

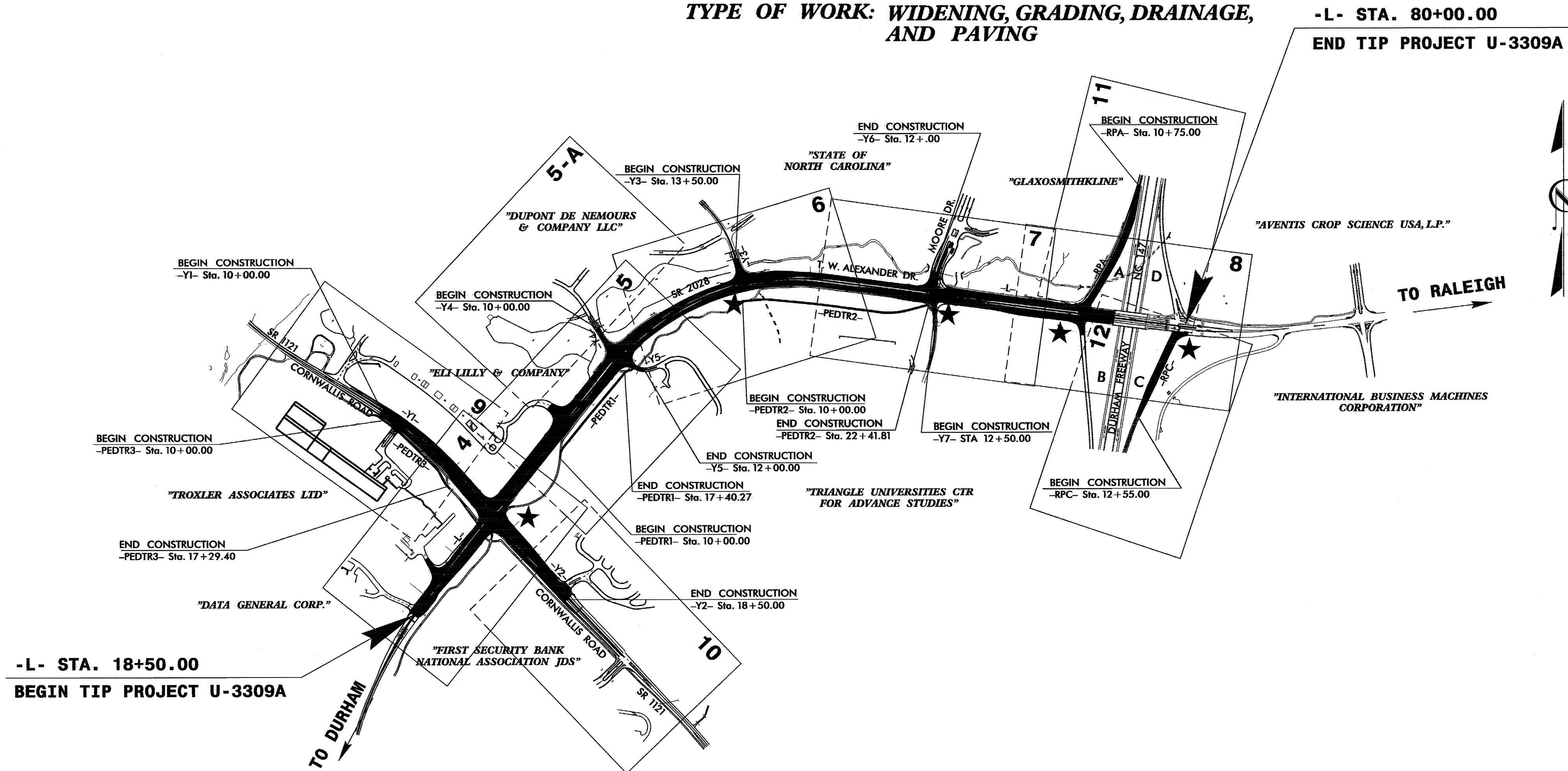
**TIP PROJECT: U-3309A**

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

**DURHAM COUNTY**

**LOCATION: SR 2028 (T.W. ALEXANDER DRIVE)  
FROM SR 1121 (CORNWALLIS ROAD)  
TO EAST OF NC 147 IN DURHAM**

**TYPE OF WORK: WIDENING, GRADING, DRAINAGE,  
AND PAVING**

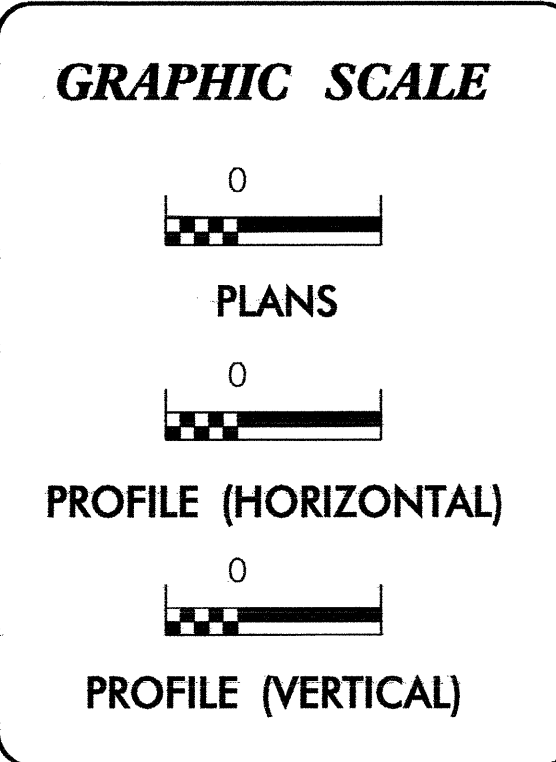


STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-3309A	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	

**EROSION AND SEDIMENT CONTROL MEASURES**

Std. #	Description	Symbol
1630.03	Temporary Silt Ditch	TD
1630.05	Temporary Diversion	TD
1605.01	Temporary Silt Fence	TSF
1606.01	Special Sediment Control Fence	SSCF
1622.01	Temporary Berms and Slope Drains	TBSD
1630.01	Riser Basin	RB
1633.01	Silt Basin Type B	SB
1633.01	Temporary Rock Silt Check Type-A	TRSCA
1633.01	Temporary Rock Silt Check Type-B	TRSCB
1633.01	Wattle	W
1634.01	Temporary Rock Sediment Dam Type-A	TRSDA
1634.02	Temporary Rock Sediment Dam Type-B	TRSDB
1635.01	Rock Pipe Inlet Sediment Trap Type-A	RPISTRA
1635.02	Rock Pipe Inlet Sediment Trap Type-B	RPISTRB
1630.04	Stilling Basin	SB
1630.06	Special Stilling Basin	SSB
Rock Inlet Sediment Trap:		
1632.01	Type A	A
1632.02	Type B	B
1632.03	Type C	C
	Skimmer Basin	SKB
	Tiered Skimmer Basin	TSKB
	Infiltration Basin	IB

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



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

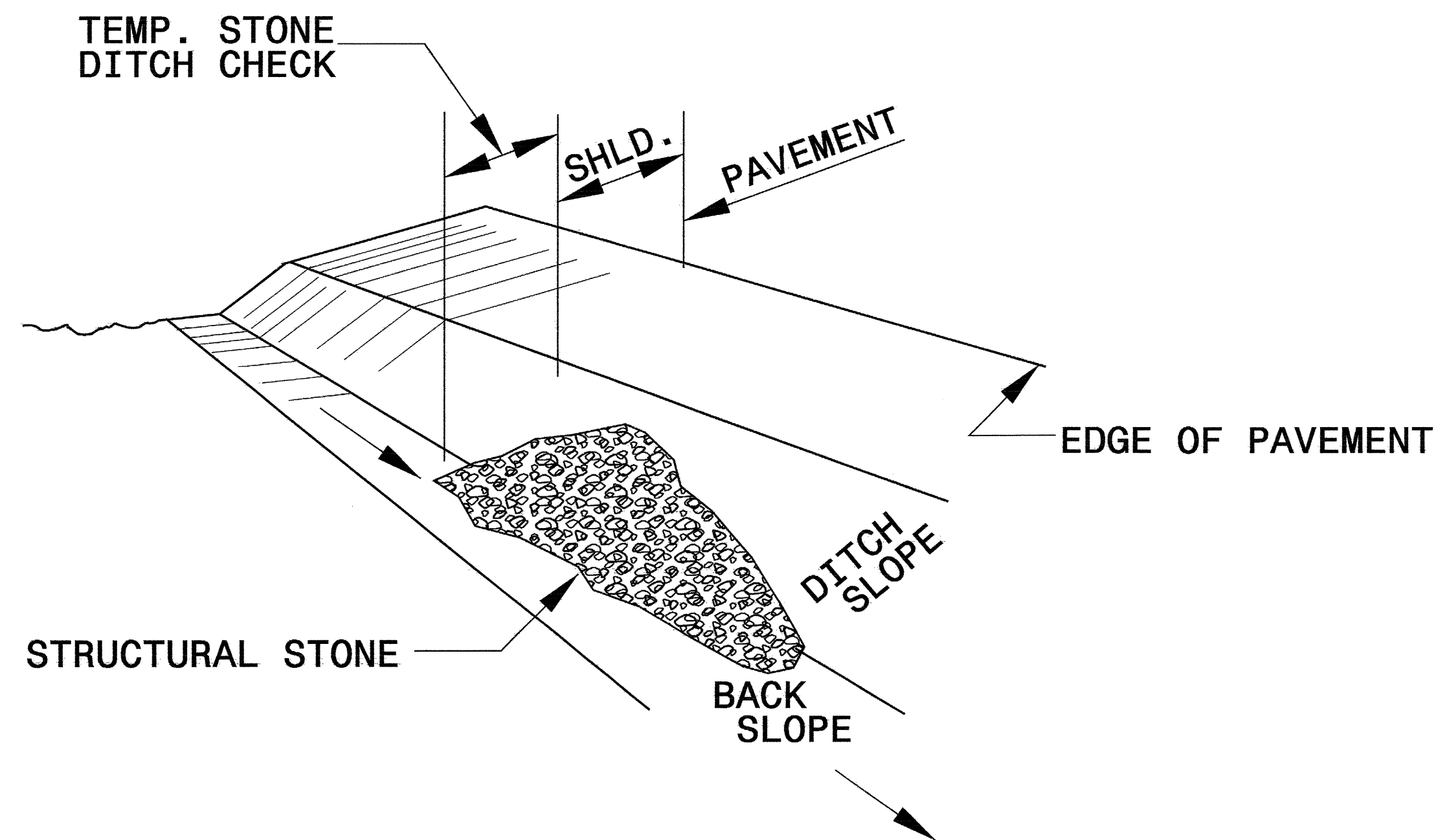
The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated July 18, 2006 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

1605.01 Temporary Silt Fence	1632.02 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	1635.01 Rock Pipe Inlet Sediment Trap Type A
1630.03 Temporary Silt Ditch	1635.02 Rock Pipe Inlet Sediment Trap Type B
1630.05 Temporary Diversion	

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rdy

PROJECT REFERENCE NO. U-3309A	SHEET NO. EC-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# TEMPORARY ROCK SILT CHECK TYPE 'B' DETAIL

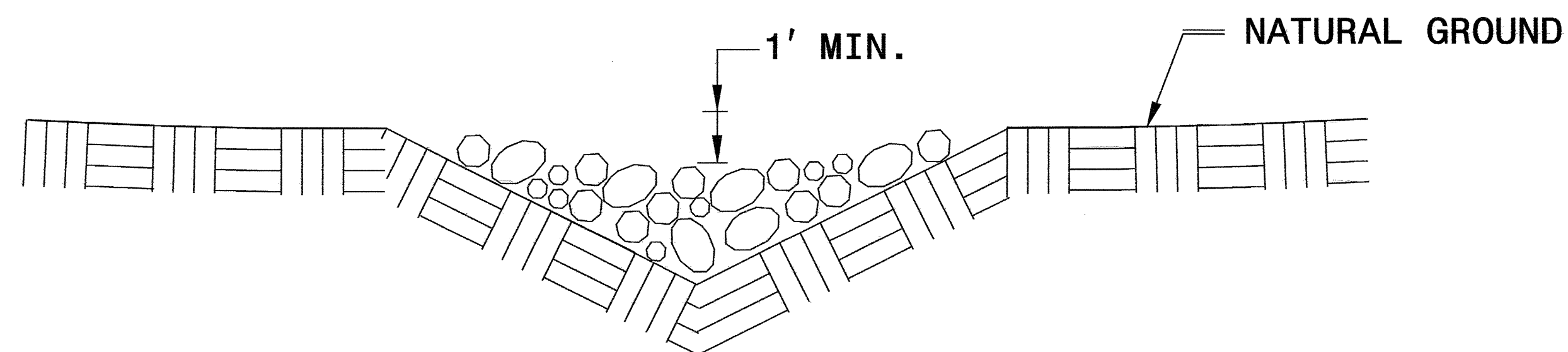


**ISOMETRIC VIEW**

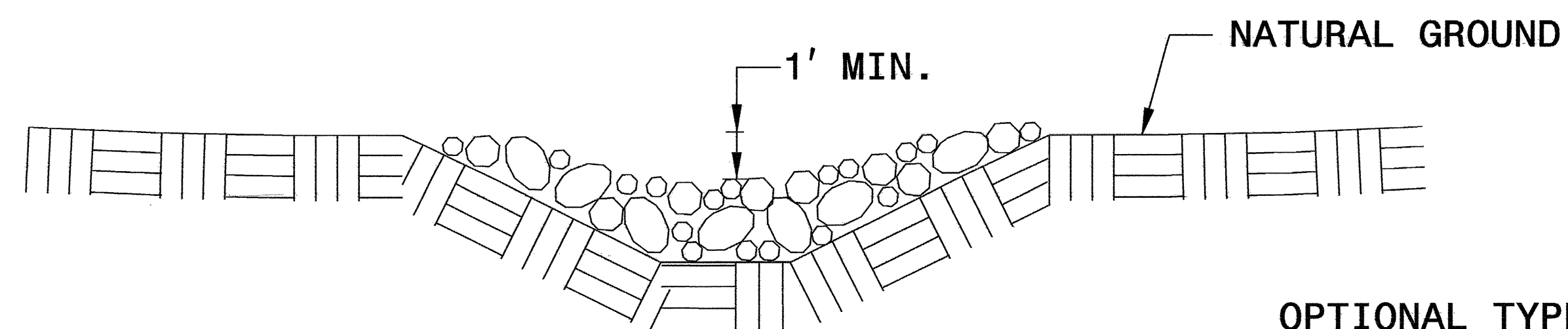
**NOTES:**

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

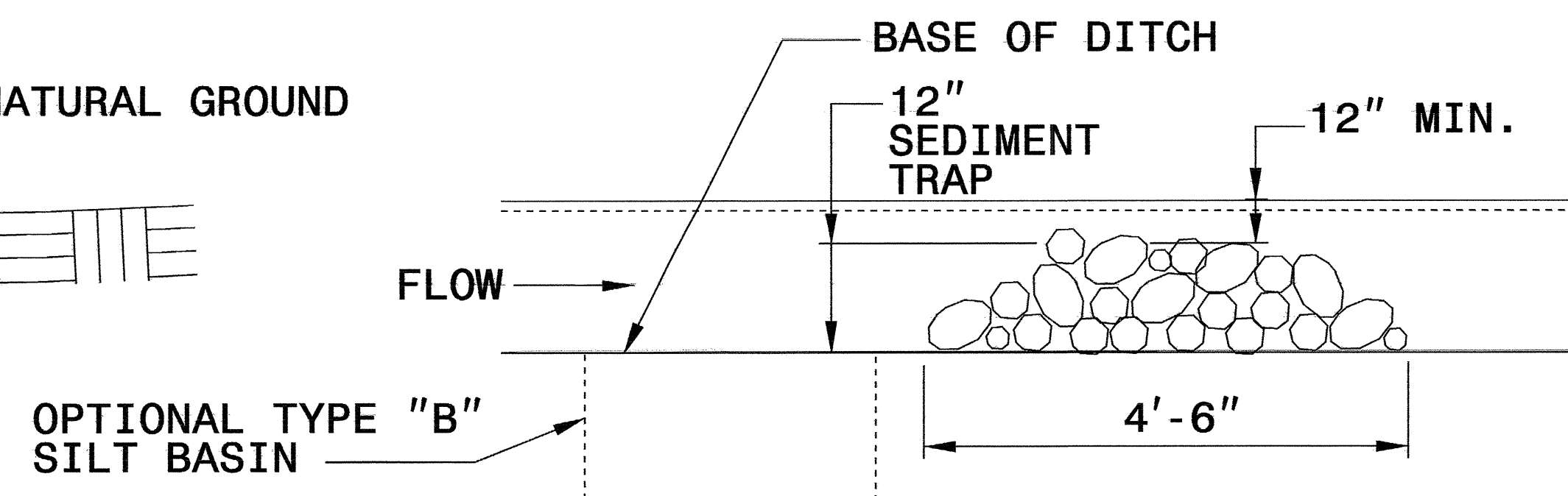
THE ENGINEER MAY DIRECT THE OPTION OF CLASS "A" STONE FOR SITES HAVING LESS THAN ONE (1) ACRE DRAINAGE AREA AND A DITCH GRADE LESS THAN 3%.



**CROSS SECTION  
VEE DITCH**



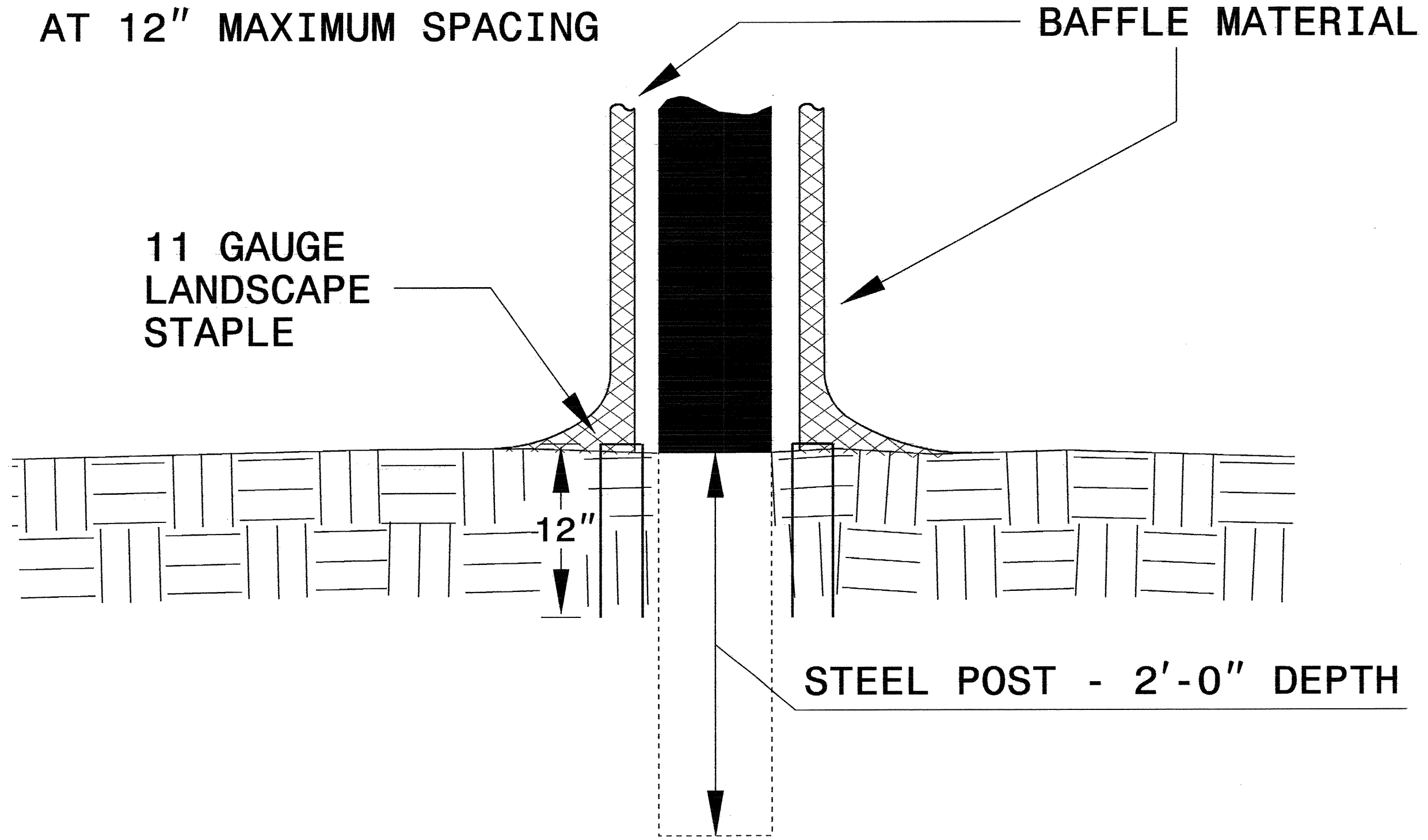
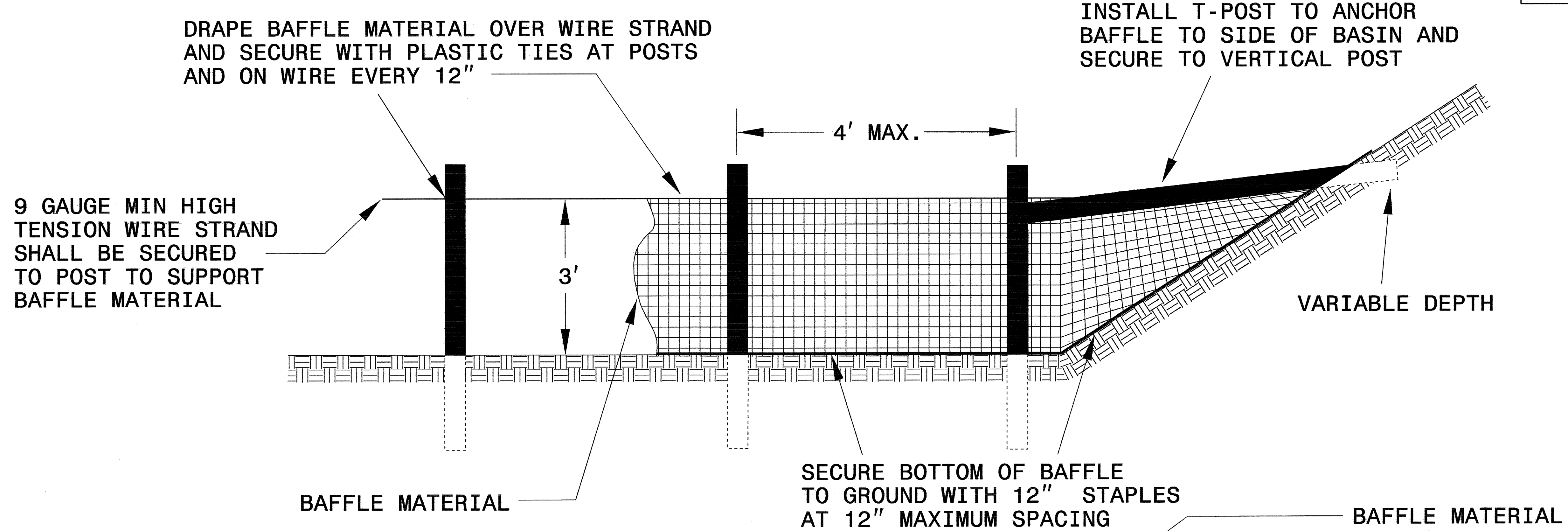
**CROSS SECTION  
TRAPEZOIDAL DITCH**



**ELEVATION VIEW**

PROJECT REFERENCE NO. U-3309A	SHEET NO. EC-2A
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# COIR FIBER BAFFLE DETAIL



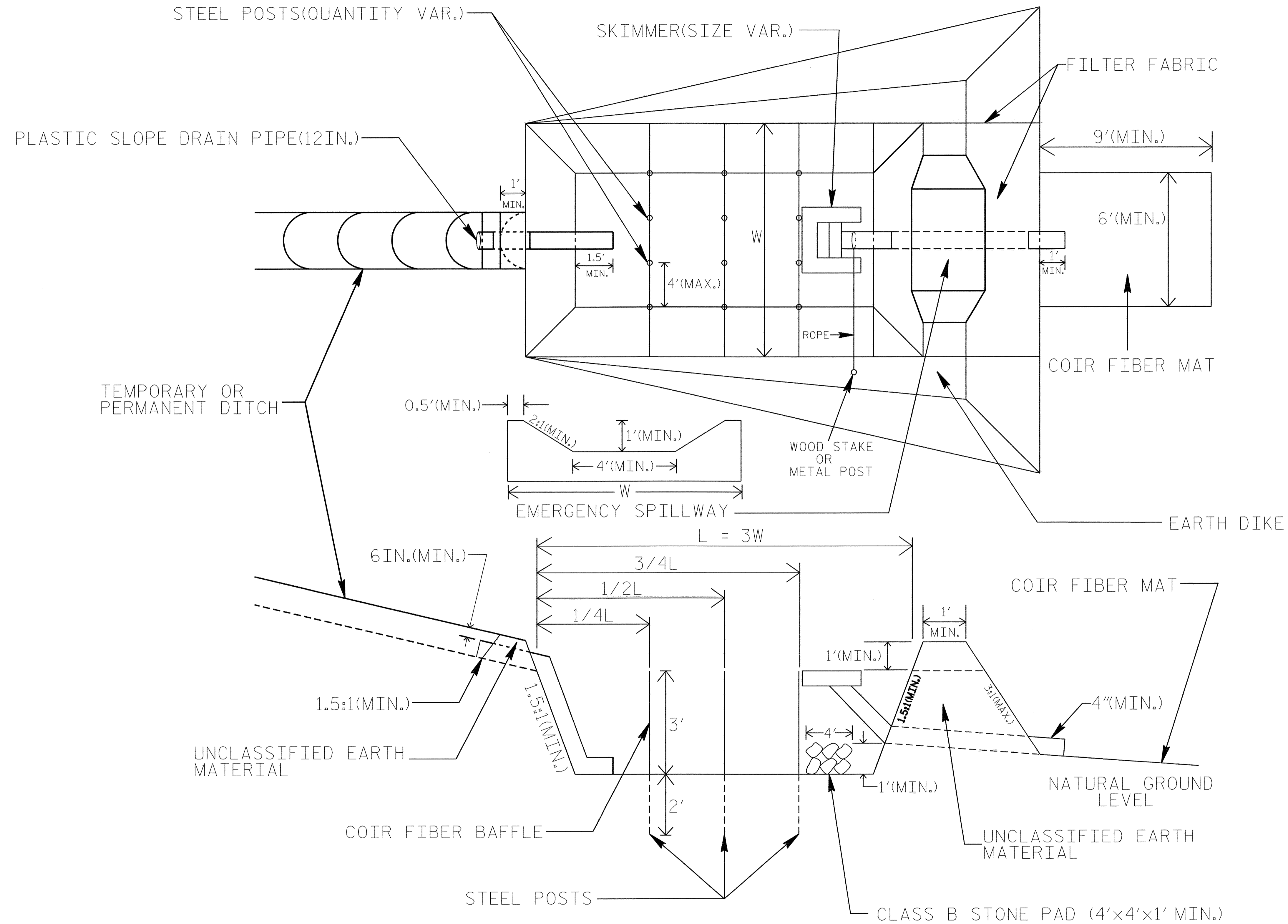
**NOTES:**

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

# SKIMMER BASIN WITH BAFFLES DETAIL

PROJECT REFERENCE NO. U-3309A	SHEET NO. EC-2B
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



## NOTES

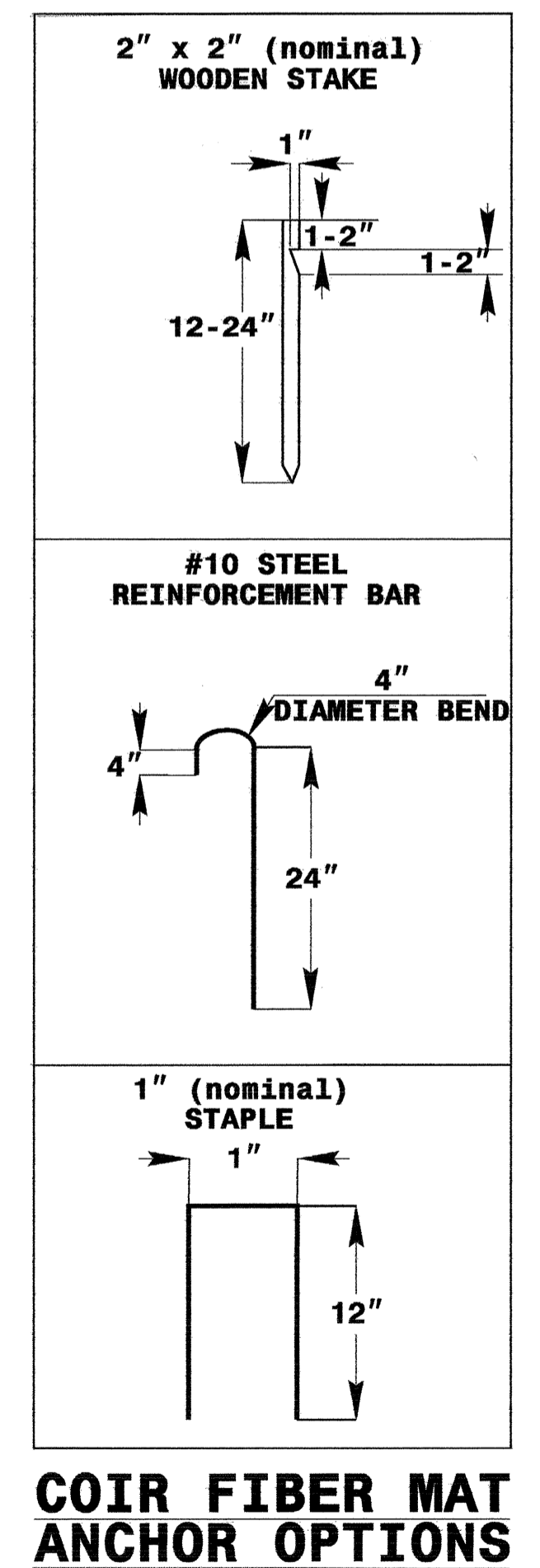
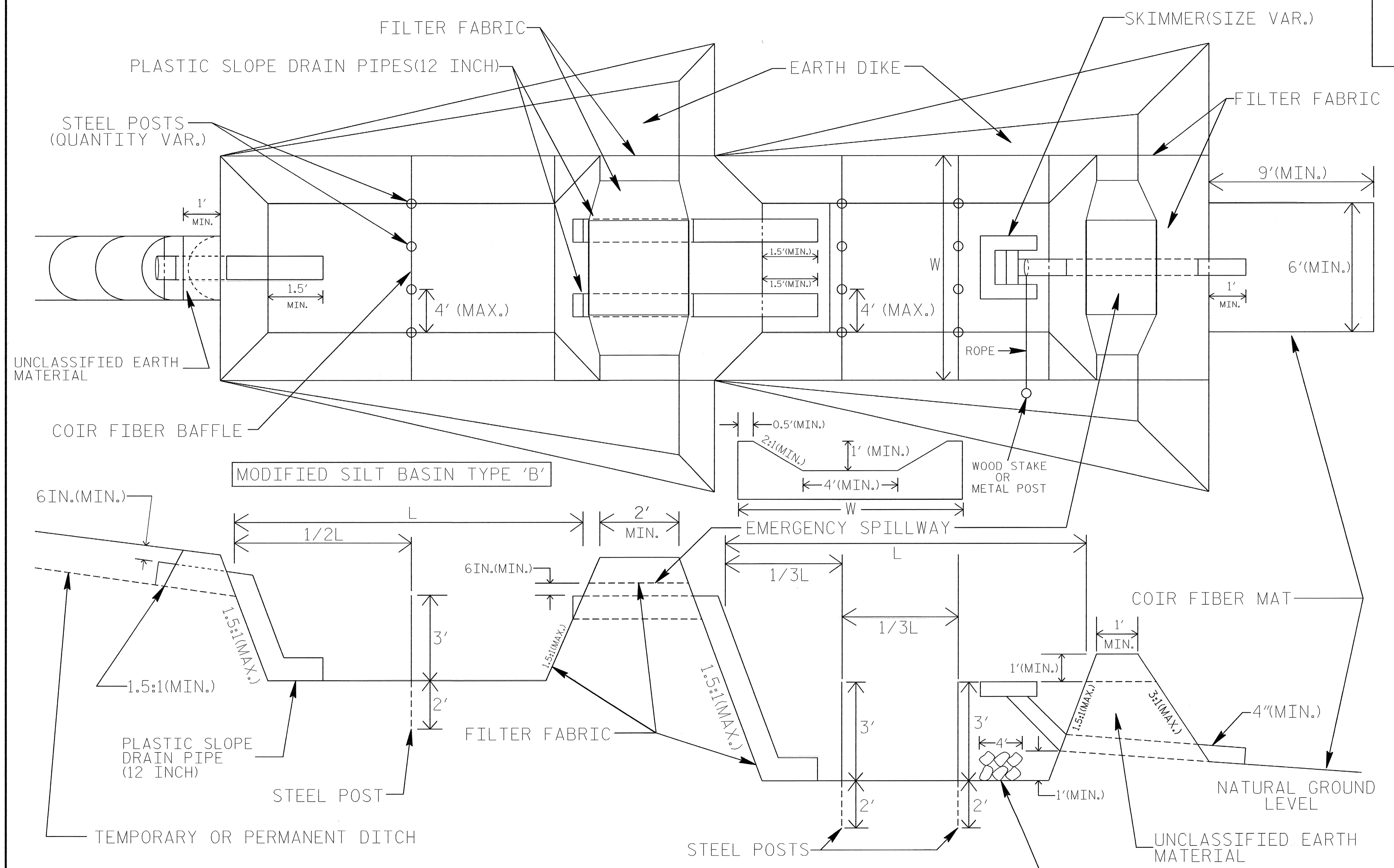
1. SEED AND PLACE MATTING FOR EROSION CONTROL ON INTERIOR SIDESLOPES.
2. LIMIT EARTH DIKE HEIGHT TO 5 FT.
3. THE MINIMUM BASIN WIDTH SHALL BE 9 FT.
4. DETERMINE EMERGENCY SPILLWAY LENGTH (FT.) USING  $Q/0.8$ , WHERE Q IS FLOW RATE (CFS) INTO BASIN.

## COIR FIBER MAT ANCHOR OPTIONS

NOT TO SCALE

PROJECT REFERENCE NO. U-3309A	SHEET NO. EC-2C
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# TIERED SKIMMER BASIN DETAIL



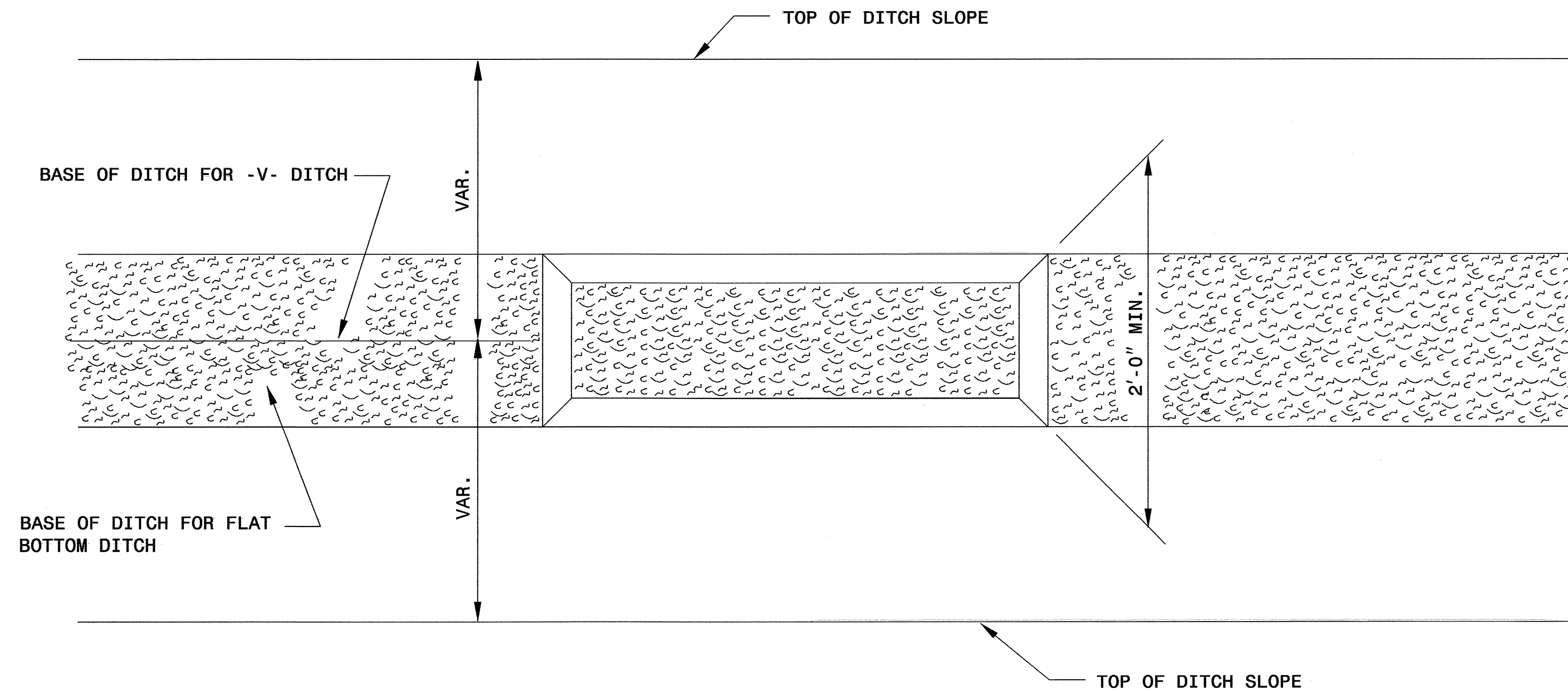
**NOTES**

1. SEED AND PLACE MATTING FOR EROSION CONTROL ON INTERIOR SIDESLOPES OF BASINS.
2. LIMIT HEIGHT OF EARTH DIKES TO 5 FT.
3. ADDITIONAL MODIFIED SILT BASINS TYPE 'B' MAY BE NEEDED DEPENDING ON SLOPE.
4. THE MINIMUM BASIN WIDTHS SHALL BE 9 FT.
5. DETERMINE EMERGENCY SPILLWAY LENGTHS (FT.) USING  $Q/0.8$ , WHERE Q IS FLOW RATE (CFS) INTO UPPER BASIN.

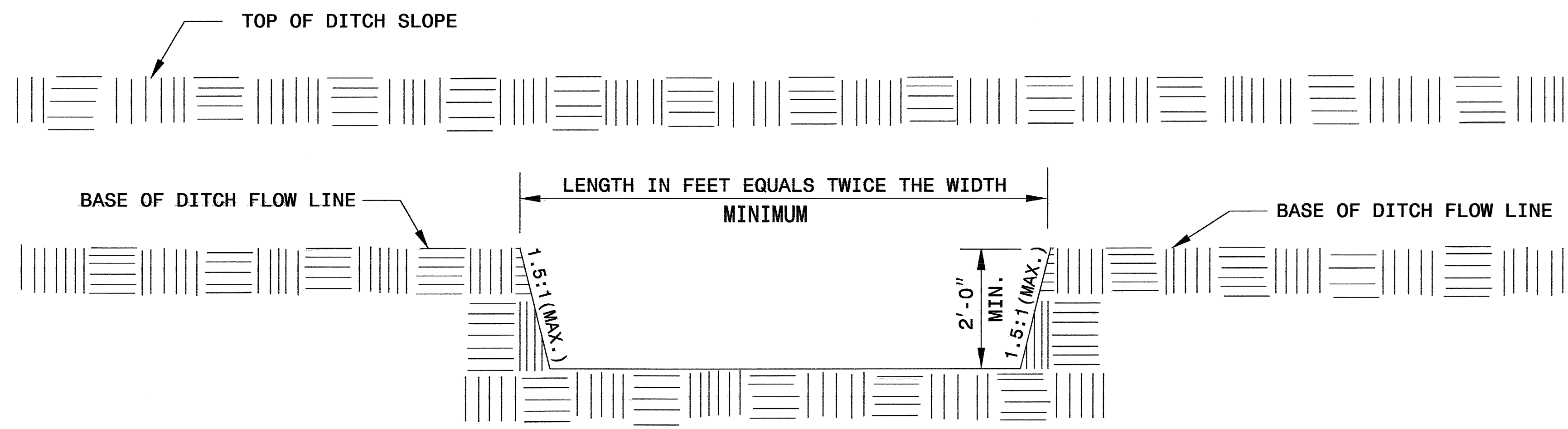
NOT TO SCALE

PROJECT REFERENCE NO. U-3309A	SHEET NO. EC-2D
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# SILT BASIN 'B' DETAIL



PLAN



ELEVATION

PROJECT REFERENCE NO. U-3309A	SHEET NO. EC-2E
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# WATTLE WITH POLYACRYLAMIDE DETAIL

**NOTES:**

USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.

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

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

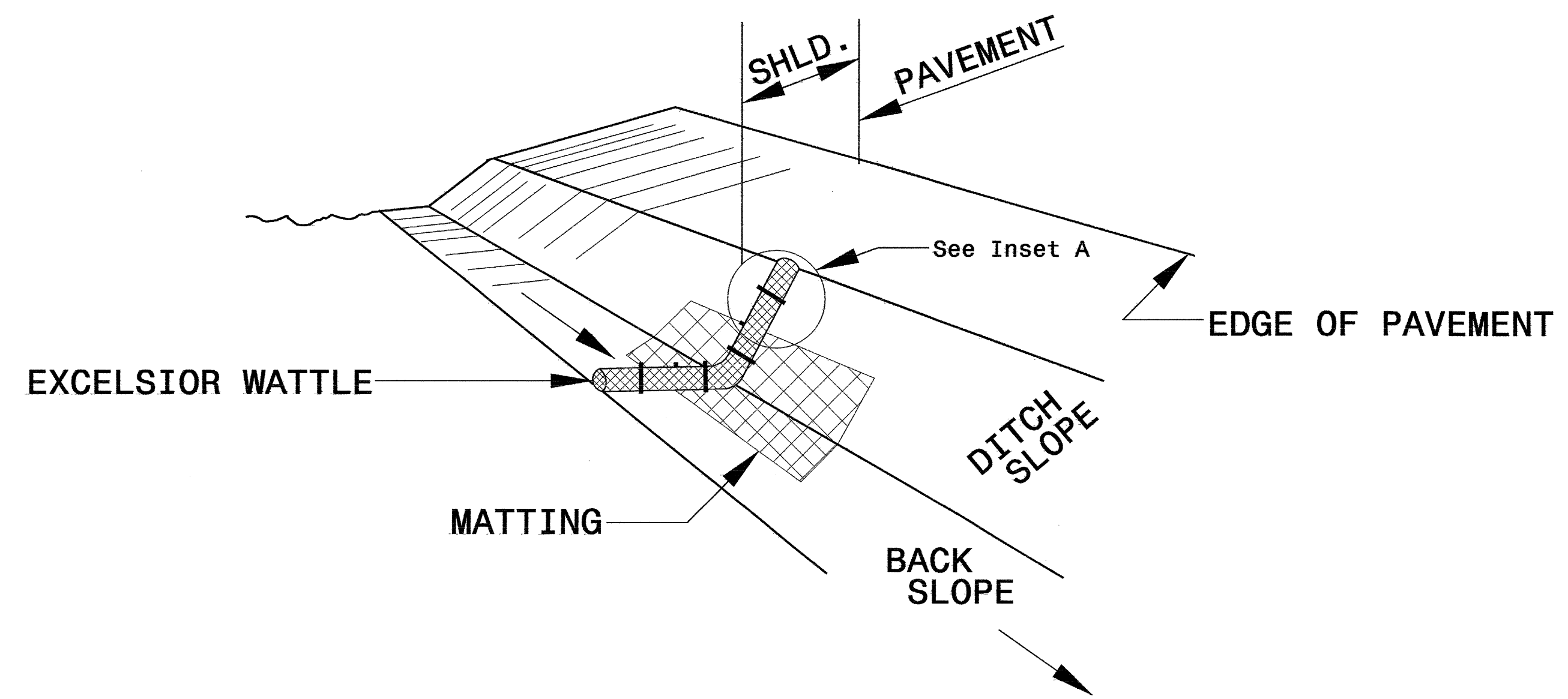
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

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

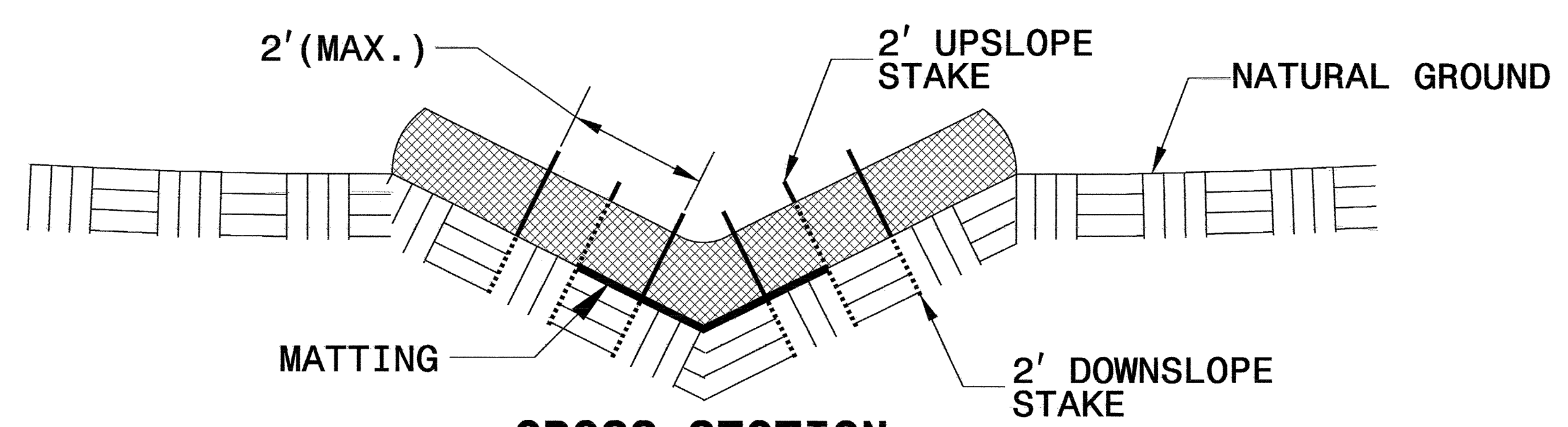
INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.

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.

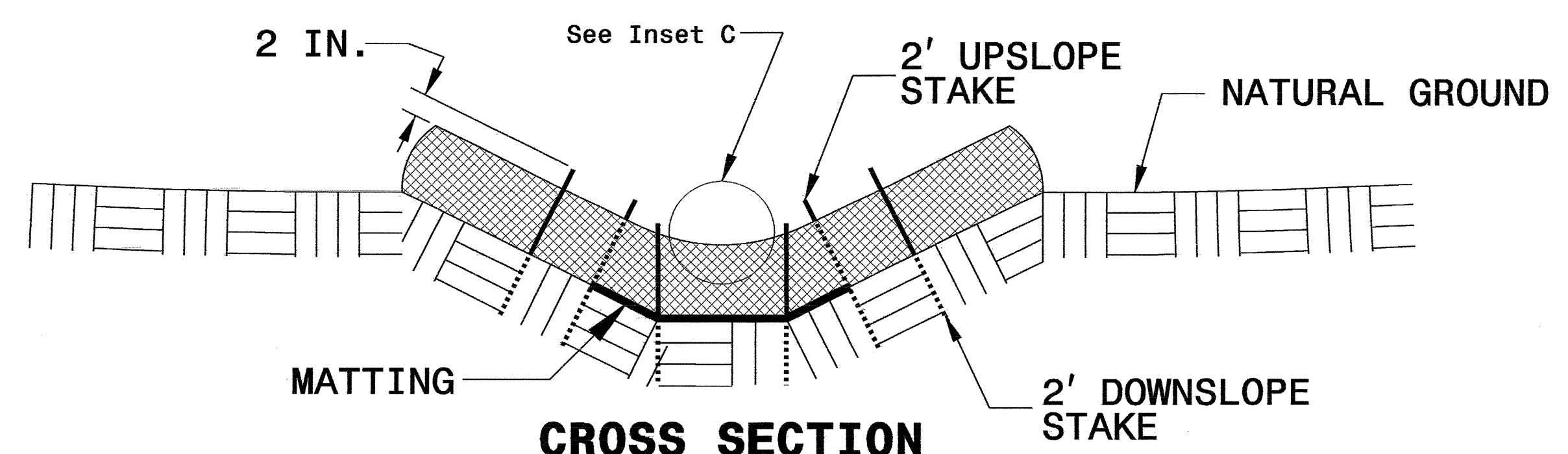
INITIALLY APPLY 3.5 OUNCES OF ANIONIC OR NEUTRALLY CHARGED POLYACRYLAMIDE (PAM) OVER WATTLE WHERE WATER WILL FLOW AND AFTER EVERY RAINFALL EVENT THAT IS EQUAL TO OR EXCEEDS 0.50 IN.



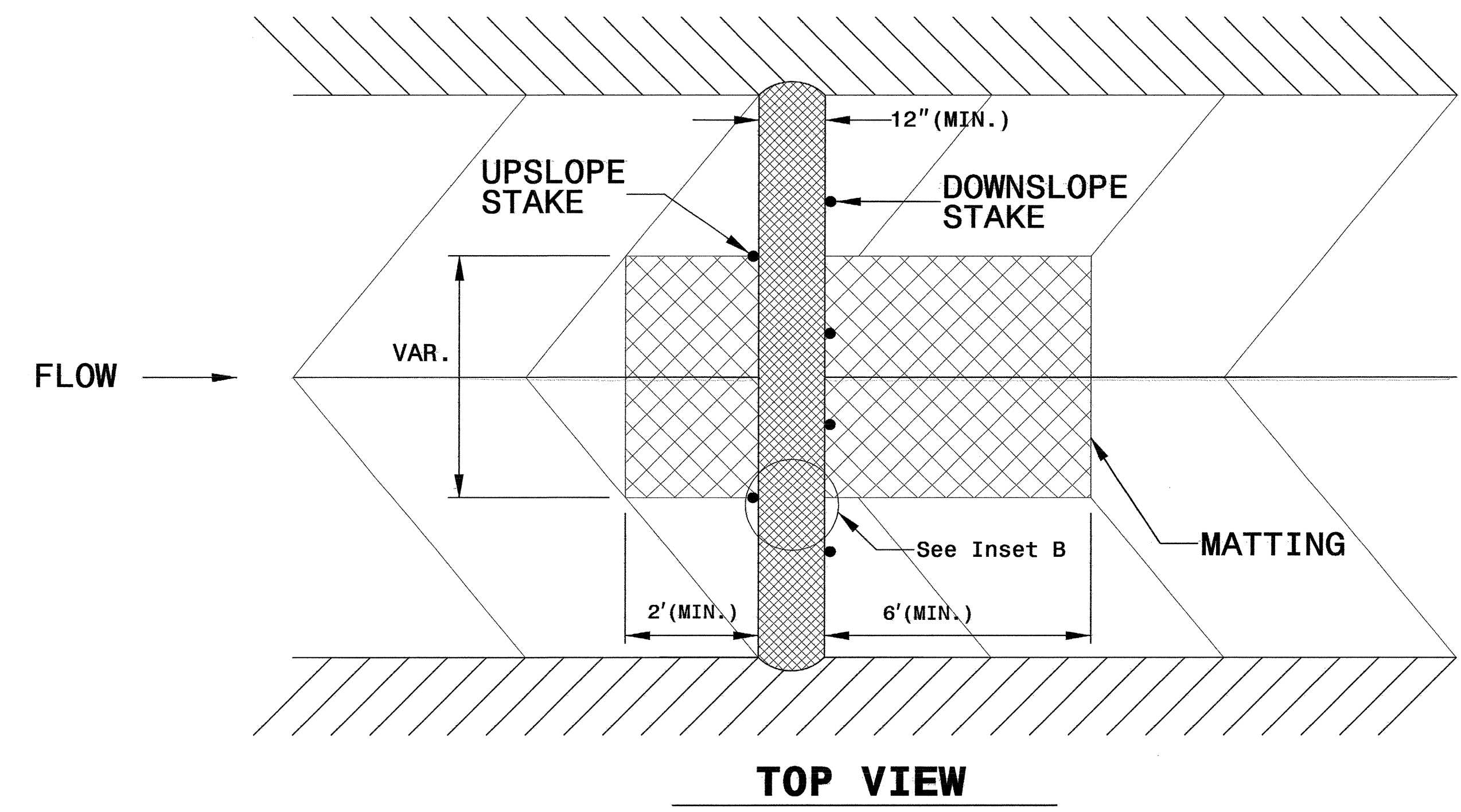
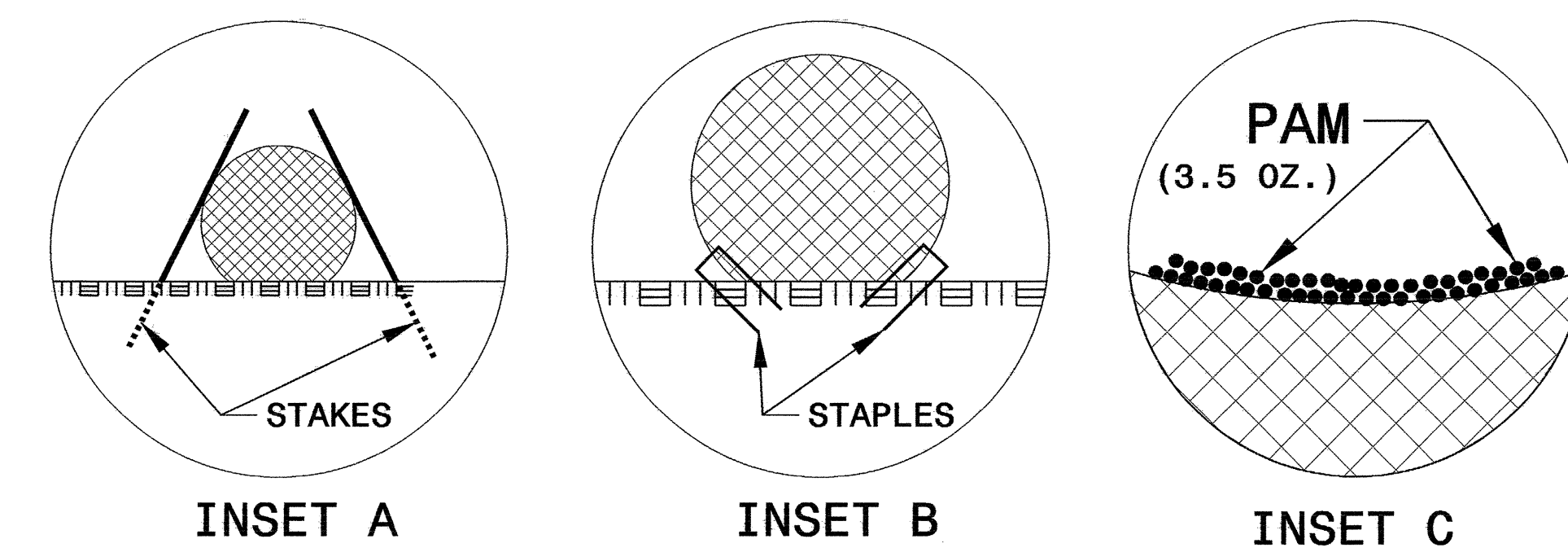
**ISOMETRIC VIEW**



**CROSS SECTION VEE DITCH**



**CROSS SECTION TRAPEZOIDAL DITCH**



**TOP VIEW**

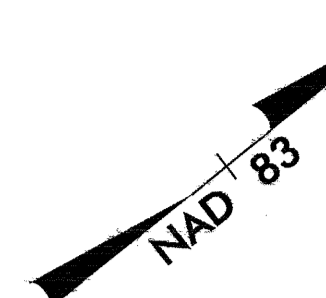
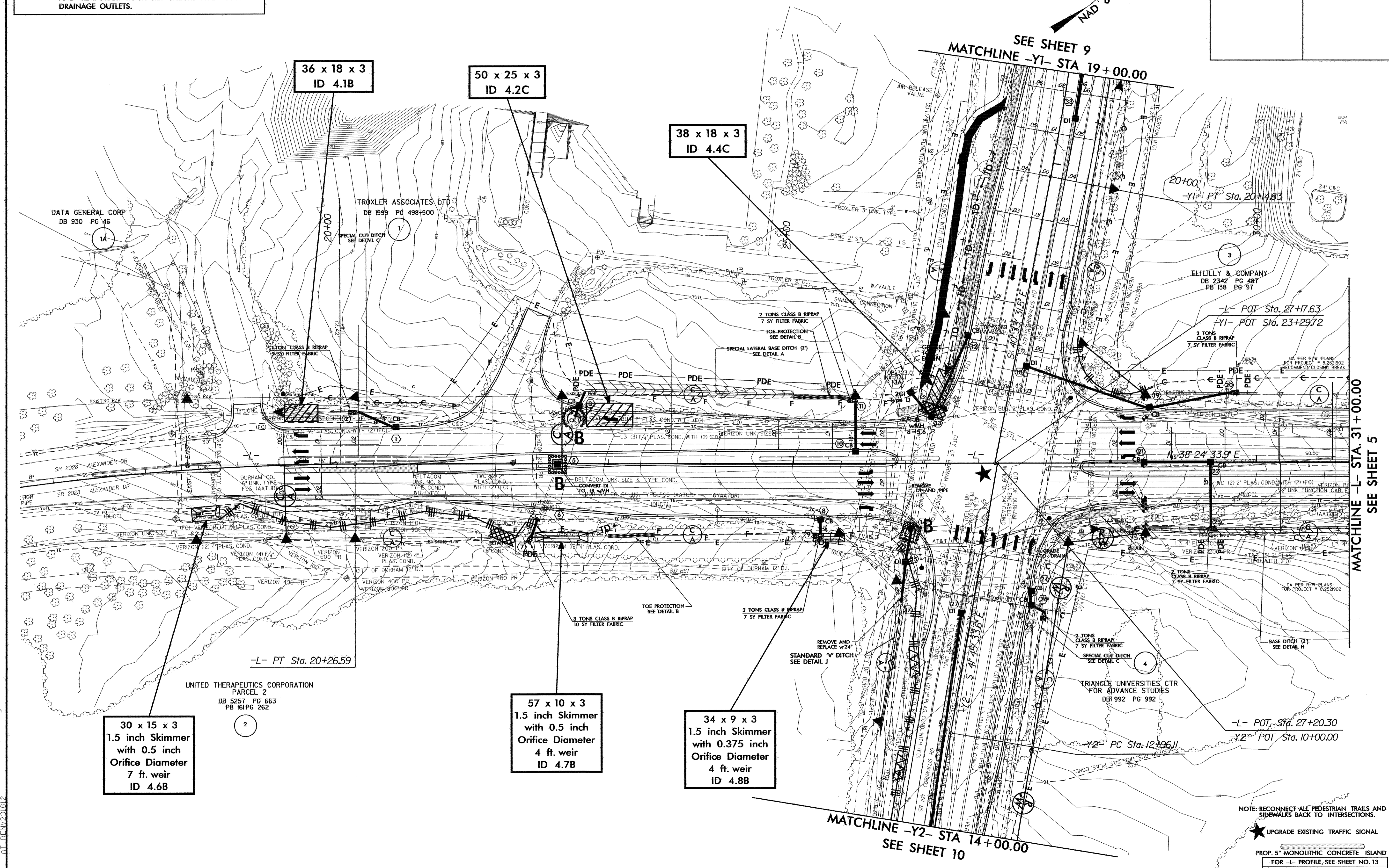




**CLEARING AND GRUBBING  
EROSION CONTROL FOR  
CONSTRUCTION SHEET 4**

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

PROJECT REFERENCE NO. U-3309A	SHEET NO. EC-4/CONST.4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



SEE SHEET 9  
MATCHLINE -Y1- STA 19+00.00

MATCHLINE -L- STA. 31+00.00  
SEE SHEET 5

MATCHLINE -Y2- STA 14+00.00  
SEE SHEET 10

NOTE: RECONNECT ALL PEDESTRIAN TRAILS AND  
SIDEWALKS BACK TO INTERSECTIONS.  
★ UPGRADE EXISTING TRAFFIC SIGNAL  
PROP. 5" MONOLITHIC CONCRETE ISLAND  
FOR -L- PROFILE, SEE SHEET NO. 13  
FOR -Y1- PROFILE, SEE SHEET NO. 16  
FOR -Y2- PROFILE, SEE SHEET NO. 17

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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.

44 x 22 x 3  
1.5 inch Skimmer  
with 0.875 inch  
Orifice Diameter  
14 ft. weir  
ID 5.2C

30 x 15 x 3  
1.5 inch Skimmer  
with 0.5 inch  
Orifice Diameter  
7 ft. weir  
ID 5.3B

27 x 13 x 3  
1.5 inch Skimmer  
with 0.375 inch  
Orifice Diameter  
5 ft. weir  
ID 5.4B

59 x 29 x 3  
1.5 inch Skimmer  
with 1.25 inch  
Orifice Diameter  
21 ft. weir  
ID 5.1C

69 x 25 x 3  
1.5 inch Skimmer  
with 1.25 inch  
Orifice Diameter  
17 ft. weir  
ID 5.9B

72 x 30 x 3  
1.5 inch Skimmer  
with 1.25 inch  
Orifice Diameter  
22ft. weir  
ID 5.5B

48 x 15 x 3  
1.5 inch Skimmer  
with 0.625 inch  
Orifice Diameter  
7 ft. weir  
ID 5.6B

38 x 19 x 3  
ID 5.7C

38 x 14 x 3  
ID 5.8C

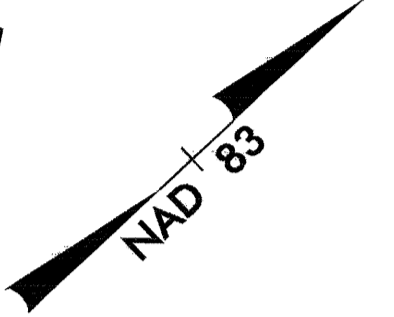
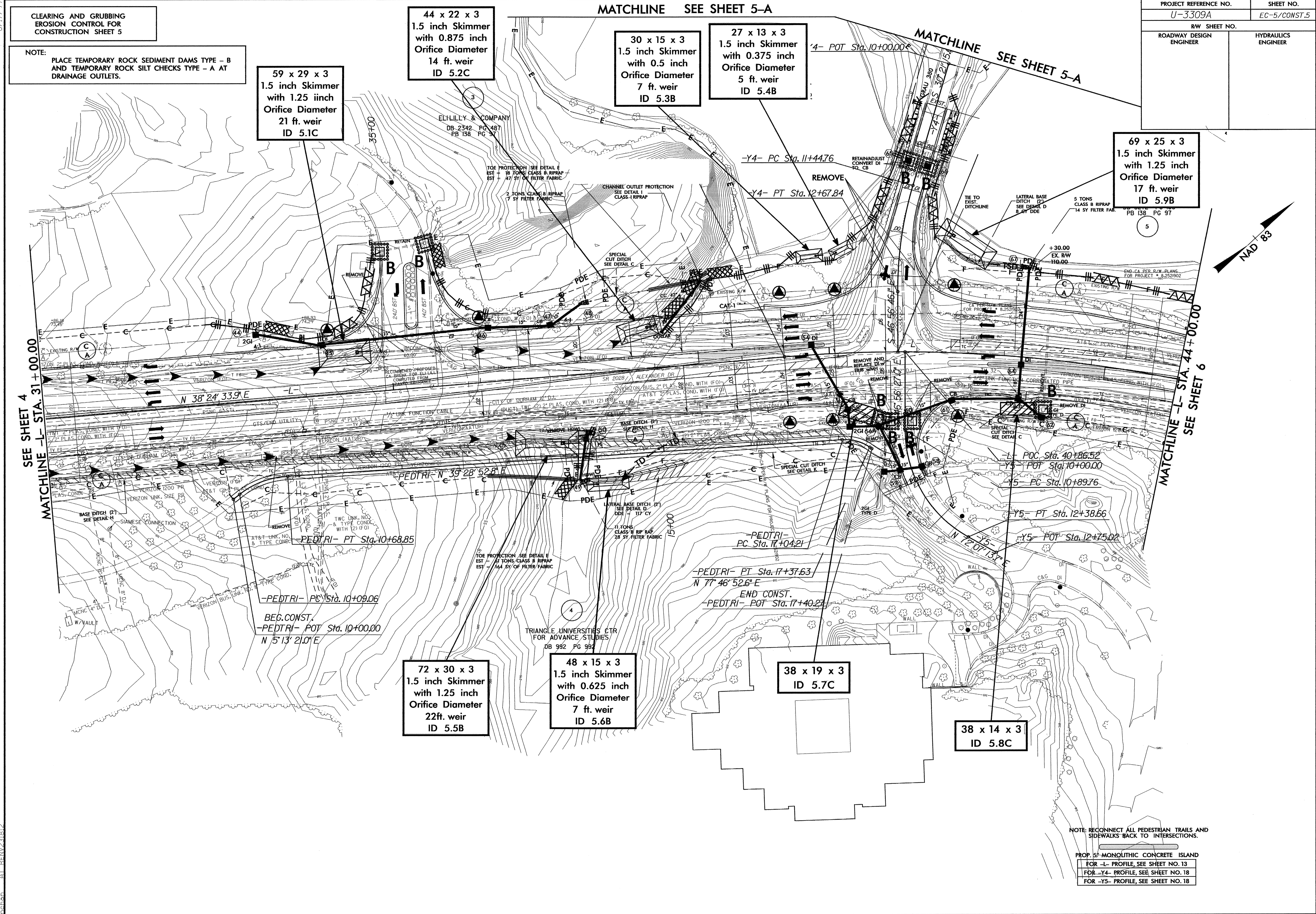
MATCHLINE SEE SHEET 5-A

MATCHLINE SEE SHEET 5-A

SEE SHEET 4  
MATCHLINE -L- STA. 31+00.00

MATCHLINE -L- STA. 44+00.00  
SEE SHEET 6

PROJECT REFERENCE NO.	SHEET NO.
U-3309A	EC-5/CONST.5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

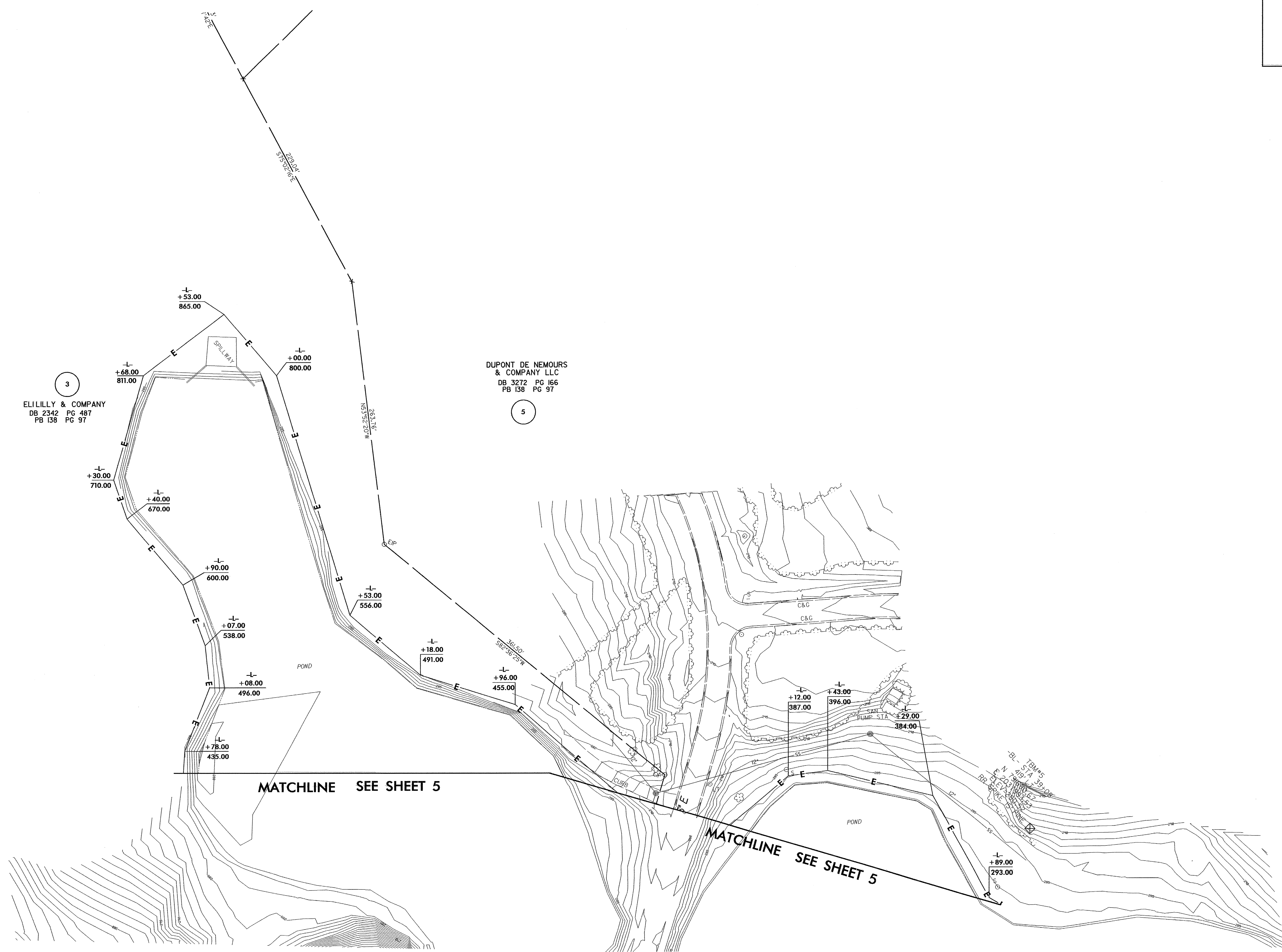
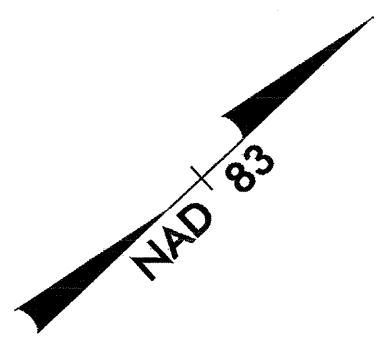


NOTE: RECONNECT ALL PEDESTRIAN TRAILS AND  
SIDEWALKS BACK TO INTERSECTIONS.

PROP. 5'- MONOLITHIC CONCRETE ISLAND  
FOR -L- PROFILE, SEE SHEET NO. 13  
FOR -Y4- PROFILE, SEE SHEET NO. 18  
FOR -Y5- PROFILE, SEE SHEET NO. 18

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PROJECT REFERENCE NO.		SHEET NO.	
U-3309A		EC-6/CONST.5a	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	



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 & COMPANY LLC  
 DB 3272 PG 166  
 PB 138 PG 57

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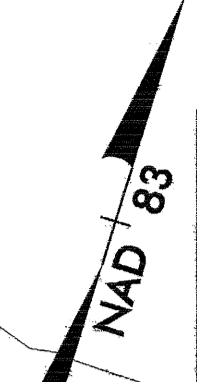
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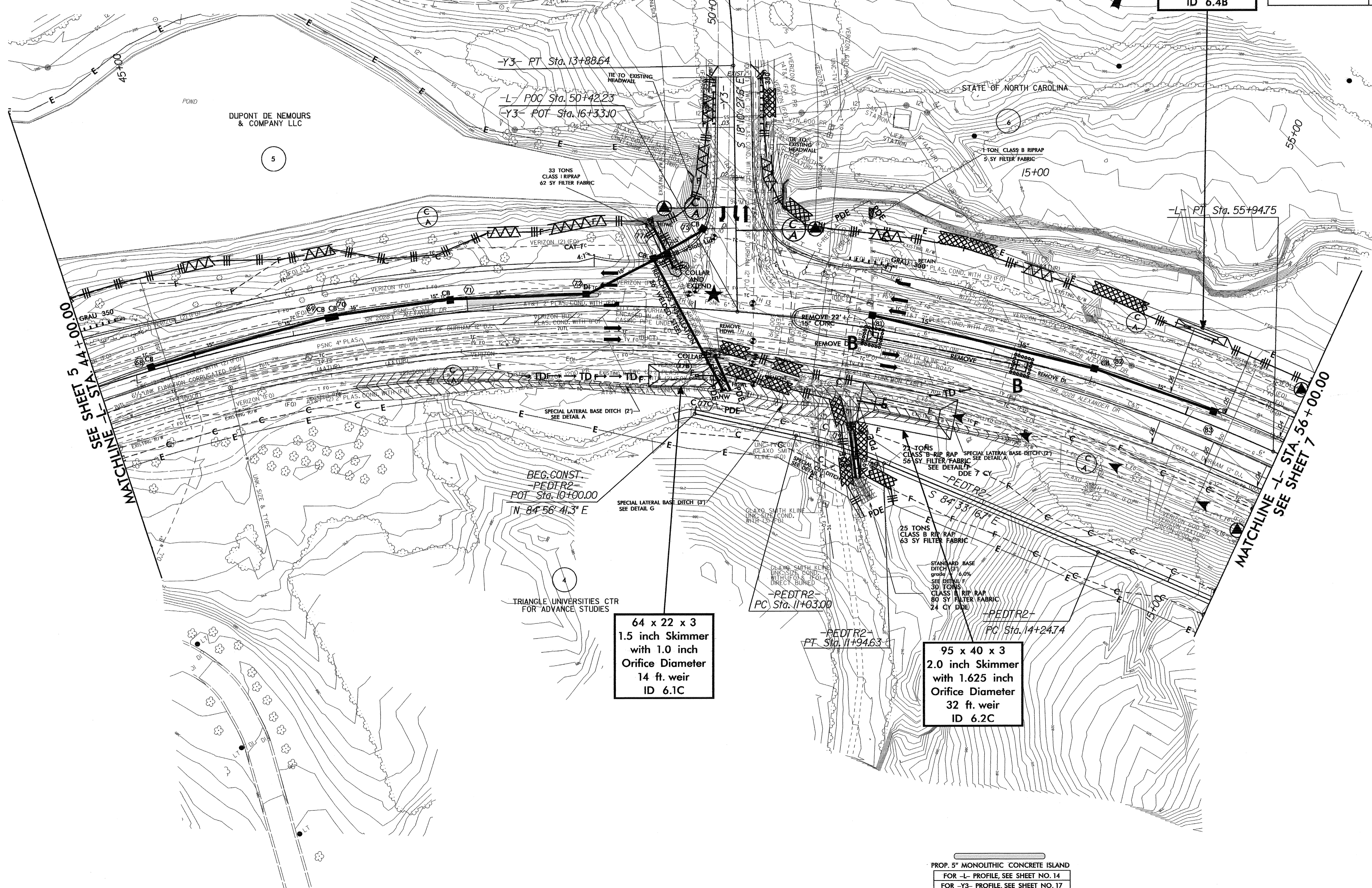
CLEARING AND GRUBBING  
EROSION CONTROL FOR  
CONSTRUCTION SHEET 6

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

PROJECT REFERENCE NO. U-3309A	SHEET NO. EC-7/CONST.6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



52 x 9 x 3  
1.5 inch Skimmer  
with 0.5 inch  
Orifice Diameter  
4 ft. weir  
ID 6.4B



PROP. 5" MONOLITHIC CONCRETE ISLAND  
FOR -L- PROFILE, SEE SHEET NO. 14  
FOR -Y3- PROFILE, SEE SHEET NO. 17

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PROJECT REFERENCE NO.	SHEET NO.
U-3309A	EC-8/CONST.7
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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.

26 x 12 x 3  
1.5 inch Skimmer  
with 0.375 inch  
Orifice Diameter  
4 ft. weir  
ID 7.1B

38 x 19 x 3  
1.5 inch Skimmer  
with 0.625 inch  
Orifice Diameter  
11 ft. weir  
ID 7.2B

39 x 14 x 3  
ID 7.3B

93 x 25 x 3  
1.5 inch Skimmer  
with 1.25 inch  
Orifice Diameter  
17 ft. weir  
ID 7.4C

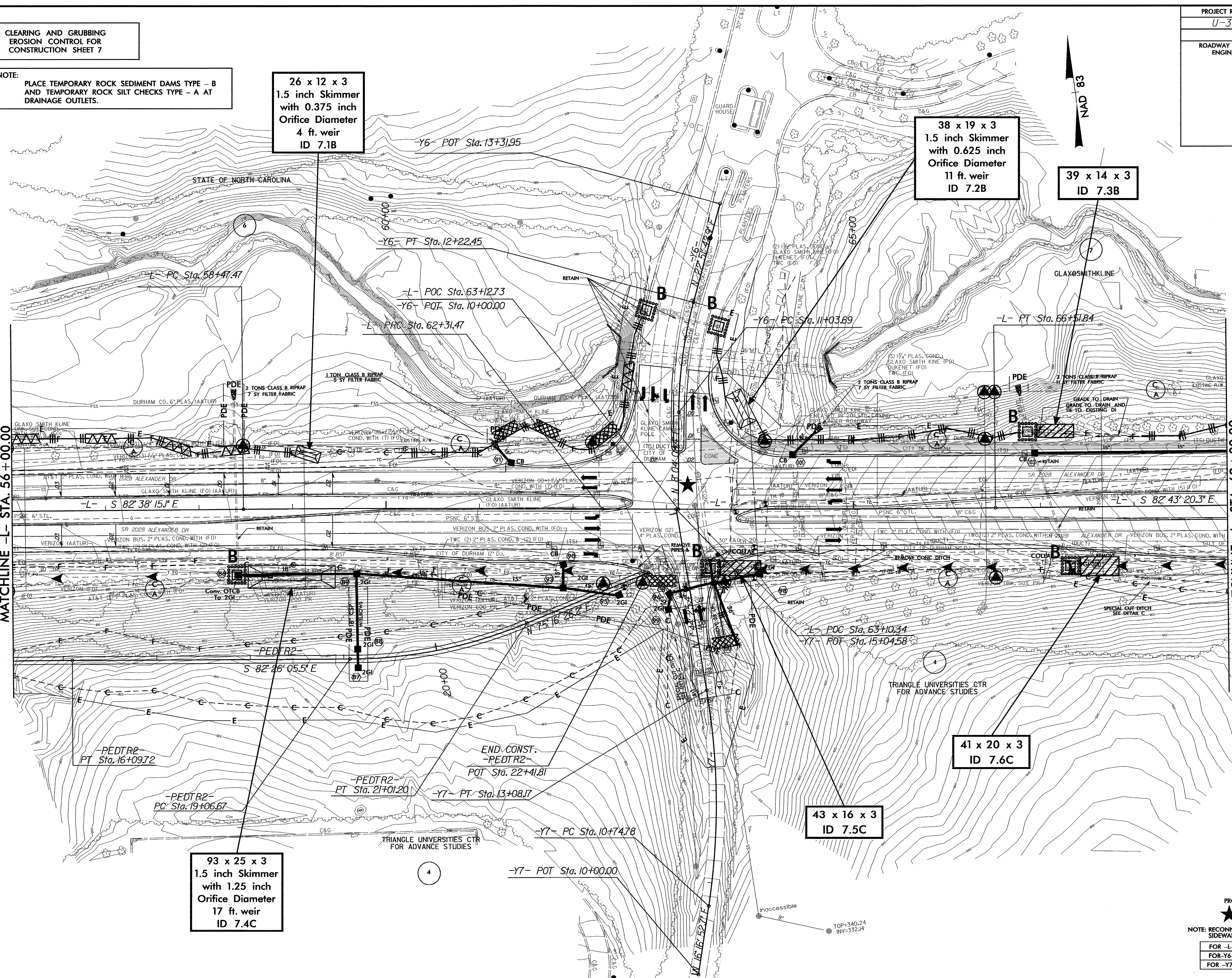
41 x 20 x 3  
ID 7.6C

43 x 16 x 3  
ID 7.5C

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SEE SHEET 6  
MATCHLINE -L- STA. 56+00.00

MATCHLINE -L- STA. 69+00.00  
SEE SHEET 8



PROP. 5" MONOLITHIC CONCRETE ISLAND  
★ UPGRADE EXISTING TRAFFIC SIGNAL  
NOTE: RECONNECT ALL PEDESTRIAN TRAILS AND  
SIDEWALKS BACK TO INTERSECTIONS.  
FOR -L- PROFILE, SEE SHEET NO. 14  
FOR -Y6- PROFILE, SEE SHEET NO. 19  
FOR -Y7- PROFILE, SEE SHEET NO. 19

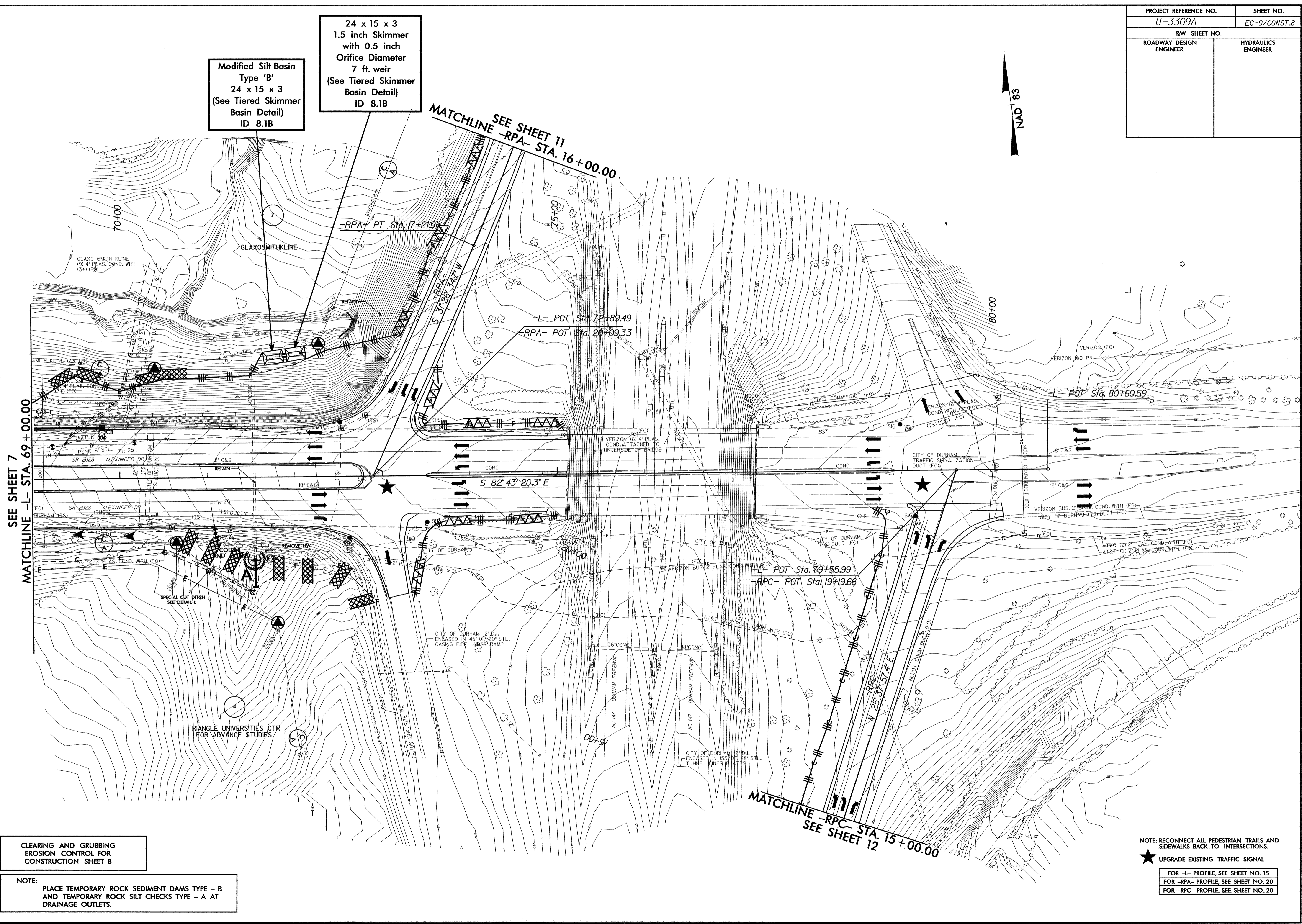
PROJECT REFERENCE NO.	SHEET NO.
U-3309A	EC-9/CONST.8
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



Modified Silt Basin  
Type 'B'  
24 x 15 x 3  
(See Tiered Skimmer  
Basin Detail)  
ID 8.1B

24 x 15 x 3  
1.5 inch Skimmer  
with 0.5 inch  
Orifice Diameter  
7 ft. weir  
(See Tiered Skimmer  
Basin Detail)  
ID 8.1B

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benj@benj.com



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.

NOTE: RECONNECT ALL PEDESTRIAN TRAILS AND  
SIDEWALKS BACK TO INTERSECTIONS.  
★ UPGRADE EXISTING TRAFFIC SIGNAL  
FOR -L- PROFILE, SEE SHEET NO. 15  
FOR -RPA- PROFILE, SEE SHEET NO. 20  
FOR -RPC- PROFILE, SEE SHEET NO. 20

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**CLEARING AND GRUBBING  
EROSION CONTROL FOR  
CONSTRUCTION SHEET 9**

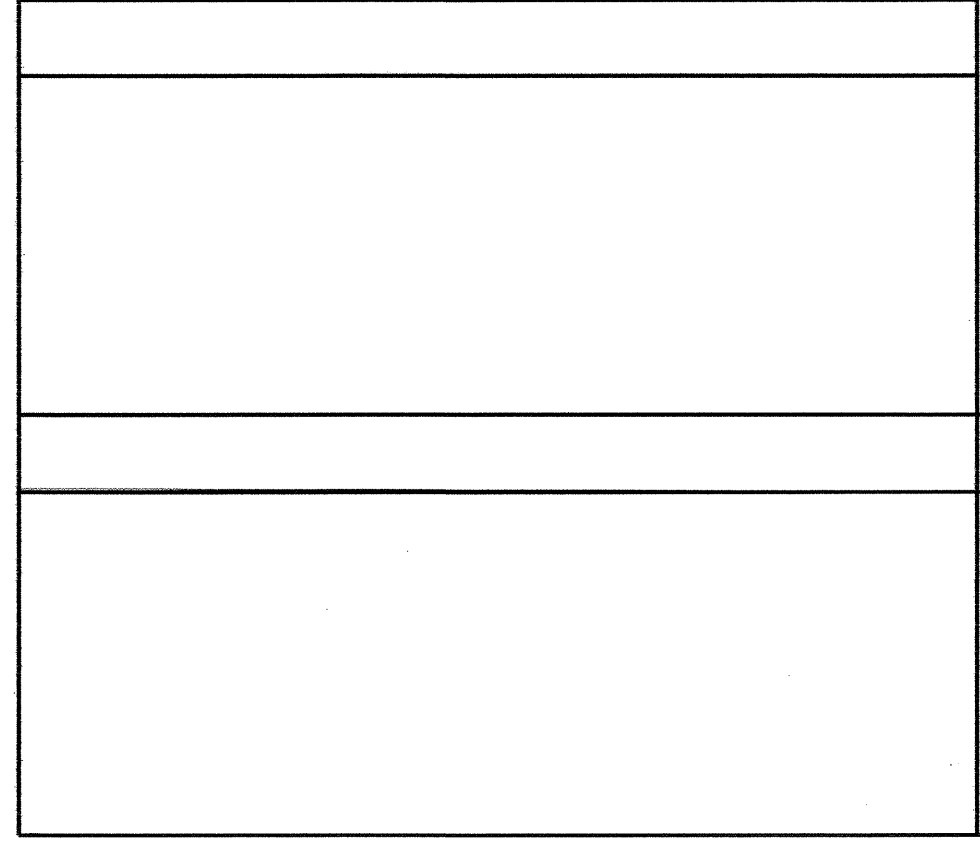
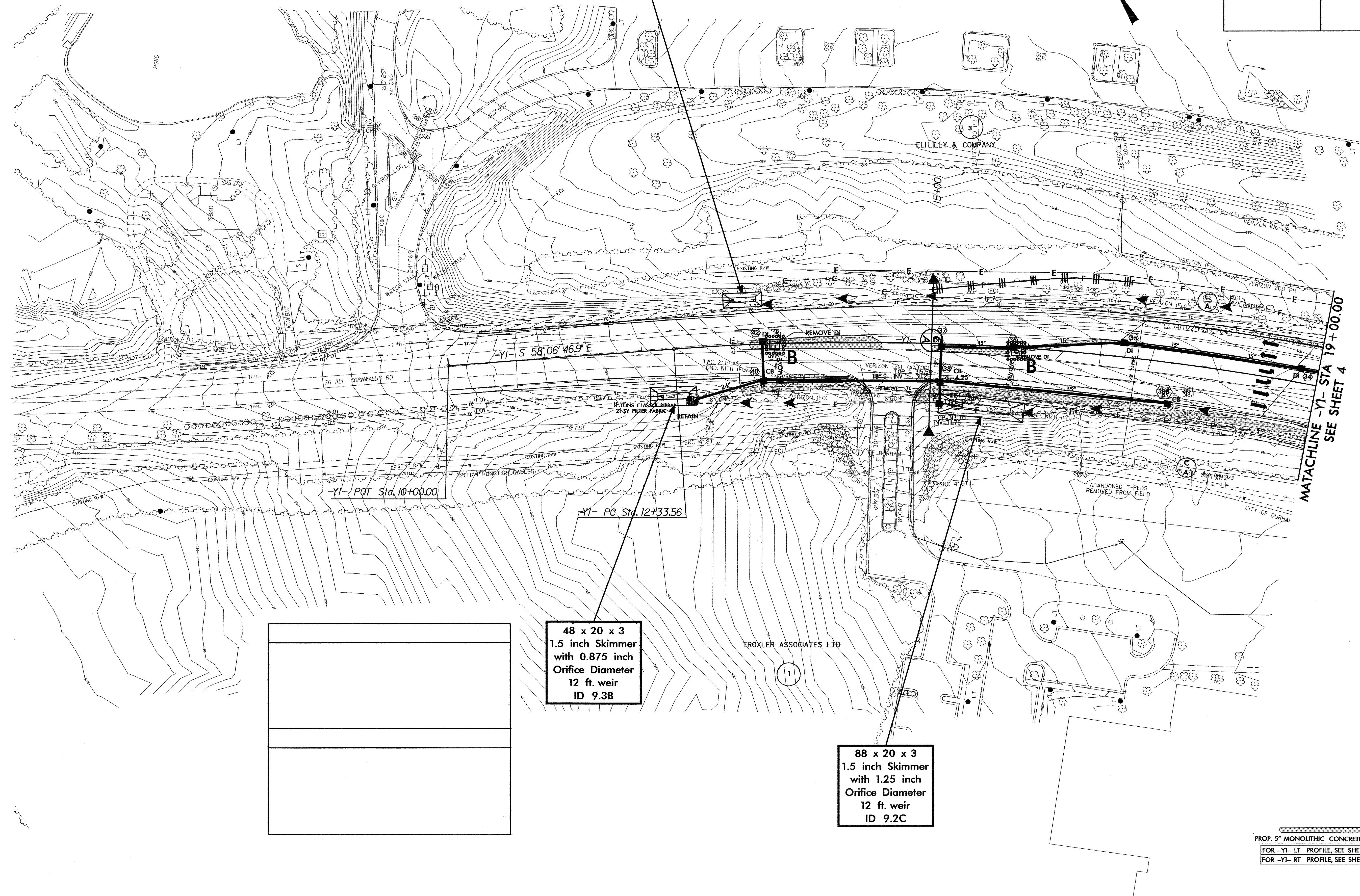
**NOTE:**  
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B  
AND TEMPORARY ROCK SILT CHECKS TYPE - A AT  
DRAINAGE OUTLETS.

**40 x 15 x 3  
1.5 inch Skimmer  
with 0.625 inch  
Orifice Diameter  
7 ft. weir  
ID 9.1B**

**48 x 20 x 3  
1.5 inch Skimmer  
with 0.875 inch  
Orifice Diameter  
12 ft. weir  
ID 9.3B**

**88 x 20 x 3  
1.5 inch Skimmer  
with 1.25 inch  
Orifice Diameter  
12 ft. weir  
ID 9.2C**

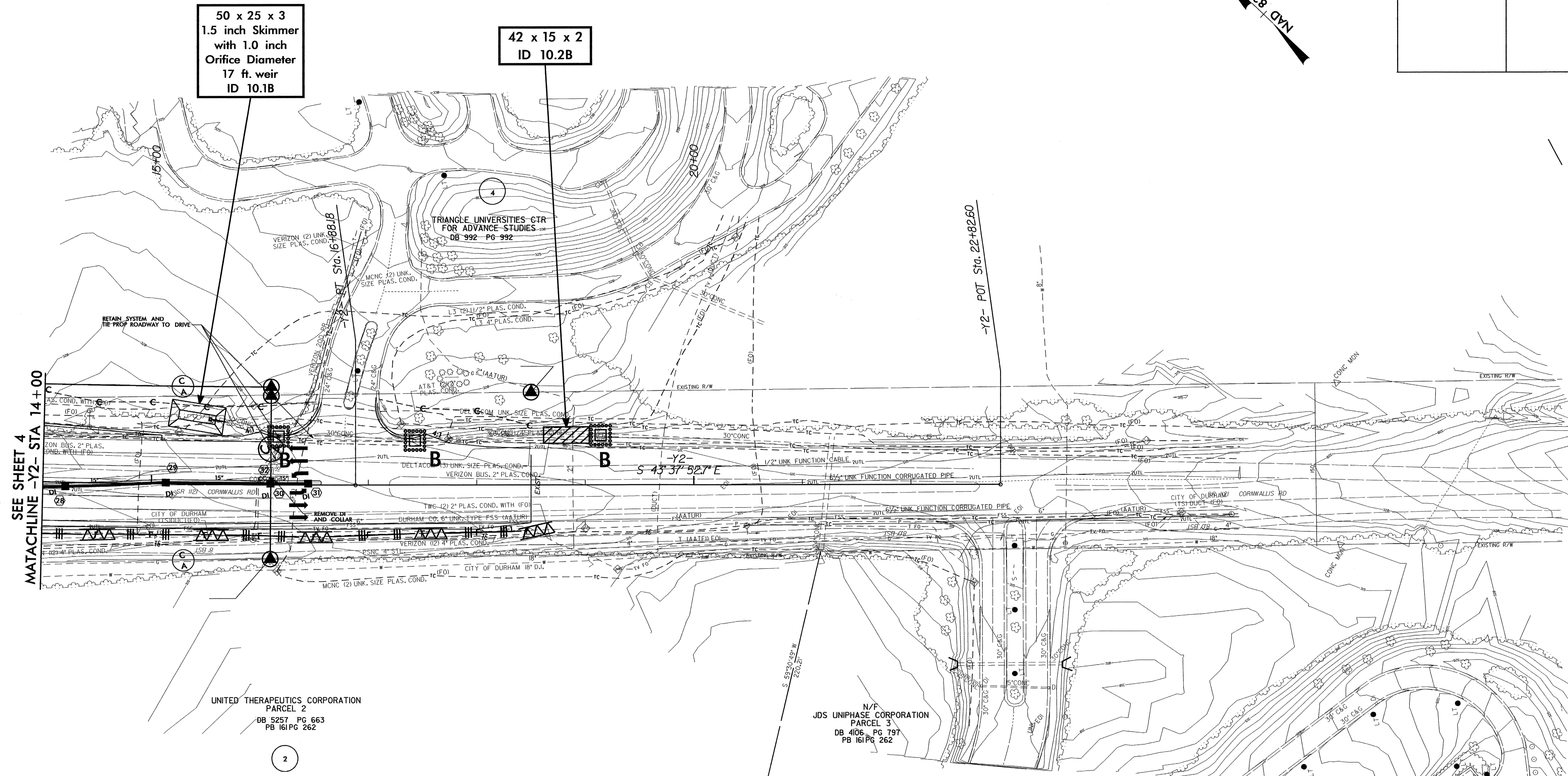
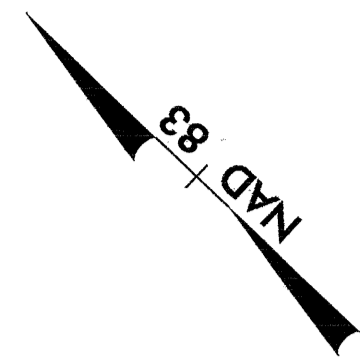
PROJECT REFERENCE NO. U-3309A	SHEET NO. EC-10/CONST.9
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	



PROP. 5" MONOLITHIC CONCRETE ISLAND  
FOR -Y1- LT PROFILE, SEE SHEET NO. 16  
FOR -Y1- RT PROFILE, SEE SHEET NO. 16

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PROJECT REFERENCE NO.	SHEET NO.
U-3309A	EC-11/CONST.10
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



SEE SHEET 4  
MATACHLINE -Y2- STA 14+00

CLEARING AND GRUBBING  
EROSION CONTROL FOR  
CONSTRUCTION SHEET 10

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

PROP. 5" MONOLITHIC CONCRETE ISLAND  
FOR -Y2- PROFILE, SEE SHEET NO. 17

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8/17/99

CLEARING AND GRUBBING  
EROSION CONTROL FOR  
CONSTRUCTION SHEET 11

NOTE:

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

PROJECT REFERENCE NO.	SHEET NO.
U-3309A	EC-12/CONST.11
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-RPA-

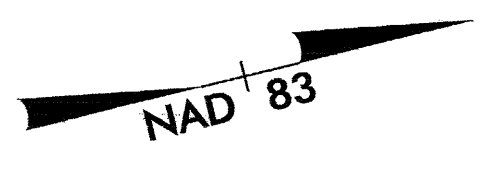
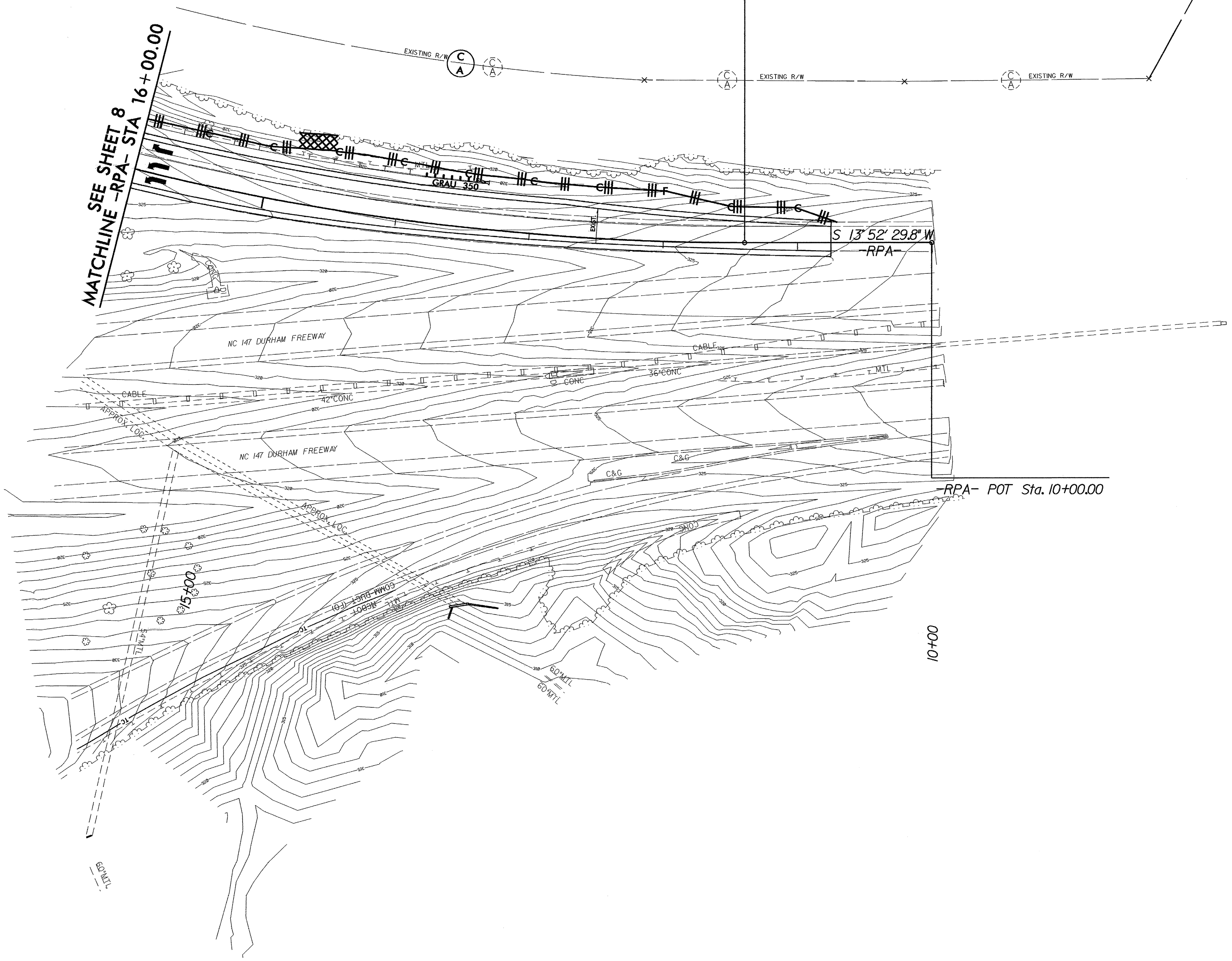
PI Sta. 14+32.93  
 $\Delta = 17^{\circ} 34' 04.8''$  (RT)  
 $D = 3^{\circ} 00' 56.0''$   
 $L = 582.58'$   
 $T = 293.59'$   
 $R = 1,900.00'$   
 $SE = EXIST.$

7

GLAXSMITHKLINE  
 DB 2986 PG 852  
 PB 101 PG 74

-RPA- PC Sta. 11+39.34

MATCHLINE SEE SHEET 8  
-RPA- STA 16+00.00



FOR -RPA- PROFILE, SEE SHEET NO. 20

13-MAY-2009 13:17  
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 AT: REN231812

8/17/99

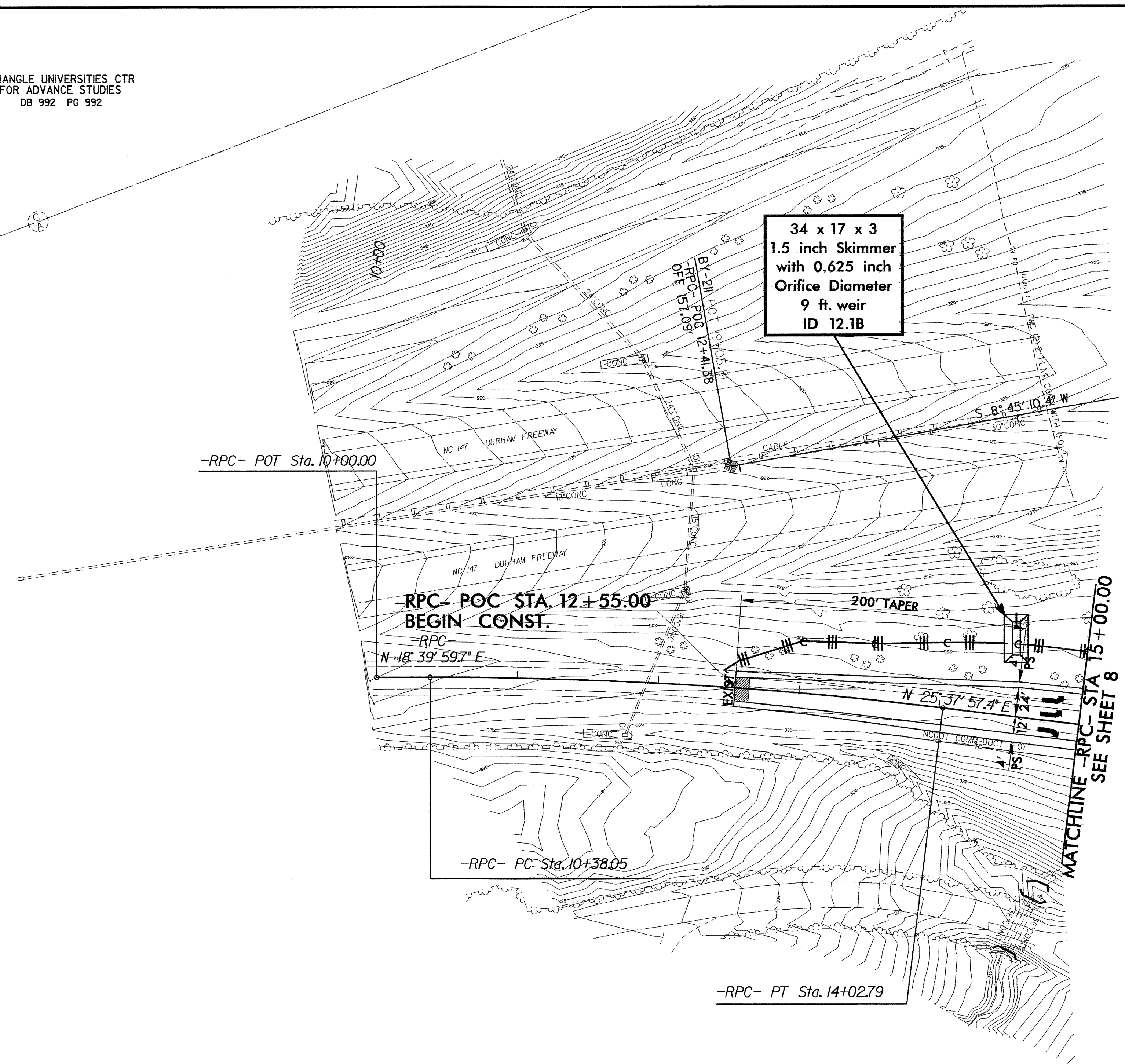
TRIANGLE UNIVERSITIES CTR  
FOR ADVANCE STUDIES  
DB 992 PG 992

PROJECT REFERENCE NO. U-3309A	SHEET NO. EC-13/CONST.12
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



CLEARING AND GRUBBING  
EROSION CONTROL FOR  
CONSTRUCTION SHEET 12

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



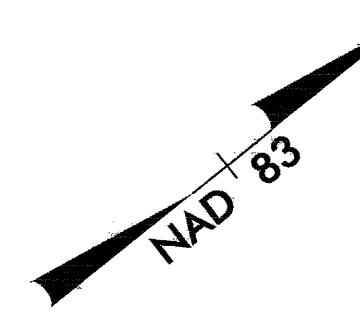
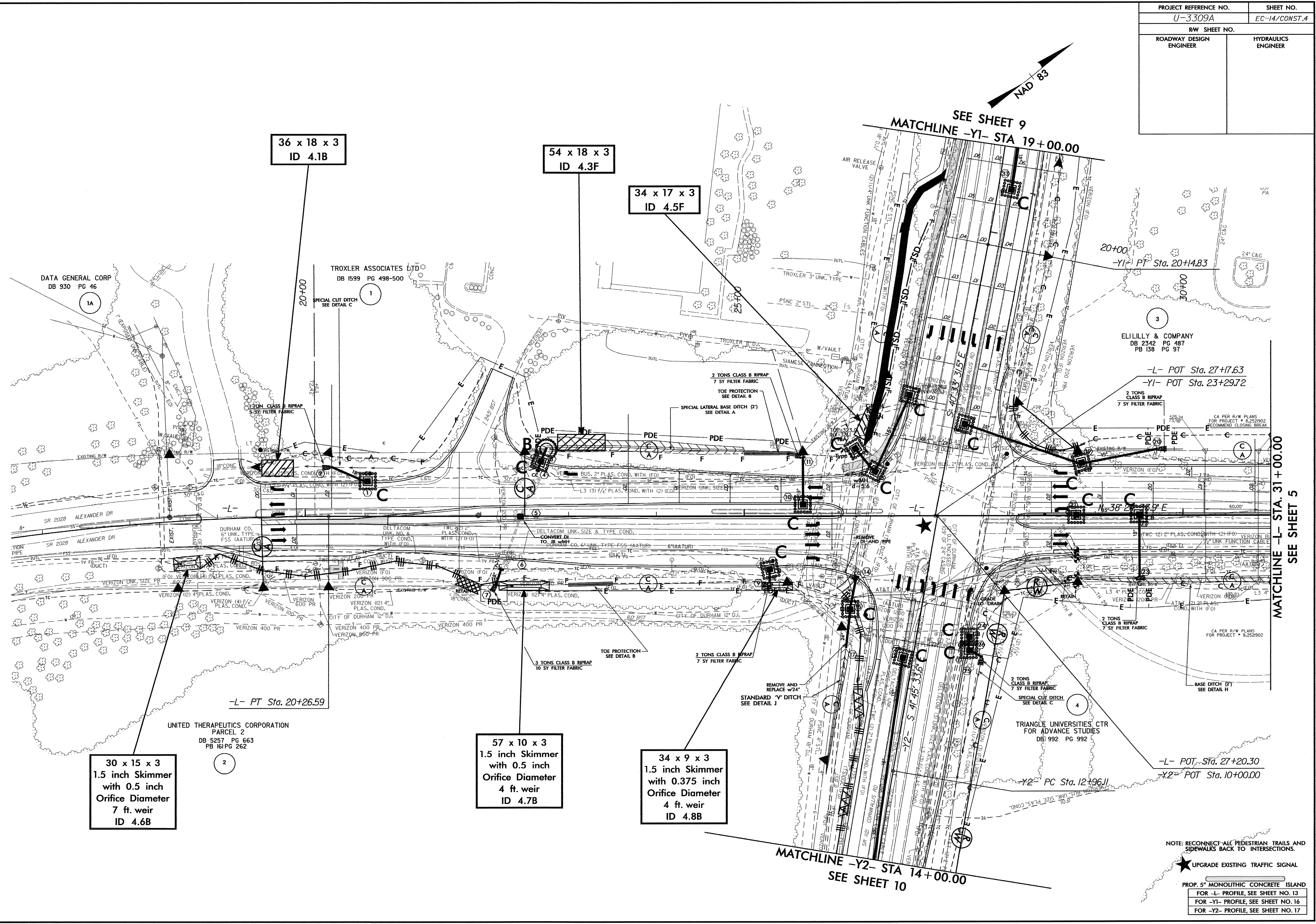
-RPC-
PI Sta 12+20.64
$\Delta = 6' 57" 57.7"$ (RT)
D = 154' 35.5"
L = 364.74'
T = 182.59'
R = 3,000.00'
SE = EXIST.

FOR -RPC- PROFILE, SEE SHEET NO. 20

13 MAY 2009 13:16  
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C:\Program Files\Autodesk\AutoCAD 2009\bin\acad.exe

PROJECT REFERENCE NO. U-3309A	SHEET NO. EC-14/CONST.4
R/W SHEET NO. ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

8/17/99  
05-JUN-2009 10:16  
c:\p\proj\3309a.ec\psh04.dgn  
DESIGNED BY: PSH04



SEE SHEET 9  
MATCHLINE -Y1- STA 19+00.00

MATCHLINE -L- STA. 31+00.00  
SEE SHEET 5

MATCHLINE -Y2- STA 14+00.00  
SEE SHEET 10

NOTE: RECONNECT ALL PEDESTRIAN TRAILS AND SIDEWALKS BACK TO INTERSECTIONS.  
★ UPGRADE EXISTING TRAFFIC SIGNAL  
PROP. 5" MONOLITHIC CONCRETE ISLAND  
FOR -L- PROFILE, SEE SHEET NO. 13  
FOR -Y1- PROFILE, SEE SHEET NO. 16  
FOR -Y2- PROFILE, SEE SHEET NO. 17

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
U-3309A	EC-15/CONST.5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

MATCHLINE SEE SHEET 5-A

MATCHLINE SEE SHEET 5-A

SEE SHEET 4  
MATCHLINE -L- STA. 31+00.00

MATCHLINE -L- STA. 44+00.00  
SEE SHEET 6

78 x 24 x 3  
ID 5.10F

72 x 20 x 3  
1.5 inch Skimmer  
with 1.0 inch  
Orifice Diameter  
12 ft. weir  
ID 5.12F

30 x 15 x 3  
1.5 inch Skimmer  
with 0.5 inch  
Orifice Diameter  
7 ft. weir  
ID 5.3B

27 x 13 x 3  
1.5 inch Skimmer  
with 0.375 inch  
Orifice Diameter  
5 ft. weir  
ID 5.4B

69 x 25 x 3  
1.5 inch Skimmer  
with 1.25 inch  
Orifice Diameter  
17 ft. weir  
ID 5.9B

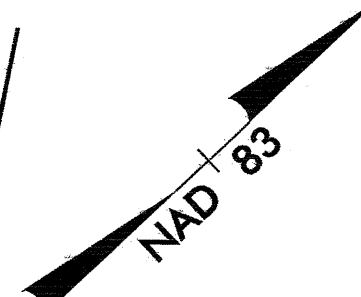
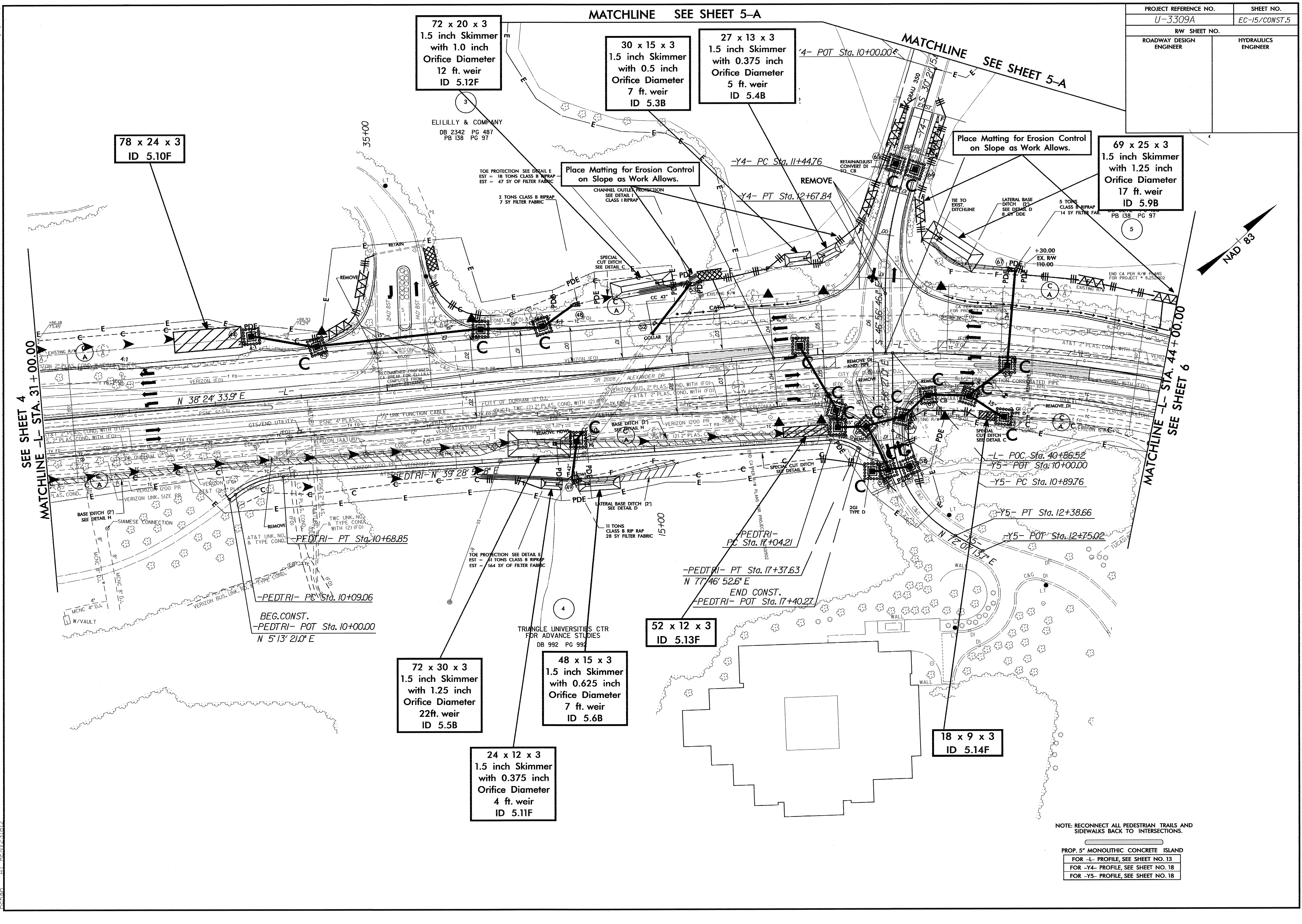
72 x 30 x 3  
1.5 inch Skimmer  
with 1.25 inch  
Orifice Diameter  
22ft. weir  
ID 5.5B

48 x 15 x 3  
1.5 inch Skimmer  
with 0.625 inch  
Orifice Diameter  
7 ft. weir  
ID 5.6B

24 x 12 x 3  
1.5 inch Skimmer  
with 0.375 inch  
Orifice Diameter  
4 ft. weir  
ID 5.11F

52 x 12 x 3  
ID 5.13F

18 x 9 x 3  
ID 5.14F



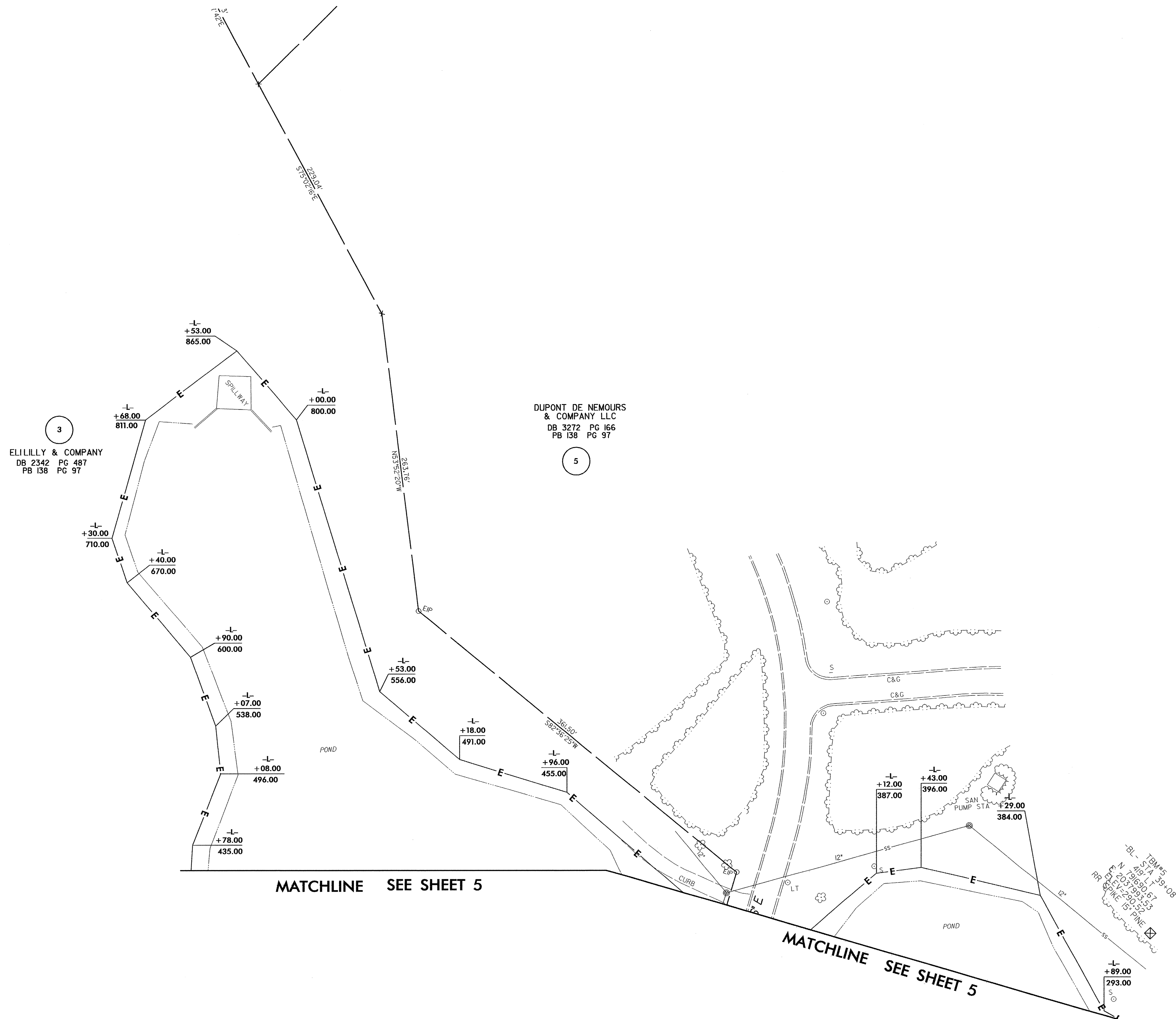
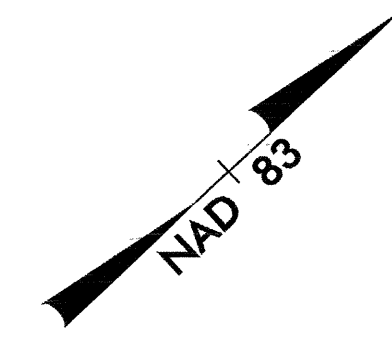
NOTE: RECONNECT ALL PEDESTRIAN TRAILS AND SIDEWALKS BACK TO INTERSECTIONS.

PROP. 5" MONOLITHIC CONCRETE ISLAND

FOR -L- PROFILE, SEE SHEET NO. 13  
FOR -Y4- PROFILE, SEE SHEET NO. 18  
FOR -Y5- PROFILE, SEE SHEET NO. 18

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AT REN231813

PROJECT REFERENCE NO.	SHEET NO.
U-3309A	EC-16/CONST.5a
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



8/17/99  
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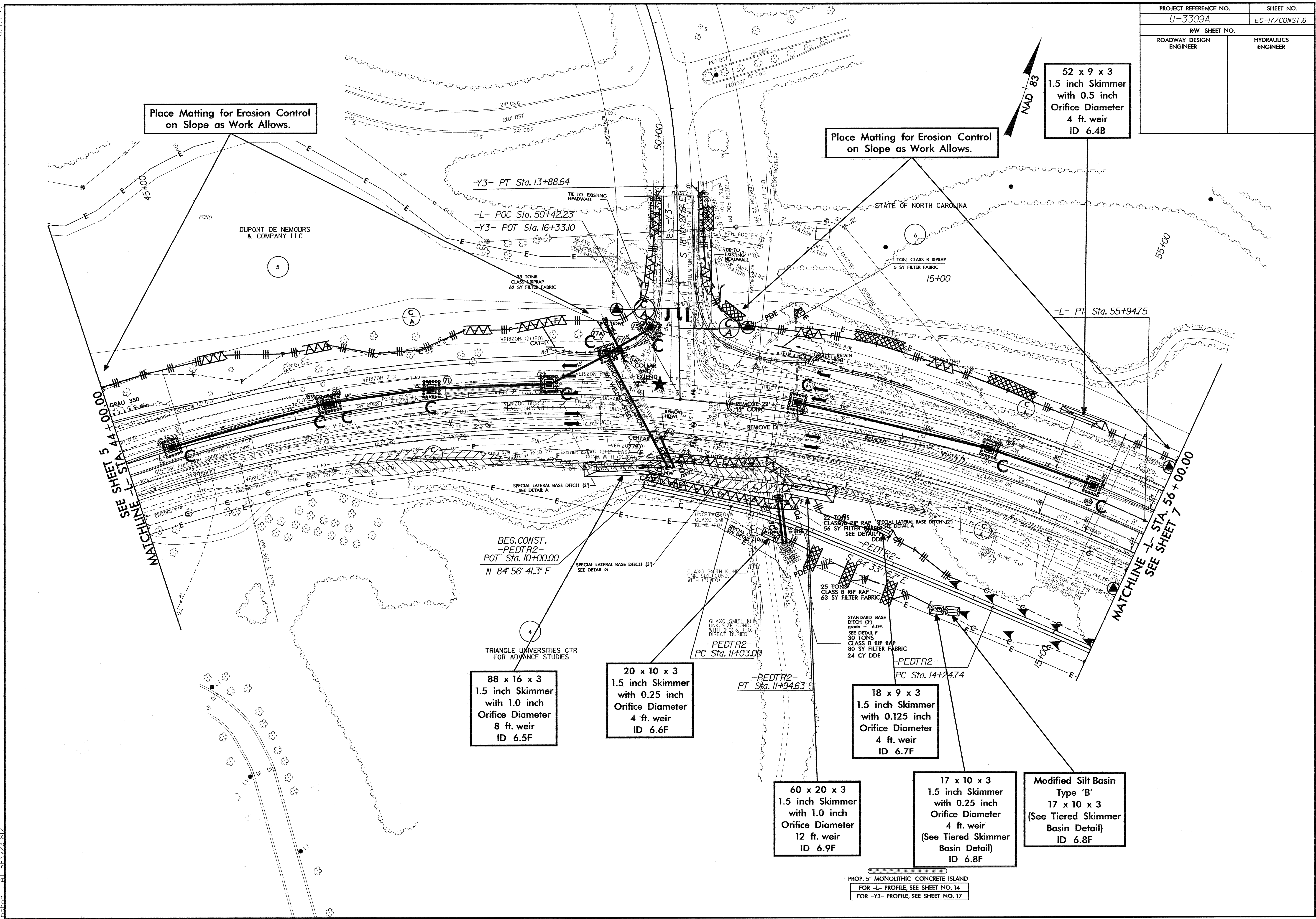
PROJECT REFERENCE NO. U-3309A	SHEET NO. EC-17/CONST.6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

Place Matting for Erosion Control on Slope as Work Allows.

Place Matting for Erosion Control on Slope as Work Allows.

52 x 9 x 3  
1.5 inch Skimmer  
with 0.5 inch  
Orifice Diameter  
4 ft. weir  
ID 6.4B

8/17/09  
29-JUL-2009 09:20 c:\pwworkspace\user3309a.ec-ps\psh06.dgn  
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AT: RNNY231812



88 x 16 x 3  
1.5 inch Skimmer  
with 1.0 inch  
Orifice Diameter  
8 ft. weir  
ID 6.5F

20 x 10 x 3  
1.5 inch Skimmer  
with 0.25 inch  
Orifice Diameter  
4 ft. weir  
ID 6.6F

18 x 9 x 3  
1.5 inch Skimmer  
with 0.125 inch  
Orifice Diameter  
4 ft. weir  
ID 6.7F

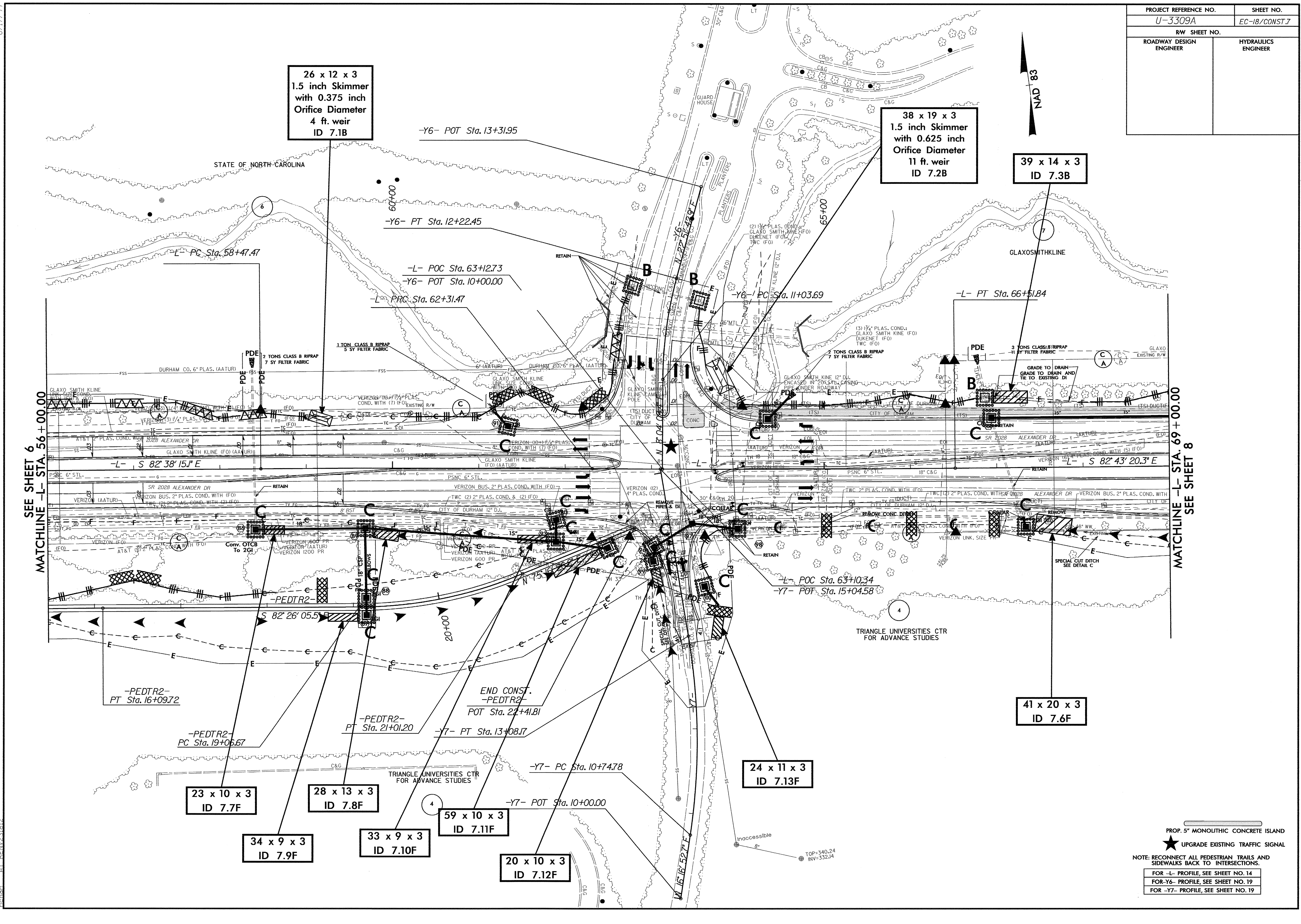
60 x 20 x 3  
1.5 inch Skimmer  
with 1.0 inch  
Orifice Diameter  
12 ft. weir  
ID 6.9F

17 x 10 x 3  
1.5 inch Skimmer  
with 0.25 inch  
Orifice Diameter  
4 ft. weir  
(See Tiered Skimmer  
Basin Detail)  
ID 6.8F

Modified Silt Basin  
Type 'B'  
17 x 10 x 3  
(See Tiered Skimmer  
Basin Detail)  
ID 6.8F

PROP. 5' MONOLITHIC CONCRETE ISLAND  
FOR -L- PROFILE, SEE SHEET NO. 14  
FOR -Y3- PROFILE, SEE SHEET NO. 17

PROJECT REFERENCE NO. U-3309A	SHEET NO. EC-18/CONST.7
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



26 x 12 x 3  
1.5 inch Skimmer  
with 0.375 inch  
Orifice Diameter  
4 ft. weir  
ID 7.1B

38 x 19 x 3  
1.5 inch Skimmer  
with 0.625 inch  
Orifice Diameter  
11 ft. weir  
ID 7.2B

39 x 14 x 3  
ID 7.3B

SEE SHEET 6  
MATCHLINE -L- STA. 56+00.00

MATCHLINE -L- STA. 69+00.00  
SEE SHEET 8

-PEDTR2-  
PT Sta. 16+09.72

23 x 10 x 3  
ID 7.7F

34 x 9 x 3  
ID 7.9F

28 x 13 x 3  
ID 7.8F

33 x 9 x 3  
ID 7.10F

59 x 10 x 3  
ID 7.11F

20 x 10 x 3  
ID 7.12F

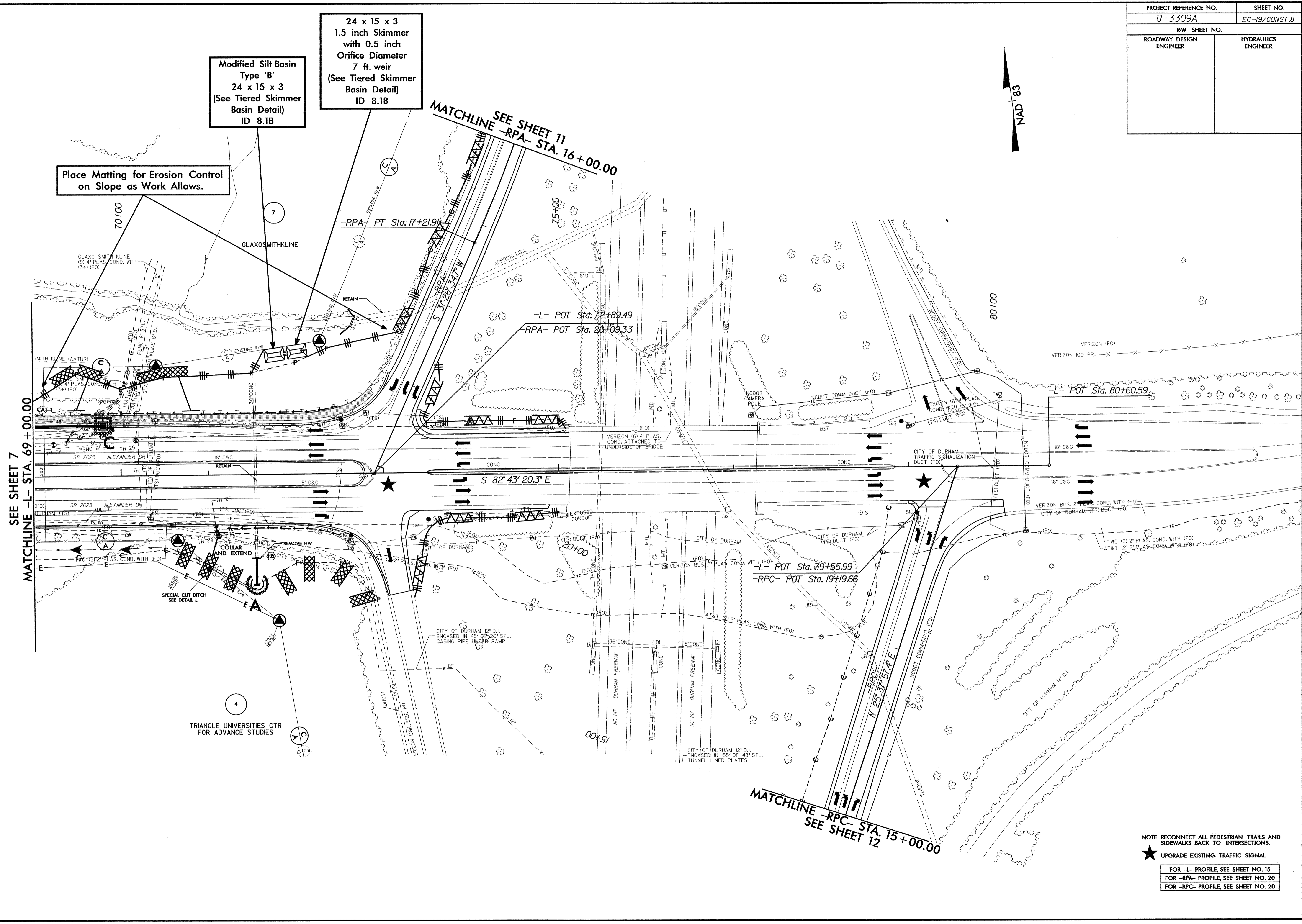
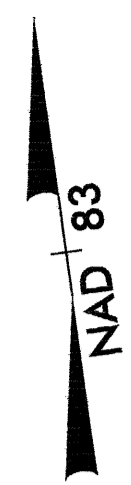
24 x 11 x 3  
ID 7.13F

41 x 20 x 3  
ID 7.6F

PROP. 5" MONOLITHIC CONCRETE ISLAND  
★ UPGRADE EXISTING TRAFFIC SIGNAL  
NOTE: RECONNECT ALL PEDESTRIAN TRAILS AND  
SIDEWALKS BACK TO INTERSECTIONS.  
FOR -L- PROFILE, SEE SHEET NO. 14  
FOR -Y6- PROFILE, SEE SHEET NO. 19  
FOR -Y7- PROFILE, SEE SHEET NO. 19

8/17/09  
23-JUN-2009 10:45  
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cehan AT REVISED 2/18/12

PROJECT REFERENCE NO.	SHEET NO.
U-3309A	EC-19/CONST.8
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



NOTE: RECONNECT ALL PEDESTRIAN TRAILS AND SIDEWALKS BACK TO INTERSECTIONS.

★ UPGRADE EXISTING TRAFFIC SIGNAL

- FOR -L- PROFILE, SEE SHEET NO. 15
- FOR -RPA- PROFILE, SEE SHEET NO. 20
- FOR -RPC- PROFILE, SEE SHEET NO. 20



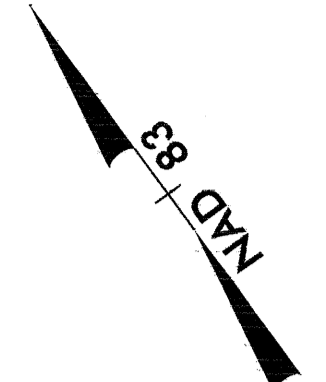
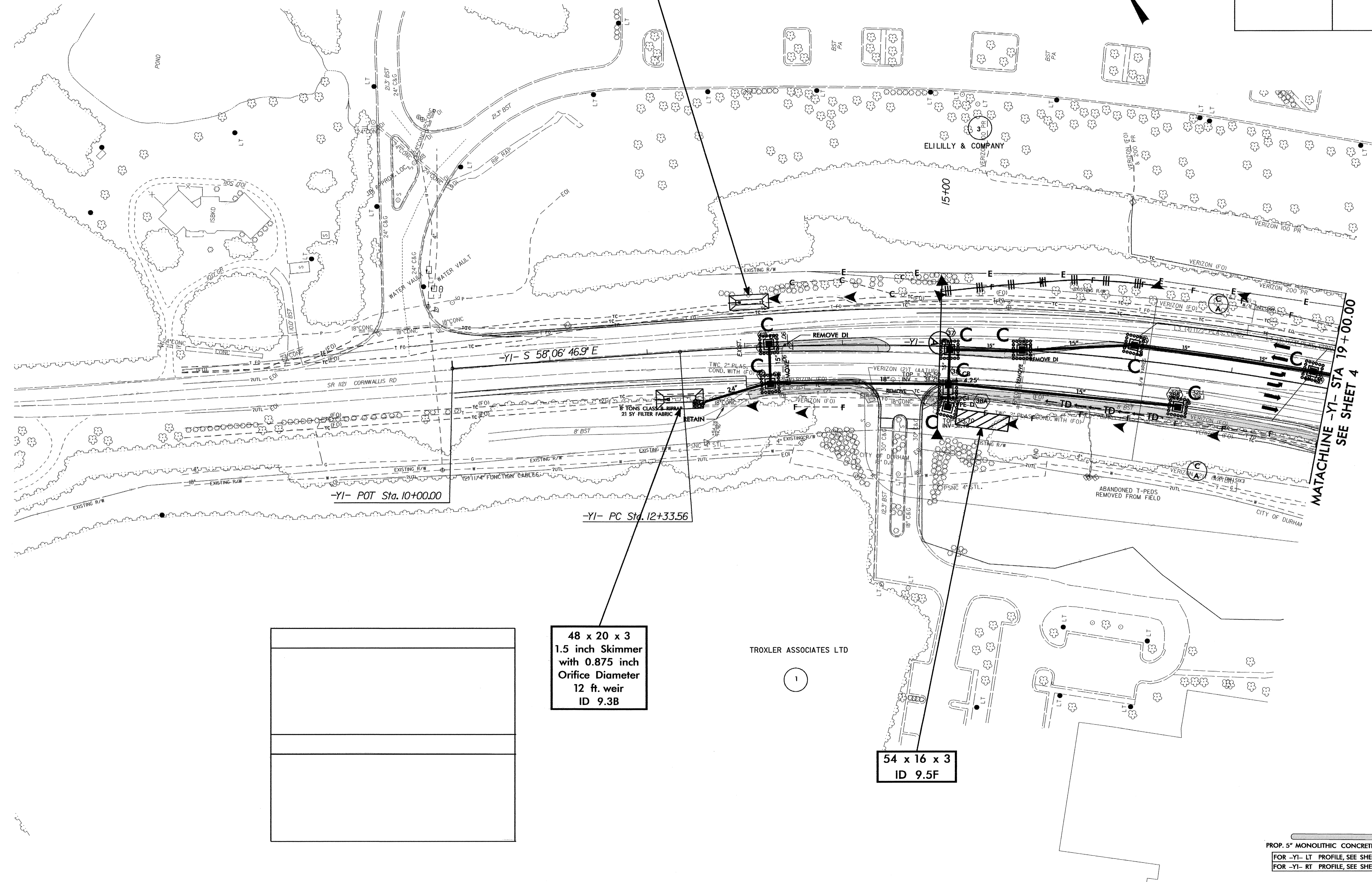
PROJECT REFERENCE NO.	SHEET NO.
U-3309A	EC-20/CONST.9
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

8/17/99

40 x 15 x 3  
1.5 inch Skimmer  
with 0.625 inch  
Orifice Diameter  
7 ft. weir  
ID 9.1B

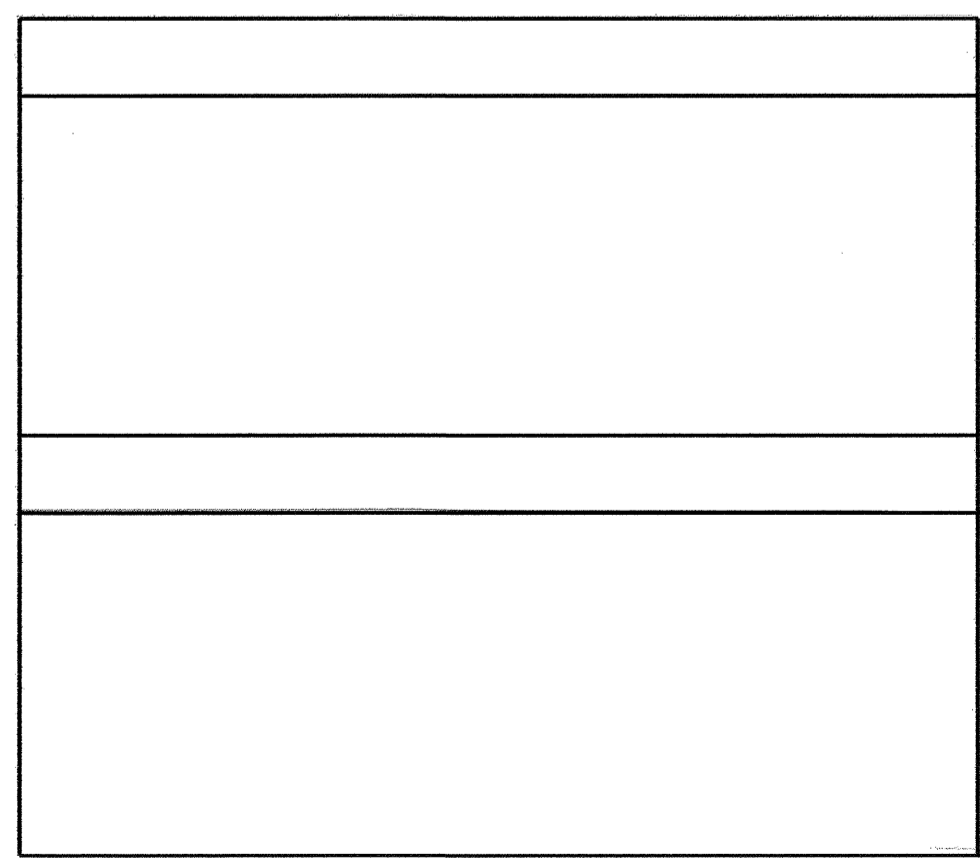
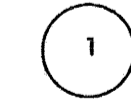
48 x 20 x 3  
1.5 inch Skimmer  
with 0.875 inch  
Orifice Diameter  
12 ft. weir  
ID 9.3B

54 x 16 x 3  
ID 9.5F



MATACHLINE -Y1- STA 19+00.00  
SEE SHEET 4

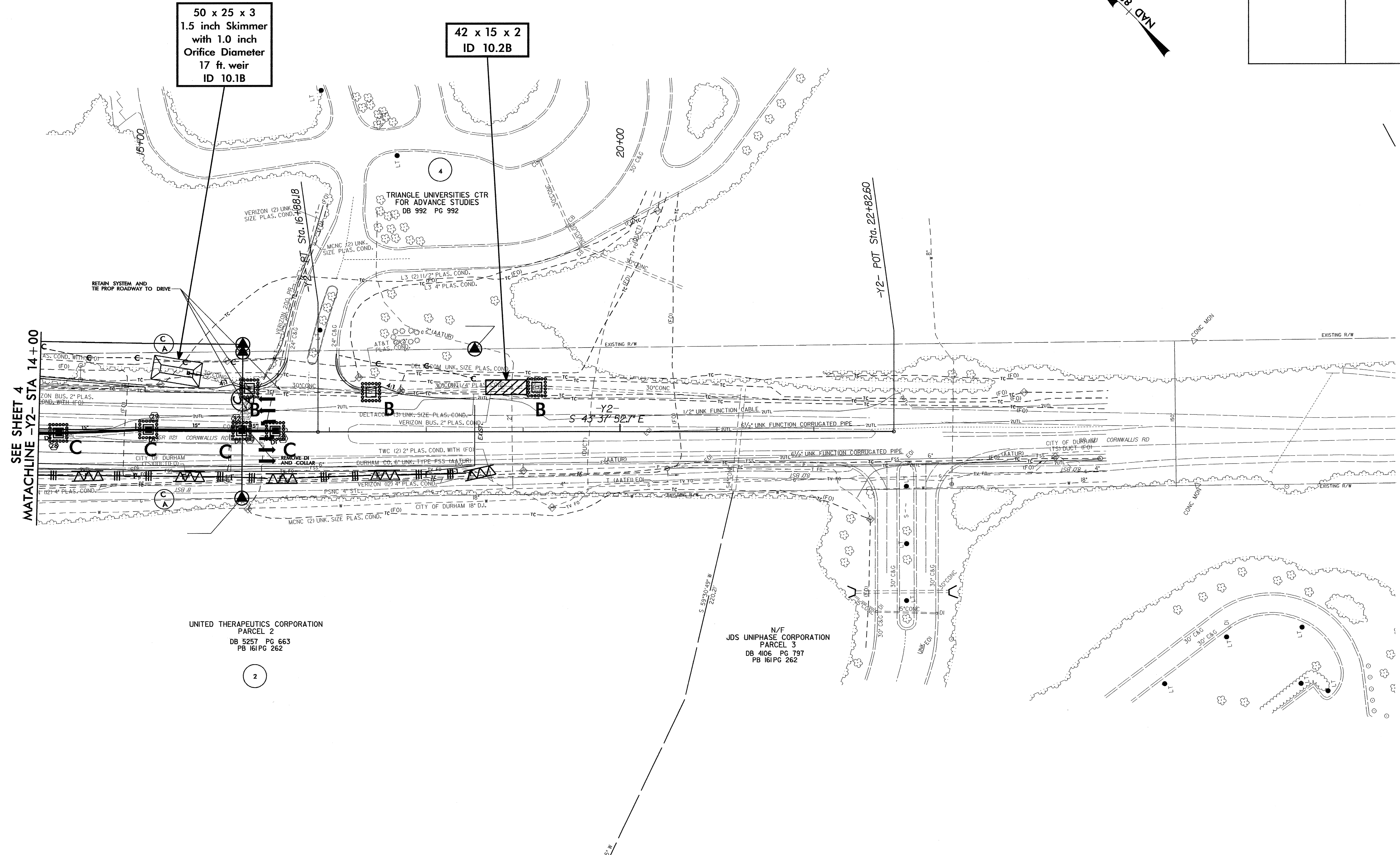
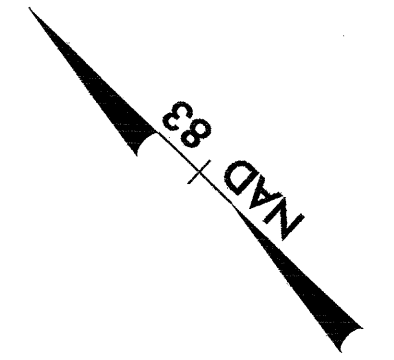
TROXLER ASSOCIATES LTD



PROP. 5" MONOLITHIC CONCRETE ISLAND  
FOR -Y1- LT PROFILE, SEE SHEET NO. 16  
FOR -Y1- RT PROFILE, SEE SHEET NO. 16

C5-JUN-2009 10:21  
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PROJECT REFERENCE NO.	SHEET NO.
U-3309A	EC-21/CONST.10
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



50 x 25 x 3  
1.5 inch Skimmer  
with 1.0 inch  
Orifice Diameter  
17 ft. weir  
ID 10.1B

42 x 15 x 2  
ID 10.2B

SEE SHEET 4  
MATACHLINE -Y2- STA 14+00

UNITED THERAPEUTICS CORPORATION  
PARCEL 2  
DB 5257 PG 663  
PB 161PG 262

N/F  
JDS UNIPHASE CORPORATION  
PARCEL 3  
DB 4106 PG 797  
PB 161PG 262

PROP. 5' MONOLITHIC CONCRETE ISLAND  
FOR -Y2- PROFILE, SEE SHEET NO. 17

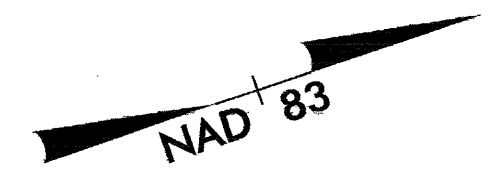
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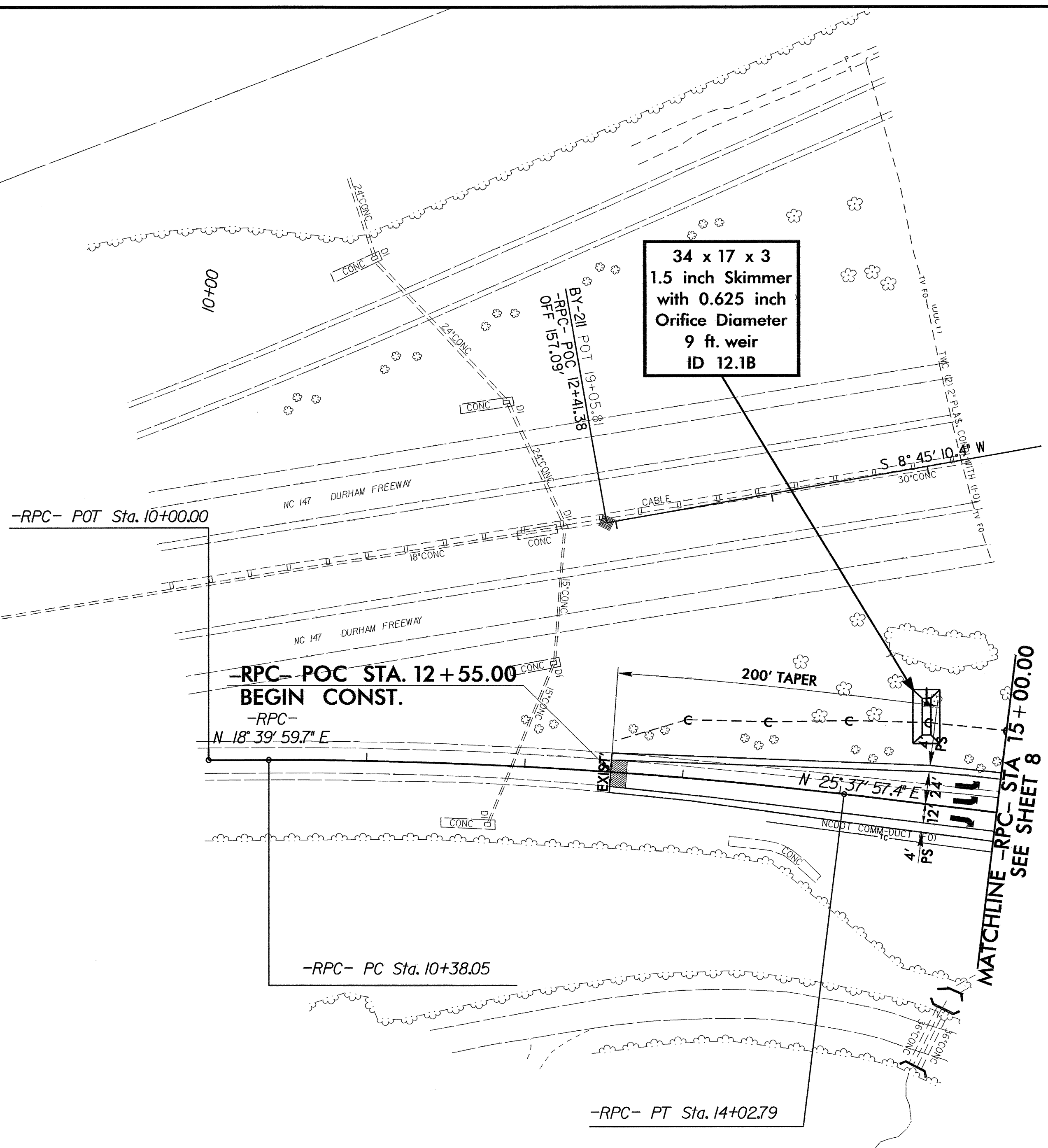
8/17/99

TRIANGLE UNIVERSITIES CTR  
FOR ADVANCE STUDIES  
DB 992 PG 992

PROJECT REFERENCE NO.	SHEET NO.
U-3309A	EC-23/CONST.12
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



34 x 17 x 3  
1.5 inch Skimmer  
with 0.625 inch  
Orifice Diameter  
9 ft. weir  
ID 12.1B



-RPC-
PI Sta 12+20.64
$\Delta = 6' 57'' 57.7''$ (RT)
D = 154' 35.5'
L = 364.74'
T = 182.59'
R = 3,000.00'
SE = EXIST.

FOR -RPC- PROFILE, SEE SHEET NO. 20

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