Bridge Field Services Advisory

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From Mark Geib, Engineer of Operations Field Services Division

MDOT
Operations Field Services Division
6333 Lansing Road
Lansing, MI 48917

Questions regarding this advisory should be directed to:

Matt Filcek, Structural Fabrication Engineer
Phone: 517-322-5709
filcekm@michigan.gov

Pete Jansson, Structure Technical Section Engineer
Phone: 517-636-6265
janssonp@michigan.gov

MECHANICAL REINFORCEMENT SPLICING

This Bridge Field Services advisory serves to remind project offices of the provisions of subsection 712.03.L of the Standard Specifications for Construction relating to mechanical reinforcement splicing and the basis of acceptance of these materials as stated in the MDOT Materials Source Guide.

Recent mechanical reinforcement splice Quality Assurance (QA) samples have failed verification testing. Reasons for the failing verification tests vary from improper installation procedures to fabrication issues. MDOT is in the process of re-evaluating several mechanical reinforcement splice products currently listed on the Qualified Products List (QPL) in the MDOT Materials Source Guide (MSG) and will determine their status on the QPL.

The MDOT MSG states that the basis of acceptance for mechanical reinforcement splices is acceptance testing of a product from the QPL. Mechanical reinforcement splicing products undergo a thorough evaluation including tensile and fatigue testing when requested by the manufacturer for QPL status. Acceptance testing requires sampling and testing of a material to determine compliance with specification requirements *prior* to incorporation into the project. The contractor must make the test splices, witnessed by the engineer, on the largest bar sizes that are to be spliced. A test splice consists of two pieces of reinforcing bar (from the same material being used on the project) joined by the mechanical splice device with a minimum of 12 inches of bar exposed on each end of the splice. The contractor shall submit the manufacturer's installation procedure and approvals to the engineer for review prior to beginning splicing. The contractor should provide adequate notice to allow the engineer to witness the QA samples and field splices being installed in accordance with the manufacturer's recommendations.

After the QA samples have been properly sampled they must be delivered to the Metals Lab located at the Construction Field Services Building, 8885 Ricks Road, Lansing, MI 48917. Delivery protocol consists of maintaining the chain of custody from the time the QA samples are obtained until they are dropped off and logged using the sample sign in sheet in the Metals Lab. The Sample Identification MDOT Form 1923 form must be completely filled out and all material certifications must be included before verification testing can be performed. Contractors, fabricators, manufacturers, and suppliers are not permitted to drop QA samples off to the Metals Lab for verification testing. If the above delivery protocol is not followed, the Project Office will be notified that new QA samples are required for testing.

Several of the failing mechanical splices mentioned above were incorporated prior to verification testing. Acceptance testing must be complete and meet project specifications prior to incorporating the material into the project.