



**Labour and Workforce Development**

**OCCUPATIONAL HEALTH AND SAFETY DIVISION**

**Excavations and Trenches**

**A guide to Part 14 of the**

**Occupational Safety General Regulations**

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## A GUIDE TO PART 14 – EXCAVATIONS AND TRENCHES - of the OCCUPATIONAL SAFETY GENERAL REGULATIONS

The information contained in this publication is a guide only and should be read with the *Occupational Safety General Regulations* for specific requirements. The Regulations are available through our web site at <http://www.gov.ns.ca/lwd/healthandsafety/pubs.asp> or copies may be requested by calling the Information Specialist at 902-424-5400 or toll-free 1-800-952-2687. For your reference and convenience the section of the Regulation has been included where possible

## **Part 14-Excavations and Trenches (sections 166-173)**

### **When is a trench cage required?**

If a person enters a trench with a wall greater than 1.2m (1.2m≈4ft) deep, that wall must be supported by shoring, bracing or a trench cage.

The exception is when the trench is:

- Cut in sound and stable rock
- Sloped to within 1.2m of the bottom of the trench

Note if the trench is more than 1.2 m deep, the employer must ensure that either the trench is sloped at a 45 degree angle from the horizontal or has a trench cage installed. If the trench is cut in sandy soil or if the material is wet, the angle slope should be shallower as sandy and wet soils collapse very easily.

### **I am working in a rock cut trench. What precautions should I take to prevent debris from falling on me?**

If the walls or crests of a trench are cut in rock, the employer must ensure that rock bolts, wire mesh, or equivalent protection supports the walls.

### **I am operating a mobile crane beside an trench. What precautions do I need to take?**

If mobile equipment is used near the edge of a trench, the employer must ensure that any shoring, bracing or caging for the trench is adequate to support the increased load.

### **I am working in a trench and concerned about a nearby utility pole becoming unstable. What precautions need to be taken?**

The employer must ensure that a utility pole, building or other structure is provided support or removed if it can become unstable due to trenching activity.

### **The ladder in the trench I am working in reaches ground level only. Is this acceptable?**

No. A person cannot enter a trench 1.2m (1.2m≈4ft) or more in depth, unless a ladder extends at least 1m (1m≈3ft) above the trench.

### **Where can I pile excavated material?**

Excavated material must be at least 1m away from the edge of a trench, unless an engineer certifies a shorter distance.

### **How much water is permitted in a trench?**

The employer must ensure water is not a hazard to anyone working in the trench. Examples of hazards due to water in the trench

- Electrical equipment in the trench
- Weakening of the soil and support walls

**I am concerned the trench I will be working in is an oxygen rich atmosphere. What precautions need to be taken?**

Before a person enters a trench, if they can be exposed to a hazardous substance or to an oxygen rich atmosphere in the trench, the employer must ensure:

- Testing is performed to determine the concentration of oxygen and any hazardous gas
- Adequate precautions are taken to reduce the risk of injury to that person.

**Can I store hazardous substances in a trench?**

No, hazardous substances cannot be stored in a trench.

**Does fencing need to be set up around an excavation?**

All temporary excavations greater than 1.2m in depth (1.2m≈4ft) require fences, guards or barricades that can prevent a person from falling into the excavation.

**Does a trench cage design have to be certified by an engineer?**

Yes, an engineer must certify the design of the cage and include information on:

- The depth at which the trench cage can be used; and
- The manner in which the trench cage is to be installed, used, maintained and dismantled

A nameplate has to be permanently attached to the cage. The nameplate must be in a location visible for inspection, and identify the engineer that certified the design of the trench cage and the depth at which the cage may be used.

**Can I alter a trench cage?**

If a trench cage has been changed in any way that may affect the structural integrity of the cage, it must be certified by an engineer.

**Does a trench cage have to rest on the ground?**

The cage should rest as close as possible to the bottom of the trench. In no case can the cage rest above the bottom of the trench more than the design maximum height, or 900mm, whichever is less. (900mm 3ft).

### **Can I design my own bracing for a trench?**

No, shoring or bracing for a trench must:

- Comply with a design certified by an engineer; or
- Be commercially manufactured

### **What are the duties regarding shoring or bracing for a trench?**

The employer must ensure shoring or bracing is built and maintained as set out in the manufacturer's/engineer's instructions.