

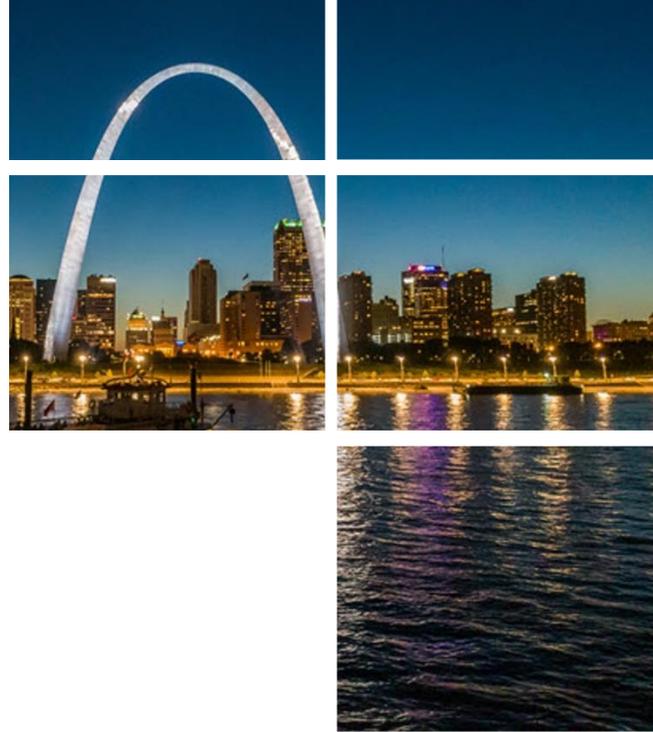


APWA Missouri Fall Conference

November 6 – 8

Union Station, STL, MO

CONFERENCE PROGRAM



SUNDAY, NOVEMBER 6

- **Registration // 3 – 5pm // REGENCY BALLROOM**
- **MO APWA Board Meeting // 2pm – 5pm // REGENCY A**
- **Exhibitor Setup // 5pm – 11:00pm REGENCY BALLROOM**
- **Get Acquainted Party // 5pm – 7pm // Sponsored by CAM**
 - Grand Hall at Union Station
 - 2 beverage tickets & light hors d'oeuvres
 - *Bonus – Grand Hall light show*



MONDAY, NOVEMBER 7

- **Registration // opens @ 7:30am**
- **Exhibit Hall**
 - All day (8am – 6pm)
- **Breakfast // 8:00am**
- **Welcome & AM Keynote // 8:05am – 9:20am // REGENCY BALLROOM**
 - (8:10a – 8:15a) Conference committee welcome
 - (8:15a – 8:25a) Local welcome & remarks – Betheryn Williams, City of St. Louis Director of Streets
 - (8:25a – 9:20a) KEYNOTE 'Creating a Culture of Inclusion' – Tabari Coleman

- **Technical Session 1 // 9:30am – 10:20am**

- **REGENCY BALLROOM: Automatic Pavement Distress Detection, PCI Evaluation and Interactive Map Visualization (Hamed Majidfard)**

Pavement distress inspections are performed using sophisticated data collection vehicles and/or foot-on-ground surveys. In either approach, the process of distress detection is human-dependent, expensive, inefficient, and/or unsafe. Automated pavement distress detection via road images is still a challenging issue among pavement researchers and computer-vision community. In this study, we annotated more than 20K images including google street-view, ARAN, 360 camera and dashcam view images with 28 categories of distresses for asphalt and concrete pavements. Afterward, a deep learning framework was implemented to train the model using the labeled dataset. Also, U-net based model is developed to quantify the severity of the distresses, and finally, a hybrid model is developed by integrating the deep CNN and U-net model to classify the distresses and quantify their severity simultaneously. The output of the distress classification and segmentation models are used to develop a comprehensive pavement condition tool which rates each pavement image according to the type and severity of distress extracted following ASTM D6433 standard. We have calibrated the models with 80 sections in the state Missouri (Jefferson City, Kansas city). As a result, we are able to avoid over-dependence on human judgement throughout the pavement condition evaluation process. The outcome of this study could be conveniently employed to evaluate the pavement conditions during its service life and help to make valid decisions for rehabilitation of the roads at the right time.

- **REGENCY A: Brickline Greenway Update (Mark Vogl, Great Rivers Greenway)**

Picture a community space that transcends boundaries – a vibrant, open and welcoming network of paths and places that invite discovery and exploration while creating equitable opportunities for everyone to thrive. A visionary project shaped from the voices of the people who will use it each and every day. This is the Brickline Greenway.

- **BREAK: 10:20 – 10:35**

- **Metro Mobile Tour // 10:20 – 11:25AM **this is a mobile tour that requires walking to the Union Station Metrolink****

- Meet near mobile tour sign in exhibit hall
 - **Please See Mobile Tour Program on our website for More Information/Registration Details**
 - **Tour Hosts (Kim Cella, Citizens for Modern Transit; Shelia Holm, AARP St. Louis & Jacque Knight, CMT)**

The transit stop transformation program, developed by Citizens for Modern Transit, seeks to better integrate transit hubs into the local community in which they are situated. Through a series of design interventions, the idea behind this program is that transit spaces can be beautiful, vibrant, and fun community assets for everyone to enjoy. Enjoy a quick Metrolink commute to the Emerson Park Station in East St. Louis to learn more about the program and one specific station. Through a strong partnership, CMT, AARP St. Louis and St. Clair County Transit District, have successfully changed a once boring and underutilized station into a community asset. The impact of the program can be felt regionally in St. Louis. As such, in 2021, the Transit Stop Transformation Program was awarded an Outstanding Local Government Achievement Award in Planning & Design Innovation by the East West Gateway Council of Governments.

- **Technical Session 2 // 10:35 – 11:25am**

- **REGENCY A: Bundling Infrastructures: Reinventing the MacArthur Bridge (Marcus Carter, Object Territories)**

This presentation will focus on the 1917 MacArthur Bridge in St. Louis, formerly known as the St. Louis Municipal Bridge, which exists as a critical freight and passenger (Amtrak) rail link across the Mississippi River but could serve as an armature for additional infrastructures. The St. Louis Metropolitan Area remains balkanized by infrastructural, geographic, economic, racial, and social barriers including the divide between the City of St. Louis and East St. Louis formed by the Mississippi River.

Bundling infrastructures can produce unexpected and mutually beneficial effects. Design concepts will be shown to illustrate possibilities for reinserting program into a bridge frame that has excess structural capacity and space. The first will come from our proposed masterplan for the Chouteau Greenway Competition. Other examples, from academic design studios, will illustrate further possibilities of reimagining this historic piece of infrastructure. Relevant precedent examples will be discussed – designed and completed in the US as well as in cities abroad – to illustrate how similar cases have been revitalized.

- **REGENCY B: The Growing Need and Value of Pavement Management (Jeremy Kaemmer, HR Green)**

This presentation will illustrate the real costs of maintaining the transportation network and how cities can plan for the future with sustainability in mind. We will present a case study for how to deal with the challenges of maintaining streets. The learning objectives are to explain the forces behind our growing needs for pavement management, exploring successful pavement management applications as well as lessons learned, and then inform the audience of resources available to communities to perform pavement management in their jurisdictions.

- **Lunch & Keynote // 11:30a – 1:30pm // REGENCY BALLROOM**

- (11:45a – 12:15a) ACEC Legislative Updates – Morgan Mundell
 - (12:15p – 1:30p) The Role of Public Works in Economic Development – Jason Hall, Greater St. Louis Inc.

- **BREAK: 1:30pm – 2pm**

- **Historical Union Station Walking Mobile Tour // 2pm – 3:30pm **this is a mobile tour that requires some walking around Union Station****

- Meet near mobile tour sign in exhibit hall
 - **Please See Mobile Tour Program on our website for More Information/Registration Details**
 - **Tour Hosts: Darlene Menietti**
 - The first train pulled into Union Station on September 1, 1894 at 1:45pm, ushering in a new and exciting time for St. Louis. The city known for being the gateway to the West suddenly became a gateway to all of America. Over the next several years, Union Station would become one of the largest and busiest passenger rail terminals in the world. Come join us for this brilliant walking tour of the main floor, from 18th to 20th Streets. Including the Grand Hall, the Women's Waiting Room, Fred Harvey Restaurant and Terminal Hotel.

- **Bike St. Louis Mobile Biking Tour // 2pm – 4pm **this is a mobile tour that requires biking 7 – 10 miles at a casual pace*****

- Meet near mobile tour sign in exhibit hall
 - **Please See Mobile Tour Program on our website for More Information/Registration Details**
 - **Tour Hosts: John Kohler, PE, City of St. Louis Board of Public Service; Scott Ogilvie, City of St. Louis Planning & Design Agency; Jacque Knight, CMT**

Shift gears with us! Come learn about all the exciting multimodal infrastructure enhancements in St. Louis. While biking through the heart of the city, you will get the chance to learn about all the exciting projects we have taking place here in St. Louis. Tour participants will be able to experience recently constructed projects as well as visit planned future projects as we imagine the future of a more bikeable City. Participants will be required to wear a helmet.

- **Technical Session 3 // 2pm – 2:50pm**

- **REGENCY BALLROOM: Cole Creek Flood Reduction (Marc Eshelman, M3 engineering)**

M3 Engineering performed an alternatives analysis and design to alleviate flooding of residential and apartment structures along several miles of Cole Creek in the City of St. Charles, MO. Residents along Cole Creek have suffered from flooding for several years, so the City committed to implementing a multifaceted project to address the situation. Using XP-SWMM to model the open and enclosed storm systems, M3 determined that the root cause of the flooding includes undersized bridges, a lack of stream capacity and houses that were simply built within the floodplain.

The preferred flood reduction solution included: replacing a Norfolk Southern Bridge; replacing two vehicular bridges; widening Cole Creek.

- **REGENCY A: Columbia Roadway Safety Audit (Shawn Leight, Brian Rensing & Joanne Matin, CBB)**

The City of Columbia developed a goal of Vision Zero in 2017. This first Vision Zero Action Plan developed a transportation strategy that is a data-driven to achieve zero traffic deaths or serious injuries on Columbia roadways. This approach is comprehensive and considers all road users, including those more vulnerable road users such as people walking, biking, using a wheelchair, or public transit. These more vulnerable road users are more likely to be killed in a crash, and a such prioritizes safety treatments around these users to minimize fatalities and serious injuries.

- **Technical Session 4 // 3pm – 3:50pm**

- **REGENCY A: Taking the Next Step: A Creative Approach to Form and Function in Stormwater Management (Chantal Block & Jay Wohlschlaeger, SWT Design)**

For many, the perspective of green infrastructure is an individual rain garden or permeable parking lot. This discussion looks at the ongoing challenges of regional stormwater management and the rings of opportunities / benefits that can be derived from a community-wide approach to investing stormwater management as both a utilitarian necessity and a functional amenity.

- **REGENCY BALLROOM: The Latest & Greatest Innovations in Concrete Pavements (Jesse Jones, ACE)**

With a focus on sustainable pavements, the concrete industry continues to advance technologies that are sure to meet the engineering needs for our pavements, and the environmental health needs for home sweet home, Mother Earth! In this session, learn about advancements in:

- Nanosilica Technologies
 - Carbon Sequestering and Curing
 - Next Generation Maturity Testing

- **BREAK: 4pm – 4:30pm**

- **Exhibitor Happy Hour // 4:30pm – 6pm // REGENCY BALLROOM**

- Exhibit hall
 - 2 beverage tickets & snacks

- **Monday Night Social // 6:30pm – 9:30pm // VIP Pitch Club @ Centene Stadium // Sponsored by Missouri Petroleum**

- **Check out the new home of the STL City SC !!**
 - 2 beverage tickets & BBQ buffet dinner
 - Tours of the stadium



TUESDAY, NOVEMBER 8

- **Exhibit Hall**
 - ½ Day (8am – 11:30am)
- **Breakfast // 8:00am**
- **Chapter Meeting & Strategic Plan Update // 8:15am – 9:30am // REGENCY BALLROOM**
 - (8:15a – 8:30a) Missouri Chapter Meeting
 - (8:30am – 9:05am) Missouri Awards
 - (9:05a – 9:30a) Update to the Missouri Chapter strategic plan
- **BREAK: 9:30am – 9:45am**
- **Technical Session 5// 9:45am – 10:35am // REGENCY BALLROOM**
 - ***Connected 2050 – Integrating Equity in the Long-Range Transportation Planning Process (Saranya Konala, East West Gateway Council of Governments)***

East-West Gateway Council of Governments (EWG) is developing the region's long-range transportation plan which is set to be adopted in June of 2023. This plan sets EWG's vision and priorities for the St. Louis transportation system including highways, bridges, public transit, bicycle and pedestrian routes, and serves as the framework for regional transportation decision-making and investments. As a part of the Connected 2050 planning process, EWG is examining past transportation investments in our region through an equity lens. This analysis will examine how transportation funding has historically been spent across different types of projects and geographic areas within our region, and how those investments have affected different populations. The analysis will provide a framework for analyzing future transportation decisions and their impacts on the region's communities.
- **Technical Session 6 // 10:45 – 11:35AM // REGENCY BALLROOM**
 - **Next Generation Engineered Crumb Rubber Asphalt Pavements In Missouri: Lower Cost, Sustainable Pavements (Redmond Clark, PhD, President, Asphalt Plus)**

Public works engineers are facing an increasing series of demands for paving projects that include static or declining paving budgets, increasing needs for pavement repair and replacement, and now, increasing demands for environmentally “sustainable” pavements. Over the past two decades, industry and university researchers have developed and deployed new asphalt paving tools that allow the cost-effective inclusion of chemically modified recycled tire rubber as a mix modifier. Engineered Crumb Rubber (ECR)-modified asphalt mix designs have been extensively used in US and EU pavements for more than 20 years. ECR offers road owners some interesting road design options and benefits, including replacement of polymer modification on arterial roads, reduction of pavement and overlay thicknesses without a reduction in pavement life, and extension of pavement life. MODOT has now specified the use of ECR in state-funded road construction projects, and various Missouri cities and counties are including or considering the inclusion of ECR in their efforts to reduce pavement LCC. Researchers will briefly summarize the history and past failures associated with tire rubber in asphalt, describe the technology enhancements that now allow cost-effective inclusion of tire rubber in roads, discuss the extensive field experience with ECR pavements in both the US and in Europe, the sustainability impacts of ECR in pavements and potential economic impacts of ECR on light, medium and heavy-traffic roads, and specification options for Missouri road owners.

See you at MidAM in Overland Park! May 22 – 24, 2023!



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