

**SECTION 32 13 13.02**  
**CONCRETE (Trench Paving and Restoration)**

**PART 1 GENERAL****1.1 DESCRIPTION**

- A. The work of this section includes, but is not limited to:
1. Temporary trench paving
  2. Permanent trench paving
  3. Shoulder restoration
  4. Driveway restoration
  5. Concrete restoration
- B. Related Work Specified Elsewhere:
1. Earth Moving (Roadway Excavation, Fill and Compaction): Section 31 20 00.01
  2. Earth Moving (Trenching, Backfilling, and Compacting): Section 31 20 00.02
  3. Asphalt Paving (Bituminous Paving and Surfacing): Section 32 12 16
  4. Concrete (Plain and Reinforced Cement Concrete): Section 32 13 13.01
- C. Definitions: NONE
- D. Applicable Standard Details:
- As shown on the Contract Drawings and in accordance with Publication 408 Specifications.

**1.2 QUALITY ASSURANCE**

- A. Reference Standards:
1. Pennsylvania Department of Transportation (PennDOT), latest revision:  
Publication 408, Specifications  
Publication 213, Temporary Traffic Control Guidelines  
Publication 27, Specification for Bituminous Mixtures (Bulletin 27)  
Publication 37, Specification for Bituminous Materials (Bulletin 25)
  2. American Society for Testing and Materials (ASTM):  
D2950 Test Method for Density of Bituminous Concrete in Place by Nuclear Method
  3. Pennsylvania Code  
Title 67 Transportation, Chapter 459, Occupancy of Highways by Utilities
- B. Inspections:
1. Inspection by the ENGINEER will, at a minimum, be made of the subgrade prior to placement of the base course, and of the base course prior to placement of the binder surface.

**1.3 SUBMITTALS**

- A. Certificates:
1. Submit certification from bituminous and aggregate suppliers attesting that materials conform to Publication 408, Specifications.
  2. Submit bituminous concrete mix design for approval.
  3. Provide PennDOT certifications (CS-4171 with each load delivered to the job site, as required by ENGINEER).

**1.4 JOB CONDITIONS**

- A. The Control of Traffic:
  - 1. Take measures to control traffic during paving operations. Do not allow traffic on newly paved areas until adequate stability and adhesion have been attained and the material has cooled to 140° F or less.
  - 2. Employ traffic control measures in accordance with Publication 213, Temporary Traffic Control Guidelines.
- B. Protection of Adjacent Areas:
  - 1. Restore existing surface outside the limits of the work that has been damaged by the CONTRACTOR's operations, to its original condition at the expense of CONTRACTOR.

**PART 2 PRODUCTS****2.1 CONCRETE**

- A. As specified in Section 32 13 13.01.
- B. Use air-entrained, PennDOT Class HES (High Early Strength).

**2.2 BITUMINOUS MATERIALS AND AGGREGATES**

- A. All bituminous materials and aggregates used in base course construction, paving, and resurfacing are designated in these specifications by, and shall conform to, the applicable portions of the Publication 408 Specifications.

**PART 3 EXECUTION****3.1 TEMPORARY TRENCH PAVING**

- A. Place temporary paving immediately upon completion of trench backfilling. Trenches shall not remain unpaved longer than five working days; nor over weekends and holidays; unless construction activities are restricted by PennDOT to restore after backfill.
- B. Shape and compact subgrade material, then place and compact base course to the required thickness. Apply tack coat to vertical trench sides, in accordance with Publication 408, Section 460.
- C. Place temporary paving material. Compact to required minimum thickness with trench roller having a minimum 300 pounds pressure per inch-width of compaction. Restore temporary trench paving in accordance with the Contract Drawings and in accordance with Publication 408 Specifications.
- D. Continuously maintain temporary paving.

**3.2 PERMANENT TRENCH PAVING**

- A. For Bituminous Surface (Trench), saw existing paving in accordance with PA Code 67, Chapter 459. This restoration shall be used when the final surface must be established immediately.
- B. For Bituminous Surface (Trench) Local, the trench restoration shall be for all trenched within the roadway surfaces on roads that are classified as local roadways. The pavement restoration design parameters shall be determined in the Contract Drawings and in accordance with Publication 408 Specifications.
- C. For Bituminous Surface (Trench) Collector or Arterial, trim existing paving to remove damaged areas. Cut straight joint lines and right angle offsets. This restoration shall be used for any trench restoration on a road surface where the road is classified as a collector or an arterial. The pavement restoration design parameters shall be determined in the Contract Drawings and in accordance with Publication 408 Specifications.

- D. For concrete (trench), trench restoration for all trenched areas within the roadway surfaces that are concrete. Design parameters shall be determined in the Contract Drawings and in accordance with Publication 408 Specifications.
- E. Construct permanent base and surface courses to the required compacted thicknesses shown in the Contract Drawings and in accordance with Publication 408 Specifications. Seal all joints.
- F. Maintain permanent paving throughout the contract maintenance period.

**3.3 BITUMINOUS OVERLAY**

- A. See Section 32 12 16.
- B. As shown on the Contract Drawings and in accordance with Publication 408 Specifications.

**END OF SECTION**