

Preliminary Site Assessment
John Waistel Hodges Property Parcel #53
& Toyota of Boone Property Parcel #55
Boone, Watauga County, NC

State Project U-4020
WBS Element # 35015.1.1
H&H Job No. ROW-148
May 29, 2008



2923 South Tryon Street
Suite 100
Charlotte, NC 28203
704-586-0007

3534 Hillsborough Street
Raleigh, NC 27607
919-847-4241

**Preliminary Site Assessment Report
John Waistel Hodges Property Parcel #53
& Toyota of Boone Property Parcel #55
Boone, Watauga County, North Carolina
H&H Project ROW-148**

Table of Contents

<u>Section</u>	<u>Page No.</u>
1.0 Introduction.....	1
2.0 Site Assessment.....	2
3.0 Analytical Results.....	3
4.0 Summary and Regulatory Considerations	4
5.0 Signature Page.....	5

List of Tables

Table 1	Soil Analytical Results – John Waistel Hodges Property, Parcel #53 & Toyota of Boone, Parcel #55
---------	---

List of Figures

Figure 1	Site Location Map
Figure 2	Site Map and Soil Analytical Results for Parcel 53
Figure 3	Site Map and Soil Analytical Results for Parcel 55

List of Appendices

Appendix A	NC DOT Preliminary Plan
Appendix B	Schnabel Engineering Report of Geophysical Services
Appendix C	Soil Boring Logs
Appendix D	Laboratory Analytical Report

**Preliminary Site Assessment Report
John Waistel Hodges Property Parcel #53
& Toyota of Boone Property Parcel #55
Boone, Watauga County, North Carolina
H&H Project ROW-148**

1.0 Introduction

Hart & Hickman, PC (H&H) has prepared this Preliminary Site Assessment (PSA) report documenting assessment activities performed at the John Waistel Hodges property (NC DOT Parcel #53) located on the northeast corner of East King Street (aka US Highway 421) and Chestnut Drive intersection and the Toyota of Boone property (NC DOT Parcel #55) located adjacent to the John Waistel Hodges property in Boone, Watauga County, North Carolina. This assessment was conducted on behalf of the North Carolina Department of Transportation (NC DOT) in accordance with H&H's February 29, 2008 proposal.

The purpose of this assessment was to determine the presence or absence of impacted soil at the subject property in proposed right-of-way construction areas related to the widening of US Highway 421 (State Project U-4020). A site location map is presented as Figure 1, and site maps are presented as Figures 2 and 3. The NC DOT preliminary plan of the US Highway 421 widening area near the John Waistel Hodges property (NC DOT Parcel #53) and Toyota of Boone property (NC DOT Parcel #55) is included in Appendix A.

Based on information provided by NC DOT, the John Waistel Hodges property is operated by Toyota of Boone as a car dealership. The property on the west side of Chestnut Drive is also part of the dealership and may have been utilized for gas station operations in the past. The Toyota of Boone owned property (NC DOT Parcel #55) is located east and north of the John Waistel Hodges property. Because the northwestern corner of Parcel 55 is downgradient of a drycleaners and is in a low area downgradient of the Toyota dealership, H&H collected one soil sample from this area. According to an Environmental Data Resources (EDR) report for the site vicinity, the John Waistel Hodges property and Toyota of Boone property (Parcel #55) do not appear on the North Carolina

Underground Storage Tank (UST) database, and H&H did not observe surface evidence of current USTs or evidence of UST removal on the subject properties.

2.0 Site Assessment

Soil Assessment Field Activities

On April 7, 2008, H&H mobilized to the John Waistel Hodges property to advance five soil borings (53-1 through 53-5) and to the Toyota of Boone property (Parcel #55) to advance one soil boring (55-1). Prior to advancing the soil borings, H&H reviewed the preliminary results of a geophysical survey conducted at the John Waistel property by Schnabel Engineering (Schnabel) on March 11 and March 19, 2008. Schnabel utilized ground penetrating radar (GPR) and electromagnetic (EM) induction technology to identify geophysical anomalies and potential USTs at the site. A Report on Geophysical Surveys (April 28, 2008) prepared by Schnabel documents the results of the survey and is included in Appendix B. The report concludes that geophysical data do not indicate the presence of USTs within the NC DOT target areas.

Prior to installing soil borings, utilities were marked via NC One Call and by DOT's contractor Vaughn and Melton. As an additional precautionary measure against damaging subsurface utility lines, the 0 to 5-foot interval below ground surface (bgs) of each soil boring was installed by hand auger methods. H&H utilized Geologic Exploration of Statesville, North Carolina to advance soil borings 53-1 through 53-5 and 55-1 by direct push technology (DPT) beyond 5-ft bgs. Soil boring locations are shown on Figures 2 and 3, and soil boring logs are included in Appendix C. To facilitate the selection of soil samples for laboratory analysis from these borings, soil was screened continuously for the presence of volatile organic compounds (VOCs) with an organic vapor analyzer (OVA). Additionally, H&H observed the soil for visual and olfactory indications of petroleum impacts. In general, soil samples that exhibited the highest reading on the OVA were selected for laboratory analysis.

H&H collected five soil samples (53-1 @ 2-5 ft; 53-2 @ 5-7 ft; 53-3 @ 4-6 ft; 53-4 @ 5-7 ft; and 53-5 @ 5-7 ft) from Parcel #53 for laboratory analysis. Soil samples are identified by the NC DOT parcel number, soil boring number, and the depth interval in feet. The samples were sent to Prism

Laboratories, Inc. of Charlotte, North Carolina for analysis of total petroleum hydrocarbons (TPH) by EPA Method 8015B for gasoline-range organics (GRO) and diesel-range organics (DRO).

Boring 55-1 was installed into the top of the water table. Based on field screening, no impacts appeared to be present. To further screen this area for potential impacts, one soil sample (55-1 @ 2-5 ft) was collected from the capillary fringe for laboratory analysis of VOCs by EPA Method 8260B and for TPH GRO and TPH DRO.

Sample intervals and analytical results are summarized in Table 1. A laboratory analytical data report and chain-of-custody documentation for this site are provided in Appendix D. The chain-of-custody form includes samples from other nearby properties. The analytical results are discussed below.

3.0 Analytical Results

With the exception of one sample, TPH GRO and TPH DRO were not detected on Parcel 53. TPH DRO was detected above the NC DENR Action Level in sample 53-5 @ 5-7 ft. Sample intervals and analytical results are summarized in Table 1.

Based on laboratory analytical results, impacted soils are present at the southwest corner of the Parcel 53. H&H estimates that there are a total of 220 cubic yards (310 tons) of impacted soil between the soil surface and 10 ft at Parcel 53. Impacts may extend beyond 10 ft depth. The impacted soil is situated between the existing northern curb of East King Street and the proposed utility easement line. DOT plans indicate a proposed fill of 1.5 ft in this area. Because this is a fill area, most of the impacted soil will not likely be disturbed, except for utility and piping installation work and any soil grading work below the existing grade. Impacted soil that is removed should be properly managed and disposed at a permitted facility.

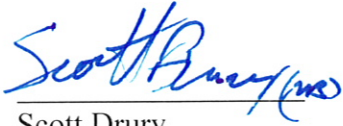
VOCs, TPH GRO, and TPH DRO were not detected in the sample collected from the low area on Parcel 55. Based on these results, impacted soil should not be encountered at this site during NC DOT road work in this area.

4.0 Summary and Regulatory Considerations

H&H has reviewed geophysical survey results for Parcel 53 and collected soil samples at Parcel 53 and Parcel 55. No potential USTs were identified in DOT target areas on these parcels. No impacts were detected in the soil sample collected from Parcel 55. With the exception of one sample, TPH GRO and TPH DRO were not detected on Parcel 53. TPH DRO was detected above the NC DENR Action Level in sample 53-5 @ 5-7 ft. H&H estimates that there are a total of 220 cubic yards (310 tons) of impacted soil between the soil surface and 10 ft at Parcel 53. The impacted soil is situated between the existing northern curb of East King Street and the proposed utility easement line. DOT plans indicate a proposed fill of 1.5 ft in this area. Because this is a fill area, most of the impacted soil will not likely be disturbed, except for utility and piping installation work and any soil grading work below the existing grade. Impacted soil that is removed should be properly managed and disposed at a permitted facility.

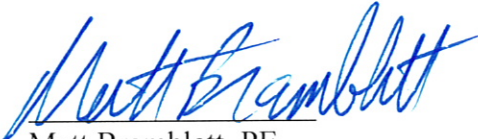
5.0 Signature Page

This report was prepared by:



Scott Drury
Staff Engineer for
Hart and Hickman, PC

This report was reviewed by:



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

Table 1
Soil Analytical Results
John Waistel Property (Property #53)
and Toyota of Boone Property (Parcel #55)
Boone, North Carolina
H&H Job No. ROW-148

Sample ID	53-1	53-2	53-3	53-4	53-5	55-1	NC DENR Action Levels (mg/kg)
	Sample Depth (ft) Sample Date Units	5-7 4/7/2008 (mg/kg)	4-6 4/7/2008 (mg/kg)	5-7 4/7/2008 (mg/kg)	5-7 4/7/2008 (mg/kg)	5-7 4/7/2008 (mg/kg)	
<u>TPH-DRO/GRO (8015B)</u> Diesel-Range Organics (DRO) Gasoline Organics (GRO)	<8.8	<8.2	<8.6	<9.0	33	<8.4	10
	<6.3	<6.0	<6.3	<6.5	<6.1	<6.1	10

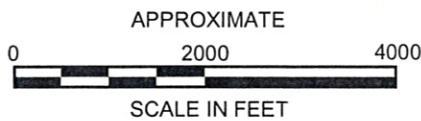
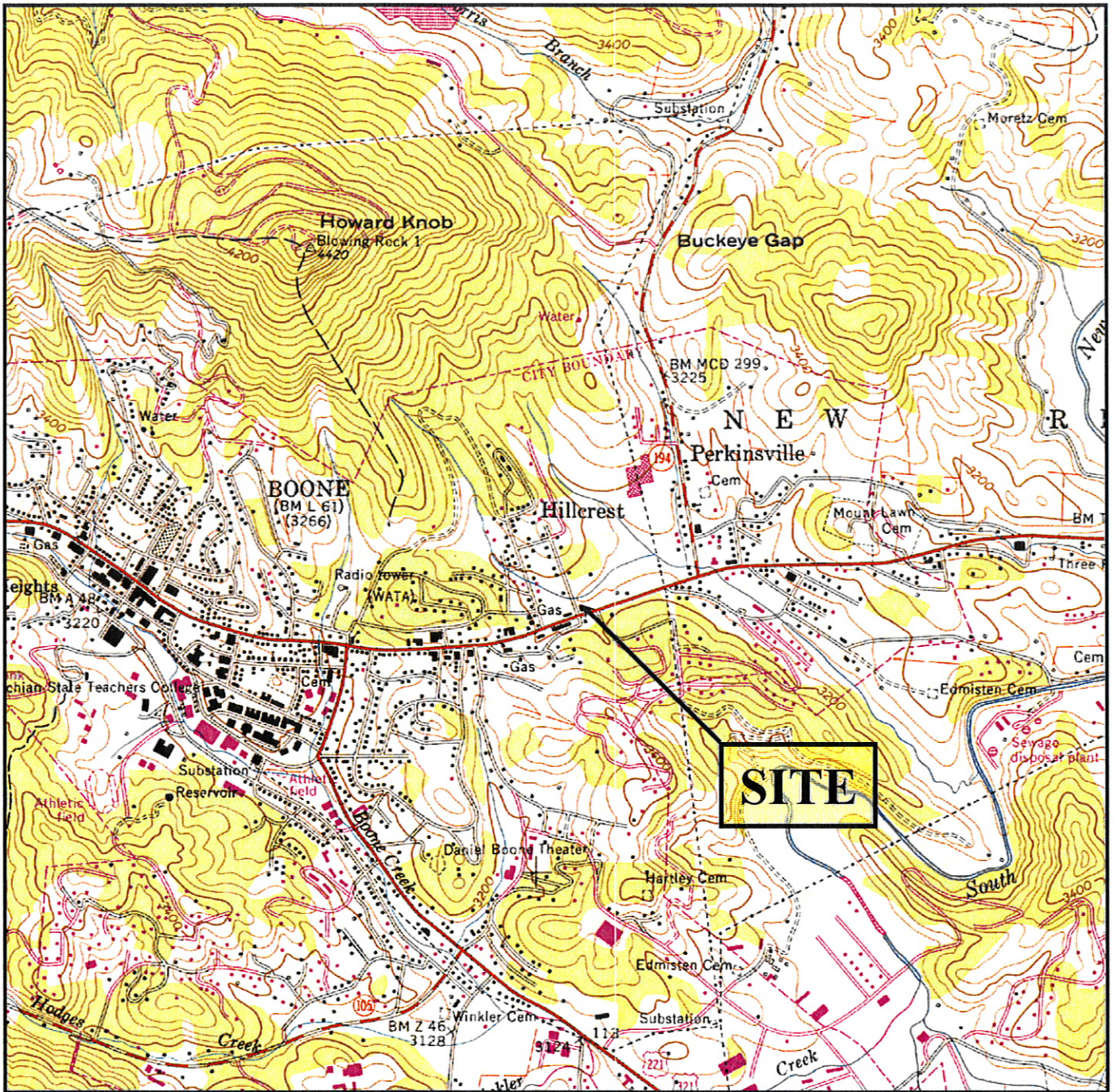
Notes:

EPA Method follows parameter in parenthesis

Bold denotes value in excess of NC DENR Action Levels

Sample 55-1 was also analyzed for VOCs by EPA Method 8260B and no VOCs were detected


TPH = total petroleum hydrocarbons



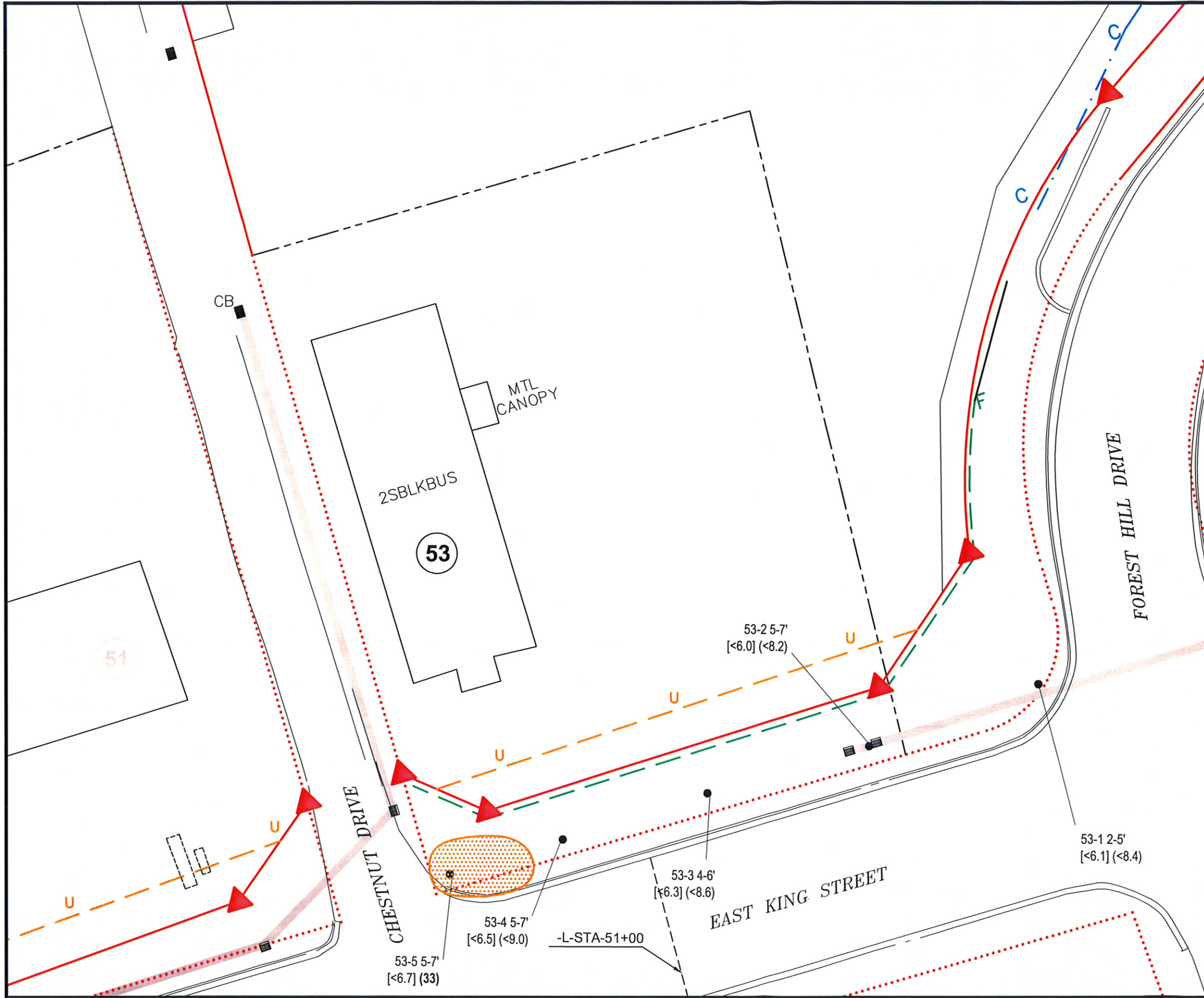
U.S.G.S. QUADRANGLE MAP

**BOONE, NC 1959
PHOTOREVISED 1978**

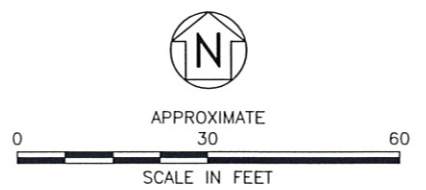
QUADRANGLE
7.5 MINUTE SERIES (TOPOGRAPHIC)


TITLE	SITE LOCATION MAP		
PROJECT	HODGES and TOYOTA PROPERTIES PARCEL #53 and #55 BOONE, NORTH CAROLINA		
	 2923 South Tryon Street-Suite 100 Charlotte, North Carolina 28203 704-586-0007 (p) 704-586-0370 (f)		
DATE:	4-28-08	REVISION NO:	0
JOB NO:	ROW-148	FIGURE NO:	1

S:\AAA-Master Projects\DOT Right-of-Way -ROW\ROW-148 Boone PSA\Files from DOT\Proj\FIGURES\50-54 A.dwg, 53, 5/28/2018 4:39:09 PM, 1:1

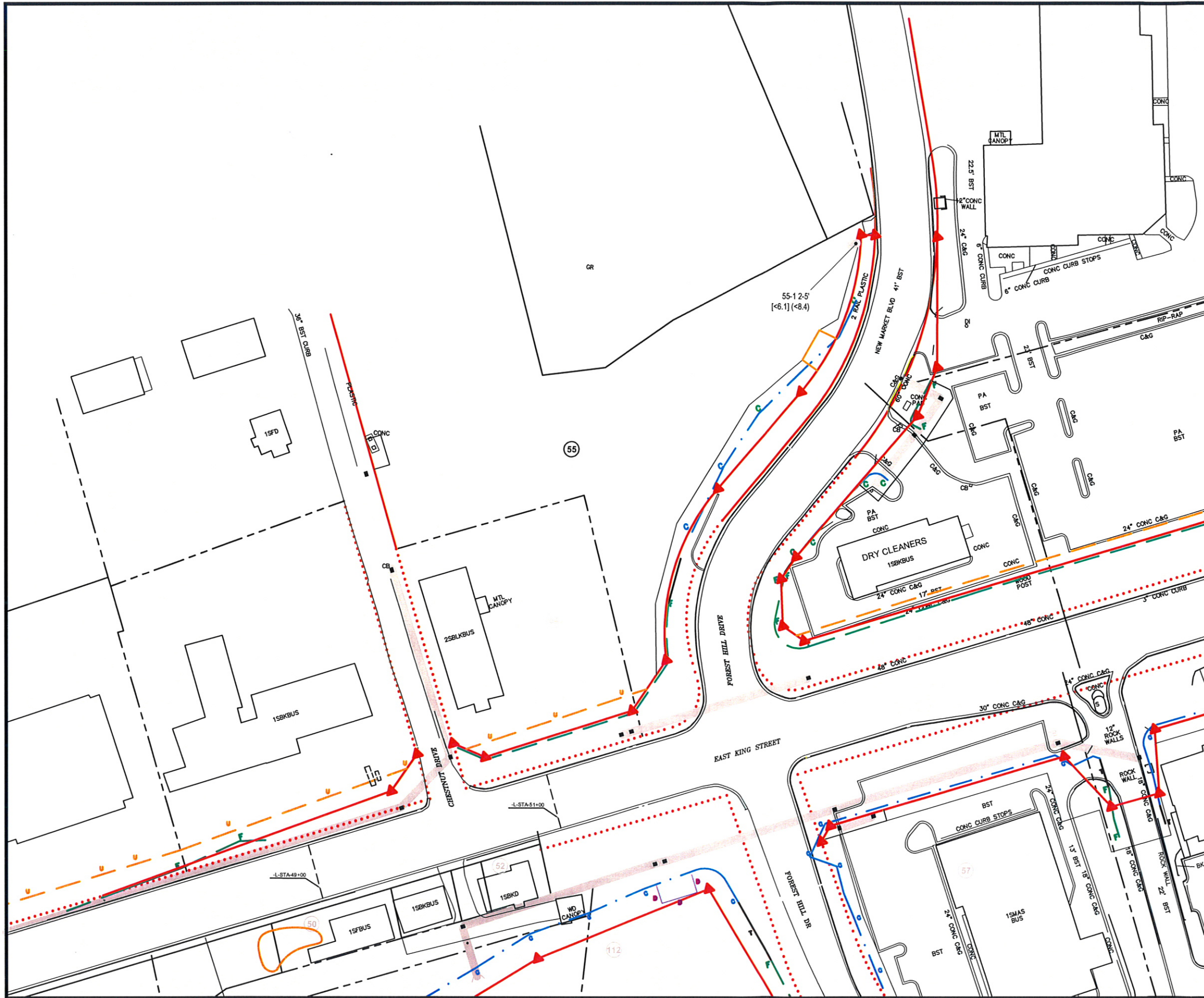


- LEGEND**
- PROPERTY LINE
 - ... EXISTING RIGHT-OF-WAY
 - ▲ PROPOSED RIGHT-OF-WAY
 - C- PROPOSED CUT LINE
 - F- PROPOSED FILL LINE
 - T- PROPOSED TRANSITION LINE
 - U- PROPOSED UTILITY EASEMENT
 - ▨ IMPACTED SOIL AREA
 - ▭ PROPOSED DRAINAGE PIPE
 - PROPOSED CATCH BASIN
 - SOIL BORING
 - 53 PARCEL NUMBER
 - [] = TPH GRO mg/kg
 - () = TPH DRO mg/kg
 - BOLD DENOTES EXCEEDANCE OF NCDENR ACTION LEVEL**



TITLE SITE MAP AND SOIL ANALYTICAL RESULTS FOR PARCEL 53	
PROJECT JOHN WAISTEL HODGES PROPERTY PARCEL # 53 BOONE, NORTH CAROLINA	
 2923 South Tryon Street-Suite 100 Charlotte, North Carolina 28203 704-586-0007(p) 704-586-0373(f)	
DATE: 4-24-08	REVISION NO. 0
JOB NO: ROW-148	FIGURE: 2

S:\AAA-Master Projects\DOT Right-of-Way - ROW\ROW-148 Boone PSAs\Files from DOT\Proj\FIGURES\50-54 A.dwg, 55, 5/28/2008 4:44:00 PM, 1:1



LEGEND

- PROPERTY LINE
- EXISTING RIGHT-OF-WAY
- ▲— PROPOSED RIGHT-OF-WAY
- C- PROPOSED CUT LINE
- F- PROPOSED FILL LINE
- T- PROPOSED TRANSITION LINE
- D- PROPOSED DRAINAGE PIPE
- U- PROPOSED UTILITY EASEMENT
- [Pattern] IMPACTED SOIL AREA
- [Pattern] PROPOSED DRAINAGE PIPE
- PROPOSED CATCH BASIN
- SOIL BORING
- (55) PARCEL NUMBER
- [] = TPH GRO mg/kg
- () = TPH DRO mg/kg



APPROXIMATE
0 80 160
SCALE IN FEET

TITLE
SITE MAP AND SOIL ANALYTICAL RESULTS
FOR PARCEL 55

PROJECT
TOYOTA OF BOONE
PARCEL # 55
BOONE, NORTH CAROLINA

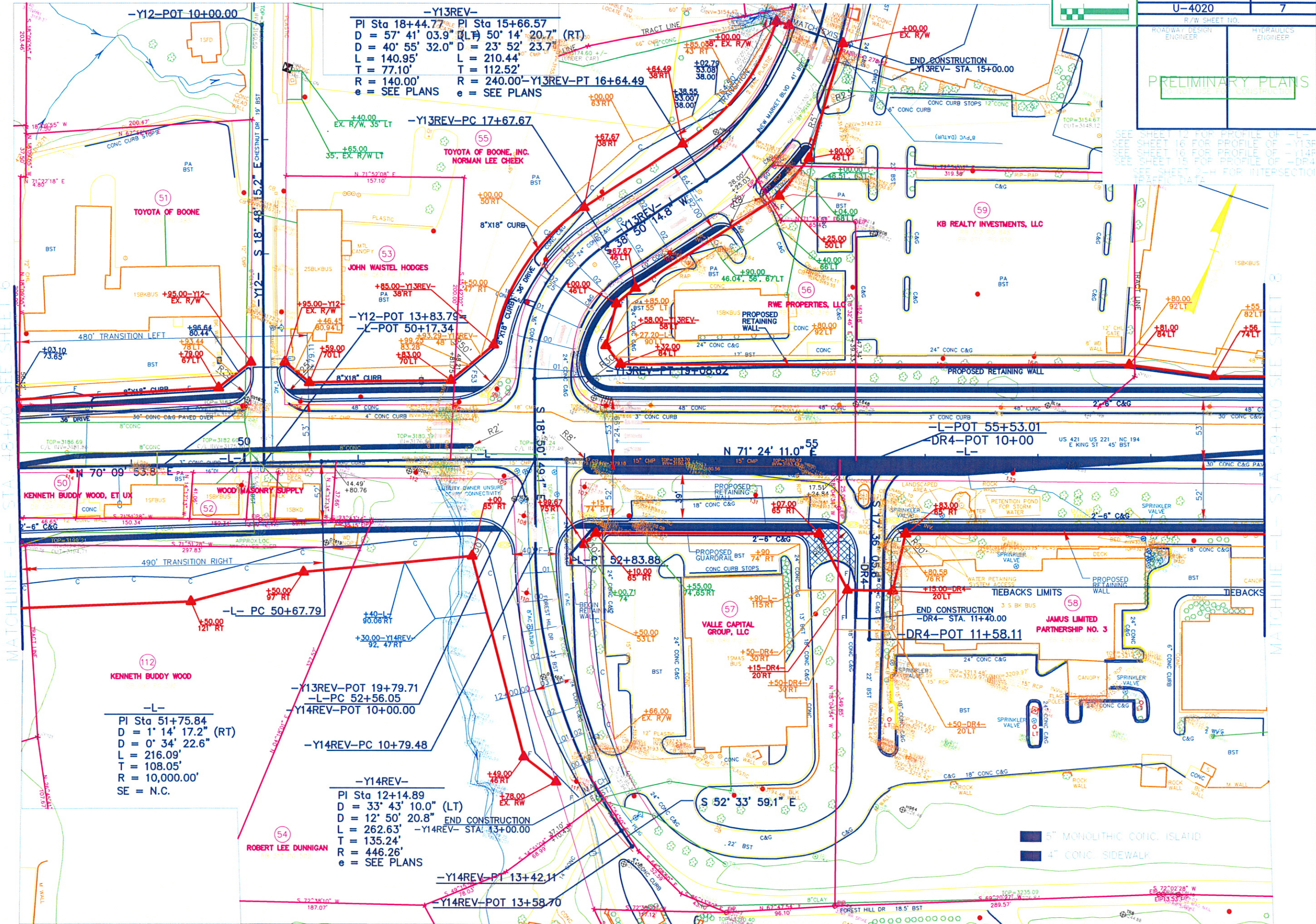
Hart & Hickman 2923 South Tryon Street-Suite 100
A PROFESSIONAL CORPORATION Charlotte, North Carolina 28203
704-586-0007(p) 704-586-0373(f)

DATE: 4-24-08
JOB NO: ROW-148

REVISION NO. 0
FIGURE: 3

Appendix A
NC DOT Preliminary Plan

SEE SHEET 12 FOR PROFILE OF -L-
 SEE SHEET 16 FOR PROFILE OF -Y13REV-
 SEE SHEET 15 FOR PROFILE OF -DR4-
 SEE SHEET 14 FOR INTERSECTION
 SPECIFIC DATA



-Y13REV-
 PI Sta 18+44.77 PI Sta 15+66.57
 D = 57' 41" 03.9" (LT) 50' 14" 20.7" (RT)
 D = 40' 55' 32.0" D = 23' 52' 23.7"
 L = 140.95' L = 210.44'
 T = 77.10' T = 112.52'
 R = 140.00' R = 240.00' -Y13REV-PT 16+64.49
 e = SEE PLANS e = SEE PLANS

-Y13REV-PC 17+67.67

-Y12-POT 13+83.79
-L-POT 50+17.34

-L- PC 50+67.79

-Y13REV-POT 19+79.71
-L-PC 52+56.05
Y14REV-POT 10+00.00

-Y14REV-PC 10+79.48

-Y14REV-
 PI Sta 12+14.89
 D = 33' 43' 10.0" (LT)
 D = 12' 50' 20.8" END CONSTRUCTION
 L = 262.63' -Y14REV- STA. 13+00.00
 T = 135.24'
 R = 446.26'
 e = SEE PLANS

-Y14REV-PT 13+42.11
-Y14REV-POT 13+58.70

-L-
 PI Sta 51+75.84
 D = 1' 14' 17.2" (RT)
 D = 0' 34' 22.6"
 L = 216.09'
 T = 108.05'
 R = 10,000.00'
 SE = N.C.

5' MONOLITHIC CONC. ISLAND
 4' CONC. SIDEWALK

MATCHLINE -L- STA 48+00 SEE SHEET 6

MATCHLINE -L- STA 59+00 SEE SHEET 9

Appendix B

Schnabel Engineering Reports of Geophysical Services

April 28, 2008

Mr. Matt Bramblett, PE
Hart & Hickman, PC
2923 South Tryon Street, Suite 100
Charlotte, NC 28203

RE: State Project: U-4020
WBS Element: 35015.1.1
County: Watauga
Description: US 421 (King Street) from US 321 (Hardin Street) to east
of NC 194 (Jefferson Road) in Boone

SUBJECT: Report on Geophysical Surveys of Parcel 53
Schnabel Engineering Project No. 07210023.07

Dear Mr. Bramblett:

This letter contains our report on the geophysical surveys we conducted on the subject property. We understand this letter report will be included as an appendix in your report to the NCDOT. The report includes two 11x17 color figures.

1.0 INTRODUCTION

Schnabel Engineering conducted geophysical surveys on March 11 and March 19, 2008, in the accessible areas of the proposed right-of-way (ROW) sections of Parcel 53 (John W. Hodges Property, Toyota of Boone) under our 2007 contract with the NCDOT. Parcel 53 is located at the northeast corner of the intersection of US 421 (King Street) and Chestnut Drive. The work was conducted at the location indicated by the NCDOT to support their environmental assessment of the subject parcel. The purpose of the geophysical surveys was to locate possible metal underground storage tanks (UST's) and associated metal product lines in the accessible areas of the site.

2.0 FIELD METHODOLOGY

Locations of geophysical data points were obtained using a sub-meter Trimble Pro-XRS DGPS system. References to direction and location in this report are based on the US State Plane 1983 system, North Carolina 3200 zone, using the NAD 83 datum, with units in US survey feet. The locations of existing site features (building, curbs, signs, etc.) were recorded for later correlation with the geophysical data and for location references to the NCDOT drawings. The geophysical investigation consisted of an electromagnetic (EM) induction survey using a Geonics EM61-MK2 instrument, and a ground-penetrating radar survey using a Geophysical Survey Systems SIR-3000 system equipped with a 400 MHz antenna.

The EM61 data were collected along parallel survey lines spaced about 2.5 feet apart. The EM61 and DGPS data were recorded digitally using a field computer and later transferred to a desktop computer for data processing. The GPR data were collected along survey lines spaced two feet apart in orthogonal directions over anomalous EM readings not attributed to cultural features.

Preliminary results were sent to David Graham and Matt Bramblett of Hart & Hickman on March 24, 2008.

3.0 DISCUSSION OF RESULTS

The contoured EM61 data are shown on Figures 1 and 2. The EM61 early time gate results are plotted on Figure 1. The early time gate data provide the most sensitive detection of metal object targets, regardless of size. Figure 2 shows the difference between the response of the top and bottom coils of the EM61 instrument (differential response). The difference is taken to remove the effect of surface and very shallowly buried metallic objects. Typically, the differential response emphasizes anomalies from deeper and larger objects such as UST's.

The early time gate and differential results show a linear trend of high amplitude anomalies centered 25 to 30 feet from US 421 (King Street). The anomalies in this area that are not related to the large metal sign are likely a result of vehicles parked close to the survey area. This area of the parcel was surveyed with GPR, but the GPR data did not indicate the presence of UST's in the areas surveyed.

4.0 CONCLUSIONS

Our evaluation of the geophysical data collected on Parcel 53 of Project U-4020 in Boone, NC indicates the following:

- The geophysical data do not indicate the presence of UST's in the areas surveyed.

5.0 LIMITATIONS

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

Thank you for the opportunity to serve you on this project. Please call if you need additional information or have any questions.

Sincerely,

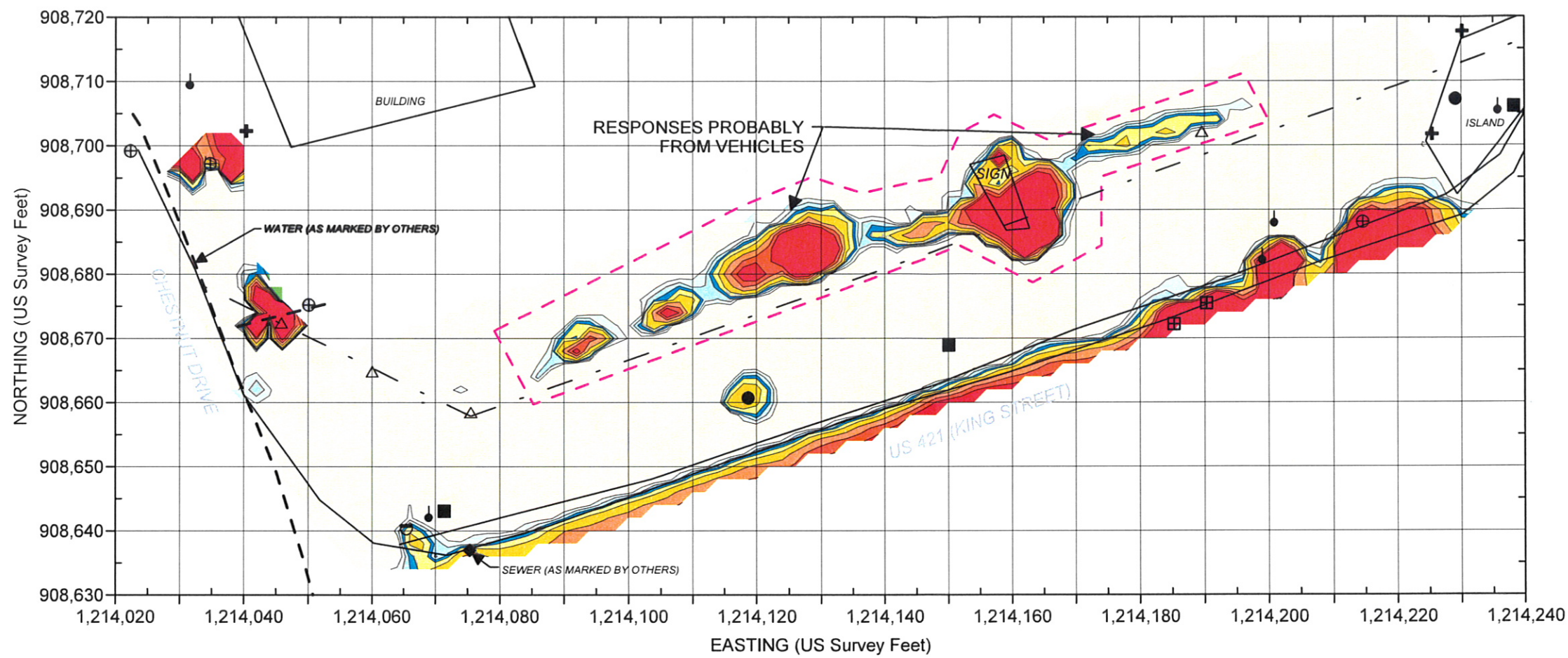


Jeremy S. Strohmeyer, P.G.
Project Manager

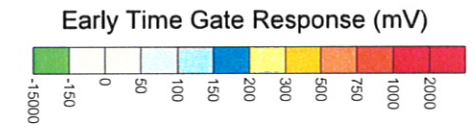
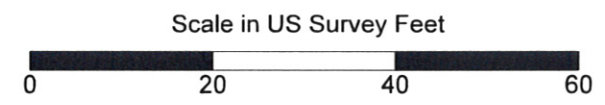
JW/JS/NB

Attachment: Figures (2)

FILE: G:\2007 PROJECTS\07210023 (NCDOT 2007 GEOPHYSICAL SERVICES) PHASE 07 (U-4020 - WATAUGA COUNTY) REPORT HART & HICKMAN PARCEL 53 REPORT ON PARCEL 53.DOC

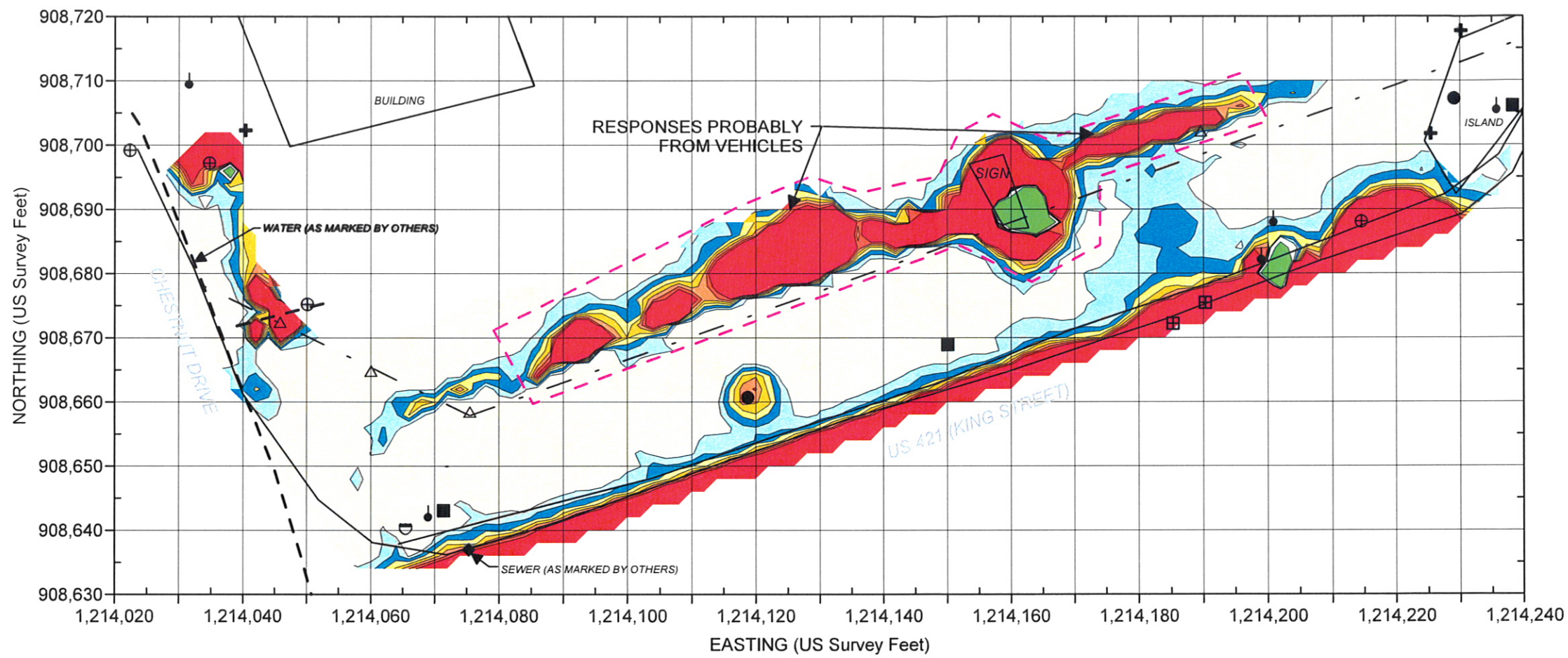


EXPLANATION	
	EM61 SURVEY AREA - DATA ACQUIRED ALONG PARALLEL SURVEY LINES SPACED APPROXIMATELY 2.5 FEET APART
	GUY WIRE
	SIGN
	METALLIC OBJECT
	NCDOT MARKER
	UTILITY POLE
	STORMWATER GRATE
	UTILITY MANHOLE
	MONITORING WELL
	LIGHTPOLE
	GPR SURVEY AREA
	LOCATION OF GPR SURVEY LINE SHOWN
	APPROXIMATE LOCATION OF POSSIBLE UTILITY (SOME MARKED IN FIELD)
	APPROXIMATE LOCATION OF POSSIBLE BURIED UST AS MARKED IN FIELD
	APPROXIMATE LIMITS OF NCDOT PROJECT

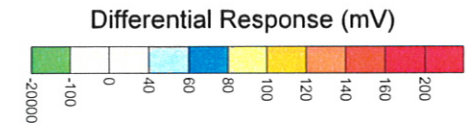
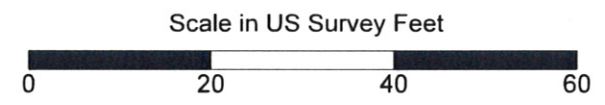


Note: The contour plot shows the earliest and most sensitive time gate of the EM61 bottom coil/channel in millivolts (mV). The EM data were collected on March 11, 2008, using a Geonics EM61-MK2 instrument. Positioning for the EM61 survey was provided using a submeter Trimble ProXRS DGPS system. Coordinates are in the US State Plane 1983 System, North Carolina Zone 3200, using the NAD 1983 datum. GPR data were acquired on March 19, 2008, using a Geophysical Survey Systems SIR 3000 equipped with a 400 MHz antenna.

	NC Department of Transportation Geotechnical Engineering Unit	PARCEL 53 EM61 EARLY TIME GATE RESPONSE FIGURE 1
	State Project No. U-4020 Watauga County, North Carolina	



EXPLANATION	
	EM61 SURVEY AREA - DATA ACQUIRED ALONG PARALLEL SURVEY LINES SPACED APPROXIMATELY 2.5 FEET APART
	GUY WIRE
	SIGN
	METALLIC OBJECT
	NCDOT MARKER
	UTILITY POLE
	STORMWATER GRATE
	UTILITY MANHOLE
	MONITORING WELL
	LIGHTPOLE
	GPR SURVEY AREA
	LOCATION OF GPR SURVEY LINE SHOWN
	APPROXIMATE LOCATION OF POSSIBLE UTILITY (SOME MARKED IN FIELD)
	APPROXIMATE LOCATION OF POSSIBLE BURIED UST AS MARKED IN FIELD
	APPROXIMATE LIMITS OF NCDOT PROJECT



Note: The contour plot shows the difference, in millivolts (mV), between the readings from the top and bottom coils of the EM61. The difference is taken to reduce the effect of shallow metal objects and emphasize anomalies caused by deeper metallic objects, such as pipes and tanks. The EM data were collected on March 11, 2008, using a Geonics EM61-MK2 instrument. Positioning for the EM61 survey was provided using a submeter Trimble ProXRS DGPS system. Coordinates are in the US State Plane 1983 System, North Carolina 3200 Zone, using the NAD 1983 datum. GPR data were acquired on March 19, 2008, using a Geophysical Survey Systems SIR 3000 equipped with a 400 MHz antenna.



NC Department of Transportation
Geotechnical Engineering Unit
State Project No. U-4020
Watauga County, North Carolina

**PARCEL 53
EM61 DIFFERENTIAL
RESPONSE**
FIGURE 2

Appendix C
Soil Boring Logs



BORING NUMBER 53-1

2923 South Tryon Street-Suite 100
Charlotte, North Carolina 28203
704-586-0007(p) 704-586-0373(f)

3334 Hillsborough Street
Raleigh, North Carolina 27607
919-847-4241(p) 919-847-4261(f)

PROJECT: Boone PSAs
JOB NUMBER: ROW-148
LOCATION: Boone, NC

LOG OF BORING - HART HICKMAN GDT - 5/27/08 08:43 - S:\AAA-MASTER PROJECTS\NC DOT RIGHT-OF-WAY - ROW\ROW-148 BOONE PSAS\BORING LOGS\ROW-148 (53).GPJ

DEPTH (ft)	RECOVERY (%)	BLOW COUNT	OVA (ppm)		LITHOLOGY	MATERIAL DESCRIPTION	WELL DIAGRAM	DEPTH (ft)
			BKG.	SAMP.				
0.0						Orange, brown, silty, SAND, slightly damp		0.0
2.5	75		0.5	0.6		Orange, tan, silty, CLAY, moist		2.5
5.0				0.9		Grey, silty, CLAY with PWR. Saturated at 6'.		5.0
7.5	50			0.4				7.5
10.0			0.3					10.0
12.5	25			0.5				12.5
15.0						Bottom of borehole at 12.0 feet.		15.0

DRILLING CONTRACTOR: GEOLOGIC EXPLORATION
DRILL RIG/ METHOD: Geoprobe 6620DT
SAMPLING METHOD: DPT Sleeves
LOGGED BY: MHF
DRAWN BY:

BORING STARTED: 4/7/08
BORING COMPLETED: 4/7/08
TOTAL DEPTH: 12
SURFACE ELEV:
DEPTH TO WATER:

Remarks:
Borehole hand-augered to 5'
Soil samples collected from 2-5'



BORING NUMBER 53-2

2923 South Tryon Street-Suite 100
Charlotte, North Carolina 28203
704-586-0007(p) 704-586-0373(f)

3334 Hillsborough Street
Raleigh, North Carolina 27607
919-847-4241(p) 919-847-4261(f)

PROJECT: Boone PSAs
JOB NUMBER: ROW-148
LOCATION: Boone, NC

LOG OF BORING - HART HICKMAN GDT - 5/27/08 08:43 - S:\AAA-MASTER PROJECTS\INC DOT RIGHT-OF-WAY - ROW\ROW-148 BOONE PSAS\BORING LOGS\ROW-148 (53).GPJ

DEPTH (ft)	RECOVERY (%)	BLOW COUNT	OVA (ppm)		LITHOLOGY	MATERIAL DESCRIPTION	WELL DIAGRAM	DEPTH (ft)
			BKG.	SAMP.				
0.0						Brown, orange, fine sandy, SILT, slightly damp		0.0
2.5	75		0.4	0.9		Orange, brown, fine sandy, CLAY, slightly damp to saturated at 12'		2.5
5.0				1				5.0
7.5	10			0.9				7.5
10.0				0.8				10.0
12.5	25			0.7				12.5
15.0						Bottom of borehole at 12.0 feet.		15.0

DRILLING CONTRACTOR: GEOLOGIC EXPLORATION
DRILL RIG/ METHOD: Geoprobe 6620DT
SAMPLING METHOD: DPT Sleeves
LOGGED BY: MHF
DRAWN BY:

BORING STARTED: 4/7/08
BORING COMPLETED: 4/7/08
TOTAL DEPTH: 12
SURFACE ELEV:
DEPTH TO WATER:

Remarks:
Borehole hand-augered to 5'
Soil samples collected from 5-7'



BORING NUMBER 53-3

2923 South Tryon Street-Suite 100
Charlotte, North Carolina 28203
704-586-0007(p) 704-586-0373(f)

3334 Hillsborough Street
Raleigh, North Carolina 27607
919-847-4241(p) 919-847-4261(f)

PROJECT: Boone PSAs
JOB NUMBER: ROW-148
LOCATION: Boone, NC

LOG OF BORING - HART HICKMAN.GDT - 5/27/08 08:43 - S:\AAA-MASTER PROJECTS\NC DOT RIGHT-OF-WAY - ROW\ROW-148 BOONE PSAS\BORING LOGS\ROW-148 (53).GPJ

DEPTH (ft)	RECOVERY (%)	BLOW COUNT	OVA (ppm)		LITHOLOGY	MATERIAL DESCRIPTION	WELL DIAGRAM	DEPTH (ft)
			BKG.	SAMP.				
0.0						Light brown, silty, SAND, slightly damp		0.0
2.5	75		0.3	0.6				2.5
5.0				1.1		Brown, silty, SAND with PWR and wood, damp		5.0
7.5	50			1		Dark, black, brown, silty, clay, wood, damp. No wood in sample after 9'		7.5
10.0				1				10.0
12.5	50			0.7				12.5
15.0						Bottom of borehole at 12.0 feet.		15.0

DRILLING CONTRACTOR: GEOLOGIC EXPLORATION
DRILL RIG/ METHOD: Geoprobe 6620DT
SAMPLING METHOD: DPT Sleeves
LOGGED BY: MHF
DRAWN BY:

BORING STARTED: 4/7/08
BORING COMPLETED: 4/7/08
TOTAL DEPTH: 12
SURFACE ELEV:
DEPTH TO WATER:

Remarks:
Borehole hand-augered to 5'
Soil samples collected from 4-6'



BORING NUMBER 53-4

2923 South Tryon Street-Suite 100
Charlotte, North Carolina 28203
704-586-0007(p) 704-586-0373(f)

3334 Hillsborough Street
Raleigh, North Carolina 27607
919-847-4241(p) 919-847-4261(f)

PROJECT: Boone PSAs
JOB NUMBER: ROW-148
LOCATION: Boone, NC

LOG OF BORING - HART HICKMAN GDT - 5/27/08 08:43 - S:\AAA-MASTER PROJECTS\NC DOT RIGHT-OF-WAY - ROW\ROW-148 BOONE PSAs\BORING LOGS\ROW-148 (53).GPJ

DEPTH (ft)	RECOVERY (%)	BLOW COUNT	OVA (ppm)		LITHOLOGY	MATERIAL DESCRIPTION	WELL DIAGRAM	DEPTH (ft)
			BKG.	SAMP.				
0.0						Light brown, silty, SAND and PWR		0.0
2.5	90		0.4	0.9		Dark brown, orange, sandy, CLAY with PWR, slightly damp		2.5
5.0				1.1				5.0
7.5	75			0.9				7.5
10.0	25			0.7				10.0
12.5						Bottom of borehole at 12.0 feet.		12.5
15.0								15.0

DRILLING CONTRACTOR: GEOLOGIC EXPLORATION
DRILL RIG/ METHOD: Geoprobe 6620DT
SAMPLING METHOD: DPT Sleeves
LOGGED BY: MHF
DRAWN BY:

BORING STARTED: 4/7/08
BORING COMPLETED: 4/7/08
TOTAL DEPTH: 12
SURFACE ELEV:
DEPTH TO WATER:

Remarks:
Borehole hand-augered to 5'
Soil samples collected from 5-7'



BORING NUMBER 53-5

2923 South Tryon Street-Suite 100
Charlotte, North Carolina 28203
704-586-0007(p) 704-586-0373(f)

3334 Hillsborough Street
Raleigh, North Carolina 27607
919-847-4241(p) 919-847-4261(f)

PROJECT: Boone PSAs

JOB NUMBER: ROW-148

LOCATION: Boone, NC

LOG OF BORING - HART HICKMAN.GDT - 5/27/08 08:43 - S:\AAA-MASTER PROJECTS\INC DOT RIGHT-OF-WAY -ROW\ROW-148 BOONE PSAS\BORING LOGS\ROW-148 (53).GPJ

DEPTH (ft)	RECOVERY (%)	BLOW COUNT	OVA (ppm)		LITHOLOGY	MATERIAL DESCRIPTION	WELL DIAGRAM	DEPTH (ft)
			BKG.	SAMP.				
0.0						Brown, orange, sandy, SILT, slightly damp		0.0
2.5	75		0.4	0.8		Brown, orange medium sandy, SILT, with PWR, slightly damp		2.5
5.0				1		Brown, orange, medium silty, SAND with PWR, damp		5.0
7.5	100			0.8				7.5
10.0	25			0.8				10.0
12.5						Bottom of borehole at 12.0 feet.		12.5
15.0								15.0

DRILLING CONTRACTOR: GEOLOGIC EXPLORATION
DRILL RIG/ METHOD: Geoprobe 6620DT
SAMPLING METHOD: DPT Sleeves
LOGGED BY: MHF
DRAWN BY:

BORING STARTED: 4/7/08
BORING COMPLETED: 4/7/08
TOTAL DEPTH: 12
SURFACE ELEV:
DEPTH TO WATER:

Remarks:
 Borehole hand-augered to 5'
 Soil samples collected from 5-7'



BORING NUMBER 55-1

2923 South Tryon Street-Suite 100
Charlotte, North Carolina 28203
704-586-0007(p) 704-586-0373(f)

3334 Hillsborough Street
Raleigh, North Carolina 27607
919-847-4241(p) 919-847-4261(f)

PROJECT: Boone PSAs
JOB NUMBER: ROW-148
LOCATION: Boone, NC

LOG OF BORING - HART HICKMAN.GDT - 5/28/08 17:23 - S:\AAA-MASTER PROJECTS\INC DOT RIGHT-OF-WAY -ROW\ROW-148 BOONE PSAS\BORING LOGS\ROW-148 (55).GPJ

DEPTH (ft)	RECOVERY (%)	BLOW COUNT	OVA (ppm)		LITHOLOGY	MATERIAL DESCRIPTION	WELL DIAGRAM	DEPTH (ft)
			BKG.	SAMP.				
0.0						Dark brown, sandy, SILT, damp		0.0
2.5	60		0.1	0.4		Dark, brown, silty, fine SAND and PWR, wet		2.5
5.0				0.8		Dark brown, silty, CLAY, with some fine sands and PWR, wet. REFUSAL at 10'		5.0
7.5	75			0.4				7.5
10.0						Bottom of borehole at 10.0 feet		10.0

DRILLING CONTRACTOR: GEOLOGIC EXPLORATION
DRILL RIG/ METHOD: Geoprobe 6620DT
SAMPLING METHOD: DPT Sleeves
LOGGED BY: MHF
DRAWN BY:

BORING STARTED: 4/8/08
BORING COMPLETED: 4/8/08
TOTAL DEPTH: 10
SURFACE ELEV:
DEPTH TO WATER:

Remarks:
Borehole hand-augered to 5'
Soil samples collected from 5-7'

Appendix D
Laboratory Analytical Report



NC Certification No. 402
 SC Certification No. 99012
 NC Drinking Water Cert. No. 37735

Laboratory Report

04/28/08

North Carolina Department of
 Transportation
 Attn: David Graham
 c/o Hart and Hickman
 2923 South Tryon St. Ste 100
 Charlotte, NC 28203

Project Name: Boone PSAs
 Project ID: ROW-148
 Project No.: WBS# 35015.1.1
 Sample Matrix: Soil

Client Sample ID: 53-3 (4-6)
 Prism Sample ID: 211228
 COC Group: G0408351
 Time Collected: 04/07/08 16:20
 Time Submitted: 04/11/08 9:20

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
<u>Percent Solids Determination</u>									
Percent Solids	80.0	%			1	SM2540 G	04/14/08 14:15	mbarber	
<u>Diesel Range Organics (DRO) by GC-FID</u>									
Diesel Range Organics (DRO)	BRL	mg/kg	8.6	1.4	1	8015B	04/18/08 21:00	jvogel	Q31877
Sample Preparation:			25.4 g	/	1 mL	3545	04/16/08 16:00	wconder	P21362
						Surrogate	% Recovery	Control Limits	
						o-Terphenyl	60	49 - 124	
<u>Sample Weight Determination</u>									
Weight 1	6.60	g			1	GRO	04/17/08 0:00	athao	
Weight 2	5.67	g			1	GRO	04/17/08 0:00	athao	
<u>Gasoline Range Organics (GRO) by GC-FID</u>									
Gasoline Range Organics (GRO)	BRL	mg/kg	6.3	3.9	50	8015B	04/18/08 9:04	wbradley	Q31785
						Surrogate	% Recovery	Control Limits	
						aaa-TFT	92	55 - 129	

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limit only. No J-Flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments.

All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services



NC Certification No. 402
 SC Certification No. 99012
 NC Drinking Water Cert. No. 37735

Laboratory Report

04/28/08

North Carolina Department of
 Transportation
 Attn: David Graham
 c/o Hart and Hickman
 2923 South Tryon St. Ste 100
 Charlotte, NC 28203

Project Name: Boone PSAs
 Project ID: ROW-148
 Project No.: WBS# 35015.1.1
 Sample Matrix: Soil

Client Sample ID: 53-1 (2-5)
 Prism Sample ID: 211229
 COC Group: G0408351
 Time Collected: 04/07/08 16:45
 Time Submitted: 04/11/08 9:20

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
<u>Percent Solids Determination</u>									
Percent Solids	79.3	%			1	SM2540 G	04/14/08 14:15	mbarber	
<u>Diesel Range Organics (DRO) by GC-FID</u>									
Diesel Range Organics (DRO)	BRL	mg/kg	8.8	1.4	1	8015B	04/18/08 21:35	jevogel	Q31877
Sample Preparation:			25.03 g	/	1 mL	3545	04/16/08 16:00	wconder	P21362
						Surrogate	% Recovery	Control Limits	
						o-Terphenyl	56	49 - 124	
<u>Sample Weight Determination</u>									
Weight 1	6.72	g			1	GRO	04/17/08 0:00	athao	
Weight 2	6.52	g			1	GRO	04/17/08 0:00	athao	
<u>Gasoline Range Organics (GRO) by GC-FID</u>									
Gasoline Range Organics (GRO)	BRL	mg/kg	6.3	3.9	50	8015B	04/17/08 11:55	wbradley	Q31785
						Surrogate	% Recovery	Control Limits	
						aaa-TFT	68	55 - 129	

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limit only. No J-Flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments.

All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services



NC Certification No. 402
 SC Certification No. 99012
 NC Drinking Water Cert. No. 37735

Laboratory Report

04/28/08

North Carolina Department of
 Transportation
 Attn: David Graham
 c/o Hart and Hickman
 2923 South Tryon St. Ste 100
 Charlotte, NC 28203

Project Name: Boone PSAs
 Project ID: ROW-148
 Project No.: WBS# 35015.1.1
 Sample Matrix: Soil

Client Sample ID: 53-2 (5-7)
 Prism Sample ID: 211230
 COC Group: G0408351
 Time Collected: 04/07/08 17:00
 Time Submitted: 04/11/08 9:20

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID						
<u>Percent Solids Determination</u>															
Percent Solids	83.8	%			1	SM2540 G	04/14/08 14:15	mbarber							
<u>Diesel Range Organics (DRO) by GC-FID</u>															
Diesel Range Organics (DRO)	BRL	mg/kg	8.2	1.3	1	8015B	04/18/08 22:11	jvogel	Q31877						
Sample Preparation:			25.46 g	/	1 mL	3545	04/16/08 16:00	wconder	P21362						
<table border="1"> <thead> <tr> <th>Surrogate</th> <th>% Recovery</th> <th>Control Limits</th> </tr> </thead> <tbody> <tr> <td>o-Terphenyl</td> <td>83</td> <td>49 - 124</td> </tr> </tbody> </table>										Surrogate	% Recovery	Control Limits	o-Terphenyl	83	49 - 124
Surrogate	% Recovery	Control Limits													
o-Terphenyl	83	49 - 124													
<u>Sample Weight Determination</u>															
Weight 1	7.70	g			1	GRO	04/17/08 0:00	athao							
Weight 2	7.61	g			1	GRO	04/17/08 0:00	athao							
<u>Gasoline Range Organics (GRO) by GC-FID</u>															
Gasoline Range Organics (GRO)	BRL	mg/kg	6.0	3.7	50	8015B	04/17/08 14:14	wbradley	Q31785						
<table border="1"> <thead> <tr> <th>Surrogate</th> <th>% Recovery</th> <th>Control Limits</th> </tr> </thead> <tbody> <tr> <td>aaa-TFT</td> <td>71</td> <td>55 - 129</td> </tr> </tbody> </table>										Surrogate	% Recovery	Control Limits	aaa-TFT	71	55 - 129
Surrogate	% Recovery	Control Limits													
aaa-TFT	71	55 - 129													

Sample Comment(s):

*BRL = Below Reporting Limit
 Values are reported down to the reporting limit only. No J-Flags applied.
 The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments.
 All results are reported on a dry-weight basis*

Angela D. Overcash, V.P. Laboratory Services



Full Service Analytical & Environmental Solutions

NC Certification No. 402
 SC Certification No. 99012
 NC Drinking Water Cert. No. 37735

Laboratory Report

04/28/08

North Carolina Department of
 Transportation
 Attn: David Graham
 c/o Hart and Hickman
 2923 South Tryon St. Ste 100
 Charlotte, NC 28203

Project Name: Boone PSAs
 Project ID: ROW-148
 Project No.: WBS# 35015.1.1
 Sample Matrix: Soil

Client Sample ID: 55-1 (5-7)
 Prism Sample ID: 211231
 COC Group: G0408351
 Time Collected: 04/08/08 8:10
 Time Submitted: 04/11/08 9:20

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
<u>Percent Solids Determination</u>									
Percent Solids	81.7	%			1	SM2540 G	04/14/08 14:15	mbarber	
<u>Sample Weight Determination</u>									
Weight Bisulfate 1	5.20	g			1	5035	04/22/08 0:00	athao	
Weight Bisulfate 2	5.18	g			1	5035	04/22/08 0:00	athao	
Weight Methanol	5.29	g			1	5035	04/22/08 0:00	athao	
<u>Volatile Organic Compounds by GC/MS</u>									
1,1,1-Trichloroethane	BRL	mg/kg	0.0059	0.00069	1	8260B	04/16/08 5:17	erussell	Q31741
1,1,2,2-Tetrachloroethane	BRL	mg/kg	0.0059	0.00042	1	8260B	04/16/08 5:17	erussell	Q31741
1,1,2-Trichloroethane	BRL	mg/kg	0.0059	0.00062	1	8260B	04/16/08 5:17	erussell	Q31741
1,1-Dichloroethane	BRL	mg/kg	0.0059	0.00067	1	8260B	04/16/08 5:17	erussell	Q31741
1,1-Dichloroethene	BRL	mg/kg	0.0059	0.0010	1	8260B	04/16/08 5:17	erussell	Q31741
1,1-Dichloropropene	BRL	mg/kg	0.0059	0.00069	1	8260B	04/16/08 5:17	erussell	Q31741
1,2,3-Trichlorobenzene	BRL	mg/kg	0.0059	0.00067	1	8260B	04/16/08 5:17	erussell	Q31741
1,2,3-Trichloropropane	BRL	mg/kg	0.0059	0.00079	1	8260B	04/16/08 5:17	erussell	Q31741
1,2,4-Trichlorobenzene	BRL	mg/kg	0.0059	0.00076	1	8260B	04/16/08 5:17	erussell	Q31741
1,2,4-Trimethylbenzene	BRL	mg/kg	0.0059	0.00029	1	8260B	04/16/08 5:17	erussell	Q31741
1,2-Dibromoethane (EDB)	BRL	mg/kg	0.0059	0.00073	1	8260B	04/16/08 5:17	erussell	Q31741
1,2-Dichlorobenzene	BRL	mg/kg	0.0059	0.00038	1	8260B	04/16/08 5:17	erussell	Q31741
1,2-Dichloroethane	BRL	mg/kg	0.0059	0.00066	1	8260B	04/16/08 5:17	erussell	Q31741
1,2-Dichloropropane	BRL	mg/kg	0.0059	0.0014	1	8260B	04/16/08 5:17	erussell	Q31741
1,3,5-Trimethylbenzene	BRL	mg/kg	0.0059	0.00049	1	8260B	04/16/08 5:17	erussell	Q31741
1,3-Dichlorobenzene	BRL	mg/kg	0.0059	0.00039	1	8260B	04/16/08 5:17	erussell	Q31741
1,3-Dichloropropane	BRL	mg/kg	0.0059	0.00025	1	8260B	04/16/08 5:17	erussell	Q31741
1,4-Dichlorobenzene	BRL	mg/kg	0.0059	0.00075	1	8260B	04/16/08 5:17	erussell	Q31741
2,2-Dichloropropane	BRL	mg/kg	0.0059	0.00085	1	8260B	04/16/08 5:17	erussell	Q31741
2-Chlorotoluene	BRL	mg/kg	0.0059	0.00033	1	8260B	04/16/08 5:17	erussell	Q31741

This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc.

449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543

Phone: 704/529-6364 - Toll Free Number: 1-800/529-6364 - Fax: 704/525-0409



NC Certification No. 402
 SC Certification No. 99012
 NC Drinking Water Cert. No. 37735

Laboratory Report

04/28/08

North Carolina Department of
 Transportation
 Attn: David Graham
 c/o Hart and Hickman
 2923 South Tryon St. Ste 100
 Charlotte, NC 28203

Project Name: Boone PSAs
 Project ID: ROW-148
 Project No.: WBS# 35015.1.1
 Sample Matrix: Soil

Client Sample ID: 55-1 (5-7)
 Prism Sample ID: 211231
 COC Group: G0408351
 Time Collected: 04/08/08 8:10
 Time Submitted: 04/11/08 9:20

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
2-Hexanone	BRL	mg/kg	0.059	0.0051	1	8260B	04/16/08 5:17	erussell	Q31741
4-Chlorotoluene	BRL	mg/kg	0.0059	0.00044	1	8260B	04/16/08 5:17	erussell	Q31741
4-Methyl-2-pentanone (MIBK)	BRL	mg/kg	0.059	0.0061	1	8260B	04/16/08 5:17	erussell	Q31741
Acetone	BRL	mg/kg	0.059	0.017	1	8260B	04/16/08 5:17	erussell	Q31741
Benzene	BRL	mg/kg	0.0035	0.00049	1	8260B	04/16/08 5:17	erussell	Q31741
Bromobenzene	BRL	mg/kg	0.0059	0.00075	1	8260B	04/16/08 5:17	erussell	Q31741
Bromochloromethane	BRL	mg/kg	0.0059	0.00048	1	8260B	04/16/08 5:17	erussell	Q31741
Bromodichloromethane	BRL	mg/kg	0.0059	0.00064	1	8260B	04/16/08 5:17	erussell	Q31741
Bromoform	BRL	mg/kg	0.0059	0.00053	1	8260B	04/16/08 5:17	erussell	Q31741
Bromomethane	BRL	mg/kg	0.012	0.0013	1	8260B	04/16/08 5:17	erussell	Q31741
Carbon tetrachloride	BRL	mg/kg	0.0059	0.00039	1	8260B	04/16/08 5:17	erussell	Q31741
Chlorobenzene	BRL	mg/kg	0.0059	0.0006	1	8260B	04/16/08 5:17	erussell	Q31741
Chlorodibromomethane	BRL	mg/kg	0.0059	0.00054	1	8260B	04/16/08 5:17	erussell	Q31741
Chloroethane	BRL	mg/kg	0.012	0.0020	1	8260B	04/16/08 5:17	erussell	Q31741
Chloroform	BRL	mg/kg	0.0059	0.00098	1	8260B	04/16/08 5:17	erussell	Q31741
Chloromethane	BRL	mg/kg	0.0059	0.0014	1	8260B	04/16/08 5:17	erussell	Q31741
cis-1,2-Dichloroethene	BRL	mg/kg	0.0059	0.00094	1	8260B	04/16/08 5:17	erussell	Q31741
cis-1,3-Dichloropropene	BRL	mg/kg	0.0059	0.00078	1	8260B	04/16/08 5:17	erussell	Q31741
Dichlorodifluoromethane	BRL	mg/kg	0.0059	0.0016	1	8260B	04/16/08 5:17	erussell	Q31741
Ethylbenzene	BRL	mg/kg	0.0059	0.00027	1	8260B	04/16/08 5:17	erussell	Q31741
Isopropyl ether (IPE)	BRL	mg/kg	0.0059	0.00054	1	8260B	04/16/08 5:17	erussell	Q31741
Isopropylbenzene	BRL	mg/kg	0.0059	0.00034	1	8260B	04/16/08 5:17	erussell	Q31741
m,p-Xylenes	BRL	mg/kg	0.012	0.00097	1	8260B	04/16/08 5:17	erussell	Q31741
Methyl ethyl ketone (MEK)	BRL	mg/kg	0.12	0.017	1	8260B	04/16/08 5:17	erussell	Q31741
Methyl t-butyl ether (MTBE)	BRL	mg/kg	0.012	0.00049	1	8260B	04/16/08 5:17	erussell	Q31741
Methylene chloride	BRL	mg/kg	0.0059	0.00097	1	8260B	04/16/08 5:17	erussell	Q31741
n-Butylbenzene	BRL	mg/kg	0.0059	0.00042	1	8260B	04/16/08 5:17	erussell	Q31741

This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc.

449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543

Phone: 704/529-6364 - Toll Free Number: 1-800/529-6364 - Fax: 704/525-0409



NC Certification No. 402
 SC Certification No. 99012
 NC Drinking Water Cert. No. 37735

Laboratory Report

04/28/08

North Carolina Department of
 Transportation
 Attn: David Graham
 c/o Hart and Hickman
 2923 South Tryon St. Ste 100
 Charlotte, NC 28203

Project Name: Boone PSAs
 Project ID: ROW-148
 Project No.: WBS# 35015.1.1
 Sample Matrix: Soil

Client Sample ID: 55-1 (5-7)
 Prism Sample ID: 211231
 COC Group: G0408351
 Time Collected: 04/08/08 8:10
 Time Submitted: 04/11/08 9:20

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
n-Propylbenzene	BRL	mg/kg	0.0059	0.00039	1	8260B	04/16/08 5:17	erussell	Q31741
Naphthalene	BRL	mg/kg	0.012	0.00071	1	8260B	04/16/08 5:17	erussell	Q31741
o-Xylene	BRL	mg/kg	0.0059	0.00025	1	8260B	04/16/08 5:17	erussell	Q31741
p-Isopropyltoluene	BRL	mg/kg	0.0059	0.00047	1	8260B	04/16/08 5:17	erussell	Q31741
sec-Butylbenzene	BRL	mg/kg	0.0059	0.0004	1	8260B	04/16/08 5:17	erussell	Q31741
Styrene	BRL	mg/kg	0.0059	0.00066	1	8260B	04/16/08 5:17	erussell	Q31741
tert-Butylbenzene	BRL	mg/kg	0.0059	0.00049	1	8260B	04/16/08 5:17	erussell	Q31741
Tetrachloroethene	BRL	mg/kg	0.0059	0.00053	1	8260B	04/16/08 5:17	erussell	Q31741
Toluene	BRL	mg/kg	0.0059	0.00044	1	8260B	04/16/08 5:17	erussell	Q31741
trans-1,2-Dichloroethene	BRL	mg/kg	0.0059	0.00075	1	8260B	04/16/08 5:17	erussell	Q31741
trans-1,3-Dichloropropene	BRL	mg/kg	0.0059	0.00069	1	8260B	04/16/08 5:17	erussell	Q31741
Trichloroethene	BRL	mg/kg	0.0059	0.00086	1	8260B	04/16/08 5:17	erussell	Q31741
Trichlorofluoromethane	BRL	mg/kg	0.0059	0.0010	1	8260B	04/16/08 5:17	erussell	Q31741
Vinyl acetate	BRL	mg/kg	0.029	0.0017	1	8260B	04/16/08 5:17	erussell	Q31741
Vinyl chloride	BRL	mg/kg	0.0059	0.0010	1	8260B	04/16/08 5:17	erussell	Q31741

Surrogate	% Recovery	Control Limits
Toluene-d8	112	81 - 128
Dibromofluoromethane	106	67 - 143
Bromofluorobenzene	105	77 - 128

Diesel Range Organics (DRO) by GC-FID

Diesel Range Organics (DRO)	BRL	mg/kg	8.4	1.4	1	8015B	04/18/08 22:47	jvogel	Q31877
Sample Preparation:			25.44 g	/	1 mL	3545	04/16/08 16:00	wconder	P21362

Surrogate	% Recovery	Control Limits
o-Terphenyl	60	49 - 124

This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc.

449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543

Phone: 704/529-6364 - Toll Free Number: 1-800/529-6364 - Fax: 704/525-0409



NC Certification No. 402
 SC Certification No. 99012
 NC Drinking Water Cert. No. 37735

Laboratory Report

04/28/08

North Carolina Department of
 Transportation
 Attn: David Graham
 c/o Hart and Hickman
 2923 South Tryon St. Ste 100
 Charlotte, NC 28203

Project Name: Boone PSAs
 Project ID: ROW-148
 Project No.: WBS# 35015.1.1
 Sample Matrix: Soil

Client Sample ID: 55-1 (5-7)
 Prism Sample ID: 211231
 COC Group: G0408351
 Time Collected: 04/08/08 8:10
 Time Submitted: 04/11/08 9:20

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
<u>Sample Weight Determination</u>									
Weight 1	4.93	g			1	GRO	04/17/08 0:00	athao	
Weight 2	5.25	g			1	GRO	04/17/08 0:00	athao	
<u>Gasoline Range Organics (GRO) by GC-FID</u>									
Gasoline Range Organics (GRO)	BRL	mg/kg	6.1	3.8	50	8015B	04/16/08 7:00	wbradley	Q31784

Surrogate	% Recovery	Control Limits
aaa-TFT	80	55 - 129

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limit only. No J-Flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments.

All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services



NC Certification No. 402
 SC Certification No. 99012
 NC Drinking Water Cert. No. 37735

Laboratory Report

04/28/08

North Carolina Department of
 Transportation
 Attn: David Graham
 c/o Hart and Hickman
 2923 South Tryon St. Ste 100
 Charlotte, NC 28203

Project Name: Boone PSAs
 Project ID: ROW-148
 Project No.: WBS# 35015.1.1
 Sample Matrix: Soil

Client Sample ID: 53-4 (5-7)
 Prism Sample ID: 211418
 COC Group: G0408351
 Time Collected: 04/07/08 17:45
 Time Submitted: 04/11/08 9:20

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
-----------	--------	-------	--------------	-----	-----------------	--------	--------------------	---------	----------

Percent Solids Determination

Percent Solids	76.5	%			1	SM2540 G	04/17/08 14:00	mbarber	
----------------	------	---	--	--	---	----------	----------------	---------	--

Diesel Range Organics (DRO) by GC-FID

Diesel Range Organics (DRO)	BRL	mg/kg	9.0	1.5	1	8015B	04/18/08 19:12	jvogel	Q31877
-----------------------------	-----	-------	-----	-----	---	-------	----------------	--------	--------

Sample Preparation: 25.34 g / 1 mL 3545 04/16/08 16:00 wconder P21362

Surrogate	% Recovery	Control Limits
o-Terphenyl	62	49 - 124

Sample Weight Determination

Weight 1	6.71	g			1	GRO	04/17/08 0:00	athao	
Weight 2	6.59	g			1	GRO	04/17/08 0:00	athao	

Gasoline Range Organics (GRO) by GC-FID

Gasoline Range Organics (GRO)	BRL	mg/kg	6.5	4.1	50	8015B	04/19/08 20:48	grappaccioli	Q31853
-------------------------------	-----	-------	-----	-----	----	-------	----------------	--------------	--------

Surrogate	% Recovery	Control Limits
aaa-TFT	90	55 - 129

Sample Comment(s):

*BRL = Below Reporting Limit
 Values are reported down to the reporting limit only. No J-Flags applied.
 The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments.
 All results are reported on a dry-weight basis*

Angela D. Overcash, V.P. Laboratory Services



NC Certification No. 402
 SC Certification No. 99012
 NC Drinking Water Cert. No. 37735

Laboratory Report

04/28/08

North Carolina Department of
 Transportation
 Attn: David Graham
 c/o Hart and Hickman
 2923 South Tryon St. Ste 100
 Charlotte, NC 28203

Project Name: Boone PSAs
 Project ID: ROW-148
 Project No.: WBS# 35015.1.1
 Sample Matrix: Soil

Client Sample ID: 53-5 (5-7)
 Prism Sample ID: 211419
 COC Group: G0408351
 Time Collected: 04/07/08 17:15
 Time Submitted: 04/11/08 9:20

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
<u>Percent Solids Determination</u>									
Percent Solids	82.0	%			1	SM2540 G	04/16/08 15:15	mbarber	
<u>Diesel Range Organics (DRO) by GC-FID</u>									
Diesel Range Organics (DRO)	33	mg/kg	8.4	1.4	1	8015B	04/21/08 9:51	jvogel	Q31787
Sample Preparation:			25.34 g	/	1 mL	3545	04/15/08 16:45	wconder	P21349
					Surrogate		% Recovery	Control Limits	
					o-Terphenyl		123	49 - 124	
<u>Sample Weight Determination</u>									
Weight 1	9.61	g			1	GRO	04/17/08 0:00	athao	
Weight 2	5.82	g			1	GRO	04/17/08 0:00	athao	
<u>Gasoline Range Organics (GRO) by GC-FID</u>									
Gasoline Range Organics (GRO)	BRL	mg/kg	6.1	3.8	50	8015B	04/19/08 21:20	grappaccioli	Q31853
					Surrogate		% Recovery	Control Limits	
					aaa-TFT		91	55 - 129	

Sample Comment(s):

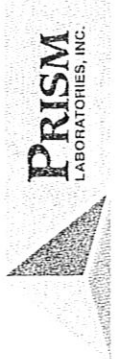
BRL = Below Reporting Limit

Values are reported down to the reporting limit only. No J-Flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments.

All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services



Full Service Analytical & Environmental Solutions

449 Springbrook Road • P.O. Box 240543 • Charlotte, NC 28224-0543
 Phone: 704/529-6364 • Fax: 704/525-0409

Client Company Name: HART & HICKMAN
 Report To/Contact Name: D. Carabian
 Reporting Address: 2923 S. Taylor St.

Phone: 704-586-0007 Fax (Yes) (No):
 Email (Yes) (No) Email Address: debra@hartandhickman.com
 EDD Type: PDF Excel Other
 Site Location Name: Boone Det
 Site Location Physical Address: Boone, NC

CHAIN OF CUSTODY RECORD

PAGE 3 OF 10 QUOTE # TO ENSURE PROPER BILLING:

Project Name: Row-148
 Short Hold Analysis: (Yes) (No) UST Project: (Yes) (No)
 *Please ATTACH any project specific reporting (QC LEVEL I II III IV) provisions and/or QC Requirements
 Invoice To:
 Address:

TO BE FILLED IN BY CLIENT/SAMPLING PERSONNEL
 Certification: NELAC _____ USACE _____ FL _____ NC
 SC _____ OTHER _____ N/A _____
 Water Chlorinated: YES _____ NO
 Sample Iced Upon Collection: YES _____ NO _____

LAB USE ONLY
 Samples INTACT upon arrival? YES NO _____ N/A _____
 Received ON WET ICE? Temp 1.2
 PROPER PRESERVATIVES indicated?
 Received WITHIN HOLDING TIMES?
 CUSTODY SEALS INTACT?
 VOLATILES rec'd W/OUT HEADSPACE?
 PROPER CONTAINERS used?

Purchase Order No./Billing Reference
 Requested Due Date 1 Day 2 Days 3 Days 4 Days 5 Days
 "Working Days" 6-9 Days Standard 10 days Pre-Approved
 Samples received after 15:00 will be processed next business day.
 Turnaround time is based on business days, excluding weekends and holidays.
 (SEE REVERSE FOR TERMS & CONDITIONS REGARDING SERVICES
 RENDERED BY PRISM LABORATORIES, INC. TO CLIENT)

CLIENT DESCRIPTION	DATE COLLECTED	TIME COLLECTED MILITARY HOURS	MATRIX (SOIL, WATER OR SLUDGE)	SAMPLE CONTAINER			PRESERVATIVES	ANALYSES REQUESTED	REMARKS	PRISM LAB ID NO.
				*TYPE SEE BELOW	NO.	SIZE				
55-1(5-7)	4/8/08	0810	soil	YOA	4	40mL	meth/none			211231
51-51-1(5-7)		0920			3					211232
51-3(2-5)		0935								211233
51-4(2-5)		0945								211234
51-5(0-2)		0955								211235
51-6(0-2)		1005								211236
51-7(0-2)		1050								211237
51-8(0-2)		1110								211238
51-9(0-2)		1117								211239
48-1(2-5)		1158								211240

PRESS DOWN FIRMLY - 3 COPIES

Sampler's Signature: [Signature] Sampled By (Print Name): M. Falkner Affiliation: H&H

Up on relinquishing, this Chain of Custody is your authorization for Prism to proceed with the analyses as requested above. Any changes must be submitted in writing to the Prism Project Manager. There will be charges for any changes after analyses have been initialized.

Relinquished By: (Signature) [Signature] Received By: (Signature) [Signature]
 Relinquished By: (Signature) [Signature] Received By: (Signature) [Signature]

Relinquished By: (Signature) [Signature] Received For Prism Laboratories By: [Signature]
 Date: 4/11/08 Date: 4/11/08
 Military/Hours: 4120 COC Group No. 60403351

Method of Shipment: Fed Ex UPS Hand-delivered Prism Field Service Other
 NOTE: ALL SAMPLE COOLERS SHOULD BE TAPED SHUT WITH CUSTODY SEALS FOR TRANSPORTATION TO THE LABORATORY. SAMPLES ARE NOT ACCEPTED AND VERIFIED AGAINST COC UNTIL RECEIVED AT THE LABORATORY.

Additional Comments:
 Site Arrival Time:
 Site Departure Time:
 Field Tech Fee:
 Mileage:
 NPDES: NC SC NC SC NC SC NC SC NC SC
 DRINKING WATER: NC SC NC SC NC SC
 SOLID WASTE: NC SC NC SC
 RCRA: NC SC NC SC
 CERCLA: NC SC NC SC
 LANDFILL: NC SC NC SC
 OTHER: NC SC NC SC

SEE REVERSE FOR TERMS & CONDITIONS
ORIGINAL



CHAIN OF CUSTODY RECORD

PAGE 2 OF 10 QUOTE # TO ENSURE PROPER BILLING: Row-148

Project Name: Row-148
 Short Hold Analysis: (Yes) (No) **UST Project: (Yes) (No)**
 *Please ATTACH any project specific reporting (QC LEVEL I II III IV)
 provisions and/or QC Requirements
 Invoice To:
 Address:

Client Company Name: HART & HICKMAN
 Report To/Contact Name: D. Graham
 Reporting Address: 2403 S. Jager St.

Phone: 704-586-0007 Fax (Yes) (No)
 Email (Yes) (No) Email Address: dgraham@hartandhickman.com
 EDD Type: PDF Excel Other
 Site Location Name: Saene-DOT
 Site Location Physical Address: Deane, NC

Purchase Order No./Billing Reference
 Requested Due Date 1 Day 2 Days 3 Days 4 Days 5 Days
 "Working Days" 6-9 Days Standard 10 days Rush Work Must Be Pre-Approved
 Samples received after 15:00 will be processed next business day.
 Turnaround time is based on business days, excluding weekends and holidays.
 (SEE REVERSE FOR TERMS & CONDITIONS REGARDING SERVICES RENDERED BY PRISM LABORATORIES, INC. TO CLIENT)

TO BE FILLED IN BY CLIENT/SAMPLING PERSONNEL
 Certification: NELAC USACE FL NC
 SC OTHER N/A
 Water Chlorinated: YES NO
 Sample Iced Upon Collection: YES NO

CLIENT SAMPLE DESCRIPTION	DATE COLLECTED	TIME COLLECTED MILITARY HOURS	MATRIX (SOIL, WATER OR SLUDGE)	SAMPLE CONTAINER		PRESERVATIVES	ANALYSES REQUESTED	REMARKS	PRISM LAB ID NO.
				*TYPE SEE BELOW	NO. SIZE				
50-11(4-6)	4/7/08	1420	soil	VOA CG	3 40ml Coz	none/meth			211221
50-12(5-8)		1430							211222
52-1(2-5)		1445							211223
52-2(5-7)		1452							211224
52-3(2-4)		1500							211225
52-4(5-7)		1510							211226
54185(4-6)		1540		VOA CG	4 40ml Coz	none/meth		HOLD VOCs	211227
53-3(4-6)		1620		VOA CG	3				211228
53-1(2-5)		1645							211229
53-2(5-7)		1700							211230

Sampler's Signature: [Signature] Sampled By (Print Name): M. Falkner Affiliation: H&H
 Upon relinquishing, this Chain of Custody is your authorization for Prism to proceed with the analyses as requested above. Any changes must be submitted in writing to the Prism Project Manager. There will be charges for any changes after analyses have been initialized.

Relinquished By: (Signature) [Signature] Received By: (Signature) [Signature] Date: 4/11/08 Military/Hours: 0920
 Relinquished By: (Signature) [Signature] Received By: (Signature) [Signature] Date: 4/11/08 Military/Hours: 0920
 Relinquished By: (Signature) [Signature] Received By: (Signature) [Signature] Date: 4/11/08 Military/Hours: 0920
 Method of Shipment: Fed Ex UPS Hand-delivered Prism Field Service Other
 NPDES: NC SC US: NC SC DRINKING WATER: NC SC SOLID WASTE: NC SC CERCLA: NC SC LANDFILL: NC SC OTHER: NC SC COC Group No. 60403351
 *CONTAINER TYPE CODES: A = Amber C = Clear G = Glass P = Plastic; TL = Teflon-Lined Cap VOA = Volatile Organics Analysis (Zero Head Space)
 SEE REVERSE FOR TERMS & CONDITIONS ORIGINAL



Full Service Analytical & Environmental Solutions
 449 Springbrook Road • P.O. Box 240543 • Charlotte, NC 28224-0543
 Phone: 704/529-6364 • Fax: 704/525-0409

CHAIN OF CUSTODY RECORD

PAGE OF QUOTE # TO ENSURE PROPER BILLING:

Project Name: _____
 Short Hold Analysis: (Yes) (No) UST Project: (Yes) (No)
 *Please ATTACH any project specific reporting (QC LEVEL I III III IV) provisions and/or QC Requirements
 Invoice To: _____
 Address: _____

Purchase Order No./Billing Reference _____
 Requested Due Date 1 Day 2 Days 3 Days 4 Days 5 Days
 "Working Days" 6-9 Days Standard 10 days Pre-Approved
 Samples received after 15:00 will be processed next business day.
 Turnaround time is based on business days, excluding weekends and holidays.
 (SEE REVERSE FOR TERMS & CONDITIONS REGARDING SERVICES RENDERED BY PRISM LABORATORIES, INC. TO CLIENT)

Phone: _____ Fax (Yes) (No): _____
 Email (Yes) (No) Email Address _____
 EDD Type: PDF Excel Other _____
 Site Location Name: _____
 Site Location Physical Address: _____

CLIENT SAMPLE DESCRIPTION	DATE COLLECTED	TIME COLLECTED MILITARY HOURS	MATRIX (SOIL, WATER OR SLUDGE)	SAMPLE CONTAINER		PRESERVATIVES	ANALYSES REQUESTED	REMARKS	PRISM LAB ID NO.
				*TYPE SEE BELOW	NO. SIZE				
53-4 (5-7)	4/7/08	1745	Soil	VOA/G	3 40ml	Meat	DRUG		211413
53-5 (5-7)	JL	1715	L	L	L	L			211419
51-a (5-7)	4/8/08	0720	L	L	L	L			211420

Sampler's Signature _____ Sampled By (Print Name) _____ Affiliation _____

Upon relinquishing, this Chain of Custody is your authorization for Prism to proceed with the analyses as requested above. Any changes must be submitted in writing to the Prism Project Manager. There will be charges for any changes after analyses have been initialized.

Relinquished By: (Signature) _____ Received By: (Signature) _____ Date _____ Military/Hours _____
 Relinquished By: (Signature) _____ Received By: (Signature) _____ Date _____
 Relinquished By: (Signature) _____ Received For Prism Laboratories By: _____ Date _____

Method of Shipment: NOTE: ALL SAMPLE COOLERS SHOULD BE TAPED SHUT WITH CUSTODY SEALS FOR TRANSPORTATION TO THE LABORATORY. SAMPLES ARE NOT ACCEPTED AND VERIFIED AGAINST COC UNTIL RECEIVED AT THE LABORATORY.
 Fed Ex UPS Hand-delivered Prism Field Service Other _____
 NPDES: NC SC NC SC NC SC NC SC NC SC NC SC
 *CONTAINER TYPE CONFS: A = Amher C = Clear G = Glass P = Plastic TL = Teflon-Lined Cap VOA = Volatile Organics Analysis (Zero Head Space)

LAB USE ONLY
 Samples INTACT upon arrival? YES NO N/A
 Received ON WET ICE? Temp _____
 PROPER PRESERVATIVES indicated?
 Received WITHIN HOLDING TIMES?
 CUSTODY SEALS INTACT?
 VOLATILES rec'd W/O OUT HEADSPACE?
 PROPER CONTAINERS used?

TO BE FILLED IN BY CLIENT/SAMPLING PERSONNEL
 Certification: NELAC _____ USACE _____ FL _____ NC _____
 SC _____ OTHER _____ N/A _____
 Water Chlorinated: YES _____ NO _____
 Sample Iced Upon Collection: YES _____ NO _____

PRESS DOWN FIRMLY - 3 COPIES

PRISM USE ONLY
 Site Arrival Time: _____
 Site Departure Time: _____
 Field Tech Fee: _____
 Mileage: _____

Additional Comments:
 HZH
 Samples not on
 C.O.C

SEE REVERSE FOR TERMS & CONDITIONS

ORIGINAL