



VDOT Hydraulic Cement Concrete Pavement Patching Special Provision

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Background

**“GENTLEMEN,
STOP**

We can not continue with theses minor changes”

-email excerpt from a committee member

- Shows the rigorous and lengthy review process of the patching specification

Types of Concrete Patching

Four Types of Concrete Patching

- **Jointed Concrete, Type I**
 - Full depth, full lane width
 - 6' to 15' patch length
 - Non reinforced, doweled
- **Jointed Concrete, Type II**
 - Full depth, full lane width
 - Greater than 15' length
 - Reinforced, doweled, tie bar
- **Jointed Concrete, Type III**
 - Partial depth (<1/3 slab thickness)
 - Partial width (<1/2 lane width)
- **Continuously Reinforced Concrete, Type IV**
 - **Full depth patch**
 - Type IV-A
 - Full lane width
 - Minimum 6' length
 - Type IV-B
 - Partial lane width
 - Minimum 6' x 6' area

Acceptance Criteria

- **Traffic opening strength is 2000 psi**
- **No other acceptance testing on the mix or hardened concrete**
 - **Less resource required to properly collect/transport samples and perform testing**
 - **On site department personnel is expected to focus better on quality of the workmanship**
- **Warranted against certain type of distresses within one year**

Warranty

Contractor provided one-year warranty for concrete patches

- Extends one year from the date of final acceptance
- VDOT will stencil all patches with installation date and project ID
- Contractor will remove and replace any patch that fail due to materials or workmanship before end of warranty period
- Contractor may request a review by the department
- Repairs must be completed within 14 days of notification by VDOT
- Failure defined by:
 - Presence of medium, high severity L/T cracking or spalling, corner breaks, joint faulting or other undesirable distress as outlined by LTPP distress manual

Signs of Distress Indicating Patch Failure



Moderate Severity Spalling



High Severity Longitudinal Cracking



Moderate Severity Corner Break



Moderate Severity Transverse Cracking

Measurement and Payment

Measurement

- Square yards of pavement surface area complete-in-place

Pay

- Contract unit price per square yard for type and depth specified
- Unit price includes ALL labor, materials, workmanship
 - If deemed necessary by the department, sublayer excavation and replacement is paid for separately



Conclusions

VDOT finalized the specification after years of effort

But we still have issues...



Thank You

Comments, suggestions, need a copy?

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