

SUPPLEMENTAL AGREEMENT NO. 6
TO
AGREEMENT OF May 18, 2011
FOR
ENGINEERING SERVICES for
Fort Bend Grand Parkway Toll Road, Segment D

This Supplemental Agreement is made and entered into this 28th day of November, 2012, and modifies the **ENGINEERING SERVICES AGREEMENT** between Fort Bend Grand Parkway Toll Road Authority and TEDSI Infrastructure Group, Inc., dated May 18, 2011 for engineering services for the Fort Bend Grand Parkway Toll Road, Segment D.

The agreement is hereby modified as follows:

1. The first sentence of Section 2.a is replaced with the following sentence:

"The Maximum Compensation under this contract is \$678,510.41."

2. The second paragraph of Section 2.a is replaced with the following paragraph:

"Compensation for performance of services within the Scope of Services described in Attachment A will be as follows: The lump sum compensation shall be increased by \$22,510.75, for the additional work shown in Attachment A. The maximum amount payable under this agreement shall not exceed \$678,510.41, as shown in Attachment B. Progress payments for work detailed in Attachment A will be made when the Engineer has attained a level of completion equal to or greater than the agreed upon milestones of completion in the reasonable opinion of FBGPTRA."


3. The Scope of Services shown in Attachment A shall be expanded to include Exhibit A-6, attached hereto.
4. The Compensation for Scope of Services shown in Attachment B shall be expanded to include Exhibit B-6, attached hereto.

[Remainder of page intentionally left blank.]

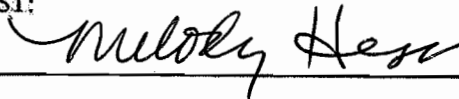
Supplemental Agreement No. 6
To Agreement of May 18, 2011

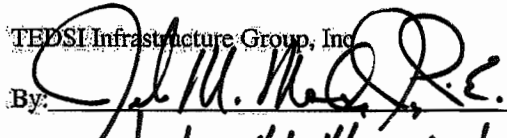
IN WITNESS WHEREOF, this Supplemental Agreement is hereby executed as of the
date first set forth above.

FORT BEND GRAND PARKWAY TOLL
ROAD AUTHORITY

By: 
James D. Condrey, DDS
Chairman, Board of Directors

ATTEST:

By: 

TEDSI Infrastructure Group, Inc.
By: 
Name: Jules M. Morris, Jr., P.E.
Title: Vice President

**EXHIBIT A-6
ATTACHMENT A
SUPPLEMENTAL AGREEMENT NO. 6
ADDITIONAL SCOPE OF SERVICES**

**FORT BEND GRAND PARKWAY TOLL ROAD AUTHORITY
Grand Parkway (SH 99) and Westpark Toll Road (FM 1093)
Dedicated Southbound Right Turn Lane Analysis
Fort Bend County Precinct 3**

GENERAL

In response to your recent request, TEDSI Infrastructure Group (TEDSI) appreciates the opportunity to submit this proposal to perform traffic engineering analysis towards the potential improvement of constructing a dedicated southbound right turn lane to serve southbound motorists on SH 99 who desire to turn right and proceed westbound on FM 1093. It is noteworthy that this turn lane analysis, while not directly related to the recent signal timing optimization effort we've performed at this same intersection, will consider the intersection operations as already being modified as per our previous recommendations. The following is a description of our proposed work scope.

PROJECT SCOPE OF WORK

1 Project Coordination

TEDSI shall coordinate with the Fort Bend Grand Parkway Toll Road Authority (FBGPTRA) for all project related matters.

2 Data Collection

TEDSI shall conduct site inspection at the study location. The field work may include but not limited to taking digital photographs (minimum of two per approach), verifying existing signal timing and documenting any discrepancies and any other issues regarding the operation and safety of the intersection which TEDSI considers might be important.

Recent traffic counts have already been collected as part of the recently performed signal optimization at this intersection. However, field observations will be performed in order to visually measure the congestion and approximate length of traffic back-up for both southbound SH 99, and for westbound FM 1093.

TEDSI shall document via field observations the existing roadway geometry for the southbound SH 99 in the direct vicinity of where a right turn lane might possibly be constructed. This is to better understand any possible constraints which may have influence on said proposed right turn lane installation.

Intersection related traffic crash reports and existing intersection condition diagrams will not be required for this study.

3 Traffic Engineering Analysis

Using the previously prepared optimized signal plans as a base template to represent the existing condition for traffic operations, TEDSI shall utilize traffic engineering software simulate the difference in traffic characteristics between the current geometry (no right turn lane) and the proposed geometry (addition of a right turn lane). The results will be quantified as Level of Service (values ranging from A-F), and also average delay per vehicle described as in units of time (seconds).

Westbound FM 1093 congestion is substantial in the PM peak time frame, due to the termination of the free flow mainlanes in the immediate vicinity of SH 99. As this congestion will have certain influence on intended performance of a future dedicated right turn lane servicing southbound to westbound movements, TEDSI will also strive to measure the overall congestion for all westbound traffic as it approaches, and is subsequently controlled by, the existing traffic signal on FM 1093 at Katy-Gaston Road. Note: similar to the SH 99/FM 1093 intersection, we have most recently made signal timing adjustment recommendations to the signal operations at this additional traffic signal and this revised operation will also be used as an existing condition "template".

Due to the existing roadway conditions, construction of a right turn lane (by widening the existing pavement) will have a negative impact on the existing southbound SH 99 traffic. And at certain times of the day, 1 of the 2 existing southbound lanes may require sporadic and temporary closure. TEDSI will also model this condition as a way to predict the anticipated increase in congestion.

There is also an alternative concept to provide right southbound to westbound movements, one that would avoid widening the existing southbound pavement in the "hole" portion of the intersection. Rather, an at-grade sweeping right turn lane might possibly be constructed with beginning and ending points well outside of the immediate signalized intersection (very similar to the existing westbound to northbound at-grade connector pavement). TEDSI will assess the performance characteristics of this alternative with special attention to the merge at the FM 1093 westbound frontage road. This particular alternative will likely require additional ROW.

4 Report Deliverable

TEDSI shall summarize the data collection and engineering analysis results in a Bound Report and submit this report to the FBGPTRA for review. Once any/all comments are addressed, the Report will be finalized, signed and sealed. TEDSI will provide 2 bound hard copies and a digital file (PDF format).

COMPENSATION

Our proposed lump sum fee for the work described herein is set at \$22,500.00. A breakdown of the estimated man-hours for each phase is shown in Attachment "B." The amount shown includes all necessary direct expenses estimated to complete the effort as described above. The fee includes all labor and non-labor reimbursable expenses required for this project. All work not specifically stated above will be considered additional work and will be subject to negotiation.

**EXHIBIT B-6
ATTACHMENT B
SUPPLEMENTAL AGREEMENT NO. 6
ADDITIONAL SCOPE OF SERVICES**

**FORT BEND GRAND PARKWAY TOLL ROAD AUTHORITY
Grand Parkway (SH 99) and Westpark Toll Road (FM 1093)
Dedicated Southbound Right Turn Lane Analysis
Fort Bend County Precinct 3**

Southbound SH 99 Right Turn Lane Analysis at FM 1093

Classification	Project Manager	Project Designer	CADD Tech	Engr. Assistant	Project Admin	Total Man-Hours	Cost
Direct Labor Rate	\$156.59	\$122.85	\$88.74	\$76.76	\$80.60		
TASK							
Project Administration & Coordination	10				2	12	\$1,727.10
Observe Traffic Operations, Field Meeting, Inventory & Pictures	4	12		12		28	\$3,021.68
Perform Engineering Analysis	12	48		56		116	\$12,074.44
Prepare Report, Deliverable	2	8	16	16	1	43	\$4,024.58
Revise as per Comments, Finalize Report	2	4	2	4	1	13	\$1,369.70
Total Man-Hours	30	72	18	88	4	212	
Percent of Total Labor	14.15%	33.96%	8.49%	41.51%	1.89%	100.00%	
Total Cost							\$22,217.50
Reimbursable Costs							Cost
Vehicle Mileage @ Current State Rate (\$0.555/mi)					150	mile	\$83.25
Toll Charges @ \$1.50/ea (Receipt Required)					10	each	\$15.00
Photocopies B/W (8X10) @ \$0.10/ea.					150	each	\$15.00
Photocopies Color (8X10) @ \$1.00/ea.					150	each	\$150.00
Deliveries/Overnight Mail - Oversized Box @ \$30/ea. (Receipt Required)					1	each	\$30.00
Total Reimbursable Cost							\$293.25
Total Labor & Reimbursable Costs							\$22,510.75