Structural Engineering Guidance No. 10-13

Date: November 8, 2010

Distribution: All Engineering Resources

SUBJECT: REVISED NU GIRDER DESIGN AND DETAIL GUIDELINES

FOR BRIDGES

Contact: Gregory Sanders

Effective Date: Immediately for All New Jobs Not Turned In To Review Section

EPG Revision Submittal Status: Submitted and Approved

Standard Drawing Revision Status: Revised

EPG 751.22 P/S Concrete I Girders and Standard Drawings have been revised to include new and updated design and detail guidelines for NU and MoDOT Bulb Tee Standard Girders.

**MAJOR REVISIONS:**

* Increased the allowable haunch for NU and MoDOT Bulb Tee Standard Girders to 4 ½” from

2 ½” at centerline of girders.

* Increased the allowable maximum joint filler thickness for NU and MoDOT Bulb Tee Standard Girders to 4” (was 2”) and increased the joint filler width to ½” less than the joint filler thickness but not less than 3” min. or 3 ½” max.
* **Added the requirement in the EPG that alternate bar reinforcing steel details shall be provided for all NU Standard Girders in all spans on all jobs.**
* Added new NU\_Bars Standard Drawings for new Alternate Bar Reinforcing Steel Details for NU Standard Girders.
* Add optional reinforcing steel details for confinement steel for NU Girder ends when Welded Wire Reinforcing Steel is used.
* Removed information for NU Standard Girders 29, 78 and 94 from the EPG and removed the Standard Drawings due to lack of availability and use.

**MINOR REVISIONS:**

* Added guidance in EPG for #5 bars for thinner webs between hold-downs.
* Added guidance in the EPG for limiting the cross sloping of the top of top flanges of NU and MoDOT Bulb Tee Standard Girders for superelevated bridges.

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* Renamed existing NU Standard Drawings using welded wire fabric to NU\_WWR Standard Drawings and revised for the following:

Relocated and differentiated tension of form strands in top flange

Added note “WWR shall not be epoxy coated”

Revised clearance to top strands at girder ends to 4” (was 3”)

Modified G301 bar at fabricator’s request

Revised note that actual bar length measurement is not to nearest inch

Miscellaneous revisions

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* For a complete listing of additions and revisions, log on to EPG using your EPG UserID, go to

EPG 751.22 P/S Concrete I Girders and click on the “History” tab. For internal personnel only,

go to *T\br-proj\A\_Development\DS Revision Requests* or *T\br-proj\A\_Development\*

*DS Investigations\09-060-DSI NU Girder Review\09-060-DSI Revision Notification NU*

*Girders.doc* orthe *Development Resources Web Page*.