



CENTRAL TEXAS REGIONAL  
**MOBILITY AUTHORITY**

March 31, 2021  
**AGENDA ITEM #10**

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Discuss and consider approving a contract with Deloitte Consulting LLP for the development of a data platform and associated transaction routing and system interfaces to support toll transaction management

**Strategic Plan Relevance:** Explore and Invest in Transformative Technology and Adopt Industry Best Practices; Deliver Multi-faceted Mobility Solutions; Invest in Effort that Extend Beyond Roadways

**Department:** Operations

**Contact:** Tracie Brown, Director of Operations

**Associated Costs:** not to exceed \$1,694,946 for implementation (*includes a 10% project contingency; does not include required hardware, software or software licenses*)

**Funding Source:** 183A Phase III Other Project funds

**Action Requested:** Consider and act on draft resolution

**Background:** The objective of the data platform project is to transition all toll transaction data processing and data management capabilities after the point of transaction creation to an Authority-managed solution. A third-party vendor will continue to collect and create the toll transaction at the roadside, then pass the fully formed toll transaction to the data platform. Business logic and rules will then consume the transaction and route the payment request to either the Central United States Interoperability (CUSIOP) Hub or the Pay by Mail (PBM) vendor.

The Authority-managed data platform will also support additional business capabilities such as external reporting and internal data analytics. A connection to the Texas Department of Motor Vehicles' datasets will enable the Authority to better understand its customer base and their travel habits. Future development could include adding

promotions and discount program logic. Staff envisions that the data platform will provide many value-added benefits to the agency. These benefits include but are not limited to:

- Complete ownership, control, access to, and governance of all tolling transaction-related data.
- The ability to implement dynamic pricing & passive discount programs.
- Increased operations controls and management.
- The scalability to products beyond fixed toll roads.
- Enhanced reporting and data visualization capabilities.
- The availability of data for public access and consumption.
- Advanced redundancy & disaster recovery.
- Readiness for CTRMA customer profile, account management and mobile payment services.
- The elimination of dependency of roadside vendors for transaction processing, operations, reporting, and compliance.

**Current Action:** The Mobility Authority has chosen a modular approach to complete the Data Platform Project. Release 1 will establish the platform. Release 2 will create the routing and exchange processes. The third release defines how data governance is handled in the new processing schema. The fourth release will identify the suite of reports necessary to account for the agency's revenue and monitor performance. Promotions and discount programs are defined in Release 5.

The scope of the first procurement is limited to Releases 1 and 2. The deliverables include: 1) build a data platform; 2) build and manage internal transaction databases; 3) create transaction data exchanges; 4) mirror pricing and payment logic; 5) ensure SOC 2 Type 2 Trust Services Criteria compliance; and 6) add additional data sources.

The scope of Releases 1 and Release 2 activities will be broken up over a series of sprints and implemented in an agile fashion. The scope will be accomplished through 17 deliverables over 22 weeks. These deliverables are outlined in Attachment A. The project schedule includes several "go / no go" decision points allowing staff to minimize the Authority's risk with regard to the data platform development work and payment.

**The cost of the Deloitte Statement of Work is \$1,540,860. A 10% project contingency has been added to this amount to cover any unforeseen events during the development phase making the final contract cost \$1,694,946.** This is a deliverable-based project meaning that payment will not be approved until the payment milestone is achieved.

**Next Steps:** Upon Board approval staff will begin a series of strategic design workshops with Deloitte's team to identify technical, functional and non-functional requirements. Once these elements are confirmed, the team will begin to setup the infrastructure and begin the development sprints. The infrastructure setup is discussed in a separate action item on the March 31, 2021 board meeting agenda – "discuss and consider approving the

purchase of a Google Enterprise Agreement subscription from Carahsoft in support of the Mobility Authority's data platform host project" (Item #11).

**Previous Actions:** After a six-month procurement process using the Texas Department of Information Resources (DIR) vendor for deliverable-based information technology services (DBITS) process the Mobility Authority Board of Directors approved the selection of Deloitte Consulting LLP in February 2021 as the vendor having the skill set needed to complete Release 1 and 2 of the Data Platform Project. Deloitte Consulting is an approved DIR vendor. Deloitte's contract with DIR, contract #DIR-TSO-4031, expires on February 22, 2022.

The Mobility Authority Board approved changes to the agency's Policy Code in November 2020 allowing for the utilization of contractors and vendors procured by the Department of Information Resources (DIR) without the need for any further procurement process. DIR's Cooperative (Co-op) Contracts program is a streamlined cooperative purchasing program for state and local government, public education, and other public entities in Texas, as well as public entities outside the state.

**Staff Recommendation:** Staff recommends approving a contract with Deloitte Consulting LLP for the development of a data platform and associated transaction routing and system interfaces to support toll transaction management through their contract with the Texas Department of Information Resources. Pursuant to Government Code Section 2054.0565 and the Mobility Authority Policy Code, use of the DIR contract with Deloitte Consulting LLP satisfies all competitive purchasing requirements.

**Backup Provided:** Draft Resolution  
Data Platform Statement of Work Summary - Deloitte Consulting

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

**RESOLUTION NO. 21-0XX**

**APPROVING A CONTRACT WITH DELOITTE CONSULTING LLP  
FOR THE DEVELOPMENT OF A DATA PLATFORM TO  
SUPPORT TOLL TRANSACTION MANAGEMENT**

WHEREAS, the Mobility Authority currently uses an outsourced solution developed by Kapsch TrafficCom USA Inc. to handle the end-to-end toll transaction management processes and workflow; and

WHEREAS, Mobility Authority staff seeks to develop a data platform to transition all toll transaction data processing and data management capabilities after the point of transaction creation from a third-party vendor to the Mobility Authority (the “Data Platform Project”); and

WHEREAS, a Mobility Authority managed data platform will support new business capabilities such as external reporting, data analytics and a connection to the Texas Department of Motor Vehicles’ datasets to allow better informed agency decision making; and

WHEREAS, the deliverables required for the first phase of the Data Platform Project include: 1) build a data platform; 2) build and manage internal transaction databases; 3) create transaction data exchanges; 4) mirror pricing and payment logic; 5) ensure SOC 2 Type 2 Trust Services Criteria compliance; and 6) add additional data sources; and

WHEREAS, by Resolution No. 21-009 dated February 24, 2021 the Board awarded a contract to Deloitte Consulting LLP (“Deloitte”) through the Texas Department of Information Resources (“DIR”) Cooperative Contracts Program for the first phase of the Data Platform Project, authorized the Interim Executive Director to negotiate a final Scope of Work with Deloitte, and directed the Interim Executive Director to present the proposed Scope of Work to the Board for its approval; and

WHEREAS, the Interim Executive Director has negotiated a proposed Scope of Work with Deloitte in an amount not to exceed \$1,694,946 for the first phase of the Data Platform Project which is attached hereto as Exhibit A; and

WHEREAS, pursuant to Texas Government Code Section 2054.0565 and Mobility Authority Policy Code Section 401.008, the Mobility Authority may use the DIR cooperative contract to procure Deloitte for the first phase of the Data Platform Project; and

WHEREAS, the Interim Executive Director recommends entering into an agreement with Deloitte Consulting LLP for the first phase of the Data Platform Project in an amount not to exceed \$1,694,946 through their DIR cooperative contract.

NOW THEREFORE BE IT RESOLVED that the Board of Directors hereby approves the Scope of Work for first phase of the Data Platform Project which is attached hereto as Exhibit A; and

BE IT FURTHER RESOLVED, that the Executive Director is authorized to enter into an agreement with Deloitte Consulting LLP in an amount not to exceed \$1,694,946 through their cooperative contract with the Texas Department of Information Resources for the first phase of the Data Platform Project.

Adopted by the Board of Directors of the Central Texas Regional Mobility Authority on the 31<sup>st</sup> day of March 2021.

Submitted and reviewed by:

Approved:

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Geoffrey Petrov, General Counsel

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

**Exhibit A**

(To be provided at the Board Meeting)

# MOBILITY AUTHORITY DATA PLATFORM PROJECT

## STATEMENT OF WORK SUMMARY FOR DELOITTE CONSULTING, INC.

Deloitte Consulting LLP (“Deloitte”) is a full-service professional services organization providing consulting, financial advisory, tax, and audit services under a unified Deloitte brand. Deloitte has partnered with Google LLC to submit a response to the Mobility Authority’s Statement of Work for Data Platform Services. Deloitte’s proposal is submitted subject to and governed by the DBITS terms and conditions as set forth in the Texas Department of Information Resources’ (DIR) delivery-based information technology services (DBITS) contract # DIR-TSO-4031.

### I. SCOPE

#### Release 1 Approach and Implementation Plan

The first release consists of discovery, design, and implementation of an initial data platform solution. This will require the Vendor to develop an understanding and appreciation of the future state conceptual and logical transaction processing architectures. This release will serve as a critical foundation for CTRMA’s transaction processing solution.

#### Critical Milestone Deliverables:

- Infrastructure architecture to support the transaction processing solution
- Data platform application to support the transaction processing data architecture
- Fixed Toll Road Transaction data architecture
- Fixed Toll Road external data exchange(s)

#### Release 1 Requirements:

1. Assessment, selection, and implementation of hosting solution(s)
  - Review and consultation of conceptual and logic architecture for hosting solution
  - Review and understanding of current physical hosting topologies
  - Design future state physical hosting solution
  - Document visual representation of future physical hosting topology design
  - *CTRMA acceptance of the future physical hosting design (Payment Deliverable Milestone)*
2. Hosting hardware/software implementation
  - Implementation of data platform physical hardware
  - Implementation of data platform operating system(s) and other necessary physical hardware support applications
  - *Production ready physical hosting environment (Payment Deliverable Milestone)*
3. Selection, licensing, and implementation of data platform application(s)
  - Review and consultation on the selection of data platform software solutions (Oracle, SQL, et. al.)
  - Installation and configuration of data platform software solution
  - *Production ready data platform software solution (Payment Deliverable Milestone)*

4. Development of Fixed Toll Road Transaction database(s) and relationships
  - Review and assess existing Fixed Toll Road Transaction data entities
  - Discover and document future state Fixed Toll Road Transaction data entities (ERDs)
  - Design database solution for Fixed Toll Road Transaction data
  - Document visual representation of Fixed Toll Road Transaction schema(s)
  - Build Fixed Toll Road Transaction database(s)
  - ***Production ready Fixed Toll Road Transaction Database(s) (Payment Deliverable Milestone)***
5. Design, development, and testing for external Fixed Toll Road Transaction data exchanges (Fixed file, API, XML, JSON)
  - Review and consultation of conceptual and logic architecture for Fixed Toll Road Transaction data exchange(s)
  - Design future state Fixed Toll Road Transaction data exchange(s)
  - Document visual representation Fixed Toll Road Transaction data exchange(s)
  - Document Fixed Toll Road data exchange(s) Interface Control Document (ICD)
  - Develop and deploy Fixed Toll Road Transaction data exchange(s)
  - Integrate Fixed Toll Road Transaction data exchange(s) and Fixed Toll Road database
  - Test Fixed Toll Road Transaction data exchange(s) integration with Fixed Toll Road Database
  - ***Production ready Fixed Toll Road Transaction data exchange(s) (Payment Deliverable Milestone)***
6. Initialization of Source Data Entity Catalog
  - Discover and develop Source Data Entity Catalog design
  - Initialize Source Data Entity Catalog with Fixed Toll Road Transaction data entities
  - ***Delivery of initial Source Data Entity Catalog (Payment Deliverable Milestone)***
7. Policies and Procedures documentation
  - Review and understand SOC 2 requirements
  - Review and understand AICPA TSP Section 100 Trust Services Criteria
  - Consult and document TSP 100 Security policies
  - Consult and document TSP 100 Availability policies
  - Consult and document TSP 100 Processing Integrity policies
  - Consult and document TSP 100 Confidentiality policies
  - Consult and document TSP 100 Privacy policies
  - ***Completion of policies in support of AICPA TSP Section 100 Trust Services Criteria (Payment Deliverable Milestone)***
8. Assessment, selection, and implementation of e-discovery toolset(s)
  - Review and consultation of e-discovery toolset(s)
  - Implementation and configuration of e-discovery toolset(s)
  - ***Production ready e-discovery toolset(s) (Payment Deliverable Milestone)***

## Release 2 Interim Routing and Data Exchanges

### Release 2 Approach and Implementation Plan

The second release consists of discovery, design, and implementation of an interim Payor ID and Payment Path solution. Currently, CTRMA relies on external service providers to apply the logic necessary to identify the appropriate payor for a fixed toll road transaction and the route that the request for payment should follow. The intent of this release is to mirror the current externally managed process in the new CTRMA Transaction Processing solution. The expanded data architecture in scope for this release will support future releases for both Reporting and more advanced Payor ID and Payment Path features.

### Critical Milestone Deliverables:

- IOP Hub Data Architecture
- DMV Data Architecture
- IOP and DMV external data exchange(s)
- Automated Payor ID logic
- Automated Payment Path logic

### Release 2 Requirements:

1. Development of IOP Hub database(s) and relationships
  - Review and assess existing IOP Hub entities
  - Discover and document future state IOP Hub entities (ERDs)
  - Design database solution for IOP Hub database
  - Document visual representation of IOP Hub database schema(s)
  - Build IOP Hub database(s)
  - ***Production ready IOP Hub database(s) (Payment Deliverable Milestone)***
2. Development of DMV Hub database(s) and relationships
  - Review and assess existing DMV entities
  - Discover and document future state DMV entities (ERDs)
  - Design database solution for DMV database
  - Document visual representation of DMV database schema(s)
  - Build DMV database(s)
  - ***Production ready DMV Hub database(s) (Payment Deliverable Milestone)***
3. Design, development, and testing for external IOP Hub ICD data exchanges (Fixed file, API, XML, JSON) (per CUSIOP ICD requirements)
  - Review and consultation of conceptual and logic architecture IOP Hub ICD data exchange(s)
  - Design future state IOP Hub ICD data exchange(s)
  - Document visual representation IOP Hub ICD data exchange(s)
  - Develop and deploy IOP Hub ICD data exchange(s)
  - Integrate IOP Hub ICD data exchange(s) and IOP Hub database
  - Test IOP Hub ICD data exchange(s) integration with IOP Hub database in accordance with the CUSIOP Certification Testing Document attached in Appendix F
  - ***Production ready IOP Hub ICD exchange(s) (Payment Deliverable Milestone)***

4. Design, development, and testing for invoicing (Pay By Mail) ICD data exchanges (Fixed file, API, XML, JSON) (integrated with current Pay By Mail ICDs)
  - Review and consultation of conceptual and logic architecture invoicing ICD data exchange(s)
  - Design future state invoicing ICD data exchange(s)
  - Document visual representation invoicing ICD data exchange(s)
  - Document revised Pay By Mail data exchange(s) ICD
  - Develop and deploy invoicing ICD data exchange(s)
  - Integrate invoicing ICD data exchange(s) and invoicing database (Pay By Mail)
  - Test invoicing ICD data exchange(s) integration with invoicing database
  - ***Production ready invoicing ICD data exchange(s) (Payment Deliverable Milestone)***
  
5. Policies and Procedures documentation
  - Revise and document TSP 100 Security policies
  - Revise and document TSP 100 Availability policies
  - Revise and document TSP 100 Processing Integrity policies
  - Revise and document TSP 100 Confidentiality policies
  - Revise and document TSP 100 Privacy policies
  - ***Delivery of updated policies in support of AICPA TSP Section 100 Trust Services Criteria (Payment Deliverable Milestone)***
  
6. Revision of Source Data Entity Catalog
  - Update Source Data Entity Catalog to include IOP Hub entities
  - Update Source Data Entity Catalog to include DMV entities
  - ***Delivery of updated Source Data Entity Catalog (Payment Deliverable Milestone)***
  
7. Development of automated business process(es) for Payor ID and Payment Path routing logic
  - Review and understanding of existing Payor ID and Payment Path routing logic
  - Discover and design UX/UI for managing exempt license plates
  - Develop and deploy UX/UI for managing exempt license plates
  - Discover and design automated interim Payor ID and Payment Path routing logic solution
  - Develop and deploy automated interim Payor ID and Payment Path routing logic solution
  - Test UX/UI for managing exempt license plates
  - Test automated interim Payor ID and Payment Path routing logic solution
  - ***Production ready automated interim Payor ID and Payment Path routing logic solution (Payment Deliverable Milestone)***

8. Development of UX/UI for monitoring and reporting of automated business process(es) for Payor ID and Payment Path routing logic
  - Discover and design UX/UI for monitoring automated interim Fixed Toll Road Transaction processing
  - Develop and deploy UX/UI for monitoring automated interim Fixed Toll Road Transaction processing
  - Discover and design UX/UI for reporting automated interim Fixed Toll Road Transaction processing
  - Develop and deploy UX/UI for reporting automated interim Fixed Toll Road Transaction processing
  - Test UX/UI for monitoring automated interim Fixed Toll Road Transaction processing
  - Test UX/UI for reporting automated interim Fixed Toll Road Transaction processing
  - ***Production ready UX/UI for monitoring and reporting automated interim Fixed Toll Road Transaction processing (Payment Deliverable Milestone)***
  
9. Design, development, and testing for external DMV Hub data exchanges (Fixed file, API, XML, JSON) (per DMV ICD requirements)
  - Review and consultation of conceptual and logic architecture DMV ICD data exchange(s)
  - Design future state DMV ICD data exchange(s)
  - Document visual representation DMV ICD data exchange(s)
  - Develop and deploy DMV ICD data exchange(s)
  - Integrate DMV ICD data exchange(s) and DMV database
  - Test DMV ICD data exchange(s) integration with DMV database
  - ***Production ready DMV Hub ICD data exchange(s) (Payment Deliverable Milestone)***

The required deliverables for Release 1 and Release 2 include:

- CTRMA acceptance of the future physical hosting design
- Production ready physical hosting environment
- Production ready data platform software solution
- Production ready fixed Toll Road Transaction Database(s)
- Production ready Fixed Toll Road Transaction data exchange(s)
- Delivery of initial Source Data Entity Catalog
- Completion of policies in support of AICPA TSP Section 100 Trust Services Criteria
- Production ready e-discovery toolset(s)
- Production ready IOP Hub database(s)
- Production ready DMV Hub database(s)
- Production ready IOP Hub data exchange(s)
- Production ready invoicing data exchange(s)
- Delivery of updated policies in support of AICPA TSP Section 100 Trust Services Criteria
- Delivery of updated Source Data Entity Catalog
- Production ready automated interim Payor ID and Payment Path routing logic solution
- Production ready UX/UI for monitoring and reporting automated interim Fixed Toll Road Transaction processing
- Production ready DMV Hub data exchange(s)

## **II. SCHEDULE**

- Anticipated date of Notice to Proceed is April 2021.
- Deliverable schedule outlined in Attachment A.
- Work is estimated to be completed within 22 weeks of NTP.

## **III. BUDGET - not to exceed \$1,694,946**

- Includes a 10% project contingency
- Assumes that CTRMA will purchase and/or have available all required software, hardware, and hosting in support of the agreed upon scope of work. All Google Cloud Platform services are available on Texas DIR contract # DIR-TSO-4162, via Google Cloud's exclusive government distributor, Carahsoft Technology Corporation. Deloitte is listed as a reseller vendor on this contract as well.