GEOPHYSICAL INVESTIGATION REPORT

PERFORMED AT:

Former Admiral Cleaners Site
617 19th Street
Watervliet, NY 12189

PREPARED FOR:

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Ballston Spa, NY 12020

PREPARED BY:

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October 22, 2021

1.0 INTRODUCTION

Enviroprobe Service, Inc. (Enviroprobe) is an environmental investigation services firm which provides monitoring well installation (HSA), Geoprobe (DPT) drilling services and Environmental & Engineering Geophysics (EEG) services to the environmental consulting and engineering community.

Enviroprobe conducted a subsurface geophysical investigation at the subject property within client-specified areas of concern. Due to conditions and objectives, the investigation utilized a GSSI UtilityScan cart-mounted Ground Penetrating Radar (GPR) unit with a 350 MHz HS antenna, a Fisher TW-6 metallic locator, a wheel mounted EM61-MK2 and a G-858G magnetometer.

Ground penetrating radar (commonly called GPR) is a geophysical method that has been developed over the past thirty years for shallow, high-resolution, subsurface investigations of the earth. GPR uses high frequency pulsed electromagnetic waves (generally 10 MHz to 2,000 MHz) to acquire subsurface information. An EM wave is propagated downward into the ground by a transmitting antenna. Where abrupt changes in electrical properties occur in the subsurface, a portion of the energy is reflected back to the surface. This reflected wave is detected by a receiver antenna and transmitted to a control unit for real time processing and display. The penetration depth of the GSSI unit varies from several inches to tens of feet according to site-specific conditions. The penetration depth decreases with increased soil conductivity. The penetration depth is the greatest in ice, dry sands, and fine gravels. Clayey, highly saline or saturated soils, areas covered by concrete, foundry slag, or other highly conductive materials greatly reduce GPR penetration. GPR is a method that is commonly used for environmental, engineering, archaeological, and other shallow investigations.

The Fisher TW-6 metallic locator is designed to find pipes, cables and other metallic objects such as underground storage tanks (USTs). The TW-6 transmitter generates an electromagnetic field that induces electrical currents in the subsurface. These currents produce a secondary electromagnetic field that is measured by the TW-6 receiver. One surveyor can carry both the transmitter and receiver together to search for underground metallic objects, although the TW-6 response can also be affected by the electrical properties of non-metallic materials in the subsurface.

The EM61 is a time-domain metal detector which can detect both ferrous and nonferrous metals. A transmitter generates a pulsed primary magnetic field in the earth, which induces eddy currents in nearby metallic objects. The eddy current decay produces a secondary magnetic field measured by the receiver coil. By taking the measurement after the start of the current decay, the current induced in the ground has fully dissipated and only the current in the metal is still producing a secondary field. The responses are recorded and displayed by an integrated data logger.

The G-858G is a high sensitivity, fast-sampling magnetometer. Variations in the Earth's magnetic field or magnetic anomalies are most usually associated to a difference in the composition of the lithosphere or to the presence of a metallic (ferrous) underground object. This equipment allows for the storage of data in a specific user custom grid, or in simple search mode can be used to locate anomalies as part of a survey.

2.0 SCOPE OF WORK

On October 21, 2021, a geophysicist from Enviroprobe Service Inc. was mobilized to the subject property to perform a geophysical investigation. The purpose of this investigation was to detect electromagnetic, magnetic, or GPR anomalies throughout client-selected areas. These areas consisted mainly of natural soil and concrete surfaces.

3.0 SURVEY RESULTS

The survey was conducted using a cart-mounted GPR unit, a Fisher TW-6 metallic locator, a Geonics EM61 metal detector with a Differential Global Positioning System (DGPS) and a G-858G magnetometer also with Differential Global Positioning System (DGPS). All surveys were conducted in a grid pattern with approximated 3 feet between lines over all client-specified areas of the property. Upon completion of the EM61 and Magnetometer surveys, interpretive color contour maps were generated and a separate GPR anomaly map. These data accompanies this report on the AutoCAD file Precision 102121 Watervliet NY.dwg.

The GPR survey shows an anomaly of approximate 10 ft by 7 ft and at a depth of approximately 4 ft consistent with a remediation liner from the area of a known former UST.

Based on the results of the EM61, GPR, magnetometer, and TW-6 surveys, no metallic anomaly consistent with a UST was found in the property.

4.0 LIMITATIONS

The client-selected areas contained metallic fences and well manholes. These objects prevented a thorough investigation due to the interference with the equipment.

Due to surface conditions and subsurface content, the GPR signal penetration was estimated at less than 5 ft in the majority of the survey area. This penetration was reduced in areas of concrete cover.

The TW-6 survey was kept up to 6 feet away from above ground objects containing metals depending on the sizes, shapes and positions of the metal objects. The TW-6 survey was not effective in areas with reinforced concrete.

Due to the dielectric properties of the subsurface, clay, plastic polymer, and fiberglass utilities may not have been detected.

All field services were conducted in compliance with the industry standard of care guidelines found in ASCE 38-02 (Level B).

5.0 WARRANTIES

The field observations and measurements reported herein are considered sufficient in detail and scope for this project. Enviroprobe Service, Inc. warrants that the findings and conclusions contained herein have been promulgated in accordance with generally accepted environmental engineering methods. There is a possibility that conditions may exist which could not be identified within the scope of this project and were not apparent during the site activities performed for this project.

Enviroprobe represents that the services were performed in a manner consistent with that level of care and skill ordinarily exercised by environmental consultants under similar circumstances. No other representations to Client, express or implied, and no warranty or guarantee is included or intended in this agreement, or in any report, document, or otherwise.

Enviroprobe Service, Inc. believes that the information provided in this report is reliable. However, Enviroprobe cannot warrant or guarantee that the information provided by others is complete or accurate. No other warranties or guarantees are implied or expressed.

EM61 data is subject to signal anomalies and operator interpretation. The EM61 data is intended to provide the locations of areas of concern requiring additional investigation or the approximate location of underground structures and utilities. Great care must be utilized when excavating and/or drilling around underground structures and utilities since EM61 data can only be used for estimation purposes and EM61 data is subject to misinterpretation. Enviroprobe can not guarantee that utilities, post-tension cables, and/or rebar will not be incurred during drilling, cutting, coring, or excavating activities.

This report was prepared pursuant to the contract Enviroprobe has with the Client. That contractual relationship included an exchange of information about the property that was unique and between Enviroprobe and its client and serves as the basis upon which this report was prepared. Because of the importance of the communication between Enviroprobe and its client, reliance or any use of this report by anyone other than the

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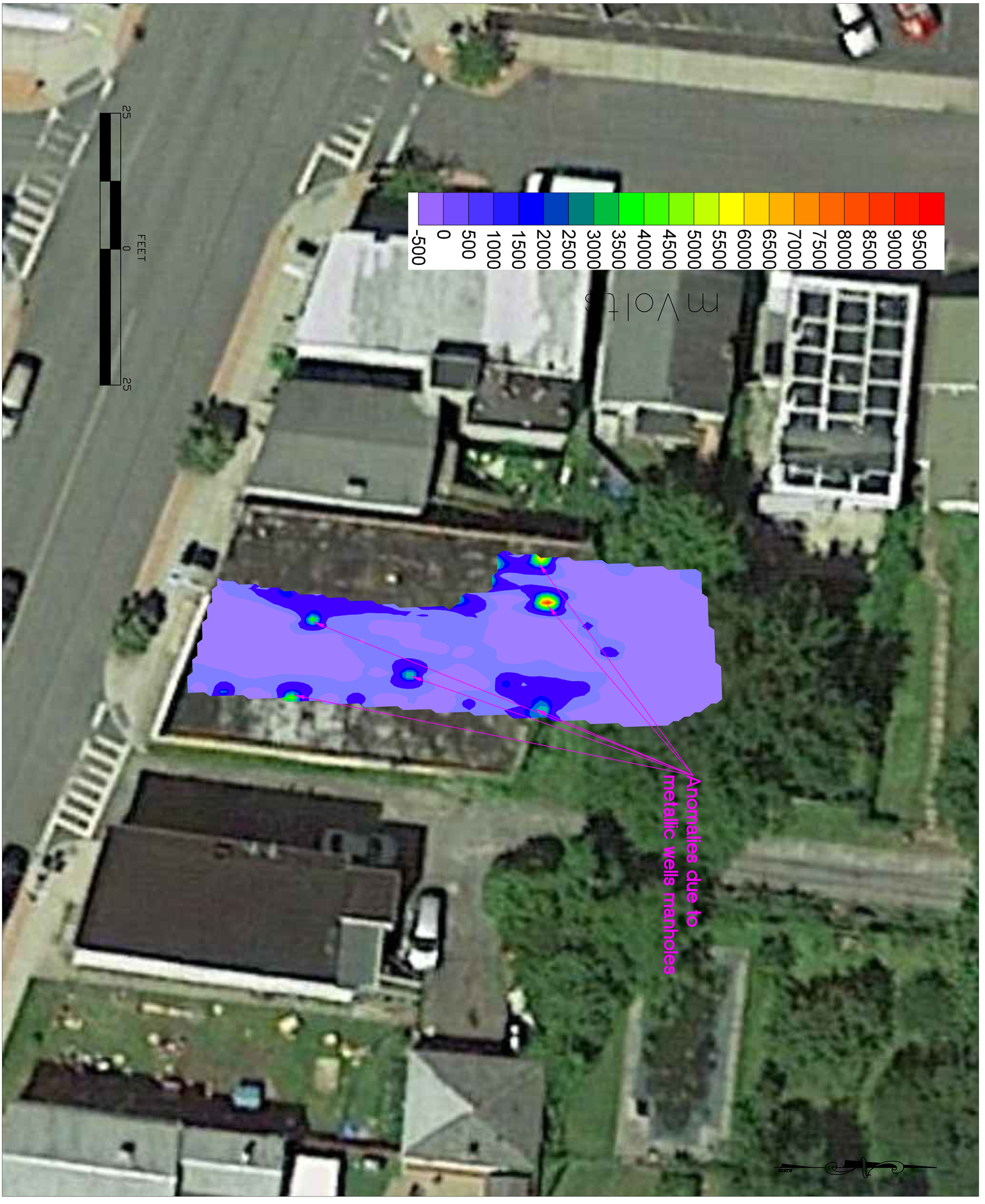

KEY

This site plan was produced from data positioned by differential GPS measurements collected in the field. Due to the errors normally present in DGPS data, this document is not intended or represented to be of survey precision. Caution should be used in all field measurements based on this site plan.

As with any geophysical method, it must be stressed that caution be used during any excavation or intrusive testing in proximity of any anomalies indicated in this document The absence of detected signatures does not preclude the possibility that targets exist. The geophysical data and results presented in this site plan are based upon the application of scientific principles and professional judgements to certain facts with resultant subjective interpretations. Professional judgements expressed herein are based on the facts currently available within the limits of the existing data, scope of work, budget, and schedule.

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DRAWING NO. EB102221
SHEET NO. 2 of 3
JOB NO.
SCALE
DATE October 22, 2021
CHKD'D BY DL
DRAWN BY EB
DESIGN BY

EM 61 PLOT
at 617 19th Street, Watervliet, NY 12189
FOR
Precision Environmental Services, Inc.
831 Route 67, Ballston Spa, NY 12020

ENVIROPROBE SERVICE INC.
81 Marter Avenue, Mount Laurel, NJ 08054
Phone: (800) 596-7472 Fax: (856) 291-6509

DATE	DESCRIPTION	REV.
	REVISIONS	

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CHECKED BY DL
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RESPONSIBLE BY

GPR Anomalies
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831 Route 67, Ballston Spa, NY 12020

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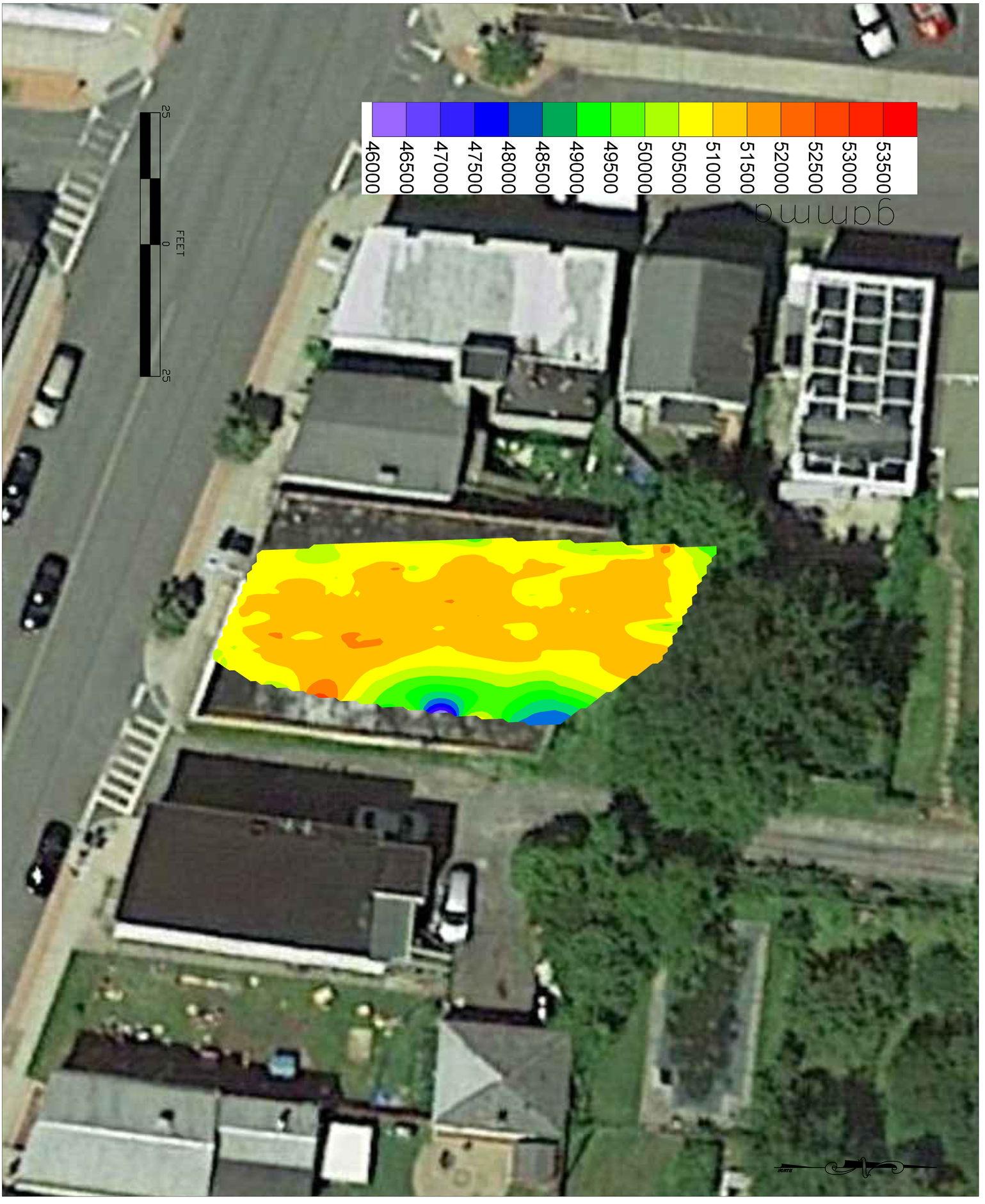

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MAGNETOMETER PLOT
at 617 19th Street, Watervliet, NY 12189
FOR
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