

## SECTION 03605

# APPROACH SLAB JACKING

### PART 1 GENERAL

#### 1.1 SECTION INCLUDES

- A. Raising the approach slab(s) by pumping cement grout underneath.

#### 1.2 REFERENCES

- A. AASHTO M 85: Portland Cement.
- B. AASHTO M 295: Fly Ash and Raw or Calcined Natural Pozzolan for Use as a Mineral Admixture in Portland Cement Concrete.

#### 1.3 CERTIFICATION

- A. Provide compliance certifications for the mix design materials conforming to the requirements of the specified specifications.

### PART 2 PRODUCTS

#### 2.1 EQUIPMENT

- A. Furnish all equipment necessary to perform this work.
- B. Grout device:
  - 1. Consisting of a cement injection pump and a high speed colloidal mixing machine.
  - 2. The colloidal mixing machine must operate at a minimum speed of 1200 rpm and consist of a rotor operating in close proximity to a stator, creating a high shearing action and subsequent pressure release to make a homogeneous mixture.
- C. Provide water storage tank and a pump to deliver water to the grout mixer.

- D. Furnish an air compressor and rock drills or other device capable of drilling the grout injection holes through the approach slab and any base material, if necessary. Equipment must be in good condition.

## **2.2 DRY MIX DESIGN**

- A. Use the standard mix design for jacking and grouting as follows:
  - 1. One part (by volume) Portland Cement Type I or II.
  - 2. Three parts (by volume) Pozzolan (natural or artificial).
- B. Do not deviate from the dry mix proportions of Portland Cement and Pozzolan unless approved by the Engineer. The water content may be varied, as required for the local conditions.
- C. May add an approved liquefier and/or water reducing agent. The Engineer approves the proportions.

## **PART 3 EXECUTION**

### **3.1 PREPARATION**

- A. Measure the dry cement and Pozzolan accurately in cubic yards whether available in bulk or packaged.
- B. Batch water through a meter or scale.

### **3.2 DRILLING**

- A. Drill a minimum of 4 evenly spaced holes into each half of every approach slab where required to obtain uniform placement underneath the approach slab. Drill holes that are vertical and not out-of-round.

### **3.3 PUMPING**

- A. Pump in a pattern and in the amount required to completely fill the voids underneath the slab. Raise the approach slabs to within plus or minus 3/16 inch from a string line grade.

- B. Remove Pozzolan mix material from the drill holes at the completion of the pumping operation. Clean the circumference of the hole and seal the hole with a stiff sand and cement grout or an approved fast setting cement mortar.

END OF SECTION