



CENTRAL TEXAS REGIONAL
MOBILITY AUTHORITY

February 26, 2020
AGENDA ITEM #10

Discuss and consider approving Amendment
No. 1 to the Interlocal Agreement with the
Texas A&M Transportation Institute for a
Technology Corridor Strategy

Strategic Plan Relevance: Deliver Multi-Faceted Mobility Solutions; Explore and Invest in Transformative Technology and Adopt Industry Best Practices; Employ a Collaborative Approach to Implementing Mobility Solutions; Invest in Efforts that Extend Beyond Roadways

Department: Administration

Contact: Jeff Dailey, Deputy Director
Mia Zmud, Mobility Innovation Manager

Associated Costs: \$250,000

Funding Source: FY2020 Operating Budget Line Item:
Research Services 64300

Action Requested: Consider and act on draft resolution

Project Description/Background – This item amends an existing interlocal agreement with the Texas A&M Transportation Institute (TTI) to develop a Technology Corridor Strategy which will establish a process for collaborating with Central Texas Agency partners and the private sector to define and prioritize regional mobility needs and to elicit, screen, and evaluate ideas, technology and innovations to meet those needs.

The Mobility Authority strategic plan includes a commitment to explore and invest in transformative technology and adopt industry best practices and employ a collaborative approach to implementing mobility solutions. To achieve these goals, the Innovation Team is conducting research to support innovation and technology decision-making and coordinating with regional partners on our respective activities.

Regarding regional collaboration, beginning in the Winter of 2018, the Mobility Authority has been meeting regularly with the TxDOT Austin District office and the Austin Transportation Department to share our respective plans for leveraging innovation and emerging technology. This concerted effort has resulted in significant outcomes including the coordination of ITS Master Plans, the decision to transition the Mobility Authority Traffic Incident Management

System to the TxDOT Lonestar platform to facilitate seamless sharing of data and enhance system-wide traffic and incident management, and the processing of updated data sharing agreements between our organizations. Additionally, planning for a Regional Transportation Innovation Summit is underway. This Spring, key Central Texas transportation agencies will convene to share respective activities related to exploring, evaluating, creating, and deploying emerging transportation technology while seeking opportunities for collaborating or scaling projects across the region.

The Technology Corridor Strategy will build upon and broaden these coordination efforts by establishing an iterative and deliberative process that brings agency partners together to integrate their respective efforts, prioritize regional needs, and identify and evaluate opportunities for cross-agency transportation innovation and emerging technology collaboration on one or more Mobility Authority corridors.

Technology Corridor Strategy

The Innovation Team plans to *extend our reach* regarding regional collaboration through a regionally coordinated Technology Corridor Strategy. This Strategy will directly align with our recently completed Roadway Technology Plan which identifies the priority infrastructure upgrades, and new technologies and connectivity investments for our roadways along with the sequence for purchase and installation. These technologies comprise the backbone of our tolling and traffic management system; they reflect current best practice and, in most cases, reflect state-of-the-art technological advances to meet our current and future transportation needs.

Under this amendment, TTI will provide research and planning support in developing this Strategy. This includes conducting industry scans, conducting surveys of public acceptance and support of emerging technology, and establishing a foundational innovation process for engaging both private and public sectors and opening up the playing field for funding, pilot testing, and offering more options and broader results: enabling safer, more coordinated and smarter use of our corridors. TTI is uniquely positioned to support this effort. They are recognized leaders in transportation research and technology development and testing. Of recent note, in 2018, TTI partnered with the McFerrin Center for Entrepreneurship in Mays Business School at Texas A&M University to launch the TTI Innovation Hub.

Task work in progress under the current Interlocal agreement with TTI, include a survey to measure customer experience with our facilities (e.g., road conditions, travel time reliability, road safety, roadside assistance, and maintenance of roads and bridges), a study of MoPac Express Lane driver behavior, and research to inform the location of wrong way driving technology on 183S. This item will expand their expertise to assist in the development of the Technology Corridor Strategy.

Previous Actions/Brief History of the Project/Program – By Resolution No. 19-009, dated March 22, 2019, the Board of Directors authorized the Executive Director to negotiate and execute an amendment to the Interlocal Agreement with Texas A&M Transportation Institute (TTI) for

research services and provide funding of up to \$453,000. That original agreement contains four distinct tasks which are briefly described in the table below along with a status of their completion.

Task No	Description and Purpose	Status
1	Customer Experience Survey <i>Purpose: Baseline measure of customer experience; Gain insights on the drivers of customer satisfaction and how to best meet customer needs.</i>	<ul style="list-style-type: none"> • Data collection begins in Mid-February. • Results will be reported by June 2020.
2	Analysis of Real-World MoPac Travel Data <i>Purpose: Understand the behavior of travelers using the MoPac Express Lane; Enhance our understanding of how travelers perceive the benefits of the Express Lane; Improve our ability to predict future demand and plan for future Express Lanes.</i>	<ul style="list-style-type: none"> • Real-world data has been compiled and is currently being analyzed. • Survey data is being collected in February. • Final report due in September 2020.
3	Assess Wrong-Way Driving Characteristics and Identify Mitigation Measures <i>Purpose: Develop and apply a consistent process for identifying locations where wrong way driving mitigation measures should be installed on CTRMA Facilities.</i>	<ul style="list-style-type: none"> • Process has been established and applied to 183S; currently being extended to MoPac, 290E and 183A. • 183S final recommendations and applications to other roadways are due in June 2020.
4	Research and Methodology Brief on Survey Panels <i>Purpose: Conduct an industry scan on the extent to which online panels are being used by government agencies as a means for quickly gathering feedback from customers.</i>	<ul style="list-style-type: none"> • Tech Brief was presented to staff in September 2019 and the results supported the decision to pursue an existing survey panel platform (Proponisi) that is also used by other tolling agencies. • The CTX Navigator Panel will launch Spring 2020.

Action requested/Staff Recommendation - This amendment No. 1 to the ILA adds to the scope of work with a new Task 5 (Technology Corridor Strategy), increases the funding by \$250,000, and extends the expiration date to June 30, 2021. Staff recommends approval of this item, proposed amendment No. 1 to the interlocal agreement with TTI, to provide continued support to the Mobility Authority in conducting research and planning to develop a regionally coordinated Technology Corridor Strategy.

Funding – FY2020 Operating Budget, Line Item: Research Services 64300

Backup Provided: Draft Resolution
Draft Amendment No. 1

**GENERAL MEETING OF THE BOARD OF DIRECTORS
OF THE
CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY**

RESOLUTION NO. 20-0XX

**APPROVE AMENDMENT NO. 1 TO THE INTERLOCAL AGREEMENT WITH
THE TEXAS A&M TRANSPORTATION INSTITUTE FOR A TECHNOLOGY
CORRIDOR STRATEGY**

WHEREAS, by Resolution No. 19-009, dated February 27, 2019, the Board of Directors approved an Interlocal Agreement (“ILA”) with the Texas A&M Transportation Institute (“TTI”) to conduct a customer satisfaction and MoPac Express Lane use survey, analyze real world MoPac travel data, assess wrong-way driving characteristics and identify mitigation measures, and provide a research and methodology brief on survey panels; and

WHEREAS, the Executive Director has determined there is a need for additional technical and research support services for the development of a technology corridor strategy to advance the Mobility Authority’s innovation process and regional collaboration support on innovation; and

WHEREAS, the Executive Director also recommends additional funding of \$250,000 and extending the ILA through June 30, 2021; and

WHEREAS, the Executive Director and TTI have negotiated proposed Amendment No. 1 to the ILA for the development of a technology corridor strategy to advance the Mobility Authority’s innovation process and regional collaboration support on innovation which extends the expiration date of the ILA to June 30, 2021 and increases the funding by \$250,000, resulting in an ILA in a total amount not to exceed \$703,000; and

WHEREAS, the Executive Director recommends that the Board approve the proposed Amendment No. 1 with TTI in the form or substantially in the same form as Exhibit A attached hereto.

NOW THEREFORE, BE IT RESOLVED, that the Board approves Amendment No. 1 to the Interlocal Agreement with the Texas A&M Transportation Institute and authorizes the Executive Director to finalize and execute proposed Amendment No. 1 with the Texas A&M Transportation Institute in the form or substantially the same form as Exhibit A.

Adopted by the Board of Directors of the Central Texas Regional Mobility Authority on the 26th day of February 2020.

Submitted and reviewed by:

Approved:

Geoffrey Petrov, General Counsel

Robert W. Jenkins, Jr.
Chairman, Board of Directors

Exhibit A

AMENDMENT NO.1

Interlocal Cooperation Contract

Additional Scope of Services

Pursuant to Article 2 of Exhibit A to the Interlocal Cooperation Contract (the Contract) entered into by and between the Central Texas Regional Mobility Authority (the Mobility Authority) and Texas A&M Transportation Institute (TTI) dated March 22, 2019, the parties hereby mutually agree to this Amendment No. 1 to the Contract as provided below:

A. Section IV is amended to read as follows:

The total amount of this contract shall not exceed: Seven Hundred and Three Thousand, \$703,000. The maximum amount payable under this contract is contingent upon availability of funds.

B. Section VIII is amended to read as follows:

Payment under this contract beyond the end of the current fiscal year is subject to availability of appropriated funds. If funds are not appropriated, this contract shall be terminated immediately with no liability to Receiving Party. This contract begins when fully executed by both parties and terminates on June 30, 2021.

C. Schedule A is amended by adding a new Task 5

New Task 5. Research and Planning Support for a Regionally Coordinated Technology Corridor Strategy is added, reading as follows:

Task 5. Research and Planning Support for Regionally Coordinated Technology Corridor Strategy

The purpose of this task is to secure support from TTI to develop a process by which rapidly emerging technology innovations in the transportation sector can be incorporated in Mobility Authority corridor projects. Of interest are projects that involve cross-agency coordination with local agencies including but not limited to Texas Department of Transportation (TxDOT) Austin District Office, the City of Austin, and Capital Metro. Specifically, under this task, TTI will support the Mobility Authority with strategic and organizational planning and collaborative partnership-building, through the development of a regionally coordinated Technology Corridor Strategy, which could become a model to extend to future roadway projects.

The work will be conducted through the following three subtasks:

- Subtask 5.1 Conduct Research to Inform the Vision and Process for a Regionally Coordinated Technology Corridor

- Subtask 5.2 Assist in Building Stakeholder and Partner Support
- Subtask 5.3 Support Development of a Technology Corridor Strategy

Subtask 5.1 Conduct Research to Inform a Vision and Process for a Regionally Coordinated Technology Corridor.

Under this subtask, the TTI team will perform background research to inform the development of the vision and process for a regionally coordinated Technology Corridor Strategy. The research activities will include the following:

- Develop from existing sources a baseline summary of travel characteristics and customer travel needs and expectations for existing Mobility Authority corridors.
- Document the current and planned technology infrastructure and innovation strategies applied to the corridors, including past, existing and proposed pilot programs. Identify Mobility Authority innovation programs at the corridor or system level that could have a relationship to each corridor.
- Conduct a public survey to gauge Central Texan’s thoughts on emerging technology and connected and autonomous vehicle (CAV). The survey will provide insights on local awareness and acceptance levels of emerging technology and help aid understanding on the concerns about future technology deployment scenarios. Findings will be integrated into the Technology Corridor Strategy; in particular, they will inform public engagement and education to ensure road user safety during deployments and to build public trust and acceptance of testing and full deployment of emerging technology.
- Gather information from public and private stakeholders via structured interviews (10-12) to assess shared need, interests, and opportunities for partnership in the corridors.
- Develop and conduct an evaluation of a connected vehicle pilot program scheduled for summer 2020, including the following activities:
 - documentation of pilot program objectives
 - identification of performance metrics associated with program objectives, both technological and customer-oriented
 - assessment of data requirements to support performance metrics
 - collection of before and after data provided by others
 - development of a pilot evaluation report.

Deliverable 5.11 Technical Memorandum on the Baseline Research for Development of the Technology Corridor Strategy. Timeframe: February 2020 – June 2020. Due date: Draft May 22, 2020; Final June 17, 2020.

Deliverable 5.12 Research Plan including Questionnaire, for a Public Survey on Emerging Technology and CAV. Timeframe: March 2020 – April 2020; Due Date: April 17, 2020.

Deliverable 5.13 Report on Public Sentiment Survey. Draft Interim Findings: June 19, 2020; Final Report, PPT, and Summary: August 31, 2020.

Deliverable 5.14 Evaluation Plan of Ford Connected Vehicle Pilot Project. Timeframe: February 2020 – May 2020; Due date: May 29, 2020.

Deliverable 5.15: Technical Memorandum on the Evaluation of Ford Connected Vehicle Pilot Project. Timeframe: June 2020 – November 2020. Due Date: November 27, 2020

Subtask 5.2 Assist in Building Stakeholder and Partner Support

The purpose of this subtask is to conduct a half-day workshop with public and private stakeholders as a venue for:

- (1) engaging with them in the development of a vision, goals and value proposition for enabling technology solutions to solve mobility challenges in one or more of Mobility Authority corridors; and,
- (2) obtaining their input on key activities and opportunities for collaboration, strategies, available resources for advancing mobility innovations, and the process for communication and collaboration on this effort.

In carrying out this task, TTI will work closely with the Mobility Authority innovation team to develop a plan that outlines the goals and objectives of the workshop, identifies the public and private stakeholders (along with key relationships, value and expectations for each, and rationale for inclusion), and provides details on a planning schedule and logistics for the workshop (e.g., date, location, agenda, letters of invitation, and a detailed planning schedule leading to the workshop).

Upon approval, TTI will implement the workshop plan, conduct the workshop, and prepare a technical memorandum that documents the workshop discussions, outlines recommendations and action items pertaining to the regionally coordinated Technology Corridor Strategy goal, vision and value proposition, and tentative strategies and opportunities for collaboration and sharing resources. Finally, the plan will outline the process for developing the Technology Corridor Strategy.

Deliverable 5.21. Workshop Plan. Timeframe: March-April 2020. Due date: April 17, 2020.

Deliverable 5.22. Technical Memorandum Documenting the Stakeholder Workshop. Timeframe: April 2020 – June 2020. Due date: June 12, 2020.

Subtask 5.3 Support Development of a Regionally Coordinated Technology Corridor Strategy

Under this subtask, TTI will assist Mobility Authority in carrying out the process defined in Task 5.2 to develop the Technology Corridor Strategy. Upon review and approval of Subtasks 5.1 and 5.2, Mobility Authority will issue a Notice to Proceed to initiate work on this task, including the following activities:

- Develop a detailed schedule for and assist with coordination of the process outlined in Task 5.2. Identify and track key milestones for inclusion in the Strategy.
- Prepare for (e.g., Agenda, invitations, meeting materials, secure guest speakers) and participate in monthly meetings. A focus of these meetings will be on obtaining continued input and review of the Strategy goals and objectives, furthering the planning and coordination of agency-specific activities and action items which will ultimately be incorporated into the Strategy, and reviewing/identifying public sector candidate solutions and technologies for the target corridor(s). This process shall be documented and included in the Strategy.
- Advise and participate in a digital process for engaging and collaborating with the private sector on prospective technology or mobility solutions for Mobility Authority technology corridors. This will entail advising on the platform design and criteria for evaluating prospect submissions, coordinating with the Agency Working Group, and participating in follow up meetings with private sector candidates, as necessary. This process shall be documented and included in the Strategy.
- Develop the Strategy and coordinate with the Agency Working Group members, as necessary. The Strategy will be dynamically developed over the course of several months allowing time for the Agency Working Group and public sector engagement process to run course. TTI shall prepare a draft and final annotated outline before proceeding with the development of the draft version of the Strategy.

Deliverable 5.31. Detailed Schedule for the Strategy Development Process. Timeframe: July 2020. Due Date July 10, 2020.

Deliverable 5.32. Annotated Outline, Draft and Final Coordinated Technology Corridor Strategy. Timeframe: July - December 2020. Due Dates: Annotated Outline, August 14, 2020; Draft October 23, 2020; Final December 4, 2020

Task 5 Budget: \$250,000.00

D. Schedule A is amended by adding delivery schedules for Tasks 1, 2 and 3 as follows:

Task 1: Customer Experience Survey

Subtask No.	Deliverable	Due Date
1.A.1	Kick-Off Meeting Agenda	3/11/2019
1.A.2	Kick-off Meeting Summary Notes	3/12/2019
1.B.1	Tech Memo on Literature Review Findings	5/3/2019
1.C.1	Draft Instrument	10/25/2019
1.C.2	Final Instrument	02/07/2020
1.E.1	Sample Plan	08/28/2019
1.E.2	Incentive Management Plan	09/05/2019
1.F.1	Data Collection Plan	02/21/2020
1.F.2	Pilot Technical Memorandum	03/21/2020
1.G.1	Cleaned Survey Dataset	06/01/2020
1.G.2	Data Dictionary	06/01/2020
1.H.1	Final Report	06/29/2020
1.H.2	PowerPoint	06/29/2020

Task 2: Analysis of Real World MoPac Driver Behavior

Subtask No.	Deliverable	Due Date
2.1	Dataset of MoPac Trips Dataset	6/31/2020
2.2	Final Report	9/30/20

Task 3: Assessing Wrong Way Driving Characteristics and Identifying Mitigation Measures

Subtask No.	Deliverable	Due Date
3.1	Technical Memorandum Documenting the Approach and Implementation Suggestions	09/17/2019
3.2	Final Technical Memorandum and PowerPoint	6/30/2020

E. All other terms and conditions of the Interlocal Cooperation Contract not hereby amended are to remain in full force and effect.

IN WITNESS WHEREOF, this additional task and time extension shall become effective on the date of the final execution of the parties hereto.

THE PERFORMING AGENCY
 The University of Texas at Austin
 Center for Transportation Research

**CENTRAL TEXAS REGIONAL
 MOBILITY AUTHORITY**

 (Signature)

 (Signature)

 (Printed Name)

Mike Heiligenstein

 (Printed Name)

 (Title)

Executive Director

 (Title)

 (Date)

 (Date)