

## **10. PORTLAND CEMENT CONCRETE CURB**

### **A. Description**

This item shall consist of removing existing curb, and constructing a Portland cement concrete curb to match adjacent existing curb to remain, in accordance with these specifications, the details in this Project Manual, and in conformance with the lines, grades, dimensions established by the Engineer, at the locations marked in the field by the Engineer. This item shall include the removal and replacement of existing curb sections, the construction of new curb sections, and the installation of graded aggregate base course, and hot-mix Type 'C' pavement repair at the face of the curb in accordance with the specifications and details in the Project Manual. Restoration of adjacent grassed areas will be considered incidental to this item.

### **B. Materials**

1. Concrete Curb Materials shall conform to the requirements of Section 701, CURB AND INTEGRAL CURB AND GUTTER of the STANDARD SPECIFICATIONS.
2. Hot-mix Bituminous Concrete Pavement Materials shall conform to the requirements of Section 401, HOT MIX HOT LAID BITUMINOUS CONCRETE PAVEMENT of the STANDARD SPECIFICATIONS.
3. Graded Aggregate Base Course shall conform to Section 302, GRADED AGGREGATE BASE COURSE, of the STANDARD SPECIFICATIONS.

### **C. Construction Methods**

1. Construction Methods shall conform to the requirements of Section 701, CURB AND INTEGRAL CURB AND GUTTER, Section 401, HOT MIX HOT LAID BITUMINOUS CONCRETE PAVEMENT, and Section 302, GRADED AGGREGATE BASE COURSE, of the STANDARD SPECIFICATIONS.
2. All work shall comply with all applicable codes, ordinances, and rules and regulations in effect.

### **D. Submissions**

1. Job mix formula
2. Material Slips
3. Provide material slips at the end of each working day

### **E. Method of Measurement**

The length of **PORTLAND CEMENT CONCRETE CURB** to be paid for under this section shall be the linear feet of curb, constructed in accordance with these specifications, measured in place, completed and accepted. No deductions will be made

where the curb is depressed for entrances or handicap ramps.

F. **Basis of Payment**

The length of **PORTLAND CEMENT CONCRETE CURB**, as provided above, shall be paid for at the contract unit price per linear foot of **PORTLAND CEMENT CONCRETE CURB**, which price and payment shall constitute full compensation for saw cutting, excavation and removal of existing concrete curb, repair of adjacent paving, furnishing and placing all materials, including joints, forms, drainage openings, and the disposal of surplus material, and for all labor, equipment, tools, and incidentals necessary to complete the section.

END OF SECTION

## **11. PORTLAND CEMENT CONCRETE APRON**

### **A. Description**

**PORTLAND CEMENT CONCRETE APRON** shall consist of the demolition, removal and disposal off-site of existing concrete apron, and construction, in accordance with the detail in this Project Manual, of 6” Portland Cement Concrete apron, on 6” (compacted thickness) of Graded Aggregate Base Course Type ‘A’ (GABC), at locations marked in the field by the engineer.

This item shall include, but not be limited to the following:

1. Saw cutting and removing existing apron and base where directed by the Engineer.
2. Furnishing and placing 6 inches (compacted thickness) of Graded Aggregate Base Course Type A.
3. Placing new 6” thick welded wire reinforced Portland Cement Concrete Apron, and necessary joint material.

### **B. Materials**

1. Portland Cement Concrete shall conform to STANDARD SPECIFICATIONS Section 812, PORTLAND CEMENT CONCRETE, for Class B Concrete.
2. Expansion Joints shall conform to STANDARD SPECIFICATIONS Section 705.03.
3. Graded Aggregate Base Course shall conform to Section 302, GRADED AGGREGATE BASE COURSE, of the STANDARD SPECIFICATIONS.
4. Welded wire fabric reinforcement shall be wire mesh fabric weighing 54 lbs/100 square feet consisting of #2 wire on 6” centers and #4 wire on 12” centers.

### **C. Construction Methods**

1. **PORTLAND CEMENT CONCRETE APRON** shall be constructed in accordance with the requirements of Section 705, PORTLAND CEMENT CONCRETE SIDEWALK, of the STANDARD SPECIFICATIONS, and in accordance with the Project Manual.
2. Graded Aggregate Base Course shall be constructed in accordance with Section 302, GRADED AGGREGATE BASE COURSE, of the STANDARD SPECIFICATIONS.
3. Care shall be exercised by the Contractor in removal of concrete to be replaced, to insure that no damage occurs to any items to remain. Any damage to such items shall be replaced or repaired by the Contractor at no additional cost to the Owner.
4. Concrete shall be broken up with an approved power-breaking machine. All concrete and materials removed shall be taken off the project site and disposed in a lawful manner.

**D. Submissions**

1. Job Mix Formula
2. Delivery Slips
3. Provide copies of delivery slips at the end of each working day.

**E. Method of Measurement**

**PORTLAND CEMENT CONCRETE APRON** shall be measured as the number of square feet of concrete apron installed, in place, and accepted. No separate measurement or payment will be made for furnishing and placing graded aggregate base course, nor for removing and disposing of existing pavement.

**F. Basis of Payment**

The square footage of **PORTLAND CEMENT CONCRETE APRON** measured as provided above, will be paid for at the contract unit price per square foot bid for this item, which price and payment shall constitute full compensation for all tasks, labor, equipment, tools, and incidentals necessary to complete the item.

END OF SECTION

**12. CLEAN CATCH BASIN/TRENCH DRAIN**

**A. Description**

**CLEAN CATCH BASIN/TRENCH DRAIN** shall consist of removing the grates from existing catch basins and/or trench drains (less than three (3) feet in depth), cleaning the accumulated debris out of the drainage structures, disposing of the debris in a legal manner, and re-installation of the existing grates, at various locations around the District, as determined by the Engineer.

**B. Materials**

1. None

**C. Construction Methods**

1. Contractor is cautioned to use care in removing and replacing existing drainage structure grates. Any grates damaged by the contractor will be replaced in kind at no additional cost to the Owner.
2. Material removed from drainage structures shall become property of the Contractor and shall be disposed of in a legal manner.

**D. Submissions**

1. None

**E. Method of Measurement**

**CLEAN CATCH BASIN/TRENCH DRAIN** shall be measured as the number catch basins and/or trench drains cleaned.

**F. Basis of Payment**

**CLEAN CATCH BASIN/TRENCH DRAIN** will be paid at the unit price bid for **CLEAN CATCH BASIN/TRENCH DRAIN**, which price and payment shall be compensation for removing and replacing the existing grates, and removal and disposal of material from the catch basin and/or trench drain.

END OF SECTION

### **13. FULL DEPTH PAVING RECONSTRUCTION**

#### **A. Description**

This item shall consist of removing, by milling or excavation, existing bituminous paving and base course to a depth of one foot, placing 8 inches of compacted graded aggregate base course, 2 inches of Type B Hot Mix, tack coat, and 2 inches of Type C Hot Mix paving, and joint sealant at the Wyoming Road Transportation Yard. All excavated material shall become property of the contractor, and shall be disposed of in a legal fashion. Recreation of existing striping, and tying in new pavement to pavement to remain in accordance with the detail on sheet 14 will be considered incidental to this item. See Item 14, PAVEMENT MARKING for additional information.

#### **B. Materials**

1. Hot-Mix Bituminous Concrete Pavement shall conform to Section 401, HOT MIX HOT LAID BITUMINOUS CONCRETE PAVEMENT, of the STANDARD SPECIFICATIONS.
2. Graded Aggregate Base Course shall conform to Section 302, GRADED AGGREGATE BASE COURSE, of the STANDARD SPECIFICATIONS.
3. Joint sealant shall be a blend of asphalt cement and a mixture of crumb rubber, in accordance with section 807 of the STANDARD SPECIFICATIONS.
4. Pavement markings shall be in accordance with section 748 of the STANDARD SPECIFICATIONS.
5. Tack Coat shall be CSS-1-h asphalt (diluted with 50% water) conforming to AASHTO M 208.

#### **C. Construction Methods**

1. Construction methods, including bituminous concrete plant and equipment requirements, bituminous concrete pavers, vehicles, and rollers shall conform to "DelDOT Specifications" Section 401.

#### **D. Submissions**

1. Job Mix Formula
2. Material Slips
3. Provide Material Slips at the end of each working day

#### **E. Method of Measurement**

The quantity of **FULL DEPTH PAVING RECONSTRUCTION** to be paid shall be the actual square yards of **FULL DEPTH PAVING RECONSTRUCTION**, constructed in accordance with these specifications, complete and accepted, as measured in place by the

Engineer.

**F. Basis of Payment**

The square yardage of **FULL DEPTH PAVING RECONSTRUCTION** shall be paid at the contract unit price bid for **FULL DEPTH PAVING RECONSTRUCTION**, which price and payment shall constitute full compensation for saw cutting, excavation, and removal of existing pavement and sub base, installation of new graded aggregate base course, Type B Hot Mix, tack coat, Type C Hot Mix, recreation of existing pavement markings, and tying in new pavement in accordance with the detail in the Project Manual.

END OF SECTION

**14. RESTORATION (INCIDENTAL ITEM)**

**A. Description**

This work shall consist of the placement of topsoil, seed, and mulch for all lawn areas disturbed as a result of construction.

**B. Materials**

1. Topsoil shall conform to Section 732, TOPSOIL, of the STANDARD SPECIFICATIONS.
2. Seed shall conform to Section 734, SEEDING, of the STANDARD SPECIFICATIONS.
3. Mulching shall conform to Section 735, MULCHING, of the STANDARD SPECIFICATIONS.

**C. Construction Methods**

1. Installation of the topsoil shall conform with the requirements of Sections 732 and 733 of the STANDARD SPECIFICATIONS. Topsoil shall be applied at a minimum depth of 4”.
2. Installation of the seed shall conform to the requirements of Section 734, SEEDING, of the STANDARD SPECIFICATIONS. Seeding to be a dry ground permanent seed mixture, such as a hard fescue blend.
3. Installation of the mulch shall conform to the requirements of Section 735, MULCHING, of the STANDARD SPECIFICATIONS.
4. All work shall comply with all applicable codes, ordinances, and rules and regulations in effect.

**D. Submissions**

None required.

**E. Method of Measurement**

No separate measurement will be made for restoration. The restoration of areas disturbed by construction shall be considered incidental and will not be paid separately.

**F. Basis of Payment**

No separate payment will be made for restoration. The restoration of areas disturbed by construction shall be considered incidental and will not be paid separately.

END OF SECTION

**15. PAVEMENT MARKING (INCIDENTAL ITEM)**

**A. Description**

This work shall consist of recreating all existing Pavement Markings, using paint, on asphalt surfaces to be patched. The contractor is responsible for documenting existing pavement striping, and for preparing, and submitting to the Engineer, a drawing of existing pavement striping before any work is performed.

**B. Materials**

1. Pavement Marking material shall be in accordance with Section 748, PAVEMENT MARKINGS, of the STANDARD SPECIFICATIONS, for Painted Markings.

**C. Construction Methods**

1. All equipment shall conform to the requirements of Section 748, PAVEMENT MARKINGS, of the STANDARD SPECIFICATIONS.
2. Application shall conform to the requirements of Section 748, PAVEMENT MARKINGS, of the STANDARD SPECIFICATIONS.
3. Parking space striping, which is disturbed, on asphalt surfaces to be patched or milled and resurfaced, shall be re-striped with 4" wide white lines, handicap parking spaces shall be re-striped with 4" wide blue lines, and where handicap symbols are disturbed as a result of hot-mix patching or milling and resurfacing, they shall have handicap symbols re-applied in the spaces.
4. Any markings which exhibit bleeding of the underlying fresh bituminous hot-mix, or which do not meet the specified application rate, must receive additional applications, at no additional cost to the Owner.
5. All work shall comply with all applicable codes, ordinances, and rules and regulations in effect.

**D. Submissions**

None required.

**E. Method of Measurement**

No separate measurement will be made for pavement markings. The recreation of pavement markings shall be considered incidental and will not be paid separately.

**F. Basis of Payment**

No separate payment will be made for pavement marking. The recreation of pavement markings shall be considered incidental, and will not be paid separately.

END OF SECTION













