# Partial Depth Concrete Pavement Repair Using Hot Applied Polymer Modified Repair Material NJSP-19-01B

**1.0 Description.** This work shall consist of removal, furnishing, and placing material to repair existing concrete pavement by performing partial depth concrete pavement repairs as specified in plans or as approved by the engineer. All work shall be in accordance with Section 613 except as herein modified.

**2.0 Construction Requirements.**

**2.1** Individual repair areas shall be limited to approximately 24 square feet in area. Repair areas larger than 24 square feet shall be patched with a cementitious based material in accordance with Section 613.

**2.2** Removal of the existing patched, spalled, delaminated, or otherwise deteriorated concrete surface shall be limited to 1/3 (one third) of the pavement thickness or 4 inches, whichever is less. Removal of concrete shall be accomplished with light jack hammers and/or a mill head designed for concrete milling. All loose materials, including milled or broken concrete or asphalt, crack seal materials, oil, sand, dust, grit, or other contaminants, shall be completely removed. Removal of material shall be in accordance with Sec 202.2.

**2.3** All surfaces shall be cleaned with compressed air at a minimum of 100 psi.

**2.4** Partially exposed reinforcing steel mesh shall be sandblasted clean or removed before placing patch materials. If sandblasting is used, all surfaces shall be cleaned of loose sandblasting grit with compressed air.

**2.5** All surfaces of the repair area shall be primed using a primer and procedure recommended and approved by the manufacturer. Any costs related to primer shall be included in the unit cost. No direct payment will be made for the priming of the repair areas.

**2.6** Material shall be placed in 1inch lifts until the repair is level with the existing pavement. Each lift shall be adequately cooled, based on manufacturer recommendations, prior to subsequent lift placement.

**2.7** Repairs that are greater than 1 inch in depth require the addition of bulking aggregate 20% to 50% by volume, as recommended by the manufacturer. The bulking stone shall be double washed, dust-free 5/8 inch to 1 inch sized granite. The bulking aggregate shall be adequately heated and dried prior to placement. No direct payment will be made for costs associated with bulking stone placement.

**2.8** Topping stone shall be placed on the surface of the patch to improve surface friction using a procedure recommended by the manufacturer. The topping stone shall be double washed, dust-free, angular, hard aggregate. The topping stone shall be adequately heated and dried prior to placement. No direct payment will be made for costs associated with topping stone placement.

**2.9** Traffic shall not be allowed on the repair area until the patching material has adequately cooled and gained strength, as recommend by the manufacturer.

**2.10** Repair areas in the roadway and shoulders shall be swept clean of all loose debris before opening to traffic.

**2.11** Any patches that vary by more than ¼ inch from the existing profile of the roadway or of poor workmanship shall be removed and replaced by the contactor at the contractor's expense.

**3.0** **Material Requirements**.

**3.1** The contractor shall submit the manufacturer's specifications for the material for patching and repair to the engineer for approval. The contractor shall follow manufacturer's specifications for material preparation and placement.

**3.2** Material shall be hot pour, polymer modified, resin-based concrete repair material, flexible and grey or black in color. Material shall provide an impermeable, voidless mass at ambient temperatures. Material is to be mixed and heated on site as recommended by the product manufacturer. The repair material shall be factory blended and in meltable bags.

**4.0** **Additional or Reduced Work**. If additional repair work is necessary beyond what is specified in the work order or the required repair is not as extensive as originally viewed, the contractor shall contact the engineer for authorization to proceed with the additional or reduced work. The contractor shall note that with this authorization to proceed with additional or reduced work may change which unit bid item is used to calculate final payment depending on final repair quantities. Any work performed without authorization of the engineer shall be at the contractor's expense.

**5.0** **Method of Measurement**. Measurement shall be made to the nearest pound based on the actual material used with an acceptable form of package documentation.

**6.0** **Basis of Payment**. Payment shall be paid by the pound and shall be full compensation for all repair work including removal of loose materials, cleaning of concrete surface, and furnishing and placing material for Partial Depth Pavement Repair using flexible, hot polymer-modified repair material. All cost for the repair work, including labor, equipment, materials, and containment and disposal of material shall be included in Item 613-99.11, Misc. Partial Depth Concrete Pavement Repair Using Flexible, Hot Polymer Modified Repair Material, per pound.

**DRAFTER’S NOTES:**

**Hot Ploymer partial depth repair is a non-cementious acceptable alternate to Class A Partila Depth Pavment Repair intended for use on concrete pavements under certain conditions It should not be used if the pavment is to be cold milled or diamond ground. Cold milling tends to pull the polymer material out of the repair area. Grinding tends to melt the material or pull it out. Class A Partial Depth Pavement Repair should be used when the concrre pavement will be diamond ground following repairs. If the pavement is to be overlaid and/or cold-milled, reference EPG 613.1 for the appropriate partial depth repair.**