

**TOWN OF EASTON  
COMMONWEALTH OF MASSACHUSETTS**

**STREET OPENING RULES  
AND  
REGULATIONS**



**DEPARTMENT OF PUBLIC WORKS  
130 Center Street  
North Easton, MA 02356**

**Adopted January 8, 2018**

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## **1 Intent and Purpose**

The purpose of this regulation is to protect the health and safety of all persons traveling on public ways in the Town of Easton and to regulate any excavations or obstructions of those ways relating to the installation, repair, or removal of utilities, installation or modification of driveways and/or sidewalks, or alterations to any portion of roadway infrastructure. Excavation and restoration standards are required to preserve the integrity, operational safety, and function of the public Right of Way.

These regulations have been put in place to extend the service life of our roadways, diminish the need for expensive resurfacing, and substantially reduce potholes and other hazards caused by improper utility patching techniques and relieving our Public Works crews from responding to deficiencies created by others and allowing them to focus on more pertinent problems.

## **2 Administration**

The Director of Public Works is the principal Town official responsible for the administration of the Right of Ways, Street Opening Permits, and the Regulations for Street Openings. The Director may delegate any or all of the duties hereunder. The Director's authority to regulate Street Opening Permits is pursuant to Chapter 202 of the Town's General Bylaws.

## **3 Definitions**

The following words and phrases, when used in these Regulations, shall have the meanings respectively ascribed to them:

**AAB Regulations** – shall mean The Rules and Regulations for the Architectural Access Board, Mass Executive Office of Public Safety (521 CMR), as amended.

**ADA** – shall mean The Americans with Disabilities Act of 1990, as amended (42 USC 12101-12213), and the Accessibility Guidelines for Buildings and Facilities (Appendix to Part 1191) of the U.S. Architectural and Transportation Barriers Compliance Board, as amended.

**Applicant** – shall mean any Public Utility, municipal department, person or entity who owns or exercises general responsibility and control over: (i) utility or other pipes, ducts, lines or other things buried in or under a Public Way, or (ii) real property abutting a Public Way, or (iii) real property served by the Public Way or by items of the type specified in (i) above and who wishes to perform Street Opening Work.

**Application Fee** – shall mean a non-refundable processing and inspection fee, which shall accompany each application for a Street Opening Permit.

**ASTM** - shall mean the material standard of the American Society for Testing and Materials.

**Compaction** – shall mean the densification of suitable soil by the removal of air, which requires mechanical energy. Suitable soils used for backfilling excavations shall be compacted to a minimum of 95% of the maximum dry density as determined by the Modified Proctor Test in accordance with ASTM 1557 D.

**Contractor** – shall mean all officers or employees of the Applicant performing Street Opening Work or any person or entity engaged by or on behalf of the Applicant to perform Street Opening Work. The Contractor for purposes of these regulations and for all questions of liability in connection with any Street Opening Work shall be conclusively deemed agents of the Applicant for whom the Applicant is fully responsible.

**Controlled Density Fill (CDF)** – Also known as Flowable Fill. CDF is a mixture of Portland cement, flyash, sand and water. It shall contain a minimum of 250 pounds of class F flyash or high air (25%) and will be self-leveling. All CDF used in conjunction with these Regulations shall be able to be excavated by use of hand tools.

**Department of Public Works (DPW)** – shall mean the municipal agency generally responsible for the repair and maintenance of Public Ways within the municipality.

**Dig-Safe** – shall mean the “Underground Protection of Facilities Act”, commonly known as the Dig-Safe law. Any excavation undertaken or authorized by this regulation shall comply with all requirements of M.G.L. Chapter 82, Sections 40 and 40A through 40E. The excavator is solely responsible for contacting Dig-Safe at least 72 hours prior to the start of any excavation, trenching or soil-test boring work. Along with contacting Dig-Safe, the excavator is also solely responsible for contacting the Easton Water Division (508) 230-0850 at least 72 hours prior to the start of excavation, trenching or soil-test boring work. The Easton Water Division may waive the Easton Water Division notification for sites located on unaccepted streets.

**Director** – shall mean the Director of Public Works and/or designee.

**Emergency** – shall mean any event which may threaten public health or safety, including, but not limited to, damaged, plugged or leaking water, gas, sewer, drain, communications or electrical conduit systems or downed overhead pole structures.

**Excavate** - shall mean to dig into or in any way remove, physically disturb or penetrate any part of a Right of Way.

**Infra-Red Process** – shall mean the restorative procedure whereby an infra-red heater softens existing pavement to a depth of one and one-half (1-1/2) inches, the softened area is treated with a penetrating asphalt emulsion, uniformly scarified and raked to a workable condition, and the treated surface is then compacted by use of a steel-wheeled roller with the purpose of creating a smooth driving surface consistent with adjacent pavement.

**May** - is permissive; shall is mandatory.

**M.G.L.** - shall mean Massachusetts General Law.

**MassDOT** – shall mean Massachusetts Department of Transportation or its successor agency.

**Newly Constructed** – shall mean any street that has been newly constructed, reconstructed or rehabilitated within the past five (5) years.

**Permit Holder** – shall mean an applicant to whom a Street Opening Permit has been granted.

**Pole Placement** – shall mean an excavation associated solely with a single placement or replacement of a utility pole.

**Public Place** – shall mean any public street, way, place, sidewalk, park, square, plaza, or any other similar public property owned or controlled by the Town and dedicated to public use.

**Public Utility** – shall include a gas and electric company as defined in M.G.L. Chapter 164, Section 1, telephone and telegraph company subject to M.G.L. Chapter 159, Section 12, and cable TV companies or other telecommunication providers regulated by the latest “Standards To Be Employed by Public Utility Operators When Restoring any of the Streets, Lanes and Highways in Municipalities” employed by the Department of Public Utilities (D.P.U.) and Department of Telecommunications and Cable (D.T.C.); and any other similar utility as may be regulated by the Commonwealth.

**Public Way** – Any road, including such appurtenances as berms, curbs, drains, sewers, water mains, sidewalks and paved and unpaved shoulders within the paper lay-out to which the public has access and the Town is responsible for maintaining as a public way, as such term may be defined under the MGL. Also referred to as a street.

**Rehabilitation** – shall mean that activity of work on any street which provides structural improvements having a minimum service life of ten (10) years with minor maintenance, which includes pavement overlay of one (1) inch or more, and partial or full depth reconstruction.

**Right of Way** – shall mean the area within the layouts of, on, below, or above a public roadway, highway, street, cart way, bicycle lane and public sidewalk in which the Town has an interest, including other dedicated Right of Ways for travel purposes and utility easements of the Town.

**Shall** - is mandatory; may is permissive.

**Standard Details** – Town of Easton Standard Construction Details as found in these regulations

**Street Opening Permit** – shall mean a permit granted by the Director of the Department of Public Works to an Applicant for permission to do Street Opening Work in a Right of Way.

**Street Opening Work** – shall mean any cutting, excavating, compacting, construction, repair or other disturbance in or under a Public Way together with restoration of the Public Way in accordance with these regulations following such disturbance, but excluding the location or

relocation of utility poles for which a grant of location has been obtained pursuant to M.G.L. Chapter 166, Section 27.

**Substructure** – shall mean any pipe, conduit, duct, tunnel, manhole, vault, buried cable, or wire, utility system appurtenance, or any other similar structures located below the surface of any public place.

**Town** – The Town of Easton

**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.

**Utility** – shall mean a public utility, as defined in Massachusetts General Laws as it may be hereinafter amended and shall specifically include the non-regulated activities of such

**Violation** – The failure of the applicant or contractor, its employees, agents and subcontractors to adhere to these regulation or other local, state and federal rules and regulations:

#### **4 Permits**

##### **4.1 Street Opening Permits:**

Any work proposed in the public right of way, including but not limited to, excavation, the installation or modification of utilities, driveways, curbing and/or sidewalks, and any modifications or alterations to the existing public right of way infrastructure shall require a street opening permit issued by the Director of the Department of Public Works in accordance with these regulations.

##### **4.2 Trench Permit:**

In accordance with M.G.L. Chapter 82A “Excavation and Trench Safety”, any excavator, whether public or private, prior to beginning the excavation of a trench in or on any public way or property shall require a trench permit issued by the Department of Public Works. For work on private property, the trench permit shall be issued through the building department.

##### **4.3 Restrictions:**

No Street Opening Permit or Trench Permit shall be issued unless a written application on a form provided by the Town for issuance of a Street Opening Permit or Trench Permit is submitted to the Director of the DPW. The written application shall contain such information as reasonably required by the DPW and identified in these Regulations. The permit shall expire sixty (60) days from the date of issuance.

##### **4.4 Fees:**

In order to obtain a permit, the applicant, and any entity related thereto, must be current on all of its financial obligations to the Town. In addition, a permit may be withheld or denied if the applicant, owner or contractor are currently in violation of any other town permits.

A non-refundable application fee is required with each Street Opening Permit and is due at the time of application submittal. The application fee reflects the time, supplies and work associated with the administrative processing and field inspections. The application fee is listed in the fee schedule included in “Appendix A” of these regulation.

No newly constructed or reconstructed pavement less than five (5) years old will be excavated except in cases of emergency or by approval of the Director of Public Works. If the roadway is permitted to be excavated, the applicant will be required to pay an extended maintenance fee based on the age of the road at the time of the application for street opening permit as outlined the fee schedule located in Appendix A.

If the town of Easton is required to file a state highway opening permit with MassDOT on behalf of the applicant, an additional fee will be assessed as listed in the fee schedule included in “Appendix A” of these regulation.

D.P.U. and D.T.C. Regulated public utilities are exempt from payment of all fees except the Application Fee per D.T.E. 98-22, “Standards To Be Employed by Public Utility Operators When Restoring any of the Streets, Lanes and Highways in Municipalities”.

**4.5 Refundable Security Deposit:**

In addition to the permit fee, all applicants must submit a certified bank deposit check along with the application. Please see Appendix “A” for the fee calculation. The certified bank deposit checks shall be paid to the “Town of Easton.”

Deposits shall be returned upon request of the applicant following the warranty period (see section 4.11) after confirmation that the work performed conforms to the rules and regulations. If it is determined, by the Director of the DPW that the work does not conform to the rules and regulations or any permit issued hereunder or if it is determined after the completion of work but before the expiration of the warranty period that the work has deteriorated or is substandard, the applicant will be notified in writing or by electronic correspondence to correct any deficiencies. If the applicant fails to correct the deficiencies identified to the satisfaction of the Director, the applicant will be notified accordingly and the security deposit will be used by the Town of Easton to correct the issues. Upon notice to the applicant, refundable security deposits may also be utilized by the Town of Easton to offset the costs of any emergency work that needs to be performed on the applicants work during the warranty period.

**4.6 Insurance:**

Prior to any permit being issued, the applicant shall acquire and continuously maintain insurance coverage on all personnel and equipment to be used in the Street Opening work with insurance companies licensed to do business in the Commonwealth of Massachusetts. The following minimum coverage shall be provided:

1. Commercial General Liability Insurance – including operation, independent contractors, complete operations for a period of one year from completing the street opening work, XCU hazards, broad form property damage and personal injury.

- a) General Aggregate: \$2,000,000.00
- b) Products and complete operations:
  - (1) Aggregate \$2,000,000
  - (2) Personal & Advertising injury (note no combined single limit)  
\$1,000,000.00
- 2. Automobile Liability Insurance-Covers owned, non-owned and hired vehicles
  - a) Combined Single Limit \$1,000,000.00 each person
  - b) Property Damage Liability \$250,000.00 each accident
- 3. Worker’s Compensation and Employer’s Liability
  - a) Bodily Injury by Disease \$5000, 000.00 policy limit
  - b) Bodily Injury by Disease \$1000, 000.00 each employee

Certificates of Insurance shall provide for at least 30 days’ notice to the Awarding Authority of cancellation or material change. The name of the municipality shall be listed as an additional insure on the Certificate of Insurance.

#### **4.7 Notice of Violation**

The Town will issue a “Notice of Violation” whenever it determines that:

- 1. A contractor is performing work without a valid permit.
- 2. A contractor is in non-compliance with the Rules and Regulations set forth by the Department of Public Safety.
- 3. Construction is proceeding in a manner that jeopardizes public safety.
- 4. Construction is occurring in violation of these Regulations and/or any other applicable approved specification or details.
- 5. Street Opening Work is proceeding without a valid permit.
- 6. There is damage to the surrounding roadway, public property, and/or utilities resulting from the work.
- 7. There are debris and/or soils in the roadway resulting from the work.
- 8. Work is not completed, including necessary testing and or documentation.

Any person found to be violating any provision of these Regulations shall be served by the Town with written notice stating the nature of the violation and provided with a reasonable time limit for the satisfactory correction thereof. The offender shall, within the period of time stated in such notice, permanently cease and correct all violations.

#### **4.8 Fines**

The Director may impose a **\$200.00** fine per day against any Applicant or Contractor who violates the requirements contained herein until the violation is rectified and accepted by the Director.

**4.9 Excavations During Winter**

No person or utility shall be granted a Street Opening Permit or open any street or sidewalk from the time of November 15<sup>th</sup> of each year to April 1<sup>st</sup> of the following year unless the Director determines that weather conditions are likely to be favorable, or unless an emergency or special condition exists and permission is obtained in writing from the Town. In the event of favorable weather conditions, the Director may allow Street Opening Work to be performed on a case-by-case basis. Any person wishing to obtain a Street Opening Permit between these aforementioned dates shall first explain fully in writing the emergency situation or special condition existing to the Town before a permit may be granted. If an emergency situation which could endanger life or property exists, excavation work shall not be delayed by this section; however, a written explanation shall be delivered to the Town as soon as possible and a Street Opening Permit obtained for the opening made. In the event that a permit is issued between the aforementioned dates for an excavation that is not due to an emergency condition, the Town reserves the right to impose additional conditions as necessary to protect safety and preserve the integrity, operational safety and function of the Public Right of Way.

**4.10 Emergency Action**

Nothing in this Regulation shall be construed to prevent the making of such excavations as may be necessary for the preservation of life or property or for the location of trouble in conduit or pipe which may be a threat to life or property, or for making emergency repairs, provided that the person making such excavation shall apply to the Town for such a permit on the first working day after such work is commenced. Before any excavation work is started, the person or utility excavating must contact all utilities for on the spot locations.

**4.11 Warranty of Work**

The Applicant shall for a period of one (1) year thereafter, be fully liable for all defects in materials and workmanship relating to such replacement or realignment and shall promptly repair or replace the same upon notice of the Director and to the satisfaction thereof.

Pavement repairs guaranteed by each Applicant shall meet all of the following conditions in order to remain in conformance with these Regulations:

1. **The entire area** shall be free from de-lamination of the approved surface material.
2. **No distortion of one-half inch or greater** shall exist over more than five percent (5%) of the total surface area of the repair.
3. **No cracks of one-quarter inch or greater** shall exist in the surface or edges of the repair totaling more than five percent (5%) of the repair perimeter.

Non-conformance with any of the above conditions shall constitute a breach of guarantee and subject the Applicant to remedial actions as required by the Director. Such remedies include both action on any security deposit and equitable remedies as may be permitted by law.

## **5 Terms of the Street Opening Permit**

### **5.1 Inspections**

The Applicant or Contractor shall notify the DPW when an inspection is required and coordinate the timing of such inspection. The Applicant or Contractor shall notify the DPW for an inspection at each of the following events:

- A. Prior to the start of trench excavation operations,
- B. Prior to trench backfilling operations,
- C. Following completion of temporary patch placement
- D. Prior to removal of temporary patch for installation of permanent patch
- E. Following final paving preparation (i.e. after saw cutting and grading, but prior to placing asphalt)
- F. Following completion of permanent patch placement.

The Director may also make additional inspections from the events listed above if deemed necessary to enforce these Regulations. In the event that any dispute exists as to the amount, nature, or scope of the work under this Regulation, the decision and judgment of the Director shall be final and binding unless appealed to or stayed by a court of competent jurisdiction.

### **5.2 Working Hours**

Except in emergency situations, Street Opening Work shall occur during the normal working hours of the DPW. The Applicant or Contractor must give notice of the intended Street Opening Work twenty four (24) hours in advance to the Director, and, unless the requirement for a police detail is waived by the Police Chief, must arrange for and pay for the police detail to be present throughout the period of time that the Street Opening Work is to be conducted.

### **5.3 Dig-Safe and the Easton Water Division**

Prior to beginning any Street Opening Work, the Applicant and/or Contractor shall contact DIGSAFE at telephone number 1-888-DIG-SAFE to have all underground utilities located and marked. The assigned DIGSAFE number shall be listed on the street opening permit application. The Applicant or Contractor shall also notify the Easton Water Division (508) 230-0850 at least three (3) business days before construction is to begin so that the Easton Water Division can mark the water lines at the site.

### **5.4 Existing Utilities**

Before starting any excavation, the Applicant and/or Contractor must confer with all Public Utilities to obtain information from each as to the horizontal and vertical locations of the existing utilities and other conditions that may affect the excavation. The Applicant or Contractor shall not interfere with any existing utility without the written consent of the Director and the owner of the utility. If it becomes necessary to relocate an existing utility, this shall be done by the Applicant or Contractor. The Applicant or Contractor shall inform itself as to the existence and location of all underground utilities to protect the same against damage.

**5.5 Protection of Existing Lines and Structures**

The Applicant and/or Contractor shall adequately support and protect by timbers, sheeting, etc. all pipes, conduits, poles, wires, cables or other appurtenances which may be in any way affected by the excavation work and shall do everything necessary to support, sustain and protect them under, over, along or across such work areas. The excavation shall be performed and conducted in such a manner that it shall not interfere with access to fire stations, fire hydrants, water gates, underground vaults, catch basins or any other public structure.

**5.6 Adjoining Property**

The Applicant and/or Contractor shall at all times and at its own expense, preserve and protect from injury any adjoining property by providing proper foundations and shall take such other precautions as may be necessary for this purpose. The Applicant and/or Contractor shall not remove, even temporarily, any trees or shrubs which exist in planting strip areas without first obtaining permission from the Director.

**5.7 Damaged Trees**

In the event a tree is either accidentally destroyed by the Applicant and/or Contractor or is authorized for removal by the Director, the Applicant or Contractor shall remove the tree, stump and debris from the work site, and replace the tree with an identical species with a minimum caliper of two (2) inches in the identical location.

**5.8 Pedestrian Crossings, Open Trenches**

The Applicant and/or Contractor shall, where possible, maintain safe crossings for two lanes of vehicle traffic at all public intersections as well as safe crossings for pedestrians at intervals of not more than three hundred (300) feet. If any excavation is made across a Public Way, it shall be made in sections to assure maximum safe crossing for vehicles and pedestrians. An open trench may not exceed three hundred (300) feet unless specifically permitted by the Director. If the Public Way is not wide enough to hold the excavated material for temporary storage, the material shall be immediately removed from the location at the Applicant and/or Contractor's expense.

**5.9 Traffic**

The Applicant and/or Contractor shall take appropriate measures to assure that during the performance of the Street Opening Work, so far as practical, normal traffic conditions shall be maintained at all times so as to cause as little inconvenience as possible to the occupants of the adjoining property and to the general public. The Director may permit the closing of streets and walks to all traffic for a period of time with proper notification of the Police Department and Fire Department. Unless the requirement for a police detail is waived by the Police Chief, the Applicant and/or Contractor shall engage a police detail to maintain traffic control and public safety at the project site while Street Opening Work is in progress. Warning signs shall be placed a sufficient distance from the project site in order to alert all traffic coming in both directions. Cones or other approved devices shall be placed to channel traffic. Warning signs, lights, and such other precautions shall conform to the latest edition of the "Manual on Uniform Traffic Control Devices for Streets and Highways".

Construction materials and equipment on the site shall be limited in quantity and in the space they occupy so that they do not improperly hinder and block traffic. The Director may require a traffic management plan be submitted along with the street opening permit in cases of high traffic volume, details or where construction may have significant impacts.

**5.10 Gutters and Basins**

The Applicant and/or Contractor shall keep all gutters free and unobstructed for the full depth of the adjacent curb and for at least one (1) foot in width from the face of such curb at the gutter line. Catch basins shall be kept clear and serviceable.

**5.11 Excavated Material**

The Applicant and/or Contractor, at their own expense, shall remove all excess excavated material, surplus water, muck, silt or other run-off pumped or removed from excavations from the site.

**5.12 Temporary Repairs**

At the end of each workday, all trenches must be plated if repair work is not completed and/or backfilled, compacted and temporarily patched. No open un-plated trenches are permitted overnight and work in plated trenches must be continually prosecuted to completion to minimize the time trenches are plated.

**5.13 Noise and Vibration**

The Applicant and/or Contractor shall perform the work in such a manner as to avoid unnecessary inconvenience and annoyance to the general public and occupants of neighboring property. During the hours from 8:00 p.m. to 7:00 a.m. the Permit Holder or Contractor shall not use, unless otherwise specifically permitted by the Awarding Authority or Awarding Authority Representative any tool, appliance or equipment producing vibration or noise of sufficient volume to disturb the sleep or repose of occupants of the neighboring property.

**5.14 Debris and Litter**

All debris and litter remaining from the Street Opening Work site shall be removed by the Applicant or Contractor in a timely manner

**5.15 Restoration of Pavement Markings**

All permanent pavement markings (crosswalks, center lines, etc.) which are damaged during Street Opening Work shall be restored in kind by and at the expense of the Applicant and/or Contractor. All markings shall meet local and state standards.

**5.16 Lawn Surfaces and Plantings**

All lawn surfaces which are disturbed during Street Opening Work shall be replaced with sod or six (6) inches of screened loam, lime fertilized and re-seeded with good quality lawn seed. Any areas containing plantings shall be restored to their original condition with the same or similar plantings.

### **5.17 Erosion Control**

The Applicant and/or Contractor shall be responsible for all erosion control and for obtaining any necessary permits from the Conservation Commission. The Applicant and/or Contractor shall protect drainage structures from siltation by whatever means required including but not limited to the installation of hay bales and/or filter fabric. In the event that a drainage structure becomes damaged from siltation as a result of the Street Opening Work, the Applicant and/or Contractor shall clean the structure at their own expense before completing the temporary patch.

## **6 Required Construction Procedures**

All Street Opening Work and materials used therein **shall** conform to the most recently published edition of the Standard Details of Town of Easton Department of Public Works. Construction methods and material requirements that are not found in the DPW's Standard Details, shall be in accordance with the latest version of the Massachusetts Department of Transportation (MassDOT) Standard Specifications and all current supplemental specifications, federal OSHA requirements, the American Disability Act and the Architectural Access Board Regulations. Exceptions to these requirements may be made at the discretion of the Director at the time the Street Opening Work is in progress.

### **6.1 Safety**

Prior to any work commencing, the applicant shall make provisions for the safety and well-being of pedestrians and vehicular traffic. Any and all signage shall conform to the latest edition of the Manual on Uniform Traffic Control Devices, (MUTCD) unless otherwise directed by the DPW.

The applicant shall make all necessary precautions to protect all property, both public and private, from unnecessary damage. The applicant shall ensure that that safe means of access to public and private property throughout the duration of the construction project. The applicant shall ensure that at any given time during the duration of the construction project that municipal vehicles shall be permitted to travel through the construction zone unobstructed.

Failure at any time to meet these requirements may cause the applicant's security deposit to be confiscated and the construction project to be shut down until requirements are satisfied.

### **6.2 Excavation**

Existing pavement shall be saw cut in neat, true lines along the area requiring excavation for repair, replacement or new installations. When opening occurs within two (2) feet of the curb and/or edge of the hardened surface, the paved area between the excavation and the curb and/or edge must also be removed. The hardened pavement shall be saw cut back a minimum of twelve (12) inches from all sides of the initial excavation to the depth of the original pavement structure, exposing the undisturbed gravel sub-base. Unstable pavement shall be removed over cave-outs and breaks and the subgrade treated as the main trench. Pavement edges shall be trimmed to a vertical face and neatly aligned with the center line

of the trench. Excavations shall be made in open cut. Trenches and excavations shall be braced and sheathed in accordance with the requirements of the Occupational Safety and Health Act (OSHA). Sections of bituminous or cement concrete sidewalks shall be removed to the nearest scoreline or approved cut edge. The contractor is solely responsible for the health and safety of all employees, subcontractors, motorists, pedestrians and the general public with regard to excavation and trench work.

### **6.3 Backfilling and Compaction**

For Street Opening Work that requires the removal of less than 100 square feet of asphalt cement, the Applicant or Contractor shall use Controlled Density Fill (CDF) for excavation backfill. However, for Street Opening Work that requires the removal of 100 square feet or greater of asphalt cement, excavations shall be backfilled with approved granular backfill material or CDF. Regardless of the material to be used for excavation and/or trench backfilling operations, the Applicant or Contractor shall be solely responsible for following the specifications, guidelines and regulations for backfilling and compaction as described in the following subsections. Regardless of the type of Street Opening Work being or to be performed, the Director has the right to alter the Regulations stated within this section to meet the needs of the Town.

#### **Approved Granular Backfill Material**

Approved backfill material shall consist of either Gravel Borrow meeting MassDOT specification M1.03.0, Type “B” or Processed Gravel for Subbase meeting MassDOT specification M1.03.1.

#### **Placement and Compaction of Approved Granular Backfill Material**

Excavations that are to be backfilled with either Gravel Borrow or Processed Gravel for Subbase shall be placed and compacted in maximum 6-inch thick lifts and the Town shall require the Applicant or Contractor to provide third party compaction testing and observation of backfilling procedures by a professionally qualified geotechnical consultant at the Applicant’s expense. The compaction testing shall consist of at least one density test per six (6”) inch lift placed per 100 square feet of trench. Compaction testing shall be performed using either the Sand Cone Method (ASTM 1556 D) or a Nuclear Density Gauge. Each lift shall be properly compacted using approved vibratory equipment to achieve a minimum compaction percentage of 95% of the maximum dry density of the soil as determined by ASTM 1557 D. If the material retained on the ¾ inch sieve is 35% or greater as determined by grain-size analysis, field density testing may be waived and the lifts of backfill should be compacted to the satisfaction of a geotechnical engineer. Any specific area that, after being compacted, does not pass the required minimum compaction percentage shall be either re-compacted or removed and properly replaced with approved granular backfill material for retesting by the Applicant or Contractor without compensation from the Town. The results of the field density testing shall be submitted to the Director in a timely manner. Pavement subbase, base and surface shall be installed to the minimum depths and prepared as indicated in the DPW’s “Standard Details” when excavations are backfilled with these granular materials.

**Potential Re-Use of Excavated On-site Soils**

The excavated on-site soils generated during the Street Opening Work may be reused as approved granular backfill material provided the soils meet the MassDOT specifications for Gravel Borrow or Processed Gravel for Subbase as described above. Excavated material that is proposed for reuse shall have a grain-size analysis test performed by a third party geotechnical laboratory, at the expense of the Applicant, for conformance to MassDOT specifications. Material that does not meet MassDOT specifications shall not be reused as approved backfill material and shall be removed from the work site at the expense of the Applicant. Excavated material that is approved for backfill shall be placed, compacted and tested as described above.

**Controlled Density Fill (CDF)**

If Controlled Density Fill (CDF) is to be used for Street Opening Work where the removal of 100 square feet or greater of asphalt cement is required, field density testing by a third party as described above shall be waived. CDF shall contain a minimum of 250 pounds of class F flyash or high air (25% plus), be self-leveling and quick setting. CDF shall meet MassDOT specification M4.08.0 and shall fall into the category of either Type 1E or 2E (very flowable). CDF is to be batched at a ready mix plant and is to be used at a high or very high slump (9” to 12”). In lieu of the slump test, a 6 inch long, 3 inch diameter tube may be filled to the top and then slowly raised. The diameter of the resulting “pancake” may be measured and the range of the diameter shall be 9 inches to 14 inches. It shall be flowable, require no vibration and after it is placed, excavatable by hand tools and/or small machines.

If CDF is used as approved backfill material, it shall fill the excavation to immediately below the asphalt grade or to the minimum required by the DPW’s “Standard Details”, whichever is greater. If an excavation is backfilled with CDF in accordance with this Regulation, then a temporary patch need not be installed, but a permanent patch may be installed immediately. Permanent patches shall be installed as indicated in the DPW’s “Standard Details”. If, the CDF used for backfill is not quick setting, then the Applicant or Contractor shall cover the excavation with heavy duty steel plates adequate to carry heavy traffic and wait twenty-four hours for the CDF to cure prior to applying the permanent patch.

**6.4 Temporary Patches**

The Applicant and/or Contractor shall install a temporary patch when excavations have been backfilled with Gravel Borrow or Processed Gravel for Subbase. The temporary patch shall remain in place for a minimum of 14 days and shall not exceed a maximum of 30 days starting at the time the temporary patch was installed. Temporary patch shall consist of either cold patch or bituminous concrete plant-mixed hot asphalt aggregate shall be installed to the thickness of the existing asphalt at a minimum.

Temporary patches shall not be allowed after November 1<sup>st</sup> of each year. Excavations generated during Street Opening Work after this date shall be backfilled using quick setting Controlled Density Fill (CDF) as described in these regulations. The Applicant or

Contractor shall construct the permanent patch as indicated in the DPW's "Standard Details" the same day the quick setting CDF is utilized.

Temporary patches shall be maintained by the Applicant and/or Contractor so that the surrounding area remains a single smooth unbroken plane. Any permanent patches constructed during the winter under less than ideal conditions for the installation of hot or warm mix asphalt will be required to be reconstructed as soon as suitable weather conditions return.

### **6.5 Permanent Patches**

Except when installed over Controlled Density Fill (CDF) as described in this policy, permanent patches shall be installed not less than fourteen (14) days from the date of installation of the temporary patch. The Applicant and/or Contractor shall contact the Director 14 days following the installation of the temporary patch for an inspection to determine if final settlement of the trench has occurred. The Director will notify the Applicant and/or Contractor within seven (7) days of the inspection whether permanent patch can be installed.

Any temporary patch installed shall be completely removed and replaced with hot mix asphalt base, binder and top courses as described and shown in the DPW's "Standard Details". If additional saw cutting is required, it shall be done in neat straight lines. Any broken or irregular edges of existing pavement shall be saw cut away in straight lines leaving a sound vertical face at least twelve (12) inches back from all edges of the existing pavement. All abutting edges of the existing pavement shall be painted with an asphalt emulsion immediately prior to the placement of the permanent patch. The Applicant and/or Contractor shall remove and dispose, at their own expense, all excavated material and thoroughly compact the surface of the subbase.

The Applicant and/or Contractor shall be required to utilize the infra-red process to any permanent patches installed within newly paved roads. See section 6.15.

### **6.6 Steel Plates**

Steel Plates may be used when temporary patch or permanent paving cannot be performed as the same day as excavation.

All steel plates shall be of sufficient thickness to resist bending, vibration, etc, under traffic loads. All steel plates shall meet ASTM A Steel (minimum), having a thickness sufficient for supporting the intended traffic load with a maximum allowable deflection of (3/4") three-quarter inch. Steel plates must completely cover the open trench and have a minimum overlap of (18") eighteen inches. Larger plates may be required as determined by the DPW.

All plates will be recessed to the adjacent pavement surface or secured by other DPW approved method. Plates may be unrecessed with permission from the DPW. If plates are not recessed the plate must be secured and ramped with hot mix asphalt in the 2' width in the travel direction and 1' of hot mix asphalt along the sides.

In the event of precipitation and/or as directed by the Director, the applicant shall immediately remove any steel plates, backfill and compact the trench with approved material and install a 2.5-inch of hot mix asphalt at the applicant's cost. Failure to do so may result in the forfeiture of the applicant's deposit.

### **6.7 Newly Paved Roads**

No newly constructed or reconstructed pavement less than five (5) years old will be cut into except in cases of emergency or by approval of the Director of Public Works.

### **Restoration**

If a newly constructed or reconstructed roadway requires excavation, the trench shall be filled with quick setting Controlled Density Fill as described in this document. After excavation work has been completed as specified in this regulation and the DPW's "Standard Details", the Applicant and/or Contractor shall restore the paved area as specified by the Director. The joints shall be treated with the infrared process as detailed in this this policy. There shall be a smooth transition from existing pavement to new pavement. If multiple trenches are required in a newly paved road the entire area may require cold planing and overlay, from curb to curb.

### **Extended Maintenance Fee**

In addition to the restoration requirement of this section, the applicant will be required to pay an extended maintenance fee based on the age of the road at the time of the application for street opening permit as outlined the fee schedule located in Appendix A.

### **6.8 Shoulders**

Suitable excavated material shall be placed in maximum six (6) inch thick lifts. Each lift shall be properly compacted. Shoulders shall be re-constructed to their existing condition and either loamed with six (6) inches of loam, limed, fertilized and seeded with roadside grass mix or covered with four (4) inches of wood chips as directed by the Director.

### **6.9 Sidewalks**

Any excavation in a concrete or bituminous concrete sidewalk shall require that the entire sidewalk area containing the trench be replaced. Any concrete sidewalk section that is excavated or damaged by the excavation must be replaced in its entirety. Gravel Borrow or Processed Gravel for Subbase meeting MassDOT specifications mentioned in this document or suitable excavated material shall be placed in maximum six (6) inch thick lifts and be properly compacted using approved vibratory equipment. All sidewalk areas will be installed by the Applicant and/or Contractor in conformance with the ADA and the AAB Regulations currently in effect. Bituminous concrete and concrete sidewalks shall also be constructed as described and indicated in the DPW's "Standard Details". All sawcuts in the walk shall be made 90-degrees to the travel way.

### **6.10 Curb and Berm**

Any curbing or berm which is damaged or removed as part of the Street opening Work shall be properly replaced in kind. The use of cast-in-place concrete curbing is prohibited.

All salvageable granite curb that is removed from the Public Way and is excess is the property of the Town and shall be delivered to the DPW by the Applicant and/or Contractor.

**6.11 Wheelchair Ramps**

Existing wheelchair ramps which are damaged or removed under Street opening Work shall be reconstructed in kind and in conformance with the ADA and the AAB Regulations that are currently in effect.

**6.12 Curb Cuts**

Any curb cut within a Public Way cannot exceed the following dimensions unless specifically approved by the Director:

- a) Single Family Dwelling – 24 feet
- b) Multi-Family Dwelling – 24 feet
- c) Commercial Property – 36 feet

Driveway entrances into Public Ways must butt into and not overlap the edge of the existing roadway hardened surface. The driveway must be graded in such a manner that no ponding of water occurs within the Public Way and in accordance with the AAB Regulations. Driveways shall not be located on small radius curves and shall be positioned as to provide maximum sight distance and safety.

Multiple driveway entrances will not be permitted except upon approval by the Director. The Director shall consider impacts to the existing roadway, sidewalk, and other roadside features as well as the stated need for more than one entrance.

**6.13 Loop Detectors**

Prior to commencement of work, the applicant shall make all efforts to identify any and all loop detectors within the project zone and shall take all effort to not damage those loops. If in the course of construction the applicant does damage or destroy loop detectors, he or she shall immediately contact the owner of the loop detectors and make all necessary repairs per local and state regulations within a reasonable amount of time. Failure to do so may result in the project being shut down and the forfeiture of security deposits.

Any proposed construction or repair work related to the installation of loop detectors shall be done so by a MassDOT approved traffic signal contractor. All materials shall be per the Standard MassDOT Specifications. Any and all repair work shall be done at the cost of the applicant.

**6.14 Utility Infrastructure**

All existing cast iron structures to be reset shall be adjusted to change in line or grade per the individual structure. All castings shall be set on brick masonry or approved equal, where necessary, to conform to the line and grade required. After casting has been set to grade on approved mortar. Cast iron structures must be incased in high early strength concrete with a minimum depth of six inches (6”) and for a distance of eighteen (18”) inches around the outside of the casting.

**6.15 Infra-Red Process.**

The Infra-Red Process shall only be utilized with the permission or at the direction of the Director.

The area to be repaired shall be thoroughly cleaned to eliminate all potential contaminants. An infrared heater shall be positioned over the area to be repaired for a period of time required to plasticize the existing pavement to a depth of 1 ½ inches. Oxidation of the pavement caused by improper heating techniques must be avoided. If this condition occurs, all oxidized material must be removed and replaced with Class I Bituminous Concrete meeting the Standard Specifications of the Massachusetts Highway Department.

The softened area shall be inwardly reworked from approximately one foot beyond all sides of the original Temporary Patch. This designated area shall be treated with a penetrating asphalt emulsion, uniformly scarified and raked to a workable condition. For street crossings and/or trenches with jogs, the reworked area will be extended beyond the outermost jog in a straight line parallel with the opposite outermost jog. Under no circumstances may the infrared heat treatable patching mix that is used register a temperature under 200° F.

After the paving mixture has been properly admixed and raked to grade, compacting shall be obtained by use of a steel-wheeled roller of sufficient weight to establish a uniform density comparable to that of the surrounding pavement surface within the work area. The finished Permanent Patch shall be level having no depressions retaining water on any of the surface. All seams of the finished perimeter shall be sealed with penetrating asphalt emulsion.

A petroleum resin sealant shall be applied consistently to the entire heated area by mechanical means or hand application at an approximate rate between .1 and .25 gallons per square yard. Actual rate will be determined on site by an approved absorption test method. A mineral filler will then be broadcast over the newly sealed area to absorb any excess liquid and prevent tracking and the area immediately opened to traffic.

**7 Obstructions Located In The Public Right Of Way**

A Street Opening Permit with associated insurance and bonds in an amount to be determined by the Director must be obtained for any proposed temporary obstruction that is to be located or placed within a Public Right of Way. An obstruction shall be considered, but not limited to, dumpsters, unregistered vehicles (such as construction machines and equipment), construction materials, or other such object or objects which are not specifically permitted under state or local regulations and may pose a potential hazard to the general public.

Warning signs shall be placed a sufficient distance from the permitted obstruction(s) in order to alert all traffic coming in both directions. Cones or other approved devices shall be placed to channel traffic. Warning signs, lights, and such other precautions shall

conform to the “Manual on Uniform Traffic Control Devices for Streets and Highways”, latest edition. Construction materials and equipment on the site shall be limited in quantity and in the space they occupy so that they do not improperly hinder and block traffic.

The Director may require a traffic management plan be submitted along with the street opening permit in cases of high traffic areas or other situations deemed necessary.

Permits for obstructions shall be granted only when no other reasonable alternative exists for locating the obstructions outside of the travelled way or shoulder.

## **8 Validity**

All regulations or parts of regulations in conflict herewith are hereby repealed.

The invalidity of any section, clause, sentence or provision of these regulations shall not affect the validity of any other part of these Regulations, which can be given effect without such invalid part or parts.

**APPENDIX A - PERMIT FEE STRUCTURE**

Application Fee (Each Individual Activity)	\$100
Trench Permit Fee (Jackie’s Law)	\$50
State Highway Street Opening Permit	\$100

**Extended Maintenance Fee – New Pavement**

0 to 12 Months	\$5,000
13 to 24 Months	\$4,000
25 to 36 Months	\$3,000
37 to 48 Months	\$2,000
49 to 60 Months	\$1,000
61 Months or Older	Standard Permit Fee

**Refundable Security Deposit for Work in Public Ways**

Utility Trench (Up to 100 SF)	\$1,000 per trench
Each additional 50 SF of trench	\$500
Driveway/Sidewalk (Up to 200 SF)	\$1,000 per curb cut
Each additional 100 SF of Driveway/Sidewalk	\$500
Access for a Subdivision	\$2,000 per access point

**Non Excavation or Public Obstruction**

Per Day	\$30
Per Month	\$250