About the Conference

Auburn’s Civil Engineering Department and the Program Committee have designed the Fifty-Fifth Annual Transportation Conference for federal and state highway personnel, road building contractors, general contractors, heavy construction contractors, utility contractors, county engineers, consulting engineers, construction material vendors, researchers, professional society representatives, and university faculty members. It provides an opportunity for these individuals to share innovative advances in transportation planning, engineering design, and construction.

The conference presents technical presentations to provide a forum for the exchange of ideas within the highway engineering and construction professions. The sponsorship of the annual conference is indicative of the broad cross section of interest in the programs of this one and a half day continuing education event.

Location and Schedule

The conference will be held at the Renaissance Montgomery Hotel & Spa at The Convention Center, located at 201 Tallapoosa Street, Montgomery, Alabama. Final registration and check-in will be held from 8:30 a.m. to 10:30 a.m. in the Main Lobby on Thursday, February 23, 2012. The Opening General Session begins at 10:30 a.m. in the Performing Arts Center on the second floor. The conference will adjourn Friday afternoon, February 24, 2012.

Registration and Fee

All persons attending the conference must register. The registration fee of $200 includes all sessions, program materials, refreshment breaks, and luncheons. Additional luncheon tickets are available at the registration desk. Student and ALDOT retiree registration is $50.

To register, please complete the attached registration form and return it to the address indicated, or call us at (800)446-0382, (334) 844-4370, or FAX (334) 844-5715. On-line registration is available at www.engce.auburn.edu

Accommodations

Participants are responsible for making their own lodging arrangements. A block of rooms have been reserved at the conference hotel.
Cancelation Policy

Due to commitments to our speakers and facilities, the registration fee is non-refundable if a registrant withdraws less than five business days before the program starts. Substitutions may be made at any time, please notify us in advance if possible. No-shows will be liable for the entire conference fee.

Auburn University reserves the right to cancel any program due to insufficient registrations. This decision is usually made no later than five business days prior to the event. If a program is canceled for any reason, all fees will be refunded. Auburn University will not be responsible for travel expenses incurred by a registrant as the result of a canceled program.

Continuing Education

Participants in this conference will be able to attend up to eight (8) hours of technical programs. Auburn University makes every effort to ensure that its technical programs conform to the requirements of the State of Alabama Board of Licensure for Professional Engineers and Land Surveyors for the award of Professional Development Hours to support the annual renewal of professional registration.

Participants with Disabilities

It is the policy of Auburn University to provide accessibility to its programs and reasonable accommodations for persons defined as having disabilities under the Americans with Disabilities Act of 1990. Please contact us at least two weeks prior to the program so that proper consideration can be given to any special needs.

Program Handouts

Handouts of the material presented at each session will be available for download two weeks after the conference. Presentations can be downloaded from: http://www.alabamat2.org

Program Committee

Alabama Department of Transportation (ALDOT)
John R. Cooper
Don Vaughn
Don Arkle
Rex Bush
Lamar Woodham
Mike Harper
John Eagerton
Buddy Cox
Ron Green
Tim Barnett
Barry Fagan

Ronnie Baldwin
Maxine Wheeler
Buddy Black
Bob Jilla
Ed Phillips
Jeff Brown
George Conner
Terry McDuffie
William Adams
Steve Walker

Auburn University

Robert Barnes
Bob Vecellio
Rod Turochy
Anton Schindler

Federal Highway Administration
Mark Bartlett and Robert King, Montgomery, Alabama

Alabama Road Builders Association
Billy Norrell, Montgomery, Alabama

Alabama Asphalt Pavement Association
Mel Monk, Montgomery, Alabama

Alabama Concrete Industries Association
John Sorrell, Montgomery, Alabama

Association of County Engineers of Alabama
Randy Cole, Columbiana, Alabama

Institute of Transportation Engineers, Alabama Section
Scott Holladay, Columbiana, Alabama

American Concrete Pavement Association, Southeast Chapter
Robert Taylor, Montgomery, Alabama

American Council of Engineering Companies of Alabama
Renee Casillas, Montgomery, Alabama

Bridge Construction Association of Alabama

Alabama Concrete Pipe Association
Fred Crawford, Montgomery, Alabama

Alabama Section, ASCE
David Webber, Mobile, Alabama

2012 Conference Outline
Thursday, February 23, 2012
8:30 a.m. Registration Opens
10:30 a.m. Opening General Session - Performing Arts Center
Presiding: Dr. Anton Schindler, Associate Professor and Director of the Highway Research Center, Department of Civil Engineering, Auburn University, Auburn, AL

Opening Remarks

Federal Perspective on Transportation
Mr. Victor Mendez, Administrator, Federal Highway Administration, Washington, DC

Economic Development in Alabama
Mr. Greg Canfield, Director, Alabama Development Office, Montgomery, AL

The Honorable Robert Bentley, Governor (Invited) State of Alabama
12:00 p.m. Governor’s Luncheon – Exhibit Hall C
Presiding: Dr. John Mason, Associate Provost and Vice-President for Research, Auburn University, Auburn, AL

Friday, February 24, 2012
8:30 a.m. Concurrent Technical Sessions
10:00 a.m. AASHTO Luncheon – Exhibit Hall C
Presiding: Dr. Michael Stalling, Head and Professor, Department of Civil Engineering, Auburn University, Auburn, AL

John R. Cooper, Transportation Director (Invited) Auburn Department of Transportation
1:30 p.m. Adjourn
Technical Sessions – Thursday, February 23, 2012

Deepwater Horizon Oil Spill Impacts
Meeting Room: Alabama A

Presiding: Mike Harper, Assistant Chief Engineer, Operations
ALDOT, Montgomery, AL

1:30 p.m. Deepwater Horizon Oil Spill Impacts on Alabama Beaches
Dr. Joel Hayworth, Department of Civil Engineering, Auburn
University, Auburn, AL

2:00 p.m. Application of Coastal Engineering Principles in Response to
the Deepwater Horizon Disaster: Lessons Learned in Coastal
Alabama
Dr. Bret Webb, Department of Civil Engineering, University of
South Alabama, Mobile, AL

2:30 p.m. Impact of Oil Spill on the Alabama Gulf Coast
Mayor Tony Kennon
City of Orange Beach, Orange Beach, AL

Meeting Room: Alabama B

Presiding: John (Buddy) Black, State Bridge Engineer
ALDOT, Montgomery, AL

1:30 p.m. Recent Trends in Texas Bridge Aesthetics
Dean Van Landuyt
Texas Department of Transportation, Austin, TX

2:00 p.m. Replace 14 Bridges in 10 Weekends? The Massachusetts
Fast 14 Project
Michael Culmo
CME Associates, Inc., East Hartford, CT

2:30 p.m. AASHTO Guide Specification for Seismic Design—Alabama
Bridges
Dr. Justin Marshall, Department of Civil Engineering, Auburn
University, Auburn, AL

Traffic Engineering
Meeting Room: Alabama CDE

Presiding: Scott Holladay, President
Alabama Section ITE

1:30 p.m. Reverse Angle Parking: Lessons in Implementation
Jennifer White
Traffic Engineering, Mobile, AL

2:00 p.m. Automated Photo Enforcement – History and Overview
Mark Bedard and Richard Kosina
GATSO USA, Beverly, MA

2:30 p.m. Thermal Imagery Video Detection
Jamie Jones
Southern Lighting & Traffic, Northport, AL

Meeting Room: Alabama A

Highway Safety

Presiding: Don Arkle, Assistant Chief Engineer, Policy and Planning
ALDOT, Montgomery, AL

3:30 p.m. Alabama’s Strategic Highway Safety Plan
Tim Barnett
ALDOT, Montgomery, AL

4:00 p.m. Drive Safe Revolution
Tony Harris
ALDOT, Montgomery, AL

4:30 p.m. Distracted Driving Issues
Clay Ingram
AAA Alabama, Birmingham, AL

Concrete
Meeting Room: Alabama B

Presiding: Steven Ingram, Testing Engineer, Bureau of Materials and
Tests, ALDOT, Montgomery, AL

3:30 p.m. Limestone Portland Cement for Sustainable and Durable
Construction
Tim Cost
Holcim (US) Inc., Canton, MS

4:00 p.m. Troubleshooting Concrete Specifications
Michelle Wilson
Portland Cement Association, Skokie, IL

4:30 p.m. Mitigation of Cracking in Cast-In-Place Box Culverts
Dr. Anton Schindler, Department of Civil Engineering,
Auburn University, Auburn, AL

Stormwater Runoff Control
Meeting Room: Alabama CDE

Presiding: David M. Webber, President
ASCE Alabama Section

3:30 p.m. New EPA Stormwater Requirements: Construction General
Permit
Mike Mitchell
US EPA Region 4, Atlanta, GA

4:00 p.m. New EPA Post-Construction Stormwater Requirements
Mike Mitchell
US EPA Region 4, Atlanta, GA

4:30 p.m. Benefits of Low Impact Develop regarding Post
Construction Stormwater Runoff
Beth Stewart
Cahaba River Society, Birmingham, AL

Technical Sessions – Friday, February 24, 2012

Surveying and Information Systems
Meeting Room: Alabama A

Presiding: William Adams, State Design Engineer
ALDOT, Montgomery, AL

8:30 a.m. Alabama/Florida and Mississippi/Louisiana Boundary
Surveys
Dr. Larry Crowley, Department of Civil Engineering,
Auburn University, Auburn, AL and
Milton Denny
Denny Enterprise, LLC, Tuscaloosa, AL

9:00 a.m. Geographic Information Systems for Alabama
Philipp Henderson, Alabama Geographic Information
Program Office, Montgomery, AL

9:30 a.m. Surveying with T-UDAR on Highway Projects
Marshall McLeod
Marshall A. McLeod, PLS, LLC, Mobile, Alabama

Maintenance
Meeting Room: Alabama B

Presiding: George Conner, State Maintenance Engineer
ALDOT, Montgomery, AL

8:30 a.m. Bridge Deck Repair Using Hydrodemolition
Eric Christie
ALDOT, Montgomery, AL

9:00 a.m. Fatigue Loadings on Overhead Sign Structures
Dr. Fouad H. Fouad, Department of Civil, Construction,
and Environmental Engineering, University of Alabama
Birmingham, Birmingham, AL

9:30 a.m. Controversial Content of the 2009 MUTCD
Stacey Glass
ALDOT, Montgomery, AL

Asphalt Pavements
Meeting Room: Alabama CDE

Presiding: Mel Monik, Executive Director, Alabama Asphalt
Pavement Association, Montgomery, AL

8:30 a.m. Pavement Factors Affecting Fuel Economy
Dr. Richard Willis
National Center for Asphalt Technology, Auburn, AL

9:00 a.m. Mechanistic-Empirical Pavement Design and DARWin
ME
Chris Wagner
FHWA Resource Center, Atlanta, GA

9:30 a.m. 2009 and 2012 Test Track Updates
Dr. Buzz Powell
National Center for Asphalt Technology, Auburn, AL
When Disaster Strikes...

Meeting Room: Alabama A

10:30 a.m. - 12:00 p.m.

Managing a Disaster: The Tuscaloosa Tornado
Mayor Walter Maddox
City of Tuscaloosa, Tuscaloosa, AL

ALDOT's Response and Recovery
Robin Rhodes
ALDOT, Tuscaloosa, AL

Learning from Extreme Events: Tornado Outbreaks of 2011
Dr. Andrew J. Graettinger, Department of Civil, Construction, and Environmental Engineering, University of Alabama, Tuscaloosa, AL

Roadway and Roadside Design

Meeting Room: Alabama B

Presiding: Joe Blankenship, Roadway Design Engineer
ALDOT, Montgomery, AL

10:30 a.m.
The New Edition of the AASHTO Green Book
Joe Ruffer
Mobile County, Mobile, AL

Summary of Major Changes in the AASHTO Roadside Design Guide
Frank Julian
FHWA, Atlanta, GA

11:00 a.m.
Roundabouts: Key Design and Operational Issues
Mark Doctor, FHWA, Atlanta, GA, and Scott Zehngraff, Georgia DOT, Atlanta, GA

Geotechnical Engineering

Meeting Room: Alabama CDE

Presiding: Kaye Chancellor Davis, Geotechnical Engineer, ALDOT, Bureau of Materials and Tests, Montgomery, AL

10:30 a.m.
Conservativeness in Drilled Shaft Design When Utilizing Rock Sockets
Robert Thompson
Dan Brown and Associates, Montgomery, AL

11:00 a.m.
Bankhead Tunnel Leakage
Luther Boudra
AMEC Engineering, Birmingham, AL

11:30 a.m.
Predicting Pile Setup (Freeze) for Driven Pile Foundations
Dr. Eric Stuart, Department of Civil Engineering, University of South Alabama, Mobile, AL