

## REVISION OF SECTION 601 CONCRETE (PATCHING) FOR PIER CAP, ABUTMENTS & CURBS REPAIR

Revise Section 601 of the Standard Specifications for this project as follows:

**Subsection 601.01 shall include the following:**

Concrete (Patching). This work consists of furnishing and placing material in accordance with these specifications and in conformity with the lines, grades and dimensions as shown on the plans or established.

**Subsection 601.02 shall include the following:**

Materials for concrete patching shall be from the list shown on the department's Approved Product List, category: concrete, repair/patching, rapid set, vertical & overhead or an approved equal. This list may be viewed at the following internet link:  
<http://www.coloradodot.info/business/apl> or  
<http://apps.coloradodot.info/apl/AplSearch.cfm>. Concrete patching material shall have an average compressive strength of 4500 psi at 28 days.

Concrete patching material may be extended only in accordance with the manufacturer's recommendations. The Contractor shall submit a report consisting of the mix proportions and compressive strength information. Compressive strength measurements shall be taken at one hour, three hours, six hours, 24 hours, 7 days and 28 days according to ASTM C 39 Compressive Strength of Cylindrical Concrete Specimens. Test results shall be the average of at least three specimens molded according to AASHTO T 126 Making and Curing Concrete Test Specimens in the Laboratory

**Subsection 601.12 (a) shall include the following:**

Concrete patching material shall be placed in the repair areas before the expiration date of the material.

Concrete patching material shall be placed and consolidated to fill voids left at removed existing concrete. The surface of concrete patching material shall be smooth and match the surrounding concrete surfaces. Concrete patching material shall not extend above a waterproofing membrane.

Concrete patching material minimum and maximum thickness shall be per recommendation of the material manufacturer.

Concrete patching material site preparation, batching, extending with aggregate, mixing, placement, placement during cold temperatures, consolidation, and curing shall be in accordance with the manufacturer's recommendations. A mix may be extended up to 90 percent of the manufacturer's maximum extension.

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Subsection 601.19 shall include the following:

Concrete (Patching) will be measured and paid for as the actual quantity placed and accepted by the Engineer.

Subsection 601.20 shall include the following:

<b>Pay Item</b>	<b>Pay Unit</b>
Concrete (Patching)	Cubic Feet
Concrete (Patching)	Cubic Yard

Payment for Concrete (Patching) will be full compensation for all the work, materials, tools, equipment, and incidentals required to replace removed concrete from structures. Furnishing, calibrating, and use of rebound hammers and other appurtenances including the molding, curing, and breaking of cylinders for calibration will not be measured and paid for separately, but shall be included in the work.

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**INSTRUCTIONS TO DESIGNERS (delete instructions and symbols from final draft):**

Use this project special provision when patching vertical or overhead surfaces (i.e., pier cap, curbs, abutment, edge of deck, column) in combination with 202 Removal of Portions of Present Structure Various paid by the Square Foot.

Notes should be added to the plans stating that formwork will be required for use of this material when used to patch vertical or overhead surfaces. Designer to consider safety critical structural implications and possible shoring/falsework requirements.

The estimated depth of removal is to be provided in the Summary of Quantities Worksheet note and is to be used to calculate the patching quantity. Cubic Yard pay unit should be used for quantities over 100 CF.

The entire structure should be closed to traffic whenever possible to achieve the best end product.

**PERMANENT CHANGES TO PROJECT DATED SPECIAL PROVISIONS  
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<b>DATE</b>	<b>AUTHOR</b>	<b>DESCRIPTION OF CHANGE</b>
1/14/19	BPM Cons.	Initial Website Issue
04.11.2023	M. Kayen	Revisions to make spec online ADA-compliant. 5.22.23 Additional ADA.

COLORADO PROJECT NO.  
PROJECT CODE XXXXX

DATE

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