

Prepared for:

**North Carolina Department of Transportation**  
**Geotechnical Engineering Unit**  
**GeoEnvironmental Section**  
**1589 Mail Service Center**  
**Raleigh, North Carolina 27699-1589**

## Preliminary Site Assessment Report

Medlin Brothers Body Shop, Inc.

Parcel # 45

721 Hunter Hill Rd.

Rocky Mount, Nash County, North Carolina

Rocky Mounty –US 301 Bypass from NC 43-48 (Benvenue Rd.) to SR 1836

TIP Number: U-3330

WBS Element: 36596.1.1



**10610 Metromont Parkway, Suite 206**  
**Charlotte, North Carolina 28269**

**October 2, 2015**

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**Charlotte, North Carolina 28269**

Prepared by:

A handwritten signature in blue ink that reads 'Troy L. Holzschuh'.

Troy L. Holzschuh  
Assistant Project Manager

Reviewed by:

A handwritten signature in blue ink that reads 'Kathleen Roush'.

Kathleen Roush, L.G. RSM  
Division Manager  
NC Geologist License No. 1353



**October 2, 2015**

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## 1.0 INTRODUCTION

This report presents the results of a Preliminary Site Assessment (PSA) for the North Carolina Department of Transportation (NCDOT) Parcel 45 performed by Apex Companies, LLC (Apex) on behalf of the NCDOT. The subject site of this PSA report is to be affected by the realignment of N Wesleyan Blvd. The Site is located on 721 Hunter Hill Rd. and is identified as Parcel 45, Medlin Brothers Body Shop, Inc. Property, within the NCDOT U-3330 design project. The property is located on the western side of N Wesleyan Blvd., as shown in the Vicinity Map, **Figure 1** and is in Rocky Mount of Nash County, North Carolina. The investigation was conducted in accordance with Apex Company's Technical and Cost proposal dated May 28, 2015.

NCDOT contracted Apex to perform the PSA within the proposed right-of-way (ROW) and/or easement due to the potential presence of contamination at the site and the fact that excavation and grading may occur within the area. The PSA was performed to evaluate if soils have been impacted as a result of past and present uses of the property within the proposed investigation area, if buried underground storage tanks (USTs) are present in the area of investigation, and if groundwater is impacted.

The following report summarizes a geophysical survey in the investigation area, and describes the subsurface field investigation at the site. The report includes the evaluation of field screening, as well as field analyses with regards to the presence or absence of soil contamination within the area of investigation across Parcel 45. **Appendix A** includes a Photograph log for the site.

### 1.1 Site History

Parcel 45 operates as an automotive body repair shop. The site has been in operation for approximately 15 years. According to the shop owner, Mr. William Medlin, the shop generates three to four barrels of waste materials per year. The waste material is recycled or picked up by a waste facility. The drums are stored inside the building and will not affect roadway construction activities. The building is approximately 80 feet from the centerline of Hunter Hill Road.

Apex personnel studied the North Carolina Department of Environment and Natural Resources (NCDENR) database for Incident Management and Registered Facilities and identified groundwater incident #5890 associated with this property. Apex corresponded with Ms. Brenda Hafshejani of the NCDENR UST Section, Raleigh Regional office. According to Ms. Hafshejani, while there is incident associated with this site, this is an old incident number and NCDENR does not have additional information for this parcel. No further information was obtainable.

## 1.2 Site Description

The site is located in a commercial area of Rocky Mount in Nash County. The automotive body repair shop is a single story aluminum siding building with one bay door and is located in the northwestern portion of the parcel. The asphalt and gravel parking lot occupies the central portion of the parcel, while the south eastern portion of the parcel is predominantly grass. The northern edge of the property is bordered by Hunter Hill Road with undeveloped wooded land across the street. The eastern edge of the parcel is bordered by N Wesleyan Blvd., with undeveloped wooded land across the street. Chili's Bar and Grill is borders the property to the southwest and Arby's borders the property to the northwest.

The geophysical surveyor, Taylor Wiseman and Taylor, did not identify possible USTs or tanks within the area of investigation.

## 2.0 GEOLOGY

### 2.1 Regional Geology

The site is located within the Eastern Slate Belt. This belt contains slightly metamorphosed volcanic and sedimentary rocks similar to those in the Carolina Slate Belt. The rocks are poorly exposed and partially covered by Coastal Plain sediments. The metamorphic rocks, 500-600 million years old, are intruded by younger, approximately 300 million year old, granitic bodies. Gold was once mined in the belt, and small occurrences of molybdenite, an ore of molybdenum, have been prospected here. Crushed stone, clay, sand and gravel are currently mined in this belt.

### 2.2 Site Geology

Site geology was observed through the drilling and sampling of five direct push probe soil borings onsite. **Figure 2** presents the boring locations and site layout. Borings did not exceed a total depth of ten feet below ground surface (bgs) since that depth was the maximum excavation depth for proposed drainage features. Soil consisting predominantly of orange to an orange and tan marbled clayey silt was observed across the parcel. Soil displayed varying degrees of moisture. Groundwater was not encountered during the assessment of this parcel. Boring logs are presented in **Appendix B**.

## **3.0 FIELD ACTIVITIES**

### **3.1 Preliminary Activities**

Prior to commencing field sampling activities at the site, several tasks were accomplished in preparation for the subsurface investigation. The Health and Safety Plan (HASP) was modified to include the site-specific health and safety information necessary for the field activities. North Carolina-One-Call was contacted on July 14, 2015 to report the proposed drilling activities and subsequently notify all affected utilities for the parcel. Apex subcontracted Taylor Wiseman & Taylor (TWT) to locate subsurface utilities and other subsurface drilling hazards as well as to perform a geophysical survey. Regional Probing Services of Wake Forest, North Carolina was retained by Apex to perform the direct push sampling for soil borings. QROS was contacted for acquisition of a rented ultraviolet fluorescence (UVF) Hydrocarbon Analyzer and Eastern Solutions was contacted for rental of a Photoionization Detector (PID). Boring locations were strategically placed in a pattern within the area of investigation to maximize the opportunity to encounter potentially contaminated soil.

### **3.2 Site Reconnaissance**

Apex personnel performed a site reconnaissance on July 24, 2015. During the site reconnaissance, the area was visually examined for the presence of UST or areas/obstructions that could potentially affect the subsurface investigation. The number and placement of boring locations were developed prior to boring activity which began on July 27, 2015. Apex personnel also used the site visit as an opportunity to contact the property manager/owner to inform them of upcoming field activities.

### **3.3 Geophysics Survey Results**

The geophysical survey of the site occurred the week of July 13<sup>th</sup>, 2015. TWT performed an electromagnetic (EM) survey followed by ground penetrating radar (GPR) survey. Their Geophysical Report is presented in **Appendix C**. No unknown EM features were identified.

### **3.4 Well Survey**

Apex personnel did not observe water supply wells or monitoring wells within the investigation area.

### 3.5 Soil Sampling

Apex conducted drilling activities at the site on July 27, 2015. Apex drilling subcontractor Regional Probing Services advanced five direct push soil borings within the proposed expanded NCDOT ROW. These five boring locations were placed in a pattern to maximize the likelihood of intercepting potential soil contamination. **Figure 2** presents the Site Map with boring locations and identifications.

The purpose of soil sampling was to determine if a petroleum release has occurred within the ROW and/or easement of the Parcel, and if so, to estimate the volume of impacted soil that might require special handling during construction activities.

Soil sampling was performed utilizing direct push methods accompanied by field screening and onsite quantitative analyses. Apex conducted field screening of the soil borings utilizing a photoionization detector (PID) that was used to screen recovered soil. One to two intervals of the soil boring, possibly exhibiting elevated PID readings, were selected for onsite quantitative analysis of total petroleum hydrocarbons (TPH) in soil via ultraviolet fluorescence (UVF) utilizing a QROS-QED Hydrocarbon Analyzer. The analysis was performed onsite by Troy Holzschuh, a certified QED UVF technician with Apex. The UVF results were generated concurrent with soil boring activities so that real-time decision making could be utilized for strategic boring placement.

## 4.0 SAMPLING RESULTS

### 4.1 Soil Sampling Results

Based on PID field screening and onsite UVF hydrocarbon analysis from the July 2015 soil sampling there is no evidence of petroleum hydrocarbon contamination onsite, within the area of investigation. Elevated PID readings, above ten parts per million, were not observed in the five borings conducted at the site. The PID readings were non-detectable. The PID field screening results are provided on the boring logs in **Appendix B**.

TPH gasoline range organics (GRO) and diesel range organics (DRO) measured using the onsite UVF unit are presented in **Table 1**, with instrument generated tables and chromatographs in **Appendix D**. **Figure 3** presents the GRO and DRO results at each boring.

Based on the UVF analyses GRO was not detected above the instrument reporting limits. DRO concentrations were identified on Parcel 45, however the concentrations do not exceed the regulatory action level of 10 milligram per kilogram (mg/kg).



Apex personnel decided not to submit samples for VOCs by EPA method 8260 or SVOCs by EPA method 8270 because no field indicators suggested contamination. In addition, the soil being tested was not native, it was predominantly fill used for an overpass project and no information with regard to soil contamination was identified while researching the project with the NCDENR regional office.

## 5.0 CONCLUSIONS

Based on site observations and onsite UVF analysis, petroleum-impacted soil contamination was not identified on this parcel.

The following bulleted summary is based upon Apex's evaluation of field observations and onsite quantitative analyses of samples collected from the Site on July 27<sup>th</sup>, 2015.

- Results of the geophysical survey produced no evidence of a possible UST.
- Five soil borings were performed and soil samples were collected from each boring. The analyzed samples were generally collected from one foot intervals at the midsection and deepest section of the boring. Each sample was analyzed via UVF in the field utilizing a QROS QED Hydrocarbon Analyzer.
- All GRO values were either non detectable or below the NCDENR Action level of 10 mg/kg.
- All DRO values were either non detectable or below the NCDENR Action level of 10 mg/kg.

## 6.0 RECOMMENDATIONS

Based on these PSA results, Apex does not recommend further assessment or soil sampling in the area of investigation.

## TABLES

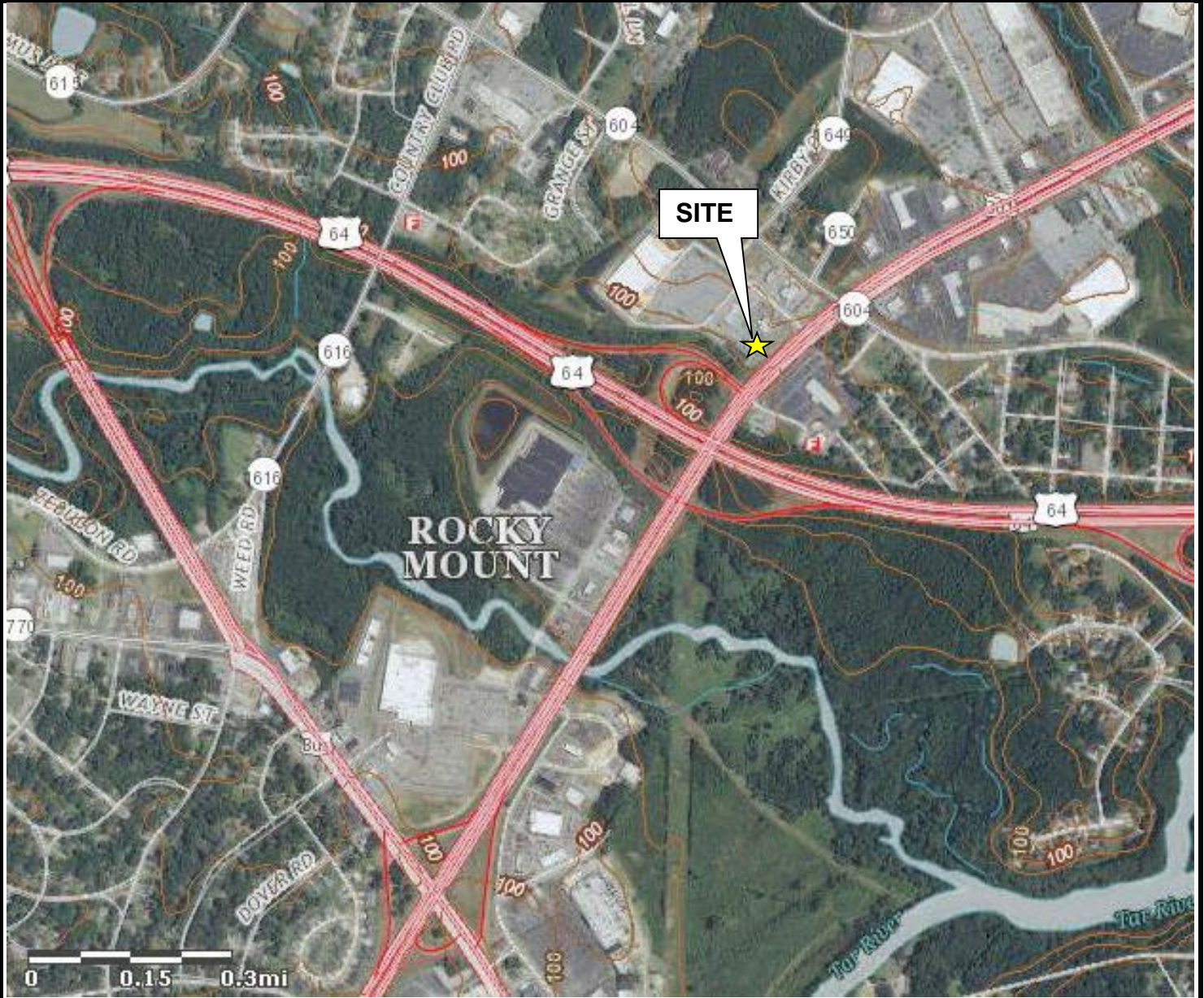
**Table 1**  
**UVF Onsite Hydrocarbon Analytical Soil Data from July 2015**  
**U-3330, Parcel 45, Medlin Brothers Body Shop, Inc.**  
**Rocky Mount, North Carolina**

Sample ID Number	Sample Date	Sample Depth (ft bgs)	GRO (mg/kg) (C5-C10)	DRO(mg/kg) (C10-C35)
P45-B1	7/27/2015	4 to 5	<0.52	<0.21
P45-B1	7/27/2015	9 to 10	<0.47	<0.19
P45-B2	7/27/2015	4 to 5	<0.42	0.23
P45-B2	7/27/2015	9 to 10	<0.62	<0.25
P45-B3	7/27/2015	4 to 5	<0.61	0.34
P45-B3	7/27/2015	9 to 10	<0.66	<0.27
P45-B4	7/27/2015	4 to 5	<0.41	0.24
P45-B4	7/27/2015	9 to 10	<0.55	0.22
P45-B5	7/27/2015	4 to 5	<0.5	0.2
P45-B5	7/27/2015	7 to 8	<0.52	<0.21
<p><b>NOTES:</b>  (mg/kg) = Milligrams per kilogram  GRO = Gasoline Range Organics  DRO = Diesel Range Organics  ft bgs = feet below ground surface  <b>Bold</b> Concentrations indicate an exceedance of NCDENR Action Level of 10 mg/Kg</p>				

## FIGURES

**Figure 1  
Site Location Map**

**Parcel #45  
Medlin Brothers Body Shop, Inc.  
829 Hunter Hill Road aka 721 Hunter Hill Road  
Rocky Mount, North Carolina**



USGS, National Geospatial Program  
1) Topographic Map, Rocky Mount, NC,  
7.5 Minute  
Year: 2013  
2) Orthoimagery, USGS EROS Ortho 1  
Foot  
Year: 2011



10610 Metromont Parkway, Suite 206  
Charlotte, NC  
Telephone: (704) 799-6390

Project:  
NCDOT – Nash Co.

Apex Job #: 510424-001

Date: August, 2015





LEGEND

	GEOENVIRONMENTAL BORING
	PROPOSED SLOPE STAKES FILL
	PROPOSED SLOPE STAKES CUT
	EXISTING ROW LINE
	PROPOSED ROW LINE
	EASEMENT LINE

**FIGURE 2  
PARCEL 45  
SITE MAP WITH  
SOIL BORING LOCATIONS**

APEX COMPANIES, LLC  
10610 METROMONT PARKWAY  
SUITE 206  
CHARLOTTE, NC 28117  
PHONE: (704) 799-6390

Date:	8/1/15	MONTGOMERY WARD 1 TARRYTOWN MALL AKA 2320 SUNSET AVENUE ROCKY MOUNT, NC 27801	
Proj. #	510424.001	Project Title:	
CAD File:	parcel_45.dgn	1" = 60'	Client:
Approx. Scale:	MJO	NC DOT	
Drawn by:			



**FIGURE 3  
 PARCEL 45  
 ONSITE UVF HYDROCARBON  
 ANALYSIS RESULTS**

**APPENDIX A**  
**PHOTOGRAPH LOG**





**Photo 1**

Viewing Parcel 45 Prior to Drilling Activities.



**Photo 2**

Removing the liner from a macro core.

**APPENDIX B**  
**BORING LOGS**



# Apex Companies, LLC

## Boring Log

<b>Boring/Well No.:</b> P45-B1	<b>Site Name:</b> Medlin Brothers Body Shop, Inc.
<b>Date:</b> 7-27-15	<b>Location:</b> Rocky Mount, Nash Co., NC
<b>Job No.:</b> 510424-001	<b>Sample Method:</b> Direct Push
<b>AMEC Rep:</b> Troy L. Holzschuh	<b>Drilling Method:</b> Direct Push
<b>Drilling Company:</b> Regional Probing Services	<b>Driller Name/Cert #:</b> Larry Opper/3322A

**Remarks:**

Depth BLS)	(ft)	PID Reading (ppm)	Lab Sample ID	Soil/Lithologic Description
0-1		0.0		Tan, Silt, Moist
1-3		0.0		Orange/Gray, Marbled, Clayey Silt, Moist
3-5		0.0		
5-7		0.0		
7-10		0.0		Gray, Clayey Silt, Moist
				Boring terminated at 10 feet

WELL CONSTRUCTION DETAILS (If Applicable)	
Well Type/Diameter:	Outer Casing Interval:
Total Depth:	Outer Casing Diameter:
Screen Interval:	Bentonite Interval:
Sand Interval:	Slot Size:
Grout Interval:	Static Water Level:





**Apex Companies, LLC**

**Boring Log**

<b>Boring/Well No.:</b> P45-B3	<b>Site Name:</b> Medlin Brothers Body Shop, Inc.
<b>Date:</b> 7-27-15	<b>Location:</b> Rocky Mount, Nash Co., NC
<b>Job No.:</b> 510424-001	<b>Sample Method:</b> Direct Push
<b>AMEC Rep:</b> Troy L. Holzschuh	<b>Drilling Method:</b> Direct Push
<b>Drilling Company:</b> Regional Probing Services	<b>Driller Name/Cert #:</b> Larry Opper/3322A

Remarks:

Depth (ft BLS)	PID Reading (ppm)	Lab Sample ID	Soil/Lithologic Description
0-2	0.0		Tan/Orange, Silty Sand, Fine, Dry
2-4	0.0		Tan, Clayey Silt, Moist
4-7	0.0		Orange, Clayey Silt, Moist
7-10	0.0		Orange/Tan, Marbled, Clayey Silt, Moist
			Boring terminated at 10 feet

**WELL CONSTRUCTION DETAILS (If Applicable)**

Well Type/Diameter:	Outer Casing Interval:
Total Depth:	Outer Casing Diameter:
Screen Interval:	Bentonite Interval:
Sand Interval:	Slot Size:
Grout Interval:	Static Water Level:



# Apex Companies, LLC

## Boring Log

<b>Boring/Well No.:</b> P45-B4	<b>Site Name:</b> Medlin Brothers Body Shop, Inc.
<b>Date:</b> 7-27-15	<b>Location:</b> Rocky Mount, Nash Co., NC
<b>Job No.:</b> 510424-001	<b>Sample Method:</b> Direct Push
<b>AMEC Rep:</b> Troy L. Holzschuh	<b>Drilling Method:</b> Direct Push
<b>Drilling Company:</b> Regional Probing Services	<b>Driller Name/Cert #:</b> Larry Opper/3322A

**Remarks:**

Depth BLS)	(ft)	PID Reading (ppm)	Lab Sample ID	Soil/Lithologic Description
0-1		0.0		Brown, Silt, Moist
1-3		0.0		Orange/Tan, Marbled, Clayey Silt, Moist
3-6		0.0		
3-6		0.0		Tan/Orange, Marbled, Clayey Silt, Moist
3-6		0.0		
				Boring terminated at 10 feet

WELL CONSTRUCTION DETAILS (If Applicable)	
Well Type/Diameter:	Outer Casing Interval:
Total Depth:	Outer Casing Diameter:
Screen Interval:	Bentonite Interval:
Sand Interval:	Slot Size:
Grout Interval:	Static Water Level:



**APPENDIX C**  
**GEOPHYSICAL REPORT**





# Taylor Wiseman & Taylor

ENGINEERS | SURVEYORS | SCIENTISTS

3500 Regency Parkway, Suite 260 – Cary, NC 27518

Office: (919) 297-0085 Fax: (919) 297-0090

August 26, 2015

TWT # 70668.5002.00

Apex Companies, LLC  
Attn: Ms. Katie Lippard  
10610 Metromont Parkway  
Suite 206  
Charlotte, NC 28269

RE: SUE Geophysical Assessment  
NCDOT Project U-3330  
US 301 Bypass  
Rocky Mount, NC (Nash County)

Ms. Lippard:

Taylor Wiseman & Taylor (**TWT**) is submitting this Subsurface Utility Engineering (SUE) Geophysical Assessment report to document services performed under Subcontracting Services Agreement number 51-315, dated 7/8/2015, for Apex Job number 510424.001. TWT was subcontracted by Apex Companies, LLC to perform a utility mark-out and underground storage tank (UST) investigation with electromagnetic designating equipment and ground penetrating radar (GPR). These services were performed at six (6) locations that are defined as follows:

- 1) Parcel 20 (Greene) – 1921 Stone Rose Avenue/Drive – see Figure 1
- 2) Parcel 37 (National) – 770 N Wesleyan Blvd – see Figure 2
- 3) Parcel 45 (Medlin) – 829 Hunter Hill Road – see Figure 3
- 4) Parcel 49 (Bishop Partners) – 921 N. Wesleyan Blvd – see Figure 4
- 5) Parcel 69 (Cliett, Inc.) – 1001 N. Wesleyan Blvd – see Figure 5
- 6) Parcels 22,23,24 & 25 (Tarrytown) – 2320 Sunset Avenue – see Figure 6

The limits and findings for each investigation are documented on the Figures attached hereto. As noted on the Figures, TWT utilized a Vivax Pro Loc 2, and Vivax Metrotech 810 for the electromagnetic designation and a Mala X3M GPR with a 250 MHz antenna. There were some areas at the sites where the GPR cart could not be pushed. Steep slopes, ditches and wooded areas presented some of these limitations. Each Figure clearly identifies the areas where GPR could not be performed.

Each Figure shows the underground utility lines that were detected by way of the electromagnetic designating. Each Figure shows any anomalies that were detected with the GPR.

Parcel 20 (refer to Figure 1) is the only parcel where the GPR detected an anomaly. The anomaly was not characteristic of a UST and has been duly noted that way on the Figure.

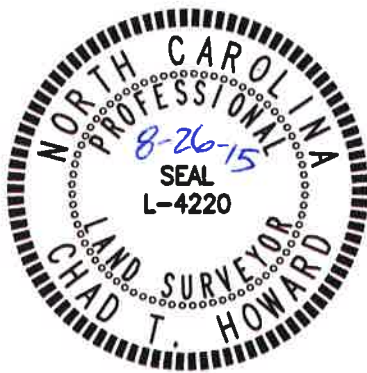
The conclusions for this geophysical assessment submitted herein are based upon the data obtained from non-invasive testing. As such, even within the surveyed area, the survey cannot be considered 100 percent accurate due to inherent method limitations, survey limitations, site features, and/or unforeseen site-specific conditions. Accordingly, the possibility exists that not all subsurface, man-made features have been located.

Properties of the subsurface materials (e.g., clay content, moisture, etc.) can have a significant impact on the effective depth of penetration of the GPR survey. Accordingly, non-metallic tanks, tanks at depths below about 5 feet, and tanks outside of the survey area may not have been detected using the

geophysical techniques. In addition, due to interference, there may be areas within the proposed survey area where an interpretation of subsurface features was not feasible.

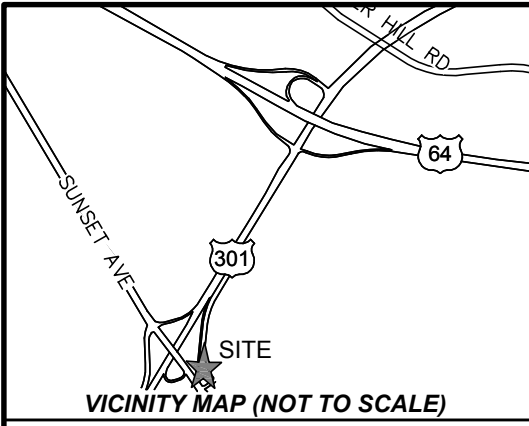
Regardless of the thoroughness of a geophysical study, there is always a possibility that actual conditions may not match the interpretations. The results should be considered accurate only to the degree implied by the methods used and the method's limitations and data coverage. Accordingly, the possibility exists that not all subsurface features at a project site will be located due to either subsurface soil conditions or the occurrence of features outside the lateral limits and below the depth of penetration of the methods used. The location and/or determination (or the lack thereof) of potential USTs is based on our review of provided information and of the geophysical survey. Under no circumstances does TWT assume any responsibility for damages resulting from the presence of subsurface features that may exist but were not identified by our survey.

TWT welcomes the opportunity to assist you with future geophysical survey needs. Should you have any questions regarding this report, please call or email.



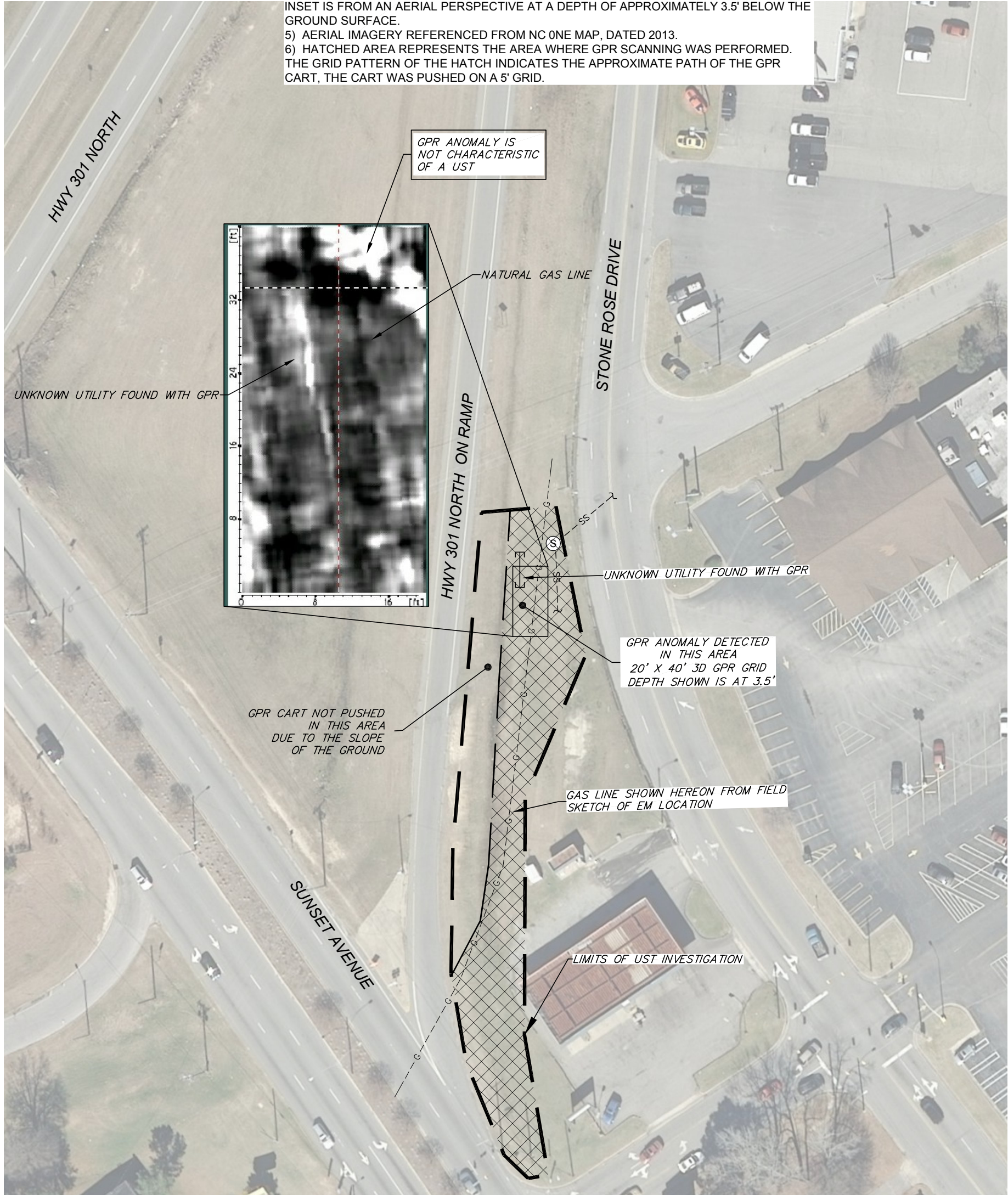
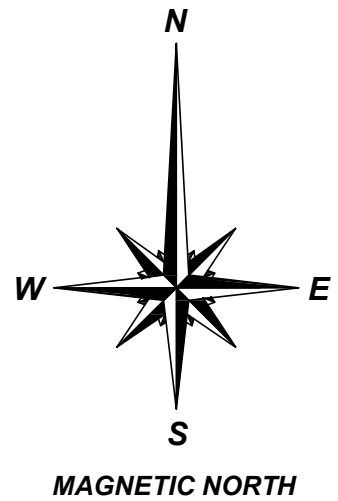
Best regards,

Chad T. Howard, PLS  
Survey & SUE Division Manager  
Taylor Wiseman & Taylor  
(919) 215-1472  
howard@taylorwiseman.com

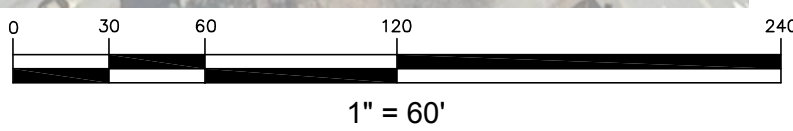


### GENERAL NOTES

- 1) THE PURPOSE OF THIS MAP IS TO DISPLAY UNDERGROUND UTILITIES DESIGNATED BY TAYLOR WISEMAN & TAYLOR'S SUBSURFACE UTILITY ENGINEERING DEPARTMENT, UTILIZING VIVAX PRO LOC 2, AND VIVAX METROTECH 810 FOR ELECTROMAGNETIC DESIGNATION, AND A MALA X3M GROUND PENETRATING RADAR WITH A 250 MHZ ANTENNA.
- 2) ALL UNDERGROUND UTILITIES SHOWN HEREON WERE LOCATED IN ACCORDANCE WITH QUALITY LEVEL "B" SUBSURFACE UTILITY ENGINEERING STANDARDS. THIS QUALITY LEVEL DOES NOT GUARANTEE THE LOCATION OF ALL UNDERGROUND UTILITIES THAT MAY EXIST WITHIN THE LIMITS OF THIS SURVEY. THIS MAP SHOULD NOT BE RELIED UPON AS A COMPLETE DEPICTION OF ALL UNDERGROUND UTILITY APPURTENANCES THAT MAY EXIST WITHIN THE LIMITS OF THIS SURVEY. NOT ALL UNDERGROUND UTILITY APPURTENANCES CAN BE DETECTED AND TRACED WITH OUR EQUIPMENT. USE OF THIS MAP DOES NOT NEGATE ANY PARTY'S RESPONSIBILITY TO CONTACT "ONE-CALL" PRIOR TO PERFORMING EXCAVATIONS INSIDE THE LIMITS OF THIS SURVEY.
- 3) THE LOCATION OF THE UTILITIES SHOWN HEREON SHOULD BE CONSIDERED APPROXIMATE. THIS DOCUMENT IS A SKETCH; IT IS NOT A SURVEY; NO FIELD SURVEYING WAS PERFORMED.
- 4) THERE WAS ONE AREA WITHIN THE LIMITS, THAT THE GPR FOUND AN ANOMALY. THE INSET IS FROM AN AERIAL PERSPECTIVE AT A DEPTH OF APPROXIMATELY 3.5' BELOW THE GROUND SURFACE.
- 5) AERIAL IMAGERY REFERENCED FROM NC ONE MAP, DATED 2013.
- 6) HATCHED AREA REPRESENTS THE AREA WHERE GPR SCANNING WAS PERFORMED. THE GRID PATTERN OF THE HATCH INDICATES THE APPROXIMATE PATH OF THE GPR CART, THE CART WAS PUSHED ON A 5' GRID.



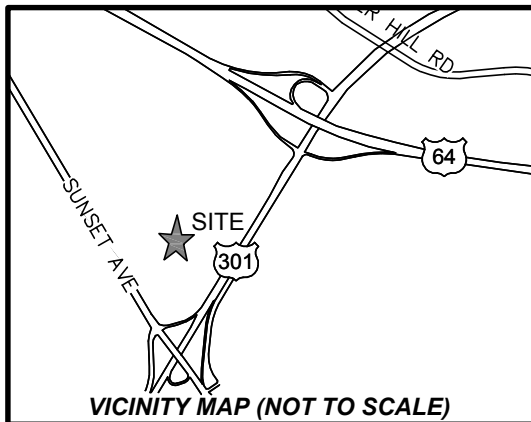
THIS MAP IS NOT A CERTIFIED SURVEY AND HAS NOT BEEN REVIEWED BY A LOCAL GOVERNMENT AGENCY FOR COMPLIANCE WITH ANY APPLICABLE LAND DEVELOPMENT REGULATIONS



**TAYLOR WISEMAN & TAYLOR**  
 ENGINEERS | SURVEYORS | SCIENTISTS  
 SUBSURFACE UTILITY ENGINEERS  
 3500 REGENCY PARKWAY  
 SUITE 260, CARY, NC 27518  
 PHONE (919) 297-0085 FAX (919) 297-0090  
 NORTH CAROLINA LICENSE NUMBER: F-0362

**GEOPHYSICAL ASSESSMENT**  
 for APEX COMPANIES LLC.  
 NCDOT PROJECT U-3330, PARCEL 20  
 1921 STONE ROSE DRIVE  
 NASH COUNTY - ROCKY MOUNT, NC

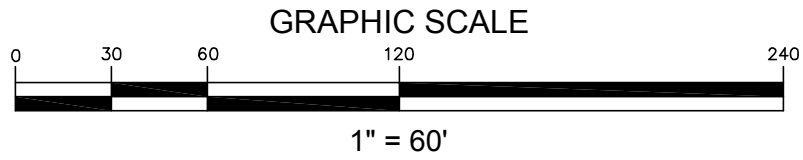
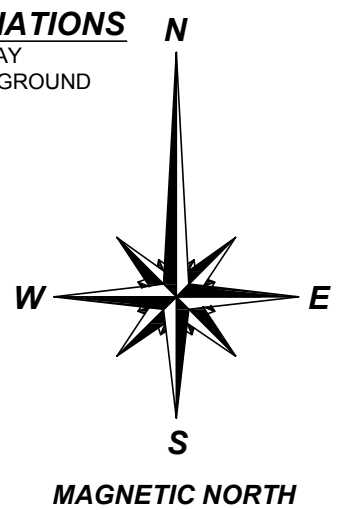
REVISIONS:	DATE OF SURVEY:	07/13/2015
	SCALE:	1" = 60'
	DRAWN BY:	J.REYNOLDS
	CHECKED BY:	C. HOWARD PLS
	PROJECT:	70668.5002.00
FIGURE #:	1	SHEET: 1 / 1



LINE LEGEND		
---	FO	U/G FIBER OPTIC (SKETCH)
---	T	U/G TELEPHONE (SKETCH)
---	UE	U/G ELECTRIC LINE (SKETCH)

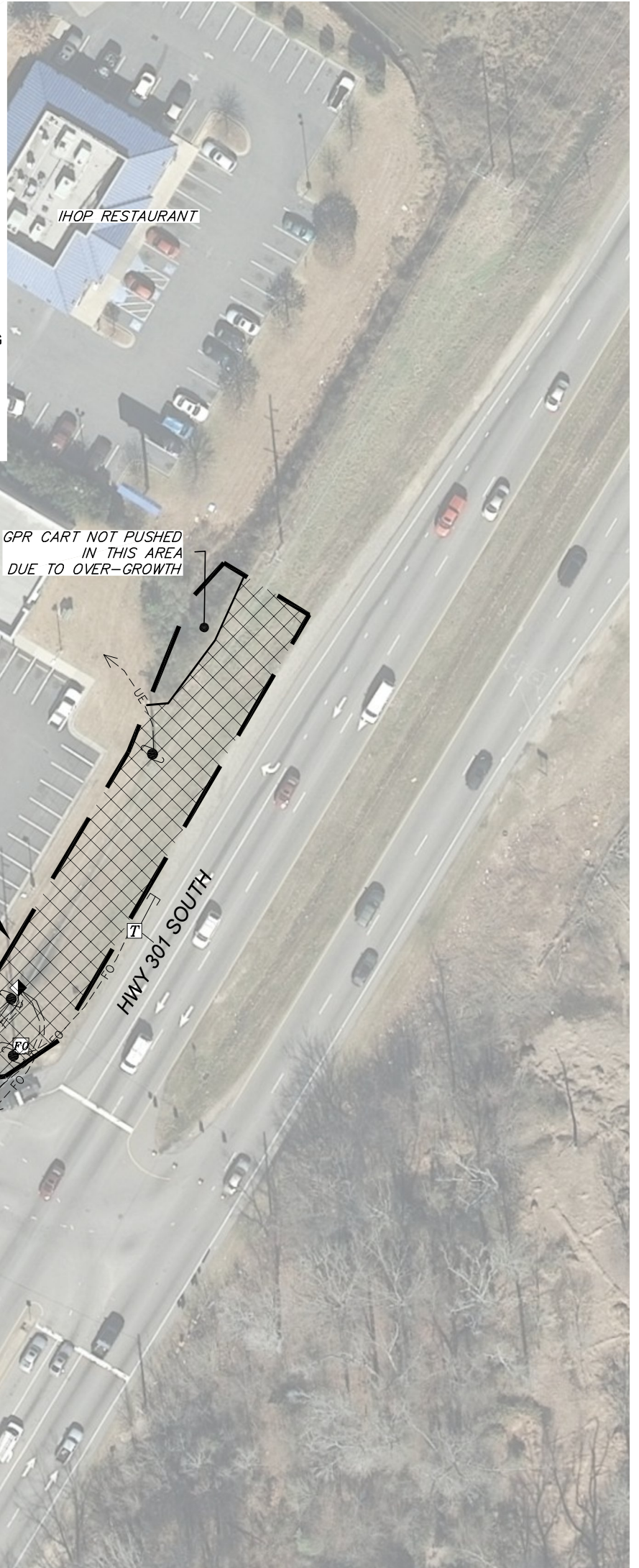
**ABBREVIATIONS**

HWY HIGHWAY  
U/G UNDERGROUND

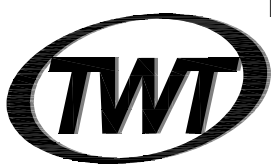


**GENERAL NOTES**

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- 3) THE LOCATION OF THE UTILITIES SHOWN HEREON SHOULD BE CONSIDERED APPROXIMATE. THIS DOCUMENT IS A SKETCH; IT IS NOT A SURVEY; NO FIELD SURVEYING WAS PERFORMED.
- 4) NO ANOMALIES WERE FOUND BY THE GPR WITHIN THE PROJECT LIMITS.
- 5) AERIAL IMAGERY REFERENCED FROM NC ONE MAP, DATED 2013.
- 6) HATCHED AREA REPRESENTS THE AREA WHERE GPR SCANNING WAS PERFORMED. THE GRID PATTERN OF THE HATCH INDICATES THE APPROXIMATE PATH OF THE GPR CART, THE CART WAS PUSHED ON A 5' GRID.



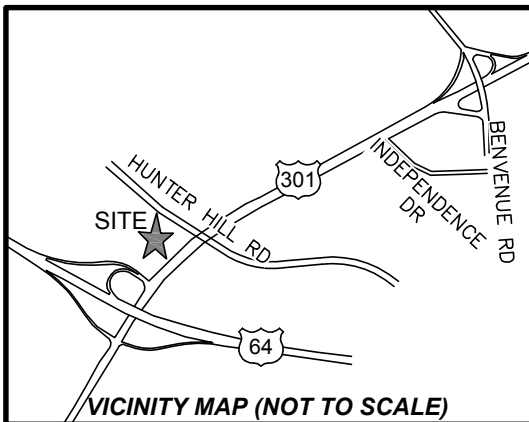
THIS MAP IS NOT A CERTIFIED SURVEY AND HAS NOT BEEN REVIEWED BY A LOCAL GOVERNMENT AGENCY FOR COMPLIANCE WITH ANY APPLICABLE LAND DEVELOPMENT REGULATIONS



**TAYLOR WISEMAN & TAYLOR**  
ENGINEERS | SURVEYORS | SCIENTISTS  
SUBSURFACE UTILITY ENGINEERS  
3500 REGENCY PARKWAY  
SUITE 260, CARY, NC 27518  
PHONE (919) 297-0085 FAX (919) 297-0090  
NORTH CAROLINA LICENSE NUMBER: F-0362

**GEOPHYSICAL ASSESSMENT**  
for APEX COMPANIES LLC.  
NCDOT PROJECT U-3330, PARCEL 37  
770 N. WESLEYAN BLVD  
NASH COUNTY - ROCKY MOUNT, NC

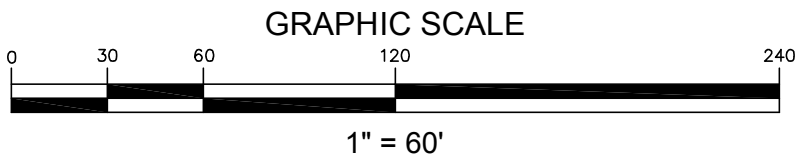
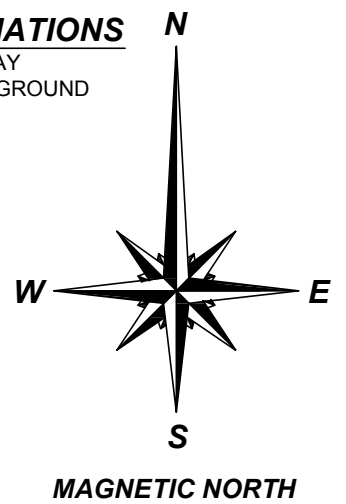
REVISIONS:	DATE OF SURVEY:	07/13/2015
	SCALE:	1" = 60'
	DRAWN BY:	J.REYNOLDS
	CHECKED BY:	C. HOWARD PLS
	PROJECT:	70668.5002.00
FIGURE #:	2	SHEET: 1 / 1



LINE LEGEND	
---G---G---	U/G GAS (SKETCH)
---FO---FO---	U/G FIBER OPTIC (SKETCH)
---T---T---	U/G TELEPHONE (SKETCH)
---UE---UE---	U/G ELECTRIC LINE (SKETCH)

**ABBREVIATIONS**

HWY HIGHWAY  
U/G UNDERGROUND



**GENERAL NOTES**

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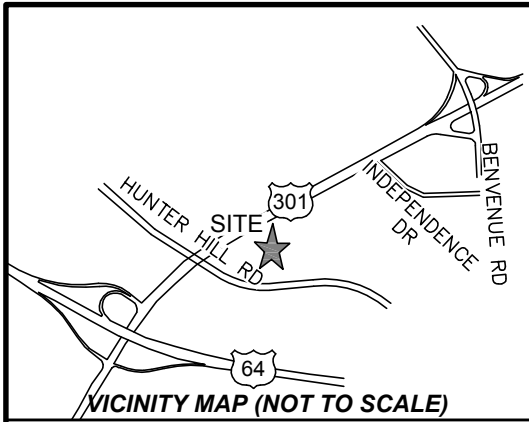
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PHONE (919) 297-0085 FAX (919) 297-0090  
NORTH CAROLINA LICENSE NUMBER: F-0362

**GEOPHYSICAL ASSESMENT**  
for APEX COMPANIES LLC.  
NCDOT PROJECT U-3330, PARCEL 45  
829 HUNTER HILL ROAD  
NASH COUNTY - ROCKY MOUNT, NC

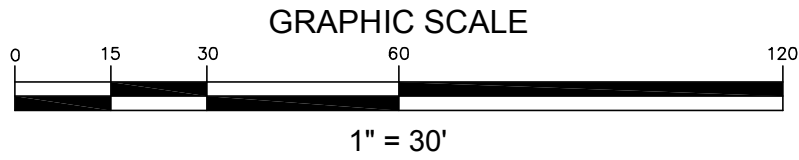
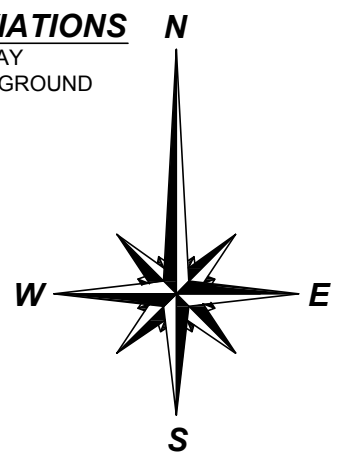
REVISIONS:	DATE OF SURVEY:	07/13/2015
	SCALE:	1" = 60'
	DRAWN BY:	J.REYNOLDS
	CHECKED BY:	C. HOWARD PLS
	PROJECT:	70668.5002.00
FIGURE #:	<b>3</b>	SHEET: <b>1 / 1</b>



LINE LEGEND	
-----T-----T-----	U/G TELEPHONE (SKETCH)
-----W-----W-----	U/G WATER LINE (SKETCH)
-----UE-----UE-----	U/G ELECTRIC LINE (SKETCH)
-----G-----G-----	U/G GAS (SKETCH)
-----UNK-----UNK-----	UNKNOWN U/G UTILITY

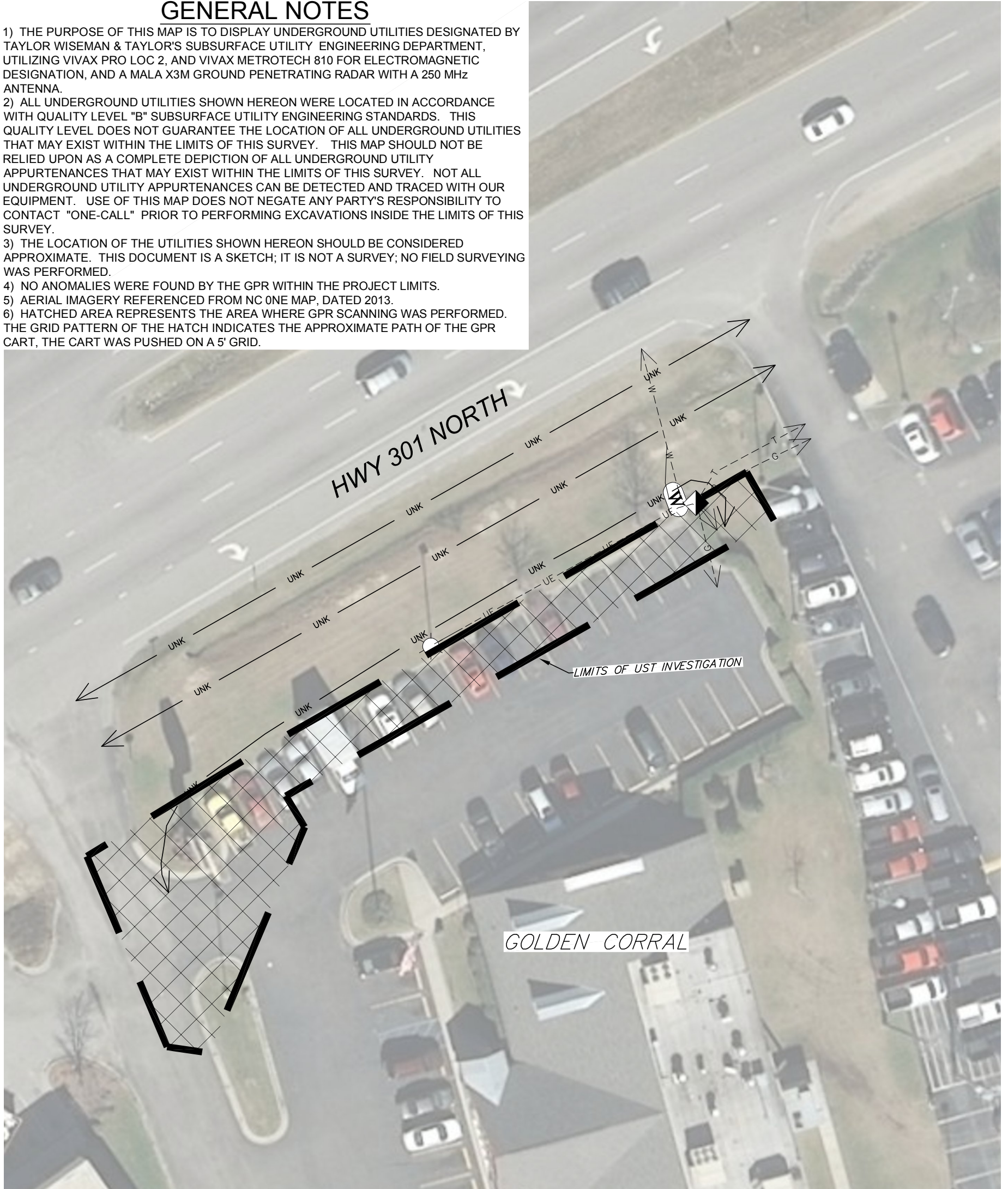
**ABBREVIATIONS**

HWY HIGHWAY  
U/G UNDERGROUND



**GENERAL NOTES**

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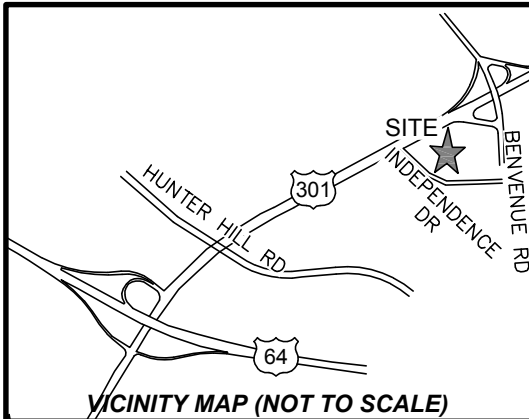
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PHONE (919) 297-0085 FAX (919) 297-0090  
NORTH CAROLINA LICENSE NUMBER: F-0362

**GEOPHYSICAL ASSESMENT**  
for APEX COMPANIES LLC.  
NCDOT PROJECT U-3330, PARCEL 49  
921 N. WESLEYAN BLVD  
NASH COUNTY - ROCKY MOUNT, NC

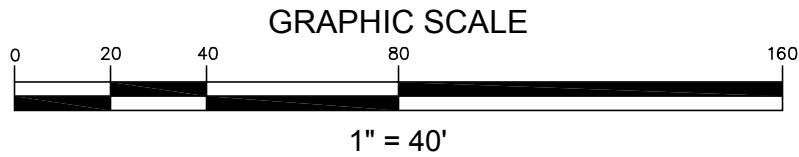
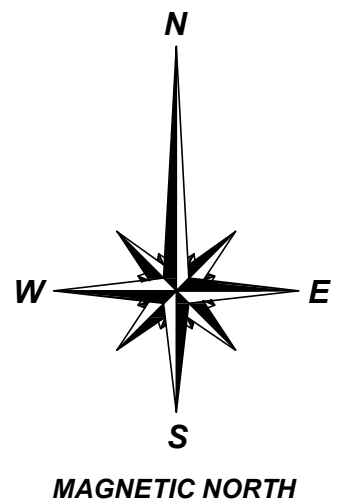
REVISIONS:	DATE OF SURVEY:	07/13/2015
	SCALE:	1" = 30'
	DRAWN BY:	J.REYNOLDS
	CHECKED BY:	C. HOWARD PLS
	PROJECT:	70668.5002.00
FIGURE #:	4	SHEET: 1 / 1



LINE LEGEND	
	U/G TELEPHONE (SKETCH)
	U/G WATER LINE (SKETCH)

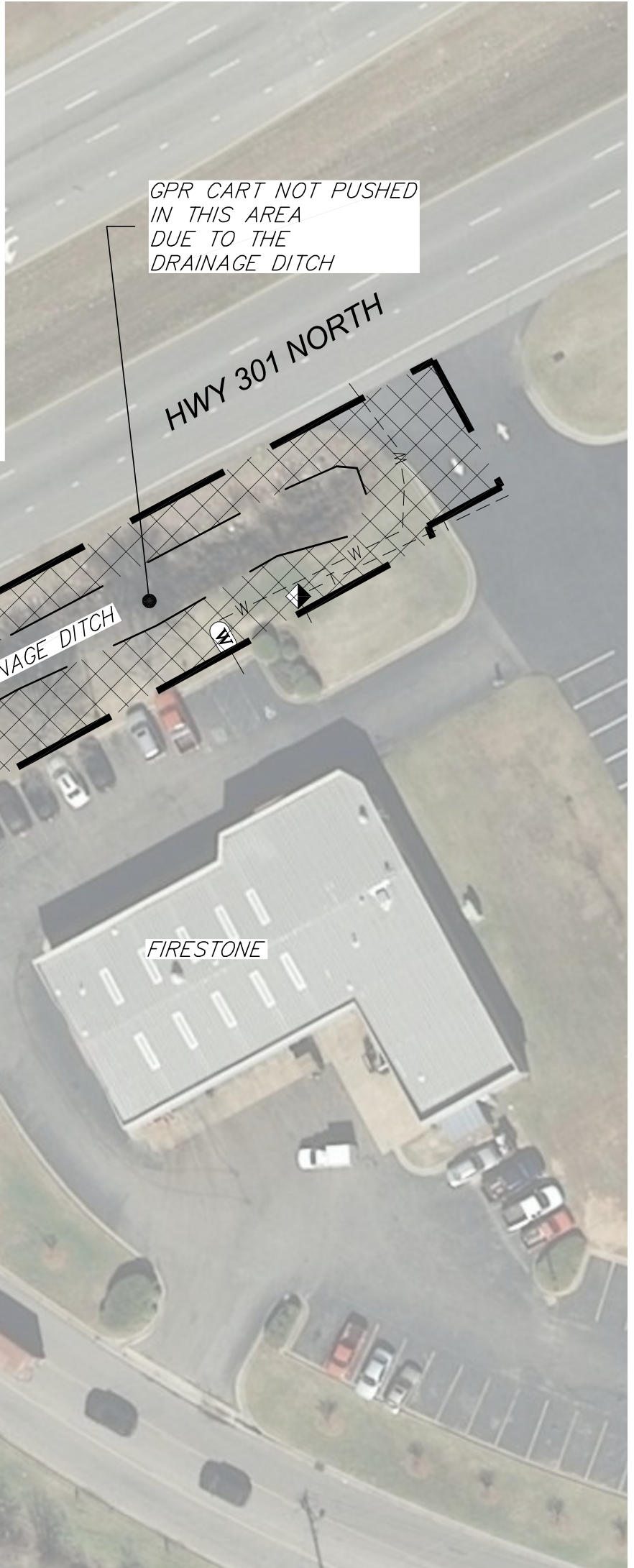
**ABBREVIATIONS**

HWY HIGHWAY  
U/G UNDERGROUND



**GENERAL NOTES**

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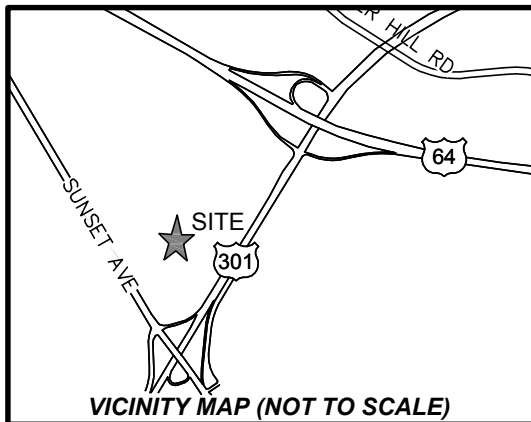
THIS MAP IS NOT A CERTIFIED SURVEY AND HAS NOT BEEN REVIEWED BY A LOCAL GOVERNMENT AGENCY FOR COMPLIANCE WITH ANY APPLICABLE LAND DEVELOPMENT REGULATIONS



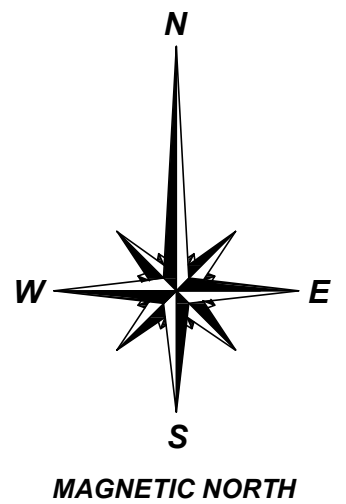
**TAYLOR WISEMAN & TAYLOR**  
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**GEOPHYSICAL ASSESMENT**  
for APEX COMPANIES LLC.  
NCDOT PROJECT U-3330, PARCEL 69  
1001 N. WESLEYAN BLVD  
NASH COUNTY - ROCKY MOUNT, NC

REVISIONS:	DATE OF SURVEY:	07/13/2015
	SCALE:	1" = 40'
	DRAWN BY:	J.REYNOLDS
	CHECKED BY:	C. HOWARD PLS
	PROJECT:	70668.5002.00
FIGURE #:	5	SHEET: 1 / 1

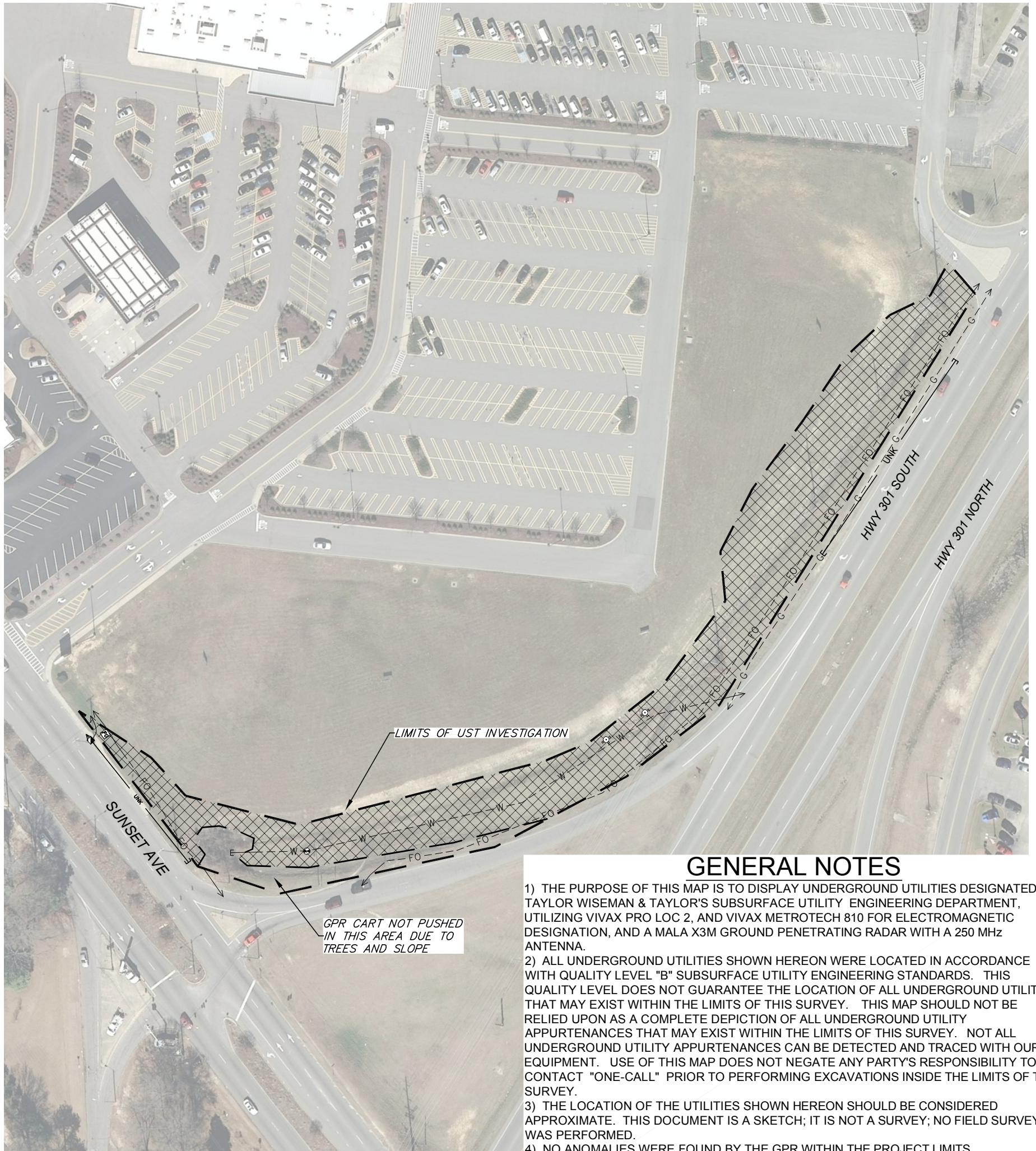
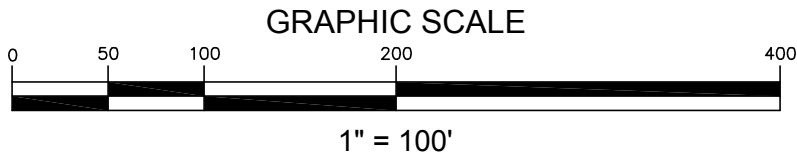


LINE LEGEND	
---T---	U/G TELEPHONE
---W---	U/G WATER LINE
---FO---	U/G FIBER OPTIC LINE)
---G---	U/G GAS
---UNK---	UNKNOWN U/G UTILITY



**ABBREVIATIONS**

HWY HIGHWAY  
U/G UNDERGROUND



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PHONE (919) 297-0085 FAX (919) 297-0090  
NORTH CAROLINA LICENSE NUMBER: F-0362

**GEOPHYSICAL ASSESSMENT**  
for APEX COMPANIES LLC.  
NCDOT PROJECT U-3330, PARCELS 22-25  
2320 SUNSET AVENUE  
NASH COUNTY - ROCKY MOUNT, NC

REVISIONS:	DATE OF SURVEY:	07/13/2015
	SCALE:	1" = 100'
	DRAWN BY:	J.REYNOLDS
	CHECKED BY:	C. HOWARD PLS
	PROJECT:	70668.5002.00
FIGURE #:	6	SHEET: 1 / 1



**APPENDIX D**  
**HYDROCARBON ANALYSIS RESULTS**



### Hydrocarbon Analysis Results

**Client:** NCDOT  
**Address:** 829 Hunter Hill Rd

**Samples taken** Monday, July 27, 2015  
**Samples extracted** Monday, July 27, 2015  
**Samples analysed** Monday, July 27, 2015

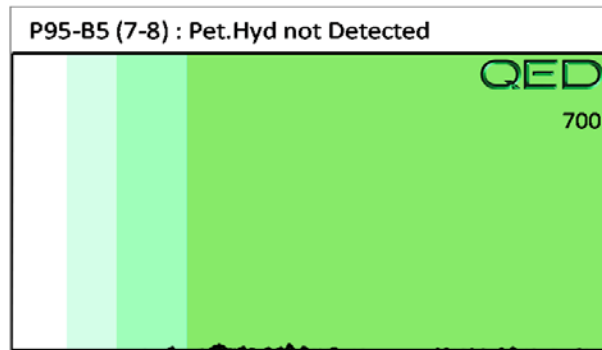
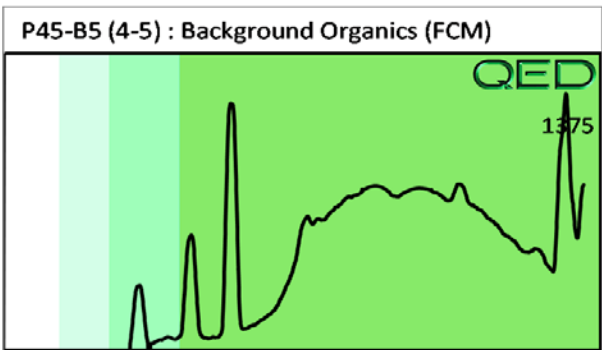
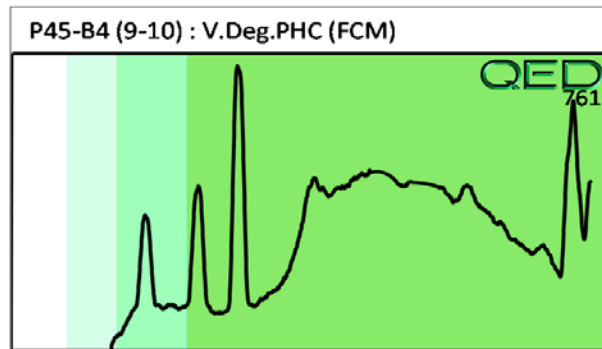
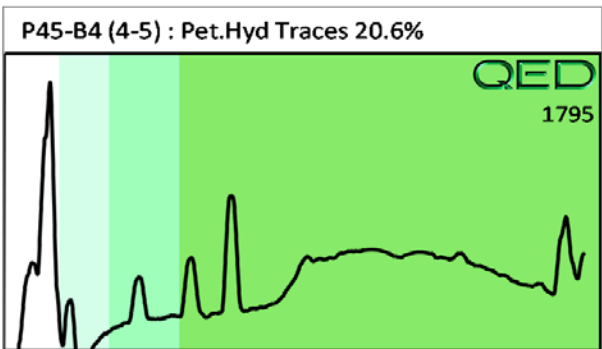
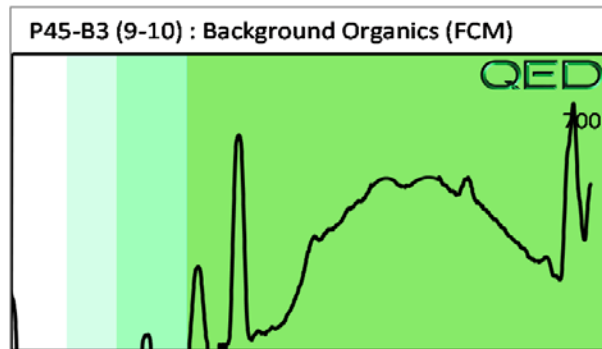
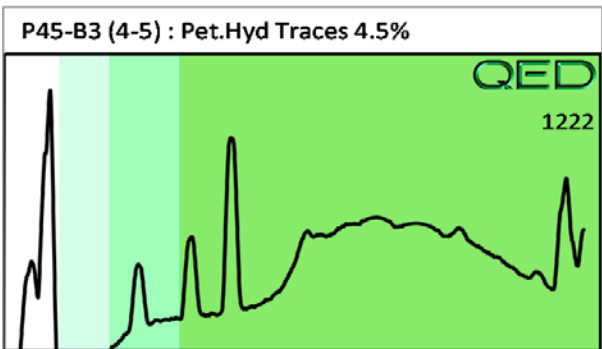
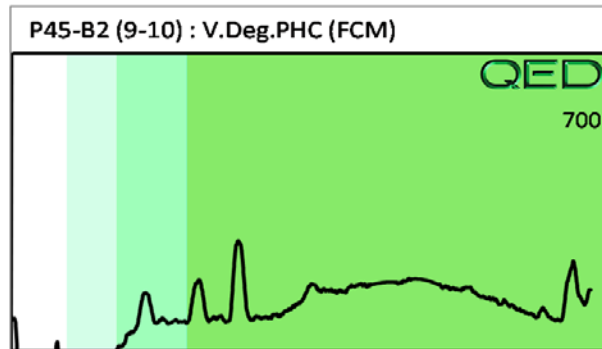
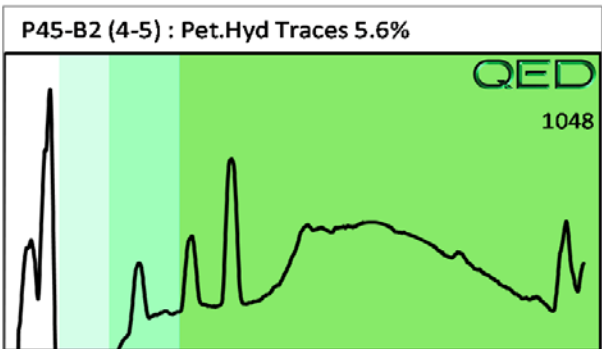
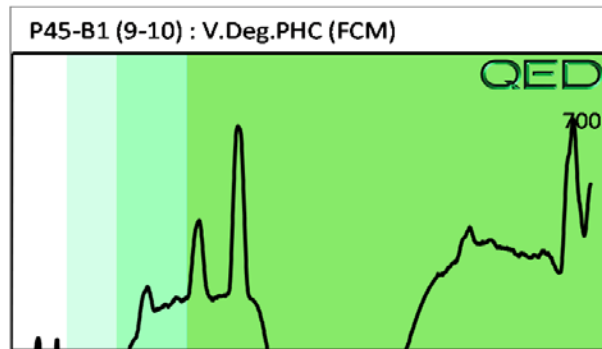
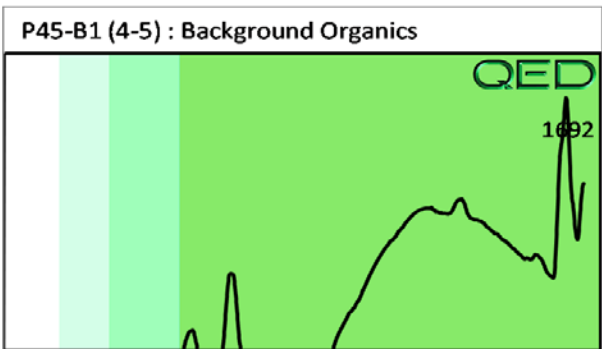
**Contact:** Gordon Box

**Operator** Troy L. Holzschuh

**Project:** U-3330

Matrix	Sample ID	Dilution used	BTEX (C6 - C9)	GRO (C5 - C10)	DRO (C10 - C35)	TPH (C5 - C35)	Total Aromatics (C10-C35)	16 EPA PAHs	BaP	Ratios			HC Fingerprint Match		
										% light	% mid	% heavy			
s	P45-B1 (4-5)	20.6	<0.52	<0.52	<0.21	<0.52	<0.1	<0.02	<0.01	0	0	0	Background Organics		
s	P45-B1 (9-10)	19.0	<0.95	<0.47	<0.19	<0.47	<0.09	<0.02	0.005	0	46.6	53.4	V.Deg.PHC (FCM)		
s	P45-B2 (4-5)	16.7	<0.83	<0.42	0.23	0.23	<0.11	<0.02	<0.008	0	21.2	78.8	Pet.Hyd Traces 5.6%		
s	P45-B2 (9-10)	24.8	<1.2	<0.62	<0.25	<0.62	<0.12	<0.02	<0.012	0	0	100	V.Deg.PHC (FCM)		
s	P45-B3 (4-5)	24.3	<1.2	<0.61	0.34	0.34	<0.17	<0.02	<0.012	0	13.2	86.8	Pet.Hyd Traces 4.5%		
s	P45-B3 (9-10)	26.5	<1.3	<0.66	<0.27	<0.66	<0.13	<0.03	<0.013	0	0	100	Background Organics (FCM)		
s	P45-B4 (4-5)	16.5	<0.82	<0.41	0.24	0.24	0.22	<0.02	<0.008	0	44.2	55.8	Pet.Hyd Traces 20.6%		
s	P45-B4 (9-10)	21.8	<0.55	<0.55	0.22	0.22	<0.19	<0.02	<0.011	0	45.3	54.7	V.Deg.PHC (FCM)		
s	P45-B5 (4-5)	20.0	<0.5	<0.5	0.2	0.2	<0.15	<0.02	<0.01	0	0	100	Background Organics (FCM)		
s	P95-B5 (7-8)	20.8	<0.52	<0.52	<0.21	<0.52	<0.1	<0.02	<0.01	0	0	0	Pet.Hyd not Detected		
Initial Calibrator QC check			OK							Final FCM QC Check			OK		87.5%

Results generated by a QED HC-1 analyser. Concentration values in mg/kg for soil samples and mg/L for water samples. Soil values are not corrected for moisture or stone content  
 Fingerprints provide a tentative hydrocarbon identification. The abbreviations are:- FCM = Results calculated using Fundamental Calibration Mode : % = confidence for sample fingerprint match to library  
 (SBS) or (LBS) = Site Specific or Library Background Subtraction applied to result : (PFM) = Poor Fingerprint Match : (T) = Turbid : (P) = Particulate present



**APPENDIX E**  
**CORRESPONDENCE WITH NCDENR**

## Troy Holzschuh

---

**To:** Hafshejani, Brenda  
**Subject:** RE: Incidents 5088, 5890 and 11742

---

**From:** Hafshejani, Brenda [mailto:brenda.hafshejani@nc.gov]  
**Sent:** Tuesday, August 11, 2015 2:49 PM  
**To:** Troy Holzschuh <THolzschuh@apexcos.com>  
**Subject:** RE: Incidents 5088, 5890 and 11742

Hi Troy,

I checked and there does not seem to be a file for the first two, 5088 and 5890. They appear old and were probably given incident numbers because of a complaint at the time. The 11742 is archived on CD 83 under RA-1915. The CD is available also at the Mooresville Office. If you have purchased the CD previously you can check it. I have downloaded the RP and DENR files from the archived CD and will attach both. DENR files attached here.

Brenda

Brenda Hafshejani  
UST Division of Waste Management  
Raleigh Regional Office  
Voice: (919)791-4200  
Fax: (919) 571-4718

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**From:** McIntosh, Craig  
**Sent:** Monday, August 10, 2015 1:02 PM  
**To:** Troy Holzschuh  
**Cc:** Hafshejani, Brenda  
**Subject:** RE: Incidents 5088, 5890 and 11742

Troy, good afternoon.

I handle Durham and Warren counties in the RRO. The incident manager that handles Nash County is Brenda Hafshejani. She will be out of the office until mid week.

Craig McIntosh  
Hydrogeologist  
Division of Waste Management  
Underground Storage Tank Section

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