Iowa Department of Transportation

**MINUTES**
**OF**
**IOWA D.O.T. SPECIFICATION COMMITTEE MEETING**

**January 14, 2010**

| | | |
|---|---|---|
| **Members Present:** | Jim Berger | Office of Materials |
| | Donna Buchwald | Office of Local Systems |
| | Eric Johnsen, Secretary | Specifications Section |
| | Bruce Kuehl | District 6 - Construction |
| | Deanna Maifield | Office of Design |
| | Doug McDonald | District 1 - Marshalltown RCE |
| | Gary Novey | Office of Bridges & Structures |
| | Dan Redmond | District 4 - Materials |
| | Tom Reis, Chair | Specifications Section |
| | John Smythe | Office of Construction |
| **Members Not Present:** | John Adam | Statewide Operations Bureau |
| | Roger Bierbaum | Office of Contracts |
| | Troy Jerman | Office of Traffic & Safety |
| **Advisory Members Present:** | Lisa Rold | FHWA |
| | Brad Skinner | Page & Montgomery Counties |
| **Others Present:** | Daniel Harness | Office of Design |
| | Khyle Clute | Office of Design |
| | Wes Mayberry | Office of Design |
| | Jim Carpenter | Office of Design |

Tom Reis, Specifications Engineer, opened the meeting. The following items were discussed in accordance with the agenda dated January 8, 2010:

**1. Article 2001.21, C, 1, Truck Mixer and Agitator.**
The Office of Materials requested changes to eliminate an incorrect reference and clarify the specification.

**2. Article 2102.03, D, 3, c, Placement of Backfill Material.**
The Office of Design requested changes to include language that had been included in the plans in the specifications.

**3. Section 2301, Portland Cement Concrete Pavement.**
The Office of Design requested changes to clarify payment for adjustment of fixtures.

**4. Section 2303, Hot Mix Asphalt Mixtures.**
The Office of Design requested changes to clarify payment for adjustment of fixtures.

**5. Article 2317.03, Surface Tolerances, Testing, and Evaluation.**
The Office of Materials requested changes to clarify handling of partial segments for smoothness testing.

**6. Article 2407.03, B, 4, Concrete.**

The Office of Materials requested changes to eliminate testing procedure language from the specification and eliminate some unnecessary testing.

**7. Section 4103, Liquid Admixtures for Portland Cement Concrete.**

The Office of Materials requested changes to match IM 403 and clarify dosage rate.

**8. DS-09027, Pedestrian Path Closure.**

The Office of Design requested changes to reference MUTCD for requirements for pedestrian barricades.

**9. SS-090XX, Furnish and Install Shrubs, Trees, and Vines.**

The Office of Design requested approval of an SS for Furnish and Install Shrubs, Trees, and Vines. The SS will include language that had been included in the plans.

**10. SS-090XX, Furnish and Install Shrubs, Trees, and Vines with Warranty.**

The Office of Design requested approval of an SS for Furnish and Install Shrubs, Trees, and Vines with Warranty. The SS will include language that had been included in the plans.

**SPECIFICATION REVISION SUBMITTAL FORM**

| | | |
|---|---|---|
| **Submitted by:** Jim Berger | **Office:** Materials | **Item 1** |
| **Submittal Date:** December 22, 2009 | **Proposed Effective Date:** October, 2010 | |
| **Article No.:** 2001.21, C<br>**Title:** Truck Mixer and Agitator | **Other:** | |

**Specification Committee Action:** Approved as is.

| | | | |
|---|---|---|---|
| **Deferred:** | **Not Approved:** | **Approved Date:** 1/14/2010 | **Effective Date:** 10/19/2010 |

**Specification Committee Approved Text:** See Specification Section Recommended Text.

**Comments:** None.

**Specification Section Recommended Text:**

**2001.21, C, 1.**

**Replace** the article:

~~Use the capacities and mixing capabilities defined in ASTM C 94. Attach a plate to each unit containing the information described therein.~~ The equipment shall have a metal plate or plates attached with the following information:

- Gross volume of the drum
- Mixed concrete capacity
- Maximum and minimum mixing speed

The plate may be issued by the Truck Mixer Manufacturers Bureau, if not, have an independent~~,~~ ~~recognized~~ laboratory meeting the requirements of ASTM C 1077 perform the proof tests described in Annex A1 of ASTM C 94 ~~as defined in Section 4103 determine compliance~~. The test report of the proof test ~~Complete test~~ results may be required.

**Comments:**

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

**C. Truck Mixer and Agitator.**

**1.** ~~Use the capacities and mixing capabilities defined in ASTM C 94. Attach a plate to each unit containing the information described therein.~~ The equipment shall have a metal plate or plates attached with the following information:

- Gross volume of the drum
- Mixed concrete capacity
- Maximum and minimum mixing speed

The plate may be issued by the Truck Mixer Manufacturers Bureau, if not, have an independent~~,~~ ~~recognized~~ laboratory meeting the requirements of ASTM C1077 perform the proof tests described in Annex A1 of ASTM C94 ~~as defined in Section 4103 determine compliance~~. The test report of the proof test ~~Complete test~~ results may be required.

**Reason for Revision:** Reference to a CCRL inspected lab in 4103 is being suggested for elimination in proposed specification change. As long as the lab reference was being done, some other changes are suggested to make the paragraph a little clearer.

| | | |
|---|---|---|
| **County or City Input Needed (X one)** | **Yes** | **No** x |
| **Comments:** | | |

| | | | | | |
|---|---|---|---|---|---|
| **Industry Input Needed (X one)** | | | **Yes** | **No** x | |
| **Industry Notified:** | **Yes** | **No** | **Industry Concurrence:** | **Yes** | **No** |
| **Comments:** | | | | | |

**SPECIFICATION REVISION SUBMITTAL FORM**

| | | |
|---|---|---|
| **Submitted by:** Deanna Maifield | **Office:** Design | **Item 2** |
| **Submittal Date:** 2009.12.28 | **Proposed Effective Date:** 10-19-10 | |
| **Article No.:** 2102.03, D, 3, c<br>**Title:** Placement of Backfill Material | **Other:** | |

**Specification Committee Action:** Approved as is.

| | | | |
|---|---|---|---|
| **Deferred:** | **Not Approved:** | **Approved Date:** 1/14/2010 | **Effective Date:** 10/19/2010 |

**Specification Committee Approved Text:** See Specification Section Recommended Text.

**Comments:** The Office of Construction has some concerns with using moisture control when sand is the select backfill material. Sampling and testing becomes an issue that must be closely watched.

**Specification Section Recommended Text:**

**2102.03, D, 3, c, 1.**

**Replace** the Article:

Place special or selected backfill material in areas shown in the contract documents or as directed by the Engineer. Place and compact as provided in Section 2107 with the following modifications:

**a)** Where compaction with moisture and density control or with moisture control is required, ensure the moisture content of special backfill material is within the limits specified.

**b)** When select backfill material is placed for subgrade treatment purposes, compact using moisture control.

**Comments:**

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

**2102.03, D, 3, c, Placement of Backfill Material.**

**Replace** the first paragraph:

**1)** Place special or selected backfill material in areas shown in the contract documents or as directed by the Engineer. Place and compact as provided in Section 2107 with the following modifications:

**a)** Where compaction with moisture and density control or with moisture control is required, ensure the moisture content of special backfill material is within the limits specified.

**b)** When select backfill material is placed for subgrade treatment purposes, compact using moisture control.

**Reason for Revision:** Soils Design has been adding this moisture control requirement to all plans involving select soil used for treatment purposes. Their hope was that this requirement would be in the specifications with the release of the 2009 book; however, it was not included. They would like it added.

| | | | | | |
|---|---|---|---|---|---|
| **County or City Input Needed (X one)** | | | **Yes** | **No** X | |
| **Comments:** | | | | | |
| **Industry Input Needed (X one)** | | | **Yes** | **No** X | |
| **Industry Notified:** | **Yes** | **No** X | **Industry Concurrence:** | **Yes** | **No** |
| **Comments:** | | | | | |

**SPECIFICATION REVISION SUBMITTAL FORM**

| | | |
|---|---|---|
| **Submitted by:** Deanna Maifield | **Office:** Design | **Item 3** |

| **Submittal Date:** 2009.12.28 | **Proposed Effective Date:** October 2010. |
|---|---|
| **Article No.:** 2301.03, D<br>**Title:** Fixtures in Pavement Surface<br>**Article No.:** 2301.04<br>**Title:** Method of Measurement<br>**Article No.:** 2301.05<br>**Title:** Basis of Payment | **Other:** |

**Specification Committee Action:** Approved with changes.

| **Deferred:** | **Not Approved:** | **Approved Date:** 1/14/2010 | **Effective Date:** 10/19/2010 |
|---|---|---|---|

**Specification Committee Approved Text:**

**2301.03, D, 1.**

**Replace** the first sentence of the article:

Adjust ~~utility accesses~~ manholes, intakes, valve ~~holes~~ boxes, or other fixtures encountered within the area to be paved to conform to the finished surface of the pavement to be built. Payment for adjustment of manholes and intakes will be per Section 2435. Payment for adjustment of valve boxes and other fixtures will be per Section 2554.

**2301.05, J, 1.**

**Replace** the article.

**1.** Deduction will not be made from the area of pavement for fixtures with an area less than 9 square feet (1 $m^2$). ~~When the adjustment of a fixture to the finished grade line involves a change in elevation of 1 foot (0.3 m) or less, this adjustment shall be made without extra compensation. When this adjustment involves a change in elevation more than 1 foot (0.3 m), this work will be paid for as extra work, as provided in Article 1109.03, B.~~

**2554.04, B, 9, Other Fixture Adjustment.**

**Add** new article:

**9. Other Fixture Adjustment.**
Adjustment of other fixtures by raising or lowering them will not be measured.

**2554.05, B, 5, Valve Box Adjustment**

**Replace** the article:

**5. Valve Box Adjustment.**
When shown in the contract documents, ~~M~~minor adjustment of an existing valve box by raising or lowering the adjustable valve box is incidental. When not shown or tabulated, adjustment will be paid for according to Article 1109.03, B.

**2554.05, B, 9, Other Fixture Adjustment.**

**Add** new article:

**9. Other Fixture Adjustment.**
When shown in the contract documents, adjustment of other fixtures by raising or lowering them is incidental. When not shown or tabulated, adjustment will be paid for according to Article 1109.03, B

**Comments:** There was some question on how to handle adjustments that are incidental by spec., but not tabulated or shown in the plan. These adjustments will be paid for by extra work order.

The Specifications Section inquired what “other” fixtures needed to be accounted included. It was decided that there are other minor structures, such as stop boxes, that will need to be adjusted, but can be incidental.

It was decided since Section 2303 refers to Sections 2435 and 2554, Section 2301 should refer directly

to these Sections instead of first taking you to Section 2303.

**Specification Section Recommended Text:**

**2301.03, D, 1.**

**Replace** the first sentence of the article:

Adjust ~~utility accesses~~ manholes, intakes, valve ~~holes~~ boxes, or other fixtures encountered within the area to be paved to conform to the finished surface of the pavement to be built.

**2301.04, Method of Measurement.**

**Add** a new article:

**2301.04, J, Adjustment of Manholes, Intakes, Valve Boxes, Fire Hydrants and Other Fixtures.**

Article 2303.04, G, applies.

**2301.05, Basis of Payment.**

**Renumber** Article J as Article K and replace the first article.

1. Deduction will not be made from the area of pavement for fixtures with an area less than 9 square feet (1 $m^2$). ~~When the adjustment of a fixture to the finished grade line involves a change in elevation of 1 foot (0.3 m) or less, this adjustment shall be made without extra compensation. When this adjustment involves a change in elevation more than 1 foot (0.3 m), this work will be paid for as extra work, as provided in Article 1109.03, B.~~

**Add** a new article:

**2301.05, J, Adjustment of Manholes, Intakes, Valve Boxes, Fire Hydrants and Other Fixtures.**

Article 2303.05, G, applies.

**Comments:**

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

**2301.03, D, Fixtures in Pavement Surface.**

**Replace** the first sentence of the first paragraph:

Adjust ~~utility accesses~~ manholes, intakes, valve ~~holes~~ boxes, or other fixtures encountered within the area to be paved to conform to the finished surface of the pavement to be built.

**2301.04, Method of Measurement.**

**Add** a new article:

**2301.04, J, Adjustment of Manholes, Intakes, Valve Boxes, Fire Hydrants and Other Fixtures.**

Article 2303.04, G, applies.

**2301.05, Basis of Payment.**

**Add** a new article:

**2301.05, J, Adjustment of Manholes, Intakes, Valve Boxes, Fire Hydrants and Other Fixtures.**

Article 2303.05, G, applies.

**Renumber** Article 2301.05, J, as 2301.05, K, and replace the first paragraph.

**1.** Deduction will not be made from the area of pavement for fixtures with an area less than 9 square feet (1 $m^2$). ~~When the adjustment of a fixture to the finished grade line involves a change in elevation of 1 foot (0.3 m) or less, this adjustment shall be made without extra compensation. When this adjustment involves a change in elevation more than 1 foot (0.3 m), this work will be paid for as extra work, as provided in Article 1109.03, B.~~

**Reason for Revision:** MOM and BOP for adjustment of manholes, intakes, fire hydrants and valve boxes is covered in other sections of the Standard Specifications. The cost of adjusting other fixtures is relatively minor and can be made incidental to other work.

| | | | | | |
|---|---|---|---|---|---|
| **County or City Input Needed (X one)** | | | **Yes** | **No** X | |
| **Comments:** | | | | | |
| **Industry Input Needed (X one)** | | | **Yes** | **No** X | |
| **Industry Notified:** | **Yes** | **No** X | **Industry Concurrence:** | **Yes** | **No** |
| **Comments:** | | | | | |

**SPECIFICATION REVISION SUBMITTAL FORM**

| | | |
|---|---|---|
| **Submitted by:** Deanna Maifield | **Office:** Design | **Item 4** |
| **Submittal Date:** 2009.12.28 | **Proposed Effective Date:** October 2010 | |
| **Article No.:** 2303.03, C, 7, c<br>**Title:** Fixtures in the Pavement Surface<br>**Article No.:** 2303.04, G<br>**Title:** Adjustment of Fixtures<br>**Article No.:** 2303.05, G<br>**Title:** Adjustment of Fixtures | **Other:** | |

**Specification Committee Action:** Approved with changes.

| **Deferred:** | **Not Approved:** | **Approved Date:** 1/14/2010 | **Effective Date:** 10/19/2010 |
|---|---|---|---|

**Specification Committee Approved Text:**

**2303.03, C, 7, c, 1.**

**Replace** the first sentence of the article:

Adjust ~~utility accesses~~ manholes, intakes, valve boxes, or other fixtures encountered within the area to be covered by HMA to conform to the final adjacent finished surface. Payment for adjustment of manholes and intakes will be per Section 2435. Payment for adjustment of valve boxes and other fixtures will be per Section 2554.

**2303.04, G, Adjustment of Fixtures.**

**Delete** the article:

~~The Engineer will count the number of fixtures adjusted to the finished grade.~~

**2303.05, G, Adjustment of Fixtures.**

**Delete** the article:

~~**1.** Payment will be the contract unit price for each.~~

~~**2.** If the contract contains no price for Adjustment of Fixtures, this work will be paid for as provided in Article 1109.03, B.~~

**Comments:** See Item 4.

**Specification Section Recommended Text:**

**2303.03, C, 7, c, 1.**

**Replace** the first sentence of the article:

Adjust ~~utility accesses~~ manholes, intakes, valve boxes, or other fixtures encountered within the area to be covered by HMA to conform to the final adjacent finished surface.

**2303.04, G, Adjustment of Manholes, Intakes, Valve Boxes, Fire Hydrants, and Other Fixtures.**

**Replace** the article:

~~The Engineer will count the number of fixtures adjusted to the finished grade.~~

**1. Adjustment of Manholes and Intakes.**

Article 2435.04 applies.

**2. Adjustment of Valve Boxes and Fire Hydrants.**

Article 2554.04 applies.

**3. Adjustment of other Fixtures.**
Not measured for payment.

**2303.05, G, Adjustment of Manholes, Intakes, Valve Boxes, Fire Hydrants, and Other Fixtures.**

**Replace** the article:

**1.** ~~Payment will be the contract unit price for each.~~ **Adjustment of Manholes and Intakes.**
Article 2435.05 applies.

**2.** ~~If the contract contains no price for Adjustment of Fixtures, this work will be paid for as provided in Article 1109.03, B.~~ **Adjustment of Valve Boxes and Fire Hydrants.**
Article 2554.05 applies.

**3. Adjustment of other Fixtures.**
Incidental to other work.

**Comments:**

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

**2303.03, C, 7, c, Fixtures in the Pavement Surface.**

**Replace** the first sentence of the first paragraph:

Adjust ~~utility accesses~~ manholes, intakes, valve boxes, or other fixtures encountered within the area to be covered by HMA to conform to the final adjacent finished surface.

**2303.04, G, Adjustment of Manholes, Intakes, Valve Boxes, Fire Hydrants, and Other Fixtures.**

**Replace** the article:

~~The Engineer will count the number of fixtures adjusted to the finished grade.~~

**1. Adjustment of Manholes and Intakes.**
Article 2435.04 applies.

**2. Adjustment of Valve Boxes and Fire Hydrants.**
Article 2554.04 applies.

**3. Adjustment of other Fixtures.**
Not measured for payment.

**2303.05, G, Adjustment of Manholes, Intakes, Valve Boxes, Fire Hydrants, and Other Fixtures.**

**Replace** the article:

**1.** ~~Payment will be the contract unit price for each.~~ **Adjustment of Manholes and Intakes.**
Article 2435.05 applies.

**2.** ~~If the contract contains no price for Adjustment of Fixtures, this work will be paid for as provided in Article 1109.03, B.~~ **Adjustment of Valve Boxes and Fire Hydrants.**
Article 2554.05 applies.

| | | | | | |
|---|---|---|---|---|---|
| **3. Adjustment of other Fixtures.**<br>Incidental to other work. | | | | | |
| **Reason for Revision:** MOM and BOP for adjustment of manholes, intakes, fire hydrants and valve boxes is covered in other sections of the Standard Specifications. The cost of adjusting other fixtures is relatively minor and can be made incidental to other work. The Office of Design also proposes eliminating the Adjustment of Fixtures bid item. | | | | | |
| **County or City Input Needed (X one)** | | | **Yes** | **No** X | |
| **Comments:** | | | | | |
| **Industry Input Needed (X one)** | | | **Yes** | **No** X | |
| **Industry Notified:** | **Yes** | **No** X | **Industry Concurrence:** | **Yes** | **No** |
| **Comments:** | | | | | |

**SPECIFICATION REVISION SUBMITTAL FORM**

| | | |
|---|---|---|
| **Submitted by:** Jim Berger | **Office:** Materials | **Item 5** |
| **Submittal Date:** December 30, 2009 | **Proposed Effective Date:** October, 2010 | |
| **Article No.:** 2317.03<br>**Title:** Surface Tolerances, Testing, and Evaluation | **Other:** | |

**Specification Committee Action:** Approved as is.

| | | | |
|---|---|---|---|
| **Deferred:** | **Not Approved:** | **Approved Date:** 1/14/2010 | **Effective Date:** 10/19/2010 |

**Specification Committee Approved Text:** See Specification Section Recommended Text.

**Comments:** None.

**Specification Section Recommended Text:**

**2317.03, SURFACE TOLERANCES, TESTING, AND EVALUATION.**

**Replace** the first paragraph:

A pavement segment is defined as a continuous area of finished pavement 0.1 mile (161 m) in length and one lane (10 to 12 foot (3.0 to 3.7 m) nominal) in width. A partial segment may result~~ing~~ from an interruption of the continuous pavement surface (in other words, bridge approaches, side road tie-ins, the cessation of the daily paving operations, and so forth) ~~is subject to the same evaluation as a whole segment~~. If the partial segment is 250 feet (80m) or less in length, include its length and roughness with the previous adjacent segment. If the partial segment length is greater than 250 feet (80 m), evaluate it as a single segment. Gaps for temporary crossings or similar construction sequencing which are placed in otherwise continuous sections will be tested, when placed, and included in one of the adjacent sections for evaluation following the procedure for partial segments above.

**Comments:**

**Member's Requested Change (Redline/Strikeout):**

**2317.03 SURFACE TOLERANCES, TESTING, AND EVALUATION.**

A pavement segment is defined as a continuous area of finished pavement 0.1 mile (161 m) in length and one lane (10 to 12 foot (3.0 to 3.7 m) nominal) in width. A partial segment may result~~ing~~ from an interruption of the continuous pavement surface (in other words, bridge approaches, side road tie-ins, the cessation of the daily paving operations, and so forth) ~~is subject to the same evaluation as a whole segment~~. If the partial segment is 250 feet (80m) or less in length, include it's length and roughness with the previous adjacent segment. If the partial segment length is greater than 250 feet (80 m), evaluate it as a single segment. Gaps for temporary crossings or similar construction sequencing which are placed in otherwise continuous sections will be tested, when placed, and included in one of the adjacent sections for evaluation following the procedure for partial segments above.

**Reason for Revision:** The above change is in response to an item from the recent joint ICPA/Spec Committee meeting. 2317 does not specifically address partial segments and IM 341 only further explains how to handle partial segments. A couple scallops over a very short distance can result in a high P.I. That is the reason for the lower limit for a segment length.

| | | |
|---|---|---|
| **County or City Input Needed (X one)** | **Yes** | **No** X |
| **Comments:** | | |

| | | | | | |
|---|---|---|---|---|---|
| **Industry Input Needed (X one)** | | | **Yes** X | **No** | |
| **Industry Notified:** | **Yes** X | **No** | **Industry Concurrence:** | **Yes** X | **No** |
| **Comments:** | | | | | |

**SPECIFICATION REVISION SUBMITTAL FORM**

| | | |
|---|---|---|
| **Submitted by:** Jim Berger | **Office:** Materials | **Item 6** |
| **Submittal Date:** December 22, 2009 | **Proposed Effective Date:** October, 2010 | |
| **Article No.:** 2407.03,B,4<br>**Title:** Concrete | **Other:** | |

**Specification Committee Action:** Approved as is.

| | | | |
|---|---|---|---|
| **Deferred:** | **Not Approved:** | **Approved Date:** 1/14/2010 | **Effective Date:** 10/19/2010 |

**Specification Committee Approved Text:** See Specification Section Recommended Text.

**Comments:** None.

**Specification Section Recommended Text:**

**2407.03, B, 4.**

**Replace** the article:

**4.** If using HPC for prestressed concrete beams, ~~apply the following additional specifications~~ use a mix design that has been evaluated according to ASTM C 1202 and approved by the Engineer. To obtain mix design approval either:

**a.** Submit to the Engineer ASTM C 1202 results from mix samples taken and tested by an independent laboratory. The results shall be 2500 coulombs or less when cured using accelerated moist curing.

**b.** Contact the Engineer and arrange for a trial batch. The Engineer will cast 4 inch by 8 inch cylinders for testing by the Materials Laboratory. The ASTM C 1202 results shall be 2500 coulombs or less when cured using accelerated moist curing.

**c.** When silica fume, class F fly ash, or GGBFS is used in the mix, the Engineer may waive ASTM C 1202 testing.

~~**a.** The Contractor may submit up to two trial batches of concrete per project at no cost. The Contractor will be charged $500 for each additional trial batch submittal or resubmittal. Submit trial batch concrete that is of a size and mix typically used in day to day operations and is made at least 60 calendar days prior to placement. Ensure the trial batch concrete design produces a slump within ± 4 inches (100 mm) of placement slump.~~

~~**b.** The District Materials Engineer may waive trial batch testing for a mix, provided the mix was previously tested and resulted in satisfactory mix properties. Adjustments to a previously approved mix, not requiring a new trial batch, will be at the discretion of the District Materials Engineer.~~

~~**c.** Notify the District Materials Engineer, Plant Inspector, and Materials Structural Engineer at least 7 calendar days prior to batching. Ensure the Plant Inspector casts all samples from the trial batch concrete.~~

~~**d.** The Contracting Authority will test trial batch concrete permeability. Two permeability samples will be cast in 4 inch by 8 inch (100 mm by 200 mm) plastic cylinder molds and capped. Within 5 calendar days of casting, the samples will be delivered to the Central Materials Testing Laboratory. The samples will remain in their plastic molds with lids until delivered. The samples will be stripped of their molds and wet cured to an age of 7 days in the moist room. After 7 days, the samples will be submerged in water heated to 100°F (37.7°C) until an age of 28 days or more. Two test specimens will be obtained from each cylinder. Permeability will be tested in accordance with AASHTO T277 at 28 days or more. A coulomb reading of 2500 or less, based on the average of four test results, is considered acceptable.~~

~~**e.** Trial batch materials, proportions, and test results will be reported to the District Materials Engineer for approval.~~

**Comments:**

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

**4.** If using HPC for prestressed concrete beams, use a mix design that has been evaluated according to ASTM C1202 and approved by the engineer. To obtain mix design approval either:

**a.** Submit to the engineer ASTM C1202 results from mix samples taken and tested by an

independent laboratory. The results shall be 2500 coulombs or less when cured using accelerated moist curing.

**b.** Contact the engineer and arrange for a trial batch. The engineer will cast 4 inch by 8 inch cylinders for testing by the Materials Laboratory. The ASTM C1202 results shall be 2500 coulombs or less when cured using accelerated moist curing.

**c.** When silica fume, class F fly ash, or GGBFS is used in the mix, the engineer may waive ASTM C1202 testing.

~~apply the following additional specifications:~~

~~**a.** The Contractor may submit up to two trial batches of concrete per project at no cost. The Contractor will be charged $500 for each additional trial batch submittal or resubmittal. Submit trial batch concrete that is of a size and mix typically used in day-to-day operations and is made at least 60 calendar days prior to placement. Ensure the trial batch concrete design produces a slump within ± 4 inches (100 mm) of placement slump.~~

~~**b.** The District Materials Engineer may waive trial batch testing for a mix, provided the mix was previously tested and resulted in satisfactory mix properties. Adjustments to a previously approved mix, not requiring a new trial batch, will be at the discretion of the District Materials Engineer.~~

~~**c.** Notify the District Materials Engineer, Plant Inspector, and Materials Structural Engineer at least 7 calendar days prior to batching. Ensure the Plant Inspector casts all samples from the trial batch concrete.~~

~~**d.** The Contracting Authority will test trial batch concrete permeability. Two permeability samples will be cast in 4 inch by 8 inch (100 mm by 200 mm) plastic cylinder molds and capped. Within 5 calendar days of casting, the samples will be delivered to the Central Materials Testing Laboratory. The samples will remain in their plastic molds with lids until delivered. The samples will be stripped of their molds and wet cured to an age of 7 days in the moist room. After 7 days, the samples will be submerged in water heated to 100°F (37.7°C) until an age of 28 days or more. Two test specimens will be obtained from each cylinder. Permeability will be tested in accordance with AASHTO T277 at 28 days or more. A coulomb reading of 2500 or less, based on the average of four test results, is considered acceptable.~~

~~**e.** Trial batch materials, proportions, and test results will be reported to the District Materials Engineer for approval.~~

**Reason for Revision:** Now that the language is in the specification rather than a DS, it should probably be less prescriptive. Anticipated changes to ASTM C1202 will soon cover the casting and curing procedures for evaluating. Certain supplementary cementitious materials, when used in sufficient quantities, will always produce C1202 results significantly below 2500 coulombs.

| | | | | | |
|---|---|---|---|---|---|
| **County or City Input Needed (X one)** | | | **Yes** | **No** x | |
| **Comments:** | | | | | |
| **Industry Input Needed (X one)** | | | **Yes** | **No** x | |
| **Industry Notified:** | **Yes** | **No** | **Industry Concurrence:** | **Yes** | **No** |

**Comments:** The changes should help plants that:

1) Are planning on using blended cements with the SCMs listed above or SCMs as partial replacement for cement.
2) Already have test data.

**SPECIFICATION REVISION SUBMITTAL FORM**

| | | |
|---|---|---|
| **Submitted by:** Jim Berger | **Office:** Materials | **Item 7** |
| **Submittal Date:** December 22, 2009 | **Proposed Effective Date:** October, 2010 | |
| **Section No.:** 4103<br>**Title:** Liquid Admixtures for Portland Cement Concrete | **Other:** | |

**Specification Committee Action:** Approved as is.

| | | | |
|---|---|---|---|
| **Deferred:** | **Not Approved:** | **Approved Date:** 1/14/2010 | **Effective Date:** 10/19/2010 |

**Specification Committee Approved Text:** See Specification Section Recommended Text.

**Comments:** None.

**Specification Section Recommended Text:**

**Section 4103, Liquid Admixtures for Portland Cement Concrete.**

**Replace** the section:

**4103.01 GENERAL REQUIREMENTS.**

**A.** ~~**Guidelines**~~ Comply with AASHTO M 154 for air entraining admixtures and AASHTO M 194 for other liquid admixtures.

~~**1.** Obtain the Engineer's approval for liquid admixtures for PCC. Submit evidence for the Engineer to evaluate showing the material meets requirements of AASHTO M 154 for air entraining admixtures and AASHTO M 194 for other liquid admixtures, based on tests made in a recognized laboratory. A recognized laboratory is any laboratory regularly inspected by the Cement and Concrete Reference Laboratory of the National Institute of Standards & Technology.~~

~~**2.** Tests may be made on samples:~~
- ~~The Contractor has submitted taken from a quantity for use on the project, or~~
- ~~The manufacturer has submitted and certified as representative of the admixture to be supplied.~~

~~**3.**~~**B.** Unless the Engineer approves, do not use admixtures containing more than 1.0% chloride ions.

~~**4.**~~**C.** Inspection and acceptance of liquid admixtures for PCC will be according to Materials I.M. 403.

~~**B.**~~**D. Air Entraining Admixtures.**

Stir, agitate, or circulate air entraining admixtures prior to use to ensure a uniform and homogeneous mixture.

~~**C.**~~**E. Retarding and Water Reducing Admixtures.**

**1.** Use retarding and water reducing admixtures compatible with the air entraining agent used.

**2.** As approved by the Engineer, use admixtures either:
- In amounts recommended by the manufacturer for conditions which prevail on the project, or
- According to Materials I.M. 403.

**3.** When used, introduce admixtures into the mixer after all other ingredients are in the mixer. The Engineer may approve other procedures.

**4.** Agitate retarding and water reducing admixtures prior to and during their use according to Materials I.M. 403.

**5.** When supplementary cementitious materials are ~~fly ash is~~ used in the concrete, apply the liquid admixture dosage rate to both the cement and supplementary cementitious materials

~~fly ash~~ weight (mass) combined.

**~~D.~~F. Other Admixtures.**
Other admixtures may be used with the Engineer's approval and according to the manufacturer's recommendations.

**Comments:**

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

**Section 4103. Liquid Admixtures for Portland Cement Concrete**

**4103.01 GENERAL REQUIREMENTS.**

A. Comply with AASHTO M154 for air entraining admixtures and AASHTO M194 for other liquid admixtures.

**A. ~~Guidelines~~**

~~1. Obtain the Engineer's approval for liquid admixtures for PCC. Submit evidence for the Engineer to evaluate showing the material meets requirements of AASHTO M 154 for air entraining admixtures and AASHTO M 194 for other liquid admixtures, based on tests made in a recognized laboratory. A recognized laboratory is any laboratory regularly inspected by the Cement and Concrete Reference Laboratory of the National Institute of Standards & Technology.~~

~~2. Tests may be made on samples:~~
- ~~The Contractor has submitted taken from a quantity for use on the project, or~~
- ~~The manufacturer has submitted and certified as representative of the admixture to be supplied.~~

~~3.~~ **B.** Unless the Engineer approves, do not use admixtures containing more than 1.0% chloride ions.

~~4.~~ **C.** Inspection and acceptance of liquid admixtures for PCC will be according to Materials I.M. 403.

~~B.~~ **D. Air Entraining Admixtures.**
Stir, agitate, or circulate air entraining admixtures prior to use to ensure a uniform and homogeneous mixture.

~~C.~~ **E. Retarding and Water Reducing Admixtures.**

1. Use retarding and water reducing admixtures compatible with the air entraining agent used.

2. As approved by the Engineer, use admixtures either:
   - In amounts recommended by the manufacturer for conditions which prevail on the project, or
   - According to Materials I.M. 403.

3. When used, introduce admixtures into the mixer after all other ingredients are in the mixer. The Engineer may approve other procedures.

4. Agitate retarding and water reducing admixtures prior to and during their use according to Materials I.M. 403.

5. When supplementary cementitious materials are ~~fly ash is~~ used in the concrete, apply the liquid admixture dosage rate to both the cement and supplementary cementitious materials ~~fly ash~~ weight (mass) combined.

~~D.~~ **F. Other Admixtures.**
Other admixtures may be used with the Engineer's approval and according to the manufacturer's recommendations.

**Reason for Revision:** The guidelines do not match the current approval process in IM 403 for admixtures. Clarify that the dosage rate should be applied to all SCM not just fly ash.

| | | | | | |
|---|---|---|---|---|---|
| **County or City Input Needed (X one)** | | | **Yes** | **No** x | |
| **Comments:** | | | | | |
| **Industry Input Needed (X one)** | | | **Yes** | **No** x | |
| **Industry Notified:** | **Yes** | **No** | **Industry Concurrence:** | **Yes** | **No** |
| **Comments:** | | | | | |

**SPECIFICATION REVISION SUBMITTAL FORM**

| | | |
|---|---|---|
| **Submitted by:** Deanna Maifield | **Office:** Design | **Item 8** |
| **Submittal Date:** 2009.12.28 | **Proposed Effective Date:** March 16, 2010 | |
| **Article No.:** DS-090XX<br>**Title:** Pedestrian Path Closure | **Other:** | |

**Specification Committee Action:** Approved as is.

| | | | |
|---|---|---|---|
| **Deferred:** | **Not Approved:** | **Approved Date:** 1/14/2010 | **Effective Date:** 10/19/2010 |

**Specification Committee Approved Text:** See attached Draft DS-090XX.

**Comments:** There were some concerns about referencing the MUTCD without specifying a year, since there is a difference between the 2003 and 2009 versions of the MUTCD. The 2003 MUTCD requires the bottom rail to be 6 inches above the pavement. The 2009 MUTCD requires the bottom rail to be 2 inches above the pavement. The Department has not yet adopted the 2009 MUTCD, but plan to later in 2010. It was decided that the reference to the MUTCD year will be left off, thus requiring the current edition, since we know there are products available now that meet the 2003 MUTCD. The Department would not be opposed to contractors using products that meet the 2009 MUTCD as they become available, even before the 2009 MUTCD is adopted by the Department.

The Specification Section asked how this DS is being applied. The designers are responsible for assigning the DS when a sidewalk is being closed on a project. There is no controller for this DS.

**Specification Section Recommended Text:** See attached Draft DS-090XX.

**Comments:**

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

See attached Draft DS-09XXXX

**Reason for Revision:** Our previous requirements for the barricade were based on a document that, according to conversations with FHWA, can be used as a reference, but is not considered policy. In addition, that document is not readily available to manufacturers and contractors. The MUTCD provides guidelines for using channelizing devices (e.g. Type 2 barricades) to channelize pedestrians. The Office of Design has decided to reference MUTCD since this is a document that is considered policy and is readily available to manufacturers and contractors.

| | | | | | |
|---|---|---|---|---|---|
| **County or City Input Needed (X one)** | | | **Yes** | **No** X | |
| **Comments:** | | | | | |
| **Industry Input Needed (X one)** | | | **Yes** | **No** X | |
| **Industry Notified:** | **Yes** | **No** X | **Industry Concurrence:** | **Yes** | **No** |
| **Comments:** | | | | | |

**Draft DS-090XX**
**(Replaces DS-09027)**

Iowa Department of Transportation

**DEVELOPMENTAL SPECIFICATIONS**
**FOR**
**PEDESTRIAN PATH CLOSURES**

**Effective Date**
**March 16, 2010**

**THE STANDARD SPECIFICATIONS, SERIES 2009, ARE AMENDED BY THE FOLLOWING MODIFICATIONS AND ADDITIONS. THESE ARE DEVELOPMENTAL SPECIFICATIONS AND THEY PREVAIL OVER THOSE PUBLISHED IN THE STANDARD SPECIFICATIONS.**

**090XX.01 Description**
This specification describes pedestrian path closure requirements.

Provide advance notification of a pedestrian path closure to the following:
- Iowa Department of the Blind: Curtis.chong@blind.state.ia.us.
- National Federation of the Blind of Iowa: m.barber@mchsi.com.
- Engineer.

**090XX.02 Materials**
Provide Type II Barricades meeting NCHRP Report 350. A list of approved Type II Barricades is found on the World Wide Web at the following URL:

http://safety.fhwa.dot.gov/roadway_dept/policy_guide/road_hardware/wzd/

Use barricades meeting the ~~following~~ requirements~~:~~ of the MUTCD for channelizing devices used to channelize pedestrians.

- ~~The top of the top rail of the barricade is 36 to 42 inches above the adjacent surface. The top rail of the barricade is parallel to the bottom rail and is situated to allow pedestrians to use the rail as a guide for their hands for way-finding purposes.~~
- ~~The bottom of the bottom rail of the barricade is no higher than 1 1/2 inches above the adjacent surface. The top of the bottom rail is no lower than 6 inches above the adjacent surface.~~
- ~~The barricade is continuous, stable, and non-flexible.~~

**090XX.03 Construction**
Install the barricade across the full width of the closed pedestrian path. Locate the barricade to minimize sight distance restrictions for road users.

**090XX.04 Method of Measurement and Basis of Payment.**
Pedestrian Path Closure is incidental to Traffic Control.

**SPECIFICATION REVISION SUBMITTAL FORM**

| | | |
|---|---|---|
| **Submitted by:** Deanna Maifield | **Office:** Design | **Item 9** |
| **Submittal Date:** 2009.12.28 | **Proposed Effective Date:** April 20, 2010 | |
| **Article No.:** SS-090XX<br>**Title:** Furnish and Install Shrubs, Trees, and Vines | **Other:** | |

**Specification Committee Action:** Approved as is. These changes will be incorporated into GS-09002 in October.

| | | | |
|---|---|---|---|
| **Deferred:** | **Not Approved:** | **Approved Date:** 1/14/2010 | **Effective Date:** 10/19/2010 |

**Specification Committee Approved Text:** See attached Draft SS-090XX.

**Comments:** There were some questions about how this SS will be applied. The Office of Contracts will be able to apply this SS whenever a bid item from Section 2610 is used.

The Office of Construction wondered if more language was needed for the basis of payment. Article 2610.05, B, includes additional language regarding materials, equipment, and labor for performing work necessary.

**Specification Section Recommended Text:** See attached Draft SS-090XX.

**Comments:**

**Member's Requested Change:** (Do not use '**Track Changes**', or '**Mark-Up**'. Use ~~**Strikeout**~~ and **Highlight**.)
See attached Draft SS-090XX.

**Reason for Revision:** Roadside Development has requested these changes. Currently these changes are being included as plan notes.

| | | |
|---|---|---|
| **County or City Input Needed (X one)** | **Yes** | **No** X |
| **Comments:** | | |

| | | | | | |
|---|---|---|---|---|---|
| **Industry Input Needed (X one)** | | | **Yes** | **No** X | |
| **Industry Notified:** | **Yes** | **No** X | **Industry Concurrence:** | **Yes** | **No** |
| **Comments:** | | | | | |

**Draft SS- 090XX**
**(New)**

Iowa Department of Transportation

**SUPPLEMENTAL SPECIFICATIONS**
**FOR**
**FURNISH AND INSTALL SHRUBS, TREES, AND VINES**

**Effective Date**
**April 20, 2010**

**THE STANDARD SPECIFICATIONS, SERIES 2009, ARE AMENDED BY THE FOLLOWING MODIFICATIONS AND ADDITIONS. THESE ARE SUPPLEMENTAL SPECIFICATIONS AND THEY PREVAIL OVER THOSE PUBLISHED IN THE STANDARD SPECIFICATIONS.**

**2610.03, E, 1, a.**

**Add** to the end of the article:

Ensure existing vegetation and its root system is obliterated to a minimum depth of 4 inches (100 mm). Several passes may be required based on equipment and soil conditions. Obtain Engineer's approval for tilling prior to excavating planting wells.

**2610.04, Method of Measurement.**

**Add** as a new article:

**E. Tillage**

Lump sum.

**2610.05, A.**

**Add** as a new article:

**5. Tillage**

Lump sum.

**SPECIFICATION REVISION SUBMITTAL FORM**

| | | |
|---|---|---|
| **Submitted by:** Deanna Maifield | **Office:** Design | **Item 10** |
| **Submittal Date:** 2009.12.28 | **Proposed Effective Date:** April 20, 2010 | |
| **Article No.:** SS-090XX<br>**Title:** Furnish and Install Shrubs and Trees with Warranty | **Other:** | |

**Specification Committee Action:** Approved as is. These changes will be incorporated into GS-09002 in October.

| | | | |
|---|---|---|---|
| **Deferred:** | **Not Approved:** | **Approved Date:** 1/14/2010 | **Effective Date:** 10/19/2010 |

**Specification Committee Approved Text:** See attached Draft SS-090XX.

**Comments:** There were some questions about how this SS will be applied. The Office of Contracts will be able to apply this SS whenever a bid item from Section 2611 is used.

**Specification Section Recommended Text:** See attached Draft SS-090XX.

**Comments:**

**Member's Requested Change:** **(Do not use 'Track Changes', or 'Mark-Up'. Use ~~Strikeout~~ and Highlight.)**
See attached Draft SS-090XX.

**Reason for Revision:** Roadside Development has requested these changes. Currently these changes are being included as plan notes.

| | | | | | |
|---|---|---|---|---|---|
| **County or City Input Needed (X one)** | | | **Yes** | **No** X | |
| **Comments:** | | | | | |
| **Industry Input Needed (X one)** | | | **Yes** | **No** X | |
| **Industry Notified:** | **Yes** | **No** X | **Industry Concurrence:** | **Yes** | **No** |
| **Comments:** | | | | | |

**Draft SS- 090XX**
**(New)**

Iowa Department of Transportation

**SUPPLEMENTAL SPECIFICATIONS**
**FOR**
**FURNISH AND INSTALL SHRUBS AND TREES WITH WARRANTY**

**Effective Date**
**April 20, 2010**

**THE STANDARD SPECIFICATIONS, SERIES 2009, ARE AMENDED BY THE FOLLOWING MODIFICATIONS AND ADDITIONS. THESE ARE SUPPLEMENTAL SPECIFICATIONS AND THEY PREVAIL OVER THOSE PUBLISHED IN THE STANDARD SPECIFICATIONS.**

**2611.01, Description.**

**Delete** Article B:

~~**B.** The Contractor has the option to use the provisions of Articles 2610.03, A; 2610.03, D; 2610.03, E; or 2610.03, F as a guideline for planting techniques to enhance survivability of plant materials, at no additional cost to the Contracting Authority.~~

**Renumber** Article C as B.

**2611.03, Construction.**

**Delete** the first paragraph:

~~Plant trees and shrubs and first year replacements between March 1 and May 15. Plant second year replacements between September 1 and September 30 for evergreens and between October 1 and November 30 for deciduous plants.~~

**Renumber** Articles A and B as F and G.

**Add** new Articles A, B, C, D, and E:

**A. Location of Plantings.**

**1.** Notify the Engineer when utility locates are complete. After utility locates have been completed, the Contracting Authority will stake plant locations with coded flags. Location adjustments may be necessary.

**2.** Preserve coded flags adjacent to proposed plants until after final fall inspection. Remove material used for flagging, including tags and flagging tape, from the right of way according to Article 1104.08 immediately after final fall inspection is completed.

**B. Planting.**

**1.** Plant trees and shrubs and first year replacements between March 1 and May 15. Plant second year replacements between September 1 and September 30 for evergreens and between October 1 and November 30 for deciduous plants.

**2.** Contractor may use Articles 2610.03, A; 2610.03, D; or 2610.03, E as guidance for planting techniques to enhance survivability of plant materials, at no additional cost to the Contracting Authority.

**3.** Dig planting wells for single plants 3 feet (1 meter) toward the mainline highway from the flag location unless otherwise directed by the Engineer.

**4.** Excavate to a minimum diameter of 24 inches (600 mm) for trees and 18 inches (450 mm) for shrubs. Remove plants from containers (plantable and nonplantable) in a manner that does not disturb the roots. Remove twine, wire, and burlap around the stem of the plant. Remove containers, twine, wire and burlap from the project.

**5.** Install plants in a straight, upright manner. Ensure plants remain plumb throughout the contract period.

**6.** Install plants such that the root collar is at soil grade upon completion of installation of backfill, and the root collar remains at soil grade.

**C. Staking and Guying.**

**1.** The Contractor may use Article 2610.03, F as guidance for staking and guying to enhance survivability of plant materials. However, deciduous trees 6 feet (1.8 meters) or taller in height require staking and guying according to Article 2610.03, F.

**2.** Repair stakes and guys broken or damaged during the contract period. Remove stakes and guys according to Article 1104.08 in the fall of the second year.

**3.** Installation, repair, and removal of stakes and guys are incidental to planting and will not be paid for separately.

**D. Mulching.**

**1.** Furnish and apply mulch to all of the proposed trees and shrubs. Place mulch as shown in the contract documents to a depth of 3 inches (75 mm). Maintain an air space at the base of tree trunks and shrub canes.

**2.** Furnish and apply 2 inches (50 mm) of mulch in the fall of the second year to replenish the mulched areas of proposed plants after final plant replacement is complete. Ensure mulch bed is weed free prior to application of additional mulch.

**3.** Furnishing and applying mulch, as well as replacing mulch displaced or disturbed by the Contractor during the contract period, are incidental to planting and will not be paid for separately.

**E. Filter Fabric.**

**1.** Install filter fabric as follows:
- **a.** In areas to be mulched for proposed plants:
  - **1)** Rototill and hand rake the area to a loose condition that:
    - Is friable and free of debris, clods and rock, and
    - Has a smooth surface with a uniform appearance.
  - **2)** Place filter fabric flush with the ground.
- **b.** Secure fabric using staples complying with Article 4169.10, A.

**2.** Furnishing and installing filter fabric is incidental to planting and will not be paid for separately.

**4169.11, Filter Fabric.**

**Add** as a new article:

Furnish nonwoven polypropylene, UV stabilized filter fabric complying with Table 4169.11-1.

**Table 4169.11-1: Filter Fabric Properties**

| Property | Typical | Minimum |
|---|---|---|
| Tensile Strength, lbs (metric) | 130 (metric) | 115 (metric) |
| Grab Elongation, % | 70 | 50 |
| Trapezoidal Tear Strength, lbs (metric) | 60 (metric) | 50 (metric) |