390 Base Patching

390.1 Description

(1) This section describes patching areas of existing concrete pavement with either concrete or asphaltic mixtures for overlaying with new pavement.

390.2 Materials

(1) The contractor may use either concrete or asphaltic mixture.

(2) Furnish concrete conforming to the requirements specified for grade B high early strength concrete, according to 710.4(5), except that under the Base Patching Concrete SHES bid item, furnish concrete as specified for SHES concrete repair and replacement in 416.2. Provide QMP for class II ancillary concrete as specified in 716.

(3) Furnish asphaltic mixture as specified for asphaltic base under 315.2.

(4) Furnish dowel bars and tie bars as the plans show and conforming to 505.2.6.

390.3 Construction

390.3.1 General

(1) Unless the contract provides otherwise, keep the road open to traffic during construction. If possible, restrict operations to one lane at a time. Perform work to cause the least possible inconvenience to traffic.

(2) Remove areas of existing concrete pavement, including existing patching or surfacing materials, at locations the plans show or the engineer directs in the field. Saw the connecting edges as specified for sawing pavement in 690. Remove the pavement without injury to the remaining pavement. Dispose of removed material as specified in 204.3.1.3.

(3) Prepare the foundation as specified in 211 using engineer-approved hand methods. Place the patch to the thickness of the contiguous pavement, including the existing asphaltic pavement or surfacing.

390.3.2 Concrete Patching

(1) Deposit concrete to require as little rehandling as possible, place and consolidate by hand, and strike off and finish flush with adjoining surfaces. The engineer will not require forms unless necessary to provide the required edge, grade, or alignment.

(2) Cure exposed patches as specified for concrete pavement in 415.3.12. Use wax-based curing compound conforming to 501.2.8. Protect as specified for concrete pavement in 415.3.14. Open to traffic as specified for concrete base in 320.3.

390.3.3 Asphaltic Patching

(1) Construct as specified for asphaltic base under 315 except as modified here in 390.3.3.

(2) Dump material outside the patch area, fill the patch in successive layers with shovels, and shape to the required grade and contour with rakes and lutes. Do not rake dumped material into the patch. The engineer will not require forms unless necessary to provide the required edge, grade, or alignment.

(3) Compact each layer with engineer-approved compaction equipment. Unless the engineer directs otherwise, compact each layer to a thickness of 6 inches or less. Roll the top layer until flush with the adjacent surface.

(4) Do not open patches to traffic until they are hard enough to prevent rutting or displacement.

390.3.4 Special High Early Strength Concrete Patching

309.3.4 Correct errata via ASP-6 with November 2023 LET. Update link from 416.3.8 to 416.3.7.

(1) Construct as specified for special high early strength repairs under 416.3.7 except as follows:

- The contractor may delay removal for up to 14 calendar days after cutting the existing pavement.

- Open to traffic as specified for concrete base in 320.3.

(2) Cure exposed patches as specified for concrete pavement in 415.3.12. Use wax-based curing compound conforming to 501.2.8. Do not apply excess curing compound that could cause slippery pavement under traffic.

390.4 Measurement

309.4 Add via ASP-6 with November 2023 LET. Revise unit of measurement and measurement information for base patching items.

(1) The department will measure Removing Pavement for Base Patching by the cubic yard acceptably completed. Measuere the depth from the bottom of the adjacent pavement to the top of the patch.

(2) The department will measure Base Patching Asphaltic by the ton acceptably completed as specified for asphaltic pavement in 450.4.

(3) The department will measure Base Patching Concrete HES and Base Patching Concrete SHES by the cubic yard acceptably completed. Measure the depth from the bottom of the adjacent pavement to the top of the patch.

390.5 Payment

390.5 Add via ASP-6 with November 2023 LET. Remove “Base Patching” bid item and add “Removing Pavement for Base Patching” bid item by CY. Remove “Base Patching Ashphaltic” by SY bid item. Add bid item for “Base Patching Concrete HES”. Revise item number for “Base Patching Concrete SHES” and change from SY to CY. Update descriptions for base patching items.

(1) The department will pay for measured quantities at the contract unit price under the following bid items:

ITEM NUMBER DESCRIPTION UNIT

390.0100 Removing Pavement for Base Patching CY

390.0201 Base Patching Asphaltic TON

390.0305 Base Patching Concrete HES CY

390.0405 Base Patching Concrete SHES CY

(2) Payment for Removing Pavement for Base Patching is full compensation for removing old pavement; for preparing the foundation and bringing up to grade. If the engineer orders the contractor to excavate yielding or unstable subgrade materials and backfill with suitable materials, the department will pay for that work with contract bid items or as agreed upon using 109.4.

(3) Payment for Base Patching Asphaltic is full compensation for providing and compacting asphaltic mixture including asphaltic binder.

(4) Payment for Base Patching Concrete HES and Base Patching Concrete SHES is full compensation for providing, curing, and protecting concrete. Payment also includes providing tie bars and dowel bars in unhardened concrete and steel within the patch. For tie bars and dowel bars provided in concrete not placed under the contract, the department will pay separately under the Drilled Tie Bars and Drilled Dowel Bars bid items as specified in 416.5.

(5) Payment for Base Patching SHES also includes providing test data to the engineer as specified in 416.2.4.

(6) The department will pay for sawing existing concrete pavement for removal under the Sawing Concrete bid item as specified in 690.5.