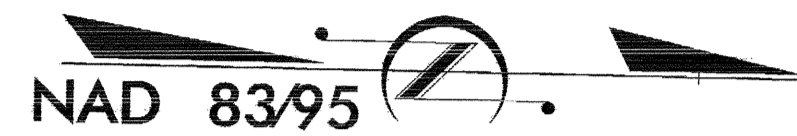


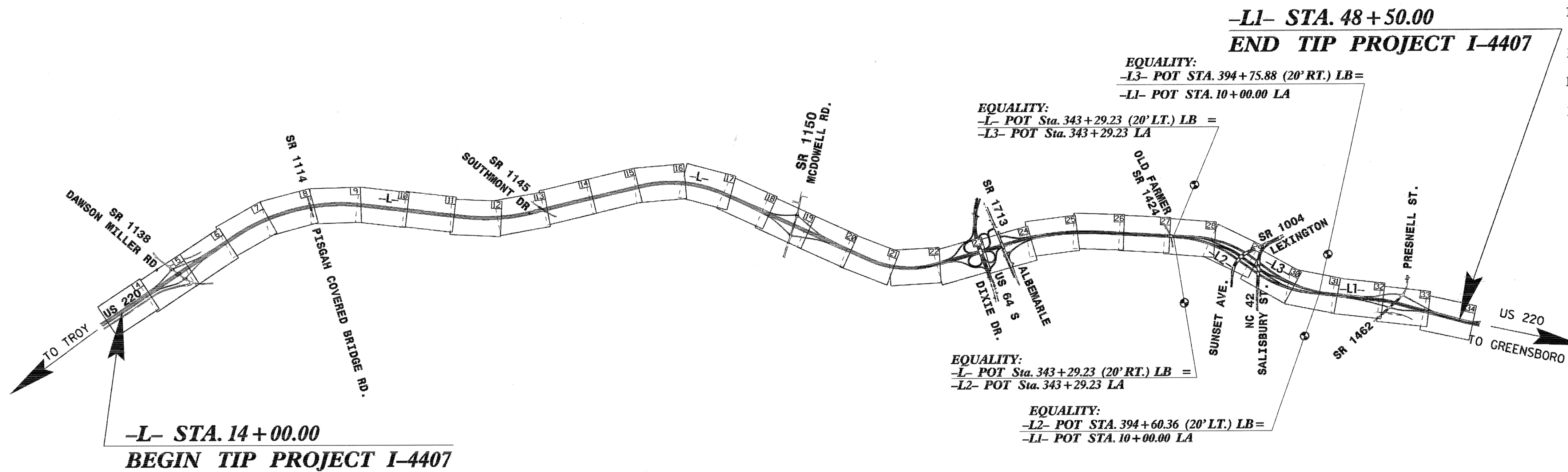
TIP PROJECT: I-4407

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



LOCATION: US 220 (FUTURE I-73/74) FROM SOUTH OF NC 134-US 220 BUSINESS TO NORTH OF SR 1462 (PARK DRIVE EXT.)

TYPE OF WORK: SAFETY IMPROVEMENTS - GRADING, DRAINAGE, PAVING, GUARDRAIL, LIGHTING, AND SIGNING



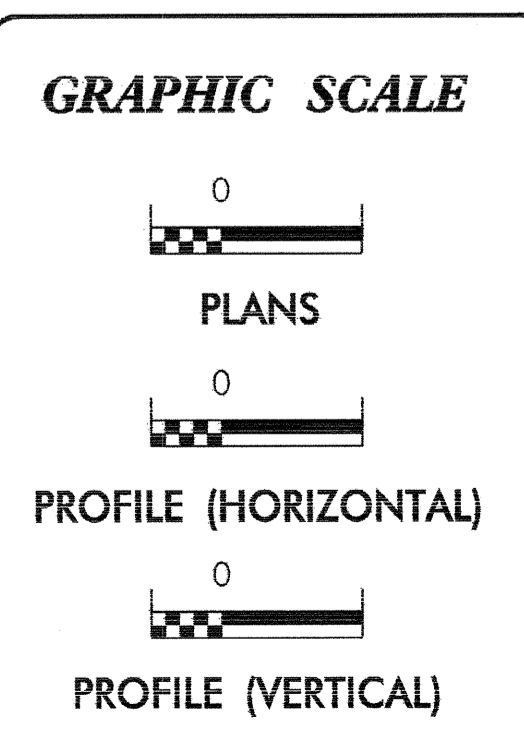
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-4407	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	

EROSION AND SEDIMENT CONTROL MEASURES

Std. #	Description	Symbol
1630.03	Temporary Silt Ditch	TS
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
	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
	Temporary Rock Silt Check Type-B	TRSCB
	Wattle / Coir Fiber Wattle	WCFW
	Wattle / Coir Fiber Wattle with Polyacrylamide (PAM)	WCFW-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	RIA
1632.02	Type B	RIAB
1632.03	Type C	RIAC
	Skimmer Basin	SKB
	Tiered Skimmer Basin	TSKB
	Infiltration Basin	IB

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

303(d) IMPAIRED WATER(S) EXIST ON THIS PROJECT
 303(d) Impaired Water Zone(s) Exist
 From Sta. 369+00 -L2-
 to Sta. End
 Refer To E. C. Special Provisions for Special Considerations.



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

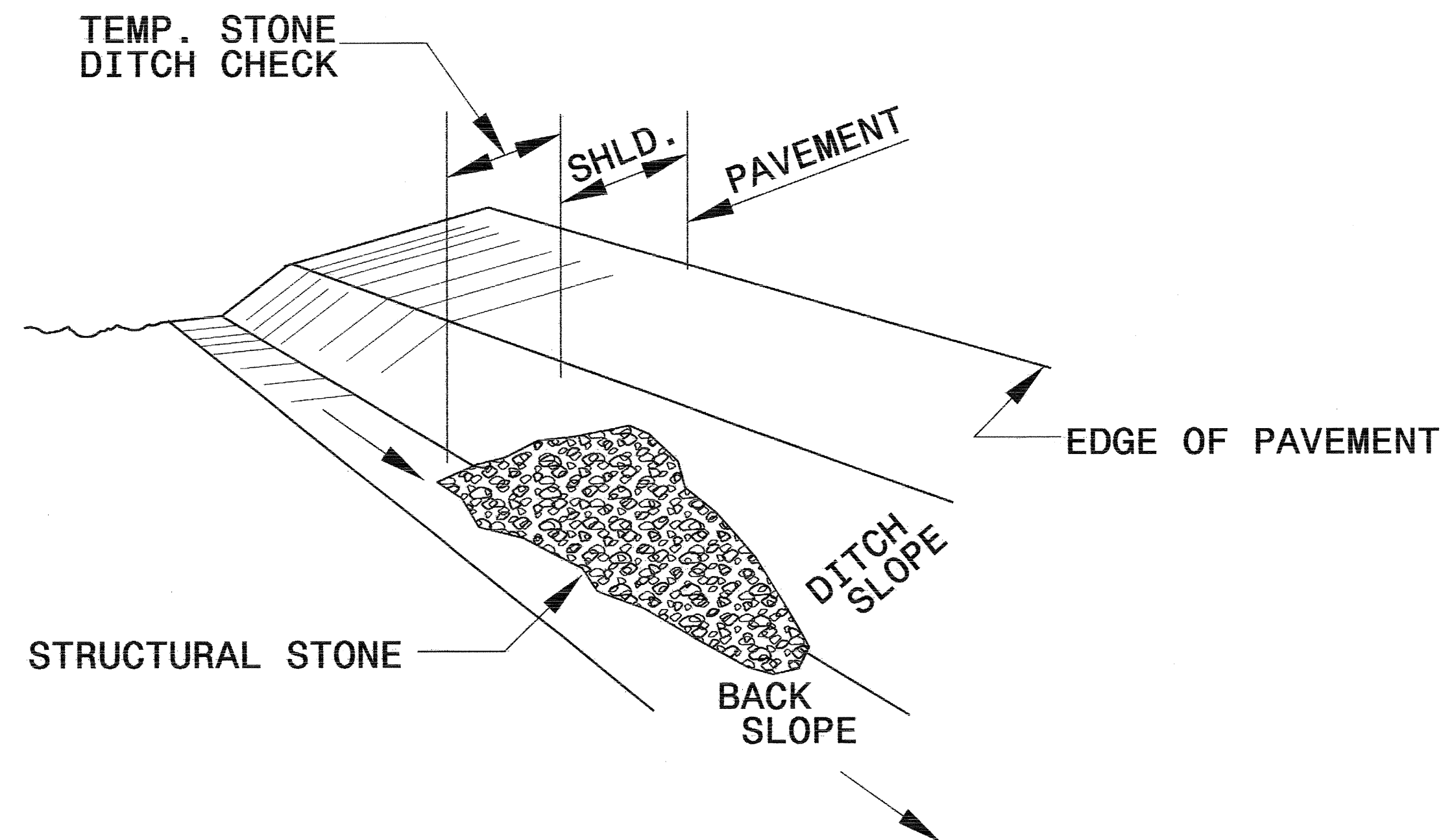
The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated July 18, 2006 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

1605.01 Temporary Silt Fence	1632.01 Rock Inlet Sediment Trap Type A
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
	1635.02 Rock Pipe Inlet Sediment Trap Type B

0-MA3-200 1612
 JemmiFerrell@ncdot.gov
 03/20/2006 10:20:23 AM
 I:\4407_EC_ash.dgn

PROJECT REFERENCE NO. 1-4407	SHEET NO. EC-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TEMPORARY ROCK SILT CHECK TYPE 'B' DETAIL

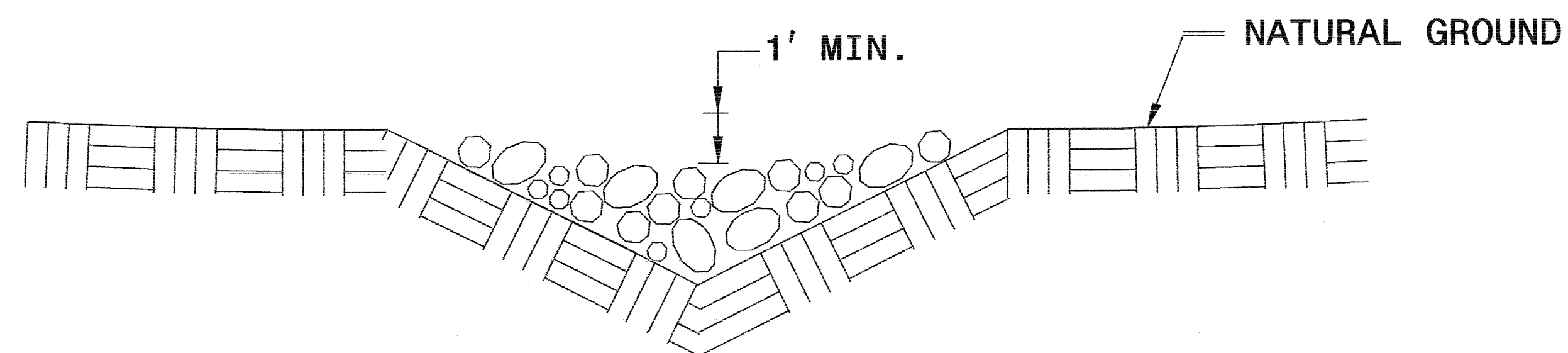


ISOMETRIC VIEW

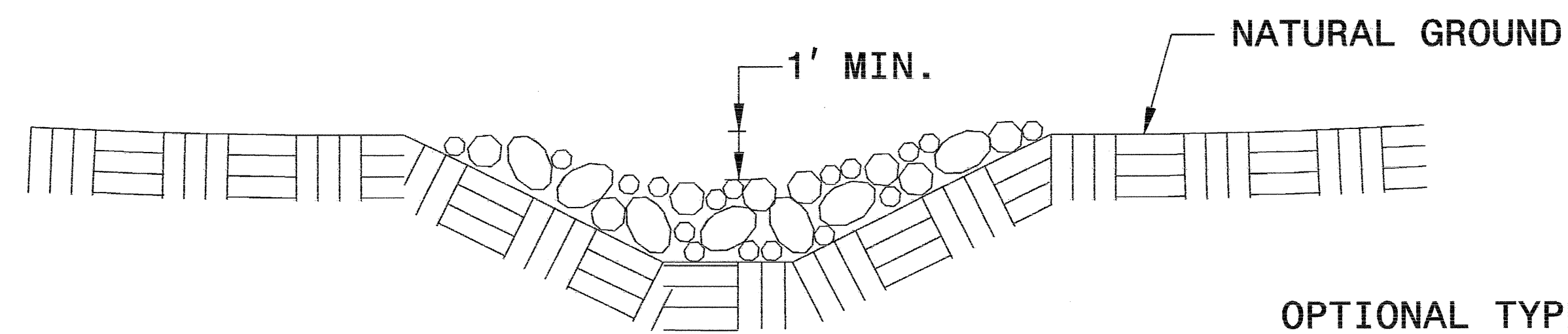
NOTES:

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

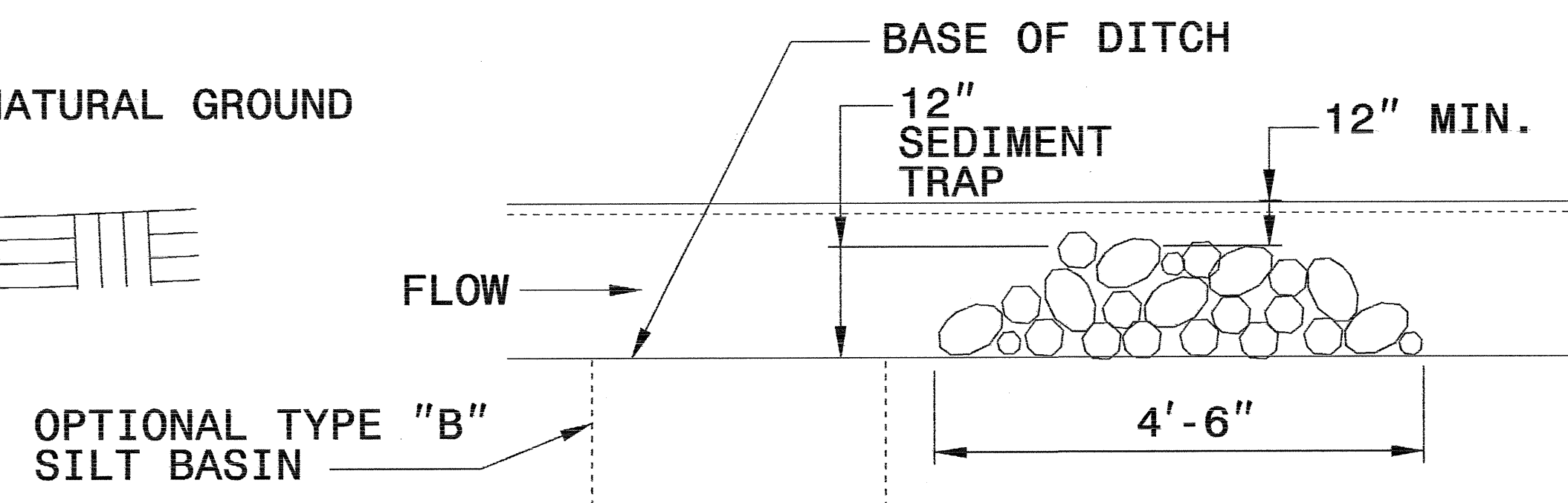
THE ENGINEER MAY DIRECT THE OPTION OF CLASS "A" STONE FOR SITES HAVING LESS THAN ONE (1) ACRE DRAINAGE AREA AND A DITCH GRADE LESS THAN 3%.



**CROSS SECTION
VEE DITCH**



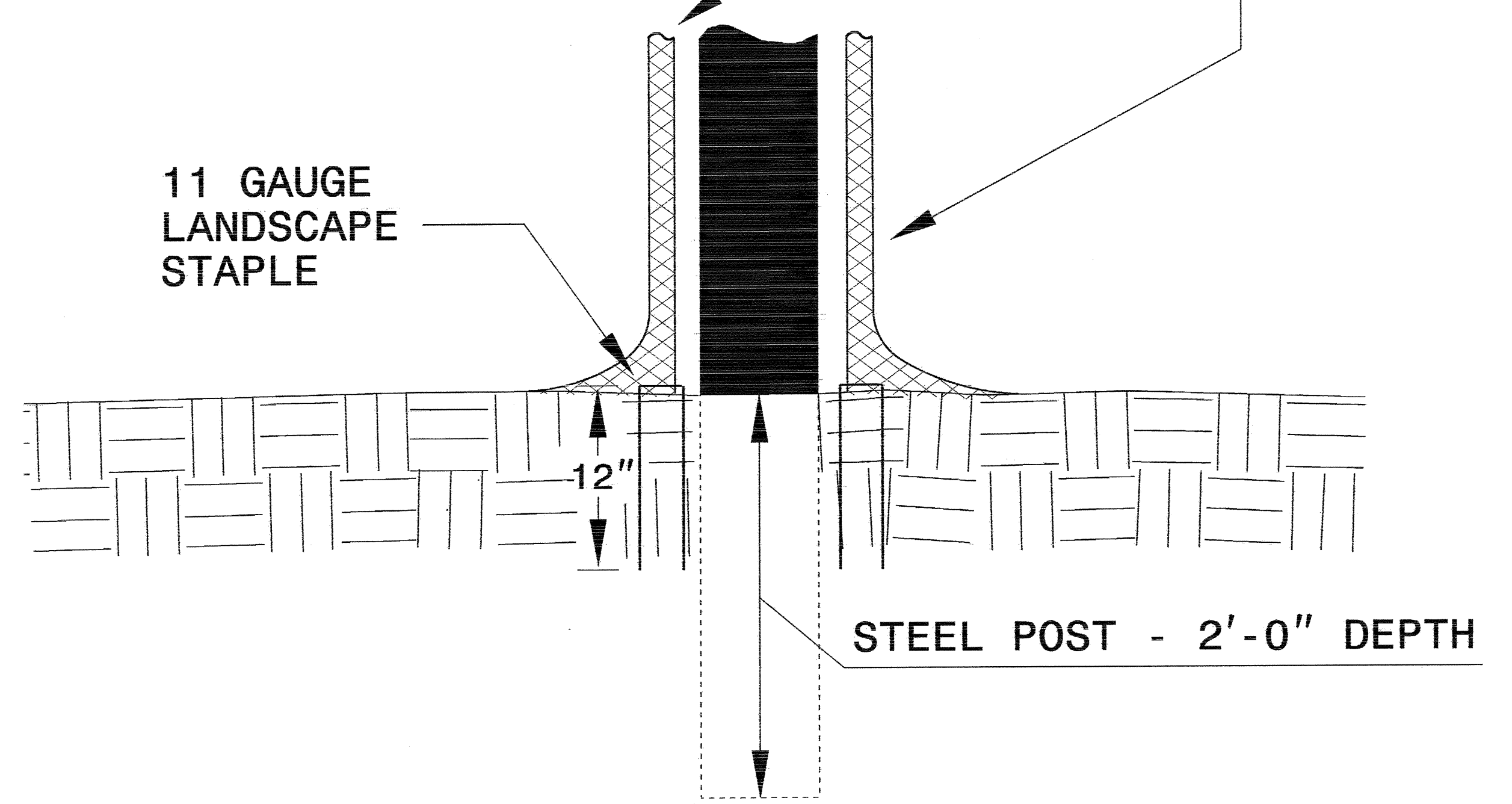
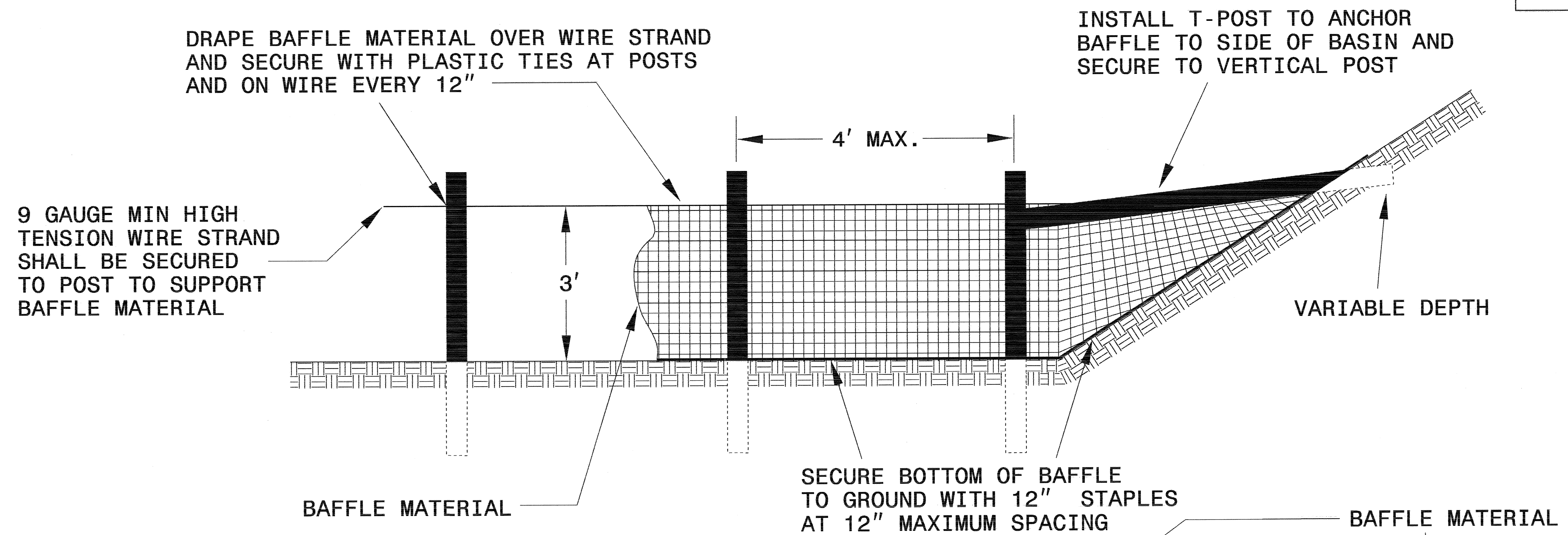
**CROSS SECTION
TRAPEZOIDAL DITCH**



ELEVATION VIEW

PROJECT REFERENCE NO. 1-4407	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.

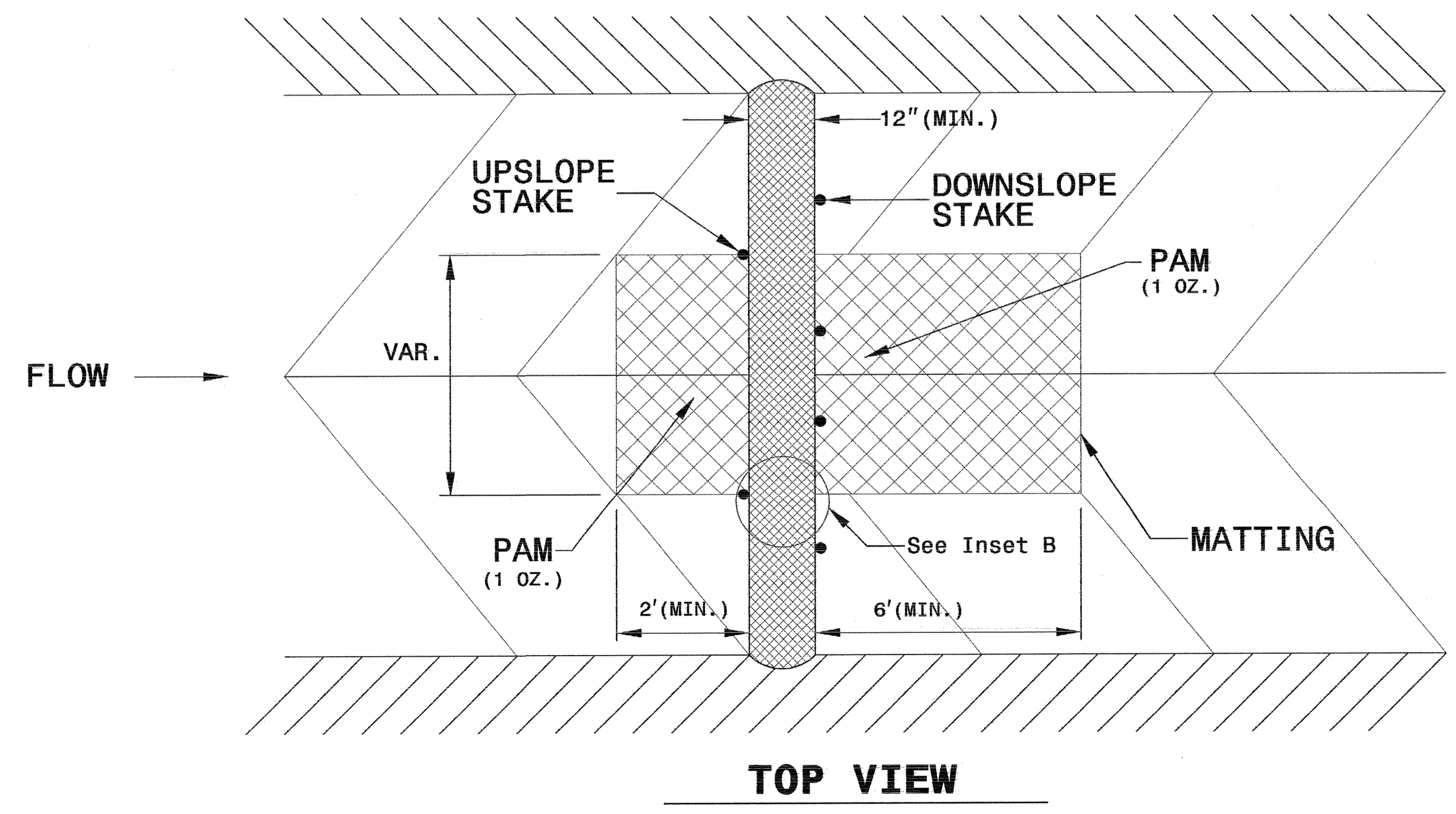
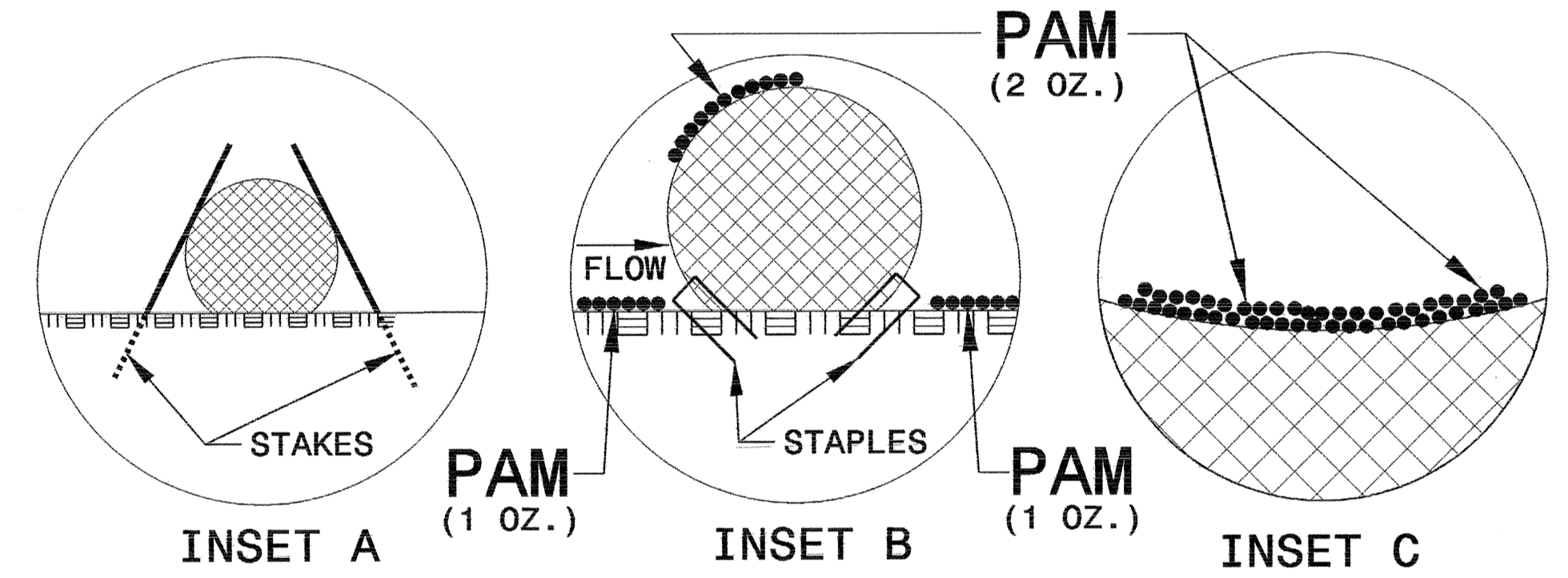
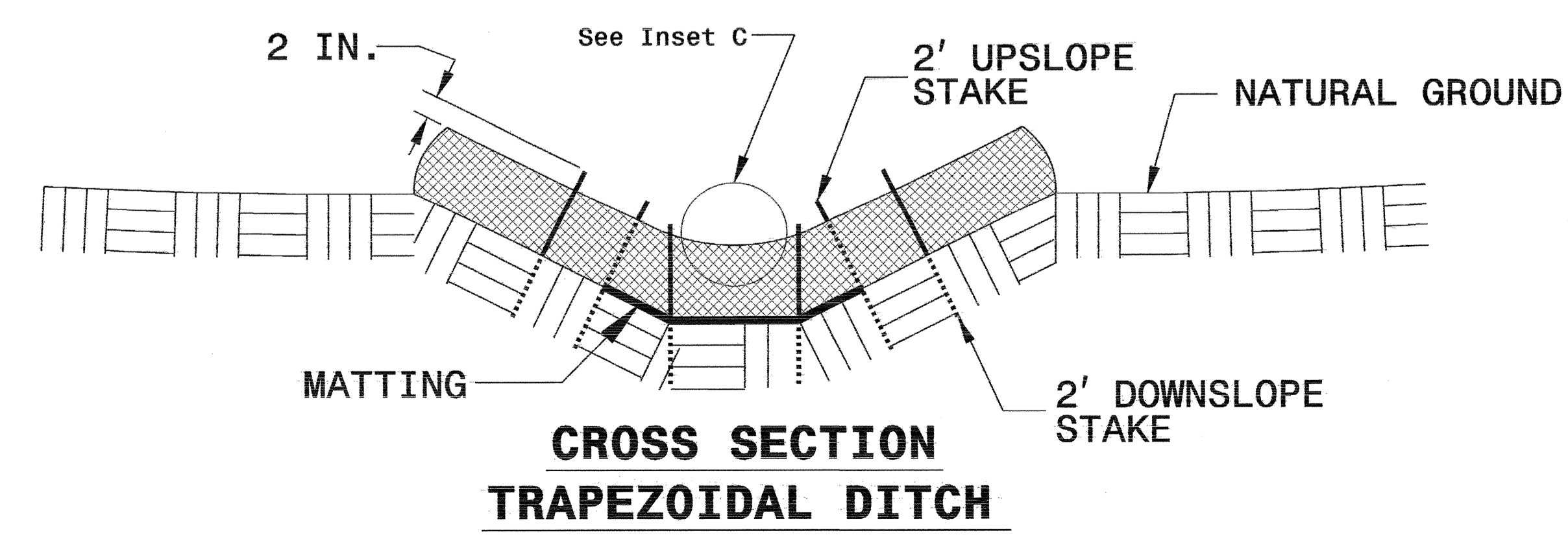
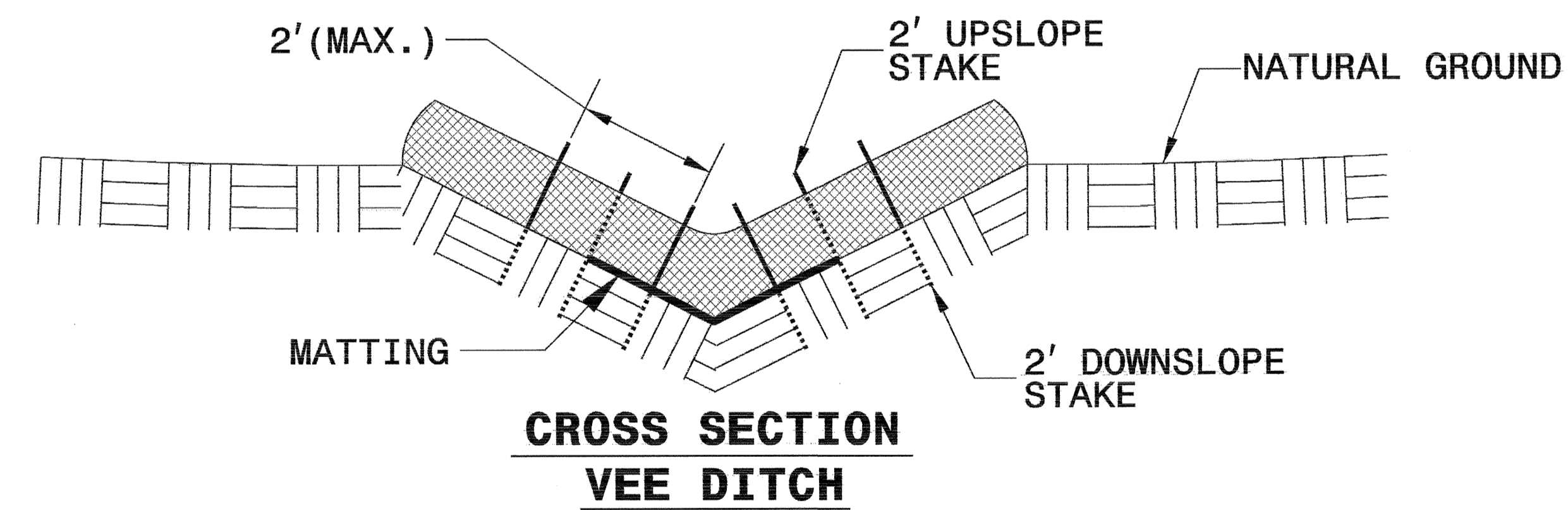
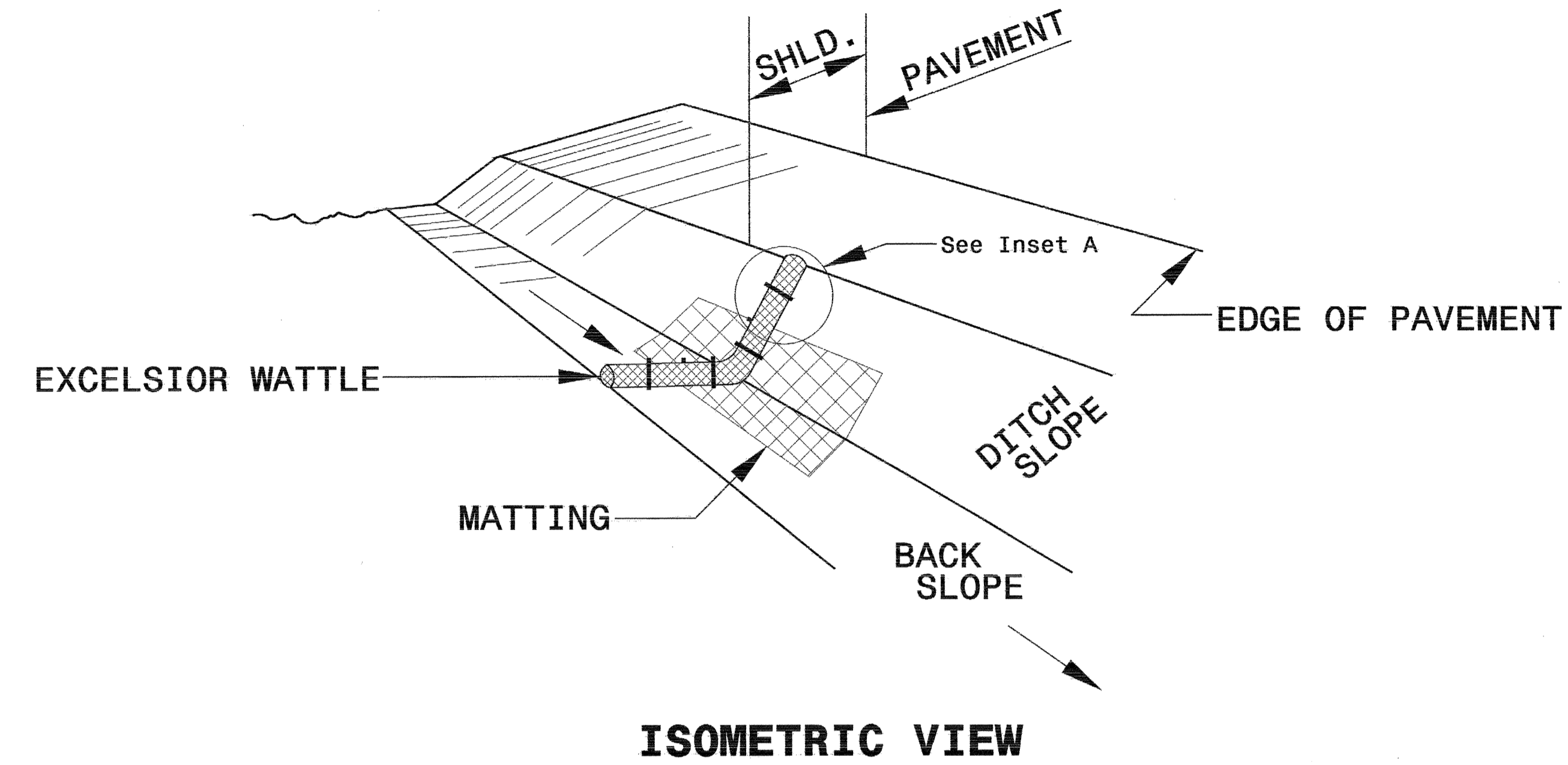
BAFFLE MATERIAL SHALL BE SECURED TO THE BOTTOM AND SIDES OF BASIN USING 12" LANDSCAPE STAPLES

PROJECT REFERENCE NO. 1-4407	SHEET NO. EC-2B
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL

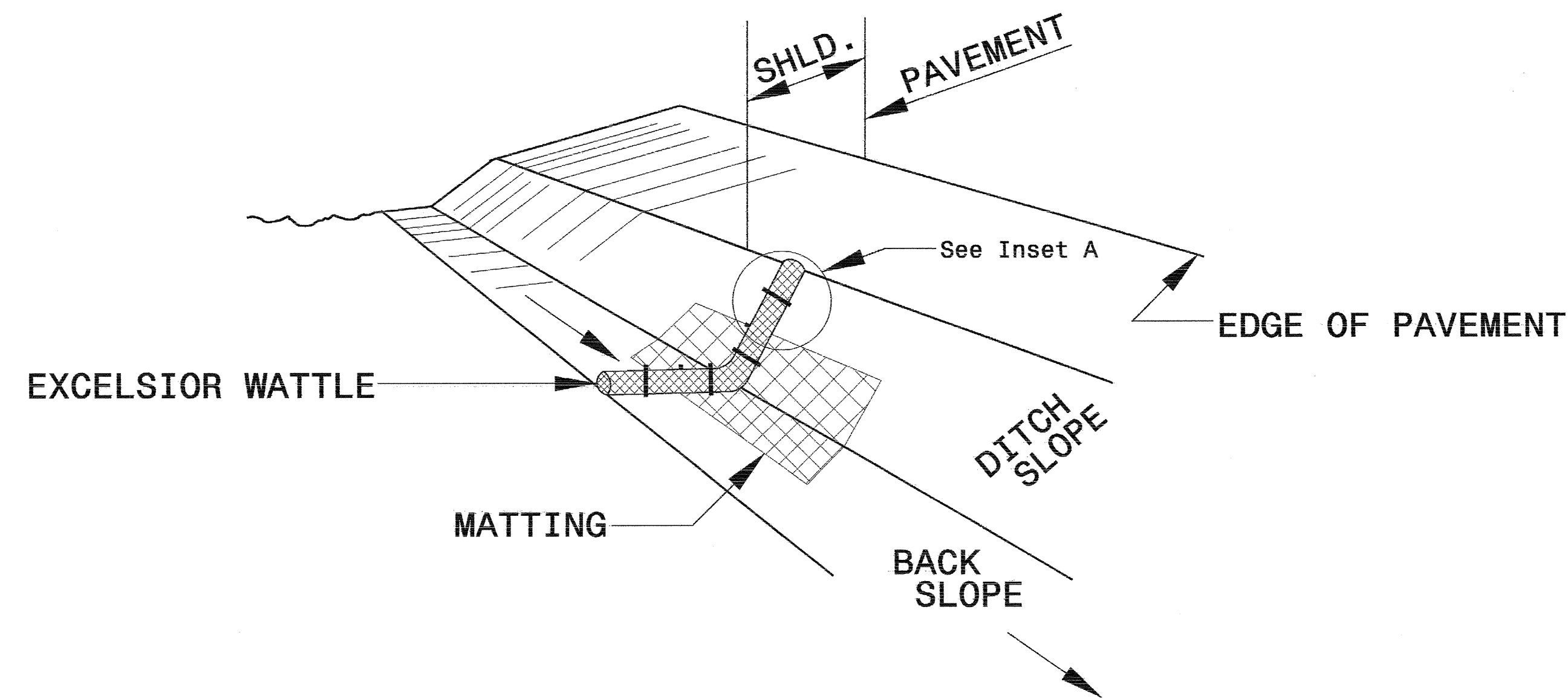
NOTES:

- 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.

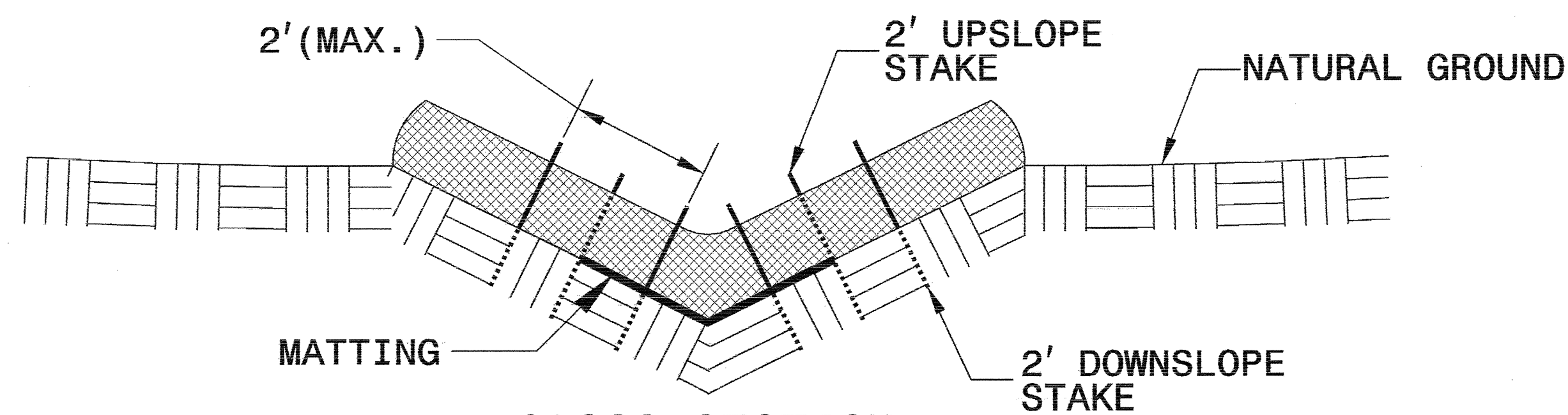


PROJECT REFERENCE NO. 1-4407		SHEET NO. EC-2C	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

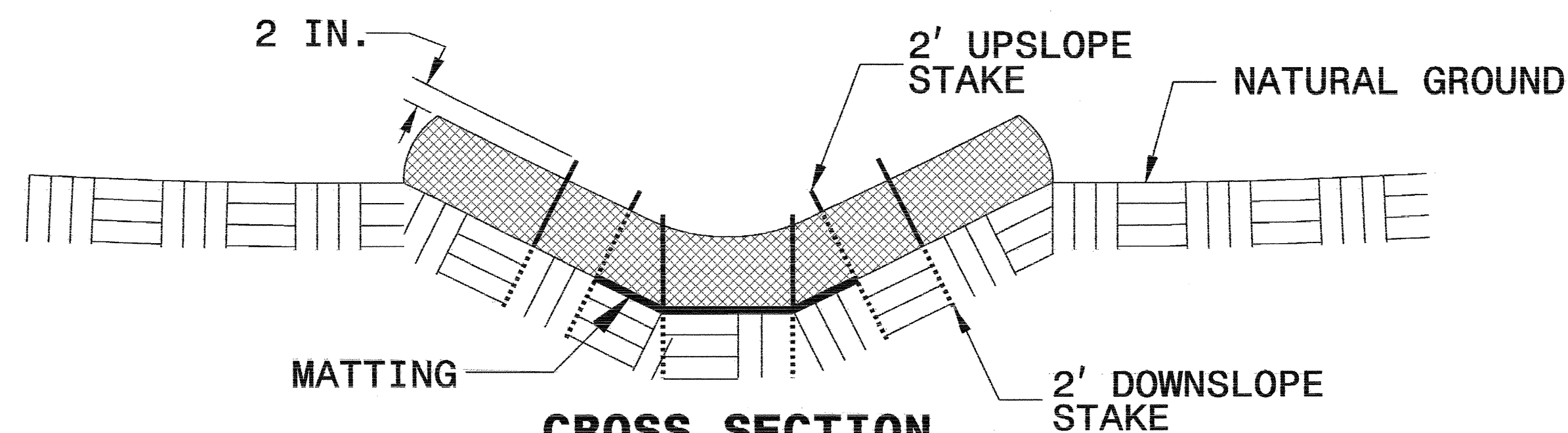
WATTLE DETAIL



ISOMETRIC VIEW



**CROSS SECTION
VEE DITCH**



**CROSS SECTION
TRAPEZOIDAL DITCH**

NOTES:

USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.

USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.

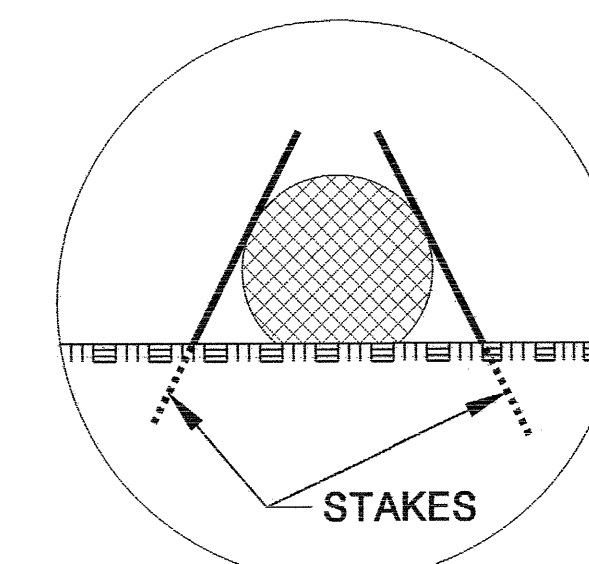
ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.

INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.

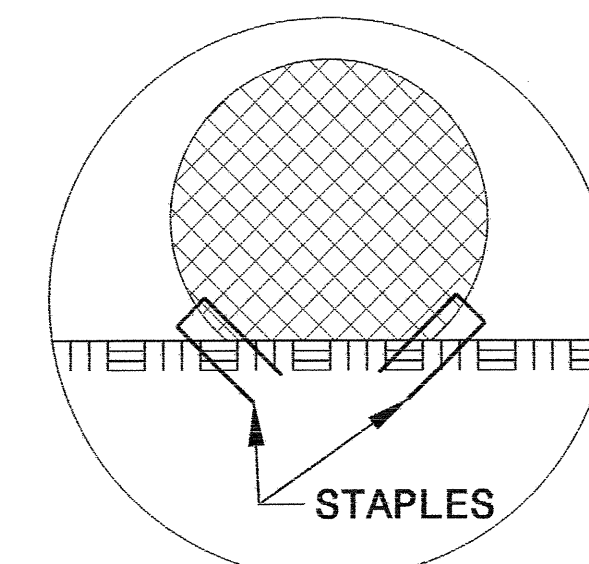
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

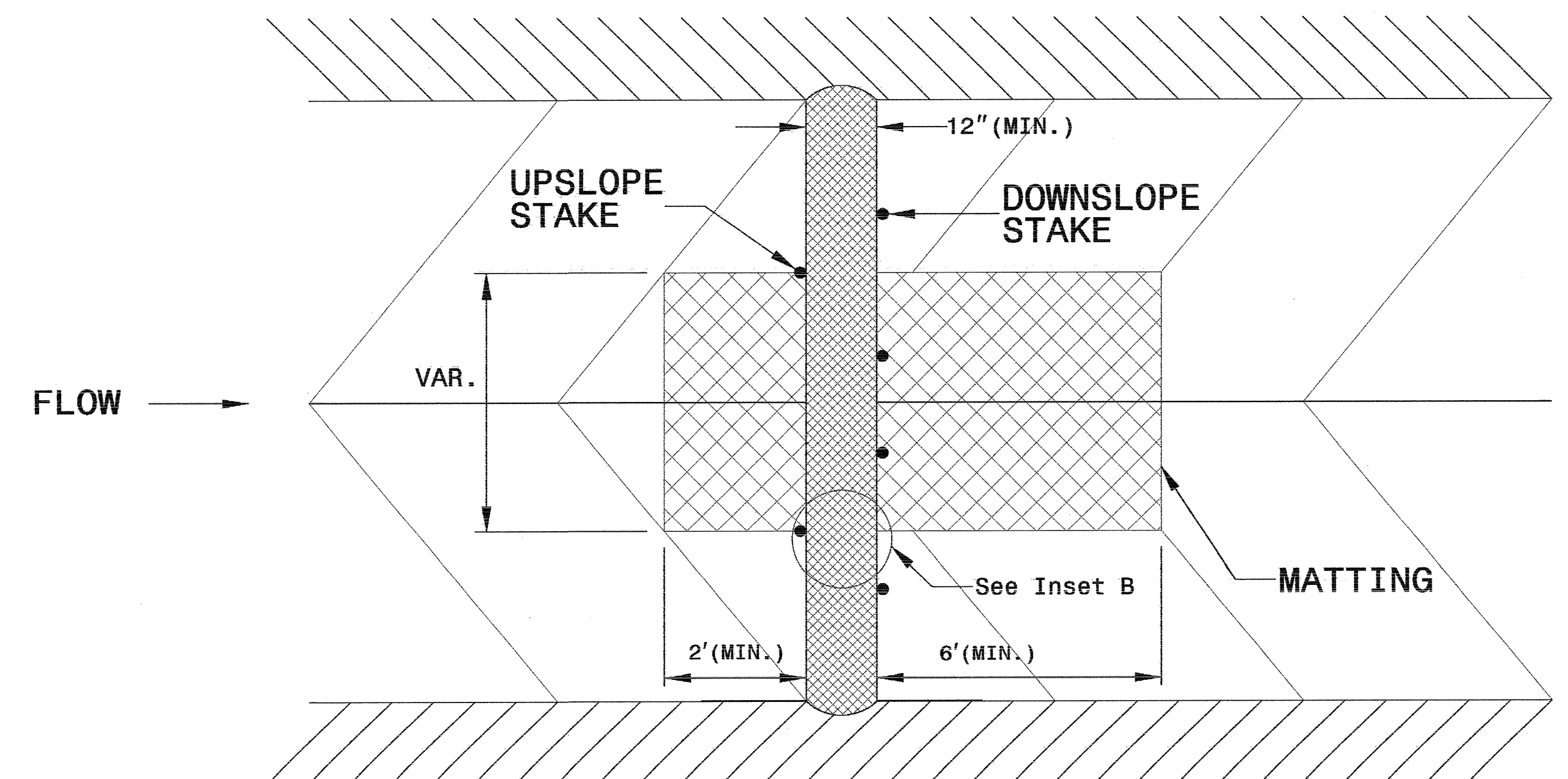
INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.



INSET A



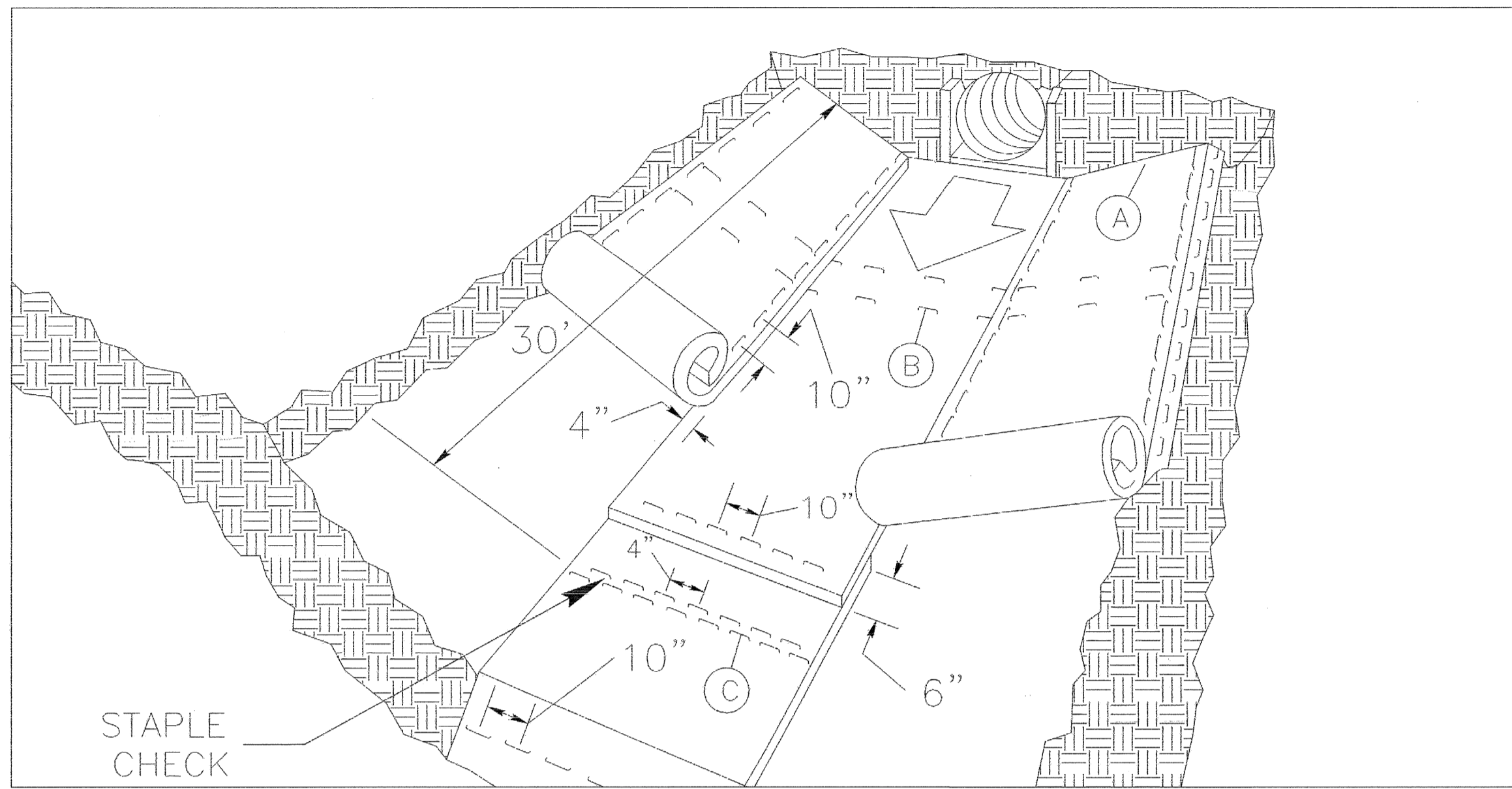
INSET B



TOP VIEW

PROJECT REFERENCE NO. 1-4407	SHEET NO. EC-2D
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

MATTING INSTALLATION DETAIL



MATTING IN DITCHES

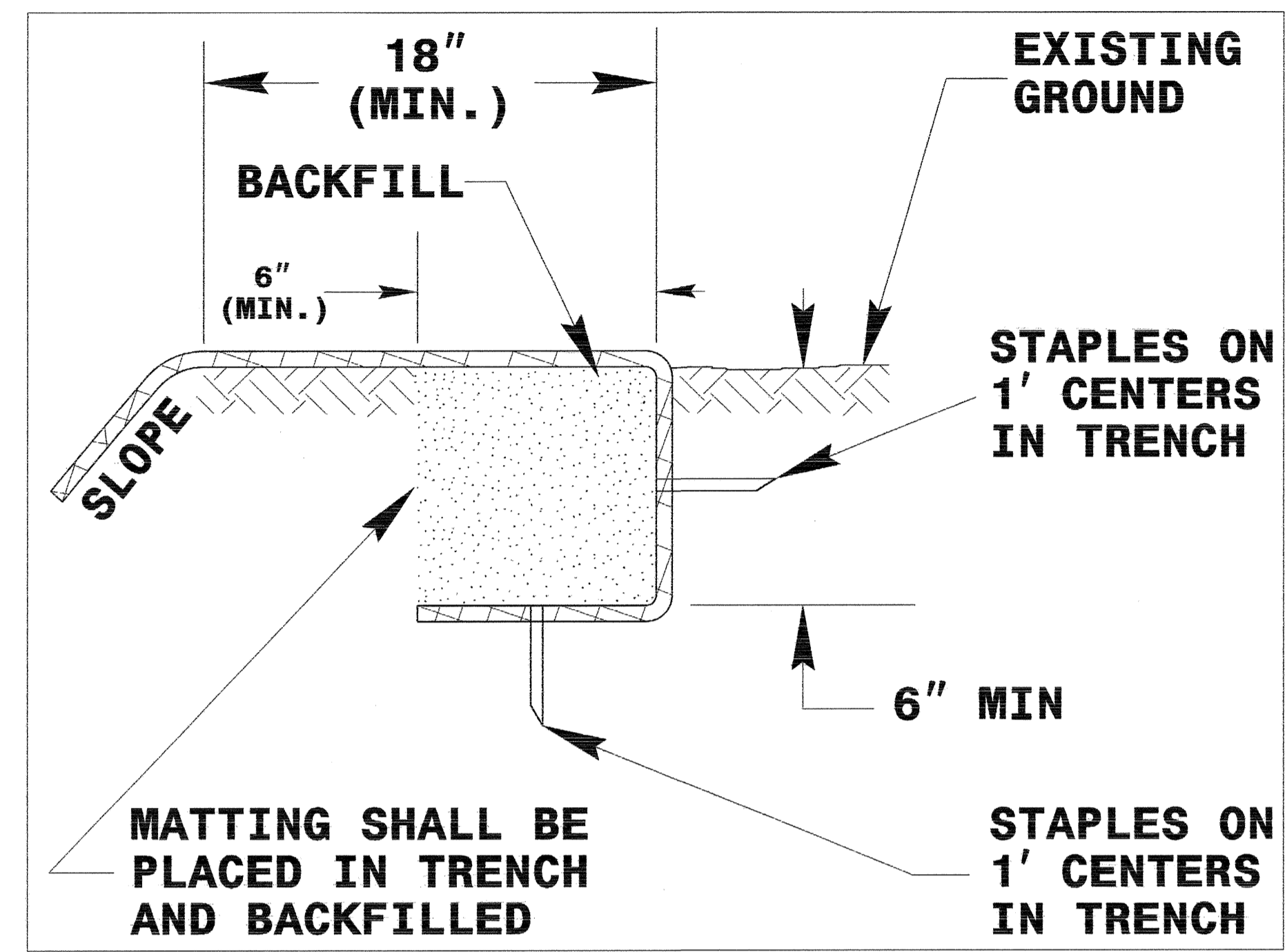
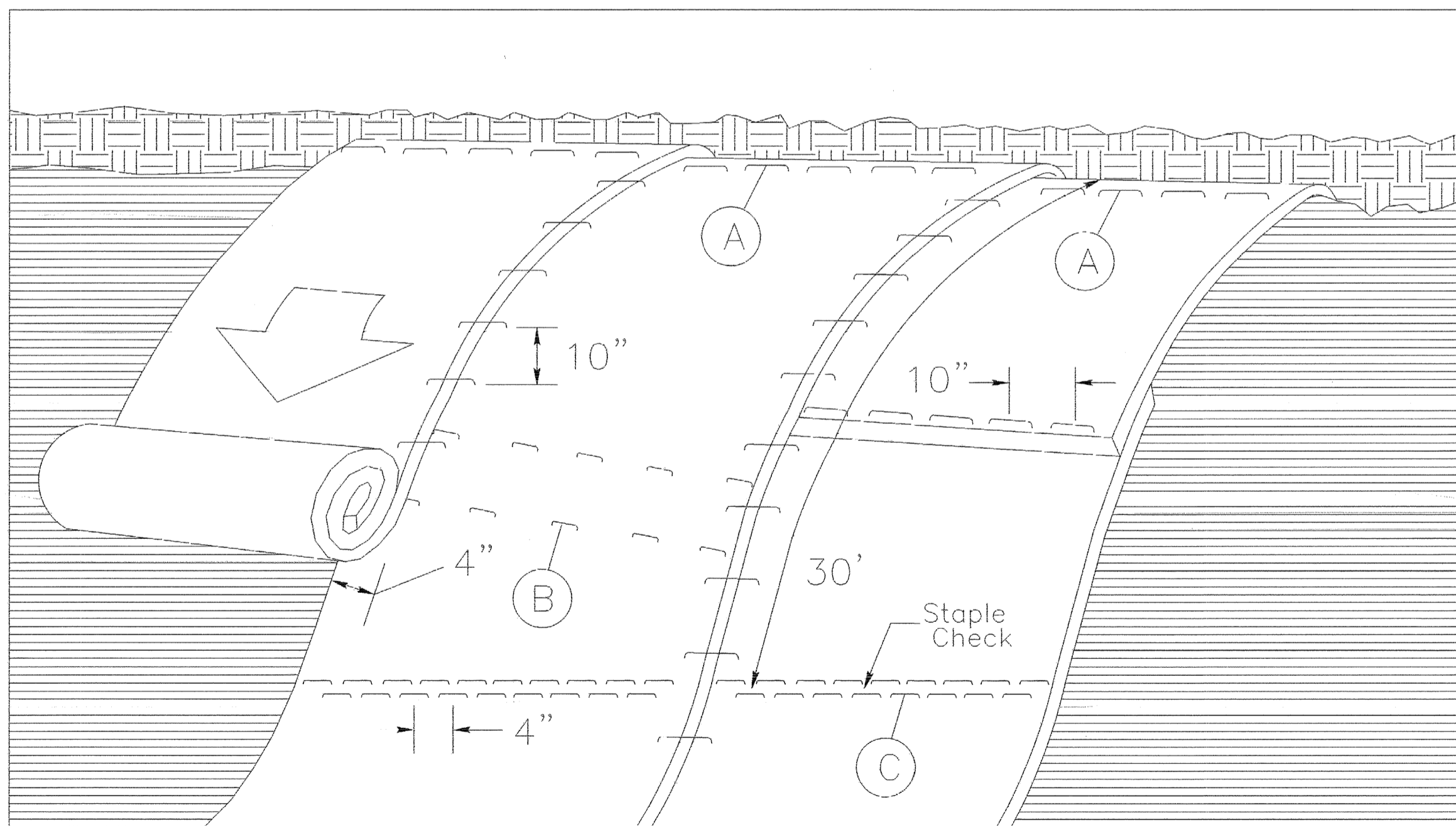


DIAGRAM (A)



MATTING ON SLOPES

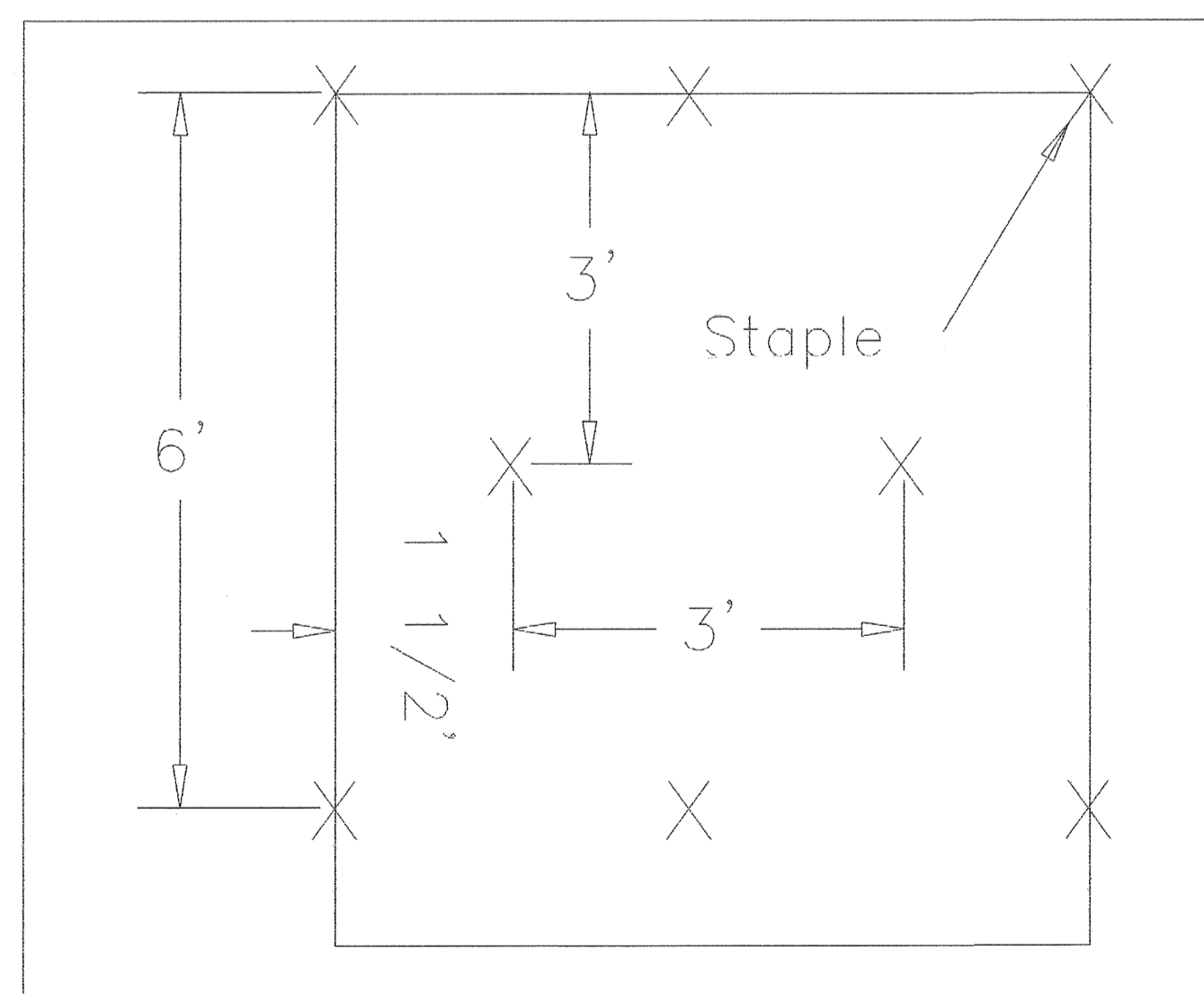


DIAGRAM (B)

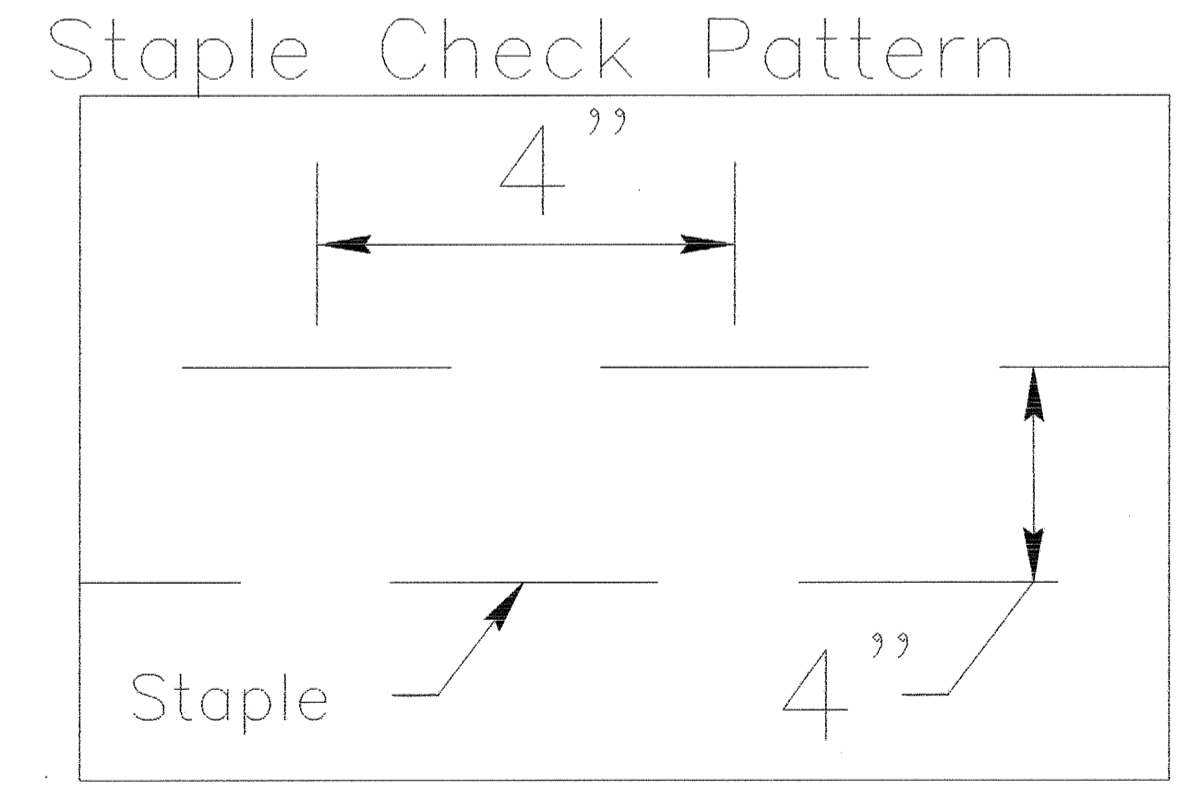


DIAGRAM (C)

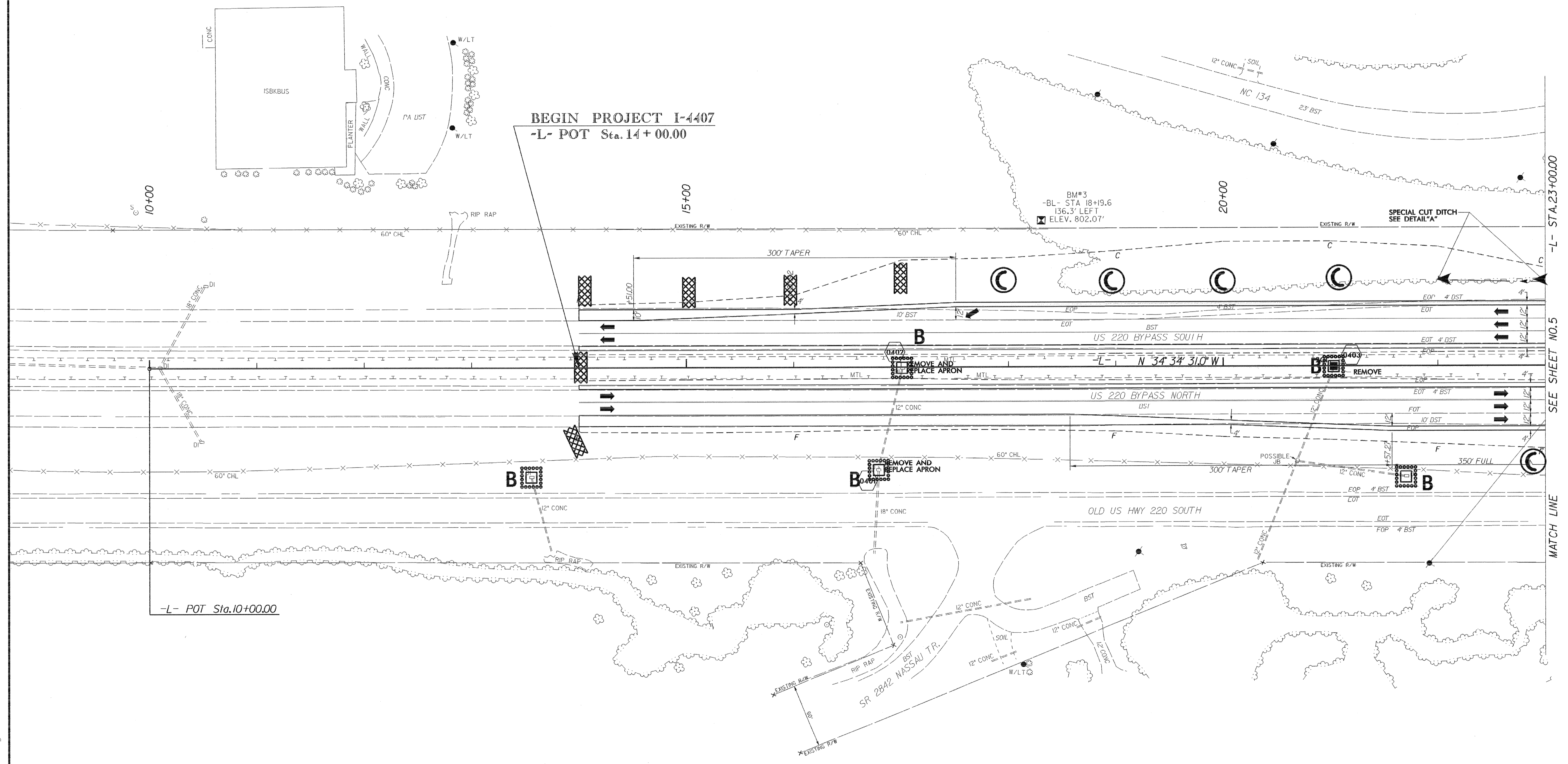
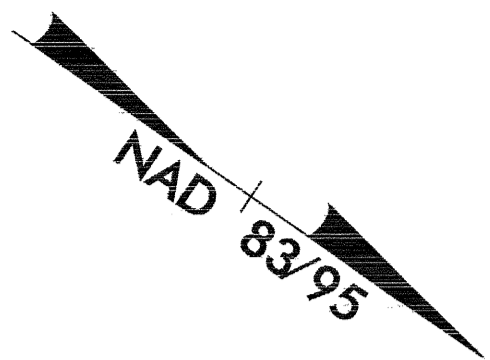
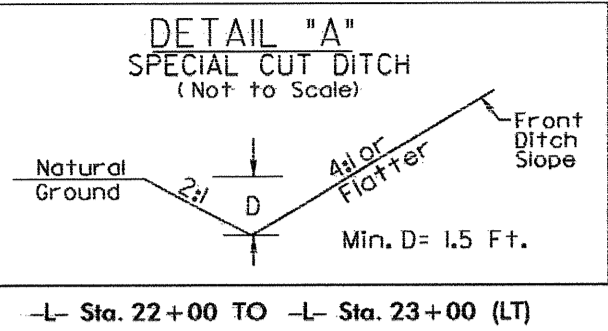
NOTES:

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

PROJECT REFERENCE NO. I-4407		SHEET NO. EC-4/CONST. A	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

NOTE: PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.



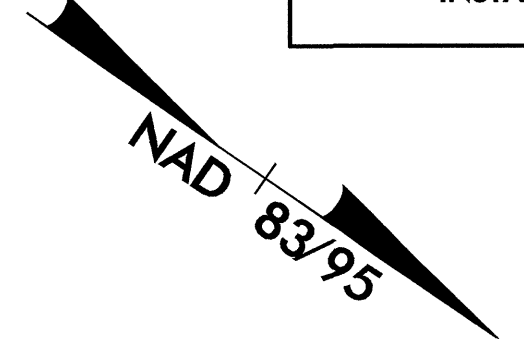
SEE SHEET NO. 5
MATCH LINE

- NOTES: (1) SEE SHEET 35 FOR -L- PROFILE
(2) GUARDRAIL OFFSET BLOCKS SHOULD BE INSPECTED AND REPLACED AS NECESSARY
(3) UPGRADE ANCHOR UNITS TO CURRENT STANDARDS
(4) 30' OF SAFETY CLEARING IS REQUIRED
(5) REMOVE AND RESET EXISTING MEDIAN GUARDRAIL AS DIRECTED BY ENGINEER

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jennifer.parish AT RENY242003

PROJECT REFERENCE NO. 1-4407	SHEET NO. EC-6/CONST.6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

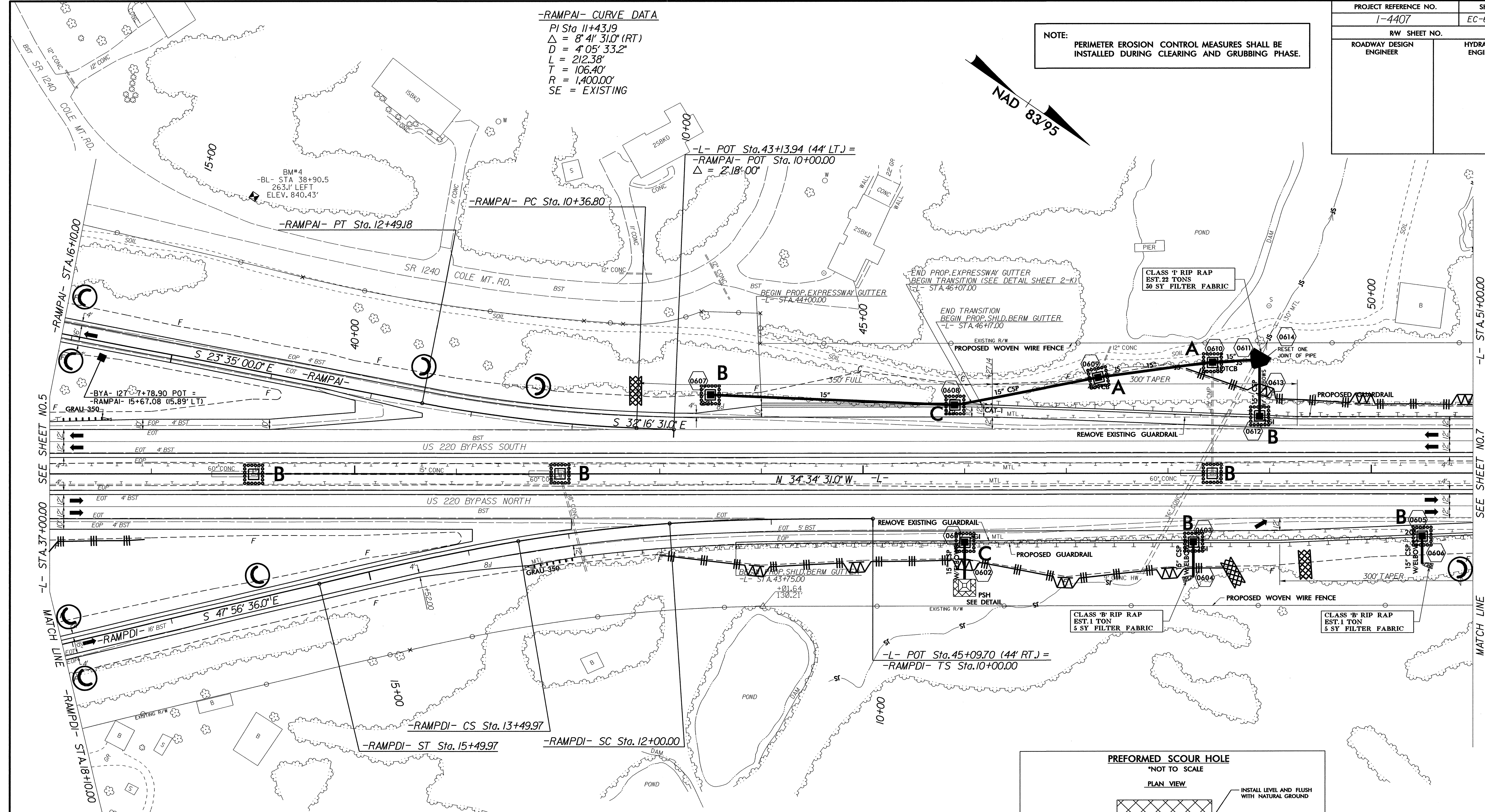
NOTE: PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.



-RAMPAI- CURVE DATA

PI Sta 11+43.19
 $\Delta = 8^\circ 41' 31.0''$ (RT)
 $D = 4^\circ 05' 33.2''$
 $L = 212.38'$
 $T = 106.40'$
 $R = 1,400.00'$
 $SE = \text{EXISTING}$

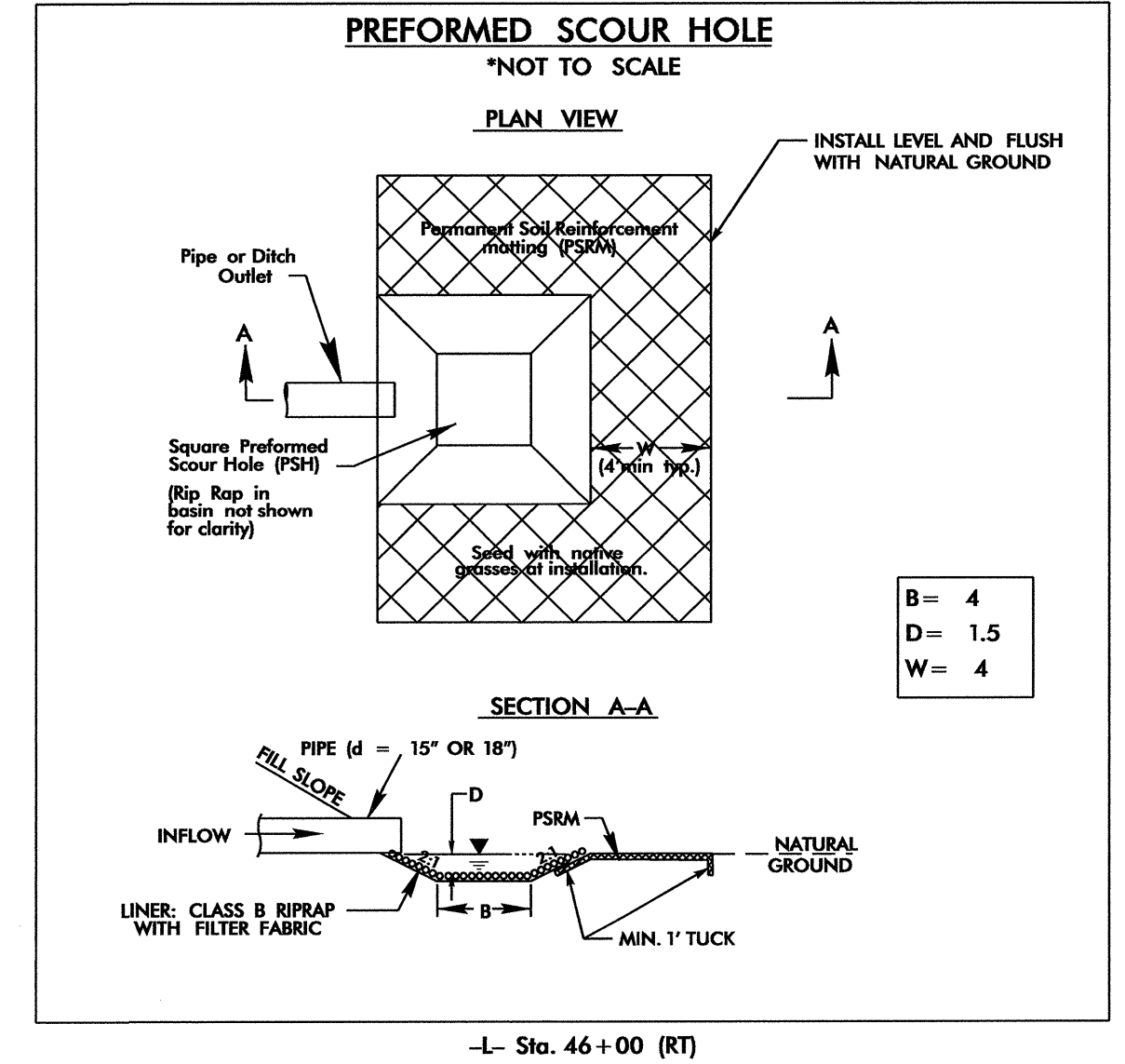
-L- POT Sta. 43+13.94 (44' LT.) =
 -RAMPAI- POT Sta. 10+00.00
 $\Delta = 2.18^\circ 00''$



-RAMPDI- CURVE DATA

PIs Sta 14+16.67	PI Sta 12+75.05	PIs Sta 11+33.36
$\Theta_s = 3^\circ 49' 11.0''$	$\Delta = 5^\circ 43' 43.0''$ (LT)	$\Theta_s = 3^\circ 49' 11.0''$
$L_s = 200.00'$	$D = 3^\circ 49' 11.0''$	$L_s = 200.00'$
$LT = 133.36'$	$T = 149.97'$	$LT = 133.36'$
$ST = 66.69'$	$T = 75.05'$	$ST = 66.69'$
	$R = 1,500.00'$	
	$SE = \text{EXISTING}$	

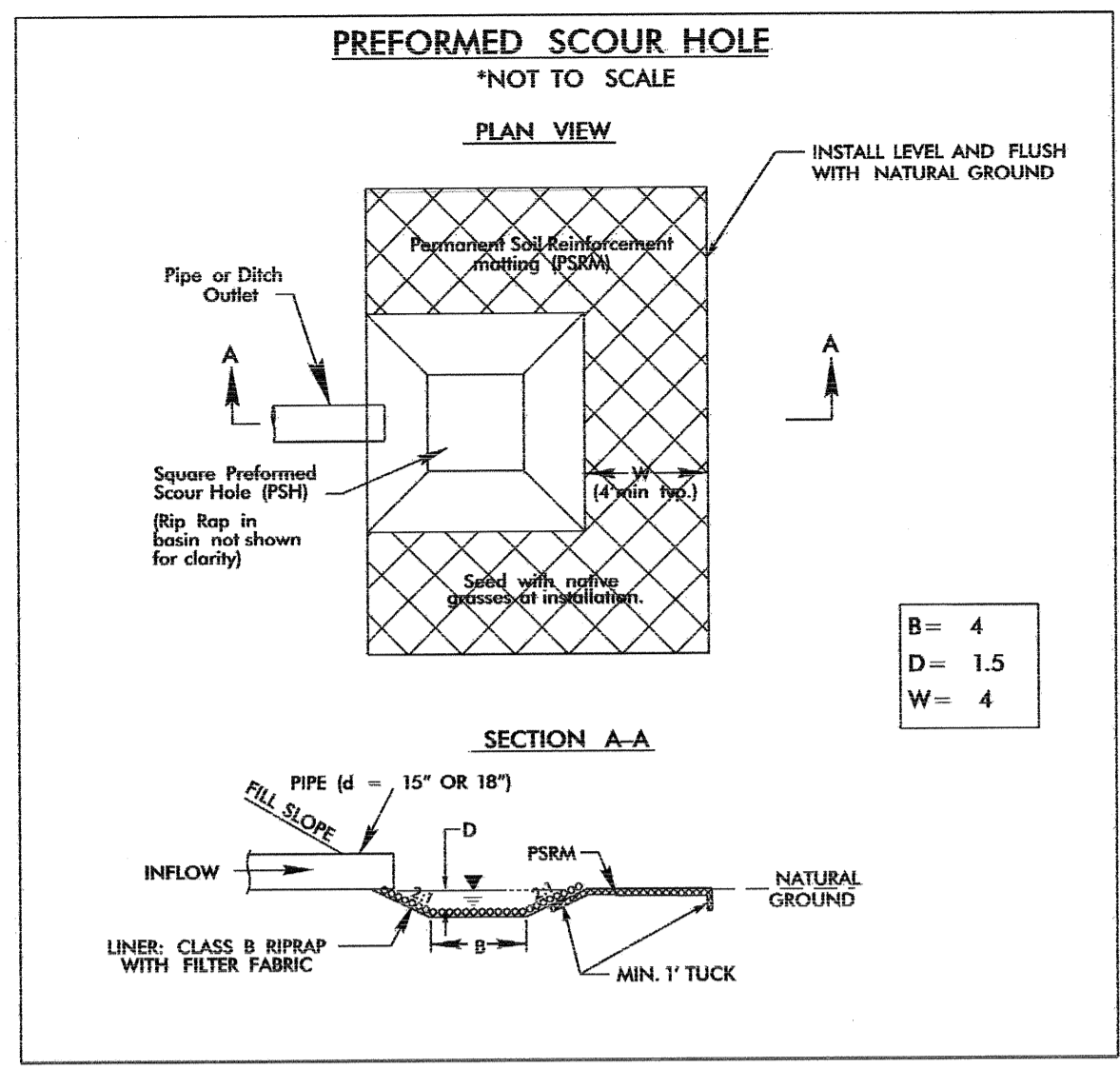
- NOTES: (1) SEE SHEET 36 FOR -L- PROFILE
 (2) SEE SHEET 52 FOR -RAMPAI- PROFILE
 (3) SEE SHEET 54 FOR -RAMPDI- PROFILE
 (4) GUARDRAIL OFFSET BLOCKS SHOULD BE INSPECTED AND REPLACED AS NECESSARY
 (5) 30' OF SAFETY CLEARING IS REQUIRED
 (6) REMOVE AND RESET EXISTING MEDIUM GUARDRAIL AS DIRECTED BY ENGINEER



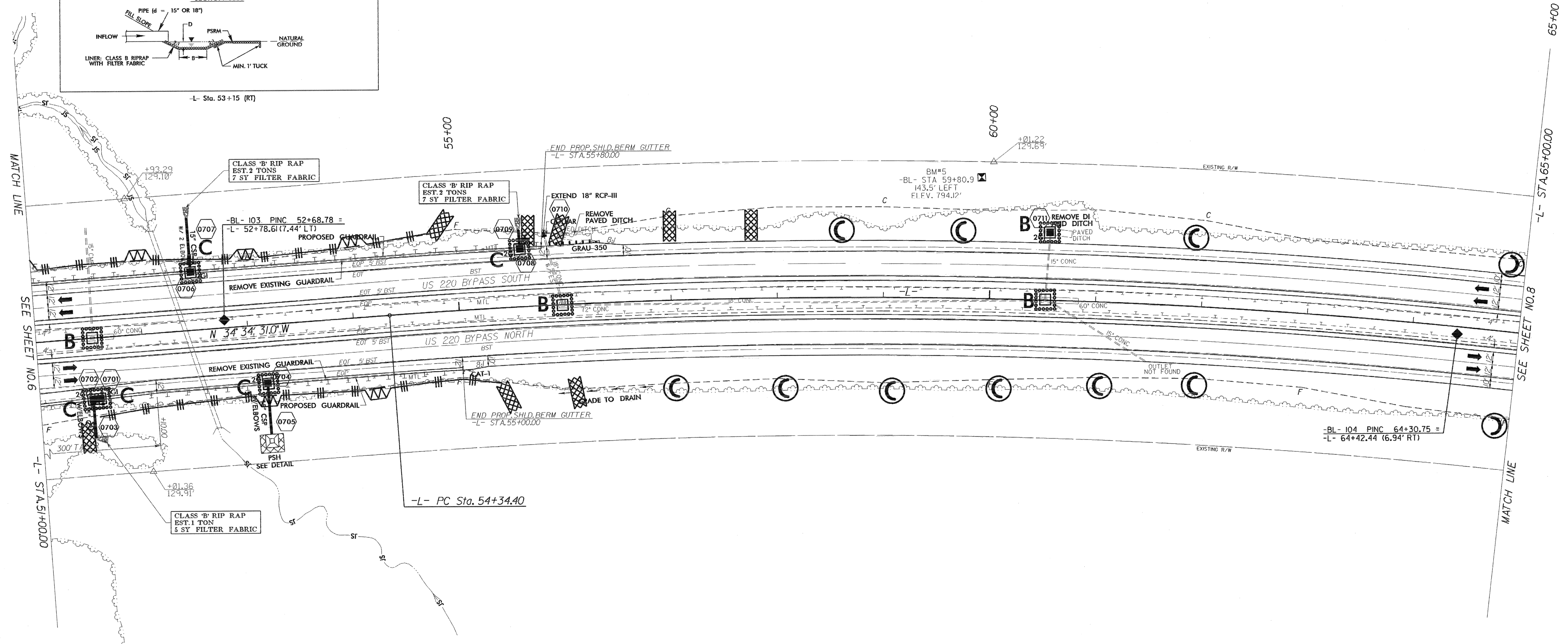
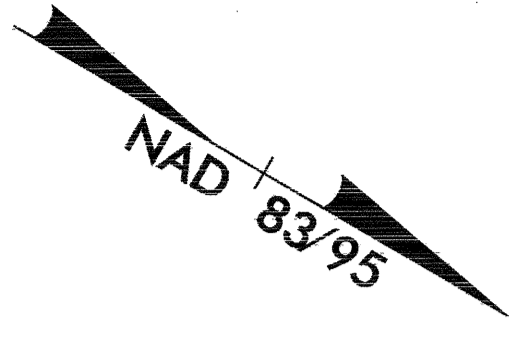
-L- Sta. 46+00 (RT)

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 11/38 DAWSON MILLER RD.

PROJECT REFERENCE NO.	SHEET NO.
1-4407	EC-7/CONST.7
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	



NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.



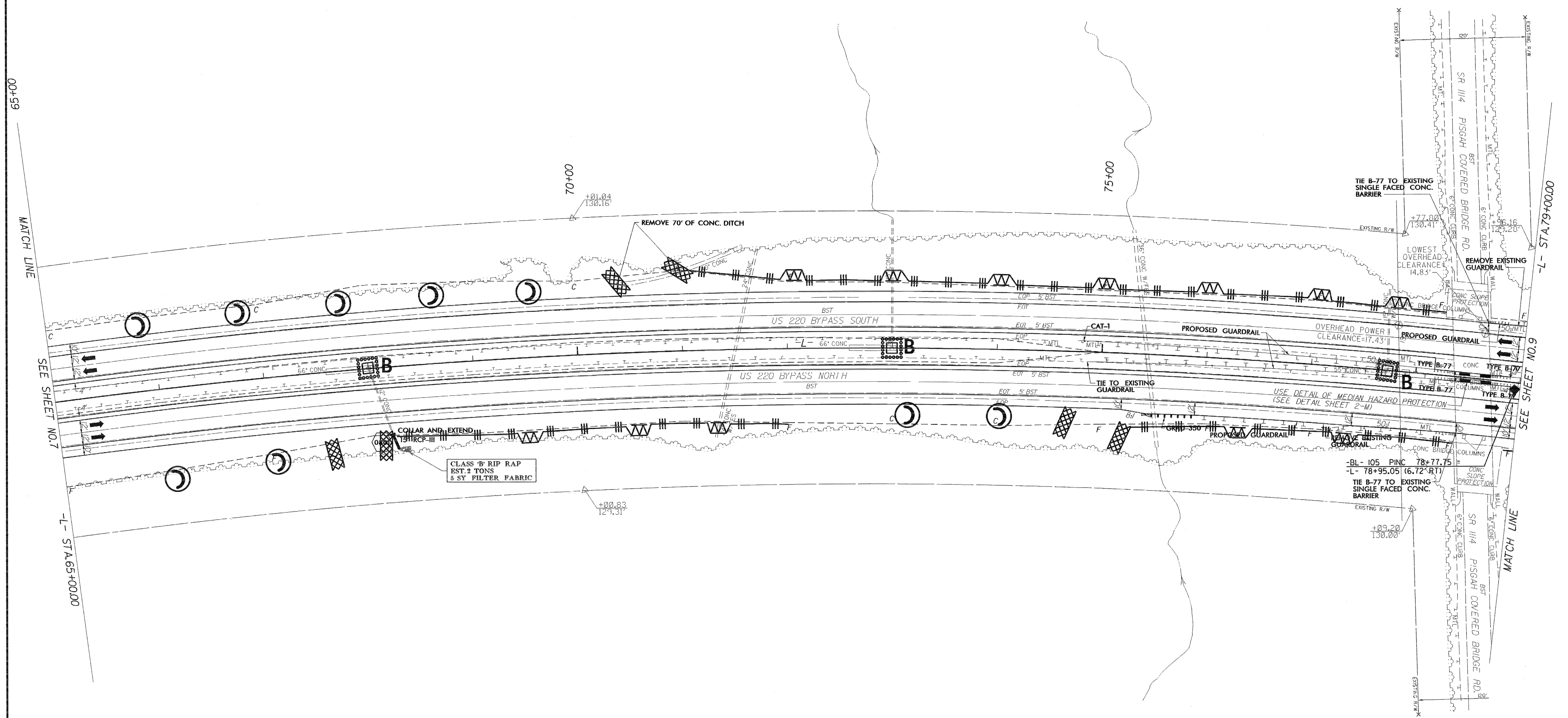
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 12/11/2009 10:11:51 AM

- NOTES:** (1) SEE SHEET 36 FOR -L- PROFILE
 (2) GUARDRAIL OFFSET BLOCKS SHOULD BE INSPECTED AND REPLACED AS NECESSARY
 (3) UPGRADE ANCHOR UNITS TO CURRENT STANDARDS
 (4) 30' OF SAFETY CLEARING IS REQUIRED
 (5) REMOVE AND RESET EXISTING MEDIAN GUARDRAIL AS DIRECTED BY ENGINEER

-L- CURVE DATA
 PI Sta 75+16.94
 $\Delta = 39^\circ 56' 48.4''$ (RT)
 $D = 0' 59' 59.7''$
 $L = 3,994.97'$
 $T = 2,082.54'$
 $R = 5,730.00'$
 SE = EXISTING

PROJECT REFERENCE NO. 1-4407		SHEET NO. EC-8/CONST.8	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

NOTE: PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.



CLASS 'B' RIP RAP
EST. 2 TONS
5 SY FILTER FABRIC

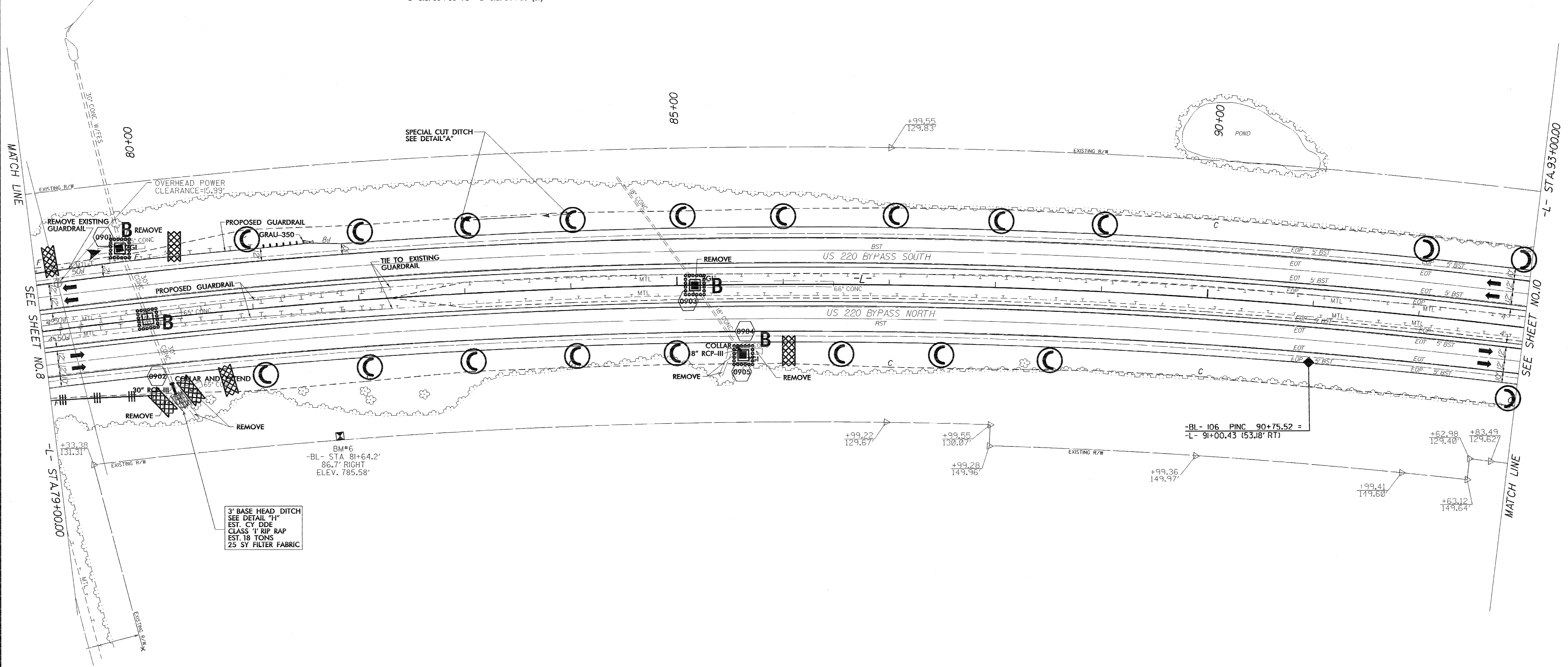
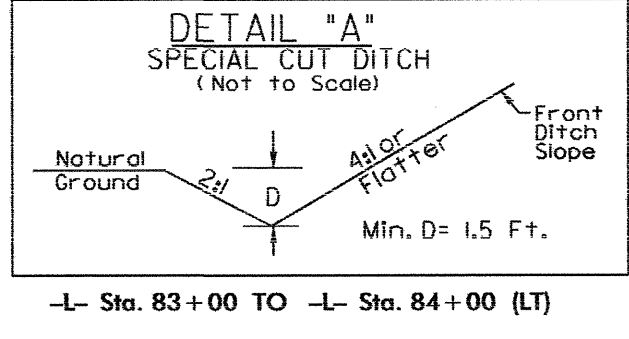
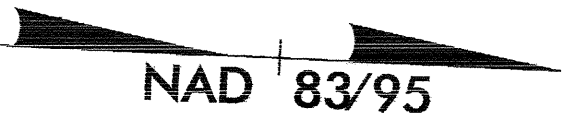
-L- CURVE DATA
 PI Sta 75+16.94
 $\Delta = 39^\circ 56' 48.4''$ (RT)
 $D = 0' 59' 59.7''$
 $L = 3,994.97'$
 $T = 2,082.54'$
 $R = 5,730.00'$
 SE = EXISTING

- NOTES: (1) SEE SHEET 37 FOR -L- PROFILE
 (2) GUARDRAIL OFFSET BLOCKS SHOULD BE INSPECTED AND REPLACED AS NECESSARY
 (3) UPGRADE ANCHOR UNITS TO CURRENT STANDARDS
 (4) 30' OF SAFETY CLEARING IS REQUIRED
 (5) REMOVE AND RESET EXISTING MEDIAN GUARDRAIL AS DIRECTED BY ENGINEER

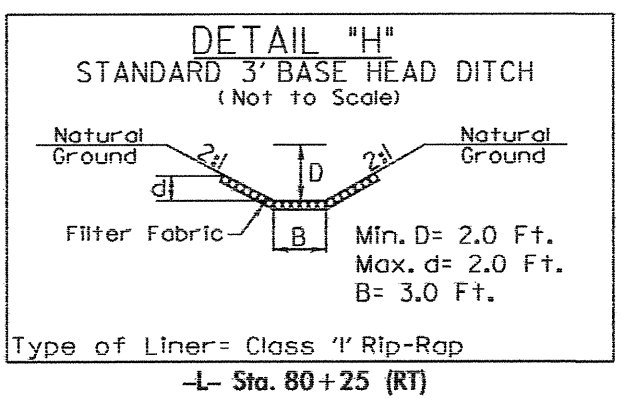
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 jennifer.parish

PROJECT REFERENCE NO.		SHEET NO.	
1-4407		EC-9/CONST.9	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

NOTE: PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.



3' BASE HEAD DITCH
SEE DETAIL "H"
EST. CY DDE
CLASS 1 RIP RAP
EST. 18 TONS
25 SY FILTER FABRIC



-L- CURVE DATA
PI Sta 75+16.94
 $\Delta = 39^{\circ} 56' 48.4''$ (RT)
 $D = 0^{\circ} 59' 59.7''$
 $L = 3,994.97'$
 $T = 2,082.54'$
 $R = 5,730.00'$
SE = EXISTING

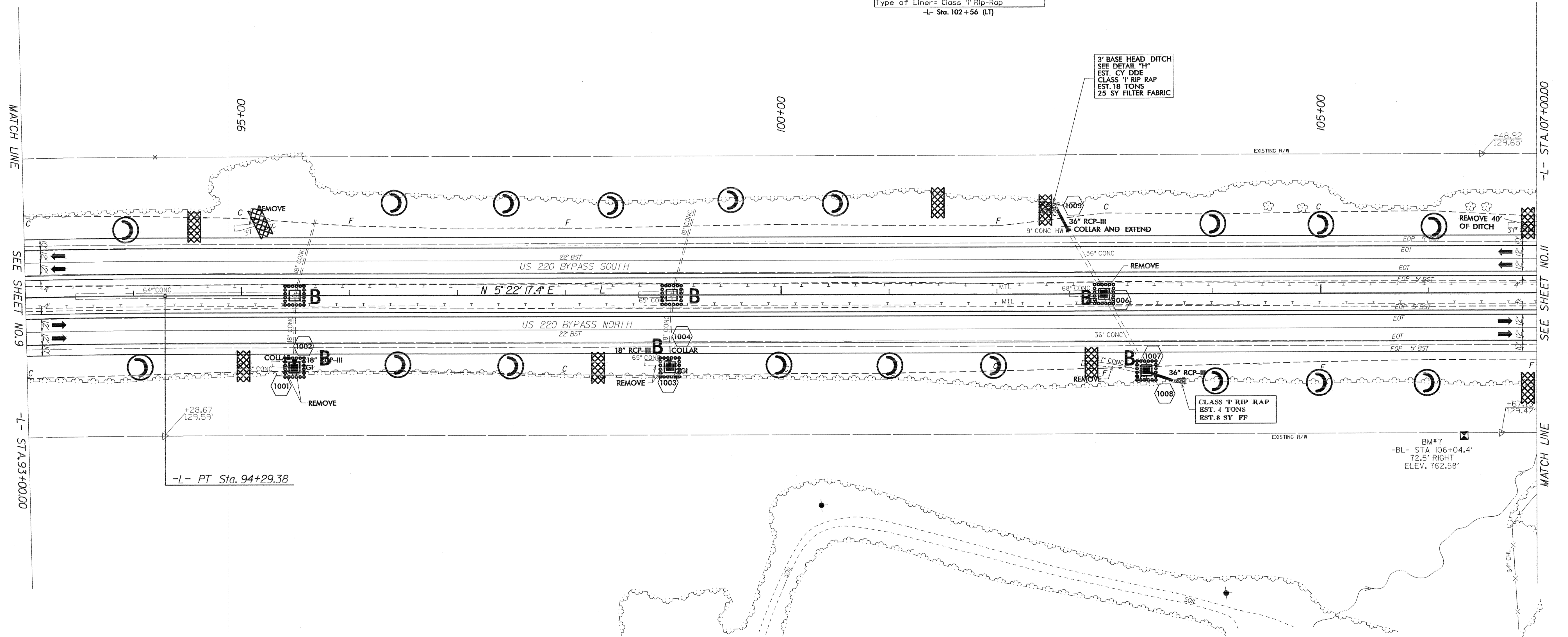
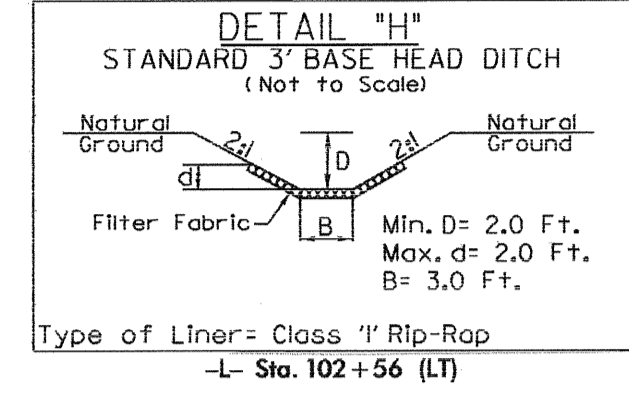
- NOTES: (1) SEE SHEET 37 FOR -L- PROFILE
(2) GUARDRAIL OFFSET BLOCKS SHOULD BE INSPECTED AND REPLACED AS NECESSARY
(3) UPGRADE ANCHOR UNITS TO CURRENT STANDARDS
(4) 30' OF SAFETY CLEARING IS REQUIRED
(5) REMOVE AND RESET EXISTING MEDIAN GUARDRAIL AS DIRECTED BY ENGINEER

C:\MAR-2010 16:30
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 14/07/2010 14:40:07
 A:\RE\242003

PROJECT REFERENCE NO.		SHEET NO.	
1-4407		EC-10/CONST.10	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

NOTE: PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

NAD 83/95



-L- PT Sta. 94+29.38

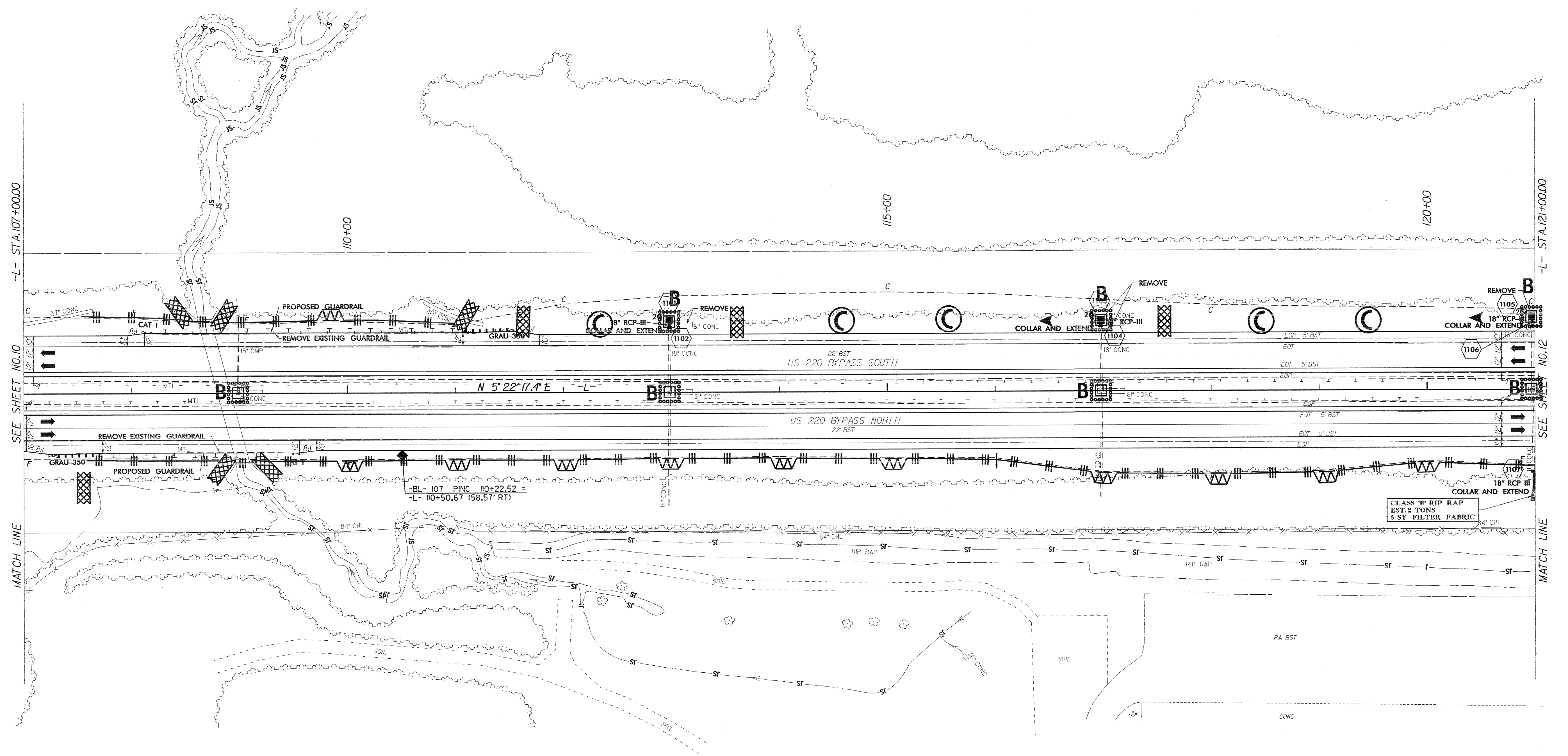
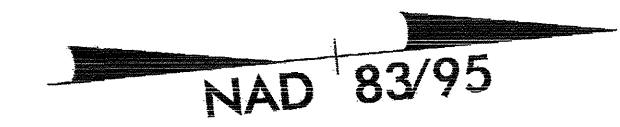
-L- CURVE DATA
 PI Sta 75+16.94
 $\Delta = 39^{\circ} 56' 48.4''$ (RT)
 $D = 0^{\circ} 59' 59.7''$
 $L = 3,994.97'$
 $T = 2,082.54'$
 $R = 5,730.00'$
 SE = EXISTING

- NOTES: (1) SEE SHEET 38 FOR -L- PROFILE
 (2) GUARDRAIL OFFSET BLOCKS SHOULD BE INSPECTED AND REPLACED AS NECESSARY
 (3) UPGRADE ANCHOR UNITS TO CURRENT STANDARDS
 (4) 30' OF SAFETY CLEARING IS REQUIRED
 (5) REMOVE AND RESET EXISTING MEDIAN GUARDRAIL AS DIRECTED BY ENGINEER

01-MAR-2010 16:32
 H:\Projects\14407_EC-10\Sheet10.dwg
 H:\Projects\14407_EC-10\Sheet10.cgm
 H:\Projects\14407_EC-10\Sheet10.plt
 H:\Projects\14407_EC-10\Sheet10.ctb
 H:\Projects\14407_EC-10\Sheet10.ctb

PROJECT REFERENCE NO.		SHEET NO.	
1-4407		EC-II/CONST.II	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

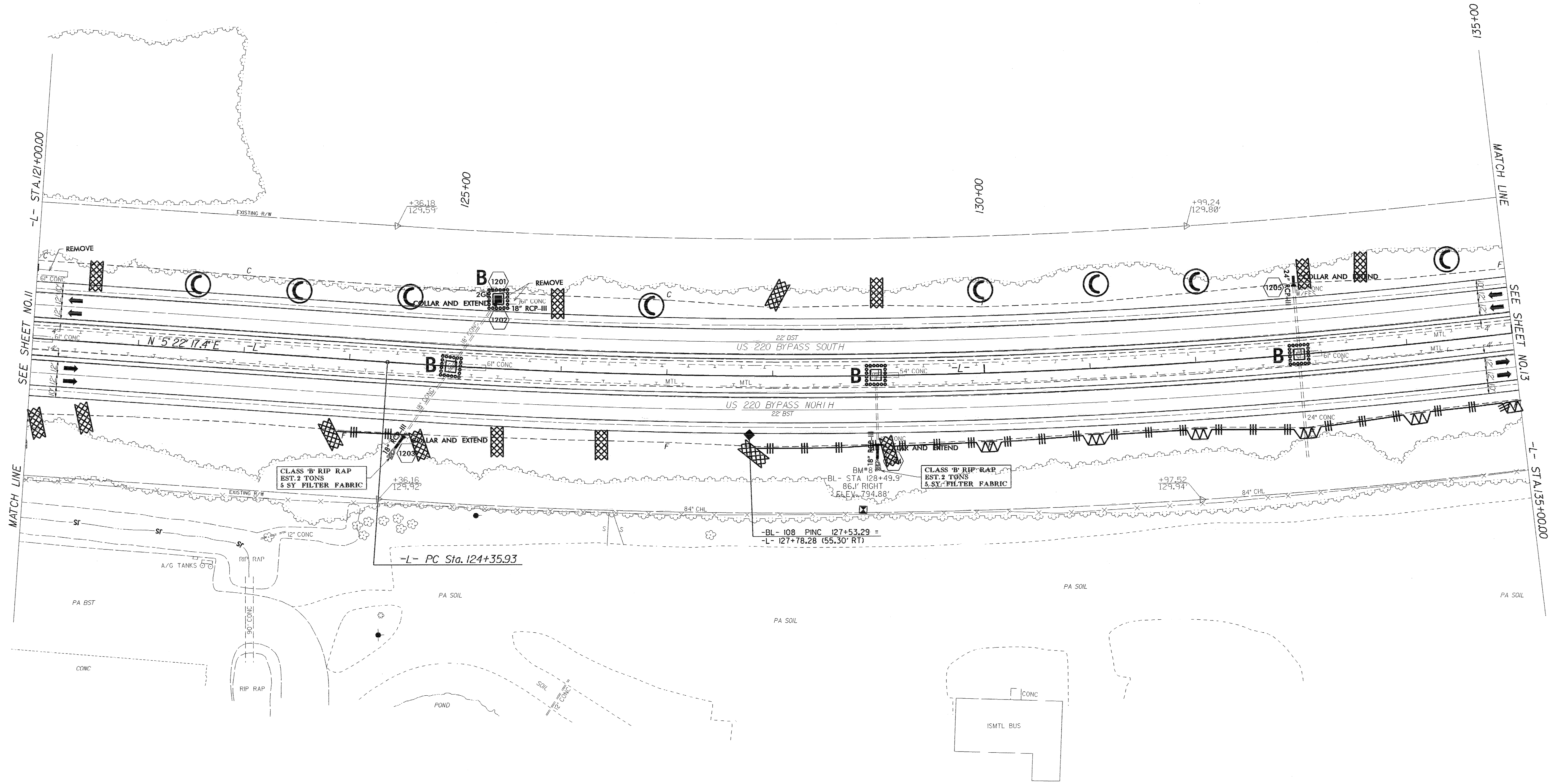
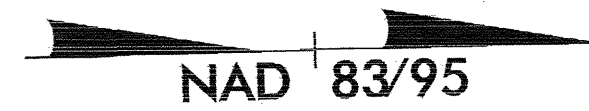


- NOTES: (1) SEE SHEET 38 FOR -L- PROFILE
 (2) GUARDRAIL OFFSET BLOCKS SHOULD BE INSPECTED AND REPLACED AS NECESSARY
 (3) UPGRADE ANCHOR UNITS TO CURRENT STANDARDS
 (4) 30' OF SAFETY CLEARING IS REQUIRED
 (5) REMOVE AND RESET EXISTING MEDIAN GUARDRAIL AS DIRECTED BY ENGINEER

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PROJECT REFERENCE NO. 1-4407	SHEET NO. EC-12/CONST J2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NOTE: PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.



-L- CURVE DATA

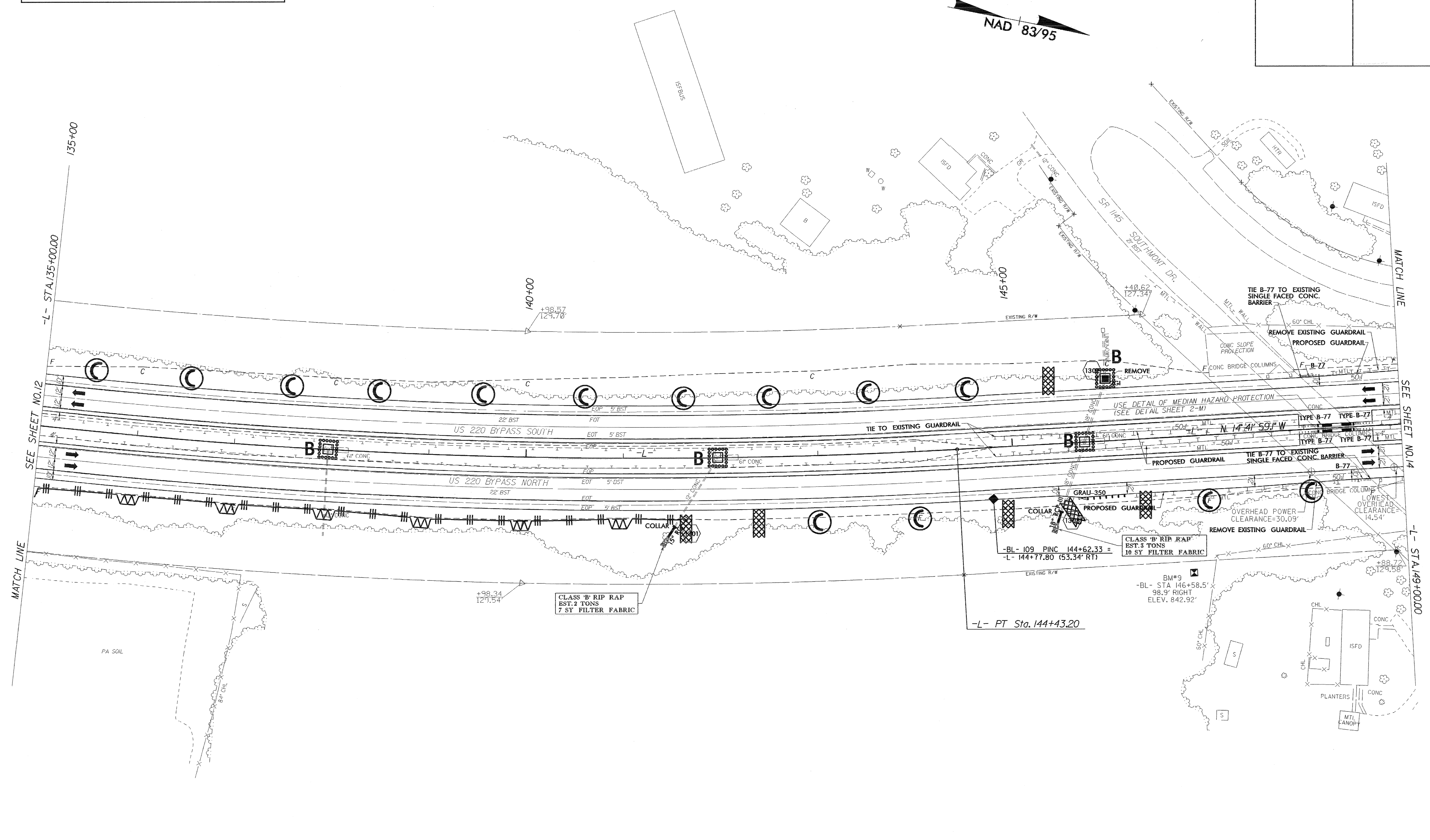
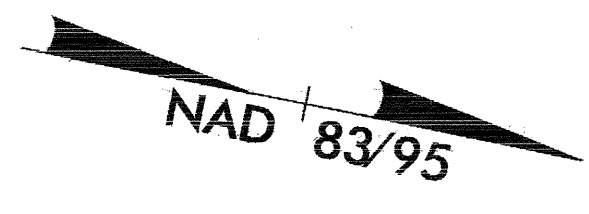
PI Sta 134+49.95
 $\Delta = 20^{\circ}04'16.4"$ (LT)
 $D = 0^{\circ}59'59.7"$
 $L = 2,007.27'$
 $T = 1,014.03'$
 $R = 5,730.00'$
 $SE = \text{EXISTING}$

- NOTES: (1) SEE SHEET 39 FOR -L- PROFILE
 (2) GUARDRAIL OFFSET BLOCKS SHOULD BE INSPECTED AND REPLACED AS NECESSARY
 (3) UPGRADE ANCHOR UNITS TO CURRENT STANDARDS
 (4) 30' OF SAFETY CLEARING IS REQUIRED
 (5) REMOVE AND RESET EXISTING MEDIAN GUARDRAIL AS DIRECTED BY ENGINEER

01-MAR-2010 16:40
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PROJECT REFERENCE NO.		SHEET NO.	
1-4407		EC-13/CONST.13	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

NOTE: PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.



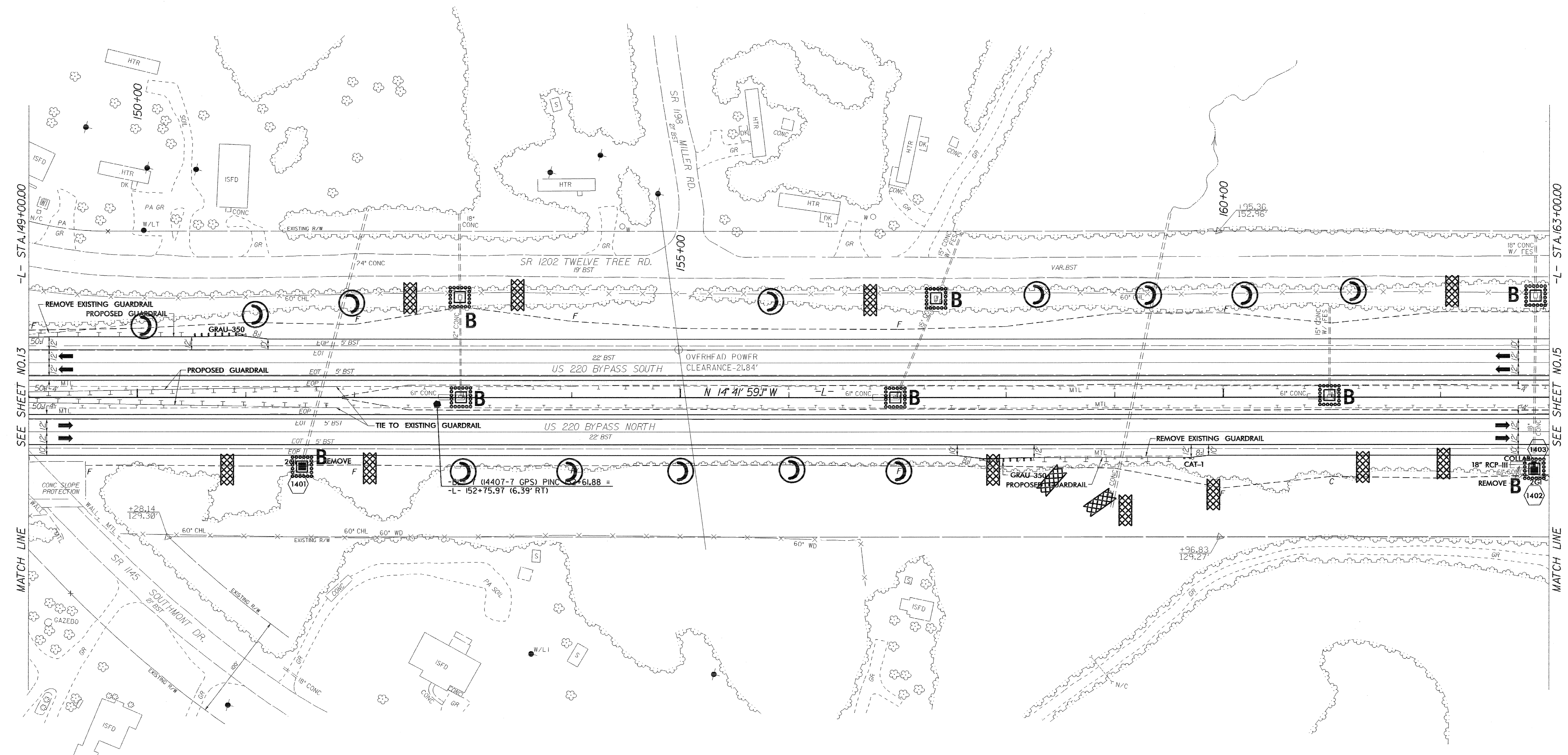
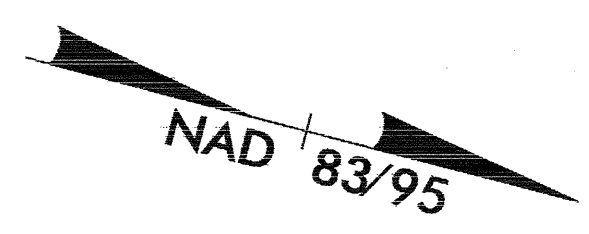
-L- CURVE DATA
 PI Sta 134+49.95
 $\Delta = 20^{\circ} 04' 16.4" (LT)$
 $D = 0^{\circ} 59' 59.7"$
 $L = 2,007.27'$
 $T = 1,014.03'$
 $R = 5,730.00'$
 SE = EXISTING

NOTES: (1) SEE SHEET 39 FOR -L- PROFILE
 (2) GUARDRAIL OFFSET BLOCKS SHOULD BE INSPECTED AND REPLACED AS NECESSARY
 (3) UPGRADE ANCHOR UNITS TO CURRENT STANDARDS
 (4) 30' OF SAFETY CLEARING IS REQUIRED
 (5) REMOVE AND RESET EXISTING MEDIAN GUARDRAIL AS DIRECTED BY ENGINEER

01-MAR-2010 16:42
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 jennifer.ferriarist

PROJECT REFERENCE NO.		SHEET NO.	
1-4407		EC-14/CONST.14	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

NOTE: PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.



-L- STA. 149+00.00

SEE SHEET NO. 13

MATCH LINE

-L- STA. 163+00.00

SEE SHEET NO. 15

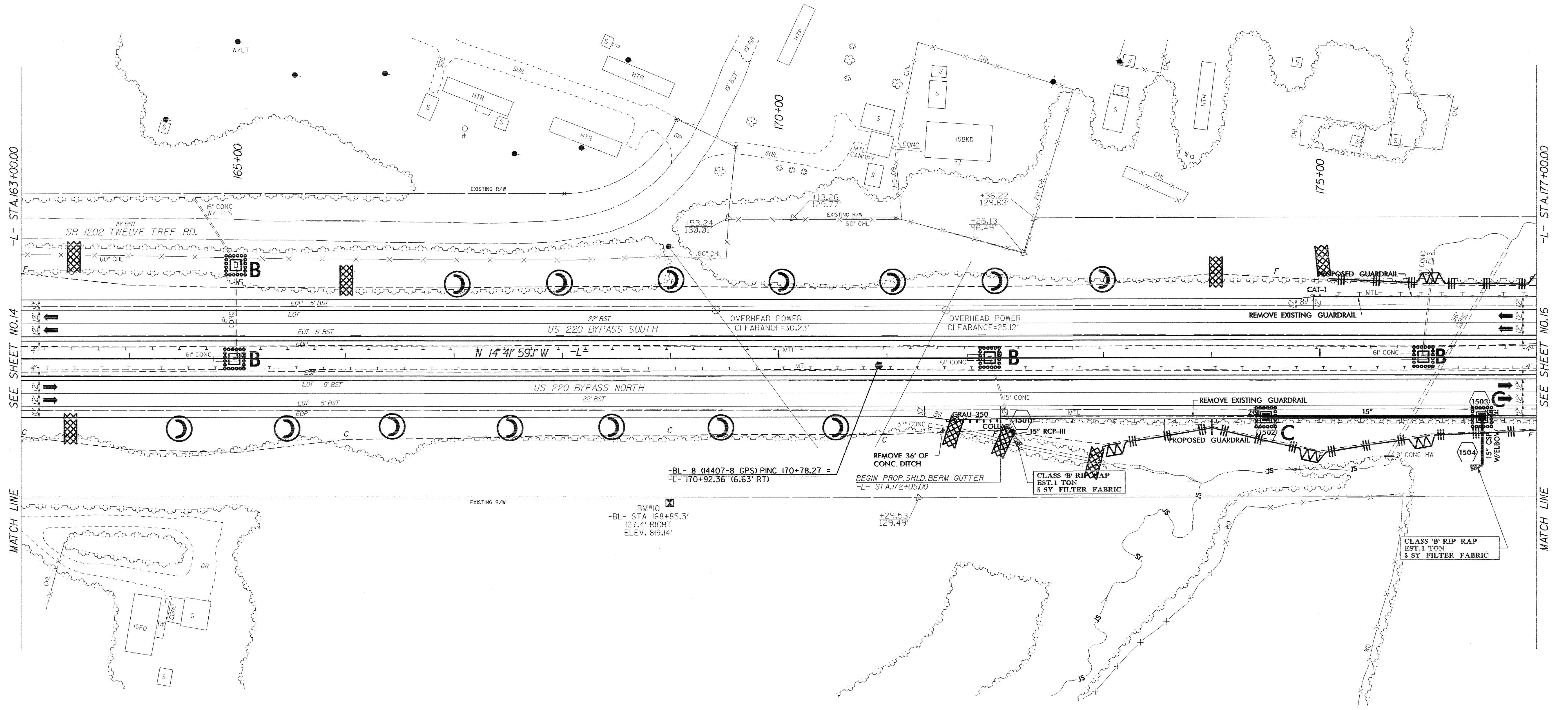
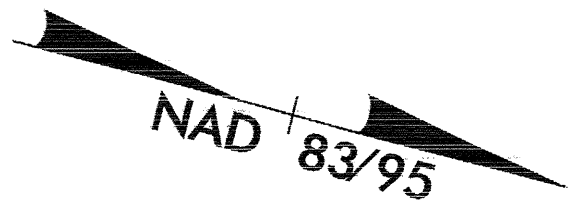
MATCH LINE

01-MAR-2010 16:43
 R:\Environmental\Design\4407_EC_pah14.ecgn
 Jennifer.pattish

- NOTES: (1) SEE SHEET 40 FOR -L- PROFILE
 (2) GUARDRAIL OFFSET BLOCKS SHOULD BE INSPECTED AND REPLACED AS NECESSARY
 (3) UPGRADE ANCHOR UNITS TO CURRENT STANDARDS
 (4) 30' OF SAFETY CLEARING IS REQUIRED
 (5) REMOVE AND RESET EXISTING MEDIAN GUARDRAIL AS DIRECTED BY ENGINEER

PROJECT REFERENCE NO.	SHEET NO.
1-4407	EC-15/CONST.15
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NOTE: PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.



-L- STA. 163+00.00

SEE SHEET NO. 14

MATCH LINE

-L- STA. 177+00.00

SEE SHEET NO. 16

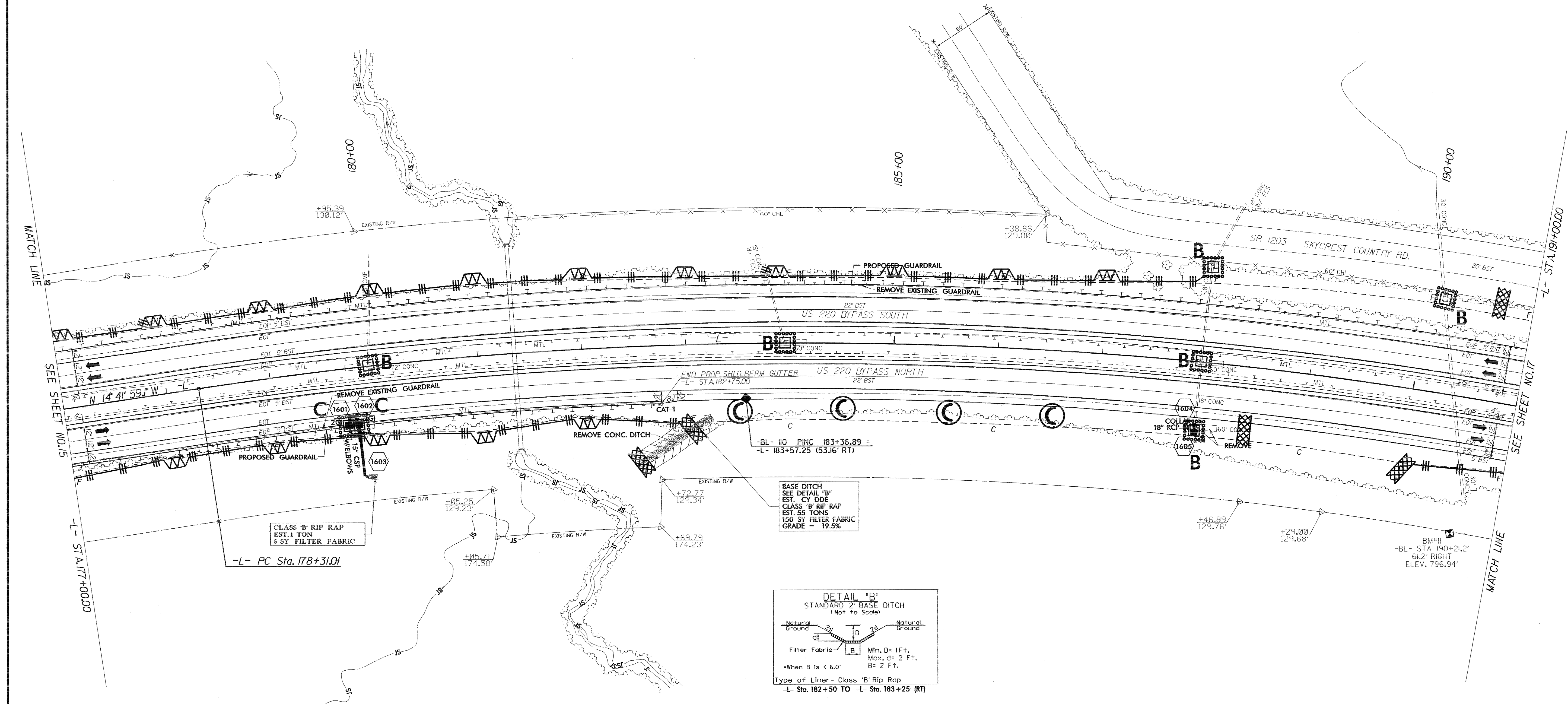
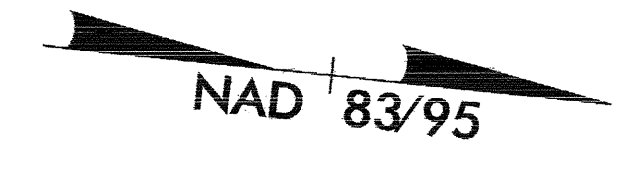
MATCH LINE

- NOTES: (1) SEE SHEET 40 FOR -L- PROFILE
(2) GUARDRAIL OFFSET BLOCKS SHOULD BE INSPECTED AND REPLACED AS NECESSARY
(3) UPGRADE ANCHOR UNITS TO CURRENT STANDARDS
(4) 30' OF SAFETY CLEARING IS REQUIRED
(5) REMOVE AND RESET EXISTING MEDIAN GUARDRAIL AS DIRECTED BY ENGINEER

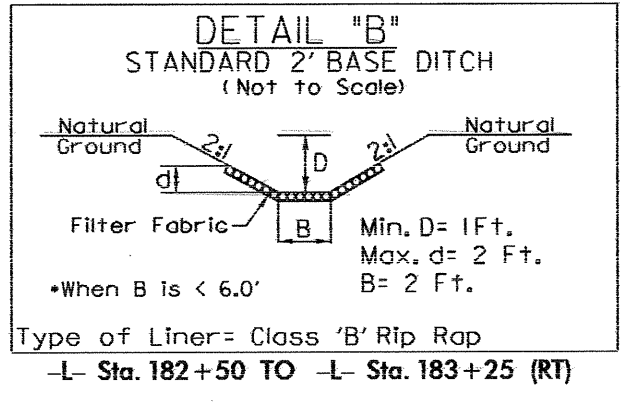
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R:\environmental\Design\14407_EC_psh15.dgn
jenn:feroarist AT REN242003

PROJECT REFERENCE NO.		SHEET NO.	
1-4407		EC-16/CONST.16	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.



BASE DITCH
SEE DETAIL "B"
EST. CY DDE
CLASS "B" RIP RAP
EST. 55 TONS
150 SY FILTER FABRIC
GRADE = 19.5%



CLASS "B" RIP RAP
EST. 1 TON
5 SY FILTER FABRIC

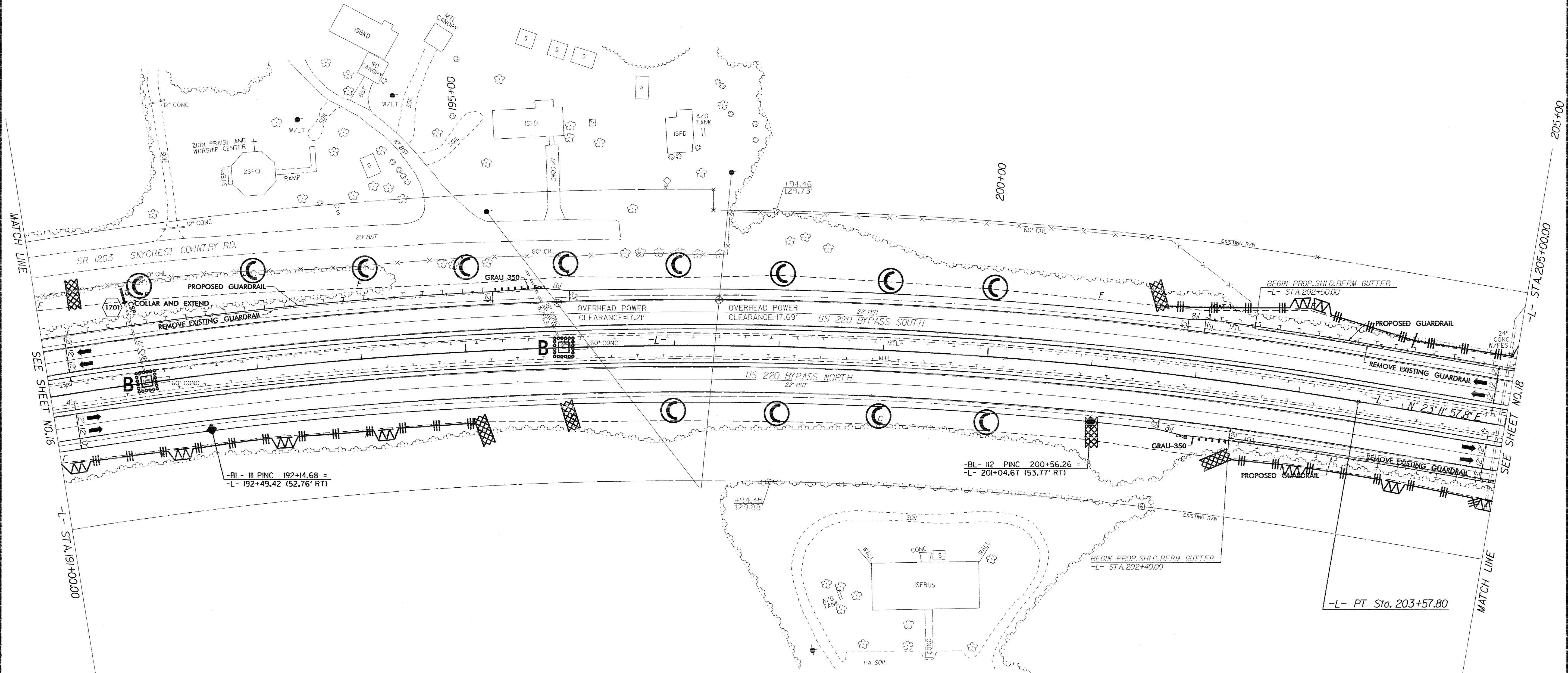
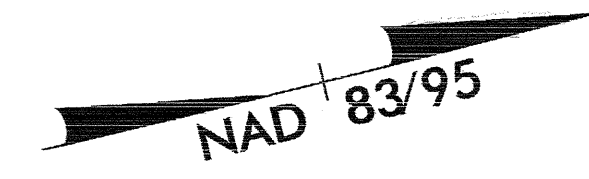
-L- CURVE DATA
PI Sta. 191+42.58
 $\Delta = 37^{\circ} 53' 56.9" (RT)$
D = 1' 29' 59.6"
L = 2,526.80'
T = 1,311.57'
R = 3,820.00'
SE = EXISTING

- NOTES: (1) SEE SHEET 41 FOR -L- PROFILE
(2) GUARDRAIL OFFSET BLOCKS SHOULD BE INSPECTED AND REPLACED AS NECESSARY
(3) UPGRADE ANCHOR UNITS TO CURRENT STANDARDS
(4) 30' OF SAFETY CLEARING IS REQUIRED
(5) REMOVE AND RESET EXISTING MEDIAN GUARDRAIL AS DIRECTED BY ENGINEER

01-MAR-2010 15:45
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jenniferrais

PROJECT REFERENCE NO.	SHEET NO.
1-4407	EC-17/CONST.J7
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NOTE: PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.



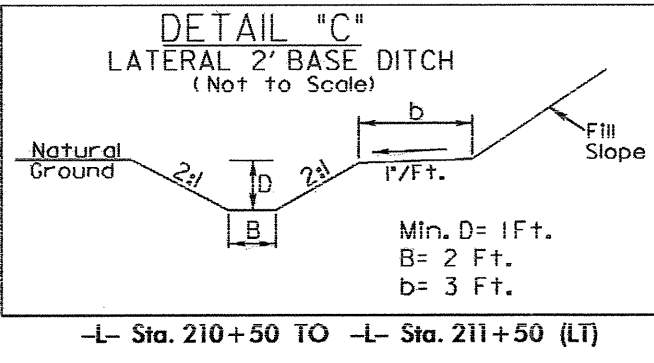
-L- CURVE DATA
 PI Sta 191+42.58
 $\Delta = 37^{\circ} 53' 56.9''$ (RT)
 $D = 1^{\circ} 29' 59.6''$
 $L = 2,526.80'$
 $T = 1,311.57'$
 $R = 3,820.00'$
 SE = EXISTING

NOTES: (1) SEE SHEET 41 FOR -L- PROFILE
 (2) GUARDRAIL OFFSET BLOCKS SHOULD BE INSPECTED AND REPLACED AS NECESSARY
 (3) UPGRADE ANCHOR UNITS TO CURRENT STANDARDS
 (4) 30' OF SAFETY CLEARING IS REQUIRED
 (5) REMOVE AND RESET EXISTING MEDIAN GUARDRAIL AS DIRECTED BY ENGINEER

01-MAR-2010 16:50
 R:\Environmental\AT\RENV242003 - Jennifer.parish.dgn

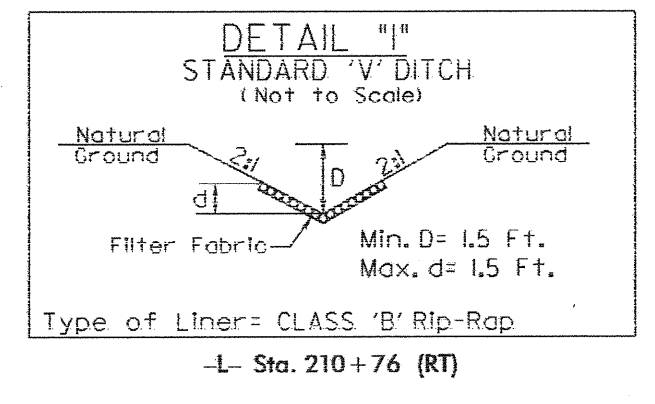
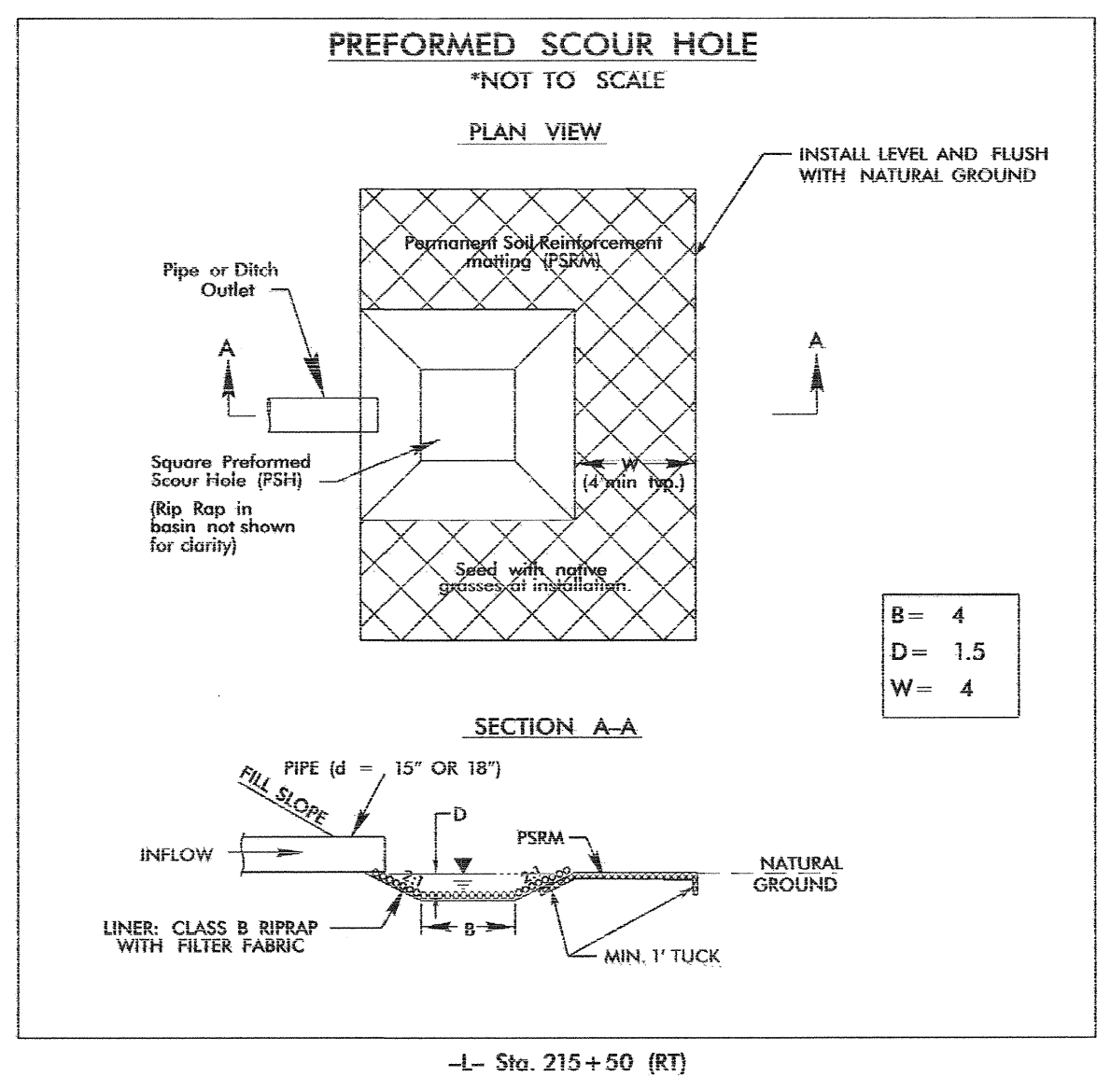
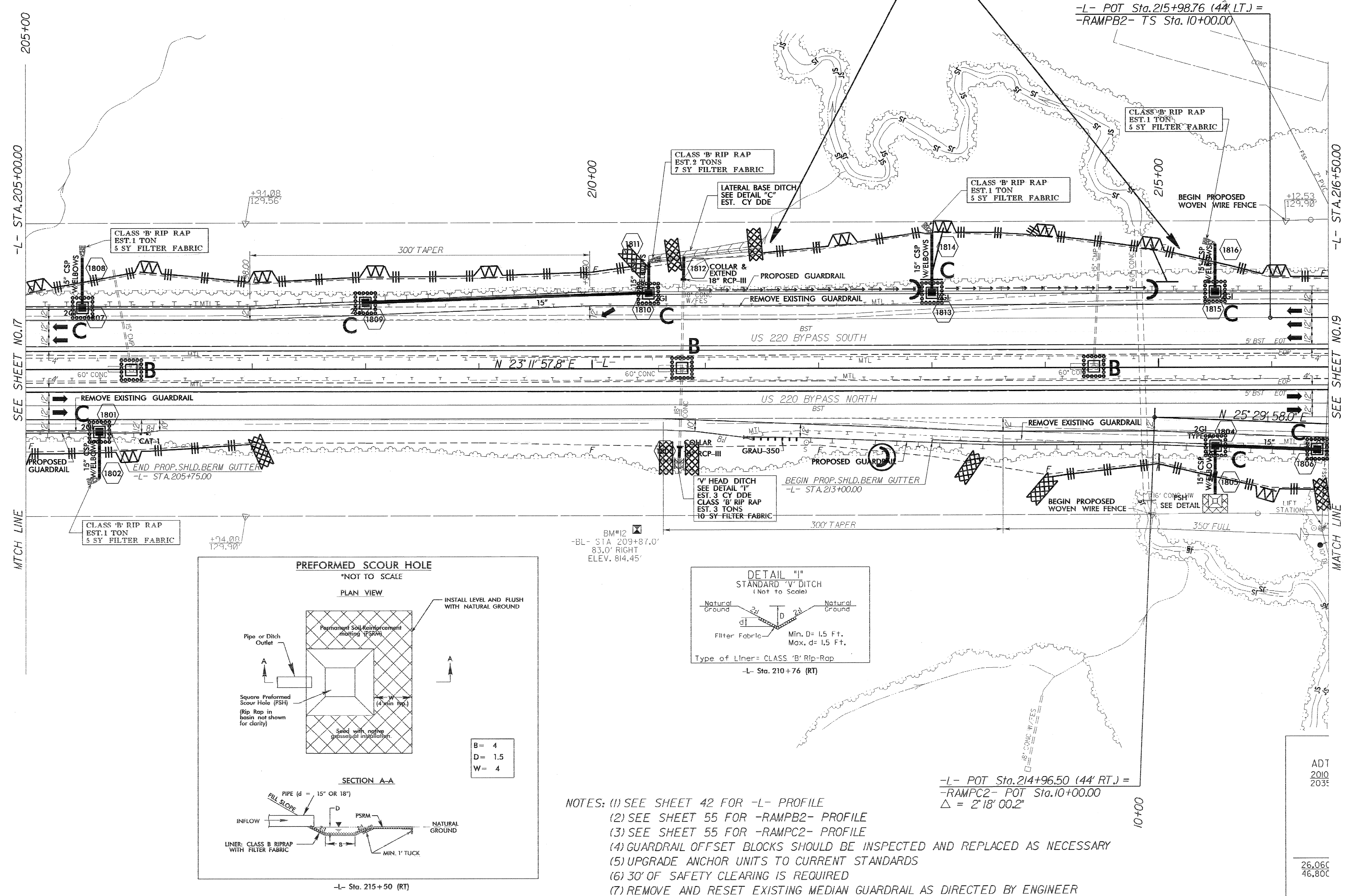
PROJECT REFERENCE NO. 1-4407	SHEET NO. EC-18/CONST.18
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.



NAD 83/95

Place Matting for Erosion Control on Slope as Work Allows.



- NOTES: (1) SEE SHEET 42 FOR -L- PROFILE
 (2) SEE SHEET 55 FOR -RAMPB2- PROFILE
 (3) SEE SHEET 55 FOR -RAMP2- PROFILE
 (4) GUARDRAIL OFFSET BLOCKS SHOULD BE INSPECTED AND REPLACED AS NECESSARY
 (5) UPGRADE ANCHOR UNITS TO CURRENT STANDARDS
 (6) 30' OF SAFETY CLEARING IS REQUIRED
 (7) REMOVE AND RESET EXISTING MEDIAN GUARDRAIL AS DIRECTED BY ENGINEER

CH:MAR-2010_16:52
 R:\Environment\14407_EC.pah18.cgm
 Jernife.parrish AT REV:242063

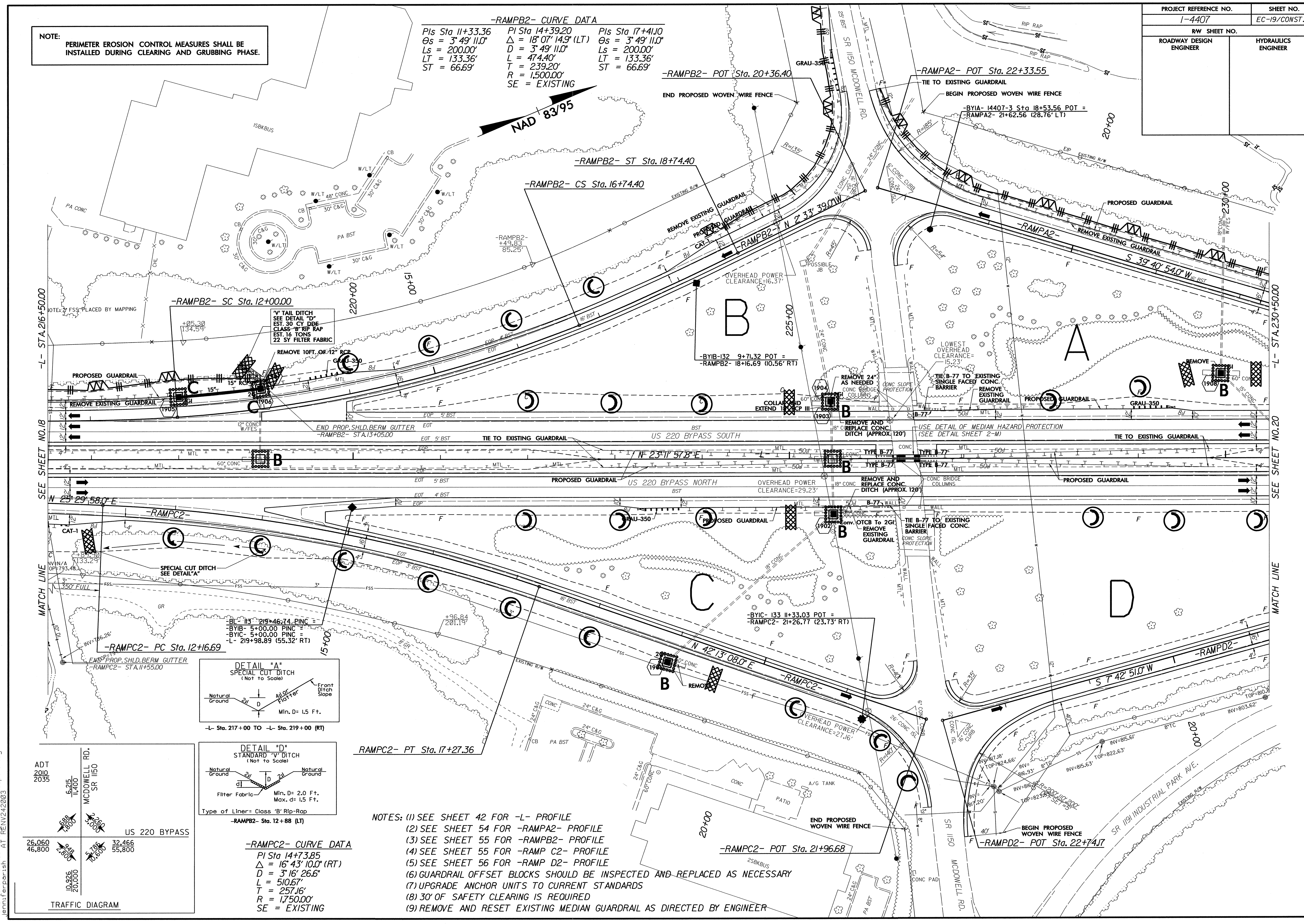
ADT
2010
2035

26,06C
46,80C

PROJECT REFERENCE NO.	SHEET NO.
1-4407	EC-19/CONST.19
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NOTE: PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

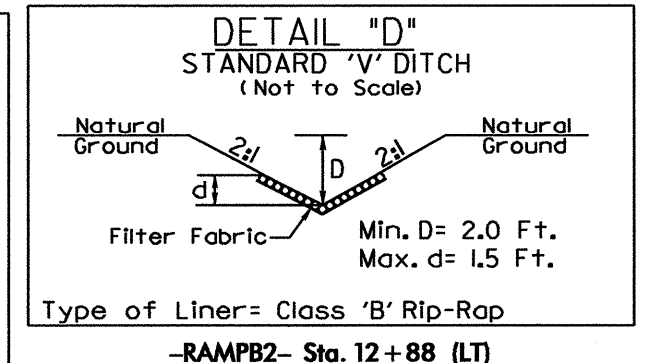
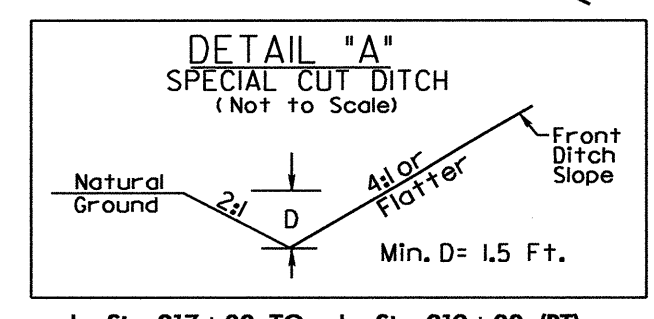
-RAMPB2- CURVE DATA
 Pls Sta 11+33.36 Pls Sta 14+39.20 Pls Sta 17+41.0
 $\Theta_s = 3^\circ 49' 11.0''$ $\Delta = 18^\circ 07' 14.9''$ (LT) $\Theta_s = 3^\circ 49' 11.0''$
 $L_s = 200.00'$ $D = 3^\circ 49' 11.0''$ $L_s = 200.00'$
 $LT = 133.36'$ $L = 474.40'$ $LT = 133.36'$
 $ST = 66.69'$ $T = 239.20'$ $ST = 66.69'$
 $R = 1,500.00'$
 SE = EXISTING



SEE SHEET NO. 18

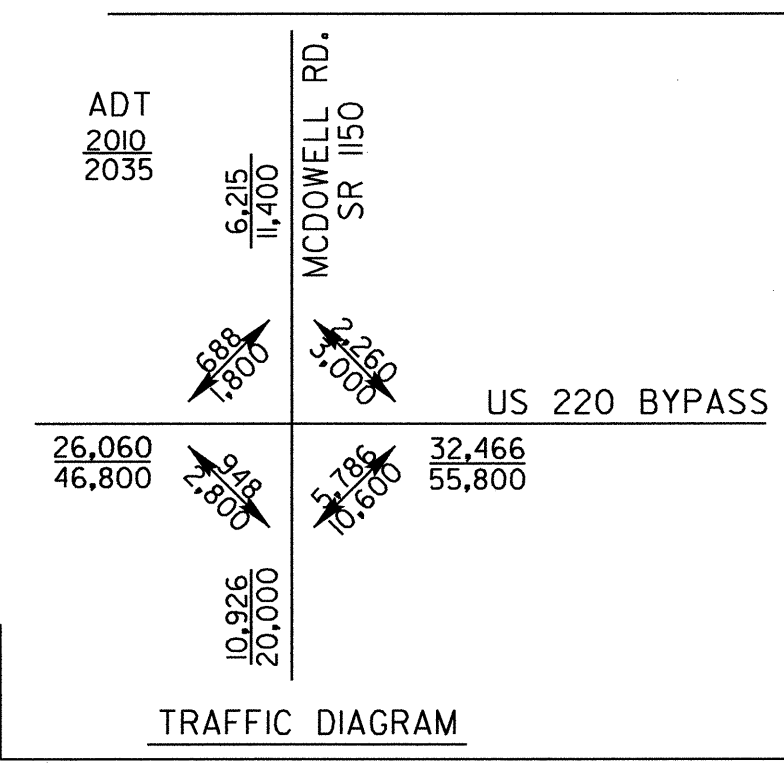
SEE SHEET NO. 20

-RAMPB2- SC Sta. 12+00.00
 V-TAIL DITCH
 SEE DETAIL "D"
 EST. 30 CY DGE
 CLASS "B" RIP RAP
 EST. 16 TONS
 22 SY FILTER FABRIC



-RAMP C2- CURVE DATA
 Pls Sta 14+73.85
 $\Delta = 16^\circ 43' 10.0''$ (RT)
 $D = 3^\circ 16' 26.6''$
 $L = 510.67'$
 $T = 257.16'$
 $R = 1,750.00'$
 SE = EXISTING

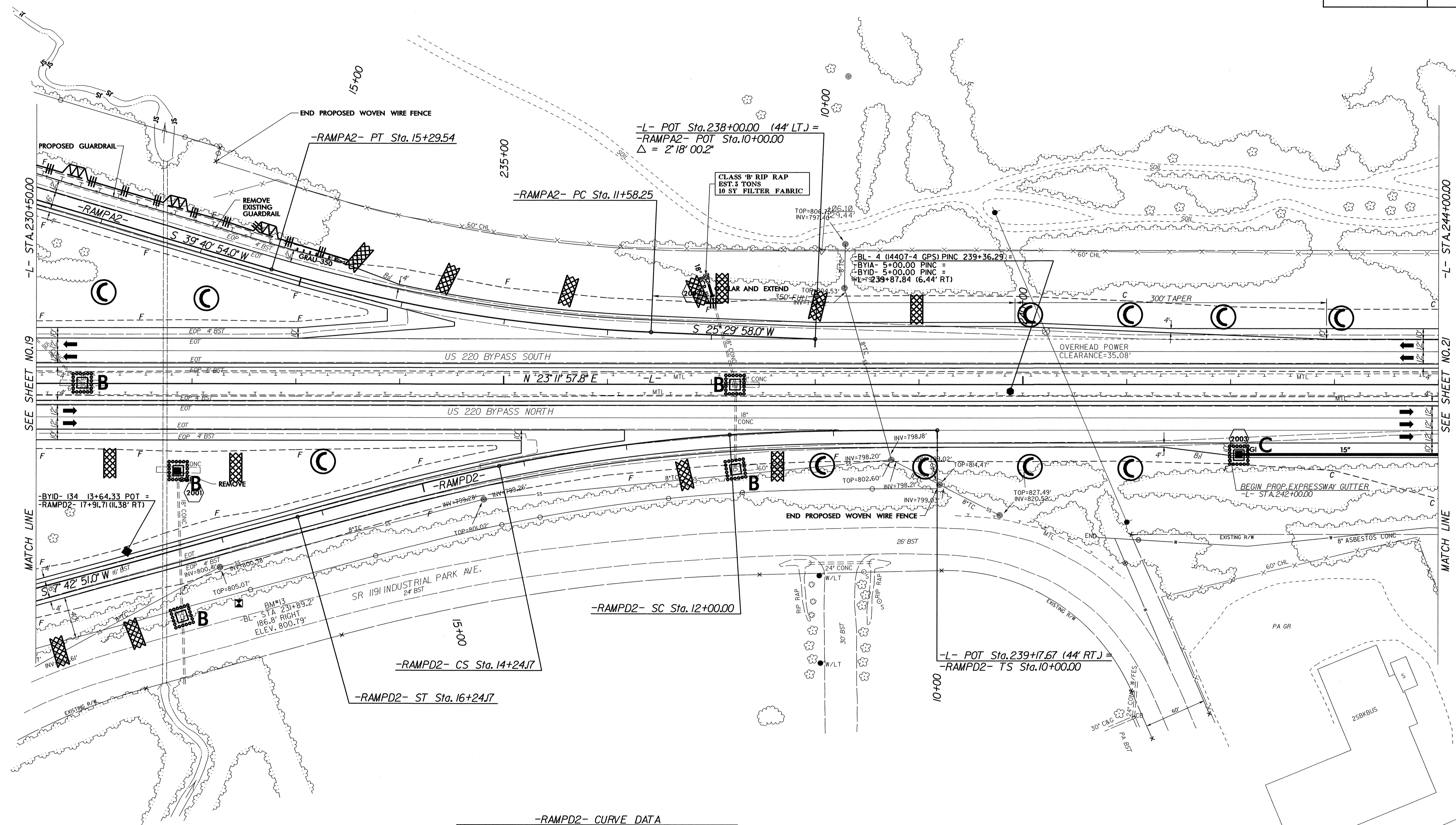
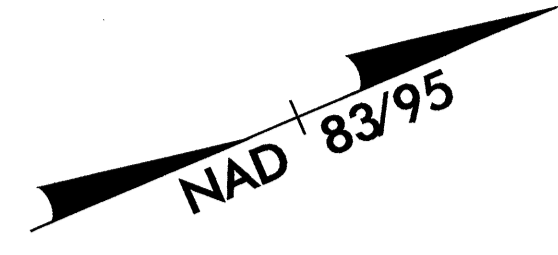
- NOTES: (1) SEE SHEET 42 FOR -L- PROFILE
 (2) SEE SHEET 54 FOR -RAMP A2- PROFILE
 (3) SEE SHEET 55 FOR -RAMP B2- PROFILE
 (4) SEE SHEET 55 FOR -RAMP C2- PROFILE
 (5) SEE SHEET 56 FOR -RAMP D2- PROFILE
 (6) GUARDRAIL OFFSET BLOCKS SHOULD BE INSPECTED AND REPLACED AS NECESSARY
 (7) UPGRADE ANCHOR UNITS TO CURRENT STANDARDS
 (8) 30' OF SAFETY CLEARING IS REQUIRED
 (9) REMOVE AND RESET EXISTING MEDIAN GUARDRAIL AS DIRECTED BY ENGINEER



02-MAR-2010 08:58
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 EC-19/CONST.19
 RENY242013

NOTE: PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

-RAMP2- CURVE DATA
 PI Sta 13+44.85
 $\Delta = 14^{\circ} 10' 56.0''$ (RT)
 D = 3' 49' 11.0"
 L = 371.29'
 T = 186.60'
 R = 1500.00'



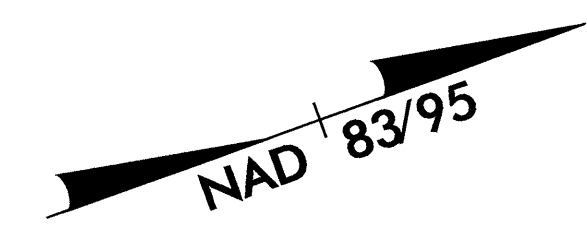
-RAMPD2- CURVE DATA

PIs Sta 14+90.86	PI Sta 13+12.28	PIs Sta 11+33.36
$\Theta_s = 3^{\circ} 38' 57.9''$	$\Delta = 8^{\circ} 10' 51.1''$ (LT)	$\Theta_s = 3^{\circ} 38' 57.9''$
Ls = 200.00'	Ls = 200.00'	Ls = 200.00'
LT = 133.36'	L = 224.17'	LT = 133.36'
ST = 66.69'	T = 112.28'	ST = 66.69'
	R = 1570.00'	
	SE = EXISTING	

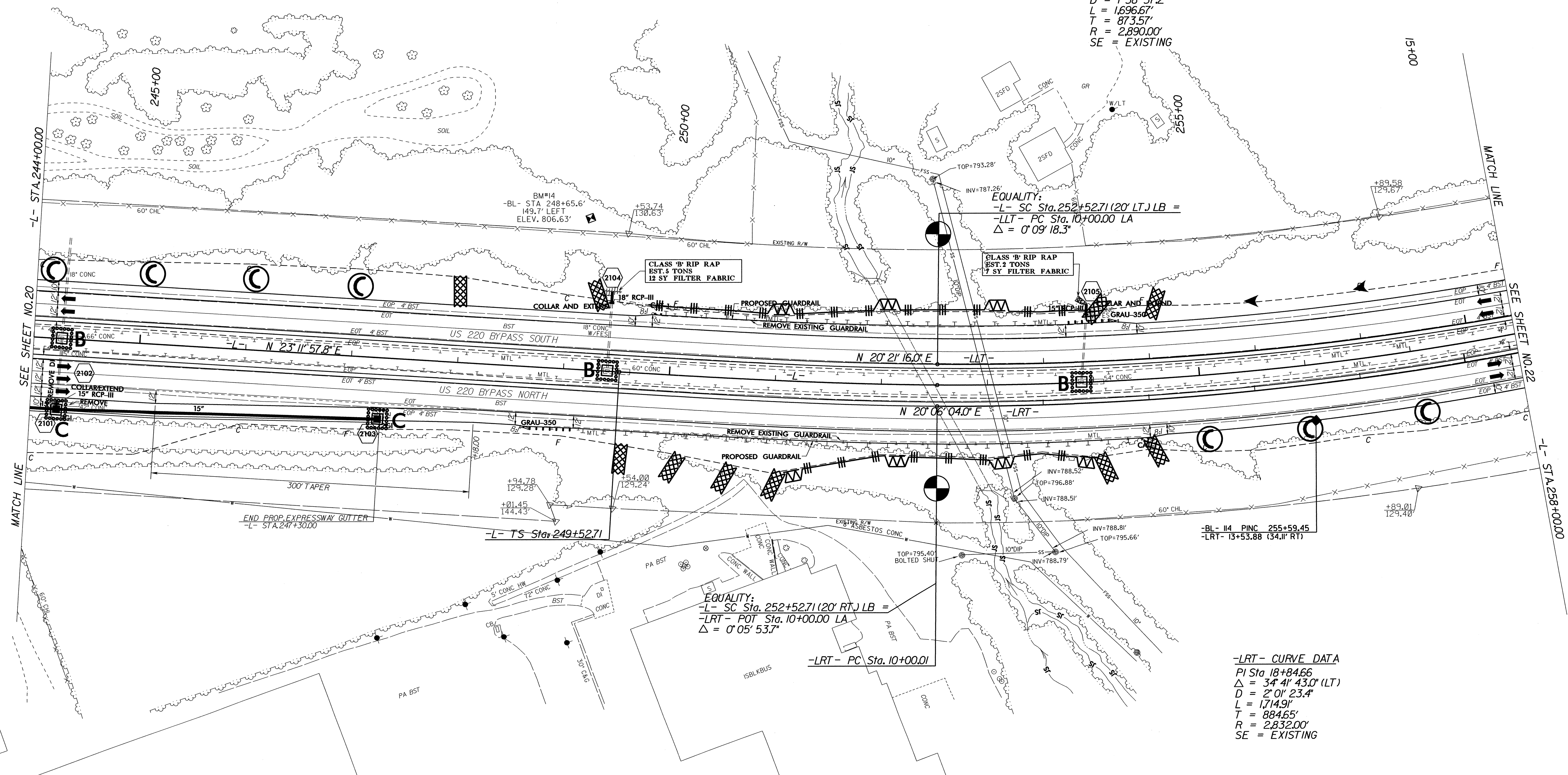
- NOTES: (1) SEE SHEET 43 FOR -L- PROFILE
 (2) SEE SHEET 54 FOR -RAMP2- PROFILE
 (3) SEE SHEET 56 FOR -RAMPD2- PROFILE
 (4) GUARDRAIL OFFSET BLOCKS SHOULD BE INSPECTED AND REPLACED AS NECESSARY
 (5) UPGRADE ANCHOR UNITS TO CURRENT STANDARDS
 (6) 30' OF SAFETY CLEARING IS REQUIRED
 (7) REMOVE AND RESET EXISTING MEDIAN GUARDRAIL AS DIRECTED BY ENGINEER

PROJECT REFERENCE NO.		SHEET NO.	
1-4407		EC-21/CONST.21	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

NOTE: PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.



-LLT- CURVE DATA
 PI Sta 18+73.57
 $\Delta = 33^{\circ} 38' 14.6''$ (LT)
 $D = 1^{\circ} 58' 57.2''$
 $L = 1,696.67'$
 $T = 873.57'$
 $R = 2,890.00'$
 SE = EXISTING



-L- SPIRAL DATA
 PIs Sta 251+52.74
 $\Theta_s = 3^{\circ} 00' 00.0''$
 $L_s = 300.00'$
 $LT = 200.03'$
 $ST = 100.03'$

-L- CURVE DATA
 PI Sta 261+31.66
 $\Delta = 34^{\circ} 06' 48.1''$ (LT)
 $D = 2^{\circ} 00' 00.0''$
 $L = 1,705.67'$
 $T = 878.95'$
 $R = 2,864.79'$
 SE = EXISTING

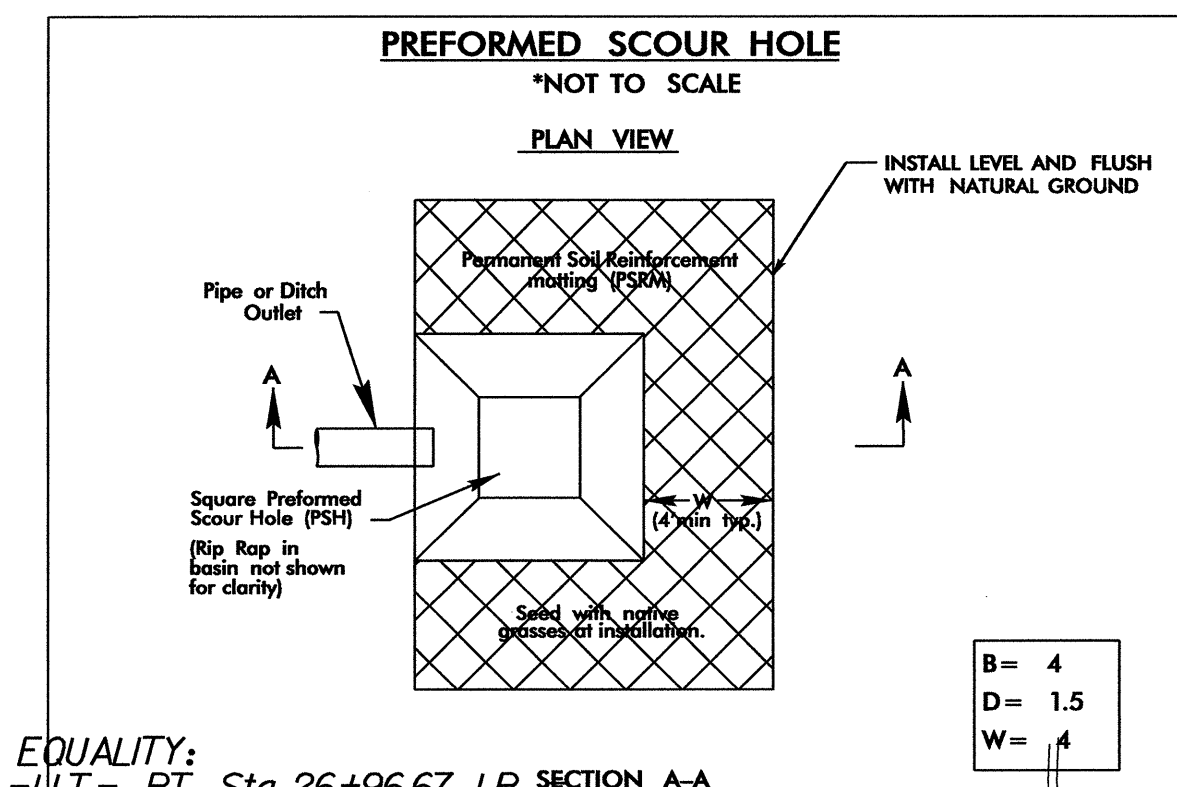
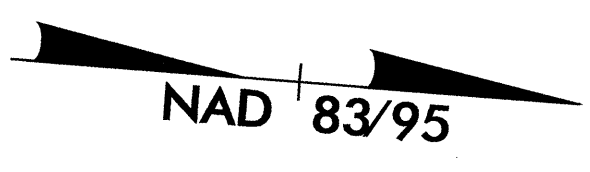
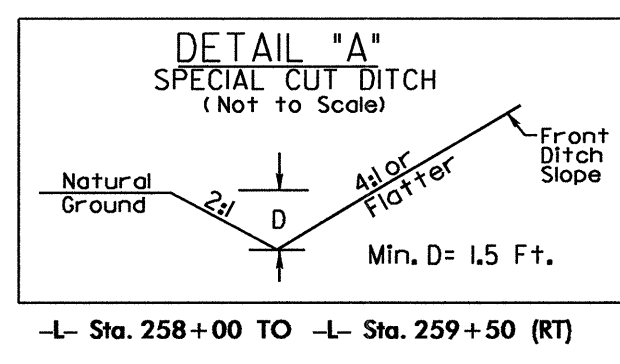
-LRT- CURVE DATA
 PI Sta 18+84.66
 $\Delta = 34^{\circ} 41' 43.0''$ (LT)
 $D = 2^{\circ} 01' 23.4''$
 $L = 1,714.91'$
 $T = 884.65'$
 $R = 2,832.00'$
 SE = EXISTING

- NOTES: (1) SEE SHEET 43 FOR -L- PROFILE
 (2) GUARDRAIL OFFSET BLOCKS SHOULD BE INSPECTED AND REPLACED AS NECESSARY
 (3) UPGRADE ANCHOR UNITS TO CURRENT STANDARDS
 (4) 30' OF SAFETY CLEARING IS REQUIRED
 (5) REMOVE AND RESET EXISTING MEDIAN GUARDRAIL AS DIRECTED BY ENGINEER

02-MAR-2010 09:01
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 Jennifer.parrish AT RENV242003

PROJECT REFERENCE NO. 1-4407		SHEET NO. EC-22/CONST.22	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

NOTE: PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.



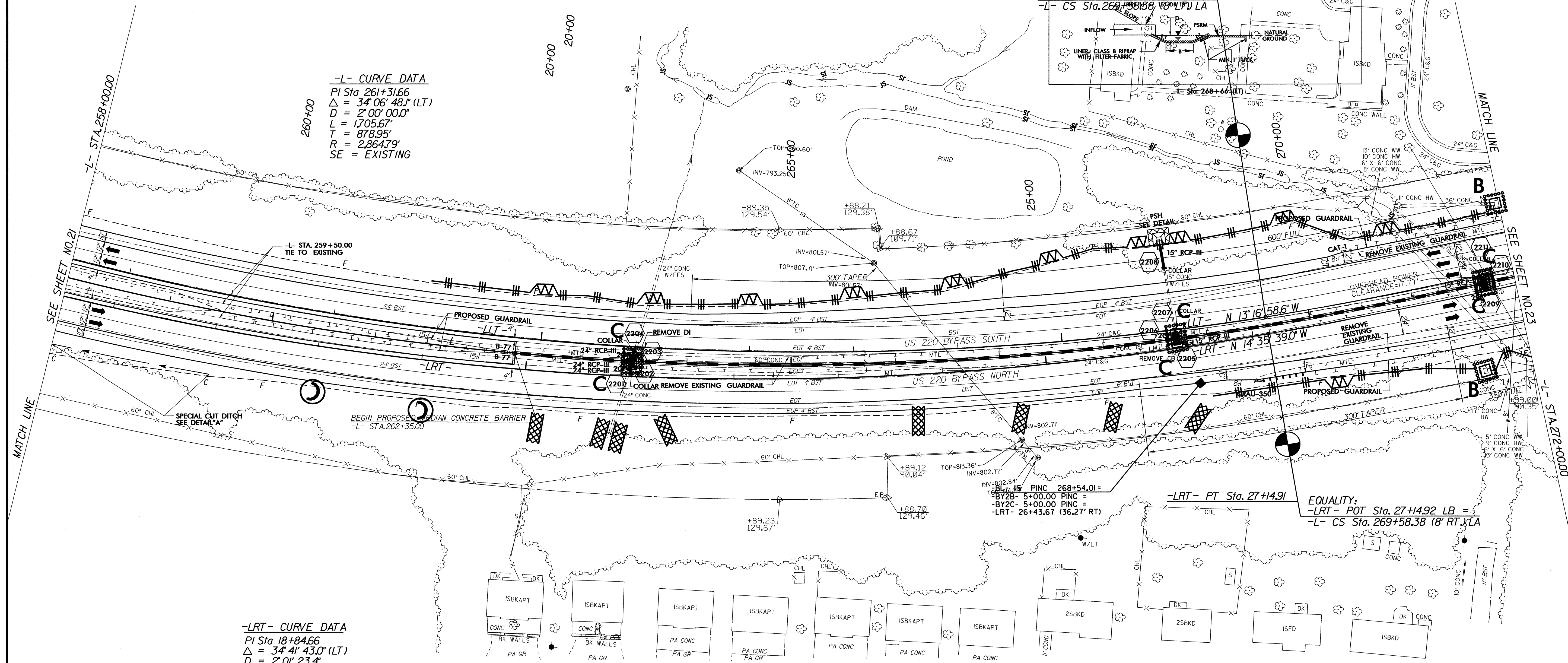
-LLT- CURVE DATA
 PI Sta 18+73.57
 $\Delta = 33^\circ 38' 14.6''$ (LT)
 $D = 1' 58' 57.2''$
 $L = 1,696.67'$
 $T = 873.57'$
 $R = 2,890.00'$
 SE = EXISTING

-L- CURVE DATA
 PI Sta 261+31.66
 $\Delta = 34^\circ 06' 48.1''$ (LT)
 $D = 2' 00' 00.0''$
 $L = 1,705.67'$
 $T = 878.95'$
 $R = 2,864.79'$
 SE = EXISTING

-LRT- CURVE DATA
 PI Sta 18+84.66
 $\Delta = 34^\circ 41' 43.0''$ (LT)
 $D = 2' 01' 23.4''$
 $L = 1,714.91'$
 $T = 884.65'$
 $R = 2,832.00'$
 SE = EXISTING

EQUALITY:
 -LLT- PT Sta. 26+96.67 LB SECTION A-A
 -L- CS Sta. 268+58.38 (8' RT) LA

EQUALITY:
 -LRT- POT Sta. 27+14.91 LB =
 -L- CS Sta. 269+58.38 (8' RT) LA



- NOTES: (1) SEE SHEET 44 FOR -L- PROFILE
 (2) GUARDRAIL OFFSET BLOCKS SHOULD BE INSPECTED AND REPLACED AS NECESSARY
 (3) UPGRADE ANCHOR UNITS TO CURRENT STANDARDS
 (4) 30' OF SAFETY CLEARING IS REQUIRED
 (5) REMOVE AND RESET EXISTING MEDIAN GUARDRAIL AS DIRECTED BY ENGINEER

-L- SPIRAL DATA
 PI Sta 270+58.40
 $\Theta_s = 3' 00' 00.0''$
 $L_s = 300.00'$
 $LT = 200.03'$
 $ST = 100.03'$

02-MAR-2010 09:02
 R:\Environmental\14407-EC.psh22.dgn
 Jennifer@parish

-64RAMPB- CURVE DATA

Pls Sta 11+33.49	Pls Sta 13+39.05	Pls Sta 15+41.02	Pls Sta 18+05.78
$\Delta = 8' 33' 05.8"$	$\Delta = 23' 26' 58.2" (LT)$	$\Delta = 8' 33' 05.8"$	$\Delta = 21' 47' 30.0" (RT)$
$Ls = 200.00'$	$L = 8' 33' 05.8"$	$Ls = 200.00'$	$D = 10' 58' 34.3"$
$LT = 133.49'$	$L = 274.21'$	$LT = 133.49'$	$L = 198.54'$
$ST = 66.81'$	$T = 139.05'$	$ST = 66.81'$	$T = 100.48'$
	$R = 670.00'$		$R = 522.00'$
	$SE = EXISTING$		$SE = EXISTING$

-64LOOPB- CURVE DATA

PI Sta 10+68.18
 $\Delta = 30' 30' 40.2" (RT)$
 $D = 22' 55' 05.9"$
 $L = 133.13'$
 $T = 68.18'$
 $R = 250.00'$
 $SE = EXISTING$

-64LOOPC- CURVE DATA

PI Sta 10+87.93
 $\Delta = 33' 44' 08.8" (LT)$
 $D = 19' 45' 25.8"$
 $L = 170.75'$
 $T = 87.93'$
 $R = 290.00'$
 $SE = EXISTING$

-64RAMPB- CURVE DATA

PI Sta 12+81.41	PI Sta 18+11.83
$\Delta = 40' 38' 12.2" (RT)$	$\Delta = 26' 42' 48.0" (LT)$
$D = 7' 32' 20.1"$	$D = 19' 45' 25.8"$
$L = 539.03'$	$L = 135.21'$
$T = 281.41'$	$T = 68.86'$
$R = 760.00'$	$R = 290.00'$
$SE = EXISTING$	$SE = EXISTING$

-L- SPIRAL DATA

Pls Sta 270+58.40
 $\Delta = 3' 00' 00.0"$
 $Ls = 300.00'$
 $LT = 200.03'$
 $ST = 100.03'$

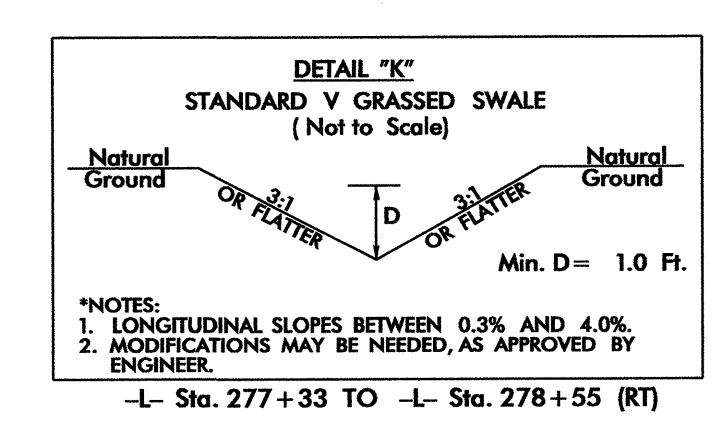
SEE SHEET NO.22

SEE SHEET NO.24

MATCH LINE

MATCH LINE

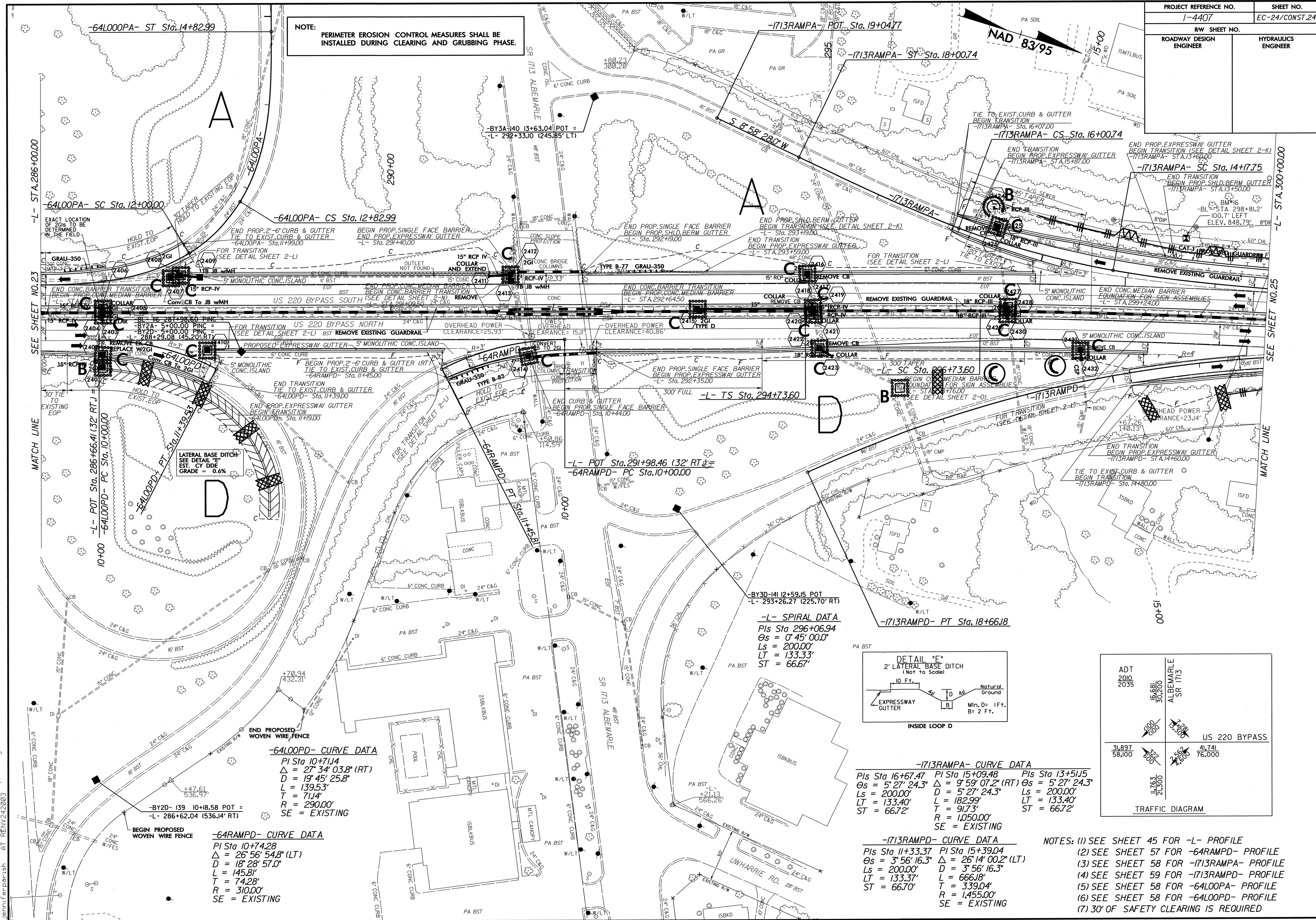
ADT		TRAFFIC DIAGRAM	
2010	2035	25,200	21,700
		32,466	31,897
		55,800	58,100
		32,944	41,000



NOTE: PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

02-MAR-2010 09:45 Design\14407-EC-psh23.dgn
 R:\Environmental\AT\REV242003
 Jennifer.pish

NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.



SEE SHEET NO. 23

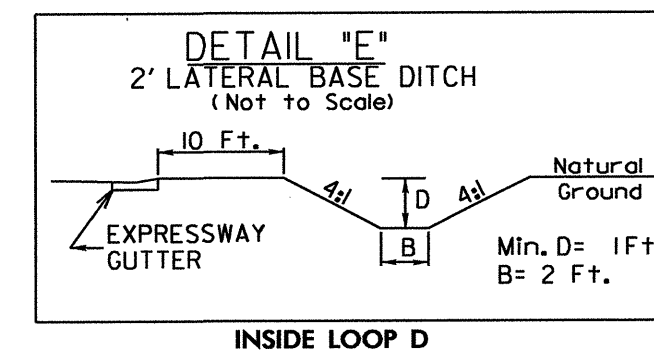
SEE SHEET NO. 25

LATERAL BASE DITCH
SEE DETAIL "E"
EST. CY DDE
GRADE = 0.6%

-64LOOPD- CURVE DATA
PI Sta 10+71.4
 $\Delta = 27^\circ 34' 03.8''$ (RT)
D = 19' 45' 25.8"
L = 139.53'
T = 71.4'
R = 290.00'
SE = EXISTING

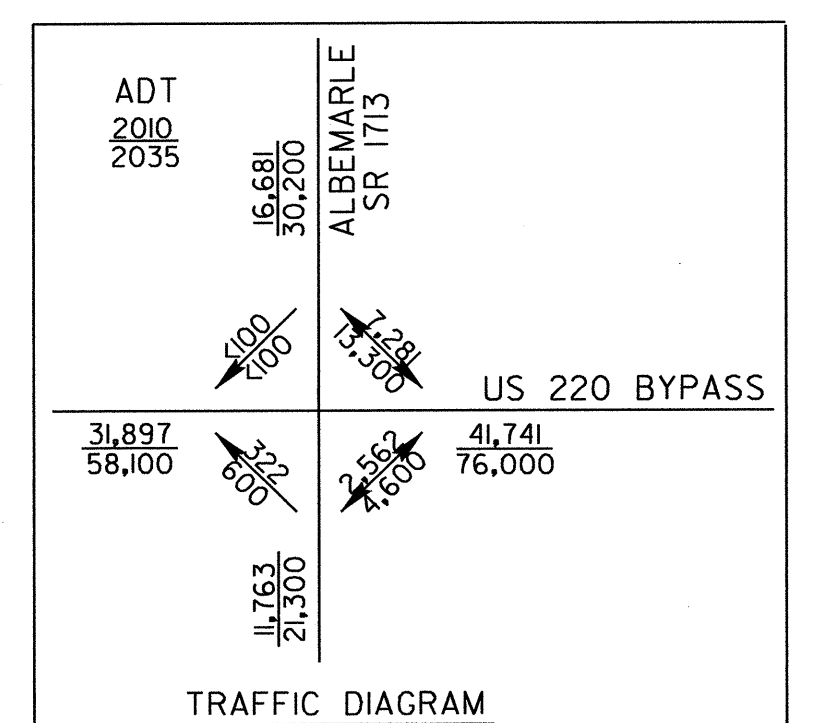
-64RAMPD- CURVE DATA
PI Sta 10+74.28
 $\Delta = 26^\circ 56' 54.8''$ (LT)
D = 18' 28' 57.0"
L = 145.81'
T = 74.28'
R = 310.00'
SE = EXISTING

-L- SPIRAL DATA
PIs Sta 296+06.94
 $\theta_s = 0^\circ 45' 00.0''$
Ls = 200.00'
LT = 133.33'
ST = 66.67'



-1713RAMPA- CURVE DATA
PIs Sta 16+67.47 PI Sta 15+09.48 PI Sta 13+51.15
 $\theta_s = 5^\circ 27' 24.3''$ $\Delta = 9^\circ 59' 07.2''$ (RT) $\theta_s = 5^\circ 27' 24.3''$
Ls = 200.00' D = 5' 27' 24.3" Ls = 200.00'
LT = 133.40' L = 182.99' LT = 133.40'
T = 91.73' T = 1,050.00' ST = 66.72'
R = 1,050.00'
SE = EXISTING

-1713RAMPD- CURVE DATA
PIs Sta 11+33.37 PI Sta 15+39.04
 $\theta_s = 3^\circ 56' 16.3''$ $\Delta = 26^\circ 14' 00.2''$ (LT)
Ls = 200.00' D = 3' 56' 16.3" Ls = 200.00'
LT = 133.37' L = 666.18' T = 339.04'
ST = 66.70' R = 1,455.00'
SE = EXISTING

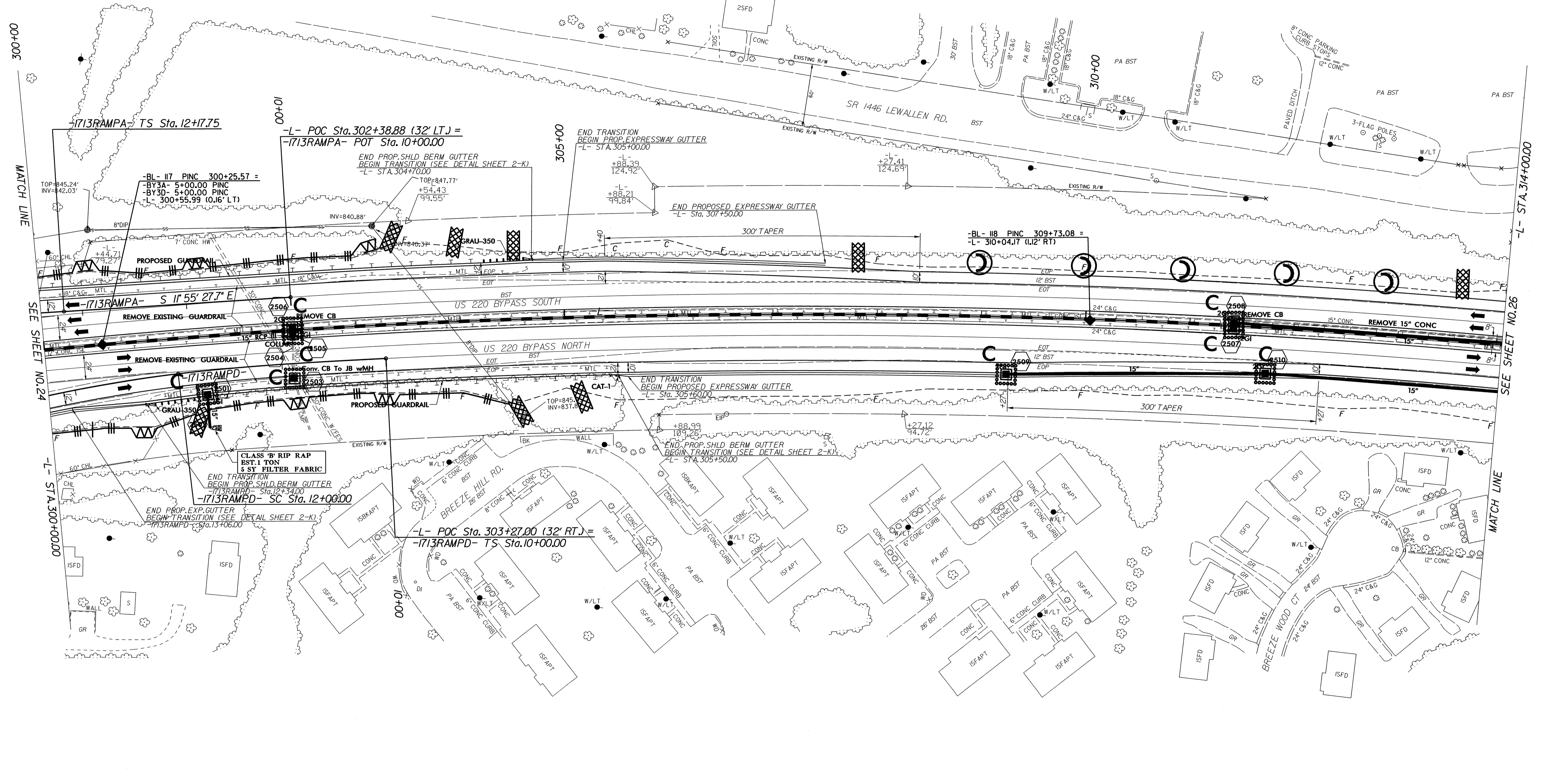


NOTES: (1) SEE SHEET 45 FOR -L- PROFILE
(2) SEE SHEET 57 FOR -64RAMPD- PROFILE
(3) SEE SHEET 58 FOR -1713RAMPA- PROFILE
(4) SEE SHEET 59 FOR -1713RAMPD- PROFILE
(5) SEE SHEET 58 FOR -64LOOPA- PROFILE
(6) SEE SHEET 58 FOR -64LOOPD- PROFILE
(7) 30' OF SAFETY CLEARING IS REQUIRED

02-MAR-2010 09:19
C:\p01\14407\EC-psht24.dgn
14407.ec-psht24.dwg
14407.ec-psht24.dwg

PROJECT REFERENCE NO.		SHEET NO.	
1-4407		EC-25/CONST.25	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

NOTE: PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.



-I713RAMPD- CURVE DATA

PI Sta 11+33.37	PI Sta 15+39.04
$\theta_s = 3^\circ 56' 16.3''$	$\Delta = 26^\circ 14' 00.2''$ (LT)
$L_s = 200.00'$	$D = 3^\circ 56' 16.3''$
$LT = 133.37'$	$L = 666.18'$
$ST = 66.70'$	$T = 339.04'$
	$R = 1,455.00'$
	$SE = \text{EXISTING}$

-L- CURVE DATA

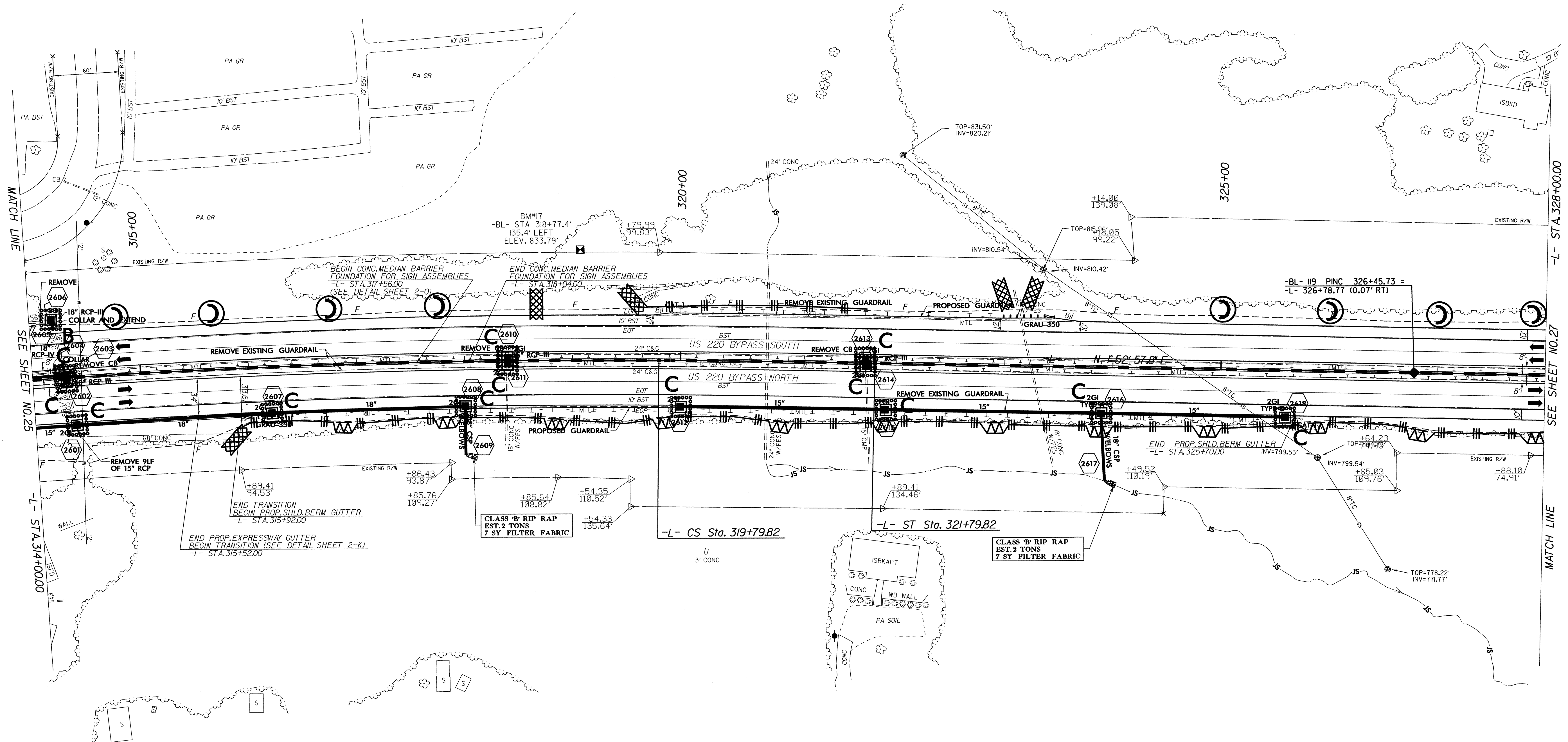
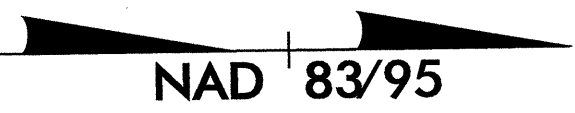
PI Sta 308+35.55
$\Delta = 17^\circ 17' 48.0''$ (RT)
$D = 0^\circ 45' 00.0''$
$L = 2,306.22'$
$T = 1,161.95'$
$R = 7,639.44'$
$SE = \text{EXISTING}$

- NOTES: (1) SEE SHEET 45 FOR -L- PROFILE
(2) SEE SHEET 58 FOR -I713RAMPA- PROFILE
(3) SEE SHEET 59 FOR -I713RAMPD- PROFILE
(4) 30' OF SAFETY CLEARING IS REQUIRED

02-MAR-2010 09:22
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jennifer.parish

PROJECT REFERENCE NO.	SHEET NO.
1-4407	EC-26/CONST.26
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NOTE: PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.



-L- CURVE DATA

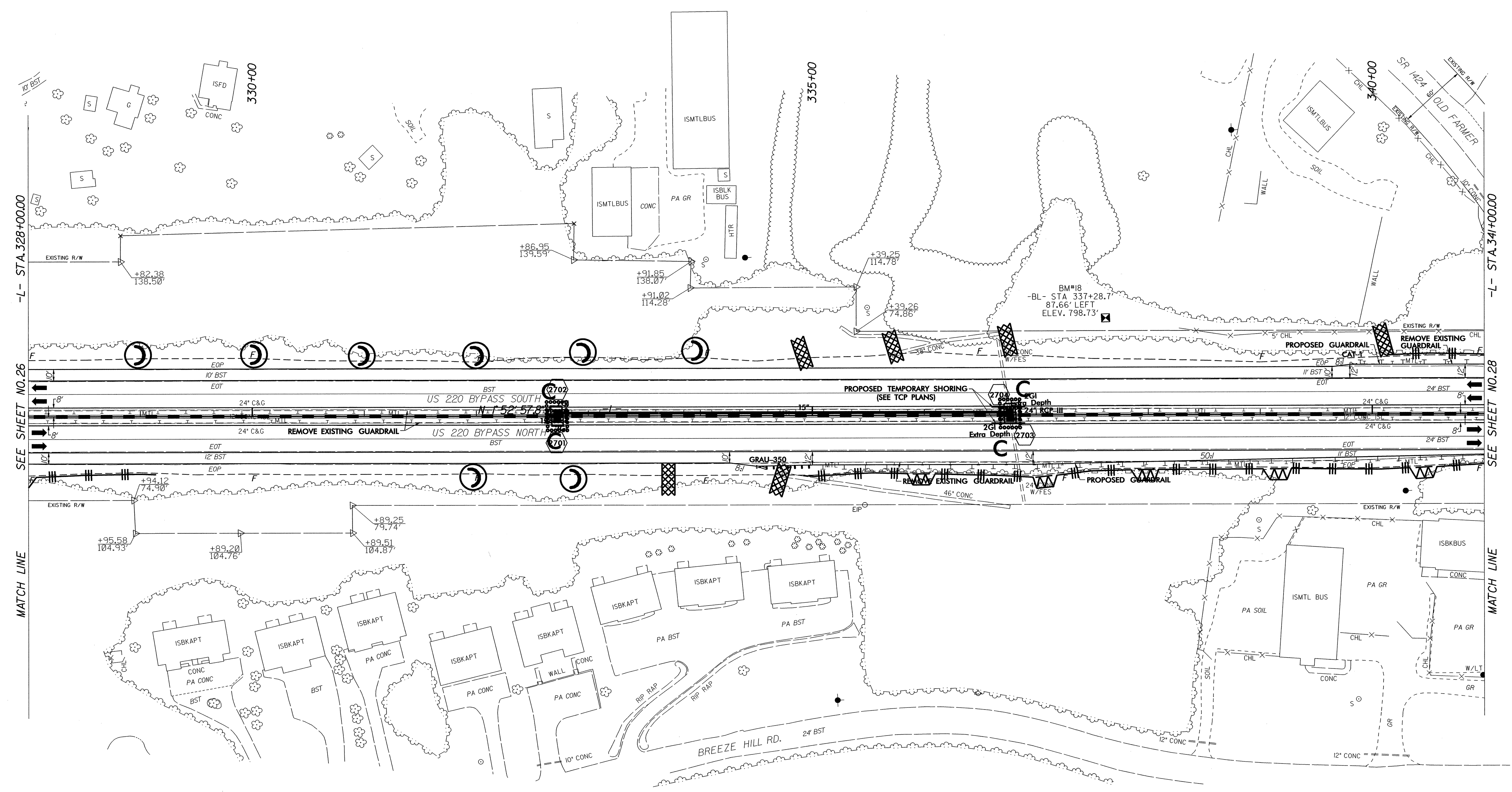
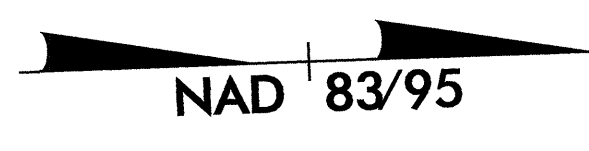
PI Sta 308+35.55	PIs Sta 320+46.49
$\Delta = 17^\circ 17' 48.0''$ (RT)	$\Theta s = 0^\circ 45' 00.0''$
$D = 0^\circ 45' 00.0''$	$Ls = 200.00'$
$L = 2,306.22'$	$LT = 133.33'$
$T = 1,161.95'$	$ST = 66.67'$
$R = 7,639.44'$	
$SE =$ EXISTING	

NOTES: (1) SEE SHEET 46 FOR -L- PROFILE
(2) 30' OF SAFETY CLEARING IS REQUIRED

02-MAR-2010 09:23
R:\L\p\comment\101...
101...
101...

PROJECT REFERENCE NO.		SHEET NO.	
I-4407		EC-27/CONST.27	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

NOTE: PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.



-L- STA. 328+00.00
SEE SHEET NO. 26
MATCH LINE

-L- STA. 341+00.00
SEE SHEET NO. 28
MATCH LINE

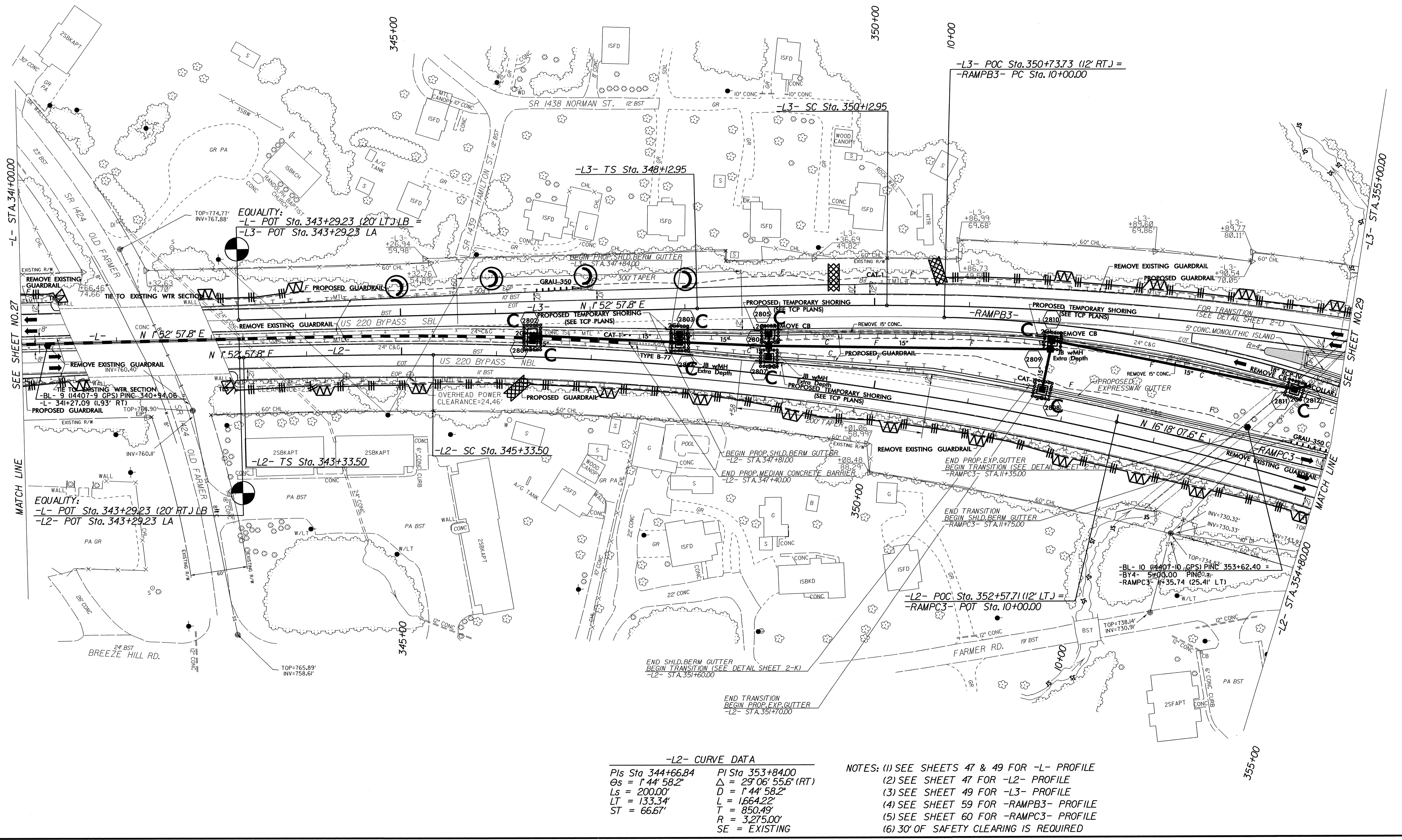
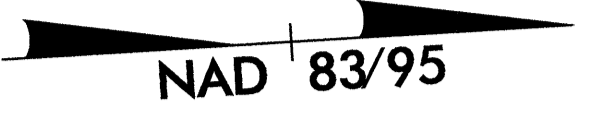
NOTES: (1) SEE SHEET 46 FOR -L- PROFILE
(2) 30' OF SAFETY CLEARING IS REQUIRED

02-MAR-2010 09:24
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AT REN242093
Jennifer Parish

PROJECT REFERENCE NO.	SHEET NO.
1-4407	EC-28/CONST.28
R/W SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	

NOTE: PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

-L3- CURVE DATA
 Pls Sta 349+46.29 PI Sta 359+24.85
 $\Delta = 31^{\circ}07'07.3" (RT)$
 $D = 1^{\circ}44'58.2"$
 $L_s = 200.00'$
 $L = 1,778.73'$
 $T = 911.89'$
 $R = 3,275.00'$
 $SE = EXISTING$



-L2- CURVE DATA
 Pls Sta 344+66.84 PI Sta 353+84.00
 $\Delta = 29^{\circ}06'55.6" (RT)$
 $D = 1^{\circ}44'58.2"$
 $L_s = 200.00'$
 $L = 1,664.22'$
 $T = 850.49'$
 $R = 3,275.00'$
 $SE = EXISTING$

- NOTES: (1) SEE SHEETS 47 & 49 FOR -L- PROFILE
 (2) SEE SHEET 47 FOR -L2- PROFILE
 (3) SEE SHEET 49 FOR -L3- PROFILE
 (4) SEE SHEET 59 FOR -RAMPB3- PROFILE
 (5) SEE SHEET 60 FOR -RAMPC3- PROFILE
 (6) 30' OF SAFETY CLEARING IS REQUIRED

02-MAR-2010 09:26
 R:\env\project\14407\14407_EC-psh28.dgn
 (1) REV 2/4/2010
 (2) REV 2/4/2010

-RAMPB3- CURVE DATA

PI Sta 12+31.79	PI Sta 18+59.4	PI Sta 21+36.32
$\Delta = 18^{\circ} 48' 06.3"$ (RT)	$\Delta = 1^{\circ} 20' 50.0"$ (LT)	$\Delta = 10^{\circ} 54' 49.0"$ (RT)
$D = 4^{\circ} 05' 33.2"$	$D = 1^{\circ} 38' 13.3"$	$D = 5^{\circ} 35' 23.4"$
$L = 459.4'$	$L = 82.30'$	$L = 195.24'$
$T = 231.79'$	$T = 41.5'$	$T = 97.92'$
$R = 1,400.00'$	$R = 3,500.00'$	$R = 1,025.00'$
SE = EXISTING	SE = EXISTING	SE = EXISTING

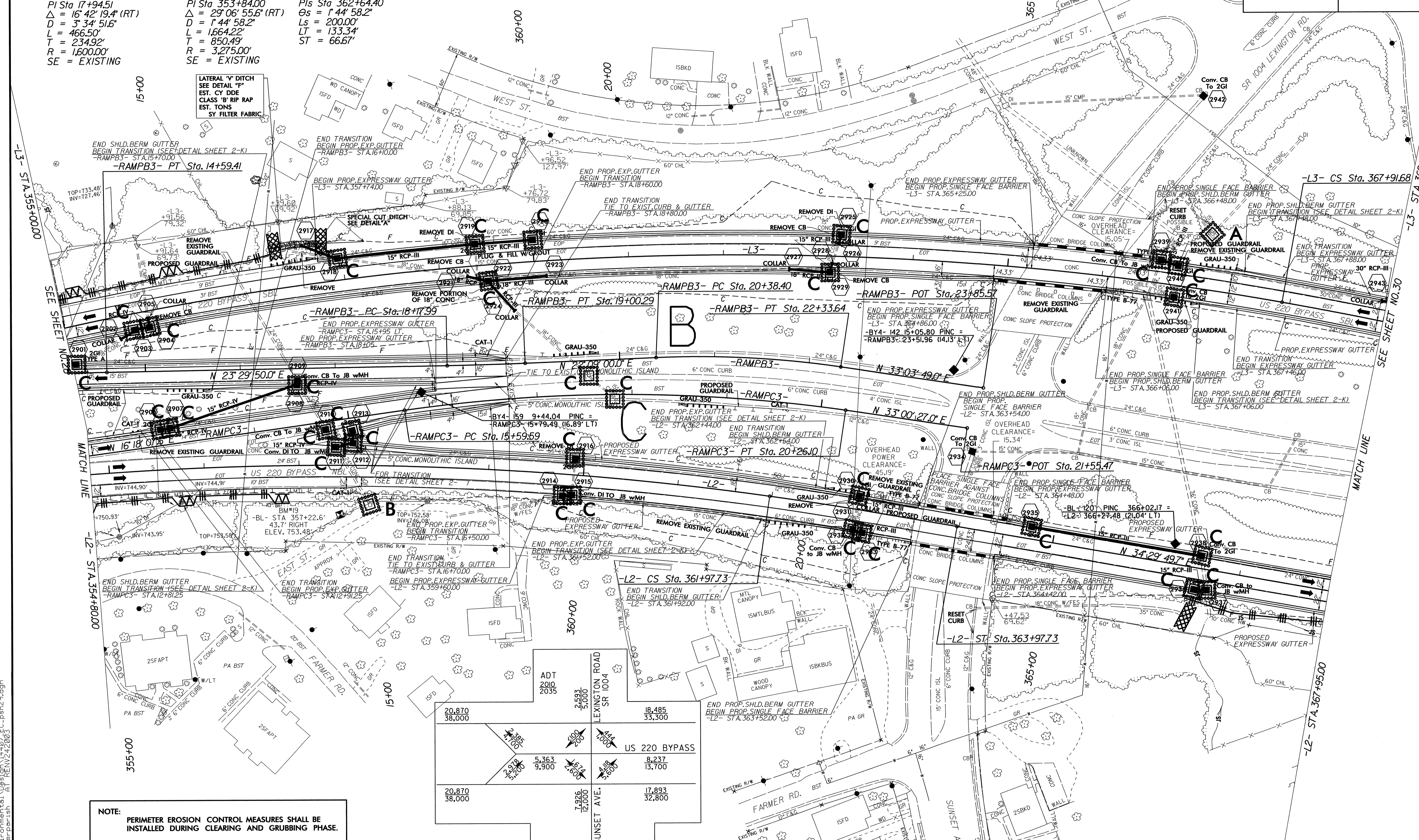
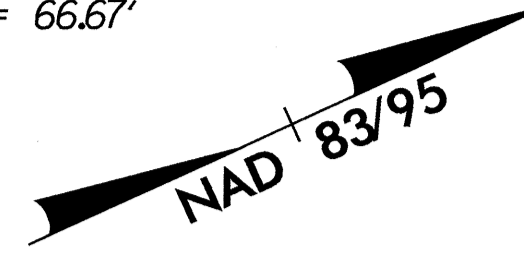
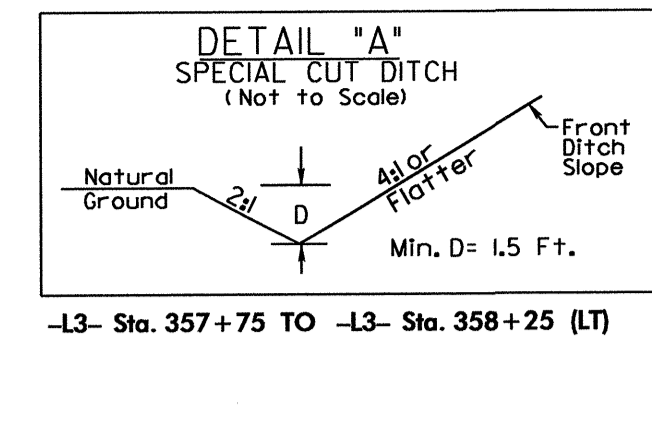
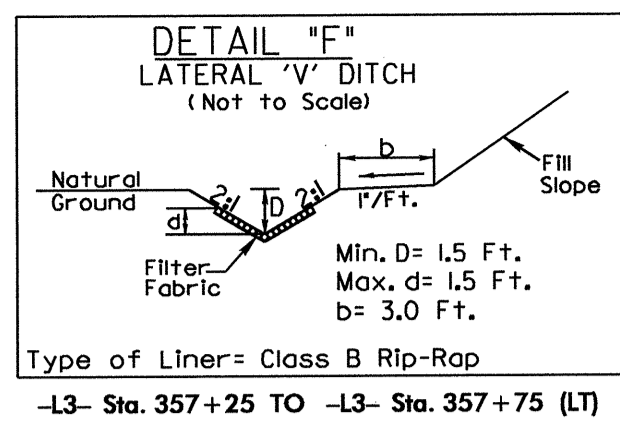
-L3- CURVE DATA

PI Sta 359+24.85	PIs Sta 368+58.36
$\Delta = 3^{\circ} 07' 07.3"$ (RT)	$\Theta_s = 1^{\circ} 44' 58.2"$
$D = 1^{\circ} 44' 58.2"$	$L_s = 200.00'$
$L = 1,778.73'$	$LT = 133.34'$
$T = 91.89'$	$ST = 66.67'$
$R = 3,275.00'$	
SE = EXISTING	

-RAMPB3- CURVE DATA

PI Sta 17+94.51	PI Sta 353+84.00	PIs Sta 362+64.40
$\Delta = 16^{\circ} 42' 19.4"$ (RT)	$\Delta = 29^{\circ} 06' 55.6"$ (RT)	$\Theta_s = 1^{\circ} 44' 58.2"$
$D = 3^{\circ} 34' 51.6"$	$D = 1^{\circ} 44' 58.2"$	$L_s = 200.00'$
$L = 466.50'$	$L = 1,664.22'$	$LT = 133.34'$
$T = 234.92'$	$T = 850.49'$	$ST = 66.67'$
$R = 1,600.00'$	$R = 3,275.00'$	
SE = EXISTING	SE = EXISTING	

LATERAL 'V' DITCH
SEE DETAIL 'F'
EST. CY DDE
CLASS 'B' RIP RAP
EST. TONS
SY FILTER FABRIC



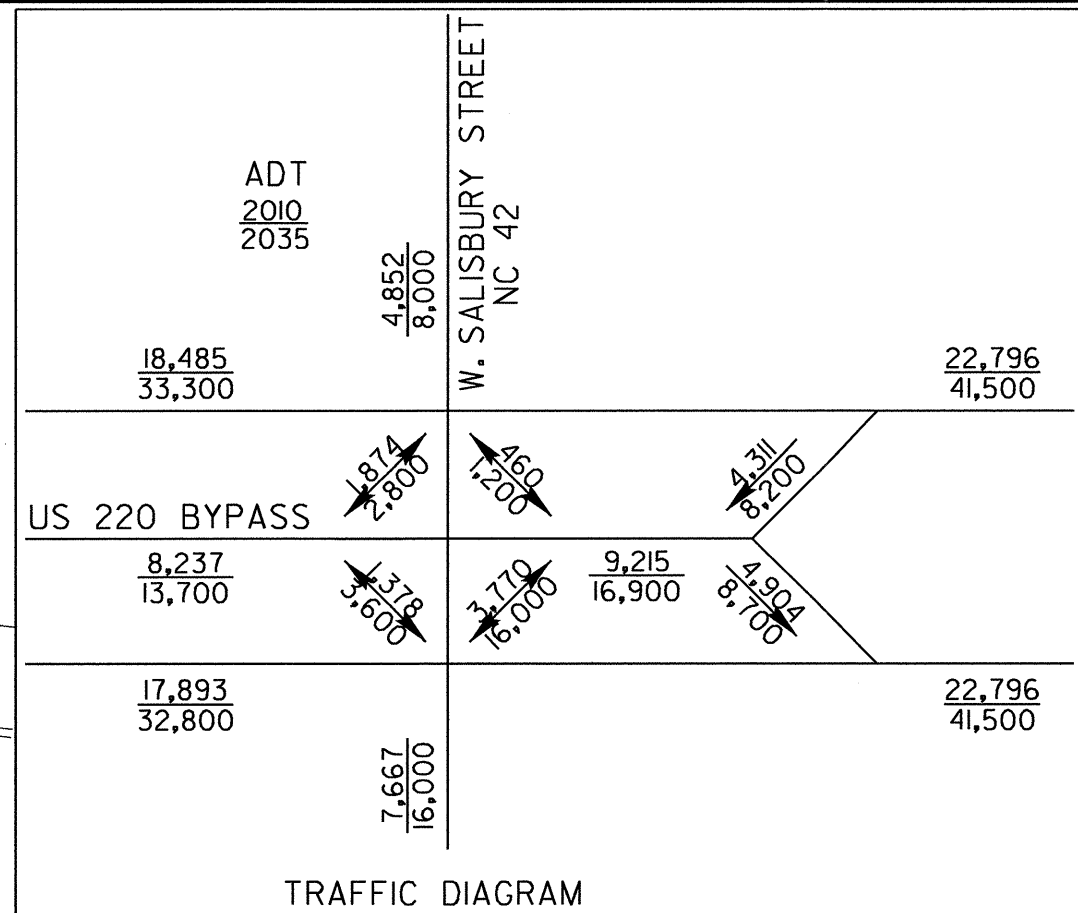
NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE
INSTALLED DURING CLEARING AND GRUBBING PHASE.

TRAFFIC DIAGRAM

20,870 38,000	2,593 5,000	18,485 33,300
5,363 9,900	1,571 3,000	8,237 15,700
20,870 38,000	7,926 12,000	17,893 32,800

02-MAR-2010 09:30 Design:14407_EC_psh29.dgn
 R: Environmental, A: REN242003
 jenniferparish

PROJECT REFERENCE NO.		SHEET NO.	
I-4407		EC-30/CONST.30	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	



-L3- CURVE DATA
 PIs Sta 373+25.25 PI Sta 383+52.85
 $\Delta = 1^\circ 30' 06.7''$ $\Delta = 28^\circ 16' 32.3''$ (LT)
 $L_s = 200.00'$ $D = 1^\circ 30' 06.7''$
 $LT = 133.34'$ $L = 1,882.71'$
 $ST = 66.67'$ $T = 960.94'$
 $R = 3,815.00'$
 SE = EXISTING

NOTE:
 PERIMETER EROSION CONTROL MEASURES SHALL BE
 INSTALLED DURING CLEARING AND GRUBBING PHASE.

-RAMP4- CURVE DATA
 PI Sta 18+64.85
 $\Delta = 10^\circ 44' 42.4''$ (RT)
 $D = 3^\circ 49' 11.0''$
 $L = 281.31'$
 $T = 141.07'$
 $R = 1,500.00'$
 SE = EXISTING

-RAMP4- CURVE DATA
 PI Sta 18+32.83 PI Sta 12+59.90
 $\Delta = 2^\circ 06' 22.0''$ (RT) $\Delta = 16^\circ 25' 56.6''$ (RT)
 $D = 1^\circ 08' 45.3''$ $D = 3^\circ 10' 59.2''$
 $L = 183.79'$ $L = 516.24'$
 $T = 91.91'$ $T = 259.90'$
 $R = 5,000.00'$ $R = 1,800.00'$
 SE = EXISTING SE = EXISTING

-L2- CURVE DATA
 PIs Sta 369+53.35 PI Sta 379+11.64
 $\Delta = 1^\circ 29' 59.6''$ $\Delta = 26^\circ 16' 34.8''$ (LT)
 $L_s = 200.00'$ $D = 1^\circ 29' 59.6''$
 $LT = 133.34'$ $L = 1,751.88'$
 $ST = 66.67'$ $T = 891.62'$
 $R = 3,820.00'$
 SE = EXISTING

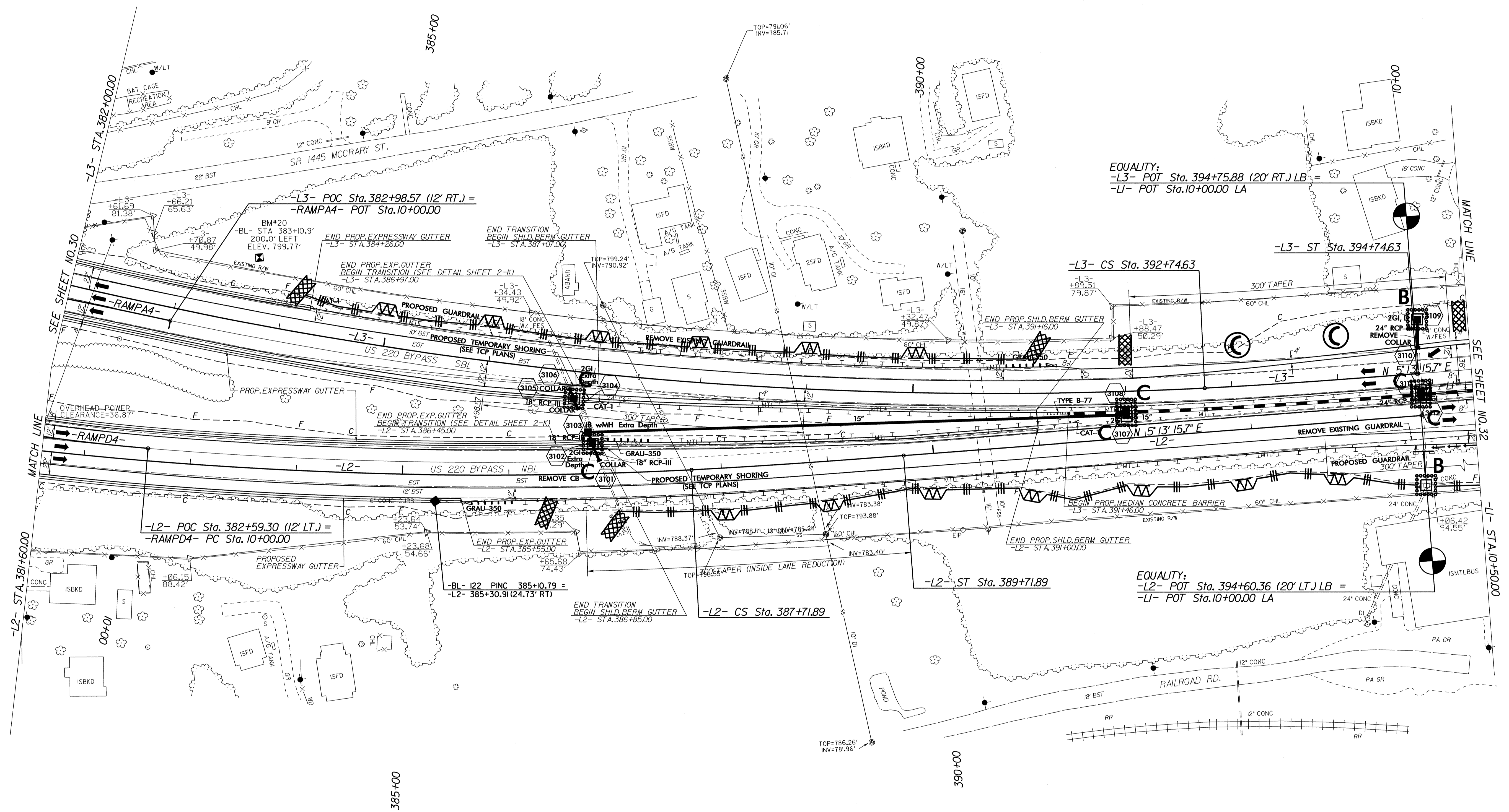
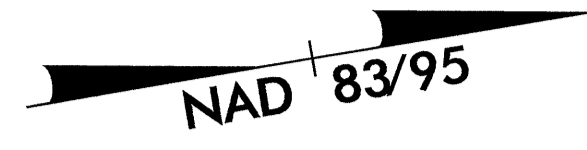
NOTES: (1) SEE SHEET 48 FOR -L2- PROFILE
 (2) SEE SHEET 50 FOR -L3- PROFILE
 (3) SEE SHEET 60 FOR -RAMP4- PROFILE
 (4) SEE SHEET 61 FOR -RAMP4- PROFILE
 (5) 30' OF SAFETY CLEARING IS REQUIRED

02-MAR-2010 09:53
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 jenniferrparish

PROJECT REFERENCE NO.		SHEET NO.	
1-4407		EC-31/CONST.31	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

NOTE: PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

-L3- CURVE DATA
 PI Sta 383+52.85 Pls Sta 393+41.30
 $\Delta = 28^\circ 16' 32.3"$ (LT) $\Theta_s = 1^\circ 30' 06.7"$
 $D = 1^\circ 30' 06.7"$ $L_s = 200.00'$
 $L = 1,882.71'$ $LT = 133.34'$
 $T = 960.94'$ $ST = 66.67'$
 $R = 3,815.00'$
 SE = EXISTING



EQUALITY:
 -L3- POT Sta. 394+75.88 (20' RT.) LB =
 -L1- POT Sta. 10+00.00 LA

EQUALITY:
 -L2- POT Sta. 394+60.36 (20' LT.) LB =
 -L1- POT Sta. 10+00.00 LA

-L2- CURVE DATA
 PI Sta 379+11.64 Pls Sta 388+38.57
 $\Delta = 26^\circ 16' 34.8"$ (LT) $\Theta_s = 1^\circ 29' 59.6"$
 $D = 1^\circ 29' 59.6"$ $L_s = 200.00'$
 $L = 1,751.88'$ $LT = 133.34'$
 $T = 891.62'$ $ST = 66.67'$
 $R = 3,820.00'$
 SE = EXISTING

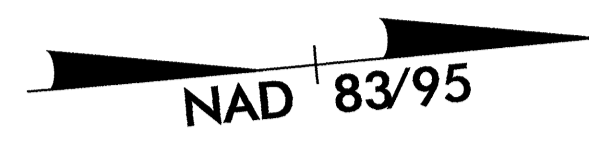
- NOTES: (1) SEE SHEETS 48 & 50 FOR -L1- PROFILE
 (2) SEE SHEET 48 FOR -L2- PROFILE
 (3) SEE SHEET 50 FOR -L3- PROFILE
 (4) SEE SHEET 60 FOR -RAMP4A- PROFILE
 (5) SEE SHEET 61 FOR -RAMP4- PROFILE
 (6) 30' OF SAFETY CLEARING IS REQUIRED

02-MAR-2010 09:34
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 Jennifer.parish AT RENV242003

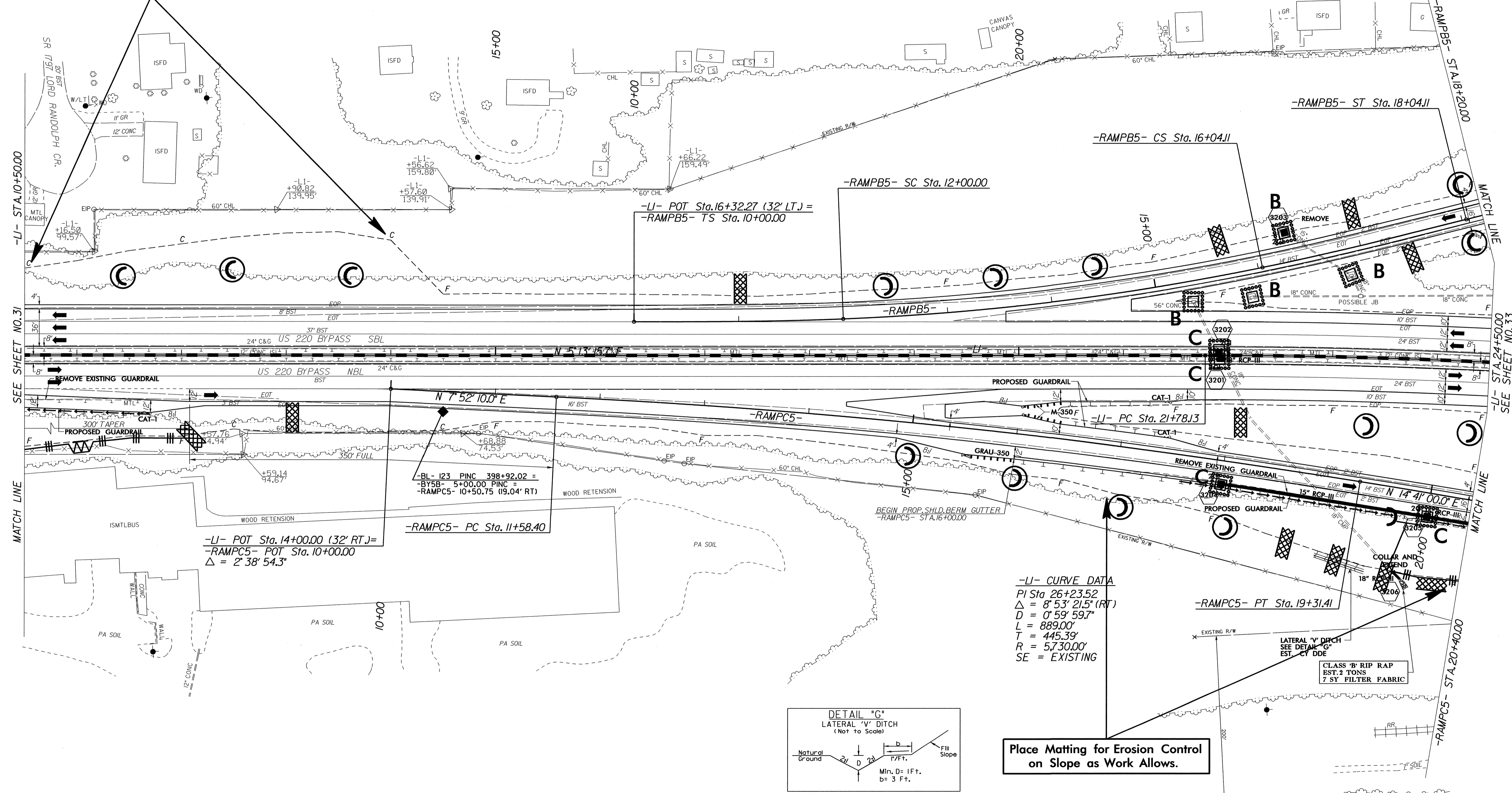
PROJECT REFERENCE NO.	SHEET NO.
1-4407	EC-32/CONST.32
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-RAMPB5- CURVE DATA
 PIs Sta 11+33.34 PIs Sta 14+02.51 PIs Sta 16+70.79
 $\theta_s = 2' 20'' 19.0''$ $\Delta = 9' 27'' 01.7''$ (LT) $\theta_s = 2' 20'' 19.0''$
 $L_s = 200.00'$ $D = 2' 20'' 19.0''$ $L_s = 200.00'$
 $LT = 133.34'$ $L = 404.11'$ $LT = 133.34'$
 $ST = 66.68'$ $T = 202.51'$ $ST = 66.68'$
 $R = 2,450.00'$ $SE = \text{EXISTING}$

NOTE: PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

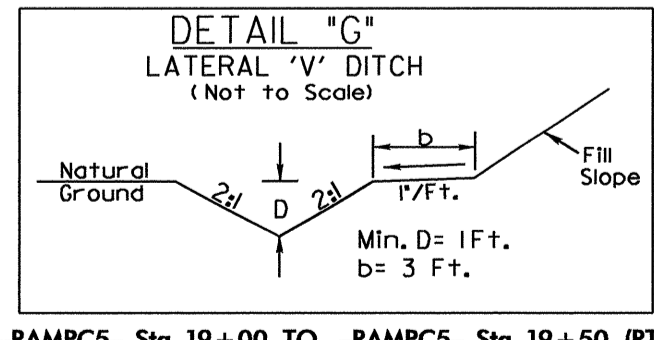


Place Matting for Erosion Control on Slope as Work Allows.



-LI- CURVE DATA
 PI Sta 26+23.52
 $\Delta = 8' 53'' 21.5''$ (RT)
 $D = 0' 59'' 59.7''$
 $L = 889.00'$
 $T = 445.39'$
 $R = 5,730.00'$
 $SE = \text{EXISTING}$

-RAMPC5- CURVE DATA
 PI Sta 15+45.36
 $\Delta = 6' 48'' 50.0''$ (RT)
 $D = 0' 52'' 53.3''$
 $L = 773.01'$
 $T = 386.96'$
 $R = 6,500.00'$
 $SE = \text{EXISTING}$



- NOTES: (1) SEE SHEET 51 FOR -LI- PROFILE
 (2) SEE SHEET 62 FOR -RAMPB5- PROFILE
 (3) SEE SHEET 63 FOR -RAMPC5- PROFILE
 (4) 30' OF SAFETY CLEARING IS REQUIRED

02-MAR-2010 09:35 Design\14407_EC-psb32.dgn
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 jenniferparish

PROJECT REFERENCE NO.	SHEET NO.
I-4407	EC-33/CONST.33
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NOTE: PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

NAD 83/95

-RAMPB5- CURVE DATA

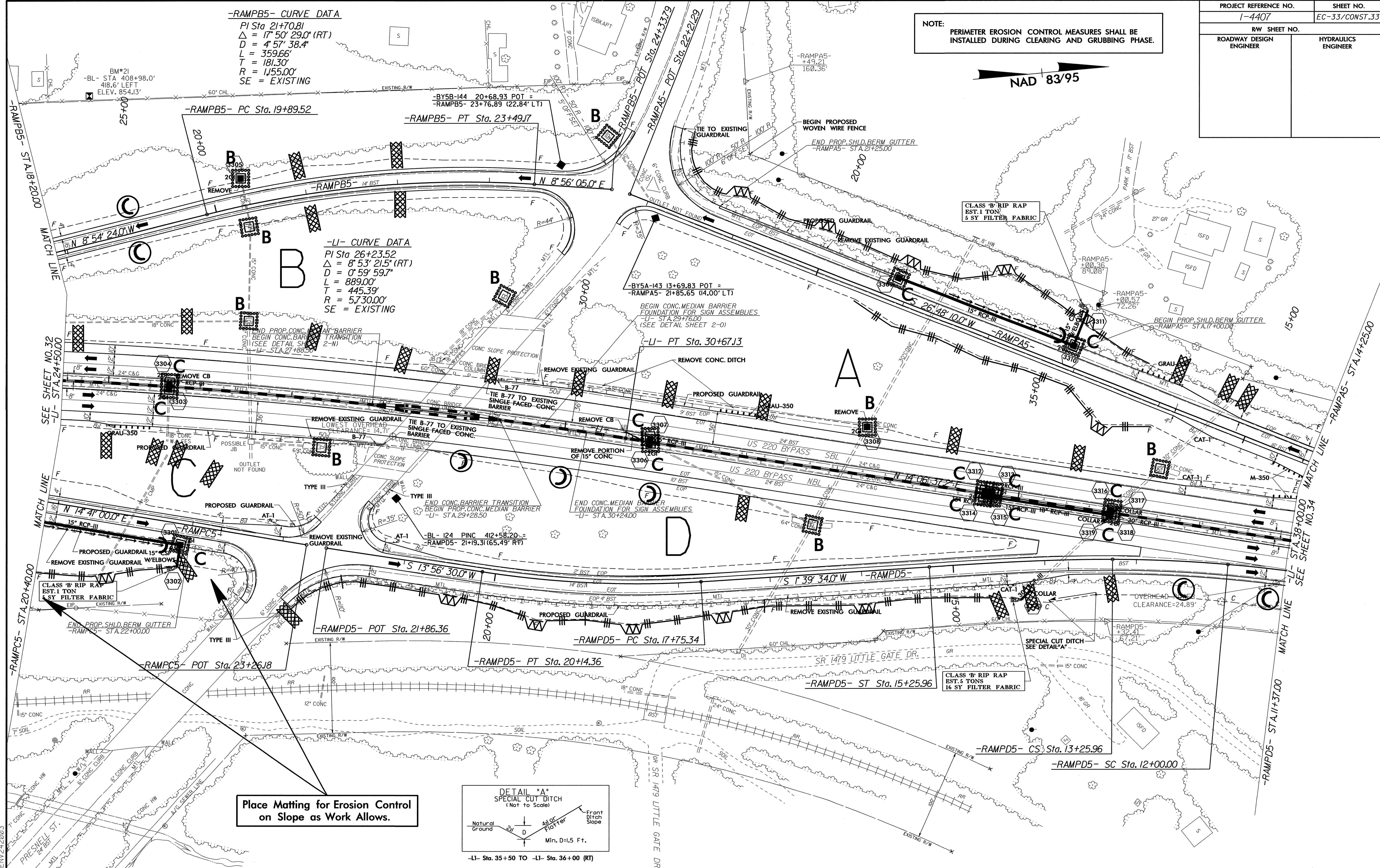
PI Sta 21+70.81
 $\Delta = 17^{\circ} 50' 29.0" (RT)$
 $D = 4' 57' 38.4"$
 $L = 359.66'$
 $T = 181.30'$
 $R = 1,155.00'$
 SE = EXISTING

-LI- CURVE DATA

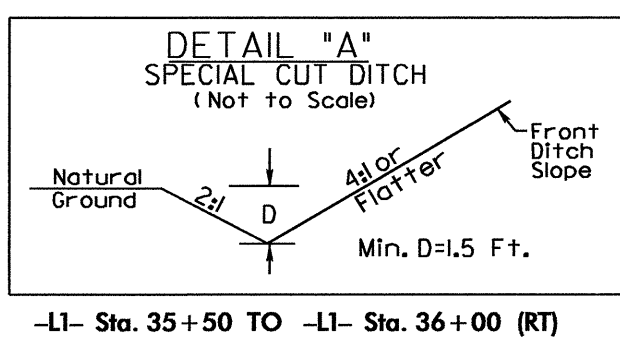
PI Sta 26+23.52
 $\Delta = 8^{\circ} 53' 21.5" (RT)$
 $D = 0' 59' 59.7"$
 $L = 889.00'$
 $T = 445.39'$
 $R = 5,730.00'$
 SE = EXISTING

-RAMPD5- CURVE DATA

PI Sta 18+95.31 $\Delta = 12^{\circ} 16' 56.0" (RT)$ $D = 5' 08' 19.1"$ $L = 239.02'$ $T = 119.97'$ $R = 1,115.00'$ SE = EXISTING	PIs Sta 13+92.66 $\Theta_s = 3^{\circ} 49' 11.0"$ $L_s = 200.00'$ LT = 133.36' ST = 66.69'	PI Sta 12+63.02 $\Delta = 4^{\circ} 48' 41.2" (LT)$ $D = 3^{\circ} 49' 11.0"$ $L = 125.96'$ $T = 63.02'$ $R = 1,500.00'$ SE = EXISTING	PIs Sta 11+33.36 $\Theta_s = 3^{\circ} 49' 11.0"$ $L_s = 200.00'$ LT = 133.36' ST = 66.69'
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Place Matting for Erosion Control on Slope as Work Allows.



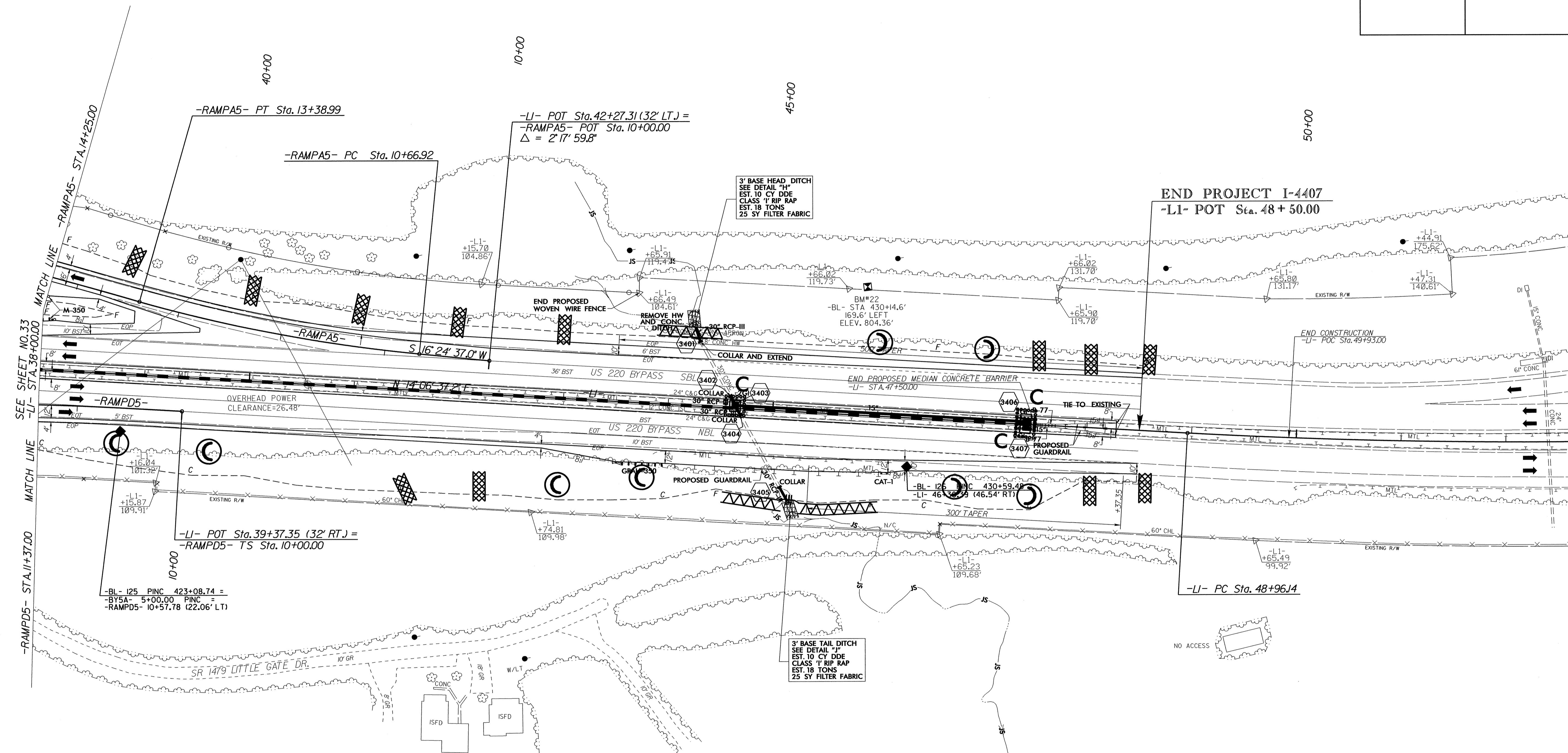
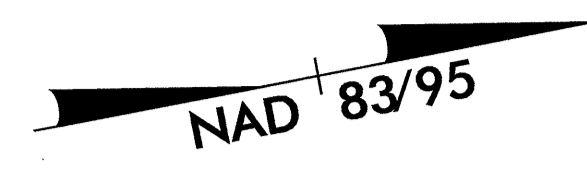
- NOTES: (1) SEE SHEET 51 FOR -LI- PROFILE
 (2) SEE SHEET 61 FOR -RAMP5- PROFILE
 (3) SEE SHEET 62 FOR -RAMPB5- PROFILE
 (4) SEE SHEET 63 FOR -RAMP5- PROFILE
 (5) SEE SHEET 63 FOR -RAMPD5- PROFILE
 (6) 30' OF SAFETY CLEARING IS REQUIRED

02-MAR-2010 09:36
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 Jenniferparish AT RENW242003

PROJECT REFERENCE NO. I-4407		SHEET NO. EC-34/CONST.34	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

-RAMP5- CURVE DATA
 PI Sta 12+03.33
 $\Delta = 10^\circ 23' 33.0''$ (RT)
 $D = 3^\circ 49' 11.0''$
 $L = 272.08'$
 $T = 136.41'$
 $R = 1,500.00'$
 SE = EXISTING

NOTE: PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.



SEE SHEET NO. 33
-LI- STA. 38+00.00

MATCH LINE
-RAMP5- STA. 11+37.00

MATCH LINE
-RAMP5- STA. 11+37.00

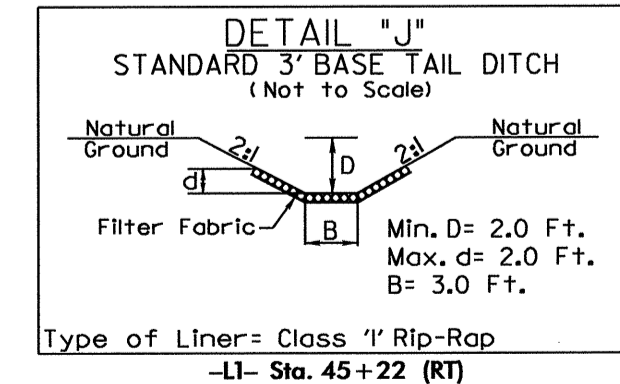
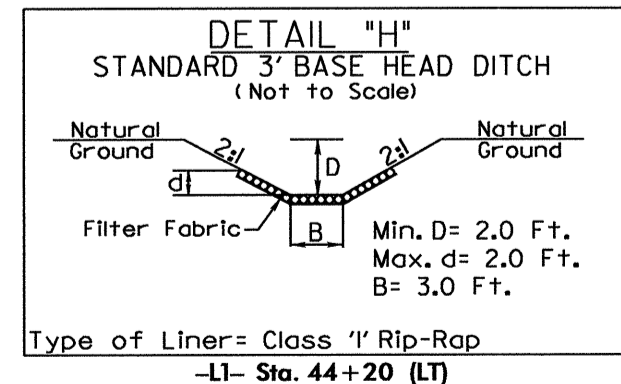
END PROJECT I-4407
-LI- POT Sta. 48 + 50.00

END CONSTRUCTION
-LI- PC Sta. 49+93.00

-LI- POT Sta. 39+37.35 (32' RT.) =
-RAMP5- TS Sta. 10+00.00

-BL- 125 PINC 423+08.74 =
-BY5A- 5+00.00 PINC =
-RAMP5- 10+57.78 (22.06' LT)

-LI- PC Sta. 48+96.14



-RAMP5- SPIRAL DATA
 PIs Sta 11+33.36
 $\Theta_s = 3^\circ 49' 11.0''$
 $L_s = 200.00'$
 $LT = 133.36'$
 $ST = 66.69'$

-LI- CURVE DATA
 PI Sta 58+25.91
 $\Delta = 18^\circ 26' 00.0''$ (LT)
 $D = 0^\circ 59' 59.7''$
 $L = 1843.47'$
 $T = 929.77'$
 $R = 5730.00'$
 SE = EXISTING

- NOTES:** (1) SEE SHEET 52 FOR -LI- PROFILE
 (2) SEE SHEET 61 FOR -RAMP5- PROFILE
 (3) SEE SHEET 63 FOR -RAMP5- PROFILE
 (4) 30' OF SAFETY CLEARING IS REQUIRED

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