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June 5, 2008

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

Via email (pdf)

cc: Mr. Cyrus Parker, NCDOT

State Project:	R-2408A and B
WBS Element:	34427.1.1
County:	Macon
Description:	Riverview Street (SR 1323) and Bryson City Road (NC 28) from Depot Street Extension (SR 1729) to Bennett Road (SR 1378)

SUBJECT: **Parcel #24, Khans of Franklin, Inc. Property**
Report on Geophysical Surveys to Locate Possible UST's
Schnabel Engineering Project No. 07210023.10

Dear Mr. Bramblett:

This letter contains our report on the geophysical surveys we conducted on the subject property. We understand this letter report will be included as an appendix in your report to the NCDOT. The report includes one 8.5x11 color figure and two 11x17 color figures.

1.0 INTRODUCTION

Schnabel Engineering conducted geophysical surveys on May 22 and May 27, 2008, in the accessible areas of the proposed right-of-way (ROW) section of Parcel 24 (Khans of Franklin, Inc. Property) under our 2007 contract with the NCDOT. Parcel 24 is located at the south corner of the intersection of NC 28 (Bryson City Road) and SR 1323 (Riverview Street). A site photo of the parcel is shown in Figure 1. The work was conducted at the locations indicated by Hart & Hickman to support their environmental assessment of the subject parcel. The purpose of the geophysical surveys was to locate

possible metal underground storage tanks (UST's) and associated metal product lines in the accessible areas of the site, and to investigate planned boring locations for the presence of buried utilities.

2.0 FIELD METHODOLOGY

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

The EM61 data were collected along parallel survey lines spaced about 2.5 feet apart. The EM61 and DGPS data were recorded digitally using a field computer and later transferred to a desktop computer for data processing. The GPR data were collected over selected EM61 anomalies and over the planned boring locations.

3.0 DISCUSSION OF RESULTS

The contoured EM61 data are shown on Figures 2 and 3. The EM61 early time gate results are plotted on Figure 2. The early time gate data provide the most sensitive detection of metal object targets, regardless of size. Figure 3 shows the difference between the response of the top and bottom coils of the EM61 instrument (differential response). The difference is taken to remove the effect of surface and very shallowly buried metallic objects. Typically, the differential response emphasizes anomalies from deeper and larger objects such as UST’s.

The early time gate and differential results show several anomalies attributed to known site features, and a linear anomaly probably in response to a buried storm sewer (Figures 3 and 4). GPR data were collected along several lines perpendicular to the suspected storm sewer to mark the approximate location of the storm sewer on the ground surface. The geophysical data do not indicate the presence of metal UST's in the areas surveyed on Parcel 24.

4.0 CONCLUSIONS

Our evaluation of the geophysical data collected on Parcel 24 of Project R-2408A and B in Franklin, NC indicates the following:

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

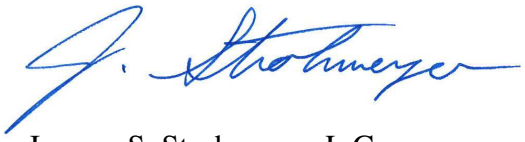
5.0 LIMITATIONS

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

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

Sincerely,

SCHNABEL ENGINEERING SOUTH, P.C.



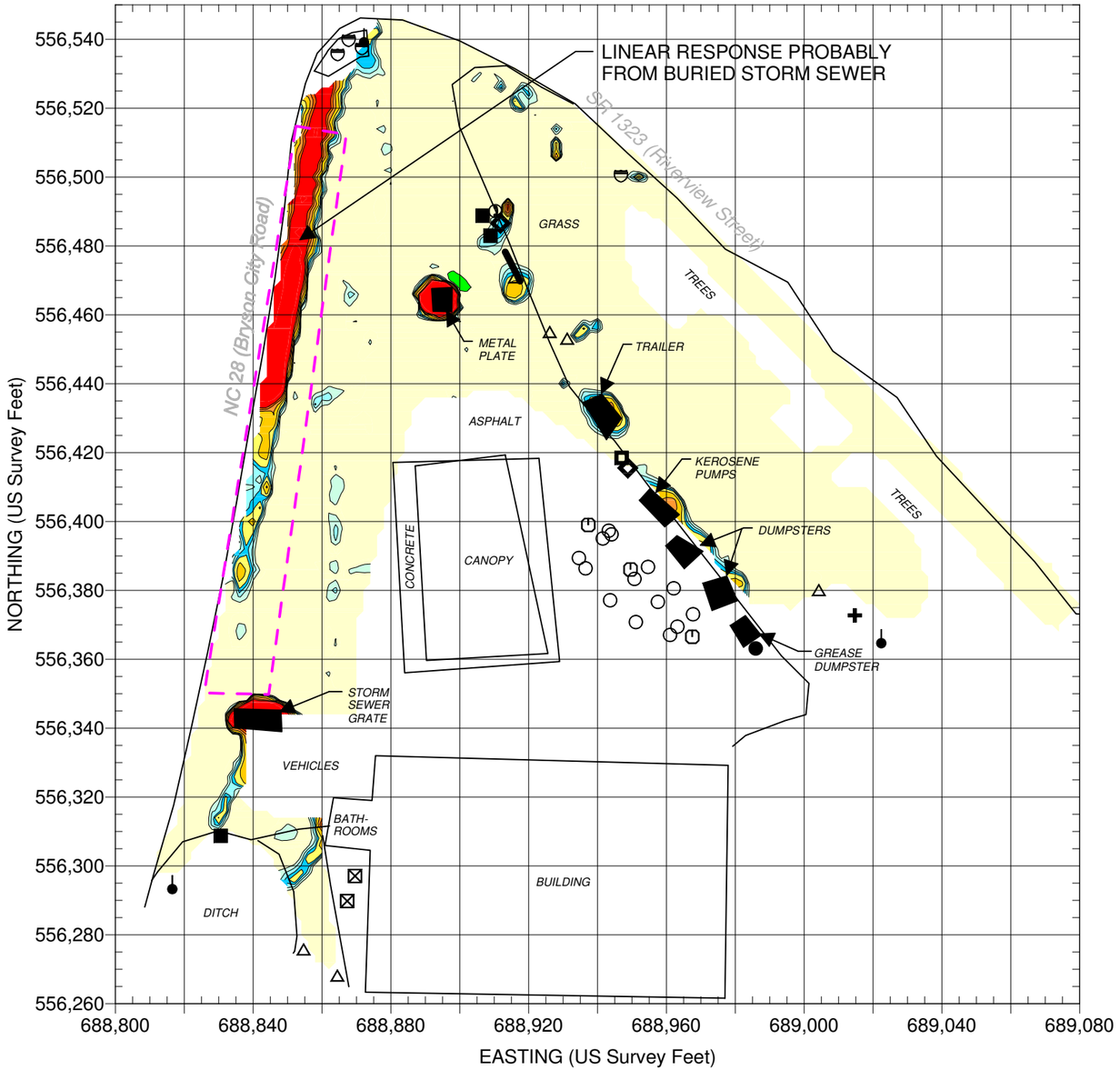
Jeremy S. Strohmeyer, L.G.
Project Manager

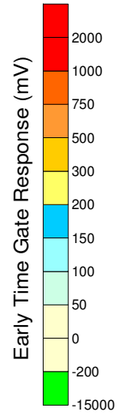
Edward D. Billington, L.G.
Senior Vice President

JS/NB
Attachment: Figures (3)
FILE: G:\2007 PROJECTS\07210023 (NCDOT 2007 GEOPHYSICAL SERVICES)\PHASE 10 (R-2408A AND B - FRANKLIN AND MACON CO)\REPORT\PARCEL 24\REPORT ON PARCEL 24.DOC

Parcel 24 – Khans of Franklin, Inc., looking south

Schnabel Engineering	NC Department of Transportation Geotechnical Engineering Unit	**PARCEL 24** **SITE PHOTO**
	State Project No. R-2408A and B Macon County, North Carolina	FIGURE 1





EXPLANATION

- UTILITY POLE
- GUY WIRE
- UST LID
- UTILITY LID
- METALLIC OBJECT
- METAL DRUM
- NCDOT ROW/EASEMENT MARKER
- SIGN
- MONITORING WELL
- ELECTRIC BOX
- TELEPHONE
- AIR PUMP
- GPR SURVEY AREA

Scale in US Survey Feet

0 40 80 120

Note: The contour plot shows the earliest and most sensitive time gate of the EM61 bottom coil/channel in millivolts (mV). The EM data were collected on May 22, 2008, using a Geonics EM61-MK2 instrument. Positioning for EM61 survey provided using a submeter Trimble ProXRS DGPS system. Coordinates are in the US State Plane 1983 System, North Carolina Zone 3200, using the NAD 1983 datum. GPR data were acquired on May 27, 2008, using a Geophysical Survey Systems SIR 3000 equipped with a 400 MHz antenna.

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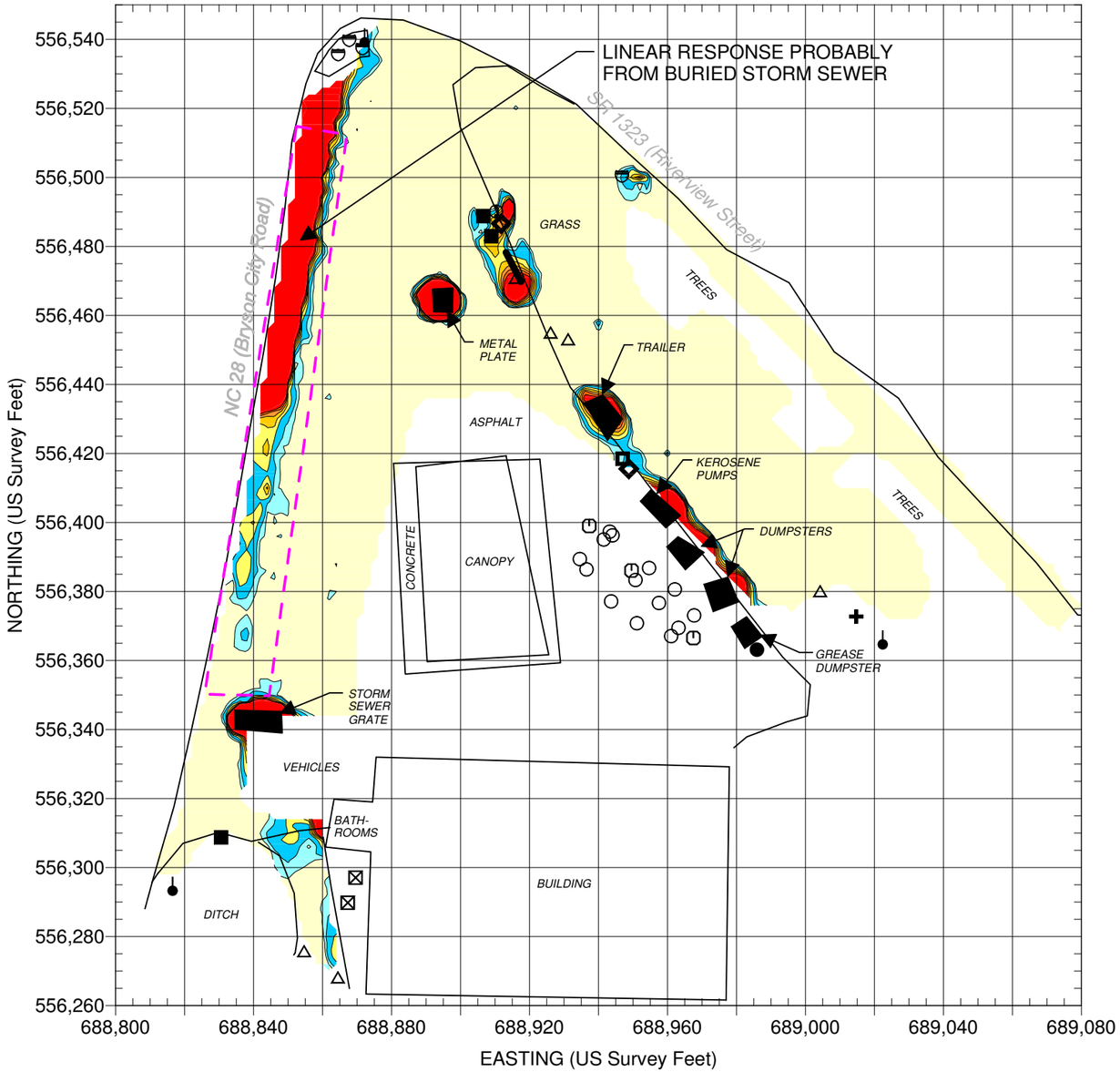
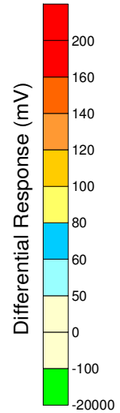
Macon County, NC

PARCEL 24
EM61 EARLY TIME GATE RESULTS

FIGURE 2





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Scale in US Survey Feet

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Note: The contour plot shows the difference, in millivolts (mV), between the readings from the top and bottom coils of the EM61. The difference is taken to reduce the effect of shallow metal objects and emphasize anomalies caused by deeper metallic objects, such as pipes and tanks. The EM data were collected on May 22, 2008, using a Geonics EM61-MK2 instrument. Positioning for the EM61 survey provided using a submeter Trimble ProXRS DGPS system. Coordinates are in the US State Plane 1983 System, North Carolina 3200 Zone, using the NAD 1983 datum. GPR data were acquired on May 27, 2008, using a Geophysical Survey Systems SIR 3000 equipped with a 400 MHz antenna.

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PARCEL 24
EM61 DIFFERENTIAL RESULTS

FIGURE 3