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Posted on Web
September 2, 2023
at 10:00 a.m.

SUPPLEMENTAL NOTICE

AGENDA

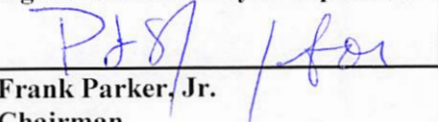
Special Meeting of the Board of Directors
of the
Cameron County Regional Mobility Authority
3470 Carmen Avenue, Suite 5
Rancho Viejo, Texas 78575
September 06, 2023
12:00 Noon

ITEMS FOR DISCUSSION AND ACTION:

1. Action Items.

- A. Consideration and Approval of Supplemental Work Authorization No. 1 to Work Authorization No. 26 for the SPI 2nd Access Project with R.R.P. Consulting Engineers, L.L.C. (RRP).

Signed this 02nd day of September 2023.



Frank Parker, Jr.
Chairman

NOTE:

Participation by Telephone Conference Call – One or more members of the CCRMA Board of Directors may participate in this meeting through a telephone conference call, as authorized by Sec. 370.262, Texas Transportation Code. Each part of the telephone conference call meeting that by law must be open to the public shall be audible to the public at the meeting location and will be recorded. On conclusion of the meeting, the recording will be made available to the public.

SUPPLEMENTAL WORK AUTHORIZATION NO. 1 TO WORK AUTHORIZATION NO. 26

This Supplemental Work Authorization is made as of this _____ day of _____, 2023, under the terms and conditions established in the AGREEMENT FOR GENERAL CONSULTING CIVIL ENGINEERING SERVICES, dated as of May 10, 2018 (the "Agreement"), between the Cameron County Regional Mobility Authority (the "Authority") and R.R.P. Consulting Engineers, L.L.C. (RRP), which formerly was S&B Infrastructure, Ltd., is the General Engineering Consultant (GEC).

The work to be performed by the GEC under this Supplemental Work Authorization is for the following purpose, consistent with the Services defined in the Agreement: ***Professional services including the development of the South Padre Island 2nd Access Traffic Update, Cameron County, Texas.***

Section A. – Scope of Services

GEC shall perform the Additional Services according to Exhibit B.

Section B. – Schedule

GEC shall perform the Services and deliver the related Documents according to the schedule as shown on Exhibit C.

Section C. – Compensation

Paragraph C.1 is hereby amended to increase the overall maximum amount from \$3,798,887.17 to \$3,954,193.59, an increase of \$155,306.42 based on the attached fee estimate shown on Exhibit D. Compensation shall be in accordance with the Agreement.

C.1. The Authority shall pay the GEC under the following acceptable payment method – Lump Sum Payment Method.

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 services as stated in Exhibit A in a timely manner so as not to delay the Services of the GEC.

Section E. - Other Provisions – No Change

The parties agree to the following provisions with respect to this specific Work Authorization: None.

-SIGNATURES ON NEXT PAGE-

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

CAMERON COUNTY REGIONAL MOBILITY AUTHORITY

By: _____
Name: Frank Parker, Jr., Chairman
Date: _____

R.R.P. Consulting Engineers, L.L.C.

By: _____
Name: Daniel O. Rios, PE, President
Date: _____

LIST OF EXHIBITS

- Exhibit A – Authority’s Responsibilities
- Exhibit B – Scope of Work
- Exhibit C – Work Schedule
- Exhibit D – Cost Proposal

EXHIBIT A

Authority's Responsibilities

The following provides an outline of the services to be provided by the Authority in the development of the Project for this work authorization.

GENERAL

The Authority will provide to the GEC the following:

- (1) Payment for work performed by the GEC and accepted by Authority in accordance with this Agreement.
- (2) Assistance to the GEC, as necessary, to obtain the required data and information from other local, regional, State and Federal agencies that the GEC cannot easily obtain.
- (3) Provide timely review and decisions in response to the GEC's request for information and/or required submittals and deliverables, in order for the GEC to maintain an agreed-upon work schedule.
- (4) Survey already performed for the Authority under different work Order.
- (5) Any permits for subject property. The GEC shall identify all necessary permits from governmental authorities which will be needed to construct the Project. The Authority shall apply for all necessary permits. The authority shall pay all other applicable permit fees. The GEC shall assist in obtaining said permits or approvals.
- (6) The Authority will advertise for any public involvement activities and provide the facilities and sound system.

EXHIBIT B

Services to be Provided by the Engineer

Project Approach

The following section outlines GEC's proposed approach to update the Project's traffic projections to develop design schematic and support the Authority's environmental analysis. In addition to the tasks described below, GEC will coordinate with subconsultants in its team as needed throughout the course of the study to gather required data.

GEC will update the traffic projections and perform traffic analyses and simulations under non-toll and tolled scenarios for the proposed SPI Second Access Project in Cameron County, TX. The scope of the task includes the following:

- Review of existing Information
- Travel demand modeling for future years under build and no-build conditions.
- Toll and non-toll traffic scenario analyses.
- Traffic forecasting with traffic projections for the selected locations in the study area.
- Traffic operational analysis for existing and future conditions by time period using SYNCHRO 11.

This scope of work summarizes the tasks of traffic projections and traffic operations analyses for the study corridor that are necessary to update the Project's traffic projections under toll and non-toll scenarios.

Task 1: Project Management/Mobilization

GEC will mobilize immediately upon receiving the Notice to Proceed (NTP). This task includes a kick-off meeting with the Authority, and key stakeholders to determine important issues relevant to this study and define any alternatives, the study's overall methodology, and data requirements.

GEC will issue a notice to stakeholders regarding study commencement and may request assistance in gathering existing data, traffic reports for the area, and details regarding the Project and/or other planned projects in the area of influence around the study area, if applicable.

GEC's hands-on management of the study will include the following:

- Participating in monthly progress meetings/teleconferences to appraise the Authority of progress and identify key issues;
- Attending key working group meetings to discuss preliminary traffic forecast results and provide input on any requirements to optimize the traffic analysis;
- Providing the Authority with progress reports on a periodic basis and providing minutes of meetings held with project stakeholders; and
- Presenting results to the Authority and providing responses to their questions.

Task 2: Review of Existing Information

GEC will first review all relevant available documentation regarding the Project. To determine historical traffic growth patterns, GEC will review and analyze historical annual average daily traffic (AADT) traffic counts in the study area via TxDOT's Traffic Count Database System (TCDS).¹ The base year traffic volumes of the Project and historical traffic within the study area will be extracted from this data source.

GEC will also review proposed future network improvements, as several transportation mobility and improvement projects are proposed in the related Transportation Improvement Plan (TIP) for the short-term and Metropolitan Transportation Plan (MTP) for the long-term.

GEC will obtain the latest version of the Lower Rio Grande Valley (LRGV) Travel Demand Model (TDM) from the Rio Grande Valley MPO (RGVMPO).

Task 3: Travel Demand Modeling

GEC will use the previously mentioned LRGV TDM to estimate future build and no-build conditions; the model will also be used to estimate Project demand in the non-toll and tolled scenarios. In the tolled condition, the Project may have less traffic than the non-tolled scenario, in the range of 15% to 50% of the non-tolled traffic. GEC has substantial experience evaluating toll and non-toll scenarios with the LRGV TDM for various other projects in the region.

GEC will revise travel time to validate network performance, corroborate model outputs with Google API time measurements, and make the necessary adjustments to calibrate the model for the base year. Specifically, a clear understanding of travel times and time-savings (or trade-offs) should emerge in connection with the project and its area of influence.

GEC will perform model calibration. Traffic assignments from the model representing existing conditions will be compared to existing counts and origin-destination (OD) results within the area of influence. Using measured speed values, impedances will be adjusted to reproduce control results in accordance with accepted calibration tolerances. The model will be validated to reflect capacity restraints resulting from traffic counts and number of lanes at key roadways within the study area.

GEC will calibrate the future year model networks. GEC will then run the future year models to generate the following traffic assignment sets for the roadways within the study area:

1. Opening Year No-build
2. Opening Year Build
3. First Future Year No-build
4. First Future Year Build
5. Second Future Year No-build
6. Second Build

¹ <https://txdot.ms2soft.com>

Additionally, for the operations analysis, GEC will obtain existing and forecasted intersection turning movements for all analyzed intersections. GEC will also use TDM data for the traffic operations analysis. The model results will include existing and future build and no-build conditions.

Task 4: Development of Toll and Non-Toll Scenarios

As previously discussed, the toll/non-toll scenarios will have completely different traffic levels, which will change the Project design and the environmental analysis traffic inputs significantly. GEC will assess these scenarios with a “Sketch Level plus” traffic and revenue (T&R) analysis of the Project by using the LRGV TDM and GEC’s experience with toll diversion models in the region.

After adoption, calibration, and validation of the TDM, GEC will determine the value of time (VOT) of the future uses of the Project by looking into different market segments. South Padre Island has different markets, for example:

- Spring Breakers
- Holiday Traffic from Mexico (Semana Santa)
- Tourists getting into Cameron County from I2 and US 77
- Weekend Trips
- Local Leisure Trips
- Hotel and Restaurant Workers

Based on the VOT and the trip ODs of these different demand segments, GEC will run its toll diversion function through the LRGV TDM and determine non-toll and toll traffic volumes for the Project.

The traffic demand of a toll project depends on the VOT of the users, the travel time savings, and toll rate. To obtain the optimum toll rate or traffic volume, this process requires several iterations due to traffic demand diverting from the project because of a higher or lower posted toll rate and congestion on other non-toll routes to SPI. By changing the congestion level of the alternative routes, the time savings of the project will change. Therefore, GEC proposes using a TDM to develop the traffic volumes for toll and non-toll scenarios.

Once GEC has obtained the daily T&R network volumes for the different model years, GEC will have the opening year and two future years serving as the basis for forecasting annual T&R. The analysis will include future regional model growth and a series of sensitivity tests to identify different sensitivities to model inputs and the impacts of varying toll rates. These tests are designed to assist in developing an improved operating plan, an optimum toll rate and traffic volume, understanding of the impacts of potential changes in assumptions, and to obtain the non-toll and toll traffic volumes for the traffic projections for each of the scenarios.

Task 5: Traffic Forecasting

GEC will use the regional TDM and TPP-provided historical regression-based traffic projection data to update future traffic volume projections for the previously analyzed 15 intersections in the study area.

Traffic Forecasting Methodology

GEC will update the Draft Traffic Forecasting Methodology Memo outlining the calibration of the regional TDM, all available traffic data used in developing the traffic projections, and the annual growth rates selected for the study area.

GEC will prepare a Traffic Forecasting Methodology Memo to include finalized items of the Draft Traffic Forecasting Methodology Memo, in addition to line diagrams of the balanced base and future AADT projections, TAHD sheets for the previously analyzed 15 roadway segments in the study area, and turning movement projections for the 15 intersections in the study area (including daily non-tourist season, daily tourist season, AM peak hour non-tourist season, PM peak hour non-tourist season, and worst-case tourist season, which includes both peak ingress and egress volumes).

Deliverables:

- Updated TxDOT/TPP demand model and traffic assignment output.
- Updated Balanced line diagrams of balanced existing year traffic volumes and pivot year traffic projections, TAHD sheets, and turning movement projections in PDF format.

Existing Conditions Traffic Analysis

GEC will compile existing traffic data (peak turning movement counts, hourly tube counts and vehicle classification) from available data sources including seasonal traffic factors from available sources.

Following TPP's SOP, GEC will utilize the 20-year historical growth rate to develop the traffic projections using the PIVOT method. However, to obtain an independent point of reference for forecasted growth rates in the region, GEC will also review the latest version of the LRGV TDM.

Future Traffic Analysis

GEC will develop future traffic projections based on the TPP methodology of using balanced existing traffic counts and applying a growth rate obtained from a regression of the Project area's historical traffic data using the PIVOT method. GEC will use existing and historical traffic counts available through TxDOT's traffic count database (ms2soft interface) and TxDOT's planning maps.

GEC will develop average daily traffic (ADT) projections for no-build and build scenarios. The traffic projections will be presented in line diagrams to be used for further analysis. GEC will perform the following sub-tasks to ensure the comprehensiveness of the presented projections:

- Prepare a detailed Project description.
- Analyze and document the existing traffic composition.
- Estimate future traffic composition (trucks percentage).
- Develop traffic projections.

GEC will utilize the traffic projections to establish the future no-build as well as future build traffic conditions for non-toll and toll scenarios. GEC will update the future scenario conditions that represent future traffic on the existing system for each peak hour at 15 intersections. GEC will update the level of service (LOS) in traffic diagrams for incorporation into the schematic document.

GEC will update the TAHD tabulations regarding the 20-year and 30-year design periods. Included in the tabulation will be data for use in air and noise analysis. All values in the TAHD table will be prepared following TPP methodology, based on the previously described traffic projections. These projections will not be considered finalized until final approval by TPP and will not be intended for construction, bidding, or permit purposes.

The TAHD tabulation will include the following items:

1. ADT estimates for the Project's opening year and for 20- and 30-year forecast periods
2. Traffic distribution by direction
3. K-factor
4. Percentage of trucks (daily and peak hour averages)
5. Average 10-heaviest wheel loads daily
6. Total number of equivalent 18k single axle load applications for 20-year and 30-year forecast periods

Items 4, 5, and 6 above will need to be reviewed and calculated by TPP. Therefore, GEC will include its calculations in a separate memorandum for the Authority's use until TPP's official calculations are received. GEC has developed in-house procedures for these calculations; however, only TxDOT has access to the vast amount of data used in their official calculations. Therefore, there is always the chance of observing some differences in the results.

Task 6: Operations Analysis

GEC will update the three (3) Synchro/SimTraffic models covering the AM peak hour, PM peak hour, and the tourist season (ingress and egress seasonal) peak hour. The previously analyzed 15 intersections will be modeled within the Synchro environment. These models will use the existing traffic and geometry.

Through the calibration process, the model will match traffic volumes and operations representative of each peak hour. The model will serve as a baseline to evaluate the impacts of future traffic and proposed improvements. GEC will prepare traffic diagrams showing LOS for incorporation into the schematic document.

Task 7: Documentation

GEC will prepare three memoranda:

- 1) Memorandum documenting the traffic projections methodology and assumptions, including the travel demand modeling methodology and development of the non-toll and toll scenarios.
- 2) Memorandum representing the results of the traffic projection development and the partial TAHD tables.
- 3) Internal memorandum including the complete TAHD tables for SBI's use.

After review by the Authority, GEC will address any comments/questions and revise the Draft Memorandum as needed.

Additional technical deliverables:

- Synchro/SimTraffic microsimulation files representing the AM & PM peaks and seasonal peak for the existing and future no-build and build alternatives (Electronic file –Synchro version 11 format)
 - Technical memorandum section summarizing existing and future no-build traffic operations and analysis comparing the performance of each condition (Electronic file - MS Word and PDF format)

FC 145 Project Management (PS&E)

GEC shall perform the following management activities during the development of the Traffic Projections:

1. Prepare / manage WA, including recordkeeping, filing, administration, etc. and overall Quality Assurance / Quality Control (QA/QC).
2. Coordinate / prepare sub-provider WA and manage sub-consultants (1 sub-consultant projected).
3. Preparation of invoices and progress reports.
4. Research / review existing plans and data.
5. Monitor sub-providers' schedules.
6. Organize and download electronic file deliverables.

EXHIBIT C

Schedule of Work

The GEC will diligently pursue the completion of the Project as defined by the milestones and deliverable due dates.

The GEC will inform the Authority (in reasonable advance of the delay) should the GEC encounter delays that would prevent the performance of all work in accordance with the established schedule(s) of work.

NOTICE TO PROCEED -- Upon Execution

GEC estimates a schedule of 12 weeks to complete the SPI Second Access traffic projections update study, beginning immediately after receiving the NTP. Project completion and final documentation is, however, contingent on receiving approval of the traffic forecast memo from TPP, which may take up to several months.

PROJECT: SPI 2nd Access - Traffic Update
 CLIENT: CCRMA
 CONTRACT: GEC Contract
 CSJ:
 COUNTY: Cameron County
 RRP JOB NO.: U2716 SWA1 to WA26

09/01/23

EXHIBIT D -- FEE ESTIMATE

ACTIVITY CODE	FUNCTION CODE	DESCRIPTION from Exhibit B	FIRM	SERVICE	MAN-HOURS														ESTIMATED FEE	TOTALS
					Principal	Quality Manager	Project Manager	Env Manager	Env Scientist	Env Scientist VII	Engineer Structural	Engineer (V)	Engineer (IV)	Engineer (I,II)	Senior CADD	CADD Operator (I)	Secretary	TOTAL HRS		
		Traffic Projections Update																	\$0.00	
	Task 1	Project Management/Mobilization	C&M	SPECIAL														0	\$14,339.00	
	Task 2	Review of Existing Information	C&M	SPECIAL														0	\$11,467.00	
	Task 3	Travel Demand Modeling	C&M	SPECIAL														0	\$31,681.00	
	Task 4	Develop Toll and Non-Toll Scenario	C&M	SPECIAL														0	\$24,523.00	
	Task 5	Traffic Forecasting	C&M	SPECIAL														0	\$29,155.00	
	Task 6	Operational Analysis	C&M	SPECIAL														0	\$28,005.00	
	Task 7	Documentation	C&M	SPECIAL														0	\$10,810.00	
		Sub Total (TRAFFIC PROJECTIONS (See Attached Cost Proposal))			0	0	0	0	0	0	0	0	0	0	0	0	0	0		\$149,980.00
		Project Administration and Coordination																		
		Project Manager (Proj Coord)(2 HRS/WK)	RRP	BASIC			6										2	8	\$1,779.92	
		Project Manager Weekly Meeting (Prog. Rpts)	RRP	BASIC			4											4	\$1,099.96	
		Project Coordination Meetings	RRP	BASIC			4										2	6	\$1,229.94	
		Prepare Proj. Meetings Notes	RRP	BASIC														0	\$0.00	
		Cameron County RMA Project Coordination	RRP	BASIC			4											4	\$1,099.96	
		Sub Total (- Project Administration and Coordination)			0	0	18	0	0	0	0	0	0	0	0	0	4	22		\$5,209.78
		LABOR TOTALS																		
		Total Hours	MULTIPLIER		0	0	18	0	0	0	0	0	0	0	0	0	4	22		\$155,189.78
		CONTRACT RATES: (\$/MAN-HOUR)	3.7717		299.96	249.99	274.99	185.00	110.02	89.99	245.16	224.98	207.44	169.73	115.00	99.99	64.99			
		BASE RATES: (\$/MAN-HOUR)			79.53	66.28	72.91	49.05	29.17	23.86	65.00	59.65	55.00	45.00	30.49	26.51	17.23			
	160	NON LABOR																		
	a	FedEx Courier	RRP	SPECIAL															\$0.00	
	b	Outside reproduction	RRP	SPECIAL															\$0.00	
	c	Travel - Mileage Project Site Visits	RRP	SPECIAL	Mileage per trip =	108		Trips =	2						Milage Rate (\$/mi.)=	\$ 0.540			\$116.64	
	d	Travel to District Area Office- Mileage	RRP	SPECIAL	Mileage per trip =			Trips =							Milage Rate (\$/mi.)=	\$ 0.540			\$0.00	
		Sub Total (F.C. 160)																		\$116.64
		NON LABOR TOTAL																	\$116.64	
		BASIC SERVICE TOTAL																	\$5,209.78	
		PROJECT TOTAL																		\$155,306.42



C&M Associates, Inc.

17304 Preston Road, Suite 800

Dallas, TX 75252

Tel: 214-245-5300

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Exhibit D Cost Proposal

Date: May 1, 2023

To: Phillip Pawelek
Project Manager
RRP Consulting Engineers, LLC

Subject: South Padre Island Second Access Project Traffic Projections Update – Scope of Work

Proposed Budget by Task

Task Description		Budget by Task
1	Project Management/Mobilization	\$14,339
2	Review of Existing Information	\$11,467
3	Travel Demand Modeling	\$31,681
4	Develop Toll and Non-Toll Scenario	\$24,523
5	Traffic Forecasting	\$29,155
6	Operational Analysis	\$28,005
7	Documentation	\$10,810
Total Hours		
Total Budget		\$149,980

Respectfully,

Axel Herrmann
Principal Transportation Planner
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