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

RESOLUTION NO. 10-01

Jacobs Carter Burgess Work Authorization No. 2 for Construction Phase Services Related to Segment #1 of the 290 East Toll Project

WHEREAS, the Central Texas Regional Mobility Authority ("CTRMA") was created pursuant to the request of Travis and Williamson Counties and in accordance with provisions of the Transportation Code and the petition and approval process established in 43 Tex. Admin. Code § 26.1, et seq. (the "RMA Rules"); and

WHEREAS, the Board of Directors of the CTRMA has been constituted in accordance with the Transportation Code and the RMA Rules; and

WHEREAS, in a minute order approved on August 25, 2005, the Texas Transportation Commission authorized the CTRMA to pursue the development of the 290 East Toll Project (the "Project"); and

WHEREAS, CTRMA staff and consultants have determined that the design and engineering of the Project should be undertaken in three segments, such segments being described as Segment #1 (from US 183 to Tuscany Way, including four direct connectors at the US 183 interchange), Segment #2 (from Tuscany Way to FM 3177 [Decker Lane]), and Segment #3 (from FM 3177 to FM 734 [Parmer Lane]); and

WHEREAS, in Resolution No. 08-16, dated March 26, 2008, following the issuance of a Request for Qualifications and evaluation of responses thereto in accordance with the CTRMA's procurement policies, the Board of Directors authorized the Executive Director and staff to enter into negotiations and finalize a contract and initial work authorization for the design and engineering of Segment #1 of the Project with Jacobs Carter Burgess, formerly Carter & Burgess, Inc. ("Jacobs"), and the contract was finalized and executed; and

WHEREAS, attached hereto and incorporated herein as <u>Attachment "A"</u> is Work Authorization No. 2 to the agreement for design and engineering services with Jacobs ("Work Authorization No. 2") which sets forth a scope of services for the provision of construction phase services for Segment #1 of the Project; and

WHEREAS, it is necessary that the board of Directors Approve Work Authorization No. 2 and its execution by the Executive Director.

NOW THEREFORE, BE IT RESOLVED, that the Board of Directors of the CTRMA hereby approves Work Authorization No. 2 in substantially the same form attached hereto as Attachment "A", provided that any work commenced under Work Authorization No. 2 be

subject to the agreement for design and engineering services between the CTRMA and Jacobs; and

BE IT FURTHER RESOLVED, that Work Authorization No. 2 may be finalized and executed by the Executive Director on behalf of the CTRMA and that Work Authorization No. 2 may be amended from time to time by written amendment as deemed necessary by the Board of Directors.

Adopted by the Board of Directors of the Central Texas Regional Mobility Authority on the 27th day of January, 2010.

Submitted and reviewed by:

C. Brian Cassidy

Acting General Counsel for the Central Texas Regional Mobility Authority

Approved:

Ray A Wilkerson

Charman, Board of Directors Resolution Number 10-01

Date Passed 01/27/10

ATTACHMENT "A" TO RESOLUTION NO. 10-01 JACOBS WORK AUTHORIZATION NO. 2

ATTACHMENT C

WORK AUTHORIZATION C-2

WORK AUTHORIZATION NO. 2 CONTRACT FOR ENGINEERING SERVICES

THIS WORK AUTHOR	IZATION is n	nade pursuan	t to the ter	ms and con-	litions	of
Article 4 of the Contract for Engin	eering Services	(the Contract	t) entered in	ito by and be	tween t	he
Central Texas Regional Mobility	Authority (the	Authority) a	and Carter	& Burgess,	Inc. (t	he
Engineer) dated	_ •					

- **PART I.** The Engineer will perform engineering services generally described as Construction Phase Services for the 290 East Toll Project Segment #1 (Direct Connectors at US 183) in accordance with the project description attached hereto and made a part of this Work Authorization. The responsibilities of the Authority and the Engineer as well as the work schedule are further detailed in Exhibits A, B, and C which are attached hereto and made a part of the Work Authorization.
- **PART II.** The maximum amount payable under this Work Authorization is \$499,837.51 and the method of payment is Cost Plus Fixed Fee. This amount is based upon the Engineer's estimated Work Authorization costs included in Exhibit D and Exhibit E, which is attached and made a part of this Work Authorization. The basis for payment will be as follows:

The amount paid shall be based on actual labor hours worked, billed at actual wage rates, plus allowable direct expenses (only those identified in Exhibit D) at actual costs. Billed labor rates must be equal to or less than the maximum wage rates per classification shown in the Maximum Rate Schedule in Exhibit E. The total amount paid shall not exceed the maximum amount payable. For payment the Engineer is required to provide evidence of actual hours worked, employee classification, actual wage rates, and evidence of allowable direct costs.

- **PART III.** Payment to the Engineer for the services established under this Work Authorization shall be made in accordance with Articles 3 thru 5 of the contract, and Attachment A, Article 1.
- **PART IV.** This Work Authorization shall become effective on the date of final acceptance of the parties hereto and shall terminate upon completion of the work, unless extended by a supplemental Work Authorization as provided in Article 4 of the Contract.
- **PART V.** This Work Authorization does not waive the parties' responsibilities and obligations provided under the Contract.
- IN WITNESS WHEREOF, this Work Authorization is executed in duplicate counterparts and hereby accepted and acknowledged below.

THE ENGINEER

CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY

(Signature)	(Signature)
Kevin P. Nelson, P.E. (Printed Name)	Mike Heiligenstein (Printed Name)
Managing Principal (Title)	Executive Director (Title)
(Date)	(Date)

LIST OF EXHIBITS

Exhibit A Scope of Services to be provided by the Authority Exhibit B Scope of Services to be provided by the Engineer

Exhibit C Work Schedule
Exhibit D Fee Schedule

Exhibit E Maximum Rate Schedule Exhibit H-2 DBE Subprovider Forms

EXHIBIT A SERVICES TO BE PROVIDED BY THE AUTHORITY

The Central Texas Regional Mobility Authority (the Authority) shall perform and provide the following in a timely manner so as not to delay the Services to be provided by the Segment Engineer, herein referred to as the "Engineer":

- 1. Designate a single person from the GEC team as the point of contact for the Engineer in the Construction Phase efforts.
- 2. Attend and participate in progress and coordination meetings as required.
- 3. Authorize the Engineer in writing to proceed. (Emailed partial NTPs will be provided for this work authorization.)
- 4. Place at Engineer's disposal all reasonably available information pertinent to the Project, including previous reports, drawings, specifications, or any other data relative to the design and construction of the Project.
- 5. Review and approve the Engineer's progress schedule with milestone activities and/or deliverables identified.
- 6. Provide timely review and decisions in response to the Engineer's request for information and/or required submittals and deliverables, in order for the Engineer to maintain the agreed-upon work schedule identified in Exhibit C.
- 7. Assemble a set of as-built "Record Drawings" for all disciplines.
- 8. Transfer all as-built information to a set of "mylar" tracings as "Record Drawings" or documents for the permanent file for all disciplines.

EXHIBIT B SERVICES TO BE PROVIDED BY THE SEGMENT ENGINEER

The Segment Engineer, herein referred to as the "Engineer", shall be available at the request of the Central Texas Regional Mobility Authority (the "Authority") or the General Engineering Consultant (GEC) for work associated with the construction of the Direct Connectors at US 183 portion of the 290E Toll Project, herein referred to as the "Project". This work authorization amends Work Authorization #1 by adding Function 1.20; "Construction Phase Services".

1.20 Construction Phase Services

The general descriptions of services set forth in Section 1.20 below represent non-exclusive examples of the types of work elements that may be assigned to the Engineer under the terms of this Work Authorization. The Authority anticipates that some of the work shall be performed inhouse by the Engineer utilizing its own staff and some work will be outsourced to other consultants. The scope of services for specific assignments to the Engineer will be clarified at the time the assignment is made. Notwithstanding the general descriptions in Section 1.20, the Engineer will be expected to provide the expertise and resources necessary to fully implement and accomplish work of the type described in accordance with the Work Authorization.

Construction phase services to be performed by the Engineer shall be limited to the structural and aesthetic elements of the project. Upon request for construction phase services, the Engineer shall prepare a written Memorandum of Understanding prior to the commencement of any task associated with this Work Authorization and submit it to the Authority. The MOU shall define the work, time frame, and level of effort associated with each task such that both parties are in agreement as to the magnitude of the task. Along with confirmation of the effort level, the GEC will grant notice to proceed via e-mail to the Engineer. Actual effort will be compensated. Invoices should reflect the effort level of each RFI as well as the hours spent by each person to complete the work.

No compensation will be made correction of errors in the plans or omissions from the plans. Construction phase services may require but are not limited to:

1.20.A. Respond to Requests for Information (RFIs)

The Engineer will respond to Requests for Information (RFIs) issued by the GEC, acting as a representative of the Authority, on an "on-call" basis for the duration of the construction of the project. RFIs may originate from the construction contractor or the construction engineering and inspection team.

1.20.B. Perform Shop Drawing Review

The following procedures shall be used for shop drawing review:

- 1. Review the drawings for conformity to the plans, specifications, and special provisions, as well as conformity to any subsidiary standards or criteria referred to by the plans, specifications or special provisions.
- 2. If the drawing is found to be in conformity, or an alternate design is adequate and acceptable, the drawing shall be marked "No Exceptions Taken" with signature, date and statement that "Review is only for general conformance with the design concept of the contract documents. Markings or comments shall not be construed as relieving the contractor from compliance with the project plans and specifications. The Contractor remains solely responsible for details and accuracy, for confirming and correlation all quantities and dimensions, for selecting fabrication processes, for techniques of assembly, for safety and for satisfactory performance of work."
- 3. If there are only minor corrections, the incorrect information shall be crossed out and the correct information will be written next to the crossed out information. All redlines shall be done in indelible red ink. The submittal shall be returned "Make Correction as Noted" and no re-submittal shall be required.
- 4. If the corrections are more significant and the Engineer does not concur with the information on the drawings, then the submittal shall be returned marked "Amend and Resubmit." The Drawings must then be resubmitted for a second review.
- 5. If the drawings are found not to be in conformity, the drawings shall be marked "Rejected See Remarks." Before rejection, the Engineer shall coordinate with the fabricator. An explanation of why the submittal was disapproved will be provided in enough detail for the Contractor to be able to make the corrections for resubmittal.
- 6. A cover letter will be returned with the reviewed drawings containing:
 - a. A description of the submittal;
 - b. The status of the submittal;
 - c. A listing of sheet numbers and tiles reviewed;
 - d. If the design reviewed was an alternate design, a notation declaring that an alternate design was presented and what criteria were use to determine if the alternate design is adequate and acceptable and;
 - e. If the submittal was not accepted without exception, and explanation of the exceptions.

1.20.C. Perform Change Order Review

Effort and expectations for Change Order Review shall be determined at the time of request for the service.

1.20.D. Produce Change Orders

The Engineer shall be available to prepare Change Orders, Alternate Designs, or Additional Design Details as directed by the State or its representatives throughout the duration of the construction. The Engineer will document each Change Order, Alternate Design, or Design Details in sufficient detail to allow the processing of the design refinement. The Engineer shall submit original mylar drawings and six copies of all Change Orders or designs requested by the Authority. In relation to preparation of change order documents, the Engineer shall be available to:

- 1. Prepare a Fair Construction Cost Estimate for the change
- 2. Evaluate contractor's proposed quotation against the Fair Construciton Cost Estimate
- 3. Submit recommendations to the Authority for final approval, and
- 4. Assist the Authority and/or its representatives in negotiating change orders following approval.

Specific effort and expectations for Change Order Review shall be determined at the time of request for the service.

1.20.E. Perform Report Revisions

The Engineer shall be expected to revise reports as requested by the Authority due to accurately reflect the field conditions at the time of construction.

1.20.F. Attend and/or Facilitate Meetings and Presentations

The Engineer shall be available to attend onsite construction progress meetings as deemed necessary by Authority.

EXHIBIT C WORK SCHEDULE

The services described in this work authorization will be "on-call" services as requested by the CTRMA and/or the GEC. Services shall be provided in a timely manner and responses shall be prompt. Time requirements for individual tasks will be determined at the time of the request. Services may be requested at any time during the construction of the project. The estimated construction schedule for the Project is outlined below:

Notice to Proceed for Construction ActivitiesFebruary 26, 2010
Substantial CompletionJanuary 13, 2012
Punch list and Final AcceptanceMay 18, 2012

EXHIBIT D FEE SCHEDULE

FOR Carter & Burgess, Inc.

290 EAST TOLL PROJECT - SEGMENT #1 Work Authorization #2

For services described in Exhibit B, we request the compensation as detailed below. Cost breakdowns for engineering services and explanation of expenses are shown on the following pages.

TOTAL COMPENSATION

Direct Connectors at US 183 - Construction Phase Services

\$ 499,837.51

EXHIBIT D SUMMARY OF MANHOURS BY CLASSIFICATION & MAJOR TASK ANALYSIS CONSTRUCTION PHASE SERVICES CARTER & BURGESS, INC.

Fee/Rate Schodule												OH	MARGIN	PROJECT
Labor Rate Per Hour	\$90.00	\$87.00	\$ 64.00	\$64.00	\$44,00	\$36.00	\$30.00	\$48.00	\$35.00	\$28.00	\$24.00	RATE	RATE	MULTIPLIER
Loaded Rate	\$253.70	\$245.25	\$180.41	\$180.41	\$124.03	\$101.48	\$84.57	\$135.31	\$98.66	\$78.93	\$67.65	151.69%	12.00%	2.819

Description of Work or Task	Principle	wanager	Senior Engineer	Senior Bridge Engineer	Project Engineer	Design Engineer	Engineering Intern (EIT)	Senior Engineering Technician	Engineering Technician	CADD Operator	Admin / Clerical	Staff Hr.	Staff Cost / Task	Plan Sheet
	\$253.70/Hr	\$245.25/Hr	\$180.41/Hr	5180.41/Hr	\$124.03/Hr	\$101.48/Hr	\$84.57/Hr	\$135.31/Hr	\$98.66/Hr	\$78.93/Hr	\$67.65/Hr	Totals	Totals	Total
1.20 Construction Phase Services														
120.A. Requests for information	-	8	30	36	40	40	50		-		8	212	\$ 27,659.16	N/A
120.B. Shop drawing review	-			340	800	800	340	-	-	-	-	2,280	\$ 270,501.20	N/A
120.C. Change order review	•	2	18	32	60	60	48	•	-	_	5	225	\$ 27,439.21	N/A
120.D. Change order		-	-	150	200	200	150	-	-	-	-	700	\$ 84,849.00	N/A
120.E. Report revisions	-	8	-	8	30	30	-	-			2	78	\$ 10,305.88	N/A
120.F. Meetings and presentations	•	4	-	30	30	-	-	-		<u> </u>	. 5	69	\$ 10,452.45	N/A
											,			
Construction Phase Services Subtotal:	•	22	48	596	1,160	1,130	588	•	-	-	20	3,564	S 431,206.90	
Expenses:													S 1,311.00	
PESC Total:												520	S 67,319.61	
WORK AUTHORIZATION TOTAL SUMMARY												4;084	\$ 499,837.51	

⁻⁻ EFFORT SHOWN IS FOR WORK AUTHORIZATION PURPOSES ONLY. ACTUAL EFFORT TO BE DETERMINED AT TIME OF REQUEST FOR SERVICES.

EXHIBIT D SUMMARY OF MANHOURS BY CLASSIFICATION & MAJOR TASK ANALYSIS CONSTRUCTION PHASE SERVICES P.E. STRUCTURAL CONSULTANTS, INC.

Fee/Rate Schedule												OH	MARGIN	PROJECT
Labor Rate Per Hour	\$66.17	\$66.17	\$54.56	\$ 54.56	\$44.00	\$35.20	\$33.44	\$36.96	\$29.92	\$26.40	\$22.88	RATE	RATE	MULTIPLIER
Loaded Rate	\$192.70	\$192.70	\$158.88	\$158.88	\$128.13	\$102.50	\$97.38	\$107.63	\$87.13	\$76.88	\$66.63	160.00%	12.00%	2.912

Description of Work or Task						Design Engineer		Senior Engineering Technician	Technician	CADD Operator			Staff Cost / Task	Plan Sheet
	S192:70/Hr	\$192.70/Hr	\$158.88/Hr	\$158.88/Hr	\$128.13/Hr	\$102.50/Hr	\$97.38/Hr	S107.63/Hr	S87.13/Hr	\$76.88/Hz	\$66.63/Hr	Totals	Totals	Total
1.20 Construction Phase Services														<u> </u>
120.A. Requests for information	•	12	24	•	35		•	•	•	-	6	77	\$ 11,009.85	
120.B. Shop drawing review	•	40	-	•	100	50	50		-	-	20	260	\$ 31,847.60	
120.C. Change order review	-	9	12	-	18	-	-	6	12	•	6	63	\$ 8,038.32	1
120.D. Change order	-	14	-	•	24	6	20	-	-	-	-	64	\$ 8,335.52	1
120.E. Report revisions	-	6	•	•	6	-	6	•	-		12	30	\$ 3,308,82	
120.F. Meetings and presentations	-	16	-	-	8	-	-		•	-	2	26	\$ 4,241.50	i .
Construction Phase Services Subtotal:		97	36	•	191	56	76	6	12		46	520	\$ 66,781.61	
Expenses:			, , , , , , , , , , , , , , , , , , , ,			1	400						\$ 538.00	
PESC Total:								, , , , , ,					S67,319:61	i
											1			

^{**} EFFORT SHOWN IS FOR WORK AUTHORIZATION FURPOSES ONLY. ACTUAL EFFORT TO BE DETERMINED AT TIME OF REQUEST FOR SERVICES.

EXHIBIT D SUMMARY OF GENERAL EXPENSES CONSTRUCTION PHASE SERVICES CARTER & BURGESS, INC.

Item Description	Unit	Quantity	Unit Cost		To	otal Cost
Basic General Expenses						
I. Travel - Mileage	Miles	520	\$	0.55	\$	286.00
II. Basic Printing and Reproduction						
A. Photo Copies (B/W) (8 1/2" x 11")	EA	1,000	\$	0.10	\$	100.00
B. Photo Copies (B/W) (11" x 17")	EA	500	\$	0.25	\$	125.00
C. Photo Copies (B/W) (11" x 17") (From Mylar)	EA		\$	0.40	\$	-
D. Photo Copies (Color) (8 1/2" x 11")	EA		\$	0.20	\$	-
E. Photo Copies (Color) (11" x 17")	EA		\$	0.25	\$	
F. Photo Copies (Color) (8 1/2" x 11") (Outside)	EA		\$	1.00	\$	_
G. Photo Copies (Color) (11" x 17") (Outside)	EA		\$	1.50	\$	
H. Color Plot (Schematic Layout)	SF		\$	2.00	\$	-
I. Paper Plot	SF		\$	1.00	\$	-
J. Mylar Plots (11" x 17")	EA	100	\$	2.00	\$	200.00
K. Manuals/Binders	EA		\$	10.00	\$	-
L. Document Assembly	Plan Set	0	\$	30.00	\$	-
III. Courier Service Deliveries (4/mo. X 18 mo.)	EA.	30	\$	20.00	\$	600.00
						.v.iii
		tal Basic Gen	eral I	Expenses	\$	1,311.00

EXHIBIT D SUMMARY OF GENERAL EXPENSES CONSTRUCTION PHASE SERVICES P.E. STRUCTURAL CONSULTANTS, INC.

Item Description	Unit	Quantity	Uı	nit Cost	T	otal Cost
Basic General Expenses						
I. Travel - Mileage	Miles	160	\$	0.55	\$	88.00
II. Basic Printing and Reproduction			<u> </u>		<u> </u>	
A. Photo Copies (B/W) (8 1/2" x 11")	EA	100	\$	0.10	\$	10.00
B. Photo Copies (B/W) (11" x 17")	EA	120	\$	0.25	\$	30.00
C. Photo Copies (B/W) (11" x 17") (From Mylar)	EA	60	\$	0.40	\$	24.00
D. Photo Copies (Color) (8 1/2" x 11")	EA	80	\$	0.20	\$	16.00
E. Photo Copies (Color) (11" x 17")	EA	120	\$	0.25	\$	30.00
F. Photo Copies (Color) (8 1/2" x 11") (Outside)	EA		\$	1.00	\$	_
G. Photo Copies (Color) (11" x 17") (Outside)	EA		\$	1.50	\$	-
H. Color Plot (Schematic Layout)	SF		\$	2.00	\$	-
I. Paper Plot	SF		\$	1.00	\$	-
J. Mylar Plots (11" x 17")	EA	40	\$	2.00	\$	80.00
K. Manuals/Binders	EA	2	\$	10.00	\$	20.00
L. Document Assembly	Plan Set	_	\$	30.00	\$	-
III. Courier Service Deliveries (4/mo. X 18 mo.)	EA.	12	\$	20.00	\$	240.00
	To	tal Basic Gen	eral l	Expenses	\$	538.00

EXHIBIT E MAXIMUM RATE SCHEDULE CONSTRUCTION PHASE SERVICES

Labor Classification	Max	mum Rate
Carter & Burgess, Inc.		
Senior Project Manager	\$	245
Senior Engineer	\$	180
Senior Bridge Engineer	\$	180
Project Engineer	\$	124
Design Engineer	\$	101
Engineering Intern (EIT)	\$	84
Senior Engineering Technician	\$	135
Engineering Technician	\$	98
CADD Operator	\$	78
Admin/Clerical	\$	67
P.E. Structural Consultants, Inc.		
Senior Project Manager	\$	192
Senior Project Manager	\$	192
Senior Engineer	\$	158
Senior Bridge Engineer	\$	158
Project Engineer	\$	128
Design Engineer	\$	102
Engineering Intern (EIT)	\$	97
Senior Engineering Technician	\$	107
belief Engineering Technician	φ.	87
Engineering Technician	\$	
	\$	76

Actual billed rates are not to exceed the maximum rate.

Documentation of hours worked is necessary to receive reimbursement.

EXHIBIT H-2

Central Texas Regional Mobility Authority Subprovider Monitoring System Commitment Agreement

This commitment agreement is subject to the award and receipt of a signed contract from the Central Texas Regional Mobility Authority. NOTE: Exhibit H-2 is required to be attached to each contract that does not include work authorizations. Exhibit H-2 is required to be attached with each work authorization. Exhibit H-2 is also required to be attached to each supplemental work authorization. If <u>DBE/HUB Subproviders</u> are used, the form must be completed and signed. If no DBE/HUB Subproviders are used, indicate with "N/A" on this line: _____ and attach with the work authorization or supplemental work authorization.

used, indicate with "N/A" on th	is line: and a	attach	with the work autho	rization or supplen	iental work autho	rization.
Contract #: <u>08290E22701E</u>	Assigned Goal: 12.7	%	Prime Provider:	Carter & Burgess	Inc.	
Work Authorization (WA)#:	2 WA Amount:	<u>\$49</u>	9,837. <u>5</u> 1	Date: 1-14-201	0	
			-			
	Description of Work or task description. Attac necessary.)				Dollar Amount cory of work or tas shown.)	
Aesthetic Construction Phas	se Services			\$67,319.61		
Total Commitment	: Amount (Including all ad	ddition	al nages.)			
IMPORTANT: The signatur the total commitment amount	es of the prime and the D	BE/HU	JB and Second Tier	Subprovider, if an	y (both DBE and)	Non-DBE) and
Provider Name:			Name:			
Address:				(Please I	Print)	1
Phone # & Fax #:			Title:			
Email:						
				Signature	Date	
DBE/HUB Sub Provider Su	hnrovider					
Subprovider Name:	provider		Name:	(Please I	Duin+)	
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VID Number:			Title:			
Address:						
				Signature	Date	