**SPECIAL NOTE FOR CONCRETE PATCHING REPAIR**

1. **DESCRIPTION.**

Perform all work in accordance with the Department's Standard Specifications and applicable Supplemental Specifications (current editions), this note and the attached detailed drawings. Section references are to the Standard Specifications. This work consists of: (1) Furnish all labor, materials, tools, and equipment, (2) Remove existing spalled/delaminated concrete, (3) Prepare the existing surface for concrete patching, (4) Apply concrete patching as specified by this note and as shown on the attached detail drawings, (6) Finish and cure the new Concrete Patches, (7) Any other work specified as part of this contract. See attachment detailed drawing “Layout Sheet”for locations.

**2. MATERIALS**.

 **A. Concrete.** **“M” Concrete.** Use either “M1” or “M2”. See Section 601.

 **B Steel Reinforcement.** Use Grade 60. See Section 602.

 **C. Epoxy Bond Coat.** See Section 511.

 D. Welded Steel Wire Fabric (WWF). Conform to Section 811.

1. **Hook Fasteners.** Use commercial grade galvanized hook fasteners. Minimum 3/16” diameter.

**3. CONSTRUCTION.**

**A. Concrete Removal and Preparation.** The Contractor, as directed by the Engineer shall locate and remove all loose, spalled, deteriorated, and delaminated concrete. Care shall be exercised not to damage areas of sound concrete or reinforcing steel during concrete removal operations. Unless specifically *directed by the Engineer*, depth of removal shall not exceed 4 inches. Concrete removal shall be in accordance with a sequence approved by the Engineer. Concrete removal shall be accomplished by chipping with hand picks, chisels, or light duty pneumatic or electric chipping hammers (not to exceed 35 lbs.). If sound concrete is encountered before existing reinforcing steel is exposed, the surface shall be prepared and repaired without further removal of the concrete. When corroded reinforcing steel is exposed, concrete removal shall continue until there is a minimum ¾ inch clearance around the exposed, corroded reinforcing bar. Care shall be taken to not damage bond to adjacent non-exposed reinforcing steel during concrete removal processes. After all deteriorated concrete has been removed; the repair surface to receive concrete patching shall be prepared by blast cleaning. Blast cleaning shall remove all fractured surface concrete and all traces of any unsound material or contaminants such as oil, grease, dirt, slurry, or any materials which could interfere with the bond of freshly placed concrete. The Contractor shall dispose all removed material off State Right of Way in an approved site.

**B. Steel Reinforcement.** All corroded reinforcing steel exposed during concrete removal shall have corrosion products removed by abrasive blasting or wire brush whichever is more appropriate. If required, furnish for replacement, as directed by the Engineer, adequate quantity of steel reinforcing bars ½” diameter for the patch in curb areas. Place these bars in areas deemed by the Engineer to require additional reinforcement. Field cutting and bending is permitted.

**C.** **Concrete Patching Repair.** Place and finish the new concrete for the patching area in accordance with the manufacturer’s recommendations, as shown on the attached detail drawings, or as directed by the Engineer. The Engineer shall approve the Contractor’s method of placing and consolidating the concrete prior to the beginning of this operation.

**D**. **Curing.** On completion of finishing operation, patching concrete shall immediately be prevented from drying out and cracking by fogging, wetting, and/or any appropriate method approved by the Engineer. Curing shall continue for duration recommended by the product manufacturer.

Each Contractor submitting a bid for this work shall make a thorough inspection of the site prior to submitting his bid and shall thoroughly familiarize himself with existing conditions so that the work can be expeditiously performed after a contract is awarded. Submission of a bid will be considered evidence of this inspection having been made. Any claims resulting from site conditions will not be honored by the Department. Quantities given are approximate. The quantity for “Concrete Repair” shall be bid with the contingency that quantities may be increased, decreased, or eliminated by the Engineer. Dispose of all removed material entirely away from the job site as approved by the Engineer. This work is incidental to the contract unit price for “Concrete Patching Repair”.

**4. MEASUREMENT**

**A. Concrete Patching Repair.** The Department will measure the quantity per square feet of each area restored, completed, and accepted.

**B. Steel Reinforcement, Welded Wire Fabric & Hook Fasteners.** Steel Reinforcement, Welded Wire Fabric and Hook Fasteners will not be measured for payment but shall be considered incidental to “Concrete Patching Repair”.

**5.** **PAYMENT**

 **A. Concrete Patching Repair (22146EN).** Payment at the contract unit price per square feet is full compensation for the following: (1) Furnish all labor, materials, tools, equipment; (2) preparation of specified areas including removing and disposing of specified existing materials; (3) place, finish and cure new concrete patches; and (4) all incidentals necessary to complete the work as specified by this note and as shown on the attached detail drawings.