Iowa Department of Transportation

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

August 13, 2009

Members Present:	John Adam	Statewide Operations Bureau
	Jim Berger	Office of Materials
	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
	John Smythe	Office of Construction
Members Not Present:	Roger Bierbaum	Office of Contracts
	Donna Buchwald	Office of Local Systems
	Troy Jerman	Office of Traffic & Safety
	Mike Kennerly	Office of Design
Advisory Members Present:	None	
Others Present:	Max Grogg	FHWA
	Tom Jacobson	Office of Construction
	Ed Kasper	Office of Contracts
	Deanna Maifield	Office of Design
	Sam Mousalli	Office of Materials
	Ngozi Ohoro	FHWA

Tom Reis, Specifications Engineer, opened the meeting. The following items were discussed in accordance with the revised agenda dated August 7, 2009:

1. **Article 1108.03, D, 2, Limitation of Operations.**

The Office of Construction requested changes to the work restrictions for Independence Day weekend.

2. **Article 2310.03, A, Equipment.**
   Article 2310.03, B, Preparation of Surface.
   Article 2310.03, C, 2, c, 2, Joints.
   Article 2310.03, C, 2, a, Hot Mix Asphalt Stress Relief Course.
   Article 2310.04, D, Pavement Scarification.
   Article 2310.05, C, Surface Preparation.
   Article 2310.05, D, Pavement Scarification.

The Office of Construction requested changes to revise the preparation of surface language, sawing requirements for bonded overlays, and compaction requirements for HMA stress relief course.

3. **Article 2408.03, B, 6.7 Nondestructive Testing.**

The Office of Materials requested changes to add testing for longitudinal web splice welds.

4. Article 2408.02, Q, 2, c, 1, Weathering Structural Steel Applications (Painting, Shop Painting).
Article 2408.02, Q, 2, c, 2, Weathering Structural Steel Applications (Painting, Shop Painting).

The Office of Materials requested changes to clarify the ASTM requirement and add a new Material I.M. appendix reference.

5. Article 2522.03, E, 4, Anchor Bolts, Washers, and Nuts.
Article 2525.03, H, 3, Hardware.
Article 2525.03, H, 3, b, Nuts.
Article 4100.07, C, Drive Screws and Bolts (over 3/8 inch (8.5 mm) in diameter), Washers 3/16 inch (4.8 mm) and 1/4 inch (6.4 mm) Thick, and Similar Articles.
Article 4100.07, D, Screws, Stove Bolts, and Bolts (3/8 inch (9.5 mm) and under in diameter), Washers Under 3/16 inch (4.8 mm) Thick, Rivets, Nails, and Similar Articles.
Article 4153.06, A, 3.
Article 4153.07, C, Galvanizing.
Article 4153.07, D, 4.
Article 4153.07, E, Lag Bolts.
Article 4185.02, B, 2.
Article 4186.09, A, 5, b.
Article 4186.09, B, Type B Signs.
Article 4186.10, B, 5.
Article 4187.01, C, 2, Anchor Bolts, Nuts, and Washers.

The Office of Materials requested changes to galvanization requirements.

6. Article 2527.03, C, 5, Removal of Pavement Markings

The Office of Construction requested changes to the requirements for removing symbols and legends.

7. Article 4151.02, C, Reinforcement for Bridge Approach Sections, Reinforced Paved Shoulders, and Full-Width Reinforcement of Pavements.
Article 4151.03, A, 1, Reinforcement for Structures.

The Office of Materials requested changes to deformed bar specifications for reinforcement.

8. Article 4155.02, D, Anchor bolts used to attach beam rail to bridge barrier rail.
Article 4155.02, J, Galvanizing.
SS-09005, Guardrail Construction and Removal

The Office of Materials requested changes to guardrail bolts and galvanizing requirements.

9. Article 4167.01, B, Pipe Piles.

The Office of Materials requested changes due to ASTM and AWS Code changes.

10. DS-090XX, Contractor Supplied Shoulder Material.

The Specifications Engineer requested approval of a new Developmental Specification for Contractor Supplied Shoulder Material.

11. Standard Specifications for Highway and Bridge Construction, Series 2009.

Discussed issuing errata for the 2009 Specification Book since the date for issuing a GS has passed and there are revisions that need to be made to the book since it was finalized and sent to the publisher. The errata will be issued as a Supplemental Specification assigned to all projects let by the Department. The errata will be posted on the Specifications Section website.

12. DS-09XXX, Monthly Employment Reporting (I-JOBS)

The Specifications Section requested approval of a new Developmental Specification for Monthly Employment Reporting (I-JOBS).

SPECIFICATION REVISION SUBMITTAL FORM

Submitted by: John Smythe	**Office:** Construction	**Item 1**
Submittal Date: July 15, 2009	**Proposed Effective Date:** April 2010	
Article No.: 1108.03 **Title:** Limitation of Operations	**Other:**	

Specification Committee Action: Approved as is.

Deferred:	**Not Approved:**	**Approved Date:** 8/13/2009	**Effective Date:** 4/20/2010

Specification Committee Approved Text: See Specification Section Recommended Text.

Comments:

Specification Section Recommended Text:

1108.03, D, 2.

Replace the article:

2. ~~Fourth of July - When the Fourth of July is observed on Saturday, Sunday or Monday, no work will be allowed beginning the preceding Friday through the holiday. When the Fourth of July is observed on Friday, no work will be allowed the preceding Thursday or the following Saturday~~. Independence Day – When Independence Day is observed as a State Holiday on Monday, no work will be allowed beginning the preceding Friday through the holiday. When Independence Day is observed as a State Holiday on Friday, no work will be allowed the preceding Thursday through the following Saturday.

Comments:

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

1108.03 LIMITATIONS OF OPERATIONS.

The Contractor shall conduct the work so as to create a minimum amount of inconvenience to traffic. At any time, when in the judgment of the Engineer, the Contractor has obstructed or closed, or is conducting operations on, a greater portion of the road than is necessary for the proper prosecution of the work, the Engineer may require the Contractor to finish the sections on which work is in progress before work is started on any additional sections.

Whenever work which is being done by other contractors or subcontractors is contiguous to, or a part of, the work included in this contract, the Engineer will, in case of dispute, determine and define the respective rights of the various interests involved, in order to secure the completion of all parts of the work in general harmony and with satisfactory results.

Except when an accelerated work schedule is required, no work requiring inspection will be permitted on Sundays or holidays observed by the Department except with permission of the Engineer. The Contractor should request a determination of the holidays to be observed at the beginning of each calendar year.

Work on Primary Roads where traffic is maintained through the project and work on all Interstate highways will not be permitted during the times identified below without approval of the Engineer:

- Memorial Day and Labor Day weekends - No work will be allowed the preceding Friday and all day Saturday.

- ~~Fourth of July - When the Fourth of July is observed on Saturday, Sunday or Monday, no work~~

~~will be allowed beginning the preceding Friday through the holiday. When the Fourth of July is observed on Friday, no work will be allowed the preceding Thursday or the following Saturday~~.

- Independence Day – When Independence Day is observed as a State Holiday on Monday, no work will be allowed beginning the preceding Friday through the holiday. When Independence Day is observed as a State Holiday on Friday, no work will be allowed the preceding Thursday or the following Saturday.

If the Contractor requests permission to work for the times identified above and the Engineer approves this request, working days will be charged for the times requested.

Reason for Revision: Contractors requested clarification, since July 4th is never "observed" on a Saturday or Sunday.

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: John Smythe / Kevin Merryman	**Office:** Construction	**Item 2**
Submittal Date: June 29, 2009	**Proposed Effective Date:** April 2010	
Article No.: 2310 **Title:** Portland Cement Concrete Overlay	**Other:**	

Specification Committee Action: Approved as is.

Deferred:	**Not Approved:**	**Approved Date:** 8/13/2009	**Effective Date:** 4/20/2009

Specification Committee Approved Text: See Specification Section Recommended Text.

Comments:

Specification Section Recommended Text:

2310.03, A, Equipment.

Replace article and title:

A. ~~Equipment.~~
~~Use preparation equipment approved by the Engineer and complying with the following:~~

~~1.~~ Scarifying or Shotblasting Equipment.
Use power operated equipment capable of uniformly scarifying or removing the existing surface in a satisfactory manner and to depths required. Other types of removal devices may be used if their operation is suitable and if they can be demonstrated to the satisfaction of the Engineer. The contract documents will include a pay item for such work.

~~2. Sand Blasting Equipment.~~
~~Use sand blasting equipment capable of removing rust, oil, and concrete laitance from the existing surface of the pavement.~~

2310.03, B, Preparation of Surface.

Replace article:

1. General.
- **a.** If full depth base repair is included in the project, complete it prior to ~~surface~~ preparation of the existing pavement surface.
- **b.** When required, ~~i~~include the entire ~~surface~~ area to be resurfaced in ~~surface~~ preparation of the existing pavement surface. Materials removed in the preparation operation may be placed in the shoulder area unless specified otherwise in the contract documents.

2. Bonded Overlays.
- **a.** Prepare the surface by shot blasting~~,~~ or scarifying ~~followed by either shot blasting or sand blasting~~. Scarify to a nominal depth of 1/4 inch (5 mm).
- **b.** Ensure preparation removes all dirt, oil, foreign materials, laitance, or loose material from the surface and edges against which new concrete will be placed.
- **c.** Work covered by Article 2310.03, B, 2 will be paid for according to Article 2310.05, C, Surface Preparation.

3. Unbonded Overlays and Whitetopping.
- **a.** ~~When jointing is specified in which panels are smaller than a normal lane width, scarify the entire surface to create a roughened surface. This will not apply when a new HMA stress~~

~~relief layer is constructed as a part of the contract.~~ Prepare surface by scarifying per Section 2214.

b. When placement of HMA stress relief layer is included as part of the contract for unbonded overlays, pavement scarification will not be required.

~~b~~c. At the direction of the Engineer, trim high spots found in the existing HMA pavement. This work will be accomplished during the scarification operation, only at isolated locations, and will be considered incidental to the ~~surface preparation~~ pavement scarification.

d. Work covered by Article 2310.03, B, 3, will be paid for according to Article 2310.05, D, Pavement Scarification.

~~**4. Whitetopping.**~~

~~**a.** When jointing is specified in which panels are smaller than a normal lane width, scarify the entire surface using a cold milling operation to create a roughened surface.~~

~~**b.** At the Engineer's direction, trim high spots found in the existing HMA pavement. This work will be accomplished during the scarification operation, only at isolated locations, and will be considered incidental to the surface preparation.~~

2310.03, C, 2, c, 2.

Replace article:

Saw joints in the resurfacing directly over existing ~~transverse~~ joints. Saw ~~transverse~~ joints to the full depth of new resurfacing concrete, including depressions created in the existing surface and as specified in the widening areas. Saw ~~transverse~~ joints as soon as possible without causing excessive raveling. ~~Saw joints directly over existing longitudinal joints to a depth of one-half the overlay thickness, with a maximum depth of 3 inches (75 mm).~~

2310.03, C, 3, a, Hot Mix Asphalt Stress Relief Course.

Replace article:

Construct in accordance with Article 2303.03. ~~Compaction shall be in accordance with Article 2303.03, E,~~ Use Class ~~1C~~ II Compaction, except use only static steel wheeled rollers ~~shall be used~~. Article 2303.04 shall also apply.

2310.04, D, Pavement Scarification.

Add new article:

1. Measurement by Weight (Mass).
The quantity of Pavement Scarification will be determined in accordance with Article 2214.06, A, 1.

2. Measurement by Area.
The quantity of Pavement Scarification will be determined in accordance with Article 2214.06, A, 2.

2310.04, D, Hot Mix Asphalt Stress Relief Course.

Renumber article:

~~D~~ E, Hot Mix Asphalt Stress Relief Course.

2310.05, C, 2.

Replace article:

Payment is full compensation for preparation of the existing pavement, ~~sandblasting~~ scarifying or shot blasting, and for removal of the existing pavement surface material according to Article 1104.08.

2310.05, D, Pavement Scarification.

Add new article:

1. Measurement by Weight (Mass).
The Contractor will be paid the contract unit price for Pavement Scarification in accordance with Article 2214.07, A, 1.

2. Measurement by Area.
The Contractor will be paid the contract unit price for Pavement Scarification in accordance with Article 2214.07, A, 2.

2310.05, D, Hot Mix Asphalt Stress Relief Course.

Renumber article:

~~**D**~~ **E, Hot Mix Asphalt Stress Relief Course.**

Comments: The Office of Bridges & Structures noted that the article heading "Preparation of Surface" is confusing when you have a sub-heading "Surface Preparation". Both items under Preparation of Surface refer to scarification, even though one item is called Pavement Scarification and one is called Surface Preparation. The Office of Contracts stated that the equipment used for surface preparation should not be subject to approval of the Engineer since we do give specifications for this equipment. The Specifications Section will revise this specification for the August Specification Committee meeting.

Member's Requested Change (Redline/Strikeout):

2310.03 CONSTRUCTION.

A. Equipment.
~~Surface preparation equipment used~~ Equipment used to prepare the existing pavement surface shall be subject to approval of the Engineer and shall comply with the following:

1. Scarifying or Shotblasting Equipment.
Equipment shall be a power operated, capable of uniformly scarifying or removing the existing surface to depths required in a satisfactory manner. Other types of removal devices may be used if their operation is suitable and if they can be demonstrated to the satisfaction of the Engineer. The contract documents will include a pay item for such work.

2. Sand Blasting Equipment.
Sand blasting equipment shall be capable of removing rust, oil, and concrete laitance from the existing surface of the pavement.

B. Preparation of Surface.
If full depth base repair is included in the project, it shall be completed prior to ~~surface preparation~~ preparation of the existing pavement surface.

~~Surface preparation~~ When required, preparation of the existing pavement shall include the entire ~~surface~~ area to be resurfaced. Materials removed in the preparation operation may be placed in the shoulder area unless otherwise specified in the contract documents.

1. ~~Bonded Overlays~~ Surface Preparation.
For Bonded Overlays, ~~T~~the surface shall be prepared by shot blasting~~,~~ or ~~shall be scarified and followed by either shot blasting or sand blasting~~ scarification. Scarification shall be to a nominal depth of 1/4 inch (5 mm). In either case, the preparation shall be of an extent to remove all dirt, oil, and other foreign materials, as well as any laitance or loose material from the surface and edges against which new concrete is to be placed.

2. ~~Unbonded Overlays~~ Pavement Scarification.
For unbonded overlays and whitetopping, pavement scarification shall meet the requirements of Section

2214.

When placement of a new HMA stress relief layer is included as part of the contract for unbonded overlays, pavement scarification will not be required.

~~When jointing is specified in which panels are smaller than a normal lane width, the entire surface shall be scarified to create a roughened surface. This will not apply when a new HMA stress relief layer is constructed as a part of this contract.~~

Any high spots found in the existing HMA pavement shall be trimmed at the direction of the Engineer. This work would be accomplished during the scarification operation, only at isolated locations, and would be considered incidental to the ~~surface preparation~~ pavement scarification.

~~**3. Whitetopping.**~~
~~When jointing is specified in which panels are smaller than a normal lane width, the entire surface shall be scarified using a cold-milling operation to create a roughened surface.~~

~~Any high spots found in the existing HMA pavement shall be trimmed at the direction of the Engineer. This work would be accomplished during the scarification operation, only at isolated locations, and would be considered incidental to the surface preparation.~~

C. Placing and Finishing Overlay.
Section 2317 shall apply to all PCC Pavement bid items of a Primary project if any individual PCC Pavement bid item for that project is 5000 square yards (4200 m^2) or greater. Section 2316 shall apply to all other Primary projects and when specifically required for other projects.

The placing equipment shall be controlled to the proper elevation by string line. Cross sections shall be taken and a grade line established. The Engineer will review and approve the new grade lines. Information detailing the pavement design thicknesses at the various survey points and material quantities will also be provided. During construction, these grades shall not be altered solely to account for concrete overruns. Some overrun is normal and only with approval of the Engineer will they be adjusted.

1. Bonded Overlays.

a. Surface Cleaning.
Prior to placing concrete onto the surface, the entire surface shall be cleaned with an air blast. After cleaning, no traffic will be permitted on the cleaned surface except that necessary for overlay construction.

b. Surface Condition.
The prepared surface shall be dry to allow some absorption of the concrete mortar.

c. Joints.
The exact location of each contraction and expansion joint in the existing pavement and the joint to be sawed at each full depth patch shall be identified on both sides by a reliable method.

Joints shall be sawed in the resurfacing directly over existing ~~transverse~~ joints. ~~Transverse~~ jJoints shall be sawed to the full depth of new resurfacing concrete, including depressions created in the existing surface, and as specified in the widening areas. ~~Transverse~~ jJoints shall be sawed as soon as possible without causing excessive raveling. ~~Joints shall be sawed directly over existing longitudinal joints to a depth of one-half the overlay thickness, with a maximum depth of 3 inches (75 mm).~~

2. Unbonded Overlays.

a. Hot Mix Asphalt Stress Relief Course.
Compaction shall be in accordance with Article 2303.03, E, 2, Class ~~1C~~ II Compaction except only static steel wheeled rollers shall be used.

b. Surface Cleaning.
The Contractor shall clean the existing surface of all loose or adhering foreign material prior to placement of the PCC over HMA pavement. Normally this will be accomplished with a power broom and shall be available during paving operations to clean loose material that may be tracked onto the surface by the construction equipment.

c. Surface Condition.
The prepared surface shall be dry when concrete is placed on the surface of the HMA pavement to allow some absorption of the concrete mortar. If the surface of the HMA is above 110ºF (40ºC), the Contractor may apply water to the surface of the HMA ahead of the paving operation in order to cool the surface. The water shall be applied far enough in advance of the paving operation that the surface will dry from evaporation before concrete is placed. No water shall be applied to the surface of the pavement when the HMA surface temperature is below 100ºF (38ºC).

d. Joints.
When jointing is specified in which panels are smaller than a normal lane width, the joints shall be 1/8 inch (3 mm) wide with no cleaning or sealing required.

3. Whitetopping.

a. Surface Cleaning.
The Contractor shall clean the existing surface of all loose or adhering foreign material prior to placement of the PCC over HMA pavement. Normally this will be accomplished with a power broom and shall be available during paving operations to clean loose material that may be tracked onto the surface by the construction equipment.

b. Surface Condition.
The prepared surface shall be dry when concrete is placed on the surface of the HMA pavement to allow some absorption of the concrete mortar. If the surface of the HMA is above 110ºF (40ºC), the Contractor may apply water to the surface of the HMA ahead of the paving operation in order to cool the surface. The water shall be applied far enough in advance of the paving operation that the surface will dry from evaporation before concrete is place. No water shall be applied to the surface of the pavement when the HMA surface temperature is below 100ºF (38ºC).

c. Joints.
When jointing is specified in which panels are smaller than a normal lane width, the joints shall be 1/8 inch (3 mm) wide with no cleaning or sealing required.

D. Limitation of Operations.
At forecasted air temperatures below 55°F (13°C) the opening time shall be determined using the maturity method. Resurfacing concrete shall not be placed when the air or pavement temperature is below 40°F (4°C).

The Contractor will be permitted to use the shoulders for construction activities. It will be the Contractor's responsibility to repair the shoulders at no additional cost as deemed necessary by the Engineer, to restore the shoulders to a condition acceptable for shoulder work. The Contractor may elect to limit the

use and vehicle loadings to minimize this work and its cost.

Bonded concrete overlays shall be placed between June 1 and September 30.

Unbonded overlay and whitetopping materials shall not be placed on any HMA when the pavement surface temperature exceeds 120° F (50°C).

2310.04 METHOD OF MEASUREMENT.
The quantity of the various items of work involved in the construction of PCC overlay will be measured by the Engineer in accordance with the following provisions:

A. Portland Cement Concrete Overlay, Furnish Only.
The quantity of resurfacing concrete furnished will be measured in cubic yards (cubic meters), using a count of batches incorporated. This quantity will include concrete placed in widening sections and partial depth patches.

B. Portland Cement Concrete Overlay, Placement Only.
The quantity of Portland Cement Concrete Overlay, Placement Only, in square yards (square meters), will be the quantity shown in the contract documents. The area of PCC overlay placement will be determined from the longitudinal surface and the nominal pavement width, including widening sections.

C. Surface Preparation.
The quantity of Surface Preparation, in square yards (square meters), will be the quantity shown in the contract documents. The area of surface preparation will be determined from the longitudinal surface and the nominal width of existing pavement.

D. Pavement Scarification

1. Measurement by Weight (Mass).
The quantity of Pavement Scarification will be determined in accordance with Section 2214.06, A, 1.

2. Measurement by Area.
The quantity of Pavement Scarification will be determined in accordance with Section 2214.06, A, 2.

~~D~~**E. Hot Mix Asphalt Stress Relief Course.**

1. Measurement by Weight (Mass).
When measurement is by weight (mass), the quantity of Hot Mix Asphalt Stress Relief Course will be expressed in tons (megagrams) and determined from the weight (mass) of individual loads, including fillets, measured to the nearest 0.01 tons (0.01 Mg). Loads may be weighed in trucks, weigh hoppers, or from the weight (mass) from batch plants computed by count of batches in each truck and batch weight (mass). Article 2001.07 shall apply.

The asphalt binder will be measured in accordance with Article 2303.05, B.

2. Measurement by Area.
When payment is based on square yards (square meters), the quantity of Hot Mix Asphalt Stress Relief Course, in square yards (square meters), will be the quantity shown in the contract documents.

The quantity of asphalt binder used will not be measured separately for payment.

2310.05 BASIS OF PAYMENT.
For the performance of acceptable work, measured as provided above, the Contractor will be paid the contract unit price in accordance with the following provisions:

A. Portland Cement Concrete Overlay, Furnish Only.
The Contractor will be paid the contract unit price per cubic yards (cubic meters) for Portland Cement Concrete, Furnish Only, as measured above. This payment shall be full compensation for furnishing all raw materials, and for proportioning, mixing, and delivery of concrete to the paving machine.

B. Portland Cement Concrete Overlay, Placement Only.
The Contractor will be paid the contract unit price per square yard (square meter) for Portland Cement Concrete Overlay, Placement Only. This payment shall be full compensation for furnishing all materials, labor, and equipment necessary to place, finish, texture, and cure the concrete, including the placement of tie bars for widening, if required; sawing, cleaning, and sealing the joints, if required; and surface cleaning.

C. Surface Preparation.
The Contractor will be paid the contract unit price per square yard (square meter) for Surface Preparation. This payment shall be full compensation for preparation of the existing pavement, sandblasting or shot blasting, and for removal of the existing pavement surface material in accordance with Article 1104.08.

D. Pavement Scarification

1. Measurement by Weight (Mass).
The contractor will be paid the contract unit price for Pavement Scarification in accordance with Section 2214.07, A, 1.

2. Measurement by Area.
The contractor will be paid the contract unit price for Pavement Scarification in accordance with Section 2214.07, A, 2.

~~D~~E. Hot Mix Asphalt Stress Relief Course.
The Contractor will be paid for the asphalt binder in accordance with Article 2303.06, B.

1. Measurement by Weight (Mass).
The Contractor will be paid the contract unit price per ton (megagram) for Hot Mix Asphalt Stress Relief Course as measured above. This payment shall be full compensation for furnishing and placing the HMA stress relief course. The Contractor will be paid separately for the asphalt binder in accordance with Article 2303.06, B.

2. Measurement by Area.
The Contractor will be paid the contract unit price per square yard (square meter) for Hot Mix Asphalt Stress Relief Course constructed. This payment shall be full compensation for furnishing and placing the HMA stress relief course, including the cost of the asphalt binder.

Reason for Revision: Revises preparation of surface language to require the Surface Preparation item only for Bonded Overlays and Pavement Scarification for Unbonded Overlays and Whitetopping. Also, revises joint sawing requirements for bonded overlays and compaction requirements for HMA stress relief course.

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 3**
Submittal Date: 6/7/2009	**Proposed Effective Date:** April 2010	
Article No.: 2408.03, B, 6.7 **Title:** Nondestructive Testing	**Other:**	

Specification Committee Action: Approved as is.

Deferred:	**Not Approved:**	**Approved Date:** 8/13/2009	**Effective Date:** 4/20/2010

Specification Committee Approved Text: See Specification Section Recommended Text.

Comments: The Committee decided to delete this reference, because it was an exception to the current welding specifications. Subsequent to the meeting, it was discovered that this reference is still necessary and will be incorporated as proposed.

Specification Section Recommended Text:

2408.03, B, 6.7 Nondestructive Testing

Replace Subparagraph 6.7.1.2(2) with the following:

50% of each joint subject to compression or shear in each main member ~~as specified, except that~~ including longitudinal butt weld splices in beam or girder webs ~~need not be tested by radiographic or ultrasonic testing unless so specified in contract document~~. If unacceptable discontinuities are found in the first 50% of joint, the entire length shall be tested.

Comments:

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

2408.13 WELDING

SECTION 6. Inspection

Part A. General Requirements

6.7 Nondestructive Testing

REPLACE Subparagraph 6.7.1.2(2) with the following:

6.7.1.2(2) 50% of each joint subject to compression or shear in each main member ~~as specified, except that~~ including longitudinal butt weld splices in beam or girder webs ~~need not be tested by radiographic or ultrasonic testing unless so specified in contract document~~. If unacceptable discontinuities are found the first 50% of joint, the entire length shall be tested.

Reason for Revision: Currently there is no testing requirements for the longitudinal web splices.

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: Jim Berger	**Office:** Materials	**Item 4**
Submittal Date: 6/7/2009	**Proposed Effective Date:** April 2010	
Article No.: 2408.03, Q, 2 **Title:** Shop Painting (Steel Structures, Weathering Structural Steel Applications)	**Other:**	

Specification Committee Action: Approved as is.

Deferred:	**Not Approved:**	**Approved Date:** 8/13/2009	**Effective Date:** 4/20/2010

Specification Committee Approved Text: See Specification Section Recommended Text.

Comments:

Specification Section Recommended Text:

2408.02, Q, 2, c, 1

Replace the second sentence of the article:

Approved paints are shown in Materials I.M. 482.02, Appendix A and Appendix C.

2408.02, Q, 2, c, 2

Replace the first sentence of the article:

Apply a top coat of waterborne acrylic paint from the approved lists shown in Materials I.M.s 482.05, Appendix A, or 482.07, Appendix A, to the primed surfaces after the primer has cured to a resistance rating of 4 as verified by 50 MEK rubs as per ASTM D 4752 for inorganic zinc rich primers.

Comments:

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

2408.30 SHOP PAINTING

B. Painting

2. Weathering Structural Steel Applications.

All the surfaces to be painted shall be given a coat of zinc silicate paint as soon as possible after blasting before formation of any surface rust and not later than 16 hours after blasting the surface. Approved paints are shown in Materials I.M. 482.02, Appendix A and Appendix C. The minimum average dry film thickness shall be 4 mils (100 µm) with no spot measurement below 3 mils (75 µm) or above 6 mils (150 µm). Any repairs or build up to the applied prime coat shall be done as soon as possible and not later than 24 hours from the initial application. After the primer has cured to a resistance rating of 4 as verified by 50 MEK rubs as per ASTM D 4752 for inorganic zinc rich primers. ~~t~~The primed surfaces shall be given a top coat of waterborne acrylic paint from the approved list shown in Materials I.M. 482.05, Appendix A or IM 482.07 Appendix A. The top coat color shall match Federal Color Standard Number 20045. The top coat shall cover all the primed surfaces except faying surfaces of bolted joints with a uniform film of paint. The top coat shall be applied in the shop unless permitted in writing by the Engineer.

Reason for Revision: Changes/updates in the paint requirements. ASTM requirement and added new appendices in the IM's.

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: Jim Berger	**Office:** Materials	**Item 5**
Submittal Date: 6/7/2009	**Proposed Effective Date:** April 2010	
Article No.: 2522.04, D **Title:** Lighting Tower **Article No.:** 2525.06, B, 2 **Title:** Traffic Signalization **Article No.:** 4100.07 **Title:** General Provisions **Section No.:** 4153 **Title:** Miscellaneous Iron and Steel **Article No.:** 4185.02, A **Title:** Anchor Bolt and Slip-Base Fasteners for Lighting Poles (Poles and Supports, Lighting Tower) **Section No.:** 4186 **Title:** Signing Materials **Section No.:** 4187 **Title:** Anchor Bolts, Nuts, and Washers	**Other:**	

Specification Committee Action: Approved as is.

Deferred:	**Not Approved:**	**Approved Date:** 8/13/2009	**Effective Date:** 4/20/2010

Specification Committee Approved Text: See Specification Section Recommended Text.

Comments:

Specification Section Recommended Text:

2522.03, E, 4, Anchor Bolts, Washers, and Nuts.

Replace the first sentence of the article:

Ensure galvanizing for anchor bolts, washers, and nuts meets the requirements of ASTM ~~A 153, Class C~~ F 2329; or ASTM B 695, Class 50, Type I coating.

2525.03, H, 3, Hardware.

Replace the third sentence of the article:

All hardware shall be steel, hot-dipped galvanized according to ASTM ~~A 153, Class C~~ F 2329; or ASTM B 695, Class 50, Type I coating, or shall have an electro deposited coating of the same coating thickness, and so designed for this purpose.

2525.03, H, 3, b, Nuts.

Delete the second bullet:

- ~~Galvanizing according to ASTM A 153, Class C, or ASTM B 695, Class 50.~~

4100.07, C, Drive Screws and Bolts (over 3/8 inch (8.5 mm) in diameter), Washers 3/16 inch (4.8 mm) and 1/4 inch (6.4 mm) Thick, and Similar Articles.

Replace the article:

Apply ASTM ~~A 153, Class C~~ F 2329.

4100.07, D, Screws, Stove Bolts, and Bolts (3/8 inch (9.5 mm) and under in diameter), Washers

Under 3/16 inch (4.8 mm) Thick, Rivets, Nails, and Similar Articles.

Replace article:
Apply ASTM ~~A 153, Class D~~ F 2329.

4153.06, A, 3.

Replace first sentence:
Where galvanized fasteners are specified, zinc is applied by hot dipped galvanizing to meet the requirements of ASTM ~~A 153~~ F 2329**.**

4153.07, C, Galvanizing.

Replace article:
Ensure all bolts, nuts, and washers are zinc coated to meet the requirements of ASTM ~~A 153, Class D~~ F 2329.

4153.07, D, 4.

Replace article:
Ensure the galvanized coating meets the requirements of ASTM ~~A 153, Class D~~ F 2329.

4153.07, E, Lag Bolts.

Replace article:
Use lag bolts meeting the requirements of ANSI B18.2.1, galvanized according to ASTM ~~A 153, Class D~~ F 2329.

4185.02, B, 2.

Replace second bullet:

- Are full-length galvanized according to ASTM ~~A 153, Class C~~ F 2329, and

4186.09, A, 5, b.

Replace second sentence:
Ensure galvanizing meets requirements of ASTM ~~A 153, Class D~~ F 2329, or ASTM B 633, Class Fe/Zn ~~12, Type 1~~ 25, Type II or Type IV.

4186.09, B, Type B Signs.

Replace third paragraph:
Galvanizing ~~is to~~ shall meet ~~the~~ requirements of ASTM ~~A 153, Class D~~ F 2329, or ASTM B 633, Class Fe/Zn ~~12, Type 1~~ 25.

4186.10, B, 5.

Replace article:
Furnish bolts (including the entire length of the anchor bolts), nuts, and washers, that are galvanized according to ASTM ~~A 153, Class A~~ F 2329 or B 695 Class 50, Type I coating.

4187.01, C, 2, Anchor Bolts, Nuts, and Washers.

Replace first sentence:
Use bolts, nuts, and washers galvanized according to the requirements of ASTM ~~A 153, Class C~~ F 2329 or ASTM B 695, Class 50, Type I coating.

Comments:

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

2522.04 LIGHTING TOWER.

D. Each anchor bolt shall be furnished with one leveling nut and two anchoring nuts. Anchor bolts shall meet the requirements of ASTM F 1554, Grade 105 (724 MPa), be full-length galvanized, and be high-strength low alloy steel. Unless otherwise specified, anchor bolts shall be the Unified Coarse Thread Series and have Class 2A tolerance. The end of each anchor bolt intended to project from the concrete shall be color coded in red to identify the grade. Washers shall be galvanized and shall meet the requirements of ASTM F 436. Nuts shall meet the requirements of ASTM A 563, DH, be heavy hex, and be galvanized. Nuts may be over-tapped in accordance with the allowance requirements of ASTM A 563. Galvanizing shall meet the requirements of ASTM ~~A 153, Class C~~ F2329; or ASTM B 695, Class 50, Type I coating.

2525.06 SIGNAL SUPPORTS (SINGLE TUBULAR MAST ARMS AND POLES).

B. Hardware.

2. The anchor bolts shall meet the requirements of ASTM F 1554, Grade 105 (724 MPa), be full-length galvanized, and have a full-body diameter. Anchor bolts shall be the Unified Coarse Thread Series and have Class 2A tolerance. The end of each anchor bolt intended to project from the concrete shall be color coded in red to identify the grade. Washers shall be galvanized and shall meet the requirements of ASTM F 436. Nuts shall meet the requirements of ASTM A 563, DH, be heavy hex, and be galvanized. Nuts may be over-tapped in accordance with the allowance requirements of ASTM A 563. Galvanizing shall meet the requirements of ASTM F 2329 ~~A 153, Class C~~; or ASTM B 695, Class 50, Type I coating.

4100.07 GALVANIZING.

C. Drive Screws and Bolts (over 3/8 inch (8.5 mm) (in diameter), Washers 3/16 inch (4.8 mm) and 1/4 inch (6.4 mm) Thick, and Similar Articles.
~~ASTM A 153, Class C~~ F 2329, shall apply.

D. Screws, Stove Bolts, and Bolts (3/8 inch (9.5 mm) and under in diameter), Washers Under 3/16 inch (4.8 mm) Thick, Rivets, Nails, and Similar Articles.
~~ASTM A 153, Class D~~ F 2329, shall apply.

4153.06 BOLTS, NUTS, WASHERS AND FASTENERS.

A. Non-High Strength Bolts and Nuts.
Non-high strength bolts and nuts shall meet requirements of ASTM A 307, Class A, with full diameter body. Threads shall meet the requirements of ANSI B1.1, Unified Coarse Thread Series, Class 1A and Class 1B fit. Bolt heads and nuts shall be hexagonal. Where galvanized fasteners are specified, zinc shall be applied by hot dipped galvanizing to meet the requirements of ASTM ~~A 153~~ F 2329 or may be mechanically galvanized to meet the requirements of ASTM B 695, Class 50 Type 1.

4153.07 HARDWARE FOR TIMBER STRUCTURES.

C. Galvanizing.
All bolts, nuts, and washers shall be zinc coated to meet requirements of ASTM ~~A 153, Class D~~ F 2329.

D. Nails.

Nails shall be round or oval galvanized wire nails meeting requirements of FSS FF-N-105(2) of the size designated. Double pointed nails shall be of a type approved by the Engineer. All nails holding floor plank, backing plank, or sway bracing shall be ring shanked before galvanizing. The galvanized coating shall meet requirements of ASTM ~~A 153, Class D~~ F 2329.

E. Lag Bolts.
Lag bolts shall meet requirements of ANSI B18.2.1 and shall be galvanized in compliance with ASTM ~~A 153, Class D~~ F 2329.

4185.02 POLES AND SUPPORTS.

A. Anchor Bolt and Slip-Base Plate Fasteners for Lighting Poles.
All bolts, nuts, and washers for pole attachment and anchoring shall be furnished in accordance with details in the contract documents. The assembled fastener shall be capable of withstanding the forces corresponding to a moment that will cause failure of the pole, transformer base, or other applicable mounting device.

The anchor bolts shall meet the requirements of ASTM F 1554, Grade 105 (724 MPa), and be full-length galvanized. Anchor bolts shall be the Unified Coarse Thread Series and have Class 2A tolerance. The end of each anchor bolt intended to project from the concrete shall be color coded in red to identify the grade. Slip base plate 1 inch by 4 1/2 inch (25 mm by 112 mm) bolts shall meet the requirements of ASTM A 325, be high-strength bolts, and be fully galvanized. Washers shall be galvanized and shall meet the requirements of ASTM F 436. Nuts shall meet the requirements of ASTM A 563, DH, be heavy hex, and be galvanized. Nuts may be over-tapped in accordance with the allowance requirements of ASTM A 563. Galvanizing shall meet the requirements of ASTM F 2329 ~~A 153, Class C~~; or ASTM B 695, Class 50, Type I coating.

4186.09 FASTENING ACCESSORIES.

5. Other Details.
Other details, including post clips on I-beam posts, etc., are shown in the contract documents.

Hardware may be furnished in stainless steel or galvanized steel as approved by the Engineer. Galvanizing shall meet requirements of ASTM ~~A 153, Class D~~ F 2329., or ASTM B 633, Class Fe/Zn 25, Type II or Type IV ~~12, Type 1~~.

B. Type B Signs.
(Last paragraph)

The fittings herein described shall, when combined with the aluminum sections and posts, form a complete, assembled sign unit that will meet the specified strength requirements. Though aluminum hardware is specified, equivalent hardware may be furnished in stainless steel or galvanized steel as approved by the Department. Galvanizing shall meet requirements of ASTM ~~A 153, Class D~~ F 2329., or ASTM B 633, Class Fe/Zn 25 ~~12, Type 1~~.

4186.10 SIGN POSTS.

B. Steel Breakaway Posts for Type A or B Signs.
(fifth paragraph)

Bolts (including the entire length of the anchor bolts), nuts, and washers, shall be galvanized according to ASTM ~~A 153, Class A~~ F2329 or B695 Class 50, Type I coating.

4187.01 DESCRIPTION.

C. Fasteners for Aluminum Alloy and Galvanized Steel Superstructures and Anchor Bolts.

2. Anchor Bolts, Nuts, and Washers.
Welding of anchor bolts will not be allowed. The anchor bolts shall meet the requirements of ASTM F 1554, Grade 105 (724 MPa), and be full-length galvanized. Anchor bolts shall be the Unified Coarse Thread Series and have Class 2A tolerance. The end of each anchor bolt intended to project from the concrete shall be color coded in red to identify the grade. Washers shall be galvanized and shall meet the requirements of ASTM F 436. Nuts shall meet the requirements of ASTM A 563, DH, be heavy hex, and be galvanized. Nuts may be over-tapped in accordance with the allowance requirements of ASTM A 563. Galvanizing shall meet the requirements of ASTM ~~A 153, Class C~~ F 2329; or ASTM B 695, Class 50, Type I coating.

Reason for Revision: ASTM Galvanizing requirements for threaded fasteners have been revised and changed. Presently our specifications, design standards, and IM's for galvanizing of all types of threaded fasteners make reference to either ASTM B675 (mechanically deposited) and/or ASTM A153 (hot dip). In 2005 ASTM established a new specification, ASTM F2329. The new specification covers requirements for hot dip zinc coating applied to carbon steel and alloy steel bolts, screws, washers and nuts and special threaded fasteners such as anchor bolts. This new coating process is intended to be applicable to fasteners that are centrifuged or otherwise handled to remove excess galvanizing (excess zinc). There are several major differences between the specification requirements of ASTM A153 and ASTM F2329 in the categories of coating, coating measurements, overtaping, hydrogen embrittlement (which is the most important), sampling, rejecting, retesting, and acceptance. The following ASTM's have been affected by these new requirements:

1. ASTM A325, structural bolts/high strength bolts
2. ASTM A563, Carbon allow steel nuts
3. ASTM F436, Hardened steel washers
4. ASTM F1554, Anchor bolts Gr36, 55 and 105 Ksi yield strength

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: John Smythe / Mark Bortle	**Office:** Construction	**Item 6**
Submittal Date: 2009.07.08	**Proposed Effective Date:** April 2010	
Article No.: 2527.03, C, 5 **Title:** Removal of Pavement Markings	**Other:**	

Specification Committee Action: Approved as is.

Deferred:	**Not Approved:**	**Approved Date:** 8/13/2009	**Effective Date:** 4/20/2010

Specification Committee Approved Text: See Specification Section Recommended Text.

Comments:

Specification Section Recommended Text:

2527.03, C, 5.

Replace second sentence:

When symbols or legends are removed, remove the entire area of the existing symbol or legend; in a rectangular shape so no directionality may be observed from the removed symbol or legend.

Comments:

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

5. Perform pavement marking removal to a width no less than the width of the existing or new pavement markings plus 1 inch (25 mm). When symbols or legends are removed, remove the entire area of the existing symbol or legend; in a rectangular shape such that no directionality may be observed from the removed symbol or legend.

Reason for Revision: To obliterate symbols such that no directionality is shown on the removed area. See following photo for an example.

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: Jim Berger	**Office:** Materials	**Item 7**
Submittal Date: 6/7/2009	**Proposed Effective Date:** April 2010	
Section No.: 4151 **Title:** Steel Reinforcement	**Other:**	

Specification Committee Action: Approved as is.

Deferred:	**Not Approved:**	**Approved Date:** 8/13/2009	**Effective Date:** 4/20/2010

Specification Committee Approved Text: See Specification Section Recommended Text.

Comments: The Office of Materials indicated that this specification change will benefit the industry by allowing this new deformed bar. This bar has some benefits over the existing bar, especially weldability.

Specification Section Recommended Text:

4151.02, C. Reinforcement for Bridge Approach Sections, Reinforced Paved Shoulders, and Full-Width Reinforcement of Pavements.

Replace the first bullet:

- Deformed bars meeting the requirements of ASTM A 615/A 615M, Grade 40 or 60 (300 or 400); or ASTM A 706/A 706M Grade 60,

4151.03, A, 1.

Replace the first sentence:

Unless otherwise specified, use deformed bars meeting the requirements of ASTM A 615/A 615M, ASTM A 706/A 706M, or ASTM A 996/A 996M.

Comments:

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

4151.02 PAVEMENT REINFORCEMENT.

C. Reinforcement for Bridge Approach Sections, Reinforced Paved Shoulders, and Full-Width Reinforcement of Pavements.
Reinforcement for bridge approach sections, reinforced paved shoulders, and full-width reinforcement of pavements shall be deformed bars meeting the requirements of ASTM A 615/A 615M, Grade 40 0r 60 (300 or 400) and/or ASTM A706/A706M Grade 60. Reinforcement shall be epoxy coated and shall meet the requirements of Article 4151.03, except that cut or sheared ends need not be recoated.

4151.03 REINFORCEMENT FOR STRUCTURES.
Unless otherwise specified, reinforcement shall be deformed bars meeting requirements of ASTM A 615/A 615M, ASTM A706/706M, or ASTM A 996/A996M. Bars shall be fabricated in accordance with Article 2404.04.

Reason for Revision:

A706 is a low allow steel deformed and plain bar available in cut lengths or coils intended for applications and/or use where restrictive mechanical properties and chemical composition are required for compatibility and controlled tensile property applications or mainly to enhance weldability. It has one grade only (Gr. 60).

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: Jim Berger	**Office:** Materials	**Item 8**
Submittal Date: 6/7/2009	**Proposed Effective Date:** April 2010 for Standard Specifications November 2009 for SS	
Article No.: 4155.02 **Title:** Guardrail	**Other:**	

Specification Committee Action: Approved with changes to SS-090XX.

Deferred:	**Not Approved:**	**Approved Date:** 8/13/2009	**Effective Date:** SS 11/17/2009 Std Specs 4/20/2009

Specification Committee Approved Text: See Specification Section Recommended Text and attached Draft SS-090XX.

Comments: Changes were made to the SS to eliminate the method of calculating steel beam guardrail length and to clarify salvaging guardrail materials.

The method of calculating steel beam guardrail length is not required in the specifications since this is a plan quantity item and should be tabbed in the plans. Plan quantity items that are not easily quantifiable from plan information such as tabulations should have quantity calculations outlined in the specifications. The method of calculating cable guardrail length (low and high tension) will remain since the pay length for these items is less apparent.

Salvaging guardrail materials will only be required when specifically stated in the contract documents. FHWA presented information on Salvage Credits. When guardrail is salvaged, a Public Interest Finding (PIF) memo may be required depending on the value of the item or future use.

Specification Section Recommended Text:

4155.02, D,

Replace article:

Anchor bolts used to attach beam rail to bridge barrier rail: full-length galvanized and meet the requirements of ASTM ~~F 1554, Grade 105~~ A 325 or A 449.

4155.02, J,

Replace article:

Galvanizing: meet the requirements of ASTM ~~A 153, Class C~~ F 2329 or B 695 Class 50, Type I coating.

SS-09005, Guardrail Construction and Removal

See attached Draft SS-090XX.

Comments:

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

4155.02 FORMED STEEL BEAM GUARDRAIL.
Rail elements, and terminal sections shall meet requirements of AASHTO M 180. Thrie-beam rail shall be furnished when required. Rail elements and terminal sections shall be Class A, 12 gauge (2.67 mm thickness), Type I, unless a greater thickness is required. Anchor bolts used to attach beam rail to

bridge barrier rail shall meet requirements of ASTM ~~F 1554, Grade 105, and shall be full-length galvanized~~ A325 or A449. Washers shall meet the requirements of ASTM F 436. Nuts shall meet the requirements of ASTM A 563, DH, and be heavy hex, Class 2B. All other bolts, nuts, and washers shall meet the requirements of ASTM A 307, Grade A; ASTM A 563, Grade A, hex; and ASTM F 844; respectively. Galvanizing shall meet the requirements of ASTM ~~A 153, Class C~~ F2329 or B695 Class 50, Type I coating.

Reason for Revision: AASHTO's Guide to Standardized Highway Barrier Hardware. The bolts used to connect steel beam guardrail to concrete barriers are classified as "High-strength structural hex bolts". ASTM F1554 Anchor Bolts do not have Hex Head; our specifications are in error.

ASTM Galvanizing requirements for threaded fasteners have been revised and changed. Presently our specifications, design standards, and IM's for galvanizing of all types of threaded fasteners make reference to either ASTM B675 (mechanically deposited) and/or ASTM A153 (hot dip). In 2005 ASTM established a new specification, ASTM F2329. The new specification covers requirements for hot dip zinc coating applied to carbon steel and alloy steel bolts, screws, washers and nuts and special threaded fasteners such as anchor bolts. This new coating process is intended to be applicable to fasteners that are centrifuged or otherwise handled to remove excess galvanizing (excess zinc). There are several major differences between the specification requirements of ASTM A153 and ASTM F2329 in the categories of coating, coating measurements, overtaping, hydrogen embrittlement (which is the most important), sampling, rejecting, retesting, and acceptance. The following ASTM's have been affected by these new requirements:

1. ASTM A325, structural bolts/high strength bolts
2. ASTM A563, Carbon allow steel nuts
3. ASTM F436, Hardened steel washers
4. ASTM F1554, Anchor bolts Gr36, 55 and 105 Ksi yield strength

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:					

DRAFT SS-090XX
(Replaces SS-09005)

Iowa Department of Transportation

SUPPLEMENTAL SPECIFICATIONS
FOR
GUARDRAIL CONSTRUCTION AND REMOVAL

Effective Date
November 17, 2009

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.

Replace Sections 2505 and 4155 with the following:

Section 2505. Guardrail Construction and Removal

2505.01 DESCRIPTION.
Construct guardrail. Remove existing guardrail.

2505.02 MATERIALS.
Provide guardrail materials meeting the requirements for the type of guardrail specified. Provide guardrail posts of wood or steel as specified in the contract documents.

A. Steel Beam Guardrail and Low Tension Cable Guardrail.
Apply Section 4155.

B. High Tension Cable Guardrail.

1. Meet the manufacturer's materials requirements. For line post and end anchor foundations, use Class C mix according to Section 2403.

2. Supply spare parts kits for high tension cable guardrail. Deliver spare parts kit to the Contracting Authority's nearest maintenance office. Spare parts kits consist of the following items, but do not include a tension meter:

- An extra supply of line posts (Test Level 4, socketed type), including post hardware and accessories (caps, reflective sheeting, straps, spacers, and socket covers). This supply shall include enough materials to complete a 300 foot (90 m) installation.
- An extra supply of anchor posts (socketed-type), including post hardware and accessories (caps, reflective sheeting, straps, fittings, spacers, and socket covers). This supply shall include enough materials to complete one end anchor installation.
- Specialized tools necessary to maintain the guardrail, such as a spreader tool.

2505.03 CONSTRUCTION AND REMOVAL OF GUARDRAIL.

Furnish and install posts, beams or cables, end anchors, and special connections and fittings required in the contract documents. Install to the specified line and mounting height. Changes in the installed length require the Engineer's approval.

A. Steel Beam Guardrail and Low Tension Cable Guardrail.

1. Steel Beam Guardrail.

- **a.** Install W-beam or thrie beam as designated in the contract documents. When not designated, install W-beam.
- **b.** Use steel beam guardrail ready for assembly when delivered to the project. Do not punch, drill, cut, or weld beam in the field.
- **c.** Steel beam guardrail elements may be furnished in either 25 foot (7.62 m) or 12.5 foot (3.81 m) nominal length sections.
- **d.** Straight rail sections may be used to construct radii of 150 feet (45 m) or greater. Shop curve rail sections for radii less than 150 feet (45 m).
- **e.** Install posts for steel beam guardrail at spacing identified in the contract documents. If not defined, use 6.25 foot (1.91 m) spacing.
- **f.** Where necessary, adjust horizontal and vertical alignment of guardrail to account for road curvature. Use minor adjustments with no abrupt changes.
- **g.** Fully connect beam to all posts as shown in the contract documents. For W-beam guardrail installations with wood blockouts, nail the blockout to the post to prevent blockout rotation. Other methods of preventing rotation may be approved by the Engineer.

2. Low Tension Cable Guardrail.

- **a.** Attach the cables to the posts and end anchors according to the contract documents. Attach compensation devices and turnbuckles so they do not interfere with the function of the installation.
- **b.** Individual cables may be spliced by use of an approved device installed where no interference with any functionality will occur. One splice per cable is allowed. Cable may not be spliced within 250 feet (75 m) of another splice in one of the other cables.
- **c.** Tighten individual cables using mechanical means. Stretch cables tight so no sags occur between posts and in the opinion of the Engineer, the finished installation presents a satisfactory appearance.

3. Posts.

- **a.** Drive posts in a manner that does not damage the post. Place backfill material (consisting of material removed or other suitable soil) around posts required to be set in prebored holes. Place the backfill material in lifts not exceeding 4 inches (100 mm). Thoroughly compact each lift before the next lift is placed.
- **b.** Install the posts to be firm, plumb, and at the location, spacing, and elevation designated.

4. End Anchors and Terminals.

- **a.** Install end anchors and terminals of the type shown in the contract documents. Cast end anchors in place using Class C concrete according to Section 2403, except air content may vary from 4% to 7%. Finish exposed concrete as directed by the Engineer.
- **b.** When bolt holes in concrete bridge end posts or concrete barrier do not align correctly for the steel beam guardrail terminal connection, drill new bolt holes in the locations required for the terminal connection. Use a core bit to ensure correct bolt hole location and alignment.

5. Guardrail Markers.

When indicated in the contract documents, install guardrail markers of the required type meeting the requirements of Article 4186.12.

6. Delineators and Object Markers.
When indicated in the contract documents, install delineators and object markers of the required type meeting the requirements of Articles 4186.11 and 4186.12.

B. High Tension Cable Guardrail.
Furnish high tension cable guardrail from the approved products listed in Materials I.M. 455.01.

1. Installation of High Tension Cable Guardrail.
- **a.** Install high tension cable guardrail according to the manufacturer's recommendations. Prior to construction, provide the Engineer with three copies of the manufacturer's most current product manuals covering installation and maintenance of the installation. Include signed certification statements that all materials to be incorporated into the installation comply with Materials I.M. 455.01.
- **b.** Tension cables according to manufacturer's recommendations at time of installation, then check and adjust tension approximately three weeks after installation.

2. Posts.
- **a.** Ensure posts are plumb and at manufacturer's recommended location, spacing, and elevation. Spacing shall not exceed 20 feet (6 m).
- **b.** Furnish socketed type posts and install in reinforced concrete foundations. Cast foundations in place according to Article 2505.03, A, 4. Use dimensions and reinforcement recommended by manufacturer, except with a foundation depth of at least 42 inches (1.1 m).

3. End Anchors.
- **a.** Incorporate an approved end anchor listed in Materials I.M. 455.01. Furnish end anchors produced by the same manufacturer of high tension cable guardrail.
- **b.** Construct end anchors according to the manufacturer's recommendations for the site specific soil conditions. Soils testing required is incidental to the cable installation.

4. Delineating High Tension Cable Guardrail.
- **a.** Delineate high tension cable guardrail installations using retroreflective sheeting. Apply sheeting to the last five posts at each end of an installation and throughout the remainder of the installation at a maximum spacing of 50 feet (15 m). Apply Type III or IV retroreflective sheeting that:
  - Meets the requirements of Article 4186.03,
  - Provides at least 7 square inches (4500 mm^2) of surface area when viewed from a line parallel to the roadway centerline, and
  - Is yellow or white and of the same color as the adjacent edge line.
- **b.** Attach sheeting near the top of the post: 1) in a manner recommended by the manufacturer; and 2) to that side of the post from which vehicle impacts are most likely. For installations where impacts are likely to occur from either side, apply the sheeting to both sides of the post.

C. Guardrail Removal.

1. Remove guardrail, delineators, and object markers as shown in the contract documents. Guardrail materials become the property of the Contactor unless stated otherwise in the contract documents. ~~Salvage the materials the Engineer considers suitable for future use.~~ Deliver salvaged materials to the location stated in the contract documents. Salvaged materials become the property of the Contracting Authority. ~~Materials not suitable for future use become the property of the Contactor.~~ Remove non-salvaged materials from project site.

2. Remove, disassemble, and clean salvaged guardrail without damaging parts. Replace material damaged during removal, disassembly, or cleaning with new material of same kind (at no cost to the Contracting Authority). Stockpile salvaged materials as indicated in the

contract documents. Restore areas disturbed by the removal operation to an acceptable condition.

3. Place backfill material consisting of suitable soil in post holes. Do not use sand or other granular materials as backfill material. Place backfill material in lifts not exceeding 4 inches (100 mm). Thoroughly compact each lift before the next lift is placed. Fill and tamp holes within the same working day.

D. Limitations.

1. General.

a. Do not stress attachments to new concrete or to bolts set in epoxy resin until the concrete or epoxy resin has attained an age of three calendar days. Concrete foundations for posts and end anchors may be subjected to cable tensioning after three calendar days. These time requirements may be lengthened by the Engineer during cool weather.

b. Complete grading work, if required, prior to removal of existing guardrail or installation of new guardrail.

c. When a roadway is open to traffic during construction, complete guardrail installations within five working days from the day the structure, barrier rail, pavement, or shoulder (whichever is the controlling item of work) is sufficiently completed to allow guardrail installation. Each installation exceeding the five working day completion requirement will be subject to a contract price adjustment of $100 per working day. For high tension cable guardrail, this price adjustment will be waived when the installation serves as crossover protection only and no guardrail or concrete barrier has been removed.

d. When a roadway is closed to public traffic for construction, complete all guardrail installations before opening the road to traffic.

2. Steel Beam Guardrail and Low Tension Cable Guardrail.

a. In areas where guardrail construction is not restricted by other construction, remove existing guardrail (if any) and construct new guardrail, except for end anchors requiring concrete, on the same working day. Place concrete for the final end anchor no later than the next working day.

b. For steel beam guardrail installations requiring end anchors, use a Type E Terminal Section, a Type II Barricade, and a Type A Warning Light to end the installations until the final anchor is finished.

3. High Tension Cable Guardrail.

a. In case of a discrepancy between these specifications and the manufacturer's recommendations, these specifications govern.

b. At locations where proposed guardrail installation does not interfere with the functioning of the existing guardrail, do not remove existing guardrail until the high tension cable guardrail system is fully functional. Once the installation is fully functional, remove existing guardrail within five working days.

2505.04 METHOD OF MEASUREMENT.

Measurement will be as follows:

A. Steel Beam Guardrail Installation.

1. Steel Beam Guardrail.

a. Linear feet (meters) shown in the contract documents.

~~**b.** Length will be calculated from the number of 12.5 foot (3.81 m) sections.~~

2. Steel Beam Guardrail Barrier Transition Section.

By count.

3. **Steel Beam Guardrail End Anchors.**
   By count for each type of end anchor constructed. Installations continued across a bridge will not be counted as end anchors.

4. **End Terminals.**
   By count for each type of end terminal constructed.

B. Low Tension Cable Guardrail Installation.

1. **Low Tension Cable Guardrail.**
   a. Linear feet (meters) shown in the contract documents.
   b. Length will be calculated using one of the cables of cable guardrail, with no deductions for turnbuckles or compensating devices.

2. **Low Tension Cable Guardrail, End Anchor.**
   By count.

C. High Tension Cable Guardrail Installation.

1. **High Tension Cable Guardrail.**
   a. Linear feet (meters) shown in the contract documents.
   b. Length will be calculated as the protection length, not including lengths of end anchors.

2. **High Tension Cable Guardrail, End Anchor.**
   By count.

3. **High Tension Cable Guardrail, Spare Parts Kit.**
   By count for the number of spare parts kits delivered.

D. Removal of Guardrail.

1. **Steel beam guardrail**: linear feet (meters) to the nearest 0.5 foot (0.1 m) by measuring along the front of the rail from bolt hole to bolt hole.

2. **Cable guardrail**: in linear feet (meters) to the nearest 1 foot (0.1 m) by measuring along the front of one of the cables with no deductions for turnbuckles or compensating devices.

2505.05 BASIS OF PAYMENT.
Payment for guardrail items will be the contract unit price as described below. Payment includes furnishing all materials, equipment, and labor to complete the removal and installation of the guardrail, including excavation and placing backfill. Excavation in unexpected rock will be paid for as extra work according to Article 1109.03. Unexpected rock will be considered as rock encountered during excavation that was not visible from the roadway and was not indicated in the contract documents.

A. Steel Beam Guardrail Installation.

1. **Steel Beam Guardrail.**
   a. Per linear foot (meter).
   b. Payment for nested steel beam guardrail will be included in the contract unit price.
   c. Posts, spacer blocks, object markers, delineators, guardrail markers, barrier markers, offset brackets, and remaining hardware are incidental.

2. **Steel Beam Guardrail Barrier Transition Section.**
   a. Each.
   b. Payment for nested steel beam guardrail will be included in the contract unit price.

c. Posts, spacer blocks, object markers, delineators, guardrail markers, barrier markers, offset brackets, and remaining hardware are incidental.

3. Steel Beam Guardrail End Anchors.
a. Each for the type of end anchor constructed.
b. Payment for nested steel beam guardrail will be included in the contract unit price.
c. Drilling new bolt holes for guardrail connection is incidental.

4. End Terminals.
a. Each for the type of end terminal constructed.
b. Payment for nested steel beam guardrail will be included in the contract unit price.
c. Posts, spacer blocks, object markers, delineators, guardrail markers, offset brackets, and remaining hardware are incidental.

B. Low Tension Cable Guardrail Installation.

1. Low Tension Cable Guardrail.
a. Per linear foot (meter).
b. Posts, spacer blocks, object markers, delineators, guardrail markers, barrier markers, offset brackets, hook bolts, turnbuckles, compensating devices, concrete, and remaining hardware are incidental.

2. Low Tension Cable Guardrail, End Anchor.
Each.

C. High Tension Cable Guardrail Installation.

1. High Tension Cable Guardrail.
a. Per linear foot (meter).
b. Posts and accessories required by the manufacturer, additional hardware and concrete, and grading required to meet cable height tolerance are incidental.

2. High Tension Cable Guardrail, End Anchor.
Each. Grading required to meet the manufacturer's recommendations is incidental.

3. High Tension Cable Guardrail, Spare Parts Kit.
Each. Payment is full compensation for delivering spare parts kit to the location identified in the contract documents.

D. Removal of Guardrail.

1. Per linear foot (meter) for removal of guardrail, including steel beam guardrail, cable guardrail, end anchors, and terminal devices.

2. Payment includes hauling salvaged material to the stockpile site. Placing backfill material around posts and in end anchor footing holes is incidental.

3. Payment for nested steel beam guardrail will be included in the contract unit price.

4. Posts, spacer blocks, object markers, delineators, guardrail markers, offset brackets, end anchors, terminal devices, and remaining hardware are incidental.

5. For low tension cable guardrail, the following additional items are incidental: hook bolts, turnbuckles, compensating devices, and remaining hardware.

Section 4155. Guardrail

4155.01 GENERAL REQUIREMENTS.
Provide guardrail materials meeting the requirements for the type of guardrail specified. Provide guardrail posts of wood or steel as specified in the contract documents.

4155.02 STEEL BEAM GUARDRAIL.
Comply with the following:

A. **Rail elements and terminal sections:** meet the requirements of AASHTO M 180, Class A, 12 gauge (2.67 mm thickness), Type I, unless a greater thickness is required.

B. **Bolts used to attach steel beam guardrail to concrete barrier or bridge rail:** full-length galvanized and meet the requirements of ASTM A 325 or A 449, Type 1.

C. **All other bolts:** meet the requirements of ASTM A 307, Grade A.

D. **Washers used to attach steel beam guardrail to concrete barrier or bridge rail:** meet the requirements of ASTM F 436.

E. **All other washers:** meet the requirements of ASTM F 844.

F. **Nuts used to attach steel beam guardrail to concrete barrier or bridge rail:** heavy hex, Class 2B meeting the requirements of ASTM A 563, DH.

G. **All other nuts:** meet the requirements for ASTM A 563, Grade A, hex.

H. **Galvanizing:** meet the requirements of ASTM ~~A 153, Class C~~ F 2329 or B 695 Class 50, Type I coating.

4155.03 CABLES.

A. **Cable Guardrail.**

1. Meet the requirements of AASHTO M 30, Type I, Class A.

2. For high tension cable guardrail, meet the manufacturer's requirements.

B. **Anchor Cable.**
Meet the requirements of AASHTO M 30, Type II, Class A.

4155.04 POSTS.

A. **Wood Posts.**
Use posts sawed to the dimensions shown in the contract documents and meeting the requirements of Section 4164.

B. **Steel Posts.**

1. Use steel posts of the dimensions shown in the contract documents and that meet the requirements of ASTM A 36/A 36M structural steel.

2. Ensure bolt holes comply with Article 2408.03, S, 2.

3. Ensure steel posts and blocks are galvanized according to the requirements of ASTM A 123. Ensure galvanizing is done after fabrication and after all bolt holes have been drilled.

4155.05 BLOCKOUTS.

A. For wood blockouts, meet the requirements for wood posts.

B. Blockouts manufactured from alternate materials that have received FHWA acceptance for use on the National Highway System may be substituted for wood blockouts.

4155.06 MISCELLANEOUS ITEMS.

A. Ensure the following:

1. All miscellaneous items and materials are of the type, size, and dimension shown in the contract documents.

2. All metal parts are galvanized. However, any items or parts of items to be covered with 2 inches (50 mm) or more of concrete need not be galvanized.

3. All cable fittings required for cable guardrail installation are designed and fabricated so as to develop the full strength of a single cable or the multiple cable assembly, as applicable.

B. Internal threads of fasteners may be oversize, tapped after galvanizing.

C. When specific requirements are not stated in the contract documents, obtain the Engineer's approval for anchor angles, anchor cable, turnbuckles, hook bolts, compensating devices, and any other fittings or special hardware which may be required.

SPECIFICATION REVISION SUBMITTAL FORM

Submitted by: Jim Berger	**Office:** Materials	**Item 9**
Submittal Date: 6/7/2009	**Proposed Effective Date:** April 2010	
Article No.: 4167.01 **Title:** Description (Steel Piles)	**Other:**	

Specification Committee Action: Approved as is.

Deferred:	**Not Approved:**	**Approved Date:** 8/13/2009	**Effective Date:** 4/20/2010

Specification Committee Approved Text: See Specification Section Recommended Text.

Comments:

Specification Section Recommended Text:

4167.01, B, Pipe Piles.

Replace the article:

1. When pipe piles are allowed in the contract documents as an option to steel H-piles, furnish pipe piles of the dimensions shown, manufactured within the physical and chemical requirements of ASTM A 252, Grade 2 or 3. Furnish test results from at least one random sample taken from pieces furnished to the project. Ensure the chemical analysis ~~includes carbon,~~ indicates no more than 0.05% phosphorous~~, sulphur, and manganese~~.
2. Only field welds will be permitted, and only at air temperatures above 0°F (-18°C). Ensure all welding is done by welders certified by the Department. When welding, the surfaces of the pipe being welded, within 3 inches (75 mm) laterally and in advance of welding, must be preheated to a minimum of ~~400~~ 50°F (~~204~~ 10°C). Maintain this temperature during welding. Weld the joint with a prequalified AWS Joint B-U2a. For manual shielded metal arc welding, use an E701.8 electrode and for semi-automatic Flux Core Arc welding, use an E71T-X electrode. Use a backup ring of the same steel as that of the pipe.

Comments:

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

4167.01 DESCRIPTION.

Steel H-piles shall be rolled from steel meeting requirements of ASTM A 572/A 572M Grade 50 (345) and shall have cross section dimensions meeting the requirements of ASTM A 6/A 6M for the section number designated. Only field welding will be allowed, and welding shall be in accordance with Article 2408.13.

When pipe piles are allowed in the contract documents as an option to steel H-piles, the pipe piles shall be of the dimensions shown. They shall be manufactured within the physical and chemical requirements of ASTM A 252, Grade 2 or 3, and the Contractor shall furnish test results from at least one random sample taken from pieces furnished to the project. The chemical analysis shall ~~include carbon,~~ contain no more than 0.05% phosphorous~~, sulphur, and manganese~~. Only field welds will be permitted, and only at air temperatures above 0°F (-18°C). When welding, the surfaces of the pipe being welded, within 3 inches (75 mm) laterally and in advance of welding, must be preheated to a minimum of ~~400~~ 50°F(~~204~~ 10°C), and this temperature shall be maintained during welding. The weld joint shall be a prequalified AWS Joint B-U2a or B-U2a-F. The electrode used for manual shielded metal arc welding shall be E701.8 and E71T-X for semi-automatic Flux Core Arc. A backup ring shall be used, of the same steel as that of the pipe. All welding shall be done by welders certified by the Department.

Reason for Revision: Change in the requirements of the ASTM and of the AWS Code.

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: Tom Reis	**Office:** Specifications	**Item 10**
Submittal Date: 6/7/2009	**Proposed Effective Date:** November 2009	
Article No.: DS-090XX **Title:** Contractor Stockpiled Shoulder Material	**Other:**	

Specification Committee Action: Approved as is. Also see attached Technical Memorandum No. 2009-SPEC-DS-090XX with changes.

Deferred:	**Not Approved:**	**Approved Date:** 8/13/2009	**Effective Date:** 11/17/2009

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

Comments: Some clarifications will be made to the Technical Memorandum. These include specifying that the bid item will be non-participating and clarifying that the quantity limits only apply to Iowa DOT projects. The Technical Memorandum will be referenced in the Design Manual. Quantity limits in the Technical Memorandum will apply to projects and not contracts.

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 DS. A Technical Memorandum is being developed for use as a guidance document to aid in implementation.

Reason for Revision: To allow Districts, cities, and counties to have contract items furnish shoulder aggregate to local maintenance facilities.

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:					

Draft DS-090XX
(New)

Iowa Department of Transportation

DEVELOPMENTAL SPECIFICATIONS
FOR
CONTRACTOR STOCKPILED SHOULDER MATERIAL

Effective Date
November 17, 2009

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.
Furnish granular shoulder material for the Contracting Authority's use. The granular shoulder material may be Class A Crushed Stone or RAP, at the Contractor's option. Stockpile material at location(s) identified in the contract documents.

090XX.02 MATERIALS AND EQUIPMENT.

A. For Class A Crushed Stone, furnish material meeting the requirements of Article 4120.04 of the Standard Specifications.

B. For RAP, meet the following:

1. RAP shall be generated from pavement scarification on the project.

2. Process RAP so 100% of the material passes the 1.5 inch (37.5 mm) sieve. RAP shall not be further processed.

C. Use weighing equipment meeting the requirements of Article 2001.07 of the Standard Specifications.

090XX.03 CONSTRUCTION.
Location(s) for delivery of shoulder material will be identified in the contract documents.

Contact the Engineer at least 48 hours prior to stockpiling.

Stockpile locations will be available from 8:00 a.m. to 4:30 p.m., Monday through Thursday, or other times with permission of the Engineer.

Stockpiles shall be constructed utilizing generally accepted methods of stockpiling.

090XX.04 METHOD OF MEASUREMENT.
Measurement for Contractor Stockpiled Shoulder Material satisfactorily stockpiled will be computed from the weights (mass) of individual truckloads, including the moisture in the material at time of delivery.

If the quantity of RAP underruns, but is greater than the bid quantity for Contractor Stockpiled Shoulder Material, the Contractor will be required to provide the bid quantity. If the quantity of RAP underruns and is less than the bid quantity for Contractor Stockpiled Shoulder Material, the quantity for Contractor Stockpiled Shoulder Material will be adjusted to the quantity of RAP generated.

090XX.05 BASIS OF PAYMENT.
Payment will be the contract unit price for Contractor Stockpiled Shoulder Material as follows:

A. Per ton (megagram) for the tons (megagrams) stockpiled.

B. Payment is full compensation for:
- Furnishing, transporting, and stockpiling Class A Crushed Stone in accordance with the contract documents, or
- Processing, hauling, and stockpiling RAP in accordance with the contract documents.

C. Payment also includes:
- Furnishing all equipment, labor, and materials, and
- Performance of all work necessary to complete the work.

D. Pavement scarification will be paid for separately.

E. No separate payment will be made for the asphalt binder in the RAP.

Iowa Department of Transportation
Specifications Section

Technical Memorandum No. 2009-SPEC-DS-090XX

Issued: XXXX XX, 2009

To: Design Engineers

From: Thomas L. Reis, Specifications Engineer

Subject: DS-090XX, Contractor Supplied Shoulder Material

Implementation and Expiration

This technical memorandum will be effective with the November 17, 2009 letting and will remain in effect until DS-090XX is replaced.

Purpose

The purpose of this technical memorandum clarifies to designers the intended use of the specification.

Applicability

DS-090XX may be used on Interstate, Primary, and Secondary projects.

On Interstate and Primary projects, a maximum of 5000 tons (5000 Mg) total per project may be designated to one or two stockpile sites. Stockpile sites shall be located no more than 30 haul miles from the project.

On all projects, the plans shall designate the following:

- Quantity of material for each stockpile site and
- Address of (or directions to) the stockpile site.

The bid item Contractor Supplied Shoulder Material will not be eligilbe for federal funding. If the bid item is used on a project with federal funding, the bid item shall be included in a non-participating division.

Questions

If you have questions as to the applicability of this Technical Memorandum or the associated Developmental Specification please contact Tom Reis, Specifications Engineer, at 515.239.1566.

SPECIFICATION REVISION SUBMITTAL FORM

Submitted by: Eric Johnsen	**Office:** Specifications	**Item 12**
Submittal Date: 8/13/2009	**Proposed Effective Date:** October 2010	
Article No.: DS-090XX **Title:** Monthly Employment Reporting (I-JOBS)	**Other:**	

Specification Committee Action: Approved with changes.

Deferred:	**Not Approved:**	**Approved Date:** 8/13/2009	**Effective Date:** 10/20/2009

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

Comments: The specification should indicate that it only applies to Interstate and Primary projects so that counties or cities do not apply it to their projects.

Bridges and Structures indicated that some I-JOBS projects may be tied to non-I-JOBS projects. John Adam will check to see if the specification should apply to projects tied to I-JOBS projects, similar to ARRA. If not, the I-JOBS project prefixes will be added to the specification so that when applied to tied projects, it will only apply to the applicable I-JOBS projects.

The Specifications Section will need the address of the website to be used for I-JOBS reporting prior to issuing the 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.)

Reason for Revision: To specify reporting requirements for I-JOBS projects.

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:					

DRAFT DS-090XX
(New)

Iowa Department of Transportation

DEVELOPMENTAL SPECIFICATIONS
FOR
MONTHLY EMPLOYMENT REPORTING (I-JOBS)

Effective Date
October 20, 2009

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.

090XX.01 DESCRIPTION.
This specification describes the Contractor's and subcontractors' monthly employment reporting for compliance with Iowa's Infrastructure Investment Initiative (I-JOBS). This specification shall only apply to contracts with Interstate and Primary I-JOBS projects.

090XX.02 REPORTING.

A. Upon commencement of work activities, complete online and submit the Monthly Employment Report. Employment information shall include the total number of persons employed on the project, hours worked, and wages paid.

B. Include employment information for both the Contractor and subcontractors. Submit this information online using a web-based application provided by the Department. Submit all reports to the Engineer no later than the 10th of the month following the month being reported. If the 10th falls on a weekend or holiday, the report will be due the first working day following the weekend or holiday.

C. The reporting period for each Monthly Employment Report shall commence on the Sunday following the last Saturday of the previous month and shall end on the last Saturday of the report month.

D. Continue reporting every month until the Engineer signs the Project Acceptance form (Form 830435). Reporting for subcontractors will be required for reporting months in which the subcontractor has been reported as active by the Contractor.

E. The Monthly Employment Reporting web-based application and instructions are available on-line at the following address:

"To be determined"

F. Progress payments will be withheld for failure to comply with the requirements of this specification.

G. Direct questions relating to the completion of the Monthly Employment Report to the Engineer.

090XX.03 METHOD OF MEASUREMENT AND BASIS OF PAYMENT.
No direct payment will be made for documenting, tracking, and reporting employment information as required by this specification. The cost of this work is to be included in the lump sum price bid for Mobilization.