

ADVANCED GEOSCIENCE, INC.

Geology and Geophysics

Subsurface Exploration

Non-Destructive Evaluation



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January 23, 2018

via. Email (4 Pages + Figures 1-3)

BA Environmental
601 South Glenoaks Blvd.
Suite No. 214
Burbank, California 91502

Attention: Mr. Russell Cote, P.G.

Re: **Summary Report
Geophysical Surveys
For Investigation of Subsurface Structures
DTLA Lot 2 Parking Lot
Located at Southwest Corner 11th and Olive Streets
Los Angeles, California**

This report summarizes the geophysical surveys completed at the referenced site by Advanced Geoscience, Inc. Ground-penetrating radar (GPR) and magnetometer surveys were performed across this parking lot area shown in Figure 1. These surveys were used to investigate evidence of abandoned underground structures, such as fuel storage tanks, concrete structures, and oil well casings. Based on our discussions with BA Environmental we understand that residential buildings and a bakery previously existed on this property.

This report presents the current results of these subsurface geophysical surveys which were completed in two days of field operations on January 8 and 9, 2018.

Survey Procedures

The parking lot shown in Figure 1 was divided into two overlapping survey areas to first remove cars from the north part and then the south part during the two consecutive days of survey operations. The surveys were completed on the north part of the parking lot on January 8 and the south part on January 9 during the rain.

A survey grid was first set up across the parking lot. The origin of this grid was referenced to the northern-most corner of the parking lot. The grid points were marked on the ground surface using aerosol paint. The positioning of this survey grid is shown on the site map in Figure 2.

Magnetometer surveys were performed across the overlapping north and south parts of the survey grid during the two consecutive days of field operations. These surveys were performed to search for evidence of larger buried steel structures. A Geometrics G858 magnetometer was used to record measurements of the earth's total magnetic field intensity. This magnetometer was configured in the vertical gradiometer mode with two sensors separated 0.8 meters apart. The measurements were recorded at 0.5-second time intervals as the instrument was slowly walked along east-west survey lines spaced 5-feet apart. The grid points marked at 10-foot intervals were used to establish the positioning of these measurements along the east-west survey lines.

After these field surveys were completed we reviewed the online data available from the US Geological Survey's magnetic observatories in Fresno and Tucson and verified that the maximum diurnal magnetic field variations during each of these survey days were less than 35 nanoTeslas.

Ground-penetrating radar (GPR) profiles were recorded across the survey grid shown in Figure 2 to map reflection patterns associated with subsurface structures. The GPR profiles were first recorded along east-west grid lines spaced 5-feet apart. Additional GPR profiles were later recorded along selected north-south grid lines.

The GPR profiles were recorded using a Geo-Physical Survey Systems, Inc., SIR System-2000 equipped with a 200-MegaHertz radar antenna. This system recorded radar waves transmitted into the ground in a continuous scanning mode as the antenna was moved slowly along the grid lines. The GPR profiling parameters were set up to image subsurface structures in the upper 10 feet with an 80-nanosecond record length. Each profile was digitally recorded for later display enhancement.

After the data recording was completed a site grid map was prepared showing the survey grid in relation to the parking lot fences, sidewalks and other structures on the ground surface.

Data Evaluation and Results

After the magnetometer surveys were completed the magnetic field measurements were downloaded to a computer to undergo data processing to prepare contour maps showing

the magnetic field vertical gradient for the north and south parts of the parking lots. These contour maps are shown in Figure 3.

The magnetic gradient contour maps were evaluated to locate magnetic field variations indicating buried steel structures. This evaluation indicated several moderate-size magnetic field anomalies which indicated evidence of steel pipelines and other steel or steel-reinforced concrete structures such as possible building piles and debris buried beneath the parking lot. Many of these magnetic anomalies of subsurface origin were located where the GPR profiles detected pipeline segments and other buried metal debris. Three of the larger-amplitude magnetic anomalies were detected at locations where the GPR profiles detected subsurface structures. These anomalies are identified as “Subsurface Magnetic Anomalies 1, 2, and 3” in Figures 2 and 3 and are associated with “Structures A, B, and C” detected on the GPR profiles.

The magnetic gradient maps also showed several higher-amplitude magnetic anomalies caused by steel structures located on the ground surface. Several of these anomalies are identified in Figure 3 as associated with parked cars, steel light poles, sign posts, fences, and other features which were mapped during our field surveys.

During the field surveys the GPR profiles showed locations where radar reflections indicated possible larger building structures. The locations and approximate bounds of these buried structures, designated as “Structures D and E”, are shown in Figure 2. In each of these two areas stronger-amplitude reflections were detected from what appears to be buried foundations or basement structures. Beneath this reflection pattern there are reflections indicating evidence of possible void spaces.

After the field surveys were completed the GPR profiles were re-displayed on a computer in our office to enhance the reflection patterns from subsurface features. These profiles were re-evaluated to map the patterns of reflections from sub-pavement surfaces, Structures A-E, pipelines, and smaller pieces of buried debris. Figure 2 shows the locations and estimated depths of these interpreted features.

Structure A appears to be the largest of the buried metal structures detected. Its upper surface is buried about 4 feet beneath the parking lot. However, due to its close association with Structure E it could be part of a former building basement.


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Advanced Geoscience appreciates this opportunity to be of continued service to Building Analytics and their clients. If you have any questions or additional requests concerning this report please contact the undersigned.

Thank you.

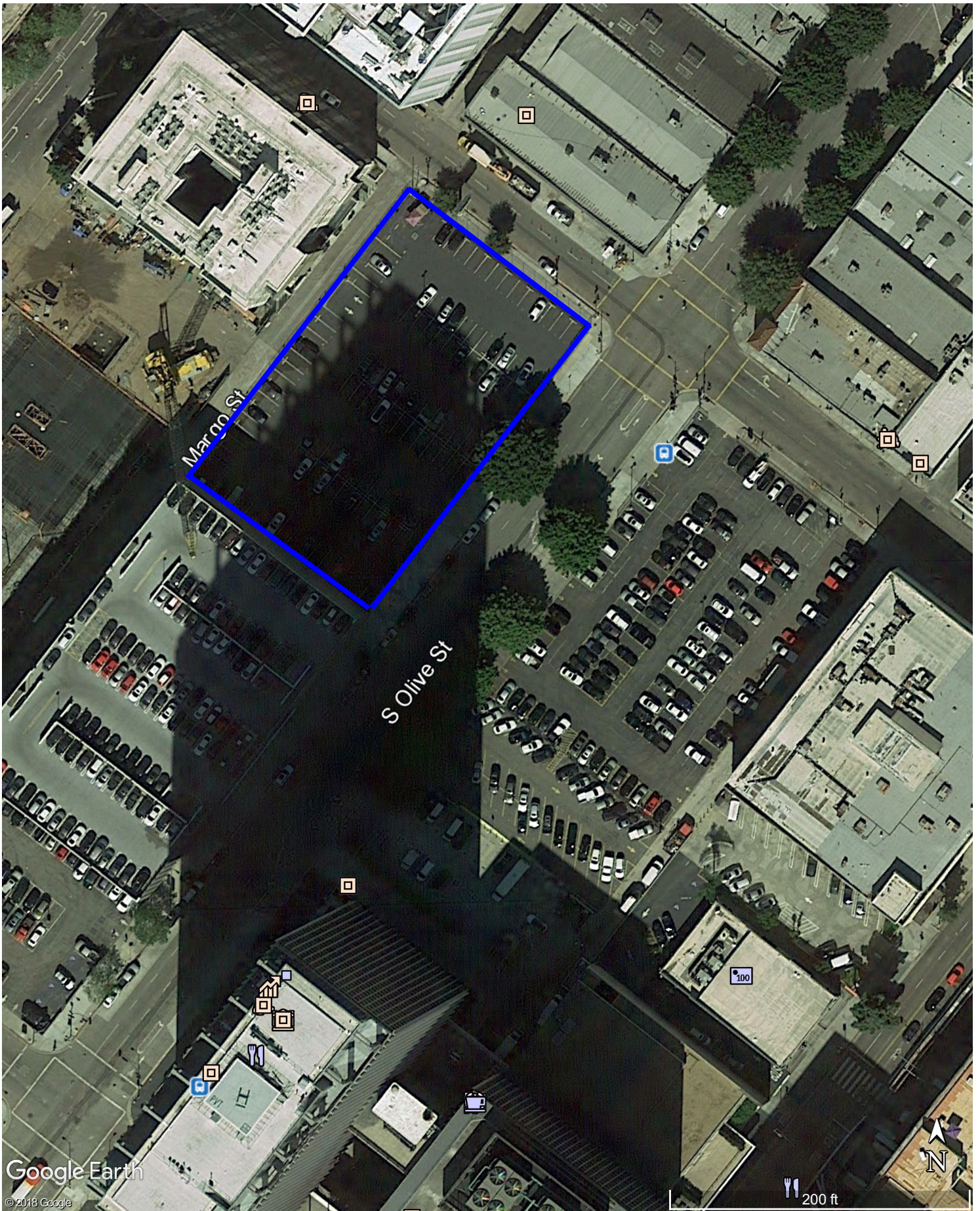
Sincerely,

Advanced Geoscience, Inc.

A handwritten signature in black ink, appearing to read "Mark G. Olson". The signature is fluid and cursive, with a large initial "M" and "O".

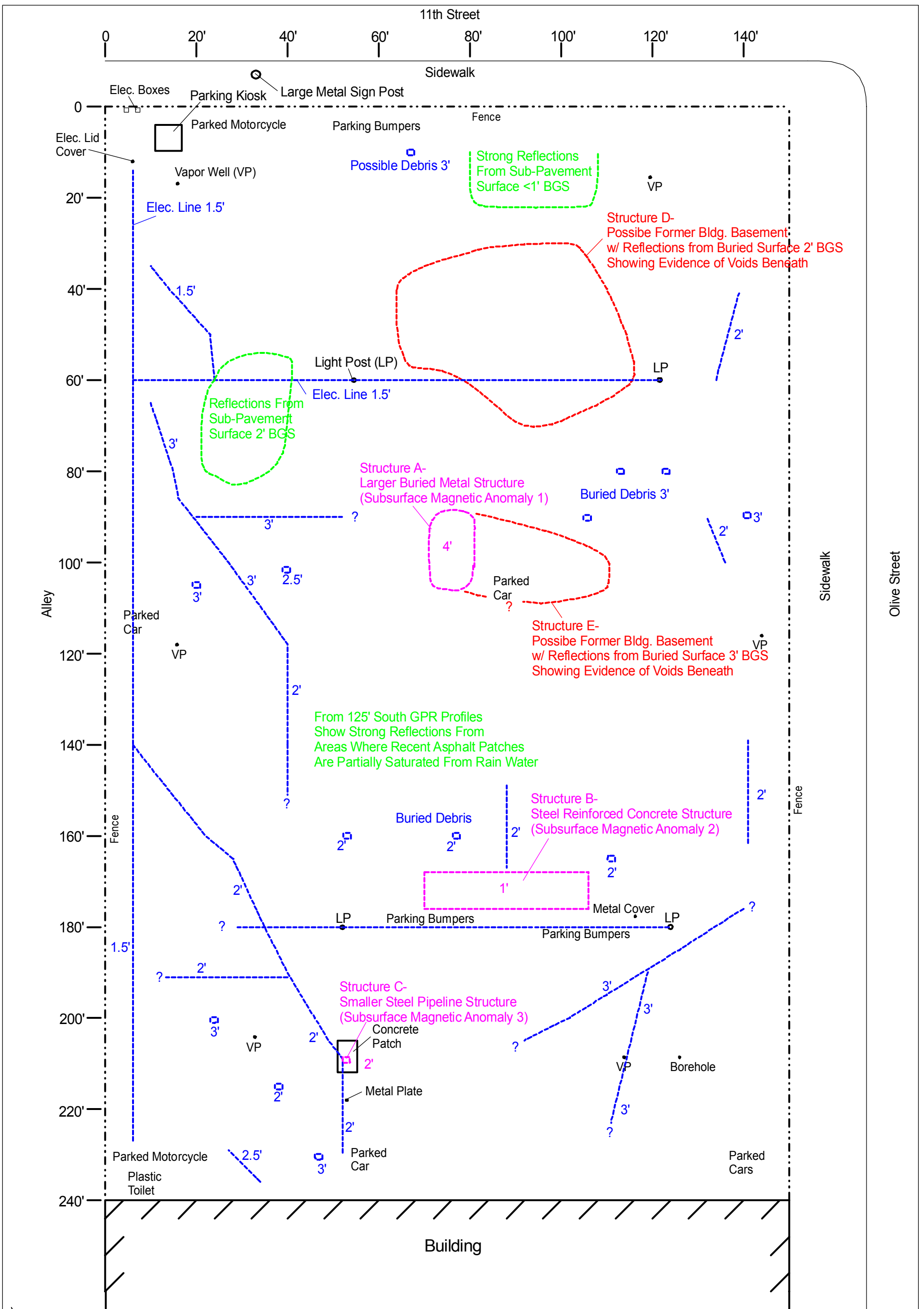
Mark G. Olson
Principal Geophysicist
California Registered Professional Geophysicist No. GP970
California Registered Professional Geologist No. 6239

Attachments: Figures 1-3



Google Earth Map Showing
DTLA Lot 2 Parking Lots
Geophysical Survey Area

Figure 1
Advanced Geoscience, Inc.

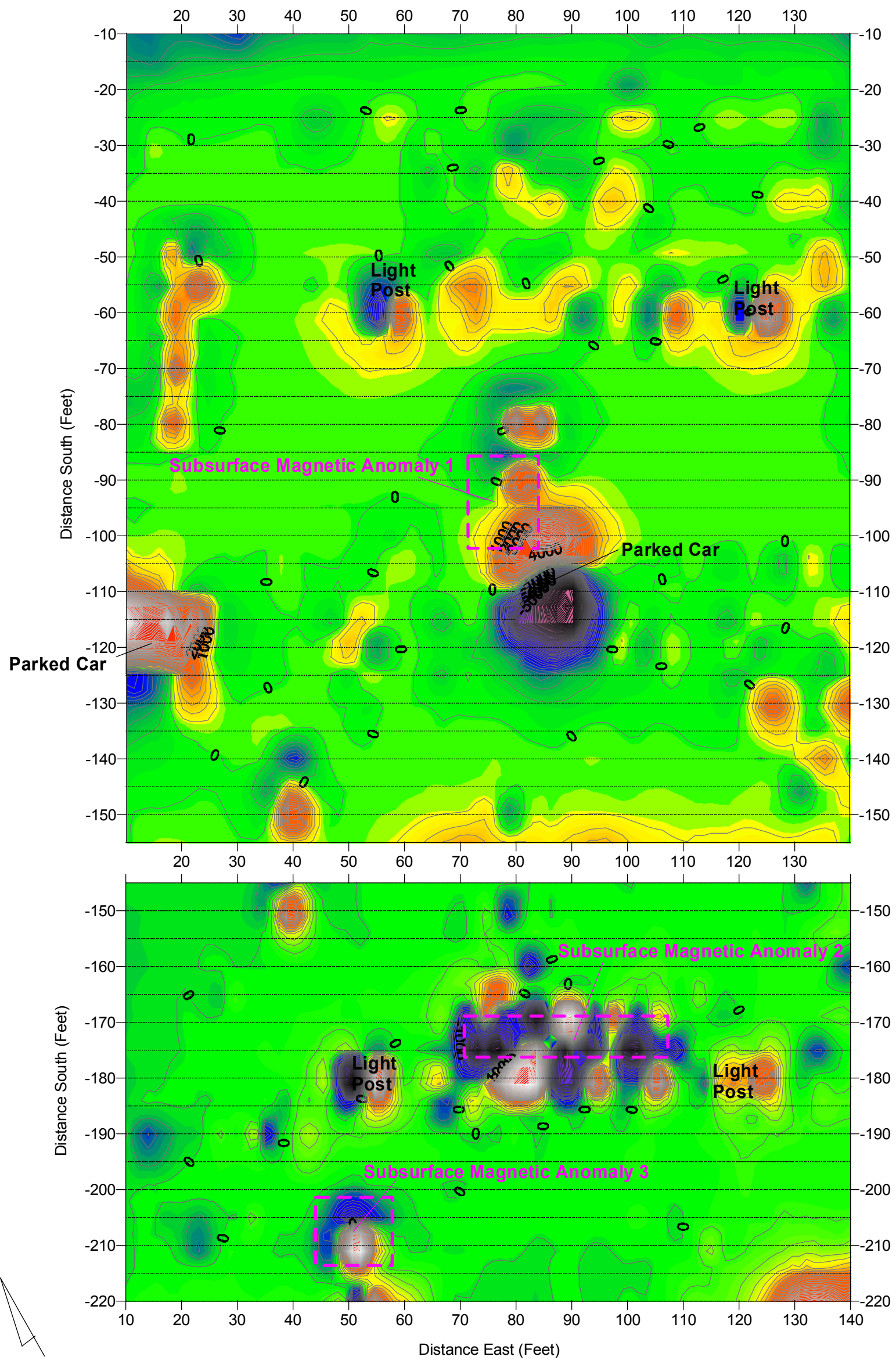


Explanation:

- Shows Approx. Bounds of Reflections from Larger Subsurface Building Structures with Depth Noted
- Shows Orientation of Steel Structures Associated with Larger Subsurface Magnetic Anomalies
- Shows Orientation Pipe-Like Reflection Pattern Alignments with Depth Noted

Site Map Showing Results of Ground-Penetrating Radar Survey DTLA Lot 2 Parking Lot Southwest Corner 11th and Olive Streets Los Angeles, CA

Figure 2
Advanced Geoscience, Inc.



North
Scale 1 inch= 20 Feet

Based on Measurements with Geometrics G858 Magnetometer
Contour Interval 200 nanoTeslas/m

Contour Map of Magnetic Field Vertical Gradient
For North and South Parts of DTLA Lot 2 Parking Lot
At Southwest Corner 11th and Olive Streets, Los Angeles