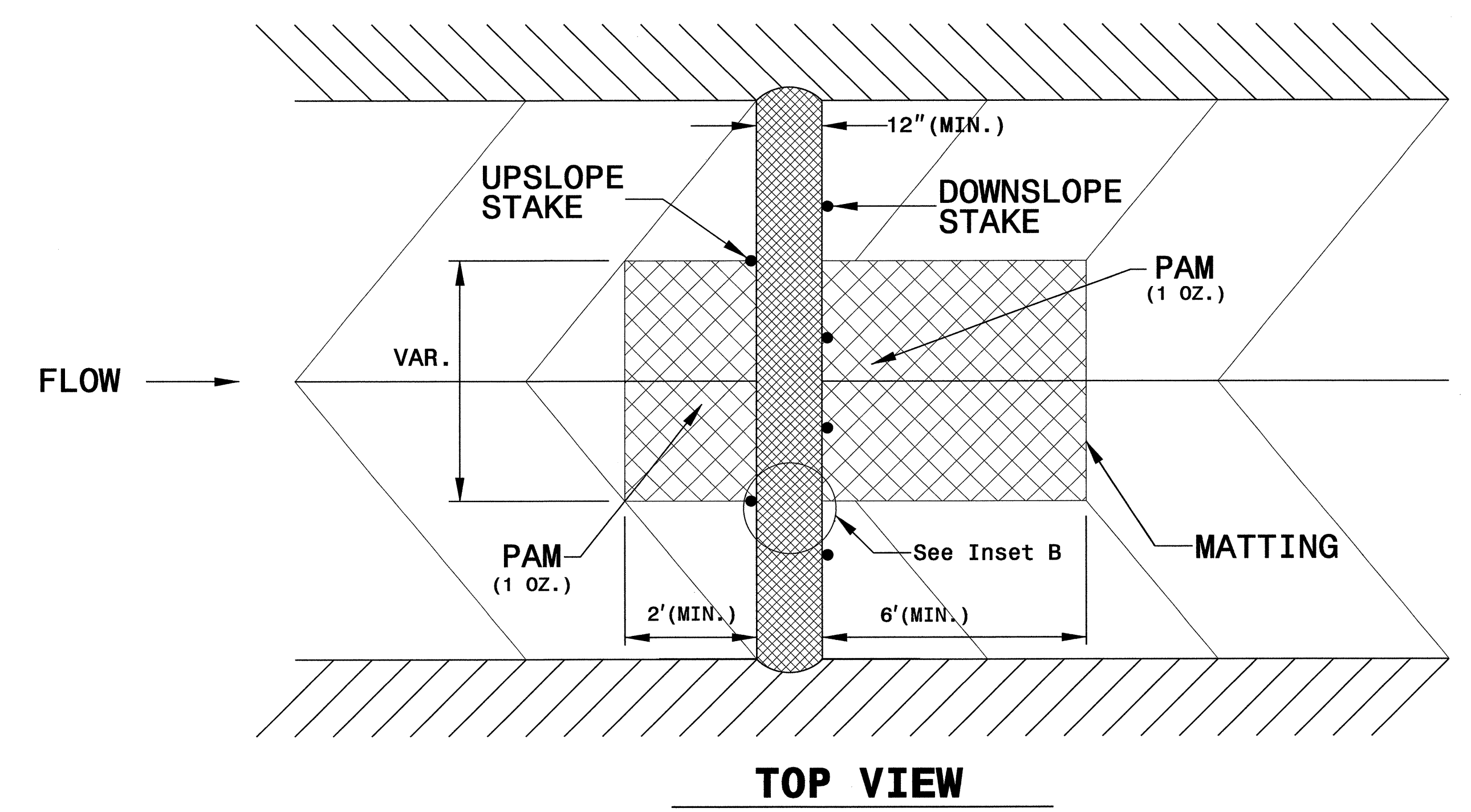
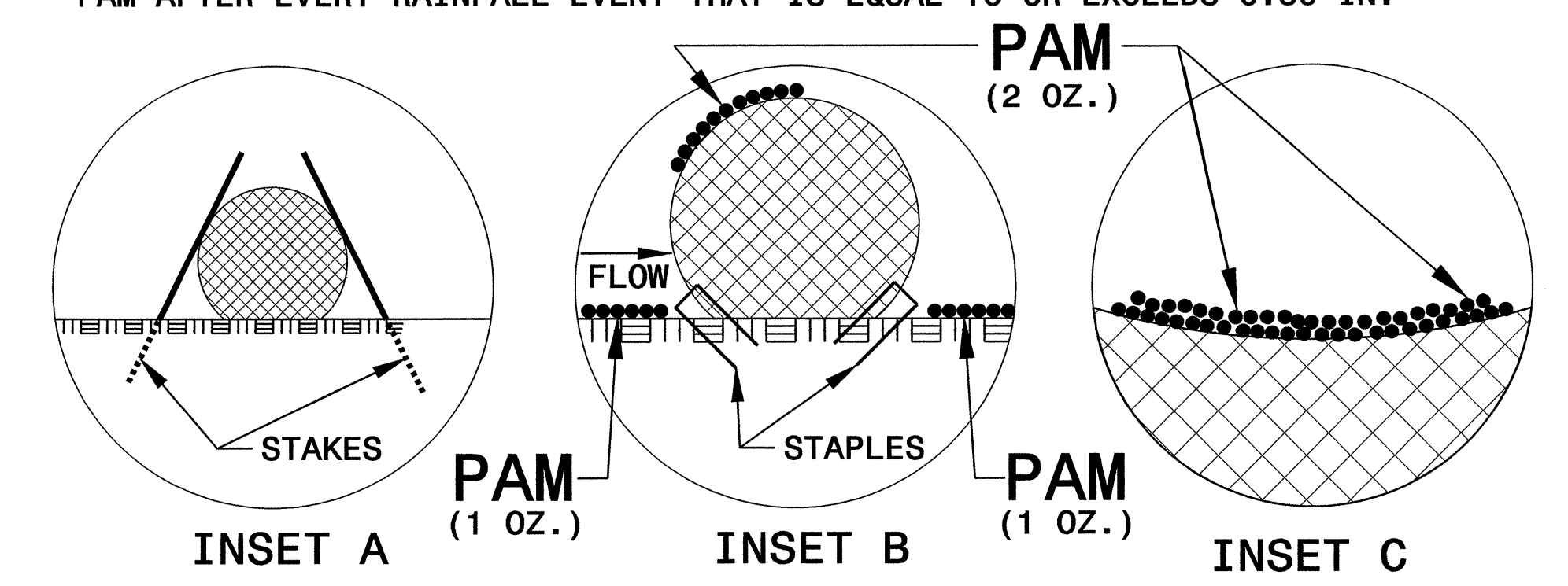
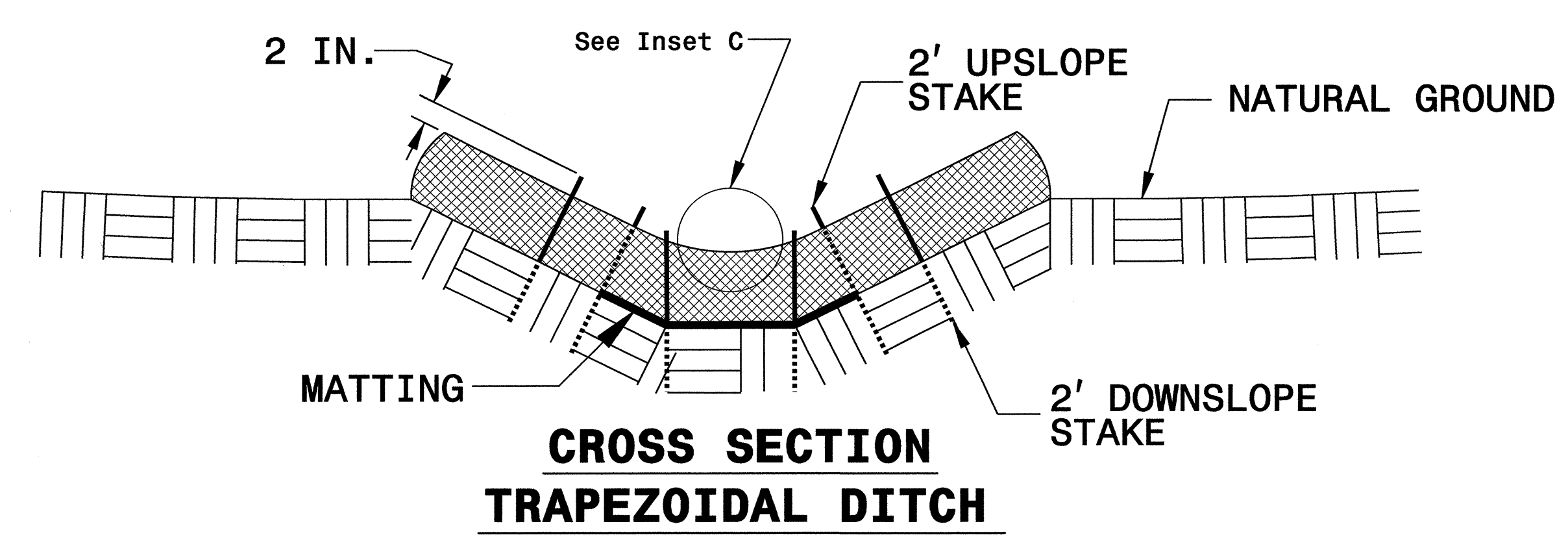
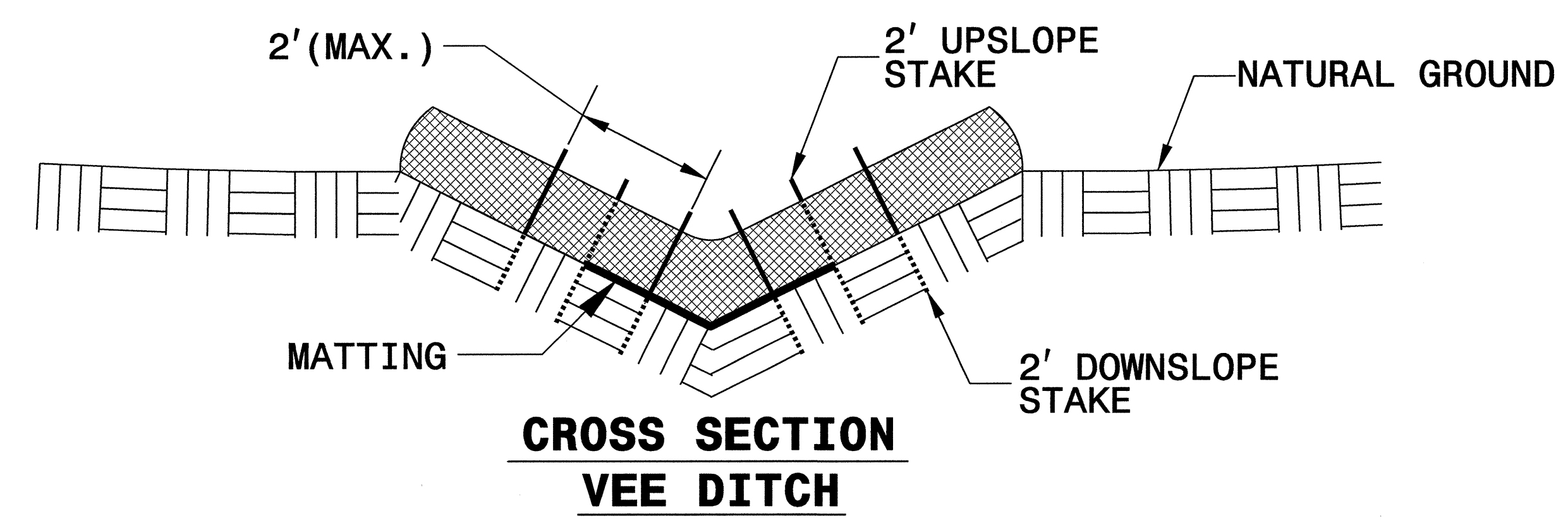
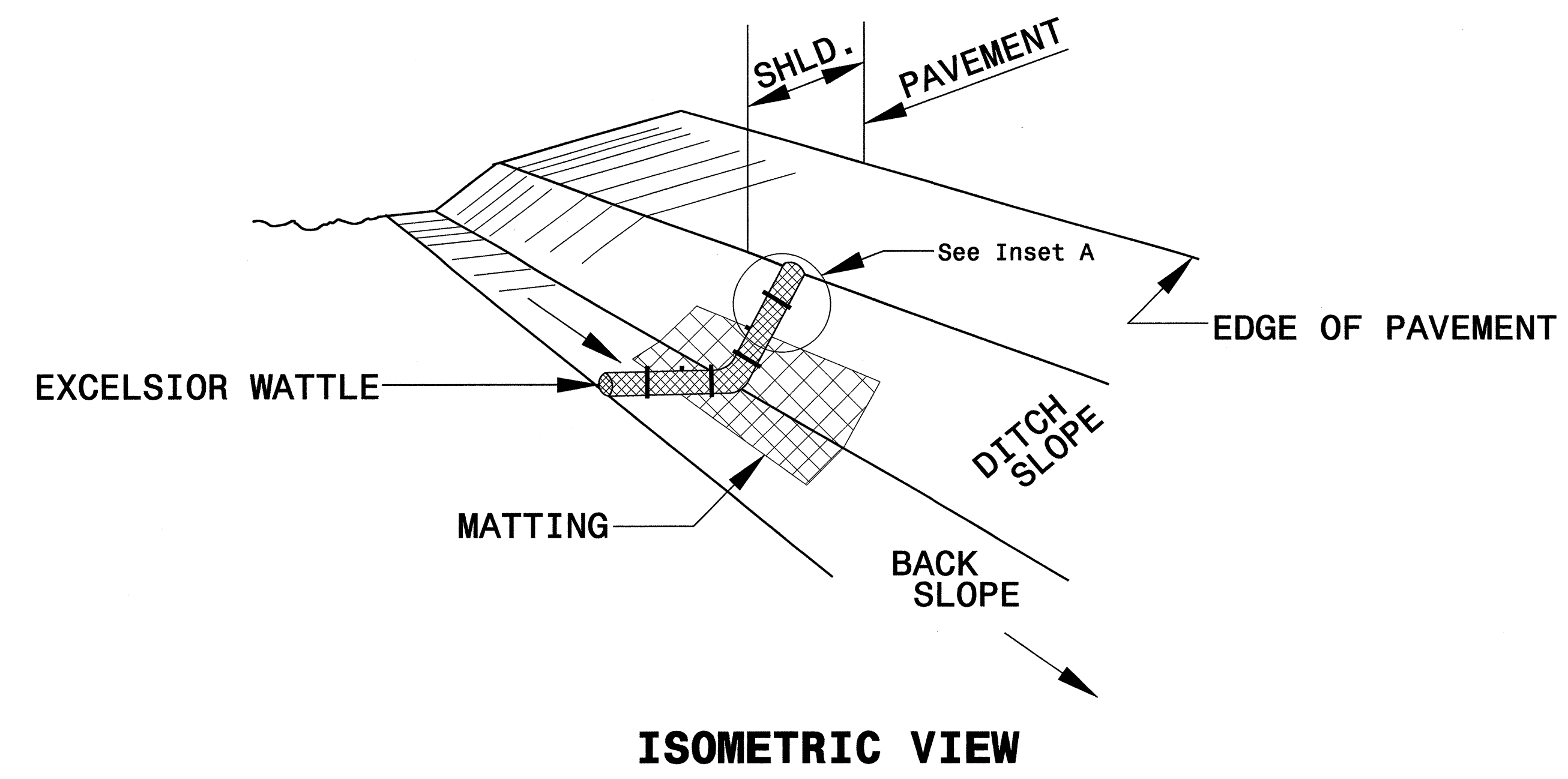
ELEVATION

PROJECT REFERENCE NO. <i>R-3622AB</i>	SHEET NO. <i>EC-2C</i>
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL

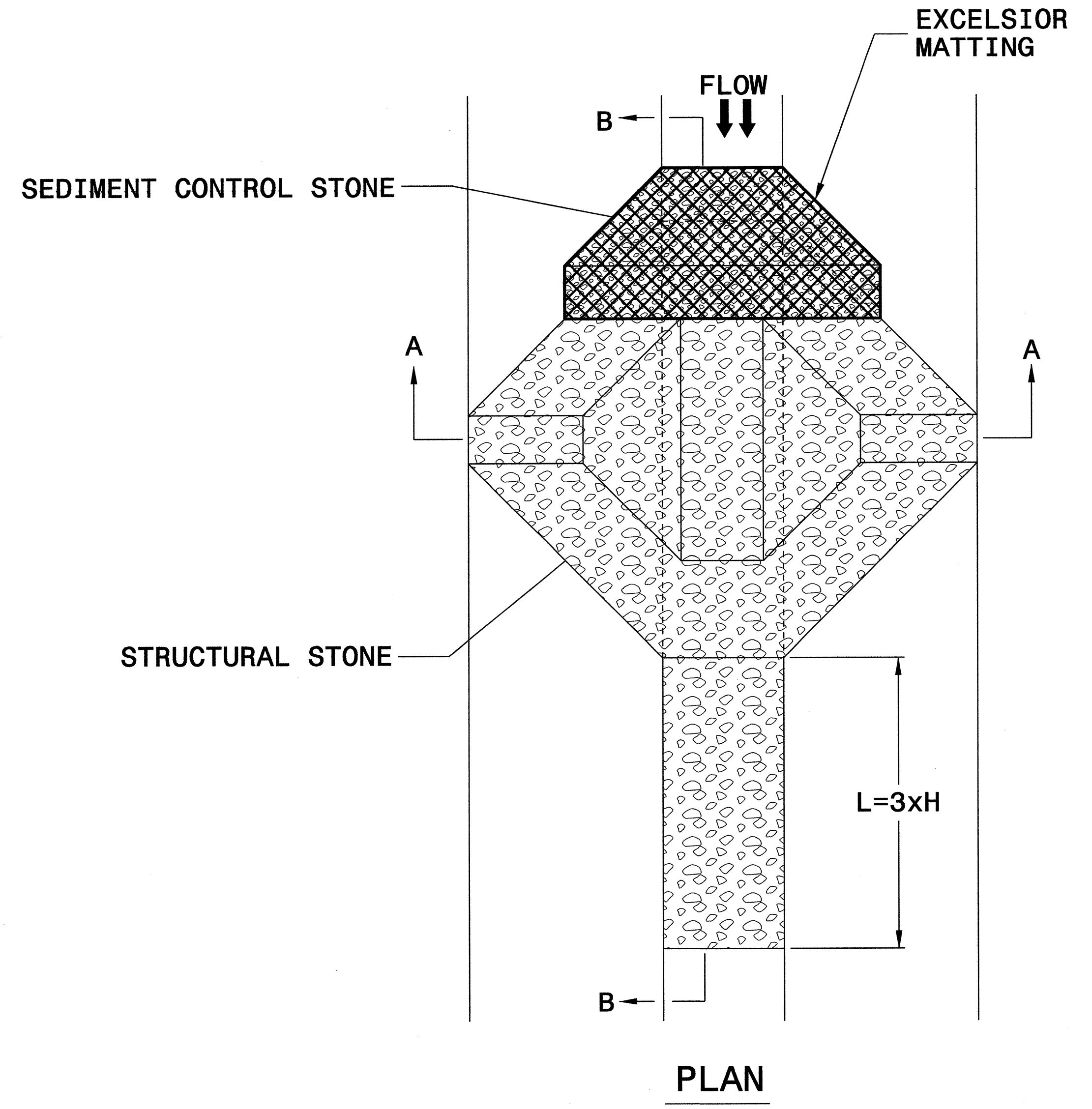
NOTES:

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



PROJECT REFERENCE NO. R-3622AB	SHEET NO. EC-2D
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

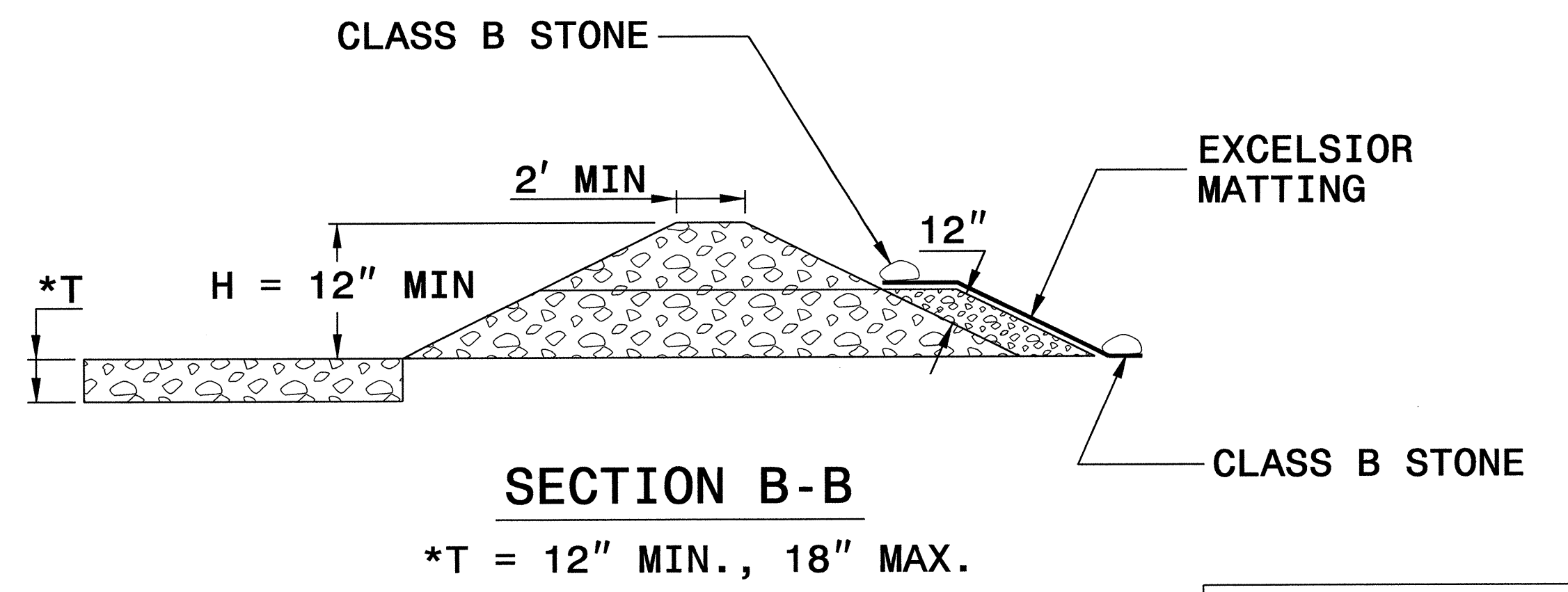
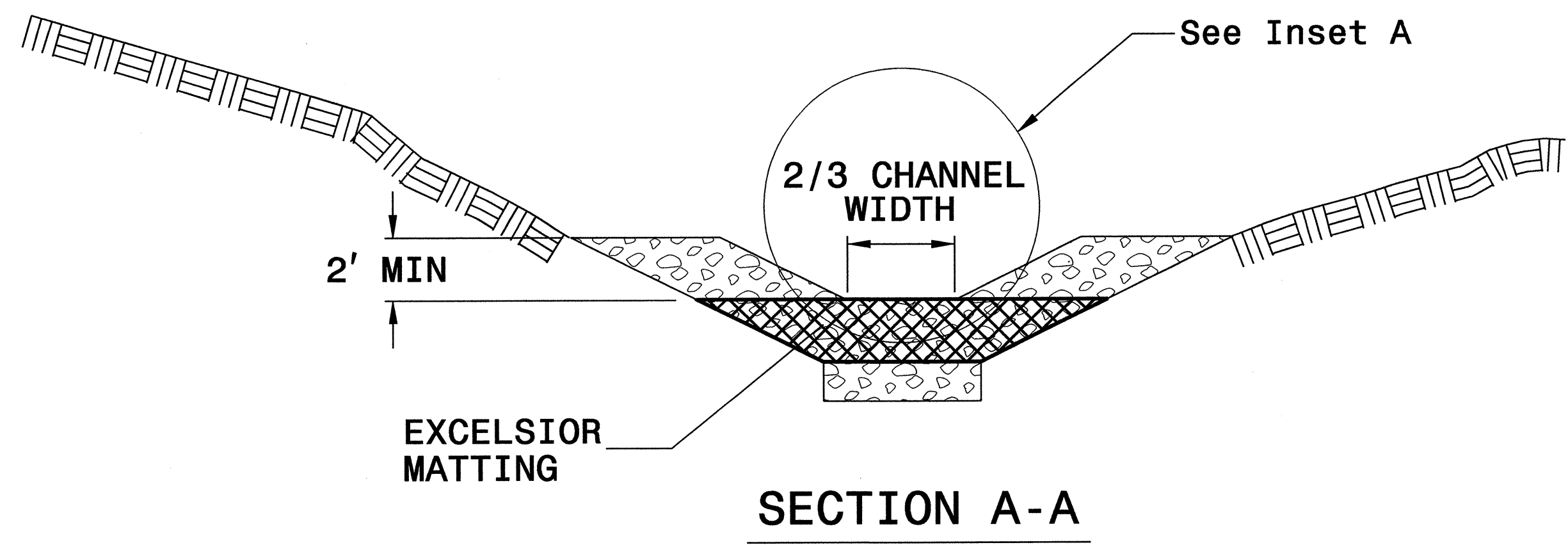
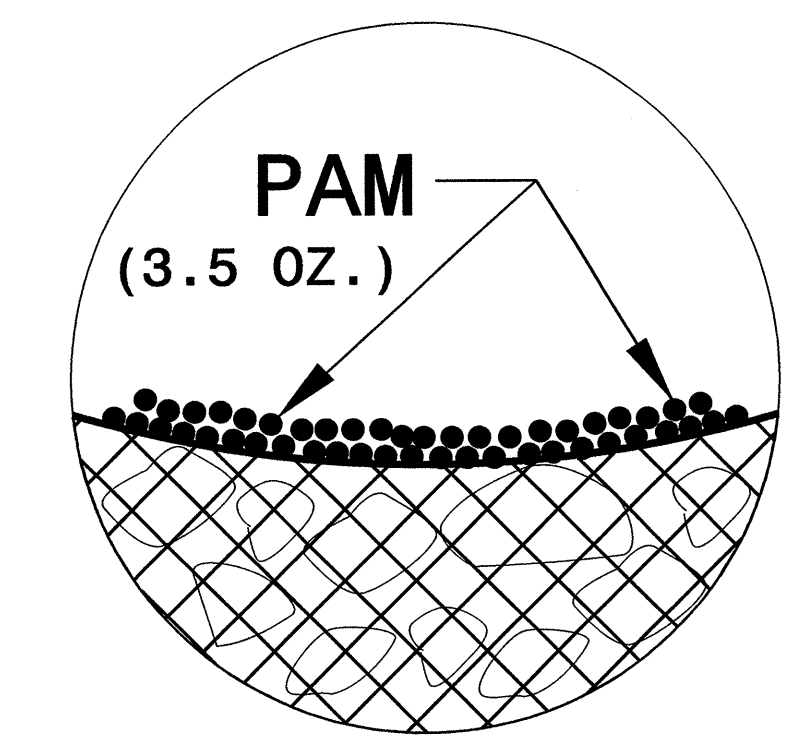


NOTES

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.

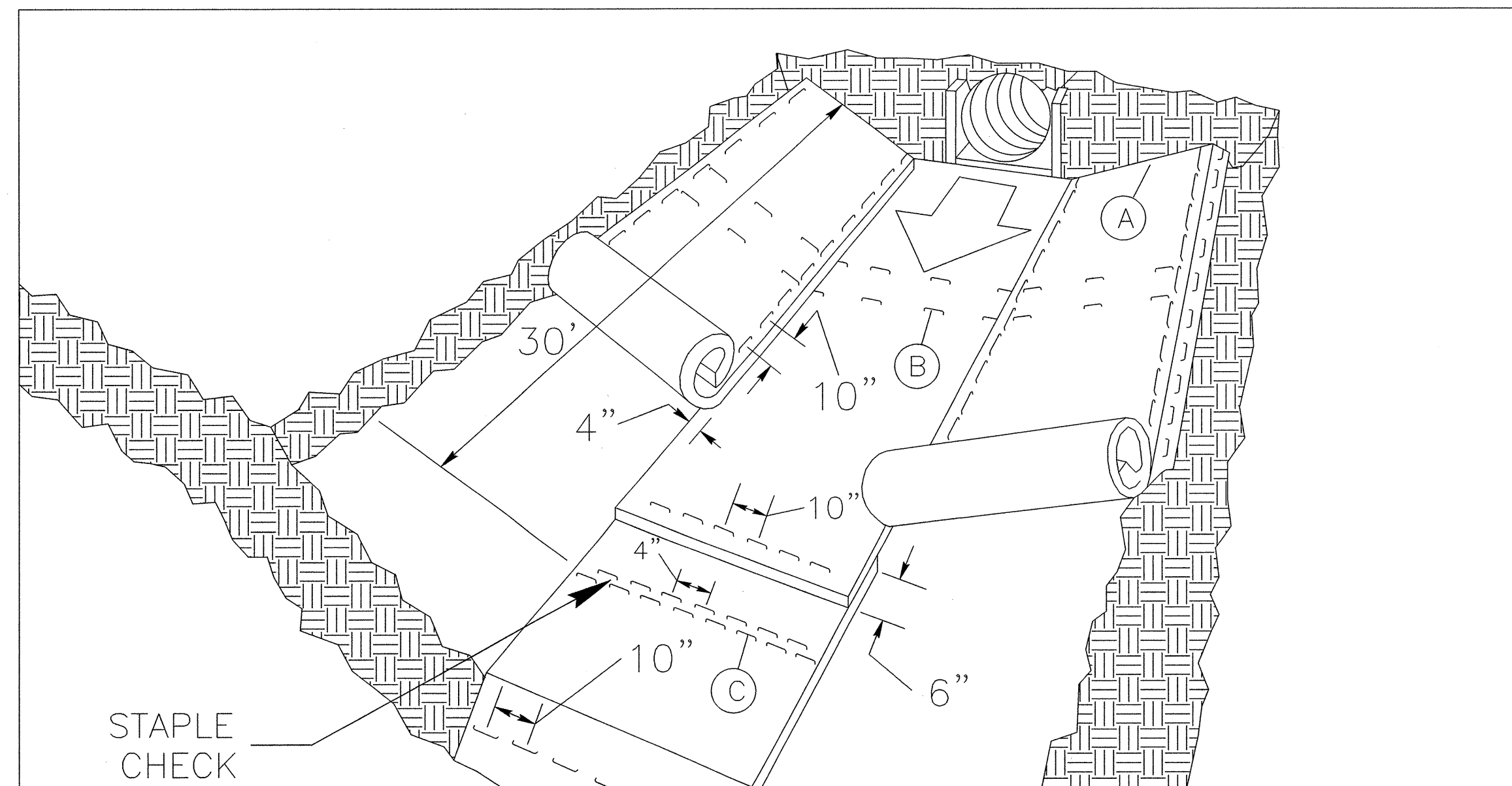
INITIALLY APPLY 3.5 OUNCES OF POLYACRYLAMIDE (PAM) TO TOP OF MATTING SECTION AND AFTER EVERY RAINFALL EVENT THAT EQUALS OR EXCEEDS 0.50 INCHES.



NOT TO SCALE

PROJECT REFERENCE NO. R-3622AB	SHEET NO. EC-2E
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

MATTING INSTALLATION DETAIL



MATTING IN DITCHES

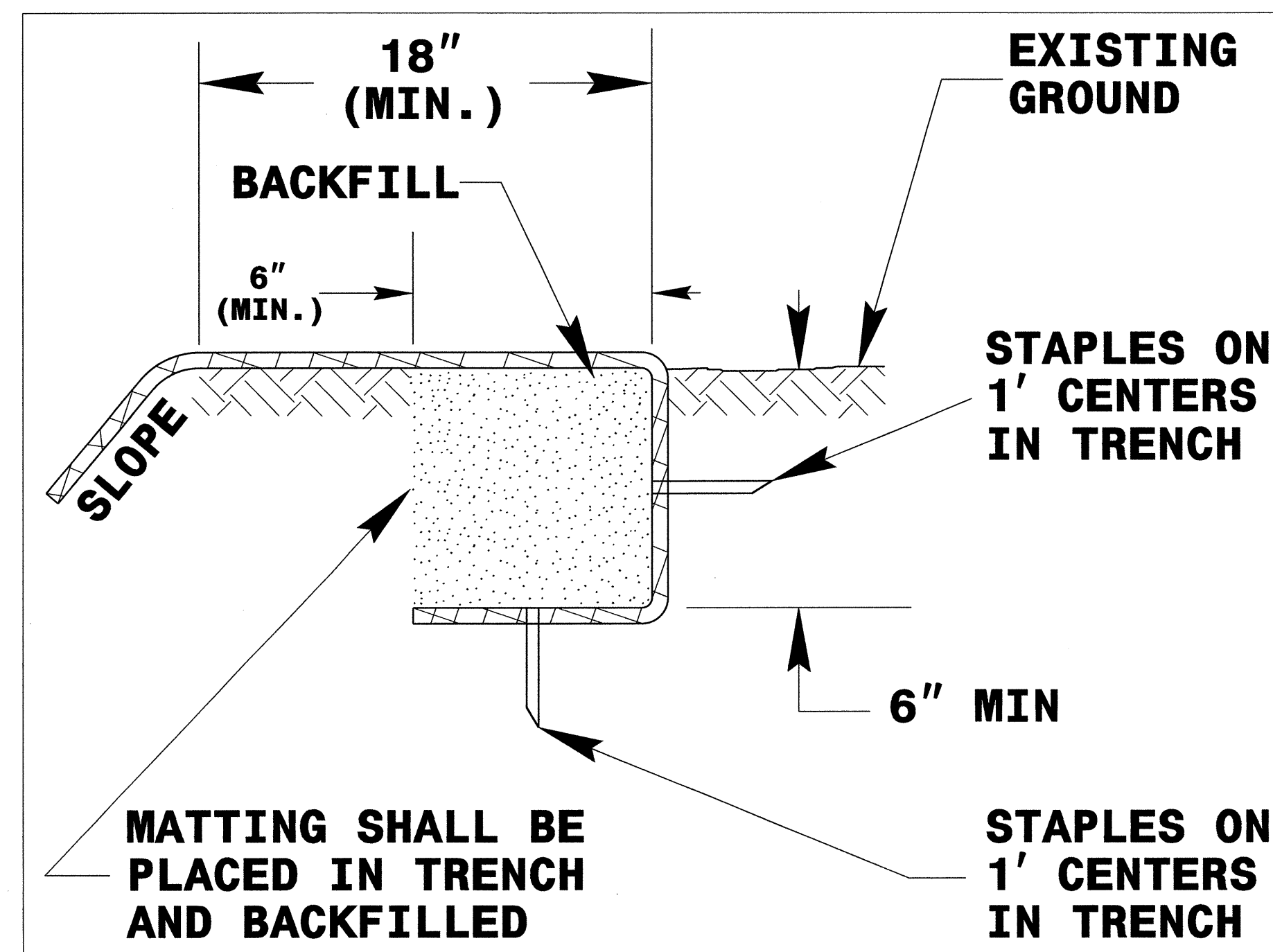
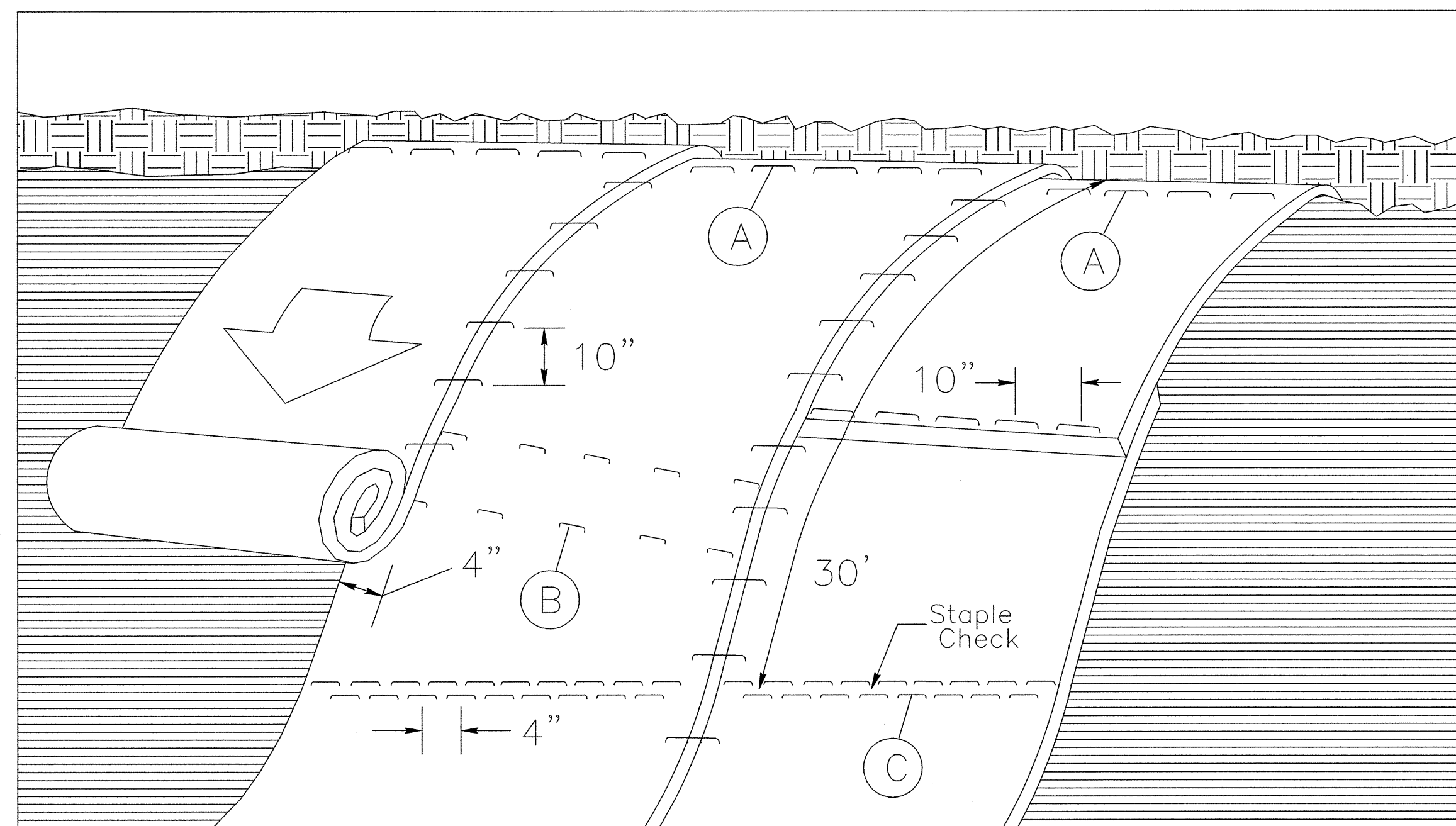


DIAGRAM (A)



MATTING ON SLOPES

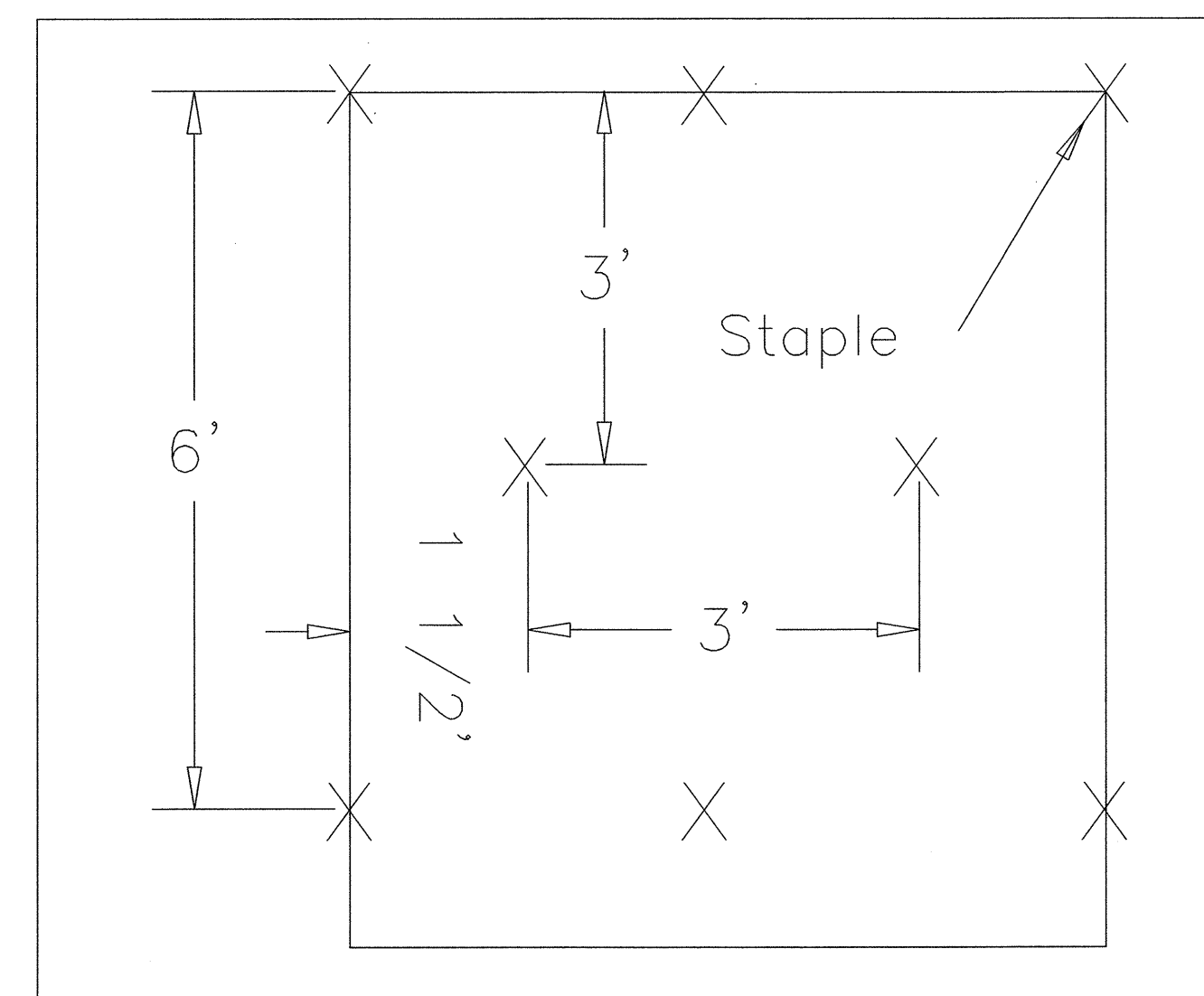


DIAGRAM (B)

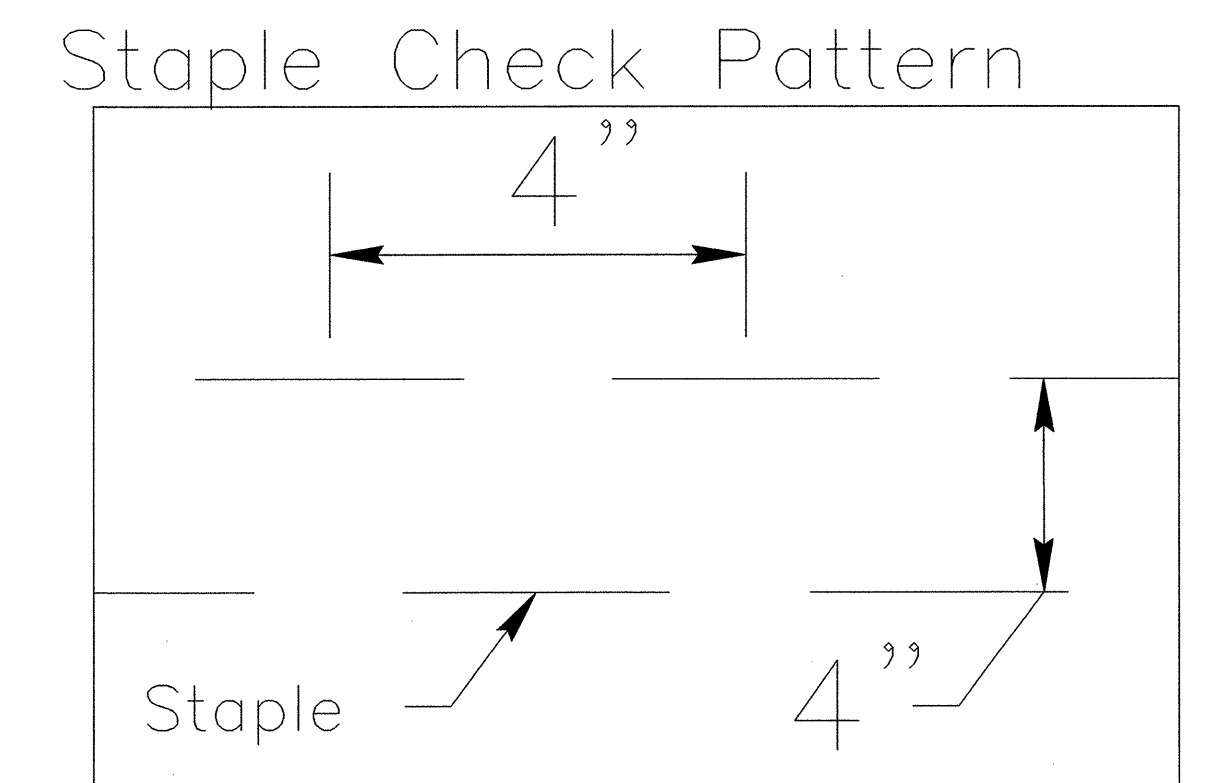


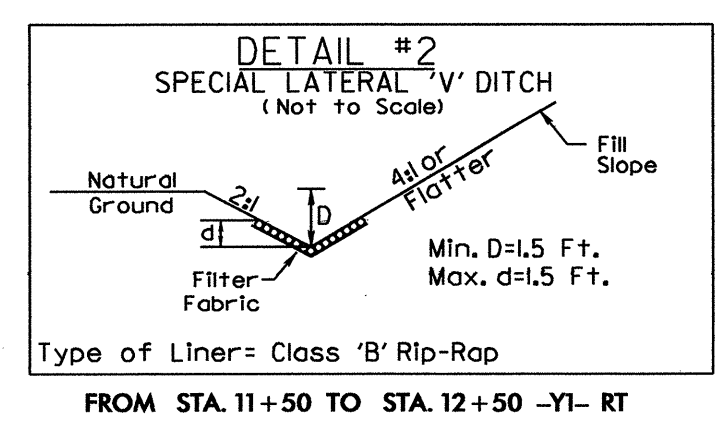
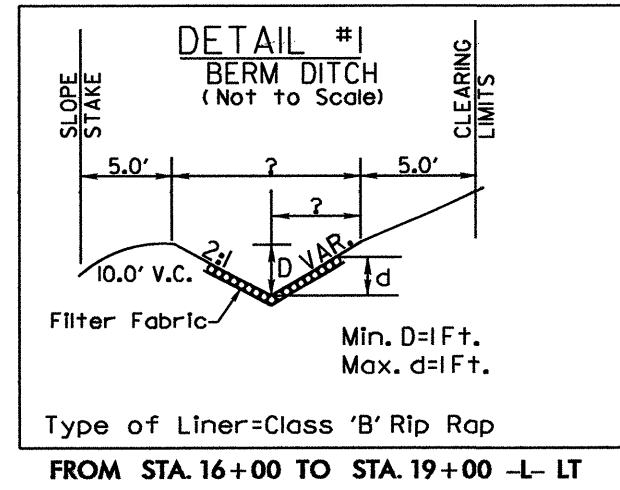
DIAGRAM (C)

NOTES:

THIS DETAIL APPLIES TO STRAW, EXCELSIOR, AND PERMANENT SOIL REINFORCEMENT MAT (PSRM) INSTALLATION.

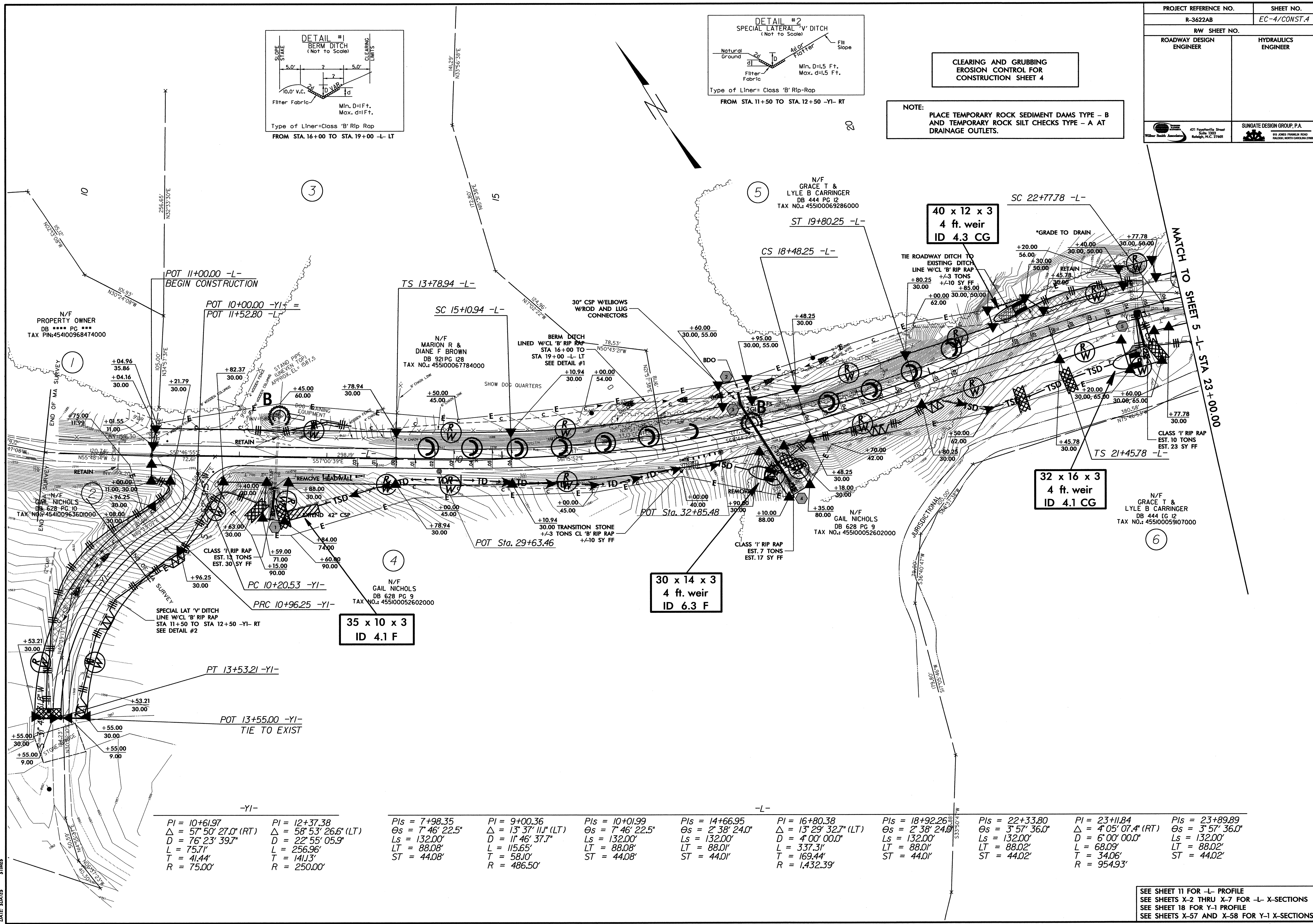
STAPLES SHALL BE NO. 11 GAUGE STEEL WIRE FORMED INTO A "U" SHAPE WITH A MINIMUM THROAT WIDTH OF 1 INCH AND NOT LESS THAN 6 INCHES IN LENGTH.

NOT TO SCALE



CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 4

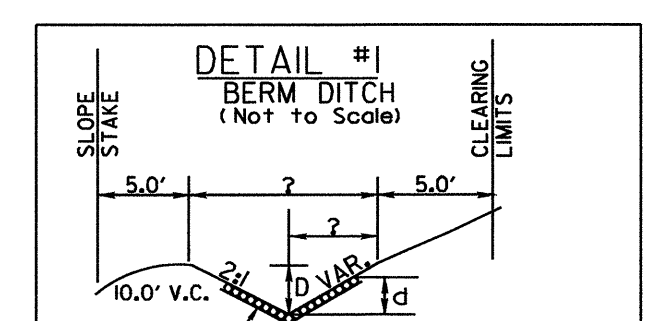
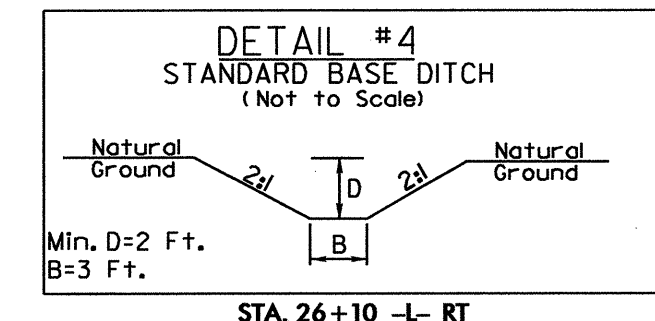
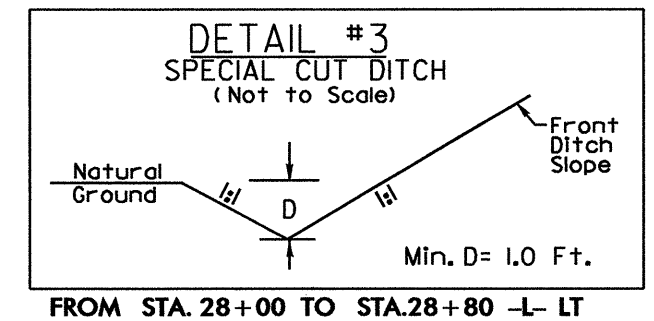
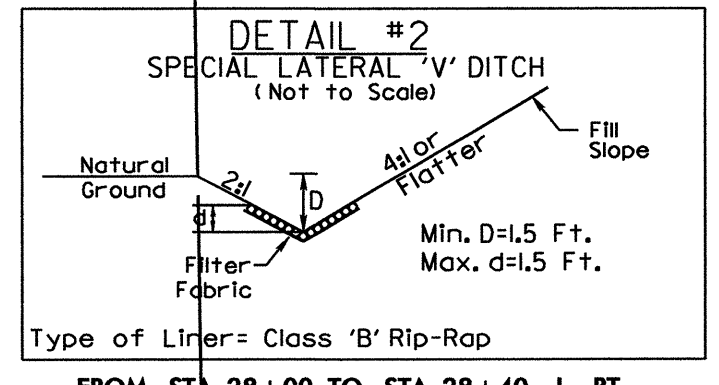
NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B
AND TEMPORARY ROCK SILT CHECKS TYPE - A AT
DRAINAGE OUTLETS.



$PI = 10+61.97$ $\Delta = 57^{\circ} 50' 27.0''$ (RT) $D = 76' 23' 39.7''$ $L = 75.71'$ $T = 41.44'$ $R = 75.00'$	$PI = 12+37.38$ $\Delta = 58^{\circ} 53' 26.6''$ (LT) $D = 22' 55' 05.9''$ $L = 256.96'$ $T = 141.13'$ $R = 250.00'$	$PIs = 7+98.35$ $\Theta_s = 7^{\circ} 46' 22.5''$ $Ls = 132.00'$ $LT = 88.08'$ $ST = 44.08'$	$PI = 9+00.36$ $\Delta = 13^{\circ} 37' 11.1''$ (LT) $D = 11' 46' 37.7''$ $L = 115.65'$ $T = 58.10'$ $R = 486.50'$	$PIs = 10+01.99$ $\Theta_s = 7^{\circ} 46' 22.5''$ $Ls = 132.00'$ $LT = 88.08'$ $ST = 44.08'$	$PIs = 14+66.95$ $\Theta_s = 2^{\circ} 38' 24.0''$ $Ls = 132.00'$ $LT = 88.01'$ $ST = 44.01'$	$PI = 16+80.38$ $\Delta = 13^{\circ} 29' 32.7''$ (LT) $D = 4' 00' 00.0''$ $L = 337.31'$ $T = 169.44'$ $R = 1,432.39'$	$PIs = 18+92.26$ $\Theta_s = 2^{\circ} 38' 24.0''$ $Ls = 132.00'$ $LT = 88.01'$ $ST = 44.01'$	$PIs = 22+33.80$ $\Theta_s = 3^{\circ} 57' 36.0''$ $Ls = 132.00'$ $LT = 88.02'$ $ST = 44.02'$	$PI = 23+11.84$ $\Delta = 4^{\circ} 05' 07.4''$ (RT) $D = 6' 00' 00.0''$ $L = 68.09'$ $T = 34.06'$ $R = 954.93'$	$PIs = 23+89.89$ $\Theta_s = 3^{\circ} 57' 36.0''$ $Ls = 132.00'$ $LT = 88.02'$ $ST = 44.02'$
--	---	--	---	---	---	--	---	---	---	---

SEE SHEET 11 FOR -L- PROFILE
SEE SHEETS X-2 THRU X-7 FOR -L- X-SECTIONS
SEE SHEET 18 FOR Y-1 PROFILE
SEE SHEETS X-57 AND X-58 FOR Y-1 X-SECTIONS

FILE: SFILES
DATE: SDATES
STIMES



FROM STA. 28+00 TO STA. 28+40 -L- RT
 FROM STA. 32+80 TO STA. 33+50 -L- RT
 FROM STA. 33+50 TO STA. 34+50 -L- RT

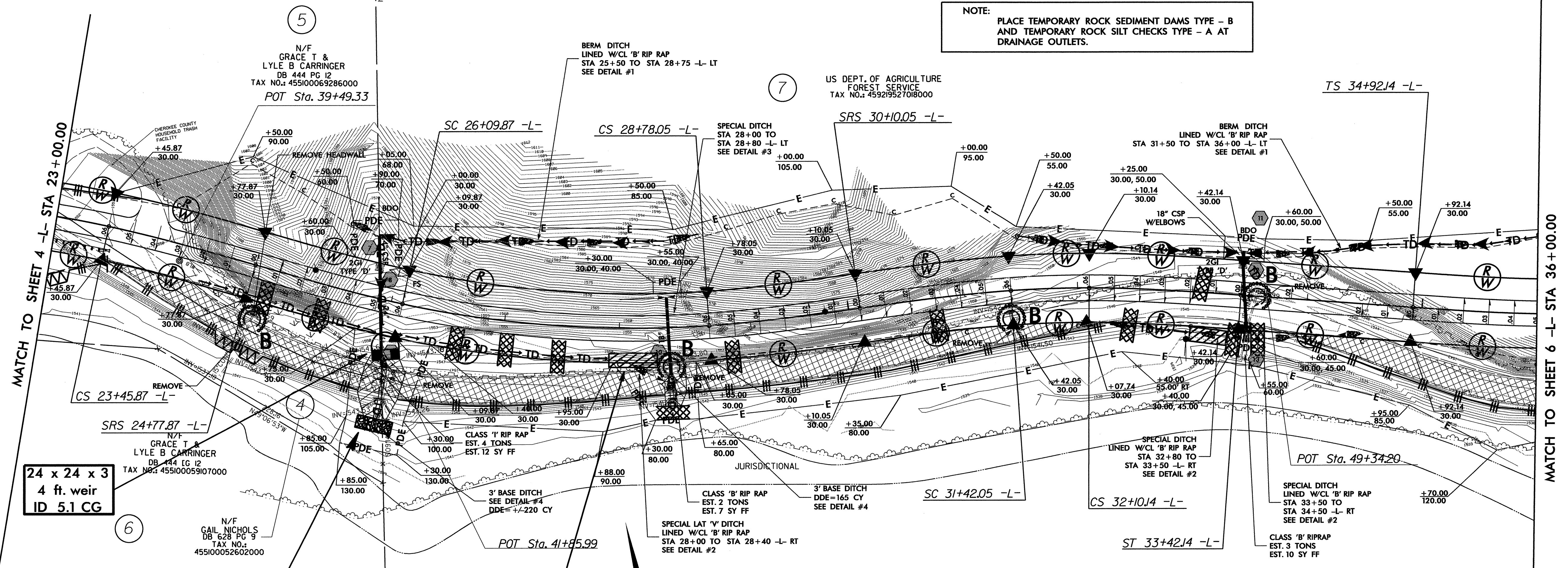
FROM STA. 28+00 TO STA. 28+80 -L- LT

STA. 26+10 -L- RT
 STA. 28+45 -L- RT

Type of Liner=Class 'B' Rip-Rap
 FROM STA. 25+50 TO STA. 28+75 -L- LT
 FROM STA. 31+50 TO STA. 36+00 -L- LT

CLEARING AND GRUBBING
 EROSION CONTROL FOR
 CONSTRUCTION SHEET 5



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



PIs = 25+65.89	PI = 27+44.85	PIs = 29+22.07	PIs = 30+98.07	PI = 31+76.11	PIs = 32+54.16
Θs = 3° 57' 36.0"	Δ = 16° 05' 26.9" (LT)	Θs = 3° 57' 36.0"	Θs = 3° 57' 36.0"	Δ = 4° 05' 07.4" (RT)	Θs = 3° 57' 36.0"
Ls = 132.00'	D = 6' 00' 00.0"	Ls = 132.00'	Ls = 132.00'	D = 6' 00' 00.0"	Ls = 132.00'
LT = 88.02'	L = 268.18'	LT = 88.02'	LT = 88.02'	L = 68.09'	LT = 88.02'
ST = 44.02'	T = 134.98'	ST = 44.02'	ST = 44.02'	T = 34.06'	ST = 44.02'
	R = 954.93'			R = 954.93'	

SEE SHEET 12 FOR -L- PROFILE
 SEE SHEETS X-7 THRU X-17 FOR -L- X-SECTIONS

FILE: SFILES
 DATE: SDATES
 STIMER

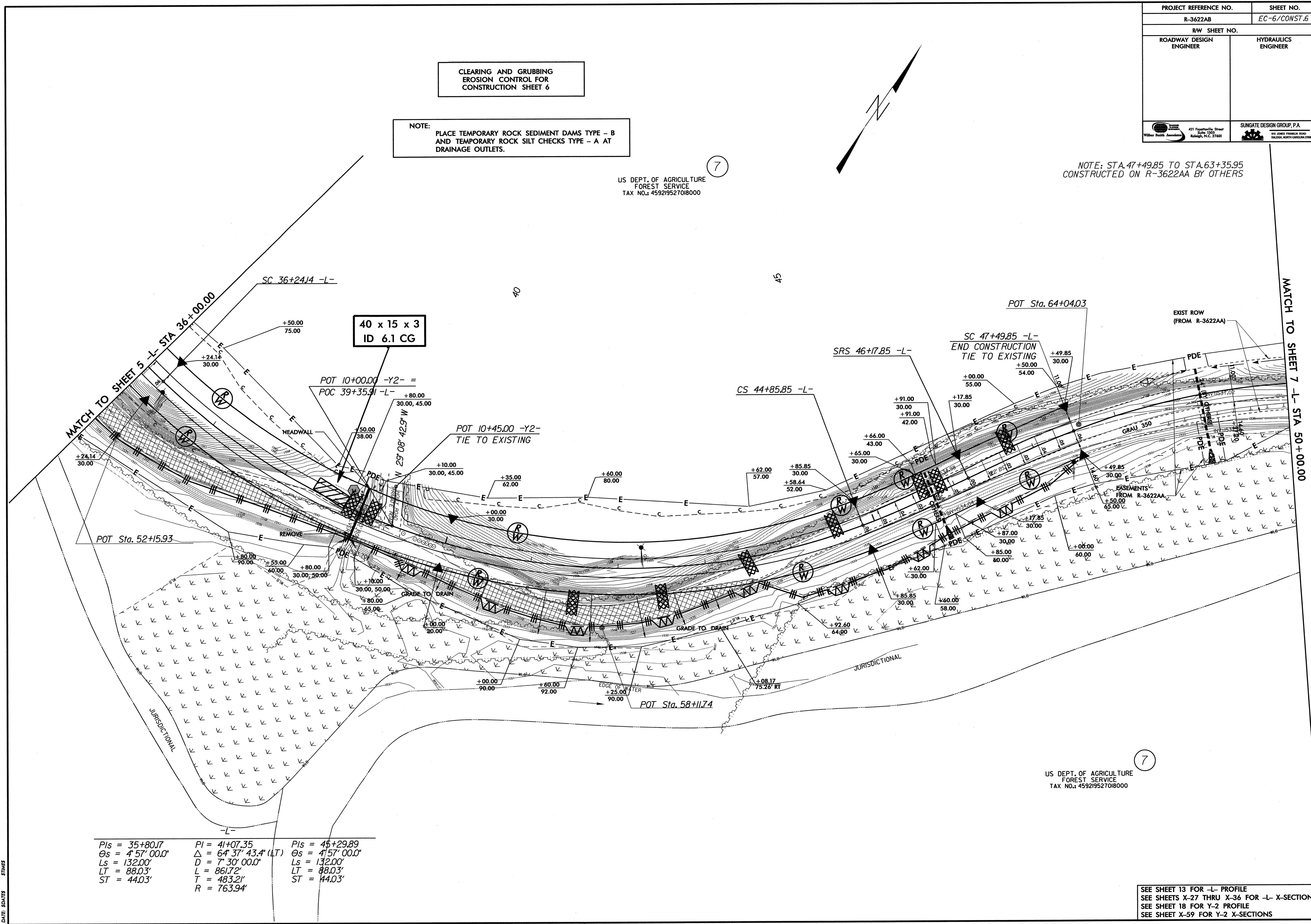
PROJECT REFERENCE NO.		SHEET NO.	
R-3622AB		EC-6/CONST.6	
RW SHEET NO.		HYDRAULICS	
ROADWAY DESIGN ENGINEER		ENGINEER	
			

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.

US DEPT. OF AGRICULTURE
FOREST SERVICE
TAX NO.: 459219527018000

NOTE: STA. 47+49.85 TO STA. 63+35.95
CONSTRUCTED ON R-3622AA BY OTHERS



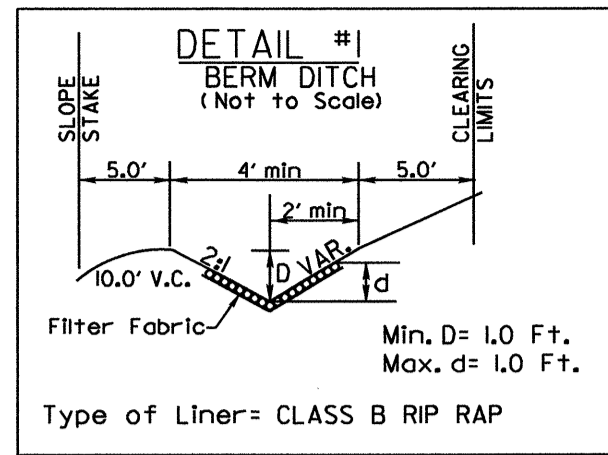
PIs = 35+80.17	PI = 41+07.35	PIs = 45+29.89
Os = 4' 57" 00.0"	Δ = 64' 37" 43.4" (LT)	Os = 4' 57" 00.0"
Ls = 132.00'	D = 7' 30" 00.0"	Ls = 132.00'
LT = 88.03'	L = 861.72'	LT = 88.03'
ST = 44.03'	T = 483.21'	ST = 44.03'
	R = 763.94'	

US DEPT. OF AGRICULTURE
FOREST SERVICE
TAX NO.: 459219527018000

SEE SHEET 13 FOR -L- PROFILE
SEE SHEETS X-27 THRU X-36 FOR -L- X-SECTIONS
SEE SHEET 18 FOR Y-2 PROFILE
SEE SHEET X-59 FOR Y-2 X-SECTIONS

FILE: SP1LES
DATE: 8/21/05

NOTE: STA. 47+49.85 TO STA. 63+35.95
CONSTRUCTED ON R-3622AA BY OTHERS



FROM STA. 67+00 TO STA. 78+00 -L- LT

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.

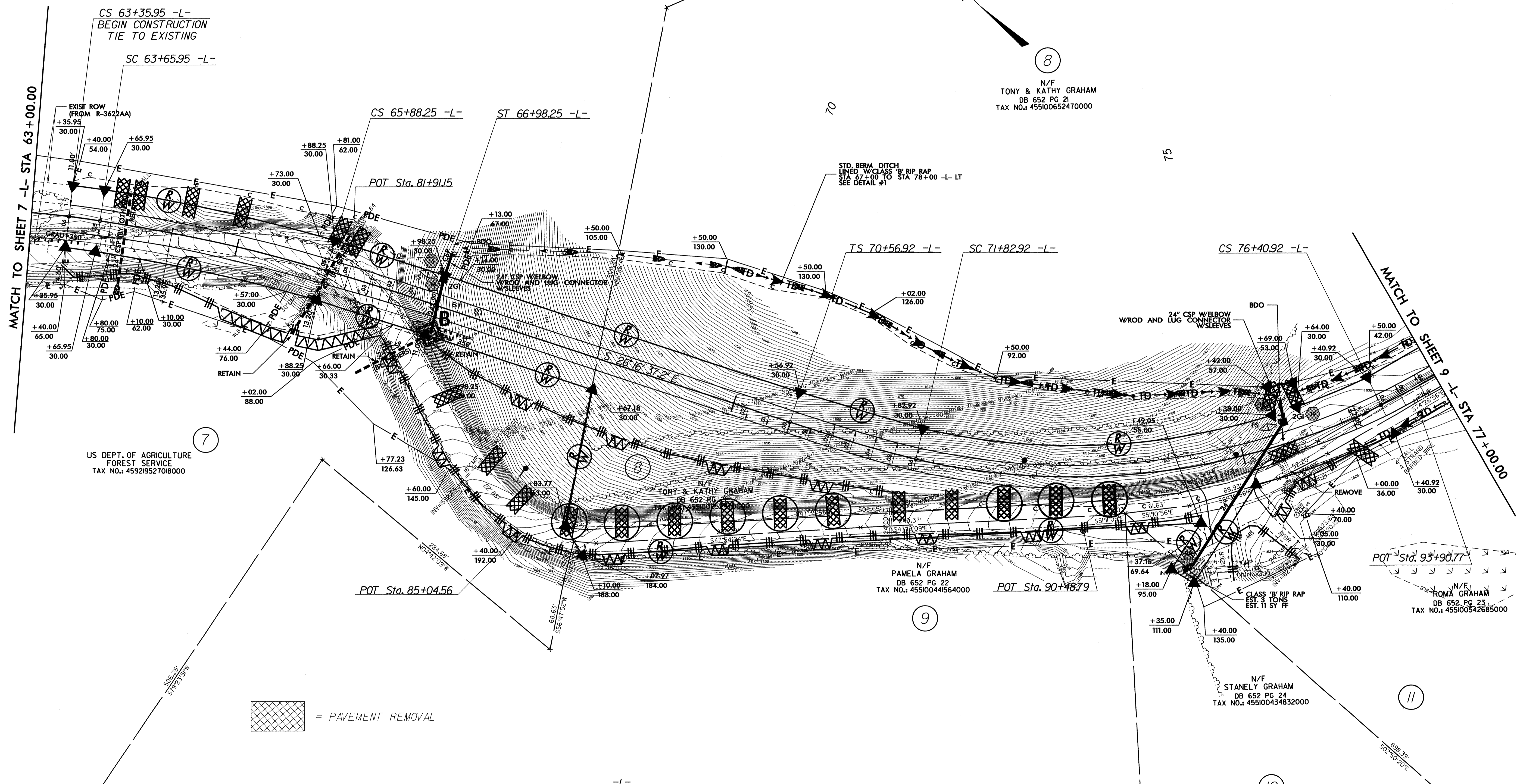
US DEPT. OF AGRICULTURE
FOREST SERVICE
TAX NO.: 459219527018000

N/F
TONY & KATHY GRAHAM
DB 652 PG 2
TAX NO.: 459100652470000

N/F
PAMELA GRAHAM
DB 652 PG 22
TAX NO.: 455100441564000

N/F
STANLEY GRAHAM
DB 652 PG 24
TAX NO.: 455100434832000

N/F
ROMA GRAHAM
DB 652 PG 23
TAX NO.: 455100542685000



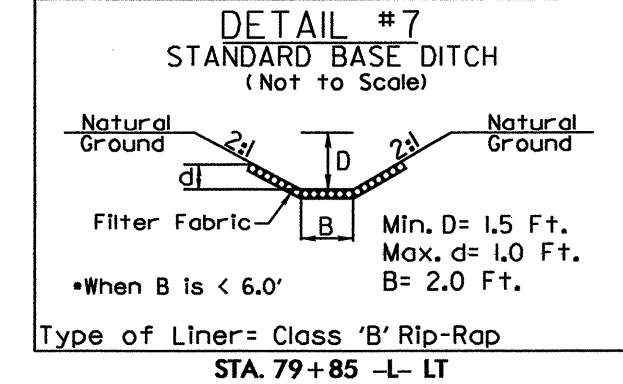
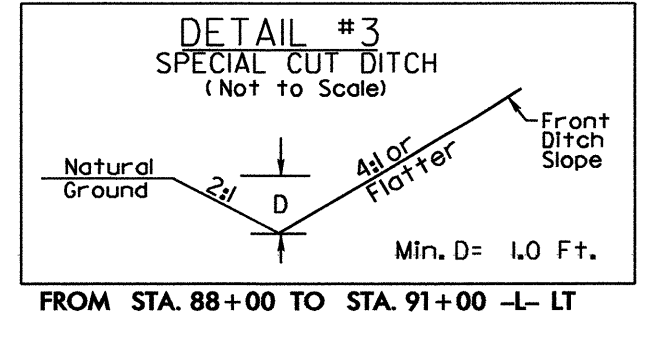
[Cross-hatched symbol] = PAVEMENT REMOVAL

PIs = 47+05.88 Θs = 4° 30' 36.0" Ls = 132.00' LT = 88.03' ST = 44.03'	PI = 59+12.07 Δ = 108° 23' 00.0" (RT) D = 6° 50' 00.0" L = 1,586.10' T = 1,162.22' R = 838.47' SE = 0.06 '/' DS = 50 mph	PIs = 63+49.34 Θs = 0° 31' 30.0" Ls = 30.00' L = 1,586.10' T = 1,162.22' R = 838.47' SE = 0.06 '/' DS = 50 mph	PI = 64+77.27 Δ = 7° 46' 49.4" (RT) D = 3° 30' 00.0" L = 222.30' T = 111.32' R = 1,637.02' SE = 0.05 '/' DS = 50 mph	PIs = 66+24.92 Θs = 1° 55' 30.0" Ls = 110.00' LT = 73.34' ST = 36.67'	PIs = 71+40.95 Θs = 5° 21' 18.0" Ls = 126.00' LT = 84.04' ST = 42.03'	PI = 74+21.15 Δ = 38° 55' 48.5" (LT) D = 8° 30' 00.0" L = 458.00' T = 238.24' R = 674.07' SE = 0.06 '/' DS = 45 mph	PIs = 76+82.95 Θs = 5° 21' 18.0" Ls = 126.00' LT = 84.04' ST = 42.03'
---	---	---	---	---	---	--	---

SEE SHEET 15 FOR -L- PROFILE
SEE SHEETS X-27 THRU X-43 FOR -L- X-SECTIONS

FILE: SP1ES
DATE: 04/25/09
STIMES

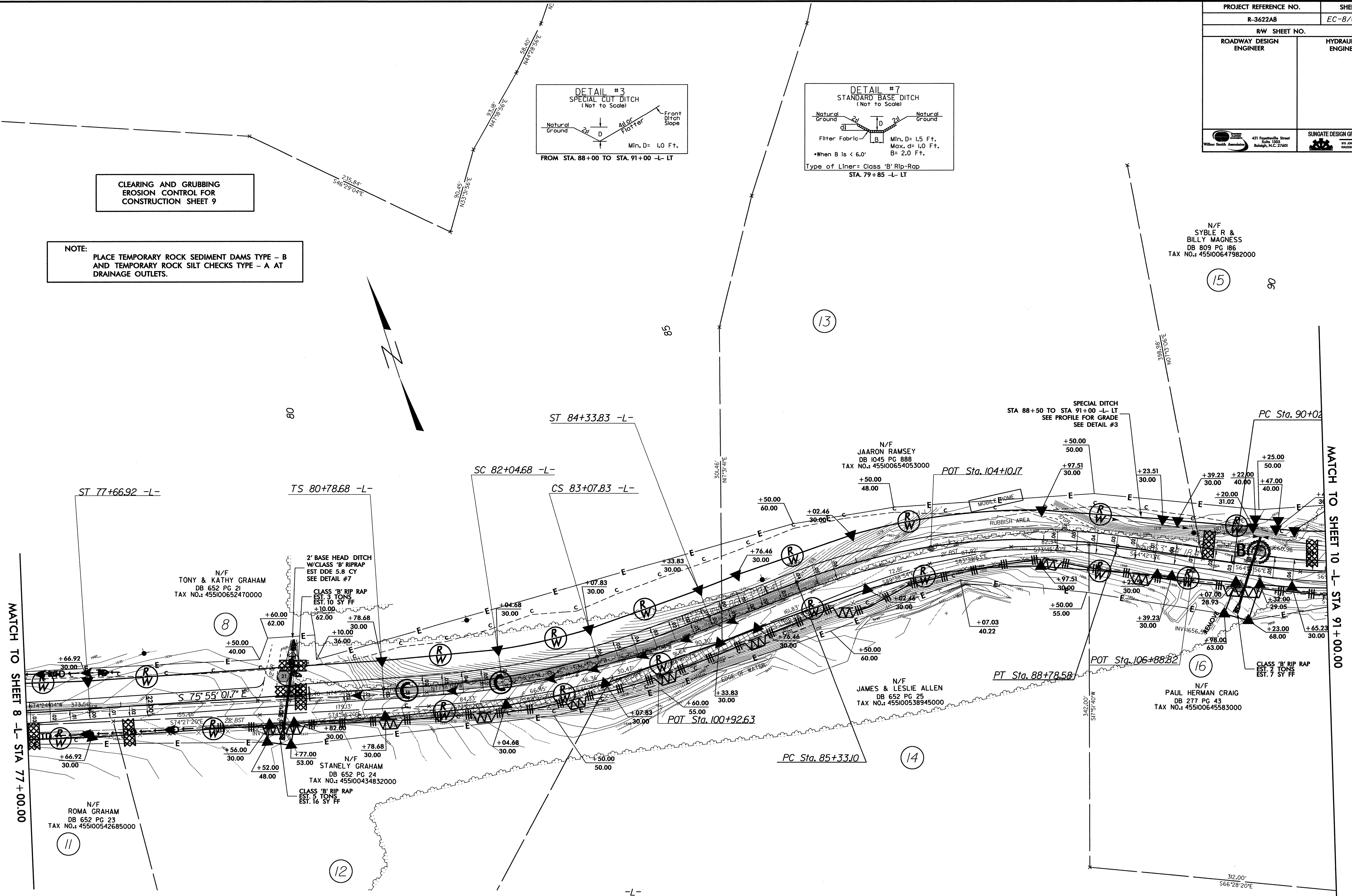
PROJECT REFERENCE NO. R-3622AB	SHEET NO. EC-7/CONST.8
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
421 Eganville Street Suite 1209 Raleigh, N.C. 27601	SUNGATE DESIGN GROUP, P.A. 815 JONES PARKWAY ROAD RALEIGH, NORTH CAROLINA 27605



CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 9

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

N/F
SYBLE R &
BILLY MAGNESS
DB 809 PG 186
TAX NO.: 455100647982000



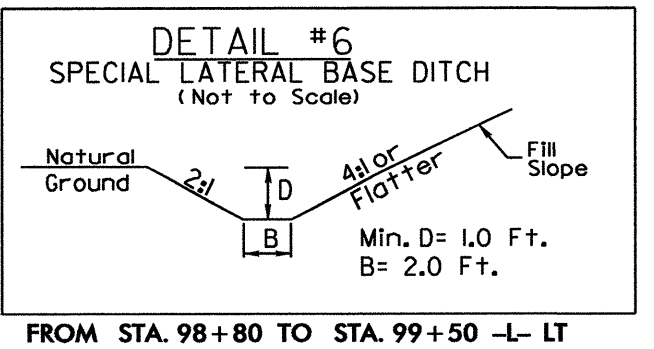
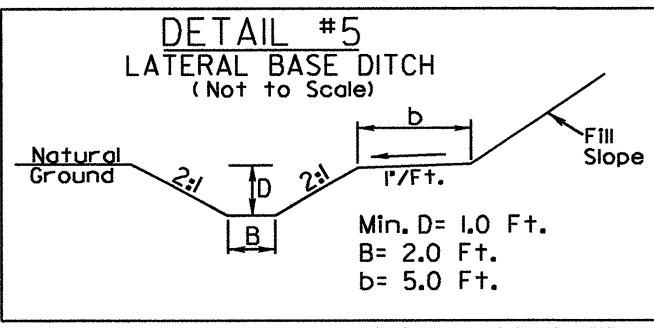
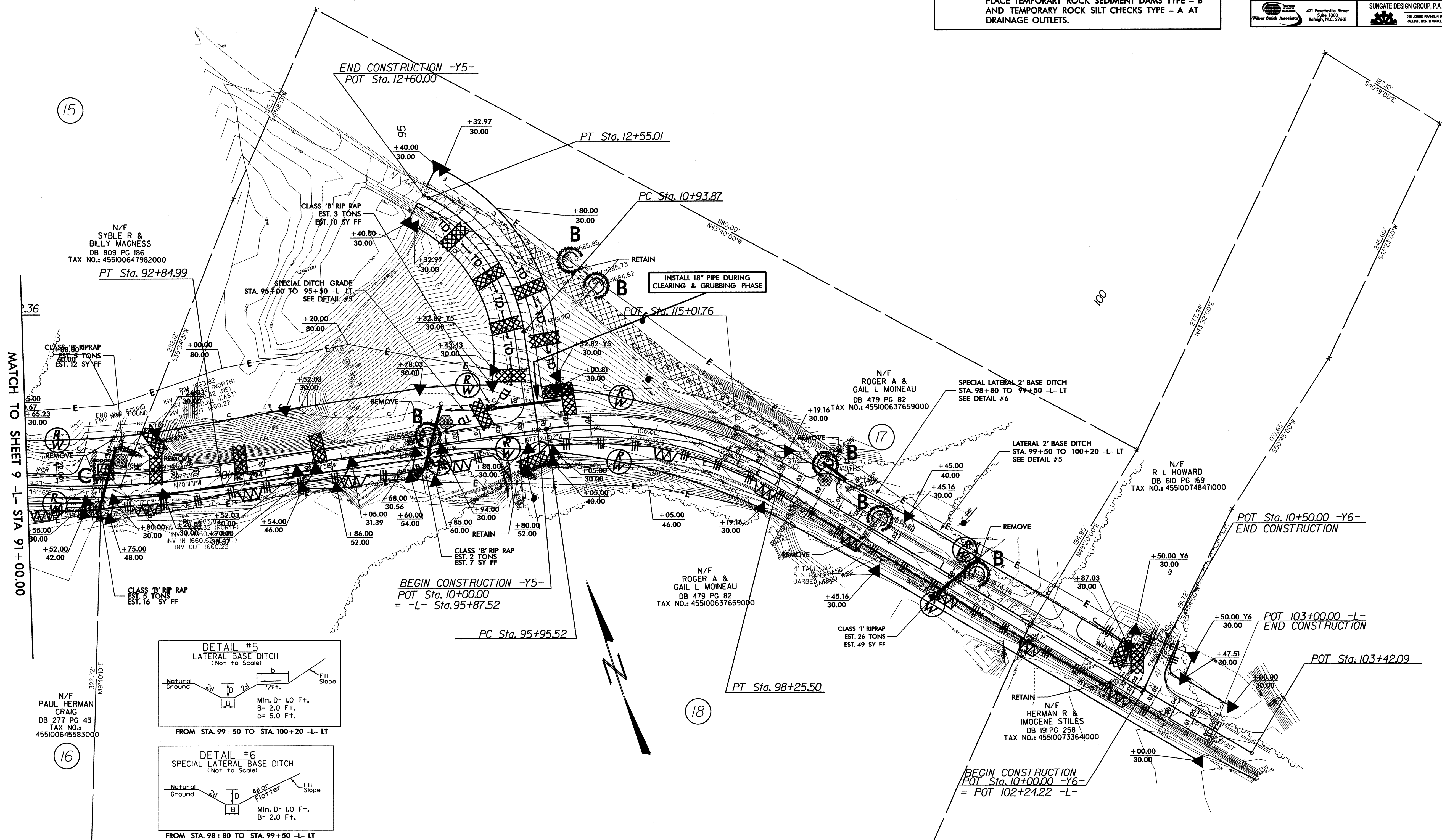
Pls = 71+40.95 Os = 5' 21' 18.0" Ls = 126.00' LT = 84.04' ST = 42.03'	Pls = 74+21.15 Δ = 38' 55' 48.5" (LT) D = 8' 30' 00.0" Ls = 126.00' LT = 84.04' T = 238.24' R = 674.07' SE = 0.06 '' DS = 45 mph	Pls = 76+82.95 Os = 5' 21' 18.0" Ls = 126.00' LT = 84.04' ST = 42.03'	Pls = 81+62.71 Os = 4' 43' 30.0" Ls = 126.00' LT = 84.03' ST = 42.03'	Pls = 82+56.34 Δ = 7' 44' 11.9" (LT) D = 7' 30' 00.0" Ls = 103.16' T = 51.66' R = 763.94' SE = 0.06 '' DS = 45 mph	Pls = 83+49.86 Os = 4' 43' 30.0" Ls = 126.00' LT = 84.03' ST = 42.03'	Pls = 85+60.50 Os = 5' 21' 18.0" Ls = 126.00' LT = 84.04' ST = 42.03'	Pls = 87+00.67 Δ = 16' 34' 44.6" (RT) D = 8' 30' 00.0" Ls = 195.05' T = 98.21' R = 674.07' SE = 0.06 '' DS = 45 mph	Pls Sta 90+23.25 Os = 3' 46' 07.6" Ls = 126.00' LT = 84.02' ST = 42.02'	Pls Sta 91+45.82 Δ = 9' 37' 08.3" (LT) D = 5' 58' 55.9" Ls = 160.79' T = 80.59' R = 957.77'	Pls Sta 92+68.04 Os = 3' 46' 07.6" Ls = 126.00' LT = 84.02' ST = 42.02'
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SEE SHEET 16 FOR -L- PROFILE
SEE SHEETS X-43 THRU X-52 FOR -L- X-SECTIONS

FILE: SFILES
DATE: 8/2/05
STIMES

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 10

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



Pls Sta 90+23.25 $\Delta s = 3' 46'' 07.6''$ $Ls = 126.00'$ $LT = 84.02'$ $ST = 42.02'$	PI Sta 91+45.82 $\Delta = 9' 37'' 08.3''$ (LT) $D = 5' 58'' 55.9''$ $L = 160.79'$ $T = 80.59'$ $R = 957.77'$	Pls Sta 92+68.04 $\Delta s = 3' 46'' 07.6''$ $Ls = 126.00'$ $LT = 84.02'$ $ST = 42.02'$	Pls Sta 94+36.07 $\Delta s = 5' 36'' 49.5''$ $Ls = 126.00'$ $LT = 84.04'$ $ST = 42.04'$	PI Sta 96+52.71 $\Delta = 30' 23'' 49.7''$ (RT) $D = 8' 54'' 38.5''$ $L = 341.13'$ $T = 174.68'$ $R = 643.00'$	Pls Sta 98+61.19 $\Delta s = 5' 36'' 49.5''$ $Ls = 126.00'$ $LT = 84.04'$ $ST = 42.04'$
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Y-5

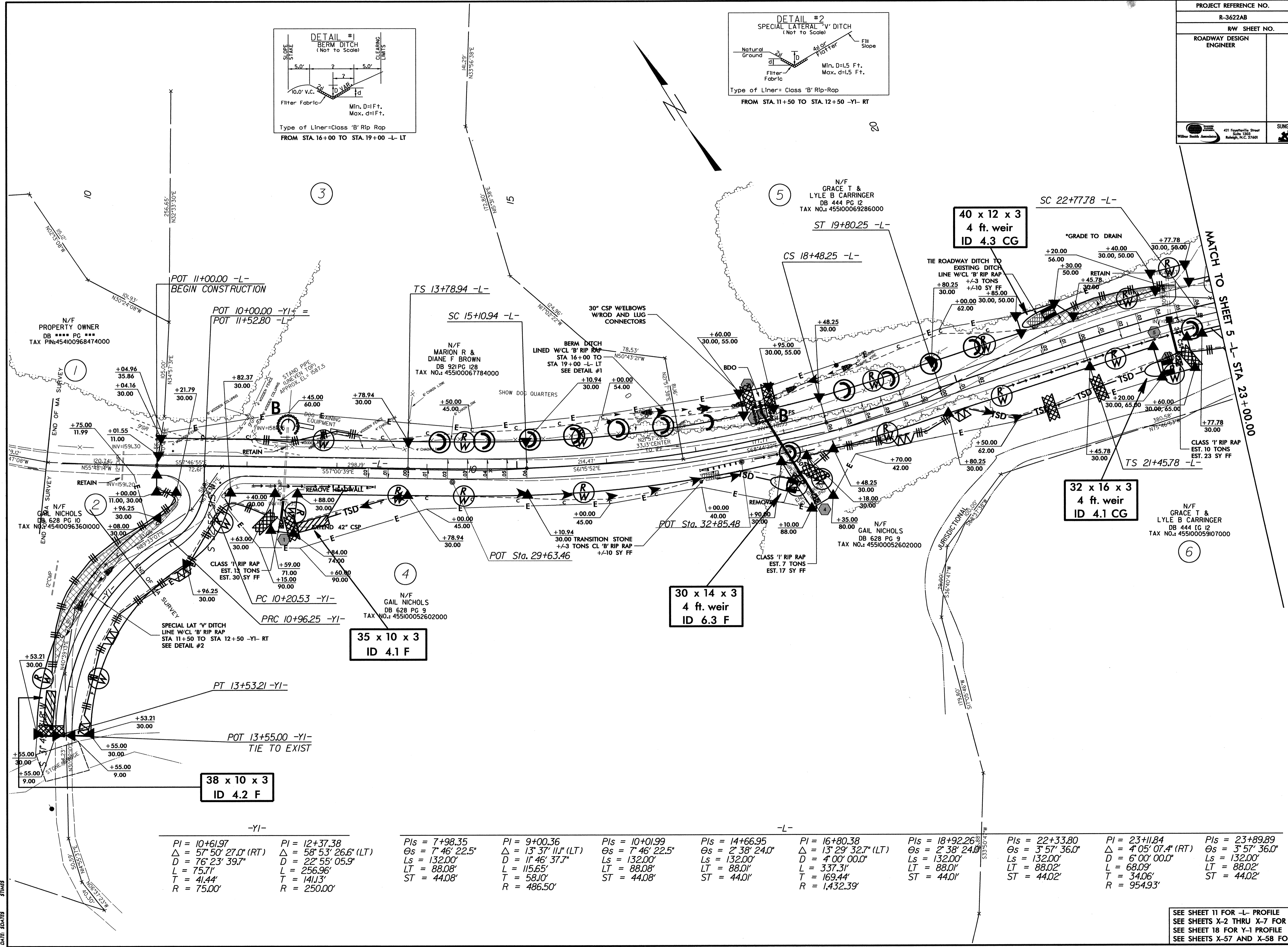
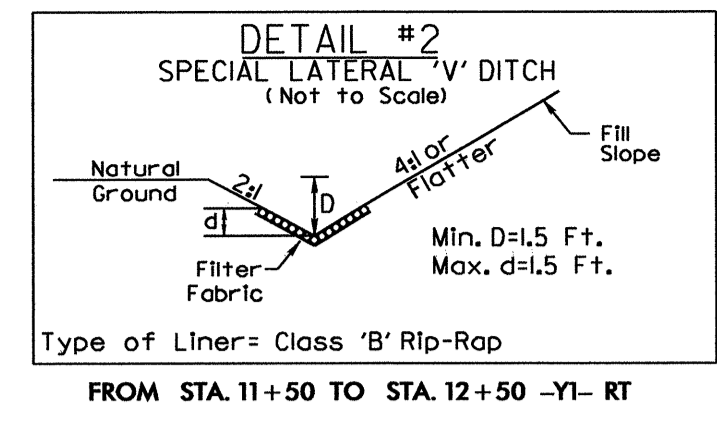
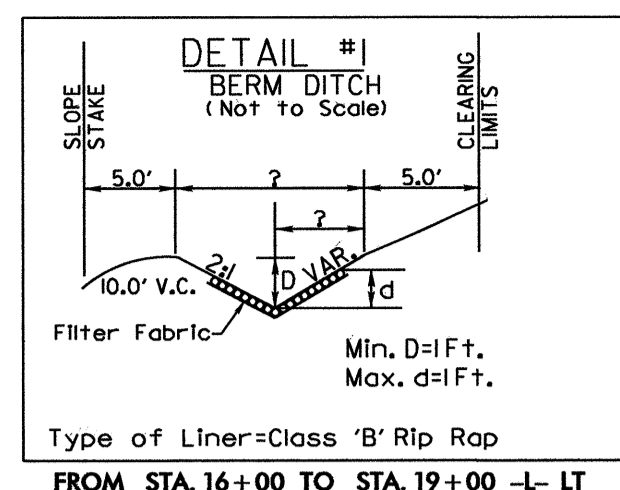
PI Sta 11+81.15 $\Delta = 54' 37'' 44.3''$ (LT) $D = 33' 54'' 10.2''$ $L = 161.13'$ $T = 87.28'$ $R = 169.00'$

MATCH TO SHEET 9 -L- STA 91+00.00

FILE: STILES
DATE: 04/20/06

SEE SHEET 17 FOR -L- PROFILE
SEE SHEETS X-52 THRU X-56 FOR -L- X-SECTIONS
SEE SHEET 18 FOR Y-5 PROFILE
SEE SHEETS X-60 AND X-61 FOR Y-5 X-SECTIONS

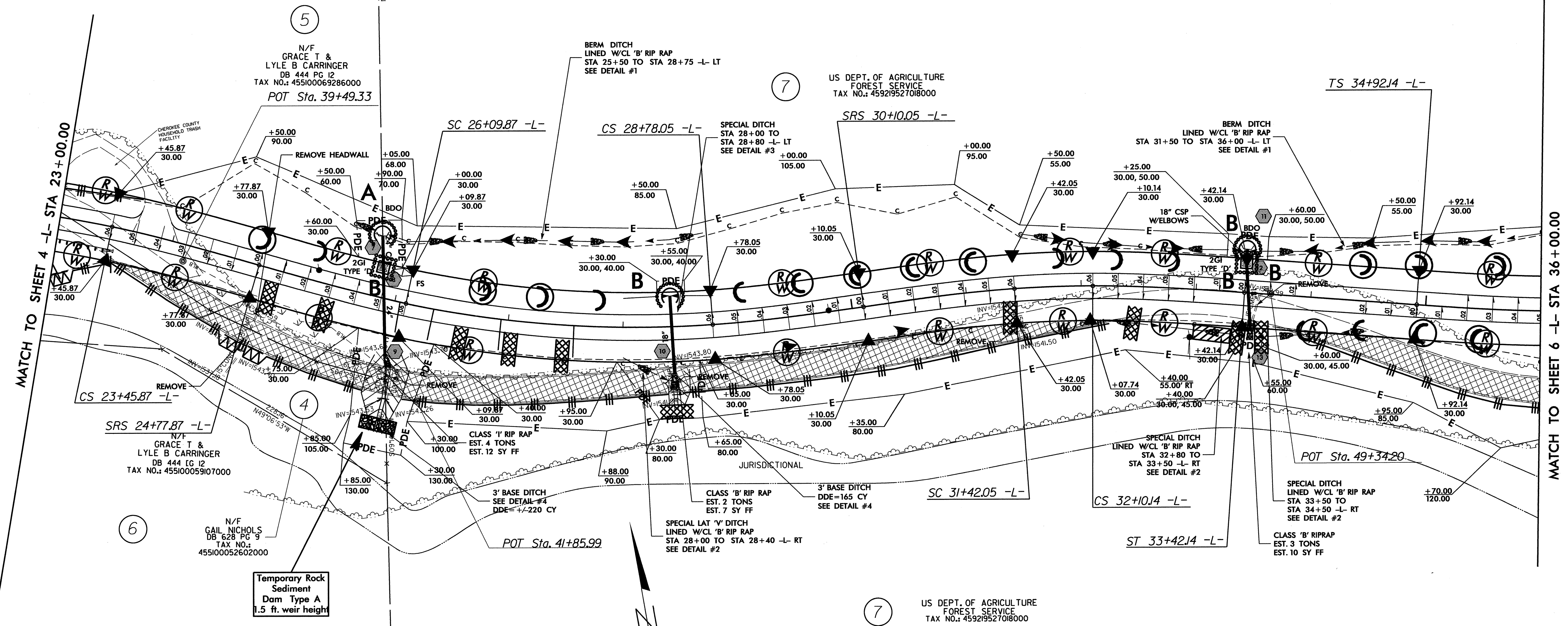
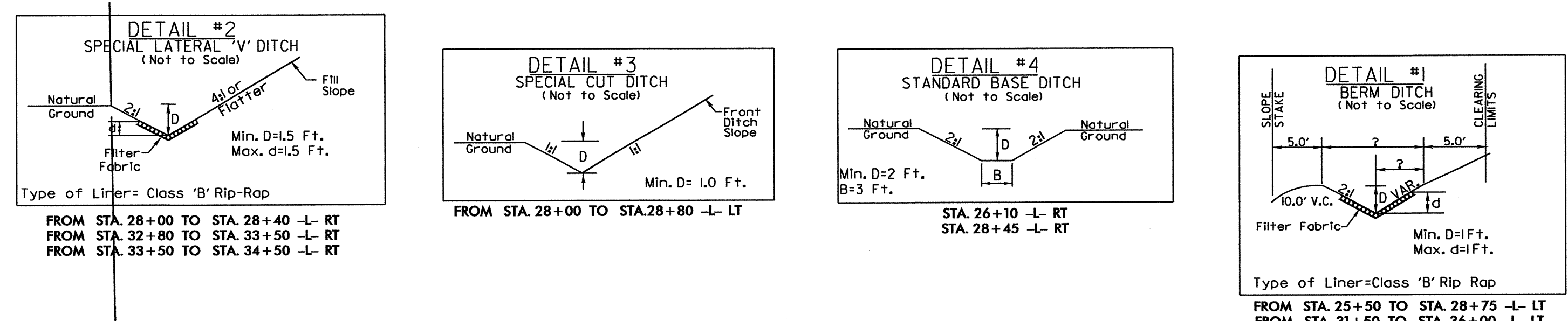
PROJECT REFERENCE NO. R-3622AB	SHEET NO. EC-10/CONST.4
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
SUNGATE DESIGN GROUP, P.A. 421 Fayetteville Street Suite 1300 Raleigh, N.C. 27601	



$PI = 10+61.97$ $\Delta = 57^{\circ} 50' 27.0''$ (RT) $D = 76^{\circ} 23' 39.7''$ $L = 75.71'$ $T = 41.44'$ $R = 75.00'$	$PI = 12+37.38$ $\Delta = 58^{\circ} 53' 26.6''$ (LT) $D = 22^{\circ} 55' 05.9''$ $L = 256.96'$ $T = 141.33'$ $R = 250.00'$	$PIs = 7+98.35$ $\Theta_s = 7^{\circ} 46' 22.5''$ $L_s = 132.00'$ $LT = 88.08'$ $ST = 44.08'$	$PI = 9+00.36$ $\Delta = 13^{\circ} 37' 11.1''$ (LT) $D = 11^{\circ} 46' 37.7''$ $L = 115.65'$ $T = 58.10'$ $R = 486.50'$	$PIs = 10+01.99$ $\Theta_s = 7^{\circ} 46' 22.5''$ $L_s = 132.00'$ $LT = 88.08'$ $ST = 44.08'$	$PIs = 14+66.95$ $\Theta_s = 2^{\circ} 38' 24.0''$ $D = 4^{\circ} 00' 00.0''$ $L = 88.01'$ $T = 169.44'$ $R = 1,432.39'$	$PI = 16+80.38$ $\Delta = 13^{\circ} 29' 32.7''$ (LT) $D = 4^{\circ} 00' 00.0''$ $L = 337.31'$ $T = 169.44'$ $R = 1,432.39'$	$PIs = 18+92.26$ $\Theta_s = 2^{\circ} 38' 24.0''$ $L_s = 132.00'$ $LT = 88.01'$ $ST = 44.01'$	$PIs = 22+33.80$ $\Theta_s = 3^{\circ} 57' 36.0''$ $D = 6^{\circ} 00' 00.0''$ $L = 132.00'$ $T = 44.02'$ $R = 954.93'$	$PI = 23+11.84$ $\Delta = 4^{\circ} 05' 07.4''$ (RT) $D = 6^{\circ} 00' 00.0''$ $L = 68.09'$ $T = 34.06'$ $R = 954.93'$	$PIs = 23+89.89$ $\Theta_s = 3^{\circ} 57' 36.0''$ $D = 6^{\circ} 00' 00.0''$ $L = 132.00'$ $T = 44.02'$ $R = 954.93'$
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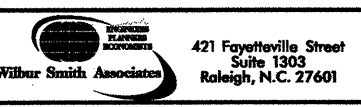

SEE SHEET 11 FOR -L- PROFILE
 SEE SHEETS X-2 THRU X-7 FOR -L- X-SECTIONS
 SEE SHEET 18 FOR Y-1 PROFILE
 SEE SHEETS X-57 AND X-58 FOR Y-1 X-SECTIONS

FILE: SFILES
 DATE: 8/24/08



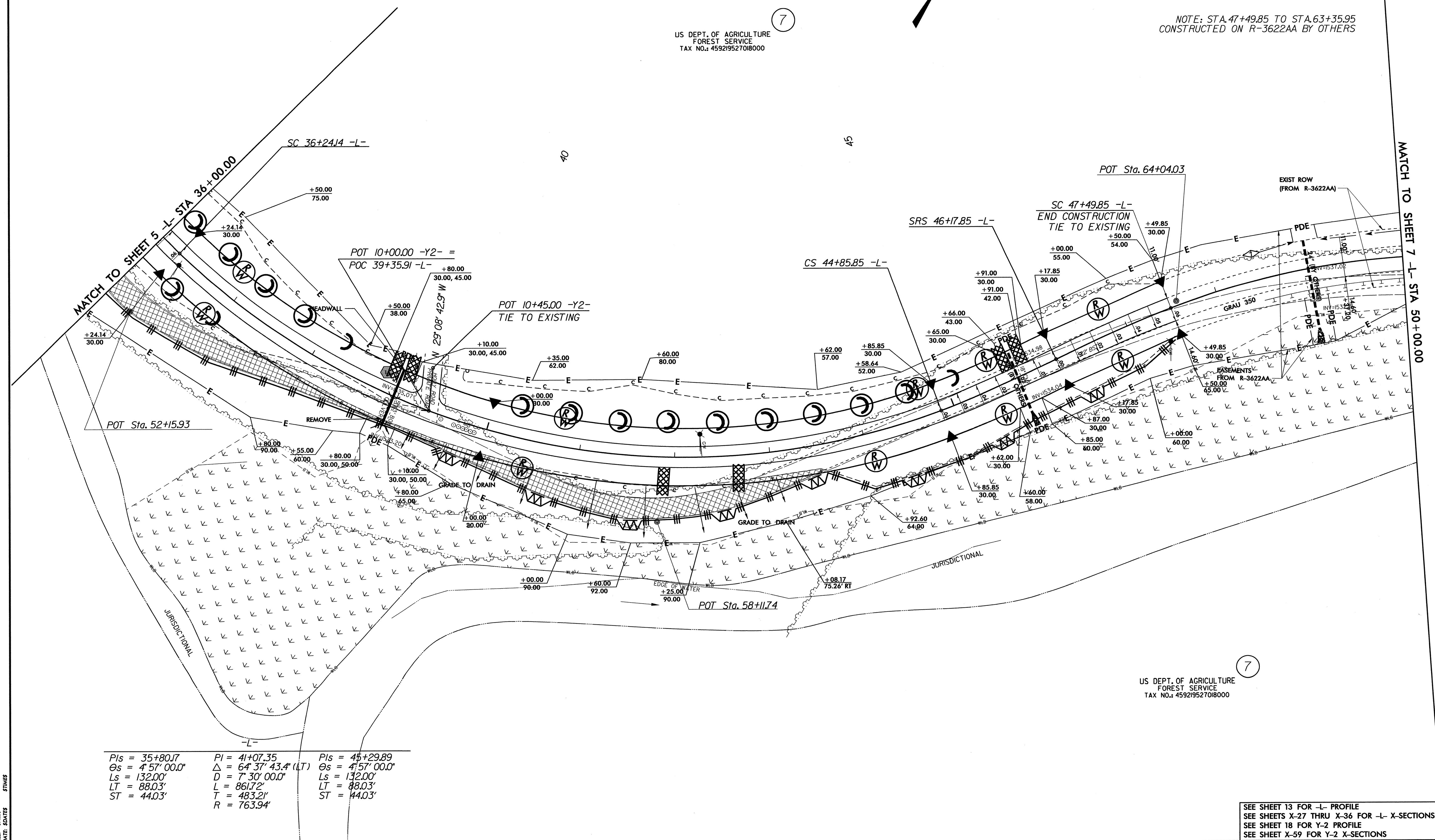
PIs = 25+65.89	PI = 27+44.85	PIs = 29+22.07	PIs = 30+98.07	PI = 31+76.11	PIs = 32+54.16
Os = 3° 57' 36.0"	Δ = 16° 05' 26.9" (LT)	Os = 3° 57' 36.0"	Os = 3° 57' 36.0"	Δ = 4° 05' 07.4" (RT)	Os = 3° 57' 36.0"
Ls = 132.00'	D = 6° 00' 00.0"	Ls = 132.00'	Ls = 132.00'	D = 6° 00' 00.0"	Ls = 132.00'
LT = 88.02'	L = 268.18'	LT = 88.02'	LT = 88.02'	L = 68.09'	LT = 88.02'
ST = 44.02'	T = 134.98'	ST = 44.02'	ST = 44.02'	T = 34.06'	ST = 44.02'
	R = 954.93'			R = 954.93'	

SEE SHEET 12 FOR -L- PROFILE
 SEE SHEETS X-7 THRU X-17 FOR -L- X-SECTIONS

PROJECT REFERENCE NO. R-3622AB		SHEET NO. EC-12/CONST.6
RW SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
		

7
US DEPT. OF AGRICULTURE
FOREST SERVICE
TAX NO.: 459219527018000

NOTE: STA 47+49.85 TO STA.63+35.95
CONSTRUCTED ON R-3622AA BY OTHERS



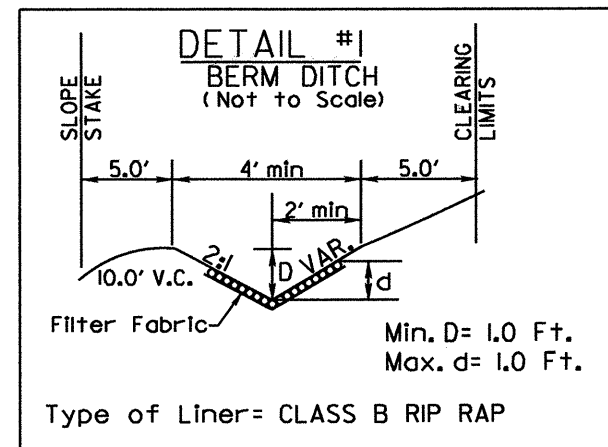
PIs = 35+80.17	PI = 41+07.35	PIs = 45+29.89
Os = 4°57'00.0"	Δ = 64°37'43.4" (LT)	Os = 4°57'00.0"
Ls = 132.00'	D = 7°30'00.0"	Ls = 132.00'
LT = 88.03'	L = 861.72'	LT = 88.03'
ST = 44.03'	T = 483.21'	ST = 44.03'
	R = 763.94'	

7
US DEPT. OF AGRICULTURE
FOREST SERVICE
TAX NO.: 459219527018000

SEE SHEET 13 FOR -L- PROFILE
SEE SHEETS X-27 THRU X-36 FOR -L- X-SECTIONS
SEE SHEET 18 FOR Y-2 PROFILE
SEE SHEET X-59 FOR Y-2 X-SECTIONS

FILE: ST/15
DATE: 10/15/15
ST/15

NOTE: STA. 47+49.85 TO STA. 63+35.95
CONSTRUCTED ON R-3622AA BY OTHERS



FROM STA. 67+00 TO STA. 78+00 -L- LT

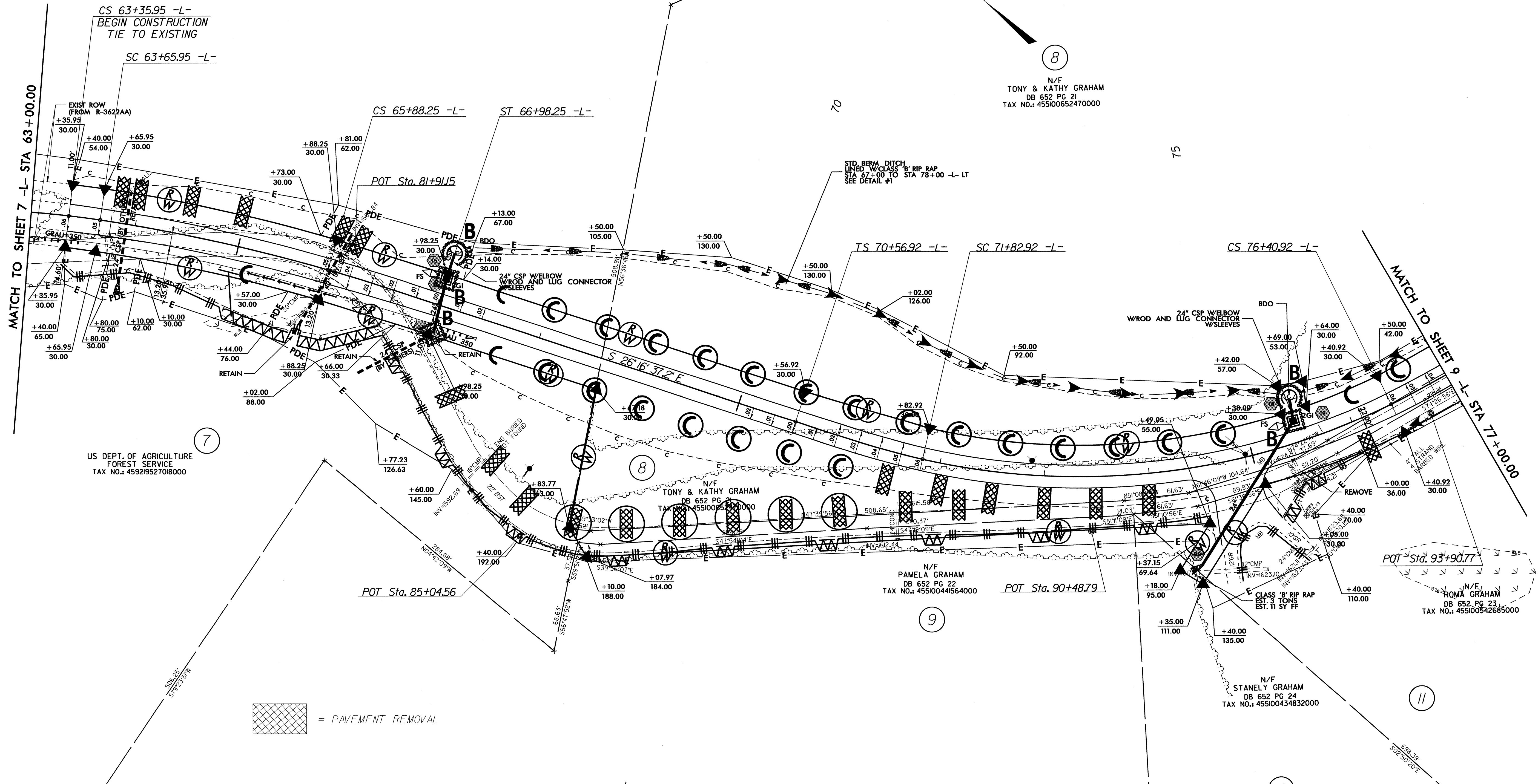
US DEPT. OF AGRICULTURE
FOREST SERVICE
TAX NO.: 459219527018000

N/F
TONY & KATHY GRAHAM
DB 652 PG 21
TAX NO.: 455100652470000

N/F
PAMELA GRAHAM
DB 652 PG 22
TAX NO.: 455100441564000

N/F
STANLEY GRAHAM
DB 652 PG 24
TAX NO.: 455100434832000



PROJECT REFERENCE NO. R-3622AB		SHEET NO. EC-13/CONST.8	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
SUNGATE DESIGN GROUP, P.A. 427 Fayetteville Street Suite 1300 Raleigh, N.C. 27601		SUNGATE DESIGN GROUP, P.A. 910 JONES FRANKLIN ROAD RALEIGH, NORTH CAROLINA 27605	

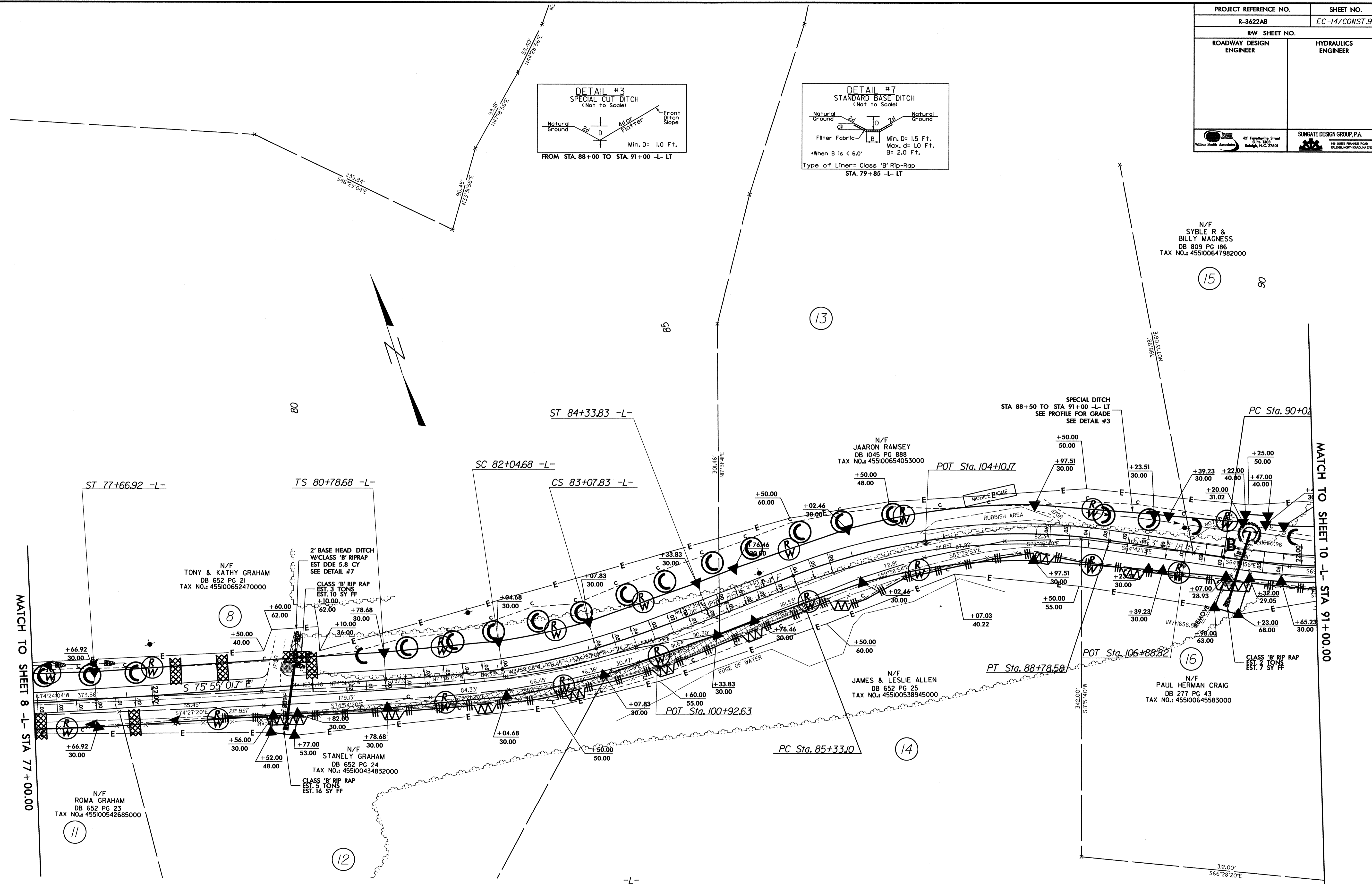
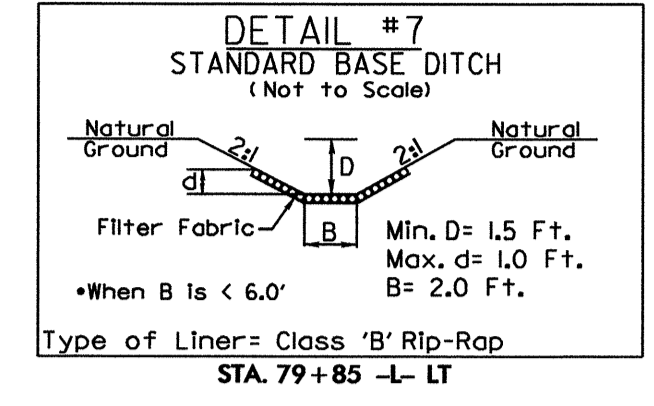
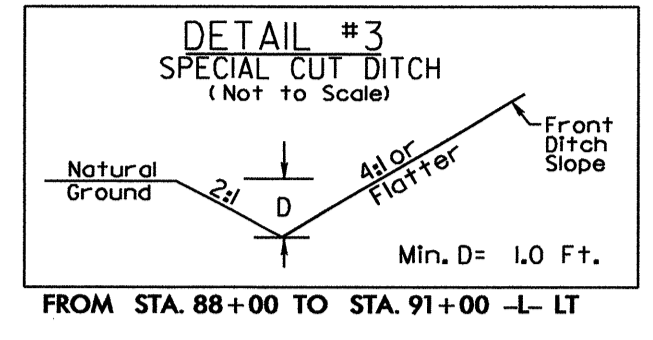


PIs = 47+05.88 Δs = 4' 30' 36.0" Ls = 132.00' LT = 88.03' ST = 44.03'	PI = 59+12.07 Δ = 108' 23' 00.0" (RT) Δs = 6' 50' 00.0" L = 1,586.10' T = 1,162.22' R = 838.47' SE = 0.06 '/' DS = 50 mph	PIs = 63+49.34 Δs = 0' 31' 30.0" D = 3' 30' 00.0" L = 30.00' LT = 16.61' ST = 13.39'	PI = 64+77.27 Δ = 7' 46' 49.4" (RT) D = 3' 30' 00.0" L = 222.30' T = 111.32' R = 1,637.02' SE = 0.05 '/' DS = 50 mph	PIs = 66+24.92 Δs = 1' 55' 30.0" D = 110.00' L = 73.34' ST = 36.67'	PIs = 71+40.95 Δs = 5' 21' 18.0" D = 8' 30' 00.0" L = 84.04' ST = 42.03'	PI = 74+21.15 Δ = 38' 55' 48.5" (LT) D = 8' 30' 00.0" L = 458.00' T = 238.24' R = 674.07' SE = 0.06 '/' DS = 45 mph	PIs = 76+82.95 Δs = 5' 21' 18.0" Ls = 126.00' LT = 84.04' ST = 42.03'
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SEE SHEET 15 FOR -L- PROFILE
SEE SHEETS X-27 THRU X-43 FOR -L- X-SECTIONS

FILE: SFILES
DATE: 8/24/05
STW:MS

PROJECT REFERENCE NO. R-3622AB		SHEET NO. EC-14/CONST.9	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
			



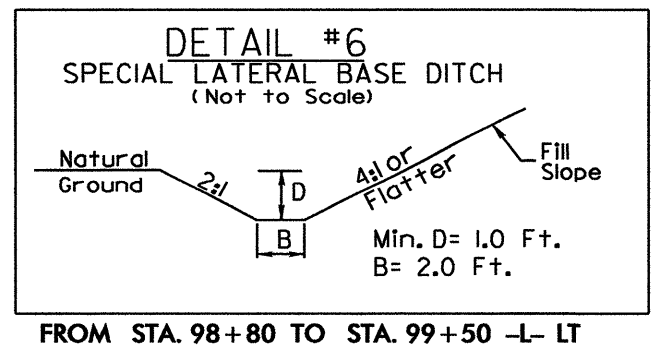
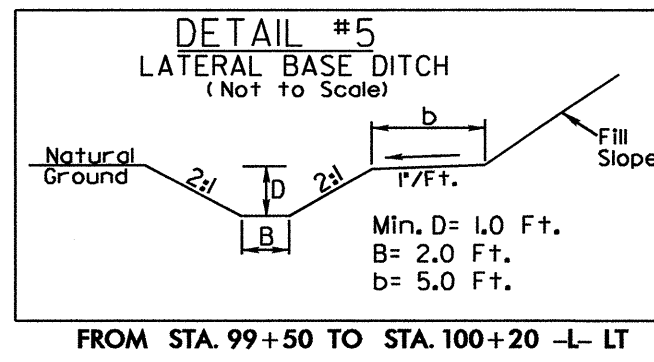
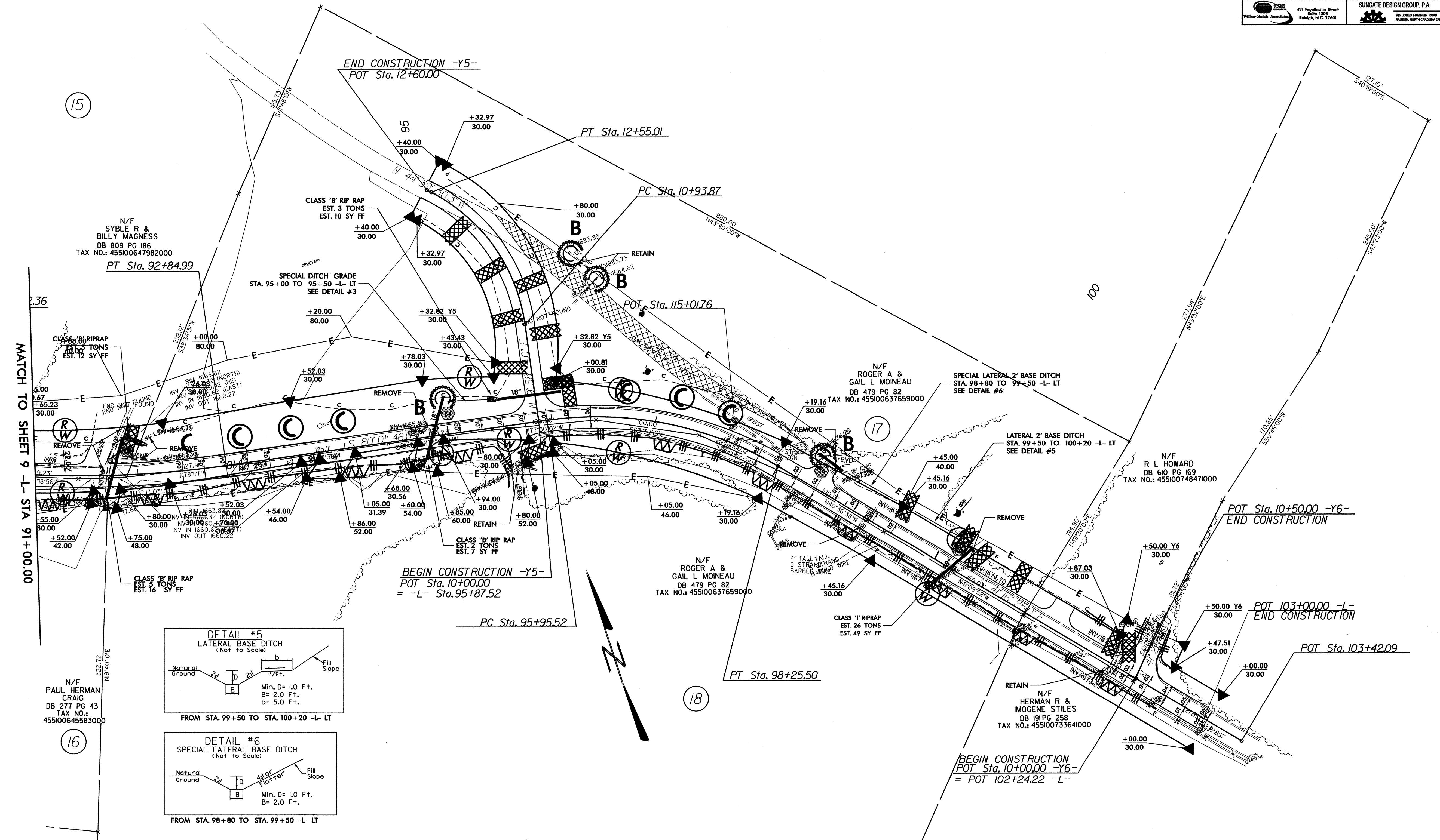
MATCH TO SHEET 8 -L- STA 77+00.00

MATCH TO SHEET 10 -L- STA 91+00.00

PIs = 71+40.95 Os = 5° 21' 18.0" Ls = 126.00' LT = 84.04' ST = 42.03'	PI = 74+21.5 Δ = 38° 55' 48.5" (LT) D = 8° 30' 00.0" L = 458.00' T = 238.24' R = 674.07' SE = 0.06 '"/ DS = 45 mph	PIs = 76+82.95 Os = 5° 21' 18.0" Ls = 126.00' LT = 84.04' ST = 42.03'	PIs = 81+62.71 Os = 4° 43' 30.0" Ls = 126.00' LT = 84.03' ST = 42.03'	PI = 82+56.34 Δ = 7° 44' 11.9" (LT) D = 7° 30' 00.0" L = 103.16' T = 51.66' R = 763.94' SE = 0.06 '"/ DS = 45 mph	PIs = 83+49.86 Os = 4° 43' 30.0" Ls = 126.00' LT = 84.03' ST = 42.03'	PIs = 85+60.50 Os = 5° 21' 18.0" Ls = 126.00' LT = 84.04' ST = 42.03'	PI = 87+00.67 Δ = 16° 34' 44.6" (RT) D = 8° 30' 00.0" L = 195.05' T = 98.21' R = 674.07' SE = 0.06 '"/ DS = 45 mph	PIs Sta 90+23.25 Os = 3° 46' 07.6" Ls = 126.00' LT = 84.02' ST = 42.02'	PI Sta 91+45.82 Δ = 9° 37' 08.3" (LT) D = 5° 58' 55.9" L = 160.79' T = 80.59' R = 957.77'	PIs Sta 92+68.04 Os = 3° 46' 07.6" Ls = 126.00' LT = 84.02' ST = 42.02'
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SEE SHEET 16 FOR -L- PROFILE
SEE SHEETS X-43 THRU X-52 FOR -L- X-SECTIONS

FILE: #FILES
DATE: #DATES
STAGES



-L-					
Pls Sta 90+23.25	Pl Sta 91+45.82	Pls Sta 92+68.04	Pls Sta 94+36.07	Pl Sta 96+52.71	Pls Sta 98+61.19
$\Delta s = 3' 46' 07.6''$	$\Delta = 9' 37' 08.3''$ (LT)	$\Delta s = 3' 46' 07.6''$	$\Delta s = 5' 36' 49.5''$	$\Delta = 30' 23' 49.7''$ (RT)	$\Delta s = 5' 36' 49.5''$
Ls = 126.00'	D = 5' 58' 55.9"	Ls = 126.00'	Ls = 126.00'	D = 8' 54' 38.5"	Ls = 126.00'
LT = 84.02'	L = 160.79'	LT = 84.02'	LT = 84.04'	L = 341.13'	LT = 84.04'
ST = 42.02'	T = 80.59'	ST = 42.02'	ST = 42.04'	T = 174.68'	ST = 42.04'
	R = 957.77'			R = 643.00'	

Y-5

Pl Sta 11+81.15
$\Delta = 54' 37' 44.3''$ (LT)
D = 33' 54' 10.2"
L = 161.13'
T = 87.28'
R = 169.00'

SEE SHEET 17 FOR -L- PROFILE
SEE SHEETS X-52 THRU X-56 FOR -L- X-SECTIONS
SEE SHEET 18 FOR Y-5 PROFILE
SEE SHEETS X-60 AND X-61 FOR Y-5 X-SECTIONS

FILE: STILES
DATE: 8/24/05
STILES