



## **PRELIMINARY SITE ASSESSMENT**

**PRIME INVESTMENT PARTNERS LLC PROPERTY (PARCEL #177)**

**5831 High Point Road**

**Greensboro, NC**

**State Project: U-2412B**

**WBS Element: 34802.1.1**

**August 17, 2011**

**Prepared for:**

**North Carolina Department of Transportation**

**Geotechnical Engineering Unit**

**1020 Birch Ridge Drive**

**Raleigh, NC 27610**



**FROEHLING & ROBERTSON, INC.**

*Engineering Stability Since 1881*

310 Hubert Street  
Raleigh, North Carolina 27603-2302  
T 919.828.3441 | F 919.828.5751  
NC License #F-0266

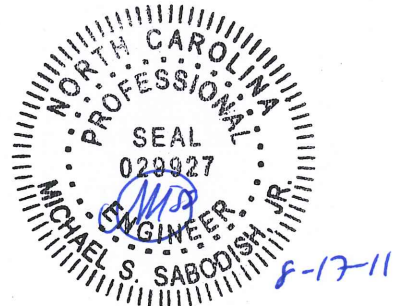
August 17, 2011

**North Carolina Department of Transportation**  
**Geotechnical Engineering Unit**  
1020 Birch Ridge Drive  
Raleigh, North Carolina 27610

Attn.: Mr. Terry Fox, L.G.  
GeoEnvironmental Project Manager

**Re:** State Project: U-2412B  
WBS Element: 3802.1.1  
Jamestown Bypass, Highpoint Road, Greensboro

**Subject: Preliminary Site Assessment**  
**Prime Investment Partners LLC Property (Parcel #177)**  
**5831 High Point Road**  
**Greensboro, NC**



Dear Mr. Fox:

Froehling and Robertson, Inc. (F&R) has completed the authorized Preliminary Site Assessment at the Prime Investment Partners Property in Greensboro, North Carolina. The work was performed in general accordance with F&R's Proposal No. 1266-061E dated June 2, 2011. This report documents our field activities, presents the results of laboratory analysis and provides recommendations regarding the property.

Please do not hesitate to contact us if you should have any questions regarding this report.

Sincerely,

**FROEHLING & ROBERTSON, INC.**

Michael S. Sabodish, Jr., Ph.D., P.E.  
Engineering and Remediation Services Manager

Christopher J. Burkhardt  
Environmental Department Manager



## TABLE OF CONTENTS

	<u>PAGE</u>
1.0 INTRODUCTION .....	1
2.0 GEOPHYSICAL SURVEY .....	1
3.0 SITE ASSESSMENT ACTIVITIES .....	2
4.0 SUBSURFACE CONDITIONS .....	3
5.0 ANALYTICAL RESULTS .....	3
6.0 CONCLUSIONS AND RECOMMENDATIONS .....	4
7.0 LIMITATIONS.....	5
APPENDIX I	FIGURE No. 1 – Site Vicinity Map
	FIGURE No. 2 – Topographic Map
	FIGURE No. 3 – Boring Location Plan
	FIGURE No. 4 – Estimated Extent of Soil Contamination
APPENDIX II	GEOPHYSICAL REPORT PREPARED BY SCHNABEL ENGINEERING
APPENDIX III	ENVIRONMENTAL BORING LOGS
APPENDIX IV	SITE PHOTOS
APPENDIX V	LABORATORY ANALYTICAL RESULTS



**Preliminary Site Assessment Report  
Prime Investment Partners LLC Property (Parcel #177)  
Greensboro, Guilford County, North Carolina  
F&R Project No. 66N-0055**

**1.0 Introduction**

Froehling and Robertson, Inc. (F&R) has prepared this Preliminary Site Assessment Report (PSA) to document soil assessment activities performed at the Prime Investment Partners LLC Property (Parcel #177) addressed as 5831 High Point Road, Greensboro, Guilford County, North Carolina. The site is located on the south side of High Point Road approximately 0.25 miles southwest from the Suttonwood Drive Intersection (Appendix I, Figure 1). Currently, the site is being utilized as an Giovanni's Italian Restaurant. As indicated in the Request for Proposal (RFP), the site historically operated as a gas station. However, the property does not appear on the UST Section Registry. Groundwater Incident # 03703 was assigned to this facility, and State lead work was assigned to Terraine, Inc. who conducted a Limited Site Assessment at the property in 2008. The RFP notes that monitoring wells were not noted on site. This work was performed in general accordance with F&R's Proposal No. 1266-061E dated June 2, 2011. The purpose of this report is to document field activities, present the results of laboratory analysis, and provide recommendations regarding the property.

Based on conversations and information provided by the NCDOT, it has been determined that the proposed utility installation and roadway construction will impact the project site (See Figure No.3). As such, the NCDOT requested a Preliminary Site Assessment be performed to assess the possibility of encountering petroleum impacted soil from known or unknown USTs which may exist/existed at the project site. The site contains one building and a small outdoor dining area on the north side of the building. The property contains asphalt parking and drive areas on the south, east and west sides of the building. Photos detailing existing site features are attached as Appendix IV of this report.

**2.0 Geophysical Survey**

Prior to F&R's soil assessment activities, Schnabel Engineering conducted a geophysical survey of the project site to locate suspect metal underground storage tanks (USTs) in the accessible areas of the right-of-way and/or easement. The geophysical work was conducted on June 9 and 15, 2011 under Schnabel's 2009 contract with NCDOT.

The geophysical investigation consisted of electromagnetic (EM) induction surveys using a Geonics EM61-MK2 instrument. Ground-penetrating radar (GPR) investigations of selected EM61 anomalies



were investigated using a Geophysical Survey Systems SIR-3000 system equipped with a 400 MHz antenna. The EM61 data were collected along parallel survey lines spaced approximately 2.5 feet apart, while the GPR data were collected along survey lines spaced 1 to 2 feet apart in orthogonal directions. The data was reviewed in the field to evaluate the possible presence of USTs and later transferred to a desktop computer for further review.

Based on the results of the geophysical survey, anomalies apparently caused by reinforced concrete, buried utilities and known site features were encountered. The GPR data collected at the site did not indicate the presence of metallic USTs within the areas surveyed. The complete geophysical report is attached as Appendix II.

### **3.0 Site Assessment Activities**

F&R visited the site on July 5, 2011 to perform the Preliminary Site Assessment. The assessment consisted of advancing 5 borings into the soils at the project site. All of the borings were advanced in the frontage of the property between the planned PUE and High Point Road. Boring B-6 was advanced in the grass covered area northwest corner of the site, Borings B-7, B-8 and B-9 were advanced in the grass and asphalt area along the southern property line, while Boring B-10 was advanced in the asphalt area west of the existing building (Appendix I, Figure 3). The borings were advanced using direct-push technology (Geoprobe) to a depth of 12 feet below ground surface (bgs). Boring locations were determined by F&R staff based on the results of the geophysical survey, site features and proposed construction activities.

Soil sample cores from the borings (B-6 through B-10) were collected in disposable, 4-foot long acetate sleeves. The soil samples were visually/manually classified and screened in the field using a photo-ionization detector (PID) for evidence of petroleum hydrocarbons. Evaluation of VOC concentrations were performed using a MiniRae 2000 PID which produces results in parts per million (ppm). A representative soil sample was collected from one foot sections of each sleeve and placed in a re-sealable plastic bag and the vapors were then allowed to equilibrate in the headspace of the bag for approximately ten minutes prior to measurement with the PID. The measurements were collected by placing the probe tip into the headspace of the bag. PID measurements can be found in the Environmental Borings Logs in Appendix III.

The soil sample which exhibited the highest PID concentration or the sample at boring termination was submitted for laboratory analysis for diesel range organics (DRO) by EPA Method 3510 and gasoline range organics (GRO) by EPA Method 5030 with preparation by EPA Method 8015C.



The samples were collected in laboratory-supplied sample containers, placed in a cooler with ice, and delivered by courier to SGS North America, Inc. (SGS) in Wilmington, North Carolina following standard chain-of custody procedures.

#### 4.0 Subsurface Conditions

As indicated in the attached Environmental Boring Logs (Appendix III), subsurface conditions from existing ground surface to boring termination at a depth of twelve feet included various layers of moist, red/brown and orange/red silty and sandy clays (USCS – CL); moist, red/orange clayey silts (USCS – MH) and moist, brown sandy silts and red/white silts (USCS – ML). The groundwater table was not encountered within the depths of the drilled borings, however, the soil samples appeared to be moist.

#### 5.0 Analytical Results

As shown in the following table, petroleum hydrocarbons identified as DRO were encountered at three of the boring locations (B-8, B-9 and B-10) at depths ranging from two feet (Boring B-8) to eight feet (Boring B-9) feet below ground surface. The laboratory results indicate the soil samples collected from Borings B-8 and B-10 exceed the NC DENR Action level of 10 mg/kg for DRO. The laboratory results for the soil sample collected at Boring B-9 indicated DRO levels (9.88 mg/kg) just below the NC DENR Action Level. The laboratory analytical results can be found in the attached Appendix V of this report.

**Table 1**  
**Soil Sampling Analytical Results**  
**Prime Investment Partners LLC Property (Parcel #177)**  
**Guilford County, Greensboro, North Carolina**

Sample ID	Sample Date	Sample Depth (ft bgs)	PID Reading (ppm)	EPA Method 8015B	
				DRO (mg/kg)	GRO (mg/kg)
B-6	7/5/11	1-2	3.8	ND	ND
B-7	7/5/11	10-11	3.4	ND	ND
B-8	7/5/11	2-3	3.6	<b>40.3</b>	ND
B-9	7/5/11	7-8	3.9	9.88	ND
B-10	7/5/11	6-7	2.4	<b>10.7</b>	ND
<b>NC DENR Action Level</b>				<b>10</b>	<b>10</b>



**Notes:**

ft bgs = feet below ground surface

ppm = parts per million

DRO = Diesel Range Organics

GRO = Gasoline Range Organics

ND = Not Detected

**Bold** indicates soil analytical results above NCDENR Action Levels

NCDENR Action Level determined from the North Carolina UST Section Guidelines for Assessment and Corrective Action

## 6.0 Conclusions and Recommendations

F&R conducted a PSA at the Prime Investment Partners LLC Property located at 5831 High Point Road, Greensboro, Guilford County, North Carolina. A geophysical investigation was performed by Schnabel Engineering to investigate the existence of unknown USTs at the site. Based on the results of the geophysical survey, it was determined that USTs were not present at the site. Five geoprobe borings were advanced in the vicinity of the proposed drainage areas at the front of the property within the PUE. Based on the results of laboratory testing, it has been determined that petroleum impacted soils exist in the vicinity of Borings B-8 and B-10 at concentrations above the NC DENR Action Level of 10 mg/kg. In addition, petroleum impacted soils were identified in the vicinity of Boring B-9 at a concentration of 9.88 mg/kg, which is just below the NC DENR Action Level.

In regards to the proposed construction, it is estimated that petroleum impacted soils may exist to depths of approximately 8 feet below existing ground surface based on laboratory analysis and PID readings at boring locations B-8, B-9 and B-10. Without knowing the invert elevations for the proposed drainage in these areas, it is difficult to accurately calculate the volume of petroleum impacted soil which may be encountered during construction. For estimating purposes, F&R assumes a utility excavation approximately four feet in width, 160 feet long (50' from B-8 to B-9 and 110' from B-9 to the northern property line) and a depth of eight feet below ground surface. The eight foot depth was chosen based on the deepest soil sample where contamination was observed. Using the above dimensions, it can be approximated that the volume of petroleum impacted soil which may be encountered to be 307 tons. Petroleum impacted soils that are removed should be properly managed and disposed of in accordance with all NCDENR rules and regulations.

It should be noted that a delineation of the soil contamination was not performed, as this was not included in the proposed scope of work. The above estimates are based on interpretations of soil



analytical results, PID readings and our experience with similar petroleum UST releases. The amount of impacted soil can only be determined after excavation or by advancing additional borings at the site to possibly delineate the extents (horizontal and vertical) of contamination.

## **7.0 Limitations**

These services have been performed, under authorization of the North Carolina Department of Transportation for specific application on this project. These services have been performed in accordance with generally accepted environmental and hydrogeological practices. No other warranty, expressed or implied is made. As with any subsurface investigation, actual conditions exist only at the precise locations from which samples were taken. Certain inferences are based on the results of sampling and related testing to form a professional opinion of conditions in areas beyond those from which samples were taken. Our conclusions and recommendations are based upon information provided to us by others, our sampling and testing results and our site observations. We have not verified the completeness or accuracy of the information provided by others, unless otherwise noted. Our observations are based upon conditions readily visible at the site at the time of our site visits.

Froehling & Robertson, Inc. by virtue of providing the services described in this report, does not assume the responsibility of the person(s) in charge of the site, or otherwise undertake responsibility for reporting to any local, state or federal public agencies any conditions at the site that may present a potential danger to public health, safety or the environment. In areas that require notification of local, state, or federal public agencies as required by law, it is the Client's responsibility to so notify.





**APPENDIX I**

**Figure No. 1 – SITE VICINITY MAP**

**Figure No. 2 – TOPOGRAPHIC MAP**

**Figure No. 3 – BORING LOCATION PLAN**

**Figure No. 4 – ESTIMATED EXTENT OF SOIL CONTAMINATION**



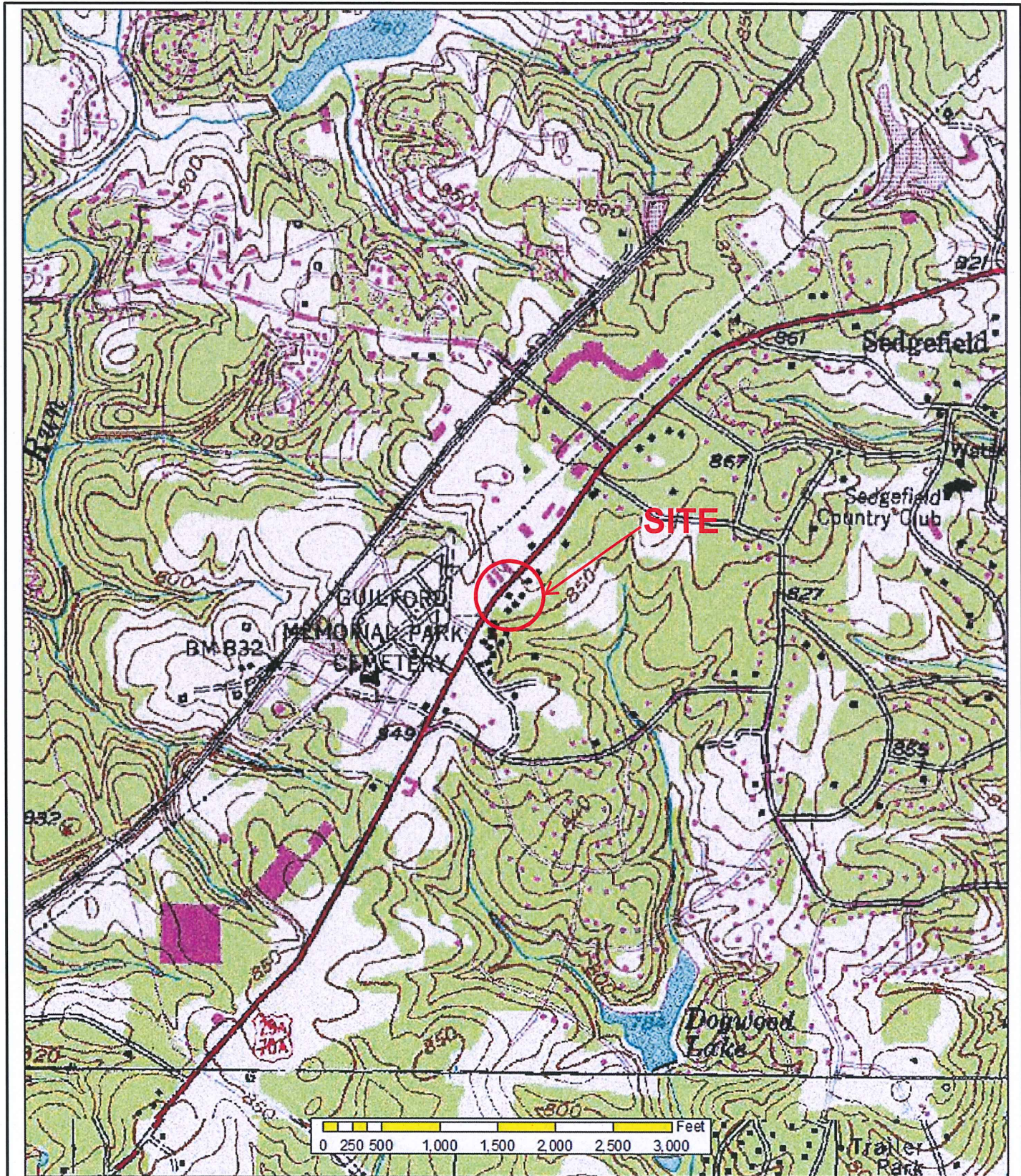
**SITE VICINITY MAP**

North



**FROEHLING & ROBERTSON, INC.**  
 Engineering • Environmental • Geotechnical  
 310 Hubert Street  
 Raleigh, North Carolina 27603-2302 | USA  
 T 919.828.3441 | F 919.828.5751  
 www.fandr.com

CLIENT: NCDOT		FIGURE No.: <b>1</b>
PROJECT: Prime Investment Partners LLC Property (Parcel #177)		
LOCATION: Greensboro, Guilford County, North Carolina		
F&R PROJECT No.: 66M-0055		
DRAWN BY: M. Sabodish		
DATE: August 2011	SCALE: Not to scale	



1 inch = 1,000 feet

**TOPOGRAPHIC MAP**

North

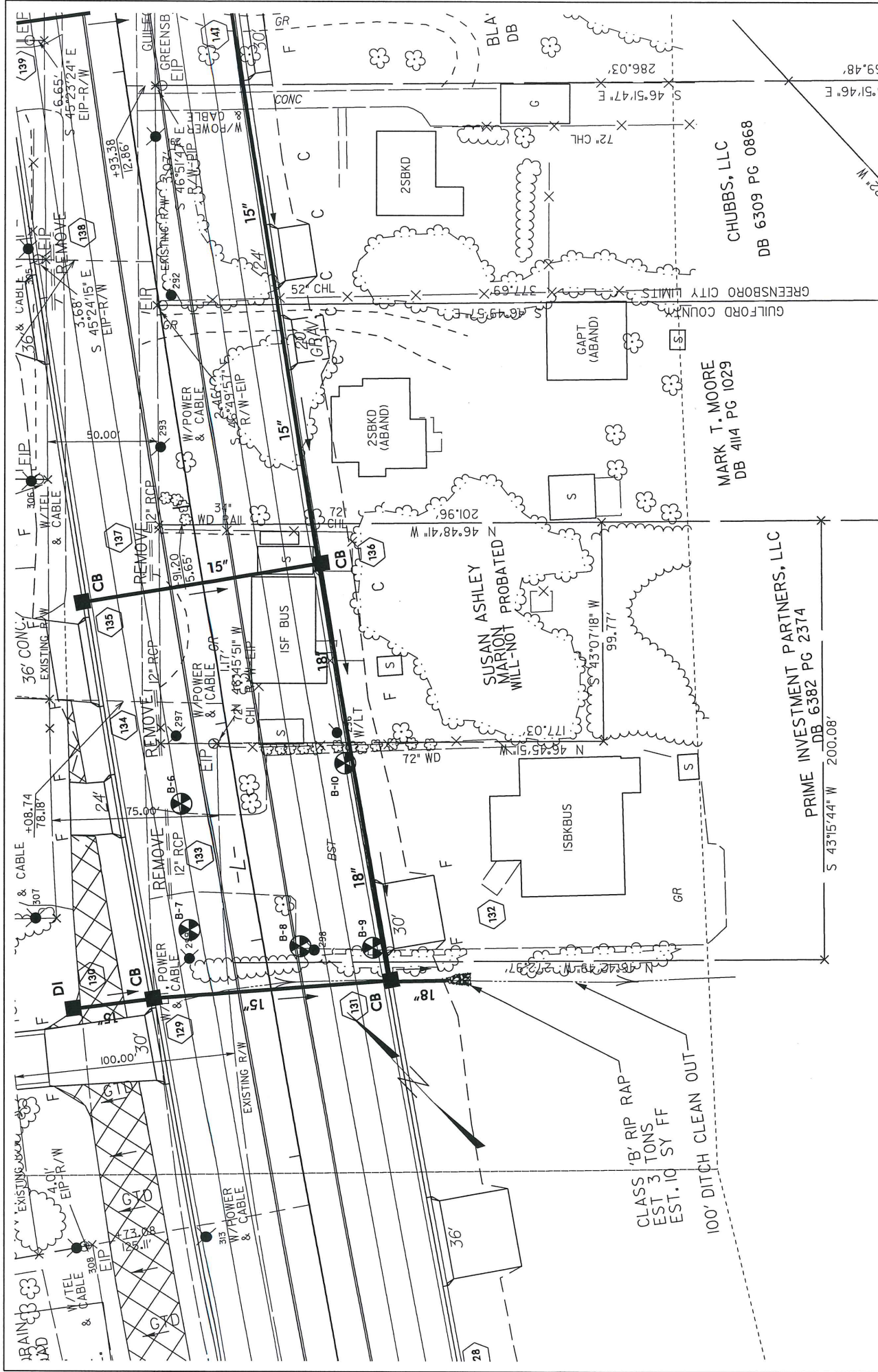


**FROEHLING & ROBERTSON, INC.**  
 Engineering • Environmental • Geotechnical  
 310 Hubert Street  
 Raleigh, North Carolina 27603-2302 | USA  
 T 919.828.3441 | F 919.828.5751  
 www.fandr.com

CLIENT: NCDOT  
 PROJECT: Prime Investment Partners LLC Property (Parcel #177)  
 LOCATION: Greensboro, Guilford County, North Carolina  
 F&R PROJECT No.: 66M-0055  
 DRAWN BY: M. Sabodish  
 DATE: August 2011

FIGURE No.: **2**

SCALE: As Shown



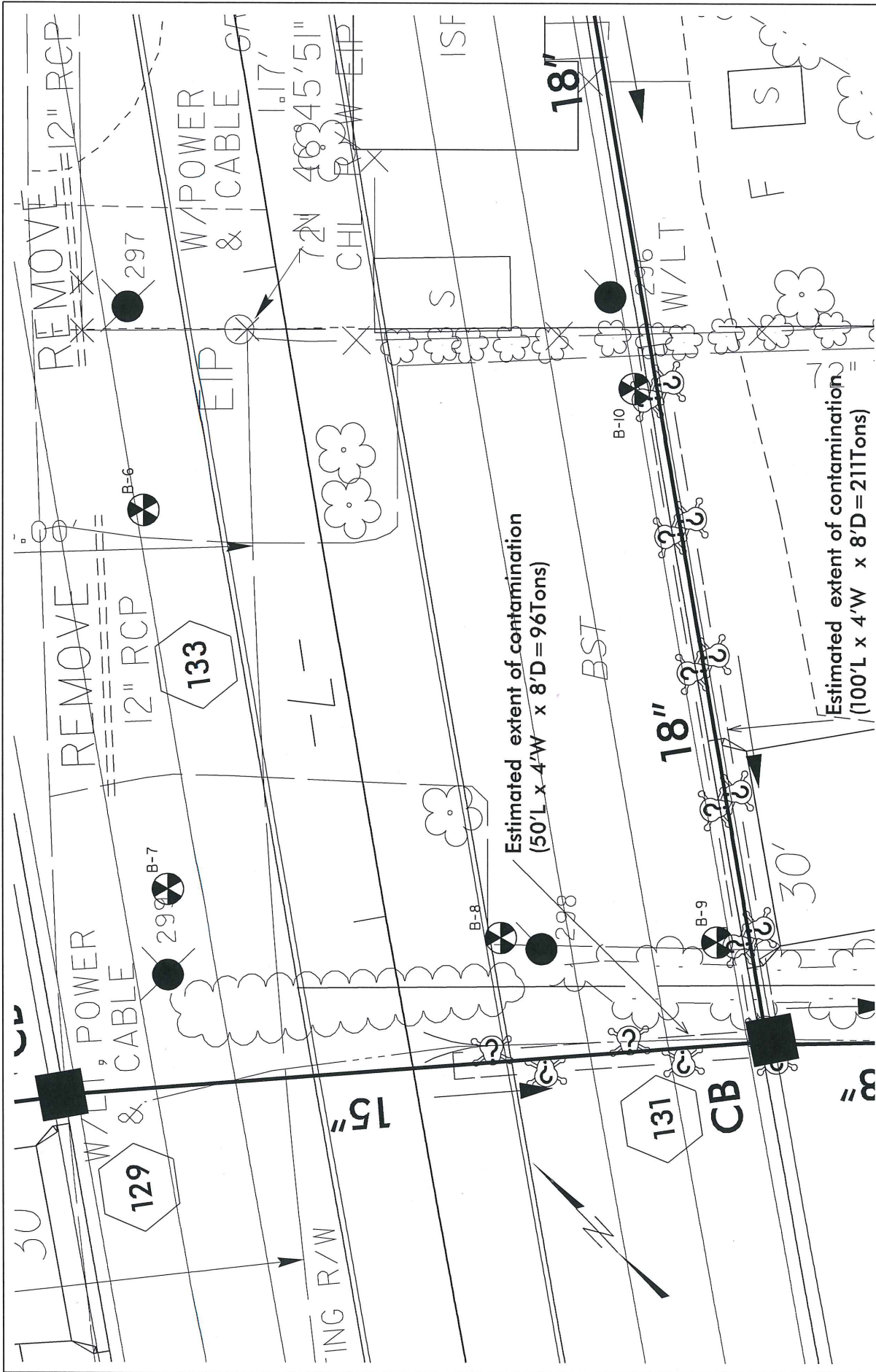
BORING LOCATION PLAN	
CLIENT: NCDOT	PROJECT: Prime Investment Partners, LLC Property (Parcel #177)
LOCATION: Greensboro, Guilford County, North Carolina	
F&R PROJECT No.: 66N-0055	DRAWN BY: D. Racey
DATE: August 2011	CHECKED BY: M. Sabodish, P.E.
SCALE: 1"=60'	FIGURE No.: 3

### LEGEND

Approximate Geoprobe Boring Location

SCALE (FEET)  
 0 30' 60'  
 1"=60'

**FROEHLING & ROBERTSON, INC.**  
 Engineering • Environmental • Geotechnical  
 310 Hubert Street  
 Raleigh, North Carolina 27603-2302 | USA  
 T 919.828.3441 | F 919.828.5751  
 www.fandr.com



<p><b>LEGEND</b></p> <p>SCALE (FEET)</p> <p>0 10' 20'</p> <p>1"=20'</p>	<p><b>ESTIMATED EXTENT OF SOIL CONTAMINATION</b></p> <p>CLIENT: NCDOT</p> <p>PROJECT: Prime Investment Partners, LLC Property (Parcel #177)</p> <p>LOCATION: Greensboro, Guilford County, North Carolina</p> <p>F&amp;R PROJECT No.: 66N-0055</p> <p>DRAWN BY: D. Racey</p> <p>DATE: August 2011</p>
	<p><b>FROEHLING &amp; ROBERTSON, INC.</b></p> <p>Engineering • Environmental • Geotechnical</p> <p>310 Hubert Street Raleigh, North Carolina 27603-2302   USA T 919.828.3441   F 919.828.5751 www.fandr.com</p>



**APPENDIX II**

**GEOPHYSICAL REPORT PREPARED BY SCHNABEL ENGINEERING**



August 5, 2011

Mr. Christopher Burkhardt  
Froehling & Robertson, Inc.  
310 Hubert Street  
Raleigh, NC 27603

RE: State Project: U-2412B  
WBS Element: 34802.1.1  
County: Guilford  
Description: Jamestown Bypass, High Point Road, Greensboro

**Subject: Project 09210013.42, Report on Geophysical Surveys (Revised)  
Parcel 177, Prime Investment Partners, LLC Property, Guilford County, North  
Carolina**

Dear Mr. Burkhardt:

**SCHNABEL ENGINEERING SOUTH, PC** (Schnabel) is pleased to present this report on the geophysical surveys we conducted on the subject property. The report includes two 11x17 color figures and two 8.5x11 color figures.

#### **INTRODUCTION**

The work described in this report was conducted on June 9 and 15, 2011, by Schnabel under our 2009 contract with the NCDOT. The work was conducted over the accessible areas of the property as indicated by the NCDOT to support their environmental assessment of the subject property. Photographs of the property are included on Figure 1. The property is located on the south side of High Point Road approximately 0.25 miles southwest from the Suttonwood Drive intersection in Greensboro, NC. The purpose of the geophysical surveys was to locate suspect metal underground storage tanks (USTs) in the accessible areas of the right-of-way and/or easement.

The geophysical investigation consisted of electromagnetic (EM) induction surveys using a Geonics EM61-MK2 instrument. The EM61 metal detector is used to locate metal objects buried up to about eight feet below ground surface. Ground-penetrating radar (GPR) investigations of selected EM61 anomalies, including areas of reinforced concrete, were conducted using a Geophysical Survey Systems SIR-3000 system equipped with a 400 MHz antenna. Photographs of the equipment used are shown on Figure 2.

## **FIELD METHODOLOGY**

Locations of geophysical data points were obtained using a sub-meter Trimble Pro-XRS DGPS system. References to direction and location in this report are based on the US State Plane 1983 System, North Carolina 3200 Zone, using the NAD 83 datum, with units in US survey feet. The locations of existing site features (monitoring wells, signs, etc.) were recorded for later correlation with the geophysical data and for location references to the NCDOT drawings.

The EM61 data were collected along parallel survey lines spaced approximately 2.5 feet apart. The EM61 and DGPS data were recorded digitally using a field computer and later transferred to a desktop computer for data processing. The GPR data were collected along survey lines spaced one to two feet apart in orthogonal directions over areas of reinforced concrete and anomalous EM readings not attributed to cultural features. The GPR data were reviewed in the field to evaluate the possible presence of USTs. The GPR data also were recorded digitally and later transferred to a desktop computer for further review.

## **DISCUSSION OF RESULTS**

The contoured EM61 data collected over Parcel 177 are shown on Figures 3 and 4. The EM61 early time gate results are plotted on Figure 3. The early time gate data provide the more sensitive detection of metal objects. Figure 4 shows the difference between the response of the top and bottom coils of the EM61 instrument (differential response). The difference is taken to remove the effect of surface and very shallowly buried metallic objects. Typically, the differential response emphasizes anomalies from deeper and larger objects such as USTs.

The early time gate and differential results show anomalies apparently caused by reinforced concrete, buried utilities, or known site features (Figures 3 and 4). The GPR data collected at the site do not indicate the presence of metallic USTs within the areas surveyed.

## **CONCLUSIONS**

Our evaluation of the geophysical data collected on the subject property on Project U-2412B in Greensboro, NC indicates the following:

The geophysical data do not indicate the presence of metallic USTs in the areas surveyed on the subject property.

## **LIMITATIONS**

These services have been performed and this report prepared for Froehling & Robertson, Inc. and the North Carolina Department of Transportation in accordance with generally accepted guidelines for conducting geophysical surveys. It is generally recognized that the results of geophysical surveys are non-unique and may not represent actual subsurface conditions.



**NCDOT, Geotechnical Engineering Unit  
State Project U-2412B, Guilford County**

We appreciate the opportunity to have provided these services. Please call if you need additional information or have any questions.

Sincerely,

**SCHNABEL ENGINEERING SOUTH, PC**



Jeremy S. Strohmeyer, LG  
Project Manager



Edward D. Billington, LG  
Senior Vice President

JS:NB

Attachments: Figures (4)

FILE: G:\2009 PROJECTS\09210013 (NCDOT 2009 GEOTECH UNIT SERVICES)\09210013.42 (U-2412B, GUILFORD COUNTY)\REPORT\PARCEL 177\SCHNABEL GEOPHYSICAL REPORT ON PARCEL 177 (U-2412B).DOCX



Parcel 177 – Prime Investment Partners, LLC Property, looking southeast



Parcel 177 – Prime Investment Partners, LLC Property, looking east



STATE PROJECT U-2412B  
NC DEPT. OF TRANSPORTATION  
GUILFORD CO., NORTH CAROLINA  
PROJECT NO. 09210013.42

PARCEL 177  
SITE PHOTOS

FIGURE 1



Geonics EM61-MK2



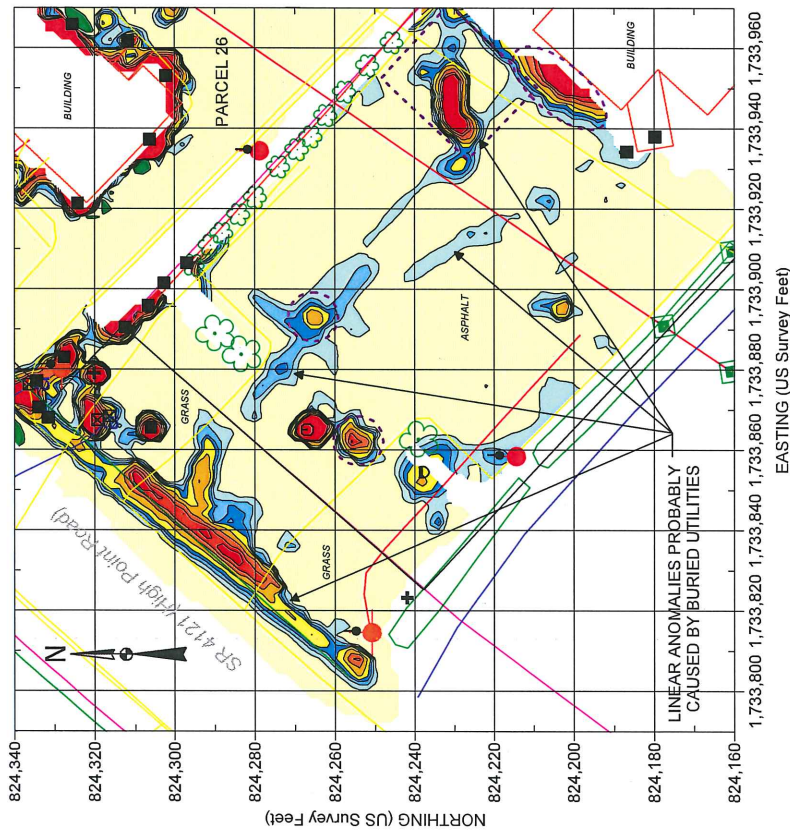
GSSI SIR-3000



STATE PROJECT U-2412B  
NC DEPT. OF TRANSPORTATION  
GUILFORD CO., NORTH CAROLINA  
PROJECT NO. 09210013.42

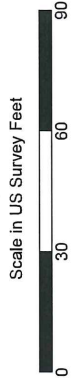
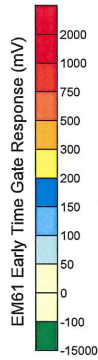
PHOTOS OF  
GEOPHYSICAL  
EQUIPMENT USED

FIGURE 2



EXPLANATION	
	MONITORING WELL
	SIGN
	UTILITY POLE
	GUYWIRE
	MISCELLANEOUS METALLIC OBJECT
	UTILITY MANHOLE, METER, BOX, ETC.
	DOT PROPOSED RW
	PROPERTY LINE
	GPR SURVEY AREA

REF.: NCDOT FILE: u-2412b\_rdy\_psh12.dgn  
(FOR SOME SITE FEATURES)



Note: The contour plot shows the earliest and most sensitive time gate of the EM61 bottom coil/channel in millivolts (mV). The EM data were collected on June 9, 2011, using a Geonics EM61-MK2 instrument. Positioning for the EM61 survey was provided using a submeter Trimble ProXRSS DGPS system. Coordinates are in the US State Plane 1983 System, North Carolina Zone 3200, using the NAD 1983 datum. GPR data were acquired on June 15, 2011, using a Geophysical Survey Systems SIR 3000 equipped with a 400 MHz antenna.



STATE PROJECT U-2412B  
GUILFORD COUNTY, NORTH CAROLINA  
NC DEPARTMENT OF TRANSPORTATION  
PROJECT NO. 09210018.42

PARCEL 177  
EARLY TIME GATE  
RESPONSE

FIGURE 3

© Schnabel Engineering 2011. All Rights Reserved





**APPENDIX III**

**ENVIRONMENTAL BORING LOGS**



**Project No:** 34802.1.1 (U-2412B)

**Elevation:**

**Drilling Method:** Geoprobe

**Client:** NCDOT

**Total Depth:** 12.0'

**Hammer Type:** N/A

**Project:** Jamestown Bypass, Highpoint Road

**Boring Location:** Parcel 177

**Date Drilled:** 7/5/11

**City/State:** Greensboro, Guilford Co., NC

**Driller:** Regional Probing Services

Elevation	Depth	Description of Materials (Classification)	* Sample Blows	Sample Depth (feet)	PID (ppm)	Remarks
		Moist, red-brown, sandy CLAY (CL).		0.0	2.9	
	1.0	Moist, orange & red, silty CLAY (CL).		1.0	3.8	Sample submitted to laboratory for analysis for TPH GRO/DRO
				2.0	3.6	
				3.0	3.5	
				4.0	3.2	
				5.0	1.8	
				6.0	1.5	
				7.0	1.3	
				8.0	1.7	
	9.0	Moist, orange & red, clayey SILT (ML).		9.0	2.3	
				10.0	1.8	
				11.0	1.9	
	12.0	Geoprobe Boring Terminated at 12.0 feet.		12.0		

BORING\_LOG GEOPROBE LOGS\_177.GPJ F&R.GDT 8/11/11

\*Number of blows required for a 140 lb hammer dropping 30" to drive 2" O.D., 1.375" I.D. sampler a total of 18 inches in three 6" increments. The sum of the second and third increments of penetration is termed the standard penetration resistance, N-Value.



**Project No:** 34802.1.1 (U-2412B)

**Elevation:**

**Drilling Method:** Geoprobe

**Client:** NCDOT

**Total Depth:** 12.0'

**Hammer Type:** N/A

**Project:** Jamestown Bypass, Highpoint Road

**Boring Location:** Parcel 177

**Date Drilled:** 7/5/11

**City/State:** Greensboro, Guilford Co., NC

**Driller:** Regional Probing Services

Elevation	Depth	Description of Materials (Classification)	* Sample Blows	Sample Depth (feet)	PID (ppm)	Remarks
		Dry, brown to light brown, sandy SILT (ML).		0.0	1.3	
				1.0	1.9	
				2.0	2.7	
	3.0	Dry to moist, yellow-brown, orange & red, clayey SILT (ML).		3.0	2.1	
				4.0	2.2	
				5.0	1.0	
				6.0	2.9	
				7.0	2.8	
				8.0	3.4	
	9.0	Moist, orange, SILT (ML).		9.0	3.4	
				10.0	3.4	Sample submitted to laboratory for analysis for TPH GRO/DRO
				11.0	2.6	
	12.0	Geoprobe Boring Terminated at 12.0 feet.		12.0		

BORING\_LOG\_GEOPROBE\_LOGS\_177.GPJ F&R.GDT 8/11/11

\*Number of blows required for a 140 lb hammer dropping 30" to drive 2" O.D., 1.375" I.D. sampler a total of 18 inches in three 6" increments. The sum of the second and third increments of penetration is termed the standard penetration resistance, N-Value.





**Project No:** 34802.1.1 (U-2412B)

**Elevation:**

**Drilling Method:** Geoprobe

**Client:** NCDOT

**Total Depth:** 12.0'

**Hammer Type:** N/A

**Project:** Jamestown Bypass, Highpoint Road

**Boring Location:** Parcel 177

**Date Drilled:** 7/5/11

**City/State:** Greensboro, Guilford Co., NC

**Driller:** Regional Probing Services

Elevation	Depth	Description of Materials (Classification)	* Sample Blows	Sample Depth (feet)	PID (ppm)	Remarks
		Moist, red, yellow & orange, clayey SILT (ML).		0.0	1.1	Sample submitted to laboratory for analysis for TPH GRO/DRO
				1.0	2.2	
				2.0	3.6	
				3.0	3.1	
				4.0	3.0	
				5.0	3.1	
	6.0	Moist, red & white, SILT (ML).		6.0	3.1	
	7.0	Moist, red & orange, clayey SILT (ML).		7.0	1.9	
	8.0	Moist, red & yellow, SILT (ML).		8.0	2.8	
				9.0	2.8	
				10.0	2.5	
	11.0	Moist to wet, red, clayey SILT (ML).		11.0	2.6	
	12.0	Geoprobe Boring Terminated at 12.0 feet.		12.0		

BORING LOG GEOPROBE LOGS\_177.GPJ F&R.GDT 8/11/11

\*Number of blows required for a 140 lb hammer dropping 30" to drive 2" O.D., 1.375" I.D. sampler a total of 18 inches in three 6" increments. The sum of the second and third increments of penetration is termed the standard penetration resistance, N-Value.



**Project No:** 34802.1.1 (U-2412B)  
**Client:** NCDOT  
**Project:** Jamestown Bypass, Highpoint Road  
**City/State:** Greensboro, Guilford Co., NC

**Elevation:**  
**Total Depth:** 12.0'  
**Boring Location:** Parcel 177

**Drilling Method:** Geoprobe  
**Hammer Type:** N/A  
**Date Drilled:** 7/5/11  
**Driller:** Regional Probing Services

Elevation	Depth	Description of Materials (Classification)	* Sample Blows	Sample Depth (feet)	PID (ppm)	Remarks
		Moist, brown, orange, red-brown & white, clayey SILT (ML).		0.0	0.8	
				1.0	2.6	
				2.0	2.0	
				3.0	2.5	
				4.0	2.5	
				5.0	2.5	
				6.0	2.7	
	7.0	Moist, orange, red & white, SILT (ML).		7.0	3.9	Sample submitted to laboratory for analysis for TPH GRO/DRO
				8.0	3.2	
				9.0	3.0	
				10.0	3.1	
				11.0	2.8	
	12.0	Geoprobe Boring Terminated at 12.0 feet.		12.0		

BORING\_LOG GEOPROBE LOGS\_177.GPJ F&R.GDT 8/11/11

\*Number of blows required for a 140 lb hammer dropping 30" to drive 2" O.D., 1.375" I.D. sampler a total of 18 inches in three 6" increments. The sum of the second and third increments of penetration is termed the standard penetration resistance, N-Value.



**FROEHLING & ROBERTSON, INC.**

**BORING LOG**

Boring: B-10 (1 of 1)

**Project No:** 34802.1.1 (U-2412B)

**Elevation:**

**Drilling Method:** Geoprobe

**Client:** NCDOT

**Total Depth:** 12.0'

**Hammer Type:** N/A

**Project:** Jamestown Bypass, Highpoint Road

**Boring Location:** Parcel 177

**Date Drilled:** 7/5/11

**City/State:** Greensboro, Guilford Co., NC

**Driller:** Regional Probing Services

Elevation	Depth	Description of Materials (Classification)	* Sample Blows	Sample Depth (feet)	PID (ppm)	Remarks
		Moist, red, clayey SILT (ML).		0.0	1.5	
				1.0	2.4	
				2.0	2.1	
				3.0	2.3	
				4.0	2.0	
				5.0	2.1	
				6.0	2.4	
	7.0	Moist, red & orange, SILT (ML).		7.0	1.8	Sample submitted to laboratory for analysis for TPH GRO/DRO
	8.0	Moist, red, clayey SILT (ML).		8.0	1.8	
	9.0	Moist, red, orange & white, SILT (ML).		9.0	1.1	
				10.0	1.3	
				11.0	0.8	
	12.0	Geoprobe Boring Terminated at 12.0 feet.		12.0		

BORING LOG GEOPROBE LOGS 177.GPJ F&R.GDT 8/11/11

\*Number of blows required for a 140 lb hammer dropping 30" to drive 2" O.D., 1.375" I.D. sampler a total of 18 inches in three 6" increments. The sum of the second and third increments of penetration is termed the standard penetration resistance, N-Value.



**APPENDIX IV**

**SITE PHOTOS**



Photo #1: Existing Giovanni's Restaurant located at the rear of the project site.



Photo #2: Location of Boring B-6 looking southeast.



Photo #3: Location of Boring B-7 looking east-northeast.



Photo #4: Location of Boring B-8 looking west-northwest.



Photo #5: Location of Boring B-9 looking south-southwest.

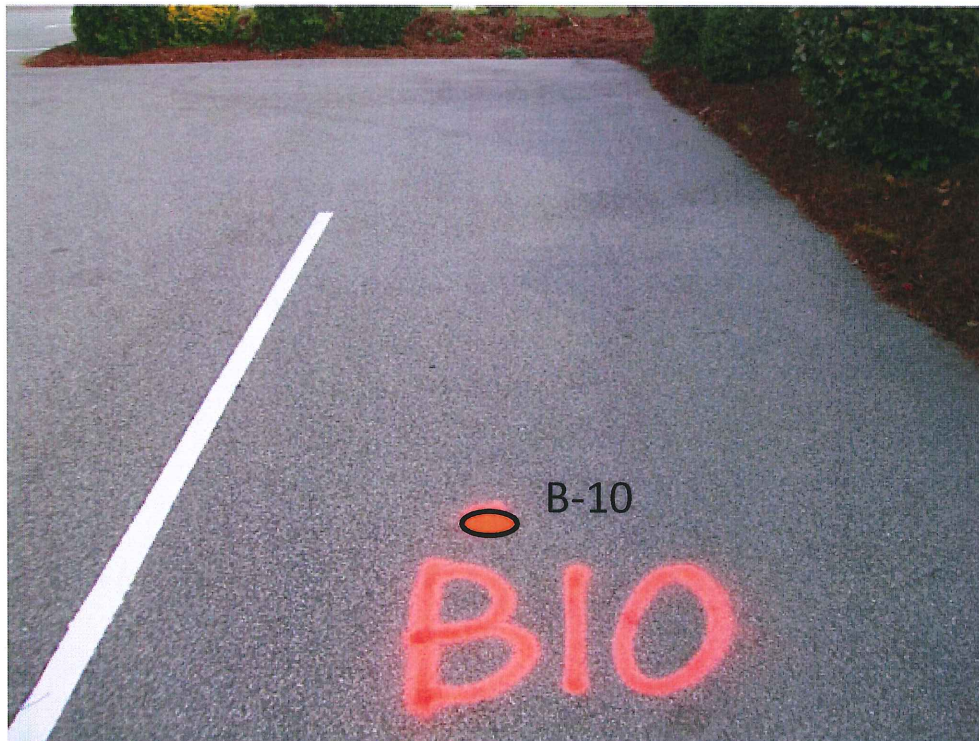


Photo #6: Location of Boring B-10 looking north.



**APPENDIX V**

**LABORATORY ANALYTICAL RESULTS**





Laboratory Report of Analysis

To: Christopher J. Burkhardt  
FROEHLING & ROBERTSON, INC.  
310 Hubert Street  
Raleigh, NC 27603

Report Number: 31101765

Client Project: 66N-0055 Jamestown Bypass

Dear Christopher J. Burkhardt,

Enclosed are the results of the analytical services performed under the referenced project for the received samples and associated QC as applicable. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of five years in the event they are required for future reference. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. Any samples submitted to our laboratory will be retained for a maximum of thirty (30) days from the date of this report unless other arrangements are requested.

If there are any questions about the report or services performed during this project, please call Michael D. Page at (910) 350-1903. We will be happy to answer any questions or concerns which you may have.

Thank you for using SGS North America Inc. for your analytical services. We look forward to working with you again on any additional analytical needs.

Sincerely,  
SGS North America Inc.

Digitally signed by Michael Page  
DN: CN = Michael Page, C = US, OU = SGS  
Environmental  
Date: 2011.07.19 09:24:26 -04'00'

Michael D. Page  
Project Manager  
michael.page@sgs.com

Date

## Laboratory Qualifiers

### Report Definitions

DL	Method, Instrument, or Estimated Detection Limit per Analytical Method
CL	Control Limits for the recovery result of a parameter
LOQ	Reporting Limit
DF	Dilution Factor
RPD	Relative Percent Difference
LCS(D)	Laboratory Control Spike (Duplicate)
MS(D)	Matrix Spike (Duplicate)
MB	Method Blank

### Qualifier Definitions

*	Recovery or RPD outside of control limits
B	Analyte was detected in the Lab Method Blank at a level above the LOQ
U	Undetected (Reported as ND or < LOD)
V	Recovery is below quality control limit. The data has been validated based on a favorable signal-to-noise and detection limit
A	Amount detected is less than the Lower Method Calibration Limit
J	Amount detected is between the Method Detection Limit and the Lower Calibration Limit
O	The recovery of this analyte in the OPR is above the Method QC Limits and the reported concentration in the sample may be biased high
E	Amount detected is greater than the Upper Calibration Limit
S	The amount of analyte present has saturated the detector. This situation results in an underestimation of the affected analyte(s)
Q	Indicates the presence of a quantitative interference. This situation may result in an underestimation of the affected analyte(s)
I	Indicates the presence of a qualitative interference that could cause a false positive or an overestimation of the affected analyte(s)
DPE	Indicates the presence of a peak in the polychlorinated diphenylether channel that could cause a false positive or an overestimation of the affected analyte(s)
TIC	Tentatively Identified Compound
EMC	Estimated Maximum possible Concentration due to ion ratio failure
ND	Not Detected
K	Result is estimated due to ion ratio failure in High Resolution PCB Analysis
P	RPD > 40% between results of dual columns
D	Spike or surrogate was diluted out in order to achieve a parameter result within instrument calibration range
M1	Mis-identified peak
M2	Software did not integrate peak
M3	Incorrect baseline construction (i.e. not all of peak included; two peaks integrated as one)
M4	Pattern integration required (i.e. DRO, GRO, PCB, Toxaphene and Technical Chlordane)
M5	Other - Explained in case narrative

**Note** Results pages that include a value for "Solids (%)" have been adjusted for moisture content.



Sample Summary

<u>Client Sample ID</u>	<u>Lab Sample ID</u>	<u>Collected</u>	<u>Received</u>	<u>Matrix</u>
<del>B1</del>	<del>31101765001</del>	<del>07/05/2011 13:07</del>	<del>07/07/2011 07:40</del>	<del>Soil-Solid as dr</del>
<del>B2</del>	<del>31101765002</del>	<del>07/05/2011 13:32</del>	<del>07/07/2011 07:40</del>	<del>Soil-Solid as dr</del>
<del>B3</del>	<del>31101765003</del>	<del>07/05/2011 14:07</del>	<del>07/07/2011 07:40</del>	<del>Soil-Solid as dr</del>
<del>B4</del>	<del>31101765004</del>	<del>07/05/2011 14:33</del>	<del>07/07/2011 07:40</del>	<del>Soil-Solid as dr</del>
<del>B5</del>	<del>31101765005</del>	<del>07/05/2011 15:12</del>	<del>07/07/2011 07:40</del>	<del>Soil-Solid as dr</del>
B6	31101765006	07/05/2011 10:22	07/07/2011 07:40	Soil-Solid as dr
B7	31101765007	07/05/2011 10:50	07/07/2011 07:40	Soil-Solid as dr
B8	31101765008	07/05/2011 11:19	07/07/2011 07:40	Soil-Solid as dr
B9	31101765009	07/06/2011 11:43	07/07/2011 07:40	Soil-Solid as dr
B10	31101765010	07/05/2011 12:12	07/07/2011 07:40	Soil-Solid as dr

Print Date: 07/19/2011

N.C. Certification # 481

SGS North America Inc.

5500 Business Drive, Wilmington, NC 28405  
t 910.350.1903 f 910.350.1557 www.us.sgs.com

Member of SGS Group



**Results of B6**

Client Sample ID: **B6**  
Client Project ID: **66N-0055 Jamestown Bypass**  
Lab Sample ID: 31101765006-A  
Lab Project ID: 31101765

Collection Date: 07/05/2011 10:22  
Received Date: 07/07/2011 07:40  
Matrix: Soil-Solid as dry weight  
Solids (%): 74

**Results by SW-846 8015C GRO**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
Gasoline Range Organics (GRO)	ND		3.59	mg/kg	1	07/8/2011 14:43

**Surrogates**

4-Bromofluorobenzene	102		70.0-130	%	1	07/8/2011 14:43
----------------------	-----	--	----------	---	---	-----------------

**Batch Information**

Analytical Batch: VGC1299  
Analytical Method: SW-846 8015C GRO  
Instrument: GC4  
Analyst: LMC  
Analytical Date/Time: 07/08/2011 14:43

Prep Batch: VXX1740  
Prep Method: SW-846 5035  
Prep Date/Time: 07/08/2011 15:56  
Prep Initial Wt./Vol.: 7.545 g  
Prep Extract Vol: 5 mL



**Results of B6**

Client Sample ID: **B6**  
Client Project ID: **66N-0055 Jamestown Bypass**  
Lab Sample ID: 31101765006-C  
Lab Project ID: 31101765

Collection Date: 07/05/2011 10:22  
Received Date: 07/07/2011 07:40  
Matrix: Soil-Solid as dry weight  
Solids (%): 74

**Results by SW-846 8015C DRO**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
Diesel Range Organics (DRO)	ND		8.40	mg/kg	1	07/12/2011 21:48
<b>Surrogates</b>						
o-Terphenyl	78.4		40.0-140	%	1	07/12/2011 21:48

**Batch Information**

Analytical Batch: XGC1366  
Analytical Method: SW-846 8015C DRO  
Instrument: GC8  
Analyst: DTF  
Analytical Date/Time: 07/12/2011 21:48

Prep Batch: XXX1514  
Prep Method: SW-846 3541  
Prep Date/Time: 07/11/2011 09:23  
Prep Initial Wt./Vol.: 32.22 g  
Prep Extract Vol: 10 mL



**Results of B7**

Client Sample ID: **B7**  
Client Project ID: **66N-0055 Jamestown Bypass**  
Lab Sample ID: 31101765007-A  
Lab Project ID: 31101765

Collection Date: 07/05/2011 10:50  
Received Date: 07/07/2011 07:40  
Matrix: Soil-Solid as dry weight  
Solids (%): 72

**Results by SW-846 8015C GRO**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
Gasoline Range Organics (GRO)	ND		4.31	mg/kg	1	07/8/2011 15:10

**Surrogates**

4-Bromofluorobenzene	104		70.0-130	%	1	07/8/2011 15:10
----------------------	-----	--	----------	---	---	-----------------

**Batch Information**

Analytical Batch: VGC1299  
Analytical Method: SW-846 8015C GRO  
Instrument: GC4  
Analyst: LMC  
Analytical Date/Time: 07/08/2011 15:10

Prep Batch: VXX1740  
Prep Method: SW-846 5035  
Prep Date/Time: 07/08/2011 15:56  
Prep Initial Wt./Vol.: 6.425 g  
Prep Extract Vol: 5 mL



**Results of B7**

Client Sample ID: **B7**  
Client Project ID: **66N-0055 Jamestown Bypass**  
Lab Sample ID: 31101765007-C  
Lab Project ID: 31101765

Collection Date: 07/05/2011 10:50  
Received Date: 07/07/2011 07:40  
Matrix: Soil-Solid as dry weight  
Solids (%): 72

**Results by SW-846 8015C DRO**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
Diesel Range Organics (DRO)	ND		8.74	mg/kg	1	07/12/2011 22:16
<b>Surrogates</b>						
o-Terphenyl	72.4		40.0-140	%	1	07/12/2011 22:16

**Batch Information**

Analytical Batch: XGC1386  
Analytical Method: SW-846 8015C DRO  
Instrument: GC6  
Analyst: DTF  
Analytical Date/Time: 07/12/2011 22:16

Prep Batch: XXX1514  
Prep Method: SW-846 3541  
Prep Date/Time: 07/11/2011 09:23  
Prep Initial Wt./Vol.: 31.68 g  
Prep Extract Vol: 10 mL



**Results of B8**

Client Sample ID: **B8**  
Client Project ID: **66N-0055 Jamestown Bypass**  
Lab Sample ID: 31101765008-A  
Lab Project ID: 31101765

Collection Date: 07/05/2011 11:19  
Received Date: 07/07/2011 07:40  
Matrix: Soil-Solid as dry weight  
Solids (%): 82

**Results by SW-846 8015C GRO**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
Gasoline Range Organics (GRO)	ND		3.81	mg/kg	1	07/8/2011 15:37

**Surrogates**

4-Bromofluorobenzene	103		70.0-130	%	1	07/8/2011 15:37
----------------------	-----	--	----------	---	---	-----------------

**Batch Information**

Analytical Batch: VGC1299  
Analytical Method: SW-846 8015C GRO  
Instrument: GC4  
Analyst: LMC  
Analytical Date/Time: 07/08/2011 15:37

Prep Batch: VXX1740  
Prep Method: SW-846 5035  
Prep Date/Time: 07/08/2011 15:56  
Prep Initial Wt./Vol.: 6.374 g  
Prep Extract Vol: 5 mL





**Results of B8**

Client Sample ID: **B8**  
Client Project ID: **66N-0055 Jamestown Bypass**  
Lab Sample ID: 31101765008-C  
Lab Project ID: 31101765

Collection Date: 07/05/2011 11:19  
Received Date: 07/07/2011 07:40  
Matrix: Soil-Solid as dry weight  
Solids (%): 82

**Results by SW-846 8015C DRO**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
Diesel Range Organics (DRO)	40.3		7.56	mg/kg	1	07/12/2011 22:44

**Surrogates**

o-Terphenyl	69.4		40.0-140	%	1	07/12/2011 22:44
-------------	------	--	----------	---	---	------------------

**Batch Information**

Analytical Batch: XGC1366  
Analytical Method: SW-846 8015C DRO  
Instrument: GC6  
Analyst: DTF  
Analytical Date/Time: 07/12/2011 22:44

Prep Batch: XXX1514  
Prep Method: SW-846 3541  
Prep Date/Time: 07/11/2011 09:23  
Prep Initial Wt./Vol.: 32.12 g  
Prep Extract Vol: 10 mL



**Results of B9**

Client Sample ID: **B9**  
Client Project ID: **66N-0055 Jamestown Bypass**  
Lab Sample ID: 31101765009-A  
Lab Project ID: 31101765

Collection Date: 07/06/2011 11:43  
Received Date: 07/07/2011 07:40  
Matrix: Soil-Solid as dry weight  
Solids (%): 75

**Results by SW-846 8015C GRO**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
Gasoline Range Organics (GRO)	ND		3.63	mg/kg	1	07/8/2011 16:04

**Surrogates**

4-Bromofluorobenzene	102		70.0-130	%	1	07/8/2011 16:04
----------------------	-----	--	----------	---	---	-----------------

**Batch Information**

Analytical Batch: VGC1299  
Analytical Method: SW-846 8015C GRO  
Instrument: GC4  
Analyst: LMC  
Analytical Date/Time: 07/08/2011 16:04

Prep Batch: VXX1740  
Prep Method: SW-846 5035  
Prep Date/Time: 07/08/2011 15:56  
Prep Initial Wt./Vol.: 7.39 g  
Prep Extract Vol: 5 mL



**Results of B9**

Client Sample ID: **B9**  
Client Project ID: **66N-0055 Jamestown Bypass**  
Lab Sample ID: 31101765009-C  
Lab Project ID: 31101765

Collection Date: 07/06/2011 11:43  
Received Date: 07/07/2011 07:40  
Matrix: Soil-Solid as dry weight  
Solids (%): 75

**Results by SW-846 8015C DRO**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
Diesel Range Organics (DRO)	9.88		8.47	mg/kg	1	07/12/2011 23:13

**Surrogates**

o-Terphenyl	62.9		40.0-140	%	1	07/12/2011 23:13
-------------	------	--	----------	---	---	------------------

**Batch Information**

Analytical Batch: XGC1386  
Analytical Method: SW-846 8015C DRO  
Instrument: GC8  
Analyst: DTF  
Analytical Date/Time: 07/12/2011 23:13

Prep Batch: XXX1514  
Prep Method: SW-846 3541  
Prep Date/Time: 07/11/2011 09:23  
Prep Initial Wt./Vol.: 31.64 g  
Prep Extract Vol: 10 mL



**Results of B10**

Client Sample ID: **B10**  
Client Project ID: **66N-0055 Jamestown Bypass**  
Lab Sample ID: 31101765010-A  
Lab Project ID: 31101765

Collection Date: 07/05/2011 12:12  
Received Date: 07/07/2011 07:40  
Matrix: Soil-Solid as dry weight  
Solids (%): 73

**Results by SW-846 8015C GRO**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
Gasoline Range Organics (GRO)	ND		4.49	mg/kg	1	07/8/2011 16:31

**Surrogates**

4-Bromofluorobenzene	101		70.0-130	%	1	07/8/2011 16:31
----------------------	-----	--	----------	---	---	-----------------

**Batch Information**

Analytical Batch: **VGC1299**  
Analytical Method: **SW-846 8015C GRO**  
Instrument: **GC4**  
Analyst: **LMC**  
Analytical Date/Time: **07/08/2011 16:31**

Prep Batch: **VXX1740**  
Prep Method: **SW-846 5035**  
Prep Date/Time: **07/08/2011 15:56**  
Prep Initial Wt./Vol.: **6.125 g**  
Prep Extract Vol: **5 mL**



**Results of B10**

Client Sample ID: **B10**  
Client Project ID: **66N-0055 Jamestown Bypass**  
Lab Sample ID: 31101765010  
Lab Project ID: 31101765

Collection Date: 07/05/2011 12:12  
Received Date: 07/07/2011 07:40  
Matrix: Soil-Solid as dry weight  
Solids (%): 73

**Results by SW-846 8015C DRO**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
Diesel Range Organics (DRO)	10.7		8.55	mg/kg	1	07/16/2011 0:23

**Surrogates**

o-Terphenyl	70.9		40.0-140	%	1	07/16/2011 0:23
-------------	------	--	----------	---	---	-----------------

**Batch Information**

Analytical Batch: XGC1373  
Analytical Method: SW-846 8015C DRO  
Instrument: GCS  
Analyst: DTF  
Analytical Date/Time: 07/16/2011 00:23

Prep Batch: XXX1525  
Prep Method: SW-846 3541  
Prep Date/Time: 07/13/2011 16:16  
Prep Initial Wt./Vol.: 32.17 g  
Prep Extract Vol: 10 mL



CHAIN OF CUSTODY RECORD  
SGS North America Inc.

- Alaska
- Maryland
- New Jersey
- North Carolina
- Ohio

www.us.sgs.com

101722

1 CLIENT: **FROEHLING & ROBERTSON**  
 CONTACT: **CHRISTOPHER BURKHARDT** (PHONE NO. 919) 630 1369  
 PROJECT: **CGN-0055** SITE/PROJECT ID#: **NC DOT U-2412B**  
 REPORTS TO: **G. BURKHARDT** FAX NO.: ( )  
 INVOICE TO: **NC DOT** QUOTE #:   
 P.O. NUMBER:   
 JAMESTOWN BYPS

SGS Reference: **31101765** PAGE **1** OF **1**

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	CONTAINERS	SAMPLE TYPE C= COMP G= GRAB	Preservatives Used Analysis Required	REMARKS
	B1	7-5-11	4:07	Soil	3	G		
	B2	7-5-11	1:36	Soil	3	G		
	B3	7-5-11	2:07	Soil	3	G		
	B4	7-5-11	2:33	Soil	3	G		
	B5	7-5-11	3:12	Soil	3	G		
	B6	7-5-11	10:22	Soil	3	G		
	B7	7-5-11	10:50	Soil	3	G		
	B8	7-5-11	11:19	Soil	3	G		
	B9	7-6-11	11:43	Soil	3	G		
	B10	7-6-11	12:12	Soil	3	G		

2

5 Collected/Relinquished By: (1) *Chris Robertson* Date: 7/6/11 Time: 1416  
 Relinquished By: (2) *NR* Received By: *NR*  
 Relinquished By: (3) *NR* Date: 7/7/11 Time: 7:40 Received By: *Jamaal Moore*  
 Relinquished By: (4) *NR* Date: Received By:   
 Requested Turnaround Time:  RUSH  STD Date Needed:   
 Special Instructions:   
 Shipping Carrier: *Country* Shipping Ticker No:   
 Samples Received Cold? (Circle) YES  NO   
 Temperature C: *4.4*   
 Chain of Custody Seal: (Circle) INTACT  BROKEN  ABSENT

SINCE



1881



---

HQ: 3015 DUMBARTON ROAD RICHMOND, VIRGINIA 23228 T 804.264.2701 F 804.264.1202 [www.fandr.com](http://www.fandr.com)

**VIRGINIA • NORTH CAROLINA • SOUTH CAROLINA • MARYLAND • DISTRICT OF COLUMBIA**