

Frequently Asked Questions Regarding MDOT Warranties February 2018

Q1: What state legislation is in place relative to warranties?

A1: In 1997, enrolled Senate Bill 303 included the following provision for development of warranties on state trunkline construction projects;

“Of the amounts appropriated for state trunkline projects, the department shall, where possible, secure warranties of not less than 5-year full replacement guarantee for contracted construction work.”

MCL 247.661(2) states:

“...Of the amounts appropriated for state trunk line projects, the department shall, where possible, secure pavement warranties for full replacement or appropriate repair for contracted construction work on pavement projects whose cost exceeds \$2,000,000.00 and projects for new construction or reconstruction undertaken after the effective date of the 2015 amendatory act that amended this subsection. ...”

Q2: What types of warranties does MDOT currently use?

A2: Two types of warranties are currently used: Materials and Workmanship Warranty and Performance Warranty.

For a **Material and Workmanship Warranty**, the contractor is responsible for correcting deficiencies in work elements caused by materials and workmanship during the warranty period, typically five years. They are responsible for materials selection and pavement mix design formulation within the confines of the specifications and the workmanship that they provide during manufacturing and construction.

Materials and Workmanship Warranties are used for the following fix types

- New/Reconstructed Hot Mix Asphalt
- Hot Mix Asphalt Overlays
- HMA Placed on Rubblized Concrete
- HMA Placed on Crush and Shaped Base
- New/Reconstructed Jointed Plain Concrete Pavement

Although the legislation requires warranties of not less than five years where possible, the Department has determined there is a benefit for adding warranties of lesser duration for types of work that have much shorter life spans than a reconstruction project, such as pavement sealing and crack filling. For these types of fixes, the Department has added a **Performance Warranty**, where the contractor assumes full responsibility for performance during the warranty period, two or three years, and is responsible for

materials selection, workmanship and certain aspects of design. The contractor is responsible for deficiencies under their control.

Performance Warranties are usually used for the following fix types:

- HMA Crack Treatment
- Micro-Surfacing
- HMA Ultra-Thin Overlay
- Paver Placed Surface Seal
- Single and Double Chip Seals
- Bridge Painting

The department has pursued longer warranty lengths from the onset of the warranty program. It was originally desired to have warranty periods equal to approximately half the life of the pavement fix. The bonding sureties were reluctant to bond anything longer than five years as was the contracting industry. As a result, MDOT set the warranty period for rehabilitation and reconstruction projects to five years and Capital Preventive Maintenance (CPM) projects to either two or three years. Thus, where possible, MDOT set the minimum to five years. It should be noted that for CPM projects the two or three year warranty equals approximately one third to one half of the expected life of the fix.

Q3: Are there specific fix types that do not have warranties? Why?

A3: In the Rehabilitation & Reconstruction (R&R) Program, two fix types do not have a warranty: Pavement demonstration projects do not utilize warranties as these projects are meant to evaluate new construction methods, materials or design and therefore, a warranty is not required. Additionally, concrete patching projects do not have warranties. Traditionally, MDOT uses existing performance data to establish the performance criteria for establishing warranty thresholds, concrete patching addresses spot locations in a pavement, not the entire roadway. Concrete patching also has a high variability in performance due to various methods and time constraints of patching projects. These factors, as well as a lack of ability of MDOT's pavement management system to isolate specific distresses that are associated with concrete patches has prohibited MDOT from developing specific warranty criteria. The MDOT will continue to work with the paving industries in order to arrive at an acceptable warranty, supported by performance data, for concrete patches.

In the Capital Preventive Maintenance (CPM) program, two fix types do not have warranties: Concrete patching (as noted above) and overband crack treatment. Overband crack treatment is often applied to cracks that have extensive secondary cracking and is used to delay further deterioration until money becomes available to perform a longer term fix. The pavements in this case are already in poor condition and the overband crack treatment is not improving the structural capacity of the pavement. Thus, the department made a decision to not warrant this particular fix.

Q4: How many warranty projects have there been?

A4: Since 1997, there have been a total of more than 3,800 warranties administered by MDOT.

Q5: How many warranty projects have required corrective action?

A5: Approximately 13.4% percent of warranties have required the contractor to return and perform corrective work. This work was done at the contractors' expense.

Q6: What documentation is in place of the decision mechanism on how MDOT selects which projects have a warranty?

A6: The decision of which pavement projects have warranties is based primarily on the type of repair and the warranty decision tree. The decision tree provides additional guidance regarding project specific circumstances which could affect the decision of whether to require a warranty. The decision tree was developed through the warranty task force partnership between MDOT, industry, and FHWA.

Bridge painting projects are warranted when painting the entire bridge, and are not warranted for a partial painting.

Q7: What are some examples of project specific circumstances that are included in the decision tree?

A7: Examples include:

- Base, subbase, and subgrade conditions
- General condition and age of existing pavement structure
- Drainage issues

Q8: How are individual projects with warranties evaluated?

A8: Individual warranted projects are evaluated throughout their warranty periods utilizing standard inspection methods to quantify the amount of distress present. These values are then compared to the performance thresholds in the applicable specifications.

Q9: How were the performance thresholds set?

A9: Pavement thresholds were set based on average historical performance data of existing pavements throughout the state.

Bridge painting Bridge concrete surface coating thresholds do not allow any rust or defects.

Q10: Does MDOT have a process to resolve disputes in regards to the cause of failure that has invoked the warranty?

A10: MDOT's warranty specifications deal with this through the use of a Conflict Resolution Team (CRT). The CRT is comprised of two members selected by the Department, two members selected by the Contractor, and one member mutually selected by the Contractor and the Department. The sole responsibility of the CRT is to provide a decision on disputes between MDOT and the contractor regarding application or fulfillment of the warranty requirements.

Q11: How does MDOT track which projects have warranties?

A11: MDOT has developed and implemented the Statewide Warranty Administration Database (SWAD). SWAD provides consistent record keeping and can be used to generate summary reports.

Q12: Are MDOT and Industry working on any changes to the current warranties?

A12: The MDOT and Industry continue to partner to improve various aspects of the existing Materials and Workmanship Warranty and Performance Warranty specifications.