

MICHIGAN  
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION  
FOR  
**WARRANTY WORK REQUIREMENTS FOR NEW/RECONSTRUCTED JOINTED  
PLAIN CONCRETE PAVEMENT**

CFS:DJW

1 of 2

APPR:JFS:CJB:03-18-20

FHWA:APPR:03-18-20

**a. Description.** This special provision must be used in conjunction with 20SP-500A - Materials and Workmanship Pavement Warranty to construct new and reconstructed jointed plain concrete warranted pavement on an unbound or stabilized aggregate base.

**b. Limits of Warranted Work.** The warranted work includes all jointed plain concrete pavement on driving lanes within the project limits unless otherwise indicated on the plans.

**c. Warranty Term.** The warranty term will be 5 years from the date of Initial Acceptance otherwise termed the Acceptance Date of Construction.

**d. Warranty Bond.** Supply a warranty bond equal to \$1,000,000.00 or five percent of the total contract amount whichever is less.

**e. Initial Ride Quality Acceptance Criteria.** Initial Ride Quality requirements are outlined in the contract.

**f. Warranty Requirements.** Table 1 lists the allowable threshold limit for each condition parameter within each segment and the maximum number of allowable segments within a driving lane for each condition parameter. If any of the warranty requirements are not met, as a result of a defect in materials and/or workmanship, corrective action (warranty work) is required.

The defective segments for surface distress may or may not be contiguous to necessitate corrective action. The maximum allowable number of defective segments for each condition parameter applies to each driving lane in each travel direction. Ensure each driving lane is evaluated independent of adjacent driving lanes. Ensure any pavement surface requiring removal/replacement to correct deficiencies, for any condition parameter, is replaced full-width across the driving lane.

**g. Corrective Action.** Table 2 lists the recommended corrective actions to outline typical acceptable treatments for the various condition parameters. The Department will accept the listed corrective action if the action addresses the cause of the condition parameter. The Contractor may use an alternative action subject to Department approval.

**Table 1: Warranty Requirements**

Condition Parameter	Threshold Limits Per Segment (Length = 528 feet)	Max. Defective Segments Per Driving Lane-Mile (a)
Transverse Crack	2	1
Longitudinal Crack	5% of segment length	1
Map Cracking	10% of segment area	1
Spalling	10% each slab (b) ≤ 2 slabs	1
Scaling	15% of the slab area ≤ 1 slab	1
Corner Cracking	1	1
Joint Sealant Failure	10% joint length (c) ≤ 2 slabs	1
Shattered Slab	0	0
<p>a. The maximum allowable number of defective segments per driving lane, on the project, is determined by multiplying by the length of the specific driving lane in miles.</p> <p>b. Can be non-contiguous. 10% value applies to total perimeter (four sides) of the slab.</p> <p>c. 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	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 (c)
Spalling	Repair with epoxy or cement mortar (d)
Scaling	Diamond grind surface (e)
Joint Sealant Failure	Remove and replace seal material (f)
Shattered Slab	Remove and replace
<p>a. If multiple condition parameters are present, the recommended action may be revised. Removal and replacement is required if multiple crack types are present.</p> <p>b. The appropriate corrective treatment is dependent on the crack's location and depth. Full-depth Transverse cracks require retrofit load transfer (&gt;90% load transfer efficiency) as a minimum. Full-depth/full-length Longitudinal cracks require slab removal and replacement, if outside influence of lane ties.</p> <p>c. Dependent on cause. If cracking is entirely from "drying shrinkage", no corrective action is required.</p> <p>d. Repair dependent on area and depth of spall. Use most current procedures and material mixtures recommended by Material's Technology Section, in the Construction Field Services Division.</p> <p>e. Diamond grinding applies to entire slab surface area where scaling exists.</p> <p>f. Replace with existing material type. Neoprene seals are removed and replaced full-width.</p>	