



ITS Heartland 2016 Annual Meeting

Des Moines, Iowa | April 25-27, 2016

Sheraton West Des Moines
West Des Moines, Iowa

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Catch Des Moines, IA

Welcome



Welcome to Iowa! On behalf of the ITS Heartland Board of Directors, I would like to thank you for joining us in Des Moines. Each year we strive to bring you an event that is not only informative, but also provides exceptional networking opportunities—this annual meeting will not disappoint.

Since our last meeting in Omaha, we have been busy managing the MCOMP grant, providing additional training opportunities for our membership through webinars and on-site training, conducting Operation Working Group webinars, and preparing for the 2016 Annual Meeting. We have also been able to increase our presence in the world of social media by frequently sharing information on current industry trends, upcoming webinars, and other relevant information. This is all great news.

The board also had a wonderful time reviewing presentation abstracts for this year's meeting—we had an outstanding number of replies from across the country. Thank you to everyone who submitted! The board regrets that it couldn't squeeze every idea into the meeting agenda. That said, we do believe you will find some fine presentations here in Iowa.

Finally, I want to take a moment to thank our generous vendors and sponsors. Your continued involvement with ITS Heartland is greatly appreciated and allows us to host this successful meeting each year.

It has been a pleasure working with the outstanding ITS Heartland Board of Directors and serving as the President.

I hope you enjoy your time in Iowa.

Sincerely,

Mandy Anderson
ITS Heartland President, 2015 - 2016



ITS Heartland Meeting App

1. Download Yapp from your App store
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What you didn't know about Des Moines?

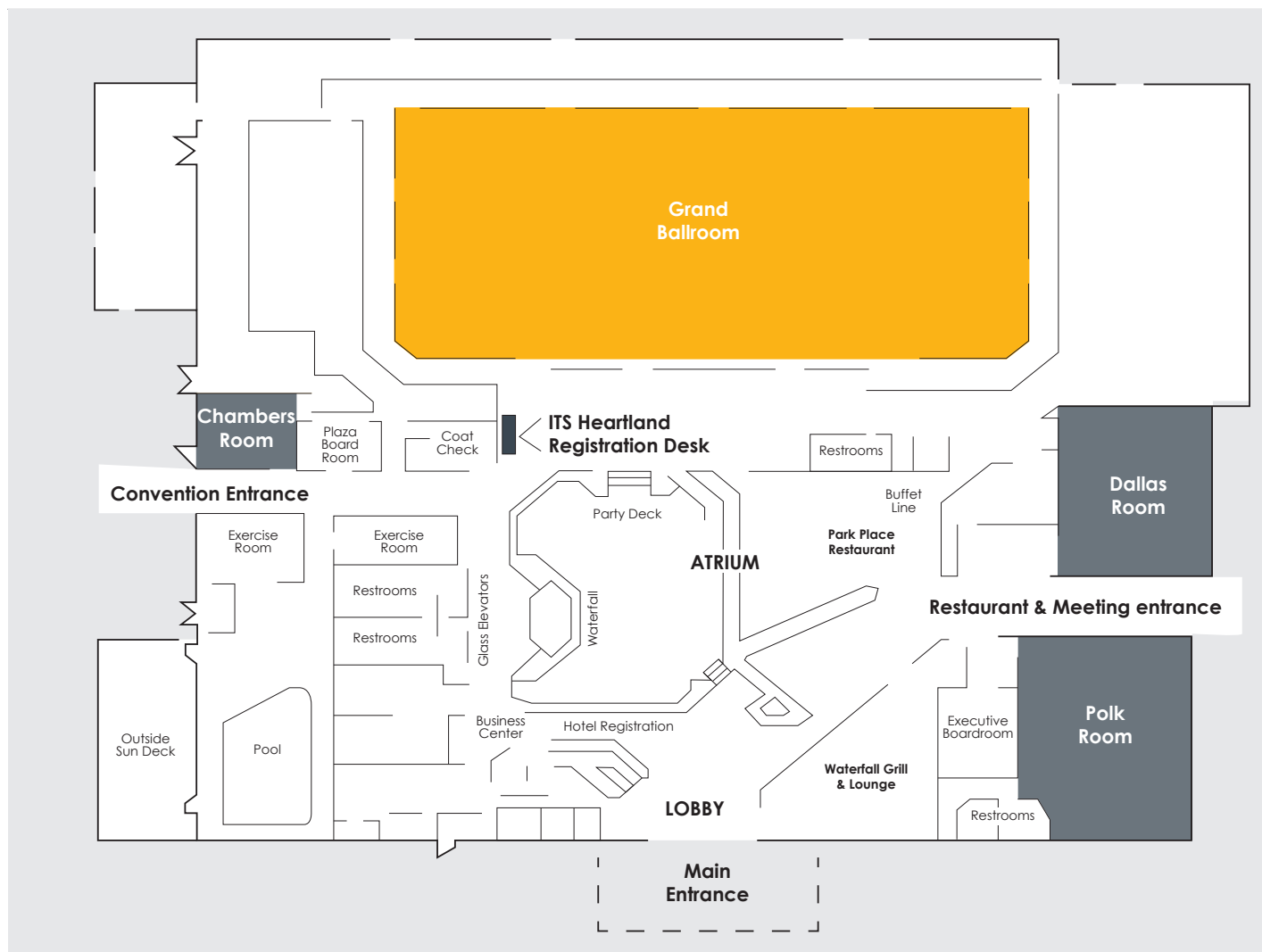
- Des Moines originated as "Fort Raccoon," but was later renamed "Fort Des Moines" after the river of the same name.
- Des Moines was ranked the best city for Business in 2010 by none other than Forbes Magazine.
- When it comes to insurance agencies, Des Moines is the third largest city in the world with London and Hartford being the two leading cities.
- Des Moines has been given the honor of being named one of the best mid-sized cities when it comes to the quality of life the residents have.
- Des Moines plays host to the Iowa caucuses every four years. Each week more than 77,000 people travel to downtown Des Moines to work.
- The capitol building in Des Moines is ranked as the number one tourist attraction.
- Gray's Lake Park, located very close to downtown Des Moines, offers its visitors the chance to take a stroll in a more relaxed and friendly environment than the crowded city streets offer. The park offers walking trails and a lake where you can rent paddle boats and sailboats.
- Des Moines is home to the world renowned Iowa State Fairgrounds and the Iowa Barnstormers.



Don't miss out...download the Conference App!

1. Download Yapp from your App store
2. Yapp ID: ITSH2016

Find your way



Why Join ITS Heartland

Our Mission:

To improve the quality of life for those transportation users who live and invest in America's Heartland Region through advanced transportation technologies and communications.

Join or Renew your Membership today!

♥ itsheartlandmembership.org

Heartland Members get:

1. A reduced rate for our annual meeting.
2. A one-year subscription to ITS Heartland Pulse.
3. Exclusive access to ITS training.
4. Many networking opportunities with other professionals in ITS.
5. Essential information on the newest products and services provided by our industry leaders.
6. BEST of ITS Awards - ITS Heartland Annual BEST Awards provide an opportunity for members to showcase award-winning projects, products and services.

Meeting at-a-glance

Monday, April 25th - Pre-meeting Events

Registration	7:30 am - 6:30 pm
National Traffic Incident Management (TIM) Training	8:30 am - 2:30 pm
Lunch	12:30 - 1:30 pm
8 th Annual ITS Heartland Operations Symposium	1:30 - 4:00 pm
Break	4:00-4:30 pm
ITS Heartland Board Meeting	4:30 - 5 :30 pm
Social Event at The Tavern II.....	6:00 - 9:00 pm

Tuesday, April 26th - ITS Heartland Annual Meeting

Registration	7:00 am - 5:30 pm
Vendor Breakfast.....	7:30 - 8:30 am
Opening Session.....	8:30 - 9:30 am
Vendor Showcase.....	9:30 - 10:00 am
Student Poster Session and Refreshments	10:00 - 10:30 am
State ITS Updates	10:30 am - 12:00 pm
Lunch/Award Ceremony	12:00 - 1:00 pm
TECHNICAL TOURS.....	1:00 - 4:30 pm
CONCURRENT SESSIONS.....	1:00 - 2:30 pm
Session 1 - Intelligent Work Zones	
Session 1A - Connected Corridors	
Break.....	2:30-3:00 pm
CONCURRENT SESSIONS / DEMOS.....	3:00 - 4:30 pm
Session 2 -Innovations in Operations Management	
Session 2A - Special Events	
Session 2B - Vendor Demonstrations (TBD)	

Wednesday, April 27th - ITS Heartland Annual Meeting

Registration	7:30 am - 12:00 pm
Breakfast.....	7:30 - 8:30 am
Business Meeting	8:00 - 8:30 am
CONCURRENT SESSIONS.....	8:30 - 10:00 am
Session 3 -Dynamic Message Sign Technologies	
Session 3A - Traffic Management	
Break	10:00-10:30 am
CLOSING SESSIONS.....	10:30 am - 12:15 pm
Session 4 - What's New and Looking Ahead	
Annual Meeting Closing Remarks	



Did you know?

ITS Heartland has over 350 Members

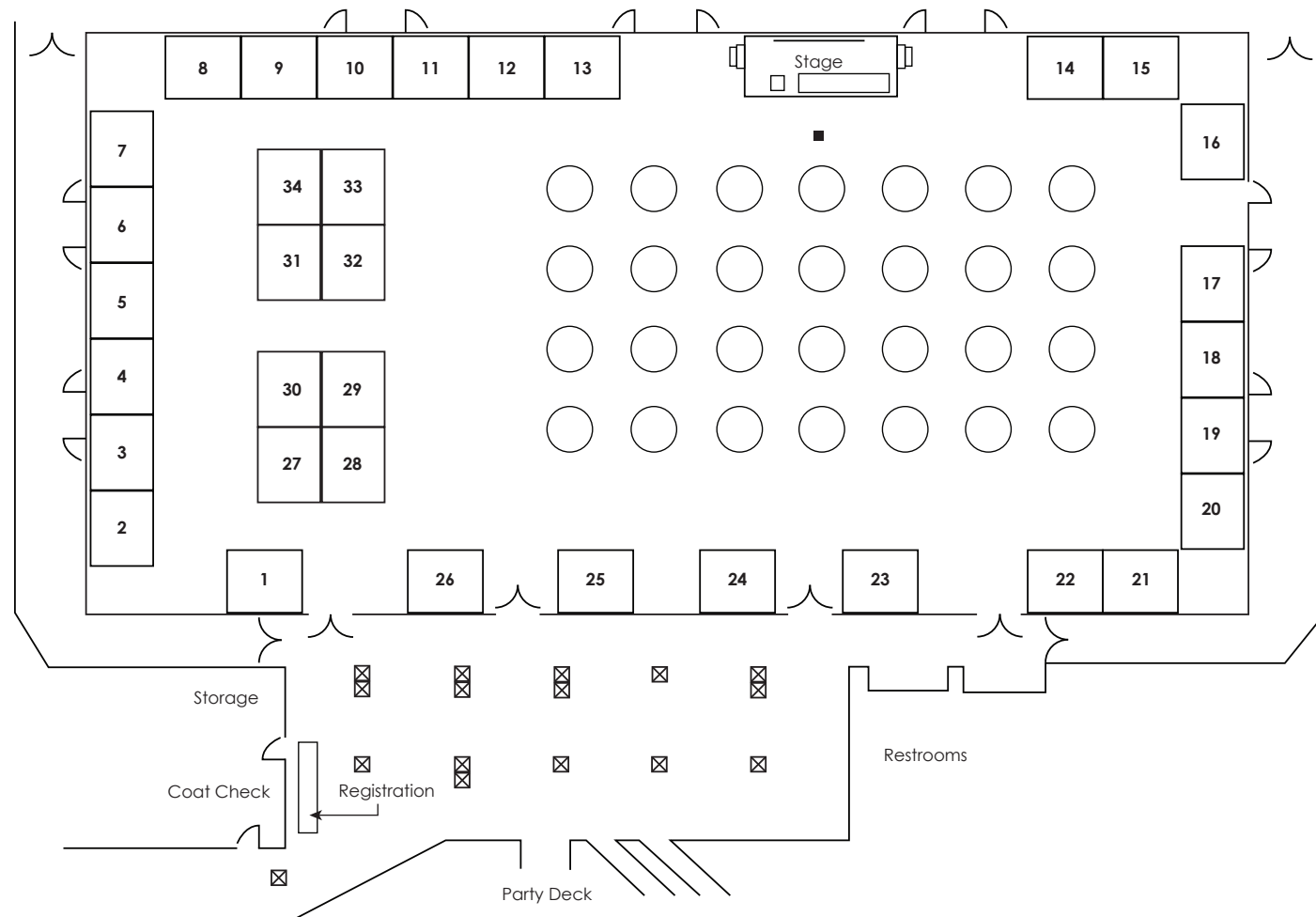
Vendor Exhibits



Get Vendor Info on the Conference App

1. Download Yapp from your App store
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Meet you in the Grand Ballroom



Please take a moment to stop by and visit your vendors. The vendors will have displays in the Grande Ballroom beginning Tuesday, April 26th and continuing through Wednesday, April 27th.

- | | | |
|--------------------------------|------------------------------|---------------------------------|
| 1 TAPCO | 13 Street Smart Rental | 25 Traffic Control Corporation |
| 2 Olsson Associates | 14 Boschung America | 26 Mid American Signal |
| 3 EtherWAN Systems, Inc. | 15 American Signal Company | 27 Rhythm Engineering |
| 4 SES America | 16 SkyBracket | 28 Multilink, Inc. |
| 5 TKH Security Solutions | 17 Iteris, Inc. | 29 Swarco |
| 6 Black and McDonald | 18 MoboTrex | 30 CohuHD Costar |
| 7 Larson Data Communications | 19 Southern Manufacturing | 31 Skyline Technology Solutions |
| 8 Siemens/RUGGEDCOM | 20 Daktronics | 32 GRIDSMART Technologies |
| 9 Bosch Security Systems, Inc. | 21 Vaisala | 33 MG Squared |
| 10 TrafficVision | 22 Wireless Technology, Inc. | 34 Sensys Networks |
| 11 gba Systems Integrators | 23 General Traffic Controls | |
| 12 SRF Consulting | 24 ADDCO | |

Detailed Schedule

full presentations at itsheartland.org

Monday, April 25th - Pre-Meeting Events

Registration (Conference Foyer).....7:30 am - 6:30 pm
Attendees are invited to stop by and pick-up their registration packets prior to attending Monday's event.

National Traffic Incident Management (TIM) Training (Dallas Room).....8:30 am - 2:30 pm
A coordinated, multi-disciplinary training program developed through the second Strategic Highway Research Program (SHRP2) for emergency responders and those supporting Traffic Incident Management operations.

Lunch (Atrium)..... 12:30 - 1:30 pm
TIM Training and Operations Symposium attendees are invited to lunch.

8th Annual ITS Heartland Operations Symposium (Dallas Room)..... 1:30 - 4:00 pm
A working session sponsored by the ITS Heartland Operations Working Group.

- A look at a mature statewide operation center, Maryland's Coordinated Highways Action Response Team (CHART) - Rick Dye, CHART.
- Discussion on the Multistate Corridor Operations and Management Program Grant - Project Direction and Future Actions - MCOMP Steering Committee
- Roundtable discussion for traffic operations and management professionals

Break (Outside Dallas Room)4:00 - 4:30 pm

ITS Heartland Board Meeting (Chambers Room) 4:30 - 5:30 pm

Social Event at The Tavern II..... 6:00 - 9:00 pm
Just a short walk from the Sheraton, join friends and colleagues for the exciting kick-off to the 2016 Annual Meeting. This networking event will include two drink tickets per attendee, appetizers and pizza at a locals' favorite restaurant - The Tavern II. The evening will feature one of Des Moines most popular musicians, Tony Bohnenkamp.

Tuesday, April 26th - ITS Heartland Annual Meeting

Registration (Conference Foyer).....7:00 am - 5:30 pm
Attendees are invited to stop by and pick-up their registration packets prior to attending any sessions.

Vendor Breakfast (Grand Ballroom).....7:30 - 8:30 am
Enjoy a nice breakfast buffet with the vendors. Student posters will be on display.

Opening Session (Grand Ballroom) 8:30 - 9:30 am
The opening session will feature welcoming remarks by dignitaries who will extend a welcome to attendees and set the stage for the meeting.

Moderator: Mandy Anderson, ITS Heartland President, GBA
Keynote Address: John Corbin, Federal Highway Administration
A Message from ITS America: TBD, ITS America

Vendor Showcase (Grand Ballroom) 9:30 - 10:00 am
Vendors will introduce their product/service to the entire group.

Student Poster Session and Refreshments (Grand Ballroom)..... 10:00 - 10:30 am
Use your break to learn from students. View their posters and visit one-on-one.

Tuesday, April 26th continued on next page ►



Schedule continued

State ITS Updates (Grand Ballroom).....10:30 am - 12:00 pm

Each state will provide an update regarding ITS accomplishments during the past year and planned deployments/products/operations in the near future.

- Moderator:** Mandy Anderson, ITS Heartland President, GBA
Iowa - Tim Simodynes, Iowa Department of Transportation
Kansas - Shari Hilliard, Kansas Department of Transportation
Missouri - Randy Johnson, Missouri Department of Transportation
Nebraska - Austin Yates, Nebraska Department of Roads
Oklahoma - Alan Stevenson, Oklahoma Department of Transportation

Lunch/Award Ceremony (Grand Ballroom) 12:00 - 1:00 pm

TECHNICAL TOURS (Meet at Registration Table) 1:00 - 4:30pm

Space is limited and PRIORITY will be given to those who have pre-registered, but registration is not required.

- City of West Des Moines Adaptive Traffic Signal Control Center** [1:00-2:00 pm or 3:00-4:00 pm]
Iowa DOT Statewide Traffic Management Center (in Ankeny) [1:00-3:00 pm or 2:00-4:00 pm]

2 TOUR TIMES

CONCURRENT SESSIONS..... 1:00 - 2:30 pm

Session 1 - Intelligent Work Zones (Polk Room)

Moderator: Rusty James, ITS Heartland Consultant Sector Director, Gannett Fleming, Inc.

Iowa DOT Traffic Critical Projects (TCP) Program

- Federal Work Zone Safety & Mobility Resources – Jon Jackels, SRF Consulting
- Iowa TCP Program – Mike Jackson, Iowa DOT
- Iowa Statewide Intelligent Work Zones and Traffic Incident Management – Tim Simodynes, Iowa DOT
- Council Bluffs Interstate System Reconstruction: TCP in Action – Tara Kramer, HDR

Smart Work Zone Technology: A Case Study on I-135 Reconstruction in Kansas - Slade Engstrom, TranSystems

Session 1A - Connected Corridors (Dallas Room)

Moderator: Kurt Rotering, ITS Heartland Secretary, Walter P. Moore

- **Connected Vehicle Environmental Applications via Cellular Network: Challenges with Latency** - Kiel Ova, Traffic Technology Services, Inc.
- **Traffic Signal Analysis using an Automatic Performance Measurement System** - Heng Hu, Live Traffic Data LLC
- **Unpredictable Traffic and Construction: How South Expressway Became an Adaptive Corridor** - Mark Franz, City of Council Bluffs and Jeff Riesselman, HDR

Break (Grand Ballroom)2:30 - 3:00 pm

CONCURRENT SESSIONS / DEMOS..... 3:00 - 4:30 pm

Session 2 - Innovations in Operations Management (Polk Room)

Moderator: Kurt Rotering, ITS Heartland Secretary, Walter P. Moore

- **iRWIS - The Municipal RWIS Solution - City of West Des Moines iRWIS Program** - Kurt Kinion, Vaisala
- **Innovations in Automating Real-Time Winter Road Condition Reporting** - Peter Davies, Castle Rock Associates
- **Low Cost Rural Roadway Cameras in Kansas** - Ron Hall, Kansas DOT

Session 2A - Special Events (Dallas Room)

Moderator: Therese Polum, ITS Heartland Consultant Sector Director, SRF Consulting Group

- **Collaborative Decision Making Tools for Significant Event Coordination** - Nikola Ivanov, UMD CATT Laboratory
- **The Impact of Cooperative Planning and Enhanced Traveler Services on Operations During Major Events** - Mary Farrell, Information Logistics, Inc.
- **Using ITS Technology to Improve Event Management Traffic** - Adam Lyons, Iteris, Inc.

Tuesday, April 26th continued on next page ►

Schedule continued

Session 2B - Vendor Demonstrations (Chambers Room)

TBD based on Registration

Wednesday, April 27th - ITS Heartland Annual Meeting

Registration (Conference Foyer)7:30 am - 12:00 pm

Attendees are invited to stop by and pick-up their registration packets prior to attending any sessions.

Breakfast & Business Meeting (Grand Ballroom)7:30 - 8:30 am

The ITS Heartland business meeting is scheduled during breakfast starting at 8:00 am

CONCURRENT SESSIONS..... 8:30 - 10:00 am

Session 3 - Dynamic Message Sign Technologies (Polk Room)

Moderator: Jamie Gilbert, ITS Heartland Vendor Sector Director, GBA Systems Integrators

- **Technology Scan and Best Practices - Full Color LED Dynamic Message Signs** - Matthew McLaughlin, HDR, Inc.
- **MoDOT Rural Queue and Delay Warning System** - K. Mark Sommerhauser, KC Scout/Missouri DOT
- **Travel Time Connectivity in Dynamic Messaging - Real and Predictive Travel Time Direct to DMS or Roadside Signage** - Mike McKay, SES America

Session 3A - Traffic Management (Dallas Room)

Moderator: Ron Hall, ITS Heartland State Director, Kansas DOT

- **Going Open - Challenges and Success in Deploying Open Source Transportation** - Mark Gallagher, SRF Consulting Group, Inc.
- **Traffic Incident Management - Connected Vehicle Considerations and National Responder Training Update** - Steven Cyra, HNTB Corporation
- **Intersection Conflict Warning Systems** - Willy Sorenson, Iowa DOT

Break (Grand Ballroom) 10:00 - 10:30 am

CLOSING SESSIONS (Grand Ballroom) 10:30 am - 12:15 pm

Session 4 - What's New and Looking Ahead

Moderator: Matthew Volz, ITS Heartland Treasurer, HDR

- **Update on the Multistate Corridor Operations and Management Program Grant** - Blake Hansen, Olsson Associates
- **Multistate Operations in the Great Lakes Megaregion** - Peter Rafferty, University of Wisconsin - Madison
- **MoDOT's Road to Tomorrow** - Marc Lewis, Missouri DOT

Annual Meeting Closing Remarks

Incoming ITS Heartland President – Tom Hein, Kansas DOT



WICHITA, KS

SAVE THE DATE

May 1-3, 2017

ITS Heartland
2017 Annual Meeting

www.itsheartland.org



- Kansas State Director**
Ron Hall, Kansas Department of Transportation
- Missouri State Director**
Randy Johnson, KC Scout/Missouri DOT
- Nebraska State Director**
Jessica Sherwood, Nebraska Department of Roads
- Oklahoma State Director**
Jared Schwennesen, Oklahoma Department of Transportation
- Vendor Sector Director**
Jamie Gilbert, GBA Systems Integrators
- Communications Director**
Matthew McLaughlin, HDR
- 2014-2015 Ex-Officio Board Members**
- Ex-Officio FHWA Representative**
John Perry, FHWA-Nebraska Division
- Ex-Officio Chapter Administrator**
Amy Lucke, Meetings Northwest, LLC

KANSAS CITY, MO is SMART CITY, USA

Smart Cities change the way municipality, industry & citizens live TOGETHER.

Kansas City is part of a leading edge movement to use advances in technology to change the way cities work—from more efficient management of infrastructure like traffic signals, streetlights and stormwater systems to new ways to engage with residents and visitors. These changes follow three major goals established in the KC Digital Roadmap:

- 1 to improve the delivery of City services
- 2 to enhance the citizen experience
- 3 to support entrepreneurship and economic development

The smart city initiative will also improve the way people experience Kansas City, from the flow of traffic to better city services to more FREE public Wi-Fi.

kcmo.gov/smartcity

Board of Directors

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Mandy Anderson, GBA
- Past President**
Sarah Tracy, Dakota County
- Vice President - President Elect**
Tom Hein, Kansas Department of Transportation
- Secretary**
Kurt Rotering, Walter P. Moore
- Treasurer**
Matthew Volz, HDR
- Consultant Sector Director #1**
Rusty James, Gannett Fleming
- Consultant Sector Director #2**
Therese Polum, SRF Consulting Group
- Academic Sector Director #1**
Peter Savolainen, Iowa State University
- Academic Sector Director #2**
Ronald Barnes, The University of Oklahoma
- Iowa State Director**
Tim Simodynes, Iowa Department of Transportation

supporting **community** through connectivity

- emergency response
- mobility
- community
- social media
- public wifi
- transit
- infrastructure
- business

K

Kansas City is a finalist in the US DOT Smart City Challenge. Learn More: transportation.gov/smartcity



Awards Did you know? In 2014, ITS America recognized ITS Heartland as an Outstanding State Chapter.

Student Contest

The ITS Heartland Student Contest will take place during the Annual Meeting. Attendees are invited to view student entries during breakfast and the morning break on Tuesday. A committee of ITS Heartland Board Members will judge the entries based on their abstracts submitted prior to the conference and their poster presentations during the conference. Prizes will be awarded for first, second and third place during lunch on Tuesday. Thank you to the following students for sharing their research.

- Tim Barrette, Iowa State University**
Data Driven Performance Analysis of Dynamic Message Signs
- Pranamesh Chakraborty, Iowa State University**
Using Statewide Performance Measures to Guide Policy Decisions
- Tingting Huang, Iowa State University**
Statewide Evaluation of Radar Sensor Using Self-health Monitoring Techniques
- Chenhui Liu, Iowa State University**
Evaluating Performance of Non-invasive Technology for Traffic Signal Operations
- Roozbeh Rahmani, University of Missouri-Columbia**
Work Zone Safety Assessment Software
- Shefang Wang, Iowa State University**
Performance Measures for Diagnosing Dynamic Message Sign Logic Discrepancies

Shuo Wang, Iowa State University
Performance Monitoring at Work Zone for improved Operations



Best of ITS Awards
The 4th Annual Best of ITS Awards recognized:

BEST ITS PROJECT: MoDOT Rural Queue and Delay Warning Project - Missouri Department of Transportation

Thank You

ITS Heartland would like to express our appreciation to the **state transportation agencies** for their continued support.



We also wish to thank the City of Des Moines & the City of West Des Moines for their support.



THANK YOU

PLATINUM Sponsors



GOLD Sponsors



A special thanks to all of our sponsors and vendors.

Your generous support makes not only this meeting possible, but all other ITS Heartland activities and accomplishments. We greatly appreciate the partnerships that further the mission of ITS Heartland.