

From: [Nordholm, Gail \[DOT\]](#)
To: [Nordholm, Gail \[DOT\]](#)
Subject: Changes to Guardrail Standards Effective April 20, 2010
Date: Thursday, March 04, 2010 3:30:00 PM

TO: County Engineers, City Representatives, and Consultants

CC: District Local Systems Engineers, Service Bureau
and Office of Local Systems

FROM: Office of Local Systems

SUBJECT: Changes to Guardrail Standards Effective April 20, 2010

DATE: March 4, 2010

We have received numerous questions about the new "BA Series" guardrail standards that take effect with the April 20, 2010 letting. We are furnishing the following information to assist your understanding of the application of the new standards.

As noted in our July 28, 2009 e-mail, the new standards have been adopted to utilize the new Midwest Guardrail System (MGS). Improvements incorporated into the MGS are a higher mounting height for improved performance and relocating the rail section splices to be between the posts. Standard Road Plan BA-200 shows this. The changes in splice locations and mounting height makes the all the old steel beam guardrail standards incompatible with the MGS so those standards had to be deleted.

All guardrail designs for federally funded projects, from the April 20, 2010 letting and thereafter, should be based on the BA standards unless there is a site condition that makes it impossible to use them. We are aware that there were some RE standards that were used often on 3R projects (e.g. RE-27B) that no longer exist. We are currently working with the Office of Design and FHWA to see what options we can provide that will fit the MGS design. If you have problems using the BA standards, you need to advise your respective district offices early in the design process to obtain assistance for other possible options.

If you are considering a design that incorporates the FLEAT 350 end terminal that was shown on the old RE-76 standard, you should know it is a proprietary product and the Iowa DOT could only use it because we had an approved statewide Public Interest Finding (PIF) to use it. With the adoption of the new BA standards and competitive end terminals, the statewide PIF is no longer in effect. Requests for an individual PIF for use of the old RE-76 will not be approved, unless for some reason the new standards will not work.

Following is information you will find useful as you begin working with the BA Standards:

- The bid items have changed significantly. The steel beam guardrail quantities are included in the bid items for Steel Beam Guardrail Barrier Transition Section (BA-201) and the Steel Beam Guardrail End Terminal (BA-205). Any pay item for Steel Beam Guardrail is the length between terminals and barrier transition sections. When using the BA-250 layout, if the variable tangent and variable flare lengths are minimized, only three bid items would be required per corner.
 1. Steel Beam Guardrail End Anchor, Bolted (You will need to specify which type shown in BA-202)
 2. Steel Beam Guardrail Barrier Transition Section (BA-201)
 3. Steel Beam Guardrail End Terminal (BA-205)
- Another point that is not readily obvious is the fact that the minimum layout length for the VT1 is 28.125 feet. This is the short length of steel beam guardrail that extends past the last post on the terminal end section (BA-205). Clicking on the following link will show you a sketch explaining this:

http://www.iowadot.gov/local_systems/mailling/2010/march/guardrail_layouts.pdf

If you have a secondary obstacle that you want to shield and need longer guardrail, the VT1 would naturally be longer.

- Some of you have noticed that the offset distance shown on BA-205 is only 24 inches. If you want more offset from the guardrail installation line, you will need to insert a VF distance to move the end terminal further out. CAUTION: The new standards include a BA-206 that shows a 48" offset but it's only intended for use when high tension cable is continuing past the end of the steel beam guardrail.

Just a final closing comment. If you need to use some special guardrail designs that could be based on old standards, you will need separate specifications for those installations including method of measurement and basis of payment. A special provision will typically be required because the DOT specifications for

steel beam guardrail (2505) only contain information for the Midwest Guardrail System.

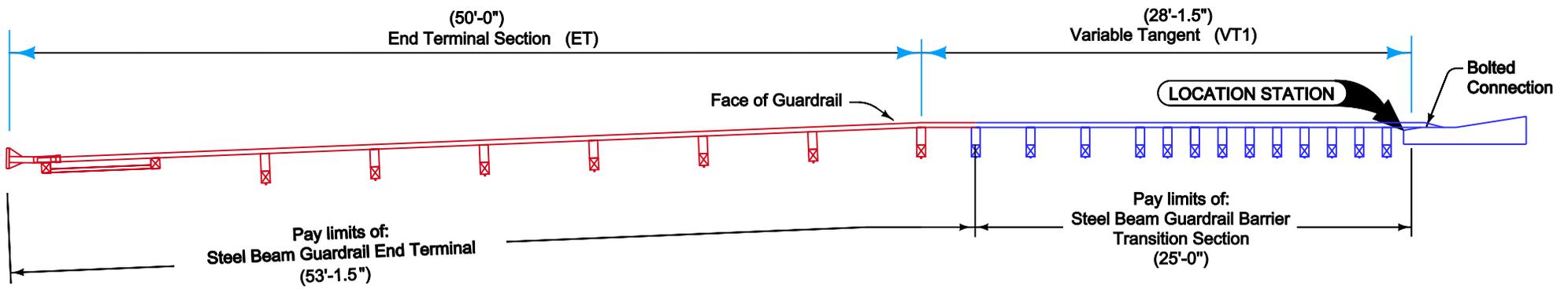
If you have any questions, **please do not reply to this note**. Instead, you may contact me as shown below.

Thank you,

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Some of the documents referenced above are in Adobe Acrobat's Portable Document Format (PDF). If you do not have the Adobe Acrobat Reader software, you can download it free of charge at:
<http://www.adobe.com/products/acrobat/readstep.html>.

Mailings are available at the Office of Local Systems Weekly Mailings web page at: http://www.iowadot.gov/local_systems/mailing/main_mailing.htm



Typical County BA-250 with no VF or VT2 Lengths
(Not to Scale)