



TOWN OF LUDLOW  
DEPARTMENT OF PUBLIC WORKS  
REGULATIONS FOR  
CONSTRUCTION WITHIN THE PUBLIC WAY

Approved by Board of Public Works

Revised October 2012

## INDEX

<b>Section Number</b>	<b>Topic</b>	<b>Page</b>
	Index	2
I	Authority	3
II	General Requirements	3
III	Public Safety	5
IV	Materials, Construction Methods and Limitations	5
	Driveways	5
	Landscape & Grassed Areas	6
	Trench Excavation	6
	Trench Backfilling – Method 1	6
	Trench Backfilling – Method 2	7
	Temporary Bituminous Patch	7
	Permanent Bituminous Patch	8
	Miscellaneous	9
	Policy for Roadway Trench & Pavement Restoration	9
V	Permit Fees, Securities, Agreements	13
VI	Inspections	14
	Permit Application	
	Hold Harmless Agreement	

## I. AUTHORITY

- A. Town of Ludlow, By-Laws, Chapter IV, Section I: "No opening or obstruction shall be made in, nor, except as provided in Section 12 of the Chapter, shall any material be placed on a public way or a way under the control of the Town of Ludlow, either by a department of the Town or a private individual for corporation, unless a permit therefore shall first be obtained from the Board of Public Works. Before such a permit is granted, an applicant, other than a Town department, may be required to file a bond in a sum satisfactory to the Board of Public Works, conditioned upon the faithful discharge and performance of every duty and requirement imposed by statute, by-laws of the Town or regulation of the Board of Public Works applicable thereto, and upon conformance to all directions of the Board of Public Works relating to the work to be done under such permit and upon the payment of all expenses and damages incurred by the Town or recovered from it by reason of or in connection with such occupation, opening or work. Each applicant for a permit to open a street shall deposit with the Town Treasurer, an amount described by the Board of Public Works as condition to the issuing of the permit to cover the cost of resurfacing after the opening has been closed, provided, however, that an applicant may be excused from making such payment in advance when a satisfactory guarantee is given".

## II. GENERAL REQUIREMENTS

- A. The permit shall be issued to a public utility company, private contractor or builder for the purpose of construction and/or reconstruction work within a public way, private way or unaccepted subdivision.
- B. Permit shall be granted **ONLY** if the proposed work is in the best interests of the Town and its residents, or is appurtenant to a building permit duly issued by the Building Inspector.
- C. Permit shall be conditional upon the permittee's adherence to these regulations, and to any additional requirements stipulated on such permit, and may be revoked at any time, should the applicant/permittee not adhere to these regulations.
- D. Permit application form, including any required sketches, shall be complete prior to the issuance of a permit.
- E. The Town Engineer or the Board of Public Works may, at his/its discretion require additional information and/or more detailed plans.

- F. The Board of Public Works, or its designee, shall be solely responsible for the interpretation of these regulations, and any specifications referenced hereto.
- G. All work done under said permit shall be completed to the satisfaction of the Board of Public Works, or its designee.
- H. All work within the public way shall be done in a manner which shall minimize disturbance to natural features such as stone walls, trees, fences.
- I. The Board of Public Works must be notified if the proposed work requires the removal of all or a part of a tree, any portion of which lies within the public way.
- J. The Board of Public Works shall not review any permit that does not have all reviews completed by the Town Engineer and executed by the Police Department.
- K. The permit application should be submitted two weeks (fourteen calendar days) prior to the anticipated date of construction activity in order to allow sufficient time for review and approval of the application.
- L. Massachusetts law (Chapter 82, Section 40) required that contractors notify public utility companies in writing at least seventy-two (72) hours, excluding Saturdays, Sundays and legal holidays, before any excavation in a public way. This may be accomplished by notifying "DIG SAFE". Either a Dig Safe number must be shown on the permit applications, or certified receipts of letters of notification to each public utility company must accompany the permit application.
- M. The cutting of roadway surfaces and excavation within the public way is **NOT ALLOWED** between November 15 and April 1, without specific waivers from the Board of Public Works.
- N. Should any proposed work result in the disturbance and/or excavation of a road bound or property corner marker, the bound or marker shall be reset to its original location by a licensed surveyor, and a certification as to its reset location furnished by said surveyor to the Town.

### III. PUBLIC SAFETY

- A. The applicant/permittee, from the time the work commences until the work has been inspected and approved by the Board of Public Works, shall be responsible for, and take care to insure, the safety of the public, both vehicular and pedestrian.
- B. All roadways shall be passable at all times, unless specific permission to close said roadway has been granted by the Board of Public Works. Such permission to close a roadway shall be stated in the permit.
- C. When required by the nature of the work to be performed, as determined by the Board of Public Works or its designee, barricades, signs, cones, and/or flashing lights shall be erected at the expense of the applicant/permittee in accordance with the appropriate diagram as shown in these regulations, and/or designated by the Board of Public Works.
- D. If the Police Department, in its review of the permit application, determines that a police officer(s) are required for traffic control and/or protect the public safety, the applicant/permittee shall pay all costs for such police officers.

### IV. MATERIALS, CONSTRUCTION METHODS, AND LIMITATIONS

- A. All construction within the public way shall be accomplished in accordance with the latest edition of the Commonwealth of Massachusetts, Department of Public Works, Standard Specifications for Highways and Bridges, except as amended by items "B" and "C" below.
- B. The construction standards shown in the Standard Construction Details of the Town of Ludlow, Department of Public Works shall supersede the above reference.
- C. Any construction standards listed in these regulations shall supersede both of the references listed above.
- D. The permit shall state and identify the method of "BACKFILL" for trench restoration.

#### E. DRIVEWAYS

- 1. The maximum driveway width shall be 14 feet for a single car garage and 24 feet for a double width car garage.
- 2. The widths of commercial driveways shall be determined on an individual basis for each project.

3. For the portion of driveway within the public way, the minimum construction shall be 2.5" of bituminous concrete on 8" of compacted processed gravel base.
4. In areas where "cape cod berm" exists, the berm **SHALL NOT** be removed for the driveway construction. The driveway shall match the top elevation for the berm, which shall remain in place.
5. On corner lots, no driveways shall be allowed any closer to the corner than 20 feet from the end of the corner radius.

#### F. LANDSCAPED AND GRASSED AREAS

1. Any landscaped areas that are disturbed shall be restored to their original in-kind condition.
2. Any grassed areas that are disturbed shall be reconstructed at the following minimum standards:
  - a. 6" of screened loam
  - b. seed applied at the minimum rate of one pound of seed per 700 square feet
  - c. seed shall be of a type to match the surrounding area
  - d. fertilize and apply powdered limestone
  - e. straw/hay cover or apply seed netting
3. Grassed areas shall be raked, re-seeded at the rate of 1 pound per 350 square feet, and re-fertilized approximately 30 days after the initial seeding.

#### G. TRENCH EXCAVATION

1. Prior to the beginning of any excavation within the paved surface of any roadway, the bituminous surface and/or concrete sidewalk, shall be cut vertically at the limits of excavation using a hand or power tool to insure that trench excavation shall proceed without disturbance to any adjacent roadway surfaces.
2. Any material which is unsuitable for backfill shall be removed.

#### H. TRENCH BACKFILLING – METHOD 1

1. The bottom of the trench, to an elevation of 12" above the top of the utility, shall be backfilled with clean sand and thoroughly compacted. The remainder of the trench shall be filled with "Flowable Concrete Fill",

100-140 PSI, to an elevation of 3 ½" (minimum) below the adjacent roadway surface.

2. The backfill/flowable concrete fill shall set up for minimum 24 hours prior to the installation of bituminous pavement.
3. A protective steel plate shall be used to cover the trench during the 24 hour set-up period.
4. A Temporary Roadway Patch is **NOT** required.
5. A PERMANENT ROADWAY PATCH, as defined in Subsection "K" of this Section shall be installed.

#### I. TRENCH BACKFILLING – METHOD 2

1. Any utility shall be placed on a "Gravel Borrow – Type C" bedding (6" minimum) and shall be thoroughly compacted to 95% relative compaction.
2. "Gravel Borrow – Type C" shall be placed in 6" lifts and thoroughly compacted to 95% relative compaction for the full width of the trench and extending a minimum of 6" above the top of the pipe.
3. The portion of the trench, from the top of the Gravel Borrow – Type C to 15" from the elevation of the surrounding roadway surface, shall be backfilled with suitable material with no stones larger than 3" diameter.
4. The backfill shall be placed in 8" lifts and shall be thoroughly compacted to 95% relative compaction.
5. The remainder of the trench, to within 2" of the elevation of the surrounding roadway surface, shall be backfilled with "Gravel Borrow – Type "B" or "Gravel Borrow – Type "C", thoroughly compacted to 95% relative compaction.
6. A 2" depth of Temporary Patch shall be installed in accordance with Sub-section J of this section.
7. No sooner than 45 days, nor longer than 90 days, from the installation of the Temporary patch, a Permanent Patch shall be installed according to Sub-section "K" of this section.

#### J. TEMPORARY BITUMINOUS PATCH

1. Install 2" of Bituminous Concrete in one lift.

2. Compaction shall take place with a minimum 3 ton roller (a vibratory roller may be utilized to achieve the weight rating specified; certification is required).
3. The elevation of the top of the temporary Bituminous Patch shall, after compaction, match the elevation of the surrounding roadway surface to within 1/4".
4. The temporary Bituminous Patch shall remain in place for a minimum of 45 days.
5. During the 45 day period described above, should any settling occur which produces deviations exceeding 1/4 inch in the surface of the patch, the patch shall be adjusted by adding additional bituminous material to conformance with the 1/4 inch deviation requirement.
6. "Cold Patch" is **NOT ACCEPTABLE** as a material for the temporary bituminous patch.

#### K. PERMANENT BITUMINOUS PATCH

1. The existing roadway surface shall be SAW CUT a minimum of 6" beyond the excavation limits, and including any areas of broken pavement adjacent to the excavation.
2. The material within the saw cut, including any existing pavement or temporary bituminous patch, shall be removed to the depth as specified below for permanent bituminous patch, and the gravel surface raked smooth.
3. The depth of the permanent bituminous patch shall be as follows:
  - a. Arterial and Collector Roadways – 4 inches
  - b. Major Residential Roadways – 3 1/2 inches
  - c. Minor Residential Roadways – 3 inches
4. A bitumen emulsion tack coat shall be applied to all the exposed edges of the existing pavement.
5. The permanent bituminous patch shall be constructed in two courses, the top course being 1 1/2 inches in depth.
6. Both courses shall be thoroughly compacted by a minimum five ton roller (a vibratory roller is acceptable to achieve the weight rating specified; certification is required).



7. The edges of the permanent bituminous patch shall be sealed with a liquid asphalt emulsion (AASHTO M140 specification) and coated with sand.
8. The edges and surface of the permanent bituminous patch shall match the surrounding existing bituminous roadway surface and no deviations shall be allowed.
9. Whenever a trench excavation crosses an existing driveway, the permanent patch shall meet the above requirements, PLUS, any portion of the existing driveway apron from the trench line to the edge of road shall be removed, and the entire area, from the property side of the trench cut to the edge of road, shall be replaced according to the driveway specification contained herein. The result shall be that only one joint between new and old driveway pavement shall exist.

#### L. MISCELLANEOUS

1. Any items of construction that are not specifically covered in these regulations shall be built in accordance with the Standard Specifications for Highways and Bridges, or returned to condition which is equal to or better than the condition that existed prior to the construction associated with this permit.

#### M. POLICY FOR ROADWAY TRENCH AND PAVEMENT RESTORATION FOR ROADWAYS RESURFACED WITHIN FIVE YEARS

1. Permit Requirement - A Construction Within the Public Way permit shall be obtained from the Department of Public Works. This permit will not be issued until full payment is received for the permanent roadway repair. The Permanent Repair section of this policy outlines details of the permanent repair.
2. Type of Roadway - The type of repair will apply to all roadways with a bituminous concrete surface under five (5) years old. A permanent patch will be placed for an interim period of approximately one (1) year. The type of permanent patch is based upon the functional classification of the roadway. A permanent repair of the roadway is conducted the following calendar year by the Town's resurfacing contractor at the expense of the contractor making the roadway cut.
3. Permanent Patches – All Roadways (Local, Collector and Arterial Streets) - The following are criteria for trench and pavement repair that apply to all roadway categories. Specific repair criteria pertaining to each roadway category follows this section.

- a. All pavement edges of the trench shall be saw cut with straight vertical edges six (6) inches from the edge of excavation. The edges shall be kept clean of any foreign material and tack coated before completion of the permanent pavement patch.
- b. Backfill material shall be of a good quality as determined by the Town's inspector. Excavatable flowable fill may be required if determined necessary by the Ludlow Department of Public Works. No frozen material shall be used as backfill.
- c. Backfill material must be placed in lifts of 8 and 10 inches and thoroughly compacted by mechanical compactors to a minimum density of 95% for the full depth of the trench. Density tests may be required by the Town. These tests will be done at the permittee's expense.
- d. The depth of gravel base shall be equal to the depth of gravel excavated, but not less than 12 inches.

*Some roadways may have an original surface under the bituminous concrete such as portland cement concrete or cobble stones. The Town may require this portion of the roadway structure to be replaced with portland cement concrete, excavatable flowable fill, bituminous concrete and/or another material suitable for the repair. This will be dealt with on a case-by-case basis.*

#### 4. Permanent Patches – Local Roadways

- a. A temporary patch may be warranted before a permanent patch is laid. This will be determined by the Department of Public Works. The top surface shall be covered with two (2) inches of Type I-1 top course and shall be maintained by the permittee until a permanent patch is placed. The patch shall be such that all vehicular, bicycle and pedestrian traffic can pass over it safely. Vehicles must be able to safely travel over the patch at a speed equaling the posted speed limit plus five (5) miles per hour. If a speed limit is not posted in the vicinity of the roadway cut, then a speed of no less than 35 miles per hour may be used.
- b. The depth of the permanent patch shall be equal to the depth of the existing pavement plus one (1) inch. The permanent patch shall consist of at least a 2 inch base course of bituminous concrete and a 2½ inch top course of Type I-1 bituminous concrete at a minimum. Work shall be done in accordance with the current

Massachusetts Highway Department "Standard Specifications for Highways and Bridges".

5. Permanent Patches – Collector and Arterial Roadway

- a. A temporary patch may be warranted before a permanent patch is laid. This will be determined by the Department of Public Works. The top surface shall be covered with three (3) inches of Type I-1 top course and shall be maintained by the permittee until a permanent patch is placed. The patch shall be such that all vehicular, bicycle and pedestrian traffic can pass over it safely. Vehicles must be able to safely travel over the patch at a speed equaling the posted speed limit plus five (5) miles per hour. If a speed limit is not posted in the vicinity of the roadway cut, then a speed of no less than 45 miles per hour may be used.
- b. The depth of the permanent patch shall be equal to the depth of the existing pavement plus one (1) inch. The permanent patch shall consist of a 4½ inch base course of bituminous concrete and a 3 inch top course of Type I-1 bituminous concrete at a minimum. Work shall be done in accordance with the current Massachusetts Highway Department "Standard Specifications for Highways and Bridges".

6. Permanent Repair

- a. The contractor who is issued the permit to cut the roadway will be responsible for all costs associated with the permanent repair plus a 10% administrative fee. Payment will need to be made to the Ludlow Department of Public Works before a permit is issued. The estimated cost of repair will be developed by the Department of Public Works.
- b. The permanent repair will consist of milling the entire roadway width to a depth of 1½ inches on local roadways and 2 inches on collector and arterial roadways for a total distance of 20 feet from the outside edge of the trench in each direction longitudinal to the roadway. The Department reserves the right to change this depth depending upon the type maintenance that was previously conducted on the road. A bituminous concrete top course will be installed over the milled area based upon the depth of asphalt removed. Structures will need to be adjusted and pavement markings replaced as necessary. This repair will be conducted by a paving contractor employed by the Town the following calendar year.

7. Police Protection and Traffic Control

- a. Police officers for traffic control will be required whenever traffic must be diverted into the lane or lanes of opposing traffic on the street or highway, to control access and/or egress for an existing driveway being worked on or as deemed necessary by the Ludlow Police Department or the Department of Public Works. This must be coordinated with the Ludlow Police Department in advance of the proposed work.

8. Inspection

- a. A representative from the Department of Public Works must inspect the trench prior to backfilling and during the repair process.

9. Warranty

- a. The permittee is required to correct trench settlement and faulty pavement repairs for a period of one year after the permanent patch is placed as directed by the Department of Public Works. Any repairs will be done under the direction of the Department of Public Works at the expense of the permittee.

*The Department of Public Works reserves the right to alter these specifications depending upon site conditions or as deemed necessary to ensure satisfactory restoration of the roadway.*

V. PERMIT FEES, SECURITIES, AGREEMENTS

A. FEE SCHEDULE

1. All permit applications shall be accompanied by a permit fee and securities as stated below for Licensed Contractors.

DESCRIPTION	PERMIT FEE	PERF. SECURITY	GUAR. SECURITY
Utility not under surface,	25.00	200.00	250.00
Residential Driveway, w/o curb or walk	25.00	200.00	250.00
Residential Driveway, with curb and/or walk	25.00	200.00	500.00
Commercial Driveway w/o curb or walk	50.00	500.00	500.00
Commercial Driveway with curb and/or walk	50.00	1,000	1,000
Utility lateral, half width,	50.00	1,000	1,000
Utility lateral, full width,	100.00	2,000	2,000
Utility, longitudinal, Installation Minimum	2.00 per ft 100.00	20.00 ft 1,000	20.00 ft 1,000
PUBLIC UTILITY COMPANY	50.00	10,000	10,000

B. HOLD HARMLESS AGREEMENT - Applicant shall be required to execute a Hold Harmless Agreement for all work within the Public Way.

C. Any certified contractor working for any public utility company conducting work in the Town of Ludlow shall apply for a Construction Within the Public Way Permit, and is required to post an annual bond in the amount of \$10,000.

D. All permit applications shall be accompanied by a Performance Security and a Guarantee Security as stated in this section.

- E. Performance Securities and Guarantee Securities shall be in the form of a check made out to the Town of Ludlow.
- F. Performance Securities shall be retained for the period of the construction, and shall be returned to the applicant/permittee upon inspection and approval of the construction work by the Town Engineer.
- G. During the course of the guarantee period, if the construction work should require repairs, the applicant/permittee shall be notified of the necessary repairs by the Town Engineer, and shall cause such work to be accomplished within 14 calendar days of receipt of the notification. Should the repairs not be accomplished within the 14 day period, or not accomplished to the satisfaction of the Town Engineer, the Guarantee Security shall be enforced to the extent to complete the work.
- H. Guarantee Securities shall be retained for the period of one year from the completion, inspection and approval of the construction.
- I. PENALTY - PERMIT FEES SHALL BE DOUBLED FOR ANY WORK PERFORMED WITHOUT OR PRIOR TO OBTAINING AN APPROVED PERMIT. A SECOND VIOLATION WILL CARRY A PENALTY OF \$300 AND A THIRD VIOLATION MAY RESULT IN THE BPW PROHIBITING WORK WITHIN THE TOWN OF LUDLOW FOR A PERIOD OF TIME.

## VI. INSPECTIONS

- A. The applicant/contractor shall notify the Department of Public Works of the schedule for inspections for the following times:
  - 1. 24 hours in advance of the work
  - 2. 24 hours in advance of any backfilling; a department inspector must be present during any backfilling operations
  - 3. 24 hours in advance of any pavement installations
- B. It shall be the responsibility of the applicant/contractor to notify the DPW and to arrange for inspections.
- C. Any work done without proper inspections shall be subject to removal and reconstruction.