



CITY OF NORTHAMPTON, MASSACHUSETTS  
**DEPARTMENT OF PUBLIC WORKS**  
125 Locust Street  
Northampton, MA 01060

413-587-1570  
Fax 413-587-1576

**Donna LaScaleia**  
Director

## **Department of Public Works (DPW) Trench, Excavation and Markings Permit Policy**

### **Permit Requirements**

In accordance with the Revised Ordinances of the City of Northampton, Section 285-21, an excavation/trench permit, commonly referred to as a Trench Permit, is required for **any** excavation within the City of Northampton road layout. Under M.G.L. c.82A and 520 CMR 14.00, trench permits may also be required for work on other public property or private property. Call the Department of Public Works (413-587-1570) for a determination. This work may include, but shall not be limited to, underground utility installation or repair, driveway or walkway construction, or installation of signs, trees or other features. Trench permits are issued by the Department of Public Works. The fee for a trench permit is \$250.

Trench Permits are valid for thirty calendar days from the date of approval. Applicants will be notified by phone that their permit has been approved and they will have ten (10) business days to pick up and sign their permit. Permits not picked up within ten (10) business days will require the applicant to file for a permit extension. If a permit is not picked up for a period of 30 days, a new permit will be required. Applicants whose application for trench permit has been disapproved will be notified in writing. Permits will generally be issued within 10 business days, but this may be extended during periods when high volumes of permit requests are received. Applications will be processed in the order in which they are received. Emergency requests will be handled on a case by case basis and expedited to the extent possible. **Permits will not be valid until the applicant has picked up and signed the approved permit.**

If work is to be completed within 50' of a Public Shade Tree, see Public Shade Tree Regulations.

The Department of Public Works recognizes an excavation moratorium for roadways and on City property that have been reconstructed or have had pavement overlay for a period of five (5) years from the date of completion. Trench permits will not be issued for areas subject to this moratorium except in cases of emergency.

No work shall be allowed in the public right-of-way between November 15<sup>th</sup> and April 1<sup>st</sup> or during winter conditions, as determined by the DPW Director. All work within the public right-of-way must be completed by November 15. No trench permit will be issued for work in the public right-of-way that cannot be completed by November 15. Permits for work in the public way do not remain valid through the winter and a new permit will be required for work in the spring.

## Department of Public Works (DPW)

### Excavation/Trench Permit Policy

#### Page 2 of 8

Permits may be extended by up to 1 month or until November 15 unless interrupted by winter conditions, as determined by the DPW Director. To obtain a permit extension, the applicant must submit a completed **Excavation/Trench Permit Extension Request** to the Northampton Department of Public Works, 125 Locust Street, Northampton, MA 01060 for consideration. Requests for extension should include a brief explanation of the reason for the request and a projected completion date. There is no fee for permit extensions. Applicants will be notified of the approval or disapproval of their request. Permit extensions are not valid until they have been approved in writing by the DPW Director. Applicants are advised to request an extension in advance of the termination date of the initial permit to allow sufficient time for processing of the extension request.

**Work may not proceed without a valid, fully signed Trench Permit or extension thereof which must be posted in plain view at the project location.**

If proposed work is located within the State layout, a copy of the State permit must be attached. The trench permit will not be approved without it.

In accordance with Section 285-21 of the Revised Ordinances of the City of Northampton, the applicant shall agree to hold the City of Northampton harmless from all claims for damages whatsoever. A certificate of Liability Insurance listing the City of Northampton as an Additional Insured and indicating general liability coverage of \$500,000 per person and \$1,000,000 per claim or evidence of self-insurance in an equal amount is required under this permit.

During construction, barriers, signage, lights and such other measures as may be necessary shall be erected and maintained for the protection of the public, in accordance with the Revised Ordinances of the City of Northampton, Section 285-22. Traffic shall be maintained at all times during construction. If a police detail is required, it is the applicant's responsibility to schedule and pay for said detail. Contact the Northampton Police Department at 413-587-1105 to schedule a police detail.

The Northampton Department of Public Works does not in any way warrant or guarantee accuracy of its utility markings. Said markings are provided from the best available information and should be considered to be approximate only. The applicant, in all operations, shall anticipate the existence of utilities that are consistent with local usage requirements.

#### **Construction Requirements**

Work shall conform with standards set forth in applicable sections of the Revised Ordinances of the City of Northampton, including but not limited to Section 290 Article VII, Design Standards, and the conditions set forth in the permit. The contractor shall notify the Department of Public Works when work has begun and upon completion. Work shall be considered substantially complete after construction activities have been finished, temporary roadway pavement patch has been installed and all other surfaces and features have been appropriately restored.

Prior to the start of excavation, bituminous concrete or concrete surfaces shall be cut vertically in a line parallel to the center line of construction, and slightly larger than the trench width, using an approved

## Department of Public Works (DPW)

### Excavation/Trench Permit Policy

#### Page 3 of 8

hand or power operated tool, so as to allow for trench excavation without further disturbance of the adjacent surfaces.

Backfill will consist of the excavated material if it is declared suitable by the DPW Director or his/her assigns. If, in the opinion of the DPW Director, the excavated material is unsuitable, the entire material for filling shall consist of approved gravel or approved borrow as directed. Backfill will be placed in successive layers of not more than six inches in compacted depth. **No frozen material shall be used as backfill.** After thorough tamping around and beneath the utility, the six-inch layers of backfill will be thoroughly compacted by tamping with a mechanical rammer or by hand tampers having a tamping face not exceeding 25 square inches in area. If dry, the material shall be moistened and then compacted. All sub-base layers shall be compacted to not less than 95% of the maximum dry density of the material as determined by the ASTM D-1557 (Modified Proctor) compaction test at optimum moisture content.

Controlled Density Fill (CDF) will be used in all cases, as the backfill material, when an emergency trench cut is required in pavement areas subject to the five (5) year moratorium, or as directed by the DPW Director due to the condition or intensity of use of the area. The method of installation and the specification for CDF shall be attached to this permit if required.

Temporary trench patch is required at all disturbed paved roadway areas. A 3-inch temporary bituminous patch shall be installed within 24 hours of backfilling.

After backfill has been in place for a period of at least 90 days, the temporary patch shall be removed. A cut shall be made at least 1' beyond each side of the trench. Where trench cuts or a series of trench cuts under the same permit or permitted by the same applicant are within 10' of one another, the pavement cut shall be enlarged to pave them with a single pavement patch. Permanent pavement patch shall be placed over 12" minimum depth of approved compacted gravel base. Permanent pavement patch shall consist of bituminous concrete Type I-1 (Hot Mix) laid in two 2-inch layers consisting of a base course, and a top course for a total finished pavement depth of 4-inches. The patch will be rolled with a 5-ton roller. The patch shall be neat, uniform and conform to the existing grade. Infra-red shall be required as determined by the DPW Director or his/her assigns. For 30-day permits, removal of the temporary patch and installation of the permanent patch will be considered as part of the initial permit and the applicant will be duly covered under said permit provided that the initial permit is posted on site and all other permit requirements have been met. Where permanent pavement patch cannot be installed prior to the onset of winter, it is expected that permanent pavement will be installed as soon as conditions become favorable in the spring.

Full width overlay shall be required in pavement areas subject to a five (5) year excavation moratorium. Existing pavement shall be milled to receive 1.5" minimum depth overlay of top course bituminous concrete pavement. The area subject to overlay shall extend at least 20 feet in all directions from the limits of excavation or as determined by the DPW Director. An asphalt emulsion tack coat shall be applied to the milled existing pavement prior to the placement of the overlay. Installed overlay shall be rolled to provide suitable compaction and to form a neat and uniform surface which conforms with existing grades.

## **Department of Public Works (DPW)**

### **Excavation/Trench Permit Policy**

#### **Page 4 of 8**

If, in the opinion of the DPW Director, a 6-inch cement concrete (Hi-Early Type) slab is necessary, it shall be laid over the backfilled trench extending 1-foot beyond each side of the trench and allowing for a 2-inch bituminous concrete surface. After a period of two days, a single layer of top course bituminous concrete Type I-1 (Hot Mix) shall be laid in a 2-inch in depth, and rolled with a 5-ton roller.

Sidewalks and curbs shall be restored to match existing material, line and grade.

Concrete sidewalks shall conform to the material and construction methods as specified in Section 701 of the Commonwealth of Massachusetts Department of Public Works Standard Specifications for Highways, Bridges and Waterways. In addition, all concrete sidewalks shall consist of 4,000 psi concrete, reinforced with 10/10 six-by-six wire fabric and shall be placed to minimum depth of 4". A minimum depth of 6 inches of concrete is required at all driveway crossings. An 8" minimum depth base of approved, compacted gravel is required for all restored concrete sidewalks.

Bituminous concrete sidewalks shall conform to the relevant provisions of Section 701 of the Commonwealth of Massachusetts Department of Public Works Standard Specifications for Highways, Bridges and Waterways. The bituminous concrete pavement shall be Type I-1 (Hot Mix) consisting of 1.5" layer of base course and 1.5" layer of top course. An 8" minimum depth base of approved, compacted gravel is required for all restored sidewalks.

Lawn and grassed areas shall receive 6" minimum depth of good quality screened loam. Spreading of loam and seed shall be in accordance with Sections 751 and 765 of Commonwealth of Massachusetts Department of Public Works Standard Specifications for Highways, Bridges and Waterways. Grass seed shall be in compliance with Materials Specifications Section M6.03.0 of the aforementioned document. Grass shall not be accepted until the DPW Director or his/her assigns has determined that it is well established and that good coverage and vigorous growth have been achieved. The applicant shall warranty installed grass for 1 year from the date of completion. The applicant shall warranty other aspects of the work, including but not limited to, settlement for a period of 5 years.

Pavement markings, signs and all other features impacted by the work shall be restored in kind.

#### **Warranty**

The applicant shall warranty the trench cut for a 5-year period following approved installation of permanent roadway pavement patch or restoration of other surfaces and features. If repairs are required during the warranty period and the applicant is unwilling or unavailable, the Department of Public Works will contract for the necessary work and the applicant will be billed for all costs incurred.

#### **Violation**

Violation of this permit shall be assessed a fine of \$50.00 per day for every day in non-compliance. Parties determined to be in non-compliance will be notified in writing. Parties in non-compliance will not be issued subsequent trench permits until the permit in violation is brought into full compliance.

## Department of Public Works (DPW)

### Excavation/Trench Permit Policy

Page 5 of 8

#### Conditions & Requirements Pursuant to M.G.L.c. 82A & 520 CMR 7.00 et seq. (as amended)

By signing the application, the applicant understands & agrees to comply with the following:

- i. No trench may be excavated unless the requirements of sections 40 through 40D of chapter 82, and any accompanying regulations, have been met and this permit is invalid unless and until said requirements have been complied with by the excavator applying for the permit including, but not limited to, the establishment of a valid excavation number with the underground plant damage prevention system as said system is defined in section 76D of chapter 164 (DIG SAFE);
- ii. Trenches may pose a significant health and safety hazard. Pursuant to Section 1 of Chapter 82 of the General Laws, an excavator shall not leave any open trench unattended without first making every reasonable effort to eliminate any recognized safety hazard that may exist as a result of leaving said open trench unattended. Excavators should consult regulations promulgated by the Department of Public Safety in order to familiarize themselves with the recognized safety hazards associated with excavations and open trenches and the procedures required or recommended by said department in order to make every reasonable effort to eliminate said safety hazards which may include covering, barricading or otherwise protecting open trenches from accidental entry.
- iii. Persons engaging in any trenching operation shall familiarize themselves with the federal safety standards promulgated by the Occupational Safety and Health Administration on excavations: 29 CFR 1926.650 et seq. entitled Subpart P “Excavations”.
- iv. Excavators engaging in any trenching operation who utilize hoisting or other mechanical equipment subject to chapter 146 shall only employ individuals licensed to operate said equipment by the Department of Public Safety pursuant to said chapter and this permit must be presented to said licensed operator before any excavation is commenced;
- v. By applying for, accepting and signing this permit, the applicant hereby attests to the following: (1) that they have read and understand the regulations promulgated by the Department of Public Safety with regard to construction related excavations and trench safety; (2) that he has read and understands the federal safety standards promulgated by the Occupational Safety and Health Administration on excavations: 29 CFR 1926.650 et seq. entitled Subpart P, Excavations, as well as any other excavation requirements established by this municipality; and (3) that he is aware of and has, with regard to the proposed trench excavation on private property or proposed excavation of a city or town public way that forms the basis of the permit application, complied with the requirements of sections 40-40D of chapter 82A.
- vi. This permit shall be posted in plain view on the site of the trench.

#### **Summary of Excavation & Trench Safety Regulation (520 CMR 14.00 et seq.)**

This summary was prepared by the Massachusetts Department of Public Safety pursuant to M.G.L.c.82A and does not include all requirements of the 520 CMR 14.00. To view the full regulation and M.G.L.c.82A, go to [www.mass.gov/dps](http://www.mass.gov/dps). Pursuant to M.G.L. c.82, §1, the Department of Public Safety, jointly with the Division of Occupational Safety, drafted regulations relative to trench safety. The regulation is codified in section 14.00 of title 520 of the Code of Massachusetts Regulations (CMR). The regulation requires all excavators to obtain a permit prior to the excavation of a trench made for a

## Department of Public Works (DPW)

### Excavation/Trench Permit Policy

#### Page 6 of 8

construction-related purpose on public or private land or rights-of-way. All municipalities must establish a local permitting authority for the purpose of issuing permits for trenches within their municipality. Trenches on land owned or controlled by a public (state) agency requires a permit to be issued by that public agency unless otherwise designated.

In addition to the permitting requirements mandated by statute, the trench safety regulations require that all excavators, whether public or private, take specific precautions to protect the general public and prevent unauthorized access to unattended trenches. Accordingly, unattended trenches must be covered, barricaded or backfilled. Covers must be road plates at least  $\frac{3}{4}$ " thick or equivalent; barricades must be fences at least 6' high with no openings greater than 4" between vertical supports; backfilling must be sufficient to eliminate the trench. Alternatively, excavators may choose to attend trenches at all times, for instance by hiring a police detail, security guard or other attendant who will be present during times when the trench will be unattended by the excavator.

The regulations further provide that local permitting authorities, the Department of Public Safety, or the Division of Occupational Safety may order an immediate shutdown of a trench in the event of a death or serious injury; the failure to obtain a permit; or the failure to implement or effectively use adequate protections for the general public. The trench shall remain shutdown until re-inspected and authorized to re-open, provided, however, that excavators shall have the right to appeal an immediate shutdown. Permitting authorities are further authorized to suspend or revoke a permit following a hearing. Excavators may also be subject to administrative fines issued by the department of Public Safety for identified violations.

For additional information please visit the Department of Public Safety's website at [www.mass.gov/dps](http://www.mass.gov/dps).

#### **Summary of 1926 CFR Subpart P - OSHA Excavation Standard**

This is a worker protection standard, and is designed to protect employees who are working inside a trench. This summary was prepared by the Massachusetts Division of Occupational Safety and not OSHA for informational purposes only and does not constitute an official interpretation by OSHA of their regulations, and may not include all aspects of the standard.

For further information or a full copy of the standard go to [www.osha.gov](http://www.osha.gov).

- **Trench Definition per the OSHA standard:**
  - An excavation made below the surface of the ground, narrow in relation to its length.
  - In general, the depth is greater than the width, but the width of the trench is not greater than fifteen feet.
- **Protective Systems** to prevent soil wall collapse are always required in trenches deeper than 5', and are also required in trenches less than 5' deep when the competent person determines that a hazard exists. Protection options include:

## Department of Public Works (DPW)

### Excavation/Trench Permit Policy

#### Page 7 of 8

- Shoring. Shoring must be used in accordance with the OSHA Excavation standard appendices, the equipment manufacturer's tabulated data, or designed by a registered professional engineer.
- Shielding (Trench Boxes). Trench boxes must be used in accordance with the equipment manufacturer's tabulated data, or a registered professional engineer.
- Sloping or Benching. In Type C soils (what is most typically encountered) the excavation must extend horizontally 1-1/2 feet for every foot of trench depth on both sides, 1 foot for Type B soils, and 3/4 foot for Type A soils.
- A registered professional engineer must design protective systems for all excavations greater than 20' in depth.
- **Ladders** must be used in trenches deeper than 4'.
  - Ladders must be inside the trench with workers at all times, and located within 25' of unobstructed lateral travel for every worker in the trench.
  - Ladders must extend 3' above the top of the trench so workers can safely get onto and off of the ladder.
- **Inspections** of every trench worksite are required:
  - Prior to the start of each shift, and again when there is a change in conditions such as a rainstorm.
  - Inspections must be conducted by the competent person (see below).
- **Competent Person(s) is:**
  - Capable (i.e. trained and knowledgeable) in identifying existing and predictable hazards in the trench, and other working conditions which may pose a hazard to workers, and
  - Authorized by management to take necessary corrective action to eliminate the hazards. Employees must be removed from hazardous areas until the hazard has been corrected.
- **Underground Utilities** must be:
  - Identified prior to opening the excavation (e.g., contact Dig Safe).
  - Located by safe and acceptable means while excavating.
  - Protected, supported, or removed once exposed.
- **Spoils** must be kept back a minimum of 2' from the edge of the trench.
- **Surface Encumbrances** creating a hazard must be removed or supported to safeguard employees. Keep heavy equipment and heavy material as far back from the edge of the trench as possible.
- **Stability of Adjacent Structures:**
  - Where the stability of adjacent structures is endangered by creation of the trench, they must be underpinned, braced, or otherwise supported.
  - Sidewalks, pavements, etc. shall not be undermined unless a support system or other method of protection is provided.
- **Protection from water accumulation hazards:**
  - It is not allowable for employees to work in trenches with accumulated water. If water control such as pumping is used to prevent water accumulation, this must be monitored by the competent person.

## Department of Public Works (DPW)

### Excavation/Trench Permit Policy

#### Page 8 of 8

- If the trench interrupts natural drainage of surface water, ditches, dikes or other means must be used to prevent this water from entering the excavation.
- **Additional Requirements:**
  - For mobile equipment operated near the edge of the trench, a warning system such as barricades or stop logs must be used.
  - Employees are not permitted to work underneath loads. Operators may not remain in vehicles being loaded unless vehicles are equipped with adequate protection as per 1926.601 (b)(6).
  - Employees must wear high-visibility clothing in traffic work zones.
  - Air monitoring must be conducted in trenches deeper than 4' if the potential for a hazardous atmosphere exists. If a hazardous atmosphere is found to exist (e.g.,  $O_2 < 19.5\%$  or  $> 23.5\%$ , 20% LEL, specific chemical hazard), adequate protections shall be taken such as ventilation of the space.
  - Walkways are required where employees must cross over the trench. Walkways with guardrails must be provided for crossing over trenches  $> 6'$  deep.
  - Employees must be protected from loose rock or soil through protections such as scaling or protective barricades.