MINUTES
OF
IOWA DOT SPECIFICATION COMMITTEE MEETING

December 14, 2023

Members Present:	Mark Dunn	Contracts & Specifications Bureau
	Eric Johnsen, Chair	Contracts & Specifications Bureau
	Wes Musgrove	Construction & Materials Bureau
	Scott Nixon	District 1 - DCE
	Dillon Feldmann	Local Systems Bureau
Members Not Present:	Darwin Bishop	District 3 – DCE
	Daniel Harness	Design Bureau
	Mike Nop	Bridges & Structures Bureau
	Willy Sorenson	Traffic & Safety Bureau
	Charlie Purcell	Project Delivery Division
	Bob Welper	District 2 - DME
Advisory Members Present:	Jeff Devries	Construction & Materials Bureau
	Scott Sommers	Construction & Materials Bureau
	Asley Buss	Construction & Materials Bureau
	Chad Anderson	Construction & Materials Bureau
	Desiree McClain	Construction & Materials Bureau
	Brian Worrel	Construction & Materials Bureau
	Melissa Serio	Construction & Materials Bureau
	Elijah Gansen	Construction & Materials Bureau
	Charles Bernhard	Location & Environment Bureau
	Ken Brink	Location & Environment Bureau
	Ben Hucker	Maintenance Bureau

The Specification Committee met on Thursday, December 14, 2023, at 9:00 a.m. Eric Johnsen, Specifications Engineer, opened the meeting. The items were discussed in accordance with the agenda dated December 4, 2023.

The minutes are as follows:

1. Article 1102.03, A, 1, b, Imposition of Increase in Bidder Qualification Requirements, Suspension, and Disqualification.

The Contracts and Specifications Bureau requested to eliminate an obsolete form reference.

2. Section 2316, Pavement Smoothness.

The Construction and Materials Bureau requested to delete the old pavement smoothness specifications.

3. Article 2433.03, D, Shaft Excavation (Concrete Drilled Shaft).

The Construction and Materials Bureau requested to add a requirement that shafts with mudstone identified will require the wet method of shaft excavation.

4. Article 2528.01, C, 01, Traffic Control.

The Construction and Materials Bureau requested to clarify Traffic Control Technician requirements.

5. Article 4149.02, A, 9, Double Walled Polypropylene Pipe 12 inch to 30 inch. (Sanitary and Storm Sewer Pipe and Structures Materials).

The Construction and Materials Bureau requested to update an obsolete ASTM reference.

6. DS-23XXX, Diamond Grinding Rumble Strips.

The Construction and Materials Bureau requested approval of Developmental Specifications for Diamond Grinding Rumble Strips.

7. DS-23017, Pavement Interlayer Geotextile for PCC Overlays.

The Construction and Materials Bureau requested approval of revisions to the Developmental Specifications for Pavement Interlayer Geotextile for PCC Overlays.

Form 510130 (08-15)

IOWA DOT

SPECIFICATION REVISION SUBMITTAL FORM

Submitted by: Mark Dunn / Eric Johnsen	**Office:** Contracts and Specifications	**Item 1**
Submittal Date: 11/27/2024	**Proposed Effective Date:** October 2024	
Article No.: 1102.03, A, 1, b **Title:** Imposition of Increase in Bidder Qualification Requirements, Suspension, and Disqualification	**Other:**	

Specification Committee Action: Approved as recommended.

Deferred:	**Not Approved:**	**Approved Date:** 12/14/2023	**Effective Date:** 10/15/2023

Specification Committee Approved Text: See Specification Section Recommended Text.

Comments: None.

Specification Section Recommended Text:

1102.03, A, 1, b.

Replace the Article:

The Contractor does any act or omits doing or performing any act which, in the judgment of the Contracts Engineer, evidences a material change in the Contractor's financial responsibility or work capability where, in the judgment of the Contracts Engineer, the same will materially prejudice the Contractor's ability to successfully prosecute such public improvement contracts, or the Contractor knowingly submits false information on the "Contractor's Financial - Experience - Equipment Statement" (Form 650004) ~~or "Certification of Uncompleted Work Under Contract" (Form 650022)~~ or other information concerning prequalification, or

Comments:

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

Language is outdated, as Form 650022 has not been in use for many years. This information is reported elsewhere when a contractor requests bidding documents.

Reason for Revision:

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 / Jeff De Vries	**Office:** Construction & Materials	**Item 2**
Submittal Date: Nov.14, 2023	**Proposed Effective Date:** October 2024	
Section No.: 2316 **Title:** Pavement Smoothness	**Other:**	

Specification Committee Action: Approved as recommended.

Deferred:	**Not Approved:**	**Approved Date:** 12/14/2023	**Effective Date:** 10/15/2023

Specification Committee Approved Text: See Specification Section Recommended Text.

Comments: The Specifications Section searched for Section 2316 references throughout the ERL. Offices have been notified of these references. There were five other sections with references that will be addressed prior to elimination of this section. The title of Section 2317 was also revised to reflect that it covers all pavement smoothness now.

Specification Section Recommended Text:

2316, Pavement Smoothness.

Delete the Section:

~~**Section 2316. Pavement Smoothness**~~

~~**2316.01 DESCRIPTION.**~~

~~**A.** Apply this specification when Section 2317 does not apply.~~

~~**B.** Test and evaluate pavement smoothness. Perform surface correction if required.~~

~~**2316.02 TESTING AND EVALUATION.**~~

~~**A. General.**~~

~~**1.** Evaluate pavement smoothness for all main line pavement surfaces, except when specifically excluded or modified by the contract documents. Main line pavement is defined as all permanent pavement for traffic lanes, including:~~
- ~~Tapers to parallel lanes or through lanes at intersections,~~
- ~~Tapers to climbing lanes, and~~
- ~~Tapers to ramps and loops.~~

~~**2.** Evaluate pavement smoothness for all interchange ramps and loops.~~

~~**3.** For non-Primary projects, do not evaluate pavement smoothness unless specified in the contract documents.~~

~~**4.** 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.~~

~~**5.** Bridge approach sections which are a part of the paving contract will be tested according to Section 2428.~~

~~**6.** Smoothness Requirements:~~

a. Apply Table 2316.02-1 to all projects when specified. Smoothness requirements in inches per mile are listed in Schedules A and B.

b. For through traffic lanes wider than 8.5 feet which require matching the surface of the new pavement to the surface of an existing old pavement, the price reduction tables for Schedule A and B will be replaced by Schedule C. When the Profile Index is greater than 7.0 inches for schedule A segments or 22.0 inches per mile for Schedule B segments, calculate an Average Base Index (ABI) for each segment as shown in Table 2316.02-1.

Table 2316.02-1: Schedule for Identification of Pavements

Pavement	Schedule by Posted Speed (mph) (Existing or Proposed)	
	45 or less	over 45
Mainline, curbed (one or both sides of roadway	B	A
Mainline, not curbed	A	A
Ramps and Collector Distributor Roads	A(c)	A(c)
Loops	B	B
Side Roads	B	A
Grade Separations(a)	B	A
Pavement adjacent to existing pavement (added lane)	C(b)	C(b)

(a) Including municipal or Secondary Roads therein.

(b) $ABI = \frac{PI + X}{2}$

where:

PI = the profile index of the edge line of the abutting lane. If the computed ABI is less than X, use an ABI equal to X

X = 7 inches/mile if Schedule A, or 22 inches/mile if Schedule B.

(c) When a ramp or collector distributor road terminates at an intersection with a traffic signal or stop sign, the 700 feet nearest the intersection will be evaluated under Schedule B.

7. Exclusions.

Roundabouts will be excluded from smoothness testing. The surface of a roundabout shall not deviate from a straight line by more than 1/8 inch in 10 feet when measured longitudinally with a 10 foot straightedge. Paved shoulders will be excluded from smoothness testing unless used as a temporary driving surface. When used as a temporary driving surface, evaluate paved shoulders for bumps and dips only. Evaluate and correct as provided in Article 2316.03, C.

B. Measurement.

1. **General.**

a. Provide and operate an Ames or California type profilograph or an inertial profiler to produce a profilogram (profile trace) of the surface tested, according to Materials I.M. 341.

b. When a pavement for which smoothness is to be tested is adjacent to an existing old pavement, smoothness must also be tested on the old pavement 3 feet from the adjacent edge for ABI calculation. Should the surface of the old pavement be specified for correction, perform smoothness testing for ABI calculation after correction.

c. Remove all objects and foreign material on the pavement surface, including protective covers if used, prior to testing. If appropriate, properly replace protective covers after testing.

d. Produce a profilogram for each segment of 50 feet or more. Include the 16 feet beyond the ends of the section in the profilogram.

2. Pavements.

a. The pavement surface will be divided into sections that represent continuous placement.

b. A section will terminate at a day's work joint (header), a bridge, similar interruption, or when continuous placement crosses to a section with a different smoothness designation.

c. Sections longer than 778 feet or 0.147 miles placed without interruption will be separated into segments of 0.1 mile. The terminating segment may be shorter than 0.1 mile and greater than 250 feet and still be considered a segment. A segment is to be in only one traffic lane. Each traffic lane will be tested and evaluated separately. Gaps for temporary crossings or similar construction sequencing which are placed in otherwise continuous sections will be tested, when placed, and included in the adjacent section evaluation. Determine pavement profiles for each lane according to procedures for one lane, as shown in Materials I.M. 341 except for main line traffic lanes which will be tested in the wheel paths. Round trace scallops to nearest 0.01 inch. Wheel paths are defined as 3 feet and 9 feet from center line or lane line. Average the two wheel path profile indexes for each segment. For projects with less than 0.5 miles of mainline paving, Contractor may elect to determine pavement profile in the quarter point unless another location is specified in the contract documents.

C. Profilograph Testing.

Perform testing and provide the Engineer with the profilogram results. Ensure testing and evaluation are done by a trained and certified person. Ensure the evaluation is certified according to Materials I.M. 341.

1. Test each segment within 48 hours following placement. Provide the Engineer the index for each segment of paving by the end of the next day worked following the placement until there has been 3 consecutive days of paving where the index for all segments would result in 100% payment or better.

2. Should any following day be evaluated to receive less than 100% payment, immediately notify the Engineer, and take corrective action to modify paving methods and equipment to achieve 100% payment or better.

3. Submit all final profilograph test reports and profile traces to the Engineer within 14 calendar days following completion of paving on the project. Selected reports and traces may be requested by the Engineer in advance of paving completion for purposes of validating the Contractor's test results. Incentive payments for qualifying segments will be made following receipt of appropriate documentation of certified smoothness results.

4. 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. The Engineer may test the entire project length if it is determined that the Contractor certified test results are inaccurate, and the Contractor will be charged for this work at a rate of $400.00 per mile, per profile track, with a minimum charge of $800.00. Furnishing inaccurate tests may result in decertification of the Contractor's certified operator.

D. Profile Index.

1. Calculate a profile index for each segment from the profilogram, according to Materials I.M. 341, except for:

a. Side road connections less than 600 feet in length.

b. Single lift pavement overlays 2 inches or less in thickness unless the existing surface has been corrected by milling or scarification.

c. Storage lanes and turn lanes.

d. Pavement less than 8.5 feet in width.

e. The 16 feet at the ends of the section when the Contractor is not responsible for the adjoining surface.

f. Runout tapers on HMA overlays at existing pavement, bridges, or bridge approach sections when the thickness is less than the design thickness.

g. Detour Pavement.

h. Crossovers.

i. Sections less than 50 feet long.

j. Roundabouts.

Evaluate pavement segments excluded from profile index calculation for bumps and dips. Evaluate and correct per Article 2316.03, C.

2. If there is a segment 250 feet or 0.047 mile long or less at the end of a section, include the profilograph measurements for that segment in the evaluation of the adjacent segment in that section.

3. Identify bumps and dips separately on all profilograms. These appear as high or low points on the profilogram and correspond to high points (bumps) or low points (dips) on the pavement surface. They are identified by locating vertical deviations exceeding 0.5 inches for a 25 foot span for both bumps and dips as indicated on the profilogram.

2316.03 SURFACE CORRECTION.

A. **General.**

1. Surface correction for pavement smoothness may be required, which includes bumps or dips. Complete the correction before the determination of pavement thickness.

2. Perform bump, dip, and smoothness correction work for the full lane width of the paved surface.

3. Obtain the Engineer's approval for all correction work. After all required correction work is completed, determine the final profile index.

B. Pavements.

1. **Portland Cement Concrete Pavement.**
   - **a.** Accomplish PCC pavement surface correction by grinding the pavement with a diamond grinder, by PCC resurfacing, or by replacement.
   - **b.** Use grinding and texturing equipment that meets the requirements of Section 2532. Use a cutting head that is a minimum of 36 inches wide, unless a 24 inch cutting head is necessary due to space limitations.
   - **c.** Perform surface correction parallel to lane lines or edge lines as directed by the Engineer. Make each pass parallel to the previous passes. Ensure the ground surface is of a uniform texture.
   - **d.** Do not allow adjacent passes to overlap more than 1 inch or have a vertical difference of more than 1/8 inch as measured from bottom of groove to bottom of groove.
   - **e.** Begin and end smoothness correction at lines normal to the pavement lane lines or edge lines within any one corrected area. Proceed from the center line or lane line toward the pavement edge to maintain pavement cross slope.

2. **Hot Mix Asphalt Pavements.**
   - **a.** Accomplish asphalt pavement surface correction by:
     - Diamond grinding,
     - Overlaying the area,
     - Replacing the area, or
     - Inlaying the area.
   - **b.** For diamond grinding, perform the same work and use the same equipment specified for PCC pavement. Cover the surface that has been ground with a seal coat according to Section 2307 with the following modifications:
     - The binder bitumen may be the same material used for tack coat, applied at a rate of 0.10 gallon per square yard. Hand methods may be used for spraying.
     - Apply a cover aggregate consisting of sand at a rate of 10 pounds per square yard. Hand methods may be used for spreading. Apply the sand slightly damp, but with no free moisture, as determined by visual inspection. Embed with at least one complete pneumatic roller coverage.
     - This seal coat is intended to be placed immediately after the diamond grinding is completed in the travel lane. Complete this work when the road surface temperature is above 60ºF.
     - Labor, equipment, and materials used for this seal coat will not be paid for separately, but are incidental to the items for which correction is required.

c. 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. Ensure the profile of the surface is smooth with no bumps or dips at the beginning or end of correction. Overlay correction must be for the entire pavement width. Maintain pavement cross slope through the corrected areas.

C. Bumps and Dips.

Evaluate bumps and dips, including those at headers, on all pavements for which pavement smoothness is designated.

1. Bumps.

a. For all pavements evaluated, if the Engineer does not assess a price adjustment, correct all bumps exceeding 0.5 inch within a 25 foot span, as indicated on the profilogram, except as stated in Article 2316.03, C, 3.

b. Corrected bumps will be considered satisfactory when measurement by the profilograph shows that the bumps are 0.3 inch or less in a 25 foot span.

c. When a through traffic lane over 8.5 feet wide is constructed adjacent to an existing old pavement, bump correction or price adjustment to the Contractor for a bump will not apply if a bump exists at that location in the adjacent existing old pavement.

2. Dips.

a. On all pavements, if the Engineer does not asses a price adjustment, correct dips of 0.5 inch to 1.0 inch in a 25 foot span, as indicated on the profilogram, except as stated in Article 2316.03, C, 3. Replace the pavement in areas with dips over 1.0 inch. Corrected dips will be considered satisfactory when the profilogram shows the dips are less than 0.3 inch in a 25 foot span.

b. When a lane over 8.5 feet wide is constructed adjacent to an existing old pavement, correction of a dip or price adjustment to the Contractor for a dip will not be required if a dip exists at that location in the adjacent existing old pavement.

3. Exceptions.

When the Contractor is not responsible for the adjoining surface, bumps and dips in the 16 feet at the end of a section will be reviewed by the Engineer. Correct all bumps and dips determined to be under the control of the Contractor and resulting from the Contractor's operations. Correction of bumps and dips determined to be beyond the control of the Contractor will be paid according to Article 1109.03, B.

2316.04 SMOOTHNESS.

Pavement smoothness will be compensated by adding to (incentive) or subtracting from (price reduction) the price bid for pavement a determined amount for each segment. These amounts are identified in the appropriate schedule of Article 2316.05.

A. Pavement Where Schedule A Smoothness is Required.

1. For the appropriate categories of highway, as shown in Schedule A, incentives for pavement smoothness will be paid for each segment of pavement with an initial index per mile per segment of 3.0 inches or less.

2. For segments with an initial index of 7.1 to 10.0 inches per mile, the Contractor will be assessed a price reduction.

3. For segments with an index of 10.1 inches per mile and greater, grind the surface to a final index of 7.0 inches per mile or less.

B. Pavement Where Schedule B Smoothness is Required.

1. For all highways, incentives for pavement smoothness will be paid for each segment of pavement with an initial index of 12 inches per mile per segment or less.

2. For all segments with an initial index of 22.1 to 30.0 inches per mile, the Contractor will be assessed a price reduction.

3. For segments with an index of 30.1 inches per mile and greater, grind the surface to a final index of 22.0 inches per mile or less.

C. Pavement Adjacent to Existing Pavement.

1. Smoothness will be evaluated by the ABI as defined in Article 2316.02, A, 6 or 7, for each segment of new pavement 8.5 feet wide or more, and over 600 feet in length, which is to be matched to the surface of an existing pavement.

2. Surface correction is required for smoothness exceeding ABI + 12 when Schedule A is required and exceeding ABI + 30 when Schedule B is required. Payment will be based on results after correction according to Schedule C.

3. Longitudinally check areas not included in the profilograph test with a 10 foot straight edge. Ensure the surface does not deviate from a straight line by more than 1/8 inch in 10 feet. Meet requirements of Article 2316.03 for all corrections needed.

D. Bridge Approach Sections.

Smoothness of bridge approach sections will not be used in the calculations for incentive or price reduction of pavement segments, sections, or the project.

2316.05 SCHEDULE OF PAYMENT.

A. For each traffic lane of main line pavement and each traffic lane of interchange ramps and loops evaluated for smoothness, as defined in Article 2316.02, A, the Engineer will determine the length of each segment in miles.

B. For roadways, the Contractor may receive an incentive payment or be assessed a price reduction based on the number of qualifying segments and the initial profile index.

C. Pavement segments excluding repair work that are subject to profilograph testing, as defined in Article 2316.02, D, will be considered for additional payment as a smoothness incentive or price reduction. For a segment to be qualified for incentive, there must be no grinding within that segment.

D. Surface correction (grinding) of bridge approach sections, and as stated in Article 2316.03, C, 3, will not count as surface correction on adjacent pavement segments and will not detract from possible incentive payments on those segments.

E. Single lift pavement resurfacing 2 inches thick or more that has milling or scarification of the original pavement will be rated using the multi-lift schedules.

F. A $1600 price adjustment will be assessed for each dip not corrected in each pavement lane under Schedule A and B, except as stated in Article 2316.03, C, 3. In addition, a $1600 price adjustment will be assessed for each bump not corrected under Schedule A and B, except as stated in Article 2316.03, C, 3. Bumps and dips not corrected will also be included in the evaluation for the segment smoothness.

G. The cost of certified smoothness and associated traffic control is incidental to the cost of the pavement.

H. These payments or assessments will be based on the following schedules:

1. Schedule A Smoothness Requirements.

Pavement segments which are designated for Schedule A smoothness will be evaluated for incentive or price reduction assessments as follows:

Table 2316.05-1: Incentives for Pavement Smoothness

Initial Profile Index	**Single Lift Pavements**		**Multi-Lift Pavements**	
Inches Per Mile Per Segment [a]	Primary	Non-Primary	Primary	Non-Primary
	Dollars Per Segment	Dollars Per Segment	Dollars Per Segment	Dollars Per Segment

0-1.0	700	300	250	125
1.1-2.0	600	250	200	100
2.1-3.0	450	200	150	50
3.1-7.0	Unit Price	Unit Price	Unit Price	Unit Price

(a) For each segment of pavement that has an initial index, within the limits listed, with no grinding, the Contractor will receive an incentive payment as shown in the tabulation for the appropriate category.

Table 2316.05-2: Price Reduction for Pavement Smoothness

Initial Profile Index	Single Lift Pavements		Multi-Lift Pavements	
Inches Per Mile Per Segment (a)	Primary	Non-Primary	Primary	Non-Primary
	Dollars Per Segment	Dollars Per Segment	Dollars Per Segment	Dollars Per Segment
3.1-7.0	Unit Price	Unit Price	Unit Price	Unit Price
7.1-10.0	200	100	100	50
10.1 & Over(a)	Grind Only	Grind Only	Grind Only	Grind Only

(a) For segments with an initial index of 10.1 and over, grind the surface to a final index of 7.0 or better. In lieu of grinding the surface to a final index of 7.0 or better, the Contractor may elect to replace part or all of the segment.

2. Schedule B Smoothness Requirements.

a. Pavement segments designated for Schedule B smoothness and indexed in segments greater than 50 feet will be evaluated for incentive or price reduction as shown in Tables 2316.05-3 and 2316.05-4.

b. No price reduction assessment will be made for individual segments shorter than 50 feet properly corrected if required.

Table 2316.05-3: Incentives for Pavement Smoothness

Initial Profile Index	New Pavements	Resurfaced Pavements
Inches Per Mile Per Segment (a)	Dollars Per Segment	Dollars Per Segment
0-4.0 4.1-8.0 8.1-12.0 12.1-22	600 500 400 Unit Price	300 250 200 Unit Price

(a) For each segment of pavement that has an initial index, within the limits listed, with no grinding, the Contractor will receive an incentive payment as shown in the tabulation for the appropriate category.

Table 2316.05-4: Price Reduction for Pavement Smoothness

Initial Profile Index	New Pavements	Resurfaced Pavements
Inches Per Mile Per Segment(a)	Dollars Per Segment	Dollars Per Segment
12.1-22.0 22.1-30.0 30.1 & Over (a)	Unit Price 500 Grind Only	Unit Price 250 Grind Only

(a) For segments with an initial index of 30.1 and over, grind the surface to a finish index of 22.0 or better. In lieu of grinding the surface to a final index of 22.0 or better the Contractor may elect to replace part or all of the segment.

3. Schedule C Smoothness Requirements (Pavement Adjacent to Existing Pavement).
For new pavement which has been matched to an existing old pavement for which an Average Base Index (ABI) was calculated, the pavement will be evaluated for a price reduction for each segment based on Schedule A or Schedule B payment.

Table 2316.05-5: Initial Profile Index or Profile Index after Correction

Schedule A Inches Per Mile Per Segment	Schedule B Inches Per Mile Per Segment	Dollars Per Segment
0 to ABI	0 to ABI	0
ABI + 0.1 to ABI +4 incl.	ABI + 0.1 to ABI + 10 incl.	300
ABI + 4.1 to ABI +8.0 incl.	ABI + 10.1 to ABI + 20 incl.	500
ABI + 8.1 to ABI +12 incl.	ABI + 20.1 to ABI + 30 incl.	800
Greater than ABI + 12	Greater than ABI + 30	Grind Only

4. Bridge Approach Sections.
Correct bridge approach sections for smoothness as specified in Section 2428.

Section 2317, Primary and Interstate Pavement Smoothness.

Retitle the Section:

Primary and Interstate Pavement Smoothness

Comments:

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

Delete 2316 since 2317 now addresses local projects/

Reason for Revision: Moving away from PI to MRI. 2317 addresses the needs of non-primary routes.

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 x**	**No**

Comments:

County or City Comments:

Industry Comments:

Form 510130 (08-15)

IOWA DOT

SPECIFICATION REVISION SUBMITTAL FORM

Submitted by: Wes Musgrove/ Desiree McClain	**Office:** Construction & Materials	**Item 3**
Submittal Date: November 13, 2023	**Proposed Effective Date:** October 2024	
Article No.: 2433.03, D **Title:** Shaft Excavation	**Other:**	

Specification Committee Action: Approved as recommended.

Deferred:	**Not Approved:**	**Approved Date:** 12/14/2023	**Effective Date:** 10/15/2023

Specification Committee Approved Text: See Specification Section Recommended Text.

Comments: None.

Specification Section Recommended Text:
2433.03, D, 1, g.

Replace the Article:

The dry method of construction will not be allowed for drilled shafts with shale and/or mudstone identified in the bearing strata of the soil profile.

Comments:

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

D. Shaft Excavation.

1. General.

a. Construct drilled shafts by either the wet, dry, or casing method as necessary to produce sound, durable concrete foundation shafts free of defects. These methods are described below.

b. Remove surface and subsurface obstructions. Special tools and/or procedures may be required.

c. If the Engineer determines that the material encountered during excavation and/or present at tip elevation is unsuitable and/or differs from that anticipated in the design of the drilled shaft, extend the drilled shaft tip elevations.

d. Maintain a drilling log during shaft and socket excavation. In the log, place information such as elevation, depth of penetration, drilling time in each of the strata, material description, and remarks. Furnish two copies of the log (signed by the Contractor) to the Engineer within 1 week after completion of the excavation.

e. After the shaft excavation has been completed, immediately proceed with shaft construction.

f. Do not excavate a shaft within a distance of three shaft diameters of a previously constructed shaft within 24 hours of completing concrete placement, unless approved by the Engineer.

g. The dry method of construction will not be allowed for drilled shafts with shale and/or mudstone identified in the bearing strata of the soil profile.

Reason for Revision: In the recent projects, there has been mudstone in our boring logs. Mudstone is a substance that we are not overly familiar with. So, we did some testing (Slake Test) and found out that Mudstone has similar attributes to shale. Therefore, we are wanted to make sure that if we encounter mudstone, we want it to stay in a wet condition and not allow them to use a dry shaft when excavating this material.

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 / Brian Worrel	**Office:** Construction and Materials	**Item 4**
Submittal Date: November 27, 2024	**Proposed Effective Date:** October 2024	
Article No.: 2528.01.C.01 **Title:** Traffic Control	**Other:**	

Specification Committee Action: Approved as recommended.

Deferred:	**Not Approved:**	**Approved Date:** 12/14/2023	**Effective Date:** 10/15/2023

Specification Committee Approved Text: See Specification Section Recommended Text.

Comments: None.

Specification Section Recommended Text:
2528.01, C, 1.

Replace the Article:

Maintain a trained Traffic Control Technician on staff, even though the traffic control portion of the contract may be subcontracted. The trained Traffic Control Technician is required to have attended and passed the exam in an ATSSA Traffic Control Technician, IMSA Work Zone Traffic Control, Iowa AGC Traffic Control Technician ~~class~~, Minnesota DOT Traffic Control Supervisor ~~training class~~, or Texas Engineering Extension Service Work Zone Traffic Control training class. This trained Traffic Control Technician is responsible for overall management of the Contractor's quality control program for traffic control. ~~Starting April 2018, the Traffic Control Technician shall retake and pass the exam in one of the approved classes every 5 years.~~ To maintain trained status, the Traffic Control Technician shall attend and pass the exam in an approved training class at a minimum of every 5 years.

Comments:

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

2528 Traffic Control

2528.01 Description

C. Traffic Quality Control.

1. Maintain a trained Traffic Control Technician on staff, even though the traffic control portion of the contract may be subcontracted. The trained Traffic Control Technician is required to have attended and passed the exam in an ATSSA Traffic Control Technician, IMSA Work Zone Traffic Control, Iowa AGC Traffic Control Technician ~~class~~, Minnesota DOT Traffic Control Supervisor ~~training class~~, or Texas Engineering Extension Service Work Zone Traffic Control training class. This trained Traffic Control Technician is responsible for overall management of the Contractor's quality control program for traffic control. ~~Starting April 2018, the Traffic Control Technician shall retake and pass the exam in one of the approved classes every 5 years.~~ To maintain trained status, the Traffic Control Technician shall attend and pass the exam in an approved training class at a minimum of every five years.

Reason for Revision: Improve clarity of requiring both class attendance and successful passing of the associated exam every five years in order to maintain a trained status for Traffic Control Technicians.

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 / Melissa Serio	**Office:** Construction & Materials	**Item 5**
Submittal Date: 11/14/23	**Proposed Effective Date:** October 2024 GS	
Article No.: 4149.02, A, 9 **Title:** Double Walled Polypropylene Pipe 12 inch to 30 inch. (Sanitary and Storm Sewer Pipe and Structures Materials)	**Other:**	

Specification Committee Action: Approved as recommended.

Deferred:	**Not Approved:**	**Approved Date:** 12/14/2023	**Effective Date:** 10/15/2023

Specification Committee Approved Text: See Specification Section Recommended Text.

Comments: None.

Specification Section Recommended Text:
4149.02, A, 9, a.

Replace the Article:
Comply with ASTM F ~~2736~~ 2764.

Comments:

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

4149.02, A, 9, Double Walled Polypropylene Pipe 12 inch to 30 inch.

Replace Article a:

9. Double Walled Polypropylene Pipe 12 inch to 30 inch.
- **a.** Comply with ASTM F ~~2736~~ 2764
- **b.** Minimum pipe stiffness per ASTM D 2412, 46 psi.
- **c.** Integral bell and spigot joint complying with ASTM D 3212 and ASTM F 477.

Reason for Revision: ASTM F 2736 has been withdrawn. ASTM F 2764 now includes double walled polypropylene pipe.

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: SUDAS has already made this ASTM reference change.

County or City Comments:

Industry Comments:

Form 510130 (08-15)

IOWA DOT

SPECIFICATION REVISION SUBMITTAL FORM

Submitted by: Wes Musgrove/Elijah Gansen	**Office:** Construction & Materials	**Item 6**
Submittal Date: November 01, 2023	**Proposed Effective Date:** March 19, 2024	
Article No.: **Title:**	**Other:** DS-23XXX, Diamond Grinding Rumble Strips	

Specification Committee Action: Approved with changes.

Deferred:	**Not Approved:**	**Approved Date:** 12/14/2023	**Effective Date:** 3/19/2024

Specification Committee Approved Text:

Comments: Road Standards are currently being developed for this DS. For the first project in the March letting, the standards will be included as plan details.

The CMB pointed out that the temperature and date requirements of Article DS-23051.03, E, 5 were different from Sections 2306 and 2308 of the Standard Specifications. The DS was modeled after Section 2548 of the Standard Specifications, which is where the temperature and date came from. The DS will be revised to refer to Section 2548 and the temperature and date will be reviewed in the future to see if they should match Section 2306 and 2308.

Elijah Gansen will be the controller of this DS.

For clarification, sinusoidal rumble strips are wavy and result in less road noise for certain locations where noise is a factor.

The Maintenance Bureau requested that the sinusoidal rumble strips be constructed with peaks at least 0.080 inches deep so that they would protect the pavement markings and not require separate grooving.

Specification Section Recommended Text: See attached Draft Developmental Specifications for Diamond Grinding Rumble Strips.

Comments:

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

See attached document.

Reason for Revision: This is a new DS for diamond ground rumble strips. Diamond ground rumble strips cause less damage to the pavement surface compared to the current milling processes.

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

Comments: We will need the following bid items created to go with this DS:

- Diamond Ground Centerline Rumble Strips, HMA Surface
- Diamond Ground Centerline Rumble Strips, PCC Surface
- Diamond Ground Centerline Sinusoidal Rumble Strips, HMA Surface
- Diamond Ground Centerline Sinusoidal Rumble Strips, PCC Surface
- Diamond Ground Shoulder Rumble Strips, HMA Surface
- Diamond Ground Shoulder Rumble Strips, PCC Surface

• Diamond Ground Shoulder Sinusoidal Rumble Strips, HMA Surface • Diamond Ground Shoulder Sinusoidal Rumble Strips, PCC Surface
County or City Comments:
Industry Comments: None

DS-23051
(New)

DEVELOPMENTAL SPECIFICATIONS
FOR
DIAMOND GRINDING RUMBLE STRIPS

Effective Date
March 19, 2024

THE STANDARD SPECIFICATIONS, SERIES 2023, ARE AMENDED BY THE FOLLOWING MODIFICATIONS AND ADDITIONS. THESE ARE DEVELOPMENTAL SPECIFICATIONS AND THEY PREVAIL OVER THOSE PUBLISHED IN THE STANDARD SPECIFICATIONS.

23051.01 DESCRIPTION.

Provide equipment, furnish all necessary labor and materials, and perform all operations necessary for diamond grinding standard or sinusoidal rumble strips in HMA or PCC surfaces. Diamond grind rumble strips to the dimensions and spacing shown in the contract documents. Apply diluted asphalt emulsion to the milled shoulder rumble strips on HMA surfaces by means of a bituminous distributor.

23051.02 MATERIALS.

A. Use asphalt emulsion Grade CSS-1, CSS-1h, SS-1, or SS-1h meeting requirements of Section 4140 of the Standard Specifications.

B. Dilute the asphalt emulsion with water prior to application to the milled shoulder rumble strip. The dilution rate is one part of asphalt emulsion to one part of water.

23051.03 CONSTRUCTION.

A. General.

1. Notify the Engineer if degraded areas are encountered that will not accommodate diamond ground rumble strips. Skip those sections.

2. Allow PCC to cure for a minimum of 14 days prior to placing diamond ground rumble strips.

B. Equipment.

1. Perform grinding using diamond blades mounted on a self propelled machine that has been designed for grinding PCC or HMA surfaces. Ensure the equipment will not cause strain or damage to the underlying pavement.

2. Do not use grinding equipment that causes excessive ravels, aggregate fractures, spalls, or excessive disturbance of the transverse and/or longitudinal joints.

3. For standard rumble strips use grinding equipment with a minimum effective head width suitable for grinding the entire width of the rumble strip in one pass. For centerline rumble strips use a grinding head equipped to grind the rumble strip on each side of the centerline in one pass.

4. Select the blade type and number of blades per foot to provide proper surface texture based on the material being ground, in particular, the coarse aggregate type.

C. Test Strip.
Demonstrate to the Engineer on an initial 500 foot test section that the equipment and method will provide the desired diamond ground rumble strip and surface inside each depression without damaging the adjacent pavement. If the desired results are not being provided, as determined by the Engineer, provide different equipment or methods, or make necessary adjustments to provide the desired results. If the initial 500 foot section results are unsatisfactory, repair or replace the section as determined by the Engineer, at no additional cost to the Contracting Authority.

D. Grinding.

1. Grind shoulder rumble strips in a straight line, offset from the painted edge line as shown in the contract documents. Do not deviate from that offset more than ± 2 inches. Ensure the depth of the rumble strips is as shown in the contract documents. The Engineer will randomly check the alignment and depth.

2. Grind centerline rumble strips in a straight line, on the centerline joint as shown in the contract documents. Do not deviate from that location more than ± 1 inch. Ensure the depth of the rumble strips is as shown in the contract documents. The Engineer will randomly check the alignment and depth.

3. 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 of the Standard Specifications.

E. Asphalt Emulsion Fog Seal.
Per Article 2548.03, C of the Standard Specifications.

F. Limitations.
Do not disturb desirable grass areas and desirable trees outside the construction limits. Do not park or service vehicles and equipment or use these areas for storage of materials. Obtain the Engineer's approval for storage, parking, and service areas.

23051.04 METHOD OF MEASUREMENT.
Measurement will be as follows:

A. Diamond Ground Shoulder Rumble Strips.
Stations shown in the contract documents for each type, measured along each edge of mainline pavement. Unless stated otherwise in the contract documents, no deduction will be made for gapped areas. The quantity will be adjusted for the length of degraded shoulders skipped, as defined in Article DS-23051.03 of this specification. The quantity will be adjusted for test sections that were deemed unsatisfactory.

B. Diamond Ground Centerline Rumble Strips.
Stations shown in the contract documents for each type, measured along the centerline of mainline pavement. Unless stated otherwise in the contract documents, no deduction will be made for gapped areas. The quantity will be adjusted for the length of degraded pavement

skipped, as defined in Article DS-23051.03 of this specification. The quantity will be adjusted for test sections that were deemed unsatisfactory.

C. Asphalt Emulsion for Fog Seal (Shoulder Rumble Strips).
Gallons computed from field measurements of distributors or from tank cars or transport trucks as provided in Article 4100.03 of the Standard Specifications. When quantities computed from field measurements check within 1.0% of the billed gallons, payment will be based on billed gallons. When quantities computed from field measurements differ from billed gallons by more than 1.0%, payment will be based on the quantity from field measurements. From these quantities, any amount used by the Contractor as fuel, left in cars, or otherwise not delivered to the road surface will be deducted. The Engineer will advise the Contractor promptly, in writing, of quantities deducted.

23051.05 BASIS OF PAYMENT.
Payment will be the contract unit price as follows:

A. Diamond Ground Shoulder Rumble Strips.
Per station for the type specified.

B. Diamond Ground Centerline Rumble Strips.
Per station for the type specified.

C. Asphalt Emulsion for Fog Seal (Shoulder Rumble Strips).

1. Per gallon for undiluted Asphalt Emulsion for Fog Seal (Shoulder Rumble Strips) that is mixed and used on the project. Diluted asphalt emulsion that is delivered to the project site, but not applied to the roadway surface will not be considered for payment.

2. Payment is full compensation for cleaning the shoulder surface, furnishing and applying diluted asphalt emulsion, mixing water, and protecting the adjacent pavement and edge lines.

Form 510130 (08-15)

IOWA DOT

SPECIFICATION REVISION SUBMITTAL FORM

Submitted by: Wes Musgrove/Elijah Gansen	**Office:** Construction & Materials	**Item 7**
Submittal Date: November 01, 2023	**Proposed Effective Date:** April 2024	
Article No.: **Title:**	**Other:** DS-23017, Pavement Interlayer Geotextile for PCC Overlays	

Specification Committee Action: Approved as recommended.			
Deferred:	**Not Approved:**	**Approved Date:** 12/14/2023	**Effective Date:** 2/20/2024
Specification Committee Approved Text:			
Comments:			

Specification Section Recommended Text: See attached Draft Developmental Specifications for Pavement Interlayer Geotextile for PCC Overlays.

Comments: None.

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

23017.03 CONSTRUCTION.

C. Place geotextile and secure per Article 23017.03, D. If geotextile fails to remain secured in place resecure loose geotextile and limit placement length in advance of the paving machine such that proper securement can be maintained. ~~Do not place more than 650 feet of geotextile in front of paver if construction traffic is expected on the grade in front of the paver.~~ Limit driving on geotextile to a minimum. Delay installation on areas subject to excess traffic, such as crossovers, until immediately before concrete placement.

Reason for Revision: The 650 feet maximum length restriction often places workers in a hazardous location in front of the paving machine. This revision allows for the workers installing the material to be further away from the paving machine but still require proper securement of the geotextile.

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: SUDAS limits placement to length that can be paved in one day.

Industry Comments: None

DS-23052
(Replaces DS-23017)

DEVELOPMENTAL SPECIFICATIONS FOR PAVEMENT INTERLAYER GEOTEXTILE FOR PCC OVERLAYS

Effective Date
February 20, 2024

THE STANDARD SPECIFICATIONS, SERIES 2023, ARE AMENDED BY THE FOLLOWING MODIFICATIONS AND ADDITIONS. THESE ARE DEVELOPMENTAL SPECIFICATIONS AND THEY SHALL PREVAIL OVER THOSE PUBLISHED IN THE STANDARD SPECIFICATIONS.

23052.01 DESCRIPTION.

Place pavement interlayer geotextile as shown on the plans.

23052.02 MATERIALS.

A. Pavement Interlayer Geotextile.
Provide a pavement interlayer meeting AASHTO M 288, except as modified below:

Table DS-23052.02-1: Pavement Interlayer Geotextile Properties

Property	Requirement	Test Method
Fabric Type	Non-woven Geotextile, no thermal treatment	EN 13249, Annex F
Mass per unit area	≥13.3 oz/sq.yd and ≤16.2 oz/sq.yd	ASTM D 5261
Thickness under load (pressure)	0.29 psi: ≥ 0.12 inches 2.9 psi: ≥ 0.10 inches 29 psi: ≥ 0.04 inches	ASTM D 5199, modified under loads of 0.29, 2.9, and 29 psi
Tensile strength	≥ 685 lb/ft	ASTM D 4595
Maximum elongation	≤ 130%	ASTM D 4595
Water permeability in normal direction under load (pressure)	≥ 3.3×10^{-4} ft/s[under pressure of 2.9 psi]	ASTM D 5493
Water permeability in the plane direction of the fabric (transmittivity) under load (pressure)	≥ 1.6×10^{-3} ft/s [under pressure of 2.9 psi] ≥ 6.6×10^{-4} ft/s [under pressure of 29 psi]	ASTM D 6574
Weather resistance	Resistance ≥ 60%	EN 12224
Alkali resistance	≥ 96% Polypropylene/Polyethylene	EN 13249, Annex B

Note: EN is European Standard

B. For each lot of material, furnish manufacturer's certification statement to Engineer stating name of manufacturer, chemical composition of filaments or yarns, and compliance with this specification. Include test results from specific lots for all specification requirements.

23052.03 CONSTRUCTION.

A. Sweep pavement to remove loose debris before applying pavement interlayer geotextile**.**

B. Ensure geotextile is tight without excess wrinkles and folds.

C. ~~Do not place more than 650 feet of geotextile in front of paver if construction traffic is expected on the grade in front of the paver.~~ Place geotextile and secure per Article DS-23017.03, D. If geotextile fails to remain secured in place resecure loose geotextile and limit placement length in advance of the paving machine such that proper securement can be maintained. Limit driving on geotextile to a minimum. Delay installation on areas subject to excess traffic, such as crossovers, until immediately before concrete placement.

D. Use one of the following methods to secure the geotextile:

1. Secure geotextile with pins or nails punched through 2 to 2.75 inch galvanized washers or disks every 6 feet or less. Place additional fasteners as needed to ensure geotextile does not shift or fold during concrete placement.

2. Secure geotextile with 3M HoldFast 70 Cylinder Spray Adhesive or approved alternate. Apply to all edges of the fabric and as needed to prevent shifting or folding of the fabric during concrete placement.

3. Other anchoring methods approved by the Engineer.

E. Do not allow more than three layers of the geotextile to overlap in any location. Overlap edges of geotextile by 8 inches ± 2 inches. Sequence rolling out geotextile to ensure good lapping practice and prevent folding or tearing by construction traffic.

F. Extend free edge of geotextile interlayer a minimum of 4 inches beyond edge of pavement**.** Terminate interlayer in a drainable layer. Do not impair free drainage within the geotextile.

G. Keep geotextile clean and free of loose debris before concrete placement.

23052.04 METHOD OF MEASUREMENT.
The quantity of Pavement Interlayer Geotextile will be the quantity in square yards shown in the contract documents.

23052.05 BASIS OF PAYMENT.
Payment for Pavement Interlayer Geotextile will be at the contract unit price per square yard. Payment is full compensation for furnishing materials, labor and equipment necessary to install the pavement interlayer geotextile.