

SECTION 1165 - PAVEMENT REPLACEMENT

PART 1 - GENERAL

1.1 SCOPE OF WORK:

Provide all labor, materials, equipment and services required for pavement replacement shown in the typical details and/or specified herein.

1.2 RELATED WORK SPECIFIED ELSEWHERE:

- A. Trench Excavation: Section 2550
- B. Bedding and Backfill: Section 2560

PART 2 - PRODUCTS

2.1 ASPHALTIC CONCRETE HIGHWAY AND STREET REPLACEMENT:

The CONTRACTOR shall replace those sections of existing roads and streets required to be removed to install the pipe lines under this Contract. He shall construct same to the original lines and grades and in such manner as to leave all such surfaces in as good or better condition than that which existed prior to the operations.

- A. Removal of Existing Pavement - The pavement to be removed shall be marked with straight lines to a width beyond the damaged area on each side of the trench, and cut on neat lines by saw cutting or by a sharp air driven flat spade, and carefully removed to avoid damage to the remainder of the pavement. The pavement base shall then be loosened by air hammer, spade or point to break the bond with adjacent base.
- B. Backfilling - After the pipe bedding has been carefully tamped in place around and to eight inches (8") above the top of the pipe with crushed stone or gravel, the remainder of the trench shall be backfilled with Low Strength Mortar material approved by the County Engineer's Office to ten inches (10") below the surface of the pavement. The remainder shall then be temporarily finished using crushed road material (ODOT Item 304) topped with two inches (2") of ODOT Item 448 Asphaltic Concrete and maintained under traffic until the pavement surface is finally restored. If ODOT Item 448 material is unavailable due to cold weather, the CONTRACTOR may temporarily install 2" of Item 405, Bituminous Cold Mix, in place of the 448 asphalt until the permanent pavement restoration is completed, with the approval of the Butler County Engineer. Temporary restoration shall be paid for under the bid item for Temporary Pavement.
- C. Backfilling outside pavement - Trench backfill not under pavement, but within five feet (5') of the edge of pavement, shall consist of full-depth compacted granular material meeting the requirements of Section 1180 of these specifications. However, the top six inches (6") shall consist of topsoil that shall be seeded and mulched.
- D. Restoration of Surface - The surface shall be replaced with pavement consisting of two inches (2") of Item 448 Asphalt Concrete over an eight inch (8") bituminous aggregate base, Item 301 (placed in two 4" layers), in accordance with the State of Ohio, Department of Transportation, Construction and Material Specifications. Any damaged edges shall be again saw-cut prior to placing asphalt. All edges shall be properly sealed with hot poured bitumen in accordance with ODOT Section 401.12. ODOT Item 407 tack coat shall be applied at a rate of 0.05 gallons per square yard.
- E. Notification - The County Engineer's Office must be notified and an inspector present for pavement restoration to be acceptable. When opening pavement at least one lane of traffic must be maintained at all times unless otherwise stated in the General notes on the plans. No road shall be closed to traffic without written permission from the County Engineer. Where necessary, traffic control devices as outlined by the Manual of Traffic Control shall be used.

2.2 BITUMINOUS CONCRETE (BLACKTOP) DRIVEWAY REPLACEMENT:

For the restoration of blacktop driveways the same procedure shall be followed as set forth in Paragraph 2.1A above. Saw cut shall be 6" beyond the trench walls. Backfill shall be compacted granular material according to Section 1180 of these specifications, and the surface restoration shall be of like material and thickness as existing blacktop (minimum of 2" ODOT Item 448).

2.3 GRAVEL DRIVEWAY REPLACEMENT:

For the restoration of gravel driveways, backfill shall be compacted granular material according to Section 1180 of these specifications, with the surface course being at least equal to that of the existing drive, with a minimum of 6" of crushed road material ODOT Item 304.

2.4 PORTLAND CEMENT CONCRETE DRIVEWAY REPLACEMENT:

- A. Where trench must pass through existing Portland Cement Concrete driveways, they shall be marked for removal to a width of at least six inches (6") in excess of the normal width of a trench and saw cut with an abrasive saw to a depth of not less than one and one-half inches (1 1/2"). The pavement shall then be broken up by air hammer and points (pavement breaker will be permitted if the CONTRACTOR can demonstrate that the use of same will not damage the portion of pavement to remain) and removed in a manner that will not damage the remaining pavement. Excavation shall then proceed as the CONTRACTOR deems most expedient.
- B. After the pipe is installed and bedding tamped around it as required, the remainder of the trench shall be filled to the surface with granular backfill according to Section 1180 of these specifications and maintained for traffic until the concrete pavement is restored. Concrete shall again be cut back and removed beyond any undermining that occurred during excavation, as necessary. Where mesh has been placed in the original pavement, a suitable mesh shall be placed in the restored pavement.
- C. Concrete for Driveway Restoration shall meet the requirements for Portland Cement Concrete Pavement of the State of Ohio, Department of Transportation, Construction and Material Specifications (Item T-70) - six and one-half (6 1/2) sacks per cubic yard 4,500 psi (ASTM Class D) concrete. Thickness shall match that of the existing surface (minimum 6").
- D. It shall be properly placed on a leveled and compacted subgrade, placed with minimum slump, and finished as nearly as is possible to match the surface of the existing driveway, covered, protected and cured until traffic can be permitted upon it.
- E. All, concrete shall be cured using Dress & Seal WB, manufactured by L&M Construction Chemicals, Inc. 14351 Calhoun Road Omaha NE 68152 phone (402-453-6600) or Fax (402-453-0244). This water based acrylic cure, sealer and dust proofer shall be applied at a rate of 200 sq ft per gallon.

2.5 DRIVEWAY CULVERT PIPE REMOVAL AND REPLACEMENT:

Where the trench must pass through or by an existing driveway culvert pipe, the CONTRACTOR shall perform the work in accordance with Section 1150.

2.6 LOW STRENGTH MORTAR BACKFILL MATERIAL:

Where indicated in these specifications or shown on the standard details, low strength mortar backfill material shall be used in backfilling trenches under pavement and shall meet the following criteria and ODOT standards:

- A. Cement 701.01 or 701.04
- B. Fly ash shall meet ASTM C-618.

- C. Fine aggregate shall be natural sand or sand manufactured from stone, gravel or air-cooled slag. The gradation of the sand shall meet the requirements of 703.05. The sand shall be fine enough to stay in suspension in the mixture to the extent required for proper flow. The ENGINEER reserves the right to reject the sand if the flowable mixture cannot be produced.
- D. Water used for mortar backfill shall be free from oil, acid, strong alkalies or vegetable matter.
- E. Slumps measured in the ordinary way will be 8" or higher for proper placement of the flowable material.

Mortar Mix Proportioning: The initial trial mixture shall consist of the following quantities of materials per cubic yard:

CLASS LSM - 50

Cement	50 Pounds
Fly Ash	250 Pounds
Sand	2,910 Pounds
Water (Target)	500 Pounds

Adjustments of the proportions may be made by the ENGINEER providing the total absolute volume of the materials is maintained. This item will be included in standard 603 installation; this will not be an additional pay item, but replacement for the normal backfill.

PART 3 - BASIS OF PAYMENT

3.1 ASPHALTIC CONCRETE PAVEMENT RESTORATION:

Pavement replacement for bituminous concrete highway and street will be paid for at the Contract unit price per linear foot of trench paved, measured along the centerline of the trench, which price will include compensation for furnishing and placing low strength mortar backfill under pavement and granular backfill outside pavement, furnishing and laying asphaltic concrete pavement, and replacing all damaged or removed pavement marking in kind. Payment will only be made for the length of trench paved, not including the length of trench outside the pavement that is backfilled with granular backfill. Low strength mortar backfill will only be a separate pay item if indicated separately on the bid forms; in such cases, the cost of furnishing and placing low strength mortar backfill shall be included in the separate pay item and not in the cost of pavement restoration.

3.2 ASPHALTIC CONCRETE DRIVEWAY REPLACEMENT:

Payment for this item shall be made at the price per linear foot stated on the Proposal Form, which price and payment shall cover all backfilling with granular material; maintaining the surface with ODOT Item 304 until paved; and placing the blacktop pavement complete.

3.3 GRAVEL DRIVEWAY REPLACEMENT:

Payment for this item shall be made at the price per linear foot stated on the Proposal Form which price and payment shall cover all backfilling with granular material and surfacing with existing or new drive material, as directed by the ENGINEER.

3.4 PORTLAND CEMENT CONCRETE DRIVEWAY REPLACEMENT:

Payment for replacement of Portland cement concrete driveways shall be made at the Contract unit price per linear foot, complete in place, which price shall include compensation for marking, saw-cutting, pavement removal, backfill, furnishing and placing base course for paving, furnishing, and placing wire mesh reinforced concrete paving.

3.5 DRIVEWAY CULVERT PIPE REMOVAL AND REPLACEMENT:

Removal and replacement of driveway culvert pipe is not a pay item. The cost shall be included in the price for asphaltic concrete, gravel, or portland cement concrete driveway replacement.

3.6 TEMPORARY PAVEMENT:

Payment for Temporary Pavement in roadways shall be made per linear foot (measured along the centerline of the pipe) as actually installed. Said price shall include maintenance of temporary pavement until permanent pavement restoration is complete. No payment will be made for temporary pavement if permanent pavement restoration is completed immediately upon backfilling trench without placing temporary gravel and asphalt.

END OF SECTION