



## Monthly Meeting Notice

*Thursday, December 3, 2009*

### Forensic Investigation of the I-35W Bridge and Application of Findings to Long Span Trusses

**Speaker:** Wes Weir, P.E., TranSystems

**Program:** On August 1, 2007 the I-35W Bridge, a 1000' long, 3-span continuous deck truss, carrying 8 lanes of rush hour traffic over the Mississippi River, suddenly collapsed, resulting in 13 deaths. As part of the Structural Investigation Group that also included NTSB, FHWA, MNDOT, and Wiss Jenny Engineers, TranSystems was assigned the tasks of field marking and cataloging the failed truss members, guiding reassembly in a nearby lay-down yard, and the preparation of a 3-dimensional global model for finite element analysis of the bridge.

In the course of the investigation, NTSB and FHWA issued directives to the state DOT's to conduct inspections of gusset plates on in-service deck trusses, and issued guidelines for the inspection and analysis of the gusset plates. The final NTSB Report identifies the probable cause of the collapse as the inadequate load capacity, due to design error, of certain gusset plates, which failed under a combination of (1) substantial increases in the weight of the bridge from previous modifications, and (2) the traffic and concentrated construction loads on the bridge at the time of collapse.

The presentation will be a review of the failed conditions, the structural model, the analysis, and the findings of the I-35W failure investigation, and the application of these findings to a follow-on project – The Jeremiah Morrow Bridge, in Cincinnati, Ohio, a 2200' long continuous deck truss, for which TranSystems performed the inspection, load testing, structural modeling, and gusset plate analysis.

**Location:** The Quality Inn, 4742 Brecksville Road, Richfield, OH, 330-659-6151

**Dinner:** Will be a buffet consisting of Chilled Garden Salad with an Assortment of Condiments and Dressings, Chicken Cordon Blue, Fresh Pork Loin, Pasta Marinara, Garlic Smashed Potatoes, Medley of Fresh Garden Vegetables, Rolls and Butter, Coffee, Hot Tea and Ice Tea and Dessert.

**Time:** 5:30 p.m. - 6:30 p.m. Social Hour (Cash bar)  
6:30 p.m. - 7:30 p.m. Dinner  
7:30 p.m. Speaker

**Cost:** \$20.00/person – Government Agency Members  
\$30.00/person – ABCD Members \$35.00/Person – Non-Members and Guests  
\$10.00/person – Student ABCD Members \$20.00/Person – Student Non-Members

**RSVP:** Contact Elaine Magoch at (216) 771-1090 x261, or email: [emagoch@DLZ.com](mailto:emagoch@DLZ.com)

*One (1) Continuing Professional Development hour will be provided for this presentation. If you attend and sign in at the meeting, and wish to obtain CPD credit, please go to our website (<http://www.abcdneoh.org/PD.htm>) following the meeting to obtain the sign-in sheet and announcement.*

**Please RSVP by November 30, 2009**

*No-shows and Cancellations after the reservation deadline may be billed.*

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