



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY  
GOVERNOR

LYNDO TIPPETT  
SECRETARY

August 15, 2003

NC Division of Water Quality  
1650 Mail Service Center  
Raleigh, NC 27699-1650

Attention: Mr. John Dorney  
Wetlands/401 Supervisor

Dear Sir,

Subject: **R-2246 C Response to DWQ ON HOLD Letter**; DWQ Project No.  
030845

On July 9, 2003 a permit application for TIP Project no. R-2246 C (DWQ Project no. 030845) was submitted to DWQ. This letter addresses each item in your July 11, 2003, "on hold" letter regarding the widening of the Concord-Kannapolis Westside Bypass. A copy is attached for your convenience.

1. The use of the Ecosystem Enhancement Program is now permitted. A Memorandum of Agreement was signed on July 22, 2003 with the North Carolina Department of Environment and Natural Resources.
2. The qualitative Indirect and Cumulative Effects (ICE) assessment which deals with future development was delivered to DWQ on July 29, 2003. The quantitative Indirect and Cumulative Impacts (ICI) assessment which deals with the impacts to the watershed is being written by Buck Engineering. We estimate that the document will be available for review by August 22, 2003.
3. NCDOT Hydraulic Design Unit has re-designed the two crossings of the unnamed tributaries to Coddle Creek, a 303(d) listed stream, to provide pre-treatment of the storm water runoff before entering the streams. The new design provides wider grass swales and the elimination of riprap in order to use permanent soil reinforcing matting (PSRM). The discharge from the pipe exceeds the allowable quantity of water to use preformed scour holes, and the topography is too steep to use detention basins or level spreaders. Wider grass swales and the use of PSRM instead of riprap will perform the same function as preformed scour holes and detention basins. This design will not exacerbate the cause (urban runoff/storm sewers) of the 303(d) listing for Coddle Creek.

**MAILING ADDRESS:**  
NC DEPARTMENT OF TRANSPORTATION  
PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS  
1548 MAIL SERVICE CENTER  
RALEIGH NC 27699-1548

TELEPHONE: 919-733-3141  
FAX: 919-733-9794

WEBSITE: [WWW.NCDOT.ORG](http://WWW.NCDOT.ORG)

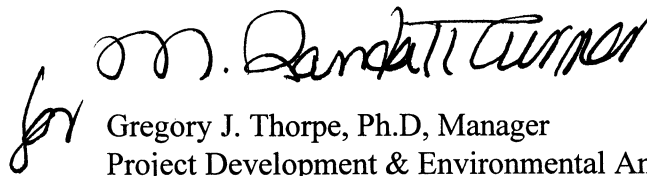
**LOCATION:**  
TRANSPORTATION BUILDING  
1 SOUTH WILMINGTON STREET  
RALEIGH NC

The revised permit drawings and the revised half size plans show details "N", "M", and "L". These details correspond to "D", "J", and "B" on the original drawings. Details "N", "M", and "L" have PSRM in the bottom of the lateral base ditches. Details "D", "J", and "B" have class B riprap in the bottom of the lateral base ditches.

Copies of the revised hydraulic drawings are attached as requested.

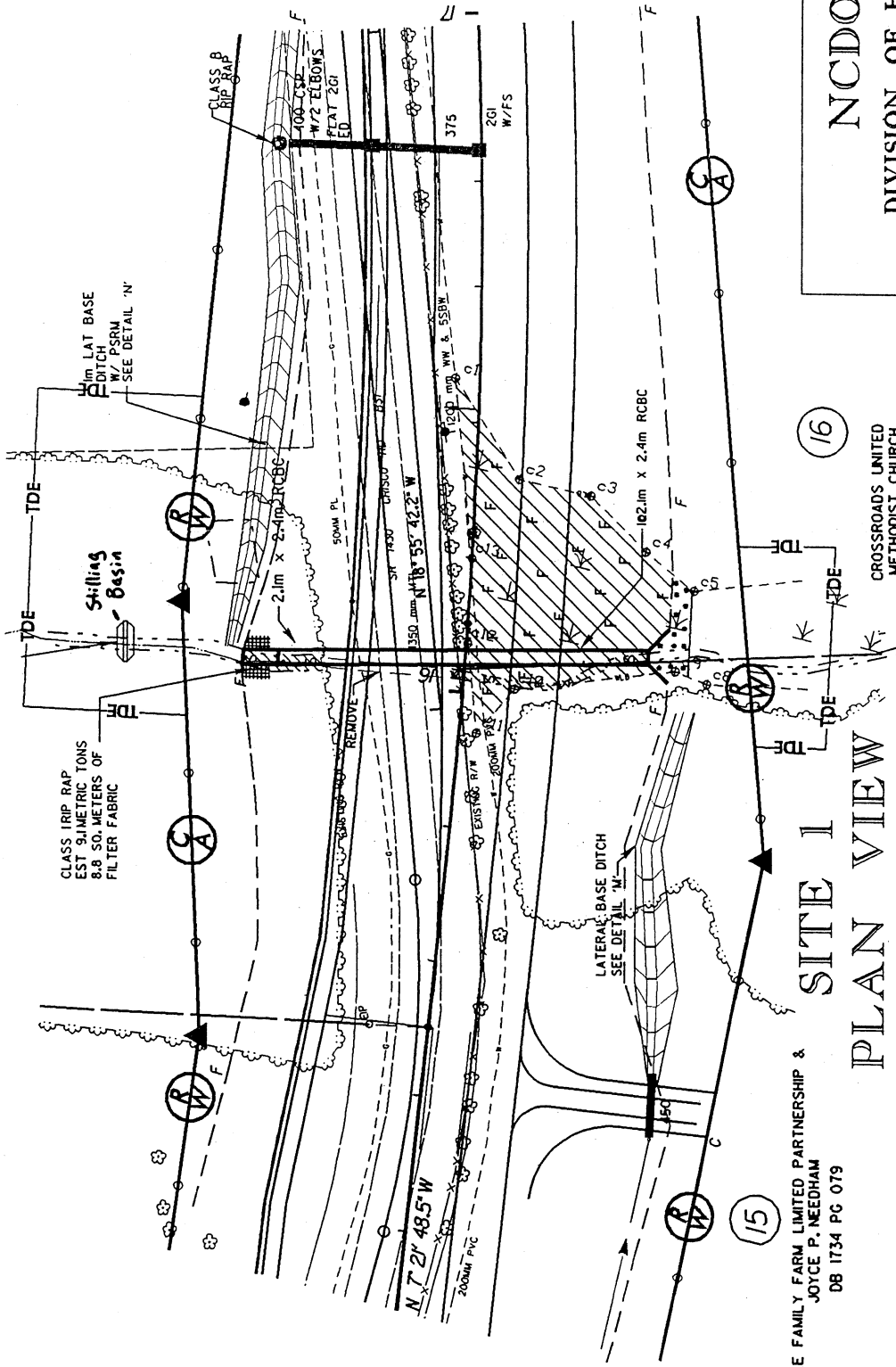
If you have any further questions, please contact Chris Underwood at (919) 715-1451.

Sincerely,

  
for Gregory J. Thorpe, Ph.D, Manager  
Project Development & Environmental Analysis Branch

cc:

Mr. John Dorney, Division of Water Quality  
Ms. Marella Buncick, USFWS  
Ms. Marla Chambers, NCWRC  
Mr. Jay Bennett, P.E., Roadway Design  
Mr. Omar Sultan, Programming and TIP  
Ms. Debbie Barbour, P.E., Highway Design  
Mr. David Chang, P.E., Hydraulics  
Mr. Greg Perfetti, P.E., Structure Design  
Mr. Mark Staley, Roadside Environmental  
Mr. John Sullivan, FHWA  
Mr. B. G. Payne, P.E., Division Engineer  
Mr. Larry Thompson, DEO  
Mr. David Franklin, USACE, Wilmington  
Mr. William Gilmore, P.E., EEP, Raleigh



CLASS IRIP RAP  
EST 9.1 METRIC TONS  
8.8 SO. METERS OF  
FILTER FABRIC

1.0m LAT BASE  
DITCH  
W/ PSM  
SEE DETAIL 'N'

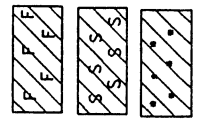
Shilling  
Basin

LATERAL BASE DITCH  
SEE DETAIL 'N'

COBLE FAMILY FARM LIMITED PARTNERSHIP &  
JOYCE P. NEEDHAM  
DB 1734 PG 079

SITE 1  
PLAN VIEW

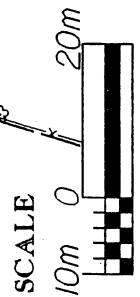
CROSSROADS UNITED  
METHODIST CHURCH



DENOTES FILL IN WETLANDS

DENOTES FILL IN SURFACE WATER

DENOTES MECHANIZED CLEARING



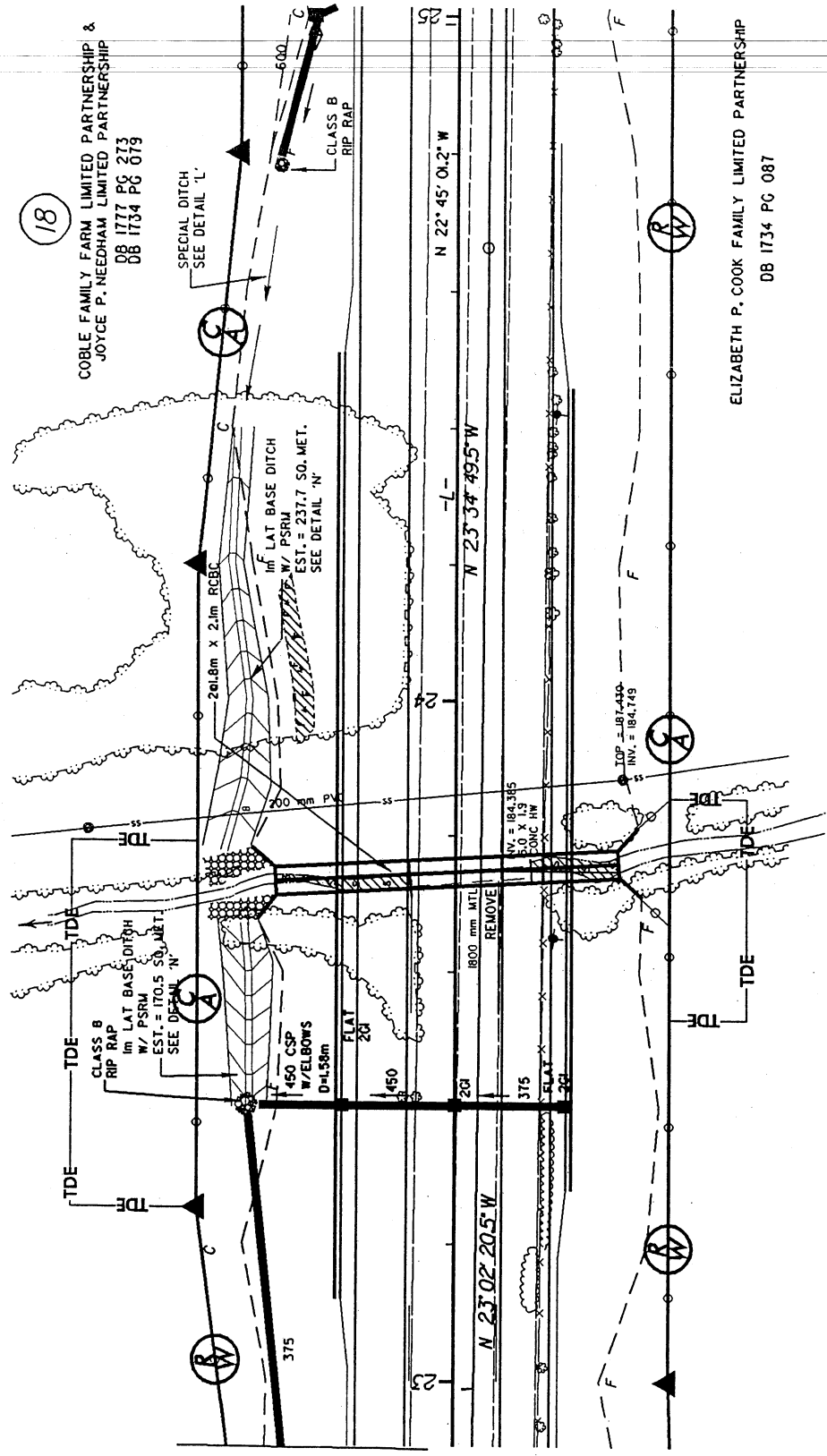
NCDOT

DIVISION OF HIGHWAYS  
CABARRUS COUNTY

PROJECT: 8.2661601 (R-2246C)  
CONCORD-KANNAPOLIS  
WESTSIDE BYP EXT FROM  
SR 1451 TO SR 1555

18

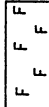

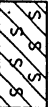
COBLE FAMILY FARM LIMITED PARTNERSHIP &  
JOYCE P. NEEDHAM LIMITED PARTNERSHIP  
DB 1777 PG 273  
DB 1734 PG 079

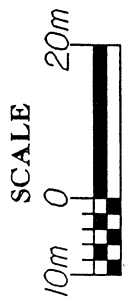


17

ELIZABETH P. COOK FAMILY LIMITED PARTNERSHIP  
DB 1734 PG 087

### SITE 3 PLAN VIEW

-  DENOTES FILL IN WETLANDS
-  DENOTES MECHANIZED CLEARING
-  DENOTES FILL IN SURFACE WATER



NCDOT  
 DIVISION OF HIGHWAYS  
 CABARRUS COUNTY  
 PROJECT: 8.2661601 (R-2246C)  
 CONCORD-KANNAPOLIS  
 WESTSIDE BYP EXT FROM  
 SR 1431 TO SR 1555



Michael F. Easley, Governor  
William G. Ross Jr., Secretary  
North Carolina Department of Environment and Natural Resources

Alan W. Klimek, P.E., Director  
Division of Water Quality  
Coleen H. Sullins, Deputy Director  
Division of Water Quality

*Handwritten initials: HCU*

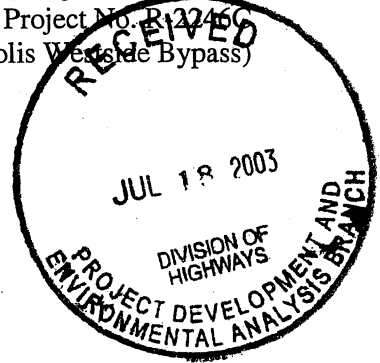
July 11, 2003

Cabarrus County

DWQ Project No. 030845

TIP Project No. R-22466

Widening of SR 1430 from SR 1431 to SR 1555 (Concord-Kannapolis Westside Bypass)



**CERTIFIED MAIL: Return receipt requested**

Mr. Gregory J. Thorpe, Ph.D., Manager  
NCDOT Project Development & Environmental Analysis Branch  
1548 Mail Service Center  
Raleigh, NC 27699-1548

Dear Mr. Thorpe:

The Division of Water Quality staff has reviewed your submittal of an application for a §401 Water Quality Certification for the aforementioned project dated July 18, 2003 (received July 10, 2003). This project will remain on hold until:

1. Issues relating to use of the Ecosystem Enhancement Program (EEP) have been resolved. To date, an MOU has not been signed with DENR. Until that MOU has been developed and signed, DWQ will be unable to permit the utilization of the EEP for this project. Use of the Wetlands Restoration Program (WRP) to provide compensatory mitigation for this project is acceptable to DWQ.
2. Receipt of the Indirect and Cumulative Impacts Study Report by DWQ.
3. Coddle Creek and its unnamed tributaries are on the §303(d) list of impaired waters for sediment. The sources are urban runoff and storm water. There are two crossings on this project. DWQ requests that NCDOT Hydraulic Design Unit re-design these two crossings to provide pre-treatment of the storm water runoff before entering the streams. Options appear to be a pre-formed scour hole or a detention basin.

Pursuant to 15A NCAC 2H .0507(a)(3), the permit application is placed on hold until we are supplied the necessary information. Furthermore, until the information is received by the NC Division of Water Quality, we request (by copy of this letter) that the US Army Corps of Engineers continue to place the permit application on hold.

We look forward to working with you to expedite the processing of your permit application. If you have any questions, please telephone Ms. Cynthia Van Der Wiele at 919.733.1786.

Sincerely,  
  
John R. Dorney  
Water Quality Certification Program

cc: Wilmington District Corps of Engineers  
Steve Lund, Corps of Engineers Asheville Field Office  
Coleen Sullins, DWQ  
NCDWQ Mooresville Regional Office

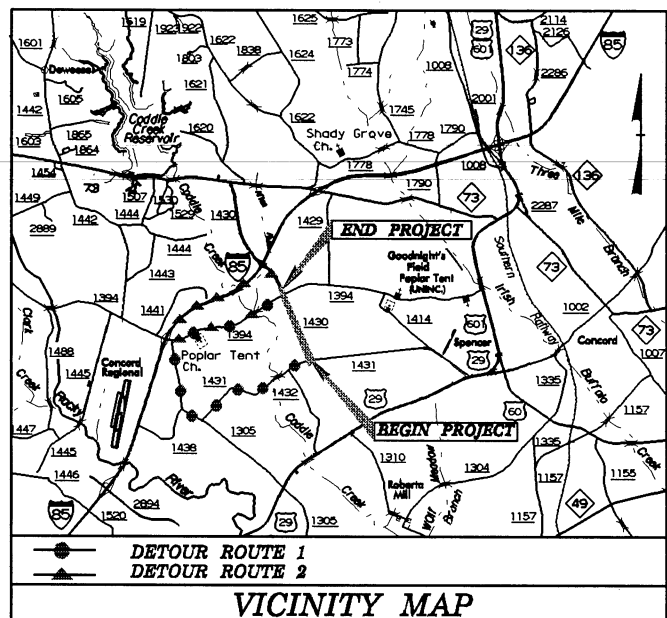
File Copy



9/09/99

CONTRACT: C200777 TIP PROJECT: R-2246C

See Sheet 1-A For Index of Sheets



STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

# CABARRUS COUNTY

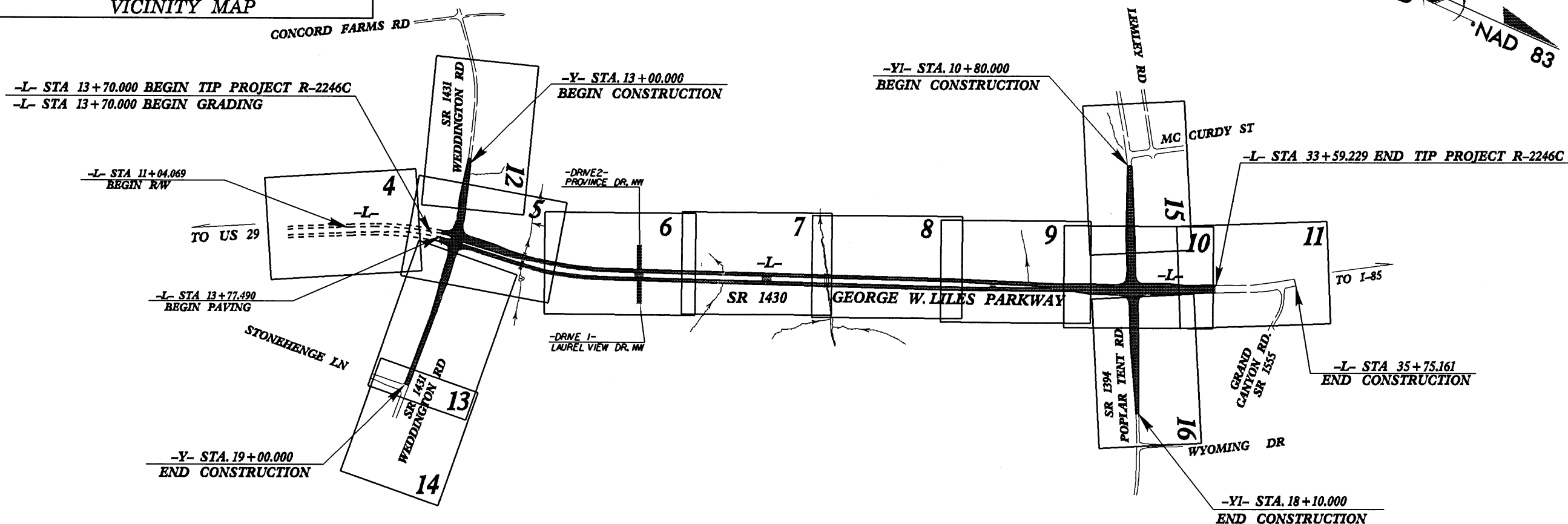
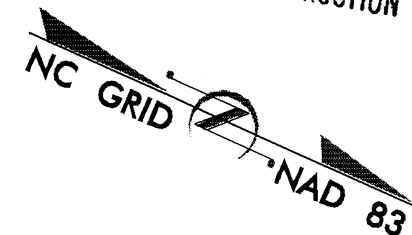
**LOCATION: CONCORD-KANNAPOLIS WESTSIDE BYPASS EXTENSION  
FROM SR 1431 (WEDDINGTON ROAD) TO SOUTH OF  
SR 1555 (GRAND CANYON ROAD)**

**TYPE OF WORK: GRADING, DRAINAGE, PAVING, CULVERTS,  
AND SIGNALS**

STATE N.C.	STATE PROJECT REFERENCE NO. <b>R-2246C</b>	SHEET NO. <b>1</b>	TOTAL SHEETS
	STATE PROJ. NO. 34408.1.1 34408.2.3 34408.3.3	F.A. PROJ. NO. STP-000S(46) STP-1004(11) STP-1004(21)	DESCRIPTION PE R/W, UTIL. CONST.

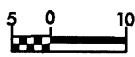
ALL DIMENSIONS IN THESE PLANS ARE IN METERS

**PRELIMINARY PLANS  
DO NOT USE FOR CONSTRUCTION**



NOTE: THIS IS A PARTIAL CONTROLLED ACCESS PROJECT WITH ACCESS BEING LIMITED TO POINTS AS SHOWN ON THE PLANS.

**GRAPHIC SCALES**



PLANS



PROFILE (HORIZONTAL)



PROFILE (VERTICAL)

**DESIGN DATA**

ADT 2003 = 15000  
 ADT 2025 = 30800  
 DHV = 11 %  
 D = 60 %  
 T = 6 % \*  
 V = 100 km/h  
 \* TTST 2 % DUAL 4 %

**PROJECT LENGTH**

LENGTH ROADWAY TIP PROJECT R-2246C = 1.989 km  
 TOTAL LENGTH TIP PROJECT R-2246C = 1.989 km

Prepared in the Office of:

**DIVISION OF HIGHWAYS**

1000 Birch Ridge Dr., NC, 27610

2002 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:  
DECEMBER 28, 2000

LETTING DATE:  
OCTOBER 21, 2003

G. E. BREW, PE  
PROJECT ENGINEER

I. T. YOUNIS  
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

ROADWAY DESIGN ENGINEER

SIGNATURE: P.E.

DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA

STATE DESIGN ENGINEER  
DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION

APPROVED DIVISION ADMINISTRATOR DATE

3-AUG-2003 11:35 AM  
BY: J. B. BROWN  
FILE: 02A

**DATUM DESCRIPTION**

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCGS FOR MONUMENT "WINDSOR"

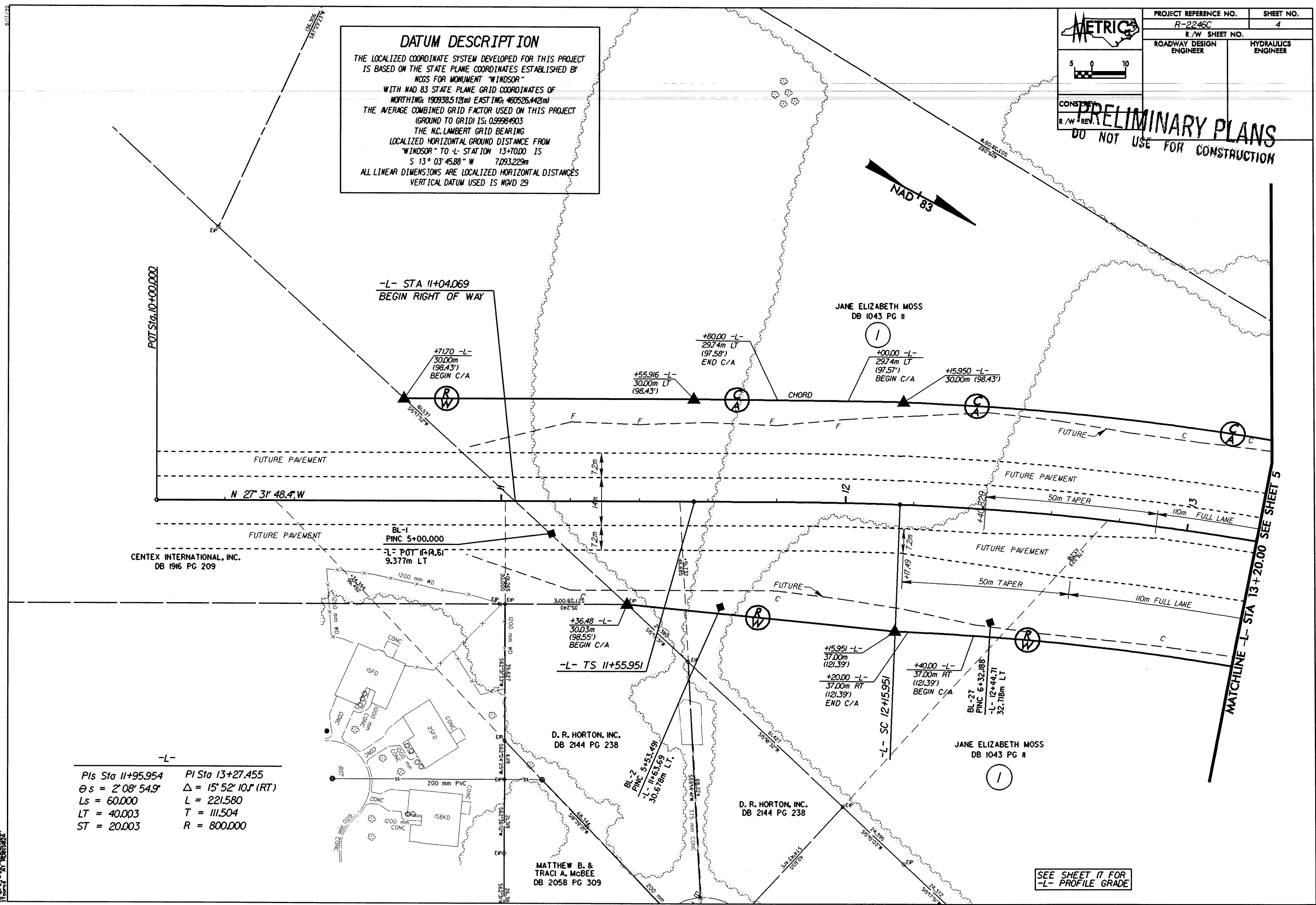
WITH NAD 83 STATE PLANE GRID COORDINATES OF  
 NORTHING: 190938.512(m) EASTING: 460526.442(m)

THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99984903

THE N.C. LAMBERT GRID BEARING LOCALIZED HORIZONTAL GROUND DISTANCE FROM "WINDSOR" TO L- STATION 13+70.00 IS  
 S 13° 03' 45.88" W 7,093.229m

ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES  
 VERTICAL DATUM USED IS NGVD 29

**PRELIMINARY PLANS**  
 DO NOT USE FOR CONSTRUCTION

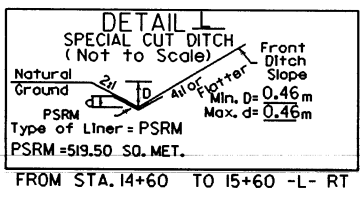
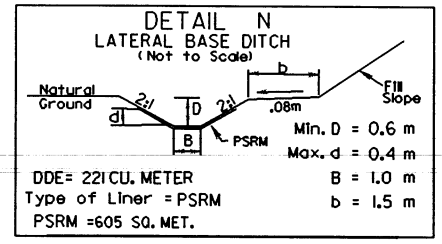


-L-

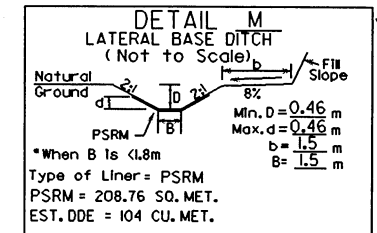
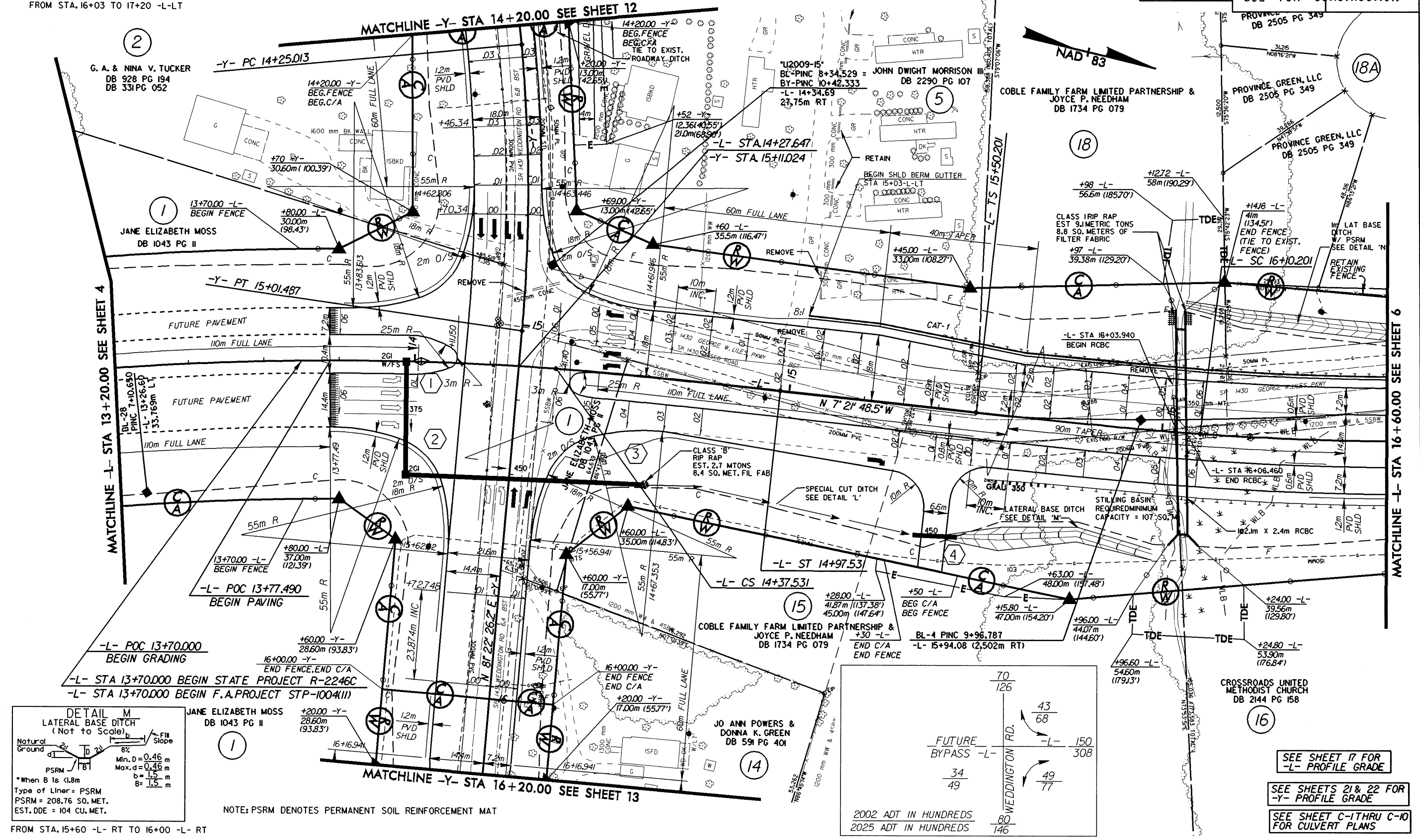
PIs Sta 11+95.954 $\theta s = 2' 08" 54.9"$ $Ls = 60.000$ $LT = 40.003$ $ST = 20.003$	PI Sta 13+27.455 $\Delta = 15' 52" 10.1" (RT)$ $L = 221.580$ $T = 111.504$ $R = 800.000$
---	--

SEE SHEET 17 FOR  
 -L- PROFILE GRADE

AUG-2003 8:35  
 11/11/03 11:21  
 11/11/03 11:21



-L-		-L-		-Y-	
PI Sta 13+27.455	Pis Sta 14+57.534	Pis Sta 15+90.204	PI Sta 16+93.718	PI Sta 14+63.351	
$\Delta = 15' 52" 10.1'$ (RT)	$\Theta s = 2' 08" 54.9'$	$\Theta s = 2' 08" 54.9'$	$\Delta = 11' 55" 11.2'$ (LT)	$\Delta = 10' 11" 23.2'$ (RT)	
L = 221.580	Ls = 60.000	Ls = 60.000	L = 166.431	L = 76.473	
T = 111.504	LT = 40.003	LT = 40.003	T = 83.517	T = 38.338	
R = 800.000	ST = 20.003	ST = 20.003	R = 800.000	R = 430.000	
e = SEE PLANS			e = SEE PLANS	e = SEE PLANS	



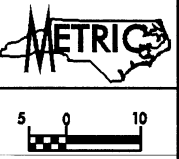
NOTE: PSRM DENOTES PERMANENT SOIL REINFORCEMENT MAT

70	126
43	68
FUTURE BYPASS -L-	150
34	49
80	146

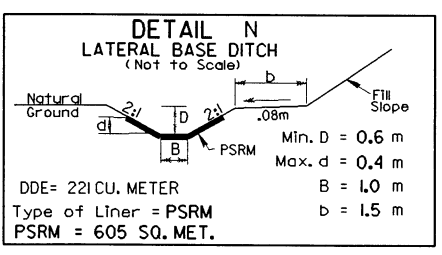
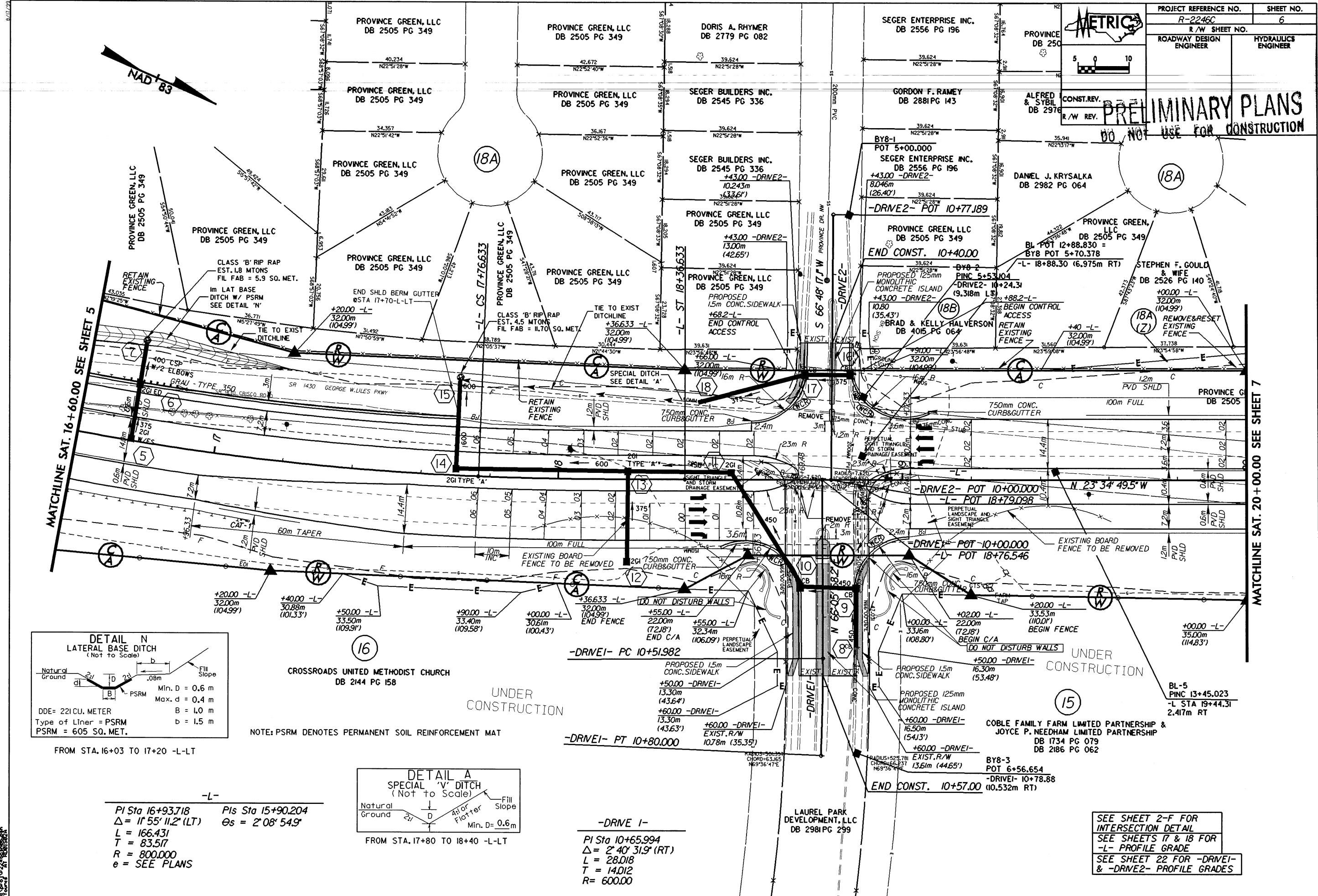
2002 ADT IN HUNDREDS  
 2025 ADT IN HUNDREDS

SEE SHEET 17 FOR -L- PROFILE GRADE  
 SEE SHEETS 21 & 22 FOR -Y- PROFILE GRADE  
 SEE SHEET C-1 THRU C-10 FOR CULVERT PLANS

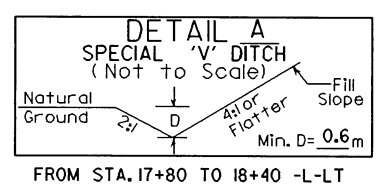




**PRELIMINARY PLANS**  
DO NOT USE FOR CONSTRUCTION



FROM STA. 16+03 TO 17+20 -L-LT



FROM STA. 17+80 TO 18+40 -L-LT

-L-  
PI Sta 16+93.718  
 $\Delta = 11' 55'' 11.2''$  (LT)  
L = 166.431  
T = 83.517  
R = 800.000  
e = SEE PLANS

-DRIVE I-  
PI Sta 10+65.994  
 $\Delta = 2' 40'' 31.9''$  (RT)  
L = 28.018  
T = 14.012  
R = 600.00

SEE SHEET 2-F FOR  
INTERSECTION DETAIL  
SEE SHEETS 17 & 18 FOR  
-L- PROFILE GRADE  
SEE SHEET 22 FOR -DRIVEI-  
& -DRIVE2- PROFILE GRADES


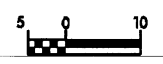
MATCHLINE SAT. 16+60.00 SEE SHEET 5

MATCHLINE SAT. 20+00.00 SEE SHEET 7

UNDER  
CONSTRUCTION

UNDER  
CONSTRUCTION

8/17/24

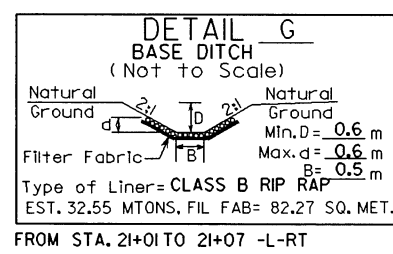
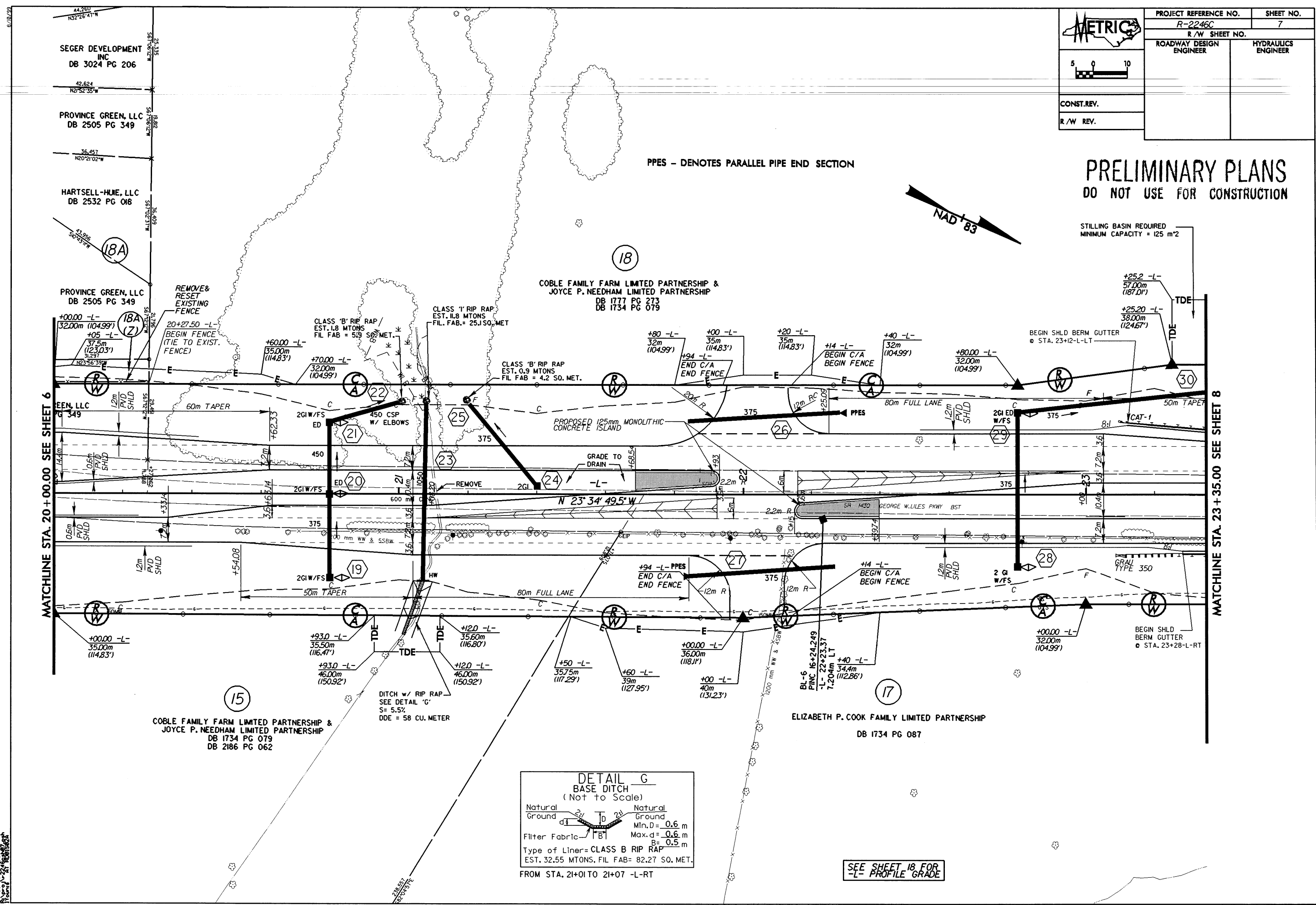
	PROJECT REFERENCE NO.	SHEET NO.
	R-2246C	7
	R/W SHEET NO.	
	ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
CONST. REV.		
R/W REV.		

**PRELIMINARY PLANS**  
DO NOT USE FOR CONSTRUCTION

PPES - DENOTES PARALLEL PIPE END SECTION



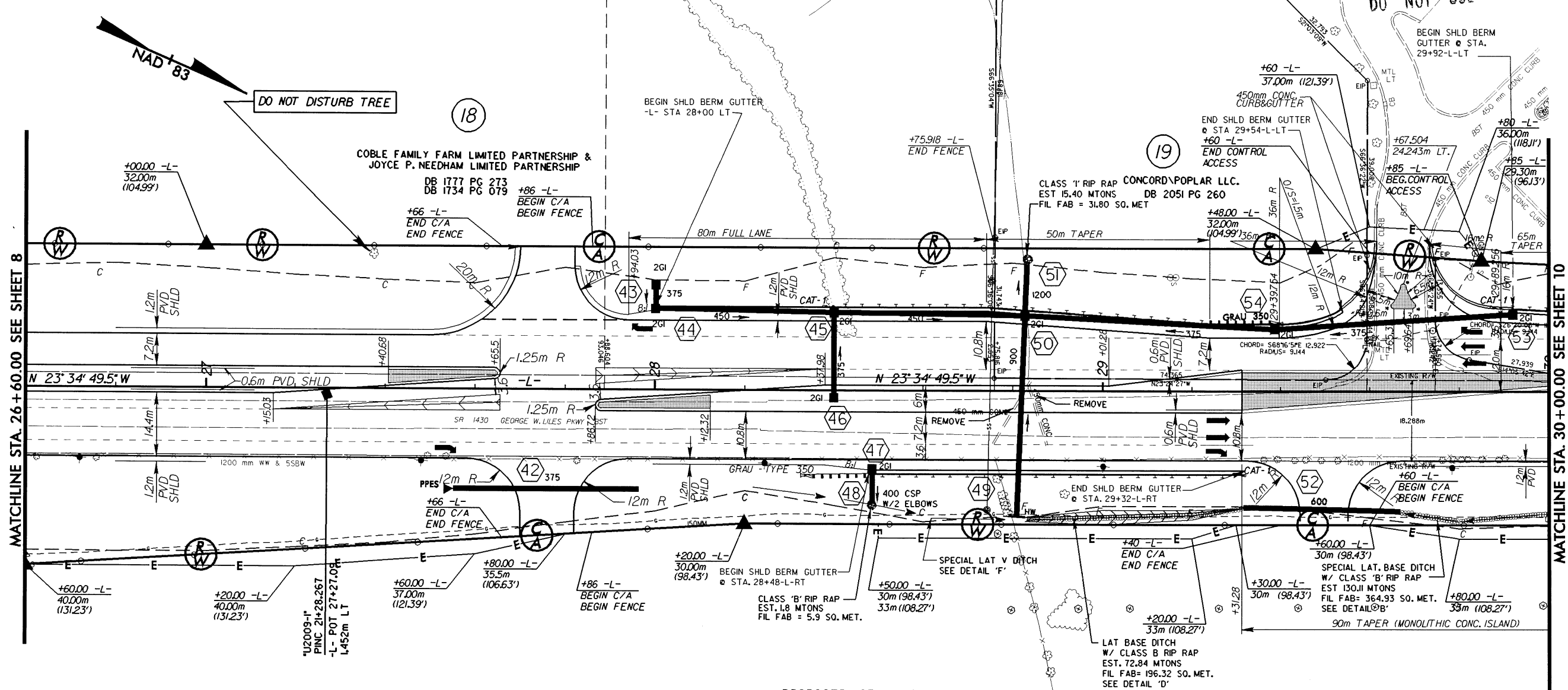
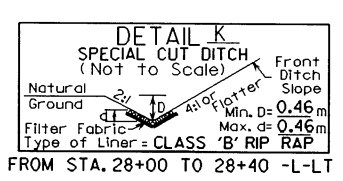
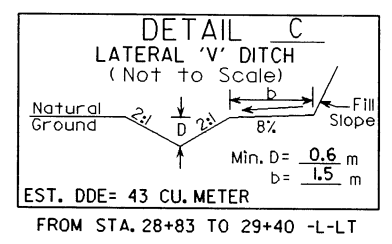
STILLING BASIN REQUIRED  
MINIMUM CAPACITY = 125 m<sup>2</sup>



SEE SHEET 18 FOR  
-L- PROFILE GRADE

PLAN DATE: 03/03/2018  
 DRAWN BY: J. J. [unreadable]  
 CHECKED BY: [unreadable]





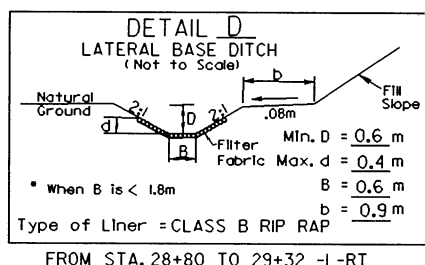
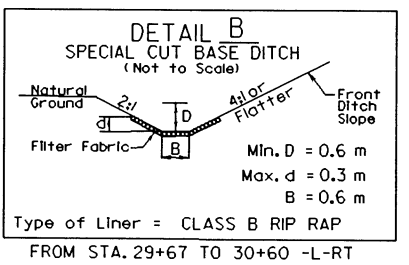
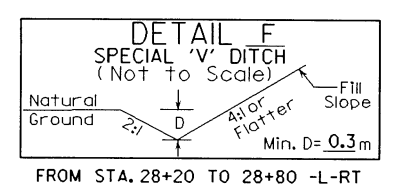
MATCHLINE STA. 26+60.00 SEE SHEET 8

MATCHLINE STA. 30+00.00 SEE SHEET 10

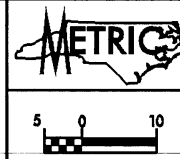
PPES - DENOTES PARALLEL PIPE END SECTION

PROPOSED 125mm MONOLITHIC CONCRETE ISLAND

ELIZABETH P. COOK FAMILY LIMITED PARTNERSHIP  
DB 1734 PG 087



SEE SHEETS 19 & 20 FOR  
-L- PROFILE GRADE

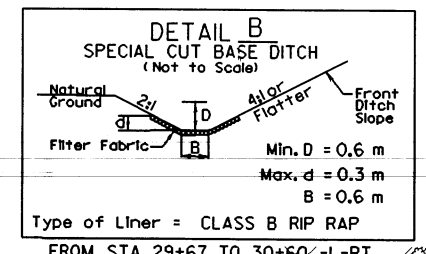


PROJECT REFERENCE NO.	SHEET NO.
R-2246C	10
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

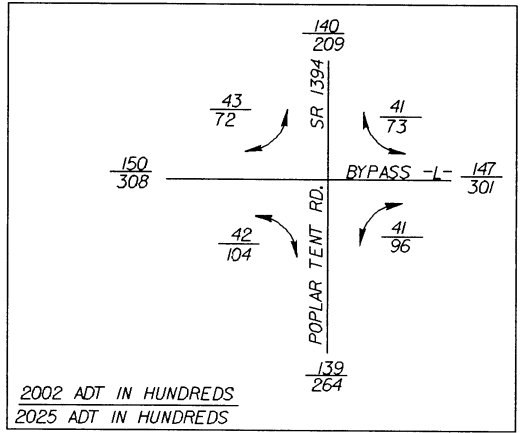
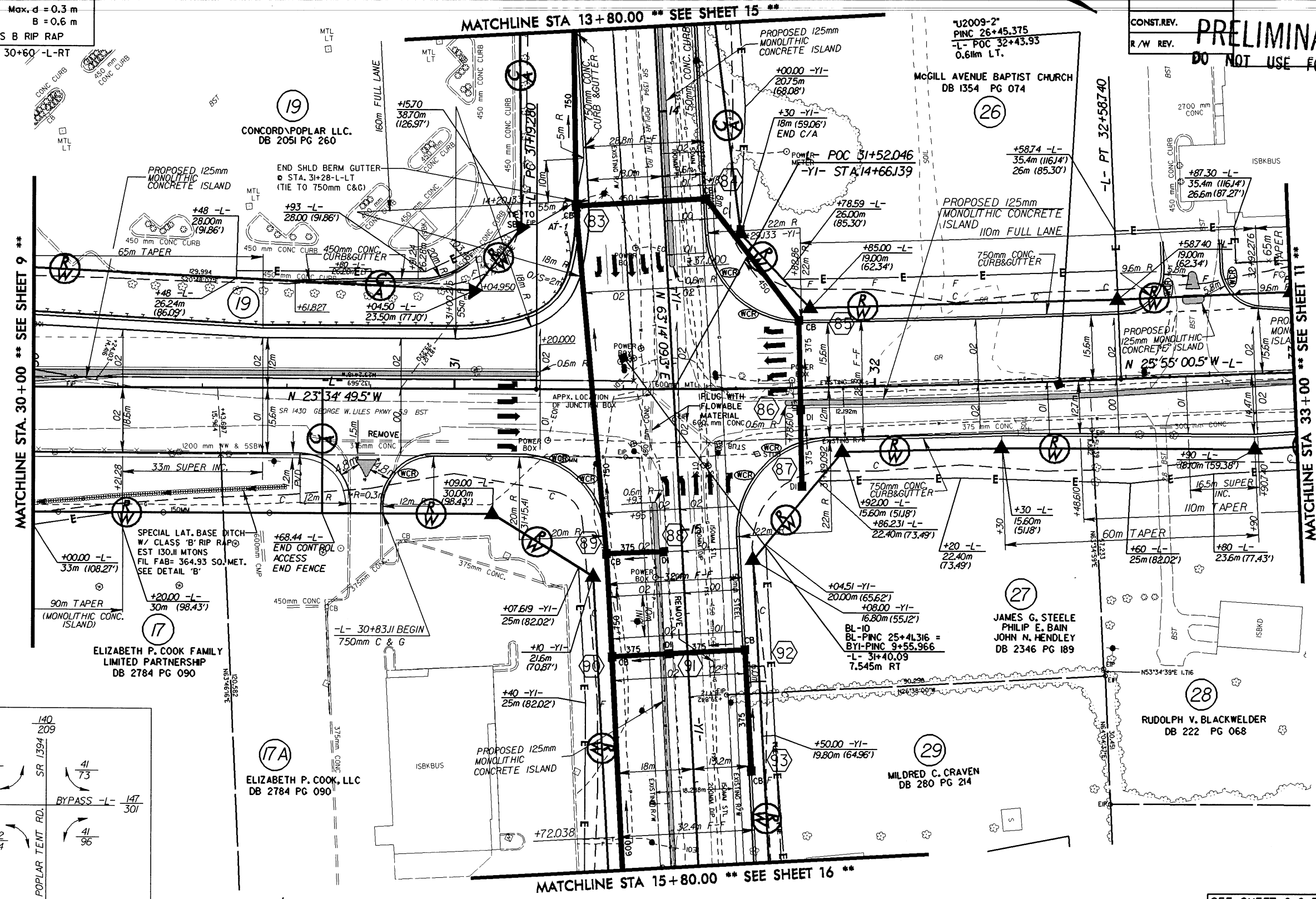
CONST. REV.  
R/W REV.

# PRELIMINARY PLANS

DO NOT USE FOR CONSTRUCTION



FROM STA. 29+67 TO 30+60 -L-RT



2002 ADT IN HUNDREDS  
2025 ADT IN HUNDREDS

-L-  
PI Sta 31+89.020  
 $\Delta = 2' 20'' 11.0'' (LT)$   
L = 139.460  
T = 69.739  
R = 3,420.000  
e = SEE PLANS

SEE SHEET 2-6 FOR INTERSECTION DETAIL  
SEE SHEET 20 FOR -L- PROFILE GRADE  
SEE SHEET 23 FOR -YI- PROFILE GRADE

8-77-03 - REVISED R/W, ELIMINATED PDE AND ADDED TDE FOR PARCELS 27.28 & 29 (TY)

5 0 10

CONST. REV.

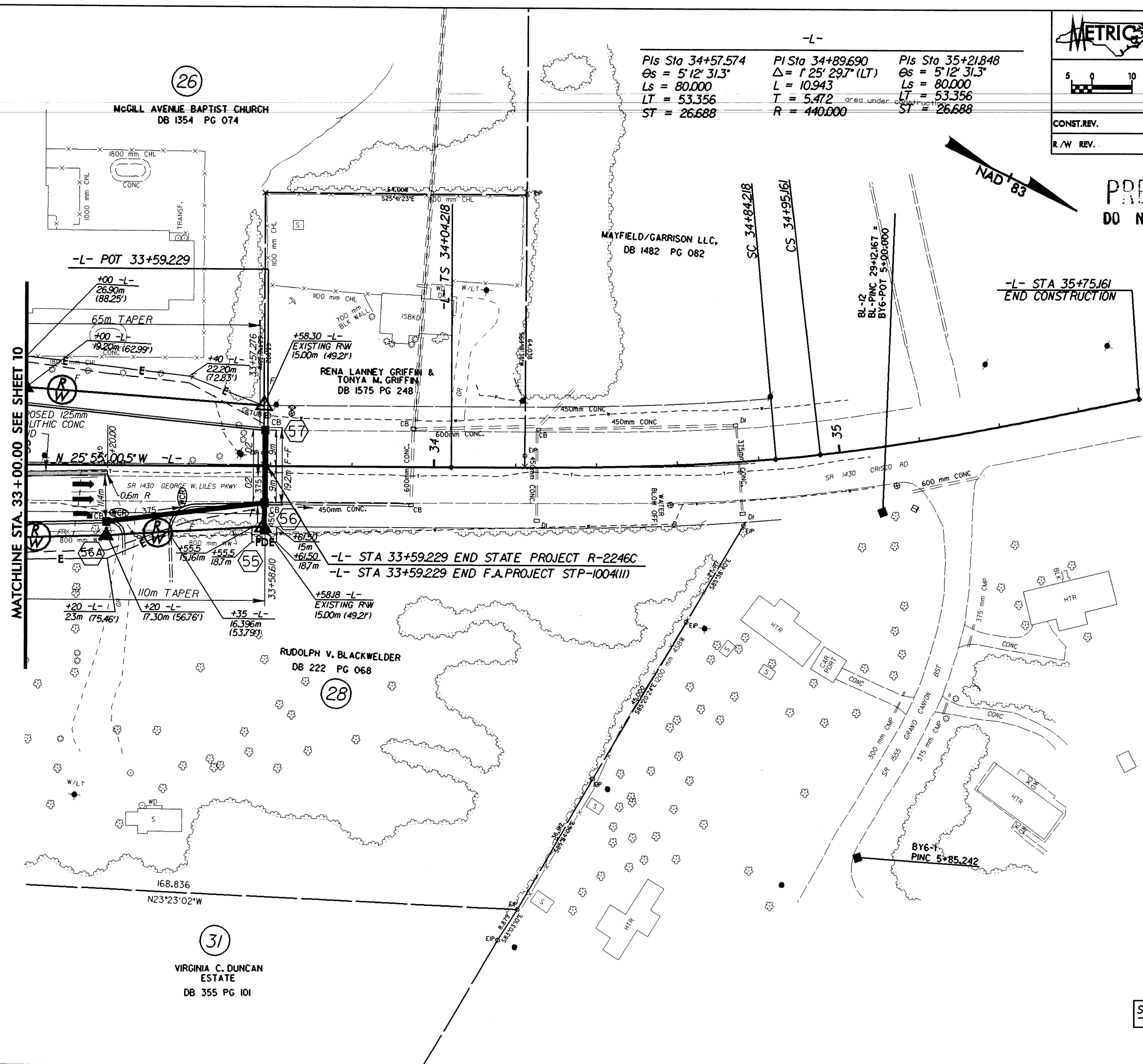
R/W REV.

PROJECT REFERENCE NO.	SHEET NO.
R-2246C	11
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-L-

Pls Sta 34+57.574	PI Sta 34+89.690	Pls Sta 35+21.848
Os = 5'12' 31.3"	Δ = 1'25' 29.7" (LT)	Os = 5'12' 31.3"
Ls = 80.000	L = 10.943	Ls = 80.000
LT = 53.356	T = 5.472	LT = 53.356
ST = 26.688	R = 440.000	ST = 26.688

PRELIMINARY PLANS  
DO NOT USE FOR CONSTRUCTION



MATCHLINE STA. 33 + 00.00 SEE SHEET 10

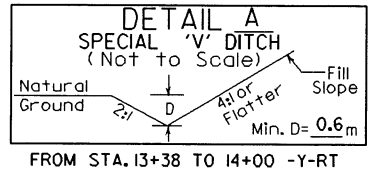
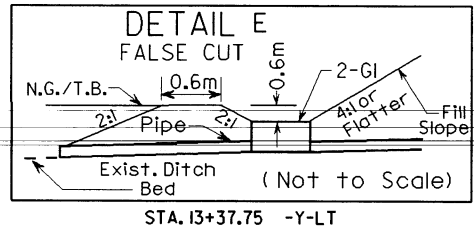
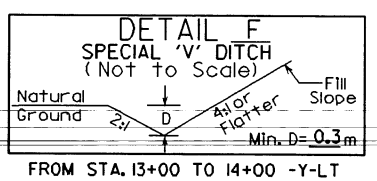
-L- STA 33+59.229 END STATE PROJECT R-2246C  
-L- STA 33+59.229 END F.A. PROJECT STP-1004(II)

-L- STA 35+75.61  
END CONSTRUCTION

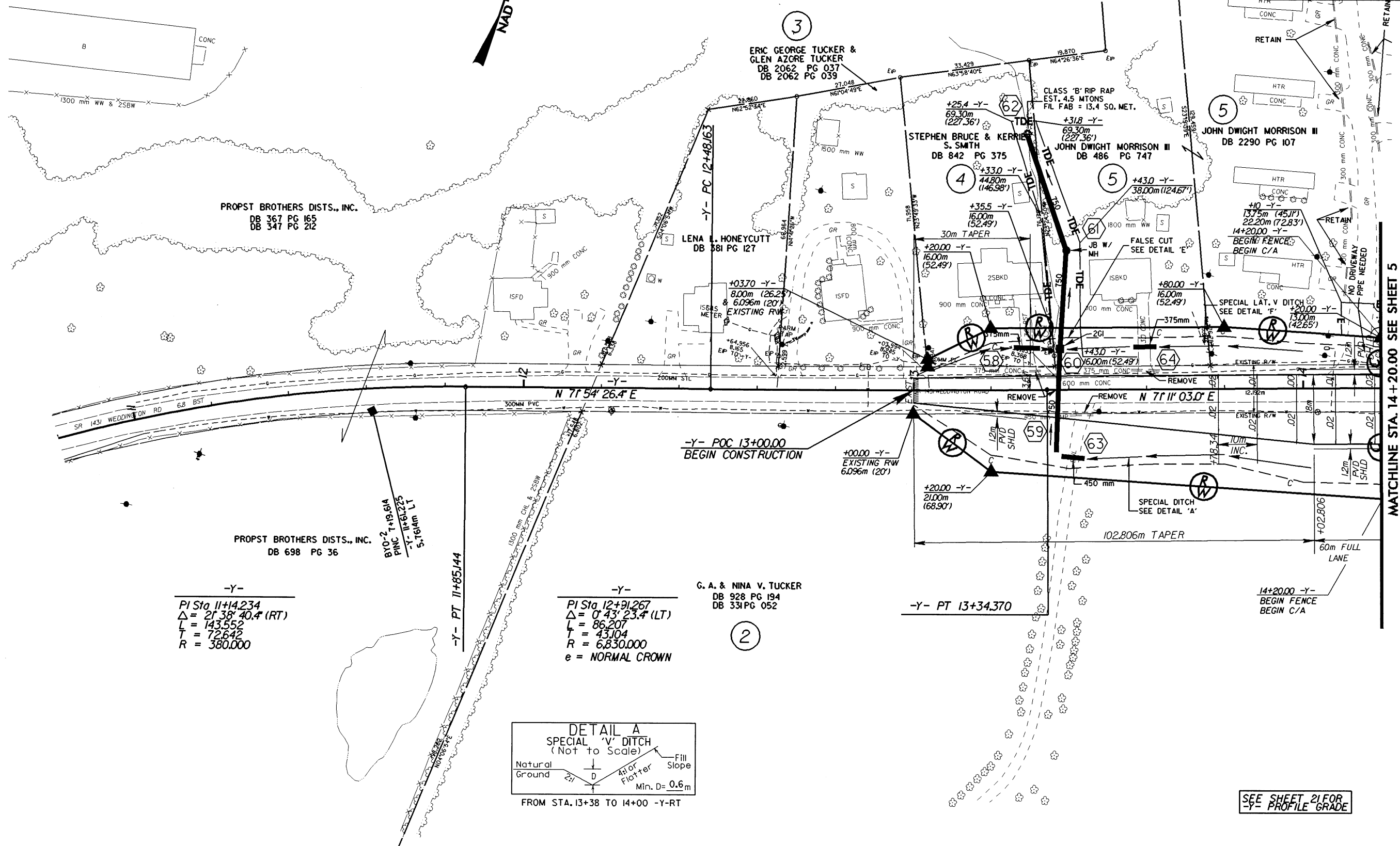
SEE SHEET 20 FOR  
-L- PROFILE GRADE

B-77-03 REVISED R/W & TEMP. CONST. EASEMENT ON PARCEL 28. ITY

AUG-2003 1:35  
BY: [signature]  
CHECKED BY: [signature]



8-17-83  
 8-AUG-2003  
 10:00 AM  
 10/10/03



-Y-  
 PI Sta 11+14.234  
 $\Delta = 21' 38'' 40.4''$  (RT)  
 $L = 143.552$   
 $T = 72.642$   
 $R = 380.000$

-Y-  
 PI Sta 12+91.267  
 $\Delta = 0' 43'' 23.4''$  (LT)  
 $L = 86.207$   
 $T = 43.104$   
 $R = 6,830.000$   
 $e = \text{NORMAL CROWN}$

SEE SHEET 21 FOR -Y- PROFILE GRADE

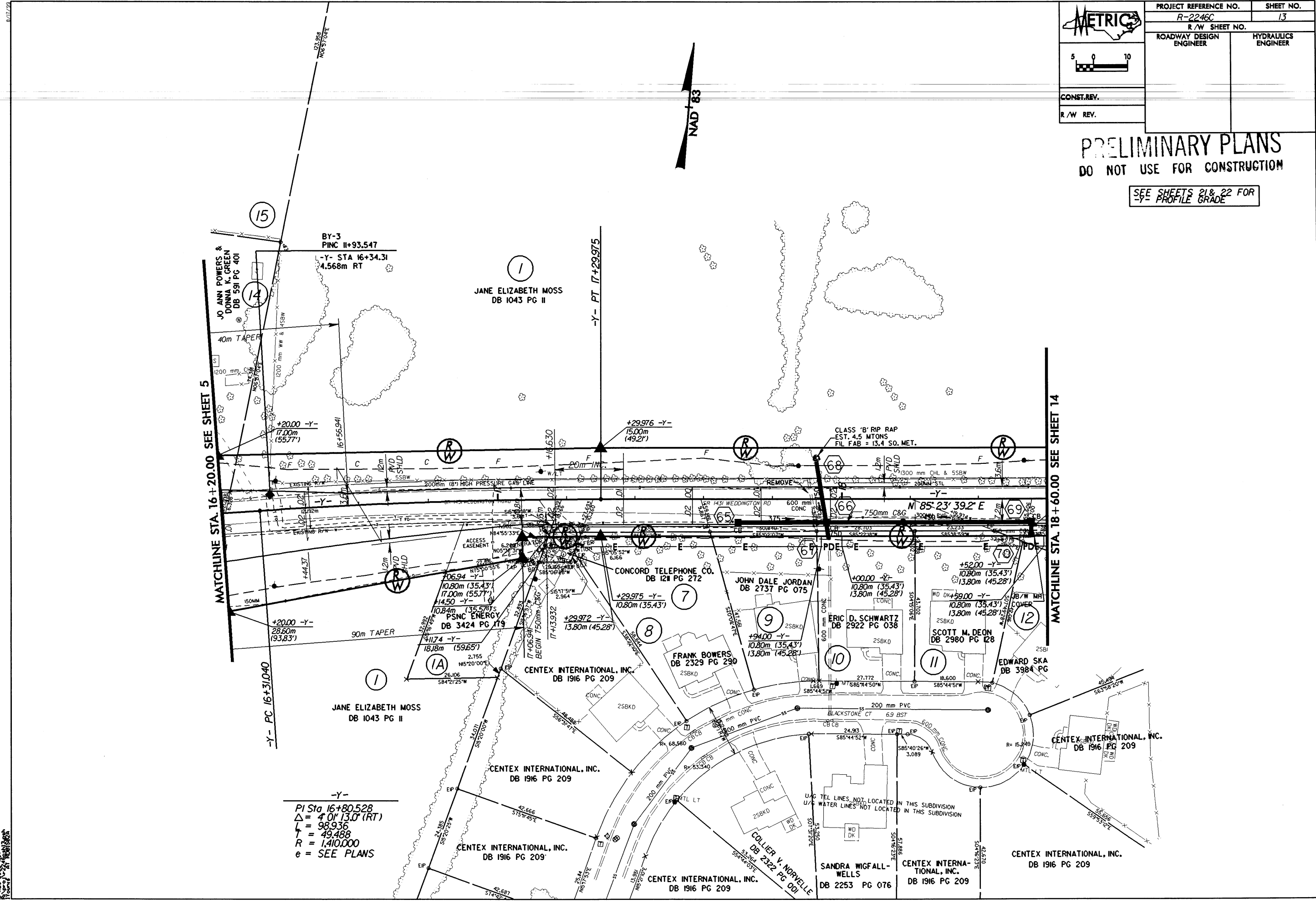
MATCHLINE STA. 14+20.00 SEE SHEET 5

PROJECT REFERENCE NO. R-2246C		SHEET NO. 13
R/W SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
CONST. REV.		
R/W REV.		



**PRELIMINARY PLANS**  
DO NOT USE FOR CONSTRUCTION

SEE SHEETS 21 & 22 FOR  
-Y- PROFILE GRADE



-Y-  
PI Sta 16+80.528  
Δ = 4' 0" 13.0' (RT)  
L = 98.936  
T = 49.488  
R = 1,410.000  
e = SEE PLANS

RAJEEV K. SINGH  
 R/W DESIGN ENGINEER  
 8/17/25

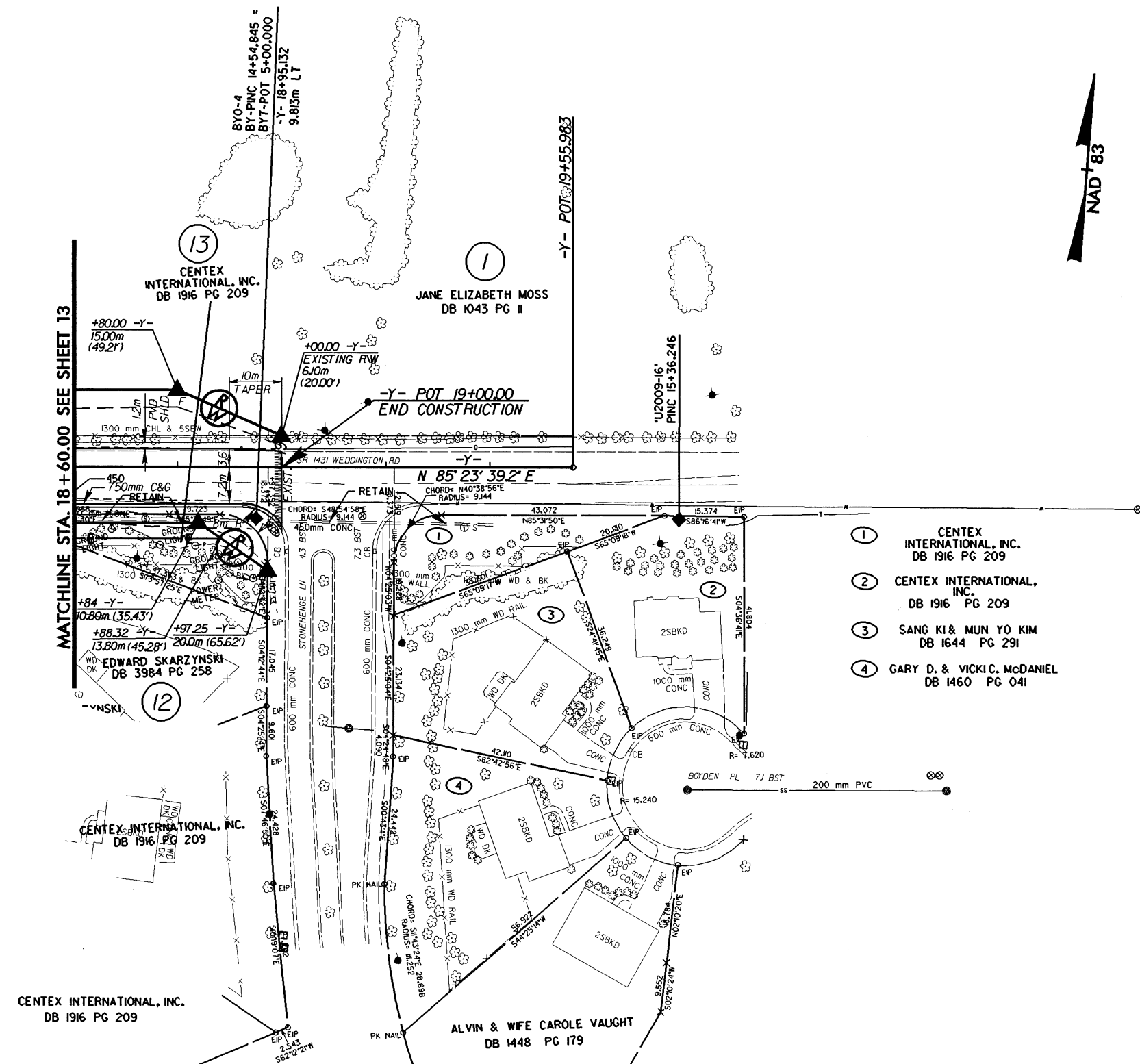




PROJECT REFERENCE NO. R-2246C	SHEET NO. 14
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
CONST. REV.	
R/W REV.	



**PRELIMINARY PLANS**  
DO NOT USE FOR CONSTRUCTION

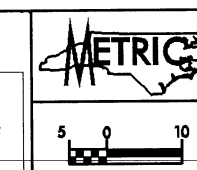


SEE SHEET 22 FOR  
-Y- PROFILE GRADE

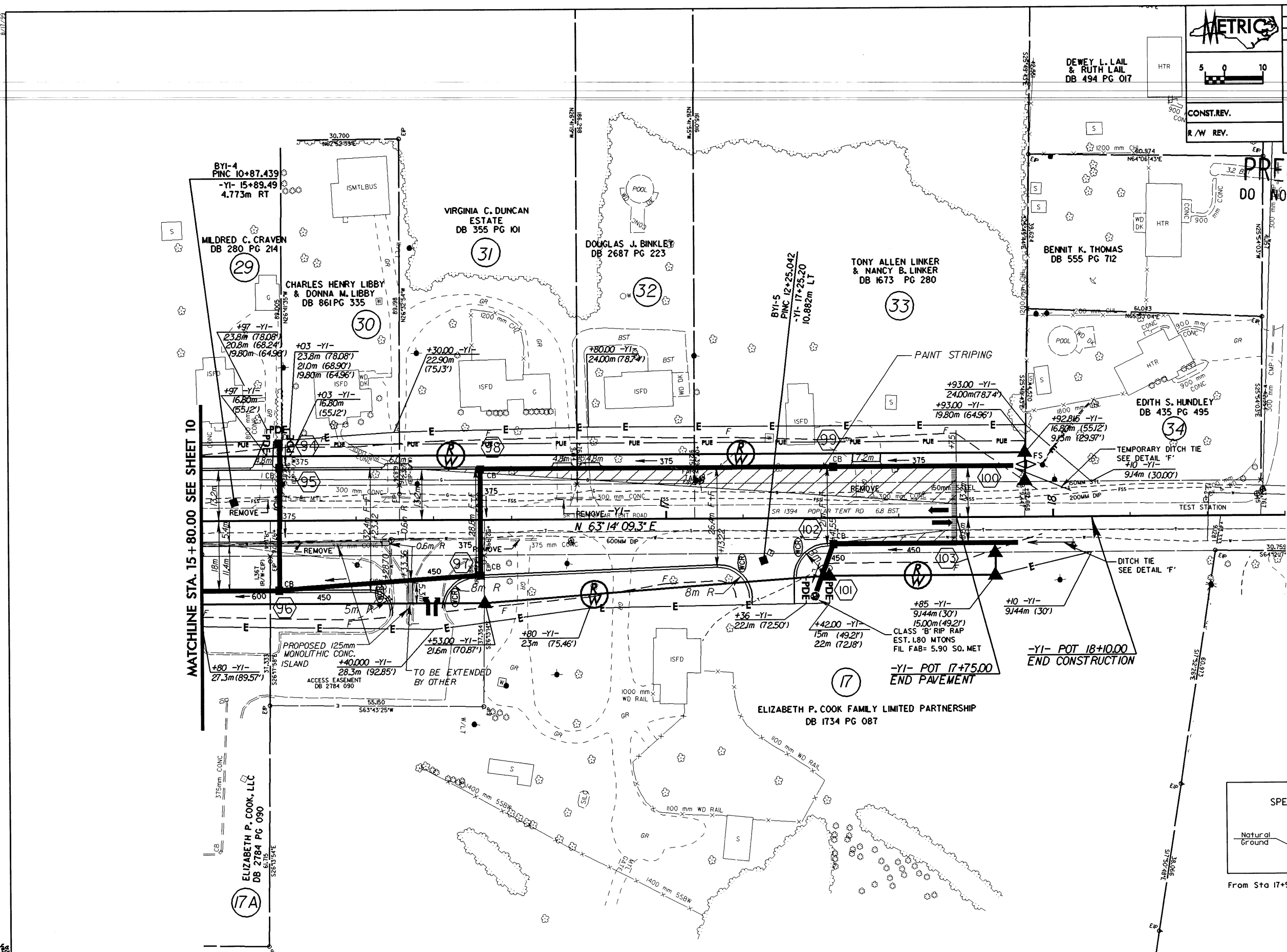
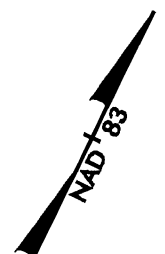
8/17/98  
 R-2246C-2003 MAC  
 10/20/03  
 10/20/03  
 10/20/03



PROJECT REFERENCE NO. R-2246C		SHEET NO. 16
R/W SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
CONST. REV.		
R/W REV.		



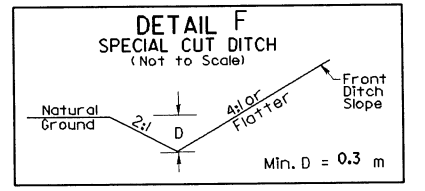
**PRELIMINARY PLANS**  
DO NOT USE FOR CONSTRUCTION



MATCHLINE STA. 15 + 80.00 SEE SHEET 10

-YI- POT 18+10.00  
END CONSTRUCTION

-YI- POT 17+75.00  
END PAVEMENT



From Sta 17+95 -YI- to Sta 18+10 -YI- Lt and Rt

SEE SHEET 23 FOR  
-YI- PROFILE GRADE

DATE: 2003, BY: [Signature], CHECKED BY: [Signature], SCALE: AS SHOWN