

**MAY 25, 2011 CTRMA BOARD OF DIRECTORS MEETING  
Summary Sheet**

**AGENDA ITEM # 5**

**Approve a supplement to Atkins' Work Authorization #2 concerning general engineering consultant services for the Bergstrom Expressway Project (US183S).**

**Department: Engineering**  
**Associated Costs: \$485,641**  
**Funding Source: Toll Equity Funds**  
**Board Action Required: YES**

**Description of Matter:**

**By action of the Board at their Meeting on August 26<sup>th</sup>, 2009, Atkins (formerly PBS&J) was selected to provide General Engineering Consultant (GEC) services to CTRMA. The Board approved Work Authorization No. 2 with Atkins to provide GEC Support Services related to the Bergstrom Expressway (US 183 South) at its meeting on December 17<sup>th</sup>, 2009.**

**This Supplemental Work Authorization No. 1 to Work Authorization No. 2 will continue GEC Support Services related to Environmental Study and Project Development/Oversight activities for the Bergstrom Expressway (US 183 South) corridor.**

**The services contained in this Supplemental Work Authorization No.1 to Work Authorization No. 2 include Environmental Study/Document Services, Project Oversight, and Project Development activities.**

**The performance of these services will be as directed by CTRMA.**

**Attached documentation for reference:**

**Supplemental Work Authorization No. 1 to Work authorization No. 2**

**Contact for further information:**

**Wesley M. Burford, P.E., Director of Engineering**

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

**RESOLUTION NO. 11-\_\_\_**

**Approve Supplement No. 1 to Atkins' Work Authorization No. 2  
Concerning General Engineering Consultant Services for  
the Bergstrom Expressway Project (US183S).**

WHEREAS, by Resolution No. 09-88, dated December 17, 2009, the Board of Directors approved Work Authorization No. 2 under the GEC Contract with PBS&J (now Atkins North America, Inc., or "Atkins") setting forth a Scope of Services for additional GEC services to be provided by Atkins for services relating to the feasibility, development, design and construction of the Bergstrom Expressway Project, also known as the 183 South Toll Project, and authorized and directed the Executive Director to finalize and execute that Work Authorization No. 2; and

WHEREAS, additional GEC services not provided under Work Authorization No. 2 are needed to provide services related to Environmental Study, Pre-Construction Project Oversight, and Pre-Construction Project Development, as detailed in Supplemental Work Authorization No. 1 to Work Authorization No. 2 attached and incorporated into this resolution as Attachment A; and

WHEREAS, because the cost of Supplemental Work Authorization No. 1 to Work Authorization No. 2 exceeds \$150,000.00, the Board of Directors must approve this proposed change order.

NOW THEREFORE, BE IT RESOLVED, that the Board of Directors approves the proposed Supplemental Work Authorization No. 1 to Work Authorization No. 2 for the Bergstrom Expressway Project in the form or substantially the same form as Attachment A; and

BE IT FURTHER RESOLVED, that Supplemental Work Authorization No. 1 to Work Authorization No. 2 for the Bergstrom Expressway Project may be finalized and executed by the Executive Director on behalf of CTRMA.

Adopted by the Board of Directors of the Central Texas Regional Mobility Authority on the 25<sup>th</sup> day of May, 2011.

Submitted and reviewed by:

Approved:

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\_\_\_\_\_  
Andrew Martin  
General Counsel for the Central  
Texas Regional Mobility Authority

\_\_\_\_\_  
Ray A. Wilkerson  
Chairman, Board of Directors  
Resolution Number: 11-\_\_\_  
Date Passed: 5/25/11

**ATTACHMENT "A" TO RESOLUTION 11-**  
**SUPPLEMENTAL WORK AUTHORIZATION NO. 1**  
**TO WORK AUTHORIZATION NO. 2**

**[on the following 10 pages]**

**EXHIBIT D**  
**WORK AUTHORIZATION**

**Supplemental Work Authorization No. 1 to  
Work Authorization No. 2**

This Supplemental Work Authorization is made as of this 25<sup>th</sup> day of May, 2011, under the terms and conditions established in the AGREEMENT FOR GENERAL CONSULTING ENGINEERING SERVICES, dated as of January 4<sup>th</sup>, 2010 (the Agreement), between the **Central Texas Regional Mobility Authority** (Authority) and **Atkins North America, Inc.** (GEC). This Work Authorization is made for the following purpose, consistent with the services defined in the Agreement:

*183S Turnpike Project  
Environmental Study / Document and Project Oversight Service*

**Section A. - Scope of Services**

A.1. GEC shall perform the following Services:

Please reference Attachment A – Services to be Provided by the GEC

A.2. The following Services are not included in this Supplemental Work Authorization, but shall be provided as Additional Services if authorized or confirmed in writing by the Authority.

Not applicable.

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

Please reference Attachment A – Services to be Provided by the GEC

**Section B. - Schedule**

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

Services defined herein are expected to be substantially complete within twenty four (24) months from the date this Supplemental Work Authorization becomes effective. This Supplemental Work Authorization will not expire until all tasks associated with the Scope of Services are complete.

**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 \$485,641 based on Attachment B -Fee Estimate. Compensation shall be in accordance with the Agreement.

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:

Please reference Attachment A – Services to be Provided by the GEC

**Section E. - Other Provisions**

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

Not applicable.

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: Atkins North America, Inc.

By: Mike Heiligenstein

By: \_\_\_\_\_

Signature: \_\_\_\_\_

Signature: \_\_\_\_\_

Title: Executive Director

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_

**CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY**  
**SUPPLEMENTAL WORK AUTHORIZATION NO.1 TO**  
**WORK AUTHORIZATION NO. 2**  
**ATKINS**

**ATTACHMENT A**  
**SERVICES TO BE PROVIDED BY GEC**

**1.0 183S TURNPIKE PROJECT**

**1.1 Environmental Study / Document Services [Code 13210]**

1.1.1 US 183 Re-evaluation

1.1.1.1 Complete response to comments log and make revisions to the US 183 EIS Re-evaluation including but not limited to the following:

- a. Prepare revised US 183 EIS Re-evaluation and respond to District comments. Send revised Re-evaluation to District for forwarding to TxDOT ENV for review.
- b. Prepare revised Re-evaluation and respond to ENV comments. Send revised Re-evaluation to ENV and FHWA.
- c. Prepare revised Re-evaluation and respond to FHWA comments.

1.1.1.2 Assist with the preparation and planning of the Public Hearing (location setup, notice publication in State and Federal Register, court reporter, exhibits, etc.). Provide appropriate staff for attending and working at the Public Hearing.

1.1.1.3 Prepare Public Hearing Summary and Analysis (response to public comments)

1.1.1.4 Continue coordination and providing response to comments to District, ENV, and FHWA upon completion of US 183 EIS Re-evaluation.

1.1.2 US 183 and Regional Toll Analysis

1.1.2.1 Update the US 183 Regional Toll Analysis [originally submitted to the TxDOT Austin District for review in August 2010]. The analysis used CAMPO's 2030 plan and has now elapsed. This will included the following:

- a. Incorporations of the results of CAMPO's new 2035 plan.
- b. Prepare revised Regional Toll Analysis and respond to District comments. Send revised analysis to District for forwarding to TxDOT ENV for review.
- c. Prepare revised Regional Toll Analysis and respond to ENV comments. Send revised analysis to ENV and FHWA.
- d. Prepare revised Regional Toll Analysis and respond to FHWA comments.
- e. Submit copies of the analysis to CAMPO if requested.
- f. For US 183-specific analysis; add to US 183 Re-evaluation

1.1.2.2 Continue coordination and providing response to comments to District, ENV, and FHWA upon completion of US 183 Regional Toll Analysis.

### 1.1.3 US 183 Ramp Programmatic Categorical Exclusion

- 1.1.3.1 Complete the US 183 Ramp Programmatic Categorical Exclusion [originally submitted to the TxDOT Austin District for review in December 2011. This will included the following:
  - a. Prepare revised PCE (Version 3 and respond to District comments. Send ten copies to District for forwarding to TxDOT Regional Support Center (RSC) for review.
  - b. Prepare Final PCE (Version 4 and respond to RSC comments. Send ten copies to District for forwarding to and coordination with RSC.

## 1.2 Project Oversight – Pre Construction [Code 13710]

### 1.2.1 Project Management

#### 1.2.1.1 Project Management

- a. Provide staff to manage the daily activities of the program.
- b. Serve as the primary contact between CTRMA, TxDOT, design consultants, third party consultants, utility companies, public agencies, and the general public.

#### 1.2.1.2 Document Controls

- a. Maintain project files for the length of the project.

### 1.2.2 Project Reporting

1.2.2.1 Provide updates to CTRMA on key tasks accomplished during the preceding month, meetings and key activities for the upcoming month, and identify outstanding issues requiring resolution.

1.2.2.2 Provide Project Administrative support staff to track, monitor, and report on contracts and budgets.

1.2.2.3 Provide Project Administrative support staff to track, monitor, and prepare reports on DBE/HUB utilization by Prime and Segment Designers, and DBE/HUB programs.

1.2.2.4 Prepare a Quarterly Report with an Executive Summary that provides a comprehensive summary of the monthly reports and the overall program progress.

### 1.2.3 Project Scheduling

1.2.3.1 Maintain a Master Project Schedule (Primavera format) that will show critical milestones for the performance and coordination of services.

1.2.3.2 Monitor, evaluate, and validate all schedules produced by others (Segment Designers, Utility Companies, etc.) that are a subset of the Master Project Schedule.

1.2.3.3 Provide updates of schedules at the appropriate stages of the project and shall provide an assessment of schedules provided by applicable third parties for integration into the Master Project Schedule.

### **1.3 Project Development – Pre Construction [Code 13710]**

#### **1.3.1 Project Development Support**

- 1.3.1.1 Loan and/or Grant Applications: Assist the Authority in the development of land and/or grant applications.
- 1.3.1.2 Engineering and Technical Support: Provide various engineering and technical tasks as requested by the Authority including but not limited to engineering assistance, general technology assistance, general environmental coordination reports, research, presentations, 3D Video animation and meetings.
- 1.3.1.3 Traffic Modeling: Conduct per review of the CORSIM and/or VISSIM Traffic Models and provide summary of suggestions.
- 1.3.1.4 TxDOT Coordination: Provide the appropriate staff as part of the coordination efforts between the Authority and TxDOT, as directed by the Authority.
- 1.3.1.5 Agency Coordination: Provide the appropriate staff as part of the coordination efforts between the Authority and Agencies, as directed by the Authority.
- 1.3.1.6 Traffic & Revenue Consultant Coordination: Provide the appropriate staff as part of the coordination efforts between the Authority and the Authority's Traffic and Revenue Consultant, as directed by the Authority.
- 1.3.1.7 Market Valuation: Assist in the development of the market valuation by providing industry knowledge and research for market valuation options.
- 1.3.1.8 Project Development Agreement (PDA): Assist in the development of the PDA, generation of PDA exhibits, review of PDA drafts, and TxDOT coordination support, as directed by the Authority.
- 1.3.1.9 DBE Outreach and Public Involvement support as requested by the Authority.

#### **1.3.2 Financial Planning Support**

- 1.3.2.1 Operation, Maintenance, and Renewal& Replacement Estimates
  - a. Develop and/or update GEC's opinion of probable operations cost estimates using either a Sketch Level approach (assumed per transaction costs based on average operations cost of similar toll systems) or a Level 1 approach (estimate actual quantities for various elements of toll operations, enforcement and incident management and applying anticipated unit prices to opening year with an escalation over an established periods of time
  - b. Develop and/or update GEC's opinion of probable annual/routine maintenance cost estimates using either a Sketch level approach (an estimated per centerline mile cost based on facility type which considers the number of lanes, pavement material and location) on a Level 1 approach (estimated quantities for the various elements of the

maintenance efforts and applying anticipated unit prices to opening year cost with escalation over an established period of time)

- c. Develop and/or update GEC's opinion of probable renewal & replacement budget cost estimates (non-routine estimates) using either a Sketch Level approach (an estimated per mile cost based on renewal & replacement budgets utilized on similar facilities) or a Level 1 approach (identification of long-term, periodic maintenance replacement schedule, estimation of quantities, and apply escalation to the appropriate replacement years.)

1.3.2.2 Project Cost Estimates: Prepare an estimate of probable construction costs which will include quantity/cost for all major components of work. Prepare estimate for total project cost which will include: program management, preliminary engineering, final engineering, right-of-way, environmental compliance/mitigation, construction, toll collection systems, utility relocation, and CE&I, and financing Co

1.3.2.3 Financial Advisor Support / Financial Plan Development: Provide financial advisor support necessary for the Authority to conduct financial programming. Including but not limited to cost estimating, financing techniques, shortfall mitigation techniques, and funding contingency plan.

### 1.3.3 Conceptual Operations Plan

1.3.3.1 Prepare a preliminary draft Conceptual Operations Plan which will establish the basic framework for operations of the facility including a basic definition of systems architecture for ITS and toll collection, incident management, safety and enforcement, maintenance. The plan will include role and responsibilities of various agencies.

## Attachment B - Fee Estimate Summary

### Atkins - Man-hour Breakdown & Fee Estimate

CTRMA General Engineering Consultant  
Atkins - Man-hour Breakdown & Fee Estimate  
183S Corridor GEC Services

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#### **PBS&J WORK AUTHORIZATION #2**

#### **183S TURNPIKE PROJECT**

<u>TASK</u>	<u>TOTAL</u>
<b>1.0 - 183S Turnpike Project Services</b>	
1.1 Environmental Study / Document Services [Code 13210]	\$ 231,163
1.2 Project Oversight -- Pre Construction [Code 13710]	\$ 103,483
1.3 Project Development -- Pre Construction [Code 13710]	\$ 150,995
<b>TOTAL</b>	<b>\$ 485,641</b>

## Attachment B - Fee Estimate

CTRMA General Engineering Consultant  
 Atkins - Man-hour Breakdown & Fee Estimate  
 183S Corridor GEC Services

### ATKINS SUPPLEMENTAL WORK AUTHORIZATION #1 WORK AUTHORIZATION #2 183S TURNPIKE PROJECT

**1.0 - 183S Turnpike Project Services**

		A	B	C	D	E	F	TOTAL
(Estimated Average Labor Rates)	\$	70.00	\$ 60.00	\$ 50.00	\$ 40.00	\$ 30.00	\$ 20.00	HRS
<b>TASK / WORK DESCRIPTION</b>								
1.1 Environmental Study / Document Services [Code 13210]								
1.1.1 US 183 Re-Evaluation		80	140	440	350	390	120	1520
1.1.2 US 183 and Regional Toll Analysis		4	40	40			8	92
1.1.3 US 183 Ramp Programmatic Categorical Exclusion		8	24	40	40	40	40	192

		92	204	520	390	430	168	1804
<b>TOTAL DIRECT LABOR</b>	<i>% Total by Classification</i>	5.10%	11.31%	28.82%	21.62%	23.84%	9.31%	
Labor Costs	\$	6,440	\$ 12,240	\$ 26,000	\$ 15,600	\$ 12,900	\$ 3,360	\$ 76,540
Overhead Costs	1.6849 \$	10,851	\$ 20,623	\$ 43,807	\$ 26,284	\$ 21,735	\$ 5,661	\$ 128,962
Profit	12.0% \$	2,075	\$ 3,944	\$ 8,377	\$ 5,026	\$ 4,156	\$ 1,083	\$ 24,660
<b>Total Loaded Labor</b>	\$	19,366	\$ 36,807	\$ 78,184	\$ 46,911	\$ 38,792	\$ 10,104	<b>\$230,163</b>

<b>Direct Expenses</b>	
Plotting and Reproduction	\$ 300
Mail and Deliveries	\$ 200
Misc Expenses	\$ 300
Travel and Field Expenses	\$ 200
<b>Total Direct Expenses</b>	<b>\$ 1,000</b>

**Total \$ 231,163**

## Attachment B - Fee Estimate

CTRMA General Engineering Consultant  
 Atkins - Man-hour Breakdown & Fee Estimate  
 183S Corridor GEC Services

### ATKINS SUPPLEMENTAL WORK AUTHORIZATION #1 WORK AUTHORIZATION #2 183S TURNPIKE PROJECT

**1.0 - 183S Turnpike Project Services**

TASK / WORK DESCRIPTION	(Estimated Average Labor Rates)	A	B	C	D	E	F	TOTAL
	\$	70.00	\$ 60.00	\$ 50.00	\$ 40.00	\$ 30.00	\$ 20.00	HRS
1.2 Project Oversight -- Pre Construction [Code 13710]								
1.2.1 Project Management & Administration		220	100	0	0	50	50	420
1.2.2 Project Reporting		60	20	0	0	20	20	120
1.2.3 Project Scheduling		20	10	0	50	0	0	80

TOTAL DIRECT LABOR	300	130	0	50	70	70	620
% Total by Classification	48.39%	20.97%	0.00%	8.06%	11.29%	11.29%	
Labor Costs	\$ 21,000	\$ 7,800	\$ -	\$ 2,000	\$ 2,100	\$ 1,400	\$ 34,300
Overhead Costs	1.6849 \$ 35,383	\$ 13,142	\$ -	\$ 3,370	\$ 3,538	\$ 2,359	\$ 57,792
Profit	12.0% \$ 6,766	\$ 2,513	\$ -	\$ 644	\$ 677	\$ 451	\$ 11,051
<b>Total Loaded Labor</b>	<b>\$ 63,149</b>	<b>\$ 23,455</b>	<b>\$ -</b>	<b>\$ 6,014</b>	<b>\$ 6,315</b>	<b>\$ 4,210</b>	<b>\$103,143</b>

**Direct Expenses**

Plotting and Reproduction	\$ -
Mail and Deliveries	\$ 100
Misc Expenses	\$ -
Travel and Field Expenses	\$ 240
<b>Total Direct Expenses</b>	<b>\$ 340</b>

1 trip to CTRMA/month; incl. roundtrip mileage + parking

**Total \$ 103,483**

## Attachment B - Fee Estimate

CTRMA General Engineering Consultant  
 Atkins - Man-hour Breakdown & Fee Estimate  
 183S Corridor GEC Services

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### ATKINS SUPPLEMENTAL WORK AUTHORIZATION #1 WORK AUTHORIZATION #2 183S TURNPIKE PROJECT

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#### 1.0 - 183S Turnpike Project Services

TASK / WORK DESCRIPTION	(Estimated Average Labor Rates)						TOTAL HRS
	A	B	C	D	E	F	
	\$ 70.00	\$ 60.00	\$ 50.00	\$ 40.00	\$ 30.00	\$ 20.00	
1.3 Project Development -- Pre Construction [Code 13710]							
1.3.1 Project Development Support	110	160	200	200	10	10	690
1.3.2 Financial Planning Support	40	40	20	0	40	40	180
1.3.3 Conceptual Operations Plan	40	40	10	10	0	0	100

TOTAL DIRECT LABOR	190	240	230	210	50	50	970
<i>% Total by Classification</i>	<i>19.59%</i>	<i>24.74%</i>	<i>23.71%</i>	<i>21.65%</i>	<i>5.15%</i>	<i>5.15%</i>	
Labor Costs	\$ 13,300	\$ 14,400	\$ 11,500	\$ 8,400	\$ 1,500	\$ 1,000	\$ 50,100
Overhead Costs	1.6849 \$ 22,409	\$ 24,263	\$ 19,376	\$ 14,153	\$ 2,527	\$ 1,685	\$ 84,413
Profit	12.0% \$ 4,285	\$ 4,640	\$ 3,705	\$ 2,706	\$ 483	\$ 322	\$ 16,142
<b>Total Loaded Labor</b>	<b>\$ 39,994</b>	<b>\$ 43,302</b>	<b>\$ 34,582</b>	<b>\$ 25,260</b>	<b>\$ 4,511</b>	<b>\$ 3,007</b>	<b>\$150,655</b>

#### Direct Expenses

Plotting and Reproduction	\$ -
Mail and Deliveries	\$ 100
Misc Expenses	\$ -
Travel and Field Expenses	\$ 240 1 trip to CTRMA/month; incl. roundtrip mileage + parking
<b>Total Direct Expenses</b>	<b>\$ 340</b>

**Total \$ 150,995**