

Appendix J

Subsurface Utility Engineering Investigation Report

Accessible formats and communication supports are available upon request:

York Region Transportation, Public Works Phone: 1-877-464-9675 ext. 75000 TTY: 1-866-512-6228 Email: Transportation@york.ca



SUBSURFACE UTILITY ENGINEERING (SUE) QUALITY LEVEL B INVESTIGATION

Project #46726 (Warden Ave, Markham, ON)

Subsurface Utility Engineering Report for York Region, ON

Prepared For:

The Regional Municipality of York

Rev No.	Date	Description	Prepared By
01	August 16, 2020	Issued for Client Review	Youssef CHOULLI, P.Eng.





The engineering stamp on this document is to confirm that the Subsurface Utility Engineering work was performed according to the scope of work in the contract, the industry best practices and ASCI 38-02 Standard. The QL-B depiction accuracy is governed by the geophysical tool limitations and site conditions, as detailed in multiVIEW's Terms and Conditions in the last sheet of the attached composite drawing.



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CCTV Sewer Inspection



1. INTRODUCTION 1.1 BACKGROUND

The York Region seeks to minimize the overall risk, in preparation for the widening of the Warden Ave, from Elgin Mills Rd to Mackenzie Dr E, Markham, ON and Kennedy Road from Elgin Mills Rd E to Major Mackenzie Dr E. For this reason, The Regional Municipality of York awarded MultiVIEW the contract to perform Subsurface Utility Engineering (SUE) investigation, for the mentioned project area.

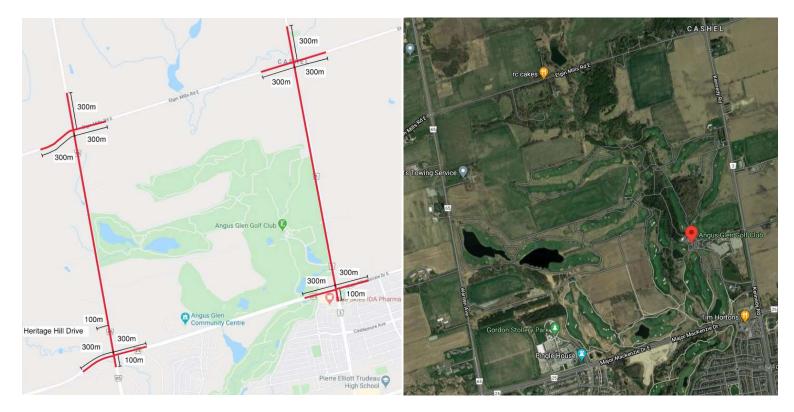


Figure 1-1: Aerial View of the Project Area at Warden Avenue and Kennedy Road, Markham. ON





1.2 DEFINITIONS

Ticket	The notification that multiVIEW sends to the utility owner to inform of any conflict and to prompt the utility owner to provide their record data and as built data of their existing utilities in the project limits.
Right-Of-Way (ROW)	Right-Of-Way refers to subsurface land or property acquired for or intended to be occupied by either a street crosswalk, railroad electric transmission line, oil or gas pipeline, water main sanitary, or storm sewer main, shade trees and/or other special private and public utility facilities.
Locate/ Locating	In this scope of work, Locate, refers to leveraging the surface geophysical methods to interpret the presence of a subsurface utility and to mark its approximate horizontal position (designation) on the ground surface. The process of exposing and recording the precise vertical and horizontal location of a utility is not included in this scope of work.
Utility	A privately, publicly, or cooperatively-owned line, facility, or system for producing, transmitting, or distributing communications, cable television, power, electricity, light, heat, gas, oil, crude products, water, steam, waste, or any other similar commodity, including any fire or police signal system or street lighting system.
The Region	The York Region















1.3 ABREVIATIONS

ASCE	American Society of Civil Engineers	QL-A	Quality Level A
Ave	Avenue	QL-B	Quality Level B
BOC	Bottom of Chamber	QL-C	Quality Level C
СВ	Catch Basin	QL-D	Quality Level D
CAD	Computer Aided Design	ROW	Right-of-Way
CATV	Cable Television	SUE	Subsurface Utility Engineering
CCTV	Closed Circuit Television	SAN	Sanitary
СІ	Construction Institute	St	Street
CSE	Confined Space Entry	STM	Storm
EM	Electromagnetic	T/G	Top of Grate Elevation
EOI	End of Surface Geophysical Information		
EORI	End of Record Information		
GPR	Ground Penetrating Radar		
GPS	Global Positioning System		
INV	Invert		
MH	Maintenance Hole (Man Hole)		
Multiview	multiVIEW Locates Inc.		
N/A	Not Applicable		
OBV	Obvert		















1.4 REFERENCES

Ref #	Document #	Document Title	Revision date
1	CI/ASCE 38-02	Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data	2006
2	P-18-69	Subsurface Utility Engineering (SUE) and Utility Coordination Services	March 5, 2018
3	Proposal Project # 46726	Estimate for SUE Consulting Services for The Regional Municipality of York. Warden Ave. & Elgin Mills Rd, Markham, ON	May 19, 2020

















2. EXECUTIVE SUMMARY

multiVIEW Locates Inc. has performed the SUE investigation; fieldwork Quality level B (QL-B) and completed the desktop investigation for the project area of the Warden Ave; from Elgin Mills Rd to Mackenzie Drive East, Markham, ON and Kennedy Road; from Elgin Mills Rd to Mackenzie Drive East, Markham, ON . That is defined in the map and scope of work, shown in Figure 1-1 and Figure 2-1.

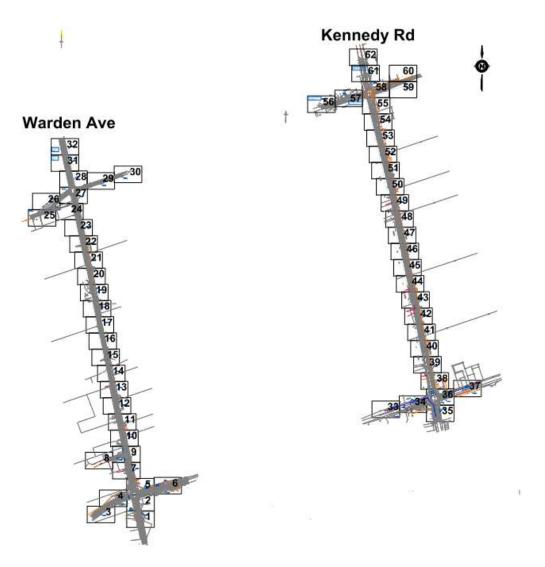


Figure 2-1: Key Map from the Composite SUE QL-B Drawing (Attached in Appendix A)













Geophysic



Utility Locating

Subsurface Utility Engineering

The present report and attached composite drawing will support the detailed design of the project (e.g. utility relocation plans), allow more accurate cost estimation, minimize risks, and support any prioritization of utility conflicts.

Through a combination of record data analysis, mobilization of personnel and equipment, field verification and professional judgement, this SUE investigation helped to identify and confirm the location of the below ground utilities infrastructure and appurtenances as defined in CI/ASCE 38-02, within the work area and project limits.

The consolidation of the above-mentioned information and investigation results have been integrated into the SUE QL-B Composite CAD Drawing, attached in Appendix -A.

3. OBJECTIVE, SCOPE OF WORK & PROJECT LIMITS

This Subsurface Utility Engineering Investigation has as an objective to identify the location of below ground utilities infrastructure and appurtenances, as defined in CI/ASCE 38-02, Ref [1] and as per Contract, Ref [3].

Project includes the investigation area as per Figure 3-1 and Figure 3-2.



Figure 3-1: Sketch Map of the SUE Investigation & Scope of Work on Warden Avenue

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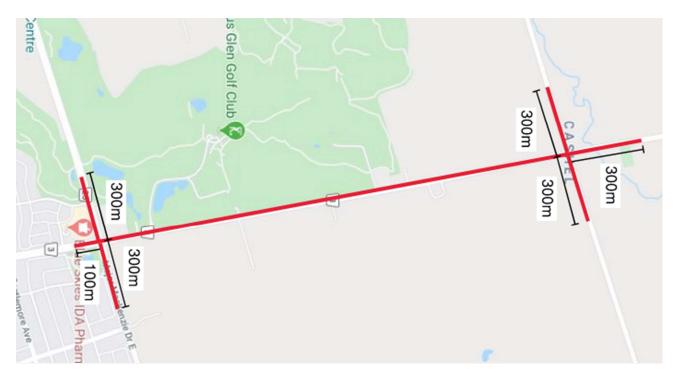


Figure 3-2: Sketch Map of the SUE Investigation & Scope of Work on Kennedy Road

The project limits defined as follows and shown in Figure 3-1 and Figure 3-2.

The work area for this survey is located -

1. Approximately 2.5 kilometers on Warden Avenue from 300 meters North of Elgin Mills Road to 100 meters south to Major Mackenzie Road, Markham, ON

- 1a. Approximately 300 meters east on Elgin Mills Road, Markham, ON
- 1b. Approximately 300 meters west on Elgin Mills Road, Markham, ON
- 1c. Approximately 300 meters east on Major Mackenzie Drive, Markham, ON
- 1d. Approximately 300 meters west on Major Mackenzie Drive, Markham, ON
- 1e. Approximately 100 meters on Heritage Drive west, Markham, ON

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Concrete Scan









2. Approximately 2.5 kilometers on Kennedy Road from 300 meters North of Elgin Mills Road to 100 meters south to Major Mackenzie Road, Markham, ON

2a. Approximately 300 meters east on Elgin Mills Road, Markham, ON

- 2b. Approximately 300 meters west on Elgin Mills Road, Markham, ON
- 2c. Approximately 300 meters east on Major Mackenzie Drive, Markham, ON
- 2d. Approximately 300 meters west on Major Mackenzie Drive, Markham, ON

The scope of work includes the following:

- Complete the desktop investigation (QL-D)
- Complete above ground utility survey (QL-C) of visible above ground utility features
- Using Electromagnetic pipe and cable locating systems and accessories, multiVIEW will locate and mark all toneable underground utility mains: electrical, gas, communications and water within the project area.
- Using differential GPS system, survey the spatial position of field markings where site conditions allow.

The Region provided multiVIEW with a Topo AutoCAD drawing base map and some record data. This AutoCAD drawing was used as a base map.

Details of the investigation are outlined in the subsequent Sections.















4. PROVIDED RECORD DATA AND VALIDITY

multiVIEW, with the help of the Region, identified utility owners with facilities within the project limits. multiVIEW raised tickets for all the possible utility owners, then obtained and reviewed all existing utility information and records. These utility owners include mainly the following:

- The Regional Municipality of York
- Ontario One Call
- Alectra-Powerstream
- Bell, Rogers, Telus, Zayo and other Allstream Telecommunications
- Enbridge Pipelines Gas Inc.

A detailed list of contacted utilities owners and their contact details is provided in Appendix B.

Utility owners typically mention a validity period of six months from issuance of the provided information, which is attached to the record data.

Enbridge Gas Inc. provides typically the following guideline related to their plant for third party:

o Third Party Requirements in The Vicinity of Natural Gas Facilities

Copy of this guideline is attached in Appendix C.













5. SUE INVESTIGATION METHODOLOGY

The SUE investigation was performed according to the CI/ASCE 38-02 Standard, Ref [1]. This investigation included data collection, depiction, data analysis, site visits and inspections.

A SUE investigation involves the collection of utility data through four (4) Quality Levels, or activities, as per Figure 6-1 below. Comparing and analyzing data makes it possible to achieve a complete and accurate composite data set for making informed decisions within a project or impact area.

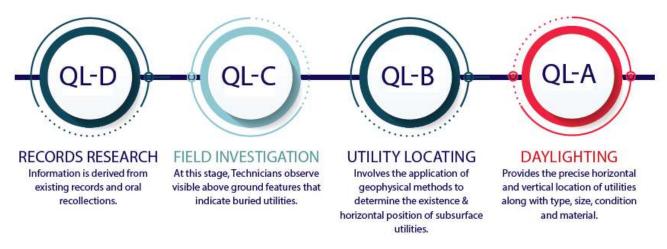


Figure 5-1: Quality Levels for SUE Investigation

In this study, the first three SUE Quality Levels; QL-D, QL-C and QL-B have been requested and performed accordingly.

Quality Level D (QL-D): Information derived from existing records or oral recollections.

Quality Level C (QL-C): Information obtained by surveying and plotting visible above-ground utility features and using professional judgment to correlate this information to Quality Level D information.

Quality Level B (QL-B): Involves the application of surface geophysical methods to determine the existence and horizontal position of subsurface utilities within a project's limits. Non-destructive technologies including Ground Penetrating Radar (GPR) and Electromagnetic (EM) tools are leveraged at this stage to accurately detect conductive and non-conductive underground assets. Quality Level B information is correlated with Quality Levels C & D to provide a comprehensive subsurface utility dataset that includes abandoned lines and other discrepancies, while confirming the accuracy of record data.















Quality Level A (QL-A): Also known as daylighting, provides the precise horizontal and vertical location of utilities along with type, size, condition and material, obtained by the actual exposure (or verification of previously exposed and surveyed utilities) usually through vacuum excavation.

For this project, multiVIEW's QL-B investigation entailed the following activities:

- Mobilize a crew of trained technicians equipped with Electromagnetic (EM) utility locating devices to complete the utility mapping exercise, and determine the existence and approximate horizontal position of toneable buried plant within the project site. The devices can accurately locate the position of steel pipes and cables (conductive), but cannot locate non-metallic utilities such as plastic pipes, drain tiles, concrete sewers or vitreous clay pipe where tracer wires are unavailable (non-conductive).
- The team then marked the inferred utility positions (conductive and non-conductive)
- The team surveyed all subsurface markings and surface features
- Sewer maintenance holes and water chambers were not surveyed and excluded form the SUE scope of work, based on Client request.















6. EQUIPMENT FOR SITE INVESTIGATION

Electromagnetic (EM) Induction tools (RD4000 PL Radio-detection type), otherwise known as pipe and cable locating, were leveraged to carry out the Quality Level B component of the SUE program and accurately locating buried infrastructure utilities.

This technique is extremely effective for locating utilities comprised of electrically conductive material or those that contain an intact tracer wire.



Figure 6-1: Electromagnetic (EM) Induction Process (Pipe and cable Locating)

The following two main detection principles have been applied:

- Passive location Used to locate an electromagnetic field already present on a utility
- Active location Used as a signal transmitter to add a specific signal onto a located utility

Low frequency long wave radio signals transmitted from a radio mast pass into the ground, inducing a signal onto metallic utilities. The utilities re-emit these signals and are located and traced using a cable locator in RADIO mode.















When an alternating current (AC) travels along a cable, an electromagnetic field is generated. The alternating current creates a magnetic field and the oscillation of the current between positive and negative creates a frequency known as Hertz (Hz). The electromagnetic field generated by an AC current can be detected by a cable locator.

7. RESULTS OF THE SUE SITE INVESTIGATION

A number of QL-C and QL-B job site investigations have been performed using equipment outlined in Section 6 to collect and depict data within the project area between May and August 2020.

The site investigation was performed based on the record data and visible features. The updated and detailed position of the utilities was confirmed and the lines were designated in the project area and then represented in the composite CAD Drawing, (46726-SUE-DWG) in Appendix A, in which was displayed with the most accurate possible estimate of its actual location.

These utilities include:

- Enbridge Gas lines Gas main
- Watermain
- Bell
- Bell Fiber
- Hydro cable (H)

- Traffic Light (TL)
- Street Light (SL)















8. SUE INVESTIGATION CHALLENGES AND DISCREPANCIES

A number of challenges were encountered in the project on site, which can explain some of the missing information regarding the lost signals, some missing details. These challenges and some considerations can be summarized as the following:

- Non-toneable sections of Water, electrical and communications lines
- No records for Sewers have been collected and no survey was done on site for STM and SAN lines.
- Street Light (SL) utility lines depiction was based on the site investigation only. No records have been collected, except the data provided by Client in the base Map.
- Identification and depiction of Culverts are not included in this SUE scope of work.
- All the data regarding pipe diameter, material and pressure were taken from the records and have not been verified.
- Overhead utilities are excluded from the scope of this SUE composite drawing.
- A discrepancy about water lines found on site and not in records was highlighted in sheet 3 of the composite Drawing 46726-SUE-DWG-Rev 01.
- No records were available for the utilities in some sections of the project, as mentioned in the composite drawing.















APPENDIX A: SUE QL-B- PROJECT AREA COMPOSITE CAD **DRAWINGS (46726-SUE-DWG)**



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APPENDIX B: UTILITY OWNER CONTACT LIST AND RECORD VALIDITY

Utility	Contact Details Information	Date for Requested Info	Date of Info Received	Type of Data received	Remarks
Bell Canada	Sanzhar Zhorabayev Technicien CAD, Ingénierie - Centre du Canada CAD Technician - MOC, Engineering - Central Canada T : 289.657.8145 7777 Weston Road Vaughan, ON L4L 0G9	2020-06-23	2020-07-09	CAD Drawing	6 months validity from issuance of information
Enbridge Gas	mark-ups <mark- Ups@enbridge.com> Kishore Sagar</mark- 	2020-06-23	2020-06-26	PDF Drawing mark up	
Alectra	Micheline Email- recordseast.info@alectrautilities.com	2020-06-23	2020-06-23		
Beanfield (Formerly Aptum Technologies, Cogeco Peer1)	Dipen Shah Design Technician Direct phone. 416.583.2096 email. dipen@beanfield.com	2020-06-23	2020-06-23		Beanfield (Including Former Aptum) has no





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Geophysics



Utility	Contact Details Information	Date for Requested Info	Date of Info Received	Type of Data received	Remarks
					infrastructure in your working area
Telecon (GT)	Mary Tina CAD Technician, Engineering-Central Canada 7777 Weston Road, Woodbridge, ON L4L 0G9 T 289-657-8072	2020-06-23	2020-07-08		GT has no plant within 2m of proposed work- NO CONFLICT
Hydro One	TPUCC Markup - Hydro One. tpumarkup@hydroone.com	2020-06-23	2020-06-25		Hydro One does not owns nor operates underground high voltage transmission facilities in the Project area
Water & Sewer	Arnoor Public Works Permits Infrastructure Planning & Policy Public Works Halton Region 905-825-6000, ext. 6032 1-866- 442-5866	2020-09-29	2020-06-25		There is no water main or sanitary & storm sewer in the area.
OOC Ontario One Call	Solutions@on1call.com	2020-06-23	2020-09-23		
York Region Water & Wastewater		2020-06-23	2020-06-29 2020-06-23		
Rogers	Shoaib Akram CAD Technician, Engineering - Central Canada T 289-657-8020 7777 Weston Rd, Woodbridge (Ontario) L4L 0G9	2020-06-23	2020-07-16		Rogers has no existing plant in the area

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Utility	Contact Details Information	Date for Requested Info	Date of Info Received	Type of Data received	Remarks
Zayo	Phil Arbeau Utility Circulations phil.arbeau@zayo.com	2020-06-23	2020-07-15		Zayo has no existing plant in the area
Telus	Indira Sharma (Project Support) Email: telusutilitymarkups@Telecon.ca 289-657-8256 7777 Weston Road Vaughan, ON L4L 0G9	2020-06-23	2020-06-25		TELUS has no infrastructure in the area of your proposed work.

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CCTV Sewer Inspection



APPENDIX C: THIRD PARTY REQUIREMENTS IN THE VICINITY OF NATURAL **GAS FACILITIES**



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Subsurface Utility Engineering

SUE NOTES:

1. The SUE Site investigation was performed on June 2020 with a sewers structures (MHs & CBs) survey updated on September 2021.

2. Discrepancies between utilities records received from utilities owners are highlighted in this drawing (see sheets).

3. This drawing was updated with records from the York Region utilities map website for the missing Sewers records.

4. Identification and depiction of Culverts and Ditches are outside of this SUE scope of work.

5. Street Light (SL) and Traffic Lights (TL) utility lines depiction was based on the site investigation only. No records have been collected, except Alectra records for Hydro.

6. The Sewer records and the connections of STM and SAN are based on the collected data and the QL-C. For this reason, it is highly recommended to perform sonding in order to establish and/or confirm connections.

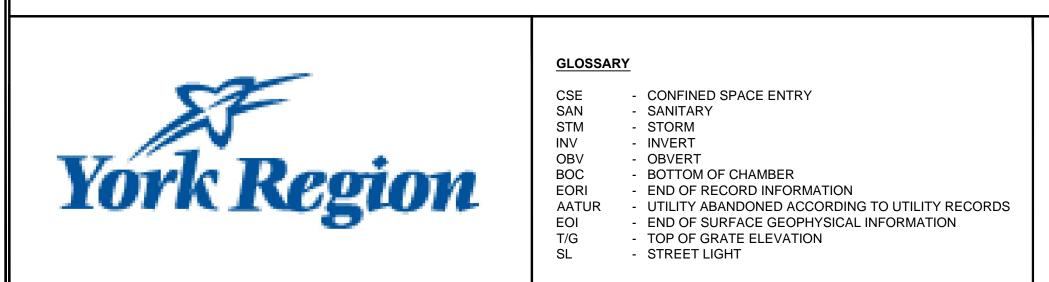
7. Any data regarding pipe diameter, material and pressure were taken from the records and have not been verified. QL-A is recommended to get depth of the utilities, diameter and material composition.

8. For more information and details please see the project report: #46726-SUE-Report-Rev01

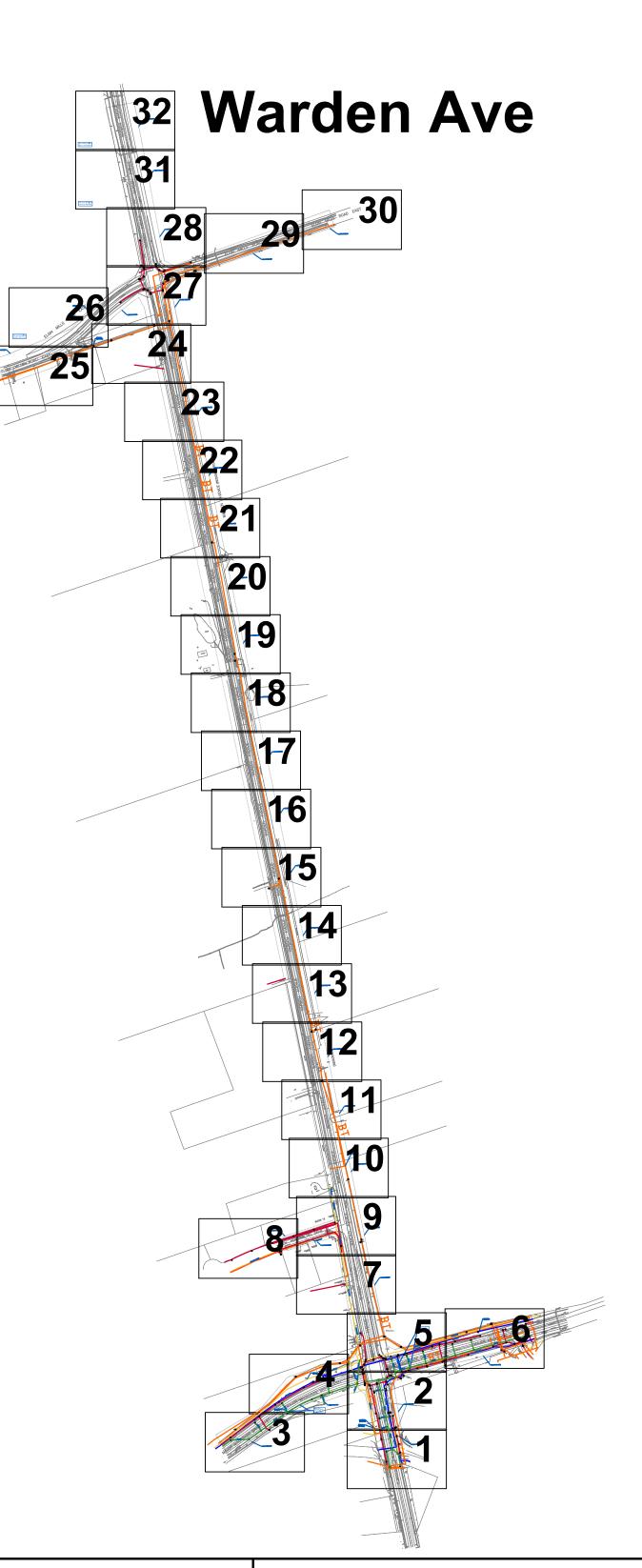
9. No record of service utility lines were available nor collected. All the depicted service lines included in this composite

drawing are based on the geophysical survey only.

10. Please see some SUE investigation challenges and Technical limitations on sheet #64







FOR: THE REGIONAL MUNICIPALITY OF YORK

PROJECT NO: 46726 PROJECT NAME: WARDEN AVE & KENNEDY RD

MARKHAM

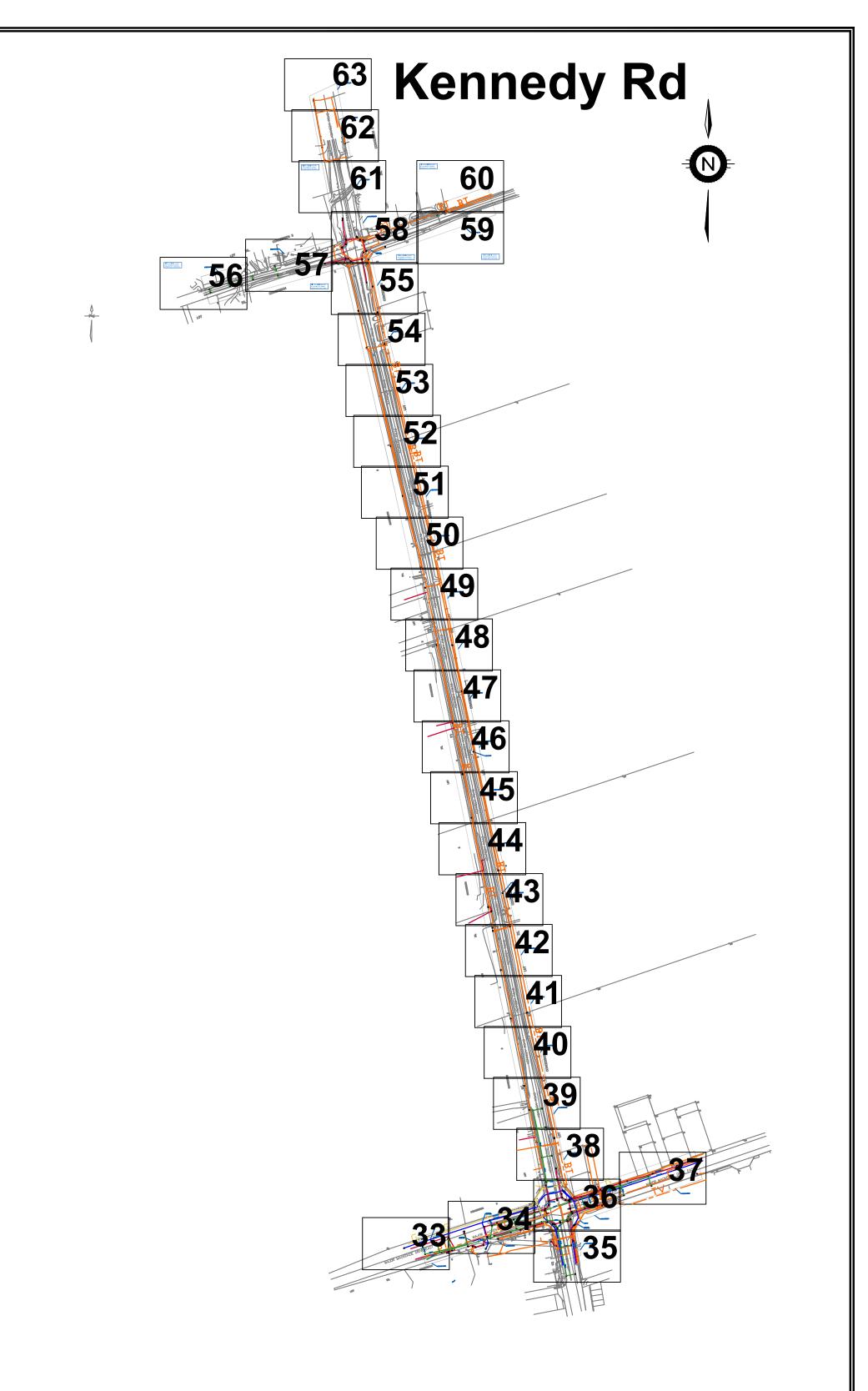
DATE: 2021-08-13

Subsurface Utility Engineering CI/ASCE 38-02 Quality Levels

QL'A': Visual verification of utility location and depth using excavation methods. i.e. Hydrovac. QL'B': Utility located using surface geophysical methods i.e. electronically applied or induced magnetic field using specific utility locate equipment or ground penetrating radar QL'C': Utility plotted using record information in conjunction with a visual field survey of utility furniture.

QL'D': Utility plotted using record information only. This can include oral recollection.

- during the course of this project.
- utilizing datum derived by differential GPS observations and referred to the CAN-NET Reference Network.



The engineering stamp on this drawing is to confirm that the Subsurface Utility Engineering work was performed according to the scope of work in the contract, the industry best practices and ASCI 38-02 Standard. The QL-B depiction accuracy is governed by the geophysical tool limitations and site conditions, as detailed in multiVIEW's Terms and Conditions in the last sheet of the attached composite drawing.

KEY MAP

GENERAL NOTES

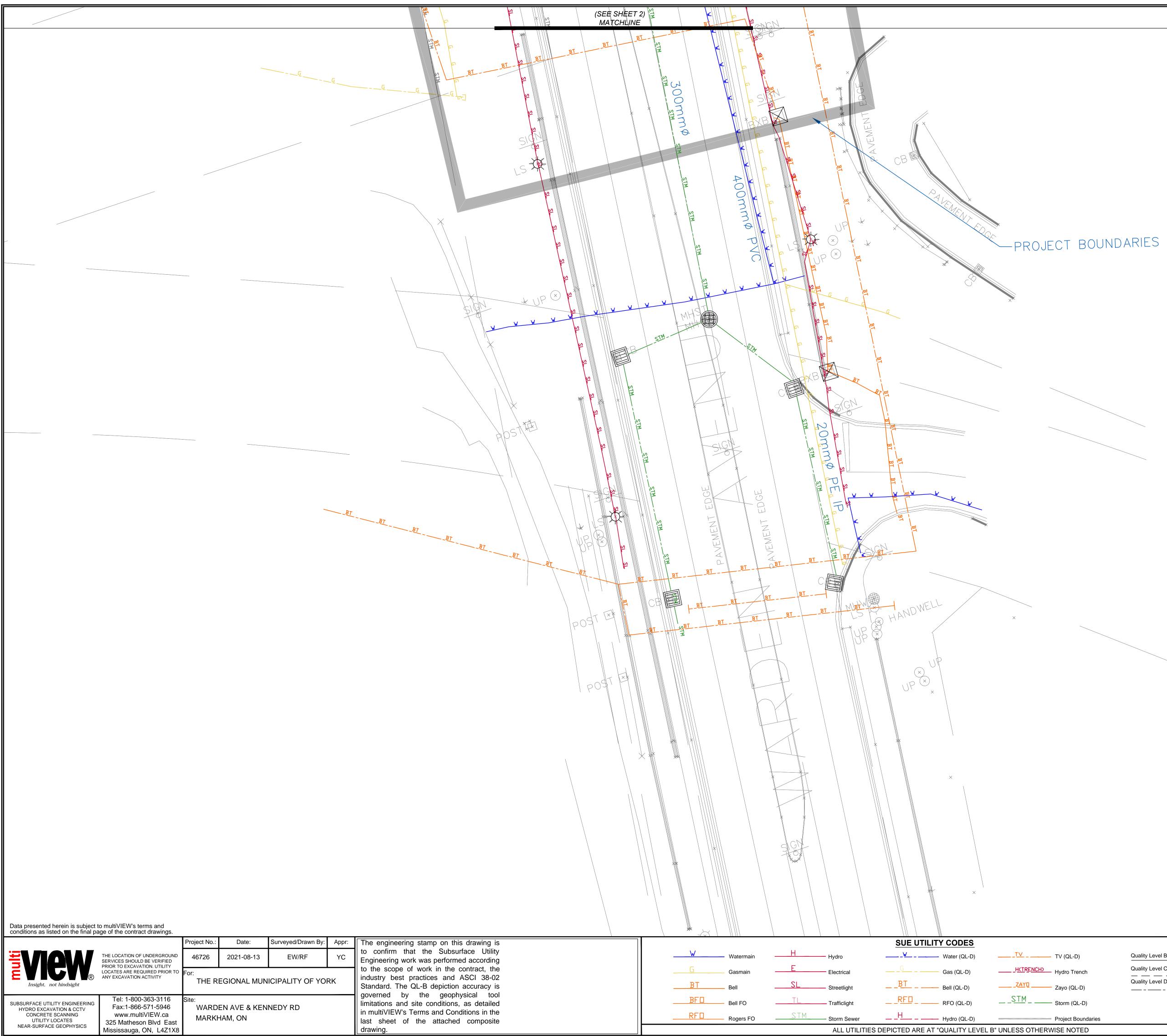
1. This information is provided for design purposes only. 2. All inverts shown on this plan by multiVIEW Locates Inc.are in meters and were measured from the top of the manhole and/or catch basin lids. 3. Subsurface utility information shown on this drawing was obtained on a best effort, best practices basis, within the technical limitations of the instrumentation.

Utilities shown on this map by multiVIEW Locates Inc. were located using ASCE 38-02 Quality Level 'B' methods unless otherwise noted. All other information hereon has been supplied by others and is not certified. 5. Third party information provided on these drawings are for the convenience of use

but do not constitute information obtained and delivered by multiVIEW Locates Inc. 6. Elevations represented for this study were obtained by multiVIEW Locates Inc.



Tel: 1-800-363-3116 Email: <u>sales@multiview.ca</u> www.multiview.ca





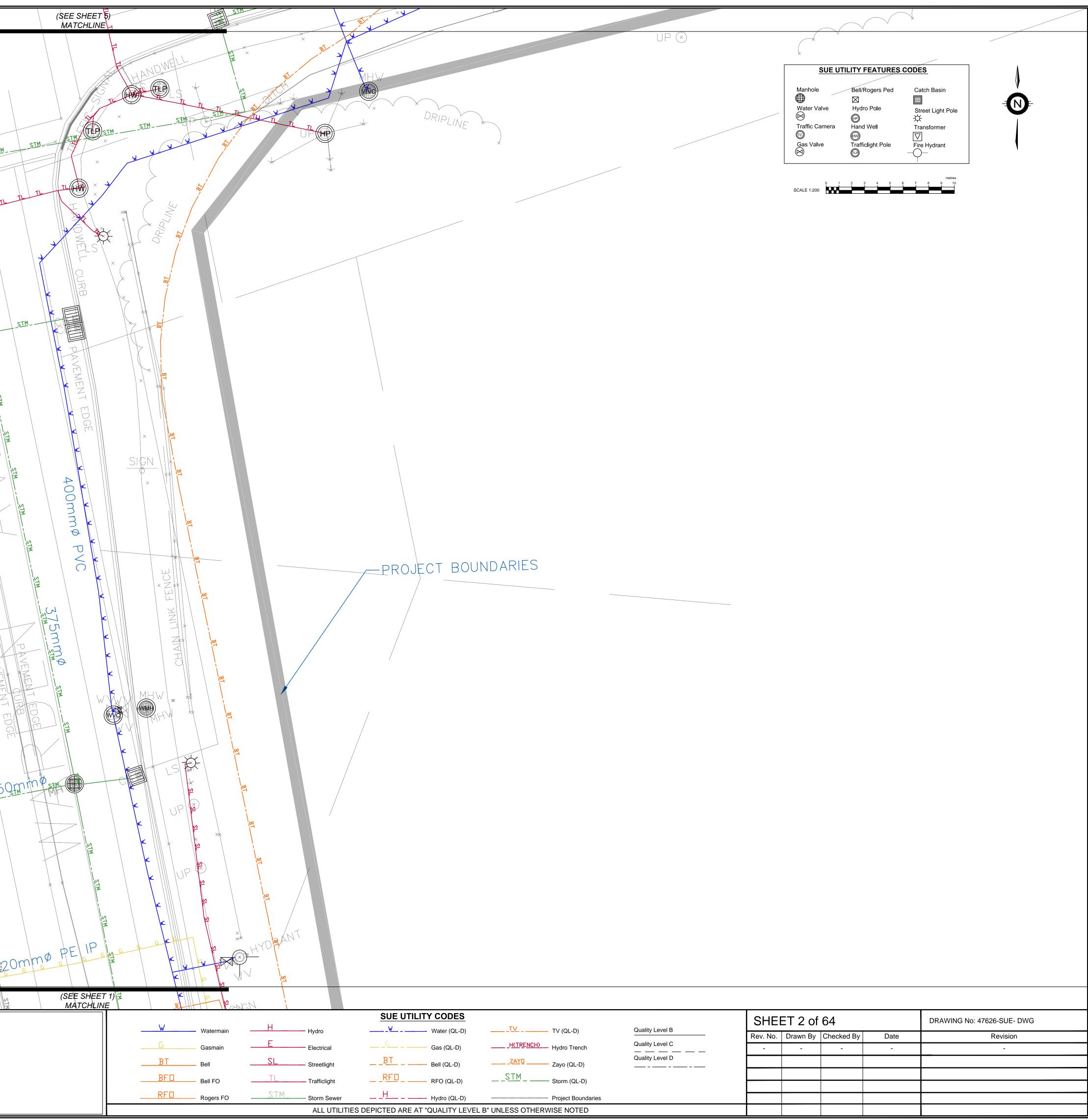
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Insight, not hindsight	THE REGIONAL MUNICIPALITY OF YORK	industry best practices and ASCI 38-02 Standard. The QL-B depiction accuracy is governed by the geophysical tool
SUBSURFACE UTILITY ENGINEERING HYDRO EXCAVATION & CCTV CONCRETE SCANNING UTILITY LOCATES NEAR-SURFACE GEOPHYSICSTel: 1-800-363-3116 Fax:1-866-571-5946 www.multiVIEW.ca 325 Matheson Blvd East Mississauga, ON, L4Z1X8	Site: WARDEN AVE & KENNEDY RD MARKHAM, ON	limitations and site conditions, as detailed in multiVIEW's Terms and Conditions in the last sheet of the attached composite drawing.



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SUE UTILITY FEATURES CODES

Manhole Water Valve Traffic Camera Gas Valve	Bell/Rogers Ped	Catch Basin
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Insight, not hindsight

	Tel: 1-800-363-31
SUBSURFACE UTILITY ENGINEERING HYDRO EXCAVATION & CCTV	Fax:1-866-571-594
CONCRETE SCANNING	www.multiVIEW.c
	325 Matheson Blvd
NEAR-SURFACE GEOPHYSICS	Mississauga, ON, L4

THE LOCATION OF UNDERGROUND SERVICES SHOULD BE VERIFIED PRIOR TO EXCAVATION. UTILITY LOCATES ARE REQUIRED PRIOR TO ANY EXCAVATION ACTIVITY THE REGIONAL MUNICIPALITY OF YORK 946 WARDEN AVE & KENNEDY RD l.ca MARKHAM, ON d East L4Z1X8

Project No.:

46726

Date:

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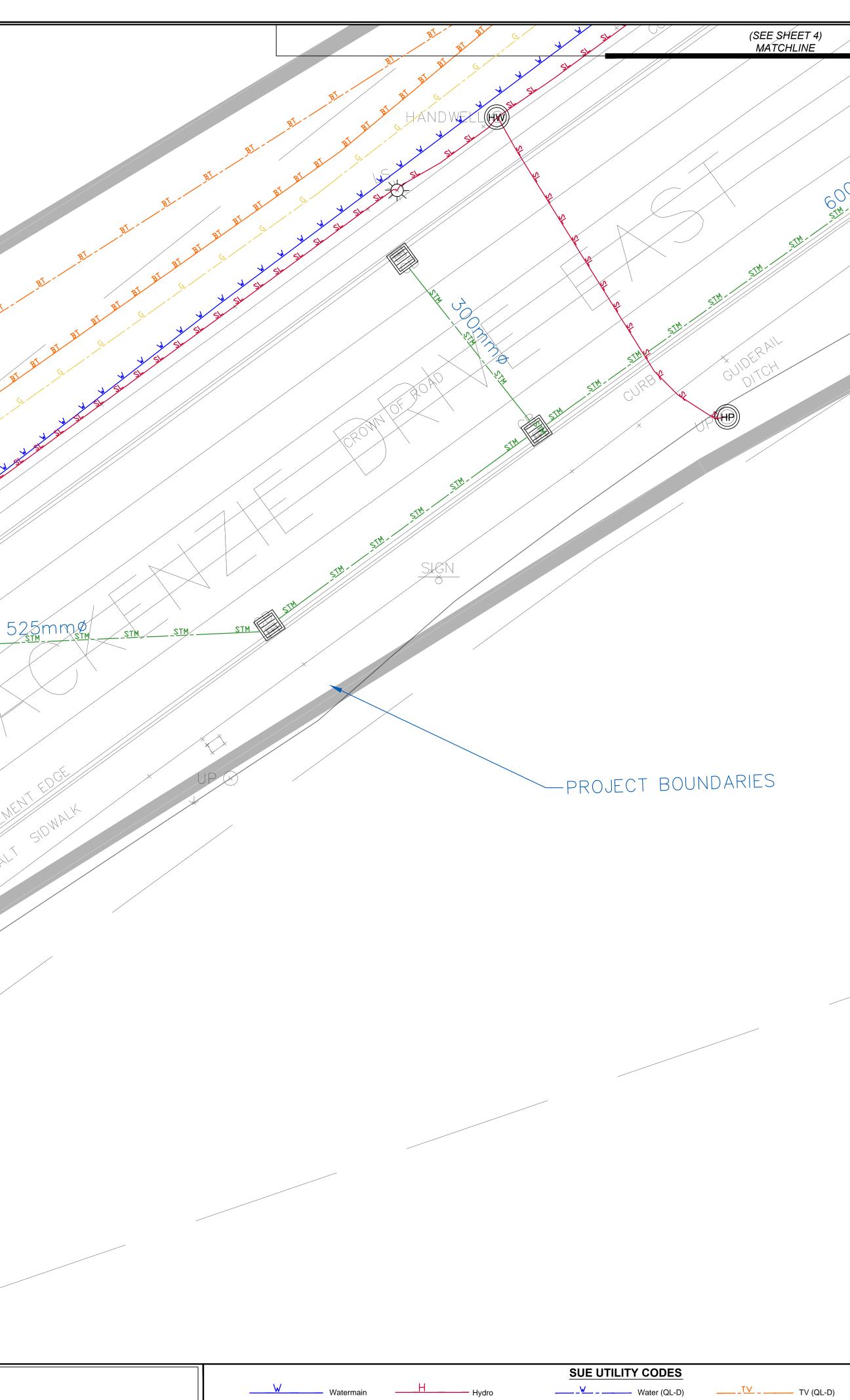
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 The engineering stamp on this drawing is to confirm that the Subsurface Utility

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STM_



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BFD	— Bell FO	TL	- Trafficlight	<u>_RFD</u>	RFO (QL-D)	<u>_STM</u>	- Storm (QL-D)
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Transformer

Fire Hydrant

(HP)

(LP)

Hand Well

(Trafficlight Pole

Traffic Camera

Gas Valve

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NO VISUAL LEADS-ON THIS CB

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THE LOCATION OF UNDERGROUND SERVICES SHOULD BE VERIFIED PRIOR TO EXCAVATION. UTILITY LOCATES ARE REQUIRED PRIOR TO ANY EXCAVATION ACTIVITY Tel: 1-800-363-3116 Site: Fax:1-866-571-5946 SUBSURFACE UTILITY ENGINEERING HYDRO EXCAVATION & CCTV CONCRETE SCANNING UTILITY LOCATES NEAR-SURFACE GEOPHYSICS

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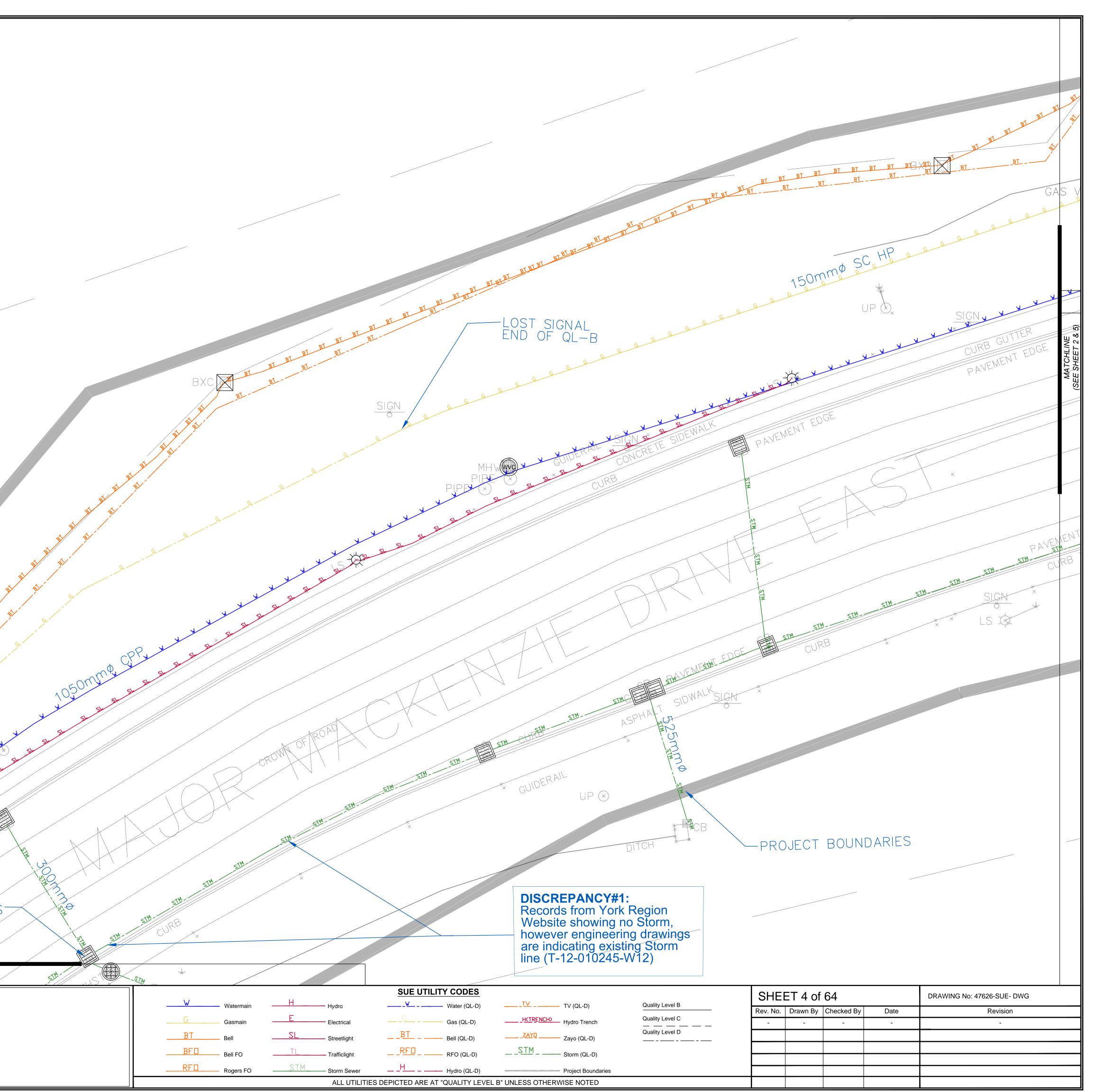
Project No.: Date: 46726 2021-08-13 EW/RF THE REGIONAL MUNICIPALITY OF YORK

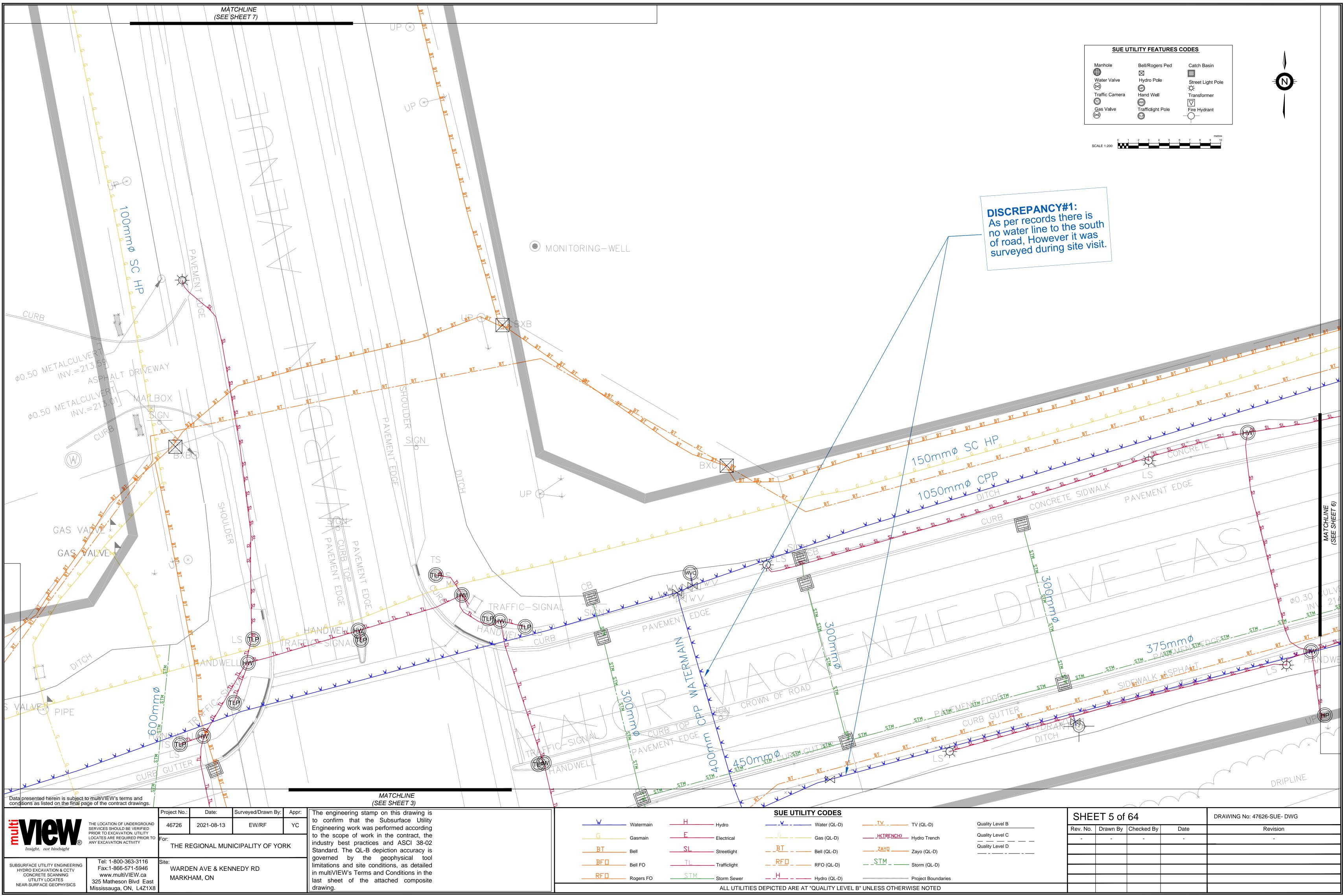
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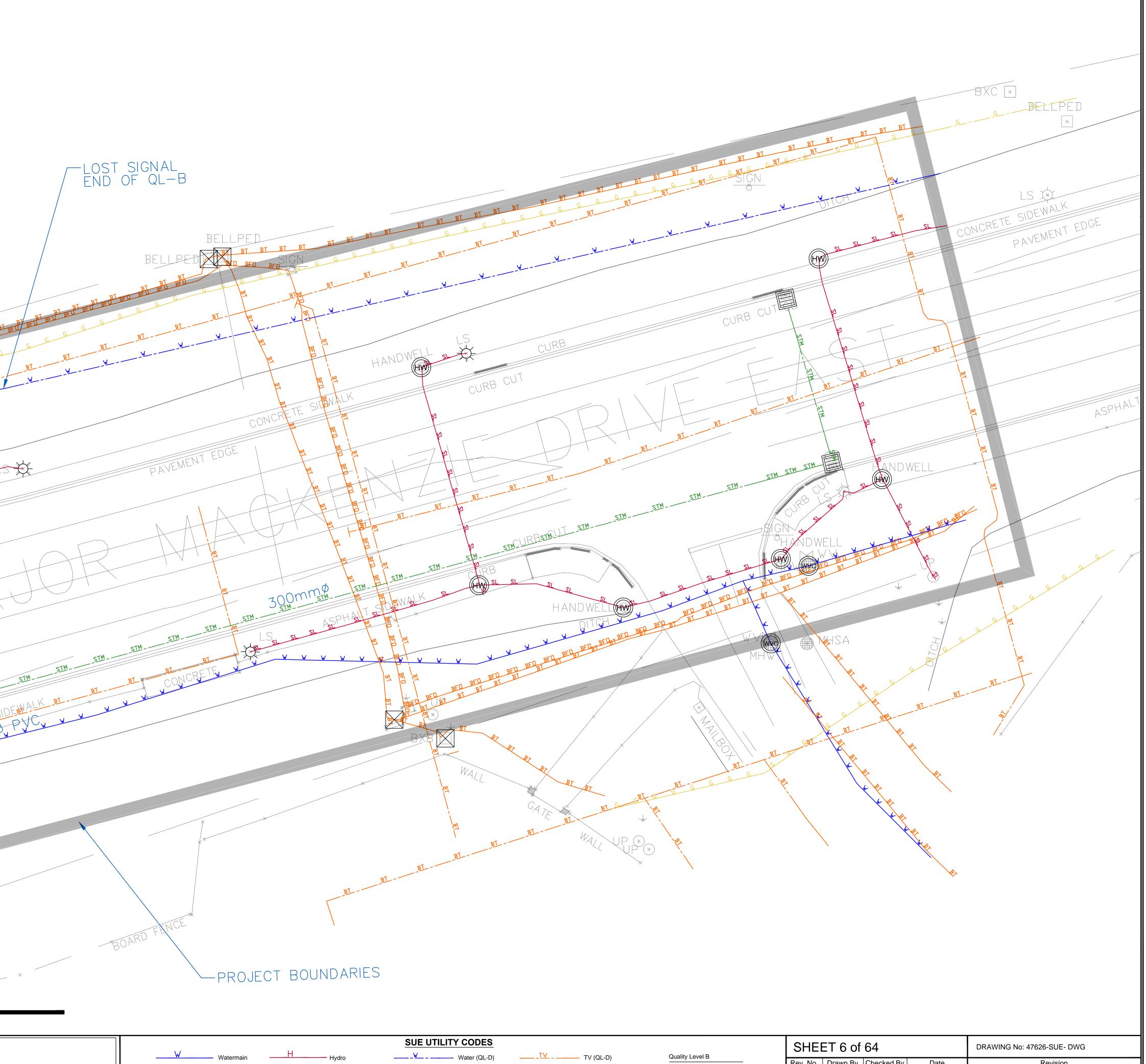
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Surveyed/Drawn By: Appr: The engineering stamp on this drawing is to confirm that the Subsurface Utility Engineering work was performed according to the scope of work in the contract, the industry best practices and ASCI 38-02 Standard. The QL-B depiction accuracy is governed by the geophysical tool limitations and site conditions, as detailed in multiVIEW's Terms and Conditions in the last sheet of the attached composite drawing.



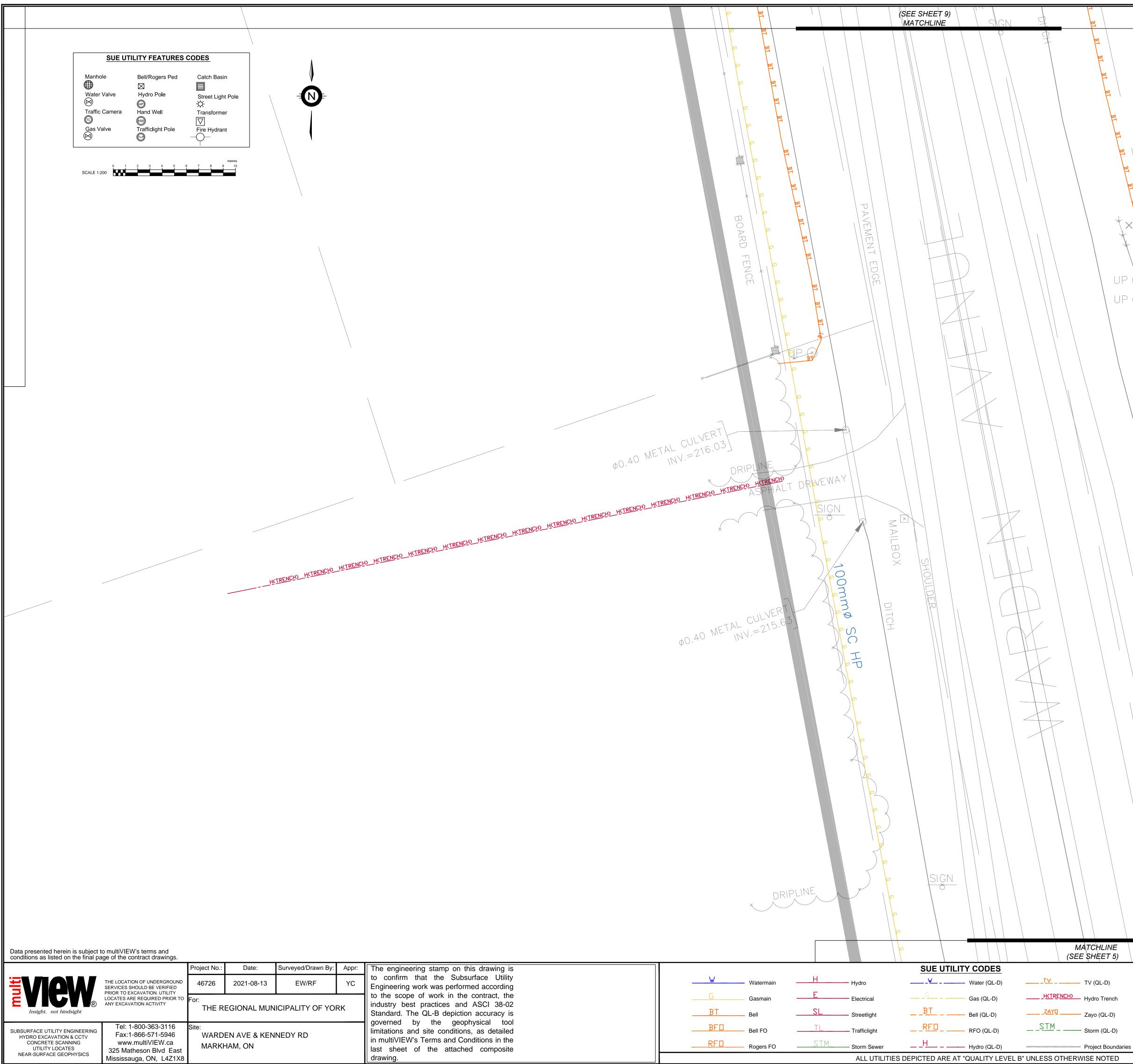


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ΗY	URFACE UTILITY ENGINEERING YDRO EXCAVATION & CCTV CONCRETE SCANNING UTILITY LOCATES FAR-SURFACE GEOPHYSICS	Fax:1-866-571-5946 www.multiVIEW.ca 325 Matheson Blvd East Mississauga, ON, L4Z1X8	WARDEN AVE & KEN MARKHAM, ON	NEDY RD		limitations and site conditions, as detailed in multiVIEW's Terms and Conditions in the last sheet of the attached composite drawing.



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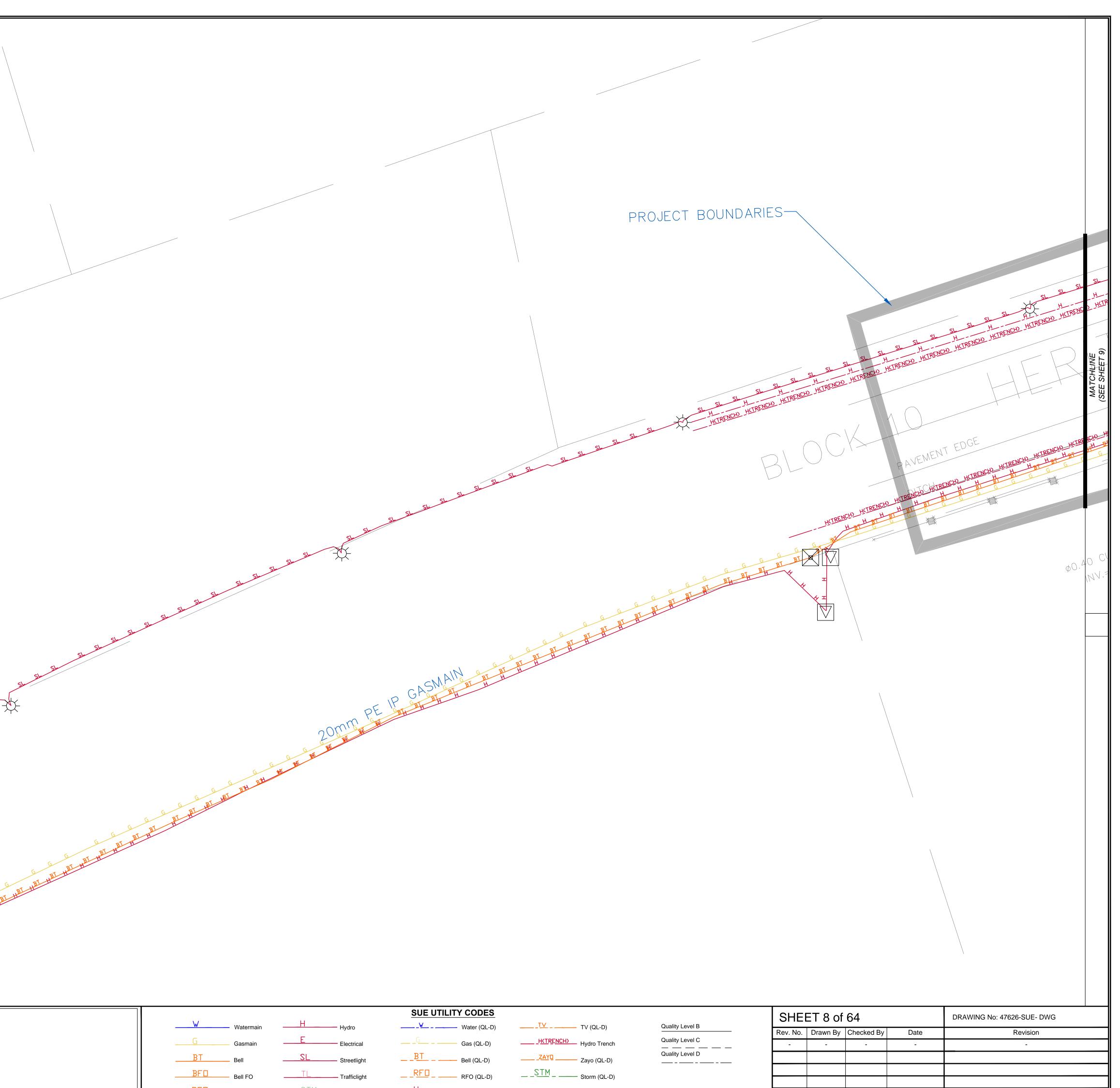


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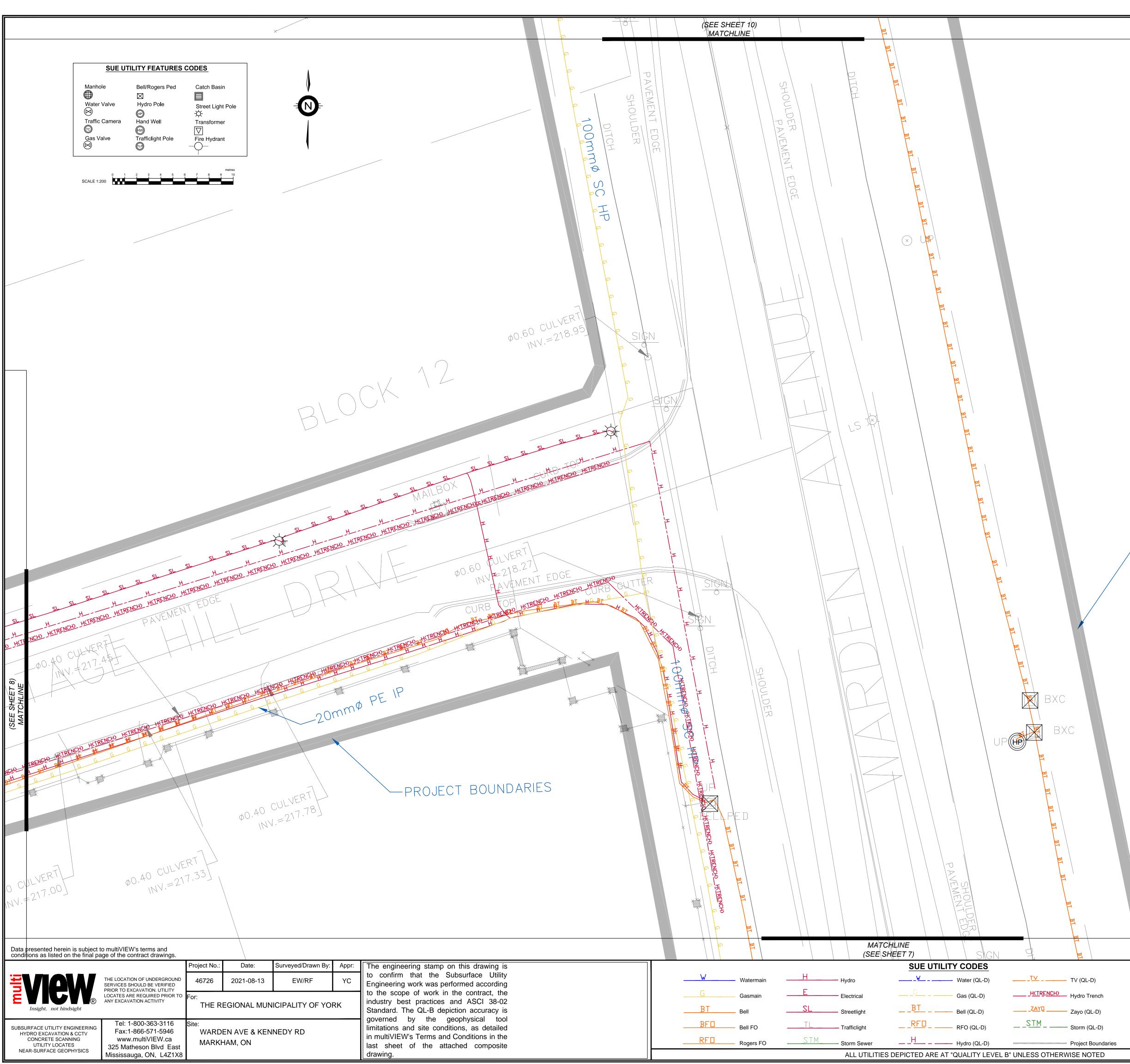
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Tel: 1-800-363-3116 Fax:1-866-571-5946	Site: WARD	EN AVE & KEN	NEDY RD		governed by the geophysical tool limitations and site conditions, as detailed in multiVIEW/s Terms and Conditions in the

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to confirm that the Subsurface Utility Engineering work was performed according to the scope of work in the contract, the industry best practices and ASCI 38-02 Standard. The QL-B depiction accuracy is governed by the geophysical tool limitations and site conditions, as detailed in multiVIEW's Terms and Conditions in the last sheet of the attached composite drawing.



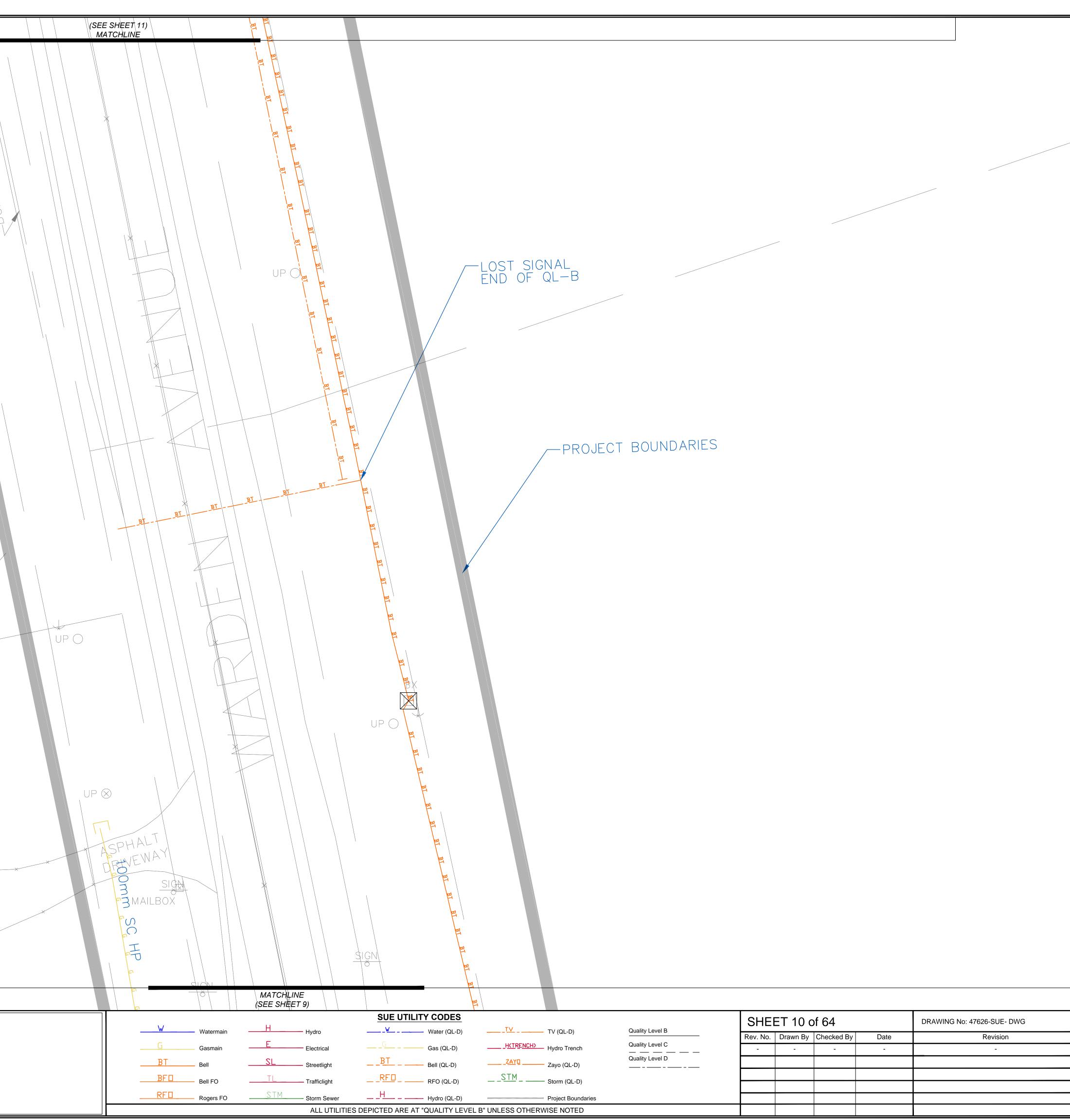
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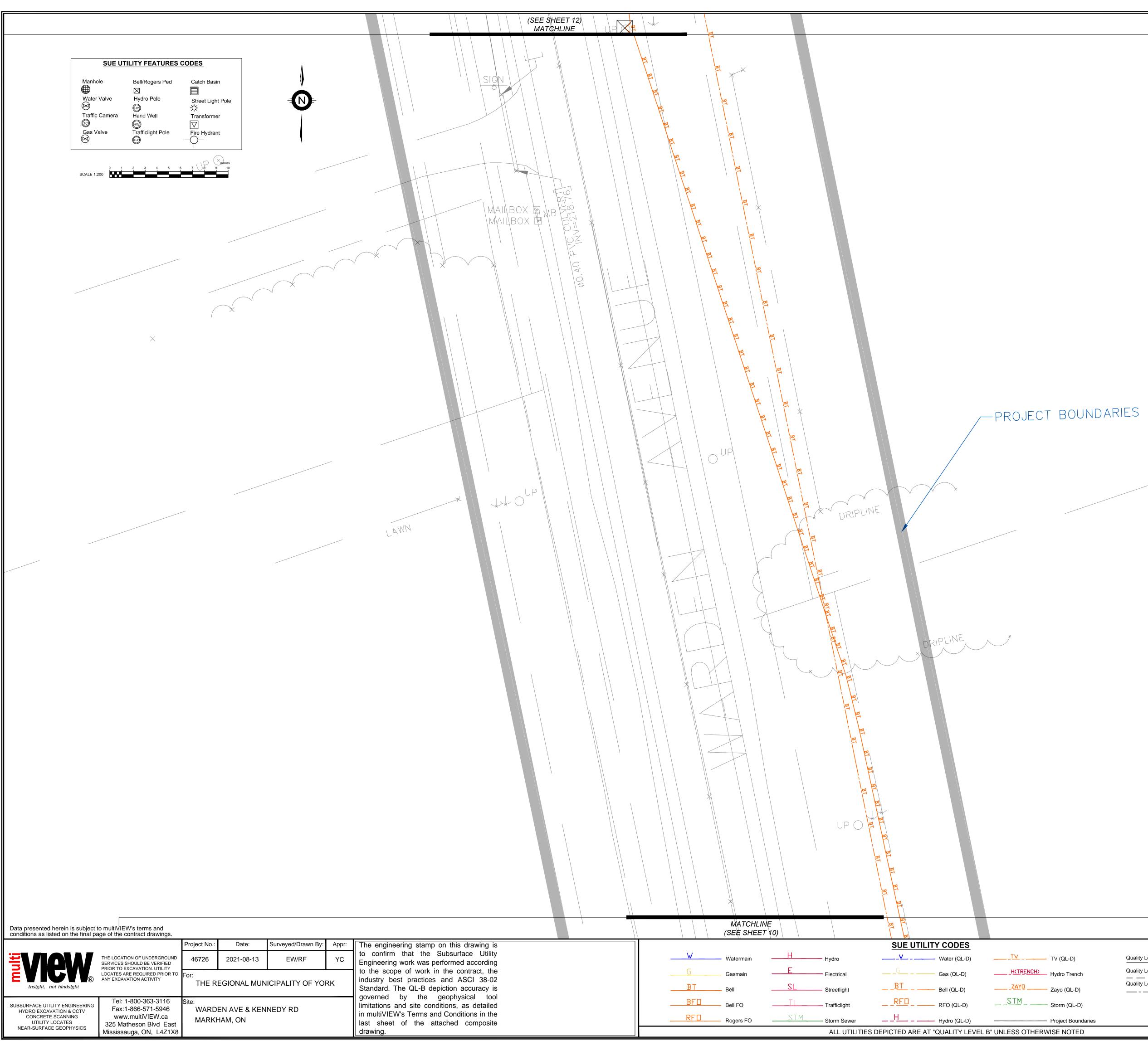
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SUE UTILITY FEATURES (Manhole Bell/Rogers Ped	Catch Basin			
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Fax:1-866-571-5946	WARDEN AVE & KENNEI
www.multiVIEW.ca 325 Matheson Blvd East	
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SUBSURFACE UTILITY ENGINEERING HYDRO EXCAVATION & CCTV CONCRETE SCANNING UTILITY LOCATES	

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Manhole Bell/Rogers Ped Catch Basin ● □ □ Water Valve Hydro Pole Street Light Pole ○ □ □ Traffic Camera Hand Well Transformer □ □ □									
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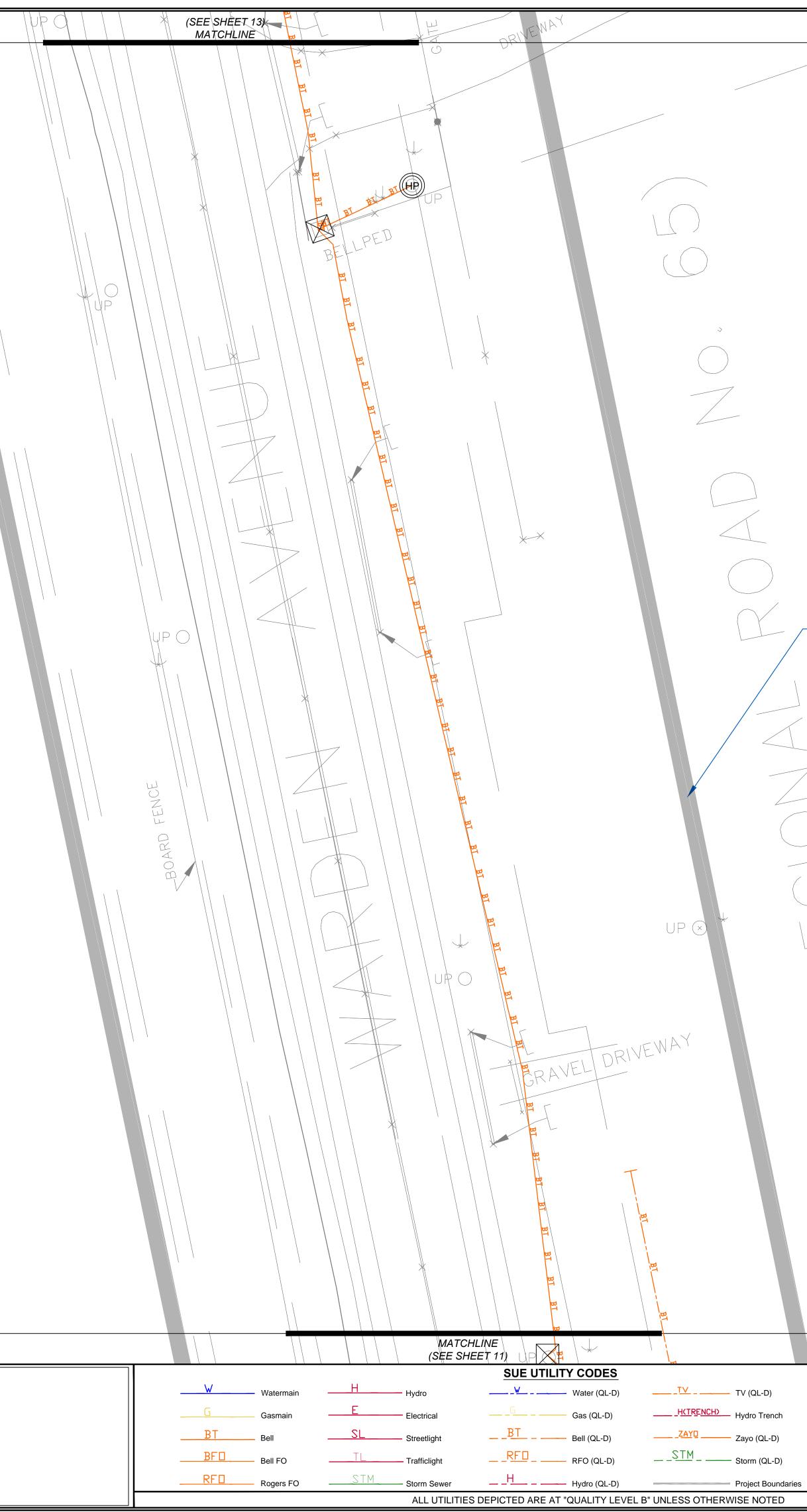
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	THE LOCATION OF UNDERGROUND SERVICES SHOULD BE VERIFIED PRIOR TO EXCAVATION. UTILITY LOCATES ARE REQUIRED PRIOR TO ANY EXCAVATION ACTIVITY	46726	2021-08-13	EW/RF	YC	Engineering
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SUBSURFACE UTILITY ENGINEERING HYDRO EXCAVATION & CCTV CONCRETE SCANNING UTILITY LOCATES NEAR-SURFACE GEOPHYSICS	Tel: 1-800-363-3116 Fax:1-866-571-5946 www.multiVIEW.ca 325 Matheson Blvd East Mississauga, ON, L4Z1X8	Site: WARDEN AVE & KENNEDY RD MARKHAM, ON				governed limitations a in multiVIEV last sheet drawing.

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SUBSURFACE UTILITY ENGINEERING HYDRO EXCAVATION & CCTV CONCRETE SCANNING UTILITY LOCATES NEAR-SURFACE GEOPHYSICS	Tel: 1-800-363-3116 Fax:1-866-571-5946 www.multiVIEW.ca 325 Matheson Blvd East Mississauga, ON, L4Z1X8		EN AVE & KEN IAM, ON	NEDY RD	governed by the geophysical tool limitations and site conditions, as detailed in multiVIEW's Terms and Conditions in the last sheet of the attached composite drawing.			



 Quality Level B
 SHEET 13 of 64
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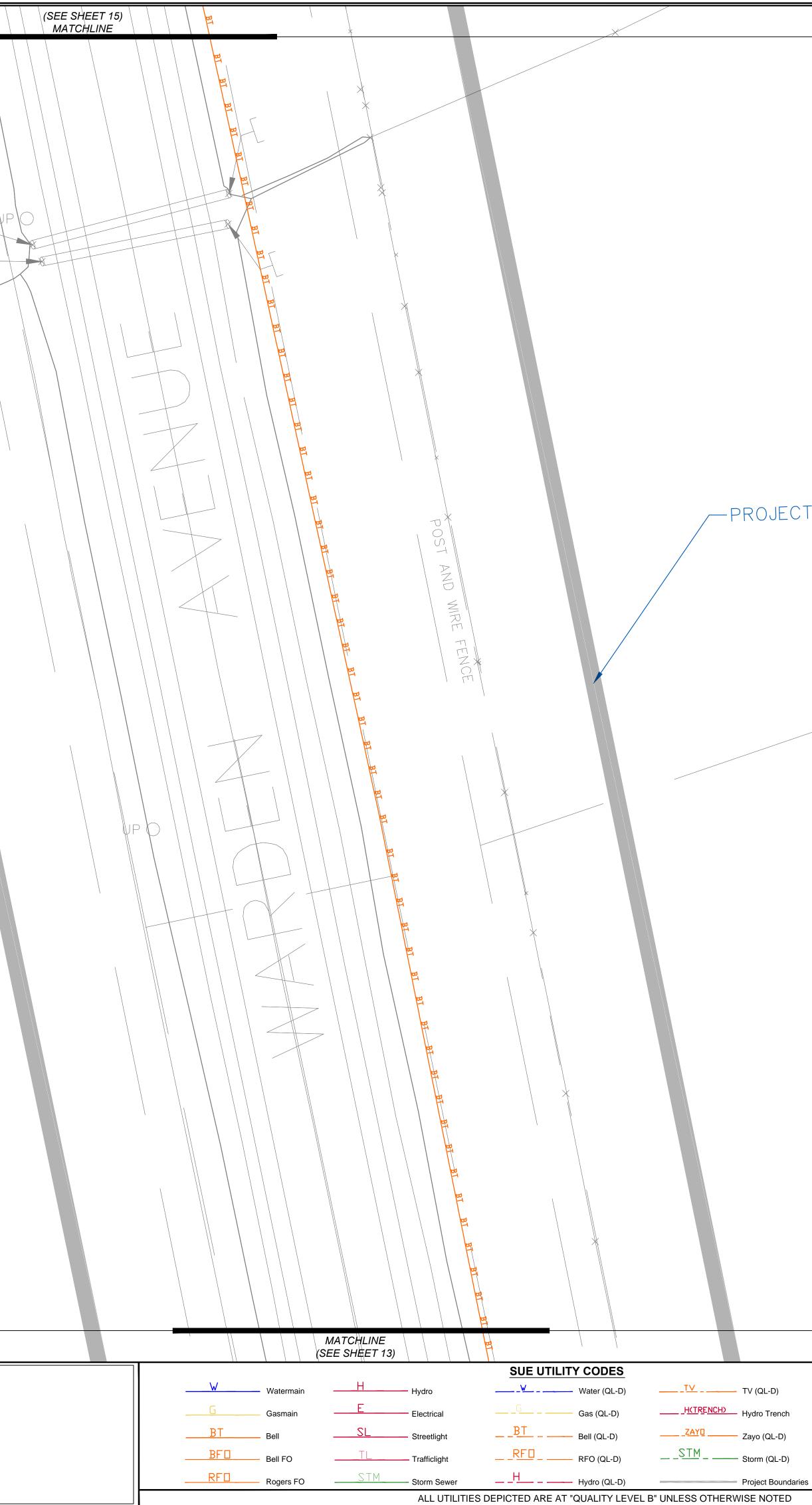
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SUE UTILITY FEATURES CODES						
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SUBSURFACE UTILITY ENGINEERING	Tel: 1-800-363-311
HYDRO EXCAVATION & CCTV	Fax:1-866-571-594
CONCRETE SCANNING	www.multiVIEW.ca
UTILITY LOCATES	325 Matheson Blvd E
NEAR-SURFACE GEOPHYSICS	Mississauga, ON, L42

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THE REGIONAL MUNICIPALITY OF YORK

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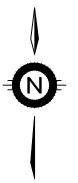
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SUE UTILITY FEATURES CODES					
Manhole Water Valve S Traffic Camera C Gas Valve S	Bell/Rogers Ped Hydro Pole P Hand Well Trafficlight Pole C	Catch Basin			



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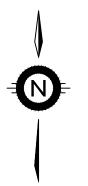
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SUE UT	ILITY FEATURES	CODES
Manhole Water Valve Constant Traffic Camera Constant Gas Valve Constant Constan	Bell/Rogers Ped	Catch Basin



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SUBSURFACE UTILITY ENGINEERING HYDRO EXCAVATION & CCTV CONCRETE SCANNING UTILITY LOCATES NEAR-SURFACE GEOPHYSICS	Tel: 1-800-363-3116 Fax:1-866-571-5946 www.multiVIEW.ca 325 Matheson Blvd East Mississauga, ON, L4Z1X8		EN AVE & KEN IAM, ON	NEDY RD		governed by the geophysical tool limitations and site conditions, as detailed in multiVIEW's Terms and Conditions in the last sheet of the attached composite drawing.

(SEE SHEET 18)	
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SUE UT	ILITY FEATURES	CODES
Manhole Water Valve S Traffic Camera C Gas Valve S	Bell/Rogers Ped	Catch Basin

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CONCRETE SCANNING	www.m
UTILITY LOCATES NEAR-SURFACE GEOPHYSICS	325 Mathe
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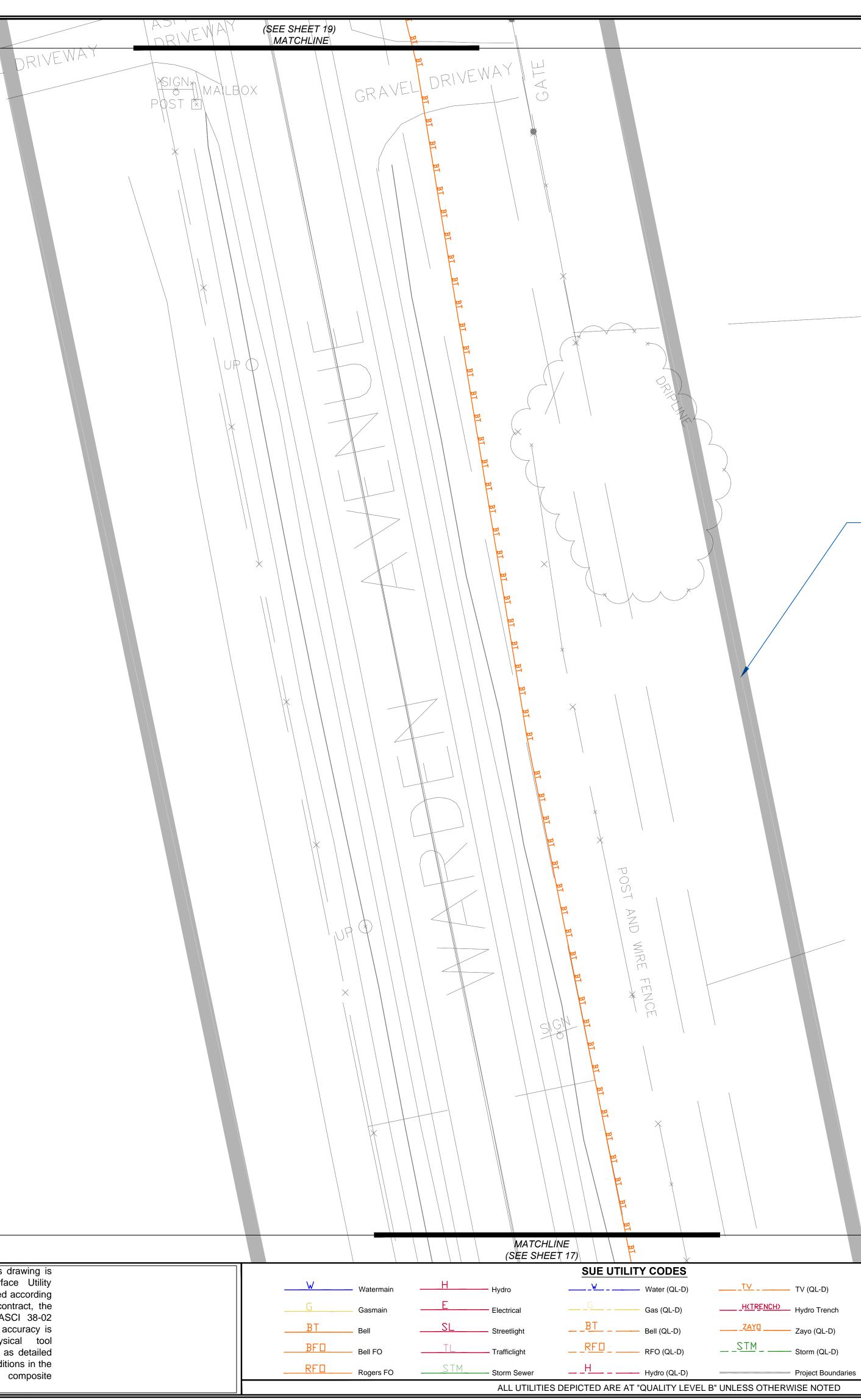
THE LOCATION OF UNDERGROUND SERVICES SHOULD BE VERIFIED PRIOR TO EXCAVATION. UTILITY LOCATES ARE REQUIRED PRIOR TO ANY EXCAVATION ACTIVITY 46726 2021-08-13 EW/RF YC THE REGIONAL MUNICIPALITY OF YORK

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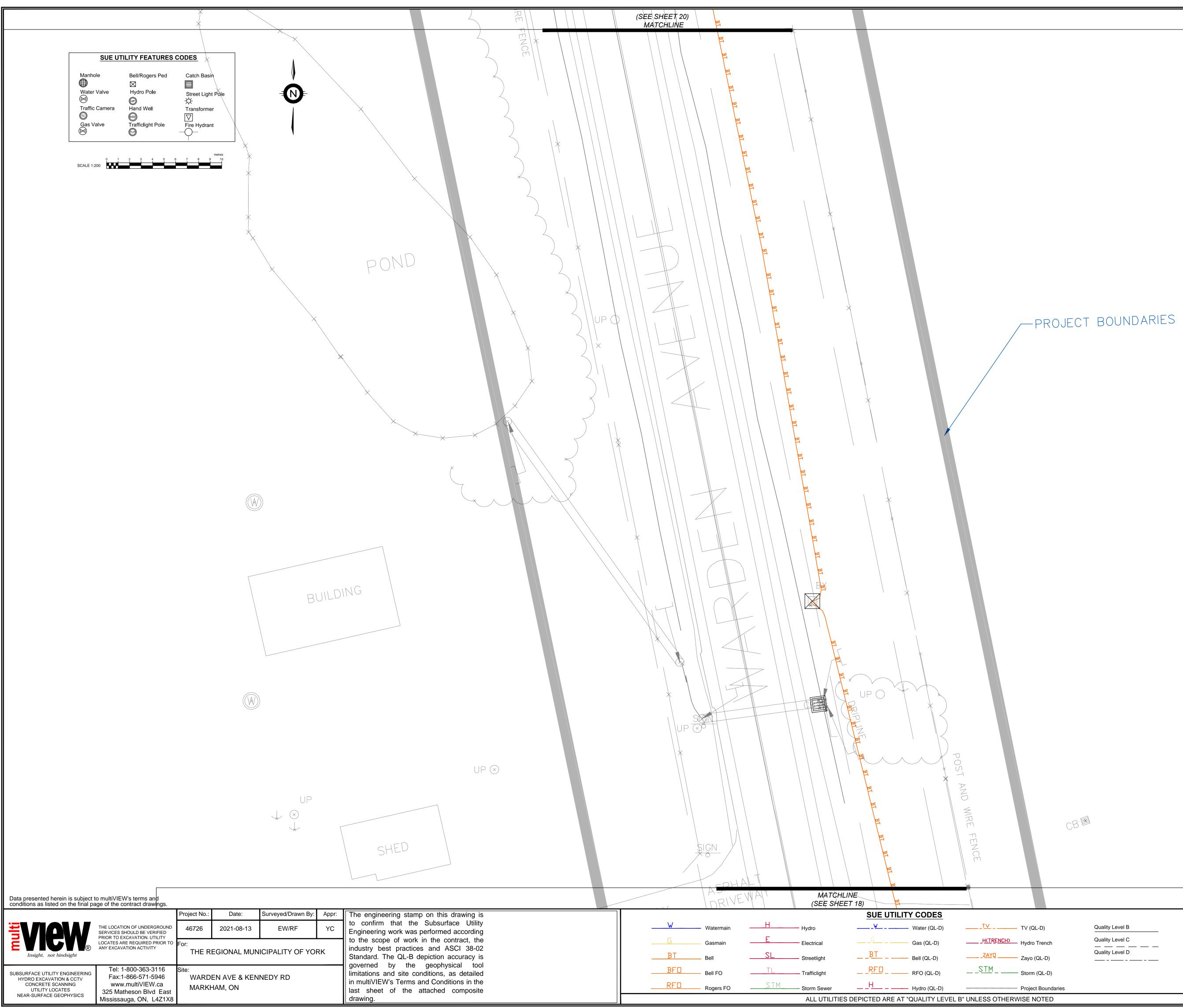
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SHEET 18 of 64 DRAWING No: 47626-SUE- DWG Quality Level B Rev. No. Drawn By Checked By Date Revision Quality Level C ----Quality Level D _____



Tel: 1-8	SUBSURFACE UTILITY ENGINEERING
Fax:1-8	HYDRO EXCAVATION & CCTV
www.r	CONCRETE SCANNING
325 Math	UTILITY LOCATES
Mississou	NEAR-SURFACE GEOPHYSICS

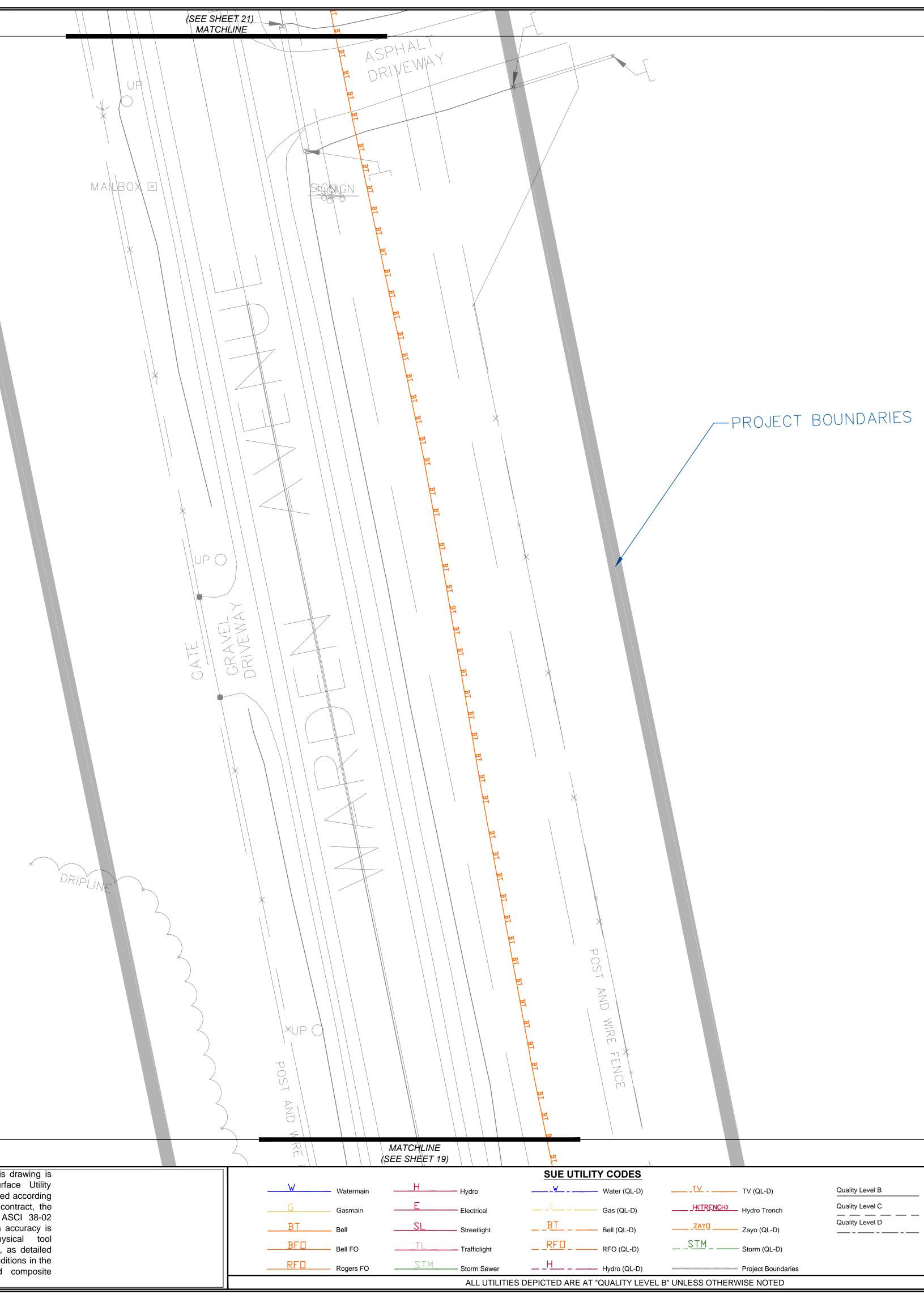
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Data presented herein is subject to conditions as listed on the final pa	o multiVIEW's terms and ge of the contract drawings.					×
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	THE LOCATION OF UNDERGROUND SERVICES SHOULD BE VERIFIED PRIOR TO EXCAVATION. UTILITY	46726	2021-08-13	EW/RF	YC	to confirm that the Engineering work was
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SUBSURFACE UTILITY ENGINEERING HYDRO EXCAVATION & CCTV CONCRETE SCANNING UTILITY LOCATES NEAR-SURFACE GEOPHYSICS	Tel: 1-800-363-3116 Fax:1-866-571-5946 www.multiVIEW.ca 325 Matheson Blvd East Mississauga, ON, L4Z1X8	MARKH	EN AVE & KEN IAM, ON	NEDY RD		governed by the limitations and site co in multiVIEW's Terms a last sheet of the drawing.

amp on this drawing is he Subsurface Utility as performed according brk in the contract, the sices and ASCI 38-02 B depiction accuracy is ne geophysical tool conditions, as detailed as and Conditions in the last sheet of the attached composite drawing.



Quality Level B	SHE	ET 20 c	of 64	DRAWING No: 47626-SUE- DWG	
	Rev. No.	Drawn By	Checked By	Date	Revision
Quality Level C	-	-	-	-	-
Quality Level D					

SUE UT		CODES
Manhole Water Valve S Traffic Camera C Gas Valve S C C	Bell/Rogers Ped	Catch Basin



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HYDRO EXCAVATION & CCTV CONCRETE SCANNING UTILITY LOCATES NEAR-SURFACE GEOPHYSICS	Fax:1-866-571-5946	
	www.multiVIEW.ca	
	325 Matheson Blvd East	
NEAR-SURFACE GEOFITISICS	Mississauga, ON, L4Z1X8	

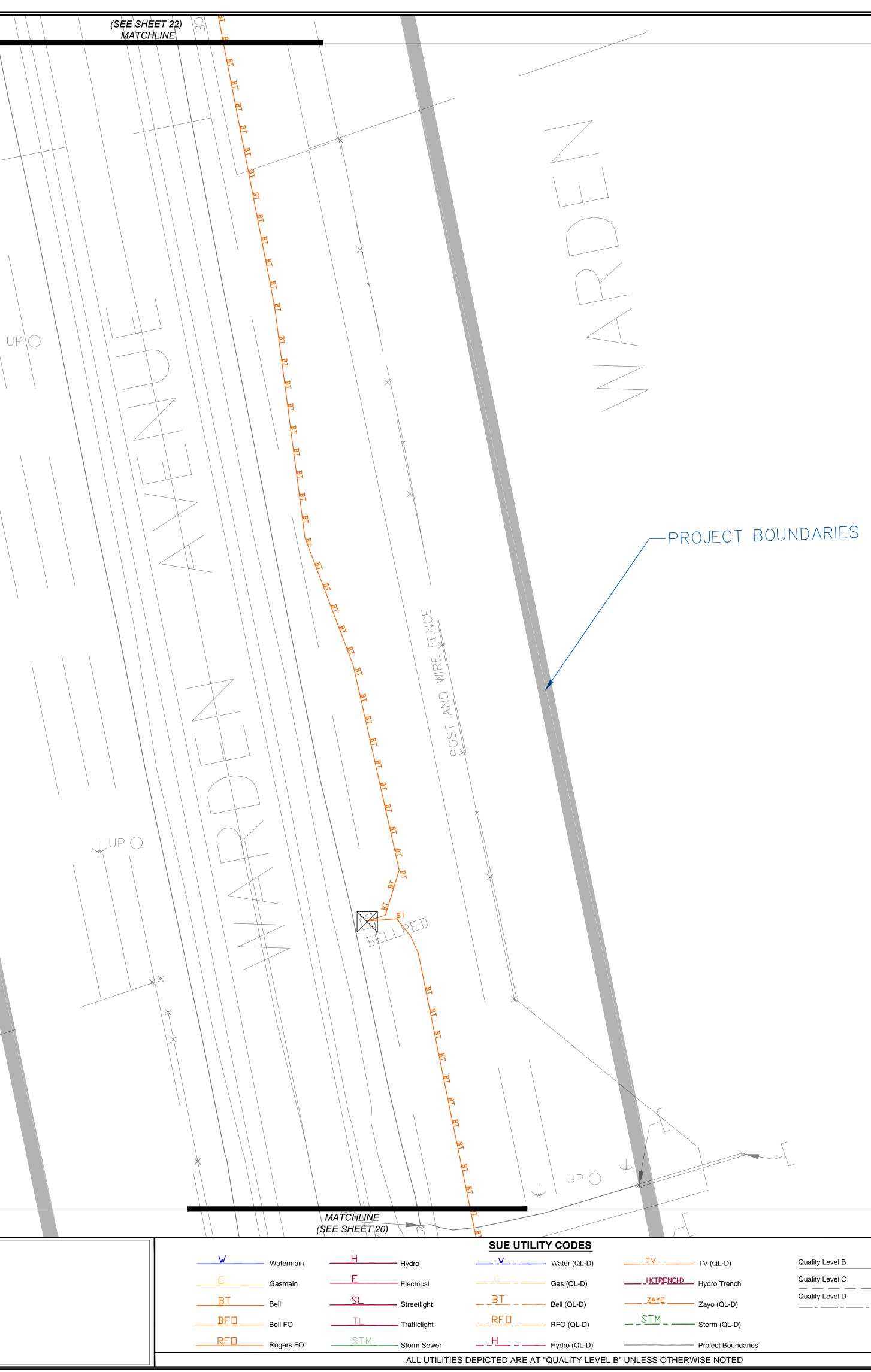
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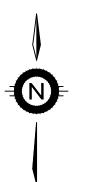
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	SHE	SHEET 21 of 64			DRAWING No: 47626-SUE- DWG
Quality Level B	Rev. No.	Drawn By	Checked By	Date	Revision
Quality Level C	-	-	-	-	-
Quality Level D					

SUE UT		CODES
Manhole Water Valve Color Traffic Camera Color Gas Valve Color Co	Bell/Rogers Ped	Catch Basin



Data presented herein is subject to conditions as listed on the final participations	to multiVIEW's terms and age of the contract drawings.				
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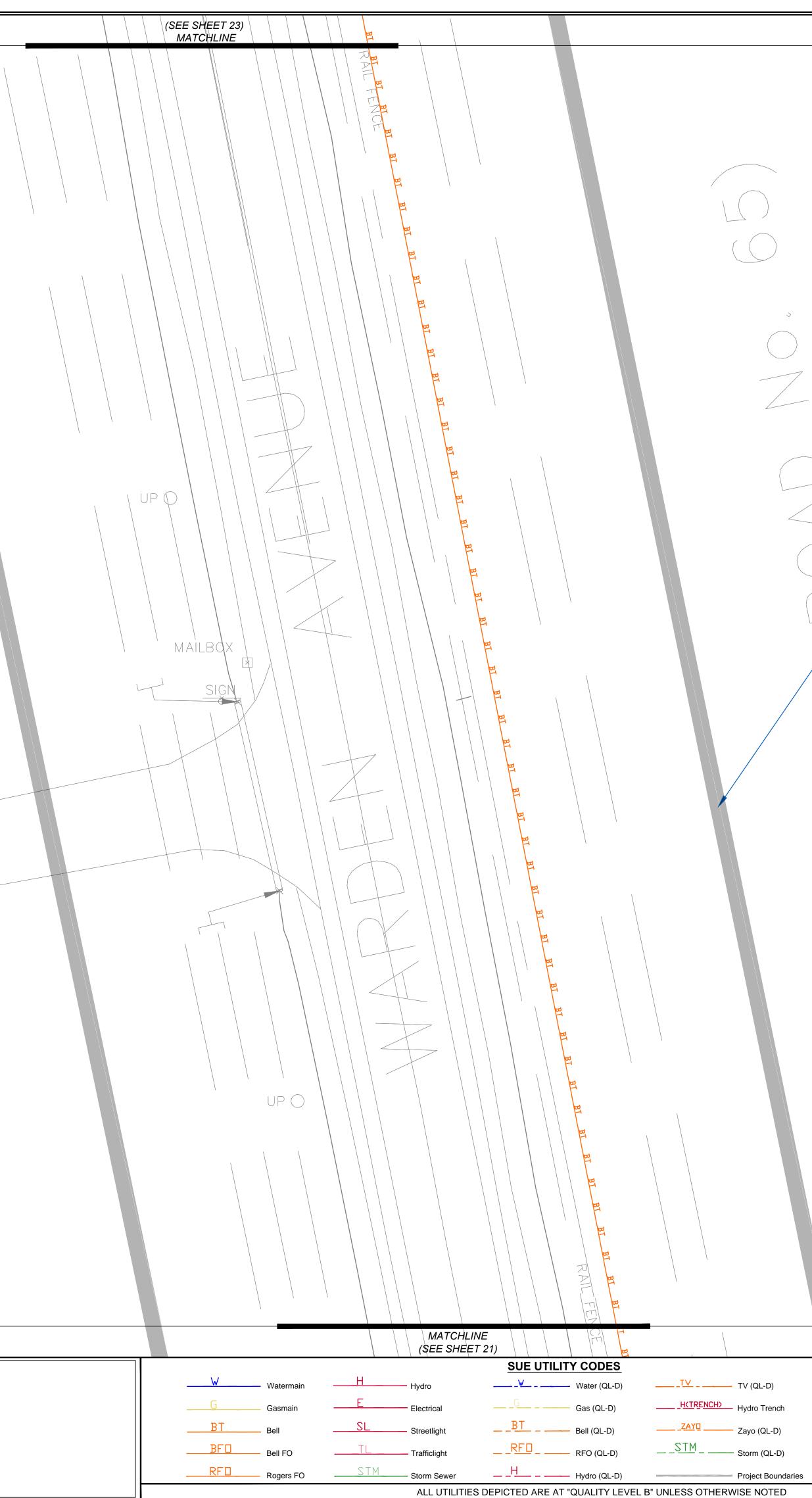
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800-363-3116	Site:
866-571-5946	WARDEN AVE & KENNEDY RD
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By: Appr: The engineering stamp on this drawing is to confirm that the Subsurface Utility Engineering work was performed according to the scope of work in the contract, the industry best practices and ASCI 38-02 Standard. The QL-B depiction accuracy is governed by the geophysical tool limitations and site conditions, as detailed in multiVIEW's Terms and Conditions in the last sheet of the attached composite drawing.

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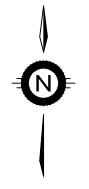


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Quality Level B	SHE	SHEET 22 of 64			DRAWING No: 47626-SUE- DWG
	Rev. No.	Rev. No. Drawn By Checked By Date Revision		Revision	
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<u>SUE UT</u>	ILITY FEATURES	CODES
Manhole Water Valve S Traffic Camera	Bell/Rogers Ped → Hydro Pole ← Hand Well ← Trafficlight Pole ←	Catch Basin

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Data presented herein is subject to multiVIEW's terms and conditions as listed on the final page of the contract drawings. Surveyed/Drawn By: Appr: The engineering stamp on this drawing is Date: Project No.: THE LOCATION OF UNDERGROUND SERVICES SHOULD BE VERIFIED PRIOR TO EXCAVATION. UTILITY LOCATES ARE REQUIRED PRIOR TO ANY EXCAVATION ACTIVITY 46726 2021-08-13 EW/RF YC

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	Tel: 1-80
SUBSURFACE UTILITY ENGINEERING HYDRO EXCAVATION & CCTV	Fax:1-86
CONCRETE SCANNING	www.mu
	325 Mathes
NEAR-SURFACE GEOPHYSICS	Mississauga

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866-571-5946	WARDEN AVE & KENNEDY RD
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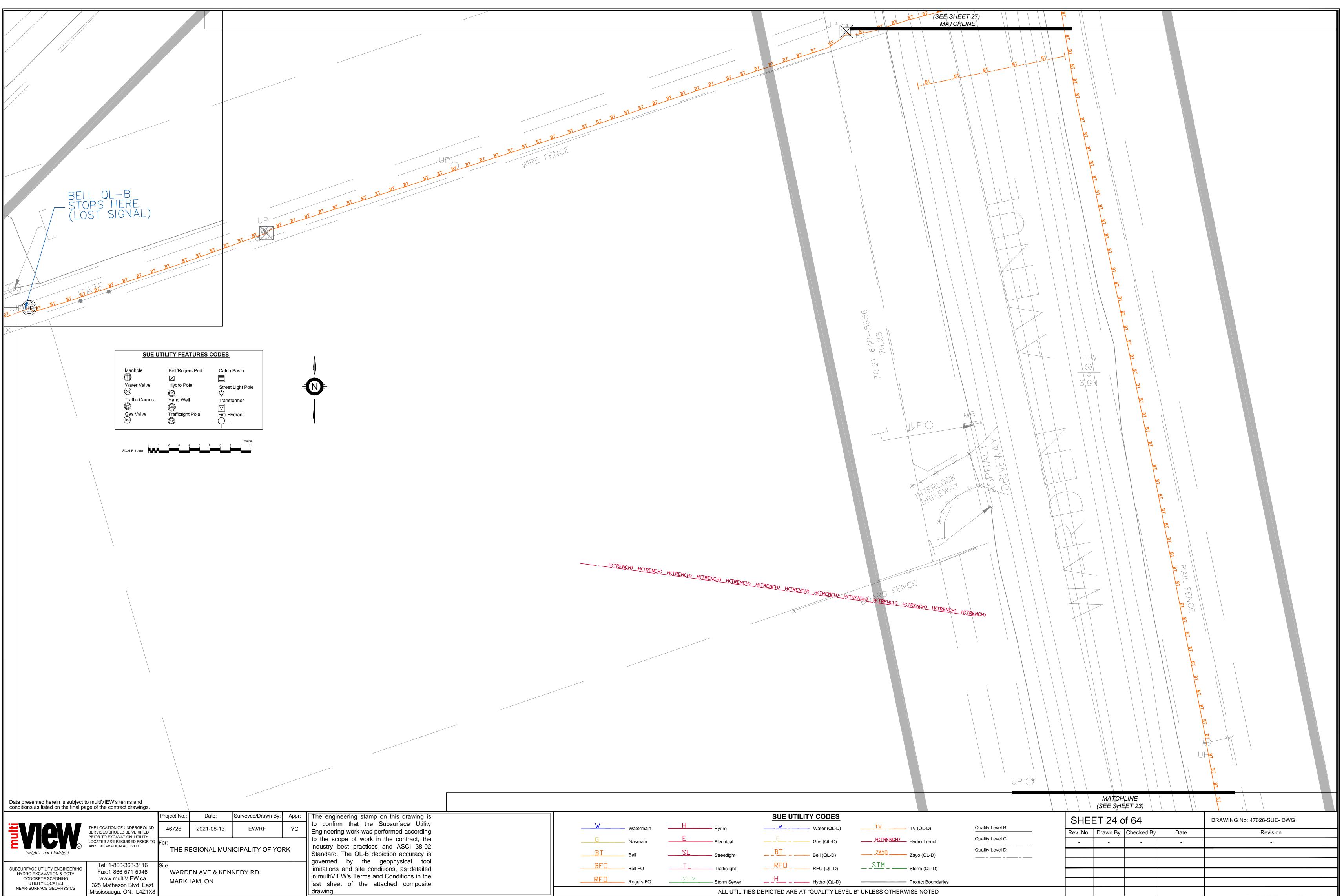
THE REGIONAL MUNICIPALITY OF YORK

to confirm that the Subsurface Utility Engineering work was performed according to the scope of work in the contract, the industry best practices and ASCI 38-02 Standard. The QL-B depiction accuracy is governed by the geophysical tool limitations and site conditions, as detailed in multiVIEW's Terms and Conditions in the last sheet of the attached composite drawing.

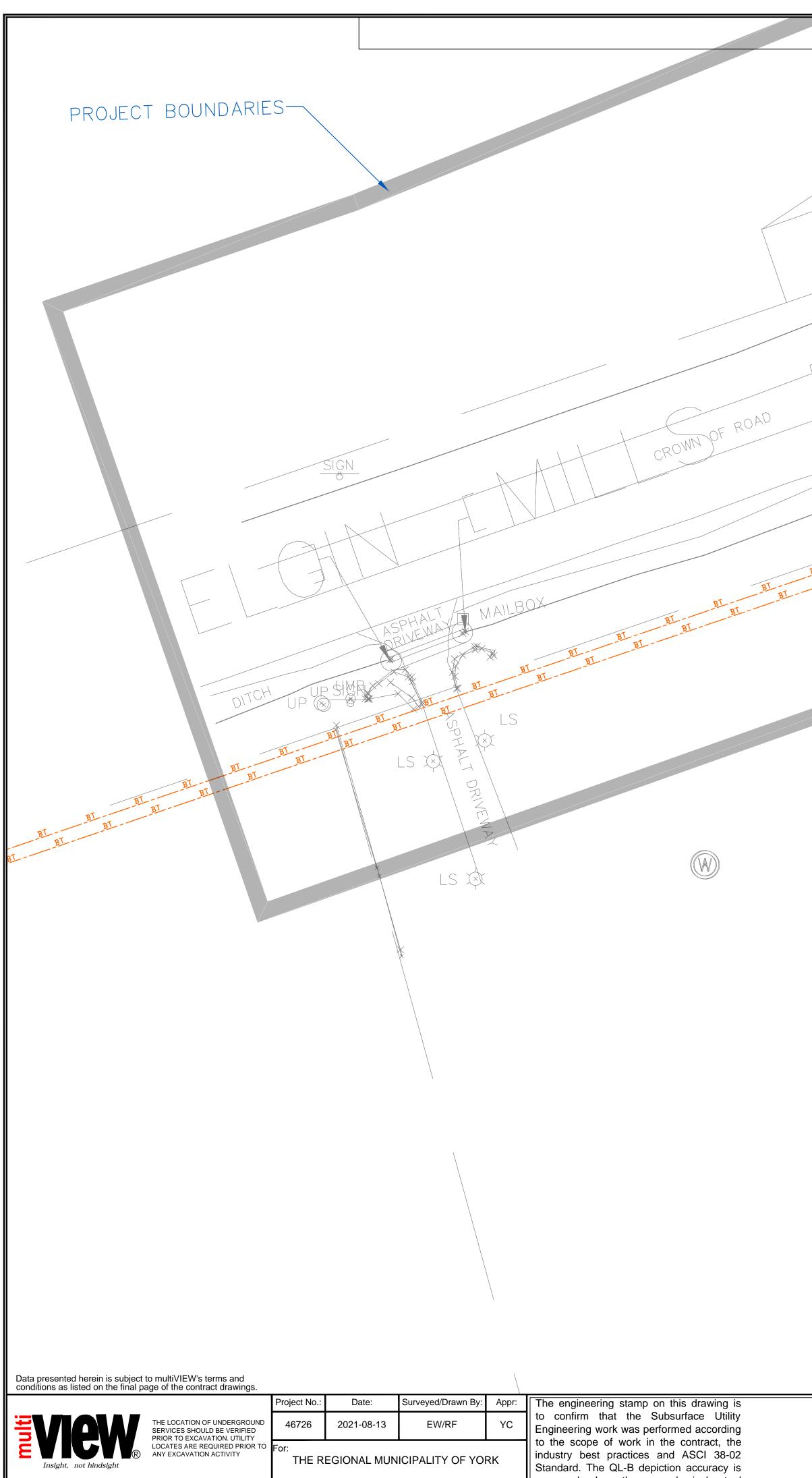
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BT	– Bell –	SL Streetlight	<u>BT</u>	Bell (QL-D)	<u>ZAYD</u>	– Zayo (QL-D)
BFD	- Bell FO	T Trafficlight	<u>_RFD</u>	——— RFO (QL-D)	<u>_STM</u>	— Storm (QL-D)
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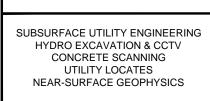
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	SHEI	ET 23 c	of 64	DRAWING No: 47626-SUE- DWG	
Quality Level B	Rev. No.	Drawn By	Checked By	Date	Revision
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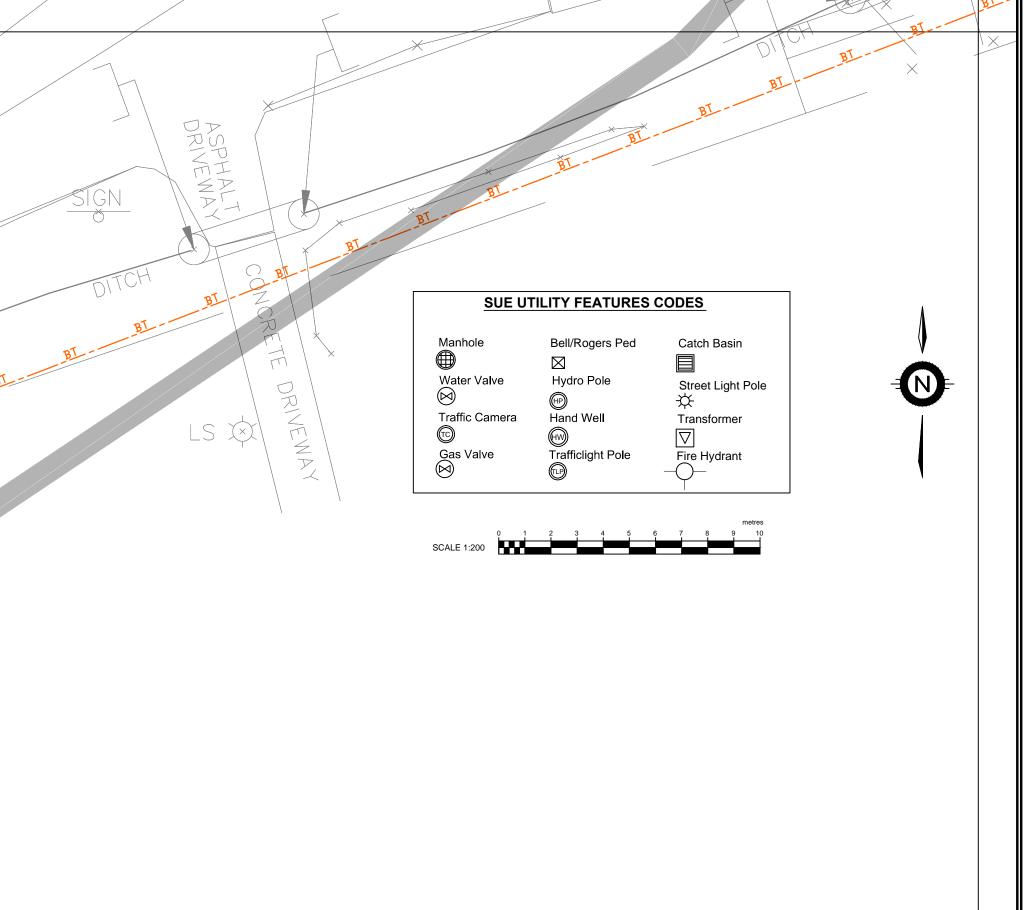


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WARDEN AVE & KENNEDY RD MARKHAM, ON

governed by the geophysical tool limitations and site conditions, as detailed in multiVIEW's Terms and Conditions in the last sheet of the attached composite drawing.

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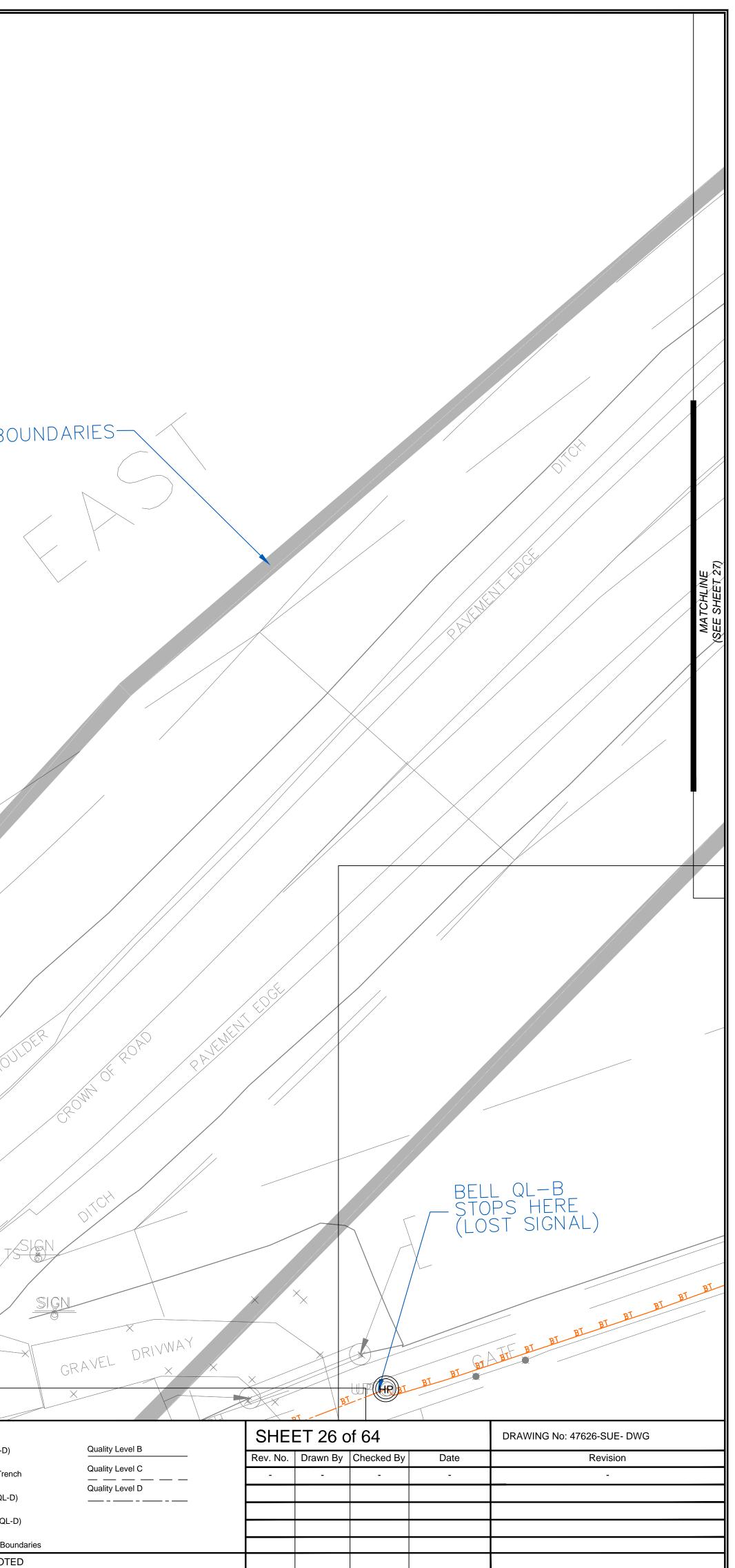
SUE UT	ILITY FEATURES	CODES
Manhole Water Valve S Traffic Camera C Gas Valve S S	Bell/Rogers Ped	Catch Basin
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No records/utilities found in this area

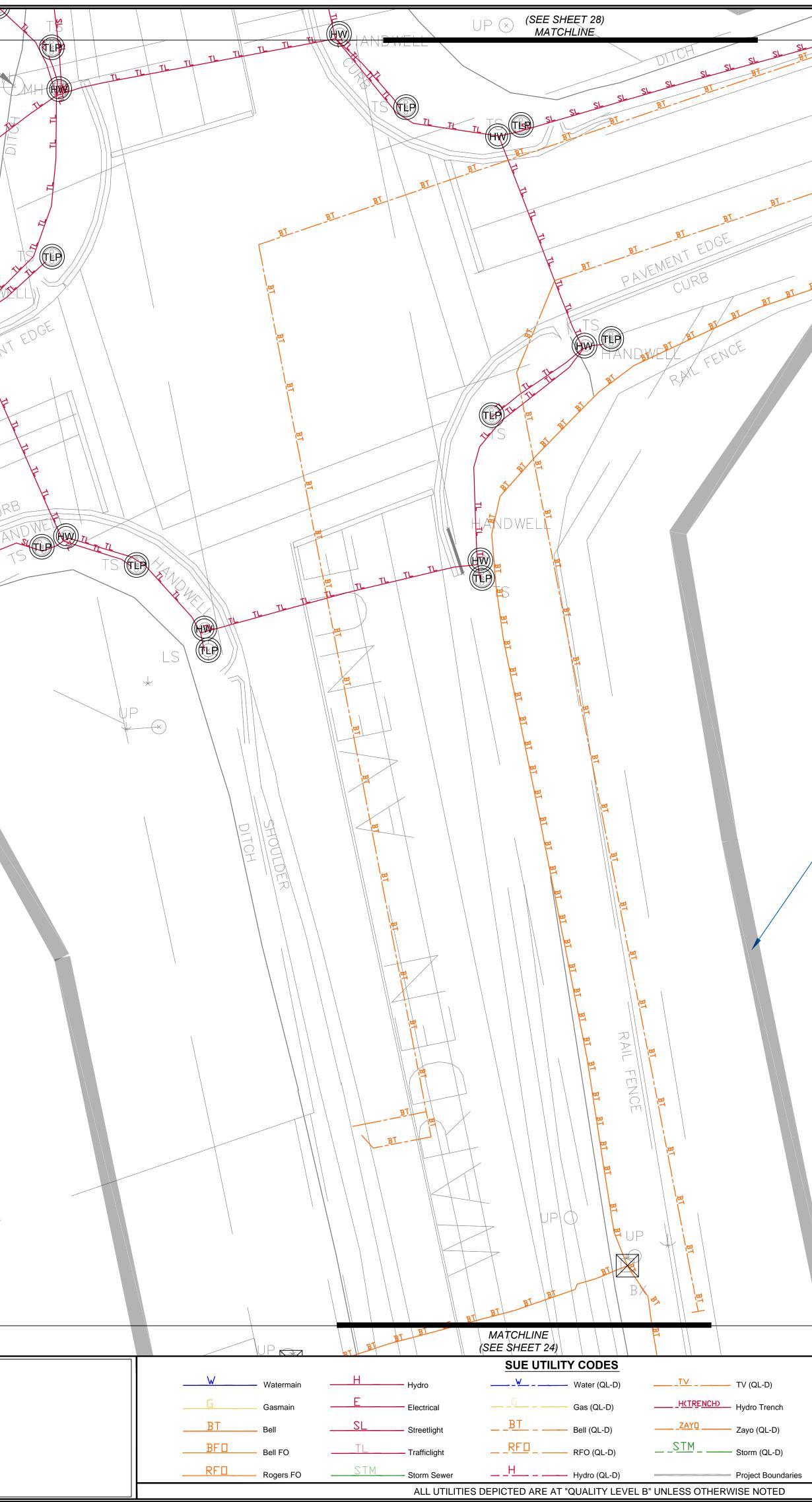
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		Project No.:	Date:	Surveyed/Drawn By:	Appr:	The engineering stamp on this drawing is	
	THE LOCATION OF UNDERGROUND SERVICES SHOULD BE VERIFIED PRIOR TO EXCAVATION. UTILITY	46726	2021-08-13	EW/RF	YC	to confirm that the Subsurface Utility Engineering work was performed according	
E I I G V R Insight, not hindsight	LOCATES ARE REQUIRED PRIOR TO ANY EXCAVATION ACTIVITY		IICIPALITY OF YOF	RK	to the scope of work in the contract, the industry best practices and ASCI 38-02 Standard. The QL-B depiction accuracy is governed by the geophysical tool		
SUBSURFACE UTILITY ENGINEERING HYDRO EXCAVATION & CCTV CONCRETE SCANNING UTILITY LOCATES NEAR-SURFACE GEOPHYSICS	Tel: 1-800-363-3116 Fax:1-866-571-5946 www.multiVIEW.ca 325 Matheson Blvd East Mississauga, ON, L4Z1X8		EN AVE & KEN IAM, ON	INEDY RD		limitations and site conditions, as detailed in multiVIEW's Terms and Conditions in the last sheet of the attached composite drawing.	

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<u>B</u> T	Bell	<u> </u>	Streetlight	<u>BT</u>	Bell (QL-D)	<u>ZAYD</u>	Zayo (QL-D)
<u>BF</u>	Bell FO	TL	Trafficlight	<u></u>	RFO (QL-D)	<u>_STM</u>	— Storm (QL-D)
	Rogers FO	STM	— Storm Sewer	<u>H</u>	Hydro (QL-D)		Project Bounda
			ALL UTILITI	ES DEPICTED ARE A	T "QUALITY LEVEI	L B" UNLESS OTHER	RWISE NOTED



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	THE LOCATION OF UNDERGROUND SERVICES SHOULD BE VERIFIED PRIOR TO EXCAVATION. UTILITY LOCATES ARE REQUIRED PRIOR TO ANY EXCAVATION ACTIVITY	46726 2021-08-13 For: THE REGIONAL MU		YC	to confirm that the Subsur Engineering work was performe to the scope of work in the c industry best practices and A	ed according contract, the ASCI 38-02
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	Quality Level B	SHEET 27 of 64				DRAWING No: 47626-SUE- DWG
		Rev. No.	Drawn By	Checked By	Date	Revision
	Quality Level C	-	-	-	-	-
	Quality Level D					

SUE UT	ILITY FEATURES	CODES
Manhole Water Valve Sas Valve Gas Valve Sas Valve	Bell/Rogers Ped	Catch Basin



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	Project No.:	Date:

THE LOCATION OF UNDERGROUND SERVICES SHOULD BE VERIFIED PRIOR TO EXCAVATION. UTILITY LOCATES ARE REQUIRED PRIOR TO ANY EXCAVATION ACTIVITY



SUBSURFACE UTILITY ENGINEERING	Tel: 1-800-36
HYDRO EXCAVATION & CCTV	Fax:1-866-57
CONCRETE SCANNING	www.multiVI
UTILITY LOCATES NEAR-SURFACE GEOPHYSICS	325 Matheson I
NEAR-SURFACE GEOFITSICS	Mississauga, ON

0-363-3116	Site:
6-571-5946	WARDEN AVE & KENNEDY RD
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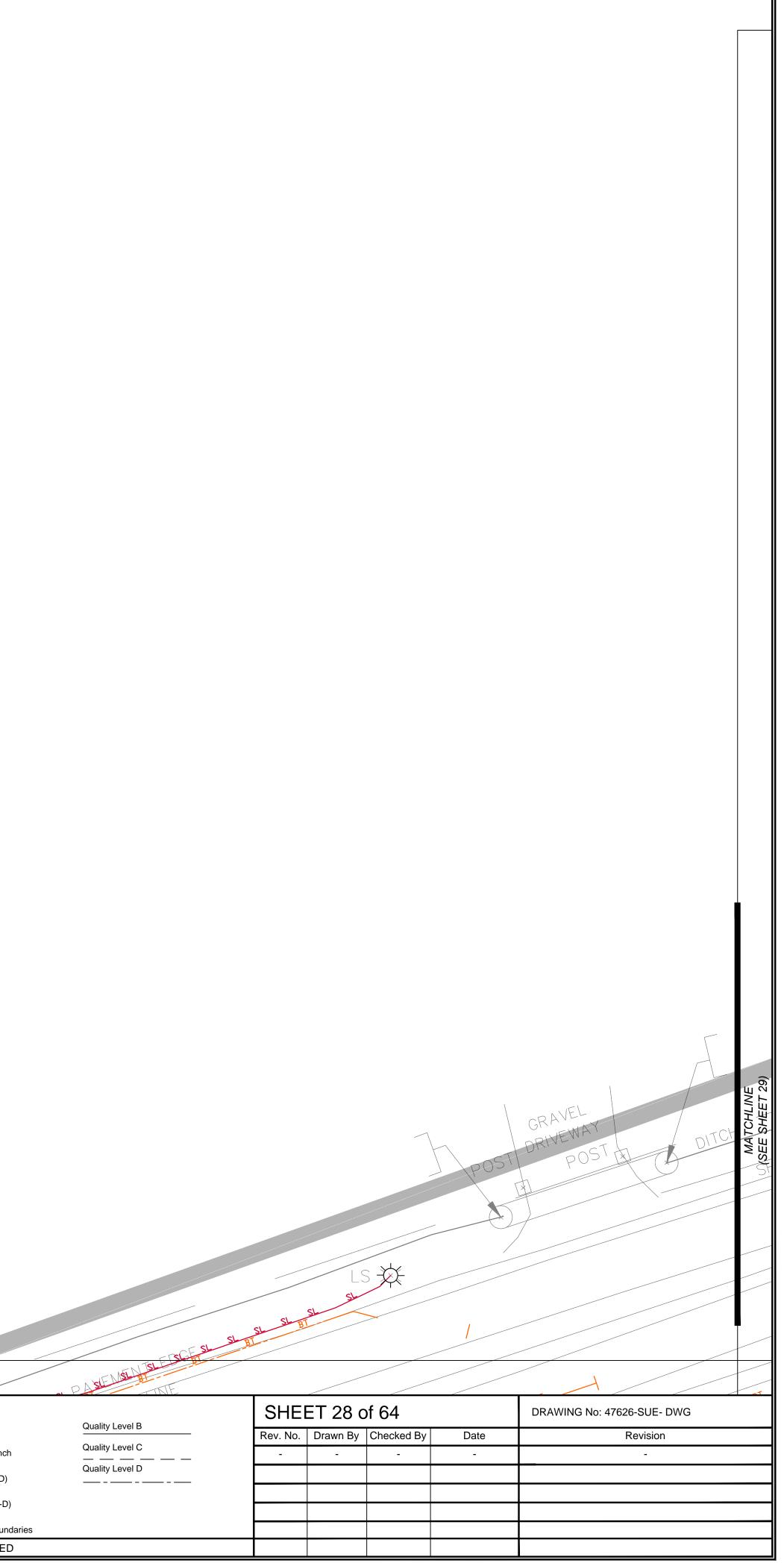
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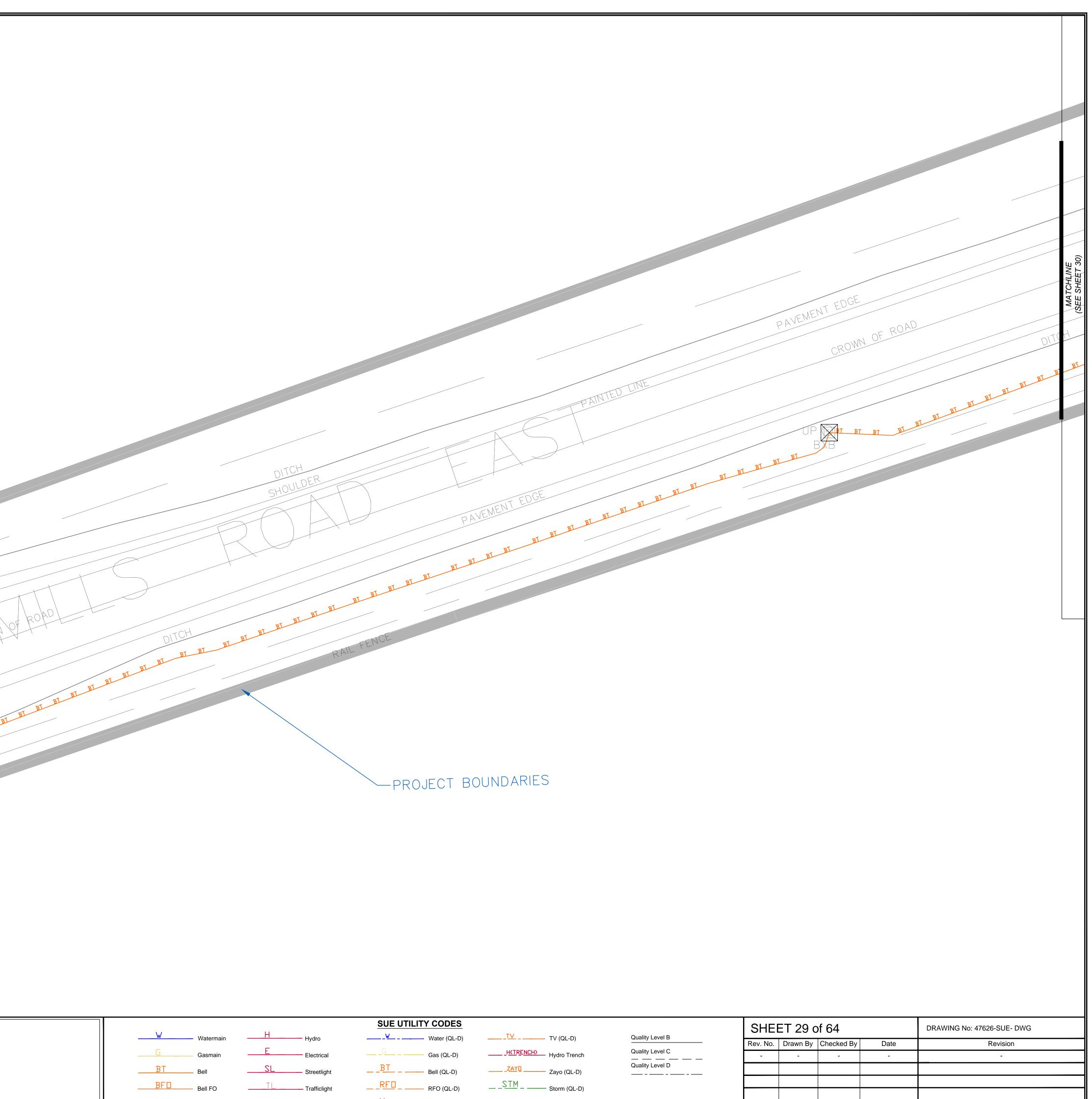
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(SEE SHEET 31)		
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	SEE SHEET 27) SUE UTILITY CODES W Watermain H Hydro Water (QL-D) G Gasmain E Electrical -G Gas (QL-D) BT Bell SL Streetlight -BT Bell (QL-D)	<u>H(TRENCH)</u> Hydro Trench <u>ZAYD</u> Zayo (QL-D)
	BFD Bell FO TL Trafficlight RFD	
	ALL UTILITIES DEPICTED ARE AT "QUALITY LEV	VEL B" UNLESS OTHERWISE NOTED



SUE UTILITY FEATURESManholeBell/Rogers Ped $ \\ \\ Water ValveHydro Pole \\ \\ \hline \\$	Catch Basin □ Street Light Pole ↓ Transformer □ Fire Hydrant ↓				
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Manhole	Bell/Rogers Ped	Catch Basin
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Gas Valve	Trafficlight Pole	Fire Hydrant
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SUBSURFACE UTILITY ENGINEERING HYDRO EXCAVATION & CCTV CONCRETE SCANNING UTILITY LOCATES NEAR-SURFACE GEOPHYSICS

		Project No.:	Date:	Surveyed/Drawn By:	Appr:
	THE LOCATION OF UNDERGROUND SERVICES SHOULD BE VERIFIED PRIOR TO EXCAVATION. UTILITY	46726	2021-08-13	EW/RF	YC
LOCATES ARE REQUIRED PRIOR TO ANY EXCAVATION ACTIVITY		For: THE R	EGIONAL MUN	ICIPALITY OF YOI	٦К
	Tel: 1-800-363-3116 Fax:1-866-571-5946	Site: WARD	EN AVE & KEN	NEDY RD	

WARDEN AVE & KENNEDY RD MARKHAM, ON

Appr: The engineering stamp on this drawing is to confirm that the Subsurface Utility Engineering work was performed according to the scope of work in the contract, the industry best practices and ASCI 38-02 Standard. The QL-B depiction accuracy is governed by the geophysical tool limitations and site conditions, as detailed in multiVIEW's Terms and Conditions in the last sheet of the attached composite drawing.

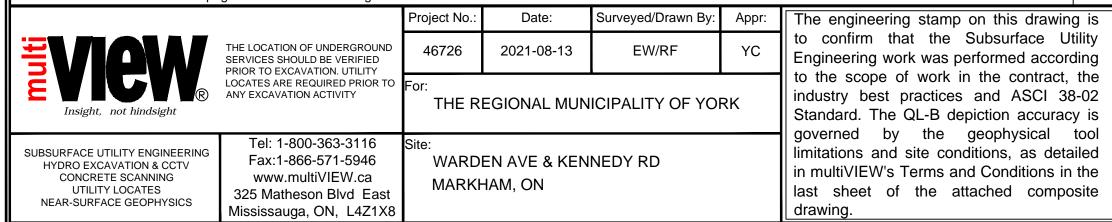
-PROJECT BOUNDARIES

SUE UTILITY CODES _____ _ <u>W___</u> _ _____ Water (QL-D) _____ _TV_ _ _____ TV (QL-D) _____H(TRENCH) Hydro Trench _____ Gas (QL-D) - Electrical ____BT___ Bell (QL-D) _____ZAYD _____ Zayo (QL-D) BT - Streetlight _____RFD_______ RFO (QL-D) ____<u>STM</u> _ ____ Storm (QL-D) _____T ____ Trafficlight BFD Bell FO ______RFD_____Rogers FO _____STM____Storm Sewer ____H___ Project Boundaries ALL UTILITIES DEPICTED ARE AT "QUALITY LEVEL B" UNLESS OTHERWISE NOTED

Quality Level B	SHEET 30 of 64				DRAWING No: 47626-SUE- DWG
	Rev. No.	Drawn By	Checked By	Date	Revision
Quality Level C	-	-	-	-	-
Quality Level D					

No records/utilities found in this area

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to confirm that the Subsurface Utility Engineering work was performed according to the scope of work in the contract, the industry best practices and ASCI 38-02 Standard. The QL-B depiction accuracy is governed by the geophysical tool limitations and site conditions, as detailed in multiVIEW's Terms and Conditions in the last sheet of the attached composite drawing.

SIDE SHEET 32) MATCHLINE		Sue utility Features codes Manhole Bell/Rogers Ped Catch Basin Water Valve Hydro Pole Street Light Pole Image: Catch Basin <
POST POST POST POST		-PROJECT BOUNDARIES
BT Bell Streetlight - BT Bell (QL-D) ZAYD	TV (QL-D) Quality Level B Hydro Trench Quality Level C Zayo (QL-D) Storm (QL-D) Project Boundaries	SHEET 31 of 64 DRAWING No: 47626-SUE- DWG Rev. No. Drawn By Checked By Date Revision - - - - - Image: Sheet of the state of the

ALL UTILITIES DEPICTED ARE AT "QUALITY LEVEL B" UNLESS OTHERWISE NOTED

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	THE LOCATION OF UNDERGROUND SERVICES SHOULD BE VERIFIED PRIOR TO EXCAVATION. UTILITY LOCATES ARE REQUIRED PRIOR TO ANY EXCAVATION ACTIVITY	Project No.:	Date:	Surveyed/Drawn By:	Appr:	The engineering
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SUBSURFACE UTILITY ENGINEERING HYDRO EXCAVATION & CCTV CONCRETE SCANNING UTILITY LOCATES NEAR-SURFACE GEOPHYSICS	BSURFACE UTILITY ENGINEERING HYDRO EXCAVATION & CCTV CONCRETE SCANNING UTILITY LOCATES 325 Matheson Blvd, Fast		Site: WARDEN AVE & KENNEDY RD MARKHAM, ON			

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Manhole	Bell/Rogers Ped	Catch Basin
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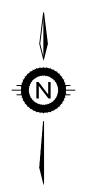
PROJECT BOUNDARIES

 Quality Level B
 SHEET 32 of 64
 DRAWING No: 47626-SUE- DWG

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Data presented herein is subject to multiVIEW's terms and conditions as listed on the final page of the contract drawings.



Tel: 1-800-363-3116 Site: Fax:1-866-571-5946 SUBSURFACE UTILITY ENGINEERING HYDRO EXCAVATION & CCTV CONCRETE SCANNING UTILITY LOCATES NEAR-SURFACE GEOPHYSICS www.multiVIEW.ca 325 Matheson Blvd East Mississauga, ON, L4Z1X8

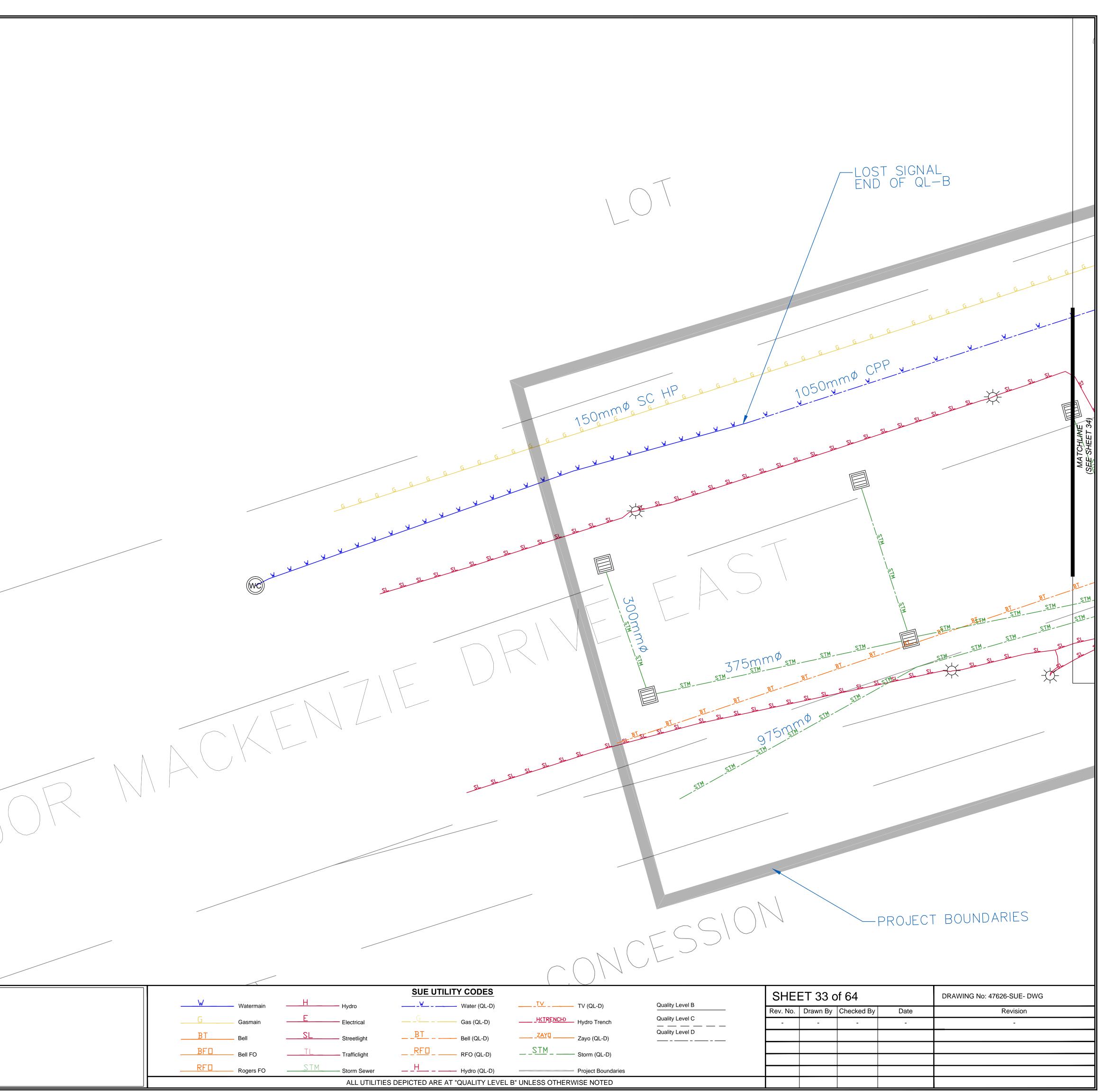
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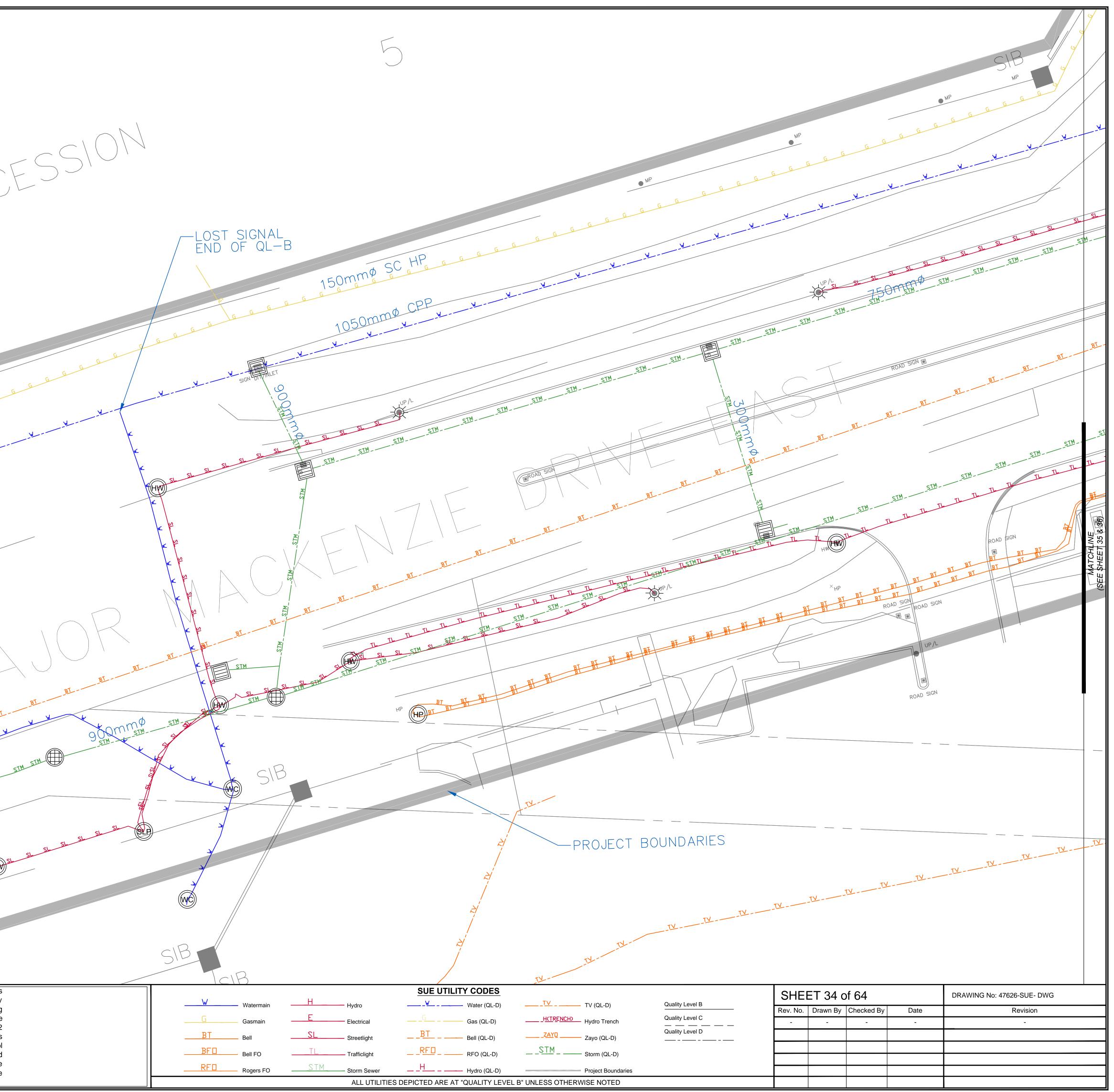
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Insight, not hindsight		THE REGIONAL MUNIC	IPALITY OF YORK	industry best practices and ASCI 38-02 Standard. The QL-B depiction accuracy is
	Tel: 1-800-363-3116 Fax:1-866-571-5946	Site: WARDEN AVE & KENNE		governed by the geophysical tool limitations and site conditions, as detailed
HYDRO EXCAVATION & CCTV CONCRETE SCANNING UTILITY LOCATES	www.multiVIEW.ca 325 Matheson Blvd East	MARKHAM, ON		in multiVIEW's Terms and Conditions in the last sheet of the attached composite
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SUBSURFACE UTILITY ENGINEERING HYDRO EXCAVATION & CCTV CONCRETE SCANNING UTILITY LOCATES NEAR-SURFACE GEOPHYSICS HYDRO EXCAVATION & CCTV CONCRETE SCANNING UTILITY LOCATES NEAR-SURFACE GEOPHYSICS	Site: WARDEN AVE & KEN MARKHAM, ON	NNEDY RD	limitations and site conditions, as detailed in multiVIEW's Terms and Conditions in the last sheet of the attached composite drawing.	

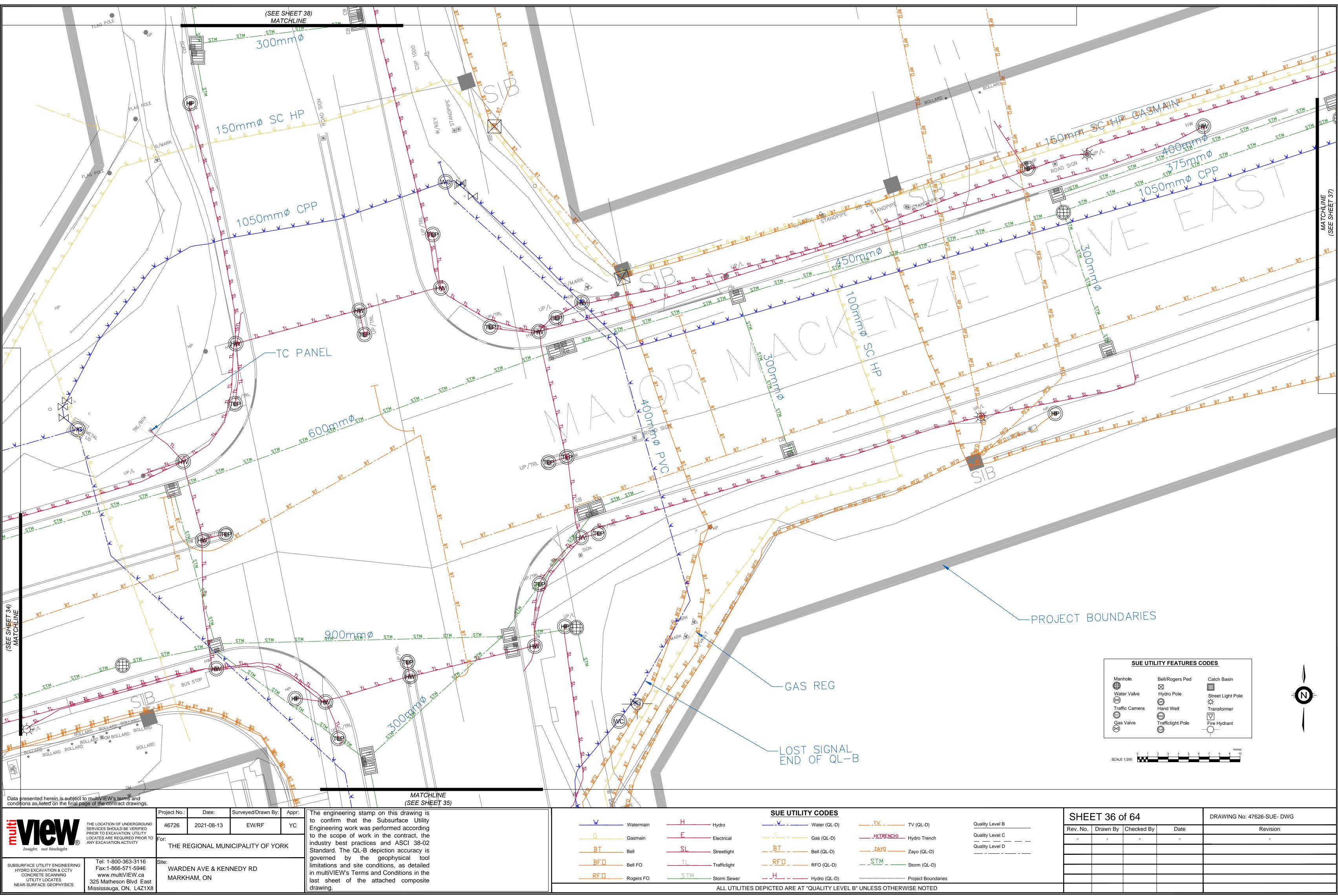
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	www.multiVIEW.ca					
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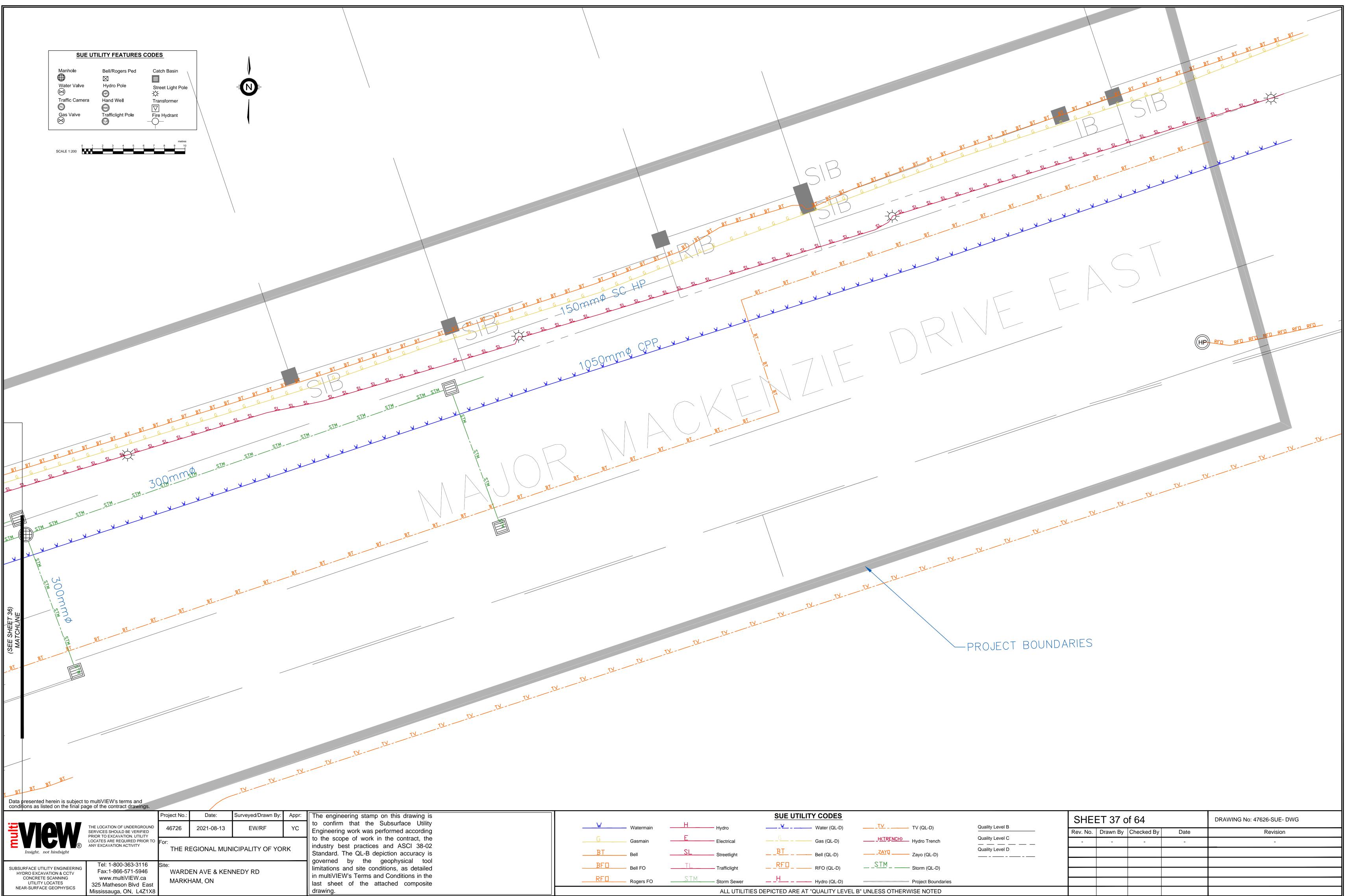


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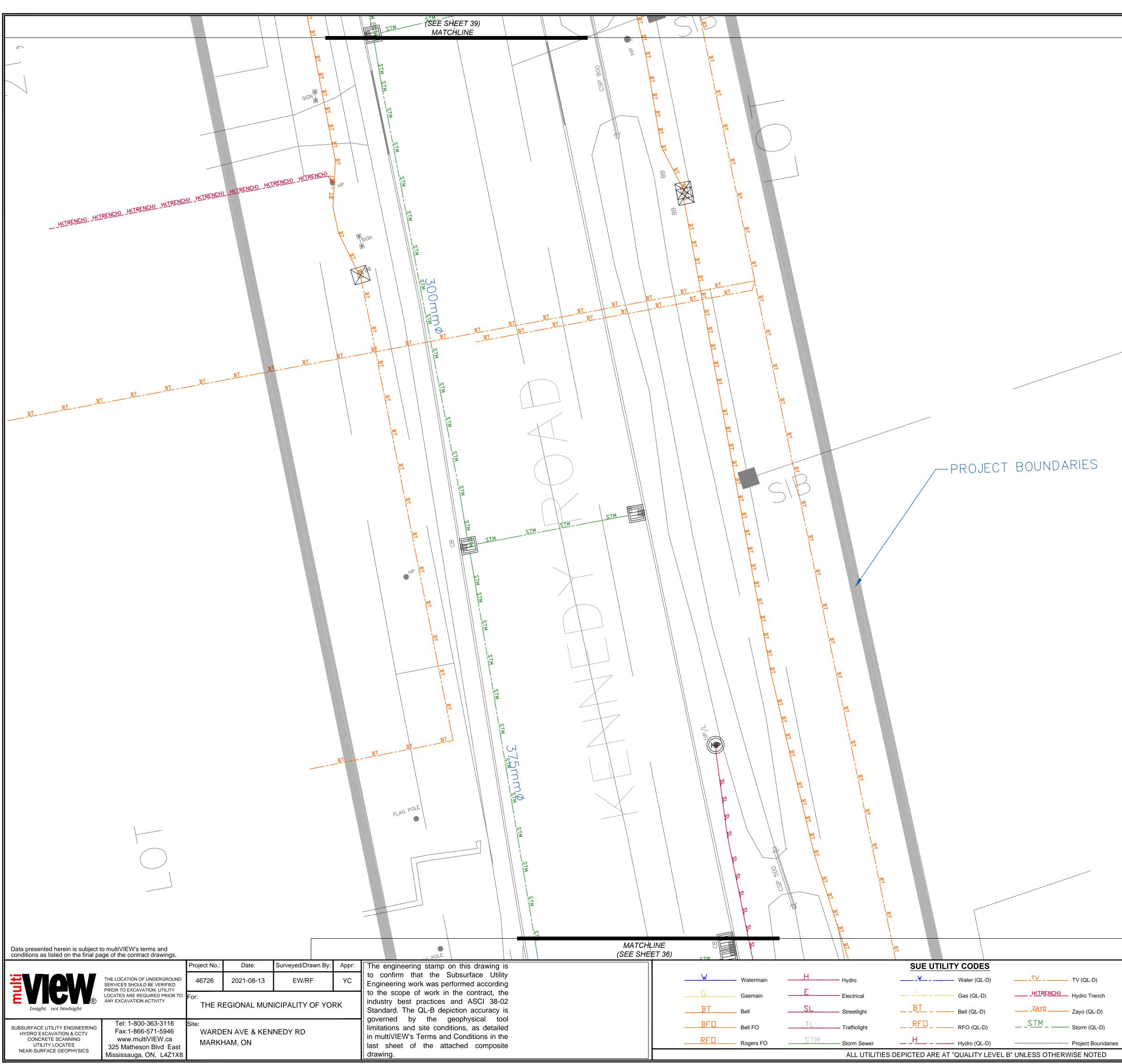
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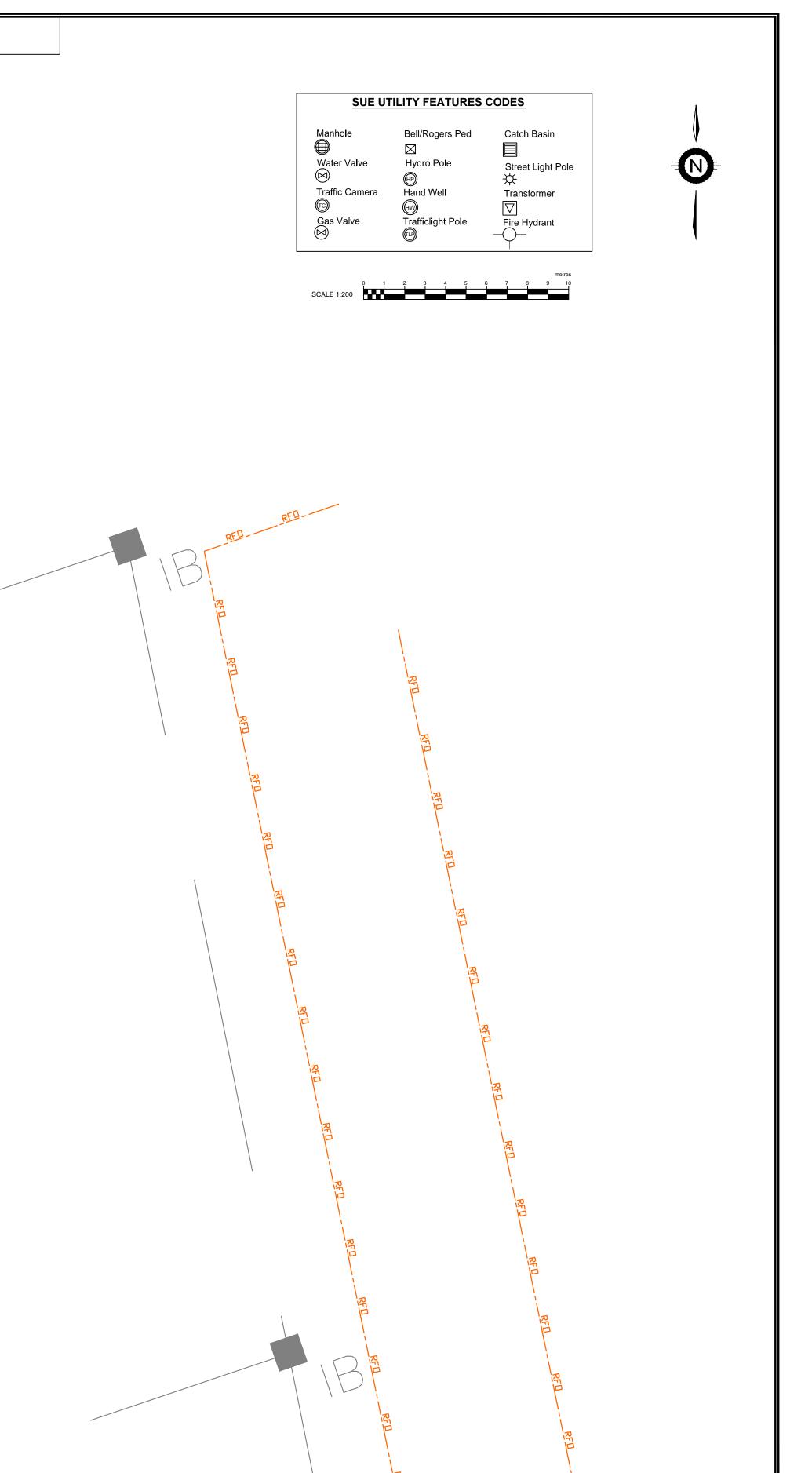




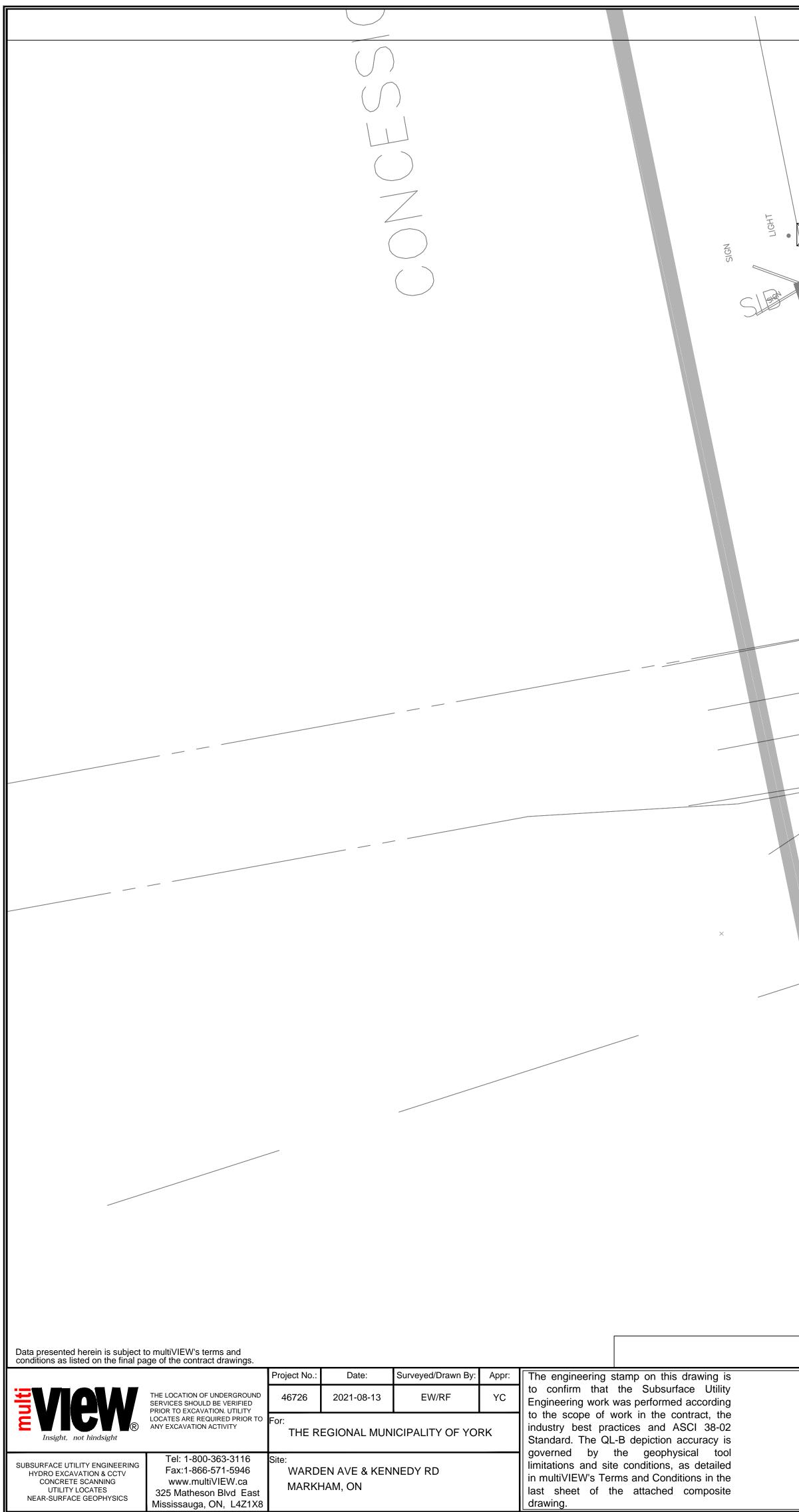
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Gasmain	Electrical	G Gas (QL-D)	H(TRENCH) Hydro Trench
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BFD Bell FO	T L Trafficlight		<u>STM</u> Storm (QL-D)
RFD Rogers FO	STM Storm Sewer	H Hydro (QL-D)	Project Bounda
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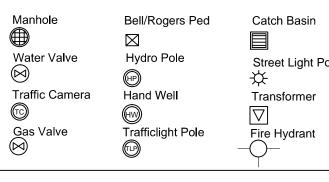


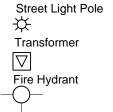
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SHEET 39 of 64				DRAWING No: 47626-SUE- DWG		
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SUE UTILITY FEATURES CODES

Manhole Water Valve S Traffic Camera C Gas Valve	Bell/Rogers Ped Hydro Pole (HP) Hand Well (HV) Trafficlight Pole (TP)	Catch Basin
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Data presented herein is subject to multiVIEW's terms and conditions as listed on the final page of the contract drawings. Date: Project No.:

THE LOCATION OF UNDERGROUND SERVICES SHOULD BE VERIFIED PRIOR TO EXCAVATION. UTILITY LOCATES ARE REQUIRED PRIOR TO ANY EXCAVATION ACTIVITY THE R



	Tel: 1-800
SUBSURFACE UTILITY ENGINEERING HYDRO EXCAVATION & CCTV	Fax:1-866
CONCRETE SCANNING	www.mu
	325 Mathes
NEAR-SURFACE GEOPHYSICS	Mississauga

ax:1-866-571-5946 www.multiVIEW.ca Matheson Blvd East	Site: WARDEN AVE & KENNEDY RD MARKHAM, ON
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2021-08-13

THE REGIONAL MUNICIPALITY OF YORK

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 Engineering work was performed according to the scope of work in the contract, the industry best practices and ASCI 38-02 Standard. The QL-B depiction accuracy is governed by the geophysical tool limitations and site conditions, as detailed in multiVIEW's Terms and Conditions in the last sheet of the attached composite drawing.

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SUBSURFACE UTILITY ENGINEERING HYDRO EXCAVATION & CCTV CONCRETE SCANNING UTILITY LOCATES NEAR-SURFACE GEOPHYSICS	Tel: 1-800-363-3116 Fax:1-866-571-5946 www.multiVIEW.ca 325 Matheson Blvd East	S
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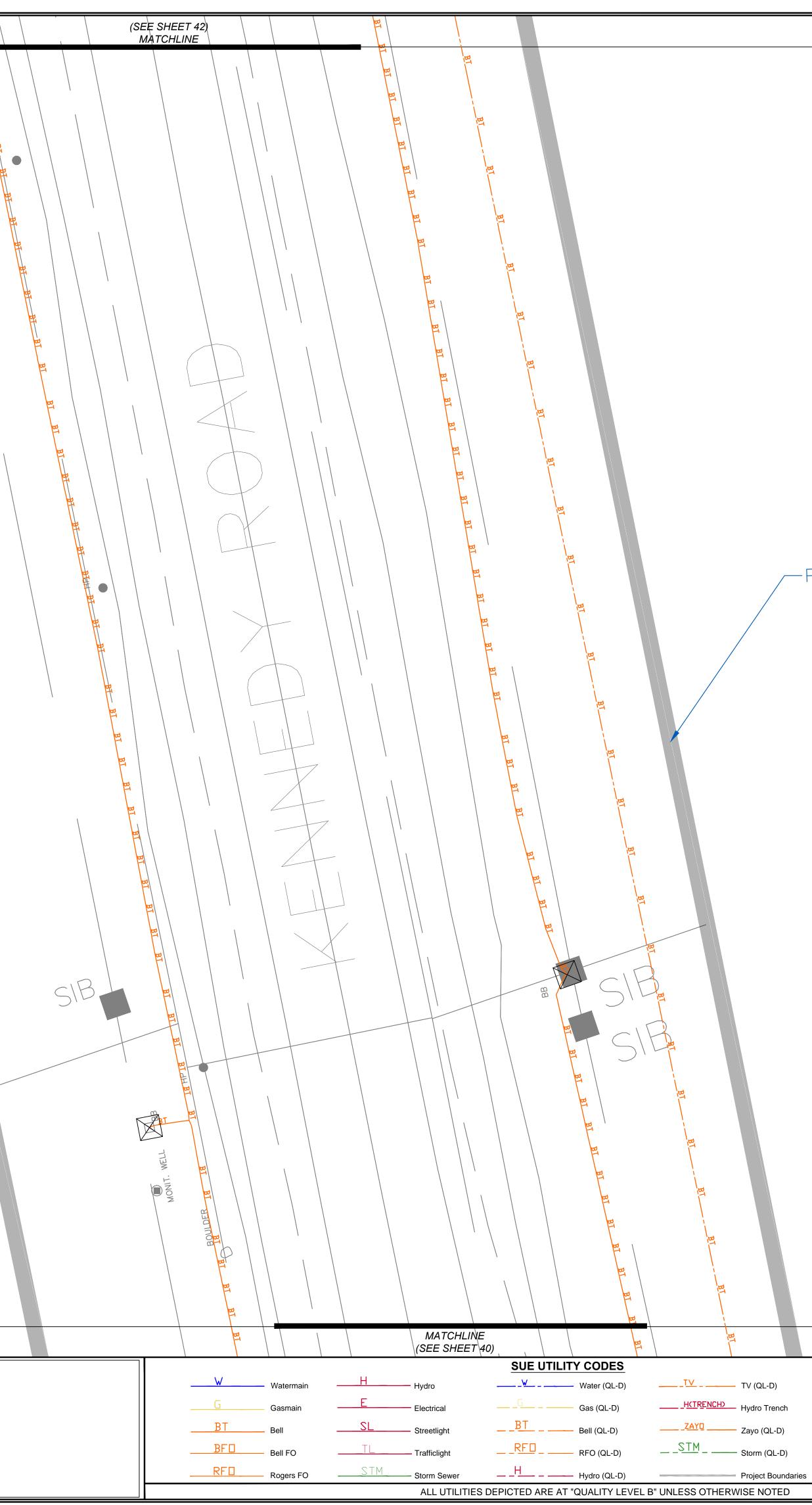
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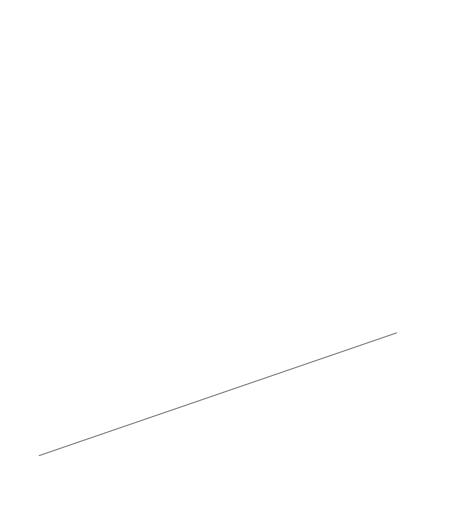
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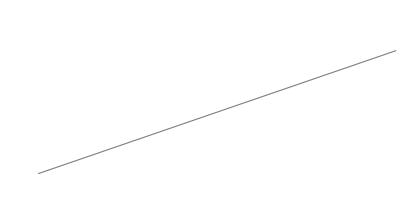
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	SHEET 41 of 64	DRAWING No: 47626-SUE- DWG
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SUBSURFACE UTILITY ENGINEERING HYDRO EXCAVATION & CCTV CONCRETE SCANNING UTILITY LOCATES NEAR-SURFACE GEOPHYSICS	Tel: 1-800-363-3116 Fax:1-866-571-5946 www.multiVIEW.ca 325 Matheson Blvd East Mississauga, ON, L4Z1X8	Site: WARDEN A MARKHAM	VE & KENNE , ON	EDY RD		governed by the geophysical tool limitations and site conditions, as detailed in multiVIEW's Terms and Conditions in the last sheet of the attached composite drawing.

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SHEET 42 of 64 DRAWING No: 47626-SUE- DWG Quality Level B Rev. No. Drawn By Checked By Date Revision Quality Level C -----Quality Level D _____

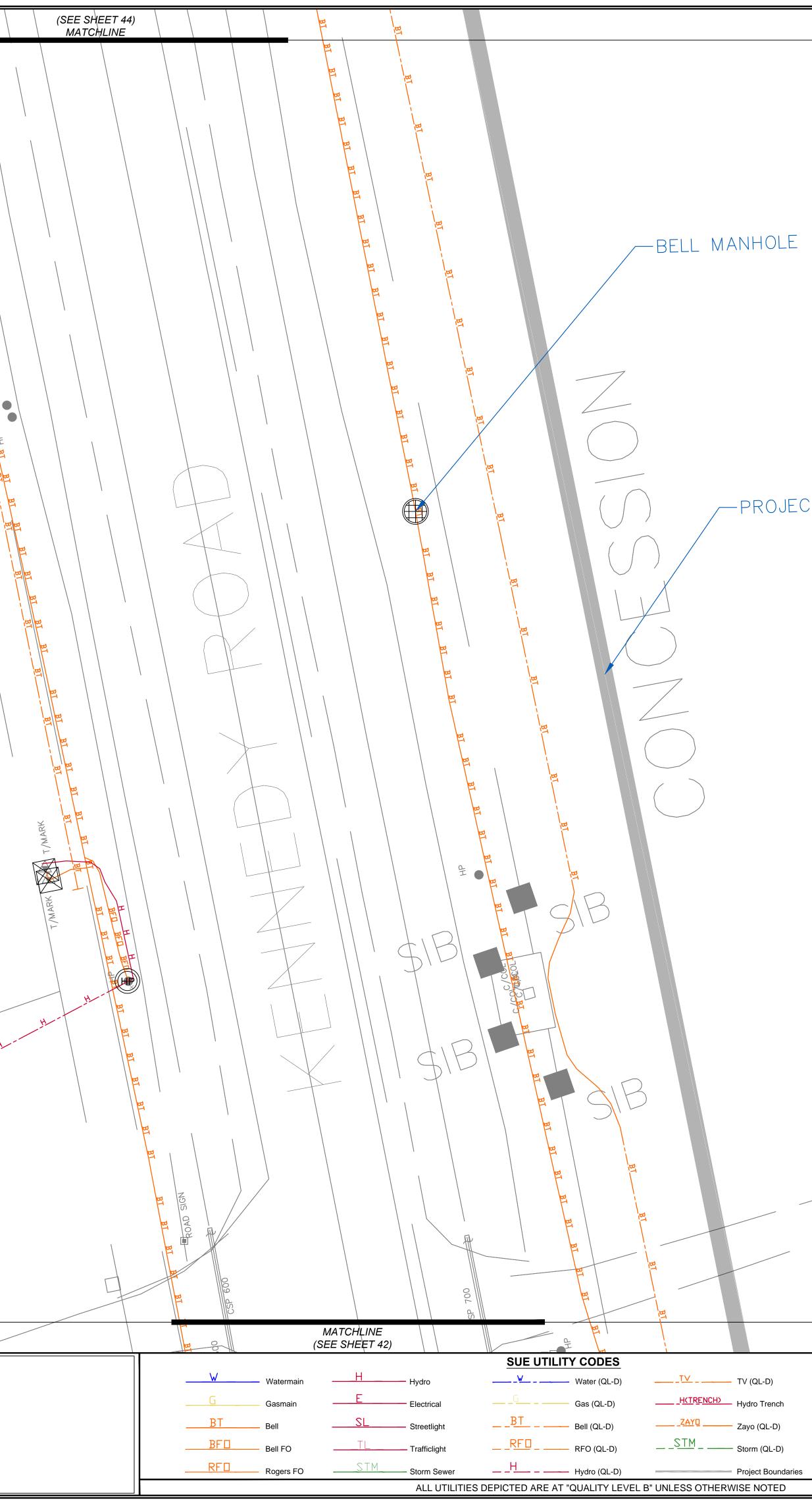
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HYDRO EXCAVATION & CCTV CONCRETE SCANNING UTILITY LOCATES NEAR-SURFACE GEOPHYSICS

Fax:1-866-571-5946 www.multiVIEW.ca 325 Matheson Blvd East Mississauga, ON, L4Z1X8

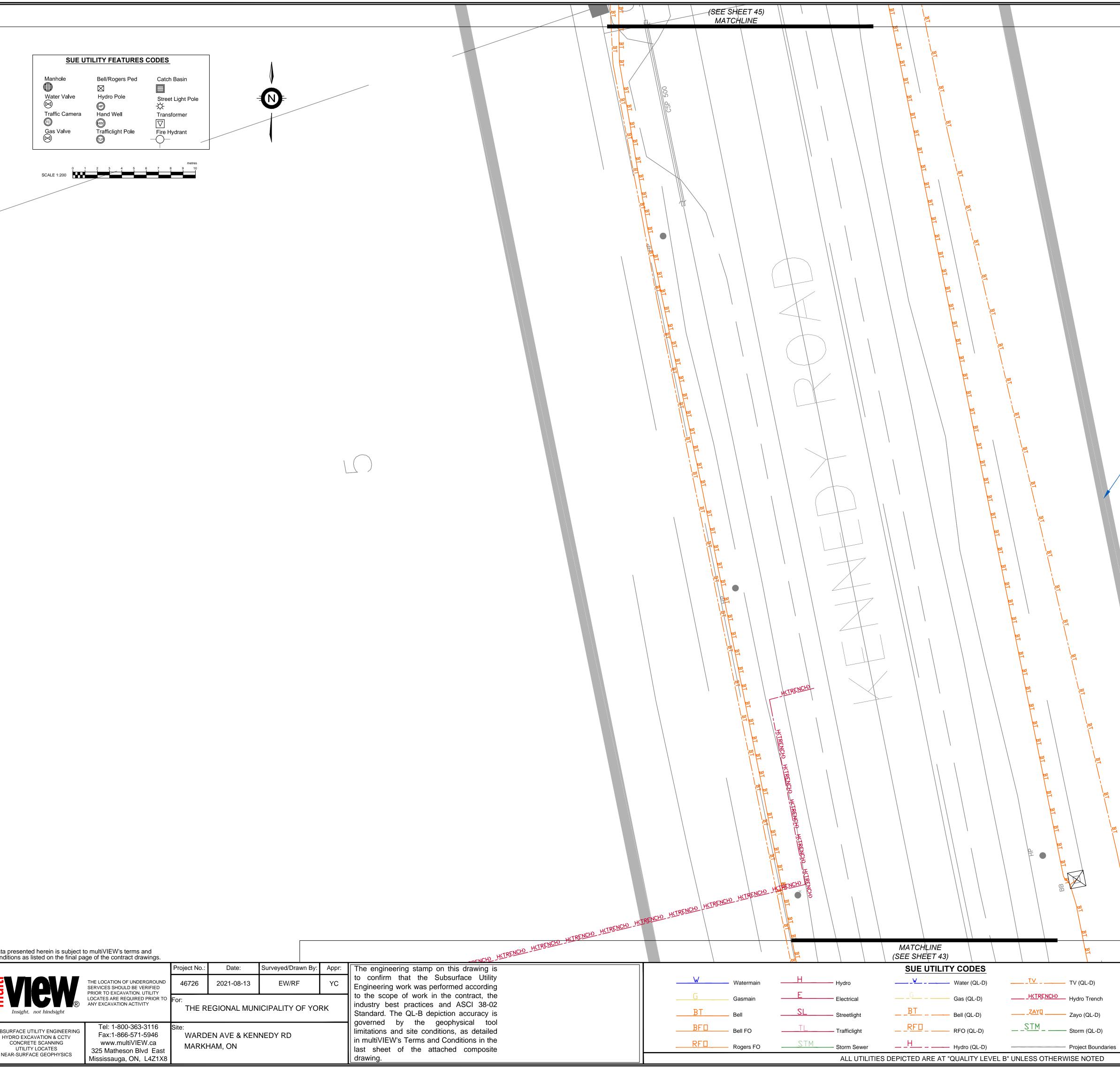
WARDEN AVE & KENNEDY RD MARKHAM, ON

in multiVIEW's Terms and Conditions in the last sheet of the attached composite drawing.



SUE UT
Manhole Water Valve M Traffic Camera C Gas Valve M

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		For: THE REGIONAL MUNICIPALITY OF YORK				to the scope of work in the contract, the industry best practices and ASCI 38-02 Standard. The QL-B depiction accuracy is
UBSURFACE UTILITY ENGINEERING HYDRO EXCAVATION & CCTV CONCRETE SCANNING UTILITY LOCATES NEAR-SURFACE GEOPHYSICS	Tel: 1-800-363-3116 Fax:1-866-571-5946 www.multiVIEW.ca 325 Matheson Blvd East Mississauga ON 1471X8		EN AVE & KEN IAM, ON	NEDY RD		governed by the geophysical tool limitations and site conditions, as detailed in multiVIEW's Terms and Conditions in the last sheet of the attached composite drawing.

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SUE UTILITY FEATURES CODES

Manhole Water Valve Co Traffic Camera Co Gas Valve Co	Bell/Rogers Ped	Catch Basin
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SUBSURFACE UTILITY ENGINEERING HYDRO EXCAVATION & CCTV CONCRETE SCANNING UTILITY LOCATES NEAR-SURFACE GEOPHYSICS

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Fax:1-866-571-5946	WARDEN AVE & KENNEDY RD
www.multiVIEW.ca	MARKHAM, ON
325 Matheson Blvd East	,
Mississauga, ON, L4Z1X8	

Project No.:

46726

THE LOCATION OF UNDERGROUND SERVICES SHOULD BE VERIFIED PRIOR TO EXCAVATION. UTILITY LOCATES ARE REQUIRED PRIOR TO ANY EXCAVATION ACTIVITY

Date:

2021-08-13

THE REGIONAL MUNICIPALITY OF YORK

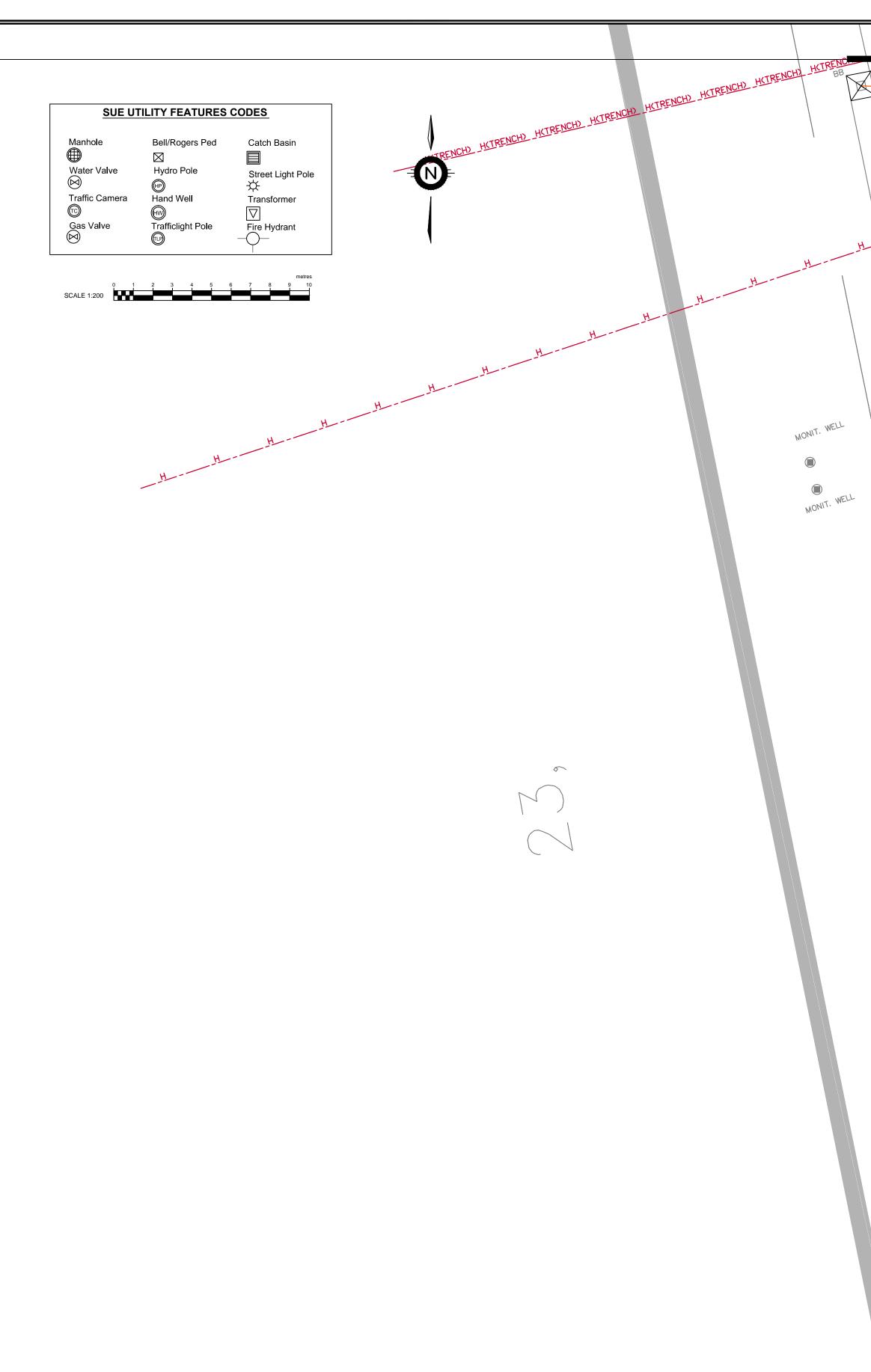
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conditions as listed on the final page of the contract dr	awings.



	Tel: 1-80
SUBSURFACE UTILITY ENGINEERING HYDRO EXCAVATION & CCTV	Fax:1-86
CONCRETE SCANNING	www.mu
UTILITY LOCATES	325 Mathes
NEAR-SURFACE GEOPHYSICS	
	Mississauga

: 1-800-363-3116 k:1-866-571-5946 vw.multiVIEW.ca /atheson Blvd East sauga, ON, L4Z1X8	Site: WARDEN AVE & KENNEDY RD MARKHAM, ON

Project No.:

46726

THE LOCATION OF UNDERGROUND SERVICES SHOULD BE VERIFIED PRIOR TO EXCAVATION. UTILITY LOCATES ARE REQUIRED PRIOR TO ANY EXCAVATION ACTIVITY

Date:

2021-08-13

THE REGIONAL MUNICIPALITY OF YORK

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SHEET 46 of 64 DRAWING No: 47626-SUE- DWG Quality Level B Rev. No. Drawn By Checked By Date Quality Level C ---Quality Level D _____

Revision -

SUE UTILITY FEATURES CODES

	Bell/Rogers Ped V Hydro Pole Hand Well Trafficlight Pole 	Catch Basin Street Light Pole Cransformer Fire Hydrant
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5	SUBSURFACE UTILITY ENGINEERING HYDRO EXCAVATION & CCTV CONCRETE SCANNING UTILITY LOCATES NEAR-SURFACE GEOPHYSICS	

Tel: 1-800-363-3116	Site:
Fax:1-866-571-5946	WARDEN AVE & KENNEDY RD
www.multiVIEW.ca	MARKHAM, ON
325 Matheson Blvd East	
Mississauga, ON, L4Z1X8	

Project No.:

Date:

2021-08-13

THE REGIONAL MUNICIPALITY OF YORK

EW/RF

YC

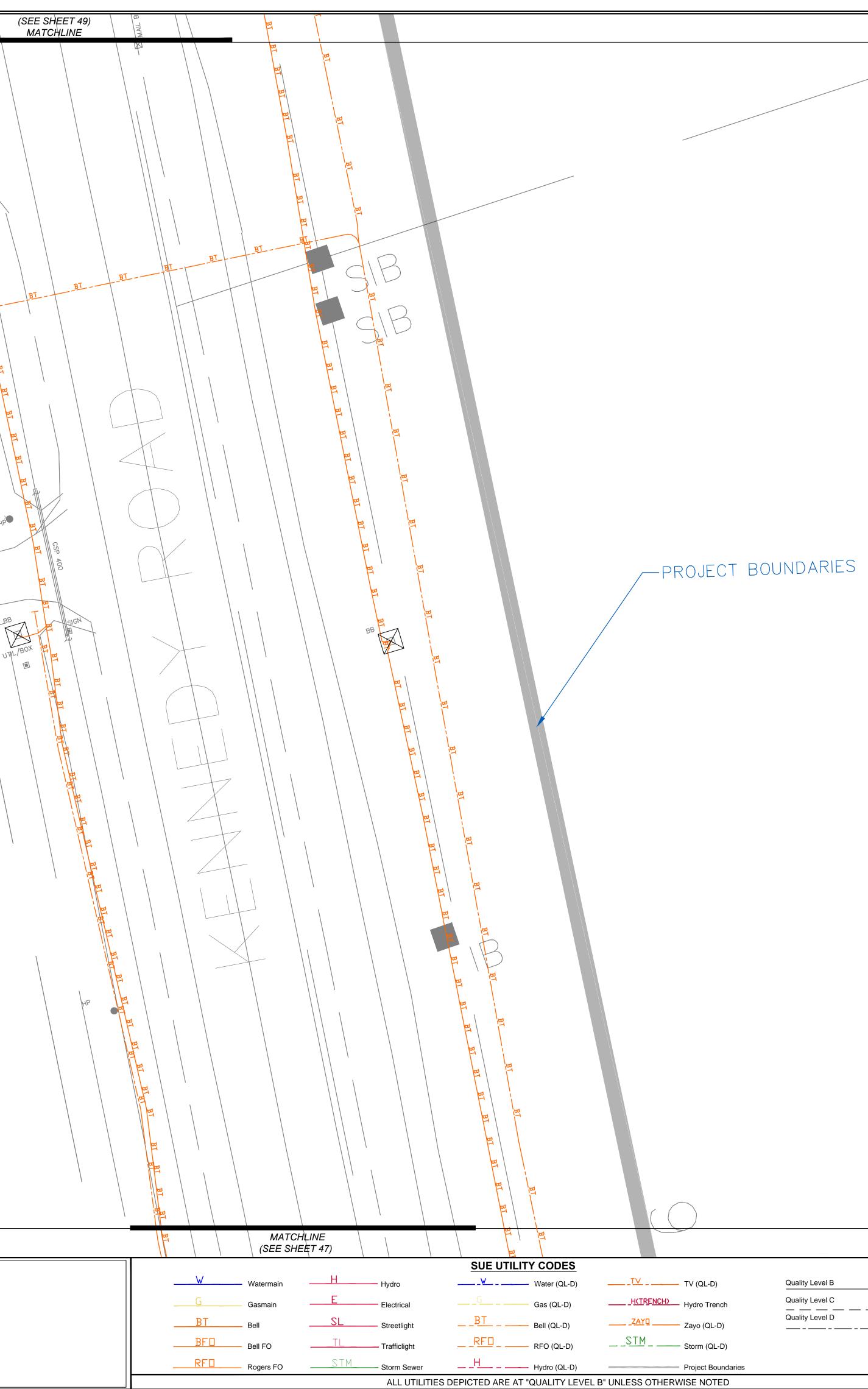
Surveyed/Drawn By: Appr: The engineering stamp on this drawing is to confirm that the Subsurface Utility Engineering work was performed according to the scope of work in the contract, the industry best practices and ASCI 38-02 Standard. The QL-B depiction accuracy is governed by the geophysical tool limitations and site conditions, as detailed in multiVIEW's Terms and Conditions in the last sheet of the attached composite drawing.

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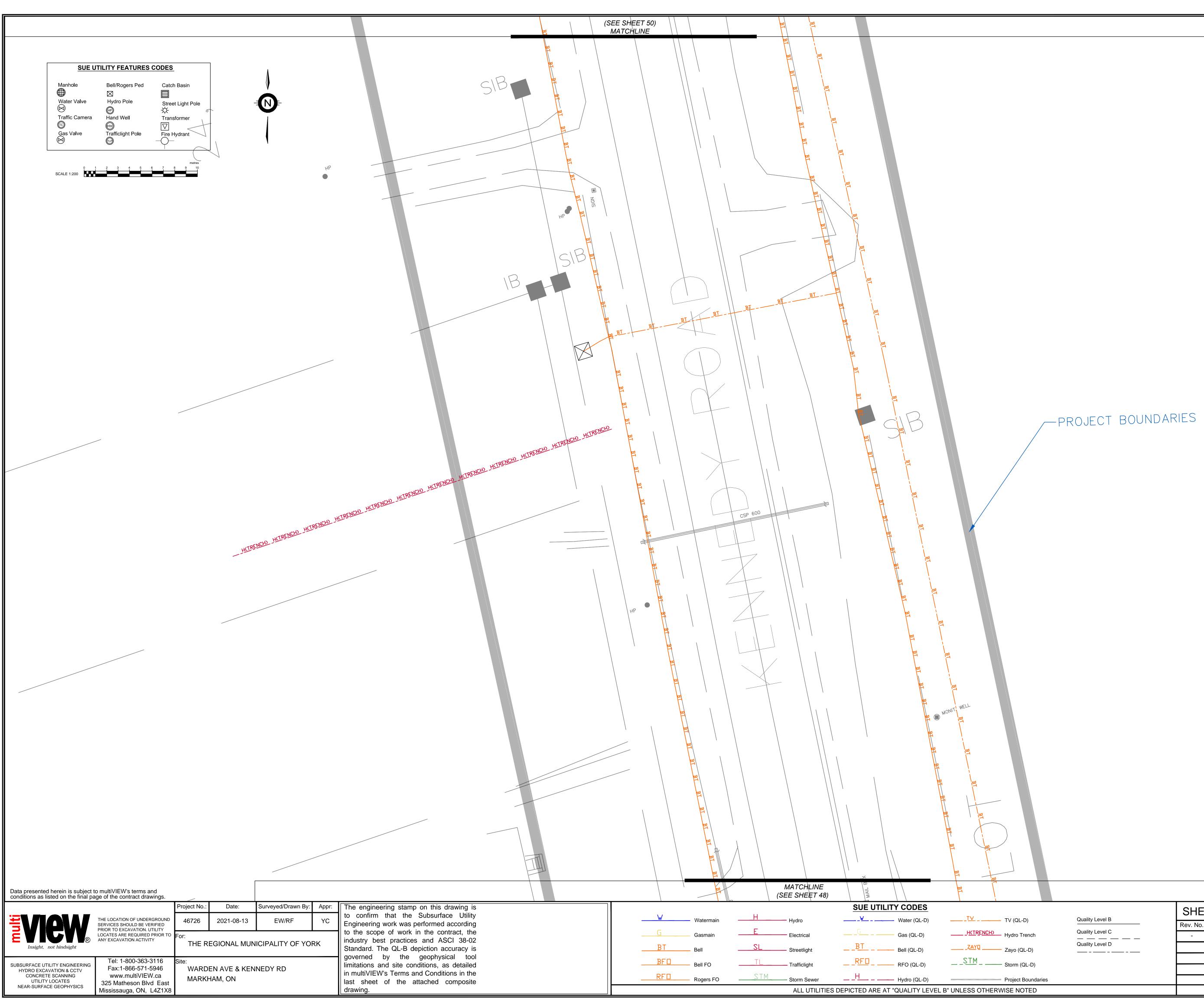
PROJECT BOUNDARIES

		SHE	ET 47 c	of 64		DRAWING No: 47626-SUE- DWG
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	THE LOCATION OF UNDERGROUND SERVICES SHOULD BE VERIFIED	Project No.: Date: 46726 2021-08-13	Surveyed/Drawn By: Appr: EW/RF YC	The engineering stamp on this drawing is to confirm that the Subsurface Utility Engineering work was performed according
Insight, not hindsight	SERVICES SHOULD BE VERIFIED PRIOR TO EXCAVATION. UTILITY LOCATES ARE REQUIRED PRIOR TO ANY EXCAVATION ACTIVITY	For: THE REGIONAL MUN	I ICIPALITY OF YORK	to the scope of work in the contract, the industry best practices and ASCI 38-02 Standard. The QL-B depiction accuracy is
SUBSURFACE UTILITY ENGINEERING HYDRO EXCAVATION & CCTV CONCRETE SCANNING UTILITY LOCATES NEAR-SURFACE GEOPHYSICS	Tel: 1-800-363-3116 Fax:1-866-571-5946 www.multiVIEW.ca 325 Matheson Blvd East Mississauga, ON, L4Z1X8	Site: WARDEN AVE & KEN MARKHAM, ON	NEDY RD	governed by the geophysical tool limitations and site conditions, as detailed in multiVIEW's Terms and Conditions in the last sheet of the attached composite drawing.



			ET 48 c	of 64		DRAWING No: 47626-SUE- DWG
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	SHE	ET 49 d	of 64		DRAWING No: 47626-SUE- DWG
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Quality Level D					

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Manhole Water Valve S Traffic Camera C Gas Valve S S	Bell/Rogers Ped	Catch Basin
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SUBSURFACE UTILITY ENGINEERING HYDRO EXCAVATION & CCTV CONCRETE SCANNING UTILITY LOCATES NEAR-SURFACE GEOPHYSICS	3
	M

Tel: 1-800-363-3116 Fax:1-866-571-5946 www.multiVIEW.ca 325 Matheson Blvd East Mississauga, ON, L4Z1X8	Site: WARDEN AVE & KENNEDY RD MARKHAM, ON

Project No.:

Date:

2021-08-13

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YC

 Surveyed/Drawn By:
 Appr:
 The engineering stamp on this drawing is to confirm that the Subsurface Utility

 Engineering work was performed according to the scope of work in the contract, the industry best practices and ASCI 38-02 Standard. The QL-B depiction accuracy is governed by the geophysical tool limitations and site conditions, as detailed in multiVIEW's Terms and Conditions in the last sheet of the attached composite drawing.

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Manhole Water Valve S Traffic Camera C Gas Valve	Bell/Rogers Ped	Catch Basin
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SUBSURFACE UTILITY ENGINEERING HYDRO EXCAVATION & CCTV	Fax:1-866-
CONCRETE SCANNING	www.multi
UTILITY LOCATES	325 Matheso
NEAR-SURFACE GEOPHYSICS	Mississauga, (

00-363-3116	Site:
6-571-5946	WARDEN AVE & KENNEDY RD
ultiVIEW.ca	MARKHAM, ON
son Blvd East	
a, ON, L4Z1X8	

Project No.:

THE LOCATION OF UNDERGROUND SERVICES SHOULD BE VERIFIED PRIOR TO EXCAVATION. UTILITY LOCATES ARE REQUIRED PRIOR TO ANY EXCAVATION ACTIVITY THE R

Date:

2021-08-13

THE REGIONAL MUNICIPALITY OF YORK

EW/RF

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 Surveyed/Drawn By:
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 The engineering stamp on this drawing is to confirm that the Subsurface Utility

 Engineering work was performed according to the scope of work in the contract, the industry best practices and ASCI 38-02 Standard. The QL-B depiction accuracy is governed by the geophysical tool limitations and site conditions, as detailed in multiVIEW's Terms and Conditions in the last sheet of the attached composite drawing.

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SHE	ET 51 c	of 64		DRAWING No: 47626-SUE- DWG
Rev. No.	Drawn By	Checked By	Date	Revision
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Manhole Water Valve S Traffic Camera C Gas Valve S	Bell/Rogers Ped	Catch Basin
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HYDRO EXCAVATION & CCTV
CONCRETE SCANNING
UTILITY LOCATES
NEAR-SURFACE GEOPHYSICS

Tel: 1-800-363-3116 Fax:1-866-571-5946 www.multiVIEW.ca 325 Matheson Blvd East Mississauga, ON, L4Z1X8	Site: WARDEN AVE & KENNEDY RD MARKHAM, ON
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(SEE SHEET 53)	
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Manhole Water Valve C Traffic Camera C Gas Valve S	Bell/Rogers Ped	Catch Basin
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HYI	RFACE UTILITY ENGINEERING DRO EXCAVATION & CCTV CONCRETE SCANNING UTILITY LOCATES AR-SURFACE GEOPHYSICS	3 M

Tel: 1-800-363-3116 Site: Fax:1-866-571-5946 WARDEN AVE & KENNEDY RD www.multiVIEW.ca MARKHAM, ON 325 Matheson Blvd East Mississauga, ON, L4Z1X8

THE LOCATION OF UNDERGROUND SERVICES SHOULD BE VERIFIED PRIOR TO EXCAVATION. UTILITY LOCATES ARE REQUIRED PRIOR TO ANY EXCAVATION ACTIVITY

Project No.:

46726

Date:

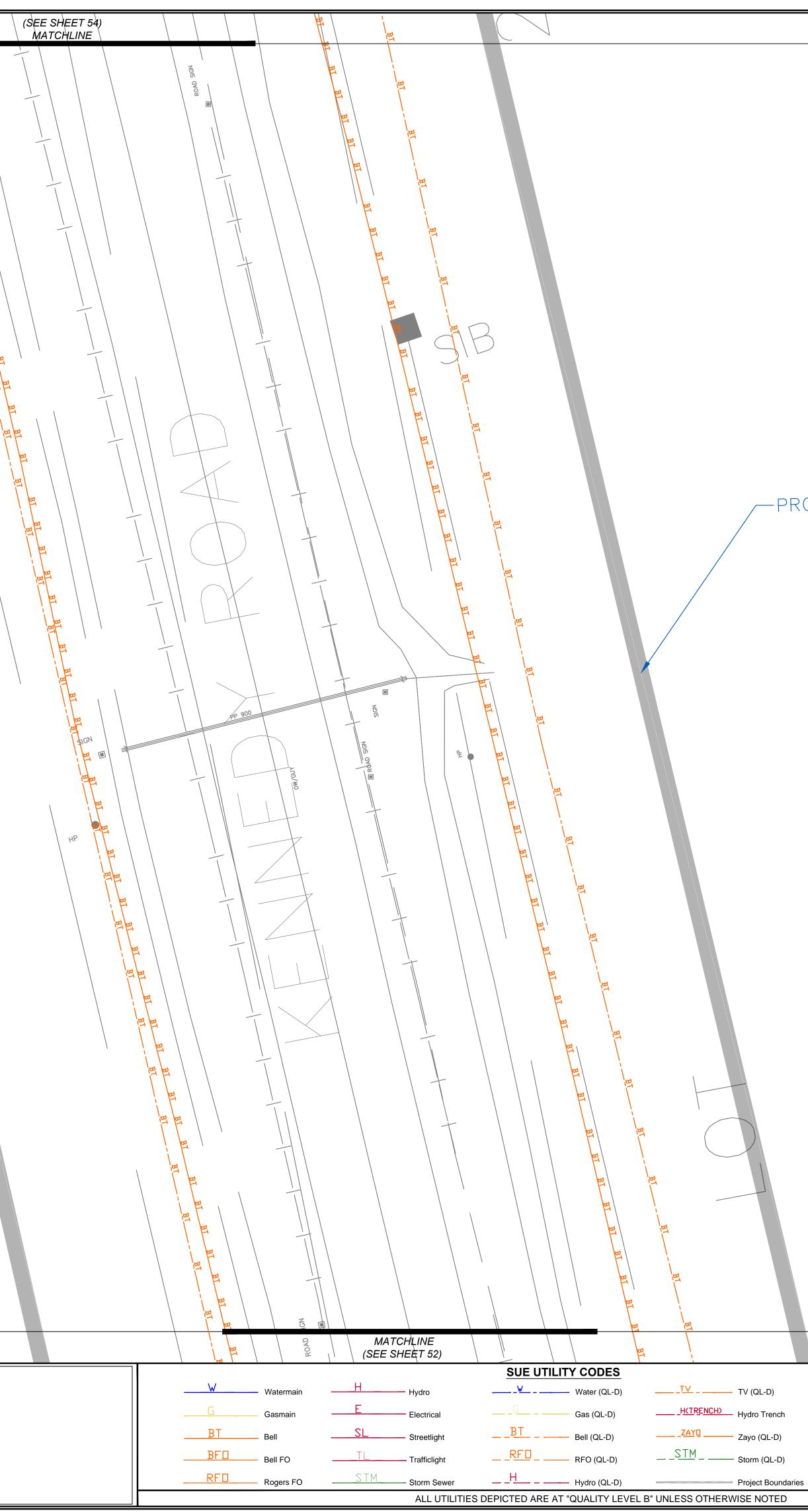
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THE REGIONAL MUNICIPALITY OF YORK

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Surveyed/Drawn By: Appr: The engineering stamp on this drawing is to confirm that the Subsurface Utility Engineering work was performed according to the scope of work in the contract, the industry best practices and ASCI 38-02 Standard. The QL-B depiction accuracy is governed by the geophysical tool limitations and site conditions, as detailed in multiVIEW's Terms and Conditions in the last sheet of the attached composite drawing.



SHEET 53 of 64 DRAWING No: 47626-SUE- DWG Quality Level B Rev. No. Drawn By Checked By Date Revision Quality Level C ----Quality Level D _____

Manhole Water Valve M Traffic Camera C Gas Valve M	Bell/Rogers Ped	Catch Basin
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CONCRETE SCANNING	
UTILITY LOCATES	
NEAR-SURFACE GEOPHYSICS	

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325 Matheson Blvd East	
Mississauga, ON, L4Z1X8	

Project No.:

46726

THE LOCATION OF UNDERGROUND SERVICES SHOULD BE VERIFIED PRIOR TO EXCAVATION. UTILITY LOCATES ARE REQUIRED PRIOR TO ANY EXCAVATION ACTIVITY

Date:

2021-08-13

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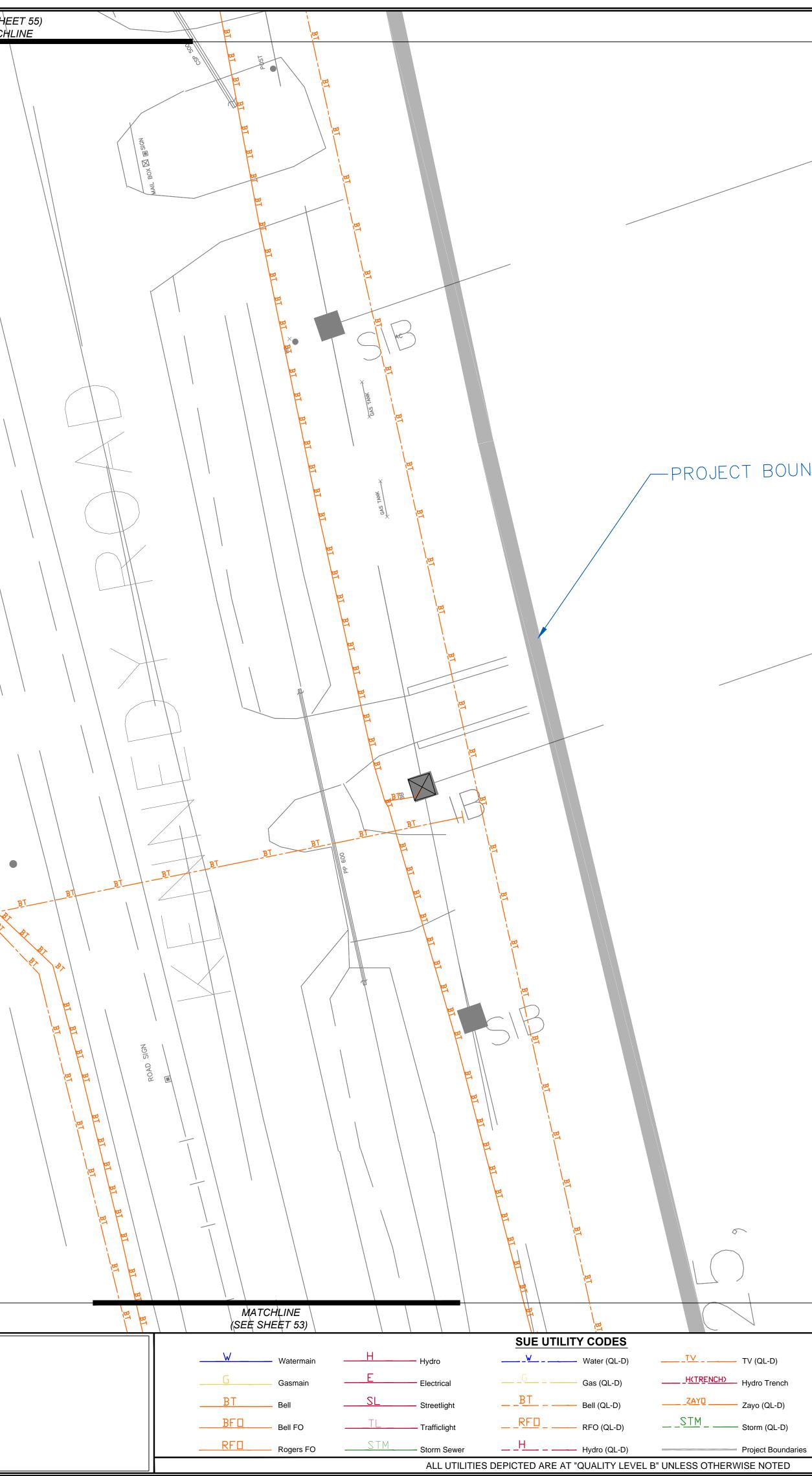
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Surveyed/Drawn By: Appr: The engineering stamp on this drawing is to confirm that the Subsurface Utility Engineering work was performed according to the scope of work in the contract, the industry best practices and ASCI 38-02 Standard. The QL-B depiction accuracy is governed by the geophysical tool limitations and site conditions, as detailed in multiVIEW's Terms and Conditions in the last sheet of the attached composite drawing.

(SEE SHEET 55) MATCHLINE

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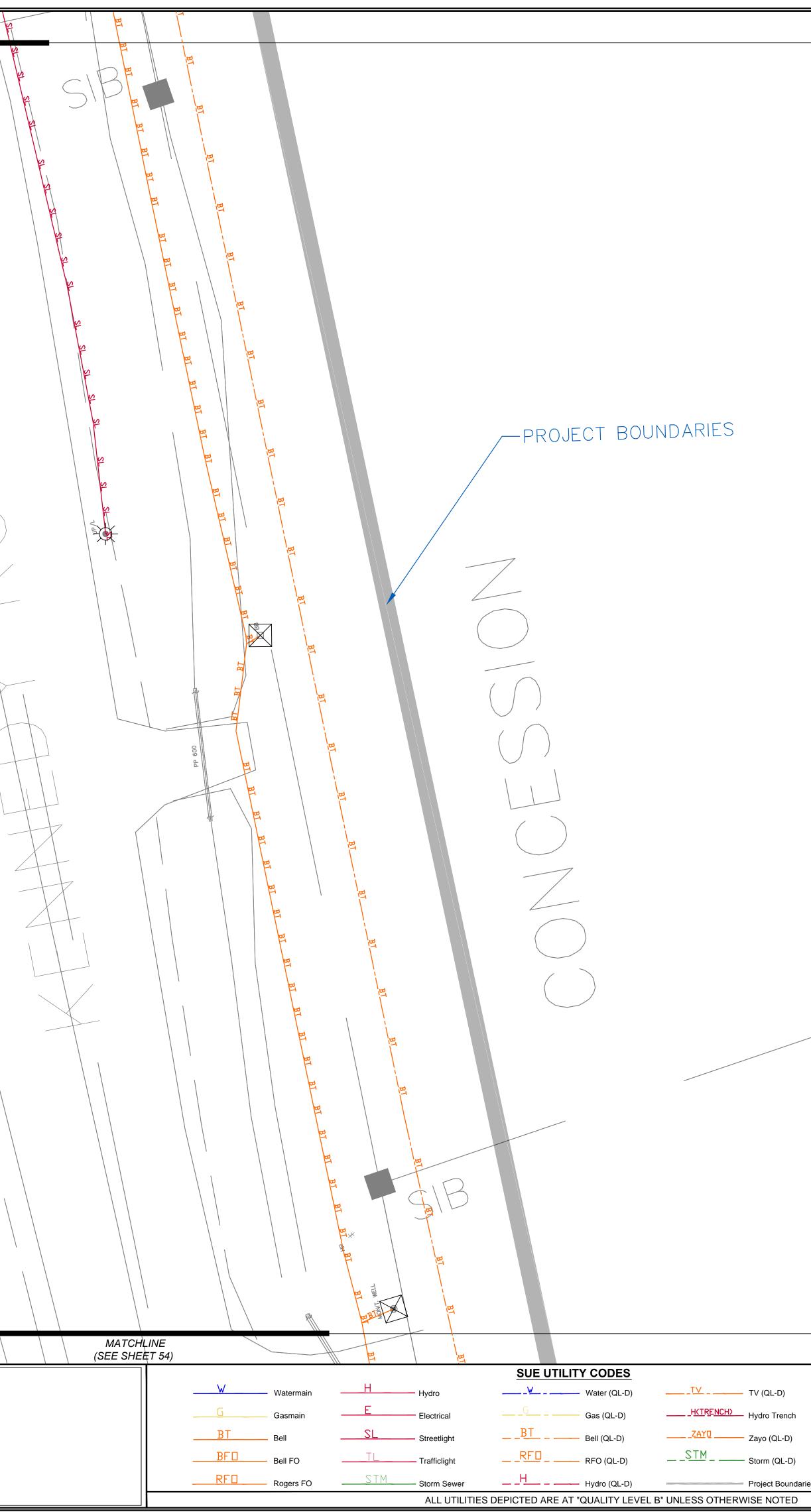


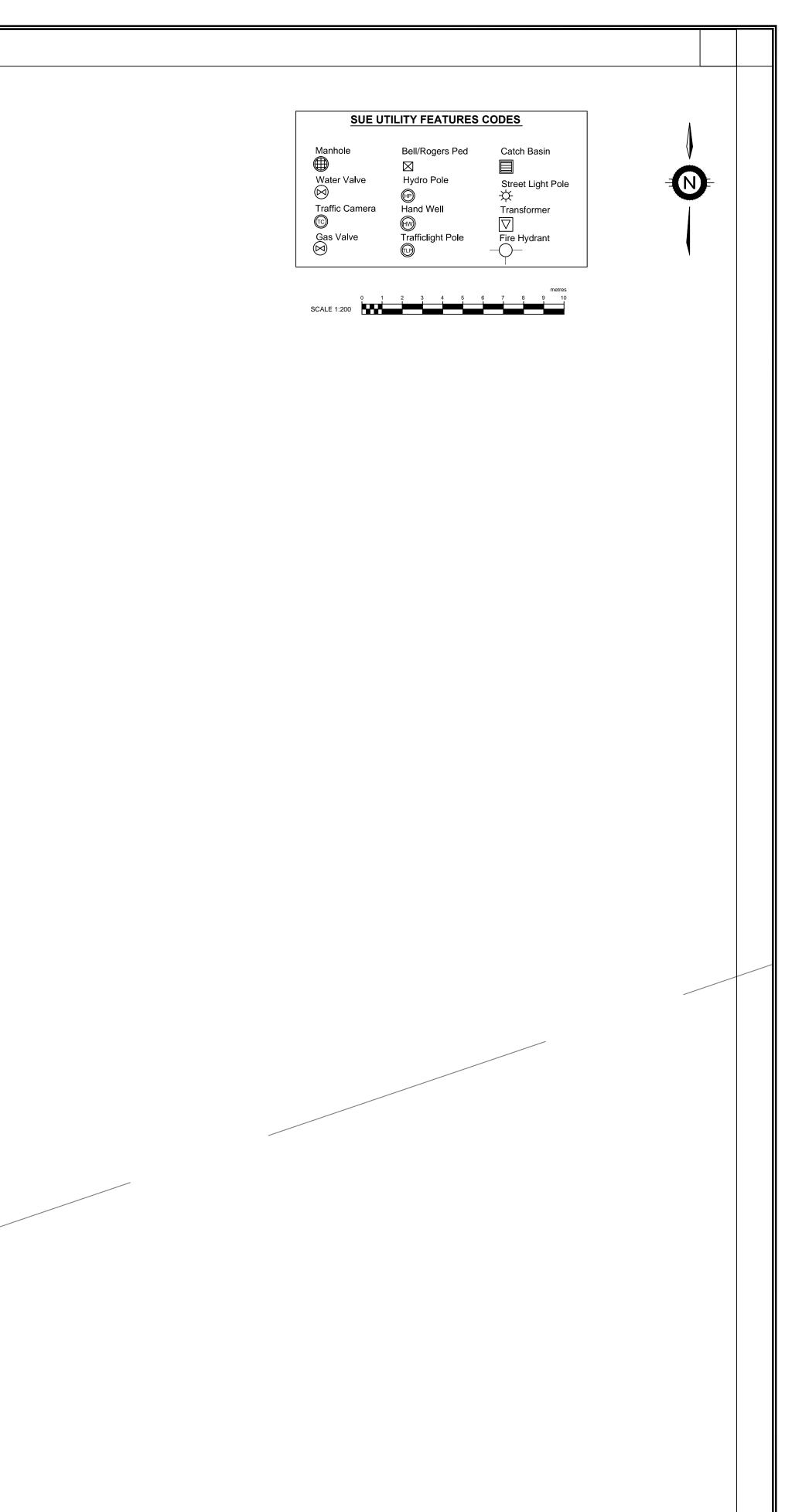
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Tel: 1-800-363-3116	Site:
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SUBSURFACE UTILITY ENGINEERING HYDRO EXCAVATION & CCTV CONCRETE SCANNING UTILITY LOCATES NEAR-SURFACE GEOPHYSICS Engineering work was performed according to the scope of work in the contract, the industry best practices and ASCI 38-02 Standard. The QL-B depiction accuracy is governed by the geophysical tool limitations and site conditions, as detailed in multiVIEW's Terms and Conditions in the last sheet of the attached composite drawing.





Quality Level		SHE	ET 55 d	of 64		DRAWING No: 47626-SUE- DWG			
		Rev. No.	Drawn By	Checked By	Date	Revision			
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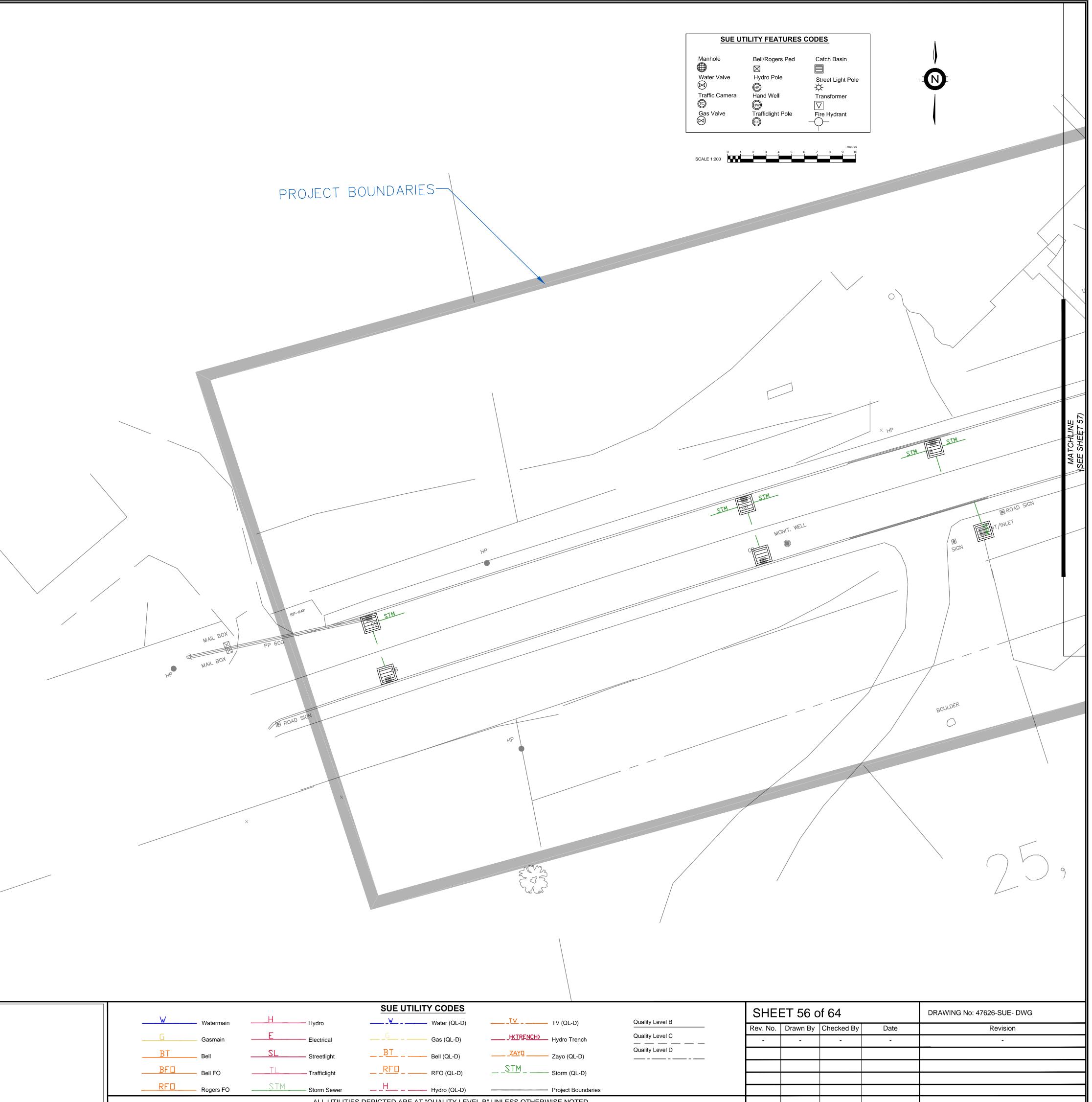
SUBSURFACE UTILITY ENGINEERING	Tel: 1-800-363-3116
HYDRO EXCAVATION & CCTV	Fax:1-866-571-5946
CONCRETE SCANNING	www.multiVIEW.ca
UTILITY LOCATES	325 Matheson Blvd East
NEAR-SURFACE GEOPHYSICS	Mississauga, ON, L4Z1X8

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THE LOCATION OF UNDERGROUND SERVICES SHOULD BE VERIFIED PRIOR TO EXCAVATION. UTILITY	46726	2021-08-13	EW/RF	Y
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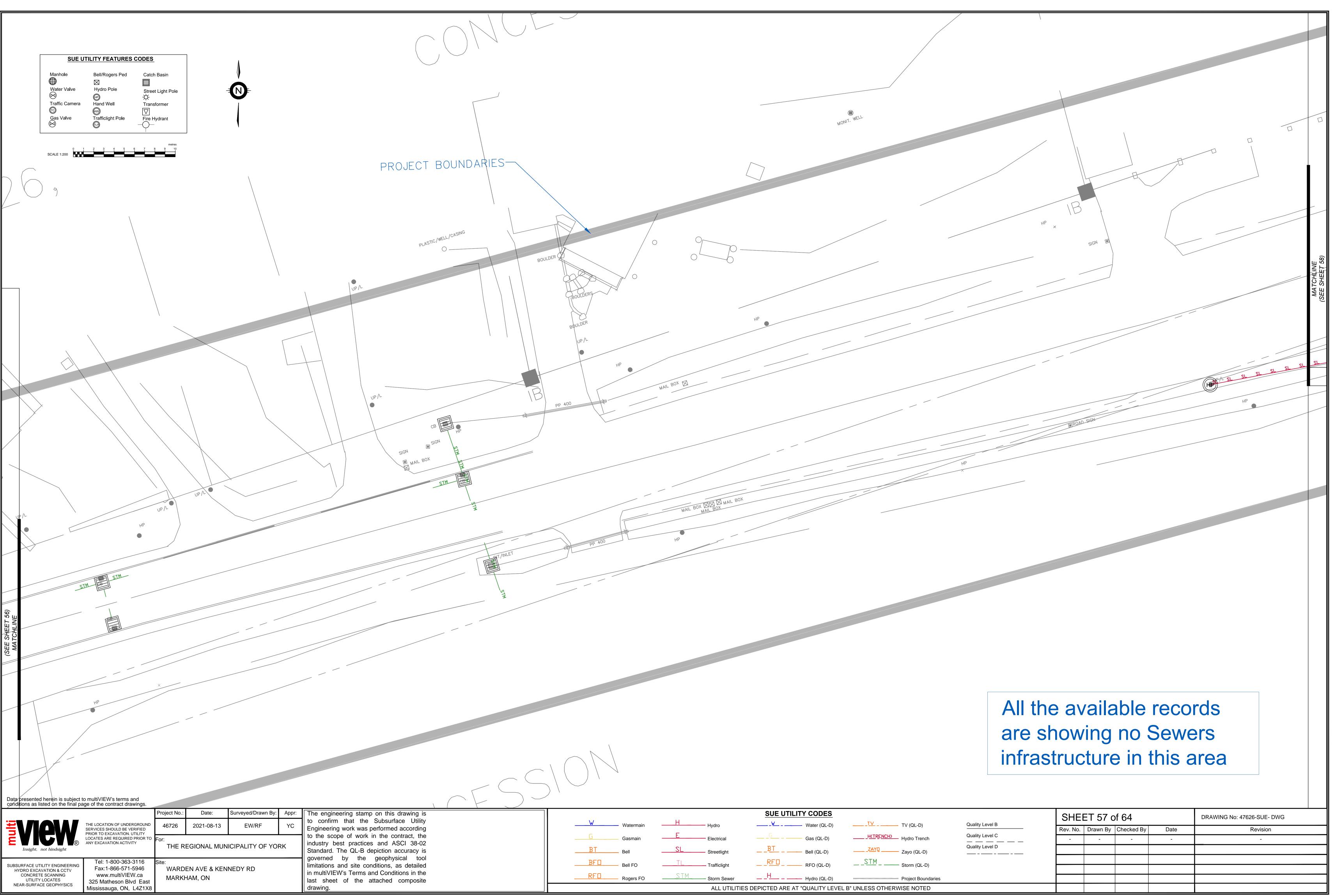
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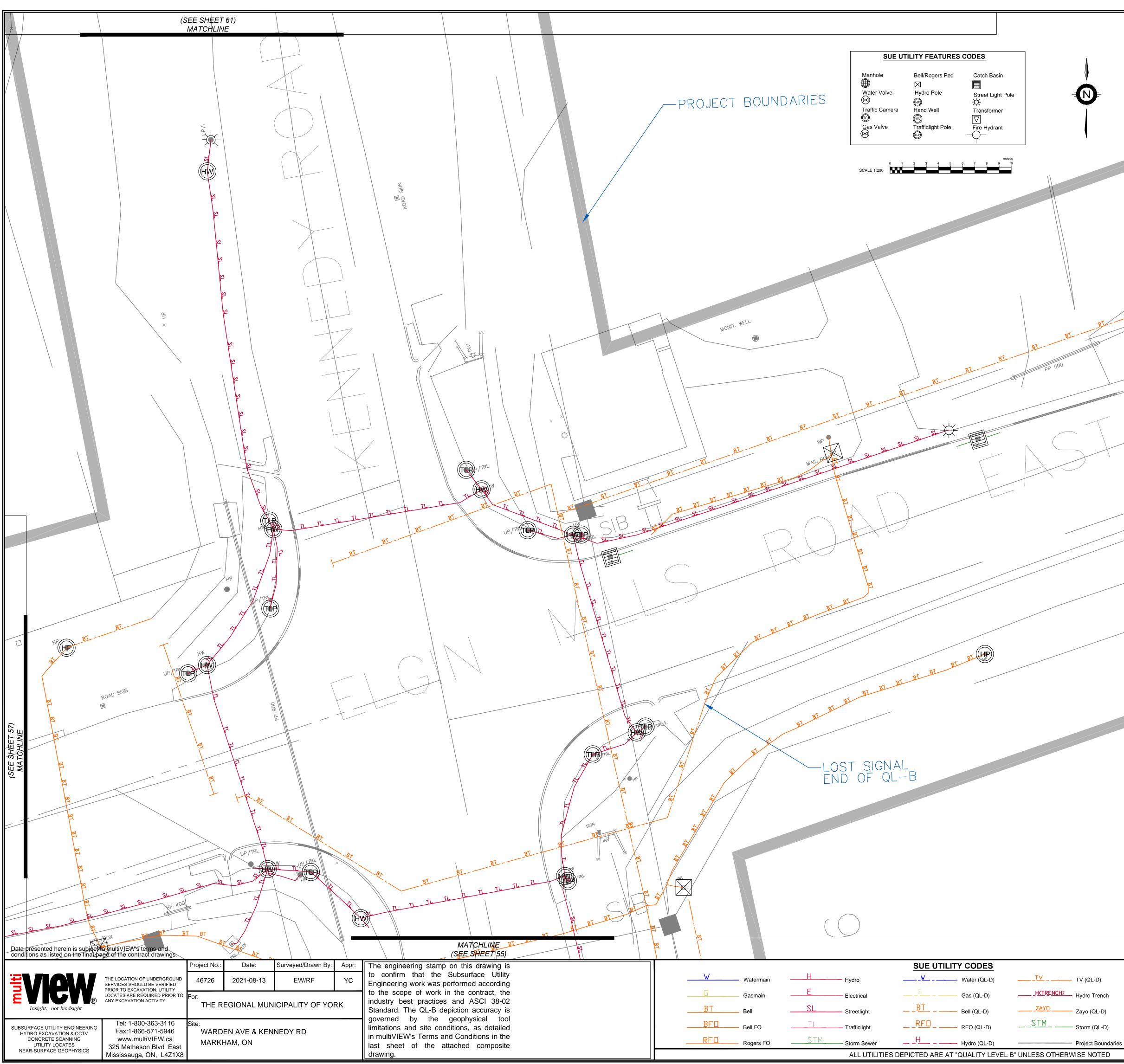
WARDEN AVE & KENNEDY RD MARKHAM, ON

Project No.: Date: Surveyed/Drawn By: Appr: The engineering stamp on this drawing is to confirm that the Subsurface Utility Engineering work was performed according to the scope of work in the contract, the industry best practices and ASCI 38-02 Standard. The QL-B depiction accuracy is governed by the geophysical tool limitations and site conditions, as detailed in multiVIEW's Terms and Conditions in the last sheet of the attached composite drawing.



	SUE UTILITY CODES							
W	– Watermain	<u> </u>	- Hydro		- Water (QL-D)	TV	TV (QL-D)	
<u> </u>	- Gasmain	<u> </u>	- Electrical	<u>G</u>	- Gas (QL-D)	<u>H(TRENCH)</u>	- Hydro Trench	
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BFD	– Bell FO	TL	- Trafficlight	<u>_RFD</u>	– RFO (QL-D)	<u>STM</u>	- Storm (QL-D)	
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			ALL UTILITI	ES DEPICTED ARE AT	"QUALITY LEV	EL B" UNLESS OTHERV	VISE NOTED	





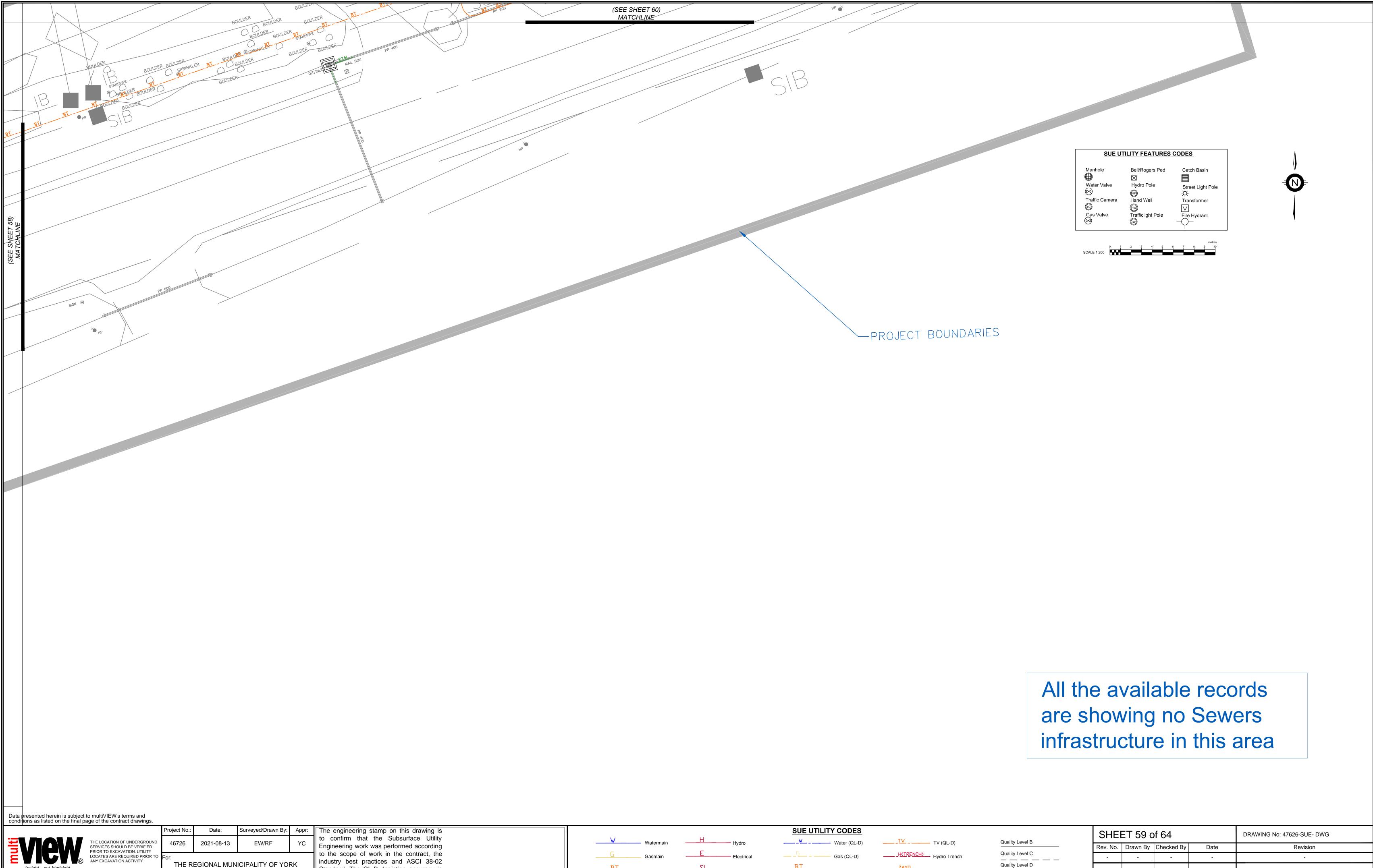
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 Quality Level B
 SHEET 58 of 64
 DRAWING No: 47626-SUE- DWG

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 Checked By
 Date
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SUBSURFACE UTILITY ENGINEERING HYDRO EXCAVATION & CCTV CONCRETE SCANNING UTILITY LOCATES NEAR-SURFACE GEOPHYSICS	
NEAR-SURFACE GEOPHYSICS	

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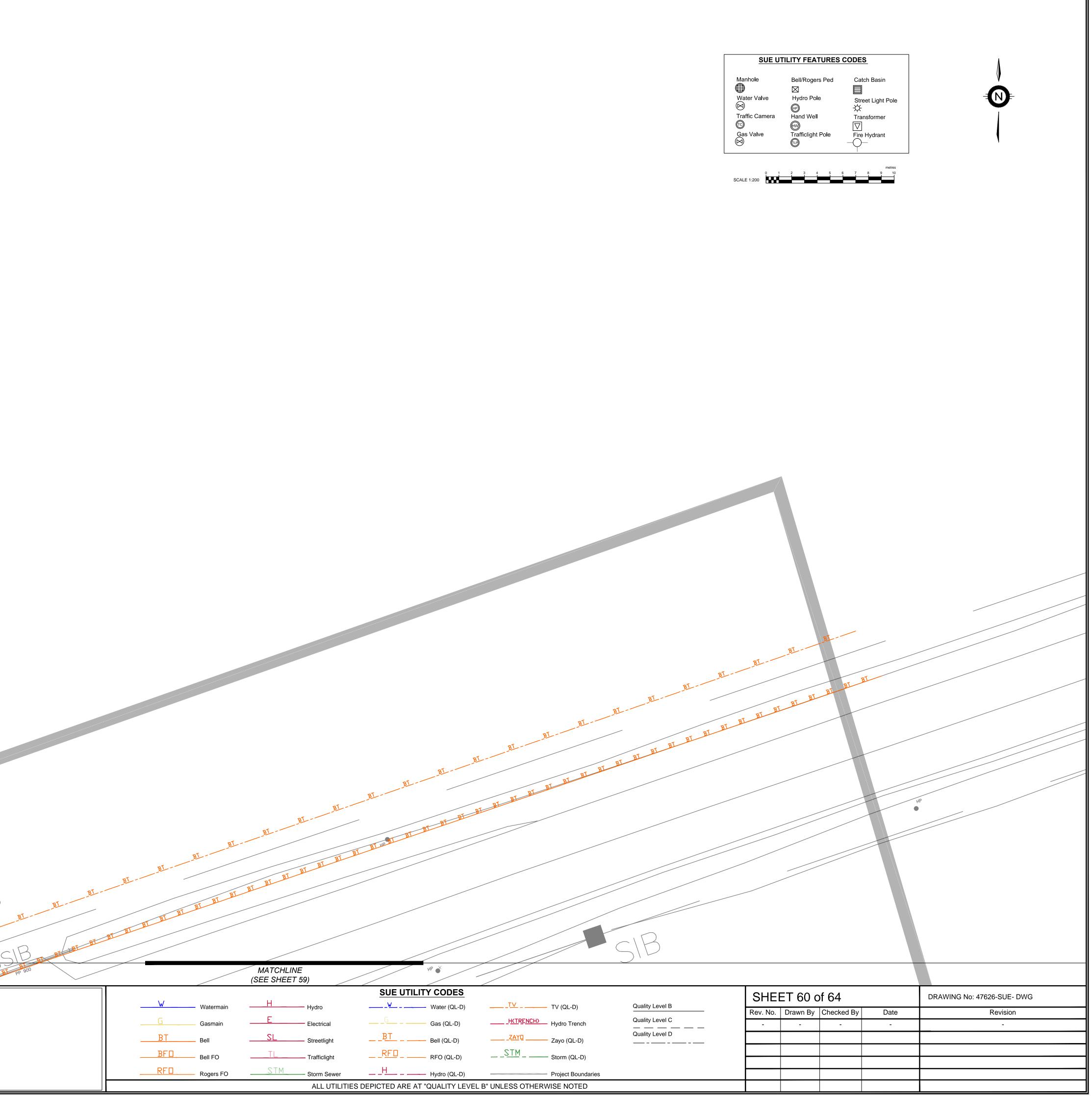
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						ET 59 o	of 64		DRAWING No: 47626-SUE- DWG
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BTBell	SLStreetlight	BT		Quality Level D	-	-	-	-	
BFBell FO	TL Trafficlight								
RF Rogers FO	STMStorm Sewer	H Hydro (QL-D)	Project Boundaries						
ALL UTILITIES DEPICTED ARE AT "QUALITY LEVEL B" UNLESS OTHERWISE NOTED									

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Data presented her conditions as listed	rein is subject on the final p	to multiVIEW's terms and age of the contract drawings.			NULDER	BOULDEN	DER BI-
			Project No.:	Date:	Surveyed/Drawn By:	Appr:	The engineering stamp on this drawing is
	Phindsight	THE LOCATION OF UNDERGROUND SERVICES SHOULD BE VERIFIED PRIOR TO EXCAVATION. UTILITY LOCATES ARE REQUIRED PRIOR TO ANY EXCAVATION ACTIVITY	46726	2021-08-13	EW/RF	YC	to confirm that the Subsurface Utility Engineering work was performed according
Insight, not h			For: THE REGIONAL MUNICIPALITY OF YORK				to the scope of work in the contract, the industry best practices and ASCI 38-02 Standard. The QL-B depiction accuracy is
SUBSURFACE UTILITY ENGINEERING HYDRO EXCAVATION & CCTV CONCRETE SCANNING UTILITY LOCATES NEAR-SURFACE GEOPHYSICS HYDRO EXCAVATION & CCTV CONCRETE SCANNING UTILITY LOCATES NEAR-SURFACE GEOPHYSICS			MARKHAM, ON				governed by the geophysical tool limitations and site conditions, as detailed in multiVIEW's Terms and Conditions in the last sheet of the attached composite drawing.

325 Matheson Blvd East Mississauga, ON, L4Z1X8

drawing.



		SHE	ET 60 c	of 64		DRAWING No: 47626-SUE- DWG		
Quality Level B		Rev. No.	Drawn By	Checked By	Date	Revision		
	Quality Level C	-	-	-	-	-		
	Quality Level D							

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CONCRETE SCANNING	www.mu
	325 Mathes
NEAR-SURFACE GEOPHYSICS	Mississauga

l: 1-800-363-3116	Site:
x:1-866-571-5946	WARDEN AVE & KENNEDY RD
ww.multiVIEW.ca	MARKHAM, ON
Matheson Blvd East	
sauga, ON, L4Z1X8	

Project No.:

46726

THE LOCATION OF UNDERGROUND SERVICES SHOULD BE VERIFIED PRIOR TO EXCAVATION. UTILITY LOCATES ARE REQUIRED PRIOR TO ANY EXCAVATION ACTIVITY

Date:

2021-08-13

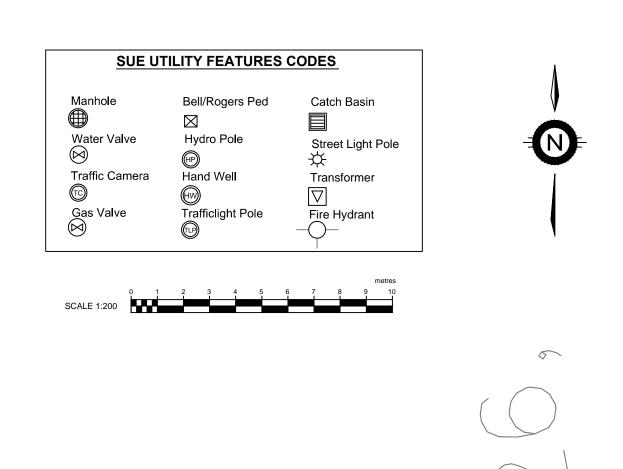
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Surveyed/Drawn By: Appr: The engineering stamp on this drawing is to confirm that the Subsurface Utility Engineering work was performed according to the scope of work in the contract, the industry best practices and ASCI 38-02 Standard. The QL-B depiction accuracy is governed by the geophysical tool limitations and site conditions, as detailed in multiVIEW's Terms and Conditions in the last sheet of the attached composite drawing.

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Quality Level B	SHEE	ET 61 c	of 64		DRAWING No: 47626-SUE- DWG
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Manhole Water Valve S Traffic Camera C Gas Valve S C S C C C C C C C C C C C C C	Bell/Rogers Ped	Catch Basin
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SCALE 1:200



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SUBSURFACE UTILITY ENGINEERING HYDRO EXCAVATION & CCTV	Fax:1-866-5
CONCRETE SCANNING	www.multi\
	325 Matheson
NEAR-SURFACE GEOPHYSICS	Mississauga, C

l: 1-800-363-3116	Site:
x:1-866-571-5946	WARDEN AVE & KENNEDY RD
ww.multiVIEW.ca	MARKHAM, ON
Matheson Blvd East	
sauga ON 1471X8	

Project No.:

46726

THE LOCATION OF UNDERGROUND SERVICES SHOULD BE VERIFIED PRIOR TO EXCAVATION. UTILITY LOCATES ARE REQUIRED PRIOR TO ANY EXCAVATION ACTIVITY

Date:

2021-08-13

THE REGIONAL MUNICIPALITY OF YORK

EW/RF

YC

to confirm that the Subsurface Utility Engineering work was performed according to the scope of work in the contract, the industry best practices and ASCI 38-02 Standard. The QL-B depiction accuracy is governed by the geophysical tool limitations and site conditions, as detailed in multiVIEW's Terms and Conditions in the last sheet of the attached composite drawing.

	SHE	ET 62 c	of 64		DRAWING No: 47626-SUE- DWG
Quality Level B	Rev. No.	Drawn By	Checked By	Date	Revision
Quality Level C	-	-	-	-	-
Quality Level D					

SUE UTILITY	FEATURES CODES

SCALE 1:200



Data presented herein is subject to multiVIEW's terms and conditions as listed on the final page of the contract drawings.



	Tel: 1-80
SUBSURFACE UTILITY ENGINEERING HYDRO EXCAVATION & CCTV	Fax:1-86
CONCRETE SCANNING	www.mu
UTILITY LOCATES	325 Mathes
NEAR-SURFACE GEOPHYSICS	
	Mississauga

Tel: 1-800-363-3116	Site:
Fax:1-866-571-5946	WARDEN AVE & KENNEDY RD
www.multiVIEW.ca	MARKHAM, ON
25 Matheson Blvd East	
ssissauga, ON, L4Z1X8	

Project No.:

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Date:

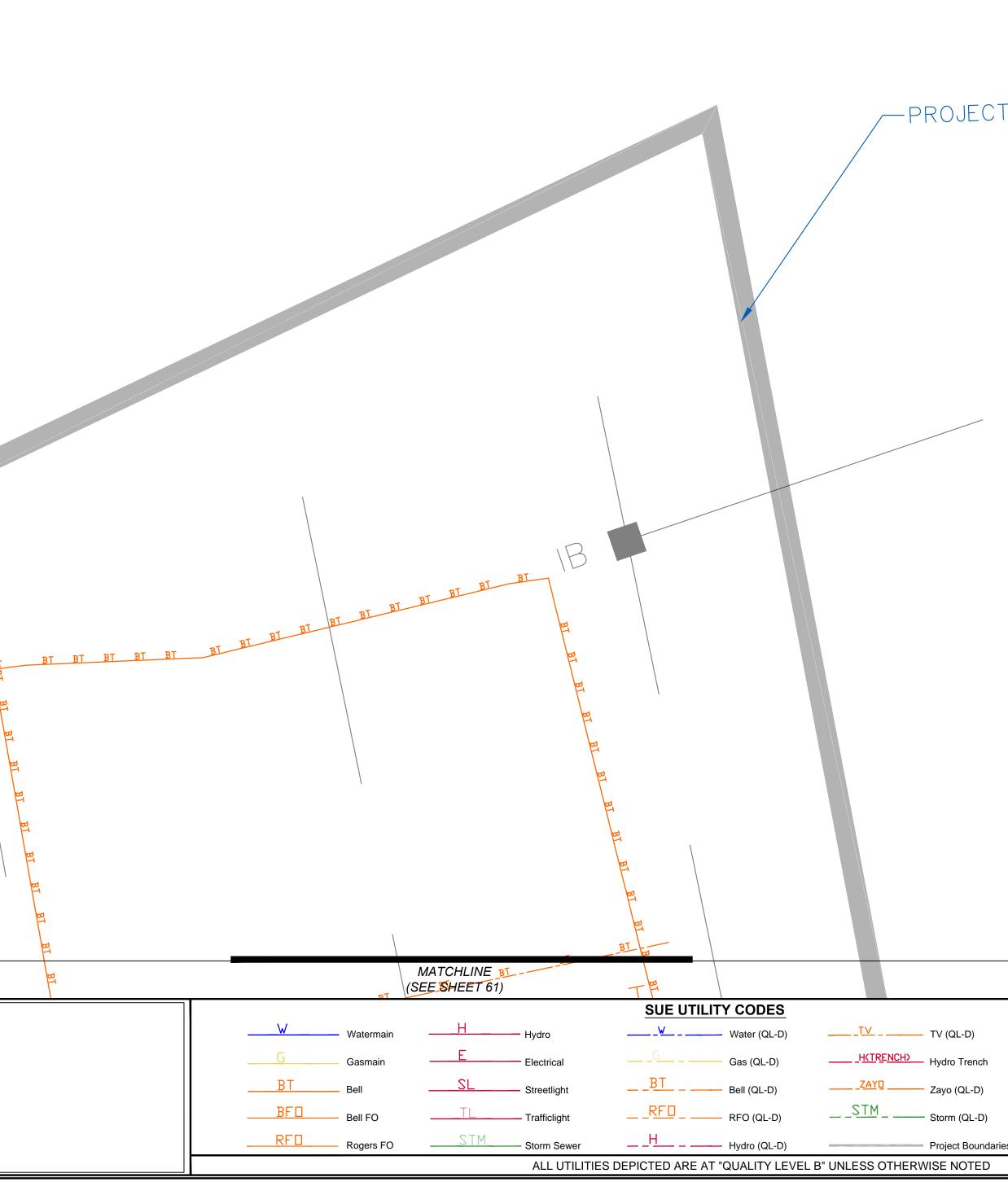
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Surveyed/Drawn By: Appr: The engineering stamp on this drawing is to confirm that the Subsurface Utility Engineering work was performed according to the scope of work in the contract, the industry best practices and ASCI 38-02 Standard. The QL-B depiction accuracy is governed by the geophysical tool limitations and site conditions, as detailed in multiVIEW's Terms and Conditions in the last sheet of the attached composite drawing.



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Technical Limitations

1. Throughout this schedule, "multiVIEW" is the corporate entity multiVIEW Locates Inc.

- 2. Pipe, cable, conduit, rebar, post-tension cables, anchors, containers, vaults, tanks and similar objects that are buried under the ground or embedded within a structure are referred to in multiVIEW's terms and conditions as Buried Assets
- 3. Subsurface conditions such as depth to bedrock, change in soil type, presence of karst, voids, contaminated soil or ground water, residual construction or industrial debris or buried waste are referred to in multiVIEW's terms and conditions as Buried Liabilities.
- 4. The Client acknowledges that the laws of fundamental physics apply and acknowledge that sensing instruments can not detect all Buried Assets and Buried Liabilities. Buried Assets and Buried Liabilities which are detectable by properly deployed and operated instruments are termed Locatable Buried Assets and Locatable Buried Liabilities. Buried Assets and Buried Assets and Buried Assets and Buried Assets and Unlocatable Buried Liabilities. multiVIEW follows industry best-practice procedures but is not responsible for determining the presence and location of Unlocatable Buried Assets or Unlocatable Buried Liabilities.
- 5. Instruments to locate Buried Assets use a variety of approaches to detect and infer the location of the Buried Assets. Standard pipe and cable locating instruments detect the magnetic fields associated with electrical current flowing in the Buried Asset. GPR (Ground Penetrating radar) techniques depend on the transmission of radio waves into the host material and detection of the Buried Assets. Sonding methods require insertion of a source of magnetic field into the pipe or conduit and detection of the
- magnetic field created by source at the surface of the Work Area to locate the sonde position. For the purposes of this estimate, Locatable Buried Assets are normally characterized as:
- a. metallic pipes, cables and conduits that are capable of carrying an electrical current and that can be physically accessed to allow an energizing current source to create an electrical current in the Buried Asset of sufficient magnitude as to be detectable by standard locating instruments;
- b. metallic pipes, cables and conduits that actively carry an identifiable electric current that is sufficiently large and has suitable frequency as to be detectable by standard locating instruments;
- c. metallic and non-metallic pipes, cables, conduits, rods, bars, wires, voids, and inclusions that represent a substantive electrical contrast to the host material and are embedded in a host material transparent to radio waves such that radio waves reflected from the feature are detectable by a GPR instrument;
- d. non-metallic pipes, cables and conduits (i.e. composed of plastic, concrete, asbestos, clay, etc.) which have continuous associated tracer wire capable of carrying an electric current and that can be physically accessed to allow an energizing current source to create an electrical current in the tracer wire of sufficient magnitude as to be detectable by standard cable locating instruments;
- e. non-metallic pipes, cables and conduits which have continuous associated tracer wire capable of carrying an electric current and that naturally carries an electrical current of sufficient magnitude and suitable frequency as to be detectable by standard cable locating instruments;
- f. open pipe and conduits that can be accessed by a sonde and are sufficiently shallow to permit detectable magnetic fields to be sensed at the surface of the Work Area;

Examples of Unlocatable Buried Assets include, but are not limited to, the following:

- g. pipes, cables and conduits whose depth of burial is too great to create and/or overlain by or in proximity to metallic material which results in signal distortion thus preventing physically measurable signals at the surface or where burial material interferes with current generation and signal emissions;
- h. normally Locatable Buried Assets situated in, or emerging from, an area which is an Inaccessible Area;
- i. normally Locatable Buried Assets with a break or breaks to the electrical continuity of any metallic pipe, cable or tracer wire (i.e. segmented lengths, corroded connections, sections of plastic repair, etc.);
- j. non-metallic pipe, cable and conduits which do not have a continuous and/or accessible associated tracer wire;
- k. the host material is opaque to radio waves;
- I. Buried Assets that are normally characterized as Locatable become Unlocatable when either ambient interfering electromagnetic fields or the material surrounding and/or above the Buried Asset disrupt the energizing current or the normal operation of the sensing instrument.
- 6. Instruments used to locate Buried Liabilities use a variety of approaches to detect and infer the location of the Buried Liability. Magnetometers detect the distortion in the local magnetic field induced by the presence of some types of Buried Liabilities. GPR (Ground Penetrating radar) techniques depend on the transmission of radio waves into the host material and detection of waves reflected back from the Buried Liability. In some cases the lack of reflected GPR signal can be a Buried Liability indicator. Electromagnetic induction methods use electromagnetic induction to induce current flow in the subsurface and detect the resulting magnetic fields that are associated with these induced currents to identify Buried Liabilities. Electrical resistivity measurements use direct connect to pass current through host material and map out distortions in the current flow to indicate changes in the subsurface that may indicate the presence of Buried Liabilities. For the purposes of this estimate, Locatable Buried Liabilities are normally characterized as those features that will create a discernable change to the response of the measuring instrument and which differ in character from the background surrounding environment (that is, the features create an Anomalous Response) when industry best practices are followed.
- 7. The Client acknowledges that the laws of fundamental physics apply and that equipment is subject to measurement distortions that are site specific resulting in limited precision when determining positional coordinates. multiVIEW will use best-practice procedures but is not responsible for determining the location of Buried Assets or Buried Liabilities to an accuracy better that what is typical of normal locate instruments.
- 8. Determination of type composition, depth or size of the Buried Assets or Buried Liabilities is not constitute part of this service. Identification of the type (i.e. gas, electric, communications, etc) of a specific Buried Asset is not technically possible except by visual surface appurtenance or excavation and visual exposure of the Buried Asset. Inferences that may be drawn by correlation with records and as-built drawings may be offered but such inferences are provided on a best effort basis with no guarantee of correctness.
- 9. Client acknowledges the critical nature of having access to energize Buried Assets to enable locating and providing access (including provision of licensed plumbing, electrical or confined space entry personnel if required and which adhere to multiVIEW health and safety procedures) to any and all points necessary for the energization of the Buried Assets. multiVIEW accepts no responsibility for locating any Buried Asset for which access and/or appropriate workplace safety measures are not provided.
- 10.Individual Locatable Buried Assets are deemed Unlocatable Buried Assets where there are numerous Buried Assets clustered together either vertically and/or horizontally ("Clustered Utilities") making identification of individual elements physically impossible. multiVIEW is not responsible for identifying the individual Buried Assets in such situations.
- 11.Non-metallic pipe and cable (i.e. fibre-optic systems, etc.) are Unlocatable Buried Assets for standard cable locating instruments unless either an unbroken tracer wire or continuous metallic sheathing surrounding such buried plant is easily accessible from the surface. The Client must provide direct and simple access to every traceable wire or continuous metallic sheathing. Otherwise, multiVIEW accepts neither liability nor responsibility for locating such features since they are deemed Unlocatable
- 12.Non-metallic pipe and conduits (i.e. plastic, concrete, asbestos, clay, etc.) under pressure (i.e. water, gas, forcemain systems, etc.) are Unlocatable Buried Assets for standard cable locating instruments unless an unbroken tracer wire is attached to the pipe and this tracer wire is easily accessible from the surface. The Client must provide direct and simple access to every traceable wire.
- 13.Non-pressurized, non-metallic (i.e. plastic, concrete, asbestos, clay, etc.) conduits or pipe (i.e. sewers, drains, empty ducts, etc.) are Unlocatable Buried Assets unless a transmitting sonde can be inserted throughout the full length of the pipe or conduit. It is the responsibility of the Client to identify and provide direct access (including provision of licensed plumbing, electrical or confined space entry personnel if required) to any and all access points for such lines. multiVIEW accepts no responsibility for locating such lines where the Client does not provide access and/or appropriate workplace safety measures.
- 14.Any Buried Asset incapable of generating a reflected radar wave detectable by a GPR instrument is an Unlocatable Buried Assets.
- 15.All or part of a Work Area is defined as an Inaccessible Area when inaccessible for surveying Inaccessible Areas include the following: those covered by a structure or object (i.e. buildings, vehicles, debris, stockpiled snow, building materials, etc.); those covered by open water; those covered by woods, vegetation, or snow too thick to permit easy walking; those where the surface terrain slopes steeper than 1:2; those covered by snow; and, those where the safety of the operator is jeopardized (i.e. unstable footing, environmental hazards,
- uncontrolled roads, etc.). The final decision for defining an area as an Inaccessible Area rests with the multiVIEW Health & Safety Officer.
- 16.Utility data depicted on QL-D CAD lines are derived via utility owners record data and shown only for reference.



JBSURFACE UTILITY ENGINEERING

HYDRO EXCAVATION & CCTV CONCRETE SCANNING

NEAR-SURFACE GEOPHYSICS

UTILITY LOCATES

	Project No.:	Date:	Surveyed/Drawn By:	Checked:
THE LOCATION OF UNDERGROUND SERVICES SHOULD BE VERIFIED PRIOR TO EXCAVATION. UTILITY LOCATES ARE REQUIRED PRIOR TO ANY EXCAVATION ACTIVITY	46726 2021-08-13 EW/RF YC			
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Tel: 1-800-363-3116 Fax:1-866-571-5946 www.multiVIEW.ca 325 Matheson Blvd East Mississauga, ON, L4Z1X8		EN AVE & KENN & CONDITION	NEDY RD, MARKH S	AM, ON

Liability Limitations

- documents, and reports.
- damages for personal injury including death, or for property damage or liability caused to or from any Buried Asset or Buried Liability, within the Work Area.
- responsibility for any damage to plant, or any third party, caused by locating signals. Technical information about locating signals is available from multiVIEW upon request.
- 4. multiVIEW is not liable for damages resulting from physical exposure of any Buried Assets or Buried Liability by the Client, its representatives, their sub-contractors or any other person or corporation.
- construction of subsequent infrastructure.
- 6. multiVIEW accepts no responsibility and is not liable for damages suffered by any third party as a result of decisions or actions based on the performance of the statement of work by multiVIEW.
- 7. multiVIEW accepts no responsibility and is not liable for conduit blockage, or restoration of the site to pre-survey conditions, as a result of survey practices needed to fulfill the objectives of the Service provided.
- that scope of work can be adjusted to address Client requirement changes. Documents and maps provided by multiVIEW are the definitive means legally defining the extent of the Work Area investigated.
- 9. multiVIEW accepts no responsibility for locating Buried Assets or Buried Liabilities outside the limit of the Work Area or in the Inaccessible Areas.
- 10.Except as written in this contract, multiVIEW disclaims any and all promises, representations, warranties and covenants, express, implied, statutory or otherwise.
- cause or origin of such loss, injury, death or damage including, without limitation, loss, injury, death or damage attributable to the negligence of multiVIEW, its employees and agents in the performance or non-performance of the Service.
- beyond its control, including the untimely performance or non-performance by the Client of its obligations.

1. Location and mapping services, marks, reports and results provided by multiVIEW cannot substitute as a legally defined Buried Asset location in jurisdiction where government regulation dictates that the Buried Asset owner is solely responsible for identifying and locating their own Buried Assets. In cases where multiVIEW is legally authorized to act on behalf of the Buried Asset owner to locate the owner's Buried Assets, any results provided by multiVIEW will clearly identify that the Buried Asset location is legally authorized on all records,

2. multiVIEW's markings of Buried Asset or Buried Liability locations are provided as information to be input into the Client's decision making process and the provision of this information does not relieve the Client, or any other person, party, or corporation, from liability for

3. Cables carrying DC voltages and/or small diameter cables (i.e. fire alarm or security systems, remote signal cables, inaccessible tracer wire, perfectly balanced AC cables, etc.) can only be detected by methods which create electrical currents and signals in the cables. Where a sensitive or dangerous connection is involved, the Client must provide qualified personnel to isolate and enable direct access to these systems. The Client is responsible for defining the impact of locating signals on sensitive electronics. multiVIEW accepts no

5. multiVIEW will not accept any liability regarding inaccurate estimates of utility depth secured only by electronic means since multiVIEW recommends exposure of any such issues by vacuum excavating if any such depth information is critical to the design, engineering or

8. The completeness of work carried out by multiVIEW is based on information provided by the Client at or prior to the earlier of the time of issuance of this Estimate. If the scope work or size and/or extent of the Work Area changes, a signed Change Order must be issued so

11.multiVIEW shall not be liable for any amount in excess of the fees paid by the Client to multiVIEW for the work described in this estimate on account of any loss, injury, death, or damage whether resulting directly or indirectly to a person or property irrespective of the

12.In any action, claim, loss or damage arising out of the work for which this estimate is provided, the Client agrees that multiVIEW Locates Inc.'s liability will be 'several' and not 'joint and several' and the Client may only claim payment from multiVIEW Locates Inc of multiVIEW Locates Inc.'s proportionate share of the total liability based on degree of fault. Any action against multiVIEW Locates Inc must be commenced on or before the date which is the earlier of: i) eighteen months from the date on which the work in this estimate is completed and, ii) the date by which an action must be commenced under any applicable legislation other than limitation legislation. In no event shall multiVIEW Locates Inc be liable to the Client whether the claim be in tort, contract or otherwise, for an amount in excess of the fees paid by the Company for the services work provided. In no event shall multiVIEW Locates Inc be liable to the Client, whether a claim be in tort, contract or otherwise for any consequential, indirect, lost profit or similar damages, or failure to realize expected savings. multiVIEW Locates Inc will use all reasonable efforts to complete within any agreed upon timeframe the performance of the services described herein; however, multiVIEW Locates Inc shall not be liable for failures or delays in performance that arise from causes

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