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Via Email

January 24, 2019

NC DOT Geotechnical Engineering Unit
1020 Birch Ridge Drive
Raleigh, North Carolina 27610

Attention: Mr. Craig Haden

Re: Phase II Investigation
Tim Boeurn & Kan Phon Property - Parcel 7
NC DOT State Project No. R-5737
WBS Element #50195.1.1
Thomasville, Davidson County, North Carolina
H&H Job No. ROW-601

Dear Craig:

Please find the attached electronic copy of the Phase II Investigation report for the Tim Boeurn & Kan Phon Property (Parcel 7) located in Thomasville, Davidson County, North Carolina. Please return via DocuSign for final signatures. If you have any questions or need additional information, please contact us at (704) 586-0007.

Sincerely,

Hart & Hickman, PC



David Graham, PG
Senior Project Geologist



Matt Bramblett, PE
Principal

Attachment

Phase II Investigation Tim Boeurn & Kan Phon Property

NC DOT Parcel 7 Thomasville, Davidson County North Carolina

H&H Job No. ROW-601
State Project R-5737
WBS Element #50195.1.1
January 24, 2019



SMARTER ENVIRONMENTAL SOLUTIONS

#C-1269 Engineering
#-245 Geology

2923 South Tryon Street, Suite 100
Charlotte, NC 28203
704.586.0007 main

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**Phase II Investigation
Tim Boeurn Property - NC DOT - Parcel 7
Thomasville, Davidson County, North Carolina
H&H Project ROW-601**

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Phase II Investigation
Tim Boeurn Property - NC DOT - Parcel 7
Thomasville, Davidson County, North Carolina
H&H Project ROW-601

1.0 Introduction and Background

Hart & Hickman, PC (H&H) has prepared this Phase II Investigation (Phase II) report documenting assessment activities performed at the Tim Boeurn and Kan Phon property (Parcel 7) located at 285 Old Greensboro Road in Thomasville, Davidson County, North Carolina. This assessment was conducted on behalf of the North Carolina Department of Transportation (NC DOT) in accordance with H&H's December 4, 2018 proposal.

The purpose of this assessment was to collect data to evaluate the potential for underground storage tank (UST) systems and the presence or absence of impacted soil in proposed right of way and construction easement areas on the subject property related to the proposed road improvements along Old Greensboro Road (State Project R-5737). Parcel 7 is currently occupied by the Gran Prix gas station and Real Quick Convenience store. A site location map is included as Figure 1, and a site map is presented as Figure 2. NC DOT's plan sheet depicting Parcel 7 is included in Appendix A.

H&H contacted the North Carolina Department of Environmental Quality (NC DEQ) Winston-Salem Regional Office and searched NC DEQ's Laserfiche website for UST incident files for the Parcel 7 property to better target UST system areas and to find locations of previously reported petroleum impacts. With the exception of a 2016 tank inspection report, no other UST incident files were available for review. The tank inspection report indicates that the UST system failed the inspection. Based on the tank inspection report four active UST's are located on the property. One 2,000-gallon kerosene UST and three 4,000-gallon gasoline USTs are located just outside of the proposed construction easement on the northern portion of the property. Three gasoline dispensers associated with the gasoline USTs are located within the NC DOT construction easement near the center of the property. The kerosene dispenser is located to the west and outside of the proposed construction easement. The tank inspection report is included in Appendix B.

The Phase II activities recently conducted by H&H on Parcel 7 are discussed below.

2.0 Geophysical Survey and Soil Assessment

2.1 Geophysical Survey

Prior to advancing soil borings, H&H reviewed the results of a geophysical survey performed at the site by GEL Solutions (GEL) on December 18, 2018. GEL utilized radio-frequency electromagnetic (EM) induction technology, ground penetrating radar (GPR), and time-domain electromagnetic (TDEM) technology to identify potential geophysical anomalies and potential USTs at the site. The EM/GPR/TDEM confirmed the presence of the four known USTs located just outside of the proposed construction easement area on the northern portion of the property. No anomalies or potential USTs were identified in proposed NC DOT work areas, although a dispenser island is present in the proposed construction easement. Other TDEM responses were present in the survey data but were attributed to known surface metallic objects or above ground metal structures that were not characteristic signatures of potential USTs. GEL's report, including a site map depicting the results of the EM/GPR/TDEM survey, is provided in Appendix C.

2.2 Soil Sampling

H&H contracted with Geologic Exploration, Inc. of Statesville, North Carolina to advance soil borings at the site. On December 26, 2018, 11 soil borings (7-1 through 7-11) were advanced at the site using a direct push technology (DPT) drilling rig. Prior to conducting soil borings, underground utilities were marked by the NC 811 public utility locator and by GEL for private underground utilities. Borings were also cleared to a five foot depth by hand auger.

The soil borings were advanced to maximum depths of 12 feet below ground surface (ft bgs). To facilitate the selection of soil samples for laboratory analysis, soil from each boring was screened continuously for the presence of volatile organic compounds (VOCs) with a photoionization detector (PID). Additionally, H&H observed the soil for visual and olfactory indications of impacts. Based on field screening, there were indications of impacts in soil boring 7-3. There were no other significant indications of impacts based on field screening. Soil samples were collected at depths

ranging from 0 to 2 ft bgs to 6 ft to 8 ft bgs. Soil boring logs are included in Appendix D. Global positioning system (GPS) coordinate data for the soil borings are summarized in Table 1, and the boring locations are shown on Figure 2.

H&H submitted a total of twelve soil samples from borings 7-1 through 7-11 for laboratory analysis. The soil samples were placed into laboratory supplied sample containers using nitrile glove-covered hands. The containers were then labeled as to content, analyses requested, sample date and time, and sampler's name. The samples were placed in an iced cooler upon collection and were subsequently submitted to Red Lab, LLC of Wilmington, NC under standard chain-of-custody protocol for analysis of total petroleum hydrocarbons (TPH) as gasoline-range organics (GRO) and diesel-range organics (DRO) using QED ultraviolet fluorescence (UVF) technology. Soil sample depths and analytical results are summarized in Table 2. Laboratory analytical data sheets and chain-of-custody documentation are provided in Appendix E. The analytical results are discussed below.

Upon completion of soil sampling activities, soil cuttings generated during drilling activities were spread on site. The soil borings were filled with bentonite pellets and patched with asphalt or concrete to match the existing ground surface.

2.3 Soil Analytical Results

Concentrations of TPH DRO (225.1 mg/kg and 2,368 mg/kg) detected in soil samples 7-5 (0-2') and 7-3 (2-4'), respectively, are above the NC DEQ Action Level of 100 mg/kg for TPH DRO. A detected concentration of TPH GRO (1,318 mg/kg) in soil sample 7-3 (2-4') is above the NC DEQ Action Level of 50 mg/kg for TPH GRO. Concentrations of TPH DRO below the NC DEQ Action Level were detected in seven of the samples analyzed and concentrations of TPH GRO were detected below the NC DEQ Action Level in four of the samples analyzed. TPH data are depicted on Figure 2.

Based on the above soil sample results, H&H estimates the following amounts of impacted soil above the NC DEQ Action Levels are present on Parcel 7 within potential NC DOT work areas:

- H&H estimates there are roughly 225 cubic yards (350 tons) of soil impacted with TPH DRO and GRO between the surface and 12 ft near the gasoline dispenser island near soil boring 7-3.
- H&H estimates there are roughly 100 cubic yards (150 tons) of TPH DRO impacted soil between the surface and 5 ft in the asphalt parking lot on the northern portion of the property near soil boring 7-5.

The estimated depth of impacted soils is based on field screening results. However, field screening and lab results did not provide information that fully defines the impacted soil interval or extent. Therefore, impacts may extend beyond the depths and amounts indicated above. The approximate areas of impacted soils are shown on Figure 2.

3.0 Summary and Regulatory Considerations

H&H has reviewed NC DEQ available UST compliance files, geophysical survey results, and analytical results of soil samples collected at the Parcel 7 property in Thomasville, Davidson County, North Carolina. Review of UST compliance files indicate that there is one 2,000-gallon kerosene UST and three 4,000-gallon gasoline USTs located on Parcel 7. The USTs are located just outside of the proposed construction easement on the northern portion of the property. Based on the geophysical survey, no potential USTs were identified in proposed NC DOT work areas on Parcel 7, although a dispenser island is present in the proposed construction easement.

Analytical results of soil samples collected by H&H indicate TPH DRO (up to 2,368 mg/kg) and/or GRO (up to 1,318 mg/kg) above the NC DEQ Action Levels in two soil samples collected on Parcel 7.

- H&H estimates there are roughly 225 cubic yards (350 tons) of soil impacted with TPH DRO and GRO between the surface and 12 ft near the gasoline dispenser island near soil boring 7-3.
- H&H estimates there are roughly 100 cubic yards (150 tons) of TPH DRO impacted soil between the surface and 5 ft in the asphalt parking lot on the northern portion of the property near soil boring 7-5.

NC DOT plans indicate a proposed cut in proposed NC DOT work areas on the eastern portion of the property and to the east of impacted soil areas identified at the site. Impacted soil that is removed during road construction activities should be properly managed and disposed at a permitted facility. If a UST is encountered during construction activities or if site work extends into the existing UST system area, the UST systems and their contents should be removed in accordance with NC DEQ regulations and properly disposed.

4.0 Signature Page

This report was prepared by:

DocuSigned by:
David Graham
9F6FAD6E6BA34BE...

1/31/2019

David Graham, PG
Senior Project Geologist for
Hart & Hickman, PC



This report was reviewed by:

DocuSigned by:
Matt Bramblett
CBCA88CDF0E547B...

Matt Bramblett, PE
Principal and Project Manager for
Hart & Hickman, PC

Not considered final unless all signatures are completed.

Table 1
Soil Boring GPS Coordinate Data
NC DOT Parcel 7
Thomasville, Davidson County, North Carolina
H&H Job No. ROW-601

Sample ID	Latitude	Longitude
7-1	35.8639363	-80.1846890
7-2	35.8639499	-80.1846611
7-3	35.8639806	-80.1847607
7-4	35.8640581	-80.1846939
7-5	35.8640837	-80.1845710
7-6	35.8641457	-80.1845307
7-7	35.8639154	-80.1845698
7-8	35.8637877	-80.1846978
7-9	35.8636643	-80.1846386
7-10	35.8638019	-80.1848784
7-11	35.8639510	-80.1848075

Notes:

GPS coordinate data points collected using a Trimble GeoExplorer 6000 series unit with external satellite for increased accuracy.

Table 2
Soil Analytical Results
NC DOT Parcel 7
Thomasville, Davidson County, North Carolina
H&H Job No. ROW-601

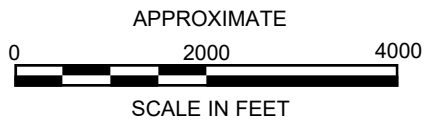
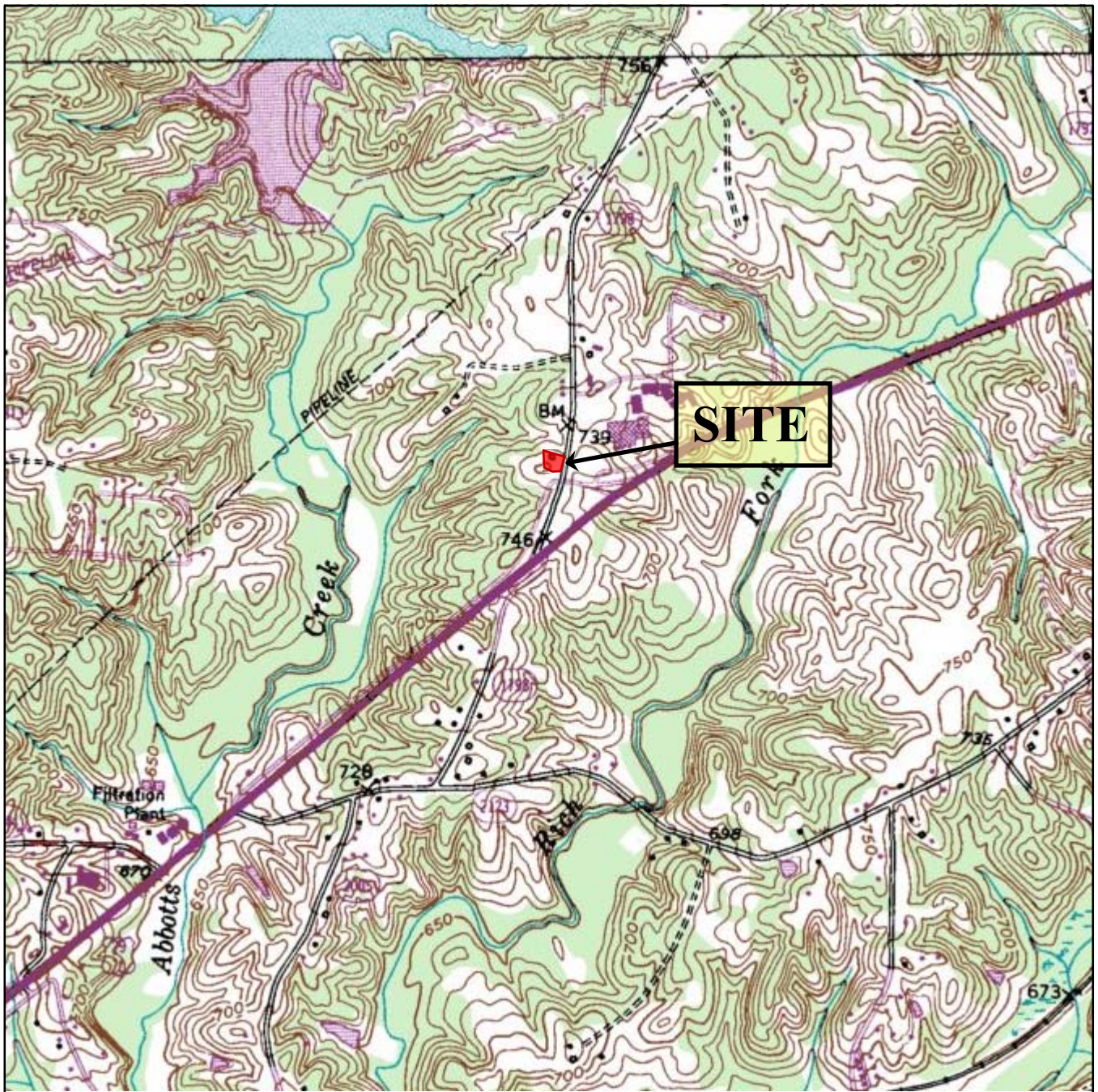
Sample ID Sample Depth (ft) Sample Date	7-1	7-2	7-3	7-4	7-5	7-6		7-7	7-8	7-9	7-10	7-11	Regulatory Standard
	4-6 12/26/2018	3-4 12/26/2018	2-4 12/26/2018	6-8 12/26/2018	0-2 12/26/2018	0-2 12/26/2018	6-8 12/26/2018	0-2 12/26/2018	4-6 12/26/2018	0-2 12/26/2018	0-2 12/26/2018	2-4 12/26/2018	
<u>TPH-DRO/GRO (UVF)</u> <u>(mg/kg)</u>													NCDEQ Action Level (mg/kg)
Diesel-Range Organics (DRO)	<0.66	6.5	2,368	<0.32	225.1	0.3	<0.55	1.8	2.1	0.51	15.1	2.3	100
Gasoline-Range Organics (GRO)	<0.66	4.1	1,318	<0.32	<55.3	<0.3	<0.55	<0.66	2.1	<0.51	2.9	6.6	50

Notes:

UVF = QED Ultraviolet fluorescence technology.


TPH = Total petroleum hydrocarbons.

Bold indicates above Action Level.

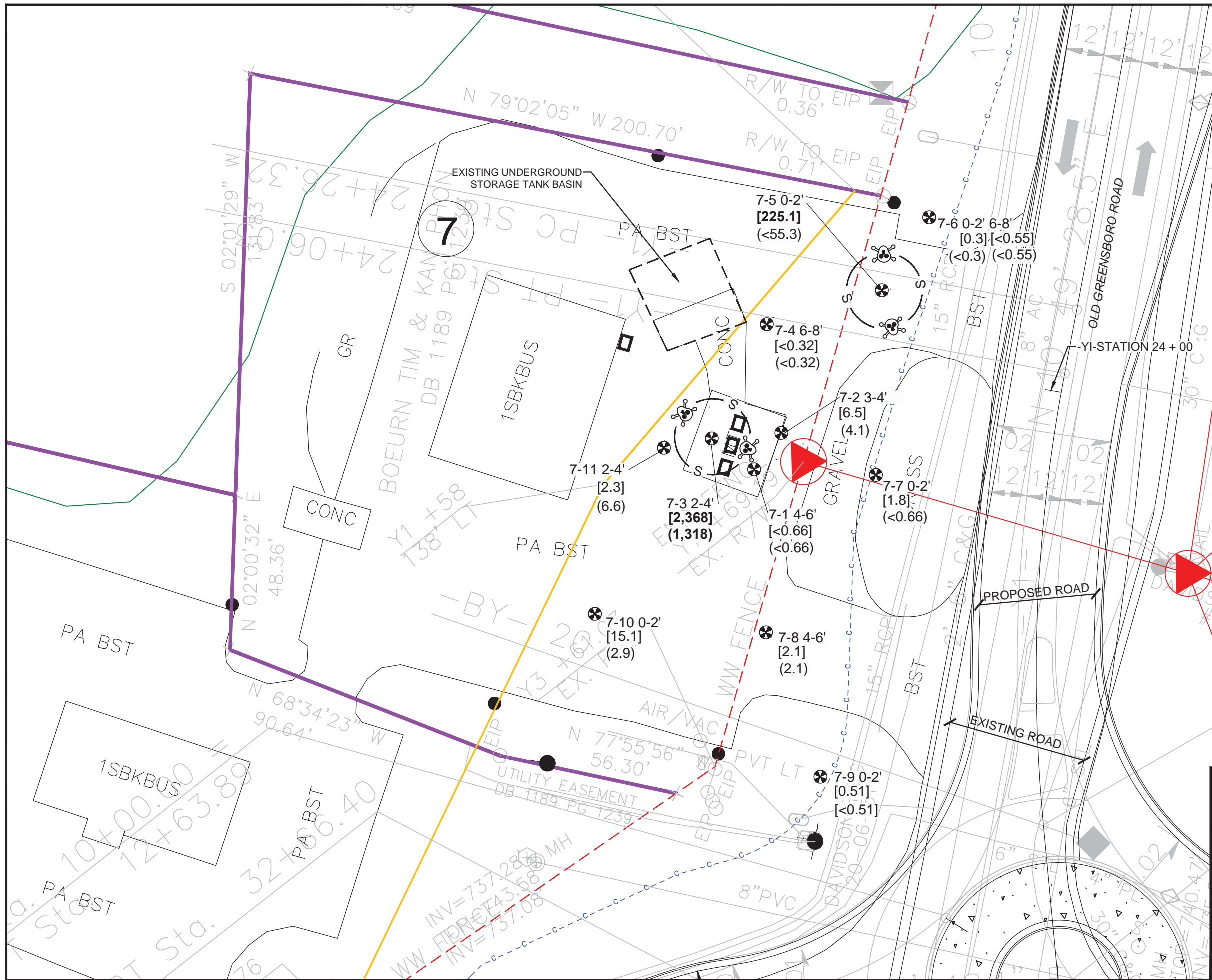


U.S.G.S. QUADRANGLE MAP
LEXINGTON EAST, NORTH CAROLINA, 1994

QUADRANGLE
7.5 MINUTE SERIES (TOPOGRAPHIC)

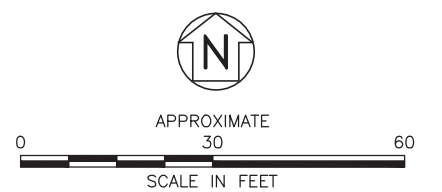
TITLE	SITE LOCATION MAP	
PROJECT	TIM BOEURN & KAN PHON PROPERTY 285 OLD GREENSBORO ROAD THOMASVILLE, NORTH CAROLINA	
	 SMARTER ENVIRONMENTAL SOLUTIONS	2923 South Tryon Street-Suite 100 Charlotte, North Carolina 28203 704-586-0007 (p) 704-586-0373 (f)
DATE:	1-11-19	REVISION NO: 0
JOB NO:	ROW-601	FIGURE: 1


S:\AAA-Master Projects\NC DOT Right-of-Way - ROW\ROW-601\Map2.dwg, FIG 2, 1/29/2019 3:44:24 PM, erichardson



- LEGEND**
- PROPERTY LINE
 - - - EXISTING RIGHT-OF-WAY
 - ▲— PROPOSED RIGHT-OF-WAY
 - PROPOSED CONSTRUCTION EASEMENT
 - - - PROPOSED CUT LINE
 - ⑦ NC DOT PARCEL ID
 - FUEL DISPENSER
 - ⊗ SOIL SAMPLE LOCATION
 - [0.3] DIESEL RANGE TPH (mg/kg)
 - (<0.3) GASOLINE RANGE TPH (mg/kg)
 - 7-5 0-2' SAMPLE ID / DEPTH
 - S-⊗-S- KNOWN SOIL CONTAMINATION ABOVE DEQ ACTION LEVELS

NOTES:
BOLD INDICATES EXCEEDANCE OF DEQ ACTION LEVEL.



TITLE SITE MAP AND ANALYTICAL RESULTS	
PROJECT TIM BOEURN & KAN PHON PROPERTY - PARCEL 7 THOMASVILLE, DAVIDSON COUNTY, NORTH CAROLINA	
 2923 South Tryon Street-Suite 100 Charlotte, North Carolina 28203 704-586-0007(p) 704-586-0373(f) License # C-1269 / #C-245 Geology	
DATE: 1-22-19	REVISION NO. 0
JOB NO. ROW-601	FIGURE NO. 2

Appendix A
NC DOT Preliminary Plan

14
JMAS AND
MBERLY W. FURR
DB 1470 PG 1441
REFER TO UNRECORDED PLAT
OF SURVEY FOR ALVIN FURR,
DATED OCTOBER 7, 2003
AS PREPARED BY ABBOTTS
CREEK SURVEYING, INC

END CURB & GUTTER
BEGIN MID LEFT & OVERLAY

NTY
EGGS, LLC
ACCESS EASEMENT
DB 1470 PG 342
56'24" E
ITS (STRAND FIBER)
ITS (STR FIBER)
ITS (STR FIBER)
EIP TO R/W
0.42'

-C3- PC Sta. 10+00.00=
-C3- PT Sta. 12+63.89

-Y3- PT Sta. 32+66.40

Y3 +88.76
EX. P/L
BEGIN FENCE

Y1 +58
138' LT

END FENCE
Y1 +69.19
EX. R/W

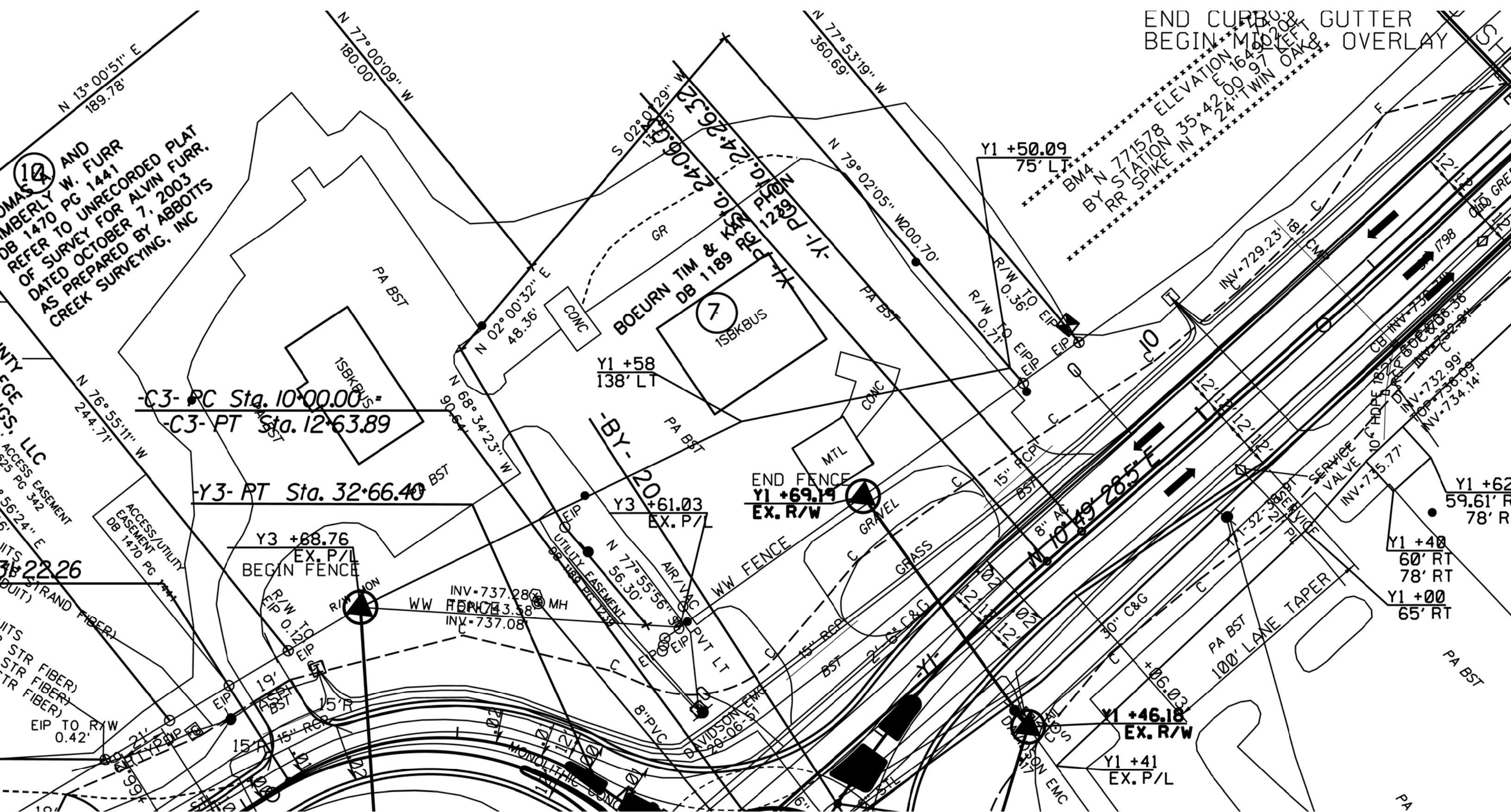
Y1 +50.09
75' LT

Y1 +40
60' RT
78' RT
Y1 +00
65' RT

Y1 +62
59.61' R
78' R

Y1 +46.18
EX. R/W

Y1 +41
EX. P/L



Appendix B
Tank Inspection Report



**North Carolina Department of Environmental Quality
Underground Storage Tank
UST-10B**

Printed: 10/20/2016 1:04 PM

Inspection Result: Failed

Partial Inspection: No

Inspection Date: 10/18/2016

Arrive and Depart Times: 8:55 AM-9:40 AM

Facility ID:	0-0-0000024862	Inspector	Jason Chapple
Facility Name	REAL QUICK L- 619	Insp. Type	Compliance
Facility Address	285 OLD GREENSBORO RD THOMASVILLE, NC 27360 Davidson County Located facility, USTs onsite	Reason(s)	Routine Compliance
		Location	35.864056, -80.184783
		Permit Exp.	12/31/2016
Facility Phone			

CONTACTS

Contact Type	Contact Information
Manager since 6/18/2013	BOEURN TIM, 285 OLD GREENSBORO RD THOMASVILLE , NC 27360, Phone: (336) 249-8160
Primary Operator since 8/19/2010	DAVE DULMAGE, PO BOX 68, 2758 EAST OZARK AVE GASTONIA, NC 28054-0068, Phone: (704) 791-0123, Email: DAVE@UNITEDOILOFTHECAROLINAS.COM Trained: Yes, 8/19/2010, Training Type:Inspection
Regulatory Operator since 6/2/1998	Real Quick Convenience Store , 284 Old Greensboro Rd. Thomasville, NC 27360-8106, Phone: (336) 249-8160
Owner since 1/13/2003	UNITED OIL OF THE CAROLINAS, INC. , PO BOX 68, 2758 EAST OZARK AVE GASTONIA, NC 28054-0068, Phone: (704) 824-3561

OWNERSHIP CHANGE

New Owner	Change Date	Basis	Transfer of Ownership Form (UST-15) Submitted

EMERGENCY RESPONSE

Emergency response placard with emergency response operator contact information is posted in the dispensing areas if the dispensers are left on without an attendant present ?	N/A
--	-----

OTHER PARTICIPANTS

Name	Organization
Dave Dulmage	United Oil

INSPECTOR COMMENTS

Type	Date	Comment

ADDITIONAL INSPECTOR COMMENTS

TANKS AND PIPING INFORMATION

Tanks	Tank #1(KERO)	Tank #2(MID)	Tank #3(PREM)	Tank #4(REG)
Tank ID	KERO	MID	PREM	REG
TIMS Tank ID	4	2	3	1
Is tank registered?	Yes	Yes	Yes	Yes
Date tank installed	11/11/1986	11/11/1986	11/11/1986	11/11/1986
Capacity of Tank in Gallons	2000	4000	4000	4000
Tank / Product use	Motor Fuel	Motor Fuel	Motor Fuel	Motor Fuel
Product stored in Tank	Kerosene, Kero Mix	Gasoline, Gas Mix	Gasoline, Gas Mix	Gasoline, Gas Mix
Product Detail		Mid-Grade	Premium	Regular

Tanks	Tank #1(KERO)	Tank #2(MID)	Tank #3(PREM)	Tank #4(REG)
If hazardous substance, CAS# or description				
If other, description				
Tank Status	Current	Current	Current	Current
Tank closure report submitted				
Date tank last operated				
Inches of product in Tank				
Manifolded Tank	No	No	No	No
Manifolded with tanks				
New Tank System installed in accordance with NC or MI	N/A	N/A	N/A	N/A
Tank Construction Material (DW required after 11/1/07)	Single Wall Steel	Single Wall Steel	Single Wall Steel	Single Wall Steel
If other, description				
Tank Manufacturer/Model	Unknown	Unknown	Unknown	Unknown
If other, describe				
Tank material verified by	UST-7A/B	UST-7A/B	UST-7A/B	UST-7A/B
Date Pipe Installed	11/11/1986	11/11/1986	11/11/1986	11/11/1986
Was UST Piping Installed on or after 11/1/2007?	No	No	No	No
Piping Construction Material (DW required after 11/1/07)	Single Wall Steel	Single Wall Steel	Single Wall Steel	Single Wall Steel
If other, description				
Pipe Manufacturer/Model	Unknown	Unknown	Unknown	Unknown
If other, describe				
Pipe material verified by	UST-7A/B	UST-7A/B	UST-7A/B	UST-7A/B
If E-blend > 10% or Biodiesel Blend > 20%; Was UST-20 completed and approved?	N/A	N/A	N/A	N/A

CORROSION PROTECTION

Tank Corrosion Protection	Tank #1(KERO)	Tank #2(MID)	Tank #3(PREM)	Tank #4(REG)
DWM notified of current CP method	Yes	Yes	Yes	Yes
Integrity assessment performed after 3/1/06	No	No	No	No
CP Method 1	Impressed Current	Impressed Current	Impressed Current	Impressed Current
if other, Description				
CP Installation Date	1/1/1994	1/1/1994	1/1/1994	1/1/1994
CP Method 2				
if other, Description				
CP Installation Date				
Flex Connector , Piping Extensions, and/or other metal fittings Present	Unknown	Unknown	Unknown	Unknown
Flex connector isolated from ground	Unknown	Unknown	Unknown	Unknown
Source of verification of CP for Flex Connectors,	CP Test Results	CP Test Results	CP Test Results	CP Test Results

Tank Corrosion Protection	Tank #1(KERO)	Tank #2(MID)	Tank #3(PREM)	Tank #4(REG)
piping extensions and/or other metal fittings				
if other, Description				
Submersible pump (STP) is isolated from ground	N/A	N/A	N/A	N/A
Piping extensions and/or other metal fittings are isolated from ground	Unknown	Unknown	Unknown	Unknown
Flex connector, STP and/or other metal fittings protected from corrosion	Yes	Yes	Yes	Yes
Corrosion protection method	Impressed Current	Impressed Current	Impressed Current	Impressed Current
Flex connector , Piping extensions, and/or other metal fittings CP Installation Date	1/1/1994	1/1/1994	1/1/1994	1/1/1994
Dielectric Coating Installed (If tank installed after 12/22/88	N/A	N/A	N/A	N/A

Pipe Corrosion Protection	Tank #1(KERO)	Tank #2(MID)	Tank #3(PREM)	Tank #4(REG)
DWM notified of current CP method	Yes	Yes	Yes	Yes
CP method	Impressed Current	Impressed Current	Impressed Current	Impressed Current
if other, Description				
CP Installation Date	1/1/1994	1/1/1994	1/1/1994	1/1/1994
Dielectric Coating Installed (If piping installed after 12/22/88	N/A	N/A	N/A	N/A

Dispenser Corrosion Protection	Dispenser #1(KERO)	Dispenser #2(PLUS)	Dispenser #3(PREM)	Dispenser #4(REG)
Flex Connector , Piping Extensions, and/or other metal fittings Present	Other Metal	Other Metal	Other Metal	Other Metal
Flex connector isolated from ground	N/A	N/A	N/A	N/A
Source of verification of CP for Flex Connectors, piping extensions and/or other metal fittings	CP Test Results	CP Test Results	CP Test Results	CP Test Results
if other, Description				
Piping extensions and/or other metal fittings are isolated from ground	No	No	No	No
Flex Connectors, Piping extensions and/or other metal fittings protected from corrosion	Yes	Yes	Yes	Yes

Dispenser Corrosion Protection	Dispenser #1(KERO)	Dispenser #2(PLUS)	Dispenser #3(PREM)	Dispenser #4(REG)
Corrosion protection method	Impressed Current	Impressed Current	Impressed Current	Impressed Current
Flex connector, Piping extensions, and/or other metal fittings CP Installation Date	1/1/1994	1/1/1994	1/1/1994	1/1/1994
Source of Information for verification of corrosion protection for Riser pipe and other metal piping if other, Description	CP Test Results	CP Test Results	CP Test Results	CP Test Results

CP Conclusions	
CP Requirements Met?	Yes
Issues	

Impressed Current Systems	System # 1
Applies to Tanks	#1(KERO), #2(MID), #3(PREM), #4(REG)
Current Voltage (Gauge)	8.0000
Current Amperage (Gauge)	1.1000
Current Voltage (Multimeter)	
Measured Shunt Voltage (mV)	
Rectifier Shunt Factor (Amps/mV)	
Amps - Calculated	
Last three 60-day readings available	Yes
System operating properly	Yes
If no, select all that apply	
If other, describe	
Hour meter reading?	
Hour meter installed	No

CP Tests	Test #1
Applies to Tanks	#1(KERO), #2(MID), #3(PREM), #4(REG)
Portion of System Tested	Piping, Tanks
Date of last Corrosion Protection Test	8/13/2015
As Left Voltage	8.0000
As Left Current	1.1000
CP Test Result	Pass
Was CP Test done in accordance with National Standard?	Yes
CP Tester Name	David Helms
Certificate Number	SEE043014-210
Certifying Organization	SEE
CP Testing Company Name	Enviro Consulting
CP Testing Company Phone	(704) 721-0101
UST7 form for last CP test submitted to DWM	Yes

SPILL PREVENTION

Has DWM been notified of spill methods?	Yes
---	-----

Spill/Overfill Details	Tank #1(KERO)	Tank #2(MID)	Tank #3(PREM)	Tank #4(REG)
Is a drop tube present?	Yes	Yes	Yes	Yes
Type of Stage I vapor recovery?	Not Required	Dual Point	Dual Point	Dual Point

Local Fill	Tank #1(KERO)	Tank #2(MID)	Tank #3(PREM)	Tank #4(REG)
Does Tank have a Remote Fill?	No	No	No	No
Spill Protection	Catchment Basin	Catchment Basin	Catchment Basin	Catchment Basin
Is spill prevention equipment provided and verified?	Yes	Yes	Yes	Yes
Manufacturer/Model	Fairfield Ind: SCM-XXX Series	EBW: Defender 705 Series	EBW: Defender 705 Series	Fairfield Ind: SCM-XXX Series
If other, describe				
Spill bucket is double-walled? (If installed after 11/1/07)	N/A	N/A	N/A	N/A
Spill bucket is isolated or made of non-corroding materials? (If installed after 11/1/07)	N/A	N/A	N/A	N/A
Date spill prevention provided	1/1/1994	1/1/1994	1/1/1994	1/1/1994
Is spill prevention operating properly?	Yes	Yes	Yes	No
If No, select all that apply				Fuel present
If other, describe				

OVERFILL PREVENTION

Has DWM been notified of overfill methods?	Yes
---	-----

Overfill Control	Tank #1(KERO)	Tank #2(MID)	Tank #3(PREM)	Tank #4(REG)
Is overfill prevention equipment provided and verified?	Yes	Yes	Yes	Yes
Date overfill control provided	1/1/1994	1/1/1994	1/1/1994	1/1/1994
Type of overfill equipment	Auto Shutoff Device	Auto Shutoff Device	Auto Shutoff Device	Auto Shutoff Device
Source of information for overfill control verification	Visual observation	Visual observation	Visual observation	Visual observation
If other, describe				
Is overfill control operating properly?	Yes	Yes	Yes	Yes
If No, select all that apply				
If other, describe				
Annual overfill check date(If installed after 11/1/07) (UST-22A)				
Annual overfill check results(UST-22A)				

Dispenser Sumps	Dispenser #1(KERO)	Dispenser #2(PLUS)	Dispenser #3(PREM)	Dispenser #4(REG)
Are containment	No	No	No	No

Dispenser Sumps	Dispenser #1(KERO)	Dispenser #2(PLUS)	Dispenser #3(PREM)	Dispenser #4(REG)
sumps present?				
Installation Date				
Sump Manufacturer				
If Other (Specify)				
Sump Construction Type				
Sump Construction Material				
If Other (Specify)				
Are containment sumps monitored?				
Is monitoring required per 2N .0900?	No	No	No	No
Piping components and/or STP were installed/replaced on or after 11/1/07?	No	No	No	No
Are spills or small weeps evident in sumps?	No	No	No	No
Are single wall piping components located in containment sump? (If installed after 11/1/07)				

SITING AND SECONDARY CONTAINMENT

Siting And Sec.Containment-General	Tank #1(KERO)	Tank #2(MID)	Tank #3(PREM)	Tank #4(REG)
UST system upgraded with corrosion protection, spill and overfill before 1/1/91?	No	No	No	No
UST system and/or piping are located within siting and secondary containment areas?	No	No	No	No

LEAK DETECTION

General	Tank #1(KERO)	Tank #2(MID)	Tank #3(PREM)	Tank #4(REG)
DWM notified of leak detection method?	Yes	Yes	Yes	Yes
Piping type	Suction System	Suction System	Suction System	Suction System
Suction Check Type				
Type LLD present.	Not Required	Not Required	Not Required	Not Required
Tank – Primary leak detection method	Statistical Inventory Reconciliation (SIR)	Statistical Inventory Reconciliation (SIR)	Statistical Inventory Reconciliation (SIR)	Statistical Inventory Reconciliation (SIR)
Tank - if other, specify				
Tank - Primary LD install date	1/1/1994	1/1/1994	1/1/1994	1/1/1994
Tank – Secondary leak detection method				
Tank - if other, specify				
Piping - Primary leak	Statistical Inventory	Statistical Inventory	Statistical Inventory	Statistical Inventory

General	Tank #1(KERO)	Tank #2(MID)	Tank #3(PREM)	Tank #4(REG)
detection method	Reconciliation (SIR)	Reconciliation (SIR)	Reconciliation (SIR)	Reconciliation (SIR)
Piping - if other, specify				
Piping - Primary LD install date				
Piping - Secondary leak detection method				
Piping - if other, specify				

PIPING LEAK DETECTION

Suction Piping	Tank #1(KERO)	Tank #2(MID)	Tank #3(PREM)	Tank #4(REG)
Last LTT Test Date				
LTT Test Result				
Does test result indicate suspected release?				

STATISTICAL INVENTORY RECONCILIATION

SIR Systems	SIR #1
SIR Manufacturer/Model	Simmons.: SIR 5.7 LM
If other, describe	
SIR Third Party Certified?	Yes

SIR Monthly LD	Tank #1(KERO)	Tank #2(MID)	Tank #3(PREM)	Tank #4(REG)
2016 Oct	Pass	Pass	Pass	Pass
2016 Sep	Pass	Pass	Pass	Pass
2016 Aug	Pass	Pass	Pass	Pass
2016 Jul	Pass	Pass	Pass	Pass
2016 Jun	Pass	Pass	Pass	Pass
2016 May	Pass	Pass	Pass	Pass
2016 Apr	Pass	Pass	Pass	Pass
2016 Mar	Pass	Pass	Pass	Pass
2016 Feb	Pass	Pass	Pass	Pass
2016 Jan	Pass	Pass	Pass	Pass
2015 Dec	Pass	Pass	Pass	Pass
2015 Nov	Pass	Pass	Pass	Pass

SIR Conclusions	
Leak Detection Requirements Met?	Yes
Do the results indicate a suspected release?	
Issues	

Electronic Data Collection	EIDC System #1
----------------------------	----------------

Electronic Data Collection	EIDC System #1
EIDC Manufacturer/Model	BLANK
If other, describe	
Tanks	#1(KERO), #2(MID), #3(PREM), #4(REG)

TRANSPORTER/FUEL DELIVERY INFORMATION

Delivery Information	Tank #1(KERO)	Tank #2(MID)	Tank #3(PREM)	Tank #4(REG)
All deliveries made to permitted tanks	Yes	Yes	Yes	Yes



Appendix C

GEL Solutions Geophysical Survey Report

January 11, 2019

Mr. David Graham
Hart & Hickman, PC
2923 South Tryon Street, Suite 100
Charlotte, NC 28203

Re: Report for Geophysical Survey to Identify Underground Storage Tanks and Underground Utilities
285 Old Greensboro Road
Lexington, North Carolina 27295

Dear Mr. Graham,

GEL Solutions appreciates the opportunity to provide Hart & Hickman, PC with this report of our geophysical investigation for the referenced project. This investigation was designed to determine the potential presence of underground storage tanks (USTs) at the site and underground utilities that would obstruct drilling activities at the site. The geophysical field investigation was successfully performed on December 18, 2018.

1.0 Summary of Results

One subsurface anomaly was identified in the geophysical data. Figure 1 depicts the approximate location and size of the anomaly, as well as the known metallic surface objects present at the time of the investigation. The anomaly was denoted as four (4) "Known USTs" with respect to the UST level of confidence rating. Any anomalies not denoted with the UST level of confidence rating in post processed data (Figure 1) are consistent with known metallic surface objects, utilities, and/or cultural interference. Although geophysical methods provide a high level of assurance for the location of subsurface objects, the possibility exists that not all features can or will be identified. Therefore, due caution should be used when performing any subsurface excavation, and GEL Solutions will not be liable for any damages that may occur. Descriptions of the technologies employed during this geophysical investigation are provided below.

2.0 Overview of Geophysical Investigation

The geophysical evaluation included the deployment of radio-frequency electromagnetic (EM), ground penetrating radar (GPR) and time-domain electromagnetic (TDEM) technologies to the site. These technologies were used in concert with one another in order to identify the presence of potential underground utilities and USTs at the site. A brief description of each technology is presented in the following paragraphs.

Radio-Frequency Electromagnetic

Radio-Frequency EM utility locating equipment consists of a transmitter and a dual-function receiver. The receiver can be operated in a "passive" mode or in an "active" mode. The two modes of operation provide various levels of detection capabilities depending on the specific target or application.

The EM system is operated in the "active" mode by either inducting or conducting a signal into the underground utility to be traced. A transmitter is placed over and in line with a suspected buried utility. The transmitter induces a signal, which propagates along the buried utility. As the receiver is moved back and forth across the suspected path of the utility, the trace signal induces a signal into the receiver's coil sensor. A visual and audio response indicates when the receiver is directly over the buried utility.

Another means of detecting in the “active” mode utilizes a method to “conduct” a signal within the buried utility. To accomplish this, a cable from the transmitter is clamped onto an exposed section of the buried utility and a signal propagates along the buried line. This technique minimizes any interference caused by parasitic emissions from adjacent cables in congested areas. When the system is utilized in the “passive” mode, the receiver is responding to a 60-Hertz cycle current energized by underground utilities.

Interference can and may occur when buried utilities intersect or are adjacent to each other. This effect, referred to as “bleed-off,” may provide a false response to the identification of the tracked utility. “Bleed-off” is caused by utilities that may be energized in the “active” or “passive” mode.

Ground Penetrating Radar Methodology

An Impulse Crossover GPR system configured with a 170-Megahertz (MHz) antenna array and a 600-MHz antenna array was used in this investigation. GPR is an EM geophysical method that detects interfaces between subsurface materials with differing dielectric constants. The GPR system consists of an antenna which houses the transmitter and receiver, a digital control unit which both generates and digitally records the GPR data, and a color video monitor to view data as it is collected in the field.

The transmitter radiates repetitive short-duration EM waves (at radar frequencies) into the earth from an antenna moving across the ground surface. These radar waves are reflected back to the receiver from the interface of materials with different dielectric constants. The intensity of the reflected signal is a function of the contrast in the dielectric constant between the materials, the conductivity of the material through which the wave is traveling, and the frequency of the signal.

Subsurface features that commonly cause such reflections are: 1) natural geologic conditions, such as changes in sediment composition, bedding, and cementation horizons and voids; or 2) unnatural changes to the subsurface such as disturbed soils, soil backfill, buried debris, tanks, pipelines, and utilities. The digital control unit processes the signal from the receiver and produces a continuous cross-section of the subsurface interface reflection events.

GPR data profiles were collected along transects covering the entire project limit. Depth of investigation of the GPR signal is highly site-specific and is limited by signal attenuation (absorption) in the subsurface materials. Signal attenuation is dependent upon the electrical conductivity of the subsurface materials. Signal attenuation is greatest in materials with relatively high electrical conductivities such as clays, brackish groundwater, or groundwater with a high dissolved solid content from natural or manmade sources. Signal attenuation is lowest in relatively low conductivity materials such as dry sand or rock. Depth of investigation is also dependent on the antenna's transmitting frequency. Depth of investigation generally increases as transmitting frequency decreases; however, the ability to resolve smaller subsurface features is diminished as frequency is decreased. The average depth of penetration at this site was approximately 2-5 feet below the surface.

The GPR antenna used at this site is internally shielded from aboveground interference sources. Accordingly, the GPR response is not affected by overhead power lines, metallic buildings, or nearby objects.

Time Domain Electromagnetic Methodology

TDEM methods measure the electrical conductivity of subsurface materials. The conductivity is determined by inducing (from a transmitter) a time or frequency-varying magnetic field and measuring (with a receiver) the amplitude and phase shift of an induced secondary magnetic field. The secondary magnetic field is created by subsurface conductive materials behaving as an inductor as the primary magnetic field is passed through them.

The Geonics EM-61 system used in this investigation operates within these principles. However, the EM-61 TDEM system can discriminate between moderately conductive earth materials and very conductive metallic targets. The EM-61 consists of a portable coincident loop time domain transmitter and receiver with a 1.0-meter by 0.5-meter coil system. The EM-61 generates 150 pulses per second and measures the response from the ground after transmission or between pulses. The secondary EM responses from metallic targets are of longer duration than those created by conductive earth materials. By recording the later time EM arrivals, only the response from metallic targets is measured, rather than the field generated by the earth material.

3.0 Field Procedures and Results

The geophysical field investigation was successfully performed on December 18, 2018 at 285 Old Greensboro Road in Lexington, North Carolina. The area of investigation was approximately 0.62 acres. Interpretation of the GPR data was conducted in the field and any potential anomalies were marked in the field. GPR data processing typically included band pass filtering, background removal, horizontal smoothing, and gain adjustments. TDEM was also used to scan the project site. Any EM anomalies detected during field activities that were indicative of buried metallic objects were also marked in the field.

One subsurface geophysical anomaly was detected during the investigation as depicted in Figure 1. The anomaly was indicative of four (4) "Known USTs" with respect to the UST level of confidence rating system based on TDEM and GPR investigation. Figure 1 depicts the approximate location and size of the anomaly as well as the known metallic surface objects present at the time of the investigation. Known metallic surface objects in Figure 1 are noted with a brief identifiable description.

The UST level of confidence rating system was developed by NCDOT in May 2009 ("Known UST," "Probable UST," "Possible UST," or "No Confidence") and was used in the interpretation and presentation of this report.

Additional TDEM responses were present in the data but correlated to surface metallic debris and/or above ground metal structures and are not considered to be representative of "Potential USTs."

The locations of underground utilities were designated using EM and GPR equipment, and their locations were marked with paint on the land surface for soil boring activities. Positioning data was obtained using a Trimble R10 GPS antenna.

4.0 Closing

GEL Solutions appreciates the opportunity to assist Hart & Hickman with this project. If you have any questions or need further information regarding the project, please do not hesitate to call me at (828) 782-3523.

Yours very truly,



William Adgate
Senior Project Manager

Attachments: Site Photos, Figure 1
fc: HAHIO0118 Report.pdf

**Attachment I
Site Photos**



Photo 1: Looking South – Four Known UST's with approximate extents in yellow



Photo 2: Looking North – Fuel Dispenser Island and boring locations within immediate vicinity



Photo 3: Looking South – Metallic surface features



Photo 4: Looking Northwest – Metallic surface features



Photo 5: Looking Northeast – Metallic surface features



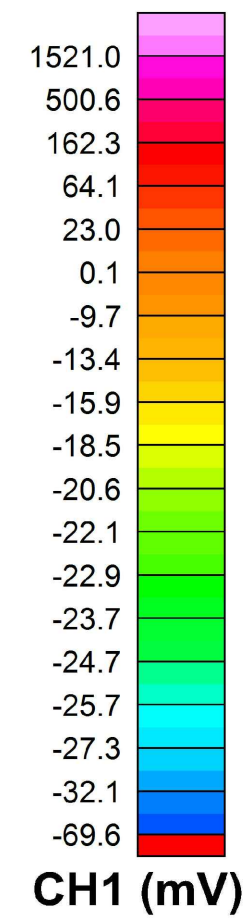
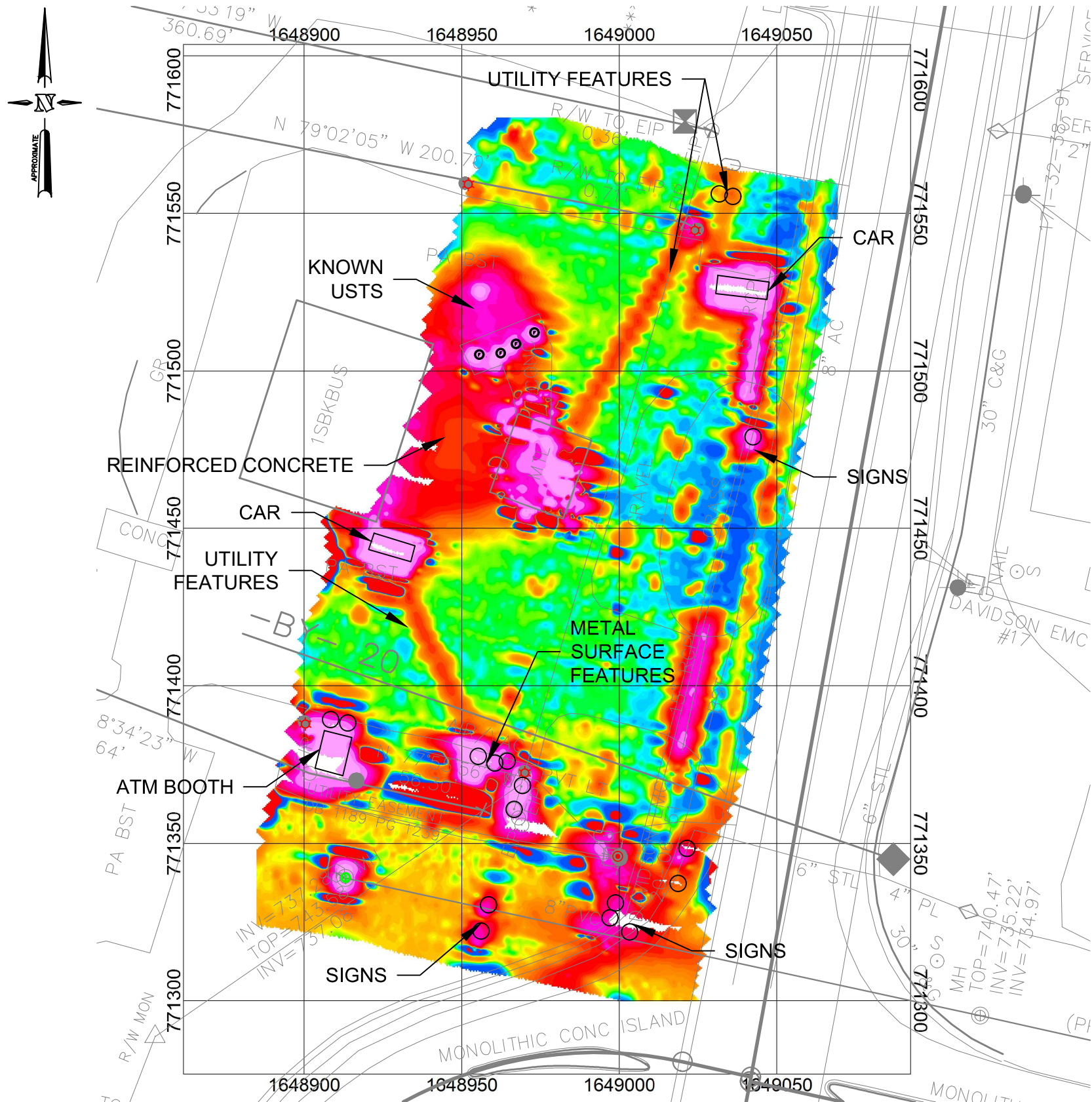
Photo 6: Looking West – Metallic surface features and ATM Booth



Photo 7: Looking North – Manhole Lid and ATM Booth



Photo 8: Looking North – Reinforced concrete storm drain culvert and stationary vehicle

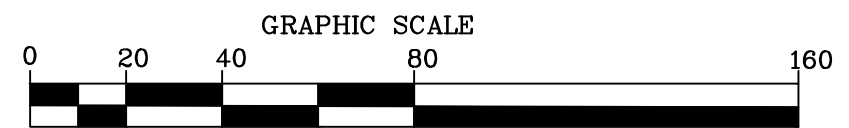


LEGEND

	METALLIC SURFACE FEATURE
	WATER METER
	LIGHT POLE
	UTILITY POLE
	FUEL MANHOLE
	SANITARY SEWER MANHOLE

NOTES

- 1) UNDERGROUND FEATURES WERE LOCATED USING VISUAL EVIDENCE, GROUND PENETRATING RADAR (GPR), AND TIME DOMAIN ELECTROMAGNETIC (TDEM) METHODS. OTHER BURIED UTILITIES AND STRUCTURES MAY EXIST BUT WERE NOT DETECTED DUE TO LIMITATIONS OF THE GEOPHYSICAL METHODS, SITE ACCESS, AND/OR HIGH TARGET CONGESTION. THEREFORE, DUE CAUTION SHOULD BE USED WHEN PERFORMING SUBSURFACE EXCAVATION ACTIVITIES WHERE POTENTIAL CONFLICTS EXIST. GEL SOLUTIONS IS NOT RESPONSIBLE FOR DAMAGES THAT MAY OCCUR. IDENTIFYING THE LOCATION OF SOME UTILITIES MAY ONLY BE POSSIBLE WITH VACUUM OR OTHER EXCAVATION METHODS.
- 2) FIELD SURVEY CONDUCTED ON 12.18.18.
- 3) DATA FROM GEONICS, LTD. EM-61 MKII A.



(IN FEET)
1 INCH = 40 ft.

GEL Solutions
55 SHILOH ROAD, SUITE 6
ASHEVILLE, NC 28803
(828) 782-3523
WWW.GEL-SOLUTIONS.COM

PROJECT: HAH00118

UNDERGROUND STORAGE TANK (UST) INVESTIGATION
285 OLD GREENSBORO ROAD
LEXINGTON, NORTH CAROLINA

DATE: 1/11/19

SITE SKETCH
RESULTS OF GEOPHYSICAL INVESTIGATION

DRAWN BY: WSD APPRV. BY: EMA

FIGURE
1

Appendix D
Soil Boring Logs



Client: **NC DOT**
 Project: **ROW-601**
 Address: **285 Old Greensboro Road,
 Thomasville, NC**

BORING LOG
 Boring No. **7-1**
 Page: **1 of 1**

Drilling Start Date: **12/26/18**
 Drilling End Date: **12/26/18**
 Drilling Company: **GEX**
 Drilling Method: **Direct Push**
 Drilling Equipment: **6620 DT**
 Driller: **Josh Bowers**
 Logged By: **Alex Leftiz**

Boring Depth (ft): **9.5**
 Boring Diameter (in): **2.25**
 Sampling Method(s): **Direct Push, Grab**
 DTW During Drilling (ft):
 DTW After Drilling (ft):
 Ground Surface Elev. (ft):
 Location (X,Y):

DEPTH (ft)	LITHOLOGY	WATER LEVEL	BORING COMPLETION	COLLECT				SOIL/ROCK VISUAL DESCRIPTION	MEASURE		DEPTH (ft)
				Sample Type	Time	Blow Counts	Recovery (ft)		PID (ppm)	Lab Sample	
0								(0') Concrete			0
								(3') Sandy SILT (ML); trace fine gravel, trace clay, soft, moist, yellowish-brown			0.6
								(6.5') Silty SAND (SM); medium dense, dry, black and white, PARTIALLY WEATHERED ROCK, probe refusal			1.1
								(9.5') Boring terminated			1.1
15											15

NOTES: Borehole cleared to 5.0' using hand auger. Soil sample collected from 4-6 ft bgs for laboratory analysis.



Client: NC DOT
 Project: ROW-601
 Address: 285 Old Greensboro Road, Thomasville, NC

BORING LOG
 Boring No. 7-2
 Page: 1 of 1

Drilling Start Date: 12/26/18
 Drilling End Date: 12/26/18
 Drilling Company: GEX
 Drilling Method: Direct Push
 Drilling Equipment: 6620 DT
 Driller: Josh Bowers
 Logged By: Alex Lefitz

Boring Depth (ft): 8.0
 Boring Diameter (in): 2.25
 Sampling Method(s): Direct Push, Grab
 DTW During Drilling (ft):
 DTW After Drilling (ft):
 Ground Surface Elev. (ft):
 Location (X,Y):

DEPTH (ft)	LITHOLOGY	WATER LEVEL	BORING COMPLETION	COLLECT				SOIL/ROCK VISUAL DESCRIPTION	MEASURE		DEPTH (ft)
				Sample Type	Time	Blow Counts	Recovery (ft)		PID (ppm)	Lab Sample	
0	Asphalt							(0') Asphalt			0
10.1								(0.7') Silty SAND (SM); trace clay, loose, dry, white gray, SAPROLITE			
9.8									7-2 (3-4)		
9.7								(4') Silty SAND (SM); trace fine-coarse gravel, trace clay, medium dense, dry, white gray, SAPROLITE to PARTIALLY WEATHERED ROCK			
5											
0.5											
0.8											
7.5								(7.5') SILT (ML); little clay, medium stiff, dry, yellowish-brown			
7.75								(7.75') Silty SAND (SM); trace fine-coarse gravel, trace clay, medium dense, dry, white gray, SAPROLITE to PARTIALLY WEATHERED ROCK, probe refusal			
8								(8') Boring terminated			
15											15

NOTES: Borehole precleared to 5.0' using hand auger. Soil sample collected from 3-4 ft bgs for laboratory analysis.



Client: NC DOT
 Project: ROW-601
 Address: 285 Old Greensboro Road,
 Thomasville, NC

BORING LOG
 Boring No. 7-3
 Page: 1 of 1

Drilling Start Date: 12/26/18
 Drilling End Date: 12/26/18
 Drilling Company: GEX
 Drilling Method: Direct Push
 Drilling Equipment: 6620 DT
 Driller: Josh Bowers
 Logged By: Alex Lefitz

Boring Depth (ft): 12.0
 Boring Diameter (in): 2.25
 Sampling Method(s): Direct Push, Grab
 DTW During Drilling (ft):
 DTW After Drilling (ft):
 Ground Surface Elev. (ft):
 Location (X,Y):

DEPTH (ft)	LITHOLOGY	WATER LEVEL	BORING COMPLETION	COLLECT				SOIL/ROCK VISUAL DESCRIPTION	MEASURE		DEPTH (ft)
				Sample Type	Time	Blow Counts	Recovery (ft)		PID (ppm)	Lab Sample	
0								(0') Concrete			0
								(1.5') Silty SAND (SM); trace fine-coarse gravel, loose, dry, white and gray, strong petroleum odor			490.2
											1,940
											1,908
5								(6') Silty SAND (SM); trace clay, loose, dry, white and gray, strong petroleum odor			1,788
											1,931
10											1,922
								(12') Boring terminated			
15											15

NOTES: Borehole precleared to 5.0' using hand auger. Soil sample collected from 2-4 ft bgs for laboratory analysis.



Client: NC DOT
 Project: ROW-601
 Address: 285 Old Greensboro Road,
 Thomasville, NC

BORING LOG
 Boring No. 7-4
 Page: 1 of 1

Drilling Start Date: 12/26/18
 Drilling End Date: 12/26/18
 Drilling Company: GEX
 Drilling Method: Direct Push
 Drilling Equipment: 6620 DT
 Driller: Josh Bowers
 Logged By: Alex Lefitz

Boring Depth (ft): 12.0
 Boring Diameter (in): 2.25
 Sampling Method(s): Direct Push, Grab
 DTW During Drilling (ft):
 DTW After Drilling (ft):
 Ground Surface Elev. (ft):
 Location (X,Y):

DEPTH (ft)	LITHOLOGY	WATER LEVEL	BORING COMPLETION	COLLECT				SOIL/ROCK VISUAL DESCRIPTION	MEASURE		DEPTH (ft)
				Sample Type	Time	Blow Counts	Recovery (ft)		PID (ppm)	Lab Sample	
0	Asphalt							(0') Asphalt			0
3.5								(0.7') Silty SAND (SM); trace fine-coarse gravel, trace clay, medium dense, dry, orange brown and black, trace relic structure present, SAPROLITE			3.5
5											5
10.4										7-4 (6-8)	10.4
10.4											10.4
12.0											12.0
15								(11.5') SILT (ML); soft, dry, yellowish-brown			15
								(12') Boring terminated			

NOTES: Borehole precleared to 5.0' using hand auger. Soil sample collected from 6-8 ft bgs for laboratory analysis.



Client: NC DOT
 Project: ROW-601
 Address: 285 Old Greensboro Road,
 Thomasville, NC

BORING LOG
 Boring No. 7-5
 Page: 1 of 1

Drilling Start Date: 12/26/18
 Drilling End Date: 12/26/18
 Drilling Company: GEX
 Drilling Method: Direct Push
 Drilling Equipment: 6620 DT
 Driller: Josh Bowers
 Logged By: Alex Lefitz

Boring Depth (ft): 12.0
 Boring Diameter (in): 2.25
 Sampling Method(s): Direct Push, Grab
 DTW During Drilling (ft):
 DTW After Drilling (ft):
 Ground Surface Elev. (ft):
 Location (X,Y):

DEPTH (ft)	LITHOLOGY	WATER LEVEL	BORING COMPLETION	COLLECT				SOIL/ROCK VISUAL DESCRIPTION	MEASURE		DEPTH (ft)
				Sample Type	Time	Blow Counts	Recovery (ft)		PID (ppm)	Lab Sample	
0								(0') Asphalt	0.8	7-5 (0-2)	0
								(0.7') Sandy SILT (ML); trace fine-coarse gravel, trace clay, soft, dry, Brown Gray			
								(2') Sandy SILT (ML); trace fine-coarse gravel, trace clay, soft, dry, gray	0.9		
5									1.2		
								(6') As Above: relic structure present, SAPROLITE	0.8		
10									1.4		
									1.8		
15								(12') Boring terminated			

NOTES: Borehole precleared to 5.0' using hand auger. Soil sample collected from 0-2 ft bgs for laboratory analysis.



Client: NC DOT
 Project: ROW-601
 Address: 285 Old Greensboro Road,
 Thomasville, NC

BORING LOG
 Boring No. 7-6
 Page: 1 of 1

Drilling Start Date: 12/26/18
 Drilling End Date: 12/26/18
 Drilling Company: GEX
 Drilling Method: Direct Push
 Drilling Equipment: 6620 DT
 Driller: Josh Bowers
 Logged By: Alex Leftitz

Boring Depth (ft): 12.0
 Boring Diameter (in): 2.25
 Sampling Method(s): Direct Push, Grab
 DTW During Drilling (ft):
 DTW After Drilling (ft):
 Ground Surface Elev. (ft):
 Location (X,Y):

DEPTH (ft)	LITHOLOGY	WATER LEVEL	BORING COMPLETION	COLLECT				SOIL/ROCK VISUAL DESCRIPTION	MEASURE		DEPTH (ft)
				Sample Type	Time	Blow Counts	Recovery (ft)		PID (ppm)	Lab Sample	
0								(0') Lean CLAY (CL); medium plasticity, medium stiff, moist, orange brown, trace organic matter	2.9	7-6 (0-2)	0
								(3') Sandy SILT (ML); trace clay, soft, dry, gray and tan, SAPROLITE to PARTIALLY WEATHERED ROCK	0.9		
									0.4		
5									11.8	S-6 (6-8)	5
									8.3		
									9.9		10
								(12') Boring terminated			
15											15

NOTES: Borehole precleared to 5.0' using hand auger. Soil sample collected from 0-2 ft bgs and 6-8 ft bgs for laboratory analysis.



Client: NC DOT
 Project: ROW-601
 Address: 285 Old Greensboro Road,
 Thomasville, NC

BORING LOG
 Boring No. 7-7
 Page: 1 of 1

Drilling Start Date: 12/26/18
 Drilling End Date: 12/26/18
 Drilling Company: GEX
 Drilling Method: Direct Push
 Drilling Equipment: 6620 DT
 Driller: Josh Bowers
 Logged By: Alex Lefitz

Boring Depth (ft): 12.0
 Boring Diameter (in): 2.25
 Sampling Method(s): Direct Push, Grab
 DTW During Drilling (ft):
 DTW After Drilling (ft):
 Ground Surface Elev. (ft):
 Location (X,Y):

DEPTH (ft)	LITHOLOGY	WATER LEVEL	BORING COMPLETION	COLLECT				SOIL/ROCK VISUAL DESCRIPTION	MEASURE		DEPTH (ft)
				Sample Type	Time	Blow Counts	Recovery (ft)		PID (ppm)	Lab Sample	
0								(0') Sandy SILT (ML); trace fine-coarse gravel, trace clay, soft, dry, orange brown, trace organic matter	7.7	7-7 (0-2)	0
								(2') Silty SAND (SM); trace fine-coarse gravel, trace clay, loose, dry, orange brown	5.3		
								(4') Sandy SILT (ML); trace fine-coarse gravel, trace clay, medium stiff, dry, gray and white, SAPROLITE to PARTIALLY WEATHERED ROCK	4.1		
5									8.4		
									6.6		
10									12.1		
								(12') Boring terminated			
15											15

NOTES: Borehole precleared to 5.0' using hand auger. Soil sample collected from 0-2 ft bgs for laboratory analysis.



Client: NC DOT
 Project: ROW-601
 Address: 285 Old Greensboro Road,
 Thomasville, NC

BORING LOG
 Boring No. 7-8
 Page: 1 of 1

Drilling Start Date: 12/26/18
 Drilling End Date: 12/26/18
 Drilling Company: GEX
 Drilling Method: Direct Push
 Drilling Equipment: 6620 DT
 Driller: Josh Bowers
 Logged By: Alex Lefitz

Boring Depth (ft): 12.0
 Boring Diameter (in): 2.25
 Sampling Method(s): Direct Push, Grab
 DTW During Drilling (ft):
 DTW After Drilling (ft):
 Ground Surface Elev. (ft):
 Location (X,Y):

DEPTH (ft)	LITHOLOGY	WATER LEVEL	BORING COMPLETION	COLLECT				SOIL/ROCK VISUAL DESCRIPTION	MEASURE		DEPTH (ft)
				Sample Type	Time	Blow Counts	Recovery (ft)		PID (ppm)	Lab Sample	
0	Asphalt							(0') Asphalt			0
0.7	Sandy SILT (ML)							(0.7') Sandy SILT (ML); some clay, soft, dry, orange and gray, SAPROLITE			7.6
4.0	Silty SAND (SM)							(4') Silty SAND (SM); trace fine-coarse gravel, trace clay, medium dense, dry, gray and white, SAPROLITE to PARTIALLY WEATHERED ROCK		7-8 (4-6)	10.0
5.0											8.5
10.0											11.7
11.5											11.5
12.0								(12') Boring terminated			15

NOTES: Borehole precleared to 5.0' using hand auger. Soil sample collected from 4-6 ft bgs for laboratory analysis.



Client: **NC DOT**
 Project: **ROW-601**
 Address: **285 Old Greensboro Road,
 Thomasville, NC**

BORING LOG
 Boring No. **7-9**
 Page: **1 of 1**

Drilling Start Date: **12/26/18**
 Drilling End Date: **12/26/18**
 Drilling Company: **GEX**
 Drilling Method: **Direct Push**
 Drilling Equipment: **6620 DT**
 Driller: **Josh Bowers**
 Logged By: **Alex Lefitz**

Boring Depth (ft): **8.0**
 Boring Diameter (in): **2.25**
 Sampling Method(s): **Direct Push, Grab**
 DTW During Drilling (ft):
 DTW After Drilling (ft):
 Ground Surface Elev. (ft):
 Location (X,Y):

DEPTH (ft)	LITHOLOGY	WATER LEVEL	BORING COMPLETION	COLLECT				SOIL/ROCK VISUAL DESCRIPTION	MEASURE		DEPTH (ft)
				Sample Type	Time	Blow Counts	Recovery (ft)		PID (ppm)	Lab Sample	
0								(0') Sandy SILT (ML); medium stiff, moist, dark brown, some organic matter	7.2	7-9 (0-2)	0
								(1') Sandy SILT (ML); trace fine-coarse gravel, trace clay, medium stiff, dry, greenish gray and white	7.4		
								(4') Sandy SILT (ML); medium stiff, dry, orange white, probe refusal	8.5		
5									8.2		
								(8') Boring terminated			
15											15

NOTES: Borehole precleared to 5.0' using hand auger. Soil sample collected from 0-2 ft bgs for laboratory analysis.



Client: NC DOT
 Project: ROW-601
 Address: 285 Old Greensboro Road,
 Thomasville, NC

BORING LOG
 Boring No. 7-10
 Page: 1 of 1

Drilling Start Date: 12/26/18
 Drilling End Date: 12/26/18
 Drilling Company: GEX
 Drilling Method: Direct Push
 Drilling Equipment: 6620 DT
 Driller: Josh Bowers
 Logged By: Alex Lefitz

Boring Depth (ft): 9.0
 Boring Diameter (in): 2.25
 Sampling Method(s): Direct Push, Grab
 DTW During Drilling (ft):
 DTW After Drilling (ft):
 Ground Surface Elev. (ft):
 Location (X,Y):

DEPTH (ft)	LITHOLOGY	WATER LEVEL	BORING COMPLETION	COLLECT				SOIL/ROCK VISUAL DESCRIPTION	MEASURE		DEPTH (ft)
				Sample Type	Time	Blow Counts	Recovery (ft)		PID (ppm)	Lab Sample	
0	Asphalt							(0') Asphalt	11.8	7-10 (0-2)	0
0.7	Silty SAND (SM); trace fine-coarse gravel, trace clay, loose, dry, brown gray							(0.7') Silty SAND (SM); trace fine-coarse gravel, trace clay, loose, dry, brown gray	6.7		
5	Silty SAND (SM); some fine-coarse gravel, trace clay, dense, dry, gray and white, PARTIALLY WEATHERED ROCK, probe Refusal							(5') Silty SAND (SM); some fine-coarse gravel, trace clay, dense, dry, gray and white, PARTIALLY WEATHERED ROCK, probe Refusal	5.3		
9	Boring terminated							(9') Boring terminated	10.9		
15									13.0		15

NOTES: Borehole precleared to 5.0' using hand auger. Soil sample collected from 0-2 ft bgs for laboratory analysis.



Client: **NC DOT**
 Project: **ROW-601**
 Address: **285 Old Greensboro Road,
 Thomasville, NC**

BORING LOG
 Boring No. **7-11**
 Page: **1 of 1**

Drilling Start Date: **12/26/18**
 Drilling End Date: **12/26/18**
 Drilling Company: **GEX**
 Drilling Method: **Direct Push**
 Drilling Equipment: **6620 DT**
 Driller: **Josh Bowers**
 Logged By: **Alex Lefitz**

Boring Depth (ft): **7.5**
 Boring Diameter (in): **2.25**
 Sampling Method(s): **Direct Push, Grab**
 DTW During Drilling (ft):
 DTW After Drilling (ft):
 Ground Surface Elev. (ft):
 Location (X,Y):

DEPTH (ft)	LITHOLOGY	WATER LEVEL	BORING COMPLETION	COLLECT				SOIL/ROCK VISUAL DESCRIPTION	MEASURE		DEPTH (ft)
				Sample Type	Time	Blow Counts	Recovery (ft)		PID (ppm)	Lab Sample	
0								(0') Asphalt			0
								(0.7') Silty SAND (SM); trace fine-coarse gravel, medium dense, dry, white orange gray, probe refusal			
											4.4
											6.5
											4.5
											4.7
								(7.5') Boring terminated			
15											15

NOTES: Borehole precleared to 5.0' using hand auger. Soil sample collected from 2-4 ft bgs for laboratory analysis.

Appendix E
Laboratory Analytical Report



Hydrocarbon Analysis Results

Client: HART & HICKMAN
Address: 2923 S TRYON STREET
 SUITE 100

Samples taken Wednesday, December 26, 2018
Samples extracted Wednesday, December 26, 2018
Samples analysed Thursday, December 27, 2018

Contact: DAVE GRAHAM
 COLLECTED BY ARC
Project: ROW-601

Operator NICK HENDRIX

U00902

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
										C5 - C10	C10 - C18	C18	
s	7 - 1 (4-6)	26.5	<0.66	<0.66	<0.66	<0.66	<0.13	<0.21	<0.027	0	0	0	(FCM)
s	7 - 3 (2-4)	25.0	508.6	1318	2368	3686	100.2	4	<0.025	99.6	0.3	0.1	Deg.Gas 86.3%,(FCM)
s	7 - 2 (3-4)	24.3	<0.61	4.1	6.5	10.6	4.9	0.25	<0.024	56.6	35.1	8.3	Deg Fuel 76%,(FCM),(BO)
s	7 - 4 (6-8)	12.6	<0.32	<0.32	<0.32	0.44987	0.21	<0.1	<0.013	95.9	2.9	1.1	Residual HC,(P)
s	7 - 5 (0-2)	2211.0	<55.3	<55.3	225.1	225.1	148.9	<17.7	<2.2	0	83.8	16.2	Deg Fuel 76.8%,(FCM)
s	7 - 6 (0-2)	11.9	<0.3	<0.3	0.3	0.3	0.18	<0.09	<0.012	0	64.9	35.1	V.Deg.Diesel 66%,(FCM),(P)
s	7 - 7 (0-2)	26.5	<0.66	<0.66	1.8	1.8	1.7	<0.21	<0.027	0	56.8	43.2	V.Deg.PHC 54.6%,(FCM),(BO),(P)
s	7 - 10 (0-2)	24.1	<0.6	2.9	15.1	18	12.4	0.64	<0.024	26.1	62	12	Deg Fuel 88.8%,(FCM),(BO)
s	7 - 8 (4-6)	26.8	<0.67	2.1	2.1	4.2	1.4	<0.21	<0.027	68.1	25.7	6.1	Deg.Fuel 85.2%,(FCM)
s	7 - 6 (6-8)	21.8	<0.55	<0.55	<0.55	<0.55	<0.11	<0.17	<0.022	0	0	100	Residual HC,(BO),(P)

Initial Calibrator QC check **OK**

Final FCM QC Check **OK**

97.8 %

Concentration values in mg/kg for soil samples and mg/L for water samples. Soil values uncorrected for moisture or stone content. Fingerprints provide a tentative hydrocarbon identification.

Abbreviations :- FCM = Results calculated using Fundamental Calibration Mode : % = confidence of hydrocarbon identification : (PFM) = Poor Fingerprint Match : (T) = Turbid : (P) = Particulate detected

B = Blank Drift : (SBS)/(LBS) = Site Specific or Library Background Subtraction applied to result : (BO) = Background Organics detected : (OCR) = Outside cal range : (M) = Modified Result.

% Ratios estimated aromatic carbon number proportions : HC = Hydrocarbon : PHC = Petroleum HC : FP = Fingerprint only.

Data generated by HC-1 Analyser



Hydrocarbon Analysis Results

Client: HART & HICKMAN
Address: 2923 S TRYON STREET
 SUITE 100

Samples taken Wednesday, December 26, 2018
Samples extracted Wednesday, December 26, 2018
Samples analysed Thursday, December 27, 2018

Contact: DAVE GRAHAM
 COLLECTED BY ARC
Project: ROW-601

Operator NICK HENDRIX

U00902

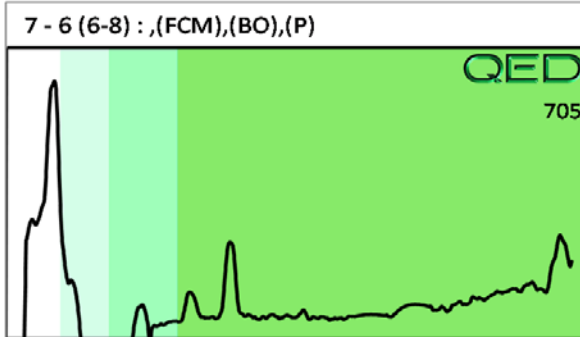
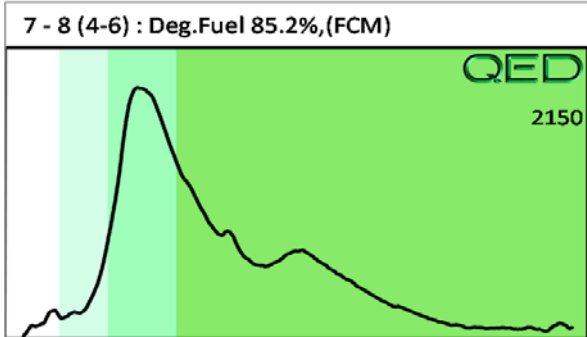
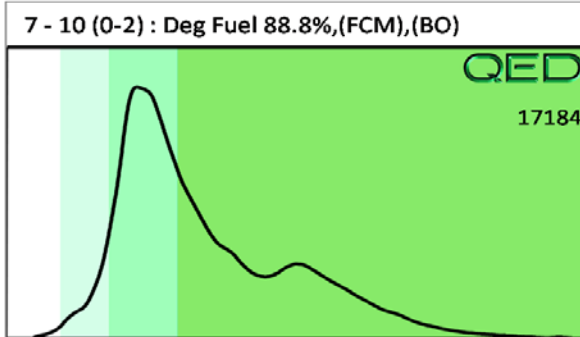
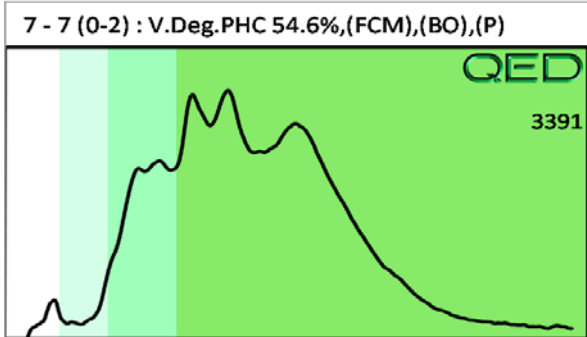
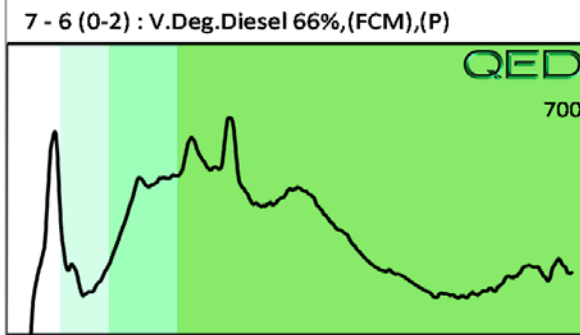
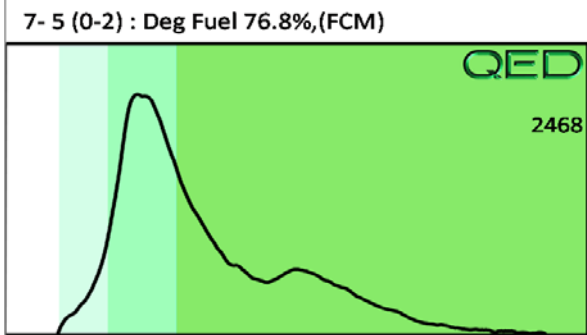
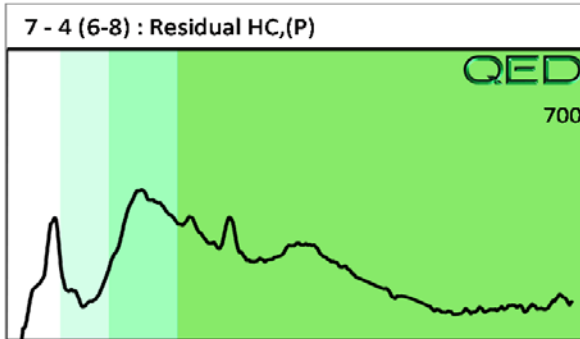
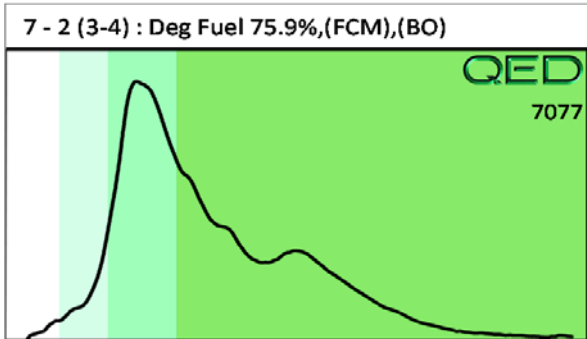
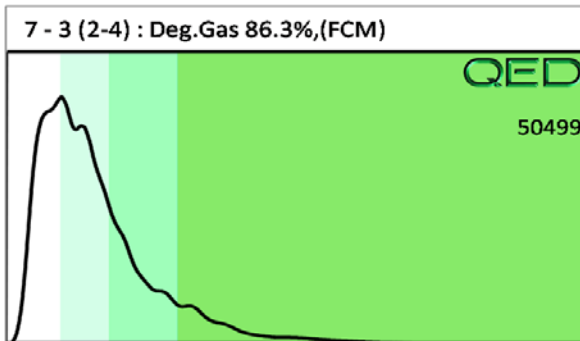
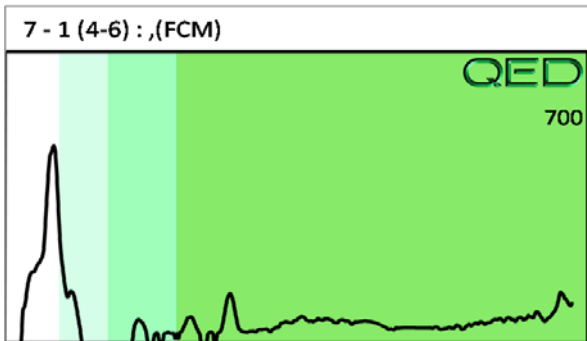
Matrix	Sample ID	Dilution used	BTEX (C6 - C9)	GRO (C5 - C10)	DRO (C10 - C35)	TPH (C5 - C35)	Total Aromatics (C10-C35)	16 EPA PAHs	BaP	% Ratios			HC Fingerprint Match
										C5 - C10	C10 - C18	C18	
s	7 - 9 (0-2)	20.5	<0.51	<0.51	0.51	0.51	0.55	<0.16	<0.02	0	79.9	20.1	Residual HC,(BO),(P)
s	7 - 11 (2-4)	21.5	<0.54	6.6	2.3	8.9	1.2	<0.17	<0.021	85.7	12	2.3	Deg.PHC 71.9%,(FCM)

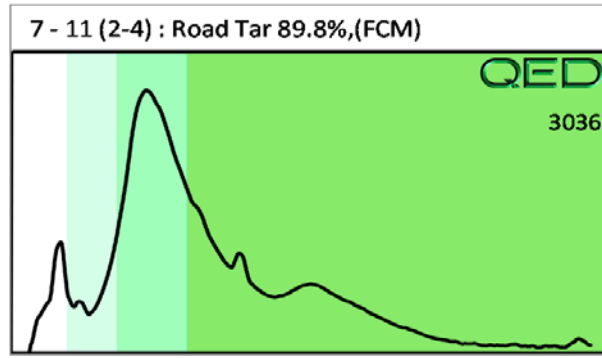
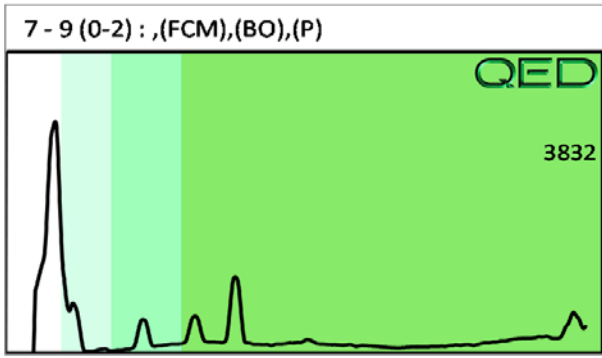
Initial Calibrator QC check **OK**

Final FCM QC Check **OK**

102 %

Concentration values in mg/kg for soil samples and mg/L for water samples. Soil values uncorrected for moisture or stone content. Fingerprints provide a tentative hydrocarbon identification.
 Abbreviations :- FCM = Results calculated using Fundamental Calibration Mode : % = confidence of hydrocarbon identification : (PFM) = Poor Fingerprint Match : (T) = Turbid : (P) = Particulate detected
 B = Blank Drift : (SBS)/(LBS) = Site Specific or Library Background Subtraction applied to result : (BO) = Background Organics detected : (OCR) = Outside cal range : (M) = Modified Result.
 % Ratios estimated aromatic carbon number proportions : HC = Hydrocarbon : PHC = Petroleum HC : FP = Fingerprint only. **Data generated by HC-1 Analyser**





B100

Client Name: Hart & Hickman
 Address: 2923 S. Tryon St. Suite 100
 Contact: Dave Gtra Graham
 Project Ref.: Row-601
 Email: dgraham@hart+hickman.com
 Phone #: dgtr dgraham@hart+hickman.com
 Collected by: AJC 704-887-4630



RAPID ENVIRONMENTAL DIAGNOSTICS
 CHAIN OF CUSTODY AND ANALYTICAL
 REQUEST FORM

RED Lab, LLC
 5598 Marvin K Moss Lane
 MARBIONC Bldg, Suite 2003
 Wilmington, NC 28409

Each sample will be analyzed for
 BTEX, GRO, DRO, TPH, PAH total
 aromatics and BaP

Sample Collection Date/Time	TAT Requested		Initials	Sample ID	Total Wt.	Tare Wt.	Sample Wt.
	24 Hour	48 Hour					
12/26/18 1020		*	AJC	70-1(4-6)	53.8	44.0	9.8
12/24/18 1150				70-3(2-4)	54.6	44.2	10.4
12/24/18 1235				70-2(3-11)	54.7	44.0	10.7
12/26/18 1320				70-4(6-8)	55.5	44.4	11.1
12/24/18 1345				70-5(0-2)	54.7	44.0	10.7
12/24/18 1435				70-6(0-2)	55.7	43.9	11.8
12/24/18 1510				70-7(0-2)	53.9	44.1	9.8
12/24/18 1545				70-10(0-2)	55.1	44.3	10.8
12/24/18 1615				70-8(4-6)	54.3	44.6	9.7
12/26/18 1620				70-6(6-8)	56.4	44.5	11.9
12/26/18 1630				70-9(0-2)	57.2	44.5	12.7
12/26/18 1720				70-11(2-4)	56.4	44.3	12.1

Comments:

Relinquished by	Date/Time	Accepted by	Date/Time
AJC	12/26/18 1925	MT	12/26/18 20
Relinquished by	Date/Time	Accepted by	Date/Time

RED Lab USE ONLY
 (12)



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

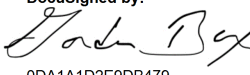
ROY COOPER
GOVERNOR

JAMES H. TROGDON, III
SECRETARY

May 30, 2018

MEMORANDUM TO: Mr. Darren Even, Dewberry

FROM: Gordon Box, PG
GeoEnvironmental Project Manager
GeoEnvironmental Section
Geotechnical Engineering Unit

DocuSigned by:

0DA1A1D2E9DB479...

TIP NO: R-5737
WBS: 50195.1.1
COUNTY: DAVIDSON
DIVISION: 9
DESCRIPTION: US 29/US 70/BUSINESS 85 AT SR 1798 (OLD GREENSBORO ROAD). CONVERT AT-GRADE INTERSECTION TO INTERCHANGE.

SUBJECT: **GeoEnvironmental Planning Report**

The GeoEnvironmental Section of the Geotechnical Engineering Unit performed a Phase I field investigation on May 25, 2018 for the above referenced project to identify geoenvironmental sites of concern. The purpose of this report is to document sites of concern within the project study area that are or may be contaminated. These sites of concern should be included in the environmental planning document in an effort to assist the project stakeholders in reducing or avoiding impacts to these sites. Sites of concern may include, but are not limited to, underground storage tank (UST) sites, dry cleaning facilities, hazardous waste sites, regulated landfills and unregulated dumpsites.

Findings

Five (5) sites of concern were identified within the proposed study area. We anticipate low monetary and scheduling impacts resulting from these sites. See the following table and figure for details.

Please note that discovery of additional sites not recorded by regulatory agencies and not reasonably discernible during the project reconnaissance may occur. The GeoEnvironmental Section should be notified immediately after discovery of such sites so their potential impact(s) may be assessed.

If there are questions regarding the geoenvironmental issues, please contact me, at 919-707-6859.

cc:

Matthew Jones, PE Division Project Engineer

John Pilipchuk, LG, PE, State Geotechnical Engineer

Stephen R. Morgan, PE, State Hydraulics Engineer

Andrew McDaniel, PE, Stormwater NPDES Permit Program - Engineering Supervisor

Brian Hanks, PE, State Structures Engineer

Dale Burton, PE, PLS, State Locations and Surveys Engineer

Carl Barclay, PE, State Utilities Manager

Wright R. Archer, III, PEDivision Construction Engineer

Rodney K HattonDivision Right of Way Agent

Eric Williams, PE, Geotechnical Regional Manager

Kevin Miller, PG, Regional Geological Engineer

Steve Grimes, ROW Unit, Negotiations, State Negotiator

row-notify@ncdot.gov

roadwaydesign@ncdot.gov

File

(01) Property Name:

Former Century Commercial Tire
3039 Greensboro St. Ext.
Lexington, NC 27295

Property Owner:

Tillie Comer Revocable Trust
2855 YADKIN COLLEGE ROAD
Lexington, NC 27292

Facility ID: NA

Incident Type/Number: NA

UST Number: NA

UST Owner:

NA



Anticipated Impacts: Low

This parcel is located at the northern portion of the intersection of NC 1844 and Business US 70. A pump island & service bays. USTs with fill ports were observed to be present on the site. In-ground hydraulic lift components may be present within the bay door (not observed).

(02) Property Name:

Comer Trucking, Inc.
1176 Caldcleugh Rd
Lexington, NC 27295

Property Owner:

CTC INVESTMENT PROPERTIES OF
LEXINGTON NC LLC
PO BOX 1083
Lexington, NC 27293

Facility ID: NA

Incident Type/Number: NA

UST Number: NA

UST Owner:

NA



Anticipated Impacts: Low

This parcel, located along the NW side of Caldcleugh Rd, is the site of a Landscaping, Sanitary Service, truck repair business. The building has two Truck service bays that have hydraulic lift(s) with observed in-ground components. An above ground storage tank (AST) and fuel pump were observed on the eastern portion of property.

(03) Property Name:

HB Auto Sale
1048 Caldcleugh Rd
Lexington, NC 27295

Property Owner:

Hassan Baba Ahmadi
5098 TOWER RD
Greensboro, NC 27410

Facility ID: NA

Incident Type/Number: NA

UST Number: NA

UST Owner:

NA



Anticipated Impacts: Low

This parcel, located along the NW side of Caldcleugh Rd, is the site of an automotive sales & repair. Numerous used automobiles were observed on premises and are used for apparent auto salvage. Leaked oils, gasoline, solvents, and metals are concerns at this site.

(04) Property Name:

Real Quick Convenient Stores
(REAL QUICK L- 619)
285 OLD GREENSBORO RD
Lexington, NC 27295

Property Owner:

Tim Boeurn & Tim Kan Phon
285 Old Greensboro Rd.
Thomasville, NC 27360

Facility ID: 24862

Incident Type/Number: NA

UST Number: NA

UST Owner:

UNITED OIL OF THE CAROLINAS, INC.
PO BOX 68, 2758 EAST OZARK AVE
Gastonia, NC 28054-0068



Anticipated Impacts: Low

This parcel, located along the western side of Caldcleugh Rd. near Old Greensboro Rd, is an active gas station with 4 registered USTs. USTs and potentially impacted soils are concerns at this site.

(05) Property Name:
Davidson CoComm Coll.
297 DCCC RD.
Lexington, NC 27295

Property Owner:
Davidson Co. Com. Col.
297 DCCC RD.
Lexington, NC 27295

Facility ID: 25497
Incident Type/Number: 13682
UST Number: WS-4138

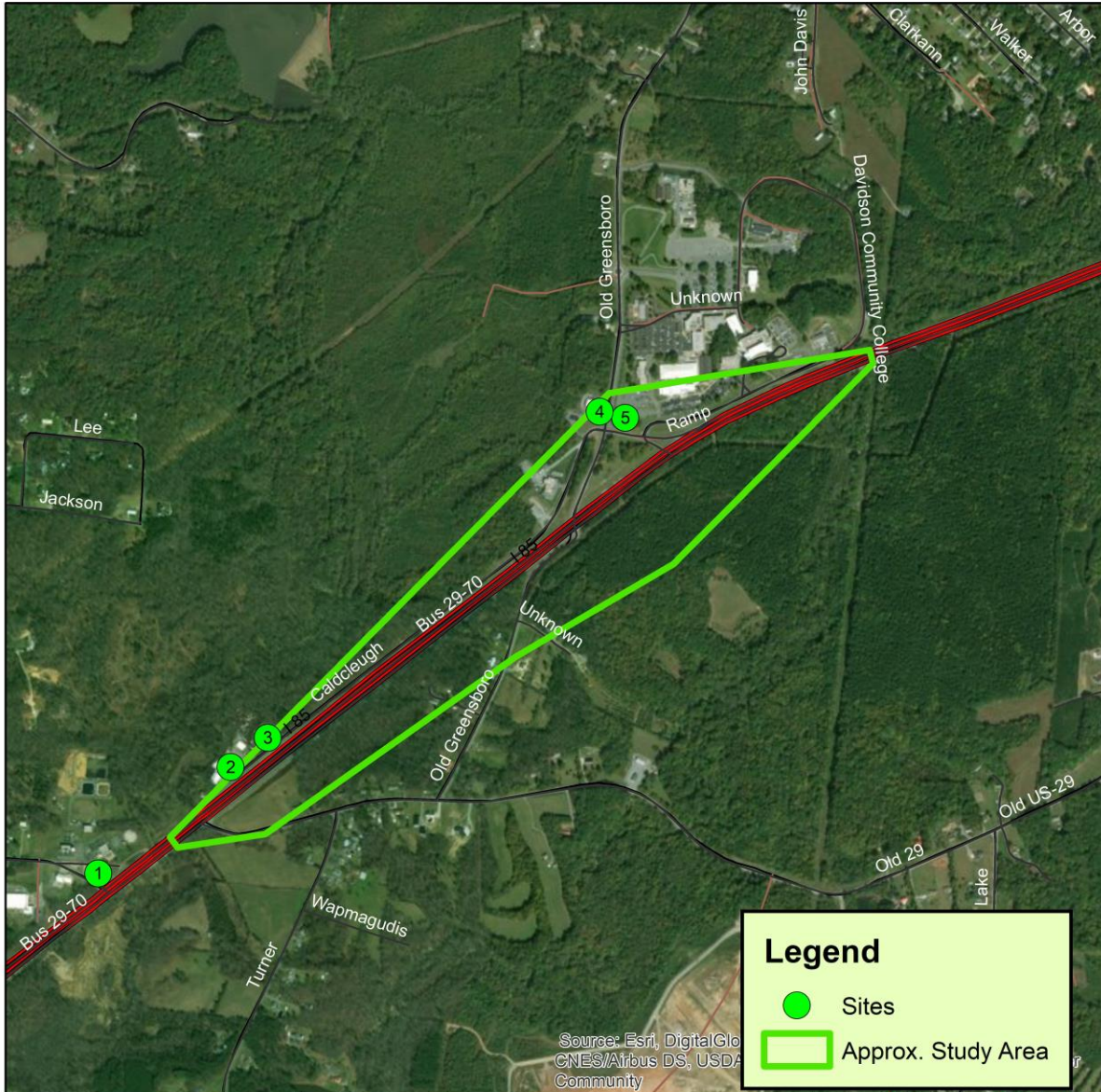
UST Owner:
NA



Anticipated Impacts: Low

This parcel, located along the eastern side of Old Greensboro road is the site of a College campus that has various heating oil USTs. NCDEQ Incidents 2002 and 1992, have been assigned to the property and were closed out 2003 and 1996. USTs and potentially impacted soils are concerns at this site.

Appendix A
Location of GeoEnvironmental Sites of Concern

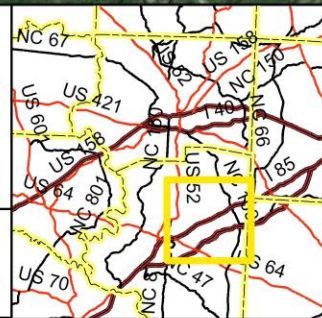


Project 50195.1.1 (TIP # R-5737)
US 29/US 70/BUSINESS 85 AT
SR 1798 (OLD GREENSBORO ROAD),
CONVERT AT-GRADE INTERSECTION
TO INTERCHANGE.
Davidson County

1,500 750 0 1,500 Feet



NC Department of Transportation
Geotechnical Engineering Unit
GeoEnvironmental Section





ROY COOPER
Governor

MICHAEL L. HOLDER
Acting Secretary

January 9, 2017

MEMORANDUM TO: Beth Smyre, PE, Associate
Dewberry

FROM: Terry W. Fox, LG *TWF*
GeoEnvironmental Project Manager
GeoEnvironmental Section
Geotechnical Engineering Unit

TIP NO: R-5737
WBS: 50195.1.1
COUNTY: Davidson
DIVISION 9
DESCRIPTION: Convert at-grade intersection of Old Greensboro Road (SR 1798) and I-85Bus/
US 29-70 to interchange

SUBJECT: **Pre-Scoping Comments**

The GeoEnvironmental Section performed a records search of readily available information for the given project study area to identify known and potential sites of concern. Two (2) UST facilities and two (2) automotive repair facilities were identified within the project area. Refer to the attached table and figure for the site of concern and its anticipated impact.

A detailed Phase I study of the preferred alternative should be performed to field verify the hazardous waste sites and identify unknown sites. This detailed Phase I study should be included in the environmental document.

cc:

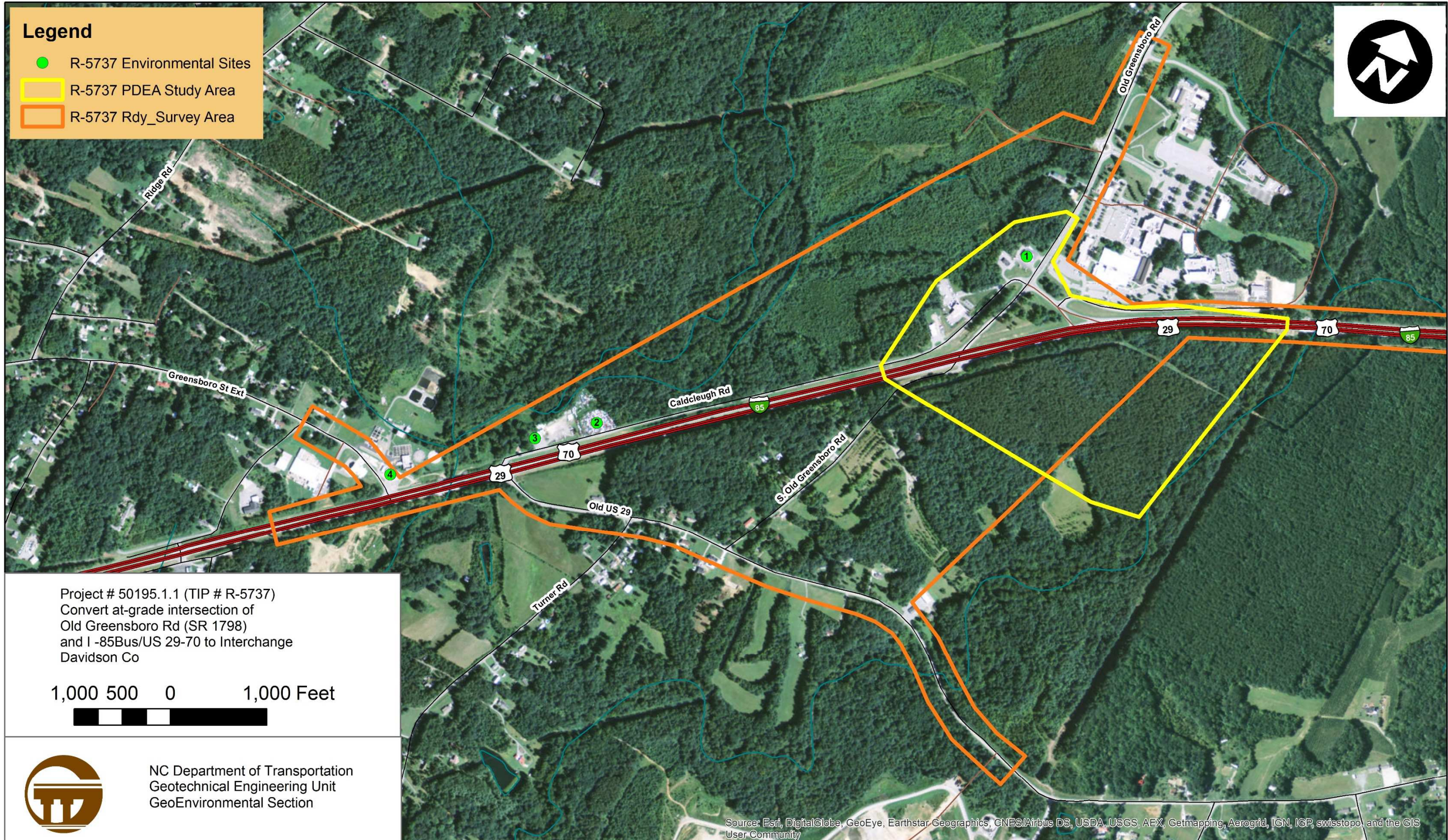
Brett Abernathy, PE, PLS, Division 9 Project Manager,
John Pilipchuk, LG, PE, State Geotechnical Engineer
Matt Lauffer, PE, Assistant Hydraulics Unit Head
Tom Koch, PE, State Structures Engineer
Dale Burton PE, PLS, Assistant State Locations and Surveys Engineer
Ronald Wilkins, PE, State Utilities Manager
Keith Raulston, PE, Division Construction Engineer
Rodney Hatton, Division Right of Way Agent
Eric Williams, PE, Geotechnical Regional Manager
Kevin Miller, LG, Regional Geological Engineer
Steve Grimes, ROW Unit, Negotiations, State Negotiator
row-notify@ncdot.gov
roadwaydesign@ncdot.gov
File



**Table
USTs, Landfills & Other Potentially Contaminated Sites of Concern**

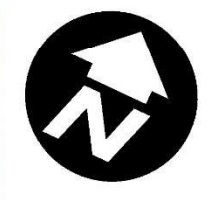
Site #	Type	Location	UST Facility ID #	Property Name	UST Owner / Property Owner	Anticipated Impact	Anticipated Risk	Comments
1	Gas station	285 Old Greensboro Rd, Thomasville, 27360	0-024862	Real Quick Convenient Stores	United Oil of the Carolinas Inc./ Boeurn & Kan Tim	Petroleum contamination	Low	Active facility- no reported groundwater incidents
2	Automotive sales & repair	1048 Caldcleugh Rd, Lexington, 27295		HB Auto Sale	Hassan Baba Ahmadi	Petroleum and solvent contamination	Low	Numerous used automobiles on premises
3	Landscaping, Sanitary Service, truck repair	1176 Caldcleugh Rd, Lexington, 27295		Comer Trucking, Inc.	CTC Investment Properties of Lexington	Petroleum and solvent contamination	Low	Truck service bays
4	Former gas station	3039 Greensboro St. Ext., Lexington, 27295	N/A	Former Century Commercial Tire	Tillie Comer Revocable Trust	Petroleum and solvent contamination	Low	Pump island at front of building & service bays

Appendix A
Locations of GeoEnvironmental Sites of Concern



Legend

- R-5737 Environmental Sites
- ▭ R-5737 PDEA Study Area
- ▭ R-5737 Rdy_Survey Area



Project # 50195.1.1 (TIP # R-5737)
Convert at-grade intersection of
Old Greensboro Rd (SR 1798)
and I -85Bus/US 29-70 to Interchange
Davidson Co

1,000 500 0 1,000 Feet



NC Department of Transportation
Geotechnical Engineering Unit
GeoEnvironmental Section

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

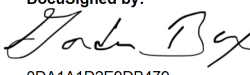
ROY COOPER
GOVERNOR

JAMES H. TROGDON, III
SECRETARY

May 30, 2018

MEMORANDUM TO: Mr. Darren Even, Dewberry

FROM: Gordon Box, PG
GeoEnvironmental Project Manager
GeoEnvironmental Section
Geotechnical Engineering Unit

DocuSigned by:

0DA1A1D2E9DB479...

TIP NO: R-5737
WBS: 50195.1.1
COUNTY: DAVIDSON
DIVISION: 9
DESCRIPTION: US 29/US 70/BUSINESS 85 AT SR 1798 (OLD GREENSBORO ROAD). CONVERT AT-GRADE INTERSECTION TO INTERCHANGE.

SUBJECT: **GeoEnvironmental Planning Report**

The GeoEnvironmental Section of the Geotechnical Engineering Unit performed a Phase I field investigation on May 25, 2018 for the above referenced project to identify geoenvironmental sites of concern. The purpose of this report is to document sites of concern within the project study area that are or may be contaminated. These sites of concern should be included in the environmental planning document in an effort to assist the project stakeholders in reducing or avoiding impacts to these sites. Sites of concern may include, but are not limited to, underground storage tank (UST) sites, dry cleaning facilities, hazardous waste sites, regulated landfills and unregulated dumpsites.

Findings

Five (5) sites of concern were identified within the proposed study area. We anticipate low monetary and scheduling impacts resulting from these sites. See the following table and figure for details.

Please note that discovery of additional sites not recorded by regulatory agencies and not reasonably discernible during the project reconnaissance may occur. The GeoEnvironmental Section should be notified immediately after discovery of such sites so their potential impact(s) may be assessed.

If there are questions regarding the geoenvironmental issues, please contact me, at 919-707-6859.

cc:

Matthew Jones, PE Division Project Engineer

John Pilipchuk, LG, PE, State Geotechnical Engineer

Stephen R. Morgan, PE, State Hydraulics Engineer

Andrew McDaniel, PE, Stormwater NPDES Permit Program - Engineering Supervisor

Brian Hanks, PE, State Structures Engineer

Dale Burton, PE, PLS, State Locations and Surveys Engineer

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Wright R. Archer, III, PE Division Construction Engineer

Rodney K Hatton Division Right of Way Agent

Eric Williams, PE, Geotechnical Regional Manager

Kevin Miller, PG, Regional Geological Engineer

Steve Grimes, ROW Unit, Negotiations, State Negotiator

row-notify@ncdot.gov

roadwaydesign@ncdot.gov

File

(01) Property Name:
Former Century Commercial Tire
3039 Greensboro St. Ext.
Lexington, NC 27295

Property Owner:
Tillie Comer Revocable Trust
2855 YADKIN COLLEGE ROAD
Lexington, NC 27292

Facility ID: NA
Incident Type/Number: NA
UST Number: NA

UST Owner:
NA



Anticipated Impacts: Low

This parcel is located at the northern portion of the intersection of NC 1844 and Business US 70. A pump island & service bays. USTs with fill ports were observed to be present on the site. In-ground hydraulic lift components may be present within the bay door (not observed).

(02) Property Name:

Comer Trucking, Inc.
1176 Caldcleugh Rd
Lexington, NC 27295

Property Owner:

CTC INVESTMENT PROPERTIES OF
LEXINGTON NC LLC
PO BOX 1083
Lexington, NC 27293

Facility ID: NA

Incident Type/Number: NA

UST Number: NA

UST Owner:

NA



Anticipated Impacts: Low

This parcel, located along the NW side of Caldcleugh Rd, is the site of a Landscaping, Sanitary Service, truck repair business. The building has two Truck service bays that have hydraulic lift(s) with observed in-ground components. An above ground storage tank (AST) and fuel pump were observed on the eastern portion of property.

(03) Property Name:

HB Auto Sale
1048 Caldcleugh Rd
Lexington, NC 27295

Property Owner:

Hassan Baba Ahmadi
5098 TOWER RD
Greensboro, NC 27410

Facility ID: NA

Incident Type/Number: NA

UST Number: NA

UST Owner:

NA



Anticipated Impacts: Low

This parcel, located along the NW side of Caldcleugh Rd, is the site of an automotive sales & repair. Numerous used automobiles were observed on premises and are used for apparent auto salvage. Leaked oils, gasoline, solvents, and metals are concerns at this site.

(04) Property Name:

Real Quick Convenient Stores
(REAL QUICK L- 619)
285 OLD GREENSBORO RD
Lexington, NC 27295

Property Owner:

Tim Boeurn & Tim Kan Phon
285 Old Greensboro Rd.
Thomasville, NC 27360

Facility ID: 24862

Incident Type/Number: NA

UST Number: NA

UST Owner:

UNITED OIL OF THE CAROLINAS, INC.
PO BOX 68, 2758 EAST OZARK AVE
Gastonia, NC 28054-0068



Anticipated Impacts: Low

This parcel, located along the western side of Caldcleugh Rd. near Old Greensboro Rd, is an active gas station with 4 registered USTs. USTs and potentially impacted soils are concerns at this site.

(05) Property Name:
Davidson CoComm Coll.
297 DCCC RD.
Lexington, NC 27295

Property Owner:
Davidson Co. Com. Col.
297 DCCC RD.
Lexington, NC 27295

Facility ID: 25497
Incident Type/Number: 13682
UST Number: WS-4138

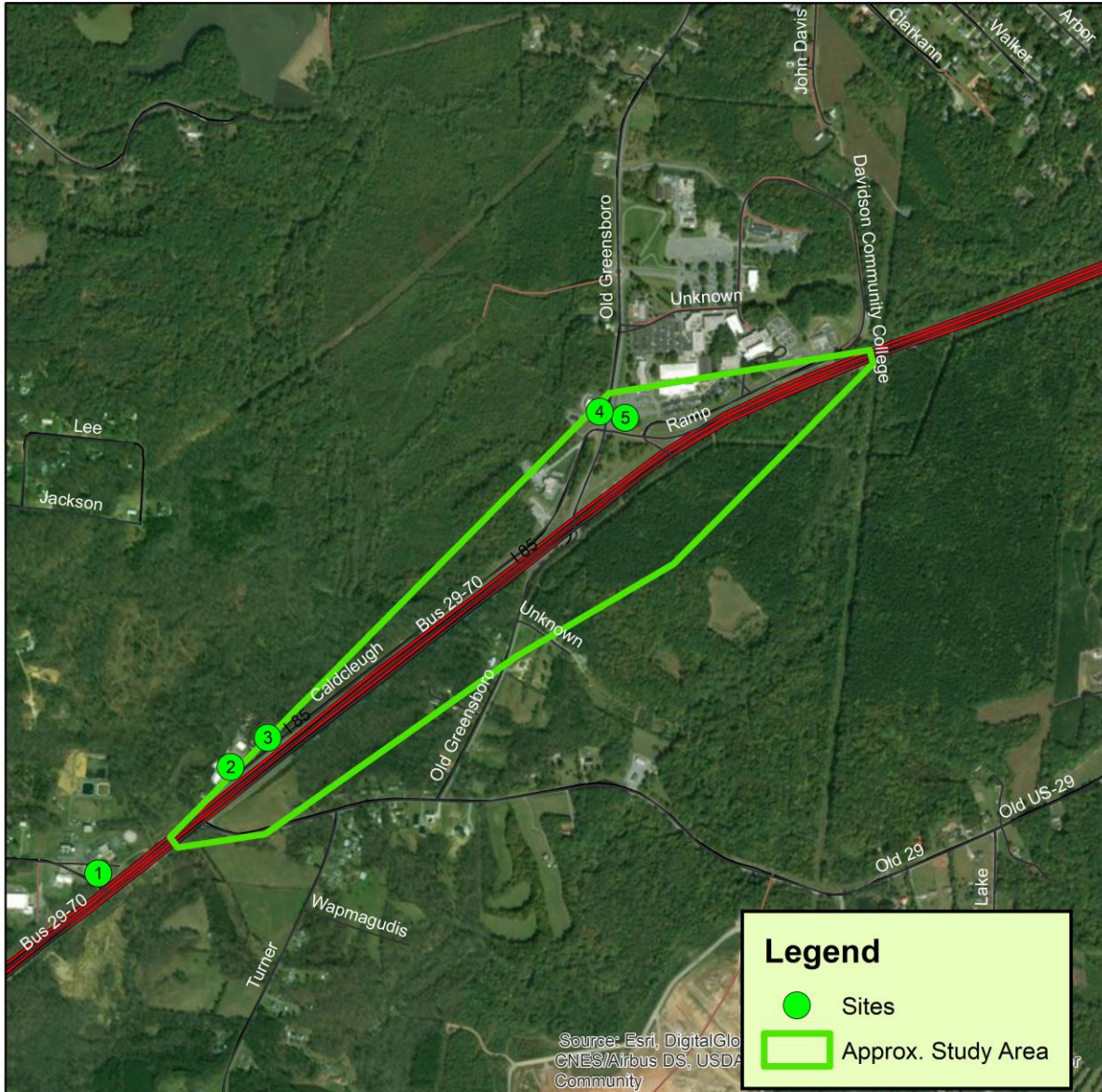
UST Owner:
NA



Anticipated Impacts: Low

This parcel, located along the eastern side of Old Greensboro road is the site of a College campus that has various heating oil USTs. NCDEQ Incidents 2002 and 1992, have been assigned to the property and were closed out 2003 and 1996. USTs and potentially impacted soils are concerns at this site.

Appendix A
Location of GeoEnvironmental Sites of Concern



Project 50195.1.1 (TIP # R-5737)
US 29/US 70/BUSINESS 85 AT
SR 1798 (OLD GREENSBORO ROAD),
CONVERT AT-GRADE INTERSECTION
TO INTERCHANGE.
Davidson County

1,500 750 0 1,500 Feet



NC Department of Transportation
Geotechnical Engineering Unit
GeoEnvironmental Section

