

## Fall 2017 State Surveys Index

### Concrete Pavement Rehabilitation (CPR)

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#1

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Thursday, August 03, 2017 6:55:58 AM  
**Last Modified:** Thursday, August 03, 2017 8:12:20 AM  
**Time Spent:** 01:16:22  
**IP Address:** 63.66.64.247

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**Q1 Agency Representative**

Name	Neal Fannin
Agency	PADOT
State / Province	PA
Email	nfannin@pa.gov

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**Q2 Full Depth Repairs: What is your Agency's experience doing full depth repairs?** **Routine (many projects)**

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**Q3 Full Depth Repairs: What is your Agency's expected life of full depth repair?** **25**

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**Q4 Full Depth Repairs: Does you Agency have any field verification tests to verify the dowel bars/tie bars are properly grouted/epoxied in-place?** **No**

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**Q5 Partial Depth Repairs: What is your Agency's experience doing partial depth repairs?** **Routine (many projects)**

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**Q6 Partial Depth Repairs: What is your Agency's minimum and/or maximum depth of a partial depth repair?** **Respondent skipped this question**

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**Q7 Partial Depth Repairs: What is your Agency's expected life of partial depth repair?** **15**

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**Q8 Partial Depth Repairs: Does you Agency have any field verification tests to verify the dowel bars/tie bars are properly grouted/epoxied in-place?** **No**

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<b>Q9</b> Dowel Bar Retrofits: Does your Agency have any experience doing dowel bar retrofit repairs?	<b>Some (Less than 5 projects)</b>
<b>Q10</b> Dowel Bar Retrofits: What is your Agency's expected life of dowel bar retrofit repair?	<b>25</b>
<b>Q11</b> Dowel Bar Retrofits: Does your Agency have any field verification tests to verify the dowel bars are properly grouted in-place?	<b>No</b>
<b>Q12</b> Does your Agency have any warranties associated with concrete pavement rehabilitation?	<b>No</b>
<b>Q13</b> Diamond Grinding: What is your Agency's specification limit for pavement rehabilitation diamond grinding for acceptance (Either International Roughness Index (IRI) or Profile Index (PI))?  IRI (in/mi)	<b>Max of 79 IRI for speed limit of greater than 45 m/h, Max of 90 IRI for speed limit less than 45 m/h.</b>
<b>Q14</b> Diamond Grinding: If your Agency offers a smoothness incentive for diamond grinding, what is your limit to earn an incentive (Either IRI or PI)?  IRI (in/mi)	<b>No incentive for diamond grinding.</b>
<b>Q15</b> Diamond Grinding: If your Agency has a Percent (%) Improvement Spec, what is the expected % improvement to comply with specifications?	<b>No</b>
<b>Q16</b> Slurry Management Practices: Does your Agency allow immediate discharge onto the ground after diamond grinding?	<b>No,</b> Comments: PA is in the middle of changing our specifications for handling slurry after some recent environmental agency conflicts.
<b>Q17</b> Slurry Management Practices: Does your Agency require collection of slurry after diamond grinding and dispose off-site?	<b>Yes,</b> Comments: See above
<b>Q18</b> Slurry Management Practices: Does your Agency have any other Best Management Practices for slurry?	<b>No,</b> If yes, please provide a link. Any additional comments?: See 16.

**Q19** Is your Agency doing any research related to any CPR activities? **No**

**Q20** Do your Agency's maintenance forces perform any CPR work? **Yes - Both**

**Q21** Please attach a link to your Agency's specifications/procedures/spreadsheets/drawings/videos for CPR.

Specifications	<b>Section 516 of</b> <a href="http://www.dot.state.pa.us/public/PubsForms/Publications/Pub_408/408_2016/408_2016_3/408_2016_3.pdf">http://www.dot.state.pa.us/public/PubsForms/Publications/Pub_408/408_2016/408_2016_3/408_2016_3.pdf</a>
Procedures	<b>Section C.5.8 of</b> <a href="http://www.dot.state.pa.us/public/PubsForms/Publications/PUB%202/PUB%202.pdf">http://www.dot.state.pa.us/public/PubsForms/Publications/PUB%202/PUB%202.pdf</a>
Spreadsheets	N/A
Standard Drawings	<b>RC-26M of</b> <a href="http://www.dot.state.pa.us/public/PubsForms/Publications/PUB%2072M/RC-26M.pdf">http://www.dot.state.pa.us/public/PubsForms/Publications/PUB%2072M/RC-26M.pdf</a>
Videos	N/a

**Q22** Any additional comments?

PA does not have "expected dowel life" specification. a full depth repair is expected to last the rest of the pavements serviceable life. A partial depth repair can be either asphalt or concrete depending on the age of the pavement.

## #2

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
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**Last Modified:** Wednesday, August 09, 2017 10:04:16 AM  
**Time Spent:** 01:00:49  
**IP Address:** 156.75.176.53

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**Q1** Agency Representative

Name	<b>Rhonda Taylor</b>
Agency	<b>FDOT</b>
State / Province	<b>Florida</b>
Email	<b>Rhonda.Taylor@dot.state.fl.us</b>

**Q2 Full Depth Repairs:** What is your Agency's experience doing full depth repairs?

**Routine (many projects)**

**Q3 Full Depth Repairs:** What is your Agency's expected life of full depth repair?

**20**

**Q4 Full Depth Repairs:** Does you Agency have any field verification tests to verify the dowel bars/tie bars are properly grouted/epoxied in-place?

If yes, briefly summarize the verification test:

Provide an independent testing agency to perform field testing of postinstalled anchors or dowels under the direction of a Professional Engineer registered in the State of Florida. Submit test reports for each LOT signed and sealed by the Professional Engineer. Perform restrained static tension tests to prevent damage to the surrounding concrete. A restrained test is defined as a test conducted in accordance with ASTM E-488 except that the test equipment support clearance requirements of ASTM E-488 do not apply. The opening in the reaction base shall be approximately equal to the drilled hole diameter for the anchor to preclude concrete or masonry failure, but allow bond failure for the adhesive-bonded anchors and dowels. Displacement measurement for field testing is not required.

**Q5 Partial Depth Repairs:** What is your Agency's experience doing partial depth repairs?

**Some (Less than 5 projects)**

Comments:

in the far past, we did not have good experiences in doing partial depth repairs with standard concrete mix patches, and making them last. However, recently we have tried fiber reinforced polymer patching material and have had good results. Will be adding this to our design manual, as CPR's are handled by our Resurfacing Program (not maintenance).

**Q6 Partial Depth Repairs:** What is your Agency's minimum and/or maximum depth of a partial depth repair?

**Respondent skipped this question**

**Q7 Partial Depth Repairs:** What is your Agency's expected life of partial depth repair?

**Respondent skipped this question**

**Q8 Partial Depth Repairs:** Does you Agency have any field verification tests to verify the dowel bars/tie bars are properly grouted/epoxied in-place?

**Respondent skipped this question**

<p><b>Q9</b> Dowel Bar Retrofits: Does your Agency have any experience doing dowel bar retrofit repairs?</p>	<p><b>Some (Less than 5 projects)</b> ,</p> <p>Comments: done in the far past, with not good results. Not in our standards at this time.</p>
<p><b>Q10</b> Dowel Bar Retrofits: What is your Agency's expected life of dowel bar retrofit repair?</p>	<p><b>Respondent skipped this question</b></p>
<p><b>Q11</b> Dowel Bar Retrofits: Does your Agency have any field verification tests to verify the dowel bars are properly grouted in-place?</p>	<p><b>No</b></p>
<p><b>Q12</b> Does your Agency have any warranties associated with concrete pavement rehabilitation?</p>	<p><b>Respondent skipped this question</b></p>
<p><b>Q13</b> Diamond Grinding: What is your Agency's specification limit for pavement rehabilitation diamond grinding for acceptance (Either International Roughness Index (IRI) or Profile Index (PI))?</p>	
<p>PI (in/mi) - blanking band</p>	<p><b>5 in/mi</b></p>
<p><b>Q14</b> Diamond Grinding: If your Agency offers a smoothness incentive for diamond grinding, what is your limit to earn an incentive (Either IRI or PI)?</p>	
<p>PI (in/mi) - blanking band</p>	<p><b>&lt;=2 in/mi</b></p>
<p><b>Q15</b> Diamond Grinding: If your Agency has a Percent (%) Improvement Spec, what is the expected % improvement to comply with specifications?</p>	<p><b>No</b></p>
<p><b>Q16</b> Slurry Management Practices: Does your Agency allow immediate discharge onto the ground after diamond grinding?</p>	<p><b>Yes,</b></p> <p>Comments: ...but we're beginning the discussions on whether this is acceptable per Florida standards, or not.</p>
<p><b>Q17</b> Slurry Management Practices: Does your Agency require collection of slurry after diamond grinding and dispose off-site?</p>	<p><b>Yes</b></p>
<p><b>Q18</b> Slurry Management Practices: Does your Agency have any other Best Management Practices for slurry?</p>	<p><b>No</b></p>
<p><b>Q19</b> Is your Agency doing any research related to any CPR activities?</p>	<p><b>No</b></p>

**Q20** Do your Agency's maintenance forces perform any CPR work?

**No,**  
Any additional comments::  
Maintenance forces may apply an asphalt patch, or fiber reinforced polymer patching material here and there just to temporarily bridge over spalls and breaks, but CPR (full depth slab repairs) are performed through FDOT's Resurfacing Program and the work is let as a construction contract.

**Q21** Please attach a link to your Agency's specifications/procedures/spreadsheets/drawings/videos for CPR.

Specifications

<http://www.fdot.gov/programmanagement/Implemented/SpecBooks/July2017/Files/717eBook.pdf>

**Q22** Any additional comments?

Respondent skipped this question

### #3

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Wednesday, August 09, 2017 10:12:07 AM  
**Last Modified:** Wednesday, August 09, 2017 10:16:54 AM  
**Time Spent:** 00:04:47  
**IP Address:** 63.225.17.34

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**Q1** Agency Representative

Name	<b>Eric Prieve</b>
Agency	<b>Colorado DOT</b>
State / Province	<b>Colorado</b>
Email	<b>Eric.Prieve@state.co.us</b>

**Q2** Full Depth Repairs: What is your Agency's experience doing full depth repairs?

**Routine (many projects)**

**Q3** Full Depth Repairs: What is your Agency's expected life of full depth repair? **20**

<p><b>Q4</b> Full Depth Repairs: Does your Agency have any field verification tests to verify the dowel bars/tie bars are properly grouted/epoxied in-place?</p>	<p><b>No</b></p>
<p><b>Q5</b> Partial Depth Repairs: What is your Agency's experience doing partial depth repairs?</p>	<p><b>Some (Less than 5 projects)</b></p>
<p><b>Q6</b> Partial Depth Repairs: What is your Agency's minimum and/or maximum depth of a partial depth repair?</p>	<p><b>Respondent skipped this question</b></p>
<p><b>Q7</b> Partial Depth Repairs: What is your Agency's expected life of partial depth repair?</p>	<p><b>Respondent skipped this question</b></p>
<p><b>Q8</b> Partial Depth Repairs: Does your Agency have any field verification tests to verify the dowel bars/tie bars are properly grouted/epoxied in-place?</p>	<p><b>No</b></p>
<p><b>Q9</b> Dowel Bar Retrofits: Does your Agency have any experience doing dowel bar retrofit repairs?</p>	<p><b>Some (Less than 5 projects)</b> ,</p> <p>Comments: Not much experience as most of our highways were built with dowels. DBR is mostly for joints missing bars when checked by the MIT</p>
<p><b>Q10</b> Dowel Bar Retrofits: What is your Agency's expected life of dowel bar retrofit repair?</p>	<p><b>Respondent skipped this question</b></p>
<p><b>Q11</b> Dowel Bar Retrofits: Does your Agency have any field verification tests to verify the dowel bars are properly grouted in-place?</p>	<p><b>No</b></p>
<p><b>Q12</b> Does your Agency have any warranties associated with concrete pavement rehabilitation?</p>	<p><b>No</b></p>
<p><b>Q13</b> Diamond Grinding: What is your Agency's specification limit for pavement rehabilitation diamond grinding for acceptance (Either International Roughness Index (IRI) or Profile Index (PI))?</p>	<p><b>95</b></p>
<p>IRI (in/mi)</p>	<p><b>95</b></p>
<p><b>Q14</b> Diamond Grinding: If your Agency offers a smoothness incentive for diamond grinding, what is your limit to earn an incentive (Either IRI or PI)?</p>	<p><b>Respondent skipped this question</b></p>



**Q15** Diamond Grinding: If your Agency has a Percent (%) Improvement Spec, what is the expected % improvement to comply with specifications? **No**

**Q16** Slurry Management Practices: Does your Agency allow immediate discharge onto the ground after diamond grinding? **No**

**Q17** Slurry Management Practices: Does your Agency require collection of slurry after diamond grinding and dispose off-site? **Yes**

**Q18** Slurry Management Practices: Does your Agency have any other Best Management Practices for slurry? **No**

**Q19** Is your Agency doing any research related to any CPR activities? **No**

**Q20** Do your Agency's maintenance forces perform any CPR work? **Yes - Both**

**Q21** Please attach a link to your Agency's specifications/procedures/spreadsheets/drawings/videos for CPR. **Respondent skipped this question**

**Q22** Any additional comments? **Respondent skipped this question**

## #4

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Wednesday, August 09, 2017 10:10:20 AM  
**Last Modified:** Wednesday, August 09, 2017 10:58:19 AM  
**Time Spent:** 00:47:58  
**IP Address:** 143.100.53.12

**Q1 Agency Representative**

Name	<b>Jason Waters</b>
Agency	<b>Georgia Dept of Transportation</b>
State / Province	<b>Georgia</b>
Email	<b>jwaters@dot.ga.gov</b>

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**Q2 Full Depth Repairs: What is your Agency's experience doing full depth repairs?** **Routine (many projects)**

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**Q3 Full Depth Repairs: What is your Agency's expected life of full depth repair?** **10**

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**Q4 Full Depth Repairs: Does you Agency have any field verification tests to verify the dowel bars/tie bars are properly grouted/epoxied in-place?** **No**

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**Q5 Partial Depth Repairs: What is your Agency's experience doing partial depth repairs?** **Some (Less than 5 projects)** ,  
 Comments:  
 Spall repair.

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**Q6 Partial Depth Repairs: What is your Agency's minimum and/or maximum depth of a partial depth repair?**

Minimum Depth	<b>2"</b>
Maximum Depth	<b>4"</b>

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**Q7 Partial Depth Repairs: What is your Agency's expected life of partial depth repair?** **Respondent skipped this question**

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**Q8 Partial Depth Repairs: Does you Agency have any field verification tests to verify the dowel bars/tie bars are properly grouted/epoxied in-place?** **No**

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**Q9 Dowel Bar Retrofits: Does your Agency have any experience doing dowel bar retrofit repairs?** **None (never tried)**

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**Q10 Dowel Bar Retrofits: What is your Agency's expected life of dowel bar retrofit repair?** **Respondent skipped this question**

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**Q11** Dowel Bar Retrofits: Does your Agency have any field verification tests to verify the dowel bars are properly grouted in-place?

Respondent skipped this question

**Q12** Does your Agency have any warranties associated with concrete pavement rehabilitation?

**No,**  
If yes, what is the warranty language:  
Currently looking at implementing warranties.

**Q13** Diamond Grinding: What is your Agency's specification limit for pavement rehabilitation diamond grinding for acceptance (Either International Roughness Index (IRI) or Profile Index (PI))?

IRI (in/mi)

**900**

**Q14** Diamond Grinding: If your Agency offers a smoothness incentive for diamond grinding, what is your limit to earn an incentive (Either IRI or PI)?

Respondent skipped this question

**Q15** Diamond Grinding: If your Agency has a Percent (%) Improvement Spec, what is the expected % improvement to comply with specifications?

**No**

**Q16** Slurry Management Practices: Does your Agency allow immediate discharge onto the ground after diamond grinding?

**No**

**Q17** Slurry Management Practices: Does your Agency require collection of slurry after diamond grinding and dispose off-site?

**Yes**

**Q18** Slurry Management Practices: Does your Agency have any other Best Management Practices for slurry?

**No**

**Q19** Is your Agency doing any research related to any CPR activities?

**No**

**Q20** Do your Agency's maintenance forces perform any CPR work?

**Yes - Both**

**Q21** Please attach a link to your Agency's specifications/procedures/spreadsheets/drawings/videos for CPR.

Specifications

<http://www.dot.ga.gov/PartnerSmart/Business/Source/specs/ss451.pdf>

<http://www.dot.ga.gov/PartnerSmart/Business/Source/specs/ss452.pdf>

Standard Drawings

<http://mydocs.dot.ga.gov/info/gdotpubs/ConstructionStandardsAndDetails/Forms/AllItems.aspx>

**Q22** Any additional comments?

Standard P1, P2 & P3.

## #5

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Thursday, August 10, 2017 4:14:26 PM  
**Last Modified:** Thursday, August 10, 2017 4:27:05 PM  
**Time Spent:** 00:12:39  
**IP Address:** 164.110.221.225

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**Q1** Agency Representative

Name	<b>Mark Russell</b>
Agency	<b>Washington DOT</b>
State / Province	<b>Washington</b>
Email	<b>russelm@wsdot.wa.gov</b>

**Q2** Full Depth Repairs: What is your Agency's experience doing full depth repairs? **Routine (many projects)**

**Q3** Full Depth Repairs: What is your Agency's expected life of full depth repair? **15**

**Q4** Full Depth Repairs: Does you Agency have any field verification tests to verify the dowel bars/tie bars are properly grouted/epoxied in-place? **No**

**Q5** Partial Depth Repairs: What is your Agency's experience doing partial depth repairs? **Routine (many projects)**

**Q6** Partial Depth Repairs: What is your Agency's minimum and/or maximum depth of a partial depth repair?

Minimum Depth	<b>2 inches</b>
Maximum Depth	<b>1/2 of the concrete thickness</b>

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**Q7** Partial Depth Repairs: What is your Agency's expected life of partial depth repair?

**5**

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**Q8** Partial Depth Repairs: Does your Agency have any field verification tests to verify the dowel bars/tie bars are properly grouted/epoxied in-place?

**No**

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**Q9** Dowel Bar Retrofits: Does your Agency have any experience doing dowel bar retrofit repairs?

**Routine (many projects)**

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**Q10** Dowel Bar Retrofits: What is your Agency's expected life of dowel bar retrofit repair?

**15**

---

**Q11** Dowel Bar Retrofits: Does your Agency have any field verification tests to verify the dowel bars are properly grouted in-place?

**No**

---

**Q12** Does your Agency have any warranties associated with concrete pavement rehabilitation?

**No**

---

**Q13** Diamond Grinding: What is your Agency's specification limit for pavement rehabilitation diamond grinding for acceptance (Either International Roughness Index (IRI) or Profile Index (PI))?

PI (in/mi) - blanking band	<b>7 inches/mile - 0.2 blanking band</b>
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**Q14** Diamond Grinding: If your Agency offers a smoothness incentive for diamond grinding, what is your limit to earn an incentive (Either IRI or PI)?

**Respondent skipped this question**

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**Q15** Diamond Grinding: If your Agency has a Percent (%) Improvement Spec, what is the expected % improvement to comply with specifications?

**No**

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**Q16** Slurry Management Practices: Does your Agency allow immediate discharge onto the ground after diamond grinding?

**No**

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**Q17** Slurry Management Practices: Does your Agency require collection of slurry after diamond grinding and dispose off-site? **Yes**

**Q18** Slurry Management Practices: Does your Agency have any other Best Management Practices for slurry? **No**

**Q19** Is your Agency doing any research related to any CPR activities? **No**

**Q20** Do your Agency's maintenance forces perform any CPR work? **Yes - Both**

**Q21** Please attach a link to your Agency's specifications/procedures/spreadsheets/drawings/videos for CPR.

Specifications <http://www.wsdot.wa.gov/publications/manuals/fulltext/M41-10/2016Amended2017-04-03.pdf> see Section 5-01

Standard Drawings [http://www.wsdot.wa.gov/publications/fulltext/Standards/english/PDF/a60.10-03\\_e.pdf](http://www.wsdot.wa.gov/publications/fulltext/Standards/english/PDF/a60.10-03_e.pdf),  
[http://www.wsdot.wa.gov/publications/fulltext/Standards/english/PDF/a60.20-03\\_e.pdf](http://www.wsdot.wa.gov/publications/fulltext/Standards/english/PDF/a60.20-03_e.pdf)

**Q22** Any additional comments? **Respondent skipped this question**

## #6

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Tuesday, August 15, 2017 3:11:21 PM  
**Last Modified:** Tuesday, August 15, 2017 3:45:12 PM  
**Time Spent:** 00:33:51  
**IP Address:** 165.189.255.35

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### Q1 Agency Representative

Name **chad hayes**  
 Agency **Wis.DOT**  
 State / Province **WI**  
 Email **chad.hayes@dot.wi.gov**

**Q2 Full Depth Repairs: What is your Agency's experience doing full depth repairs?** **Routine (many projects)**

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**Q3 Full Depth Repairs: What is your Agency's expected life of full depth repair?** **20**

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**Q4 Full Depth Repairs: Does you Agency have any field verification tests to verify the dowel bars/tie bars are properly grouted/epoxied in-place?** **No**

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**Q5 Partial Depth Repairs: What is your Agency's experience doing partial depth repairs?** **Routine (many projects),**  
 Comments:  
 Used less than full-depth repairs

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**Q6 Partial Depth Repairs: What is your Agency's minimum and/or maximum depth of a partial depth repair?**

Minimum Depth	<b>2</b>
Maximum Depth	<b>4</b>

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**Q7 Partial Depth Repairs: What is your Agency's expected life of partial depth repair?** **10**

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**Q8 Partial Depth Repairs: Does you Agency have any field verification tests to verify the dowel bars/tie bars are properly grouted/epoxied in-place?** **No**

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**Q9 Dowel Bar Retrofits: Does your Agency have any experience doing dowel bar retrofit repairs?** **Routine (many projects)**

---

**Q10 Dowel Bar Retrofits: What is your Agency's expected life of dowel bar retrofit repair?** **15**

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**Q11 Dowel Bar Retrofits: Does your Agency have any field verification tests to verify the dowel bars are properly grouted in-place?** **No**

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**Q12 Does your Agency have any warranties associated with concrete pavement rehabilitation?** **Yes,**  
 If yes, what is the warranty language:  
 Partial Depth - DBR -

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**Q13** Diamond Grinding: What is your Agency's specification limit for pavement rehabilitation diamond grinding for acceptance (Either International Roughness Index (IRI) or Profile Index (PI))?

IRI (in/mi) **65 rural, 115 urban**

**Q14** Diamond Grinding: If your Agency offers a smoothness incentive for diamond grinding, what is your limit to earn an incentive (Either IRI or PI)?

IRI (in/mi) **<55**

**Q15** Diamond Grinding: If your Agency has a Percent (%) Improvement Spec, what is the expected % improvement to comply with specifications? If yes, what is the expected % improvement:  
65

**Q16** Slurry Management Practices: Does your Agency allow immediate discharge onto the ground after diamond grinding? **Yes,**  
Comments:  
Not on all projects.

**Q17** Slurry Management Practices: Does your Agency require collection of slurry after diamond grinding and dispose off-site? **Yes**

**Q18** Slurry Management Practices: Does your Agency have any other Best Management Practices for slurry? **Respondent skipped this question**

**Q19** Is your Agency doing any research related to any CPR activities? **Yes,**  
If yes - what is the research and who is performing the work?:  
Rapid Repair - Dr.  
Cramer

**Q20** Do your Agency's maintenance forces perform any CPR work? **Yes - Both**

**Q21** Please attach a link to your Agency's specifications/procedures/spreadsheets/drawings/videos for CPR.

Specifications <http://wisconsindot.gov/rdwy/stndspec/ss-04-16.pdf#ss416>

Standard Drawings <http://wisconsindot.gov/rdwy/sdd/sd-13-00toc.pdf>



**Q22** Any additional comments?

See SDD 13C8-10

# #7

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Friday, August 18, 2017 3:11:38 PM  
**Last Modified:** Friday, August 18, 2017 3:49:21 PM  
**Time Spent:** 00:37:42  
**IP Address:** 108.59.56.1

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**Q1** Agency Representative

Name	<b>Michael Nelson</b>
Agency	<b>INDOT</b>
State / Province	<b>IN</b>
Email	<b>mnelson@indot.in.gov</b>

**Q2** Full Depth Repairs: What is your Agency's experience doing full depth repairs?

**Routine (many projects),**  
 Comments:  
 In recent years opening to traffic time and strength has become very complicated. We now identify patches as "short" (<= 15' length) or "long" (>15' length). Short patches are opened at 300 psi flexural and long patches are opened at 425 psi flexural.

**Q3** Full Depth Repairs: What is your Agency's expected life of full depth repair? **10**

**Q4** Full Depth Repairs: Does you Agency have any field verification tests to verify the dowel bars/tie bars are properly grouted/epoxied in-place? **No**

**Q5** Partial Depth Repairs: What is your Agency's experience doing partial depth repairs?

**Some (Less than 5 projects)**

Comments:

INDOT has a partial depth patching spec that involves removing the top half of complete slabs, but it is not common and typically full depth removal is done. INDOT recently let four contracts for partial depth joint repairs with a new provision that is similar to the MnDOT process. The contracts are currently under construction.

**Q6** Partial Depth Repairs: What is your Agency's minimum and/or maximum depth of a partial depth repair?

Minimum Depth

**2"**

**Q7** Partial Depth Repairs: What is your Agency's expected life of partial depth repair?

**10**

**Q8** Partial Depth Repairs: Does you Agency have any field verification tests to verify the dowel bars/tie bars are properly grouted/epoxied in-place?

**No**

**Q9** Dowel Bar Retrofits: Does your Agency have any experience doing dowel bar retrofit repairs?

**Routine (many projects)**

Comments:

INDOT does do dowel bar retrofit, but it is typically case-by-case and not large scale.

**Q10** Dowel Bar Retrofits: What is your Agency's expected life of dowel bar retrofit repair?

**5**

**Q11** Dowel Bar Retrofits: Does your Agency have any field verification tests to verify the dowel bars are properly grouted in-place?

**No**

**Q12** Does your Agency have any warranties associated with concrete pavement rehabilitation?

**No**

**Q13** Diamond Grinding: What is your Agency's specification limit for pavement rehabilitation diamond grinding for acceptance (Either International Roughness Index (IRI) or Profile Index (PI))?

IRI (in/mi)

**Does Not Apply**

**Q14** Diamond Grinding: If your Agency offers a smoothness incentive for diamond grinding, what is your limit to earn an incentive (Either IRI or PI)?

IRI (in/mi)

**Does Not Apply**

**Q15** Diamond Grinding: If your Agency has a Percent (%) Improvement Spec, what is the expected % improvement to comply with specifications?

**No**

**Q16** Slurry Management Practices: Does your Agency allow immediate discharge onto the ground after diamond grinding?

**No**

**Q17** Slurry Management Practices: Does your Agency require collection of slurry after diamond grinding and dispose off-site?

**No**

**Q18** Slurry Management Practices: Does your Agency have any other Best Management Practices for slurry?

**No**

**Q19** Is your Agency doing any research related to any CPR activities?

**Yes,**

If yes - what is the research and who is performing the work?:

SPR-4004 - Development of Subgrade Stabilization & Slab Undersealing Solutions for PCC Pavements Restoration and Repairs. The research is intended to provide a solution to void undersealing with hot asphalt material. It is also looking into options to chemically stabilize relatively small areas of patching (one or two slabs) that are difficult to use traditional chemical stabilization methods.

**Q20** Do your Agency's maintenance forces perform any CPR work?

**Yes - Full Depth Repairs** ,

Any additional

comments::

Emergency repairs only

**Q21** Please attach a link to your Agency's specifications/procedures/spreadsheets/drawings/videos for CPR.

**Respondent skipped this question**

**Q22** Any additional comments?

INDOT does not diamond grind or groove PCCP for smoothness. The only exception is bump/profile correction on new pavement if it does not pass the profilograph.

# #8

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Thursday, August 24, 2017 12:40:05 PM  
**Last Modified:** Thursday, August 24, 2017 12:54:44 PM  
**Time Spent:** 00:14:39  
**IP Address:** 165.206.209.230

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## Q1 Agency Representative

Name	<b>Kevin Merryman</b>
Agency	<b>Iowa DOT</b>
State / Province	<b>Iowa</b>
Email	<b>kevin.merryman@iowadot.us</b>

**Q2 Full Depth Repairs: What is your Agency's experience doing full depth repairs?** **Routine (many projects)**

**Q3 Full Depth Repairs: What is your Agency's expected life of full depth repair?** **15**

**Q4 Full Depth Repairs: Does you Agency have any field verification tests to verify the dowel bars/tie bars are properly grouted/epoxied in-place?** **No**

**Q5 Partial Depth Repairs: What is your Agency's experience doing partial depth repairs?** **Routine (many projects)**

**Q6 Partial Depth Repairs: What is your Agency's minimum and/or maximum depth of a partial depth repair?**

Minimum Depth	<b>2 inches</b>
Maximum Depth	<b>1/2 the pavement thickness</b>

**Q7 Partial Depth Repairs: What is your Agency's expected life of partial depth repair?** **15**

**Q8 Partial Depth Repairs: Does you Agency have any field verification tests to verify the dowel bars/tie bars are properly grouted/epoxied in-place?** **No**

<b>Q9</b> Dowel Bar Retrofits: Does your Agency have any experience doing dowel bar retrofit repairs?	<b>Routine (many projects)</b>
<b>Q10</b> Dowel Bar Retrofits: What is your Agency's expected life of dowel bar retrofit repair?	<b>25</b>
<b>Q11</b> Dowel Bar Retrofits: Does your Agency have any field verification tests to verify the dowel bars are properly grouted in-place?	<b>No</b>
<b>Q12</b> Does your Agency have any warranties associated with concrete pavement rehabilitation?	<b>Yes,</b> If yes, what is the warranty language: 30 days for partial depth repairs
<b>Q13</b> Diamond Grinding: What is your Agency's specification limit for pavement rehabilitation diamond grinding for acceptance (Either International Roughness Index (IRI) or Profile Index (PI))?	<b>Respondent skipped this question</b>
<b>Q14</b> Diamond Grinding: If your Agency offers a smoothness incentive for diamond grinding, what is your limit to earn an incentive (Either IRI or PI)?	<b>65 or less for speeds over 45 mph and 115 or less for less than 45 mph</b>
IRI (in/mi)	
<b>Q15</b> Diamond Grinding: If your Agency has a Percent (%) Improvement Spec, what is the expected % improvement to comply with specifications?	If yes, what is the expected % improvement: 3) For extremely rough conditions: the greater of 35% of the pre-grind profile or the aforementioned requirement shall be the required smoothness or less and no bumps exceeding 0.5 inches in 25 feet.
<b>Q16</b> Slurry Management Practices: Does your Agency allow immediate discharge onto the ground after diamond grinding?	<b>Yes,</b> Comments: b. Continuously remove all slurry or residue resulting from the grinding operations. Do not deposit on the slab or shoulder. Leave pavement and paved shoulders in a clean condition. Ensure residue from grinding operations does not flow across lanes occupied by public traffic or into gutters or other drainage facilities. This residue may be spread on the foreslope or removed according to Article 1104.08.

**Q17** Slurry Management Practices: Does your Agency require collection of slurry after diamond grinding and dispose off-site?

**Yes,**  
Comments:  
See above

**Q18** Slurry Management Practices: Does your Agency have any other Best Management Practices for slurry?

**No**

**Q19** Is your Agency doing any research related to any CPR activities?

**Yes,**  
If yes - what is the research and who is performing the work?:  
Improved patching practices -  
WJE

**Q20** Do your Agency's maintenance forces perform any CPR work?

**Yes - Full Depth Repairs**

**Q21** Please attach a link to your Agency's specifications/procedures/spreadsheets/drawings/videos for CPR.

**Respondent skipped this question**

**Q22** Any additional comments?

**Respondent skipped this question**

## #9

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Friday, August 25, 2017 5:40:12 AM  
**Last Modified:** Friday, August 25, 2017 11:05:05 AM  
**Time Spent:** 05:24:52  
**IP Address:** 156.63.133.8

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### Q1 Agency Representative

Name	<b>Craig Landefeld</b>
Agency	<b>Ohio DOT</b>
State / Province	<b>Ohio</b>
Email	<b>craig.landefeld@dot.ohio.gov</b>

**Q2** Full Depth Repairs: What is your Agency's experience doing full depth repairs?

**Routine (many projects)**

**Q3 Full Depth Repairs:** What is your Agency's expected life of full depth repair? **12**

**Q4 Full Depth Repairs:** Does you Agency have any field verification tests to verify the dowel bars/tie bars are properly grouted/epoxied in-place? **No**

**Q5 Partial Depth Repairs:** What is your Agency's experience doing partial depth repairs? **Some (Less than 5 projects)**

**Q6 Partial Depth Repairs:** What is your Agency's minimum and/or maximum depth of a partial depth repair?

Minimum Depth **1.5in**

Maximum Depth **No max but generally no more than 4in**

**Q7 Partial Depth Repairs:** What is your Agency's expected life of partial depth repair? **12**

**Q8 Partial Depth Repairs:** Does you Agency have any field verification tests to verify the dowel bars/tie bars are properly grouted/epoxied in-place? **No**

**Q9 Dowel Bar Retrofits:** Does your Agency have any experience doing dowel bar retrofit repairs?

**Routine (many projects)** ,

Comments:

They have become less prevalent with shorter joint spacing and old project being covered with asphalt.

**Q10 Dowel Bar Retrofits:** What is your Agency's expected life of dowel bar retrofit repair? **12**

**Q11 Dowel Bar Retrofits:** Does your Agency have any field verification tests to verify the dowel bars are properly grouted in-place? **No**

**Q12** Does your Agency have any warranties associated with concrete pavement rehabilitation? **No**

**Q13 Diamond Grinding:** What is your Agency's specification limit for pavement rehabilitation diamond grinding for acceptance (Either International Roughness Index (IRI) or Profile Index (PI))?

IRI (in/mi) **95**

<b>Q14</b> Diamond Grinding: If your Agency offers a smoothness incentive for diamond grinding, what is your limit to earn an incentive (Either IRI or PI)?	Respondent skipped this question
<b>Q15</b> Diamond Grinding: If your Agency has a Percent (%) Improvement Spec, what is the expected % improvement to comply with specifications?	No
<b>Q16</b> Slurry Management Practices: Does your Agency allow immediate discharge onto the ground after diamond grinding?	No
<b>Q17</b> Slurry Management Practices: Does your Agency require collection of slurry after diamond grinding and dispose off-site?	<b>Yes,</b> Comments: Our specification is not very prescriptive it just generally directs them to follow the law.
<b>Q18</b> Slurry Management Practices: Does your Agency have any other Best Management Practices for slurry?	No
<b>Q19</b> Is your Agency doing any research related to any CPR activities?	No
<b>Q20</b> Do your Agency's maintenance forces perform any CPR work?	<b>Yes - Full Depth Repairs</b>
<b>Q21</b> Please attach a link to your Agency's specifications/procedures/spreadsheets/drawings/videos for CPR.	
Specifications	<a href="http://www.dot.state.oh.us/Divisions/ConstructionMgt/OnlineDocs/Pages/2016-Online-Spec-Book.aspx">http://www.dot.state.oh.us/Divisions/ConstructionMgt/OnlineDocs/Pages/2016-Online-Spec-Book.aspx</a>
Procedures	<a href="http://www.dot.state.oh.us/Divisions/ConstructionMgt/Pages/2017-MOP.aspx">http://www.dot.state.oh.us/Divisions/ConstructionMgt/Pages/2017-MOP.aspx</a>
<b>Q22</b> Any additional comments?	Respondent skipped this question

# #10

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Monday, August 28, 2017 3:07:15 PM  
**Last Modified:** Monday, August 28, 2017 3:31:05 PM  
**Time Spent:** 00:23:50  
**IP Address:** 163.191.102.70



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**Q1 Agency Representative**

Name	<b>Steve Gillen</b>
Agency	<b>Illinois Tollway</b>
State / Province	<b>IL</b>
Email	<b>sgillen@getipass.com</b>

**Q2 Full Depth Repairs: What is your Agency's experience doing full depth repairs?**

**Routine (many projects),**  
 Comments:  
 Mostly for application to expressways and interchange ramps. Mainly they consist of performance related accelerated mix designs for placement in the median and outer lanes on weekends, or of precast concrete pavement slabs for the middle lanes. High early strength calcium aluminate or prepackaged repair materials are used only for short life emergency repairs.

**Q3 Full Depth Repairs: What is your Agency's expected life of full depth repair?**

**25**

**Q4 Full Depth Repairs: Does you Agency have any field verification tests to verify the dowel bars/tie bars are properly grouted/epoxied in-place?**

If yes, briefly summarize the verification test:  
 MIT scanning is commonly performed. With full depth repairs performed at the Tollway, gang drills are commonly used for dowels and visually observed to be parallel and aligned before cast-in-place placements

**Q5 Partial Depth Repairs: What is your Agency's experience doing partial depth repairs?**

**Some (Less than 5 projects)**,  
 Comments:  
 Only for surficial repairs on pavements using epoxy or used on bridge approaches and bridge decks.

**Q6 Partial Depth Repairs: What is your Agency's minimum and/or maximum depth of a partial depth repair?**

Minimum Depth

**Enough depth to allow for 1" clearance under top mat of deck or approach rebar.**

Maximum Depth

**To the level of sound concrete with approaches and at no more than 1/2 the depth of a bridge deck.**

**Q7 Partial Depth Repairs: What is your Agency's expected life of partial depth repair?**

**10**

**Q8** Partial Depth Repairs: Does your Agency have any field verification tests to verify the dowel bars/tie bars are properly grouted/epoxied in-place? **If yes, briefly summarize the verification test:**  
 GPR scans performed to locate reinforcement for structures. Not applicable for pavements since partial depth repairs of pavements are only surficial.

**Q9** Dowel Bar Retrofits: Does your Agency have any experience doing dowel bar retrofit repairs? **Routine (many projects)**,  
**Comments:**  
 Once commonly used for mid slab cracking on slabs of 20 ft. length between joints. Now used for remedial action when MIT scanning of new pavements finds misalignment of bars. Retrofits are one of the alternatives for remedial action.

**Q10** Dowel Bar Retrofits: What is your Agency's expected life of dowel bar retrofit repair? **30**

**Q11** Dowel Bar Retrofits: Does your Agency have any field verification tests to verify the dowel bars are properly grouted in-place? **No**

**Q12** Does your Agency have any warranties associated with concrete pavement rehabilitation? **Yes,**  
 If yes, what is the warranty language:  
 It is a one year warranty upon completion of the work that is too long to paste into this box.

**Q13** Diamond Grinding: What is your Agency's specification limit for pavement rehabilitation diamond grinding for acceptance (Either International Roughness Index (IRI) or Profile Index (PI))?

IRI (in/mi) **80 in/mi or less**

**Q14** Diamond Grinding: If your Agency offers a smoothness incentive for diamond grinding, what is your limit to earn an incentive (Either IRI or PI)? **Respondent skipped this question**

**Q15** Diamond Grinding: If your Agency has a Percent (%) Improvement Spec, what is the expected % improvement to comply with specifications? **No**

**Q16** Slurry Management Practices: Does your Agency allow immediate discharge onto the ground after diamond grinding? **No**

**Q17** Slurry Management Practices: Does your Agency require collection of slurry after diamond grinding and dispose off-site?

**Yes,**  
 Comments:  
 Proposed methods of disposal must be submitted to the Tollway for approval.

**Q18** Slurry Management Practices: Does your Agency have any other Best Management Practices for slurry?

**No**

**Q19** Is your Agency doing any research related to any CPR activities?

**No**

**Q20** Do your Agency's maintenance forces perform any CPR work?

**Yes - Partial Depth Repairs,**  
 Any additional comments::  
 Only for short life emergency repairs.

**Q21** Please attach a link to your Agency's specifications/procedures/spreadsheets/drawings/videos for CPR.

**Respondent skipped this question**

**Q22** Any additional comments?

Too many specifications and drawings to attach. Geopolymers may be our next step to research along with precast CRC repairs using UHPC for splice zones.

# #11

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Monday, August 28, 2017 5:10:46 PM  
**Last Modified:** Monday, August 28, 2017 5:25:41 PM  
**Time Spent:** 00:14:55  
**IP Address:** 168.177.119.128

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## Q1 Agency Representative

Name	<b>Scott Nussbaum</b>
Agency	<b>Utah Department of Transportation</b>
State / Province	<b>Utah</b>
Email	<b>snussbaum@utah.gov</b>

**Q2 Full Depth Repairs: What is your Agency's experience doing full depth repairs?** **Routine (many projects)**

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**Q3 Full Depth Repairs: What is your Agency's expected life of full depth repair?** **10**

---

**Q4 Full Depth Repairs: Does you Agency have any field verification tests to verify the dowel bars/tie bars are properly grouted/epoxied in-place?** **No**

---

**Q5 Partial Depth Repairs: What is your Agency's experience doing partial depth repairs?** **Routine (many projects)**

---

**Q6 Partial Depth Repairs: What is your Agency's minimum and/or maximum depth of a partial depth repair?**

Minimum Depth	<b>3"</b>
Maximum Depth	<b>5"</b>

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**Q7 Partial Depth Repairs: What is your Agency's expected life of partial depth repair?** **5**

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**Q8 Partial Depth Repairs: Does you Agency have any field verification tests to verify the dowel bars/tie bars are properly grouted/epoxied in-place?** **No**

---

**Q9 Dowel Bar Retrofits: Does your Agency have any experience doing dowel bar retrofit repairs?** **Routine (many projects)**

---

**Q10 Dowel Bar Retrofits: What is your Agency's expected life of dowel bar retrofit repair?** **15**

---

**Q11 Dowel Bar Retrofits: Does your Agency have any field verification tests to verify the dowel bars are properly grouted in-place?**

If yes, briefly summarize the verification test:  
 In the past, we have routinely core-drilled a small number to verify placement and encasement. We have incorporated test strips into our projects to reduce the number of cores for the project pavement. We are also experimenting with non-destructive dowel bar detection.

---

**Q12 Does your Agency have any warranties associated with concrete pavement rehabilitation?** **No**

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**Q13** Diamond Grinding: What is your Agency's specification limit for pavement rehabilitation diamond grinding for acceptance (Either International Roughness Index (IRI) or Profile Index (PI))?

IRI (in/mi)

**Specifications and smoothness limits and undergoing modification in transition from IRI to PI**

**Q14** Diamond Grinding: If your Agency offers a smoothness incentive for diamond grinding, what is your limit to earn an incentive (Either IRI or PI)?

IRI (in/mi)

**Specifications and smoothness limits and undergoing modification in transition from IRI to PI**

**Q15** Diamond Grinding: If your Agency has a Percent (%) Improvement Spec, what is the expected % improvement to comply with specifications?

**No**

**Q16** Slurry Management Practices: Does your Agency allow immediate discharge onto the ground after diamond grinding?

**No**

**Q17** Slurry Management Practices: Does your Agency require collection of slurry after diamond grinding and dispose off-site?

**Yes**

**Q18** Slurry Management Practices: Does your Agency have any other Best Management Practices for slurry?

**No**

**Q19** Is your Agency doing any research related to any CPR activities?

**No**

**Q20** Do your Agency's maintenance forces perform any CPR work?

**Yes - Full Depth Repairs**

Any additional comments::

The majority of our CPR work is performed by contractors, even isolated repairs and blow-ups. Much of our UDOT maintenance forces work is temporary, i.e. an asphalt patch until we can arrange for a contractor.

**Q21** Please attach a link to your Agency's specifications/procedures/spreadsheets/drawings/videos for CPR.

Specifications

<http://www.udot.utah.gov/main/uconowner.gfn=31730316757114651>

Q22 Any additional comments?

Respondent skipped this question

# #12

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Wednesday, August 23, 2017 1:32:50 PM  
**Last Modified:** Tuesday, August 29, 2017 1:22:47 PM  
**Time Spent:** Over a day  
**IP Address:** 204.24.69.109

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## Q1 Agency Representative

Name	<b>John Staton</b>
Agency	<b>Michigan DOT</b>
State / Province	<b>MI</b>
Email	<b>statonj@michigan.gov</b>

**Q2 Full Depth Repairs: What is your Agency's experience doing full depth repairs?**

**Routine (many projects),**  
 Comments:  
 Very frequently used for many decades. Standard patch sizes are 4' with contraction joints. Concrete mixture type is selected based on open to traffic requirements. The MDOT concrete Grade P-NC is commonly used, which is 7 sacks of Portland cement with the minimum volume of non-chloride accelerator to achieve 300 psi flexural strength required for open to traffic. In the past, our standard patching mixture used calcium chloride along with a 9-sack concrete mixture to achieve early-open strengths. However, those patches tended to only last about 5-7 years. When we eliminate calcium chloride with reduced cement content, we can expect the patch to last up to 15 years. See Standard Plan R-44 and spec book section 603 links at the end.

**Q3 Full Depth Repairs: What is your Agency's expected life of full depth repair?** **12**

**Q4 Full Depth Repairs: Does you Agency have any field verification tests to verify the dowel bars/tie bars are properly grouted/epoxied in-place?** **Yes**

**Q5** Partial Depth Repairs: What is your Agency's experience doing partial depth repairs?

**Routine (many projects),**

Comments:

Partial depth repairs have been done on joints and for spall repairs. We have had poor results with partial depth longitudinal and transverse joint repairs. We have tried with several materials such as latex, standard redi-mix concrete, and epoxy materials. Failures usually occur as a result of inconsistent mixtures as well as poor quality control of preparation of the substrate. We have had good experiences with intermediate spall repair. We have used prepackaged fast-set, standard redi-mix concrete, epoxy materials, and some non-cementitious materials for this type of repair

**Q6** Partial Depth Repairs: What is your Agency's minimum and/or maximum depth of a partial depth repair?

Minimum Depth

**2**

Maximum Depth

**1/2 pavement thickness**

**Q7** Partial Depth Repairs: What is your Agency's expected life of partial depth repair?

**5**

**Q8** Partial Depth Repairs: Does you Agency have any field verification tests to verify the dowel bars/tie bars are properly grouted/epoxied in-place?

**No**

**Q9** Dowel Bar Retrofits: Does your Agency have any experience doing dowel bar retrofit repairs?

**Routine (many projects),**

Comments:

It is a tool in our toolbox, but it isn't used very often. Contractors typically would rather do a full depth repair than the retrofit.

**Q10** Dowel Bar Retrofits: What is your Agency's expected life of dowel bar retrofit repair?

**10**

**Q11** Dowel Bar Retrofits: Does your Agency have any field verification tests to verify the dowel bars are properly grouted in-place?

**Yes**

**Q12** Does your Agency have any warranties associated with concrete pavement rehabilitation?

**No**

**Q13** Diamond Grinding: What is your Agency's specification limit for pavement rehabilitation diamond grinding for acceptance (Either International Roughness Index (IRI) or Profile Index (PI))?

IRI (in/mi)

**100 for Design Speed 30-50, 75 for Design Speed >50**

**Q14** Diamond Grinding: If your Agency offers a smoothness incentive for diamond grinding, what is your limit to earn an incentive (Either IRI or PI)?

IRI (in/mi)

**N/A**

PI (in/mi) - blanking band

**N/A**

**Q15** Diamond Grinding: If your Agency has a Percent (%) Improvement Spec, what is the expected % improvement to comply with specifications?

**Yes**

**Q16** Slurry Management Practices: Does your Agency allow immediate discharge onto the ground after diamond grinding?

**Yes,**

Comments:

Yes, but the slurry must have a pH below 12.5 percent and it cannot be in urban areas

**Q17** Slurry Management Practices: Does your Agency require collection of slurry after diamond grinding and dispose off-site?

**Yes,**

Comments:

Yes, but there is a land permit from the Department of Environmental Quality that waives the collection requirement and allows discharge onto the land if the pH is below 12.5 percent and the job is in a rural area. Urban areas still require collection.

**Q18** Slurry Management Practices: Does your Agency have any other Best Management Practices for slurry?

**Yes,**

If yes, please provide a link. Any additional comments?:

Treat the slurry before release if the pH is above 12.5 percent.

**Q19** Is your Agency doing any research related to any CPR activities?

**Yes,**

If yes - what is the research and who is performing the work?:

MDOT has participated in several past and current research projects to study issues related to concrete pavement deterioration and preservation. We has participated on a NCHRP project team to study the durability of early-open concrete mixtures. We are also involved with research to study the effectiveness of CPR treatments.



**Q20** Do your Agency's maintenance forces perform any CPR work?

**Yes - , Both**

Any additional comments::

Capital Preventive Maintenance work is contracted out while scheduled maintenance and emergency repair are performed in-house.

**Q21** Please attach a link to your Agency's specifications/procedures/spreadsheets/drawings/videos for CPR.

Specifications

<http://mdotcf.state.mi.us/public/specbook/files/2012/603%20Conc%20Pavt%20Restoration.pdf>

Spreadsheets

[http://www.michigan.gov/documents/mdot/MDOT\\_PCC\\_PWL\\_Worksheet\\_384094\\_7.xls](http://www.michigan.gov/documents/mdot/MDOT_PCC_PWL_Worksheet_384094_7.xls)

Standard Drawings

<http://mdotcf.state.mi.us/public/design/files/englishstandarplans/files/R044f.pdf>

**Q22** Any additional comments?

Respondent skipped this question

## #13

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Wednesday, August 30, 2017 7:45:20 AM  
**Last Modified:** Wednesday, August 30, 2017 9:01:58 AM  
**Time Spent:** 01:16:38  
**IP Address:** 163.191.13.70

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**Q1** Agency Representative

Name	<b>Charles Wienrank</b>
Agency	<b>Illinois Department of Transportation</b>
State / Province	<b>Illinois</b>
Email	<b>Charles.Wienrank@illinois.gov</b>

**Q2** Full Depth Repairs: What is your Agency's experience doing full depth repairs?

**Routine (many projects),**

Comments:

Illinois performs full-depth repairs on both jointed plain concrete (JPC) and continuously reinforced concrete (CRC) pavements.

**Q3 Full Depth Repairs:** What is your Agency's expected life of full depth repair? **10**

**Q4 Full Depth Repairs:** Does you Agency have any field verification tests to verify the dowel bars/tie bars are properly grouted/epoxied in-place?

If yes, briefly summarize the verification test:

Illinois does not have a standardized test for checking dowel bar placement; however, Resident Engineers are supposed to physically pull on the bars to ensure chemical adhesive was used in installation.

**Q5 Partial Depth Repairs:** What is your Agency's experience doing partial depth repairs?

**Routine (many projects),**

Comments:

Seldom do traditional partial depth repairs at joints in JPC pavements. Partial depth repairs on CRC pavements limits depth to above longitudinal reinforcement. This repair treatment is typically used prior to a hot-mix asphalt overlay.

**Q6 Partial Depth Repairs:** What is your Agency's minimum and/or maximum depth of a partial depth repair?

Minimum Depth

**job specific - called out in plans**

Maximum Depth

**JPC - job specific - called out in plans; CRC - must stay above steel**

**Q7 Partial Depth Repairs:** What is your Agency's expected life of partial depth repair? **8**

**Q8 Partial Depth Repairs:** Does you Agency have any field verification tests to verify the dowel bars/tie bars are properly grouted/epoxied in-place?

**No**

**Q9 Dowel Bar Retrofits:** Does your Agency have any experience doing dowel bar retrofit repairs?

**Some (Less than 5 projects)**

Comments:

Illinois uses dowels in all JPC pavements on state maintained routes, so seldom a need for dowel bar retrofit. May have been used by local agencies on pavements that were built without load transfer dowel bars.

**Q10 Dowel Bar Retrofits:** What is your Agency's expected life of dowel bar retrofit repair? **10**

**Q11** Dowel Bar Retrofits: Does your Agency have any field verification tests to verify the dowel bars are properly grouted in-place?

If yes, briefly summarize the verification test:

Inspect installation prior to and after grouting. After installation, could check load transfer efficiency with Falling Weight Deflectometer.

**Q12** Does your Agency have any warranties associated with concrete pavement rehabilitation?

**No**

**Q13** Diamond Grinding: What is your Agency's specification limit for pavement rehabilitation diamond grinding for acceptance (Either International Roughness Index (IRI) or Profile Index (PI))?

IRI (in/mi)

**Seldom used**

PI (in/mi) - blanking band

**Seldom used**

**Q14** Diamond Grinding: If your Agency offers a smoothness incentive for diamond grinding, what is your limit to earn an incentive (Either IRI or PI)?

IRI (in/mi)

**None**

PI (in/mi) - blanking band

**None**

**Q15** Diamond Grinding: If your Agency has a Percent (%) Improvement Spec, what is the expected % improvement to comply with specifications?

**No**

**Q16** Slurry Management Practices: Does your Agency allow immediate discharge onto the ground after diamond grinding?

**No**

**Q17** Slurry Management Practices: Does your Agency require collection of slurry after diamond grinding and dispose off-site?

**Yes**

**Q18** Slurry Management Practices: Does your Agency have any other Best Management Practices for slurry?

**No**

**Q19** Is your Agency doing any research related to any CPR activities?

**No**

**Q20** Do your Agency's maintenance forces perform any CPR work?

**Yes - Full Depth Repairs** ,  
Any additional comments::  
This is on a limited basis and only used for emergency situations.

**Q21** Please attach a link to your Agency's specifications/procedures/spreadsheets/drawings/videos for CPR.

Specifications

<http://www.idot.illinois.gov/Assets/uploads/files/Doing-Business/Manuals-Guides-&-Handbooks/Highways/Construction/Standard-Specifications/Standard%20Specifications%20for%20Road%20and%20Bridge%20Construction%202016.pdf>

Standard Drawings

<http://www.idot.illinois.gov/Assets/uploads/files/Doing-Business/Standards/Highway-Standards/Rev%202019%20Complete%20Set.pdf>

**Q22** Any additional comments?

The two standards for full-depth patching are:

CRC Pavement -  
219-442001-04\_classapatches.pdf

JPC Pavement -  
219-442101-07\_classbpatches.pdf

# #14

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Wednesday, August 30, 2017 10:43:23 AM  
**Last Modified:** Wednesday, August 30, 2017 10:59:40 AM  
**Time Spent:** 00:16:16  
**IP Address:** 158.123.8.110

**Q1 Agency Representative**

Name	<b>Jose Lima</b>
Agency	<b>RIDOT</b>
State / Province	<b>RI</b>
Email	<b>jose.lima@dot.ri.gov</b>

<b>Q2 Full Depth Repairs: What is your Agency's experience doing full depth repairs?</b>	<b>Some (Less than 5 projects)</b> Comments: Rhode Island has very few concrete roads. The few we have are basically rigid road base.
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<b>Q3 Full Depth Repairs: What is your Agency's expected life of full depth repair?</b>	<b>25</b>
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<b>Q4 Full Depth Repairs: Does you Agency have any field verification tests to verify the dowel bars/tie bars are properly grouted/epoxied in-place?</b>	<b>No</b>
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<b>Q5 Partial Depth Repairs: What is your Agency's experience doing partial depth repairs?</b>	<b>None (never tried),</b> Comments: Most partial repairs are conducted with asphalt hot mix
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<b>Q6 Partial Depth Repairs: What is your Agency's minimum and/or maximum depth of a partial depth repair?</b>	<b>Respondent skipped this question</b>
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<b>Q7 Partial Depth Repairs: What is your Agency's expected life of partial depth repair?</b>	<b>Respondent skipped this question</b>
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<b>Q8 Partial Depth Repairs: Does you Agency have any field verification tests to verify the dowel bars/tie bars are properly grouted/epoxied in-place?</b>	<b>No</b>
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<b>Q9 Dowel Bar Retrofits: Does your Agency have any experience doing dowel bar retrofit repairs?</b>	<b>None (never tried)</b>
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<b>Q10 Dowel Bar Retrofits: What is your Agency's expected life of dowel bar retrofit repair?</b>	<b>Respondent skipped this question</b>
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**Q11** Dowel Bar Retrofits: Does your Agency have any field verification tests to verify the dowel bars are properly grouted in-place? **No**

**Q12** Does your Agency have any warranties associated with concrete pavement rehabilitation? **No**

**Q13** Diamond Grinding: What is your Agency's specification limit for pavement rehabilitation diamond grinding for acceptance (Either International Roughness Index (IRI) or Profile Index (PI))?

IRI (in/mi) **RIDOT does not diamond grind**

**Q14** Diamond Grinding: If your Agency offers a smoothness incentive for diamond grinding, what is your limit to earn an incentive (Either IRI or PI)? **Respondent skipped this question**

**Q15** Diamond Grinding: If your Agency has a Percent (%) Improvement Spec, what is the expected % improvement to comply with specifications? **No**

**Q16** Slurry Management Practices: Does your Agency allow immediate discharge onto the ground after diamond grinding? **No**

**Q17** Slurry Management Practices: Does your Agency require collection of slurry after diamond grinding and dispose off-site? **Yes,**  
Comments:  
RIDOT diamond ground one bridge which required collection of slurry and disposal off-site

**Q18** Slurry Management Practices: Does your Agency have any other Best Management Practices for slurry? **No**

**Q19** Is your Agency doing any research related to any CPR activities? **No**

**Q20** Do your Agency's maintenance forces perform any CPR work? **No**

**Q21** Please attach a link to your Agency's specifications/procedures/spreadsheets/drawings/videos for CPR. **Respondent skipped this question**

**Q22** Any additional comments? **Respondent skipped this question**

# #15

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Wednesday, August 30, 2017 10:41:39 AM  
**Last Modified:** Wednesday, August 30, 2017 11:05:12 AM  
**Time Spent:** 00:23:33  
**IP Address:** 164.154.156.59

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## Q1 Agency Representative

Name	<b>Darin Hodges</b>
Agency	<b>South Dakota DOT</b>
State / Province	<b>SD</b>
Email	<b>darin.hodges@state.sd.us</b>

**Q2 Full Depth Repairs: What is your Agency's experience doing full depth repairs?** **Routine (many projects)**

**Q3 Full Depth Repairs: What is your Agency's expected life of full depth repair?** **15**

**Q4 Full Depth Repairs: Does you Agency have any field verification tests to verify the dowel bars/tie bars are properly grouted/epoxied in-place?** **No**

**Q5 Partial Depth Repairs: What is your Agency's experience doing partial depth repairs?** **Routine (many projects)**

**Q6 Partial Depth Repairs: What is your Agency's minimum and/or maximum depth of a partial depth repair?**

Minimum Depth	<b>2"</b>
Maximum Depth	<b>Depth of dowel bars.</b>

**Q7 Partial Depth Repairs: What is your Agency's expected life of partial depth repair?** **10**

**Q8 Partial Depth Repairs: Does you Agency have any field verification tests to verify the dowel bars/tie bars are properly grouted/epoxied in-place?** **No**

<b>Q9</b> Dowel Bar Retrofits: Does your Agency have any experience doing dowel bar retrofit repairs?	<b>Routine (many projects)</b>
<b>Q10</b> Dowel Bar Retrofits: What is your Agency's expected life of dowel bar retrofit repair?	<b>15</b>
<b>Q11</b> Dowel Bar Retrofits: Does your Agency have any field verification tests to verify the dowel bars are properly grouted in-place?	<b>No</b>
<b>Q12</b> Does your Agency have any warranties associated with concrete pavement rehabilitation?	<b>No</b>
<b>Q13</b> Diamond Grinding: What is your Agency's specification limit for pavement rehabilitation diamond grinding for acceptance (Either International Roughness Index (IRI) or Profile Index (PI))?  IRI (in/mi)	<b>80</b>
<b>Q14</b> Diamond Grinding: If your Agency offers a smoothness incentive for diamond grinding, what is your limit to earn an incentive (Either IRI or PI)?  IRI (in/mi)	<b>60</b>
<b>Q15</b> Diamond Grinding: If your Agency has a Percent (%) Improvement Spec, what is the expected % improvement to comply with specifications?	<b>No</b>
<b>Q16</b> Slurry Management Practices: Does your Agency allow immediate discharge onto the ground after diamond grinding?	<b>Yes</b>
<b>Q17</b> Slurry Management Practices: Does your Agency require collection of slurry after diamond grinding and dispose off-site?	<b>No</b>
<b>Q18</b> Slurry Management Practices: Does your Agency have any other Best Management Practices for slurry?	<b>No</b>
<b>Q19</b> Is your Agency doing any research related to any CPR activities?	<b>Yes,</b> If yes - what is the research and who is performing the work?: Doing test sections on curled and warped PCCP to determine how to maintain the smoothness after grinding. This is informal work by the SDDOT working with the IGGA.



**Q20** Do your Agency's maintenance forces perform any CPR work? **No**

**Q21** Please attach a link to your Agency's specifications/procedures/spreadsheets/drawings/videos for CPR.

Specifications	<b>Section 390 "Spall Repair" @ <a href="http://www.sddot.com/business/contractors/specs/2015specbook/Default.aspx">http://www.sddot.com/business/contractors/specs/2015specbook/Default.aspx</a></b>
Procedures	<b>Not published online</b>
Spreadsheets	<b>NA</b>
Standard Drawings	<b>Not published online</b>
Videos	<b>NA</b>

**Q22** Any additional comments? **Respondent skipped this question**

# #16

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Wednesday, August 30, 2017 3:20:24 PM  
**Last Modified:** Wednesday, August 30, 2017 4:00:08 PM  
**Time Spent:** 00:39:44  
**IP Address:** 164.119.51.4

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**Q1** Agency Representative

Name	<b>Brandon Varilek</b>
Agency	<b>NDOT</b>
State / Province	<b>NE</b>
Email	<b>brandon.varilek@nebraska.gov</b>

**Q2** Full Depth Repairs: What is your Agency's experience doing full depth repairs? **Routine (many projects),**  
 Comments:  
 Full depth PCC repairs are performed as needed on every concrete pavement prior to resurfacing and every composite prior to resurfacing.

**Q3** Full Depth Repairs: What is your Agency's expected life of full depth repair? **15**

**Q4 Full Depth Repairs:** Does your Agency have any field verification tests to verify the dowel bars/tie bars are properly grouted/epoxied in-place?

If yes, briefly summarize the verification test:

We have tested pull-out strengths of tie bars placed in new, plastic concrete to evaluate tie bar placement methods. We intend to perform the same testing in repair situations but have not done so yet.

**Q5 Partial Depth Repairs:** What is your Agency's experience doing partial depth repairs?

**Routine (many projects),**

Comments:

We no longer perform partial depth repairs on mainline pavement that will be left exposed. We continue to perform partial depth repairs on exposed shoulders and mainline/shoulders that will receive an HMA overlay.

**Q6 Partial Depth Repairs:** What is your Agency's minimum and/or maximum depth of a partial depth repair?

Minimum Depth

**T/2**

Maximum Depth

**T/2**

**Q7 Partial Depth Repairs:** What is your Agency's expected life of partial depth repair?

**15**

**Q8 Partial Depth Repairs:** Does your Agency have any field verification tests to verify the dowel bars/tie bars are properly grouted/epoxied in-place?

**No**

**Q9 Dowel Bar Retrofits:** Does your Agency have any experience doing dowel bar retrofit repairs?

**Routine (many projects),**

Comments:

NE performed many DBRs years ago. We have only performed a few in the last 10 years as we have few candidates left. We have been doweled pavements since approximately 2000. There are few un-doweled, exposed concrete pavements remaining w/out deterioration from Alkali Silica Reaction.

**Q10 Dowel Bar Retrofits:** What is your Agency's expected life of dowel bar retrofit repair?

**15**

**Q11 Dowel Bar Retrofits:** Does your Agency have any field verification tests to verify the dowel bars are properly grouted in-place?

**No**

<b>Q12</b> Does your Agency have any warranties associated with concrete pavement rehabilitation?	<b>No</b>
<b>Q13</b> Diamond Grinding: What is your Agency's specification limit for pavement rehabilitation diamond grinding for acceptance (Either International Roughness Index (IRI) or Profile Index (PI))?	<b>Respondent skipped this question</b>
<b>Q14</b> Diamond Grinding: If your Agency offers a smoothness incentive for diamond grinding, what is your limit to earn an incentive (Either IRI or PI)?	<b>Respondent skipped this question</b>
<b>Q15</b> Diamond Grinding: If your Agency has a Percent (%) Improvement Spec, what is the expected % improvement to comply with specifications?	<b>No</b>
<b>Q16</b> Slurry Management Practices: Does your Agency allow immediate discharge onto the ground after diamond grinding?	<b>Yes,</b> Comments: Slurry is collected in urban areas. It may be discharged onto the ground in rural areas if several conditions are met. Conditions are based partially on a NDOR/UNL research project on slurry impacts to vegetation.
<b>Q17</b> Slurry Management Practices: Does your Agency require collection of slurry after diamond grinding and dispose off-site?	<b>Yes,</b> Comments: See above.
<b>Q18</b> Slurry Management Practices: Does your Agency have any other Best Management Practices for slurry?	<b>No</b>
<b>Q19</b> Is your Agency doing any research related to any CPR activities?	<b>Yes,</b> If yes - what is the research and who is performing the work?: NDOT and UNL have a current research project to develop a more durable PCC repair mix. Our standard paving mix is used for repair of multilane facilities when a lane can be shut down for 5+ days. On rural, two lane roads that must be open w/in 4-8 hours we use our Pavement Repair (PR) mix that often utilizes chloride accelerators and does not mitigate ASR leading to durability issues.
<b>Q20</b> Do your Agency's maintenance forces perform any CPR work?	<b>Yes - Full Depth Repairs</b>

**Q21** Please attach a link to your Agency's specifications/procedures/spreadsheets/drawings/videos for CPR.

Respondent skipped this question

**Q22** Any additional comments?

Specifications and Standard Drawings can be supplied in PDF form on request. Specs for #13 & #14 were not immediately available but can also be provided.

# #17

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Thursday, August 31, 2017 3:36:47 PM  
**Last Modified:** Thursday, August 31, 2017 3:51:05 PM  
**Time Spent:** 00:14:17  
**IP Address:** 167.7.17.3

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**Q1** Agency Representative

Name	<b>Jesse Thompson</b>
Agency	<b>SCDOT</b>
State / Province	<b>SC</b>
Email	<b>Thompsonju@scdot.org</b>

**Q2** Full Depth Repairs: What is your Agency's experience doing full depth repairs?

**Routine (many projects),**  
 Comments:  
 good success, been doing them for years on CRC and JPCP

**Q3** Full Depth Repairs: What is your Agency's expected life of full depth repair?

**20**

**Q4** Full Depth Repairs: Does you Agency have any field verification tests to verify the dowel bars/tie bars are properly grouted/epoxied in-place?

If yes, briefly summarize the verification test:  
 visual

**Q5** Partial Depth Repairs: What is your Agency's experience doing partial depth repairs?

**Some (Less than 5 projects)**

Comments:

we have not had good success with partial depth repairs. We utilize them occasionally, dependent on project circumstances but prefer to go to full depth repairs.

**Q6** Partial Depth Repairs: What is your Agency's minimum and/or maximum depth of a partial depth repair?

**Respondent skipped this question**

**Q7** Partial Depth Repairs: What is your Agency's expected life of partial depth repair?

**Respondent skipped this question**

**Q8** Partial Depth Repairs: Does your Agency have any field verification tests to verify the dowel bars/tie bars are properly grouted/epoxied in-place?

**No**

**Q9** Dowel Bar Retrofits: Does your Agency have any experience doing dowel bar retrofit repairs?

**None (never tried),**

Comments:

We have recently looked into this on 2 projects but have not performed any DBR work.

**Q10** Dowel Bar Retrofits: What is your Agency's expected life of dowel bar retrofit repair?

**Respondent skipped this question**

**Q11** Dowel Bar Retrofits: Does your Agency have any field verification tests to verify the dowel bars are properly grouted in-place?

**No**

**Q12** Does your Agency have any warranties associated with concrete pavement rehabilitation?

**Yes,**

If yes, what is the warranty language:

It varies on projects but our standard specifications state 45 days on full depth patches.

**Q13** Diamond Grinding: What is your Agency's specification limit for pavement rehabilitation diamond grinding for acceptance (Either International Roughness Index (IRI) or Profile Index (PI))?

**Respondent skipped this question**

**Q14** Diamond Grinding: If your Agency offers a smoothness incentive for diamond grinding, what is your limit to earn an incentive (Either IRI or PI)?

IRI (in/mi) **100% pay is 63 - 78 in/mi**

**Q15** Diamond Grinding: If your Agency has a Percent (%) Improvement Spec, what is the expected % improvement to comply with specifications? **No**

**Q16** Slurry Management Practices: Does your Agency allow immediate discharge onto the ground after diamond grinding? **Yes,**  
 Comments:  
 We generally accept IGGA bmp's. However, we are in discussions with the Department of Health and Environmental Control to establish accepted methods in SC.

**Q17** Slurry Management Practices: Does your Agency require collection of slurry after diamond grinding and dispose off-site? **Yes,**  
 Comments:  
 Dependent on PH in accordance with IGGA bmp's

**Q18** Slurry Management Practices: Does your Agency have any other Best Management Practices for slurry? **No**

**Q19** Is your Agency doing any research related to any CPR activities? **No**

**Q20** Do your Agency's maintenance forces perform any CPR work? **Yes - , Both**  
 Any additional comments::  
 Very minimally in emergency situations. 99.9% of CPR work is done through contractors.

**Q21** Please attach a link to your Agency's specifications/procedures/spreadsheets/drawings/videos for CPR. **Respondent skipped this question**

**Q22** Any additional comments?

We are working on development of CPR standard drawings but they are not available at this time.

# #18

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Tuesday, September 05, 2017 9:57:15 AM  
**Last Modified:** Tuesday, September 05, 2017 1:21:25 PM  
**Time Spent:** 03:24:09  
**IP Address:** 161.7.59.18

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## Q1 Agency Representative

Name	<b>Paul Bushnell</b>
Agency	<b>Montana Department of Transportation</b>
State / Province	<b>Montana</b>
Email	<b>pbushnell@mt.gov</b>

<b>Q2 Full Depth Repairs: What is your Agency's experience doing full depth repairs?</b>	<b>Some (Less than 5 projects)</b>
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<b>Q3 Full Depth Repairs: What is your Agency's expected life of full depth repair?</b>	<b>Respondent skipped this question</b>
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<b>Q4 Full Depth Repairs: Does you Agency have any field verification tests to verify the dowel bars/tie bars are properly grouted/epoxied in-place?</b>	<b>No</b>
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<b>Q5 Partial Depth Repairs: What is your Agency's experience doing partial depth repairs?</b>	<b>Some (Less than 5 projects)</b>
--	------------------------------------

## Q6 Partial Depth Repairs: What is your Agency's minimum and/or maximum depth of a partial depth repair?

Minimum Depth	<b>1 1/2-inches</b>
Maximum Depth	<b>1/3 of slab with 12: by 4" width</b>

<b>Q7 Partial Depth Repairs: What is your Agency's expected life of partial depth repair?</b>	<b>20</b>
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<b>Q8 Partial Depth Repairs: Does you Agency have any field verification tests to verify the dowel bars/tie bars are properly grouted/epoxied in-place?</b>	<b>No</b>
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<b>Q9</b> Dowel Bar Retrofits: Does your Agency have any experience doing dowel bar retrofit repairs?	<b>Some (Less than 5 projects)</b>
<b>Q10</b> Dowel Bar Retrofits: What is your Agency's expected life of dowel bar retrofit repair?	<b>20</b>
<b>Q11</b> Dowel Bar Retrofits: Does your Agency have any field verification tests to verify the dowel bars are properly grouted in-place?	<b>No</b>
<b>Q12</b> Does your Agency have any warranties associated with concrete pavement rehabilitation?	<b>No</b>
<b>Q13</b> Diamond Grinding: What is your Agency's specification limit for pavement rehabilitation diamond grinding for acceptance (Either International Roughness Index (IRI) or Profile Index (PI))?	
IRI (in/mi)	<b>N/A</b>
PI (in/mi) - blanking band	<b>N/A</b>
<b>Q14</b> Diamond Grinding: If your Agency offers a smoothness incentive for diamond grinding, what is your limit to earn an incentive (Either IRI or PI)?	
IRI (in/mi)	<b>N/A</b>
PI (in/mi) - blanking band	<b>N/A</b>
<b>Q15</b> Diamond Grinding: If your Agency has a Percent (%) Improvement Spec, what is the expected % improvement to comply with specifications?	<b>No</b>
<b>Q16</b> Slurry Management Practices: Does your Agency allow immediate discharge onto the ground after diamond grinding?	<b>No</b>
<b>Q17</b> Slurry Management Practices: Does your Agency require collection of slurry after diamond grinding and dispose off-site?	<b>Yes</b>
<b>Q18</b> Slurry Management Practices: Does your Agency have any other Best Management Practices for slurry?	<b>No</b>
<b>Q19</b> Is your Agency doing any research related to any CPR activities?	<b>No</b>



**Q20** Do your Agency's maintenance forces perform any CPR work? **No**

**Q21** Please attach a link to your Agency's specifications/procedures/spreadsheets/drawings/videos for CPR. **Respondent skipped this question**

**Q22** Any additional comments? **Respondent skipped this question**

# #19

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Tuesday, September 05, 2017 10:37:04 AM  
**Last Modified:** Tuesday, September 05, 2017 1:31:40 PM  
**Time Spent:** 02:54:35  
**IP Address:** 165.201.162.178

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**Q1** Agency Representative

Name	<b>Rick Barezinsky</b>
Agency	<b>Kansas DOT</b>
State / Province	<b>Kansas</b>
Email	<b>rick.barezinsky@ks.gov</b>

**Q2** Full Depth Repairs: What is your Agency's experience doing full depth repairs? **Routine (many projects),**  
 Comments:  
 (SS 833) (Standard Drawing 721 and 721B)

**Q3** Full Depth Repairs: What is your Agency's expected life of full depth repair? **7**

**Q4** Full Depth Repairs: Does you Agency have any field verification tests to verify the dowel bars/tie bars are properly grouted/epoxied in-place? **If yes, briefly summarize the verification test:**  
 Other than inspection, we do not have any additional verification tests.

**Q5** Partial Depth Repairs: What is your Agency's experience doing partial depth repairs? **Routine (many projects),**  
 Comments:  
 (SS 833) (std dwg 719A and 719B)

**Q6** Partial Depth Repairs: What is your Agency's minimum and/or maximum depth of a partial depth repair?

Minimum Depth	<b>2"</b>
Maximum Depth	<b>4", though not absolute</b>

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**Q7** Partial Depth Repairs: What is your Agency's expected life of partial depth repair?

**5**

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**Q8** Partial Depth Repairs: Does your Agency have any field verification tests to verify the dowel bars/tie bars are properly grouted/epoxied in-place?

**No**

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**Q9** Dowel Bar Retrofits: Does your Agency have any experience doing dowel bar retrofit repairs?

**Routine (many projects)** ,  
 Comments:  
 (SS 504) (std dwg RD723)

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**Q10** Dowel Bar Retrofits: What is your Agency's expected life of dowel bar retrofit repair?

**20**

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**Q11** Dowel Bar Retrofits: Does your Agency have any field verification tests to verify the dowel bars are properly grouted in-place?

**No**

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**Q12** Does your Agency have any warranties associated with concrete pavement rehabilitation?

**No**

---

**Q13** Diamond Grinding: What is your Agency's specification limit for pavement rehabilitation diamond grinding for acceptance (Either International Roughness Index (IRI) or Profile Index (PI))?

PI (in/mi) - blanking band	<b>35% of the control or 30 in/mi, whichever is greater - 0 Blanking band</b>
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**Q14** Diamond Grinding: If your Agency offers a smoothness incentive for diamond grinding, what is your limit to earn an incentive (Either IRI or PI)?

PI (in/mi) - blanking band	<b>begins at 18.0 in/mi</b>
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**Q15** Diamond Grinding: If your Agency has a Percent (%) Improvement Spec, what is the expected % improvement to comply with specifications?

If yes, what is the expected % improvement:  
 35% of the control or 30 in/mi, whichever is greater, (SS 838)

---

**Q16** Slurry Management Practices: Does your Agency allow immediate discharge onto the ground after diamond grinding?

**No,**

Comments:

Must use vacuum equipment or other continuous method to remove grinding slurry and residue. (SS 838)

**Q17** Slurry Management Practices: Does your Agency require collection of slurry after diamond grinding and dispose off-site?

**Yes**

**Q18** Slurry Management Practices: Does your Agency have any other Best Management Practices for slurry?

**No**

**Q19** Is your Agency doing any research related to any CPR activities?

**No**

**Q20** Do your Agency's maintenance forces perform any CPR work?

**Yes - ,**

**Both**

Any additional comments::

Maintenance is normally limited to spray patching (partial depth) or full depth patching with HMA. There are occasions that concrete is used by maintenance to patch, but this is rare.

**Q21** Please attach a link to your Agency's specifications/procedures/spreadsheets/drawings/videos for CPR.

Specifications

<https://www.ksdot.org/bureaus/burConsMain/specprov/2015specprov.asp>

Standard Drawings

<https://kart.ksdot.org/>

**Q22** Any additional comments?

Respondent skipped this question

## #20

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Tuesday, September 05, 2017 10:05:11 AM  
**Last Modified:** Tuesday, September 05, 2017 3:06:48 PM  
**Time Spent:** 05:01:36  
**IP Address:** 199.90.35.10

**Q1 Agency Representative**

Name	<b>Brian Hunter</b>
Agency	<b>NCDOT</b>
State / Province	<b>NC</b>
Email	<b>bhunter@ncdot.gov</b>

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**Q2 Full Depth Repairs: What is your Agency's experience doing full depth repairs?** **Routine (many projects)**

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**Q3 Full Depth Repairs: What is your Agency's expected life of full depth repair?** **30**

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**Q4 Full Depth Repairs: Does you Agency have any field verification tests to verify the dowel bars/tie bars are properly grouted/epoxied in-place?** **No**

---

**Q5 Partial Depth Repairs: What is your Agency's experience doing partial depth repairs?** **Some (Less than 5 projects)**

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**Q6 Partial Depth Repairs: What is your Agency's minimum and/or maximum depth of a partial depth repair?**

Minimum Depth	<b>4"</b>
Maximum Depth	<b>Depends on depth of dowels</b>

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**Q7 Partial Depth Repairs: What is your Agency's expected life of partial depth repair?** **Respondent skipped this question**

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**Q8 Partial Depth Repairs: Does you Agency have any field verification tests to verify the dowel bars/tie bars are properly grouted/epoxied in-place?** **No**

---

**Q9 Dowel Bar Retrofits: Does your Agency have any experience doing dowel bar retrofit repairs?** **Some (Less than 5 projects)**

---

**Q10 Dowel Bar Retrofits: What is your Agency's expected life of dowel bar retrofit repair?** **30**

---

**Q11 Dowel Bar Retrofits: Does your Agency have any field verification tests to verify the dowel bars are properly grouted in-place?** **No**

---

**Q12** Does your Agency have any warranties associated with concrete pavement rehabilitation? **No**

**Q13** Diamond Grinding: What is your Agency's specification limit for pavement rehabilitation diamond grinding for acceptance (Either International Roughness Index (IRI) or Profile Index (PI))?

IRI (in/mi) **Project specific, but 70 for new pavement**

**Q14** Diamond Grinding: If your Agency offers a smoothness incentive for diamond grinding, what is your limit to earn an incentive (Either IRI or PI)? **Respondent skipped this question**

**Q15** Diamond Grinding: If your Agency has a Percent (%) Improvement Spec, what is the expected % improvement to comply with specifications? **No**

**Q16** Slurry Management Practices: Does your Agency allow immediate discharge onto the ground after diamond grinding? **Yes,**  
 Comments:  
 Currently allowed to discharge on side of the road as a trial to monitor the impact. Previous projects required collection of the slurry and disposal off-site.

**Q17** Slurry Management Practices: Does your Agency require collection of slurry after diamond grinding and dispose off-site? **No,**  
 Comments:  
 See answer  
 16

**Q18** Slurry Management Practices: Does your Agency have any other Best Management Practices for slurry? **No**

**Q19** Is your Agency doing any research related to any CPR activities? **No**

**Q20** Do your Agency's maintenance forces perform any CPR work? **No**

**Q21** Please attach a link to your Agency's specifications/procedures/spreadsheets/drawings/videos for CPR.

Specifications **<https://connect.ncdot.gov/resources/Specifications/StandSpecLibrary/2018%20Standard%20Specifications%20for%20Roads%20and%20Structures.pdf>**

**Q22** Any additional comments? **Respondent skipped this question**

# #21

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Tuesday, September 05, 2017 5:18:40 PM  
**Last Modified:** Tuesday, September 05, 2017 5:30:31 PM  
**Time Spent:** 00:11:51  
**IP Address:** 164.165.251.4

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## Q1 Agency Representative

Name	<b>Clint Hoops</b>
Agency	<b>Idaho Transportation Dept</b>
State / Province	<b>Idaho</b>
Email	<b>clint.hoops@itd.idaho.gov</b>

**Q2 Full Depth Repairs: What is your Agency's experience doing full depth repairs?** **Routine (many projects)**

**Q3 Full Depth Repairs: What is your Agency's expected life of full depth repair?** **20**

**Q4 Full Depth Repairs: Does you Agency have any field verification tests to verify the dowel bars/tie bars are properly grouted/epoxied in-place?** **No**

**Q5 Partial Depth Repairs: What is your Agency's experience doing partial depth repairs?** **Some (Less than 5 projects)**

**Q6 Partial Depth Repairs: What is your Agency's minimum and/or maximum depth of a partial depth repair?** **Respondent skipped this question**

**Q7 Partial Depth Repairs: What is your Agency's expected life of partial depth repair?** **10**

**Q8 Partial Depth Repairs: Does you Agency have any field verification tests to verify the dowel bars/tie bars are properly grouted/epoxied in-place?** **No**

<b>Q9</b> Dowel Bar Retrofits: Does your Agency have any experience doing dowel bar retrofit repairs?	<b>Routine (many projects)</b>
<b>Q10</b> Dowel Bar Retrofits: What is your Agency's expected life of dowel bar retrofit repair?	<b>15</b>
<b>Q11</b> Dowel Bar Retrofits: Does your Agency have any field verification tests to verify the dowel bars are properly grouted in-place?	<b>No</b>
<b>Q12</b> Does your Agency have any warranties associated with concrete pavement rehabilitation?	<b>No</b>
<b>Q13</b> Diamond Grinding: What is your Agency's specification limit for pavement rehabilitation diamond grinding for acceptance (Either International Roughness Index (IRI) or Profile Index (PI))?	<b>Respondent skipped this question</b>
<b>Q14</b> Diamond Grinding: If your Agency offers a smoothness incentive for diamond grinding, what is your limit to earn an incentive (Either IRI or PI)?	
IRI (in/mi)	<b>70"/mi</b>
<b>Q15</b> Diamond Grinding: If your Agency has a Percent (%) Improvement Spec, what is the expected % improvement to comply with specifications?	<b>No</b>
<b>Q16</b> Slurry Management Practices: Does your Agency allow immediate discharge onto the ground after diamond grinding?	Comments: Not covered by specification
<b>Q17</b> Slurry Management Practices: Does your Agency require collection of slurry after diamond grinding and dispose off-site?	<b>Respondent skipped this question</b>
<b>Q18</b> Slurry Management Practices: Does your Agency have any other Best Management Practices for slurry?	<b>Respondent skipped this question</b>
<b>Q19</b> Is your Agency doing any research related to any CPR activities?	<b>No</b>
<b>Q20</b> Do your Agency's maintenance forces perform any CPR work?	<b>No</b>

**Q21** Please attach a link to your Agency's specifications/procedures/spreadsheets/drawings/videos for CPR.

Specifications

<http://apps.itd.idaho.gov/apps/manuals/SpecBook.pdf>

**Q22** Any additional comments?

Note to Question 14: depends on project classification. 70"/mi on interstate & up to 95"/mile for low speed roadways.

## #22

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Tuesday, September 05, 2017 11:16:33 PM  
**Last Modified:** Tuesday, September 05, 2017 11:39:58 PM  
**Time Spent:** 00:23:24  
**IP Address:** 70.113.9.166

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**Q1** Agency Representative

Name	<b>Andy Naranjo</b>
Agency	<b>TxDOT</b>
State / Province	<b>TX</b>
Email	<b>andy.naranjo@txdot.gov</b>

**Q2** Full Depth Repairs: What is your Agency's experience doing full depth repairs? **Routine (many projects)**

**Q3** Full Depth Repairs: What is your Agency's expected life of full depth repair? **20**

**Q4** Full Depth Repairs: Does you Agency have any field verification tests to verify the dowel bars/tie bars are properly grouted/epoxied in-place? **If yes, briefly summarize the verification test:**  
 We can perform a pull-out test to ensure the epoxy grouted bars are able to hold a load of at least 75% of the bar yield strength.

**Q5** Partial Depth Repairs: What is your Agency's experience doing partial depth repairs? **Routine (many projects)**



**Q6** Partial Depth Repairs: What is your Agency's minimum and/or maximum depth of a partial depth repair?

Minimum Depth **half depth of section**

Maximum Depth **half depth of section**

---

**Q7** Partial Depth Repairs: What is your Agency's expected life of partial depth repair? **10**

---

**Q8** Partial Depth Repairs: Does your Agency have any field verification tests to verify the dowel bars/tie bars are properly grouted/epoxied in-place? **No**

---

**Q9** Dowel Bar Retrofits: Does your Agency have any experience doing dowel bar retrofit repairs? **Some (Less than 5 projects)**

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**Q10** Dowel Bar Retrofits: What is your Agency's expected life of dowel bar retrofit repair? **20**

---

**Q11** Dowel Bar Retrofits: Does your Agency have any field verification tests to verify the dowel bars are properly grouted in-place? **No**

---

**Q12** Does your Agency have any warranties associated with concrete pavement rehabilitation? **No**

---

**Q13** Diamond Grinding: What is your Agency's specification limit for pavement rehabilitation diamond grinding for acceptance (Either International Roughness Index (IRI) or Profile Index (PI))?

IRI (in/mi) **For NGCS only - 50 IRI or less**

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**Q14** Diamond Grinding: If your Agency offers a smoothness incentive for diamond grinding, what is your limit to earn an incentive (Either IRI or PI)?

IRI (in/mi) **For NGCS only - 45 IRI or less**

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**Q15** Diamond Grinding: If your Agency has a Percent (%) Improvement Spec, what is the expected % improvement to comply with specifications? **No**

---

**Q16** Slurry Management Practices: Does your Agency allow immediate discharge onto the ground after diamond grinding? **No**

---

**Q17** Slurry Management Practices: Does your Agency require collection of slurry after diamond grinding and dispose off-site? **Yes**

**Q18** Slurry Management Practices: Does your Agency have any other Best Management Practices for slurry? **No**

**Q19** Is your Agency doing any research related to any CPR activities? **Yes,**  
If yes - what is the research and who is performing the work?:  
Currently working on a Development of Concrete Overlay Type and Design for PCC Pavements

**Q20** Do your Agency's maintenance forces perform any CPR work? **No**

**Q21** Please attach a link to your Agency's specifications/procedures/spreadsheets/drawings/videos for CPR.

Specifications <ftp://ftp.dot.state.tx.us/pub/txdot-info/des/spec-book-1114.pdf>, see Item 361

Standard Drawings <ftp://ftp.dot.state.tx.us/pub/txdot-info/cmd/cserve/standard/roadway/repcp14.pdf>

**Q22** Any additional comments? **Respondent skipped this question**

## #23

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Friday, August 18, 2017 9:46:58 AM  
**Last Modified:** Wednesday, September 06, 2017 7:47:42 AM  
**Time Spent:** Over a week  
**IP Address:** 130.39.255.10

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### Q1 Agency Representative

Name **Zachary Collier**  
Agency **Louisiana DOTD**  
State / Province **Louisiana**  
Email **zachary.collier@la.gov**

<b>Q2</b> Full Depth Repairs: What is your Agency's experience doing full depth repairs?	<b>Routine (many projects)</b>
<b>Q3</b> Full Depth Repairs: What is your Agency's expected life of full depth repair?	<b>30</b>
<b>Q4</b> Full Depth Repairs: Does you Agency have any field verification tests to verify the dowel bars/tie bars are properly grouted/epoxied in-place?	<b>No</b>
<b>Q5</b> Partial Depth Repairs: What is your Agency's experience doing partial depth repairs?	<b>Routine (many projects)</b>
<b>Q6</b> Partial Depth Repairs: What is your Agency's minimum and/or maximum depth of a partial depth repair?	
Minimum Depth	<b>2 inches</b>
Maximum Depth	<b>6 inches</b>
<b>Q7</b> Partial Depth Repairs: What is your Agency's expected life of partial depth repair?	<b>30</b>
<b>Q8</b> Partial Depth Repairs: Does you Agency have any field verification tests to verify the dowel bars/tie bars are properly grouted/epoxied in-place?	<b>No</b>
<b>Q9</b> Dowel Bar Retrofits: Does your Agency have any experience doing dowel bar retrofit repairs?	<b>Some (Less than 5 projects)</b> Comments: Probably less than 10 have ever been done in the state. Last one was several years ago.
<b>Q10</b> Dowel Bar Retrofits: What is your Agency's expected life of dowel bar retrofit repair?	<b>30</b>
<b>Q11</b> Dowel Bar Retrofits: Does your Agency have any field verification tests to verify the dowel bars are properly grouted in-place?	<b>No</b>
<b>Q12</b> Does your Agency have any warranties associated with concrete pavement rehabilitation?	<b>No</b>

**Q13** Diamond Grinding: What is your Agency's specification limit for pavement rehabilitation diamond grinding for acceptance (Either International Roughness Index (IRI) or Profile Index (PI))?

IRI (in/mi) **N/A**  
 PI (in/mi) - blanking band **N/A**

**Q14** Diamond Grinding: If your Agency offers a smoothness incentive for diamond grinding, what is your limit to earn an incentive (Either IRI or PI)?

IRI (in/mi) **Cat 1 < than or = to 65/ Cat 2 < than or + to 75**

**Q15** Diamond Grinding: If your Agency has a Percent (%) Improvement Spec, what is the expected % improvement to comply with specifications? **No**

**Q16** Slurry Management Practices: Does your Agency allow immediate discharge onto the ground after diamond grinding? **No,**  
 Comments:  
 Promptly remove slurry or residue that results from the grinding operation. Prevent slurry flow across lanes occupied by public traffic, or into gutters or other drainage facilities.

**Q17** Slurry Management Practices: Does your Agency require collection of slurry after diamond grinding and dispose off-site? **No**

**Q18** Slurry Management Practices: Does your Agency have any other Best Management Practices for slurry? **Yes,**  
 If yes, please provide a link. Any additional comments?:  
 When practical, slurry may be disposed of on the slope near the shoulder edge as the machine progresses down the roadway, unless otherwise directed. Conduct a final sweeping with power equipment before opening the pavement to traffic.

**Q19** Is your Agency doing any research related to any CPR activities? **No**

**Q20** Do your Agency's maintenance forces perform any CPR work? **Yes - , Both**  
 Any additional comments::  
 Smaller repairs and repairs that are needed quickly are done by our maintenance crews.

**Q21** Please attach a link to your Agency's specifications/procedures/spreadsheets/drawings/videos for CPR.

Specifications

[http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/Standard\\_Specifications/Standard%20Specifications/2016%20Standard%20Specifications%20for%20Roads%20and%20Bridges%20Manual%20\(for%20Use%20on%20Selected%20Projects\)/10%20-%202016%20-%20Part%20VI%20-%20Rigid%20Pavement.pdf](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Standard_Specifications/Standard%20Specifications/2016%20Standard%20Specifications%20for%20Roads%20and%20Bridges%20Manual%20(for%20Use%20on%20Selected%20Projects)/10%20-%202016%20-%20Part%20VI%20-%20Rigid%20Pavement.pdf)

Standard Drawings

[http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/Standard\\_Plans/Pages/default.aspx?RootFolder=%2FInside\\_LaDOTD%2FDivisions%2FEngineering%2FStandard\\_Plans%2FSpecial%20Details%2FConcrete%20Pavement%20Rehab&FolderCTID=0x012000B45DF4ABE71813419EF4AF62EBF6A9F3&View={818530E6-561D-4F7C-A684-91AEF628795A}](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Standard_Plans/Pages/default.aspx?RootFolder=%2FInside_LaDOTD%2FDivisions%2FEngineering%2FStandard_Plans%2FSpecial%20Details%2FConcrete%20Pavement%20Rehab&FolderCTID=0x012000B45DF4ABE71813419EF4AF62EBF6A9F3&View={818530E6-561D-4F7C-A684-91AEF628795A})

**Q22** Any additional comments?

Respondent skipped this question

## #24

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Wednesday, September 06, 2017 9:39:20 AM  
**Last Modified:** Wednesday, September 06, 2017 9:44:02 AM  
**Time Spent:** 00:04:41  
**IP Address:** 204.62.25.101

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**Q1** Agency Representative

Name	<b>Matt Romero</b>
Agency	<b>Oklahoma DOT</b>
State / Province	<b>Oklahoma</b>
Email	<b>mromero@odot.org</b>

**Q2** Full Depth Repairs: What is your Agency's experience doing full depth repairs?

**Routine (many projects)**

**Q3** Full Depth Repairs: What is your Agency's expected life of full depth repair? **5**

**Q4 Full Depth Repairs:** Does your Agency have any field verification tests to verify the dowel bars/tie bars are properly grouted/epoxied in-place? **No**

**Q5 Partial Depth Repairs:** What is your Agency's experience doing partial depth repairs? **Routine (many projects)**

**Q6 Partial Depth Repairs:** What is your Agency's minimum and/or maximum depth of a partial depth repair?

Minimum Depth **None**

Maximum Depth **None**

**Q7 Partial Depth Repairs:** What is your Agency's expected life of partial depth repair? **5**

**Q8 Partial Depth Repairs:** Does your Agency have any field verification tests to verify the dowel bars/tie bars are properly grouted/epoxied in-place? **No**

**Q9 Dowel Bar Retrofits:** Does your Agency have any experience doing dowel bar retrofit repairs? **Some (Less than 5 projects)**

**Q10 Dowel Bar Retrofits:** What is your Agency's expected life of dowel bar retrofit repair? **10**

**Q11 Dowel Bar Retrofits:** Does your Agency have any field verification tests to verify the dowel bars are properly grouted in-place? **No**

**Q12** Does your Agency have any warranties associated with concrete pavement rehabilitation? **No**

**Q13 Diamond Grinding:** What is your Agency's specification limit for pavement rehabilitation diamond grinding for acceptance (Either International Roughness Index (IRI) or Profile Index (PI))?

IRI (in/mi) **None**

PI (in/mi) - blanking band **Yes**

**Q14 Diamond Grinding:** If your Agency offers a smoothness incentive for diamond grinding, what is your limit to earn an incentive (Either IRI or PI)?

IRI (in/mi) **None**

PI (in/mi) - blanking band **Not sure**

**Q15** Diamond Grinding: If your Agency has a Percent (%) Improvement Spec, what is the expected % improvement to comply with specifications? **No**

**Q16** Slurry Management Practices: Does your Agency allow immediate discharge onto the ground after diamond grinding? **Yes**

**Q17** Slurry Management Practices: Does your Agency require collection of slurry after diamond grinding and dispose off-site? **No**

**Q18** Slurry Management Practices: Does your Agency have any other Best Management Practices for slurry? **Yes,**  
If yes, please provide a link. Any additional comments?:  
Bury

**Q19** Is your Agency doing any research related to any CPR activities? **Yes,**  
If yes - what is the research and who is performing the work?:  
Concrete Pavement Rehabilitation

**Q20** Do your Agency's maintenance forces perform any CPR work? **Yes - Both**

**Q21** Please attach a link to your Agency's specifications/procedures/spreadsheets/drawings/videos for CPR.

Specifications	<b>None</b>
Procedures	<b>None</b>
Spreadsheets	<b>None</b>
Standard Drawings	<b>None</b>
Videos	<b>None</b>

**Q22** Any additional comments? **Respondent skipped this question**

## #25

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Wednesday, September 06, 2017 7:30:53 AM  
**Last Modified:** Wednesday, September 06, 2017 10:19:09 AM  
**Time Spent:** 02:48:15  
**IP Address:** 174.233.3.137

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**Q1 Agency Representative**

Name	<b>Drew Waldrop</b>
Agency	<b>ALDOT</b>
State / Province	<b>AL</b>
Email	<b>waldropa@dot.state.al.us</b>

**Q2 Full Depth Repairs: What is your Agency's experience doing full depth repairs?** **Routine (many projects)**

**Q3 Full Depth Repairs: What is your Agency's expected life of full depth repair?** **15**

**Q4 Full Depth Repairs: Does your Agency have any field verification tests to verify the dowel bars/tie bars are properly grouted/epoxied in-place?**

If yes, briefly summarize the verification test:

After epoxy has cured as recommended by the producer, 7200 lbs. (32 kN) pull out force shall be applied to the steel tie bar. Should the steel tie bar pull out before the required force is attained the test will be considered a failure.

**Q5 Partial Depth Repairs: What is your Agency's experience doing partial depth repairs?** **None (never tried)**

**Q6 Partial Depth Repairs: What is your Agency's minimum and/or maximum depth of a partial depth repair?**

Minimum Depth	<b>N/A</b>
Maximum Depth	<b>N/A</b>

**Q7 Partial Depth Repairs: What is your Agency's expected life of partial depth repair?** **Respondent skipped this question**

**Q8 Partial Depth Repairs: Does your Agency have any field verification tests to verify the dowel bars/tie bars are properly grouted/epoxied in-place?** **No**

**Q9 Dowel Bar Retrofits: Does your Agency have any experience doing dowel bar retrofit repairs?** **None (never tried)**

**Q10 Dowel Bar Retrofits: What is your Agency's expected life of dowel bar retrofit repair?** **Respondent skipped this question**



<b>Q11</b> Dowel Bar Retrofits: Does your Agency have any field verification tests to verify the dowel bars are properly grouted in-place?	<b>No</b>
<b>Q12</b> Does your Agency have any warranties associated with concrete pavement rehabilitation?	<b>No</b>
<b>Q13</b> Diamond Grinding: What is your Agency's specification limit for pavement rehabilitation diamond grinding for acceptance (Either International Roughness Index (IRI) or Profile Index (PI))?	
PI (in/mi) - blanking band	<b>20-35 (zero blanking band) for 100% pay; 35-65 for acceptance w/penalty; over 65 unacceptable.</b>
<b>Q14</b> Diamond Grinding: If your Agency offers a smoothness incentive for diamond grinding, what is your limit to earn an incentive (Either IRI or PI)?	
PI (in/mi) - blanking band	<b>Max of 20 (Pay adjustment=105-(PI/4))</b>
<b>Q15</b> Diamond Grinding: If your Agency has a Percent (%) Improvement Spec, what is the expected % improvement to comply with specifications?	<b>No</b>
<b>Q16</b> Slurry Management Practices: Does your Agency allow immediate discharge onto the ground after diamond grinding?	<b>Yes,</b> Comments: Spec language: "The Contractor shall provide positive means for the removal of the grinding residue before such residue is blown by traffic action or wind. Residue shall not be permitted to flow across lanes designated for traffic use or into gutters or other drainage structures."
<b>Q17</b> Slurry Management Practices: Does your Agency require collection of slurry after diamond grinding and dispose off-site?	<b>No</b>
<b>Q18</b> Slurry Management Practices: Does your Agency have any other Best Management Practices for slurry?	<b>No</b>
<b>Q19</b> Is your Agency doing any research related to any CPR activities?	<b>No</b>
<b>Q20</b> Do your Agency's maintenance forces perform any CPR work?	<b>Yes - Full Depth Repairs</b>

**Q21** Please attach a link to your Agency's specifications/procedures/spreadsheets/drawings/videos for CPR.

Specifications	<a href="http://www.dot.state.al.us/conweb/pdf/Specifications/2012%20DRAFT%20Standard%20Specs.pdf">http://www.dot.state.al.us/conweb/pdf/Specifications/2012%20DRAFT%20Standard%20Specs.pdf</a> (Sections 453 & 455)
Procedures	<b>ALDOT-366 (pull-out test):</b> <a href="http://www.dot.state.al.us/mtweb/Testing/testing_manual/pdf/Pro/ALDOT366.pdf">http://www.dot.state.al.us/mtweb/Testing/testing_manual/pdf/Pro/ALDOT366.pdf</a>
Standard Drawings	<a href="http://alletting.dot.state.al.us/Docs/Standard_Drawings/2017%20English/STDUS17_0100.pdf">http://alletting.dot.state.al.us/Docs/Standard_Drawings/2017%20English/STDUS17_0100.pdf</a>

**Q22** Any additional comments?

Respondent skipped this question

## #26

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Tuesday, September 05, 2017 10:28:59 AM  
**Last Modified:** Wednesday, September 06, 2017 12:38:44 PM  
**Time Spent:** Over a day  
**IP Address:** 149.136.17.252

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**Q1** Agency Representative

Name	<b>Flor Bautista</b>
Agency	<b>CA DOT</b>
State / Province	<b>California</b>
Email	<b>florante_bautista@dot.ca.gov</b>

**Q2** Full Depth Repairs: What is your Agency's experience doing full depth repairs?

**Routine (many projects),**  
 Comments:  
 Included as part of a rehabilitation project to address isolated locations that include inside lanes, ramps, shoulders, and truck lanes.

**Q3** Full Depth Repairs: What is your Agency's expected life of full depth repair? **20**

**Q4 Full Depth Repairs:** Does your Agency have any field verification tests to verify the dowel bars/tie bars are properly grouted/epoxied in-place?

If yes, briefly summarize the verification test:

Engineer selects 6 to 12 core locations for dowel bars placement and up to 6 core locations for tie bars placement

**Q5 Partial Depth Repairs:** What is your Agency's experience doing partial depth repairs?

**Some (Less than 5 projects)**

**Q6 Partial Depth Repairs:** What is your Agency's minimum and/or maximum depth of a partial depth repair?

Minimum Depth

**2"**

Maximum Depth

**1/2 inch above reinforcement.**

**Q7 Partial Depth Repairs:** What is your Agency's expected life of partial depth repair?

**Respondent skipped this question**

**Q8 Partial Depth Repairs:** Does your Agency have any field verification tests to verify the dowel bars/tie bars are properly grouted/epoxied in-place?

**No**

**Q9 Dowel Bar Retrofits:** Does your Agency have any experience doing dowel bar retrofit repairs?

**Routine (many projects)**

Comments:

DBR is a CAPM preservation strategy that can significantly prolong pavement service life from 10 to 15 years by improving load transfer efficiency (LTE) across joints and cracks.

**Q10 Dowel Bar Retrofits:** What is your Agency's expected life of dowel bar retrofit repair?

**20**

**Q11 Dowel Bar Retrofits:** Does your Agency have any field verification tests to verify the dowel bars are properly grouted in-place?

If yes, briefly summarize the verification test:

Engineer selects core locations for dowel bars placement verification.

**Q12** Does your Agency have any warranties associated with concrete pavement rehabilitation?

**Yes,**

If yes, what is the warranty

language:

Guarantee that work remains free from substantial defects for 1 year after Contract acceptance except for work parts for which you were relieved of maintenance and protection.

Guarantee each of these relieved work parts for 1 year after the relief date. The guarantee excludes damage or displacement caused by an event outside your control,

including: 1. Normal wear and tear 2. Improper operation 3. Insufficient maintenance 4. Abuse 5. Unauthorized change 6.

Act of God During the guarantee period, repair or replace each work part having a substantial defect.

**Q13** Diamond Grinding: What is your Agency's specification limit for pavement rehabilitation diamond grinding for acceptance (Either International Roughness Index (IRI) or Profile Index (PI))?

IRI (in/mi)

**60**

PI (in/mi) - blanking band

**Not used in the current specification**

**Q14** Diamond Grinding: If your Agency offers a smoothness incentive for diamond grinding, what is your limit to earn an incentive (Either IRI or PI)?

IRI (in/mi)

**No**

PI (in/mi) - blanking band

**Not used**

**Q15** Diamond Grinding: If your Agency has a Percent (%) Improvement Spec, what is the expected % improvement to comply with specifications?

**No**

**Q16** Slurry Management Practices: Does your Agency allow immediate discharge onto the ground after diamond grinding?

**No,**

Comments:

The Contractor to include water pollution control measures to address the handling of the grinding pavement residue within the Storm Water Pollution Prevention Plan or Water Pollution Control Program.

**Q17** Slurry Management Practices: Does your Agency require collection of slurry after diamond grinding and dispose off-site?

**Yes**

**Q18** Slurry Management Practices: Does your Agency have any other Best Management Practices for slurry?

**Yes,**  
If yes, please provide a link. Any additional comments?:  
SWPPP and WPCP guidance  
<http://www.dot.ca.gov/hq/construc/stormwater/reviewguidance.pdf>

**Q19** Is your Agency doing any research related to any CPR activities?

**No**

**Q20** Do your Agency's maintenance forces perform any CPR work?

**Yes - Full Depth Repairs**

**Q21** Please attach a link to your Agency's specifications/procedures/spreadsheets/drawings/videos for CPR.

Procedures

[http://www.dot.ca.gov/hq/maint/Pavement/Offices/Pavement\\_Engineering/CPG/CPG\\_complete\\_download.pdf](http://www.dot.ca.gov/hq/maint/Pavement/Offices/Pavement_Engineering/CPG/CPG_complete_download.pdf)

**Q22** Any additional comments?

Respondent skipped this question

## #27

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Wednesday, September 06, 2017 12:34:24 PM  
**Last Modified:** Wednesday, September 06, 2017 12:57:22 PM  
**Time Spent:** 00:22:58  
**IP Address:** 168.166.124.100

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### Q1 Agency Representative

**Name** Brett Trautman  
**Agency** Missouri DOT  
**State / Province** Missouri  
**Email** Brett.Trautman@modot.mo.gov

**Q2** Full Depth Repairs: What is your Agency's experience doing full depth repairs?

**Routine (many projects)**

**Q3** Full Depth Repairs: What is your Agency's expected life of full depth repair? **15**

**Q4** Full Depth Repairs: Does your Agency have any field verification tests to verify the dowel bars/tie bars are properly grouted/epoxied in-place? **No**

**Q5** Partial Depth Repairs: What is your Agency's experience doing partial depth repairs? **Routine (many projects)**

**Q6** Partial Depth Repairs: What is your Agency's minimum and/or maximum depth of a partial depth repair?

Minimum Depth **2-inches**

Maximum Depth **Half the pavement thickness**

**Q7** Partial Depth Repairs: What is your Agency's expected life of partial depth repair? **15**

**Q8** Partial Depth Repairs: Does your Agency have any field verification tests to verify the dowel bars/tie bars are properly grouted/epoxied in-place? **No**

**Q9** Dowel Bar Retrofits: Does your Agency have any experience doing dowel bar retrofit repairs? **Routine (many projects)**

**Q10** Dowel Bar Retrofits: What is your Agency's expected life of dowel bar retrofit repair? **20**

**Q11** Dowel Bar Retrofits: Does your Agency have any field verification tests to verify the dowel bars are properly grouted in-place? **No**

**Q12** Does your Agency have any warranties associated with concrete pavement rehabilitation? **No**

**Q13** Diamond Grinding: What is your Agency's specification limit for pavement rehabilitation diamond grinding for acceptance (Either International Roughness Index (IRI) or Profile Index (PI))?

IRI (in/mi) **< 45 mph 70.1 - 125.0 > 45 mph 54.1 - 80.0**

PI (in/mi) - blanking band **n/a**

**Q14** Diamond Grinding: If your Agency offers a smoothness incentive for diamond grinding, what is your limit to earn an incentive (Either IRI or PI)?

IRI (in/mi)

< 45 mph 103% @ 70.0 or less > 45 mph 103% @ 40.1 - 54.0 and 105% @ 40.0 or less

PI (in/mi) - blanking band

n/a

**Q15** Diamond Grinding: If your Agency has a Percent (%) Improvement Spec, what is the expected % improvement to comply with specifications?

If yes, what is the expected % improvement:  
35% improvement or 80.0 in./mile whichever is greater

**Q16** Slurry Management Practices: Does your Agency allow immediate discharge onto the ground after diamond grinding?

**Yes,**  
Comments:  
Can not be placed on right-a-way within 100 ft. of a waterway such as a lake, stream or river. Also can not be within 15 ft. of a water filled ditch.

**Q17** Slurry Management Practices: Does your Agency require collection of slurry after diamond grinding and dispose off-site?

**Yes,**  
Comments:  
When within 100 ft. of a waterway such as a lake, stream or river. When within 15 ft. of a water filled ditch.

**Q18** Slurry Management Practices: Does your Agency have any other Best Management Practices for slurry?

**Yes,**  
If yes, please provide a link. Any additional comments?:  
Place on vegetation area and slurry material is to be spread out so as not to form a mound.

**Q19** Is your Agency doing any research related to any CPR activities?

**Yes,**  
If yes - what is the research and who is performing the work?:  
MoDOT is assisting with a FHWA effort to develop best practices for concrete pavement repairs. ARA won the contract and is giving a presentation at the 2017 Fall NCC meeting.

**Q20** Do your Agency's maintenance forces perform any CPR work?

**Yes - Both**

**Q21** Please attach a link to your Agency's specifications/procedures/spreadsheets/drawings/videos for CPR.

Specifications	<a href="http://www.modot.org/business/standards_and_specs/2017%20Missouri%20Standards%20Specific%20-%20MHTC%20(Jul%202017).pdf">www.modot.org/business/standards_and_specs/2017%20Missouri%20Standards%20Specific%20-%20MHTC%20(Jul%202017).pdf</a>
Procedures	<a href="http://epg.modot.org/index.php?title=Category:613_Pavement_Repair">epg.modot.org/index.php?title=Category:613_Pavement_Repair</a>
Standard Drawings	<a href="http://www.modot.org/business/standards_and_specs/documents/Std_Plans_07_01_2017.pdf">www.modot.org/business/standards_and_specs/documents/Std_Plans_07_01_2017.pdf</a>

**Q22** Any additional comments?

Respondent skipped this question

## #28

**COMPLETE**

<b>Collector:</b>	Web Link 1 (Web Link)
<b>Started:</b>	Wednesday, September 06, 2017 1:14:58 PM
<b>Last Modified:</b>	Wednesday, September 06, 2017 2:17:26 PM
<b>Time Spent:</b>	01:02:28
<b>IP Address:</b>	108.171.131.160

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**Q1** Agency Representative

Name	<b>Gordy Bruhn</b>
Agency	<b>MnDOT Concrete Engineering</b>
State / Province	<b>Minnesota</b>
Email	<b>gordon.bruhn@state.mn.us</b>

**Q2** Full Depth Repairs: What is your Agency's experience doing full depth repairs?

**Routine (many projects)**

**Q3** Full Depth Repairs: What is your Agency's expected life of full depth repair? **15**



**Q4 Full Depth Repairs:** Does your Agency have any field verification tests to verify the dowel bars/tie bars are properly grouted/epoxied in-place?

If yes, briefly summarize the verification test:

MnDOT requires the Contractor to preform a Dowel Bar Anchoring Test Section. The test section requires dowel bar installation followed by cores cut through the previously installed dowel bars. MnDOT also randomly cores installed dowel bars to verify continued adequate adhesive (grout or epoxy) coverage.

**Q5 Partial Depth Repairs:** What is your Agency's experience doing partial depth repairs?

**Routine (many projects)**

**Q6 Partial Depth Repairs:** What is your Agency's minimum and/or maximum depth of a partial depth repair?

Minimum Depth

**2 inches**

Maximum Depth

**Up to full pavement depth**

**Q7 Partial Depth Repairs:** What is your Agency's expected life of partial depth repair?

**10**

**Q8 Partial Depth Repairs:** Does your Agency have any field verification tests to verify the dowel bars/tie bars are properly grouted/epoxied in-place?

**No**

**Q9 Dowel Bar Retrofits:** Does your Agency have any experience doing dowel bar retrofit repairs?

**Routine (many projects)**

Comments:

MnDOT has found DBR's to provide excellent load transfer efficiency years after installation through Falling Weight Deflection (FWD) testing.

**Q10 Dowel Bar Retrofits:** What is your Agency's expected life of dowel bar retrofit repair?

**15**

**Q11** Dowel Bar Retrofits: Does your Agency have any field verification tests to verify the dowel bars are properly grouted in-place?

If yes, briefly summarize the verification test:

Test Section Provide a test section consisting of complete dowel bar retrofit at a site directed by the Engineer at least three (3) days prior to startup of major operations as follows:  
 h) Install 24 retrofit dowels in the test section. i) The Engineer will identify and mark three (3) locations for coring. j) Take three (3) – 6 in [150 mm] diameter full depth cores at least 4 hours after completion of the test section. At the Engineer’s discretion, the Contractor will take additional cores to confirm consistent dowel placement and proper consolidation for each 600 bars placed. The Engineer will randomly mark two retrofit locations for assurance coring.

**Q12** Does your Agency have any warranties associated with concrete pavement rehabilitation?

**Yes,**

If yes, what is the warranty language:

Remove and replace areas of failure that appear within thirty (30) calendar days at no cost to the Department. The 30 calendar day warranty will commence after all Type B, Type C, Dowel Bar Retrofits repair and Concrete Grinding (when required) are completed in a single traffic lane. The continuity of a single traffic lane is not broken by either staging or project exceptions unless otherwise authorized by the Engineer. Any subsequent warranty repairs are subject to the 30 calendar day specification at no cost to the Department. Failures include (but are not limited to) the loss of bonding to the in place concrete or crack apparent in the repair other than the desired crack in the newly constructed joint or re-established crack.

**Q13** Diamond Grinding: What is your Agency's specification limit for pavement rehabilitation diamond grinding for acceptance (Either International Roughness Index (IRI) or Profile Index (PI))?

IRI (in/mi)

**IRI**

**Q14** Diamond Grinding: If your Agency offers a smoothness incentive for diamond grinding, what is your limit to earn an incentive (Either IRI or PI)?

IRI (in/mi)

**Incentive starts at an IRI of 71.2 inches per mile, and full incentive at an IRI of < 50.0 inches per mile**

**Q15** Diamond Grinding: If your Agency has a Percent (%) Improvement Spec, what is the expected % improvement to comply with specifications?

**No**

**Q16** Slurry Management Practices: Does your Agency allow immediate discharge onto the ground after diamond grinding?

**Yes,**  
 Comments:  
 Yes, on some rural grinding projects

**Q17** Slurry Management Practices: Does your Agency require collection of slurry after diamond grinding and dispose off-site?

**Yes,**  
 Comments:  
 Yes, on all urban projects

**Q18** Slurry Management Practices: Does your Agency have any other Best Management Practices for slurry?

**Yes**

**Q19** Is your Agency doing any research related to any CPR activities?

**No**

**Q20** Do your Agency's maintenance forces perform any CPR work?

**No**

**Q21** Please attach a link to your Agency's specifications/procedures/spreadsheets/drawings/videos for CPR.

Specifications

<http://www.dot.state.mn.us/pre-letting/prov/index.html>

Spreadsheets

<http://www.dot.state.mn.us/materials/concretepavementrehabilitation.html>

Standard Drawings

[http://www.dot.state.mn.us/materials/concretedocs/MemoandCPR\\_Details\\_04-22-2016.pdf](http://www.dot.state.mn.us/materials/concretedocs/MemoandCPR_Details_04-22-2016.pdf)

**Q22** Any additional comments?

Respondent skipped this question

## #29

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Wednesday, September 06, 2017 11:10:55 AM  
**Last Modified:** Wednesday, September 06, 2017 3:18:04 PM  
**Time Spent:** 04:07:09  
**IP Address:** 170.142.177.26

**Q1 Agency Representative**

Name	<b>Jason Mellons</b>
Agency	<b>Tennessee DOT</b>
State / Province	<b>Tennessee</b>
Email	<b>Michael.J.Mellons@tn.gov</b>

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**Q2 Full Depth Repairs:** What is your Agency's experience doing full depth repairs?

**Routine (many projects),**

Comments:

We have a contract let annually for each of our 4 regions that has specific places designated for concrete pavement repairs.

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**Q3 Full Depth Repairs:** What is your Agency's expected life of full depth repair? **25**

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**Q4 Full Depth Repairs:** Does your Agency have any field verification tests to verify the dowel bars/tie bars are properly grouted/epoxied in-place? **No**

---

**Q5 Partial Depth Repairs:** What is your Agency's experience doing partial depth repairs? **Routine (many projects)**

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**Q6 Partial Depth Repairs:** What is your Agency's minimum and/or maximum depth of a partial depth repair?

Minimum Depth **2 inches**

Maximum Depth **4 inches**

---

**Q7 Partial Depth Repairs:** What is your Agency's expected life of partial depth repair? **25**

---

**Q8 Partial Depth Repairs:** Does your Agency have any field verification tests to verify the dowel bars/tie bars are properly grouted/epoxied in-place? **No**

---

**Q9 Dowel Bar Retrofits:** Does your Agency have any experience doing dowel bar retrofit repairs? **None (never tried)**

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**Q10 Dowel Bar Retrofits:** What is your Agency's expected life of dowel bar retrofit repair? **Respondent skipped this question**

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**Q11** Dowel Bar Retrofits: Does your Agency have any field verification tests to verify the dowel bars are properly grouted in-place? **No**

**Q12** Does your Agency have any warranties associated with concrete pavement rehabilitation? **No**

**Q13** Diamond Grinding: What is your Agency's specification limit for pavement rehabilitation diamond grinding for acceptance (Either International Roughness Index (IRI) or Profile Index (PI))?

PI (in/mi) - blanking band

**Design speeds >40 grind to 9" per mile for 100% pay**

**Q14** Diamond Grinding: If your Agency offers a smoothness incentive for diamond grinding, what is your limit to earn an incentive (Either IRI or PI)?

PI (in/mi) - blanking band

**Design speeds >40 grind to < 5" per mile for 105% pay**

**Q15** Diamond Grinding: If your Agency has a Percent (%) Improvement Spec, what is the expected % improvement to comply with specifications? **No**

**Q16** Slurry Management Practices: Does your Agency allow immediate discharge onto the ground after diamond grinding? **No**

**Q17** Slurry Management Practices: Does your Agency require collection of slurry after diamond grinding and dispose off-site? **Yes**

**Q18** Slurry Management Practices: Does your Agency have any other Best Management Practices for slurry? **No**

**Q19** Is your Agency doing any research related to any CPR activities? **No**

**Q20** Do your Agency's maintenance forces perform any CPR work? **No**

**Q21** Please attach a link to your Agency's specifications/procedures/spreadsheets/drawings/videos for CPR.

Specifications

<http://www.tn.gov/tdot/article/transportation-construction-2015-standard-specifications>

Standard Drawings

<http://www.tn.gov/tdot/article/transportation-roadway-design-standard-drawings-std.-dwg-item-nos-rpj23>

**Q22** Any additional comments?

In Specifications link above:  
Section 501: Rigid Pavements

# #30

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Monday, September 11, 2017 4:15:03 PM  
**Last Modified:** Monday, September 11, 2017 4:51:27 PM  
**Time Spent:** 00:36:24  
**IP Address:** 167.154.77.167

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**Q1** Agency Representative

Name	<b>Michele Maher</b>
Agency	<b>NDOT</b>
State / Province	<b>Nevada</b>
Email	<b>mmaher@dot.nv.gov</b>

**Q2** Full Depth Repairs: What is your Agency's experience doing full depth repairs? **Some (Less than 5 projects)**

**Q3** Full Depth Repairs: What is your Agency's expected life of full depth repair? **10**

**Q4** Full Depth Repairs: Does you Agency have any field verification tests to verify the dowel bars/tie bars are properly grouted/epoxied in-place? **No**

**Q5** Partial Depth Repairs: What is your Agency's experience doing partial depth repairs? **Some (Less than 5 projects)**

**Q6** Partial Depth Repairs: What is your Agency's minimum and/or maximum depth of a partial depth repair?

Minimum Depth	<b>None</b>
Maximum Depth	<b>None</b>

<b>Q7</b> Partial Depth Repairs: What is your Agency's expected life of partial depth repair?	<b>7</b>
<b>Q8</b> Partial Depth Repairs: Does you Agency have any field verification tests to verify the dowel bars/tie bars are properly grouted/epoxied in-place?	<b>No</b>
<b>Q9</b> Dowel Bar Retrofits: Does your Agency have any experience doing dowel bar retrofit repairs?	<b>Some (Less than 5 projects)</b>
<b>Q10</b> Dowel Bar Retrofits: What is your Agency's expected life of dowel bar retrofit repair?	<b>20</b>
<b>Q11</b> Dowel Bar Retrofits: Does your Agency have any field verification tests to verify the dowel bars are properly grouted in-place?	<b>No</b>
<b>Q12</b> Does your Agency have any warranties associated with concrete pavement rehabilitation?	<b>No</b>
<b>Q13</b> Diamond Grinding: What is your Agency's specification limit for pavement rehabilitation diamond grinding for acceptance (Either International Roughness Index (IRI) or Profile Index (PI))?	<b>Respondent skipped this question</b>
<b>Q14</b> Diamond Grinding: If your Agency offers a smoothness incentive for diamond grinding, what is your limit to earn an incentive (Either IRI or PI)?	
PI (in/mi) - blanking band	<b>5 inches/mile</b>
<b>Q15</b> Diamond Grinding: If your Agency has a Percent (%) Improvement Spec, what is the expected % improvement to comply with specifications?	<b>No</b>
<b>Q16</b> Slurry Management Practices: Does your Agency allow immediate discharge onto the ground after diamond grinding?	<b>No</b>
<b>Q17</b> Slurry Management Practices: Does your Agency require collection of slurry after diamond grinding and dispose off-site?	<b>Yes</b>
<b>Q18</b> Slurry Management Practices: Does your Agency have any other Best Management Practices for slurry?	<b>No</b>

**Q19** Is your Agency doing any research related to any CPR activities? **No**

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**Q20** Do your Agency's maintenance forces perform any CPR work? **No**

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**Q21** Please attach a link to your Agency's specifications/procedures/spreadsheets/drawings/videos for CPR. **Respondent skipped this question**

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**Q22** Any additional comments? **Respondent skipped this question**

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