

Project 9-4973: Guidelines for Designing Bridge Piers & Abutments for Vehicle Collisions

Project Meeting Minutes

April 14, 2009, 8:00AM

TTI Gilchrist Office

Prepared by: William Williams

Attendees:

Participants attending in person:

- 1) Gene Buth, TTI, g-buth@tamu.edu
- 2) Nick Nemec, TxDOT, nnemec@dot.state.tx.us
- 3) James Pohl, TxDOT, jpohl@dot.state.tx.us
- 4) Gregg Freeby, TxDOT, gfreeby@dot.state.tx.us
- 5) Akram Abu-Odeh, TTI, abu-odeh@tamu.edu
- 6) Dominique Lord, TTI, d-lord@tamu.edu
- 7) William Williams, TTI, w-williams@tamu.edu
- 8) Hector Garcia, FHWA, Hector.Garcia@fhwa.dot.gov
- 9) Srinivas Geedipally, TTI, srinivas-g@ttimail.tamu.edu
- 10) Roger Bligh, TTI, rbligh@tamu.edu
- 11) Susan Hida, CalTrans, AASHTO T-5 Chair, susan_hida@dot.ca.gov
- 12) Loren Risch, Kansas DOT, Loren@ksdot.org
- 13) David Kiekbush, Wisconsin DOT, david.kiekbusch@dot.state.wi.us
- 14) Art Yannotti, New York DOT, ayannotti@dot.state.ny.us
- 15) Michael Brackin, TTI, m-brackin@ttimail.tamu.edu

Study Partners attending by video conference:

Sean Meddles, Ohio DOT, Sean.Meddles@dot.state.oh.us

Charles Boyd, Florida DOT, Charles.Boyd@dot.state.fl.us

Study Partners not in attendance:

Ed Wasserman, TennDOT, Ed.Wasserman@state.tn.us

Will Longstreet, PennDOT, wlongstreet@state.pa.us ? No confirmation.

Paul Liles, Georgia DOT, paul.liles@dot.state.ga.us ? No confirmation.

Attendees by Conference call:

German Claros, TxDOT, email gclaros@dot.state.tx.us

Items Discussed:

- 1) Gregg Freeby with TxDOT gave a presentation on the overview of the project. A copy of this presentation is included with these meeting minutes in pdf format.

- 2) William Williams with TTI gave a presentation on Tasks 1a & 1c of the project. A copy of this presentation is included with these meeting minutes in pdf format.
- 3) Akram Abu-Odeh with TTI gave a presentation on Task 1b of the project. A copy of this presentation is included with the meeting minutes in pdf format.
- 4) Srinivas Geedipally with TTI gave a presentation on Task 1d of the project. A copy of this presentation is included with the meeting minutes in pdf format.
- 5) David Kiekbush with Wisconsin DOT indicated that Wisconsin currently uses 3'x5' columns to address the 400k load provision. Local FHWA officials in Wisconsin are requiring this.
- 6) Sue Hida with Cal Trans (AASHTO T-5 Chair) expressed concerns about requirements for retrofit solutions might be very different than requirements for new designs. Focus should be on new designs. Use of in-fill walls could be a problem with regard to meeting seismic requirements.
- 7) Art Yannotti with NY DOT indicated that New York has had at least one impact on a rectangular column.
- 8) Loren Risch with Kansas DOT observed that TxDOT spiral reinforcement in columns is very light compared to what Kansas provides.
- 9) Sue Hida offered that the column strength calculations should use AASHTO LRFD not ACI. Researchers will need to look at the AASHTO shear design methods and use the one most appropriate.
- 10) William Williams gave a presentation on the preliminary testing options developed for Phase 2 of the project. Four testing concepts were presented and discussed. Concept 4 was selected as the preferred testing option for this project. This concept consists of rigid pier supported by a rigid frame and instrumented with load cells to measure the impact force from the vehicle. A copy of this presentation is included with these meeting minutes.
- 11) Gene Buth with TTI indicated it is very difficult to determine the force in a crash test if the test article, in this case a concrete column, fails.
- 12) Testing will be performed on Design Concept 4 using a 80,000 lb tractor trailer with a deformable ballast at 50 mph. The second crash test will likely use an 80,000 lb tractor trailer with a deformable ballast at a speed to be selected after the project team reviews the results from the first test.
- 13) Gene Buth & Roger Bligh both agreed that the ultimate design force (currently 400 kips) should only be applied in the direction of travel. Current

specification requires the force to be applied in any direction. This recommendation will be included in the final report.

- 14) The meeting adjourned.