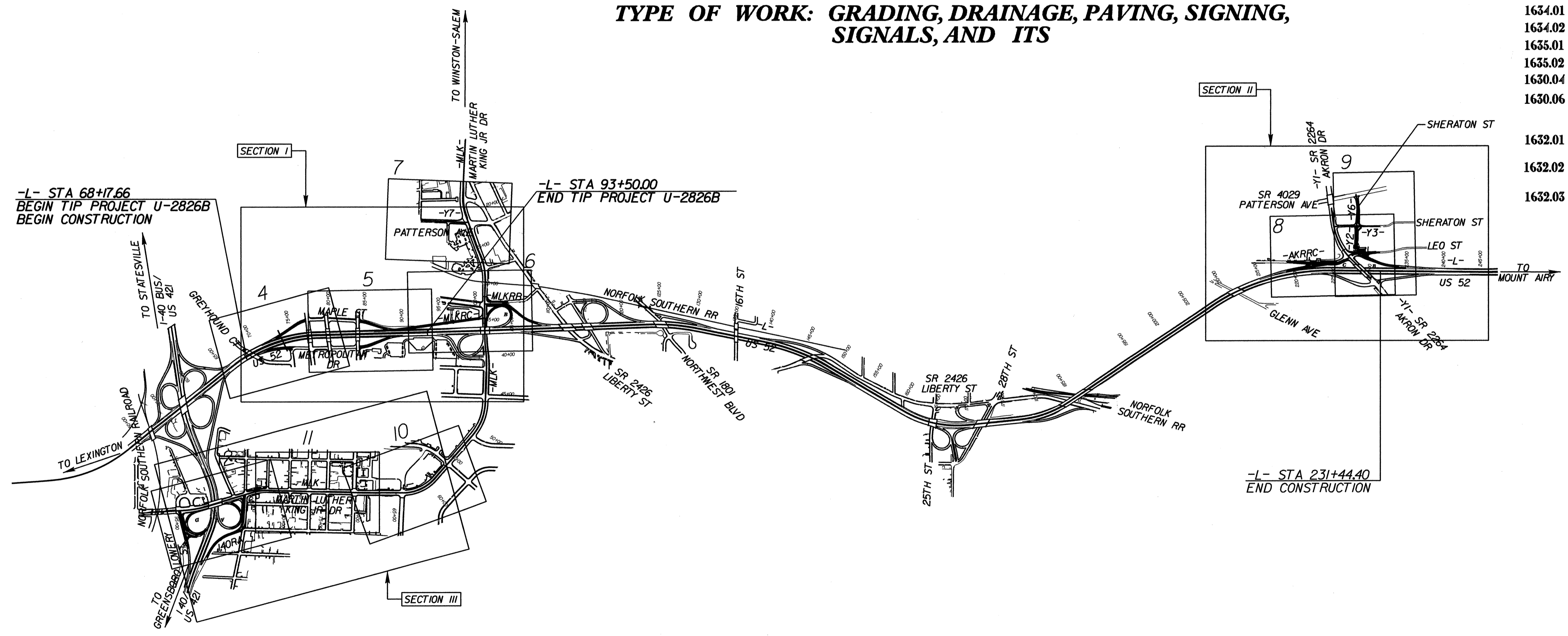


**TIP PROJECT: U-2826B**

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

**LOCATION: US 52 FROM GREYHOUND COURT  
 TO SR 2264 (AKRON DRIVE), INCLUDING  
 MARTIN LUTHER KING, JR. DRIVE**  
**TYPE OF WORK: GRADING, DRAINAGE, PAVING, SIGNING,  
 SIGNALS, AND ITS**

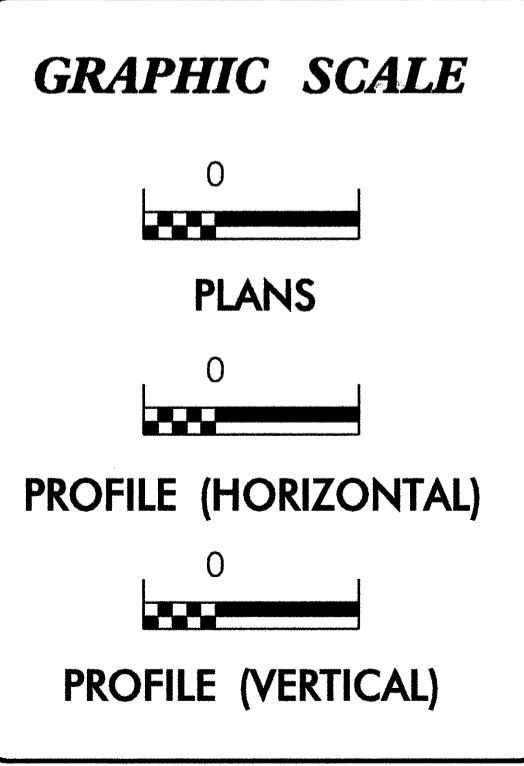


STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-2826B	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	

**EROSION AND SEDIMENT CONTROL MEASURES**

Std. #	Description	Symbol
1630.03	Temporary Silt Ditch	TD
1630.05	Temporary Diversion	TD
1605.01	Temporary Silt Fence	III III III
1606.01	Special Sediment Control Fence	ZZZZZZ
1622.01	Temporary Berms and Slope Drains	—▲—
	Silt Basin Type B	▨
1633.01	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	A
1632.02	Type B	B
1632.03	Type C	C
	Skimmer Basin	▭
	Tiered Skimmer Basin	▭
	Infiltration Basin	▭

**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

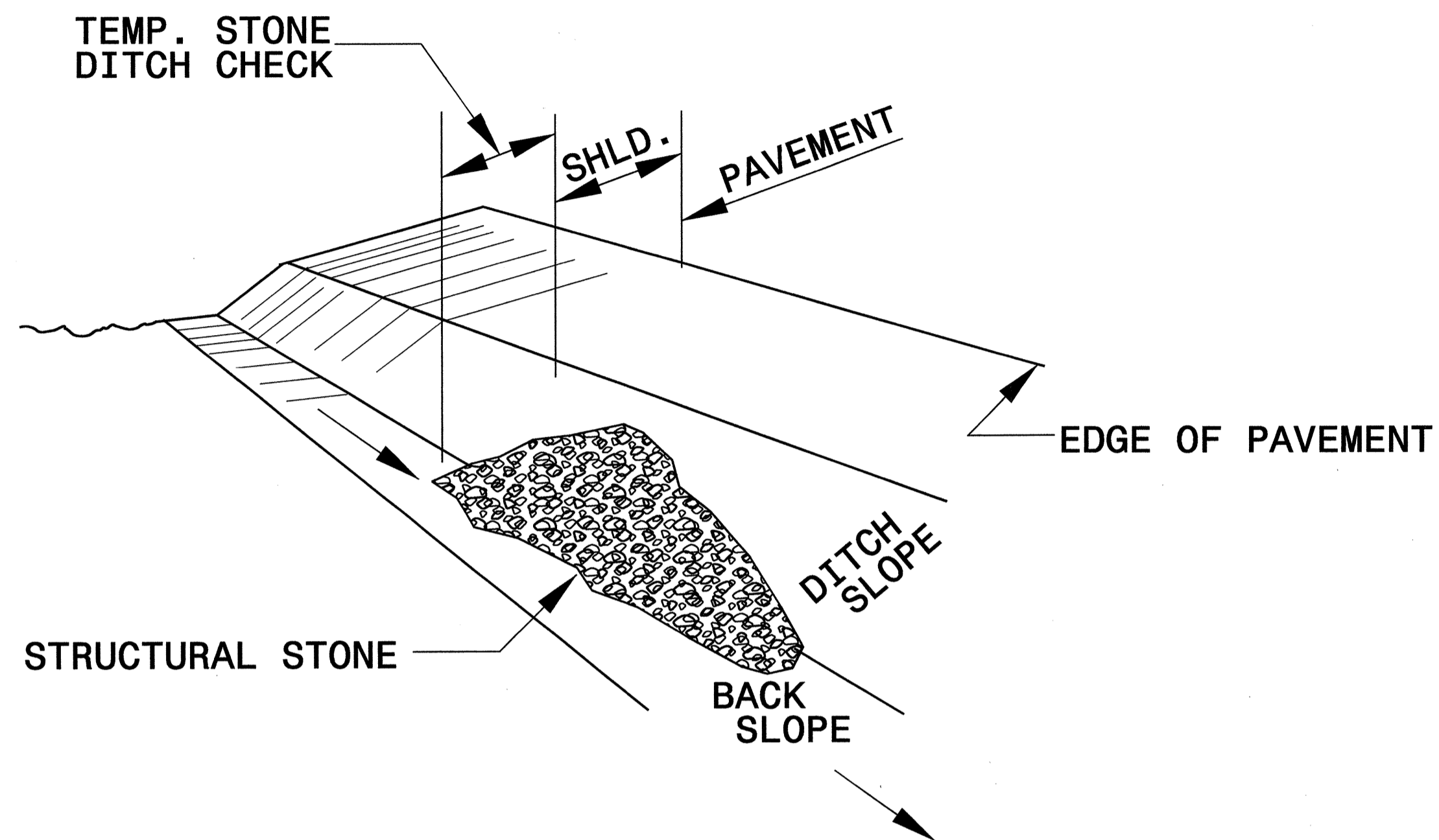
The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated July 18, 2006 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

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	1635.02 Rock Pipe Inlet Sediment Trap Type B

09-DEC-2006 10:21 R:\Environment\2006\U-2826B\_EC.tsh.dgn

PROJECT REFERENCE NO. U-2826B	SHEET NO. EC-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# TEMPORARY ROCK SILT CHECK TYPE 'B' DETAIL

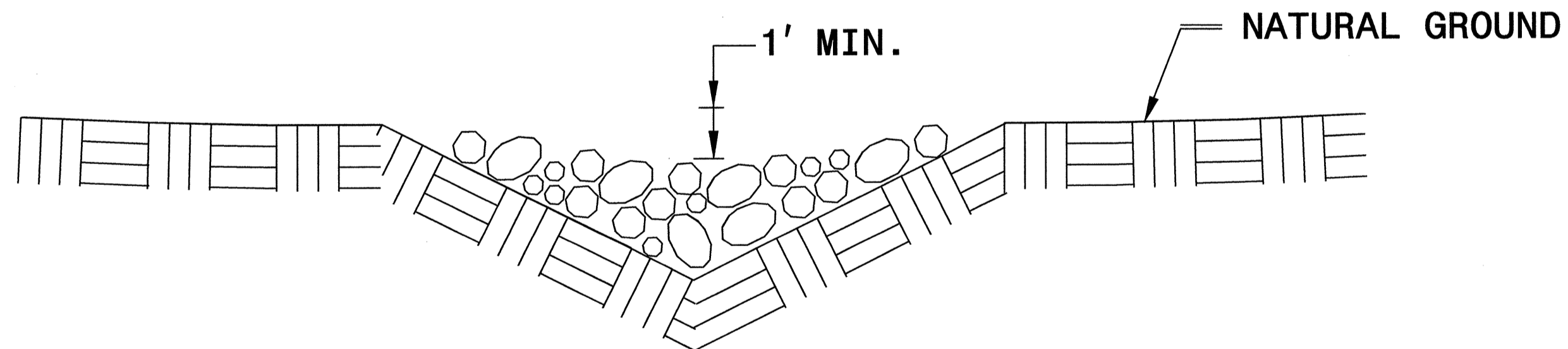


**ISOMETRIC VIEW**

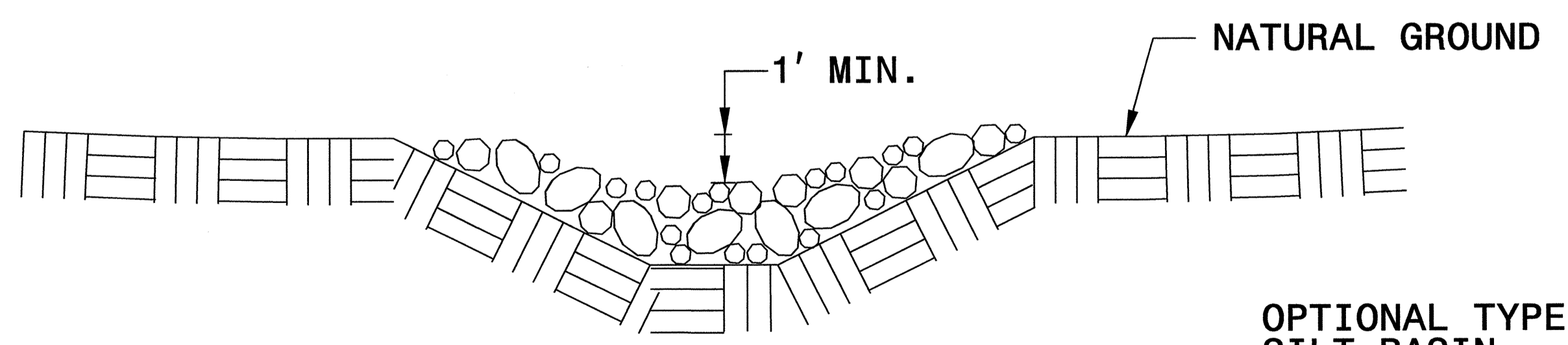
**NOTES:**

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

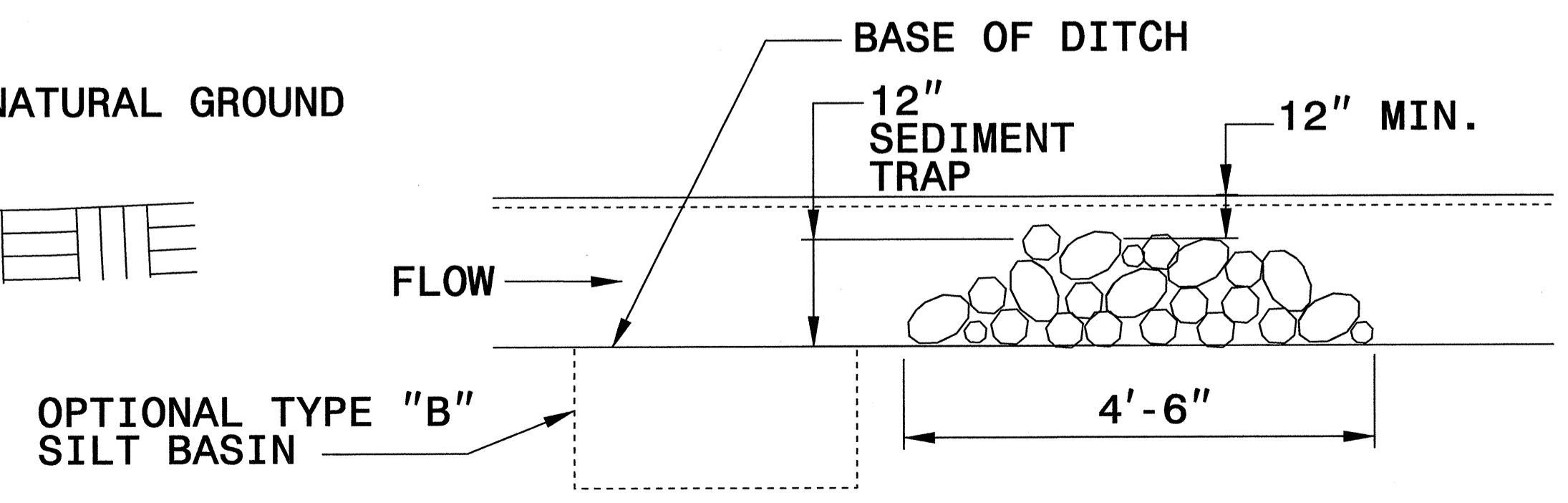
THE ENGINEER MAY DIRECT THE OPTION OF CLASS "A" STONE FOR SITES HAVING LESS THAN ONE (1) ACRE DRAINAGE AREA AND A DITCH GRADE LESS THAN 3%.



**CROSS SECTION VEE DITCH**



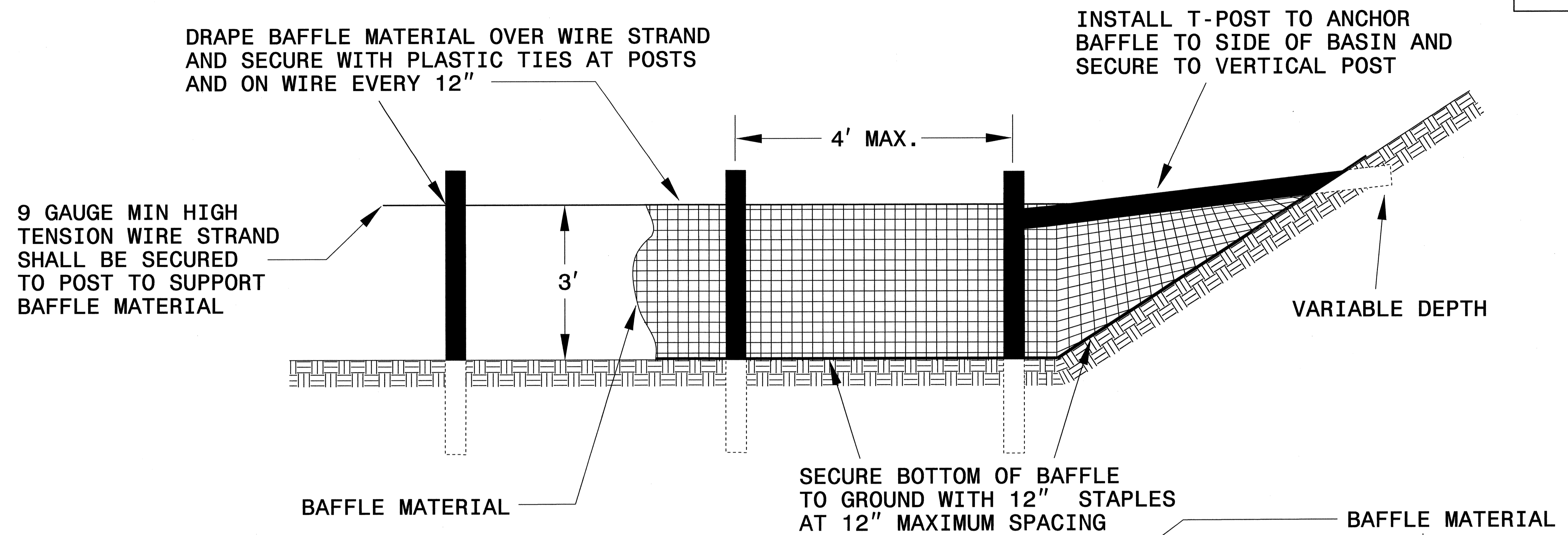
**CROSS SECTION TRAPEZOIDAL DITCH**



**ELEVATION VIEW**

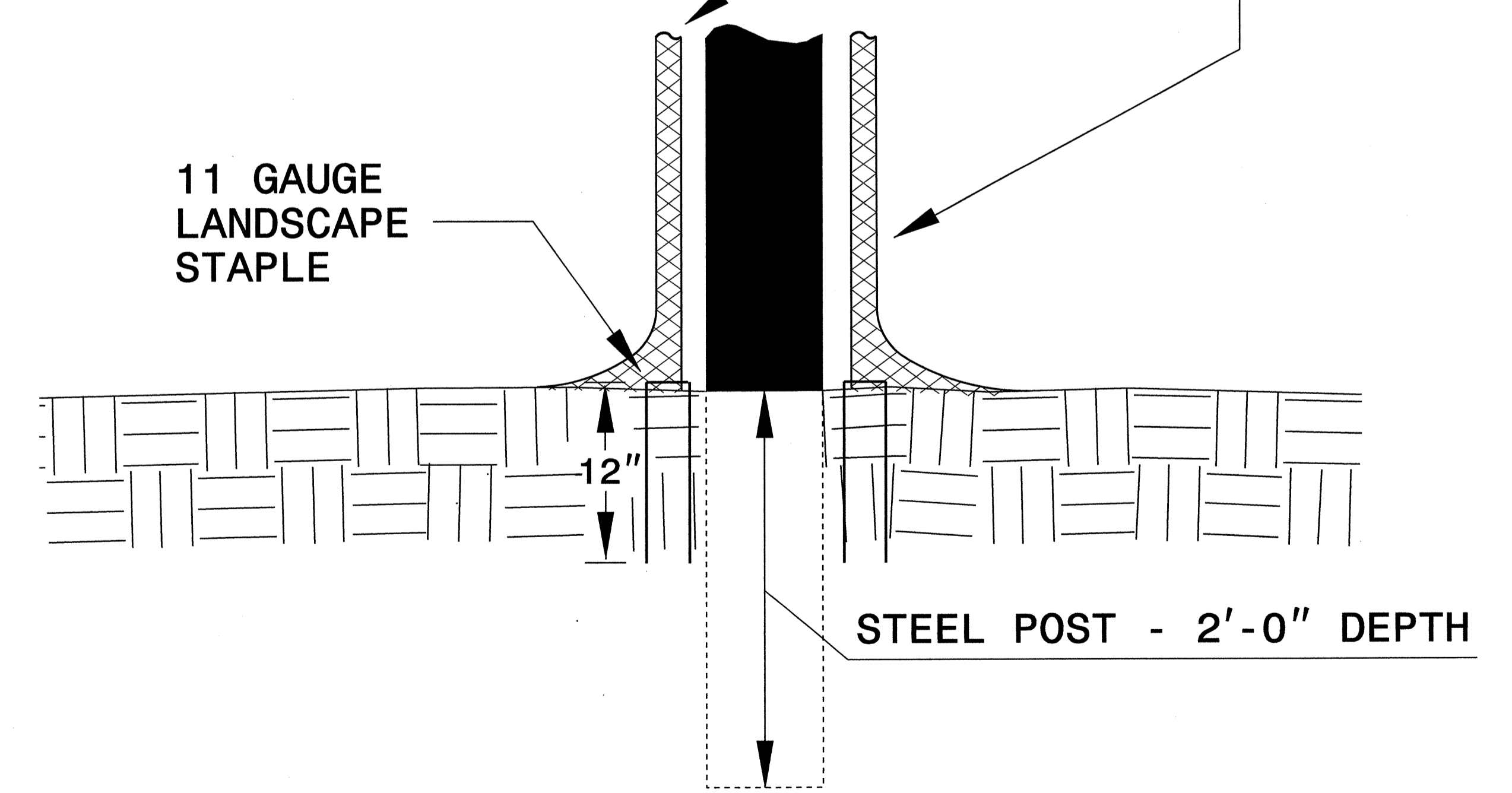
PROJECT REFERENCE NO. U-2826B	SHEET NO. EC-2A
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# 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.

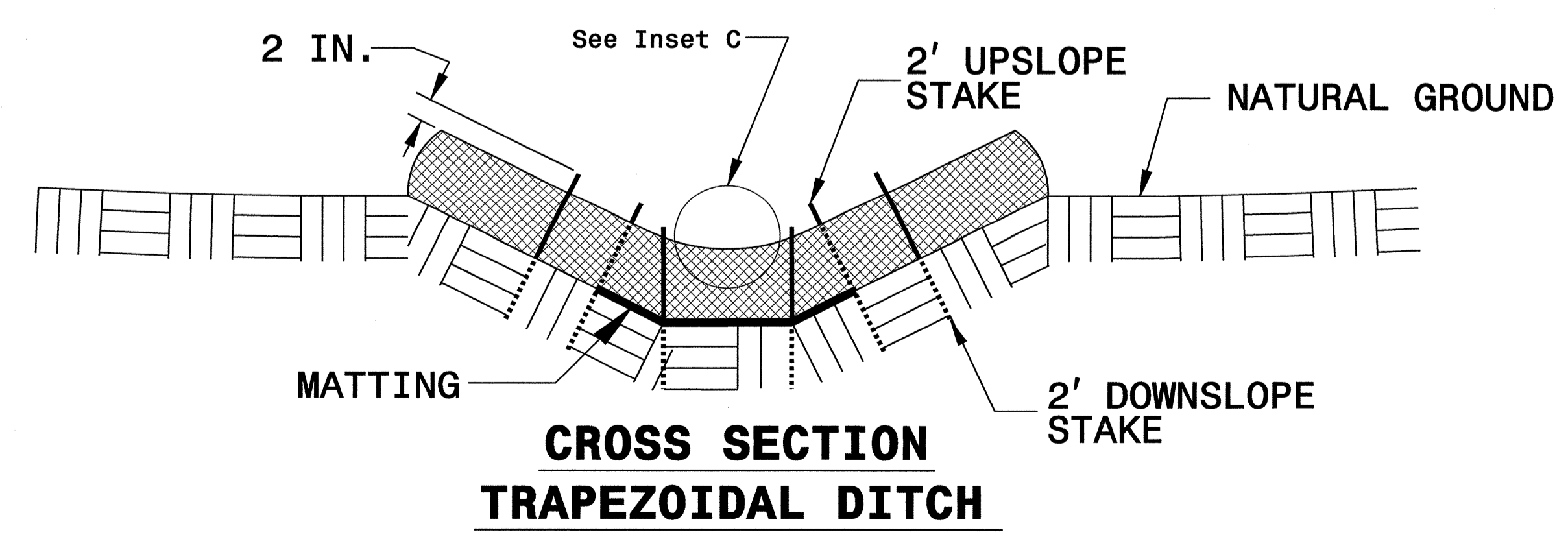
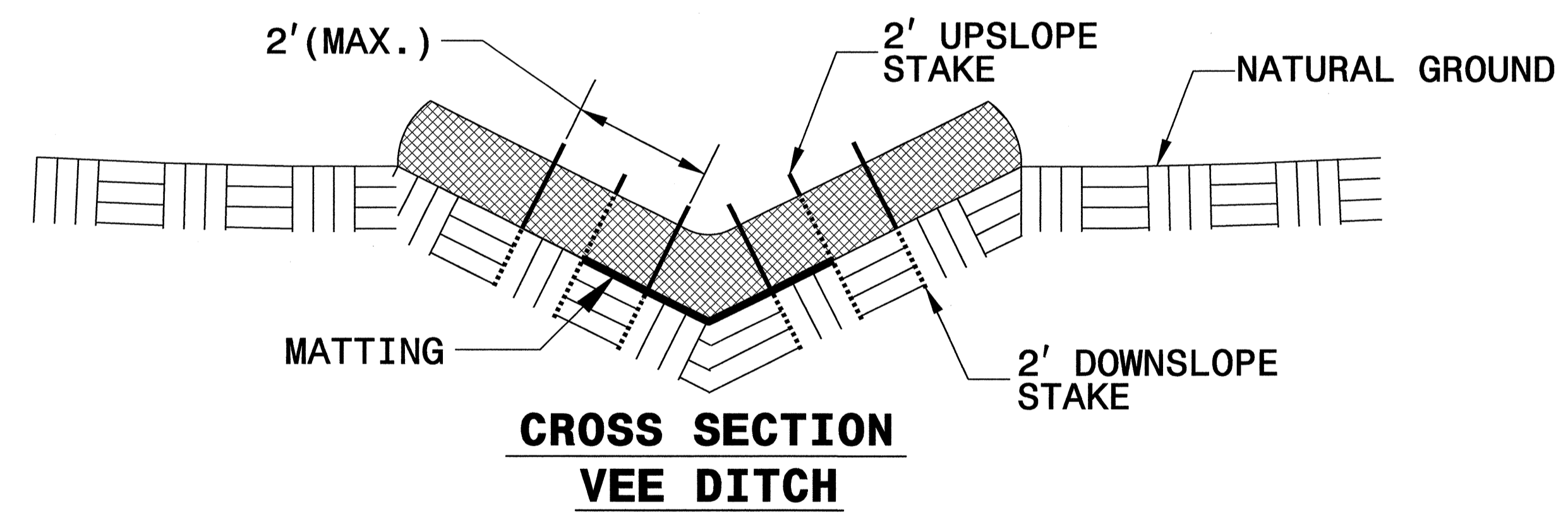
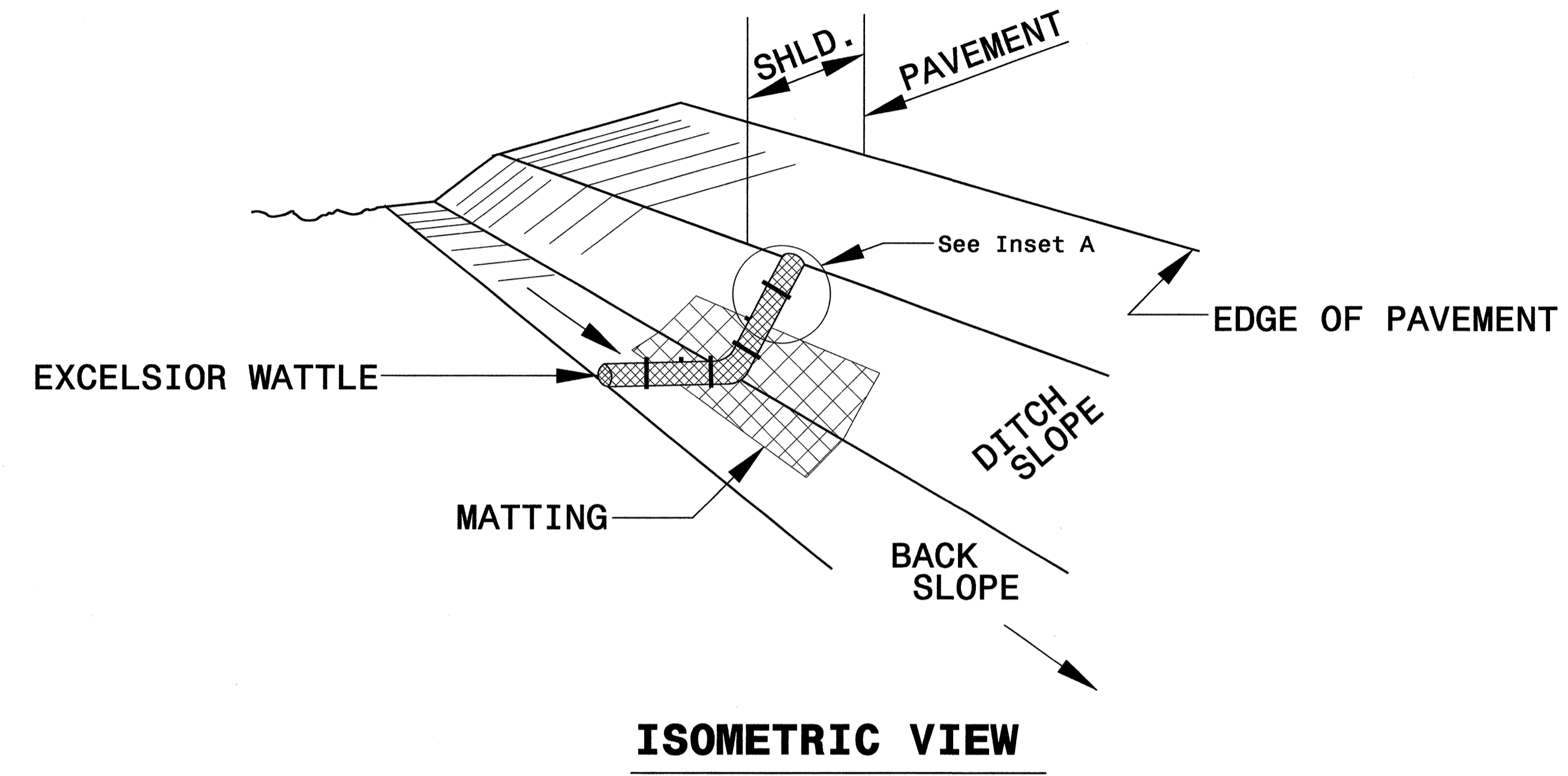


BAFFLE MATERIAL SHALL BE SECURED TO THE BOTTOM AND SIDES OF BASIN USING 12" LANDSCAPE STAPLES

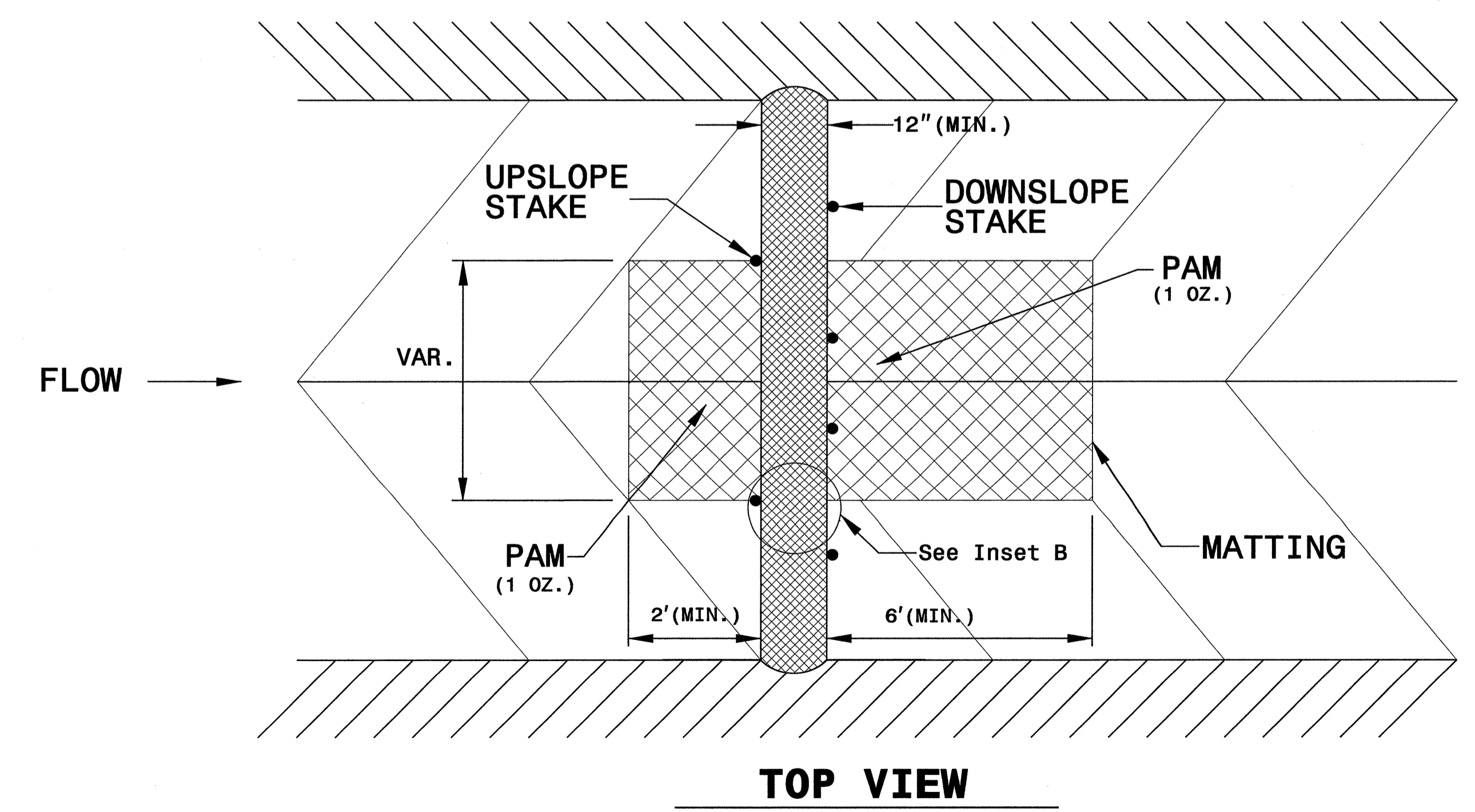
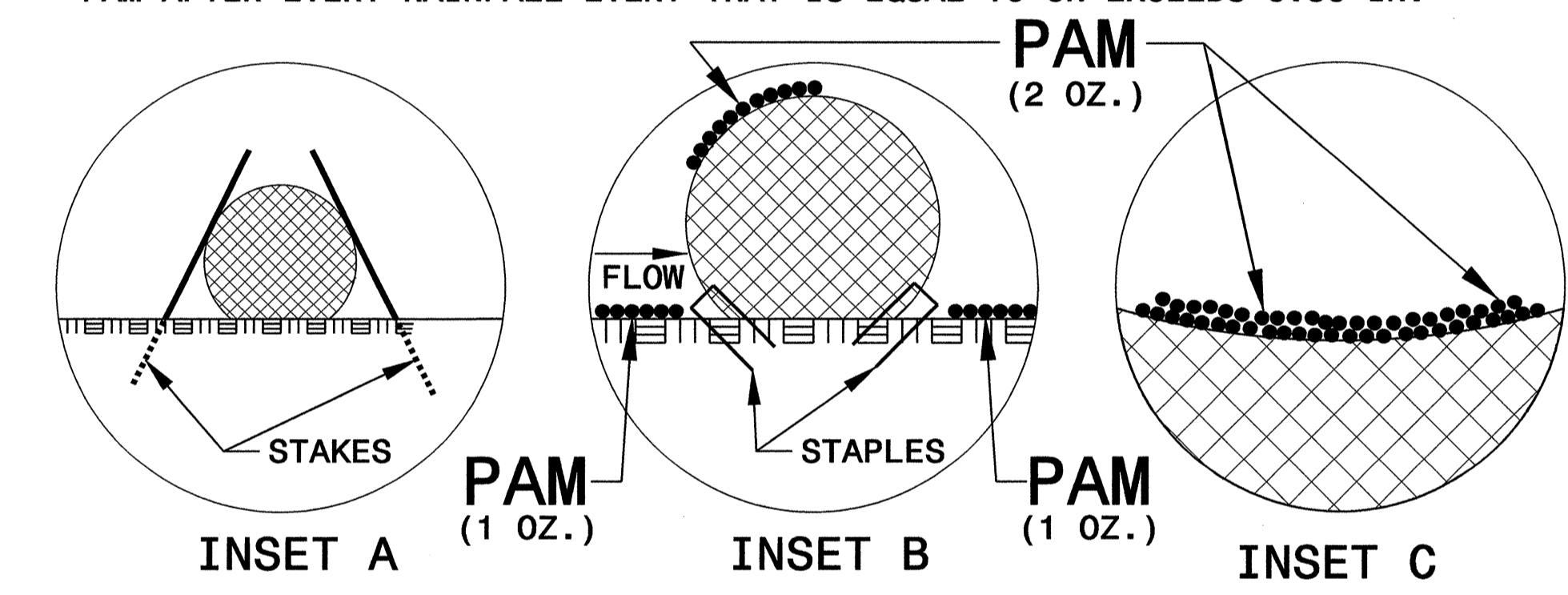


PROJECT REFERENCE NO. U-2826B	SHEET NO. EC-2B
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL



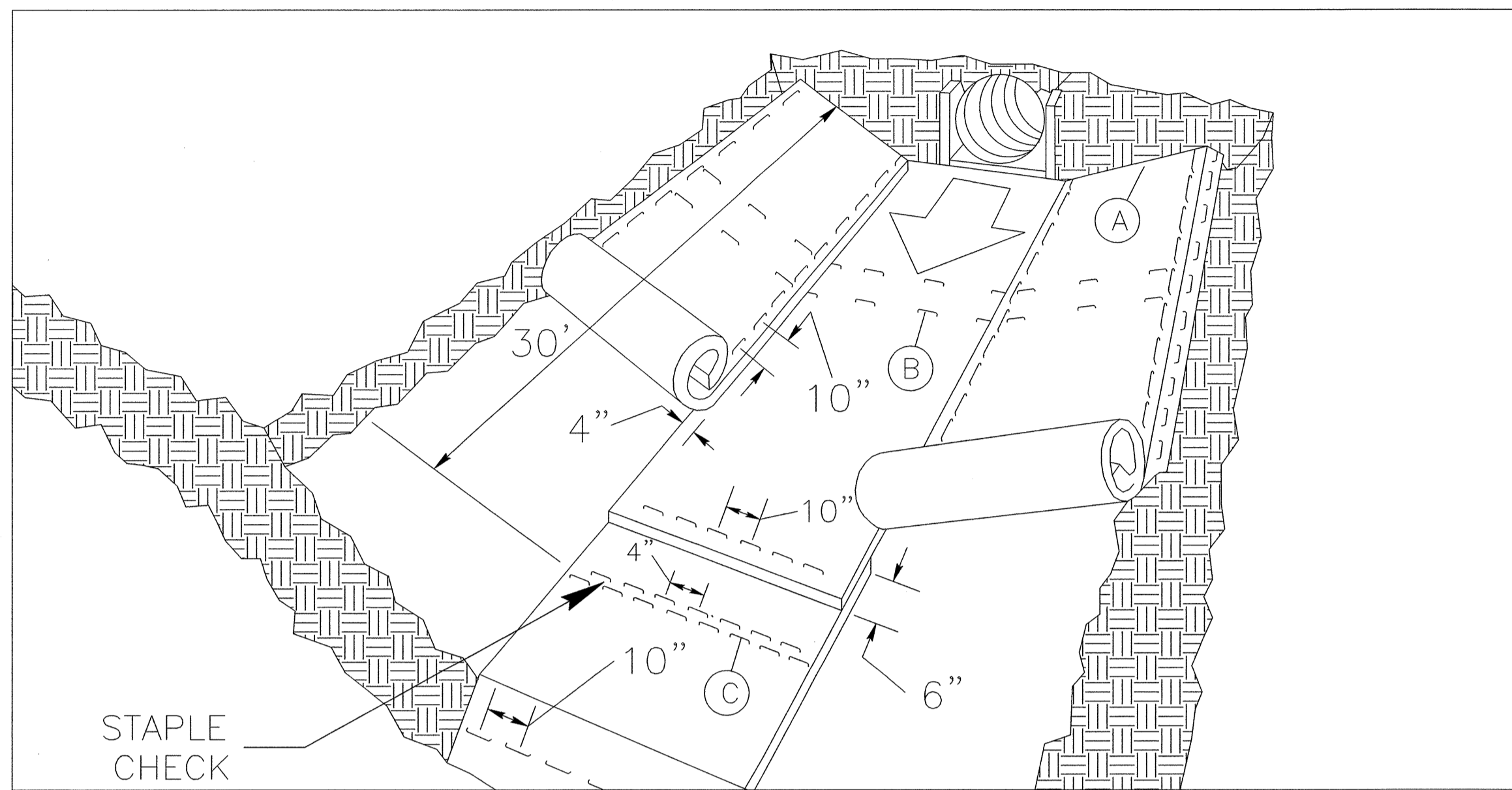
- NOTES:**
- USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.
  - USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.
  - ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.
  - INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.
  - PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.
  - INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.
  - INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.
  - PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH WATTLE.
  - INITIALLY APPLY 2 OUNCES OF ANIONIC OR NEUTRALLY CHARGED PAM OVER WATTLE WHERE WATER WILL FLOW AND 1 OUNCE OF PAM ON MATTING ON EACH SIDE OF WATTLE. REAPPLY PAM AFTER EVERY RAINFALL EVENT THAT IS EQUAL TO OR EXCEEDS 0.50 IN.





PROJECT REFERENCE NO. U-2826B	SHEET NO. EC-2C
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# MATTING INSTALLATION DETAIL



**MATTING IN DITCHES**

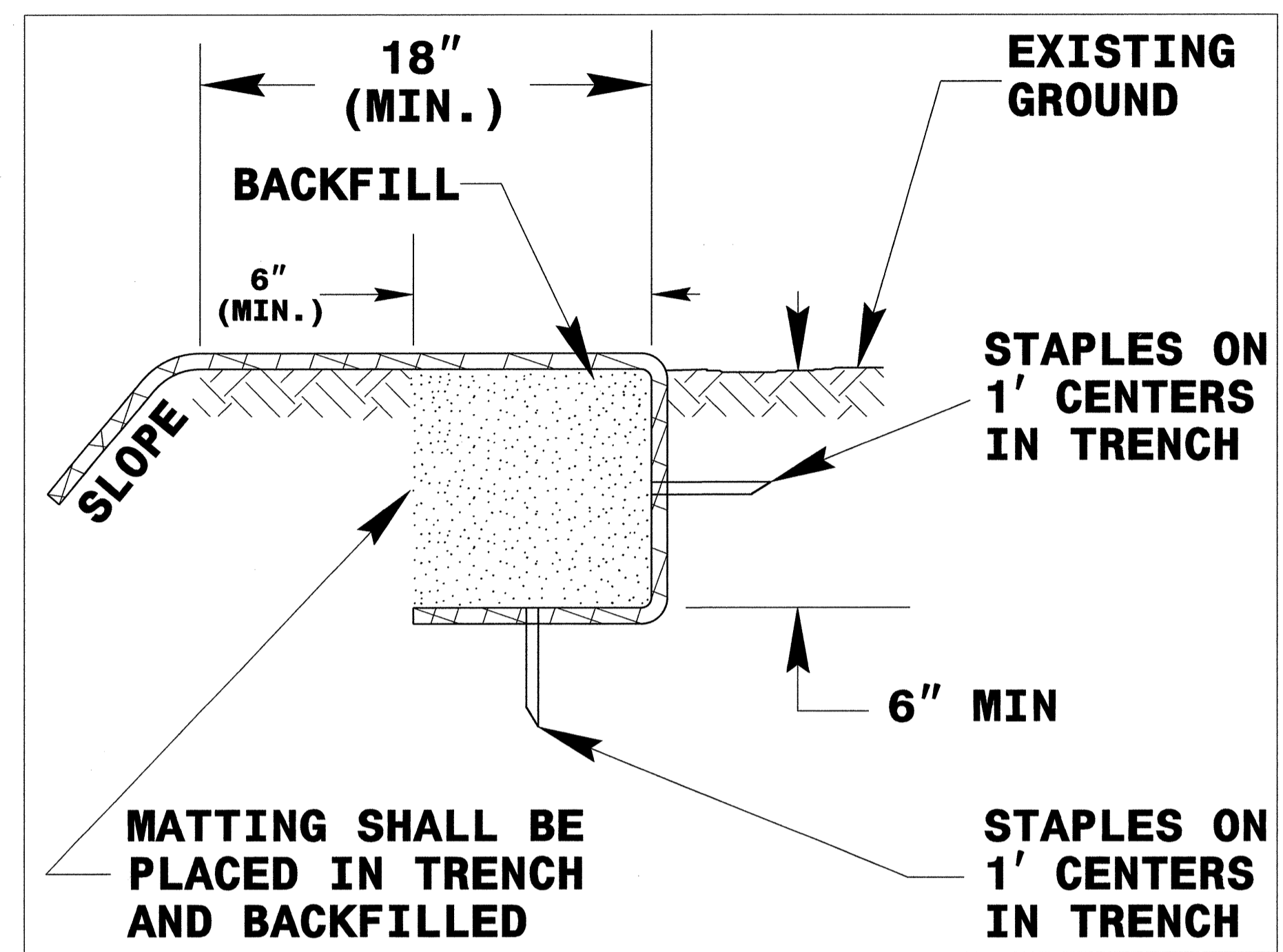
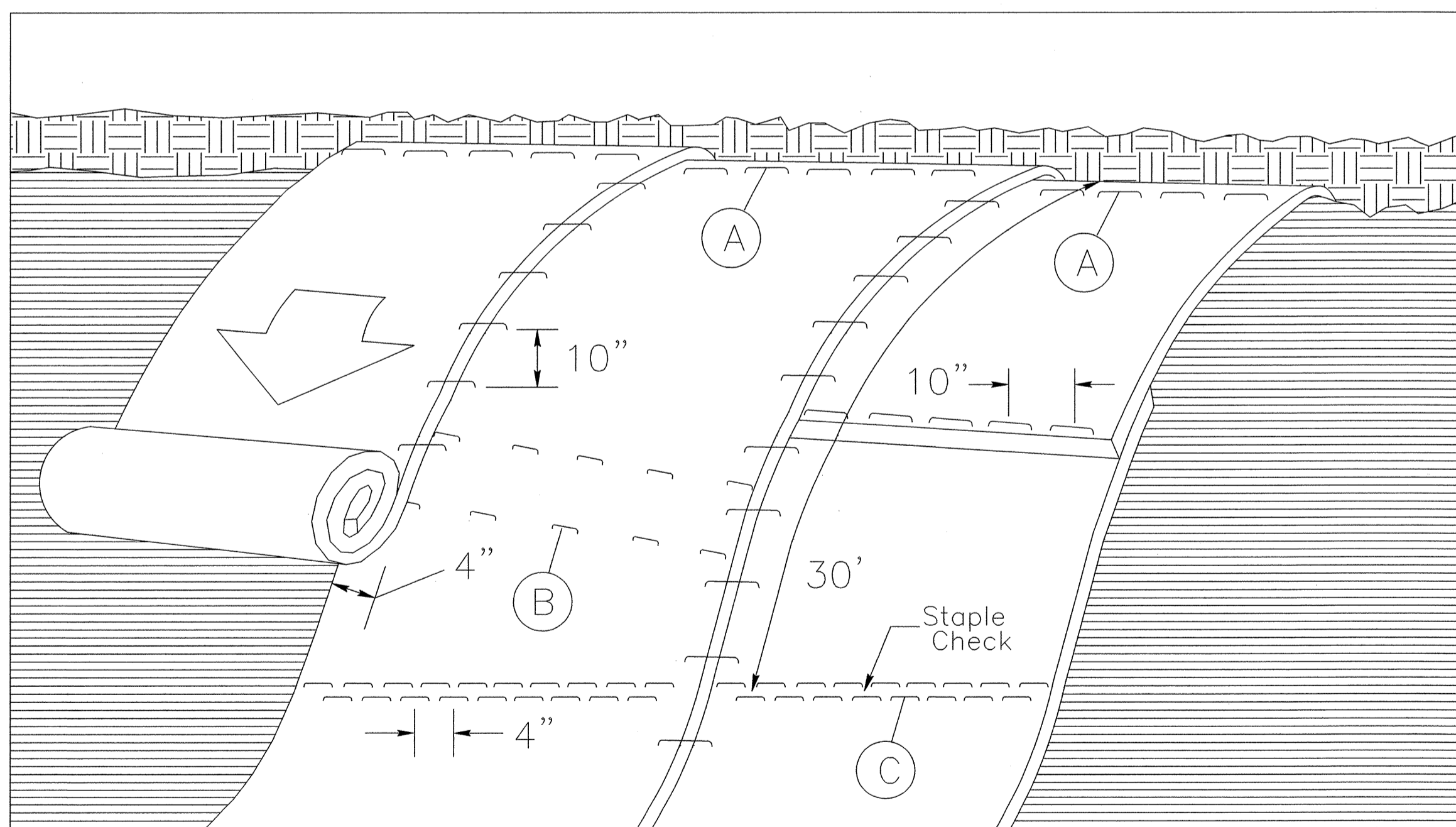


DIAGRAM (A)



**MATTING ON SLOPES**

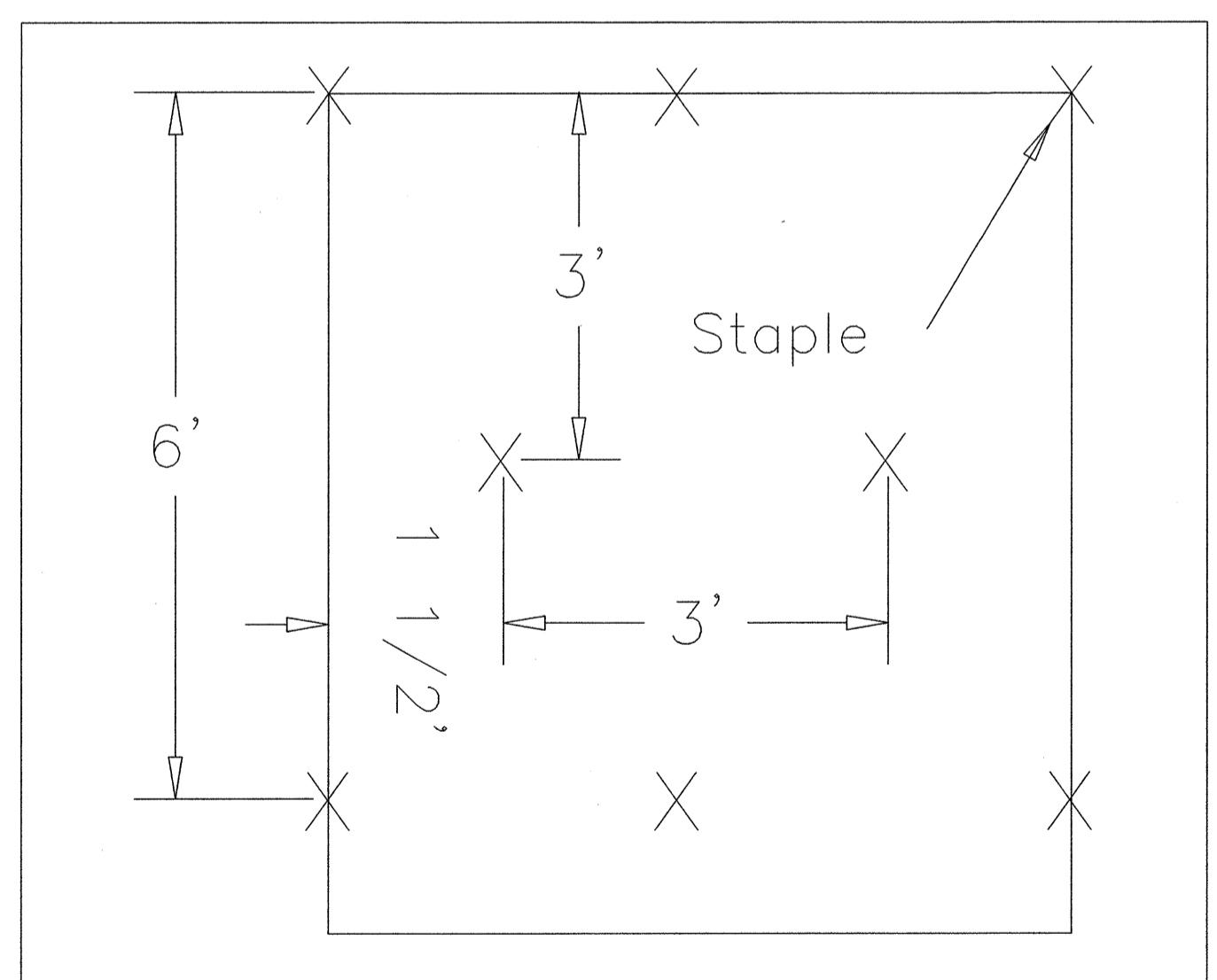


DIAGRAM (B)

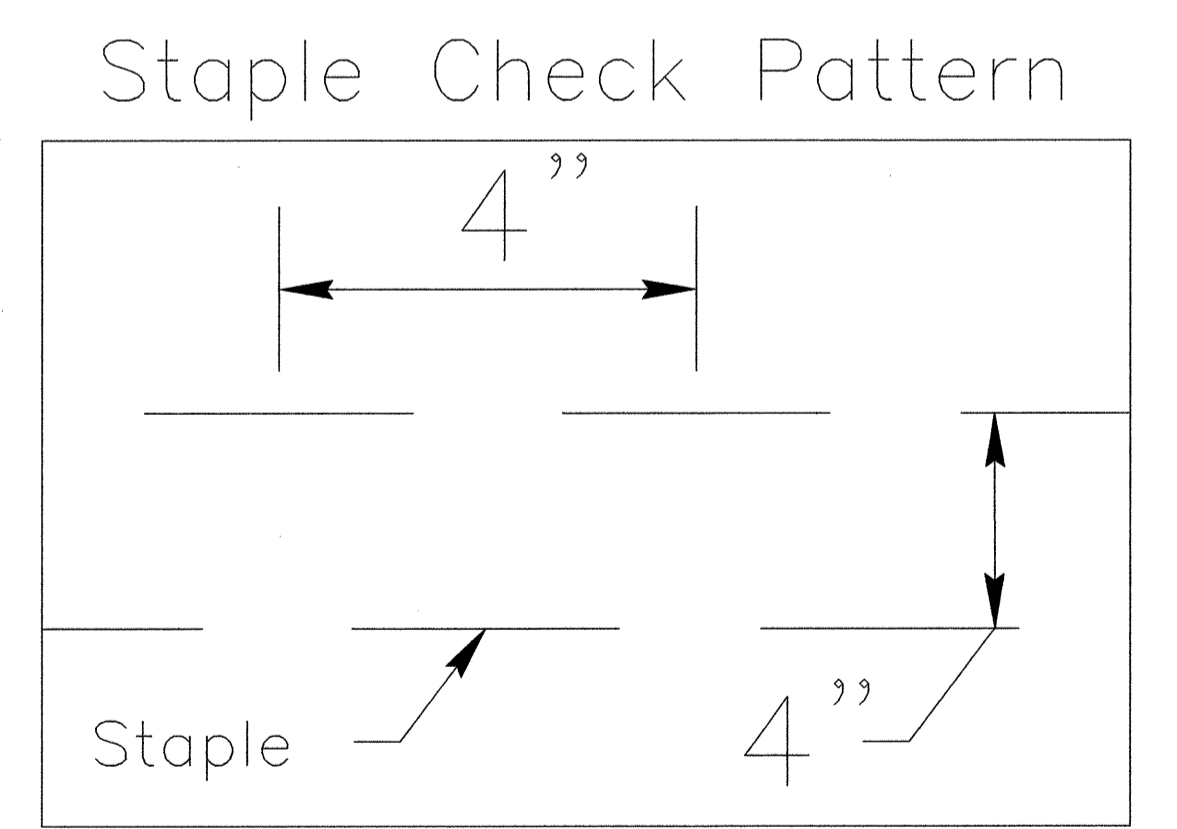


DIAGRAM (C)

**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





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.

Pls Sta 66+84.48  
Es = 6'00'00.0"  
Ls = 400.00'  
LT = 266.82'  
ST = 133.47'

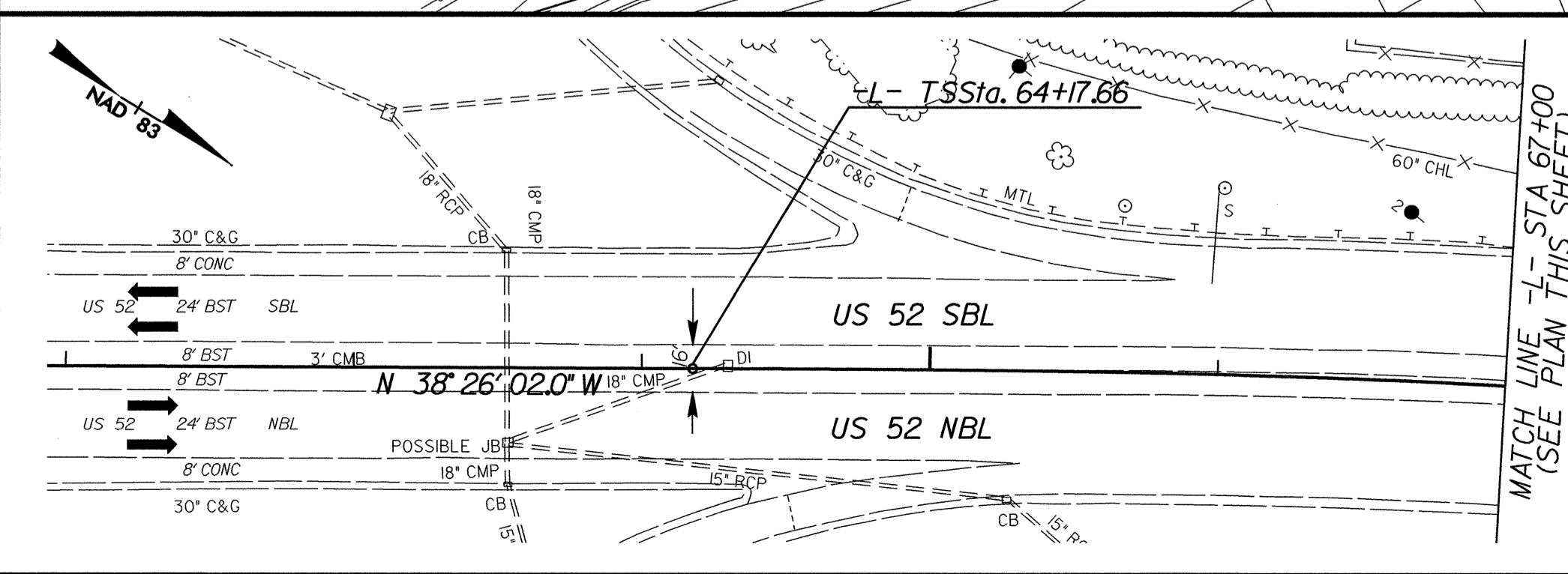
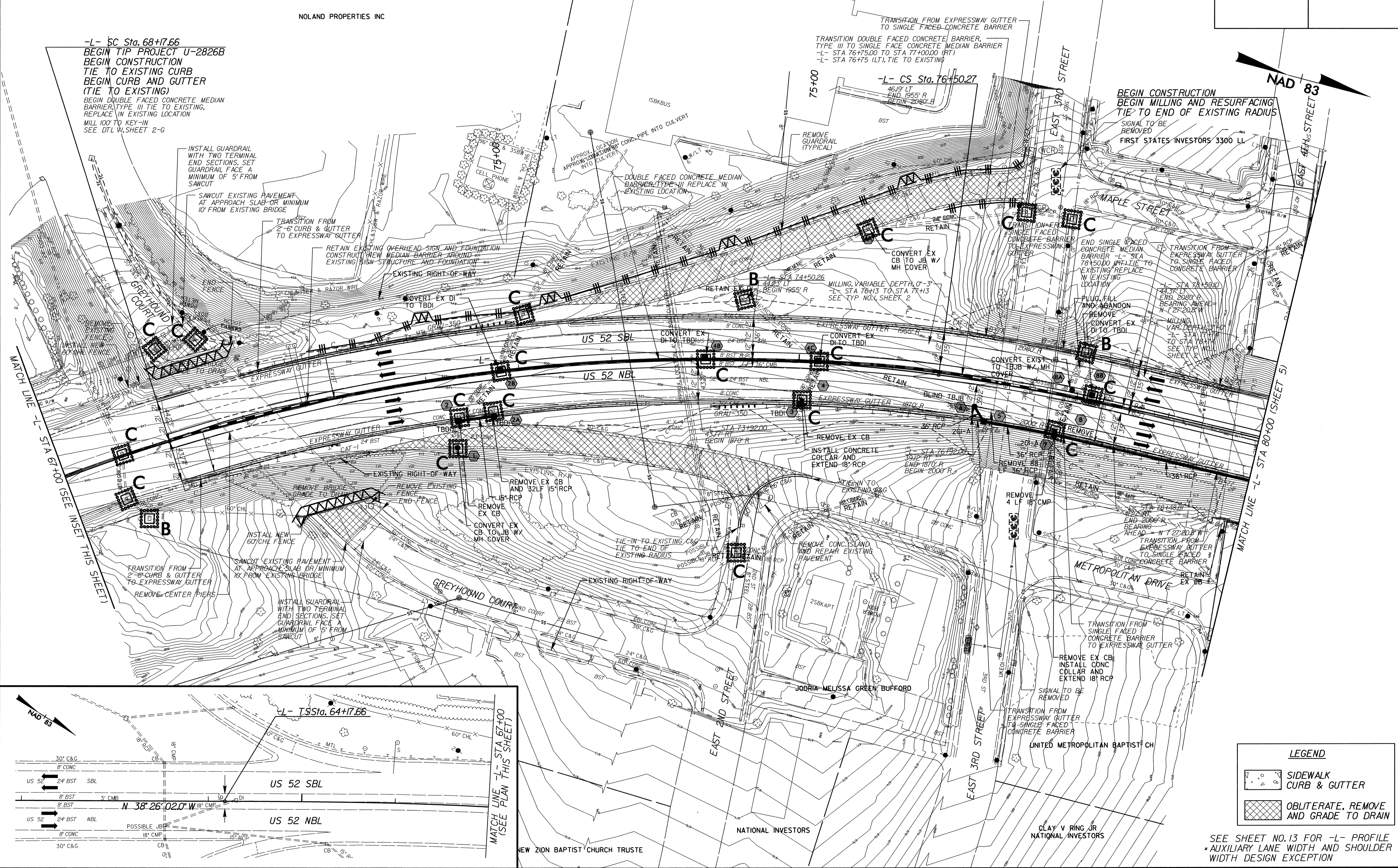
-L-

PI Sta 72+40.68  
 $\Delta = 24'58'41.2"$  (RT)  
D = 3'00'00.0"  
L = 832.60'  
T = 423.02'  
R = 1,909.86'  
SE = EXIST  
DS = 60 MPH

Pls Sta 77+83.74  
Es = 6'00'00.0"  
Ls = 400.00'  
LT = 266.82'  
ST = 133.47'

# SECTION I

PROJECT REFERENCE NO.	SHEET NO.
U-2826B	EC-4/CONST.4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



**LEGEND**

	SIDEWALK CURB & GUTTER
	OBLITERATE, REMOVE AND GRADE TO DRAIN

SEE SHEET NO.13 FOR -L- PROFILE  
\*AUXILIARY LANE WIDTH AND SHOULDER  
WIDTH DESIGN EXCEPTION



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-  
Pls Sta 77+83.74  
Os = 6' 00' 00.0"  
Ls = 400.00'  
LT = 266.82'  
ST = 133.47'

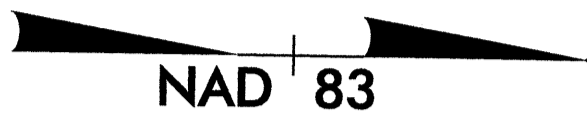
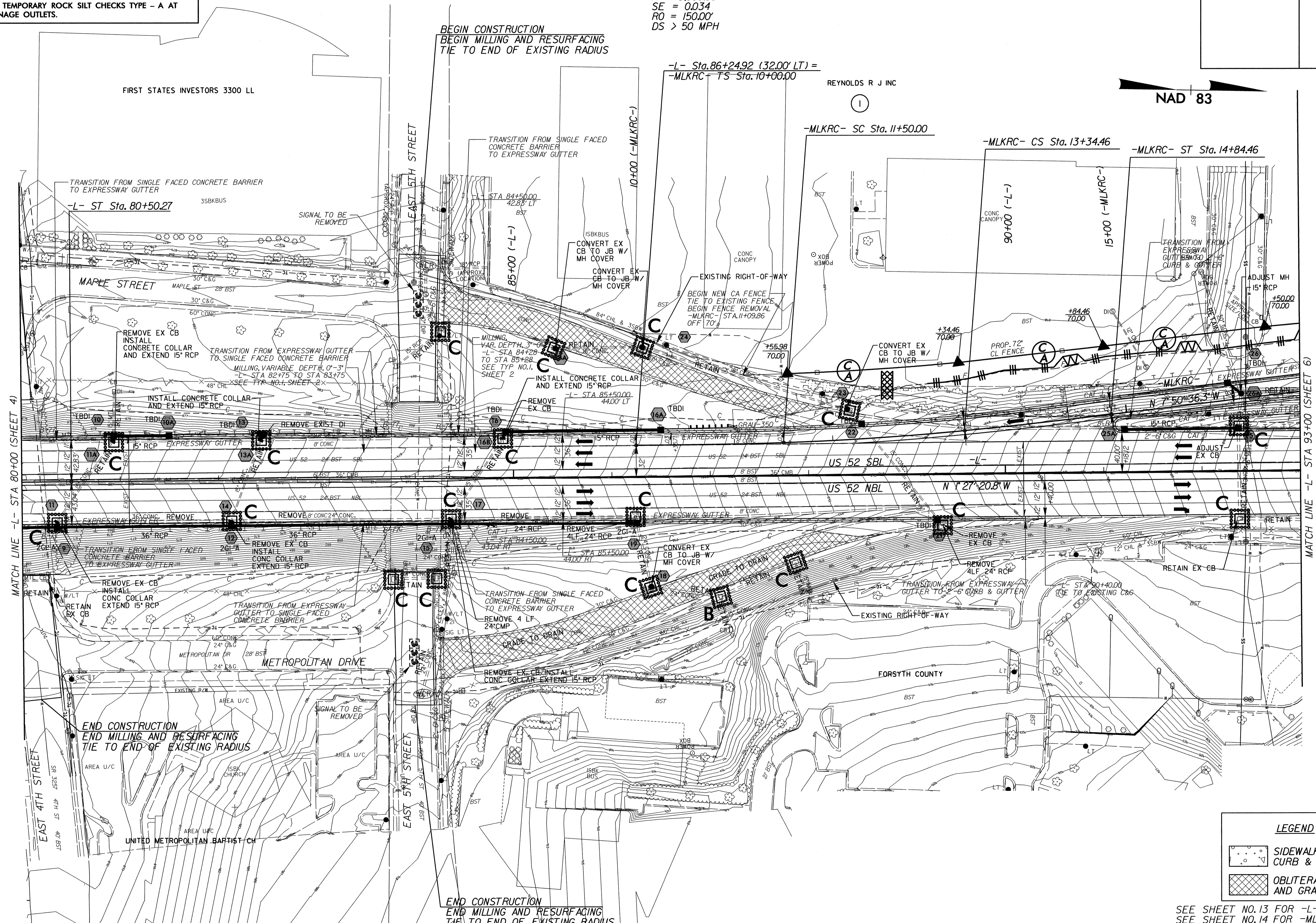
Pls Sta 11+00.00  
Os = 1' 25' 56.6"  
Ls = 150.00'  
LT = 100.00'  
ST = 50.00'

-MLKRC-  
Pl Sta 12+42.26  
Δ = 3' 31' 22.3" (LT)  
D = 1' 54' 35.5"  
L = 184.46'  
T = 92.26'  
R = 3,000.00'  
SE = 0.034  
RO = 150.00'  
DS > 50 MPH

Pls Sta 13+84.46  
Os = 1' 25' 56.6"  
Ls = 150.00'  
LT = 100.00'  
ST = 50.00'

# SECTION I

PROJECT REFERENCE NO. U-2826B	SHEET NO. EC-5/CONST.5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



MATCH LINE -L- STA 80+00 (SHEET 4)

MATCH LINE -L- STA 93+00 (SHEET 6)

**LEGEND**

	SIDEWALK CURB & GUTTER
	OBLITERATE, REMOVE AND GRADE TO DRAIN

SEE SHEET NO. 13 FOR -L- PROFILE  
SEE SHEET NO. 14 FOR -MLKRC- PROFILE  
\* AUXILIARY LANE WIDTH AND SHOULDER WIDTH DESIGN EXCEPTION

END CONSTRUCTION  
END MILLING AND RESURFACING  
TIE TO END OF EXISTING RADIUS

END CONSTRUCTION  
END MILLING AND RESURFACING  
TIE TO END OF EXISTING RADIUS







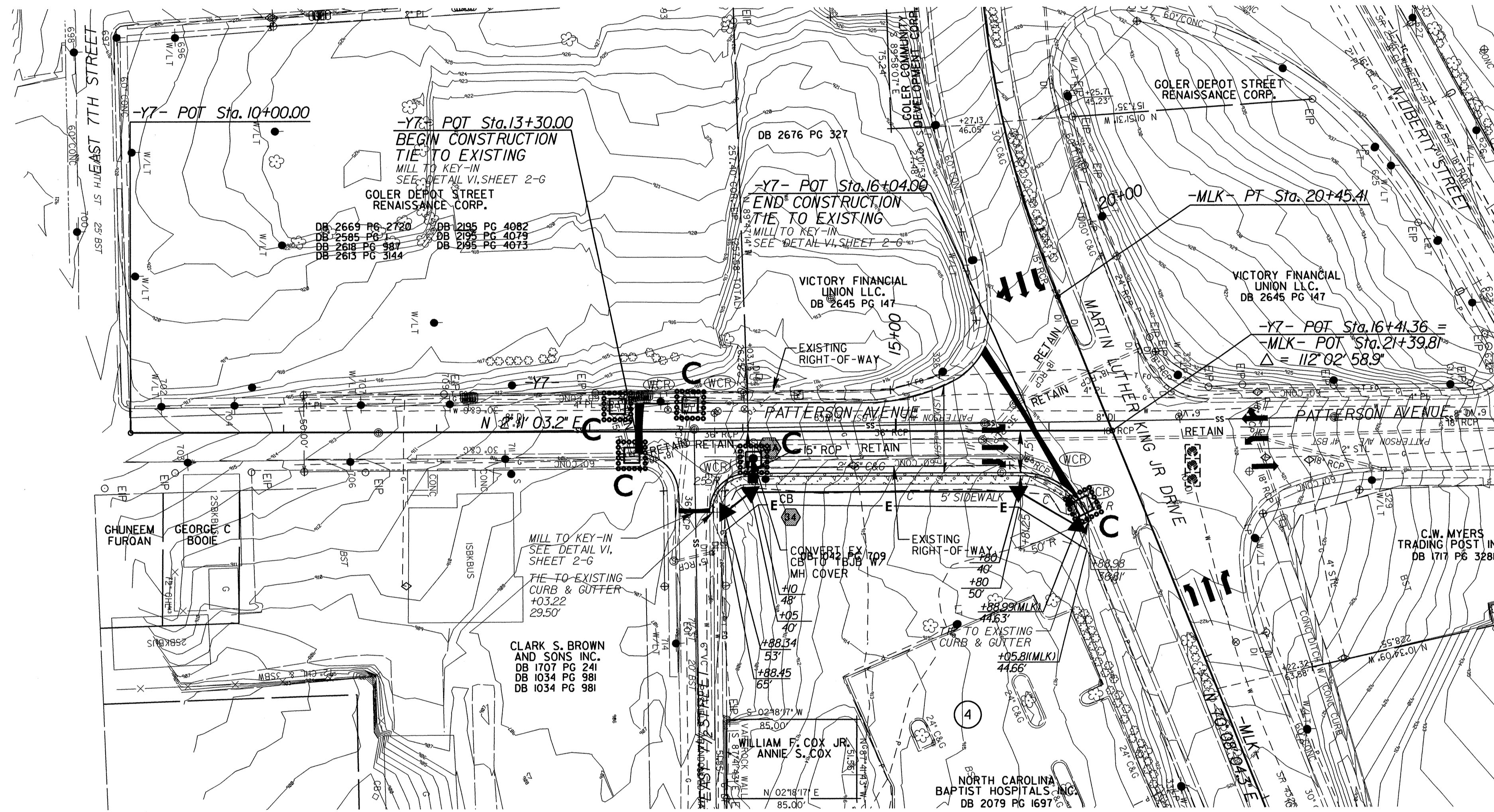
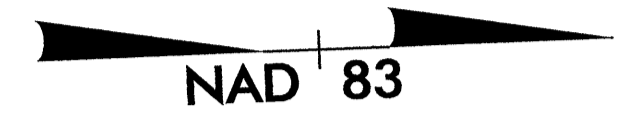
CLEARING AND GRUBBING  
EROSION CONTROL FOR  
CONSTRUCTION SHEET 7

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

# SECTION I

PROJECT REFERENCE NO. U-2826B	SHEET NO. EC-7/CONST.7
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-MLK-  
 PI Sta 19+07.09      PI Sta 28+28.39  
 $\Delta = 22' 25" 16.9'$  (LT)       $\Delta = 21' 37" 27.5'$  (RT)  
 D = 8' 00' 00.0"      D = 8' 00' 00.0"  
 L = 280.27'      L = 270.30'  
 T = 141.95'      T = 136.78'  
 R = 716.20'      R = 716.20'  
 SE = EXIST      SE = EXIST  
 DS = 45 MPH      DS = 45 MPH



**LEGEND**

	EXISTING SIGNAL
	SIDEWALK CURB & GUTTER
	OBLITERATE, REMOVE AND GRADE TO DRAIN

SEE SHEET NO.15 FOR -Y7- PROFILE



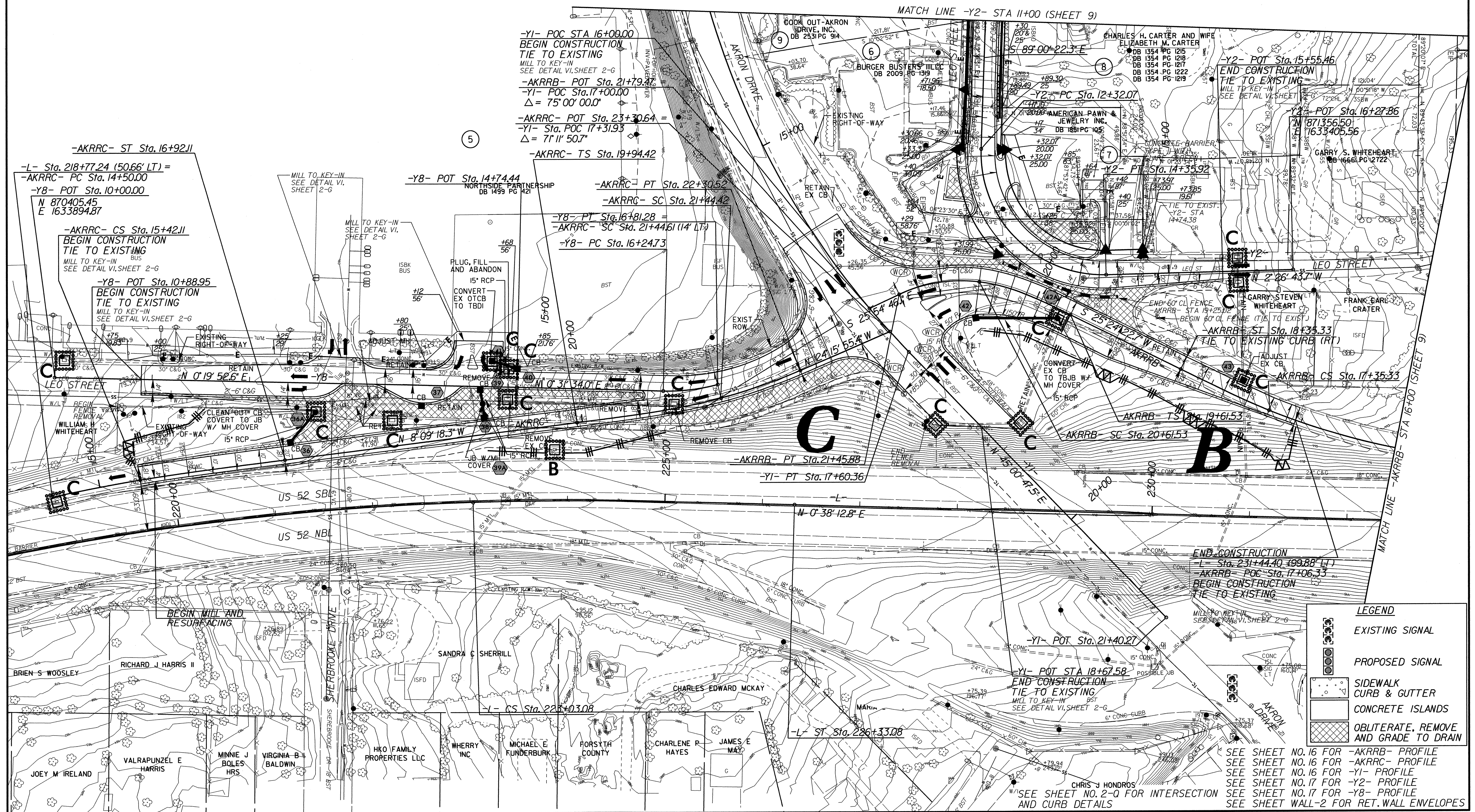
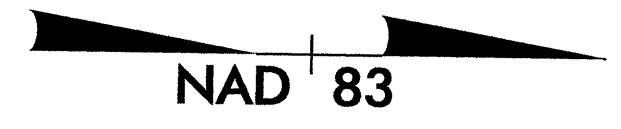
CLEARING AND GRUBBING  
EROSION CONTROL FOR  
CONSTRUCTION SHEET 8

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

-YI- AKRON DRIVE		2005 2015
DHV = 15% DS 2005 = 85% DS 2015 = 100% DUAL = 1% TTST = 1%	15000 19000	DHV = 10% DS 2005 = 85% DS 2015 = 100% DUAL = 1% TTST = 1%
-AKRRC- AKRON DRIVE RAMP C / -Y8- LEO STREET	4000 4800 6700	600 1000 2200 3000
	2300 2500	1300 1800
-YI- AKRON DRIVE		
DHV = 10% DS = 55% DUAL = 1% TTST = 1%	14000 17500	DHV = 15% DS 2005 = 85% DS 2015 = 100% DUAL = 1% TTST = 1%

# SECTION II

PROJECT REFERENCE NO. U-2826B	SHEET NO. EC-8/CONST.8
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	



**LEGEND**

	EXISTING SIGNAL
	PROPOSED SIGNAL
	SIDEWALK CURB & GUTTER
	CONCRETE ISLANDS
	OBLITERATE, REMOVE AND GRADE TO DRAIN

SEE SHEET NO. 16 FOR -AKRRB- PROFILE  
SEE SHEET NO. 16 FOR -AKRRC- PROFILE  
SEE SHEET NO. 16 FOR -YI- PROFILE  
SEE SHEET NO. 17 FOR -Y2- PROFILE  
SEE SHEET NO. 17 FOR -Y8- PROFILE  
SEE SHEET WALL-2 FOR RET. WALL ENVELOPES

SEE SHEET NO. 2-Q FOR INTERSECTION  
AND CURB DETAILS



CLEARING AND GRUBBING  
EROSION CONTROL FOR  
CONSTRUCTION SHEET 9

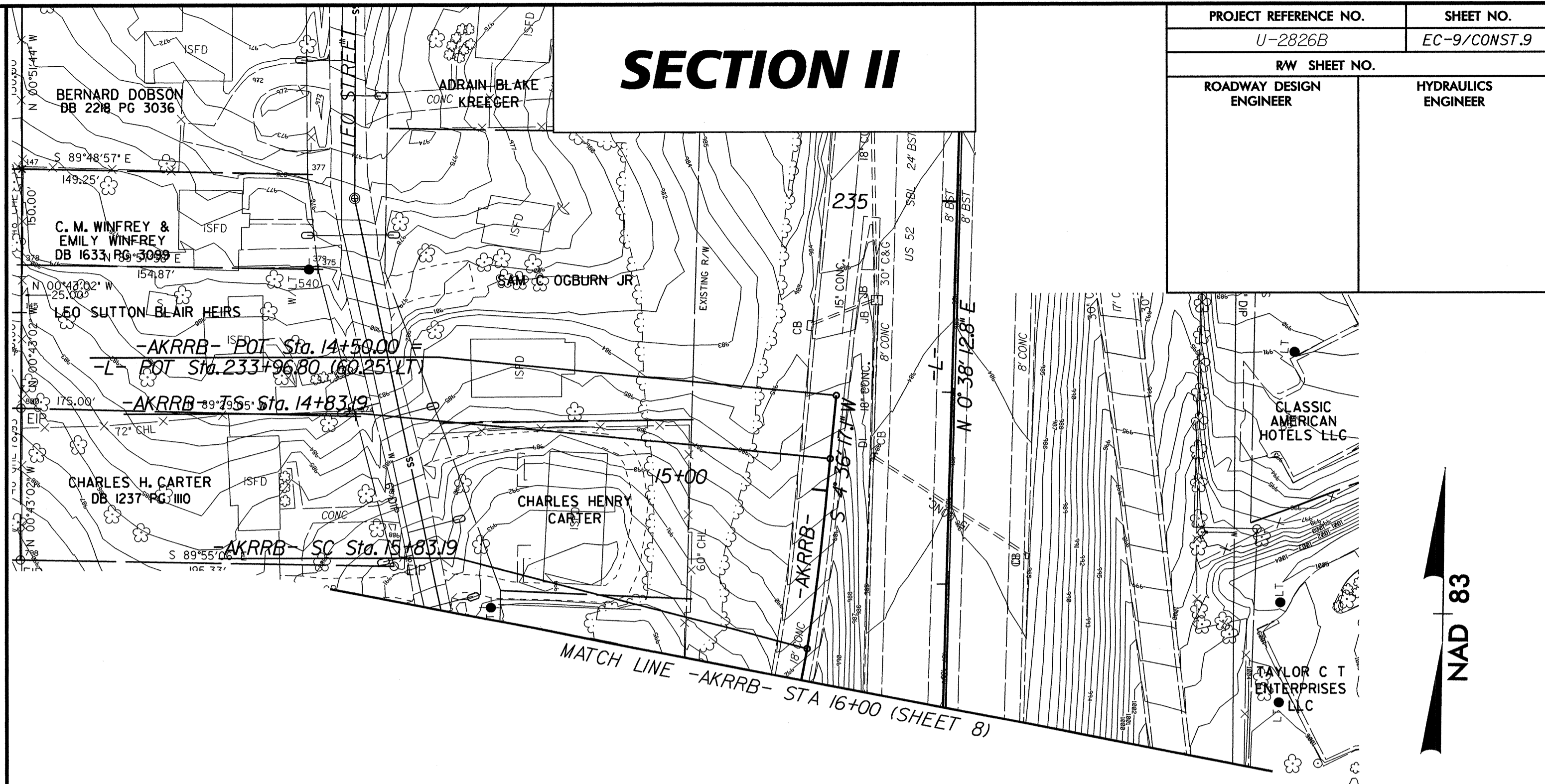
NOTE:  
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B  
AND TEMPORARY ROCK SILT CHECKS TYPE - A AT  
DRAINAGE OUTLETS.

-Y3-			Y6
PI Sta 10+91.65	PI Sta 13+3.84	PI Sta 14+7.23	PI Sta 11+32.77
$\Delta = 3' 29' 17.0''$ (RT)	$\Delta = 5' 08' 17.4''$ (RT)	$\Delta = 3' 58' 07.9''$ (LT)	$\Delta = 17' 56' 12.3''$ (RT)
D = 1' 54' 12.7"	D = 3' 28' 20.9"	D = 6' 44' 26.4"	D = 11' 27' 33.0"
L = 183.24'	L = 147.97'	L = 58.88'	L = 156.53'
T = 91.65'	T = 74.03'	T = 29.45'	T = 78.91'
R = 3,010.00'	R = 1,650.00'	R = 850.00'	R = 500.00'
SE = NC	SE = NC	SE = NC	S = NC
R = > 40 MPH	R = > 40 MPH	R = > 40 MPH	DS = 40 MPH

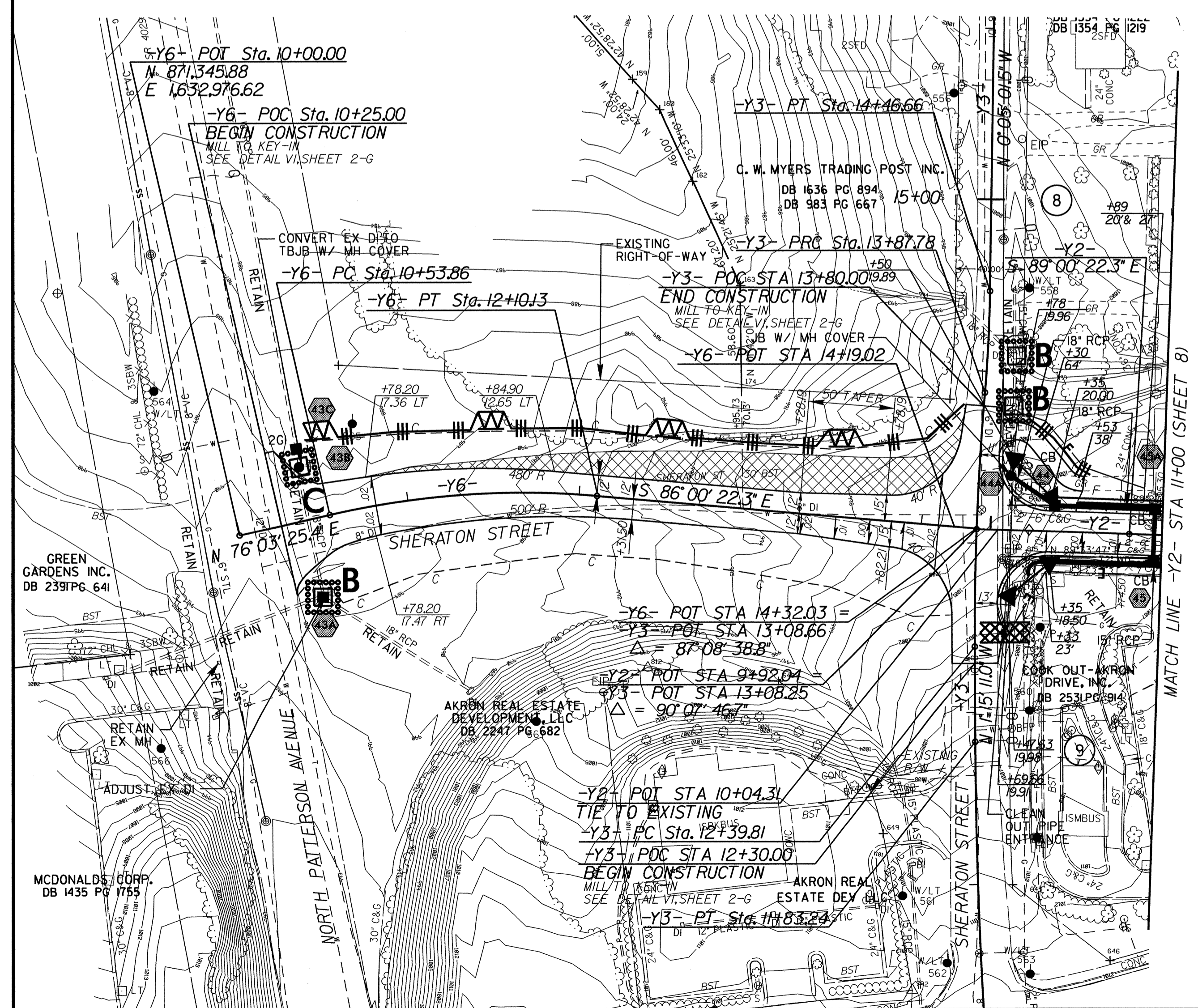
NAD 83

# SECTION II

PROJECT REFERENCE NO. U-2826B	SHEET NO. EC-9/CONST.9
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



NAD 83



-AKRRB-

PIs Sta 15+49.88	PI Sta 16+59.57
$\Delta_s = 4' 07' 30.0''$	$\Delta = 12' 33' 05.6''$ (RT)
Ls = 100.00'	D = 8' 15' 00.0"
LT = 66.68'	L = 152.14'
ST = 33.35'	T = 76.38'
	R = 694.49'
	SE = EXIST
	R = 45 MPH

LEGEND

	EXISTING SIGNAL
	PROPOSED SIGNAL
	SIDEWALK CURB & GUTTER
	CONCRETE ISLANDS
	OBLITERATE, REMOVE AND GRADE TO DRAIN

SEE SHEET NO. 17 FOR -Y2- PROFILE  
SEE SHEET NO. 17 FOR -Y6- PROFILE  
SEE SHEET WALL-2 FOR RETAINING WALL ENVELOPES  
SEE SHEET NO. 2-Q FOR INTERSECTION AND CURB DETAILS

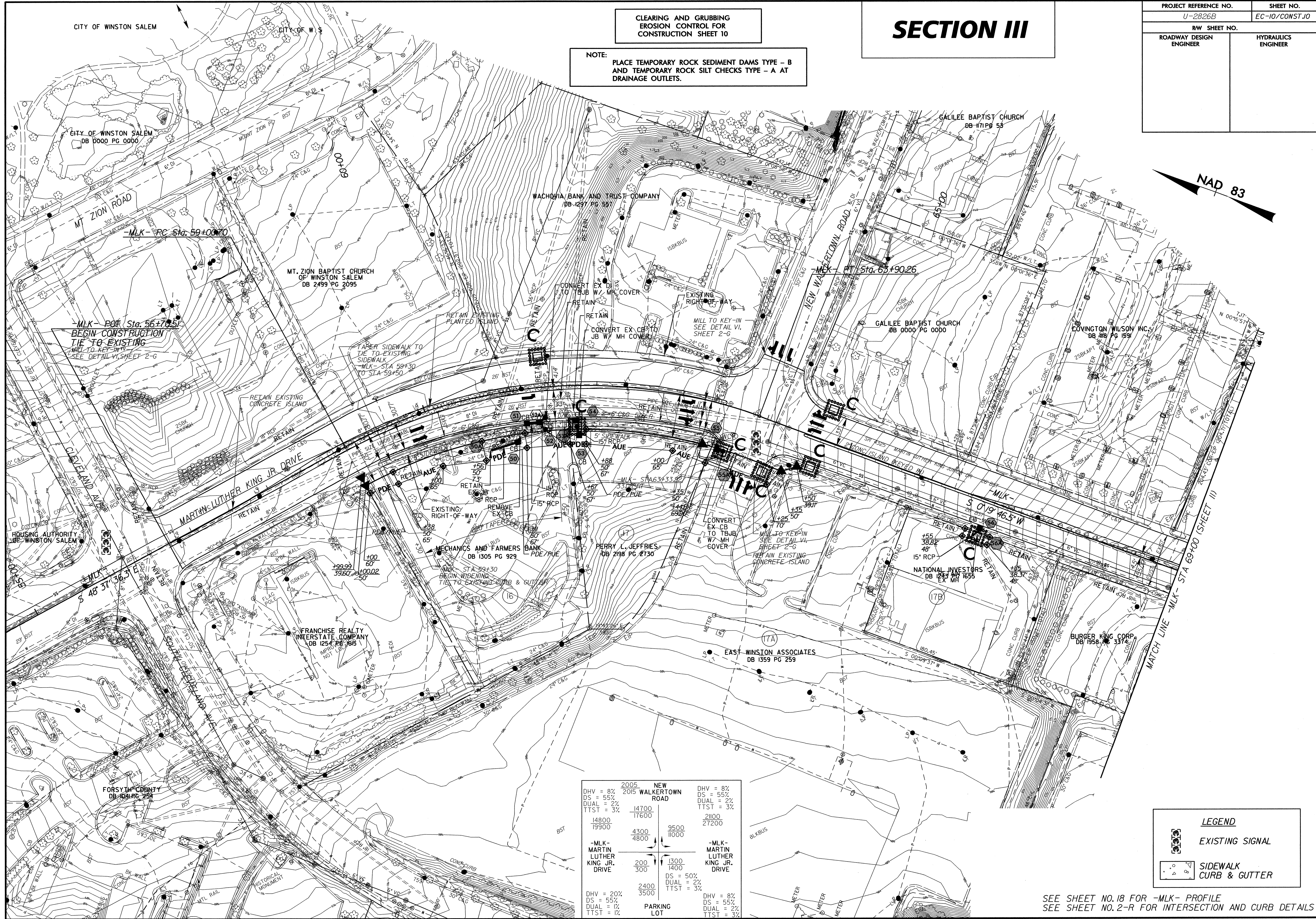


PROJECT REFERENCE NO. U-2826B	SHEET NO. EC-10/CONST.10
R/W SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	

CLEARING AND GRUBBING  
EROSION CONTROL FOR  
CONSTRUCTION SHEET 10

# SECTION III

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



**LEGEND**

	EXISTING SIGNAL
	SIDEWALK CURB & GUTTER

SEE SHEET NO. 18 FOR -MLK- PROFILE  
SEE SHEET NO. 2-R FOR INTERSECTION AND CURB DETAILS



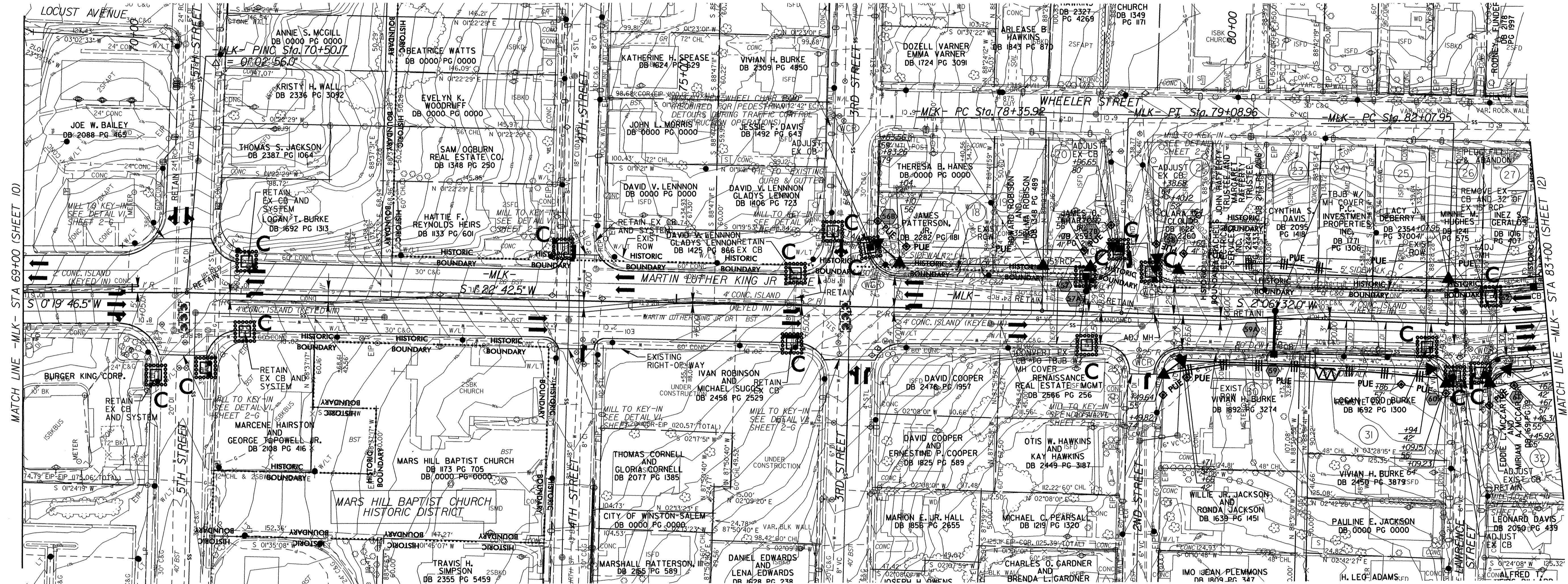
CLEARING AND GRUBBING  
EROSION CONTROL FOR  
CONSTRUCTION SHEET 11

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

# SECTION III

PROJECT REFERENCE NO. U-2826B	SHEET NO. EC-II/CONST.II
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NAD 83



<p>2005 5TH STREET DHW = 8% DS = 55% DUAL = 2% TTST = 3%</p> <p>5400 10500</p> <p>DHW = 8% DS = 60% DUAL = 1% TTST = 1%</p> <p>1800 1800 2000 1800</p> <p>-MLK- MARTIN LUTHER KING JR. DRIVE</p> <p>21400 21300 28300 27600</p> <p>1400 1300 4300 3800</p> <p>DHW = 8% DS = 55% DUAL = 2% TTST = 3%</p> <p>4500 14800</p> <p>E. 5TH STREET</p>	<p>2005 4TH STREET DHW = 8% DS = 55% DUAL = 2% TTST = 3%</p> <p>2400 1800</p> <p>DHW = 10% DS = 100% DUAL = 1% TTST = 1%</p> <p>300 300 1100 700</p> <p>-MLK- MARTIN LUTHER KING JR. DRIVE</p> <p>21300 21000 26700 27100</p> <p>800 1500 700 1500</p> <p>DHW = 10% DS = 100% DUAL = 1% TTST = 1%</p> <p>3100 2200</p> <p>E. 4TH STREET</p>	<p>2005 3RD STREET DHW = 9% DS = 55% DUAL = 2% TTST = 3%</p> <p>2100 3700</p> <p>DHW = 12% DS = 60% DUAL = 1% TTST = 1%</p> <p>500 1200 1850 20200</p> <p>-MLK- MARTIN LUTHER KING JR. DRIVE</p> <p>900 1200 2400 26400</p> <p>1100 2100 1900 3900</p> <p>DHW = 10% DS = 55% DUAL = 2% TTST = 3%</p> <p>3600 7400</p> <p>E. 3RD STREET</p>
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**LEGEND**

	EXISTING SIGNAL
	SIDEWALK
	CURB & GUTTER
	CONCRETE ISLANDS

SEE SHEET NO. 18 FOR -MLK- PROFILE  
SEE SHEET NO. 2-S FOR INTERSECTION AND CURB DETAILS



CLEARING AND GRUBBING  
EROSION CONTROL FOR  
CONSTRUCTION SHEET 12

NOTE:

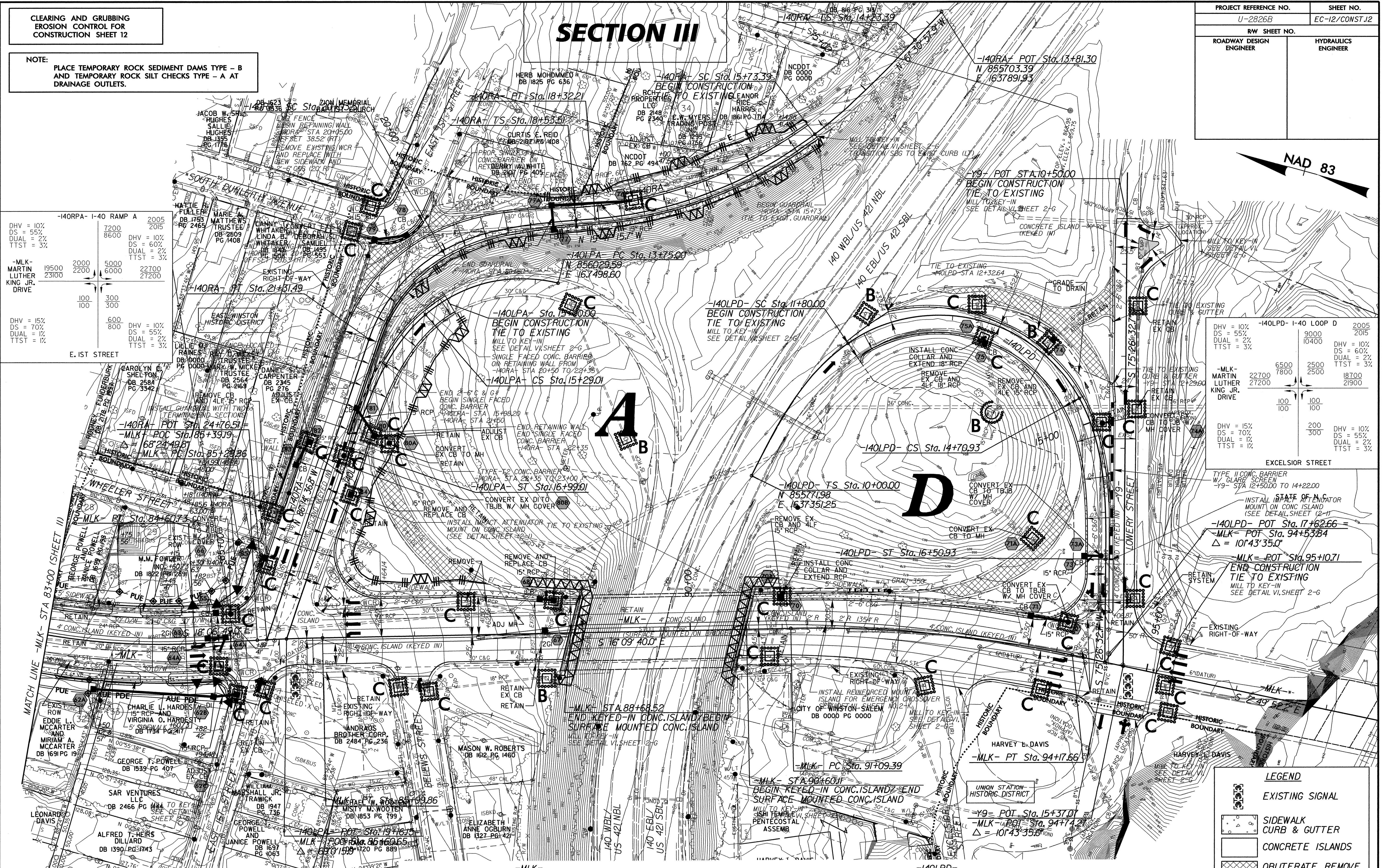
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B  
AND TEMPORARY ROCK SILT CHECKS TYPE - A AT  
DRAINAGE OUTLETS.

# SECTION III

PROJECT REFERENCE NO.	SHEET NO.
U-2826B	EC-12/CONST.12
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-140RPA- I-40 RAMP A	2005 2015
DHV = 10%	7200
DS = 55%	8600
DUAL = 2%	
TTST = 3%	
-MLK- MARTIN LUTHER KING JR. DRIVE	2000 2200 2300
	5000 6000 6200
	22700 27200
	100 300
	100 300
DHV = 15%	600
DS = 70%	800
DUAL = 1%	
TTST = 1%	
	100 300
	100 300
	200 300
	100 300
	200 300
	100 300
	100 300

-140LPD- I-40 LOOP D	2005 2015
DHV = 10%	9000
DS = 55%	10400
DUAL = 2%	
TTST = 3%	
-MLK- MARTIN LUTHER KING JR. DRIVE	6500 7800 27200
	2500 2500
	18700 21900
	100 100
	100 100
DHV = 15%	200
DS = 70%	300
DUAL = 1%	
TTST = 1%	
	100 300
	100 300
	200 300
	100 300
	200 300
	100 300
	100 300



<p>-MLK- PI Sta 83+35.67 Δ = 20°13' 21.0" (LT) D = 8'00' 00.0" L = 252.78' T = 127.72' R = 716.20' SE = 0.038 RO = 138</p>	<p>-MLK- PI Sta 85+64.37 Δ = 1°57' 09.0" (RT) D = 2' 45' 00.0" L = 71.00' T = 35.50' R = 2,083.48' SE = EXIST</p>	<p>-MLK- PI Sta 92+64.22 Δ = 13°19' 47.8" (RT) D = 4'19' 27.2" L = 308.26' T = 154.83' R = 1,325.00' SE = EXIST</p>	<p>-140LPD- PIs Sta 11+21.71 Os = 29° 27' 59.0" Ls = 180.00' LT = 121.71' ST = 61.55'</p>	<p>-140LPD- PIs Sta 13+71.82 Δ = 95°15' 04.3" (RT) D = 32' 44' 25.6" L = 290.93' T = 175.00' R = 175.00' SE = 0.06 RO = SEE PLANS DS = 25 MPH</p>	<p>-140LPD- PIs Sta 15+32.48 Os = 29° 27' 59.0" Ls = 180.00' LT = 121.71' ST = 61.55'</p>
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SEE SHEET NO. 19 FOR -MLK- PROFILE  
SEE SHEET NO. 19 FOR -140RPA- PROFILE  
SEE SHEET NO. 20 FOR -140LPA- PROFILE  
SEE SHEET NO. 20 FOR -140LPD- PROFILE  
SEE SHEET NO. 20 FOR -Y9- PROFILE  
SEE SHEET NO. 2-T FOR INTERSECTION AND CURB DETAILS  
SEE SHEET WALL-3 FOR RET. WALL ENVELOPES



# SECTION I

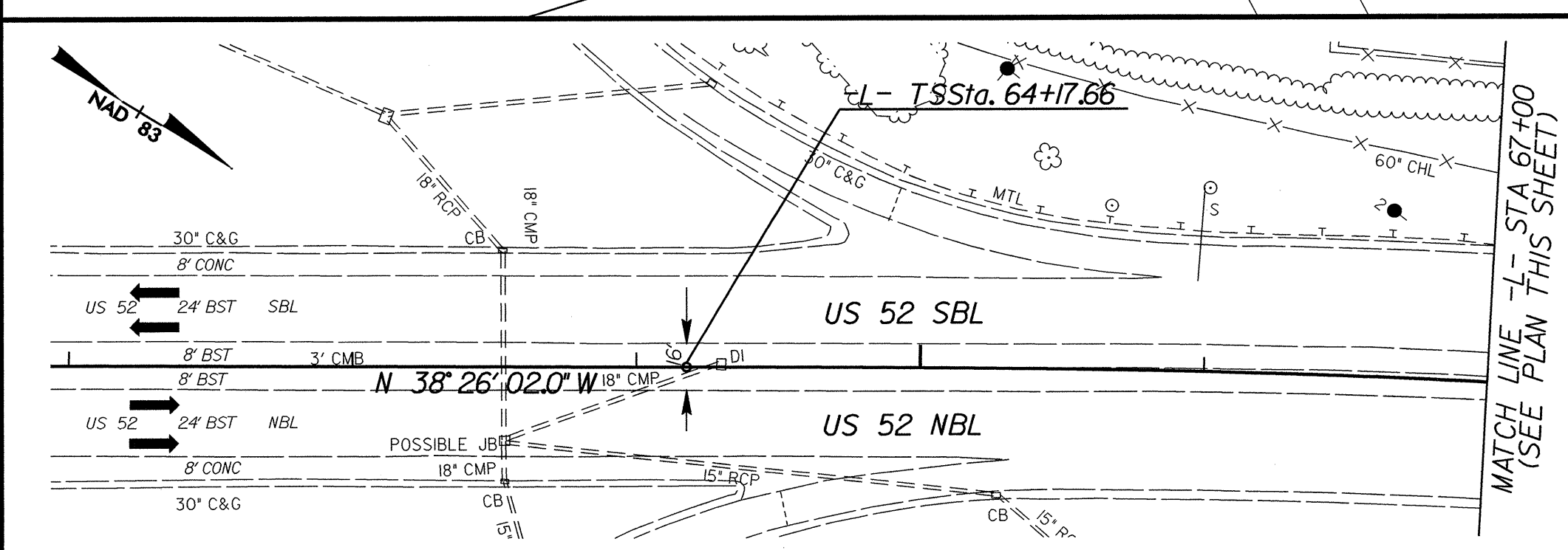
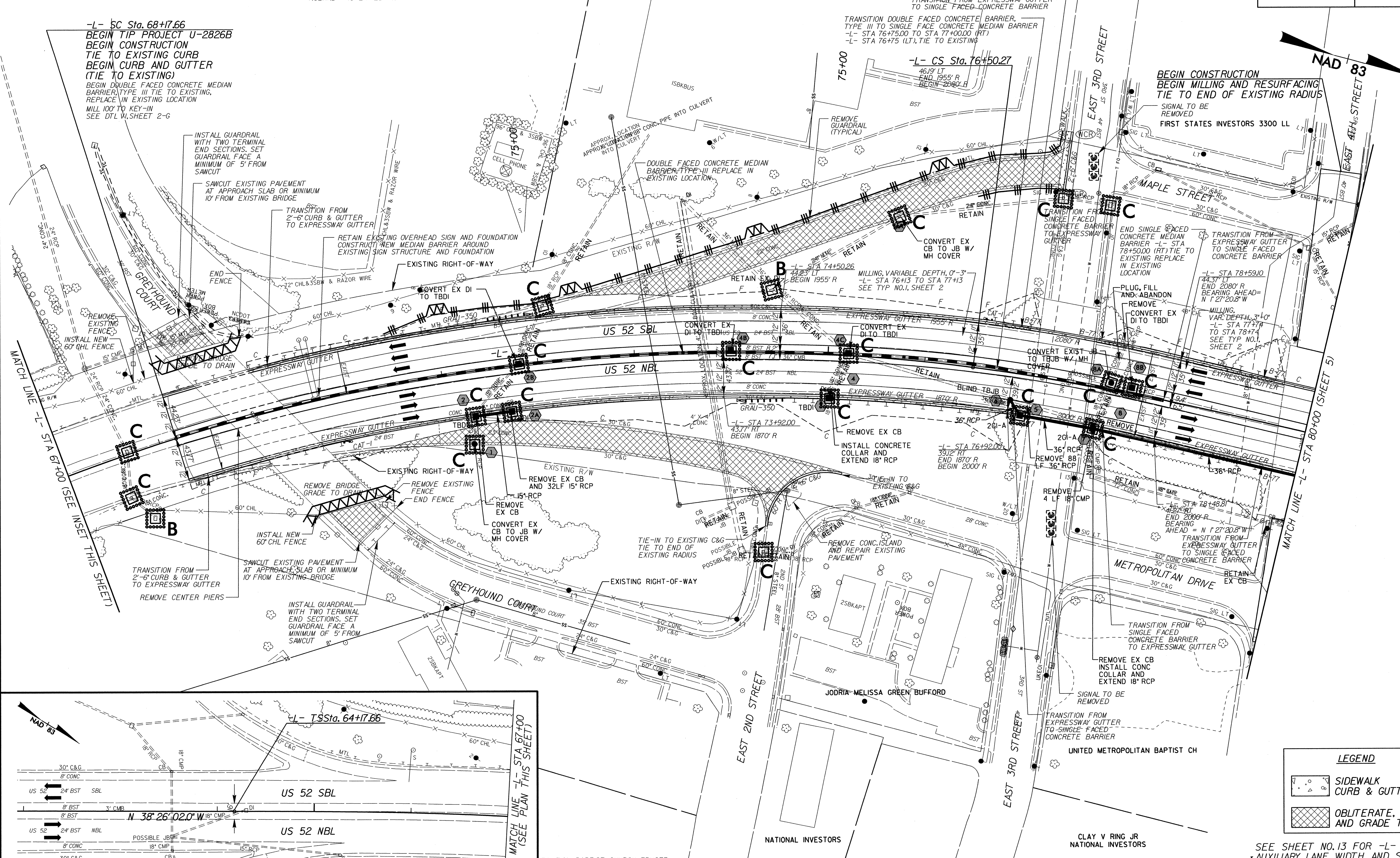
PROJECT REFERENCE NO.	SHEET NO.
U-2826B	EC-13/CONST.4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-L-

Pls Sta 66+84.48	Pls Sta 72+40.68	Pls Sta 77+83.74
$\Delta s = 6'00''00.0'$	$\Delta = 24'58''41.2'$ (RT)	$\Delta s = 6'00''00.0'$
$Ls = 400.00'$	$D = 3'00''00.0'$	$Ls = 400.00'$
$LT = 266.82'$	$L = 832.60'$	$LT = 266.82'$
$ST = 133.47'$	$T = 423.02'$	$ST = 133.47'$
	$R = 1,909.86'$	
	$SE = EXIST$	
	$DS = 60 MPH$	

NOLAND PROPERTIES INC

-L- SC Sta. 68+17.66  
 BEGIN TIP PROJECT U-2826B  
 BEGIN CONSTRUCTION  
 TIE TO EXISTING CURB  
 BEGIN CURB AND GUTTER  
 (TIE TO EXISTING)  
 BEGIN DOUBLE FACED CONCRETE MEDIAN  
 BARRIER TYPE III TIE TO EXISTING.  
 REPLACE IN EXISTING LOCATION  
 MILL 100' TO KEY-IN  
 SEE DTL W, SHEET 2-G



LEGEND

	SIDEWALK CURB & GUTTER
	OBLITERATE, REMOVE AND GRADE TO DRAIN

SEE SHEET NO. 13 FOR -L- PROFILE  
 \* AUXILIARY LANE WIDTH AND SHOULDER  
 WIDTH DESIGN EXCEPTION



PROJECT REFERENCE NO.	SHEET NO.
U-2826B	EC-14/CONST.5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

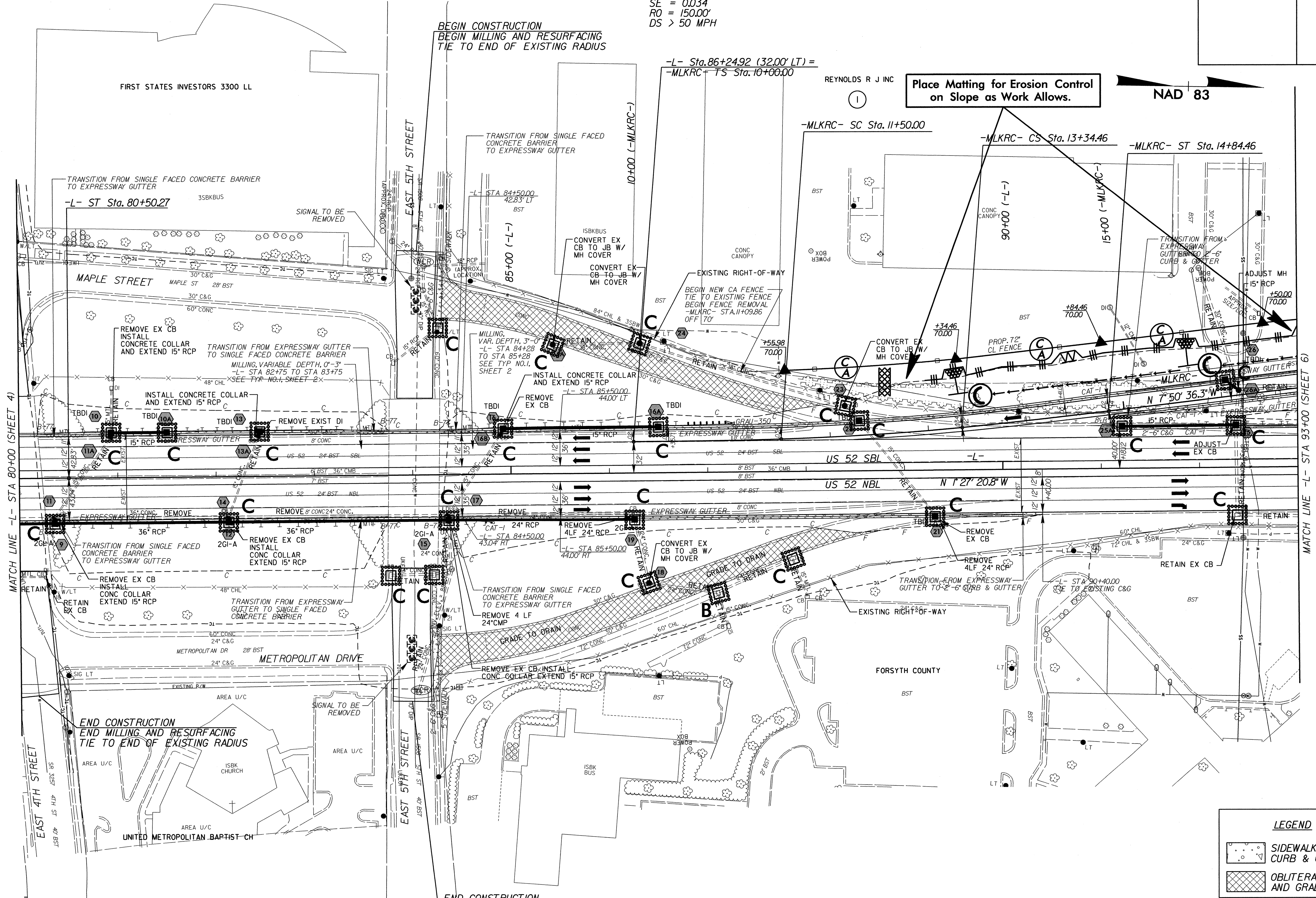
# SECTION I

**-L-**  
 Pls Sta 77+83.74  
 $\Theta_s = 6'00'00.0''$   
 $L_s = 400.00'$   
 $LT = 266.82'$   
 $ST = 133.47'$

**-MLKRC-**  
 Pls Sta 11+00.00  
 $\Theta_s = 1'25'56.6''$   
 $L_s = 150.00'$   
 $LT = 100.00'$   
 $ST = 50.00'$

**-L-**  
 Pls Sta 12+42.26  
 $\Delta = 3'31'22.3''$  (LT)  
 $D = 1'54'35.5''$   
 $L = 184.46'$   
 $T = 92.26'$   
 $R = 3000.00'$   
 $SE = 0.034$   
 $RO = 150.00'$   
 $DS > 50$  MPH

Pls Sta 13+84.46  
 $\Theta_s = 1'25'56.6''$   
 $L_s = 150.00'$   
 $LT = 100.00'$   
 $ST = 50.00'$



Place Matting for Erosion Control on Slope as Work Allows.

NAD 83

MATCH LINE -L- STA 80+00 (SHEET 4)

MATCH LINE -L- STA 93+00 (SHEET 6)

END CONSTRUCTION  
 END MILLING AND RESURFACING  
 TIE TO END OF EXISTING RADIUS

END CONSTRUCTION  
 END MILLING AND RESURFACING  
 TIE TO END OF EXISTING RADIUS

**LEGEND**

	SIDEWALK CURB & GUTTER
	OBLITERATE, REMOVE AND GRADE TO DRAIN

SEE SHEET NO.13 FOR -L- PROFILE  
 SEE SHEET NO.14 FOR -MLKRC- PROFILE  
 \* AUXILIARY LANE WIDTH AND SHOULDER WIDTH DESIGN EXCEPTION





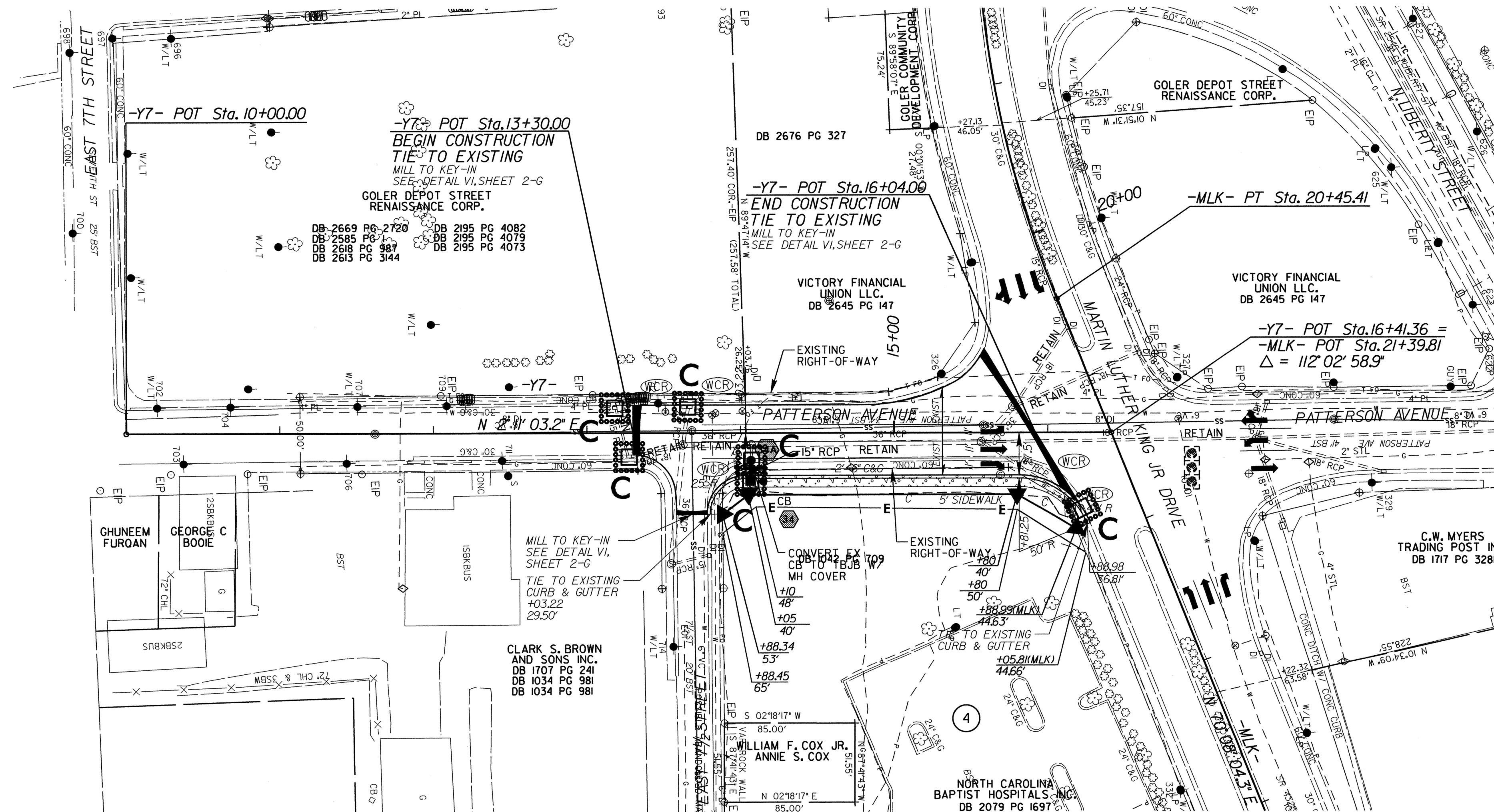
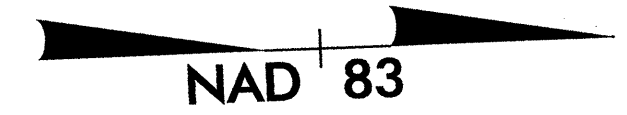


# SECTION I

PROJECT REFERENCE NO. U-2826B	SHEET NO. EC-16/CONST.7
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-MLK-

PI Sta 19+07.09 $\Delta = 22' 25" 16.9"$ (LT) D = 8' 00' 00.0" L = 280.27' T = 141.95' R = 716.20' SE = EXIST DS = 45 MPH	PI Sta 28+28.39 $\Delta = 21' 37" 27.5"$ (RT) D = 8' 00' 00.0" L = 270.30' T = 136.78' R = 716.20' SE = EXIST DS = 45 MPH
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LEGEND	
	EXISTING SIGNAL
	SIDEWALK CURB & GUTTER
	OBLITERATE, REMOVE AND GRADE TO DRAIN

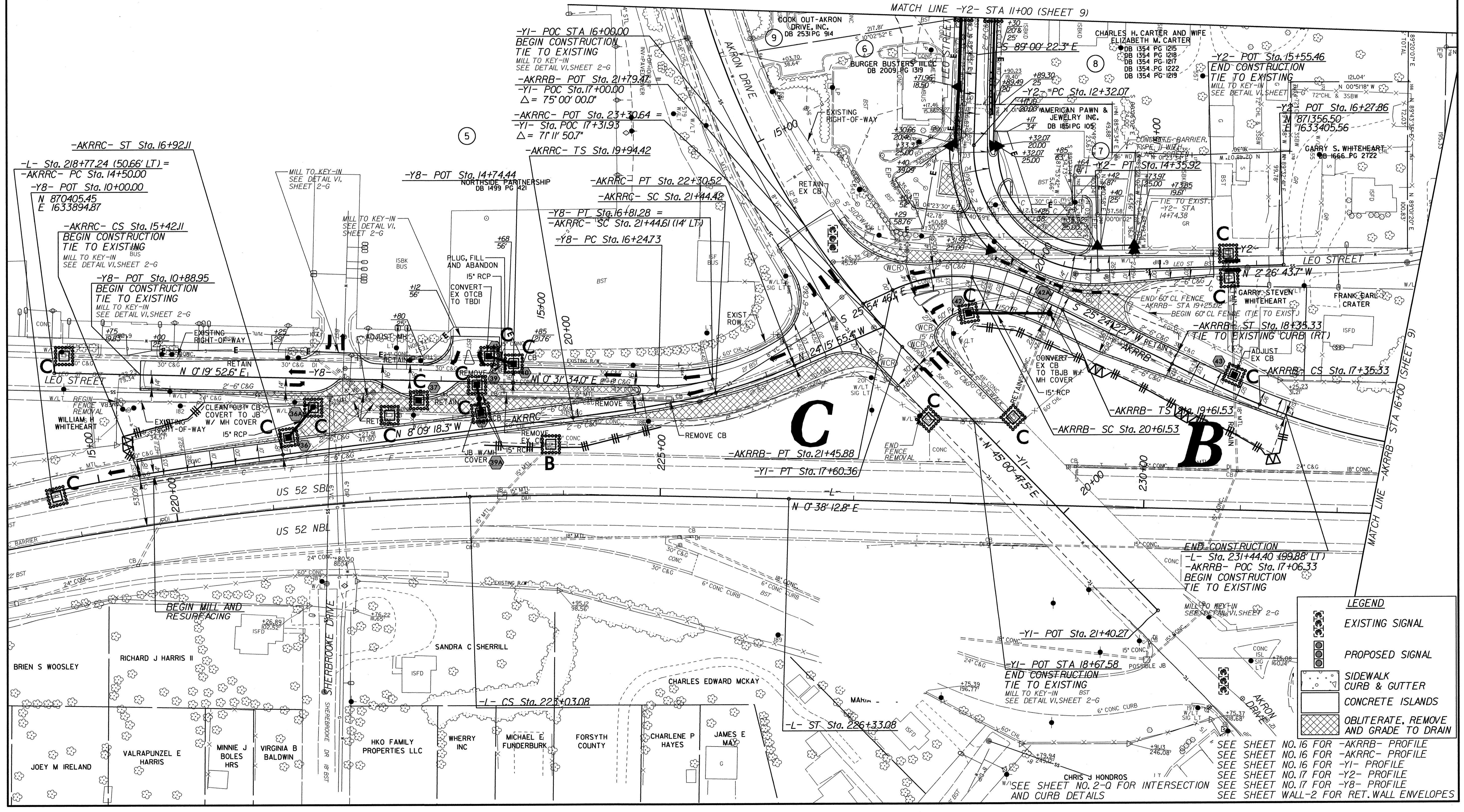


# SECTION II

-YI- AKRON DRIVE		2005 2015
DHV = 15% DS 2005 = 85% DS 2015 = 100% DUAL = 1% TTST = 1%	15000 19000	DHV = 10% DS = 55% DUAL = 1% TTST = 1%
-AKRRC- AKRON DRIVE RAMP C / -Y8- LEO STREET	4000 4800 6500 6700	600 1000 2200 3000
	2300 2500	1300 1800
-YI- AKRON DRIVE		2005 2015
DHV = 10% DS = 55% DUAL = 1% TTST = 1%	14000 17500	DHV = 15% DS 2005 = 85% DS 2015 = 100% DUAL = 1% TTST = 1%

PROJECT REFERENCE NO. U-2826B	SHEET NO. EC-17/CONST.8
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NAD 83



**LEGEND**

- EXISTING SIGNAL
- PROPOSED SIGNAL
- SIDEWALK CURB & GUTTER
- CONCRETE ISLANDS
- OBLITERATE, REMOVE AND GRADE TO DRAIN

SEE SHEET NO. 16 FOR -AKRRB- PROFILE  
 SEE SHEET NO. 16 FOR -AKRRC- PROFILE  
 SEE SHEET NO. 16 FOR -YI- PROFILE  
 SEE SHEET NO. 17 FOR -Y2- PROFILE  
 SEE SHEET NO. 17 FOR -Y8- PROFILE  
 SEE SHEET WALL-2 FOR RET. WALL ENVELOPES

-AKRRC- ST Sta. 16+92.11  
 -L- Sta. 218+77.24 (50.66' LT) =  
 -AKRRC- PC Sta. 14+50.00  
 -Y8- POT Sta. 10+00.00  
 N 87°04'05.45"  
 E 1633894.87

-AKRRC- CS Sta. 15+42.11  
 BEGIN CONSTRUCTION  
 TIE TO EXISTING  
 MILL TO KEY-IN  
 SEE DETAIL VI, SHEET 2-G

-Y8- POT Sta. 10+88.95  
 BEGIN CONSTRUCTION  
 TIE TO EXISTING  
 MILL TO KEY-IN  
 SEE DETAIL VI, SHEET 2-G

-Y8- POT Sta. 14+74.44  
 NORTHSIDE PARTNERSHIP  
 DB 1499 PG 421

-AKRRC- PT Sta. 22+30.52  
 -AKRRC- SC Sta. 21+44.42

-Y8- PT Sta. 16+81.28 =  
 -AKRRC- SC Sta. 21+44.61 (14' LT)  
 -Y8- PC Sta. 16+24.73

-AKRRC- POT Sta. 23+30.64 =  
 -YI- Sta. POC 17+31.93  
 Δ = 71' 11" 50.7"

-YI- POC STA 16+00.00  
 BEGIN CONSTRUCTION  
 TIE TO EXISTING  
 MILL TO KEY-IN  
 SEE DETAIL VI, SHEET 2-G

-AKRRB- POT Sta. 21+79.47  
 -YI- POC Sta. 17+00.00  
 Δ = 75' 00" 00.0"

-Y2- POT Sta. 15+55.46  
 END CONSTRUCTION  
 TIE TO EXISTING  
 MILL TO KEY-IN  
 SEE DETAIL VI, SHEET 2-G

-Y2- POT Sta. 16+27.86  
 N 87°13'56.50"  
 E 1633405.56

-AKRRC- ST Sta. 18+35.33  
 TIE TO EXISTING CURB (RT)

-AKRRC- SC Sta. 20+61.53

-YI- PT Sta. 17+60.36

-L- CS Sta. 22+03.08

-L- ST Sta. 226+33.08

-YI- POT Sta. 21+40.27  
 -YI- POT STA 18+67.58  
 END CONSTRUCTION  
 TIE TO EXISTING  
 MILL TO KEY-IN  
 SEE DETAIL VI, SHEET 2-G

END CONSTRUCTION  
 -L- Sta. 231+44.40 (99.88' LT)  
 -AKRRC- POC Sta. 17+06.33  
 BEGIN CONSTRUCTION  
 TIE TO EXISTING

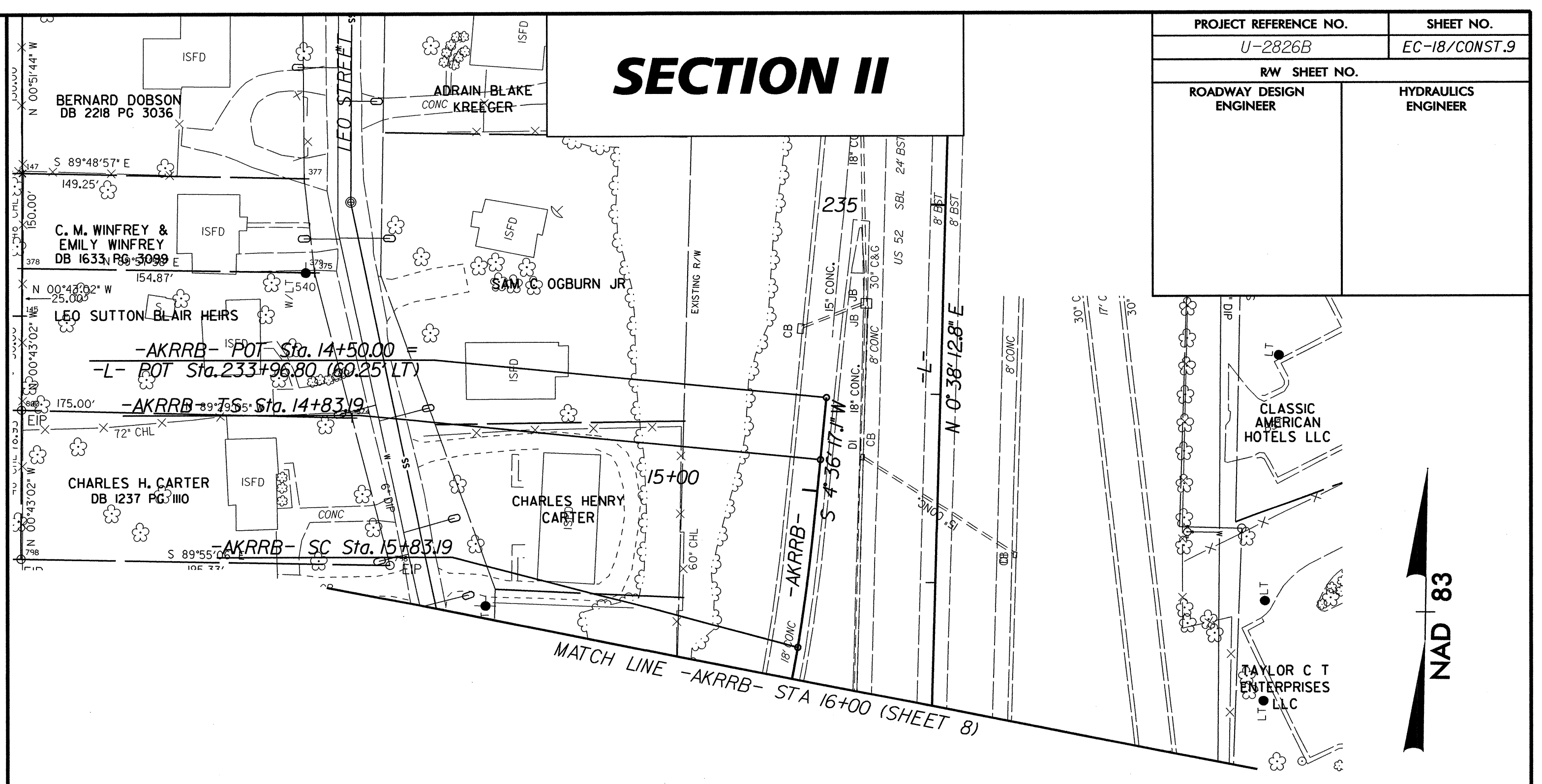


-Y3-			Y6
PI Sta 10+91.65	PI Sta 13+13.84	PI Sta 14+17.23	PI Sta 11+32.77
$\Delta = 3' 29' 17.0''$ (RT)	$\Delta = 5' 08' 17.4''$ (RT)	$\Delta = 3' 58' 07.9''$ (LT)	$\Delta = 17' 56' 12.3''$ (RT)
D = 1' 54' 12.7"	D = 3' 28' 20.9"	D = 6' 44' 26.4"	D = 1' 27' 33.0"
L = 183.24'	L = 147.97'	L = 58.88'	L = 156.53'
T = 91.65'	T = 74.03'	T = 29.45'	T = 78.91'
R = 3,010.00'	R = 1,650.00'	R = 850.00'	R = 500.00'
SE = NC	SE = NC	SE = NC	S = NC
R = > 40 MPH	R = > 40 MPH	R = > 40 MPH	DS = 40 MPH

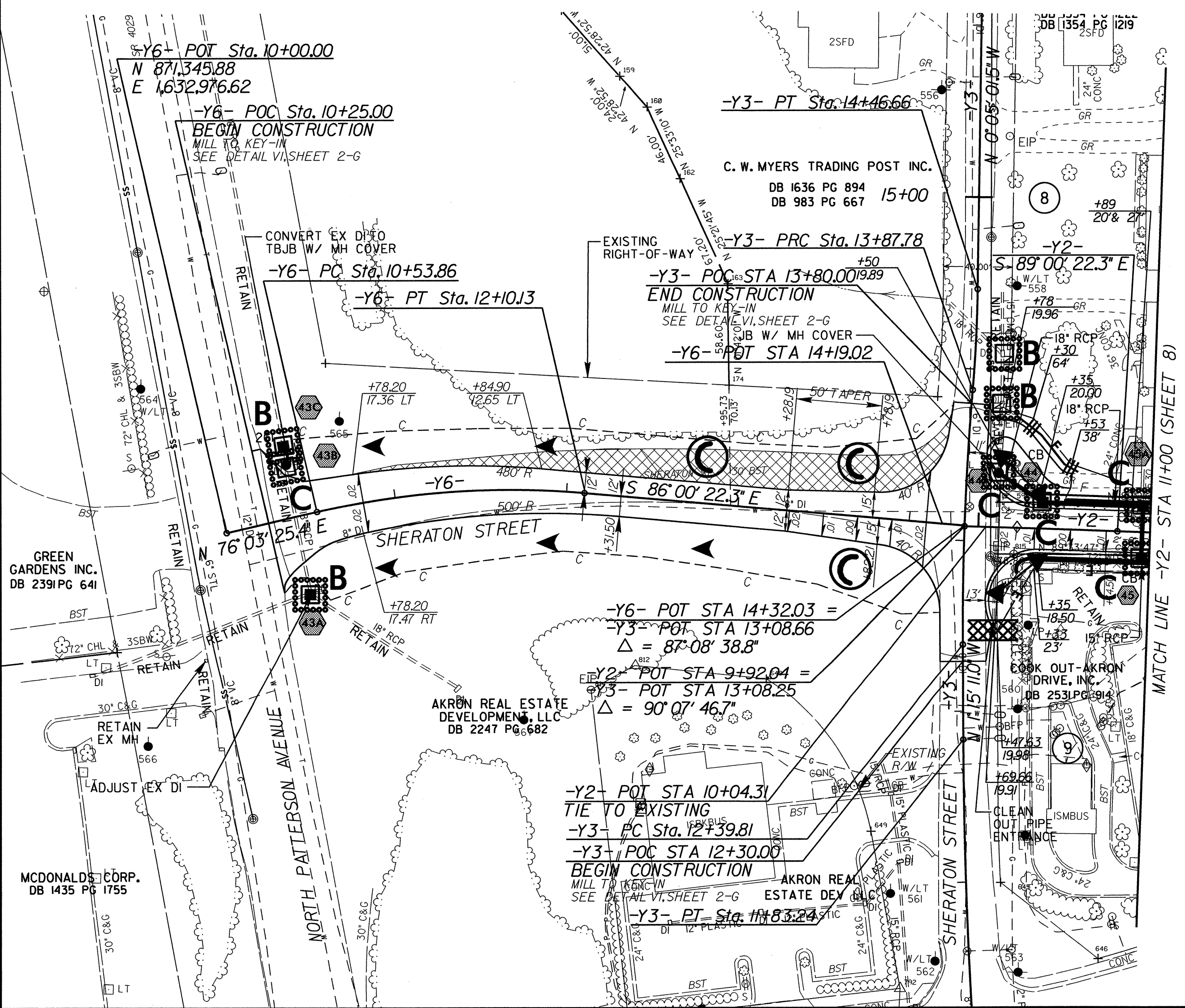
NAD 83

# SECTION II

PROJECT REFERENCE NO. U-2826B	SHEET NO. EC-18/CONST.9
R/W SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	



NAD 83



-AKRRB-	
PIs Sta 15+49.88	PI Sta 16+59.57
$\Delta_s = 4' 07' 30.0''$	$\Delta = 12' 33' 05.6''$ (RT)
Ls = 100.00'	D = 8' 15' 00.0"
L = 152.14'	T = 76.38'
R = 66.68'	R = 694.49'
ST = 33.35'	SE = EXIST
	R = 45 MPH

LEGEND	
	EXISTING SIGNAL
	PROPOSED SIGNAL
	SIDEWALK CURB & GUTTER
	CONCRETE ISLANDS
	OBLITERATE, REMOVE AND GRADE TO DRAIN

SEE SHEET NO. 17 FOR -Y2- PROFILE  
 SEE SHEET NO. 17 FOR -Y6- PROFILE  
 SEE SHEET WALL-2 FOR RETAINING WALL ENVELOPES  
 SEE SHEET NO. 2-Q FOR INTERSECTION AND CURB DETAILS



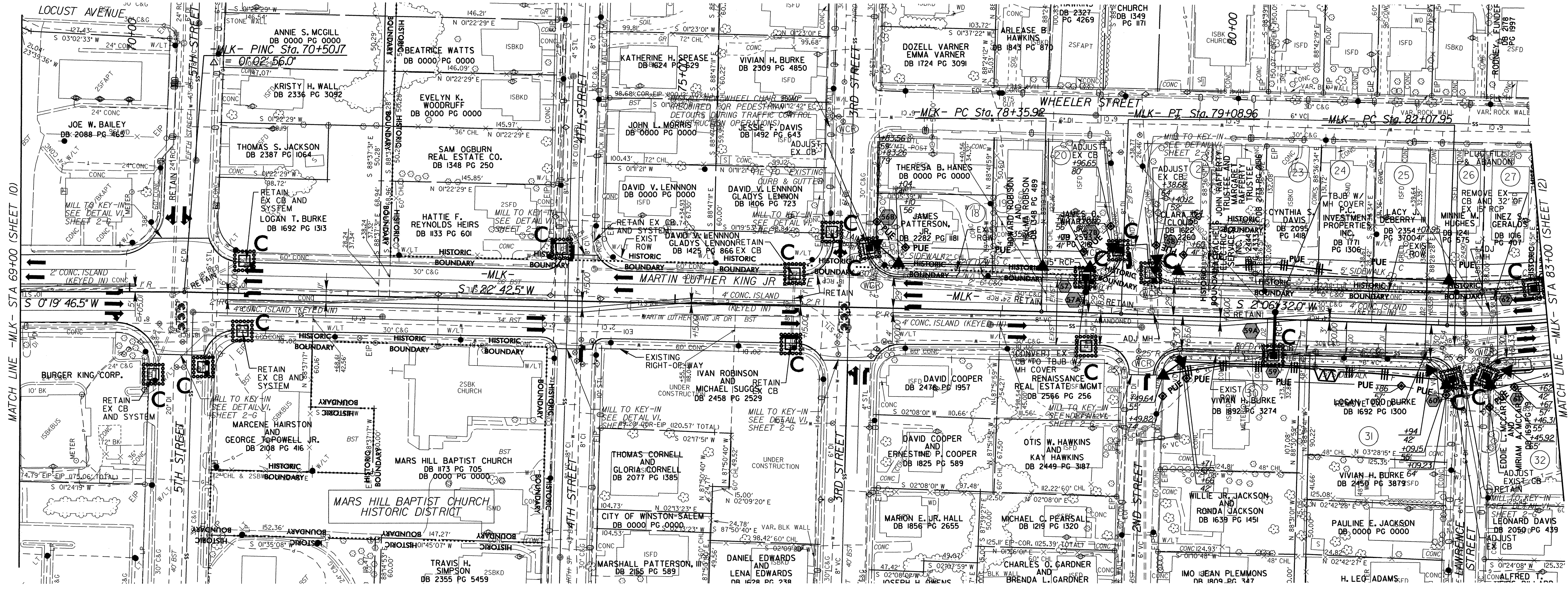




# SECTION III

PROJECT REFERENCE NO. U-2826B	SHEET NO. EC-20/CONST.II
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NAD 83



2005 5TH STREET				2005 4TH STREET				2005 3RD STREET					
DHV = 8%	5400	DHV = 8%	2400	DHV = 9%	2100	DHV = 12%	3700	DHV = 10%	2100	DHV = 10%	3700	DHV = 10%	3700
DS = 55%	10500	DS = 55%	1800	DS = 55%	1200	DS = 60%	3700	DS = 55%	1200	DS = 55%	3700	DS = 55%	3700
DUAL = 2%		DUAL = 2%		DUAL = 2%		DUAL = 1%		DUAL = 1%		DUAL = 1%		DUAL = 1%	
TTST = 3%		TTST = 3%		TTST = 3%		TTST = 1%		TTST = 1%		TTST = 1%		TTST = 1%	
-MLK- MARTIN LUTHER KING JR. DRIVE				-MLK- MARTIN LUTHER KING JR. DRIVE				-MLK- MARTIN LUTHER KING JR. DRIVE					
1800	1800	21300	300	300	21000	500	1200	20200	500	1200	20200	500	1200
21400	1800	27600	21300	700	2100	18500	900	26400	1100	1900	26400	1100	1900
28300	21300		26700	2100		24100	2100		24100	2100		24100	2100
1400	1300		800	500			2100			2100			2100
4300	3800		700	1500			3900			3900			3900
E. 5TH STREET				E. 4TH STREET				E. 3RD STREET					
DHV = 8%		DHV = 8%		DHV = 12%		DHV = 10%		DHV = 10%		DHV = 10%		DHV = 10%	
DS = 60%		DS = 60%		DS = 60%		DS = 55%		DS = 55%		DS = 55%		DS = 55%	
DUAL = 1%		DUAL = 1%		DUAL = 1%		DUAL = 1%		DUAL = 1%		DUAL = 1%		DUAL = 1%	
TTST = 1%		TTST = 1%		TTST = 1%		TTST = 1%		TTST = 1%		TTST = 1%		TTST = 1%	
4500		3100		3600		3600		7400		7400		7400	
14800		2200		7400		7400							

**LEGEND**

[Symbol]	EXISTING SIGNAL
[Symbol]	SIDEWALK CURB & GUTTER
[Symbol]	CONCRETE ISLANDS

SEE SHEET NO. 18 FOR -MLK- PROFILE  
SEE SHEET NO. 2-S FOR INTERSECTION AND CURB DETAILS



# SECTION III

PROJECT REFERENCE NO.		SHEET NO.	
U-2826B		EC-21/CONST.12	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

-140RPA- I-40 RAMP A		2005	
DHV = 10%	7200	DS = 10%	2015
DS = 55%	8600	DUAL = 2%	
DUAL = 2%		TTST = 3%	
-MLK- MARTIN LUTHER KING JR. DRIVE			
19500	2000	5000	22700
23100	2200	6000	27200
100	300	100	300
100	300	100	300

-140LPD- I-40 LOOP D		2005	
DHV = 10%	9000	DS = 10%	2015
DS = 55%	10400	DUAL = 2%	
DUAL = 2%		TTST = 3%	
-MLK- MARTIN LUTHER KING JR. DRIVE			
22700	27200	2500	18700
27200	27200	2500	21900
100	100	100	100
100	100	100	100

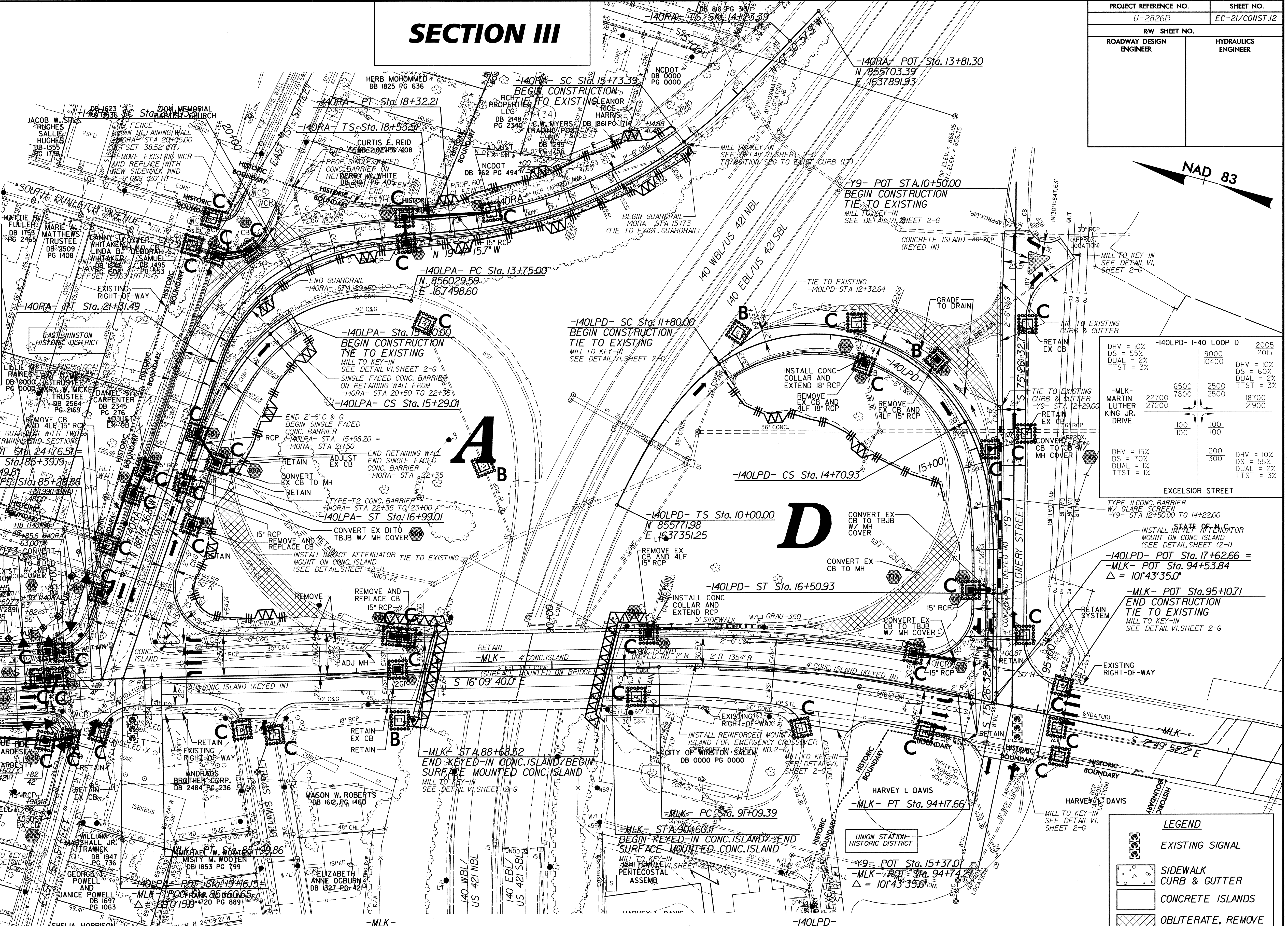
-MLK- POT Sta. 85+28.96		2005	
DHV = 15%	200	DS = 10%	2015
DS = 70%	300	DUAL = 2%	
DUAL = 2%		TTST = 3%	
-MLK- POT Sta. 94+53.84			
22700	27200	2500	18700
27200	27200	2500	21900
100	100	100	100
100	100	100	100

-MLK- POT Sta. 95+10.71		2005	
DHV = 10%	200	DS = 10%	2015
DS = 55%	300	DUAL = 2%	
DUAL = 2%		TTST = 3%	
-MLK- POT Sta. 94+53.84			
22700	27200	2500	18700
27200	27200	2500	21900
100	100	100	100
100	100	100	100

-MLK- POT Sta. 94+17.66		2005	
DHV = 10%	200	DS = 10%	2015
DS = 55%	300	DUAL = 2%	
DUAL = 2%		TTST = 3%	
-MLK- POT Sta. 94+53.84			
22700	27200	2500	18700
27200	27200	2500	21900
100	100	100	100
100	100	100	100

-MLK- POT Sta. 94+53.84		2005	
DHV = 10%	200	DS = 10%	2015
DS = 55%	300	DUAL = 2%	
DUAL = 2%		TTST = 3%	
-MLK- POT Sta. 94+53.84			
22700	27200	2500	18700
27200	27200	2500	21900
100	100	100	100
100	100	100	100

-MLK- POT Sta. 94+53.84		2005	
DHV = 10%	200	DS = 10%	2015
DS = 55%	300	DUAL = 2%	
DUAL = 2%		TTST = 3%	
-MLK- POT Sta. 94+53.84			
22700	27200	2500	18700
27200	27200	2500	21900
100	100	100	100
100	100	100	100



PI Sta 83+35.67	PI Sta 85+64.37	PI Sta 92+64.22
$\Delta = 20'13'21.0"$ (LT)	$\Delta = 1'57'09.0"$ (RT)	$\Delta = 13'19'47.8"$ (RT)
D = 8'00'00.0"	D = 2'45'00.0"	D = 4'19'27.2"
L = 252.78'	L = 71.00'	L = 308.26'
T = 127.72'	T = 35.50'	T = 154.83'
R = 716.20'	R = 2,083.48'	R = 1,325.00'
SE = 0.038	SE = EXIST	SE = EXIST
RO = 138		

PIs Sta 11+21.71	PIs Sta 13+71.82	PIs Sta 15+32.48
$\Delta = 29'27'59.0"$	$\Delta = 95'15'04.3"$ (RT)	$\Delta = 29'27'59.0"$
Ls = 180.00'	D = 32'44'25.6"	Ls = 180.00'
LT = 121.71'	LT = 290.93'	LT = 121.71'
ST = 61.55'	T = 191.82'	ST = 61.55'
	R = 175.00'	
	SE = 0.06	
	RO = SEE PLANS	
	DS = 25 MPH	

LEGEND	
	EXISTING SIGNAL
	SIDEWALK CURB & GUTTER
	CONCRETE ISLANDS
	OBLETE, REMOVE AND GRADE TO DRAIN

SEE SHEET NO. 19 FOR -MLK- PROFILE  
 SEE SHEET NO. 19 FOR -140RA- PROFILE  
 SEE SHEET NO. 20 FOR -140LPA- PROFILE  
 SEE SHEET NO. 20 FOR -140LPD- PROFILE  
 SEE SHEET NO. 20 FOR -Y9- PROFILE  
 SEE SHEET NO. 2-T FOR INTERSECTION AND CURB DETAILS  
 SEE SHEET WALL-3 FOR RET. WALL ENVELOPES