**IOWA DEPARTMENT OF TRANSPORTATION**

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| **To Office:** | Specification Committee | **Date:** | September 2, 2025 |
| **Attention:** | | **Ref. No.:** | 305 |
| **From:** | Eric Johnsen, P.E. | | |
| **Office:** | Specifications | | |
| **Subject:** | Agenda for September 11, 2025, Specification Committee Meeting | | |

The Specification Committee will meet on Thursday, September 11, 2025, at 9:00 a.m.

The agenda is as follows:

**1. Article 1103.01, I, Consideration of Bids.**
**Article 1107.02, Insurance.**

Contracts and Specifications Bureau requests to update the insurance requirements for contractors.

**2. Article 2310.03, Construction (Portland Cement Concrete Overlay).**

Construction and Materials Bureau requests to remove references to obsolete Section 2316.

**3. Section 2317, Pavement Smoothness.**

Construction and Materials Bureau requests several revisions to clean up Section 2317.

**4. Article 2515.02, A, Materials (Removal and Construction of Paved Driveways).**

The Construction and Materials Bureau requests a change because 2515 has no reference to 2301 for air and slump requirements.

**5. Article 2529.03, H, 1, Smoothness (Full Depth Finish Patches).**

The Construction and Materials Bureau requests to eliminate the confusion about where to test.

**6. Article 2531.03, C, Smoothness (Pavement Surface Repair (Milling)).**

The Construction and Materials Bureau requests to remove references to obsolete Section 2316.

**7. Article 4183.03, B. 2. Fast Dry Waterborne Traffic Paints.**

The Construction and Materials Bureau requests the update to waterborne traffic paints needed based on alignment with AASHTO standards.

Form 510130 (07-24)

IOWA | DOT

**SPECIFICATION REVISION SUBMITTAL FORM**

| | | |
|---|---|---|
| **Submitted by:** Mark Dunn/Eric Johnsen | **Bureau/Office:** Contracts and Specifications | Item 1 |
| **Submittal Date:** 8/25/2025 | **Proposed Effective Date:** 10/20/2026 | |
| **Article No.:** 1103.01, I<br>**Title:** Consideration of Bids<br>**Article No.:** 1107.02<br>**Title:** Insurance | **Other:** | |

| **Specification Committee Action:** | | | |
|---|---|---|---|
| **Deferred:** | **Not Approved:** | **Approved Date:** | **Effective Date:** |

**Specification Committee Approved Text:**

**Comments:**

**Specification Section Recommended Text:**

**1103.01, I.**

**Replace** the Article:

For failure to ~~file~~ submit and maintain with the Contracting Authority a current Certificate of Insurance meeting the requirements of Article 1107.02.

**1107.02, Insurance.**

**Replace** the Article:

~~**A.** It shall be the Contractor's responsibility to have liability insurance covering all of the construction operations incident to contract completion and the Contractor must have on file with the Contracting Authority a current "Certificate of Insurance" prior to award of contract. The certificate shall identify the insurance company firm name and address, Contractor firm name, policy period, type of policy, limits of coverage, and scope of work covered (single contract or statewide). This requirement shall apply with equal force, whether the work is performed by persons employed directly by the Contractor including a subcontractor, persons employed by a subcontractor, or by an independent contractor.~~

~~**B.** In addition to the above, the Contracting Authority shall be included as an insured party, or a separate owner's protective policy shall be filed showing the Contracting Authority as an insured party.~~

~~**C.** The liability insurance shall be written by an insurance company (or companies) qualified to do business in Iowa. For independent contractors engaged solely in the transportation of materials, the minimum coverage provided by such insurance shall be not less than that required by Chapter 325A, Code of Iowa, for such truck operators or contract carriers as defined therein. For all other contractors, subcontractors, independent contractors, and the Contracting Authority, the minimum coverage by such insurance shall be as follows:~~

~~General Liability, Including: BODILY INJURY~~

~~Independent Contractors $500,000 Each Occurrence~~
~~Contractual Liability, $500,000 Aggregate~~
~~Products and Completed Operations PROPERTY DAMAGE~~
~~$250,000 Each Occurrence~~
~~$250,000 Aggregate~~
~~or~~

~~BODILY INJURY AND PROPERTY DAMAGE~~
~~- COMBINED SINGLE LIMIT*~~
~~$750,000 Each Occurrence~~
~~$750,000 Aggregate~~

~~*A comprehensive Catastrophe Liability Policy (Umbrella) can be used to aid in achieving the minimum required limits.~~

~~**D.** Failure on the part of the Contractor to comply with the requirements of this article will be considered sufficient cause to suspend the work, withhold estimates, and to deny the Contractor from receiving further contract awards, as provided in Article 1103.01.~~

**A.** At its own expense, the Contractor or joint venture shall carry insurance covering all construction operations incident to contract completion. The Contractor or joint venture shall submit to the Contracting Authority a current certificate(s) of insurance prior to execution of the contract and thereafter as insurance policies are renewed or replaced. The certificate(s) shall show the Contracting Authority as the certificate holder and identify the Contractor's insurer(s), Contractor's name and address, type of policy, policy number, policy period, limits of coverage, and scope of work covered (single contract or statewide). This requirement applies with equal force, whether the work is performed by the Contractor, or by any subcontractor or independent contractor, or by anyone employed by any of the foregoing. Except as provided elsewhere in this article, coverage shall remain in force until the Engineer's final acceptance of the work.

**1.** For contracts let by the Department:
- **a.** Submit initial certificate(s) of insurance electronically to the Department per instructions provided by the Contracts and Specifications Bureau prior to signing the contract.
- **b.** Certificates of insurance for Iowa DOT or county contracts may be statewide or contract specific per instructions provided by the Contracts and Specifications Bureau. Contracts for joint ventures or city projects shall be contract specific.
- **c.** Insurance renewals or replacements prior to final acceptance of the work shall be submitted electronically to the Department's Finance Bureau, per the instructions provided by the Department. Provide to the Engineer electronically per their instructions.

**2.** For locally let contracts:
Provide certificate of insurance as well as any renewals or replacements to the Contracting Authority.

**B.** The Contractor shall not cancel or fail to renew any required coverage without giving the Contracting Authority at least 30 calendar days' written notice. If any policy is to be canceled or not renewed during any period of required coverage, the Contractor must have in place a new policy before or upon cancelation or non-renewal of the former policy to ensure no lapse in coverage.

**C.** The insurance shall be written by an insurer or insurers qualified to do business in the State of Iowa. For independent contractors engaged solely in the transportation of materials, the coverage provided by such insurance shall not be less than that required by Iowa Code 325A for such truck operators or contract carriers as defined therein. For all

other contractors, subcontractors, and independent contractors, the minimum insurance coverage shall be as follows:

1. **Workers' Compensation.**
   Workers' compensation insurance shall be obtained at applicable State of Iowa statutory limits and include Employer's Liability insurance with limits of not less than: $500,000 per accident for bodily injury by disease; $500,000 per employee for bodily injury by disease; and $500,000 policy limit. When required, US Longshore and Harbor Workers' Compensation Act and Jones Act coverage shall be added with appropriate limits.

2. **Commercial Auto Liability.**
   The limit of coverage shall not be less than $1,000,000 combined single limit per accident for bodily injury and property damage. This policy shall be written on an occurrence basis and provide coverage for all owned, non-owned, and hired vehicles used on or off the project site.

3. **Commercial General Liability.**
   The limits of coverage shall not be less than: $1,000,000 per occurrence for bodily injury and property damage; $1,000,000 for personal and advertising injury; $3,000,000 general aggregate; and $3,000,000 products and completed operations aggregate. This policy shall be written on a broad form, occurrence basis, and provide coverage for blanket contractual liability, independent contractors, and general liability. Completed operations coverage shall remain in force for one year after the Engineer's final acceptance of the work. This policy shall not contain any exclusion for explosion, collapse, or underground property damage. Coverage under this policy shall be as broadly construed for the Contracting Authority as is available to the Contractor.

4. **Excess or Umbrella Liability.**
   The Contractor may use Excess or Umbrella Liability insurance to aid in meeting the minimum limits of coverage required by this article. If the Contractor utilizes umbrella or excess policies, these policies shall follow form.

**D.** The Contracting Authority shall be named as an additional insured on the Commercial General Liability (including ongoing and completed operations), and Commercial Auto Liability policies. For general liability, the additional insured coverage shall not be less than that provided by ISO Forms CG 2010 0704 and 2037 0704 (together) or equivalent. All required insurance shall be primary and noncontributory to any insurance available to the Contracting Authority. Each policy shall include a waiver of subrogation in favor of the Contracting Authority. The Contractor shall obtain all endorsements necessary to support these requirements.

**E.** This article specifies minimum limits of coverage only and shall not be construed to limit the Contractor's actual liability under the contract.

**F. Insurance for Joint Ventures.**

1. If a contract is awarded to a joint venture, the parties to the joint venture shall each comply with all insurance requirements in this article.

2. Each party to a joint venture shall submit its own certificate of insurance naming itself as the insured but listing the Contracting Authority, the other party or parties to the joint venture, and the joint venture as additional insureds as it pertains to the contract, such to be shown in the certificate's Description of Operations. Each party shall obtain all endorsements necessary to support these requirements.

**G. Railroad Insurance.**

**1.** For contracts that involve work on or near railroad ROW, the Contractor shall at its own expense obtain the types and limits of insurance specified in the contract documents, including any requirement to obtain Railroad Protective Liability insurance.

**2.** A separate certificate of insurance shall be submitted for each railroad with insurance requirements contained in the contract documents. The certificate shall show the railroad as the certificate holder and include the contract ID in the Description of Operations as well as meet all other requirements contained in the contract documents

**H.** The Contractor's failure to comply with the requirements of this article shall be considered sufficient cause to suspend the work, withhold estimates, and deny the Contractor from receiving further contract awards, as provided in Article 1103.01.

**Comments:** This is being submitted now for implementation in October 2026. This will give contractors the opportunity to update their insurance limits on their normal yearly renewal cycle if they need to.

**Member's Requested Change:** (Do not use **'Track Changes', or 'Mark-Up'. Use ~~Strikeout~~ and Highlight.**)

**Reason for Revision:** Update the insurance requirements, which haven't been touched for decades.

| | | |
|---|---|---|
| **New Bid Item Required (X one)** | **Yes** | **No** X |
| **Bid Item Modification Required (X one)** | **Yes** | **No** X |
| **Bid Item Obsoletion Required (X one)** | **Yes** | **No** X |

**Comments:**

**County or City Comments:**

**Industry Comments:** Some members of AGC are currently doing a final review, but they have been involved in the submitted revisions.

Form 510130 (07-24)

IOWA | DOT

**SPECIFICATION REVISION SUBMITTAL FORM**

| | | |
|---|---|---|
| **Submitted by:** Musgrove/De Vries | **Bureau/Office:** Construction and Materials | Item 2 |
| **Submittal Date:** 8/21/25 | **Proposed Effective Date:** April 2026 | |
| **Article No.:** 2310.03<br>**Title:** Construction (Portland Cement Concrete Overlay) | **Other:** | |

**Specification Committee Action:**

| | | | |
|---|---|---|---|
| **Deferred:** | **Not Approved:** | **Approved Date:** | **Effective Date:** April 2026 |

**Specification Committee Approved Text:**

**Comments:**

**Specification Section Recommended Text:**

**2310.03, C, 1, General.**

**Replace** the Article:

~~a. Apply Section 2317 to all PCC Pavement bid items of a Primary project if any individual PCC Pavement bid item for that project is 5000 square yards or greater. Apply Section 2316 to all other Primary projects and when specifically required for other projects.~~

~~b~~ **a.** Clean existing surface of loose or adhering foreign material prior to and during placement of PCC.

~~c~~ **b.** Ensure existing pavement surface is free of standing water during PCC placement.

~~d~~ **c.** Ensure temperature of existing pavement surface does not exceed 120ºF during PCC placement. Water may be applied to cool existing pavement surface provided standing water is not present during PCC placement.

**2310.03, Construction.**

**Add** the Article:

**F. Smoothness.**

Apply Section 2317.

**Comments:** Why is Article a even located here? Article 2310.03, C is on placing and finishing the overlay. Evaluation of the smoothness is not part of that work. I think we should add an Article to 2310.03 on smoothness. There we can just say that smoothness shall be evaluated per Article 2317.01 instead of repeating that language.

**C. Placing and Finishing Overlay.**

**1.** General.

**a.** ~~Apply Section 2317 to all PCC Pavement bid items of a Primary project if any individual PCC Pavement bid item for that project is 5000 square yards or greater. Apply Section 2316 to all other Primary projects and when specifically required for other projects.~~ Evaluate pavement smoothness in accordance with Section 2317 for all Interstate and Primary main line pavement surfaces, and all other road surfaces included on Primary projects, except when specifically

excluded or modified by the contract documents. For non-Primary projects, do not evaluate pavement smoothness unless specified in the contract documents. If this specification is required by contract documents on non-Primary projects let by the Department, it will be added in its entirety. Selected portions of the specification will not be deleted.

**b.** Clean existing surface of loose or adhering foreign material prior to and during placement of PCC.

**c.** Ensure existing pavement surface is free of standing water during PCC placement.

**d.** Ensure temperature of existing pavement surface does not exceed 120ºF during PCC placement. Water may be applied to cool existing pavement surface provided standing water is not present during PCC placement.

**Reason for Revision:** Eliminating references to 2316.

| | | |
|---|---|---|
| **New Bid Item Required (X one)** | **Yes** | **No** X |
| **Bid Item Modification Required (X one)** | **Yes** | **No** X |
| **Bid Item Obsoletion Required (X one)** | **Yes** | **No** X |
| **Comments:** | | |
| **County or City Comments:** | | |
| **Industry Comments:** | | |

Form 510130 (07-24)

IOWA | DOT

**SPECIFICATION REVISION SUBMITTAL FORM**

| | | |
|---|---|---|
| **Submitted by:** Musgrove/De Vries | **Bureau/Office:** Construction and Materials | **Item 3** |
| **Submittal Date:** 08/22/2025 | **Proposed Effective Date:** April 2026 | |
| **Section No.:** 2317<br>**Title:** Pavement Smoothness | **Other** | |

| **Specification Committee Action:** | | | |
|---|---|---|---|
| **Deferred:** | **Not Approved:** | **Approved Date:** | **Effective Date:** |
| **Specification Committee Approved Text:** | | | |
| **Comments:** | | | |

**Specification Section Recommended Text:**

**2317, Pavement Smoothness.**

**Replace** the Section:

**2317.01 GENERAL.**

Evaluate pavement smoothness for all Interstate and Primary main line pavement surfaces, and all other road surfaces included on Primary projects, except when specifically excluded or modified by the contract documents. For non-Primary projects, do not evaluate pavement smoothness unless specified in the contract documents. If this specification is required by contract documents on non-Primary projects let by the Department, it will be added in its entirety. Selected portions of the specification will not be deleted.

**A.** Main line pavement is defined as all permanent pavement for through lanes.

**B.** The index used for determining the pavement smoothness is the Mean Roughness Index (MRI) per segment as determined by the latest version of the FHWA's software, ProVAL.

**C.** The other measure of pavement smoothness is the Area of Localized Roughness (ALR) based on a continuous MRI computed over a 25-foot distance as determined by the latest version of ProVAL.

**D.** A pavement segment is defined as a continuous area of finished pavement ~~0.1 mile~~ 528 feet in length and one lane (10 to 12 foot nominal) in width. A partial segment may result from an interruption of the continuous pavement surface (in other words, bridge approaches, side road tie-ins, the completion of the daily paving operations, and so forth). Pay adjustments will be prorated for partial segments. If a segment is less than 100 feet in length and requires corrective work, the Engineer will waive the corrective work requirement for the segment and instead assess a prorated disincentive. The Contracting Authority will still subject the segment to ALR correction in accordance with Table 2317.05-1 and Table 2317.05-2.

**2317.02 EQUIPMENT.**

**A.** Provide and operate an inertial profiler meeting the requirements of AASHTO M328 and Materials I.M. 341, Appendix A. Ensure the operator is trained and certified to operate the profiler as required by the Contracting Authority.

**B.** For corrective work by diamond grinding, use grinding and texturing equipment meeting the requirements of Section 2532.

**2317.03 TESTING AND EVALUATION.**

**A. Testing.**

**1.** Obtain profiles of both wheel paths for each lane according to the procedures shown in Materials I.M. 341, Appendix A. The wheel paths are defined as 3 feet and 9 feet from the center line or lane line. Average the two wheel path profile indexes for each segment.

**2.** The Engineer may use an inertial profiler, 10 foot straightedge, or other means to detect irregularities in excluded surface areas or areas outside the required wheel paths for required corrective action.

**3.** Test bridge approaches according to Section 2428.

**4.** Test the pavement within 5 working days of completion of paving.

**5.** Paved shoulders will be excluded from smoothness testing. When used as a temporary driving surface, evaluate paved shoulders for ALR. Take corrective action for ALR greater than 250.0 inches/mile.

**B. Evaluation.**

**1.** Determine an MRI using the latest version of the ProVAL "Ride Quality" or "Smoothness Assurance" analysis and following the procedures shown in Materials I.M. 341, Appendix A for each segment of finished pavement surface with a posted speed or advisory speed over 45 mph except for:
- **a.** Roads intersecting the mainline pavement less than 600 feet in length.
- **b.** Road connections 150 feet before an intersection that end at a stop sign (or a yield sign at roundabouts).
- **c.** Twenty feet on either side of bridges, bridge approaches, existing EF joints, manholes, or water valve boxes in the lane that the obstruction is located.
- **d.** Ramps and loops.
- **e.** Bridge approaches (evaluated according to Section 2428).
- **f.** Storage lanes, turn lanes, and other auxiliary lanes less than 1000 feet.
- **g.** Pavement less than 8.5 feet in width.
- **h.** Single lift flexible pavement overlays 2 inches thick or less, unless the existing surface has been corrected by milling or scarification.
- **i.** Single lift flexible pavement overlays 2 inches thick or less placed directly on PCC pavement.
- **j.** Paved shoulders.
- **k.** Detour pavement.
- **l.** Crossovers.
- **m.** Individual sections of pavement less than 100 feet in length.
- **n.** Roundabouts

**2.** Determine ALR using the latest version of the ProVAL "Smoothness Assurance" analysis and following the procedures shown in Materials I.M. 341, Appendix A for each segment of finished pavement surface with a posted or advisory speed over 35 mph except for:
- **a.** Side road connections 150 feet before an intersection that end at a stop sign (or a yield sign at roundabouts).
- **b.** Twenty feet on either side of bridges, bridge approaches, manholes, existing EF joints, or water valve boxes in the lane that the obstruction is located.
- **c.** Bridge approaches (evaluated according to Section 2428).
- **d.** Pavement less than 8.5 feet in width.
- **e.** Paved shoulders (unless used as a temporary driving surface).
- **f.** Detour pavement.
- **g.** Crossovers.
- **h.** Individual sections of pavement less than 50 feet in length.

**3.** The Engineer may determine and identify irregularities of ~~1/8 inch or more in 10 feet~~ 1/2 inch or more in 25 feet longitudinally for excluded surface areas or areas outside the required wheel paths.

4. Submit all preliminary profile summary sheets to the RCE and the DME within 7 calendar days of testing.

~~4~~ 5. Submit all final profile summary sheets and all ALR graphs to the engineer within 14 calendar days following completion of paving on the project. If requested by the engineer, provide the ProVAL files. When all the testing is done at the completion of paving on the project, provide the engineer the ProVal files along with the profile summary sheets.

~~5~~ 6. Submit all preliminary profile summary sheets on provided form (https://iowadot.gov/Construction_Materials/materialsforms/ProfileSummarySheet.xlsx) and final ProVAL compatible files to the Construction and Materials Bureau via email to smoothness.cmb@iowadot.us following completion of paving on the project.

**2317.04 CORRECTIVE ACTIONS.**

**A. General.**

**1.** Pavement will be evaluated in ~~0.1 mile~~ 528 feet segments using the inertial profiler, to determine pavement segments where corrective work or pay adjustments will be necessary.

**2.** Within each ~~0.1 mile~~ 528 feet segment, correct all ALR identified as grind in table 2317.05-1 or table 2317.05-2 regardless of the MRI value. Take corrective action.

**3.** Separately identify ALR.

**4.** On lanes over 8.5 feet in width, for through traffic which requires matching the surface of the new pavement to the surface of an existing pavement, Determine the MRI and ALR for the existing lane. Compare the MRI values and ALR areas according to Materials I.M. 341, Appendix A. If the MRI and ALR for the new pavement are less than the MRI and ALR for the existing surface, no negative payment adjustment or correction for MRI or ALR will be required.

**B. MRI Correction.**
Correct all ~~0.1 mile~~ 528 feet segments having an initial MRI of greater than those tolerances shown in Article 2317.05. Correct these segments to reduce the MRI to that shown in Table 2317.05-3 through Table 2317.05-6. The Contractor has the option to replace these segments. On segments where corrections are made, test the entire ~~0.1 mile~~ 528 feet segment of pavement to verify that corrections have met the MRI as shown in Table 2317.05-3 through Table 2317.05-6.

**C. ALR Correction.**
Correct ALR greater than those tolerances shown in Article 2317.05. Correct these segments to reduce the ALR to that shown in Table 2317.05-1 or Table 231705-2. The Contractor has the option to replace these areas. On segments where corrections are made, test the entire ~~0.1 mile~~ 528 feet segment of pavement to verify that corrections have met ALR level shown in Table 2317.05-1 or Table 2317.05-2. Provide the engineer an image file for each area of ALR greater than 250 Inches per mile. Use ~~0.1 mile~~ 528 feet scale setting and label the file with the station location, lane, and direction.

**D. Engineer Identified Irregularities.**
Correct areas over ~~1/8 inch in 10 feet~~ 1/2 inch or more in 25 feet identified by the Engineer.

**E. Bridge Approach Sections.**
Correct bridge approach sections according to Section 2428.

**F. Corrective Work.**
When the Contractor is not responsible for the adjoining surface, ALR in the 45 feet at the beginning or end of a section will be reviewed by the Engineer. Correction of ALR determined to be beyond the control of the Contractor will be paid according to Article 1109.03, B. Correct ALR determined to be under the control of the Contractor and resulting from the Contractor's operations. Complete the corrective work prior to determining pavement thickness. Do not use bush hammers or other impact devices.

**1. PCC Pavement.**
On PCC pavement, make corrections using an approved profiling device or by removing and replacing the pavement. Apply corrective methods to the full lane width. Ensure, when completed, the corrected area (full lane width) has uniform texture and appearance, with the beginning and ending of the corrected area squared normal to centerline of the paved surface. Where surface corrections are made, grooving will not be required.

2. **HMA Pavement.**
   a. On HMA pavement, make corrections by diamond grinding, by overlaying the area, by replacing the area, or by inlaying the area. If the surface is corrected by diamond grinding, perform the same work and use the same equipment as specified for PCC pavement~~.~~, except cover the ground surface with a seal coat according to Section 2307, with the following modifications:
      1) The binder bitumen may be the emulsion or cutback asphalt used for tack coat, applied at a rate of 0.10 gallon per square yard. Hand methods may be used for spraying.
      2) Apply a cover aggregate consisting of sand (slightly damp, but with no free moisture as determined by visual inspection) at a rate of 10 pounds per square yard. Hand methods may be used for spreading. Embed cover aggregate with at least one complete pneumatic roller coverage.
      3) This seal coat is intended to be placed immediately after the diamond grinding is completed in the travel lane. Do not place when road surface temperatures are below 60ºF, unless approved by the Engineer.
      4) Labor, equipment, and materials used for this seal coat are incidental to other items and will not be paid for separately.
   b. If the surface is corrected by overlay, replacement, or inlay, begin and end the surface correction with a transverse saw cut normal to the pavement lane lines or edge lines within any one area. The profile of the surface must be smooth with no bumps or dips at the beginning or end of correction.
   c. Overlay correction must be for the entire pavement width. Pavement cross slope must be maintained through the corrected areas.

**G. Verification Testing.**

1. The Engineer will perform verification testing to validate the Contractor's certified quality control testing. If the Engineer's verification test results validate the Contractor's test results, the Contractor's results will be used for acceptance. Disputes between the Contractor's and Engineer's test results will be resolved according to Materials I.M. 341, Appendix A.

2. The Engineer may test the entire project length if it is determined that the Contractor certified test results are inaccurate, The Contractor will be charged for this work at a rate of $800.00 per lane-mile, with a minimum charge of $1500.00.

3. Furnishing inaccurate tests may result in decertification of the Contractor's certified operator.

**2317.05 PAY ADJUSTMENTS.**

**A. General.**

1. Pay adjustments will be based on the initial MRI determined for the segments prior to performing any corrective work. Areas excluded from Inertial profiler testing and bridges approaches will not be subject to price adjustments.

2. If the Contractor elects to remove and replace the segments, the Contractor will be paid the price adjustment that corresponds to the initial index obtained on the pavement segments after replacement.

3. When the plans dictate that an area of pavement is to be hand finished, the area will not be subject to reduced payment. However, the area is to be profiled and corrected as necessary to meet these specifications.

**B. Areas of Localized Roughness**

The payment for areas of localized roughness will be adjusted as shown in Table 2317.05-1 and Table 2317.05-2.

**Table 2317.05-1: Schedule for Adjustment Payment for Areas of Localized Roughness for Primary and Interstate**

| Projects | |
|---|---|
| **ALR in 25 Foot Continuous Mean International Roughness Index (MRI) Inches per mile** | **Dollars per foot of pavement length per lane** |
| 200.0 to 250.0 | -30.00 or grind[1] |
| Greater than 250.0 | Grind[1] |

1. Correct these areas to below 200.0 inches per mile

**Table 2317.05-2: Schedule for Adjustment Payment for Areas of Localized Roughness for Non-Primary Projects**

| Segment Speed/Type | ALR in 25 Foot Continuous Mean International Roughness Index (MRI) Inches per mile | Dollars per foot of pavement length per lane |
|---|---|---|
| Speed greater than 45 mph | 200.0 to 250.0 | -15.00 or grind[1] |
| Speed greater than 45 mph | Greater than 250.0 | Grind[1] |
| Speed greater than 35 mph and less than or equal to 45 mph or curbed | 250.0 to 300.0 | -15.00 or grind[2] |
| Speed greater than 35 mph and less than or equal to 45 mph or curbed | Greater than 300.0 | Grind[2] |

1. Correct these areas to below 200.0 inches per mile
2. Correct these areas to below 250.0 inches per mile

**C. PCC Pavement.**

The payment for MRI for PCC pavement will be adjusted as shown in Table 2317.05-3 and Table 2317.05-4.

**Table 2317.05-3: Schedule for Adjustment Payment for PCC Pavements for Primary and Interstate Projects**

| MRI (inches per mile) | Dollars per ~~0.1 mile~~ 528 feet segment per lane (Design Thickness Greater than 6") | Dollars per ~~0.1 mile~~ 528 feet segment per lane (Design Thickness 6" or less) |
|---|---|---|
| Less than 47.5 | 1,500.00 | 1,250.00 |
| 47.5 to 57.5 | 8,625.00-(150*MRI) | ~~5,226.596-(133.2623*MRI)~~ 7,187.50-(125*MRI) |
| 57.5 to 75 | Unit Price | Unit Price |
| 75 to 90 | 7,500.00-(100*MRI) (or grind[1]) | 6,250.00-(83.333*MRI) (or grind[1]) |
| Greater than 90 | Grind[1] | Grind[1] |

1. Correct these areas below 75.0 inches per mile

**Table 2317.05-4: Schedule for Adjustment Payment for PCC Pavements for Non-Primary Projects**

| MRI (Inches per mile) | Dollars per ~~0.1 mile~~ 528 feet segment per lane |
|---|---|
| Less than 60.0 | 300.00 |
| 60.0 to70.0 | 2,100.00-(30*MRI) |
| 70.0 to 80.0 | 0.00 |
| 80.0 to 95.0 | 1,600.00-(20*MRI) or grind[1] |
| Greater than 95.0 | Grind[1] |

1. Correct these areas to below 80.0 inches per mile

**D. HMA Pavement.**

The payment for MRI for HMA pavement will be adjusted as shown in Table 2317.05-5 and Table 2317.05-6.

**Table 2317.05-5: Schedule for Adjustment Payment for HMA Pavements for Primary and Interstate Projects**

| MRI (inches per mile) | Dollars per ~~0.1 mile~~ 528 feet segment per lane (Design Thickness greater than 4") | Dollars per ~~0.1 mile~~ 528 feet segment per lane (Design Thickness 4" or less) |
|---|---|---|
| Less than 29.84 | 1,500.00 | 1,250.00 |
| 29.84 to 39.22 | 6,271.915-(159.915*MRI) | 5,226.596-(133.2623*MRI) |
| 39.22 to 75 | Unit Price | Unit Price |
| 75 to 90 | 7,500.00-(100*MRI) or grind[1] | 6,250.00-(83.333*MRI) or grind[1] |
| Greater than 90 | Grind[1] | Grind[1] |

1. Correct these areas below 75.0 inches per mile

**Table 2317.05-6: Schedule for Adjustment Payment for HMA Pavements for Non-Primary Projects**

| MRI (Inches per mile) | Dollars per ~~0.1 mile~~ 528 feet segment per lane |
|---|---|
| Less than 35.0 | 300.00 |
| 35.0 to 45.0 | 1,350.00-(30*MRI) |
| 45.0 to 80.0 | 0.00 |
| 80.0 to 95.0 | 1,600.00-(20*MRI) or grind[1] |
| Greater than 95.0 | Grind[1] |

1. Correct these areas to below 80.0 inches per mile

**Comments:**

## Section 2317. Pavement Smoothness

**2317.01 GENERAL.**

Evaluate pavement smoothness for all Interstate and Primary main line pavement surfaces, and all other road surfaces included on Primary projects, except when specifically excluded or modified by the contract documents. For non-Primary projects, do not evaluate pavement smoothness unless specified in the contract documents. If this specification is required by contract documents on non-Primary projects let by the Department, it will be added in its entirety. Selected portions of the specification will not be deleted.

**E.** Main line pavement is defined as all permanent pavement for through lanes.

**F.** The index used for determining the pavement smoothness is the Mean Roughness Index (MRI) per segment as determined by the latest version of the FHWA's software, ProVAL.

**G.** The other measure of pavement smoothness is the Area of Localized Roughness (ALR) based on a continuous MRI computed over a 25-foot distance as determined by the latest version of ProVAL.

**H.** A pavement segment is defined as a continuous area of finished pavement 528 feet in length and one lane (10 to 12 foot nominal) in width. A partial segment may result from an interruption of the continuous pavement surface (in other words, bridge approaches, side road tie-ins, the completion of the daily paving operations, and so forth). Pay adjustments will be prorated for partial segments. If a segment is less than 100 feet in length and requires corrective work, the Engineer will waive the corrective work requirement for the segment and instead assess a prorated disincentive. The Contracting Authority will still subject the segment to ALR correction in accordance with Table 2317.05-1 and Table 2317.05-2.

**2317.02 EQUIPMENT.**

**A.** Provide and operate an inertial profiler meeting the requirements of AASHTO M328 and Materials I.M. 341, Appendix A. Ensure the operator is trained and certified to operate the profiler as required by the Contracting Authority.

**B.** For corrective work by diamond grinding, use grinding and texturing equipment meeting the requirements of Section 2532.

**2317.03 TESTING AND EVALUATION.**

**A. Testing.**

1. Obtain profiles of both wheel paths for each lane according to the procedures shown in Materials I.M. 341, Appendix A. The wheel paths are defined as 3 feet and 9 feet from the center line or lane line. Average the two wheel path profile indexes for each segment.

2. The Engineer may use an inertial profiler, 10 foot straightedge, or other means to detect irregularities in excluded surface areas or areas outside the required wheel paths for required corrective action.

3. Test bridge approaches according to Section 2428.

4. Test the pavement within 5 working days of completion of paving.

5. Paved shoulders will be excluded from smoothness testing. When used as a temporary driving surface, evaluate paved shoulders for ALR. Take corrective action for ALR greater than 250.0 inches/mile.

**B. Evaluation.**

1. Determine an MRI using the latest version of the ProVAL "Ride Quality" or "Smoothness Assurance" analysis and following the procedures shown in Materials I.M. 341, Appendix A for each segment of finished pavement surface with a posted speed or advisory speed over 45 mph except for:
   - **a.** Roads intersecting the mainline pavement less than 600 feet in length.
   - **b.** Road connections 150 feet before an intersection that end at a stop sign (or a yield sign at roundabouts).
   - **c.** Twenty feet on either side of bridges, bridge approaches, existing EF joints, manholes, or water valve boxes in the lane that the obstruction is located.
   - **d.** Ramps and loops.
   - **e.** Bridge approaches (evaluated according to Section 2428).
   - **f.** Storage lanes, turn lanes, and other auxiliary lanes less than 1000 feet.
   - **g.** Pavement less than 8.5 feet in width.
   - **h.** Single lift flexible pavement overlays 2 inches thick or less, unless the existing surface has been corrected by milling or scarification.
   - **i.** Single lift flexible pavement overlays 2 inches thick or less placed directly on PCC pavement.
   - **j.** Paved shoulders.
   - **k.** Detour pavement.
   - **l.** Crossovers.
   - **m.** Individual sections of pavement less than 100 feet in length.
   - **n.** Roundabouts

2. Determine ALR using the latest version of the ProVAL "Smoothness Assurance" analysis and following the procedures shown in Materials I.M. 341, Appendix A for each segment of finished pavement surface with a posted or advisory speed over 35 mph except for:
   - **a.** Side road connections 150 feet before an intersection that end at a stop sign (or a yield sign at roundabouts).
   - **b.** Twenty feet on either side of bridges, bridge approaches, manholes, existing EF joints, or water valve boxes in the lane that the obstruction is located.
   - **c.** Bridge approaches (evaluated according to Section 2428).
   - **d.** Pavement less than 8.5 feet in width.
   - **e.** Paved shoulders (unless used as a temporary driving surface).
   - **f.** Detour pavement.
   - **g.** Crossovers.
   - **h.** Individual sections of pavement less than 50 feet in length.

3. The Engineer may determine and identify irregularities of 1/8 inch or more in 10 feet longitudinally for excluded surface areas or areas outside the required wheel paths.

4. Submit all final profile summary sheets and all ALR graphs to the engineer within 14 calendar days following completion of paving on the project. If requested by the engineer, provide the ProVAL files. When all the testing is done at the completion of paving on the project, provide the engineer the ProVal files along with the profile summary sheets.

5. Submit all preliminary profile summary sheets on provided form (https://iowadot.gov/Construction_Materials/materialsforms/ProfileSummarySheet.xlsx) and final

ProVAL compatible files to the Construction and Materials Bureau via email to smoothness.cmb@iowadot.us following completion of paving on the project.

**2317.04 CORRECTIVE ACTIONS.**

**A. General.**

**1.** Pavement will be evaluated in ~~0.1 mile~~ 528 feet segments using the inertial profiler, to determine pavement segments where corrective work or pay adjustments will be necessary.

**2.** Within each ~~0.1 mile~~ 528 feet segment, correct all ALR identified as grind in table 2317.05-1 or table 2317.05-2 regardless of the MRI value. Take corrective action.

**3.** Separately identify ALR.

**4.** On lanes over 8.5 feet in width, for through traffic which requires matching the surface of the new pavement to the surface of an existing pavement, Determine the MRI and ALR for the existing lane. Compare the MRI values and ALR areas according to Materials I.M. 341, Appendix A. If the MRI and ALR for the new pavement are less than the MRI and ALR for the existing surface, no negative payment adjustment or correction for MRI or ALR will be required.

**B. MRI Correction.**
Correct all ~~0.1 mile~~ 528 feet segments having an initial MRI of greater than those tolerances shown in Article 2317.05. Correct these segments to reduce the MRI to that shown in Table 2317.05-3 through Table 2317.05-6. The Contractor has the option to replace these segments. On segments where corrections are made, test the entire ~~0.1 mile~~ 528 feet segment of pavement to verify that corrections have met the MRI as shown in Table 2317.05-3 through Table 2317.05-6.

**C. ALR Correction.**
Correct ALR greater than those tolerances shown in Article 2317.05. Correct these segments to reduce the ALR to that shown in Table 2317.05-1 or Table 231705-2. The Contractor has the option to replace these areas. On segments where corrections are made, test the entire ~~0.1 mile~~ 528 feet segment of pavement to verify that corrections have met ALR level shown in Table 2317.05-1 or Table 2317.05-2. Provide the engineer an image file for each area of ALR greater than 250 Inches per mile. Use the 0.1-mile scale setting and label the file with the station location, lane, and direction.

**D. Engineer Identified Irregularities.**
Correct areas over 1/8 inch in 10 feet identified by the Engineer.

**E. Bridge Approach Sections.**
Correct bridge approach sections according to Section 2428.

**F. Corrective Work.**
When the Contractor is not responsible for the adjoining surface, ALR in the 45 feet at the beginning or end of a section will be reviewed by the Engineer. Correction of ALR determined to be beyond the control of the Contractor will be paid according to Article 1109.03, B. Correct ALR determined to be under the control of the Contractor and resulting from the Contractor's operations. Complete the corrective work prior to determining pavement thickness. Do not use bush hammers or other impact devices.

**1. PCC Pavement.**
On PCC pavement, make corrections using an approved profiling device or by removing and replacing the pavement. Apply corrective methods to the full lane width. Ensure, when completed, the corrected area (full lane width) has uniform texture and appearance, with the beginning and ending of the corrected area squared normal to centerline of the paved surface. Where surface corrections are made, grooving will not be required.

**2. HMA Pavement.**

**a.** On HMA pavement, make corrections by diamond grinding, by overlaying the area, by replacing the area, or by inlaying the area. If the surface is corrected by diamond grinding, perform the same work and use the same equipment as specified for PCC pavement~~.~~, except cover the ground surface with a seal coat according to Section 2307, with the following modifications:

**1)** The binder bitumen may be the emulsion or cutback asphalt used for tack coat, applied at a rate of 0.10 gallon per square yard. Hand methods may be used for spraying.

**2)** Apply a cover aggregate consisting of sand (slightly damp, but with no free moisture as determined by visual inspection) at a rate of 10 pounds per square yard. Hand methods may be used for spreading. Embed cover aggregate with at least one complete pneumatic roller coverage.

**3)** This seal coat is intended to be placed immediately after the diamond grinding is completed in the travel lane. Do not place when road surface temperatures are below 60ºF, unless approved by the Engineer.

**4)** Labor, equipment, and materials used for this seal coat are incidental to other items and will not be paid for separately.

**b.** If the surface is corrected by overlay, replacement, or inlay, begin and end the surface correction with a transverse saw cut normal to the pavement lane lines or edge lines within any one area. The profile of the surface must be smooth with no bumps or dips at the beginning or end of correction.

**c.** Overlay correction must be for the entire pavement width. Pavement cross slope must be maintained through the corrected areas.

**G. Verification Testing.**

**1.** The Engineer will perform verification testing to validate the Contractor's certified quality control testing. If the Engineer's verification test results validate the Contractor's test results, the Contractor's results will be used for acceptance. Disputes between the Contractor's and Engineer's test results will be resolved according to Materials I.M. 341, Appendix A.

**2.** The Engineer may test the entire project length if it is determined that the Contractor certified test results are inaccurate, The Contractor will be charged for this work at a rate of $800.00 per lane-mile, with a minimum charge of $1500.00.

**3.** Furnishing inaccurate tests may result in decertification of the Contractor's certified operator.

**2317.05 PAY ADJUSTMENTS.**

**A. General.**

**1.** Pay adjustments will be based on the initial MRI determined for the segments prior to performing any corrective work. Areas excluded from Inertial profiler testing and bridges approaches will not be subject to price adjustments.

**2.** If the Contractor elects to remove and replace the segments, the Contractor will be paid the price adjustment that corresponds to the initial index obtained on the pavement segments after replacement.

**3.** When the plans dictate that an area of pavement is to be hand finished, the area will not be subject to reduced payment. However, the area is to be profiled and corrected as necessary to meet these specifications.

**B. Areas of Localized Roughness**

The payment for areas of localized roughness will be adjusted as shown in Table 2317.05-1 and Table 2317.05-2.

**Table 2317.05-1: Schedule for Adjustment Payment for Areas of Localized Roughness for Primary and Interstate Projects**

| ALR in 25 Foot Continuous Mean International Roughness Index (MRI) Inches per mile | Dollars per foot of pavement length per lane |
|---|---|
| 200.0 to 250.0 | -30.00 or grind[1] |
| Greater than 250.0 | Grind[1] |
| 1. Correct these areas to below 200.0 inches per mile | |

**Table 2317.05-2: Schedule for Adjustment Payment for Areas of Localized Roughness for Non-Primary Projects**

| Segment Speed/Type | ALR in 25 Foot Continuous Mean International Roughness Index (MRI) Inches per mile | Dollars per foot of pavement length per lane |
|---|---|---|
| Speed greater than 45mph | 200.0 to 250.0 | -15.00 or grind[1] |
| | Greater than 250.0 | Grind[1] |
| | 1. Correct these areas to below 200.0 inches per mile | |
| Speed less than or equal to 45mph or curbed | 250.0 to 300.0 | -15.00 or grind[1] |
| | Greater than 300.0 | Grind[1] |
| | 1. Correct these areas to below 250.0 inches per mile | |

**C. PCC Pavement.**

The payment for MRI for PCC pavement will be adjusted as shown in Table 2317.05-3 and Table 2317.05-4.

**Table 2317.05-3: Schedule for Adjustment Payment for PCC Pavements for Primary and Interstate Projects**

| MRI (inches per mile) | Dollars per ~~0.1 mile~~ 528 feet~~-~~ segment per lane | |
|---|---|---|
| | Design Thickness | |
| | Full Depth (>6") | Overlay (<=6") |
| Less than 47.5 | 1,500.00 | 1,250.00 |
| 47.5 to 57.5 | 8,625.00-(150*MRI) | 5,226.596-(133.2623*MRI) |
| 57.5 to 75 | Unit Price | Unit Price |
| 75 to 90 | 7,500.00-(100*MRI) (or grind[1]) | 6,250.00-(83.333*MRI) (or grind[1]) |
| Greater than 90 | Grind[1] | Grind[1] |
| 1. Correct these areas below 75.0 inches per mile | | |

**Table 2317.05-4: Schedule for Adjustment Payment for PCC Pavements for Non-Primary Projects**

| MRI (Inches per mile) | Dollars per ~~0.1 mile~~ 528 feet segment per lane |
|---|---|
| Less than 60.0 | 300.00 |
| 60.0 to70.0 | 2,100.00-(30*MRI) |
| 70.0 to 80.0 | 0.00 |
| 80.0 to 95.0 | 1,600.00-(20*MRI) or grind[1] |
| Greater than 95.0 | Grind[1] |
| 1. Correct these areas to below 80.0 inches per mile | |

**D. HMA Pavement.**

The payment for MRI for HMA pavement will be adjusted as shown in Table 2317.05-5 and Table 2317.05-6.

**Table 2317.05-5: Schedule for Adjustment Payment for HMA Pavements for Primary and Interstate Projects**

| MRI (inches per mile) | Dollars per ~~0.1 mile~~ 528 feet~~-~~ segment per lane | |
|---|---|---|
| | Design Thickness | |
| | Full Depth (>4") | Overlay (≤4") |
| Less than 29.84 | 1,500.00 | 1,250.00 |
| 29.84 to 39.22 | 6,271.915- | 5,226.596- |

| | | |
|---|---|---|
| | (159.915*MRI) | (133.2623*MRI) |
| 39.22 to 75 | Unit Price | Unit Price |
| 75 to 90 | 7,500.00-(100*MRI) or grind[1] | 6,250.00-(83.333*MRI) or grind[1] |
| Greater than 90 | Grind[1] | Grind[1] |
| 1. Correct these areas below 75.0 inches per mile | | |

**Table 2317.05-6: Schedule for Adjustment Payment for HMA Pavements for Non-Primary Projects**

| MRI (Inches per mile) | Dollars per ~~0.1 mile~~ 528 feet segment per lane |
|---|---|
| Less than 35.0 | 300.00 |
| 35.0 to 45.0 | 1,350.00-(30*MRI) |
| 45.0 to 80.0 | 0.00 |
| 80.0 to 95.0 | 1,600.00-(20*MRI) or grind[1] |
| Greater than 95.0 | Grind[1] |
| 1. Correct these areas to below 80.0 inches per mile | |

3. Submit all preliminary profile summary sheets to the RCE and the DME within 7 calendar days of testing.

~~3.~~4. Submit all final profile summary sheets and all ALR graphs to the engineer within 14 calendar days following completion of paving on the project. If requested by the engineer, provide the ProVAL files. When all the testing is done at the completion of paving on the project, provide the engineer the ProVal files along with the profile summary sheets.

4.5. Submit all preliminary profile summary sheets on provided form (https://iowadot.gov/Construction_Materials/materialsforms/ProfileSummarySheet.xlsx) and final ProVAL compatible files to the Construction and Materials Bureau via email to smoothness.cmb@iowadot.us following completion of paving on the project.

**2317.05.B**

**Table 2317.05-2: Schedule for Adjustment Payment for Areas of Localized Roughness for Non-Primary Projects**

| Segment Speed/Type | ALR in 25 Foot Continuous Mean International Roughness Index (MRI) Inches per mile | Dollars per foot of pavement length per lane |
|---|---|---|
| Speed greater than 45mph | 200.0 to 250.0 | -15.00 or grind[1] |
| | Greater than 250.0 | Grind[1] |
| | 1. Correct these areas to below 200.0 inches per mile | |
| Speed greater than 35mph and less than or equal to 45mph or curbed | 250.0 to 300.0 | -15.00 or grind[1] |
| | Greater than 300.0 | Grind[1] |
| | 1. Correct these areas to below 250.0 inches per mile | |

**2317.03 TESTING AND EVALUATION.**

**3.** The Engineer may determine and identify irregularities of ~~1/8 inch or more in 10 feet~~ 1/2 inch or more in 25 feet longitudinally for excluded surface areas or areas outside the required wheel paths.

**2317.04 CORRECTIVE ACTIONS.**

**D. Engineer Identified Irregularities.**
Correct areas over ~~1/8 inch in 10 feet~~ 1/2 inch or more in 25 feet identified by the Engineer.

| | | |
|---|---|---|
| **Reason for Revision:** MRI is measured in 528 feet segments not 0.1 mile segments.<br>Several RCE and DME offices are not getting preliminary reports in a timely manner.<br>2317.03, B, 2 states "Determine ALR using the latest version of the ProVAL "Smoothness Assurance" analysis and following the procedures shown in Materials I.M. 341, Appendix A for each segment of finished pavement surface with a posted or advisory speed over 35 mph except for:" Changes to column 1 row 3 of table 2317.05-2 adds clarity.<br>To align 2317 to 2303 and 2301. | | |
| **New Bid Item Required (X one)** | **Yes** | **No** X |
| **Bid Item Modification Required (X one)** | **Yes** | **No** X |
| **Bid Item Obsoletion Required (X one)** | **Yes** | **No** X |
| **Comments:** | | |
| **County or City Comments:** | | |
| **Industry Comments:** | | |

Form 510130 (08-15)

IOWA | DOT

## SPECIFICATION REVISION SUBMITTAL FORM

| | | |
|---|---|---|
| **Submitted by:** Wes Musgrove | **Office:** Construction & Materials | **Item 4** |
| **Submittal Date:** August 4, 2025 | **Proposed Effective Date:** April 2026 | |
| **Article No.:** 2515<br>**Title:** Materials (Removal and Construction of Paved Driveways) | **Other:** | |

| **Specification Committee Action:** | | | |
|---|---|---|---|
| **Deferred:** | **Not Approved:** | **Approved Date:** | **Effective Date:** |

**Specification Committee Approved Text:**

**Comments:**

**Specification Section Recommended Text:**

**2515.02, A.**

**Add** the following to the end of the Article:

Place according to Section 2301.

**Comments:**

**Member's Requested Change:** (Do not use '**Track Changes**', or '**Mark-Up**'. Use ~~**Strikeout**~~ and **Highlight**.)

**2515.02 MATERIALS.**

**A.** When paved driveways are to be constructed in conjunction with a PCC paving project, the class of concrete being used on the project may be used for driveways. If that class of pavement is not chosen for use, or if the contract contains no item for PCC pavement, pavement widening, or base, then use Class C concrete. Place according to Section 2301.

**Reason for Revision:** 2515 has no reference to 2301 for air and slump requirements. Add similar language as 2511 and 2512.

| | | |
|---|---|---|
| **New Bid Item Required (X one)** | **Yes** | **No** X |
| **Bid Item Modification Required (X one)** | **Yes** | **No** X |
| **Bid Item Obsoletion Required (X one)** | **Yes** | **No** X |

**Comments:**

**County or City Comments:**

**Industry Comments:** Sent to ICPA

Form 510130 (07-24)

IOWA | DOT

## SPECIFICATION REVISION SUBMITTAL FORM

| | | |
|---|---|---|
| **Submitted by:** Musgrove/De Vries | **Bureau/Office:** Construction and Materials | **Item 5** |
| **Submittal Date:** 8/21/25 | **Proposed Effective Date:** April 2026 | |
| **Article No.:** 2529.03, H, 1<br>**Title:** Smoothness (Full Depth Finish Patches) | **Other:** | |

| | | | |
|---|---|---|---|
| **Specification Committee Action:** | | | |
| **Deferred:** | **Not Approved:** | **Approved Date:** | **Effective Date:** |
| **Specification Committee Approved Text:** | | | |
| **Comments:** | | | |

**Specification Section Recommended Text:**

**2529.03, H, 1**

**Delete the sentence**:

~~For full lane width patches, perform the testing near the center of the traffic lane after the patch is placed.~~

**Comments:**

**Member's Requested Change:** (Do not use '**Track Changes**', or '**Mark-Up**'. Use ~~**Strikeout**~~ and **Highlight**.)

**H. SMOOTHNESS.**

**APPLY SECTION 2317 TO SMOOTHNESS OF FULL DEPTH FINISH PATCHES (EXCEPT WHEN THE CONTRACT INCLUDES AN OVERLAY OR PAVEMENT SURFACE REPAIR BY DIAMOND GRINDING OR MILLING WITHIN THE PATCH AREA) WITH THE FOLLOWING MODIFICATIONS FOR FULL DEPTH FINISH PATCHES (50 FEET OR GREATER IN LENGTH):**

**1. SMOOTHNESS TESTING AND EVALUATION IS REQUIRED FOR EACH PATCH WITH A LENGTH OF 50 FEET OR MORE.** ~~**FOR FULL LANE WIDTH PATCHES, PERFORM THE TESTING NEAR THE CENTER OF THE TRAFFIC LANE AFTER THE PATCH IS PLACED. FOR PARTIAL LANE WIDTH PATCHES,**~~ **PERFORM TESTING IN THE PATCHED WHEEL PATH.**

**Reason for Revision:** To eliminate the confusion about where to test.

| | | |
|---|---|---|
| **New Bid Item Required (X one)** | **Yes** | **No** X |
| **Bid Item Modification Required (X one)** | **Yes** | **No** X |
| **Bid Item Obsoletion Required (X one)** | **Yes** | **No** X |
| **Comments:** | | |
| **County or City Comments:** | | |
| **Industry Comments:** | | |

Form 510130 (07-24)

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## SPECIFICATION REVISION SUBMITTAL FORM

| | | |
|---|---|---|
| **Submitted by:** Musgrove/De Vries | **Bureau/Office:** Construction and Materials Bureau | **Item 6** |
| **Submittal Date:** 8/21/25 | **Proposed Effective Date:** | |
| **Article No.:** 2531.03, C<br>**Title:** Smoothness (Pavement Surface Repair (Milling)) | **Other:** | |

**Specification Committee Action:**

| **Deferred:** | **Not Approved:** | **Approved Date:** | **Effective Date:** |
|---|---|---|---|

**Specification Committee Approved Text:**

**Comments:**

**Specification Section Recommended Text:**

**2531.03, C, 1.**

**Replace** the first sentence:

The Engineer will partly profile the pavement on the initial trace using the procedure described in ~~Article 2316.02, b~~ Section 2317.

**2531.03, C, 3.**

**Replace** the first sentence**:**

Provide a control profilograph trace as described in ~~Article 2316.02, b~~ Section 2317 prior to performing any grinding work.

**2531.03, C, 6.**

**Replace** the article:

**6.** Test and evaluate the milled surface according to Section ~~2316~~ 2317, with the following modifications:

- **a.** Run the test and evaluate the profilograph using the same procedure as for the control trace.
- **b.** Each segment for which continuous milling is designated will be evaluated individually, and it shall meet the smoothness and bump requirements specified above, regardless of its length.
- **c.** In excluded areas, smoothness requirements will be modified or may be waived by the Engineer.
- **d.** Certify smoothness of the finished surface according to ~~Article 2316.02, C~~ Section 2317.
- **e.** The Engineer may test for smoothness and bumps near the center line and at other spot locations where compliance is questioned. Additional milling may be required.
- **f.** Do not use the original and final profilograph trace to determine milling depth.

**Comments:**

**Member's Requested Change:** (Do not use 'Track Changes', or 'Mark-Up'. Use ~~Strikeout~~ and Highlight.)

**C. SMOOTHNESS.**

**1. THE ENGINEER WILL PARTLY PROFILE THE PAVEMENT ON THE INITIAL TRACE USING THE PROCEDURE DESCRIBED IN ARTICLE 2317 ~~2316.02, B~~. THE AVERAGE PROFILE INDEX FOR EACH AREA MAY BE SHOWN IN THE CONTRACT DOCUMENTS. THE BIDDER IS ALSO ADVISED THAT ALL PROFILOGRAPH INFORMATION IS AVAILABLE FOR INSPECTION AT THE OFFICE OF CONTRACTS BY A REQUEST TO THE CONTRACTS ENGINEER.**

**2. AFTER THE CONTRACT IS AWARDED, THE PROFILOGRAPH INFORMATION WILL BE AVAILABLE FROM THE ENGINEER. THIS INFORMATION REPRESENTS A SUMMARY OF CONDITIONS FOUND TO EXIST AT THE TIME THE SURVEY WAS MADE. THE AVAILABILITY OF THIS INFORMATION WILL NOT CONSTITUTE A GUARANTEE THAT A PROFILE OTHER THAN THAT INDICATED WILL NOT BE ENCOUNTERED AT THE TIME OF MILLING.**

**3. PROVIDE A CONTROL PROFILOGRAPH TRACE AS DESCRIBED IN ARTICLE 2317 ~~2316.02, B~~ PRIOR TO PERFORMING ANY GRINDING WORK. THIS CONTROL TRACE WILL BE USED TO IDENTIFY THE REQUIRED SMOOTHNESS FOR THE PROJECT. EACH SEGMENT OF THE FINISHED GROUND SURFACE IS TO:**

- **HAVE A FINAL PROFILE INDEX OF 35% OF THE CONTROL PROFILOGRAPH TRACE OR 10 INCHES PER MILE, WHICHEVER IS GREATER, AND**
- **NOT INCLUDE ANY BUMPS EXCEEDING 0.5 INCHES IN 25 FEET.**

**4. WHEN THE ENGINEER APPROVES, THE FOLLOWING AREAS WILL BE EXCLUDED FROM PROFILOGRAPH TESTING:**

- **DEPRESSED PAVEMENT AREAS DUE TO SUBSIDENCE OR OTHER LOCALIZED CAUSES, AND**
- **AREAS WHERE THE MAXIMUM CUT AT MID PANEL OR A FAULT RESTRICTS FURTHER MILLING.**

**5. END PROFILOGRAPH TESTING 15 FEET PRIOR TO EXCLUDED AREAS AND RESUME 15 FEET FOLLOWING EXCLUDED AREAS.**

**6. TEST AND EVALUATE THE MILLED SURFACE ACCORDING TO SECTION 2317 ~~2316~~, WITH THE FOLLOWING MODIFICATIONS:**

**A. RUN THE TEST AND EVALUATE THE PROFILOGRAPH USING THE SAME PROCEDURE AS FOR THE CONTROL TRACE.**

**B. EACH SEGMENT FOR WHICH CONTINUOUS MILLING IS DESIGNATED WILL BE EVALUATED INDIVIDUALLY, AND IT SHALL MEET THE SMOOTHNESS AND BUMP REQUIREMENTS SPECIFIED ABOVE, REGARDLESS OF ITS LENGTH.**

**C. IN EXCLUDED AREAS, SMOOTHNESS REQUIREMENTS WILL BE MODIFIED OR MAY BE WAIVED BY THE ENGINEER.**

**D. CERTIFY SMOOTHNESS OF THE FINISHED SURFACE ACCORDING TO ARTICLE 2317 ~~2316.02, C~~.**

**E. THE ENGINEER MAY TEST FOR SMOOTHNESS AND BUMPS NEAR THE CENTER LINE AND AT OTHER SPOT LOCATIONS WHERE COMPLIANCE IS QUESTIONED. ADDITIONAL MILLING MAY BE REQUIRED.**

**F. DO NOT USE THE ORIGINAL AND FINAL PROFILOGRAPH TRACE TO DETERMINE MILLING DEPTH.**

**Reason for Revision:** Eliminating references to 2316.

| | | |
|---|---|---|
| **New Bid Item Required (X one)** | **Yes** | **No** X |
| **Bid Item Modification Required (X one)** | **Yes** | **No** X |
| **Bid Item Obsoletion Required (X one)** | **Yes** | **No** X |
| **Comments:** | | |
| **County or City Comments:** | | |
| **Industry Comments:** | | |

Form 510130 (07-24)

IOWA | DOT

## SPECIFICATION REVISION SUBMITTAL FORM

| | | |
|---|---|---|
| **Submitted by:** Wes Musgrove/Ben Hucker | **Bureau/Office:** Construction and Materials / Maintenance | **Item 7** |
| **Submittal Date:** August 2025 | **Proposed Effective Date:** April 2026 | |
| **Article No.:** 4183.03, B, 2<br>**Title:** Fast Dry Waterborne Traffic Paints | **Other:** | |

**Specification Committee Action:**

| | | | |
|---|---|---|---|
| **Deferred:** | **Not Approved:** | **Approved Date:** | **Effective Date:** April 2026 |

**Specification Committee Approved Text:**

**Comments:**

**Specification Section Recommended Text:**

**4183.03, B, 2, a.**

**Rename** and **replace** the Article:

**Color, Yellowness Index, and Daytime Luminance Factor.**

1) ~~For white, the color after drying is to be a flat white, free from tint, furnishing good opacity and visibility under both daylight and artificial light.~~ The initial color of the unbeaded white and yellow paint shall satisfy the appropriate chromaticity coordinates indicated in Table 2 of AASHTO M 348 when tested in accordance with ASTM E 1349 and AASHTO M 348 requirements.
2) ~~For yellow, the color is to be within the following CIE chromaticity limits when measured with an instrument having a 2 degree observer, using a standard C illuminant, and 45/0 or 0/45 geometry.~~ The Yellowness Index for White shall be 0.12 max when tested in accordance with ASTM E313.

~~**Table 4183.03-1: CIE Chromaticity Limits**~~

| ~~**CIE Data Limits**~~ | ~~Y~~ | ~~x~~ | ~~y~~ |
|---|---|---|---|
| ~~Minimum~~ | ~~0.5400~~ | ~~0.462~~ | ~~0.428~~ |
| ~~Maximum~~ | ~~0.5910~~ | ~~0.501~~ | ~~0.455~~ |

3) ~~The yellow color chip with chromaticity readings can be obtained from the Office of Materials for correlation.~~ The Daytime Luminance Factor, Y (%), shall be 75 minimum for white and 45 Minimum for Yellow when tested per ASTM E 1349 and AASHTO M 348 requirements.

**4183.03, B, 2, e, 2.**

**Replace** the first sentence:

Test according to the requirements of ~~Federal Test 141a Method 4121~~ ASTM D 2805.

**Comments:**

**4183.03 FAST DRY WATERBORNE TRAFFIC PAINTS. B 2**

**2. Laboratory Test Requirements.**

**a. Color, Yellowness Index, and Daytime Luminance Factor**

**1)** The initial color of the unbeaded white and yellow paint shall satisfy the appropriate chromaticity coordinates indicated in Table 2 of AASHTO M 348 when tested in accordance with ASTM E 1349 and AASHTO M 348 requirements. ~~For white, the color after drying is to be a flat white, free from tint, furnishing good opacity and visibility under both daylight and artificial light.~~

**2)** The Yellowness Index for White shall be 0.12 max when tested in accordance with ASTM E313. ~~For yellow, the color is to be within the following CIE chromaticity limits when measured with an instrument having a 2 degree observer, using a standard C illuminant, and 45/0 or 0/45 geometry.~~

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~~**Table 4183.03-1: CIE Chromaticity Limits**~~

| ~~**CIE Data Limits**~~ | ~~Y~~ | ~~x~~ | ~~y~~ |
|---|---|---|---|
| ~~Minimum~~<br>~~Maximum~~ | ~~0.5400~~<br>~~0.5910~~ | ~~0.462~~<br>~~0.501~~ | ~~0.428~~<br>~~0.455~~ |

**3)** The Daytime Luminance Factor, Y (%), shall be 75 minimum for white and 45 Minimum for Yellow when tested per ASTM E 1349 and AASHTO M 348 requirements. ~~The yellow color chip with chromaticity readings can be obtained from the Office of Materials for correlation.~~

**b. Viscosity.**

**1)** For white: no less than 80 or no greater than 95 Krebs Units at 77F.

**2)** For yellow: no less than 80 Kreb Units or no greater than 95 Krebs Units at 77F.

**3)** Use ASTM D 562 to measure viscosity.

**c. No-Pick-Up Time.**

**1)** Less than 10 minutes.

**2)** Test according to the requirements of ASTM D 711.

**d. Directional Reflectance (without Glass Spheres).**

**1)** For white: 84.0% minimum.

**2)** For yellow: 50.0% minimum.

**e. Dry Opacity.**

**1)** A minimum contrast ratio of 0.980.

**2)** Test according to the requirements of ASTM D2805 ~~Federal Test 141a Method 4121~~. Use a test stripe with a wet film thickness of 15 mil as measured by an Interchemical Wet Film Thickness Gage.

**f. Flexibility.**

No cracking or flaking shows when tested according to Federal Specification TT-P-1952b.

**g. Pigment Particle Size.**

Grind of no less than 3 on a Hegman Grind Gage when measured according to ASTM D 1210.

**Reason for Revision:** Update to Waterborne Traffic paints needed based on alignment with AASHTO standards.

| | | |
|---|---|---|
| **New Bid Item Required (X one)** | **Yes** | **No** X |
| **Bid Item Modification Required (X one)** | **Yes** | **No** X |
| **Bid Item Obsoletion Required (X one)** | **Yes** | **No** X |
| **Comments:** | | |
| **County or City Comments:** | | |
| **Industry Comments:** | | |