



INDIANA DEPARTMENT OF TRANSPORTATION

Driving Indiana's Economic Growth

Design Memorandum No. 16-32 Technical Advisory

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TO: All Design, Operations, and District Personnel, and Consultants

FROM: /s/ Jeremy C. Hunter
Jeremy C. Hunter
Manager, Office of Bridge Design
Bridges Division

SUBJECT: Integral End Bent Depth

REVISES: *Indiana Design Manual* Section 409-2.04(02), Figures 409-2C and 409-2D

EFFECTIVE: Immediately

The *Indiana Design Manual* (IDM) provides the design requirements and assumptions for the use of integral end bents. The design assumptions and typical reinforcing details are appropriate for end bents of reasonable depth. Deeper end bents may be subject to frame action forces and not be representative of the design assumptions. Deeper end bents may also complicate superstructure replacement should the end bent not have the capacity to resist lateral earth pressure behind the bent without the superstructure functioning like a strut.

The Department is implementing a maximum allowable integral end bent depth of 6 feet as measured from the bottom of the beams to the bottom of the bent. Integral end bents deeper than 6 feet will be considered on a case by case basis, but will require coordination with, and approval from the Office of Bridge Design.

The referenced IDM section and figures have been revised to implement the above requirement. In addition, the previous terminology of "integral abutment" has been restored to "integral end bent".