Iowa Department of Transportation

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

March 8, 2012

Members Present:	Jim Berger	Office of Materials
	Roger Bierbaum	Office of Contracts
	Eric Johnsen, Secretary	Specifications Section
	Bruce Kuehl	District 6 - Construction
	Doug McDonald	District 1 - Marshalltown RCE
	Gary Novey	Office of Bridges & Structures
	Dan Redmond	District 4 - Materials
	Tom Reis, Chair	Specifications Section
	Willy Sorensen	Office of Traffic & Safety
Members Not Present:	Donna Buchwald	Office of Local Systems
	Deanna Maifield	Office of Design
	John Selmer	Statewide Operations Bureau
	John Smythe	Office of Construction
Advisory Members Present:	Lisa Rold	FHWA
Others Present:	Brenda Boell	Office of Local Systems
	Daniel Harness	Office of Design
	Danielle Mulholland	Office of Design
	Wayne Sunday	Office of Construction

Tom Reis, Specifications Engineer, opened the meeting. The following items were discussed in accordance with the revised agenda dated March 1, 2012:

1. Article 1102.09, A, Preparation of Proposals.

The Office of Contracts requested changes to require electronic bidding, unless prequalification is not required.

2. Article 1102.10, Irregular Proposals.

The Office of Contracts requested changes to clarify that a bid will not be considered if a bidder fails to acknowledge receipt of an addendum.

3. Article 2532.03, B, 3, Bridge Deck (Pavement Surface Repair (Diamond Grinding)).

The Office of Construction requested changes to require re-establishment of transverse grooving after deck surface correction.

4. Article 2601.03, B, 4, a, 1, Seedbed Preparation.

The Office of Design requested changes to incorporate Standard Note 232-8, Erosion Control (Disturbed Areas), into the Standard Specifications.

5. Section 2602, Water Pollution Control.

The Office of Contracts requested incorporation of SS-09015, Mobilization for Erosion Control, into the Standard Specifications.

6. Section 4170, Landscape Plant Materials.

The Office of Design requested changes to incorporate plan notes used by the Roadside Development Section into the Standard Specifications.

7. DS-09XXX, Alternate Acceptance of HMA for Local Systems Projects.

The Office of Materials requested approval of Developmental Specifications for Alternate Acceptance of HMA for Local Systems Projects.

8. DS-09XXX, Precast Reinforced Concrete Three-Sided Culvert.

The Office of Bridges and Structures requested approval of Developmental Specifications for Precast Reinforced Concrete Three-Sided Culvert.

9. SS-09013, Asphalt Emulsions Containing Gilsonite.

The Office of Materials requested revisions to the Supplemental Specifications for Asphalt Emulsions Containing Gilsonite.

Additional Discussion Items:

The Specifications Section asked the Office of Contracts to inform the committee on what specifications are sent out with proposals. The Office of Contracts indicated that Developmental Specifications will no longer be sent out with proposal forms as they are available on the website. This is consistent with how they have been handling Supplemental Specifications. Special Provisions will continue to be sent out with the proposal form. This change will be effective with the April 17, 2012 letting.

The Office of Contracts asked the Specifications Section when they are planning on issuing a new Specification Book. The Specifications Section informed the Specification Committee they intend to issue a new Specification Book for the October 16, 2012 letting. The new Specification Book would be issued in early August, with the electronic files available at an earlier date. The Specifications Section asked the committee to start thinking about any changes they would like to see in the format of the new Specification Book. The new Specification Book format will be discussed at a future Specification Committee meeting.

SPECIFICATION REVISION SUBMITTAL FORM

Submitted by: Roger Bierbaum	**Office:** Contracts	**Item 1**
Submittal Date: January 26, 2012	**Proposed Effective Date:** October 2012 GS	
Article No.: 1102.09, A **Title:** Preparation Of Proposals	**Other:**	

Specification Committee Action: Approved as recommended.

Deferred:	**Not Approved:**	**Approved Date:** 3/8/2012	**Effective Date:** 10/16/2012

Specification Committee Approved Text: See Specification Section Recommended Text.

Comments: This revision will help mitigate the increased workload for the Office of Contracts due to a change in policy regarding issuing of addendums. Typically, only a few bids are received each letting that are not submitted electronically and most of these would still qualify for the exemption.

Specification Section Recommended Text:

1102.09, A.

Replace the Article:

Only contractors who have been authorized to bid a proposal may submit a bid for a contract. ~~For bids submitted to the Department that exceed $1 million, the bidder shall use subparagraph 2 or subparagraph 3 below. The Department may wave this requirement for unique or isolated situations.~~

~~**1.** Submit the signed, original Bidding Document furnished by the Contracting Authority with a Schedule of Prices from the Estimating Proposal.~~

~~**2.** Submit the signed, original Bidding Document furnished by the Contracting Authority with the computer printout and diskette of the Schedule of Prices from the bidding software furnished by the Department.~~

~~**3.** Submit an electronic bid with digital signature using the bidding software furnished by the Department and the electronic bid submittal procedures of the Department.~~

Unless otherwise specified, bidder shall submit an electronic bid with digital signature using bidding software furnished by the Department and electronic bid submittal procedures of the Department. When prequalification is waived per Article 1102.01, H, or elsewhere in the contract documents, bidder may submit the signed proposal on the original forms furnished by the Contracting Authority in lieu of submitting an electronic bid.

Comments: Language was simplified to state that all bids shall be submitted electronically, unless otherwise specified, followed by the exception for when prequalification is not required.

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

Replace paragraph A of 1102.09 PREPARATION OF PROPOSALS with the following:

~~**A.** Only contractors who have been authorized to bid a proposal may submit a bid for a contract. For bids submitted to the Department that exceed $1 million, the bidder shall use subparagraph 2 or subparagraph 3 below. The Department may wave this requirement for unique or isolated situations.~~

~~**1.** Submit the signed, original Bidding Document furnished by the Contracting Authority with a Schedule of Prices from the Estimating Proposal.~~

~~**2.** Submit the signed, original Bidding Document furnished by the Contracting Authority with the computer printout and diskette of the Schedule of Prices from the bidding software furnished by the Department.~~

~~**3.** Submit an electronic bid with digital signature using the bidding software furnished by the Department and the electronic bid submittal procedures of the Department.~~

A. Only contractors who have been authorized to bid a proposal may submit a bid for a contract. For bids submitted where prequalification as per Article 1102.01, D is required, the bidder shall submit an electronic bid with digital signature using the bidding software furnished by the Department and the electronic bid submittal procedures of the Department. Where prequalification as per Article 1102.01,

D is waived by Article 1102.01H or elsewhere in the contract documents, the bidder may submit the signed, original Bidding Document and Schedule of Prices on the original forms furnished by the Contracting Authority in lieu of submitting an electronic bid.					
Reason for Revision: Governor's January 2012 Road Use Tax Fund Efficiency Report					
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: Roger Bierbaum	**Office:** Contracts	**Item 2**
Submittal Date: February 27, 2012	**Proposed Effective Date:** Oct 2012 GS	
Article No.: 1102.10 **Title:** Irregular Proposals	**Other:**	

Specification Committee Action: Approved as recommended.

Deferred:	**Not Approved:**	**Approved Date:** 3/8/2012	**Effective Date:** 10/16/2012

Specification Committee Approved Text: See Specification Section Recommended Text.

Comments: This revision will help mitigate the increased workload for the Office of Contracts due to a change in policy regarding issuing addendums. Typically, only a few bids are received each letting that are not submitted electronically and most of these would still qualify for the exemption.

Specification Section Recommended Text:

1102.10, Irregular Proposals.

Add the Article:

G. If a bidder fails to acknowledge receipt of an addendum. For electronic bidding, loading of the addendum into the Department's bid preparation software is acknowledgment of receipt by bidder.

Comments:

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

Add the following Paragraph G to Article 1102.10

G. If a contractor fails to acknowledge the receipt of any addendum. For electronic bidding, loading of the addendum into the Department bid preparation software is the acknowledgment of receipt by the contractor.

Reason for Revision: To make it clear that a bid will not be considered if the contractor fails to acknowledge the receipt of an addendum

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**	**No**
Comments: Noted at the February 24, 2012 AGC Best Business Practice Meeting					

SPECIFICATION REVISION SUBMITTAL FORM

Submitted by: John Smythe	**Office:** Construction	**Item 3**
Submittal Date: 2012.01.26	**Proposed Effective Date:** October 16, 2012	
Article No.: 2532.03, B, 3 **Title:** Bridge Deck (Pavement Surface Repair (Diamond Grinding))	**Other:**	

Specification Committee Action: Approved with changes.

Deferred:	**Not Approved:**	**Approved Date:** 3/8/2012	**Effective Date:** 10/16/2012

Specification Committee Approved Text:

2532.03, B, 3, a.

Replace the Article:

When specified in the contract documents, ~~G~~grind and longitudinally groove the entire surface of the bridge deck according to Article 2412.03, D, 4, a. For other projects, re-establish transverse grooving through corrected areas using diamond blades to provide a surface similar to a new deck except the area within approximately 2 feet (0.6 m) from the curb.

Comments: The Office of Construction requested to change "on Interstate and Primary projects" to "when specified in the contract documents", so that it would apply to local systems projects when longitudinal grooving is specified.

Specification Section Recommended Text:

2532.03, B, 3, a.

Replace the Article:

Grind and longitudinally groove the entire surface of the bridge deck according to Article 2412.03, D, 4, a, on Interstate and Primary projects. For other projects, re-establish transverse grooving through corrected areas using diamond blades to provide a surface similar to a new deck except the area within approximately 2 feet (0.6 m) from the curb.

Comments:

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

3. Bridge Deck.

a. Grind and longitudinally groove the entire surface of the bridge deck according to Article 2412.03, D, 4, a, on Interstate and Primary Projects. For other projects, re-establish transverse grooving through corrected areas using diamond blades to provide a surface similar to that of a new deck except the area within approximately 2 feet (0.6 m) from the curb.

b. Assemble the grinding head to produce the tolerances in Table 2532.03-2 on bridge decks. **Table 2532.03-2: Grinding Head Tolerances**

(ENGLISH)	**Limestone**
Blade segment thickness Land area between grooves(a)	0.130 inch maximum 0.100 inch to 0.125 inch
Texture depth(b)	Target of 1/8 inch ± 1/32 inch
(METRIC)	**Limestone**
Blade segment thickness Land area between grooves(a)	3.30 mm maximum 2.5 mm to 3.4 mm
Texture depth(b)	Target of 3 mm ± 1 mm

(a) Based on an average of a minimum of ten measurements across the ground width for one pass.
(b) Based on an average of a minimum of six measurements across the ground width for one pass.

Reason for Revision: For projects where transverse grooving is allowed to be raked in the plastic concrete during bridge deck placement, the specifications do not state that the transverse texture is to be re-established after deck surface correction.

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

Industry Notified:	**Yes**	**No**	**Industry Concurrence:**	**Yes**	**No**
Comments:					

SPECIFICATION REVISION SUBMITTAL FORM

Submitted by: Deanna Maifield	**Office:** Design	**Item 4**
Submittal Date: 1/27/12	**Proposed Effective Date:** 10/16/12	
Article No.: 2601.03, B, 4, a, 1 **Title:** Seedbed Preparation	**Other:**	

Specification Committee Action: This revision was not approved.

Deferred:	**Not Approved:** X	**Approved Date:**	**Effective Date:**

Specification Committee Approved Text:

Comments: The Committee decided this revision did not add anything that wasn't already required by the specifications. Specifically, Article 2601.03, B, 4, a, 7, requires removing all debris. Also, "subject to Engineer's approval" leaves room for interpretation by the Engineer.

Specification Section Recommended Text:

2601.03, B, 4, a, 1.

Replace the first sentence:

Ensure the area to be seeded is relatively smooth, free of rock and debris, and is suitable for establishment of vegetation, subject to Engineer's approval.

Comments:

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

2601.03, B, 4, a, 1, Seedbed Preparation.

Replace the first sentence:

Ensure the area to be seeded is relatively smooth, free of rock and debris, and is suitable for the establishment of vegetation, subject to the Engineer's approval.

Reason for Revision: This language is currently part of Standard Note 232-8. Roadside Development requested this language be added to the Standard Specifications with the limit for the top 6 inches removed. Standard Note 232-8 will be voided.

232-8
10-18-11

EROSION CONTROL
(DISTURBED AREAS)

Ensure the top 6 inches of the disturbed areas are free of rock and debris and are suitable for the establishment of vegetation, subject to the Engineer's approval.

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

SPECIFICATION REVISION SUBMITTAL FORM

Submitted by: Roger Bierbaum	**Office:** Contracts	**Item 5**
Submittal Date: February 22, 2012	**Proposed Effective Date:** October 2012 GS	
Section No.: 2602 **Title:** Water Pollution Control	**Other:** SS-09015, Mobilization for Erosion Control	

Specification Committee Action: This item was deferred to the next Spec. Committee meeting.

Deferred: X	**Not Approved:**	**Approved Date:**	**Effective Date:**

Specification Committee Approved Text:

Comments: The Office of Construction had concerns regarding how to handle mobilizations for erosion control if the bid items are not included on the proposal. As per Article 2602.05, B, they would be paid at the prices indicated in the specification. The Office of Construction would like the Engineer to have the discretion of adding the bid items by extra work order (if multiple mobilizations will be required) or having the mobilization be incidental (if only one mobilization will be required. The Specifications Section will revise Article 2602.05, B, to alleviate the Office of Construction's concerns.

The Office of Construction also indicated that the criteria for bidding mobilizations for erosion control will need to be added to the Design Manual. The Specifications Section asked if this criteria should be included in the Specification.

Specification Section Recommended Text:

2602.03, A.

Replace the Article:

Prior to the preconstruction conference, furnish the Engineer an initial Erosion Control Implementation Plan (ECIP) for accomplishment of temporary and permanent erosion control. In addition, furnish the proposed method of erosion control on haul roads and borrow pits as well as the plan for the removal of excess materials from the project.

In the ECIP, include stages for erosion control work to address Contractor's timetable and sequence for major activities or stages on the contract, including number of Mobilizations, Erosion Control, anticipated for the contract. In consideration of the number of mobilizations consider, as a minimum:

- Initial controls required prior to land disturbing activities,
- Number of earthwork balances for the contract,
- Sensitive areas requiring special consideration,
- Anticipated suspension of work,
- Compliance with Pollution Prevention Plan (PPP), and
- Separate mobilizations needed for different crews performing work such as silt fence, seeding, or ditch checks (however, multiple mobilizations will not be paid for a single crew performing different items of erosion control work).

2602.03, Construction.

Add the Articles:

L. Mobilizations, Erosion Control.

1. Only one mobilization will be paid for each stage of work described in the ECIP. Within the scope of work defined for each single mobilization described in the ECIP, additional movement due to weather delays or at the option of the Contractor will not be counted as a mobilization.

2. Payment for mobilization applies to contract items from Sections 2601 and 2602, excluding watering, mowing, debris pickup, monitoring well, or removal items.

3. Additional mobilizations not outlined in the ECIP must be approved by the Engineer.

4. Payment for mobilization to correct items not properly installed will not be approved. Payment for

mobilization will also not be approved if labor, equipment, and materials to perform erosion control are used for other non-erosion control work onsite.

5. Mobilize with sufficient labor, equipment, and materials to perform erosion control included in ECIP or as ordered or approved by Engineer. If Contractor fails to mobilize when erosion control work is needed to comply with the ECIP or PPP, the Engineer will, by written order, direct Contractor to mobilize within 72 hours of a written order.

6. If Contractor fails to mobilize within such time period, a deduction of $750.00 per calendar day will be made from payment due under the contract, except when Engineer extends such time period.

7. Mobilizations, Erosion Control, will include work provided under the item of Mobilizations, Emergency Erosion Control.

M. Mobilizations, Emergency Erosion Control.
An emergency will be considered to be a sudden occurrence of a serious and urgent nature which is beyond normal maintenance of erosion control items. Emergency work requires immediate mobilization and movement of necessary labor, equipment, and materials to the emergency site, followed by immediate installation of temporary erosion control measures.

1. Mobilize with sufficient labor, equipment, and materials on job site within eight hours of Engineer's written order to install temporary erosion control items on an emergency basis. Engineer's written order will include a description of required work. Only one mobilization will be paid for work described in the written order.

2. If Contractor fails to mobilize within eight hours of written order, a deduction of $1500.00 per calendar day will be made from payment due under the contract, except when Engineer extends such time period.

2602.04, Method of Measurement.

Add the Articles:

M. Mobilizations, Erosion Control.
By count for each mobilization in the accepted ECIP and acceptably performed, as well as additional mobilizations ordered or approved by Engineer and acceptably performed.

N. Mobilizations, Emergency Erosion Control.
By count for each mobilization directed in writing by Engineer and acceptably performed.

2602.05, Basis of Payment.

Renumber Articles B, C, and D and **Add** the Article:

B. Payment for Mobilizations, Erosion Control, and Mobilizations, Emergency Erosion Control, will be at unit prices stipulated in the proposal. If bid items are not included in the proposal then mobilizations for erosion control will paid at unit prices stipulated below. Mobilization for Erosion Control costs are not included as part of the contract item for "Mobilization" described in Section 2533.

1. Mobilizations, Erosion Control.
The quantity will be paid for at the unit price of $500.00 each for Mobilizations, Erosion Control, which is full compensation for staged movement of labor, equipment, and materials; and labor, tools, equipment, and incidentals necessary to complete the movement.

2. Mobilizations, Emergency Erosion Control.
The quantity will be paid for at the unit price of $1000.00 each for Mobilizations, Emergency Erosion Control, which is full compensation for movement of labor, equipment and materials; and for labor, tools, equipment, and incidentals necessary to complete the movement.

~~**B**~~ **C.** When it is necessary for the Contractor to clean out, repair, or reconstruct a silt ditch, dike, or basin, the additional payment will be 100% of the contract unit price for construction of that item. When applicable bid items are not in the contract documents, payment for clean out, repair, or

reconstruction will be according to Article 1109.03, B.

~~C~~ **D.** If water control measures are required due to the Contractor's negligence, carelessness, or failure to install the controls as a part of the work as scheduled, and are ordered by the Engineer, perform this work at no additional cost to the Contracting Authority.

~~D~~ **E.** All water pollution control features are to be in functional condition before final acceptance of the contract.

Comments:

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

Incorporate SS-09015 (Mobilization for Erosion Control) into the General Supplemental Specifications. Formatting changes will be necessary to incorporate the SS into the GS. The only change in the specification is to state "The mobilizations for erosion control will be paid at the unit prices stipulated in the proposal. If no bid items are included in the proposal then the mobilizations for erosion control will paid at the unit prices stipulated in this specification."

Reason for Revision: The criteria for when mobilization for erosion control has expanded to more projects, but the consistency for adding the SS to proposals has decreased. Therefore it is desired that the specification is included in the GS and the bid items added by the designers rather than by Contracts.

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:					

SS-09015
(Replaces SS-09011)

Iowa Department of Transportation

SUPPLEMENTAL SPECIFICATIONS
FOR
MOBILIZATION FOR EROSION CONTROL

Effective Date
November 15, 2011

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.

09015.01 MOBILIZATIONS, EROSION CONTROL.

A. Prior to the Preconstruction Conference, submit for ~~approval~~ acceptance an initial Erosion Control Implementation Plan (ECIP) for accomplishing ~~all~~ aspects of erosion control work. In the ECIP include a description of additions or modifications to the contract. ~~Do not implement deviations from the approved ECIP without the Engineer's written permission.~~

B. During the ~~course of the~~ contract, review ECIP with the Engineer and modify as needed to address changes in schedule of operations, staging, weather changes, or other changes required to comply with applicable permit requirements, or when there are changes to the number of mobilizations.

~~B~~C. In the ECIP, include stages for erosion control work to address the Contractor's timetable and sequence for major activities or stages on the contract, including the number of Mobilizations, Erosion Control, anticipated for the contract. In the consideration of the number of mobilizations consider, as a minimum:

- Initial controls required prior to land disturbing activities,
- ~~Clearing and grubbing activities,~~
- The number of earthwork balances for the contract,
- Sensitive areas requiring special consideration,
- Anticipated suspension of work,
- Compliance with the Pollution Prevention Plan (PPP), and
- Separate mobilizations needed for different crews performing work such as silt fence, seeding, or ditch checks (however, multiple mobilizations will not be paid for a single crew performing different items of erosion control work ~~that require the same equipment to be mobilized~~).

~~C~~D. Only one mobilization will be paid for each stage of work described in the ECIP. Within the scope of work defined for each single mobilization described in the ECIP, additional movement due to weather delays or at the option of the Contractor will not be counted as a mobilization.

E. Payment for mobilization applies to contract items from Sections 2601 and 2602 of the Standard Specifications, excluding watering, mowing, debris pickup, monitoring well, or removal items.

~~D~~F. Additional mobilizations not outlined in the ECIP must be approved by the Engineer. ~~Only one mobilization will be paid for each stage of additional work approved by the Engineer.~~

G. Payment for mobilization to correct items not properly installed will not be approved. Payment for mobilization will also not be approved if labor, equipment, and materials to perform erosion control is used for other non-erosion control work onsite.

~~E~~H. Mobilize with sufficient labor, equipment, and materials to perform the erosion control included in the ECIP or as ordered or approved by the Engineer. If the Contractor fails to mobilize when erosion control work is needed to comply with the ECIP ~~and~~ or the PPP, the Engineer will, by written order, direct the Contractor to mobilize within 72 hours of a written order.

~~F~~I. If the Contractor fails to mobilize within such time period, a deduction of $750.00 per calendar day will be made from money due under the contract, except when the Engineer extends such time period.

~~G~~J. Mobilizations, Erosion Control is not to include work provided under the item of Mobilizations, Emergency Erosion Control.

09015.02 MOBILIZATIONS, EMERGENCY EROSION CONTROL.
An emergency will be considered to be a sudden occurrence of a serious and urgent nature which ~~requires work not included in the contract or~~ is beyond normal maintenance of erosion control items ~~and the mobilizations included in the erosion control implementation plan~~. Emergency work requires immediate mobilization and movement of necessary labor, equipment, and materials to the emergency site, followed by the immediate installation of temporary erosion control measures.

A. Mobilize with sufficient labor, equipment, and materials on the job site within eight hours of the Engineer's written order to install temporary erosion control items on an emergency basis. The Engineer's written order will include a description of the required work. Only one mobilization will be paid for the work described in the written order.

B. If the Contractor fails to mobilize within eight hours of the written order, a deduction of $1500.00 per calendar day will be made from money due under the contract, except when the Engineer extends such time period.

09015.03 METHOD OF MEASUREMENT.

A. Mobilizations, Erosion Control: units. The quantity measured for payment will be the number of such mobilizations in the ~~approved~~ accepted ECIP and acceptably performed, as well as all additional mobilizations ordered or approved by the Engineer and acceptably performed.

B. Mobilizations, Emergency Erosion Control: units. The quantity measured for payment will be the number of such mobilizations directed in writing by the Engineer and acceptably performed.

09015.04 BASIS OF PAYMENT.
Payment for Mobilizations, Erosion Control, and Mobilizations, Emergency Erosion Control will be ~~according to Article 1109.03, B, 1, of the Standard Specifications,~~ at the unit prices stipulated in this specification. Mobilization for Erosion Control costs are not included as part of the contract item for "Mobilization" described in Section 2533 of the Standard Specifications.

A. Mobilizations, Erosion Control.

1. The quantity will be paid for at the unit price of $500.00 each for Mobilizations, Erosion Control, which is full compensation for staged movement of labor, equipment, and materials; and all labor, tools, equipment, and incidentals necessary to complete the movement.

2. Individual erosion control items provided for in the contract, and acceptably furnished and placed under the item of Mobilizations, Erosion Control, will be paid for separately at the contract unit price for the items.

B. Mobilizations, Emergency Erosion Control.

1. The quantity will be paid for at the unit price of $1000 each for Mobilizations, Emergency Erosion Control, which is full compensation for movement of labor, equipment and materials; and for labor, tools, equipment, and incidentals necessary to complete the movement.

2. Individual temporary erosion control items provided for in the contract, and acceptably furnished and placed under the item of Mobilizations, Emergency Erosion Control, will be paid for separately at the contract unit price for the items.

SPECIFICATION REVISION SUBMITTAL FORM

Submitted by: Deanna Maifield	**Office:** Design	**Item 6**
Submittal Date: 2/24/12	**Proposed Effective Date:** 10/16/12	
Section No.: 4170 **Title:** Landscape Plant Materials	**Other:**	

Specification Committee Action: Approved with changes.

Deferred:	**Not Approved:**	**Approved Date:** 3/8/2012	**Effective Date:** 10/16/2012

Specification Committee Approved Text:

4170.02, Materials.

Add new Article:

C. Comply with rules and regulations of State Entomologist of Iowa relative to nursery inspection of Nursery Stock according to provisions set forth in Section 177A.5 of Iowa Crop Pest Act, Chapter 177A, Code of Iowa.

4170.09, D, Mulch.

Replace the article:

~~As specified in the contract documents.~~

A. Unless stated elsewhere on the contract documents, use material consisting of shredded bark or shredded wood, or a mixture containing no more than 50% wood chips. Allow Engineer to visually inspect material prior to application.

B. Comply with the following requirements:

- Use tree bark and wood chips consisting of either hardwood or softwood as produced by a mechanical debarker or chipping machine.
- Ensure mulch is reasonably free from leaves, twigs, dust, toxic substances, and other foreign materials.

C. Mulch material consistently delivered in excessively wet condition may be rejected by Engineer.

Comments: The Office of Contracts asked if it was necessary for the Engineer to give approval prior to applying mulch. Approval could mean written documentation. This statement was revised to indicate that the Engineer will be allowed to visually inspect the material prior to application, but approval is not required. The Engineer has authority to reject the material if necessary without needing to give written approval.

Specification Section Recommended Text:

4170.02, Materials.

Add new Article:

C. Comply with rules and regulations of State Entomologist of Iowa relative to nursery inspection of Nursery Stock according to provisions set forth in Section 177A.5 of Iowa Crop Pest Act, Chapter 177A, Code of Iowa.

4170.09, D, Mulch.

Replace the article:

~~As specified in the contract documents.~~

A. Unless stated elsewhere on the contract documents, use material consisting of shredded bark or shredded wood, or a mixture containing no more than 50% wood chips. Allow Engineer to visually inspect material. Obtain Engineer's approval prior to applying mulch.

B. Comply with the following requirements:

- Use tree bark and wood chips consisting of either hardwood or softwood as produced by a mechanical debarker or chipping machine.
- Ensure mulch is reasonably free from leaves, twigs, dust, toxic substances, and other foreign materials.

C. Mulch material consistently delivered in excessively wet condition may be rejected by the Engineer.

Comments:

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

4170.02, Materials.

Add as a new article:

C. Comply with the rules and regulations of the State Entomologist of Iowa relative to nursery inspection of Nursery Stock according to the provisions set forth in Section 177A.5 of the Iowa Crop Pest Act, Chapter 177A, Code of Iowa.

4170.09, D, Mulch.

Replace the article:

~~As specified in the contract documents.~~

A. Unless stated elsewhere in the contract documents, use material consisting of shredded bark or shredded wood, or a mixture containing no more than 50% wood chips. Allow the Engineer to visually inspect the material. Obtain the Engineer's approval prior to applying mulch.

B. Comply with the following requirements:

- Use tree bark and wood chips consisting of either hardwood or softwood as produced by a mechanical debarker or chipping machine.
- Ensure mulch is reasonably free from leaves, twigs, dust, toxic substances, and other foreign materials.

C. Any mulch material that is consistently delivered in excessively wet condition may be rejected by the Engineer.

Reason for Revision: Roadside Development has been including these as plan notes for several years. The Office of Design would like to include these in the Standard Specifications.

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 7**
Submittal Date: February 28, 2012	**Proposed Effective Date:** May 15, 2012	
Article No.: **Title:**	**Other:** Developmental Specifications for Alternate Acceptance of HMA for Local Systems	

Specification Committee Action: Approved as recommended with an effective date of April 17, 2012.

Deferred:	**Not Approved:**	**Approved Date:** 3/8/2012	**Effective Date:** 4/17/2012

Specification Committee Approved Text: See attached DS for Alternate Acceptance of HMA for Local Systems.

Comments: There will be no controller for this DS.

Specification Section Recommended Text: See attached Draft DS for Alternate Acceptance of HMA for Local Systems.

Comments:

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

This Developmental Specification becomes void on Federal Aid contracts. Apply requirements of Section 2303 unless otherwise stated.

For all mixture bid items not defined as small quantities in Article 2303.03, D, acceptance for laboratory voids will be based on a moving absolute average deviation (AAD) from target as defined in Materials I.M. 501. Use the production tolerance in Table 2303.03-5.

Replace item b of **Article 2303.03, D, 4, a, 6** with the following:

b) For all other areas of Class I compaction, determine PWL, as defined in Materials I.M. 501, for each lot using ~~a lower specification limit (LSL) of 3.5% voids (96.5% of G_{mm}) and~~ an upper specification limit (USL) of 8.5% voids (91.5% G_{mm}).

Replace item 1 of **Article 2303.05, A, 3, b** with the following:

1) Payment when PWL is used for acceptance:

PWL	Pay Factor
~~95.1 – 100.0~~	~~PF = 0.008000*PWL + 0.240~~
80.0 – 100.0 ~~95.0~~	1.000
50.0 – 79.9	PF = 0.008333*PWL + 0.3333
Less than 50.0	0.750

When PWL is less than 50.0, Engineer may declare the lot or parts of the lot deficient or unacceptable.

Reason for Revisions: Allow local systems the option to opt out of paying incentives for PWL

County or City Input Needed (X one)			**Yes** X		**No**
Comments: Locals are in support					
Industry Input Needed (X one)			**Yes** X		**No**
Industry Notified:	**Yes** X	**No**	**Industry Concurrence:**	**Yes** X	**No**
Comments: The industry is in support					

DS-09XXX
(New)

Iowa Department of Transportation

DEVELOPMENTAL SPECIFICATIONS
FOR
ALTERNATE ACCEPTANCE OF HMA FOR LOCAL SYSTEMS PROJECTS

Effective Date
April 17, 2012

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

This Specification becomes void on federal aid contracts. Apply requirements of Article 2303 of the Standard Specifications unless otherwise stated.

For mixture bid items not defined as small quantities in Article 2303.03, D, of the Standard Specfications, acceptance for laboratory voids will be based on a moving absolute average deviation (AAD) from target as defined in Materials I.M. 501. Use the production tolerance in Table 2303.03-5.

2303.03, D, 4, a 6, b.

Replace the Article:

For all other areas of Class I compaction, determine PWL, as defined in Materials I.M. 501, for each lot using ~~a lower specification limit (LSL) of 3.5% voids (96.5% of G_{mm}) and~~ an upper specification limit (USL) of 8.5% voids (91.5% G_{mm}).

2303.05, A, 3, b, 1.

Replace the Article:

Payment when PWL is used for acceptance:

PWL	Pay Factor
~~95.1 – 100.0~~	~~PF = 0.008000*PWL + 0.240~~
80.0 – ~~95.0~~ 100.0	1.000
50.0 – 79.9	PF = 0.008333*PWL + 0.3333
Less than 50.0	0.750

When PWL is less than 50.0, the Engineer may declare the lot or parts of the lot deficient or unacceptable.

SPECIFICATION REVISION SUBMITTAL FORM

Submitted by: Gary Novey	**Office:** Bridges & Structures	**Item 8**
Submittal Date: 02/27/2012	**Proposed Effective Date:** May 15, 2012	
Article No.: **Title:**	**Other:** Developmental Specification for Precast Reinforced Concrete Three-Sided Culvert	

Specification Committee Action: Approved with changes with an effective date of June 19, 2012.

Deferred:	**Not Approved:**	**Approved Date:** 3/8/2012	**Effective Date:** 6/19/2012

Specification Committee Approved Text: See attached DS for Precast Reinforced Concrete Three-Sided Culvert.

Comments: The Office of Construction asked if the Office of Bridges and Structures will allow the use of plastic plugs for filling lift holes instead of the precast concrete plugs as specified. The Office of Construction indicated that this is how contractors are filling lift holes on precast culverts. The DS was revised to allow concrete or plastic plugs for filling lift holes.

After discussion with the Office of Contracts, the Office of Bridges and Structures added language indicating that the span and rise will be listed in the bid item on the proposal form. The Office of Contracts will have a universal bid item in linear feet with a blank supplemental description to add the span and rise.

Dave Claman will be the controller of this DS.

Specification Section Recommended Text: See attached Draft DS for Precast Reinforced Concrete Three-Sided Culvert.

Comments:

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

See attached.

Reason for Revision: Propose the use of a Developmental Specification in place of a Special Provision.

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

DS-09XXX
(New)

Iowa Department of Transportation

DEVELOPMENTAL SPECIFICATIONS
FOR
PRECAST REINFORCED CONCRETE THREE-SIDED CULVERT

Effective Date
June 19, 2012

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

09XXX.01 DESCRIPTION.
This specification is for precast concrete three-sided culverts constructed on site-cast concrete footings or a full width site-cast concrete floor. Precast reinforced concrete three sided culvert shall be fabricated in accordance with Materials I.M. 445 by an approved source in accordance with Materials I.M. 445.02, Appendix A.

A. Designation.
Precast reinforced concrete three-sided culvert units manufactured in accordance with this specification shall be designated by span and rise. Precast reinforced concrete culvert wingwalls and headwalls manufactured in accordance with this specification shall be designated by length, height, and deflection angle.

B. Shop Drawings.

1. Contractor shall submit design computations and shop drawings for review. These documents shall be signed and sealed by a Professional Engineer licensed in the State of Iowa and shall include the following:
- Reactions at base of arch legs, and base of wingwalls,
- Quantity and weight of anchor blocks at wingwalls,
- Dimensions of arch, wingwalls, and anchor blocks at wingwalls,
- Connection details at base of arch to footing and base of wingwall to footing,
- Connection details of wingwall to arch, headwall to arch, and
- Connection details between arch sections.

2. Fabrication shall not to begin until review by Engineer is completed.

09XXX.02 MATERIALS AND DESIGN.

A. Materials.
Refer to Section 2407 of the Standard Specifications.

1. Steel Reinforcement.

Reinforcing steel shall be in accordance with Section 2404 of the Standard Specifications. Reinforcing steel for precast elements shall be fabricated and placed according to detailed shop drawings submitted by manufacturer.

2. **Hardware.**
Bolts and threaded rods for wingwall connections shall conform to ASTM A 307. Nuts shall conform to AASHTO M 292 (ASTM A 194) Grade 2H. Bolts, threaded rods, and nuts used in wingwall connections shall be mechanically zinc coated in accordance with ASTM B 695 Class 50. Structural Steel for wingwall connection plates and plate washers shall conform to AASHTO M 270 (ASTM A 709) Grade 36 and shall be hot dip galvanized as per AASHTO M 111 (ASTM A 123). Wingwalls shall be connected with bolted steel plates meeting the above specifications. Hook Bolts used in attached headwall connections shall be ASTM A 307. Mechanical splices for reinforcing bars shall be in accordance with Materials I.M. 451 Appendix E

B. Design.

1. **Minimum Stresses.**
Precast element dimensions and reinforcement details shall be as prescribed in plans and shop drawings provided by manufacturer, subject to provisions of Article 09XXX.02, C. Minimum concrete compressive strength shall be 4000 psi (27.5 MPa). Minimum steel yield strength shall be 60,000 psi (450 MPa).

2. **AASHTO Specification.**
Precast elements shall be designed in accordance with “AASHTO LRFD Bridge Design Specifications”, 5th Edition, adopted by AASHTO, 2010. Minimum of 1 foot (0.3 m) cover above crown of culvert units is required in the installed condition (unless noted otherwise on the shop drawings and designed accordingly). Design live load shall be HL-93.

3. **Placement of Reinforcement in Precast Culvert Units.**
Cover of concrete over outside circumferential reinforcement shall be 2 inches (50 mm) minimum. Cover of concrete over inside circumferential reinforcement shall be 1.5 inches (38 mm) minimum, unless otherwise noted on shop drawings. Clear distance of end circumferential wires shall not be less than 1 inch (25 mm) or more than 2 inches (50 mm) from ends of each section. Reinforcement shall be assembled utilizing single or multiple layers of welded wire reinforcing (not to exceed three layers) supplemented with a single layer of deformed billet-steel bars, when necessary. Welded wire reinforcing shall be composed of circumferential and longitudinal wires meeting spacing requirements of Article 09XXX.02, B, 6, and shall contain sufficient longitudinal wires extending through culvert unit to maintain shape and position of reinforcement. Longitudinal distribution reinforcement may be welded wire reinforcing or deformed billet-steel bars and shall meet spacing requirements of Article 09XXX.02, B, 6. Ends of longitudinal distribution reinforcement shall not be more than 3 inches (75 mm) or less than 1.5 inches (38 mm) from ends of culvert unit.

4. **Placement of Reinforcement for Precast Wingwalls and Headwalls.**
Cover of concrete over longitudinal and transverse reinforcement shall be 2 inches (50 mm) minimum. Clear distance from end of each precast element to end transverse reinforcing steel shall not be less than 1 inch (25 mm) or more than 2 inches (50 mm). Reinforcement shall be assembled using a single layer of welded wire reinforcing or single layer of deformed billet-steel bars. Welded wire reinforcing shall be composed of transverse and longitudinal wires meeting the spacing requirements of Article 09XXX.02, B, 6, and shall contain sufficient longitudinal wires extending through the element to maintain shape and position of reinforcement. Longitudinal reinforcement may be welded wire reinforcing or deformed billet-steel bars and shall meet spacing requirements of Article 09XXX.02, B, 6. Ends of longitudinal reinforcement shall be not more than 3 inches (75 mm) or less than 1.5 inches (38 mm) from the ends of the walls.

5. Laps, Welds, and Spacing for Precast Culvert Units.
Tension splices in circumferential reinforcement shall be made by lapping. Overlap shall meet requirements of AASHTO 5.11.2. Overlap for welded wire reinforcing shall be measured between outermost longitudinal wires of each fabric sheet. For splices other than tension splices, Overlap shall be a minimum of 12 inches (300 mm) for welded wire reinforcing or deformed billet-steel bars. Spacing center-to-center of circumferential wires in a wire reinforcing sheet shall be not less than 2 inches (50 mm) or more than 4 inches (100 mm). Spacing center-to-center of longitudinal wires shall not be more than 8 inches (200 mm). Spacing center-to-center of longitudinal distribution steel for either line of reinforcing in top slab shall be not more than 16 inches (400 mm).

6. Laps, Welds, and Spacing for Precast Wingwalls and Headwalls.
Splices in reinforcement shall be made by lapping. Overlap shall meet requirements of AASHTO 5.11.2. Spacing center-to-center of wires in a wire reinforcing sheet shall be not less than 2 inches (50 mm) or more than 8 inches (200 mm).

7. Structural Design.
Structural design shall consider the following assumptions:

- Foundation design shall consider lateral forces caused by arching action.
- Culvert leg to footing connection shall not transfer design moments. Vertical and horizontal force components shall be resisted by the footing.
- Wingwall to footing connection shall not transfer design moments. Anchor block system shall resist soil overturning forces. Wingwall footings shall not be designed to resist soil overturning forces.
- Headwall connections and wingwalls shall be designed for sliding and overturning.
- Continuity shall exist between main structure footing and wingwall footing.

C. DESIGN DIMENSION TOLERANCES.

1. Culvert Units.

a. Internal Dimensions.
Internal dimensions shall vary not more than 1% from design dimensions or more than 1.5 inches (38 mm), whichever is less. Haunch dimensions shall vary not more than 0.75 inches (19 mm) from design dimension.

b. Slab and Wall Thickness.
Slab and wall thicknesses shall not be less than that shown in the design by more than 0.25 inch (6 mm). A thickness more than that required in the design will not be cause for rejection.

c. Length of Opposite Surfaces.
Variations in laying lengths of two opposite surfaces of culvert unit shall not be more than 0.50 inch (12.5 mm) in any section, except where beveled ends for laying of curves are specified on the contract documents.

d. Length of Section.
Underrun in laying length of a section shall not be more than 0.50 inches (12.5 mm) in any culvert unit.

e. Position of Reinforcement.
Maximum variation in position of reinforcement shall be ± 0.50 inches (12.5 mm). In no case shall cover over reinforcement be less than 1.50 inches (38 mm) for outside circumferential steel or less than 1 inch (25 mm) for inside circumferential steel as measured to external or internal surface of culvert. These tolerances or cover requirements do not apply to mating surfaces of joints.

f. Area of Reinforcement.
Areas of steel reinforcement shall be the design steel areas shown on manufacturer's shop drawings. Steel areas greater than those required will not be cause for rejection.

Permissible variation in diameter of reinforcement shall conform to tolerances prescribed in the ASTM specifications for that type of reinforcement.

2. **Wingwalls and Headwalls.**
   a. **Wall Thickness.**
   Wall thickness shall not vary from that shown in the design by more than 0.50 inches (12.5 mm).
   b. **Length / Height of Wall sections.**
   Length and height of wall shall not vary from that shown in the design by more than 0.50 inches (12.5 mm).
   c. **Position of Reinforcement.**
   Maximum variation in position of reinforcement shall be ± 0.50 inches (12.5 mm). In no case shall cover over reinforcement be less than 1.50 inches (38 mm).
   d. **Size of Reinforcement.**
   Permissible variation in diameter of reinforcing shall conform to tolerances prescribed in the ASTM specification for that type of reinforcing. Steel area greater than that required will not be cause for rejection.

09XXX.03 CONSTRUCTION.

A. Footings.
Culvert units and wingwalls shall be installed on cast-in-place concrete footings. Design size and elevation of footings shall be as shown on the plans. Keyways shall be compatible with precast arch system. A keyway shall be formed in top surface of footing and 3 inches (75 mm) minimum clear of inside and outside faces of culvert units, unless specified otherwise on the plans. Footings shall be given a smooth float finish and shall reach a compressive strength of at least 2000 psi (13.8 MPa) before placement of culvert and wingwall elements. Completed footing surface shall be constructed in accordance with grades shown on the plans. When tested with a 10 foot (3 m) straight edge, the surface shall not vary more than 0.25 inches in 10 feet (6 mm in 3 m).

B. Placement of the Culvert Units, Wingwalls, and Headwalls.
Culvert units, wingwalls, and headwalls shall be placed as shown on the plans. Special care shall be taken in setting elements to true line and grade. Culvert units and wingwalls shall be set on 6 inch by 6 inch (150 mm by 150 mm) steel shims. A minimum of 0.50 inches (12.5 mm) gap shall be provided between footing and bottom of the culvert's vertical legs or wingwall. This gap shall be filled with non-shrink cement grout with a minimum 28 day compressive strength of 4000 psi (27.5 MPa) and shall comply with Materials I.M. 491.13.

C. External Protection of Joints.

1. Butt joints made by two adjoining culvert units shall be covered with a 7/8 inch by 1 3/8 inch (22 mm by 35 mm) piece of preformed bituminous joint sealant and a minimum of a 24 inch (600 mm) wide joint wrap of engineering fabric. Engineering fabric shall be in accordance with Article 4196.01, B, 3, of the Standard Specifications, and centered on joint. Surface shall be free of dirt before applying joint material. A primer compatible with the joint wrap shall be applied for a minimum width of 12 inches (300 mm) to each side of joint. Joint shall be covered continuously from bottom of one culvert section leg, across top of arch and to opposite culvert section leg. Laps that result in joint wrap shall be a minimum of 6 inches (150 mm) long with overlap running downhill.

2. In addition to joints between culvert units, the joint between end culvert unit and headwall shall be sealed as described above. If precast wingwalls are used, joint between end culvert unit and wingwall shall be sealed with a 24 inch (600 mm) wide strip of engineering fabric. If lift holes are formed in arch units, they shall be plugged with a concrete or plastic plug and

primed and covered with a 12 inch by 12 inch (300 mm by 300 mm) square of engineering fabric.

D. Joints.
Culvert units shall be produced with flat butt ends. Ends of culvert units shall be such that when sections are laid together they make a continuous line with a smooth interior free of appreciable irregularities, all compatible with permissible variations in Article 09XXX.02, C. Joint width shall not exceed 0.75 inches (19 mm).

09XXX.04 METHOD OF MEASUREMENT.

A. Precast Concrete Three-Sided Culvert.
Linear feet as shown on plans.

B. Precast Concrete Wingwalls.
Number of wingwalls as shown on plans.

09XXX.05 BASIS OF PAYMENT.

A. Precast Concrete Three-Sided Culvert.
Payment will be the contract unit price per linear foot for the number of linear feet constructed in a satisfactory manner. Bid items will be specified by span and rise. Payment will be full compensation for providing equipment; materials including concrete, reinforcing steel, connecting plates, bolts, non-shrink grout, material testing, tools, and shipping; and incidentals necessary to construct culvert and headwalls.

B. Precast Concrete Wingwalls.
Payment will be the contract unit price for each wingwall constructed in a satisfactory manner. Payment will be full compensation for providing equipment; materials including concrete, reinforcing steel, connecting plates, bolts, non-shrink grout, material testing, tools, shipping, and labor; and incidentals necessary to construct wingwalls.

SPECIFICATION REVISION SUBMITTAL FORM

Submitted by: Jim Berger	**Office:** Materials	**Item 9**
Submittal Date: February 28, 2012	**Proposed Effective Date:** May 15, 2012	
Article No.: SS-09013 **Title:** Supplemental Specifications for Asphalt Emulsions Containing Gilsonite	**Other:**	

Specification Committee Action: Approved with changes.

Deferred:	**Not Approved:**	**Approved Date:** 3/8/2012	**Effective Date:** 5/15/2012

Specification Committee Approved Text: See attached SS for Asphalt Emulsions Containing Gilsonite.

Comments: The District 4 Office asked if there should be a separate approved provider list for asphalt emulsions containing gilsonite. The Office of Materials indicated that the current specifications are adequate to cover emulsions and suppliers.

Specification Section Recommended Text: See attached Draft SS for Asphalt Emulsions Containing Gilsonite.

Comments:

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

2308.02, Materials.

Add the following to the Article:

When specified, the emulsion shall contain a minimum of 18 percent Gilsonite Ore with the following modifications to Section 4140:

Tests on Residue from Distillation, or Evaporation[1] (AASHTO T 59)

- Viscosity at 275°F (135°C) ASTM D 4402 = 1.750 Pa·s maximum
- Solubility in trichloroethylene ASTM D 2042 = 97.5% minimum
- Penetration AASHTO T 49 = 50 dmm maximum
- Asphaltenes ASTM D 2007 = 15% minimum
- Saturates ASTM D 2007 = 15% maximum
- Polar Compounds ASTM D 2007 = 25% minimum
- Aromatics ASTM D 2007 = 15% minimum

1) AASHTO T 59 is modified by reducing the temperatures to 300°F (149°C) maximum for distillation or evaporation test methods.

2548.02, B, 1.

Add the following to the Article:

The emulsion may contain Gilsonite Ore with the following modifications to Section 4140:

Tests on Residue from Distillation, or Evaporation[1] (AASHTO T 59)

- Viscosity at 275°F (135°C) ASTM D 4402 = 1.750 Pa·s maximum
- Solubility in trichloroethylene ASTM D 2042 = 97.5% minimum
- Penetration AASHTO T 49 = 50 dmm maximum
- Asphaltenes ASTM D 2007 = 15% minimum
- Saturates ASTM D 2007 = 15% maximum
- Polar Compounds ASTM D 2007 = 25% minimum
- Aromatics ASTM D 2007 = 15% minimum

1) AASHTO T 59 is modified by reducing the temperatures to 300°F (149°C) maximum for distillation or evaporation test methods.

Reason for Revisions: More details on deviations from 4140 are needed. Also, a minimum quantity of gilsonite is needed for clarity.					
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:					

SS-09XXX
(Replaces SS-09013)

Iowa Department of Transportation

SUPPLEMENTAL SPECIFICATIONS
FOR
ASPHALT EMULSIONS CONTAINING GILSONITE

Effective Date
May 15, 2012

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.

2308.02, Materials.

Add the following to the Article:

When specified, emulsion shall contain a minimum of 18% Gilsonite Ore with the following modifications to Section 4140:

Tests on Residue from Distillation, or Evaporation[1] (AASHTO T 59)

- Viscosity at 275°F (135°C) ASTM D 4402 = 1.750 Pa·s maximum
- Solubility in trichloroethylene ASTM D 2042 = 97.5% minimum
- Penetration AASHTO T 49 = 50 dmm maximum
- Asphaltenes ASTM D 2007 = 15% minimum
- Saturates ASTM D 2007 = 15% maximum
- Polar Compounds ASTM D 2007 = 25% minimum
- Aromatics ASTM D 2007 = 15% minimum

1) AASHTO T 59 is modified by reducing the temperatures to 300°F (149°C) maximum for distillation or evaporation test methods.

2308.03, C, Dilution.

Add the following to the Article:

Emulsions containing Gilsonite use a dilution rate of one part asphalt emulsion to one part water.

2308.03, D, 1.

Replace the Article:

Uniformly apply the diluted asphalt emulsion at the rate of 0.20 gallon per square yard (0.9 L/m^2) of shoulder surface. Emulsions containing Gilsonite use a rate of 0.12 gallons per square yard (0.54 L/m^2) of shoulder surface. The application rate may be ~~reduced~~ modified as directed by the Engineer.

2308.04, Method of Measurement.

Renumber Articles B and C and **Add** new Article:

B. Asphalt Emulsion Containing Gilsonite for Fog Seal (Shoulders).
As provided in Article 2307.04, B, for undiluted Asphalt Emulsion Containing Gilsonite for Fog Seal (Shoulders).

~~**B**~~**C. Sand.**
Not be measured for payment.

~~**C**~~**D. Traffic Control.**
Lump sum for the contract.

2308.05, Basis of Payment.

Renumber Article B and **Add** new Article:

B. Asphalt Emulsion Containing Gilsonite for Fog Seal (Shoulders).

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

2. Payment is full compensation for:
- **a.** Cleaning shoulder surface.
- **b.** Furnishing and applying diluted asphalt emulsion.
- **c.** Mixing water.
- **d.** Furnishing and applying sand cover.
- **e.** Protecting adjacent pavement and edge lines, including special protection and dams in areas of superelevated curves.

~~**B**~~**C. Traffic Control.**

The following changes apply to the Developmental Specifications for Milled Rumble Strips – HMA or PCC Surface:

2548.02, B, 1.

Add the following to the Article:

Emulsion may contain Gilsonite Ore with the following modifications to Section 4140:

Tests on Residue from Distillation, or Evaporation[1] (AASHTO T 59)

• Viscosity at 275°F (135°C) ASTM D 4402	= 1.750 Pa·s maximum
• Solubility in trichloroethylene ASTM D 2042	= 97.5% minimum
• Penetration AASHTO T 49	= 50 dmm maximum
• Asphaltenes ASTM D 2007	= 15% minimum
• Saturates ASTM D 2007	= 15% maximum
• Polar Compounds ASTM D 2007	= 25% minimum
• Aromatics ASTM D 2007	= 15% minimum

1) AASHTO T 59 is modified by reducing the temperatures to 300°F (149°C) maximum for distillation or evaporation test methods.

2548.03, C, 3.

Add the following to the Article:

Emulsions containing Gilsonite, apply at a rate of 0.12 gallons per square yard (0.54 L/m^2) of rumble strip surface. Application rate may be modified as directed by the Engineer.

2548.04, Method of Measurement.

Add new Article:

D. Asphalt Emulsion Containing Gilsonite for Fog Seal (Shoulder Rumble Strips). Gallons (liters) as provided in Article 2307.04, B, computed from field measurements of distributors or from tank cars or transport trucks as provided in Article 4100.03. When quantities computed from field measurements check within 1.0% of billed gallons (liters), payment will be based on billed gallons (liters). When quantities computed from field measurements differ from billed gallons (liters) by more than 1.0%, payment will be based on quantity from field measurements. From these quantities, any amount used by Contractor as fuel, left in cars, or otherwise not delivered to road surface will be deducted. Engineer will advise Contractor promptly, in writing, of quantities deducted.

2548.05, Basis of Payment.

Add new Article:

D. Asphalt Emulsion Containing Gilsonite for Fog Seal (Shoulder Rumble Strips).

1. Per gallon (liter) for undiluted Asphalt Emulsion Containing Gilsonite 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 roadway surface will not be considered for payment.

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