

# Utility Hit Prevention

Adequate due diligence prior to construction is essential to avoid striking subsurface utilities. Below are a few considerations and due diligence measures that must be utilized during the pre-construction and construction phases to ensure the safety of our workers and local communities.

*Will the work require one or more of the following?*

- Drilling
- Core Boring
- Saw Cutting
- Any other method of penetrating a surface that may contain public or private utilities
- Excavating
- Directional Boring
- Plowing
- Demolition
- Trenching
- Grading

*If so, select the appropriate subsurface object location methodologies from the table below.*

The primary reference regarding the potential for subsurface utilities to be present is a set of as-built drawings for the building, facility or exterior area.

Even if as-builts exist, it is mandatory to use the local state One-Call system for location of public utilities and a private locator for in-building exterior private property commodities that the state One-Call system will not locate.

Finally, a common sense review of the surrounding area for evidence of unmarked utility service, vent risers, hydrants, manholes, utility vaults, valve caps, generators, light poles, irrigation systems, traffic controls, cable boxes, phone boxes, transformers, etc. must also be undertaken to minimize the potential for striking a subsurface utility.

ACTIVITY	CONCRETE STRUCTURES	SOIL / PAVED SURFACES	
Core Boring	GPR Radiography (X-ray)	GPR Pipe Tracing EM Metal Detector Passive (50/60 Hz) Line Locator	
Demolition			
Saw Cutting			
Drilling			
Excavating	N/A		
Trenching			
Directional Boring			
Grading			
Plowing			
LOCATION METHOD	MATERIALS DETECTABLE	EFFECTIVE DEPTH	
		Soil	Conc.
GPR	Metals, Plastics, Terra-Cotta, and Concrete	10' (400 MHz)	16" (1.6 GHz) 10" (2.3 GHz)
Radiography (X-ray)	Metals and Plastics	N/A	12" to 36"
Passive (50/60 Hz) Line Locator	Power Conduit	up to 6'	12"
Pipe Tracing	Copper, Aluminum, Steel and Cast Iron	10' - ideal conditions	N/A
EM Metal Detector	Metal or Pipes with Metallic Reinforcement	6.5' to 14'	N/A

Note: Cutting of rebar, embedded tensioned members or other embedded structural members is not permitted. Cutting of embedded structural objects may only take place after first obtaining appropriate written engineering approval(s).

