Florida Department of Transportation

JEB BUSH
GOVERNOR

605 Suwannee Street
Tallahassee, FL 32399-0450

JOSÉ ABREU
SECRETARY

July 22, 2004

Mr. Donald Davis
Program Operations Engineer
Federal Highway Administration
227 N. Bronough Street, Suite 2015
Tallahassee, Florida 32301

Re: Office of Design, Specifications
Section 452
Proposed Specification: 4520821 - Erection Geometry Control – General.

Dear Mr. Davis:

We are resubmitting, for your approval, two copies of a proposed Supplemental Specification for Erection Geometry Control – General.

These changes were made Robert Robertson, State Structures Office to address problems with shimming joints to bring the geometry back into alignment.

Please review and transmit your comments, if any, within two weeks. Comments should be sent via Email to SP965DB or duane.brautigam@dot.state.fl.us.

If you have any questions relating to this specification change, please call Duane F. Brautigam, State Specifications Engineer at 414-4110.

Sincerely,

Signature on file

Duane F. Brautigam, P.E.
State Specifications Engineer

DFB/jho
Attachment
cc: General Counsel
Florida Transportation Builders' Assoc.
State Construction Engineer

ERECTION GEOMETRY CONTROL – GENERAL.
(REV 6-14-04)

SUBARTICLE 452-8.2.1 (of the Supplemental Specifications) is deleted and the following substituted:

452-8.2 Erection Geometry Control:

452-8.2.1 General: Numerical or graphical methods may be used for alignment control and checking during erection. Establish the key stages for checking of the erection in the erection manual and obtain the Engineer's review and approval. Key stages would include, for example, setting a pier segment during cantilever erection and various intermediate points during subsequent segment erection, at span closure and upon completion.

Prepare a table of elevations and alignments required at each key stage of erection in accordance with the plans, as cast geometry, camber and erection elevations for establishing erection controls and submit to the Engineer for approval.

Carefully check elevations and alignments at each stage of erection and correct as required to avoid any possible accumulation of errors.

~~Submit to the Engineer a proposal detailing the geometry of the span with and without the shims and the thickness and location of the shims, when shimming is warranted to correct mis-alignment. Use shims constructed of woven Type 304 stainless steel wire cloth. Obtain the approval of the Engineer prior to performing any shimming.~~

Propose to shim joints only after all other corrective measures have been eliminated. Submit methods and procedures that have been developed by the Specialty Engineer for approval by the Engineer. Include the anticipated bridge geometry both with and without shims being placed. Use shims made of ASTM A 240 Type 304 wire cloth (roving) with a maximum of 1/8~~"~~ inch ~~([~~3.2 mm~~)]~~ thickness. Use small patch wire cloth shims having a maximum thickness of 1/8 inch [3 mm] and minimum area of 1 ft.^{2} ~~([~~645 mm~~)]~~ at the intersection points of webs and slabs to attain the required geometric change. Fully impregnate shims with epoxy prior to placement. Place shims at any single joint to modify the geometry in a single direction, either vertical or horizontal. Ensure that all shimmed joints are fully epoxied and water tight. Do not place any shims until the methods and procedures are approved by the Engineer.

ERECTION GEOMETRY CONTROL – GENERAL.
(REV 6-14-04)

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452-8.2 Erection Geometry Control:

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