

Facilities must be exposed by non-destructive techniques before mechanical equipment is used within the Control Zone. Always use the method of exposure approved by the utility owner. This often means careful **hand exposure** before mechanical equipment is used within the Control Zone.

Hand exposure is started at or near the location marks, working outwards into the Control Zone until the buried facility is found. However, high voltage energized cables should never be hand exposed.

Make sure you know the Control Zones and hand exposure procedures for the underground facility you are working around.

Digging at Home

Homeowners often need to put in new fence posts, plant a tree, or build a garage pad or retaining wall.

Remember: Call Before You Dig!

It's easy to forget that just doing some work around the yard can be extremely dangerous. But it's just as important to be careful at home as it is at work. In fact, there are some special problems to consider when digging at home:

- Although utility lines are supposed to be buried at approved depths, conditions can change. Some shallow utilities may be less than 300 mm (12 inches) below ground surface in residential areas.
- There may be secondary services (such as electrical, telephone, or gas lines) located between your house and garage.
- Utility Rights of Way (URW) are becoming very common in urban areas. They are usually located across the front of residential properties. Your use of land within a URW is restricted.
- You own the sewer and water services on your property. Municipalities will not locate these facilities (and they won't pay for damage to them either).

Make sure you know your rights and responsibilities—you are responsible when digging on your property.

With underground facilities, what seems like the smallest incident can cause incredible destruction. You can prevent disasters by following these basic steps:

1. Plan your work.
2. Find out what's below.
3. Hand expose facilities.
4. Use safe work practices and procedures.

Both excavators and owners of buried facilities are responsible for preventing damage to underground facilities—make sure you do your part!

For more information, refer to current applicable Occupational Health and Safety Legislation.

The Alberta Construction Safety Association's mission is to provide quality advice and education for the construction industry that will reduce human suffering and financial costs associated with workplace incidents. This brochure is part of a series, **The Toolbox Brochures**, which are available on a variety of safety topics. If you have any questions or comments please contact:



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Underground Facilities



Making Safety A Way Of Life



The Alberta Construction Safety Association

www.acsa-safety.org

To order more brochures, contact the above.

There's a Lot to Watch Out For!

When people think of underground facilities, they often think of power and phone lines. But underground facilities include anything below the ground which transports or stores:

- Water
- Sewage
- Electronic, telephonic, and telegraphic communications
- Cablevision
- Electric Energy
- Oil
- Gas

These may be contained in pipes, sewers, conduits, valves, manholes, cables, fiber optics, lines, wires, and catch basins. There's a lot to watch out for underground.

The Risks

If you hit an underground facility while digging, you could cause:

Injury to yourself and others:

- Electrocutation
- Explosion
- High pressure releases

Severe damage:

- Isolate entire communities
- Disrupt vital communications networks
- Render computer-based business operations useless

Financial penalties:

- Legal costs due to prosecution or litigation
- Fines for violations of provincial legislation

Ground Disturbances

There are many activities that create a ground disturbance and have the potential for danger:

- Excavating, digging, and trenching
- Plowing (cable, pipe), drilling, tunneling, auguring, and backfilling
- Driving posts, topsoil stripping, land leveling, and quarrying
- Tree planting, rock picking, grading, blasting, and clearing

Alberta 1 Call

Most Alberta communities and industries are serviced by a complex network of underground facilities. Before you dig or excavate, find out what is buried below. Use the **FREE** Buried Facility Location Notification Service.

Call toll free: 1-800-242-3447

When you call for locates, **Alberta 1 Call** will notify its members in the area. Those members will then call you and arrange a meeting date and time on your site to mark the locations of their buried facilities.

Alberta 1 Call will give you the names of the member companies being notified. It is up to you to contact those utilities that are **NOT** members of **Alberta 1 Call**.

Remember to call at least two full working days before you want to dig!!



Other Information Sources

In addition to contacting **Alberta 1 Call** and checking for warning signs, you may need to use other information sources:

- The Alberta Energy & Utilities Board (AEUB)
- Alberta Agriculture Food and Rural Development (AAFRD)
- Rural Utilities Branch low pressure gas distribution pipeline records
- Certificates of title including Right of Way (ROW), and Utility Right of Way (URW)
- The landowner

Location Marks

Red	Electrical
Yellow	Gas, oil, petroleum and gaseous materials
Blue	Potable water
Green	Sanitary sewers, storm sewers and drain lines
Orange	Telephone, communications, cable TV, alarm and signals
White	Proposed excavation
Pink	Temporary survey markings
Purple	Reclaimed water, irrigation, and slurry lines

Control Zones

Generally, a Control Zone is the area one metre on either side of location marks. However, some special cases such as fiber optics and high pressure pipelines require a Control Zone of five metres.