

**TIP PROJECT: R-2245**

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

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PLAN FOR PROPOSED  
HIGHWAY EROSION CONTROL

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**BRUNSWICK COUNTY**

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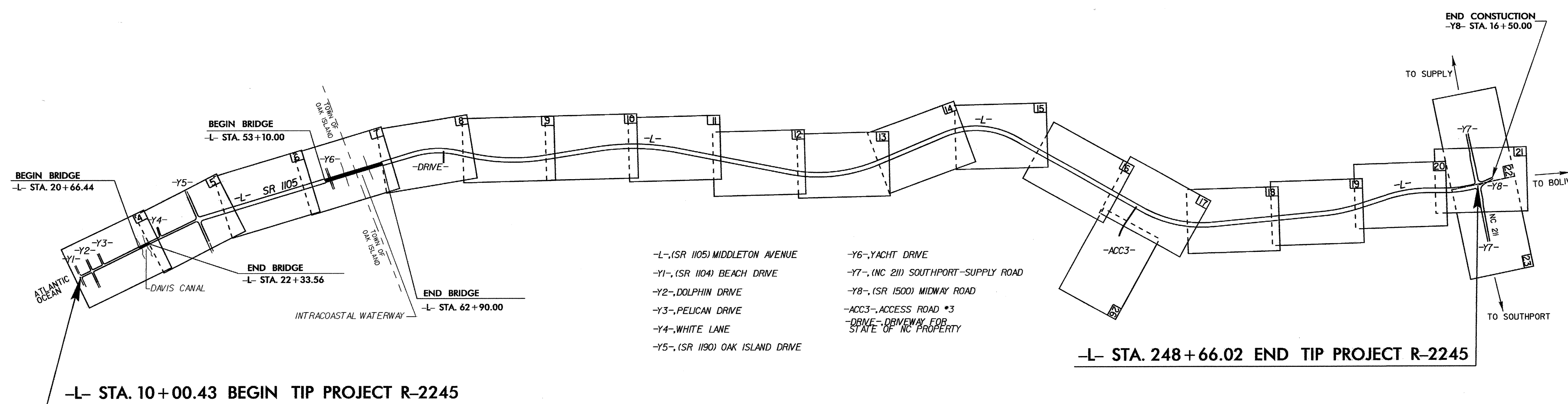
**LOCATION: NEW ROUTE FROM SR 1104 (OCEAN BEACH DRIVE)  
TO NC 211 (SECOND BRIDGE TO OAK ISLAND)**

**TYPE OF WORK: GRADING, PAVING, DRAINAGE, CULVERT, STRUCTURES,  
SIGNING AND SIGNALS**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-2245	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	

**EROSION AND SEDIMENT CONTROL MEASURES**

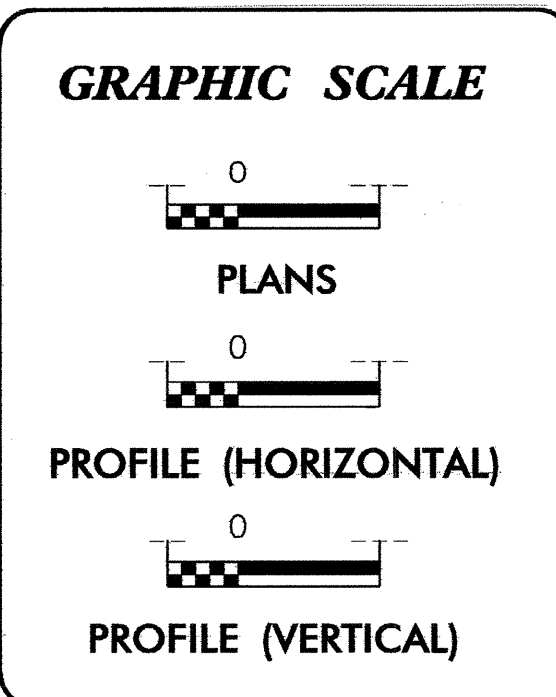
Std. #	Description	Symbol
	Streambank Reforestation	
1630.03	Temporary Silt Ditch	
1630.05	Temporary Diversion	
1605.01	Temporary Silt Fence	
1606.01	Special Sediment Control Fence	
1622.01	Temporary Berms and Slope Drains	
1630.01	Riser Basin	
1630.02	Silt Basin Type B	
1633.01	Temporary Rock Silt Check Type-A	
	Temporary Rock Silt Check Type-B	
1634.01	Temporary Rock Sediment Dam Type-A	
1634.02	Temporary Rock Sediment Dam Type-B	
1635.01	Rock Pipe Inlet Sediment Trap Type-A	
1635.02	Rock Pipe Inlet Sediment Trap Type-B	
1630.04	Stilling Basin	
	Rock Inlet Sediment Trap:	
1632.01	Type A	
1632.02	Type B	
1632.03	Type C	
	Skimmer Basin	



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

**HIGH QUALITY WATER(S) EXIST  
ON THIS PROJECT**  
*High Quality Water Zone(s) Exist  
From Sta. 15+00  
to Sta. 66+50  
Refer To E. C. Special Provisions  
for Special Considerations.*

**THIS PROJECT HAS  
BEEN DESIGNED TO  
SENSITIVE WATERSHED  
STANDARDS.**



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**

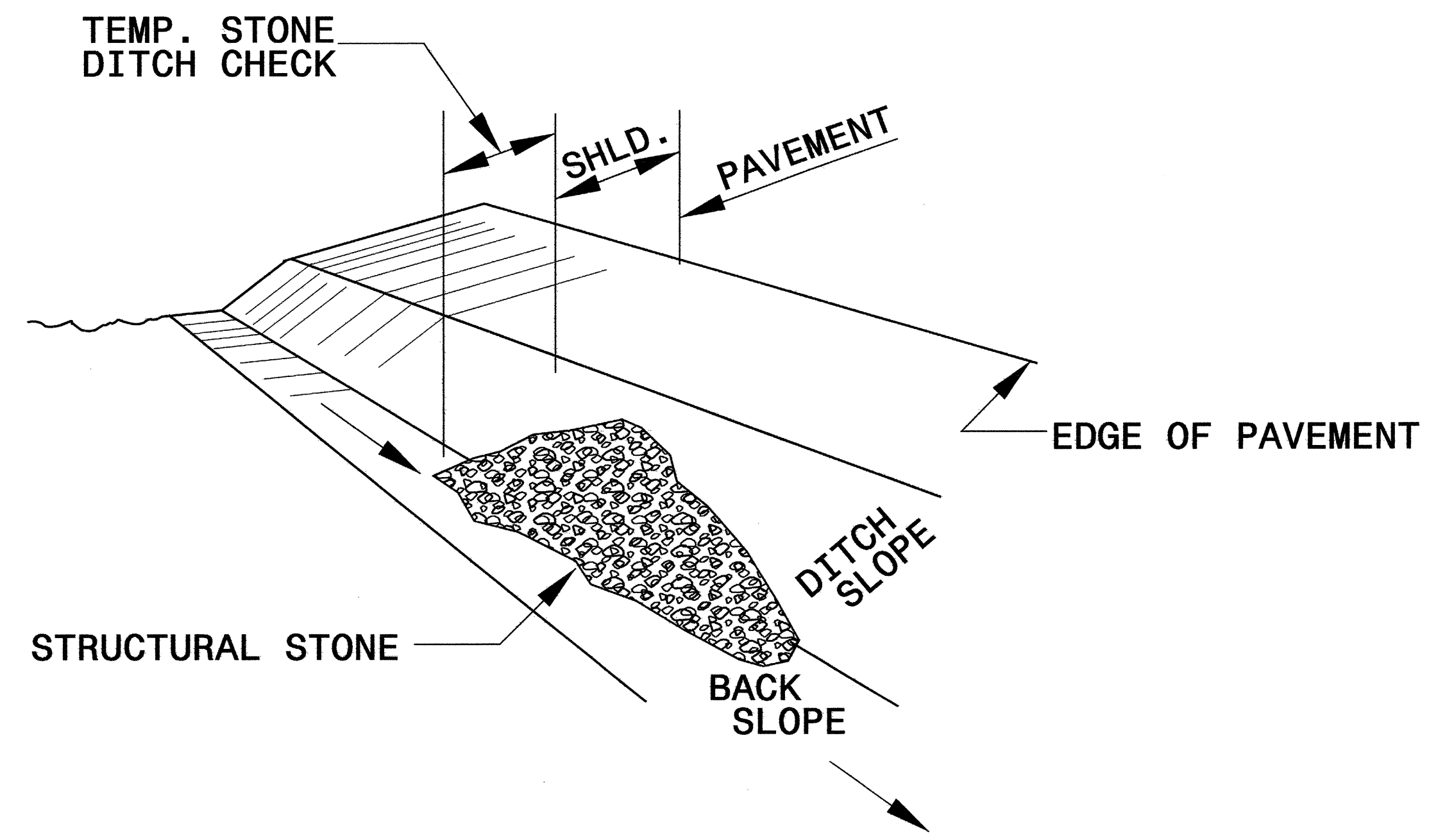
Roadway Standard Drawings

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	1630.05 Temporary Diversion
1606.01 Special Sediment Control Fence	1630.06 Special Stilling Basin
1607.01 Gravel Construction Entrance	1632.03 Rock Inlet Sediment Trap Type C
1622.01 Temporary Berms and Slope Drains	1633.01 Temporary Rock Silt Check Type A
1630.02 Silt Basin Type B	1634.02 Temporary Rock Sediment Dam Type B
1630.04 Stilling Basin	1635.01 Rock Pipe Inlet Sediment Trap Type A

PROJECT REFERENCE NO. R-2245	SHEET NO. EC-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# TEMPORARY ROCK SILT CHECK TYPE 'B' DETAIL

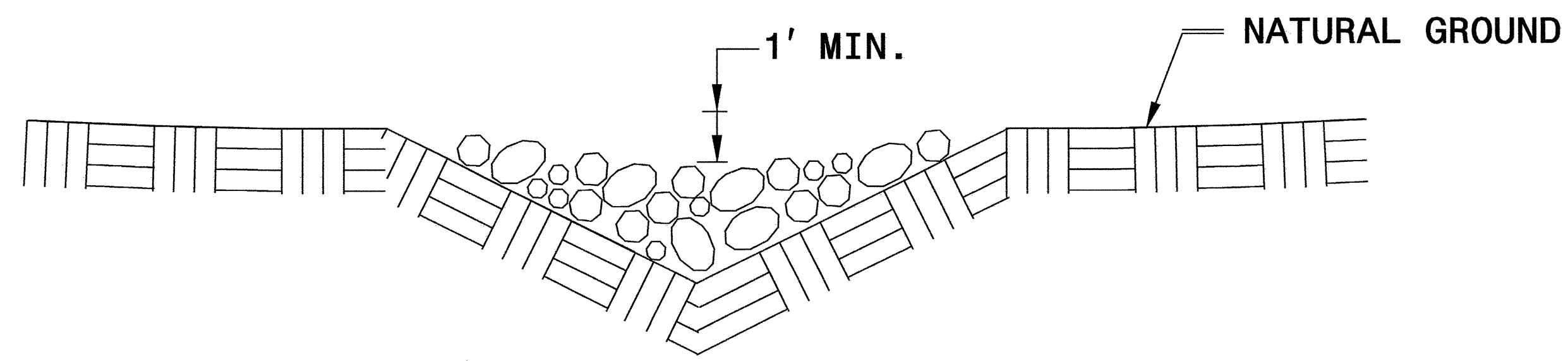


**ISOMETRIC VIEW**

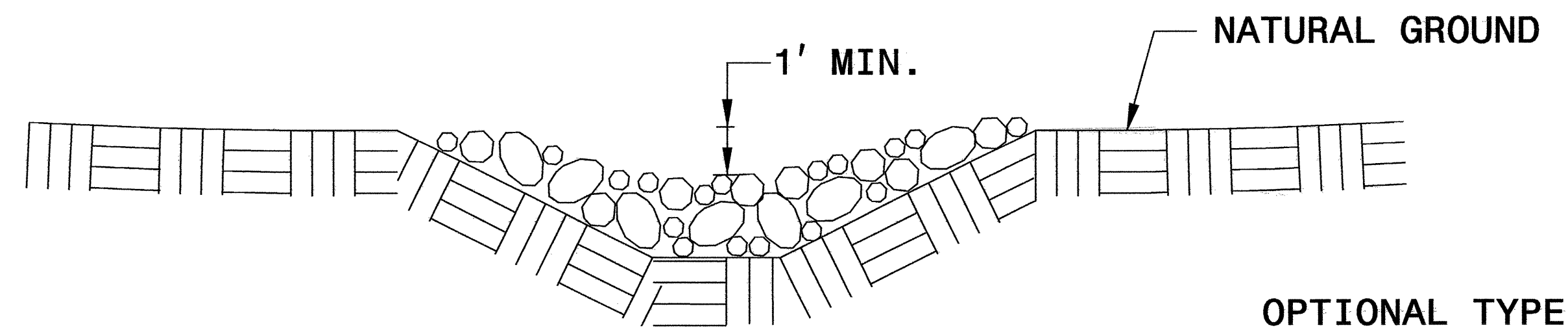
**NOTES:**

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

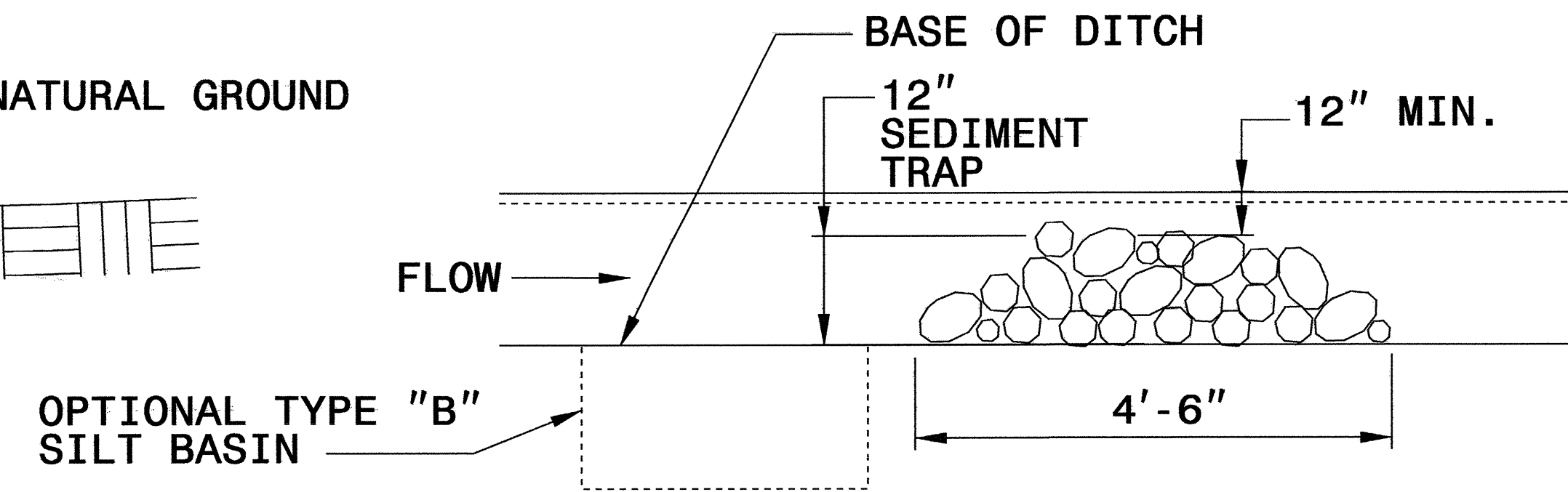
THE ENGINEER MAY DIRECT THE OPTION OF CLASS "A" STONE FOR SITES HAVING LESS THAN ONE (1) ACRE DRAINAGE AREA AND A DITCH GRADE LESS THAN 3%.



**CROSS SECTION VEE DITCH**



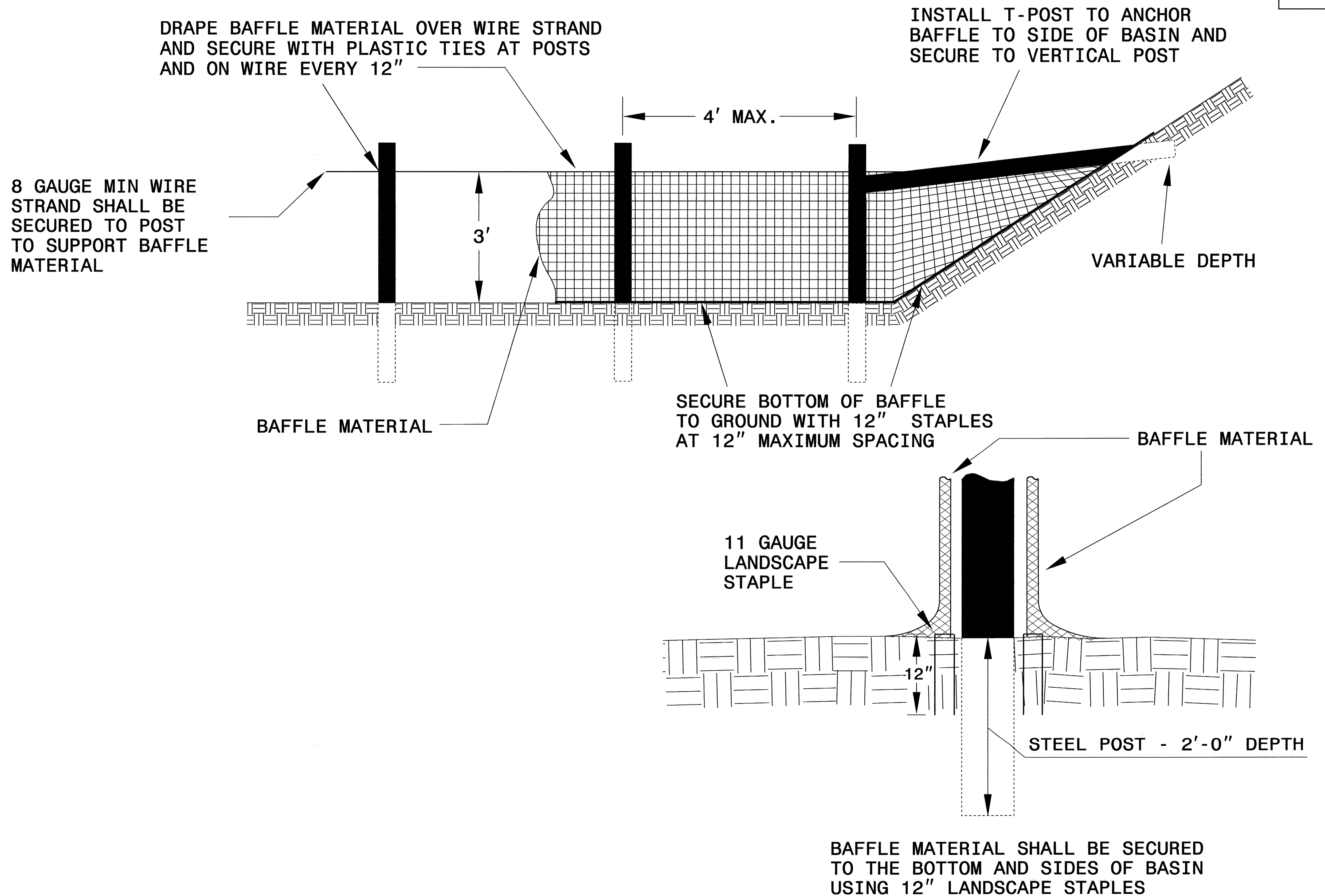
**CROSS SECTION TRAPEZOIDAL DITCH**



**ELEVATION VIEW**

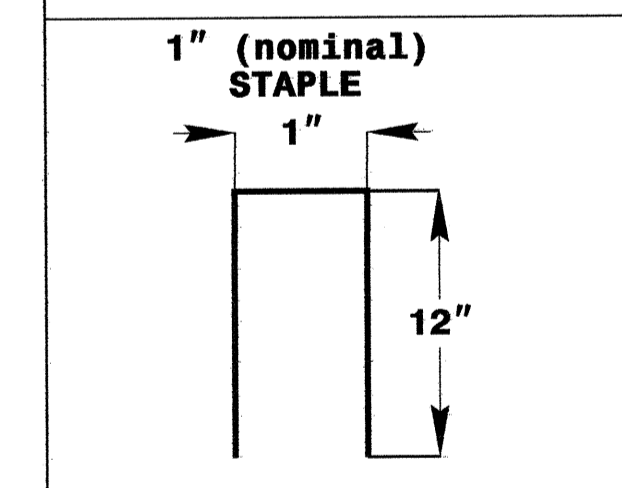
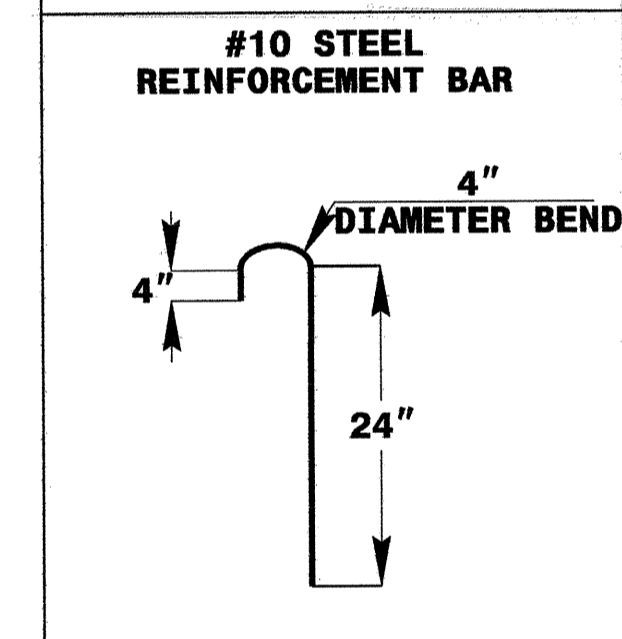
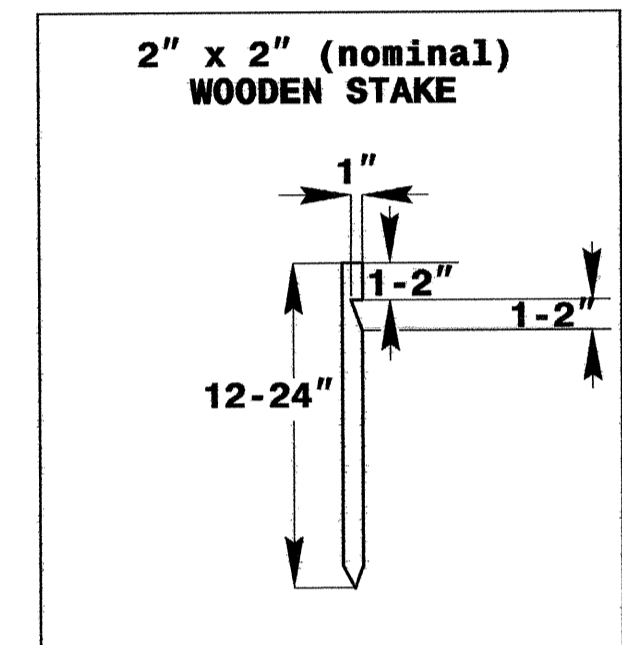
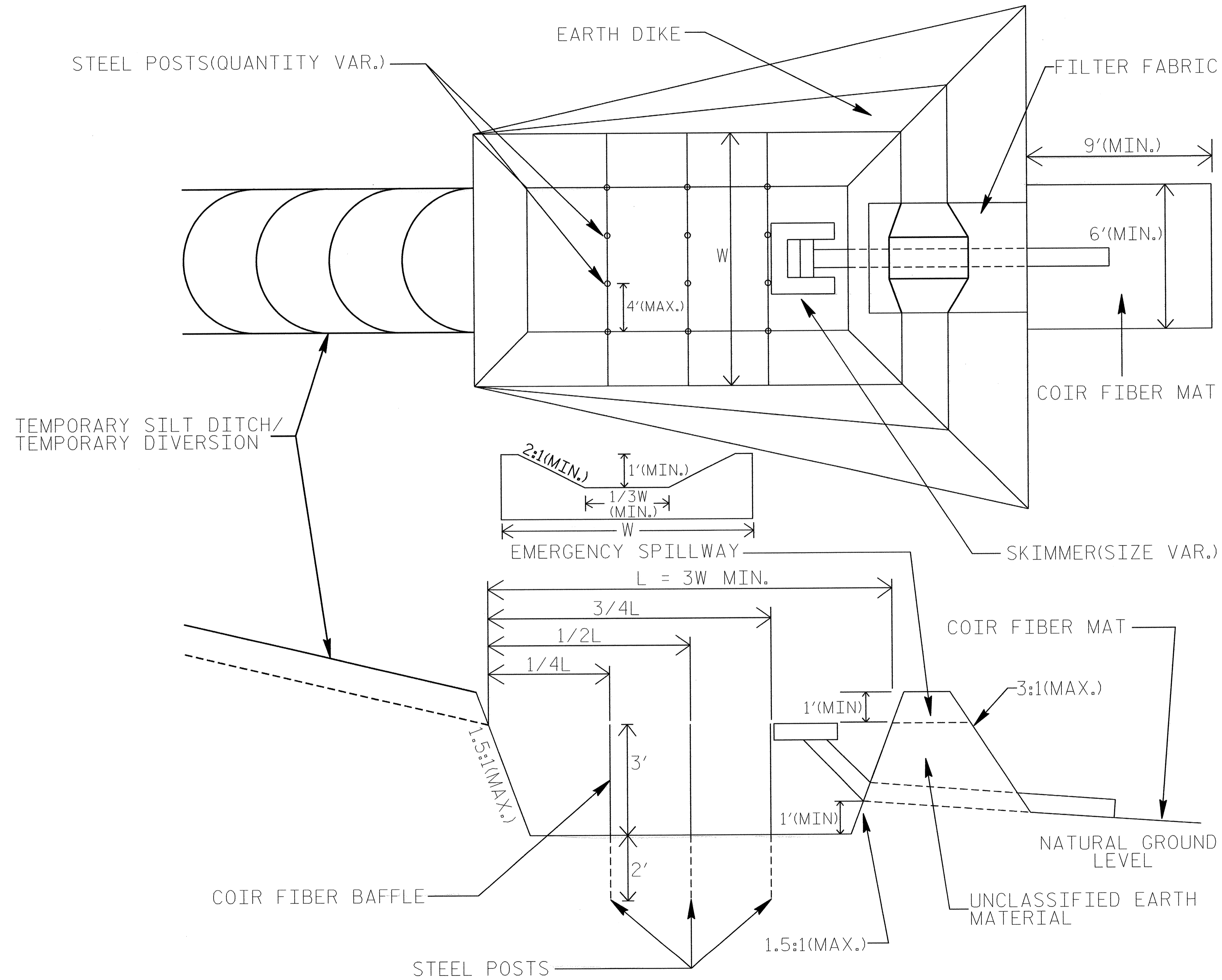
PROJECT REFERENCE NO. R-2245	SHEET NO. EC-2A
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# COIR FIBER BAFFLE DETAIL



# SKIMMER BASIN WITH BAFFLES DETAIL

PROJECT REFERENCE NO. R-2245	SHEET NO. EC-2B
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



**COIR FIBER MAT ANCHOR OPTIONS**



8/17/99

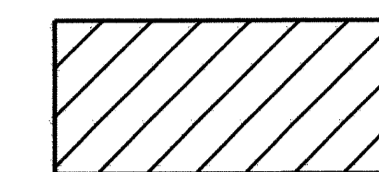
NOTE: UTILIZE TEMPORARY ROCK SILT CHECK TYPE - A AND /OR SKIMMER BASIN AS STILLING BASIN WHERE APPLICABLE.

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 4

PROJECT REFERENCE NO.	SHEET NO.
R-2245	EC-4/CONST.4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

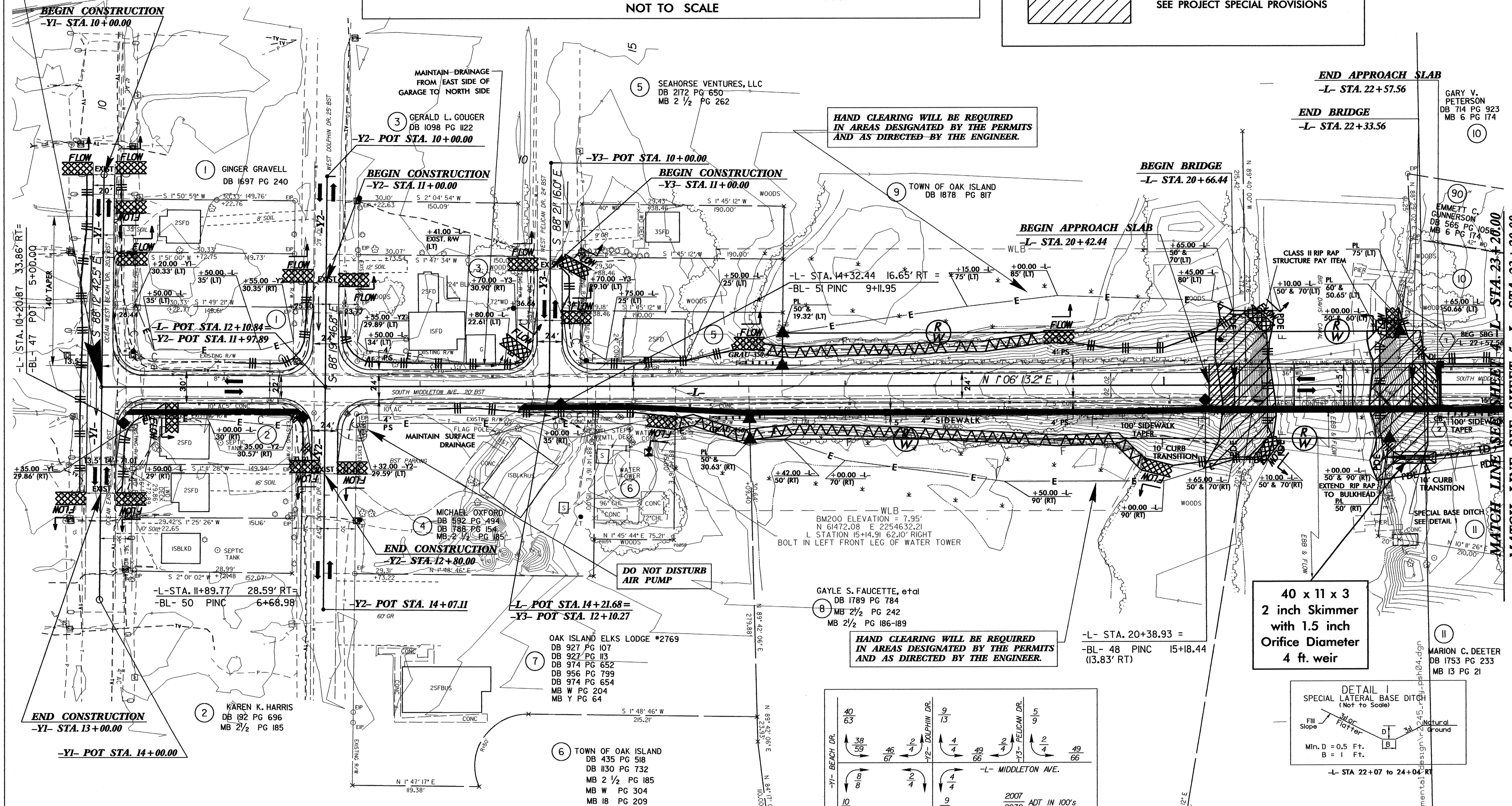
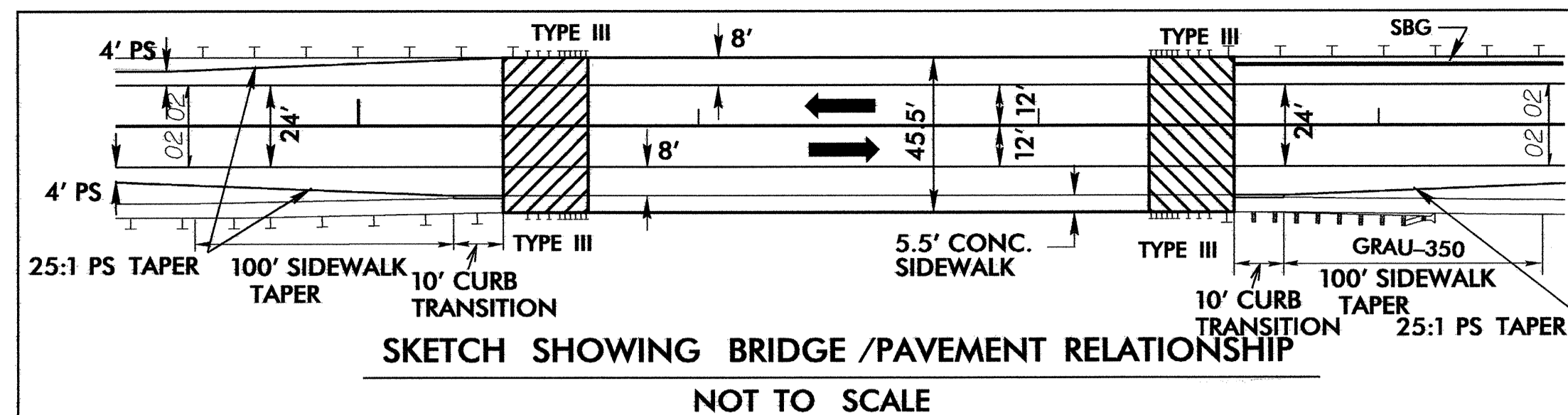
NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.

NAD 83



ENVIRONMENTALLY SENSITIVE AREA SEE PROJECT SPECIAL PROVISIONS

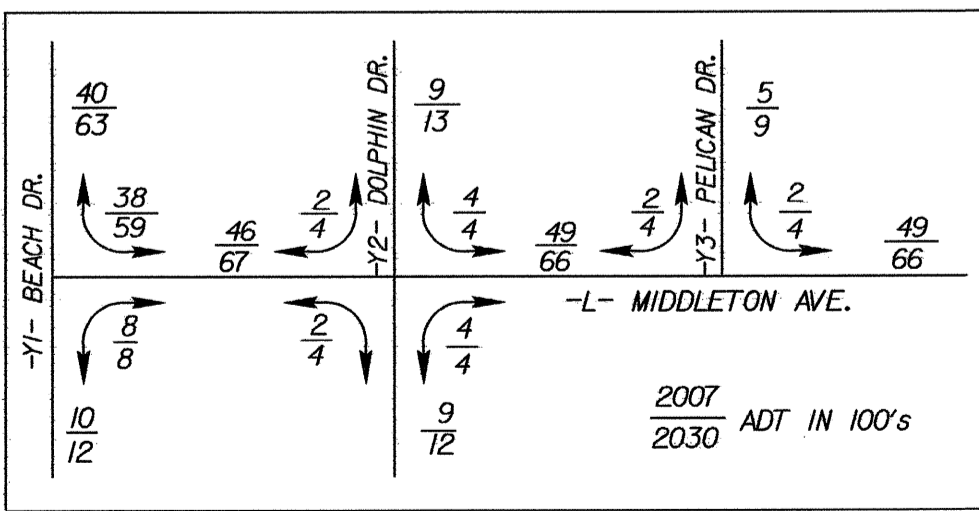
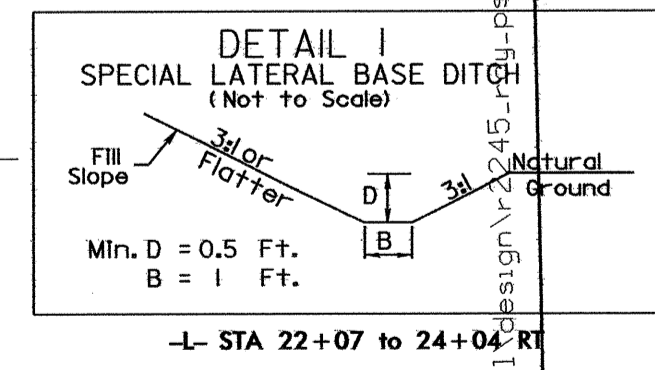
**BEGIN TIP PROJECT R-2245**  
-L- POT Sta.. 10+00.43 =  
-Y1- POT Sta. 11+99.95



HAND CLEARING WILL BE REQUIRED IN AREAS DESIGNATED BY THE PERMITS AND AS DIRECTED BY THE ENGINEER.

HAND CLEARING WILL BE REQUIRED IN AREAS DESIGNATED BY THE PERMITS AND AS DIRECTED BY THE ENGINEER.

40 x 11 x 3  
2 inch Skimmer  
with 1.5 inch  
Orifice Diameter  
4 ft. weir



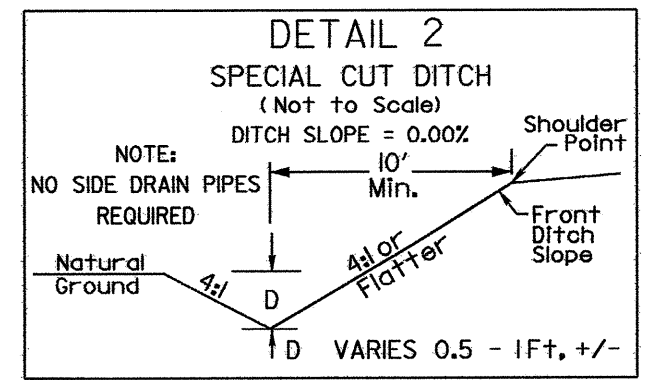
- NOTES:
- 1) FOR -L- PROFILE SEE SHEET 27.
  - 2) FOR -Y1-, -Y2- AND -Y3- PROFILES SEE SHEET 36.
  - 3) FOR STRUCTURE PLANS SEE SHEETS S- TO S-.
  - 4) DRIVEWAY RADII ARE 10' UNLESS OTHERWISE NOTED.
  - 5) PAVED SHOULDER TAPERS ARE 8:1 UNLESS OTHERWISE NOTED.
  - 6) -Y- LINE RADII ARE 30' UNLESS OTHERWISE NOTED.
  - 7) FOR CURB TRANSITION SEE SHEET 2-

MATCH LINE SEE SHEET 5 -L- STA. 23 + 20.00

15-SEP-2006 16:00  
g:\tipproj\ec-4\2245\environmental\design\r-2245\_rdy\_psh04.dgn  
Faban AT REN221445

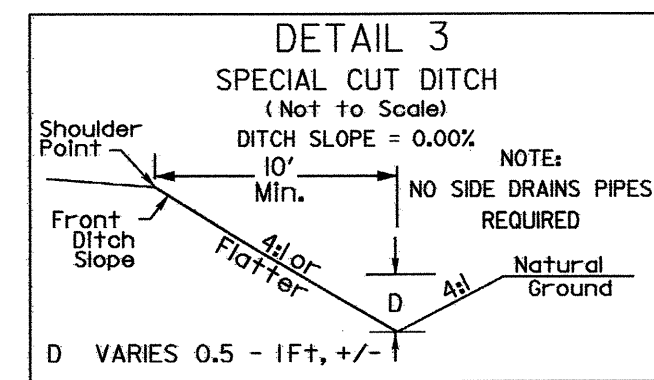
NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.

PROJECT REFERENCE NO. R-2245	SHEET NO. EC-5/CONST.5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



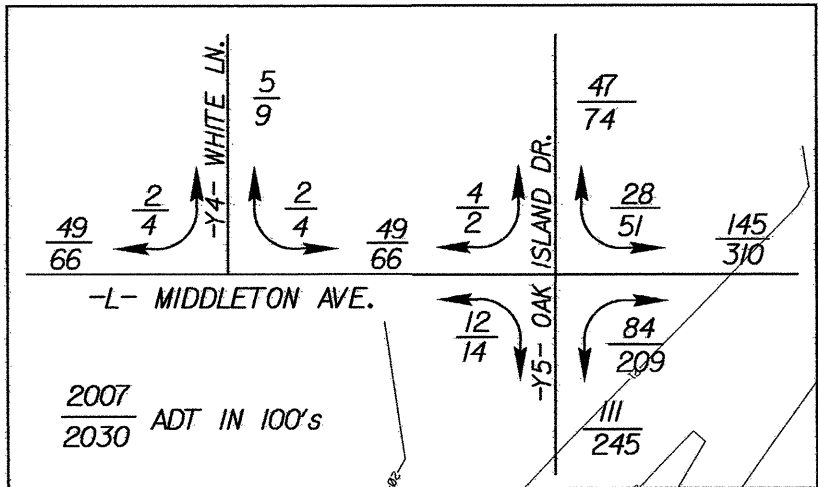
NOTE:  
DITCH SLOPE = 0.002  
Shoulder Point  
Front Ditch Slope  
Natural Ground  
D VARIES 0.5 - 1 FT. +/-

-L- STA 33+72 TO 34+75 LT EL=23.40  
-L- STA 35+38 TO 36+02 LT EL=23.90  
-L- STA 36+50 TO 37+13 LT EL=24.20



NOTE:  
DITCH SLOPE = 0.002  
Shoulder Point  
Front Ditch Slope  
Natural Ground  
D VARIES 0.5 - 1 FT. +/-

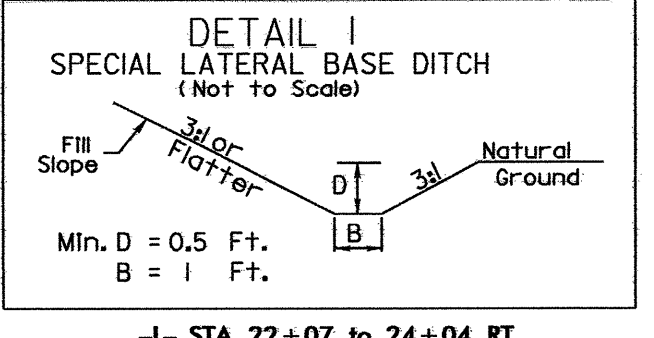
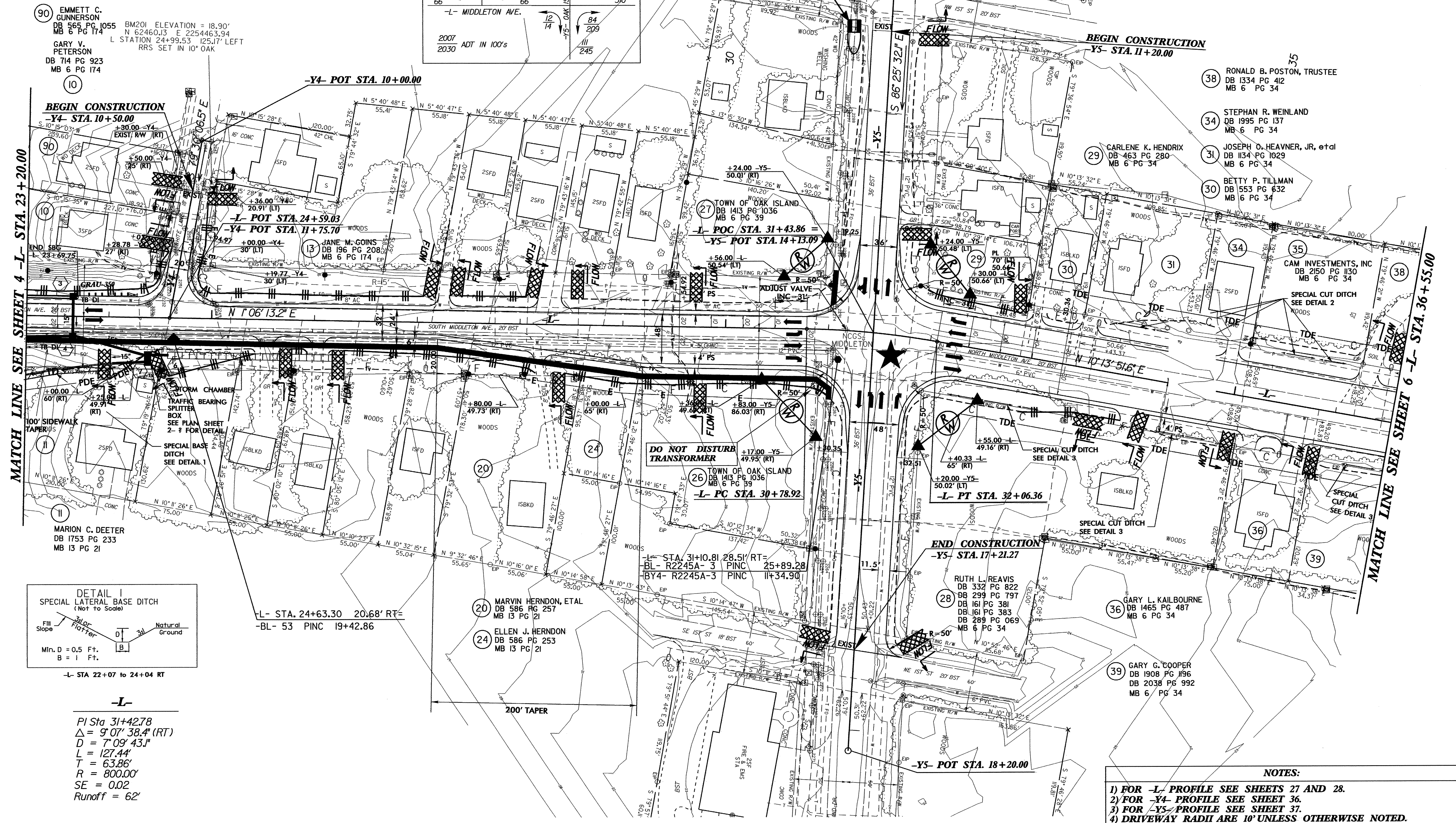
-L- STA 32+25 TO 33+13 RT EL=22.10  
-L- STA 34+30 TO 34+78 RT EL=23.00  
-L- STA 36+14 TO 37+10 RT EL=24.20



34 x 12 x 3  
4' weir

CLEARING AND GRUBBING  
EROSION CONTROL FOR  
CONSTRUCTION SHEET 5

NAD 83



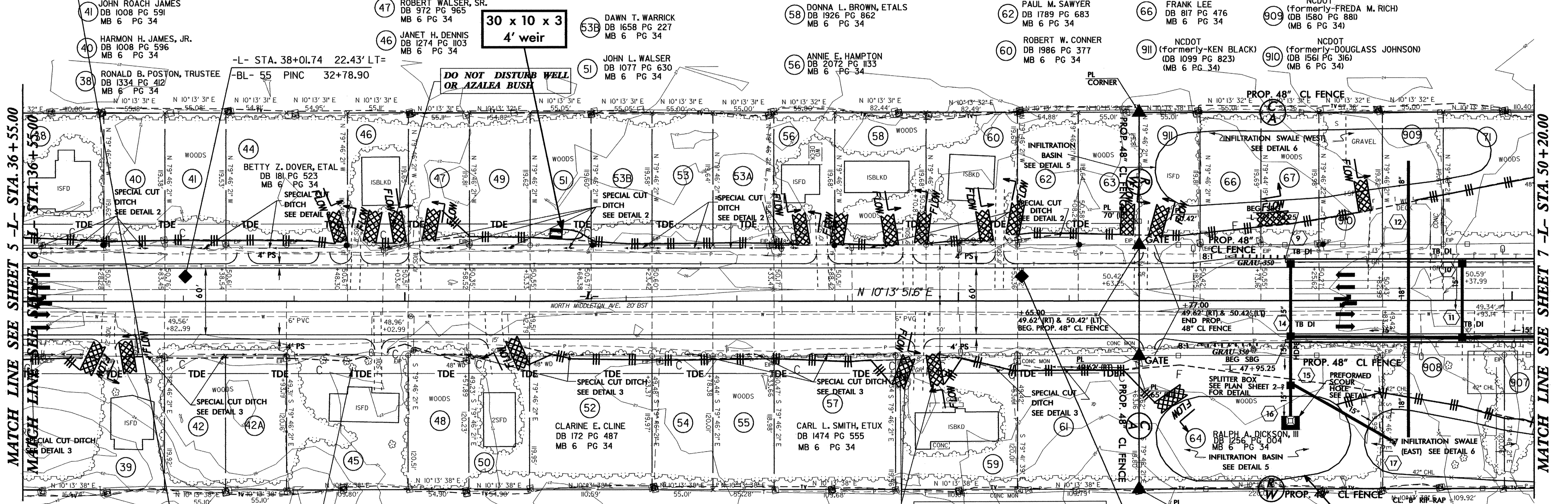
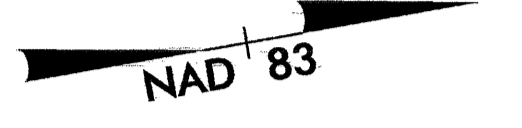
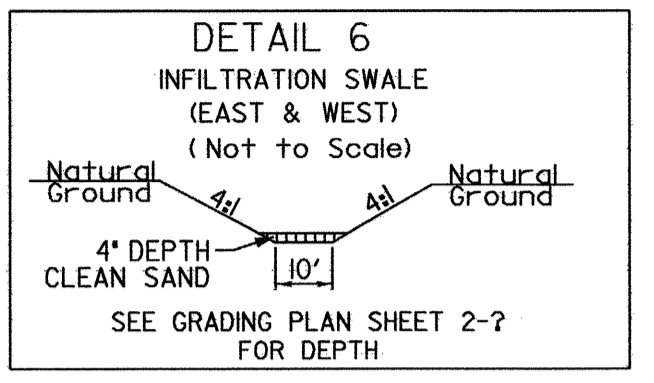
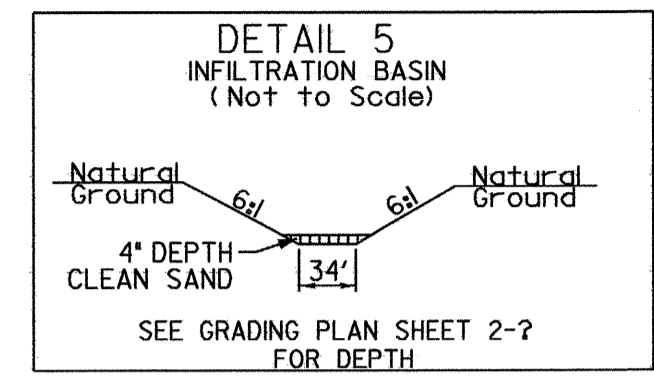
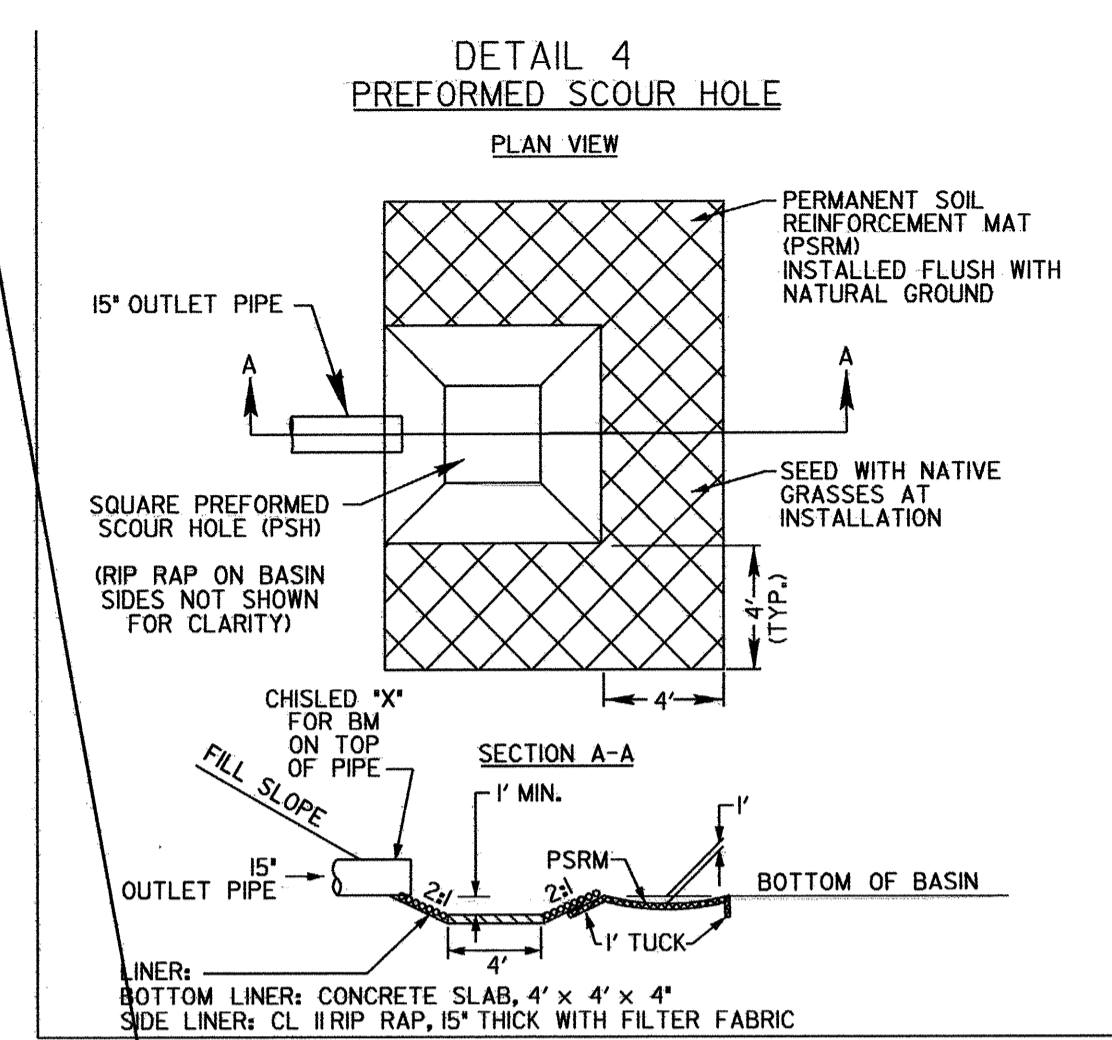
-L- STA 22+07 TO 24+04 RT

-L-  
PI Sta 31+42.78  
Δ = 9' 07" 38.4" (RT)  
D = 7' 09" 43.1"  
L = 127.44'  
T = 63.86'  
R = 800.00'  
SE = 0.02  
Runoff = 62'

- NOTES:
- 1) FOR -L- PROFILE SEE SHEETS 27 AND 28.
  - 2) FOR -Y- PROFILE SEE SHEET 36.
  - 3) FOR -Y- PROFILE SEE SHEET 37.
  - 4) DRIVEWAY RADII ARE 10' UNLESS OTHERWISE NOTED.
  - 5) PAVED SHOULDER TAPERS ARE 8:1 UNLESS OTHERWISE NOTED.
  - 6) -Y- LINE RADII ARE 30' UNLESS OTHERWISE NOTED.

PROJECT REFERENCE NO. R-2245	SHEET NO. EC-6/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.

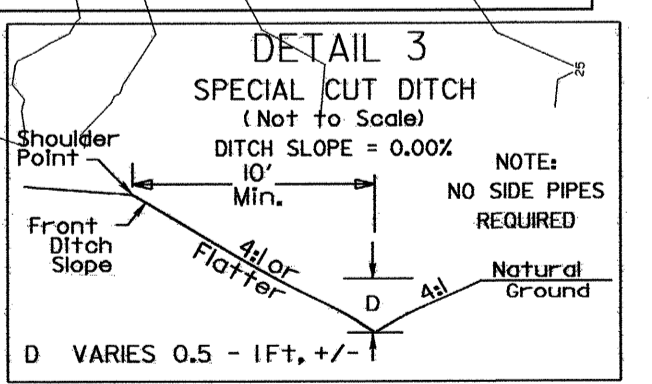
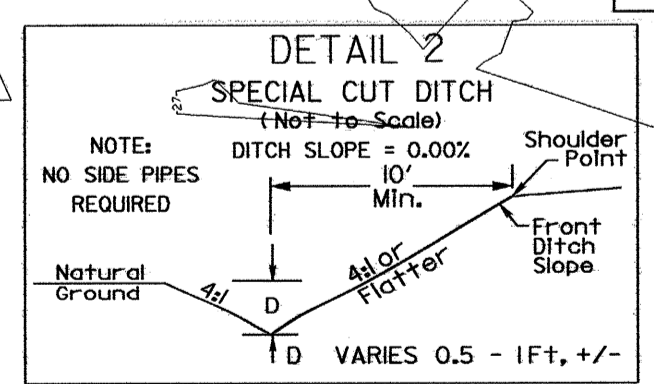


MATCH LINE SEE SHEET 5 - L- STA. 36 + 55.00

MATCH LINE SEE SHEET 7 - L- STA. 50 + 20.00

28.  
OTHERWISE NOTED.  
UNLESS OTHERWISE NOTED.  
OTHERWISE NOTED.

- 49 MINDI W. SINK, ETAL  
DB 1484 PG III2  
MB 6 PG 34
- 47 ROBERT WALSER, SR.  
DB 972 PG 965  
MB 6 PG 34
- 46 JANET H. DENNIS  
DB 1274 PG 1103  
MB 6 PG 34
- 38 RONALD B. POSTON, TRUSTEE  
DB 1334 PG 412  
MB 6 PG 34
- 44 BETTY Z. DOVER, ETAL  
DB 181 PG 523  
MB 6 PG 34
- 42 GARY C. COOPER  
DB 1908 PG 1196  
DB 2038 PG 992  
MB 6 PG 34
- 41 JOHN ROACH JAMES  
DB 1008 PG 591  
MB 6 PG 34
- 40 HARMON H. JAMES, JR.  
DB 1008 PG 596  
MB 6 PG 34
- 39 ARTHUR SKIPPER  
DB 1999 PG 778  
MB 6 PG 34
- 42A KIMBERLY S. ANDERSON  
DB 1999 PG 775  
MB 6 PG 34
- 53A DAWN T. WARRICK  
DB 1658 PG 229  
MB 6 PG 34
- 53 WILLIAM B. WARRICK  
DB 1658 PG 231  
MB 6 PG 34
- 53B DAWN T. WARRICK  
DB 1658 PG 227  
MB 6 PG 34
- 51 JOHN L. WALSER  
DB 1077 PG 630  
MB 6 PG 34
- 54 NEIL G. JESTER  
DB 2179 PG 693  
MB 6 PG 34
- 55 ANNE J. CONNER  
DB 1008 PG 606  
MB 6 PG 34
- 56 ANNIE E. HAMPTON  
DB 2072 PG 1133  
MB 6 PG 34
- 58 DONNA L. BROWN, ETALS  
DB 1926 PG 862  
MB 6 PG 34
- 59 MARSHALL R. CARROLL  
DB 1895 PG 1128  
MB 6 PG 34
- 60 ROBERT W. CONNER  
DB 1986 PG 377  
MB 6 PG 34
- 61 J. R. CORBETT  
DB 596 PG 210  
DB 596 PG 212  
MB 6 PG 34
- 62 PAUL M. SAWYER  
DB 1789 PG 683  
MB 6 PG 34
- 63 MARVIN C. MARTIN, SR.  
DB 1390 PG 266  
MB 6 PG 34
- 64 RALPH A. DICKSON, III  
DB 1256 PG 004  
MB 6 PG 34
- 66 FRANK LEE  
DB 817 PG 476  
MB 6 PG 34
- 67 PAUL E. MOORE, JR.  
DB 1223 PG 689  
MB 6 PG 34
- 68 J. R. CORBETT  
DB 596 PG 210  
DB 596 PG 212  
MB 6 PG 34
- 69 NCDOT (formerly-FREDA M. RICH)  
DB 1580 PG 881  
(MB 6 PG 34)
- 70 NCDOT (formerly-KEN BLACK)  
DB 1099 PG 823  
(MB 6 PG 34)
- 71 GEORGE L. FISHER, ETAL  
DB 1181 PG 593  
MB 6 PG 34
- 908 NCDOT (formerly-KATHERINE W. HICKS )  
DB 169 PG 55  
MB 6 PG 34
- 909 NCDOT (formerly-DOUGLASS JOHNSON)  
DB 1561 PG 316  
(MB 6 PG 34)
- 910 NCDOT (formerly-DOUGLASS JOHNSON)  
DB 1561 PG 316  
(MB 6 PG 34)
- 911 NCDOT (formerly-KEN BLACK)  
DB 1099 PG 823  
(MB 6 PG 34)



- L- STA 36+50 TO 37+13 LT EL=24.20
- L- STA 37+58 TO 37+68 RT EL=24.50
- L- STA 38+13 TO 38+24 LT EL=24.60
- L- STA 38+68 TO 39+37 LT EL=24.90
- L- STA 39+75 TO 39+89 LT EL=25.00
- L- STA 40+28 TO 40+44 LT EL=25.00
- L- STA 40+88 TO 40+98 LT EL=25.00
- L- STA 41+43 TO 41+53 LT EL=25.40
- L- STA 41+98 TO 43+55 LT EL=25.70
- L- STA 43+97 TO 44+34 LT EL=25.70
- L- STA 44+73 TO 45+18 LT EL=26.20
- L- STA 45+65 TO 46+10 LT EL=26.20
- L- STA 36+14 TO 37+10 RT EL=24.20
- L- STA 37+50 TO 37+68 RT EL=24.50
- L- STA 38+13 TO 39+58 RT EL=24.80
- L- STA 40+33 TO 40+61 RT EL=25.50
- L- STA 41+43 TO 42+08 RT EL=25.60
- L- STA 42+53 TO 42+63 RT EL=25.80
- L- STA 43+08 TO 43+19 RT EL=26.00
- L- STA 43+64 TO 44+45 RT EL=26.20
- L- STA 44+83 TO 45+39 RT EL=26.50
- L- STA 45+84 TO 46+48 RT EL=26.90

NOTE:  
UTILIZE INFILTRATION BASIN  
AS SEDIMENT BASIN.

NOTES:  
1) FOR -L- PROFILE SEE SHEET 28.  
2) DRIVEWAY RADII ARE 10' UNLESS OTHERWISE NOTED.  
3) PAVED SHOULDER TAPERS ARE 8:1 UNLESS OTHERWISE NOTED.

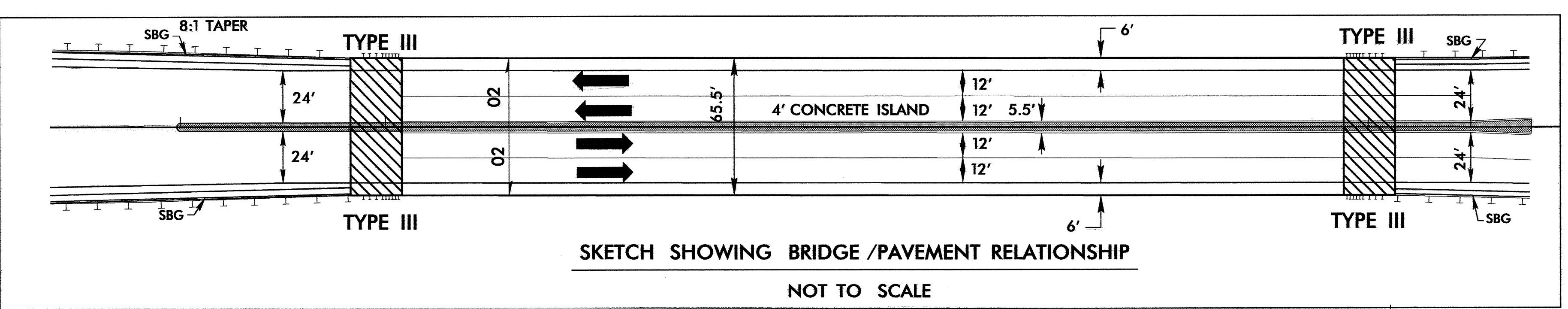


PROJECT REFERENCE NO.	SHEET NO.
R-2245	EC-7/CONST.7
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING  
EROSION CONTROL FOR  
CONSTRUCTION SHEET 7

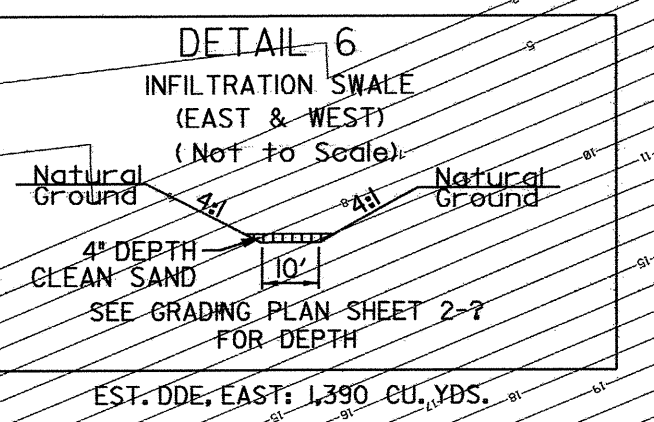
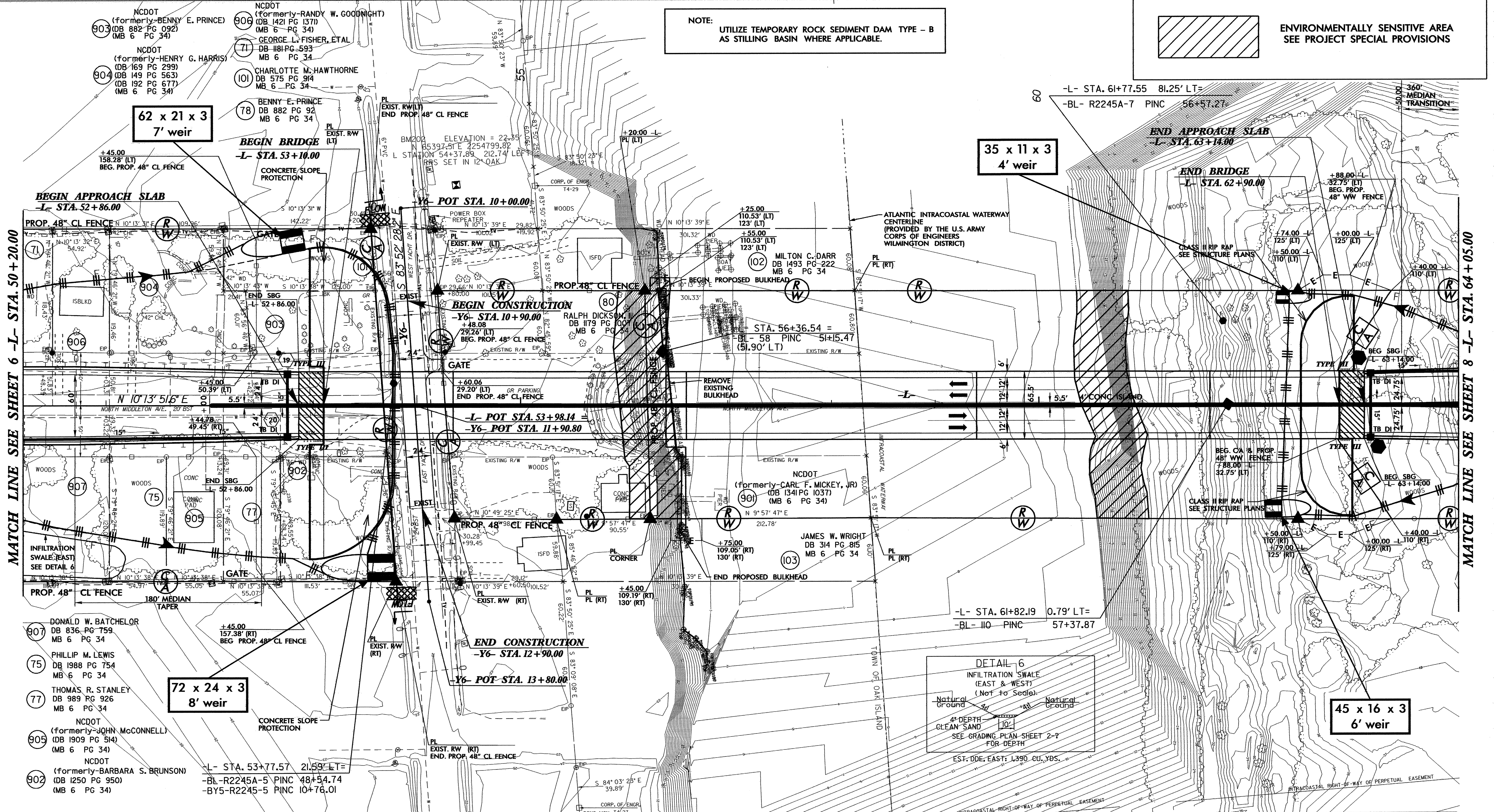


NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.



NOTE: UTILIZE TEMPORARY ROCK SEDIMENT DAM TYPE - B AS STILLING BASIN WHERE APPLICABLE.

ENVIRONMENTALLY SENSITIVE AREA  
SEE PROJECT SPECIAL PROVISIONS



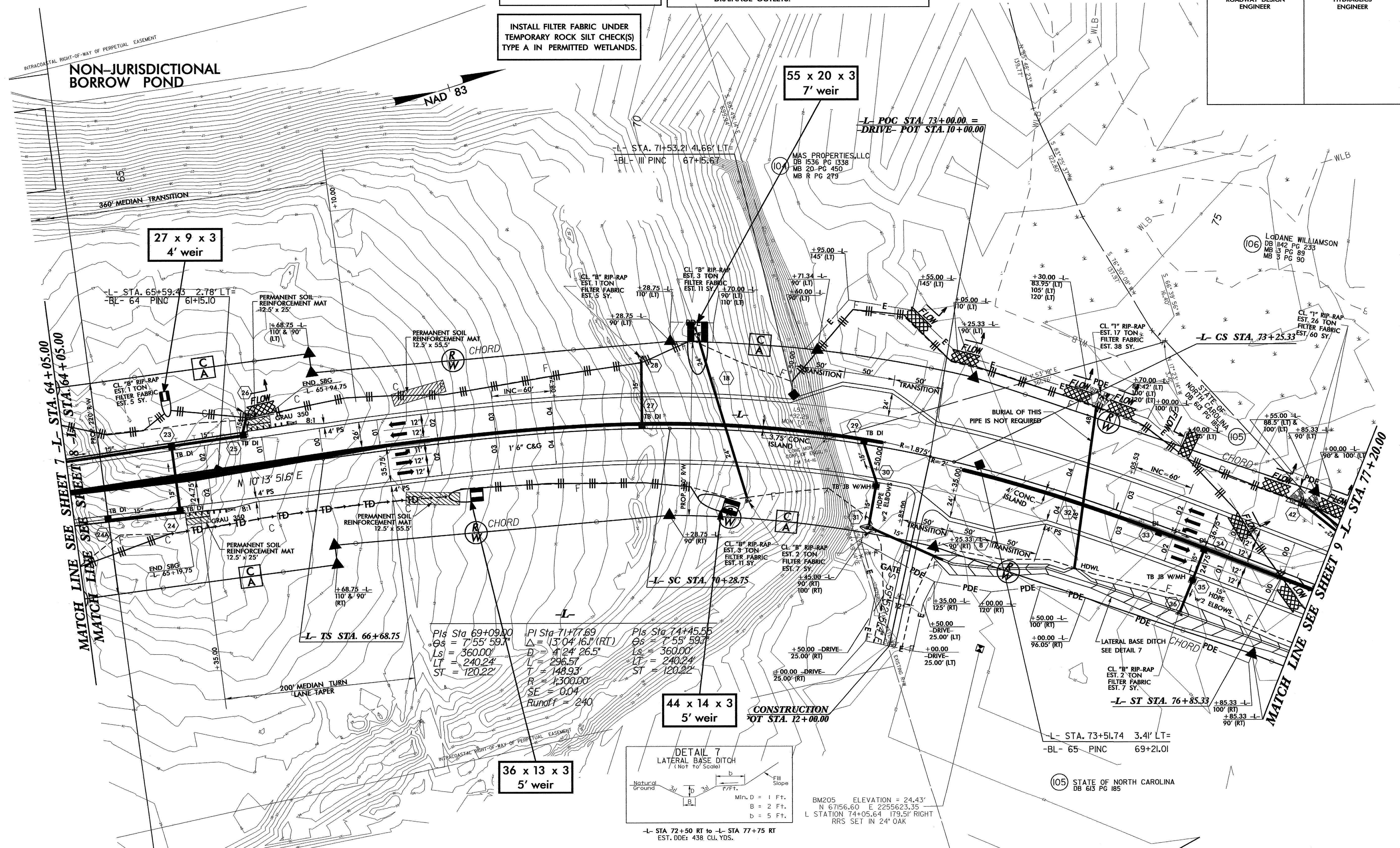
NOTES:  
 1) FOR -L- PROFILE SEE SHEETS 28 AND 29.  
 2) FOR -Y6- PROFILE SEE SHEET 37.  
 3) FOR STRUCTURE PLANS SEE SHEETS S- TO S-.  
 4) PAVED SHOULDER TAPERS ARE 8:1 UNLESS OTHERWISE NOTED.

PROJECT REFERENCE NO.		SHEET NO.	
R-2245		EC-8/CONST.8	
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER			

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 8

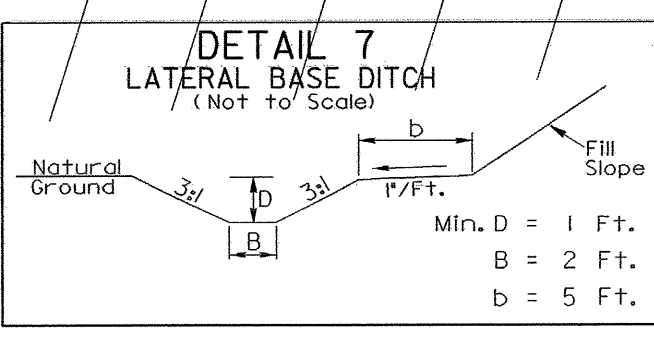
INSTALL FILTER FABRIC UNDER TEMPORARY ROCK SILT CHECK(S) TYPE A IN PERMITTED WETLANDS.

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



**SPECIAL CONTROL OF ACCESS DESIGNATION**  
**NO REVISIONS SHALL BE MADE TO THE CONTROL OF ACCESS WITHOUT APPROVAL OF NCDOT, FHWA, USEPA AND NCDENR PER AGREEMENT AND USACE PER PERMIT CONDITION.**

- NOTES:**
- 1) FOR -L- PROFILE SEE SHEET 29.
  - 2) PAVED SHOULDER TAPERS ARE 8:1 UNLESS OTHERWISE NOTED.
  - 3) SEE SHEET 2- FOR 50' TRANSITION FROM 1'-6" C&G TO 2'-9" C&G.
  - 4) ACCESS ROADS TO BE CONSTRUCTED BY OTHERS.
  - 5) A FUTURE CONTROL-OF-ACCESS BREAK HAS BEEN RESERVED LEFT OF -L- STATION 73+15.00. ANY ACCESS BREAK AT THIS LOCATION SHALL BE IN ACCORDANCE WITH SPECIFIC GUIDELINES SET FORTH IN THE MEMORANDUM OF UNDERSTANDING BETWEEN NCDOT, FHWA, NCDENR AND USEPA AND SPECIAL PERMIT CONDITIONS PRESCRIBED BY USACE.



**MATCH LINE SEE SHEET 25**  
**-ACCI- STA. 15+00.00**

04-JAN-2007 15:07  
 9A:\p\proj\ec08\env\environmental\design\2245-r.dj\_psh08.dgn  
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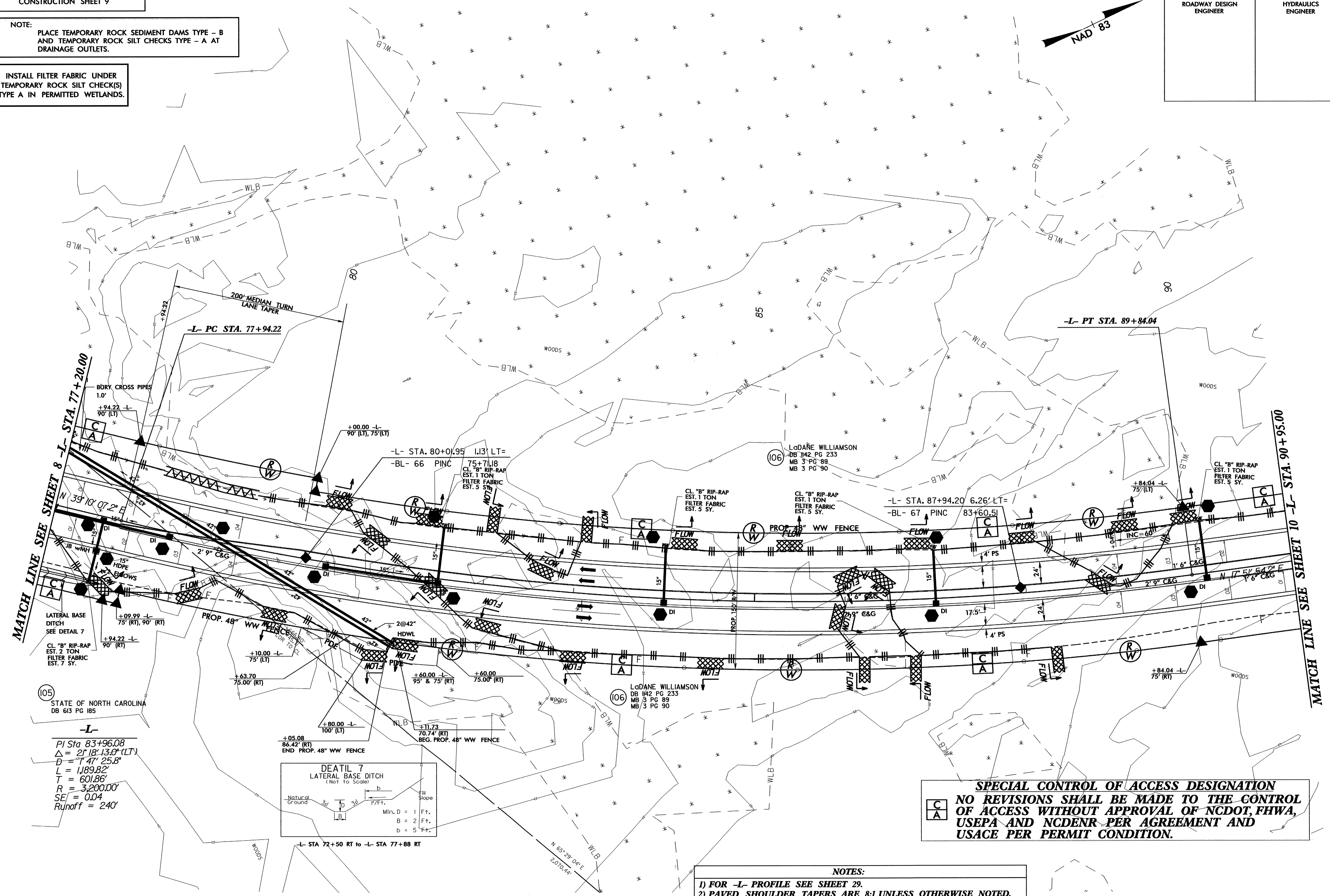
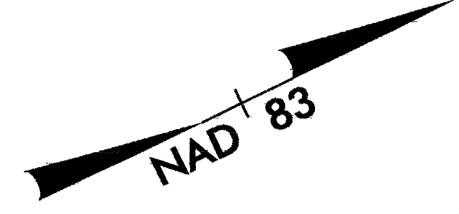
8/17/99

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.

INSTALL FILTER FABRIC UNDER  
TEMPORARY ROCK SILT CHECK(S)  
TYPE A IN PERMITTED WETLANDS.

PROJECT REFERENCE NO. R-2245	SHEET NO. EC-9/CONST.9
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

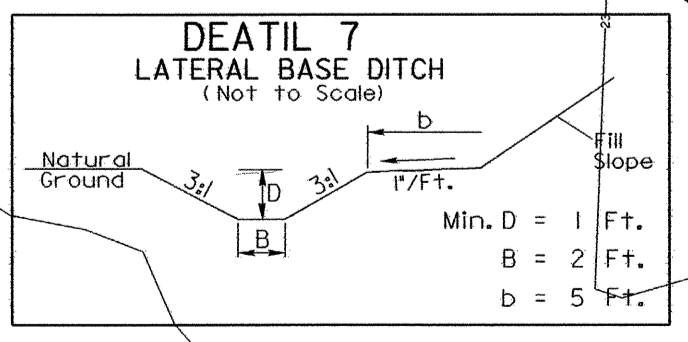


MATCH LINE SEE SHEET 8 -L- STA. 77+20.00

MATCH LINE SEE SHEET 10 -L- STA. 90+95.00

(105) STATE OF NORTH CAROLINA  
DB 613 PG 185

-L-  
PI Sta 83+96.08  
 $\Delta = 21' 13.13.0" (LT)$   
 $D = 47' 25.8"$   
 $L = 1189.82'$   
 $T = 601.86'$   
 $R = 3,200.00'$   
 $SE = 0.04$   
 $Runoff = 240'$



**SPECIAL CONTROL OF ACCESS DESIGNATION**  
NO REVISIONS SHALL BE MADE TO THE CONTROL  
OF ACCESS WITHOUT APPROVAL OF NCDOT, FHWA,  
USEPA AND NCDENR PER AGREEMENT AND  
USAGE PER PERMIT CONDITION.

NOTES:  
1) FOR -L- PROFILE SEE SHEET 29.  
2) PAVED SHOULDER TAPERS ARE 8:1 UNLESS OTHERWISE NOTED.  
3) SEE SHEET 2- FOR 50' TRANSITION FROM 1'-6" C&G TO 2'-9" C&G.

REVISIONS

15-SEP-2006 16:21  
g:\itpprojects\2245\environmental\design\2245\_rdy\_psh09.dgn  
chao AT HENV21445

PROJECT REFERENCE NO. R-2245	SHEET NO. EC-10/CONST.10
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

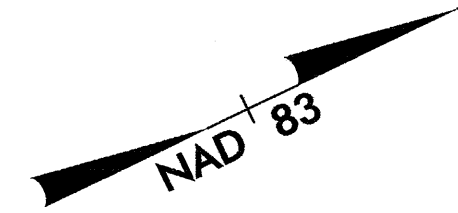
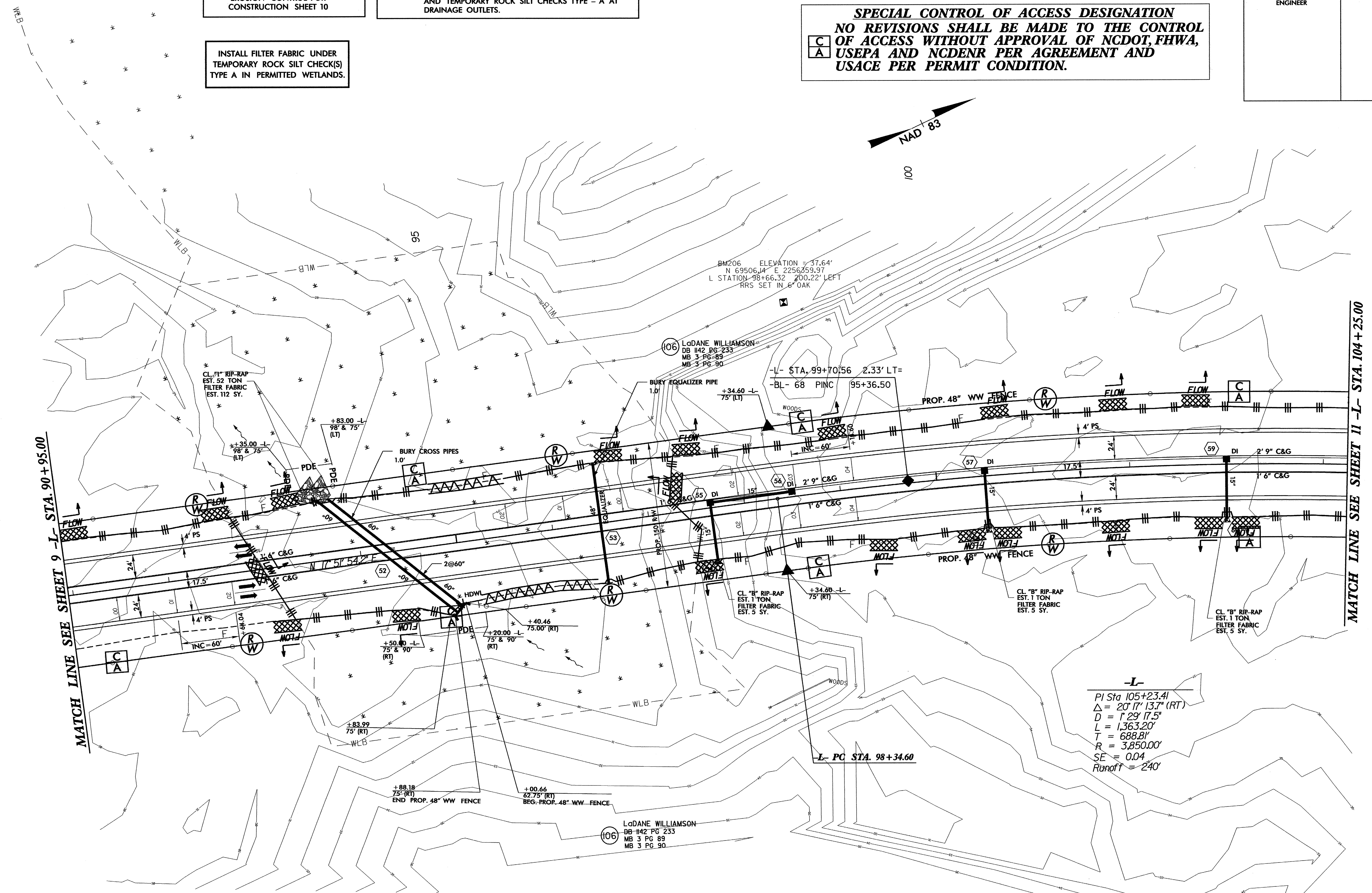
CLEARING AND GRUBBING  
EROSION CONTROL FOR  
CONSTRUCTION SHEET 10

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

INSTALL FILTER FABRIC UNDER  
TEMPORARY ROCK SILT CHECK(S)  
TYPE A IN PERMITTED WETLANDS.

**SPECIAL CONTROL OF ACCESS DESIGNATION**  
**NO REVISIONS SHALL BE MADE TO THE CONTROL**  
**OF ACCESS WITHOUT APPROVAL OF NCDOT, FHWA,**  
**USEPA AND NCDENR PER AGREEMENT AND**  
**USACE PER PERMIT CONDITION.**

8/17/99  
18-SEP-2006 08:53  
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Rehan AT RENV21445



**-L-**  
PI Sta 105+23.41  
 $\Delta = 20' 17" 13.7" (RT)$   
 $D = 1' 29" 17.5"$   
 $L = 1,363.20'$   
 $T = 688.81'$   
 $R = 3,850.00'$   
 $SE = 0.04$   
 $Runoff = 240'$

**NOTES:**  
1) FOR -L- PROFILE SEE SHEETS 29 AND 30.  
2) PAVED SHOULDER TAPERS ARE 8:1 UNLESS OTHERWISE NOTED.  
3) SEE SHEET 2- FOR 50' TRANSITION FROM 1'-6" C&G TO 2'-9" C&G.

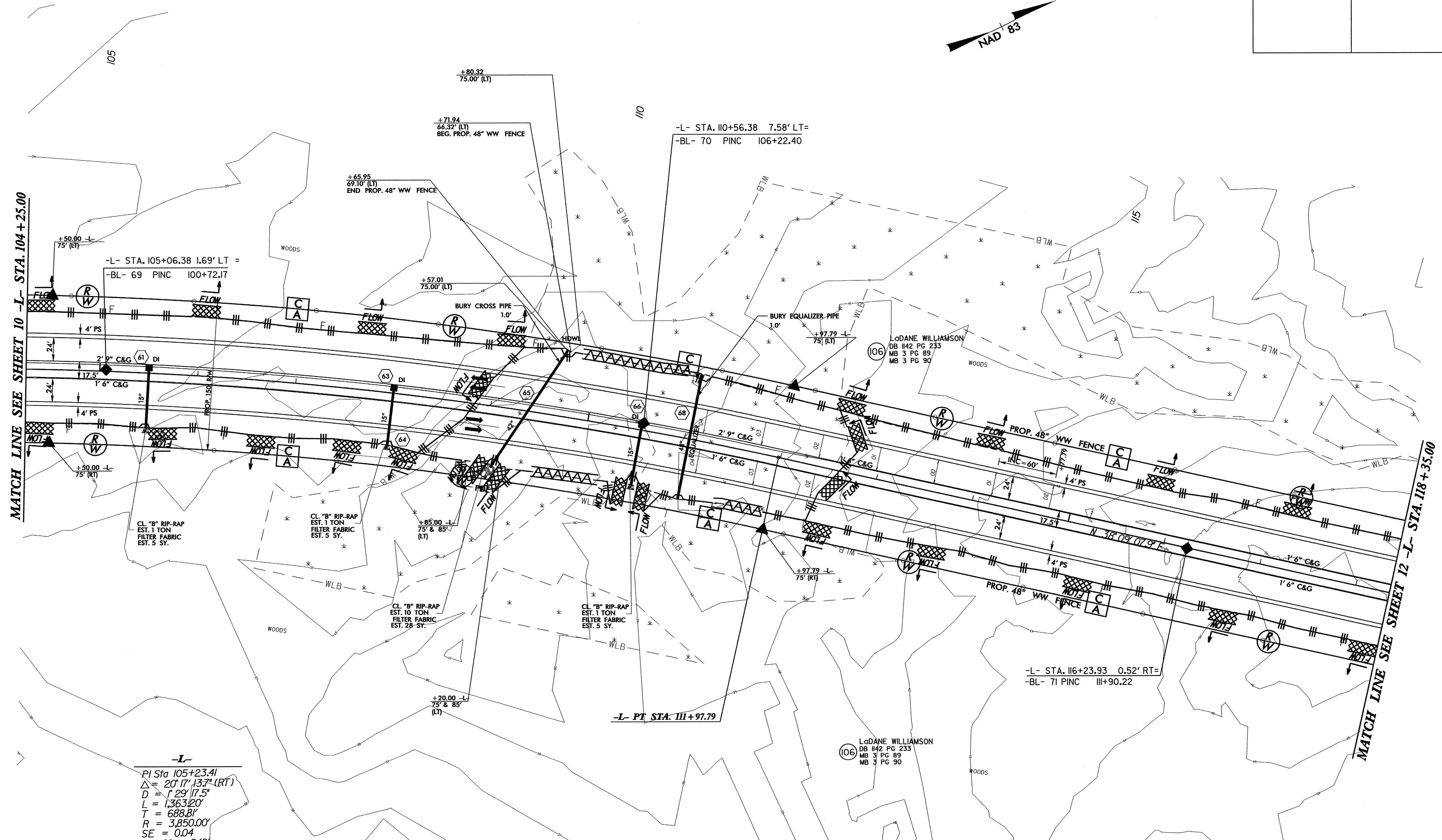
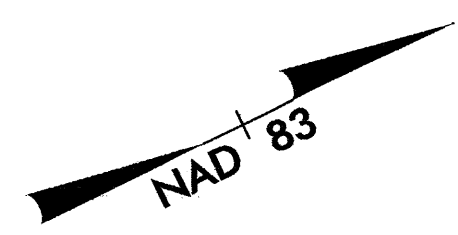
8/17/99

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.

INSTALL FILTER FABRIC UNDER  
TEMPORARY ROCK SILT CHECK(S)  
TYPE A IN PERMITTED WETLANDS.

PROJECT REFERENCE NO. R-2245	SHEET NO. EC-11/CONST.11
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



MATCH LINE SEE SHEET 10 -L- STA. 104 +25.00

MATCH LINE SEE SHEET 12 -L- STA. 118 +35.00

REVISIONS

-L-  
 PI Sta 105+23.41  
 $\Delta = 20' 17" 13.7" (RT)$   
 $D = 1' 29" 17.5"$   
 $L = 1,363.20'$   
 $T = 688.81'$   
 $R = 3,850.00'$   
 $SE = 0.04$   
 Runoff = 240'

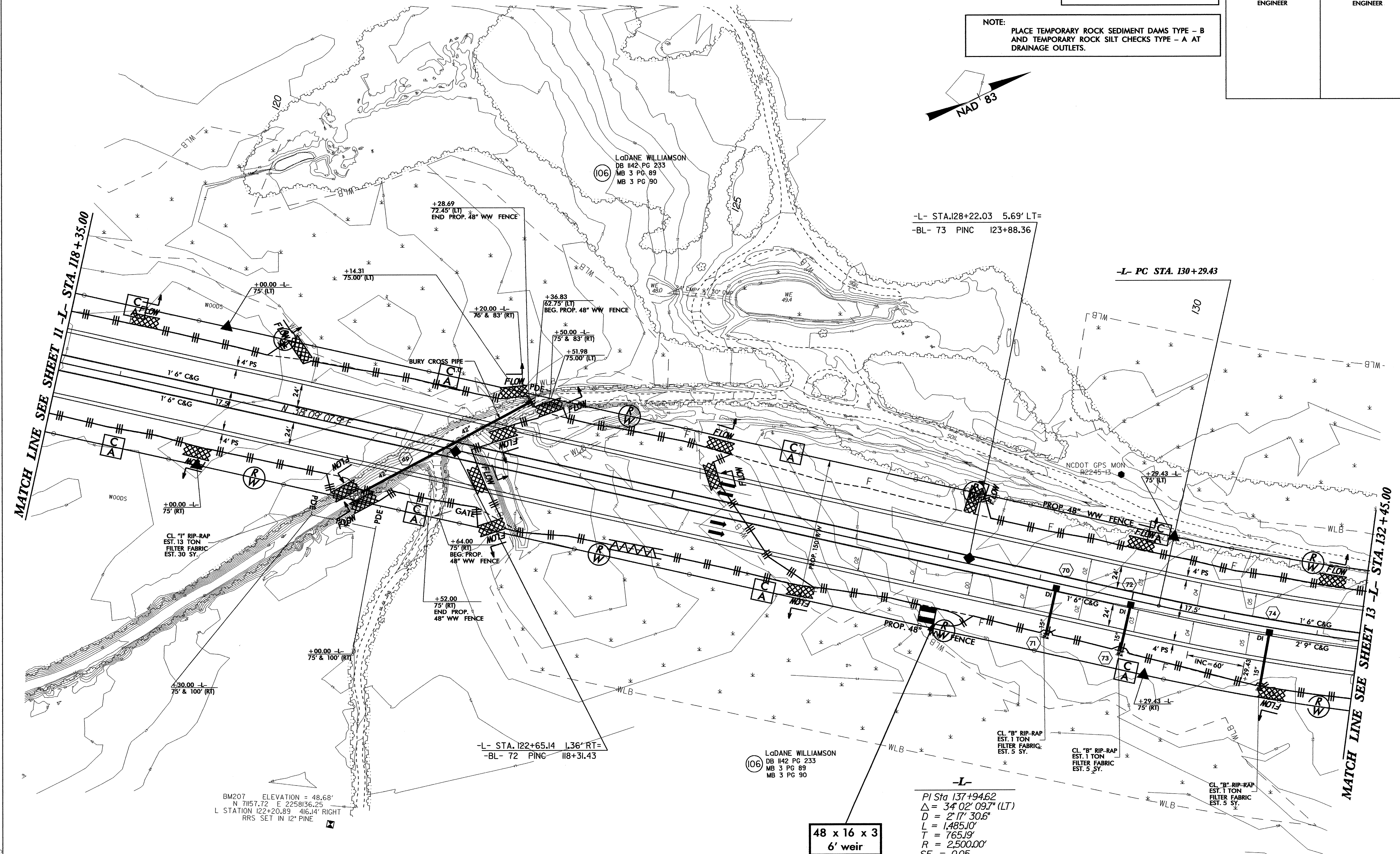
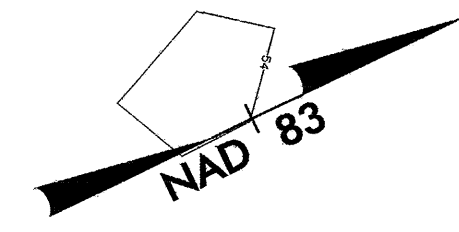
**SPECIAL CONTROL OF ACCESS DESIGNATION**  
**NO REVISIONS SHALL BE MADE TO THE CONTROL**  
**OF ACCESS WITHOUT APPROVAL OF NCDOT, FHWA,**  
**USEPA AND NCDENR PER AGREEMENT AND**  
**USAGE PER PERMIT CONDITION.**

**NOTES:**  
 1) FOR -L- PROFILE SEE SHEET 30.  
 2) PAVED SHOULDER TAPERS ARE 8:1 UNLESS OTHERWISE NOTED.  
 3) SEE SHEET 2- FOR 50' TRANSITION FROM 1'-6" C&G TO 2'-9" C&G.

18-SEP-2006 08:55  
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 tchan AT REN22445

PROJECT REFERENCE NO. R-2245	SHEET NO. EC-12/CONST.12
R/W 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.



**SPECIAL CONTROL OF ACCESS DESIGNATION**  
**NO REVISIONS SHALL BE MADE TO THE CONTROL OF ACCESS WITHOUT APPROVAL OF NCDOT, FHWA, USEPA AND NCDENR PER AGREEMENT AND USACE PER PERMIT CONDITION.**

**48 x 16 x 3  
6' weir**

-L-  
 PI Sta 137+94.62  
 $\Delta = 34' 02'' 09.7''$  (LT)  
 $D = 2' 17'' 30.6''$   
 $L = 1,485.10'$   
 $T = 765.19'$   
 $R = 2,500.00'$   
 $SE = 0.05$   
 Runoff = 300'

**NOTES:**  
 1) FOR -L- PROFILE SEE SHEETS 30 AND 31.  
 2) PAVED SHOULDER TAPERS ARE 8:1 UNLESS OTHERWISE NOTED.  
 3) SEE SHEET 2- FOR 50' TRANSITION FROM 1'-6" C&G TO 2'-9" C&G.

BM207 ELEVATION = 48.68'  
 N 71157.72' E 2258136.25'  
 L STATION 122+20.89' 416.14' RIGHT  
 RRS SET IN 12" PINE

-L- STA. 122+65.14 1.36' RT=  
 -BL- 72 PINC 118+31.43

-L- STA. 128+22.03 5.69' LT=  
 -BL- 73 PINC 123+88.36

-L- PC STA. 130+29.43

MATCH LINE SEE SHEET 11 -L- STA. 118+35.00

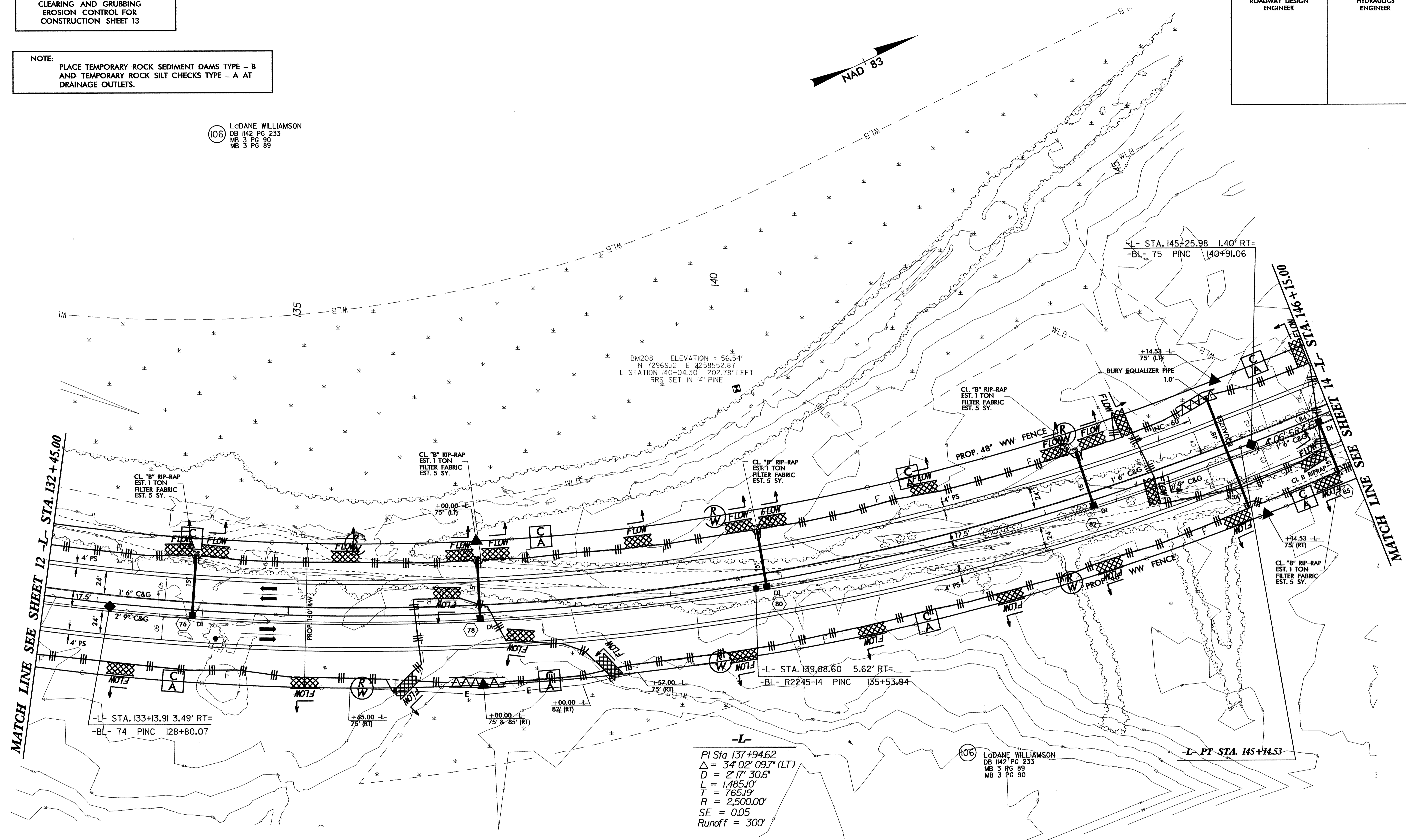
MATCH LINE SEE SHEET 13 -L- STA. 132+45.00

PROJECT REFERENCE NO.		SHEET NO.	
R-2245		EC-13/CONST.13	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

CLEARING AND GRUBBING  
EROSION CONTROL FOR  
CONSTRUCTION SHEET 13

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

(106) LODANE WILLIAMSON  
DB 1142 PG 233  
MB 3 PG 90  
MB 3 PG 89



-L-  
PI Sta 137+94.62  
 $\Delta = 34' 02'' 09.7''$  (LT)  
 $D = 2' 17'' 30.6''$   
 $L = 1,485.10'$   
 $T = 765.19'$   
 $R = 2,500.00'$   
 $SE = 0.05$   
Runoff = 300'

(106) LODANE WILLIAMSON  
DB 1142 PG 233  
MB 3 PG 89  
MB 3 PG 90

MATCH LINE SEE SHEET 12 -L- STA. 132 +45.00

MATCH LINE SEE SHEET 14 -L- STA. 146 +15.00

**SPECIAL CONTROL OF ACCESS DESIGNATION**  
**NO REVISIONS SHALL BE MADE TO THE CONTROL OF ACCESS WITHOUT APPROVAL OF NCDOT, FHWA, USEPA AND NCDENR PER AGREEMENT AND USAGE PER PERMIT CONDITION.**

NOTES:  
1) FOR -L- PROFILE SEE SHEET 31.  
2) PAVED SHOULDER TAPERS ARE 8:1 UNLESS OTHERWISE NOTED.  
3) SEE SHEET 2- FOR 50' TRANSITION FROM 1'-6" C&G TO 2'-9" C&G.

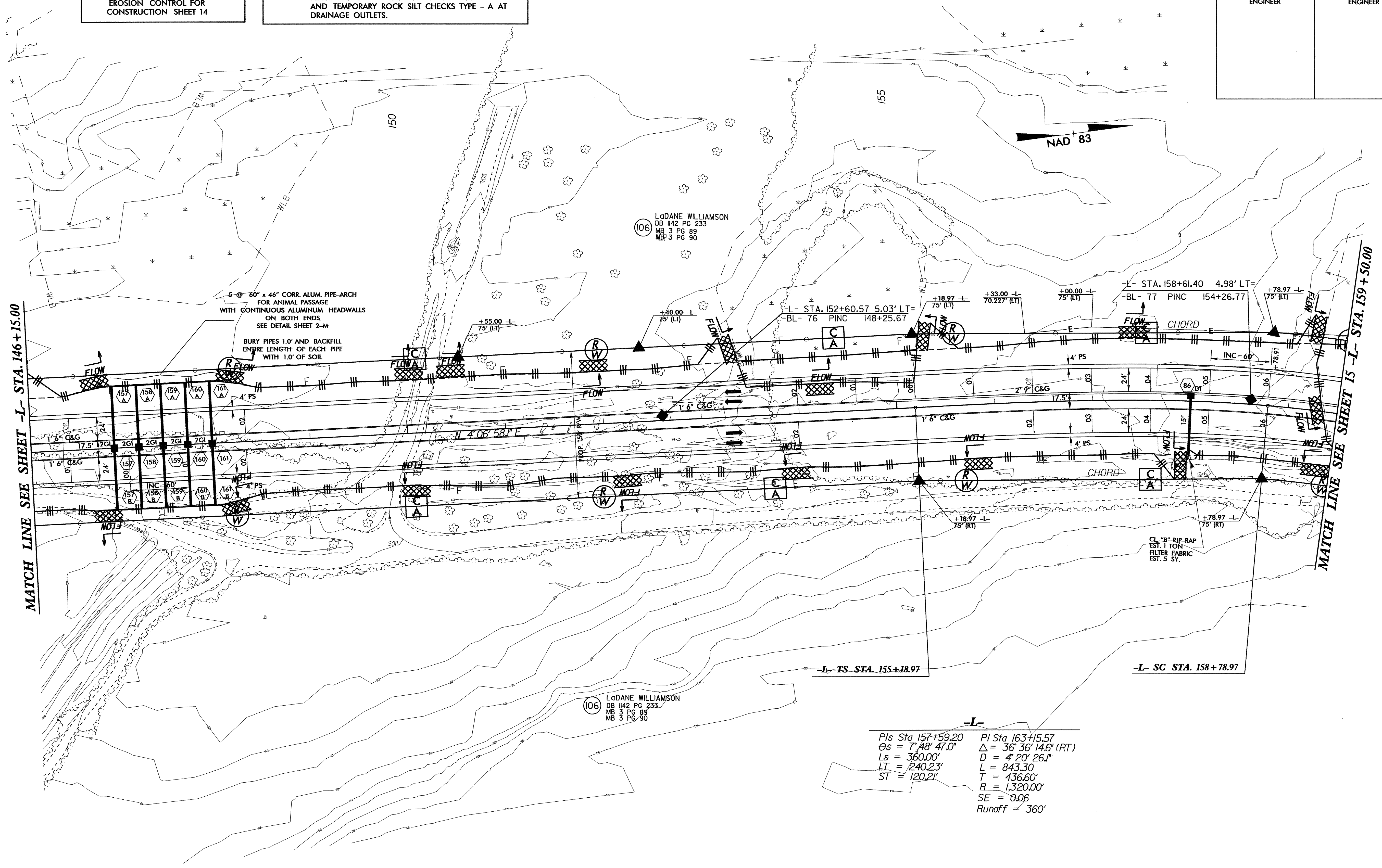
REVISIONS

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richan AT REN2245

PROJECT REFERENCE NO.		SHEET NO.	
R-2245		EC-14/CONST.14	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

CLEARING AND GRUBBING  
EROSION CONTROL FOR  
CONSTRUCTION SHEET 14

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



MATCH LINE SEE SHEET 14 -L- STA. 146+15.00

MATCH LINE SEE SHEET 15 -L- STA. 159+50.00

-L-  
 Pls Sta 157+59.20    Pl Sta 163+15.57  
 Os = 7' 48' 47.0"    Δ = 36' 36' 14.6" (RT)  
 Ls = 360.00'        D = 4' 20' 26.1"  
 LT = 240.23'        L = 843.30'  
 ST = 120.21'        T = 436.60'  
                          R = 1,320.00'  
                          SE = 0.06  
                          Runoff = 360'

**SPECIAL CONTROL OF ACCESS DESIGNATION**

C	NO REVISIONS SHALL BE MADE TO THE CONTROL OF ACCESS WITHOUT APPROVAL OF NCDOT, FHWA, USEPA AND NCDENR PER AGREEMENT AND USACE PER PERMIT CONDITON.
A	

**NOTES:**

- 1) FOR -L- PROFILE SEE SHEETS 31 AND 32.
- 2) PAVED SHOULDER TAPERS ARE 8:1 UNLESS OTHERWISE NOTED.
- 3) SEE SHEET 2- FOR 50' TRANSITION FROM 1'-6" C&G TO 2'-9" C&G.

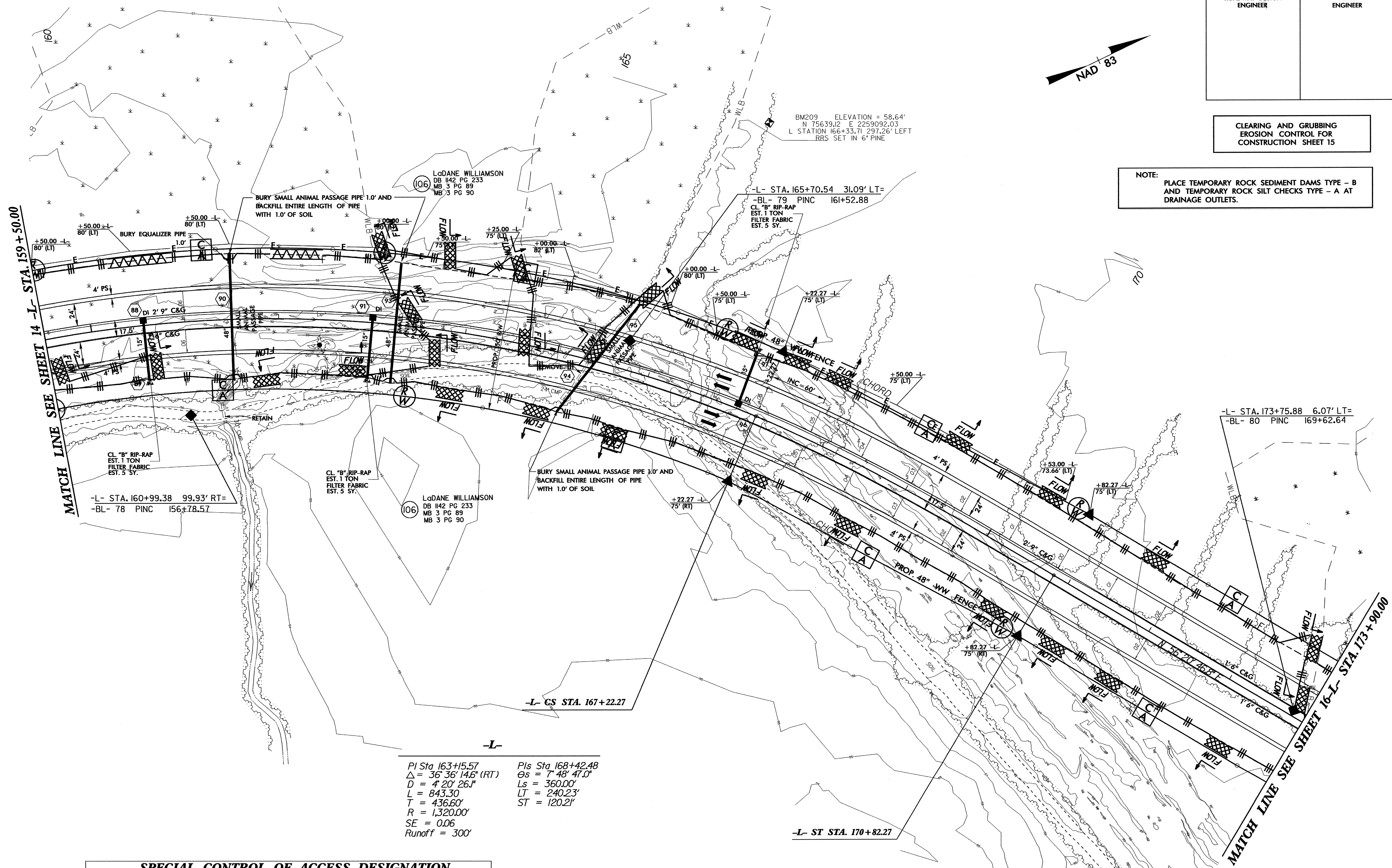
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LAWLSTON AL REV 2/2/05



PROJECT REFERENCE NO. R-2245		SHEET NO. EC-15/CONST.15	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

CLEARING AND GRUBBING  
EROSION CONTROL FOR  
CONSTRUCTION SHEET 15

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



MATCH LINE SEE SHEET 14 -L- STA. 159+50.00

-L- STA. 173+75.88 6.07' LT=  
-BL- 80 PINC 169+62.64

-L- STA. 160+99.38 99.93' RT=  
-BL- 78 PINC 156+78.57

PI Sta 163+15.57  
 $\Delta = 36' 36'' 14.6''$  (RT)  
 $D = 4' 20'' 26.1''$   
 $L = 843.30$   
 $T = 436.60'$   
 $R = 1,320.00'$   
 $SE = 0.06$   
 $Runoff = 300'$

PIs Sta 168+42.48  
 $\Theta_s = 7' 48'' 47.0''$   
 $L_s = 360.00'$   
 $LT = 240.23'$   
 $ST = 120.21'$

**SPECIAL CONTROL OF ACCESS DESIGNATION**

C	NO REVISIONS SHALL BE MADE TO THE CONTROL OF ACCESS WITHOUT APPROVAL OF NCDOT, FHWA, USEPA AND NCDENR PER AGREEMENT AND USACE PER PERMIT CONDITION.
A	

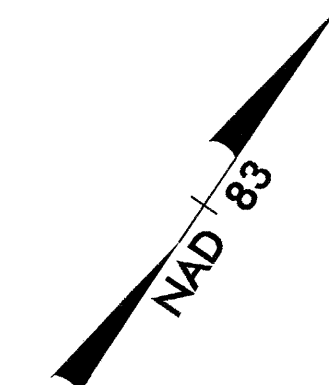
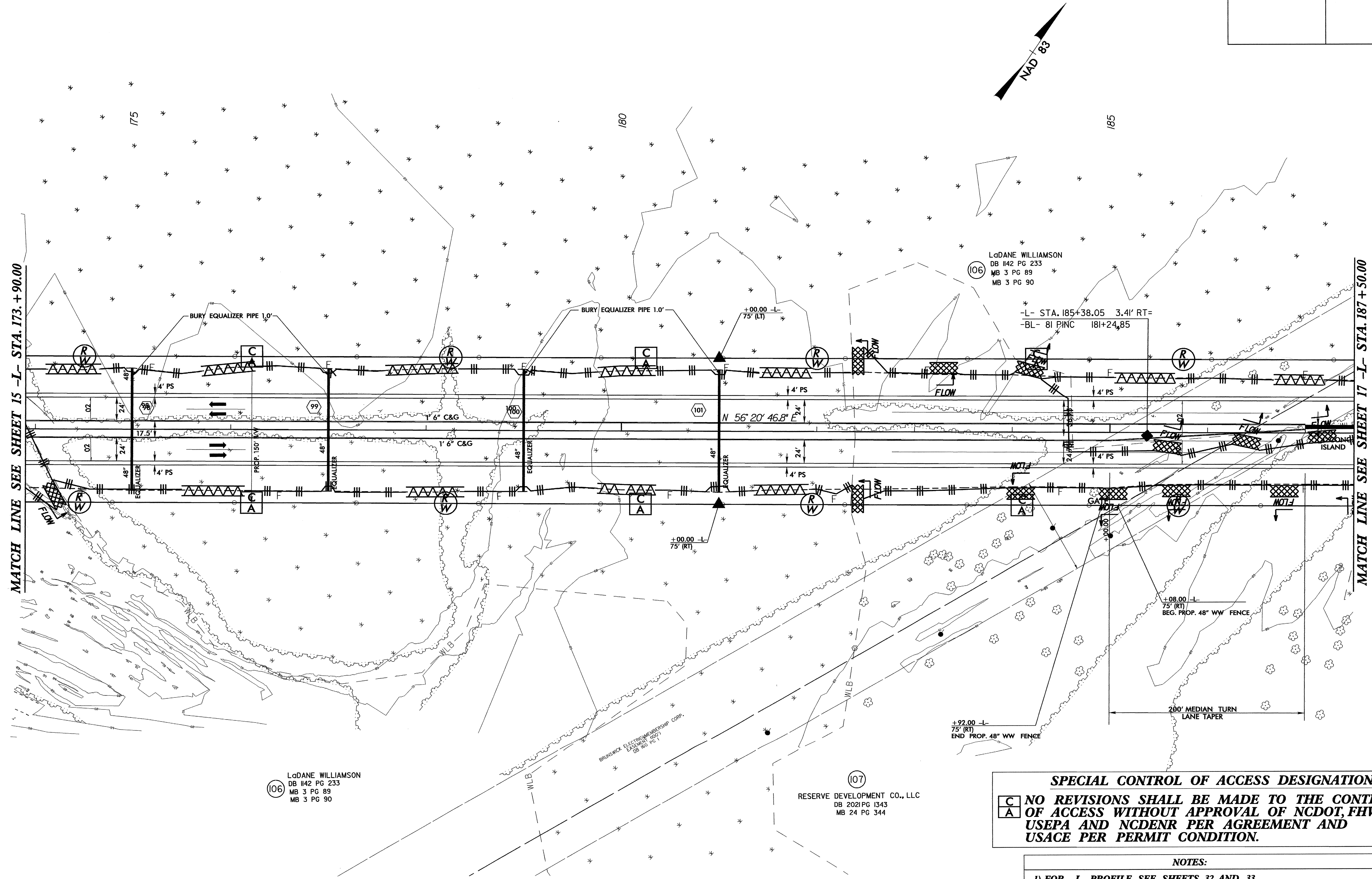
NOTES:  
 1) FOR -L- PROFILE SEE SHEET 32.  
 2) PAVED SHOULDER TAPERS ARE 8:1 UNLESS OTHERWISE NOTED.  
 3) SEE SHEET 2- FOR 50' TRANSITION FROM 1'-6" C&G TO 2'-9" C&G.

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 AT RENW2245

CLEARING AND GRUBBING  
 EROSION CONTROL FOR  
 CONSTRUCTION SHEET 16

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

PROJECT REFERENCE NO. R-2245		SHEET NO. EC-16/CONST.16	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	



106  
 LoDANE WILLIAMSON  
 DB 1142 PG 233  
 MB 3 PG 89  
 MB 3 PG 90

107  
 RESERVE DEVELOPMENT CO., LLC  
 DB 2021 PG 1343  
 MB 24 PG 344

**SPECIAL CONTROL OF ACCESS DESIGNATION**  
 [C] NO REVISIONS SHALL BE MADE TO THE CONTROL  
 [A] OF ACCESS WITHOUT APPROVAL OF NCDOT, FHWA,  
 USEPA AND NCDENR PER AGREEMENT AND  
 USACE PER PERMIT CONDITION.

NOTES:  
 1) FOR -L- PROFILE SEE SHEETS 32 AND 33.  
 2) PAVED SHOULDER TAPERS ARE 8:1 UNLESS OTHERWISE NOTED.

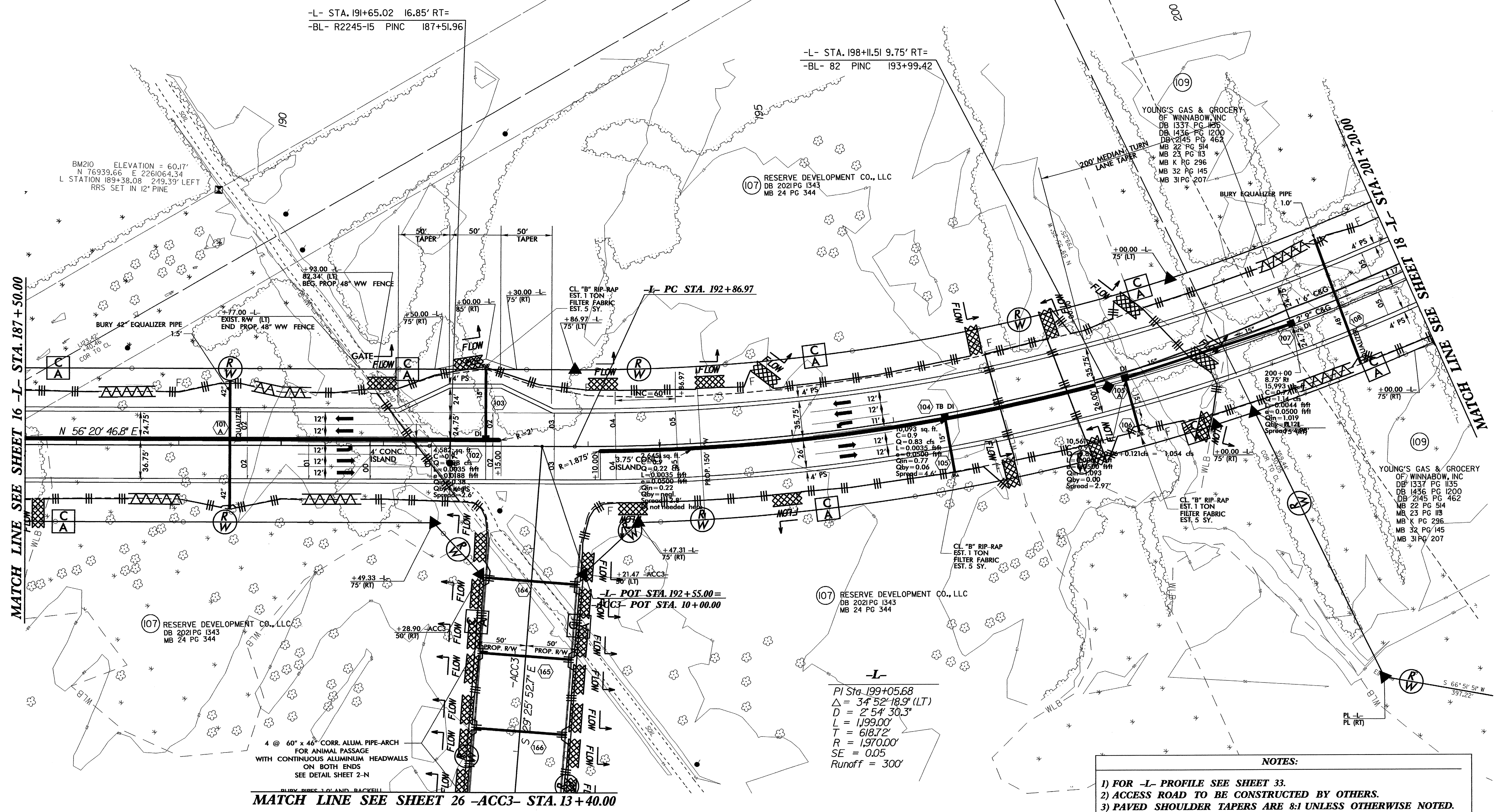
PROJECT REFERENCE NO. R-2245		SHEET NO. EC-17/CONST.17	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

CLEARING AND GRUBBING  
EROSION CONTROL FOR  
CONSTRUCTION SHEET 17

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

**SPECIAL CONTROL OF ACCESS DESIGNATION**  
**NO REVISIONS SHALL BE MADE TO THE CONTROL  
OF ACCESS WITHOUT APPROVAL OF NCDOT, FHWA,  
USEPA AND NCDENR PER AGREEMENT AND  
USACE PER PERMIT CONDITION.**

8/17/99  
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dbalston RL REV2245



4 @ 60" x 46" CORR. ALUM. PIPE-ARCH  
FOR ANIMAL PASSAGE  
WITH CONTINUOUS ALUMINUM HEADWALLS  
ON BOTH ENDS  
SEE DETAIL SHEET 2-N

**MATCH LINE SEE SHEET 26 -ACC3- STA. 13+40.00**

**-L-**  
PI Sta. 199+05.68  
 $\Delta = 34^{\circ} 52' 18.9" (LT)$   
 $D = 2' 54' 30.3"$   
 $L = 1,199.00'$   
 $T = 618.72'$   
 $R = 1,970.00'$   
 $SE = 0.05$   
Runoff = 300'

- NOTES:**
- 1) FOR -L- PROFILE SEE SHEET 33.
  - 2) ACCESS ROAD TO BE CONSTRUCTED BY OTHERS.
  - 3) PAVED SHOULDER TAPERS ARE 8:1 UNLESS OTHERWISE NOTED.
  - 4) SEE SHEET 2- FOR 50' TRANSITION FROM 1'-6" C&G TO 2'-9" C&G.

8/17/99

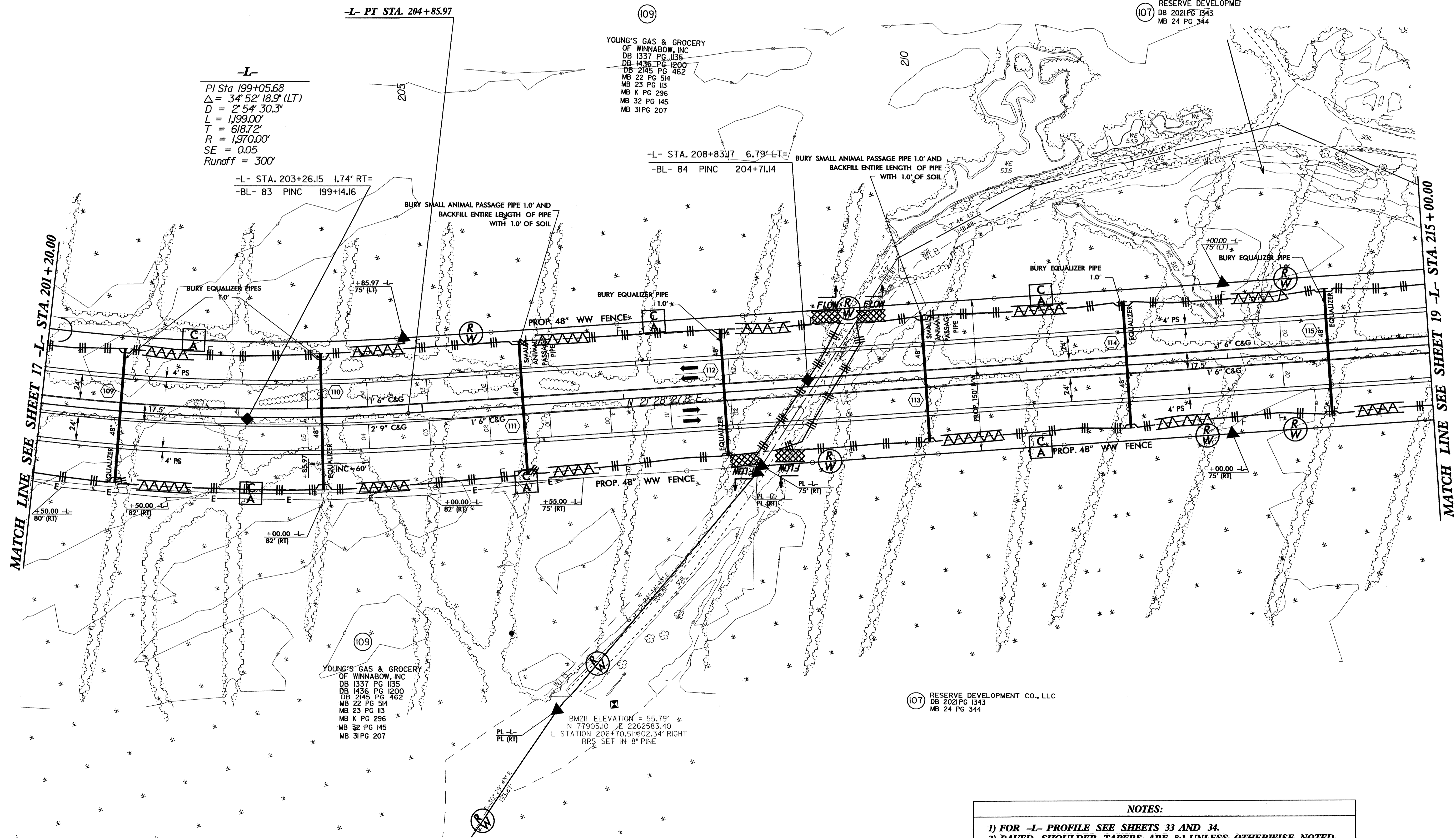
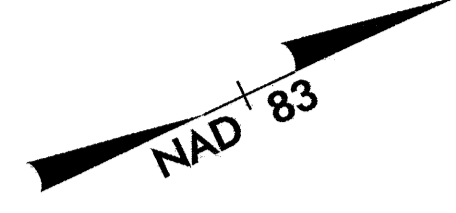
CLEARING AND GRUBBING  
EROSION CONTROL FOR  
CONSTRUCTION SHEET 18

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

**SPECIAL CONTROL OF ACCESS DESIGNATION**  
**NO REVISIONS SHALL BE MADE TO THE CONTROL**  
**OF ACCESS WITHOUT APPROVAL OF NCDOT, FHWA,**  
**USEPA AND NCDENR PER AGREEMENT AND**  
**USACE PER PERMIT CONDITION.**

C  
A

PROJECT REFERENCE NO. R-2245	SHEET NO. EC-18/CONST.18
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



**-L-**  
 PI Sta 199+05.68  
 $\Delta = 34^{\circ} 52' 18.9" (LT)$   
 $D = 2' 54' 30.3"$   
 $L = 1,199.00'$   
 $T = 618.72'$   
 $R = 1,970.00'$   
 $SE = 0.05$   
 Runoff = 300'

-L- STA. 203+26.15 1.74' RT=  
 -BL- 83 PINC 199+14.16

(109)

YOUNG'S GAS & GROCERY  
 OF WINNABOW, INC  
 DB 1337 PG 1135  
 DB 1436 PG 1200  
 DB 2145 PG 462  
 MB 22 PG 514  
 MB 23 PG 113  
 MB K PG 296  
 MB 32 PG 145  
 MB 31 PG 207

-L- STA. 208+83.17 6.79' LT=  
 -BL- 84 PINC 204+71.14

(107) RESERVE DEVELOPMENT  
 DB 2021 PG 1343  
 MB 24 PG 344

MATCH LINE SEE SHEET 17 -L- STA. 201 + 20.00

MATCH LINE SEE SHEET 19 -L- STA. 215 + 00.00

(109)  
 YOUNG'S GAS & GROCERY  
 OF WINNABOW, INC  
 DB 1337 PG 1135  
 DB 1436 PG 1200  
 DB 2145 PG 462  
 MB 22 PG 514  
 MB 23 PG 113  
 MB K PG 296  
 MB 32 PG 145  
 MB 31 PG 207

BM211 ELEVATION = 55.79'  
 N 77905.10 E 2262583.40  
 L STATION 206+70.51 \*02.34' RIGHT  
 RRS SET IN 8" PINE

(107) RESERVE DEVELOPMENT CO., LLC  
 DB 2021 PG 1343  
 MB 24 PG 344

**NOTES:**  
 1) FOR -L- PROFILE SEE SHEETS 33 AND 34.  
 2) PAVED SHOULDER TAPERS ARE 8:1 UNLESS OTHERWISE NOTED.  
 3) SEE SHEET 2- FOR 50' TRANSITION FROM 1'-6" C&G TO 2'-9" C&G.

REVISIONS

18-SEP-2006 09:19  
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 Author: AL RENV221445

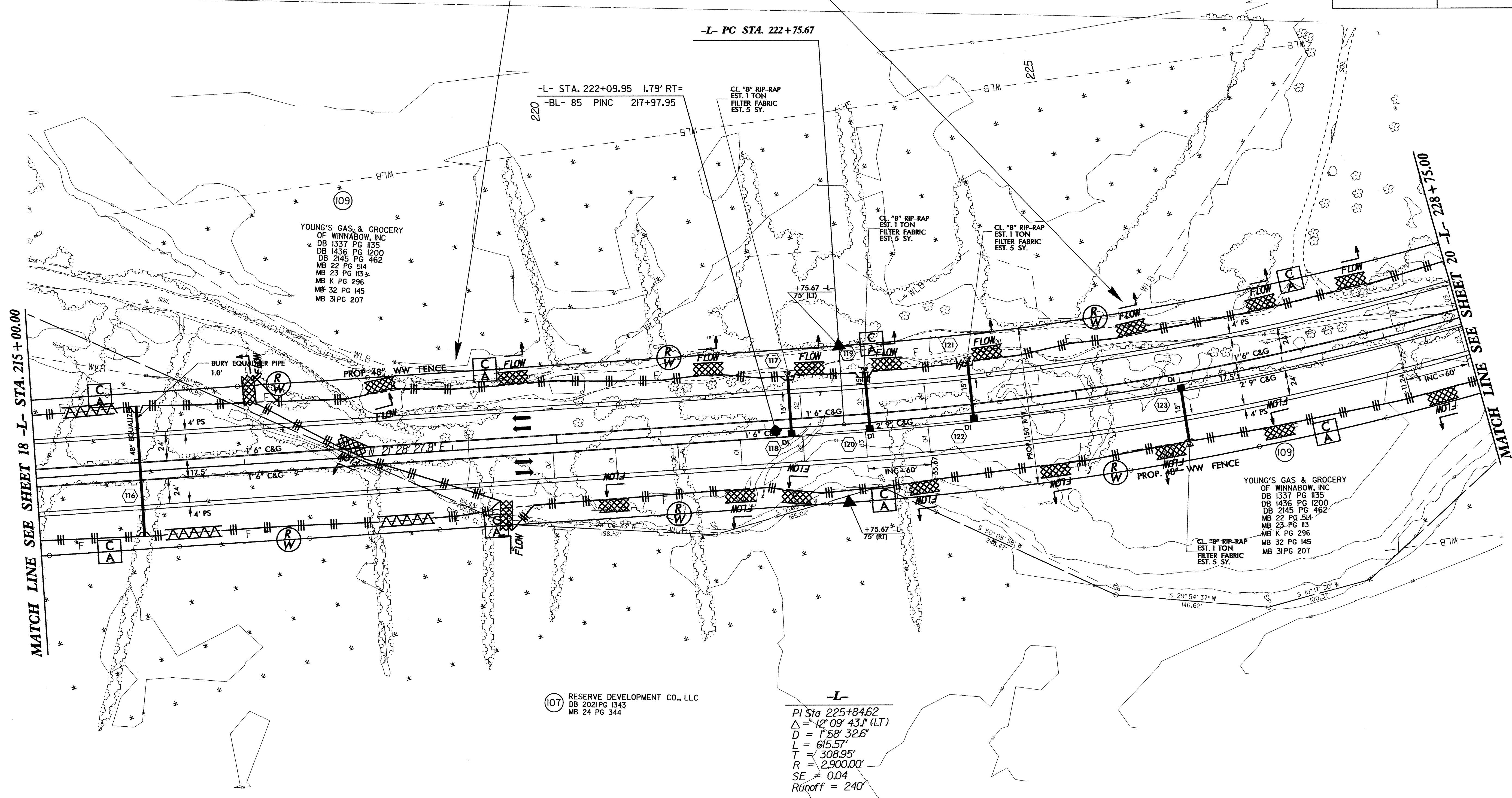
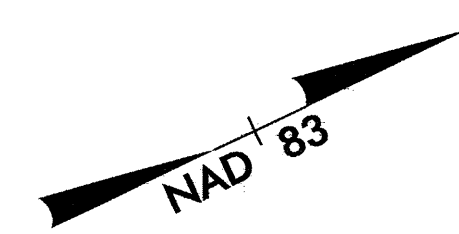
8/17/99

PROJECT REFERENCE NO. <i>R-2245</i>	SHEET NO. EC-19/CONST.19
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING  
EROSION CONTROL FOR  
CONSTRUCTION SHEET 19

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

HAND CLEARING WILL BE REQUIRED  
IN AREAS DESIGNATED BY THE PERMITS  
AND AS DIRECTED BY THE ENGINEER.



**SPECIAL CONTROL OF ACCESS DESIGNATION**  
NO REVISIONS SHALL BE MADE TO THE CONTROL  
OF ACCESS WITHOUT APPROVAL OF NCDOT, FHWA,  
USEPA AND NCDENR PER AGREEMENT AND  
USACE PER PERMIT CONDITION.

**NOTES:**

- 1) FOR -L- PROFILE SEE SHEET 34.
- 2) PAVED SHOULDER TAPERS ARE 8:1 UNLESS OTHERWISE NOTED.
- 3) SEE SHEET 2- FOR 50' TRANSITION FROM 1'-6" C&G TO 2'-9" C&G.

18-SEP-2006 09:20  
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psh19.dgn AT REN221445

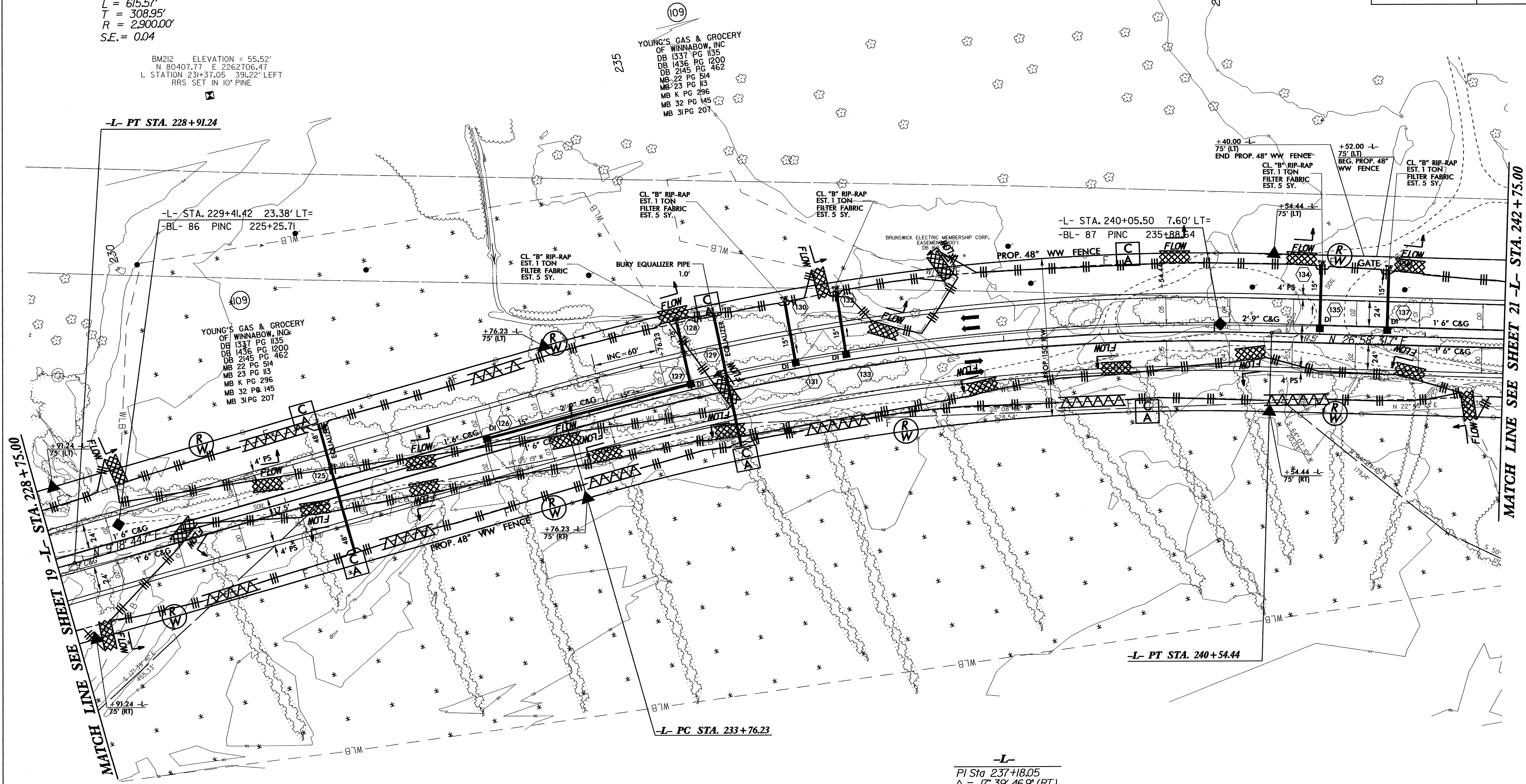
PROJECT REFERENCE NO.	SHEET NO.
R-2245	EC-20/CONST.20
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING  
EROSION CONTROL FOR  
CONSTRUCTION SHEET 20

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

**-L-**  
PI Sta 225+84.62  
 $\Delta = 12^{\circ} 09' 43.1''$  (LT)  
D = 158' 32.6"  
L = 615.57'  
T = 308.95'  
R = 2,900.00'  
S.E. = 0.04

BM212 ELEVATION = 55.52'  
N 80407.77 E 2262706.47  
L STATION 231+37.05 391.22' LEFT  
RRS SET IN 10" PINE



18-SEP-2006 09:56  
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psh20.dgn  
REV 2/24/06

(107) RESERVE DEVELOPMENT CO., LLC  
DB 2021 PG 1343  
MB 24 PG 344

**SPECIAL CONTROL OF ACCESS DESIGNATION**  
**NO REVISIONS SHALL BE MADE TO THE CONTROL OF ACCESS WITHOUT APPROVAL OF NCDOT, FHWA, USEPA AND NCDENR PER AGREEMENT AND USAGE PER PERMIT CONDITION.**

**-L-**  
PI Sta 237+18.05  
 $\Delta = 17^{\circ} 39' 46.9''$  (RT)  
D = 2' 36' 15.7"  
L = 678.21'  
T = 341.82'  
R = 2,200.00'  
SE = 0.05  
Runoff = 300'

**NOTES:**  
1) FOR -L- PROFILE SEE SHEETS 34 AND 35.  
2) PAVED SHOULDER TAPERS ARE 8:1 UNLESS OTHERWISE NOTED.  
3) SEE SHEET 2- FOR 50' TRANSITION FROM 1'-6" C&G TO 2'-9" C&G.

MATCH LINE SEE SHEET 21 -L- STA. 242 + 75.00

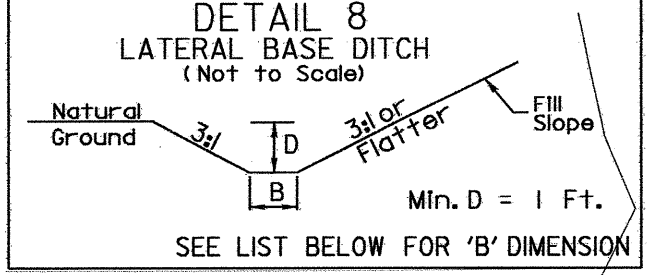
MATCH LINE SEE SHEET 19 -L- STA. 228 + 75.00

8/17/99

**SPECIAL CONTROL OF ACCESS DESIGNATION**  
**NO REVISIONS SHALL BE MADE TO THE CONTROL OF ACCESS WITHOUT APPROVAL OF NCDOT, FHWA, USEPA AND NCDENR PER AGREEMENT AND USACE PER PERMIT CONDITION.**

**C**  
**A**

PROJECT REFERENCE NO. R-2245	SHEET NO. EC-2VCONST.21
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



-L- STA 244+00 LT to -L- STA 248+20 LT B=3'  
 -Y7- STA 13+00 RT to -Y7- STA 17+96 RT B=3'  
 -Y7- STA 12+75 LT to -Y7- STA 16+00 LT B=3'  
 -Y7- STA 19+14 LT to -Y7- STA 23+88 LT B=2'  
 -Y8- STA 12+05 LT to -Y8- STA 12+77 LT B=5'  
 -Y8- STA 10+57 RT to -Y8- STA 16+50 RT B=5'

-Y7- STA. 13+98.06 23.02' RT=  
 -BY6- 90 PINC 10+11.16

+30.00 -Y7-  
 72.91' (LT)  
 END PROP. 48" WW FENCE

+80.00 -Y7-  
 72.91' (LT)  
 BEG. PROP. 48" WW FENCE

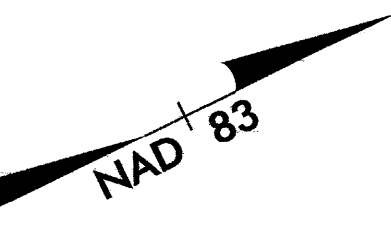
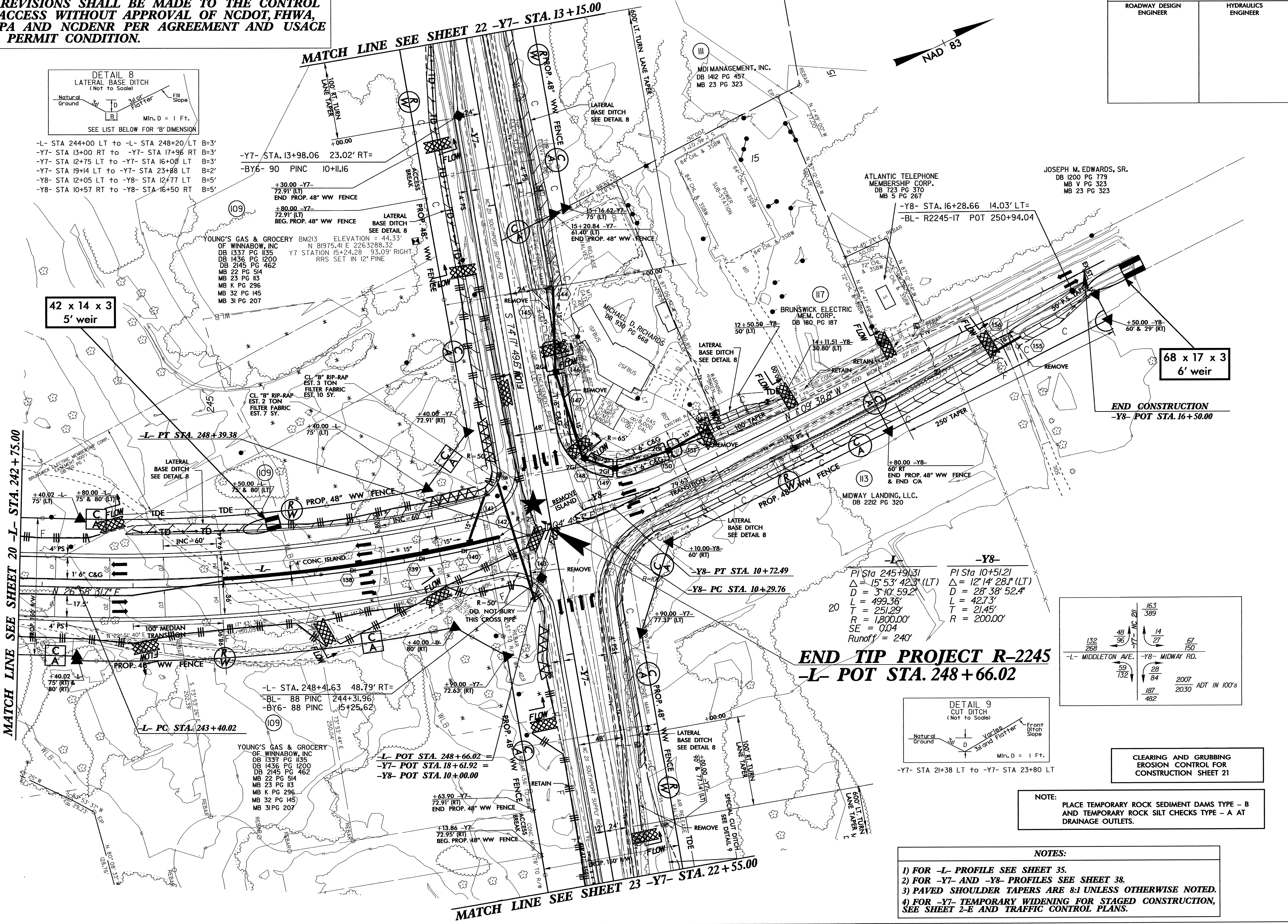
YOUNG'S GAS & GROCERY  
 OF WINNABOW, INC  
 DB 1337 PG 1135  
 DB 1436 PG 1200  
 DB 2145 PG 462  
 MB 22 PG 514  
 MB 23 PG 113  
 MB K PG 296  
 MB 32 PG 145  
 MB 31 PG 207

**42 x 14 x 3**  
**5' weir**

**68 x 17 x 3**  
**6' weir**

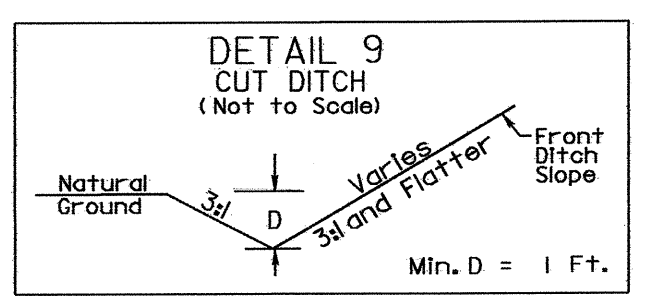
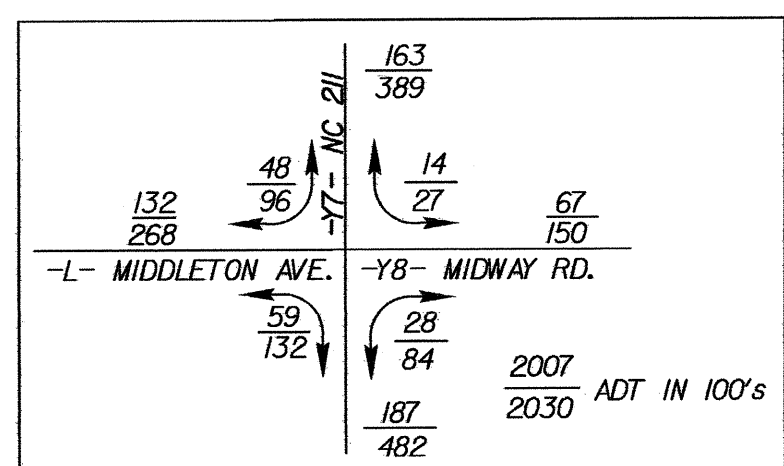
MATCH LINE SEE SHEET 20 -L- STA. 242+75.00

MATCH LINE SEE SHEET 23 -Y7- STA. 22+55.00



**END TIP PROJECT R-2245**  
**-L- POT STA. 248+66.02**

-L-	-Y8-
PI Sta 245+91.31	PI Sta 10+51.21
$\Delta = 15' 53" 42.3" (LT)$	$\Delta = 12' 14" 28.1" (LT)$
$D = 3' 10" 59.2"$	$D = 28' 38" 52.4"$
$L = 499.38'$	$L = 42.73'$
$T = 251.29'$	$T = 21.45'$
$R = 1,800.00'$	$R = 200.00'$
$SE = 0.04$	
Runoff = 240'	



**CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 21**

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

- NOTES:**
- 1) FOR -L- PROFILE SEE SHEET 35.
  - 2) FOR -Y7- AND -Y8- PROFILES SEE SHEET 38.
  - 3) PAVED SHOULDER TAPERS ARE 8:1 UNLESS OTHERWISE NOTED.
  - 4) FOR -Y7- TEMPORARY WIDENING FOR STAGED CONSTRUCTION, SEE SHEET 2-E AND TRAFFIC CONTROL PLANS.

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 shaban - AT - REV 224445

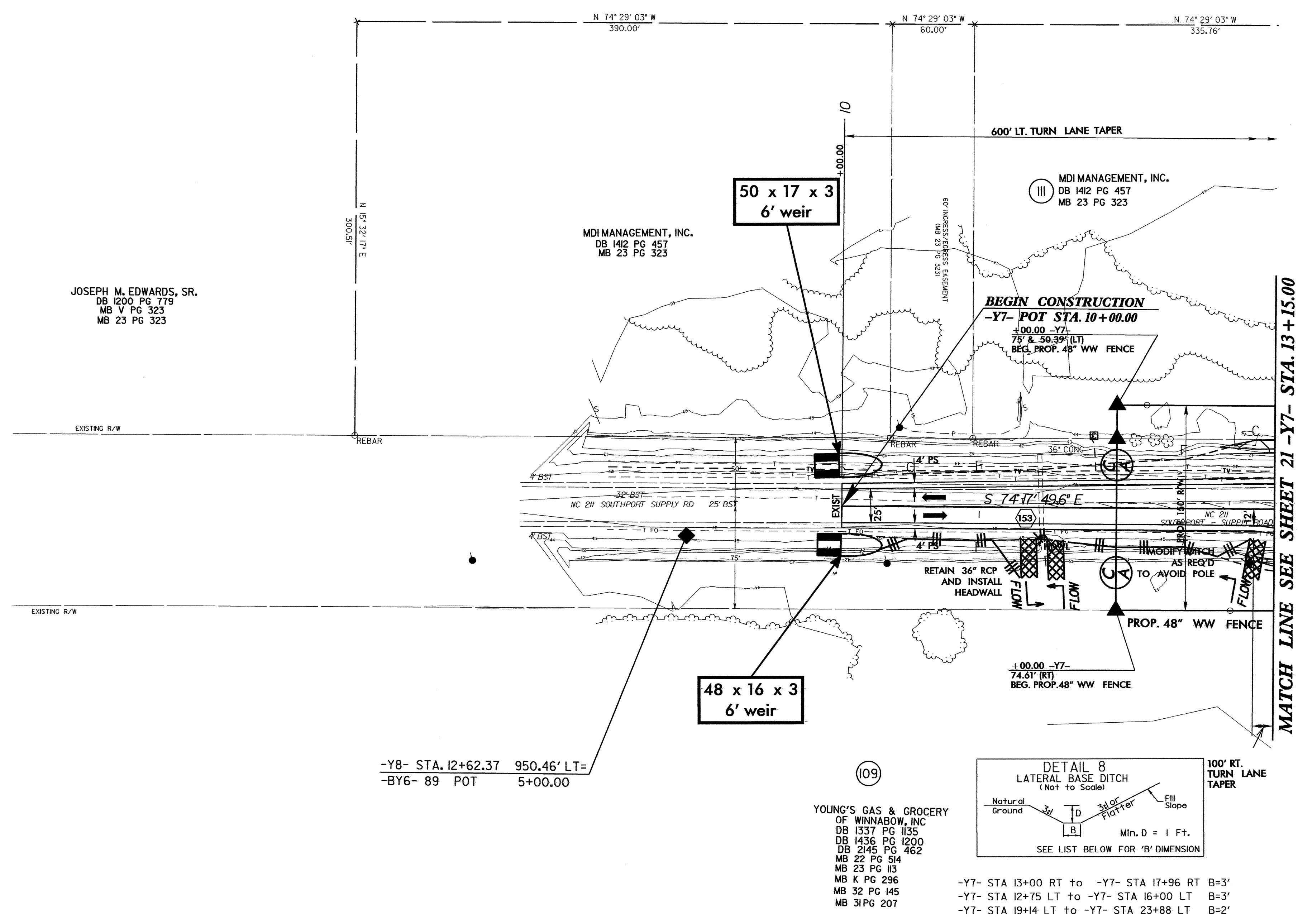
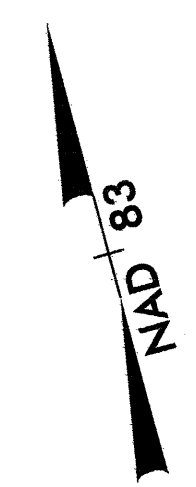
8/17/99

18-SEP-2006 09:59  
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Richard A. PENNY 22445

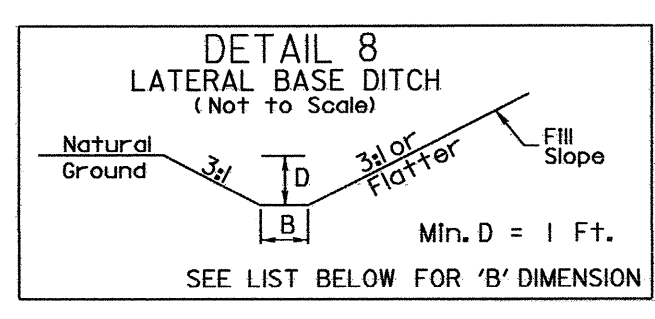
PROJECT REFERENCE NO.		SHEET NO.	
R-2245		EC-22/CONST.22	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

CLEARING AND GRUBBING  
EROSION CONTROL FOR  
CONSTRUCTION SHEET 22

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



MATCH LINE SEE SHEET 21 -Y7- STA. 13+15.00



-Y7- STA 13+00 RT to -Y7- STA 17+96 RT B=3'  
-Y7- STA 12+75 LT to -Y7- STA 16+00 LT B=3'  
-Y7- STA 19+14 LT to -Y7- STA 23+88 LT B=2'

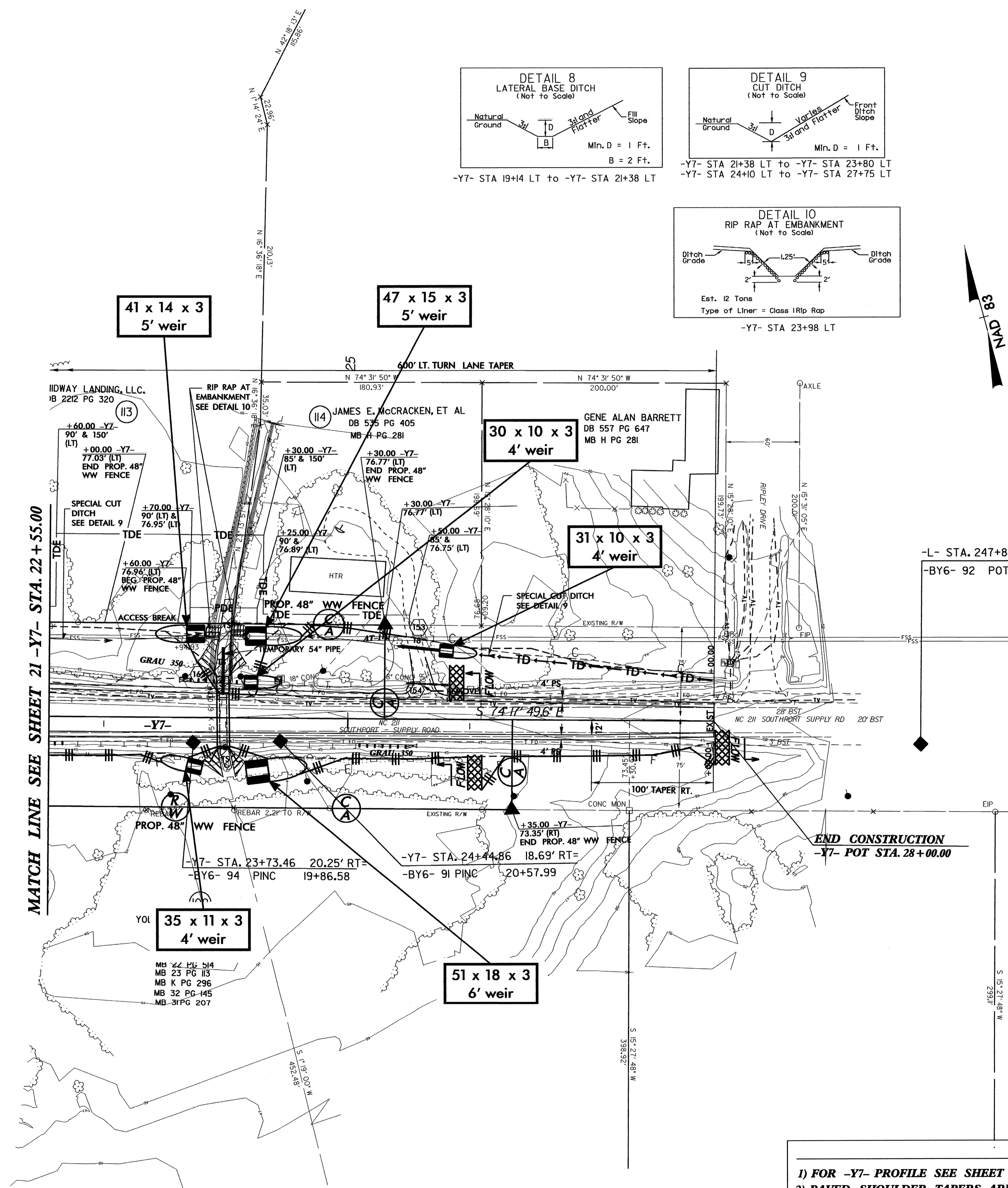
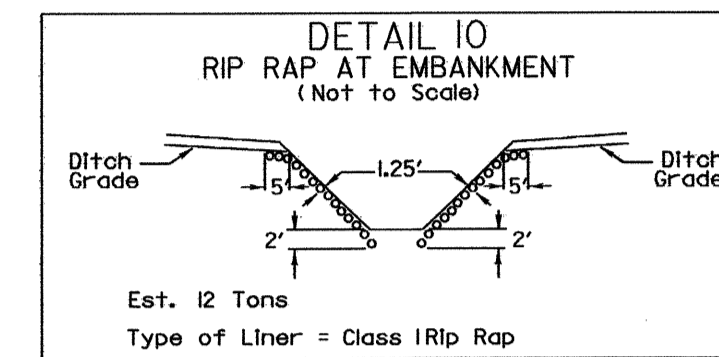
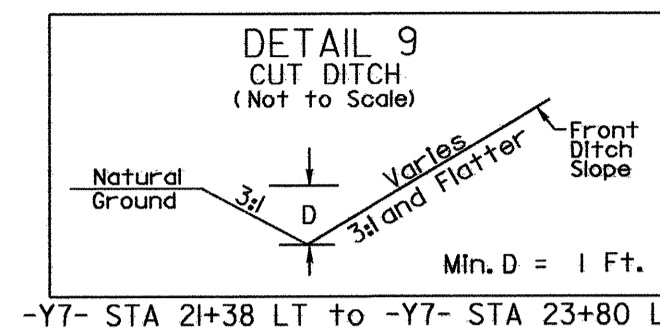
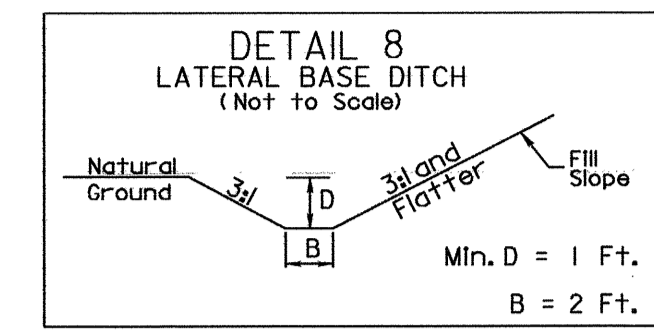
NOTES:  
1) FOR -Y7- PROFILE SEE SHEET 38.  
2) PAVED SHOULDER TAPERS ARE 8:1 UNLESS OTHERWISE NOTED.



PROJECT REFERENCE NO.		SHEET NO.	
R-2245		EC-23/CONST.23	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

CLEARING AND GRUBBING  
EROSION CONTROL FOR  
CONSTRUCTION SHEET 23

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



- NOTES:
- 1) FOR -Y7- PROFILE SEE SHEET 38.
  - 2) PAVED SHOULDER TAPERS ARE 8:1 UNLESS OTHERWISE NOTED.
  - 3) FOR -Y7- TEMPORARY WIDENING FOR STAGED CONSTRUCTION, SEE SHEET 2-E AND TRAFFIC CONTROL PLANS.

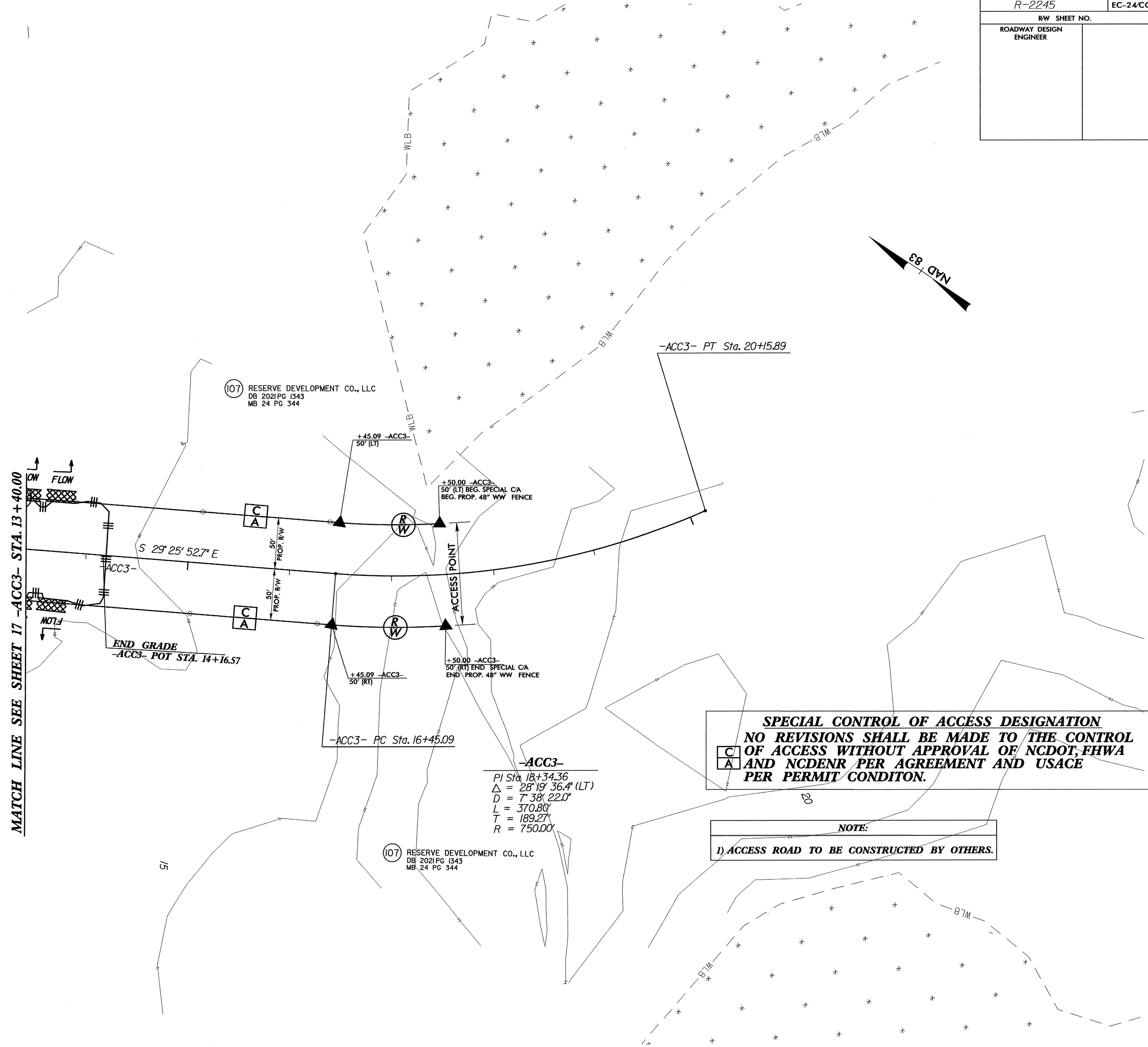
# CULVERT CONSTRUCTION SEQUENCE STA. 23+98 -Y7-

PHASE I	PHASE II	PHASE III	PHASE IV
<ol style="list-style-type: none"> <li>1. CONSTRUCT STILLING BASIN (300 CY).</li> <li>2. CONSTRUCT IMPERVIOUS DIKES AND INSTALL 24 INCH TEMPORARY PIPE. DEWATER SITE.</li> <li>3. INSTALL TEMPORARY SHORING ON SOUTH SIDE OF -Y7-.</li> <li>4. WIDEN -Y7- WITH TEMPORARY PAVEMENT ON THE SOUTH SIDE, PROVIDING 2 11-FOOT LANES, 2-FOOT SHOULDERS, AND 2-FOOT WIDTHS FOR PORTABLE CONCRETE BARRIERS.</li> <li>5. SHIFT TRAFFIC TO THE SOUTH.</li> <li>6. INSTALL 54 INCH TEMPORARY PIPE ON DOWNSTREAM END OF THE EXISTING CULVERT.</li> </ol>	<ol style="list-style-type: none"> <li>7. INSTALL TEMPORARY SHORING ON NORTH SIDE OF -Y7- AS SHOWN.</li> <li>8. WIDEN -Y7- WITH TEMPORARY PAVEMENT ON THE NORTH SIDE, PROVIDING 2 11-FOOT LANES, 2-FOOT SHOULDERS, AND 2-FOOT WIDTHS FOR PORTABLE CONCRETE BARRIERS.</li> <li>9. SHIFT TRAFFIC TO THE NORTH.</li> <li>10. REMOVE TEMPORARY SHORING ON SOUTH SIDE OF -Y7-, AND APPROXIMATELY 40 FEET OF THE UPSTREAM END OF THE EXISTING CULVERT.</li> <li>11. CONSTRUCT APPROXIMATELY 35 FEET OF THE UPSTREAM END OF THE PROPOSED CULVERT, INCLUDING WING WALLS AND CHANNEL IMPROVEMENTS.</li> </ol>	<ol style="list-style-type: none"> <li>12. RESTORE EXISTING AND TEMPORARY PAVEMENT ON THE SOUTH SIDE OF -Y7- AND SHIFT TRAFFIC TO THE SOUTH SIDE.</li> <li>13. INSTALL TEMPORARY SHORING ON NORTH SIDE OF -Y7- AS SHOWN.</li> <li>14. REMOVE TEMPORARY SHORING INSTALLED IN PHASE II, AND TEMPORARY PAVEMENT ON THE NORTH SIDE OF -Y7-.</li> <li>15. REMOVE 54 INCH TEMPORARY PIPE AND REMAINDER OF THE EXISTING CULVERT.</li> <li>16. CONSTRUCT THE REMAINING DOWNSTREAM PORTION OF THE PROPOSED CULVERT, INCLUDING WING WALLS AND CHANNEL IMPROVEMENTS.</li> </ol>	<ol style="list-style-type: none"> <li>17. COMPLETE ROADWAY CONSTRUCTION AND SHIFT TRAFFIC TO FINAL CONFIGURATION.</li> <li>18. REMOVE ALL TEMPORARY PAVEMENT AND WIDENING.</li> <li>19. REMOVE THE 24 INCH TEMPORARY PIPE AND IMPERVIOUS DIKES.</li> <li>20. REMOVE/OBLITERATE THE STILLING BASIN AND STABILIZE DISTURBED AREAS.</li> </ol>
<p>Diagram illustrating Phase I construction. A 300 CY stilling basin is shown on the left. Impervious dikes are placed on both sides of the roadway (-Y7-). A 24-inch temporary pipe is installed on the south side. Temporary shoring is installed on the south side of the roadway. The roadway is widened with temporary pavement. A north arrow is labeled 'NAD 83'.</p>	<p>Diagram illustrating Phase II construction. Temporary shoring is installed on the north side of the roadway. The roadway is widened on both sides with temporary pavement. The 24-inch temporary pipe and stilling basin remain. A north arrow is labeled 'NAD 83'.</p>	<p>Diagram illustrating Phase III construction. Temporary shoring and pavement are removed from the north side. The remaining downstream portion of the culvert is constructed, including wing walls and channel improvements. A north arrow is labeled 'NAD 83'.</p>	<p>Diagram illustrating Phase IV construction. All temporary structures, including the stilling basin, dikes, and temporary pipe, are removed. The roadway is in its final configuration. A north arrow is labeled 'NAD 83'.</p>

PROJECT REFERENCE NO.	SHEET NO.
R-2245	EC-24/CONST.26
RW SHEET NO.	
ROADWAY DESIGN 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 26



(107) RESERVE DEVELOPMENT CO., LLC  
DB 2021 PG 1343  
MB 24 PG 344

(107) RESERVE DEVELOPMENT CO., LLC  
DB 2021 PG 1343  
MB 24 PG 344

**-ACC3-**  
PI Sta. 18+34.36  
 $\Delta = 28^{\circ}19'36.4"$  (LT)  
D = 7'38"22.0"  
L = 370.80'  
T = 189.27'  
R = 750.00'

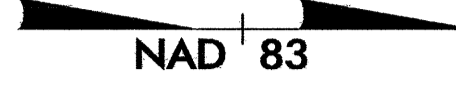
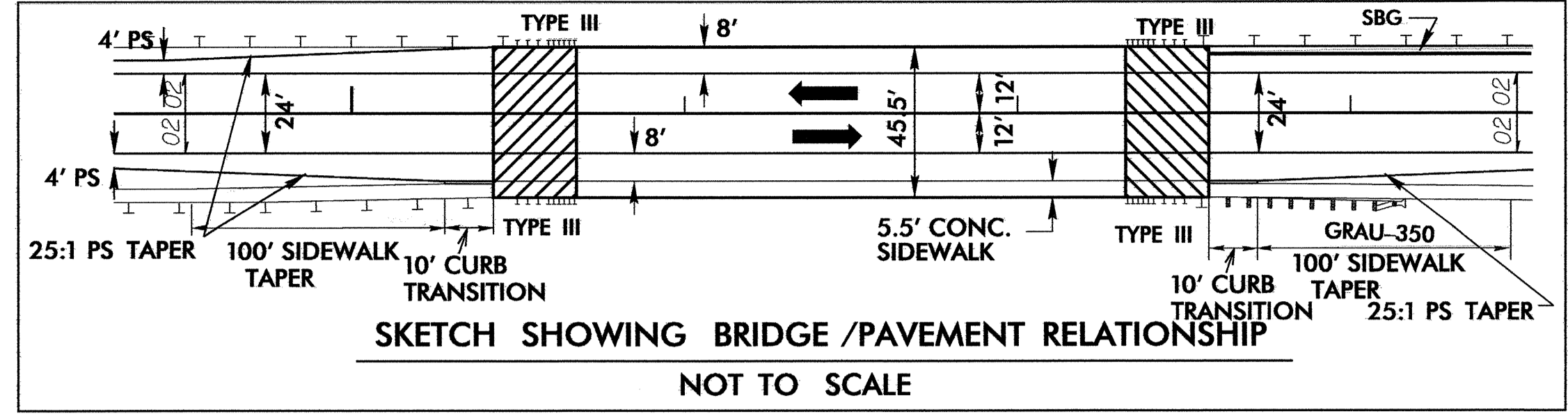
**SPECIAL CONTROL OF ACCESS DESIGNATION**  
NO REVISIONS SHALL BE MADE TO THE CONTROL  
OF ACCESS WITHOUT APPROVAL OF NCDOT, FHWA  
AND NCDENR PER AGREEMENT AND USACE  
PER PERMIT CONDITON.

NOTE:  
1) ACCESS ROAD TO BE CONSTRUCTED BY OTHERS.

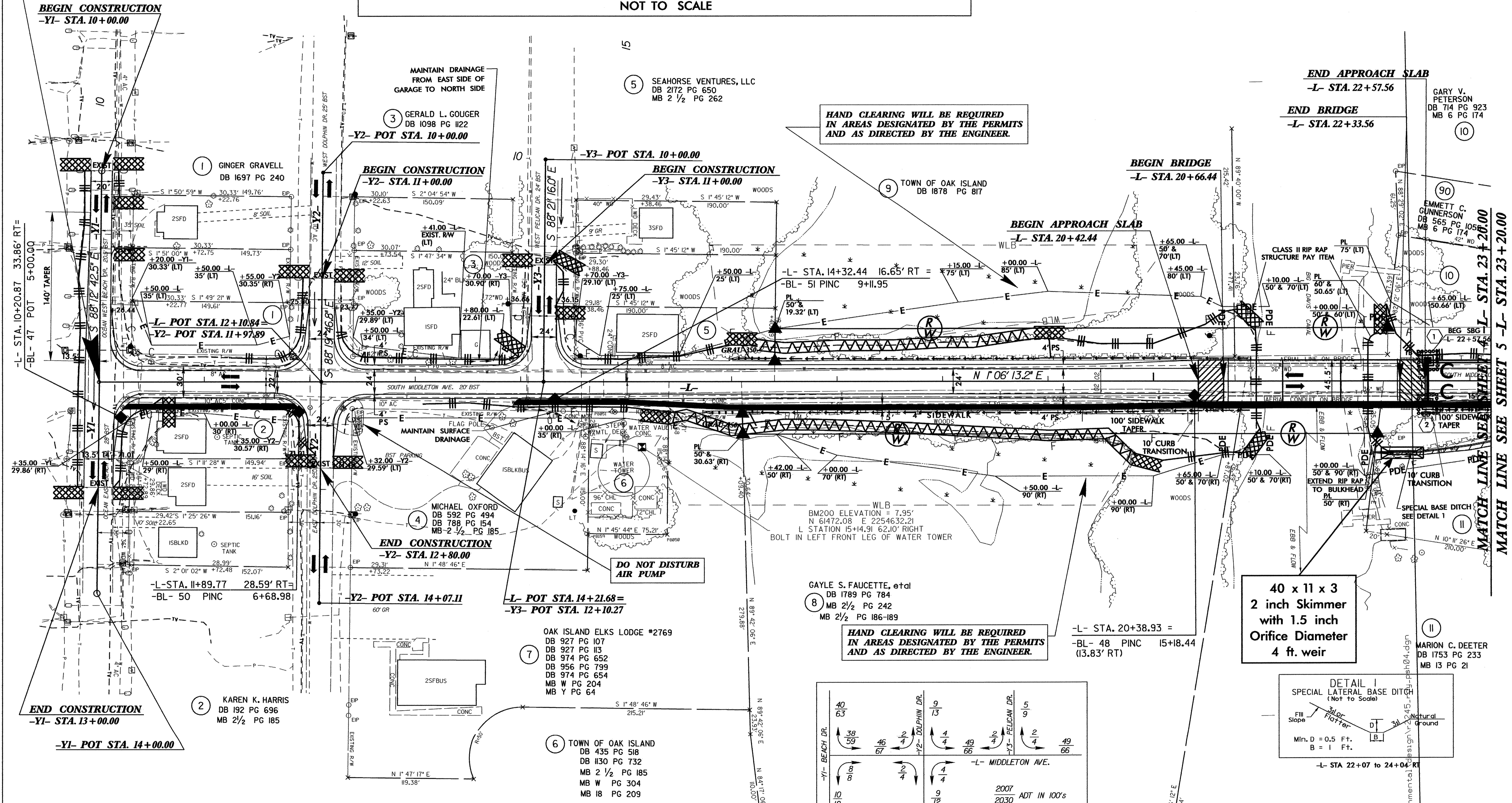
MATCH LINE SEE SHEET 17 -ACC3- STA. 13+40.00

PROJECT REFERENCE NO.	SHEET NO.
R-2245	EC-25/CONST.4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NOTE: UTILIZE TEMPORARY ROCK SILT CHECK TYPE - A AND /OR SKIMMER BASIN AS STILLING BASIN WHERE APPLICABLE.



**BEGIN TIP PROJECT R-2245**  
**-L- POT Sta. 10+00.43 =**  
**-Y1- POT Sta. 11+99.95**

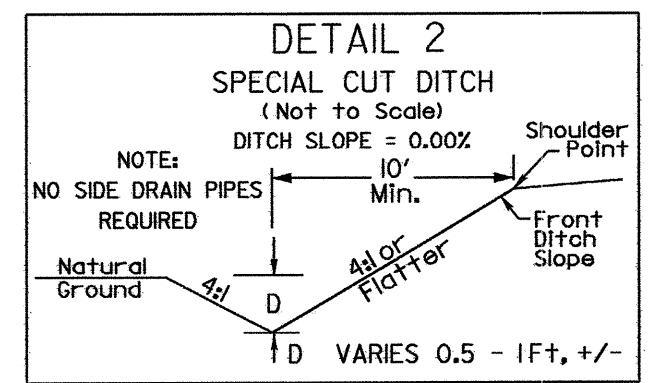


MATCH LINE SEE SHEET 5 -L- STA. 23 + 20.00

- NOTES:**
- 1) FOR -L- PROFILE SEE SHEET 27.
  - 2) FOR -Y1-, -Y2- AND -Y3- PROFILES SEE SHEET 36.
  - 3) FOR STRUCTURE PLANS SEE SHEETS S- TO S-.
  - 4) DRIVEWAY RADII ARE 10' UNLESS OTHERWISE NOTED.
  - 5) PAVED SHOULDER TAPERS ARE 8:1 UNLESS OTHERWISE NOTED.
  - 6) -Y- LINE RADII ARE 30' UNLESS OTHERWISE NOTED.
  - 7) FOR CURB TRANSITION SEE SHEET 2-

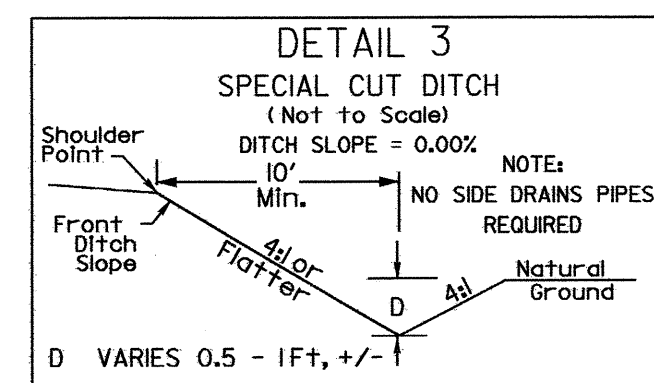
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PROJECT REFERENCE NO.		SHEET NO.	
R-2245		EC-26/CONST.5	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	



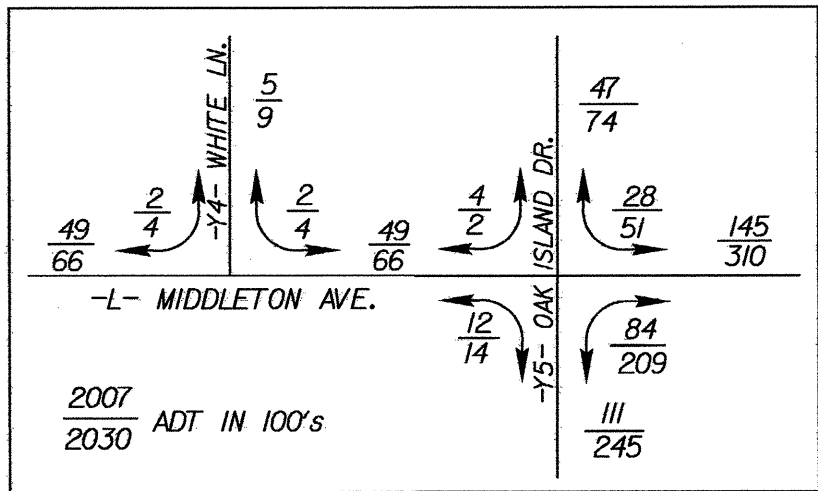
D VARIES 0.5 - 1 FT, +/-

-L- STA 33+72 TO 34+75 LT EL=23.40  
 -L- STA 35+38 TO 36+02 LT EL=23.90  
 -L- STA 36+50 TO 37+13 LT EL=24.20

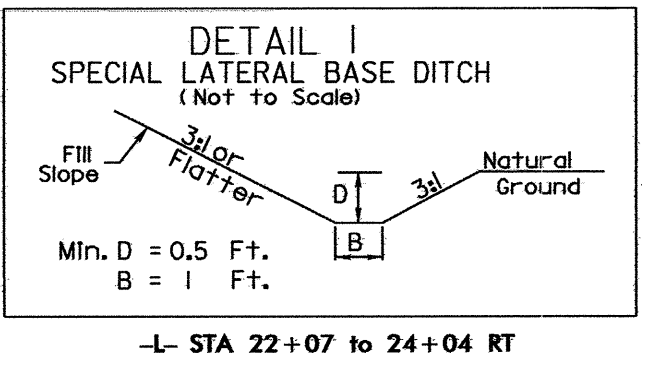
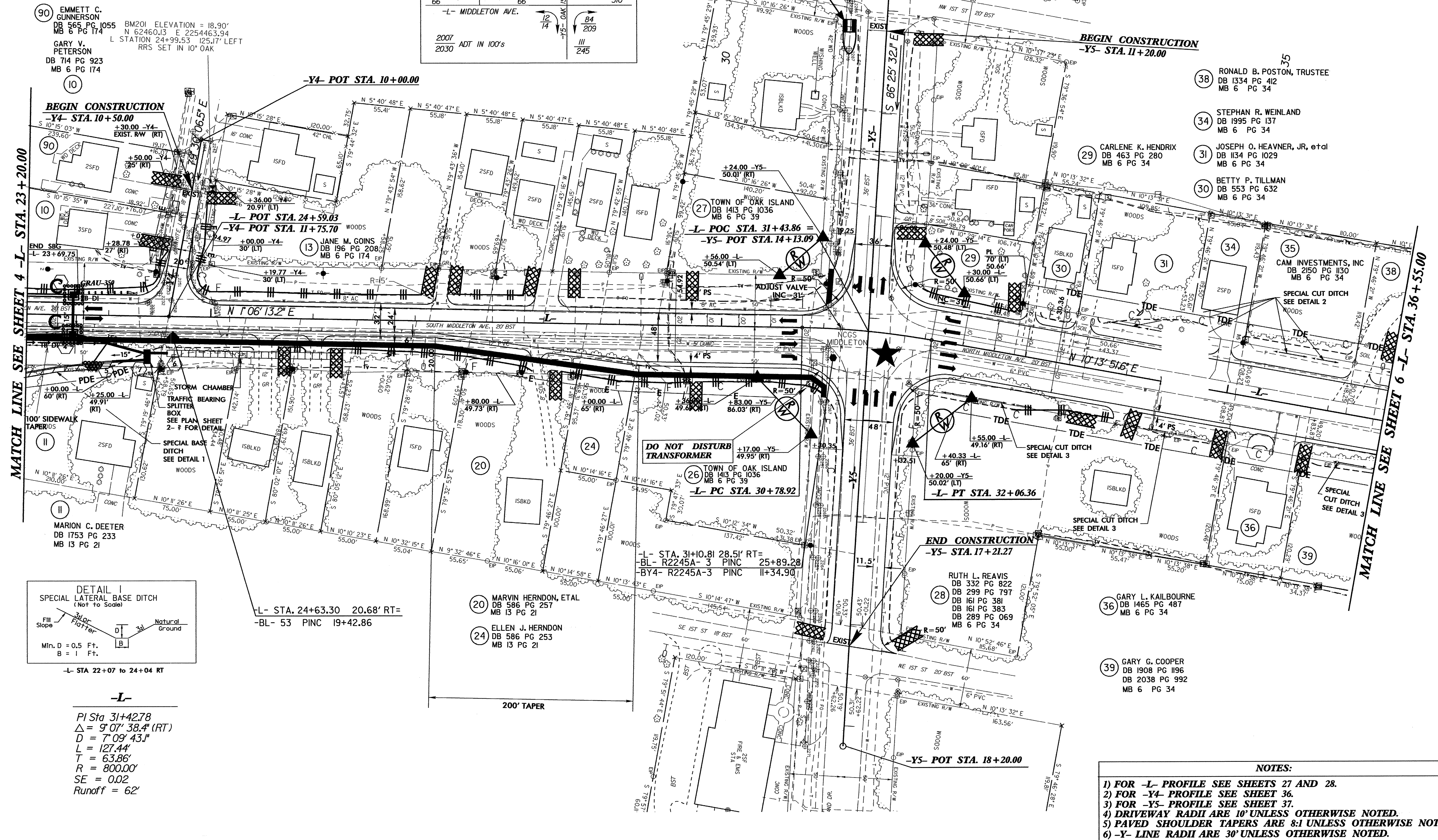
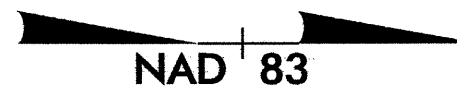


D VARIES 0.5 - 1 FT, +/-

-L- STA 32+25 TO 33+13 RT EL=22.10  
 -L- STA 34+30 TO 34+78 RT EL=23.00  
 -L- STA 36+14 TO 37+10 RT EL=24.20



34 x 12 x 3  
4' weir



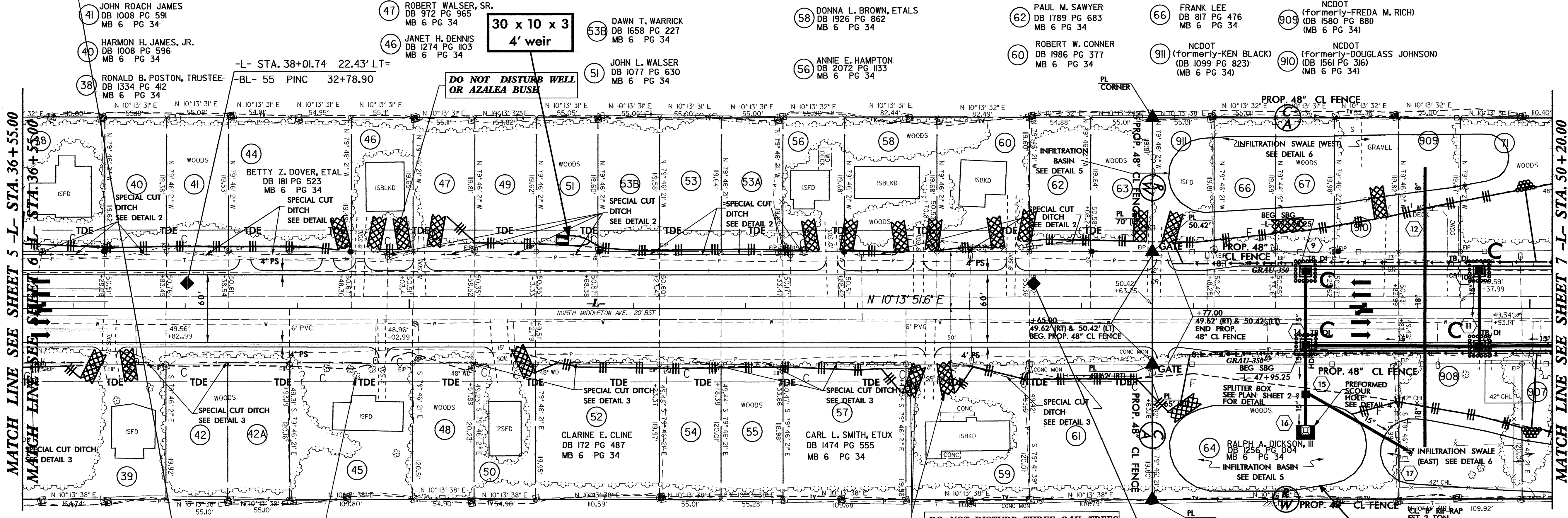
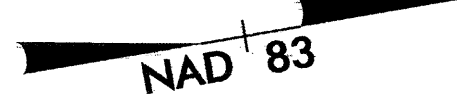
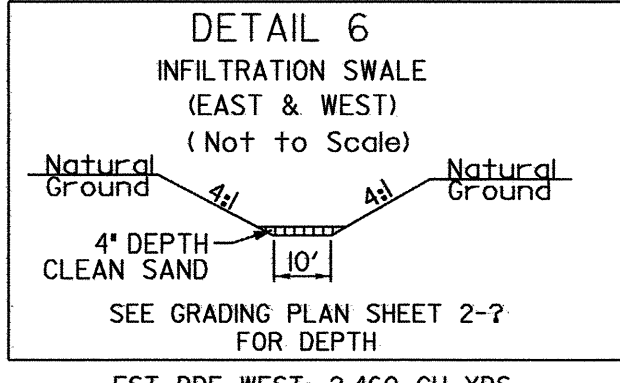
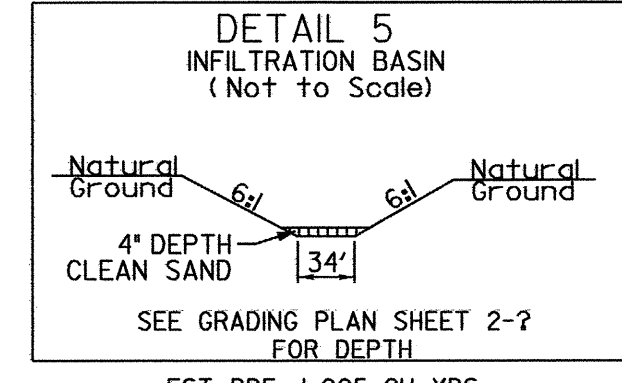
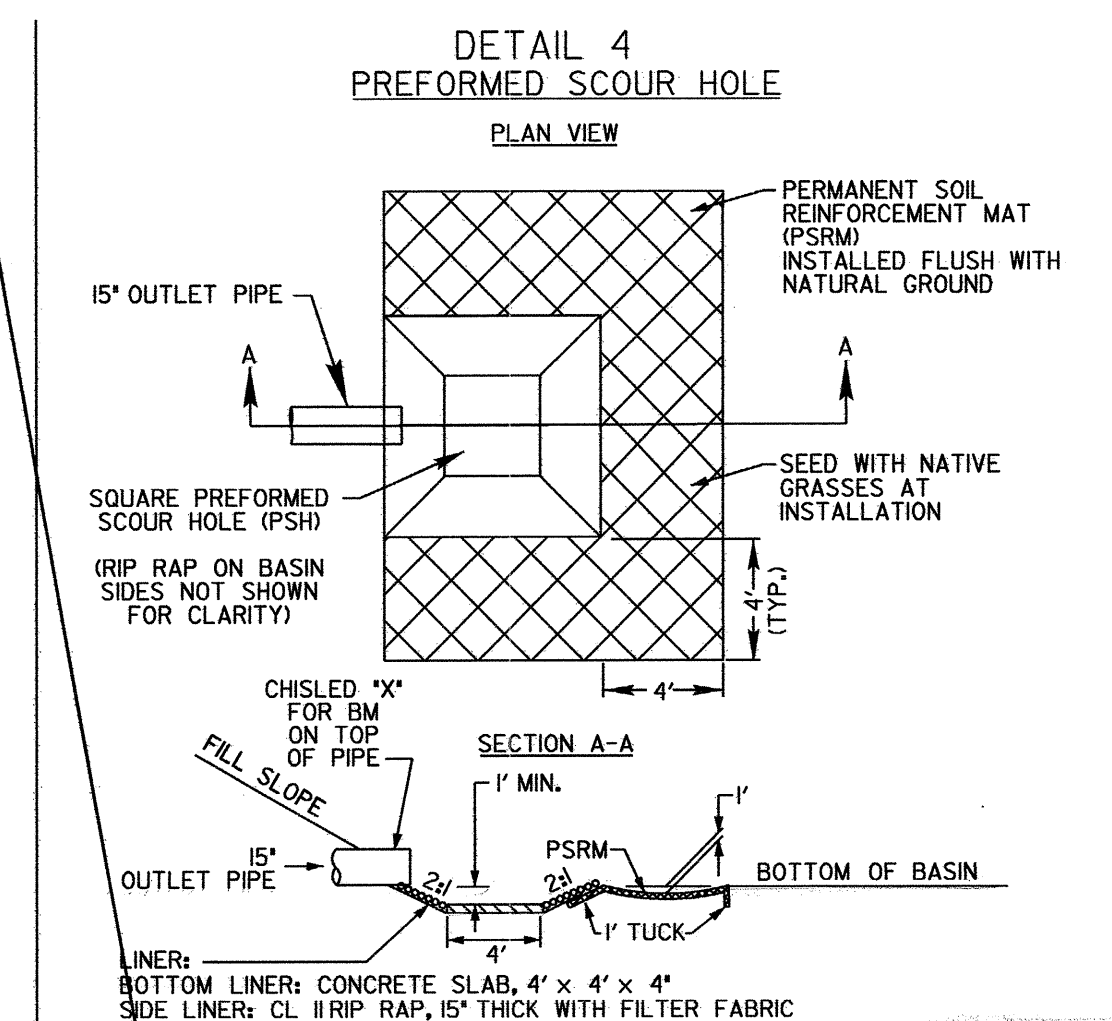
-L- STA 22+07 TO 24+04 RT

-L-  
 PI Sta 31+42.78  
 $\Delta = 9^{\circ} 07' 38.4''$  (RT)  
 $D = 7^{\circ} 09' 43.1''$   
 $L = 127.44'$   
 $T = 63.86'$   
 $R = 800.00'$   
 $SE = 0.02$   
 $Runoff = 62'$

- NOTES:**
- 1) FOR -L- PROFILE SEE SHEETS 27 AND 28.
  - 2) FOR -Y4- PROFILE SEE SHEET 36.
  - 3) FOR -Y5- PROFILE SEE SHEET 37.
  - 4) DRIVEWAY RADII ARE 10' UNLESS OTHERWISE NOTED.
  - 5) PAVED SHOULDER TAPERS ARE 8:1 UNLESS OTHERWISE NOTED.
  - 6) -Y- LINE RADII ARE 30' UNLESS OTHERWISE NOTED.

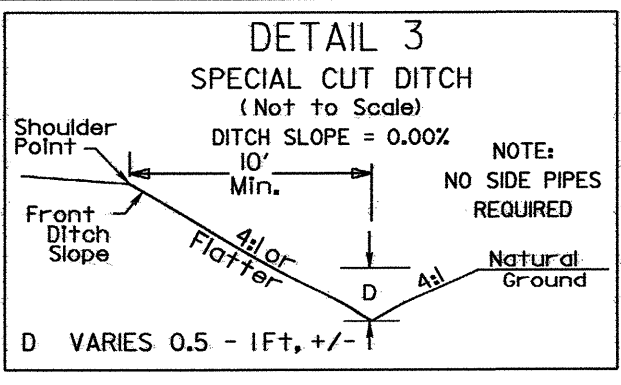
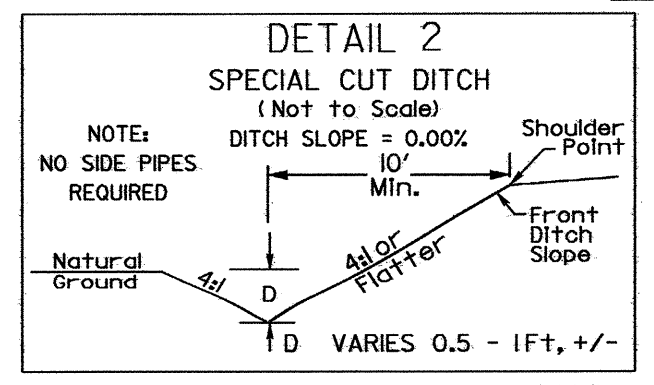
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PROJECT REFERENCE NO.		SHEET NO.	
R-2245		EC-27/CONST.6	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	



- (49) MINDI W. SINK, ETAL DB 1484 PG 112 MB 6 PG 34
- (47) ROBERT WALSER, SR. DB 972 PG 965 MB 6 PG 34
- (46) JANET H. DENNIS DB 1274 PG 1103 MB 6 PG 34
- (44) BETTY Z. DOVER, ETAL DB 181 PG 523 MB 6 PG 34
- (42) GARY G. COOPER DB 1908 PG 196 MB 6 PG 34
- (42) ARTHUR SKIPPER DB 999 PG 778 MB 6 PG 34
- (42A) KIMBERLY S. ANDERSON DB 1999 PG 775 MB 6 PG 34
- (45) MARY W. CHURCH DB 1174 PG 175 MB 6 PG 34
- (48) H. EMANUEL GHENT DB 1249 PG 181 MB 6 PG 34
- (50) DENISE M. WEST DB 1830 PG 945 MB 6 PG 34
- (53A) DAWN T. WARRICK DB 1658 PG 229 MB 6 PG 34
- (53) WILLIAM B. WARRICK DB 1658 PG 231 MB 6 PG 34
- (53B) DAWN T. WARRICK DB 1658 PG 227 MB 6 PG 34
- (51) JOHN L. WALSER DB 1077 PG 630 MB 6 PG 34
- (54) NEIL G. JESTER DB 2179 PG 693 MB 6 PG 34
- (55) ANNE J. CONNER DB 1008 PG 606 MB 6 PG 34
- (56) ANNIE E. HAMPTON DB 2072 PG 1133 MB 6 PG 34
- (57) CARL L. SMITH, ETUX DB 1474 PG 555 MB 6 PG 34
- (58) DONNA L. BROWN, ETALS DB 1926 PG 862 MB 6 PG 34
- (59) MARSHALL R. CARROLL DB 1895 PG 128 MB 6 PG 34
- (60) ANNE E. HAMPTON DB 2072 PG 1133 MB 6 PG 34
- (61) J. R. CORBETT DB 596 PG 210 MB 6 PG 34
- (62) PAUL M. SAWYER DB 1789 PG 683 MB 6 PG 34
- (63) MARVIN C. MARTIN, SR. DB 1390 PG 266 MB 6 PG 34
- (64) RALPH A. DICKSON, III DB 1256 PG 004 MB 6 PG 34
- (66) PAUL E. MOORE, JR. DB 1223 PG 689 MB 6 PG 34
- (67) FRANK LEE DB 817 PG 476 MB 6 PG 34
- (68) J. R. CORBETT DB 596 PG 212 MB 6 PG 34
- (69) NCDOT (formerly-KATHERINE W. HICKS) DB 169 PG 55 MB 6 PG 34
- (70) NCDOT (formerly-DONALD W. BATCHELOR) DB 836 PG 759 MB 6 PG 34
- (71) GEORGE L. FISHER, ETAL DB 1181 PG 593 MB 6 PG 34
- (90) NCDOT (formerly-FREDA M. RICH) DB 1580 PG 881 MB 6 PG 34
- (90A) NCDOT (formerly-DOUGLASS JOHNSON) DB 1561 PG 316 MB 6 PG 34
- (90B) NCDOT (formerly-KEN BLACK) DB 1099 PG 823 MB 6 PG 34

28.  
OTHERWISE NOTED.  
UNLESS OTHERWISE NOTED.  
OTHERWISE NOTED.



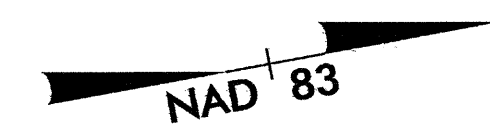
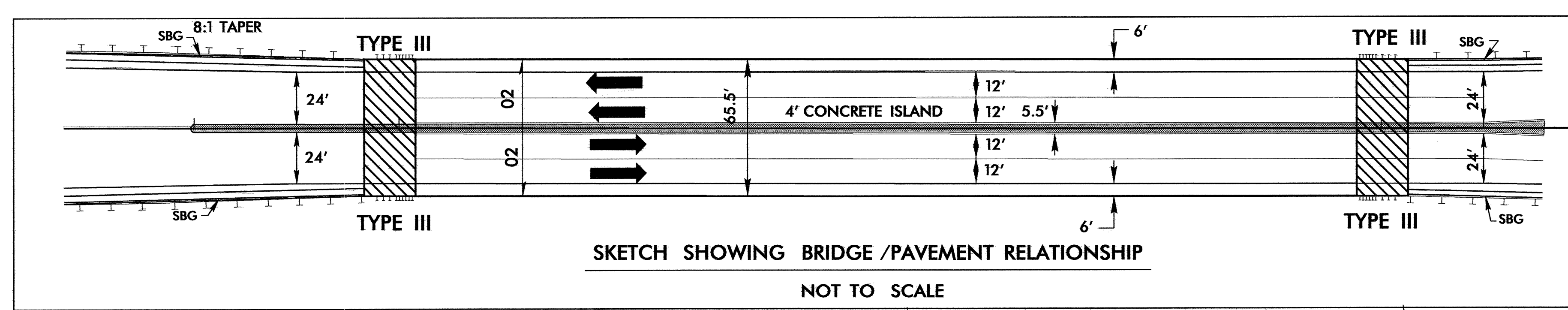
- L- STA 36+50 to 37+13 LT EL=24.20
- L- STA 37+58 to 37+68 LT EL=24.50
- L- STA 38+13 to 38+24 LT EL=24.60
- L- STA 38+68 to 39+37 LT EL=24.90
- L- STA 39+75 to 39+89 LT EL=25.00
- L- STA 40+28 to 40+44 LT EL=25.00
- L- STA 40+88 to 40+98 LT EL=25.00
- L- STA 41+43 to 41+53 LT EL=25.40
- L- STA 41+98 to 43+55 LT EL=25.70
- L- STA 43+97 to 44+34 LT EL=25.70
- L- STA 44+73 to 45+18 LT EL=26.20
- L- STA 45+65 to 46+10 LT EL=26.20
- L- STA 36+14 to 37+10 RT EL=24.20
- L- STA 37+50 to 37+68 RT EL=24.50
- L- STA 38+13 to 39+58 RT EL=24.80
- L- STA 40+33 to 40+61 RT EL=25.50
- L- STA 41+43 to 42+08 RT EL=25.60
- L- STA 42+53 to 42+63 RT EL=25.80
- L- STA 43+08 to 43+19 RT EL=26.00
- L- STA 43+64 to 44+45 RT EL=26.20
- L- STA 44+83 to 45+39 RT EL=26.50
- L- STA 45+84 to 46+48 RT EL=26.90

NOTE: UTILIZE INFILTRATION BASIN AS SEDIMENT BASIN.

- NOTES:
- 1) FOR -L- PROFILE SEE SHEET 28.
  - 2) DRIVEWAY RADII ARE 10' UNLESS OTHERWISE NOTED.
  - 3) PAVED SHOULDER TAPERS ARE 8:1 UNLESS OTHERWISE NOTED.

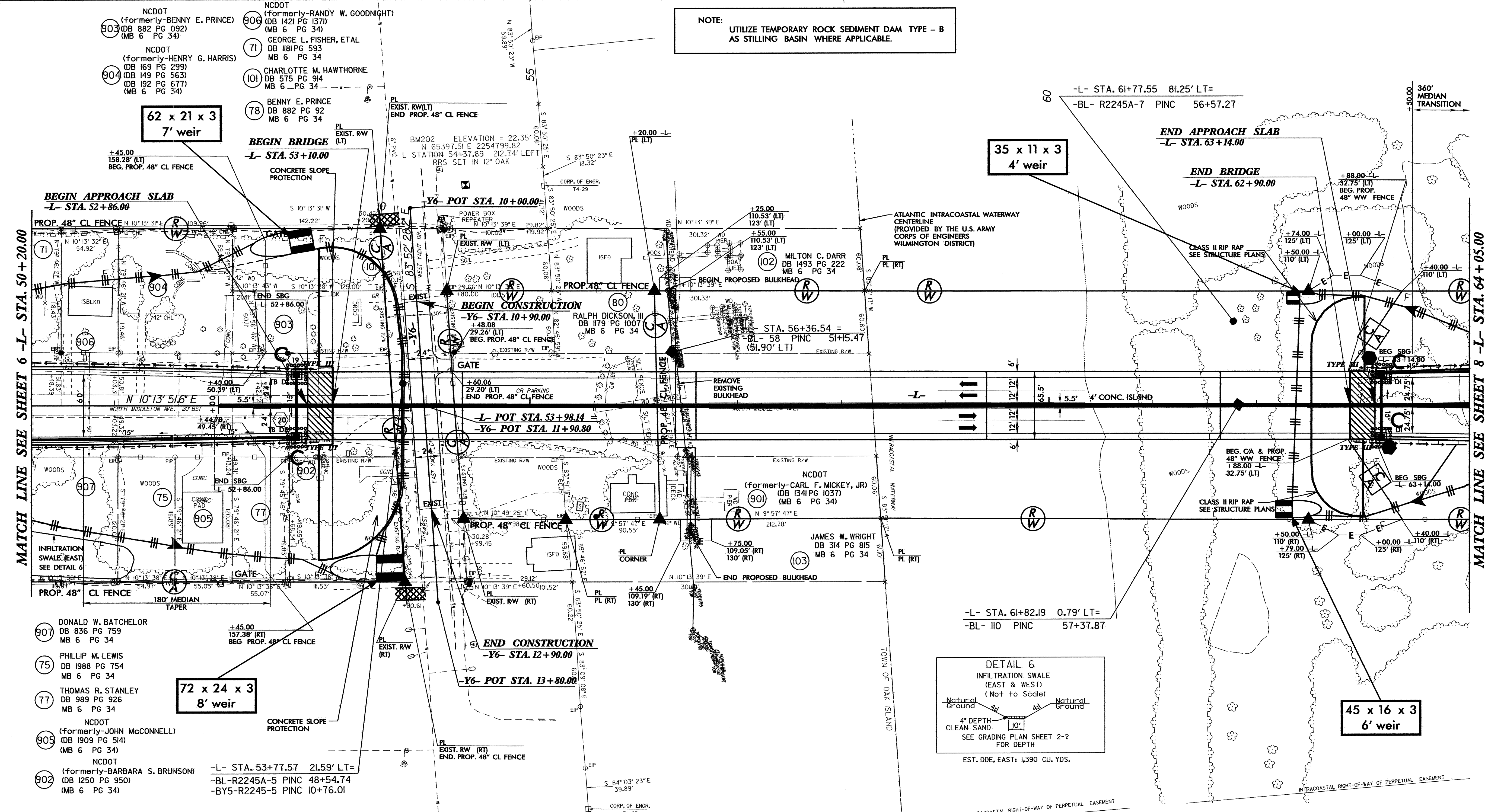
8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-2245	EC-28/CONST.7
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



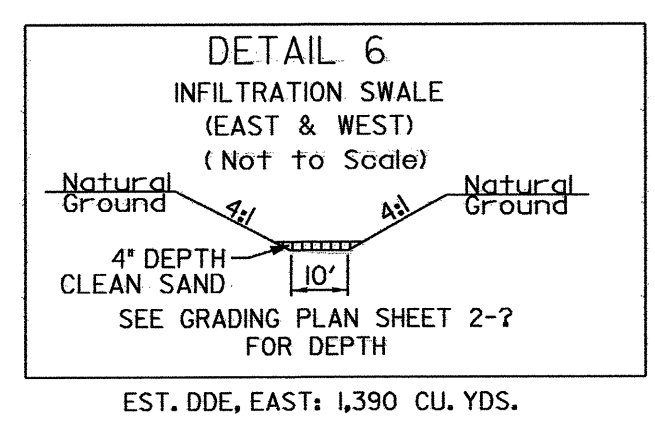
- 903 (formerly-BENNY E. PRINCE) (DB 882 PG 092) (MB 6 PG 34)
- 904 (formerly-HENRY G. HARRIS) (DB 169 PG 299) (DB 149 PG 563) (DB 192 PG 677) (MB 6 PG 34)
- 906 (formerly-RANDY W. GOODNIGHT) (DB 1421 PG 1370) (MB 6 PG 34)
- 71 GEORGE L. FISHER, ETAL (DB 181 PG 593) (MB 6 PG 34)
- 101 CHARLOTTE M. HAWTHORNE (DB 575 PG 914) (MB 6 PG 34)
- 78 BENNY E. PRINCE (DB 882 PG 92) (MB 6 PG 34)

NOTE: UTILIZE TEMPORARY ROCK SEDIMENT DAM TYPE - B AS STILLING BASIN WHERE APPLICABLE.



MATCH LINE SEE SHEET 6 -L- STA. 50 + 20.00

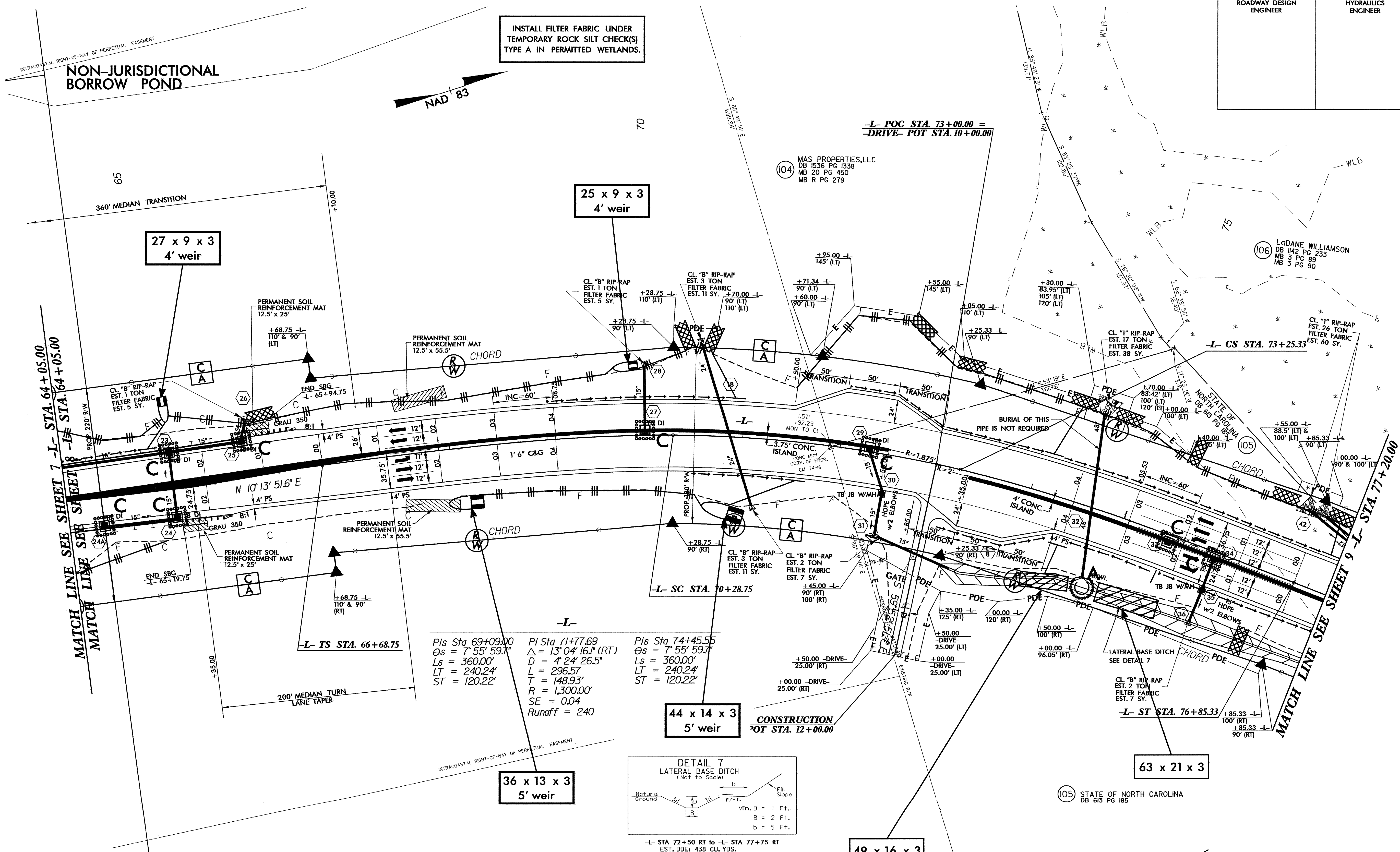
MATCH LINE SEE SHEET 8 -L- STA. 64 + 05.00



- NOTES:
- 1) FOR -L- PROFILE SEE SHEETS 28 AND 29.
  - 2) FOR -Y6- PROFILE SEE SHEET 37.
  - 3) FOR STRUCTURE PLANS SEE SHEETS S- TO S-.
  - 4) PAVED SHOULDER TAPERS ARE 8:1 UNLESS OTHERWISE NOTED.

15-SEP-2006 16:18 g:\tipproj\ec-28\environmental\design\r-2245\_rdw\_psh07.dgn

PROJECT REFERENCE NO. R-2245		SHEET NO. EC-29/CONST.8	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	



INSTALL FILTER FABRIC UNDER  
TEMPORARY ROCK SILT CHECK(S)  
TYPE A IN PERMITTED WETLANDS.

25 x 9 x 3  
4' weir

27 x 9 x 3  
4' weir

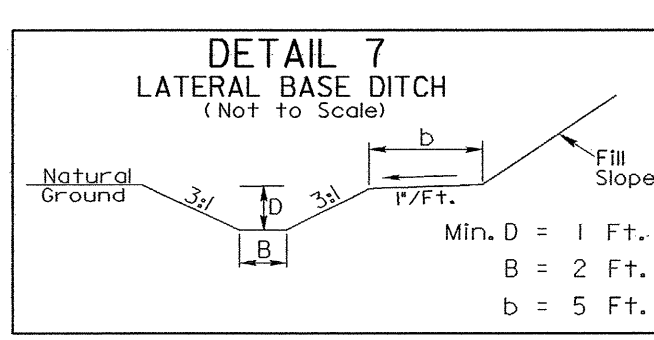
44 x 14 x 3  
5' weir

36 x 13 x 3  
5' weir

63 x 21 x 3

49 x 16 x 3

-L-  
 Pls Sta 69+09.00    PI Sta 71+77.69    Pls Sta 74+45.55  
 $\Theta_s = 7^\circ 55' 59.7''$      $\Delta = 13^\circ 04' 16.1''$  (RT)     $\Theta_s = 7^\circ 55' 59.7''$   
 Ls = 360.00'    D = 4' 24" 26.5"    Ls = 360.00'  
 LT = 240.24'    L = 296.57'    LT = 240.24'  
 ST = 120.22'    T = 148.93'    ST = 120.22'  
 R = 1,300.00'    SE = 0.04  
 Runoff = 240



NOTES:

- 1) FOR -L- PROFILE SEE SHEET 29.
- 2) PAVED SHOULDER TAPERS ARE 8:1 UNLESS OTHERWISE NOTED.
- 3) SEE SHEET 2- FOR 50' TRANSITION FROM 1'-6" C&G TO 2'-9" C&G.
- 4) ACCESS ROADS TO BE CONSTRUCTED BY OTHERS.
- 5) A FUTURE CONTROL-OF-ACCESS BREAK HAS BEEN RESERVED LEFT OF -L- STATION 73+15.00. ANY ACCESS BREAK AT THIS LOCATION SHALL BE IN ACCORDANCE WITH SPECIFIC GUIDELINES SET FORTH IN THE MEMORANDUM OF UNDERSTANDING BETWEEN NCDOT, FHWA, NCDENR AND USEPA AND SPECIAL PERMIT CONDITIONS PRESCRIBED BY USACE.

**SPECIAL CONTROL OF ACCESS DESIGNATION**  
**NO REVISIONS SHALL BE MADE TO THE CONTROL OF ACCESS WITHOUT APPROVAL OF NCDOT, FHWA, USEPA AND NCDENR PER AGREEMENT AND USACE PER PERMIT CONDITION.**

C  
A

MATCH LINE SEE SHEET 25  
-ACCL- STA. 15+00.00

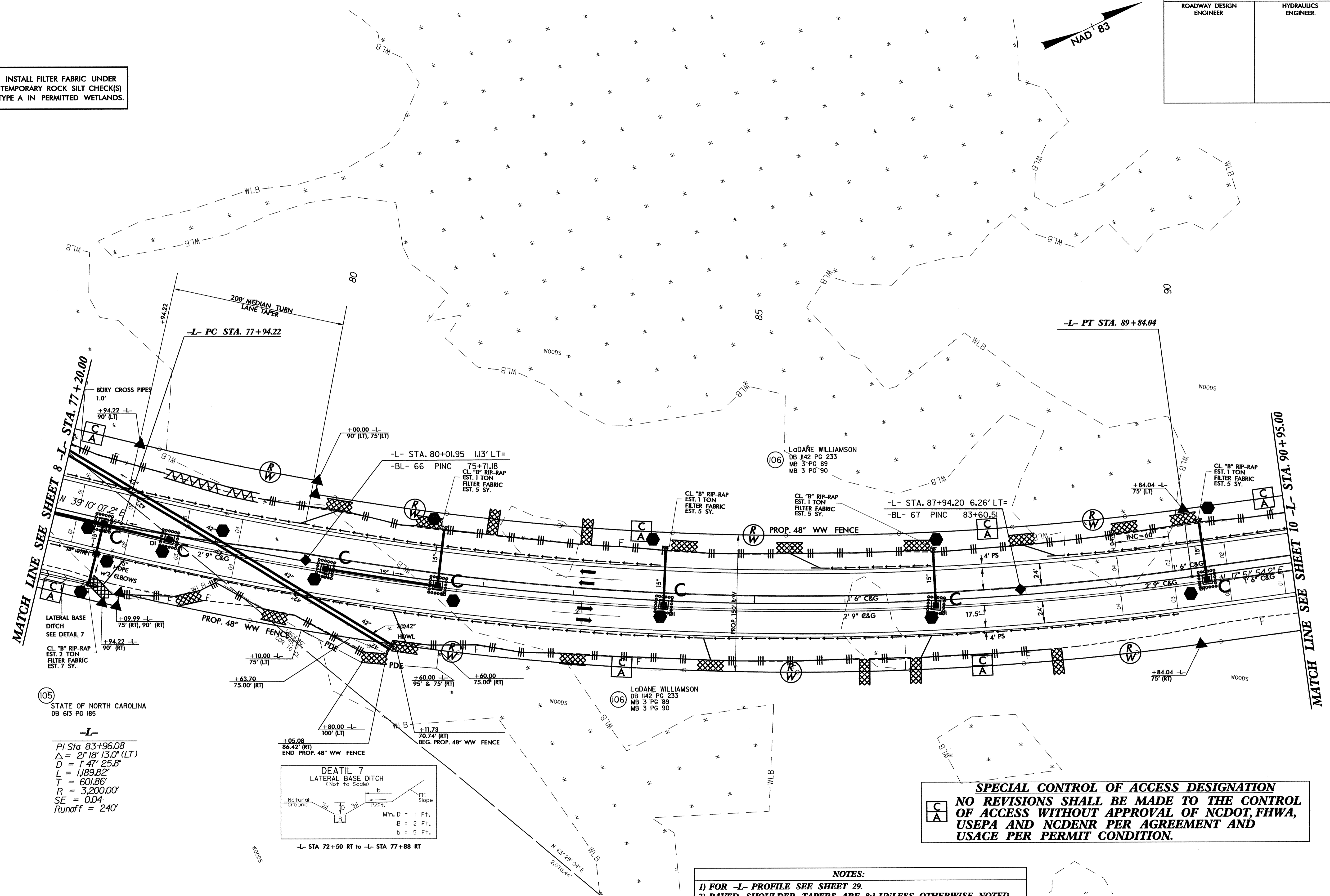
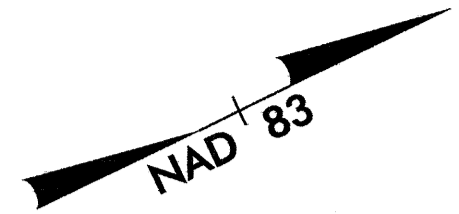
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 AT REN2245



8/17/99

PROJECT REFERENCE NO.		SHEET NO.	
R-2245		EC-30/CONST.9	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

INSTALL FILTER FABRIC UNDER  
TEMPORARY ROCK SILT CHECK(S)  
TYPE A IN PERMITTED WETLANDS.



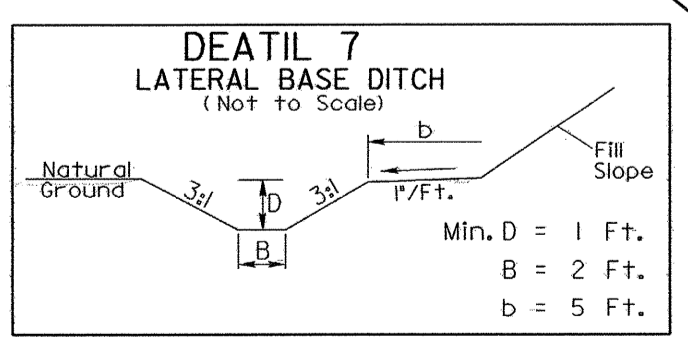
REVISIONS

MATCH LINE SEE SHEET 8 -L- STA. 77+20.00

MATCH LINE SEE SHEET 10 -L- STA. 90+95.00

105 STATE OF NORTH CAROLINA  
DB 613 PG 185

-L-  
PI Sta 83+96.08  
 $\Delta = 21' 18" 13.0" (LT)$   
 $D = 1' 47" 25.8"$   
 $L = 1189.82'$   
 $T = 601.86'$   
 $R = 3,200.00'$   
 $SE = 0.04$   
Runoff = 240'



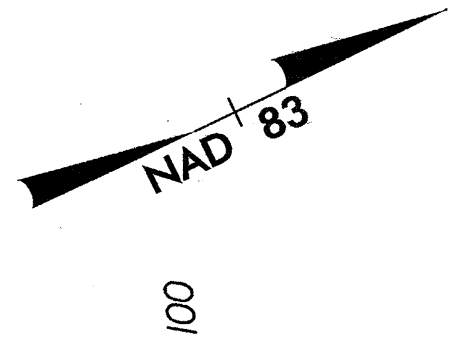
**SPECIAL CONTROL OF ACCESS DESIGNATION**  
**NO REVISIONS SHALL BE MADE TO THE CONTROL OF ACCESS WITHOUT APPROVAL OF NCDOT, FHWA, USEPA AND NCDENR PER AGREEMENT AND USAGE PER PERMIT CONDITION.**

NOTES:  
1) FOR -L- PROFILE SEE SHEET 29.  
2) PAVED SHOULDER TAPERS ARE 8:1 UNLESS OTHERWISE NOTED.  
3) SEE SHEET 2- FOR 50' TRANSITION FROM 1'-6" C&G TO 2'-9" C&G.

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Richard At RENV22445

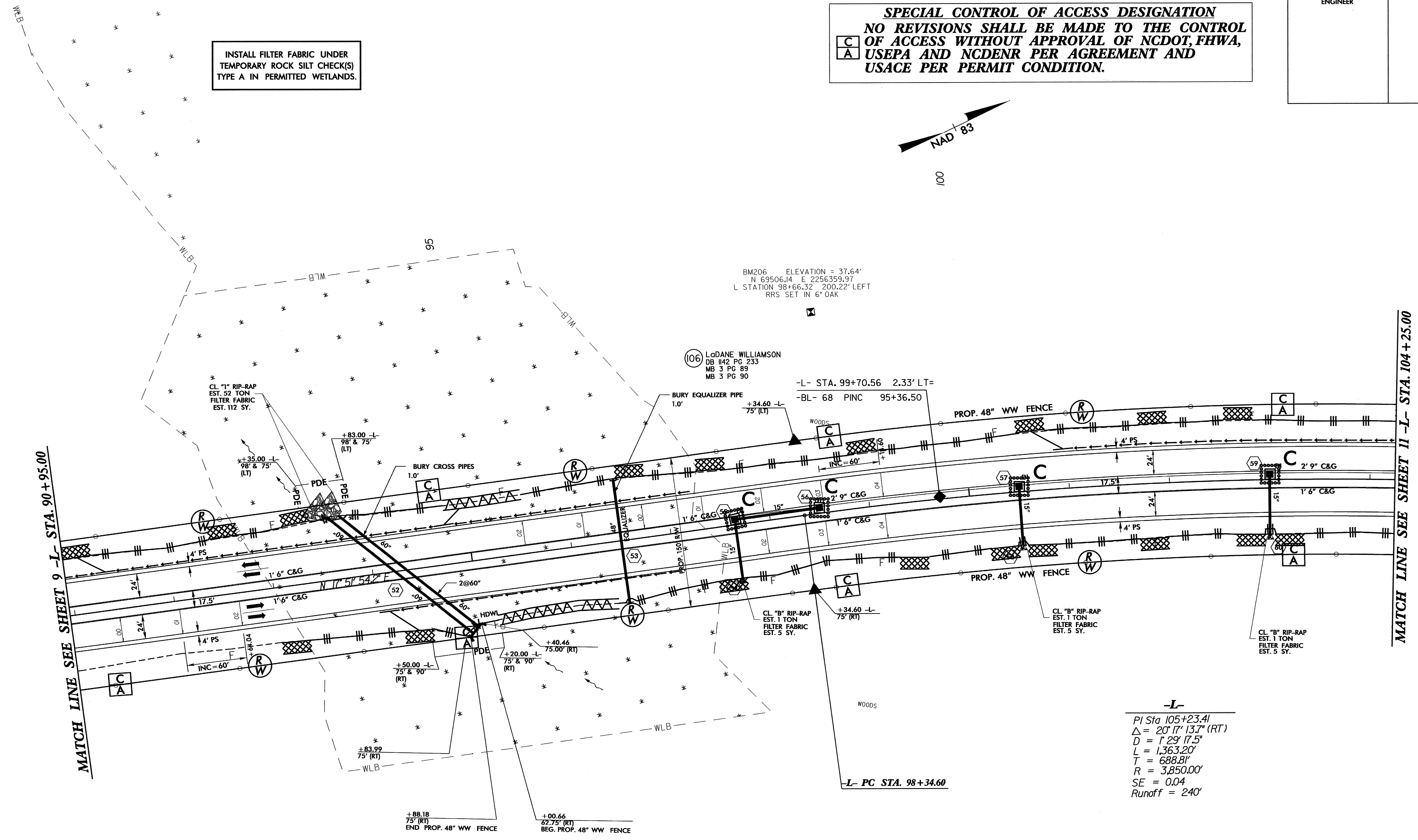
PROJECT REFERENCE NO.		SHEET NO.	
R-2245		EC-31/CONST.10	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

**SPECIAL CONTROL OF ACCESS DESIGNATION**  
**NO REVISIONS SHALL BE MADE TO THE CONTROL**  
**OF ACCESS WITHOUT APPROVAL OF NCDOT, FHWA,**  
**USEPA AND NCDENR PER AGREEMENT AND**  
**USACE PER PERMIT CONDITION.**



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 pahan - AT REV22445

REVISIONS



BM206 ELEVATION = 37.64'  
 N 69506.14' E 2256359.91'  
 L STATION 98+66.32' 200.22' LEFT  
 RRS SET IN 6' OAK

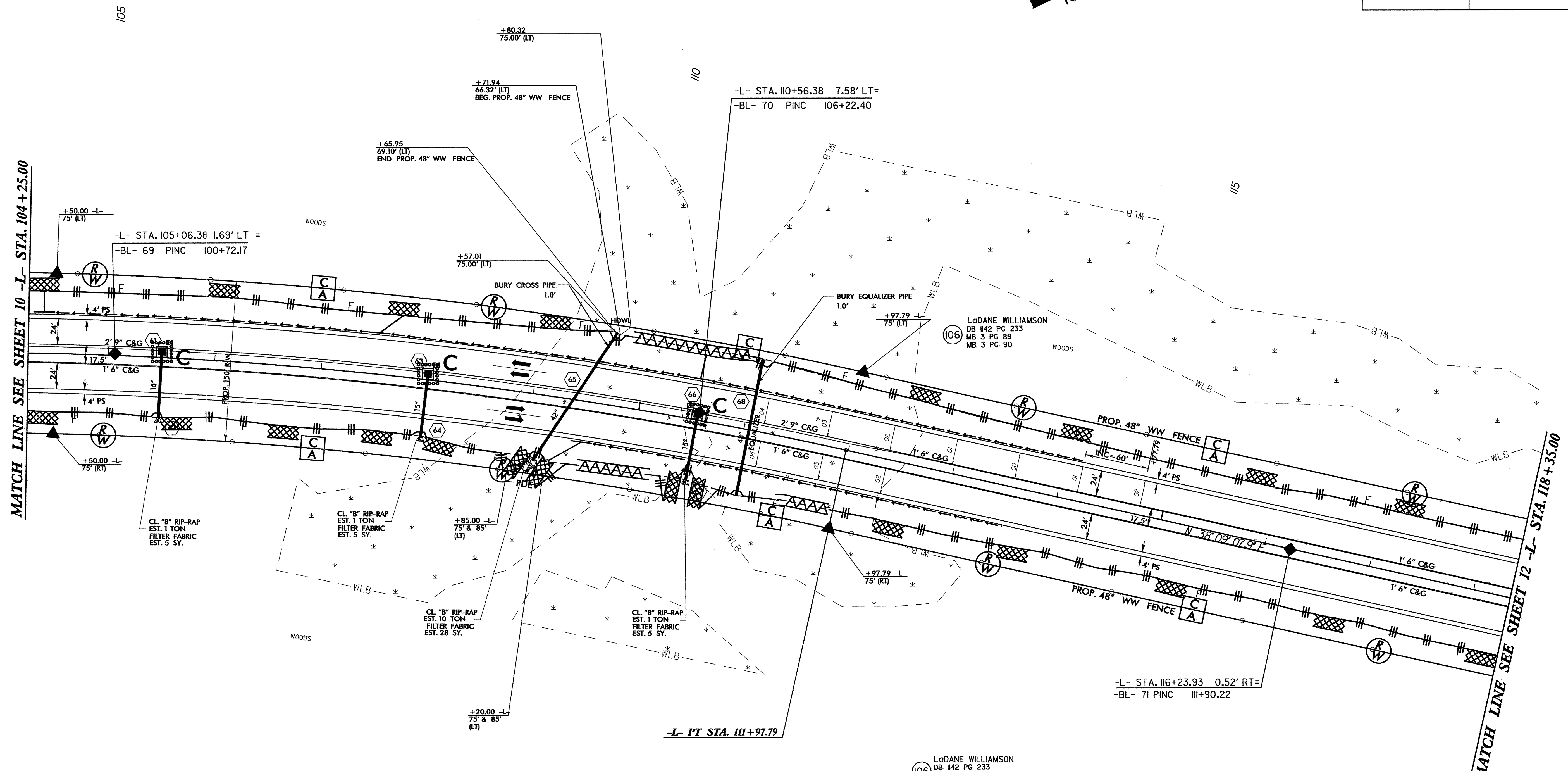
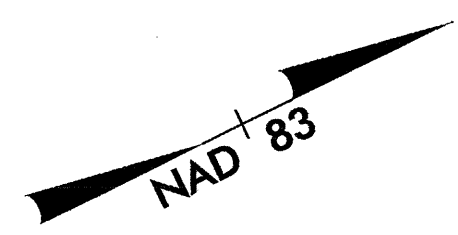
(106) LADANE WILLIAMSON  
 DB 1142 PG 233  
 MB 3 PG 89  
 MB 3 PG 90

**-L-**  
 PI Sta 105+23.41  
 $\Delta = 20' 17" 13.7" (RT)$   
 $D = 1' 29" 17.5"$   
 $L = 1,363.20'$   
 $T = 688.81'$   
 $R = 3,850.00'$   
 $SE = 0.04$   
 Runoff = 240'

**NOTES:**  
 1) FOR -L- PROFILE SEE SHEETS 29 AND 30.  
 2) PAVED SHOULDER TAPERS ARE 8:1 UNLESS OTHERWISE NOTED.  
 3) SEE SHEET 2- FOR 50' TRANSITION FROM 1'-6" C&G TO 2'-9" C&G.

PROJECT REFERENCE NO. R-2245	SHEET NO. EC-32/CONST.11
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INSTALL FILTER FABRIC UNDER  
TEMPORARY ROCK SILT CHECK(S)  
TYPE A IN PERMITTED WETLANDS.



MATCH LINE SEE SHEET 10 -L- STA. 104+25.00

MATCH LINE SEE SHEET 12 -L- STA. 118+35.00

REVISIONS

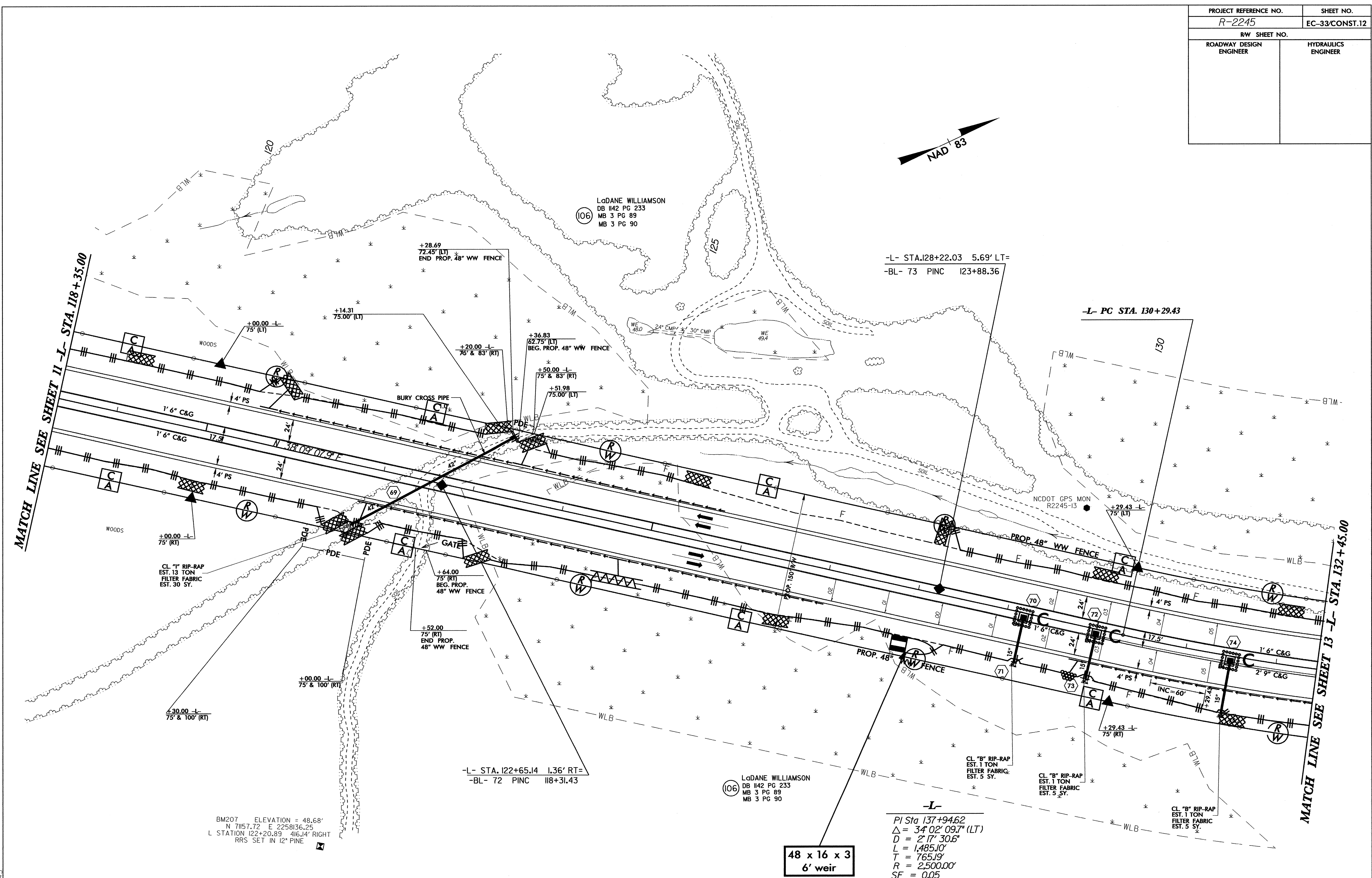
-L-  
 PI Sta 105+23.41  
 $\Delta = 20' 17" 13.7" (RT)$   
 $D = 1' 29" 17.5"$   
 $L = 1,363.20'$   
 $T = 688.81'$   
 $R = 3,850.00'$   
 $SE = 0.04$   
 Runoff = 240'

**SPECIAL CONTROL OF ACCESS DESIGNATION**  
**NO REVISIONS SHALL BE MADE TO THE CONTROL**  
**OF ACCESS WITHOUT APPROVAL OF NCDOT, FHWA,**  
**USEPA AND NCDENR PER AGREEMENT AND**  
**USAGE PER PERMIT CONDITION.**

**NOTES:**  
 1) FOR -L- PROFILE SEE SHEET 30.  
 2) PAVED SHOULDER TAPERS ARE 8:1 UNLESS OTHERWISE NOTED.  
 3) SEE SHEET 2- FOR 50' TRANSITION FROM 1'-6" C&G TO 2'-9" C&G.

PROJECT REFERENCE NO. R-2245	SHEET NO. EC-33/CONST.12
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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**SPECIAL CONTROL OF ACCESS DESIGNATION**

C  
A

**NO REVISIONS SHALL BE MADE TO THE CONTROL OF ACCESS WITHOUT APPROVAL OF NCDOT, FHWA, USEPA AND NCDENR PER AGREEMENT AND USACE PER PERMIT CONDITION.**

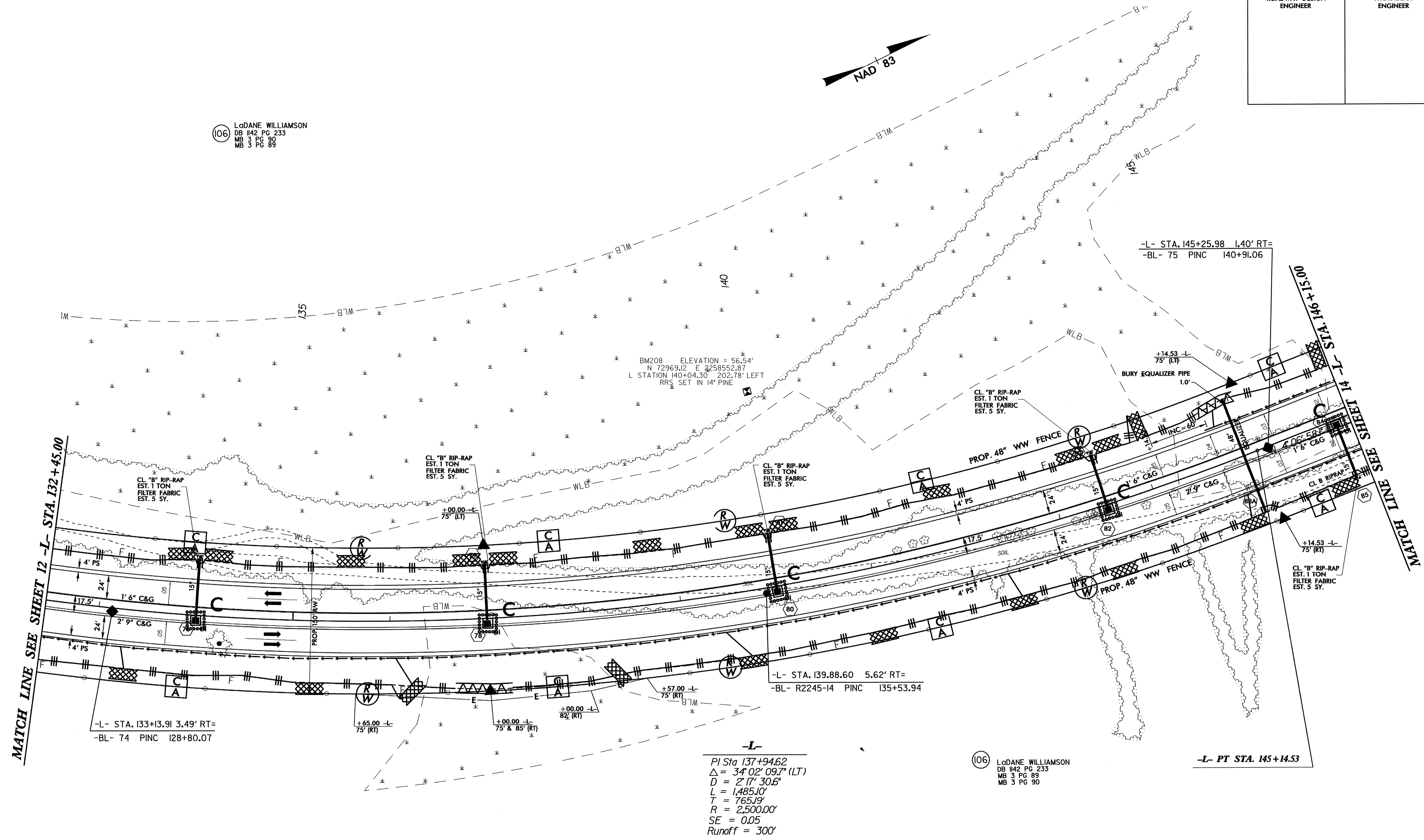
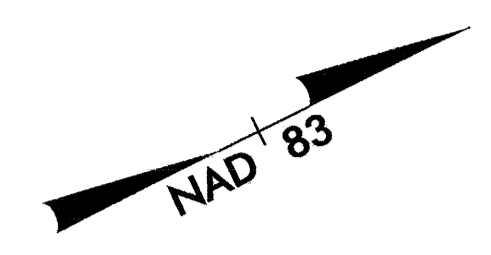
**NOTES:**

- 1) FOR -L- PROFILE SEE SHEETS 30 AND 31.
- 2) PAVED SHOULDER TAPERS ARE 8:1 UNLESS OTHERWISE NOTED.
- 3) SEE SHEET 2- FOR 50' TRANSITION FROM 1'-6" C&G TO 2'-9" C&G.

PROJECT REFERENCE NO. R-2245	SHEET NO. EC-34/CONST.13
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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chen AT REN221445

(106) L&DANE WILLIAMSON  
DB 142 PG 233  
MB 3 PG 90  
MB 3 PG 89



MATCH LINE SEE SHEET 12 -L- STA. 132+45.00

MATCH LINE SEE SHEET 14 -L- STA. 145+14.53

-L- STA. 133+13.91 3.49' RT=  
-BL- 74 PINC 128+80.07

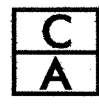
-L- STA. 139.88.60 5.62' RT=  
-BL- R2245-14 PINC 135+53.94

-L- STA. 145+25.98 1.40' RT=  
-BL- 75 PINC 140+91.06

-L- PT STA. 145+14.53

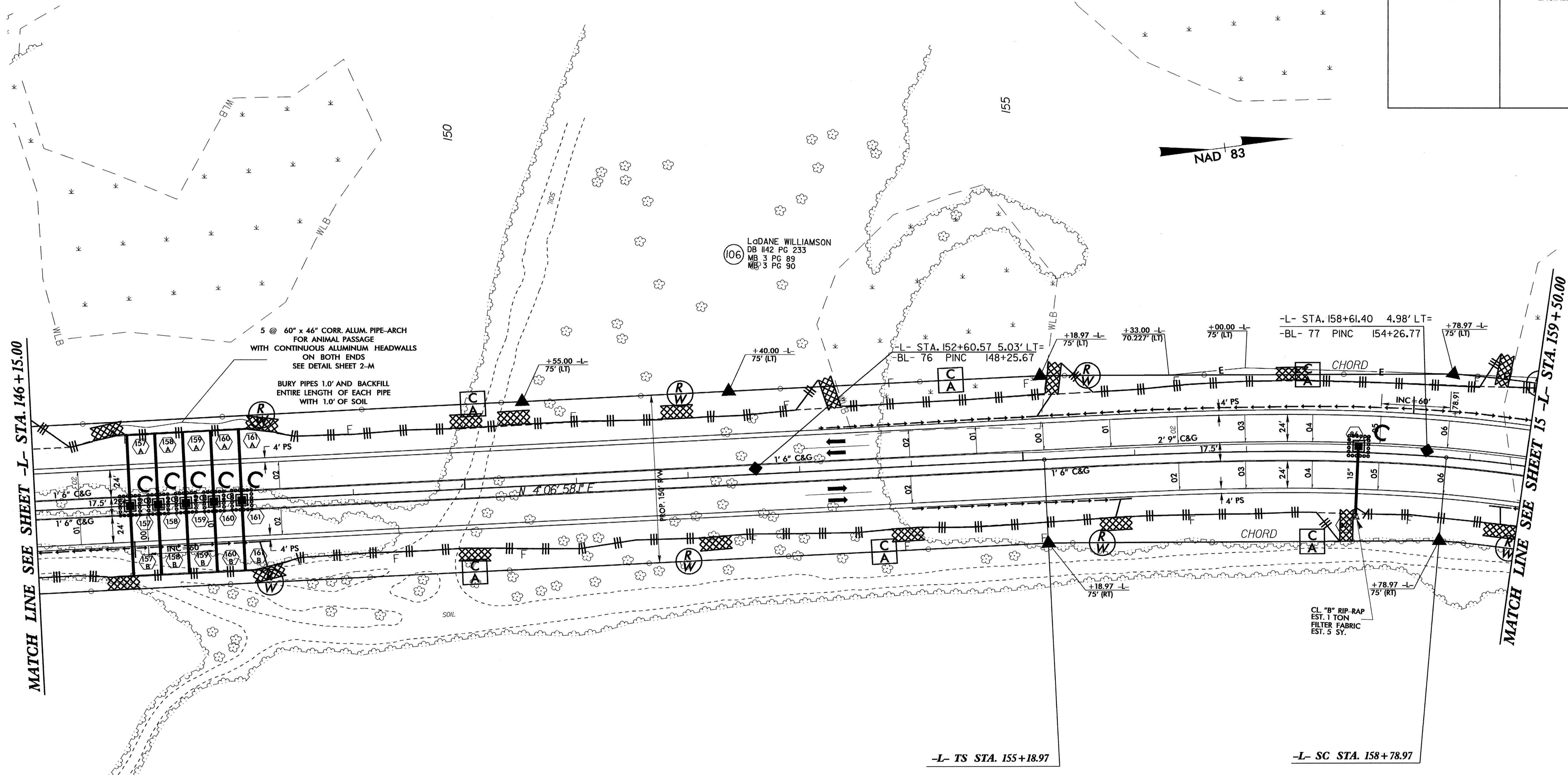
**-L-**  
PI Sta 137+94.62  
 $\Delta = 34^{\circ} 02' 09.7''$  (LT)  
 $D = 2' 17' 30.6''$   
 $L = 1,485.10'$   
 $T = 765.19'$   
 $R = 2,500.00'$   
 $SE = 0.05$   
Runoff = 300'

(106) L&DANE WILLIAMSON  
DB 142 PG 233  
MB 3 PG 89  
MB 3 PG 90

**SPECIAL CONTROL OF ACCESS DESIGNATION**  

**NO REVISIONS SHALL BE MADE TO THE CONTROL OF ACCESS WITHOUT APPROVAL OF NCDOT, FHWA, USEPA AND NCDENR PER AGREEMENT AND USACE PER PERMIT CONDITION.**

**NOTES:**  
 1) FOR -L- PROFILE SEE SHEET 31.  
 2) PAVED SHOULDER TAPERS ARE 8:1 UNLESS OTHERWISE NOTED.  
 3) SEE SHEET 2- FOR 50' TRANSITION FROM 1'-6" C&G TO 2'-9" C&G.

PROJECT REFERENCE NO. R-2245		SHEET NO. EC-35/CONST.14	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	



**SPECIAL CONTROL OF ACCESS DESIGNATION**

C A	<b>NO REVISIONS SHALL BE MADE TO THE CONTROL OF ACCESS WITHOUT APPROVAL OF NCDOT, FHWA, USEPA AND NCDENR PER AGREEMENT AND USACE PER PERMIT CONDITON.</b>
--------	---

**-L-**

PI Sta 157+59.20	PI Sta 163+15.57
Os = 7' 48' 47.0"	Δ = 36' 36" 14.6" (RT)
Ls = 360.00'	D = 4' 20' 26.1"
LT = 240.23'	L = 843.30'
ST = 120.21'	T = 436.60'
	R = 1,320.00'
	SE = 0.06
	Runoff = 360'

**NOTES:**

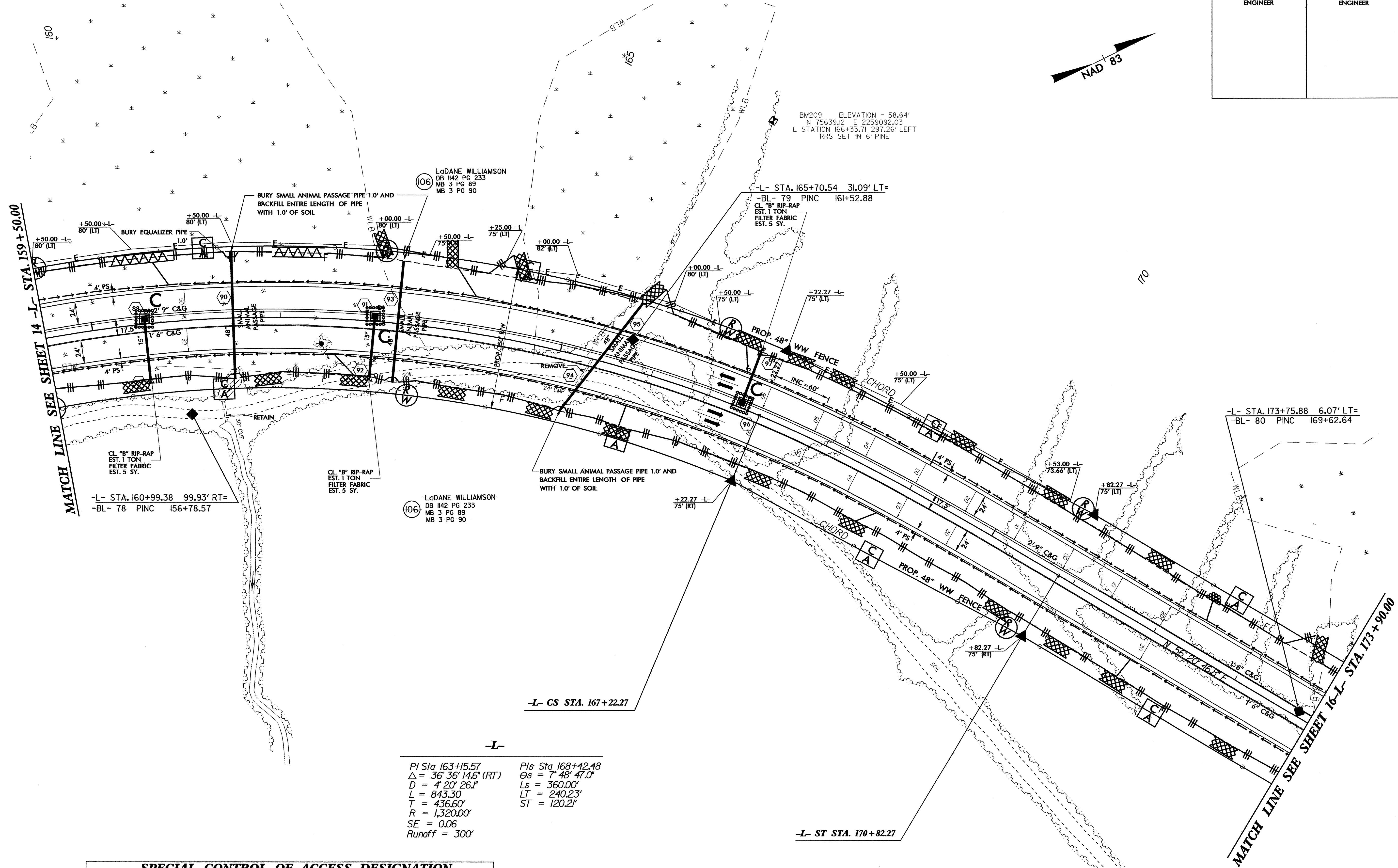
- FOR -L- PROFILE SEE SHEETS 31 AND 32.
- PAVED SHOULDER TAPERS ARE 8:1 UNLESS OTHERWISE NOTED.
- SEE SHEET 2- FOR 50' TRANSITION FROM 1'-6" C&G TO 2'-9" C&G.

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LaDANE WILLIAMSON

(106) LaDANE WILLIAMSON  
DB 1142 PG 233  
MB 3 PG 89  
MB 3 PG 90

PROJECT REFERENCE NO.		SHEET NO.	
R-2245		EC-36/CONST.15	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

8/17/99



BM209 ELEVATION = 58.64'  
 N 75639.12 E 2259092.03  
 L STATION 166+33.71 297.26' LEFT  
 RRS SET IN 6" PINE

-L- STA. 160+99.38 99.93' RT=  
 -BL- 78 PINC 156+78.57

-L- STA. 165+70.54 31.09' LT=  
 -BL- 79 PINC 161+52.88

-L- STA. 173+75.88 6.07' LT=  
 -BL- 80 PINC 169+62.64

-L-  
 PI Sta. 163+15.57    Pls Sta. 168+42.48  
 $\Delta = 36^{\circ} 36' 14.6" (RT)$      $\Theta_s = 7^{\circ} 48' 47.0"$   
 $D = 4' 20' 26.1"$      $L_s = 360.00'$   
 $L = 843.30'$      $LT = 240.23'$   
 $T = 436.60'$      $ST = 120.21'$   
 $R = 1,320.00'$   
 $SE = 0.06$   
 $Runoff = 300'$

**SPECIAL CONTROL OF ACCESS DESIGNATION**

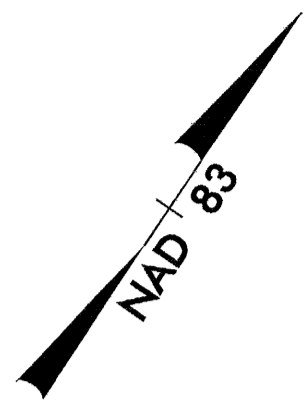
C	NO REVISIONS SHALL BE MADE TO THE CONTROL OF ACCESS WITHOUT APPROVAL OF NCDOT, FHWA, USEPA AND NCDENR PER AGREEMENT AND USACE PER PERMIT CONDITION.
A	

**NOTES:**

- 1) FOR -L- PROFILE SEE SHEET 32.
- 2) PAVED SHOULDER TAPERS ARE 8:1 UNLESS OTHERWISE NOTED.
- 3) SEE SHEET 2- FOR 50' TRANSITION FROM 1'-6" C&G TO 2'-9" C&G.

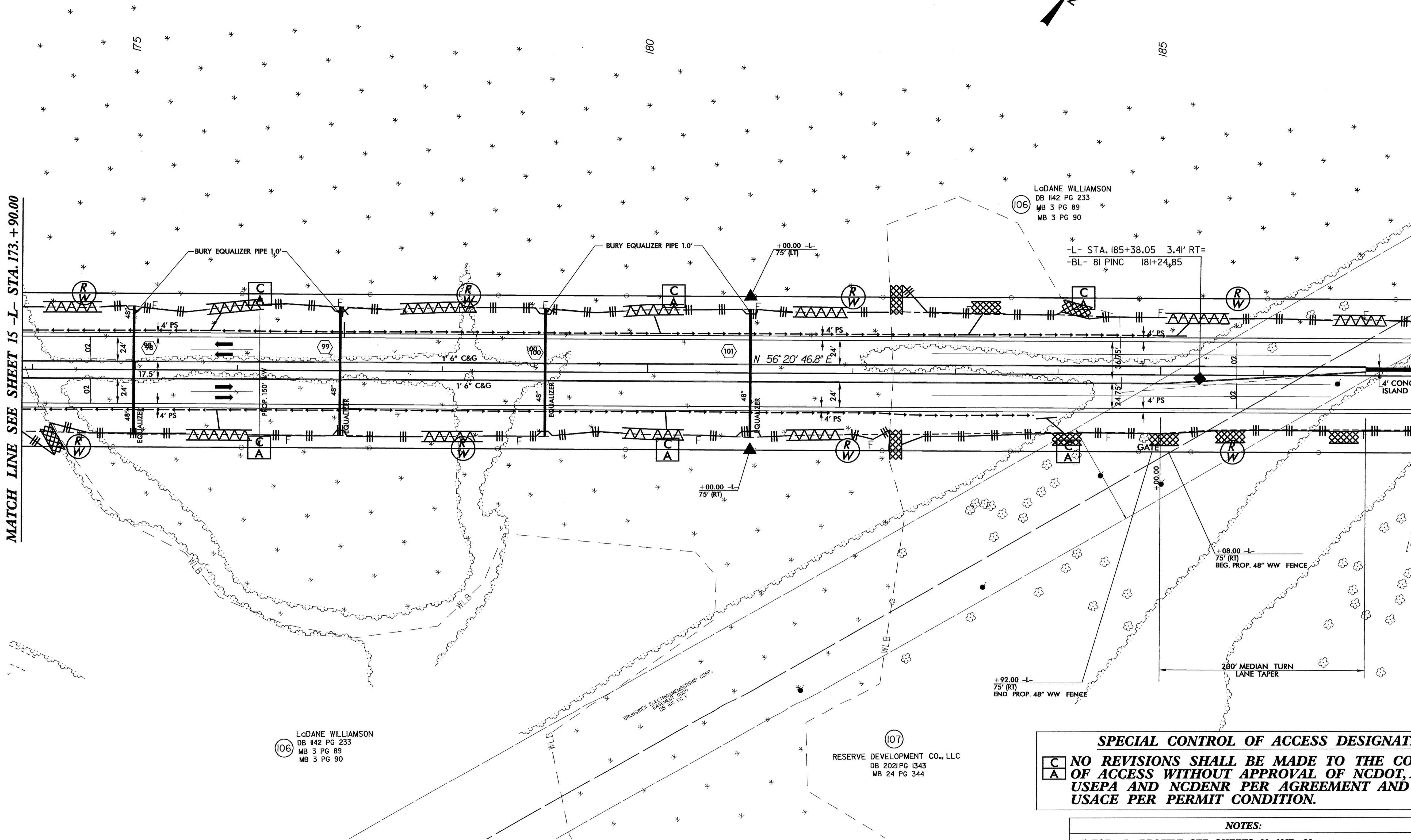
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PROJECT REFERENCE NO.		SHEET NO.	
R-2245		EC-37/CONST.16	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	



MATCH LINE SEE SHEET 15 -L- STA. 173. +90.00

MATCH LINE SEE SHEET 17 -L- STA. 187 +50.00



LoDANE WILLIAMSON  
DB 1142 PG 233  
MB 3 PG 89  
MB 3 PG 90

-L- STA. 185+38.05 3.41' RT=  
-BL- 81 PINC 181+24.85

N 56° 20' 46.8" E

LoDANE WILLIAMSON  
DB 1142 PG 233  
MB 3 PG 89  
MB 3 PG 90

RESERVE DEVELOPMENT CO., LLC  
DB 2021 PG 1343  
MB 24 PG 344

**SPECIAL CONTROL OF ACCESS DESIGNATION**  
**C** NO REVISIONS SHALL BE MADE TO THE CONTROL OF ACCESS WITHOUT APPROVAL OF NCDOT, FHWA, USEPA AND NCDENR PER AGREEMENT AND USACE PER PERMIT CONDITION.  
**A**

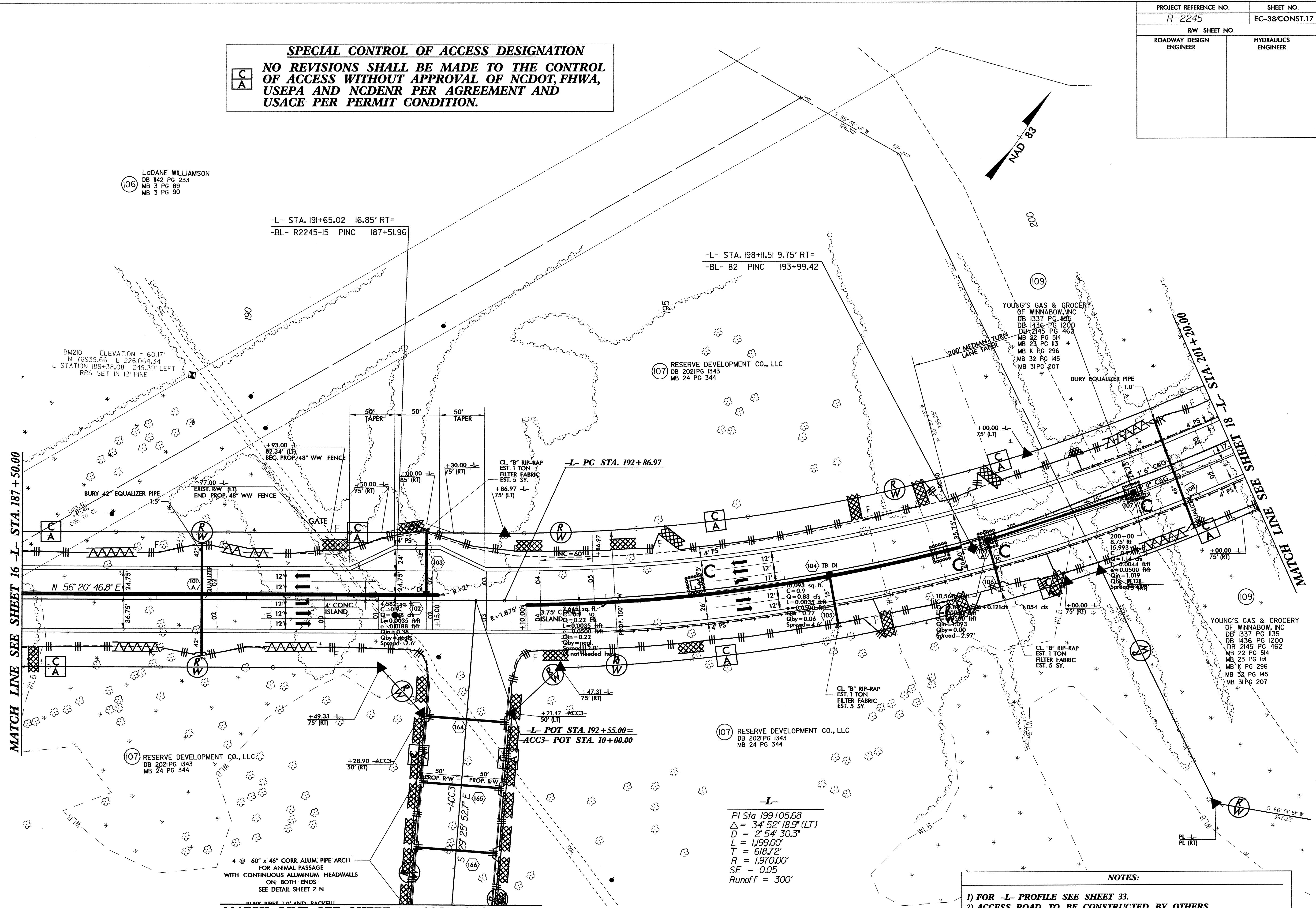
- NOTES:**
- 1) FOR -L- PROFILE SEE SHEETS 32 AND 33.
  - 2) PAVED SHOULDER TAPERS ARE 8:1 UNLESS OTHERWISE NOTED.



PROJECT REFERENCE NO. R-2245		SHEET NO. EC-38/CONST.17	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

**SPECIAL CONTROL OF ACCESS DESIGNATION**  
**NO REVISIONS SHALL BE MADE TO THE CONTROL OF ACCESS WITHOUT APPROVAL OF NCDOT, FHWA, USEPA AND NCDENR PER AGREEMENT AND USACE PER PERMIT CONDITION.**

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4 @ 60" x 46" CORR. ALUM. PIPE-ARCH  
 FOR ANIMAL PASSAGE  
 WITH CONTINUOUS ALUMINUM HEADWALLS  
 ON BOTH ENDS  
 SEE DETAIL SHEET 2-N

**-L-**  
 PI Sta 199+05.68  
 $\Delta = 34^{\circ} 52' 18.9" (LT)$   
 $D = 2^{\circ} 54' 30.3"$   
 $L = 1,199.00'$   
 $T = 618.72'$   
 $R = 1,970.00'$   
 $SE = 0.05$   
 $Runoff = 300'$

- NOTES:**
- 1) FOR -L- PROFILE SEE SHEET 33.
  - 2) ACCESS ROAD TO BE CONSTRUCTED BY OTHERS.
  - 3) PAVED SHOULDER TAPERS ARE 8:1 UNLESS OTHERWISE NOTED.
  - 4) SEE SHEET 2- FOR 50' TRANSITION FROM 1'-6" C&G TO 2'-9" C&G.

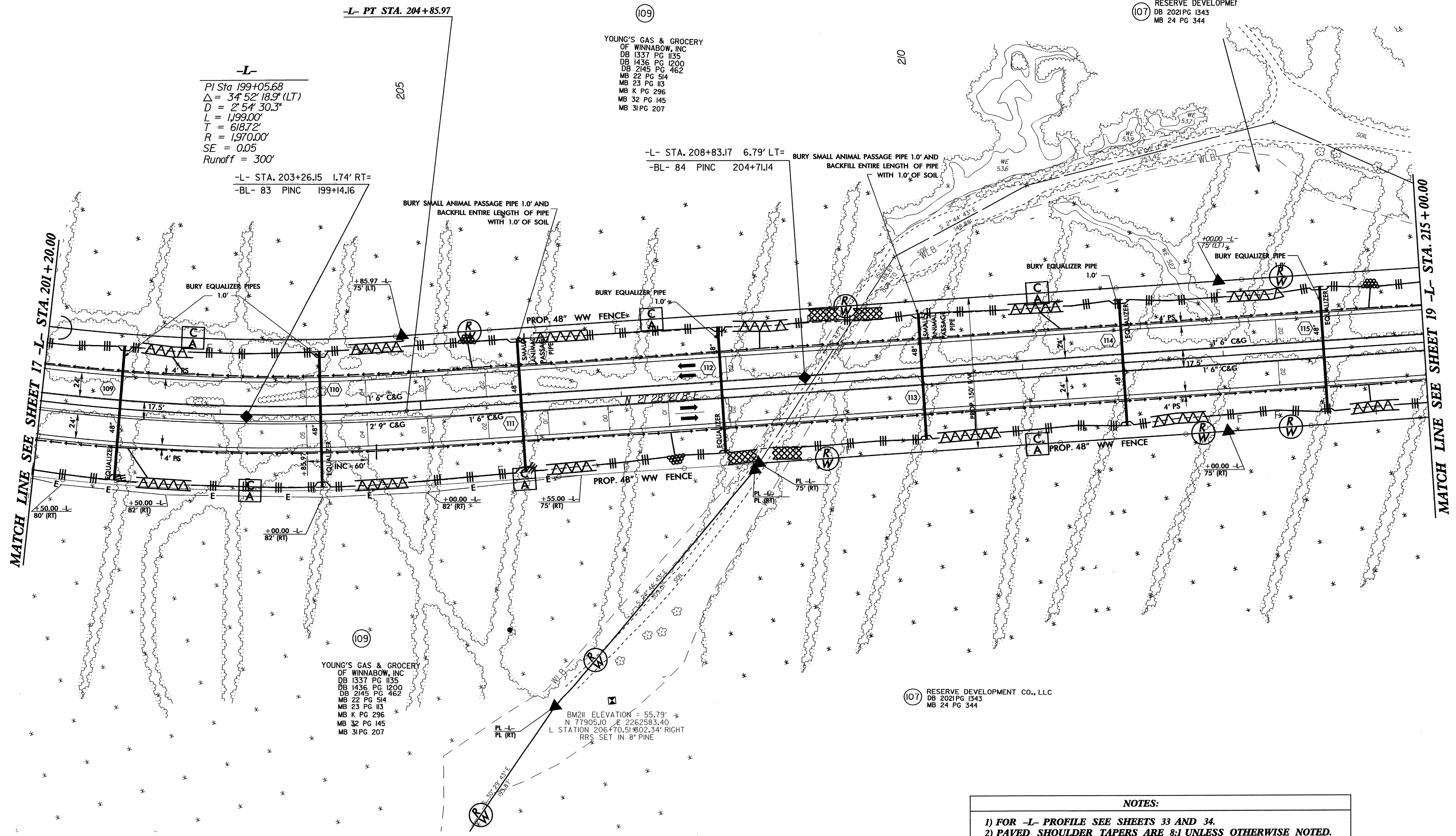
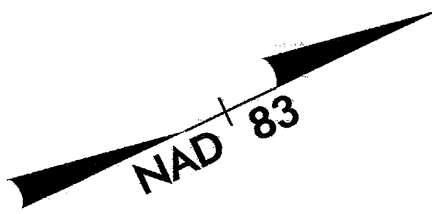
**MATCH LINE SEE SHEET 26 -ACC3- STA. 13+40.00**

**MATCH LINE SEE SHEET 16 -L- STA. 187+50.00**

**MATCH LINE SEE SHEET 18 -L- STA. 201+20.00**

PROJECT REFERENCE NO.		SHEET NO.	
R-2245		EC-39/CONST.18	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

**SPECIAL CONTROL OF ACCESS DESIGNATION**  
**NO REVISIONS SHALL BE MADE TO THE CONTROL OF ACCESS WITHOUT APPROVAL OF NCDOT, FHWA, USEPA AND NCDENR PER AGREEMENT AND USACE PER PERMIT CONDITION.**



**-L-**  
 PI Sta 199+05.68  
 $\Delta = 34^{\circ} 52' 18.9''$  (LT)  
 $D = 2^{\circ} 54' 30.3''$   
 $L = 1,199.00'$   
 $T = 618.72'$   
 $R = 1,970.00'$   
 $SE = 0.05$   
 Runoff = 300'

YOUNG'S GAS & GROCERY OF WINNABOW, INC  
 DB 1337 PG 1135  
 DB 1436 PG 1200  
 DB 2145 PG 462  
 MB 22 PG 514  
 MB 23 PG 113  
 MB K PG 296  
 MB 32 PG 145  
 MB 31 PG 207

RESERVE DEVELOPMENT CO., LLC  
 DB 2021 PG 1343  
 MB 24 PG 344

MATCH LINE SEE SHEET 17 -L- STA. 201 + 20.00

MATCH LINE SEE SHEET 19 -L- STA. 215 + 00.00

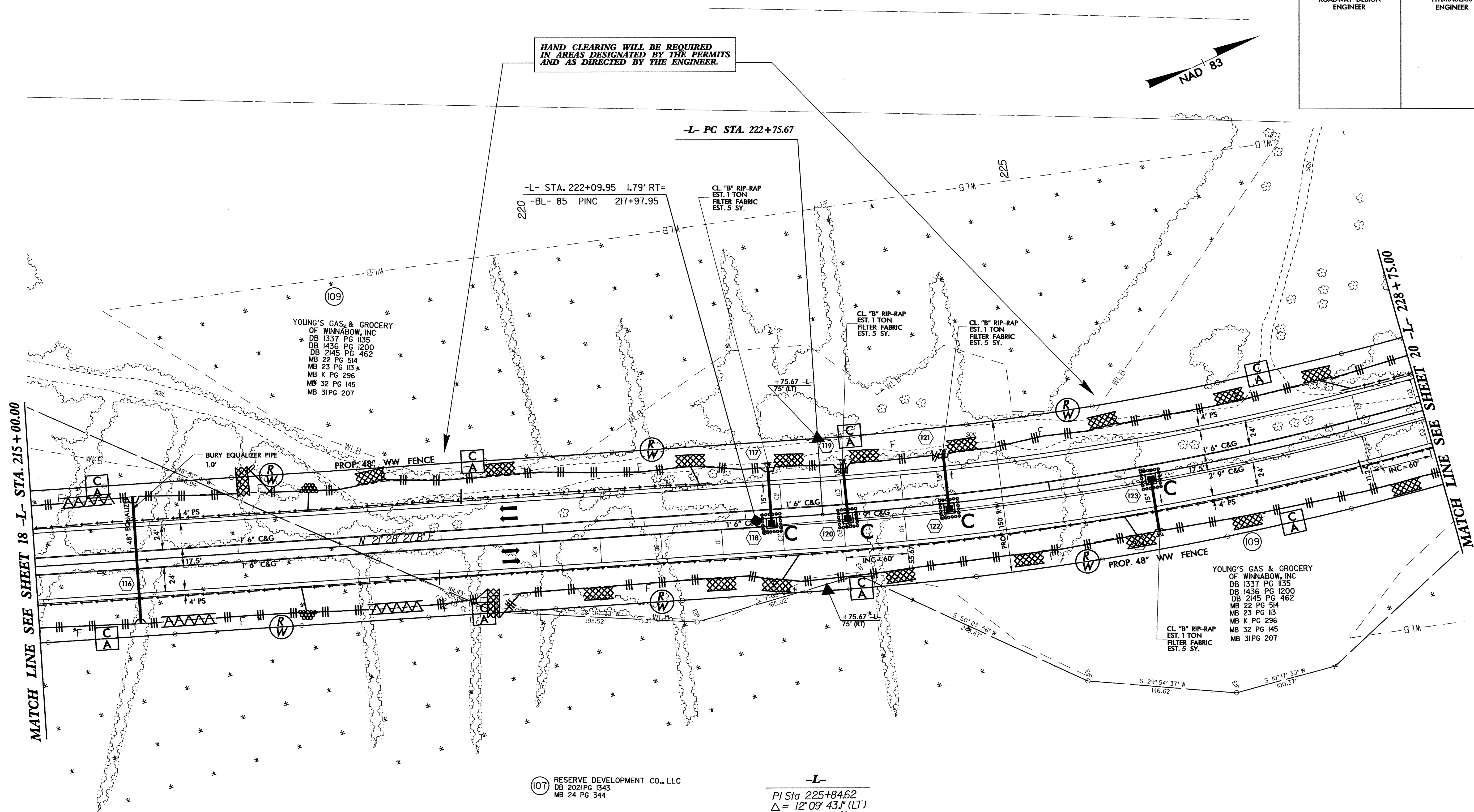
REVISIONS

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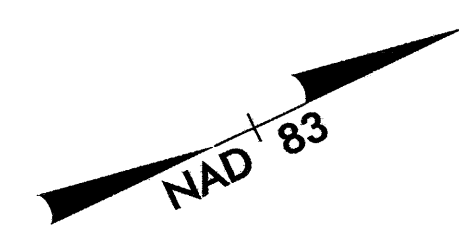
**NOTES:**  
 1) FOR -L- PROFILE SEE SHEETS 33 AND 34.  
 2) PAVED SHOULDER TAPERS ARE 8:1 UNLESS OTHERWISE NOTED.  
 3) SEE SHEET 2- FOR 50' TRANSITION FROM 1'-6" C&G TO 2'-9" C&G.

PROJECT REFERENCE NO. R-2245	SHEET NO. EC-40/CONST.19
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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18-SEP-2006 09:20  
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**HAND CLEARING WILL BE REQUIRED  
IN AREAS DESIGNATED BY THE PERMITS  
AND AS DIRECTED BY THE ENGINEER.**



MATCH LINE SEE SHEET 18 -L- STA. 215 + 00.00

MATCH LINE SEE SHEET 20 -L- STA. 228 + 75.00

-L- STA. 222+09.95 1.79' RT=  
-BL- 85 PINC 217+97.95

-L- PC STA. 222+75.67

(107) RESERVE DEVELOPMENT CO., LLC  
DB 2021 PG 1343  
MB 24 PG 344

**-L-**  
PI Sta 225+84.62  
 $\Delta = 12^{\circ} 09' 43.1''$  (LT)  
D = 158' 32.6"  
L = 615.57'  
T = 308.95'  
R = 2,900.00'  
SE = 0.04  
Runoff = 240'

**SPECIAL CONTROL OF ACCESS DESIGNATION  
NO REVISIONS SHALL BE MADE TO THE CONTROL  
OF ACCESS WITHOUT APPROVAL OF NCDOT, FHWA,  
USEPA AND NCDENR PER AGREEMENT AND  
USAGE PER PERMIT CONDITION.**

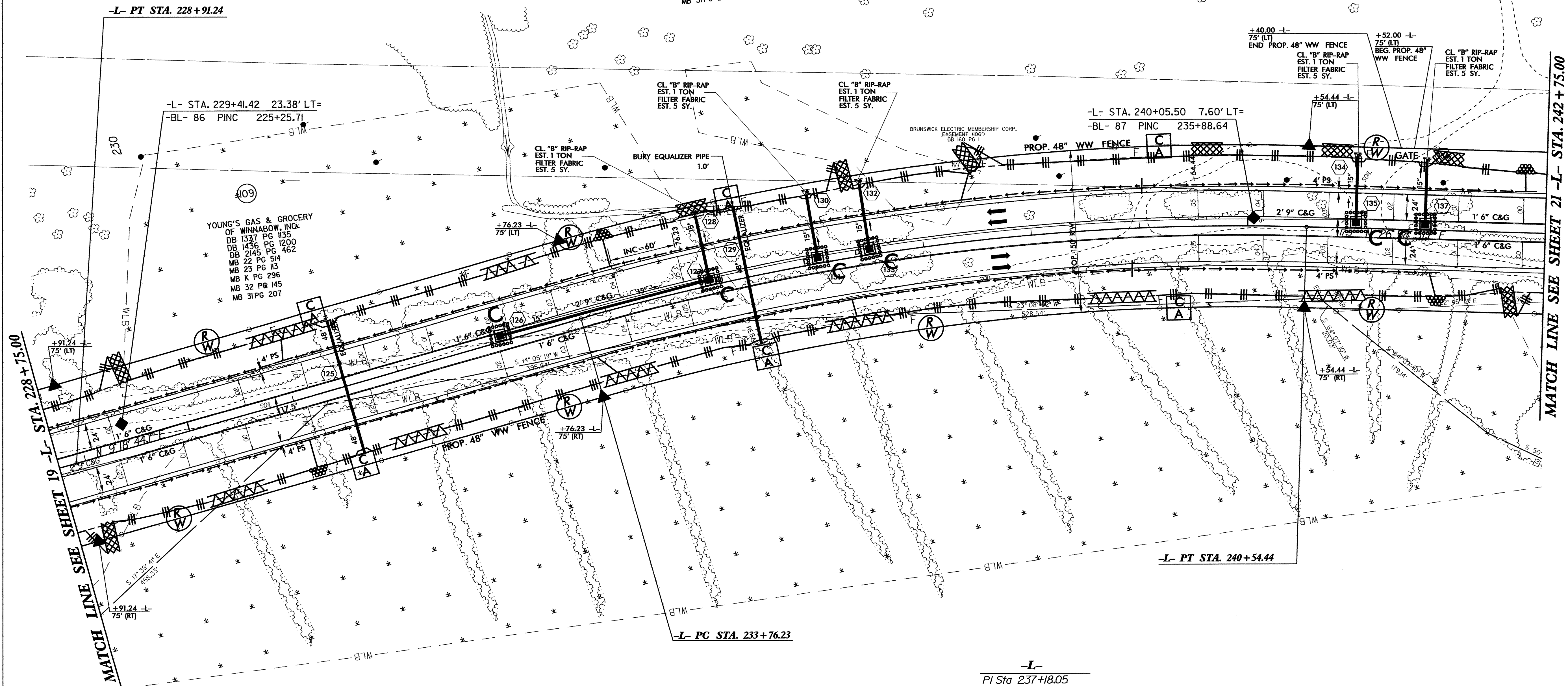
**NOTES:**  
1) FOR -L- PROFILE SEE SHEET 34.  
2) PAVED SHOULDER TAPERS ARE 8:1 UNLESS OTHERWISE NOTED.  
3) SEE SHEET 2- FOR 50' TRANSITION FROM 1'-6" C&G TO 2'-9" C&G.

8/17/99

PROJECT REFERENCE NO.		SHEET NO.	
R-2245		EC-41/CONST.20	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

**-L-**  
 PI Sta 225+84.62  
 $\Delta = 12^{\circ} 09' 43.1''$  (LT)  
 $D = 1^{\circ} 58' 32.6''$   
 $L = 615.57'$   
 $T = 308.95'$   
 $R = 2,900.00'$   
 $S.E. = 0.04$

BM212 ELEVATION = 55.52'  
 N 80407.77 E 2262706.47  
 L STATION 231+37.05 391.22' LEFT  
 RRS SET IN 10' PINE



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Paban A RENV22445

(107) RESERVE DEVELOPMENT CO., LLC  
 DB 2021 PG 1343  
 MB 24 PG 344

**SPECIAL CONTROL OF ACCESS DESIGNATION**  
 NO REVISIONS SHALL BE MADE TO THE CONTROL OF ACCESS WITHOUT APPROVAL OF NCDOT, FHWA, USEPA AND NCDENR PER AGREEMENT AND USAGE PER PERMIT CONDITION.

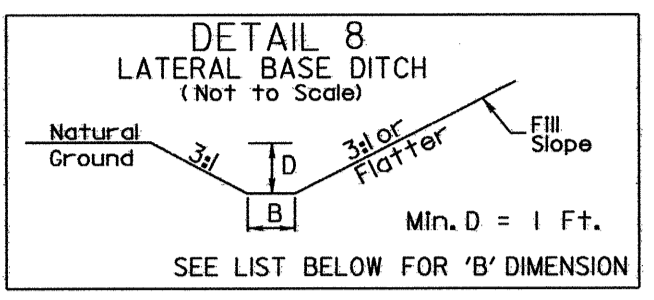
**-L-**  
 PI Sta 237+18.05  
 $\Delta = 17^{\circ} 39' 46.9''$  (RT)  
 $D = 2^{\circ} 36' 15.7''$   
 $L = 678.21'$   
 $T = 341.82'$   
 $R = 2,200.00'$   
 $SE = 0.05$   
 Runoff = 300'

**NOTES:**  
 1) FOR -L- PROFILE SEE SHEETS 34 AND 35.  
 2) PAVED SHOULDER TAPERS ARE 8:1 UNLESS OTHERWISE NOTED.  
 3) SEE SHEET 2- FOR 50' TRANSITION FROM 1'-6" C&G TO 2'-9" C&G.

PROJECT REFERENCE NO.	SHEET NO.
R-2245	EC-42/CONST.21
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

**SPECIAL CONTROL OF ACCESS DESIGNATION**  
**NO REVISIONS SHALL BE MADE TO THE CONTROL OF ACCESS WITHOUT APPROVAL OF NCDOT, FHWA, USEPA AND NCDENR PER AGREEMENT AND USACE PER PERMIT CONDITION.**

C  
A



-L- STA 244+00 LT to -L- STA 248+20 LT B=3'  
 -Y7- STA 13+00 RT to -Y7- STA 17+96 RT B=3'  
 -Y7- STA 12+75 LT to -Y7- STA 16+00 LT B=3'  
 -Y7- STA 19+14 LT to -Y7- STA 23+88 LT B=2'  
 -Y8- STA 12+05 LT to -Y8- STA 12+77 LT B=5'  
 -Y8- STA 10+57 RT to -Y8- STA 16+50 RT B=5'

-Y7- STA. 13+98.06 23.02' RT=  
 -BY6- 90 PINC 10+11.16

+30.00 -Y7- 72.91' (LT) END PROP. 48" WW FENCE  
 +80.00 -Y7- 72.91' (LT) BEG. PROP. 48" WW FENCE

YOUNG'S GAS & GROCERY OF WINNABOW, INC  
 DB 1337 PG 1135  
 DB 1436 PG 1200  
 DB 2145 PG 462  
 MB 22 PG 514  
 MB 23 PG 113  
 MB K PG 296  
 MB 32 PG 145  
 MB 31 PG 207

42 x 14 x 3  
5' weir

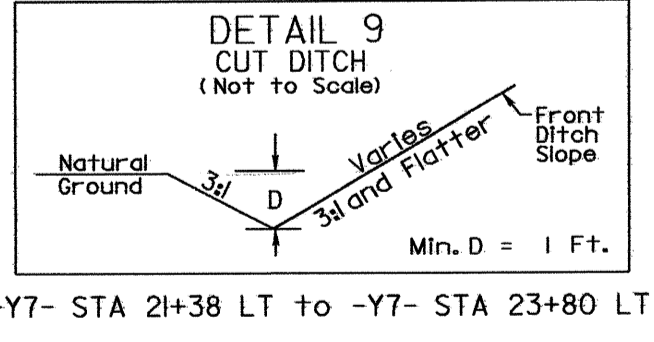
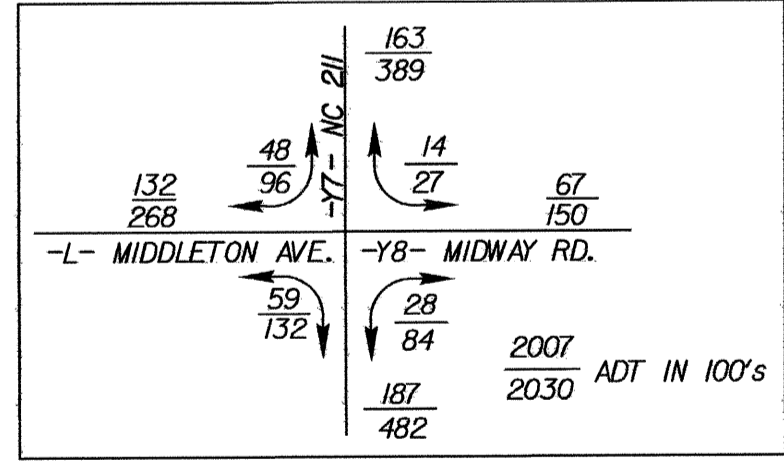
68 x 17 x 3  
6' weir

END CONSTRUCTION  
 -Y8- POT STA. 16+50.00

-L- -Y8-  
 PI Sta 245+91.31 Δ = 15' 53" 42.3" (LT)  
 D = 3' 10" 59.2"  
 L = 499.36'  
 T = 251.29'  
 R = 1,800.00'  
 SE = 0.04  
 Runoff = 240'

PI Sta 10+51.21 Δ = 12' 14" 28.1" (LT)  
 D = 28' 38" 52.4"  
 L = 427.3'  
 T = 21.45'  
 R = 200.00'

END TIP PROJECT R-2245  
 -L- POT STA. 248+66.02



-Y7- STA 21+38 LT to -Y7- STA 23+80 LT

NOTES:

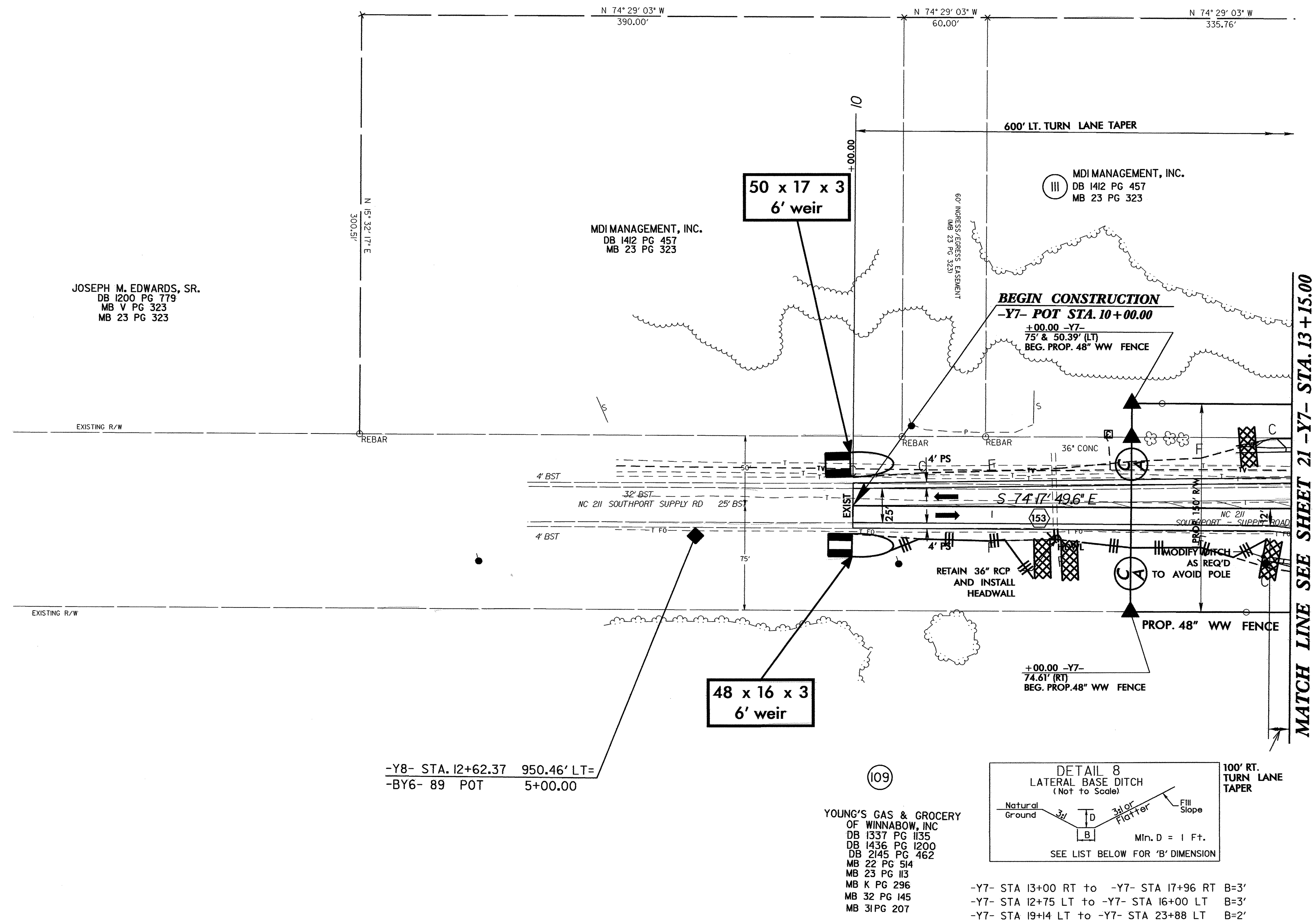
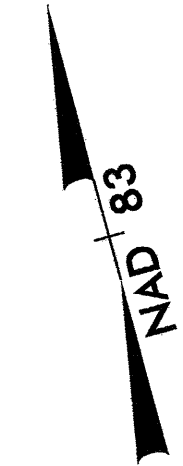
- 1) FOR -L- PROFILE SEE SHEET 35.
- 2) FOR -Y7- AND -Y8- PROFILES SEE SHEET 38.
- 3) PAVED SHOULDER TAPERS ARE 8:1 UNLESS OTHERWISE NOTED.
- 4) FOR -Y7- TEMPORARY WIDENING FOR STAGED CONSTRUCTION, SEE SHEET 2-E AND TRAFFIC CONTROL PLANS.

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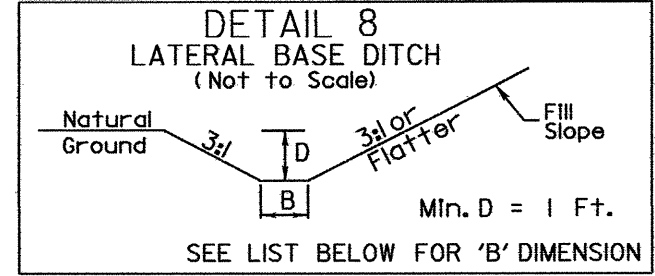
8/17/99

18-SEP-2006 10:00  
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rebar AT BEN\22145

PROJECT REFERENCE NO.	SHEET NO.
R-2245	EC-43/CONST.22
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



MATCH LINE SEE SHEET 21 -Y7- STA. 13+15.00



(109)  
 YOUNG'S GAS & GROCERY  
 OF WINNABOW, INC.  
 DB 1337 PG 1135  
 DB 1436 PG 1200  
 DB 2145 PG 462  
 MB 22 PG 514  
 MB 23 PG 113  
 MB K PG 296  
 MB 32 PG 145  
 MB 31 PG 207

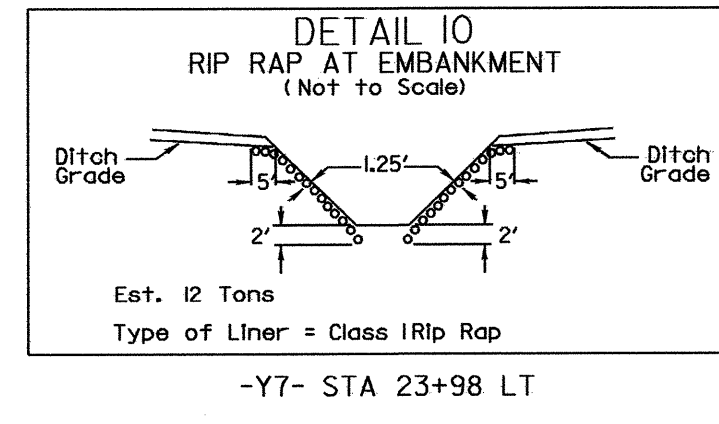
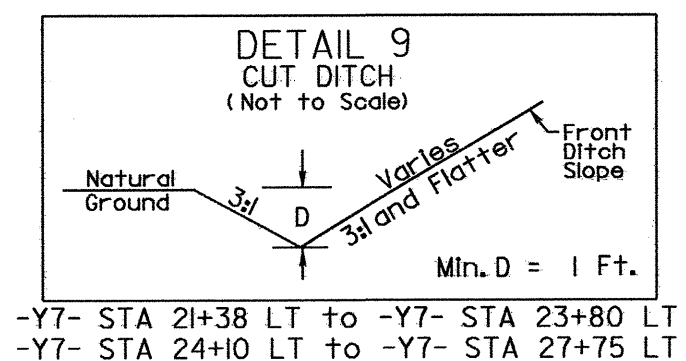
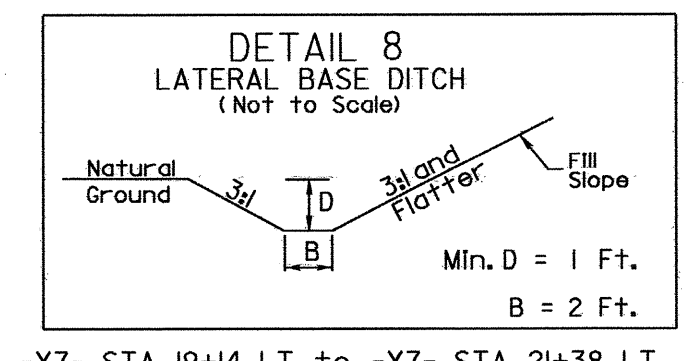
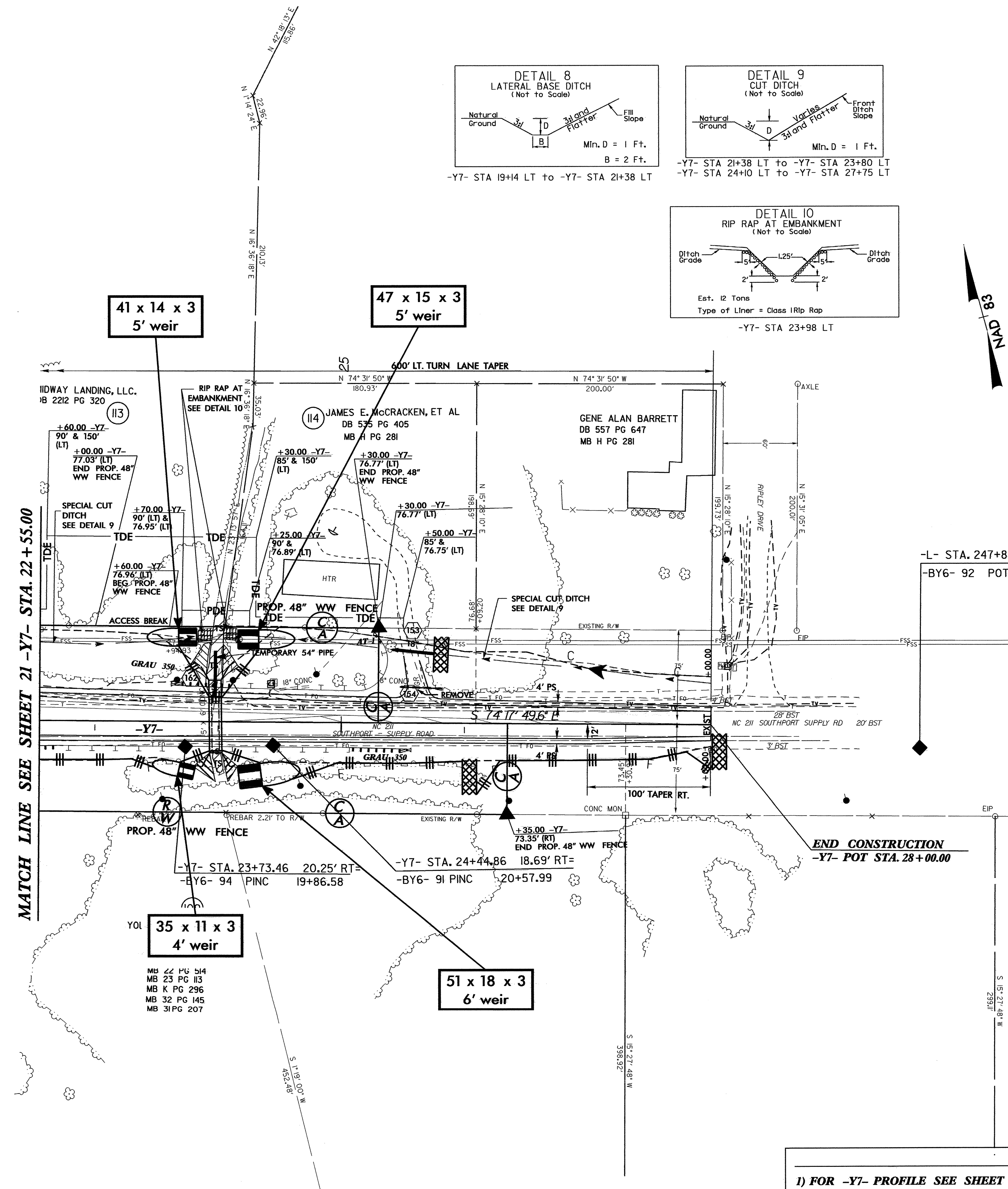
-Y7- STA 13+00 RT to -Y7- STA 17+96 RT B=3'  
 -Y7- STA 12+75 LT to -Y7- STA 16+00 LT B=3'  
 -Y7- STA 19+14 LT to -Y7- STA 23+88 LT B=2'

**NOTES:**  
 1) FOR -Y7- PROFILE SEE SHEET 38.  
 2) PAVED SHOULDER TAPERS ARE 8:1 UNLESS OTHERWISE NOTED.

PROJECT REFERENCE NO.	SHEET NO.
R-2245	EC-44/CONST.23
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

8/17/99

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 AT REN221445

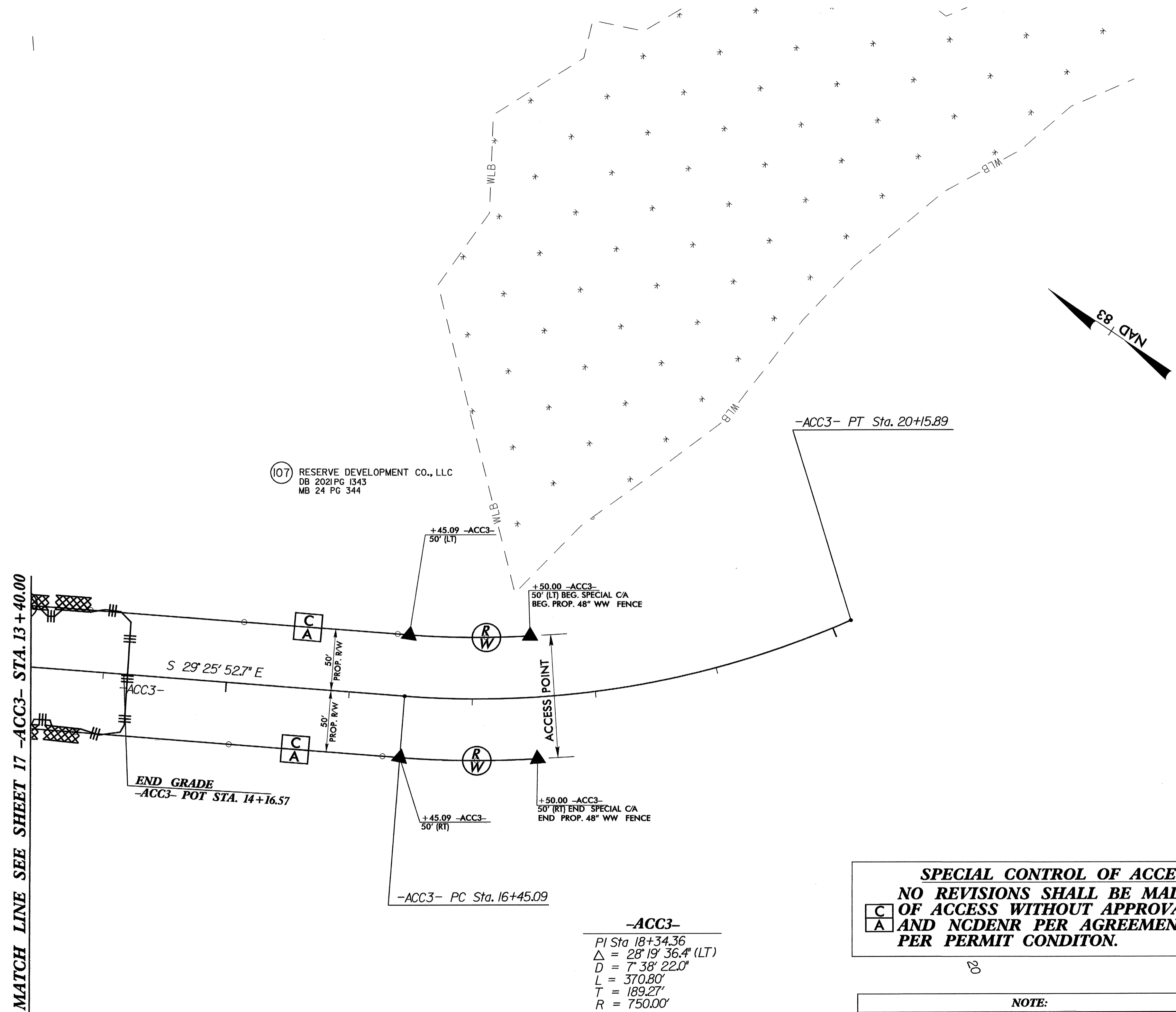


**NOTES:**

- 1) FOR -Y7- PROFILE SEE SHEET 38.
- 2) PAVED SHOULDER TAPERS ARE 8:1 UNLESS OTHERWISE NOTED.
- 3) FOR -Y7- TEMPORARY WIDENING FOR STAGED CONSTRUCTION, SEE SHEET 2-E AND TRAFFIC CONTROL PLANS.

PROJECT REFERENCE NO.	SHEET NO.
R-2245	EC-45/CONST.26
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	

MATCH LINE SEE SHEET 17 -ACC3- STA. 13+40.00



(107) RESERVE DEVELOPMENT CO., LLC  
DB 2021 PG 1343  
MB 24 PG 344

(107) RESERVE DEVELOPMENT CO., LLC  
DB 2021 PG 1343  
MB 24 PG 344

**-ACC3-**  
 PI Sta 18+34.36  
 $\Delta = 28^\circ 19' 36.4" (LT)$   
 $D = 7^\circ 38' 22.0"$   
 $L = 370.80'$   
 $T = 189.27'$   
 $R = 750.00'$

**SPECIAL CONTROL OF ACCESS DESIGNATION**  
**NO REVISIONS SHALL BE MADE TO THE CONTROL**  
**OF ACCESS WITHOUT APPROVAL OF NCDOT, FHWA**  
**AND NCDENR PER AGREEMENT AND USACE**  
**PER PERMIT CONDITON.**

**NOTE:**  
**1) ACCESS ROAD TO BE CONSTRUCTED BY OTHERS.**

