



UNDERGROUND UTILITY GUIDELINES

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Underground Utility Location Policy

All existing utilities will be located, marked, and visually verified prior to starting any operation.

Utility Locate Services

Prior to the start of any excavation a utility locate service must be contacted. Locate companies require 2 full working days advanced notice before performing a locate. This excludes weekends and holidays. Before calling for a locate the excavation area must be pre-marked with white paint stakes or flags.

Traffic signal wires and illumination for intersections **ARE NOT** covered by locate services. It is the manager's responsibility to contact the proper authority to locate the traffic signal wires.

In addition, newly constructed work **IS NOT** covered (i.e. drainage, electrical subcontractor new installations, etc.) and should be located by other means. The manager is responsible for this work will be contacted to verify what has been constructed and an appropriate as-built requested.

Utility Color Markings

The following colors and symbols have been adopted by all utilities for marking underground utilities:

	BLUE	Water
	ORANGE	Telephone, Railroad, Cable TV
	GREEN	Sewer, Storm Drain
	RED	Street Lighting, Electric, Traffic Signals (may be orange)
	YELLOW	Gas
	PINK	Survey
	WHITE	Proposed Excavation

Excavation Utility Permits

An Excavation Utility Permit is required for all operations which penetrate the original ground surface. The manager of each operation is responsible for ensuring that the Excavation Utility Permit and all necessary drawings are available at the operation and in the cab of the excavator. The operator is ultimately responsible and will be held accountable to ensure the operation does not proceed without a valid Excavation Utility permit.

The Excavation Utility Permit has several steps requiring completion. All steps will be completed and legible. The manager will verify that the Excavation Utility Permit has been properly completed. The following documents will be attached before being distributed to the manager and operator:

- The page of the plans containing the contact numbers for every possible utility in the area.
- A copy of the plan sheets for the work zone that the permit covers. Any utility relocations that have been completed before the start of the operation must be clearly noted on these drawings.
- A copy of the plan sheets for the work zone that the permit covers. Notes and highlights will be made on these drawings to indicate which drainage items (i.e. catch basins, pipe runs, etc.) have been installed.

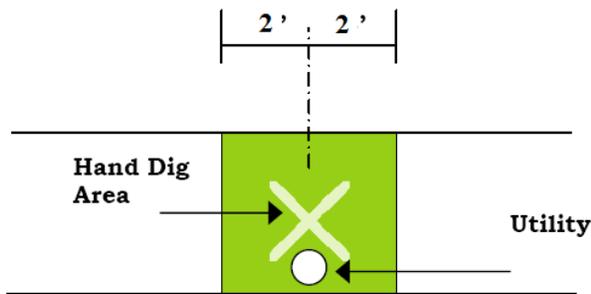
Potholing

Before excavating operations begin, potholing for the utilities will take place. Potholing is performed to verify the location and depth of the utility lines. Potholing will be done using hand labor or a VAC truck (if available). Equipment can be used in conjunction with hand labor to remove hand-loosened material only.

NOTE: Utilities typically identified by locate services have a two-foot safe zone. In other words, the utility should be within a two-foot zone of either side of the markings.

The manager of the job will maintain a minimum clearance of 24 inches between a marked and unexposed underground facility and the cutting edge or point of any power operated excavating or earth moving equipment. If excavation is required within 24 inches horizontally of any marking, the excavation will be performed with extreme care utilizing hand tools or vacuum excavation techniques only.

Utility owners will not guarantee the depth of a utility; therefore the superintendent will use the same excavation techniques vertically as horizontally, unless a utility owner informs us that we can use a different technique.



Potholing Procedure

Potholing will be performed to locate the utility. The utility must be found prior to the start of excavation operations.

The soil must be excavated in 6" lifts (approximately) by hand to verify that no utilities are present. Then the equipment can be used to excavate the material in that lift. If utilities are located, then the utilities must be exposed by hand. The proper tools that can be used for handwork are shovels and pry bars (or other tools of this nature). At no time should a pickaxe or other similar tools be used.

Once identified, all utilities will be marked with stakes and ribbon. When offset markings are necessary, the information will be clearly noted on the stake. Make sure all personnel are aware of the location of the utilities in the area.

DO NOT ASSUME THAT THE UTILITY WILL CONTINUE ON THE SAME LINE AND GRADE.

If any damage occurs to any line, contact the utility company, the utility engineer and the manager immediately.

Underground Utility Pothole Spacing and Frequency

The following spacing and frequency requirements will be followed on all projects. ANY DEVIATION FROM THIS PROCEDURE WILL REQUIRE APPROVAL FROM THE MANAGER.

- Life threatening utilities such as gas and electrical services will be exposed through the entire length of the excavation.
- Gas and electric lines within 25 feet of your work area will be potholed and marked every 25 feet to verify that the line has not changed directions.
- Gas and electric lines outside the 25 feet of the work zone will be potholed at least once on each end of the limits of the excavation to verify Underground Service Alert and the utility plans.

Communications Lines

Fiber-optic lines will be potholed every 25 feet within the work area. Telephone/Cable lines will be potholed every 50 feet within the work area.

Other Utilities

- Will be potholed every 25 feet for lines less than 8” in diameter.
- Will be potholed every 50 feet for lines 8” through 24" in diameter.
- Will be potholed every 100 feet for lines greater than 24” in diameter?

At least two (2) potholes must be obtained for each utility within the work zone regardless of how small the work area is.

Utilities in Roadways

Utilities that are located within the roadway will be potholed.

Street plates will be obtained to cover a pothole when there is live traffic on the roadway. For roadway work not scheduled to be excavated in the current operation, an asphalt patch will be placed over the pothole. This will be done after all pothole information has been recorded and the pothole has been offset using stakes and ribbon.

Once all potholing has been completed excavation can begin. However, always keep an eye out for unknown utilities.

If during the course of excavation a utility has been exposed, it is our responsibility to inspect and support these facilities prior to backfilling. If damage of any kind is discovered, or any suspicion of damage exists, call the utility engineer so documentation can take place. The utility engineer will then notify the utility owner.

Operator Awareness

Training will be performed with all operators and manager. All such personnel must be “Dig Safe” trained before working on an excavation operation.

This training is also required for personnel involved in the completion of the Excavation Utility Permit.

Reporting Requirements

If a utility hit does occur, several reporting steps are required:

- First, and foremost, clear and secure the area if there is potential for further exposure to hazardous environments.
- Contact the appropriate utility owner to inform them of the damage so they can inspect and repair, if necessary.
- Notify the Utility Engineer and Manager.

The manager will complete the Utility Damage Report and transmit it to the Safety Director within 4 hours.

Excavation Utility Permit

General Information	
Location of Excavation (attach plans)	Permit #
Drawing Numbers of Plans Attached (highlight utilities)	Job #
Purpose of Excavation	

DIG Safe Notification		
DIG Ticket #	Date Requested	Requested By

Pre-Work Checklist			
	Circle	Initial	Comments (if no explain)
Pre-construction meeting held with utility owners	Y / N / NA		
Plans verified against DIG markings	Y / N / NA		
Location of recent re-locations known	Y / N / NA		
DIG markings offset	Y / N / NA		
Visual check for unmarked utilities (manholes, telephone pedestals, etc.)	Y / N / NA		
All utilities potholed within max. limits	Y / N / NA		

Verification Signatures		
	Location Of DIG Markings Known	Print Name and Initial
Manager	Y / N / NA	
Operator	Y / N / NA	
	Y / N / NA	
	Y / N / NA	

As-Builts		
As-built completed	Y / N / NA	Comment:

Utility Strike Report

Date of Accident: _____ Time: _____ AM/PM Type of Utility
Owner of Utility: _____ Telephone Storm Drain
Location: _____ Water Sewer
Supervisor: _____ Power Traffic Signals
Job: _____ Gas Cable
Operator: _____ Other: _____
Other Personnel Involved: _____

Immediate Identification Initiated: Yes No

Contacted Whom: _____ Time _____ AM/PM

Was Line Marked? Yes No

If Yes:

1. Utility line marked by: Owner Other
2. Were markings accurate? Yes No
3. Markings checked by? Owner Contractor Other

If No:

1. Was line marking services requested? Yes No
2. Date of Request: _____
3. Ticket Number: _____

Date when information received on the location of utilities: _____

Describe other evidence in the area, if any, of the existence of utility: _____

Describe how accident occurred: _____

Describe Damage: _____

List who repaired, how many people and type of vehicles and equipment:

