



EXCAVATION AND TRENCH PERMIT

Pursuant to G.L. c. 82A §1 and 520 CMR 14.00 et seq. (as amended)

THIS PERMIT MUST BE FULLY COMPLETED PRIOR TO CONSIDERATION

This permit is effective from July 5, 2022 up to and including November 4, 2022 between the hours of 7 A.M. - 4 P.M.

Permit Details

Permit Location: **37 Blanchard Rd**
Purpose of Excavation: Belmont project, gas main work in Blanchard Rd which crosses over into the City of Cambridge approx.420 feet, 420' X 18"

Applicant Details

Company Name: NATIONAL GRID
Name of Applicant: Mary Mulronej
Address: 37 Blanchard Rd
Emergency Contact: Dispatch Emergency Phone: 1 877 304 1184

Additional Information

Dig Safe Number: N/A

Trench Information

Name of Competent Person: Nationalgrid
Massachusetts Hoisting License Number: unknown
License Grade: 1A
Expiration of Hoisting License: May 27, 2022

Special Conditions

Your permit is not approved until a final sign-off has concluded and the document has been issued. Please call Paul Almeida at 781-290-3807 at least 24 hours in advance to set up an onsite inspection or for any permit review updates.

Permit Conditions

Failure to comply with MUTCD complaint work zone will result in the project being shut down. Pedestrian, bicycle and vehicular traffic must be protected at all times. Pedestrian ramps, hydrants, and curbs must remain unobstructed at all times. 72 hour advance notification is required to users if utilities are interrupted. Contractor hereby certifies that work in connection with this permit will comply with all federal, state and local laws, including those related to safety. Contractor hereby certifies that it has insurance, on which the City is a named additional insured, in an amount not less than \$1,000,000 per occurrence and \$3,000,000 in the aggregate for personal injuries or property damage. This permit requires a \$5,000 surety bond.

By signing this form, the applicant, owner, and excavator all acknowledge and certify that they are familiar with, or before commencement of the work, will become familiar with, all laws and regulations applicable to work proposed, including osha regulations, g.l.c. 82a, 520 cmr 14 et seq., and any applicable municipal ordinances, by-laws and regulations and they covenant and agree that all work done under the permit issued for such work will comply therewith in all respects and with the conditions set forth below.

The undersigned owner authorizes the applicant to apply for the permit and the excavator to undertake such work on the property of the owner, and also, for the duration of construction, authorizes persons duly appointed by the municipality to enter upon the property to monitor and inspect the work for conformity with the conditions attached hereto and the laws and regulations governing such work. The undersigned applicant, owner and excavator agree jointly and severally to reimburse the municipality for any and all costs and expenses incurred by the municipality in connection with this permit and the work conducted thereunder, including but not limited to enforcing the requirements of state law and conditions of this permit. Inspections made to assure compliance therewith, and measures taken by the municipality to protect the public where the applicant owner or excavator has failed to comply therewith, including police details and other remedial measures deemed necessary by the municipality.

No excavation or equipment will be allowed within 3 feet of the outer bark of any tree, or in such a manner as to injure the roots of any tree without the written consent of the City Arborist. Tree protection must be installed around any tree within the scope of this project. Contact the City Arborist at 617-349-6433 or dtfcourt@cambridgema.gov before working around roots. Any injury to a street tree is subject to a fine as stated in MGL Chapter 87.

The undersigned applicant, owner and excavator agree jointly and severally to defend, indemnify, and hold harmless the municipality and all of its agents and employees from any and all liability, causes of action, costs, and expenses resulting from or arising out of any injury, death, loss, or damage to any person or property, including without limitation environmental contamination, resulting from, arising out of, or encountered during the work conducted under this permit. As built must be delivered to the City Engineer's office (DPW) within 60 days on completion (City Ordinance 12-12-010)

CONDITIONS AND REQUIREMENTS PURSUANT TO G.L.C. 82A AND 520 CMR 14.00 ET SEQ (AS AMENDED)

By signing the application, the applicant understands and 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 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 understands 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 CMR 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
- vi. This permit shall be posted in plain view on the site of the trench.

For additional information please visit the Department of Public Safety's website at www.mass.gov/dps Summary of Excavation and Trench Safety Regulation (520 CMR 14.00 et seq.) This summary was prepared by the Massachusetts Department of Public Safety pursuant to G.L.c.82A and does not include all requirements of the 520 CMR 14.00. To view the full regulation and G.L.c.82A, go to 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. The regulation requires all excavators to obtain a permit prior to the excavation of a trench made for a 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 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.

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.

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:
- **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 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:
 - o Prior to the start of each shift, and again when there is a change in conditions such as a rainstorm.
 - o Inspections must be conducted by the competent person (see below).
 - Competent Person(s) is:
 - o 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
 - o 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:
 - o Identified prior to opening the excavation (e.g., contact Digsafe).
 - o Located by safe and acceptable means while excavating.
 - o 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:
 - o Where the stability of adjacent structures is endangered by creation of the trench, they must be underpinned, braced, or otherwise supported.
 - o Sidewalks, pavements, etc. shall not be undermined unless a support system or other method of protection is provided.
 - Protection from water accumulation hazards:

- o 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.
- o 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., O₂ <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.

Erosion and Sediment Control

Erosion and Sediment Control (ESC) is not a discretionary practice; it is required for all excavations. The number of Best Management Practices (BMPs) that you must employ depends on the size and type of construction activity. You are responsible to control erosion before, during, and after construction.

For large developments a developer must submit an ESC plan for their construction project that specifies a unique combination of ESCs for the unique conditions of the site. The plan is reviewed as part of the permit approval process, and the ESC practices must be installed prior to construction activity. Construction sites are inspected periodically to ensure the practices are intact and working properly to prevent off-site sediment discharge. Inspectors will issue warnings or fines if ESC practices are not being implemented and maintained.

Smaller excavations are also required to implement ESC practices that ensure catch basins, wetland and waterbodies are protected.

Why is controlling erosion so important?

Water that runs off construction sites ends up in storm drains that eventually empties into the Charles River or Alewife Brook. Any pollutants this water picks up along the way can harm fish and other wildlife and can impact the value of these resources for public enjoyment, recreation and tourism.

Allowing stormwater with sediment or pollutants to leave your construction site and enter a storm drain or waterway is against federal, state, and local laws!

Best Management Practices and good housekeeping can significantly reduce pollutant discharges from your construction site. Please follow the suggestions below to keep local waterways free from pollutants.

- Protect all storm drain inlets and water bodies located near the site.
- Limit access to and from the site and stabilize construction entrances and exits.
- Sweep frequently.
- Protect stockpiles by storing under a roof, impermeable tarp, or plastic sheeting.
- Do not store or stockpile materials near a storm drain, wetland or river.
- Perform major maintenance and repairs of vehicles off site.
- Wash out concrete mixers only in designated washout areas away from resources and set up small mixers on tarps.
- Remove trash, debris, and wastes on a regular basis and ensure that dumpsters are covered and don't leak.
- Clean up small spills immediately using dry cleanup methods, such as an absorbent. Sweep as soon as possible.
- Prevent erosion by implementing soil stabilization practices such as mulching, temporary or permanent seeding.
- Maintain all haybales, wattles, rolls, mats and silt fence to make sure no materials are getting beyond them; replace if necessary.

Ideally, the only thing that should leave your project's site and enter a storm drain is rainwater – clean, uncontaminated rainwater. An effective stormwater management program is one in which ALL potential pollutants are recognized, and a plan is designed to control or prevent them. As a result, you will ensure the safety of the public and preserve the quality of local waters.

For more tips on how to do your part to keep our waterways clean, visit

www.cambridgema.gov/stormwater and www.thinkbluemassachusetts.org