

Oklahoma State Transportation Innovation Council (STIC)

Meeting Minutes

Tuesday, March 7, 2017 at 1:30pm

Location: Oklahoma History Center
Oklahoma Historical Society Boardroom

See attendance sheet for attendees. Lawrence Levesque and Michael Lynn joined over the phone line.

Dawn Sullivan and Basharat Siddiqi provided the welcome and opening remarks.

EDC-4 Innovations

Collaboration Hydraulics: Advancing to the Next Generation of Engineering (CHANGE)

Leslie Lewis, ODOT, provided an update on the CHANGE EDC-4 innovation. She and her team have downloaded the software and they have planned an April 5th kickoff meeting with Scott Hogan of the FHWA Resource Center Hydraulics Team. Leslie discussed comparing CHANGE's model to a local government 2D model on the North Canadian River at XXX Road.

Data-Driven Safety Analysis (DDSA)

David Glabas reported that ODOT Traffic Engineering has driven the HSIP for a while. ODOT Traffic Engineering and Strategic Asset and Performance Management offices are working together to use Decision Lens on a large and small construction project. Decision Lens is a multi-objective decision-making analysis tool that ODOT is using to help balance the priorities of safety, system improvements, and capacity (which all have different goals) to help balance goals and provide transparency for decisions. This is currently being piloted at ODOT. The objective of trying this tool is to help quantify and capture the safety benefits and calculate the expected crashes. Casey Shell and Dawn Sullivan are driving the pilot of Decision Lens at ODOT.

Glabas reported that Louisiana DOT has an interesting approach in incorporating safety into their projects. They treat it as an environmental process so they house it in their Environmental Division. David Glabas would like to go visit with Louisiana and see what their program is about. Siv Sundaram is supportive of this approach. In Louisiana they calculate the safety benefit of alternatives. Glabas noted he may try a pilot of this approach. Basharat Siddiqi offered to arrange a webinar first to provide ODOT with more details. Jerry Roche is the FHWA Resource Center contact for Data-Driven Safety Analysis. Glabas mentioned ODOT might form a monthly Traffic and Safety group within ODOT comprising of representatives from Traffic Incident Management, Environment, Traffic Geometrics, Data Analysis, and Pedestrian/Bicycle areas.

Viplava Putta, INCOG, updated the STIC on Safety Data. The City of Tulsa's Mayor wants a focus on safety of arterial streets. Tulsa is using state safety data supplemented with police and fire data that don't necessarily get entered into the Department of Public Safety (DPS) data. Tulsa is looking for top crash locations and making site visits.

Pavement Preservation (When, Where, How)

Louisa Ward, FHWA Oklahoma Division, gave the Pavement Preservation summary from the EDC-4 baseline report.

For Pavement Preservation, “How,” the champions have set a goal to institutionalize the chip seal technique statewide and to advance to the development stage for other innovative techniques. They have requested training, webinars, and workshops of the EDC-4 team.

For Pavement Preservation, “When and Where,” the champions have set a goal to go from the development stage to the demonstration stage. ODOT does have its pavement preservation policy which is based on traffic volume and pavement condition. These traffic volume and pavement condition indices (PCI) follow a decision tree that leads to some recommended preservation treatments. These treatments are recommended based on their past performance experience, and the availability of local materials and contractors. However, there is a desire to make this preservation program more systematic by considering complete service life and basing it on a life cycle cost analysis (LCCA) to optimize the infrastructure performance. They have requested training, webinars, and a peer exchange to learn more about LCCA and optimization processes from other state partners/peers and experts.

Road Weather Management – Weather Savvy Roads

Alan Stevenson reported that ODOT has installed tablets in 85 snowplows and have recalibrated them. Weather radar is now integrated onto maps that display the location of trucks. ODOT is working with the National Weather Service and moving toward Pathfinder. Pathfinder is the system to integrate weather and DOT data. Alan indicated he might be able to provide a presentation to the STIC on their efforts. Alan noted that this EDC-4 innovation has two parts: Pathfinder and Integrating Mobile Observations (IMO). One (Pathfinder) feeds data to the other (IMO). Alan is interested in getting additional people to join his EDC-4 implementation group. FHWA has been a resource by providing webinars.

Safe Transportation for Every Pedestrian (STEP)

Michael Hinkston, OSU LTAP, reported this implementation group has arranged for five workshops to be delivered in Oklahoma in November. Laura Chaney, ODOT, will help promote these workshops as will the Oklahoma Municipal League, LTAP, and TTAP.

Karla Sisco, OSU TTAP, reported that a Safety Peer Exchange for Tribes will be held May 18th or 19th. Karla is seeking speakers on the theme of Pedestrian Safety.

Michael Hinkston reported that the course registration is open for the FHWA course, Designing Pedestrian Facilities for Accessibility to be hosted in four locations in April. The FHWA course instructor, Patrick Gomez, will be returning in May to deliver an abbreviated course for APWA in the Cox Center.

Ultra-High Performance Concrete Connections for PBES (UHPC-PBES)

Walt Peters, ODOT, attended a webinar that went into depth on this very strong composite material with steel fibers. The unique challenge is to find a place to use this innovation. Peters reported that ODOT is teaming with the University of Oklahoma's Dr. Zaman and Dr. Floyd, with ODOT's Division 3 Field Office, and the FHWA Oklahoma Bridge Engineer, Randy Leonard, to work towards using UHPC-PBES to replace an expansion joint on the North Canadian River near Shawnee. The goal is to be able to turn the bridge back over to traffic quickly.

ODOT is thinking of using this in late August. Walt noted that they will need to add heat and use some mixers. This type of connection should be safer for snow plows (which tend to hit bridge elements). UHPC-PBES has been used in New York on about 40 bridges. Walt thanked Randy Leonard for attending the meeting and is appreciative of his assistance. Walt noted that ODOT plans to experiment with this as a pilot first. Dr. Floyd is trying to use Oklahoma materials to save money so this type of connection can be more competitive. Walt mentioned that Lake Eufaula might be another location for using PBES.

Using Data to Improve Traffic Incident Management

Alan Stevenson reported his team had a kickoff conference call on March 6 with FHWA Office of Operations which outlined TIM performance measures that they need to meet. Alan received some website resources to review. Raina Wilson, ODOT ITS, has gone through incident command training and will be working with DPS and responders.

Alan shared that there is a TIM Coalition of responders that have been meeting including ODOT and FHWA (Richard Jurey). Alan is stripping off ACOG 911 data from the website and trying to do this for Tulsa too. He strips off anything to do with highways or arterials. Alan then posts that data on the road conditions website. Part of road weather management is the road conditions map which Raina manages. This map is posted on the ODOT website.

Alan explained that the TIMS training focus on setting up traffic control to provide direction for drivers. In Oklahoma there have been 63 fatalities of wrecker drivers versus 5 of ODOT and Highway Patrol. Alan explained that part of the TIMS training effort is to get Towing and Wrecker services personnel trained so they can be safe. When crash victims are evacuated, the Wreckers are left without police and have to clean up the scene without additional traffic control. Michael Hinkston reported that all Safety Directors will be receiving TIMS training at ACCO.

Alan noted the data that needs to be collected includes: 1) the time it takes to get the lanes open, 2) the time it takes to get the site clear, and 3) secondary crashes.

Previous EDC Initiatives

- Shannon Sheffert, ODOT, reported on the EDC-3 Geosynthetic Reinforced Soil – Integrated Bridge System initiative (GRS-IBS). He shared photos from a recently completed bridge in Lincoln County which was a GRS-IBS bridge project with the Bureau of Indian Affairs. The Contractor remarked that it was labor intensive and new to them. They did not see any cost savings compared to driven pile abutments. The contractor was in favor of large blocks but with no specifications for the blocks, the concrete producers only make them when they have leftover concrete. The beams used in this bridge are from the Crosstown bridge. Shannon explained that the GRS bridge will last longer than one with driven pile abutments. Karla Sisco noted that the height of this particular bridge was taller than normal and may have affected the cost. Karla stated that four additional bridges have been constructed in Caddo County. Shannon offered that six GRS-IBS bridges have been built across the State.
- Alan Stevenson reported on EDC-3 initiative Smarter Work Zones. He explained that they are looking at trying to implement variable speed limits into Smart Work Zones. Dawn Sullivan noted that legislation was passed during the last session to allow variable speed limits.
- Road diets have been implemented by ODOT Division 4 and the City of Norman is working on one.
- Dr. Zaman stated they are working on Intelligent Compaction with Larry Patrick. Larry would like to obtain real-time data on the cores. The operators like to know that they have 94% density. Dr. Zaman reported on a T2 workshop this Thursday on Intelligent Compaction. They are discussing whether this should be a Quality Assurance (QA) or Quality Control (QC) tool. The current thinking is it should be a QC tool and it is not ready yet for an acceptance tool. Dr. Zaman is interested in taking data from twelve projects and using it to see what can be obtained in terms of density. Larry Patrick stated that in the field they need to look at the data and perhaps modify the special provision with OU and ODOT.
- Larry Patrick spoke on High Friction Surface Treatment noting that Dr. Buzz Powell, NCAT, spoke at their conference last week. Larry had several members submit materials including sandstone from Sawyer Quarry. They are still obtaining the same numbers and have not observed any cracking or rutting. The calcite bauxite numbers are going away quickly – turning very smooth. Bryan Cooper said ODOT is doing some testing on their sections.

Other Innovations

It was discussed that the Oklahoma STIC should undertake more outreach to spread the word about innovations and think about what the problems are that we need help with fixing. It was requested that the Special Initiatives subcommittee report at the next meeting. Dr. Zaman volunteered to join the Special Initiatives subcommittee.

ODOT Division 2 would like to try an on-system roundabout southwest of the town area of Madill on Route 99. The question was raised on whether to apply for AID funding for a Roundabout project. It was also raised that application for AID funding on Data-Driven Safety Analysis initiatives might be competitive.

New Business

Ron Curb presented an update on vehicle to vehicle technology and offered to provide a presentation on driverless vehicles during the next meeting.

Dawn Sullivan discussed upcoming meetings. A meeting invitation will be emailed out for the National STIC Video/web conference to be held on April 27th.

Basharat Siddiqi, FHWA Oklahoma Division Administrator, discussed that Elaine Chao has been confirmed as the new USDOT Secretary of Transportation.

Doug Wright, LTAP, informed the group about their intern program. They have students in Civil Engineering, Construction Management, and other disciplines that they can place. Students we know are welcome to apply as well.

Closing Comments

Dawn Sullivan and Basharat Siddiqi thanked the STIC for a good meeting, especially our remote attendees. We will arrange to have a conference call line at the next Oklahoma STIC meeting on June 22, 2017.