



MINUTES  
OF  
IOWA DOT SPECIFICATION COMMITTEE MEETING

September 11, 2014

<b>Members Present:</b>	Darwin Bishop Mark Brandl Eric Johnsen, Secretary Wes Musgrove Gary Novey Tom Reis, Chair Brian Smith Willy Sorensen	District 3 - Construction District 6 - Davenport RCE Specifications Section Office of Contracts Office of Bridges & Structures Specifications Section Office of Design Office of Traffic & Safety
<b>Members Not Present:</b>	Donna Buchwald Mitch Dillavou Greg Mulder Dan Redmond	Office of Local Systems Project Delivery Bureau Office of Construction & Materials District 4 - Materials
<b>Advisory Members Present:</b>	Lisa McDaniel	FHWA
<b>Others Present:</b>	Mark Bortle Nicole Fox Thomas Jacobson	Office of Construction & Materials Office of Local Systems Office of Construction & Materials

Tom Reis, Specifications Engineer, opened the meeting. The following items were discussed in accordance with the revised agenda dated September 2, 2014:

**1. Article 2301.02, B, 5, Admixtures (Portland Cement Concrete Pavement).**

The Office of Construction and Materials requested to clarify that admixtures do not need Engineer's authorization.

**2. Article 2403.02, B, 2, a, Water and Consistency (Structural Concrete).**

The Office of Construction and Materials requested to allow a higher slump for structural concrete when a Type A Mid Range water reducer is used.

**3. Article 2413.02, D, 2, b, Class HPC-O High Performance Concrete (Bridge Deck Surfacing, Repair and Overlay).**

The Office of Construction and Materials requested to revise language referencing the approved list for mid range water reducers.

**4. Article 2413.03, D, 2, Stationary Mixer (Bridge Deck Surfacing, Repair and Overlay).**

The Office of Construction and Materials requested to add time limits for ready mixed concrete.

**5. Article 2530.03, B, 3, c, 1, Class A Patching Material (Partial Depth Finish Patches).**

The Office of Construction and Materials requested to eliminate reference to curing times in Materials I.M. 491.20, Appendix A.

**6. DS-12029, Lane Rental (A + B Bidding with Incentive/Disincentive).**

The Office of Construction and Materials requested revisions to the Developmental Specifications for Lane Rental (A + B Bidding with Incentive/Disincentive).

**7. Article 2528.03, F, Modular Glare Screens (Traffic Control).**

The Office of Construction and Materials requested to revise the requirements for modular glare screens.

**SPECIFICATION REVISION SUBMITTAL FORM**

<b>Submitted by:</b> Greg Mulder		<b>Office:</b> Construction & Materials	<b>Item 1</b>	
<b>Submittal Date:</b> September 2014		<b>Proposed Effective Date:</b> April 2015		
<b>Article No.:</b> 2301.02, B, 5 <b>Title:</b> Admixtures (Portland Cement Concrete Pavement)		<b>Other:</b>		
<b>Specification Committee Action:</b> Approved as recommended.				
<b>Deferred:</b>	<b>Not Approved:</b>	<b>Approved Date:</b> 9/11/2014	<b>Effective Date:</b> 4/21/2015	
<b>Specification Committee Approved Text:</b> See Specification Section Recommended Text.				
<b>Comments:</b> None.				
<b>Specification Section Recommended Text:</b> 2301.02, B, 5, Admixtures.				
<b>Replace the Article:</b> Use Approved admixtures complying with Section 4103 <del>may be used with the Engineer's authorization.</del>				
<b>Comments:</b>				
<b>Member's Requested Change (Redline/Strikeout):</b>				
<table border="1"> <tr> <td>                     5. Admixtures.                      Use <del>Approved admixtures complying with Section 4103 may be used with the Engineer's authorization.</del> </td> </tr> </table>				5. Admixtures. Use <del>Approved admixtures complying with Section 4103 may be used with the Engineer's authorization.</del>
5. Admixtures. Use <del>Approved admixtures complying with Section 4103 may be used with the Engineer's authorization.</del>				
<b>Reason for Revision:</b> We do not require authorization of admixtures. All mixes require air entraining and CWR mixes require a water reducer. 4103.01F already allows other admixtures to be used with Engineer approval.				
<b>New Bid Item Required (X one)</b>	<b>Yes</b>	<b>No X</b>		
<b>Bid Item Modification Required (X one)</b>	<b>Yes</b>	<b>No X</b>		
<b>Bid Item Obsolescence Required (X one)</b>	<b>Yes</b>	<b>No X</b>		
<b>Comments:</b>				
<b>County or City Comments:</b>				
<b>Industry Comments:</b>				

**SPECIFICATION REVISION SUBMITTAL FORM**

<b>Submitted by:</b> Greg Mulder		<b>Office:</b> Construction & Materials	<b>Item 2</b>
<b>Submittal Date:</b> 2014.08.19		<b>Proposed Effective Date:</b> April 2015	
<b>Article No.:</b> 2403.02, B, 2, a <b>Title:</b> Water and Consistency (Structural Concrete)		<b>Other:</b>	
<b>Specification Committee Action:</b> Approved as recommended.			
<b>Deferred:</b>	<b>Not Approved:</b>	<b>Approved Date:</b> 9/11/2014	<b>Effective Date:</b> 4/21/2015
<b>Specification Committee Approved Text:</b> See Specification Section Recommended Text.			
<b>Comments:</b> None.			
<b>Specification Section Recommended Text:</b> 2403.02, B, 2, a.  <b>Add to the end of the Article:</b> When Type A Mid Range water reducing admixture is used, the slump, measured according to Materials I.M. 317, may be increased to between 1 inch (25 mm) and 4 inches (100 mm) as a target range, allowing a maximum of 5 inches (125 mm).			
<b>Comments:</b>			
<b>Member's Requested Change (Redline/Strikeout):</b>			
<p><b>2. Water and Consistency.</b>  a. Place with a slump between 1 and 3 inches (25 and 75 mm) as a target range, allowing a maximum of 4 inches (100 mm) as a tolerance. When Type A Mid Range water reducing admixture is used, the slump, measured according to <u>Materials I.M. 317</u>, may be increased to between 1 inch (25 mm) and 4 inches (100 mm) as a target range, allowing a maximum of 5 inches (125 mm).</p>			
<b>Reason for Revision:</b> This is already allowed in bridge decks and deck overlays. Field staff has been using for structural concrete also. Spec change to provide consistency for all structural concrete.			
<b>New Bid Item Required (X one)</b>	<b>Yes</b>	<b>No</b>	<b>X</b>
<b>Bid Item Modification Required (X one)</b>	<b>Yes</b>	<b>No</b>	<b>X</b>
<b>Bid Item Obsolescence Required (X one)</b>	<b>Yes</b>	<b>No</b>	<b>X</b>
<b>Comments:</b>			
<b>County or City Comments:</b>			
<b>Industry Comments:</b>			

**SPECIFICATION REVISION SUBMITTAL FORM**

<b>Submitted by:</b> Greg Mulder		<b>Office:</b> Construction & Materials	<b>Item 3</b>
<b>Submittal Date:</b> 2014.08.22		<b>Proposed Effective Date:</b> April 2015	
<b>Article No.:</b> 2413.02, D, 2, b <b>Title:</b> Class HPC-O High Performance Concrete (Bridge Deck Surfacing, Repair and Overlay)		<b>Other:</b>	
<b>Specification Committee Action:</b> Approved as recommended.			
<b>Deferred:</b>	<b>Not Approved:</b>	<b>Approved Date:</b> 9/11/2014	<b>Effective Date:</b> 4/21/2015
<b>Specification Committee Approved Text:</b> See Specification Section Recommended Text.			
<b>Comments:</b> None			
<b>Specification Section Recommended Text:</b> 2413.02, D, 2, b.  <b>Replace the first sentence:</b> Use a mid-range water reducing admixture <del>meeting the requirements of</del> listed in Materials I.M. 403, Appendix C and a retarder listed in Materials I.M. 403, Appendix G.			
<b>Comments:</b>			
<b>Member's Requested Change (Redline/Strikeout):</b>			
<p><b>2. Class HPC-O High Performance Concrete.</b> Meet the requirements of <a href="#">Materials I.M. 529</a> and the following:</p> <ul style="list-style-type: none"> <li>a. A slump of 1 inch (25 mm) to 4 inches (100 mm), measured according to <a href="#">Materials I.M. 317</a>, with a maximum of 5 inches (125 mm). Commence testing for concrete slump from a continuous mixer within 2 to 4 minutes after the concrete is discharged. Before placing ready mix concrete, test the slump.</li> <li>b. Use a mid-range water reducing admixture <del>listed in meeting the requirements of</del> <a href="#">Materials I.M. 403, Appendix C</a> and a retarder listed in <a href="#">Materials I.M. 403 Appendix G</a>. When the expected haul time is less than 30 minutes or the maximum air temperature expected is less than 75°F (24°C), addition of a retarder is not required. The intent of the mid-range water reducer is to achieve a workable, dense, and low w/c ratio concrete. The Engineer may approve other admixtures or combinations of admixtures and dosages to achieve a workable low w/c ratio mix.</li> </ul>			
<b>Reason for Revision:</b> There are no requirements for admixtures are listed in IM 403.			
<b>New Bid Item Required (X one)</b>	<b>Yes</b>	<b>No X</b>	
<b>Bid Item Modification Required (X one)</b>	<b>Yes</b>	<b>No X</b>	
<b>Bid Item Obsolescence Required (X one)</b>	<b>Yes</b>	<b>No X</b>	
<b>Comments:</b>			
<b>County or City Comments:</b>			
<b>Industry Comments:</b>			

**SPECIFICATION REVISION SUBMITTAL FORM**

<b>Submitted by:</b> Greg Mulder		<b>Office:</b> Construction & Materials	<b>Item 4</b>
<b>Submittal Date:</b> 2014.08.22		<b>Proposed Effective Date:</b> April 2015	
<b>Article No.:</b> 2413.03, D, 2 <b>Title:</b> Bridge Deck Surfacing, Repair and Overlay		<b>Other:</b>	
<b>Specification Committee Action:</b> Approved as recommended.			
<b>Deferred:</b>	<b>Not Approved:</b>	<b>Approved Date:</b> 9/11/2014	<b>Effective Date:</b> 4/21/2015
<b>Specification Committee Approved Text:</b> See Specification Section Recommended Text.			
<b>Comments:</b> None			
<b>Specification Section Recommended Text:</b> 2413.03, D, 2, Stationary Mixer.  Replace the Article and Title: <b>Stationary Mixer and Ready Mixed Concrete.</b> <del>When a construction or stationary mixer is used, p</del> Proportion and mix according to applicable provisions of Article 2403.02, D.			
<b>Comments:</b>			
<b>Member's Requested Change (Redline/Strikeout):</b>			
<p><b>D. Proportioning and Mixing.</b></p> <p><b>1. General.</b></p> <p>a. Proportion and mix Class O PCC at the project site. Ready mixed concrete will not be approved.</p> <p>b. For Class HPC-O, ready mixed concrete or portioned and mixed concrete at the project site will be allowed.</p> <p>c. Mix the water reducing admixture for improved workability of Class O PCC or HPC-O into the concrete according to the manufacturer's recommendations and the Engineer's instructions.</p> <p><b>2. Stationary Mixer and Ready Mixed Concrete.</b> <del>When a construction or stationary mixer is used, p</del>Proportion and mix according to applicable provisions of <a href="#">Article 2403.02, D.</a></p>			
<b>Reason for Revision:</b> Field staff are confused that no time limits are included for overlays when ready mix is used. Add reference to ready mixed concrete – 2403.02.D refers to 2301.01.C.1 for ready mix/transit mix and mixing time.			
<b>New Bid Item Required (X one)</b>	<b>Yes</b>	<b>No</b>	X
<b>Bid Item Modification Required (X one)</b>	<b>Yes</b>	<b>No</b>	X
<b>Bid Item Obsolescence Required (X one)</b>	<b>Yes</b>	<b>No</b>	X
<b>Comments:</b>			
<b>County or City Comments:</b>			
<b>Industry Comments:</b>			

**SPECIFICATION REVISION SUBMITTAL FORM**

<b>Submitted by:</b> Greg Mulder		<b>Office:</b> Construction & Materials	<b>Item 5</b>
<b>Submittal Date:</b> 2014.09.22		<b>Proposed Effective Date:</b> April 2015	
<b>Article No.:</b> 2530.03, B, 3, c, 1 <b>Title:</b> Class A Patching Material (Partial Depth Finish Patches)		<b>Other:</b>	
<b>Specification Committee Action:</b> Deferred to a future meeting.			
<b>Deferred:</b> X	<b>Not Approved:</b>	<b>Approved Date:</b>	<b>Effective Date:</b>
<b>Specification Committee Approved Text:</b>			
<b>Comments:</b> The Davenport RCE Office asked what they should do if the manufacturer doesn't provide a table or cure times for multiple temperatures. When a cure time is given for only one temperature, there is no way to extrapolate a cure time for other temperatures. The Office of Construction and Materials will come up with an overall minimum cure time if none is given by the manufacturer or some other way to have an enforceable minimum cure time for all manufacturers.			
<b>Specification Section Recommended Text:</b> <b>2530.03, B, 3, c, 1, Class A Patching Material.</b>			
<b>Delete</b> the second sentence: <del>Use a minimum curing time according to Materials I.M. 491.20, Appendix A.</del>			
<b>Comments:</b>			
<b>Member's Requested Change (Redline/Strikeout):</b>			
<p>c. Protecting and Curing.                  1) Class A patching material.                  Cure according to the manufacturer's recommendations. <del>Use a minimum curing time according to Materials I.M. 491.20, Appendix A.</del></p>			
<b>Reason for Revision:</b> No cure times are given in IM 491.20. Use manufacturer's recommendations for cure time.			
<b>New Bid Item Required (X one)</b>	<b>Yes</b>	<b>No</b>	X
<b>Bid Item Modification Required (X one)</b>	<b>Yes</b>	<b>No</b>	X
<b>Bid Item Obsolescence Required (X one)</b>	<b>Yes</b>	<b>No</b>	X
<b>Comments:</b>			
<b>County or City Comments:</b>			
<b>Industry Comments:</b>			

**SPECIFICATION REVISION SUBMITTAL FORM**

<b>Submitted by:</b> Greg Mulder / Mark Bortle		<b>Office:</b> Construction and Materials	<b>Item 6</b>
<b>Submittal Date:</b> 2014.08.22		<b>Proposed Effective Date:</b> Nov. 2014	
<b>Article No.:</b> <b>Title:</b>		<b>Other:</b> DS-12029, Lane Rental (A + B Bidding with Incentive/Disincentive)	
<b>Specification Committee Action:</b> Approved with changes.			
<b>Deferred:</b>	<b>Not Approved:</b>	<b>Approved Date:</b> 9/11/2014	<b>Effective Date:</b> 12/16/2014
<b>Specification Committee Approved Text:</b> See attached Developmental Specifications for Lane Rental (A + B Bidding with Incentive/Disincentive).			
<p><b>Comments:</b> Mark Bortle will be the controller of this specification.</p> <p>The Office of Local Systems asked about using this specification in an urban setting and whether the length (mile) should be shorter, such as 0.1 mile. The committee decided that an urban setting will require other work restrictions and should be handled that way.</p> <p>The Davenport RCE Office requested that we use "day-lane mile" as the unit, so that it is clear that each lane is measured separately.</p> <p>The District 3 Construction Office asked if the last sentence of Article 12029.05, F was necessary since the Contractor will be charged for whatever they close. This sentence was removed.</p> <p>The Office of Traffic and Safety asked if the units should be something less than a full day, so that there is incentive to remove the lane closure as soon as possible. The Davenport RCE Office pointed out that nothing in the specification now prohibits the Contractor from reporting less than a day on their log and the Engineer using a portion of a day for calculating the incentive / disincentive.</p> <p>The Office of Construction and Materials will be meeting with the section engineers from the Office of Design and the Assistant District Engineers in the next month to discuss this specification. District 4 plans on using this specification for all interstate work that does not have other work restrictions or requirements. It is intended that this specification be used consistently throughout the state whenever possible.</p> <p>The effective date of the specification was changed from November to December, since November projects have already been turned in and the Office of Contracts will need to change the proposal language to match the revise units.</p>			
<b>Specification Section Recommended Text:</b> See attached Draft Developmental Specifications for Lane Rental (A + B Bidding with Incentive/Disincentive).			
<b>Comments:</b>			
<p><b>Member's Requested Change:</b> (Do not use 'Track Changes', or 'Mark-Up'. Use <b>Strikeout</b> and <b>Highlight</b>.)</p> <p>Draft is attached.</p>			
<b>Reason for Revision:</b> To include a length component to the Lane Rental Specification to minimize Contractors closing additional length of lane than necessary to perform the work.			
<b>New Bid Item Required (X one)</b>	<b>Yes</b>	<b>No</b> X	
<b>Bid Item Modification Required (X one)</b>	<b>Yes</b>	<b>No</b> X	
<b>Bid Item Obsolescence Required (X one)</b>	<b>Yes</b>	<b>No</b> X	
<b>Comments:</b> This change will require recalculation of lane rental rates and adjustment of proposal language by the Office of Contracts.			
<b>County or City Comments:</b>			
<b>Industry Comments:</b>			





## Iowa Department of Transportation

### DEVELOPMENTAL SPECIFICATIONS FOR LANE RENTAL (A + B BIDDING WITH INCENTIVE/DISINCENTIVE)

Effective Date  
December 16, 2014

**THE STANDARD SPECIFICATIONS, SERIES 2012, ARE AMENDED BY THE FOLLOWING MODIFICATIONS AND ADDITIONS. THESE ARE DEVELOPMENTAL SPECIFICATIONS AND THEY PREVAIL OVER THOSE PUBLISHED IN THE STANDARD SPECIFICATIONS.**

#### **12029.01 GENERAL.**

- A. The determination of the low bidder involves a combination of the contract sum and the bidder's proposed time to complete the work designated as the A+B portion when lane rental is included as a part of the contract documents. These specifications also describe lane rental procedures with incentive/disincentive under which the Contractor will be assessed a rental rate for each lane closure.
- B. Article 1108.02, K, applies to contracts with lane rental except for work restrictions included in the contract documents.

#### **12029.02 DEFINITION OF RENTAL DAY-LANE MILE.**

Any 24 hour period, or portion of a 24 hour period, beginning at the time a lane is closed by the Contractor's operation and ending when the lane is re-opened to traffic multiplied by the length closed rounded up to the nearest mile.

#### **12029.03 PREPARATION OF PROPOSAL.**

The bidder shall compute the lane rental durations-length they estimate are is needed to complete the work required under the A+B portion of this project.

#### **12029.04 CONSIDERATION OF BIDS.**

- A. Each bid submitted shall consist of two parts:
  - (A) The contract sum.
  - (B) Total number of rental days-lane miles proposed by the bidder. The bidder shall enter the number of rental days-lane miles on the proposal form.
- B. The bid amount for award consideration will be determined by the following formula:  
 $(A) + [(B) \times (\text{Daily Road User Cost})] = \text{Bid amount for award consideration.}$

#### **12029.05 CHARGING OF LANE RENTAL DAYS.**

- A. The proposal form will identify the portions (geographic section of traffic stage) of the project for which lane rental applies.
- B. The working days will be assessed based on the controlling operation of the contract and will include working days needed for lane closures.

- C. The Contractor shall record the time and length a lane is closed, whether work is being performed or not. The Contractor shall submit to the Engineer, in writing, a log of lane closure activity. This report shall be submitted to the Engineer daily (reporting the previous day's activities) and shall include station location (beginning and ending), direction and number of lanes for every closure, and days used (beginning time, ending time, and total days per closure). This report shall also include a written statement of any objections to rental days previously charged.
- D. A lane closure will be identified as any of the following instances:
- Lane closure commencing with a the start of the lane closure taper or when access to a lane is denied and continuing through the end of the ending taper,
  - Access is denied to a turning lane (left or right),
  - Ramp closure (does not include narrowing of a ramp where traffic is allowed access), or
  - Shoulder closure when specifically noted in the contract documents.
- E. Rental periods for multiple lane closures, both longitudinally and transversely, will be assessed simultaneously for each lane that is closed. Lane rental will not be charged for shoulder closures adjacent to lane closures. When a ramp is closed, each lane closed on the ramp will be assessed independently.
- F. The count for lane closures will be based on the number of locations a lane is closed, with no consideration for length of lane closure. Contractor shall not extend the length of a lane closure beyond the length needed to perform the work.

#### **12029.06 LANE RENTAL PAYMENT OR ASSESSMENT.**

Lane rental payment or assessment will be as follows:

**A. Incentive Payment.**

The Contractor will be paid an amount equal to the predetermined daily rental rate multiplied by the days remaining if the days used is less than the days bid. Maximum incentive payment will not exceed the amount specified on the proposal form. If not shown, there will be no maximum amount for incentive payment.

**B. Disincentive Assessment.**

The Contractor will be assessed an amount equal to the predetermined daily rental rate multiplied by the days used that is in excess of the days bid. There will be no maximum amount of disincentive that may be assessed.

#### **12029.07 CONSIDERATION FOR EXTRA WORK OR DELAYS DURING LANE RENTAL CHARGES.**

Additional lane rental days-lane miles will be given by the Engineer for extra work and overruns of contract items that extend the duration of closure, if documented by the Contractor and requested when the extra work or overrun occurs. No additional days-lane miles will be given for other circumstances which extend the duration of closure. Contractor will be responsible for obtaining weather forecasts prior to lane or shoulder closures to limit the duration of closures.

**SPECIFICATION REVISION SUBMITTAL FORM**

<b>Submitted by:</b> Greg Mulder / Mark Bortle		<b>Office:</b> Construction & Materials	<b>Item 7</b>
<b>Submittal Date:</b> August 12, 2014		<b>Proposed Effective Date:</b> April 2015	
<b>Article No.:</b> 2528.03, F <b>Title:</b> Modular Glare Screens		<b>Other:</b>	
<b>Specification Committee Action:</b> Approved with changes.			
<b>Deferred:</b>	<b>Not Approved:</b>	<b>Approved Date:</b> 9/11/2014	<b>Effective Date:</b> 4/21/2015
<b>Specification Committee Approved Text:</b> <b>2528.03, F, Modular Glare Screens.</b>			
<b>Replace the Article:</b>			
<ol style="list-style-type: none"> <li>1. When specified in the contract documents furnish, install, and maintain a modular glare screen system on the top of concrete barrier rail according to the contract documents and the modular glare screen system manufacturer's instructions. Furnish a system consisting of modular base units rails attached to the top of concrete barrier rail with blades evenly spaced and securely mounted to the base units rails. Ensure the following: <ul style="list-style-type: none"> <li>• Modular base units rails and glare screen blades are compatible so the base unit and blades can be securely attached to each other.</li> <li>• Base units rails and blades supplied are manufactured by the same manufacturer.</li> <li>• The length of individual modular base units rails is no longer than the nominal length of individual temporary concrete barrier rail sections.</li> <li>• The width of the modular base units rails is no wider than the top width of the concrete barrier rail.</li> <li>• Glare screen blades are FHWA highway green in color and made of impact resistant non-metallic high density plastic material.</li> <li>• Blade height is from 24 inches to 30 inches (600 mm to 750 mm) and width is from 6 inches to 9 inches (150 mm to 225 mm).</li> <li>• The same uniform sized blades are used throughout the work.</li> <li>• The modular glare screen system is manufactured by a company on the approved manufacturer's list in Materials I.M. 486.06, Appendix A.</li> </ul> </li> <li>2. Install the modular glare screen system according to the manufacturer's instructions and the approval of the Engineer. Install the system so that: <ul style="list-style-type: none"> <li>• It is centered along the longitudinal axis length of the top of the concrete barrier rail.</li> <li>• The overhang of the base units rails, blades, and associated assembly over the edges of the top of the concrete barrier rail is kept to a minimum.</li> <li>• The modular base units rails are flush with the top of the concrete barrier rail and they do not extend over the joints between concrete barrier rail sections. A maximum gap between base rails across barrier rail gaps shall be 12 inches (300 mm).</li> </ul> </li> <li>3. Install glare screen blades so the combination of blade width and spacing provide for a minimum 22 degree sight cut-off angle.</li> <li>4. <del>At 10 foot (3 m) intervals along the glare screen installation, apply (appropriate to the direction of traffic) 3 inch by 6 inch (75 mm by 150 mm) yellow or white strips of Type III or IV retroreflective sheeting meeting the requirements of Section 4186 to the appropriate glare screen blades. Apply each strip at the vertical midpoint of the glare screen blade and to the side of the blade nearest to traffic. Apply the strip with the longer dimension vertical. Glare screen blades shall be free from reflective sheeting or other modifications and shall be consistent in appearance.</del></li> <li>5. Maintain the modular glare screen throughout the work. Replace or repair damaged parts of the modular glare screen system, as soon as practical, at no additional cost to the Contracting Authority.</li> <li>6. When moving temporary barrier rail with a modular glare screen system, the Contractor may temporarily remove base units rails and glare screen blades, if necessary, to assist in the moving. Reinstall the removed base units and glare screen blades as soon as the temporary concrete barrier rail has been moved to its new location.</li> </ol>			

7. Perform final removal of the modular glare screens from the concrete barrier rail when directed by the Engineer. Upon removal, ensure there are no protrusions on the top of the concrete barrier rail.
8. Upon completion of the work, the Contractor retains ownership of the modular glare screen system.

**Comments:** The Office of Local Systems asked if we want to require removal of any existing retroreflective sheeting so that the blades are uniform in appearance. This requirement was added.

**Specification Section Recommended Text:**  
**2528.03, F, Modular Glare Screens.**

**Replace the Article:**

1. When specified in the contract documents furnish, install, and maintain a modular glare screen system on the top of concrete barrier rail according to the contract documents and the modular glare screen system manufacturer's instructions. Furnish a system consisting of modular base units rails attached to the top of concrete barrier rail with blades evenly spaced and securely mounted to the base units rails. Ensure the following:
  - Modular base units rails and glare screen blades are compatible so the base unit and blades can be securely attached to each other.
  - Base units rails and blades supplied are manufactured by the same manufacturer.
  - The length of individual modular base units rails is no longer than the nominal length of individual temporary concrete barrier rail sections.
  - The width of the modular base units rails is no wider than the top width of the concrete barrier rail.
  - Glare screen blades are FHWA highway green in color and made of impact resistant non-metallic high density plastic material.
  - Blade height is from 24 inches to 30 inches (600 mm to 750 mm) and width is from 6 inches to 9 inches (150 mm to 225 mm).
  - The same uniform sized blades are used throughout the work.
  - The modular glare screen system is manufactured by a company on the approved manufacturer's list in Materials I.M. 486.06, Appendix A.
2. Install the modular glare screen system according to the manufacturer's instructions and the approval of the Engineer. Install the system so that:
  - It is centered along the longitudinal axis length of the top of the concrete barrier rail.
  - The overhang of the base units rails, blades, and associated assembly over the edges of the top of the concrete barrier rail is kept to a minimum.
  - The modular base units rails are flush with the top of the concrete barrier rail and they do not extend over the joints between concrete barrier rail sections. A maximum gap between base rails across barrier rail gaps shall be 12 inches (300 mm).
3. Install glare screen blades so the combination of blade width and spacing provide for a minimum 22 degree sight cut-off angle.
- ~~4. At 10 foot (3 m) intervals along the glare screen installation, apply (appropriate to the direction of traffic) 3 inch by 6 inch (75 mm by 150 mm) yellow or white strips of Type III or IV retroreflective sheeting meeting the requirements of Section 4186 to the appropriate glare screen blades. Apply each strip at the vertical midpoint of the glare screen blade and to the side of the blade nearest to traffic. Apply the strip with the longer dimension vertical.~~
5. Maintain the modular glare screen throughout the work. Replace or repair damaged parts of the modular glare screen system, as soon as practical, at no additional cost to the Contracting Authority.
6. When moving temporary barrier rail with a modular glare screen system, the Contractor may temporarily remove base units rails and glare screen blades, if necessary, to assist in the moving. Reinstall the removed base units and glare screen blades as soon as the temporary concrete barrier rail has been moved to its new location.
7. Perform final removal of the modular glare screens from the concrete barrier rail when directed by the Engineer. Upon removal, ensure there are no protrusions on the top of the concrete barrier rail.
8. Upon completion of the work, the Contractor retains ownership of the modular glare screen system.

Comments:		
<p><b>Member's Requested Change: (Do not use 'Track Changes', or 'Mark-Up'. Use Strikeout and Highlight.)</b></p> <p><b>F. Modular Glare Screens.</b></p> <ol style="list-style-type: none"> <li>1. When specified in the contract documents furnish, install, and maintain a modular glare screen system on the top of concrete barrier rail according to the contract documents and the modular glare screen system manufacturer's instructions. Furnish a system consisting of modular base rails <del>units</del> attached to the top of concrete barrier rail with blades evenly spaced and securely mounted to the base rails <del>units</del>. Ensure the following:                      Modular base rails <del>units</del> and glare screen blades are compatible so the base unit and blades can be securely attached to each other.                      Base rails <del>units</del> and blades supplied are manufactured by the same manufacturer.                      The length of individual modular base rails <del>units</del> is no longer than the nominal length of individual temporary concrete barrier rail sections.                      The width of the modular base rails <del>units</del> is no wider than the top width of the concrete barrier rail.                      Glare screen blades are FHWA highway green in color and made of impact resistant non-metallic high density plastic material.                      Blade height is from 24 inches to 30 inches (600 mm to 750 mm) and width is from 6 inches to 9 inches (150 mm to 225 mm).                      The same uniform sized blades are used throughout the work.                      The modular glare screen system is manufactured by a company on the approved manufacturer's list in Materials I.M. 486.06, Appendix A.</li> <li>2. Install the modular glare screen system according to the manufacturer's instructions and the approval of the Engineer. Install the system so that:                      It is centered along the longitudinal axis length of the top of the concrete barrier rail.                      The overhang of the base rails <del>units</del>, blades, and associated assembly over the edges of the top of the concrete barrier rail is kept to a minimum.                      The modular base rails <del>units</del> are flush with the top of the concrete barrier rail and they do not extend over the joints between concrete barrier rail sections. A maximum gap between base rails across barrier rail gaps shall be 12 inches (300 mm).</li> <li>3. Install glare screen blades so the combination of blade width and spacing provide for a minimum 22 degree sight cut-off angle.</li> <li>4. <del>At 10 foot (3 m) intervals along the glare screen installation, apply (appropriate to the direction of traffic) 3 inch by 6 inch (75 mm by 150 mm) yellow or white strips of Type III or IV retroreflective sheeting meeting the requirements of Section 4186 to the appropriate glare screen blades. Apply each strip at the vertical midpoint of the glare screen blade and to the side of the blade nearest to traffic. Apply the strip with the longer dimension vertical.</del></li> <li>5. Maintain the modular glare screen throughout the work. Replace or repair damaged parts of the modular glare screen system, as soon as practical, at no additional cost to the Contracting Authority.</li> <li>6. When moving temporary barrier rail with a modular glare screen system, the Contractor may temporarily remove base rails <del>units</del> and glare screen blades, if necessary, to assist in the moving. Reinstall the removed base units and glare screen blades as soon as the temporary concrete barrier rail has been moved to its new location.</li> <li>7. Perform final removal of the modular glare screens from the concrete barrier rail when directed by the Engineer. Upon removal, ensure there are no protrusions on the top of the concrete barrier rail.</li> <li>8. Upon completion of the work, the Contractor retains ownership of the modular glare screen system.</li> </ol>		
<p><b>Reason for Revision:</b> To delete the requirement for retroreflective sheeting on the blades, which are often not correct, not in a uniform position, incorrect color, and not necessary since the TBR upon which the glare screen is attached already contains reflective markers. In addition, language for a maximum gap between glare screen rails is included. The word "units" is being changed throughout the specification to the word "rails" to be consistent with manufacturer's verbiage. Pictures showing these issues are included in this submittal.</p>		
<b>New Bid Item Required (X one)</b>	<b>Yes</b>	<b>No X</b>

<b>Bid Item Modification Required (X one)</b>	<b>Yes</b>	<b>No X</b>
<b>Bid Item Obsolescence Required (X one)</b>	<b>Yes</b>	<b>No X</b>
<b>Comments:</b>		
<b>County or City Comments:</b>		
<b>Industry Comments:</b>		