

**SPECIAL SPECIFICATION
3043**

Raising and Undersealing Concrete Slabs

1. **Description.** Raise and underseal concrete slabs at locations shown on the plans and as directed.
2. **Material.** Furnish high density polyurethane material, such as Uretek 486 or approved equivalent. Use epoxy material that meets the requirements of DMS-6100, "Epoxies and adhesives," Type III Class B.
3. **Equipment.** Provide machinery, tools, and equipment necessary for proper execution of the work.
 - A. **Drill.** Use a maximum 40 lbs drill with capable of drilling 1/2 in. or 5/8 in. diameter holes.
 - B. **Pump.** Furnish a pump unit with a pressure gage and capable of injecting the polyurethane:
 - between the concrete slab and subbase,
 - controlling the rate of the rise of the concrete slab.
4. **Construction.**
 - A. **Preparation.** Prepare a profile of each area to determine the extent of the concrete slab that requires adjustment or raising. Ensure that the finished concrete slabs will conform to the grades and cross-section of the slabs prior to settlement and following the settlement. Determine the exact locations of the injection holes at 3 to 6 ft intervals for each treated area. Obtain approval for the final proposed grades and the injection holes.
 - B. **Drilling.** Use drilling operations that do not damage the surrounding concrete. Drill a series of 1/2 in. or 5/8 in. injection holes through the concrete as proposed or as directed.
 - C. **Injection.** Inject high density polyurethane formulation directly under the slab. Do not extend the nozzle end below the bottom of concrete. Control the rise of the slab by regulating the rate of injection and by controlling the pumping unit. Do not overfill the voids under the slabs. Keep pumping pressure below 200 psi unless otherwise directed by the Engineer. Cease injection at a particular location when the Engineer determines that continued injection is no longer feasible due to major voids. Take precautions to prevent the injected material into any drainage facility and other structures.

Remove any excessive polyurethane material after the nozzle is removed from the hole. Seal the hole with approved method and material.

- D. Grade Control.** Control the final elevations within 1/4 in. of the proposed profile elevations. The Engineer may check the treated area to confirm that the pavement has been aligned properly to facilitate drainage.
 - E. Repairs.** As directed, repair any pavement slab or bridge approach slab that are cracked, or that had excessive lifting or where the slab is left uneven, that is the result of the Contractor's operation without any additional compensation.
 - F. Set-Time.** Formulate the high density polyurethane to set and obtain 90% of its compressive strength within 15 minutes after injection. Attain manufacturer's recommended compressive strength unless otherwise shown on the plans.
- 5. Measurement.** This Item will be measured by the pound of high density polyurethane injected and accepted.
- 6. Payment.** The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Raising and Undersealing Concrete Slabs". This price is full compensation for furnishing and injecting material, all labor, materials, tools, and incidentals.