

NOTE: SEE SHEET 2A FOR PLAN SHEET LAYOUT AT TIME OF INVESTIGATION

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
GEOTECHNICAL ENGINEERING UNIT

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-0061C	1	18
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
38783.1.1	NHF-74 (80)	P.E.	
38783.2.1	HPPNHF-0074(80)	RW	
38783.3.1	HPPNHF-0074(80)	UTILITY, CONST.	

CONTENTS

LINE	STATION	PLAN	PROFILE
-L-	10+00 TO 57+50	4-7	10,11
-Y-	14+50 TO 40+00	5,8,9	16-18
-RPA-	10+00 TO 30+66	5,6,8	12
-RPB-	10+00 TO 22+69	4,5	13
-RPC-	10+00 TO 28+90	4,5,9	14
-RPD-	10+00 TO 26+15	5,6	15

ROADWAY  
SUBSURFACE INVESTIGATION

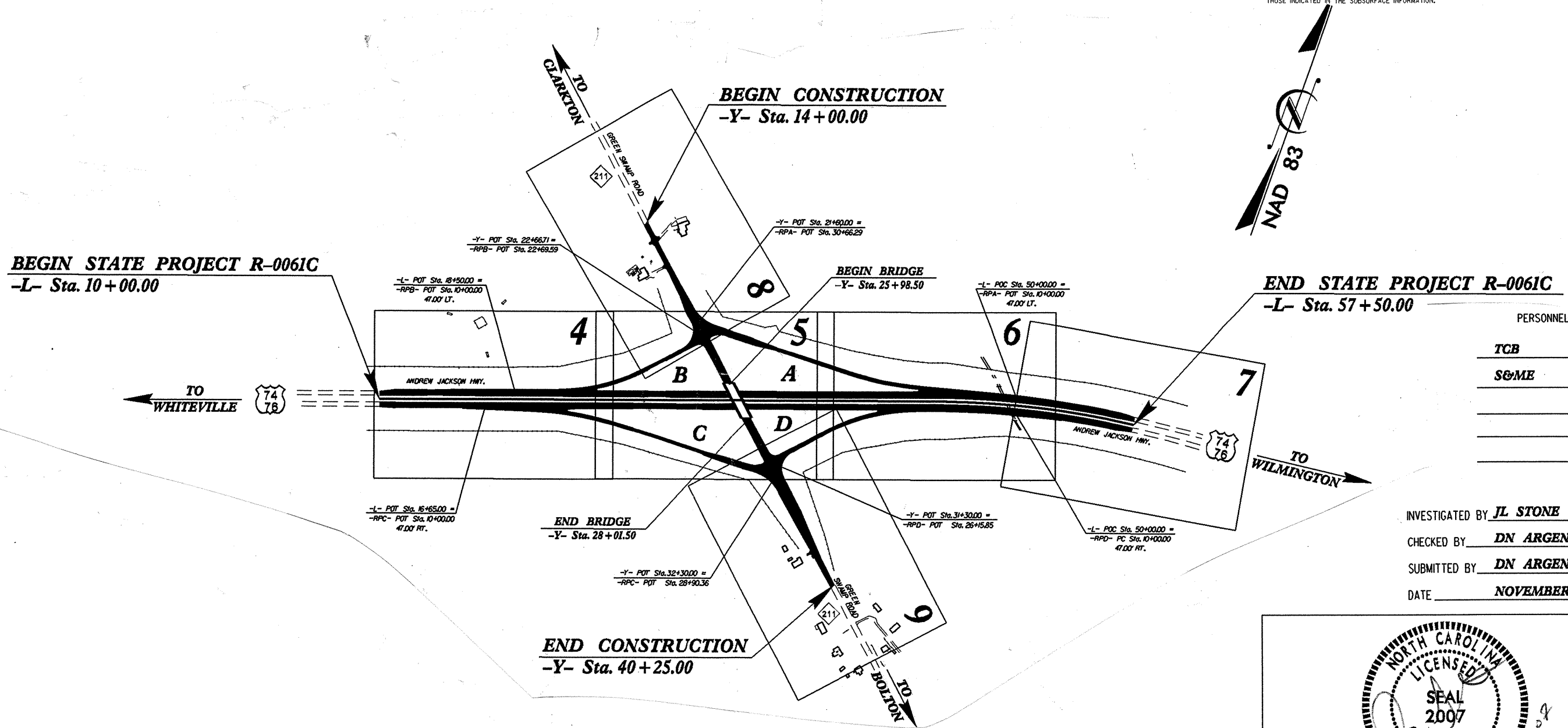
PROJ. REFERENCE NO. 38783.1.1 (R-0061C) F.A. PROJ. NHF-74 (80)  
COUNTY COLUMBUS  
PROJECT DESCRIPTION PROPOSED INTERCHANGE AT INTERSECTION OF US 74/76 (ANDREW JACKSTON HWY.) AND NC 211 (GREEN SWAMP RD.)

INVENTORY

**CAUTION NOTICE**  
THE SUBSURFACE INFORMATION AND THE SUBSURFACE INVESTIGATION ON WHICH IT IS BASED WERE MADE FOR THE PURPOSE OF STUDY, PLANNING, AND DESIGN, AND NOT FOR CONSTRUCTION OR PAY PURPOSES. THE VARIOUS FIELD BORING LOGS, ROCK CORES, AND SOIL TEST DATA AVAILABLE MAY BE REVIEWED OR INSPECTED IN RALEIGH BY CONTACTING THE N. C. DEPARTMENT OF TRANSPORTATION, GEOTECHNICAL ENGINEERING UNIT AT (919) 250-4088. NEITHER THE SUBSURFACE PLANS AND REPORTS, NOR THE FIELD BORING LOGS, ROCK CORES, OR SOIL TEST DATA ARE PART OF THE CONTRACT.  
  
GENERAL SOIL AND ROCK STRATA DESCRIPTIONS AND INDICATED BOUNDARIES ARE BASED ON A GEOTECHNICAL INTERPRETATION OF ALL AVAILABLE SUBSURFACE DATA AND MAY NOT NECESSARILY REFLECT THE ACTUAL SUBSURFACE CONDITIONS BETWEEN BORINGS OR BETWEEN SAMPLED STRATA WITHIN THE BOREHOLE. THE LABORATORY SAMPLE DATA AND THE IN SITU (IN-PLACE) TEST DATA CAN BE RELIED ON ONLY TO THE DEGREE OF RELIABILITY INHERENT IN THE STANDARD TEST METHOD. THE OBSERVED WATER LEVELS OR SOIL MOISTURE CONDITIONS INDICATED IN THE SUBSURFACE INVESTIGATIONS ARE AS RECORDED AT THE TIME OF THE INVESTIGATION. THESE WATER LEVELS OR SOIL MOISTURE CONDITIONS MAY VARY CONSIDERABLY WITH TIME ACCORDING TO CLIMATIC CONDITIONS INCLUDING TEMPERATURES, PRECIPITATION, AND WIND, AS WELL AS OTHER NON-CLIMATIC FACTORS.  
  
THE BIDDER OR CONTRACTOR IS CAUTIONED THAT DETAILS SHOWN ON THE SUBSURFACE PLANS ARE PRELIMINARY ONLY AND IN MANY CASES THE FINAL DESIGN DETAILS ARE DIFFERENT. FOR BIDDING AND CONSTRUCTION PURPOSES, REFER TO THE CONSTRUCTION PLANS AND DOCUMENTS FOR FINAL DESIGN INFORMATION ON THIS PROJECT. THE DEPARTMENT DOES NOT WARRANT OR GUARANTEE THE SUFFICIENCY OR ACCURACY OF THE INVESTIGATION MADE, NOR THE INTERPRETATIONS MADE, OR OPINION OF THE DEPARTMENT AS TO THE TYPE OF MATERIALS AND CONDITIONS TO BE ENCOUNTERED. THE BIDDER OR CONTRACTOR IS CAUTIONED TO MAKE SUCH INDEPENDENT SUBSURFACE INVESTIGATIONS AS HE DEEMS NECESSARY TO SATISFY HIMSELF AS TO CONDITIONS TO BE ENCOUNTERED ON THIS PROJECT. THE CONTRACTOR SHALL HAVE NO CLAIM FOR ADDITIONAL COMPENSATION OR FOR AN EXTENSION OF TIME FOR ANY REASON RESULTING FROM THE ACTUAL CONDITIONS ENCOUNTERED AT THE SITE DIFFERING FROM THOSE INDICATED IN THE SUBSURFACE INFORMATION.

ID: R-0061C

CONTRACT: C202555



PERSONNEL

TCB
S&ME

INVESTIGATED BY JL STONE  
CHECKED BY DN ARGENBRIGHT  
SUBMITTED BY DN ARGENBRIGHT  
DATE NOVEMBER, 2007



DRAWN BY: C.M. KENT, J.L. STONE

NOTE - THE INFORMATION CONTAINED HEREIN IS NOT IMPLIED OR GUARANTEED BY THE N. C. DEPARTMENT OF TRANSPORTATION AS BEING ACCURATE NOR IS IT CONSIDERED TO BE PART OF THE PLANS, SPECIFICATIONS, OR CONTRACT FOR THE PROJECT.

NOTE - BY HAVING REQUESTED THIS INFORMATION THE CONTRACTOR SPECIFICALLY WAIVES ANY CLAIMS FOR INCREASED COMPENSATION OR EXTENSION OF TIME BASED ON DIFFERENCES BETWEEN THE CONDITIONS INDICATED HEREIN AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
GEOTECHNICAL ENGINEERING UNIT

PROJECT REFERENCE NO. 38783.11(R-0061C) SHEET NO. 2

SUBSURFACE INVESTIGATION

SOIL AND ROCK LEGEND, TERMS, SYMBOLS, AND ABBREVIATIONS

Table with multiple columns: SOIL DESCRIPTION, GRADATION, ROCK DESCRIPTION, TERMS AND DEFINITIONS, SOIL LEGEND AND AASHTO CLASSIFICATION, MINERALOGICAL COMPOSITION, COMPRESSIBILITY, PERCENTAGE OF MATERIAL, GROUND WATER, CONSISTENCY OR DENSENESS, MISCELLANEOUS SYMBOLS, ABBREVIATIONS, EQUIPMENT USED ON SUBJECT PROJECT, ROCK HARDNESS, FRACTURE SPACING, BEDDING, INDURATION, PLASTICITY, COLOR.

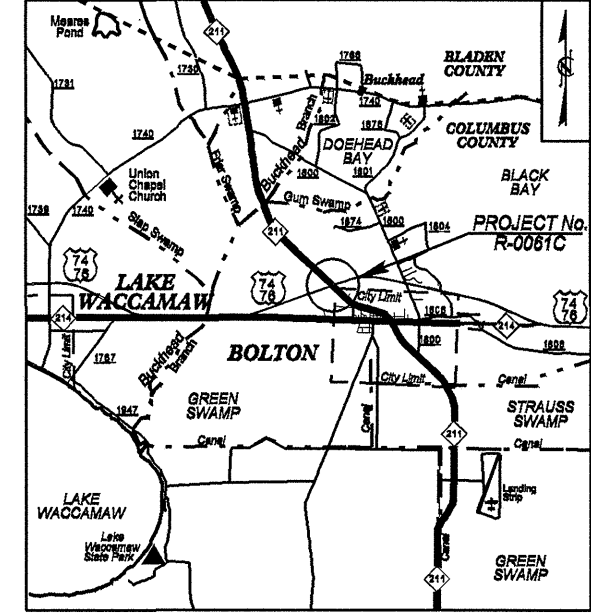
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-0061C	2A	15
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
38783.1.1	NHF-74 (80)	P.E.	

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

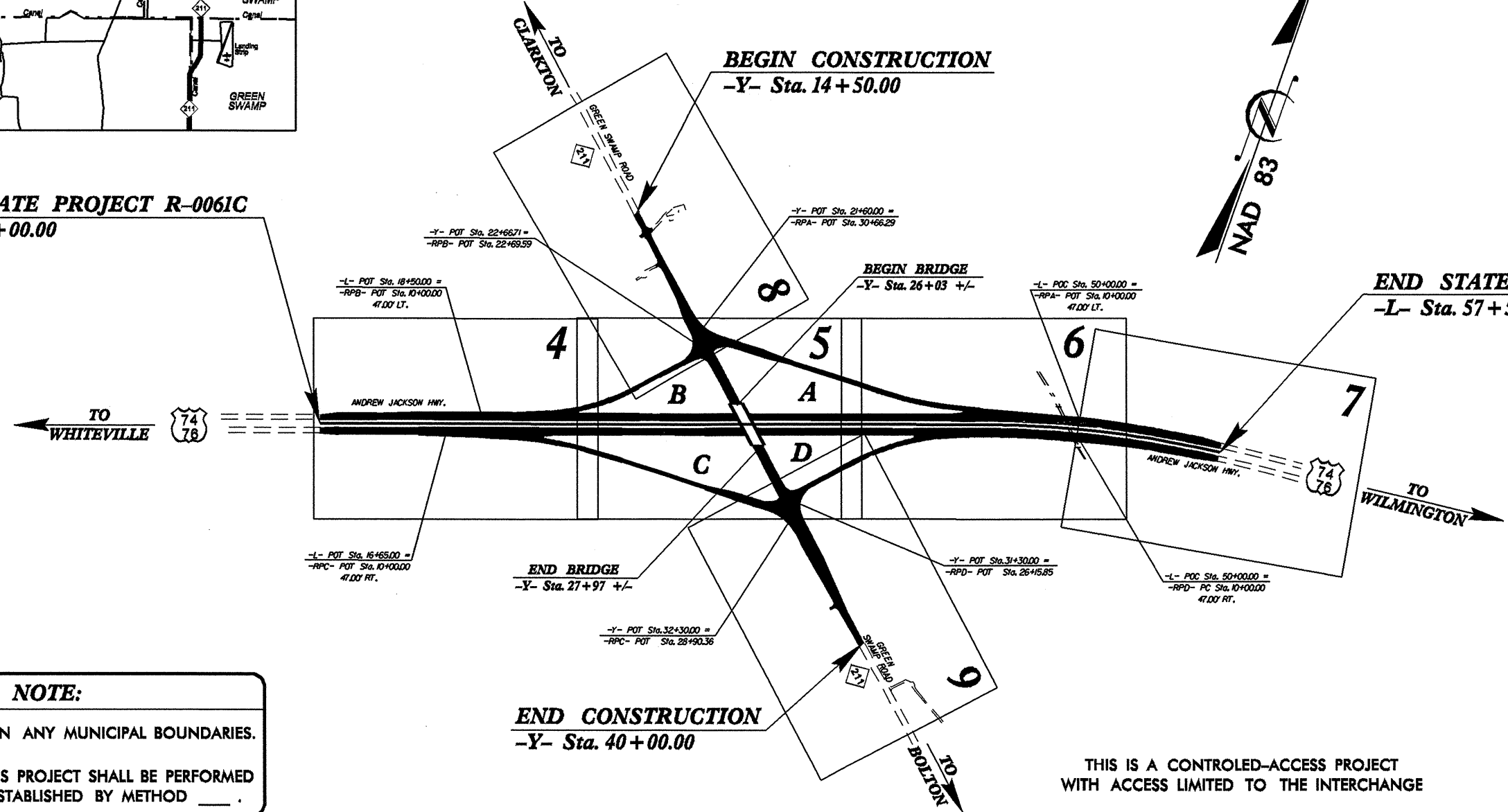
# COLUMBUS COUNTY

**LOCATION: PROPOSED INTERCHANGE AT INTERSECTION OF  
US 74 /76 (ANDREW JACKSON HWY.) AND  
NC 211 (GREEN SWAMP RD.)**

**TYPE OF WORK: GRADING, PAVING, DRAINAGE, AND STRUCTURE**



**BEGIN STATE PROJECT R-0061C**  
-L- Sta. 10 + 00.00

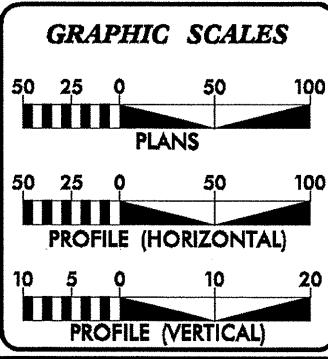


**END STATE PROJECT R-0061C**  
-L- Sta. 57 + 50.00

**NOTE:**  
THIS IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.  
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD \_\_\_\_\_

THIS IS A CONTROLLED-ACCESS PROJECT  
WITH ACCESS LIMITED TO THE INTERCHANGE

INCOMPLETE PLANS  
DO NOT USE FOR R/W ACQUISITION  
PRELIMINARY PLANS  
DO NOT USE FOR CONSTRUCTION



**DESIGN DATA**

ADT 2005 =	11,000
ADT 2030 =	20,000
DHV =	60 %
D =	10 %
T =	21 % *
V =	60 MPH
* TTST =	17% DUAL = 4%

**PROJECT LENGTH**

LENGTH ROADWAY F.A. PROJECT No. NHF-74(80)	= 0.900 Miles
TOTAL LENGTH STATE PROJECT No. 38783.1.1	= 0.900 Miles

**FUNC. CLASS FOR PROPOSED**

PROPOSED -L-	= INTERSTATE
PROPOSED -Y-	= COLLECTOR

Prepared in the Office of:  
**DIVISION OF HIGHWAYS**  
1000 Birch Ridge Dr., Raleigh NC, 27610

2006 STANDARD SPECIFICATIONS

**RIGHT OF WAY DATE:**  
JUNE 2008

**LETTING DATE:**  
DECEMBER 2009

**JIMMY GOODNIGHT**  
PROJECT ENGINEER

**STEVE KENDALL**  
PROJECT DESIGN ENGINEER

**HYDRAULICS ENGINEER**

SIGNATURE \_\_\_\_\_ P.E.

**ROADWAY DESIGN ENGINEER**

SIGNATURE \_\_\_\_\_ P.E.

**DIVISION OF HIGHWAYS**  
STATE OF NORTH CAROLINA

STATE HIGHWAY DESIGN ENGINEER P.E.

CONTRACT: R-0061C  
 TIP PROJECT: R-0061C  
 12-OCT-2007 12:42  
 i:\ero\greenville\_investigation\tip\0061c-geo\_rdw\cadd\geotech\site&sub\0061c\_rdy\_tsh.dgn  
 jstone AT GEG226153

09/08/99



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY  
GOVERNOR

LYNDO TIPPETT  
SECRETARY

November 26, 2007

STATE PROJECT: 38783.1.1 (R-0061C)  
F.A. PROJECT: NHF-74(80)  
COUNTY: Columbus  
DESCRIPTION: Proposed Interchange at Intersection of US 74/76  
(Andrew Jackson Hwy.) and NC 211 (Green Swamp Rd.)  
SUBJECT: Geotechnical Inventory

**Project Description**

This project area lies just north of the town of Bolton, at the existing NC 211, US74/76 interchange. This geotechnical investigation was confined to the areas of proposed construction.

Fieldwork for this project was completed in July 2007. Standard Penetration Test borings were advanced with an ATV mounted BK-51 drill machine with an automatic hammer. Cone Penetration Test borings were completed with a Vertek cone penetration machine mounted on a Diedrich ATV using a 1.75" diameter cone. Representative soil samples were collected for visual classification in the field and for laboratory analysis by the Materials and Tests Unit.

The following alignments, totaling 0.9 miles were investigated. Subsurface profiles or cross sections of these alignments are included in this report.

<u>Line</u>	<u>Station(±)</u>
-L-	10+00 to 57+50
-Y-	14+50 to 40+00
-RPA-	10+00 to 30+66
-RPB-	10+00 to 22+69
-RPC-	10+00 to 28+90
-RPD-	10+00 to 26+15

**Areas of Special Geotechnical Interest**

- 1) The following sections contain cohesive soils which have the potential to cause embankment stability and/or long term settlement problems:

<u>Line</u>	<u>Station(±)</u>
-L-	10+00 to 34+50
-L-	36+50 to 37+50
-L-	38+50 to 39+50
-L-	40+50 to 47+00
-L-	48+50 to 56+50
-Y-	14+50 to 40+00
-RPA-	10+00 to 30+66
-RPB-	10+00 to 22+69
-RPC-	10+00 to 28+90
-RPD-	10+00 to 26+15

- 2) The following sections were found to exhibit seasonal high ground water.

<u>Line</u>	<u>Station(±)</u>
-L-	10+00 to 10+50
-L-	24+50 to 30+50
-L-	33+50 to 47+00
-L-	49+50 to 57+50
-Y-	15+50 to 21+00
-Y-	25+00 to 29+00
-Y-	31+50 to 40+00
-RPA-	12+00 to 25+50
-RPC-	12+00 to 17+00
-RPC-	27+50 to 28+90
-RPD-	15+50 to 22+00
-RPD-	24+00 to 26+15

**Physiography and Geology**

This project corridor is located within the Coastal Plain Physiographic Province. Topography along the project is nearly flat to gently sloping. Elevations ranged from 55± to 65± feet above sea level

Surficial soils in this area are generally classified as undivided coastal plain sediments and are underlain by the Cretaceous marine deposits of the Peedee Formation.

**Ground Water**

Ground water data was collected in July 2007, during a time of below normal precipitation. Ground water elevations ranged from 43± to 60± feet above sea level.

Soils

Soils within this project area have been divided into three categories, undivided coastal plain soils, formational soils and roadway embankment soils.

Soils classified as undivided coastal plain are comprised of 1± to 14± feet of very loose to very dense sand and clayey sand (A-2-4, A-3 and A-2-6), 2± to 9± feet of soft to stiff sandy and clayey silt (A-4), and 1± to 15± feet of very soft to very stiff sandy and silty clay (A-6, A-7-6). Moisture samples collected within these cohesive soils ranged from 5.5% to 26.9%.

Formational soils encountered belong to the Cretaceous Peedee Formation. In this area the Peedee Formation is composed of 7± to 15± feet of medium stiff to very stiff calcareous silt with 3± to 39± feet of loose to very dense sand (A-2-4, A-3). Scattered within these units are thin moderately hard to hard limestone layers.

Soils identified as roadway embankment are comprised of 2± to 5± feet of loose to dense sand (A-2-4) and 2± feet of medium stiff to stiff sandy silt (A-4). These soils were encountered along existing US 74/76 as well as NC 211.

Respectfully Submitted,



Joseph L. Stone, L.G.

Project Engineering Geologist



EARTHWORK BALANCE SHEET

Volumes in Cubic Yards

PROJECT: R-0061C

COUNTY: Columbus

DATE: May 10, 2010

COMPILED BY: L. CHAROVA

SHEET 36 OF 18 SHEETS

STATION	STATION	EXCAVATION					EMBANKMENT				BORROW	WASTE			
		TOTAL UNCLASS.	ROCK	UNDERCUT	UNSUIT. UNCLASS.	SUITABLE UNCLASS.	TOTAL	ROCK	EARTH	EMBANK. +25%		ROCK	SUITABLE	UNSUIT.	TOTAL
L LT	10+00 TO 28+50	695				695	1,273	1,273	1,591	896					
L MD	10+00 TO 28+50	2,155				2,155	8	8	10			2,145		2,145	
L RT	10+00 TO 28+50	901				901	1,437	1,437	1,796	895					
RPB	15+25 TO 22+00						20,969	20,969	26,211	26,211					
RPC	15+40 TO 28+00						35,865	35,865	44,831	44,831					
<b>SUBTOTAL #1</b>		3,751				3,751	59,552	59,552	74,440	72,834		2,145		2,145	
L LT	28+50 TO 57+50	1,417				1,417	2,328	2,328	2,910	1,493					
L MD	28+50 TO 57+50	4,120				4,120	2	2	3			4,118		4,118	
L RT	28+50 TO 57+50	1,199				1,199	626	626	783			417		417	
RPA	16+25 TO 30+00						23,621	23,621	29,526	29,526					
RPD	18+75 TO 25+50						15,689	15,689	19,611	19,611					
<b>SUBTOTAL #2</b>		6,736				6,736	42,266	42,266	52,833	50,631		4,535		4,535	
Y	14+00 TO 26+03	619				619	55,517	55,517	69,396	68,777					
Y	27+97 TO 40+00	913				913	54,871	54,871	68,589	67,676					
<b>SUBTOTAL #3</b>		1,532				1,532	110,388	110,388	137,985	136,453					
DETOUR															
DET	10+50 TO 17+70.21	160				160	1,532	1,532	1,915	1,755					
DET	18+75 TO 27+00	133				133	1,738	1,738	2,173	2,040					
DET REMOVAL	15+50 TO 17+00	795				795						795		795	
DET REMOVAL	19+50 TO 21+50	610				610						610		610	
<b>SUBTOTAL #4</b>		1,698				1,698	3,270	3,270	4,088	3,795		1,405		1,405	
<b>SUMMARIES TOTAL</b>		13,717				13,717	215,476	215,476	269,345	263,712		8,085		8,085	
MATERIAL FOR SHOULDER CONSTRUCTION							9,697	9,697	12,121	12,121					
ADDITIONAL UNDERCUT				700			700	700	875	875			700	700	
ROCK WASTE TO REPLACE BORROW															
ADJUST FOR ROCK WASTE															
WASTE IN LIEU OF BORROW										-8,085		-8,085		-8,085	
<b>PROJECT TOTAL</b>		13,717		700		13,717	225,873	225,873	282,341	268,623			700	700	
EST. 5% TO REPLACE TOP SOIL ON BORROW PIT										13,431					
<b>GRAND TOTAL</b>		13,717		700		13,717	225,873	225,873	282,341	282,054			700	700	
<b>SAY</b>		<b>13,800</b>								<b>283,000</b>					

NOTE: EARTHWORK QUANTITIES ARE CALCULATED BY THE ROADWAY DESIGN UNIT. THESE EARTHWORK QUANTITIES ARE BASED IN PART ON SUBSURFACE DATA PROVIDED BY THE GEOTECHNICAL ENGINEERING UNIT.

I:\05-2007\12\19\Investigation\TIP\0061C.GEO.RDMY\CADD.GEOTECH\PlanProj\0061c.rdw\_psh4.dgn  
 8/17/99

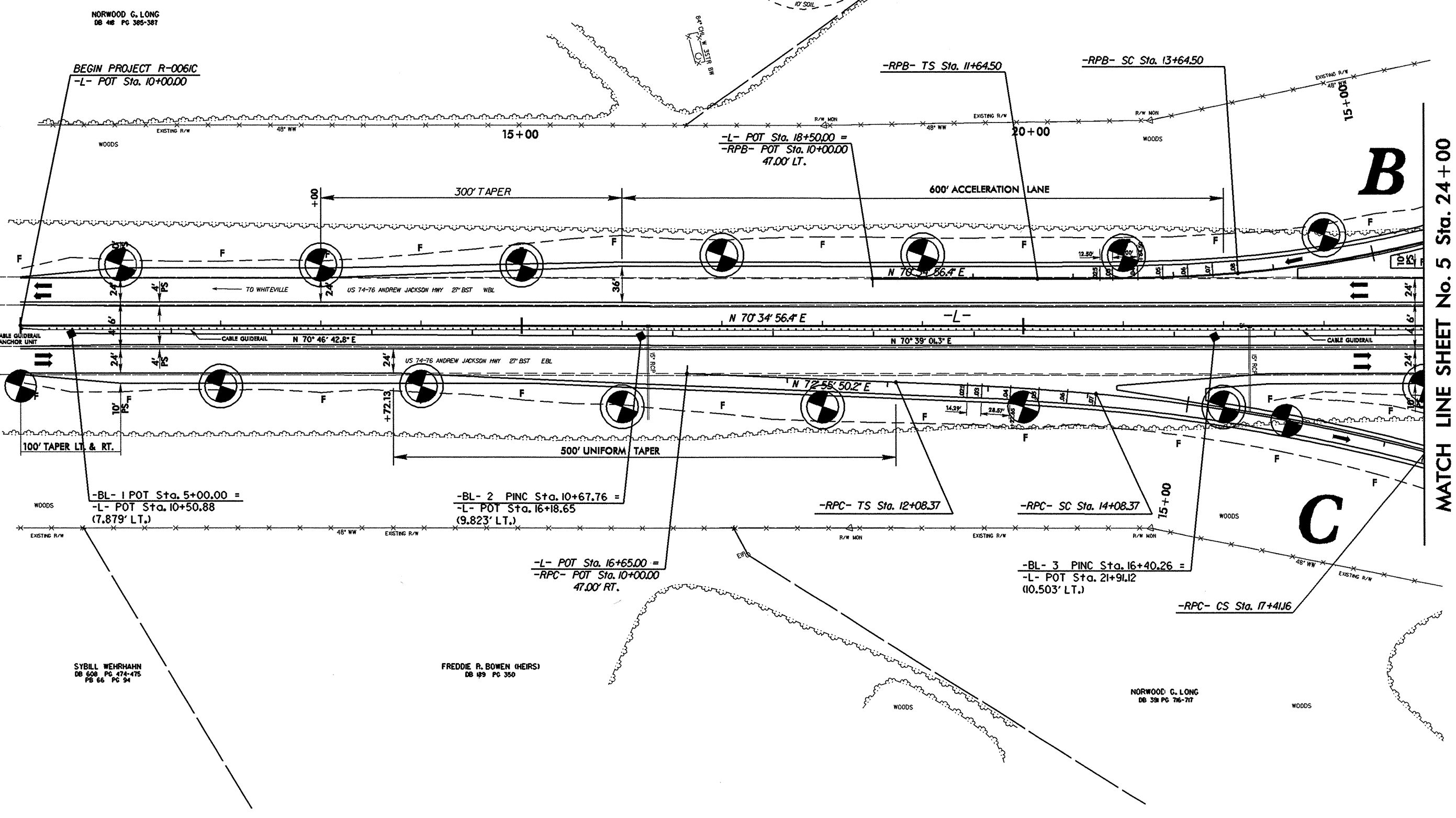
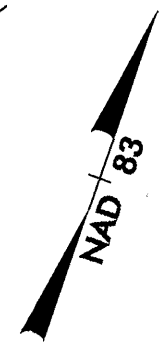
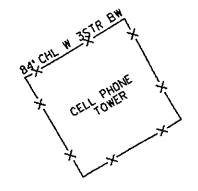
PROJECT REFERENCE NO. <b>R-0061C</b>	SHEET NO. <b>4</b>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION	
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	
SEE SHEET No. 10 FOR -L- PROFILE SEE SHEET No. 14 FOR -RPB- PROFILE SEE SHEET No. 14 & 15 FOR -RPC- PROFILE	

**-RPB-**

PIs Sta 12+97.88	PI Sta 16+08.03
$\Delta = 4' 46'' 28.7''$	$\Delta = 22' 56'' 37.7''$ (LT)
Ls = 200.00'	D = 4' 46'' 28.7''
LT = 133.38'	L = 480.53'
ST = 66.71'	T = 243.53'
	R = 1,200.00'

**-RPC-**

PIs Sta 13+41.73	PI Sta 15+75.15	PIs Sta 18+07.85
$\Delta = 2' 51'' 53.2''$	$\Delta = 9' 32'' 01.4''$ (RT)	$\Delta = 2' 51'' 53.2''$
Ls = 200.00'	D = 2' 51'' 53.2''	Ls = 200.00'
LT = 133.35'	L = 332.79'	LT = 133.35'
ST = 66.68'	T = 166.78'	ST = 66.68'
	R = 2,000.00'	



**B**

**C**

MATCH LINE SHEET No. 5 Sta. 24+00

NORWOOD G. LONG  
DB 48 PG 385-387

BEGIN PROJECT R-0061C  
-L- POT Sta. 10+00.00

NORWOOD G. LONG  
DB 48 PG 385-387

W. L. SPANN (HEIRS)  
DB 239 PG 345

-BL- 1 POT Sta. 5+00.00 =  
-L- POT Sta. 10+50.88  
(7.879' LT.)

-BL- 2 PINC Sta. 10+67.76 =  
-L- POT Sta. 16+18.65  
(9.823' LT.)

-L- POT Sta. 16+65.00 =  
-RPC- POT Sta. 10+00.00  
47.00' RT.

-BL- 3 PINC Sta. 16+40.26 =  
-L- POT Sta. 21+91.12  
(10.503' LT.)

SYBILL WEHRHAHN  
DB 608 PG 474-475  
PG 66 PG 94

FREDDIE R. BOWEN (HEIRS)  
DB 49 PG 350

NORWOOD G. LONG  
DB 39 PG 76-77

PROJECT REFERENCE NO. R-0061C	SHEET NO. 5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION <b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

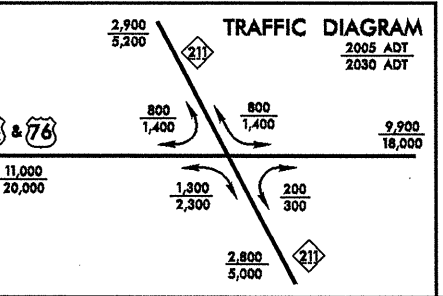
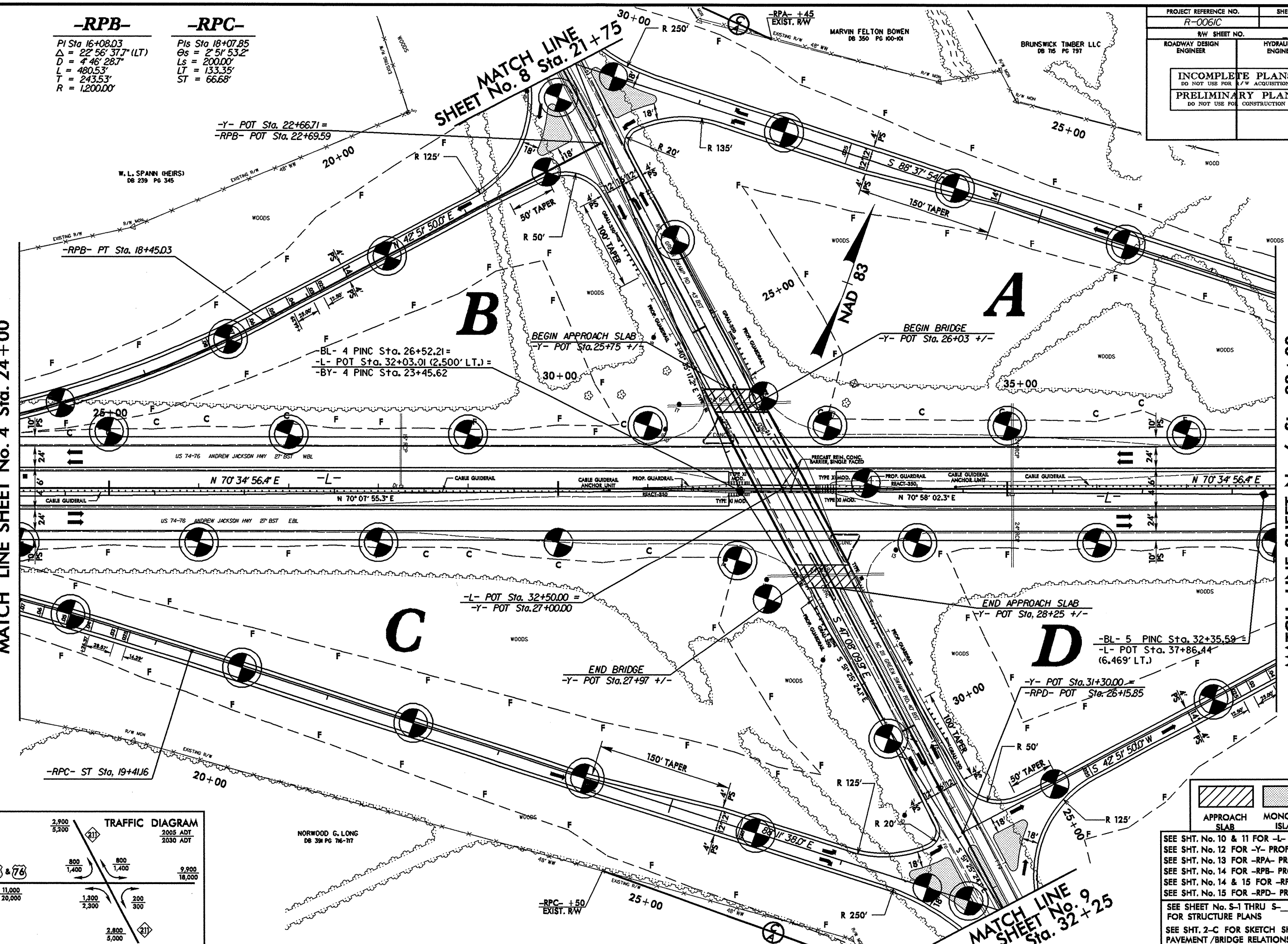
**-RPB-**  
 PI Sta 16+08.03  
 $\Delta = 22^\circ 56' 37.7" (LT)$   
 $D = 446' 28.7"$   
 $L = 480.53'$   
 $T = 243.53'$   
 $R = 1,200.00'$

**-RPC-**  
 PIs Sta 18+07.85  
 $\Theta_s = 2^\circ 51' 53.2"$   
 $L_s = 200.00'$   
 $LT = 133.35'$   
 $ST = 66.68'$

**SHEET MATCH LINE**  
**No. 8 Sta. 21+75**

**MATCH LINE SHEET No. 4 Sta. 24+00**

**MATCH LINE SHEET No. 6 Sta. 38+00**



**APPROACH SLAB** (hatched pattern)  
**MONOLITHIC ISLAND** (stippled pattern)

SEE SHT. No. 10 & 11 FOR -L- PROFILE  
 SEE SHT. No. 12 FOR -Y- PROFILE  
 SEE SHT. No. 13 FOR -RPA- PROFILE  
 SEE SHT. No. 14 FOR -RPB- PROFILE  
 SEE SHT. No. 14 & 15 FOR -RPC- PRO.  
 SEE SHT. No. 15 FOR -RPD- PROFILE

SEE SHEET No. S-1 THRU S-  
 FOR STRUCTURE PLANS  
 SEE SHT. 2-C FOR SKETCH SHOWING  
 PAVEMENT / BRIDGE RELATIONSHIP

8/17/99  
 10-OCT-2007 12:19  
 L:\Road\Projects\0061C\_GEO\_ROW\Y\CADD\_GEO\TECH\Plan\Prof\0061c\_rdu\_psh5.dgn



8/17/99  
 I:\000000\Drawings\000000\TIP\000000\Geo\RDWY\CADD\GEOTECH\PlanPr\of\000000.rdw\_psh6.dgn  
 10-000000\Drawings\000000\TIP\000000\Geo\RDWY\CADD\GEOTECH\PlanPr\of\000000.rdw\_psh6.dgn

**-L-**

PIs Sta 45+07.57	PI Sta 51+64.19
θs = 1°00'00.0"	Δ = 11°45'27.8" (RT)
Ls = 200.00'	D = 1°00'00.0"
LT = 133.34'	L = 1175.77'
ST = 66.67'	T = 589.96'
	R = 5729.58'

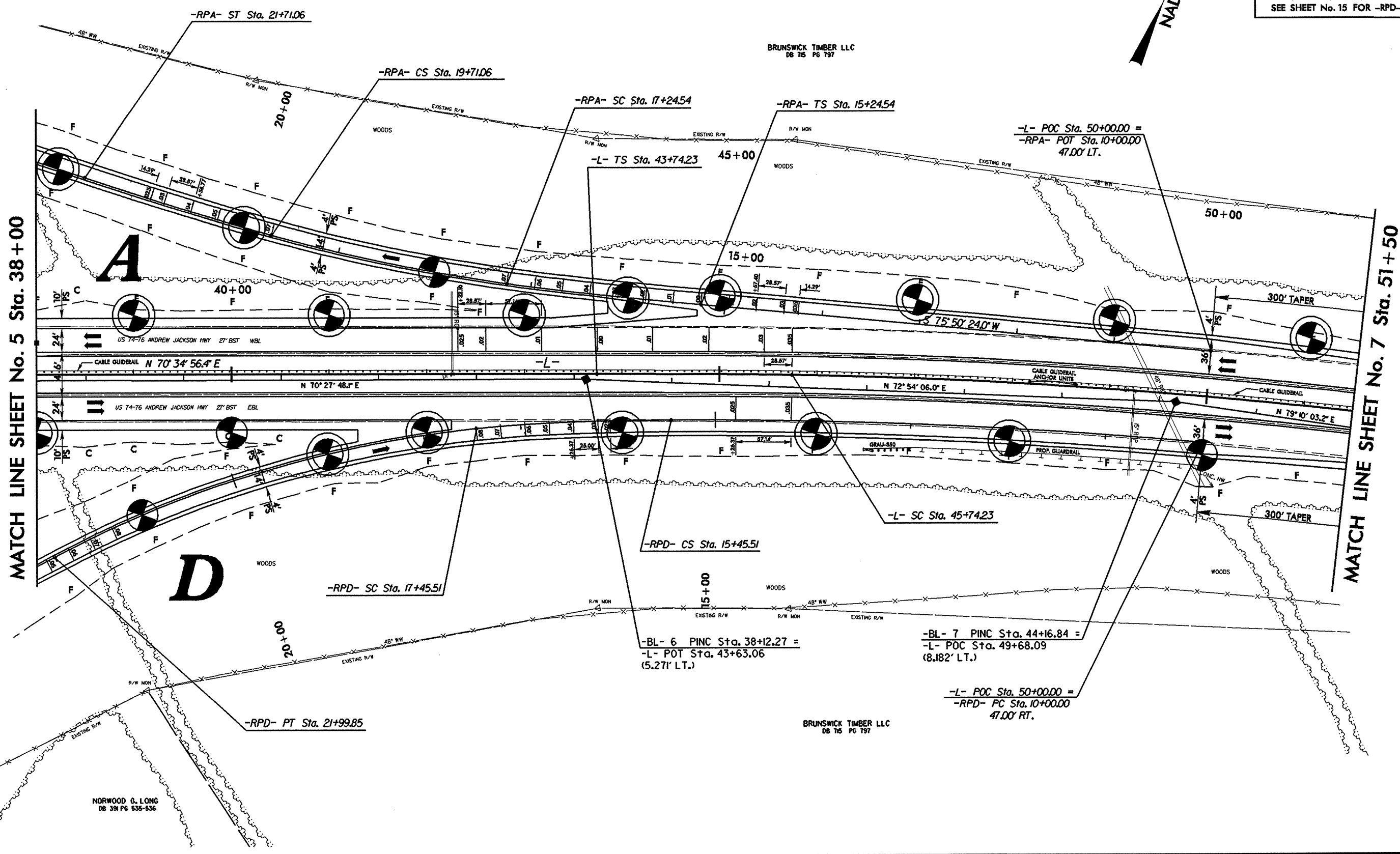
**-RPA-**

PIs Sta 16+57.89	PI Sta 18+47.96	PIs Sta 20+37.74
θs = 2°51'53.2"	Δ = 7°03'43.7" (RT)	θs = 2°51'53.2"
Ls = 200.00'	D = 2°51'53.2"	Ls = 200.00'
LT = 133.35'	L = 246.51'	LT = 133.35'
ST = 66.68'	T = 123.41'	ST = 66.68'
	R = 2,000.00'	

**-RPD-**

PI Sta 12+72.96	PIs Sta 16+67.30	PI Sta 19+75.43
Δ = 5°30'00.8" (LT)	θs = 1°00'28.4"	Δ = 2°41'34.7" (LT)
D = 1°00'29.8"	θs = 4°46'30.1"	D = 4°46'28.7"
L = 545.51'	Ls = 200.00'	L = 454.34'
T = 272.96'	LT = 121.79'	T = 229.92'
R = 5,682.58'	ST = 78.36'	R = 1,200.00'

PROJECT REFERENCE NO. R-0061C	SHEET NO. 6
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION	
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	
SEE SHEET No. 11 FOR -L- PROFILE SEE SHEET No. 13 FOR -RPA- PROFILE SEE SHEET No. 15 FOR -RPD- PROFILE	



MATCH LINE SHEET No. 5 Sta. 38+00

MATCH LINE SHEET No. 7 Sta. 51+50

8/17/99

I:\PROJECTS\2007\1531\1531e\Investigation\TIP\R0061C\_GEO\_ROW\CA00\_GEO\TECH\Plan\Prof\0061c\_rdy\_pah7.dgn

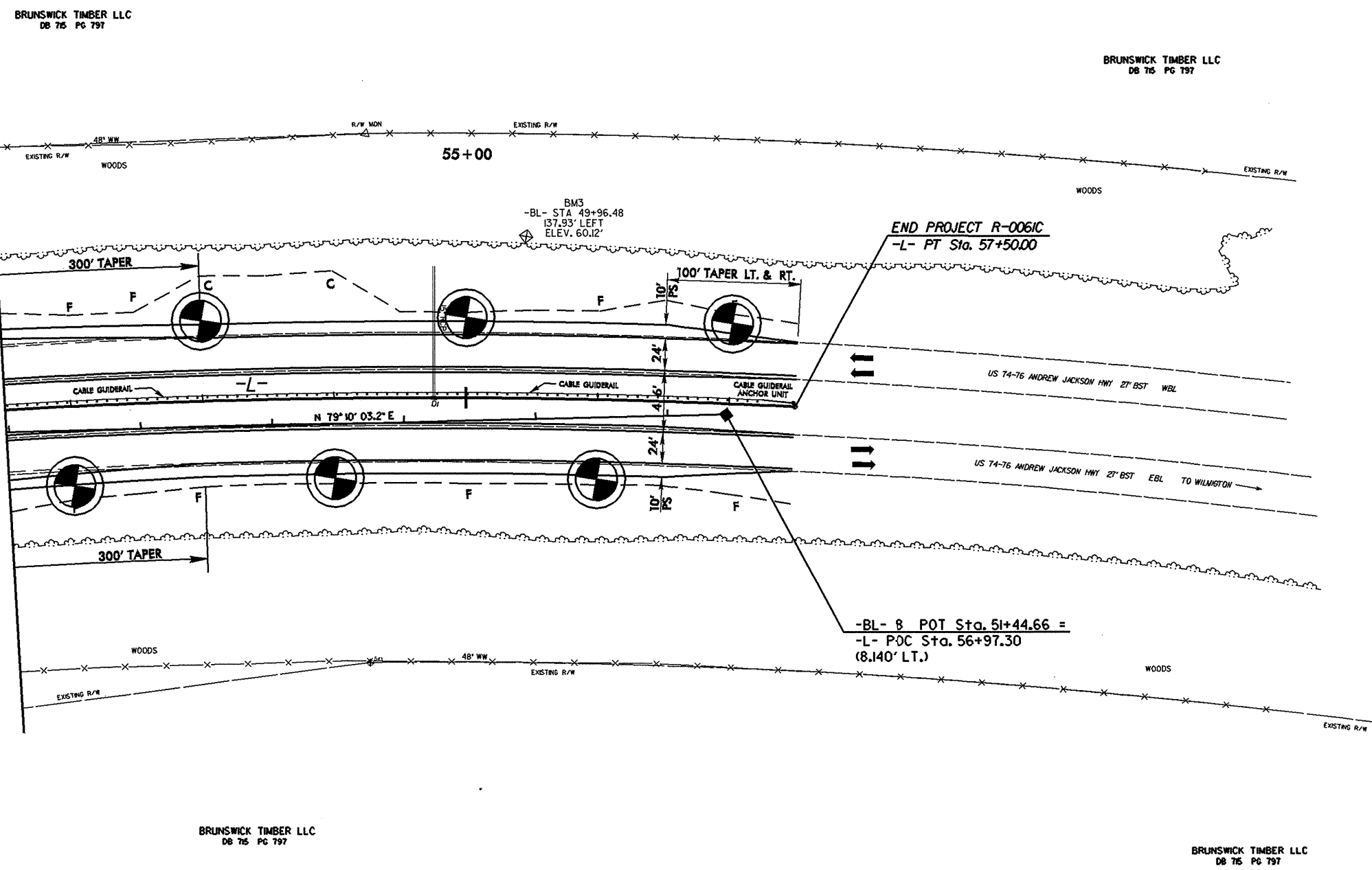
PROJECT REFERENCE NO. <i>R-0061C</i>	SHEET NO. 7				
RW SHEET NO.					
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER				
<table border="1"> <tr> <td colspan="2" style="text-align: center;">INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION</td> </tr> <tr> <td colspan="2" style="text-align: center;">PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION</td> </tr> </table>		INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION		PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION					
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION					
SEE SHEET No. 11 FOR -L- PROFILE SEE SHEET No. 13 FOR -RPA- PROFILE SEE SHEET No. 16 FOR -RPD- PROFILE					

**-L-**

PI Sta 51+64.19  
 $\Delta = 1^\circ 45' 27.8" (RT)$   
 $D = 1'00' 00.0"$   
 $L = 1175.77'$   
 $T = 589.96'$   
 $R = 5,729.58'$



MATCH LINE SHEET No. 6 Sta. 51+50



BRUNSWICK TIMBER LLC  
DB 76 PG 797

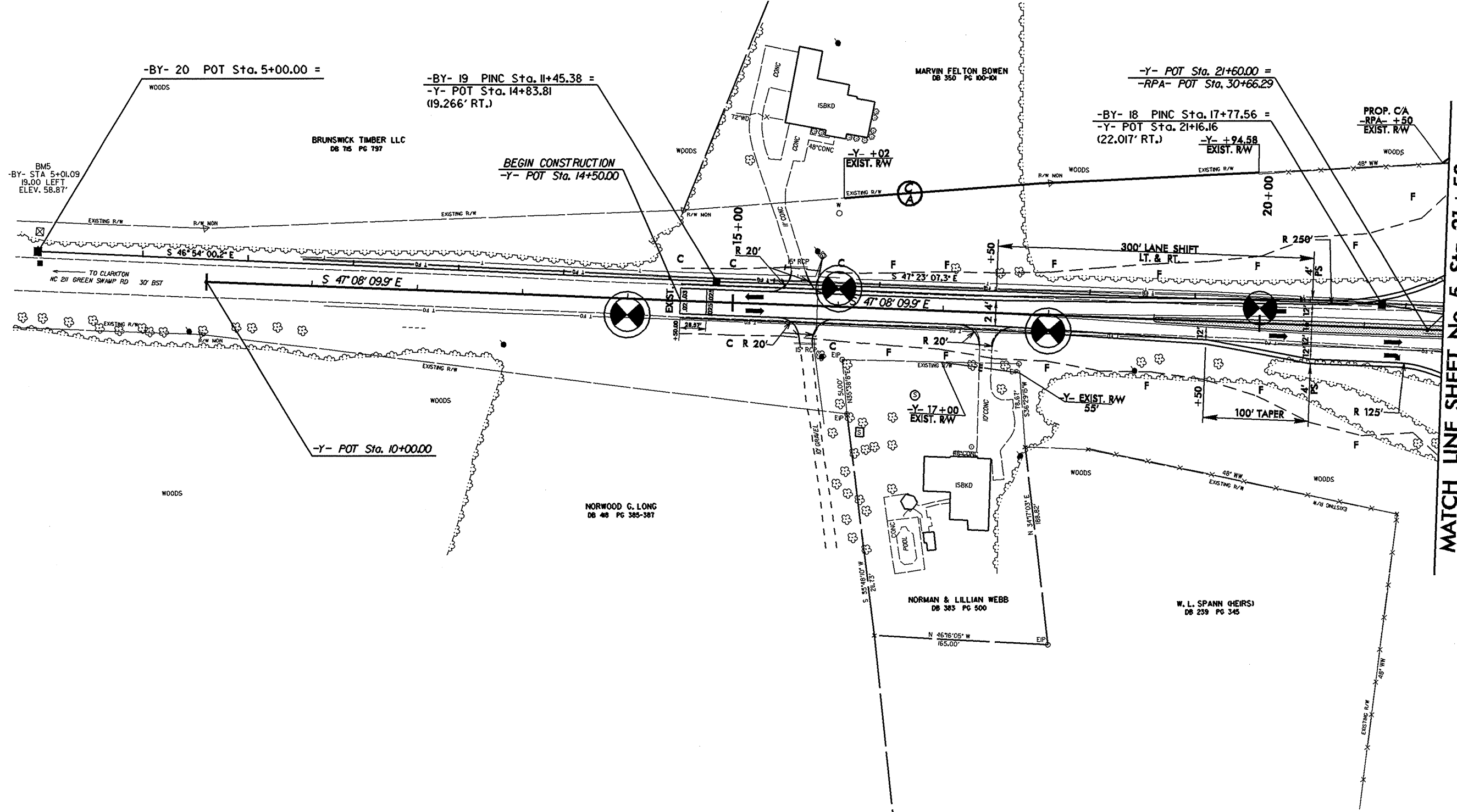
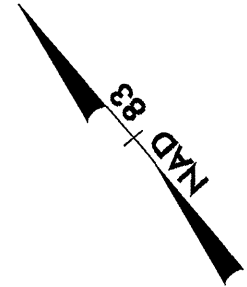
BRUNSWICK TIMBER LLC  
DB 76 PG 797

BRUNSWICK TIMBER LLC  
DB 76 PG 797

BRUNSWICK TIMBER LLC  
DB 76 PG 797

8/17/99

PROJECT REFERENCE NO. R-0061C		SHEET NO. 8	
R/W SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION <b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION			
SEE SHEET No. 12 FOR -Y- PROFILE SEE SHEET No. 13 FOR -RPA- PROFILE SEE SHEET No. 14 FOR -RPB- PROFILE			



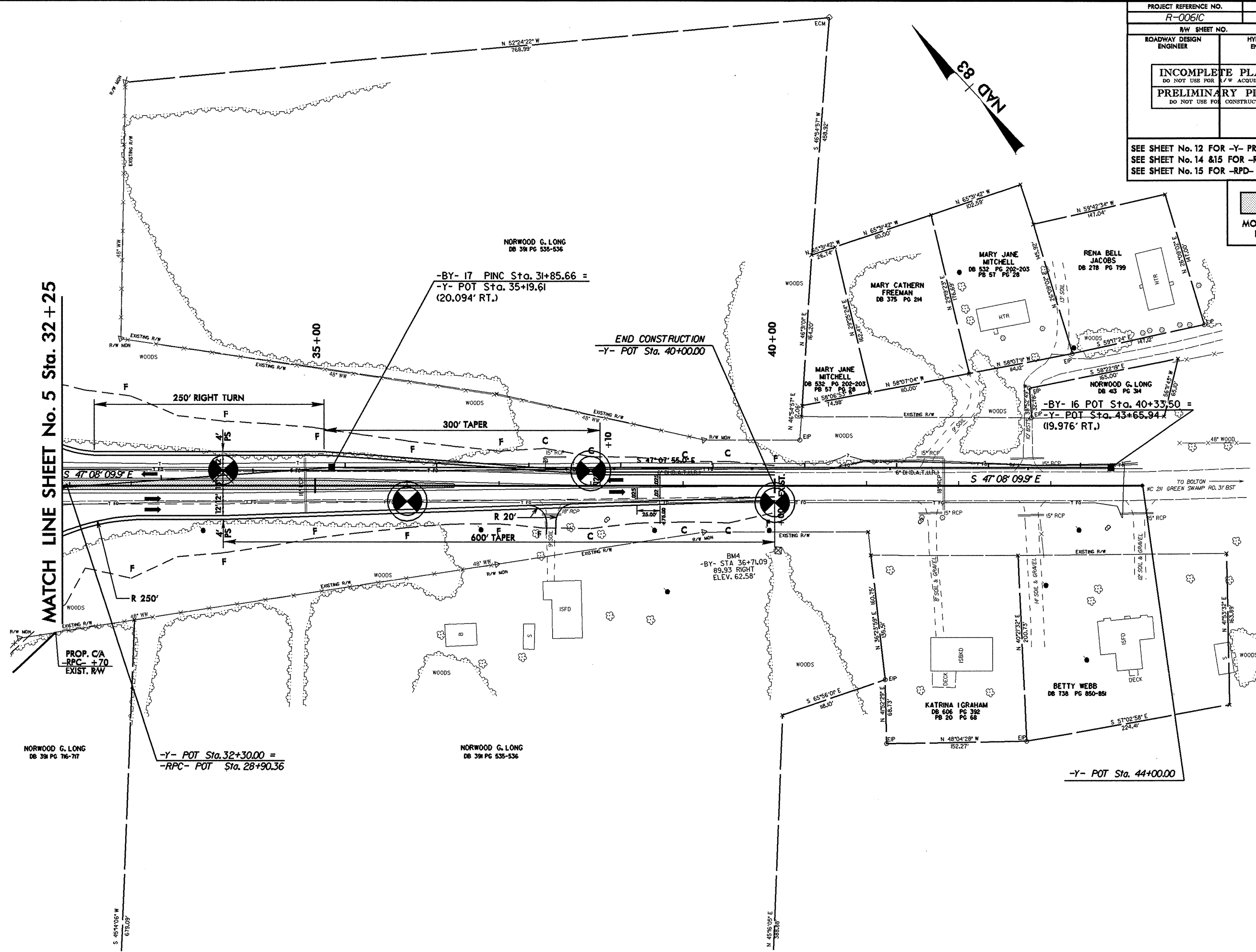
MATCH LINE SHEET No. 5 Sta. 21+50

I:\projects\station\TIP\0061C.GEO.RD.WY.CADD.GEOTECH\Plan\Prof\0061c\_rdy\_psh8.dgn

8/17/99

D:\001\_2007\_12\19... \Investigation\TIP\0061C.GEO.RDMY.CADD.GEOTECH\Plan\Prof\0061c.rdw\psf9.dgn

PROJECT REFERENCE NO. <i>R-0061C</i>	SHEET NO. 9
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR ACQUISITION	
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	
SEE SHEET No. 12 FOR -Y- PROFILE SEE SHEET No. 14 & 15 FOR -RPC- PROFILE SEE SHEET No. 15 FOR -RPD- PROFILE	



MATCH LINE SHEET No. 5 Sta. 32+25

NORWOOD G. LONG  
DB 391 PG 716-717

-Y- POT Sta. 32+30.00 =  
-RPC- POT Sta. 28+90.36

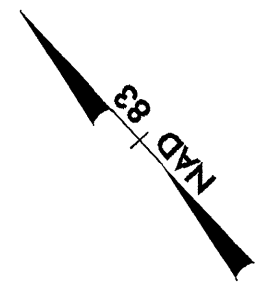
NORWOOD G. LONG  
DB 391 PG 535-536

-BY- 17 PINC Sta. 31+85.66 =  
-Y- POT Sta. 35+19.61  
(20.094' RT.)

END CONSTRUCTION  
-Y- POT Sta. 40+00.00

-BY- 16 POT Sta. 40+33.50 =  
-Y- POT Sta. 43+65.94  
(19.976' RT.)

-Y- POT Sta. 44+00.00

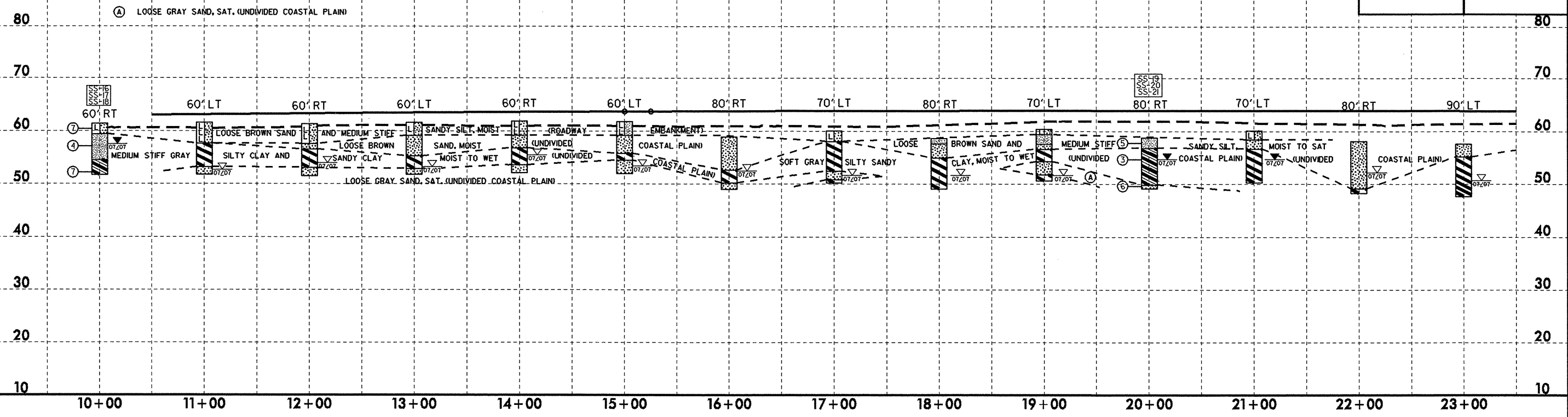


5/28/09  
 P:\ACT-2007-140-1\Geo\Investigation\TIP\R0061C\_GEO\_ROMY\CADD\_GEO\TECH\PlanProf\R0061C\_Geo\_pf1.dgn  
 11/13/08

PROJECT REFERENCE NO.	SHEET NO.
R-0061C	10
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION	
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

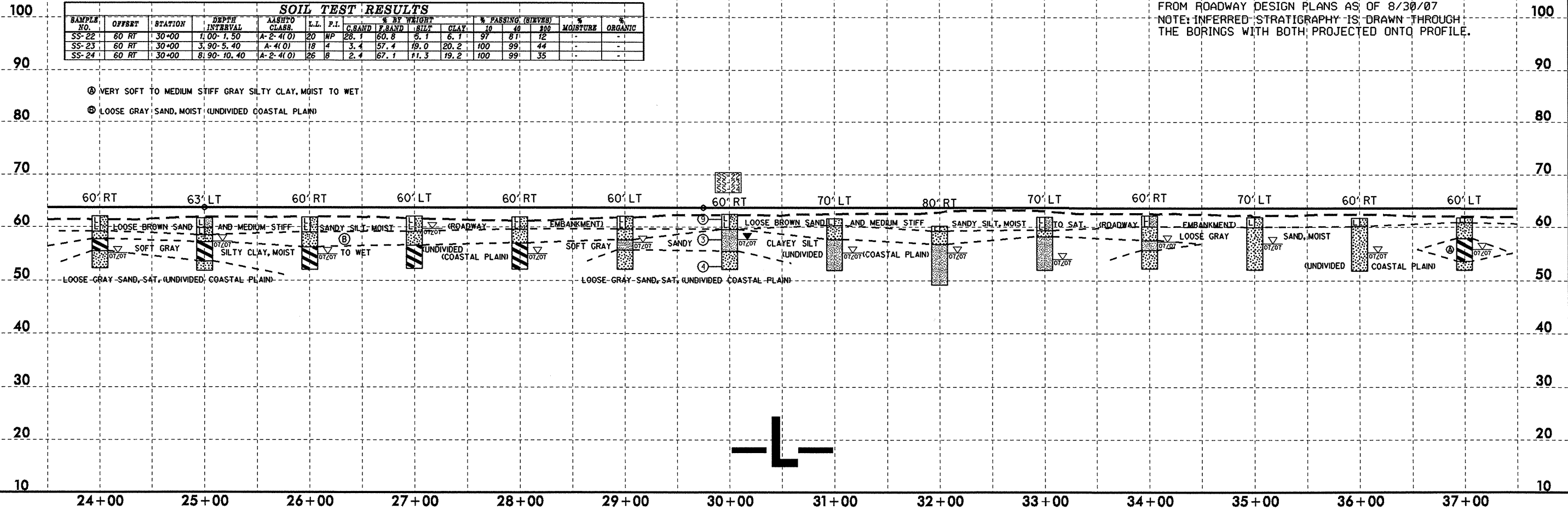
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	ASHTO CLASS	L.L.	P.I.	% BY WEIGHT			% PASSING (SIEVES)			% MOISTURE	% ORGANIC	
							C. SAND	F. SAND	SILT	10	40	200			
SS-16	60 RT	10+00	1.00-1.50	A-2-4(0)	17	2	6.7	61.2	11.9	20.2	100	98	35	-	-
SS-17	60 RT	10+00	3.30-4.80	A-4(4)	27	10	1.8	41.0	20.8	36.4	100	100	62	-	-
SS-18	60 RT	10+00	8.30-9.80	A-6(9)	37	21	2.4	43.2	18.0	36.4	100	99	59	-	-
SS-19	80 RT	20+00	1.00-1.50	A-4(2)	26	10	5.5	48.7	23.6	22.2	100	98	50	-	-
SS-20	80 RT	20+00	3.20-4.70	A-6(6)	30	15	3.6	38.6	23.4	34.3	100	99	61	24.8	-
SS-21	80 RT	20+00	8.20-9.70	A-2-4(0)	24	3	3.4	72.1	6.3	18.2	100	99	26	-	-

NOTE: GROUNDLINE PROFILE AT CL OF -L- TAKEN FROM ROADWAY DESIGN PLANS AS OF 8/30/07  
 NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.



SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	ASHTO CLASS	L.L.	P.I.	% BY WEIGHT			% PASSING (SIEVES)			% MOISTURE	% ORGANIC	
							C. SAND	F. SAND	SILT	10	40	200			
SS-22	60 RT	30+00	1.00-1.50	A-2-4(0)	20	NP	28.1	60.8	5.1	6.1	97	81	12	-	-
SS-23	60 RT	30+00	3.90-5.40	A-4(0)	18	4	3.4	57.4	19.0	20.2	100	99	44	-	-
SS-24	60 RT	30+00	8.90-10.40	A-2-4(0)	26	8	2.4	67.1	11.3	19.2	100	99	35	-	-

NOTE: GROUNDLINE PROFILE AT CL OF -L- TAKEN FROM ROADWAY DESIGN PLANS AS OF 8/30/07  
 NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.





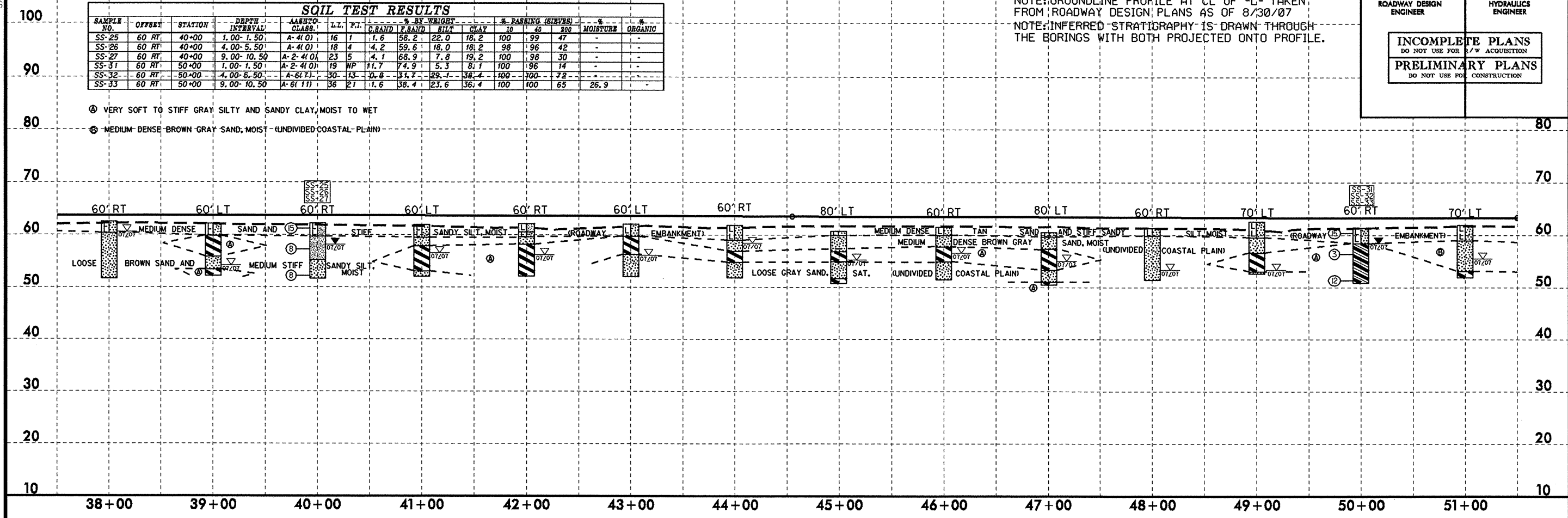
5/28/99

PROJECT REFERENCE NO.	SHEET NO.
R-0061C	11
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION	
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	LAB/TEST CLASS.	L.L.	P.L.	% BY WEIGHT			% PASSING (SIEVES)			% MOISTURE	% ORGANIC	
							SAND	FINE SAND	CLAY	10	40	200			
SS-25	60 RT	40+00	1.00-1.50	A-4(0)	16	1	1.6	56.2	22.0	18.2	100	99	47	-	-
SS-26	60 RT	40+00	4.00-5.50	A-4(0)	18	4	4.2	59.6	18.0	18.2	98	96	42	-	-
SS-27	60 RT	40+00	9.00-10.50	A-2-4(0)	23	5	4.1	68.9	7.8	19.2	100	98	30	-	-
SS-31	60 RT	50+00	1.00-1.50	A-2-4(0)	19	NP	17.7	74.9	5.3	8.1	100	96	14	-	-
SS-32	60 RT	50+00	4.00-6.50	A-6(1)	30	13	0.8	31.7	29.7	38.4	100	100	72	-	-
SS-33	60 RT	50+00	9.00-10.50	A-6(1)	36	27	1.6	38.4	23.6	36.4	100	100	65	26.9	-

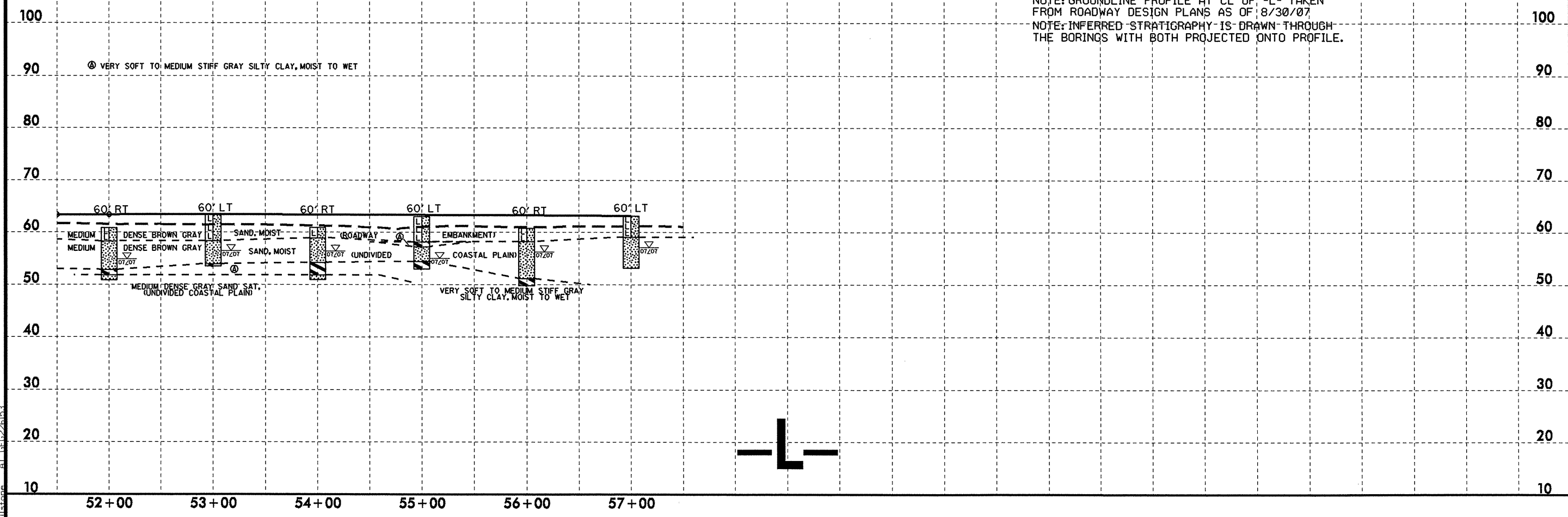
NOTE: GROUNDLINE PROFILE AT CL OF -L- TAKEN FROM ROADWAY DESIGN PLANS AS OF 8/30/07  
 NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

- Ⓐ VERY SOFT TO STIFF GRAY SILTY AND SANDY CLAY, MOIST TO WET
- Ⓑ MEDIUM DENSE BROWN GRAY SAND, MOIST (UNDIVIDED COASTAL PLAIN)



NOTE: GROUNDLINE PROFILE AT CL OF -L- TAKEN FROM ROADWAY DESIGN PLANS AS OF 8/30/07  
 NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

- Ⓐ VERY SOFT TO MEDIUM STIFF GRAY SILTY CLAY, MOIST TO WET
- Ⓑ MEDIUM DENSE GRAY SAND, SAT. (UNDIVIDED COASTAL PLAIN)
- Ⓒ MEDIUM DENSE BROWN GRAY SAND, MOIST
- Ⓓ SAND, MOIST
- Ⓔ MEDIUM DENSE BROWN GRAY SAND, MOIST
- Ⓕ ROADWAY EMBANKMENT
- Ⓖ MEDIUM DENSE BROWN GRAY SAND, MOIST
- Ⓗ VERY SOFT TO MEDIUM STIFF GRAY SILTY CLAY, MOIST TO WET
- Ⓘ MEDIUM DENSE GRAY SAND, SAT. (UNDIVIDED COASTAL PLAIN)
- Ⓚ MEDIUM DENSE BROWN GRAY SAND, MOIST
- Ⓛ MEDIUM DENSE BROWN GRAY SAND, MOIST



P:\ACT-2007\1101\1101\Investigation\TIP\R0061C.GEO.RDMY\CADD\_GEO\TECH\PlanPr\of\R0061C\_Geo\_pf\_11.dgn  
 5/28/99

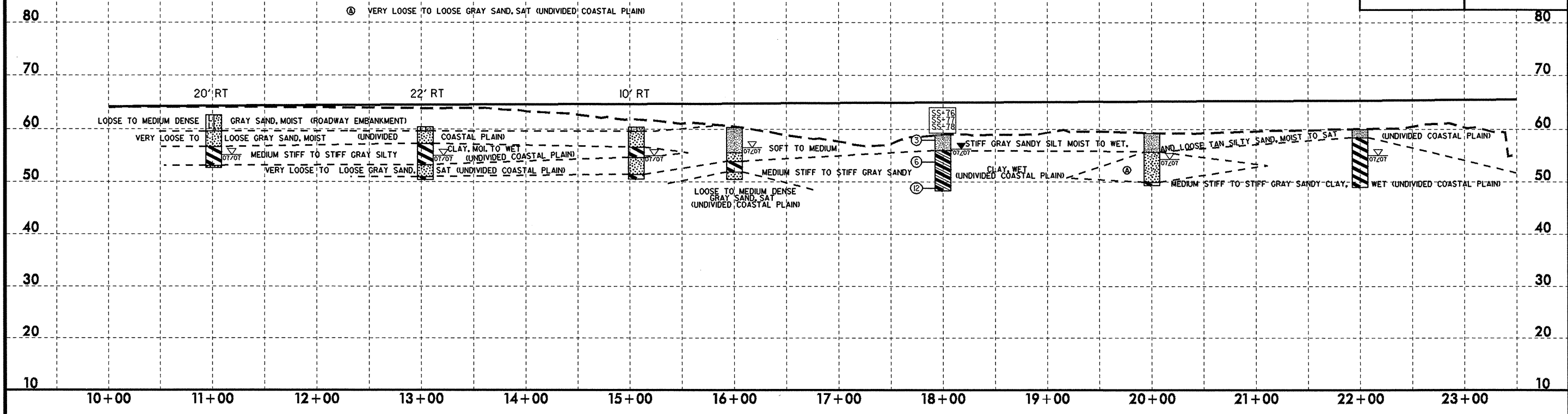
5/28/99

PROJECT REFERENCE NO. <b>R-0061C</b>		SHEET NO. <b>12</b>	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR ACQUISITION		100	

**SOIL TEST RESULTS**

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT			% PASSING (SIEVES)			% MOISTURE	% ORGANIC	
							C.SAND	F.SAND	SILT	CLAY	10	40			200
SS-76	CL	18+00	1.00-1.50	A-4(0)	19	2	1.4	57.5	20.8	20.3	100	99	48	-	-
SS-77	CL	18+00	4.10-5.60	A-6(4)	31	13	1.4	50.5	11.7	36.5	100	100	52	-	-
SS-78	CL	18+00	9.10-10.60	A-6(4)	32	20	20.9	38.1	6.6	34.4	99	88	43	-	-

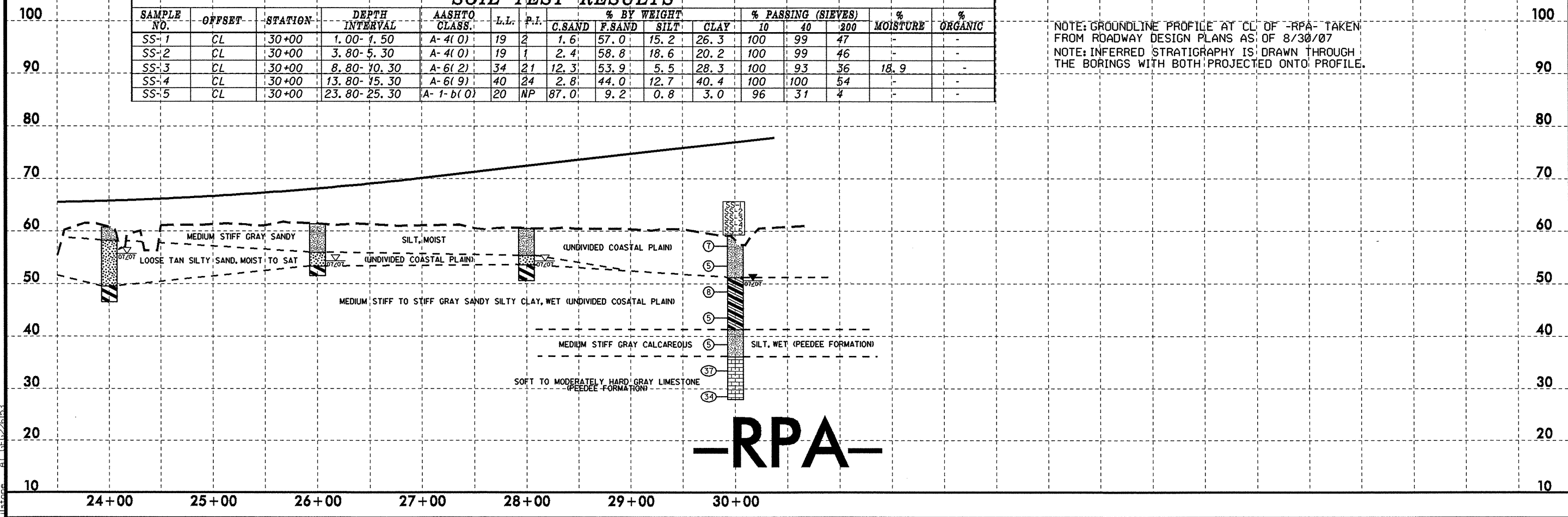
NOTE: GROUNDLINE PROFILE AT CL OF -RPA- TAKEN FROM ROADWAY DESIGN PLANS AS OF 8/30/07  
NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.



**SOIL TEST RESULTS**

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT			% PASSING (SIEVES)			% MOISTURE	% ORGANIC	
							C.SAND	F.SAND	SILT	CLAY	10	40			200
SS-1	CL	30+00	1.00-1.50	A-4(0)	19	2	1.6	57.0	15.2	26.3	100	99	47	-	-
SS-2	CL	30+00	3.80-5.30	A-4(0)	19	1	2.4	58.8	18.6	20.2	100	99	46	-	-
SS-3	CL	30+00	8.80-10.30	A-6(2)	34	21	12.3	53.9	5.5	28.3	100	93	36	18.9	-
SS-4	CL	30+00	13.80-15.30	A-6(9)	40	24	2.8	44.0	12.7	40.4	100	100	54	-	-
SS-5	CL	30+00	23.80-25.30	A-1-b(0)	20	NP	87.0	9.2	0.8	3.0	96	31	4	-	-

NOTE: GROUNDLINE PROFILE AT CL OF -RPA- TAKEN FROM ROADWAY DESIGN PLANS AS OF 8/30/07  
NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.



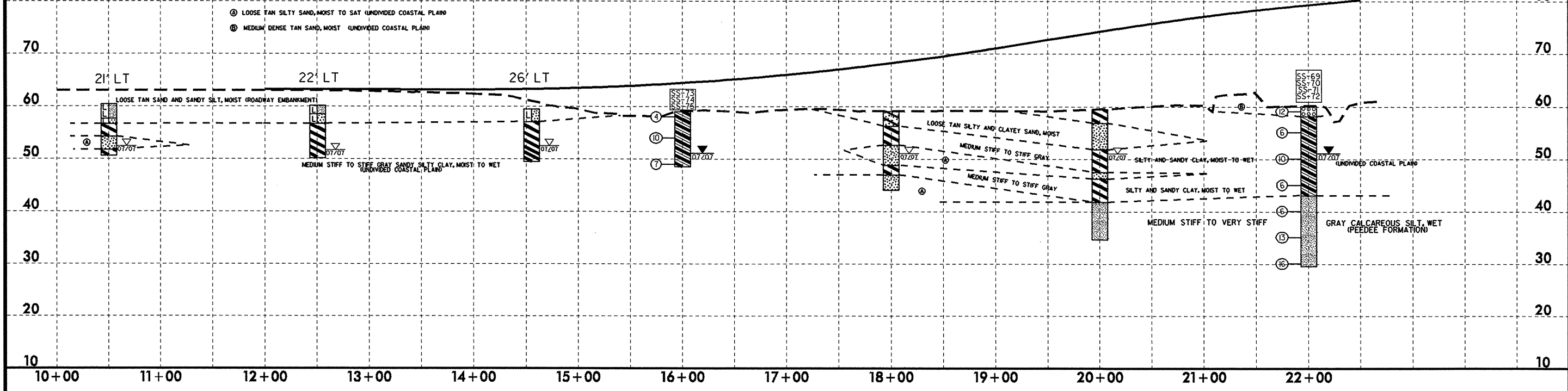
P:\007\007 IHO... Investigation\TIP\R0061C.GEO.RDMY\CADD\_GEO\TECHN\PlanPrjof\R0061C.Geo.pf1\_RPA.dgn  
 5/28/99 10:00 AM  
 100

5/28/99

PROJECT REFERENCE NO.	SHEET NO.
R-0061C	13
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR ACQUISITION <b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

SOIL TEST RESULTS														
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT			% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	10	40	200		
SS-73	CL	16+00	0.50-1.50	A-6(4)	28	13	1.0	46.4	20.2	32.4	100	100	57	-
SS-74	CL	16+00	4.00-5.50	A-6(2)	28	12	1.4	56.1	12.1	30.4	100	100	48	5.5
SS-75	CL	16+00	9.00-10.50	A-6(2)	33	17	11.6	51.0	6.1	31.4	100	97	39	-
SS-69	CL	22+00	0.50-1.50	A-7(6)O	16	NP	76.6	15.3	0.8	7.2	89	42	8	-
SS-70	CL	22+00	4.00-5.50	A-6(2)	31	13	1.8	62.0	10.3	25.9	100	99	41	-
SS-71	CL	22+00	9.00-10.50	A-6(3)	33	18	10.8	51.2	5.0	33.1	100	94	40	-
SS-72	CL	22+00	14.00-15.50	A-6(10)	39	26	5.7	41.5	12.3	40.5	100	97	55	-

NOTE: GROUNDLINE PROFILE AT CL OF -RPB- TAKEN FROM ROADWAY DESIGN PLANS AS OF 8/30/07  
 NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.



I:\Projects\2007\1110\1110-Geo\Investigation\TIP\R0061C.GEO.RDWAY\CADD.GEOTECH\PlanProf\R0061C.Geo.pf1-RPB.dgn  
 5/28/99

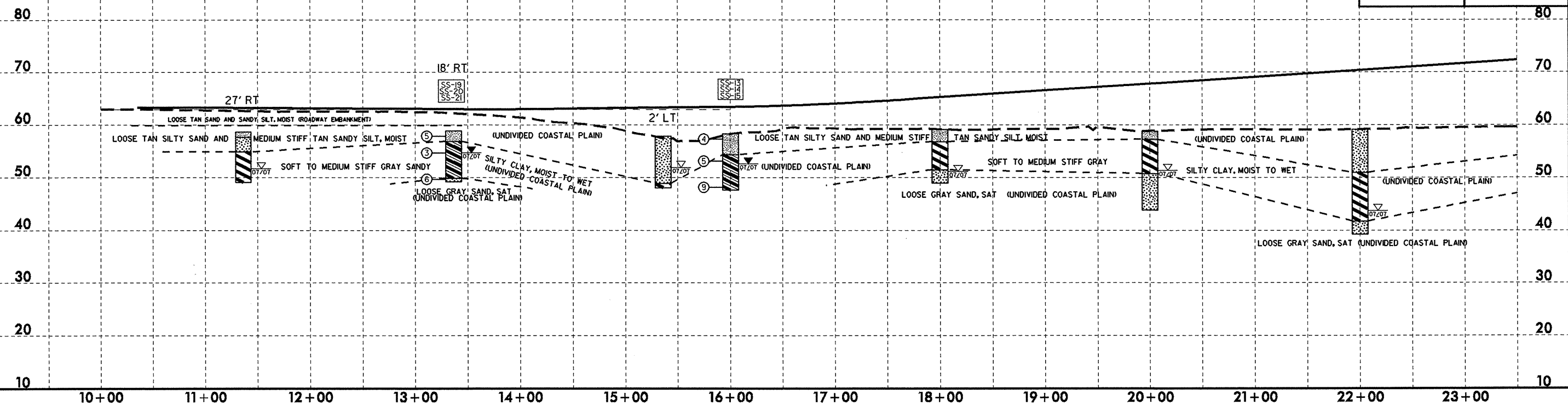
-RPB-

5/28/99

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-19	18 RT	13+35	1.00-1.50	A-4(2)	26	10	51.5	48.7	23.6	22.2	100	98	50	-	-
SS-20	18 RT	13+35	3.20-4.70	A-6(6)	30	15	31.6	38.6	23.4	34.3	100	99	61	-	-
SS-21	18 RT	13+35	8.20-9.70	A-2-4(0)	24	3	31.4	72.1	6.3	18.2	100	99	26	-	-
SS-13	CL	16+00	1.00-1.50	A-4(0)	15	NP	41.8	59.0	18.0	18.2	100	98	41	-	-
SS-14	CL	16+00	4.20-5.70	A-6(2)	32	16	31.6	60.4	7.7	28.3	100	99	39	-	-
SS-15	CL	16+00	9.20-10.70	A-2-6(1)	35	17	61.5	59.8	5.5	28.3	100	97	35	-	-

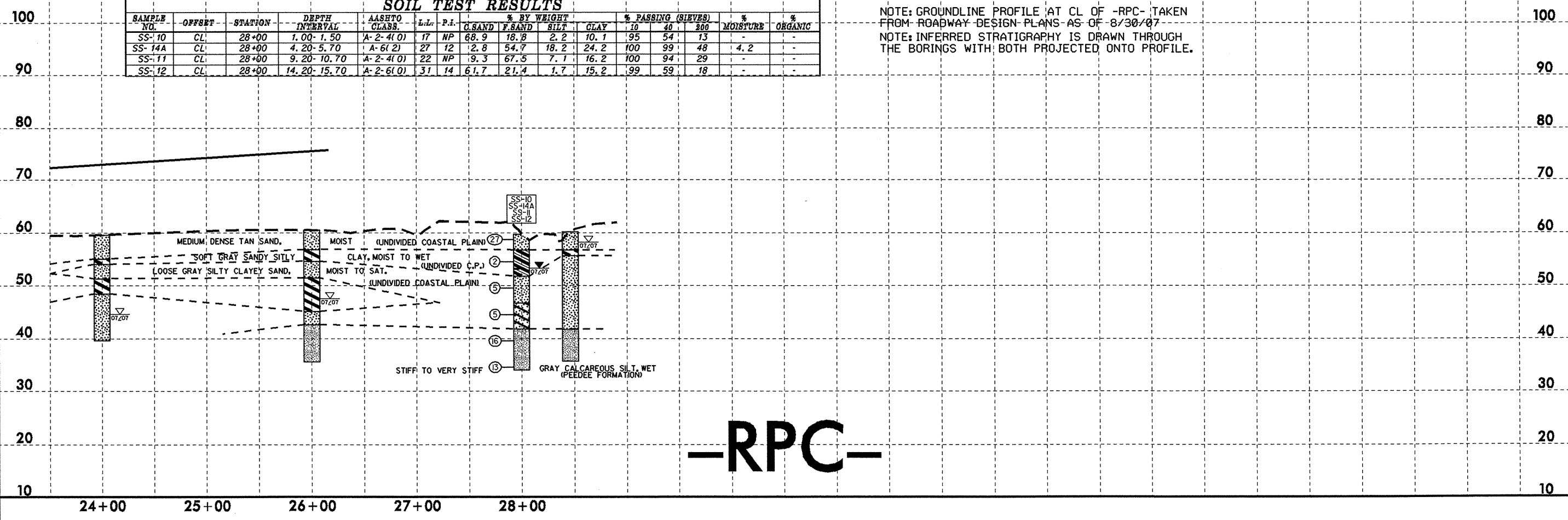
PROJECT REFERENCE NO. <b>R-0061C</b>	SHEET NO. <b>14</b>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR ACQUISITION <b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

NOTE: GROUNDLINE PROFILE AT CL OF -RPC- TAKEN FROM ROADWAY DESIGN PLANS AS OF 8/30/07  
 NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.



SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-10	CL	28+00	1.00-1.50	A-2-4(0)	17	NP	68.9	18.8	2.2	10.1	95	54	13	-	-
SS-14A	CL	28+00	4.20-5.70	A-6(2)	27	12	2.8	54.7	18.2	24.2	100	99	48	4.2	-
SS-11	CL	28+00	9.20-10.70	A-2-4(0)	22	NP	9.3	67.5	7.1	16.2	100	94	29	-	-
SS-12	CL	28+00	14.20-15.70	A-2-6(0)	31	14	61.7	21.4	1.7	15.2	99	59	18	-	-

NOTE: GROUNDLINE PROFILE AT CL OF -RPC- TAKEN FROM ROADWAY DESIGN PLANS AS OF 8/30/07  
 NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

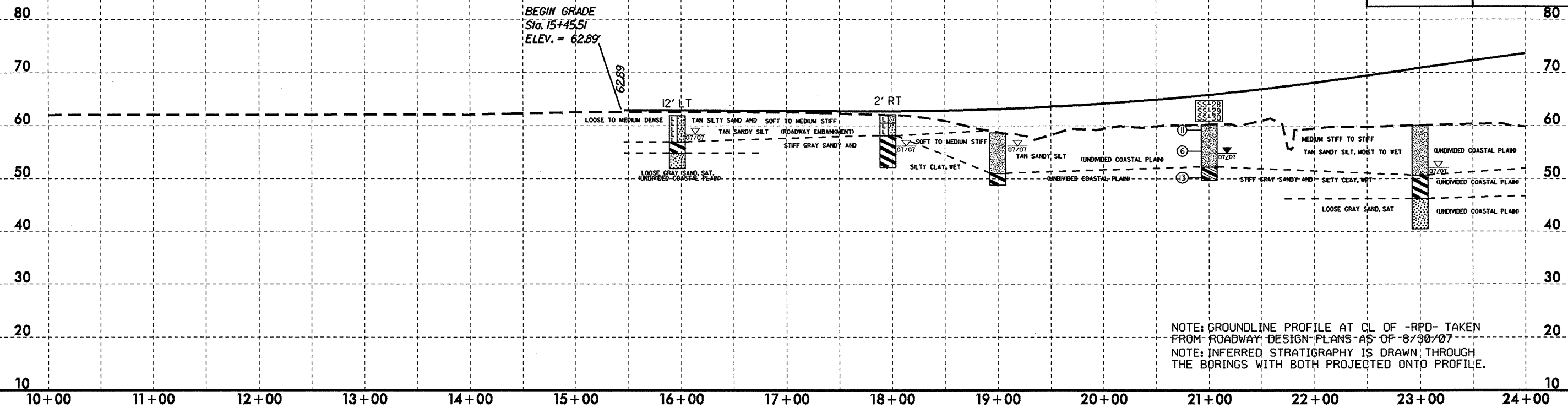


2-OCT-2007 11:01 AM C:\Users\jg\Documents\Projects\RPC\RPC.dgn  
 2-OCT-2007 11:01 AM C:\Users\jg\Documents\Projects\RPC\RPC.dgn  
 2-OCT-2007 11:01 AM C:\Users\jg\Documents\Projects\RPC\RPC.dgn

5/28/09

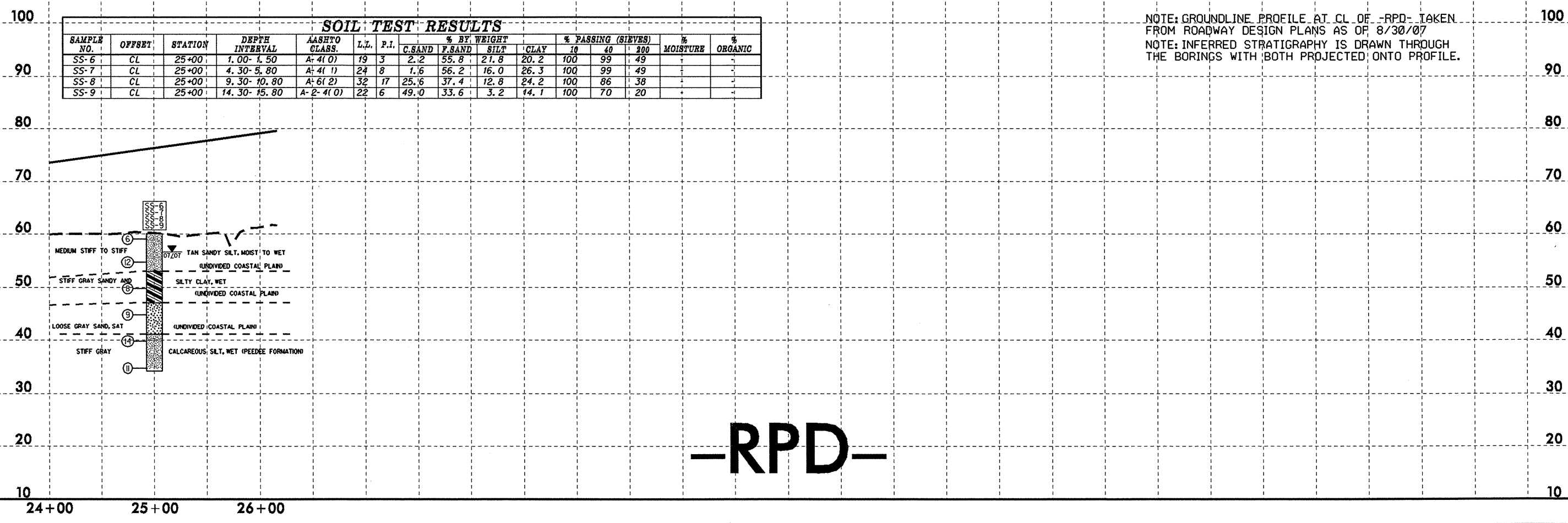
PROJECT REFERENCE NO.		SHEET NO.	
R-0061C		15	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR ACQUISITION		PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-28	CL	21+00	1.00-1.50	A-4(0)	19	2	1.0	61.6	21.2	16.2	100	100	44	-	-
SS-29	CL	21+00	4.00-5.50	A-4(0)	21	4	1.2	65.8	16.8	18.2	100	100	43	-	-
SS-30	CL	21+00	9.00-10.50	A-6(9)	40	28	11.1	44.8	10.7	33.3	100	95	48	-	-



NOTE: GROUNDLINE PROFILE AT CL OF -RPD- TAKEN FROM ROADWAY DESIGN PLANS AS OF 8/30/07  
NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-6	CL	25+00	1.00-1.50	A-4(0)	19	3	2.2	55.8	21.8	20.2	100	99	49	-	-
SS-7	CL	25+00	4.30-5.80	A-4(1)	24	8	1.6	56.2	16.0	26.3	100	99	49	-	-
SS-8	CL	25+00	9.30-10.80	A-6(2)	32	17	25.6	37.4	12.8	24.2	100	86	38	-	-
SS-9	CL	25+00	14.30-15.80	A-2-4(0)	22	6	49.0	33.6	3.2	14.1	100	70	20	-	-



NOTE: GROUNDLINE PROFILE AT CL OF -RPD- TAKEN FROM ROADWAY DESIGN PLANS AS OF 8/30/07  
NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

**-RPD-**

P:\GIS\2007\1101\Investigation\TIP\R0061C.GEO\RDWY\CADD\_GEO\RDWY\CADD\_GEO\TECH\PlanPrf\R0061C\_Geo\_pf\_1\_RPD.dgn



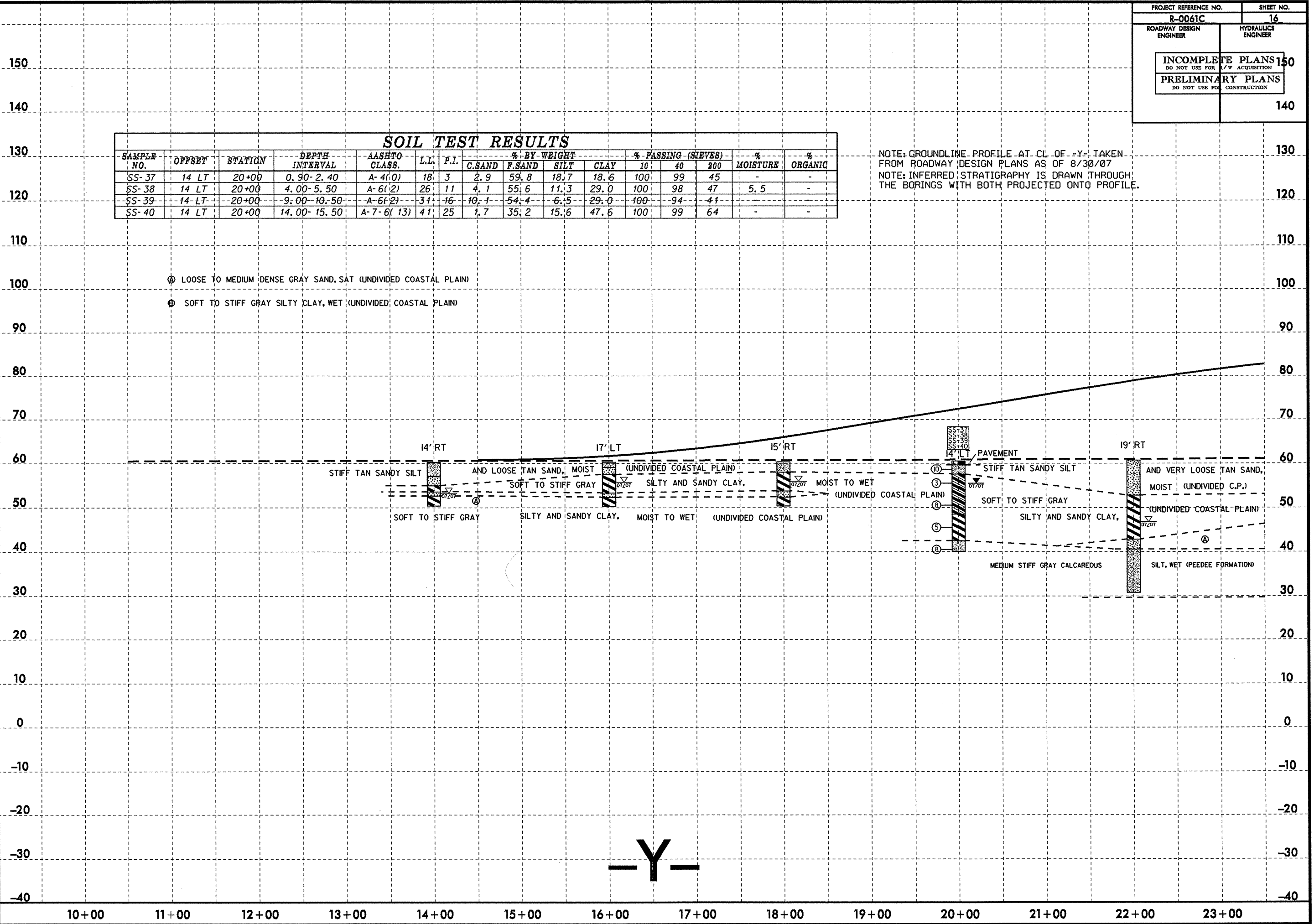
5/14/99

PROJECT REFERENCE NO.		SHEET NO.	
R-0061C		16	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR ACQUISITION		150	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION		140	

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
							SS-37	14 LT	20+00	0.90-2.40	A-4(0)	18	3		
SS-38	14 LT	20+00	4.00-5.50	A-6(2)	26	11	4.1	55.6	11.3	29.0	100	98	47	5.5	-
SS-39	14 LT	20+00	9.00-10.50	A-6(2)	31	16	10.1	54.4	6.5	29.0	100	94	41	-	-
SS-40	14 LT	20+00	14.00-15.50	A-7-6(13)	41	25	1.7	35.2	15.6	47.6	100	99	64	-	-

NOTE: GROUNDLINE PROFILE AT CL OF -Y- TAKEN FROM ROADWAY DESIGN PLANS AS OF 8/30/07  
 NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

12-OCT-2007 11:10 L:\ERON\erone\file\investigation\TIP\R0061C.GEO.RDWY\CADD.GEOTECHN\Plan\Pr-of\R0061C\_Geo\_pf1\_Y.dgn



-Y-

5/14/99

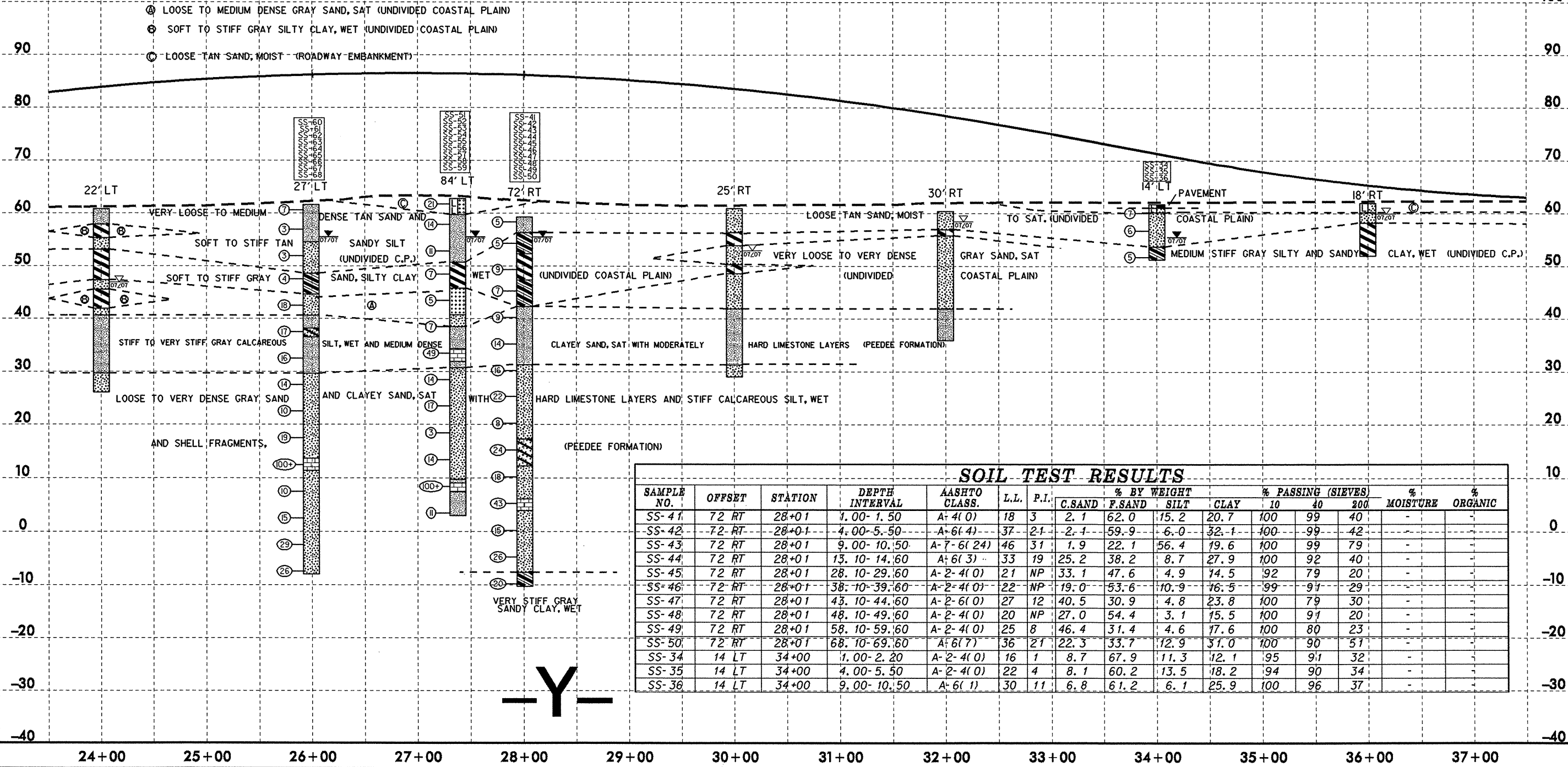
R:\061\2007\1122\investigation\top\0061c-geo-rdwy\cadd\geotech\plan\pof\0061c-geo-pf1-1.dgn

PROJECT REFERENCE NO. <b>R-0061C</b>	SHEET NO. <b>17</b>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> <small>DO NOT USE FOR ACQUISITION</small>	
<b>PRELIMINARY PLANS</b> <small>DO NOT USE FOR CONSTRUCTION</small>	

### SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-60	27' LT	25+99	1.00-1.50	A-4(1)	21	8	2.9	51.7	18.5	26.9	100	98	50	-	-
SS-61	27' LT	25+99	8.70-10.20	A-2-4(0)	21	NP	3.8	75.1	3.5	17.6	100	98	26	-	-
SS-62	27' LT	25+99	13.10-14.60	A-6(3)	33	16	1.0	61.4	8.6	29.0	100	100	41	-	-
SS-63	27' LT	25+99	18.10-19.60	A-2-4(0)	20	NP	17.2	68.3	4.2	10.3	100	98	16	-	-
SS-64	27' LT	25+99	23.10-24.60	A-2-6(1)	31	15	33.7	31.2	8.2	26.9	96	75	35	-	-
SS-65	27' LT	25+99	38.10-39.60	A-2-4(0)	21	NP	23.2	52.5	9.8	14.5	95	85	25	-	-
SS-66	27' LT	25+99	43.10-44.60	A-2-4(0)	21	3	29.2	49.4	3.8	17.6	100	90	23	-	-
SS-67	27' LT	25+99	53.10-54.60	A-2-4(0)	22	3	34.9	41.9	4.7	18.6	100	87	26	-	-
SS-68	27' LT	25+99	63.10-64.60	A-2-4(0)	21	2	38.5	41.3	6.8	13.4	100	86	25	-	-
SS-51	84' LT	27+38	1.00-1.50	A-3(0)	22	NP	17.3	73.4	0.0	9.3	100	94	10	-	-
SS-52	84' LT	27+38	3.90-5.40	A-4(0)	16	2	1.0	58.5	19.8	20.7	100	100	46	-	-
SS-53	84' LT	27+38	8.90-10.40	A-4(0)	18	3	1.4	65.0	14.9	18.6	100	100	38	-	-
SS-54	84' LT	27+38	13.30-14.80	A-7-6(15)	45	30	1.0	45.9	11.7	41.4	100	100	61	-	-
SS-55	84' LT	27+38	18.30-19.80	A-3(0)	22	NP	27.2	65.6	0.0	7.2	100	94	8	-	-
SS-56	84' LT	27+38	23.30-24.80	A-2-4(0)	27	NP	30.6	54.8	4.2	10.3	98	81	17	-	-
SS-57	84' LT	27+38	43.30-44.80	A-2-4(0)	21	NP	18.6	48.6	14.2	18.6	96	86	33	-	-
SS-58	84' LT	27+38	48.30-49.80	A-2-4(0)	20	NP	26.8	51.7	3.9	17.6	93	85	22	-	-
SS-59	84' LT	27+38	53.30-54.80	A-4(0)	19	NP	17.6	57.2	11.8	13.4	100	95	36	-	-

NOTE: GROUNDLINE PROFILE AT CL OF LY- TAKEN FROM ROADWAY DESIGN PLANS AS OF 8/30/07  
 NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.



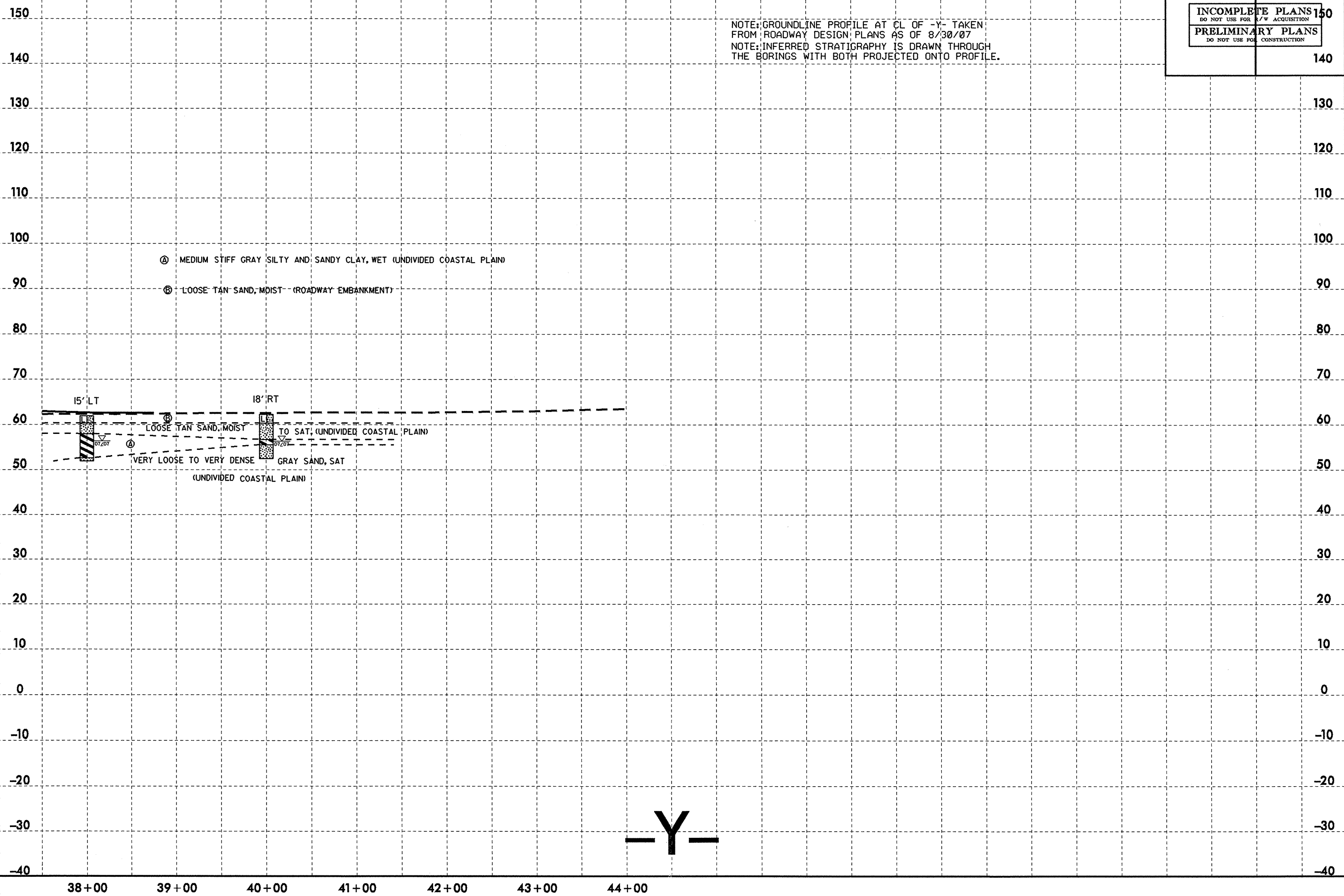
### SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-41	72' RT	28+01	1.00-1.50	A-4(0)	18	3	2.1	62.0	15.2	20.7	100	99	40	-	-
SS-42	72' RT	28+01	4.00-5.50	A-6(4)	37	21	2.1	59.9	6.0	32.1	100	99	42	-	-
SS-43	72' RT	28+01	9.00-10.50	A-7-6(24)	46	31	1.9	22.1	56.4	19.6	100	99	79	-	-
SS-44	72' RT	28+01	13.10-14.60	A-6(3)	33	19	25.2	38.2	8.7	27.9	100	92	40	-	-
SS-45	72' RT	28+01	28.10-29.60	A-2-4(0)	21	NP	33.1	47.6	4.9	14.5	92	79	20	-	-
SS-46	72' RT	28+01	38.10-39.60	A-2-4(0)	22	NP	19.0	53.6	10.9	16.5	99	91	29	-	-
SS-47	72' RT	28+01	43.10-44.60	A-2-6(0)	27	12	40.5	30.9	4.8	23.8	100	79	30	-	-
SS-48	72' RT	28+01	48.10-49.60	A-2-4(0)	20	NP	27.0	54.4	3.1	15.5	100	91	20	-	-
SS-49	72' RT	28+01	58.10-59.60	A-2-4(0)	25	8	46.4	31.4	4.6	17.6	100	80	23	-	-
SS-50	72' RT	28+01	68.10-69.60	A-6(7)	36	21	22.3	33.7	12.9	31.0	100	90	51	-	-
SS-34	14' LT	34+00	1.00-2.20	A-2-4(0)	16	1	8.7	67.9	11.3	12.1	95	91	32	-	-
SS-35	14' LT	34+00	4.00-5.50	A-2-4(0)	22	4	8.1	60.2	13.5	18.2	94	90	34	-	-
SS-36	14' LT	34+00	9.00-10.50	A-6(1)	30	11	6.8	61.2	6.1	25.9	100	96	37	-	-

5/14/99

PROJECT REFERENCE NO. <b>R-0061C</b>	SHEET NO. <b>18</b>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR ACQUISITION	<b>150</b>
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	<b>140</b>

NOTE: GROUNDLINE PROFILE AT CL OF -Y- TAKEN FROM ROADWAY DESIGN PLANS AS OF 8/30/07  
NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.



I:\2007\1110 - I:\Investigation\TIP\R0061C.GEO.RDWY\CADD\_GEO\TECH\Plan\Profile\R0061C\_Geo.pfl.y.dgn