



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY  
GOVERNOR

LYNDO TIPPETT  
SECRETARY

April 28, 2005

US Army Corps of Engineers  
Raleigh Field Office  
6508 Falls of Neuse Road, Suite 120  
Raleigh, NC 27615-6814

ATTENTION: John Thomas  
NCDOT Coordinator, Division 11

Dear Sir:

Subject: **Supplemental Information for Application for Individual Section 404 and Section 401 Water Quality Certification** for the widening of NC 67 from SR 1355 (Messick Road) to US 601 in Booneville, Yadkin County. State Project No. 6.771008. Division 11, T.I.P. No. R-3415:

The North Carolina Department of Transportation (NCDOT) proposes to improve NC 67 from SR 1355 to US 601 in Booneville by widening and constructing turn lanes. NC 67 will vary from two lanes to three lanes, on existing location, and 24 feet to 36 feet travel way, including 2 foot paved shoulders. Curb and gutter may be added in some spots along NC 67. The project length is approximately 6.2 miles.

The purpose of this letter is to provide the amount of temporary surface water impacts that will occur during the construction of the box culvert extensions. Temporary impacts include the following: Site 1 65 feet, Site 2 80 feet, Site 3 60 feet and Site 5 55 feet for a total of 260 feet. No additional mitigation is required. Enclosed are the revised permit drawings and summary sheet.

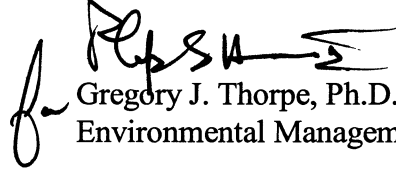
**MAILING ADDRESS:**  
NC DEPARTMENT OF TRANSPORTATION  
PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS  
1598 MAIL SERVICE CENTER  
RALEIGH NC 27699-1598

TELEPHONE: 919-715-1500  
FAX: 919-715-1501  
WEBSITE: [WWW.NCDOT.ORG](http://WWW.NCDOT.ORG)

**LOCATION:**  
2728 CAPITAL BLVD.  
PARKER LINCOLN BUILDING, SUITE 168  
RALEIGH NC 27604

If you have any questions or need additional information, please call Rachele Beauregard at 715-1383.

Sincerely,



Gregory J. Thorpe, Ph.D.  
Environmental Management Director, PDEA

w/attachment

- Mr. John Hennessy, NCDWQ (7 copies)
- Ms. Marla Chambers, NCWRC
- Ms. Becky Fox, USEPA – Whittier, NC
- Mr. Ronald Mikulak, USEPA – Atlanta, GA
- Ms. Marella Buncick, USFWS
- Dr. David Chang, P.E., Hydraulics
- Mr. Greg Perfetti, P.E., Structure Design
- Mr. Mark Staley, Roadside Environmental
- Mr. Michael A. Pettyjohn, P.E.
- Mr. Heath Slaughter, DEO

w/o attachment

- Mr. Jay Bennett, P.E., Roadway Design
- Mr. Omar Sultan, Programming and TIP
- Mr. Art McMillan, P.E., Highway Design
- Ms. Stephanie Caudill, PDEA Project Planning Engineer
- Mr. David Franklin, USACE, Wilmington
- Ms. Beth Harmon, EEP
- Mr. Carl Goode, PE

# WETLAND PERMIT IMPACT SUMMARY

Site No.	Station (From/To)	Structure (Size/Type)	WETLAND IMPACTS			SURFACE WATER IMPACTS					
			Fill In Wetlands (Ac)	Temp. Fill In Wetlands (Ac)	Excavation In Wetlands (Ac)	Mechanized Clearing (Method III) (Ac)	Fill In SW (Natural) (Ac)	Temp Exist Channel Impact (Ft)	Temp Fill In SW (Ac)	Existing Channel Impact (Ft)	Natural Stream Design (Ft)
1	-L- 79+43.01	EXTEND 368'X15' RCBC					0.014	65'	0.014'	32'	
	-L- 81+00 RT	LATERAL DITCH CONST.					0.019			325'	
2	-L- 119+06.31	EXTEND 368'X12' RCBC					0.010	60'	0.021	28'	
3	-L- 141+90.62	EXTEND 268'X8' RCBC					0.009	60'	0.006	46'	
	-L- 141+50 LT	LATERAL DITCH CONST.					0.004			74'	
	-L- 143+00 LT	LATERAL DITCH CONST.					0.018			208'	
4	-L- 153+48	RETAIN, COLLAR & EXTEND EX. 4'X5' RCBC W/ 60" RCP					0.008			60'	
5	-L- 171+37.35	EXTEND 6'X5' RCBC					0.016	55'	0.004	38'	
6	-L- 209+25 RT	LATERAL DITCH CONST.					0.010			126'	
7	-L- 209+25 RT	RETAIN & EXTEND EX. 4'X5' RCBC W/ 60" RCP					0.006			48'	
8	-L- 222+41.60	RETAIN & EXTEND EX. 4'X4' RCBC W/ 54" RCP					0.006			49'	
PAGE TOTAL:							0.120	260'	0.045	1034'	

**DIVISION OF HIGHWAYS  
N.C. DEPT. OF TRANSPORTATION  
YADKIN COUNTY**

**PROJECT: R-3415  
IMPROVEMENT OF NC 67 FROM SR 1355  
(MESSICK) ROAD TO JUST WEST OF  
BOONVILLE**

# WETLAND PERMIT IMPACT SUMMARY

Site No.	Station (From/To)	Structure (Size/Type)	WETLAND IMPACTS			SURFACE WATER IMPACTS					
			Fill In Wetlands (Ac)	Temp. Fill In Wetlands (Ac)	Excavation In Wetlands (Ac)	Mechanized Clearing (Method III) (Ac)	Fill In SW (Natural) (Ac)	Temp. Exist Channel Impact (Ft)	Temp. Fill In SW (Ac)	Existing Channel Impact (Ft)	Natural Stream Design (Ft)
9	-L- 233+96.76	RETAIN & EXTEND EX. 4'X4' RCBC W/ 5' RCP					0.019			98'	
10	-L- 233+96.76	RETAIN & EXTEND EX. 3'X4' RCBC W/ 48" RCP					0.016			80'	
PAGE TOTAL:							0.035			178'	
PREVIOUS PAGE TOTAL:							0.120		260'	1034'	
PROJECT TOTAL:							0.155		260'	1212'	

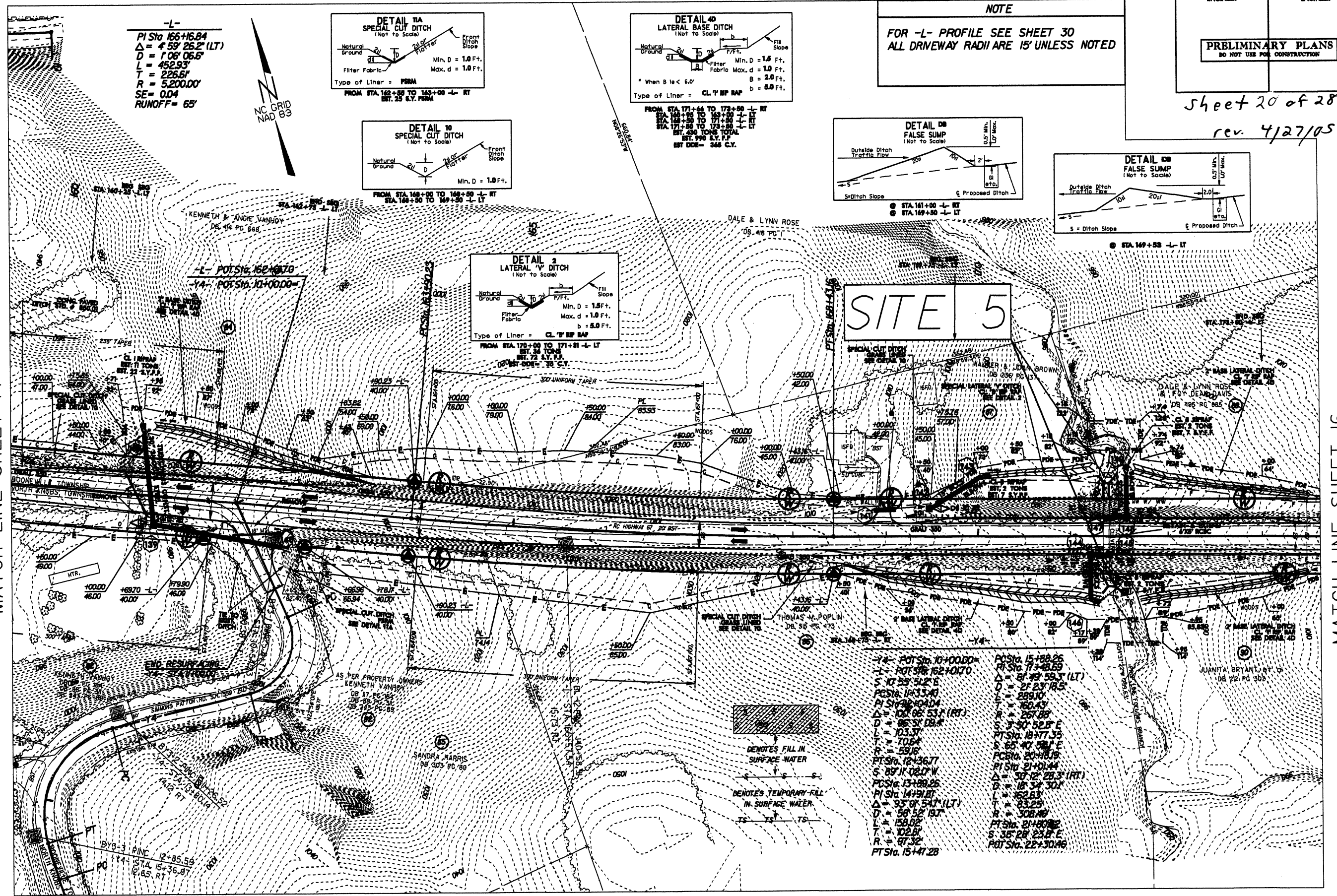
**DIVISION OF HIGHWAYS**  
**N.C. DEPT. OF TRANSPORTATION**  
**YADKIN COUNTY**  
 PROJECT: R-3415  
 IMPROVEMENT OF NC 67 FROM SR 1355  
 (MESSICK) ROAD TO JUST WEST OF  
 BOONVILLE  
 SHEET 7 OF 28 rev. 4/27/05 8/03/04

8/17/99

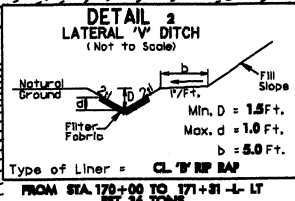
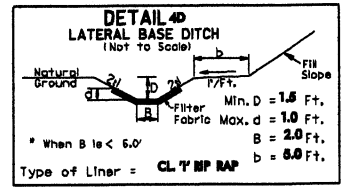
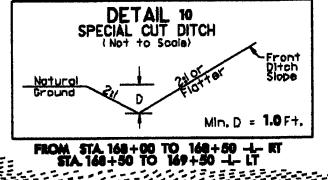
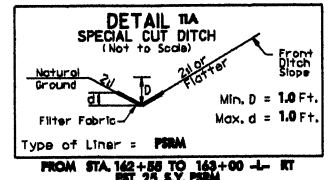
Sheet 20 of 28  
rev. 4/27/05

MATCH LINE SHEET 14

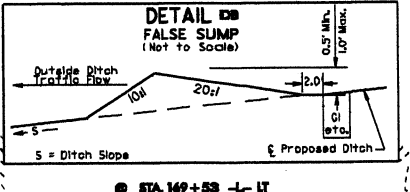
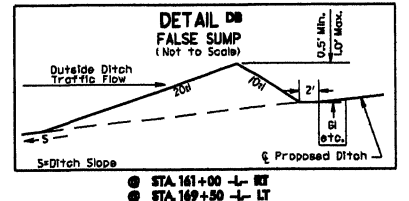
MATCH LINE SHEET 16



**-L-**  
 $PI\ STA\ 166+16.84$   
 $\Delta = 4^\circ 59' 26.2" (LT)$   
 $D = 108' 06.5"$   
 $L = 452.93'$   
 $R = 226.61'$   
 $R = 5200.00'$   
 $SE = 0.04$   
 $RUNOFF = 65'$

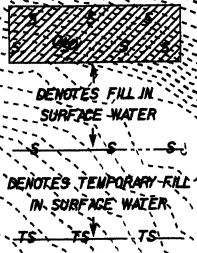


**NOTE**  
FOR -L- PROFILE SEE SHEET 30  
ALL DRIVEWAY RADII ARE 15' UNLESS NOTED



**SITE 5**

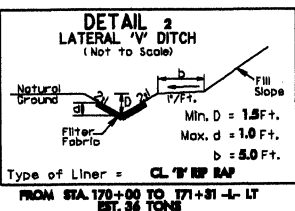
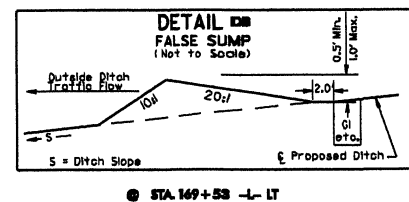
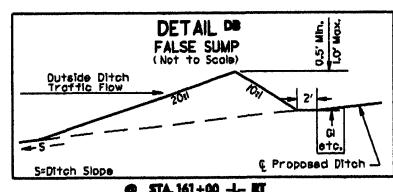
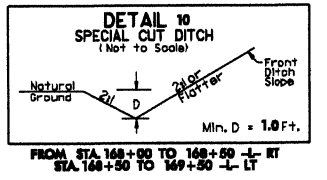
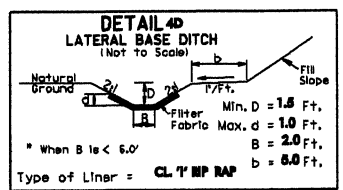
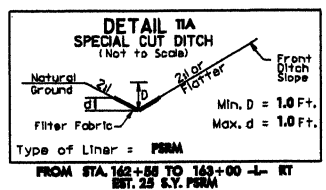
- |                                     |                                    |
|-------------------------------------|------------------------------------|
| -Y- POT Sta 10+00.00                | PC Sta. 15+88.26                   |
| -L- POT Sta 162+01.70               | PI Sta. 17+48.69                   |
| S 10° 25' 52.2" E                   | $\Delta = 81^\circ 49' 59.3" (LT)$ |
| L = 103.37                          | D = 21' 23" 11.5"                  |
| PI Sta. 11+33.40                    | L = 289.10                         |
| PI Sta. 12+04.04                    | T = 160.43                         |
| $\Delta = 100^\circ 06' 53.7" (RT)$ | R = 267.88                         |
| D = 86.51' 13.8"                    | S 3° 30' 52.8" E                   |
| L = 103.37                          | PT Sta. 18+77.35                   |
| T = 70.64                           | S 65° 40' 58.1" E                  |
| R = 59.16                           | PC Sta. 20+78.19                   |
| PT Sta. 12+36.77                    | PI Sta. 21+01.44                   |
| S 87° 11' 02.0" W                   | $\Delta = 30^\circ 12' 28.3" (RT)$ |
| PC Sta. 13+88.26                    | D = 18' 34" 30.1"                  |
| PI Sta. 14+91.87                    | L = 162.63                         |
| $\Delta = 93^\circ 01' 54.7" (LT)$  | T = 83.25                          |
| D = 56' 52" 19.7"                   | R = 308.48                         |
| L = 158.02                          | PT Sta. 21+00.92                   |
| T = 102.61                          | S 38° 28' 23.8" E                  |
| R = 97.32                           | POT Sta. 22+30.16                  |
| PT Sta. 15+47.28                    |                                    |



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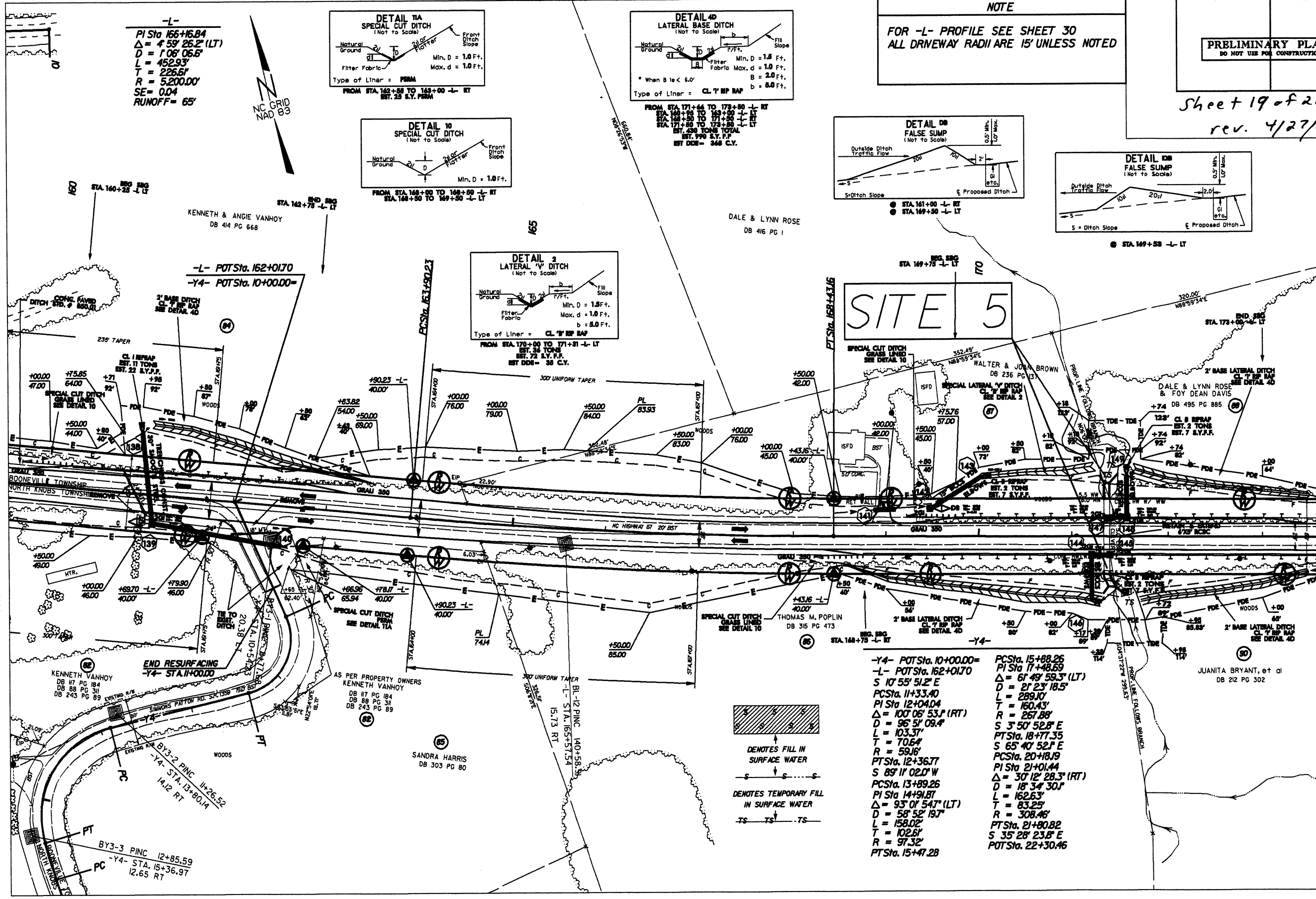
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rev. 4/27/05

**NOTE**  
FOR -L- PROFILE SEE SHEET 30  
ALL DRIVEWAY RADII ARE 15' UNLESS NOTED

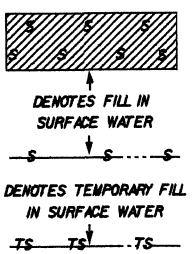


MATCH LINE SHEET 14

MATCH LINE SHEET 16



- Y4- POTSta. 10+00.00=
- L- POTSta. 162+01.70
- PCSta. 11+33.40
- PI Sta. 12+04.04
- $\Delta = 100' 06" 53.1' (RT)$
- D = 96' 51" 09.4'
- L = 103.37'
- T = 70.64'
- R = 59.16'
- PTSta. 12+36.77
- S 89' 11" 02.0" W
- PCSta. 13+89.26
- PI Sta. 14+91.87
- $\Delta = 93' 01" 54.7' (LT)$
- D = 58' 52" 19.7'
- L = 158.02'
- T = 102.61'
- R = 97.32'
- PTSta. 15+47.28
- PCSta. 15+88.26
- PI Sta. 17+48.69
- $\Delta = 61' 49" 59.3' (LT)$
- D = 21' 23" 18.5'
- L = 289.10'
- T = 160.43'
- R = 267.88'
- S 3' 50" 52.8" E
- PTSta. 18+77.35
- S 65' 40" 52.1" E
- PCSta. 20+88.19
- PI Sta. 21+01.44
- $\Delta = 30' 12" 28.3' (RT)$
- D = 18' 34" 30.1'
- L = 162.63'
- T = 83.25'
- R = 308.46'
- PTSta. 21+80.82
- S 35' 28" 23.8" E
- POTSta. 22+30.46

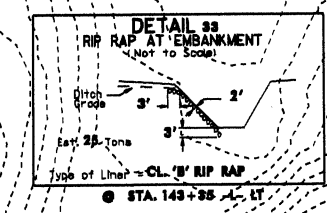


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PROJECT REFERENCE NO.	SHEET NO.
R-3415	13
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

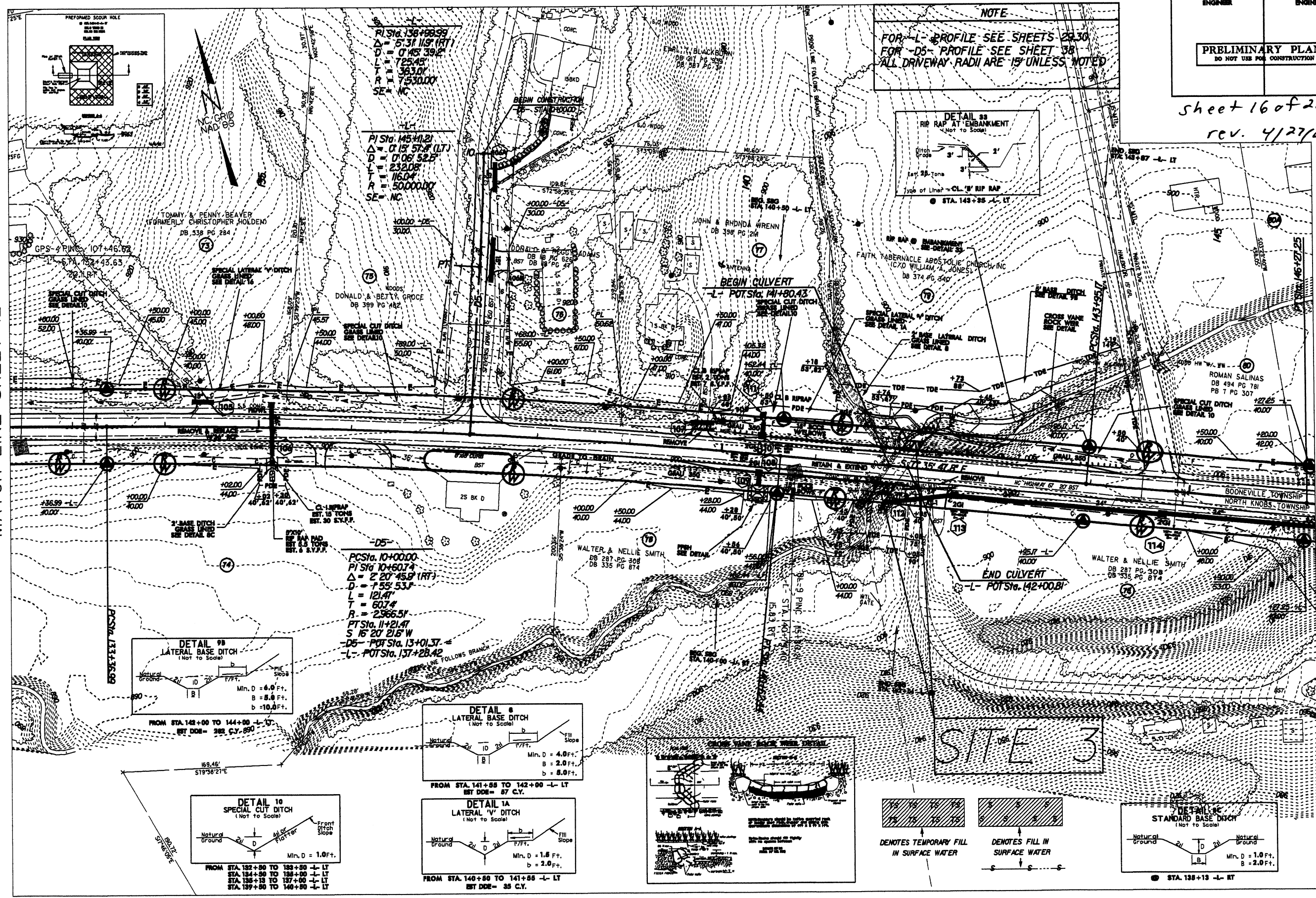
sheet 16 of 28  
rev. 4/27/05

**NOTE**  
FOR -L- PROFILE SEE SHEETS 22,30  
FOR -D5- PROFILE SEE SHEET 38  
ALL DRIVEWAY RADII ARE 15' UNLESS NOTED



MATCH LINE SHEET 12

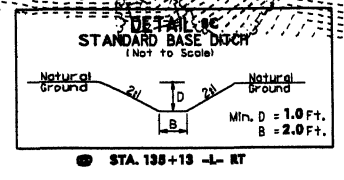
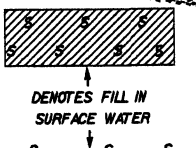
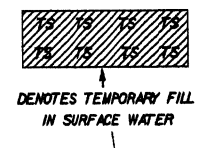
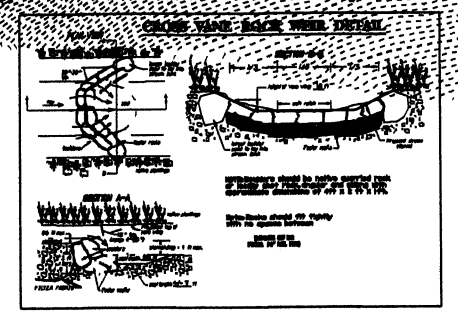
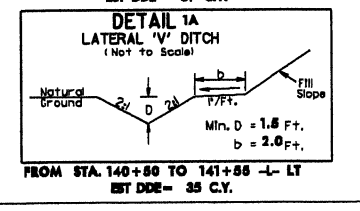
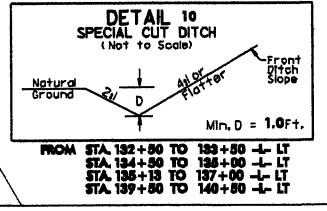
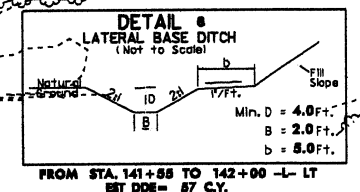
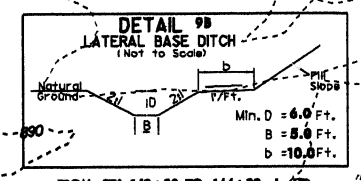
MATCH LINE SHEET 14



PI Sta. 136+89.99  
Δ = 5°31' 11.9" (RT)  
D = 0' 45' 39.2"  
L = 725.45'  
T = 363.07'  
R = 7530.00'  
SE = NC

PI Sta. 145+11.21  
Δ = 0°15' 57.4" (LT)  
D = 0' 06' 52.5"  
L = 232.08'  
T = 116.04'  
R = 50000.00'  
SE = NC

PC Sta. 10+00.00  
PI Sta. 10+60.74  
Δ = 2°20' 45.9" (RT)  
D = 1°55' 53.1"  
L = 121.47'  
T = 60.74'  
R = 2366.51'  
PT Sta. 11+21.47  
S 16°20' 21.5" W  
-D5- POT Sta. 13+01.37  
-L- POT Sta. 137+28.42



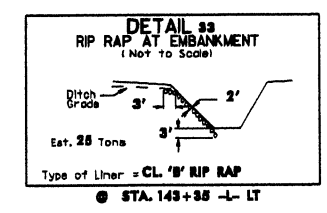
8/17/99

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PROJECT REFERENCE NO.	SHEET NO.
R-3415	13
RDW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

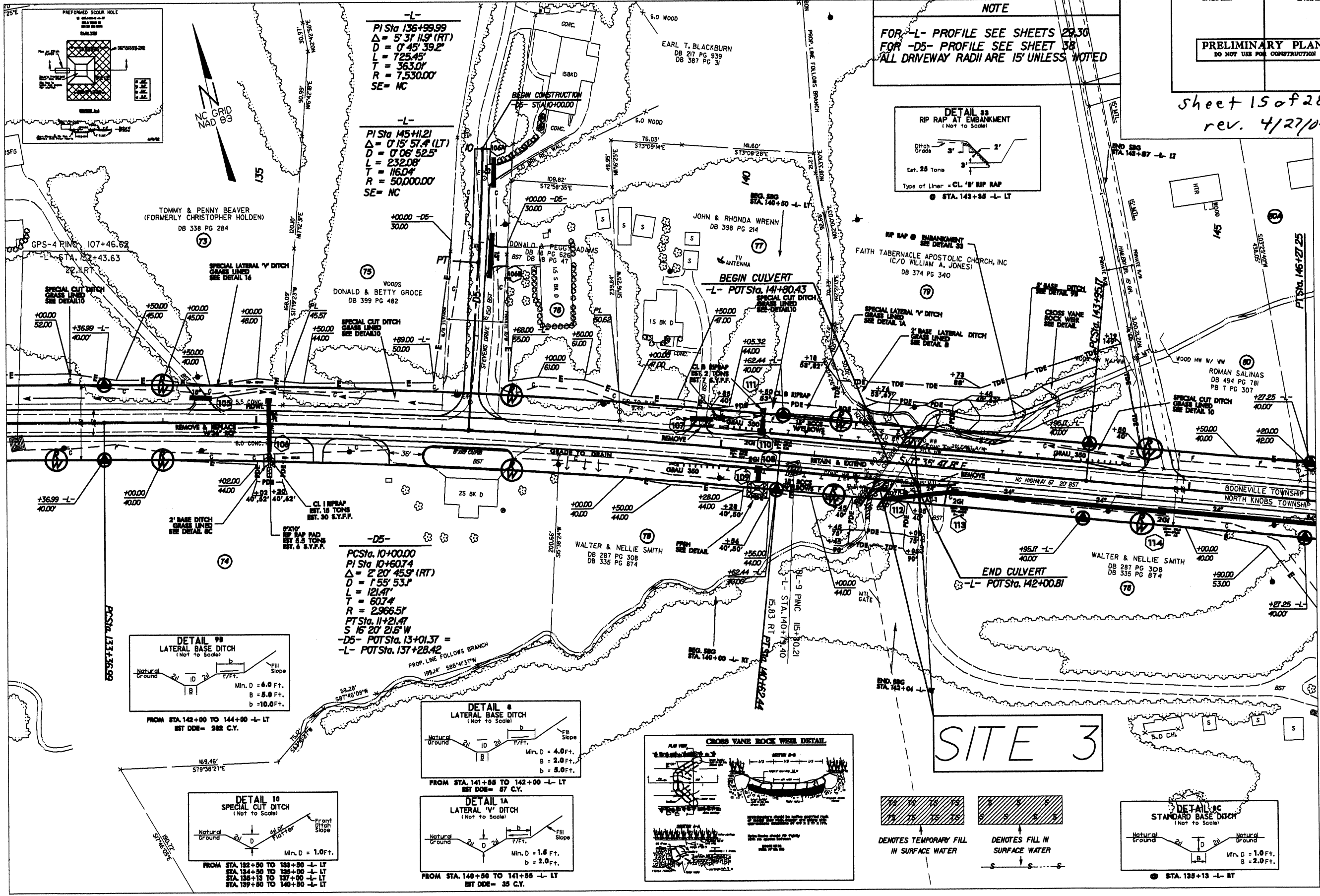
Sheet 15 of 28  
rev. 4/27/05

**NOTE**  
FOR -L- PROFILE SEE SHEETS 28,30  
FOR -D5- PROFILE SEE SHEET 38  
ALL DRIVEWAY RADII ARE 15' UNLESS NOTED



MATCH LINE SHEET 12

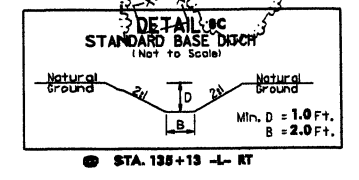
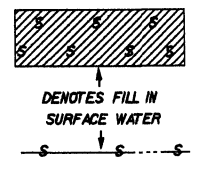
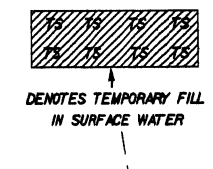
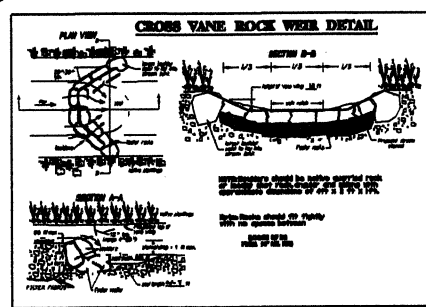
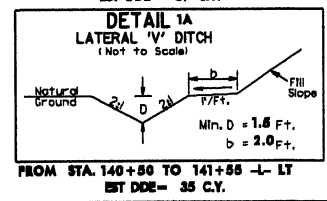
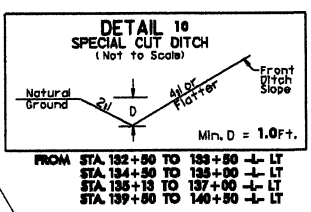
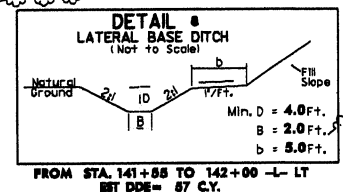
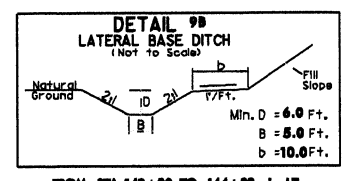
MATCH LINE SHEET 14



**-L-**  
PI Sta 136+99.99  
 $\Delta = 5' 31'' 11.9''$  (RT)  
D = 0' 45' 39.2"  
L = 725.45'  
T = 363.0'  
R = 7,530.00'  
SE = NC

**-L-**  
PI Sta 145+11.21  
 $\Delta = 0' 15' 57.4''$  (LT)  
D = 0' 06' 52.5"  
L = 232.08'  
T = 116.04'  
R = 50,000.00'  
SE = NC

**-D5-**  
PCSta. 10+00.00  
PI Sta 10+60.74  
 $\Delta = 2' 20' 45.5''$  (RT)  
D = 1' 55' 53.1"  
L = 121.47'  
T = 60.74'  
R = 2,966.51'  
PT Sta. 11+21.47  
S 15° 20' 21.6" W  
-D5- POT Sta. 13+01.37 =  
-L- POT Sta. 137+28.42



SITE 3

8/17/99

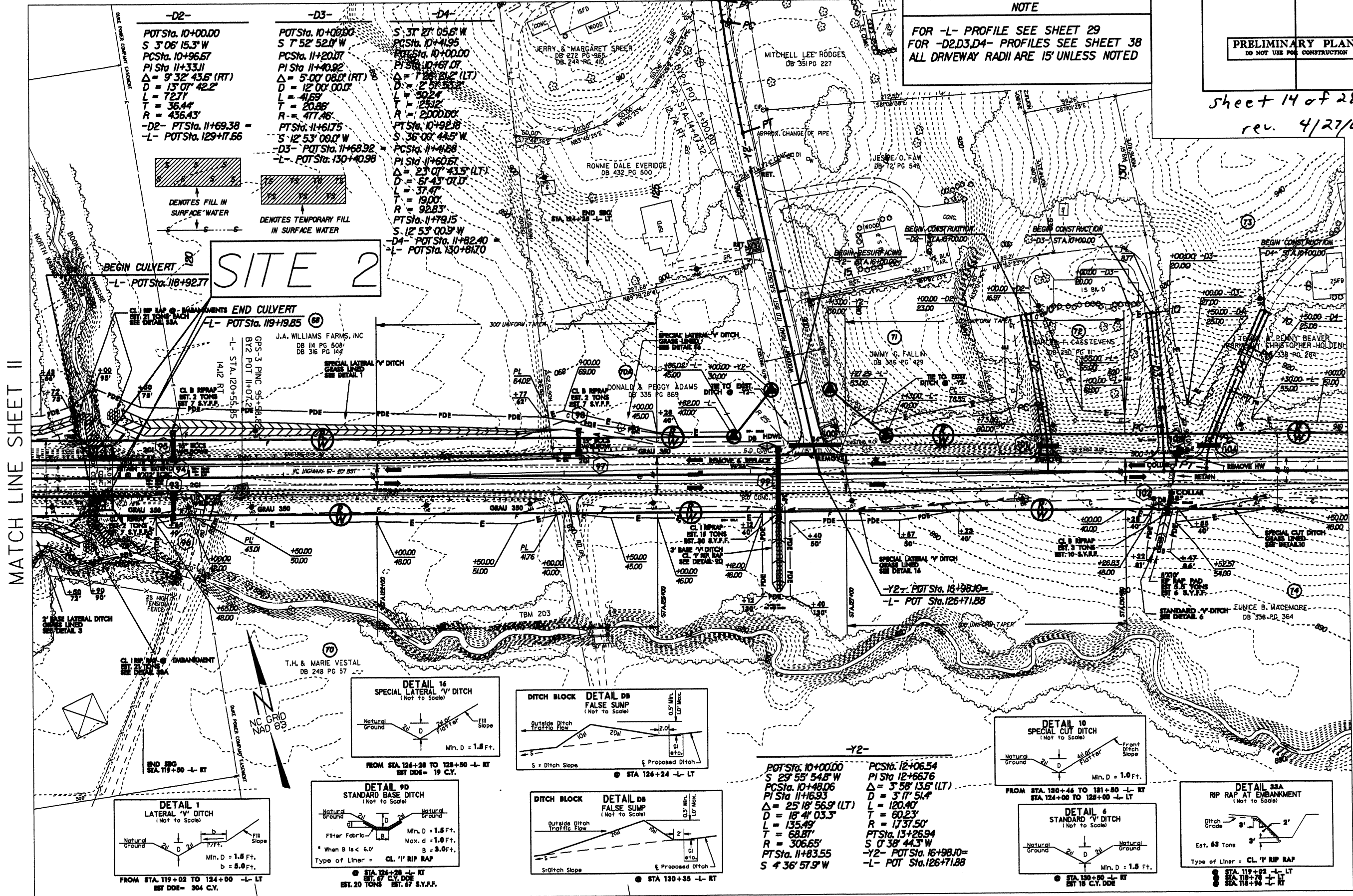
REVISIONS

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Sheet 14 of 28  
rev. 4/27/05

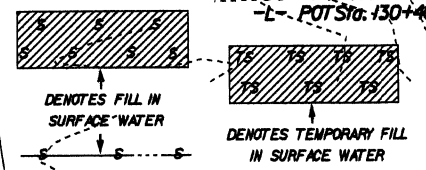
**NOTE**  
FOR -L- PROFILE SEE SHEET 29  
FOR -D2,D3,D4- PROFILES SEE SHEET 38  
ALL DRIVEWAY RADII ARE 15' UNLESS NOTED



**-D2-**  
POT Sta. 10+00.00  
S 3° 06' 15.3" W  
PC Sta. 10+96.67  
PI Sta. 11+33.11  
Δ = 9° 32' 43.6" (RT)  
D = 13° 07' 42.2"  
L = 72.71'  
T = 36.44'  
R = 436.43'  
-D2- PTS Sta. 11+69.38 =  
-L- POT Sta. 129+17.66

**-D3-**  
POT Sta. 10+00.00  
S 7° 52' 52.0" W  
PC Sta. 11+20.07  
PI Sta. 11+40.92  
Δ = 5° 00' 08.0" (RT)  
D = 12° 00' 00.0"  
L = 41.69'  
T = 20.86'  
R = 477.46'  
PTS Sta. 11+61.75  
S 12° 53' 08.0" W  
-D3- POT Sta. 11+68.92 =  
-L- POT Sta. 130+40.98

**-D4-**  
S 37° 27' 05.6" W  
POT Sta. 10+41.95  
PC Sta. 10+100.00  
PI Sta. 10+67.07  
Δ = 1° 28' 21.2" (LT)  
D = 2° 58' 55.2"  
L = 30.24'  
T = 25.12'  
R = 2000.00'  
PTS Sta. 10+92.18  
S 36° 08' 44.5" W  
PC Sta. 11+41.88  
PI Sta. 11+60.67  
Δ = 23° 07' 43.5" (LT)  
D = 61° 43' 01.0"  
L = 37.47'  
T = 19.00'  
R = 92.83'  
PTS Sta. 11+79.15  
S 12° 53' 00.9" W  
-D4- POT Sta. 11+82.40 =  
-L- POT Sta. 130+81.70



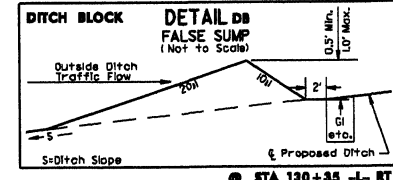
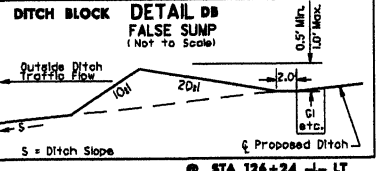
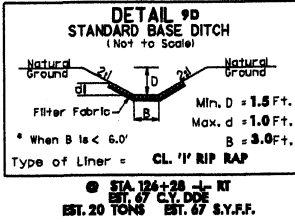
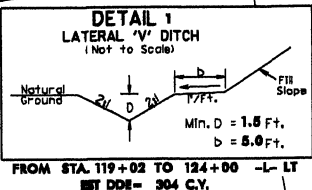
**SITE 2**

BEGIN CULVERT  
-L- POT Sta. 118+92.77

END CULVERT  
-L- POT Sta. 119+19.85

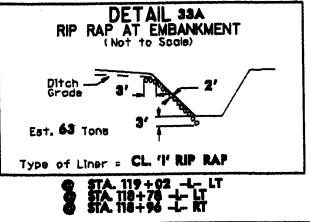
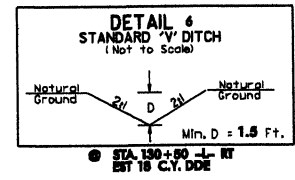
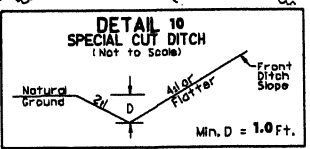
MATCH LINE SHEET 11

MATCH LINE SHEET 13



**-Y2-**  
POT Sta. 10+00.00  
S 29° 55' 54.8" W  
PC Sta. 10+48.06  
PI Sta. 11+16.93  
Δ = 25° 18' 56.9" (LT)  
D = 18° 41' 03.3"  
L = 135.49'  
T = 68.87'  
R = 306.65'  
PTS Sta. 11+83.55  
S 4° 36' 57.9" W

**-Y2-**  
POT Sta. 12+06.54  
PC Sta. 12+66.76  
PI Sta. 12+66.76  
Δ = 3° 58' 13.6" (LT)  
D = 3° 17' 51.4"  
L = 120.40'  
T = 60.23'  
R = 1737.50'  
PTS Sta. 13+26.94  
S 0° 38' 44.3" W  
-Y2- POT Sta. 16+98.10 =  
-L- POT Sta. 126+71.88



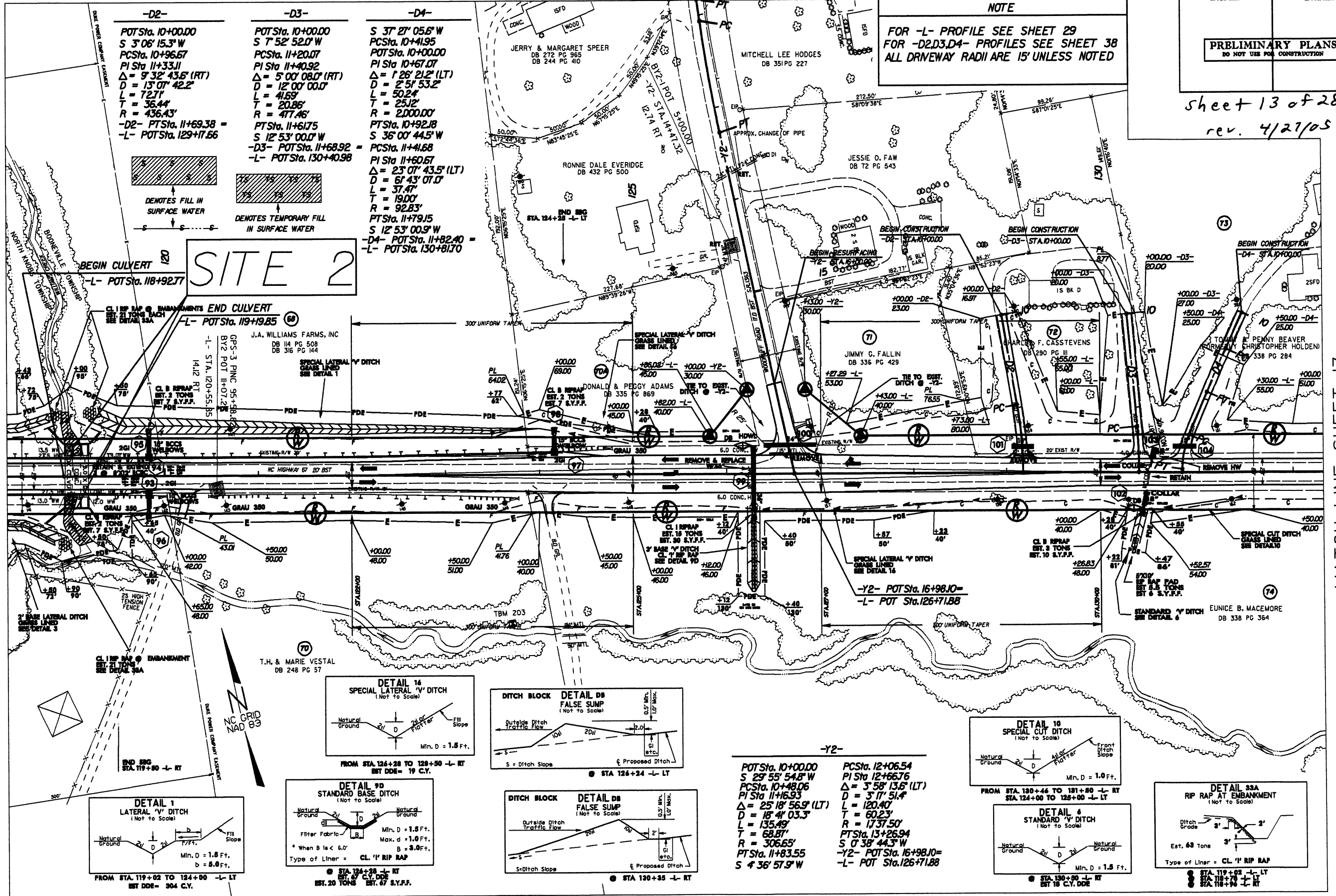
4/28/04 MOVE TCE TO STA. 10+50 -D4- ON PARCEL 73

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AT 011000-226452

PROJECT REFERENCE NO.	SHEET NO.
R-3415	12
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

sheet 13 of 28  
rev. 4/27/05

**NOTE**  
FOR -L- PROFILE SEE SHEET 29  
FOR -D2,D3,D4- PROFILES SEE SHEET 38  
ALL DRIVEWAY RADII ARE 15' UNLESS NOTED



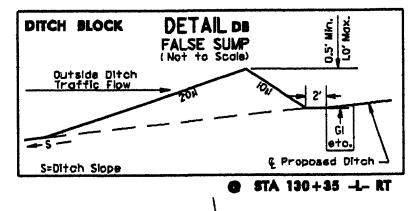
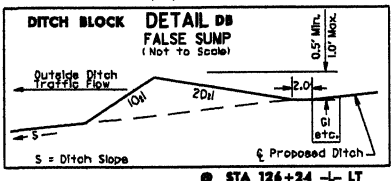
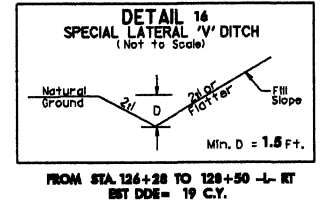
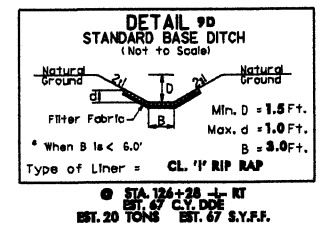
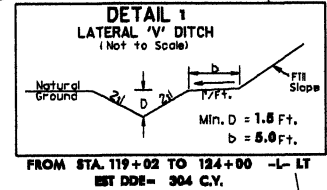
-D2-	-D3-	-D4-
POTSta. 10+00.00 S 3° 06' 15.3" W PCSta. 10+96.67 PISta. 10+33.11 Δ = 9° 32' 43.6" (RT) D = 13° 07' 42.2" L = 72.71' T = 36.44' R = 436.43'	POTSta. 10+00.00 S 7° 52' 52.0" W PCSta. 11+20.07 PISta. 11+40.92 Δ = 5° 00' 08.0" (RT) D = 12° 00' 00.0" L = 41.69' T = 20.86' R = 477.46'	S 37° 27' 05.6" W PCSta. 10+41.95 POTSta. 10+00.00 PISta. 10+67.07 Δ = 1° 26' 21.2" (LT) D = 2° 51' 53.2" L = 50.24' T = 25.32' R = 2,000.00'
-D2- POTSta. 11+69.38 = -L- POTSta. 129+17.66	POTSta. 11+61.75 S 12° 53' 00.0" W -D3- POTSta. 11+68.92 = -L- POTSta. 130+40.98	POTSta. 10+92.18 S 36° 00' 44.5" W PISta. 11+60.67 Δ = 2° 37' 43.5" (LT) D = 6° 43' 07.0" L = 37.47' T = 19.00' R = 92.83' POTSta. 11+79.15 S 12° 53' 00.9" W -D4- POTSta. 11+82.40 = -L- POTSta. 130+81.70

**SITE 2**

MATCH LINE SHEET 11

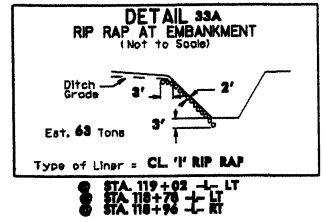
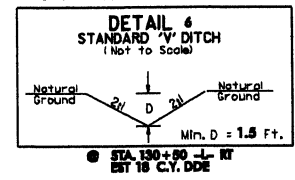
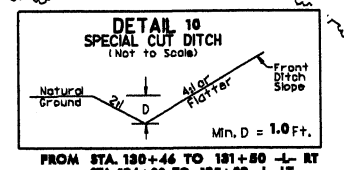
MATCH LINE SHEET 13

4/28/04 MOVE TO STA. 10+50 -D4- ON PARCEL 73



**-Y2-**

POTSta. 10+00.00 S 29° 55' 54.8" W PCSta. 10+48.06 PISta. 11+16.93 Δ = 25° 18' 56.9" (LT) D = 18° 41' 03.3" L = 135.49' T = 68.87' R = 306.65'	PCSta. 12+06.54 PISta. 12+66.76 Δ = 3° 58' 13.6" (LT) D = 3° 17' 51.4" L = 120.40' T = 60.23' R = 1,737.50'
POTSta. 11+83.55 S 4° 36' 57.9" W	POTSta. 13+26.94 S 0° 38' 44.3" W -Y2- POTSta. 16+98.10 = -L- POTSta. 126+71.88

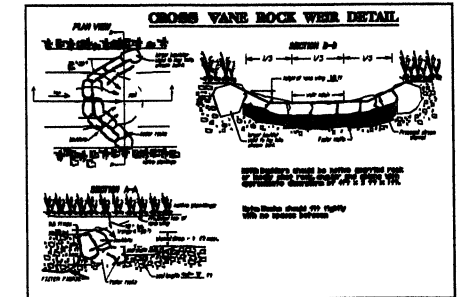
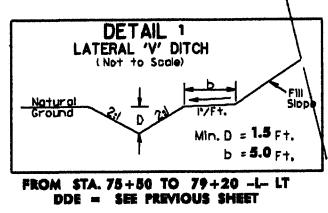
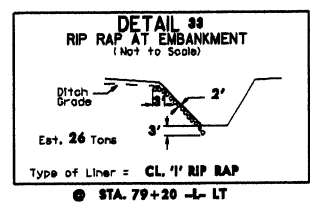
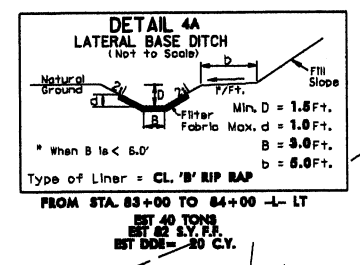


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PROJECT REFERENCE NO. R-3415	SHEET NO. 9
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

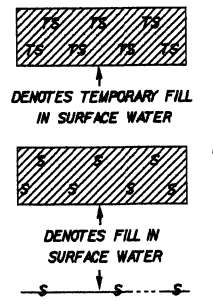
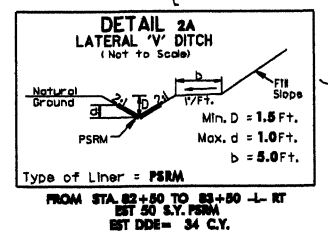
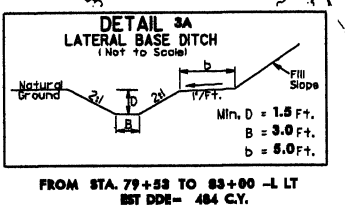
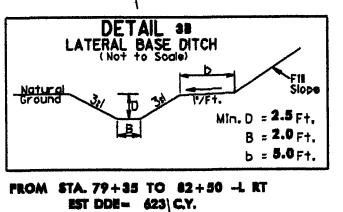
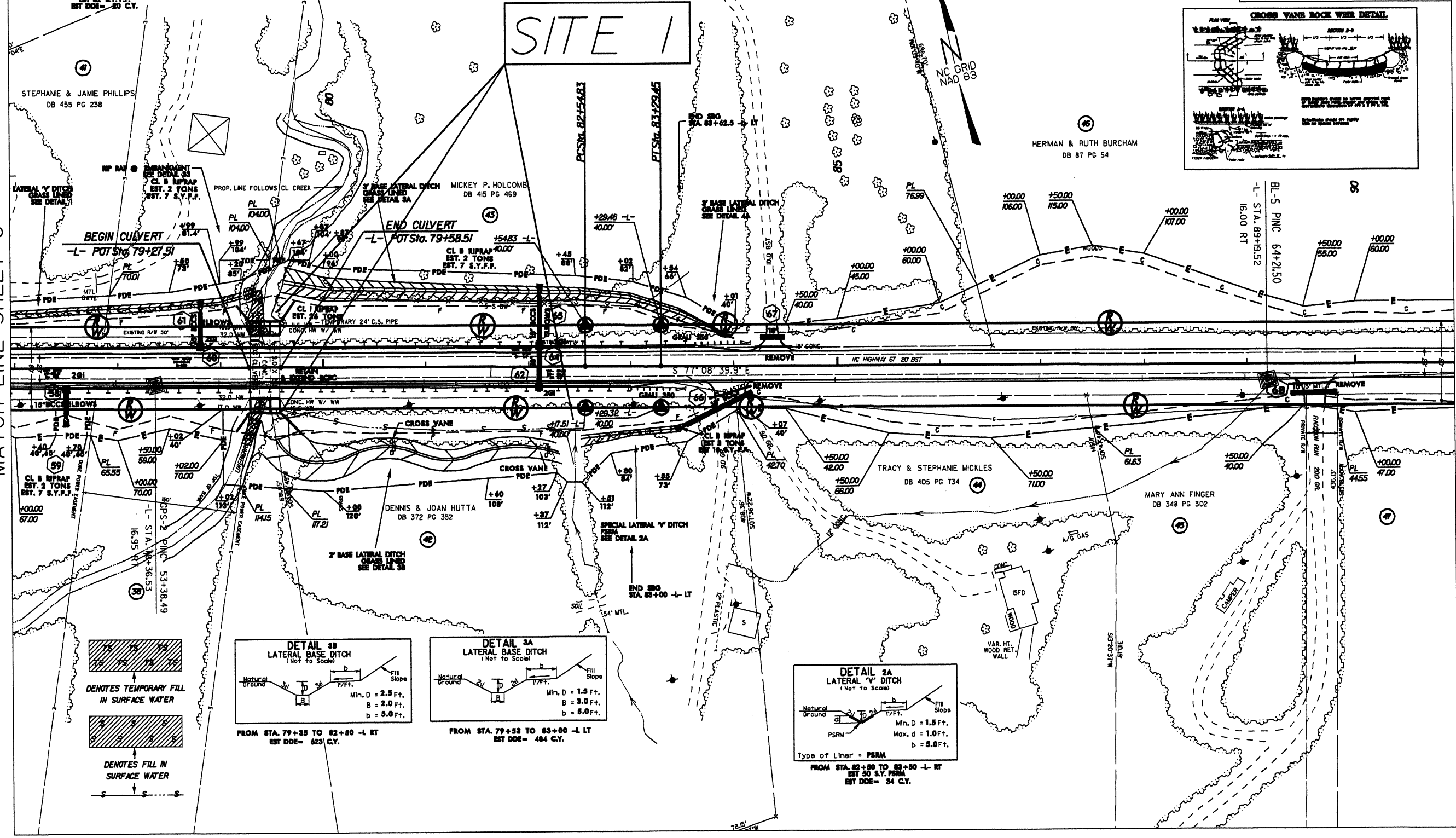
Sheet 11 of 28  
rev. 4/27/05

**NOTE**  
FOR -L- PROFILE SEE SHEETS 27,28  
ALL DRIVEWAY RADII ARE 15' UNLESS NOTED



MATCH LINE SHEET 8

MATCH LINE SHEET 10

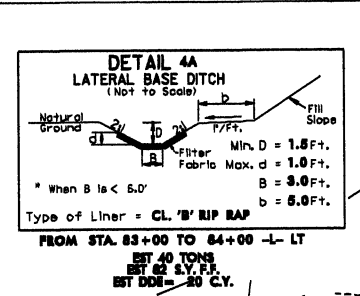


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27\_APR\_2005\_Site\_11.dwg  
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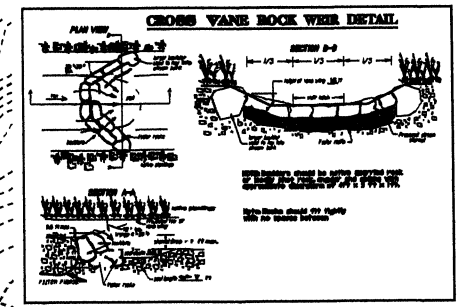
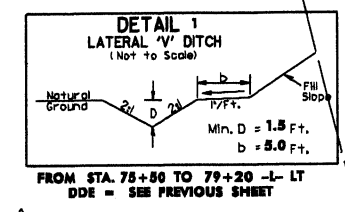
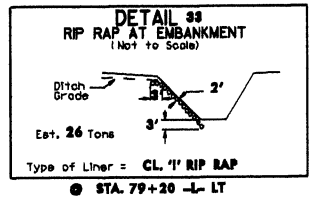
PROJECT REFERENCE NO.	SHEET NO.
R-3415	9
RDW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

Sheet 12 of 28  
rev. 4/27/05

**NOTE**  
FOR -L- PROFILE SEE SHEETS 27,28  
ALL DRIVEWAY RADII ARE 15' UNLESS NOTED

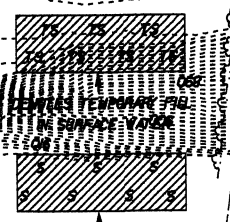
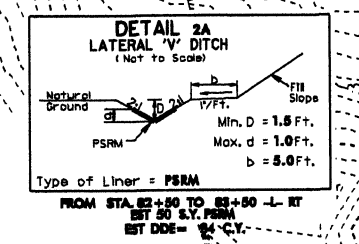
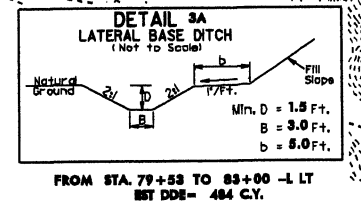
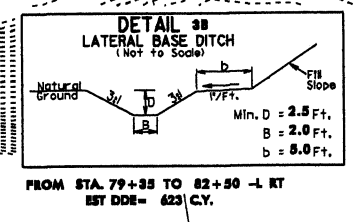
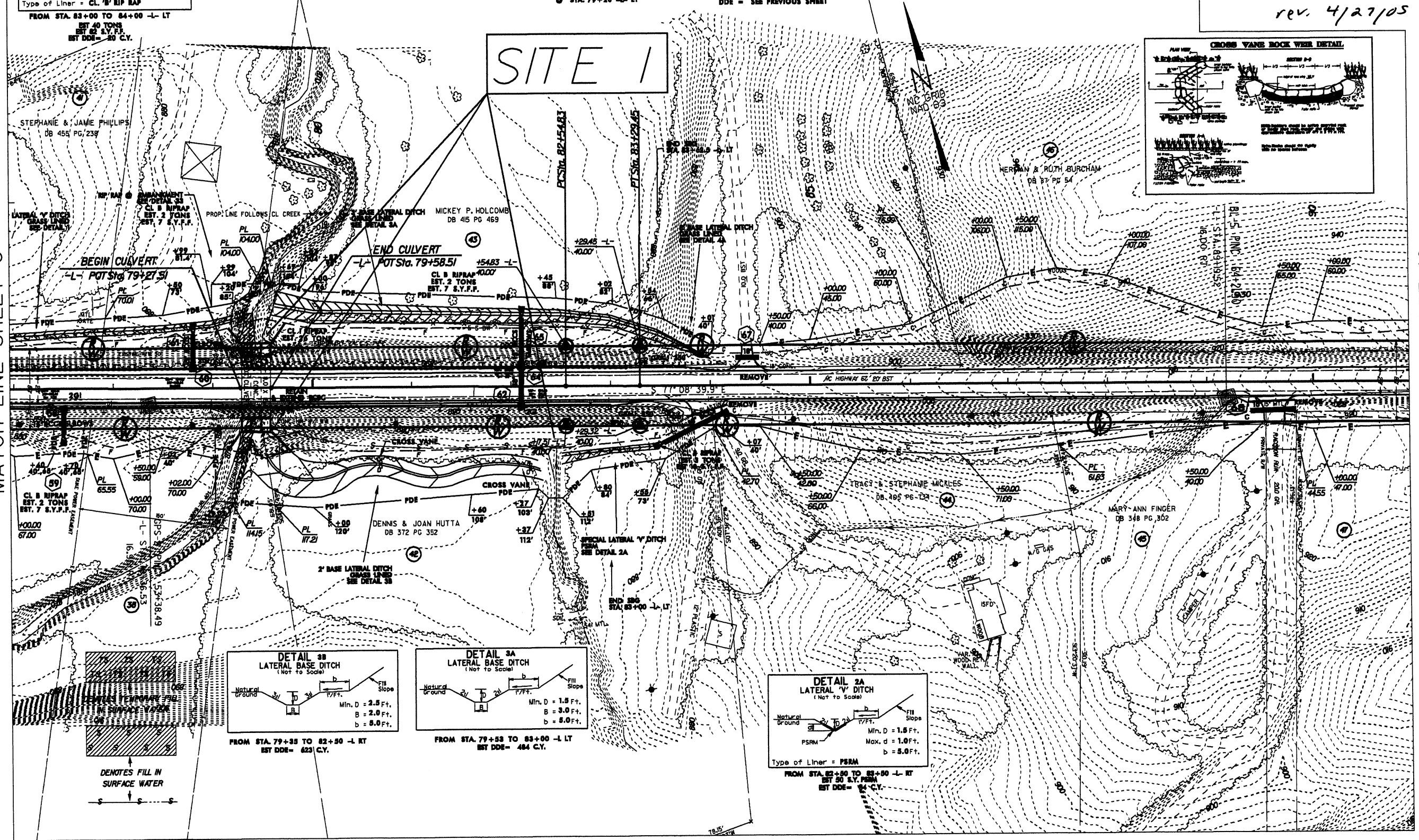


-L-  
PI Sta 82+92.4  
 $\Delta = 0'03'12.4''$  (LT)  
D = 0'04'17.8''  
L = 7462'  
T = 37.31'  
R = 80,000.00'  
SE = NC



MATCH LINE SHEET 8

MATCH LINE SHEET 10



8/17/99

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