To participate or provide public comment register via zoom: Virtual Meeting Registration

Written public comment must be received by the MPO by 5:00 p.m. on the day before the meeting. Send correspondence electronically to mpo@lawrenceks.org. Comments received after the deadline will not be posted and there is no guarantee that such comments will be considered. The MPO is sensitive to members of the public who may not have access to technology. For those persons, written comments may be dropped in the Utility Billing Drop Box, located at the cut-out at 6th Street and New Hampshire Street. Comments should be marked for the **MPO ITS Plan**.
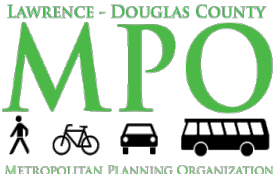
The MPO will provide a method at the Parks and Recreation Administration Building for individuals without access to the internet or a telephone - and only such persons - to observe or participate in the meeting.

Intelligent Transportation Systems (ITS) Steering Committee Agenda

1. **Zoom Meeting Preamble**

2. **Introductions**

3. **Public Comment**

4. **Meeting 2 Notes - Attached**

5. **Plan Update Process - Attached**

6. **Prioritizing Projects (Discussion) - Attached**

7. **Necessary Agreements for ITS Projects (Discussion) - Attached**

8. **Next Meeting**
   - Meeting 4 - April 26 @ 1:30

MEETING 2 NOTES
Intelligent Transportation Systems (ITS) Steering Committee
Monday, March 29, 2021
1:30-3:00 PM
Virtual meeting hosted in
Parks and Recreation Administration Building
1141 Massachusetts St

	Agency	Stakeholder		Agency	Stakeholder
	FTA	Eva Steinman	X		Nick Hoyt
X	FHWA	David LaRoche	X		Dustin Smith
X	KDOT	Michael Flory, Taylor McHenry, Garry Olson, Mike Floberg	X	Lawrence	Caleb Pettengill
	KTA	David Jacobsen	X		Micah Seybold
X	KC Scout	Randy Johnson + Guest	X		Rob Neff
	Baldwin City	Ed Courton			Kevin Fussell
	Eudora	Branden Boyd	X	Douglas County	Chad Voigt
			X	Lawrence Transit	Adam Weigel
			X	KU On Wheels	Aaron Quisenberry
	Staff			**Public**	
X	L-DC MPO	Jessica Mortinger	X	Heather Thies	Cottonwood Inc.
X	L-DC MPO	Ashley Bryers			
X	L-DC MPO	Sarah Buford			
	L-DC MPO	Ari Leyva			

1. **Zoom Meeting Preamble (1:30 pm)**

2. **Introductions –** Introductions were made.

3. **Public Comment** – No public comments were given.

4. **Kickoff Meeting Notes (Discussion)** – Meeting notes were found satisfactory.

5. **Plan Update Process (Discussion)** – Staff agreed on the Intelligent Transportation System (ITS) Plan Update timeline.

Intelligent Transportation System (ITS) Plan Update

Task	March 4 @ 1:30 - 3:00	March 29 @ 1:30 - 3:00	April 13 @ 10:30 - Noon	April 26 @ 1:30 - 3:00	May	June
Development						
Steering Committee	Kickoff	Meeting 2	Meeting 3	Meeting 4		
Meeting Topic	Overview, Discuss ITS needs, & Verify goals (T2040 & ITS)	Discuss projects (new & old)	Discuss timeline, priorities & necessary agreements	Review draft plan		
Homework	Review & comment on ITS needs & Review existing projects for Meeting 2	Provide any further comments on projects	Review & comment on necessary agreements	Review & comment on draft plan		
Review						
15-day public comment period					Anticipated - May 6 - May 21*	
Document public comments & make necessary edits					X	
TAC/MPO Policy Board consideration of ITS Plan						Anticipated - June 1 & June 17*
Pending Policy Board approval post online and send to KDOT, FHWA, and FTA						X

* Anticipated dates. The final dates depend on how the planning process advances. 2.25.21

** Public participation process includes: Newspaper advertisement, email to subscription list, place document online and at public locations - Baldwin City Public Library, Eudora City Hall, Lawrence Public Library, Lecompton City Hall, and MPO Office, send to TAC and Policy Board for review

6. Existing and new ITS Projects (Discussion) - Staff used Mural during the meeting to add changes and updates to current projects. Staff designated stakeholders responsible for finishing updates on each project before the next meeting.

A. Existing Projects, Signal Coordination and Control Expansion, and Camera Deployment and Image Sharing Project

B. Transit Traveler Information Improvements Project, Interagency Information Sharing Project, and Work Zone Management Project

3. Transit Traveler Information Improvements Project

4. Interagency Information Sharing Project

5. Work Zone Management Project

C. Dynamic Message Signs Project, Fiber Communications Expansion Project, and Event and Incident Management Project

6. Dynamic Message Signs Project

7. Fiber Communications Expansion Project

8. Event and Incident Management Project

D. Transit Management Improvements, Transit Signal Priority Project, and Signal Beacons Project

9. Transit Management Improvements

Adam/Quiz

10. Transit Signal Priority Project

Adam

11. Signal Beacons Project

Nick

E. Parking Management Systems Project, Emergency Signal Preemption Improvements Project, and Bicycle/Pedestrian Warning Systems Project

12. Parking Management Systems Project

Quiz, Adam/Brad

13. Emergency Signal Preemption Improvements Project

Rob

14. Bicycle/Pedestrian Warning Systems Project

Dustin

F. Weather Monitoring Project, Regional Virtual Data Warehouse Project, and Journey Trip Project Planner

15. Weather Monitoring Project

Program

3 Road sensors & 2 rain gauges being installed

23rd/OcC, 6/GWW, Kason/BBP

Caleb/Nick

16. Regional Virtual Data Warehouse Project

Testing in Wichita now

Mike Floberg

17. Journey Trip Planner Project

3rd party creation, not us

Transit is working on real time GTFS feed

Ashley

G. Traffic Detection Improvements Project, Connected Vehicles – Need to update, and Any New Projects to Include?

18. Traffic Detection Improvements Project

3rd party creation, not us

program

program stuff - ongoing

Nick

19. Connected Vehicles - Need to update

self driving vehicles preparation

no legislature to do anything yet. KDOT is working on connected vehicle programs

$2 mill per year to do innovative technology solutions

MPO Person to Update: Ashley

Any New Projects to Include?

Future Shared Mobility (scooters, etc)

Electric vehicle infrastructure

Vehicle-to-Pedestrian Communications :https://www.its.dot.gov/factsheets/cv_v2pcomms.htm

5

H. Next Meeting – Meeting adjourned at 2:54 pm.
   a. Meeting 3 – April 13 @ 10:30
      i. Prepare for the meeting by gathering information and updating existing and future projects discussed in the meeting.
      ii. Provide comments on project word documents or on Mural by 5 pm on April 5.

   b. Meeting 4 – April 26 @ 1:30

Intelligent Transportation System (ITS) Plan Update

Task	March 4 @ 1:30 - 3:00	March 29 @ 1:30 - 3:00	April 13 @ 10:30 - Noon	April 26 @ 1:30 - 3:00	May	June
Development						
Steering Committee	Kickoff	Meeting 2	Meeting 3	Meeting 4		
Meeting Topic	Overview, Discuss ITS needs, & Verify goals (T2040 & ITS)	Discuss projects (new & old)	Discuss timeline, priorities & necessary agreements	Review draft plan		
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15-day public comment period					Anticipated - May 6 - May 21*	
Document public comments & make necessary edits					X	
TAC/MPO Policy Board consideration of ITS Plan						Anticipated - June 1 & June 17*
Pending Policy Board approval post online and send to KDOT, FHWA, and FTA						X

2.25.21

* Anticipated dates. The final dates depend on how the planning process advances.

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L-DC Region ITS Projects

Table 10 lists the sequenced ITS projects for the L-DC Region. The inclusion of a project in this list does not mean that it has been programmed in other regional transportation plans. Neither do the vast majority of Projects on this list have committed funding. This Plan is a means for identifying potential ITS Projects that should be considered and possibly programmed into the Region's funding processes.

One ITS Project identified in this Plan is an exception. The Signal Coordination and Control Project has been funded and is in development at the City of Lawrence. Funding for the Project has been programmed though City and KDOT ITS Set-Aside funds.

It should also be noted that cost estimates for near-term projects are more precise than the estimates for the medium-term and long-term projects. Near-term projects assume the use of current technologies whose costs are better known. Medium-term and long-term projects are not as clearly defined because stakeholder participation has not been committed, and technologies may change before the projects are designed.

Near-term (*planned for the next three years*)	1. Signal Coordination Program
	2. Camera Deployment Program
	3. Transit Traveler Information Improvements
	4. Interagency Information Sharing
	5. Work Zone Management (possibly integrated with #8 Event and Incident Management Improvements)
	6. Dynamic Message Signs
Medium-term (*planned for three to six years*)	7. Fiber Communications Expansion Program
	8. Event and Incident Management Improvements
	9. Transit Management Improvements
	10. Lawrence Transit Signal Priority
	11. Signal Beacon Deployment
	12. Parking Management System
Long-term (*planned for six to ten years*)	13. Emergency Signal Preemption Improvements
	14. Bicycle/Pedestrian Warning Systems Program
	15. Weather Monitoring Program
	16. Regional Virtual Data Warehouse
	17. Journey Trip Planner
	18. Traffic Detection Improvements Program
	19. Connect Vehicles
	20. Future Shared Mobility (scooters, etc.)
	21. Electric Vehicle Infrastructure

1. L-DC Region ITS Project Interagency Agreements

Agreements among the stakeholder agencies and organizations in the L-DC Region may be required to realize the integration proposed in the ITS Architecture. Each connection between systems owned by different Stakeholders represents cooperation among Stakeholders and a potential need for an agreement.

One of the first steps of any ITS Project development should be to review existing Stakeholder agreements that support sharing information, funding, or specific ITS projects. The review should assess if the existing agreements can be extended and used to support the cooperative implementation and operation of ITS in the region. The L-DC Region's existing interagency agreements may already address some of the agreements identified in this Plan.

The list of the necessary L-DC Region ITS Project agreements was developed based on the stakeholder roles and responsibilities, awareness of the types of existing or planned ITS for implementation by the region, and the information that will be exchanged among systems for the ITS Projects.

1.1 Agreement Types

There is a wide range of agreement types that may be necessary to develop and implement an ITS project. The nature of existing interagency relationships and existing "local practices" may influence the types of agreements various agencies enter into. For example, two agencies that are co-located or frequently work together may have a working relationship that simplifies the need for detailed agreements. Other Stakeholders, brought together for the first time by an ITS Project, may need a more clearly defined agreement that helps each understand the responsibilities and capabilities of each Stakeholder.

Table 9 contains descriptions of common types of agreements relevant to the Region's ITS projects as identified in the *FHWA Regional ITS Architecture Guidance Document*.

Lawrence-Douglas County MPO
Agreements Extracted from 2015 Intelligent Transportation System (ITS) Plan – Update in 2021

1

Table 9: Common ITS Project Agreement Types

Type of Agreement	Description
Handshake Agreement	• Early agreement between one or more partners. • Not recommended for long term operations. • Does not require formal documentation.
Memorandum of Understanding (MOU)	• Initial agreement used to provide minimal detail and usually demonstrates a general consensus. • Used to expand a more detailed agreement like an Interagency Agreement, which may be broad in scope but contains all of the standard contract clauses required by a specific agency. • May serve as a means to modify a much broader agreement, allowing the master agreement to cover various ITS projects throughout the region and the MOUs to specify the scope and differences between the projects.
Interagency Agreement (IA)	• Between local public agencies (e.g. transit authorities, cities, counties, etc.) for operations, services, or funding. • Documents responsibility, functions, and liability at a minimum.
Operational Agreement (OA)	• Between any agency involved in funding, operating, maintaining or using the right-of-way of another public or private agency. • Identifies respective responsibilities for all activities associated with shared systems being operated and/or maintained.
Funding Agreement (FA)	• Documents the funding arrangements for ITS projects (and other projects). • Includes at a minimum standard funding clauses, detailed scope, services to be performed, detailed project budgets, etc.
Master Agreements (MA)	• Standard contract and/or legal verbiage for a specific agency and serves as a master agreement by which all business is done. It can be found in the legal department of many public agencies • Allows states, cities, transit agencies, and other public agencies that do business with the same agencies over and over (e.g., cities and counties) to have one Master Agreement that uses smaller agreements (e.g., MOUs, Scope-of-Work and Budget Modifications, Funding Agreements, Project Agreements, etc.) to modify or expand the boundaries of the larger agreement to include more specific language

1.2 Agreement Focus

Rather than focus on specific technologies in an agreement, the focus is typically on the scope-of-service and specific agency responsibilities for various components of the service. The agreement should also describe the high-level information that each agency needs to exchange in order to meet the objectives of the ITS Project. The agreement should not focus on how the delivery of that information will occur.

Lawrence-Douglas County MPO
Agreements Extracted from 2015 Intelligent Transportation System (ITS) Plan – Update in 2021

2

A simple handshake agreement may be enough for some L-DC Region ITS planning activities. Once interconnections and integration of systems occur, however, agencies may want a more formal agreement in place to document items such as how operations will occur and who will maintain the system. Documented agreements will aid agencies in planning their operational costs, understanding their respective roles and responsibilities, and in building trust for future projects. Formal agreements are necessary where funding or financial arrangements are defined, or where participation in large regionally-significant projects is required.

1.3 Needed L-DC ITS Project Agreements

A few ITS Projects planned for the L-DC Region do not require agreements because they involve a single Stakeholder or involve multiple agencies each acting independently. The projects that are not foreseen as requiring Stakeholder agreements are:

- Work Zone Management
- Transit Traveler Information Improvements
- Transit Management Improvements
- Signal Beacons
- Bicycle/Pedestrian Warning Systems
- Traffic Detection Improvements

The ITS Projects listed in Table 10 involve two or more Stakeholders, where agreements will be needed. For most Projects, it is recommended that a Memorandum of Understanding (MOU) be the first step in project planning. The purpose of an initial MOU is to confirm that all Stakeholders are in support of the project and in agreement on what the objectives are. Stakeholders becoming a party to the MOU will then pursue further agreements, as needed, for development, deployment, operations, and funding. In some cases, an MOU is not listed as needed. These ITS Projects are generally those with clear objectives or among Stakeholders with an existing working relationship.

Table 10: L-DC Regional ITS Architecture Agreement Types

L-DC Region ITS Project	Stakeholders	Agreement Type(s)	Agreement Objectives
Signal Coordination and Control Expansion	• **City of Lawrence Municipal Services and Operations (lead)** • KDOT	• Interagency Agreement	**IA:** The IA may incorporate the funding arrangement that describes the role of funding provided by the participating Stakeholders. The IA may also include the expectations of each agency for the operation and use of the expanded signal control, and how the Project's performance will be measured. Because the project includes cameras, the IA may indicate KDOT and the City's expectations for sharing images with other agencies and the public.
Camera Sharing	• **City of Lawrence Municipal Services and Operations (lead)** • City of Lawrence Police • Douglas County Emergency Communications • KTA • KDOT • KC Scout	• MOU • Interagency Agreement	**MOU**: Because the City of Lawrence will be solely responsible for deploying upgraded software and the operation and maintenance of the cameras, a simple MOU is recommended among agencies to agree upon the sharing of images from the cameras. The MOU may describe the expectation of the City in how other agencies use the images, and the agencies' expectation of availability of camera images. **IA**: The IA should describe specifically how agencies will connect to the camera software, such as through a direct connection with the Traffic Operations Center, or via a private or public web site. The IA may also include any funding arrangements that describe the sharing of costs for operating and maintaining the camera sharing software.
Transit Traveler Information	• **KU on Wheels (co-lead)** • **Lawrence Transit (co-lead)** • City of Lawrence Municipal Services and Operations	• IA	**IA:** The IA should address access to power and communications at the roadside needed by the transit agencies to connect digital signs. The IA should identify the specific locations, the type of power required and access to communications. The IA should also clearly indicate the responsibility for the costs of using power and communications.

L-DC Region ITS Project	Stakeholders	Agreement Type(s)	Agreement Objectives
Inter-agency Information Sharing	• **City of Lawrence Municipal Services and Operations (lead)** • City of Lawrence Police • Douglas County Emergency Communications • Douglas County Public Works • Douglas County Sheriff's Office • KDOT • KTA • KU on Wheels • University of Kansas • Lawrence Transit • Local Cities • Local Cities Emergency Services • KC Scout	• Memorandum of Understanding • Interagency Agreement	**MOU**: The MOU should be used in describing how emergency responders and transportation management agencies will coordinate to share resources and information. A key element of this MOU should be defining at a high-level the types of information that will be shared, and how they will be used. In addition, if emergency responders will have some say in how traffic is managed during emergencies, the MOU should describe the level of input and how instructions should be exchanged. **IA:** An incrementally developed IA should address how agencies will actually work together for information sharing, operations, etc. The primary purposes of the agreement are to describe agency expectations and roles for information and resource sharing across jurisdictional boundaries.

Lawrence-Douglas County MPO
Agreements Extracted from 2015 Intelligent Transportation System (ITS) Plan – Update in 2021

5

L-DC Region ITS Project	Stakeholders	Agreement Type(s)	Agreement Objectives
Dynamic Message Signs	• **City of Lawrence Municipal Services and Operations (lead)** • KDOT • KTA • KC Scout	• MOU • Interagency Agreement	**MOU**: The four proposed DMS will be controlled by KC Scout but with considerable input from the City of Lawrence and KTA. An MOU will be needed to define the types of messages each agency may place on the signs, the hierarchy of authority for the signs, and the shared expectations for the signs in performing traffic, event and incident management. The MOU is critical because the City and KC Scout currently do not jointly operate any devices in the Region. **IA**: The IA should describe specifically how agencies will connect to the signs, either directly or through the DMS. The IA should also establish funding arrangements for operating and maintaining the signs and the software required to control them.
Communications Expansion	• **City of Lawrence Municipal Services and Operations (lead)** • Douglas County Public Works • KDOT • KTA • University of Kansas • KC Scout • Private communications providers	• Interagency Agreement • Operating Agreement	**IA:** The IA should address the access of each agency to the communications network, the bandwidth available to each agency, and the agencies' authority to connect devices. The IA may also address issues such as right-of-way access for installation and maintenance of communications hardware. **OA:** The OA should address the ongoing maintenance and operation of the communications network. It may include the expectations of the agencies and private communications providers to keep the system operational, and the expectations of stakeholders in performing other roadway construction and maintenance that may impact the network. The OA may also address the sharing of fiber and how the strands may be distributed by Stakeholder or function.

Lawrence-Douglas County MPO
Agreements Extracted from 2015 Intelligent Transportation System (ITS) Plan – Update in 2021

6

L-DC Region ITS Project	Stakeholders	Agreement Type(s)	Agreement Objectives
Event and Incident Management	• **Douglas County Emergency Communications (lead)** • City of Lawrence Police • City of Lawrence Municipal Services and Operations • Douglas County Public Works • Douglas County Sheriff's Office • KDOT • KTA • KU on Wheels • KU • Lawrence Transit • Local Cities • Local Cities Emergency Services • KC Scout	• Interagency Agreement	**IA:** An IA may be the only agreement required for this Project because the MOU established for the Interagency Information Sharing Project has established the roles and responsibilities of the Stakeholders. The IA should address the standards and formats agreed to for the electronic exchange of event and incident information. The IA should also establish any platform or software that will be used by all participating Stakeholders. In addition, the IA should address the funding needed to purchase the software, develop a plan and operate and maintain information sharing systems.
Transit Signal Priority	• **Lawrence Transit (lead)** • City of Lawrence Municipal Services and Operations	• Memorandum of Understanding • Interagency Agreement	**MOU**: The MOU should address expectations and roles regarding priority signal control for Lawrence Transit. The MOU should define preliminary goals and system functional requirements. **IA**: The IA is needed to formally document how the signal priority system will work, to exclude unauthorized users, and to report system usage and impact on timing plans. The IA may include funding, depending on the source of funds and how costs are distributed between controller hardware/software upgrades, on-bus equipment, and Traffic Operations Center improvements.

L-DC Region ITS Project	Stakeholders	Agreement Type(s)	Agreement Objectives
Parking Management Systems	• **City of Lawrence Municipal Services and Operations (co-lead)** • **KU Parking and Transit (co-lead)**	• Memorandum of Understanding • Interagency Agreement	**MOU:** The MOU should outline the roles and responsibilities of the City and KU in collecting and sharing parking information. The MOU should also provide basic guidelines that define the types of parking management systems to be implemented in order to ensure interoperability and similar data collection. **IA**: The IA should establish how information will be exchanged between the parking systems and the Traffic Operations Center, or with traveler information systems and a virtual regional data warehouse. The IA should also describe how data will be used by each stakeholder, and interagency operation of parking facilities during events.
Emergency Signal Preemption Upgrade	• **Lawrence-Douglas County Fire Medical (lead)** • City of Lawrence Municipal Services and Operations	• Interagency Agreement	**IA**: Any existing agreement between the City and Fire Medical addresses how emergency signal preemption is used in the City of Lawrence. That agreement can remain in place to describe each agency's roles and responsibilities and when signal preemption is used. An IA is needed to define the technology that will be used in the improved signal preemption. It will describe what is expected of the City to implement wireless communications with fire and medical vehicles, and the system that will be deployed on-board vehicles.

Lawrence-Douglas County MPO
Agreements Extracted from 2015 Intelligent Transportation System (ITS) Plan – Update in 2021

8

L-DC Region ITS Project	Stakeholders	Agreement Type(s)	Agreement Objectives
Weather Monitoring	• **City of Lawrence Municipal Services and Operations (lead)** • Douglas County Emergency Communications Center • Douglas County Public Works • KDOT • KTA	• Memorandum of Understanding • Interagency Agreement	**MOU:** The MOU should define the roles and responsibilities of each stakeholder, and define the purpose of the deployment of multiple weather sensors in the Region. The MOU should also identify the agreed upon data to be collected and how it will be shared among the participating Stakeholders. The MOU should also address the type of sensors to be deployed by multiple agencies to ensure interoperability with central software. **IA**: The IA should address specific standards and data formats to be collected and exchanged by the weather sensors. The IA should also define who will operate the central software and how information will be shared from that central software to other participating Stakeholders. The IA should also address operations and maintenance obligations for each participating Stakeholder.

L-DC Region ITS Project	Stakeholders	Agreement Type(s)	Agreement Objectives
Virtual Regional Data Warehouse	• **KDOT (lead)** • City of Lawrence Police • City of Lawrence Municipal Services and Operations • Douglas County Emergency Communications • Douglas County Public Works • Douglas County Sheriff's Office • KTA • KU on Wheels • KU • Lawrence Transit • Local Cities • Local Cities Emergency Services	• Memorandum of Understanding • Interagency Agreement	**MOU:** This MOU should develop high-level expectations for what types of data will be exchanged through the virtual warehouse, how they will be used, and the responsibilities of each agency in providing accurate and usable information. The MOU should also describe at a high-level who will be granted access to data, and for what purposes. **IA**: The IA is needed to formally document how the data warehouse will operate and the formats and protocols used for data exchange. The IA should define the level of access by Stakeholders, as well as how the system will be maintained. The IA can also define any warehouse functionality for data reporting and display. For funding participation, the IA should define development, deployment and operation funding sources.

L-DC Region ITS Project	Stakeholders	Agreement Type(s)	Agreement Objectives
Journey Trip Planner	• **City of Lawrence Municipal Services and Operations (lead)** • KDOT • KTA • KU on Wheels • KU • Lawrence Transit • Local Cities • Private Sector Information Services	• Memorandum of Understanding • Interagency Agreement • Operations Agreement	**MOU**: This MOU should develop high-level expectations for disseminating information from the regional stakeholders to the public. It should expand on the understanding that much of the disseminated information may come from the Virtual Regional Data Warehouse. **IA**: The IA should formally document the types of information the participating public-sector Stakeholders agree to share through a regional traveler information system. The IA should also expand upon the IA for the Virtual Regional Data Warehouse to ensure that traveler information, including incident and emergency information, is provided for dissemination. **OA**: The OA should be developed between the public and private sectors to define the types of information to be shared with services that will provide commercial traveler information. The OA should define the quality and frequency of public information and the limitations placed on the private sector in processing and disseminating that information.