SOS LOCATES INC.
A Divison of Surveyors On Site Inc.

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Summary Report

Project: 79 Columbia St, Waterloo, Ontario Client: Raft Consulting Inc.

Service Provider: Surveyors On Site Locates Inc. Project # 2025-334

Surveyors On Site Locates Inc. (SOS Locates Inc.) was engaged by Raft Consulting Inc. to perform Subsurface Utility Engineering (SUE) investigations at the property located at 79 Columbia Street, Waterloo, Ontario. The scope of work focused on collecting Quality Level B (QL-B) data for underground utilities within the defined project limits, which include the full right-of-way on both sides of the street, from the east property line to the west property line.

Scope of Work

The investigation included:

- Identification and mapping of underground utilities using non-destructive geophysical methods, primarily electromagnetic (EM) induction.
- Determination of depth of cover (DoC) for utilities.
- Alignment tracing of sewer and storm mains from manhole to manhole using line-of-sight techniques, as these non-conductive utilities cannot be traced via EM methods.
- Collection of invert data from sanitary and storm manholes at both ends of the project limits to assist in estimating utility depths.
- Integration of client-provided as-built drawings to represent sanitary laterals as Quality Level D (QL-D) data.

Methodology

Field data was collected by a crew of damage prevention technicians using EM induction to locate conductive utilities such as gas, water, and telecommunications. Sewer mains were identified using sound testing and visual alignment methods. Depth of cover for water lines was estimated via EM and verified using the depth of the valve spindle within the project area.
Depths for telecommunications and gas lines were estimated solely through EM methods.

Sanitary and storm main depths were derived from invert measurements taken at manholes located at both ends of the project limits. The horizontal distance between these manholes was also provided to the client to support depth estimation.

Deliverables

- GPS-surveyed utility positions and depth of cover data.
- CAD plan showing all located utilities and relevant details.
- Field photographs for reference.
- Utility depth profiles prepared for the Department of Construction (DoC), as requested.

All collected data has been compiled and presented in the attached CAD drawing and supporting imagery.

Regards,



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SOS Locates Inc.
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