Pre-conference Workshop:
Geotechnical Considerations for Bridge Foundation Design & Construction
March 17, 2015
8:00 AM - 5:00 PM

Michigan Bridge Conference:
March 18, 2015
8:30 AM - 5:00 PM
Tuesday, March 17
Workshop: Geotechnical Considerations for Bridge Foundation Design & Construction

This workshop will provide younger geotechnical engineers, bridge designers and bridge owners a deeper understanding of geotechnical engineering techniques used during the geotechnical evaluation and design process for bridges, with the goal of improved bridge design team interactions. The morning sessions will provide overviews of:
- key Michigan soil formations
- geotechnical evaluations
- basic geotechnical engineering concepts used in bridge foundation and embankment designs

The key concepts will be demonstrated through a side-by-side analysis of two bridge abutments: with and without a large mass of Geofoam lightweight backfill.

The second half of the workshop will include bridge and geotechnical engineering case histories for projects with challenging geotechnical issues. In addition, the workshop has a goal of highlighting how the recent switch to Load and Resistance Factor Design (LRFD) in geotechnical engineering and abutment design has changed how we are designing bridge foundations and approach embankments; areas such as the requirements for inclusion of negative pile skin friction (down-drag) loads; differences in abutment lateral loading; and presentation of settlement analysis data.

**Schedule**
- 7:00 Check-in
- 8:00 Workshop Begins
- 10:00 Break (15 minutes)
- 12:00 Lunch
- 1:00 Afternoon Session
- 3:00 Break (15 minutes)
- 5:00 Adjourn

**Topics**
- LRFD Geotechnical Requirements
- Geotechnical Basics
- Michigan Geology Overview
- Abutment Wall Analysis
- Case Studies

New this year is an optional Buffet Dinner taking place after the Pre-Conference Workshop on Tuesday, March 17. The dinner is included in the registration fee. Please RSVP for the March 17 Buffet Dinner when registering.

Wednesday, March 18
Bridge Conference Agenda

7:30 Check-in
8:25 Opening Remarks
8:30 Federal Highway Administration Update
Mark Lewis, P.E., Michigan Division Bridge Engineer, FHWA
9:00 MDOT’s Bridge Innovation Hub
Beckie Curtis, P.E., Bridge Management Engineer, MDOT
Matt Chynoweth, P.E., Engineer of Bridge Field Services, MDOT
9:30 Local Bridge Program Update
Keith Cooper, P.E., Bridge Program Manager, MDOT
10:00 Question & Answer Period
FHWA & MDOT
10:15 Break
10:30 Environmental Concerns & Culvert/Bridge Design
Barb Barton, Aquatic Resources Specialist, MDOT
11:15 Effect of Pile Driving Induced Vibrations on Nearby Structures
Richard D. Woods, Ph.D., Professor Emeritus, University of Michigan
12:00 Lunch
1:00 Michigan Transportation Asset Management Council Update
Roger L. Safford, P.E., Region Engineer, MDOT & TAMC Chairman
1:30 Automated Scour Monitoring
Andrew Swartz, Ph.D., Michigan Technological University
2:15 Break
2:30 Pine Island Bridge Restoration/Rehabilitation
Tom Byle, P.E., Assistant Director of Engineering, Kent CRC
Mike TenBrock, Project Engineer, Kent CRC
3:15 Bridge Deck Joint Replacement
Neal Carbomeau, P.E., Transportation Training Institute
4:00 Zilwaukee Bridge Repair & US 131 over the Muskegon River Rehabilitation Project
Matt Chynoweth, P.E., Engineer of Bridge Field Services, MDOT
Corey Rogers, P.E., Bridge Construction Engineer, MDOT Bridge Field Services
5:00 Adjourn
Registration
You must register separately for each event (see costs below). Seating is limited; please register early to ensure participation.

Pre-conference Workshop: Geotechnical Considerations for Bridge Foundation Design & Construction
Employees of Public Agencies.............................................$75
Employees of Private Companies........................................$95
Register here for the Pre-Conference Workshop

Michigan Bridge Conference
Employees of Public Agencies.............................................$95
Employees of Private Companies........................................$120
Register here for the Bridge Conference

Visa and MasterCard are accepted. If you have special dietary needs, please notify us in advance and we will accommodate you to the best of our ability.

The costs for each event include break refreshments, lunch, conference materials, and the optional buffet dinner on Tuesday, March 17, after the Pre-Conference Workshop. The registration fee does not include hotel accommodations.

A limited number of MDOT participants have been approved to attend. MDOT staff need to contact Julia Tanner at (517) 335-2177 to be added to that list prior to registration.

Cancellation Policy: No-shows and cancellations within three business days prior to the workshop or conference will be charged the full registration fee. Substitutions will be accepted.

Questions? Email ctt@mtu.edu, or contact the Center for Technology & Training by calling (906) 487-2102.

Continuing Education
This workshop and conference will provide information about bridge inspection, research, construction, repair, and management. The workshop and conference count for 7.5 and 7 instructional hours respectively for Continuing Education for Professional Engineers. It had not yet been determined if the 2015 Michigan Bridge Conference Workshop will qualify for bridge inspection recurrent training as defined by The National Bridge Inspection Standards (NBIS).

See the CTT’s policy for Continuing Education for Professional Engineers in Michigan here.

Accommodations
Rooms have been reserved at the Doubletree by Hilton Bay City - Riverfront Hotel. Rooms are available on a first-come, first-served basis at a rate of $85.00 per room. To reserve a room at this rate, call the Doubletree by Hilton at (989) 891-6000 and mention the Michigan Bridge Conference.

Location
Doubletree by Hilton Bay City - Riverfront Hotel
1 Wenonah Park Place
Bay City, MI 48708

Directions to Hotel/Conference Center
From Interstate I-75, take Exit 162A East (M-25) for two miles. The hotel is just over the bridge on the left along the Saginaw River. After crossing the bridge, turn left at the first light onto Saginaw Street. Drive two blocks, then turn left on 6th Street. The entrance will be straight ahead.

Follow signs inside the hotel to the conference room.