RIGID PAVEMENT ITEMS
ITEM P-501  CEMENT CONCRETE PAVEMENT [Reserved]
ITEM P-560  POZZOLONIC CEMENT GROUT

DESCRIPTION

560-1.1 Drill holes through existing steel-reinforced portland cement concrete, provide and pump grout into voids observed beneath the slabs. Clean and patch the drilled holes.

MATERIALS

560-2.1 GENERAL. Use a grout mixture and a patch material with the following components proportioned by volume. Obtain test results and approvals as stated.

560-2.2 POZZOLONIC CEMENT GROUT. Provide pozzolonic-cement grout consisting of the following:

   a. Portland Cement, type I or II (ASTM C150 or AASHTO M 85)-one part.
   b. Fly-Ash Pozzolon (ASTM C618 or AASHTO M 295)-three parts.
   c. Potable Water as required for fluidity.

Measure fluidity by the Corps of Engineers flow cone method (CRD-C-611). (10-16 seconds efflux time) Additives as needed, such as plasticizers or water reducers.

Submit a 5-pound sample of the proposed grout mixture components. Proportion this total weight according to the proposed mix. Deliver sample materials for testing to the Department Regional Materials Lab. Deliver these materials between 8 am and 4 pm at least 4 weeks before scheduled field use. The test results must show that the components are compatible. If test results do not confirm that the components are compatible, a new submittal of components of a revised mix may be required. Fieldwork will be delayed during the time needed for testing revised mix designs. The required minimum compressive strength is 600 psi, as measured according to ASTM C109 (AASHTO T 106).

560-2.3 PORTLAND CEMENT PATCH. Use concrete pavement patch material that consists of the following:

   a. Portland Cement, type I or II -(ASTM C150 or AASHTO M 85)-one part.
   b. Sand-three parts.
   c. Potable Water-the minimum amount needed to moisten the dry components.

The required minimum compressive strength is 600 psi, as measured according to ASTM C109 (AASHTO T 106).

CONSTRUCTION REQUIREMENTS

560-3.1 The plan layout was developed from sounding the intact slabs. This layout may be modified in the field, depending on the voids verified or discovered during drilling.

Provide the machinery and labor to accomplish the following sequence. Drill holes using core bits through the existing steel-reinforced concrete pavement. Mix and inject under low pressure the pozzolonic-cement grout into any voids below the slab. Begin injection near the center of slabs and work outwards. Stop pumping if pressures rise or as grout appears in communicating holes. Provide mixing and pumping apparatus, including working gages, hoses and fittings such as nozzles and packers that are needed to complete the task. Place tightly fitted tapering wooden plugs flush with the top of concrete in each hole that is not immediately patched. To patch the slab, clean foreign material, including grout, from boreholes. Redrill to slightly larger diameter, any holes that exhibit spalled edges in the top 1-inch, and tamp them full of patching mixture. Finish patched holes smooth and flush.
METHOD OF MEASUREMENT

560-4.1 This item will not be measured for payment.

BASIS OF PAYMENT

560-5.1 Payment will be made at the contract lump sum price.

Payment will be made under:

- Item P560.010.0000  Pozzolonic Cement Grout – per lump sum
- Item P560.020.0000  Portland Cement Grout – per lump sum