Fifty-Ninth Annual Transportation Conference
February 9-10, 2016

Sponsored by:

- Alabama Department of Transportation
- Federal Highway Administration
- Auburn University
- Alabama Road Builders Association
- Alabama Asphalt Pavement Association
- Alabama Concrete Industries Association
- ASCE, Alabama Section
- Association of County Engineers of Alabama
- Institute of Transportation Engineers, Alabama Section
- Alabama Concrete Pipe Association
- American Council of Engineering Companies of Alabama
- Bridge Construction Association of Alabama

About the Conference

Auburn’s Civil Engineering Department and the Program Committee have designed the Fifty-Ninth 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 Tuesday, February 9, 2016. The Opening General Session begins at 10:30 a.m. in the Performing Arts Center on the second floor. The conference will adjourn Wednesday afternoon, February 10, 2016.

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 by mail to the address indicated, by FAX (334) 844-5715, or by calling Engineering Continuing Education at (800) 446-0382 or (334) 844-4370. Online registration is available at www.engce.auburn.edu.

Accommodations

Participants are responsible for making their own lodging arrangements. A block of rooms has been reserved at the conference hotel. Room Block is listed under “59th Transportation Conference”. Rate: $131 plus taxes. Call (877) 545-0311. Reference # FFT
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.

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 licensure.

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.

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

\[\text{Program Committee}\]

**Alabama Department of Transportation (ALDOT)**
- John R. Cooper
- Rex Busch
- Lamar Woodham
- Curtis Vincent
- Stacey Glass
- Bob Jilla
- Ed Austin
- John Eagerton
- Michelle Owens
- Barry Fagan
- Johnny Harris
- Vince Calametti
- Don Arkle
- John Lorentson
- William Adams
- Buddy Black
- Scott George
- Steve Walker
- Tim Barnett
- Ed Phillips
- Maxine Wheeler
- DeJarvis Leon
- George Conner
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**Auburn University**
- Brian Anderson
- Jeff LaMondia
- Larry Sellers
- Rod Turochy
- Wesley Zech
- Garry Havron
- Justin Marshall
- Anton Schindler
- Richard Willis
- Hugo Zhou

**Federal Highway Administration**
- Mark Bartlett and Lewis Harden
  Montgomery, Alabama

**Alabama Road Builders Association**
- Tom Layfield, Montgomery, Alabama

**Alabama Asphalt Pavement Association**
- Mel Monk, Montgomery, Alabama

**Alabama Concrete Industries Association**
- John Sorrell, Montgomery, Alabama

**Alabama Section, ASCE**
- Shelia Montgomery-Mills, Birmingham, Alabama

**Association of County Engineers of Alabama**
- Derek Brewer, Ozark, Alabama

**Institute of Transportation Engineers, Alabama Section**
- Rod Turochy, Auburn, Alabama

**American Council of Engineering Companies of Alabama**
- Renée Casillas, Montgomery, Alabama

**Bridge Construction Association of Alabama**
- Travis Tyler, Montgomery, Alabama

**Alabama Concrete Pipe Association**
- Fred Crawford, Clanton, Alabama

\[\text{2016 Conference Outline} \]

**Tuesday, February 9, 2016**

- 8:30 a.m. Registration Opens
- 10:30 a.m. Opening General Session – Performing Arts Center
  Presiding: Dr. Rod Turochy, Associate Professor and Director of the Alabama Technology Transfer Center, Department of Civil Engineering, Auburn University, Auburn, AL

**Opening Remarks**

- Transportation Funding and the FAST Act
  Carlos Monje
  Assistant Secretary for Transportation Policy
  U.S. Department of Transportation, Washington, DC

- 12:10 p.m. Governor’s Luncheon – Exhibit Hall C
  Presiding: Dr. Chris Roberts, Dean
  Samuel Ginn College of Engineering
  Auburn University, Auburn, AL

- The Honorable Robert Bentley, Governor (Invited)
  State of Alabama

- 1:30 p.m. Concurrent Technical Sessions
- 3:00 p.m. Break
- 3:30 p.m. Concurrent Technical Sessions
- 5:00 p.m. Adjourn

**Wednesday, February 10, 2016**

- 8:30 a.m. Concurrent Technical Sessions
- 10:00 a.m. Break
- 10:30 a.m. Concurrent Technical Sessions
- 12:10 p.m. Transportation Director’s Luncheon – Exhibit Hall C
  Presiding: Dr. Andy Nowak, Chair and Professor
  Department of Civil Engineering
  Auburn University, Auburn, AL

- John R. Cooper, Transportation Director
  Alabama Department of Transportation

- AASHTO 25-Year Awards of Meritorious Service
- 1:30 p.m. Adjourn
### Traffic Operations
**Meeting Room: Alabama A**

**Presiding:** Rod Turochy, President  
Alabama Section ITE

- **1:30 p.m.**  
  Transportation System Management & Operation LT S  
  Not that Complicated  
  Kerry NeSmith  
  ALDOT Maintenance Bureau, Montgomery, AL

- **2:00 p.m.**  
  Performance Measures for Traffic Signals  
  Alex Hainen, Ph.D., Department of Civil, Construction, and Environmental Eng., University of Alabama, Tuscaloosa, AL

- **2:30 p.m.**  
  Operational Review of Georgia’s First DDI  
  Sean Coleman  
  Kimley-Horn, Atlanta, GA

### Advancing Asphalt Pavements
**Meeting Room: Alabama B**

**Presiding:** Aaron Foita, State Bituminous Engineer  
ALDOT, Montgomery, AL

- **1:30 p.m.**  
  15 Years of Findings from the Test Track  
  David Timm, Ph.D.  
  Department of Civil Engineering, Auburn University, AL

- **2:00 p.m.**  
  NAPA’s EPD Program for Asphalt Mixtures  
  Amlan Mukherjee, Ph.D.  
  Department of Civil and Environmental Engineering, Michigan Technological University, Houghton, MI

- **2:30 p.m.**  
  Ground The Rubber In Asphalt Mixtures; US-231 Case Study  
  Richard Willis, Ph.D.  
  National Center for Asphalt Technology, Auburn, AL

### Construction
**Meeting Room: Performing Arts Center**

**Presiding:** Curtis Vincent, State Construction Engineer  
ALDOT, Montgomery, AL

- **1:30 p.m.**  
  Update on I-59/I-20 Bridge Replacement Project in Birmingham Central Business District  
  Lance Taylor  
  ALDOT East Central Region, Hoover, AL

- **2:00 p.m.**  
  Update on the Bridge Slide on the Ross Clark Circle Project  
  Travis Tyler  
  McInnis Construction, Montgomery, AL

- **2:30 p.m.**  
  I-55 and Corridor X Interchange In Birmingham  
  Jacob Hudson  
  Stantec Inc., Birmingham, AL

### Highway Safety
**Meeting Room: Alabama A**

**Presiding:** Tim Barnett, Safety Operations Engineer  
ALDOT, Montgomery, AL

- **3:30 p.m.**  
  Impact of new MASH Crash Testing Requirements on ALDOT Operations  
  Tim Barnett  
  ALDOT, Montgomery, AL

- **4:00 p.m.**  
  Development of a Highway Safety Workforce In Alabama  
  Rod Turochy, Ph.D.  
  Department of Civil Engineering, Auburn University, AL

- **4:30 p.m.**  
  High Friction Surface Treatment; Kentucky Experience  
  Tracy Allen Lovell  
  Kentucky Transportation Cabinet, Frankfort, KY

### Preserving our Transportation Infrastructure
**Meeting Room: Alabama B**

**Presiding:** Scott George, Materials and Tests Engineer  
ALDOT, Montgomery, AL

- **3:30 p.m.**  
  Pavement Preservation: A Federal Perspective  
  Luis Rodriguez  
  Federal Highway Administration, Atlanta, GA

- **4:00 p.m.**  
  NCAT and MnROAD’s Partnership for Improving Pavement Preservation  
  Jason Nelson  
  National Center for Asphalt Technology, Auburn, AL

- **4:30 p.m.**  
  Alabama’s Pavement Management System  
  Frank Bell  
  ALDOT Bureau of Materials & Tests, Montgomery, AL

### Bridges
**Meeting Room: Performing Arts Center**

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

- **3:30 p.m.**  
  Emergency Repair of Bridge I-813 on I-495 over the Christina River, Delaware  
  Barry Benton  
  Delaware Department of Transportation, Dover, DE

- **4:00 p.m.**  
  Experimental Testing and Modelling of Steel Pipe Bridge Bents  
  Justin D. Marshall, Ph.D.  
  Department of Civil Engineering, Auburn University, AL

- **4:30 p.m.**  
  Renovations of the General W.K. Wilson, Jr, Bridge of the Mobile Tensaw River Delta  
  Michael Collier  
  Scott Bridge Company, Opelika, AL

### Innovative Technologies
**Meeting Room: Alabama A**

**Presiding:** Steve Walker, State Right of Way Engineer  
ALDOT, Montgomery, AL

- **8:30 a.m.**  
  ALDOT 3D Advancements  
  Zac Cooper and Matt Taylor  
  ALDOT Design Bureau, Montgomery, AL

- **9:00 a.m.**  
  V2V for Efficient Platooning of Heavy Trucks  
  David Bevly, Ph.D.  
  Dept. of Mechanical Engineering, Auburn University, AL

- **9:30 a.m.**  
  Reducing Highway Construction Cost Using 3D BIM Technology  
  Tate Jones  
  LandAir Surveying Company, Roswell, GA

### Geotechnical Risk Management
**Meeting Room: Alabama B**

**Presiding:** Kaye Chancellor Davis, State Geotechnical Engineer  
ALDOT, Montgomery, AL

- **8:30 a.m.**  
  Effects of Soil Variability on Geotechnical Analyses  
  Jack Montgomery, Ph.D.  
  Department of Civil Engineering, Auburn University, AL

- **9:00 a.m.**  
  ALDOT Implementation of LRFD Design & Construction Procedures for Driven Piles  
  Stephen M. Revell  
  ALDOT Bureau of Materials & Tests, Montgomery, AL

- **9:30 a.m.**  
  SCDOT Cylinder Pile Design-Phase Load Test Program  
  William M. Camp, III  
  S&amp;M, Inc., Charleston, SC

### Multimodal Transportation
**Meeting Room: Alabama CDE**

**Presiding:** Shelia Montgomery-Mills, President  
Alabama ASCE Section

- **8:30 a.m.**  
  Intermodal Issues and Freight Movement  
  Todd Jones  
  Alabama State Port Authority, Mobile, AL

- **9:00 a.m.**  
  State, Regional, and National TRIP Highway Statistics  
  Rocky Moretti  
  TRIP, Washington, DC

- **9:30 a.m.**  
  Overview of Mission and Operations of ALDOT’s Aeronautic Bureau  
  John Eagerton, Ph.D.  
  ALDOT Aeronautics Bureau, Montgomery, AL
February 10, 2016

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

Maintaining Alabama's Highways
Meeting Room: Alabama CDE

Presiding: Stacey Glass, State Maintenance Engineer
ALDOT, Montgomery, AL

10:30 a.m.  ALDOT's Tunnels for the National Tunnel Inventory
Eric Christie
ALDOT Maintenance Bureau, Montgomery, AL

11:00 a.m.  ALDOT's Transportation Asset Management Plan (TAMP)
Paul Carter, ALDOT Maint. Bureau, Montgomery and Rob Zilay, Dye Management Group, Inc., Kirkland, WA

11:30 a.m. District Manager Training
Stacey Glass
ALDOT Maintenance Bureau, Montgomery, AL

Bike/Ped Infrastructure and Implementation
Meeting Room: Alabama B

Presiding: Derek Brewer, President
Association of County Engineers of Alabama

10:30 a.m.  Birmingham’s Zyp Bikeshare Program
Lindsey West
Zyp, Birmingham, AL

11:00 a.m.  Downtown Mobile: Non-motorized Mobility Study
Tom Piper
South Alabama Regional Planning Commission, Mobile, AL

11:30 a.m. Anniston Bicycle and Pedestrian Integration Plan, Design and Implementation
Toby Bennington, City of Anniston, Anniston, AL, and Rod Wilburn, J.R. Wilburn and Assoc., Inc., Greenville, GA

Sustainability Issues
Meeting Room: Alabama CDE

Presiding: Barry Fagan, Environmental Program Engineering
ALDOT, Montgomery, AL

10:30 a.m.  TDOT Extreme Weather Vulnerability Assessment
Alan Jones
TDOT Research & Policy Office, Nashville, TN

11:00 a.m. Making the Business Case for Green Infrastructure
Bob Adair
Convergent Water Technologies, Houston, TX

11:30 a.m. U.S. Army Corps of Engineers Program Updates and Nationwide Permits
Craig Litkefen
US Army Corps of Engineers, Mobile, AL