

## **AGENDA ITEM #10 SUMMARY**

Approve a supplement to the work authorization with Atkins North America Inc. for general engineering consultant services on the Bergstrom Expressway project.

Strategic Plan Relevance: Regional Mobility

Department: Engineering

Associated Costs: \$4,274,800

Funding Source: General Fund, reimbursed per Advanced Funding Agreement

with TxDOT

Board Action Required: Yes

Description of Matter:

Atkins is providing general engineering consultant support services for the Bergstrom Expressway Project.

This supplement to the work authorization for those services provides for continued oversight of activities to develop the Bergstrom Expressway Project, to include without limitation project management, administrative tasks, and program oversight including coordination with TxDOT, consultants, resource agencies, TxDOT Environmental Affairs Division, and the FHWA as required for permitting, environmental approval, schematic design updates, public involvement/outreach support, right-of-way acquisition and relocation services, utility relocation design, and additional activities as specifically requested by the Authority.

Reference documentation: Draft Resolution

Proposed Supplement #4 to Work Authorization #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. 14-\_\_\_**

# APPROVING A SUPPLEMENT TO THE WORK AUTHORIZATION WITH ATKINS NORTH AMERICA, INC., TO PROVIDE GENERAL ENGINEERING CONSULTANT SERVICES ON THE BERGSTROM EXPRESSWAY PROJECT.

WHEREAS, Atkins North America, Inc., ("Atkins") serves as a general engineering consultant to the Mobility Authority under the Agreement for General Consulting Civil Engineering Services effective January 1, 2010 (the "GEC Agreement"); and

WHEREAS, Atkins provides general engineering consultant support services to the Mobility Authority for the Bergstrom Expressway Project; and

WHEREAS, the Executive Director and Atkins have discussed and agreed to a proposed supplement to the work authorization for Atkins to provide continued general engineering consultant services for the Bergstrom Expressway Project; and

WHEREAS, the Executive Director recommends approval of the proposed supplement to the work authorization attached as Exhibit 1.

NOW THEREFORE, BE IT RESOLVED that the proposed supplement to the work authorization is hereby approved; and

BE IT FURTHER RESOLVED that the Executive Director may finalize and execute for the Mobility Authority the proposed supplement to the work authorization in the form or substantially the same form as Exhibit 1.

Adopted by the Board of Directors of the Central Texas Regional Mobility Authority on the 24<sup>th</sup> day of September, 2014.

Submitted and reviewed by:	Approved:
Andrew Martin	Ray A. Wilkerson
General Counsel for the Central	Chairman, Board of Directors
Texas Regional Mobility Authority	Resolution Number: 14
-	Date Passed: 9/24/2014

## **EXHIBIT 1 TO RESOLUTION 14-**

## SUPPLEMENT TO THE WORK AUTHORIZATION WITH ATKINS NORTH AMERICA, INC.

[on the following 16 pages]

## EXHIBIT D WORK AUTHORIZATION

#### **Supplement No. 4 to Work Authorization No.2**

This Work Authorization is made as of this 1<sup>st</sup> day of September, 2014, 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:

Bergstrom Expressway Oversight Services

#### **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 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 ten (10) months from the date this Supplement becomes effective. This Supplement 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 \$4,274,800, based on Attachment B -Fee Estimate. This will increase the not to exceed amount for Work Authorization No. 2 from \$8,169,122 to \$12,443,922. Compensation for Direct Expenses under this Supplement which are incurred as part of normal business operations (i.e., internal document reproduction, internal plotting, travel and parking associated with local

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meetings, etc.) will be reimbursed on a Lump-Sum basis in the amount of: \$128,250 (with \$12,825 to be invoiced monthly). Profit will be 12% for all services. 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:	
Data		Data	

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#### CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY

#### SUPPLEMENT NO. 4 TO WORK AUTHORIZATION NO. 2 ATKINS

## ATTACHMENT A SERVICES TO BE PROVIDED BY GEC

#### **BERGSTROM EXPRESSWAY (183 SOUTH) PROJECT**

#### 1.0 Preliminary Engineering [Code 13110]

#### **Schematics and Exhibits**

- 1.1 TxDOT Support: Provide engineering support as directed by the Mobility Authority for the review and updates to the corridor exhibits and schematic.
- 1.2 Design Verification: Provide a cursory review of the current TxDOT Design to ensure that all elements of the schematic conform to current standards. Develop a list of non-conformance elements and provide recommendations to the Mobility Authority. Develop a design notebook which notes the results of the design.
- 1.3 Design Modifications: Update the design schematic incorporating alternative design modifications as directed by the CTRMA. Provide engineering support as directed by the Mobility Authority for changes in design associated NEPA, context sensitive solutions, community and stakeholder input. Address all non-conformance elements as directed by the Mobility Authority.
- 1.4 Shared Use Path: Provide a cursory review of the current TxDOT Design to ensure that a Shared Use Path can be incorporated into the Design. Provide recommendations to the locations of the Shared Use Path. Incorporate the proposed design as directed by the Mobility Authority.
- 1.5 Tree Alternative Design: Evaluate designs that lessen the impacts to specific trees within the corridor.
- 1.6 Mobility Improvements associated with Logical Termini. Evaluate and update the design of the TxDOT proposed Mobility improvement at the south end of the project (SH 71).
- 1.7 Preliminary Cross-sections: Develop cross-sections including limits of construction in order to evaluate the ROW footprint. Provide comments and recommendations to the Mobility Authority.
- 1.8 Design Evaluations/Reference Documents: Provide engineering support as directed by the Mobility Authority to further evaluate existring reference documents in support of the Design-Build Procurement team.

#### 2.0 Final Design Services [Code 13310]

- 2.1 AT&T Design: Prepare civil and cable/conduit print design for AT&T in an effort to advance critical utility relocations.
- 2.2 Review existing utility information for conflicts with preliminary roadway configuration, conduct a utility conflict analysis, and provide a conceptual utility relocation plan.

- 2.3 Represent the Authority in coordination efforts related to utility matters; includes coordination with Utility Companies and TxDOT Utility staff.
- 2.4 Prepare and maintain schedules which will identify utility ownership and include milestones and operations and activities pertinent to each assigned project.

#### 3.0 Right-of-Way Acquisition & Relocation Services [Code 13410]

#### 3.1 Maps & Documents

- 3.1.1 Prepare right-of-way maps and documents.
- 3.1.2 Review completed right-of-way maps and documents to ensure all necessary information is provided prior to initiating acquisition efforts.

#### 3.2 Appraisals

- 3.2.1 Obtain title reports for parcels to be acquired; the title reports will be preliminarily reviewed for accuracy, ownership verification, to determination if there are any existing liens or encumbrances which may prohibit the owner from conveying clear title.
- 3.2.2 Conduct appraisals to determine the fair market value of the property to be acquired; appraisals will contain sufficient documentation, including valuation data and the appraiser's analysis of that data, to support his or her opinion of value.
- 3.2.3 Conduct review appraisals to confirm that the appraisal has been completed in accordance with defined specifications/procedures and follows accepted appraisal principles/techniques; contains information and consideration of all compensable items, damages, and benefits; and includes written approval of the fair market value contained in the appraisal.
- 3.2.4 Conduct environmental site assessments, prior to acquisition of real property, on certain parcels to determine the potential of, and extent of liability for hazardous substances or other environmental remediation or injury. This includes a determination of the absence or presence of hazardous substances, as well as conditions that indicate an existing or past release.

#### 3.3 Negotiations / voluntary settlement

- 3.3.1 Provide written notification, consistent with Federal regulations, to effected property owners stating the Authority's intent to acquire right-of-way; this correspondence will also inform the affected property owners of the basic protections provided to them by law.
- 3.3.2 Develop offer letter and participate in a meeting with the affected property owner to present the offer.
- 3.3.3 Participate in negotiations with the affected property owner; documentation of ALL negotiations will be maintained in writing in a negotiators log.
- 3.3.4 In the event that negotiations result in a voluntary settlement acceptable to both parties, assemble a closing package containing all documents necessary to timely process the acquisition and relocations checks necessary for closing.

#### 3.4 Relocation Assistance Services

3.4.1 Conduct determination of relocation benefits, consistent with the Uniform Relocation Act, for both residential and business relocations.

#### 3.5 Right of Way status Tracking

3.5.1 Track status of Appraisals, Offers, Counter Offers, Condemnation, property management services and relocation assistance in both dollars and schedule.

#### 4.0 Project Oversight – Pre-Construction [Code 13710]

#### **Project Management**

- 4.1 Project Management
  - 4.1.1 Provide staff to manage the daily activities of the project.
  - 4.1.2 Serve as the primary contact between the Mobility Authority, TxDOT, design consultants, third party consultants, utility companies, public agencies, and the general public.

#### 4.2 Project Management Plan (PMP)

4.2.1 Develop the corridor specific PMP's in accordance with FHWA published Guidance Documents.

#### 4.3 Document Control

- 4.3.1 Implement document control plan
- 4.3.2 Maintain project files for the length of the project
- 4.3.3 Transfer project files to the Mobility Authority upon completion of the work or as directed by the Mobility Authority
- 4.4 Sub-Consultant Coordination, Work Authorization Management and Invoicing.

#### 4.5 Project Reporting

- 4.5.1 Provide updates to the Mobility Authority on key tasks accomplished during the preceding month, meetings and key activities for the upcoming month, and identify outstanding issues requiring resolution.
- 4.5.2 Provide Project Administrative support staff to track, monitor, evaluate and report on contracts and budgets.
- 4.5.3 Provide Project Administrative support staff to track, monitor, and prepare reports on DBE/HUB utilization by Prime and Segment Designers, and DBE/HUB programs.
- 4.5.4 Prepare a Quarterly Report with an Executive Summary that provides a comprehensive summary of the monthly reports and the overall program progress.

#### 4.6 Project Scheduling

- 4.6.1 Maintain a Master Project Schedule (Primavera format) that will show critical milestones for the performance and coordination of services.
- 4.6.2 Monitor, evaluate, validate, and periodically update all schedules produced by others (Segment Designers, Utility Companies, etc.) that are a subset of the Master Project Schedule.

4.6.3 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.

#### 4.7 Project Development Support

- 4.7.1 Loan and/or Grant Applications: Assist the Authority in the development of loan and/or grant applications (i.e. TIFIA Application).
- 4.7.2 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, and presentations.
- 4.7.3 Traffic Modeling: Conduct peer review of the CORSIM and/or VISSIM Traffic Models and provide summary of suggestions.
- 4.7.4 TxDOT Coordination: Provide the appropriate staff as part of the coordination efforts between the Authority and TxDOT, as directed by the Authority.
- 4.7.5 Agency Coordination: Provide the appropriate staff as part of the coordination efforts between the Authority and Agencies, as directed by the Authority.
- 4.7.6 Project Agreements: Assist in the development and review of various agreements necessary such as the Project Development Agreement (PDA), Advance Funding Agreement (AFA), Financial Assistance Agreement (FAA), etc.; generation of agreement exhibits; review of agreement drafts; and TxDOT coordination support, as directed by the Authority.
- 4.7.7 DBE Outreach support as requested by the Authority.

#### 4.8 Financial Planning Support

- 4.8.1 Operation, Maintenance, and Renewal & Replacement Estimates
  - 4.8.1.1 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
  - 4.8.1.2 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)
  - 4.8.1.3 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.)

- 4.8.2 Project Cost Estimates: Prepare an estimate of probable construction costs which will include quantity/costs 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.
- 4.8.3 Cost Estimate Review Workshop: Prepare for and conduct cost estimate review workshop as required by FHWA on "major projects".
- 4.8.4 Initial Finance Plan: Develop an Initial Finance Plan as required by FHWA on "major projects".
- 4.8.5 Engineer's Report: Prepare an Engineer's Report which includes the project scope, schedule and budget to be included in the Official Statement.
- 4.8.6 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.

#### 4.9 Conceptual Operations Plan

4.9.1 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 roles and responsibilities of the various agencies.

#### 5.0 Public Involvement / Outreach [Code 13750]

- 5.1 Prepare a comprehensive mailing list of adjacent property owners which may include additional property owners defined by the Mobility Authority
- 5.2 Distribute invitations based on comprehensive mailing lists
- 5.3 Support the Mobility Authority in the development and maintenance of the Project Website.
- 5.4 Support the Mobility Authority in the development of miscellaneous public involvement materials including but not limited to fact sheets, stake holder lists, advertisements, and news letters
- 5.5 Stakeholder and Public Outreach support as requested by the Authority. Facilitate and prepare documents for public and stakeholder outreach including but not limited to meeting notes, sign-in sheets, and plan view exhibits (Scroll type). Provide staff to support as needed for each meeting.
- 5.6 Develop 3D roadway animation incorporating schematic and context sensitive designs as directed by the Mobility Authority.

#### 5.7 Public Meetings

- 5.7.1 Facilitate, prepare documents and provide supporting staff as needed for four (4) Open House meetings. [One (1) TxDOT Public Meeting and Three (3) Context Sensitive Solutions (CSS) Meetings]
- 5.7.2 Distribute invitations to the additional property owners.

- 5.7.3 Provide supporting staff as needed for the Public Meetings.
- 5.7.4 Provide supporting documentation as directed by the Mobility Authority.
- 5.7.5 Provide website support associated opening and closing comment periods for the NEPA exhibits and voting selections associated with the CSS elements.

#### 5.8 Public Hearing

- 5.8.1 Assist TxDOT with preparation of a comprehensive mailing list of adjacent property owners which may include additional property owners defined by the Mobility Authority.
- 5.8.2 Distribute invitations to the additional property owners.
- 5.8.3 Provide supporting staff as needed for the Public Hearing.
- 5.8.4 Provide supporting documentation as directed by the Mobility Authority.

#### 5.9 Context Sensitive Solutions

- 5.9.1 Provide supporting staff as needed for meetings and workshops.
- 5.9.2 Provide supporting documentation as directed by the Mobility Authority.
- 5.10 Mobility Authority Open House/Workshops
  - 5.10.1 Provide supporting staff as needed for stakeholder meetings and workshops.
  - 5.10.2 Provide Supporting Documentation and materials as directed by the Mobility Authority.

## Attachment B - Fee Estimate Summary

CTRMA General Engineering Consultant Atkins - Man-hour Breakdown & Fee Estimate 183 South Project (Bergstrom Expressway)

## ATKINS - Supplemental Work Authorization #4 to Work Authorization #2

## 183 South Project (Bergstrom Expressway)

		<b>SUBTOTAL</b>	<b>SUBTOTAL</b>	<b>TOTAL</b>
		Labor +	Direct	
	TASK	Overhead +	Expenses	
		Profit	Lapenses	
183 South	Project (Bergstrom Expressway)			
1.0	Preliminary Engineering [13110]	\$ 1,002,795	\$ 27,500	\$ 1,030,295
2.0	Final Design Services [Code 13310]	\$ 763,883	\$ 25,500	\$ 789,383
3.0	Right-of-Way Acquisition & Relocation Services [Code 13410]	\$ 513,401	\$ 14,500	\$ 527,901
4.0	Project Oversight - Pre Construction [Code 13710]	\$ 865,695	\$ 29,250	\$ 894,945
5.0	Public Involvement / Outreach [Code 13750]	\$ 1,000,770	\$ 31,500	\$ 1,032,270
	Subtotals	\$ 4,146,545	\$ 128,250	\$ 4,274,795

**TOTAL (rounded)** \$ 4,274,800

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CTRMA General Engineering Consultant Atkins - Man-hour Breakdown & Fee Estimate 183 South Project (Bergstrom Expressway)

## 183 South Project (Bergstrom Expressway)

			A	B	C		D		E		F	TOTAL
	*	imated Average Labor Rates) \$	80.00 \$	70.00	\$ 60.0	0 \$	45.00	\$	35.00	\$	25.00	HRS
K / WORK DES	CRIPTION											
	y Engineering [13110]											
Sche	natics and Exhibits											
1.1	TxDOT Support		80	800	640		800		160		80	2560
1.2	Design Verification		40	300	100		60		120			620
1.3	Design Modifications		80	300	160		160		120			820
1.4	Shared Use Path		20	120	480		80		80			780
1.5	Tree Alternative Designs			100	160		80		120			460
1.6	Mobility Improvement associated with logi	cal termini	20	100	60		80					260
1.7	Preliminary Cross Sections		10	80	60		80		120			350
1.0	D		10	80	60		80					230
1.8	Design Evaluations/Reference Documents											
1.8	TOTAL DIRECT LABOR		260	1880	1720	0/	1420		720		80	6080
1.8	TOTAL DIRECT LABOR	% Total by Classification	260 4.28%	1880 30.92%	1720 28.29		1420 23.36%	<b>.</b>	11.84%	Φ.	1.32%	6080
1.8	TOTAL DIRECT LABOR	% Total by Classification \$	260 4.28% 20,800 \$	1880 30.92% 131,600	1720 28.29 \$ 103,20	0 \$	1420 23.36% 63,900		11.84% 25,200		1.32% 2,000	6080 \$ 346,7
1.8	TOTAL DIRECT LABOR  Labor Costs Overhead Costs	% Total by Classification \$ 1.5825 \$	260 4.28% 20,800 \$ 32,916 \$	1880 30.92% 131,600 208,257	1720 28.29 \$ 103,20 \$ 163,3	0 \$ 4 \$	1420 23.36% 63,900 101,122	\$	11.84% 25,200 39,879	\$	1.32% 2,000 3,165	\$ 346,7 \$ 548,6
1.8	TOTAL DIRECT LABOR  Labor Costs Overhead Costs Profit	% Total by Classification \$ 1.5825 \$ 12.0% \$	260 4.28% 20,800 \$ 32,916 \$ 6,446 \$	1880 30.92% 131,600 208,257 40,783	1720 28.29 \$ 103,20 \$ 163,3 \$ 31,98	0 \$ 4 \$ 2 \$	1420 23.36% 63,900 101,122 19,803	\$ \$	11.84% 25,200 39,879 7,809	\$ \$	1.32% 2,000 3,165 620	6080 \$ 346, \$ 548, \$ 107,
1.8	TOTAL DIRECT LABOR  Labor Costs Overhead Costs	% Total by Classification \$ 1.5825 \$	260 4.28% 20,800 \$ 32,916 \$	1880 30.92% 131,600 208,257 40,783	1720 28.29 \$ 103,20 \$ 163,3	0 \$ 4 \$ 2 \$	1420 23.36% 63,900 101,122	\$ \$	11.84% 25,200 39,879	\$ \$	1.32% 2,000 3,165	\$ 346, \$ 548, \$ 107,
1.8	Labor Costs Overhead Costs Profit Total Loaded Labor	% Total by Classification \$ 1.5825 \$ 12.0% \$	260 4.28% 20,800 \$ 32,916 \$ 6,446 \$	1880 30.92% 131,600 208,257 40,783	1720 28.29 \$ 103,20 \$ 163,3 \$ 31,98	0 \$ 4 \$ 2 \$	1420 23.36% 63,900 101,122 19,803	\$ \$	11.84% 25,200 39,879 7,809	\$ \$	1.32% 2,000 3,165 620	\$ 346, \$ 548, \$ 107,
1.8	Labor Costs Overhead Costs Profit Total Loaded Labor  Direct Expenses	% Total by Classification \$ 1.5825 \$ 12.0% \$ \$	260 4.28% 20,800 \$ 32,916 \$ 6,446 \$ 60,162 \$	1880 30.92% 131,600 208,257 40,783	1720 28.29 \$ 103,20 \$ 163,3 \$ 31,98	0 \$ 4 \$ 2 \$	1420 23.36% 63,900 101,122 19,803	\$ \$	11.84% 25,200 39,879 7,809	\$ \$	1.32% 2,000 3,165 620	\$ 346,7 \$ 548,4
1.8	TOTAL DIRECT LABOR  Labor Costs Overhead Costs Profit Total Loaded Labor  Direct Expenses Plotting and Reproduction	% Total by Classification \$ 1.5825 \$ 12.0% \$ \$	260 4.28% 20,800 \$ 32,916 \$ 6,446 \$ 60,162 \$	1880 30.92% 131,600 208,257 40,783	1720 28.29 \$ 103,20 \$ 163,3 \$ 31,98	0 \$ 4 \$ 2 \$	1420 23.36% 63,900 101,122 19,803	\$ \$	11.84% 25,200 39,879 7,809	\$ \$	1.32% 2,000 3,165 620	\$ 346, \$ 548, \$ 107,
1.8	TOTAL DIRECT LABOR  Labor Costs Overhead Costs Profit Total Loaded Labor  Direct Expenses Plotting and Reproduction Mail and Deliveries	% Total by Classification  \$ 1.5825 \$ 12.0% \$ \$ \$	260 4.28% 20,800 \$ 32,916 \$ 6,446 \$ 60,162 \$ 5,000 500	1880 30.92% 131,600 208,257 40,783	1720 28.29 \$ 103,20 \$ 163,3 \$ 31,98	0 \$ 4 \$ 2 \$	1420 23.36% 63,900 101,122 19,803	\$ \$	11.84% 25,200 39,879 7,809	\$ \$	1.32% 2,000 3,165 620	\$ 346, \$ 548, \$ 107,
1.8	TOTAL DIRECT LABOR  Labor Costs Overhead Costs Profit Total Loaded Labor  Direct Expenses Plotting and Reproduction	% Total by Classification \$ 1.5825 \$ 12.0% \$ \$	260 4.28% 20,800 \$ 32,916 \$ 6,446 \$ 60,162 \$	1880 30.92% 131,600 208,257 40,783	1720 28.29 \$ 103,20 \$ 163,3 \$ 31,98	0 \$ 4 \$ 2 \$	1420 23.36% 63,900 101,122 19,803	\$ \$	11.84% 25,200 39,879 7,809	\$ \$	1.32% 2,000 3,165 620	\$ 346, \$ 548, \$ 107,

Total \$ 1,030,295

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CTRMA General Engineering Consultant Atkins - Man-hour Breakdown & Fee Estimate 183 South Project (Bergstrom Expressway)

## 183 South Project (Bergstrom Expressway)

			A		В		С		D		E		F		TAL
		(Estimated Average Labor Rates) \$	80.00	\$	70.00	\$	60.00	\$	45.00	\$	35.00	\$	25.00	HF	RS
	DESCRIPTION														
	Design Services [Code 13310]														0
2.1	AT&T Design		80		240		1440		2240		540		240		4780
2.2	Conflict Analysis and Conceptual R		20								120				140
2.3	Utility Company and TxDOT Coord	dination	20								240		80		340
2.4	Prepare and Maintain Utility Sched	ule	20								240		40		300
															0
															0
															0
															0
															0
	TOTAL DIRECT I	AROR	140		240		1440		2240		11/0		360		
	TOTAL DIRECT I		140		240 4.32%		1440 25.90%		2240 40.29%		1140 20.50%		360 6.47%		5560
		LABOR  % Total by Classification  \$	2.52%		4.32%	\$	25.90%	\$	40.29%	\$	20.50%	\$	6.47%		5560
	Labor Costs	% Total by Classification \$	2.52% 11,200	\$	4.32% 16,800		25.90% 86,400	\$	40.29% 100,800		20.50% 39,900		6.47% 9,000	\$	5560
	Labor Costs Overhead Costs	% Total by Classification \$ 1.5825 \$	2.52% 11,200 17,724	\$ \$	4.32% 16,800 26,586	\$	25.90% 86,400 136,728	\$	40.29% 100,800 159,516	\$	20.50% 39,900 63,142	\$	6.47% 9,000 14,243	\$ \$	5560 264, 417,9
	Labor Costs Overhead Costs Profit	% Total by Classification \$ 1.5825 \$ 12.0% \$	2.52% 11,200 17,724 3,471	\$ \$ \$	4.32% 16,800 26,586 5,206	\$ \$	25.90% 86,400 136,728 26,775	\$ \$	40.29% 100,800 159,516 31,238	\$ \$	20.50% 39,900 63,142 12,365	\$ \$	6.47% 9,000 14,243 2,789	\$	5560 264, 417,9 81,8
	Labor Costs Overhead Costs	% Total by Classification \$ 1.5825 \$	2.52% 11,200 17,724	\$ \$ \$	4.32% 16,800 26,586	\$	25.90% 86,400 136,728	\$	40.29% 100,800 159,516	\$ \$	20.50% 39,900 63,142	\$ \$	6.47% 9,000 14,243	\$ \$	5560 264, 417, 81,
	Labor Costs Overhead Costs Profit <b>Total Loaded Labor</b>	% Total by Classification \$ 1.5825 \$ 12.0% \$	2.52% 11,200 17,724 3,471	\$ \$ \$	4.32% 16,800 26,586 5,206	\$ \$	25.90% 86,400 136,728 26,775	\$ \$	40.29% 100,800 159,516 31,238	\$ \$	20.50% 39,900 63,142 12,365	\$ \$	6.47% 9,000 14,243 2,789	\$ \$	5560 264, 417,
	Labor Costs Overhead Costs Profit Total Loaded Labor  Direct Expenses	% Total by Classification \$ 1.5825 \$ 12.0% \$	2.52% 11,200 17,724 3,471 32,395	\$ \$ \$	4.32% 16,800 26,586 5,206	\$ \$	25.90% 86,400 136,728 26,775	\$ \$	40.29% 100,800 159,516 31,238	\$ \$	20.50% 39,900 63,142 12,365	\$ \$	6.47% 9,000 14,243 2,789	\$ \$	5560 264, 417, 81,
	Labor Costs Overhead Costs Profit Total Loaded Labor  Direct Expenses Plotting and Reproduction	% Total by Classification \$ 1.5825 \$ 12.0% \$ \$	2.52% 11,200 17,724 3,471 32,395 5,000	\$ \$ \$	4.32% 16,800 26,586 5,206	\$ \$	25.90% 86,400 136,728 26,775	\$ \$	40.29% 100,800 159,516 31,238	\$ \$	20.50% 39,900 63,142 12,365	\$ \$	6.47% 9,000 14,243 2,789	\$ \$	5560 264, 417, 81,
	Labor Costs Overhead Costs Profit Total Loaded Labor  Direct Expenses Plotting and Reproduction Mail and Deliveries	% Total by Classification \$ 1.5825 \$ 12.0% \$	2.52% 11,200 17,724 3,471 32,395 5,000 500	\$ \$ \$	4.32% 16,800 26,586 5,206	\$ \$	25.90% 86,400 136,728 26,775	\$ \$	40.29% 100,800 159,516 31,238	\$ \$	20.50% 39,900 63,142 12,365	\$ \$	6.47% 9,000 14,243 2,789	\$ \$	5560 264, 417, 81,
	Labor Costs Overhead Costs Profit Total Loaded Labor  Direct Expenses Plotting and Reproduction	% Total by Classification \$ 1.5825 \$ 12.0% \$ \$	2.52% 11,200 17,724 3,471 32,395 5,000	\$ \$ \$	4.32% 16,800 26,586 5,206	\$ \$	25.90% 86,400 136,728 26,775	\$ \$	40.29% 100,800 159,516 31,238	\$ \$	20.50% 39,900 63,142 12,365	\$ \$	6.47% 9,000 14,243 2,789	\$ \$	5560 264, 417, 81,

Total \$ 789,383

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CTRMA General Engineering Consultant Atkins - Man-hour Breakdown & Fee Estimate 183 South Project (Bergstrom Expressway)

## 183 South Project (Bergstrom Expressway)

			A		В		С		D		E		F		OTAL
ar / work brach	· · · · · · · · · · · · · · · · · · ·	ated Average Labor Rates) \$	80.00	\$	70.00	\$	60.00	\$	45.00	\$	35.00	\$	25.00	H	RS
SK / WORK DESCR		1 124101													
	Acquisition & Relocation Services [Cod	de 13410]	40				260		0.40		7.60		120		2120
3.1	Maps & Documents		40		40		360		840		760		120		2120
3.2	Appraisals				40		400		220		240		120		620
3.3	Negotiations / Voluntary Settlement	i					120		240		240		80		680
3.4 3.5	Relocation Assistance Services								240		240		80		560
3.5	Right-of-Way Status Tracking		40						120				120		280
															0
															0
	TOTAL DIRECT LAI		80		40		480		1660		1480		520		4260
		BOR % Total by Classification	1.88%		0.94%		11.27%		38.97%		34.74%		12.21%		
	Labor Costs	% Total by Classification \$	1.88% 6,400	\$	0.94% 2,800	\$	11.27% 28,800		38.97% 74,700		34.74% 51,800		12.21% 13,000		177.
		% Total by Classification	1.88%	\$	0.94%	\$	11.27%		38.97%		34.74%		12.21%		4260 177, 280,
	Labor Costs Overhead Costs Profit	% Total by Classification \$	1.88% 6,400 10,128 1,983	\$ \$ \$	0.94% 2,800 4,431 868		11.27% 28,800 45,576 8,925		38.97% 74,700 118,213 23,150	\$ \$	34.74% 51,800 81,974 16,053	\$ \$	12.21% 13,000	\$	177, 280, 55,
	Labor Costs Overhead Costs	% Total by Classification \$ 1.5825 \$	1.88% 6,400 10,128	\$ \$ \$	0.94% 2,800 4,431	\$	28,800 45,576	\$	38.97% 74,700 118,213	\$ \$	34.74% 51,800 81,974	\$ \$	12.21% 13,000 20,573	\$ \$	177. 280.
	Labor Costs Overhead Costs Profit Total Loaded Labor	% Total by Classification \$ 1.5825 \$ 12.0% \$	1.88% 6,400 10,128 1,983	\$ \$ \$	0.94% 2,800 4,431 868	\$ \$	11.27% 28,800 45,576 8,925	\$ \$	38.97% 74,700 118,213 23,150	\$ \$	34.74% 51,800 81,974 16,053	\$ \$	12.21% 13,000 20,573 4,029	\$ \$	177, 280, 55,
	Labor Costs Overhead Costs Profit Total Loaded Labor  Direct Expenses	% Total by Classification \$ 1.5825 \$ 12.0% \$	1.88% 6,400 10,128 1,983 18,511	\$ \$ \$	0.94% 2,800 4,431 868	\$ \$	11.27% 28,800 45,576 8,925	\$ \$	38.97% 74,700 118,213 23,150	\$ \$	34.74% 51,800 81,974 16,053	\$ \$	12.21% 13,000 20,573 4,029	\$ \$	177 280 55
	Labor Costs Overhead Costs Profit Total Loaded Labor  Direct Expenses Plotting and Reproduction	% Total by Classification \$ 1.5825 \$ 12.0% \$	1.88% 6,400 10,128 1,983 18,511	\$ \$ \$	0.94% 2,800 4,431 868	\$ \$	11.27% 28,800 45,576 8,925	\$ \$	38.97% 74,700 118,213 23,150	\$ \$	34.74% 51,800 81,974 16,053	\$ \$	12.21% 13,000 20,573 4,029	\$ \$	177 280 55
	Labor Costs Overhead Costs Profit Total Loaded Labor  Direct Expenses Plotting and Reproduction Mail and Deliveries	% Total by Classification \$ 1.5825 \$ 12.0% \$	1.88% 6,400 10,128 1,983 18,511 4,000 500	\$ \$ \$	0.94% 2,800 4,431 868	\$ \$	11.27% 28,800 45,576 8,925	\$ \$	38.97% 74,700 118,213 23,150	\$ \$	34.74% 51,800 81,974 16,053	\$ \$	12.21% 13,000 20,573 4,029	\$ \$	177 280 55
	Labor Costs Overhead Costs Profit Total Loaded Labor  Direct Expenses Plotting and Reproduction	% Total by Classification \$ 1.5825 \$ 12.0% \$	1.88% 6,400 10,128 1,983 18,511	\$ \$ \$	0.94% 2,800 4,431 868	\$ \$	11.27% 28,800 45,576 8,925	\$ \$	38.97% 74,700 118,213 23,150	\$ \$	34.74% 51,800 81,974 16,053	\$ \$	12.21% 13,000 20,573 4,029	\$ \$	177 280 55

Total \$ 527,901

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CTRMA General Engineering Consultant Atkins - Man-hour Breakdown & Fee Estimate 183 South Project (Bergstrom Expressway)

## 183 South Project (Bergstrom Expressway)

			A		B		C		D		E		F		TAL
		(Estimated Average Labor Rates) \$	80.00	\$	70.00	\$	60.00	\$	45.00	\$	35.00	\$	25.00	HI	RS
	DESCRIPTION														
	ect Oversight - Pre Construction [Code 1	3710]													
4.1	Project Management		480		80								80		640
4.2	Project Management Plan		40				120		320		120		80		680
4.3	Document Control		120								120		120		360
4.4	Sub-Consultant Coordination, WA Ma	anagement and Invoicing	80								120		120		320
4.5	Project Reporting		120		120				120		120		240		720
4.6	Project Scheduling		40		240		120		120						520
4.7	Project Development Support		120		320		240		240		80		80		1080
4.8	Financial Planning Support		180		240		200		120		120		80		940
4.9	Conceptual Operations Plan		40		20				80		20				160
															0
															0
															0 0
	TOTAL DIDECT LA	ROP	1220		1020		680		1000		700		800		0
	TOTAL DIRECT LA		1220		1020		680 12 55%		1000		700		800		
		% Total by Classification	22.51%		18.82%	\$	12.55%	\$	18.45%	\$	12.92%	\$	14.76%		5420
	Labor Costs	% Total by Classification \$	22.51% 97,600	\$	18.82% 71,400	\$	12.55% 40,800	\$	18.45% 45,000	\$	12.92% 24,500	\$	14.76% 20,000	\$	5420 299,300
	Labor Costs Overhead Costs	% Total by Classification \$ 1.5825 \$	22.51% 97,600 154,452	\$ \$	18.82% 71,400 112,991	\$	12.55% 40,800 64,566	\$	18.45% 45,000 71,213	\$	12.92% 24,500 38,771	\$	14.76% 20,000 31,650	\$ \$	5420 299,300 473,642
	Labor Costs Overhead Costs Profit	% Total by Classification \$ 1.5825 \$ 12.0% \$	22.51% 97,600 154,452 30,246	\$ \$ \$	18.82% 71,400 112,991 22,127	\$ \$	12.55% 40,800 64,566 12,644	\$ \$	18.45% 45,000 71,213 13,946	\$ \$	12.92% 24,500 38,771 7,593	\$ \$	14.76% 20,000 31,650 6,198	\$	5420 299,300 473,642 92,753
	Labor Costs Overhead Costs	% Total by Classification \$ 1.5825 \$	22.51% 97,600 154,452 30,246	\$ \$ \$	18.82% 71,400 112,991	\$ \$	12.55% 40,800 64,566	\$ \$	18.45% 45,000 71,213	\$ \$	12.92% 24,500 38,771	\$ \$	14.76% 20,000 31,650	\$ \$	5420 299,300 473,642
	Labor Costs Overhead Costs Profit Total Loaded Labor	% Total by Classification \$ 1.5825 \$ 12.0% \$	22.51% 97,600 154,452 30,246	\$ \$ \$	18.82% 71,400 112,991 22,127	\$ \$	12.55% 40,800 64,566 12,644	\$ \$	18.45% 45,000 71,213 13,946	\$ \$	12.92% 24,500 38,771 7,593	\$ \$	14.76% 20,000 31,650 6,198	\$ \$	5420 299,300 473,642 92,753
	Labor Costs Overhead Costs Profit	% Total by Classification \$ 1.5825 \$ 12.0% \$	22.51% 97,600 154,452 30,246	\$ \$ \$	18.82% 71,400 112,991 22,127	\$ \$	12.55% 40,800 64,566 12,644	\$ \$	18.45% 45,000 71,213 13,946	\$ \$	12.92% 24,500 38,771 7,593	\$ \$	14.76% 20,000 31,650 6,198	\$ \$	5420 299,300 473,642 92,753
	Labor Costs Overhead Costs Profit Total Loaded Labor	% Total by Classification \$ 1.5825 \$ 12.0% \$	22.51% 97,600 154,452 30,246	\$ \$ \$	18.82% 71,400 112,991 22,127	\$ \$	12.55% 40,800 64,566 12,644	\$ \$	18.45% 45,000 71,213 13,946	\$ \$	12.92% 24,500 38,771 7,593	\$ \$	14.76% 20,000 31,650 6,198	\$ \$	5420 299,300 473,642 92,753
	Labor Costs Overhead Costs Profit Total Loaded Labor  Direct Expenses	% Total by Classification \$ 1.5825 \$ 12.0% \$	22.51% 97,600 154,452 30,246 282,298	\$ \$ \$	18.82% 71,400 112,991 22,127	\$ \$	12.55% 40,800 64,566 12,644	\$ \$	18.45% 45,000 71,213 13,946	\$ \$	12.92% 24,500 38,771 7,593	\$ \$	14.76% 20,000 31,650 6,198	\$ \$	5420 299,300 473,642 92,753
	Labor Costs Overhead Costs Profit Total Loaded Labor  Direct Expenses Plotting and Reproduction	% Total by Classification  1.5825 \$ 12.0% \$  \$	22.51% 97,600 154,452 30,246 282,298	\$ \$ \$	18.82% 71,400 112,991 22,127	\$ \$	12.55% 40,800 64,566 12,644	\$ \$	18.45% 45,000 71,213 13,946	\$ \$	12.92% 24,500 38,771 7,593	\$ \$	14.76% 20,000 31,650 6,198	\$ \$	5420 299,300 473,642 92,753
	Labor Costs Overhead Costs Profit Total Loaded Labor  Direct Expenses Plotting and Reproduction Mail and Deliveries	% Total by Classification  1.5825 \$ 12.0% \$  \$	22.51% 97,600 154,452 30,246 282,298 4,500 250	\$ \$ \$	18.82% 71,400 112,991 22,127	\$ \$	12.55% 40,800 64,566 12,644	\$ \$	18.45% 45,000 71,213 13,946	\$ \$	12.92% 24,500 38,771 7,593	\$ \$	14.76% 20,000 31,650 6,198	\$ \$	5420 299,300 473,642 92,753

Total \$ 894,945

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## 183 South Project (Bergstrom Expressway)

183 South Project (Bergstrom Expressway)								
		A	В	С	D	E	F	TOTAL
	(Estimated Average Labor Rates) \$	80.00 \$	70.00 \$	60.00 \$	45.00 \$	35.00 \$	25.00	HRS

TASK / WORK DESCRIPTION

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CTRMA General Engineering Consultant Atkins - Man-hour Breakdown & Fee Estimate 183 South Project (Bergstrom Expressway)

## 183 South Project (Bergstrom Expressway)

			A		B	_	C		D		E	_	F	TOTAL
SIZ / WANDIZ	DESCRIPTION	(Estimated Average Labor Rates) \$	80.00	\$	70.00	\$	60.00	\$	45.00	\$	35.00	\$	25.00	HRS
	ic Involvement / Outreach [Code 13750]			2	20		60		120				80	280
5.1	Prepare Comprehensive Mailing List Distribute Invitations													
5.2			10		20		60		60		260		80	220
5.3	Website development and maintenance		10		40		80		320		360			810
5.5 Sta	Development of Public Involvement m		20		20		80		360		480			1060
	Stakeholder and Public Outreach Suppo	ort	20		20		80		360		480			1060
5.6	Develop 3D Animation		10		60		680		60					810
5.7	Public Meetings		40		80		80		120		80		60	460
5.8	Public Hearing		40		80		80		80		80		60	420
5.9	Context Sensitive Solutions		20		60		720		240		240		80	1360
	Open House/Workshops		40	12	20		80		120		160		80	600
5.10	Open House/Workshops													0
5.10		POR	200		220		2000		1940		1000		440	0
5.10	TOTAL DIRECT LAR		200		720		2000		1840		1880		440	
5.10	TOTAL DIRECT LAN	% Total by Classification	2.82%	i	10.17%	•	28.25%	\$	25.99%	•	26.55%	\$	6.21%	7080
5.10	TOTAL DIRECT LAN	% Total by Classification \$	2.82% 16,000	\$	10.17% 50,400		28.25% 120,000		25.99% 82,800		26.55% 65,800		6.21% 11,000	7080
5.10	TOTAL DIRECT LAND Labor Costs Overhead Costs	% Total by Classification \$ 1.5825 \$	2.82% 16,000 25,320	\$ \$	10.17% 50,400 79,758	\$	28.25% 120,000 189,900	\$	25.99% 82,800 131,031	\$	26.55% 65,800 104,129	\$	6.21% 11,000 17,408	7080 \$ 346 \$ 547
5.10	TOTAL DIRECT LAND Labor Costs Overhead Costs Profit	% Total by Classification \$ 1.5825 \$ 12.0% \$	2.82% 16,000 25,320 4,958	\$ \$ \$	10.17% 50,400 79,758 15,619	\$ \$	28.25% 120,000 189,900 37,188	\$ \$	25.99% 82,800 131,031 25,660	\$ \$	26.55% 65,800 104,129 20,391	\$ \$	6.21% 11,000 17,408 3,409	7080 \$ 346 \$ 547 \$ 107
5.10	TOTAL DIRECT LAND Labor Costs Overhead Costs	% Total by Classification \$ 1.5825 \$	2.82% 16,000 25,320 4,958	\$ \$ \$	10.17% 50,400 79,758	\$	28.25% 120,000 189,900	\$	25.99% 82,800 131,031	\$ \$	26.55% 65,800 104,129	\$	6.21% 11,000 17,408	7080 \$ 346 \$ 547
5.10	TOTAL DIRECT LAND Labor Costs Overhead Costs Profit	% Total by Classification \$ 1.5825 \$ 12.0% \$	2.82% 16,000 25,320 4,958	\$ \$ \$	10.17% 50,400 79,758 15,619	\$ \$	28.25% 120,000 189,900 37,188	\$ \$	25.99% 82,800 131,031 25,660	\$ \$	26.55% 65,800 104,129 20,391	\$ \$	6.21% 11,000 17,408 3,409	7080 \$ 346 \$ 547 \$ 107
5.10	TOTAL DIRECT LAND Labor Costs Overhead Costs Profit Total Loaded Labor	% Total by Classification \$ 1.5825 \$ 12.0% \$	2.82% 16,000 25,320 4,958	\$ \$ \$	10.17% 50,400 79,758 15,619	\$ \$	28.25% 120,000 189,900 37,188	\$ \$	25.99% 82,800 131,031 25,660	\$ \$	26.55% 65,800 104,129 20,391	\$ \$	6.21% 11,000 17,408 3,409	7080 \$ 346 \$ 547 \$ 107
5.10	TOTAL DIRECT LAS  Labor Costs Overhead Costs Profit Total Loaded Labor  Direct Expenses	% Total by Classification \$ 1.5825 \$ 12.0% \$	2.82% 16,000 25,320 4,958 46,278	\$ \$ \$	10.17% 50,400 79,758 15,619	\$ \$	28.25% 120,000 189,900 37,188	\$ \$	25.99% 82,800 131,031 25,660	\$ \$	26.55% 65,800 104,129 20,391	\$ \$	6.21% 11,000 17,408 3,409	7080 \$ 346 \$ 547 \$ 107
5.10	TOTAL DIRECT LAND Labor Costs Overhead Costs Profit Total Loaded Labor  Direct Expenses Plotting and Reproduction	% Total by Classification \$ 1.5825 \$ 12.0% \$ \$	2.82% 16,000 25,320 4,958 46,278	\$ \$ \$	10.17% 50,400 79,758 15,619	\$ \$	28.25% 120,000 189,900 37,188	\$ \$	25.99% 82,800 131,031 25,660	\$ \$	26.55% 65,800 104,129 20,391	\$ \$	6.21% 11,000 17,408 3,409	7080 \$ 346 \$ 547 \$ 107
5.10	TOTAL DIRECT LAR  Labor Costs Overhead Costs Profit Total Loaded Labor  Direct Expenses Plotting and Reproduction Mail and Deliveries	% Total by Classification \$ 1.5825 \$ 12.0% \$ \$	2.82% 16,000 25,320 4,958 46,278	\$ \$ \$	10.17% 50,400 79,758 15,619	\$ \$	28.25% 120,000 189,900 37,188	\$ \$	25.99% 82,800 131,031 25,660	\$ \$	26.55% 65,800 104,129 20,391	\$ \$	6.21% 11,000 17,408 3,409	7080 \$ 346 \$ 547 \$ 107

Total \$ 1,032,270

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## 183 South Project (Bergstrom Expressway)

183 South Project (Bergstrom Expressway)								
		A	В	С	D	E	F	TOTAL
	(Estimated Average Labor Rates) \$	80.00	\$ 70.00 \$	60.00	\$ 45.00 \$	35.00 \$	25.00	HRS

TASK / WORK DESCRIPTION

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