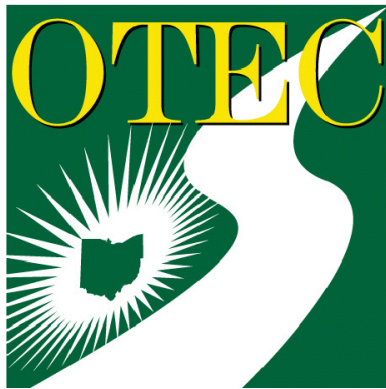


Ohio Transportation Engineering Conference

October 28 - 29, 2008

Tim Keller, P.E.

Administrator, Office of Structural Engineering



**What's New in the
Office of Structural Engineering**



Topics

- ❑ Load Ratings
- ❑ MSE Walls
- ❑ Bridge Inspections
- ❑ Bridge Standards
- ❑ National Bridge Issues
- ❑ Bridge Hits



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Load Ratings

- LRFR (Load Resistance Factored Rating)
 - After Oct. 10, 2010 All bridges designed under LRFD shall be load rated using LRFR
 - Federal Requirement
 - ODOT will require two load ratings (PC Bars and Virtis) until Super Load Program (ODOT's Permitting program) can accommodate Virtis
 - Policy Statement for LRFR is forthcoming



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Load Rating

□ County System

- Approximately 70% of County System is not currently load rated.
- Currently working on a MOU (Memorandum of Understanding) between ODOT, CEAO, & FHWA.
- Goal is to have all bridges that can be load rated done within 5 years.



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Load Rating

- County System (Con't)
 - Concrete bridges **without plans** can remain load rated via “engineering judgement”.
 - Training via hand calculations will be offered soon to help the Counties with this task.
 - Load rate “worst first”.



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Load Rating

□ Gusset Plates

- FHWA has issued guidelines for gusset plate analysis using LFR (still waiting on examples)
- ODOT has posted a spread sheet on OSE web site to load rate gusset plates based on FHWA guidelines.
- ODOT has committed to completing gusset plate load rating of State bridges in 3 years.



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Load Rating

- Long Span Bridges
 - Long span for load rating is defined as any structure with a span over 200 feet.
 - Added a truck train loading.
 - Comprised of a series of 5C1 trucks.
 - See BDM Section 911.
 - Load was added to account for congestion backing traffic up across a bridge.



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MSE Walls

- Coming Soon – MSE Walls will be an independent set of plans.
 - This means:
 - Separate page numbering
 - Separate set of estimated quantities
 - Separate reference on the General Summary
 - BDM will be updated in January 2009 for requirements
- Implementation plan will be developed.



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MSE Walls

- Coming Soon – New MSE Wall supplier may be available in January, 2009
 - Earth Trac HA by Earth Tec
 - SS 840 will be revised accordingly



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Bridge Inspection

- Team is working on updating the bridge inspection scales
 - All items will be 0-9 scale
 - 4-1 scale will be completely eliminated (history will be kept – similarly to when the paint scale was changed)
- Team has representatives from ODOT, FHWA, Counties, & Cities.
- Additional guidance will also be included in the update.

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Bridge Inspection

- Federal Bridge Bill is on hold.
 - On hold for at least a year.
 - This bill included language that would require a team leader to have 10 years experience or have a PE.
 - ODOT tried to get this language amended in the bill, but was unsuccessful.



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Bridge Standards

- Coming Soon – All superseded bridge standard drawings will be posted on OSE web site.
 - Will be posted as .pdf files



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National Bridge Issues

- NTSB final report on the I-35W bridge tragedy is due out before the end of the year.

- Peer Reviews for large and complex bridges
 - ODOT generally complies with this now with a few exceptions.



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National Bridge Issues

- Formalized QC/QA programs
 - ODOT currently does not require formalized programs at this time.
 - ODOT / ACEC should commence discussions on this issue.



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National Bridge Issues

- I-35W Bridge
 - Aug. 1, 2007 collapsed
 - Sept. 18, 2008 new bridge opened to traffic
 - Less than 14 months between collapse and new bridge opened to traffic
 - \$234 million bid



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National Bridge Issues

- I-35W Bridge – How so fast?
 - Design Build delivery
 - 650 workers on site during peak of construction
 - A separate form was supplied for each of the 12 piers.
 - 8 casting beds were built – each bed was used once.
 - Contractor received \$25 million for early completion



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Bridge Hits

- ODOT continues to deal with vehicles striking bridges.



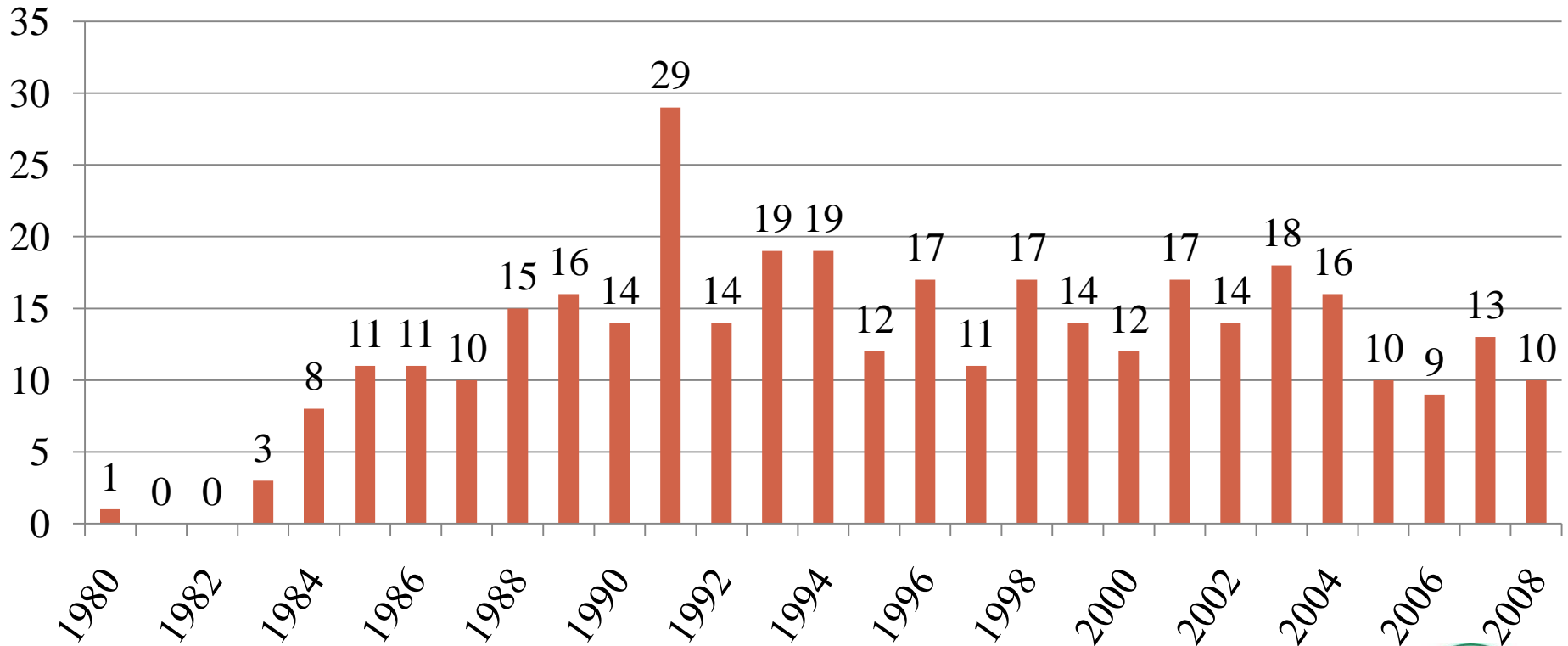
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Bridge Hits

Bridge Damage Reports



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Bridge Hits

TUS-250-1412



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Bridge Hits

SHE-75-1832



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Bridge Hits

TRU-11-0959R



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Bridge Hits

COL-62



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Bridge Hits

ALL-30-0547R



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Bridge Hits

HAM-74-5.87



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Questions ?

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