Project: 24-0464

1470 Williamsport Drive, Mississauga

SUE REPORT

Submitted by: 4Sight Utility Engineers

For: Crozier

Date: 2024-11-27

4SIGHT UTILITY ENGINEERS

Qualifications and Limitations

4Sight Inc. (4Sight) has prepared this report for the Consultant and Project Owner in accordance with the industry practices and the scope of work agreed upon for the project. The information contained is based on the judgement of the Professional Engineer stamping the drawing based on the information provided to 4Sight and collected by 4Sight. The information is current as per the date that the information was collected, and any changes made following the investigation are not covered by this report and not the responsibility of 4Sight.

Some information for this report were provided by the Consultant and/or Project Owner and 4Sight is relying on the accuracy of that information for our report.

The report should be treated as confidential information and should not be used by any third parties unless agreed upon by 4Sight and the Consultant and/or Project Owner. Any damages incurred by unauthorized parties using the data is their responsibility.

Signature and Revision Log

Prepared by: Jay Goswami, EIT, PMP **Stamped/Signed by:** Claire Lukka, P.Eng., ing. **Date:** **2024-11-27**	

Revision #	Revised By	Date	Revision Summary

1 TABLE OF CONTENTS

1. Project Summary 4

1.1 Investigation Limits 4

2 Investigation Scope and Methodology 5

2.1 ASCE 38 Quality Level Description 5

2.2 Scope of Work 6

3 Investigation Techniques Utilized 8

3.1 Pipe and Cable Locators (PCLs) 8

3.2 Magnetometers (Metal Detectors) 9

3.3 Measuring Rods 9

3.4 Survey Grade GPS 9

4 Key Investigation 10

4.1 Water 10

4.2 Sewers 10

4.3 Gas/Pipelines 10

4.4 Telecom 10

4.5 Electrical 11

4.6 Undocumented 11

5 Summary 12

Appendix A – Utility Records Circulation List 13

Appendix B – SUE Drawing 14

Appendix C – Site Photos 15

1. Project Summary

4Sight Inc (4Sight) completed a Subsurface Utility Engineering (SUE) Investigation for Crozier, located at 1470 Williamsport Drive, Mississauga. The Quality Level B SUE investigation was completed in November, 2024. The objective of the investigation was to identify the location of the key utilities on the project in accordance with the ASCE 38-22 Standard

1.1 Investigation Limits

The investigation took place on 1470 Williamsport Drive, Mississauga. The limits were as per highlighted area in Figure 1 below.

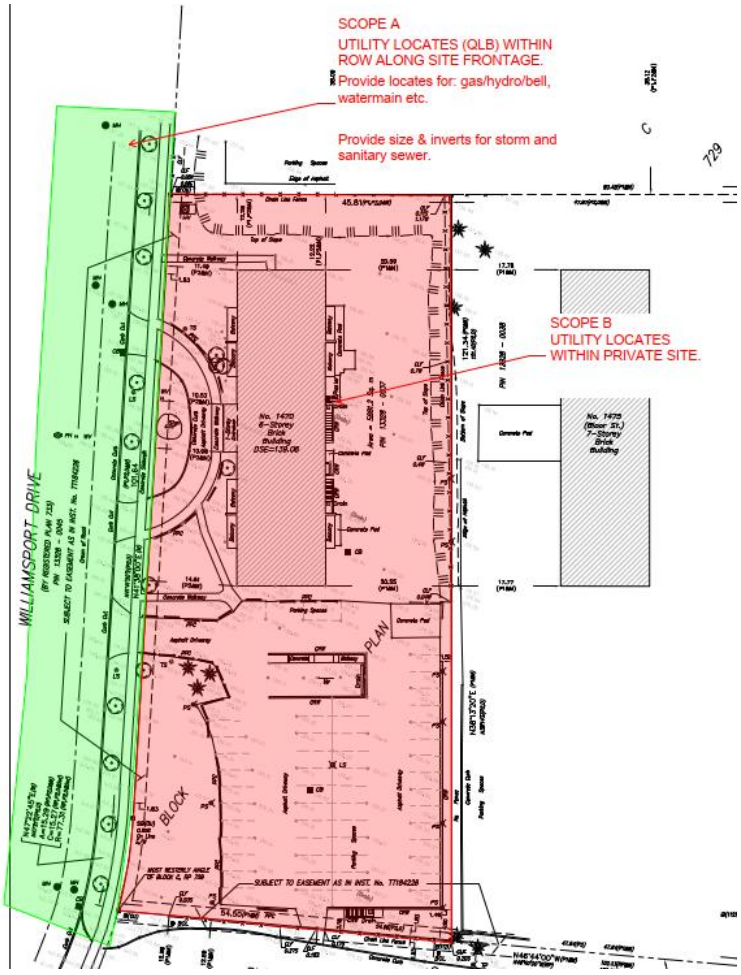


Figure 1 – SUE Investigation (Area outlined in RED and GREEN

2 Investigation Scope and Methodology

4Sight's investigation was completed in accordance with ASCE 38-22 Standard.

2.1 ASCE 38 Quality Level Description

All utility information collected and depicted as part of this investigation were assigned a quality level in accordance with the ASCE 38 Standard. The following is a summary of the Quality Level descriptions identified in the ASCE 38 Standard.

Quality Level D (QLD) – Information shown on the drawing is based solely on information provided by Utility Owners, As-built records, verbal recounts, or other third-party sources.

Quality Level C (QLC) – Information shown in the drawing is based on correlating surveyed surface features with records information provided by Utility Owners, As-built records, verbal recounts, or other third-party sources.

Quality Level B (QLB) – Information shown on the drawing is based on geophysical designating using a variety of geophysical sources which are outlined in the report.

Quality Level A (QLA) – Information shown on the drawing is based on exposure of the utility at test hole locations, and the subsequent survey of those points.

2.2 Scope of Work

Phase I - SUE Investigation up to QL-B

4Sight will complete a SUE investigation in accordance with ASCE 38-22 – Standard Guideline for the Depiction of Existing Subsurface Utility Data. The base scope of this investigation will include:

- Request, collect, and document utility record information from the various Utility Companies present within the investigation area. Review records information provided by Crozier, and those received from our records request.
- Obtain any required permits and arrange any required traffic control required to complete the field investigation.
- Complete a field investigation using electromagnetic pipe and cable locate equipment to attempt to determine the horizontal alignment of the conductive utilities present within the investigation area. Any utilities that were not identified on the records will be considered as un-documented. 4Sight will attempt to find undocumented utilities however cannot confirm that we will find all undocumented utilities.
    - Utilities that will be located in this investigation will be water, telecom, hydro, and gas to Quality Level B where possible. We will also include services to the property. Where Quality Level B can not be achieved for a utility, that facility will be depicted per utility record information (i.e., Quality Level D).
    - Utilities that will be excluded for the investigation will be underground storage tanks, and landscape irrigation.
- Collect measure down values at sanitary and storm manhole and catch-basin locations and use this data along with records information to determine as best as possible the alignments of the storm sewers at Quality Level C. Invert values will be calculated utilizing the collected measure down values and the rim elevations provided from the client's topographic survey.
    - If manhole or catch basins are inaccessible, they will be noted and brought to the attention of the client.
- Obtain measurements of watermains at any chamber locations.

- Survey paint marks in the field and tie them into the control provided for the project.
- Produce a set of signed and sealed (by a licensed professional engineer in the province of Ontario) deliverables which will include:
    - An ASCE 38 compliant drawing showing utilities at the quality level determined by the professional engineer in charge.
    - A SUE report highlighting the record information gathered, methodologies used, and key findings from the SUE investigation.

3 Investigation Techniques Utilized

4Sight used a number of techniques for the collection of information contained in this report. Details regarding the merits of these techniques can be found in the ASCE 38 standard. The following outlines the techniques used

3.1 Pipe and Cable Locators (PCLs)

Pipe and Cable Locators (PCLs) were the key designating equipment utilized to complete the investigation. A variety of equipment was used including Vivax VLoc 3 Pro and VM810. Scans were completed using a variety of frequencies such as 8kHz, 33kHz and passive 60Hz mode.

PCLs operate by inducing a signal on the utility to be found and designated the location based on the electromagnetic field picked up by the receiver. Utilities must be conductive in nature for the PCL to work.

Results from the PCL can be affected by a number of factors including the quality of the electrical conductivity of the conductor and/or tracer wire, the ground conductivity, the presence/interference from adjacent utilities and/or conductive elements.

3.2 Magnetometers (Metal Detectors)

Magnetometers were used to find any metallic elements such as MH lids, and Valves that are not visible at surface. Magnetometers work by picking up a distortion in the background magnetic field that is created in the presence of metallic objects.

3.3 Measuring Rods

A measuring rod was used to complete the inverts collected on the project. The modifications to the rod allow for more accurate measurements particularly in pipes that are offset from the MH lid.

3.4 Survey Grade GPS

4Sight uses a Trimble data collector and R12i GNSS system to survey the paint markings, utility features and to record invert information collected on site. 4Sight uses the project control information provided by the client to complete a site calibration on the job file to ensure accurate integration of our data into the project.

4 Key Investigation

4Sight completed the SUE investigation in November, 2024. The following are some key findings that were identified.

4.1 Water

Water mains within the project boundaries are under the ownership of the City of Mississauga. During the investigation, portions of water mains were confirmed at Quality Level B, while most of the alignments along Williamsport Drive were added at Quality Level D, which includes 300mm PVC and abandoned 200mm CI watermains. Field crew could not locate these alignments in the field. If critical, further investigation can be carried out to confirm alignment.

4.2 Sewers

4Sight collected the invert information within the accessible sewer chambers (MHs and CBs) within the project limit. Most sewers have been shown on the drawing at Quality Level C, with a small portion of alignments shown at Quality Level D.

4.3 Gas/Pipelines

Gas mains within the project boundaries are owned by Enbridge. Gas main alignments were confirmed to Quality Level B with one small segment at QLD.

4.4 Telecom

Telecommunication owners within the project limits identified by records and field investigation are Bell & Rogers. Generally, the telecoms were designated and are shown at Quality Level B (where field verified) with some small segments shown at Quality Level D (where unable to be field verified).

4.5 Electrical

Alectra is identified as the electrical plant owner within the project boundaries based on both records and field investigation. Electrical plant along Williamsport Drive is present within the project boundaries. However, major portion of infrastructure was not located along street in the field and shown at Quality Level D. The field investigation was able to confirm alignments within the private property, these are represented at Quality Level B.

4.6 Undocumented

During the investigation, one unknown alignment, going towards the property was confirmed in the field. However, 4Sight was unable to ascertain the type or ownership of any of this alignment. The signal was picked up while clamping the Bell fiber dip but aligns with On Call gas marks. However, no gas main was found around the property. If deemed critical, it is recommended to conduct further investigation, potentially involving test holes, to gather more information.

5 Summary

This SUE Report outlines the successful completion of a Subsurface Utility Engineering (SUE) investigation, in accordance with the ASCE 38-22 standards and within the project scope. The primary objective was to achieve Quality Level B for all conductive utilities through a comprehensive process. The investigation took place in November, 2024.

As outlined in the preceding key findings section, the majority of utilities underwent field verification and are represented at Quality Level B. However, it's worth noting the exception for the sewers, which are presented mostly at quality level C. Additionally, portions of the watermains are included at quality level D, due to the difficulty in verification during the field investigation. These alignments are based on record information.

Addressing any uncertainties may require additional investigation, particularly if they are critical. Further investigation can be conducted in areas where additional details are required.

This report provides a complete analysis of all the findings of these investigations, including accurate mapping and classification of the underground utilities and the identification of potential conflicts.

Appendix A – Utility Records Circulation List

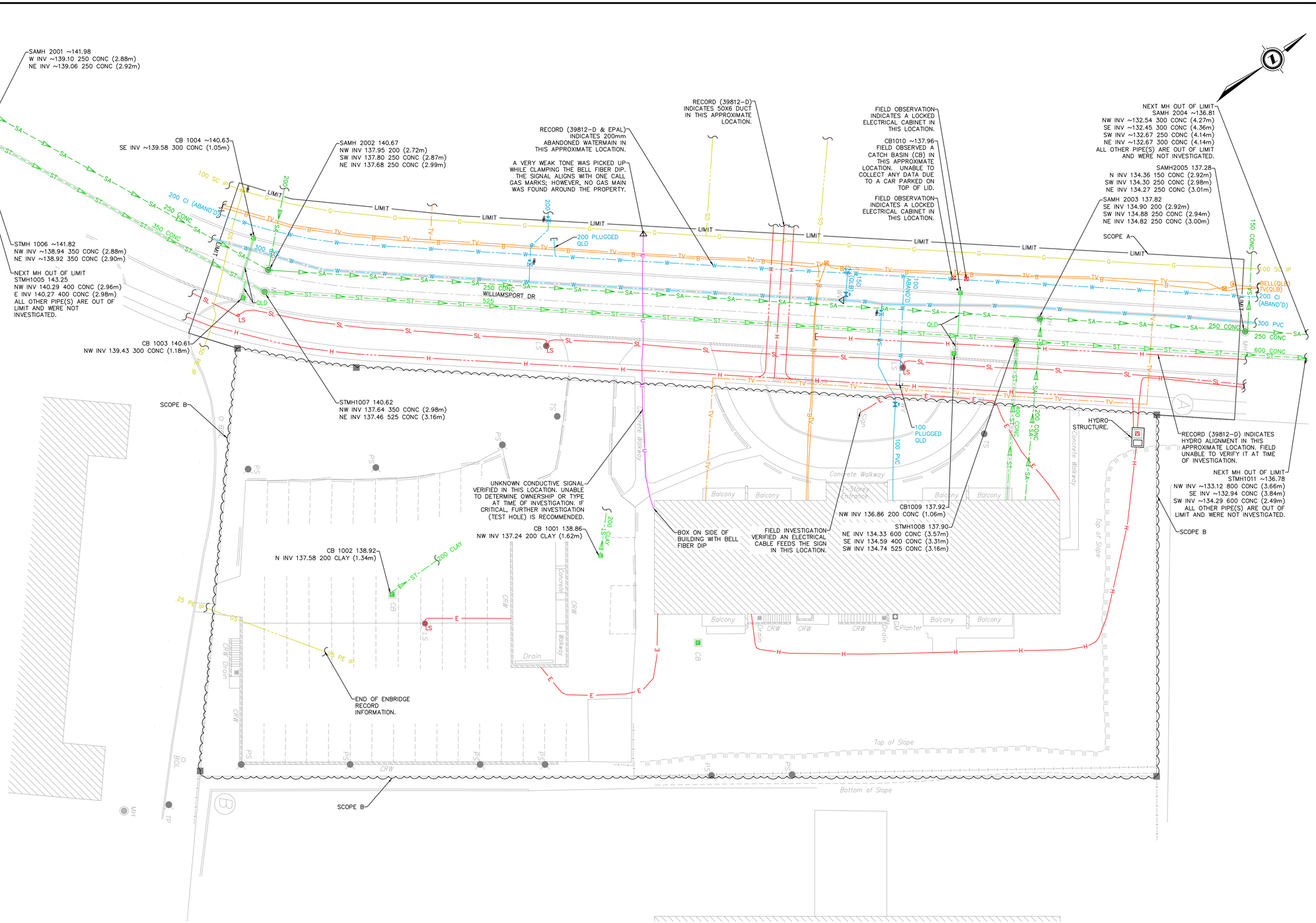
Project Name: 1470 Williamsport Dr Completed By: Daniela Giosu

Project Number: 24-0464 Checked By: Arshia Khiavi

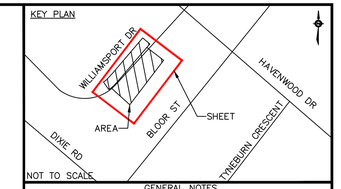
Utility Records Circulations List

					First Req		Follow Up			
UTILITY	CONTACT TYPE	EMAIL ADDRESS	PHONE NUMBER	EXTENSION	DATE REQUESTED	DATE RECEIVED	DATE REQUESTED	DATE RECEIVED	MATERIAL RECEIVED	COMMENTS
Ontario 1Call Planning Ticket	Website	www.on1call.com	(800) 400-2255		Sept-22-24	Sept-22-24	-	-	2024390614	Complete planning request for records, compare utility owner list to list below and update as req.
PEEL Region	Online Database	https://epal.peelregion.ca/epal/	(905) 791-7800		Sept-22-24	Oct-3-24	-	-	PNG, TIF	Contact zzg-pwservicerequests@peelregion.ca with any questions.
City of Mississauga	Records Research Folder				Sept-22-24	-	-	-	Access Storm Record info through C:\4SightOneDrive\4Sight Utility Engineers\Projects - Documents\Records Research\Record Info\City of Mississauga	Access Storm Record info through C:\4SightOneDrive\4Sight Utility Engineers\Projects - Documents\Records Research\Record Info\City of Mississauga
PSN Fibre	General Mailbox	PUCC.PSN@mississauga.ca			Sept-22-24	Oct-3-24	-	-	No confl	
Bell Canada	General Mailbox	bell.moc@telecon.ca	(416) 296-6587		Sept-22-24	Sept-23-24	-	-	PDF	
Beanfield Technologies Inc.	General Mailbox	gtapucc@beanfield.com			Sept-22-24	Oct-1-24	-	-	No confl	
Cogeco Connexion	General Mailbox	permits.cptconsents@cogeco.com			Sept-22-24	Sept-24-24	-	-	No confl	
Group Telecom	General Mailbox	GT.moc@telecon.ca			Sept-22-24	Sept-30-24	-	-	No confl	
Rogers Cable Communications	General Mailbox	rogers.moc@telecon.ca	(905) 361-4953		Sept-22-24	Oct-1-24	-	-	PDF, DWG	
Zayo (Formerly Allstream)	General Mailbox	utility.circulations@Zayo.com	(416) 649-7509		Sept-22-24	Sept-26-24	-	-	No confl	
Enbridge Gas Distribution	General Mailbox	Through ON1 Call (See note)	(416) 758-7956		Sept-22-24	Sept-26-24	-	-	PDF	
Hydro One Underground	General Mailbox	tpumarkup@hydroone.com			Sept-22-24	Sept-23-24	-	-	No confl	High Voltage - Underground Facilities
Hydro One Aerial	General Mailbox	westcentralzonescheduling@hydroone.ca			Sept-22-24	Sept-23-24	-	-	No confl	High Voltage - Aerial Facilities

Appendix B – SUE Drawing



KEY PLAN



GENERAL NOTES

1. THE FIELD INVESTIGATION WAS COMPLETED IN NOVEMBER 2024.
2. THE LIMITS OF THE INVESTIGATION ARE AS PER SHOWN ON THE DRAWING.
3. THE BASE PLAN FOR THIS DRAWING WAS PROVIDED BY THE CLIENT AND 4SIGHT IS NOT RESPONSIBLE FOR ITS ACCURACY.
4. UTILITY SIZES AND MATERIALS ARE SHOWN IF AVAILABLE FROM RECORD INFORMATION.
5. KNOWN UTILITY OWNERS IDENTIFIED WITHIN PUBLIC RIGHT OF WAY INCLUDE:
   a. WATER & SEWERS – REGION OF PEEL & CITY OF MISSISSAUGA
   b. ELECTRICAL – ALECTRA
   c. TELECOM – BELL, ROGERS
   d. GAS – ENBRIDGE
6. SEE PROJECT REPORT FOR ADDITIONAL DETAILS.

LEGEND:

B	BELL TELECOMMUNICATIONS
TV	ROGERS COAXIAL
C	PRIVATE COMMUNICATIONS
FO	FIBER OPTIC
BF	BELL FIBER OPTIC
RF	ROGERS FIBER OPTIC
CF	COGECO FIBER OPTIC
ZF	ZAYO FIBER OPTIC
H	HYDRO
SL	STREETLIGHT
TL	TRAFFIC LIGHT
E	PRIVATE ELECTRICAL
G	GAS
PL	PIPELINE
W	WATER
WS	WATER SERVICE
SA	SANITARY SEWER
FM	SANITARY FORCEMAIN
ST	STORM SEWER
U	UNKNOWN CONDUCTIVE SIGNAL
	QUALITY LEVEL "B"
	QUALITY LEVEL "C"
	QUALITY LEVEL "D"
LIMIT	LIMIT OF INVESTIGATION
	CONTINUES OUT OF LIMITS
	FLOW ARROW
	END CAP
#	LOCATION BASED ON RECORD INFO
*	LOCATION BASED ON FIELD OBSERVATION
	LOSS OF SIGNAL
	STORM MAINTENANCE HOLE
	SANITARY MAINTENANCE HOLE
	CATCH BASIN
	WATER CHAMBER
	FIRE HYDRANT
	WATER VALVE
	GAS VALVE
UP	UTILITY POLE
LS	LIGHT STANDARD
HW	HAND WELL
	HYDRO MAINTENANCE HOLE
	HYDRO VAULT / TRANSFORMER
	TELECOM PEDESTAL
	FLUSH-TO-GRADE
	BELL MAINTENANCE HOLE
	ROGERS MAINTENANCE HOLE
	UNKNOWN MAINTENANCE HOLE
TH	TEST HOLE

ASCE QUALITY LEVELS

THE UTILITY INFORMATION SHOWN ON THIS DRAWING WAS COLLECTED IN ACCORDANCE TO ASCE STANDARD 38-22. THE INFORMATION IS SHOWN BY QUALITY LEVEL WHICH INDICATES THE LEVEL OF EFFORT USED TO DETERMINE THE LOCATION OF THE DATA

INCREASED QUALITY

QUALITY LEVEL "D" – INFORMATION DERIVED FROM EXISTING RECORDS OR VERBAL RECOLLECTIONS.

QUALITY LEVEL "C" – INFORMATION OBTAINED BY SURVEYING AND PLOTTING VISIBLE ABOVE GROUND UTILITY FEATURES AND BY USING PROFESSIONAL JUDGEMENT IN CORRELATING THIS INFORMATION TO THE QUALITY LEVEL "D" INFORMATION.

QUALITY LEVEL "B" – INFORMATION OBTAINED THROUGH THE APPLICATION OF APPROPRIATE SURFACE GEOPHYSICAL METHODS TO DETERMINE THE EXISTENCE AND APPROXIMATE HORIZONTAL POSITION OF THE UTILITIES.

QUALITY LEVEL "A" – PRECISE HORIZONTAL AND VERTICAL LOCATION OF UTILITES OBTAINED BY THE ACTUAL EXPOSURE AND SUBSEQUENT MEASUREMENT OF SUBSURFACE UTILITIES.

PREPARED BY. 4SIGHT UTILITY ENGINEERS

REVISIONS

DISCLAIMER.
THIS DRAWING WAS PRODUCED BY 4SIGHT INC FOR THE USE OF THE CLIENT. 4SIGHT INC DOES NOT ACCEPT ANY RESPONSIBILITY FOR ANY UNAUTHORIZED USE BY THIRD PARTIES, OR ANY MODIFICATION MADE TO THIS DRAWING.

		DATE (MM/DD/YY)
DRAWN	A. KHIAVI	11/20/24
CHECKED	J. GOSWAMI	11/27/24
APPROVED	C. LUKKA	11/27/24

SCALE 1:250 (0, 5, 10m)

THE ENGINEER'S SEAL HEREON IS TO CERTIFY THAT THE UTILITIES SHOWN HAVE BEEN INVESTIGATED IN ACCORDANCE WITH STANDARD SUE INDUSTRY PRACTICES. ALL OTHER INFORMATION HEREON HAS BEEN PROVIDED BY OTHERS AND IS NOT A PART OF THIS CERTIFICATION.

LICENSED PROFESSIONAL ENGINEER
C. A. LUKKA
100182823
24-0464
November 27, 2024
PROVINCE OF ONTARIO

PROJECT. 1470 WILLIAMSPORT DRIVE

DRAWING. SUBSURFACE UTILITY ENGINEERING INVESTIGATION

CLIENT. CROZIER

PROJECT NO. 24-0464

SHEET NO. 01 OF 01

Appendix C – Site Photos

24-0464
1470 Williamsport Dr

Photo Report

4SIGHT UTILITY ENGINEERS


1001
24-0464
1001
2024.09.30 13:37
17T 613455 4830478
1470 Williamsport Dr, Mississauga, ON


24-0464
1001
2024.09.30 13:38
17T 613453 4830480
1470 Williamsport Dr, Mississauga, ON


24-0464
1002
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1470 Williamsport Dr, Mississauga, ON


24-0464
1002
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1470 Williamsport Dr, Mississauga, ON


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604-1485 Williamsport Dr, Mississauga, ON


24-0464
CB 1010 south facing
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