

UMassAmherst	Environmental Health & Safety	
Subject: Excavation & Trench Safety Permit Policy		
Number: 201		
Effective date: March 28, 2019		
Issuing Authority: Jeffrey Hescock, Executive Director of Environmental Health and Safety and Emergency Management		
Amends or Rescinds: Updated and Revised		

1.0 Purpose and Applicability

1.1 The purpose of this policy is to establish worker protection and public safety requirements for excavations and trenches on UMass Property and for UMass Projects. This policy also applies to projects under the jurisdiction of the UMass Building Authority (UMBA). Projects under the direction of the Department of Capital Asset Management and Maintenance (DCAMM) exercise their own authority to issue these permits.

1.2 This policy:

- 1.2.1 delineates permitting requirements for all excavations and trenches greater than 3 feet below grade.
- 1.2.2 establishes UMass policy to invoke OSHA standards (29 CFR 1926 Subpart P) as the minimum requirements for excavation/trench safety.
- 1.2.3 specifies minimum requirements for protecting the general public from hazards associated with trenches and excavations Massachusetts General Law(M.G.L.) Chapter 82A, as codified in the Code of Massachusetts Regulation 520 CMR 14.00 Note: UMass goes beyond the law by requiring permits for ALL excavations.
- 1.2.4 Provides protocols for addressing violations of this policy.

2.0 Definitions

2.1 Applicant/Owner – The permit holder.

2.2 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 is knowledgeable about: soil analysis, the use of protections for workers and the general public consistent with the requirements of Federal Occupational Safety and Health Administration (OSHA) and Massachusetts regulations.

2.3 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.

- 2.4 **Excavation** - any man-made cut, cavity, trench, or depression in an earth surface, formed by earth removal, made below the surface ground in excess of 3 feet below grade
- 2.5 **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.
- 2.6 **General Public** – All natural persons not engaged in construction activities at a trench site.
- 2.7 **Office of Public Safety and Inspections (OPSI)** – Responsible party for Massachusetts Excavation and Trenching regulations.
- 2.8 **Permit Holder** – The excavator who is responsible for acquiring a permit from the Permitting Authority.
- 2.9 **Permitting Authority** –for UMass property, the permitting authority is the UMass Amherst Campus Safety and Fire Prevention or Physical Plant Safety Departments. Projects under the direction of the Department of Capital Asset Management and Maintenance (DCAMM) exercise their own authority to issue these permits. For excavations outside UMass Property Lines, the permitting authority is the municipality. Note: the Town of Amherst is the authority for permits in North Pleasant St.
- 2.10 **Public Agency**-A department, agency, board, commission, authority, or other instrumentality of the commonwealth.
- 2.11 **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.
- 2.12 **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.
- 2.13 **Unattended Trench** – A trench where neither the permit holder, excavator, nor any of the people who work in or at the trench, are present.

3.0 Roles & Responsibilities

3.1 Permitting Authority

- 3.1.1 Convene, or assist in convening, hearings relative to the suspension or revocation of a permit as necessary in response to alleged violations of the statute or regulations
- 3.1.2 Suspend or revoke permit if continuing to have serious issues with worker and public safety.
- 3.1.3 For the purposes of this policy the permitting authority is the UMass Amherst Campus Safety and Fire Prevention or Physical Plant Safety Departments.
- 3.1.4 Maintain this policy and UMass Amherst Environmental Health and Safety Excavation and Trench Permits as needed.
- 3.1.5 Review, approve and issue UMass Amherst Environmental Health and Safety Excavation and Trench Permits.
- 3.1.6 Ensure electronic notifications are made to the State for any permit that meet the definition of trench on a weekly basis as a minimum.

- 3.1.7 Respond to reports of open, unattended trenches.
- 3.1.8 Notify permit holders of an unsafe, unattended condition of a trench.
- 3.1.9 Ensure action is taken in a timely manner to make open, unattended trenches safe
- 3.1.10 Order the immediate shutdown of a trench if considered an immediate danger to workers or the public.
- 3.1.11 Notify Office of Public Safety and Inspections of violations of public protection requirements, or OSHA of violations of worker safety regulations, if deemed necessary by EHS due to nature of violations
- 3.1.12 Perform inspections of trenches and excavations in the course of normal duties
- 3.1.13 Perform inspections before reopening, after immediate shutdown

3.2 Permit Holder / Excavator -

- 3.2.1 Makes DigSafe notifications prior to start-of excavation work
- 3.2.2 Obtains a permit from Permitting Authority prior to excavation.
- 3.2.3 Ensures persons performing work under the permit have watched the UMass Amherst Dig Safe Video and certified such within 2 years of performing the work.
- 3.2.4 Ensures persons performing excavating work perform a hazard assessment by reviewing any project drawings, a copy of the UMass Amherst Utility Map for the area and surface indications to determine likelihood of hitting underground utilities not clearly located by DigSafe prior to commencing excavation.
- 3.2.5 Confirms property lines and whether more than one permitting authority is involved
- 3.2.6 If contracted, provides certificate of insurance
- 3.2.7 Provides copies of hoisting licenses including class and expiration dates
- 3.2.8 Displays permit appropriately (posted in plain view of the trench, and available for inspection)
- 3.2.9 Ensures Competent Person present for all active work on excavations
- 3.2.10 Safely secures all trenches/excavations (by attendance, barricade, backfill, or covering)
- 3.2.11 Provides permit to permitting authority, or inspectors from the Office of Public Safety and Inspections upon request
- 3.2.12 Allows permitting authority or inspectors from the Office of Public Safety and Inspections access for inspections
- 3.2.13 Complies with order for immediate shutdown indicated by permitting authority, or inspectors from the Office of Public Safety and Inspections
- 3.2.14 Takes corrective measures to ensure worker and general public safety, as advised by permitting authority, when violations are found
- 3.2.15 Pays administrative fines, if levied by Office of Public Safety and Inspections
- 3.2.16 Reports serious injuries/fatalities immediately (within 1 hour) to UMPD and EHS. Serious injuries are considered those that require an ambulance transport, or result in an OSHA recordable or loss time injury.

4.0 Procedure

4.1 Permit – Application & Requirements

- 4.1.1 Excavator completes UMass Environmental Health and Safety Permit Application and submits to UMass Amherst Campus Safety and Fire Prevention (construction projects) or Physical Plant Safety Departments (Physical Plant or their Service Contractors)
- 4.1.2 Excavator must provide certificate of insurance with general liability coverage of \$100,000 per person and \$300,000 per claim (outside contractors only)
- 4.1.3 Permitting Authority issues Permit and ensures appropriate State notifications are made.
- 4.1.4 Emergency Situations: Permits are not required prior to creating a trench in response to an emergency. The excavator must obtain a permit on the next business day, at the latest.
- 4.1.5 Blanket Permit Provision: a blanket permit allows entities working on large projects with multiple trenches to obtain a permit for work within their construction limits. Blanket permits will be valid for the duration established by the permitting authority. Additional excavations come up that did not meet the description of work or were not included in the original Dig Safe, may be added to the permit by providing the new description and Dig Safe number(s) to the permitting authority. Permitting Authority must also be notified of changes in names of the Competent Person or operators prior to the changes being made.

4.2 Excavation/Trench Protection for the General Public

- 4.2.1 When protecting the General Public from unauthorized access to unattended excavations/trenches, remember:

“A-B-B-C” Attendance Barriers Backfill Covers
- 4.2.2 All unattended excavation/ trenches must be protected from access, whether on public ways, public lands, or private property.
- 4.2.3 Covers, portable barriers, or backfilling are required when the excavation/trench is unattended.
- 4.2.4 Placement of horizontal supports shall be on the inside of the barrier (facing the excavation/trench)
- 4.2.5 Fence-type barriers shall be secured by vertical support members not more than 10 feet apart.
- 4.2.6 Barriers shall be placed so as to be unaffected by changing conditions (i.e. erosion, cave-in) of the trench
- 4.2.7 Chain-link fence is an appropriate selection
- 4.2.8 Barriers adjacent to high-speed traffic may include traffic control barrels ballasted by sandbags or temporary pre-cast concrete barriers as components.
- 4.2.9 Solid barriers shall not contain holes or indentations larger than 4 inches

- 4.2.10 The wall of a dwelling or other permanent structure of a height of not less than 6 feet may serve as part of the barrier, provided it complies with all of the provisions listed above
- 4.2.11 Gates and other means of egress must:
 - 4.2.11.1 comply with the size and strength provisions listed above
 - 4.2.11.2 be securely fastened to adjacent barrier components
 - 4.2.11.3 allow not more than 4 inches between gates and barrier components
 - 4.2.11.4 be securely locked with a padlock, combination lock, or other suitable locking device
- 4.2.12 Barriers shall be clearly marked on all sides with signs indicating “Danger – Do Not Enter”, “Authorized Personnel Only”, or equivalent warning
- 4.2.13 The wall of a permanent structure of a height of not less than six feet may serve as part of the barrier, provided it complies with all of the provisions of listed above
- 4.2.14 For excavations/trenches inside an established construction area, the site construction fence may be considered adequate if it meets the requirements specified herein. However, some excavations within the site may need additional barricades if not readily seen construction workers on the site.
- 4.2.15 The strength of barriers shall match that of fencing listed in swimming-pool safety standards.
- 4.2.16 If a cover, barrier, or backfilling is not used to secure an excavation/trench, then it must be continuously monitoring by the permit holder or by a person(s) under the control and direction of the permit holder.
- 4.2.17 The permitting authority may require any additional, site-specific provisions it deems necessary to protect the general public as a condition to any permit issued.

4.3 Inspections

- 4.3.1 The permitting authority shall perform inspections of trenches and excavations in the course of their regular duties.
- 4.3.2 These inspections cover both public safety and worker safety considerations.

4.4 Violations - UMass may take the following actions if a violation is noted:

- 4.4.1 Immediate Shutdown -Conditions warranting immediate shutdown:
 - 4.4.1.1 Immediate threat, fatality or serious injury to the general public
 - 4.4.1.2 Failure to use effective protections for the general public, as required (attendance, barrier, backfilled, covered)
 - 4.4.1.3 Any other condition that constitutes a serious threat to life, limb, or property of the general public as determined by the permitting authority
 - 4.4.1.4 Failure to obtain a permit
 - 4.4.1.5 UMass may also order an immediate shutdown for conditions that constitute and immediate threat to worker, such as violations of OSHA requirements or other serious safety issues.

- 4.4.1.6 Shutdown remains in effect until the condition(s) is corrected to the satisfaction of the authority responsible for shutdown (re-inspection is required).
- 4.4.1.7 Appeals for immediate shutdown may be made to the permitting authority within 10 calendar days from the date of the immediate shutdown; the site must remain shut down during the appeal period.

4.4.2 Suspension or Revocation of a Permit

- 4.4.2.1 UMass may suspend or revoke a permit if continuing to have serious issues with worker and public safety.
- 4.4.2.2 Approving authority shall hold a hearing prior to proceeding to suspend or revoke a permit.

4.5 Notifications

4.5.1 UMass reserves the right to notify the Office of Public Safety and Inspections or OSHA of violations to State and Federal regulations.

4.5.2 Serious Injury / Fatality –

- 4.5.2.1 Permit holder shall report all serious injuries or fatalities which occur at the location of a trench to the UMPD and EHS immediately. Permit holder must also make appropriate notifications to the Office of Public Safety and Inspections and OSHA. UMass also reserves the right to notify these entities.
- 4.5.2.2 Investigation - In the event that a serious injury or fatality occurs, the trench site shall be immediately secured. The site surrounding the trench shall not be disturbed, cleaned, or altered in any way except by a public authority or as necessary for the preservation of life and property or the removal of the injured person(s) until receiving express authorization from an inspector of the Office of Public Safety and Inspections and/or OSHA.

5.0 References

- 5.1 M.G.L. chapter 82A, "General Laws of Massachusetts, Chapter 82A, Excavation and Trench Safety"
- 5.2 520 CMR 14.00, "Code of Massachusetts Regulations, Excavation and Trench Safety"
- 5.3 OSHA Regulations – Code of Federal Regulations 29 CFR 1929 Subpart P (1926.650-1926.652 including Appendixes A-F)