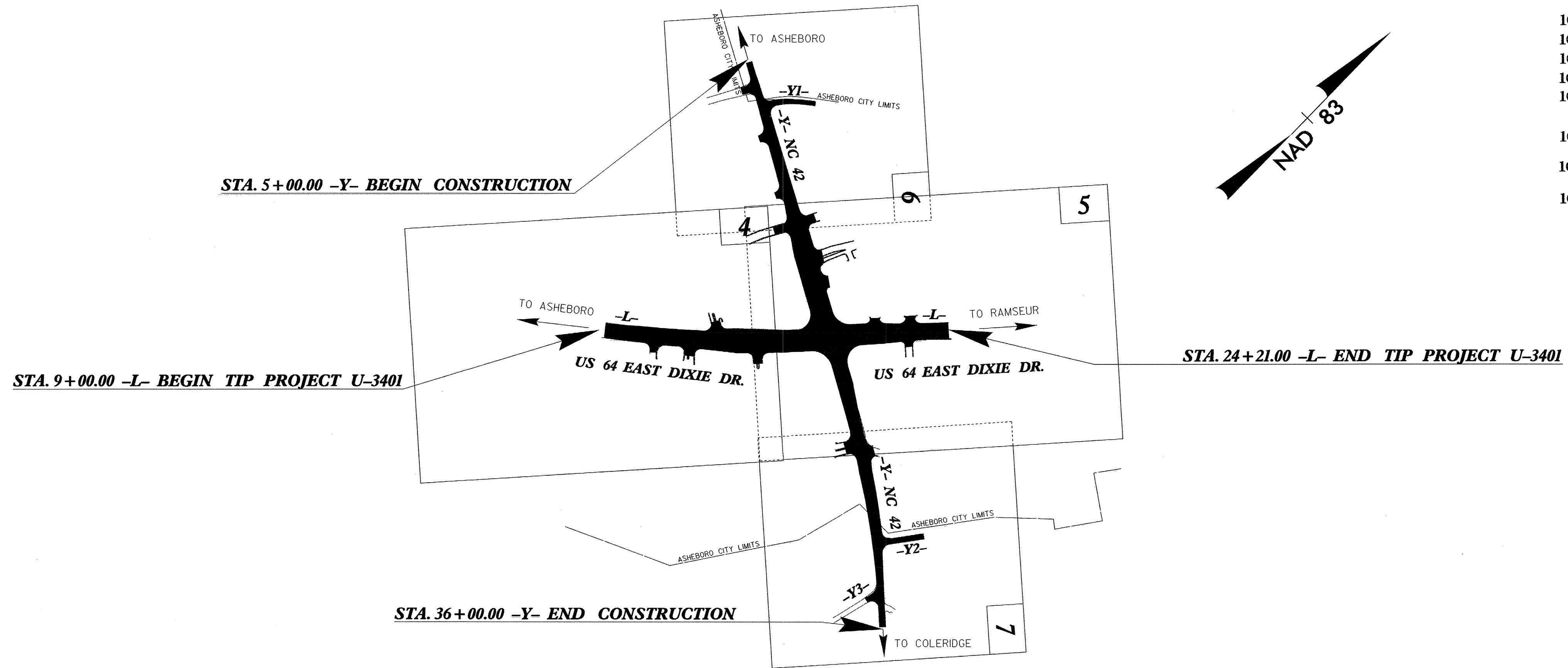


TIP PROJECT: U-3401

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

LOCATION: INTERSECTION AT US 64/NC 49 AND NC 42 IN ASHEBORO
TYPE OF WORK: GRADING, PAVING, DRAINAGE AND WIDENING



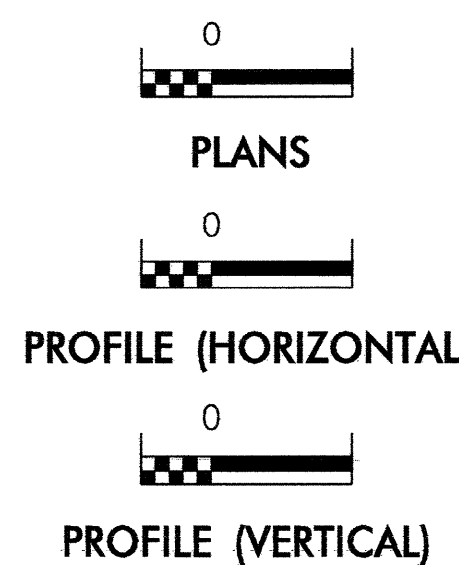
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-3401	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	

EROSION AND SEDIMENT CONTROL MEASURES

Std. #	Description	Symbol
	Streambank Reforestation	
1630.03	Temporary Silt Ditch	
1630.05	Temporary Diversion	
1605.01	Temporary Silt Fence	
1606.01	Special Sediment Control Fence	
1622.01	Temporary Berms and Slope Drains	
1630.01	Riser Basin	
1630.02	Silt Basin Type B	
1633.01	Temporary Rock Silt Check Type-A	
	Temporary Rock Silt Check Type-B	
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	
	Rock Inlet Sediment Trap:	
1632.01	Type A	
1632.02	Type B	
1632.03	Type C	
	Skimmer Basin	
	Tiered Skimmer Basin	

**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

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

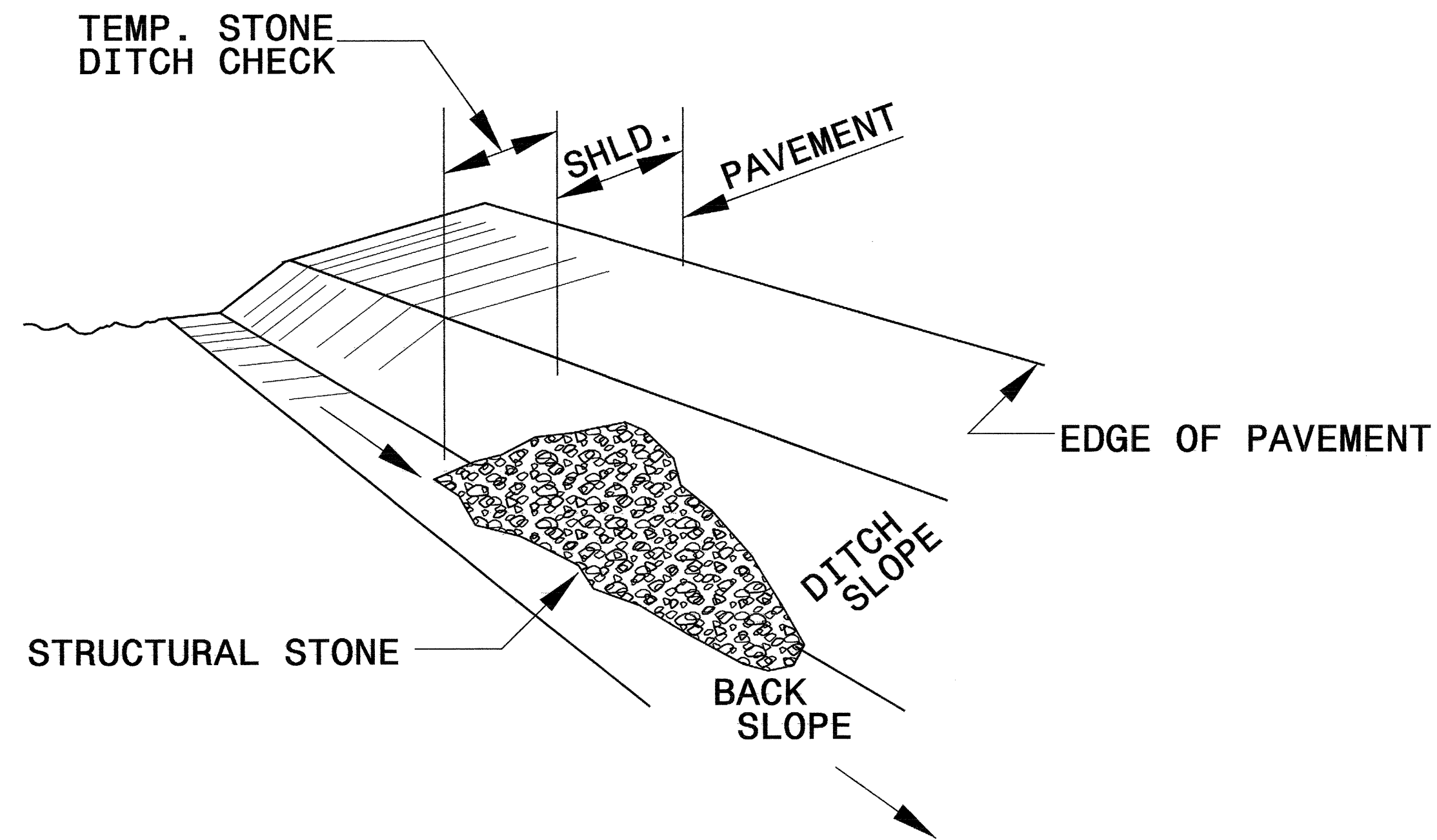
Roadway Standard Drawings

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
1630.02 Silt Basin Type B	
1630.04 Stilling Basin	
1630.05 Temporary Diversion	

PROJECT REFERENCE NO. U-3401	SHEET NO. EC-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TEMPORARY ROCK SILT CHECK TYPE 'B' DETAIL

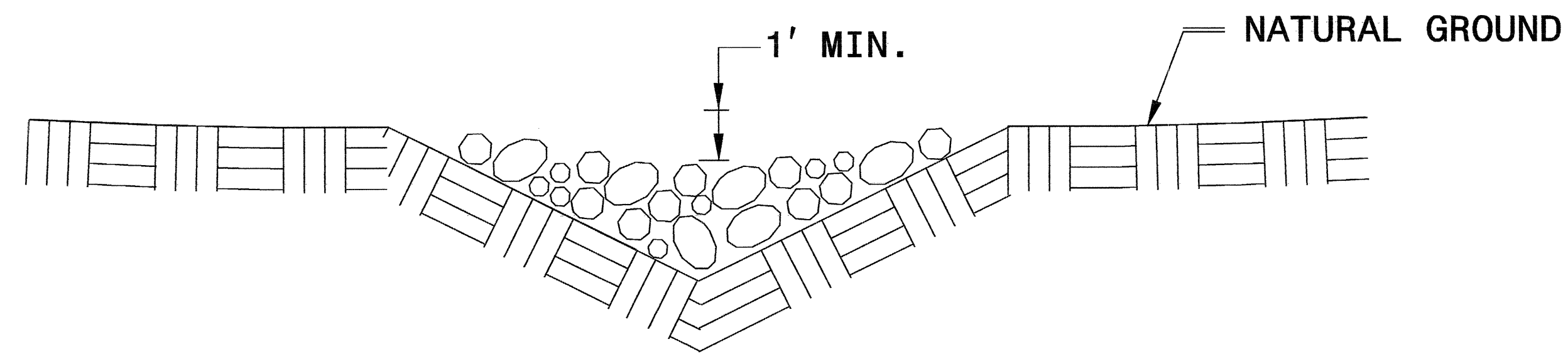


ISOMETRIC VIEW

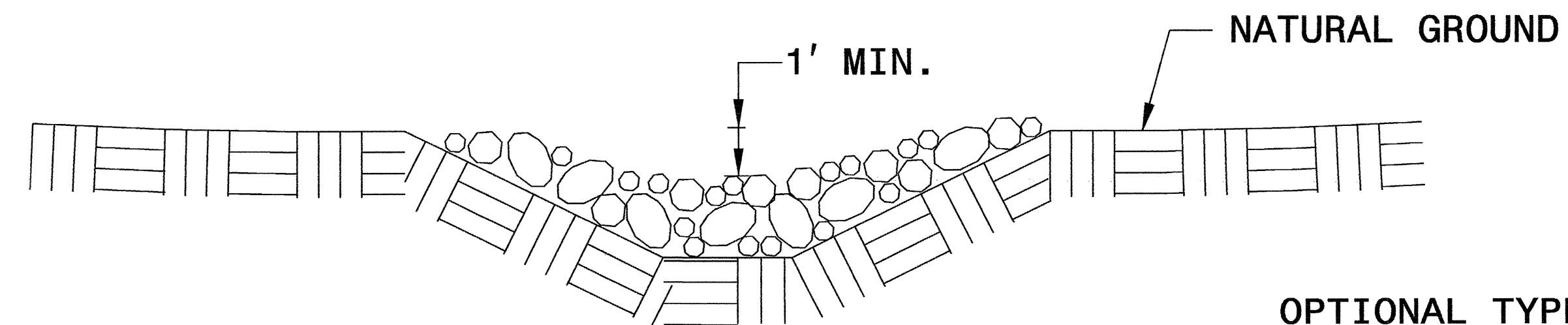
NOTES:

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

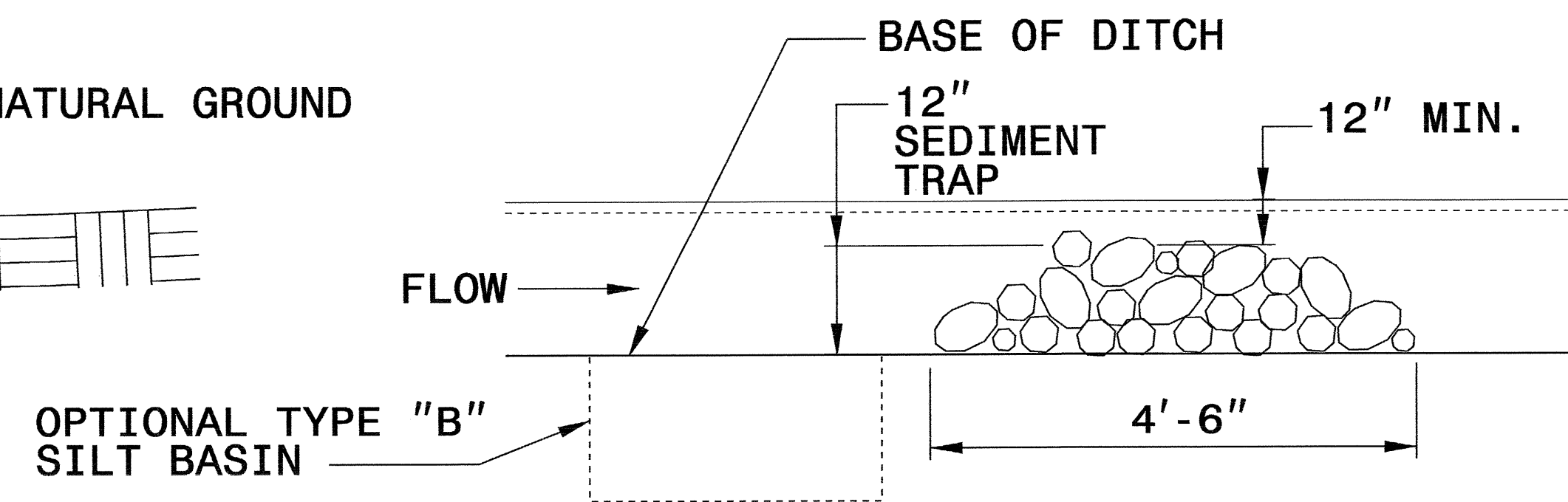
THE ENGINEER MAY DIRECT THE OPTION OF CLASS "A" STONE FOR SITES HAVING LESS THAN ONE (1) ACRE DRAINAGE AREA AND A DITCH GRADE LESS THAN 3%.



**CROSS SECTION
VEE DITCH**



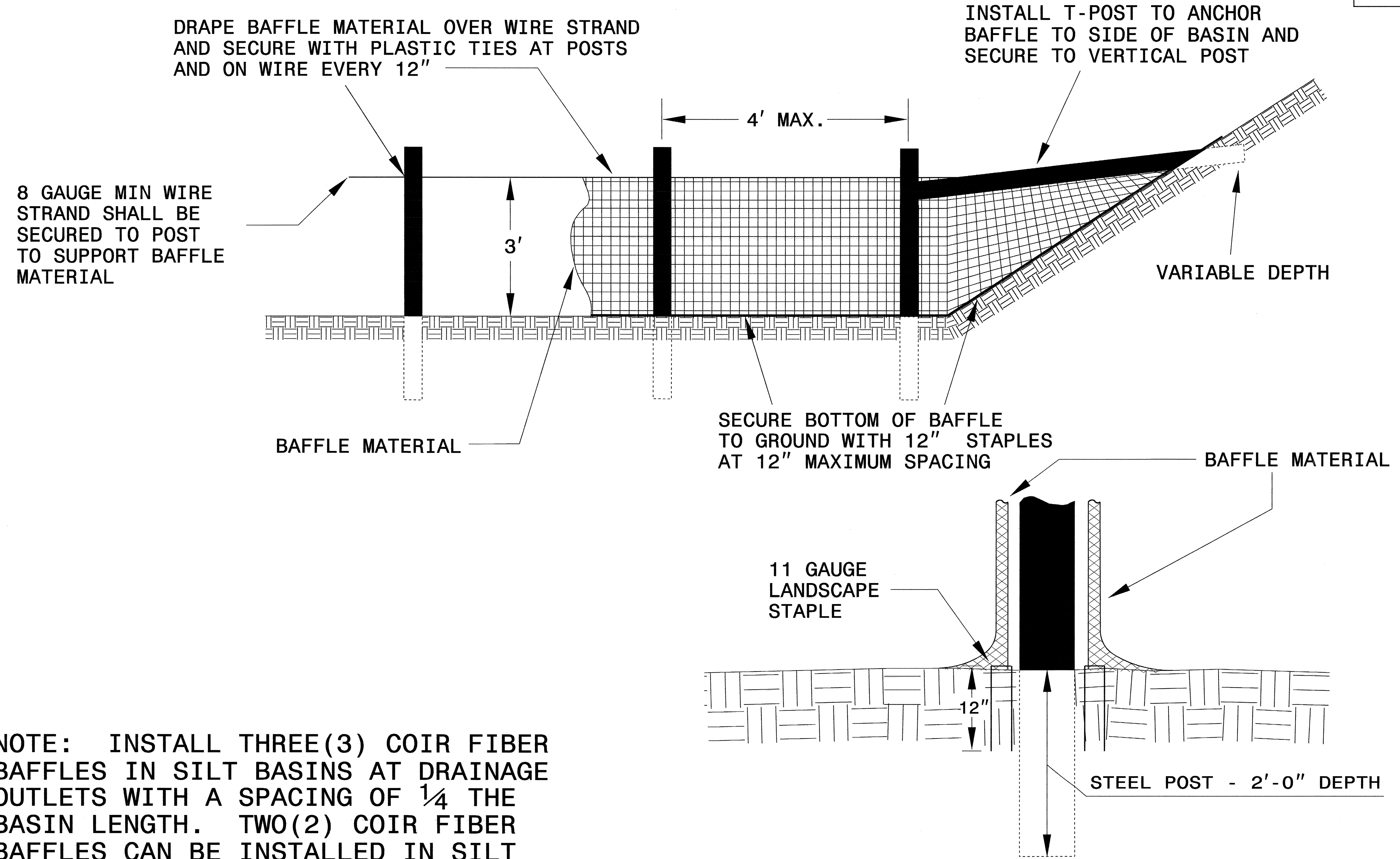
**CROSS SECTION
TRAPEZOIDAL DITCH**



ELEVATION VIEW

PROJECT REFERENCE NO. U-3401	SHEET NO. EC-2A
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

COIR FIBER BAFFLE DETAIL

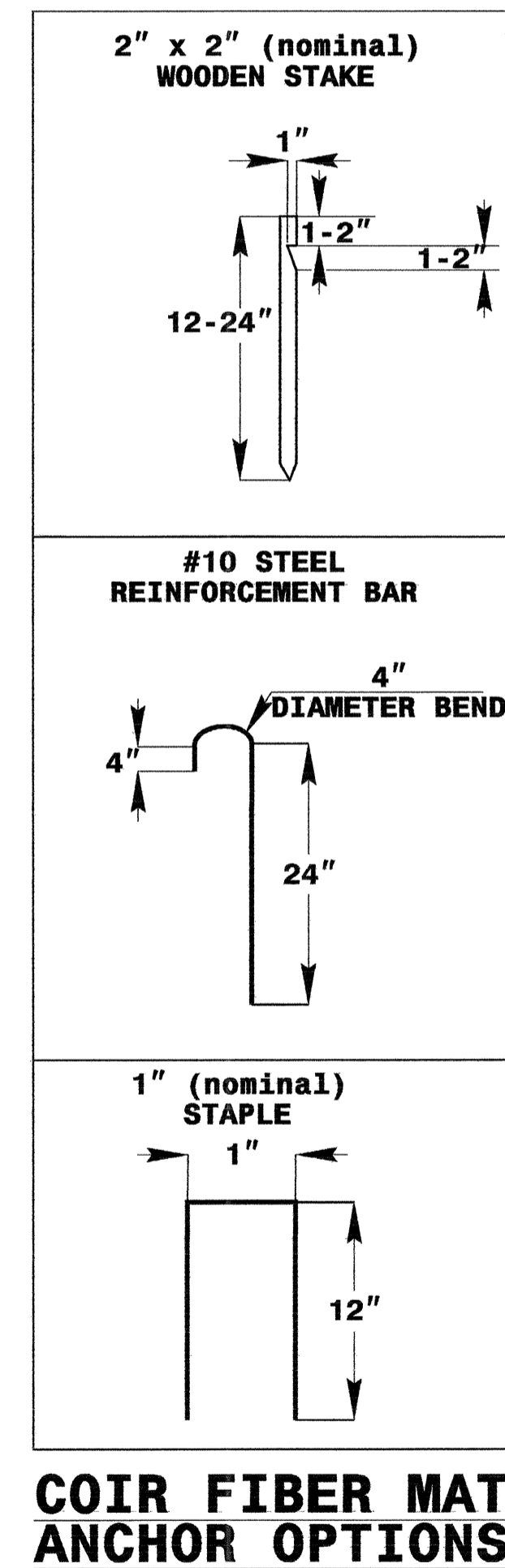
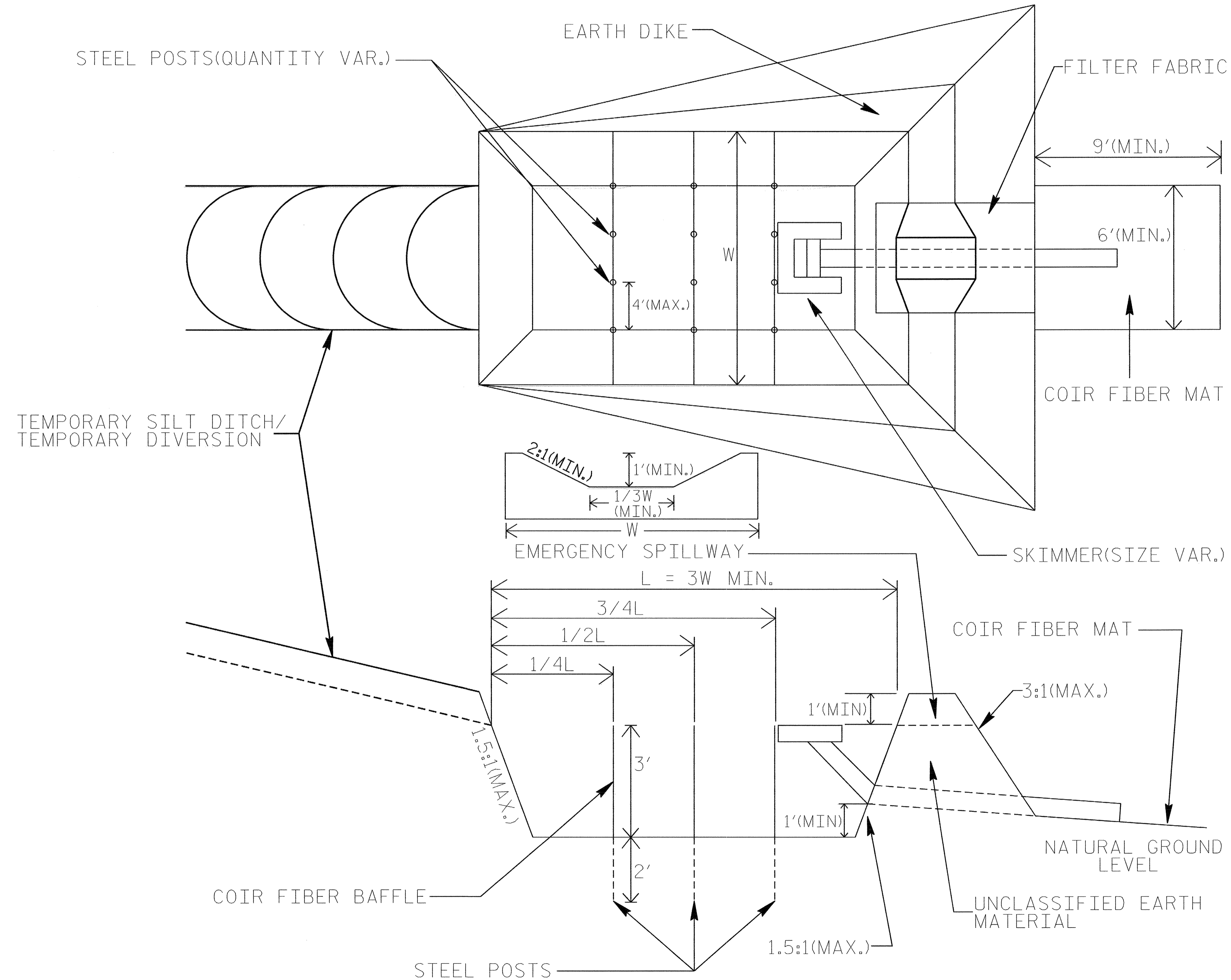


NOTE: INSTALL THREE(3) COIR FIBER BAFFLES IN SILT BASINS AT DRAINAGE OUTLETS WITH A SPACING OF $\frac{1}{4}$ THE BASIN LENGTH. TWO(2) COIR FIBER BAFFLES CAN BE INSTALLED IN SILT BASINS LESS THAN 20 FT. IN LENGTH WITH A SPACING OF $\frac{1}{3}$ THE BASIN LENGTH.

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

SKIMMER BASIN WITH BAFFLES DETAIL

PROJECT REFERENCE NO. U-3401	SHEET NO. EC-2B
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

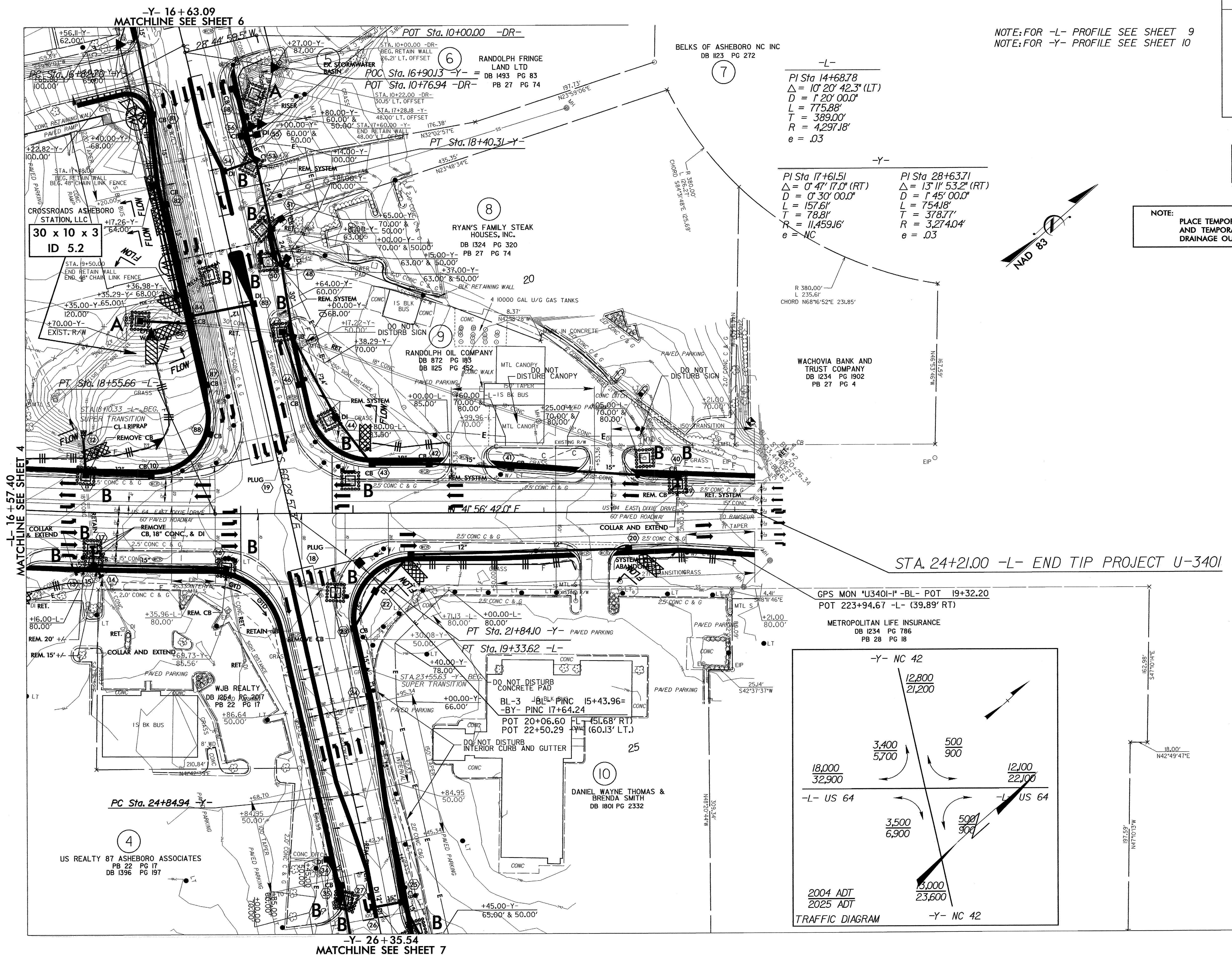


PROJECT REFERENCE NO.	SHEET NO.
U-3401	EC-5/CONST.5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NOTE: FOR -L- PROFILE SEE SHEET 9
 NOTE: FOR -Y- PROFILE SEE SHEET 10

CLEARING AND GRUBBING
 EROSION CONTROL FOR
 CONSTRUCTION SHEET 5

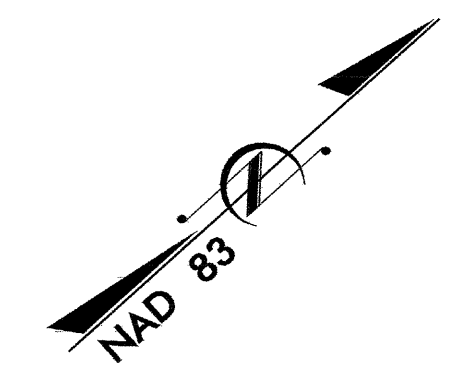
NOTE:
 PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B
 AND TEMPORARY ROCK SILT CHECKS TYPE - A AT
 DRAINAGE OUTLETS.



-L-
 PI Sta 14+68.78
 $\Delta = 10^{\circ} 20' 42.3''$ (LT)
 $D = 1^{\circ} 20' 00.0''$
 $L = 775.88'$
 $T = 389.00'$
 $R = 4,297.18'$
 $e = .03$

-Y-
 PI Sta 17+61.51
 $\Delta = 0^{\circ} 47' 17.0''$ (RT)
 $D = 0^{\circ} 30' 00.0''$
 $L = 157.61'$
 $T = 78.81'$
 $R = 11,459.16'$
 $e = NC$

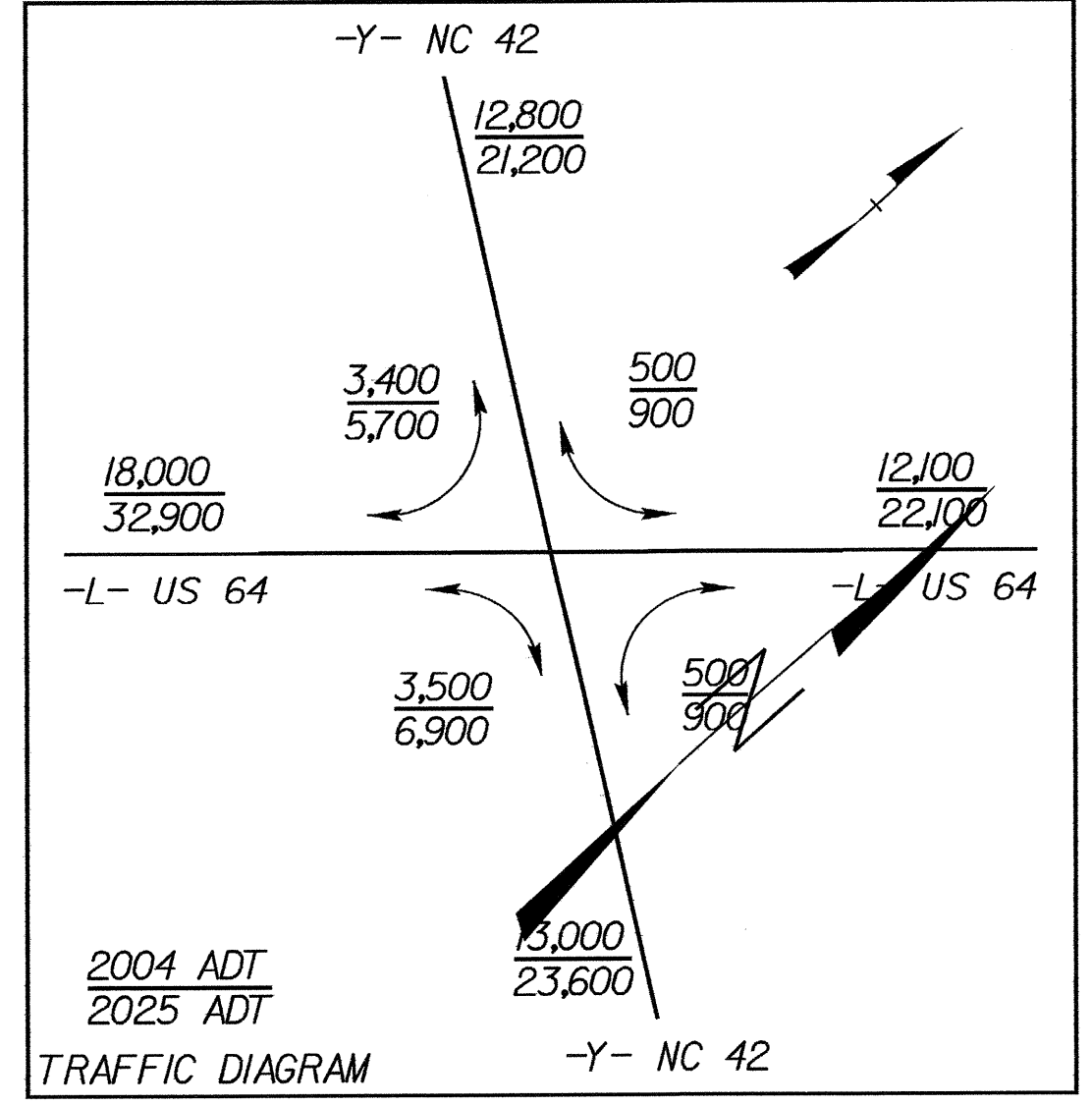
PI Sta 28+63.71
 $\Delta = 13^{\circ} 11' 53.2''$ (RT)
 $D = 1^{\circ} 45' 00.0''$
 $L = 754.18'$
 $T = 378.77'$
 $R = 3,274.04'$
 $e = .03$



STA. 24+21.00 -L- END TIP PROJECT U-3401

GPS MON 'U3401-I' -BL- POT 19+32.20
 POT 223+94.67 -L- (39.89' RT)

METROPOLITAN LIFE INSURANCE
 DB 1234 PG 786
 PB 28 PG 18



MATCHLINE SEE SHEET 4

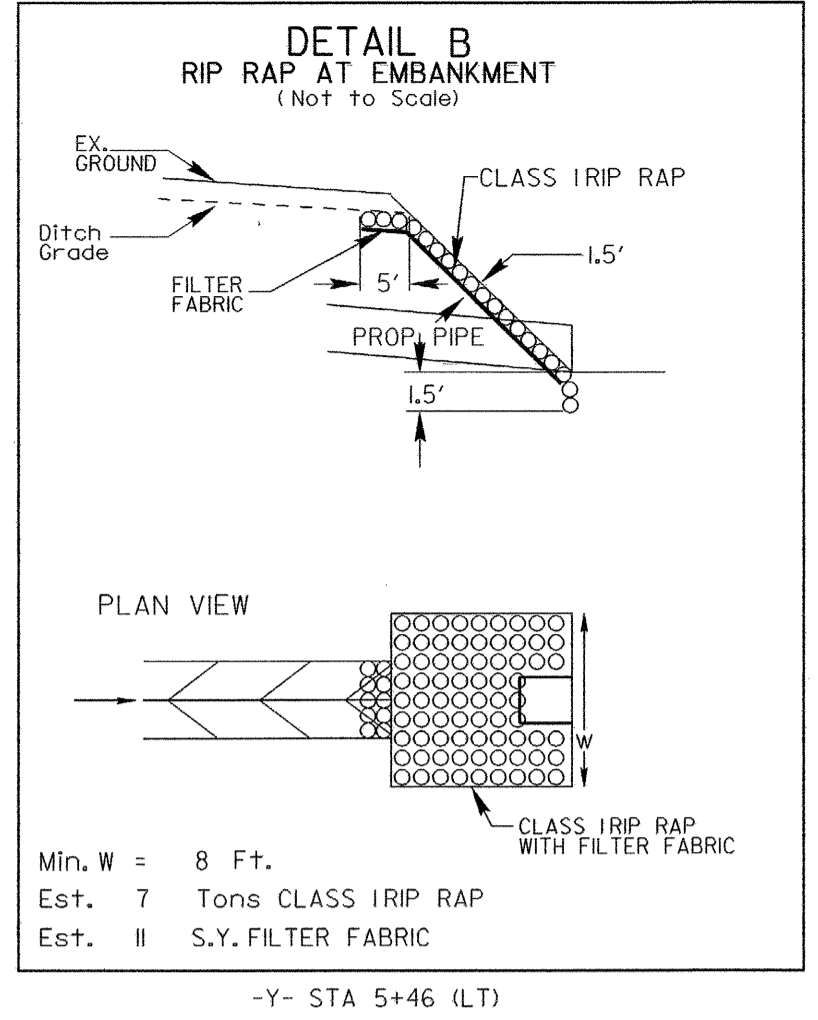
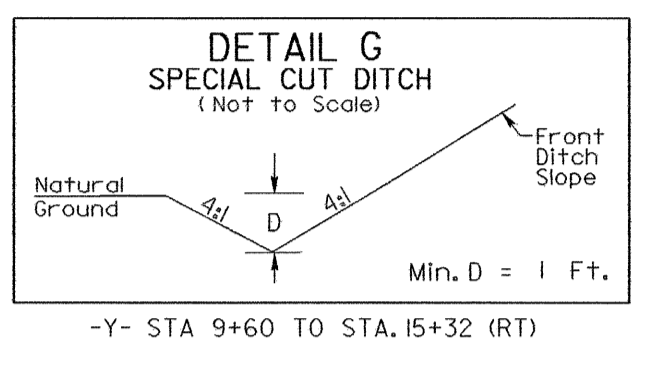
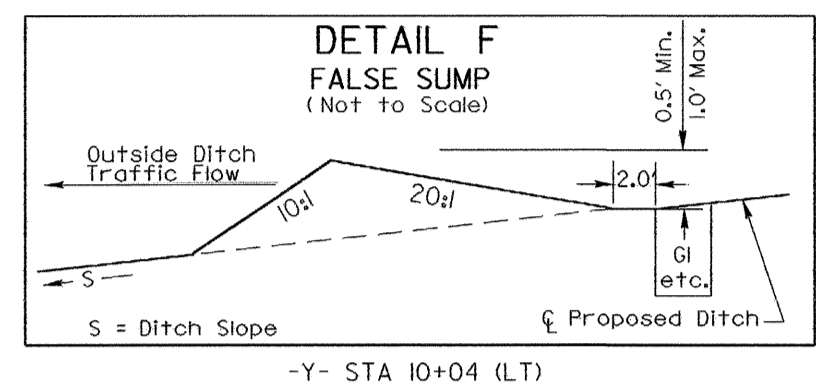
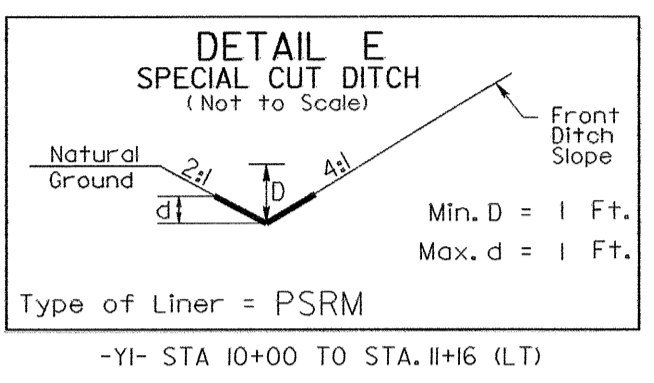
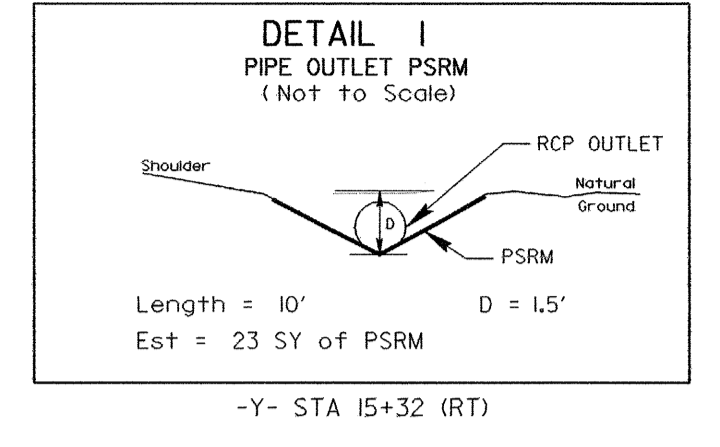
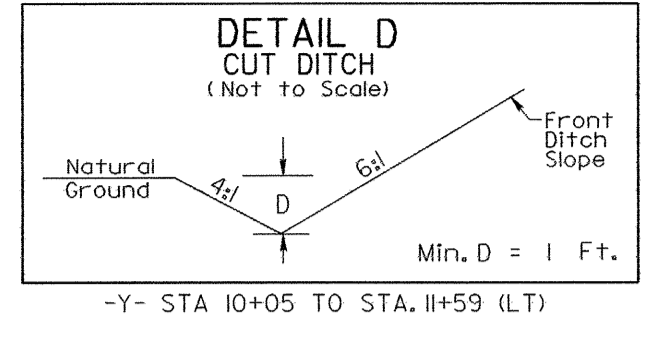
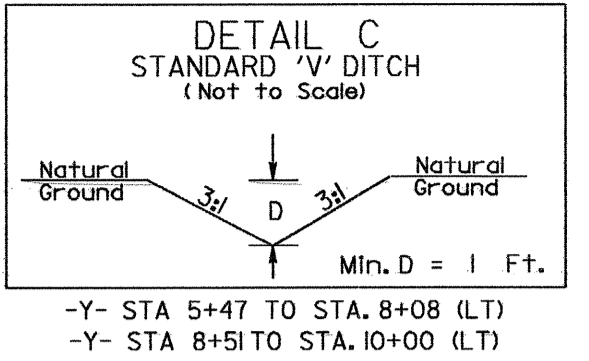
-Y- 16+63.09
 MATCHLINE SEE SHEET 6

-Y- 26+35.54
 MATCHLINE SEE SHEET 7

PROJECT REFERENCE NO. U-3401	SHEET NO. EC-6/CONST.6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

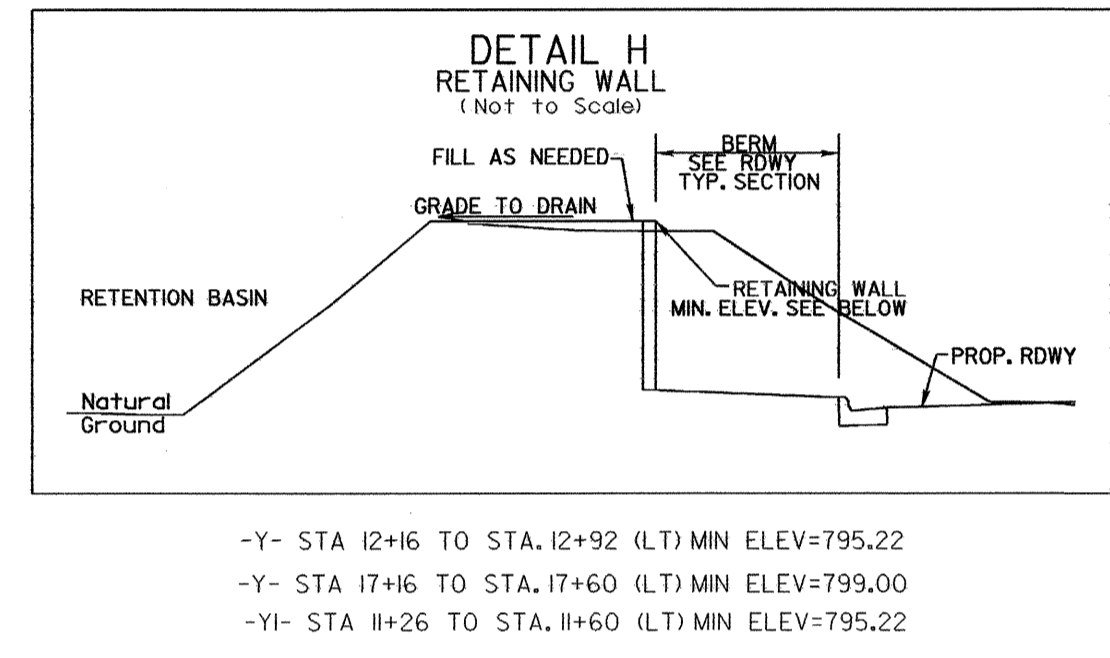
NOTE: FOR -Y- PROFILE SEE SHEET 10
NOTE: FOR -YI- PROFILE SEE SHEET 11

-Y-	-YI-
PI Sta 6+92.47	PI Sta 11+43.94
$\Delta = 0' 23' 35.7''$ (LT)	$\Delta = 2' 52' 50.0''$ (LT)
$D = 0' 13' 45.1''$	$D = 19' 05' 54.9''$
$L = 171.59'$	$L = 114.57'$
$T = 85.80'$	$T = 57.99'$
$R = 25,000.00'$	$R = 300.00'$
	$e = RC$



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.

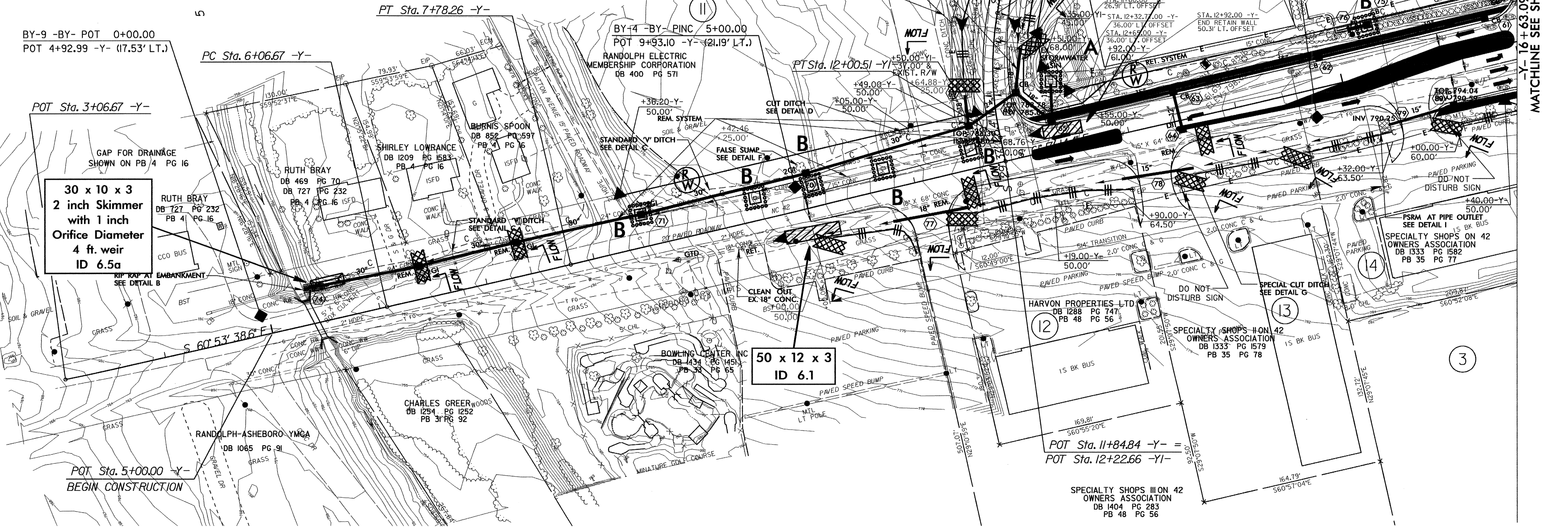


BY-9 -BY- POT 0+00.00
POT 4+92.99 -Y- (17.53' LT.)

30 x 10 x 3
2 inch Skimmer
with 1 inch
Orifice Diameter
4 ft. weir
ID 6.5a

50 x 12 x 3
ID 6.1

35 x 12 x 3
ID 6.10



MATCHLINE SEE SHEET 5

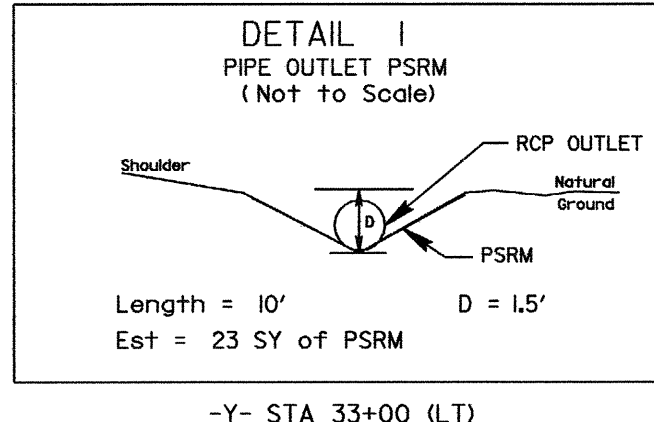
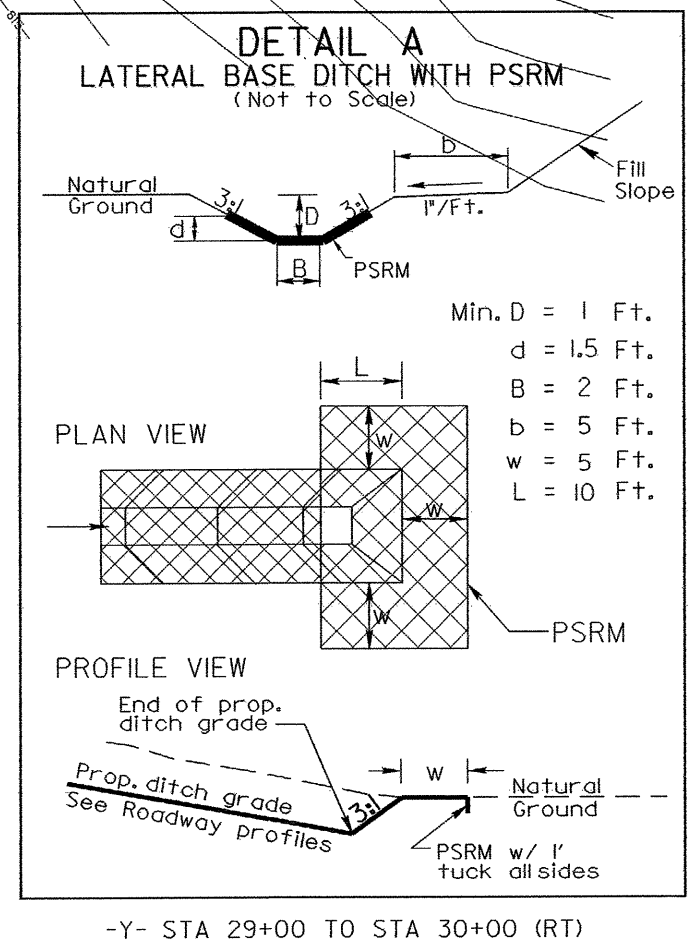
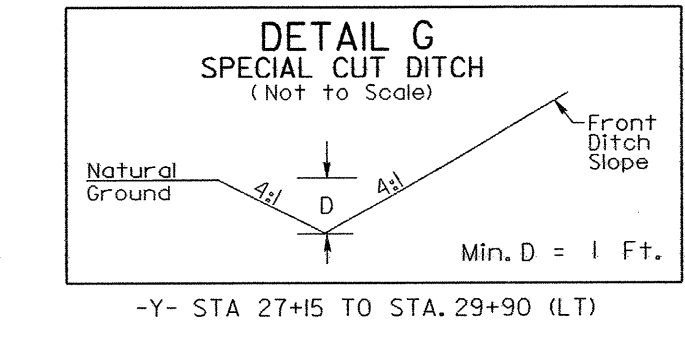
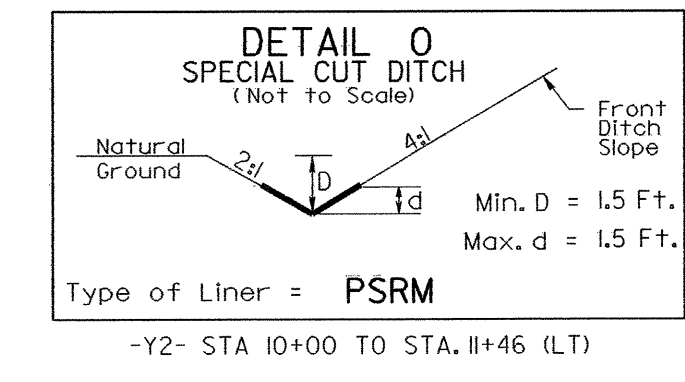
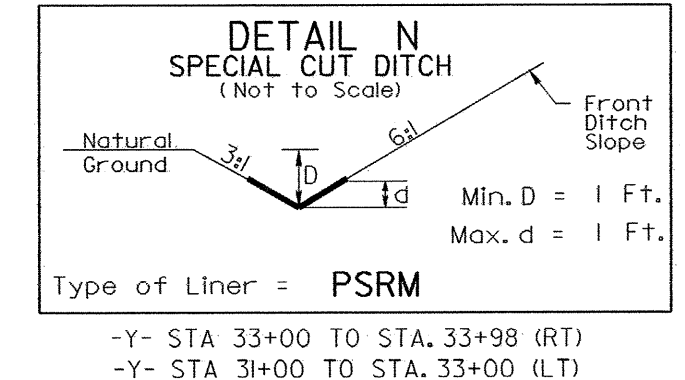
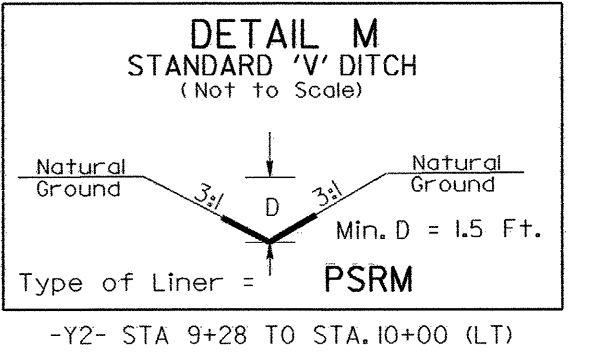
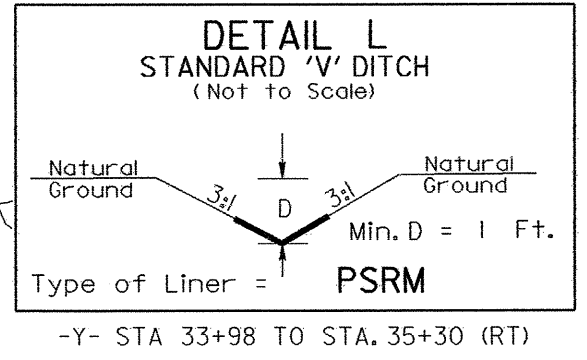
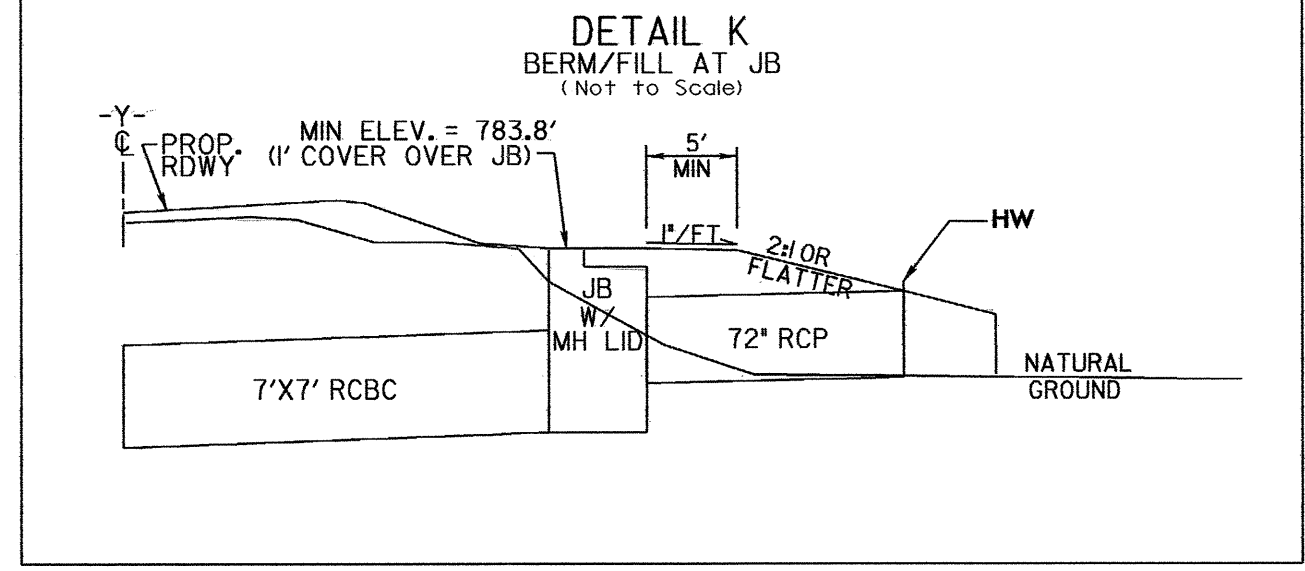
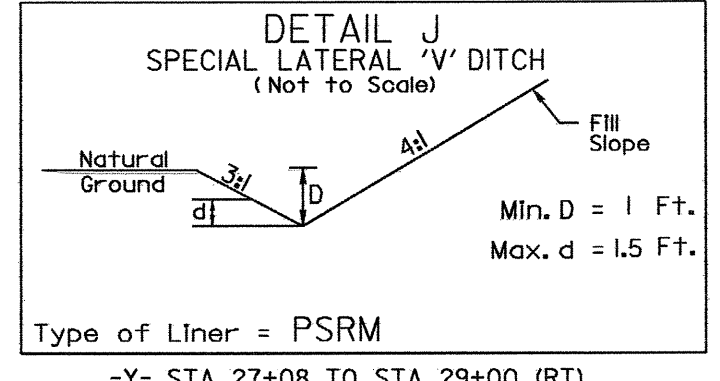
PROJECT REFERENCE NO.	SHEET NO.
U-3401	EC-7/CONST.7
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NOTE: FOR -Y- PROFILE SEE SHEET 10 & 11
 NOTE: FOR -Y2- & -Y3- PROFILES SEE SHEET 11

CLEARING AND GRUBBING
 EROSION CONTROL FOR
 CONSTRUCTION SHEET 7

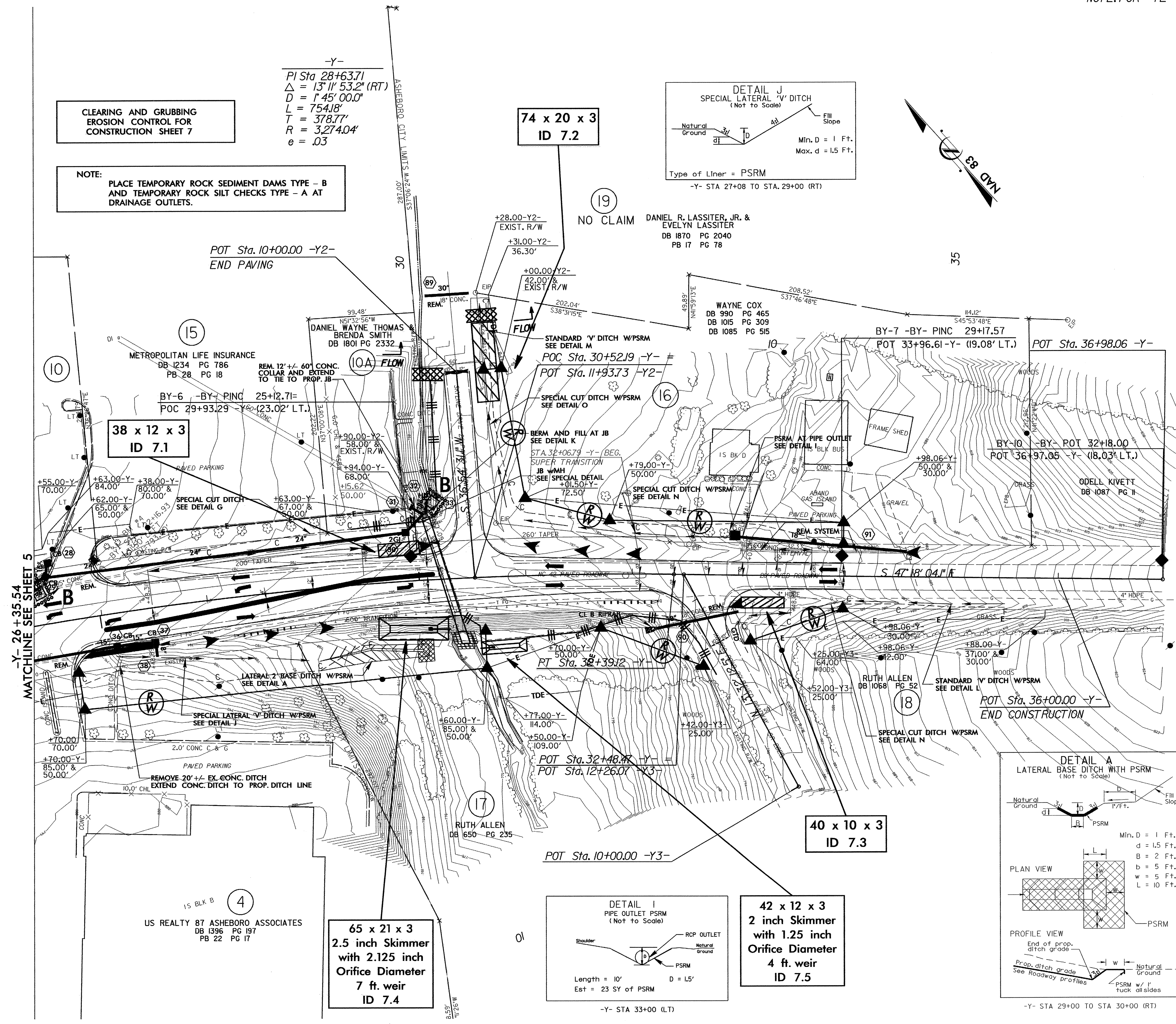
-Y-
 PI Sta 28+63.71
 $\Delta = 13^{\circ} 11' 53.2''$ (RT)
 $D = 145^{\circ} 00.0'$
 $L = 754.18'$
 $T = 378.77'$
 $R = 3,274.04'$
 $e = .03$

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

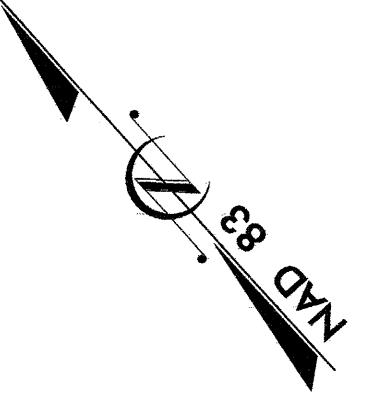


42 x 12 x 3
 2 inch Skimmer
 with 1.25 inch
 Orifice Diameter
 4 ft. weir
 ID 7.5

65 x 21 x 3
 2.5 inch Skimmer
 with 2.125 inch
 Orifice Diameter
 7 ft. weir
 ID 7.4



-Y- 26+35.54
 MATCHLINE SEE SHEET 5



PROJECT REFERENCE NO.	SHEET NO.
U-3401	EC-8/CONST.7
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

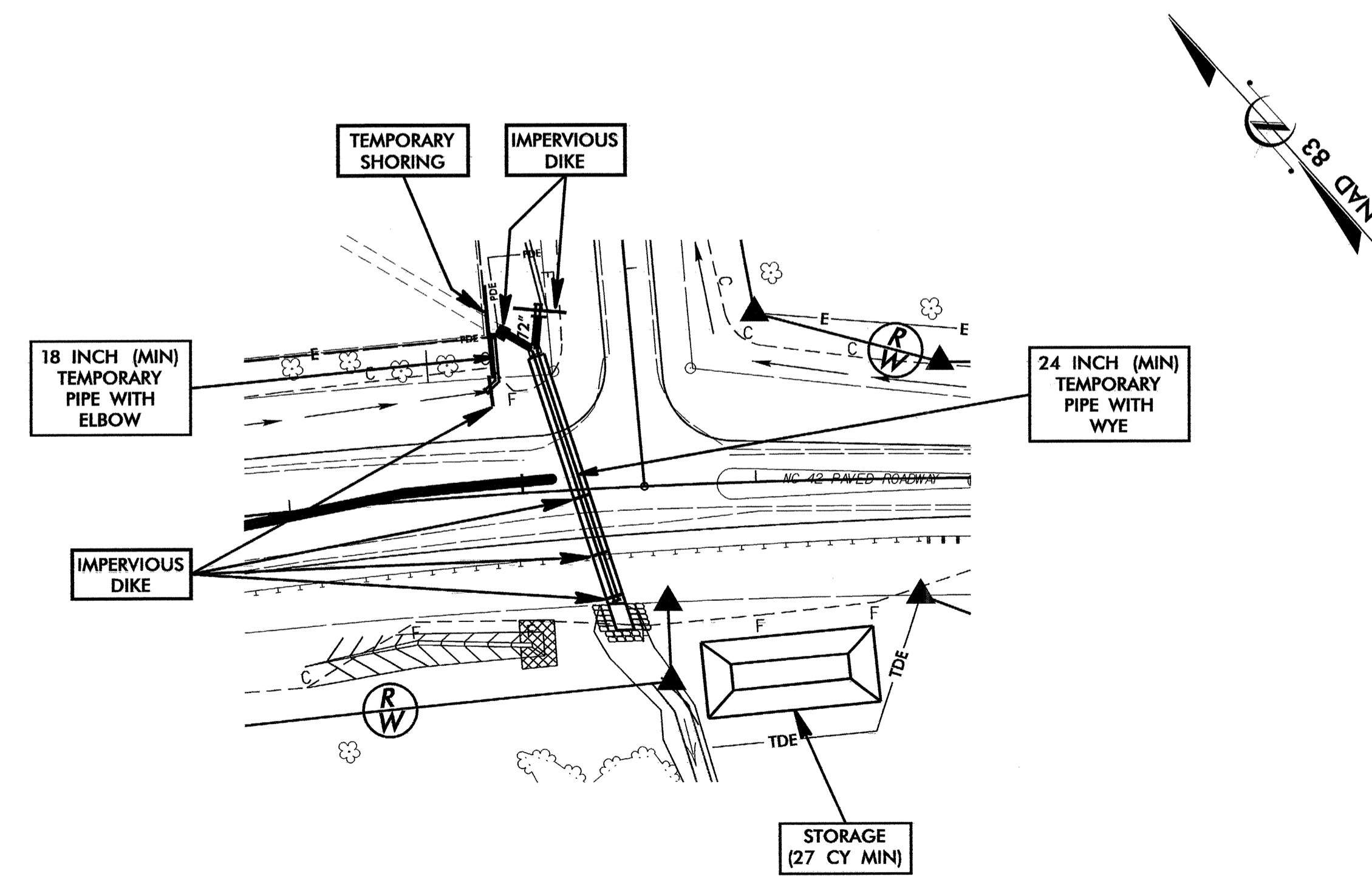
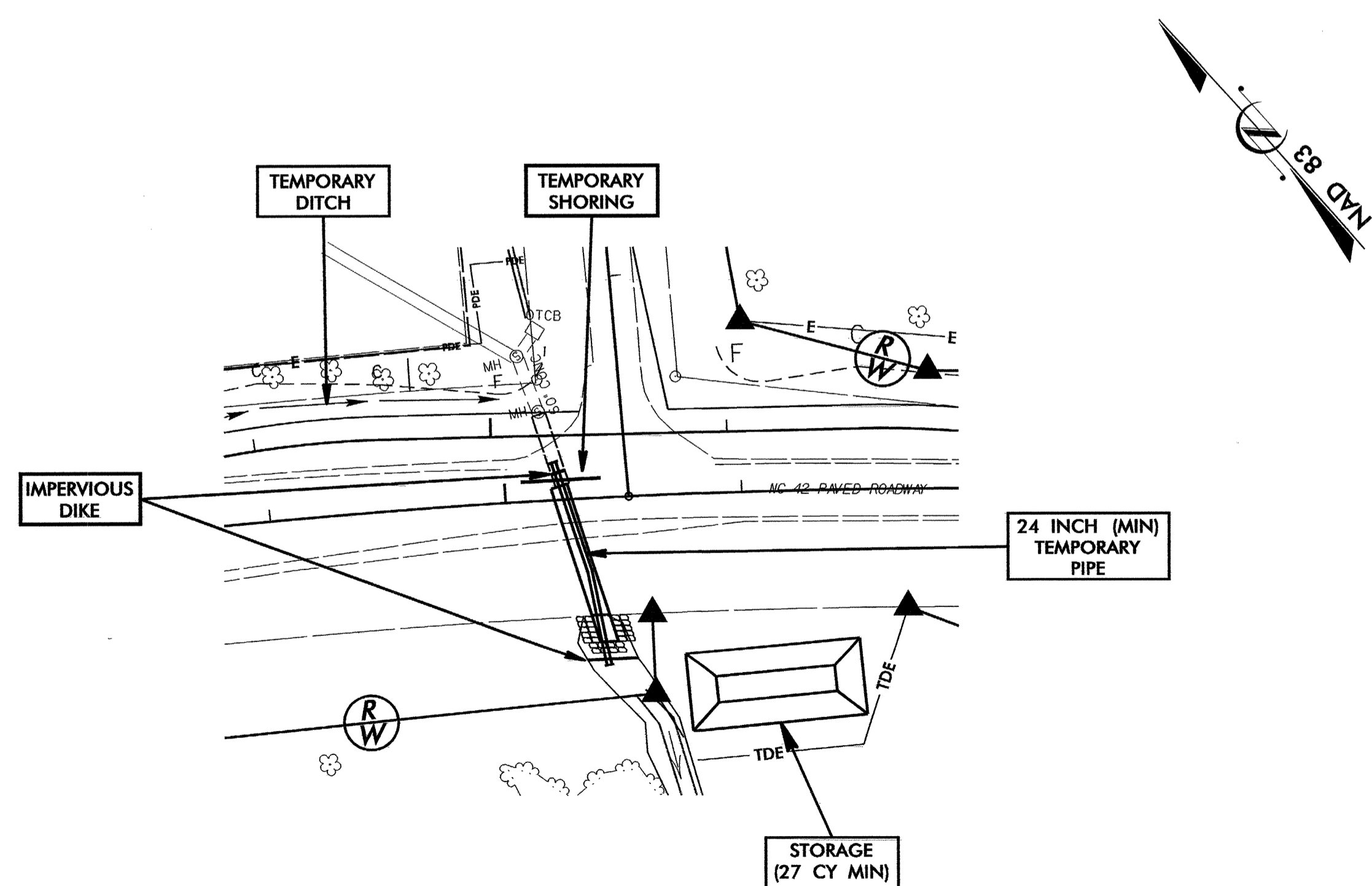
CULVERT CONSTRUCTION SEQUENCE STA. 30+24.5 -Y-

PHASE I

1. CONSTRUCT SEDIMENT CONTROL DEVICES.
2. CONSTRUCT THE ON-SITE DETOUR AND TEMPORARY DITCH ON LEFT SIDE OF -Y-.
3. INSTALL A TEMPORARY STILLING BASIN (27 CY MIN.) ON RIGHT SID OF -Y-.
4. ONCE TRAFFIC HAS BEEN SHIFTED TO THE DETOUR, INSTALL A 24" MIN. CS TEMPORARY DIVERSION PIPE WITH IMPERVIOUS DIKES TO CARRY FLOW FROM UPSTREAM OF WORK AREA TO AN AREA BEYOND CONSTRUCTION AREA.
5. CONSTRUCT REQUIRED TEMPORARY SHORING.
6. REMOVE 72" CMP AND 40' +/- OF EXISTING 5' X 5' BOX CULVERT TO ALLOW FOR CONSTRUCTION OF THE PROPOSED SOUTHERN PORTION OF THE CULVERT, WHILE PUMPING EFFLUENT INTO STILLING BASIN.
7. WHILE TRAFFIC IS MAINTAINED ON THE NEWLY CONSTRUCTED ON-SITE DETOUR, CONSTRUCT AS MUCH OF THE PROPOSED SOUTHERN (DOWNSTREAM) PORTION OF THE CULVERT AS POSSIBLE.
8. REMOVE PHASE I 24" MIN. TEMPORARY DIVERSION PIPE AND IMPERVIOUS DIKES.

PHASE II

9. CONSTRUCT PROPOSED ROADWAY RIGHT OF -Y- OVER NEWLY CONSTRUCTED CULVERT WITH REQUIRED TEMPORARY SHORING.
10. ONCE TRAFFIC HAS BEEN SHIFTED TO THE NEWLY CONSTRUCTED ROADWAY, INSTALL 24" MIN. CS TEMPORARY DIVERSION PIPES WITH WYE AND IMPERVIOUS DIKES TO CARRY FLOW FROM THE EXISTING PRIVATE SYSTEM AND FROM THE CHANNEL UPSTREAM OF THE WORK AREA TO AN AREA BEYOND THE CONSTRUCTION AREA. IMPERVIOUS DIKES WILL INCLUDE TWO INTERIOR IMPERVIOUS DIKES TO SERVE AS PIPE SUPPORT AND AS SEDIMENT REDUCTION BAFFLES.
11. REMOVE TEMPORARY PAVEMENT, AS NEEDED, FROM THE NO-LONGER USED ON-SITE DETOUR, TO CONSTRUCT THE PROPOSED DITCH ON THE LEFT SIDE OF -Y-. INSTALL 18" MIN. CS TEMPORARY DIVERSION PIPE WITH ELBOW AND IMPERVIOUS DIKE, TO CARRY FLOW FROM DITCH TO UPSTREAM OF THE TEMPORARY DIVERSION PIPE. CONSTRUCT IMPERVIOUS DIKE FOR THE EXISTING PRIVATE SYSTEM..
12. REMOVE REMAINING 5' X 5' BOX CULVERT, 60" CONC. PIPE, 2 MANHOLES, 54" CONC. PIPE, OTCB, AND 12' +/- OF 60' CONC. PIPE FROM EXISTING PRIVATE SYSTEM WHILE PUMPING EFFLUENT INTO STILLING BASIN.
13. CONSTRUCT THE REMAINING NORTHERN (UPSTREAM) PORTION OF THE CULVERT.
14. REMOVE THE TEMP. PIPE THAT IS CARRYING FLOW FROM THE UPSTREAM CHANNEL AND CONSTRUCT THE PROPOSED JB AND 72" RCP OPEN-END PIPE. AFTER PROPOSED JB IS COMPLETE, CONSTRUCT 2GI AT STA. 29+90 -Y- AND TIE TO PROPOSED JB AT CULVERT INLET. REMOVE TEMPORARY DIVERSION PIPE FROM DITCH. COLLAR AND EXTEND 60" CONC. PIPE FROM PRIVATE SYSTEM TO TIE TO PROPOSED JB.
15. UPON PERMANENT STABILIZATION OF ALL DISTURBED AREAS, REMOVE ALL TEMPORARY SEDIMENT CONTROL DEVICES INCLUDING TEMPORARY DITCHES, PIPES, AND STILLING BASIN.



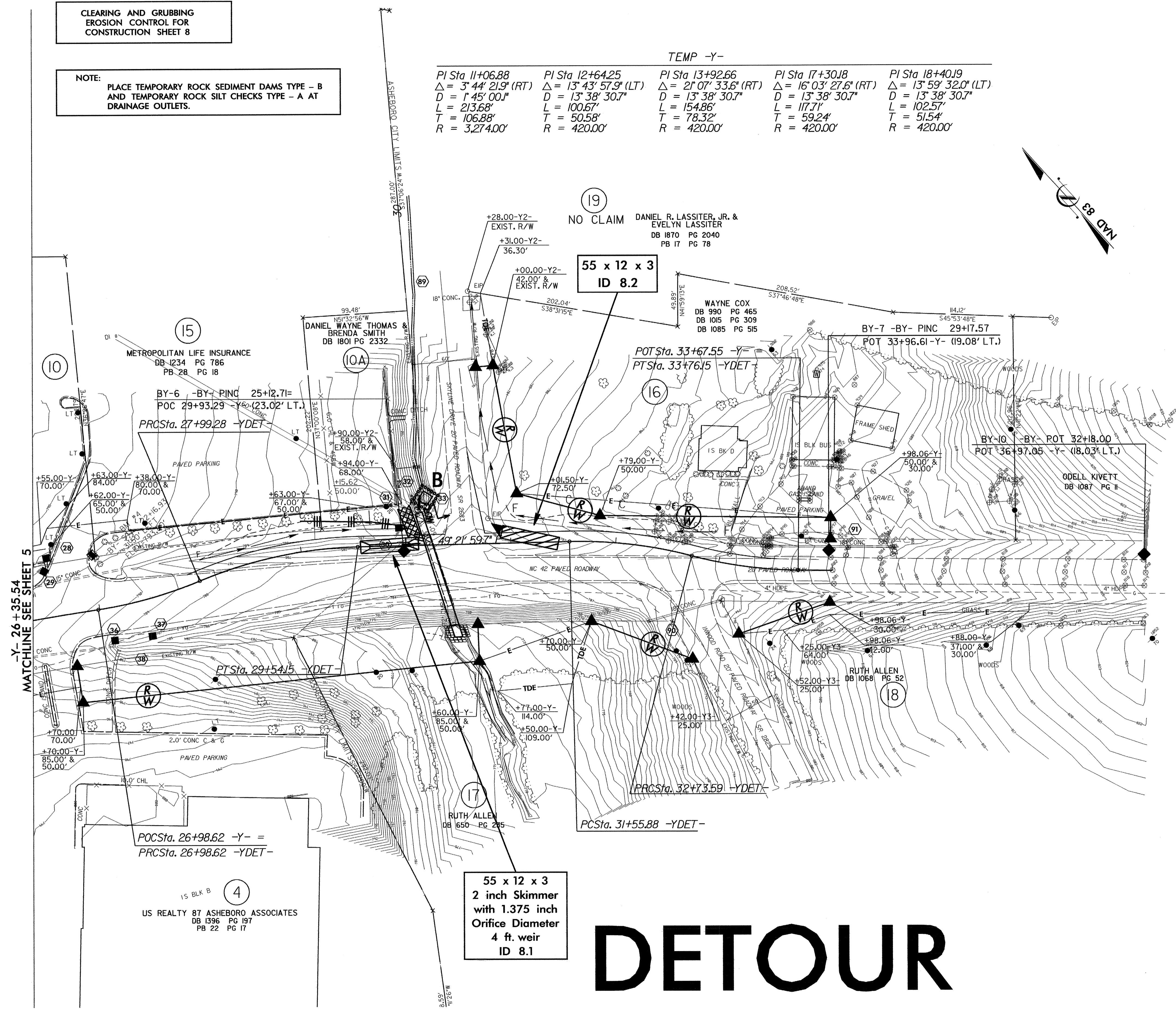
PROJECT REFERENCE NO.	SHEET NO.
U-3401	EC-9/CONST.8
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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.

TEMP -Y-

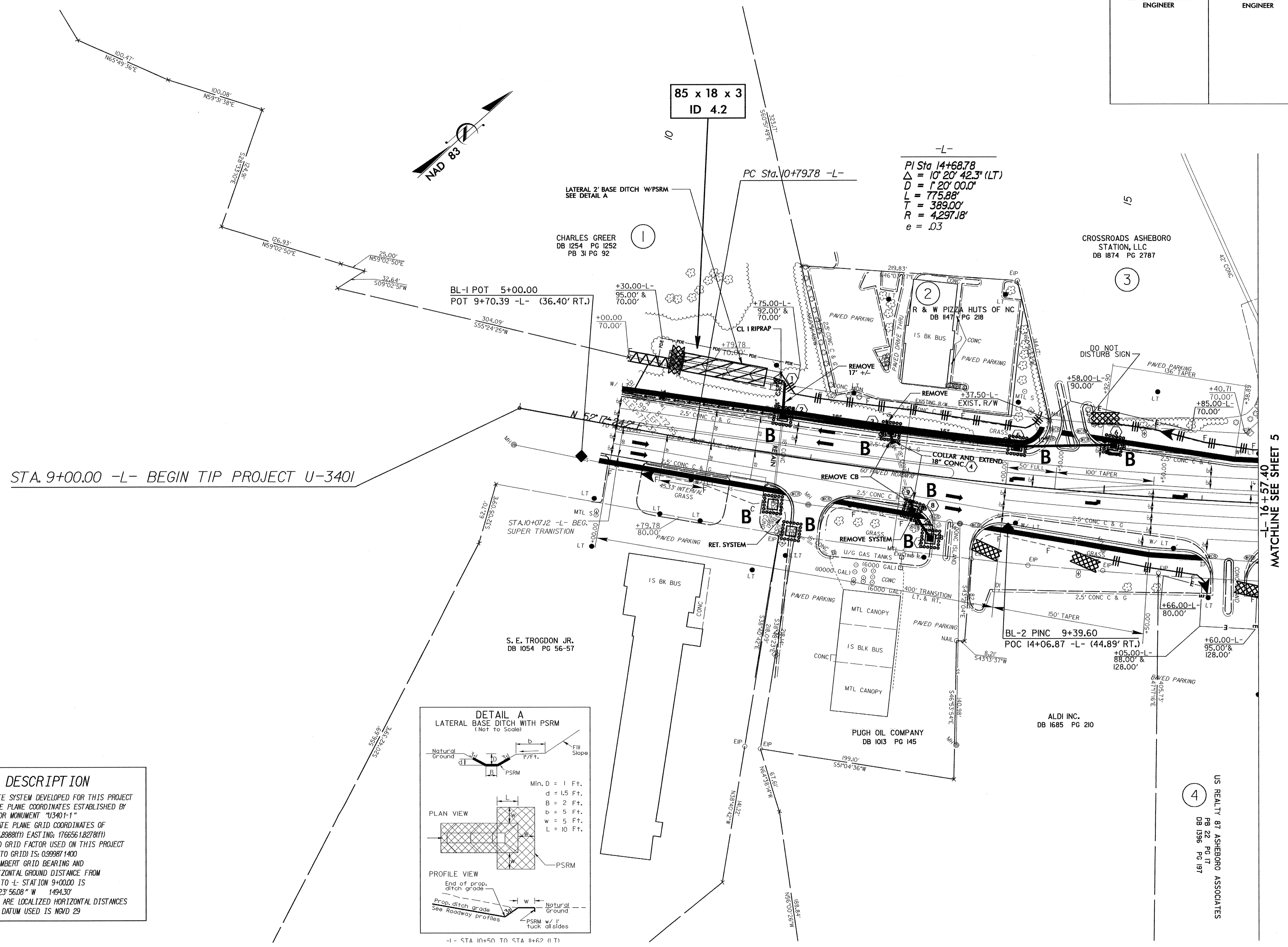
PI Sta 11+06.88 Δ = 3° 44' 21.9" (RT) D = 1' 45' 00" L = 213.68' T = 106.88' R = 3,274.00'	PI Sta 12+64.25 Δ = 13° 43' 57.9" (LT) D = 13' 38' 30.7" L = 100.67' T = 50.58' R = 420.00'	PI Sta 13+92.66 Δ = 21° 07' 33.6" (RT) D = 13' 38' 30.7" L = 154.86' T = 78.32' R = 420.00'	PI Sta 17+30.18 Δ = 16° 03' 27.6" (RT) D = 13' 38' 30.7" L = 117.71' T = 59.24' R = 420.00'	PI Sta 18+40.19 Δ = 13° 59' 32.0" (LT) D = 13' 38' 30.7" L = 102.57' T = 51.54' R = 420.00'
---	--	--	--	--



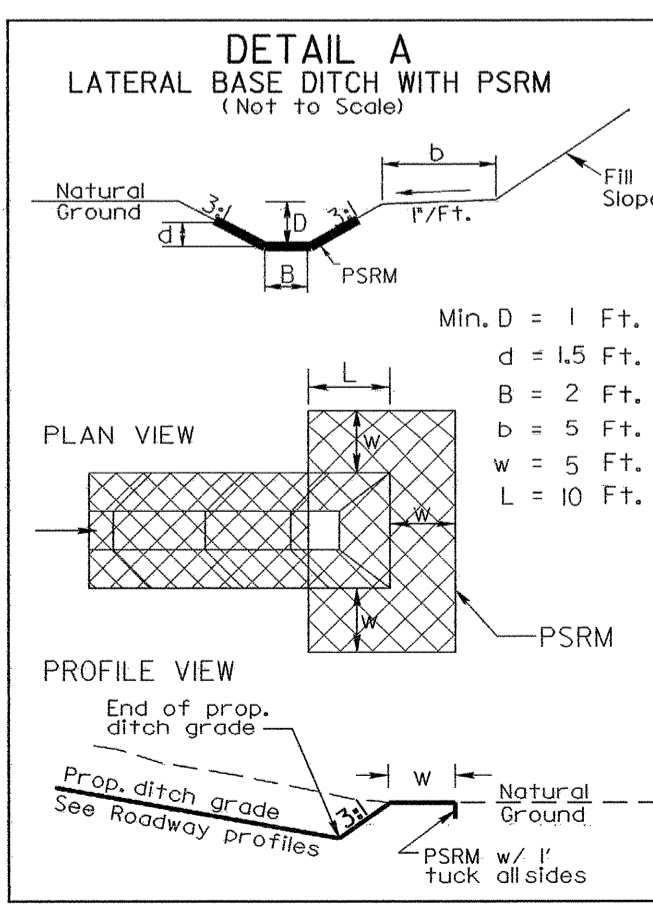
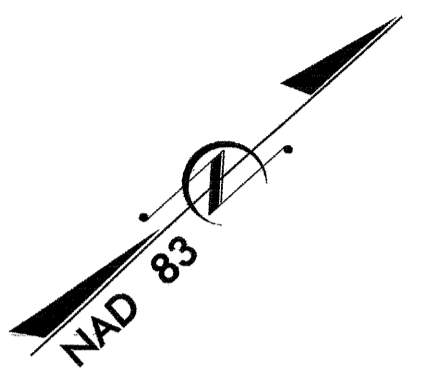
DETOUR

PROJECT REFERENCE NO.		SHEET NO.	
U-3401		EC-10/CONST.4	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

NOTE: FOR -L- PROFILE SEE SHEET 9



-L-
 PI Sta 14+68.78
 $\Delta = 10^\circ 20' 42.3''$ (LT)
 $D = 1' 20' 00.0''$
 $L = 775.88'$
 $T = 389.00'$
 $R = 4,297.18'$
 $e = .03$



DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "U3401-1"

WITH NAD 83 STATE PLANE GRID COORDINATES OF NORTHING: 710365.8988(11) EASTING: 176656.1827(11)

THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.999871400

THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "U3401-1" TO L- STATION 9+00.00 IS

S $41^\circ 23' 56.08''$ W 1494.30'

ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES

VERTICAL DATUM USED IS NAVD 29

STA. 9+00.00 -L- BEGIN TIP PROJECT U-3401

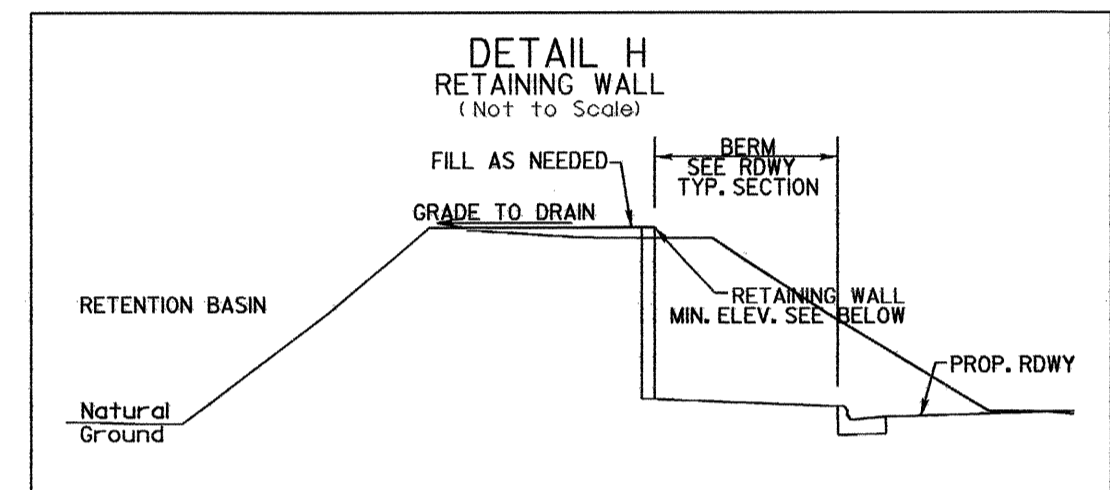
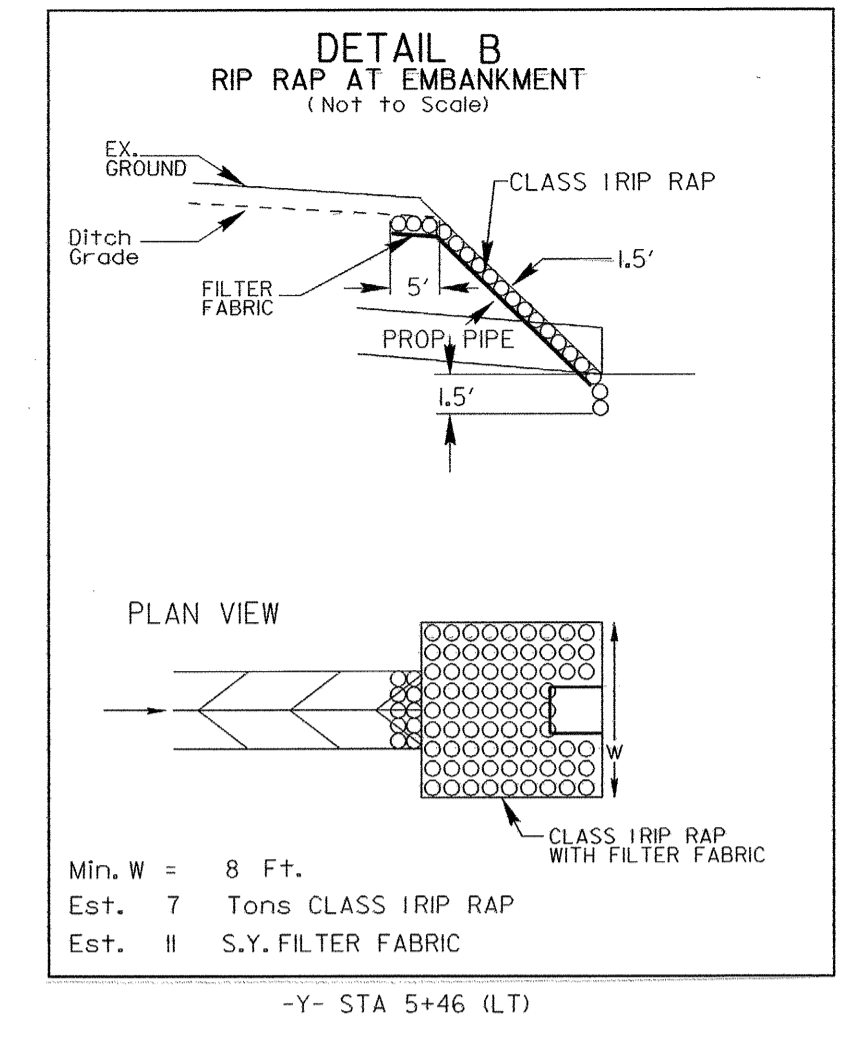
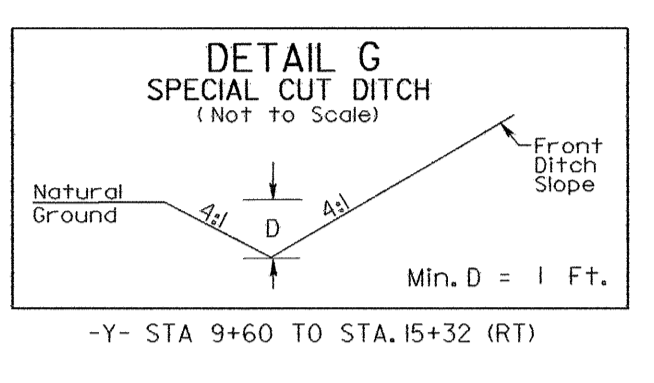
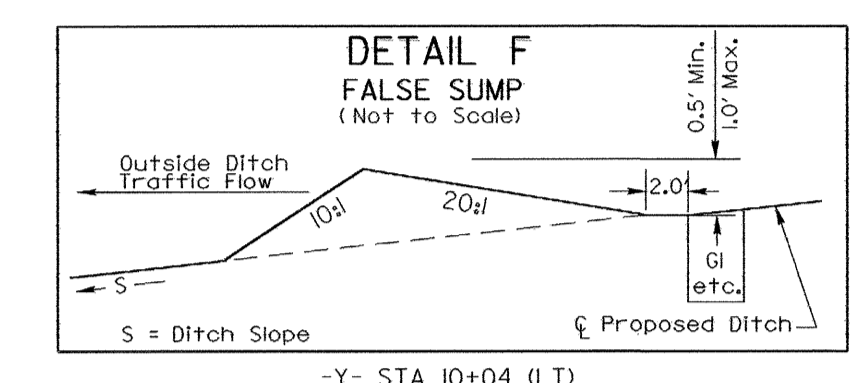
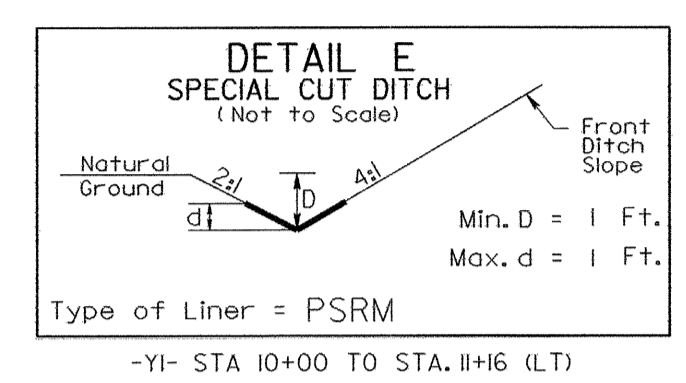
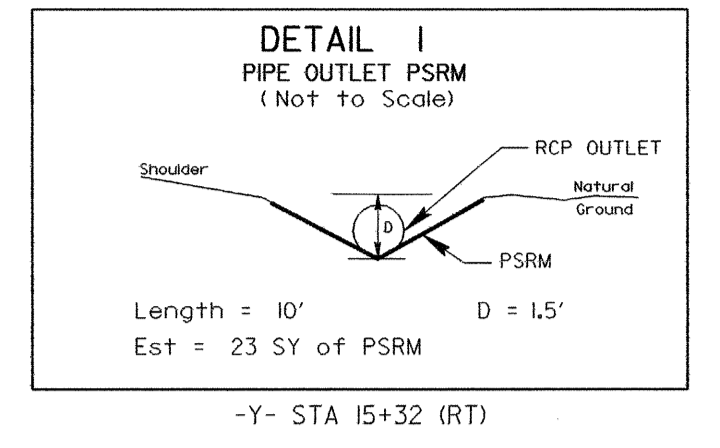
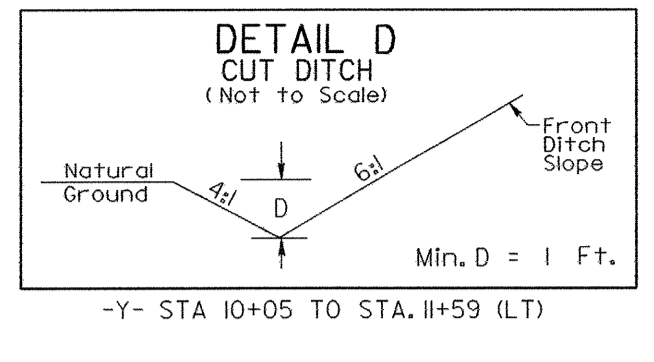
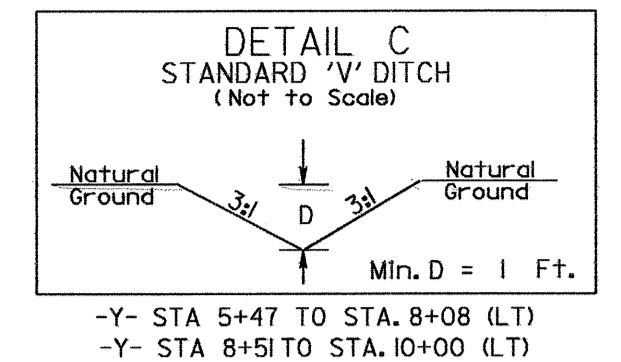
MATCHLINE SEE SHEET 5

US REALTY 87 ASHEBORO ASSOCIATES
 PB 22 PG 17
 DB 1396 PG 197

PROJECT REFERENCE NO. U-3401	SHEET NO. EC-12/CONST.6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NOTE: FOR -Y- PROFILE SEE SHEET 10
NOTE: FOR -YI- PROFILE SEE SHEET 11

-Y-	-YI-
PI Sta 6+92.47	PI Sta 11+43.94
$\Delta = 0' 23' 35.7" (LT)$	$\Delta = 2' 52' 50.0" (LT)$
$D = 0' 13' 45.1"$	$D = 19' 05' 54.9"$
$L = 171.59'$	$L = 114.57'$
$T = 85.80'$	$T = 57.99'$
$R = 25,000.00'$	$R = 300.00'$
	$e = RC$



36 x 12 x 3
ID 6.3

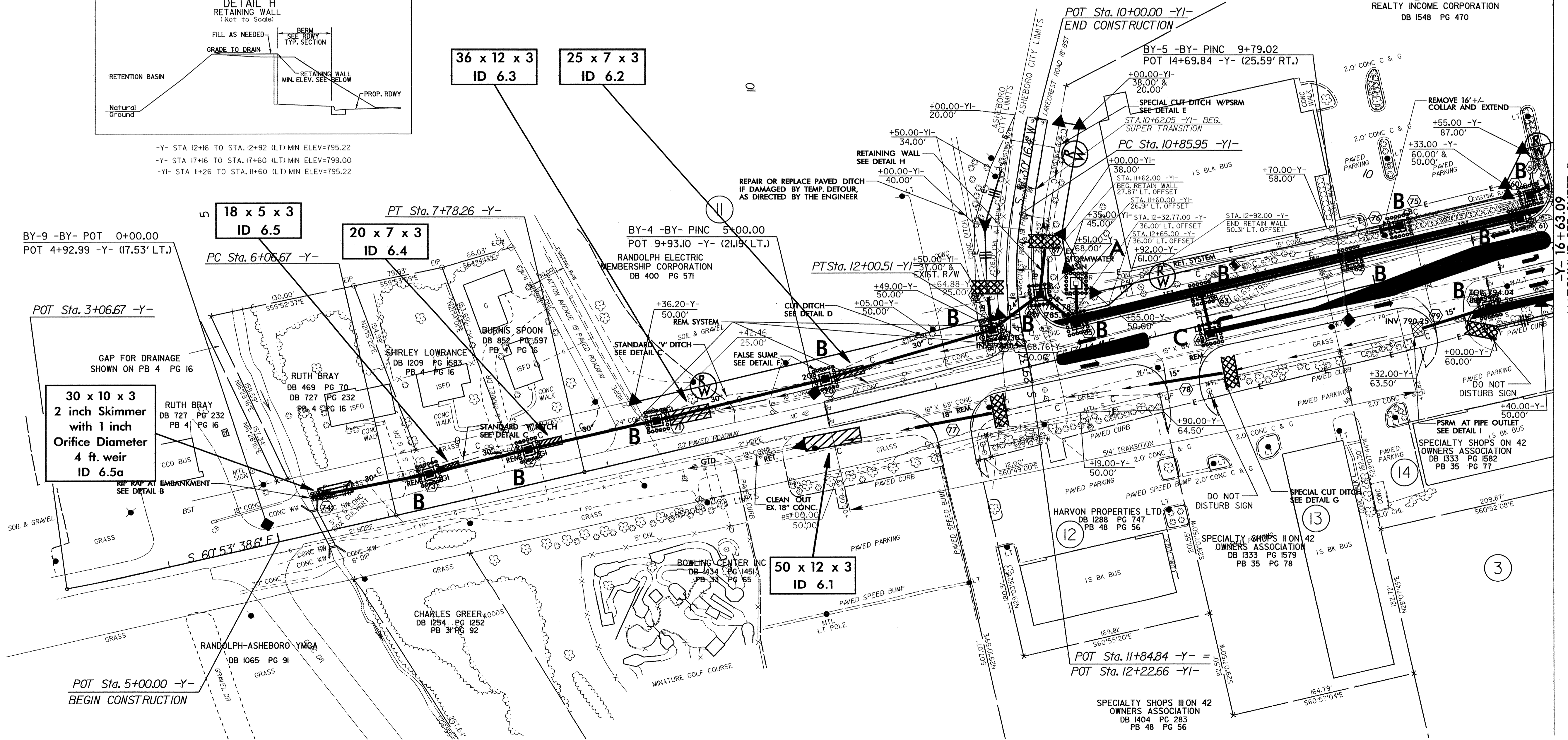
25 x 7 x 3
ID 6.2

18 x 5 x 3
ID 6.5

20 x 7 x 3
ID 6.4

30 x 10 x 3
2 inch Skimmer
with 1 inch
Orifice Diameter
4 ft. weir
ID 6.5a

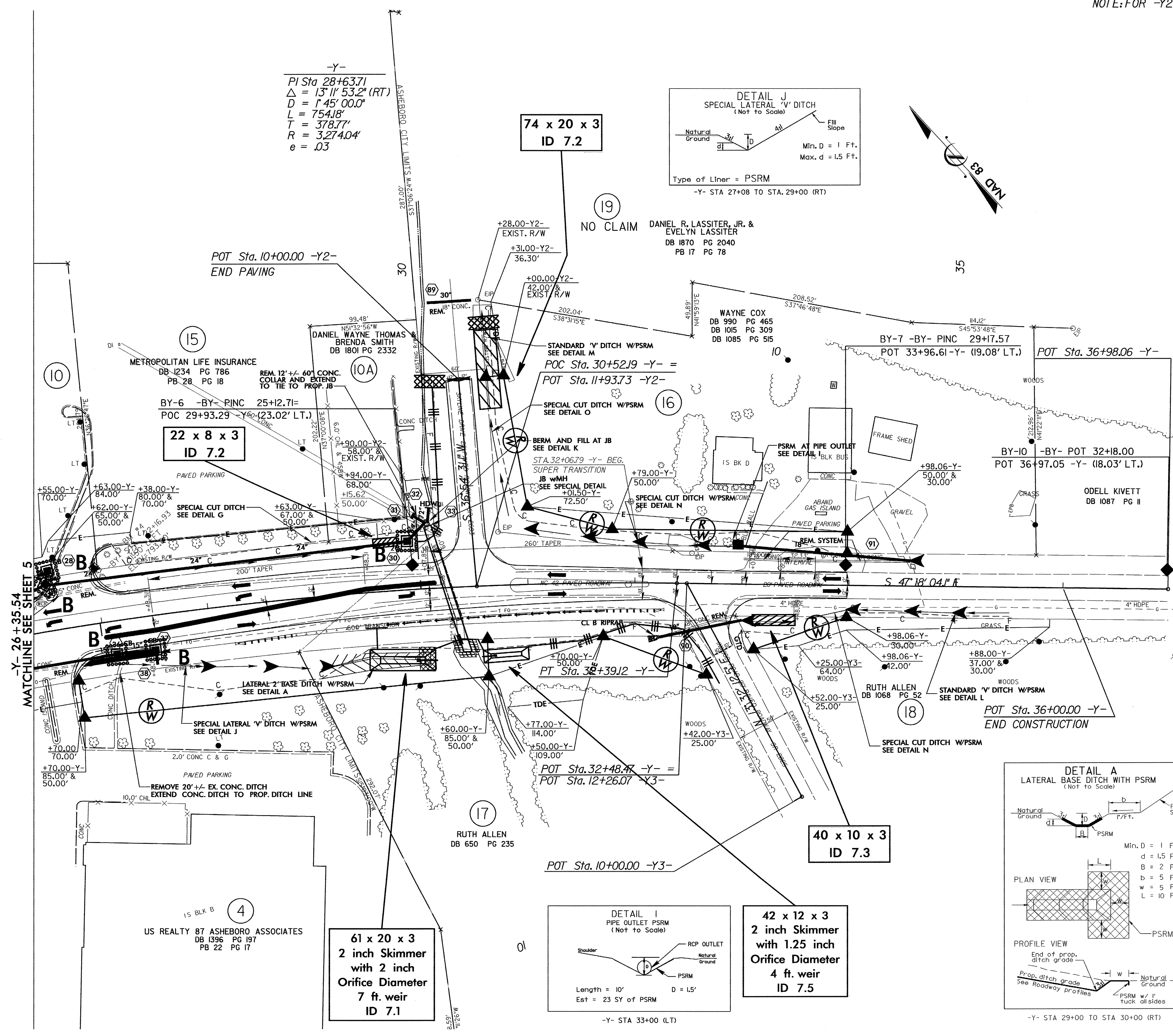
50 x 12 x 3
ID 6.1



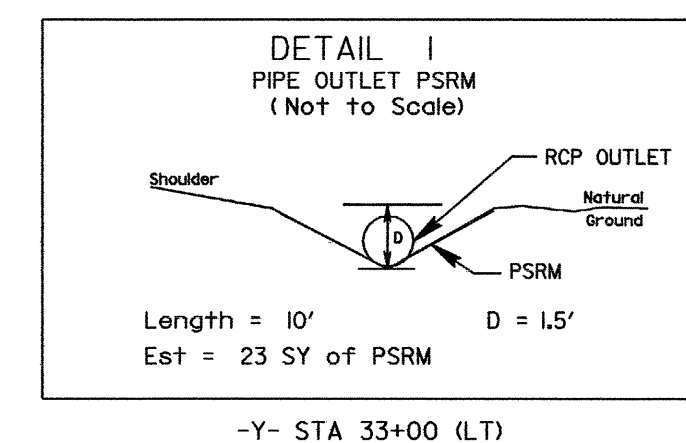
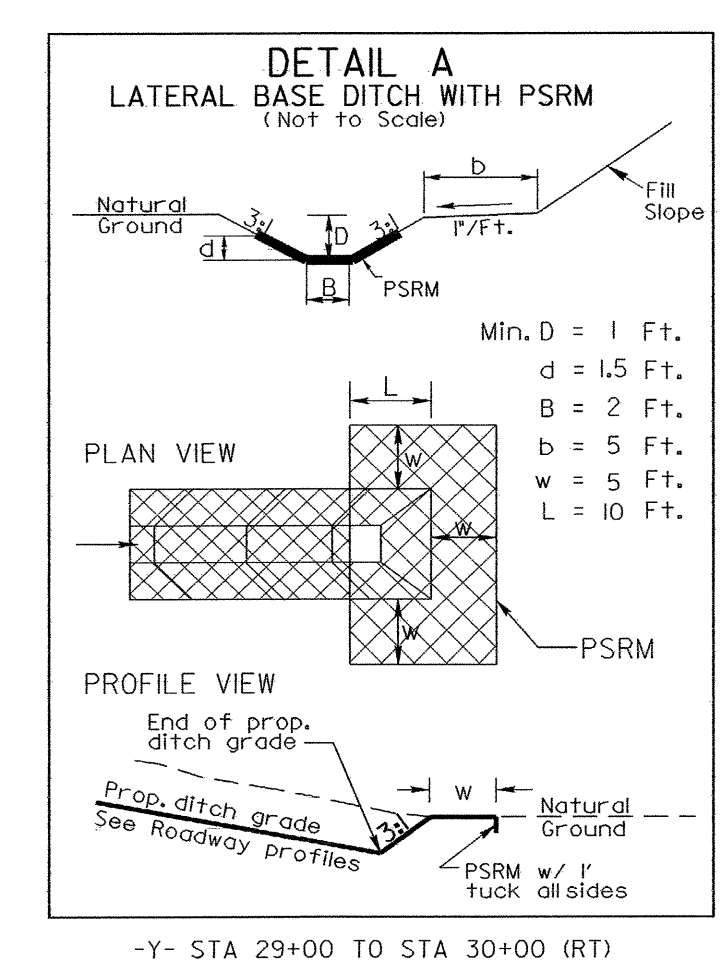
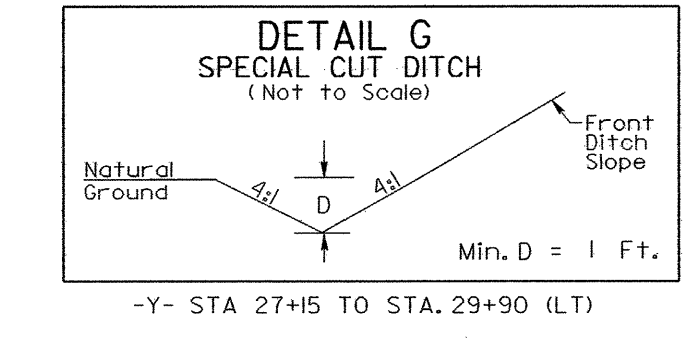
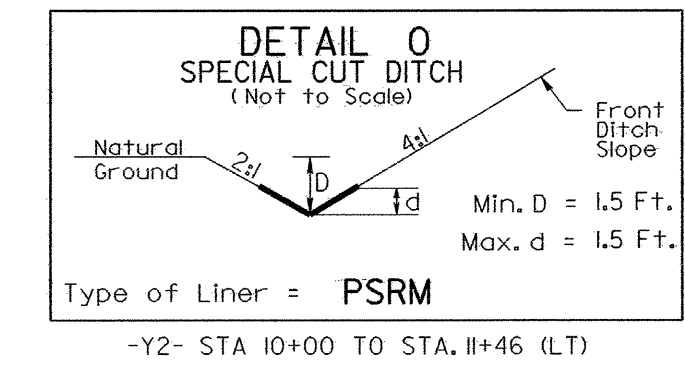
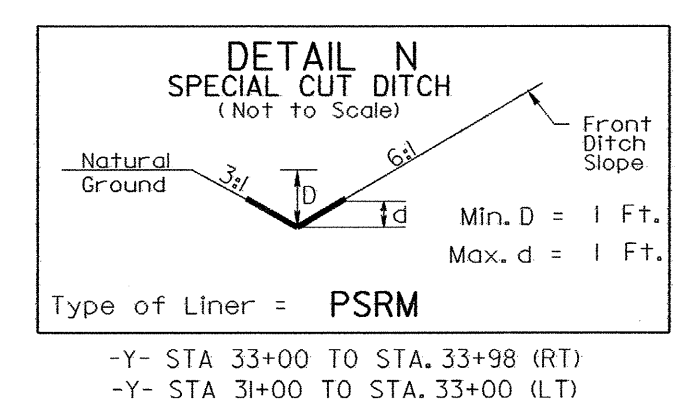
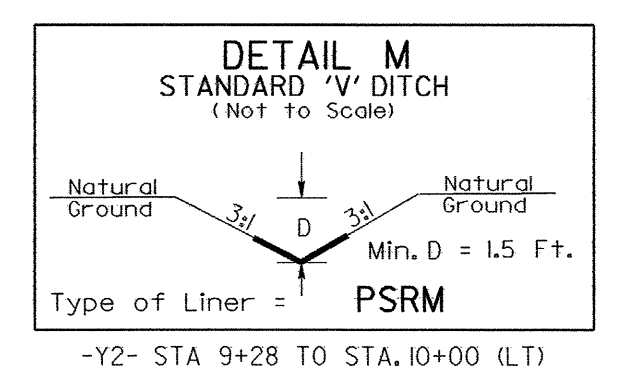
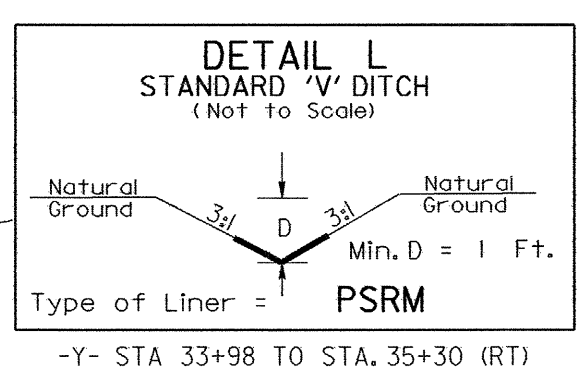
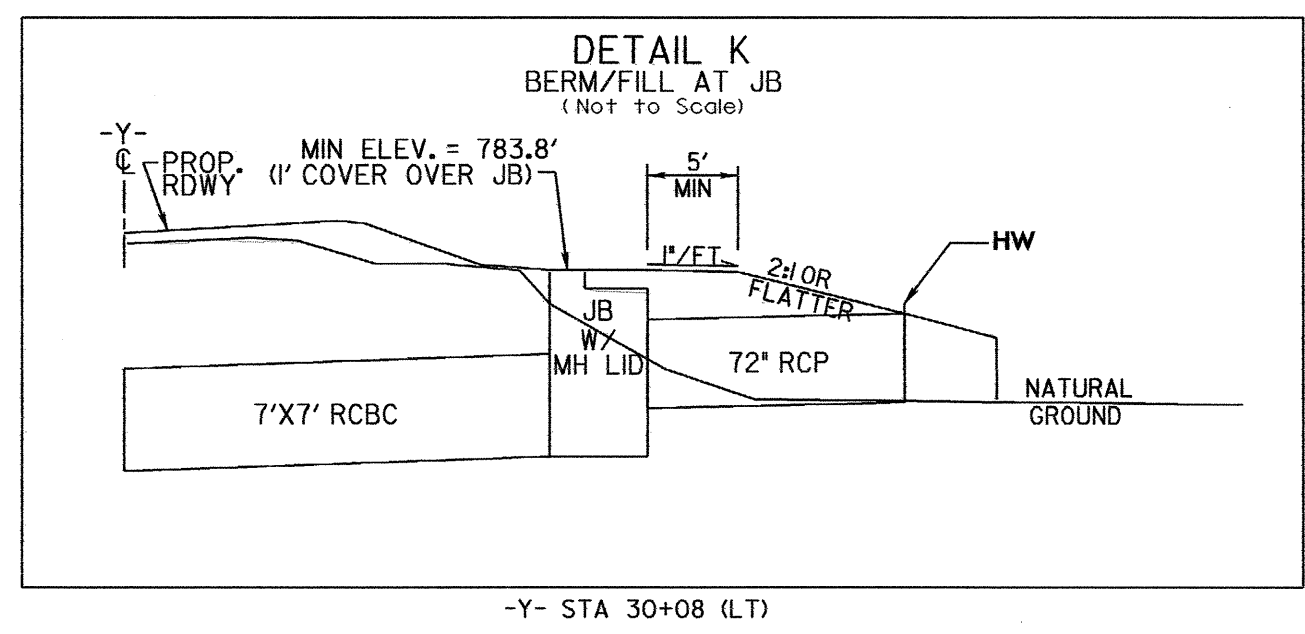
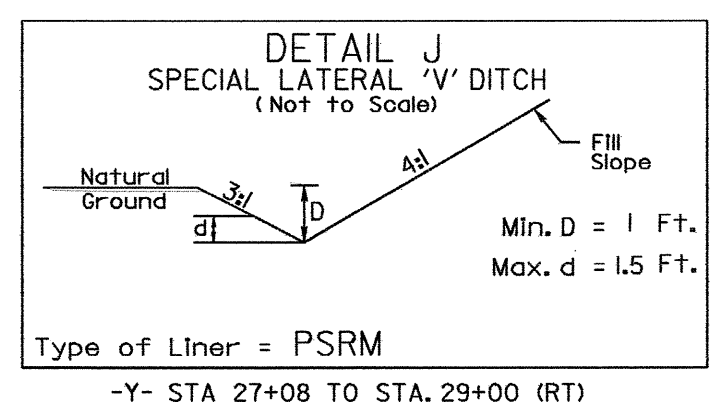
MATCHLINE SEE SHEET 5

PROJECT REFERENCE NO.	SHEET NO.
U-3401	EC-13/CONST.7
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NOTE: FOR -Y- PROFILE SEE SHEET 10 & 11
 NOTE: FOR -Y2- & -Y3- PROFILES SEE SHEET 11



-Y-
 PI Sta 28+63.71
 $\Delta = 13^{\circ}11'53.2''$ (RT)
 $D = 1^{\circ}45'00.0''$
 $L = 754.18'$
 $T = 378.77'$
 $R = 3,274.04'$
 $e = .03$



42 x 12 x 3
 2 inch Skimmer
 with 1.25 inch
 Orifice Diameter
 4 ft. weir
 ID 7.5

61 x 20 x 3
 2 inch Skimmer
 with 2 inch
 Orifice Diameter
 7 ft. weir
 ID 7.1

40 x 10 x 3
 ID 7.3

22 x 8 x 3
 ID 7.2

74 x 20 x 3
 ID 7.2

Y-26+35.54
 MATCHLINE SEE SHEET 5

