



CENTRAL TEXAS REGIONAL
MOBILITY AUTHORITY

December 16, 2020
AGENDA ITEM #4

Amend Board approved Work Authorization
No. 17 with Kapsch TrafficCom USA, Inc. for the
installation of Intelligent transportation system
hardware on the 183A corridor

Strategic Plan Relevance: Regional Mobility
Department: Operations
Contact: Tracie Brown, Director of Operations
Associated Costs: not to exceed \$548,195.78
Funding Source: Capital Improvement Project - 183A Phase III
Action Requested: Consider and act on draft resolution
Summary:

Background - The 183A Intelligent Transportation System (ITS) Retrofit Project will update 183A Phases I and II with technology that is consistent with the 290 East, MoPac North, SH 71 and SH 45SW corridors, allowing for better traffic management, incident response and communication with area stakeholders. The approximate limits of the retrofit project are from SH 45N / RM 620 in northwest Austin to Hero Way in Leander.

Current Action - Under this proposed supplemental work authorization, Kapsch TrafficCom USA will procure, install, test, and integrate two (2) dynamic message signs (DMS) and an advanced incident detection (AID) system, inclusive of thirty-nine (39) DVAS cameras and TrafficVision Software, on the existing 183A Phases I & II corridor. These additional technology improvements will increase communication with 183A customers and provide enhanced detection of incidents on the roadway.

The cost of this Supplemental Work Authorization is \$548,195.78, bringing the total project cost to \$926,807.92 Funding for this additional work was anticipated and budgeted in the FY21 Operating Budget under CIP-183A.

Previous Action - In March 2019 the CTRMA Board authorized Work Authorization No. 17 with Kapsch TrafficCom USA to design, furnish, install, test, integrate and maintain nine (9) pan-tilt-zoom cameras and ten (10) microwave vehicle detectors on the existing 183A corridor as part of the 183A Intelligent Transportation System (ITS) Retrofit Project. The backup information for this item contemplated the addition of other technology enhancements such as incident detection, wrong way driver detection, and other remote sensing units. The approved cost was not to exceed \$378,612.14.

Four of the proposed nine cameras have been installed. Live video was integrated into the TIM Center on November 9th for the cameras located at the southbound Lakeline gantry, the northbound Brushy Creek off ramp, Crystal Falls Mainline and Crystal Falls northbound on-ramp. The remaining five CCTV cameras require additional infrastructure to include power, communication lines and lighting protection. Design of such infrastructure is nearing completion.

Regarding the traffic sensors, five have been installed and will be logging live traffic by December 7th. The remaining traffic sensors will be installed on December 11th. These will be calibrated and logged into the traffic sensor buffer but will not be accessible remotely until all civil work is completed. Staff anticipates that a civil construction contract will be let in the Spring of 2021 and that construction will start shortly thereafter. A separate item will be submitted for board consideration in the coming months related to the project's construction and oversight.

Staff Recommendation – Staff recommends approving Supplement No. 1 to Work Authorization #17 with Kapsch TrafficCom USA for the installation of additional hardware for the 183A Phase Intelligent Transportation System

Backup Provided - Kapsch Statement of Work
Draft Resolution

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

RESOLUTION NO. 20-0XX

**APPROVING SUPPLEMENT NO. 1 TO WORK AUTHORIZATION NO. 17 WITH
KAPSCH TRAFFICOM USA, INC. FOR THE INSTALLATION OF ADDITIONAL
HARDWARE FOR THE 183A INTELLIGENT TRANSPORTATION SYSTEM RETROFIT
PROJECT**

WHEREAS, by Resolution No. 19-012, dated March 27, 2019, the Board approved Work Authorization No. 17 with Kapsch TrafficCom USA Inc. (Kapsch) to retrofit the intelligent transportation system (ITS) on 183A Phases I & II consistent with technology on the 290 East, MoPac North, SH 71 and SH 45SW corridors in order to provide better traffic management, incident response and communication with area stakeholders; and

WHEREAS, the Mobility Authority requires the installation of additional hardware including additional cameras and microwave vehicle detectors for the 183A ITS Retrofit Project; and

WHEREAS, the Executive Director has developed proposed Supplement No. 1 to Work Authorization No. 17 with Kapsch in an amount not to exceed \$548,195.78 for the installation of additional ITS hardware, including two (2) dynamic message signs and an advanced incident detection system on the 183A corridor; and

WHEREAS, the Executive Director recommends that the Board approve Supplement No. 1 to Work Authorization No. 17 with Kapsch TrafficCom USA Inc. in the form or substantially the same form attached hereto as Exhibit A.

NOW THEREFORE, BE IT RESOLVED, that the Board approves Supplement No. 1 to Work Authorization No. 17 in an amount not to exceed \$548,195.78 for the installation of additional ITS hardware on the 183A corridor; and

BE IT FURTHER RESOLVED that the Board authorizes the Executive Director to finalize and execute Supplement No. 1 to Work Authorization No. 17 with Kapsch TrafficCom USA Inc. on behalf of the Mobility Authority and in the form or in substantially the same form attached hereto as Exhibit A.

Adopted by the Board of Directors of the Central Texas Regional Mobility Authority on the 16th day of December 2020.

Submitted and reviewed by:

Approved:

Geoffrey Petrov, General Counsel

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

Exhibit A

CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY

SUPPLEMENTAL WORK AUTHORIZATION NO. 1

to

WORK AUTHORIZATION NO.17

INTELLIGENT TRANSPORTATION SYSTEM (ITS) RETROFIT IMPLEMENTATION

183A ITS RETROFIT PROJECT

THIS SUPPLEMENTAL WORK AUTHORIZATION NO. 1 (“SWA No. 1”) TO WORK AUTHORIZATION NO. 17 (“WA No. 17”) is made pursuant to the terms and conditions of Article 1 of the GENERAL PROVISIONS, Attachment A, to the original Contract for Toll System Implementation, dated April 27, 2005 (the Contract) entered into by and between the Central Texas Regional Mobility Authority (the “Authority” or “CTRMA”), and Kapsch TrafficCom USA, Inc. (the “Contractor,” also referred to in attachments to this SWA No. 1 and WA No. 17 as the “System Integrator” or “SI”).

Pursuant to this SWA No. 1, PARTS I and II of WA No. 17 are modified as follows:

PART I. The Scope of Work attached to WA No. 17 as **Attachment A** is amended to include the following additional services:

- All work required to coordinate with the Authority, General Engineering Consultant, third-party manufactures and subcontractors, and the Roadway Contractor to design, procure (e.g. system hardware and software), install, configure, and test two (2) dynamic message signs (DMS); procure, install, configure test and integrate an advanced incident detection (AID) system, inclusive of thirty-nine (39) Video Detection Fixed Cameras (VDFC) cameras and TrafficVision Software, on Phases 1 and 2 of the 183A corridor.
- All work required to coordinate with the Authority, General Engineering Consultant, third-party manufactures and subcontractors, and the Roadway Contractor to construct and install any necessary civil infrastructure (e.g. installation of poles for the system, structures for DMS, new conduit for power and/or fiber optic communications and installation of fiber optic cable and/or power cables) needed to implement the additional ITS technologies.

PART II. This SWA No. 1 increases the maximum amount payable under this WA No. 17 by FIVE HUNDRED FORTY-EIGHT THOUSAND ONE HUNDRED NINETY FIVE AND 78/100 DOLLARS (\$548,195.78). The revised maximum amount payable is NINE HUNDRED TWENTY-SIX THOUSAND EIGHT HUNDRED SEVEN AND 92/100 DOLLARS (\$926,807.92).

Intelligent Transportation System (ITS) Retrofit
Supplemental Work Authorization No. 1 to
Work Authorization No. 17

IN WITNESS WHEREOF, this Supplemental Work Authorization No. 1 to Work Authorization No. 17 is executed in duplicate counterparts and hereby accepted and acknowledged below.

THE CONTRACTOR: Kapsch TrafficCom USA, Inc.



Signature

December 9, 2020

Date

Peter Aczel, Vice President & General Manager, Central Region

Typed/Printed Name and Title

CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY

Executed for and approved by the Central Texas Regional Mobility Authority for the purpose and effect of activating and/or carrying out the orders, established policies or work programs heretofore approved and authorized by the Texas Transportation Commission.

Signature

Date

Mike Heiligenstein, Executive Director

Typed/Printed Name and Title

LIST OF ATTACHMENTS

Attachment A WA-17 183A ITS Retrofit – Revision 1 (Scope of Work)

Central Texas Regional Mobility Authority
Tracie Brown, Director of Operations
3300 North IH-35, Suite 300
Austin, TX 78705 USA

Sender | Lisa Gauger
Phone | 512-435-9697
Email | Lisa.Gauger@kapsch.net
Date | 04-December-2020

Re: WA-17 183A ITS Retrofit – Revision 1

Dear Tracie Brown,

Kapsch TrafficCom USA, Inc. (“Kapsch”) is pleased to offer this proposal to furnish the Central Texas Regional Mobility Authority (“CTRMA”) and (“Customer”) for the above referenced project as detailed below in the “Work Included” section, and including referenced attachments.

This proposal and all related materials attached or appended hereto are proprietary and confidential to Kapsch, and submitted solely for the recipient’s internal evaluation purposes. Disclosure to any third parties is prohibited without the express written consent of Kapsch, as described further herein.

1. PRICING AND PAYMENT TERMS

The Kapsch price to provide the materials and services described in the ‘Work Included’ section of this proposal is as follows:

\$548,195.78 (not to exceed)

- A. The price quoted is valid for ninety (90) days and subject to Kapsch’s terms and conditions as expressed herein. No other terms and conditions apply unless expressly agreed to in writing by Kapsch.
- B. The above quoted price does not include any bonds, taxes, permits or duties that may be applicable to the proposed scope of work. Delivery is to the Met Center/TMC/work site.
- C. All pricing is in US Dollars.
- D. Net 30 days upon receipt of invoice from Kapsch

Payment Terms will be mutually agreed upon prior to contract execution and documented in writing. It is projected that payment terms will follow the project phasing as described in the Scope of Work below, in addition to mutually agreeable contract terms. Kapsch proposes the following payment milestones for the project:

- 10% Notice to Proceed (NTP)
- 25% Equipment Ordered and Received, excluding Corridor DMS
- 25% Equipment Ordered and Received, Corridor DMS
- 10% Start of Installation Activities
- 30% Final System Acceptance

2. WORK INCLUDED

Kapsch will design, furnish, install, configure, test, and integrate thirty nine (39) Video Detection Fixed Cameras (VDFC) cameras, TrafficVision Software, and two (2) DMS units on the 183A facility. Work includes provision of ITS hardware and software, fiber splice boxes, installing equipment on existing structures, and where applicable new structures.

A. General

The proposed scope of work is applicable to the following project sites:

- 183A Toll Facility for CTRMA in Austin, TX

B. Scope Description

1. Kapsch will design, furnish, install, configure, test, and integrate the stated quantities of ITS devices and infrastructure as stated on 183A.
2. See description below in Section C, Statement of Work.

C. Statement of Work

1. Procure and install 39 new VDFC cameras. The VDFC cameras will be configured, tested, and integrated into the CTRMA Traffic Management Center.
2. Procure, install, configure, and test 2 new DMS units. The DMS units will be integrated into the CTRMA Traffic Management Center.
3. Add Automatic Incident Detection (AID) hardware and software to corridor (includes cameras and Traffic Vision software/server & licensing) and integrate into the Traffic Management System.
4. Provide installation drawings for the new ITS components outlined above to be installed on this corridor.

D. Pricing Breakdown

Price Sheet
WA-17 183A ITS Retrofit – Revision 1
ITS System Installation/Integration

The below pricing is based on estimates and will be updated once the Purchase Orders are completed.

	Materials / Equipment	Unit Price	Quantity	Cost	10% Markup	Extended Price
1	DVAS/VDFC - CAMERA-HOUSING	\$1,160.00	39	\$45,240.00	\$4,524.00	\$49,764.00
2	VDFC: POE Injector/IR/Brackets/Pole/VI	\$11,356.00	1	\$11,356.00	\$1,135.60	\$12,491.60
3	PowerEdge R730 Server	\$13,793.00	1	\$13,793.00	\$1,379.30	\$15,172.30
4	AID Traffic Vision Software	\$28,400.00	1	\$28,400.00	\$2,840.00	\$31,240.00
5	DMS	\$53,850.00	2	\$107,700.00	\$10,770.00	\$118,470.00
6	CORRIDOR FIELD NETWORK	\$3,238.02	1	\$3,238.02	\$323.80	\$3,561.82
7	CORRIDOR POWER SUPPILES	\$97.50	1	\$97.50	\$9.75	\$107.25
8	ROADSIDE CABINET(S)	\$726.32	2	\$1,452.64	\$145.26	\$1,597.90
9	EQUIPMENT PANEL ASSESORIES	\$1,028.26	1	\$1,028.26	\$102.83	\$1,131.09
10		\$0.00	0	\$0.00	\$0.00	\$0.00
Total Hardware						\$233,535.96

	Labor	No. of Hours	Hr. Contract Rate	Total
1	Software Engineer	160.00	\$157.59	\$25,214.40
2	System/Hardware Engineer	364.00	\$172.52	\$62,797.28
3	Technician	180.00	\$120.90	\$21,762.00
4	Business Analyst	0.00	\$157.59	\$0.00
5	Database Administrator	0.00	\$224.14	\$0.00
6	Documentation Clerk	40.00	\$161.66	\$6,466.40
7	Testing Engineer	8.00	\$171.17	\$1,369.36
8	Network Engineer/Administrator	40.00	\$156.22	\$6,248.80
9	Project Manager	40.00	\$224.14	\$8,965.60
Total Hours:		832.00	Total Labor:	\$132,823.84

	Subcontractor	Quantity	Cost	10% Markup	Extended Price
	Fiber + Fiber install	1	\$20,000.00	\$2,000.00	\$22,000.00
	COORIDOR DEVICE INSTALLATIONS	1	\$80,000.00	\$8,000.00	\$88,000.00
	Traffic Control	1	\$20,000.00	\$2,000.00	\$22,000.00
	0	0	\$0.00	\$0.00	\$0.00
	0	0	\$0.00	\$0.00	\$0.00
	0	0	\$0.00	\$0.00	\$0.00
	0	0	\$0.00	\$0.00	\$0.00
	0	0	\$0.00	\$0.00	\$0.00
Total Subcontractor					\$132,000.00

	ODCs / Travel	Quantity	Cost	10% Markup	Extended Price
1	Air Fare	0	\$0.00	\$0.00	\$0.00
2	Mileage	0	\$0.00	\$0.00	\$0.00
3	Lodging	0	\$0.00	\$0.00	\$0.00
4	Per Diem	0	\$0.00	\$0.00	\$0.00
5	Car Rental	0	\$0.00	\$0.00	\$0.00
6	PM - Other/Misc.	0	\$0.00	\$0.00	\$0.00
7	Warr/Maint - Other/Misc.	0	\$0.00	\$0.00	\$0.00
Total ODCs / Travel					\$0.00

PRICE SUMMARY: \$498,359.80
10% PRICING BUFFER: \$49,835.98
NOT TO EXCEED PRICING: \$548,195.78

E. Preliminary Schedule

1. At Notice to Proceed (NTP), or upon approval and authorization by the Authority, Kapsch will initiate the procurement process for the required materials and sensors.
2. It is estimated the amended work included in the project revision will be completed in 4-6 weeks after Civil work is completed as noted in the assumptions above, not accounting for weather delays, extended review cycles, or procurement lead time delays.
3. An install schedule will be provided for CTRMA's review and approval once a comprehensive civil turnover schedule and NTP are provided to Kapsch.

F. Assumptions for the design revisions:

Original assumptions:

1. Assumes the CTRMA Contractor will be responsible for all activities associated with utility relocates and service turn-ons.
2. Assumes the CTRMA Contractor will be responsible for all power drops.
3. Civil design work to be prepared by others but reviewed by Kapsch. Civil infrastructure included in the Civil Bid Set include:
 - a. All underground Conduit (Trench and Bore)
 - b. All RMC on Existing COSS and OSB that do not have an existing Toll System
 - c. All Ground Boxes
 - d. All Junction Boxes
 - e. Placement of an Existing 40' CCTV Pole onto a new drill shaft
 - f. All Drill Shafts
 - g. All Service Poles with Load Panels and Branch Breakers (as specified by SI)
 - h. All Branch Circuits off the Load Panels to locations that do not have access to existing Toll Power
 - i. Lightning Protection for the 40' CCTV Pole and DMS will be part or the Civil PS&E
4. SI will provide the 6' CCTV Poles. SI will provide lightning protection for all CCTV cameras mounted to 6' CCTV Pole

Change Order assumptions:

1. CTRMA Consultant added two (2) 3-Line DMS signs to project. Change Order to procure/install/configure/integrate/test. Kapsch will document testing/validation plan in agreement with CTRMA.
2. Change Order to add automatic incident detection to corridor (includes VDFC cameras and TrafficVision software/server & licensing).
3. Upon completion of testing and TMC integration, maintenance service, repair, and troubleshooting for these new devices will be added to the maintenance contract at an additional cost using the per-device pricing in the outlined in the maintenance contract.
4. CTRMA will pay for future recurring data/communication costs and fees associated with this device and software procurement.

3. WORK NOT INCLUDED

The following listing of "Work Not Included" is intended as further clarification regarding Kapsch's proposed offering.

- A. Excludes sealing the TXDOT Standards plan sets.
- B. Performing any configuration, programming and startup of any devices that are not specifically noted in WA #17 or above in the "Work Included" section, unless the additional scope and related fee has been agreed to by CTRMA and Kapsch.
- C. Furnishing any hardware or any additional software unless stated otherwise in the "Work Included" section, unless additional scope and related fee has been agreed to by CTRMA and Kapsch.
- D. Performing any services in the capacity of a licensed Professional Engineer unless specifically stated otherwise in the "Work Included" section.
- E. Providing any submittal data, drawings, manuals, reports, test data or record documentation other than the deliverables listed above in the Work Included section. Installation of any equipment unless stated otherwise in WA #17 or the Work Included section.
- F. Testing of any devices, subsystems, or systems not listed above in the Work Included section.
- G. Any other system not expressly stated in Work Included Section.

Kapsch appreciates this opportunity to submit this proposal. Should you have any questions regarding our proposal, please contact the undersigned at 202-341-2292 or by email at Peter.Aczel@kapsch.net.

Yours Truly,




Peter Aczel
Vice President & General Manager, Central Region
Kapsch TrafficCom USA, Inc.

cc: Lisa Gauger, PM; Tim Duke, MM; Don Hicks, VP Sales

Acceptance of Scope of Work:

Kapsch TrafficCom USA, Inc.

Central Texas Regional Mobility Authority

By:  _____

By: _____

Name: Peter Aczel

Name: Mike Heiligenstein

Title: Vice President Delivery & Operation, Central Region

Title: Executive Director

Date: December 10, 2020

Date: _____