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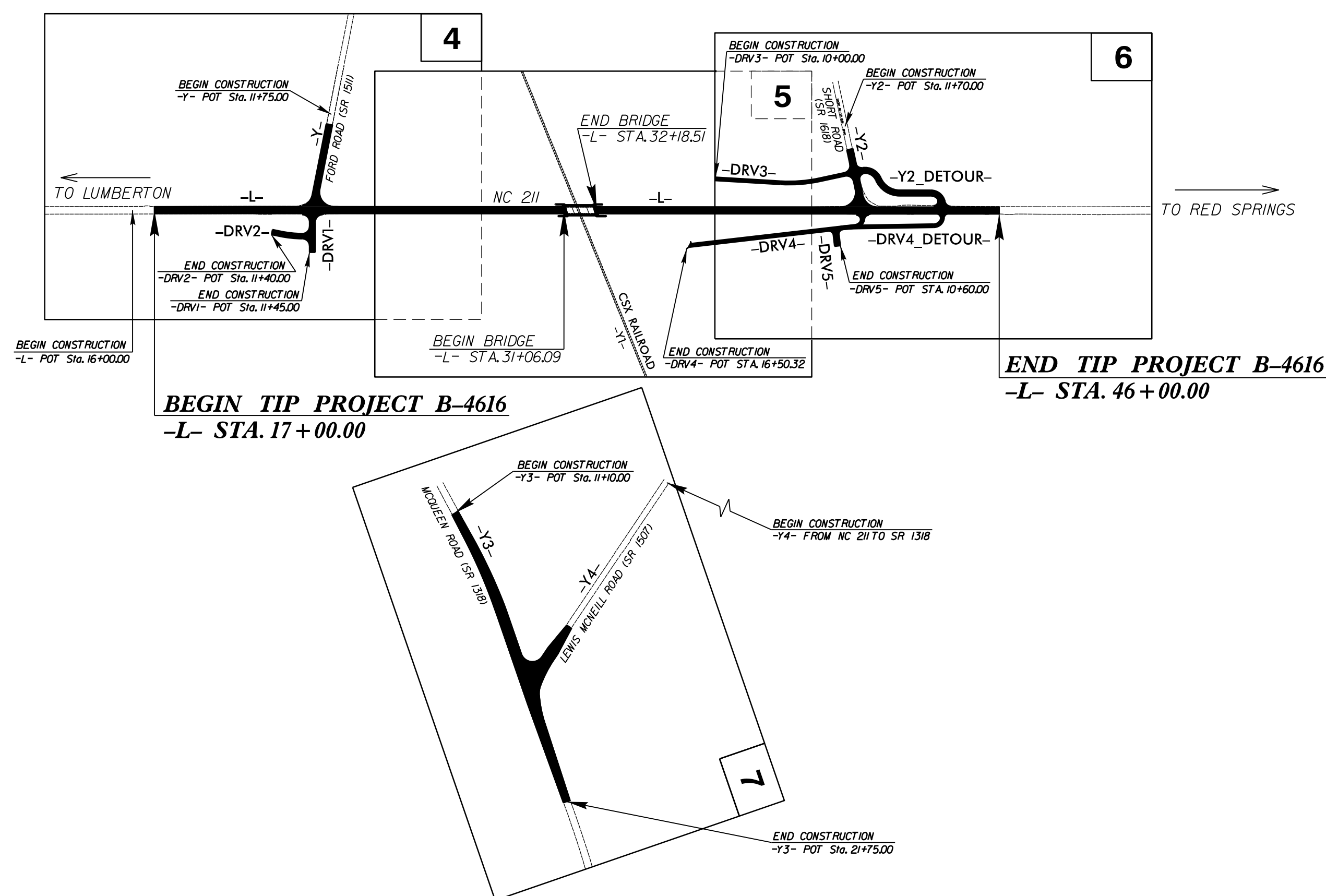
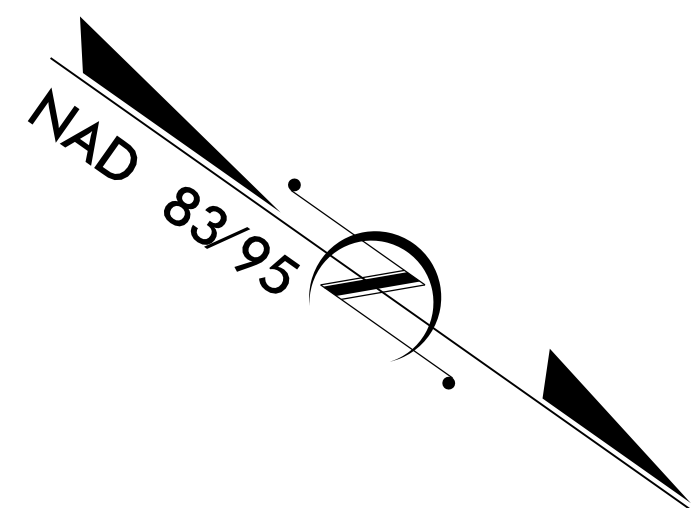
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TIP PROJECT: B-4616

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

LOCATION: BRIDGE NO. 18 OVER CSX RAILROAD ON NC 211

TYPE OF WORK: GRADING, DRAINAGE, PAVING AND STRUCTURE



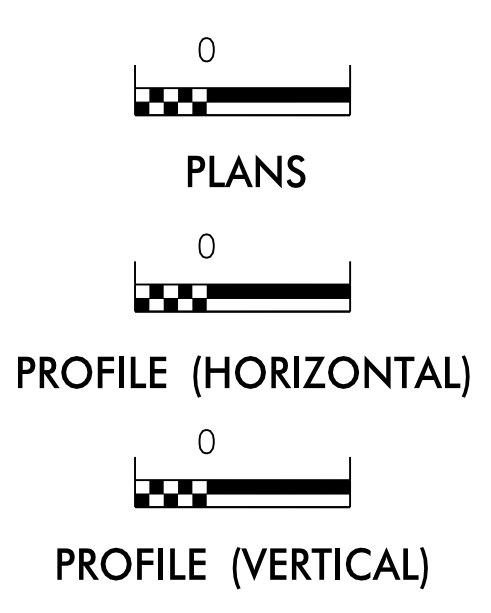
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4616	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	

EROSION AND SEDIMENT CONTROL MEASURES

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

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

GRAPHIC SCALE



ROADSIDE ENVIRONMENTAL UNIT
 DIVISION OF HIGHWAYS
 STATE OF NORTH CAROLINA

THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH THE REGULATIONS SET FORTH BY THE NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE AUGUST 3, 2011 ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES DIVISION OF WATER QUALITY.

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

2012 STANDARD SPECIFICATIONS

Designed by:
Benjamin Bradley 3873
 NAME LEVEL III CERTIFICATION NO.

Roadway Standard Drawings

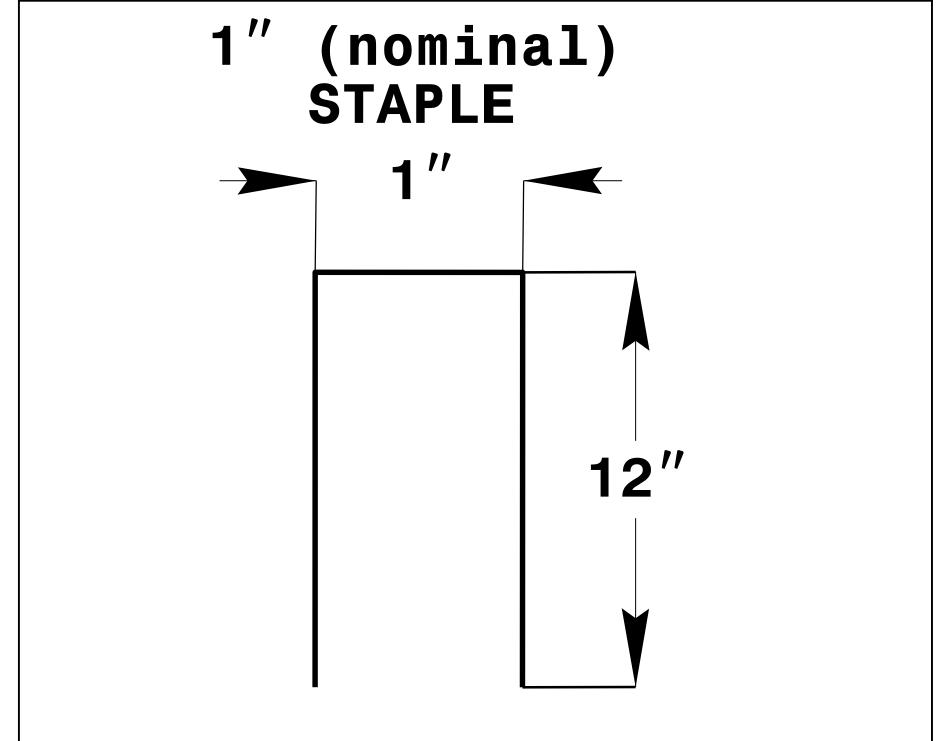
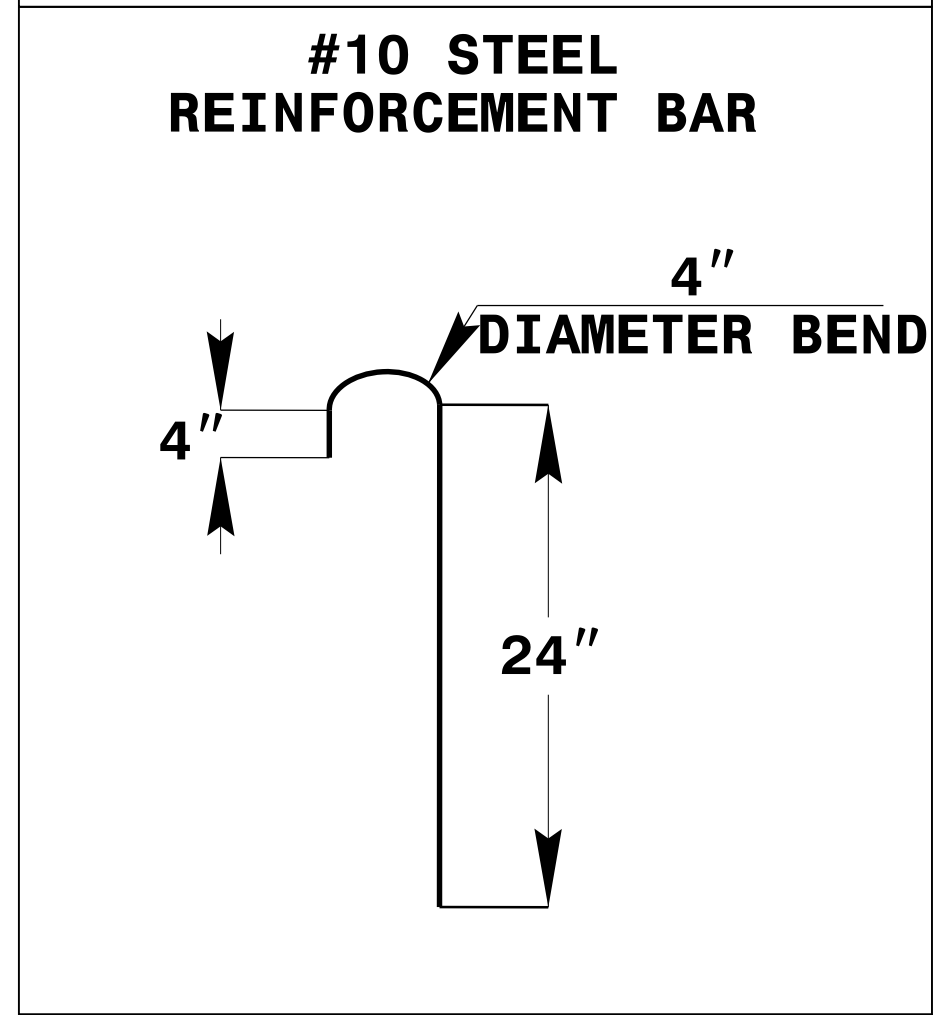
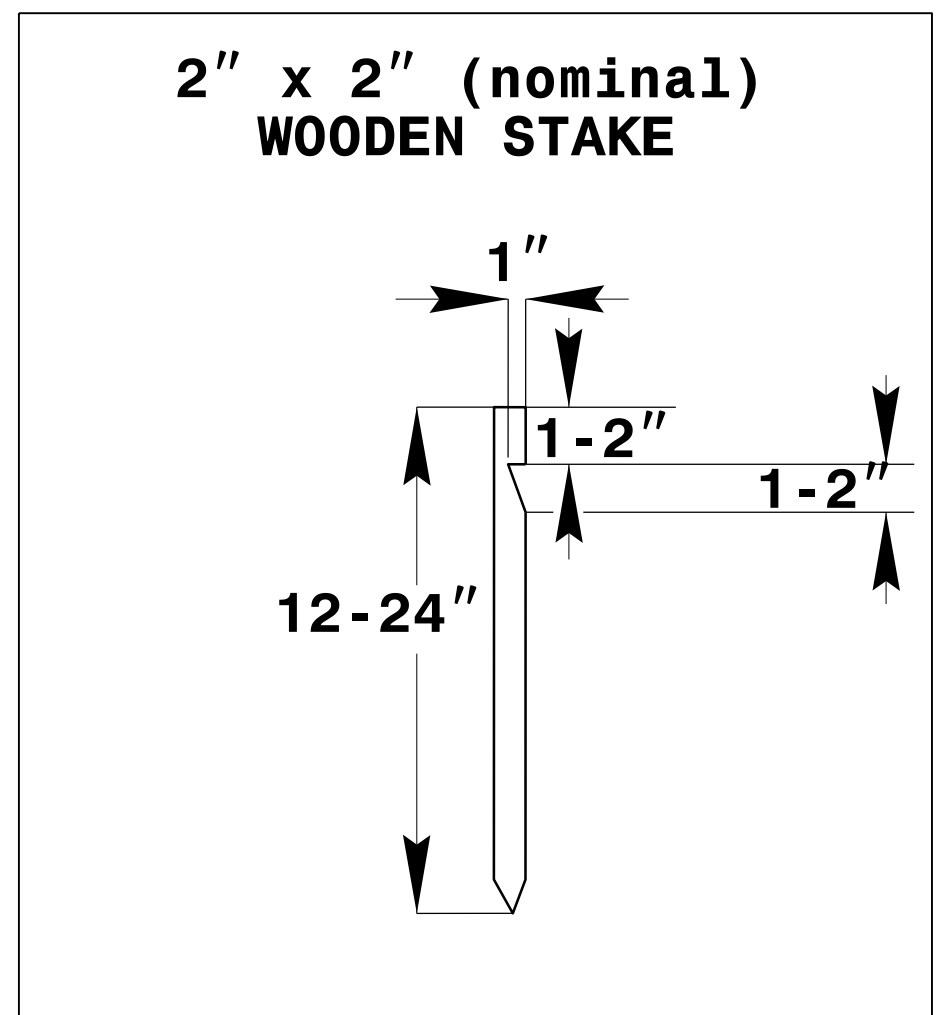
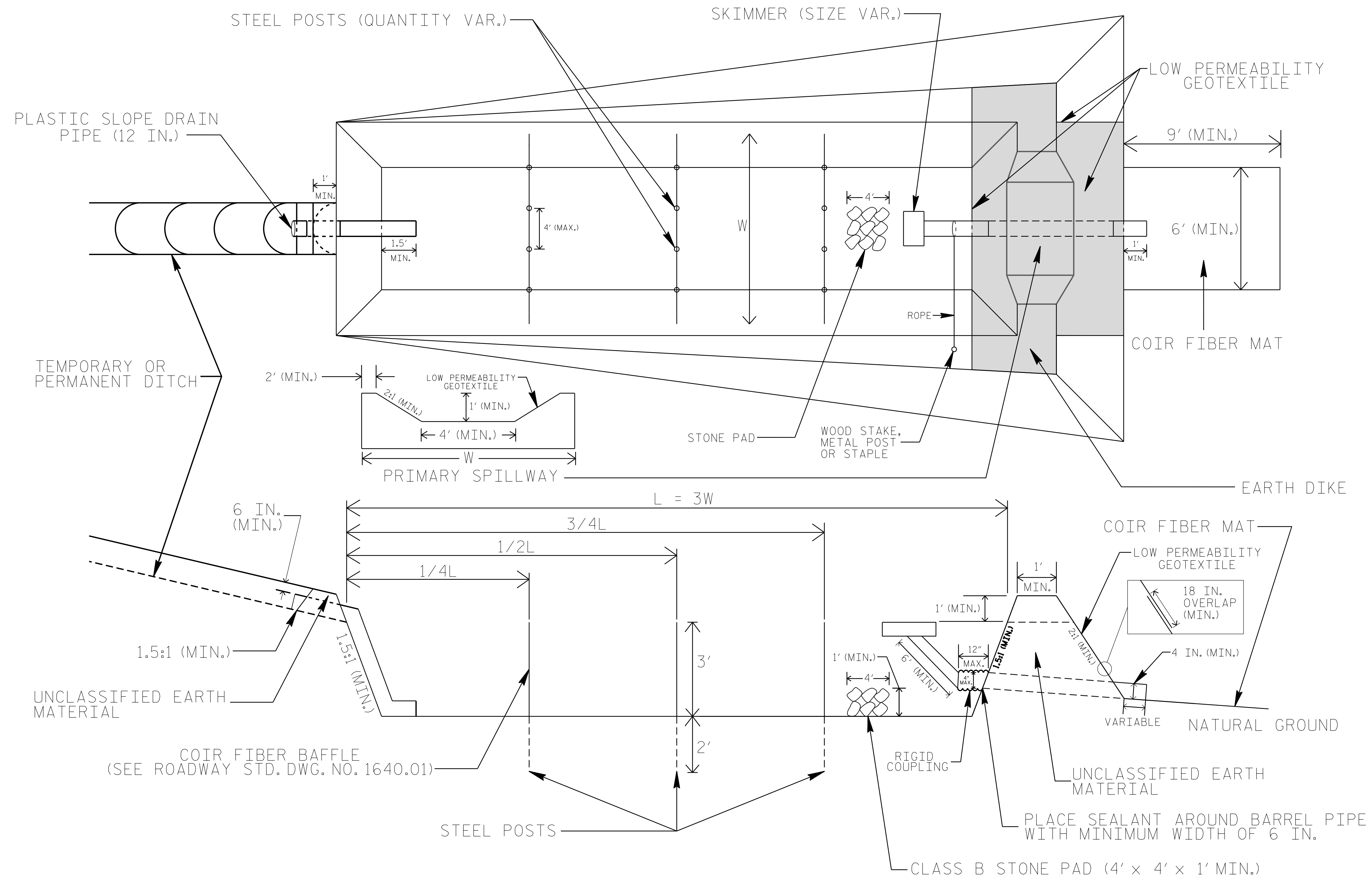
The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated January 2012 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

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 Wattle
1630.06 Special Stilling Basin	1645.01 Temporary Stream Crossing
1631.01 Matting Installation	

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PROJECT REFERENCE NO. B-4616	SHEET NO. EC-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SKIMMER BASIN WITH BAFFLES DETAIL (EAST)



COIR FIBER MAT ANCHOR OPTIONS

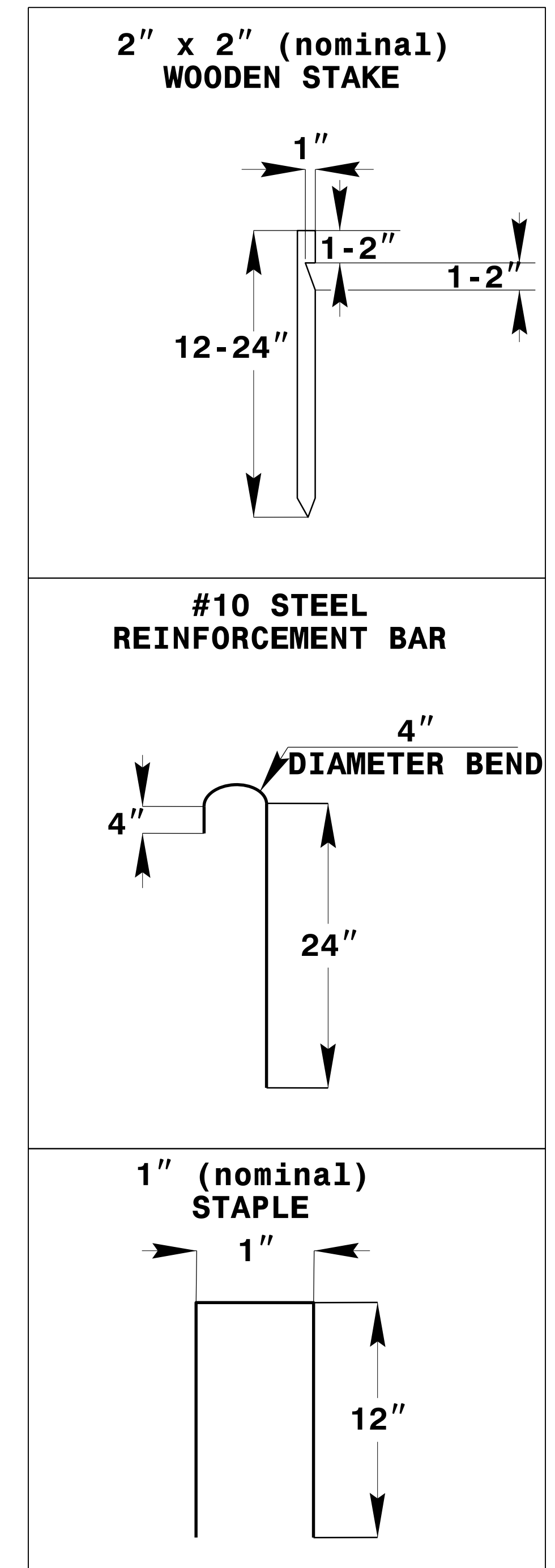
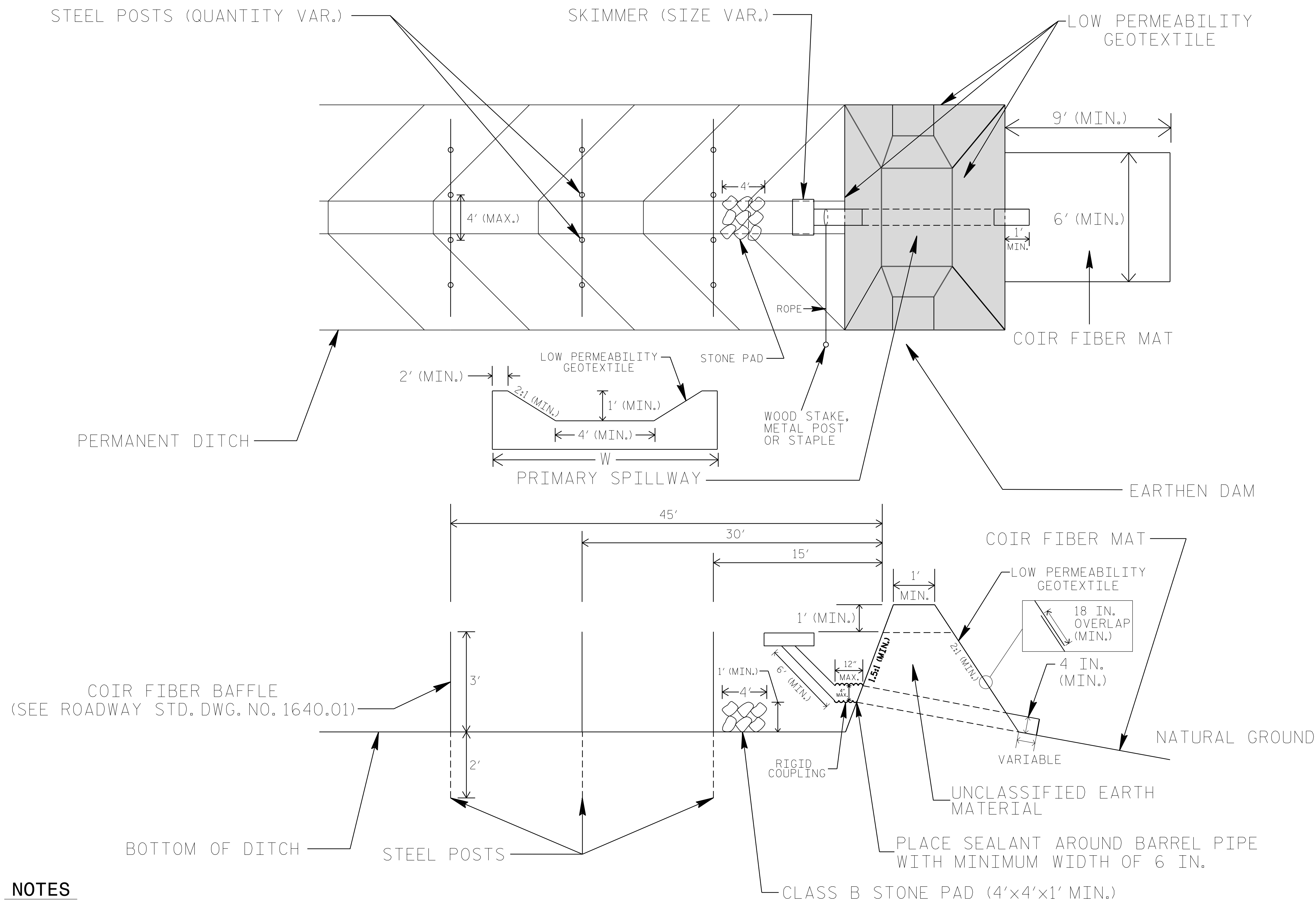
NOTES

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

PROJECT REFERENCE NO. B-4616	SHEET NO. EC-2A
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

EARTHEN DAM WITH SKIMMER DETAIL (EAST)



COIR FIBER MAT ANCHOR OPTIONS

NOTES

1. LIMIT EARTHEN DAM HEIGHT TO 5 FT.
2. DETERMINE PRIMARY SPILLWAY LENGTH (FT.) USING $Q/0.8$, WHERE Q IS FLOW RATE (CFS) INTO BASIN.
3. LOW PERMEABILITY GEOTEXTILE FOR PRIMARY SPILLWAY SHALL BE ONE CONTINUOUS PIECE OF MATERIAL OR OVERLAPPED 18 IN. (MIN.).

NOT TO SCALE

BORROW PIT DEWATERING BASIN DETAIL

PROJECT REFERENCE NO. B-4616	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 1060-14.

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.

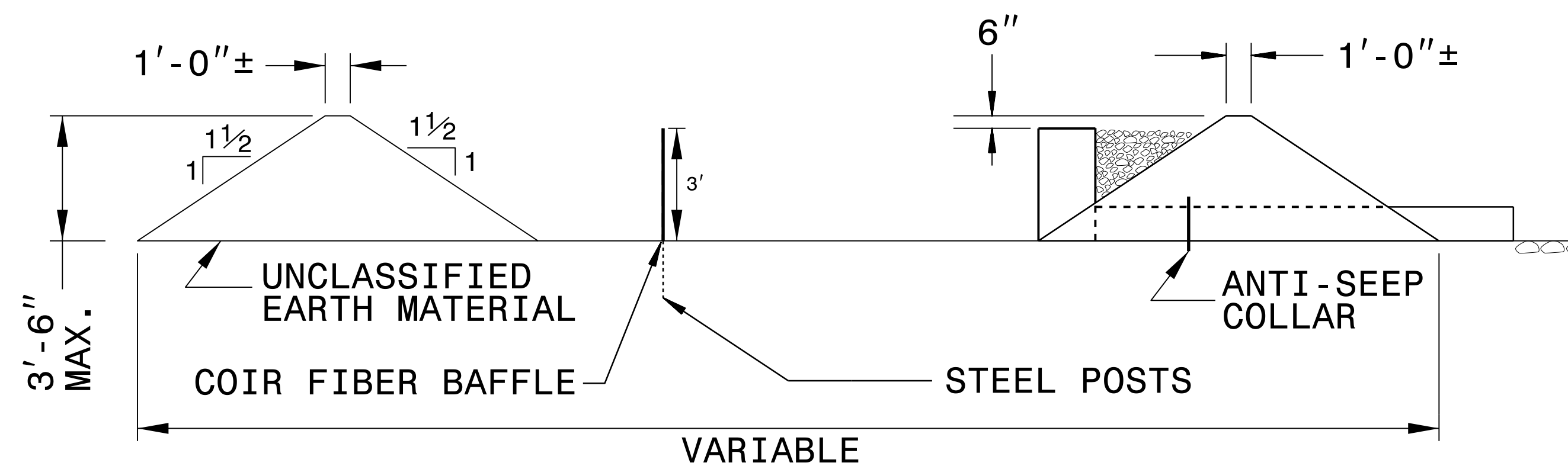
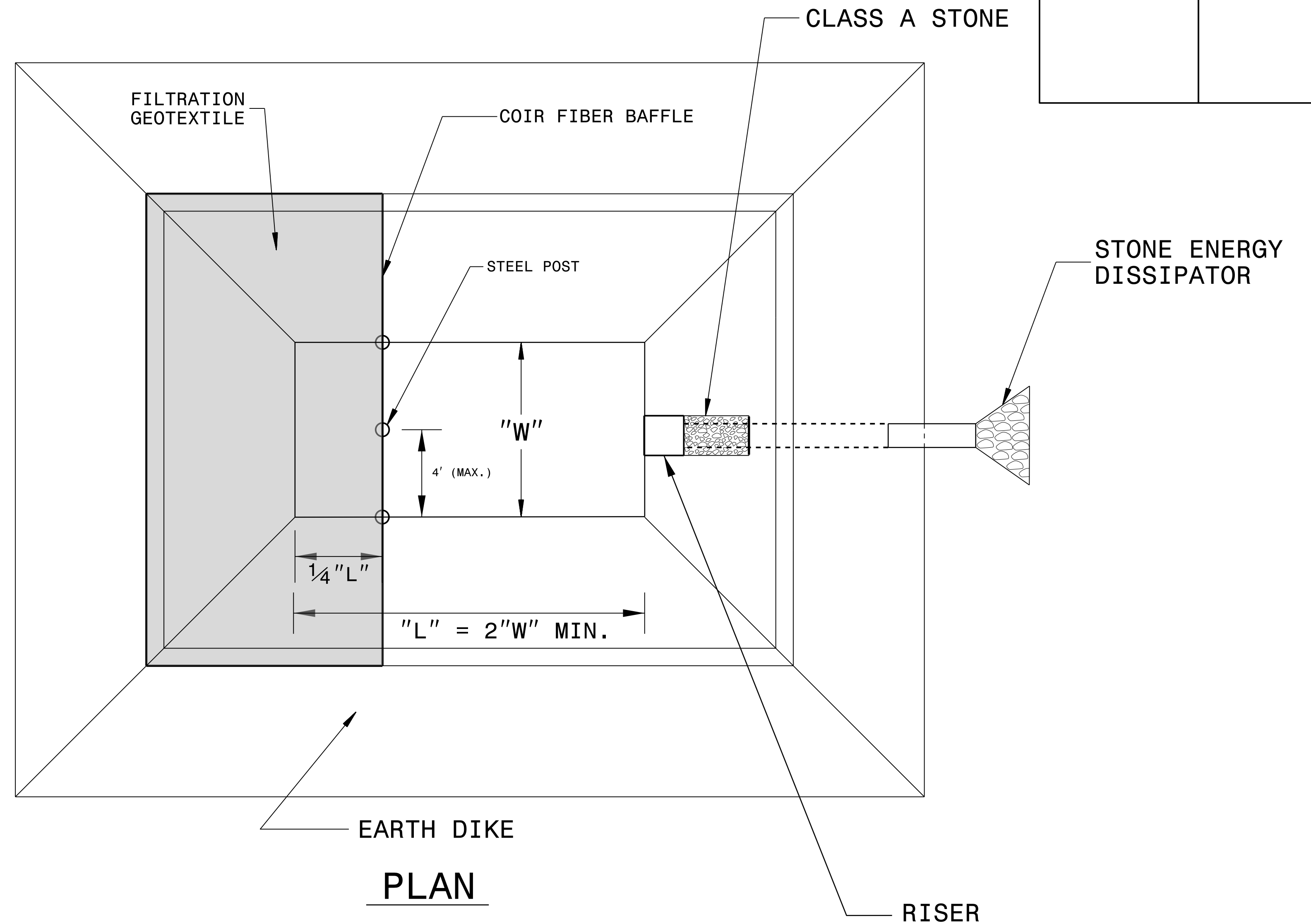
DO NOT EXCEED 3½ FT. IN HEIGHT FOR THE EARTH DIKES REQUIRED FOR BORROW PIT DEWATERING BASIN.

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.

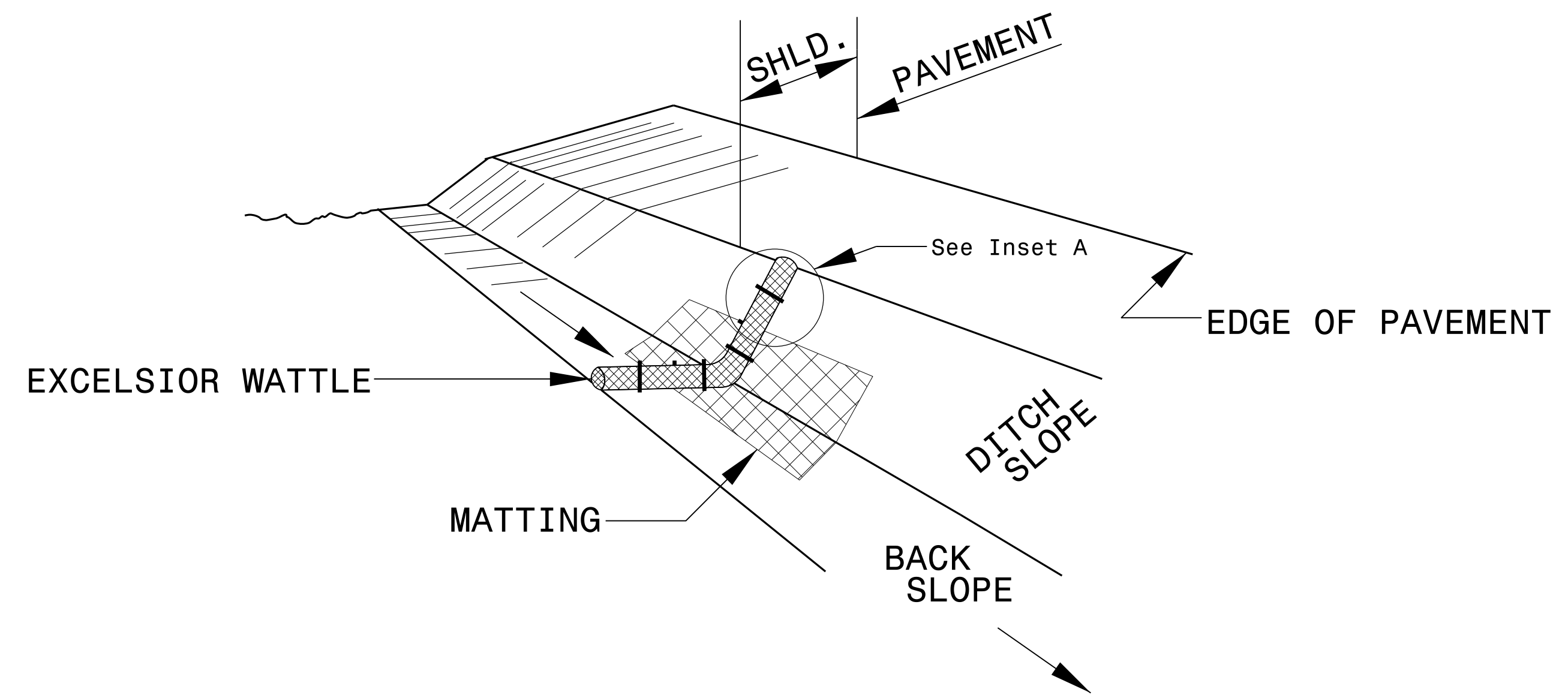


TYPICAL SECTION VIEW

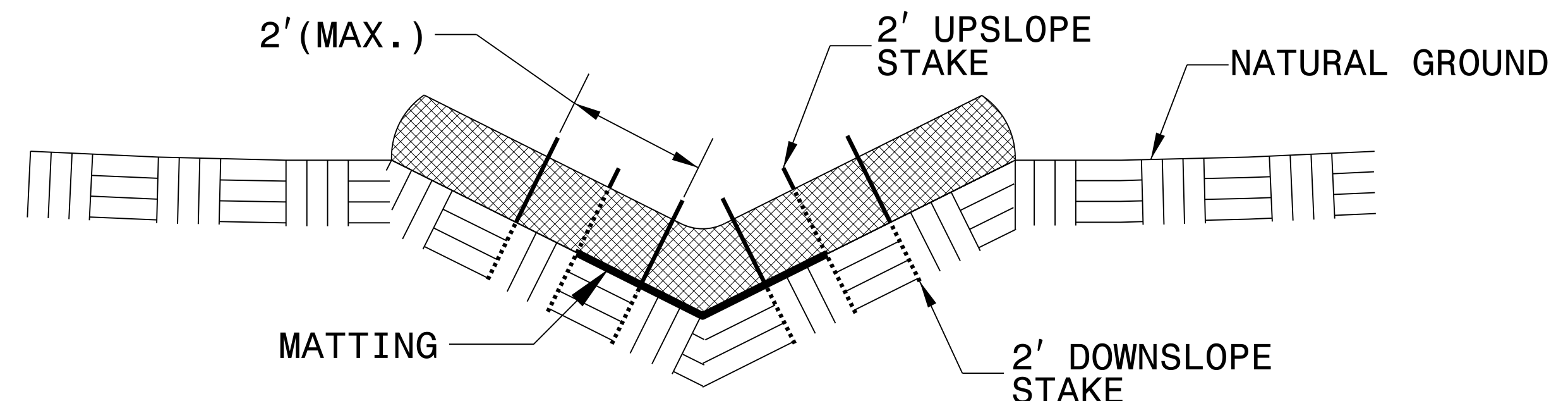
NOT TO SCALE

PROJECT REFERENCE NO. B-4616	SHEET NO. EC-2C
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

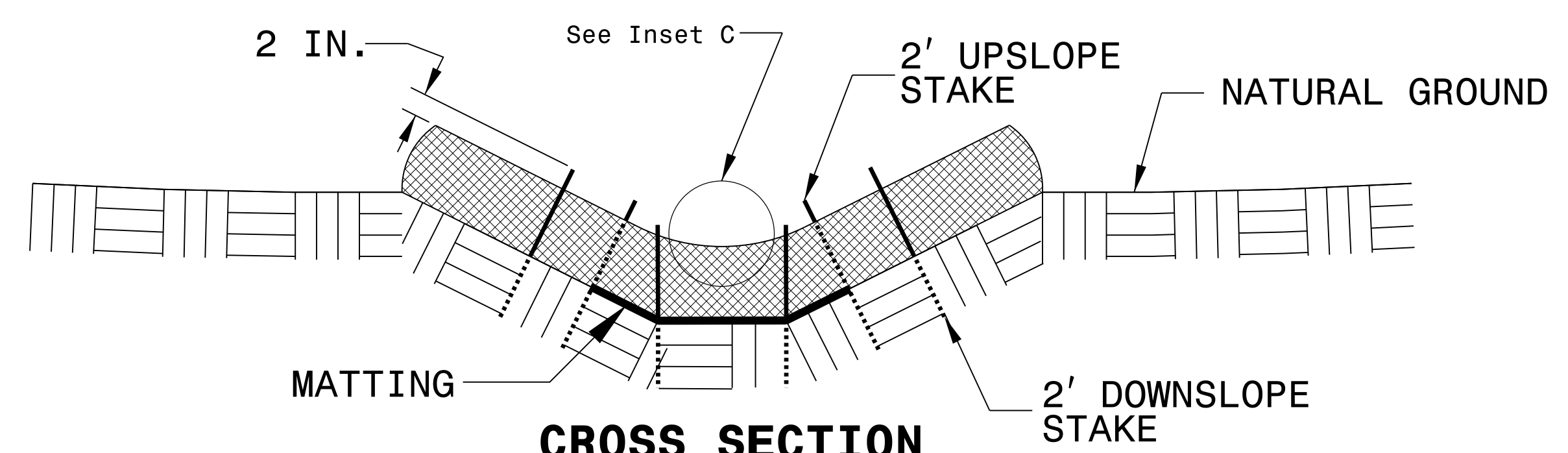
WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL



ISOMETRIC VIEW

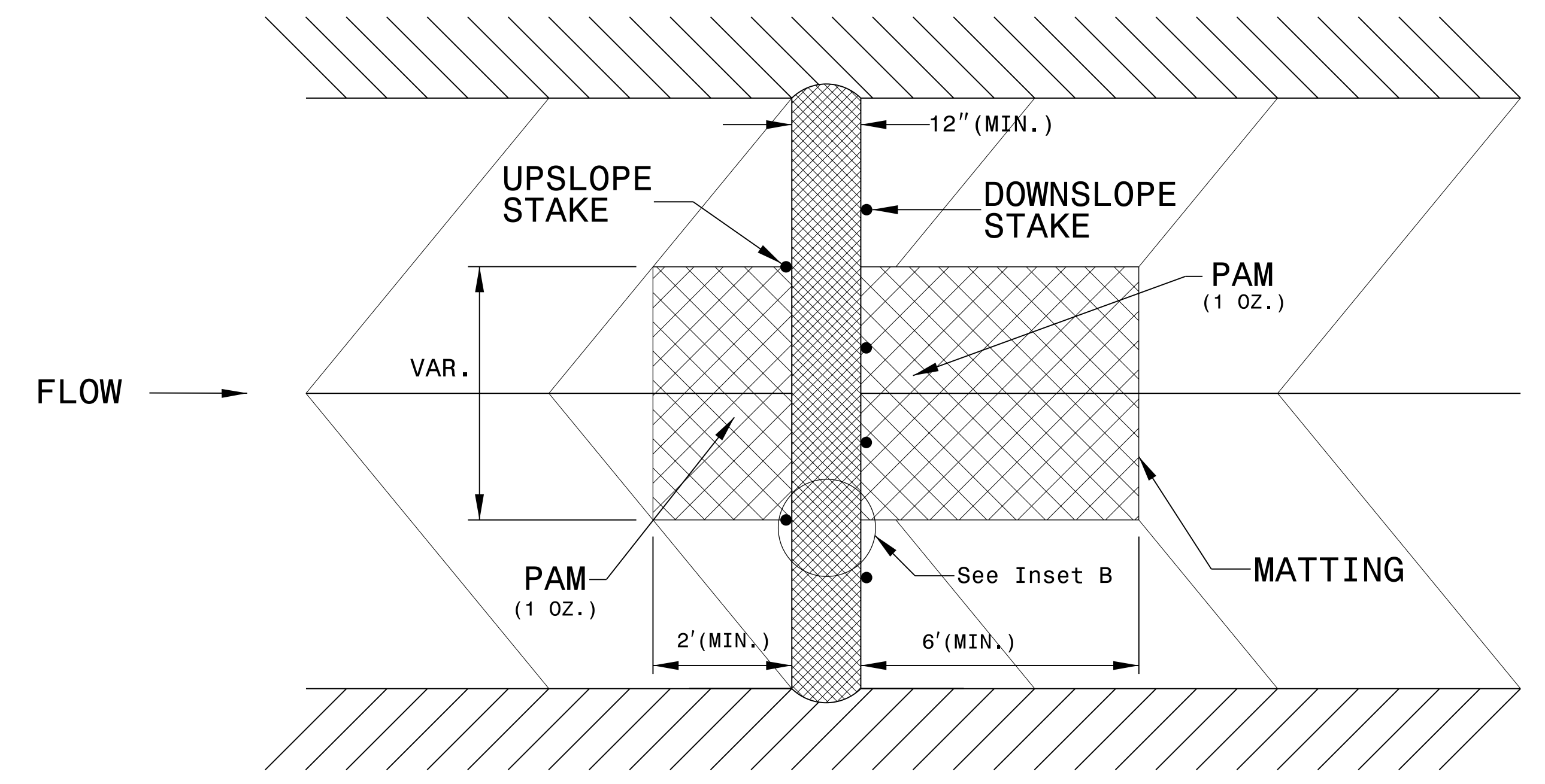
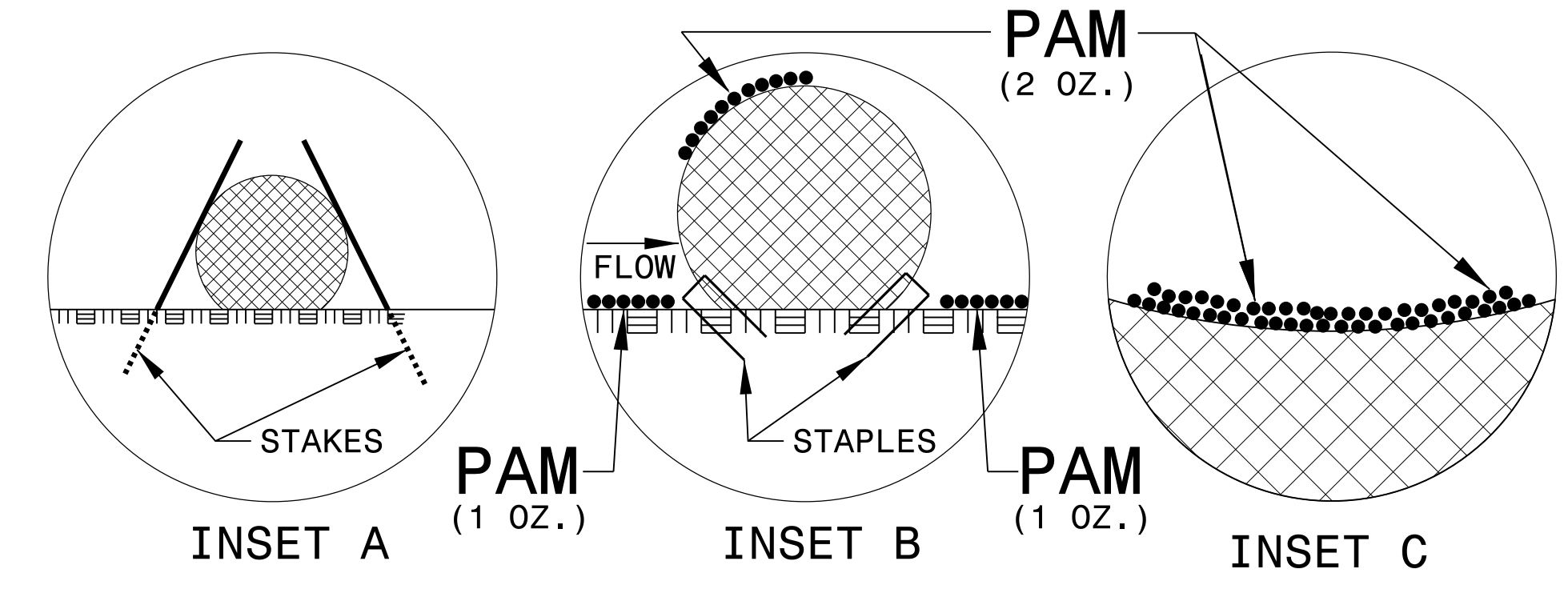


CROSS SECTION VEE DITCH



CROSS SECTION TRAPEZOIDAL DITCH

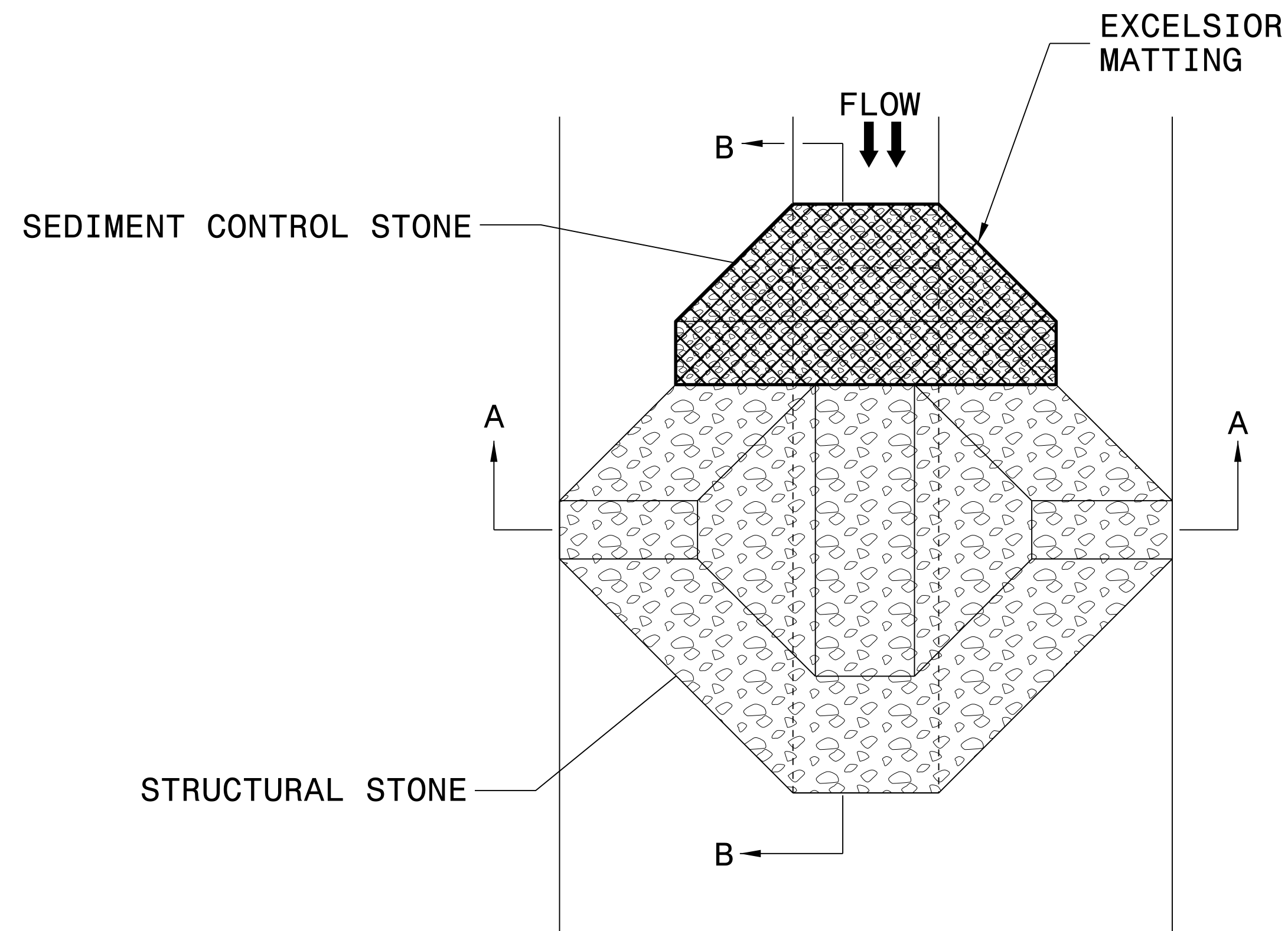
- NOTES:
- USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.
 - USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.
 - ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.
 - INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE 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.
 - 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.



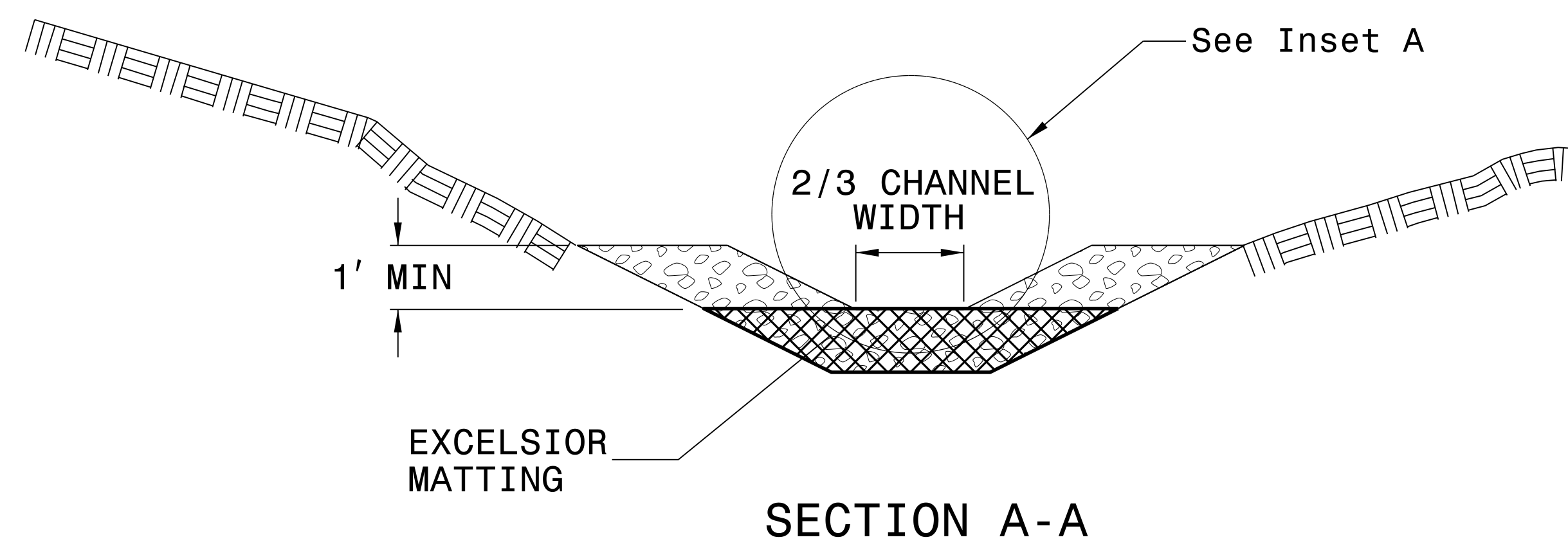
TOP VIEW

PROJECT REFERENCE NO. B-4616	SHEET NO. EC-2D
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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



PLAN



SECTION A-A

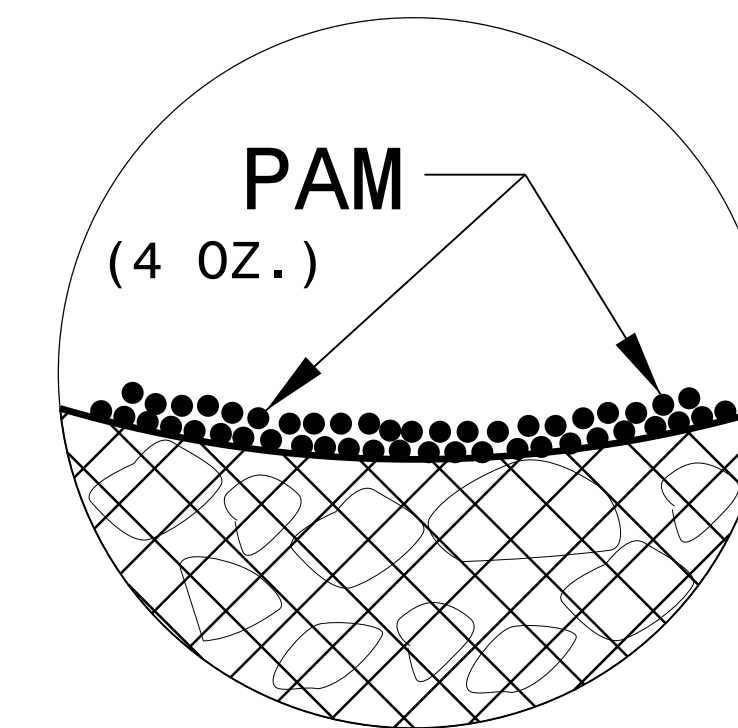
NOTES:

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

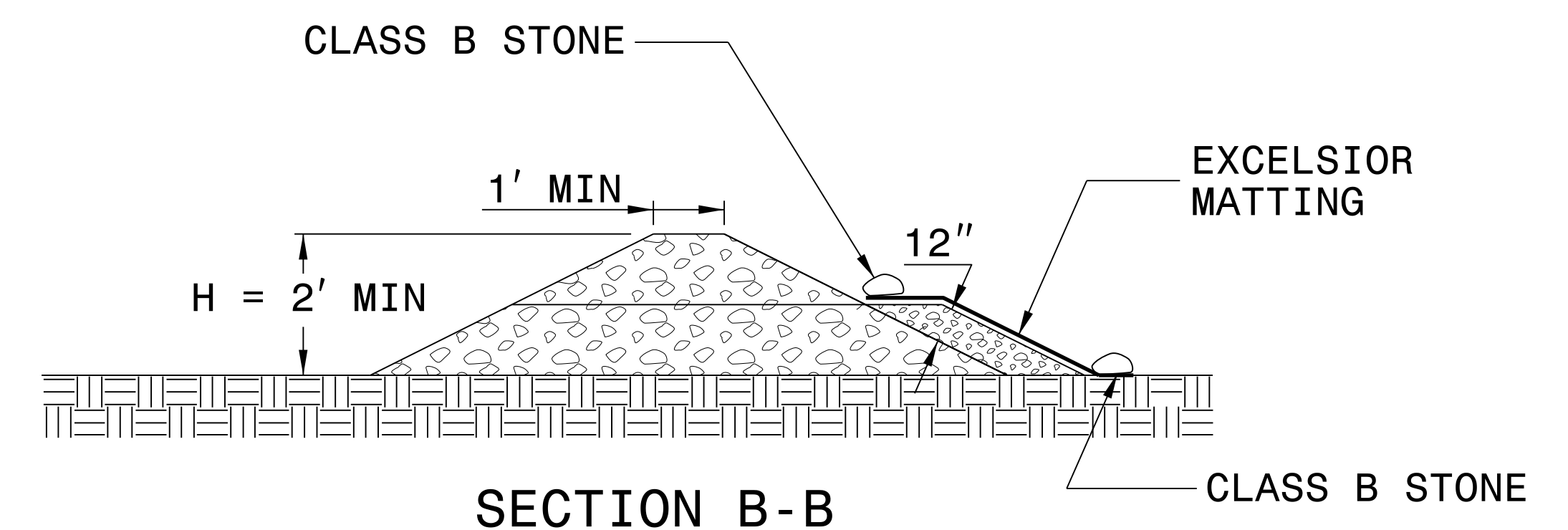
USE EXCELSIOR FOR MATTING MATERIAL AND ANCHOR MATTING SECTION AT TOP AND BOTTOM WITH CLASS B STONE.

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.



INSET A

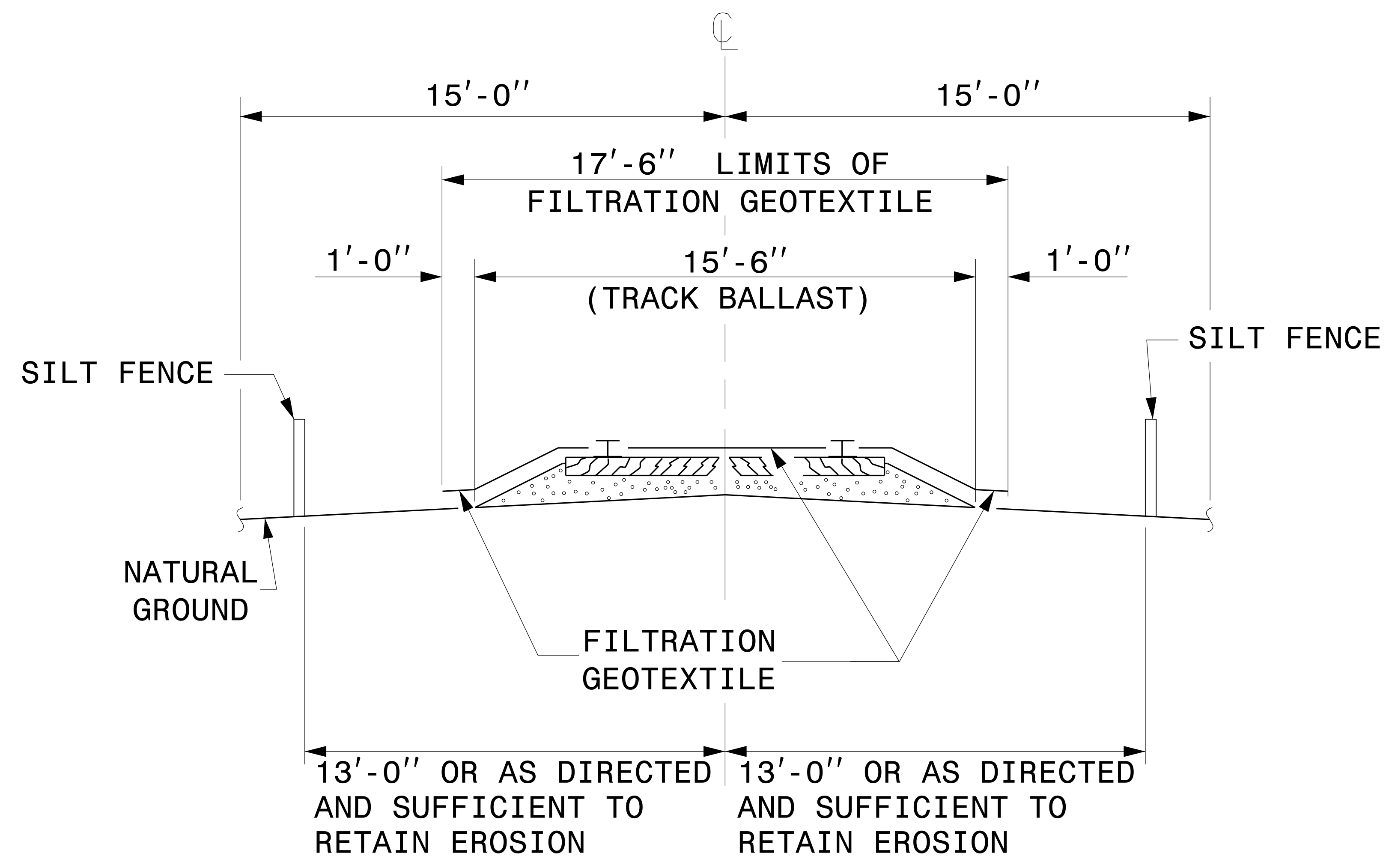


SECTION B-B

NOT TO SCALE

PROJECT REFERENCE NO. B-4616	SHEET NO. EC-2E
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

RAILROAD EROSION CONTROL DETAIL



NOTES

INSTALL RAILROAD EROSION CONTROL MEASURES PRIOR TO PERFORMING ANY WORK IN THE RAILROAD RIGHT-OF-WAY.

ADDITIONAL EROSION CONTROL MEASURES FOR PROTECTION OF RAILROAD DITCHES MAY BE REQUIRED AS DIRECTED.

NO SEPARATE MEASUREMENT OR PAYMENT WILL BE MADE FOR RAILROAD EROSION CONTROL MEASURES.

EXTEND LIMITS OF SILT FENCE AND FILTRATION GEOTEXTILE PARALLEL TO RAILROAD A MINIMUM OF 10'-0" OUTSIDE EDGE OF SUPERSTRUCTURE OR TOE OF SLOPE ON CONSTRUCTION. A GREATER LENGTH OF SILT FENCE OR FILTRATION GEOTEXTILE MAY BE REQUIRED AS DIRECTED.

NAIL FILTRATION GEOTEXTILE TO TIMBER RAIL TIES WITH PRIME SOURCE "GRIP CAP" OR EQUIVALENT. SECURE FILTRATION GEOTEXTILE ON SHOULDER AS DIRECTED BY THE RAILROAD AND NCDOT.

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

PROJECT REFERENCE NO. <i>B-4616</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.

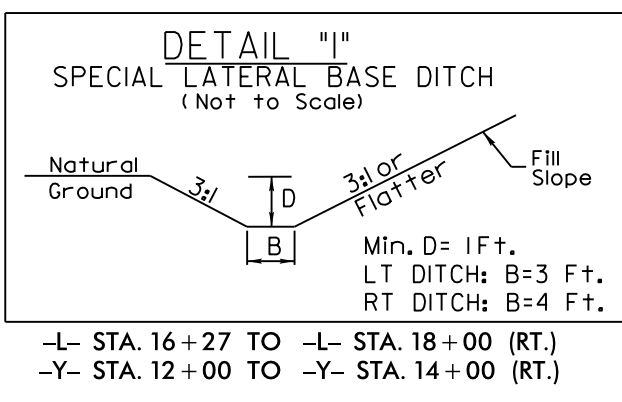
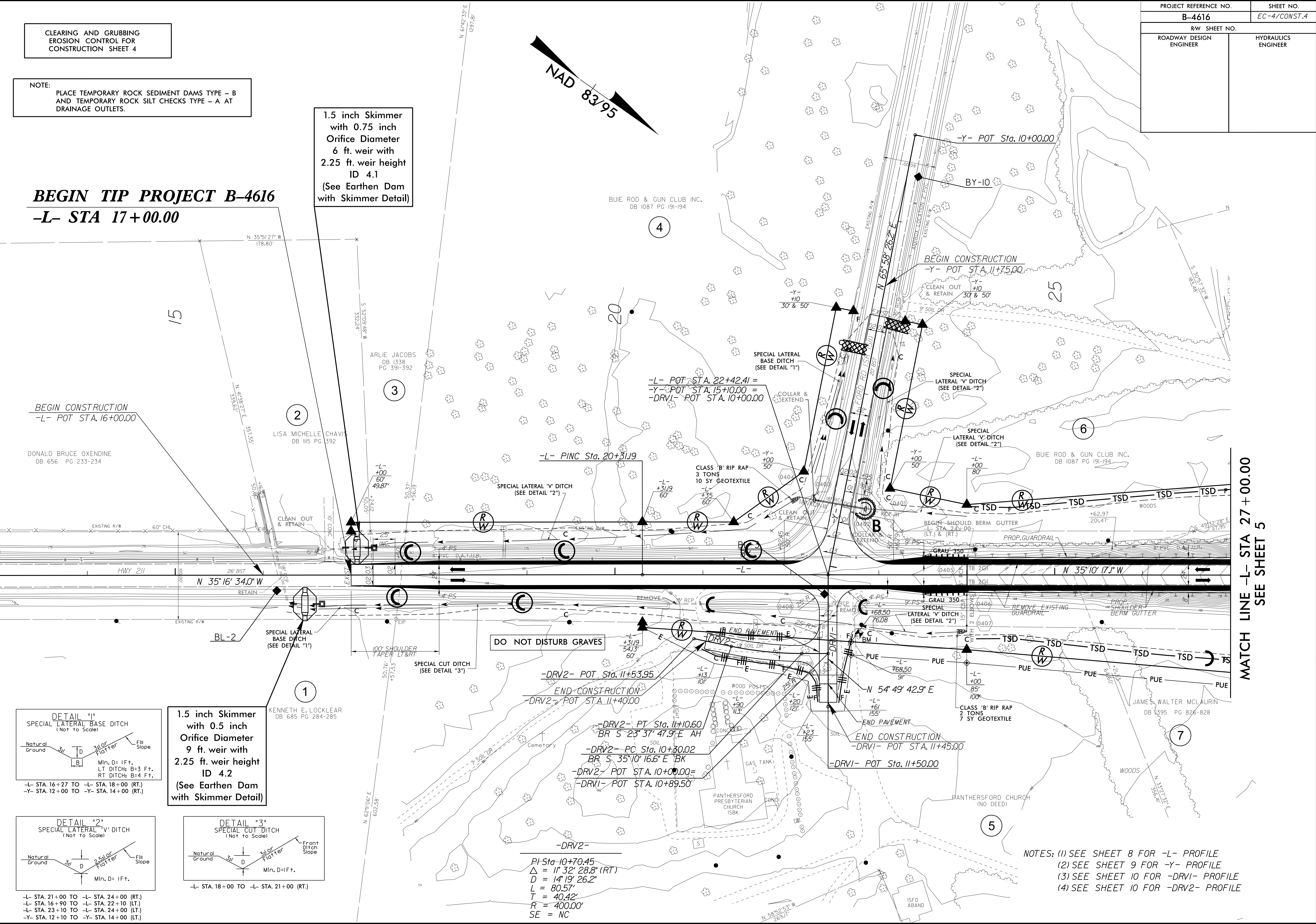
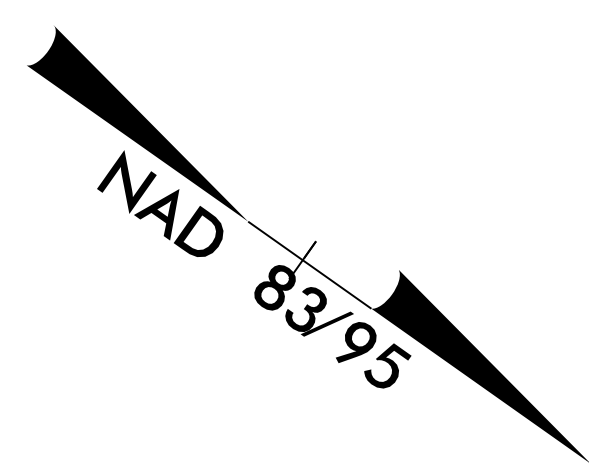
PROJECT REFERENCE NO.	SHEET NO.
B-4616	EC-4/CONST.4
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 4

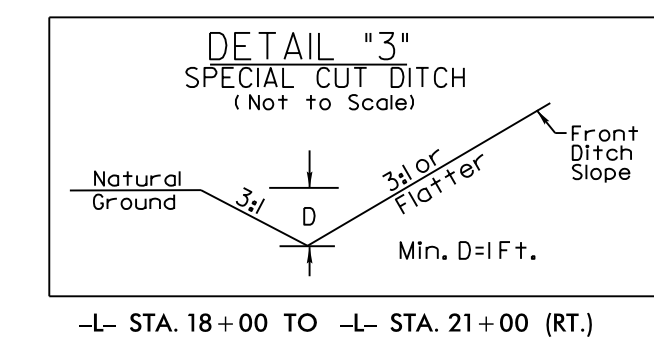
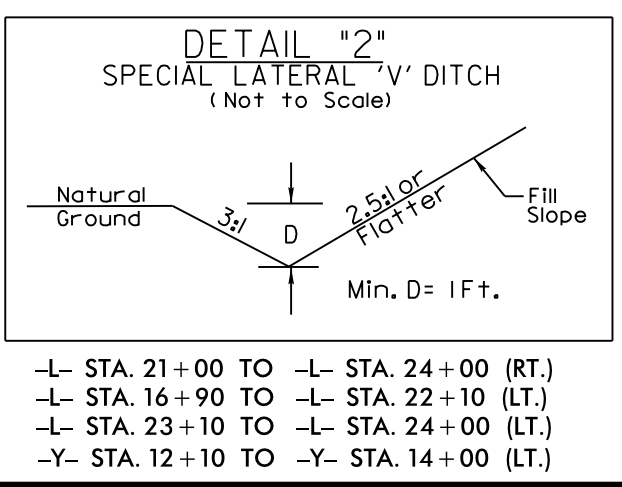
NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B
AND TEMPORARY ROCK SILT CHECKS TYPE - A AT
DRAINAGE OUTLETS.

1.5 inch Skimmer
with 0.75 inch
Orifice Diameter
6 ft. weir with
2.25 ft. weir height
ID 4.1
(See Earthen Dam
with Skimmer Detail)

BEGIN TIP PROJECT B-4616
-L- STA 17+00.00



1.5 inch Skimmer
with 0.5 inch
Orifice Diameter
9 ft. weir with
2.25 ft. weir height
ID 4.2
(See Earthen Dam
with Skimmer Detail)



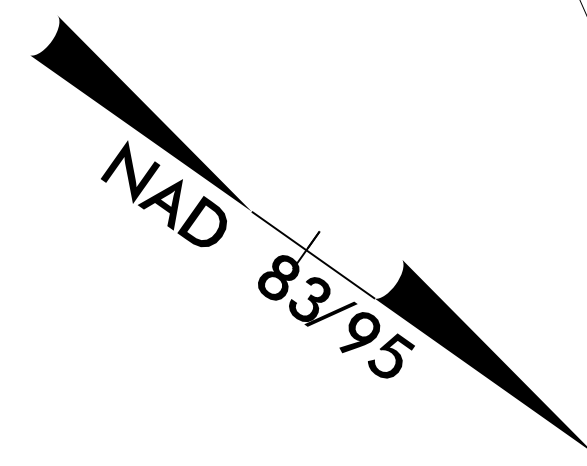
-DRV2-
PI- Sta 10+70.45
Δ = 11' 32" 28.8" (RT)
D = 14' 19" 26.2"
L = 80.57'
T = 40.42'
R = 400.00'
SE = NC

NOTES: (1) SEE SHEET 8 FOR -L- PROFILE
(2) SEE SHEET 9 FOR -Y- PROFILE
(3) SEE SHEET 10 FOR -DRV1- PROFILE
(4) SEE SHEET 10 FOR -DRV2- PROFILE

MATCH LINE -L- STA 27+00.00
SEE SHEET 5

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PROJECT REFERENCE NO.	SHEET NO.
B-4616	EC-5/CONST.5
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	

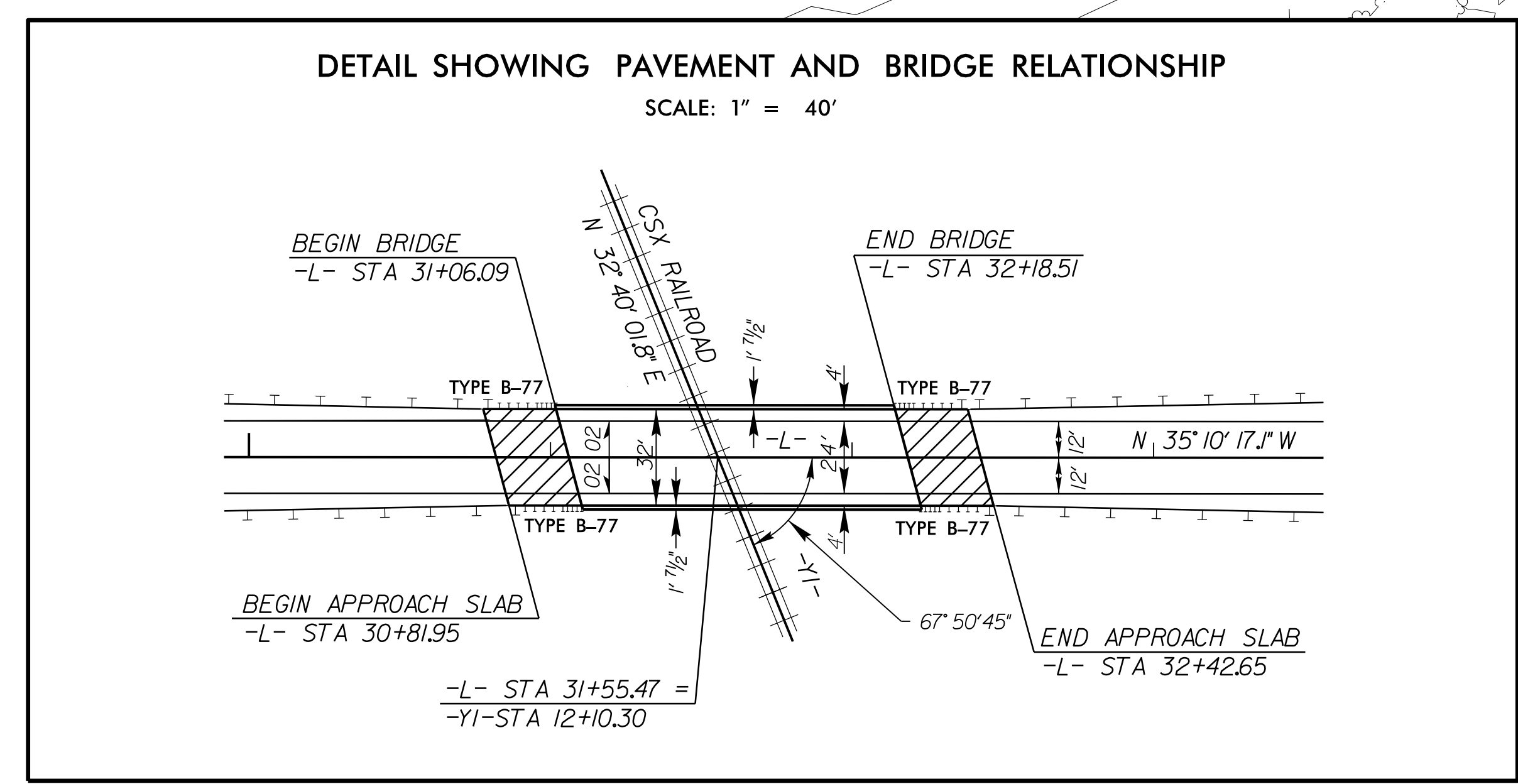


MATCH LINE -L- STA 27+00.00
SEE SHEET 4

MATCH LINE -L- STA 38+00.00
SEE SHEET 6

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 5

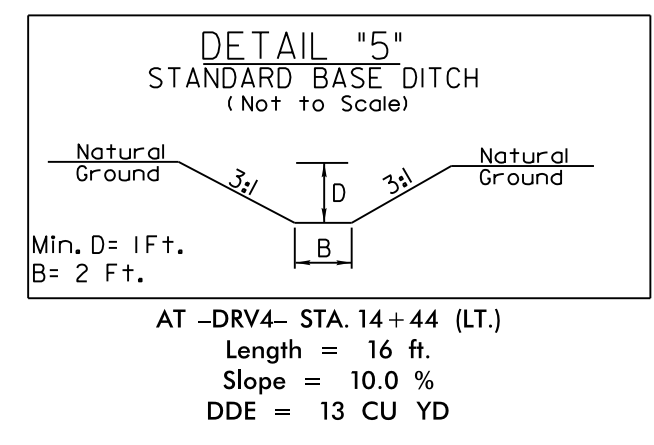
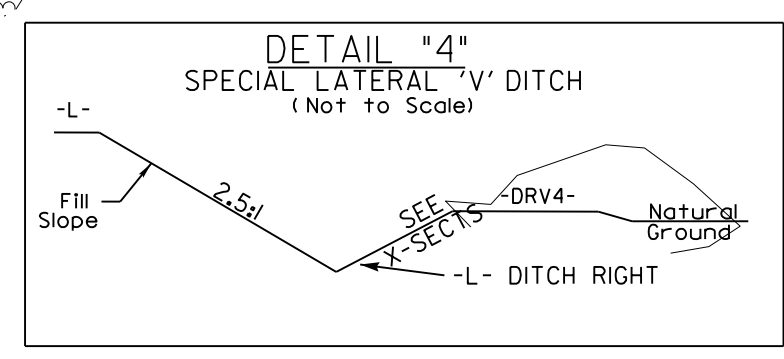
NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B
AND TEMPORARY ROCK SILT CHECKS TYPE - A AT
DRAINAGE OUTLETS.



42 x 20 x 3
1.5 inch Skimmer
with 0.75 inch
Orifice Diameter
4 ft. weir
ID 5.1

38 x 18 x 3
1.5 inch Skimmer
with 0.625 inch
Orifice Diameter
4 ft. weir
ID 5.2

36 x 18 x 3
1.5 inch Skimmer
with 0.625 inch
Orifice Diameter
5 ft. weir
ID 5.3



NOTES: (1) SEE SHEET 8 FOR -L- PROFILE
(2) SEE SHEET 10 FOR -DRV3- PROFILE
(3) SEE SHEET 10 FOR -DRV4- PROFILE

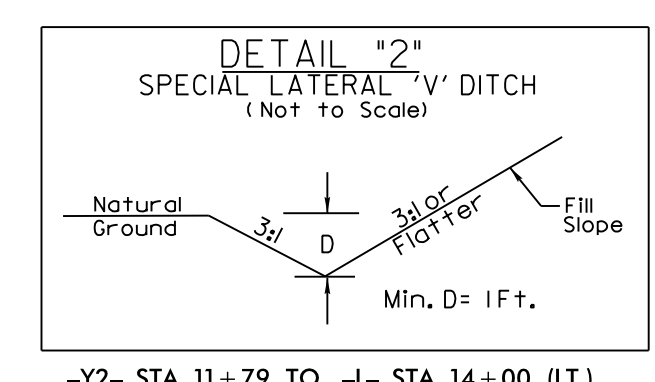
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jld
1384

PROJECT REFERENCE NO.	SHEET NO.
B-4616	EC-6/CONST.6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

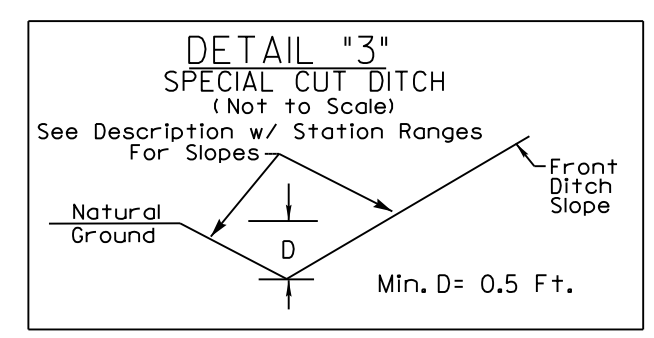
CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 6

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

-DRV3-
PI Sta 12+92.07
 $\Delta = 15^\circ 32' 19.2''$ (LT)
D = 11' 27" 33.0"
L = 135.60'
T = 68.22'
R = 500.00'
SE = NC



-Y2- STA. 11+79 TO -L- STA. 14+00 (LT.)



-L- STA. 41+50 TO -L- STA. 46+00 (RT.) w/3:1 BACK SLOPE & 3:1 OR FLATTER FRONT SLOPE
-L- STA. 45+00 TO -L- STA. 46+00 (LT.) w/4:1 BACK SLOPE & 6:1 FRONT SLOPE
-DRV3- STA. 11+75 TO -DRV3- STA. 14+27 (RT.) w/3:1 FRONT & BACK SLOPES

-DRV4-
PI Sta 10+51.55
 $\Delta = 82^\circ 48' 08.5''$ (RT)
D = 190' 59" 09.4"
L = 43.36'
T = 26.45'
R = 30.00'
SE = NC

END TIP PROJECT B-4616
-L- STA 46+00.00

- NOTES: (1) SEE SHEET 9 FOR -L- PROFILE
(2) SEE SHEET 9 FOR -Y2- PROFILE
(3) SEE SHEET 10 FOR -DRV3- PROFILE
(4) SEE SHEET 10 FOR -DRV4- PROFILE
(5) SEE SHEET 10 FOR -DRV5- PROFILE
(6) SEE SHEET 6-A FOR -Y2 DETOUR- & -DRV4 DETOUR- DESIGN

MATCH LINE -L- STA 38+00.00
SEE SHEET 5

-DRV5- POT STA. 10+00.00=
-DRV4- POT STA. 11+36.74

END CONSTRUCTION
-DRV5- POT STA. 10+60.00
-DRV5- POT STA. 11+00.00

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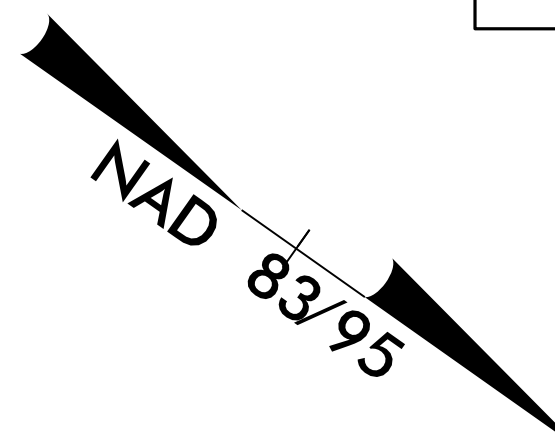
TEMPORARY DETOUR ONLY FOR -DRV4 DETOUR- AND -Y2 DETOUR- (FOR -L-, -Y2-, -DRV4- AND -DRV5- PLANS SEE SHEET 6)

PROJECT REFERENCE NO. B-4616	SHEET NO. EC-7/CONST.6A
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

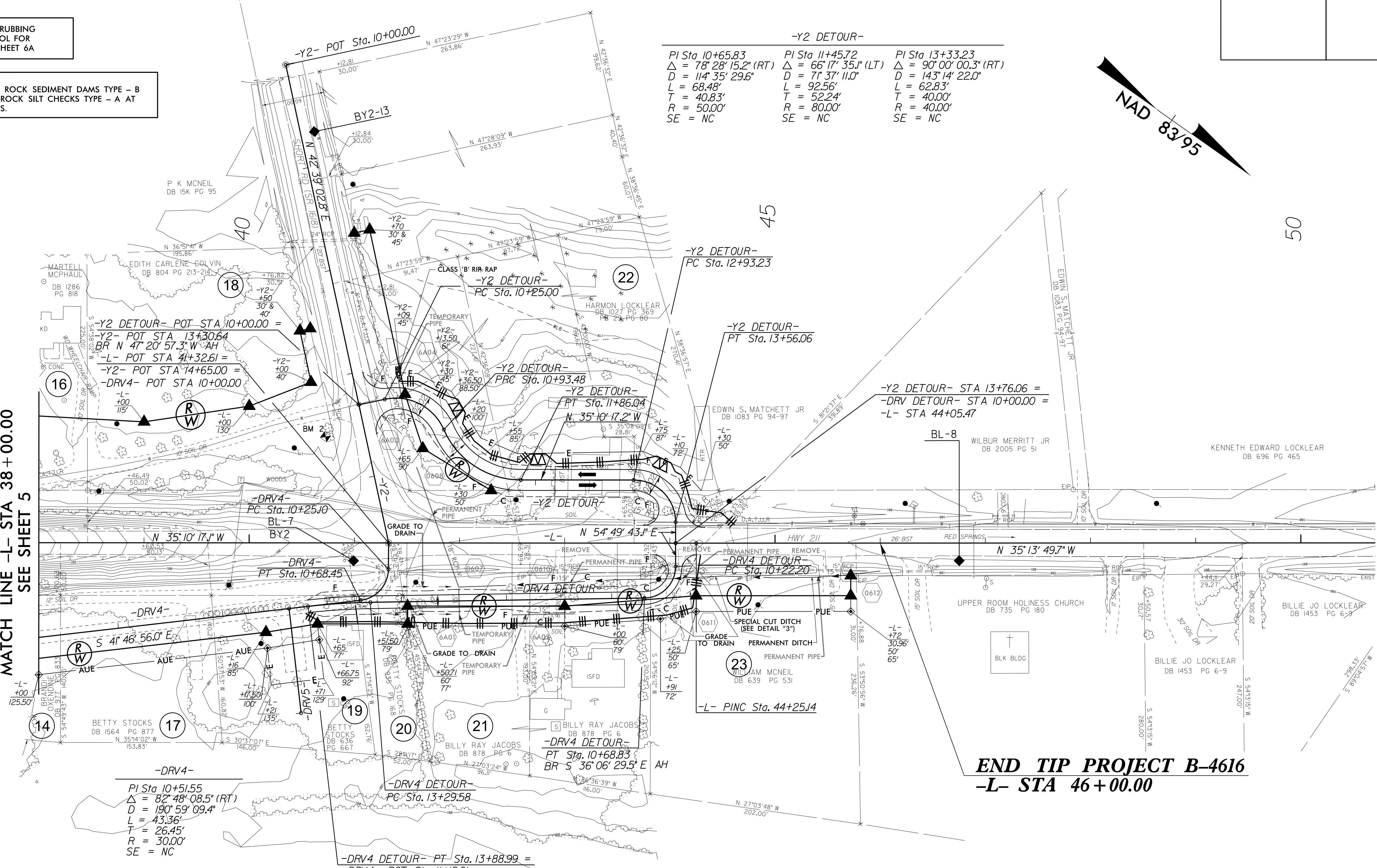
CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 6A

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

-Y2 DETOUR-		
PI Sta 10+65.83	PI Sta 11+45.72	PI Sta 13+33.23
$\Delta = 78^{\circ} 28' 15.2" (RT)$	$\Delta = 66^{\circ} 17' 35.1" (LT)$	$\Delta = 90^{\circ} 00' 00.3" (RT)$
$D = 114^{\circ} 35' 29.6"$	$D = 71^{\circ} 37' 11.0"$	$D = 143^{\circ} 14' 22.0"$
$L = 68.48'$	$L = 92.56'$	$L = 62.83'$
$T = 40.83'$	$T = 52.24'$	$T = 40.00'$
$R = 50.00'$	$R = 80.00'$	$R = 40.00'$
SE = NC	SE = NC	SE = NC

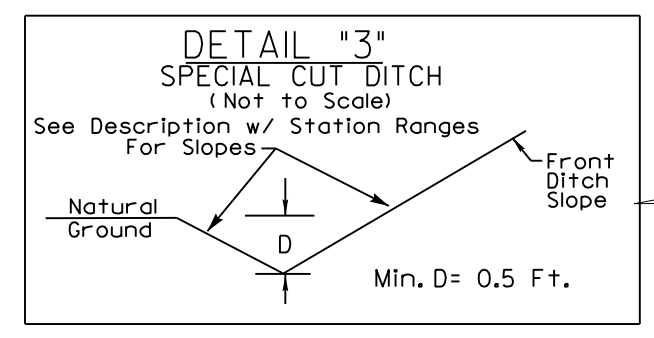


MATCH LINE -L- STA 38+00.00
SEE SHEET 5



-DRV4-	
PI Sta 10+51.55	
$\Delta = 82^{\circ} 48' 08.5" (RT)$	
$D = 190^{\circ} 59' 09.4"$	
$L = 43.36'$	
$T = 26.45'$	
$R = 30.00'$	
SE = NC	

-DRV4 DETOUR-	
PI Sta 10+51.71	PI Sta 13+59.31
$\Delta = 89^{\circ} 03' 47.4" (RT)$	$\Delta = 5^{\circ} 40' 26.5" (LT)$
$D = 190^{\circ} 59' 09.4"$	$D = 9^{\circ} 32' 57.5"$
$L = 46.63'$	$L = 59.42'$
$T = 29.51'$	$T = 29.73'$
$R = 30.00'$	$R = 600.00'$
SE = NC	SE = NC



END TIP PROJECT B-4616
-L- STA 46+00.00

NOTES: (1) SEE SHEET 11 FOR -DRV4- DETOUR PROFILE
(2) SEE SHEET 11 FOR -Y2- DETOUR PROFILE
(3) SEE SHEET 6 FOR -L- DESIGN

-L- STA. 42+00 TO -L- STA. 46+00 (RT) w/3:1 BACK SLOPE & 3:1 OR FLATTER FRONT SLOPE

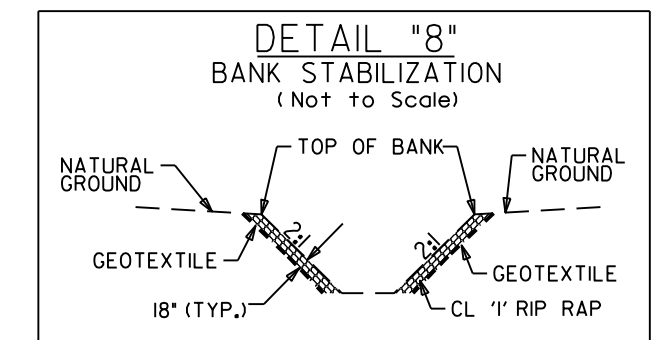
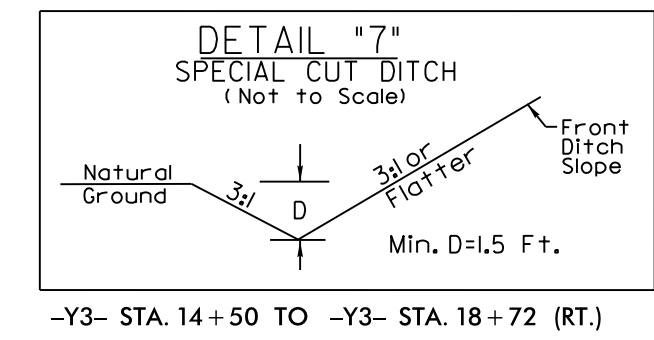
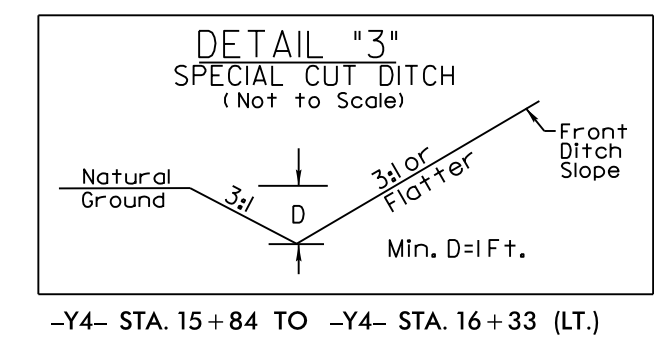
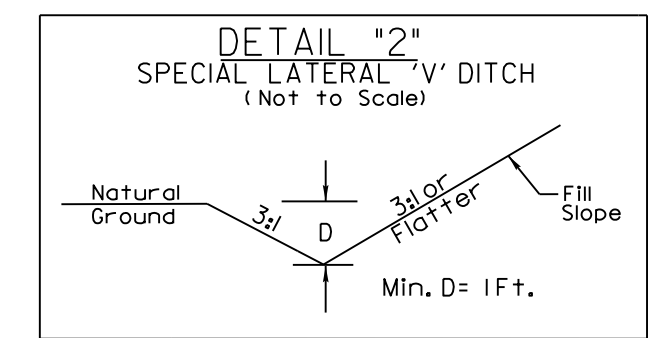
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PROJECT REFERENCE NO.	SHEET NO.
B-4616	EC-8/CONST.7
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-Y4-	-Y3-	
PI Sta 15+98.95 Δ = 27° 0' 44.5" (RT) D = 57' 17" 44.8" L = 47.7' T = 24.03' R = 100.00' SE = EXIST.	PI Sta 13+56.76 Δ = 9° 12' 36.7" (RT) D = 3° 05' 49.4" L = 297.38' T = 149.01' R = 1,850.00' SE = EXIST.	PI Sta 23+91.33 Δ = 5° 08' 53.2" (RT) D = 2° 23' 14.4" L = 215.64' T = 107.89' R = 2,400.00' SE = EXIST.

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 7

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

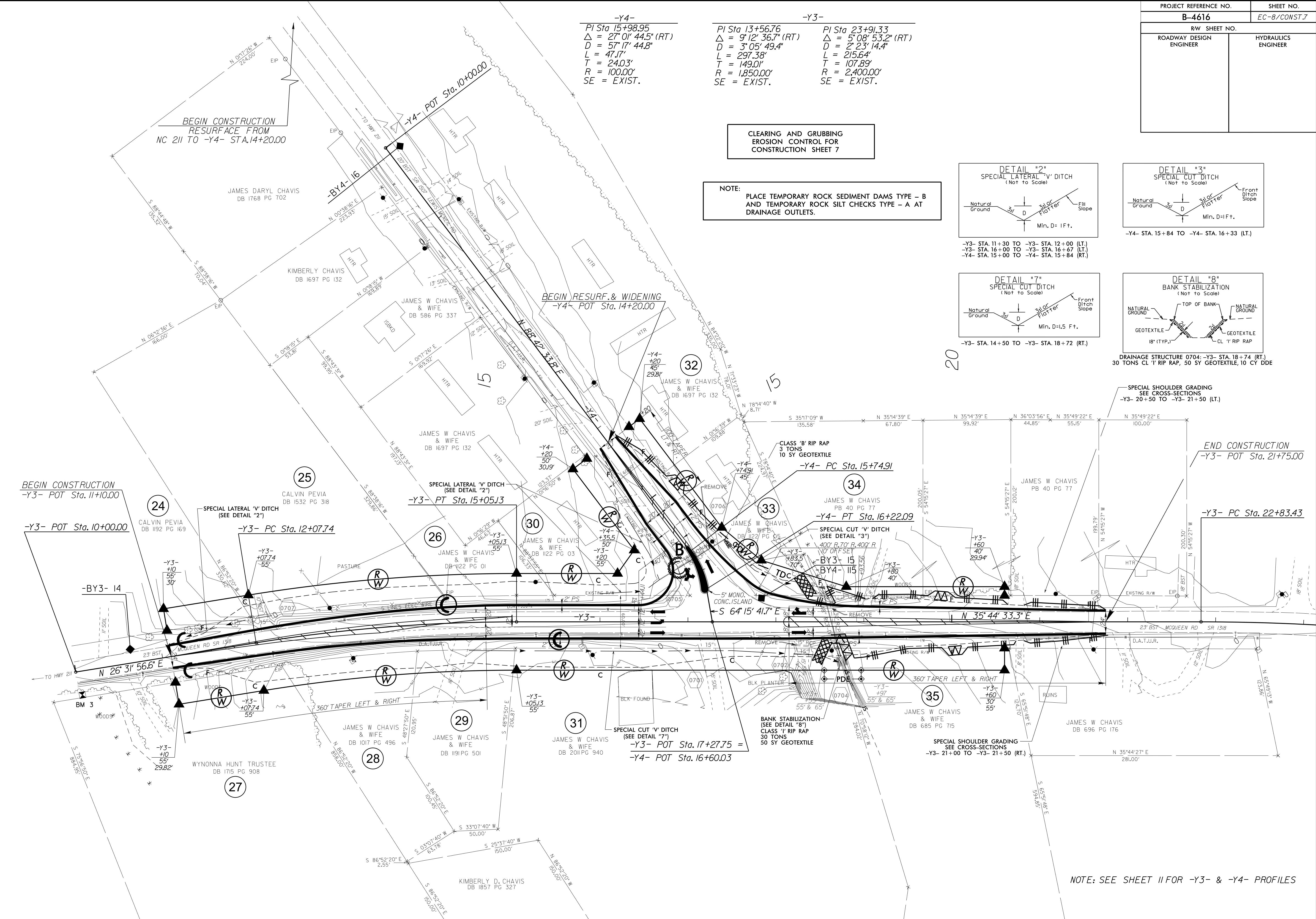


DRAINAGE STRUCTURE 0704: -Y3- STA. 18+74 (RT.)
30 TONS CL 1' RIP RAP, 50 SY GEOTEXTILE, 10 CY DDE

SPECIAL SHOULDER GRADING
SEE CROSS-SECTIONS
-Y3- 20+50 TO -Y3- 21+50 (LT.)

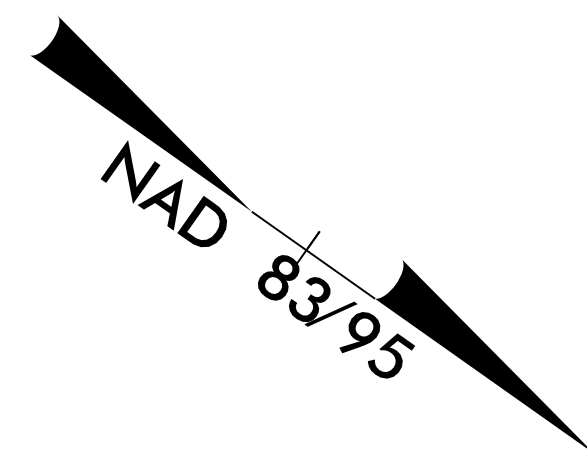
END CONSTRUCTION
-Y3- POT Sta. 21+75.00

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NOTE: SEE SHEET 11 FOR -Y3- & -Y4- PROFILES

PROJECT REFERENCE NO.	SHEET NO.
B-4616	EC-10/CONST.5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



Place Excelsior Matting for Erosion Control on Slope as Work Allows. Sta. 27+00 to Sta. 30+50 L+Rt

Place Excelsior Matting for Erosion Control on Slope as Work Allows. Sta. 32+50 to Sta. 38+00 L+Rt

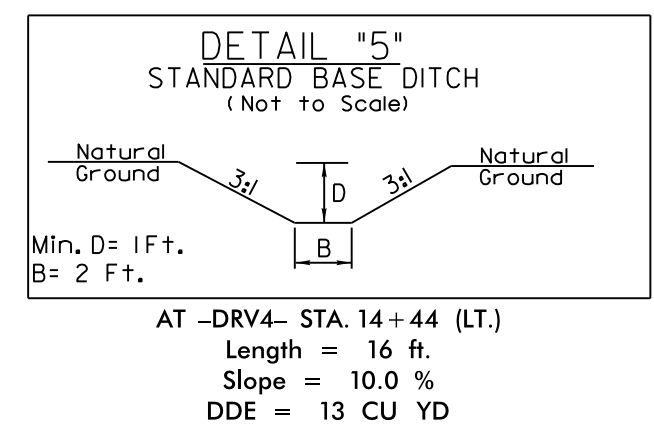
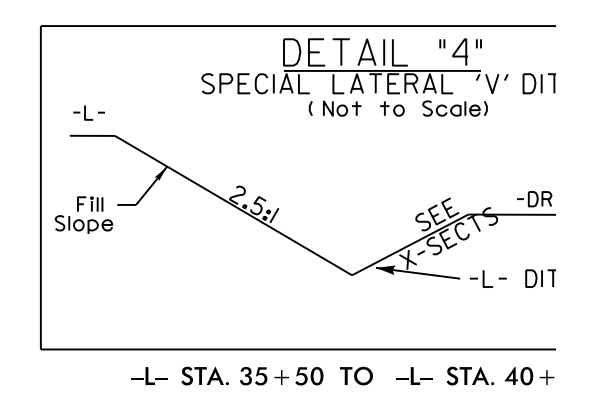
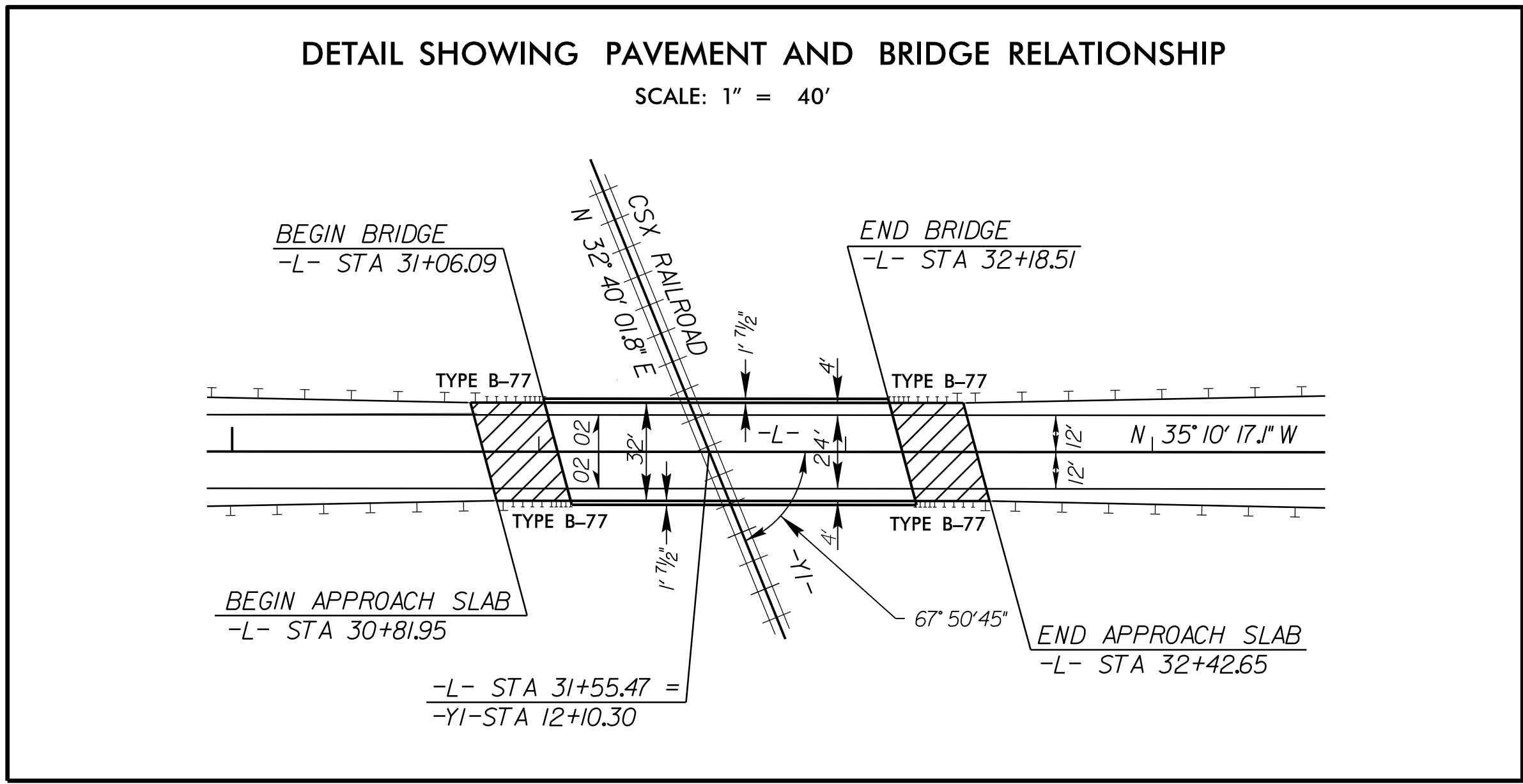
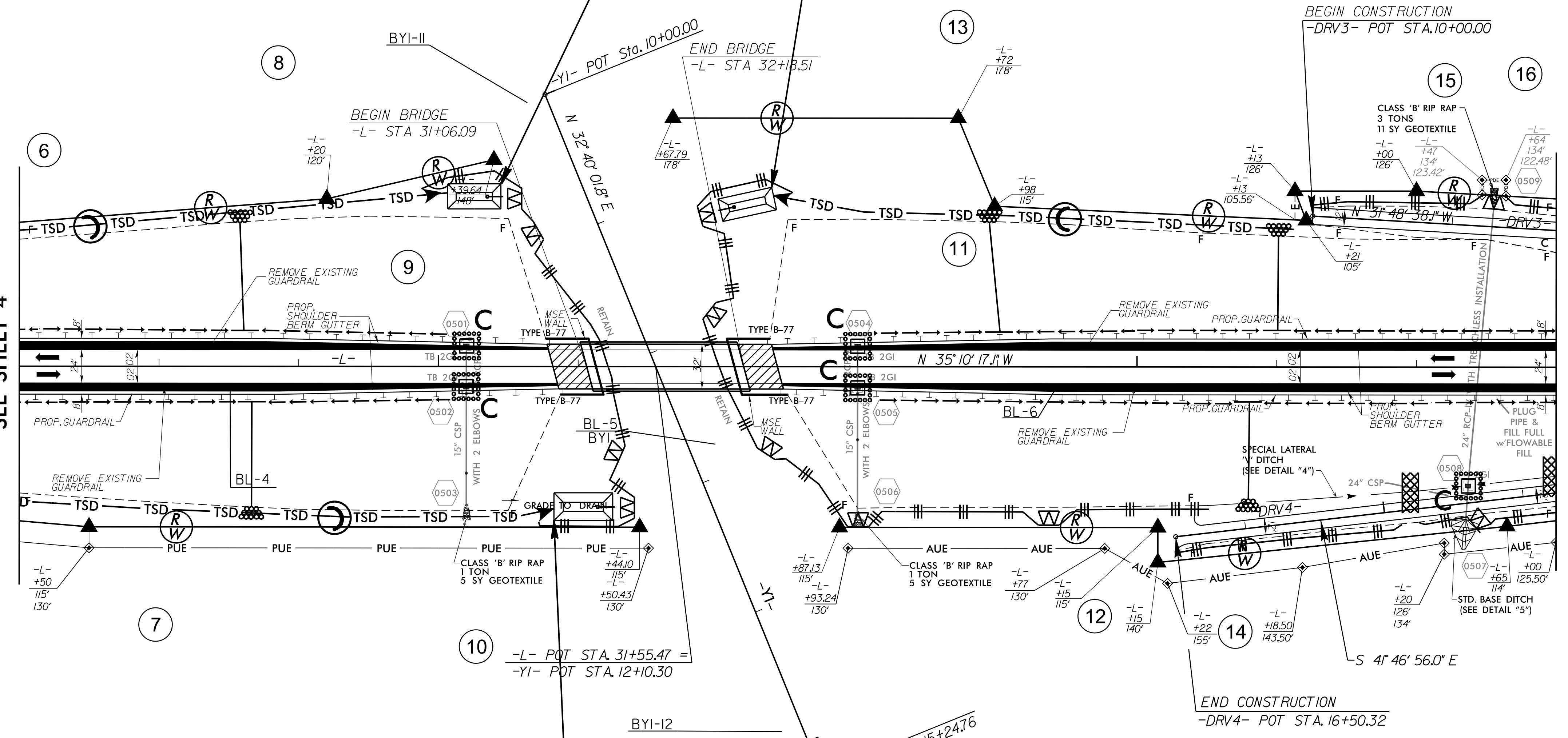
38 x 18 x 3
1.5 inch Skimmer
with 0.625 inch
Orifice Diameter
4 ft. weir
ID 5.2

36 x 18 x 3
1.5 inch Skimmer
with 0.625 inch
Orifice Diameter
5 ft. weir
ID 5.3

42 x 20 x 3
1.5 inch Skimmer
with 0.75 inch
Orifice Diameter
4 ft. weir
ID 5.1

MATCH LINE -L- STA 27+00.00
SEE SHEET 4

MATCH LINE -L- STA 38+00.00
SEE SHEET 6



NOTES: (1) SEE SHEET 8 FOR -L- PROFILE
(2) SEE SHEET 10 FOR -DRV3- PROFILE
(3) SEE SHEET 10 FOR -DRV4- PROFILE

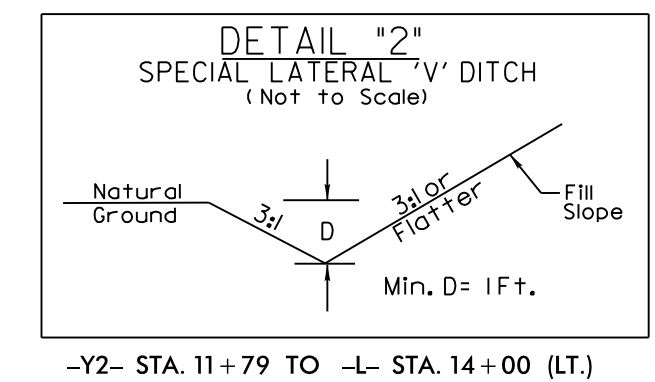
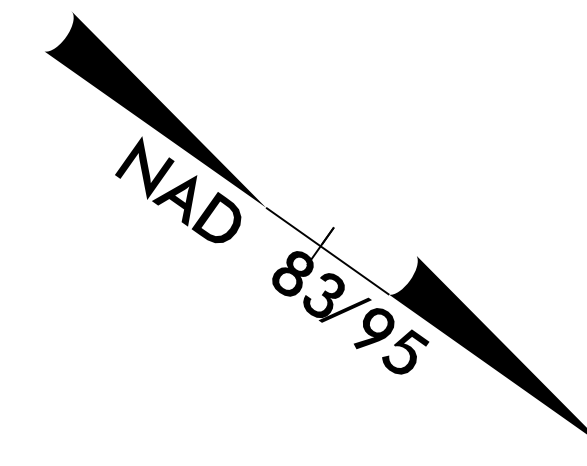
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PROJECT REFERENCE NO.	SHEET NO.
B-4616	EC-II/CONST.6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

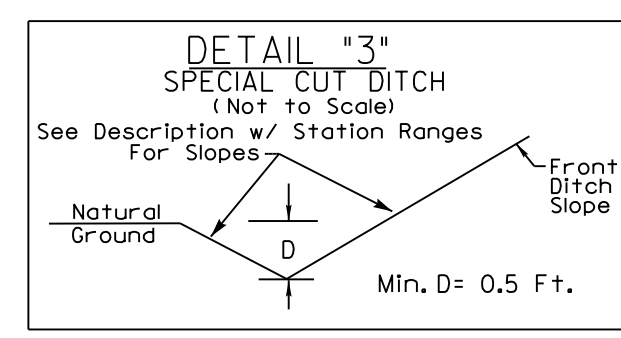
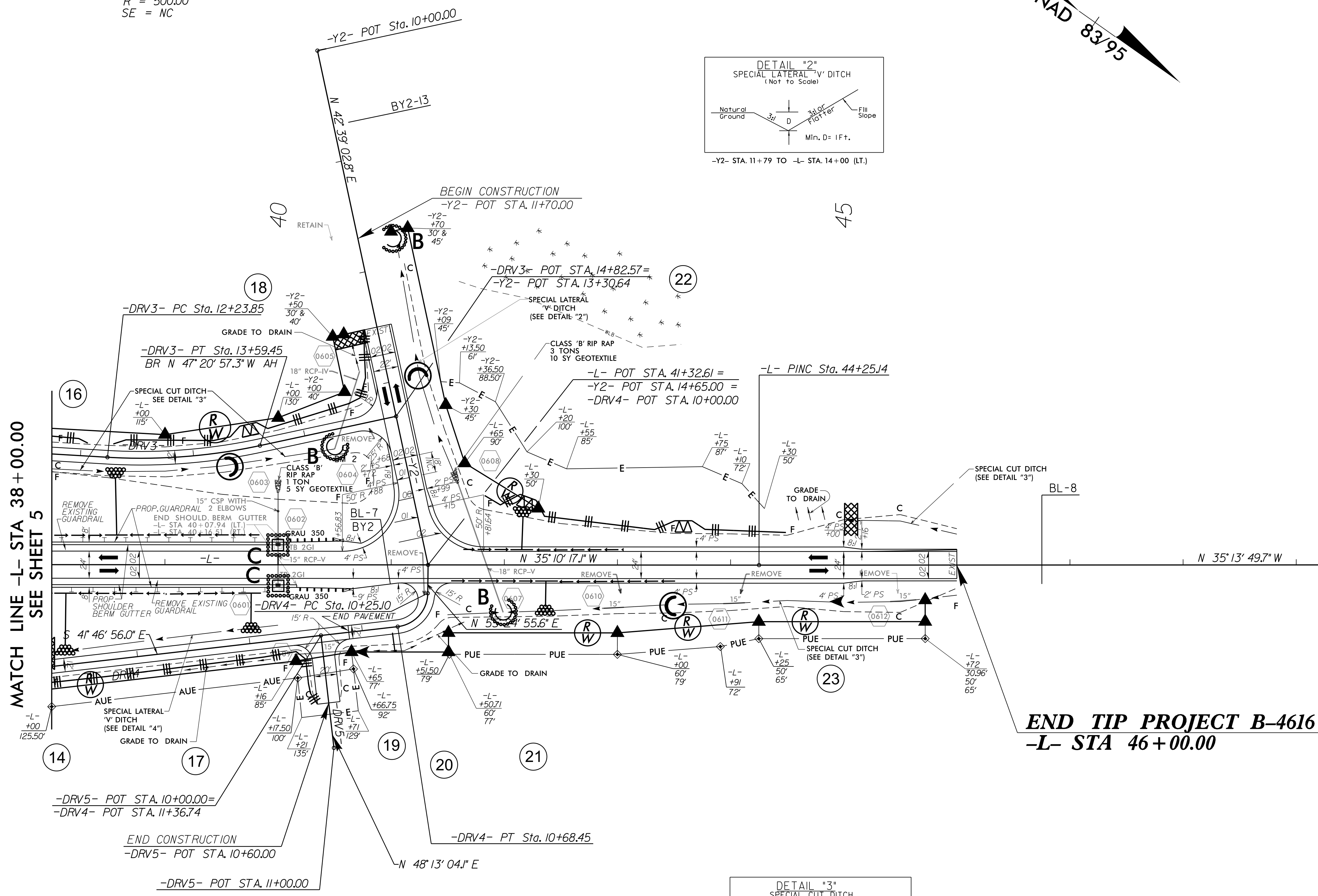
-DRV3-
 PI Sta 12+92.07
 $\Delta = 15^{\circ} 32' 19.2''$ (LT)
 $D = 11^{\circ} 27' 33.0''$
 $L = 135.60'$
 $T = 68.22'$
 $R = 500.00'$
 $SE = NC$

Place Excelsior Matting for Erosion Control on Slope as Work Allows. Sta. 38+00 to Sta. 41+00 Lt/Rt



-Y2- STA. 11+79 TO -L- STA. 14+00 (LT.)

MATCH LINE -L- STA 38+00.00
 SEE SHEET 5



-L- STA. 41+50 TO -L- STA. 46+00 (RT.) w/3:1 BACK SLOPE & 3:1 OR FLATTER FRONT SLOPE
 -L- STA. 45+00 TO -L- STA. 46+00 (LT.) w/4:1 BACK SLOPE & 6:1 FRONT SLOPE
 -DRV3- STA. 11+75 TO -DRV3- STA. 14+27 (RT.) w/3:1 FRONT & BACK SLOPES

-DRV4-
 PI Sta 10+51.55
 $\Delta = 82^{\circ} 48' 08.5''$ (RT)
 $D = 190^{\circ} 59' 09.4''$
 $L = 43.36'$
 $T = 26.45'$
 $R = 30.00'$
 $SE = NC$

- NOTES: (1) SEE SHEET 9 FOR -L- PROFILE
 (2) SEE SHEET 9 FOR -Y2- PROFILE
 (3) SEE SHEET 10 FOR -DRV3- PROFILE
 (4) SEE SHEET 10 FOR -DRV4- PROFILE
 (5) SEE SHEET 10 FOR -DRV5- PROFILE
 (6) SEE SHEET 6-A FOR -Y2 DETOUR- & -DRV4 DETOUR- DESIGN

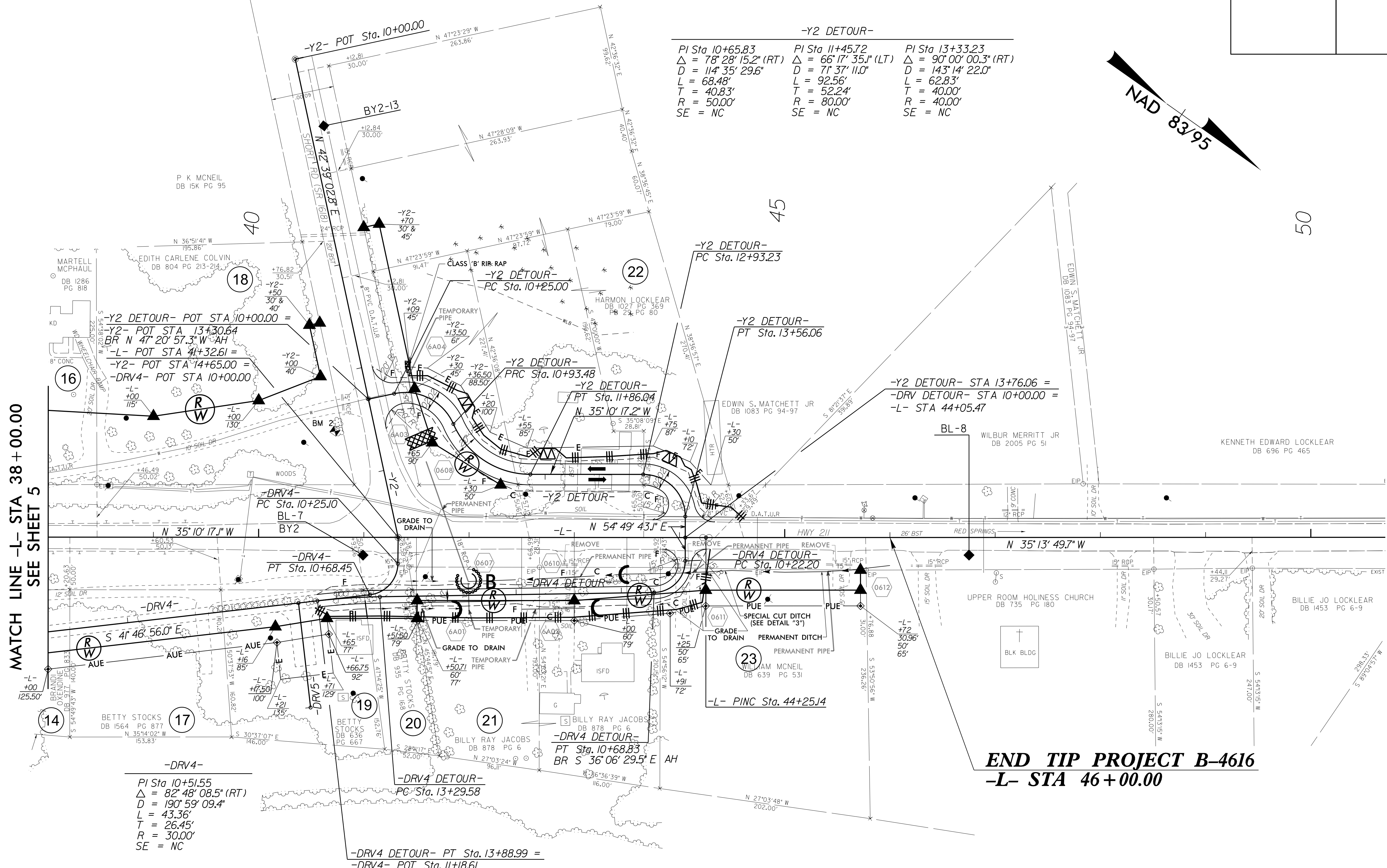
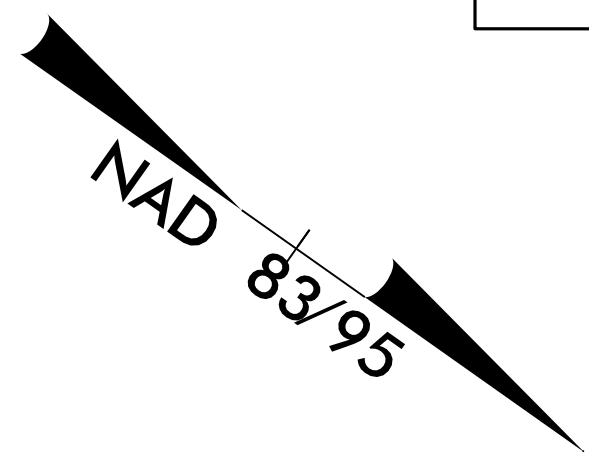
CH	
V4-	Natural Ground
CH RIGHT	
00 (RT.)	

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TEMPORARY DETOUR ONLY FOR -DRV4 DETOUR- AND -Y2 DETOUR- (FOR -L-, -Y2-, -DRV4- AND -DRV5- PLANS SEE SHEET 6)

PROJECT REFERENCE NO. B-4616	SHEET NO. EC-12/CONST.6A
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



-Y2 DETOUR-

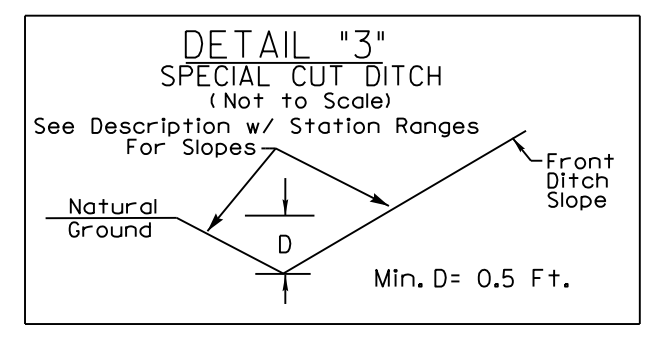
PI Sta 10+65.83 Δ = 78° 28' 15.2" (RT) D = 114' 35' 29.6" L = 68.48' T = 40.83' R = 50.00' SE = NC	PI Sta 11+45.72 Δ = 66° 17' 35.1" (LT) D = 71' 37' 11.0" L = 92.56' T = 52.24' R = 80.00' SE = NC	PI Sta 13+33.23 Δ = 90° 00' 00.3" (RT) D = 143' 14' 22.0" L = 62.83' T = 40.00' R = 40.00' SE = NC
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-DRV4-

PI Sta 10+51.55 Δ = 82° 48' 08.5" (RT) D = 190' 59' 09.4" L = 43.36' T = 26.45' R = 30.00' SE = NC
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-DRV4 DETOUR-

PI Sta 10+51.71 Δ = 89° 03' 47.4" (RT) D = 190' 59' 09.4" L = 46.63' T = 29.51' R = 30.00' SE = NC	PI Sta 13+59.31 Δ = 5° 40' 26.5" (LT) D = 9' 32' 57.5" L = 59.42' T = 29.73' R = 600.00' SE = NC
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**END TIP PROJECT B-4616
-L- STA 46+00.00**

NOTES: (1) SEE SHEET 11 FOR -DRV4- DETOUR PROFILE
(2) SEE SHEET 11 FOR -Y2- DETOUR PROFILE
(3) SEE SHEET 6 FOR -L- DESIGN

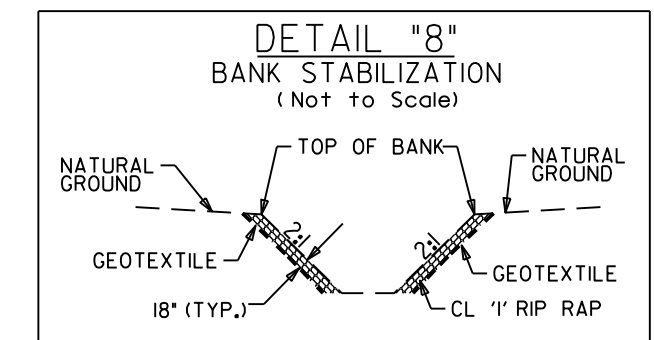
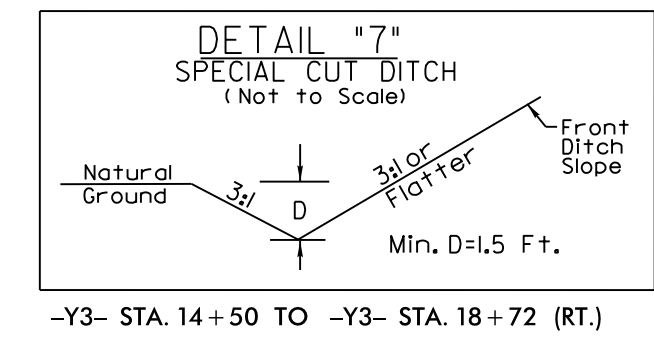
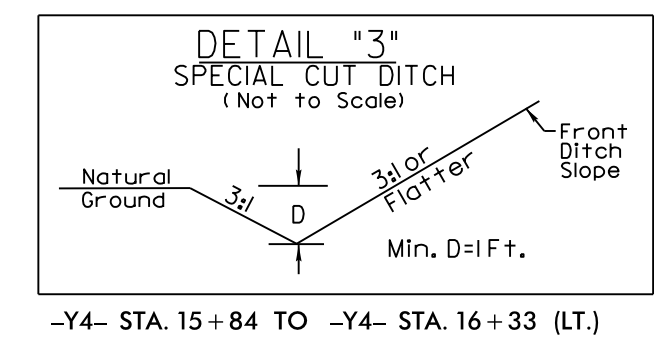
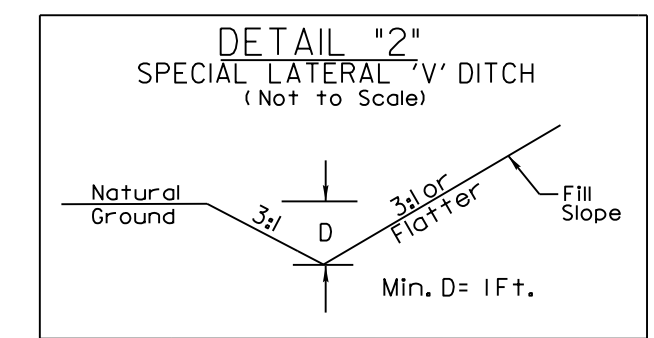
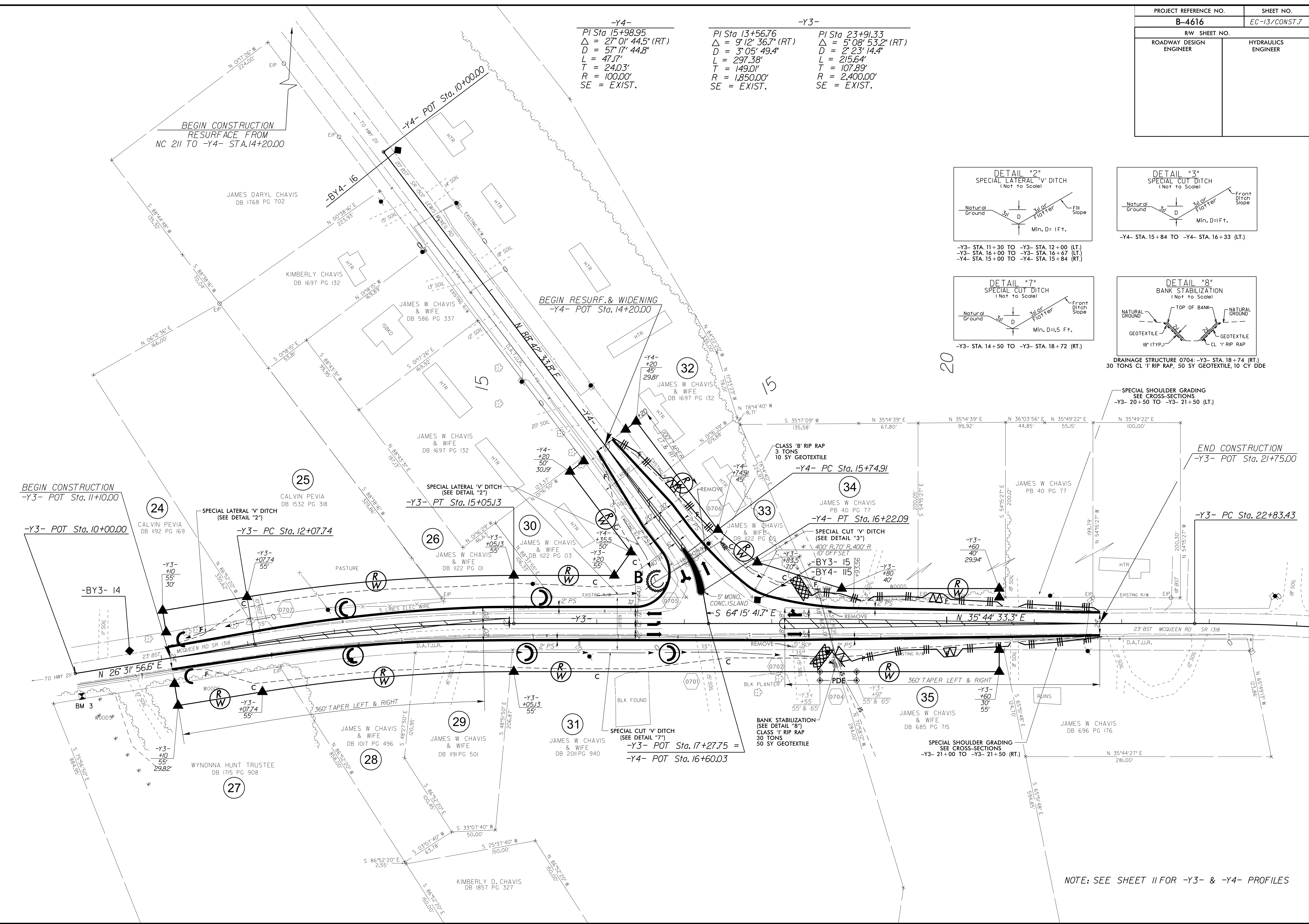
-L- STA. 42+00 TO -L- STA. 46+00 (RT) w/3:1 BACK SLOPE & 3:1 OR FLATTER FRONT SLOPE

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PROJECT REFERENCE NO.	SHEET NO.
B-4616	EC-13/CONST.7
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-Y4-	-Y3-	-Y3-
PI Sta 15+98.95	PI Sta 13+56.76	PI Sta 23+91.33
$\Delta = 27^{\circ} 01' 44.5"$ (RT)	$\Delta = 9^{\circ} 12' 36.7"$ (RT)	$\Delta = 5^{\circ} 08' 53.2"$ (RT)
D = 57' 17" 44.8"	D = 3' 05" 49.4"	D = 2' 23" 14.4"
L = 47.7'	L = 297.38'	L = 215.64'
T = 24.03'	T = 149.01'	T = 107.89'
R = 100.00'	R = 1,850.00'	R = 2,400.00'
SE = EXIST.	SE = EXIST.	SE = EXIST.



SPECIAL SHOULDER GRADING
SEE CROSS-SECTIONS
-Y3- 20+50 TO -Y3- 21+50 (LT.)

END CONSTRUCTION
-Y3- POT Sta. 21+75.00

-Y3- PC Sta. 22+83.43

20

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jchavis

NOTE: SEE SHEET 11 FOR -Y3- & -Y4- PROFILES