



Summary of Underground Utility & Grave Locating

Prepared For: KZ COPANS LLC

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August 13, 2023

KZ COPANS LLC

Attn: Jake Zebede

Site: 1900 W Copans Rd, Pompano FL

We appreciate the opportunity to provide this report for our work completed on 11/29/2021.

PURPOSE

The purpose of this project was to scan an area that's approximately 4.5 acres. GPRS was requested to scan within the scope of work to locate underground utilities and any foreign objects such as unmarked graves.

EQUIPMENT

- **Underground Scanning GPR Antenna.** The antenna with frequencies ranging from 250 MHz-450 MHz is mounted in a stroller frame which rolls over the surface. The surface needs to be reasonably smooth and unobstructed in order to obtain readable scans. Obstructions such as curbs, landscaping, and vegetation will limit the feasibility of GPR. The data is displayed on a screen and marked in the field in real time. The total depth achieved can be as much as 8' or more with this antenna but can vary widely depending on the types of materials being scanned through. Some soil types such as clay may limit maximum depths to 3' or less. As depth increases, targets must be larger in order to be detected and non-metallic targets can be especially difficult to locate. Depths provided should always be treated as estimates as their accuracy can be affected by multiple factors. For more information, please visit: [Link](#)
- **Electromagnetic Pipe Locator.** The EM locator can passively detect the electromagnetic fields from live AC power or from radio signals travelling along some conductive utilities. It can also be used in conjunction with a transmitter to connect directly to accessible, metallic pipes or tracer wires. A current is sent through the pipe or tracer wire at a specific frequency and the resulting EM field can then be detected by the receiver. A utility's ability to be located depends on a variety of factors including access to the utility, conductivity, grounding, interference from other fields, and many others. Depths provided should always be treated as estimates as their accuracy can be affected by multiple factors. For more information, please visit: [Link](#)

PROCESS

The process begins by using GPR to collect initial scans throughout the area. These scans are used to calibrate the equipment and determine the data quality, maximum depth penetration, and any other potential limitations. The GPR data is viewed in real time and anomalies in the data were located and marked on the surface. Relevant scan examples were saved and will be provided in this report.

The process typically begins with using the EM pipe locator to locate pipes or utilities throughout the scan area. First, the transmitter is used to connect to and trace any visible risers, tracer wires, or accessible, conductive utilities provided that there is an exposed, metallic surface. The areas are then swept with the receiver to detect live power or radio frequency signals. Locations and depths are painted or flagged on the surface. Depths cannot always be provided depending on the location method and can be prone to error.

LIMITATIONS

Please keep in mind that there are limitations to any subsurface investigation. The equipment may not achieve maximum effectiveness due to soil conditions, above ground obstructions, reinforced concrete, and a variety of other factors. No subsurface investigation or equipment can provide a complete image of what lies below. Our results should always be used in conjunction with as many methods as possible including consulting existing plans and drawings, exploratory excavation or potholing, visual inspection of above-ground features, and utilization of services such as One Call/811. Depths are dependent on the dielectric of the materials being scanned, so depth accuracy can vary throughout a site. Relevant scan examples were saved and will be provided in this report.

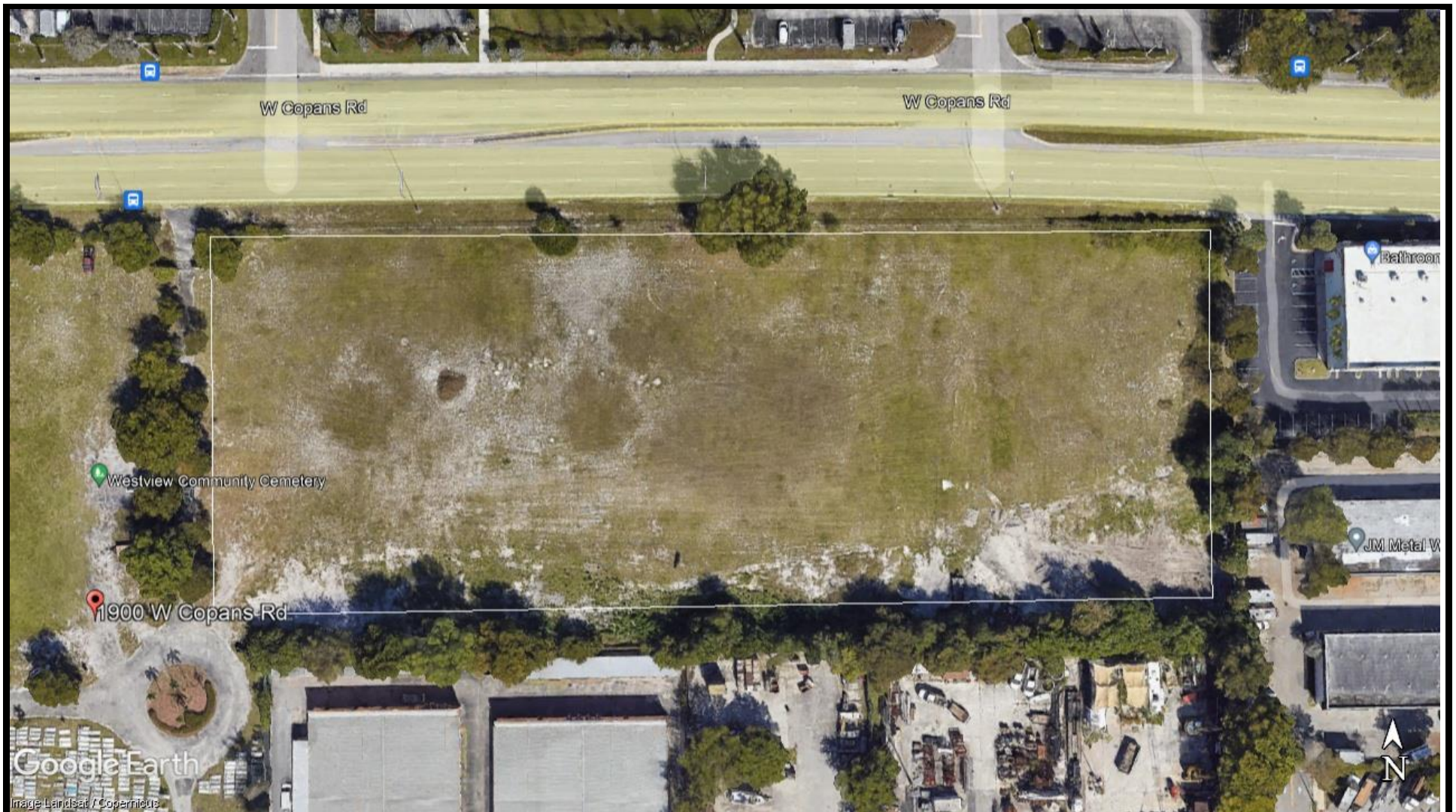
P&Z

PZ20-13000006

11/15/2023

FINDINGS

The subsurface conditions at the time of the scanning allowed for maximum GPR depth penetration of 10'. GPRS attempted to locate all utilities within the GPR depth limitation and any other possible foreign objects. The radio detection device was used first to detect any power or communication signals within the scope area but none were found. The GPR was then used to do a thorough locate. GPRS was able to identify one possible utility within the area that is believed to be an abandoned irrigation line. Findings were marked on surface using paint and flags. GPRS didn't detect any evidence of foreign objects or buried graves within in the scope area. The following pages will solely provide site photos as agreed upon by the client; no data images were collected during the time of the locate as this was not part of the scope of work.




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 Date of Scanning: 11/29/2021

Terms and Conditions

GPRS does not provide land survey or civil engineering data collection or documentation. This is provided as a reference map of the field markings and is not survey-grade.

LEGEND

	Scan Area		

Prepared by:





Picture 1: This image is an onsite photo of the scope of work, no utilities or foreign objects were found.



Picture 2: This image is an onsite photo of the scope of work, no utilities or foreign objects were found.



Picture 3: This image is an onsite photo of the scope of work, no utilities or foreign objects were found.



Picture 4: This image is an onsite photo of the scope of work, no utilities or foreign objects were found.

GPR Data Screenshots and Photos

1900 W Copans Rd, Pompano FL



CLOSING

GPRS, Inc. has been in business since 2001, specializing in underground storage tank location, concrete scanning, utility locating, and shallow void detection for projects throughout the United States. I encourage you to visit our website (www.gprsinc.com) and contact any of the numerous references listed.

GPRS didn't detect any evidence of foreign objects or buried graves within in the scope area. The results within this report are based on the field findings from the GPR investigation conducted. It should be noted that some underground utilities (i.e. small irrigation lines, utilities deeper than effective depth lines, PVC/terra-cotta lines, etc.) may have not been located due to soil conditions, ground covering, etc. Additionally, due to some likely non-conductive soils present in the area, some false-positive readings are likely to have been encountered. Given these limitations, it is our standard practice to mark out all anomalies and reactions when found and where present. GPRS's standard procedure is to over-mark an area to ensure the highest levels of safety and to limit potential shutdown or service interruptions. Additional exploration measures may be required in order to confirm or deny the presence of these anomalies and reactions (i.e. probing, limited excavations, daylighting, etc.).

GPRS appreciates the opportunity to offer our services, and we look forward to continuing to work with you on future projects. Please feel free to contact us for additional information or with any questions you may have regarding this report.

Signed,



Vijay Gentles
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Reviewed,



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