

## **Division 21: Pavement Patching**

- 21.01 SCOPE:** The Contractor shall furnish all labor, materials, equipment and supplies, and shall perform all work necessary for the replacement of paved surfaces as shown on the plans and specified herein. This work shall be in accordance with the VDOT Road and Bridge Specifications unless otherwise provided in the following division.
- 21.02 MATERIALS:** Materials for pavement patching shall be furnished by the Contractor in accordance with Divisions 4 thru 9 of these specifications.
- 21.03 EXECUTION:**
- A. General:
1. Paved surfaces necessary to be removed or disturbed in order to perform the installation of water, sewer and storm pipelines and private utilities shall be restored in accordance with the requirements specified herein or shown on the plans.
  2. Compaction of the subgrade and placement of pavement shall be performed in a manner as to prevent settlement of restored surfaces. Irregularities which develop in the restored pavement section as a result of improper placement or compaction shall be corrected by the Contractor at no additional expense to the City.
  3. Any pavement undermined or otherwise disturbed shall be edged with a method acceptable to the Engineer or sawed as straight as possible and removed so the patched pavement will be restored to a uniform surface conforming to the grade and section existing prior to commencement of work without ragged edges, spalls, or loose material. A backhoe cut will be acceptable if the entire roadway is to receive an overlay. If there has been settlement of the edge of the pavement at the cut, the settled portion shall not be corrected by an overlap. The edges of the existing pavement are to be tacked as per Division 8 before new asphalt is placed.
  4. When in the opinion of the Engineer the work is detrimental to the comfort and safety of the citizens and the Contractor fails to provide an immediate correction, the City will order that the necessary repairs be made at the expense of the Contractor.
  5. Construction methods shall conform to the requirements listed herein and Divisions 4 thru 9 of these Specifications.
- B. Procedural:
1. All excavated paved areas shall be backfilled with select material Type II and asphalt concrete surface or cold-mix shall be placed and compacted prior to opening to vehicular traffic and prior to completion of work on any day unless otherwise approved by the Engineer.
  2. The base and subbase materials shall be placed as per City Standard PC-1 in the Public Facilities Manual Volume II and must provide a smooth and uniform surface. Thickness of the base course shall be at the Contractor's option unless shown otherwise on the construction plans. In no case will the minimum base and subbase depth be less than that in the aforementioned standard for the applicable ADT.
  3. A temporary surface course may consist of asphalt concrete cold-mix if a asphalt concrete surface is unavailable due to temperature or if directed by the Engineer due to high traffic volumes. This thickness shall be at the Contractor's option unless shown otherwise on the construction plans and in no case shall the thickness of the temporary surface course be less than that resulting from the application of a "double surface treatment: consisting of CRS-2 or RC-250 at 0.30 gal/sy and No. 68 stone at 35 lbs/sy. All excavated areas shall be backfilled with base stone and asphalt concrete prior to opening the roadway to traffic. Generally all

roadway areas shall be opened to traffic at the end of the work day unless otherwise directed by the Engineer.

4. In order to minimize the duration and frequency of disruption to streets and pavements, the Contractor shall conduct his operations such that installation of laterals and services shall closely follow installation of mains; the intent of this requirement shall be to insure that disruption of the pavement and traffic on any given street or area shall as far as possible, be limited to "one event", i.e., disruption for installation of mains followed by a time delay and subsequent disruption for installation of laterals will not be tolerated or permitted. Installation of the temporary surface course over mains and laterals shall proceed orderly behind the installation and backfill of the improvements.
5. The Contractor shall diligently and continuously maintain the base course prior to placement of the temporary surface course and the temporary surface course prior to the placement of the permanent surface course by grading, adding materials, removing and replacing components, or any other measures necessary to provide a smooth and passable surface free from pot holes, depressions, and irregularities.
6. Installation of the permanent surface course (thickness and type as stipulated in Division 9), or shown on the construction plans unless specifically otherwise authorized by the Engineer, shall commence no later than 60 calendar days after initial cut has been made on any street or at such time as 50% of the pipeline has been installed, whichever is sooner; installation of the permanent surface course shall proceed at a rate of progress at least equal to the pipeline installation.

- C. Flexible Pavement: Aggregate base, tack coat, surface and base asphalt concrete materials and method of installation shall be in accordance with Division 4 and 6 thru 9 of these Specifications.
- D. Concrete Pavement: The materials and method of construction of concrete pavement shall be in accordance with Section 316 of the VDOT Road and Bridge Specifications. The required pavement section must be in accordance with the section as per the construction plans.
- E. Surface Tolerance: Riding quality of the finished surface is very important. The completed pavement will be checked longitudinally and transversely for smoothness with a (10') ten foot straight edge. Surface tolerance will not vary more than 1/8" in 10' parallel to the centerline and not more than 1/4" in 10' at right angles to the centerline.  
  
All humps and/or depressions exceeding this specified tolerance shall be corrected or the defective work removed and replaced with new material at no additional cost to the City.
- F. Gravel Driveways: Shall be in accordance with the requirements for Aggregate Base Course, VDOT, No. 25 or 26 and at the depth shown on the construction plans or specified in these contract documents.
- G. The pavement patch section will be in accordance with that shown on the plans. If none is provided it shall be in accordance with the standard PC-1, Volume II of the Public Facilities Manual at the ADT specified by the Engineer.

**21.04 MEASUREMENT AND PAYMENT:** The patched or restored pavement is to be measured along the centerline of the pipe and manholes and the lengths so determined will be paid for at the unit price per lineal foot specified for pavement patching in the Unit Price Table. Measurement and payment for pavement patching shall be made only at locations where the centerline of the pipe lies within a paved surface. Where the pipe centerline lies outside the paved surface no measurement or payment shall be made for pavement patching. The width of the patching or restoration will not be measured. It shall be the responsibility of the Contractor to minimize the width disturbed or removed. Measurements for pavement patching shall not include curb and gutters. Curbs and gutters shall be restored under the provisions of Division 22. Payment for pavement patching shall include payment in full for all labor, materials, and equipment necessary to furnish, install, and maintain the base course, temporary surface course, and permanent surface course. Gravel driveways will be measured and paid for at the location and depth shown on the construction plans and/or as directed in the field by the Engineer at the unit price per square yard specified in the Unit Price Table.

