

**PRELIMINARY SITE ASSESSMENT
PARCEL #6
349 AKRON DRIVE
WINSTON-SALEM, NORTH CAROLINA
STATE PROJECT: U-2826B
WBS ELEMENT: 34871.2.1**

Prepared for:

NC Department of Transportation
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Solutions-IES Project No. 3944.10A3.NDOT

May 10, 2010



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1.0 INTRODUCTION

Parcel #6 in Forsyth County is currently in use as a Taco Bell® fast food restaurant located at 349 Akron Drive, Winston-Salem North Carolina. The location of the property is shown on **Figures 1 and 2**. The NCDOT plans to acquire this property due to the planned realignment of entrance and exit ramps to US-52. This report summarizes the results of field and laboratory activities conducted during the Preliminary Site Assessment (PSA) of the subject parcel. The scope of work executed at the site was performed in general accordance with Solutions-IES proposal NC101062 revised March 1, 2010, and was initiated based on a Notice to Proceed issued by the NCDOT Geotechnical Engineering Unit on March 3, 2010, under contract 7000010453, dated June 25, 2009.

2.0 BACKGROUND AND SITE DESCRIPTION

Burgerbusters LLC owns Parcel #6 where a Taco Bell® fast food restaurant currently operates. It is located at the intersection of Akron Drive and Leo Street. A property deed search revealed a 30 foot easement described in Deed from Exxon Corporation to Enron, a partnership described in book 1234, page 549. The PSA was performed along the proposed right-of-way (ROW) and/or easement stretching west to east along the north side of the storefront and continuing along a south to north trend parallel to Leo Street. Work was not performed in areas of the properties outside of the proposed ROW and/or easement. Photographs of the site are included in **Appendix A**.

3.0 FIELD ACTIVITIES

Prior to mobilizing to the site to conduct work, Solutions-IES contacted North Carolina One Call to locate underground utilities at the site. Pyramid Environmental & Engineering, P.C. (Pyramid) was contracted to perform a geophysical survey, and mobilized to the study area March 9 and March 15, 2010. The geophysical investigation consisted of electromagnetic (EM) induction-metal detection surveys using a Geonics EM61-MK1 metal detection instrument and ground penetrating radar (GPR) surveys using a GSSI SIR-2000 unit equipped with a 400 MHz antenna. Results of the survey suggested that the surveyed portions within the proposed ROW and/or easement at Parcel #6 do not contain metallic underground storage tanks (UST). Images of the EM and GPR findings are included in the geophysical report included as **Appendix B**. After a review of the geophysical report, Solutions-IES mobilized to the site on March 31 and April 1, 2010, to collect soil samples. Nine soil borings were advanced to a depth of 8 feet below ground surface (ft bgs). The soil borings were advanced using a Geoprobe®. The

approximate locations of the soil borings are displayed in **Figure 3**. The GPS coordinates of the boring locations are included in **Appendix C**.

A Macro-Core[®] sampler fitted with a dedicated polyvinyl chloride (PVC) liner was used to collect samples at 2-foot intervals. Each soil sample was split into two aliquots. Each aliquot was placed in a separate resealable plastic bag. One bag was placed on ice for possible laboratory analysis, while the other bag was sealed and placed at ambient temperature for field screening with a flame ionization detector (FID). After approximately 20 minutes to allow accumulation of volatile organic compounds (VOCs) in the headspace of the bag, each sealed bag was scanned with the FID. The FID measurements were entered into the field logbook along with the soil description and any indications of petroleum staining or odor. That information was subsequently transferred onto boring logs. The boring logs are provided in **Appendix D** and the field screening results are summarized in **Table 1**. The field screening results are also shown on the boring logs.

The subsurface at the site generally consisted of red-orange clays overlying tan silts and sands (Unified Soil Classification CL to ML-SM). Soils were moist and groundwater was not encountered in the borings to a depth of 8 ft bgs.

Table 1 shows the FID field screening results of the soils ranged from not detected to 1.2 parts per million (ppm). One soil sample was collected from each boring at the interval identified in **Table 1** and was placed in laboratory-supplied jars and stored on ice pending transport via courier service to Prism Laboratories in Charlotte, NC. Sample information was recorded on the chain-of-custody form, and the samples were submitted for analysis of gasoline range organics (GRO) and diesel range organics (DRO) total petroleum hydrocarbons (TPH) by EPA Modified Method 8015 with preparation methods 5030 and 3545, respectively. GRO and DRO TPH analysis can be used to screen soil which may be impacted by fuel constituents.

4.0 LABORATORY RESULTS

The laboratory analytical results do not indicate the presence of TPH in soil samples collected from borings P6-1 through P6-9. No concentrations exceed the laboratory reporting limit. The analytical results are summarized in **Table 2**, and the laboratory report is included in **Appendix E**.

5.0 DISCUSSION

The geophysical survey conducted at the site suggested that no buried metallic objects such as a UST are present within the surveyed portions of the proposed ROW and/or easement. Solutions-IES advanced nine soil borings at the study area to a depth of 8 ft bgs. The highest FID reading measured 1.2 ppm in boring P6-1 at a depth of 6 to 8 ft bgs.

TPH (GRO or DRO) was not detected above the laboratory reporting limits in soil samples collected from the site. Therefore, the concentrations do not exceed the tank closure screening level of 10 mg/kg in *Guidelines for Site Checks, Tank Closure, and Initial Response and Abatement, (State of North Carolina Department of Environment and Natural Resources [NCDENR], Division of Waste Management [DWM], Underground Storage Tank [UST] Division, March 1, 2007; Version; Change 3, Effective December 1, 2008) (Site Check Guidelines)*. Further assessment at this site is not necessary at this time.

TABLES

TABLE 1
Summary of Field Screening Results for Soil
NCDOT Parcel #6
349 Akron Drive
Winston-Salem, North Carolina
WBS Element: 34871.2.1; State Project: U-2826B
Sample Collection Date: March 31 and April 1, 2010

Sample Depth Below Ground Surface	Soil Boring								
	P6-1	P6-2	P6-3	P6-4	P6-5	P6-6	P6-7	P6-8	P6-9
	FID Reading (ppm)								
0 - 2 feet	1.1	0.0	0.0	0.0	0.5	0.0	0.0	0.8	0.4
2 - 4 feet	0.8	0.0	0.5	0.0	0.0	0.1	0.0	0.3	0.0
4 - 6 feet	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.5	0.0
6 - 8 feet	1.2	1.1	0.3	0.5	0.0	0.0	0.0	0.2	0.0

Notes:

Samples denoted by shaded cells were submitted for laboratory analysis.
FID readings were obtained with a Photovac MicroFID Flame Ionization Detector.
ppm = parts per million

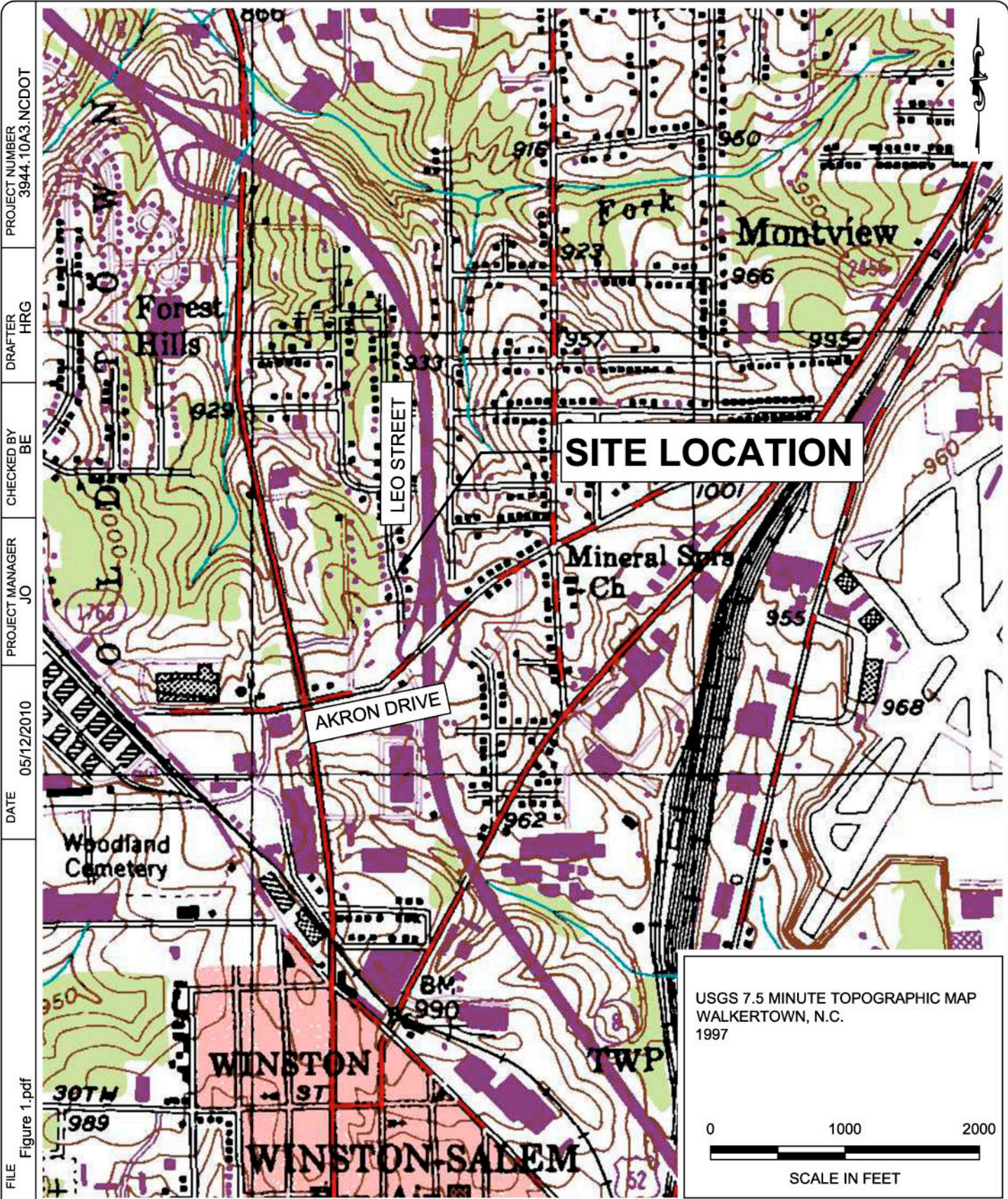
TABLE 2
Summary of Soil Analytical Results
NCDOT Parcel #6
349 Akron Drive
Winston-Salem, North Carolina
WBS Element: 34871.2.1; State Project: U-2826B
Sample Collection Date: March 31 and April 1, 2010

Sample Information		Total Petroleum Hydrocarbons	
Boring Number	Depth (ft bgs)	Gasoline Range ¹ (mg/kg)	Diesel Range ² (mg/kg)
P6-1	6-8	<5.8	<8.0
P6-2	6-8	<5.9	<8.3
P6-3	6-8	<6.1	<8.5
P6-4	6-8	<6.0	<8.4
P6-5	6-8	<6.0	<8.4
P6-6	6-8	<6.0	<8.4
P6-7	6-8	<6.3	<8.8
P6-8	6-8	<5.6	<7.8
P6-9	6-8	<5.7	<8.0

Notes:

1. Total Petroleum Hydrocarbons (TPH) Method 5030/8015MOD - Gasoline Range Hydrocarbons
 2. Total Petroleum Hydrocarbons (TPH) Method 3545/8015MOD - Diesel Range Hydrocarbons
- ft bgs = feet below ground surface
mg/kg = milligram per kilogram

FIGURES

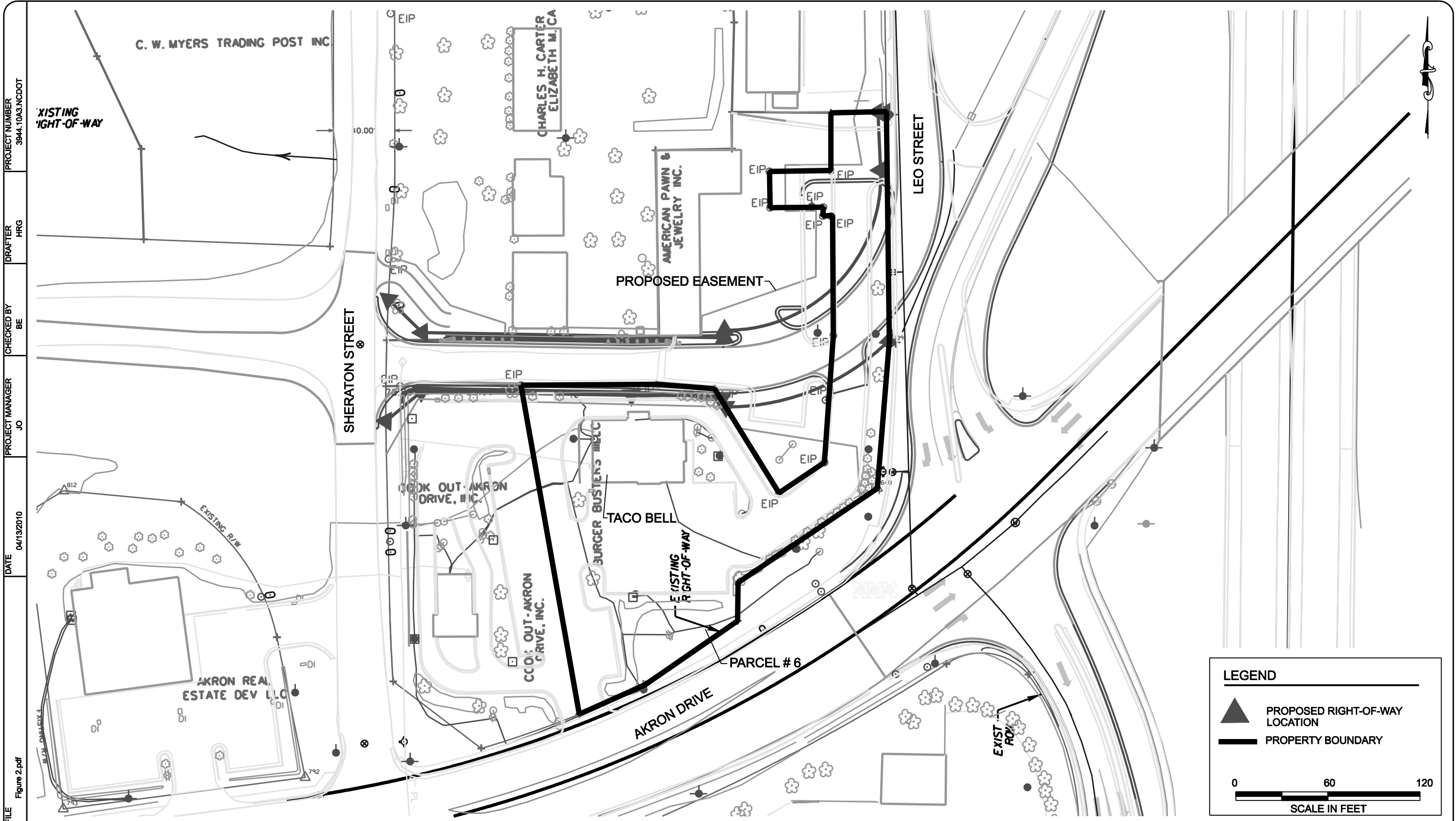


PROJECT NUMBER 3944.10A3.NCDOT
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 DATE 05/12/2010
 FILE Figure 1.pdf

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SITE LOCATION MAP
 349 AKRON DRIVE
 WINSTON-SALEM, NORTH CAROLINA
 STATE PROJECT: U-2826B
 WBS ELEMENT: 34871.2.1

FIGURE:
 1



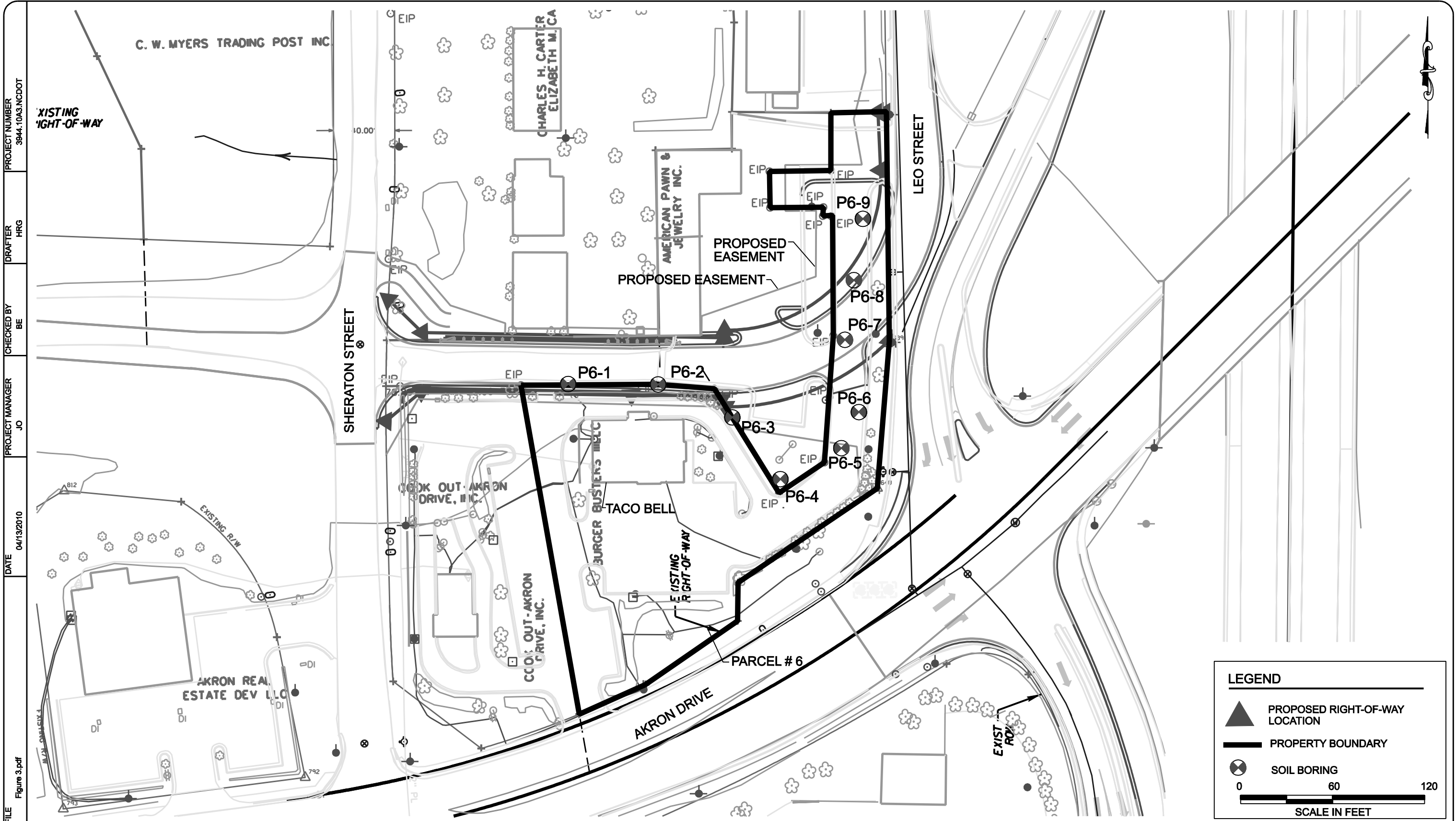
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PARCEL # 6
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 WBS ELEMENT: 34871.2.1

SITE MAP

FIGURE:
2



PROJECT NUMBER 3944.10A3.NC DOT
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PARCEL # 6
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SOIL BORING LOCATIONS

FIGURE:
 3

APPENDIX A
PHOTOGRAPHS

Appendix A - Photographs



Photograph 1 – View of Storefront and east parking lot, looking west along Leo Street.



Photograph 2 – View of the service road on north side of Parcel 6 looking southwest.

Appendix A - Photographs



Photograph 3 – View of the service road on east side of Parcel 6 looking north along Leo Street.

APPENDIX B
GEOPHYSICAL REPORT

GEOPHYSICAL INVESTIGATION REPORT

***GEOPHYSICAL SURVEYS FOR THE
DETECTION OF METALLIC USTs***

**Akron Drive & Martin Luther King Jr. Drive Sites
Winston-Salem, North Carolina
Preliminary Site Assessments State Project #U2826B**

March 26, 2010

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GEOPHYSICAL INVESTIGATION REPORT
Akron Drive & Martin Luther King, Jr. Drive Sites
Winston-Salem, North Carolina
Preliminary Site Assessments State Project #U2826B

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Figure 3	American Pawn & Burgerbusters Properties - EM61 Bottom Coil Results
Figure 4	American Pawn & Burgerbusters Properties - EM61 Differential Results
Figure 5	A & M Realty Company Property - EM61 Bottom Coil Results
Figure 6	A & M Realty Company Property - EM61 Differential Results
Figure 7	M. M. Fowler Property - EM61 Bottom Coil Results
Figure 8	M. M. Fowler Property - EM61 Differential Results

1.0 INTRODUCTION

Pyramid Environmental & Engineering, PC conducted geophysical investigations for Solutions - IES during the period of March 8-16, 2010, within the proposed Right-of-Way (ROW) areas at five sites located along Akron Drive and Martin Luther King, Jr. Drive in Winston-Salem, North Carolina. The work was done as part of the North Carolina Department of Transportation (NCDOT) Preliminary Site Assessments State Project #U2826B. The geophysical surveys were conducted to determine if unknown metallic underground storage tanks (UST's) were present beneath the proposed ROW area of each site.

Solutions - IES representative Ms. Jessica Keener, PE provided maps and site photographs during the week of February 15, 2010 that outlined the geophysical survey area of each site. Ms. Keener also provided project management during the geophysical investigation of the sites. The following, listed in geographical order from northern-most to southern-most locations, are the five sites in which geophysical investigations were conducted within the proposed ROW areas.

<u>Property Owner</u>	<u>Parcel</u>	<u>Present Use of Property</u>
Meryl B. Mabe Property	none	Randy Moore's Auto Repair
American Pawn & Jewelry Property	7	Cash America Pawn Shop
Burgerbusters Iii, LLC Property	6	Taco Bell Restaurant
A & M Realty Property	2	Piedmont Garage Doors
M. & M. Fowler Property	29	BP Gas Station/Store

Photographs of the geophysical equipment used in this investigation and the geophysical survey areas of the five sites are shown in **Figure 1**.

2.0 FIELD METHODOLOGY

Prior to conducting the geophysical investigations at the five Winston-Salem sites, a 10-foot by 10-foot survey grid was established across each of the geophysical survey areas using measuring tapes,

pin flags and water-based marking paint. These grid marks were used as X-Y coordinates for location control when collecting the geophysical data and establishing base maps for the geophysical results.

The geophysical investigation consisted of electromagnetic (EM) induction-metal detection surveys using a Geonics EM61-MK1 metal detection instrument. According to the instrument specifications, the EM61 can detect a metal drum down to a maximum depth of approximately 8 feet. All of the EM61 data were digitally collected at 0.8 foot intervals along northerly-southerly (X-axis) or easterly-westerly (Y-axis), parallel survey lines spaced five feet apart. All of the data were downloaded to a computer and reviewed in the office using the Geonics DAT61W and Surfer for Windows Version 7.0 software programs.

Upon processing and review of the EM61 metal detection data, ground penetrating radar (GPR) surveys were conducted across selected EM61 differential anomalies, areas containing steel reinforced concrete and around areas that contained parked vehicles when the metal detection surveys were conducted. GPR data were collected using a Geophysical Survey Systems SIR-2000 unit equipped with a 400 MHz antenna. Data were digitally collected in a continuous mode along X-axis and/or Y-axis survey lines, spaced 2.5 to 5.0 feet apart using a vertical scan of 512 samples, at a rate of 48 scans per second. A 70 MHz high pass filter and an 800 MHz low pass filter were used during data acquisition with the 400 MHz antenna. GPR data were collected down to a maximum depth of approximately 5.0 feet, based on an estimated two-way travel time of 8 nanoseconds per foot. All of the GPR data were downloaded to a field computer and reviewed in the field and office using Radprint software.

Contour plots of the EM61 bottom coil and differential results are presented in this report for each of the five sites. The bottom coil results represent the most sensitive component of the EM61 instrument and detect metal objects regardless of size. The bottom coil response can be used to delineate metal conduits or utility lines, small, isolated metal objects, and areas containing insignificant metal debris. The differential results are obtained from the difference between the top

and bottom coils of the EM61 instrument. The differential results focus on the larger metal objects such as drums and USTs and ignore the smaller insignificant metal objects.

Preliminary geophysical results obtained from the five Winston-Salem sites were reported to Ms. Keener during the weeks of March 15 and March 22, 2010.

3.0 DISCUSSION OF RESULTS

3.1 Meryl B. Mabe Property

The Meryl B. Mabe property is located at 3810 Leo Street and contains the Randy Moore's Auto Repair & Towing facility. The ROW area consists primarily of flat-lying asphalt pavement with non-operating, parked vehicles. The EM61 bottom coil and differential metal detection results are presented in **Figures 2**. GPR surveys were conducted across several of the differential anomalies and a GPR reconnaissance was conducted around the parked, non-operating vehicles.

The linear EM61 metal detection anomalies intersecting grid coordinates X=340 Y=360 and X=340 Y=405 are probably in response to the metallic fence that runs along the edge of the property. GPR data suggest that the negative EM61 differential anomalies (contours shaded in green) centered near grid coordinates X=316 Y=360, X=330 Y=440 and X=330 Y=470 are probably in response to the parked vehicles. The negative differential anomalies centered near grid coordinates X=345 Y=432 and X=345 Y=447 are probably in response to a water meter and a storm sewer drain, respectively.

The geophysical results suggest that the proposed ROW area at the Meryl B. Mabe property does not contain metallic USTs.

3.2 American Pawn & Jewelry – Burgerbusters, Iii, LLC Properties (Parcels 7 & 6)

The American Pawn & Jewelry property (Parcel 7) is located at 3800 Leo Street and contains the Cash America Pawn Shop. The proposed ROW area consists primarily of flat-lying asphalt or grass

surfaces and includes the east-west trending asphalt access road that runs from the pawn shop parking area to Sheridan Street. The Burgerbusters, Iii, LLC property is located immediately south of Parcel 7 at 349 Akron Drive. The property consists of a Taco Bell Restaurant and lies along the intersection of Akron Drive and Leo Street. The proposed ROW area at Parcel 6 consists of the asphalt access road that runs parallel to Leo Street and terminates in the Taco Bell parking lot and the grass island between the access road and Leo Street. The EM61 bottom coil and differential metal detection results obtained across the proposed ROW areas for the American Pawn and Burgerbusters properties are presented in **Figures 3 and 4**, respectively.

The linear, EM61 bottom coil anomalies intersecting grid coordinates X=15 Y=190, X=280 Y=154 and X=300 Y=324 are probably in response to buried utility lines or conduits. Similarly, the series of linear northeast-southwest trending bottom coil anomalies intersecting grid coordinates X=265 Y=170 may be in response to a buried line or conduit. The numerous bottom coil anomalies located along the grass island immediately west of Leo Street are probably in response to known surface objects or utility-related equipment or lines. GPR data suggest the high amplitude bottom coil anomalies (contours shaded in red) centered near grid coordinates X=237 Y=135 and X=280 Y=130 are in response to the Taco Bell drive thru-related equipment and the large sign poles, respectively.

GPR data suggest the higher amplitude EM61 differential anomaly centered near grid coordinates X=293 Y=300 is in response to utility-related equipment and/or lines. GPR data collected across the negative differential anomalies centered near grid coordinates X=210 Y=203 and X=227 Y=220 are in response to the steel reinforced concrete sidewalk, the pawn shop building and metallic bollards. The negative linear anomaly intersecting grid coordinates X=300 Y=350 is probably in response to the metallic fence. The geophysical investigation suggests that the surveyed portions of Parcels 7 & 6 (proposed ROW areas) do not contain unknown, metallic USTs.

3.3 A & M Realty Company Property (Parcel 2)

The A & M Realty Company property (Parcel 2) is located at 1151 North Martin Luther King, Jr. Drive and contains the Piedmont Garage Doors facility. The proposed ROW area consists of asphalt,

concrete and grass surfaces and includes the eastern and southern portions of the property. The EM61 bottom coil and differential metal detection results obtained across the proposed ROW area at the A & M Realty property are presented in **Figures 5 and 6**, respectively.

The linear, EM61 bottom coil anomalies intersecting grid coordinates X=230 Y=120 and X=249 Y=150 are probably in response to the metallic fence line. The linear bottom coil anomalies intersecting grid coordinates X=60 Y=52, X=75 Y=60, X=220 Y=74, and X=240 Y=53 are probably in response to buried utility lines or conduits. GPR data suggest that the bottom coil anomalies centered near grid coordinates X=120 Y=57 and X=170 Y=55 are in response to the building.

GPR data suggest the EM61 differential anomalies centered near grid coordinates X=225 Y=176 are in response to the dumpsters and metal fence line. Similarly, GPR data suggest the negative differential anomaly centered near grid coordinates X=195 Y=65 is in response to the parked vehicle that was present during the EM61 survey. The remaining negative differential anomalies are probably in response to known surface objects or utility-related equipment. The geophysical investigation suggests that the surveyed portions of Parcel 2 (proposed ROW area) do not contain unknown, metallic USTs.

3.4 M. M. Fowler Property (Parcel 29)

The M. M. Fowler property (Parcel 29) is located at 105 North Martin Luther King, Jr. Drive and contains a BP gas station/store facility. The proposed ROW area consists of asphalt, concrete and grass surfaces and includes the western and southern portions of the property. The EM61 bottom coil and differential metal detection results obtained across the proposed ROW area at the Fowler property are presented in **Figures 7 and 8**, respectively

The linear, EM61 bottom coil anomalies recorded along the edge of Martin Luther King, Jr. Drive and adjacent to East 1st Street (which intersect grid coordinates X=14 Y=140 and X=35 Y=36) are probably in response to buried utility lines. Similarly, the linear bottom coil anomalies intersecting grid coordinates X=27 Y=174 and X=84 Y=26 are probably in response to buried utility lines or

conduits. GPR data suggest that the high amplitude bottom coil anomalies or series of differential anomalies centered near grid coordinates X=30 Y=140 and X=90 Y=70 are in response to steel reinforced concrete.

GPR data suggest the negative EM61 differential anomalies centered near grid coordinates X=28 Y=60 and X=48 Y=76 are in response to the sign poles, telephones and bollards. The remaining differential anomalies are probably in response to known surface objects or utility line-related equipment. The geophysical investigation suggests that the surveyed portions of Parcel 29 (proposed ROW area) do not contain unknown, metallic USTs.

4.0 SUMMARY & CONCLUSIONS

Our evaluation of the EM61 & GPR data acquired across the proposed ROW areas at the five sites located along Akron Drive and Martin Luther King Jr. Drive in Winston-Salem, North Carolina, provides the following summary and conclusions:

- The EM61 and GPR surveys provided reliable results for the detection of metallic USTs within the surveyed portions of the sites.
- GPR data suggest that the EM61 differential anomalies recorded at the Meryl B. Mabe property (Tommy Moore's Auto Repair) are in response to the metal fence line, parked, non-operating vehicles or utility-related equipment.
- The geophysical results suggest that the proposed ROW area at the Meryl B. Mabe property does not contain metallic USTs.
- At the American Pawn and Burgerbusters properties (Parcels 7 & 6), GPR data suggest the higher amplitude EM61 differential anomaly centered near grid X=293 Y=300 is in response to utility-related equipment and/or lines. GPR data collected across the remaining negative

differential anomalies are in response to the steel reinforced concrete sidewalk, building, metallic bollards or metallic fence.

- The geophysical investigation suggests that the surveyed portions of Parcels 7 & 6 (proposed ROW areas) do not contain unknown, metallic USTs.

- GPR data acquired at the A & M Realty Company property (Parcel 2) suggest the negative EM61 differential anomalies are in response to dumpsters, a park vehicle, metal fence, known surface objects, or utility-line related equipment.

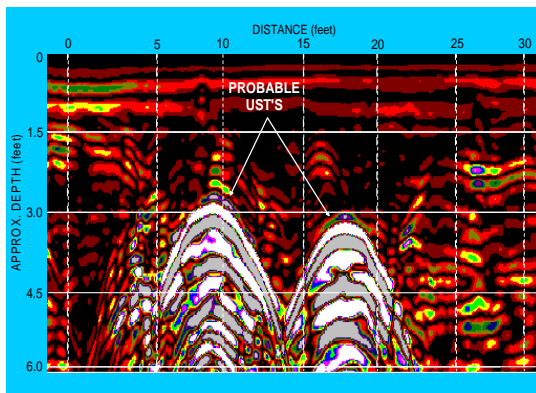
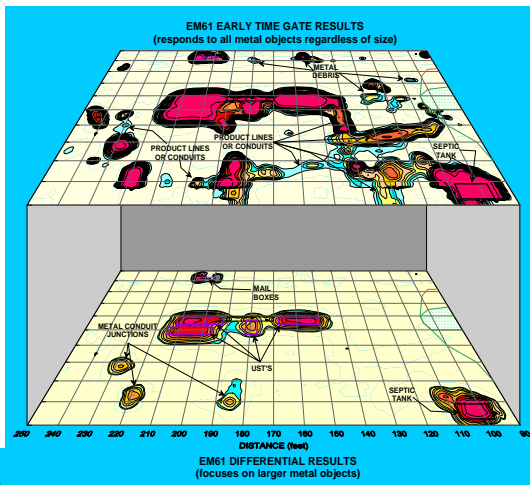
- The geophysical investigation suggests that the surveyed portions of Parcel 2 (proposed ROW area) do not contain unknown, metallic USTs.

- GPR data acquired at the M. M. Fowler property (Parcel 29) suggest the negative EM61 differential anomalies are in response to steel reinforced concrete, sign poles, possible abandoned wells, known surface objects, or utility-line related objects.

- The geophysical investigation suggests that the surveyed portions of Parcel 29 (proposed ROW area) do not contain unknown, metallic USTs.

5.0 LIMITATIONS

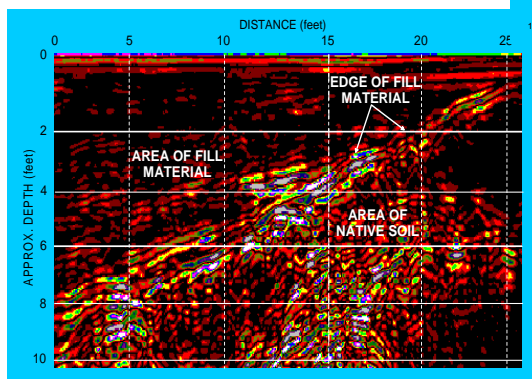
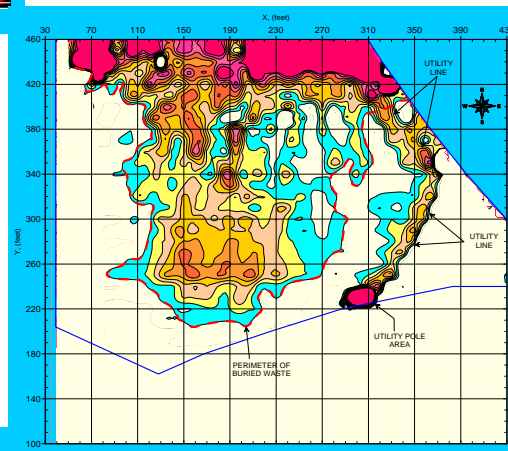
EM61 and GPR surveys have been performed and this report prepared for Solutions-IES in accordance with generally accepted guidelines for EM61 and GPR surveys. It is generally recognized that the results of the EM61 and GPR surveys are non-unique and may not represent actual subsurface conditions. The EM61 and GPR results obtained across the proposed ROW areas at the five sites located in Winston-Salem have not conclusively determine that the surveyed portions of the sites do not contain buried, unknown, metallic USTs, but that none were detected.



FIGURES

(on the following pages)

Figures shown on this page are for esthetic purposes only and are not related to the geophysical results discussed in this report





MERYL B. MABE PROPERTY
RANDY MOORE'S AUTO REPAIR & TOWING
3810 LEO STREET



BURGERBUSTERS III, LLC PROPERTY (PARCEL 6)
TACO BELL RESTAURANT
349 AKRON DRIVE



AMERICAN PAWN & JEWELRY PROPERTY (PARCEL 7)
CASH AMERICA PAWN SHOP
3800 LEO STREET



A & M REALTY COMPANY PROPERTY (PARCEL 2)
PIEDMONT GARAGE DOORS FACILITY
1151 N. MARTIN LUTHER KING, JR. DRIVE



ACCESS ROAD LOCATED BETWEEN AMERICAN
PAWN & BURGERBUSTERS PROPERTIES
3800 LEO STREET



M. M. FOWLER PROPERTY - (PARCEL 29)
BP GAS STATION/STORE
105 N. MARTIN LUTHER KING, JR. DRIVE

GEOPHYSICAL EQUIPMENT



The photograph shows the Geonics EM61 metal detector that was used to conduct the metal detection survey at the sites in Winston-Salem, North Carolina. The EM61 surveys were conducted during the week of March 8, 2010



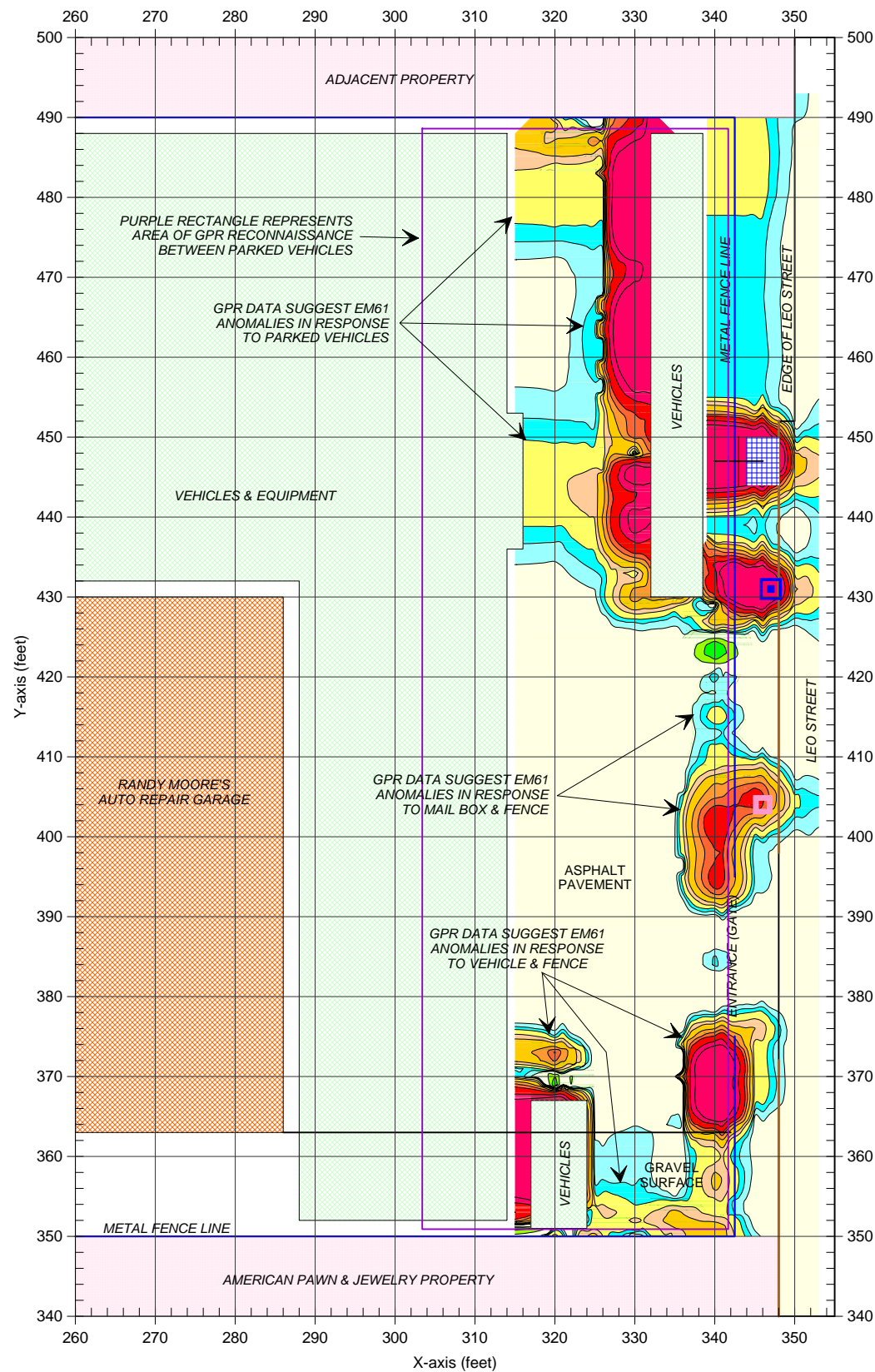
The photographs show the SIR-2000 GPR system equipped with a 400 MHz antenna that were used to conduct the ground penetrating radar investigation at the sites in Winston-Salem, North Carolina. The GPR surveys were conducted during the week of March 15, 2010.

SITE PHOTOGRAPHS

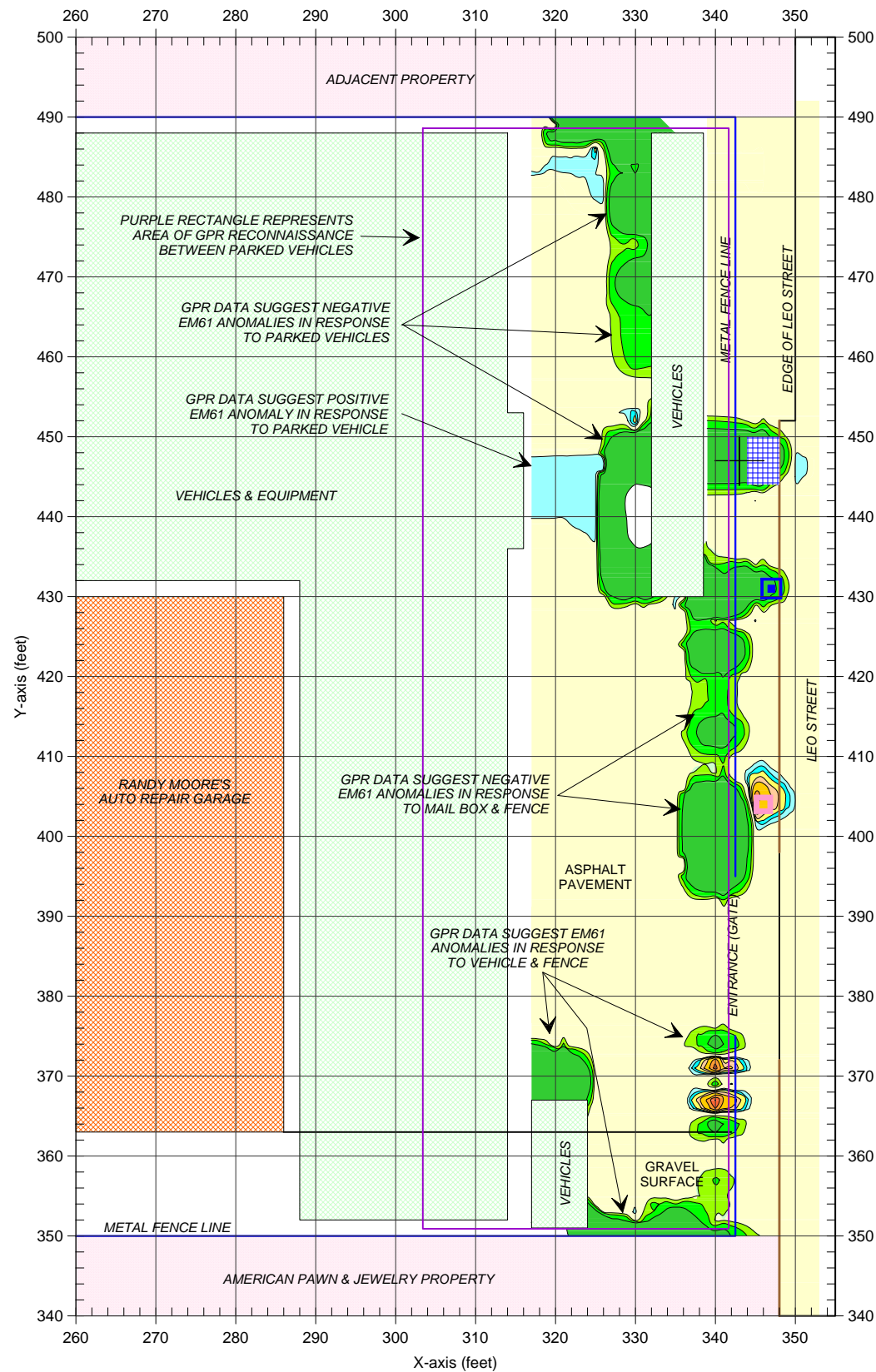
This figure shows the photographs of the five sites located along Akron Drive or Martin Luther King, Jr. Drive in Winston-Salem, North Carolina where geophysical investigations were conducted within the ROW areas for the detection of unknown, metallic USTs.

GRAPHIC SCALE IN FEET		MJD		FIGURE	
03/25/10	DATE	DRWN	CHRD	2006-200	FIGURE
AKRON DRIVE & MARTIN LUTHER KING, JR. DRIVE SITES	STATE	WINSTON-SALEM	NORTH CAROLINA	GEOPHYSICAL RESULTS	
CLIENT	SITE	CITY	TITLE		





BOTTOM COIL RESULTS

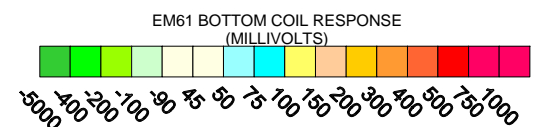


DIFFERENTIAL RESULTS



LEGEND

- SURVEY AREA: EM61 DATA ACQUIRED ALONG X-AXIS TRENDING LINES SPACED 5 FEET APART
- GPR RECONNAISSANCE AREA
- BUILDING
- FENCE LINE
- MAIL BOX
- RIGHT-OF-WAY MARKER
- ROAD SIGN
- STORM SEWER GRATE
- UTILITY LINE BOX
- PARKED VEHICLES OR EQUIPMENT
- WATER METER BOX



Note: The contour plot shows the bottom coil (most sensitive) response and the differential response of the EM61 instrument in millivolts (mV). The bottom coil response shows buried metallic objects regardless of size. The differential response focuses on larger, buried metallic objects such as drums and USTs and ignores smaller miscellaneous, buried, metal debris. The EM61 survey was collected on March 10, 2010 using a Geonics EM61 instrument. Ground penetrating radar (GPR) data were acquired on March 15, 2010 using a Geophysical Survey Systems SIR 2000 instrument with a 400 MHz antenna.

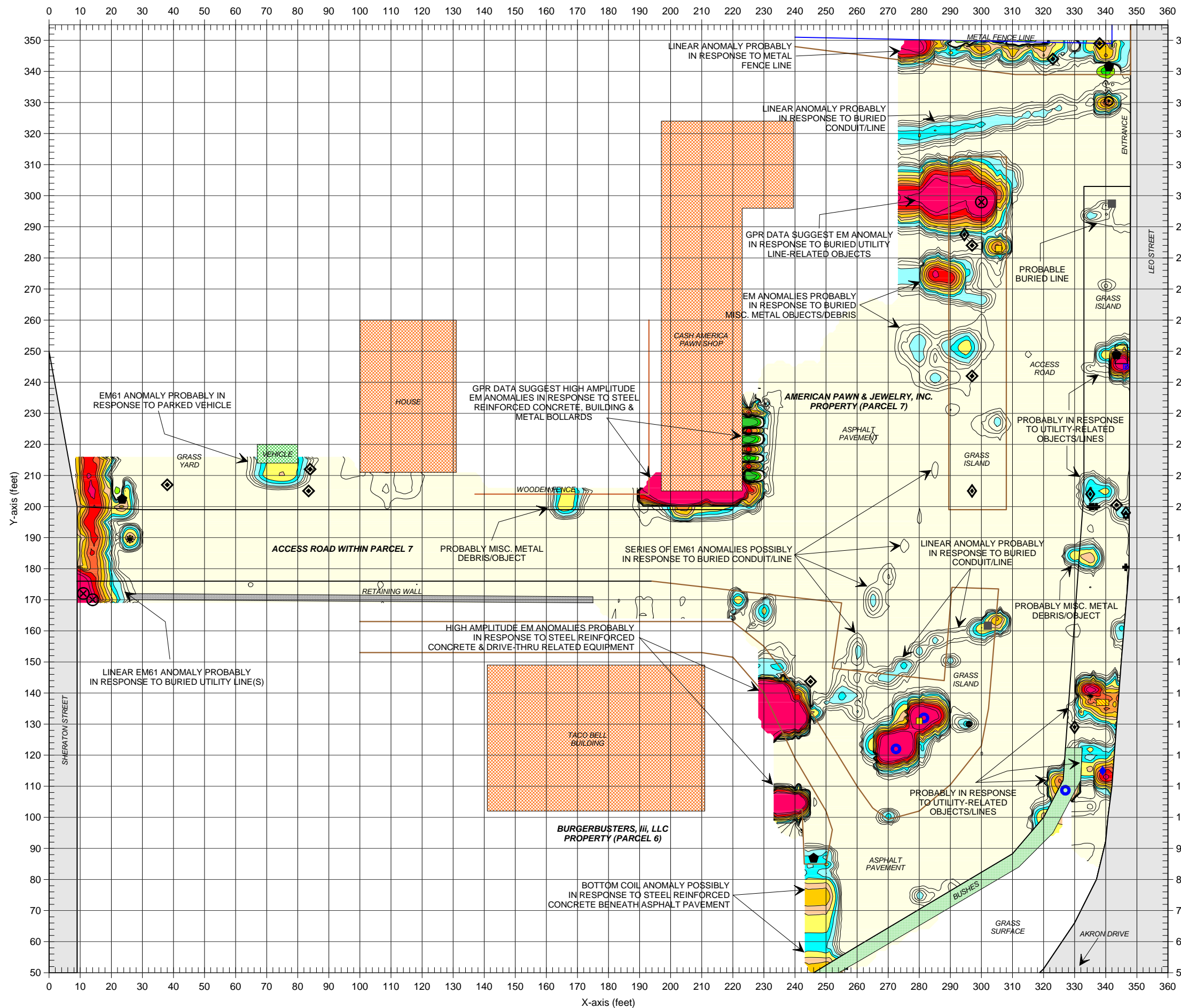
The geophysical investigation suggests that the surveyed portion of the property does not contain metallic USTs.

EM61 METAL DETECTION RESULTS

FIGURE 2

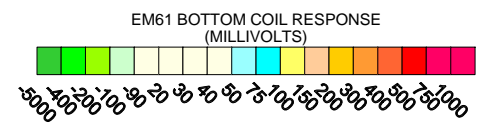
CLIENT	MJD	DATE	DRAWN	FIGURE	L-NO.
SOLUTIONS-IES		03/25/10			2010-044
MERYL B. MABE PROPERTY (RANDY MOORE'S AUTO)					
WINSTON-SALEM					
NORTH CAROLINA					
GEOPHYSICAL RESULTS					

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LEGEND

- SURVEY AREA: EM61 DATA ACQUIRED ALONG X-AXIS OR Y-AXIS TRENDING LINES SPACED 5 FEET APART
- BUILDING
- STORM SEWER COVER
- BUSINESS SIGN
- BUSINESS SIGN POLE
- CONCRETE CURBING
- ELECTRICAL BOX OR AIR PUMP
- GUY WIRE
- MONITORING WELL
- RIGHT-OF-WAY MARKER
- ROAD SIGN
- STORM SEWER GRATE
- GAS VALVE COVER
- UTILITY POLE
- UTILITY LINE BOX
- VEHICLE
- WATER METER BOX
- VALVE COVER
- FIRE HYDRANT
- CONCRETE ABUTMENT



The contour plot shows the bottom coil (most sensitive) response of the EM61 instrument in millivolts (mV). The bottom coil response shows buried metallic objects regardless of size. The EM metal detection data were collected on March 9, 2010 using a Geonics EM61 instrument. Ground penetrating radar (GPR) data were acquired on March 15, 2010 using a Geophysical Survey Systems SIR 2000 instrument with a 400 MHz antenna.

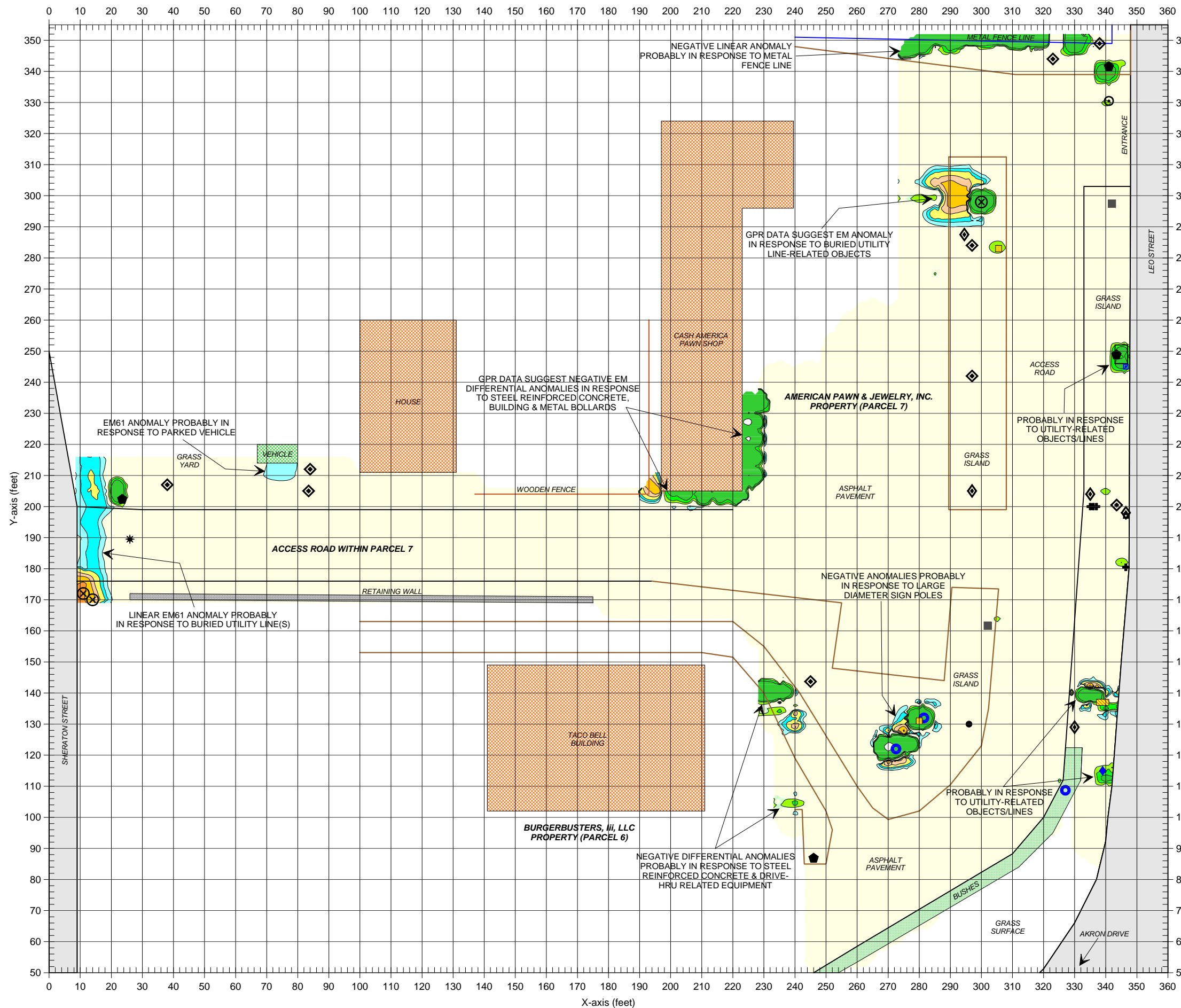
The geophysical investigation suggests that the surveyed portions of Parcels 6 & 7 do not contain metallic USTs.

EM61 METAL DETECTION (BOTTOM COIL RESULTS)

FIGURE 3

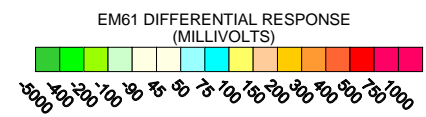
CLIENT	SOLUTIONS-IES	DATE	DRAWN	MJD
AMERICAN PAWN & BURGERBUSTERS PROPERTIES (PARCELS 7&6)		03/25/10		
CITY	STATE	DWG	FIGURE	
WINSTON-SALEM	NORTH CAROLINA		2010-044	
TITLE	GEOPHYSICAL RESULTS			

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LEGEND

- SURVEY AREA: EM61 DATA ACQUIRED ALONG X-AXIS OR Y-AXIS TRENDING LINES SPACED 5 FEET APART
- BUILDING
- STORM SEWER COVER
- BUSINESS SIGN
- BUSINESS SIGN POLE
- CONCRETE CURBING
- ELECTRICAL BOX OR AIR PUMP
- GUY WIRE
- MONITORING WELL
- RIGHT-OF-WAY MARKER
- ROAD SIGN
- STORM SEWER GRATE
- GAS VALVE COVER
- UTILITY POLE
- UTILITY LINE BOX
- VEHICLE
- WATER METER BOX
- VALVE COVER
- FIRE HYDRANT
- CONCRETE ABUTMENT



Note: The contour plot shows the differential response between the bottom and top coils of the EM61 instrument in millivolts (mV). The differential response focuses on larger, buried metallic objects such as drums and USTs and ignores smaller miscellaneous, buried, metal debris. The EM61 data were collected on March 9, 2010 using a Geonics EM61 instrument. Ground penetrating radar (GPR) data were acquired on March 15, 2010 using a Geophysical Survey Systems SIR 2000 instrument with a 400 MHz antenna.

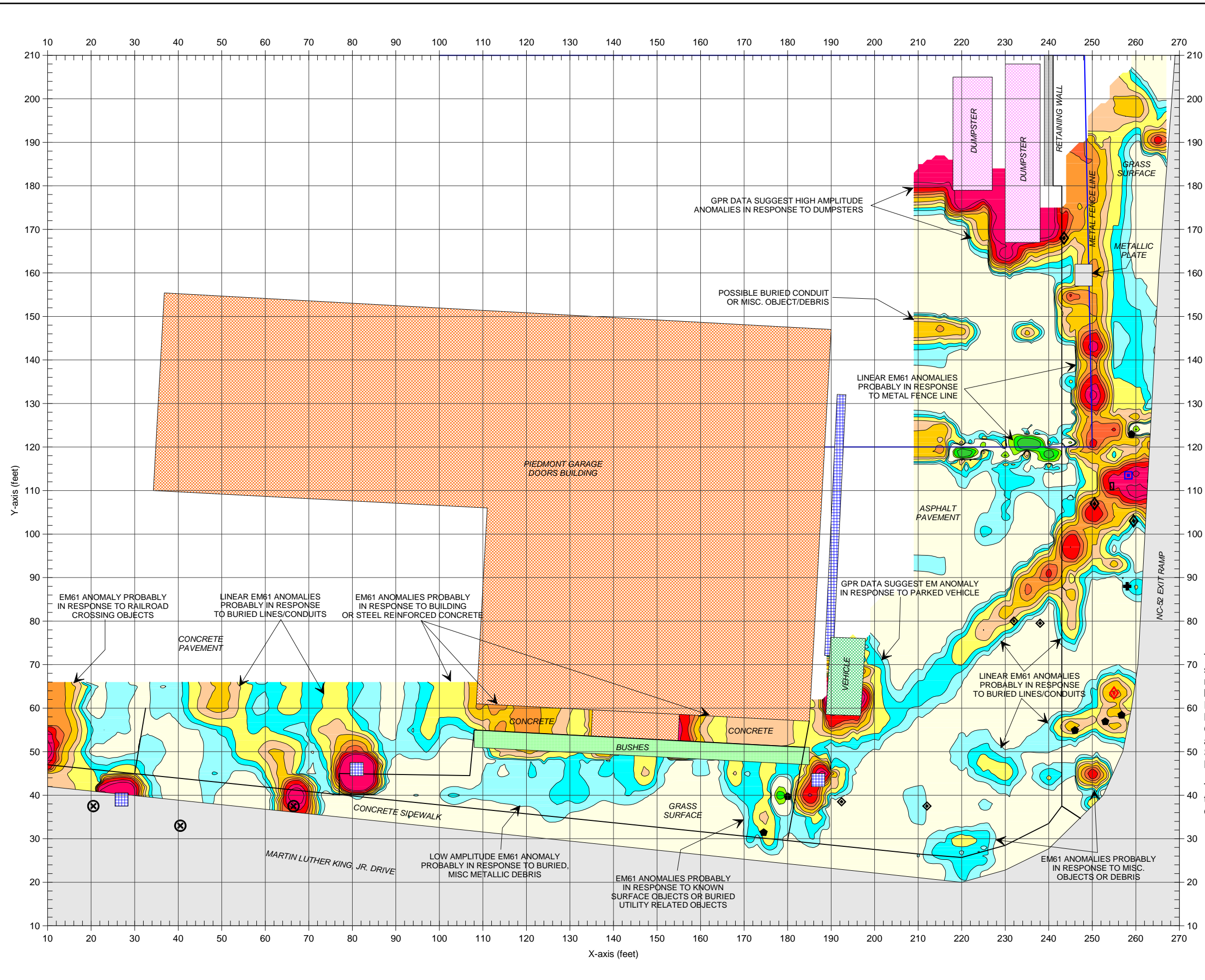
The geophysical investigation suggests that the surveyed portions of Parcels 6 & 7 do not contain metallic USTs.

EM61 METAL DETECTION (DIFFERENTIAL RESULTS)

FIGURE 4

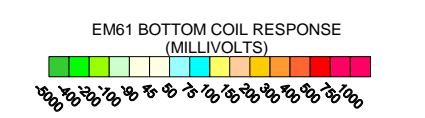
CLIENT	SOLUTIONS-IES	DATE	DRAWN	MJD
AMERICAN PAWN & BURGERBUSTERS PROPERTIES (PARCELS 7&6)		03/25/10		
CITY	STATE	DWG	CHKD	FIGURE
WINSTON-SALEM	NORTH CAROLINA			2010-044
TITLE	GEOPHYSICAL RESULTS			

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LEGEND

- SURVEY AREA: EM61 DATA ACQUIRED ALONG X-AXIS OR Y-AXIS TRENDING LINES SPACED 5 FEET APART
- BUILDING
- DUMPSTER
- FIRE HYDRANT
- GUY WIRE
- METAL FENCE LINE
- RIGHT-OF-WAY MARKER
- ROAD SIGN
- STORM SEWER GRATE
- STORM SEWER COVER
- UTILITY POLE
- UTILITY LINE BOX
- VEHICLE
- WATER METER BOX
- VALVE COVER



The contour plot shows the bottom coil (most sensitive) response of the EM61 instrument in millivolts (mV). The bottom coil response shows buried metallic objects regardless of size. The EM metal detection data were collected on March 9, 2010 using a Geonics EM61 instrument. Ground penetrating radar (GPR) data were acquired on March 15, 2010 using a Geophysical Survey Systems SIR 2000 instrument with a 400 MHz antenna.

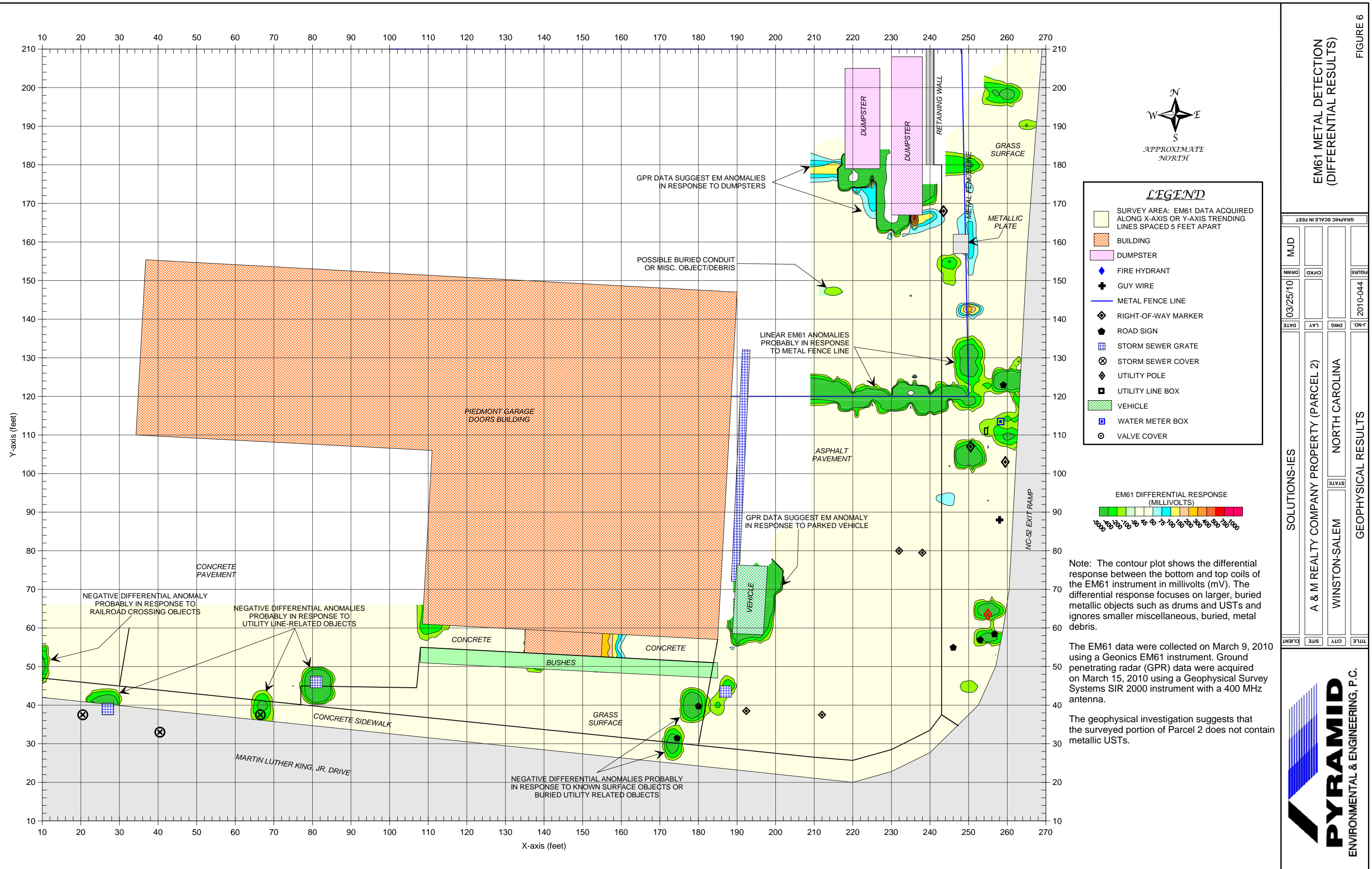
The geophysical investigation suggests that the surveyed portion of Parcel 2 does not contain metallic USTs.

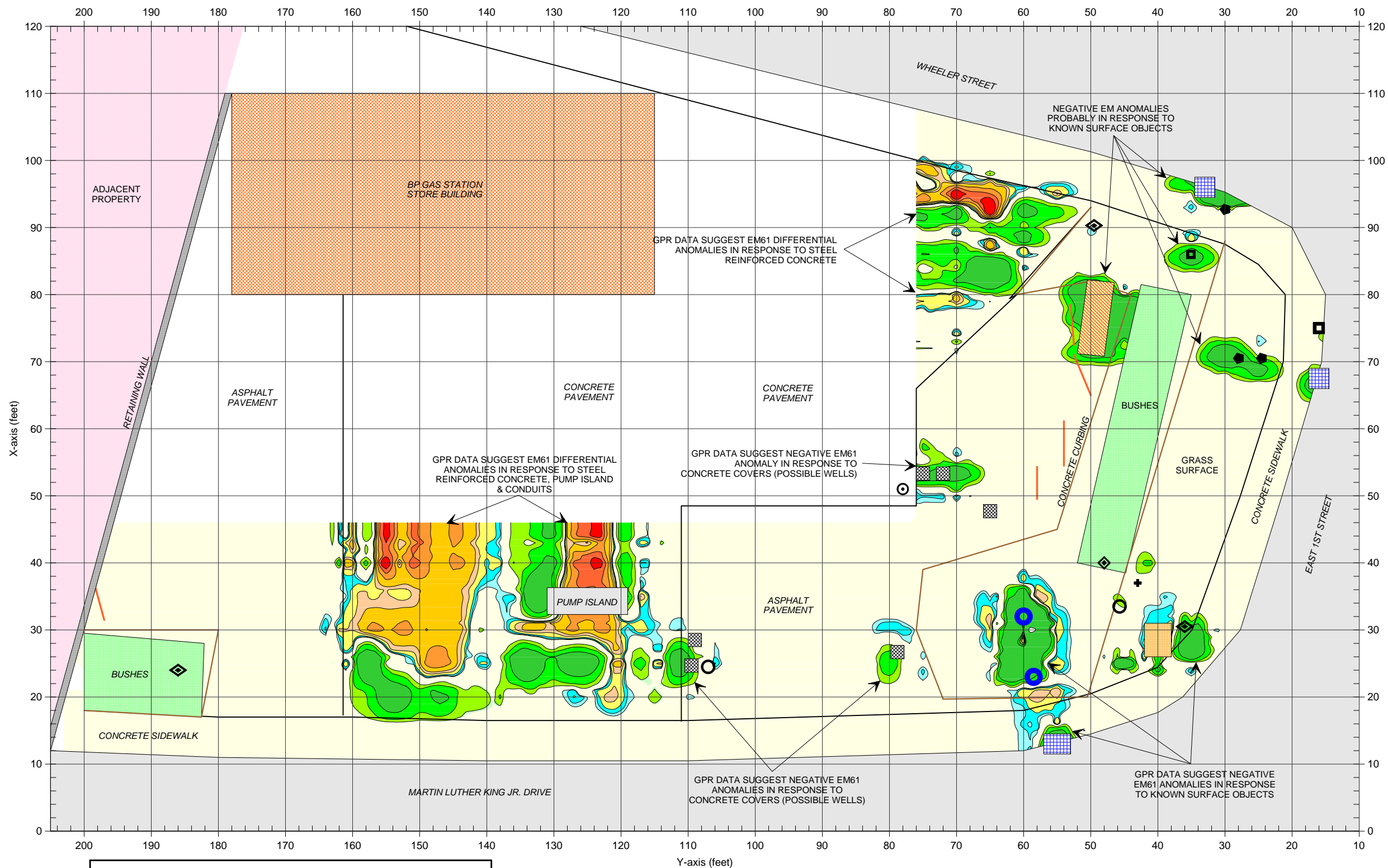
EM61 METAL DETECTION (BOTTOM COIL RESULTS)

FIGURE 5

CLIENT	SOLUTIONS-IES	DATE	DRAWN	MJD
A & M REALTY COMPANY PROPERTY (PARCEL 2)		03/25/10		
CITY	STATE	LAY	DWG	FIGURE
WINSTON-SALEM	NORTH CAROLINA			2010-044
TITLE	GEOPHYSICAL RESULTS			

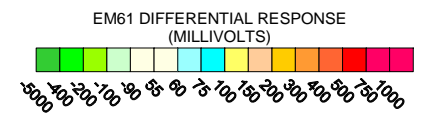
PYRAMID
ENVIRONMENTAL & ENGINEERING, P.C.





LEGEND

SURVEY AREA: EM61 DATA ACQUIRED ALONG X-AXIS OR Y-AXIS TRENDING LINES SPACED 5 FEET APART	GUY WIRE
BUILDING	RIGHT-OF-WAY MARKER
4-INCH DIAMETER PIPES	ROAD SIGN
TELEPHONES & BOLLARDS	STORM SEWER GRATE
BUSINESS SIGN POLE	UTILITY POLE
CONCRETE CURBING	UTILITY LINE BOX
ELECTRICAL BOX OR AIR PUMP	CONCRETE PATCH OR COVER (POSSIBLE ABANDONED WELL)
VALVE COVER	CONCRETE PARKING CURB



Note: The contour plot shows the differential response between the bottom and top coils of the EM61 instrument in millivolts (mV). The differential response focuses on larger, buried metallic objects such as drums and USTs and ignores smaller miscellaneous, buried, metal debris. The EM61 data were collected on March 10, 2010 using a Geonics EM61 instrument. Ground penetrating radar (GPR) data were acquired on March 15, 2010 using a Geophysical Survey Systems SIR 2000 instrument with a 400 MHz antenna.

Excluding the active (known) USTs, the geophysical investigation suggests that the surveyed portions of Parcel 29 does not contain unknown metallic USTs.

EM61 METAL DETECTION (DIFFERENTIAL RESULTS)
FIGURE 8

CLIENT	SOLUTIONS-IES	DATE	03/25/10	DRWN	MJD	FIGURE	2010-044
SITE	M. M. FOWLER PROPERTY - PARCEL 29	LAY		CHKD			
CITY	WINSTON-SALEM	DWG					
STATE	NORTH CAROLINA						
TITLE	GEOPHYSICAL RESULTS						

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APPENDIX C
GPS COORDINATES

APPENDIX C
BORING LOCATION GPS COORDINATES
NCDOT Parcel #6
349 Akron Drive
Winston-Salem, North Carolina
WBS Element: 34871.2.1; State Project: U-2826B

Boring Identification	Latitude	Longitude
P6-1	36.13777254	-80.24100194
P6-2	36.13778779	-80.24090471
P6-3	36.1377898	-80.24079583
P6-4	36.13764195	-80.24058167
P6-5	36.13770699	-80.24042694
P6-6	36.13778058	-80.24040003
P6-7	36.13790531	-80.24043255
P6-8	36.13801704	-80.24041831
P6-9	36.13810237	-80.24036894

APPENDIX D

BORING LOGS

Log of Soil Boring: P6-1

Project: 3944.10A3.NDOT
 Client: NCDOT
 WBS # 34871.2.1
 State Project # U-2826B
 Drilling Method: Geoprobe®
 Sampler Type: Macro-Core®
 Logged By: BE

Boring Number: P6-1
 Boring Date: 3/31/2010
 Total Depth of Boring: 8' bgs
 Initial Water Level: N/A
 Stabilized Water Level: N/A
 Cave In Depth: N/A
 County: Forsyth

SUBSURFACE PROFILE			SAMPLE		PID Field Screen ppm	FID Field Screen ppm	Lab Sample Depth	Well Data
Depth ft. bgs	USCS Symbol	Description	Sample Interval	% Recovery				
0	OL	Ground Surface Gray-Black, Organic Rich, Silt						
1	CL	Red-Orange, Moist, Silty Clay		100%	NS	1.1		
2					NS	0.8		
3					NS	0.9		
4	SM	Pink-White, Moist, Silty Sand		100%	NS	1.2	P6-1-6-8	
5					NS			
6								
7								
8								
9		EOB 1555 TD 8' BGS						
10		Boring backfilled with soil cuttings and bentonite.						
11		NR - No Recovery						
12								
13								
14								
15								
16								

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Log of Soil Boring: P6-2

Project: 3944.10A3.NDOT
 Client: NCDOT
 WBS # 34871.2.1
 State Project # U-2826B
 Drilling Method: Geoprobe®
 Sampler Type: Macro-Core®
 Logged By: BE

Boring Number: P6-2
 Boring Date: 3/31/2010
 Total Depth of Boring: 8' bgs
 Initial Water Level: N/A
 Stabilized Water Level: N/A
 Cave In Depth: N/A
 County: Forsyth

SUBSURFACE PROFILE			SAMPLE		PID Field Screen ppm	FID Field Screen ppm	Lab Sample Depth	Well Data
Depth ft. bgs	USCS Symbol	Description	Sample Interval	% Recovery				
0	OL	Ground Surface Black, Organic Rich, Silt						
1		Red-Orange, Moist, Silty Clay, Some Sand Mica Rich		100%	NS	0.0		
2					NS	0.0		
3					NS	0.9		
4	CL				NS	1.1	P6-2-6-8	
5								
6								
7								
8								
9		EOB 1615 TD 8' BGS						
10		Boring backfilled with soil cuttings and bentonite.						
11		NR - No Recovery						
12								
13								
14								
15								
16								

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Log of Soil Boring: P6-3

Project: 3944.10A3.NDOT
 Client: NCDOT
 WBS # 34871.2.1
 State Project # U-2826B
 Drilling Method: Geoprobe®
 Sampler Type: Macro-Core®
 Logged By: BE

Boring Number: P6-3
 Boring Date: 3/31/2010
 Total Depth of Boring: 8' bgs
 Initial Water Level: N/A
 Stabilized Water Level: N/A
 Cave In Depth: N/A
 County: Forsyth

SUBSURFACE PROFILE			SAMPLE		PID Field Screen ppm	FID Field Screen ppm	Lab Sample Depth	Well Data
Depth ft. bgs	USCS Symbol	Description	Sample Interval	% Recovery				
0		Ground Surface						
0	OL	Black, Organic Rich, Silt						
1					NS	0.0		
2				100%				
3					NS	0.5		
4	CL	Red-Brown, Moist, Silty Clay with some Sand						
5					NS	0.0		
6				100%				
7					NS	0.3	P6-3-6-8	
8								
9		EOB 1640 TD 8' BGS						
10		Boring backfilled with soil cuttings and bentonite.						
11		NR - No Recovery						
12								
13								
14								
15								
16								

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Log of Soil Boring: P6-4

Project: 3944.10A3.NDOT
 Client: NCDOT
 WBS # 34871.2.1
 State Project # U-2826B
 Drilling Method: Geoprobe®
 Sampler Type: Macro-Core®
 Logged By: BE

Boring Number: P6-4
 Boring Date: 4/1/2010
 Total Depth of Boring: 8' bgs
 Initial Water Level: N/A
 Stabilized Water Level: N/A
 Cave In Depth: N/A
 County: Forsyth

SUBSURFACE PROFILE			SAMPLE		PID Field Screen ppm	FID Field Screen ppm	Lab Sample Depth	Well Data
Depth ft. bgs	USCS Symbol	Description	Sample Interval	% Recovery				
0		Ground Surface						
0	OH	Black, Organic Rich, Silty Clay	Sample Interval	100%	NS	0.0		
1								
2	CL	Red-Orange, Moist, Silty Clay, some Sand						
3								
4				90%	NS	0.0		
5	CL	Red-Orange, Moist, Silty Clay, some Sand						
6								
7	SC	Gray-Tan, Dry, Clayey Sand						
7	CL	Orange, Moist, Silty Clay		NS	0.5	P6-4-6-8		
8		NR						
9	EOB 725 TD 8' BGS							
10	Boring backfilled with soil cuttings and bentonite.							
11	NR - No Recovery							
12								
13								
14								
15								
16								

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Log of Soil Boring: P6-5

Project: 3944.10A3.NDOT
 Client: NCDOT
 WBS # 34871.2.1
 State Project # U-2826B
 Drilling Method: Geoprobe®
 Sampler Type: Macro-Core®
 Logged By: BE

Boring Number: P6-5
 Boring Date: 4/1/2010
 Total Depth of Boring: 8' bgs
 Initial Water Level: N/A
 Stabilized Water Level: N/A
 Cave In Depth: N/A
 County: Forsyth

SUBSURFACE PROFILE			SAMPLE		PID Field Screen ppm	FID Field Screen ppm	Lab Sample Depth	Well Data
Depth ft. bgs	USCS Symbol	Description	Sample Interval	% Recovery				
0		Ground Surface						
		Asphalt						
1	CL	Red-Orange, Moist, Silty Clay		100%	NS	0.5		
2					NS	0.0		
3	CL	Orange-Red, Moist, Silty Clay, some Sand		100%	NS	0.0		
4					NS	0.0		
5					NS	0.0		
6								
7								
8	SM	Tan, Moist, Silty Sand			NS	0.0	P6-5-6-8	
9	EOB 757 TD 8' BGS							
10	Boring backfilled with soil cuttings and bentonite.							
11	NR - No Recovery							
12								
13								
14								
15								
16								

Log of Soil Boring: P6-6

Project: 3944.10A3.NDOT
 Client: NCDOT
 WBS # 34871.2.1
 State Project # U-2826B
 Drilling Method: Geoprobe®
 Sampler Type: Macro-Core®
 Logged By: BE

Boring Number: P6-6
 Boring Date: 4/1/2010
 Total Depth of Boring: 8' bgs
 Initial Water Level: N/A
 Stabilized Water Level: N/A
 Cave In Depth: N/A
 County: Forsyth

SUBSURFACE PROFILE			SAMPLE		PID Field Screen ppm	FID Field Screen ppm	Lab Sample Depth	Well Data
Depth ft. bgs	USCS Symbol	Description	Sample Interval	% Recovery				
0		Ground Surface						
		Asphalt						
1	CL	Red-Orange, Moist, Silty Clay, some Sand		100%	NS	0.0		
2					NS	0.1		
3					NS	0.0		
4					NS	0.0		
5								
6								
7	SM	Light-Tan, Moist, Fine Sandy Silt			NS	0.0	P6-6-6-8	
8	CL	Brown-Orange, Dry, Silty Clay						
9	EOB 823 TD 8' BGS							
10	Boring backfilled with soil cuttings and bentonite.							
11	NR - No Recovery							
12								
13								
14								
15								
16								

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Log of Soil Boring: P6-7

Project: 3944.10A3.NDOT
 Client: NCDOT
 WBS # 34871.2.1
 State Project # U-2826B
 Drilling Method: Geoprobe®
 Sampler Type: Macro-Core®
 Logged By: BE

Boring Number: P6-7
 Boring Date: 4/1/2010
 Total Depth of Boring: 8' bgs
 Initial Water Level: N/A
 Stabilized Water Level: N/A
 Cave In Depth: N/A
 County: Forsyth

SUBSURFACE PROFILE			SAMPLE		PID Field Screen ppm	FID Field Screen ppm	Lab Sample Depth	Well Data
Depth ft. bgs	USCS Symbol	Description	Sample Interval	% Recovery				
0		Ground Surface						
		Asphalt						
1				100%	NS	0.0		
2	CL	Red-Orange, Moist, Silty Clay			NS	0.0		
3				100%	NS	0.0		
4	CL	Tan-Orange, Moist, Silty Clay, some Sand			NS	0.0		
5				100%	NS	0.0		
6	ML	Red, Moist, Clayey Silt			NS	0.0	P6-7-6-8	
7								
8								
9		EOB 855 TD 8' BGS						
10		Boring backfilled with soil cuttings and bentonite.						
11		NR - No Recovery						
12								
13								
14								
15								
16								

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Log of Soil Boring: P6-8

Project: 3944.10A3.NDOT
 Client: NCDOT
 WBS # 34871.2.1
 State Project # U-2826B
 Drilling Method: Geoprobe®
 Sampler Type: Macro-Core®
 Logged By: BE

Boring Number: P6-8
 Boring Date: 4/1/2010
 Total Depth of Boring: 8' bgs
 Initial Water Level: N/A
 Stabilized Water Level: N/A
 Cave In Depth: N/A
 County: Forsyth

SUBSURFACE PROFILE			SAMPLE		PID Field Screen ppm	FID Field Screen ppm	Lab Sample Depth	Well Data
Depth ft. bgs	USCS Symbol	Description	Sample Interval	% Recovery				
0		Ground Surface						
		Asphalt, Gravel						
1	CL	Red-Orange, Moist, Silty Clay, some Sand		100%	NS	0.8		
2					NS	0.3		
3	ML	Red, Moist, Clayey Silt, some Sand		100%	NS	0.5		
4					NS	0.2		
5	ML	Tan, Moist, Clayey Silt, some Sand		100%	NS	0.5		
6					NS	0.2		
7	SM	Red, Moist, Clayey Silt, some Sand			NS	0.2	P6-8-6-8	
8	EOB 906							
	TD 8' BGS							
9	Boring backfilled with soil cuttings and bentonite.							
10	NR - No Recovery							
11								
12								
13								
14								
15								
16								

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Log of Soil Boring: P6-9

Project: 3944.10A3.NDOT
 Client: NCDOT
 WBS # 34871.2.1
 State Project # U-2826B
 Drilling Method: Geoprobe®
 Sampler Type: Macro-Core®
 Logged By: BE

Boring Number: P6-9
 Boring Date: 4/1/2010
 Total Depth of Boring: 8' bgs
 Initial Water Level: N/A
 Stabilized Water Level: N/A
 Cave In Depth: N/A
 County: Forsyth

SUBSURFACE PROFILE			SAMPLE		PID Field Screen ppm	FID Field Screen ppm	Lab Sample Depth	Well Data
Depth ft. bgs	USCS Symbol	Description	Sample Interval	% Recovery				
0		Ground Surface						
		Asphalt, Gravel						
	SW	Gray, Graveley Sand						
1	CL	Red-Orange, Moist, Silty Clay		95%	NS	0.4		
2	ML	Red-Orange, Moist, Clayey Silt						
3	CL	Red-Orange, Moist, Silty Clay					NS	0.0
4		NR						
		Red-Orange, Moist, Silty Clay		100%	NS	0.0		
5								
6	ML	Tan, Moist, Clayey Silt, some Sand			NS	0.0	P6-9-6-8	
7								
8								
EOB 928 TD 8' BGS								
Boring backfilled with soil cuttings and bentonite.								
10								
NR - No Recovery								
11								
12								
13								
14								
15								
16								

APPENDIX E

LABORATORY ANALYTICAL REPORT



Case Narrative

Date: 04/13/10
Company: N. C. Department of Transportation
Contact: Jodi Overmyer
Address: c/o Solution - IES
1101 Nowell Road
Raleigh, NC 27607

Client Project ID: NCDOT Forsyth Co. PSA-Parcel 6
Prism COC Group No: G0410030
Collection Date(s): 3/31/10 thru 4/1/10
Lab Submittal Date(s): 04/01/10
Client Project Name Or No: U-2826-B

This data package contains the analytical results for the project identified above and includes a Case Narrative, Laboratory Report and Quality Control Data totaling 12 pages. A chain-of-custody is also attached for the samples submitted to Prism for this project.

Data qualifiers are flagged individually on each sample. A key reference for the data qualifiers appears at the end of this case narrative. Quality control statements and/or sample specific remarks are included in the sample comments section of the laboratory report for each sample affected.

Semi Volatile Analysis

No Anomalies Reported

Volatile Analysis

No Anomalies Reported

Metals Analysis

N/A

Wet Lab and Micro Analysis

N/A

Please call if you have any questions relating to this analytical report.

Data Reviewed by: Robbi A. Jones

Project Manager: Angela D. Overcash

Signature: 

Signature: 

Review Date: 04/13/10

Approval Date: 04/13/10

Data Qualifiers Key Reference:

- B: Compound also detected in the method blank.
- #: Result outside of the QC limits.
- DO: Compound diluted out.
- E: Estimated concentration, calibration range exceeded.
- J: The analyte was positively identified but the value is estimated below the reporting limit.
- H: Estimated concentration with a high bias.
- L: Estimated concentration with a low bias.
- M: A matrix effect is present.

Notes: This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. The results in this report relate only to the samples submitted for analysis.



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

Laboratory Report

04/13/10

N. C. Department of Transportation
 Attn Jodi Overmyer
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project Name: U-2826-B
 Project ID: NCDOT Forsyth Co. PSA-Prism Sample ID 275485
 Parcel 6
 Sample Matrix: Soil

Client Sample ID P6-1-6-8
 COC Group: G0410030
 Time Collected: 03/31/10 16:55
 Time Submitted: 04/01/10 13:50

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination									
Percent Solids	86.6	%			1	SM2540 G	04/05/10 13:30	jbrayton	
Diesel Range Organics (DRO) by GC-FID									
Diesel Range Organics (DRO)	BRL	mg/kg	8.0	1.3	1	8015B	04/08/10 0:28	jvogel	Q49285
Sample Preparation:			25.11 g	/	1 mL	3545	04/06/10 15:00	athao	P27198
					Surrogate		% Recovery	Control Limits	
					o-Terphenyl		62	49 - 124	
Sample Weight Determination									
Weight 1	5.49	g			1	GRO	04/06/10 0:00	lbrown	
Weight 2	5.70	g			1	GRO	04/06/10 0:00	lbrown	
Gasoline Range Organics (GRO) by GC-FID									
Gasoline Range Organics (GRO)	BRL	mg/kg	5.8	3.6	50	8015B	04/07/10 20:56	heasler	Q49290
					Surrogate		% Recovery	Control Limits	
					aaa-TFT		99	55 - 129	

Sample Comment(s):

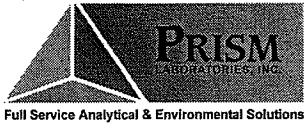
BRL = Below Reporting Limit
 J- Estimated value between the Reporting Limit and the MDL
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Angela D. Overcash, V.P. Laboratory Services

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

Laboratory Report

04/13/10

N. C. Department of Transportation
 Attn Jodi Overmyer
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project Name: U-2826-B
 Project ID: NCDOT Forsyth Co. PSA- Prism Sample ID
 Parcel 6
 Sample Matrix: Soil

Client Sample ID P6-2-6-8
 275486
 COC Group: G0410030
 Time Collected: 03/31/10 17:00
 Time Submitted: 04/01/10 13:50

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

Percent Solids	84.1	%			1	SM2540 G	04/05/10 13:30	jbrayton	
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Diesel Range Organics (DRO) by GC-FID

Diesel Range Organics (DRO)	BRL	mg/kg	8.3	1.3	1	8015B	04/08/10 1:38	jvogel	Q49285
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Sample Preparation: 25.08 g / 1 mL 3545 04/06/10 15:00 athao P27198

Surrogate	% Recovery	Control Limits
o-Terphenyl	63	49 - 124

Sample Weight Determination

Weight 1	6.16	g			1	GRO	04/06/10 0:00	lbrown	
Weight 2	6.19	g			1	GRO	04/06/10 0:00	lbrown	

Gasoline Range Organics (GRO) by GC-FID

Gasoline Range Organics (GRO)	BRL	mg/kg	5.9	3.7	50	8015B	04/08/10 14:08	heaster	Q49290
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Surrogate recovery was outside the control limits. No target compounds were detected in this sample that were associated with this surrogate. No further action was taken.

Surrogate	% Recovery	Control Limits
aaa-TFT	143 #	55 - 129

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL

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Laboratory Report

04/13/10

N. C. Department of Transportation
 Attn Jodi Overmyer
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project Name: U-2826-B
 Project ID: NCDOT Forsyth Co. PSA-Prism Sample ID
 Parcel 6
 Sample Matrix: Soil

Client Sample ID P6-3-6-8
 275487
 COC Group: G0410030
 Time Collected: 03/31/10 17:05
 Time Submitted: 04/01/10 13:50

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

Percent Solids	82.0	%			1	SM2540 G	04/05/10 13:30	jbrayton	
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Diesel Range Organics (DRO) by GC-FID

Diesel Range Organics (DRO)	BRL	mg/kg	8.5	1.4	1	8015B	04/08/10 2:14	jvogel	Q49285
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Sample Preparation: 25.17 g / 1 mL 3545 04/06/10 15:00 athao P27198

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

Sample Weight Determination

Weight 1	6.33	g			1	GRO	04/06/10 0:00	lbrown	
Weight 2	6.72	g			1	GRO	04/06/10 0:00	lbrown	

Gasoline Range Organics (GRO) by GC-FID

Gasoline Range Organics (GRO)	BRL	mg/kg	6.1	3.8	50	8015B	04/08/10 14:39	heasler	Q49290
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Surrogate	% Recovery	Control Limits
aaa-TFT	95	55 - 129

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL

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Laboratory Report

04/13/10

N. C. Department of Transportation
 Attn Jodi Overmyer
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project Name: U-2826-B
 Project ID: NCDOT Forsyth Co. PSA- Parcel 6
 Sample Matrix: Soil

Client Sample ID P6-4-6-8
 Prism Sample ID 275488
 COC Group: G0410030
 Time Collected: 04/01/10 9:15
 Time Submitted: 04/01/10 13:50

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination									
Percent Solids	83.6	%			1	SM2540 G	04/05/10 13:30	jbrayton	
Diesel Range Organics (DRO) by GC-FID									
Diesel Range Organics (DRO)	BRL	mg/kg	8.4	1.4	1	8015B	04/08/10 2:49	jvogel	Q49285
Sample Preparation:			24.98 g	/	1 mL	3545	04/06/10 15:00	athao	P27198
		Surrogate		% Recovery		Control Limits			
		o-Terphenyl		62		49 - 124			
Sample Weight Determination									
Weight 1	6.87	g			1	GRO	04/06/10 0:00	lbrown	
Weight 2	6.53	g			1	GRO	04/06/10 0:00	lbrown	
Gasoline Range Organics (GRO) by GC-FID									
Gasoline Range Organics (GRO)	BRL	mg/kg	6.0	3.7	50	8015B	04/07/10 22:30	heasler	Q49290
		Surrogate		% Recovery		Control Limits			
		aaa-TFT		119		55 - 129			

Sample Comment(s):

BRL = Below Reporting Limit
 J- Estimated value between the Reporting Limit and the MDL
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Laboratory Report

04/13/10

N. C. Department of Transportation
 Attn Jodi Overmyer
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project Name: U-2826-B
 Project ID: NCDOT Forsyth Co. PSA-Prism Sample ID
 Parcel 6
 Sample Matrix: Soil

Client Sample ID P6-5-6-8
 275489
 COC Group: G0410030
 Time Collected: 04/01/10 9:20
 Time Submitted: 04/01/10 13:50

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

Percent Solids	83.5	%			1	SM2540 G	04/05/10 13:30	jbrayton	
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Diesel Range Organics (DRO) by GC-FID

Diesel Range Organics (DRO)	BRL	mg/kg	8.4	1.4	1	8015B	04/08/10 3:25	jvogel	Q49285
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Sample Preparation: 25 g / 1 mL 3545 04/06/10 15:00 athao P27198

Surrogate	% Recovery	Control Limits
o-Terphenyl	58	49 - 124

Sample Weight Determination

Weight 1	6.04	g			1	GRO	04/06/10 0:00	lbrown	
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Weight 2	6.50	g			1	GRO	04/06/10 0:00	lbrown	
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Gasoline Range Organics (GRO) by GC-FID

Gasoline Range Organics (GRO)	BRL	mg/kg	6.0	3.7	50	8015B	04/07/10 23:02	heasler	Q49290
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Surrogate	% Recovery	Control Limits
aaa-TFT	74	55 - 129

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL

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Laboratory Report

04/13/10

N. C. Department of Transportation
 Attn Jodi Overmyer
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project Name: U-2826-B
 Project ID: NCDOT Forsyth Co. PSA- Prism Sample ID 275490
 Parcel 6
 Sample Matrix: Soil
 Client Sample ID P6-6-6-8
 COC Group: G0410030
 Time Collected: 04/01/10 9:35
 Time Submitted: 04/01/10 13:50

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

Percent Solids	83.5	%			1	SM2540 G	04/05/10 13:30	jbrayton	
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Diesel Range Organics (DRO) by GC-FID

Diesel Range Organics (DRO)	BRL	mg/kg	8.4	1.4	1	8015B	04/08/10 4:00	jvogel	Q49285
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Sample Preparation: 25 g / 1 mL 3545 04/06/10 15:00 athao P27198

Surrogate	% Recovery	Control Limits
o-Terphenyl	56	49 - 124

Sample Weight Determination

Weight 1	5.58	g			1	GRO	04/06/10 0:00	lbrown	
Weight 2	6.32	g			1	GRO	04/06/10 0:00	lbrown	

Gasoline Range Organics (GRO) by GC-FID

Gasoline Range Organics (GRO)	BRL	mg/kg	6.0	3.7	50	8015B	04/07/10 23:33	heasler	Q49290
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Surrogate	% Recovery	Control Limits
aaa-TFT	126	55 - 129

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL

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 Raleigh, NC 27607

Project Name: U-2826-B
 Project ID: NCDOT Forsyth Co. PSA- Parcel 6
 Sample Matrix: Soil

Client Sample ID P6-7-6-8
 Prism Sample ID 275491
 COC Group: G0410030
 Time Collected: 04/01/10 9:50
 Time Submitted: 04/01/10 13:50

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

Percent Solids	79.0	%			1	SM2540 G	04/05/10 13:30	jbrayton	
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Diesel Range Organics (DRO) by GC-FID

Diesel Range Organics (DRO)	BRL	mg/kg	8.8	1.4	1	8015B	04/08/10 4:35	jvogel	Q49285
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Sample Preparation: 25.06 g / 1 mL 3545 04/06/10 15:00 athao P27198

Surrogate	% Recovery	Control Limits
o-Terphenyl	56	49 - 124

Sample Weight Determination

Weight 1	6.06	g			1	GRO	04/06/10 0:00	lbrown	
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Weight 2	5.67	g			1	GRO	04/06/10 0:00	lbrown	
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Gasoline Range Organics (GRO) by GC-FID

Gasoline Range Organics (GRO)	BRL	mg/kg	6.3	4.0	50	8015B	04/08/10 1:07	heasler	Q49290
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Surrogate	% Recovery	Control Limits
aaa-TFT	123	55 - 129

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL

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Laboratory Report

04/13/10

N. C. Department of Transportation
 Attn Jodi Overmyer
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project Name: U-2826-B
 Project ID: NCDOT Forsyth Co. PSA- Parcel 6
 Sample Matrix: Soil

Client Sample ID P6-8-6-8
 Prism Sample ID 275492
 COC Group: G0410030
 Time Collected: 04/01/10 9:55
 Time Submitted: 04/01/10 13:50

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

Percent Solids	88.8	%			1	SM2540 G	04/05/10 13:30	jbrayton	
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Diesel Range Organics (DRO) by GC-FID

Diesel Range Organics (DRO)	BRL	mg/kg	7.8	1.3	1	8015B	04/08/10 5:11	jvogel	Q49285
Sample Preparation:			25.2 g	/	1 mL	3545	04/06/10 15:00	athao	P27198

Surrogate	% Recovery	Control Limits
o-Terphenyl	57	49 - 124

Sample Weight Determination

Weight 1	5.35	g			1	GRO	04/06/10 0:00	lbrown	
Weight 2	5.17	g			1	GRO	04/06/10 0:00	lbrown	

Gasoline Range Organics (GRO) by GC-FID

Gasoline Range Organics (GRO)	BRL	mg/kg	5.6	3.5	50	8015B	04/08/10 1:38	heasler	Q49290
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Surrogate	% Recovery	Control Limits
aaa-TFT	128	55 - 129

Sample Comment(s):

BRL = Below Reporting Limit
 J- Estimated value between the Reporting Limit and the MDL
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Laboratory Report

04/13/10

N. C. Department of Transportation
 Attn: Jodi Overmyer
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project Name: U-2826-B
 Project ID: NCDOT Forsyth Co. PSA- Parcel 6
 Sample Matrix: Soil

Client Sample ID: P6-9-6-8
 Prism Sample ID: 275493
 COC Group: G0410030
 Time Collected: 04/01/10 10:00
 Time Submitted: 04/01/10 13:50

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
<u>Percent Solids Determination</u>									
Percent Solids	87.9	%			1	SM2540 G	04/05/10 13:30	jbrayton	
<u>Diesel Range Organics (DRO) by GC-FID</u>									
Diesel Range Organics (DRO)	BRL	mg/kg	8.0	1.3	1	8015B	04/08/10 23:59	jbvogel	Q49287
Sample Preparation:			24.98 g	/	1 mL	3545	04/07/10 17:00	athao	P27216
						Surrogate	% Recovery	Control Limits	
						o-Terphenyl	87	49 - 124	
<u>Sample Weight Determination</u>									
Weight 1	5.18	g			1	GRO	04/06/10 0:00	lbrown	
Weight 2	4.65	g			1	GRO	04/06/10 0:00	lbrown	
<u>Gasoline Range Organics (GRO) by GC-FID</u>									
Gasoline Range Organics (GRO)	BRL	mg/kg	5.7	3.6	50	8015B	04/08/10 2:10	heasler	Q49290
						Surrogate	% Recovery	Control Limits	
						aaa-TFT	98	55 - 129	

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL

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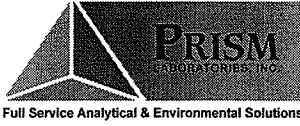
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NC Certification No. 402
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Level II QC Report

4/13/10

N. C. Department of Transportation
 Attn Jodi Overmyer
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project Name: U-2826-B
 Project ID: NCDOT Forsyth Co. PSA-Parcel 6

COC Group Number: G0410030
 Date/Time Submitted: 4/1/10 13:50

Diesel Range Organics (DRO) by GC-FID, method 8015B

Method Blank							QC Batch ID		
	Result	RL	Control Limit	Units					
Diesel Range Organics (DRO)	ND	7	<3.5	mg/kg			Q49285		
Laboratory Control Sample							QC Batch ID		
	Result	Spike Amount		Units	Recovery %	Recovery Ranges %			
Diesel Range Organics (DRO)	56.8	80		mg/kg	71	55-109	Q49285		
Matrix Spike							QC Batch ID		
Sample ID:	Result	Spike Amount		Units	Recovery %	Recovery Ranges %			
275474 Diesel Range Organics (DRO)	56.3	80		mg/kg	70	50-117	Q49285		
Matrix Spike Duplicate							QC Batch ID		
Sample ID:	Result	Spike Amount		Units	Recovery %	Recovery Ranges %	RPD %	RPD Range %	
275474 Diesel Range Organics (DRO)	56.7	80		mg/kg	71	50-117	1	0 - 24	Q49285

Diesel Range Organics (DRO) by GC-FID, method 8015B

Method Blank							QC Batch ID		
	Result	RL	Control Limit	Units					
Diesel Range Organics (DRO)	ND	7	<3.5	mg/kg			Q49287		
Laboratory Control Sample							QC Batch ID		
	Result	Spike Amount		Units	Recovery %	Recovery Ranges %			
Diesel Range Organics (DRO)	57.3	80		mg/kg	72	55-109	Q49287		
Matrix Spike							QC Batch ID		
Sample ID:	Result	Spike Amount		Units	Recovery %	Recovery Ranges %			
275461 Diesel Range Organics (DRO)	60.4	80		mg/kg	76	50-117	Q49287		
Matrix Spike Duplicate							QC Batch ID		
Sample ID:	Result	Spike Amount		Units	Recovery %	Recovery Ranges %	RPD %	RPD Range %	
275461 Diesel Range Organics (DRO)	55.8	80		mg/kg	70	50-117	8	0 - 24	Q49287



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

Level II QC Report

4/13/10

N. C. Department of Transportation
 Attn Jodi Overmyer
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project Name: U-2826-B
 Project ID: NCDOT Forsyth Co. PSA-Parcel 6

COC Group Number: G0410030
 Date/Time Submitted: 4/1/10 13:50

Gasoline Range Organics (GRO) by GC-FID, method 8015B

Method Blank					QC Batch ID
	Result	RL	Control Limit	Units	

Gasoline Range Organics (GRO)	ND	5	<2.5	mg/kg	Q49290
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Laboratory Control Sample							QC Batch ID
	Result	Spike Amount	Units	Recovery %	Recovery Ranges %		

Gasoline Range Organics (GRO)	51.10	50	mg/kg	102	67-116		Q49290
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Matrix Spike							QC Batch ID
Sample ID:	Result	Spike Amount	Units	Recovery %	Recovery Ranges %		

275480 Gasoline Range Organics (GRO)	45.75	50	mg/kg	92	57-113		Q49290
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Matrix Spike Duplicate								
Sample ID:	Result	Spike Amount	Units	Recovery %	Recovery Ranges %	RPD %	RPD Range %	QC Batch ID

275480 Gasoline Range Organics (GRO)	45.20	50	mg/kg	90	57-113	1	0 - 23	Q49290
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#-See Case Narrative

