



INDIANA DEPARTMENT OF TRANSPORTATION

Design Memo No. 24-12

September 11, 2024

October 11, 2024

TO: All Design Personnel and Consultants

FROM: */s/ Stephanie Wagner*
Stephanie Wagner
Director of Bridge Engineering

SUBJECT: Semi-Integral End Bent Details

REVISES: *Indiana Design Manual* Section 409-3.03, Figures 409-3A and 409-3B

EFFECTIVE: Stage 3 submittals on or after March 1, 2025

This design memo has been revised to identify revisions to Figure 409-3A, Semi-Integral End Bent Details for Prestressed Concrete Beams, and 409-3B, Semi-Integral End Bent Details for Steel Beams. Callouts for preformed expansion joint filler (PEFJ) used for forming have been added, and the figures have been reformatted.

Semi-Integral details referred to as Method 1 and Method 2, previously shown in Figures 409-3A and 409-3B, have been eliminated and replaced with two new details. The updates are intended to simplify the detailing and address issues noted in the field.

The new semi-integral details eliminate the shear keys between the bent cap and end diaphragm, which were the source of unintentional fixity on previous projects. Figure 409-3A now shows a typical application using prestressed beams, and Figure 409-3B now shows a typical application using steel beams. The new details also allow for future replacement of the elastomeric bearings.

The referenced figures and section of IDM [Chapter 409](#) have been revised to reflect these changes.

For questions related to this design memo, please contact the Bridge Engineering Division at bridgedesignoffice@indot.in.gov.