

520 CMR 14.00
Excavation & Trench Safety
Regulations

Effective: March 1, 2009

Department of Public Safety
Division of Occupational Safety
(abbreviated version of DPS/DOS training)



Background

- August 20, 1999: 4-year-old Jackie Moore dies after being buried in freshly dug but unattended trench in a Bridgewater backyard.
- DPS takes action against excavator's license. OSHA assesses penalties for failure to backfill trench and failure to provide safe means of egress.
 - At the time of the accident, no regulations relative to trench safety for the General Public at unattended trenches existed in the Commonwealth.
- December 4, 2002: Legislature enacts legislation relative to excavation and trench safety, [MGL c. 82A](#).



Scope & Purpose of Trench Safety

Laws: c. 82A & 520 CMR 14.00

- Two purposes:
 - Protect the General Public from hazards inherent in trenches; and
 - Provide for penalties for violations.
- The laws apply to Excavators and set forth actions excavators must take to protect the General Public.
 - The law does not apply to worker safety.



How do the regs achieve the purpose of protecting the General Public?

- Purpose: To provide protections to the General Public from the hazards inherent in unattended trenches.
 1. Requires excavators to obtain a permit.
 2. Requires excavators to provide protections when trenches are unattended.
 3. Deters violations by authorizing the collection of fines.



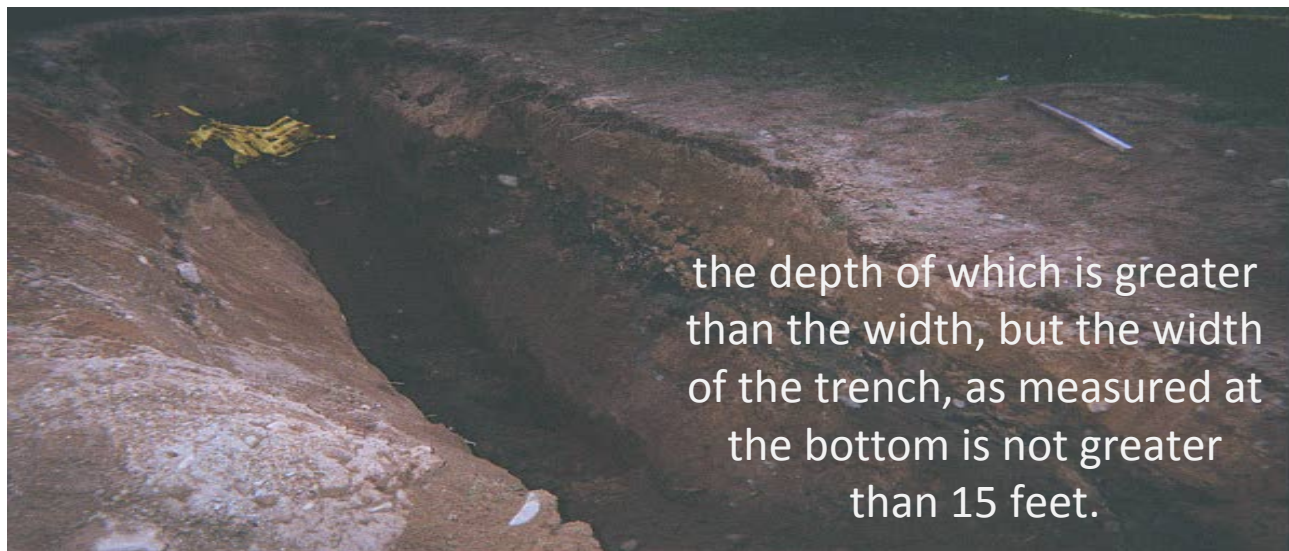
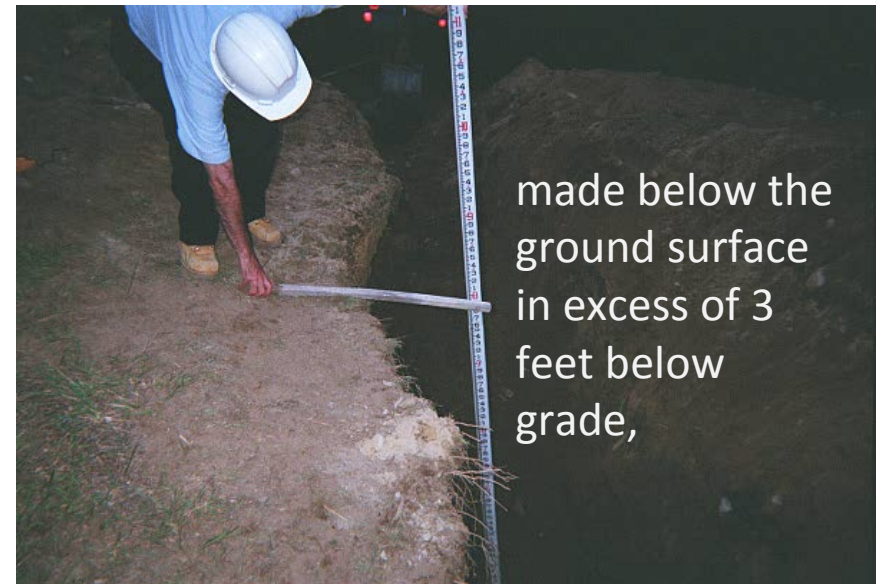
14.02 Definitions

- **Competent Person**- A person or persons who is capable of identifying existing and predictable hazards in the surroundings, or working conditions which are unsanitary, hazardous, or dangerous to people, and who has authorization to take prompt corrective measures to eliminate them. A competent person must be able to demonstrate that he or she has been trained in and are knowledgeable about: soil analysis, the use of protective systems and the requirements of this regulation.
- **Emergency**- An unforeseen condition in which the safety of the public is in imminent danger because of a threat to life or health or where immediate correction is required to maintain or restore essential public utility service.
- **Excavator** – Any entity including, but not limited to, a person, partnership, joint venture, trust, corporation, association, public utility, company or state or local government body or public agency which performs excavation operations including the excavation of trenches.
- **General Public** – All natural persons not engaged in the creation of a trench.
- **Permit Holder** –The excavator who is responsible for acquiring a permit from the Permitting Authority.
- **Permitting Authority** – A city, town, or public agency required to administer the provisions of 520 C.M.R. 14.03.
- **Public Agency**— A department, agency, board, commission, authority, or other instrumentality of the Commonwealth or political subdivision of the Commonwealth or two or more subdivisions thereof.
- **Serious Injury** - A personal injury that results in death, dismemberment, significant disfigurement, permanent loss of the use of a body organ, member, function, or system, a compound fracture, or other significant injury that requires immediate admission and overnight hospitalization and observation by a licensed physician.
- **Trench** – An excavation which is narrow in relation to its length, made below the surface ground in excess of 3 feet below grade and the depth of which is, in general, greater than the width, but the width of the trench, as measured at the bottom, is no greater than 15 feet.
- **Unattended Trench** – A trench where neither the permit holder, excavator, nor any of the people who work in or at the trench are present.



When do these regulations apply?

When there is a trench, defined here as:



Who do the regulations apply to, and how?

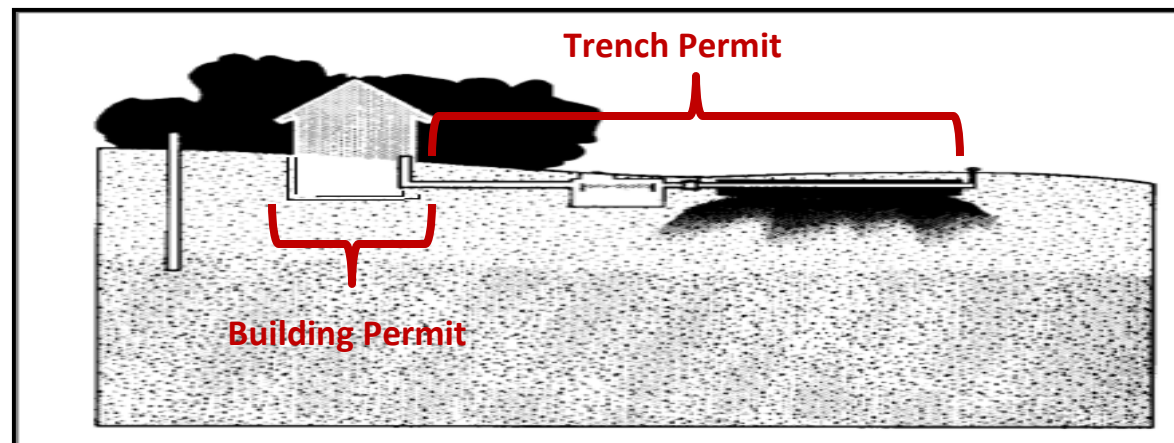
- Apply to ANY excavator, whether a public agency, public utility, municipal DPW, private company or citizen.
- Permits must be obtained prior to beginning the excavation of a trench in or on any:
 - Public way
 - Public property
 - Privately owned land
- Exceptions are provided for emergencies.



When will a Trench Permit be necessary?

- Permits are required whenever you are making a [trench](#), as that definition applies.
- Note, however, that the Trench Safety regs must be read in conjunction with the Building Code.
 - Excavations solely to place a foundation generally fall outside the definition of a trench (according to c. 82A) therefore they do not require a trench permit.
 - Building Code and Trench Regs provide for many of the same General Public protections, with some exceptions.
- Finally, some excavations may require *both* a trench and a building permit.

For example, the construction of a house with a septic system will require both: a building permit for the foundation and a trench permit for the trench excavation for the septic system.



Who issues the permit to create a trench?

- Each city, town, or regional entity issues the permit for municipal or private property.
- State agencies issue for state property/
- The permitting authority is responsible for:
 - The issuance of trench permits;
 - The collection of permit fees; and
 - The enforcement of protections for the General Public required by 520 CMR 14.04.

Note: this permit is similar to the Street Opening Permit, the application may be included with that application.



Who will a municipality designate as the permitting authority?

DPS and DOS recommend the designation of an individual or board presumed to have knowledge of excavation safety already, such as:

- A Local Building Commissioner or Inspector;
- A Fire Chief or other Local Fire Department Official;
- A DPW Director; or
- A City or Town Engineer.

South Hadley : Permitting authority is the DPW



What is needed to obtain a permit?

- *Required:*
 - A completed application to excavate a trench; and
 - A certificate of insurance with general liability coverage of \$100,000 per person and \$300,000 per claim.
(See [MGL c. 82A, §2](#))
- *Optional* at discretion of municipality:
 - A reasonable permit fee.
 - The purpose of the fee is to cover the administrative costs of reviewing and processing the permits.
 - **South Hadley fee is \$30.00**



What information must the permit application require?

- The requirements of the permit application are outlined in 520 CMR 14.03(4):
 - Dig Safe number;
 - Name and contact information of the permit holder;
 - Name and contact information of the excavator(s);
 - The permitting authority should realize that the specific excavator, competent person; and person performing the excavation may change on complex projects. Therefore, information may be updated as necessary during the course of the project.
 - Name of the competent person(s);
 - Name of the person(s) performing the excavation of the trench;
 - Permit expiration date (where applicable);
 - Specific location of the trench (pursuant to MGL c. 82A, §2)
 - Name and contact information of the insurer; and
 - Statements required by MGL c. 82A, §3 relative to the requirement of familiarity with 520 CMR 14.00 and 29 CFR 1926.650 (OSHA).
- The permit is similar to the Street Opening Permit and the application for a Trench Permit may be included with that application.



Do excavators need a permit even in the case of an emergency?

- **Emergency**: an unforeseen condition in which the safety of the public is in imminent danger because of a threat to life or health or where immediate correction is required to maintain or restore essential public utility service.
- Emergencies relax the requirement for a permit *before* beginning to excavate, but *not* the requirement for a permit all together.
 - Excavators must still obtain a permit from the permitting authority upon the first reasonable opportunity (i.e. business hours).



What do authorities look for at a trench site?

- Authorities are not required to conduct inspections.
- Is the trench unattended?
- Is the permit posted in plain view at the site of the trench?
 - What's plain view?
 - The cabs of the hoisting equipment (so as not to block the view of the operator);
 - The window of the construction trailer.
- Is the permit provided upon request?
- Have effective protections for the *General Public* been implemented?
- Does the information at the site match the information on the permit?



Municipalities are required to shut down trenches where a violation is found and may take other actions.

- Possible actions include:
 - Immediate shutdown by DPS, DOS, or local authorities for a serious threat to public safety.
 - Post-hearing suspension or revocation of permit.
 - Imposition by the DPS of further administrative fines against the excavator ([MGL c. 82A, §1](#)).

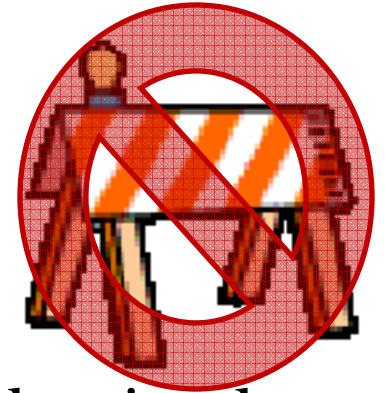


When do permitting authorities order an immediate shutdown?

- When the municipality finds:
 - A fatality or *serious injury* to the general public; *or*
 - A failure to use effective protections for the General Public as required by 14.04; *or*
 - Any other condition that constitutes a serious threat to life, limb, or property of the General Public as determined by the Permitting Authority; *or*
 - The excavator failed to obtain a permit.
- Shutdown remains in effect until condition corrected to satisfaction of authority responsible for shut down.
 - Reinspection required.
 - Permit holder has a right to appeal immediate shutdown within 10 calendar days.



What are effective protections for the General Public?



- Protecting the General Public from unauthorized access to unattended trenches is as easy as **A-B-B-C**.
 1. Attendance
 2. Barriers
 3. Backfill; or
 4. Covers
- All unattended trenches must be protected from access, whether on public ways, public lands, and private property.



Effective Protections on Public Ways

- Requires covers or barriers when trench unattended.
 - Covers must be steel plates no less than $\frac{3}{4}$ inches thick or equivalent and placed over the excavation or trench
 - Barriers used instead of covers to secure an unattended trench shall be no less than 6 feet in height;
 - Barriers must be adequately stable and supported so as not to be blown over or easily moved
 - No more than 4 inches shall be allowed between multi-sectioned barriers
 - Barriers shall be placed so as to be unaffected by changing conditions (i.e. erosion, cave in) of the trench.



Effective Protections at Fixed Worksites

- Fixed work site: work site that is not located on a public way where the excavation of a trench occurs.
- Covers, portable barriers, or backfilling required where trench is unattended:
 - Covers must be steel plates no less than $\frac{3}{4}$ inches thick or equivalent and placed over the excavation or trench
 - Portable barriers shall be erected to preclude unauthorized entry, for example:
 - Placement of horizontal supports shall be on the inside of the barrier;
 - Barriers shall be at least 6 feet in height;
 - Spaces in fencing shall not exceed 4"
 - Barriers shall be clearly marked



Photo from trench, looking out.



What's not Required

It is also critical to understand what the regulations **do not** require. The Trench Safety regs:

- ***Do not*** require a trench permit for the excavation of building foundations (building permits are still required).
- ***Do not*** mandate inspections.
- ***Do not*** regulate worker safety already covered by OSHA (i.e.: the use of trench boxes).
- ***Do not*** require a trench permit in the case of an *emergency*.
- ***Do not*** allow for the suspension or revocation of permits based solely on worker-related OSHA violations.

