



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

May 18, 2005

NC Department of Environment and Natural Resources
Division of Water Quality
1650 Mail Service Center
Raleigh, NC 27699-1650

Attn: Mr. Brian Wrenn
NCDOT Coordinator

Dear Sir:

Subject: **Application for Modification to Individual Section 401 Water Quality Certification Permit** 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: \$475.00 Debit Work Order 6.771008, WBS Element 34541.1.1.

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 application 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.

REGULATORY APPROVALS

Application is hereby made for a Section 401 Water Quality Certification from the Division of Water Quality. In compliance with Section 143-215.3D(e) of the NCAC, \$475.00 from NCDOT debit account will provide payment for processing the Section 401 permit

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

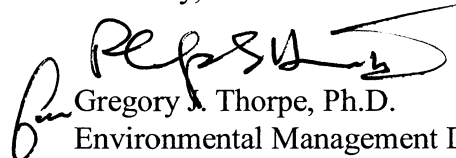
LOCATION:

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

application. We are providing seven copies of this application to the North Carolina Department of Environment and Natural Resources, Division of Water Quality, for their review.

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

Sincerely,


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

w/attachment

- Mr. John Hennessy, NCDWQ (7 copies)
- Mr. John Thomas, USACE
- 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
- Mr. Carl Goode, PE

WETLAND PERMIT IMPACT SUMMARY

Site No.	Station (From/To)	Structure (Size/Type)	WETLAND IMPACTS				SURFACE WATER IMPACTS				Natural Stream Design (FT)
			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)	
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	80'	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			128'	
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/ 54" RCP					0.019		96"		
10	-L- 233+96.76	RETAIN & EXTEND EX. 3'X4' RCBC W/ 48" RCP					0.018		80"		
PAGE TOTAL:							0.035		260"	178"	
PREVIOUS PAGE TOTAL:							0.120		260"	1034"	
PROJECT TOTAL:							0.155		260"	1212"	

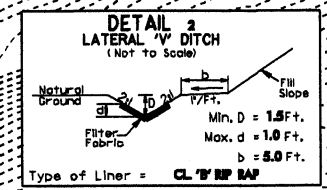
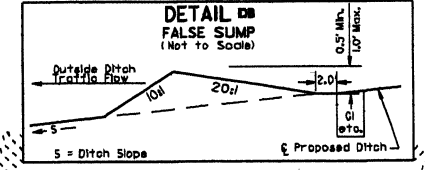
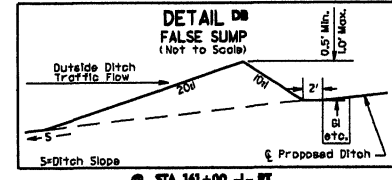
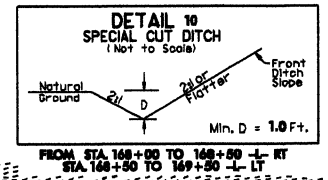
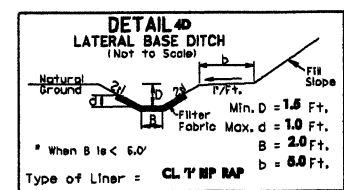
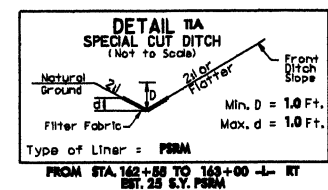
DIVISION OF HIGHWAYS
N.C. DEPT. OF TRANSPORTATION
YADKIN COUNTY
 PROJECT: R-3415
 IMPROVEMENT OF NC 67 FROM SR 1355
 (MESSICK) ROAD TO JUST WEST OF
 BOONVILLE
 SHEET 7 OF 28 rev. 4/27/05 8/03/04

8/17/99

PROJECT REFERENCE NO. R-3415	SHEET NO. 15
HW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

Sheet 20 of 28
rev. 4/27/05

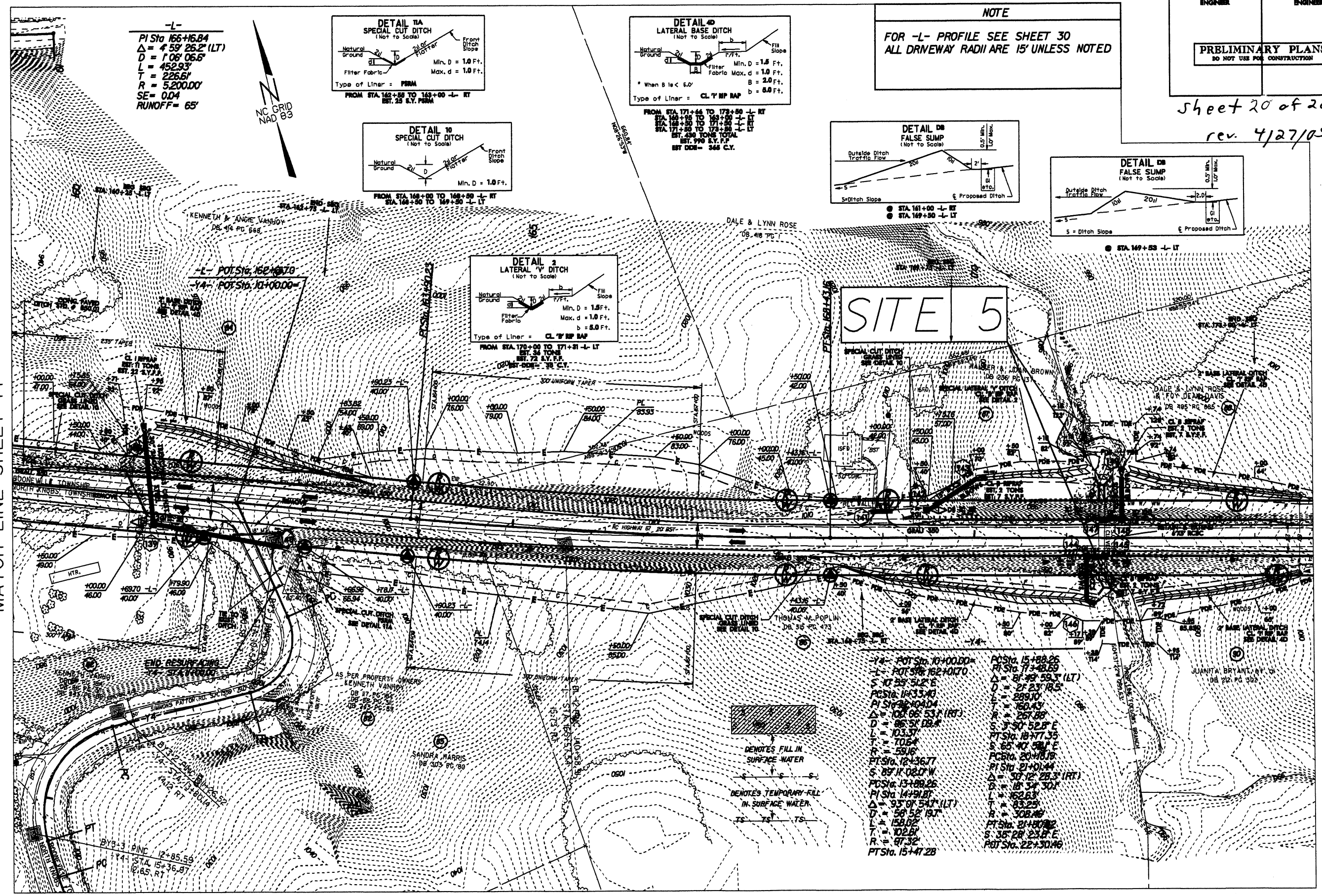
NOTE
FOR -L- PROFILE SEE SHEET 30
ALL DRIVEWAY RADII ARE 15' UNLESS NOTED



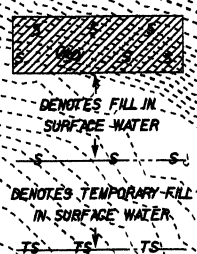
SITE 5

MATCH LINE SHEET 14

MATCH LINE SHEET 16



- Y4- POT Sta. 10+00.00 =
 - L- POT Sta. 162+01.70
 - S 10° 33' 52.2" E
 - PC Sta. 11+33.40
 - PI Sta. 12+04.04
 - Δ = 100° 06' 53.1" (RT)
 - D = 86.51' DB.P
 - L = 103.37'
 - T = 106.4'
 - R = 59.16'
 - PT Sta. 12+36.77
 - S 87° 11' 02.0" W
 - PC Sta. 13+09.26
 - PI Sta. 14+19.87
 - Δ = 93° 01' 54.7" (LT)
 - L = 158.82'
 - T = 102.61'
 - R = 97.32'
 - PT Sta. 15+47.28
- PC Sta. 15+88.26
 - PI Sta. 17+48.69
 - Δ = 81° 49' 59.3" (LT)
 - D = 21.23' DB.S
 - L = 289.10'
 - T = 160.43'
 - R = 267.88'
 - S 7° 50' 52.8" E
 - PT Sta. 18+77.35
 - S 65° 40' 58.1" E
 - PC Sta. 20+18.19
 - PI Sta. 21+01.44
 - Δ = 38° 12' 28.3" (RT)
 - D = 18.34' DB.S
 - L = 162.63'
 - T = 83.25'
 - R = 308.16'
 - PT Sta. 21+80.82
 - S 35° 28' 23.8" E
 - POT Sta. 22+30.96

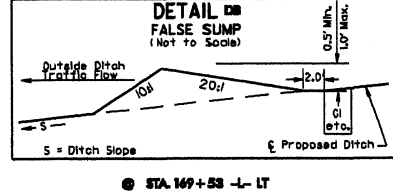
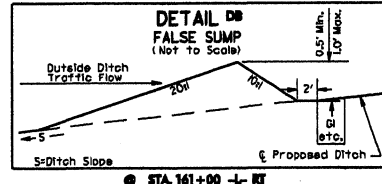
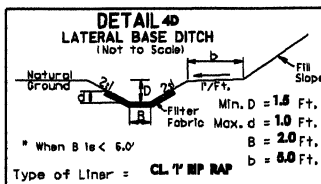
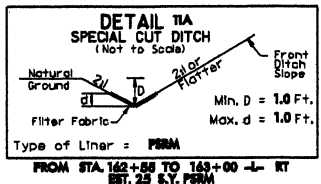


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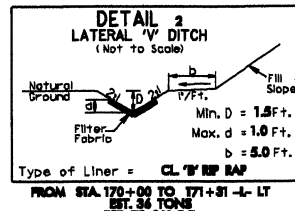
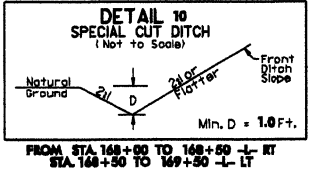
Sheet 19 of 28
rev. 4/27/05

NOTE

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



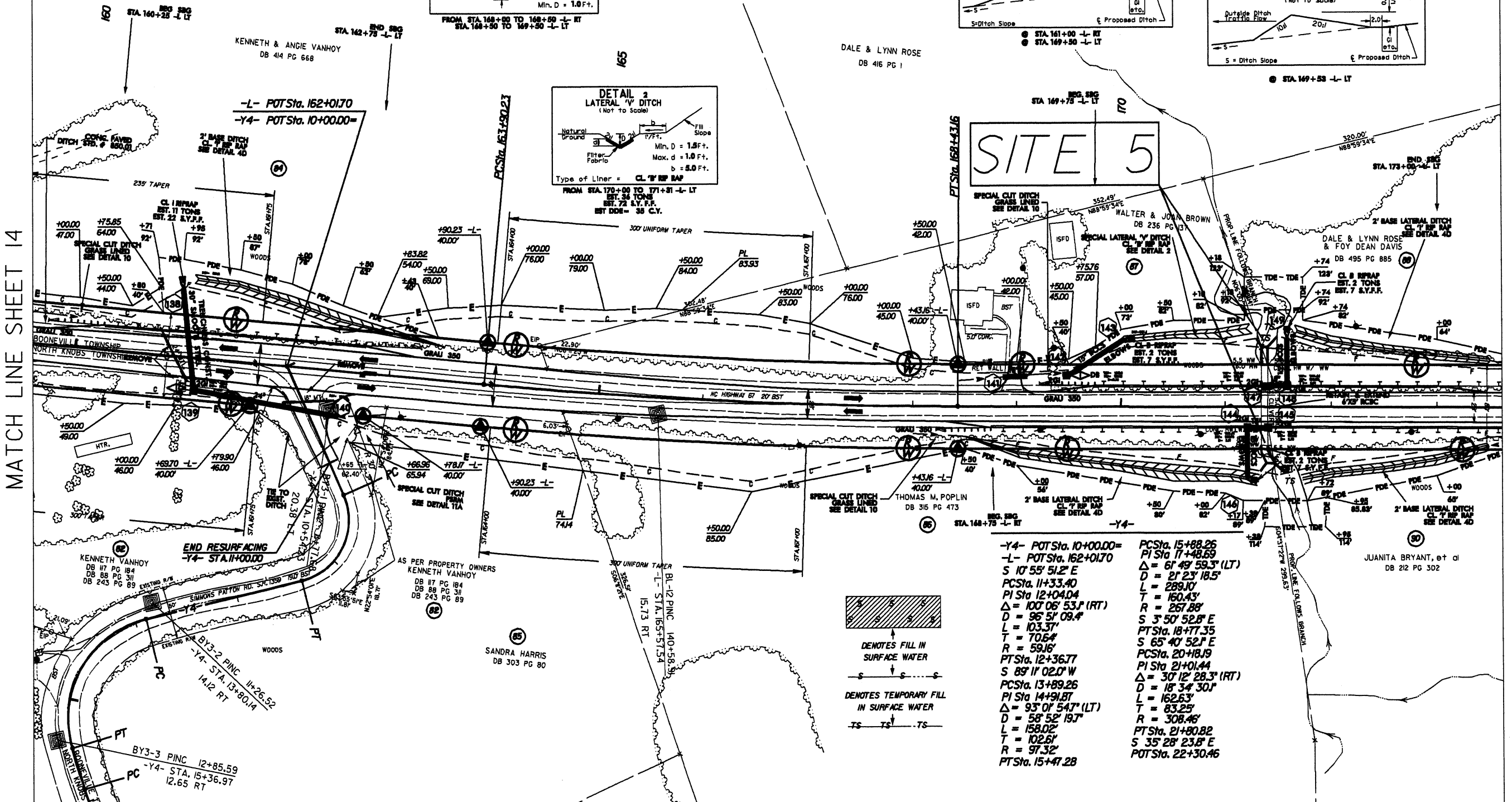
-L-
PI Sta. 166+16.84
 $\Delta = 4^\circ 59' 26.2'' (LT)$
D = 1'06' 06.6"
L = 452.93'
T = 226.61'
R = 5200.00'
SE = 0.04
RUNOFF = 65'



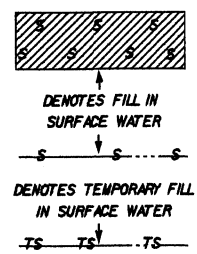
SITE 5

MATCH LINE SHEET 14

MATCH LINE SHEET 16



- Y4- POT Sta. 10+00.00=
- L- POT Sta. 162+10.70
- S 10° 55' 51.2" E
- PC Sta. 11+33.40
- PI Sta. 12+10.04
- $\Delta = 100^\circ 06' 53.1'' (RT)$
- D = 96' 51' 09.4"
- L = 103.37'
- T = 70.64'
- R = 59.16'
- PT Sta. 12+36.77
- S 89° 11' 02.0" W
- PC Sta. 13+89.26
- PI Sta. 14+91.87
- $\Delta = 93^\circ 07' 54.7'' (LT)$
- D = 58° 52' 19.7"
- L = 158.02'
- T = 102.61'
- R = 97.32'
- PT Sta. 15+47.28
- PC Sta. 15+88.26
- PI Sta. 17+48.69
- $\Delta = 67^\circ 49' 59.3'' (LT)$
- D = 21° 23' 18.5"
- L = 289.10'
- T = 160.43'
- R = 267.88'
- S 3° 50' 52.8" E
- PT Sta. 18+77.35
- S 65° 40' 52.1" E
- PC Sta. 20+18.19
- PI Sta. 21+01.44
- $\Delta = 30^\circ 12' 28.3'' (RT)$
- D = 18° 34' 30.1"
- L = 162.63'
- T = 83.25'
- R = 308.46'
- PT Sta. 21+80.82
- S 35° 28' 23.8" E
- POT Sta. 22+30.46

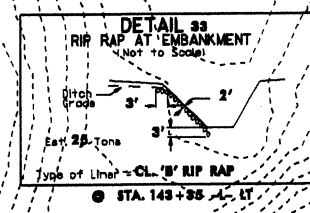


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PROJECT REFERENCE NO. R-3415	SHEET NO. 13
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

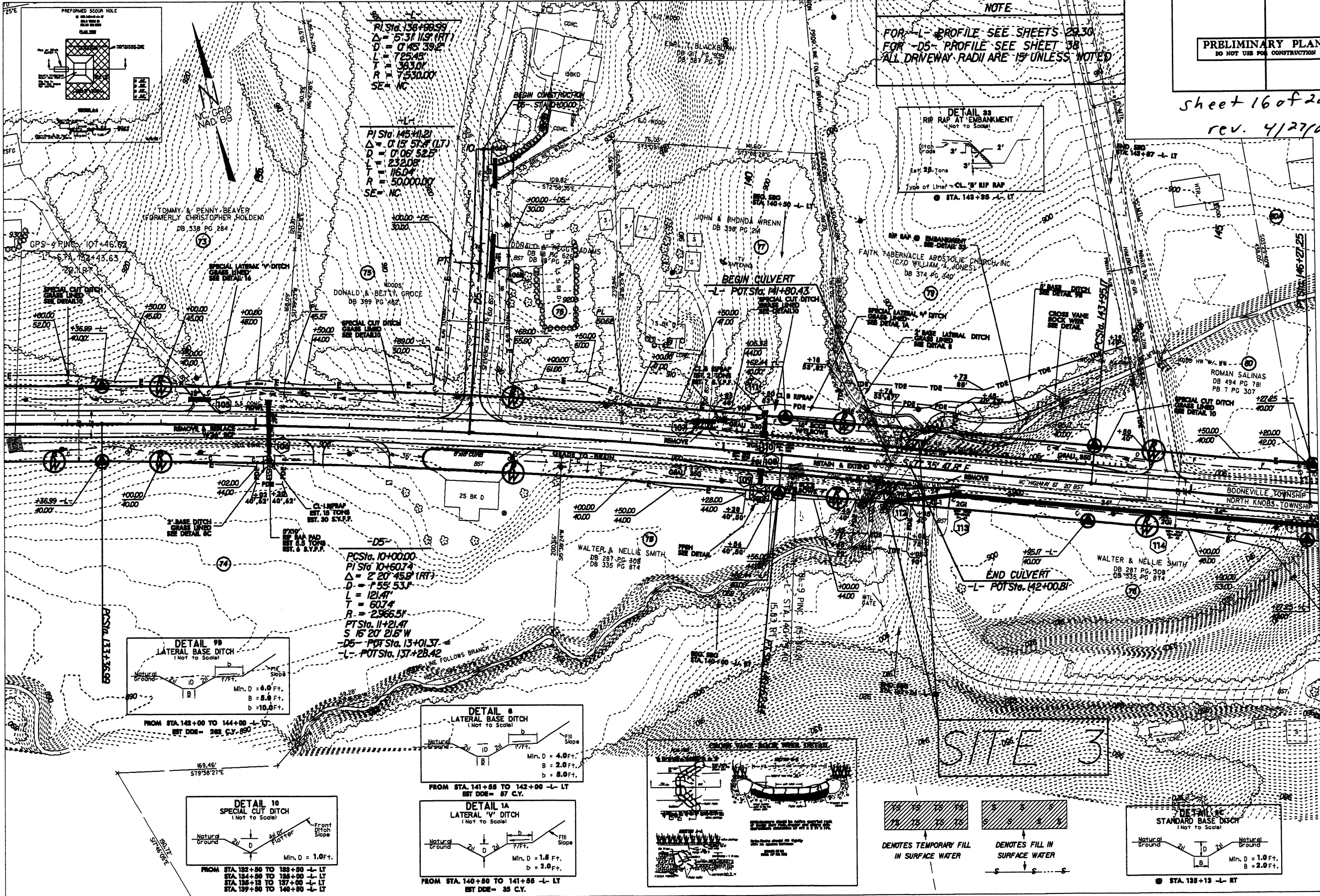
Sheet 16 of 28
rev. 4/27/05

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



MATCH LINE SHEET 12

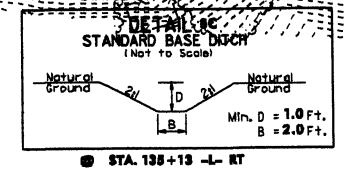
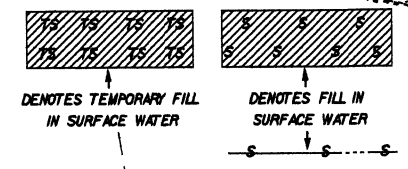
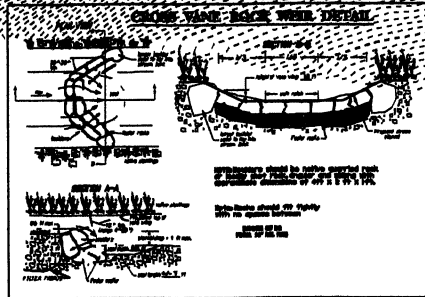
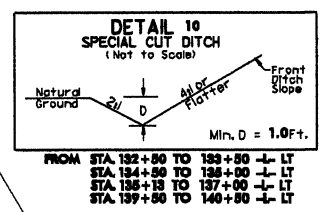
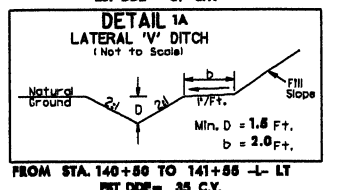
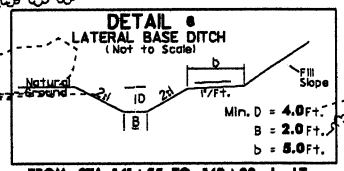
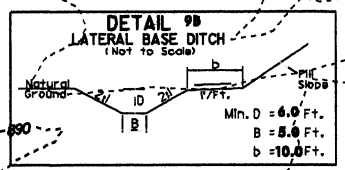
MATCH LINE SHEET 14



PI Sta. 136+98.99
 $\Delta = 5' 31'' 11.9'' (RT)$
 $D = 0' 45'' 39.2''$
 $L = 725.45'$
 $T = 363.01'$
 $R = 7530.00'$
SE = NC

PI Sta. 145+11.21
 $\Delta = 0' 13'' 57.7'' (LT)$
 $D = 0' 06'' 52.5''$
 $L = 232.08'$
 $T = 116.04'$
 $R = 50000.00'$
SE = NC

PCS Sta. 10+00.00
PI Sta. 10+60.74
 $\Delta = 2' 20'' 45.8'' (RT)$
 $D = 1' 55'' 53.1''$
 $L = 121.47'$
 $T = 60.74'$
 $R = 2966.51'$
PTS Sta. 11+21.47
 $S 16' 20'' 21.5'' W$
-D5- POF Sta. 13+01.37
-L- POT Sta. 137+28.42



8/17/99

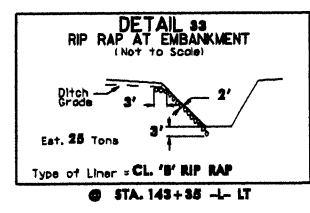
REVISIONS

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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	

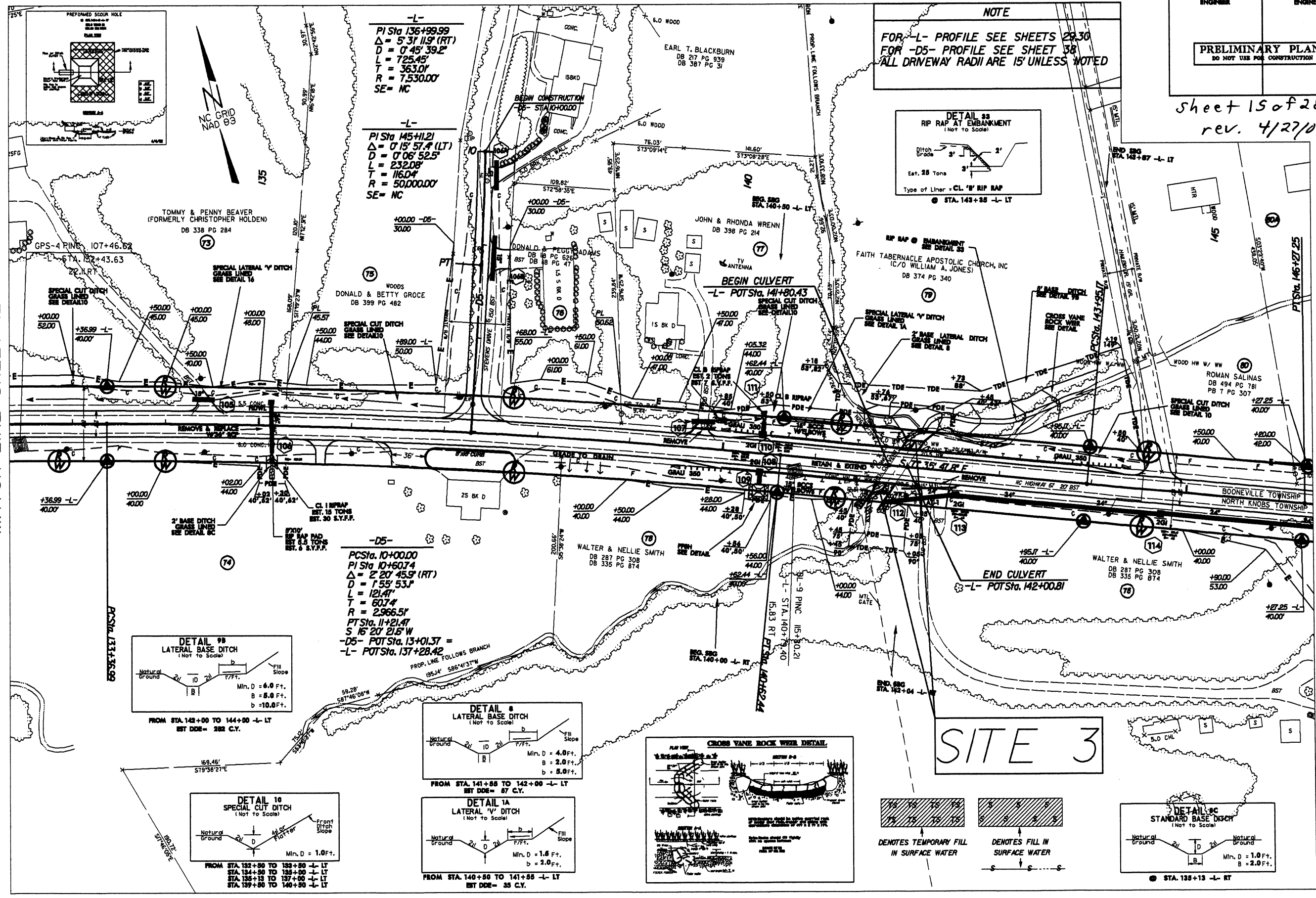
Sheet 15 of 28
rev. 4/27/05

NOTE
FOR -L- PROFILE SEE SHEETS 29, 30
FOR -D5- PROFILE SEE SHEET 38
ALL DRIVEWAY RADII ARE 15' UNLESS NOTED



MATCH LINE SHEET 12

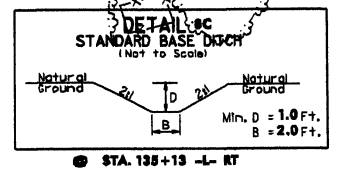
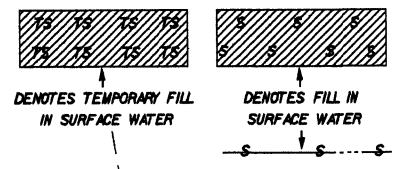
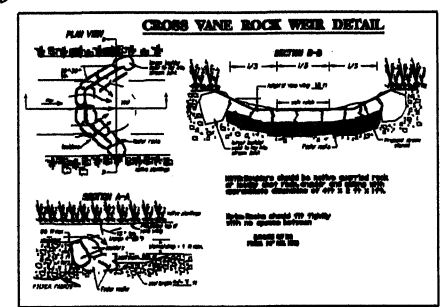
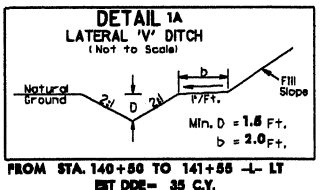
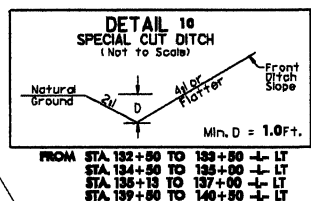
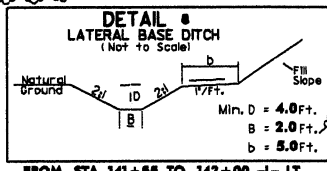
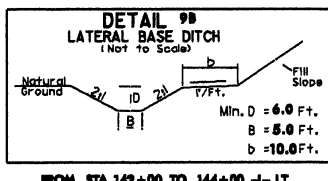
MATCH LINE SHEET 14



-L-
PI Sta 136+99.99
 $\Delta = 5^\circ 31' 11.9''$ (RT)
 $D = 0^\circ 45' 39.2''$
 $L = 725.45'$
 $T = 363.01'$
 $R = 7,530.00'$
SE= NC

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

-D5-
PC Sta. 10+00.00
PI Sta. 10+60.74
 $\Delta = 2^\circ 20' 45.9''$ (RT)
 $D = 1^\circ 55' 53.1''$
 $L = 121.41'$
 $T = 60.74'$
 $R = 2,966.51'$
PT Sta. 11+21.47
S 16° 20' 21.8" W
-D5- POT Sta. 13+01.37 =
-L- POT Sta. 137+28.42



SITE 3

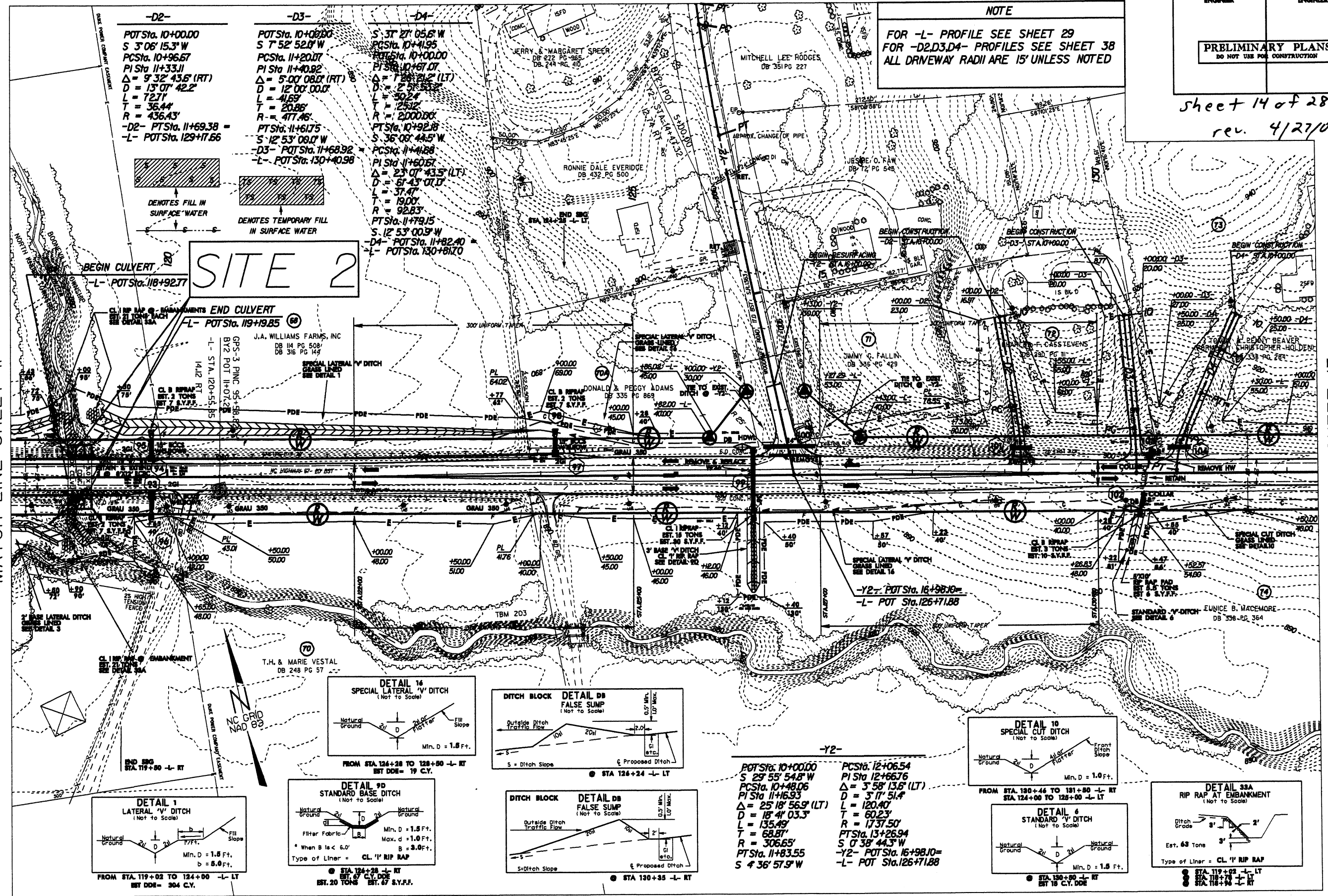
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PROJECT REFERENCE NO. R-3415	SHEET NO. 12
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

sheet 14 of 28
rev. 4/27/05

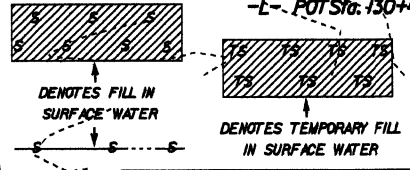
NOTE
FOR -L- PROFILE SEE SHEET 29
FOR -D2,D3,D4- PROFILES SEE SHEET 38
ALL DRIVEWAY RADII ARE 15' UNLESS NOTED



-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- POTS Sta. 11+69.38 =
-L- POTS Sta. 129+17.66

-D3-
POT Sta. 10+00.00
S 7° 52' 52.0" W
PC Sta. 11+20.07
PI Sta. 11+40.82
Δ = 5° 00' 08.0" (RT)
D = 12° 00' 00.0"
L = 41.69
T = 20.86
R = 477.46'
POTS Sta. 11+61.75
S 12° 53' 09.0" W
-D3- POTS Sta. 11+68.92 =
-L- POTS Sta. 130+40.98

-D4-
S 37° 27' 05.6" W
PC Sta. 10+41.95
POTS Sta. 10+00.00
PI Sta. 10+67.07
Δ = 1° 28' 21.2" (LT)
D = 2° 56' 53.2"
L = 30.24
T = 25.92
R = 2000.00'
POTS Sta. 10+92.88
S 36° 08' 44.5" W
PC Sta. 11+41.88
PI Sta. 11+60.67
Δ = 23° 07' 43.5" (LT)
D = 51° 43' 01.0"
L = 37.47
T = 19.00
R = 92.83'
POTS Sta. 11+79.15
S 12° 53' 00.9" W
-D4- POTS Sta. 11+82.40 =
-L- POTS Sta. 130+81.70



SITE 2

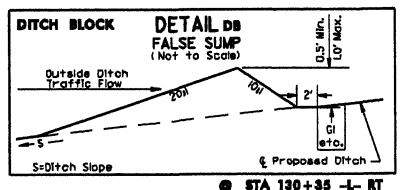
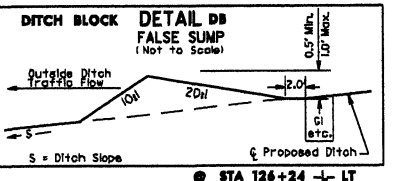
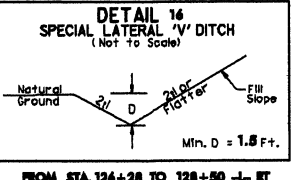
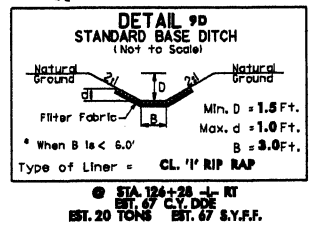
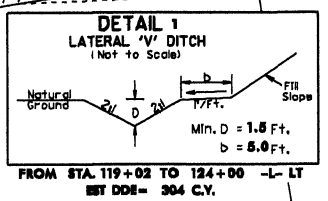
MATCH LINE SHEET 11

MATCH LINE SHEET 13

REVISIONS

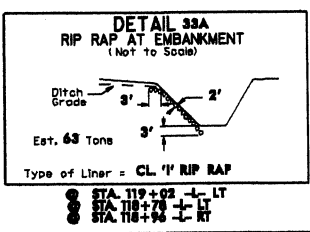
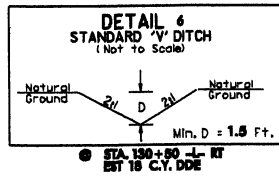
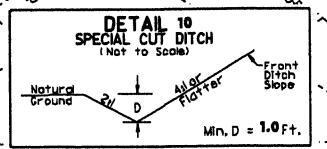
4/28/04 MOVE TOE TO STA. 10+50 -D4- ON PARCEL 73

27 APR 2005 8:18 AM 11512 permit.site*2.dgn
11512 - AT 11:00:26:45



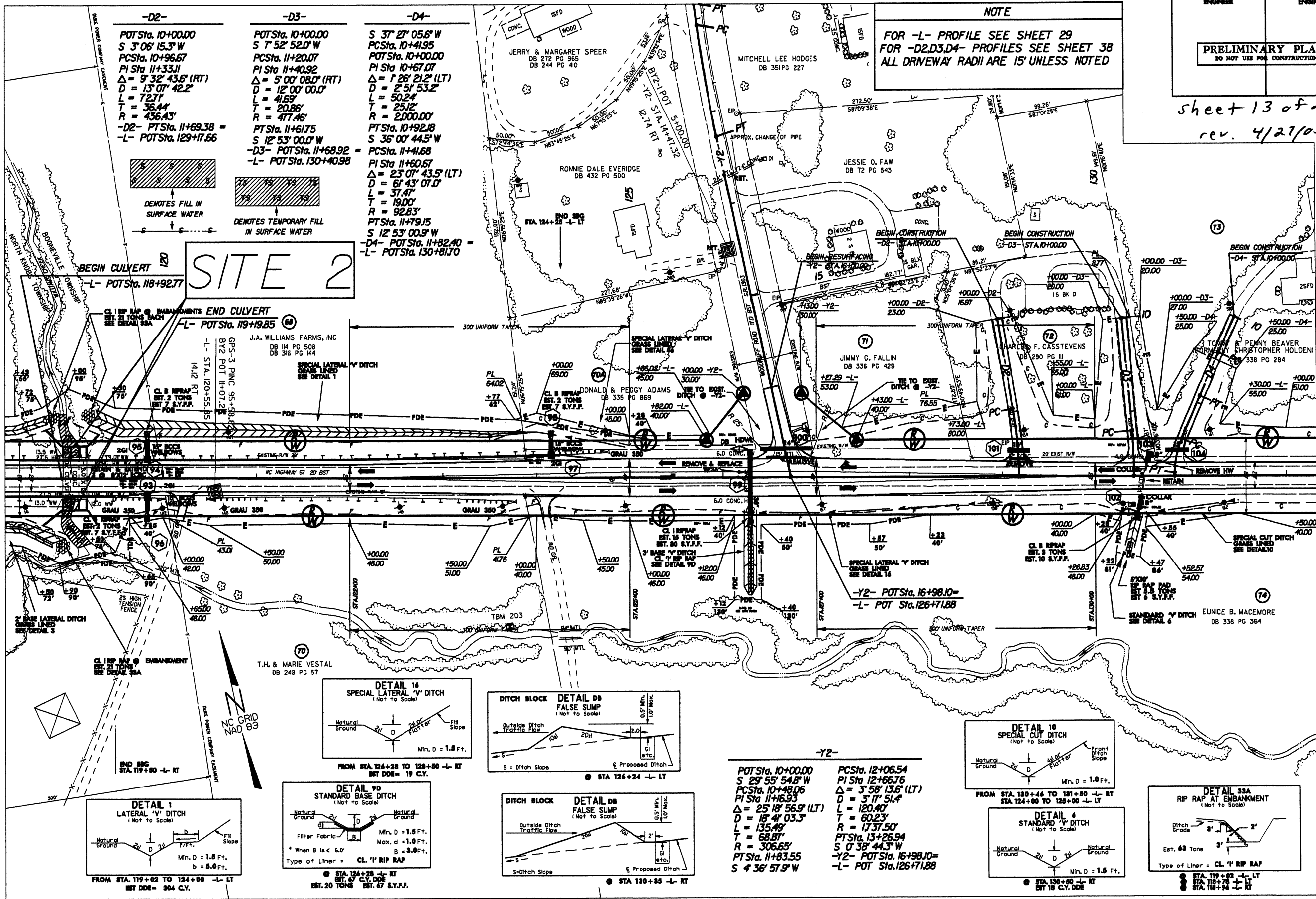
POT Sta. 10+00.00
S 29° 55' 54.8" W
PC Sta. 10+48.06
PI Sta. 11+6.93
Δ = 25° 18' 56.9" (LT)
D = 18° 41' 03.3"
L = 135.49
T = 68.87
R = 306.65'
POTS Sta. 11+83.55
S 4° 36' 57.9" W

PC Sta. 12+06.54
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'
POTS Sta. 13+26.94
S 0° 38' 44.3" W
-Y2- POTS Sta. 16+98.10 =
-L- POTS Sta. 126+71.88



sheet 13 of 28
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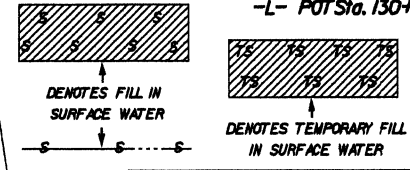
NOTE
FOR -L- PROFILE SEE SHEET 29
FOR -D2,D3,D4- PROFILES SEE SHEET 38
ALL DRIVEWAY RADII ARE 15' UNLESS NOTED



-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- POT 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'
PT Sta. 11+61.75
S 12° 53' 00.0" W
-D3- POT Sta. 11+68.92 =
-L- POT Sta. 130+40.98

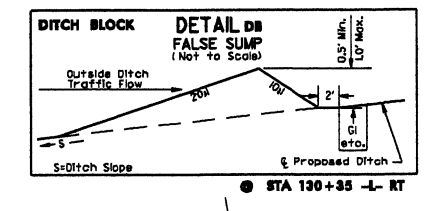
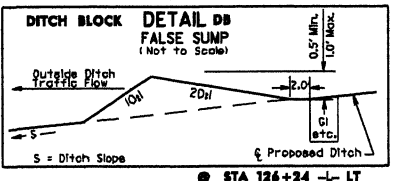
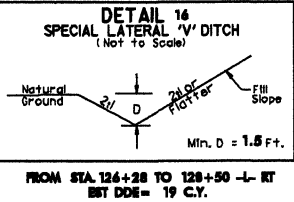
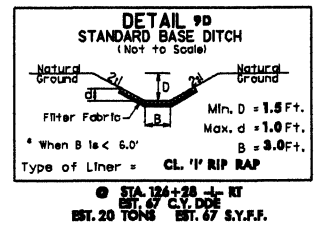
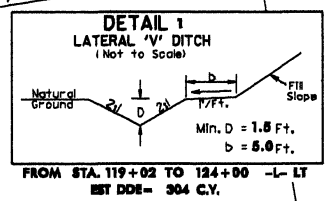
-D4-
S 37° 27' 05.6" W
PC Sta. 10+41.95
POT Sta. 10+00.00
PI Sta. 10+67.07
Δ = 1° 26' 21.2" (LT)
D = 2° 51' 53.2"
L = 50.24'
T = 25.12'
R = 2,000.00'
PT Sta. 10+92.18
S 36° 00' 44.5" W
PC Sta. 11+41.68
PI Sta. 11+60.67
Δ = 23° 07' 43.5" (LT)
D = 61° 43' 07.0"
L = 37.47'
T = 19.00'
R = 92.83'
PT Sta. 11+79.15
S 12° 53' 00.9" W
-D4- POT Sta. 11+82.40 =
-L- POT Sta. 130+81.70



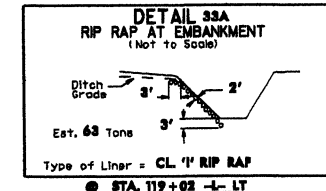
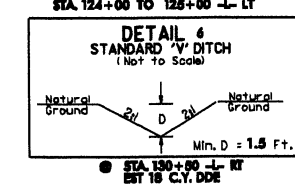
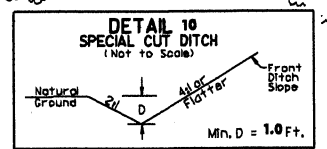
SITE 2

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'
PT Sta. 11+83.55
S 4° 36' 57.9" W
PC Sta. 12+06.54
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'
PT 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

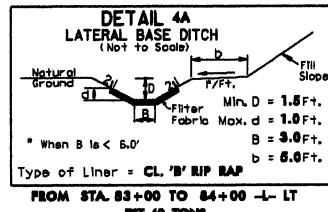
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Revision 2
Revision 1
Revision 0

8/17/99

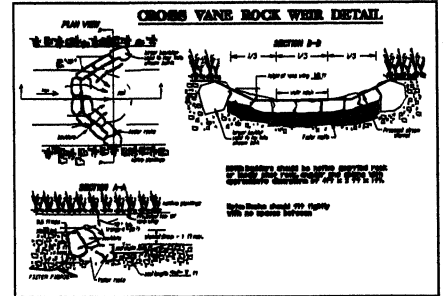
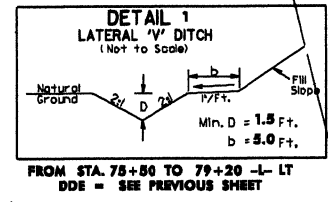
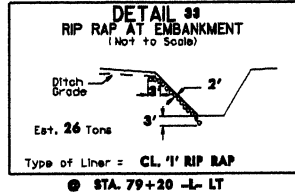
PROJECT REFERENCE NO. R-3415	SHEET NO. 9
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

Sheet 11 of 28
rev. 4/27/05

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

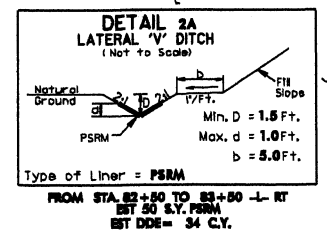
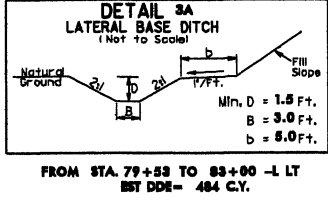
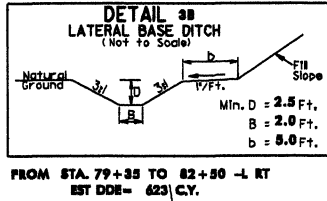
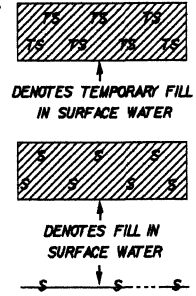
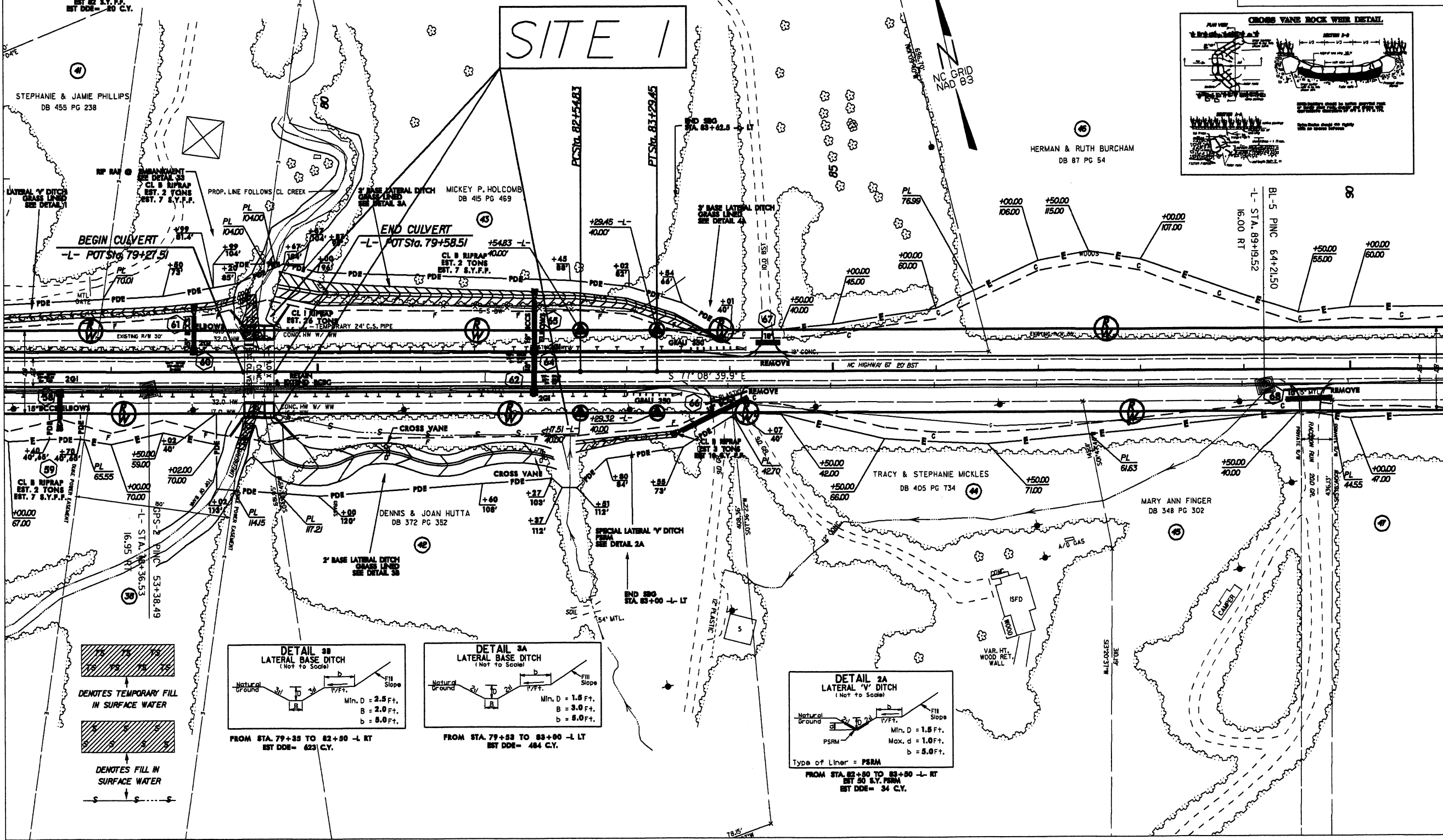


-L-
PI Sta 82+92.14
Δ = 0'03" 12.4' (LT)
D = 0'04" 17.8'
L = 74.62'
T = 37.37'
R = 80,000.00'
SE = NC



MATCH LINE SHEET 8

MATCH LINE SHEET 10



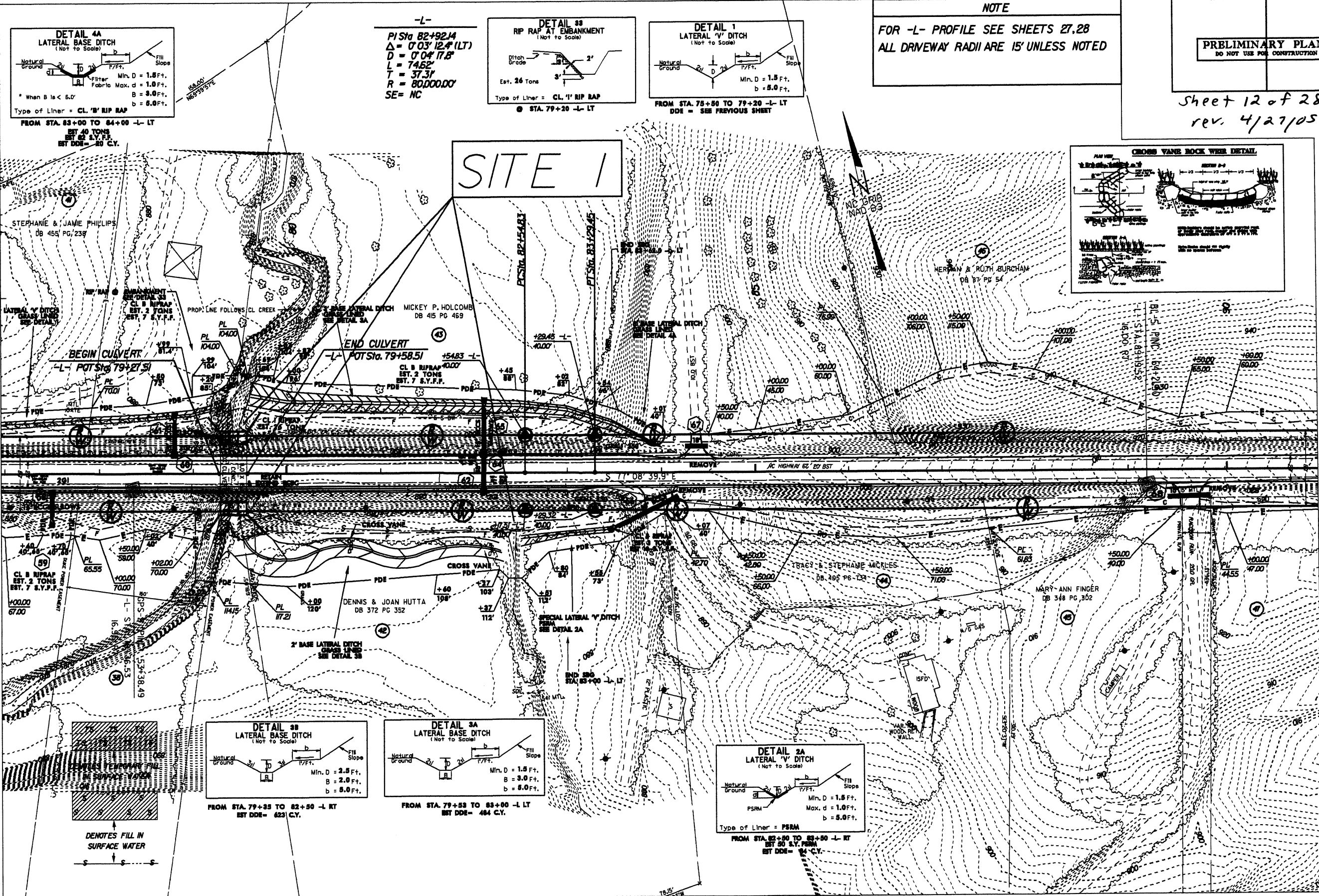
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PROJECT REFERENCE NO. R-3415	SHEET NO. 9
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

NOTE

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

Sheet 12 of 28
rev. 4/27/05



MATCH LINE SHEET 8

MATCH LINE SHEET 10

8/17/99
27-APR-2005 15:18 415:0893 permit.state#1.dgn
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