

# UST Investigation Activities NC DOT Property - Parcel 4B

Charlotte, Mecklenburg County  
North Carolina

H&H Job No. ROW-504  
State Project P-3800  
WBS Element #32213  
May 15, 2015



SMARTER ENVIRONMENTAL SOLUTIONS

**Via 2<sup>nd</sup> Day Federal Express**

May 15, 2015

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

Attention: Mr. Gordon Box, LG

Re: UST Investigation Activities  
NC DOT Property – Parcel 4B  
Charlotte, Mecklenburg County, NC  
State Project P-3800  
WBS Element # 32213  
H&H Job No. ROW-504

Dear Gordon:

### **1.0 Introduction and Background Information**

Hart & Hickman, PC (H&H) has prepared this letter report documenting underground storage tank (UST) investigation activities recently conducted at NC DOT Parcel 4B located at 537 W. Trade Street in Charlotte, Mecklenburg County, North Carolina. A site location map is provided as Figure 1. UST investigation activities were conducted on behalf of the North Carolina Department of Transportation (NC DOT) in accordance with H&H's February 26, 2015 proposal.

Parcel 4B and several other adjacent parcels may be used by NC DOT to facilitate a trade for a separate parcel related to the construction of the Charlotte Multimodal Rail Station (State Project P-3800). A parking lot currently occupies parcel 4B. In January 2015, GEL Engineering of NC, Inc. conducted geophysical surveys using electromagnetic (EM) induction technology and

ground penetrating radar (GPR) to identify potential USTs on these parcels. One possible UST was identified on Parcel 4B. The possible UST location is shown on Figure 1 from GEL's report dated February 25, 2015, which is included in Appendix A. The UST investigation activities are discussed below.

## **2.0 UST Investigation Activities**

H&H mobilized to the site on March 26, 2015 to conduct UST exploratory excavation activities on Parcel 4B. H&H contracted EVO Corporation (EVO) of Winston-Salem, North Carolina to perform the excavation activities. Prior to UST removal activities, a fire department permit was obtained from the Charlotte Fire Department. The fire department permit is included in Appendix B.

During excavation activities, no UST was encountered; however, bricks and metal piping debris were identified in the excavation area approximately one ft to six ft below ground surface (bgs). The bricks and metal piping likely caused the GPR data to be misinterpreted as a possible UST. The excavation area is shown on Figure 2. Photographs of the excavation and debris are included in Appendix C.

During excavation activities, soils from the sidewalls and base of the excavation were field screened for potential impacts using a photoionization detector (PID). Based on field screening with the PID, no impacted soils were suspected in the excavation. In addition, H&H did not observe soil staining or petroleum odors. Because there was no evidence of a UST and no suspected soil impacts, post-excavation soil samples were not collected for laboratory analysis.

The excavation was backfilled with the excavated soil and brick debris, compacted with the bucket of the backhoe, and capped with gravel. No geotechnical testing was conducted during backfilling of the excavation.

Mr. Gordon Box, LG  
May 15, 2015  
Page 3

### 3.0 Conclusions

H&H has completed UST exploratory investigation activities on NC DOT Parcel 4B and no UST was encountered. Bricks and metal piping debris were identified in the possible UST location. Upon completion of excavation activities, the area was backfilled with the excavated soil. The bricks and piping debris were left in place. Based on field screening and visual observations, no impacted soil was identified in the excavation area. If impacted soil is encountered in this area during future site work, it should be properly managed and disposed at a permitted facility.

If you have any questions or need any additional information, please do not hesitate to contact us at (704) 586-0007.

Very truly yours,

*Hart & Hickman, PC*

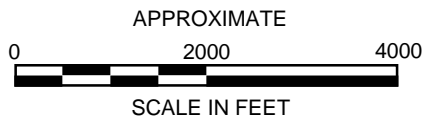
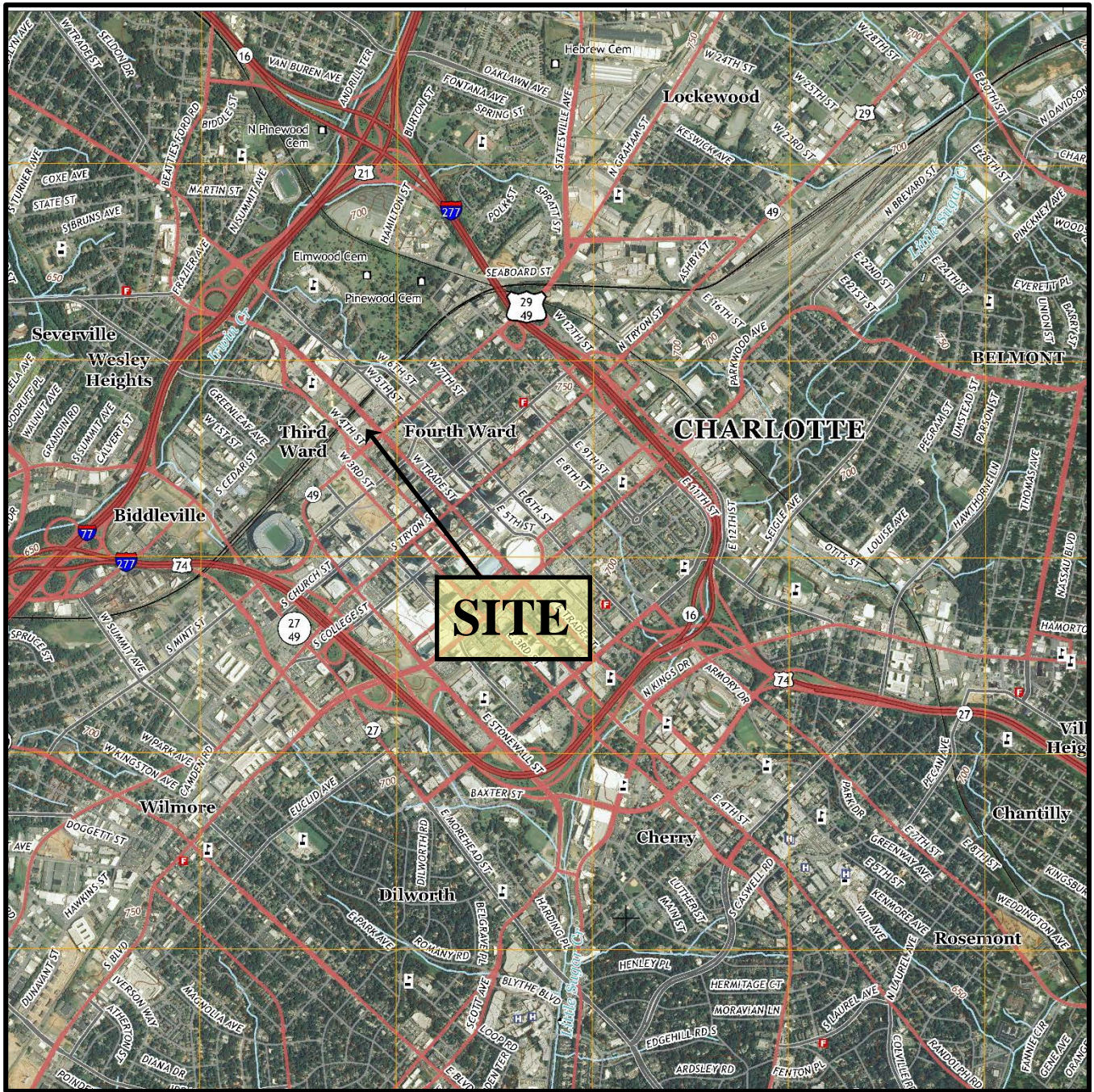


David Graham  
Senior Project Geologist

Matt Bramblett, PE  
Principal




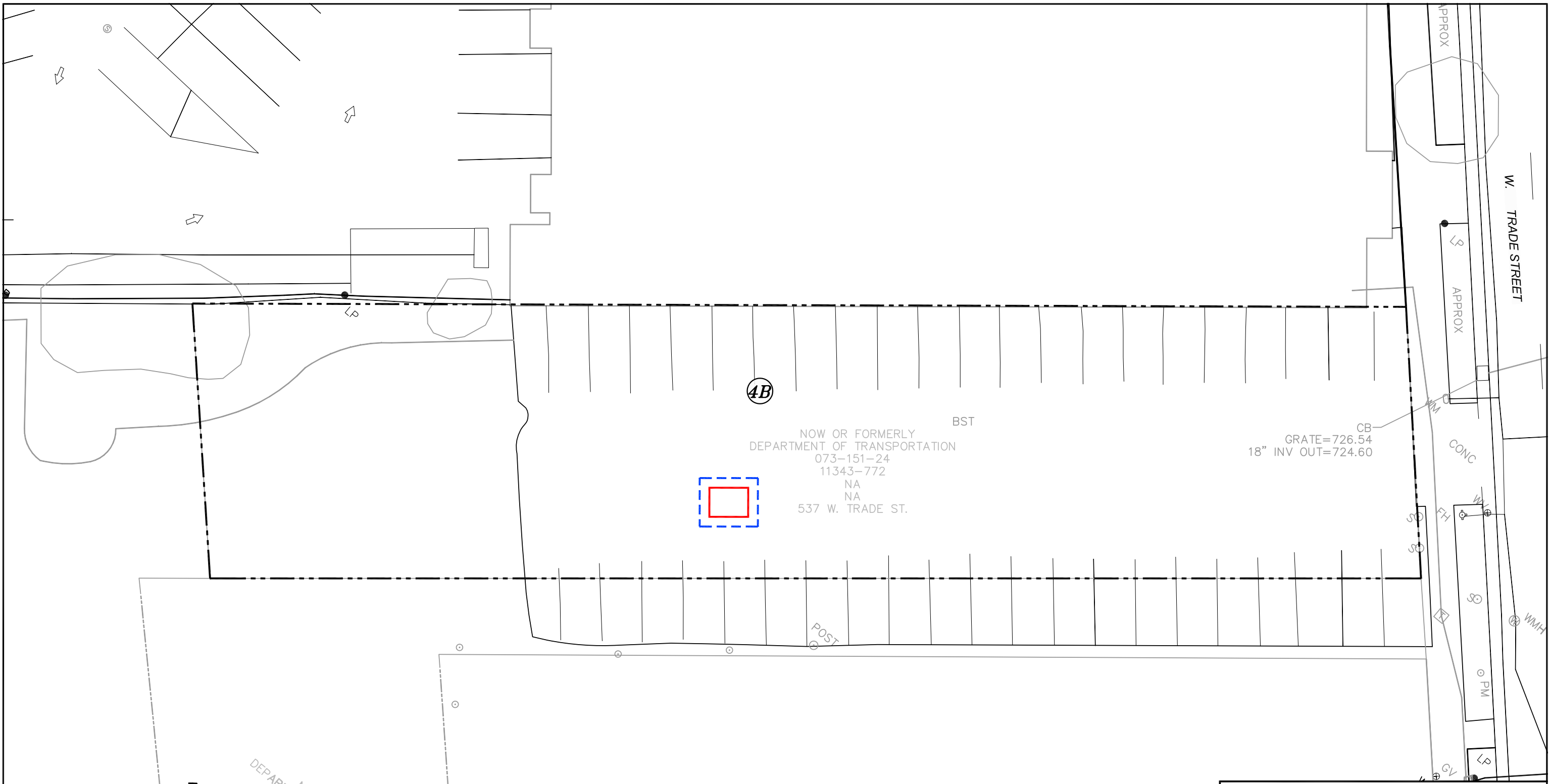
Attachments









U.S.G.S. QUADRANGLE MAP  
**CHARLOTTE, NC 2013**

QUADRANGLE  
 7.5 MINUTE SERIES (TOPOGRAPHIC)


TITLE	<b>SITE LOCATION MAP</b>		
PROJECT	NC DOT PARCEL 4B 537 W. TRADE STREET CHARLOTTE, MECKLENBURG COUNTY, NC		
			2923 South Tryon Street-Suite 100 Charlotte, North Carolina 28203 704-586-0007 (p) 704-586-0373 (f)
	<b>SMARTER ENVIRONMENTAL SOLUTIONS</b>		
DATE:	4/1/15	REVISION NO:	0
JOB NO:	ROW-504	FIGURE:	1



**LEGEND**

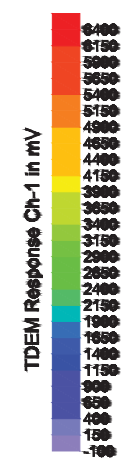
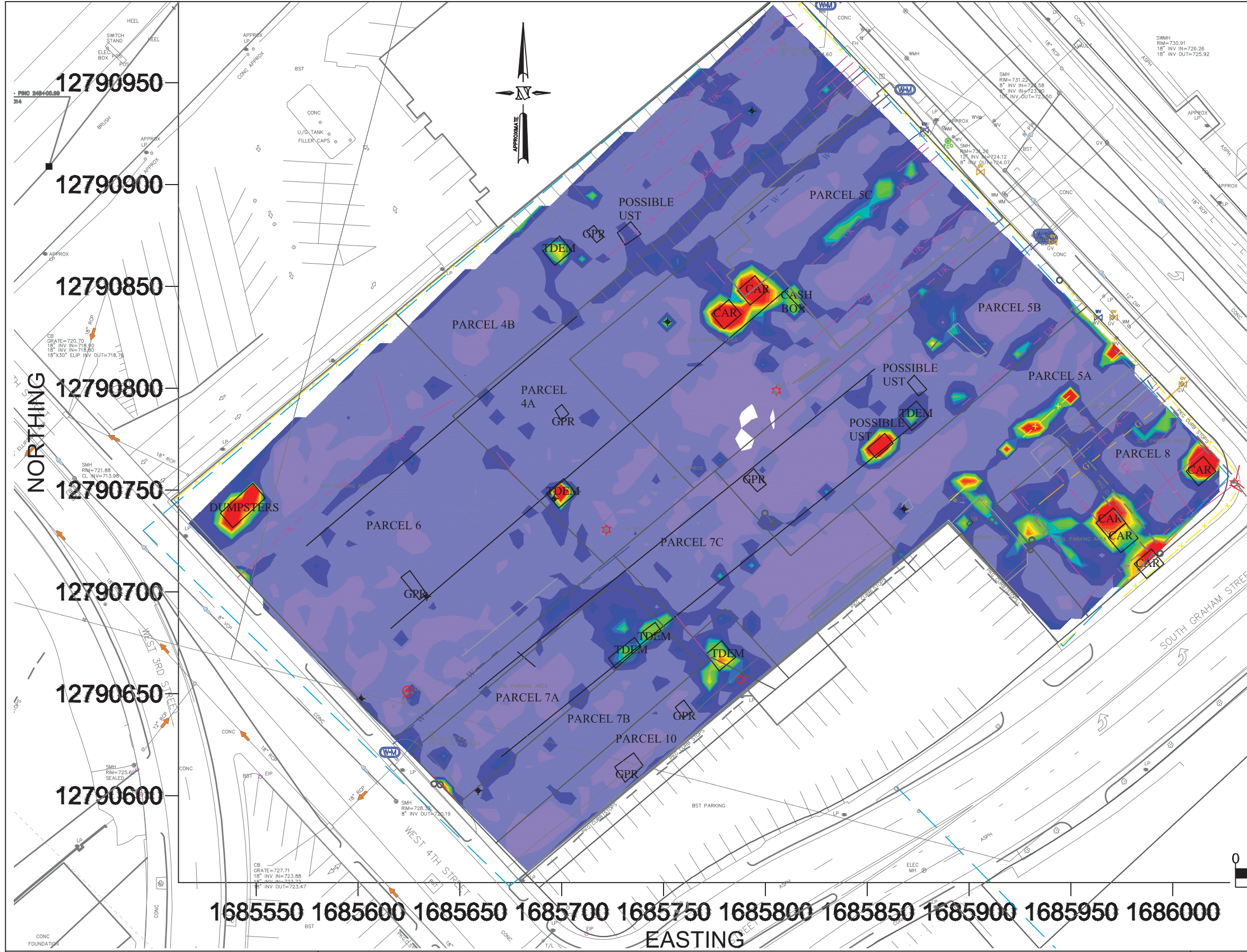
-  SITE PROPERTY BOUNDARY
-  PARCEL BOUNDARY
-  OFF-SITE BUILDING
-  NCDOT PARCEL NUMBER
-  EXTENT OF EXCAVATION AREA
-  POSSIBLE UST LOCATION



TITLE <b>SITE MAP &amp; EXCAVATION AREA</b>	
PROJECT NCDOT PARCEL 4B 537 W. TRADE STREET CHARLOTTE, MECKLENBURG COUNTY, NC	
 2923 South Tryon Street-Suite 100 Charlotte, North Carolina 28203 704-586-0007(p) 704-586-0373(f) License # C-1269 / #C-245 Geology <b>SMARTER ENVIRONMENTAL SOLUTIONS</b>	
DATE: 05-13-2015	REVISION NO. 0
JOB NO. ROW-504	FIGURE NO. 2

**Appendix A**

**Figure 1 from GEL's Geophysical Survey Report dated February 25, 2015**



- ### LEGEND
- UK --- APPROXIMATE LOCATION OF SUSPECTED UNDERGROUND UNKNOWN UTILITY LINE
  - W --- APPROXIMATE LOCATION OF SUSPECTED UNDERGROUND WATER LINE
  - SD --- APPROXIMATE LOCATION OF SUSPECTED STORMWATER DRAIN LINE
  - G --- APPROXIMATE LOCATION OF SUSPECTED UNDERGROUND GAS LINE
  - E --- APPROXIMATE LOCATION OF SUSPECTED UNDERGROUND ELECTRICAL POWER LINE
  - x-x CHAIN LINK FENCE
  - END OF DESIGNATION OR UNKNOWN DESIGNATION
  - POWER POLE
  - METALLIC SURFACE FEATURE
  - STORM DRAIN MANHOLE
  - STORM DRAIN DROP INLET
  - WATER VALVE
  - WATER METER
  - GAS VALVE
  - GAS METER
  - + MONITORING WELL

### NOTES

- 1) UNDERGROUND FEATURES WERE LOCATED USING VISUAL EVIDENCE, GROUND PENETRATING RADAR (GPR), RADIO-FREQUENCY ELECTROMAGNETIC (EM) AND TIME DOMAIN ELECTROMAGNETIC (TDEM) METHODS. OTHER BURIED UTILITIES AND STRUCTURES MAY EXIST BUT WERE NOT DETECTED DUE TO LIMITATIONS OF THE GEOPHYSICAL METHODS, SITE ACCESS, AND/OR HIGH TARGET CONGESTION. THEREFORE, DUE CAUTION SHOULD BE USED WHEN PERFORMING SUBSURFACE EXCAVATION ACTIVITIES WHERE POTENTIAL CONFLICTS EXIST. GEL GEOPHYSICS, LLC. IS NOT RESPONSIBLE FOR DAMAGES THAT MAY OCCUR. IDENTIFYING THE LOCATION OF SOME UTILITIES AND STRUCTURES MAY ONLY BE POSSIBLE WITH VACUUM OR OTHER EXCAVATION METHODS.
- 2) FIELD SURVEY CONDUCTED ON 1/17/15-1/18/15.
- 3) DATA FROM GEONICS, LTD. EM-61 MKII AND MALA GEOSCIENCE GROUND PENETRATING RADAR.
- 4) GEL GEOPHYSICS, LLC. IS NOT RESPONSIBLE FOR ACCURACY OF BASE MAP PROVIDED BY HART & HICKMAN.

### GRAPHIC SCALE



( IN FEET )  
1 inch = 50 ft.

**1685550 1685600 1685650 1685700 1685750 1685800 1685850 1685900 1685950 1686000**  
**EASTING**

**GEL GEOPHYSICS, LLC**  
a Member of THE GEL GROUP, INC.  
P.O. BOX 30712 CHARLESTON, SC 29417  
2040 SAVAGE ROAD 29407  
(843) 769-7379 FAX (843) 769-7397  
WWW.GELGEOPHYSICS.COM

PROJECT: HAH00115  
UST INVESTIGATION OF  
11 PARCELS W. TRADE ST AND S. GRAHAM ST  
CHARLOTTE, NORTH CAROLINA  
NCDOT RAIL PSA PROJECT

DATE: FEBRUARY 25, 2015

RESULTS OF GEOPHYSICAL INVESTIGATION

DRAWN BY: WSD      APPRV. BY: EJB

FIGURE  
1



**Appendix B**  
**Fire Permit**



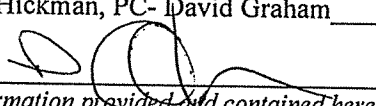
**CHARLOTTE FIRE DEPARTMENT  
FIRE PREVENTION BUREAU  
Tank Removal and Safeguarding Permit Application**

Applicant			
<i>This is the company name and mailing address of the tank removal company.</i>			
Name: Hart & Hickman, PC	Contacts: David Graham or Jake Whittle		
Address: 2923 S. Tryon Street	City/State: Charlotte	Zip Code: 28203	
Phone Number: ( 704 ) 586-0007	Cell Number: ( 704 ) 649-5999		

Location and Type of Project	
<i>This is the facility name and address of the tank removal project. If vacant property, indicate "Vacant" for facility name.</i>	
Facility Name: Vacant Parking Lot(s)	Address: 517 -537 W. Trade Street, Charlotte, NC
Type of Project: YES Tank Removal	___ Tank Abandonment ___ Both A/G: ___ B/G: ___ up to 3 USTs

Tank Information			
<i>If more than 4 tanks, complete a separate sheet. TANK SIZES AND CONTENTS UNKNOWN AT THIS TIME</i>			
Tank 1) Product: UNKNOWN / TBD	Size: UNK	Tank 2) Product: UNK	Size: UNK
Tank 3) Product: UNK	Size: UNK	Tank 4) Product:	Size:
Tanks Transported To: Tank removal will be performed by H&H sub. USTs and contents will be disposed properly.			

**Responsible Applicant**

Name: ___Hart & Hickman, PC- David Graham_____	Title: ___As NC DOT Agent_____
Signature: 	Date: ___3/17/2015_
<i>I certify that the information provided and contained herein is true and accurate to the best of my knowledge. The issuance of a permit shall not be deemed as approval to violate any provisions of the North Carolina State Fire Code. The code official has the right to inspect the site to ensure compliance with provisions of the fire code, and to issue a Stop Work Order for unsafe practices.</i>	

**NOTE! A site plan of the job site shall be submitted with this application**

Return the completed and signed application, site plan, and check to:  
Charlotte Fire Department – Fire Prevention Bureau  
500 Dalton Avenue  
Charlotte, North Carolina 28206  
Phone: 704-336-2101 Facsimile: 704-336-5190

\_\_\_ Check Enclosed Payable to "The City of Charlotte"

*If you wish to pay by credit card, contact the Fire Prevention Bureau Office to provide necessary information.*

**CFD Office Use Only**

Permit Code: <u>16</u>	Fee: \$ _____	Permit No. _____
Check No. _____	Issue Date: ___ / ___ / ___	
Issued by Inspector: _____	Emp. #: _____	
Information Collected By: _____		
Entry Date: ___ / ___ / ___	Entered By: _____	

**Appendix C**  
**Photographs**



Photograph 1: View of brick and metal piping debris in excavation.



Photograph 2: View of brick debris in excavation.