

**ORDINANCE NO. 2251**

AN ORDINANCE AMENDING THE CODE OF THE  
BOROUGH OF CARLISLE BY PROVIDING SPECIAL  
CONDITIONS RELATING TO STREET OPENINGS AND  
EXCAVATIONS.

IT IS HEREBY ENACTED AND ORDAINED by the Borough Council of the  
Borough of Carlisle, Cumberland County, Pennsylvania, as follows:

SECTION 1: Section 223-26 [Special conditions for subsurface operations] of  
Article IV [Street Openings and Excavations] of Chapter 223 [Streets and Sidewalks] of  
the Code of the Borough of Carlisle is hereby amended in its entirety to provide as  
follows:

§ 223-26. Special conditions for subsurface operations.

A. Drilling, boring, driving or tunneling across improved area.

- (1) When crossing under any improved area, the opening for a utility facility shall be drilled, bored or driven on a horizontal plane at a minimum depth of three feet below the surface of the highway and its swale ditches.
  - (a) The facility may be placed otherwise by tunneling when specified in the permit. When tunneling, after the facility is placed, the hole shall be backfilled with one-to-three-to-six concrete of dry consistency and tamped.
  - (b) Wet boring is prohibited.
- (2) No openings for the purpose of placing utility facilities or other structures under the improved area by drilling, boring, driving or tunneling shall be made closer than three feet to the edge of the roadway unless the permit authorizes a lesser clearance.
- (3) Facilities and other structures crossing under the improved area shall be constructed so as to assure the safety of the traveling public and to preclude the necessity of entering upon the improved area to affect future maintenance or replacement.

B. Trenching across improved area.

- (1) No trenching shall be permitted across the improved area unless authorized by the permit.
- (2) Trenching across the improved area may be authorized by the permit where other methods of installation are not considered feasible by the Borough Engineer because:
  - (a) The subsurface is solid rock.
  - (b) There are other facilities located longitudinally under the improved area and their location precludes methods other than trenching.

(c) Adjacent development in a very congested urban area makes the construction of a tunneling or boring shaft impossible.

(3) When trenching is specified in the permit, the trenching operation shall be performed by one of the following methods:

(a) Utility facility placed in one piece across highway.

[1] Traffic shall be routed over 1/2 of the pavement width. Contractor shall place notification signs for temporary parking restriction needed, if any, at least 24 hours before beginning work. Notification signs shall contain language approved by the Borough Engineer.

[2] The closed half of the pavement shall be opened to the required depth and bridged with steel plates.

[3] Traffic shall be shifted to the bridged half of the pavement.

[4] The remaining half of the pavement shall be opened to the required depth.

[5] The facility shall be placed full width.

[6] The open trench shall be backfilled and restored half-width in accordance with this section (relating to special conditions for subsurface operations).

[7] Traffic shall be shifted to the restored half of the pavement.

[8] The bridging shall be removed and the remaining half of the trench shall be backfilled and restored in accordance with this section (relating to special conditions for subsurface operations).

(b) Utility facility placed in more than one piece across highway.

[1] Traffic shall be routed over 1/2 of the pavement width. Contractor shall place notification signs for temporary parking restriction needed, if any, at least 24 hours before beginning work. Notification signs shall contain language approved by the Borough Engineer.

[2] The closed half of the pavement shall be opened to the required depth, the facility placed and the trench backfilled and restored in accordance with this section (relating to special conditions for subsurface operations).

[3] Traffic shall be shifted to the restored half of the pavement.

[4] The remaining half of the pavement shall be opened to the required depth, the facility placed and the trench backfilled and restored in accordance with this section (relating to special conditions for subsurface operations).

C. Trench openings parallel to highway.

- (1) Trench openings for utility facilities and other structures shall be made so that the near edge of the opening is at least three feet outside the edge of the roadway, unless the permit authorizes a lesser clearance, with a minimum depth of three feet from the surface to the top of the facility.
- (2) On an unpaved highway, the near edge of the trench opening shall be at least 12 feet from the general center line of the traveled highway or as authorized in Subsection C(1) above. The center line shall be determined by the Borough Office.
- (3) No trench opening shall be made for a distance of more than 200 feet at any one time unless authorized by the permit. In addition, no more than 40 feet of trench shall be left open on the shoulder of a highway at the end of any workday unless authorized by the permit.

D. Except for emergency repairs of utility facilities, work shall not take place during peak traffic hours. Steel plates or bridging shall be placed over all openings made within the improved area which are less than six feet in either length or width when work is stopped. The plates or bridging shall be extended a minimum of 18 inches from each edge of the opening and shall be secured in a safe manner.

E. Plowing Operations

- (1) No plowing shall be permitted within the right-of-way unless authorized by the permit.
- (2) Plowing operations will be authorized only in unpaved shoulders.
- (3) Plowing operations are not allowed from November through March, inclusive, unless authorized by the permit.
- (4) No plowing shall be permitted within three feet from the edge of the roadway. A greater distance shall be attained wherever possible.
- (5) The opening shall be a minimum depth of three feet. If this depth cannot be consistently maintained, the proper depth shall be achieved by trenching.
- (6) The utility facility shall be installed under any structures that are less than three feet deep. All disturbed structures shall be repaired or replaced by the permittee.

- (7) The disturbed area shall be restored in conjunction with the plowing operation. If heaving occurs, the disturbed area shall be reshaped, backfilled with No. 2 RC and compacted until the disturbed area is restored to a condition equal to that which existed before plowing.

F. Disposition of materials.

- (1) The permittee shall keep the improved area free of all material which may be deposited by vehicles traveling upon or entering onto the roadway during the performance of work authorized by the permit.
- (2) The permittee shall be responsible for controlling dust conditions created by its own operations.
- (3) All excess material and material that is not suitable for backfill shall be promptly removed from the public right-of-way and disposed of properly as the work progresses.
- (4) All retained material to be stockpiled for pending placement shall be stored in a location and manner which will not interfere with traffic or cause deleterious effects to stormwater flow or quality.

G. Backfilling. All openings made in the improved area shall be backfilled by the permittee in accordance with the following minimum standards:

- (1) Approved bedding material may be placed around and over the utility facility at a height not to exceed eight (8) inches above the top of the facility and compacted in not more than four-inch layers.
- (2) The opening shall then be backfilled with 2A or 2RC aggregate compacted throughout its full width with approved vibratory compaction equipment in layers not to exceed eight inches.
- (3) Compaction shall be completed to the bottom elevation of the existing pavement.
- (4) The Borough may require the permittee to have material used for backfill tested for conformance to PennDOT Form 408.
- (5) The Borough reserves the right to require placement of approved flowable fill material instead of 2A or 2RC backfill material if deemed appropriate and essential to the best interests of the Borough. Also, as an alternative to temporary restoration requirements, the contractor may request permission to use flowable fill and to perform permanent restoration without waiting 90 or more days. [When required or permitted, flowable fill shall be placed at a depth no greater than 8 inches above the utility facility and shall extend to a height equal to the bottom of the adjoining pavement or 6.5 inches below the finished street grade, whichever is lower.]

H. Restoration of flexible base pavements.

- (1) Temporary Restoration. Following placement and full compaction of the 2A or 2RC aggregate, and prior to opening the roadway to traffic, the trench must be filled with approved roadway material to an elevation which is level with the adjoining roadway. The surface of the trench must be on a consistent plane, and must not contain dips,

humps or other irregularities. This material must be kept in place for a minimum of 90 days and must be replaced with approved permanent restoration material within 180 days. The trench must provide a smooth riding surface at all times. The contractor shall bear full responsibility and liability for harm to persons or property caused by incidents related to the condition of the trench, and will be required to immediately improve unacceptable conditions within twenty four hours after receiving notice by Carlisle Borough. If the contractor fails to perform remedial work as directed, the Borough may restore the trench and bill the contractor for cost incurred plus a 15 % administrative fee. Approved materials for temporary restoration will include 2A or 2RC aggregate base placed and compacted to within 3 inches of the surface and at least three (3) inches of hot mix, warm mix, or cold-patch bituminous road material

- (2) Permanent Restoration. Within a time frame of 90 days to 180 days after placement of the backfill material, the contractor must restore the trench in the following manner:
  - (a) Saw-cut the existing roadway in a neat straight line at least 12 inches beyond each edge of the trench to a depth equal to the existing pavement.
  - (b) Remove and dispose of all material within the saw cuts to a depth of 6.5 inches or to the depth of the adjacent pavement, whichever is greater.
  - (c) Compact sub-grade, then place and compact a minimum of 5 inches of Hot Mix Asphalt (HMA) or Warm Mix Asphalt (WMA) superpave asphalt base 25 mm mix or approved ID-2 base substitute.
  - (d) Place and compact a minimum of 1.5 inches of HMA or WMA superpave asphalt wearing course 9.5 mm or 12.5 mm mix, or approved ID-2 wearing substitute
  - (e) Hot seal all edges at 6 inch width with approved sealant material
  - (f) Paint the month and year of restoration in accordance with utility color-coding at least six inches in height.
  - (g) Restore all pavement markings destroyed by the street opening.
- (3) Alternate Permanent Restoration when flowable fill is placed in lieu of 2A or 2RC aggregate backfill. After flowable fill has cured to acceptable strength, the contractor may proceed with the following permanent restoration steps:
  - (a). Saw cut adjoining roadway in a neat straight line at least 12 inches beyond each edge of trench to a depth equal to the existing pavement
  - (b) Remove and dispose of material between edges of trench and the sawcuts to a depth of 6.5 inches or to the depth of the adjacent pavement, whichever is greater.
  - (c) Compact subgrade adjacent to flowable fill, then place and compact a minimum of 5 inches of HMA or WMA superpave asphalt 25 mm mix or approved ID-2 substitute base material.

- (d) Place and compact a minimum of 1.5 inches of HMA or WMA superpave asphalt wearing course, 9.5 mm or 12.5 mm mix, or approved ID-2 wearing substitute.
  - (e) Hot seal all edges at 6 inch width with approved sealant material.
  - (f) Paint the month and year of restoration in accordance with utility color-coding at least six inches in height.
  - (g) Restore all pavement markings destroyed by the street opening.
- I. Restoration of plain or reinforced cement concrete pavements. Prior to replacement of the base, one foot from each edge of the trench shall be sawed or cut, in a neat straight line, to a depth of at least four inches, and the detached material shall be removed. Drilling shall not be permitted where sawing or cutting-is required.
- (1) The replacement base shall consist of certified high early strength concrete equal in depth to the original concrete pavement.
  - (2) On existing reinforced cement concrete pavements, reinforcing steel and expansion tie bolts shall be placed in accordance with PennDOT Roadway Construction Standard RC-26.
  - (3) The surface shall be restored as follows:
    - (a) The surface shall be cured in accordance with Section 501.3(n), Form 408. After surface corrections have been completed and just before the concrete becomes nonplastic, the surface shall be given a textured finish in accordance with Section 501.3(m)4, Form 408.
    - (b) Surface restoration of a cement concrete pavement which has a bituminous surface shall be done in accordance with Subsection H (1) of this section.
- J. Shoulder and parking lane restoration. All provisions for subsurface restoration on travel lanes shall apply to subsurface restoration in shoulders or parking lanes of Borough streets.
- K. Additional Restoration Requirements. When deemed integral to the long-term road maintenance objectives of the Borough, additional surface restoration shall be required between multiple cuts and/or adjacent to utility cuts in order to restore the road surface within the limits of work to a contiguous and smooth condition. Expanded surface restoration requirements will be in addition to all other applicable requirements for subsurface operations and shall not be cause for waiver of any such applicable requirements. In most cases, the additional surface restoration will consist of removing the existing wearing surface by milling or other approved method, and repaving approved wearing course at a depth of 1.5 inches. The Borough Engineer may increase the requirements if perceived as necessary. Conditions which will require additional restoration requirements include but are not limited to:
- (1) Cuts within 4 feet of each other.
    - a.) Wearing surface restoration of cuts within 4 feet of each other shall be combined into a single surface restoration area.
  - (2) Cuts within 3 feet of a curblines, whether or not curb is present.
    - a.) Wearing surface restoration shall extend to the curblines.

- (3) Multiple cuts which have a width equal to or greater than 50 percent of a travel lane, parking lane or shoulder. [Parking lanes shall be considered to be 8 feet wide]
  - a.) Surface restoration shall be extended to cover full width of travel lane, parking lane and shoulder.
- (4) Four or more utility cuts within 100 linear feet.
  - a.) Wearing surface restoration shall be combined into a single surface restoration area for the entire length of travel lane that was opened.
- (5) Any portion of a road segment which contains multiple cuts that provide a total longitudinal opening (TLO) to overall length (OL) ratio of 0.35 or greater. Required 12 inch cutbacks must be included in the ratio calculation.
  - a.) Mill and pave areas between the cuts to create a contiguous wearing surface restoration area which traverses the entire length of the applicable segment. Widen restoration to include the entire travel lane. [For example, a 75 feet long section of a 10 feet wide travel lane contains (3) cuts which are 7 feet long by 5 feet wide.  $TLO: OL = (3 \times 7) + (6) \text{ cutbacks @ } 1 \text{ feet each}$  equals  $27 / 75 = 0.36$ . Therefore, the surface restoration must be combined into one contiguous area 75 feet long, and must be widened to 10 feet since the width exceeds 50 percent of the travel lane width.]
- (6) Eight ( 8 ) or more utility cuts in the same lane within the same qualifying road segment regardless of the TLO: OL ratio. Qualifying segments will be defined by the Borough Engineer. Segments may typically, but not necessarily exclusively, consist of roadway “blocks”.
  - a.) Mill and pave areas between the cuts to create a contiguous wearing surface restoration area which traverses the entire length of the applicable segment. Widen restoration to include the entire travel lane.
- (7) Any cut on a street which was paved within the past (2) years.
  - a.) Flowable fill will be required in lieu of 2A or 2RC backfill material.

L. Modified Restoration Requirements in Advance of Roadwork

- may
- Borough road
- (1) The Borough Engineer may waive additional roadway restoration requirements or modify standard restoration requirements in cases where extensive utility upgrade work is being conducted in advance of and in conjunction with scheduled maintenance activities.
  - (2) Approved flowable fill material will be required when work is performed less than 90 days before scheduled Borough paving.

M. Appurtenances to underground Installations.

- (1) The top of every manhole, valve box or other access to the facility shall be at the same elevation as the surface in which it is located.

(2) The surface surrounding manhole or valve covers located in shoulders shall be paved in such a manner as to prevent washouts.

SECTION 2: In all other respects, Chapter 223 of the Code of the Borough of Carlisle shall remain as heretofore enacted, ordained and amended, which said Chapter, as amended, is hereby re-enacted in its entirety herein.

SECTION 3: All ordinances or parts of ordinances inconsistent herewith are hereby repealed.

SECTION 4: This Ordinance shall become effective immediately.

ENACTED AND ORDAINED this 11th day of August, 2016.

ATTEST:

Borough of Carlisle

Signature on file in Borough Manager's Office

Joyce E. Stone, Secretary

By: Signature on file in Borough Manager's Office

Timothy A. Scott, Mayor

(Borough Seal)