FROEHLING & ROBERTSON, INC.

PRELIMINARY SITE ASSESSMENT

HABCO AUTO SALES, INC. (PARCEL #24)
905 Capital Boulevard
Raleigh, North Carolina
State Project: B-5121 & B-5317
WBS Element: 42263.1.1
F&R Project #66T-0097

August 21, 2015

Prepared for:

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

310 Hubert Street Raleigh, North Carolina 27603 919.828.3441

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August 21, 2015

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: B-5121 & B-5317
WBS Element: 42263.1.1
BR 277 on US 70/US 401/NC 50 (Capital Blvd.) over Peace Street and
BR 213 on US 70/NC 50 (Wade Ave.) over US 401 (Capital Blvd.)

Subject: **Preliminary Site Assessment**
Parcel #24 – Habco Auto Sales, Inc. (Former Habco Auto Sales)
905 Capital Blvd
Raleigh, North Carolina
F&R Project #66T-0097

Dear Mr. Fox:

Froehling and Robertson, Inc. (F&R) has completed the authorized Preliminary Site Assessment at the Habco Auto Sales, Inc. property in Raleigh, North Carolina. The work was performed in general accordance with F&R's Proposal No. 1666-00058, dated May 19, 2015. Notice to Proceed was issued to F&R on June 25, 2015. This report documents our field activities, presents the results of laboratory analysis and provides estimated quantities of petroleum impacted soils.

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

Sincerely,

FROEHLING & ROBERTSON, INC.

DocuSigned by:
Benjamin A. Whitley
E425D6E8C23545B...

Benjamin A. Whitley, P.E.
Project Engineer

NORTH CAROLINA PROFESSIONAL SEAL 038743 ENGINEER BENJAMIN A. WHITLEY

DocuSigned by:
Michael Sabodish
B4FED45203C345C...

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

TABLE OF CONTENTS

Preliminary Site Assessment Report
Habco Auto Sales, Inc. Property (Parcel #24)
Raleigh, Wake County, North Carolina
F&R Project No. 66T-0097

1.0 Introduction

Froehling and Robertson, Inc. (F&R) has prepared this Preliminary Site Assessment (PSA) Report to document soil assessment activities performed at the Habco Auto Sales, Inc. Property addressed as 905 Capital Boulevard in Raleigh, Wake County, North Carolina. The site is located at the northwest quadrant of the Capital Boulevard and Dortch Street intersection, as shown in Appendix I, Figures 1 and 2. As indicated in the Request for Technical and Cost Proposal (RFTCP), the property formerly operated as an automotive sales business (Habco & Dew Motors). A Charco Burger originally operated at the site in the 1950s. In addition, the RFP notes that a gas station and a car wash may also have operated at the property. The property does not appear on the NCDENR UST Section registry.

The PSA was performed in general accordance with F&R's Proposal No. 1666-00058, dated May 19, 2015 with Notice to Proceed issued to F&R by the NCDOT on June 25, 2015. The purpose of this report is to document field activities, present the results of laboratory analysis, and provide estimated quantities of petroleum impacted soils.

As outlined by the NCDOT in their RFTCP, acquisition of right-of-way is necessary for the Peace Street Bridge, Wade Avenue Bridge and Capital Boulevard improvements in Raleigh (See Figure No. 3). As such, the NCDOT requested a PSA be performed to assess the possibility of encountering petroleum impacted soil from known or unknown USTs which may exist/existed at the project site.

A coffee company (Cup O' Jane) currently operates in a mobile trailer stationed at the site. The existing on-site building is one-story in height and is constructed of concrete masonry unit block with steel framing. In addition, a canopy is located on the northern side of the structure. Located on the central portion of the property is a concrete slab which contains three drains, which may have been associated with a former car wash. Adjacent to the east of the concrete slab is a similar feature that appears to have been paved over with asphalt. Asphalt pavement surrounds these areas on the eastern portion of the site. Pigeon House Branch is located on the western portion of the site. Access to the property is gained from Capital Boulevard to the east and Dortch Street to the south. The site is bordered to the north by Green Taxi; to the east by

Capital Boulevard; to the south by Dortch Street; and to the west by North West Street. 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, Pyramid Environmental & Engineering, P.C. (Pyramid) conducted a geophysical survey to locate suspect metal underground storage tanks (USTs). The geophysical work was conducted from June 26 to July 1, 2015, and was performed within the proposed right-of-ways of Capital Boulevard and Dortch Street.

The geophysical investigation consisted of electromagnetic (EM) induction surveys using a Geonics EM61 instrument. Ground-penetrating radar (GPR) investigations of selected EM61 anomalies were investigated using a Geophysical Survey Systems UtilityScan DF unit equipped with a dual frequency 300/800 MHz antenna. The EM61 data was collected along parallel survey lines spaced approximately five feet apart. The data was reviewed in the field to evaluate the possible presence of USTs and later transferred to a desktop computer for further review. Data was collected over most of the planned survey site with the exception of the building footprint and areas immediately adjacent to metallic objects and other obstacles (such as vehicles). Isolated EM anomalies were identified on the site, including signs, utilities, vehicles, light poles and suspected reinforced concrete.

Based on the EM data collected at the site, Pyramid did not observe anomalies that were interpreted to be the results of metallic USTs within about 6 feet of the ground surface. The complete geophysical report is attached as Appendix II.

3.0 Site Assessment Activities

F&R visited the site on July 29, 2015 to perform the Preliminary Site Assessment. The assessment consisted of advancing 8 borings into the soils at the project site using direct-push technology (Geoprobe). The borings (B-1 through B-8) were generally located within the proposed right-of-way on Capital Boulevard and Dortch Street (Appendix I, Figure 3). Boring locations were determined by F&R staff based on the results of the geophysical survey, site features and proposed construction activities. Borings B-1 through B-3 were advanced on the eastern portion of the site adjacent to Capital Boulevard, while Borings B-5 through B-8 were advanced along the southern portion of the site adjacent to Dortch Street. Boring B-4 was advanced near the intersection of Capital Boulevard and Dortch Street. The borings were advanced to the proposed depth of 10 feet bgs.

Soil sample cores from the borings 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. 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 Geoprobe Logs in Appendix III, as well as in Table 1 in Section 5.0 below.

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), gasoline range organics (GRO), Total BTEX (benzene, toluene, ethylbenzene and xylenes), 16 PAHs (polycyclic aromatic hydrocarbons) and BaP (Benzo(a)pyrene) by Ultraviolet Fluorescence (UVF) technology (QROS QED Hydrocarbon Analyzer).

The samples were collected in laboratory-supplied sample containers, placed in a cooler with ice, and shipped via UPS to QROS in Wilmington, North Carolina following standard chain-of custody procedures.

4.0 Subsurface Conditions

As indicated in the attached Geoprobe Logs (Appendix III), subsurface conditions from existing ground surface to boring termination primarily included various layers of moist, tan to gray fine to medium sandy silt (USCS – ML), red-brown to red-tan sandy and/or silty clay (USCS – CL). The borings were terminated at the proposed depth of 10 feet bgs. Groundwater was not observed during field screening or sample collection activities. F&R notes that petroleum odors were observed in Boring B-3 from 5 to 6 feet bgs.

Of the samples screened, PID readings generally did not exceed 1.9 ppm; however, one elevated reading was recorded in Boring B-3 from 5 to 6 feet bgs.

5.0 Analytical Results

As shown in the following table, petroleum hydrocarbons identified as DRO were encountered in the soil samples collected at the eight boring locations advanced at the site (B-1 through B-8), at depths from 5 feet bgs (B-3, B-4 and B-6) to 9 feet bgs (B-5 and B-7). The laboratory results indicate that the DRO concentrations ranged from 1.9 mg/kg (B-2) to 92.5 mg/kg (B-4). DRO concentrations above the NCDENR Action Level of 10 mg/kg were detected in five of the samples submitted.

In addition, GRO was detected in the sample obtained from Boring B-3 at a concentration of 27.5 mg/kg, which is above the NCDENR Action Level of 10 mg/kg.

The laboratory analytical results indicate concentrations of the Sum of 16 PAHs above the method detection limit, but below the NCDENR Action Level of 7,041.14 mg/kg in the eight samples submitted. In addition, Benzo (a) pyrene (BaP) was detected in samples B-1 and B-4 at concentrations above the NCDENR Soil-to-Water MSCC of 0.096 mg/kg.

The soil analytical results are summarized in Table 1 below. The laboratory analytical results can also be found in the attached Appendix V of this report.

Table 1
Soil Sampling Analytical Results

Sample ID	Sample Date	Sample Depth (ft bgs)	PID Reading (ppm)	GRO (mg/kg)	DRO (mg/kg)	TPH (mg/kg)	Total BTEX (mg/kg)	Total Aromatics (mg/kg)	16 EPA PAHs (mg/kg)	BaP (mg/kg)
B-1	7/29/15	7-8	1.1	< 6.7	**60**	**60**	< 13.3	56	2.6	**0.13**
B-2		7-8	0.7	< 0.59	1.9	1.9	< 1.2	1.7	0.22	0.044
B-3		5-6	50.0	**27.5**	**47.7**	**75.2**	< 1	35.2	1.4	0.012
B-4		5-6	1.1	< 6.7	**92.5**	**92.5**	< 13.4	46.2	1.8	**0.13**
B-5		8-9	1.1	< 0.53	**38.6**	**38.6**	< 1.1	5	0.2	0.011
B-6		5-6	1.0	< 0.56	6.8	6.8	< 1.1	6	0.29	0.004
B-7		8-9	0.6	< 0.49	6.5	6.5	< 0.98	3.6	0.14	0.01
B-8		6-7	0.7	< 0.55	**10.7**	**10.7**	< 1.1	9.6	0.45	0.006
NC DENR Action Level				**10**	**10**	**10**	**13.8**	**NSE**	**7,041.41**	**0.096**

Samples shown in bold exceed the NCDENR Action Level as outlined in the NCDENR, DWM, UST Section Guidelines
ppm = parts per million
GRO = Gasoline Range Organics
DRO = Diesel Range Organics
TPH = Total Petroleum Hydrocarbons
BTEX = Benzene, Toluene, Ethylbenzene and Xylenes
NSE = No Standard Exists

6.0 Conclusions and Recommendations

F&R conducted a PSA at the Habco Auto Sales, Inc. Property located at 905 Capital Boulevard in Raleigh, Wake County, North Carolina. A geophysical investigation was performed by Pyramid Environmental & Engineering to investigate the existence of unknown/known USTs in the proposed right-of-way. Based on the results of the geophysical survey, it was determined that USTs were not present within the surveyed area.

Eight Geoprobe borings were advanced during the assessment within the proposed right-of-way, where grading activities are proposed in association with the Peace Street Bridge, Wade Avenue Bridge and Capital Boulevard improvements. Based on the results of laboratory testing and observed PID readings, petroleum impacted soils were found at concentrations above the NCDENR Action Level of 10 mg/kg within the areas evaluated. Therefore, it is estimated that petroleum impacted soils, at concentrations above the NCDENR Action Level, are present at the following areas:

- Area 1: In the vicinity of Boring B-1, from existing ground surface to a depth of at least eight feet bgs;
- Area 2: In the vicinity of Borings B-3 through B-5, from existing ground surface to a depth of nine feet bgs; and
- Area 3: In the vicinity of Boring B-8, from existing ground surface to a depth of seven feet bgs.

No below grade utilities appear on the proposed improvement plans. However, driveway reconstruction and curbline realignment is depicted, which will likely require re-grading of the existing ground surface during the construction. To account for impacted soils generated during re-grading activities and for unknown below grade utilities that may be installed during construction, we have estimated the following approximate petroleum-impacted areas:

- Area 1: 1,193.5 square feet, extending to a depth of eight feet bgs;
- Area 2: 4,547.5 square feet, extending to a depth of nine feet bgs; and
- Area 3: 1,448.7 square feet, extending to a depth of seven feet bgs.

These areas were determined by averaging distances between the proposed right-of-way and the existing edge of pavement on the construction drawings (Appendix I, Figure 4).

Table 2
Approximate Volume of Petroleum Impacted Soil

Excavation Location (As Shown on Figure 4)	L x W x D (feet)	Soil Volume (cubic feet)	Soil Volume (tons)
Area 1 (vicinity of B-1)	L x W varies (1,193.5 SF) X 8' depth	9,548.0	572.9
Area 2 (vicinity of B-3 through B-5)	L x W varies (4,547.5 SF) X 9' depth	40,927.5	2,455.7
Area 3 (vicinity of B-8)	L x W varies (1,448.7 SF) X 7' depth	10,140.9	608.5
Soil Volume (assuming a soil density of 120 pcf)		**Total**	**3,637.1**

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 petroleum UST releases. In order to generate estimated quantities of petroleum impacted soils, we have inferred that the contamination has occurred between the existing ground surface and the sample collection depth. The amount of impacted soil can only be determined after excavation or by advancing additional borings and performing additional laboratory analysis 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 – LABORATORY RESULTS & BORING LOCATION PLAN

Figure No. 4 – ESTIMATED EXTENTS OF SOIL CONTAMINATION

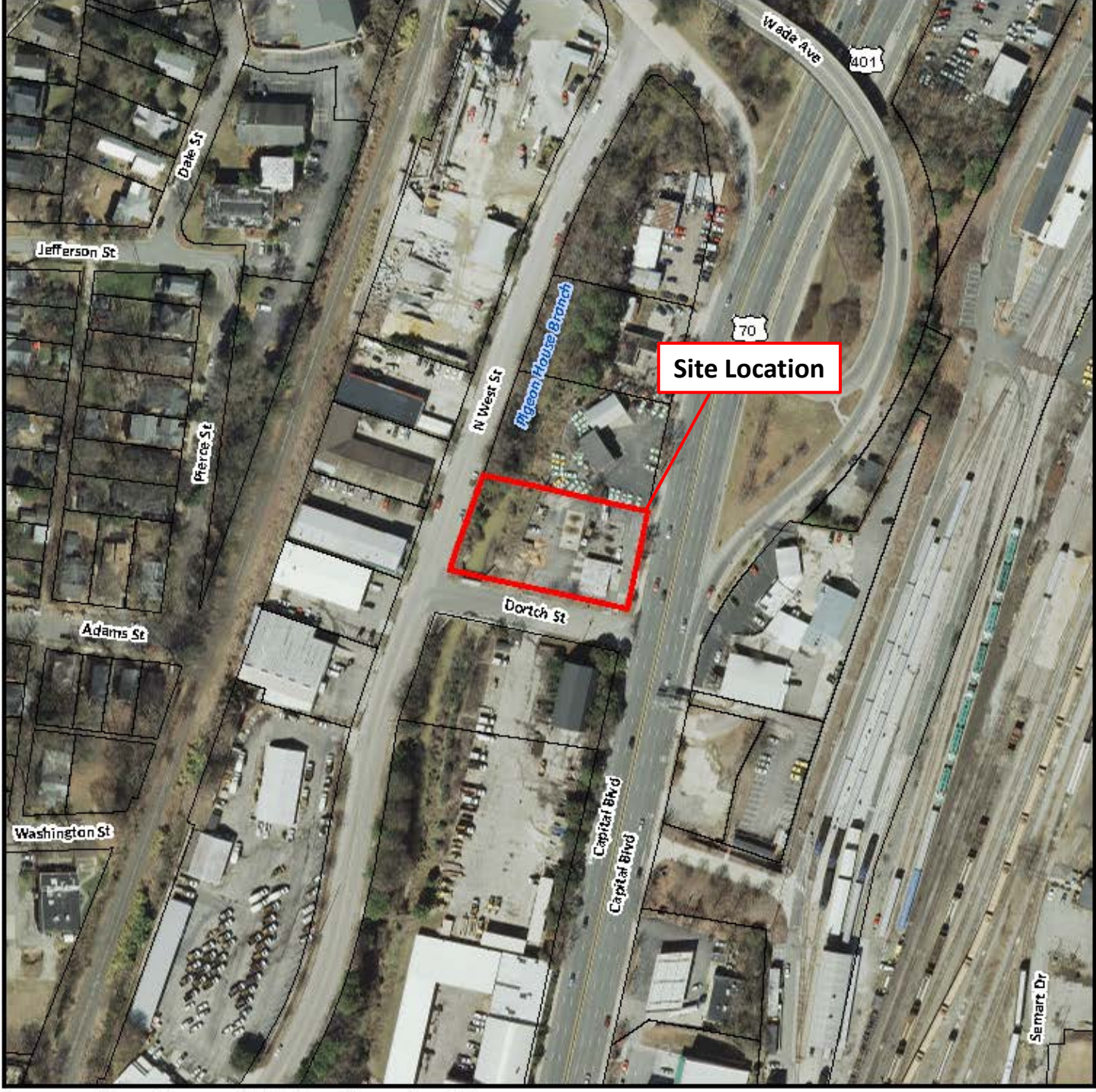

Image Courtesy of Wake County iMaps

N

0 100 200 400 Feet

1 inch = 200 feet

SITE VICINITY MAP

North

SINCE F&R 1881

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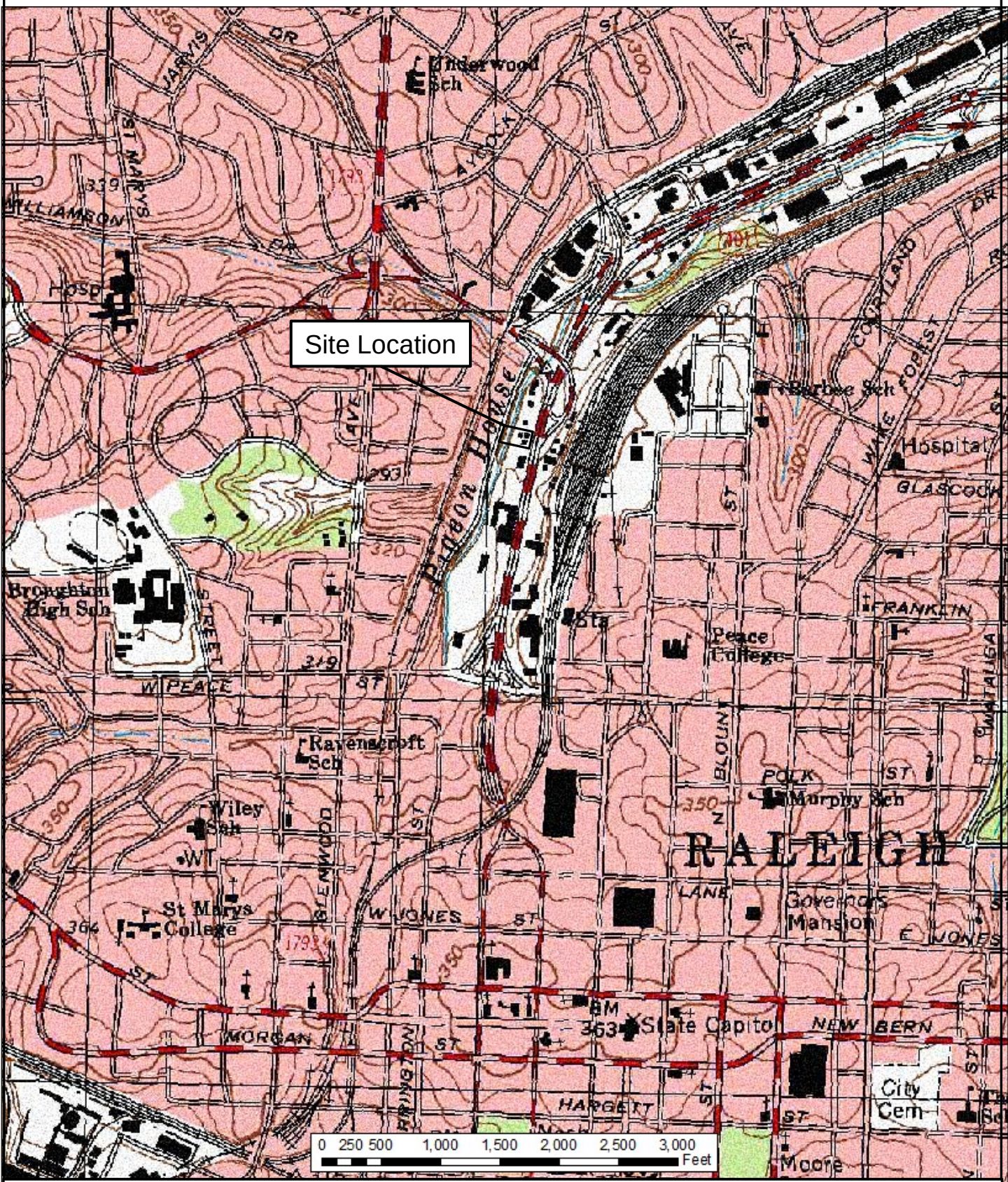
CLIENT: NCDOT	
PROJECT: B-5121 & B-5317, Habco Auto Sales, Inc. Property, NCDOT Parcel #24	
LOCATION: Raleigh, Wake County, North Carolina	
F&R PROJECT No.: 66T-0097	FIGURE No.: 1
DRAWN BY: B. Whitley	
DATE: August 2015	**SCALE**: 1" = 200 '



TOPOGRAPHIC MAP – RALEIGH, NC

North

SINCE F&R 1881

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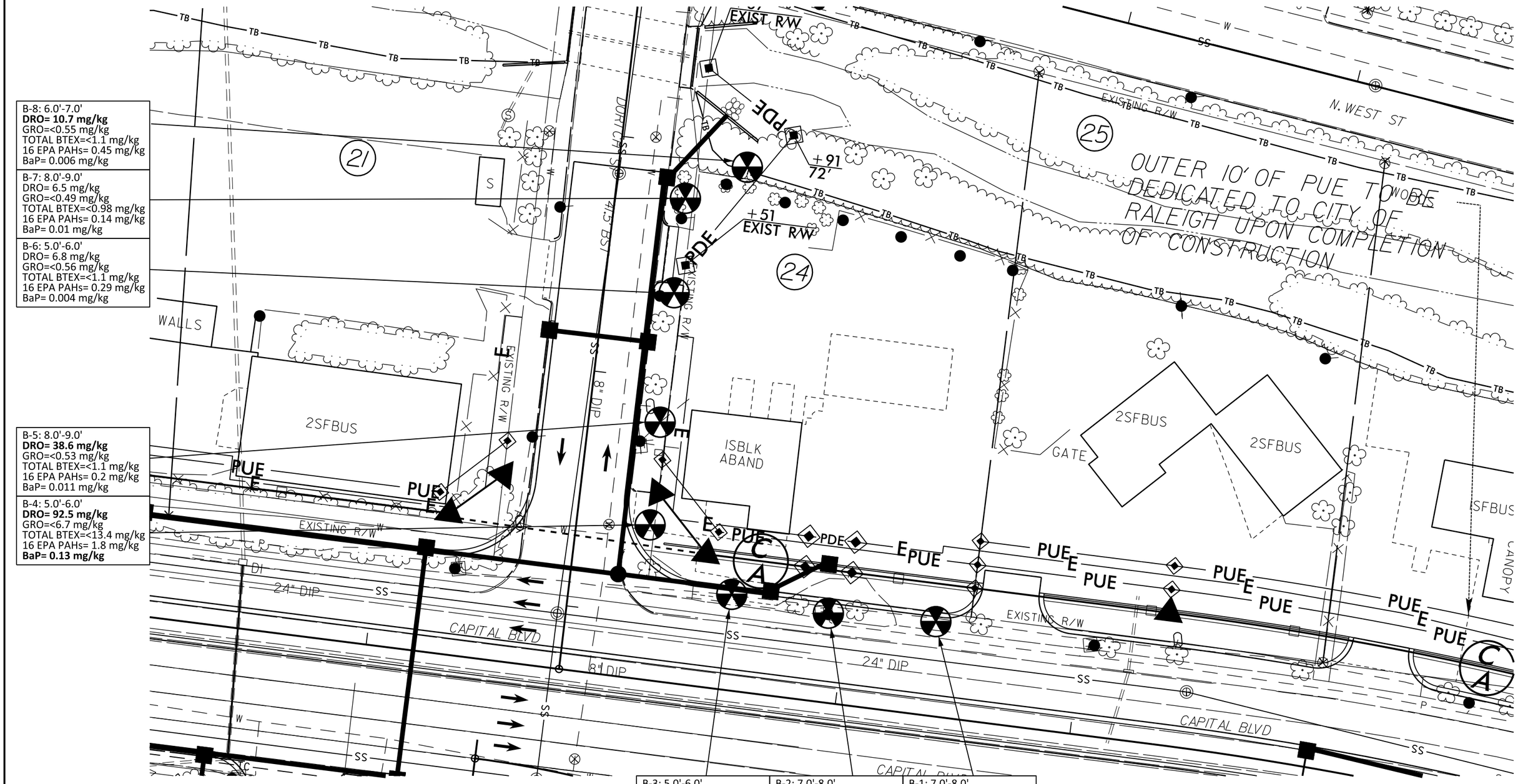
CLIENT: NCDOT	
PROJECT: B-5121 & B-5317, Habco Auto Sales, Inc. Property, NCDOT Parcel #24	
LOCATION: Raleigh, Wake County, North Carolina	
F&R PROJECT No.: 66T-0097	FIGURE No.: 2
DRAWN BY: B. Whitley	
DATE: August 2015	**SCALE**: As Shown



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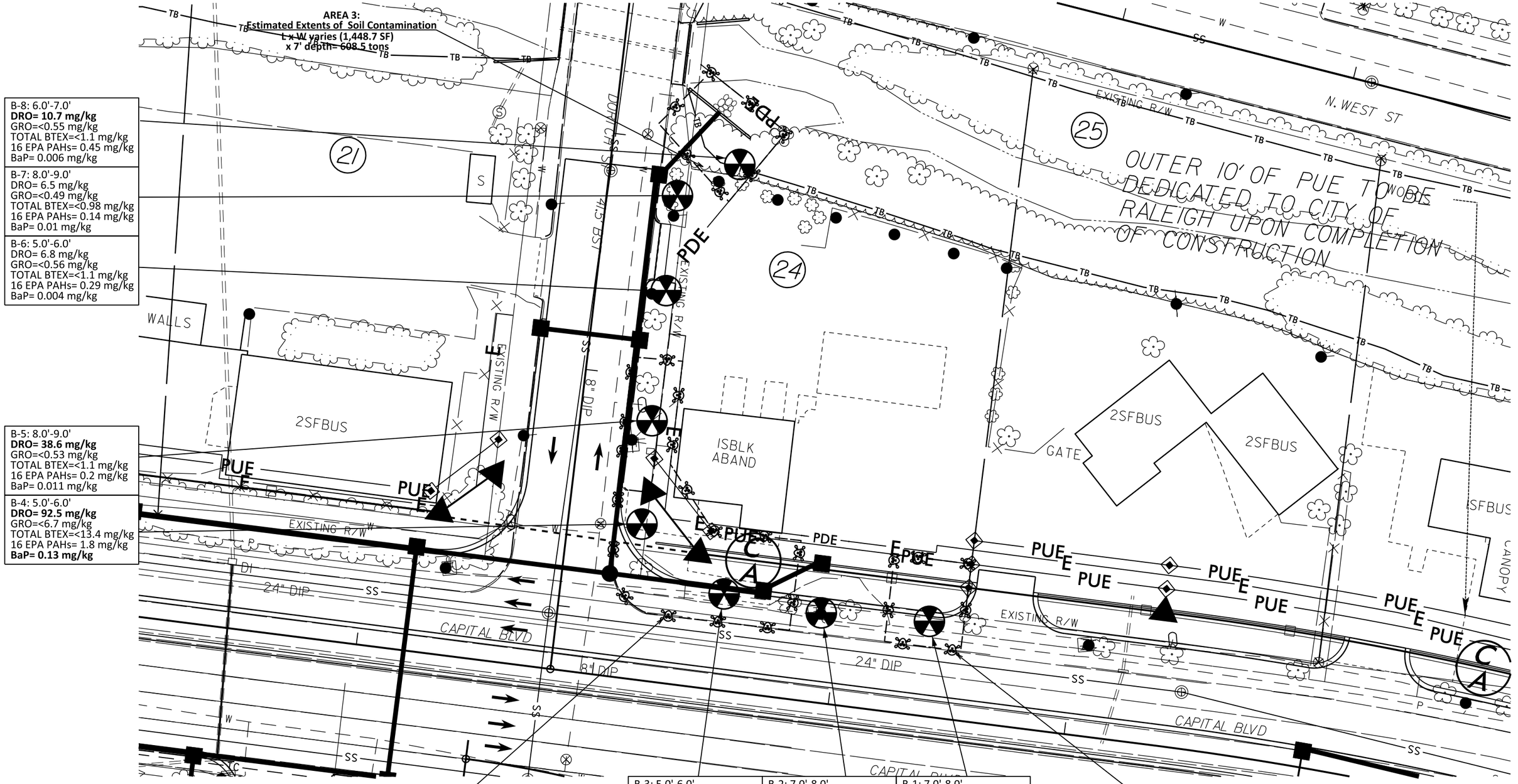
LEGEND

Approximate Geoprobe Boring Location

Samples Shown in Bold Exceed the NCDENR Action Level as Outlined in the NCDENR, DWM, UST Section Guideline

LABORATORY RESULTS & BORING LOCATION PLAN

CLIENT: NCDOT		
PROJECT: B-5121/B-5317 Habco Auto Sales (Parcel #24)		
LOCATION: Raleigh, Wake, County, North Carolina		
F&R PROJECT No.: 66T-0097		FIGURE No.: 3
DRAWN BY: T. T. Walker	CHECKED BY: M. Sabodish, P.E.	
DATE: August 2015	SCALE: 1"=40'	



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LEGEND

Approximate Geoprobe Boring Location

Samples Shown in Bold Exceed the NCDENR Action Level as Outlined in the NCDENR, DWM, UST Section Guideline

ESTIMATED EXTENTS OF SOIL CONTAMINATION

CLIENT: NCDOT		
PROJECT: B-5121/B-5317 Habco Auto Sales (Parcel #24)		
LOCATION: Raleigh, Wake County, North Carolina		
F&R PROJECT No.: 66T-0097		FIGURE No.: 4
DRAWN BY: T. T. Walker	CHECKED BY: M. Sabodish, P.E.	
DATE: August 2015	SCALE: 1"=40'	

APPENDIX II

GEOPHYSICAL REPORT PREPARED BY PYRAMID

PYRAMID ENVIRONMENTAL & ENGINEERING, P.C.

PYRAMID ENVIRONMENTAL & ENGINEERING
(PROJECT 2015-176)

GEOPHYSICAL SURVEY

METALLIC UST INVESTIGATION:
PARCEL 24 – HABCO AUTO SALES, INC.
NCDOT PROJECT B-5121/B5317
(WBS 42263.1.1)

905 CAPITAL BLVD., RALEIGH, WAKE COUNTY, NC

JULY 17, 2015

Report prepared for: **Michael Sabodish Jr., Ph.D., P.E.**
Froehling and Robertson
310 Hubert Street
Raleigh, North Carolina 27603

Prepared by: _____
Eric C. Cross, P.G.
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GEOPHYSICAL INVESTIGATION REPORT
Parcel 24 – Habco Auto Sales, Inc.
Raleigh, Wake County, North Carolina

Table of Contents

Figures

Appendices

LIST OF ACRONYMS

CADD	Computer Assisted Drafting and Design
DF	Dual Frequency
EM	Electromagnetic
GPR	Ground Penetrating Radar
GPS	Global Positioning System
NCDOT	North Carolina Department of Transportation
ROW	Right-of-Way
SVE	Soil Vapor Extraction
UST	Underground Storage Tank

EXECUTIVE SUMMARY

Project Description: Pyramid Environmental conducted a geophysical investigation for Froehling & Robertson (F&R) at Parcel 24, located at 905 Capital Blvd., Raleigh, NC. The survey was part of a North Carolina Department of Transportation (NCDOT) Right-of-Way (ROW) investigation (NCDOT Project B-5121/B-5317). F&R directed Pyramid as to the geophysical survey boundaries at the project site, which were designed to extend from the existing edge of pavement into the proposed ROW line and/or proposed easements, whichever distance was greater. Conducted from June 26 to July 1, 2015, the geophysical investigation was performed to determine if unknown, metallic underground storage tanks (USTs) were present beneath the survey area.

Geophysical Results: Several of the EM features were directly attributed to visible cultural features such as signs, utilities, vehicles, and posts. Two unknown EM anomalies were recorded on the west side of the survey area. Metal reinforcement was suspected to be contained in the concrete on the east side of the survey area. An isolated EM feature north of the reinforced concrete was suspected to be associated with a cut post and/or a buried utility. GPR scans did not record any evidence of subsurface structures such as USTs at the locations of the unknown anomalies. GPR also verified the presence of metal reinforcement within the concrete on the east side of the survey area. Collectively, the geophysical data did not record any evidence of unknown metallic USTs at the property.

INTRODUCTION

Pyramid Environmental conducted a geophysical investigation for Froehling & Robertson (F&R) at Parcel 24, located at 905 Capital Blvd., Raleigh, NC. The survey was part of a North Carolina Department of Transportation (NCDOT) Right-of-Way (ROW) investigation (NCDOT Project B-5121/B-5317). F&R directed Pyramid as to the geophysical survey boundaries at the project site, which were designed to extend from the existing edge of pavement into the proposed ROW line and/or proposed easements, whichever distance was greater. Conducted from June 26 to July 1, 2015, the geophysical investigation was performed to determine if unknown, metallic underground storage tanks (USTs) were present beneath the survey area.

The site included a mobile coffee service company, a building with a canopy, and sections of concrete and an asphalt pavement. Portions of the survey area were underlain by suspected reinforced concrete. Aerial photographs showing the survey area boundaries and ground-level photographs are shown in **Figure 1**.

FIELD METHODOLOGY

The geophysical investigation consisted of electromagnetic (EM) induction-metal detection and ground penetrating radar (GPR) surveys. Pyramid collected the EM data using a Geonics EM61 metal detector integrated with a Trimble AG-114 GPS antenna. The integrated GPS system allows the location of the instrument to be recorded in real-time during data collection, resulting in an EM data set that geo-referenced and can be overlain on aerial photographs and CADD drawings. A boundary grid was established around the perimeter of the site with marks every 10 feet to maintain orientation of the instrument throughout the survey and assure complete coverage of the area.

According to the instrument specifications, the EM61 can detect a metal drum down to a maximum depth of approximately 8 feet. Smaller objects (1-foot or less in size) can be

detected to a maximum depth of 4 to 5 feet. The EM61 data were digitally collected at approximately 0.8 foot intervals along north-south trending or east-west trending, generally parallel survey lines spaced five feet apart. The data were downloaded to a computer and reviewed in the field and office using the Geonics NAV61 and Surfer for Windows Version 11.0 software programs.

GPR data were acquired across select EM anomalies on June 30, 2015, using a Geophysical Survey Systems, Inc. (GSSI) UtilityScan DF unit equipped with a dual frequency 300/800 MHz antenna. Data were collected both in reconnaissance fashion as well as along formal transect lines across EM features. The GPR data were viewed in real time using a vertical scan of 512 samples, at a rate of 48 scans per second. GPR data were viewed down to a maximum depth of approximately 10 feet, based on dielectric constants calculated by the DF unit in the field during the reconnaissance scans. GPR transects across specific anomalies were saved to the hard drive of the DF unit for post-processing and figure generation.

Pyramid's classifications of USTs for the purposes of this report are based directly on the geophysical UST ratings provided to us by the NCDOT. These ratings are as follows:

Geophysical Surveys for Underground Storage Tanks
on NCDOT Projects

High Confidence	Intermediate Confidence	Low Confidence	No Confidence
Known UST Active tank - spatial location, orientation, and approximate depth determined by geophysics.	**Probable UST** Sufficient geophysical data from both magnetic and radar surveys that is characteristic of a tank. Interpretation may be supported by physical evidence such as fill/vent pipe, metal cover plate, asphalt/concrete patch, etc.	**Possible UST** Sufficient geophysical data from either magnetic or radar surveys that is characteristic of a tank. Additional data is not sufficient enough to confirm or deny the presence of a UST.	Anomaly noted but not characteristic of a UST. Should be noted in the text and may be called out in the figures at the geophysicist's discretion.

DISCUSSION OF RESULTS

Discussion of EM Results

A contour plot of the EM61 results obtained across the survey area at the property is presented in **Figure 2**. Each EM anomaly is numbered for reference to the figure. The following table presents the list of EM anomalies and the cause of the metallic response, if known:

LIST OF METALLIC ANOMALIES IDENTIFIED BY EM SURVEY

Metallic Anomaly #	Cause of Anomaly	Investigated with GPR
1	Unknown metal	☑
2	Vehicle/trailer	
3	Water meter/well	
4	Utility boxes	
5	Possible reinforcement	☑
6	Building	
7	Sign/post	
8	Trailer/vehicle	
9	Reinforced Concrete	☑
10	Light post	
11	Cut post	☑
12	Reinforced Concrete	
13	Vehicles	

Several of the EM anomalies were associated with visible cultural features such as signs, vehicles, utilities, posts, and light poles (specifically, Anomalies 2, 3, 4, 6, 7, 8, 10, and 13). An EM feature was observed on the west side of the survey area (Anomaly #1) that was not associated with any visible cultural structures, and was investigated by the GPR. Anomaly #5 was associated with a concrete ramp leading to the existing building, and was suspected to be the result of reinforcement within the ramp. This feature was also investigated by the GPR. The series of high amplitude EM responses on the west side of

the survey area in the concrete parking lot were suspected to be the result of metal reinforcement within the concrete. This area of metallic interference was further surveyed by the GPR. Lastly, an EM feature was noted north of the reinforced concrete (Anomaly #11) that appeared to be the result of a cut metal post, but was investigated further with the GPR.

Discussion of GPR Results

Figure 3 presents the locations of the formal GPR transects performed at the property, as well as select transect images. A total of 9 formal GPR transects were performed at the property. GPR transects 1-3 were performed across Anomaly #1 on the west side of the survey area. These transect did not record any significant reflectors at this location, suggesting the feature may be associated with minor debris or instrument interference. Transects 4-5 were performed across the concrete ramp at Anomaly #5, and also did not record any significant reflectors that would be indicative of subsurface structures such as a UST. Transects 6-8 were performed across the concrete area on the east side of the parcel, and verified the presence of metal reinforcement in the concrete that was causing the observed EM response. No structures were observed beneath the reinforcement. Transect 9 was performed at Anomaly #9, and recorded an isolated reflector that was suggestive of a possible utility cross this location.

Collectively, the geophysical data did not record any evidence of unknown metallic USTs at the property.

SUMMARY & CONCLUSIONS

Our evaluation of the EM61 and GPR data collected at Parcel 24 in Raleigh, Wake County, North Carolina, provides the following summary and conclusions:

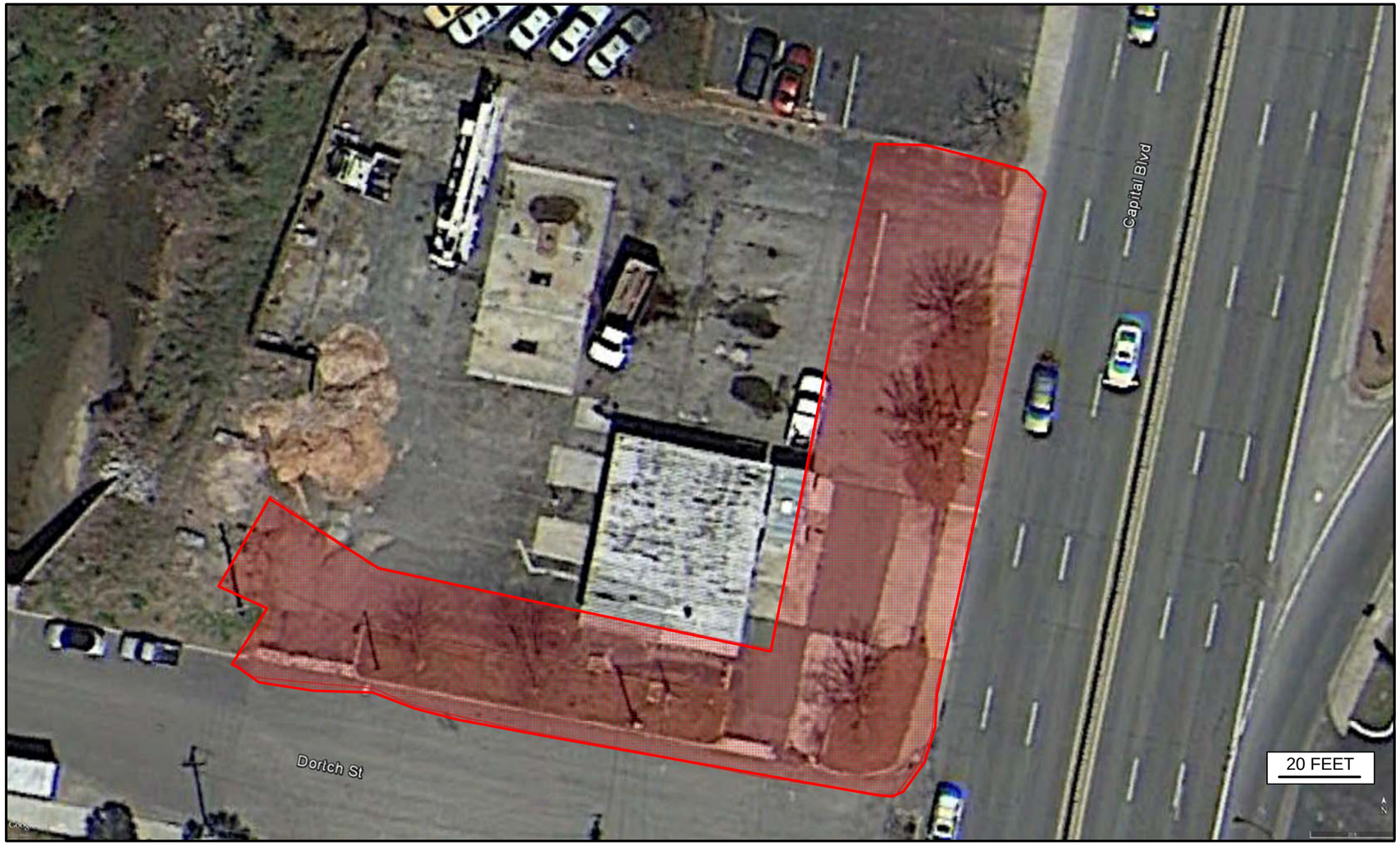
- The EM61 and GPR surveys provided reliable results for the detection of metallic USTs within the accessible portions of the geophysical survey area.

- Several of the EM features were directly attributed to visible cultural features such as signs, utilities, vehicles, and posts.
- Two unknown EM anomalies were recorded on the west side of the survey area.
- Metal reinforcement was suspected to be contained in the concrete on the east side of the survey area.
- An isolated EM feature north of the reinforced concrete was suspected to be associated with a cut post and/or a buried utility.
- GPR scans did not record any evidence of subsurface structures such as USTs at the locations of the unknown anomalies. GPR also verified the presence of metal reinforcement within the concrete on the east side of the survey area.
- Collectively, the geophysical data did not record any evidence of unknown metallic USTs at the property.

LIMITATIONS

Geophysical surveys have been performed and this report prepared for F&R in accordance with generally accepted guidelines for EM61 and GPR surveys. It is generally recognized that the results of the EM61 and GPR surveys are non-unique and may not represent actual subsurface conditions. The EM61 and GPR results obtained for this project have not conclusively determined the definitive presence or absence of metallic USTs, but that the evidence collected is sufficient to result in the conclusions made in this report. Additionally, it should be understood that areas containing extensive vegetation, reinforced concrete, or other restrictions to the accessibility of the geophysical instruments could not be fully investigated.

N↑



APPROXIMATE BOUNDARIES OF GEOPHYSICAL SURVEY AREA

View of East Survey Area
(Facing Approximately South)

View of South Survey Area
(Facing Approximately West)

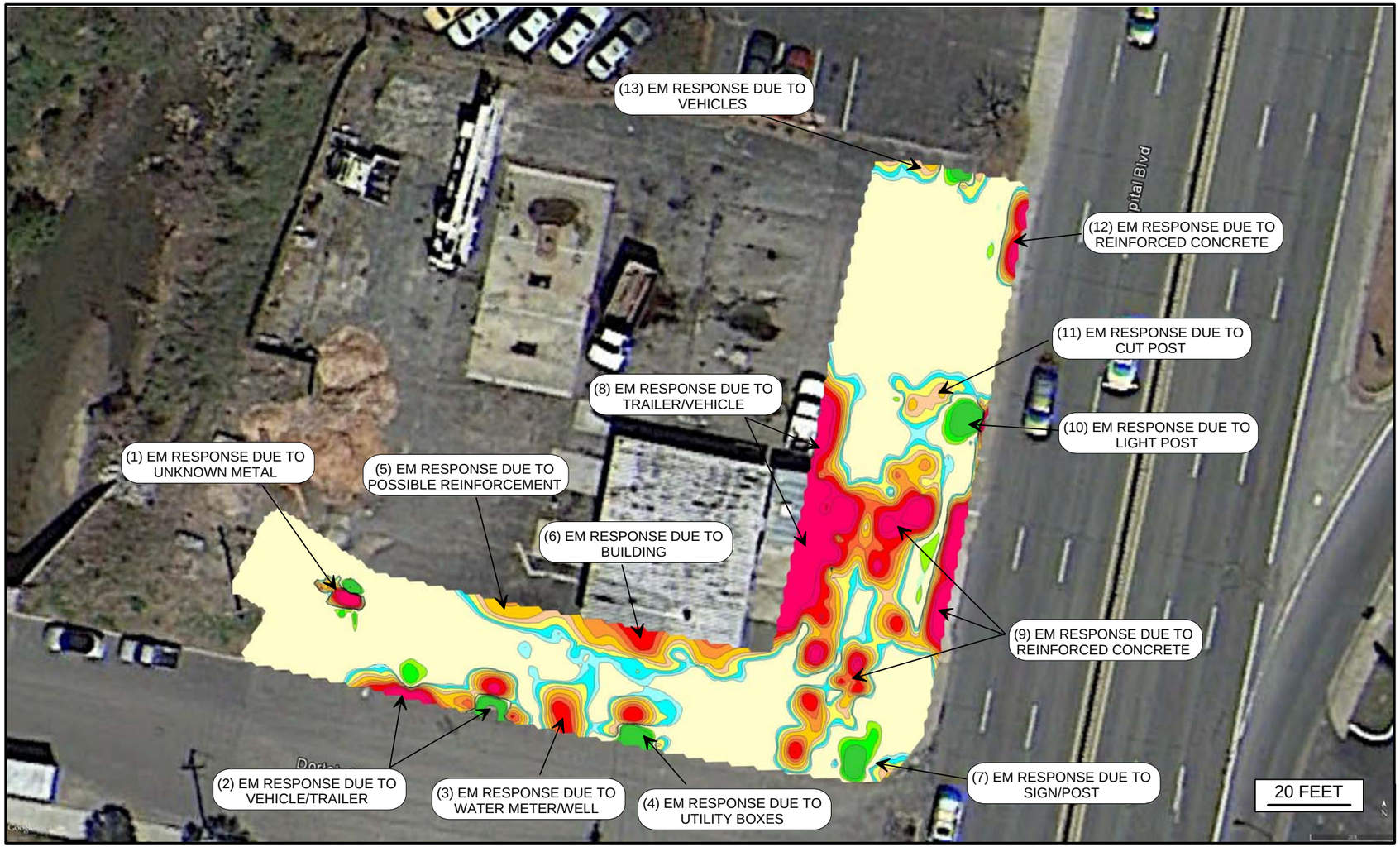
TITLE	PARCEL 24 - 905 CAPITAL BLVD. GEOPHYSICAL SURVEY BOUNDARIES AND SITE PHOTOGRAPHS
PROJECT	METALLIC UST INVESTIGATION NCDOT B-5121/B-5317, RALEIGH, NC

PYRAMID ENVIRONMENTAL & ENGINEERING, P.C.
503 INDUSTRIAL AVENUE
GREENSBORO, NC 27460
(336) 335-3174 (p) (336) 691-0648 (f)
License # C1251 Eng. / License # C257 Geology

DATE 7/6/2015	CLIENT FROEHLING & ROBERTSON
PYRAMID PROJECT #: 2015-176	**FIGURE 1**

N

Parcel 24 - EM61 Differential Results

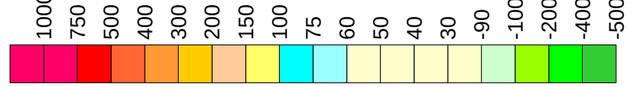


Locations of metallic anomalies detected by the EM61 survey. Numbers correspond to descriptive Table in report.

NO EVIDENCE OF METALLIC USTs OBSERVED

The contour plot shows the differential results of the EM61 instrument in millivolts (mV). The EM61 data were collected on June 29, 2015, using a Geonics EM61 instrument. Ground penetrating radar (GPR) data were aquired on July 1, 2015, using a GSSI UtilityScan DF unit with a dual frequency 300/800 MHz antenna.

EM61 Metal Detection Response (millivolts)



TITLE
PARCEL 24 - 905 CAPITAL BLVD.
EM 61 RESULTS CONTOUR MAP

PROJECT
METALLIC UST INVESTIGATION
NCDOT PROJECT B-5121/B-5317 (42263.1.1)

PYRAMID ENVIRONMENTAL & ENGINEERING, P.C.
503 INDUSTRIAL AVENUE
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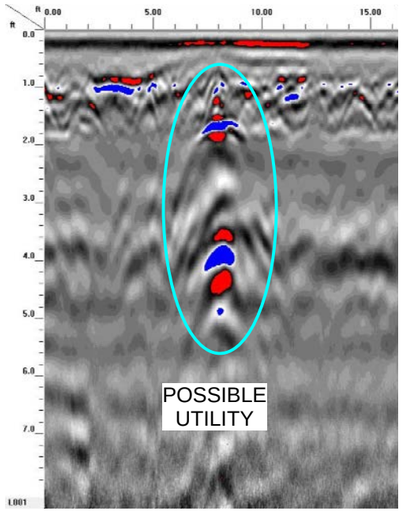
DATE 7/6/2015

CLIENT FROEHLING & ROBERTSON

PYRAMID PROJECT #: 2015-176

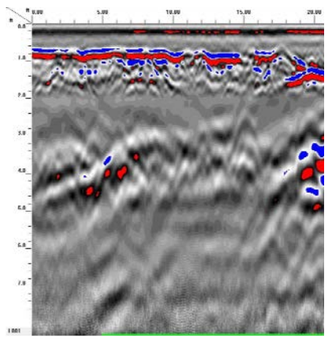
FIGURE 2

Parcel 24 - Approximate Locations of GPR Transects

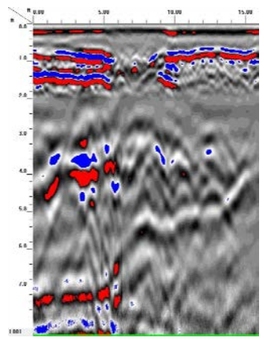


GPR TRANSECT 9 (T9)

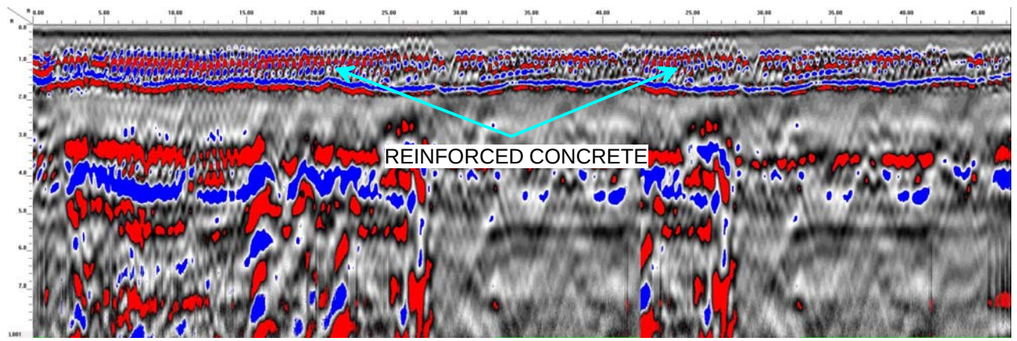
N



GPR TRANSECT 3 (T3)



GPR TRANSECT 5 (T5)



GPR TRANSECT 6 (T6)

TITLE	PARCEL 24 - 905 CAPITAL BLVD. GPR TRANSECT LOCATIONS AND SELECT IMAGES
PROJECT	METALLIC UST INVESTIGATION NCDOT PROJECT B-5121/B-5317 (42263.1.1)

PYRAMID ENVIRONMENTAL & ENGINEERING, P.C.
503 INDUSTRIAL AVENUE
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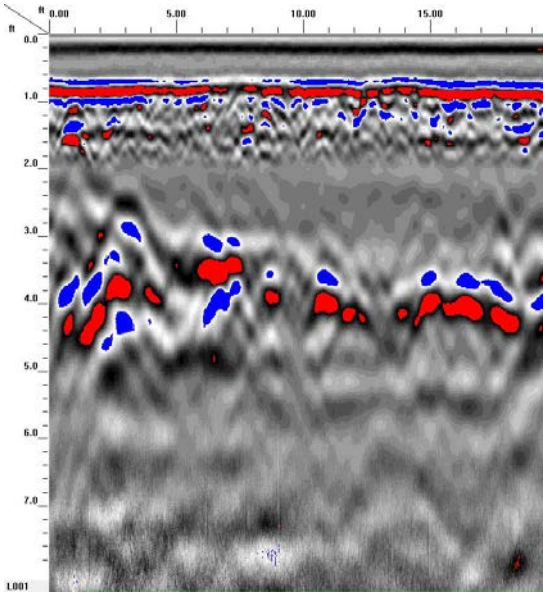
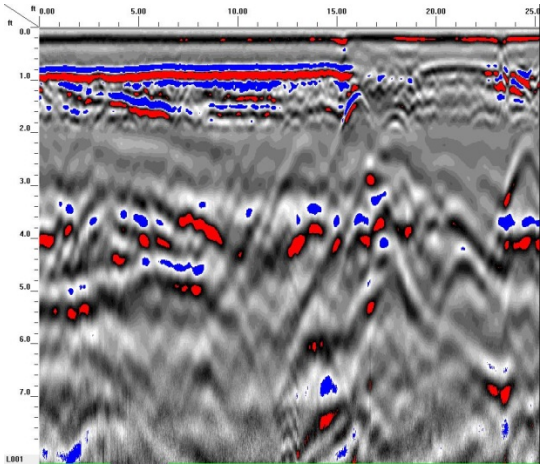
License # C1251 Eng. / License # C257 Geology

DATE 7/6/2015	CLIENT FROEHLING & ROBERTSON
PYRAMID PROJECT #: 2015-176	**FIGURE 3**

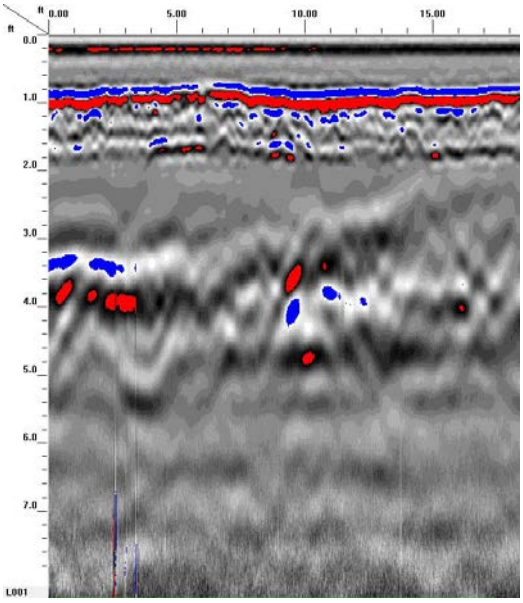
Appendix A – GPR Transects



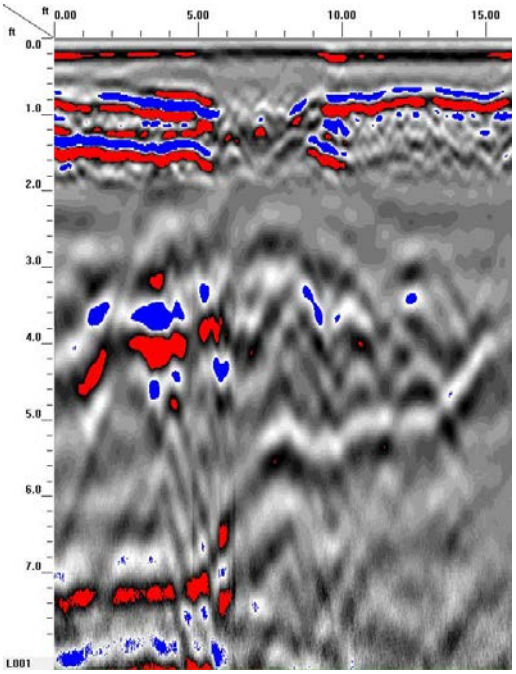
GPR TRANSECT 1



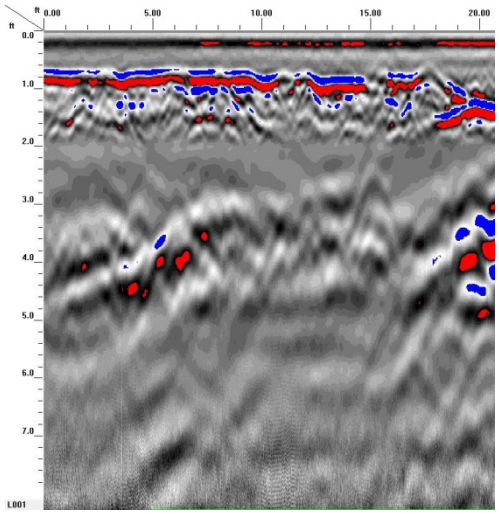
GPR TRANSECT 4



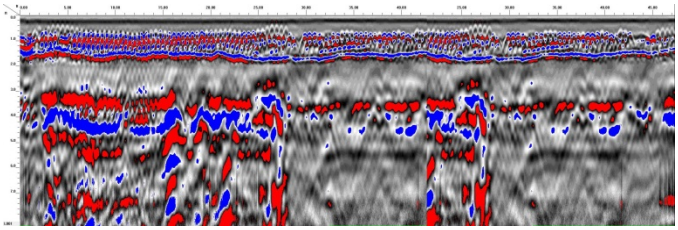
GPR TRANSECT 2



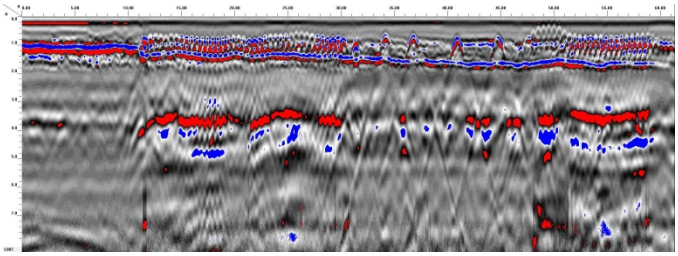
GPR TRANSECT 5



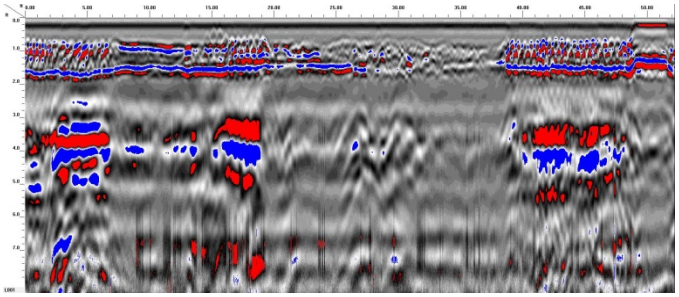
GPR TRANSECT 3



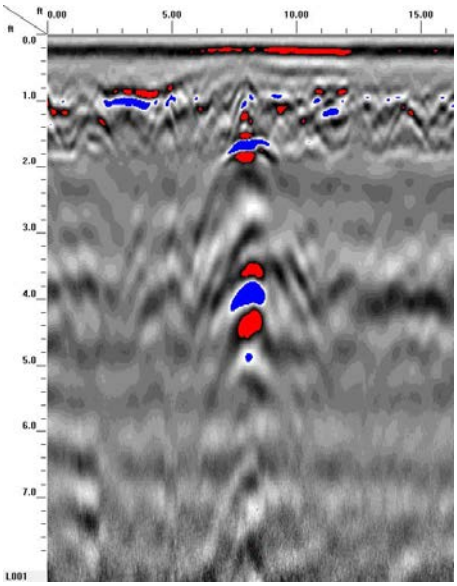
GPR TRANSECT 6



GPR TRANSECT 7



GPR TRANSECT 8



GPR TRANSECT 9

APPENDIX III

GEOPROBE LOGS

FROEHLING & ROBERTSON, INC.

GEOPROBE LOG

Boring: B-1 (1 of 1)

Project No: 66T-0097
Client: NCDOT
Project: B-5121/B-5137 Habco Auto (Parcel 24)
City/State: Raleigh, NC

Elevation: Existing Ground Surface
Total Depth: 10.0'
Boring Location: See Plan

Drilling Method: Geoprobe
Hammer Type: N/A
Date Drilled: 7/29/15
Driller: Regional Probing Services

Elevation	Depth	Description of Materials (Classification)	*Sample Depth (feet)	PID (ppm)	Remarks
	0.2	Asphalt	0.0	0.3	Petroleum Odors not Observed in Boring
		Moist, Red-Brown, Sandy Silty CLAY with Mica (CL)			
	1.0	Moist, Red-Brown, Sandy CLAY (CL)	1.0	0.6	
	2.0	Moist, Red-Brown, Silty Sandy CLAY (CL)	2.0	0.5	
	3.0	Moist, Red-Brown, Sandy CLAY (CL)	3.0	0.7	
	4.0	Moist, Red-Tan, Sandy CLAY (CL)	4.0	0.5	
			5.0	0.3	
			6.0	0.8	
	7.0	Moist, Tan-Brown, Silty Sandy CLAY (CL)	7.0	1.1*	*Sample Submitted for Laboratory Analysis for TPH, DRO/GRO, Total BTEX, 16 PAHs, and BaP
			8.0	1.0	
			9.0	1.0	
	10.0	Geoprobe Boring Terminated at 10 feet.	10.0		

*Geoprobe soil samples were collected by continuous push of a 2 inch ID stainless steel barrel containing a 4 foot long acetate collection sleeve. The 4 foot long soil sample sleeves were cut open and the soil was separated into 1 foot long sample intervals.

FROEHLING & ROBERTSON, INC.

GEOPROBE LOG

Boring: B-2 (1 of 1)

Project No: 66T-0097
Client: NCDOT
Project: B-5121/B-5137 Habco Auto (Parcel 24)
City/State: Raleigh, NC

Elevation: Existing Ground Surface
Total Depth: 10.0'
Boring Location: See Plan

Drilling Method: Geoprobe
Hammer Type: N/A
Date Drilled: 7/29/15
Driller: Regional Probing Services

Elevation	Depth	Description of Materials (Classification)	*Sample Depth (feet)	PID (ppm)	Remarks
	0.1	Surficial Organic Soils	0.0	0.3	Petroleum Odors not Observed in Boring
		Dry, Tan, Fine Sandy Silty CLAY (CL)			
	2.0	Dry, Tan, Fine to Medium, Sandy SILT (ML)	2.0	0.5	
	4.0	Moist, Red-Tan, Sandy Silty CLAY (CL)	4.0	0.4	
	6.0	Dry, Red-Tan, Sandy Silty CLAY (CL)	6.0	0.6	
	7.0	Moist, Orange-Tan, Sandy CLAY (CL)	7.0	0.7*	*Sample Submitted for Laboratory Analysis for TPH, DRO/GRO, Total BTEX, 16 PAHs, and BaP
			8.0	0.5	
			9.0	0.4	
	10.0	Geoprobe Boring Terminated at 10 feet.	10.0		

*Geoprobe soil samples were collected by continuous push of a 2 inch ID stainless steel barrel containing a 4 foot long acetate collection sleeve. The 4 foot long soil sample sleeves were cut open and the soil was separated into 1 foot long sample intervals.

Froehling & Robertson, Inc.

GEOPROBE LOG

Boring: B-3 (1 of 1)

Project No: 66T-0097
Client: NCDOT
Project: B-5121/B-5137 Habco Auto (Parcel 24)
City/State: Raleigh, NC

Elevation: Existing Ground Surface
Total Depth: 10.0'
Boring Location: See Plan

Drilling Method: Geoprobe
Hammer Type: N/A
Date Drilled: 7/29/15
Driller: Regional Probing Services

Elevation	Depth	Description of Materials (Classification)	*Sample Depth (feet)	PID (ppm)	Remarks
	0.2	Concrete	0.0	0.5	
		Moist, Tan, Sandy Silty CLAY with Mica (CL)			
	1.0	Moist, Tan, Sandy CLAY (CL)	1.0	0.8	
	2.0	Moist, Tan, Sandy CLAY with Gravel (CL)	2.0	0.5	
	3.0	Moist, Red-Tan, Silty Sandy CLAY (CL)	3.0	0.7	
			4.0	0.4	
	5.0	Moist, Gray, Medium to Coarse, Sandy CLAY with Trace Organics (CL)	5.0	50.0*	*Sample Submitted for Laboratory Analysis for TPH, DRO/GRO, Total BTEX, 16 PAHs, and BaP
	6.0	Moist, Tan-Gray, Medium Sandy CLAY (CL)	6.0	4	Petroleum Odors Observed 5'-6'
			7.0	1.9	
			8.0	1.5	
			9.0	1.1	
	10.0	Geoprobe Boring Terminated at 10 feet.	10.0		

*Geoprobe soil samples were collected by continuous push of a 2 inch ID stainless steel barrel containing a 4 foot long acetate collection sleeve. The 4 foot long soil sample sleeves were cut open and the soil was separated into 1 foot long sample intervals.

FROEHLING & ROBERTSON, INC.

GEOPROBE LOG

Boring: B-4 (1 of 1)

Project No: 66T-0097
Client: NCDOT
Project: B-5121/B-5137 Habco Auto (Parcel 24)
City/State: Raleigh, NC

Elevation: Existing Ground Surface
Total Depth: 10.0'
Boring Location: See Plan

Drilling Method: Geoprobe
Hammer Type: N/A
Date Drilled: 7/29/15
Driller: Regional Probing Services

Elevation	Depth	Description of Materials (Classification)	*Sample Depth (feet)	PID (ppm)	Remarks
	0.2	Asphalt	0.0	0.5	Petroleum Odors not Observed in Boring
		Moist, Tan, Fine to Medium Sandy Silty CLAY (CL)			
	1.0	Moist, Tan, Sandy CLAY (CL)	1.0	0.6	
	2.0	Moist, Sandy Silty CLAY with Mica (CL)	2.0	0.9	
	3.0	Moist, Red-Brown, Fine Sandy SILT (ML)	3.0	0.8	
	4.0	Moist, Red-Brown, Sandy Silty CLAY with Mica (CL)	4.0	0.8	
	5.0	Moist, Red-Brown, Sandy Silty CLAY (CL)	5.0	1.1*	*Sample Submitted for Laboratory Analysis for TPH, DRO/GRO, Total BTEX, 16 PAHs, and BaP
			6.0	0.9	
	7.0	Moist, Brown, Sandy Silty CLAY with Mica (CL)	7.0	0.8	
			8.0	1.0	
			9.0	0.9	
	10.0	Geoprobe Boring Terminated at 10 feet.	10.0		

*Geoprobe soil samples were collected by continuous push of a 2 inch ID stainless steel barrel containing a 4 foot long acetate collection sleeve. The 4 foot long soil sample sleeves were cut open and the soil was separated into 1 foot long sample intervals.

FROEHLING & ROBERTSON, INC.

GEOPROBE LOG

Boring: B-5 (1 of 1)

Project No: 66T-0097
Client: NCDOT
Project: B-5121/B-5137 Habco Auto (Parcel 24)
City/State: Raleigh, NC

Elevation: Existing Ground Surface
Total Depth: 10.0'
Boring Location: See Plan

Drilling Method: Geoprobe
Hammer Type: N/A
Date Drilled: 7/29/15
Driller: Regional Probing Services

Elevation	Depth	Description of Materials (Classification)	*Sample Depth (feet)	PID (ppm)	Remarks
	0.1	Surficial Organic Soils	0.0	0.5	Petroleum Odors not Observed in Boring
		Moist, Tan, Medium Sandy CLAY (CL)			
	1.0	Moist, Fine to Medium, Sandy CLAY (CL)	1.0	0.5	
			2.0	0.8	
	3.0	Moist, Red-Tan, Fine to Medium Sandy CLAY (CL)	3.0	0.5	
	4.0	Moist, Red-Brown, Fine to Medium Sandy CLAY (CL)	4.0	0.4	
	5.0	Moist, Red-Brown, Fine Sandy Silty CLAY with Mica (CL)	5.0	0.4	
			6.0	0.7	
			7.0	1.1	
	8.0	Moist, Brown, Fine Sandy Silty CLAY (CL)	8.0	1.1*	*Sample Submitted for Laboratory Analysis for TPH, DRO/GRO, Total BTEX, 16 PAHs, and BaP
			9.0	0.8	
	10.0	Geoprobe Boring Terminated at 10 feet.	10.0		

*Geoprobe soil samples were collected by continuous push of a 2 inch ID stainless steel barrel containing a 4 foot long acetate collection sleeve. The 4 foot long soil sample sleeves were cut open and the soil was separated into 1 foot long sample intervals.

FROEHLING & ROBERTSON, INC.

GEOPROBE LOG

Boring: B-6 (1 of 1)

Project No: 66T-0097
Client: NCDOT
Project: B-5121/B-5137 Habco Auto (Parcel 24)
City/State: Raleigh, NC

Elevation: Existing Ground Surface
Total Depth: 10.0'
Boring Location: See Plan

Drilling Method: Geoprobe
Hammer Type: N/A
Date Drilled: 7/29/15
Driller: Regional Probing Services

Elevation	Depth	Description of Materials (Classification)	*Sample Depth (feet)	PID (ppm)	Remarks
	0.1	Surficial Organic Soils	0.0	0.7	Petroleum Odors not Observed in Boring
		Moist, Red-Tan, Sandy CLAY with Mica (CL)			
	1.0	Moist, Tan, Sandy CLAY (CL)	1.0	0.7	
	2.0	Moist, Red-Brown, Sandy Silty CLAY with Mica (CL)	2.0	0.7	
			3.0	0.8	
			4.0	0.7	
			5.0	1.0*	*Sample Submitted for Laboratory Analysis for TPH, DRO/GRO, Total BTEX, 16 PAHs, and BaP
	6.0	Moist, Brown, Silty CLAY with Mica (CL)	6.0	1.0	
			7.0	0.7	
	8.0	Moist, Tan-Gray, Sandy SILT with Mica (ML)	8.0	0.6	
			9.0		
	10.0		10.0		
		Geoprobe Boring Terminated at 10 feet.			

*Geoprobe soil samples were collected by continuous push of a 2 inch ID stainless steel barrel containing a 4 foot long acetate collection sleeve. The 4 foot long soil sample sleeves were cut open and the soil was separated into 1 foot long sample intervals.

FROEHLING & ROBERTSON, INC.

GEOPROBE LOG

Boring: B-7 (1 of 1)

Project No: 66T-0097
Client: NCDOT
Project: B-5121/B-5137 Habco Auto (Parcel 24)
City/State: Raleigh, NC

Elevation: Existing Ground Surface
Total Depth: 10.0'
Boring Location: See Plan

Drilling Method: Geoprobe
Hammer Type: N/A
Date Drilled: 7/29/15
Driller: Regional Probing Services

Elevation	Depth	Description of Materials (Classification)	*Sample Depth (feet)	PID (ppm)	Remarks
	0.1	Surficial Organic Soils	0.0	0.5	Petroleum Odors not Observed in Boring
		Moist, Red-Brown, Sandy CLAY (CL)	2.0	0.6	
			4.0	0.6	
			6.0	0.6	
	7.0	Moist, Red-Tan, Sandy CLAY (CL)	7.0	0.6	
	8.0	Moist, Tan, Fine Sandy SILT (ML)	8.0	0.6*	*Sample Submitted for Laboratory Analysis for TPH, DRO/GRO, Total BTEX, 16 PAHs, and BaP
	9.0	Moist, Gray-Brown, Fine Sandy SILT (ML)	9.0	0.5	
	10.0	Geoprobe Boring Terminated at 10 feet.	10.0		

*Geoprobe soil samples were collected by continuous push of a 2 inch ID stainless steel barrel containing a 4 foot long acetate collection sleeve. The 4 foot long soil sample sleeves were cut open and the soil was separated into 1 foot long sample intervals.

FROEHLING & ROBERTSON, INC.

GEOPROBE LOG

Boring: B-8 (1 of 1)

Project No: 66T-0097
Client: NCDOT
Project: B-5121/B-5137 Habco Auto (Parcel 24)
City/State: Raleigh, NC

Elevation: Existing Ground Surface
Total Depth: 10.0'
Boring Location: See Plan

Drilling Method: Geoprobe
Hammer Type: N/A
Date Drilled: 7/29/15
Driller: Regional Probing Services

Elevation	Depth	Description of Materials (Classification)	*Sample Depth (feet)	PID (ppm)	Remarks
	0.2	Asphalt	0.0	0.5	Petroleum Odors not Observed in Boring
		Moist, Tan-Brown, Fine to Medium SAND (SP)			
	2.0	Moist, Tan-Brown, Fine to Medium Sandy CLAY with Gravel (CL)	2.0	0.6	
	4.0	Moist, Tan, Fine to Medium SAND with Mica (SP)	4.0	0.5	
	6.0	Moist, Red-Brown, Sandy Silty CLAY with Mica (CL)	6.0	0.7*	*Sample Submitted for Laboratory Analysis for TPH, DRO/GRO, Total BTEX, 16 PAHs, and BaP
			7.0	0.6	
	8.0	Moist, Brown, Sandy Silty CLAY with Mica (CL)	8.0	0.5	
			9.0	0.5	
	10.0	Geoprobe Boring Terminated at 10 feet.	10.0		

*Geoprobe soil samples were collected by continuous push of a 2 inch ID stainless steel barrel containing a 4 foot long acetate collection sleeve. The 4 foot long soil sample sleeves were cut open and the soil was separated into 1 foot long sample intervals.

GEOPROBE_LOG B5121_GEOENV_GEOPROBEBORELOG_PARCEL24.GPJ F&R.GDT 8/14/15

APPENDIX IV

SITE PHOTOS

Photo #1: A view of Boring B-1, facing south.

Photo #2: A view of Boring B-2, facing south.

Photo #3: A view of Boring B-3, facing south.

Photo #4: A view of Boring B-4, facing east.

Photo #5: A view of Boring B-5, facing west.

Photo #6: A view of Boring B-6, facing northeast.

Photo #7: A view of Boring B-7, facing northeast.

Photo #8: A view of Boring B-8, facing west.

APPENDIX V

LABORATORY ANALYTICAL RESULTS

QED

AQROS

Hydrocarbon Analysis Results

Client: F&R
Address:

Samples taken Wednesday, July 29, 2015
Samples extracted Wednesday, July 29, 2015
Samples analysed Monday, August 03, 2015

Contact: Ben Whitley

Operator King

Project: NCDOT B-5121/B-5317

Matrix	Sample ID	Dilution used	BTEX (C6 - C9)	GRO (C5 - C10)	DRO (C10 - C35)	TPH (C5 - C35)	Total Aromatics (C10-C35)	16 EPA PAHs	BaP	Ratios			HC Fingerprint Match
										% light	% mid	% heavy	
s	B-1 7-8	266.1	<13.3	<6.7	60	60	56	2.6	0.13	0	87.6	12.4	V.Deg.PHC (FCM) 84.5%
s	B-2 7-8	23.6	<1.2	<0.59	1.9	1.9	1.7	0.22	0.044	0	71.5	28.5	V.Deg.PHC (FCM) 70.8%
s	B-3 5-6	20.0	<1	27.5	47.7	75.2	35.2	1.4	0.012	46	51.5	2.6	Deg Fuel (FCM) 82.9%
s	B-4 5-6	268.3	<13.4	<6.7	92.5	92.5	46.2	1.8	0.13	2.9	89.7	7.5	Deg Fuel (FCM) 91.2%
s	B-5 8-9	21.3	<1.1	<0.53	38.6	38.6	5	0.2	0.011	0	97.4	2.6	Deg.Fuel (FCM) 82.3%
s	B-6 5-6	22.4	<1.1	<0.56	6.8	6.8	6	0.29	0.004	0	89.1	10.9	V.Deg.PHC (FCM) 88.4%
s	B-7 8-9	19.5	<0.98	<0.49	6.5	6.5	3.6	0.14	0.01	0	93	7	Deg Fuel (FCM) 93.4%
s	B-8 6-7	21.8	<1.1	<0.55	10.7	10.7	9.6	0.45	0.006	0	84.5	15.5	V.Deg.PHC (FCM) 90.7%

Initial Calibrator QC check OK

Final FCM QC Check OK 88.7%

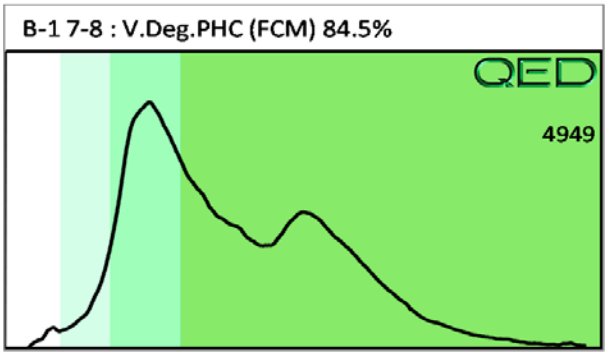
Results generated by a QED HC-1 analyser. Concentration values in mg/kg for soil samples and mg/L for water samples. Soil values are not corrected for moisture or stone content

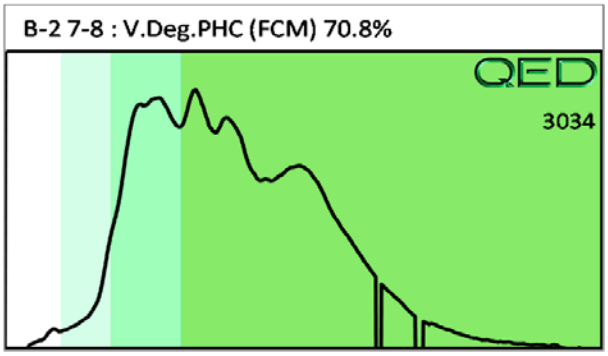
Fingerprints provide a tentative hydrocarbon identification. The abbreviations are:- FCM = Results calculated using Fundamental Calibration Mode : % = confidence for sample fingerprint match to library

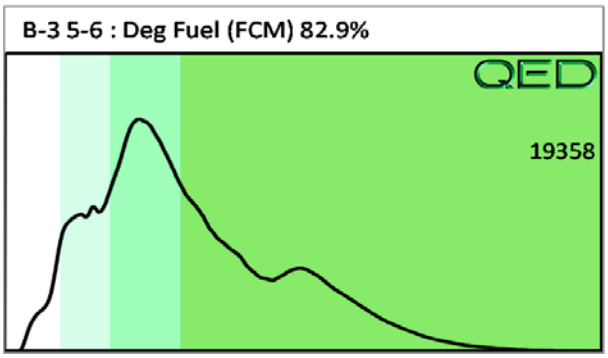
(SBS) or (LBS) = Site Specific or Library Background Subtraction applied to result : (PFM) = Poor Fingerprint Match : (T) = Turbid : (P) = Particulate present

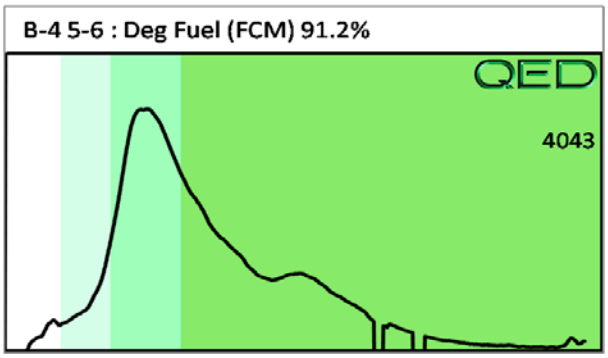
QED Hydrocarbon Fingerprints

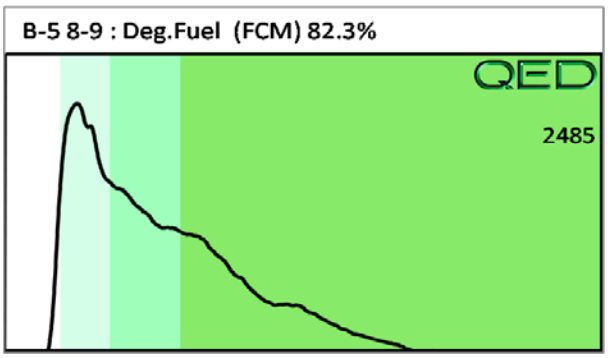
Project: NCDOT B-5121/B-5317 ##################

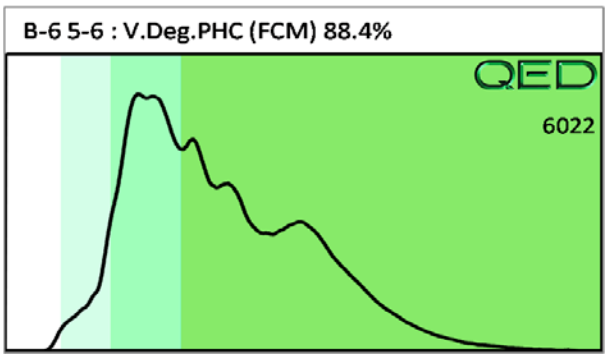


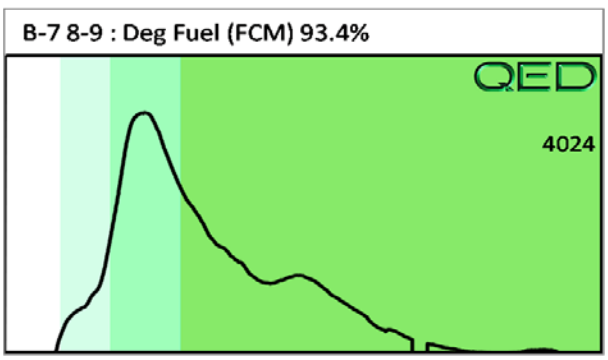


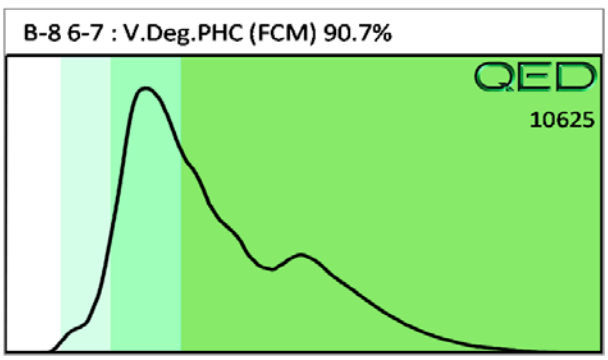












Chain of Custody Record and Analytical Request Form

	Sample ID	Sample Collection			TAT Requested	
	QED UVF	Date	Time	Initials	24 Hour	48 Hour
Parcel 23	B-4 6-7	7-29-15	1620	BMW	13.2	X
Parcel 27	B-1 9-10		955		11.5	
	B-2 7-8		1015		13.5	
	B-3 2-3		1035		14.2	
Parcel 25	B-1 7-8		1110		12.7	
	B-2 8-10		1120		9.8	
	B-3 8-9		1150		12.8	
Parcel 24	B-1 7-8		1255		12.7	
	B-2 7-8		1315		11.0	
	B-3 5-6		1350		13.0	
	B-4 5-6		1415		12.6	
	B-5 8-9		1445		12.2	
	B-6 5-6		1500		11.6	
	B-7 8-9		1530		13.3	
	B-8 6-7	↓	1540	↓	11.9	↓

Client: FGR

Contact: Ben Whitley

Phone: 919-630-5661

Email: bwhitley@fandr.com

Project Reference:
NCDOT B-5121 / B-5317

Each sample will be analyzed for total

BTEX, GRO, DRO, TPH and PAH

Each sample will generate a fingerprint representative of the petroleum product within the samples. Electronic data will be submitted to the email above.

FGR	7-31-15	UPS overnight	7-31-15
Relinquished by	Date/Time	Accepted by	Date/Time
		[illegible]	8/1/15
Relinquished by	Date/Time	Accepted by	Date/Time
Relinquished by	Date/Time	Accepted by	Date/Time

SHIP TO:
QROS, LLC
420 Raleigh Street, Suite E
Wilmington, NC 28412

Hannah King
hannahk@grosllc.com
(704)-654-7391

ATTENTION

When shipping, please DO NOT submerge sample vials in ice or water. This is to avoid dilution errors and contamination. To keep the samples cool we suggest using a freezer pack or a bag of ice sealed that will not leak.

* test results on seperate spreadsheets for each parcel please

Corporate HQ: 3015 DUMBARTON ROAD RICHMOND, VIRGINIA 23228 T 804.264.2701 F 804.264.1202 www.fandr.com

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