

MICHIGAN
LOCAL AGENCY
SPECIAL PROVISION
FOR
**WARRANTY WORK REQUIREMENTS FOR JOINTED
PLAIN CONCRETE PAVEMENT**

CRA/MML
MDOT
FHWA

1 of 3

09/04/2018
09/18/2018
11/01/2018

a. Description. This special provision is for use with MICHIGAN LOCAL ROAD AGENCY SPECIAL PROVISION FOR HOT MIX ASPHALT and CONCRETE PAVEMENT WARRANTY for construction/reconstruction projects using jointed concrete pavement on an unbound or stabilized aggregate base that will be warranted against defects in workmanship and materials.

When a local agency concrete project is to be warranted, its Initial Acceptance shall follow Section.602 of the current MDOT Standard Specifications for Construction.

b. Terms of the Warranty

Limits of the Warranted Work - Warranted work includes all jointed plain concrete pavement placed in driving lanes within the project limits, unless described otherwise on the plans.

Warranty Term - A timeframe which begins at the Acceptance Date of Warranted Work of a completed Concrete Pavement project. Multi-phased projects may have multiple "Acceptance Dates of Warranted Work." The Warranty Term will last five (5) years, unless otherwise specified in the contract.

Warranty Bond - The Contractor shall furnish a single term bond worth 5% of the total contract or \$1,000,000 whichever is less, secured in the name of the road owner and/or the agency in charge of the project. The effective starting date of the warranty bond will be the Acceptance Date of Warranted Work. The warranty bond will be released at the end of the warranty period or upon satisfactory completion of all warranty work; whichever is later.

Warranty Requirements - Table 1 lists maximum allowable defect thresholds for each condition per 1/10th-mile lane segments and the maximum allowable number of segments for each condition parameter. If the Contractor has not met any warranty requirement, even in non-contiguous segments, the Engineer will request warranty fixes.

Each driving lane will be assessed separately. Any warranty work required of the Contractor to correct deficiencies for any condition, will be full-width across the driving lane.

c. Quality Control / Quality Assurance (QA/QC). The Contractor is responsible for project quality and must provide QC testing procedures and results.

The Engineer will perform Quality Assurance (QA) testing as a spot-check to determine Initial Acceptance or assess penalties if specifications are not met. QA testing does not relieve the Contractor of QC responsibilities. A Contractor may not use QA tests as evidence in a warranty dispute.

d. Initial Ride Quality Acceptance. Initial Ride Quality requirements are outlined in the bid documents.

e. Corrective Action. Table 2 lists the recommended corrective actions/treatments for the various defects. The Contractor may use an alternative action subject to Engineer’s approval.

Table 1: Warranty Requirements

Condition Parameter or Defect	Threshold Limits Per Segment (Length = 528 feet)	Max. Defective Segments Per Driving Lane-Mile (b)
Transverse Crack	2 (a)	1
Longitudinal Crack	5% of segment length	1
Map Cracking	10% of segment area	1
Spalling	10% each slab (c) < 2 slabs	1
Surface Scaling	15% of the slab area < 1 slab	1
Corner Cracking	1	1
Joint Sealant Failure	10% joint length (c,d) < 2 slabs	1
Shattered Slab	0	0
<p>a. For segments less than 1/10 mile in length, divide the segment length in feet by 528. The multiply the threshold limit shown in the table by this fractional number. Round the result to the nearest whole number for the new threshold limit. In no case can the threshold limit be less than 1.</p> <p>b. The maximum allowable number of defective segments per condition for a specific driving lane is determined by multiplying the length of the specific driving lane in miles by the maximum allowable defective segments per mile as shown in the table for that condition. . In no case can the max Defective segments per driving lane limit be less than 1.</p> <p>c. Can be non-contiguous. 10% value applies to total perimeter (four sides) of the slab.</p> <p>d. Applies to all transverse and longitudinal joints on the perimeter of the slab. Non-contiguous lengths will be summed on a per-slab basis.</p>		

Table 2: Recommended Corrective Action

Condition Parameter or Defect	Recommended Action (a)
Longitudinal Cracking (b)	Retrofit load transfer
Transverse Cracking (b)	Retrofit load transfer
Corner Cracking	Full-depth, tied, concrete patch
Map Cracking	Remove and replace
Spalling	Repair with epoxy or cement mortar (c)
Surface Scaling	Diamond grind surface (d)
Joint Sealant Failure	Remove and replace seal material (e)
Shattered Slab	Full depth slab replacement (f)
<p>a. If multiple defects are present, the Engineer may revise the recommended actions, up to and including removal and replacement.</p> <p>b. The Engineer's requested corrective treatment will depend on the crack's location and depth. Full-depth T-cracks require retrofit load transfer (> 90% load transfer efficiency) as a minimum. Full depth/full length L-cracks require slab removal and replacement, if outside influence of lane ties.</p> <p>c. The Engineer's requested repair depends on the area and depth of spall, relying on most current specifications in the MDOT Material's Technology Section, Construction and Technology Division.</p> <p>d. Diamond grinding applies to entire slab surface area where scaling exists.</p> <p>e. Replace with existing material type. Neoprene seals are removed and replaced full-width.</p> <p>f. All shattered slabs must be removed and replaced.</p>	