

**TIP PROJECT: U-2550B**

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

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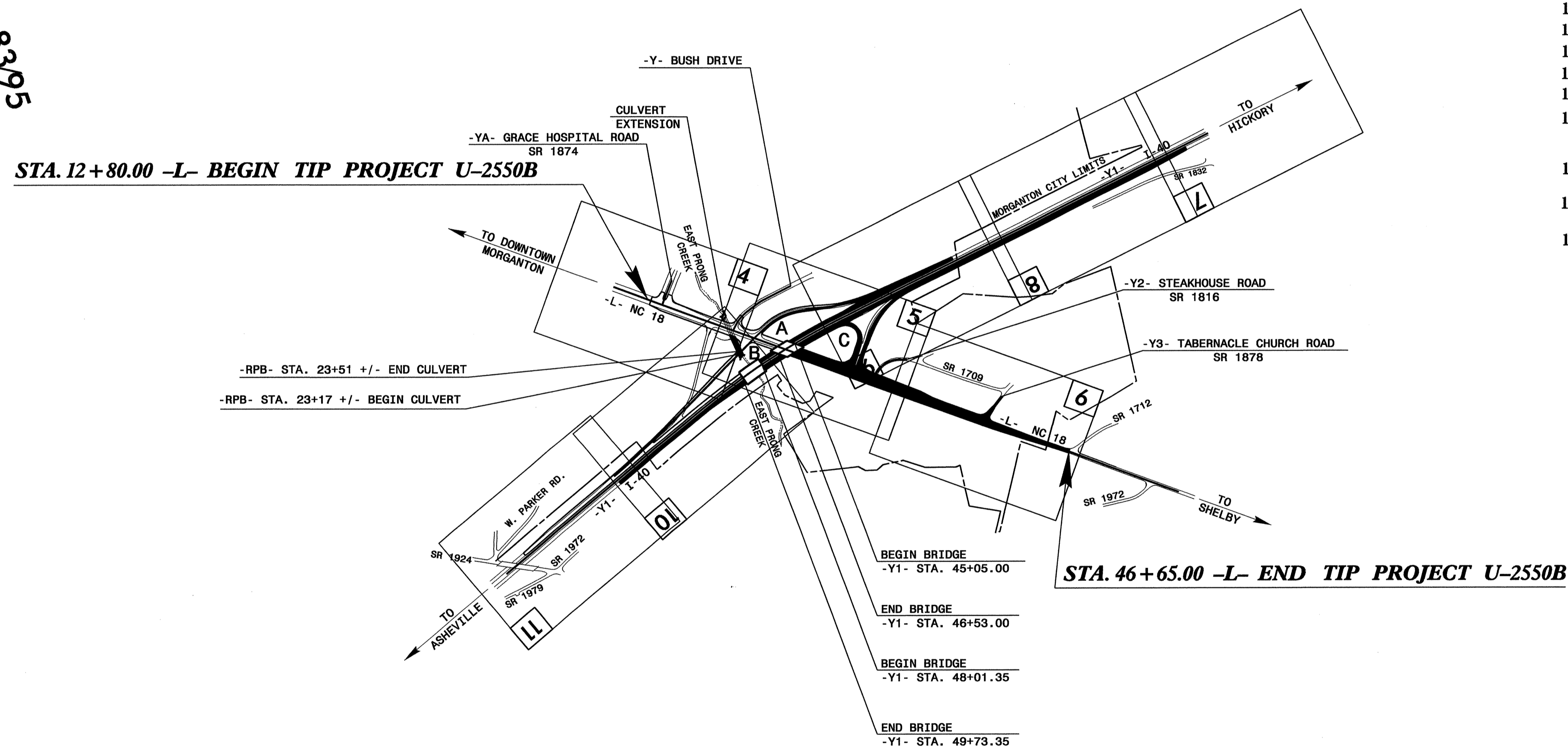
PLAN FOR PROPOSED  
HIGHWAY EROSION CONTROL

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**BURKE COUNTY**

**LOCATION: MORGANTON - NC 18 (STERLING STREET)  
AND I-40 INTERCHANGE**

**TYPE OF WORK: GRADING, PAVING, WIDENING, DRAINAGE, STRUCTURES,  
CULVERT EXTENSIONS, RETAINING WALLS, AND SIGNALS**



**EROSION AND SEDIMENT CONTROL MEASURES**

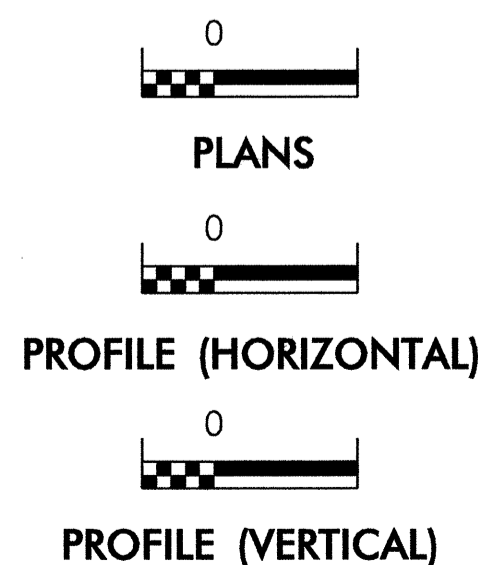
Std. #	Description	Symbol
1630.03	Temporary Silt Ditch	
1630.05	Temporary Diversion	
1605.01	Temporary Silt Fence	
1606.01	Special Sediment Control Fence	
1622.01	Temporary Berms and Slope Drains	
1635.01	Temporary Rock Silt Check Type-A	
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide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

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

**ENVIRONMENTALLY  
SENSITIVE AREA(S) EXIST  
ON THIS PROJECT**

*Refer To E. C. Special Provisions  
for Special Considerations.*

**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**

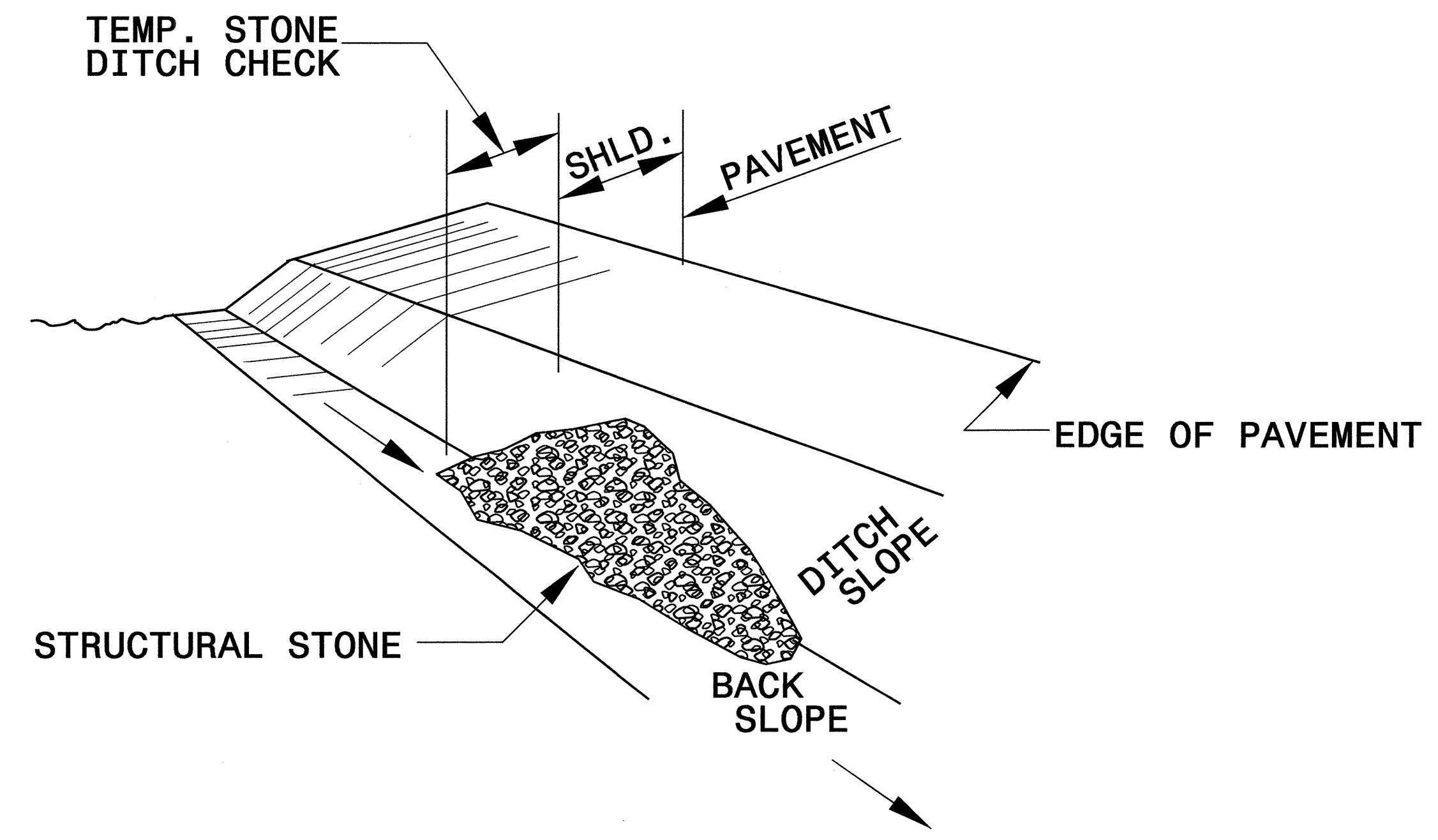
**Roadway Standard Drawings**

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	1630.06	Special Stilling Basin
1606.01	Special Sediment Control Fence	1632.02	Rock Inlet Sediment Trap Type B
1607.01	Gravel Construction Entrance	1632.03	Rock Inlet Sediment Trap Type C
1622.01	Temporary Berms and Slope Drains	1633.01	Temporary Rock Silt Check Type A
1630.04	Stilling Basin	1634.02	Temporary Rock Sediment Dam Type B
1630.05	Temporary Diversion	1635.01	Rock Pipe Inlet Sediment Trap Type A
		1635.02	Rock Pipe Inlet Sediment Trap Type B

PROJECT REFERENCE NO. U-2550B	SHEET NO. EC-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# TEMPORARY ROCK SILT CHECK TYPE 'B' DETAIL

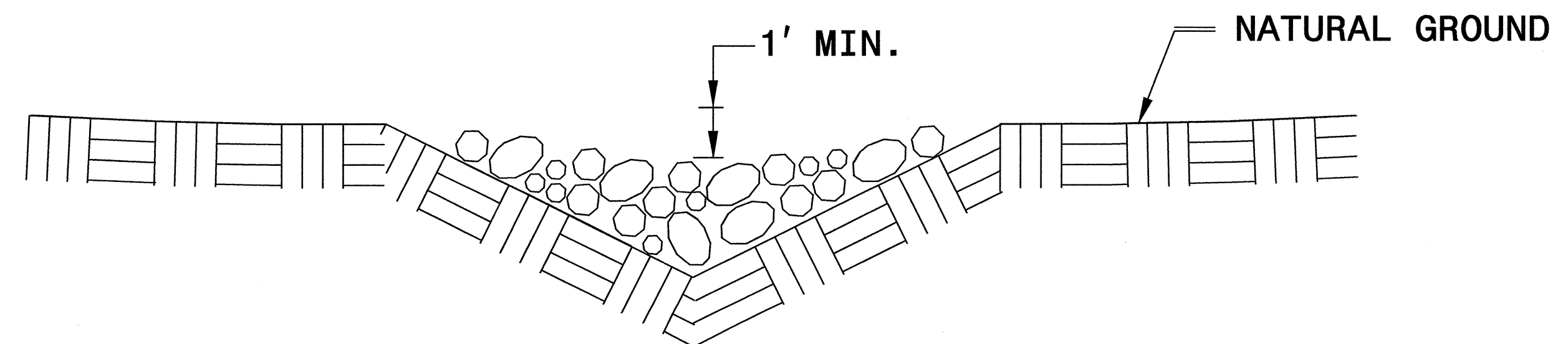


**ISOMETRIC VIEW**

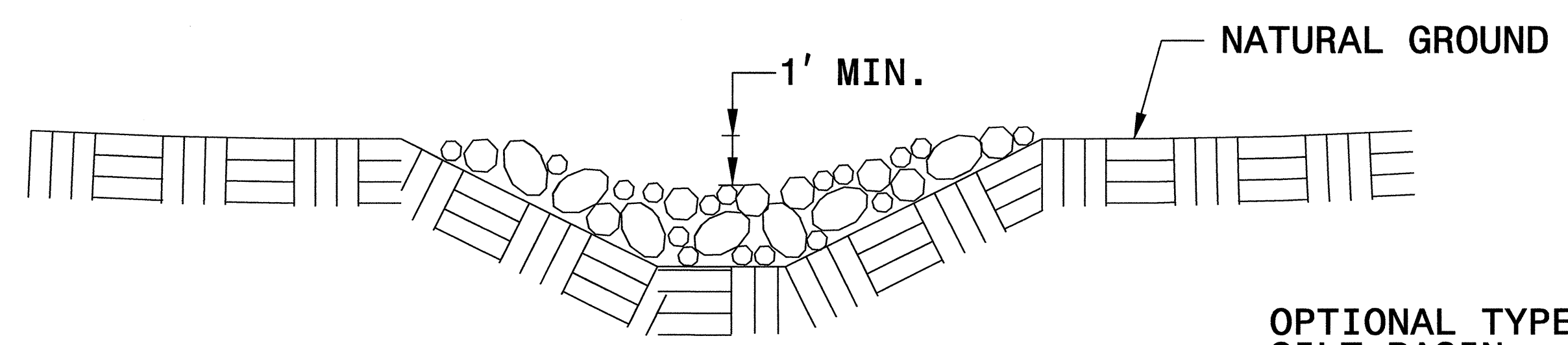
NOTES:

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

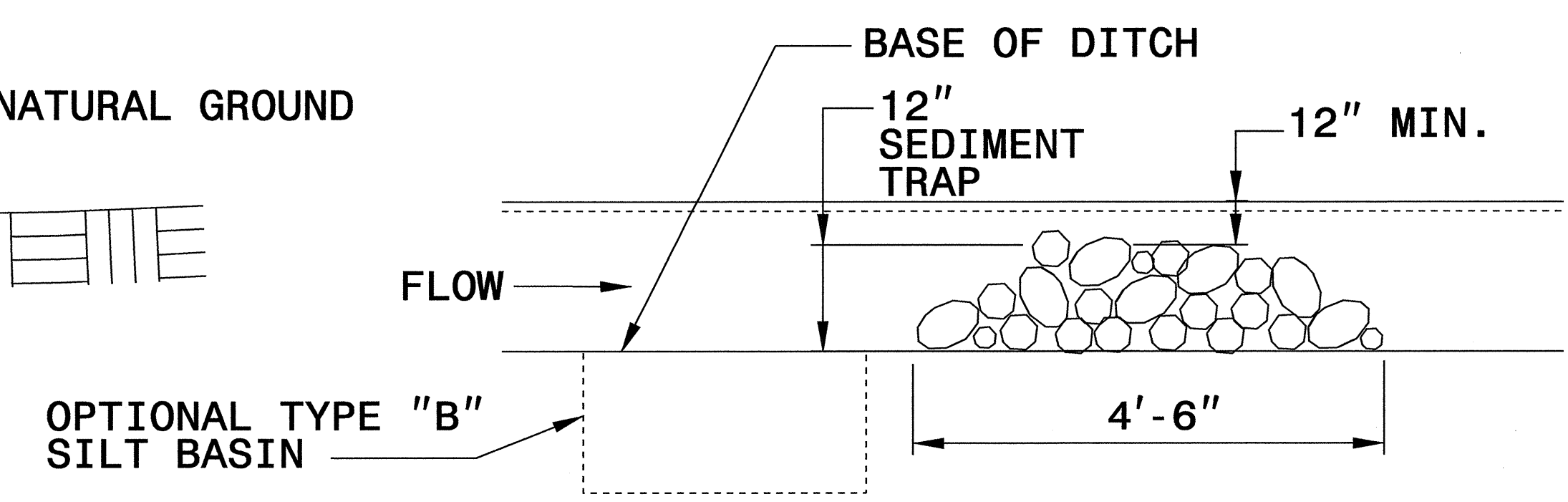
THE ENGINEER MAY DIRECT THE OPTION OF CLASS "A" STONE FOR SITES HAVING LESS THAN ONE (1) ACRE DRAINAGE AREA AND A DITCH GRADE LESS THAN 3%.



**CROSS SECTION VEE DITCH**



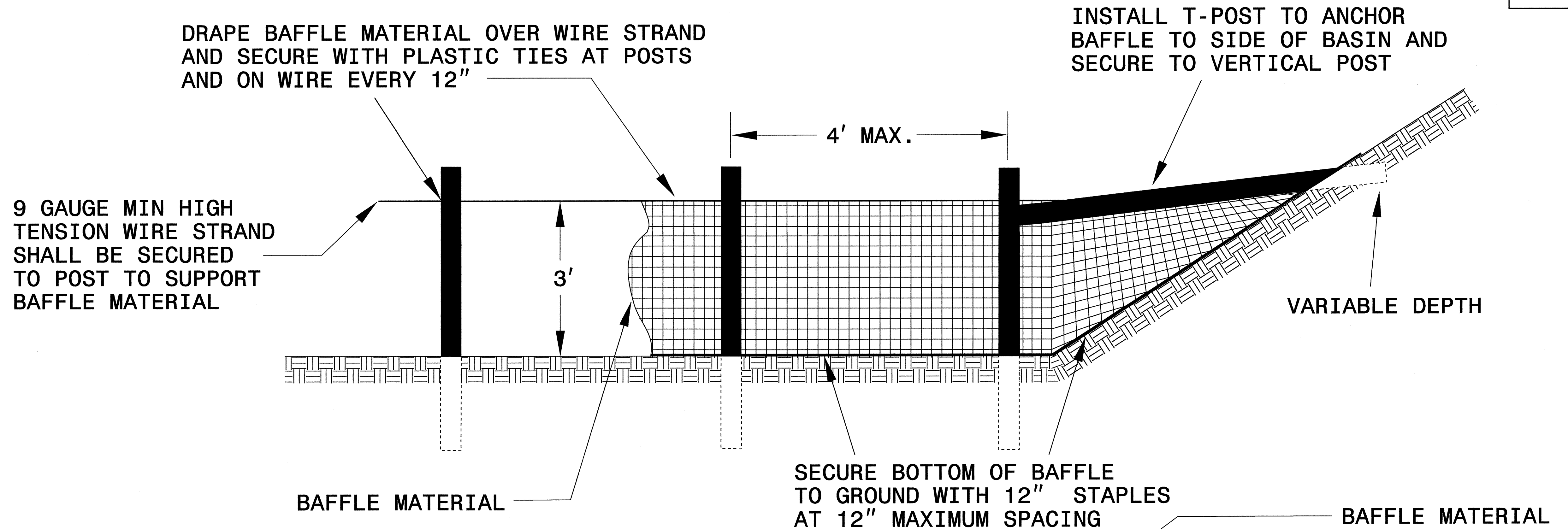
**CROSS SECTION TRAPEZOIDAL DITCH**



**ELEVATION VIEW**

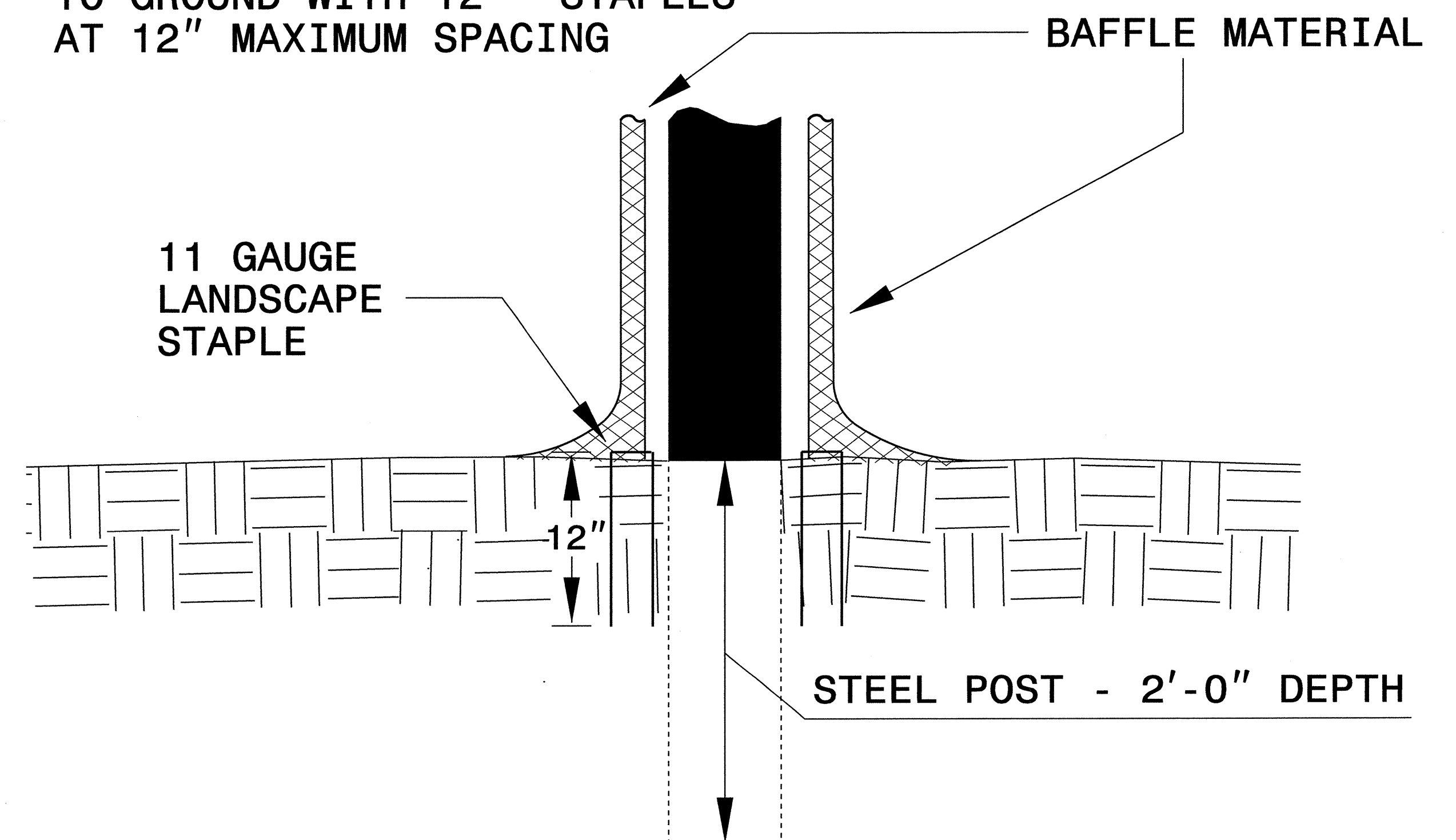
PROJECT REFERENCE NO. U-2550B	SHEET NO. EC-2A
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# COIR FIBER BAFFLE DETAIL



## NOTES:

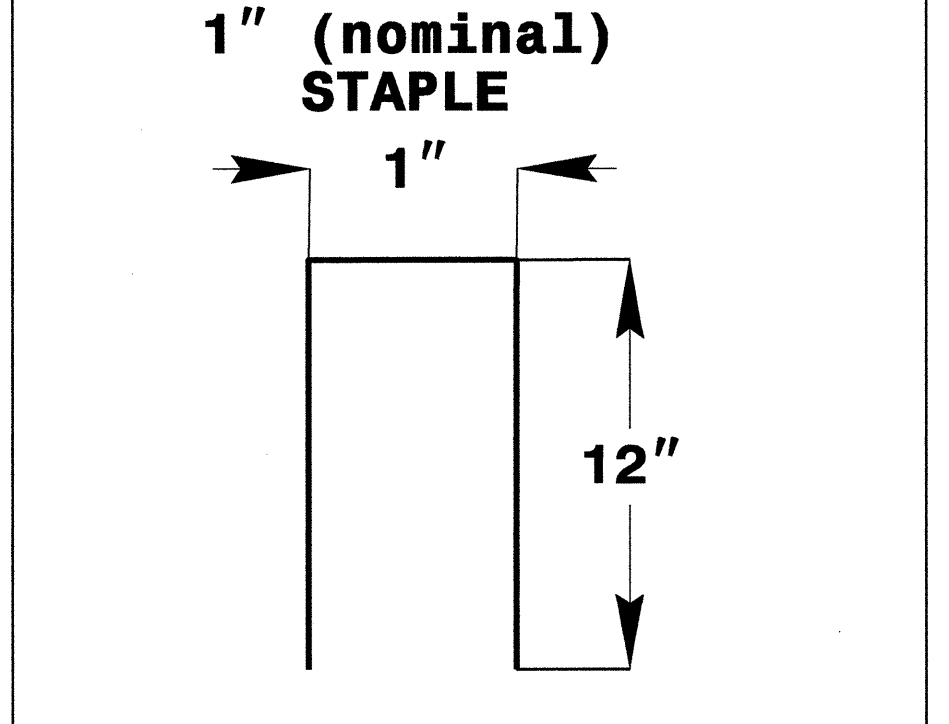
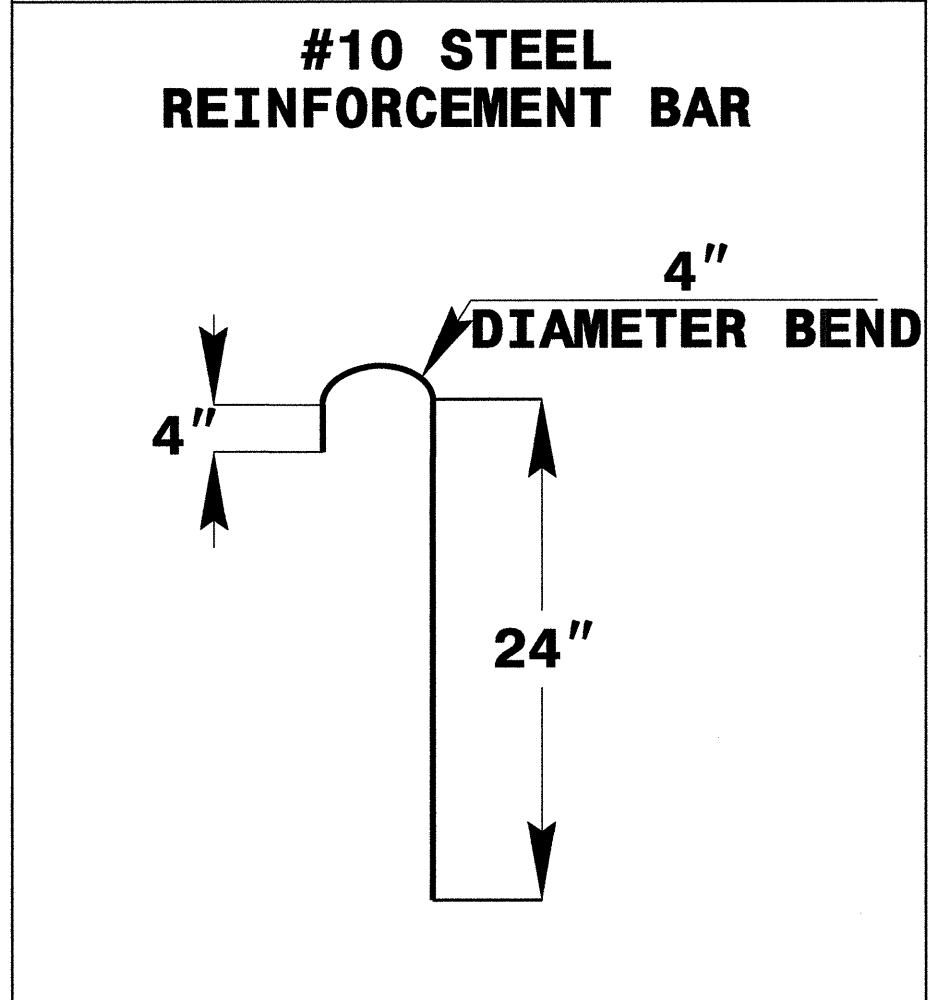
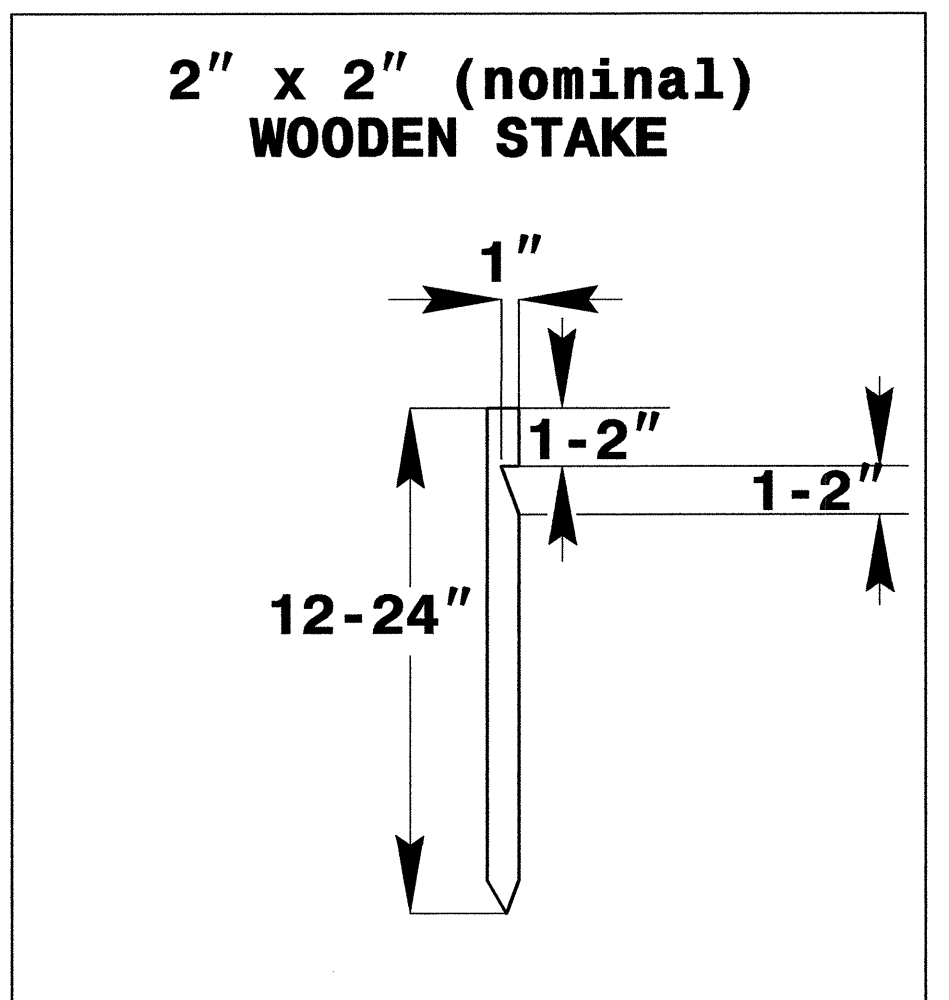
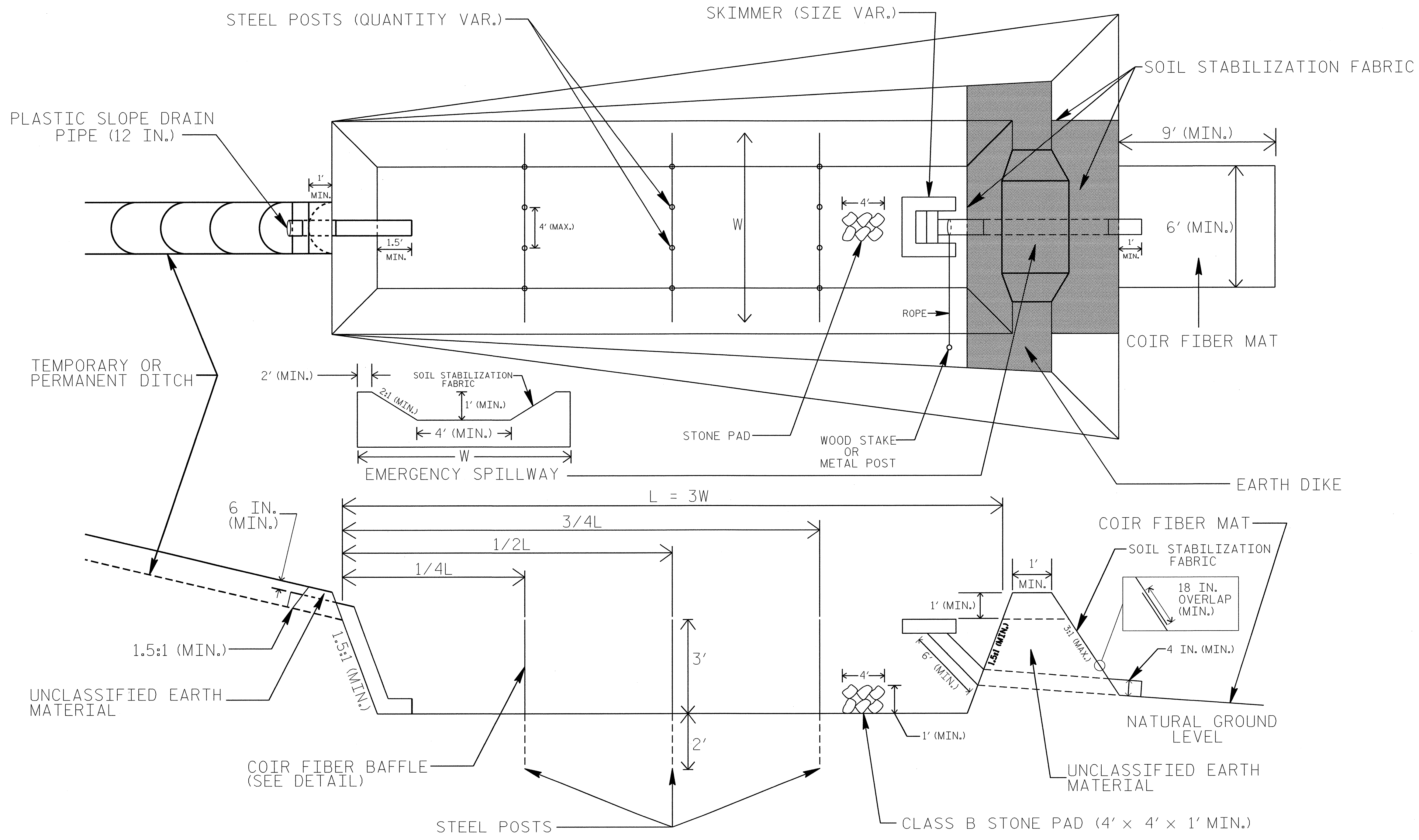
1. INSTALL THREE(3) COIR FIBER BAFFLES IN SILT BASINS AND SEDIMENT DAMS AT DRAINAGE OUTLETS WITH A SPACING OF  $\frac{1}{4}$  THE BASIN LENGTH.
2. TWO(2) COIR FIBER BAFFLES CAN BE INSTALLED IN SILT BASINS AND DAMS LESS THAN 20 FT. IN LENGTH WITH A SPACING OF  $\frac{1}{3}$  THE BASIN LENGTH.
3. TOP HEIGHT 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. U-2550B	SHEET NO. EC-2B
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# SKIMMER BASIN WITH BAFFLES DETAIL



## COIR FIBER MAT ANCHOR OPTIONS

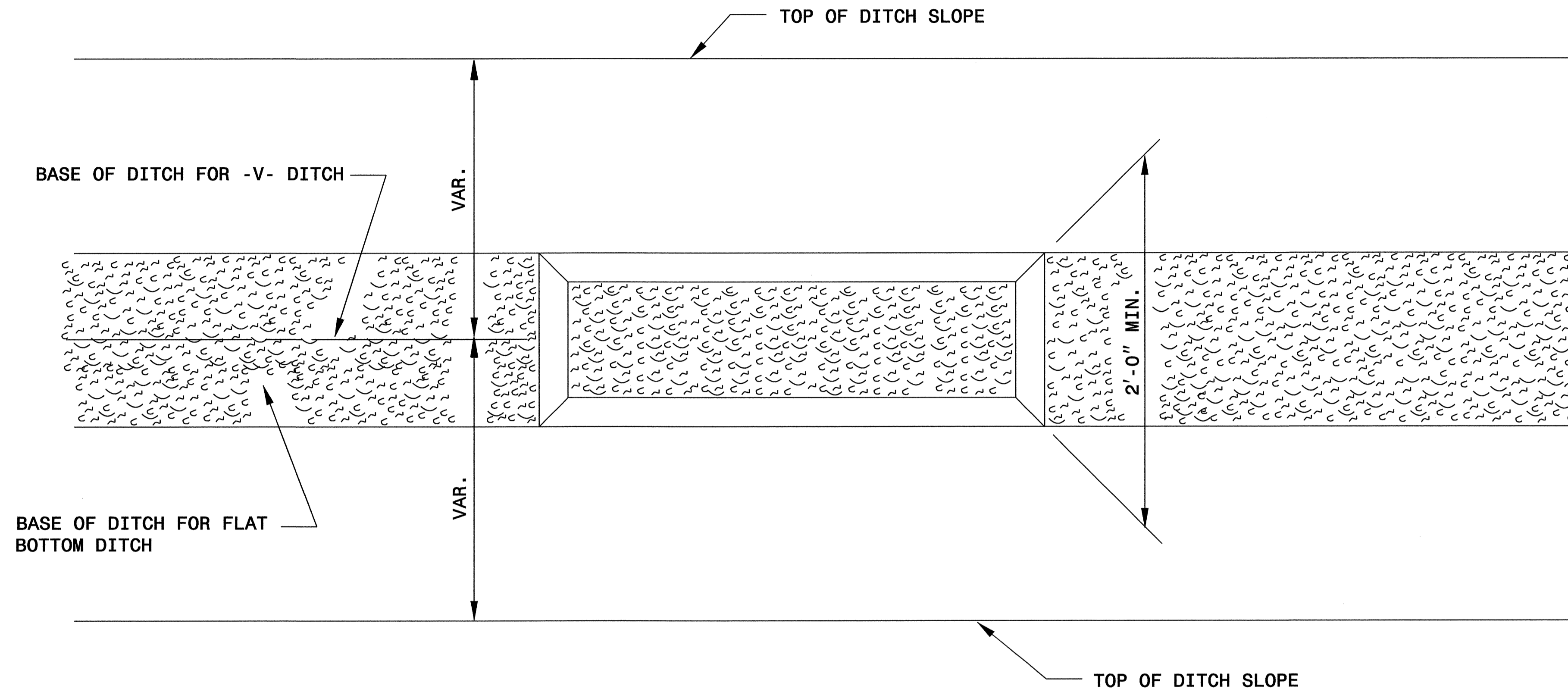
### NOTES

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 EMERGENCY SPILLWAY 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 FILTER FABRIC AS DIRECTED.
6. SOIL STABILIZATION FABRIC FOR EMERGENCY SPILLWAY SHALL BE ONE CONTINUOUS PIECE OF MATERIAL OR OVERLAPPED 18 IN. (MIN.).

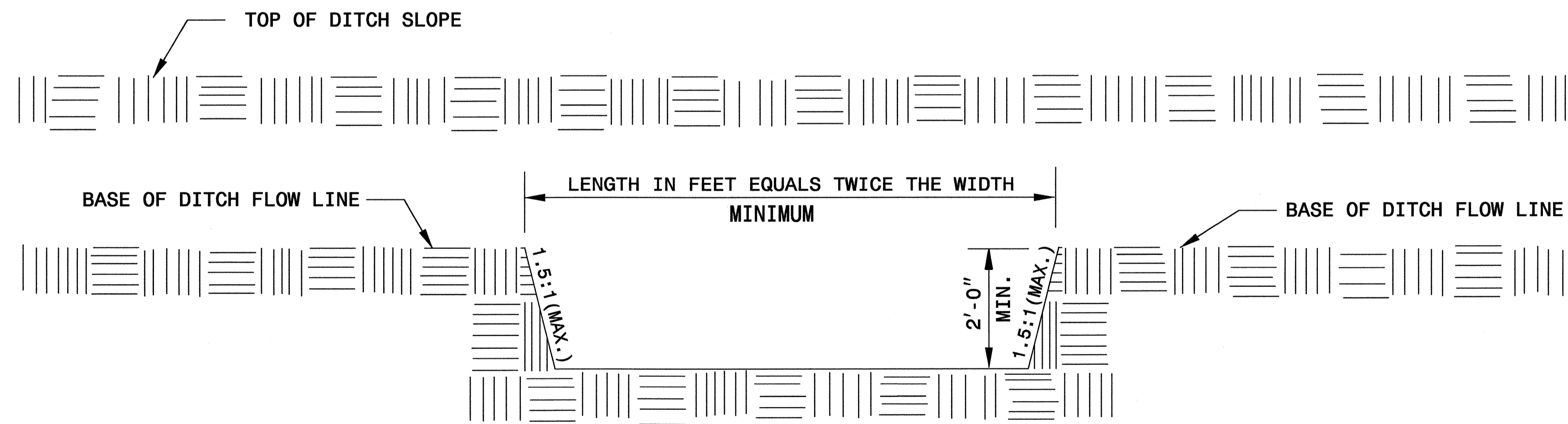
NOT TO SCALE

PROJECT REFERENCE NO. <i>U-2550B</i>	SHEET NO. <i>EC-2C</i>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# SILT BASIN 'B' DETAIL



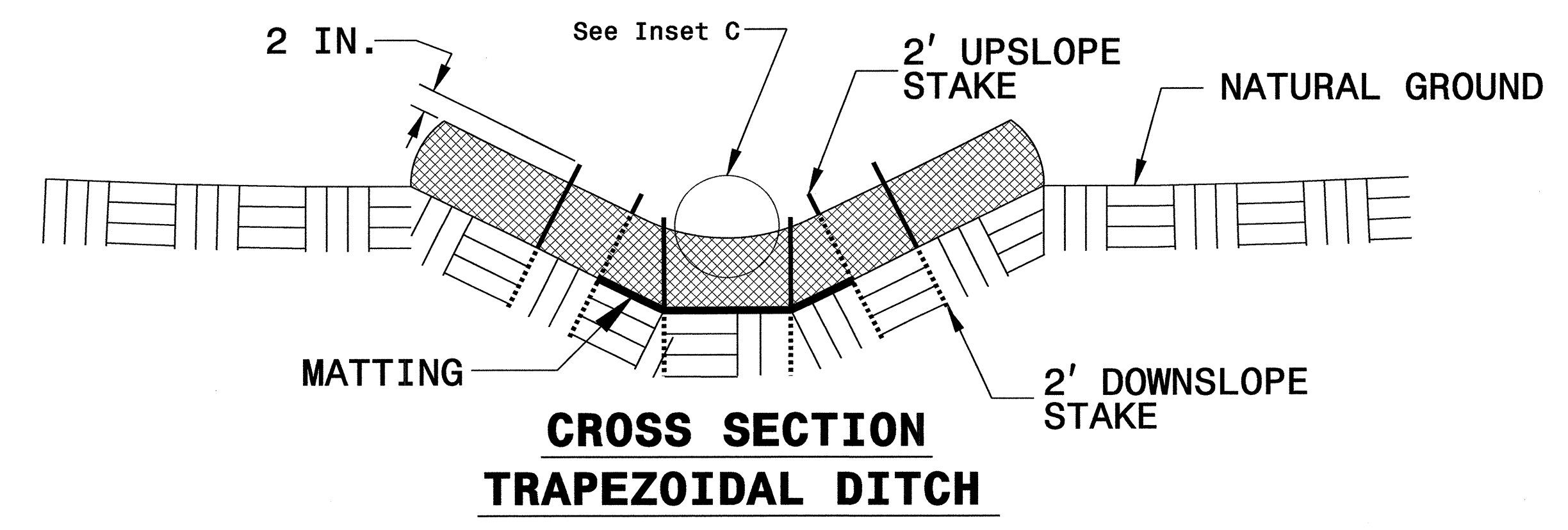
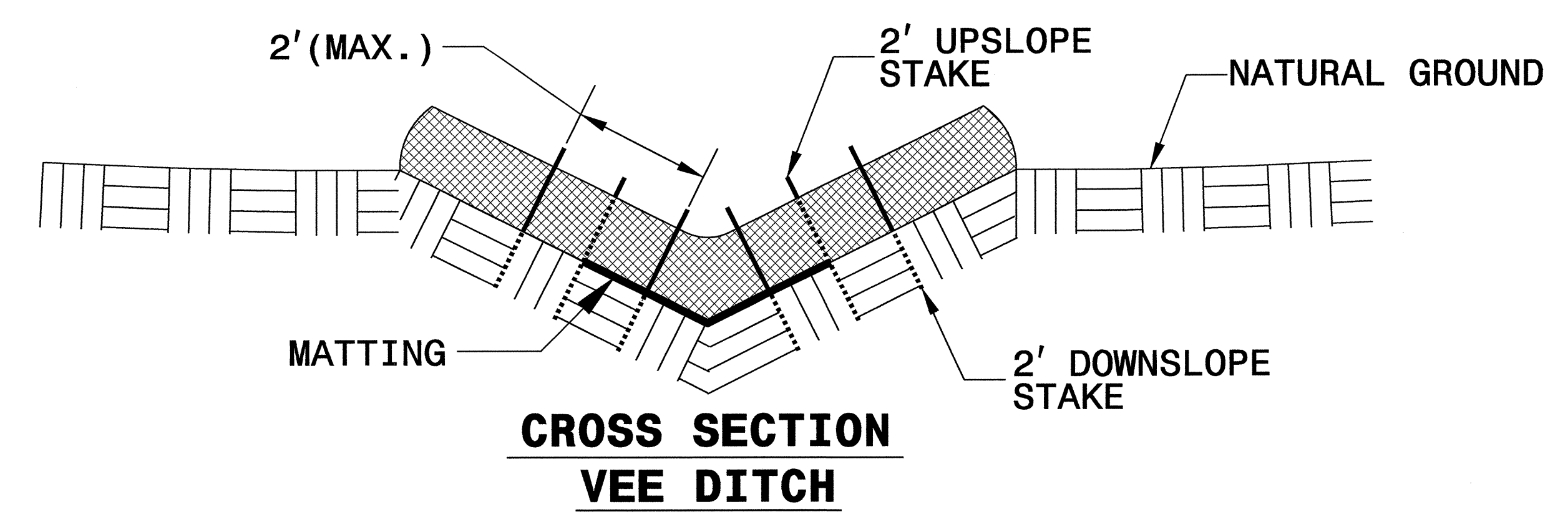
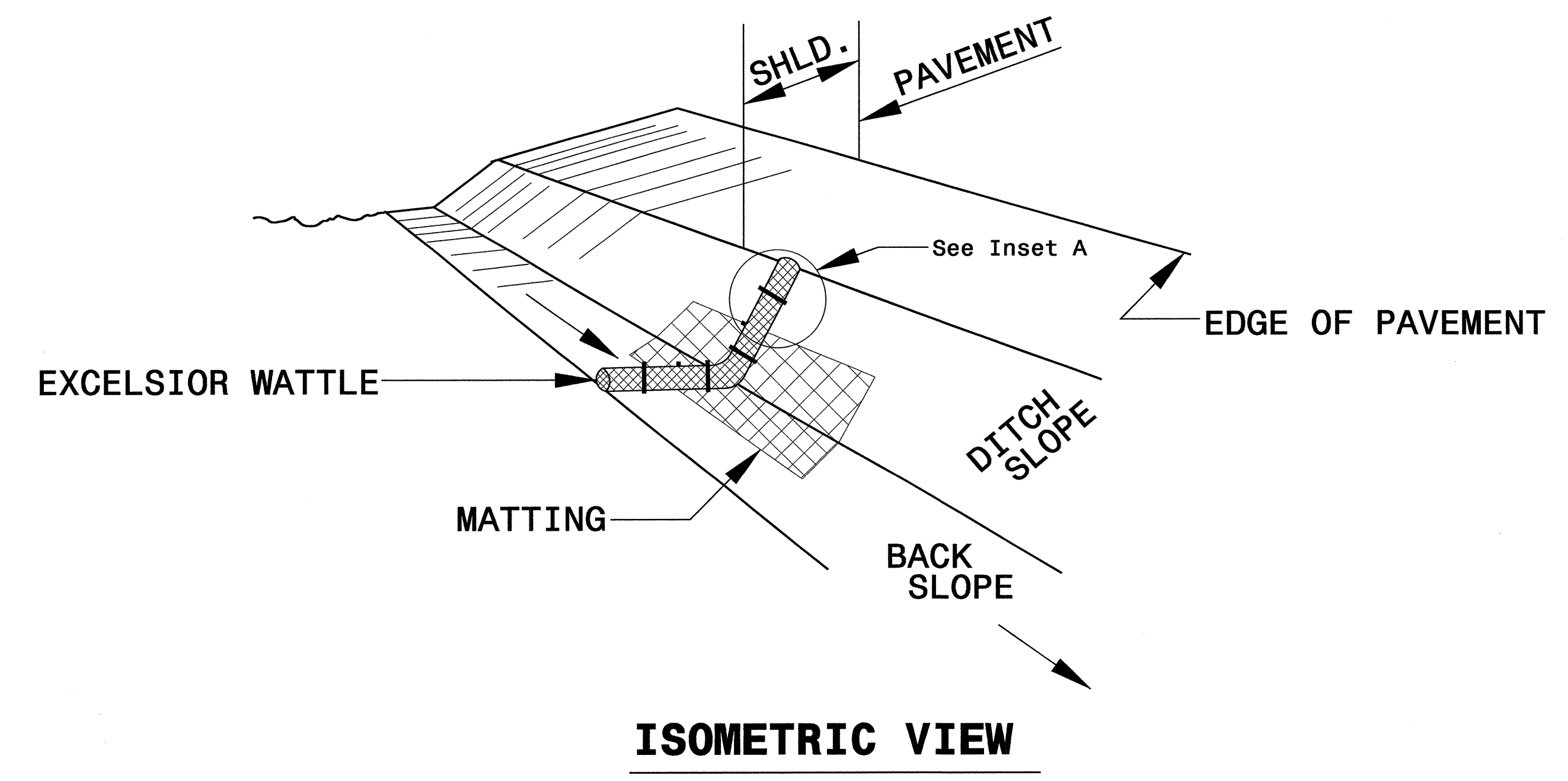
PLAN



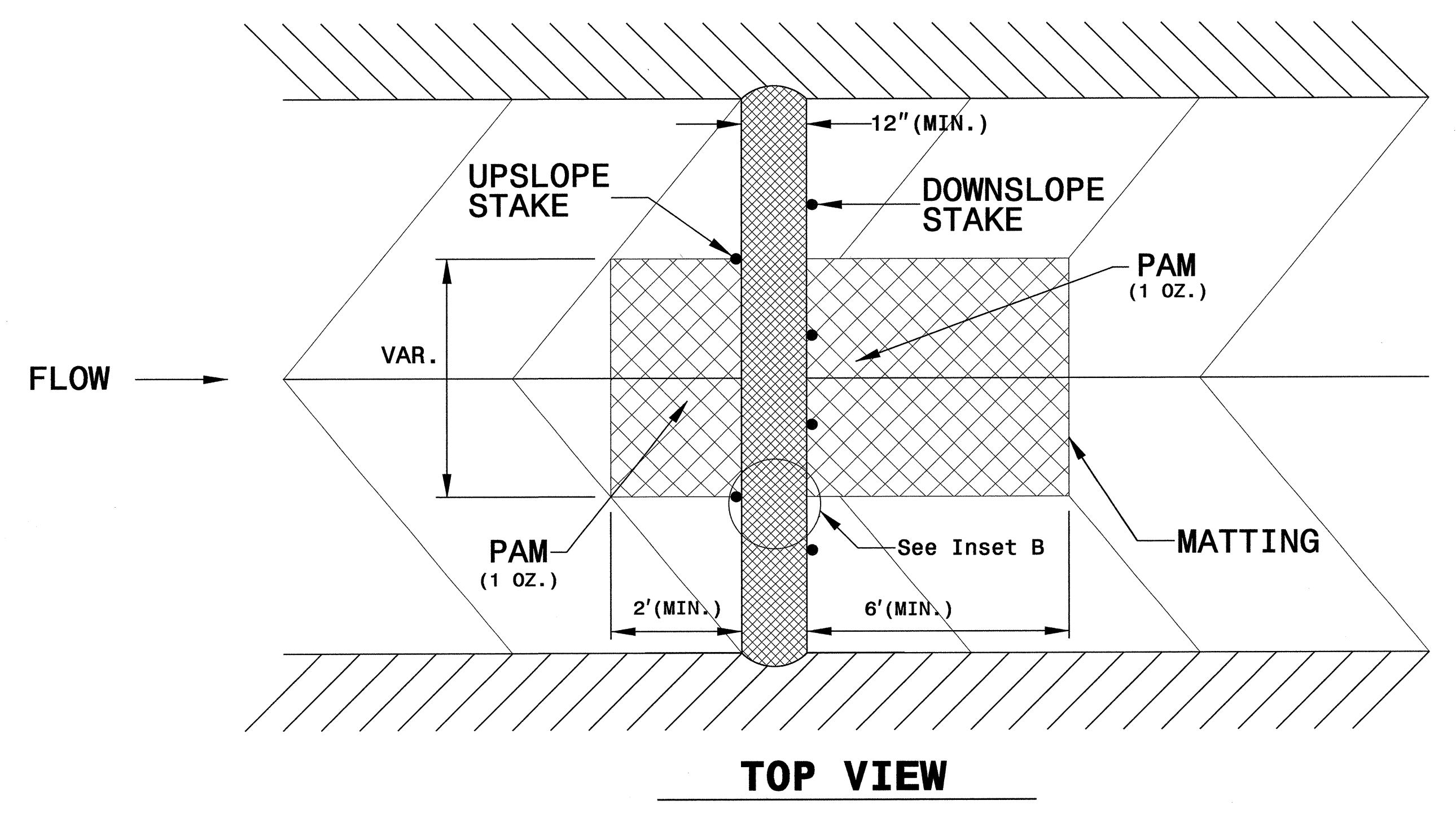
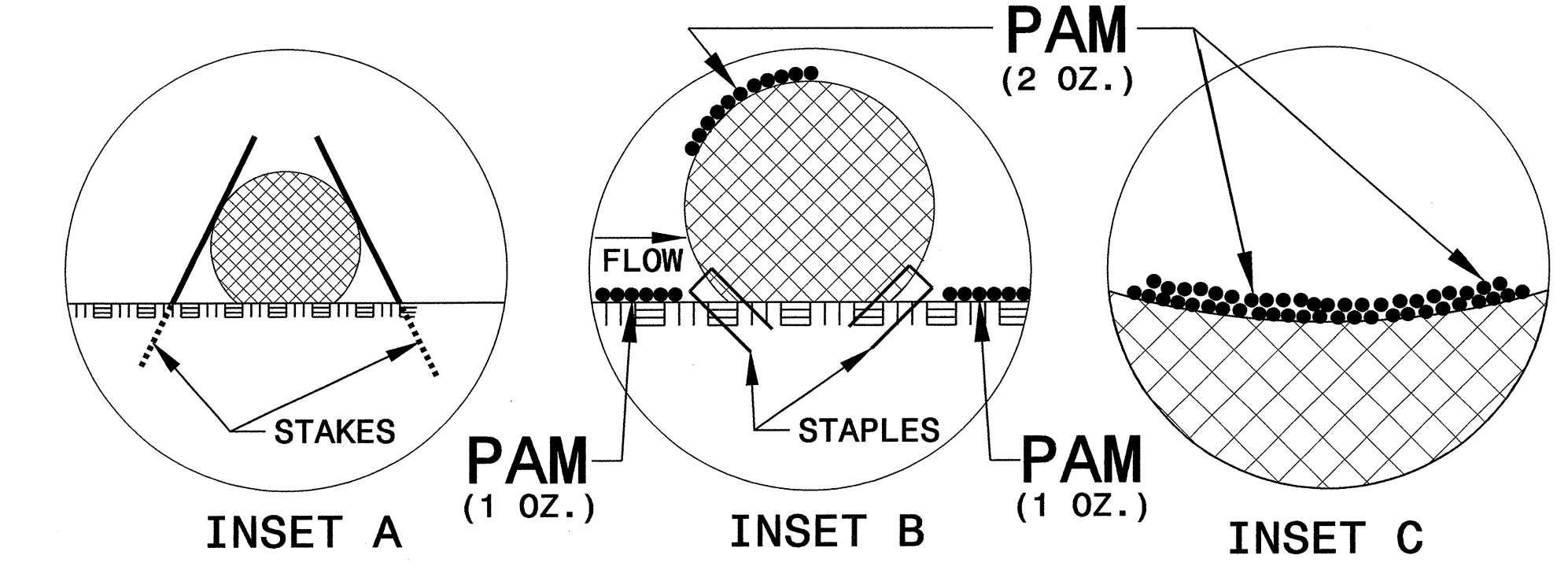
ELEVATION

PROJECT REFERENCE NO. U-2550B	SHEET NO. EC-2D
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL

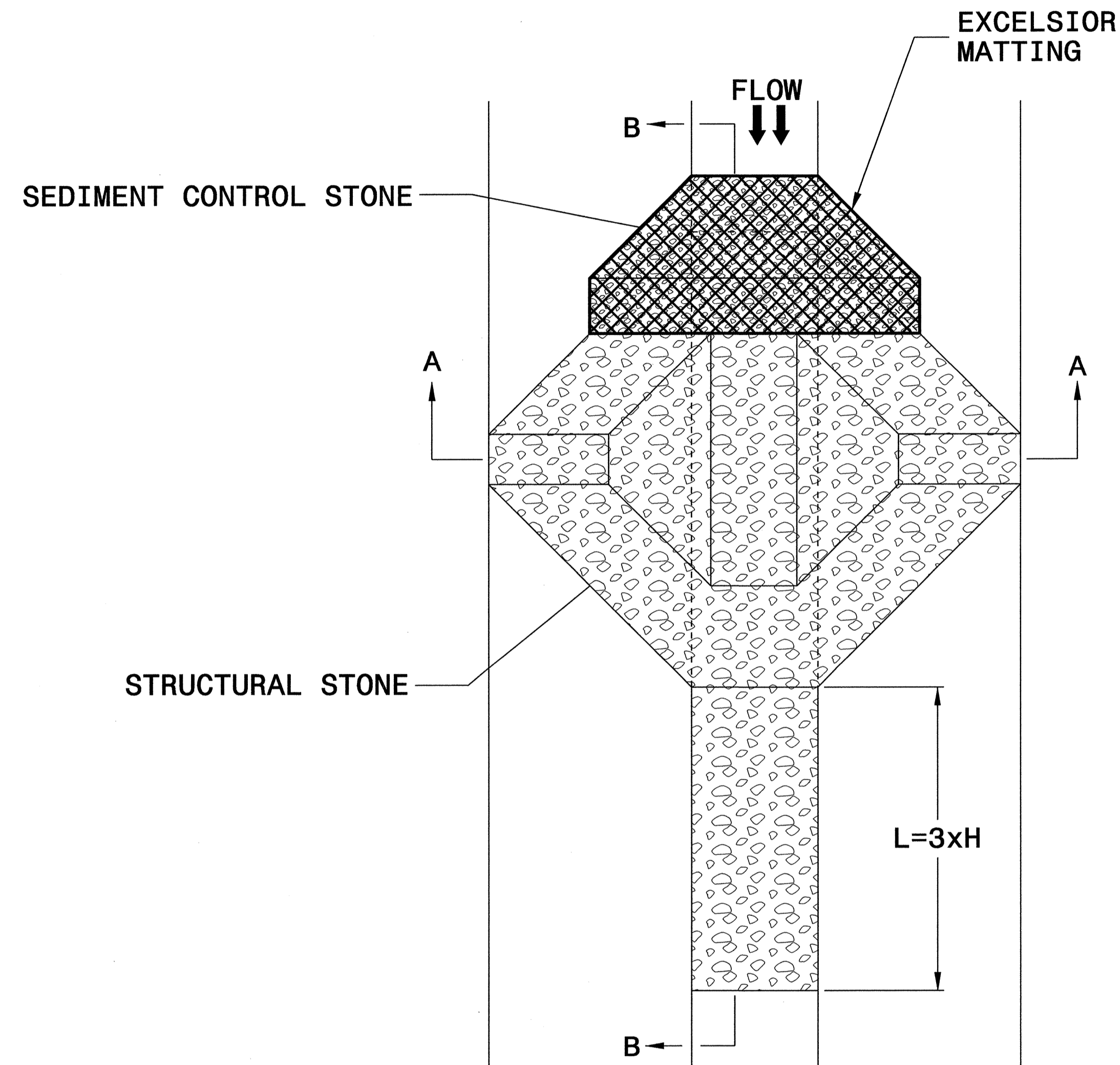


- NOTES:
- USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.
  - USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.
  - ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.
  - INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 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. U-2550B	SHEET NO. EC-2E
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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



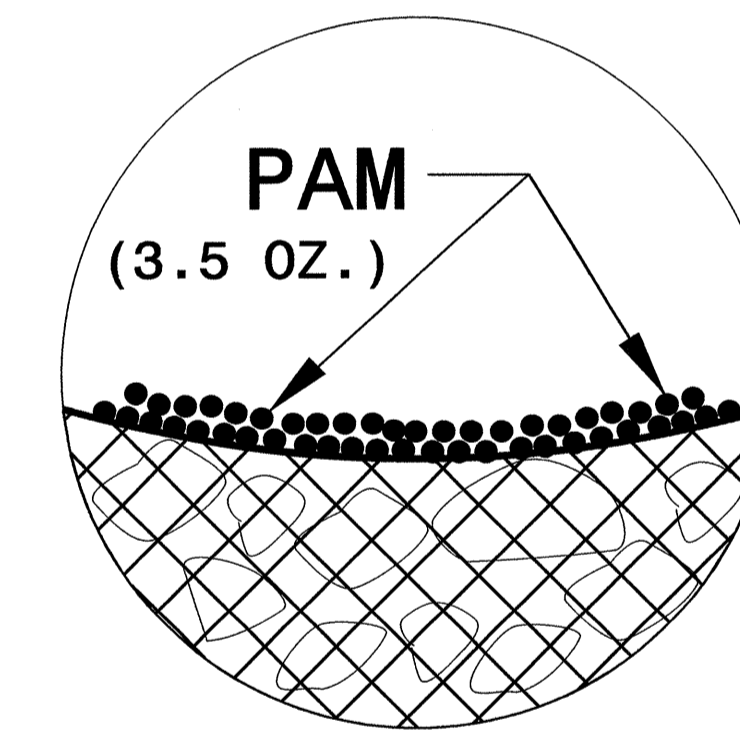
PLAN

## NOTES

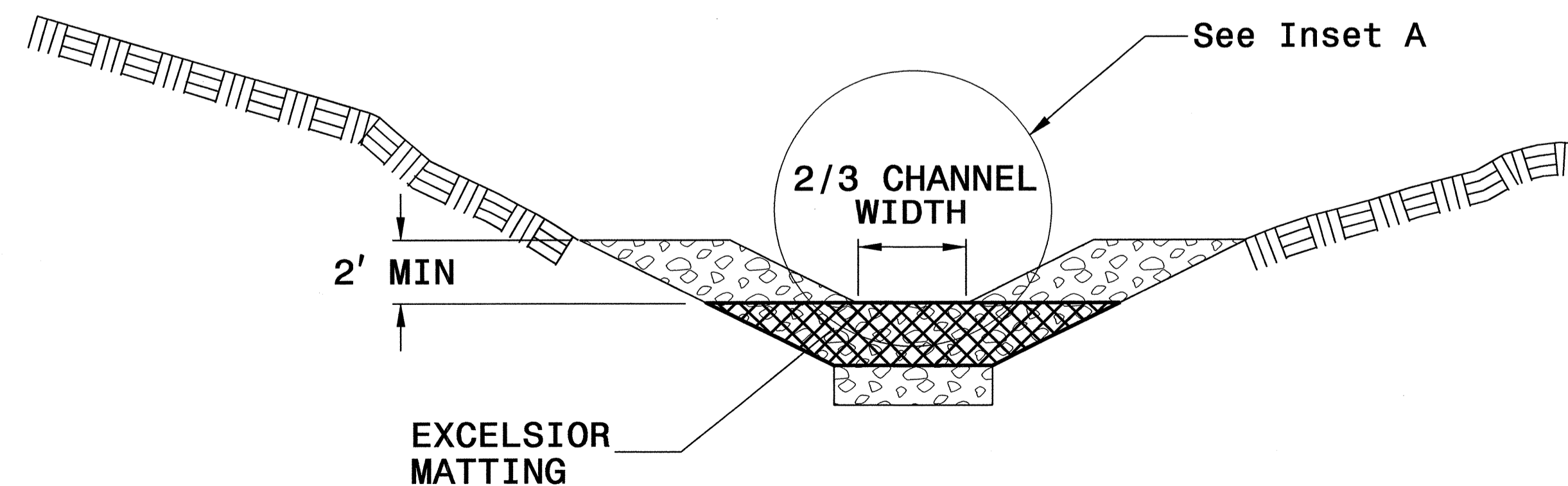
USE EXCELSIOR FOR MATTING MATERIAL AND ANCHOR MATTING SECTION AT TOP AND BOTTOM WITH CLASS B STONE.

PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH ROCK SILT CHECK.

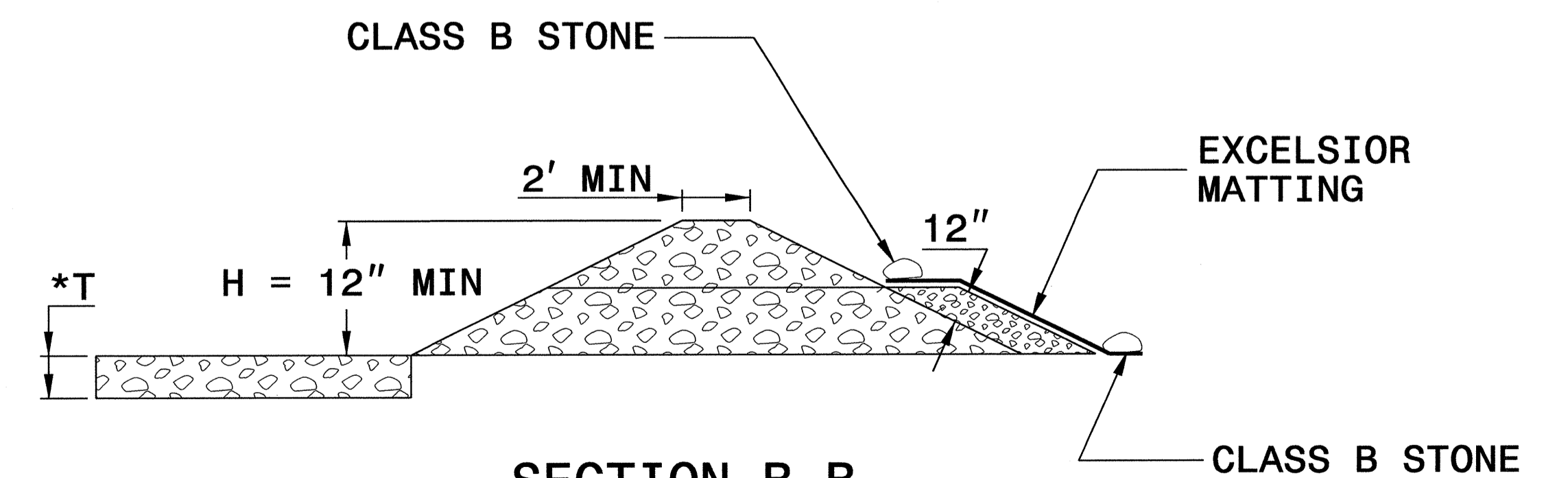
INITIALLY APPLY 3.5 OUNCES OF POLYACRYLAMIDE (PAM) TO TOP OF MATTING SECTION AND AFTER EVERY RAINFALL EVENT THAT EQUALS OR EXCEEDS 0.50 INCHES.



INSET A



SECTION A-A



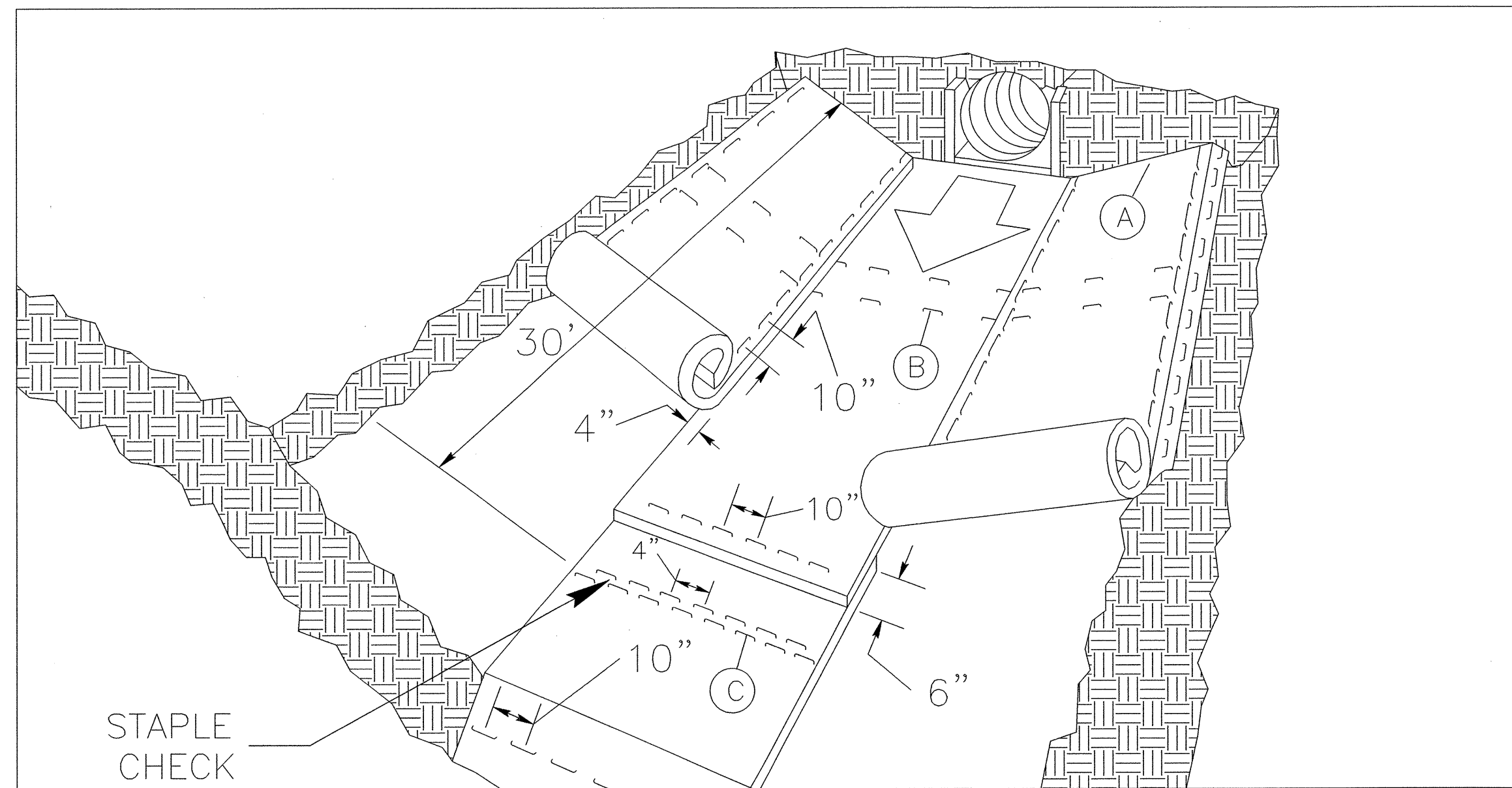
SECTION B-B

\*T = 12" MIN., 18" MAX.

NOT TO SCALE

PROJECT REFERENCE NO. U-2550B	SHEET NO. EC-2F
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# MATTING INSTALLATION DETAIL



**MATTING IN DITCHES**

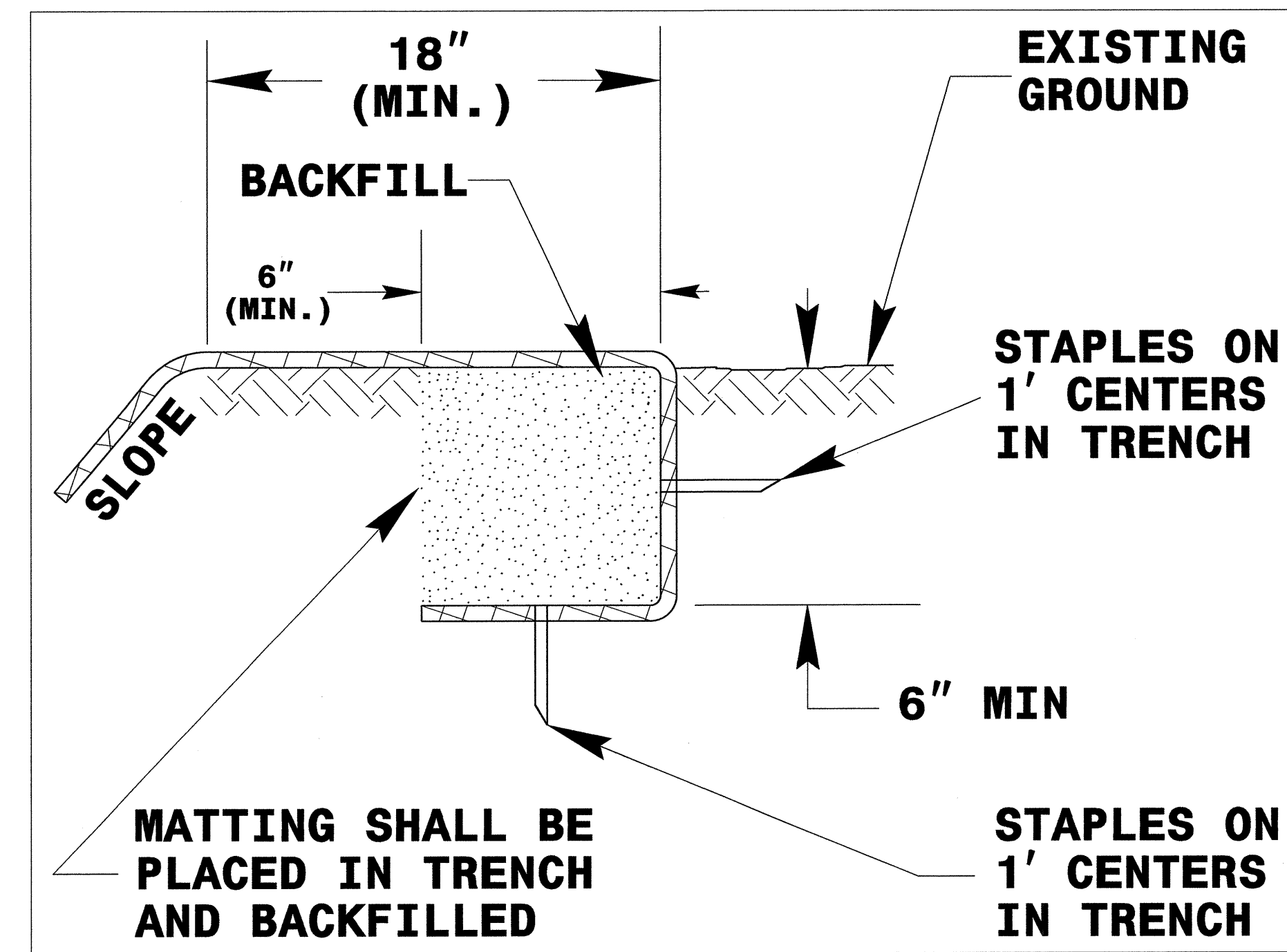
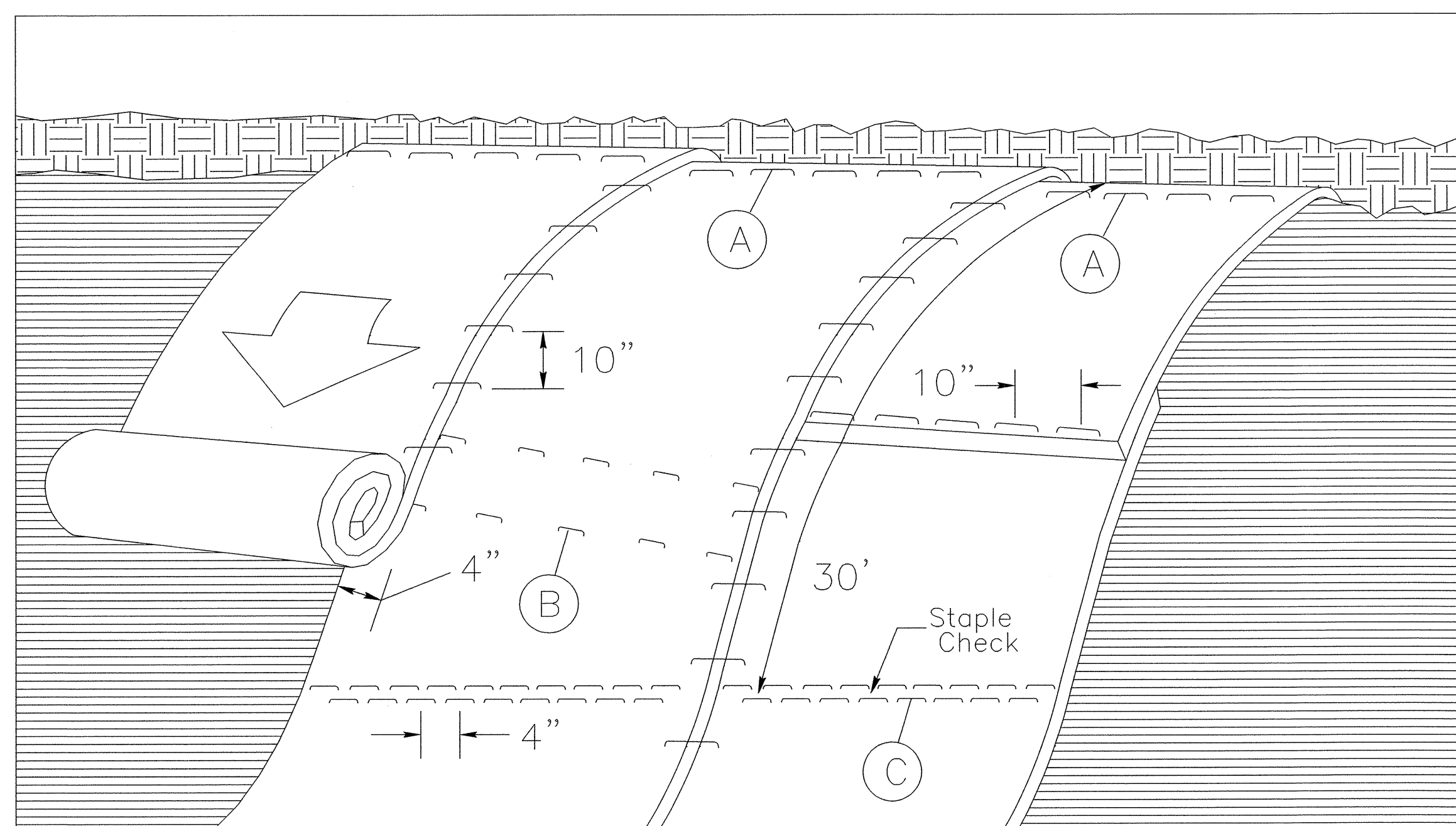


DIAGRAM (A)



**MATTING ON SLOPES**

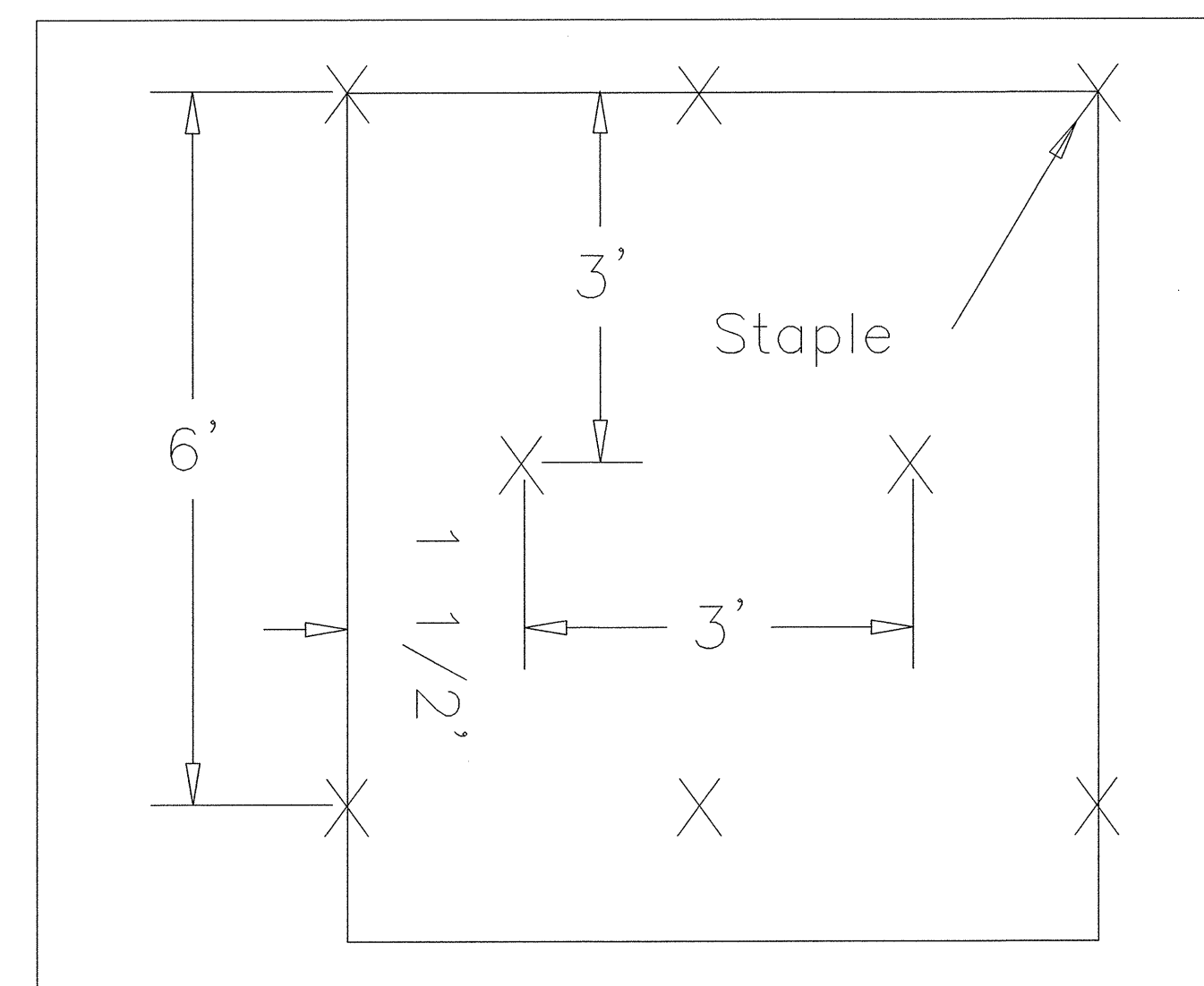


DIAGRAM (B)

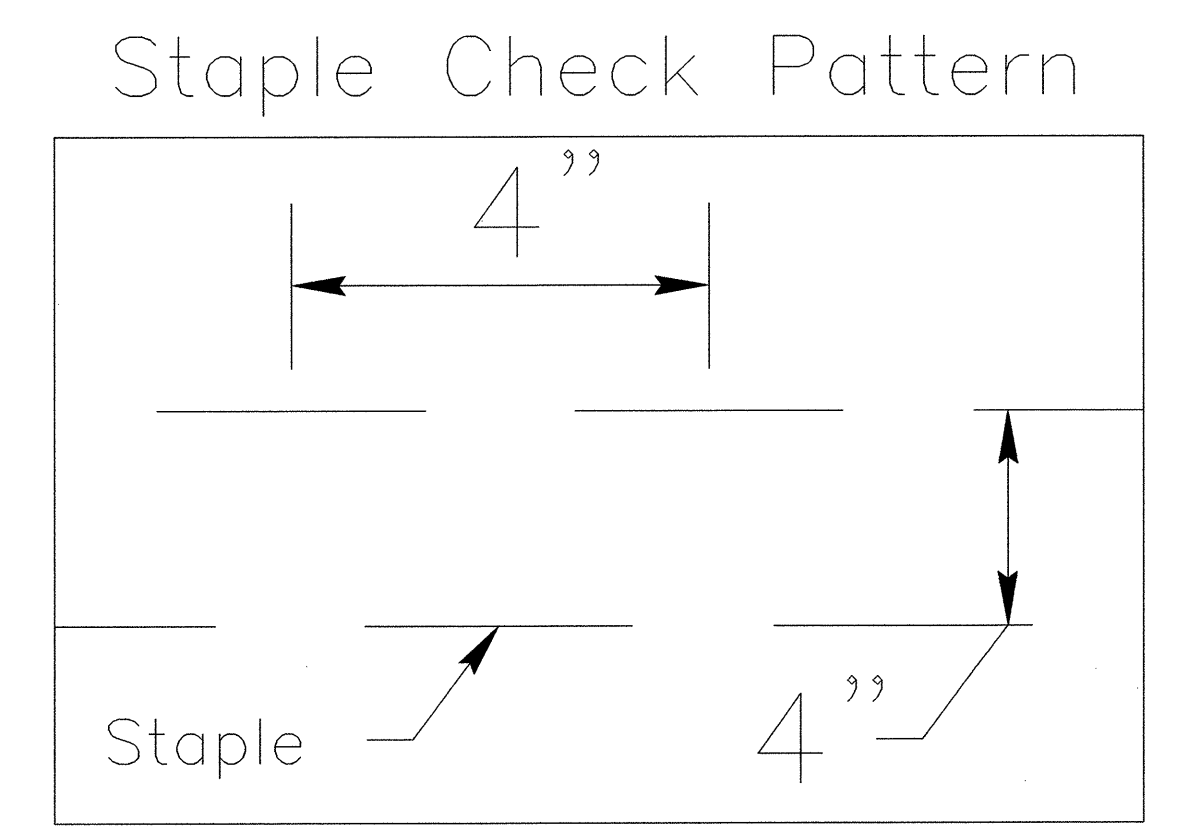


DIAGRAM (C)

**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>U-2550B</i>	SHEET NO. <i>EC-4/CONST.4</i>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

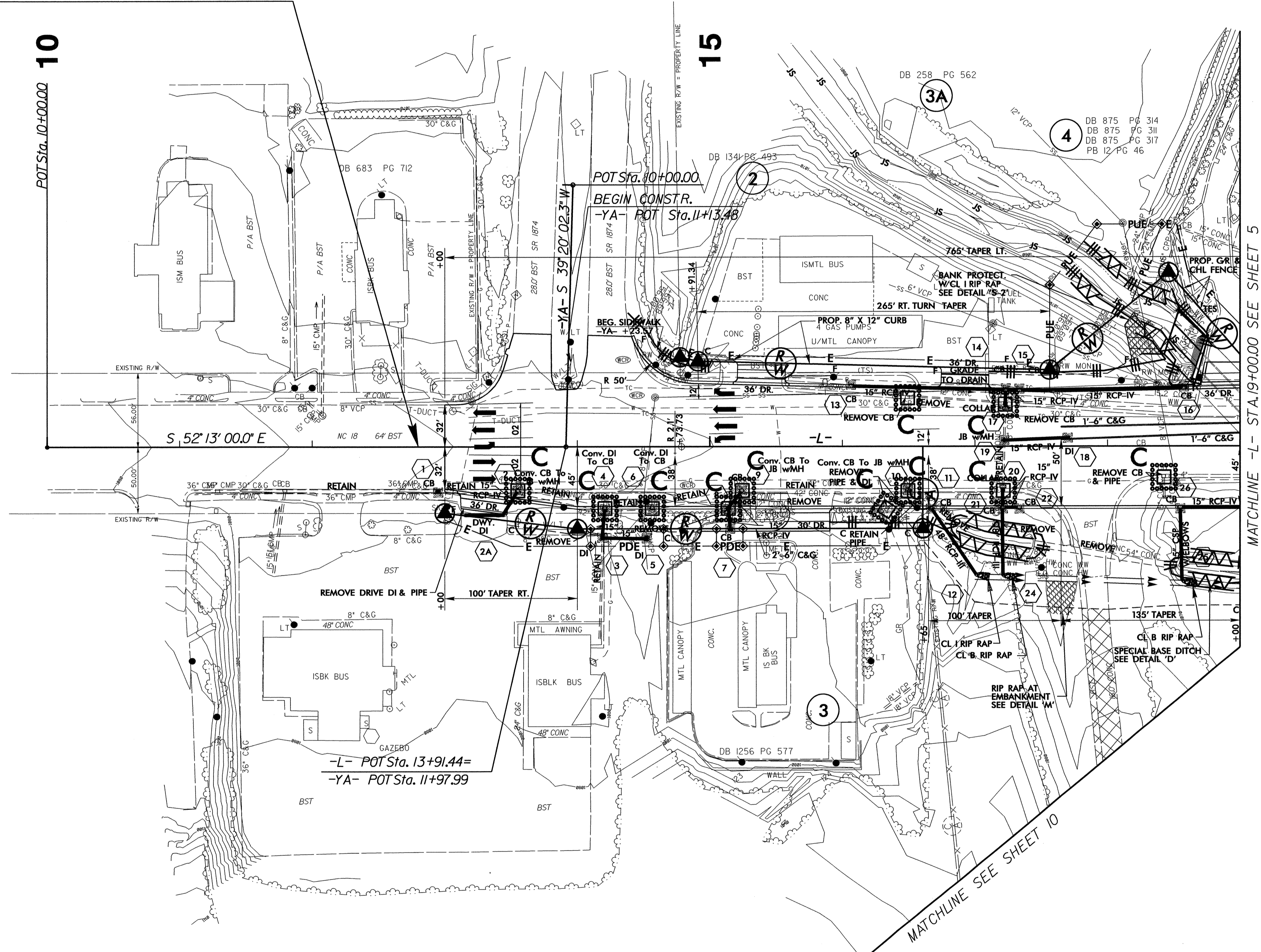
NOTE:  
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B  
AND TEMPORARY ROCK SILT CHECKS TYPE - A AT  
DRAINAGE OUTLETS.

CLEARING AND GRUBBING  
EROSION CONTROL FOR  
CONSTRUCTION SHEET 4

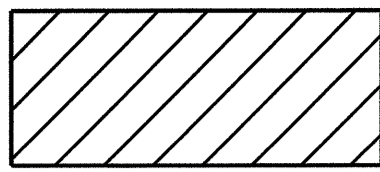
FOR -L- PROFILE SEE SHEET 12  
FOR DITCH DETAILS SEE SHEET 2-R

**STA. 12+80.00 -L- BEGIN TIP PROJECT U-2550B**

BEGIN CONSTRUCTION  
FOR SIGNAL WORK  
APPROXIMATELY 8950'  
NORTHWEST ALONG  
NC 18 (STERLING STREET)  
SEE SIGNAL PLANS



8/17/99

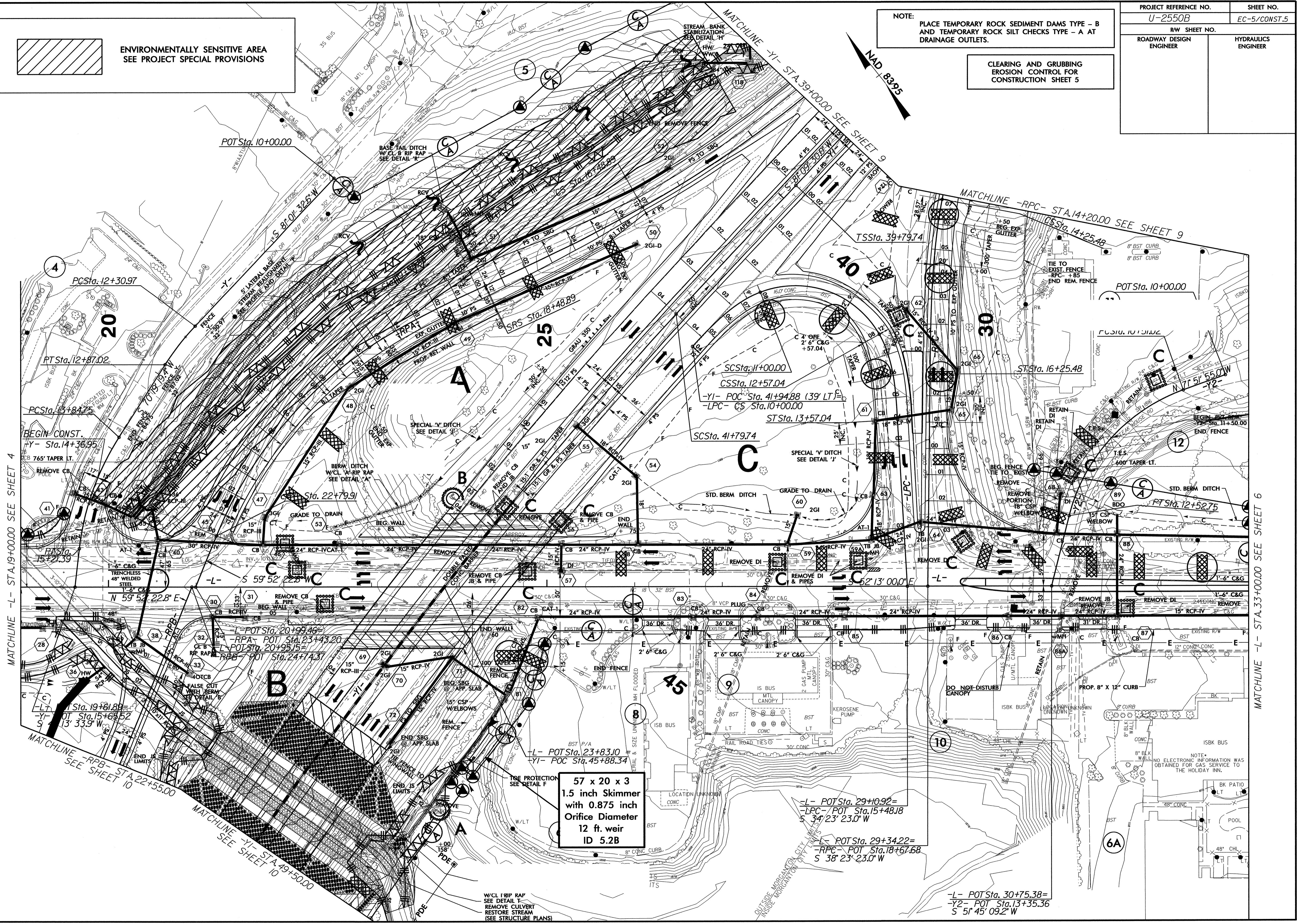


ENVIRONMENTALLY SENSITIVE AREA  
SEE PROJECT SPECIAL PROVISIONS

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

CLEARING AND GRUBBING  
EROSION CONTROL FOR  
CONSTRUCTION SHEET 5

PROJECT REFERENCE NO. U-2550B	SHEET NO. EC-5/CONST.5
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	



57 x 20 x 3  
1.5 inch Skimmer  
with 0.875 inch  
Orifice Diameter  
12 ft. weir  
ID 5.2B

-L- POTSta. 29+0.92=  
-LPC- POTSta. 15+48.18  
S 34° 23' 23.0" W

-L- POTSta. 29+34.22=  
-RPC- POTSta. 18+67.68  
S 38° 23' 23.0" W

-L- POTSta. 30+75.38=  
-Y2- POTSta. 13+35.36  
S 5° 45' 09.2" W

W/C L RIP RAP  
SEE DETAIL F  
REMOVE CULVERT  
RESTORE STREAM  
(SEE STRUCTURE PLANS)

23-FEB-2011 10:24  
R:\Environmental\Design\2550b\_EC\_psh\_05.dgn  
Author: AT RENV2550B

MATCHLINE -L- STA.19+00.00 SEE SHEET 4

MATCHLINE -RPB- STA.22+55.00 SEE SHEET 10

MATCHLINE -YI- STA.49+50.00 SEE SHEET 10

OUTSIDE -MORGANTON CITY LIMITS  
INSIDE -MORGANTON CITY LIMITS

MATCHLINE -L- STA.33+00.00 SEE SHEET 6

MATCHLINE -YI- STA.39+00.00 SEE SHEET 9

MATCHLINE -RPC- STA.14+20.00 SEE SHEET 9

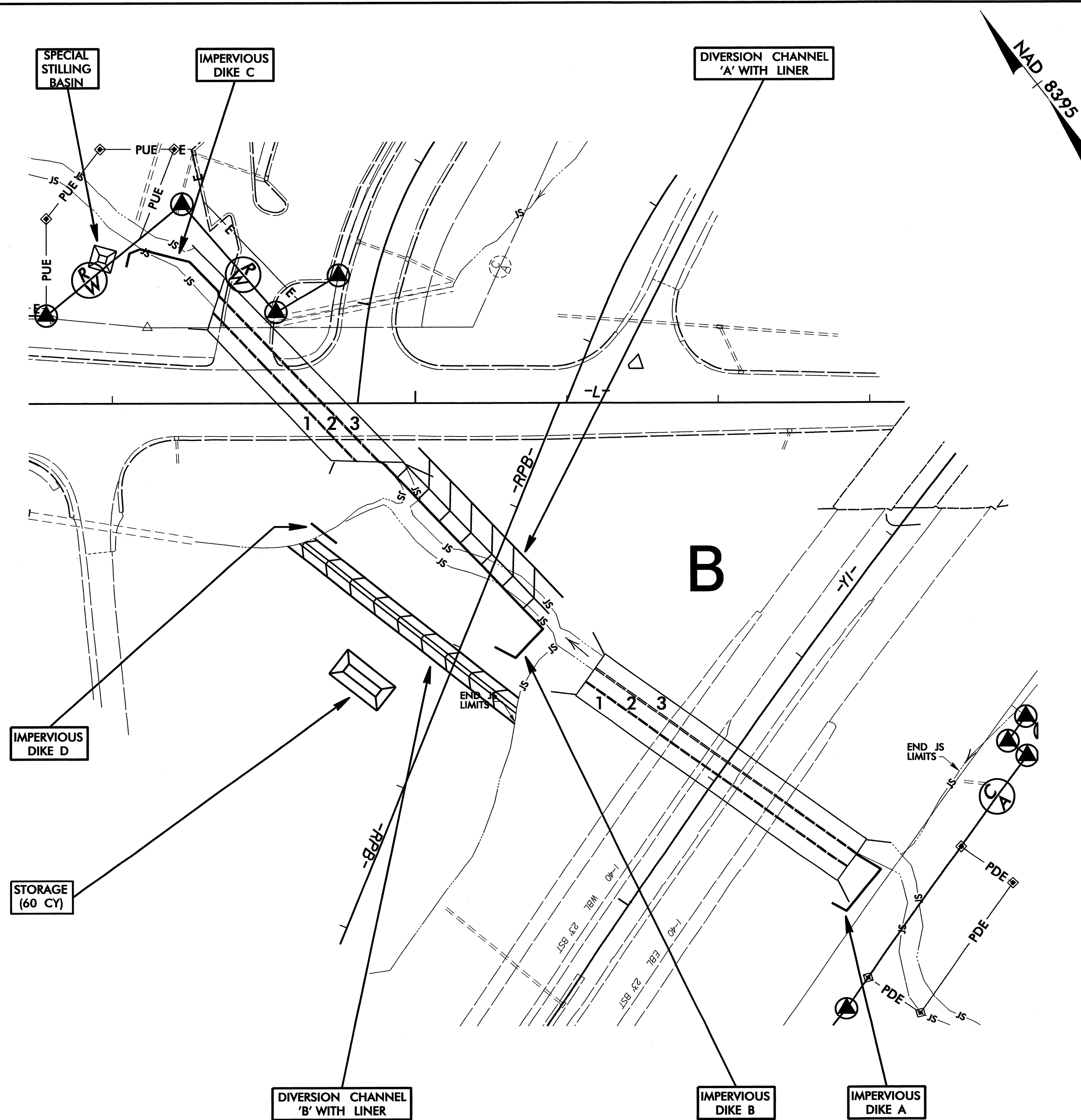
NOTE:  
NO ELECTRONIC INFORMATION  
WAS OBTAINED FOR GAS SERVICE TO  
THE HOLIDAY INN.

# CULVERT CONSTRUCTION SEQUENCE STA. 19+31.37 -L- (SHEET 1 OF 5)

PROJECT REFERENCE NO. U-2550B	SHEET NO. EC-6/CONST.5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

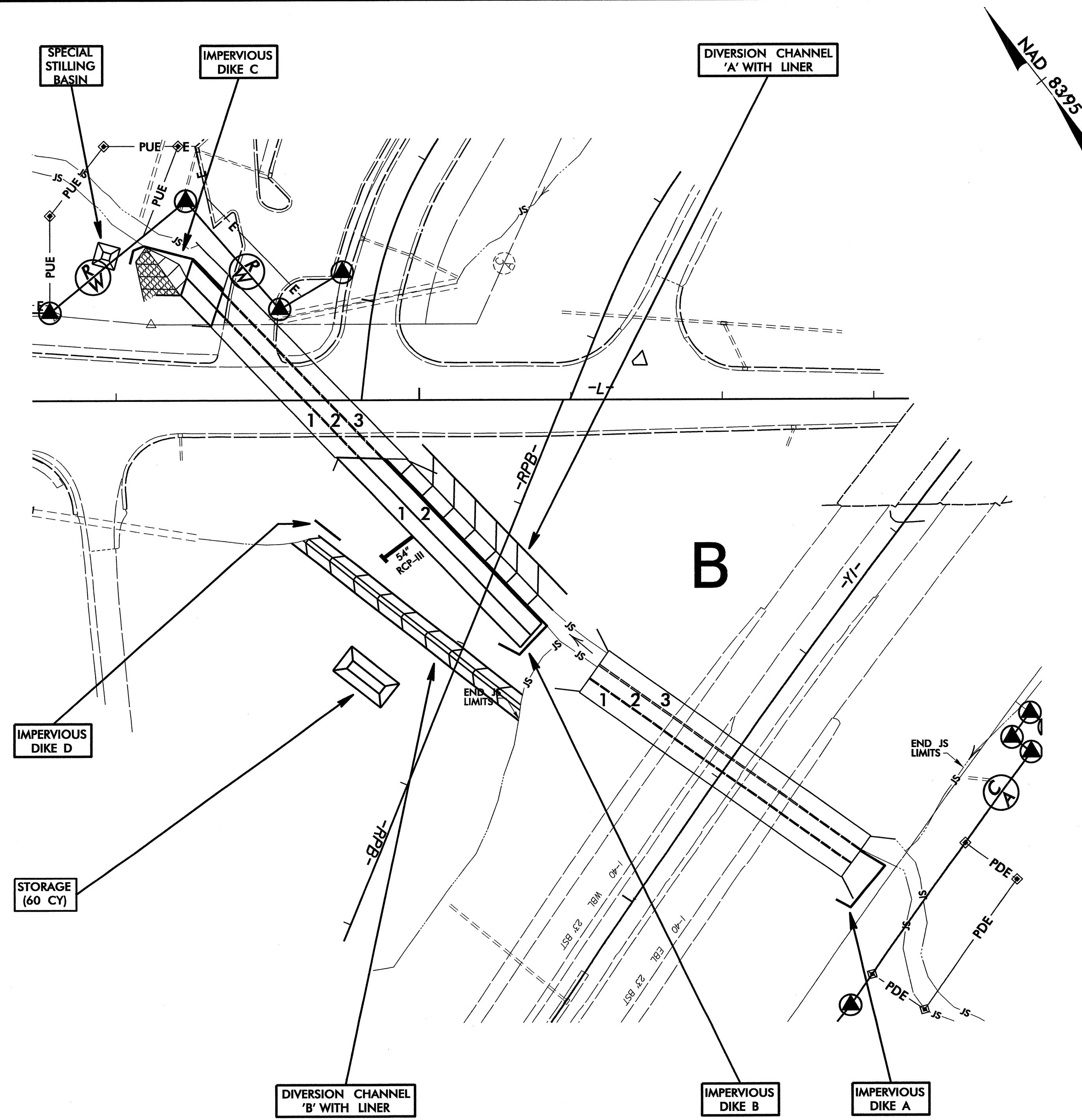
## PHASE I

1. UTILIZE STILLING BASIN (60CY) AND SPECIAL STILLING BASIN(S) AS NEEDED THROUGHOUT CULVERT CONSTRUCTION.
2. CONSTRUCT IMPERVIOUS DIKES A, B, AND C, AND DIVERSION CHANNEL 'A' WITH LINER (10 FT. BASE, 7 FT. DEEP, 2:1 SIDE SLOPE), DIVERTING FLOW THROUGH BARREL 3 OF EXISTING CULVERTS.
3. CONSTRUCT IMPERVIOUS DIKE D AND DIVERSION CHANNEL 'B' WITH LINER (3 FT. BASE, 3 FT. DEEP, 2:1 SIDE SLOPES), DIVERTING TRIBUTARY INTO DIVERSION CHANNEL 'A' WITH LINER.
4. CLEAN OUT BARRELS 1 AND 2 OF EXISTING CULVERTS.



## PHASE II

5. CONSTRUCT PROPOSED DOWNSTREAM EXTENSION OF BARRELS 1 AND 2, AND DOWNSTREAM CHANNEL IMPROVEMENTS ON THE WESTERN BANK.
6. CONSTRUCT PROPOSED MIDDLE EXTENSION OF BARRELS 1 AND 2 TO THE PROPOSED CULVERT BEND.
7. CONNECT PROPOSED 54" RCP TO BARREL 1.



# CULVERT CONSTRUCTION SEQUENCE STA. 19 + 31.37 -L- (SHEET 2 OF 5)

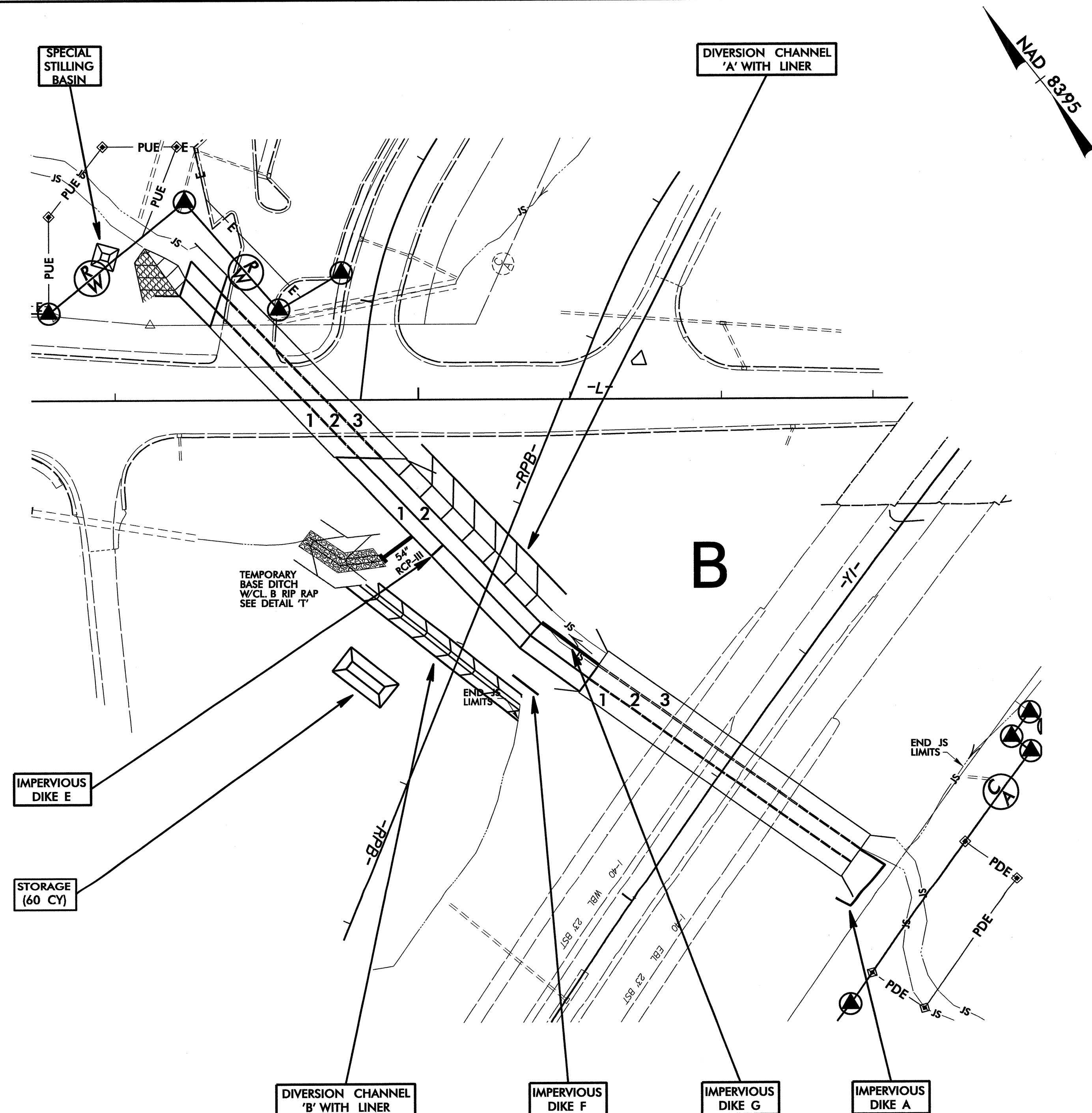
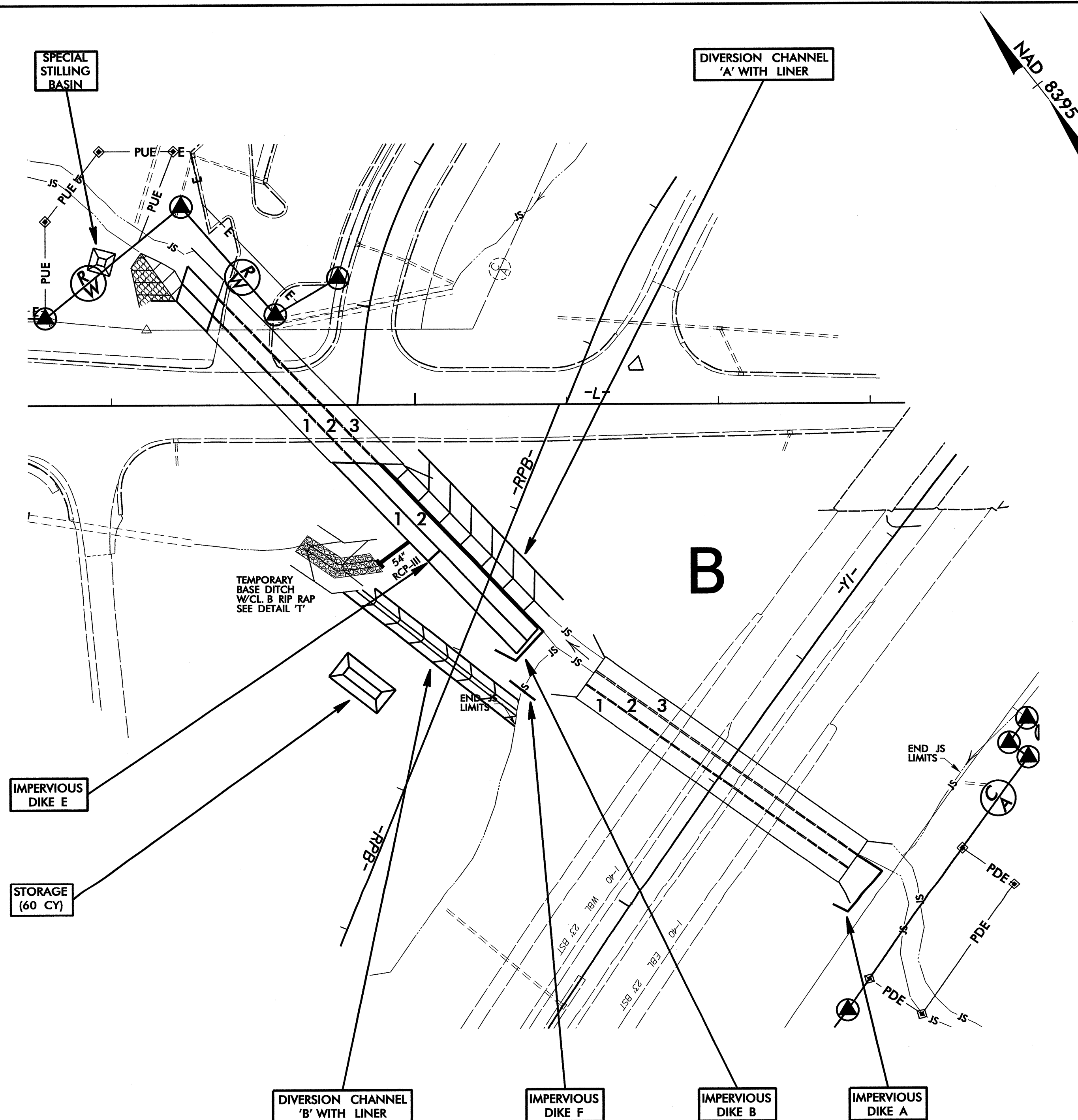
PROJECT REFERENCE NO. U-2550B	SHEET NO. EC-7/CONST.5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

## PHASE III

## PHASE IV

8. REMOVE IMPERVIOUS DIKE C.
9. CONSTRUCT IMPERVIOUS DIKE E IN BARREL 1 UPSTREAM OF 54" RCP.
10. CONSTRUCT TEMPORARY BASE DITCH 'T', UTILIZING BYPASS PUMP AS NEEDED.
11. REMOVE IMPERVIOUS DIKE D AND CONSTRUCT IMPERVIOUS DIKE F, REVERSING FLOW IN DIVERSION CHANNEL 'B' WITH LINER.

12. REMOVE IMPERVIOUS DIKE B AND CONSTRUCT IMPERVIOUS DIKE G.
13. COMPLETE PROPOSED MIDDLE EXTENSION OF BARRELS 1 AND 2.
14. REMOVE IMPERVIOUS DIKES A, E, AND G, AND DIVERSION CHANNEL 'A' WITH LINER.

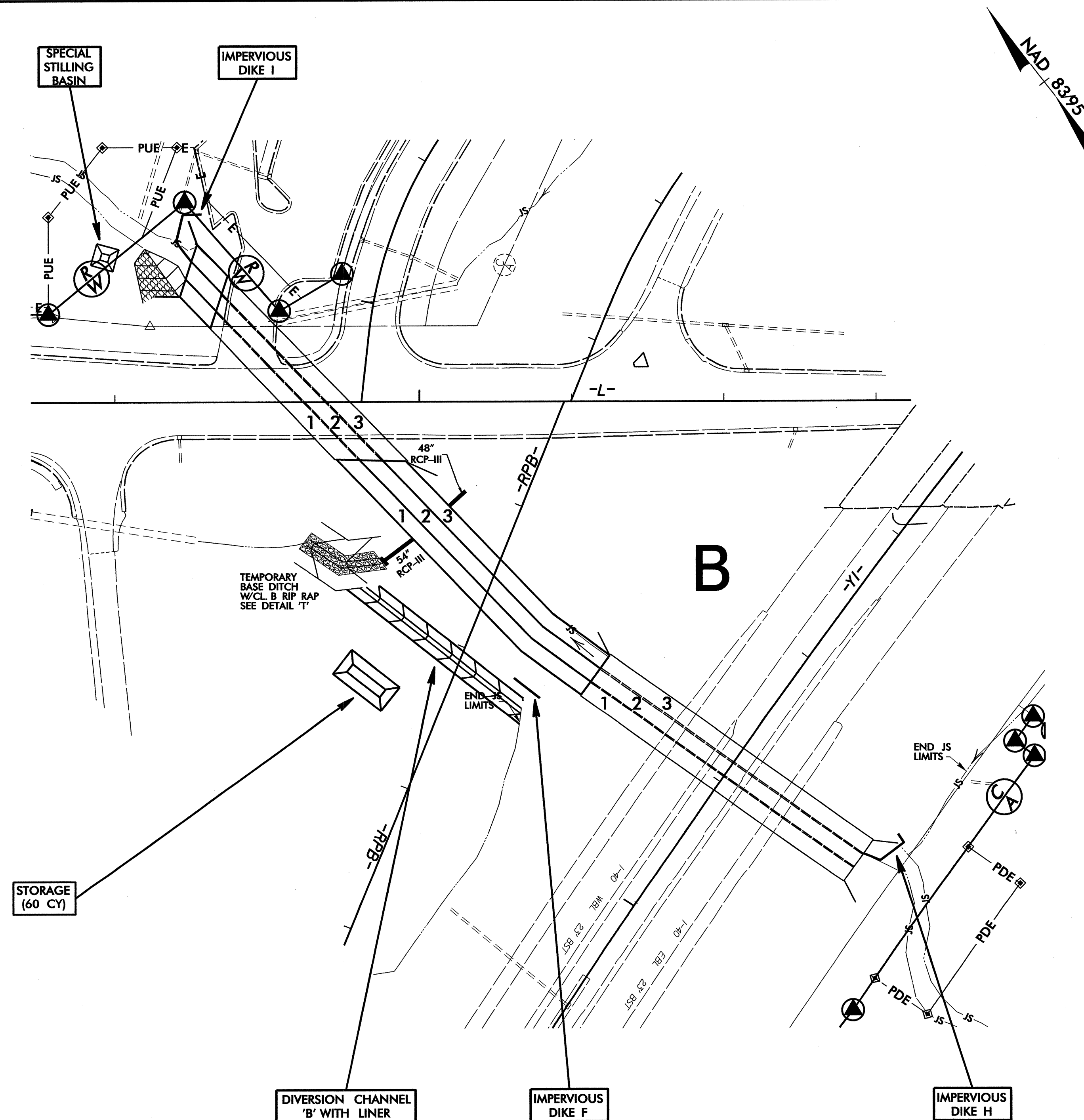


# CULVERT CONSTRUCTION SEQUENCE STA. 19 + 31.37 -L- (SHEET 3 OF 5)

PROJECT REFERENCE NO. U-2550B	SHEET NO. EC-8/CONST.5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

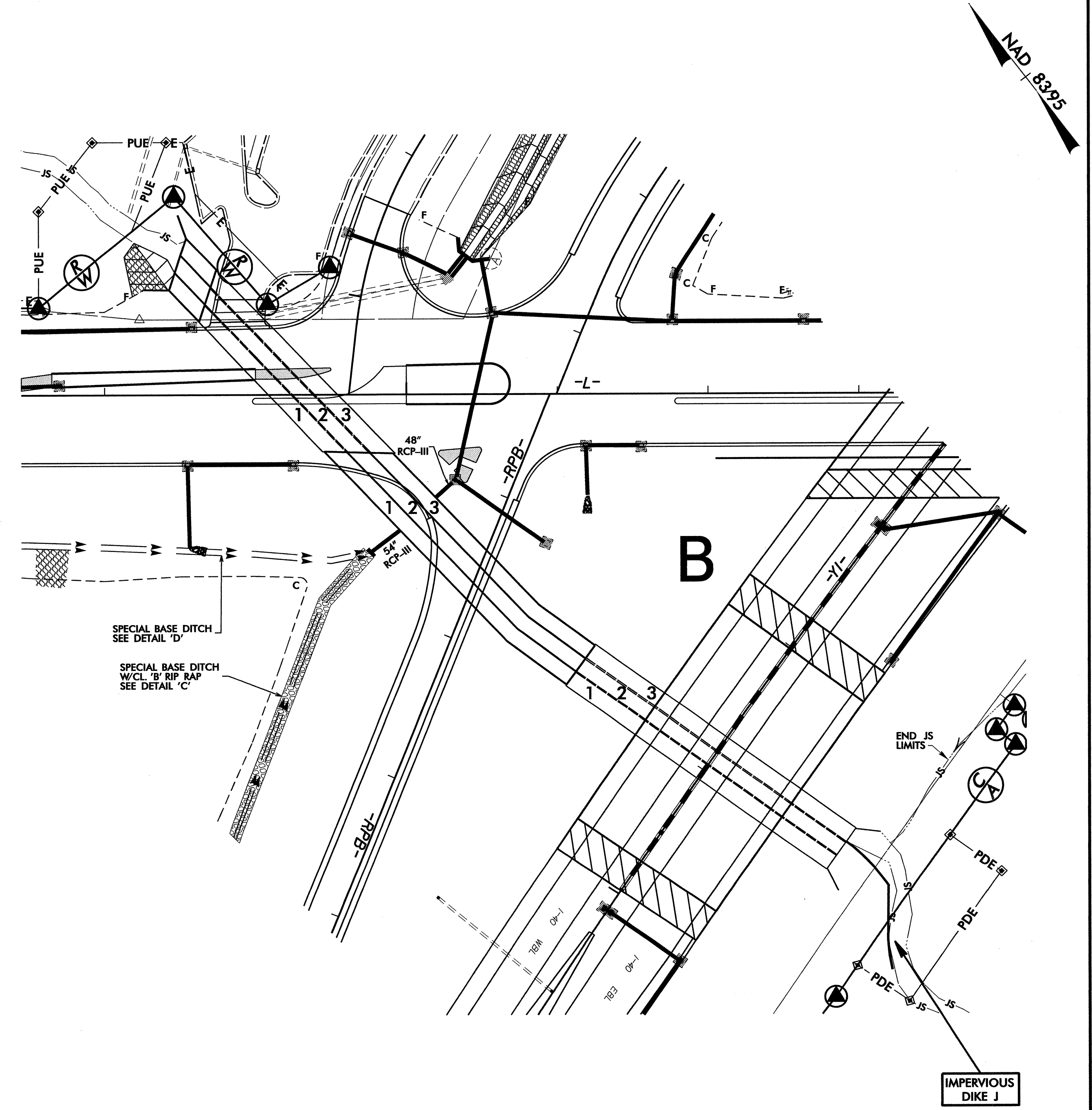
## PHASE V

15. CONSTRUCT IMPERVIOUS DIKES H AND I, DIVERTING FLOW INTO BARRELS 1 AND 2.
16. CONSTRUCT PROPOSED DOWNSTREAM AND MIDDLE EXTENSIONS OF BARREL 3.
17. CONNECT PROPOSED 48" RCP TO BARREL 3.
18. REMOVE IMPERVIOUS DIKES H AND I.



## PHASE VI

19. REMOVE TEMPORARY BASE DITCH 'T', IMPERVIOUS DIKE F, DIVERSION CHANNEL 'B' WITH LINER, AND STILLING BASIN.
20. CONSTRUCT SPECIAL BASE DITCH 'C' AND 'D', AND MAJORITY OF THE PROPOSED ROADWAY CONSTRUCTION.
21. CONSTRUCT IMPERVIOUS DIKE J, DIVERTING FLOW THROUGH BARREL 3.



PROJECT REFERENCE NO. U-2550B	SHEET NO. EC-9/CONST.5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

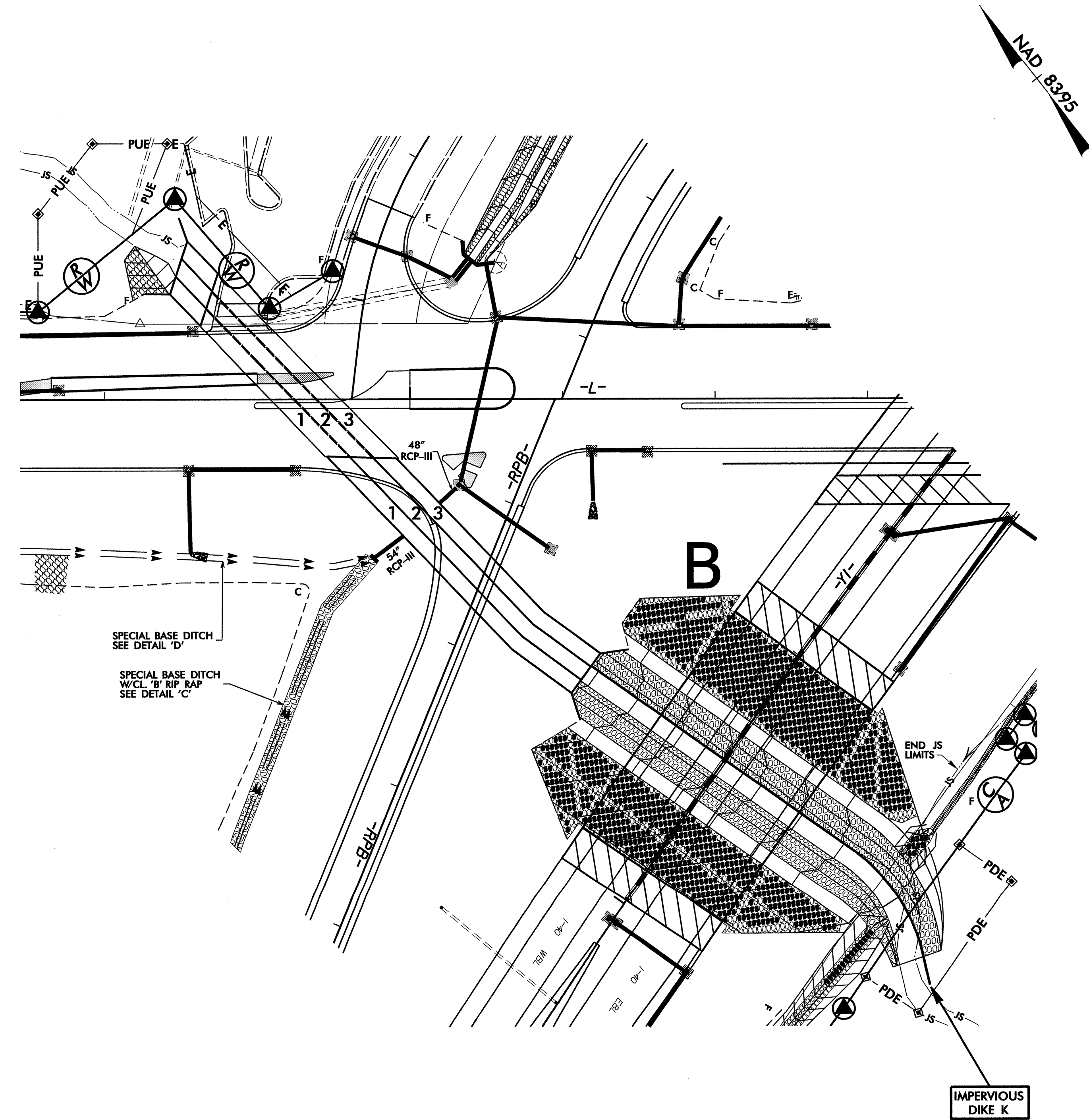
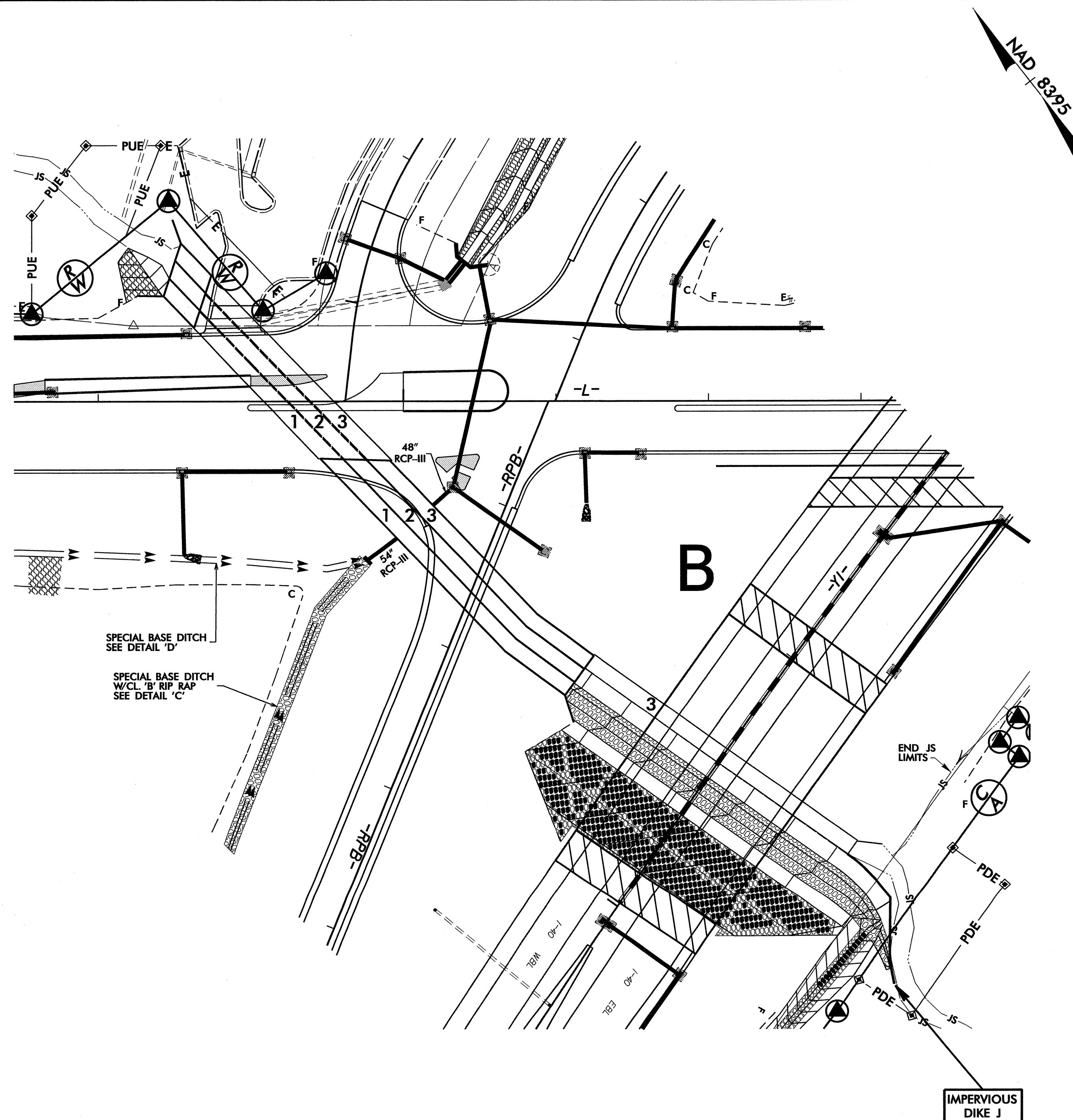
# CULVERT CONSTRUCTION SEQUENCE STA. 19 + 31.37 -L- (SHEET 4 OF 5)

## PHASE VII

22. EXCAVATE EXISTING ROADWAY FILL BENEATH THE PROPOSED BRIDGE DOWN TO THE EXISTING CULVERT.
23. REMOVE BARRELS 1 AND 2 OF THE EXISTING CULVERT.
24. CONSTRUCT WESTERN SIDE AND BASE OF THE PROPOSED CHANNEL.

## PHASE VIII

25. REMOVE IMPERVIOUS DIKE J AND CONSTRUCT IMPERVIOUS DIKE K, DIVERTING FLOW INTO THE PROPOSED CHANNEL.
26. REMOVE BARREL 3 OF THE EXISTING CULVERT.
27. CONSTRUCT THE REMAINDER OF THE PROPOSED CHANNEL.

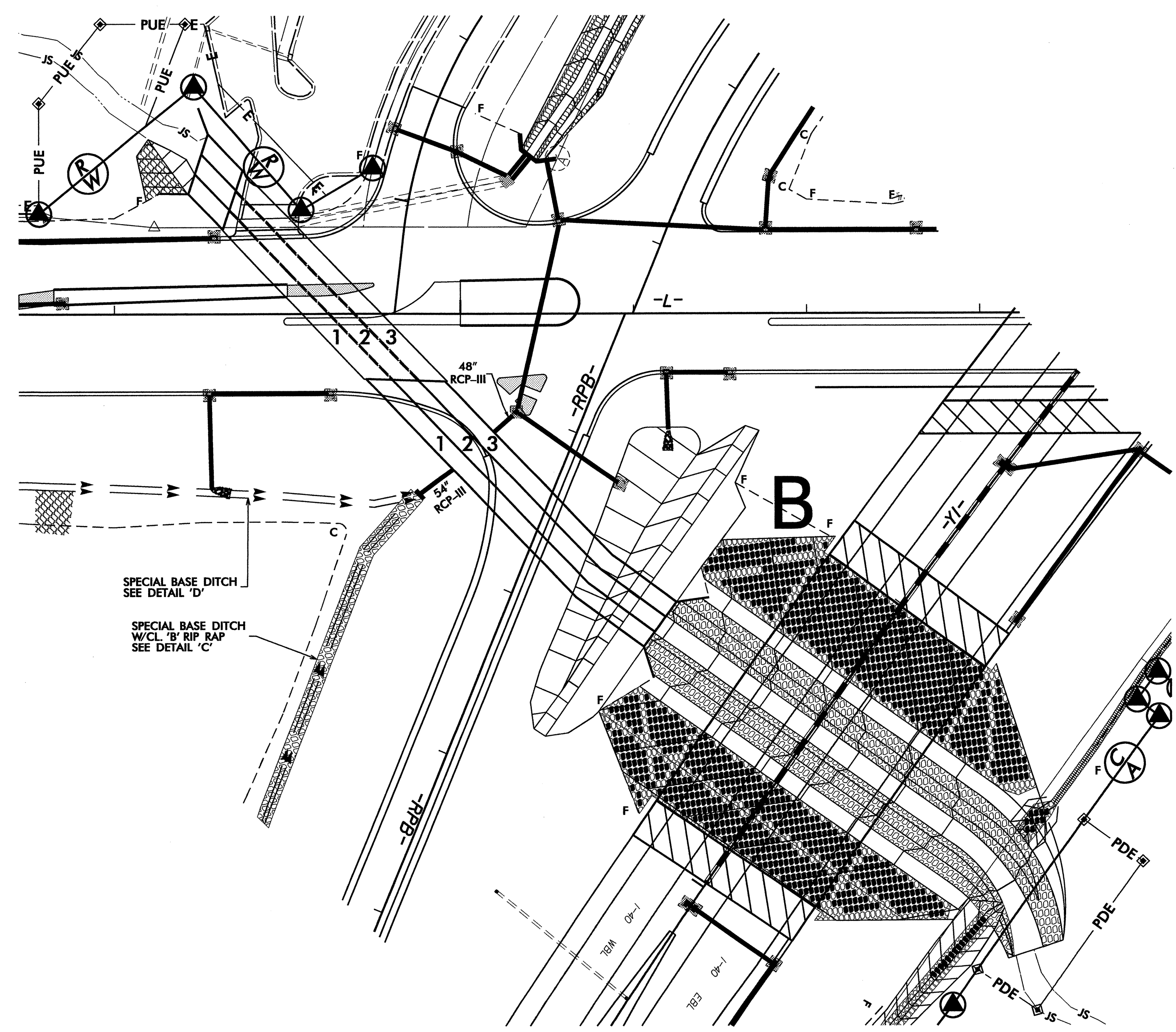


PROJECT REFERENCE NO.	SHEET NO.
U-2550B	EC-10/CONST.5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# CULVERT CONSTRUCTION SEQUENCE STA. 19 + 31.37 -L- (SHEET 5 OF 5)

## PHASE IX

- 28. REMOVE IMPERVIOUS DIKE K, ALLOWING NORMAL FLOW IN THE PROPOSED CHANNEL.
- 29. REMOVE ANY REMAINING SPECIAL STILLING BASIN(S).
- 30. COMPLETE ROADWAY CONSTRUCTION.

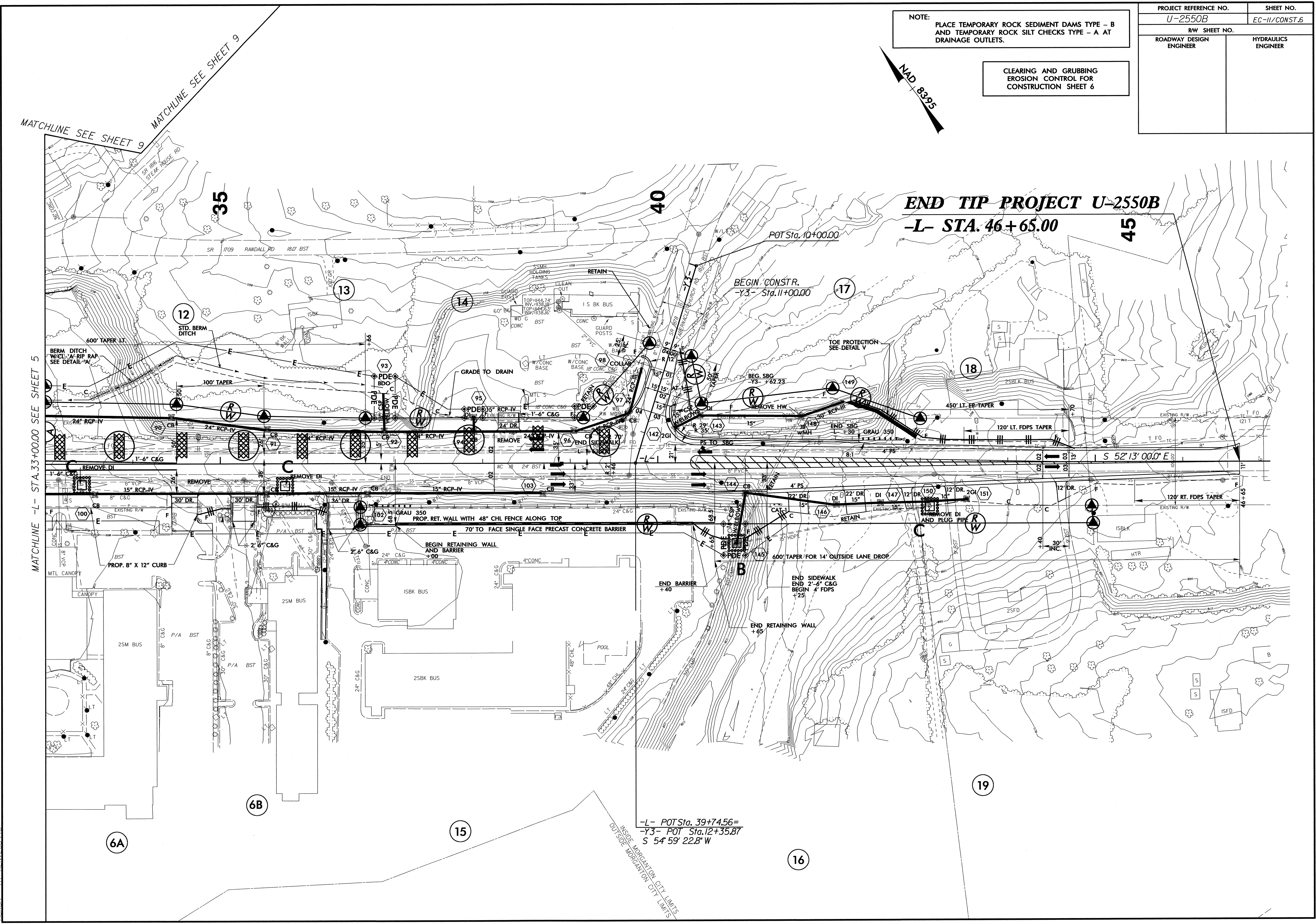
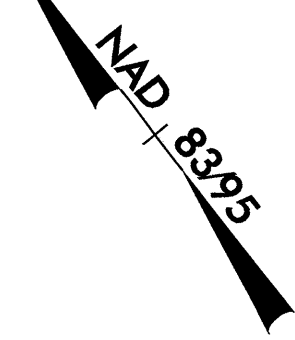




PROJECT REFERENCE NO.	SHEET NO.
U-2550B	EC-II/CONST.6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

CLEARING AND GRUBBING  
EROSION CONTROL FOR  
CONSTRUCTION SHEET 6



**END TIP PROJECT U-2550B**  
**-L- STA. 46+65.00**

-L- POT Sta. 39+74.56=  
-Y3- POT Sta. 12+35.87  
S 54° 59' 22.8" W

MATCHLINE -L- STA. 33+00.00 SEE SHEET 5

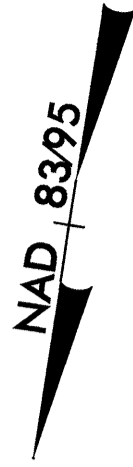
MATCHLINE SEE SHEET 9

MATCHLINE SEE SHEET 9

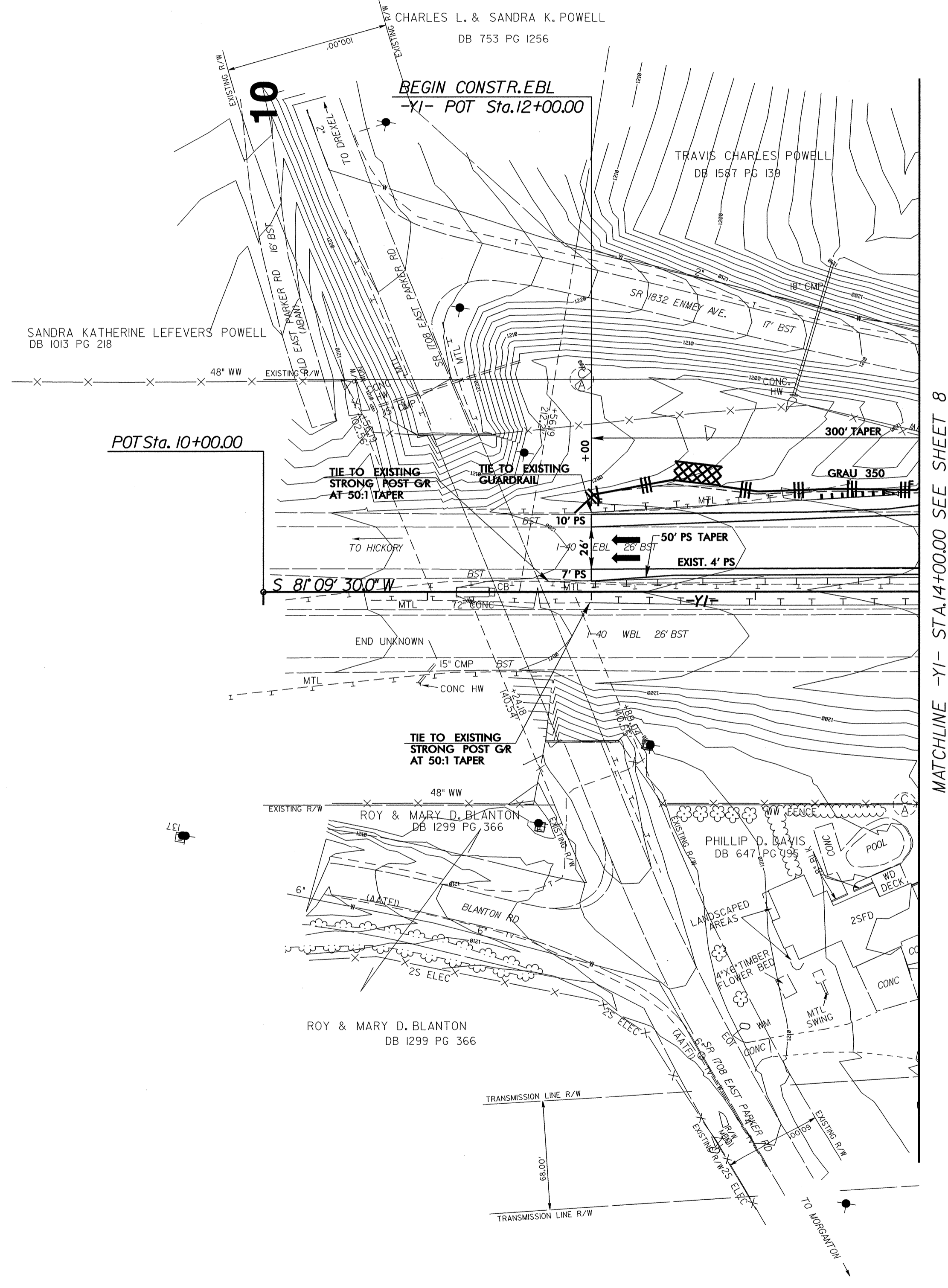
8/17/99  
 23-FEB-2011 10:32  
 R:\Environmental\Design\2550b\_EC.psh 06.dgn  
 created AT RBN/255985

**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.



PROJECT REFERENCE NO. <i>U-2550B</i>		SHEET NO. <i>EC-12/CONST.7</i>	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	



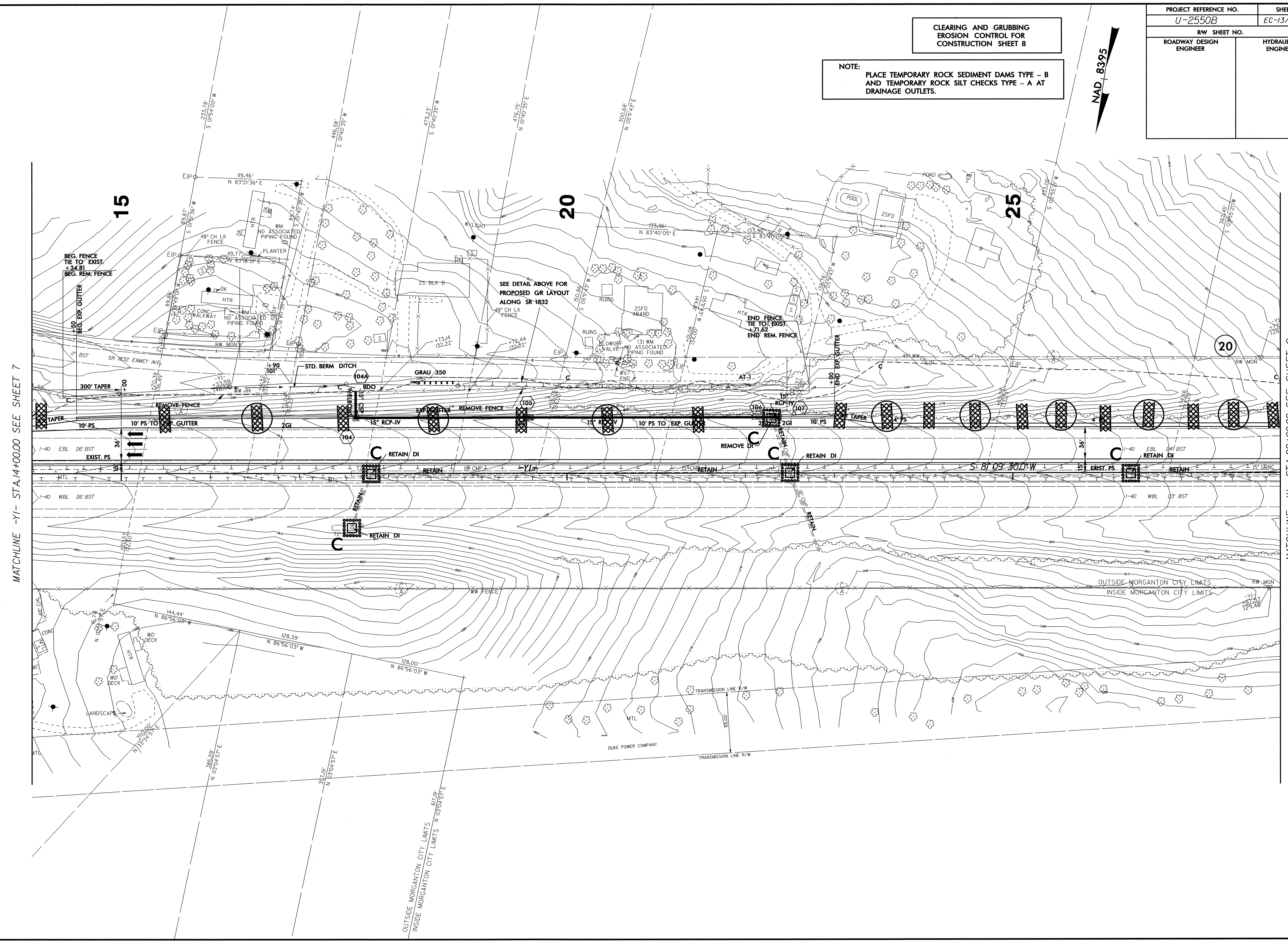
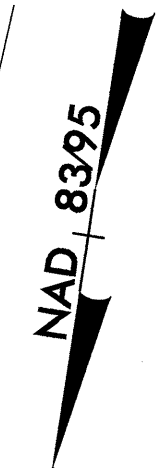
MATCHLINE -YI- STA 14+00.00 SEE SHEET 8

8/17/99

PROJECT REFERENCE NO.		SHEET NO.	
U-2550B		EC-13/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.



MATCHLINE -Y1- STA.14+00.00 SEE SHEET 7

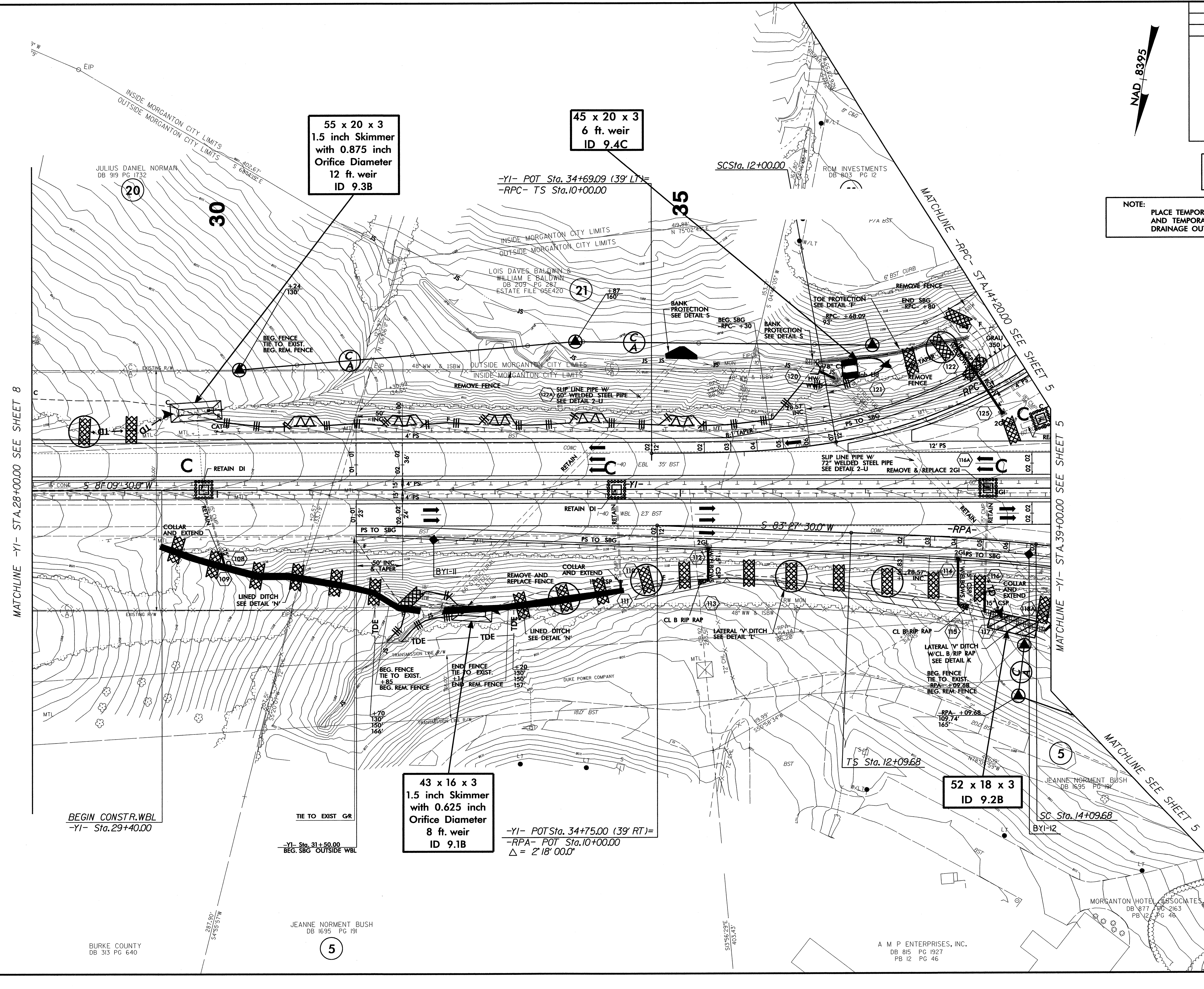
MATCHLINE -Y1- STA.28+00.00 SEE SHEET 9

23-FEB-2011 10:34  
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Action AT:BNV2550B

PROJECT REFERENCE NO. U-2550B	SHEET NO. EC-14/CONST.9
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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.



MATCHLINE -YI- STA. 28+00.00 SEE SHEET 8

MATCHLINE -YI- STA. 39+00.00 SEE SHEET 5

MATCHLINE SEE SHEET 5

8/17/99  
23-FEB-2011 10:50  
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Burke County  
DB 313 PG 640

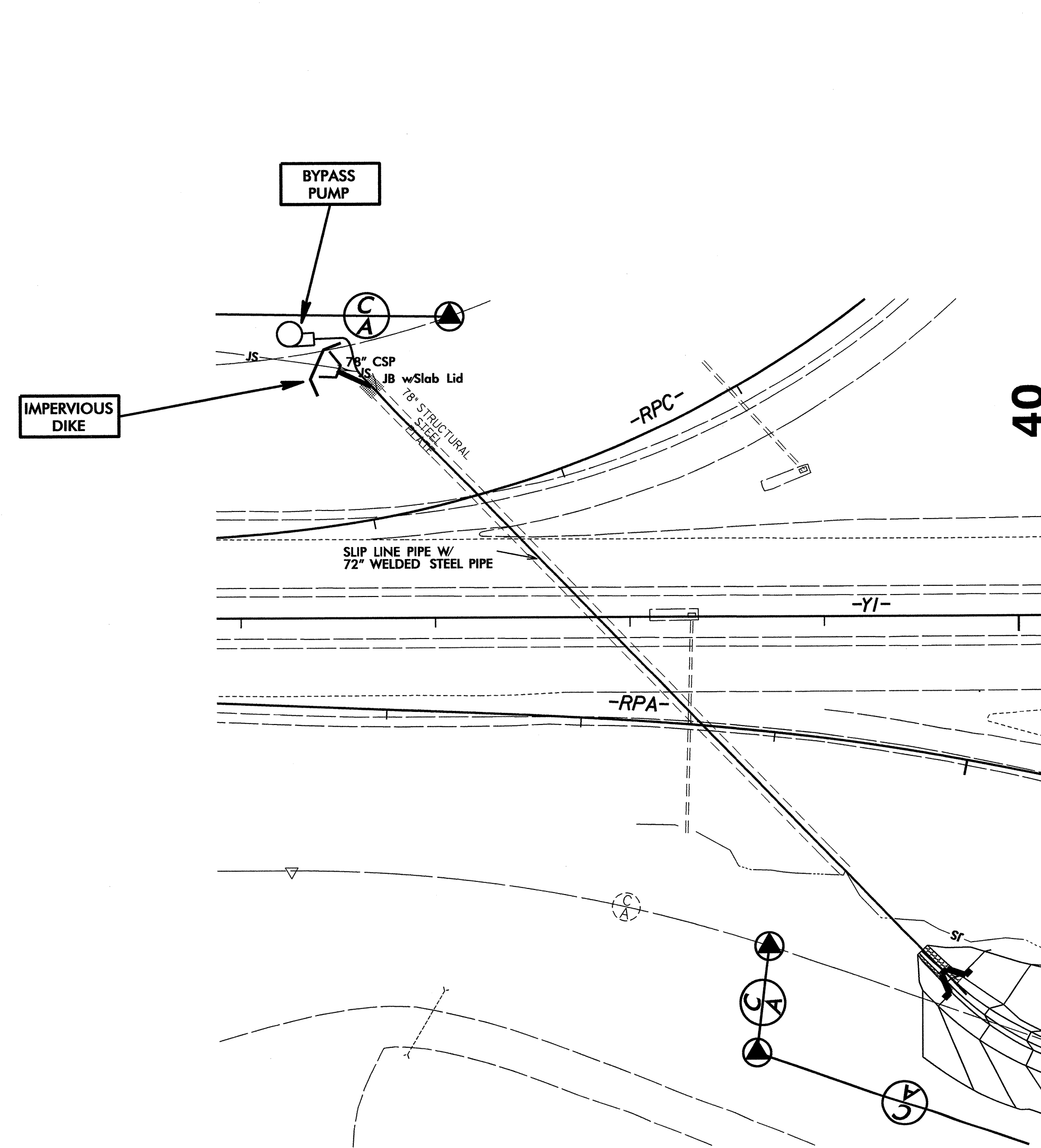
A M P ENTERPRISES, INC.  
DB 815 PG 1927  
PB 12 PG 46

# PIPE EXTENSION SEQUENCE STA. 37+83.14 -Y1-

PROJECT REFERENCE NO. U-2550B	SHEET NO. EC-15/CONST.9
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

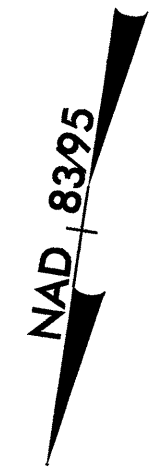
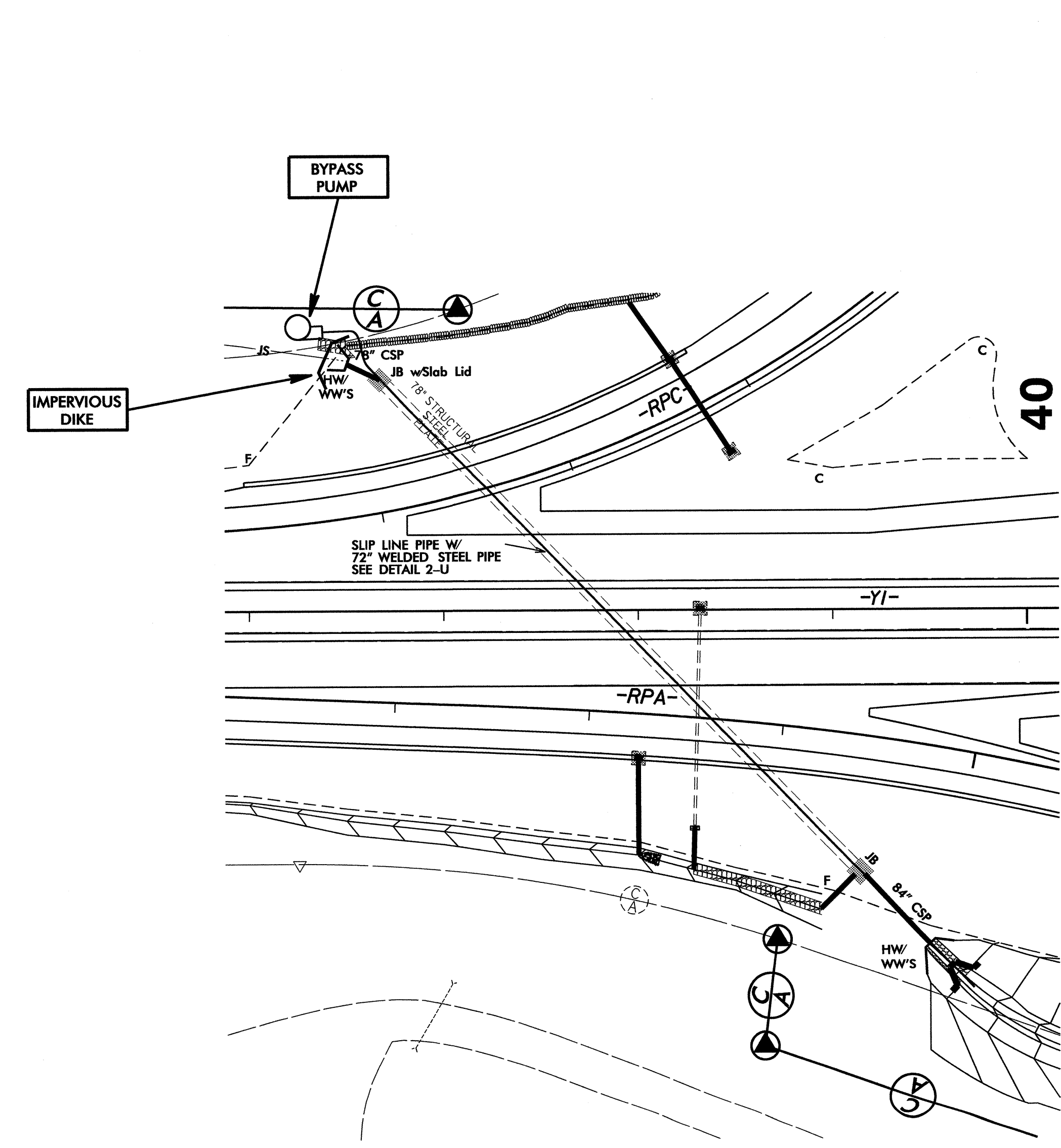
## PHASE I

1. UTILIZE SPECIAL STILLING BASIN(S) AS NEEDED THROUGHOUT PIPE EXTENSION.
2. SLIP LINE EXISTING 78" STRUCTURAL STEEL PLATE PIPE WITH 72" WELDED STEEL PIPE.
3. CONSTRUCT AS MUCH OF DOWNSTREAM STREAM RELOCATION AS POSSIBLE.
4. CONSTRUCT IMPERVIOUS DIKE AND UTILIZE BYPASS PUMP WITH OUTLET HOSE ROUTED INSIDE 72" PIPE.
5. CONSTRUCT UPSTREAM JUNCTION BOX AND 78" CSP EXTENSION AND HEADWALL.



## PHASE II

6. CONSTRUCT DOWNSTREAM JUNCTION BOX AND 84" CSP EXTENSION AND HEADWALL.
7. COMPLETE ANY REMAINING UPSTREAM/DOWNSTREAM CHANNEL IMPROVEMENTS.
8. REMOVE THE IMPERVIOUS DIKE AND BYPASS PUMP.
9. REMOVE ANY REMAINING SPECIAL STILLING BASIN(S).
10. COMPLETE ROADWAY.



8/17/99

ERCO, LLC  
DB 1853 PG 560  
6

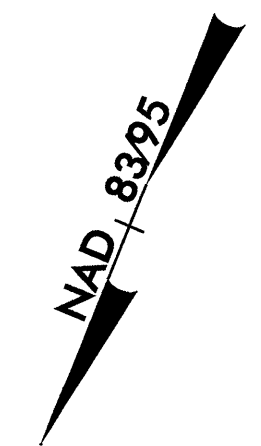
INSIDE MORGANTON CITY LIMITS  
OUTSIDE MORGANTON CITY LIMITS

80 x 25 x 3  
1.5 inch Skimmer  
with 1.375 inch  
Orifice Diameter  
17 ft. weir  
ID 10.3B

FRED A. STROUP  
DB 1405 PG 474  
22

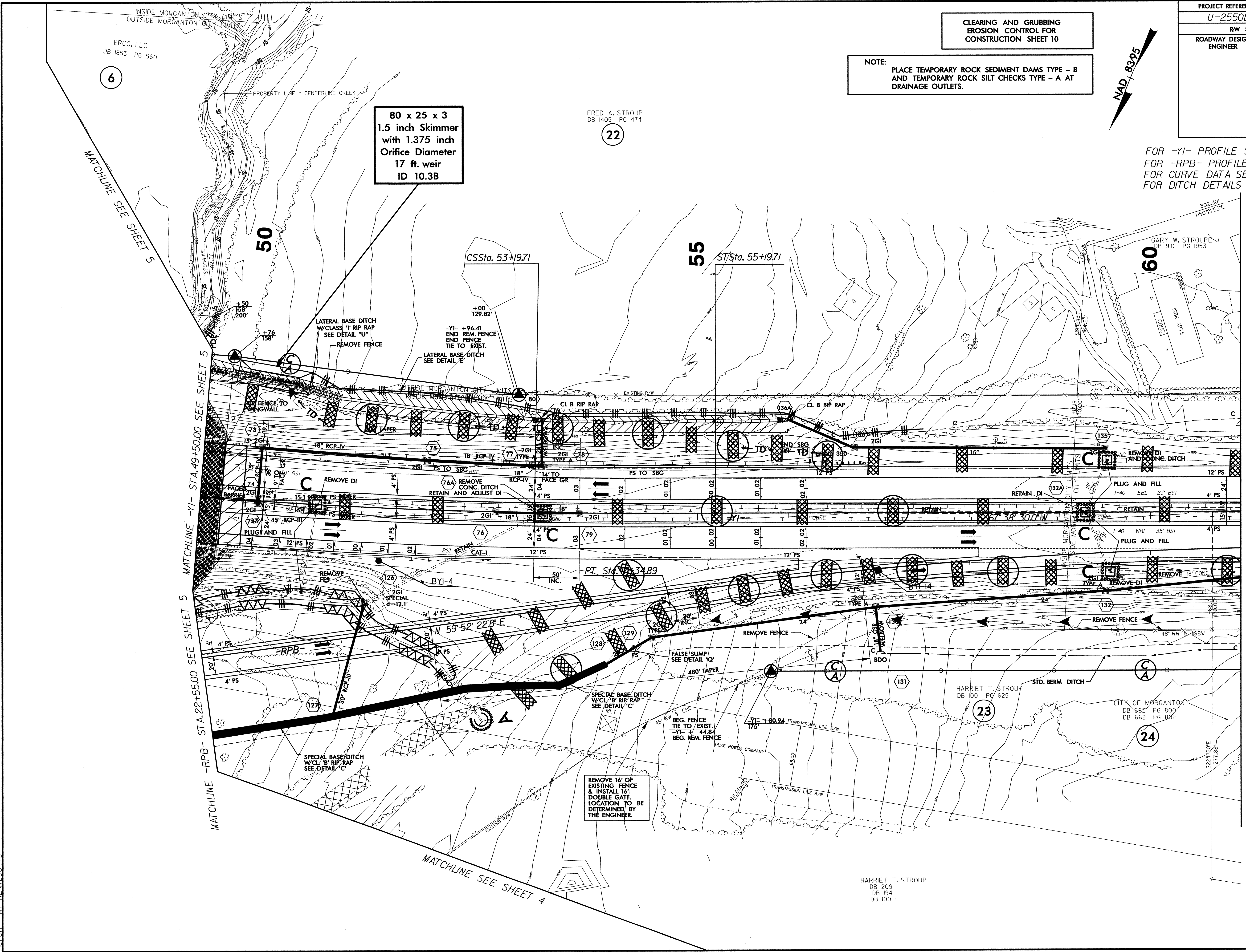
CLEARING AND GRUBBING  
EROSION CONTROL FOR  
CONSTRUCTION SHEET 10

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



PROJECT REFERENCE NO. U-2550B	SHEET NO. EC-16/CONST.10
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	

FOR -YI- PROFILE SEE SHEET 14  
FOR -RPB- PROFILE SEE SHEET 15  
FOR CURVE DATA SEE SHEET 2-J  
FOR DITCH DETAILS SEE SHEET 2-R



REMOVE 16' OF  
EXISTING FENCE  
& INSTALL 16'  
DOUBLE GATE.  
LOCATION TO BE  
DETERMINED BY  
THE ENGINEER.

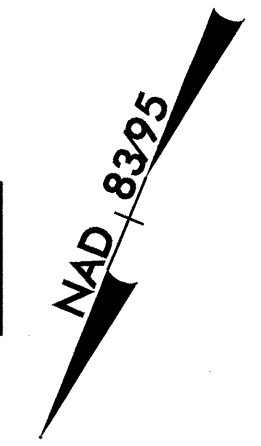
HARRIET T. STROUP  
DB 209  
DB 194  
DB 100 I

23-FEB-2011 10:02  
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Action: A1: BENV2550B

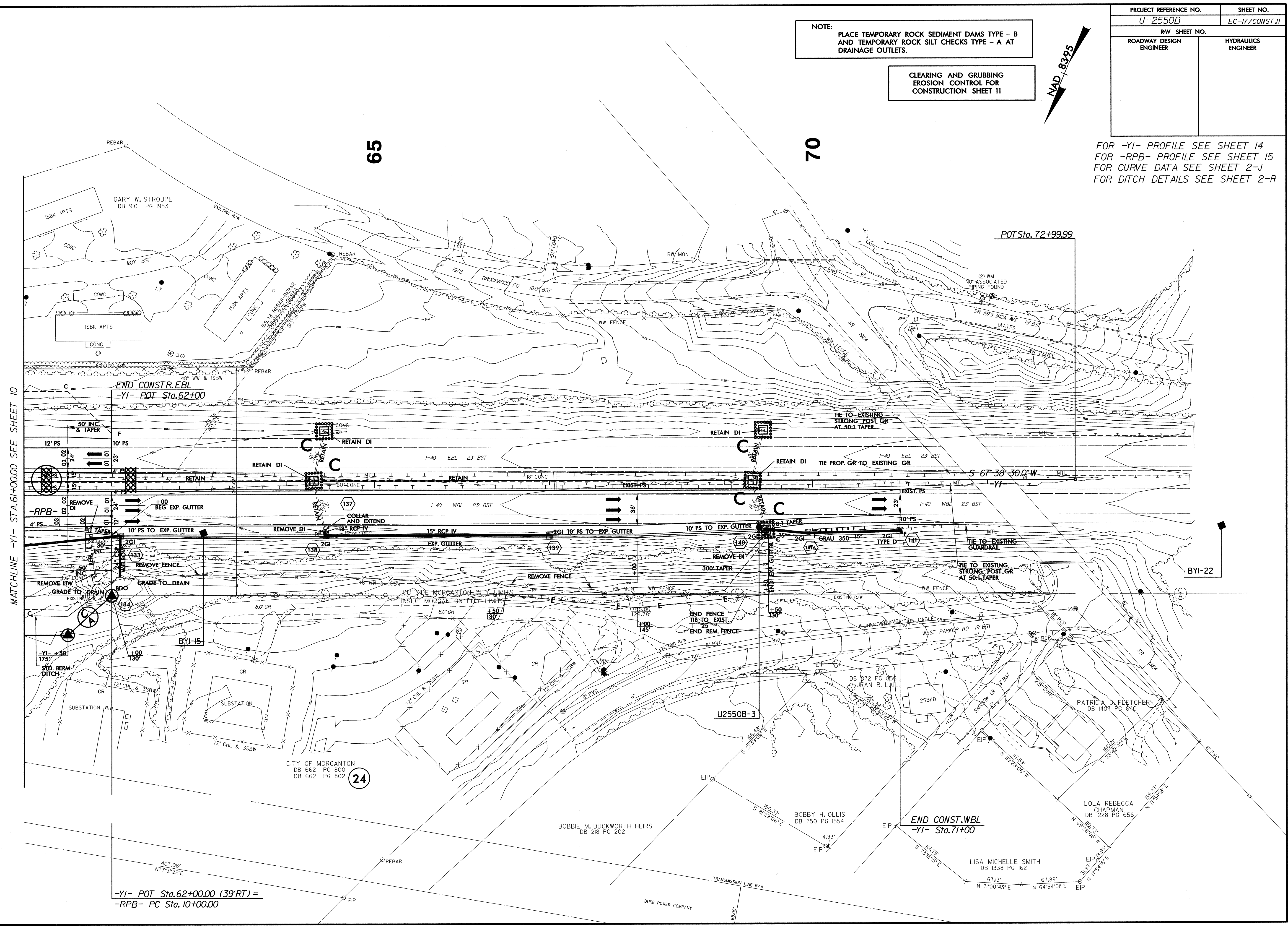
PROJECT REFERENCE NO. U-2550B	SHEET NO. EC-17/CONST.II
R/W SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	

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

CLEARING AND GRUBBING  
EROSION CONTROL FOR  
CONSTRUCTION SHEET 11



FOR -YI- PROFILE SEE SHEET 14  
FOR -RPB- PROFILE SEE SHEET 15  
FOR CURVE DATA SEE SHEET 2-J  
FOR DITCH DETAILS SEE SHEET 2-R



MATCHLINE -YI- STA.61+00.00 SEE SHEET 10

-YI- POT Sta.62+00.00 (39'RT) =  
-RPB- PC Sta.10+00.00

END CONST. WBL  
-YI- Sta.71+00

POT Sta.72+99.99

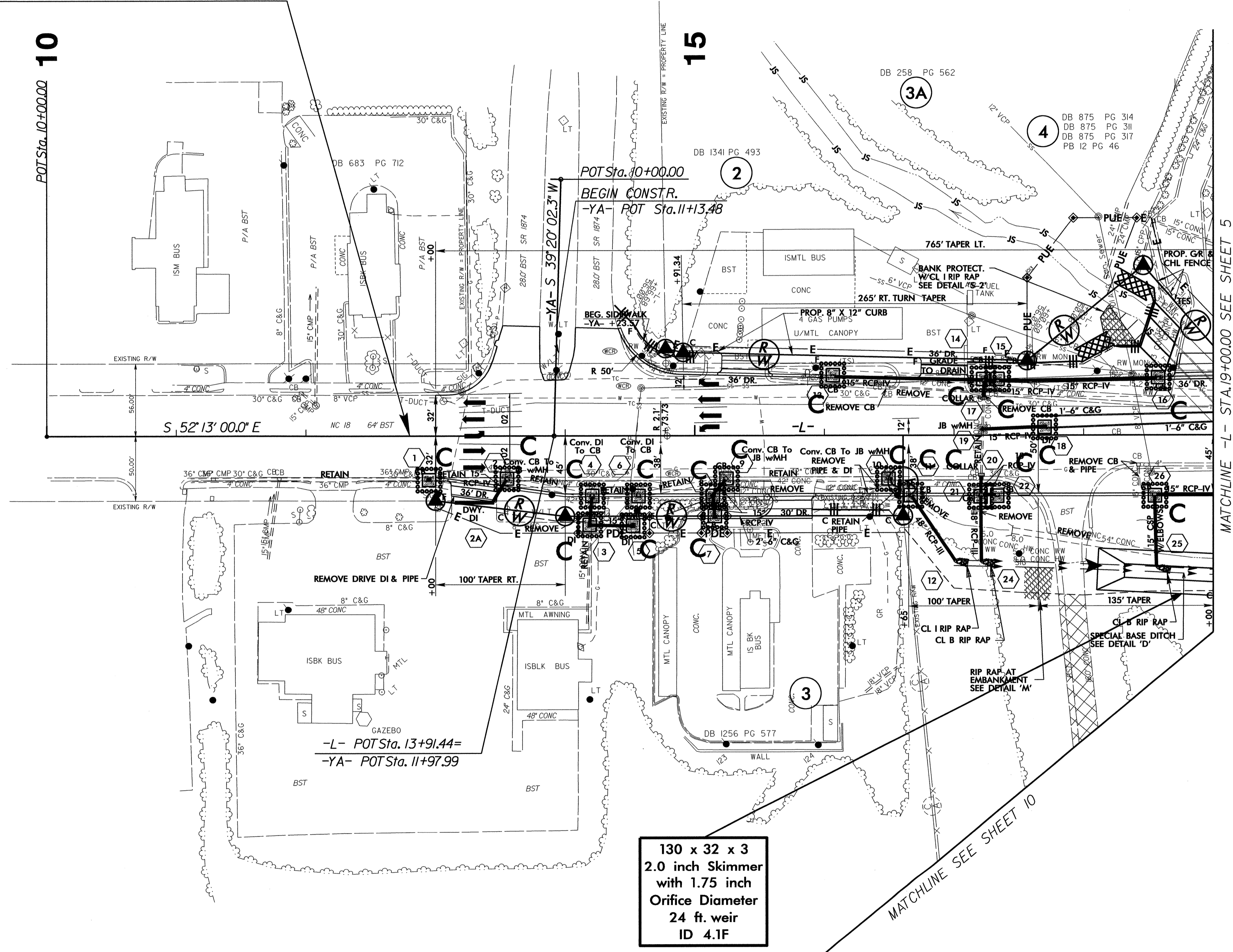
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Checked AT BENTZ65946

PROJECT REFERENCE NO. U-2550B	SHEET NO. EC-18/CONST.4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

**STA. 12+80.00 -L- BEGIN TIP PROJECT U-2550B**

FOR -L- PROFILE SEE SHEET 12  
FOR DITCH DETAILS SEE SHEET 2-R

BEGIN CONSTRUCTION  
FOR SIGNAL WORK  
APPROXIMATELY 8950'  
NORTHWEST ALONG  
NC 18 (STERLING STREET)  
SEE SIGNAL PLANS



130 x 32 x 3  
2.0 inch Skimmer  
with 1.75 inch  
Orifice Diameter  
24 ft. weir  
ID 4.1F

DB 1405 PG 478

1

8/17/99  
23-FEB-2011 10:24  
R:\Environment\Design\2550b\_EC.psh 04.dgn  
c:\p\at\henry\2550b

MATCHLINE SEE SHEET 10

MATCHLINE -L- STA. 19+00.00 SEE SHEET 5



PROJECT REFERENCE NO.		SHEET NO.	
U-2550B		EC-19/CONST.5	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

Place Matting for Erosion Control on Slope as Work Allows.

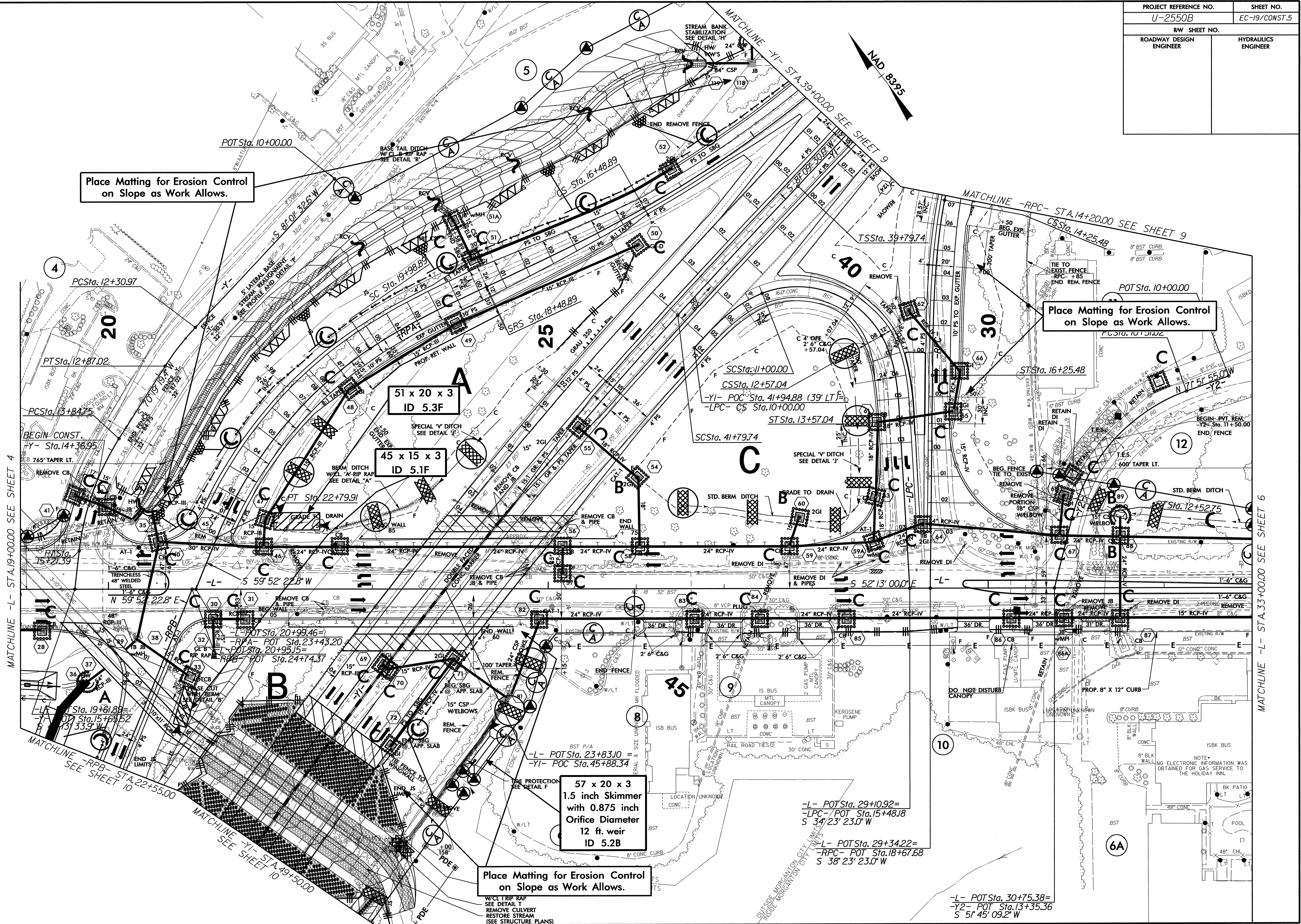
Place Matting for Erosion Control on Slope as Work Allows.

Place Matting for Erosion Control on Slope as Work Allows.

51 x 20 x 3  
ID 5.3F

45 x 15 x 3  
ID 5.1F

57 x 20 x 3  
1.5 inch Skimmer  
with 0.875 inch  
Orifice Diameter  
12 ft. weir  
ID 5.2B



MATCHLINE -L- STA.19+00.00 SEE SHEET 4

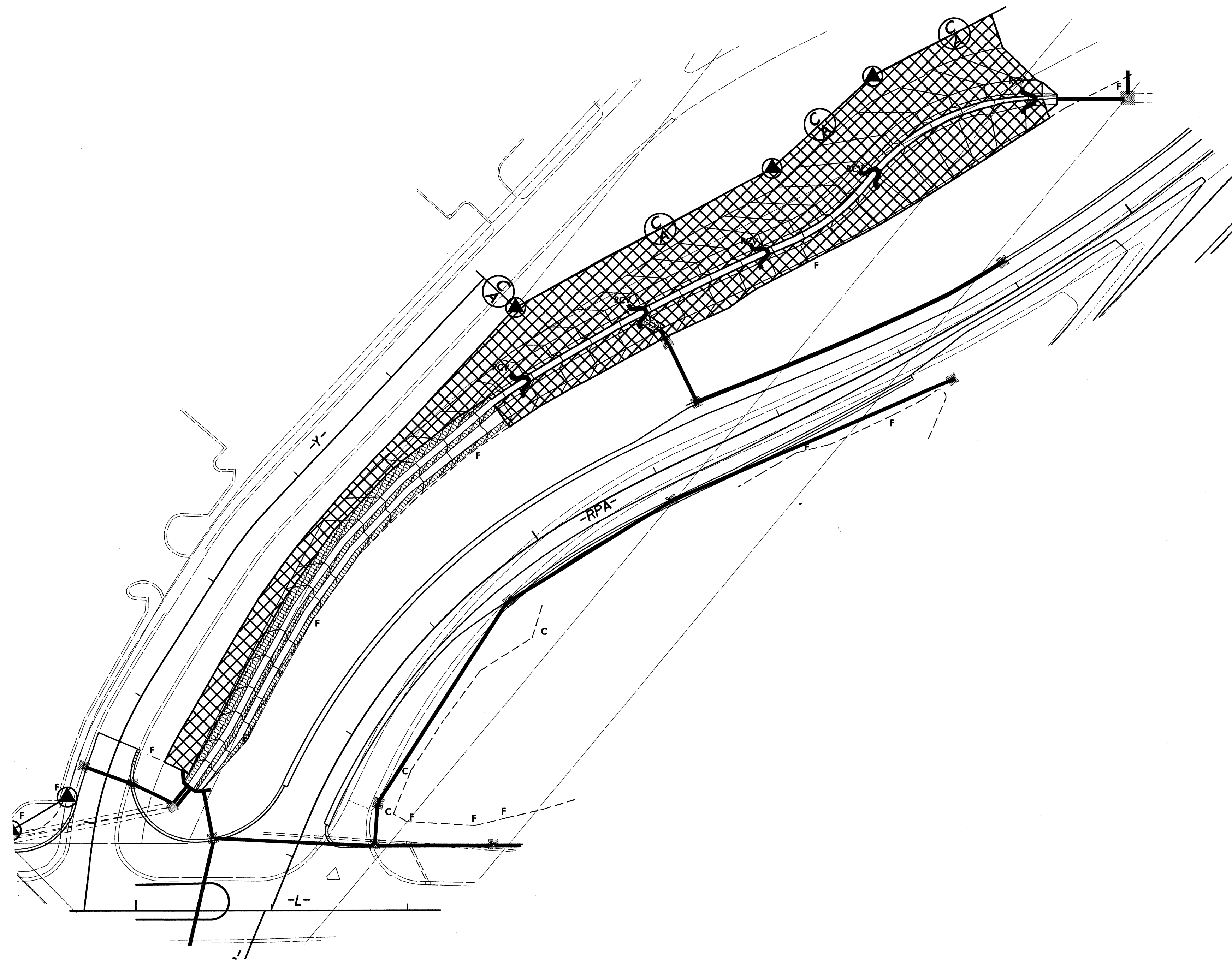
MATCHLINE -L- STA.33+00.00 SEE SHEET 6

8/17/99  
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Author: BT RENY255046

NOTE:  
NO ELECTRONIC INFORMATION WAS  
OBTAINED FOR GAS SERVICE TO  
THE HOLIDAY INN.

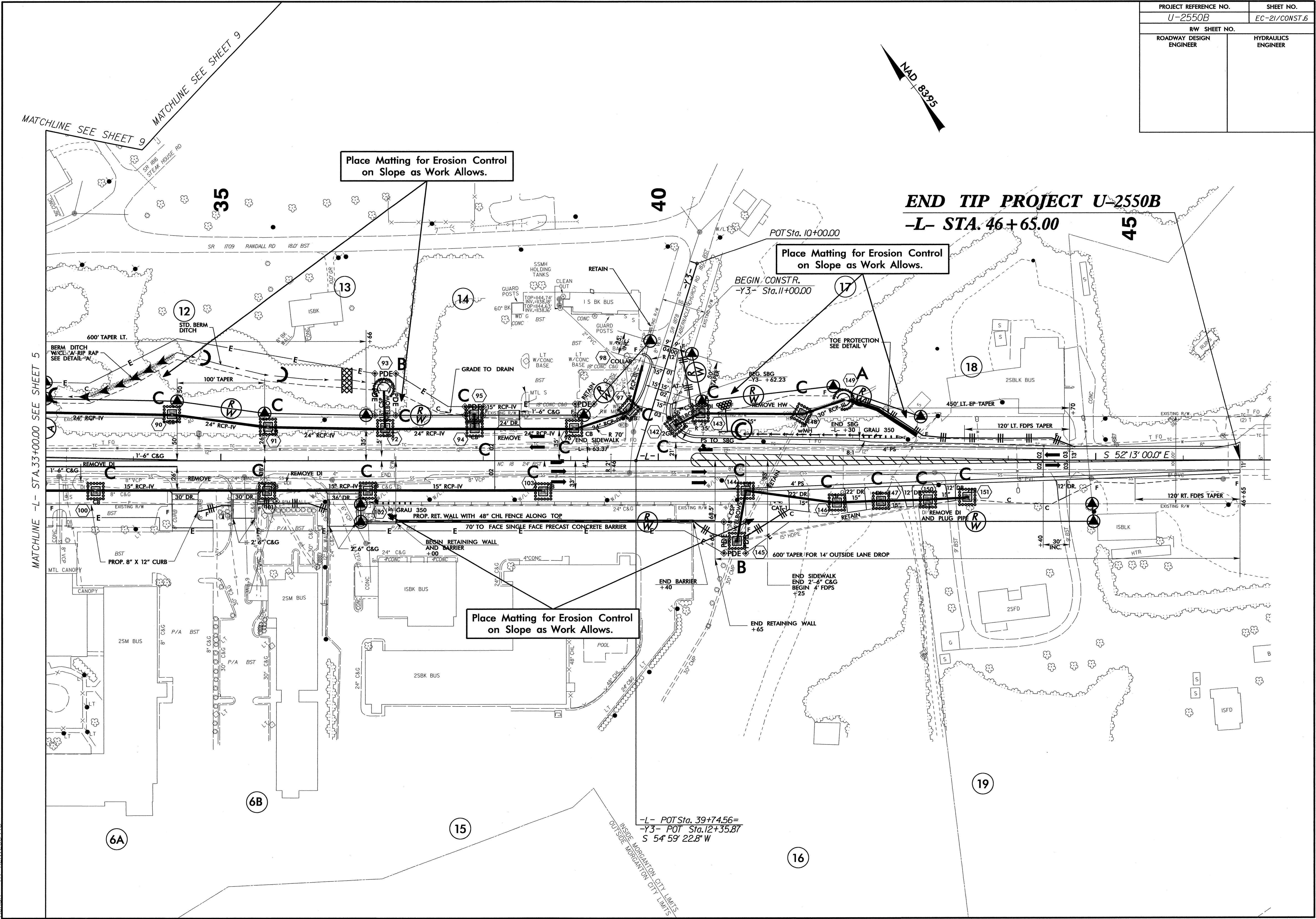
# 0.95 ACRE STREAMBANK REFORESTATION

PROJECT REFERENCE NO. U-2550B	SHEET NO. EC-20/CONST.5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



SEE RF-1, RF-2 AND PROJECT SPECIAL PROVISIONS

PROJECT REFERENCE NO. U-2550B	SHEET NO. EC-21/CONST.6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



MATCHLINE SEE SHEET 9

MATCHLINE -L- STA. 33+00.00 SEE SHEET 5

**END TIP PROJECT U-2550B**  
**-L- STA. 46+65.00**

Place Matting for Erosion Control  
on Slope as Work Allows.

Place Matting for Erosion Control  
on Slope as Work Allows.

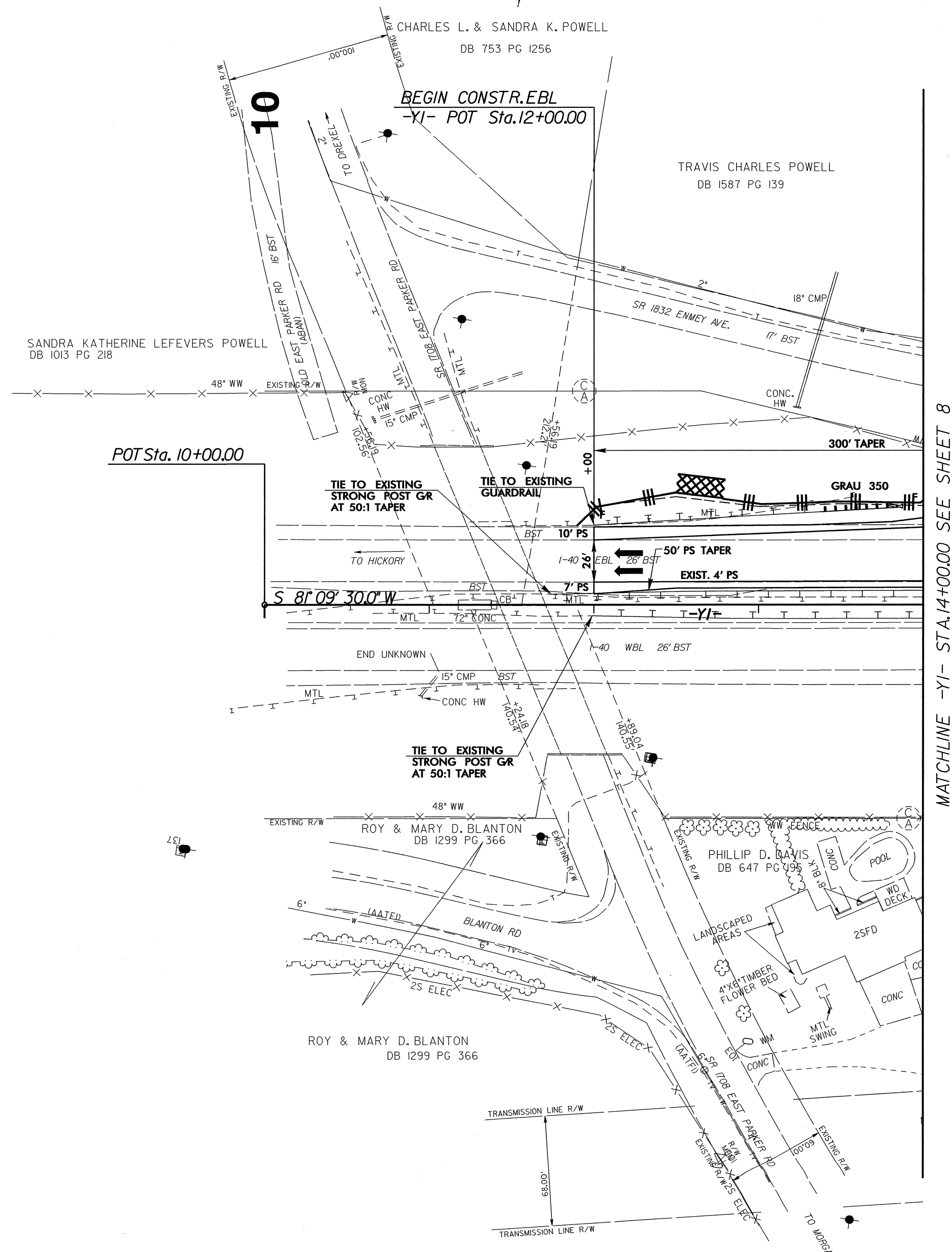
Place Matting for Erosion Control  
on Slope as Work Allows.

-L- POT Sta. 39+74.56=  
-Y3- POT Sta. 12+35.87  
S 54° 59' 22.8" W

8/17/99  
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PROJECT REFERENCE NO. U-2550B	SHEET NO. EC-22/CONST.7
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NAD 8395

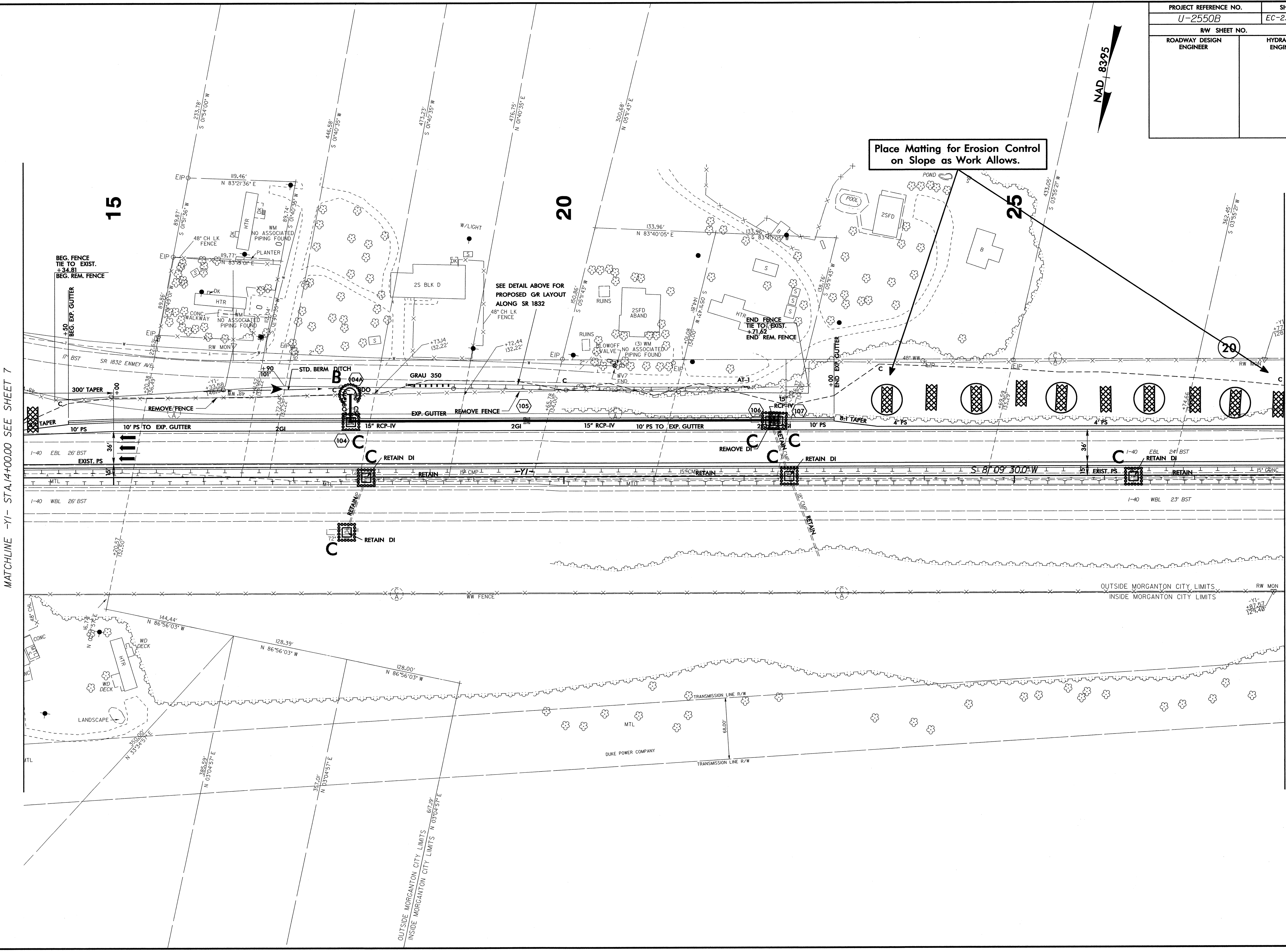


MATCHLINE -YI- STA. 14+00.00 SEE SHEET 8

8/17/99

23-FEB-2011 10:32  
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PROJECT REFERENCE NO. U-2550B	SHEET NO. EC-23/CONST.8
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



Place Matting for Erosion Control on Slope as Work Allows.

SEE DETAIL ABOVE FOR PROPOSED GR LAYOUT ALONG SR 1832

MATCHLINE -YI- STA.14+00.00 SEE SHEET 7

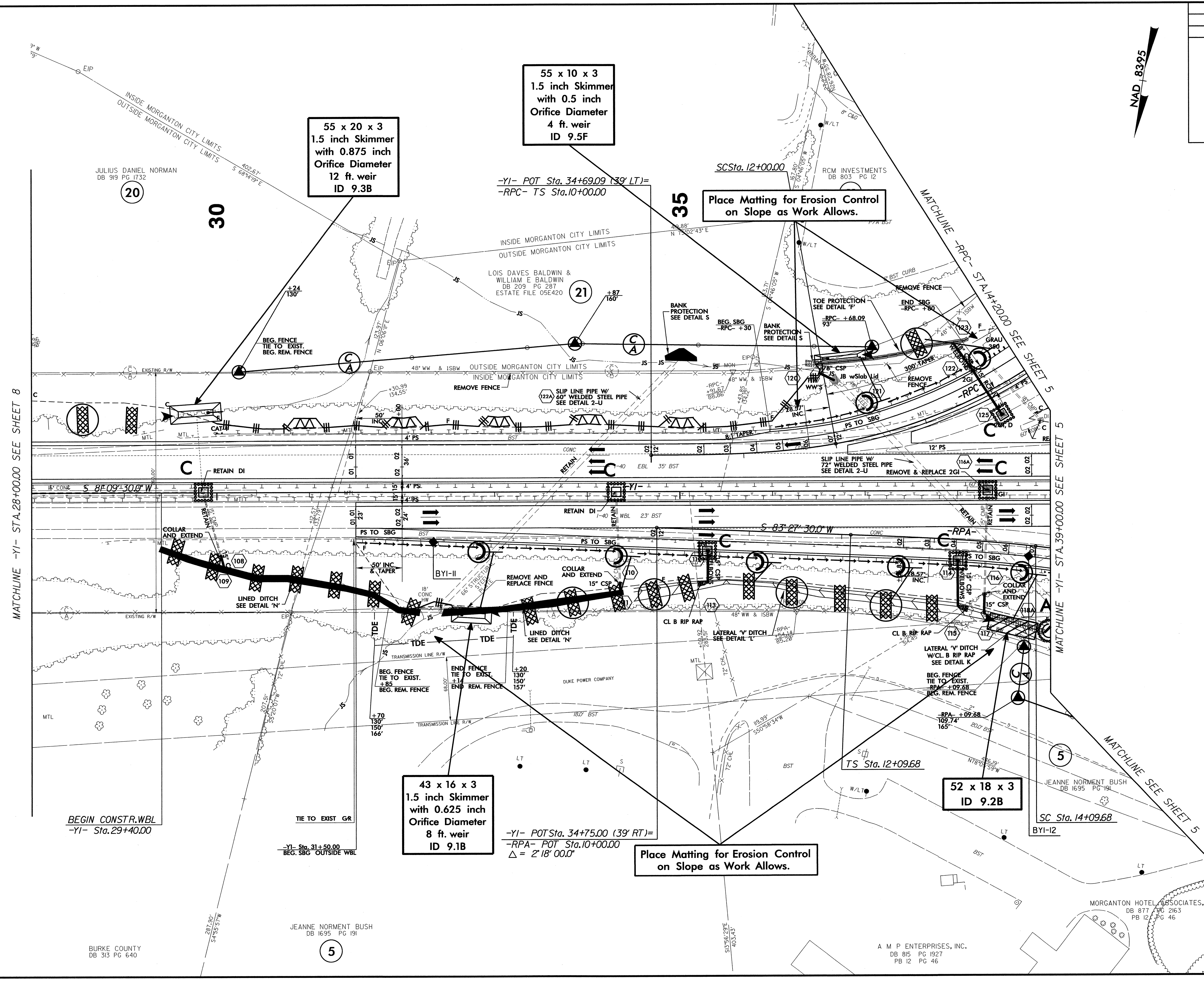
MATCHLINE -YI- STA.28+00.00 SEE SHEET 9

OUTSIDE MORGANTON CITY LIMITS  
INSIDE MORGANTON CITY LIMITS

8/17/99  
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A:\REN\2550B

PROJECT REFERENCE NO. U-2550B	SHEET NO. EC-24/CONST.9
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NAD 83 95



MATCHLINE -YI- STA.28+00.00 SEE SHEET 8

MATCHLINE -YI- STA.39+00.00 SEE SHEET 5

MATCHLINE SEE SHEET 5

23-FEB-2010 10:51  
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BEGIN CONSTR.WBL  
-YI- Sta.29+40.00

-YI- Sta. 31+50.00  
BEG. SBG OUTSIDE WBL

-YI- POT Sta. 34+75.00 (39' RT)=  
-RPA- POT Sta.10+00.00  
Δ = 2'18" 00.0"

TS Sta. 12+09.68

SC Sta. 14+09.68

BURKE COUNTY  
DB 313 PG 640

JEANNE NORMENT BUSH  
DB 1695 PG 191

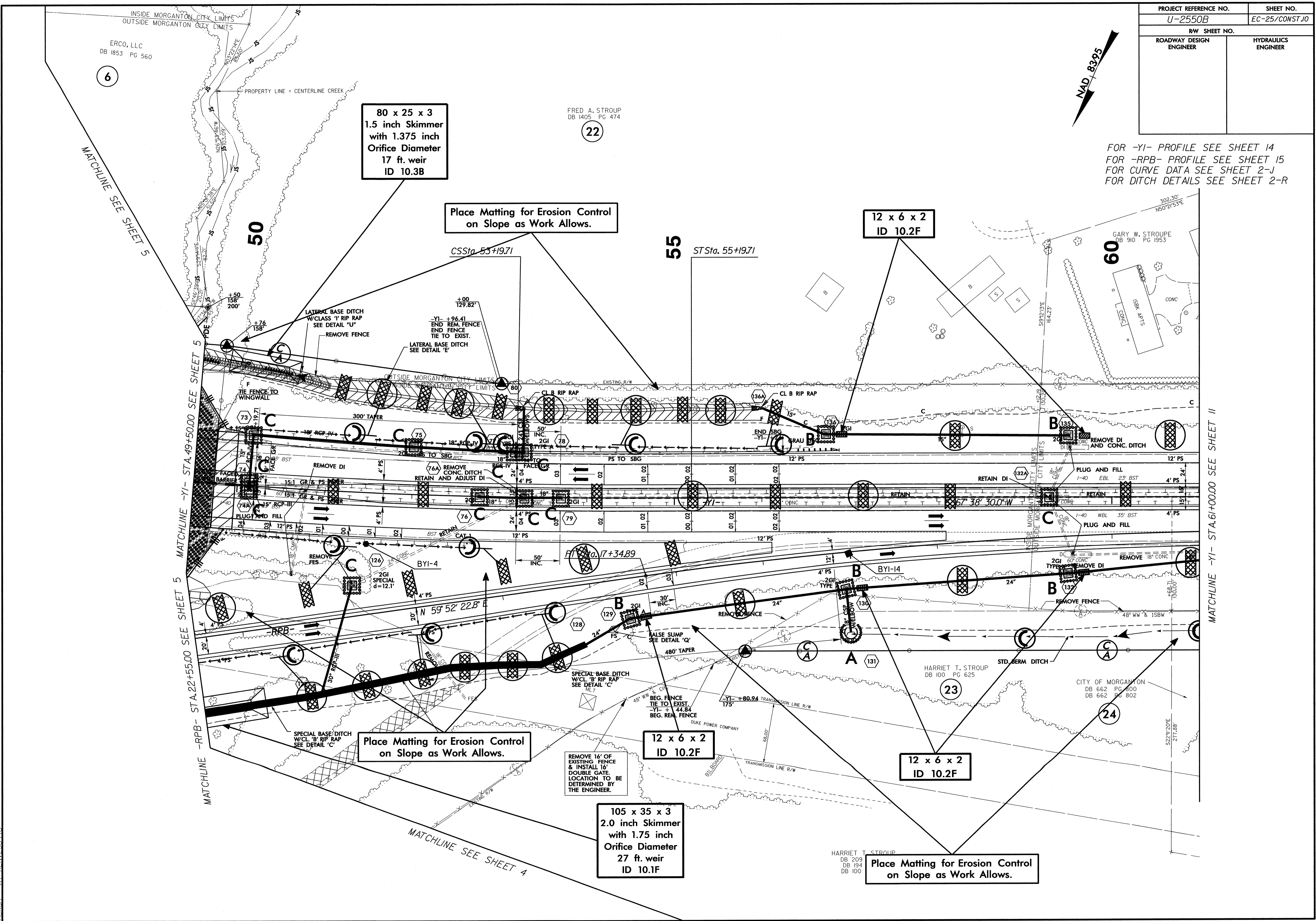
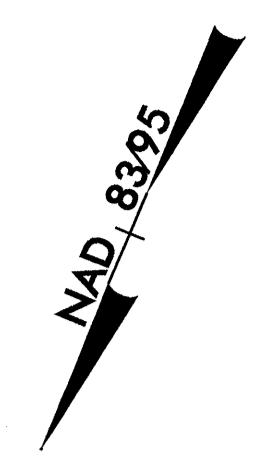
A M P ENTERPRISES, INC.  
DB 815 PG 1927  
PB 12 PG 46

MORGANTON HOTEL ASSOCIATES, LLC  
DB 877 PG 2163  
PB 12 PG 46

POOL

PROJECT REFERENCE NO. U-2550B	SHEET NO. EC-25/CONST.10
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

FOR -YI- PROFILE SEE SHEET 14  
 FOR -RPB- PROFILE SEE SHEET 15  
 FOR CURVE DATA SEE SHEET 2-J  
 FOR DITCH DETAILS SEE SHEET 2-R



80 x 25 x 3  
 1.5 inch Skimmer  
 with 1.375 inch  
 Orifice Diameter  
 17 ft. weir  
 ID 10.3B

Place Matting for Erosion Control  
 on Slope as Work Allows.

12 x 6 x 2  
 ID 10.2F

Place Matting for Erosion Control  
 on Slope as Work Allows.

12 x 6 x 2  
 ID 10.2F

105 x 35 x 3  
 2.0 inch Skimmer  
 with 1.75 inch  
 Orifice Diameter  
 27 ft. weir  
 ID 10.1F

Place Matting for Erosion Control  
 on Slope as Work Allows.

8/17/99  
 23-FEB-2011 10:03  
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 Pchao AT BENV25546

MATCHLINE SEE SHEET 5

MATCHLINE -YI- STA. 49+50.00 SEE SHEET 5  
 MATCHLINE -RPB- STA. 22+55.00 SEE SHEET 5

MATCHLINE SEE SHEET 4

MATCHLINE -YI- STA. 61+00.00 SEE SHEET 11

INSIDE MORGANTON CITY LIMITS  
 OUTSIDE MORGANTON CITY LIMITS

ERCO, LLC  
 DB 1853 PG 560

FRED A. STROUP  
 DB 1405 PG 474

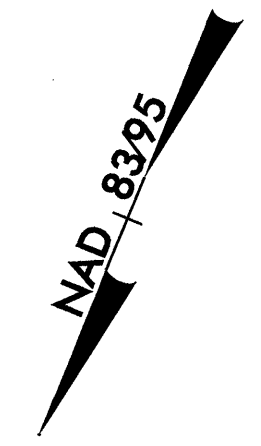
GARY W. STROUPE  
 DB 910 PG 1953

HARRIET T. STROUP  
 DB 100 PG 625

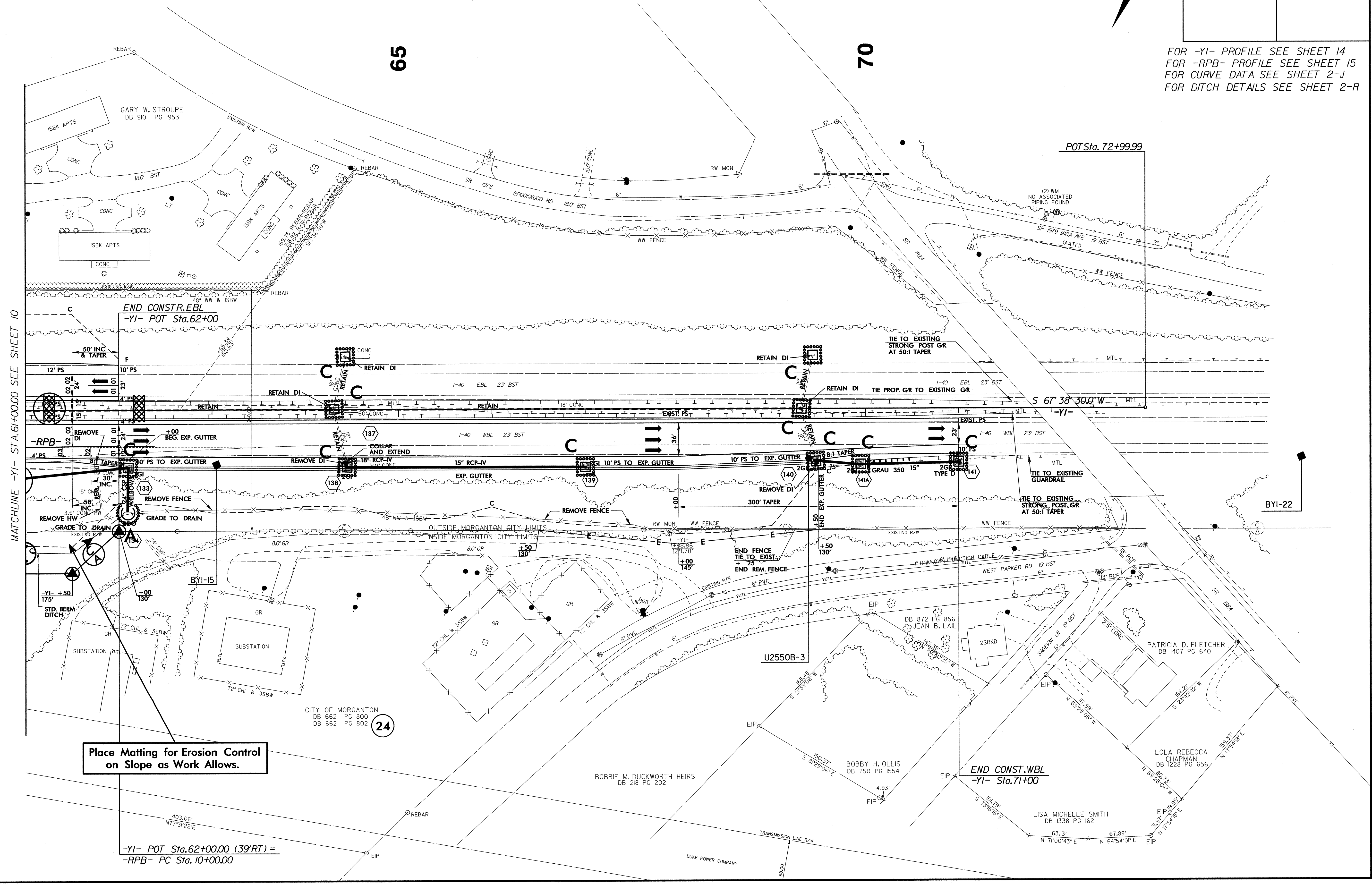
CITY OF MORGANTON  
 DB 662 PG 800  
 DB 662 PG 802

HARRIET T. STROUP  
 DB 209  
 DB 194  
 DB 100

PROJECT REFERENCE NO. U-2550B		SHEET NO. EC-26/CONST.II	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	



FOR -YI- PROFILE SEE SHEET 14  
 FOR -RPB- PROFILE SEE SHEET 15  
 FOR CURVE DATA SEE SHEET 2-J  
 FOR DITCH DETAILS SEE SHEET 2-R



MATCHLINE -YI- STA. 61+00.00 SEE SHEET 10

**Place Matting for Erosion Control on Slope as Work Allows.**

-YI- POT Sta. 62+00.00 (39' RT) =  
 -RPB- PC Sta. 10+00.00

8/17/99  
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 Author: A1\_BENNY26946

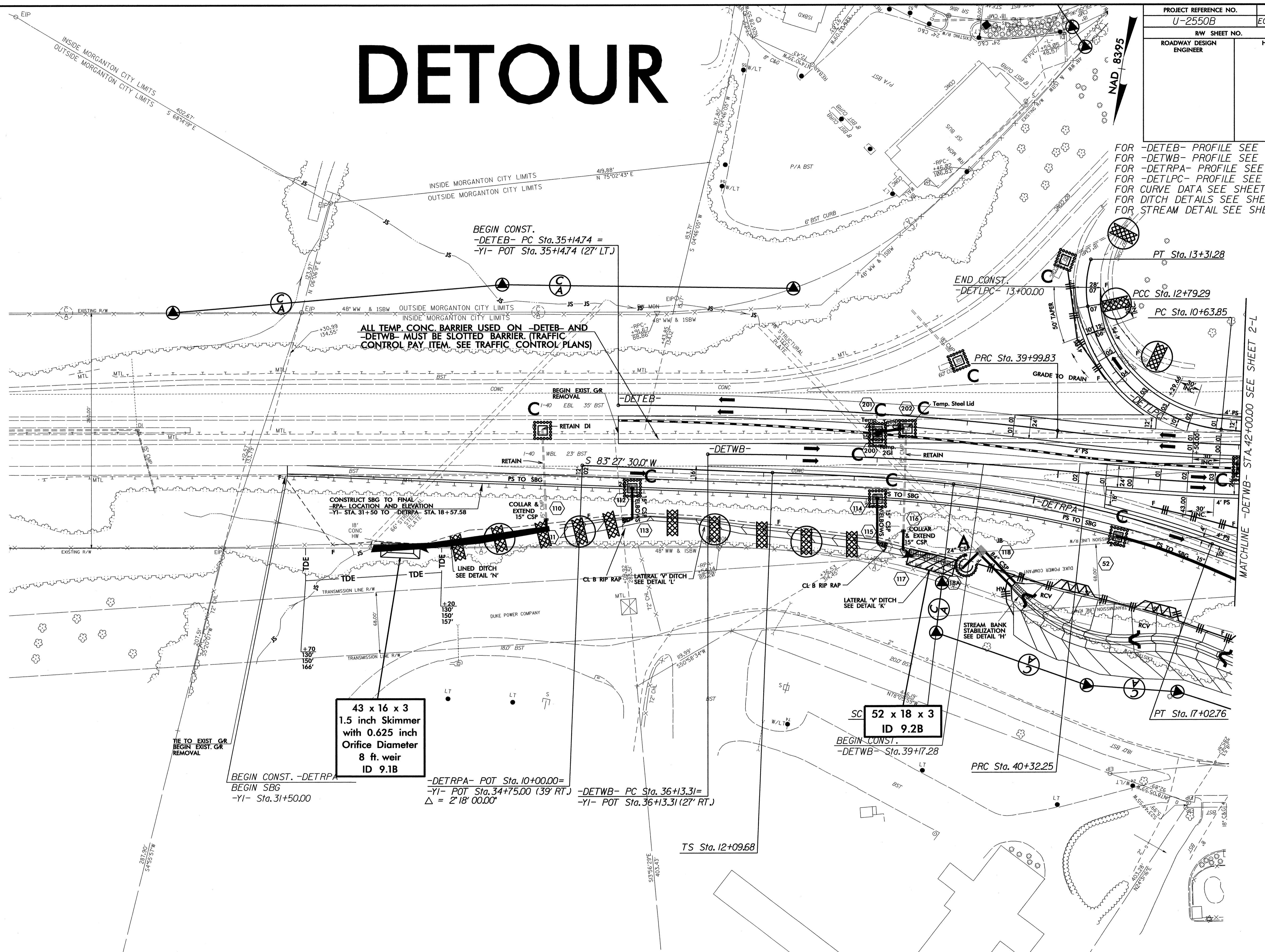


8/17/99

PROJECT REFERENCE NO. U-2550B		SHEET NO. EC-27/CONST.2-K	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

# DETOUR

FOR -DETEB- PROFILE SEE SHEET 17  
 FOR -DETWB- PROFILE SEE SHEET 18  
 FOR -DETRPA- PROFILE SEE SHEET 19  
 FOR -DETLPC- PROFILE SEE SHEET 19  
 FOR CURVE DATA SEE SHEET 2-J  
 FOR DITCH DETAILS SEE SHEET 2-R  
 FOR STREAM DETAIL SEE SHEET 2-S



ALL TEMP. CONC. BARRIER USED ON -DETEB- AND -DETWB- MUST BE SLOTTED BARRIER. (TRAFFIC CONTROL PAY ITEM. SEE TRAFFIC CONTROL PLANS)

43 x 16 x 3  
 1.5 inch Skimmer  
 with 0.625 inch  
 Orifice Diameter  
 8 ft. weir  
 ID 9.1B

52 x 18 x 3  
 ID 9.2B

BEGIN CONST. -DETRPA-  
 BEGIN SBG  
 -YI- Sta. 31+50.00

-DETRPA- POT Sta. 10+00.00=  
 -YI- POT Sta. 34+75.00 (39' RT.)  
 Δ = 2' 18" 00.00"

-DETWB- PC Sta. 36+13.31=  
 -YI- POT Sta. 36+13.31 (27' RT.)

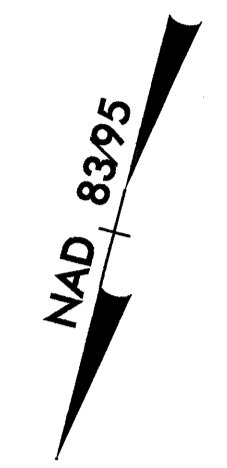
TS Sta. 12+09.68

MATCHLINE -DETWB- STA. 42+00.00 SEE SHEET 2-L

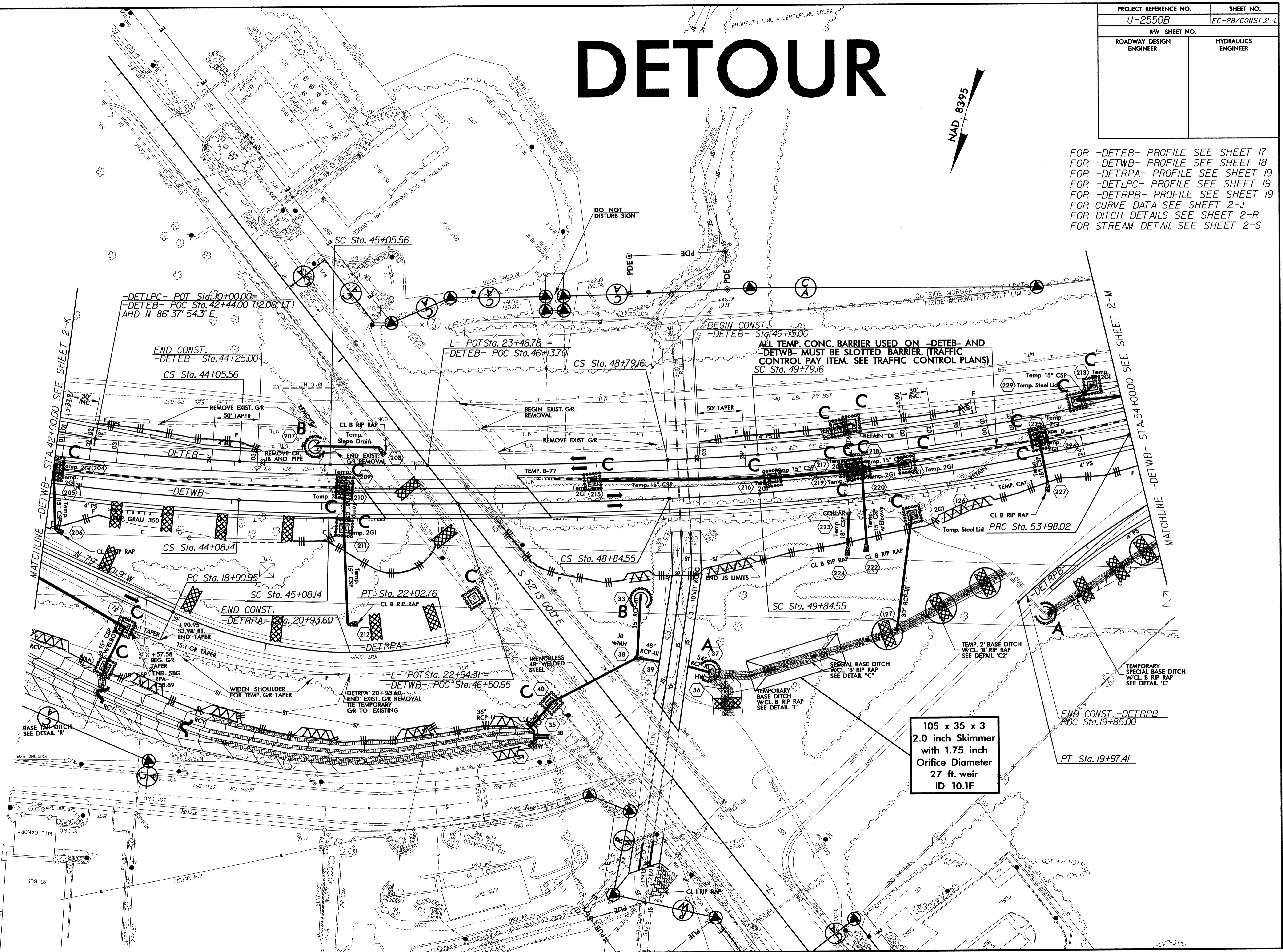
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 P:\BEN\2550B

PROJECT REFERENCE NO.	SHEET NO.
U-2550B	EC-28/CONST.2-L
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# DETOUR



FOR -DETEB- PROFILE SEE SHEET 17  
 FOR -DETWB- PROFILE SEE SHEET 18  
 FOR -DETRPA- PROFILE SEE SHEET 19  
 FOR -DETRPB- PROFILE SEE SHEET 19  
 FOR CURVE DATA SEE SHEET 2-J  
 FOR DITCH DETAILS SEE SHEET 2-R  
 FOR STREAM DETAIL SEE SHEET 2-S

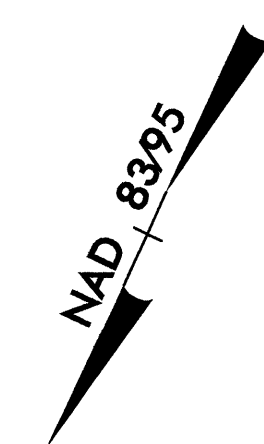


105 x 35 x 3  
 2.0 inch Skimmer  
 with 1.75 inch  
 Orifice Diameter  
 27 ft. weir  
 ID 10.1F

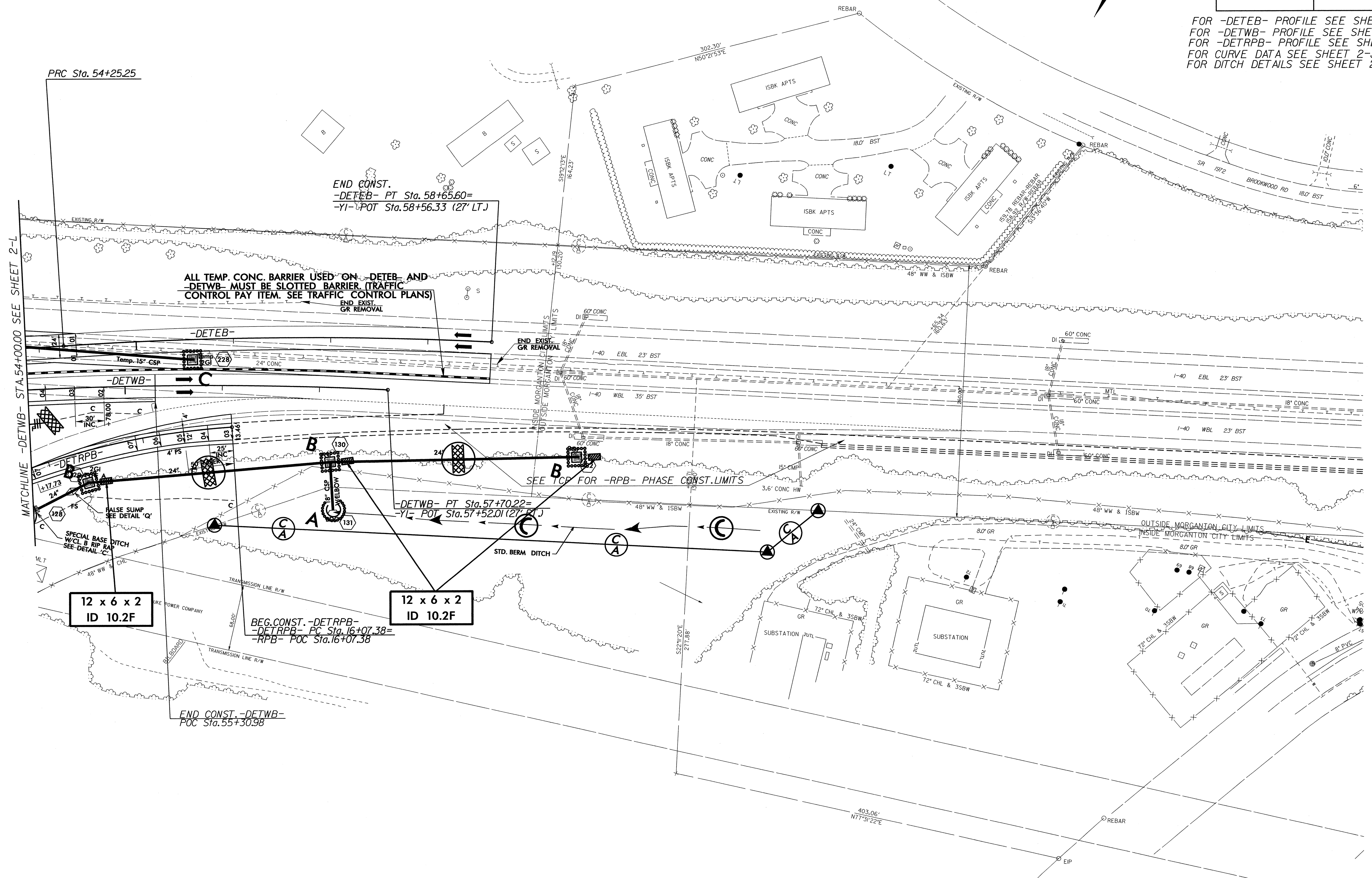
8/17/99  
 23-FEB-2011 10:07  
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PROJECT REFERENCE NO.		SHEET NO.	
U-2550B		EC-29/CONST.2-M	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

# DETOUR



FOR -DETEB- PROFILE SEE SHEET 17  
 FOR -DETWB- PROFILE SEE SHEET 18  
 FOR -DETRPB- PROFILE SEE SHEET 19  
 FOR CURVE DATA SEE SHEET 2-J  
 FOR DITCH DETAILS SEE SHEET 2-R

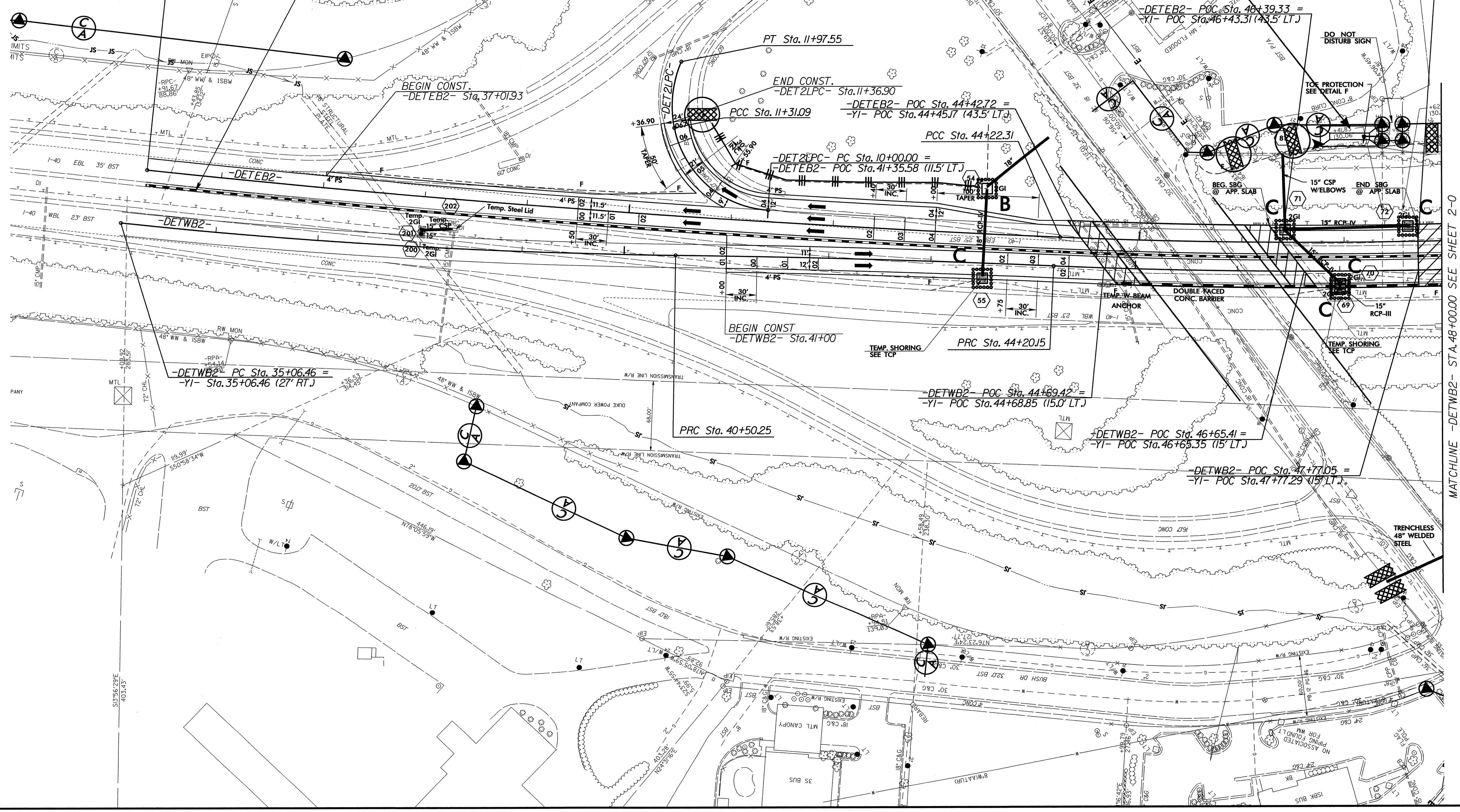


PROJECT REFERENCE NO.	SHEET NO.
U-2550B	EC-30/CONST.2-N
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# DETOUR

57 x 20 x 3  
1.5 inch Skimmer  
with 0.875 inch  
Orifice Diameter  
12 ft. weir  
ID 5.2B

ALL TEMP. BARRIER USED ON -DETEB2- AND -DETWB2-  
MUST BE SLOTTED BARRIER. (TRAFFIC CONTROL PAY ITEM.  
SEE TRAFFIC CONTROL PLANS.)  
-DETEB2- PC Sta. 35+26.74 =  
-YI- Sta. 35+26.74 (27' LT.)



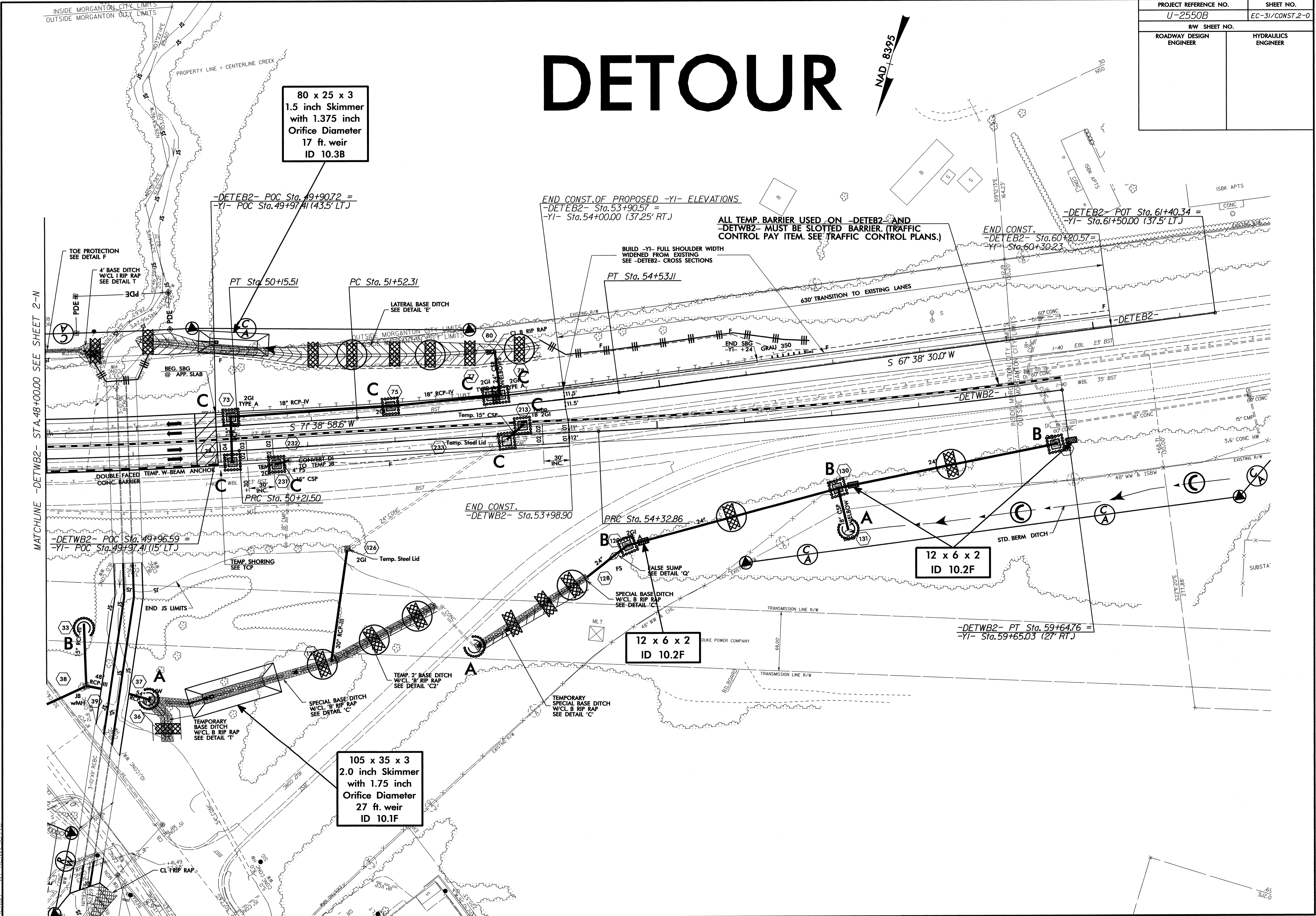
MATCHLINE -DETWB2- STA. 48+00.00 SEE SHEET 2-0

8/17/99  
23-FEB-2011 08:00  
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PROJECT REFERENCE NO. U-2550B	SHEET NO. EC-31/CONST.2-0
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# DETOUR

NAD 8395



80 x 25 x 3  
1.5 inch Skimmer  
with 1.375 inch  
Orifice Diameter  
17 ft. weir  
ID 10.3B

12 x 6 x 2  
ID 10.2F

12 x 6 x 2  
ID 10.2F

105 x 35 x 3  
2.0 inch Skimmer  
with 1.75 inch  
Orifice Diameter  
27 ft. weir  
ID 10.1F

MATCHLINE -DETWB2- STA. 48+00.00 SEE SHEET 2-N

ALL TEMP. BARRIER USED ON -DETEB2- AND  
-DETWB2- MUST BE SLOTTED BARRIER. (TRAFFIC  
CONTROL PAY ITEM. SEE TRAFFIC CONTROL PLANS.)

END CONST. OF PROPOSED -YI- ELEVATIONS  
-DETEB2- Sta. 53+90.57 =  
-YI- Sta. 54+00.00 (37.25' RT.)

END CONST.  
-DETEB2- Sta. 60+20.57 =  
-YI- Sta. 60+30.23

-DETEB2- POT Sta. 61+40.34 =  
-YI- Sta. 61+50.00 (37.5' LT.)

-DETEB2- POC Sta. 49+90.72 =  
-YI- POC Sta. 49+97.41 (43.5' LT.)

-DETWB2- POC Sta. 49+96.59 =  
-YI- POC Sta. 49+97.41 (15' LT.)

END CONST.  
-DETWB2- Sta. 53+98.90

-DETWB2- PT Sta. 59+64.76 =  
-YI- Sta. 59+65.03 (27' RT.)

8/17/99  
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