











Date Revised:	March 2021	Overall Task Risk Rating:	Before Controls	B	After Controls	C
Description:	All utilities must be located and marked. Underground utilities range from hydro, communication cables, gas, fibre optic lines, existing water mains, TV cables, storm drains, sanitary sewers, etc.					
Location(s):	Construction Projects					
Associated Documents: Trenching and Excavating WTS, Housekeeping WTS, Equipment and Machinery Operation WTS, Hazardous Energy Control WTS						

RED FLAGS (HOLD WORK UNTIL CORRECTED):

Note:

- Do not commence work if you haven't got the locates done for the underground utilities in the area
- Always remember to contact "ONTARIO ONE CALL" before you dig
- If you find an unidentified utility, STOP and contact the utility owner immediately

PERSONAL PROTECTIVE EQUIPMENT (CSA APPROVED)

									
Head Protection	Foot Protection	High-Vis Protection	Hearing Protection	Hand Protection	Eye Protection	Respiratory Protection	Skin Protection	Face Protection	Fall Protection
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Note:

- Additional PPE such as eye protection (i.e. safety glasses), hand protection (i.e. gloves) and respiratory protection (i.e. a full face respirator) may be required depending on the task and surrounding environment

SAFE WORK PRACTICES (SWP)

General Locates Practices:

- All underground utilities that may be encountered during the excavation must be located and marked prior to breaking ground
- Always contact "ONTARIO ONE CALL" for locating any underground utilities that may be on a project for locate request services
- Where underground utility cannot be located contact utility owner to assist with manual locate
- Ensure supervisors and operators have locates available if equipment is to be used around underground electrical or energy hazards
- Ensure workers are provided copies of utility locates (as necessary) and that the content/specifications set out therein, are current and communicated to them
- If you find an error or an unidentified utility, STOP and contact the utility owner immediately
- If the utility may pose a hazard, the service shall be locked-out / tagged-out (LO / TO)
- While the excavation is open, underground utilities shall be protected, supported, or removed as necessary to protect employees

Digging Techniques:

- Do not use mechanical excavation within locate boundary limits
- Use non-intrusive methods of excavating material within restricted areas around utilities
- Uncover utilities using hand digging methods
- To ensure that you've exposed the correct utility, you may need assistance (hydro vac, subsurface imaging, radar (GPR), x-ray, etc.)
- Ensure excavation does not occur outside of the area where locates were obtained, without obtaining further locates

Utility Locate Markings:

- Ensure locates are up to date, and clearly marked onsite
- To help the locator on site, the excavator is to white line the dig area
- Ensure utility owner indicates, using labelled stakes / flags / paint, the centre line of underground utilities in the vicinity of the proposed excavation
- Ensure a diagram of the locate information is provided
- A colour code for marking buried utilities is used by contractors, locators, and utility owners throughout North America
- Re-conduct locates if markings not identifiable
- If locates are expired a new set of locates must be obtained
- Locate documents must be available onsite
- Do not remove or deface conducted utility locates

Utility or Product	Paint Colour
Electric - Powerlines; Cables; Conduit and lighting cables	Red
Gas; Oil; Steam; Petroleum; Compressed air and gases (e.g., propane); Other hazardous liquid or gaseous materials except water	Yellow
Communications - CATV; Alarms; Signal lines; Cables and conduit (phone and fibre optics)	Orange
Water	Blue
Sewers; Drain lines	Green
Reclaimed/treated water; Irrigation and slurry lines	Purple
Temporary survey marks	Pink
Proposed excavations	White

Inspections:

- Keep track of utility locates conducted onsite
- Inspect uncovered utilities for damage, and to ensure they are supported appropriately
- All workers must consult the utility locates report/diagram, prior to commencing excavation (and related) activities

Training:

- Employee Orientations (including roles, responsibilities, applicable workplace task standards, WHMIS, etc.)
- Ensure utility locates are conducted by competent workers
- Ensure workers who are provided copies of utility locates, are competent and understand the content and specifications outlined
- Only trained, authorized personnel are allowed to operate machinery or equipment
- Only operate machinery and equipment that you are authorized and trained to use

Personal Protective Equipment:

- Workers on construction projects must wear, at a minimum, head, foot and high visibility protection. Eye protection when necessary
- Eye protection is required when completing tasks that may cause debris / objects to dislodge or become airborne

JOB HAZARD AND RISK ANALYSIS		RISK RATING SYSTEM	A	High risk of injury or equipment / property damage.
			B	Medium risk of injury or equipment / property damage.
		C	Low risk of injury or equipment / property damage.	
TASK HAZARDS	RATING BEFORE CONTROLS	TASK CONTROLS	RATING AFTER CONTROLS	
• Lack of Documentation, Locates	B	<ul style="list-style-type: none"> • Before you dig, mark the proposed excavation area and contact "ONTARIO ONE CALL" to obtain locates for all underground utilities • Keep all documentation on the job-site showing proof that the locates were made 	B	
• Lack of Communication	C	<ul style="list-style-type: none"> • Established safe working zones while digging in proximity to underground utilities 	C	
• Lack of Training	C	<ul style="list-style-type: none"> • Excavation equipment is to be operated and maintained by competent trained and authorized personnel • Ensure utility locates are conducted by competent workers • Ensure workers who are provided copies of utility locates, are competent and understand the content and specifications outlined 	C	
• Lack of Site Planning and Storage Knowledge	B	<ul style="list-style-type: none"> • Ensure excavation does not occur outside of the area where locates were obtained, without obtaining further locates 	B	
• Utilities Not Located	B	<ul style="list-style-type: none"> • Where underground utility cannot be located contact utility owner to assist with manual locate • Confirm location of all utilities within excavation area by hand digging 	B	

<ul style="list-style-type: none"> Located Utilities Not Marked 	B	<ul style="list-style-type: none"> Ensure locates are up to date, and clearly marked onsite Ensure utility owner indicates, the centre line of underground utilities in the vicinity of the proposed excavation Ensure a diagram of the locate information is provided Re-conduct locates if markings not identifiable 	B
<ul style="list-style-type: none"> Mechanical Excavation in Close Proximity to Utilities 	B	<ul style="list-style-type: none"> Do not use mechanical excavation in locate boundary limits Use non-intrusive methods of excavating material within 1 metre of centre line of marked utilities (i.e. hand digging or hydro vactor) Dig test holes to find the line and depth of the utility 	B
<ul style="list-style-type: none"> Unstable or Live Utilities 	B	<ul style="list-style-type: none"> If the utility may pose a hazard, the service shall be LO / TO While the excavation is open, underground utilities shall be protected, supported, or removed as necessary 	B
<ul style="list-style-type: none"> Expired Utility Locates 	C	<ul style="list-style-type: none"> Each utility can have different expiration periods (~30 days) Get new locates done before the old ones expire Request locates at least 5 to 10 days in advance of expiry 	C

SAFE JOB PROCEDURES (SJP)

<p><u>Pre-Task Commencement:</u></p> <ol style="list-style-type: none"> 1. Gather and wear the required PPE for the task - on construction sites, all must wear head, foot and high visibility protection. Eye protection when necessary 2. Ensure the site-specific workplace violence assessment is complete 3. Complete the Daily GAZZ Card and review with all workers the shift's tasks with any associated hazards and control strategies 4. Ensure all workers understand the GAZZ Card contents, and sign off in acknowledgement 5. Ensure controls are in place prior to commencing work so risks are mitigated / eliminated 6. Determine what equipment / machinery / tools and material, are required for the completion of the task 7. Inspect all equipment / machinery / tools prior to use and document the inspections on appropriate forms when required 8. Ensure preventative maintenance activities have been completed where required, prior to using equipment / machinery / tools 9. If equipment / machinery / tools are observed to be damaged, remove it from use and notify the Foreman / Superintendent 10. Install fencing and hoarding where needed 11. Call "ONTARIO ONE CALL" for locating services of all buried utilities to request that they locate and mark the utilities and provide a diagram describing the locate information 12. The excavation area should be outlined by a white line when possible
<p><u>During Task:</u></p> <ol style="list-style-type: none"> 1. Review locate and ensure compliance to utility location and active work 2. Locate centre line of utility 3. Ensure the operator has a copy of the locates 4. Determine excavating procedures 5. Communicate with near-by workers to inform them that work is commencing 6. Support utilities to prevent failure or breakage
<p><u>Note - If un-located utilities or damaged utilities are discovered:</u></p> <ol style="list-style-type: none"> 1. Stop all related work activities 2. Contact the utility owner 3. Verify the damaged area by taking pictures, notes (i.e. elevations, etc.) and complete an incident report
<p><u>Task Completion:</u></p> <ol style="list-style-type: none"> 1. Ensure all equipment / machinery / tools are maintained and stored appropriately in the designated locations 2. Implement any housekeeping or maintenance as required