

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

RESOLUTION NO. 07-47

WHEREAS, the Central Texas Regional Mobility Authority ("CTRMA") was created pursuant to the request of Travis and Williamson Counties and in accordance with provisions of the Transportation Code and the petition and approval process established in 43 Tex. Admin. Code § 26.01, *et. seq.* (the "RMA Rules"); and

WHEREAS, the CTRMA identified the proposed 183-A turnpike as its initial project in the petition filed under the RMA Rules; and

WHEREAS, the CTRMA has approved various work authorizations for its General Engineering Consultant (the "GEC") to pursue work necessary for the development of 183-A; and

WHEREAS, in Resolution No. 03-46, dated September 24, 2003, the CTRMA Board of Directors approved Work Authorization No. 3.1 concerning project office operations, administrative support, and core staff services related to project development; and

WHEREAS, in Resolutions Nos. 04-44, 05-68, 06-36, 06-51 and 07-13, the CTRMA Board of Directors approved, respectively, Supplements Nos. 1, 2, 3, 4 and 5 to Work Authorization 3.1 and the CTRMA Board of Directors is considering approval of other Supplements to Work Authorization 3.1 under other action at this Board meeting; and


WHEREAS, the GEC has requested approval of Supplement 6 to Work Authorization No. 3.1 related to providing certain GIS services; and

WHEREAS, the GEC has represented to the Board of Directors that the work reflected in Supplement No. 6 to Work Authorization No. 3.1, attached hereto as Attachment "A", and the cost thereof is necessary and appropriate to pursue the development of 183-A and other CTRMA turnpike projects.

NOW THEREFORE, BE IT RESOLVED, that the Board of Directors approves Supplement No. 6 to Work Authorization No. 3.1, attached hereto as Attachment "A", provided that any work commenced under the Supplement 6 to Work Authorization No. 3.1 be subject to the Agreement for General Consulting Civil Engineering Services between the CTRMA and the GEC.

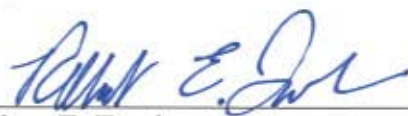
Adopted by the Board of Directors of the Central Texas Regional Mobility Authority on the 29th day of August, 2007.

Submitted and reviewed by:



Tom Nielson
General Counsel for the Central
Texas Regional Mobility Authority

Approved:



Robert E. Tesch
Chairman, Board of Directors
Resolution Number 07-47
Date Passed 08/29/07

**ATTACHMENT "A"
TO
RESOLUTION 07-47**

Supplement No. 6 to GEC Work Authorization 3.1

EXHIBIT B

WORK AUTHORIZATION NO. 3.1

SUPPLEMENT NO. 6

This Supplement No. 6 to Work Authorization No. 3.1 is made as of this 29th day of August, 2007, under the terms and conditions established in the AGREEMENT FOR GENERAL CONSULTING ENGINEERING SERVICES, dated as of September 1, 2003 (the Agreement), between the Central Texas Regional Mobility Authority (Authority) and HNTB Corporation (GEC). The contract award amount of this Work Authorization Supplement is \$79,388. This Supplemental Work Authorization is made for the following purpose, consistent with the Services defined in the Agreement:

GIS Services

The following terms and conditions of Work Authorization No. 3.1 are hereby amended, as follows:

Section A. - Scope of Services

A.1. GEC shall perform the following Services:

Refer to Attachment A – Scope of Work

A.2. The following Services are not included in this Supplement No. 6 to Work Authorization No. 3.1, but shall be provided as Additional Services if authorized or confirmed in writing by the Authority.

N/A

A.3. In conjunction with the performance of the foregoing Services, GEC shall provide the following submittals/deliverables (Documents) to the Authority:

Refer to Attachment A - Scope of Work

Section B. - Schedule

GEC shall perform the Services and deliver the related Documents (if any) according to the following schedule:

Services defined herein shall be complete within eleven (11) months from the date this Supplement No. 6 to Work Authorization No. 3.1 becomes effective.

Section C. - Compensation

C.1. In return for the performance of the foregoing obligations, the Authority shall pay to the GEC the amount not to exceed **\$79,388.00**, based on Attachment B – Fee Estimate. This will increase the not to exceed compensation amount for Work Authorization No. 3.1 from **\$6,071,589.00 to \$6,150,977.00**. Compensation shall be in accordance with the Agreement.

The Authority and the GEC agree that the budget amounts contained in Attachment B-Fee Estimate for the various companies and firms composing the GEC are estimates and that these individual figures may be redistributed and/or adjusted as necessary over the duration of this Work Authorization. The GEC may alter the compensation distribution between tasks or work assignments to be consistent with the Services actually rendered within the total Work Authorization amount. The GEC shall not exceed the maximum amount payable without prior written permission by Owner.

C.2. Compensation for Additional Services (if any) shall be paid by the Authority to the GEC according to the terms of a future Work Authorization.

Section D. - Authority's Responsibilities

The Authority shall perform and/or provide the following in a timely manner so as not to delay the Services of the GEC. Unless otherwise provided in this Work Authorization, the Authority shall bear all costs incident to compliance with the following:

N/A

Section E. - Other Provisions

The parties agree to the following provisions with respect to this specific Work Authorization:

N/A

Except to the extent expressly modified herein, all terms and conditions of the Agreement shall continue in full force and effect.

Authority: Central Texas Regional Mobility Authority

GEC: HNTB Corporation

By: ROBERT E. TESCH

By: RICHARD L. RIDINGS

Signature: 

Signature: 

Title: CHAIRMAN

Title: VICE PRESIDENT

Date: 8/29/07

Date: 8/28/2007

General Counsel Approval: 

CENTRAL TEXAS RMA**ATTACHMENT A – SCOPE OF WORK****WORK AUTHORIZATION NO. 3.1 – SUPPLEMENT NO. 6****SERVICES TO BE PROVIDED BY THE GENERAL ENGINEERING CONSULTANT (GEC)**

The services to be provided by the GEC under this scope are the CTRMA Enterprise GIS (EGIS) Implementation.

I. CTRMA ENTERPRISE GIS (EGIS) IMPLEMENTATION

The goal of this initiative is the development of a basic Enterprise Geographical Information System (EGIS) for the CTRMA that includes a base data environment, industry-standard software and hosting platform, a non-proprietary Internet data viewing application for non-desktop EGIS users, mapping data for the CTRMA's existing facilities, and training for appropriate CTRMA staff and consultants.

PROJECT SCHEDULE

As directed by the CTRMA, the first step of the implementation plan will be to develop a base data platform and select an industry-standard software and hosting environment. The second step will be to develop the Internet application for non-desktop end-users while coordinating the collection of design and available survey data of the CTRMA's existing facilities. The final step will be to load the data into the CTRMA's base environment, conduct training and deploy the Internet application to complete this initial phase of EGIS implementation..

It is important to note that the majority of these tasks can be completed by the GEC in 2007. However, due to procurement and seasonal constraints, the mapping services task cannot be completed until late first quarter 2008. The GEC recommends that the CTRMA target a procurement selection date of October 2007. This would allow the selected mapping vendor to fly the 183A Corridor in a December-February timeframe; the optimum timeframe to capture aerial survey data.

Implementation Plan	Start	Finish
I. Develop the Base Data Environment	September '07	October '07
1. Develop data model and dictionary		
2. Develop linear reference system		
II. Develop a Software and Hosting Platform	October '07	November '07
1. Select a desktop environment		
2. Select a hosting environment		
→ Conduct 'GIS applications'	October - November '07	

presentation for CTRMA staff ←		
III. Develop Application for Non-Desktop End-Users	December '07	March '08
1. Review existing CTRMA Internet solutions		
2. Develop requirements document		
3. Develop Internet application		
IV. Deploy Internet Application with Initial Data	April '08	July '08
1. Develop user documentation		
2. Deploy in hosting environment		
3. Conduct training		

EGIS SCOPE OF SERVICES

A. Develop Base Data Environment

Assist the CTRMA in developing the overall base data environment.

1. Data Model

The logical data model will outline a list of tables and their general structure and descriptive names. To accomplish this task, a meeting will be conducted between the GEC and appropriate CTRMA staff to conceptually design the database structure needed to support all asset information to be collected and maintained during this stage of the Authority's overall EGIS implementation plan. Generic industry standards will be utilized for the development of the CTRMA's logical data model.

Upon completion of the logical data model, develop the physical data model. The physical data model will be developed using standard Microsoft Visio software. Each abbreviated table name, field name and entity relationship will be diagrammed in order to provide both a visual representation of the database, and a development tool, which will later be utilized to generate a database shell and manage changes to the data model during system maintenance.

2. Data Dictionary

Create a data dictionary which defines and documents each item in the database. The data dictionary will be written in Microsoft Office Excel spreadsheet format and designed to print as formatted pages.

3. Linear Reference System

Develop a Linear Reference System (LRS) for the CTRMA based on the Authority's existing engineering stationing on existing facilities. The LRS will document the spatial relationship between the assets with the CTRMA right-of-way and the EGIS data model.

B. Develop Software and Hosting Platform

Assist the CTRMA with selecting an appropriate EGIS software platform and hosting approach for this stage of the Authority's EGIS implementation plan. Recommendations will be made based on the potential vendors' technical strengths and weaknesses, cost comparisons, usability and overall compatibility with the CTRMA's needs.

The resources required to host a functional, efficient and reliable EGIS environment are considerable. It is recommended that the CTRMA consider the possibility of outsourcing their EGIS hosting needs during this initial implementation stage.

C. Develop Application for Non-Desktop End-Users

Develop a basic Internet and/or intranet-based asset inventory map viewer application. This application will be designed to allow CTRMA end-users to access the CTRMA GIS base data on a web-based map browser using primarily "out-of-the-box" software functionality. Basic functionality of the application will include allowing end-users to zoom in, zoom out, and pan graphically utilizing the map. Additional functionality will include the ability to search and display specific assets by type, identification, station and location. End-users will be able to generate automated map layouts.

D. Deploy Internet Application with Initial Data

Deploy application into production environment, and develop basic system administration documentation and end-user guideline documentation. The system administration document will contain the data models, the data dictionary and processes required for data maintenance. The end-user guidelines document will contain instructions for the use of the Internet asset inventory map viewer application. Appropriate training sessions will be coordinated with the CTRMA. It is anticipated that brownbag-type training sessions for appropriate CTRMA staff and consultants will be utilized.

E. Project Management and Administration

Organize and coordinate applicable meetings; prepare progress reports; manage and maintain an internal project cost control system to process and track costs; monthly progress reports will include a series of narrative descriptions and graphs detailing tasks accomplished issues of concern, schedule status, budget status, and future activities. Final reviews will be conducted by the GEC Project Manager and the Project Engineer responsible for project controls; the final acceptance will be documented on the CTRMA Certification cover sheet prior to submittal to the CTRMA.

Attachment Fee Estimate

CTRMA GEC
 HNTB Corporation - MANHOUR BREAKDOWN
 August 29, 2007

PROJECT NO. 38773, CTRMA
 WORK AUTHORIZATION NO. 3.1
 SUPPLEMENT NO. 6

GIS Foundation

Task	Work Description	(Labor Rates)	MANHOURS						TOTAL HRS									
			A	B1	B	C	D	E		F1	F							
		\$	79.00	\$	79.00	\$	65.00	\$	55.00	\$	42.00	\$	32.00	\$	32.00	\$	22.00	
A	Develop Base Data Environment					6	70							10				86
B	Develop Software and Hosting Platform					6												6
C	Develop Application for Non-Desktop End-Users					36	120							15	30			201
D	Deploy Initial Internet Application with Initial Data					16	40							100	40			196
E	Project Management & Administration					16		72										88
TOTAL GEC TEAM DIRECT LABOR			0	0	80	230	72	0	125	70	577							
% Total by Classification			0.00%	0.00%	13.86%	39.86%	12.48%	0.00%	21.66%	12.13%								

Labor Costs		\$	-	\$	-	\$	5,200	\$	12,650	\$	3,024	\$	-	\$	4,000	\$	1,540	\$	26,414
Overhead Costs	155.59%	\$	-	\$	-	\$	8,091	\$	19,682	\$	4,705	\$	-	\$	6,224	\$	2,396	\$	41,098
Profit	15%	\$	-	\$	-	\$	1,994	\$	4,850	\$	1,159	\$	-	\$	1,534	\$	590	\$	10,127
Total Loaded Labor		\$	-	\$	-	\$	15,284	\$	37,182	\$	8,888	\$	-	\$	11,757	\$	4,526	\$	77,638

Direct Expenses	Cost
Printing	\$ 1,000
Communication	\$ 250
Mileage	\$ 500
Total Direct Expenses	\$ 1,750
Total Loaded Labor	\$ 77,638
Total Direct Expenses	\$ 1,750
Total	\$ 79,388