

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

RESOLUTION NO. 09-84

**PBS&J GEC Scope of Services/ Supplemental Agreement No. 1 to
Work Authorization No. 1 for
GEC Oversight of Segments 1A, 2 and 3 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 § 26.01, *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, the CTRMA utilizes PBS&J for certain purposes as a General Engineering Consultant ("GEC") pursuant to an existing Agreement for General Consulting Engineering Services with HNTB dated September 1, 2003, under which PBS&J is a subconsultant and Project Manager, and the CTRMA Board of Directors has authorized the negotiation and execution of a new GEC Agreement with PBS&J (the "New GEC Agreement") that will be executed prior to expiration of the existing HNTB Agreement; and

WHEREAS, attached hereto and incorporated herein as Attachment "A" is Supplemental Agreement No. 1 to Work Authorization No. 1 to the New GEC Agreement ("Supplemental Agreement No. 1") which sets forth a Scope of Services for additional GEC services to be provided by PBS&J relating to the feasibility, development, design and construction of Segments 1A, 2 and 3 of the 290 East Toll Project; and

WHEREAS, it is necessary that the Board of Directors approve Supplemental Agreement No. 1 and its execution by the Executive Director.

NOW THEREFORE, BE IT RESOLVED, that the Board of Directors of the CTRMA hereby adopts and approves Supplemental Agreement No. 1 and the related Scope of Services in substantially the form attached hereto as Attachment "A"; and

BE IT FURTHER RESOLVED, that Supplemental Agreement No. 1 and the related Scope of Services may be finalized and executed by the Executive Director on behalf of the CTRMA and that Supplemental Agreement No. 1 may be amended from time to time by written amendment as deemed necessary the Board of Directors.


Adopted by the Board of Directors of the Central Texas Regional Mobility Authority on the 17th day of December, 2009.

Submitted and reviewed by:



Tom Nielson
General Counsel for the Central
Texas Regional Mobility Authority

Approved:



Ray A. Wilkerson
Chairman, Board of Directors
Resolution Number 09-84
Date Passed 12/17/09

ATTACHMENT "A"
TO
RESOLUTION 09-84
Supplemental Agreement No. 1 to Work Authorization No. 1
for Segments 1A, 2 and 3 of the
290 East Toll Project

EXHIBIT D
WORK AUTHORIZATION

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

This Supplemental Work Authorization is made as of this 17th day of December, 2009, under the terms and conditions established in the AGREEMENT FOR GENERAL CONSULTING ENGINEERING SERVICES, dated as of _____, 20____ (the Agreement), between the Central Texas Regional Mobility Authority (Authority) and PBS&J (GEC). This Work Authorization is made for the following purpose, consistent with the services defined in the Agreement:

*290E Turnpike Project
Services related to Segment 1A and Segments 2 & 3*

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 twelve (12) 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 \$4,431,107.00, 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: PBS&J

By: _____

By: _____

Signature: _____

Signature: _____

Title: _____

Title: _____

Date: _____

Date: _____

**CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY
SUPPLEMENTAL WORK AUTHORIZATION NO. 1 TO
WORK AUTHORIZATION NO. 1
PBS&J**

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

1.0 290E TURNPIKE PROJECT – SEGMENT 1A SERVICES:

1.1 Environmental Study / Document Services [Code 13210]

1.1.1 Coordinate with various resource/review agencies to resolve their comments and receive their approval of the Environmental Re-evaluation document which was prepared to document the assessment of possible environmental impacts associated with the project design/scope refinements which have occurred since the completion of the Environmental Assessment [Finding of No Significant Impact was issued March 9, 2009] as part of the final design process.

1.2 Environmental Permit Support [Code 13220]

1.2.1 Continue with the U.S. Army Corps of Engineers (USACE) Pre-construction Notice (PCN) agency review process and respond to any TxDOT Austin District, TxDOT Environmental Affairs, Federal Highway Administration and USACE comments. Responses to comments and revisions to the PCN would be performed until environmental clearance is obtained from the USACE.

1.2.2 A hazardous material monitoring program has been prepared by the project engineer and shall be followed for construction in the area within Segment 1A between Ferguson Cutoff Road and Walnut Creek. The project engineer will be monitoring for hazardous materials during the initial disturbance of the soil in this area for demolition of existing structures.

1.3 Final Design Services [Code 13310]

1.3.1 Utility Coordination

1.3.1.1 Provide technical expertise in the areas of Utility Accommodation Rules (UAR), utility coordination, utility reimbursement procedures and real property interest issues.

1.3.1.2 Review existing utility information for conflicts with preliminary roadway configuration, conduct a utility conflict analysis, and provide a conceptual utility relocation plan.

1.3.1.3 Represent the Authority in coordination efforts related to utility matters; includes coordination with Utility Companies and TxDOT Utility staff.

1.3.1.4 Coordinate directly with Segment Design Consultants as necessary to resolve matters relating to utility conflicts and associated resolutions, relocation and construction schedules, utility identification, design changes, and negotiation with utility owners.

1.3.1.5 Assist the Authority with negotiating the details of utility agreements with the utility companies. Details will include any necessary betterment

percentages, indirect costs, plans, estimates and schedules for the utility companies' activities.

1.3.1.6 Review utility plans for compliance with the TxDOT Utility Accommodation Policy, compatibility with roadway features, betterment inclusion and constructability.

1.3.1.7 Prepare draft agreements for Authority's use including the necessary exhibits and information concerning the Project (such as reports, plans and surveys).

1.3.1.8 Prepare and maintain schedules which will identify utility ownership and include milestones and operations and activities pertinent to each assigned project.

1.3.2 Subsurface Utility Engineering (SUE)

1.3.2.1 Conduct Quality Level A and Quality Level B SUE efforts at specific locations as necessary to adequately identify existing utility locations which are potentially in conflict with the proposed roadway configuration.

1.3.2.2 Provide traffic control and utilize traffic control devices in conformance with the MUTCD in the event that the SUE efforts will affect the movement of traffic or traffic/SUE personnel safety.

1.3.2.3 Obtain all necessary permits from TxDOT and/or local jurisdictions as required to work within public rights of way.

1.3.2.4 Obtain written permission from property owners allowing entry onto private property/premises.

1.4 Investment Grade Traffic & Revenue Analysis Coordination [Code 13330]

1.4.1 Support the Authority during their coordination efforts with the Traffic & Revenue consultant, as directed by the Authority.

1.4.2 Provide detailed project configuration and scope information to the Traffic & Revenue consultant. Review Draft Traffic & Revenue Analyses to ensure consistency with project information.

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

1.5.1 Appraisals

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

1.5.1.2 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.

1.5.1.3 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.

1.5.1.4 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.

1.5.1.5 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.

1.5.2 Negotiations / voluntary settlement

1.5.2.1 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.

1.5.2.2 Develop offer letter and participate in a meeting with the affected property owner to present the offer.

1.5.2.3 Participate in negotiations with the affected property owner; documentation of ALL negotiations will be maintained in writing in a negotiators log.

1.5.2.4 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.

1.5.3 Relocation Assistance Services

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

1.5.4 Right of Way status Tracking

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

1.6 Property Management Services [Code 13440]

1.6.1 Provide procurement support to select a pool of qualified contractors / companies to provide property management services including: environmental consulting for asbestos containing materials; asbestos abatement; demolition of improvements; and removal of underground petroleum storage tank systems.

1.6.2 Provide contracting support to assist the Authority in executing Agreements with a pool of qualified contractors/companies to provide property management services including: environmental consulting for asbestos containing materials; asbestos abatement; demolition of improvements; and removal of underground petroleum storage tank systems.

1.6.3 Manage and oversee, on the Authority's behalf, a pool of qualified contractors / companies who will provide property management services including: environmental

consulting for asbestos containing materials; asbestos abatement; demolition of improvements; and removal of underground petroleum storage tank systems.

1.7 Right-of-Way Litigation / Condemnation Services [Code 13450]

1.7.1 Litigation Support

- 1.7.1.1 In the event that negotiations do NOT result in a voluntary settlement acceptable to both parties, a condemnation package will be assembled containing all documents necessary to initiate the eminent domain process.
- 1.7.1.2 Provide Expert testimony and review in preparation for litigation. Includes development of exhibits copies, depositions, etc.
- 1.7.1.3 Provide support for title and deed acquisition.

1.7.2 General attorney consultation for issues relating to project.

1.8 Project Oversight – Pre Construction [Code 13710]

1.8.1 Project Management

1.8.1.1 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.

1.8.1.2 Project Management Plan (PMP)

- a. Update the corridor specific PMP's in accordance with FHWA published Guidance Documents.

1.8.1.3 Document Controls

- a. Implement a document controls plan.
- b. Maintain project files for the length of the project.
- c. Transfer project files to CTRMA upon completion of the work or as directed by the CTRMA.

1.8.1.4 Sub-Consultant Coordination, Work Authorization Management and Invoicing.

1.8.2 Project Reporting

1.8.2.1 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.

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

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

- 1.8.2.4 Prepare a Quarterly Report with an Executive Summary that provides a comprehensive summary of the monthly reports and the overall program progress.
- 1.8.3 Project Scheduling
- 1.8.3.1 Maintain a Master Project Schedule (Primavera format) that will show critical milestones for the performance and coordination of services.
 - 1.8.3.2 Monitor, evaluate, and validate all schedules produced by others (Segment Designers, Utility Companies, etc.) that are a subset of the Master Project Schedule.
 - 1.8.3.3 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.
- 1.8.4 Segment Design Consultant (SDC) Management
- 1.8.4.1 Provide a SDC Management Team to manage and oversee the SDC's efforts on behalf of the Authority. This team will be led by a Corridor Manager who will serve as the day-to-day contact and be responsible to provide project management coordination for the SDC.
 - 1.8.4.2 Evaluate each of the invoices and associated progress reports for completeness and accuracy as provided by the SDC with the evidence of the work accomplished during the period since the previous report.
 - 1.8.4.3 Provide written documentation of the invoice/progress report evaluation and make the appropriate recommendations to the Authority.
 - 1.8.4.4 Maintain a schedule for billing and monitor budgets established for the SDC.
 - 1.8.4.5 Provide resolution and recommendations to any contract issues and provide response to Requests for Information and Requests for Clarification received from the SDC as related to contract issues.
 - 1.8.4.6 Assess requests for supplemental agreements as submitted by the SDC and provide written recommendations to CTRMA concerning validity of requests, proposed man-hours, and whether or not a supplemental agreement is warranted under the terms of the SDC agreement.
 - 1.8.4.7 Prepare independent estimate (pre-negotiation estimate) of proposed fee for supplemental agreements as may be required.
 - 1.8.4.8 Review supplemental agreements and contracts for spreadsheet accuracy using approved rates from the contracts prior to SDC submittal to CTRMA.
 - 1.8.4.9 Support CTRMA, as directed, in the preparation of final supplemental agreement documents for final processing.
- 1.8.5 Segment Design Consultant (SDC) Document Reviews
- 1.8.5.1 Provide continual "Over the Shoulder" reviews of the SDC to verify conformance to design specifications and enhance coordination with the SDC.

- 1.8.5.2 Review submittals for completeness and coordinate reviews by discipline area specialists and appropriate personnel as applicable. Develop comment tracking logs documenting/detailing the results of the submittal reviews. The SDC submittals that are associated with this specific scope include:
 - a. Engineering Reports
 - b. 90% Plan Submittal
 - c. 100% Plan Submittal
- 1.8.5.3 Coordinate directly with TxDOT Austin District, TxDOT Design Division, and FHWA to incorporate agency review results into the comment tracking logs.
- 1.8.5.4 Evaluate the SDC submittals for consistency between the various corridor segments.
- 1.8.6 Project Meetings & Documentation
 - 1.8.6.1 Facilitate Project Meetings to proactively ensure necessary coordination is occurring and issues are being resolved in a timely manner, including:
 - a. Design Coordination Meetings (Bi-Weekly)
 - b. Issue Resolution Meetings (As Needed)
 - 1.8.6.2 Prepare Meeting Minutes and Action Items for each of the Project Meetings and distribute to attendees and appropriate personnel.

1.9 Project Oversight – Construction [Code 13720]

- 1.9.1 Procurement Support [from Advertisement to Letting]
 - 1.9.1.1 Compile the Final PS&E Documents to be composed of the Final 100% signed & sealed construction plans [developed by others], Final Bid Proposal document, and Final Engineer's Estimate.
 - 1.9.1.2 Coordinate with the Texas Department of Transportation Austin District, Texas Department of Transportation Design Division, and the Federal Highway Administration to receive all final approval necessary to advertise the Project letting. This includes completion of all certification, Letter of Authority (LOA) and the Federal Project Authorization & Agreement (FPAA) documents necessary to advertise and let the Project.
 - 1.9.1.3 Prepare and distribute advertisement formally notifying potential bidders of the Project letting.
 - 1.9.1.4 Administer a prequalification process to ensure that potential bidders meet the necessary Texas Department of Transportation criteria to bid a project of this size.
 - 1.9.1.5 Coordinate the distribution of 100% signed & sealed construction plans [developed by others], Official Bid Proposal documents [for prequalified bidders only], Unofficial Bid Proposal documents [for interested parties who do not meet the prequalified bidders criteria], and all associated bidding documents.
 - 1.9.1.6 Develop and coordinate distribution of Addenda, as required.

- 1.9.1.7 Review and respond to questions posed by potential bidders regarding the Project.
- 1.9.1.8 Plan, organize, and administer a Pre-Bid meeting to present an overview of the project, unique construction contracting elements, timelines, etc. to the potential bidders.
- 1.9.1.9 Plan, organize, and administer a Bid Opening to publically open and read aloud all bids received for the project.
- 1.9.2 Contracting Support [from Letting to Award]
 - 1.9.2.1 Tabulate and review bids received, including an evaluation for mathematical accuracy and unbalanced bids to identify the Lowest Best Bidder for the Project.
 - 1.9.2.2 Provide documentation supporting CTRMA Executive Director's Recommendation of Award to the Lowest Best Bidder, conditioned on the concurrence by the Texas Department of Transportation, to be presented to CTRMA Board of Directors for their approval.
 - 1.9.2.3 Provide documentation supporting CTRMA's Recommendation of Award to the Lowest Best Bidder for review and possible concurrence by the Texas Department of Transportation.
 - 1.9.2.4 Prepare the Final Construction Contract to the Lowest Best Bidder [upon receipt of CTRMA Board of Directors and Texas Department of Transportation approval/concurrence to Award].
 - 1.9.2.5 Review required DBE participation information supplied by the Lowest Best Bidder.
 - 1.9.2.6 Review required Performance Bond, Payment Bond, and Certificates of Insurance supplied by the Lowest Best Bidder.
 - 1.9.2.7 Provide a memorandum and all associated documentation recommending CTRMA execution of the Final Construction Contract with the Lowest Best Bidder.
- 1.9.3 Bond Sale Support [from Award to Receipt of Funds]
 - 1.9.3.1 Develop detailed capital cost estimates defining all elements necessary for project implementation.
 - 1.9.3.2 Develop detailed annualized cost estimate for funding of necessary operations, maintenance, and renewal & replacement elements for the duration of the bonds.
 - 1.9.3.3 Develop comprehensive schedules defining all elements of the project, including the critical path tasks that directly affect the opening of the project.
 - 1.9.3.4 Prepare the Consulting Engineer's Report necessary for the bond sale with a detailed description and history of the bonded project, comprehensive schedules, detailed capital cost estimates, and annualized operations, maintenance, and renewal & replacement cost estimates.
 - 1.9.3.5 Support the Authority in development of the Preliminary Official Statement and the Final Official Statement.

- 1.9.3.6 Coordinate as necessary with the Authority, Bond Counsels, Financial Advisors, and Underwriters on the bond finance team.
- 1.9.3.7 Issue such certificates as are required to be delivered by the GEC regarding specific scope of the project; estimated capital costs; estimated operations, maintenance, and renewal & replacement costs; implementation/open to traffic schedule; and necessity to acquire certain real property for the project.
- 1.9.3.8 Present the accuracy and reliability of project costs and schedules to the bond rating agencies and insurers during bond sales.

2.0 290E TURNPIKE PROJECT – SEGMENTS 2 & 3 SERVICES:

2.1 Environmental Study / Document Services [Code 13210]

- 2.1.1 Coordinate with various resource/review agencies to resolve their comments and receive their approval of the Environmental Re-evaluation document which was prepared to document the assessment of possible environmental impacts associated with the project design/scope refinements which have occurred since the completion of the Environmental Assessment [Finding of No Significant Impact was issued March 9, 2009] as part of the final design process.
- 2.1.2 Noise Community Workshop
 - 2.1.2.1 Prepare Noise analysis for area around Chimney Hill Subdivision
 - 2.1.2.2 Plan and conduct a Noise Community Workshop with Residents of Chimney Hill Subdivision
 - a. Determine Reasonable and Feasible design for Potential Noise Wall
 - b. Work with Residences in order to determine what Community would like proposed for noise reduction.

2.2 Environmental Permit Support [Code 13220]

- 2.2.1 Continue with the U.S. Army Corps of Engineers (USACE) Pre-construction Notice (PCN) agency review process and respond to any TxDOT Austin District, TxDOT Environmental Affairs, Federal Highway Administration and USACE comments. Responses to comments and revisions to the PCN would be performed until environmental clearance is obtained from the USACE.
- 2.2.2 A hazardous material monitoring program has been prepared by the project engineer and shall be followed for construction in the area within Segment 1A between Ferguson Cutoff Road and Walnut Creek. The project engineer will be monitoring for hazardous materials during the initial disturbance of the soil in this area for demolition of existing structures.

2.3 Final Engineering Services [Code 13310]

- 2.3.1 Utility Coordination

- 2.3.1.1 Provide technical expertise in the areas of Utility Accommodation Rules (UAR), utility coordination, utility reimbursement procedures and real property interest issues.
 - 2.3.1.2 Review existing utility information for conflicts with preliminary roadway configuration, conduct a utility conflict analysis, and provide a conceptual utility relocation plan.
 - 2.3.1.3 Represent the Authority in coordination efforts related to utility matters; includes coordination with Utility Companies and TxDOT Utility staff.
 - 2.3.1.4 Coordinate directly with Segment Design Consultants as necessary to resolve matters relating to utility conflicts and associated resolutions, relocation and construction schedules, utility identification, design changes, and negotiation with utility owners.
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 - 2.3.1.6 Review utility plans for compliance with the TxDOT Utility Accommodation Policy, compatibility with roadway features, betterment inclusion and constructability.
 - 2.3.1.7 Prepare draft agreements for Authority's use including the necessary exhibits and information concerning the Project (such as reports, plans and surveys).
 - 2.3.1.8 Prepare and maintain schedules which will identify utility ownership and include milestones and operations and activities pertinent to each assigned project.
- 2.3.2 Subsurface Utility Engineering (SUE)
- 2.3.2.1 Conduct Quality Level A and Quality Level B SUE efforts at specific locations as necessary to adequately identify existing utility locations which are potentially in conflict with the proposed roadway configuration.
 - 2.3.2.2 Provide traffic control and utilize traffic control devices in conformance with the MUTCD in the event that the SUE efforts will affect the movement of traffic or traffic/SUE personnel safety.
 - 2.3.2.3 Obtain all necessary permits from TxDOT and/or local jurisdictions as required to work within public rights of way.
 - 2.3.2.4 Obtain written permission from property owners allowing entry onto private property/premises.

2.4 Investment Grade Traffic & Revenue Analysis Coordination [Code 13330]

- 2.4.1 Support the Authority during their coordination efforts with the Traffic & Revenue consultant, as directed by the Authority.
- 2.4.2 Provide detailed project configuration and scope information to the Traffic & Revenue consultant. Review Draft Traffic & Revenue Analyses to ensure consistency with project information.

2.5 Project Oversight – Pre Construction [Code 13710]

2.5.1 Project Management

2.5.1.1 Project Management

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

2.5.1.2 Project Management Plan (PMP)

- a. Update the corridor specific PMP's in accordance with FHWA published Guidance Documents.

2.5.1.3 Document Controls

- a. Implement a document controls plan.
- b. Maintain project files for the length of the project.
- c. Transfer project files to CTRMA upon completion of the work or as directed by the CTRMA.

2.5.1.4 Sub-Consultant Coordination, Work Authorization Management and Invoicing.

2.5.2 Project Reporting

2.5.2.1 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.

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

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

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

2.5.3 Program Scheduling

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

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

2.5.3.3 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.

2.5.4 Segment Design Consultant (SDC) Management

- 2.5.4.1 Provide a SDC Management Team to manage and oversee the SDC's efforts on behalf of the Authority. This team will be led by a Corridor Manager who will serve as the day-to-day contact and be responsible to provide project management coordination for the SDC.
- 2.5.4.2 Evaluate each of the invoices and associated progress reports for completeness and accuracy as provided by the SDC with the evidence of the work accomplished during the period since the previous report.
- 2.5.4.3 Provide written documentation of the invoice/progress report evaluation and make the appropriate recommendations to the Authority.
- 2.5.4.4 Maintain a schedule for billing and monitor budgets established for the SDC.
- 2.5.4.5 Provide resolution and recommendations to any contract issues and provide response to Requests for Information and Requests for Clarification received from the SDC as related to contract issues.
- 2.5.4.6 Assess requests for supplemental agreements as submitted by the SDC and provide written recommendations to CTRMA concerning validity of requests, proposed man-hours, and whether or not a supplemental agreement is warranted under the terms of the SDC agreement.
- 2.5.4.7 Prepare independent estimate (pre-negotiation estimate) of proposed fee for supplemental agreements as may be required.
- 2.5.4.8 Review supplemental agreements and contracts for spreadsheet accuracy using approved rates from the contracts prior to SDC submittal to CTRMA.
- 2.5.4.9 Support CTRMA, as directed, in the preparation of final supplemental agreement documents for final processing.
- 2.5.5 Segment Design Consultant (SDC) Document Reviews
 - 2.5.5.1 Provide continual "Over the Shoulder" reviews of the SDC to verify conformance to design specifications and enhance coordination with the SDC.
 - 2.5.5.2 Review submittals for completeness and coordinate reviews by discipline area specialists and appropriate personnel as applicable. Develop comment tracking logs documenting/detailing the results of the submittal reviews. The SDC submittals that are associated with this specific scope include:
 - a. Engineering Reports
 - b. 60% Plan Submittal for Segments 2 & 3 respectively
 - 2.5.5.3 Coordinate directly with TxDOT Austin District, TxDOT Design Division, and FHWA to incorporate agency review results into the comment tracking logs.
 - 2.5.5.4 Evaluate the SDC submittals for consistency between the various corridor segments.
- 2.5.6 Project Meetings & Documentation
 - 2.5.6.1 Facilitate Project Meetings to proactively ensure necessary coordination is occurring and issues are being resolved in a timely manner, including:

- a. Design Coordination Meetings (Bi-Weekly)
 - b. Issue Resolution Meetings (As Needed)
- 2.5.6.2 Prepare Meeting Minutes and Action Items for each of the Project Meetings and distribute to attendees and appropriate personnel.

2.6 Project Oversight – CDA [Code 13730]

2.6.1 Request for Qualifications (RFQ) Process

- 2.6.1.1 Develop a RFQ for the project, post the RFQ as required by CTRMA rules, and provide responses to questions/modifications as may be required during the process. RFQ provisions shall include at a minimum:
- a. General Understanding of the Project
 - b. Scope of Services to be requested
 - c. Developer team and personnel requirements
 - d. Financial statements and requirements
 - e. Bonding and insurance requirements
 - f. General Disclosures
- 2.6.1.2 Evaluate responses to the RFQ for the project based on the qualifying/measurable components posed in the RFQ and the associated evaluation criteria/procedures established by CTRMA. Provide summaries of strengths and weaknesses of all proposers for each component.
- 2.6.1.3 Plan, organize, and administer a series of oral presentations / briefings / discussions (the "orals") by and with the proposers if requested by the CTRMA. Prepare questions to be asked by the CTRMA at the orals. Assist and advise the CTRMA in planning and managing the orals. Assist the CTRMA in answering questions at the orals. Prepare written answers to respondent questions posed at the orals for consideration by the CTRMA.
- 2.6.1.4 Participate with the CTRMA in discussions and reviews of the proposers' comments and answers to CTRMA questions post orals. Prepare final written synopses of those responses in a style and format suitable for review and evaluation by the Selection Committee. Document for the record the review and shortlist selection procedure followed.
- 2.6.1.5 Assist in preparing for and presenting the recommendations of the Selection Committee to the CTRMA Board of Directors. Prepare and organize all documents, exhibits, and visual aids helpful to the comprehension and supporting of the presentation to the Board.
- 2.6.1.6 Prepare correspondence for consideration of execution by the CTRMA.
- 2.6.2 Draft Request for Detailed Proposals (RFDP)
- 2.6.2.1 Develop a management plan for the procurement of developers of the project. This will entail working closely with the CTRMA in the preparation of a procurement process / protocol and reasonable time schedule to define progress achievement milestones between the issuance

of the RFDP and the issuance of Notice(s) to Proceed to the selected Proposer. This schedule will allow sufficient time for all elements of the procurement process, including: development of the RFDP CTRMA and GEC; preparation of Detailed Proposals by the shortlisted Proposers; assessment of the Detailed Proposals by the CTRMA and GEC; selection of the "Best Value" proposal; and negotiation of the terms and execution of CDA.

2.6.2.2 Develop the main sections of the Preliminary Draft RFDP. These main sections will include:

- a. Draft Instructions to Proposers – This document will contain relevant information to the shortlisted Proposers regarding the project and their associated submittals, including: an introduction and summary of the project; a procurement schedule defining the major milestone dates to be adhered to during the CDA procurement process; detailed description of the procurement process which the CTRMA will utilize during the review and evaluation of the responses to the RFDP; detailed information pertaining to the Proposal delivery, content and format; Proposal evaluation criteria and weighting; CDA award and approval process; and stipend information and amounts (if applicable).
- b. Draft Comprehensive Development Agreement – This document will contain the actual Agreement to be executed between the CTRMA and successful Proposer. This section of the RFDP will be prepared by the CTRMA legal counsel and the GEC will serve in a coordination / review role in the development of same. The GEC will be responsible for coordinating with the CTRMA legal counsel on this element of the Draft RFDP deliverable.
- c. Draft Scope of Work – This document will contain detailed information, specifications, and associated guidance intended to apply specifically to the development and implementation of the project.
- d. Draft Technical Provisions – This document will contain detailed information, specifications, and associated guidance intended to apply to the development and implementation of all toll facility projects procured by the CTRMA.

2.6.2.3 Conduct a series of Risk Allocation Workshops with CTRMA staff, GEC staff, legal counsel, financial advisors, and others to develop a policy and methodology to divide and assign the risks associated with the design, construction, operation, maintenance and financing elements of the project. A Risk Allocation matrix will be developed which will divide and assign all potential risks associated with the development and implementation of the project, including:

- a. Design Process: design defect (damages, third party injury); design defect (Nonconforming Work); system integrator (SI) delays; other cost increases and delays; accuracy of schematics and reference documents; alignment change creating need for additional right-of-way.
- b. Right of Way: right-of-way acquisition costs; right-of-way acquisition delays.

- c. Utility Relocation: delay due to Utility Adjustments, including unidentified utilities; cost of unidentified utilities; failure of Utility Owners to comply with Adjustment Agreements.
 - d. Governmental Approvals: governmental approvals; new environmental approvals and changes to CTRMA-Provided Approvals due to changes in Final Design; governmental approvals required due to Force Majeure or CTRMA-Directed Change After NTP
 - e. Force Majeure Events: actions of the elements; acts of war; strikes and labor disputes; archaeological, paleontological or cultural resource; threatened or endangered species; changes in law; injunctions against the Project; temporary no-work restrictions resulting from the discovery within the Site of any karst features; hazardous materials (third party spills after proposal date); hazardous materials (existing).
 - f. Construction, Supply and Installation: cost increase due to CTRMA-Directed Change or CTRMA-Caused Delay; differing site conditions; delay in completion (other than CTRMA-Caused Delay, Force Majeure and certain uncooperative utility delays); delay in completion due to CTRMA-Caused Delay, Force Majeure and certain uncooperative utility delays; construction defect (damages, third party injury); construction defect (Nonconforming Work); delays in opening Project for revenue service due to System Integrator work.
- 2.6.2.4 Prepare a Draft RFDP by incorporating the Risk Allocation assignments agreed to by the CTRMA into the Preliminary Draft RFDP. An extensive internal review of this Draft RFDP will be completed by senior level Consultant and GEC staff having experience in CDA processes to ensure completeness. Comments developed / identified during this internal review process will be discussed with the CTRMA staff, legal counsel, and financial advisers to obtain their approval prior to modifying the Preliminary Draft RFDP / preparing the Draft RFDP.
- 2.6.2.5 Organize Reference Documents for inclusion into the Draft RFDP as attachments. Status assessments will be prepared for inclusion in the RFDP for those documents which have not been fully completed at the time of Draft RFDP issuance to the shortlisted Proposers.
- 2.6.3 Final RFDP
- 2.6.3.1 Facilitate the industry review of the Draft RFDP. Prepare correspondence for CTRMA formally issuing the Draft RFDP to the shortlisted Proposers for their review and comment. Written comments will be requested from each shortlisted Proposer. An Industry Review workshop will be held with all shortlisted Proposers to discuss the general elements of the Draft RFDP. Individual one-on-one meetings will also be held with each of the shortlisted Proposers, as required by CTRMA, to discuss specific comments.
- 2.6.3.2 Working jointly and cooperatively with the CTRMA, compile industry review comments and meeting documentation. Based on discussions with CTRMA staff, legal counsel, and financial advisers, a Final RFDP will be prepared by incorporating applicable industry review comments into the Draft RFDP.

- 2.6.3.3 Coordinate with the Texas Department of Transportation (TxDOT) and Federal Highway Administration (FHWA). The GEC will attend meetings with the CTRMA to present the Final RFDP to TxDOT and FHWA; written comments will be formally requested from both agencies. Comments received from TxDOT and FHWA will be discussed with the CTRMA staff, legal counsel, and financial advisers to obtain their approval prior to modifying the Final RFDP.
- 2.6.3.4 Prepare correspondence for execution by the CTRMA distributing the Final RFDP to shortlisted Proposers [upon receipt of FHWA approval of the Final RFDP].
- 2.6.4 Proposal Coordination Support
 - 2.6.4.1 Plan, organize, and administer a series of general workshops to be attended by CTRMA staff, legal counsel, financial advisers, GEC staff, and shortlisted Proposers. These workshops will allow the CTRMA to brief the shortlisted Proposers on the background and status of the various project elements such as design/geometrics, maintenance of traffic, landscape/aesthetics, environmental, right-of-way, utility coordination/relocations, and tolling.
 - 2.6.4.2 Plan, organize, and administer a series of one-on-one meetings to allow shortlisted Proposers the opportunity to ask specific questions/request clarifications on the Final RFDP; it will also provide the shortlisted Proposers the opportunity to solicit preliminary feedback regarding potential Alternative Technical Concepts and Value-Added Concepts they intend to include in their Technical Proposals. The GEC will solicit information from the shortlisted Proposers such that agendas and related documents / exhibits can be prepared and distributed prior to these one-on-one meetings; minutes of all one-on-one meetings will also be prepared by the GEC. The GEC will evaluate questions (oral and written) posed at these meetings (and submitted later in writing) and draft answers for consideration by the CTRMA. Upon receipt of CTRMA approval, the GEC will assemble and distribute CTRMA answers to questions.
 - 2.6.4.3 Prepare and issue all addenda to the Final RFDP, if required, suggested by meetings, discussions, workshops, questions posed by potential Proposers, and clarifications suggested and/or approved by the CTRMA; addenda will also include status updates on Reference Documents originally included in the Final RFDP, if required.
 - 2.6.4.4 Working with the CTRMA staff and counselors, conduct a detailed and thorough procedure and methodology for evaluating preliminary Proposal elements to be submitted by the shortlisted Proposers, as follows:
 - a. Initial submittal of conceptual information pertaining to Alternate Technical Concepts (ATCs) and Draft Value-Added Concepts (VACs) will be evaluated. The evaluation procedure and methodology for these initial submittals will include a preliminary review by a Technical Subcommittee approved by the CTRMA and will be completed such that the CTRMA can provide initial feedback regarding their opinion of each ATC and VAC. One-on-one meetings will be held, as required

by CTRMA, to discuss the ATCs and VACs with each shortlisted Proposer.

- b. Alternative Technical Concepts (ATCs) formally submitted by the shortlisted Proposers will be evaluated. These ATCs will include proposed changes to the minimum project requirements set forth in the Final RFDP. The GEC will establish an ATC Review Core Team composed of senior level staff to lead the review of these Concepts. Upon completion of the GEC review, recommendations will be made to the CTRMA regarding which ATCs should be "Approved", "Conditionally Approved", or "Rejected"; recommendations that "Additional Information is Required" or that an "ATC does not qualify as an ATC but may be included in the Proposal" may also be made. Upon acceptance of the GEC's recommendations by the CTRMA, the GEC will assist the CTRMA in obtaining necessary agency approvals, including Texas Department of Transportation (TxDOT) and Federal Highway Administration (FHWA), if required. The GEC will attend meetings with the CTRMA to present and discuss the selected ATCs with TxDOT and FHWA; written comments will be formally requested from both agencies.

2.6.4.5 Prepare correspondence for execution by the CTRMA transmitting the findings of the CTRMA's evaluation of the preliminary Proposal elements. This correspondence will be utilized by the shortlisted Proposers during their preparation of their Technical Proposals.

2.6.4.6 Plan, organize, and administer a series of Final one-on-one meetings to allow shortlisted Proposers the opportunity to ask final specific questions/request final clarifications prior to submittal of their Final Technical Proposal and Price Proposals. The GEC will solicit information from the shortlisted Proposers such that agendas and related documents / exhibits can be prepared and distributed prior to these Final one-on-one meetings; minutes of all Final one-on-one meetings will also be prepared by the GEC. The GEC will evaluate questions (oral and written) posed at these meetings (and submitted later in writing) and draft answers for consideration by the CTRMA. Upon receipt of CTRMA approval, the GEC will assemble and distribute CTRMA answers to questions.

2.6.4.7 Working with the CTRMA staff and counselors, develop a detailed and thorough procedure and methodology for evaluating final Proposal elements to be submitted by the shortlisted Proposers, as follows:

- a. Technical Proposals, which include detailed information pertaining to the development of the Project as defined in the Final RFDP, innovative financing plans, opening schedule, and overall approach to the project will be evaluated. The evaluation procedure and methodology for the Technical Proposals will utilize the "Best Value Concept" process and will include detailed reviews by a series of specialized Technical Subcommittees approved by the CTRMA. The findings of each Technical Subcommittees' review will be documented for presentation to the Detailed Proposal Evaluation Committee (appointed by the CTRMA) such that an objective evaluation process can be completed by each Committee member for each proposal. Upon

completion of the individual Committee member evaluation / scoring, an average of all scores will be prepared for each Proposal.

- b. Price Proposals, which include detailed cost information for the development of the Project as defined in the shortlisted Proposers' Technical Proposals and as defined in the Final RFDP. The evaluation procedure and methodology will be completely independent from the Technical Proposal evaluation and will include review of the Price Proposals for mathematical accuracy and completeness.

Upon receipt of CTRMA approval on the evaluation procedures and methodologies, a workshop will be held to convey this information to the Detailed Proposal Evaluation Committee appointed by the CTRMA.

- 2.6.4.8 Develop a secure system for receiving, handling, distributing, tracking, storing, and dating all documents, correspondence, facsimile transmissions, and other telecommunications after the date of acceptance of the Final RFDP. Search and locate a secure site acceptable to the CTRMA to store all documents and correspondence received and created on and after the date of receipt of the Final RFDP. With the assistance of the CTRMA staff, create and maintain a list of parties who have been authorized access to the secured data by the CTRMA staff. Create a controlled system in which the evaluators must check out, check in, and be recorded as holding the secured data.

2.6.5 Proposal Review Support

- 2.6.5.1 Receive and commence detailed reviews of the Technical Proposals submitted by the shortlisted Proposers, which include detailed information pertaining to the development of the Project as defined in the Final RFDP, innovative financing plans, opening schedule, and overall approach to the project; review of the associated price proposals submitted by the shortlisted Proposers defining their maximum price for the aforementioned minimum interim build scenario of the Project will also be reviewed. The GEC will establish a series of specialized Technical Subcommittees approved by the CTRMA to evaluate the thoroughness and quality of the Technical Proposal responses to each inquiry item contained in the Final RFDP utilizing the evaluation procedures and formulae adopted by the CTRMA. There may be other unsolicited technical, contractual or financial proposals in addition to the base guidelines provided by the CTRMA in the Final RFDP; such alternate responses also shall be evaluated and reported by the GEC. The GEC will prepare documentation of the findings resulting from the Technical Subcommittee evaluations; meetings with CTRMA staff, legal counsel, and financial advisors will also be held to discuss same.

- 2.6.5.2 Assist the CTRMA in the identification and selection of the "Best Value" Proposal. An evaluation outline will be prepared which documents the procedure followed during the evaluation of the Proposals, indicating what measurable developer performance categories were identified and individually analyzed. Using the outline, a detailed summary report of the review and analysis process followed by the GEC will be prepared, describing how the evaluators used the analytical work performed by the GEC to rank the responses in a best value order.

- 2.6.5.3 Serve as a resource participant with the evaluators and the CTRMA staff in delivering final reports and recommendations for best value developer selections and designations to the Committee and to the Board. GEC will also prepare final reports summarizing the deliberations, actions, and recommendations of the Committee and the Board relative to the review and consideration of the Proposals and their final selection and designation of the developer for the Project based on the "Best Value" evaluations.
- 2.6.6 CDA Contracting Support
 - 2.6.6.1 Complete various Contracting phase efforts associated with the CDA procurement, including:
 - a. Assist CTRMA in identifying Proposer commitments and negotiating the final agreement language.
 - b. Assist CTRMA in reviewing insurance and bond documents for inclusion in the conformed CDA.
 - c. Assist CTRMA in preparing the final conformed CDA document for execution.
 - d. Conduct debriefings on behalf of the CTRMA, under the guidance of general counsel of the CTRMA, for proposers to the RFDP that were not selected to enter CDA with the CTRMA.
 - e. Final filing and documentation.
- 2.6.7 Bond Sale Support
 - 2.6.7.1 Develop detailed capital cost estimates defining all elements necessary for project implementation.
 - 2.6.7.2 Develop detailed annualized cost estimate for funding of necessary operations, maintenance, and renewal & replacement elements for the duration of the bonds.
 - 2.6.7.3 Develop comprehensive schedules defining all elements of the project, including the critical path tasks that directly affect the opening of the project.
 - 2.6.7.4 Prepare the Consulting Engineer's Report necessary for the bond sale with a detailed description and history of the bonded project, comprehensive schedules, detailed capital cost estimates, and annualized operations, maintenance, and renewal & replacement cost estimates.
 - 2.6.7.5 Support the Authority in development of the Preliminary Official Statement and the Final Official Statement.
 - 2.6.7.6 Coordinate as necessary with the Authority, Bond Counsels, Financial Advisors, and Underwriters on the bond finance team.
 - 2.6.7.7 Issue such certificates as are required to be delivered by the GEC regarding specific scope of the project; estimated capital costs; estimated operations, maintenance, and renewal & replacement costs; implementation/open to traffic schedule; and necessity to acquire certain real property for the project.

2.6.7.8 Present the accuracy and reliability of project costs and schedules to the bond rating agencies and insurers during bond sales.

**Attachment B - Fee Estimate
Summary**

CTRMA General Engineering Consultant
PBS&J - Man-hour Breakdown & Fee Estimate
290E Corridor GEC Services

PBS&J SUPPLEMENTAL WORK AUTHORIZATION #1 TO WORK AUTHORIZATION #1

290E TURNPIKE PROJECT

<u>TASK</u>	<u>TOTAL</u>
1.0 - 290E Segment 1A Services	
1.1 Environmental Study / Document Services [Code 13210]	\$ 53,723
1.2 Environmental Permit Support [Code 13220]	\$ 73,793
1.3 Final Design Services [Code 13310]	\$ 564,413
1.4 Investment Grade Traffic & Revenue Analysis Coordination [Code 13330]	\$ 128,048
1.5 Right-of-Way Acquisition & Relocation Services [Code 13410]	\$ 752,186
1.6 Property Management Services [Code 13440]	\$ 264,607
1.7 Right-of-Way Litigation / Condemnation Services [Code 13450]	\$ 144,533
1.8 Project Oversight - Pre Construction [Code 13710]	\$ 487,917
1.9 Project Oversight - Construction [Code 13720]	\$ 128,495
SUBTOTAL	\$ 2,469,220
2.0 - 290E Segments 2 & 3 Services	
2.1 Environmental Study / Document Services [Code 13210]	\$ 120,820
2.2 Environmental Permit Support [Code 13220]	\$ 73,793
2.3 Final Design Services [Code 13310]	\$ 392,204
2.4 Investment Grade Traffic & Revenue Analysis Coordination [Code 13330]	\$ 152,104
2.5 Project Oversight - Pre Construction [Code 13710]	\$ 365,589
2.6 Project Oversight - CDA [Code 13730]	\$ 857,376
SUBTOTAL	\$ 1,961,886
TOTAL	\$ 4,431,107

Attachment B - Fee Estimate

CTRMA General Engineering Consultant
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 290E Corridor GEC Services

**PBS&J SUPPLEMENTAL WORK AUTHORIZATION #1 TO WORK AUTHORIZATION #1
 290E TURNPIKE PROJECT**

1.0 - 290E Segment 1A 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	
1.1 Environmental Study / Document Services [Code 13210]							
1.1.1 290E Re-Evaluation for Project Design / Scope Refinements	20	80	80	80	80	80	420
							0
							0
							0
							0
							0
							0
							0

TOTAL DIRECT LABOR	20	80	80	80	80	80	420
<i>% Total by Classification</i>	4.76%	19.05%	19.05%	19.05%	19.05%	19.05%	
Labor Costs	\$ 1,400	\$ 4,800	\$ 4,000	\$ 3,200	\$ 2,400	\$ 1,600	\$ 17,400
Overhead Costs	1.6849 \$ 2,359	\$ 8,088	\$ 6,740	\$ 5,392	\$ 4,044	\$ 2,696	\$ 29,317
Profit	12.0% \$ 451	\$ 1,547	\$ 1,289	\$ 1,031	\$ 773	\$ 516	\$ 5,606
Total Loaded Labor	\$ 4,210	\$ 14,434	\$ 12,028	\$ 9,623	\$ 7,217	\$ 4,812	\$52,323

Direct Expenses	
Plotting and Reproduction	\$ 300
Mail and Deliveries	\$ 200
Misc Expenses	\$ 400
Travel and Field Expenses	\$ 500
Total Direct Expenses	\$ 1,400

Total \$ 53,723

Attachment B - Fee Estimate

CTRMA General Engineering Consultant
 PBS&J - Man-hour Breakdown & Fee Estimate
 290E Corridor GEC Services

PBS&J SUPPLEMENTAL WORK AUTHORIZATION #1 TO WORK AUTHORIZATION #1
290E TURNPIKE PROJECT

1.0 - 290E Segment 1A Services

TASK / WORK DESCRIPTION	(Estimated Average Labor Rates)							TOTAL HRS
	A \$ 70.00	B \$ 60.00	C \$ 50.00	D \$ 40.00	E \$ 30.00	F \$ 20.00		
1.2 Environmental Permit Support [Code 13220]								0
1.2.1 Preconstruction Notice for (USACE)	20	40	80	80	20	20		260
1.2.2 Hazardous Material Monitoring during Demolition	8	40	40	80	80	20		268
								0
								0
								0
								0
								0
								0

TOTAL DIRECT LABOR	28	80	120	160	100	40	528
<i>% Total by Classification</i>	<i>5.30%</i>	<i>15.15%</i>	<i>22.73%</i>	<i>30.30%</i>	<i>18.94%</i>	<i>7.58%</i>	
Labor Costs	\$ 1,960	\$ 4,800	\$ 6,000	\$ 6,400	\$ 3,000	\$ 800	\$ 22,960
Overhead Costs	1,6849 \$ 3,302	\$ 8,088	\$ 10,109	\$ 10,783	\$ 5,055	\$ 1,348	\$ 38,685
Profit	12.0% \$ 631	\$ 1,547	\$ 1,933	\$ 2,062	\$ 967	\$ 258	\$ 7,397
Total Loaded Labor	\$ 5,894	\$ 14,434	\$ 18,043	\$ 19,245	\$ 9,021	\$ 2,406	\$69,043

Direct Expenses	
Plotting and Reproduction	\$ 200
Mail and Deliveries	\$ 50
Misc Expenses	\$ 3,500
Travel and Field Expenses	\$ 1,000
Total Direct Expenses	\$ 4,750

Total \$ 73,793

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 290E Corridor GEC Services

PBS&J SUPPLEMENTAL WORK AUTHORIZATION #1 TO WORK AUTHORIZATION #1
290E TURNPIKE PROJECT

1.0 - 290E Segment 1A Services

TASK / WORK DESCRIPTION	(Estimated Average Labor Rates)							TOTAL HRS
	A \$ 70.00	B \$ 60.00	C \$ 50.00	D \$ 40.00	E \$ 30.00	F \$ 20.00		
1.3 Final Design Services [Code 13310]								0
1.3.1 Utility Coordination	80	240	960	800	400	240		2720
1.3.2 Subsurface Utility Engineering	40	160	800	300	80	80		1460
								0
								0
								0
								0
								0
								0

TOTAL DIRECT LABOR	120	400	1760	1100	480	320	4180
% Total by Classification	2.87%	9.57%	42.11%	26.32%	11.48%	7.66%	
Labor Costs	\$ 8,400	\$ 24,000	\$ 88,000	\$ 44,000	\$ 14,400	\$ 6,400	\$ 185,200
Overhead Costs	1.6849 \$ 14,153	\$ 40,438	\$ 148,271	\$ 74,136	\$ 24,263	\$ 10,783	\$ 312,043
Profit	12.0% \$ 2,706	\$ 7,733	\$ 28,353	\$ 14,176	\$ 4,640	\$ 2,062	\$ 59,669
Total Loaded Labor	\$ 25,260	\$ 72,170	\$ 264,624	\$ 132,312	\$ 43,302	\$ 19,245	\$556,913

Direct Expenses	
Plotting and Reproduction	\$ 500
Mail and Deliveries	
Misc Expenses	\$ 5,000
Travel and Field Expenses	\$ 2,000
Total Direct Expenses	\$ 7,500

Total \$ 564,413

Attachment B - Fee Estimate

CTRMA General Engineering Consultant
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 290E Corridor GEC Services

**PBS&J SUPPLEMENTAL WORK AUTHORIZATION #1 TO WORK AUTHORIZATION #1
 290E TURNPIKE PROJECT**

1.0 - 290E Segment 1A Services

TASK / WORK DESCRIPTION	(Estimated Average Labor Rates)							TOTAL HRS
	A \$ 70.00	B \$ 60.00	C \$ 50.00	D \$ 40.00	E \$ 30.00	F \$ 20.00		
1.4 Investment Grade Traffic & Revenue Analysis Coordination [Code 13330]								0
1.4.1 Coordination with CTRMA's T&R Consultant	80	80	40	80	40	80	80	400
1.4.2 Provide project information to T&R Consultant	40	80	120	120	120	80		560
								0
								0
								0
								0
								0
								0

TOTAL DIRECT LABOR	120	160	160	200	160	160	960
<i>% Total by Classification</i>	<i>12.50%</i>	<i>16.67%</i>	<i>16.67%</i>	<i>20.83%</i>	<i>16.67%</i>	<i>16.67%</i>	
Labor Costs	\$ 8,400	\$ 9,600	\$ 8,000	\$ 8,000	\$ 4,800	\$ 3,200	\$ 42,000
Overhead Costs	1.6849 \$ 14,153	\$ 16,175	\$ 13,479	\$ 13,479	\$ 8,088	\$ 5,392	\$ 70,766
Profit	12.0% \$ 2,706	\$ 3,093	\$ 2,578	\$ 2,578	\$ 1,547	\$ 1,031	\$ 13,532
Total Loaded Labor	\$ 25,260	\$ 28,868	\$ 24,057	\$ 24,057	\$ 14,434	\$ 9,623	\$126,298

Direct Expenses	
Plotting and Reproduction	\$ 300
Mail and Deliveries	\$ 250
Misc Expenses	
Travel and Field Expenses	\$ 1,200
Total Direct Expenses	\$ 1,750

Total \$ 128,048

Attachment B - Fee Estimate

CTRMA General Engineering Consultant
 PBS&J - Man-hour Breakdown & Fee Estimate
 290E Corridor GEC Services

PBS&J SUPPLEMENTAL WORK AUTHORIZATION #1 TO WORK AUTHORIZATION #1
290E TURNPIKE PROJECT

1.0 - 290E Segment 1A Services

TASK / WORK DESCRIPTION	(Estimated Average Labor Rates)							TOTAL HRS
	A \$ 70.00	B \$ 60.00	C \$ 50.00	D \$ 40.00	E \$ 30.00	F \$ 20.00		
1.5 Right-of-Way Acquisition & Relocation Services [Code 13410]								0
1.5.1 Appraisals	40	120	140	160	120	200		780
1.5.2 Negotiations / Voluntary Settlement	200	320	800	600	480	600		3000
1.5.3 Relocation Assistance	120	40	80	40	120	200		600
1.5.4 ROW Status Tracking (Time & \$)	20	80	80	40	120	80		420
								0
								0
								0
								0

TOTAL DIRECT LABOR	380	560	1100	840	840	1080	4800
% Total by Classification	7.92%	11.67%	22.92%	17.50%	17.50%	22.50%	
Labor Costs	\$ 26,600	\$ 33,600	\$ 55,000	\$ 33,600	\$ 25,200	\$ 21,600	\$ 195,600
Overhead Costs	1.6849 \$ 44,818	\$ 56,613	\$ 92,670	\$ 56,613	\$ 42,459	\$ 36,394	\$ 329,566
Profit	12.0% \$ 8,570	\$ 10,826	\$ 17,720	\$ 10,826	\$ 8,119	\$ 6,959	\$ 63,020
Total Loaded Labor	\$ 79,989	\$ 101,038	\$ 165,390	\$ 101,038	\$ 75,779	\$ 64,953	\$888,186

Direct Expenses

Plotting and Reproduction	
Mail and Deliveries	\$ 1,000
Misc Expenses (Appraisals 25@ \$6,500)	\$ 162,500
Travel and Field Expenses	\$ 500
Total Direct Expenses	\$ 164,000

Total \$ 752,186

Attachment B - Fee Estimate

CTRMA General Engineering Consultant
 PBS&J - Man-hour Breakdown & Fee Estimate
 290E Corridor GEC Services

**PBS&J SUPPLEMENTAL WORK AUTHORIZATION #1 TO WORK AUTHORIZATION #1
 290E TURNPIKE PROJECT**

1.0 - 290E Segment 1A Services

TASK / WORK DESCRIPTION	(Estimated Average Labor Rates)							TOTAL HRS
	A \$ 70.00	B \$ 60.00	C \$ 50.00	D \$ 40.00	E \$ 30.00	F \$ 20.00		
1.6 Property Management Services [Code 13440]								0
1.6.1 Procurement Support for Property Management Service Providers	40	80	80	40	20	40		300
1.6.2 Contract Management of Property Management Service Providers	24	120	80	40	80	40		384
1.6.3 Management of Property Management Service Providers	40	320	240	280	160	240		1280
								0
								0
								0
								0
								0

TOTAL DIRECT LABOR	104	520	400	360	260	320	1964
<i>% Total by Classification</i>	5.30%	26.48%	20.37%	18.33%	13.24%	16.29%	
Labor Costs	\$ 7,280	\$ 31,200	\$ 20,000	\$ 14,400	\$ 7,800	\$ 6,400	\$ 87,080
Overhead Costs	1.6849 \$ 12,266	\$ 52,569	\$ 33,698	\$ 24,263	\$ 13,142	\$ 10,783	\$ 146,721
Profit	12.0% \$ 2,346	\$ 10,052	\$ 6,444	\$ 4,640	\$ 2,513	\$ 2,062	\$ 28,056
Total Loaded Labor	\$ 21,892	\$ 93,821	\$ 60,142	\$ 43,302	\$ 23,455	\$ 19,246	\$261,857

Direct Expenses	
Plotting and Reproduction	\$ 250
Mail and Deliveries	\$ 750
Misc Expenses	\$ 250
Travel and Field Expenses	\$ 1,500
Total Direct Expenses	\$ 2,750

Total \$ 264,607

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 290E Corridor GEC Services

PBS&J SUPPLEMENTAL WORK AUTHORIZATION #1 TO WORK AUTHORIZATION #1
290E TURNPIKE PROJECT

1.0 - 290E Segment 1A Services

TASK / WORK DESCRIPTION	(Estimated Average Labor Rates)						TOTAL HRS
	A \$ 70.00	B \$ 60.00	C \$ 50.00	D \$ 40.00	E \$ 30.00	F \$ 20.00	
1.7 Right-of-Way Litigation / Condemnation Services [Code 13450]							0
1.7.1 Litigation Support	320	120	100	0	320	0	860
1.7.2 Consultation with General Attorney	40	0	0	0	0	0	40
							0
							0
							0
							0
							0
							0

TOTAL DIRECT LABOR	360	120	100	0	320	0	900
<i>% Total by Classification</i>	<i>40.00%</i>	<i>13.33%</i>	<i>11.11%</i>	<i>0.00%</i>	<i>35.56%</i>	<i>0.00%</i>	
Labor Costs	\$ 25,200	\$ 7,200	\$ 5,000	\$ -	\$ 9,600	\$ -	\$ 47,000
Overhead Costs	1.6849 \$ 42,459	\$ 12,131	\$ 8,425	\$ -	\$ 16,175	\$ -	\$ 79,190
Profit	12.0% \$ 8,119	\$ 2,320	\$ 1,611	\$ -	\$ 3,093	\$ -	\$ 15,143
Total Loaded Labor	\$ 75,779	\$ 21,651	\$ 15,035	\$ -	\$ 28,868	\$ -	\$141,333

Direct Expenses	
Plotting and Reproduction	\$ 200
Mail and Deliveries	\$ 500
Misc Expenses	\$ 1,000
Travel and Field Expenses	\$ 1,500
Total Direct Expenses	\$ 3,200

Total \$ 144,533

Attachment B - Fee Estimate

CTRMA General Engineering Consultant
 PBS&J - Man-hour Breakdown & Fee Estimate
 290E Corridor GEC Services

**PBS&J SUPPLEMENTAL WORK AUTHORIZATION #1 TO WORK AUTHORIZATION #1
 290E TURNPIKE PROJECT**

1.0 - 290E Segment 1A Services

TASK / WORK DESCRIPTION	(Estimated Average Labor Rates)							TOTAL HRS
	A \$ 70.00	B \$ 60.00	C \$ 50.00	D \$ 40.00	E \$ 30.00	F \$ 20.00		
1.8 Project Oversight - Pre Construction [Code 13710]								
1.8.1 Project Management	40	120	80	200	120	120	680	
1.8.2 Project Reporting	80	80	80	40	80	80	440	
1.8.3 Project Scheduling	40	80	120	120	240	80	680	
1.8.4 Segment Design Consultant Management	40	160	240	80	120	120	760	
1.8.5 Segment Design Consultant Document Reviews	80	120	200	120	120	80	720	
1.8.6 Project Meetings & Documentation	40	80	80	40	40	80	360	
							0	
							0	
							0	

TOTAL DIRECT LABOR	320	640	800	600	720	560	3640
<i>% Total by Classification</i>	<i>8.79%</i>	<i>17.58%</i>	<i>21.98%</i>	<i>16.48%</i>	<i>19.78%</i>	<i>15.38%</i>	
Labor Costs	\$ 22,400	\$ 38,400	\$ 40,000	\$ 24,000	\$ 21,600	\$ 11,200	\$ 157,600
Overhead Costs	1.6849 \$ 37,742	\$ 64,700	\$ 67,396	\$ 40,438	\$ 36,394	\$ 18,871	\$ 265,540
Profit	12.0% \$ 7,217	\$ 12,372	\$ 12,888	\$ 7,733	\$ 6,959	\$ 3,609	\$ 50,777
Total Loaded Labor	\$ 67,359	\$ 115,472	\$ 120,284	\$ 72,170	\$ 64,953	\$ 33,680	\$473,917

Direct Expenses	
Plotting and Reproduction	\$ 8,000
Mail and Deliveries	\$ 2,000
Misc Expenses	\$ 1,500
Travel and Field Expenses	\$ 2,500
Total Direct Expenses	\$ 14,000

Total \$ 487,917

Attachment B - Fee Estimate

CTRMA General Engineering Consultant
 PBS&J - Man-hour Breakdown & Fee Estimate
 290E Corridor GEC Services

**PBS&J SUPPLEMENTAL WORK AUTHORIZATION #1 TO WORK AUTHORIZATION #1
 290E TURNPIKE PROJECT**

1.0 - 290E Segment 1A Services

TASK / WORK DESCRIPTION	(Estimated Average Labor Rates)							TOTAL HRS
	A \$ 70.00	B \$ 60.00	C \$ 50.00	D \$ 40.00	E \$ 30.00	F \$ 20.00		
1.9 Project Oversight - Construction [Code 13720]								
1.9.1 Procurement Support (Advertisement to Letting)	16	80	120	40	120	120	496	
1.9.2 Contracting Support (Letting to Award)	24	40	80	0	40	40	224	
1.9.3 Bond Sale Support (Award to Receipt of Funds)	80	40	40	0	40	40	240	
							0	
							0	
							0	
							0	
							0	

TOTAL DIRECT LABOR	120	160	240	40	200	200	960
% Total by Classification	12.50%	16.67%	25.00%	4.17%	20.83%	20.83%	
Labor Costs	\$ 8,400	\$ 9,600	\$ 12,000	\$ 1,600	\$ 6,000	\$ 4,000	\$ 41,600
Overhead Costs	1.6849 \$ 14,153	\$ 16,175	\$ 20,219	\$ 2,696	\$ 10,109	\$ 6,740	\$ 70,092
Profit	12.0% \$ 2,706	\$ 3,093	\$ 3,866	\$ 516	\$ 1,933	\$ 1,289	\$ 13,403
Total Loaded Labor	\$ 25,260	\$ 28,868	\$ 36,085	\$ 4,811	\$ 18,043	\$ 12,029	\$125,095

Direct Expenses	
Plotting and Reproduction	\$ 1,000
Mail and Deliveries	\$ 150
Misc Expenses	\$ 750
Travel and Field Expenses	\$ 1,500
Total Direct Expenses	\$ 3,400

Total \$ 128,495

Attachment B - Fee Estimate

CTRMA General Engineering Consultant
 PBS&J - Man-hour Breakdown & Fee Estimate
 290E Corridor GEC Services

PBS&J SUPPLEMENTAL WORK AUTHORIZATION #1 TO WORK AUTHORIZATION #1
290E TURNPIKE PROJECT

2.0 - 290E Segments 2 & 3 Services

TASK / WORK DESCRIPTION	(Estimated Average Labor Rates)							TOTAL HRS
	A \$ 70.00	B \$ 60.00	C \$ 50.00	D \$ 40.00	E \$ 30.00	F \$ 20.00		
2.1 Environmental Study / Document Services [Code 13210]								
2.1.1 290E Re-Evaluation for Project Design / Scope Refinements	20	80	80	80	80	80	80	420
2.1.2 Noise Community Workshop	24	120	120	80	80	80	80	504
								0
								0
								0
								0
								0
								0

TOTAL DIRECT LABOR	44	200	200	160	160	160	924
% Total by Classification	4.76%	21.65%	21.65%	17.32%	17.32%	17.32%	
Labor Costs	\$ 3,080	\$ 12,000	\$ 10,000	\$ 6,400	\$ 4,800	\$ 3,200	\$ 39,480
Overhead Costs	1.6849 \$ 5,189	\$ 20,219	\$ 16,849	\$ 10,783	\$ 8,088	\$ 5,392	\$ 66,520
Profit	12.0% \$ 992	\$ 3,866	\$ 3,222	\$ 2,062	\$ 1,547	\$ 1,031	\$ 12,720
Total Loaded Labor	\$ 9,262	\$ 36,085	\$ 30,071	\$ 19,245	\$ 14,434	\$ 9,623	\$118,720

Direct Expenses	
Plotting and Reproduction	\$ 1,000
Mail and Deliveries	\$ 200
Misc Expenses	\$ 400
Travel and Field Expenses	\$ 500
Total Direct Expenses	\$ 2,100

Total \$ 120,820

Attachment B - Fee Estimate

CTRMA General Engineering Consultant
 PBS&J - Man-hour Breakdown & Fee Estimate
 290E Corridor GEC Services

PBS&J SUPPLEMENTAL WORK AUTHORIZATION #1 TO WORK AUTHORIZATION #1
290E TURNPIKE PROJECT

2.0 - 290E Segments 2 & 3 Services

TASK / WORK DESCRIPTION	(Estimated Average Labor Rates)						TOTAL HRS
	A \$ 70.00	B \$ 60.00	C \$ 50.00	D \$ 40.00	E \$ 30.00	F \$ 20.00	
2.2 Environmental Permit Support [Code 13220]							0
2.2.1 Preconstruction Notice for (USACE)	20	40	80	80	20	20	260
2.2.2 Hazardous Material Monitoring during Demolition	8	40	40	80	80	20	268
							0
							0
							0
							0
							0
							0

TOTAL DIRECT LABOR	28	80	120	160	100	40	528
% Total by Classification	5.30%	15.15%	22.73%	30.30%	18.94%	7.58%	
Labor Costs	\$ 1,960	\$ 4,800	\$ 6,000	\$ 6,400	\$ 3,000	\$ 800	\$ 22,960
Overhead Costs	1.6849 \$ 3,302	\$ 8,088	\$ 10,109	\$ 10,783	\$ 5,055	\$ 1,348	\$ 38,685
Profit	12.0% \$ 631	\$ 1,547	\$ 1,933	\$ 2,062	\$ 967	\$ 258	\$ 7,397
Total Loaded Labor	\$ 5,894	\$ 14,434	\$ 18,043	\$ 19,245	\$ 9,021	\$ 2,406	\$69,043

Direct Expenses	
Plotting and Reproduction	\$ 200
Mail and Deliveries	\$ 50
Misc Expenses	\$ 3,500
Travel and Field Expenses	\$ 1,000
Total Direct Expenses	\$ 4,750

Total \$ 73,793

Attachment B - Fee Estimate

CTRMA General Engineering Consultant
 PBS&J - Man-hour Breakdown & Fee Estimate
 290E Corridor GEC Services

**PBS&J SUPPLEMENTAL WORK AUTHORIZATION #1 TO WORK AUTHORIZATION #1
 290E TURNPIKE PROJECT**

2.0 - 290E Segments 2 & 3 Services

TASK / WORK DESCRIPTION	(Estimated Average Labor Rates)						TOTAL HRS
	A \$ 70.00	B \$ 60.00	C \$ 50.00	D \$ 40.00	E \$ 30.00	F \$ 20.00	
2.3 Final Design Services [Code 13310]							0
2.3.1 Utility Coordination	40	120	480	400	200	160	1400
2.3.2 Subsurface Utility Engineering	40	160	800	300	80	80	1460
							0
							0
							0
							0
							0
							0

TOTAL DIRECT LABOR	80	280	1280	700	280	240	2860
<i>% Total by Classification</i>	2.80%	9.79%	44.76%	24.45%	9.79%	8.39%	
Labor Costs	\$ 5,600	\$ 16,800	\$ 64,000	\$ 28,000	\$ 8,400	\$ 4,800	\$ 127,600
Overhead Costs	1.6849 \$ 9,435	\$ 28,306	\$ 107,834	\$ 47,177	\$ 14,153	\$ 8,088	\$ 214,993
Profit	12.0% \$ 1,804	\$ 5,413	\$ 20,620	\$ 9,021	\$ 2,706	\$ 1,547	\$ 41,111
Total Loaded Labor	\$ 16,840	\$ 50,519	\$ 192,454	\$ 84,198	\$ 25,260	\$ 14,434	\$383,704

Direct Expenses	
Plotting and Reproduction	\$ 1,500
Mail and Deliveries	
Misc Expenses	\$ 5,000
Travel and Field Expenses	\$ 2,000
Total Direct Expenses	\$ 8,500

Total \$ 392,204

Attachment B - Fee Estimate

CTRMA General Engineering Consultant
 PBS&J - Man-hour Breakdown & Fee Estimate
 290E Corridor GEC Services

**PBS&J SUPPLEMENTAL WORK AUTHORIZATION #1 TO WORK AUTHORIZATION #1
 290E TURNPIKE PROJECT**

2.0 - 290E Segments 2 & 3 Services

TASK / WORK DESCRIPTION	(Estimated Average Labor Rates)						TOTAL HRS
	A \$ 70.00	B \$ 60.00	C \$ 50.00	D \$ 40.00	E \$ 30.00	F \$ 20.00	
2.4 Investment Grade Traffic & Revenue Analysis Coordination [Code 13330]							0
2.4.1 Coordination with CTRMA's T&R Consultant	80	80	40	80	40	80	400
2.4.2 Provide project information to T&R Consultant	80	120	160	120	120	120	720
							0
							0
							0
							0
							0
							0

TOTAL DIRECT LABOR	160	200	200	200	160	200	1120
<i>% Total by Classification</i>	<i>14.29%</i>	<i>17.86%</i>	<i>17.86%</i>	<i>17.86%</i>	<i>14.29%</i>	<i>17.86%</i>	
Labor Costs	\$ 11,200	\$ 12,000	\$ 10,000	\$ 8,000	\$ 4,800	\$ 4,000	\$ 50,000
Overhead Costs	1,6849 \$ 18,871	\$ 20,219	\$ 16,849	\$ 13,479	\$ 8,088	\$ 6,740	\$ 84,245
Profit	12.0% \$ 3,609	\$ 3,866	\$ 3,222	\$ 2,578	\$ 1,547	\$ 1,289	\$ 16,109
Total Loaded Labor	\$ 33,679	\$ 36,085	\$ 30,071	\$ 24,057	\$ 14,434	\$ 12,029	\$150,354

Direct Expenses	
Plotting and Reproduction	\$ 300
Mail and Deliveries	\$ 250
Misc Expenses	
Travel and Field Expenses	\$ 1,200
Total Direct Expenses	\$ 1,750

Total \$ 152,104

Attachment B - Fee Estimate

CTRMA General Engineering Consultant
 PBS&J - Man-hour Breakdown & Fee Estimate
 290E Corridor GEC Services

**PBS&J SUPPLEMENTAL WORK AUTHORIZATION #1 TO WORK AUTHORIZATION #1
 290E TURNPIKE PROJECT**

2.0 - 290E Segments 2 & 3 Services

TASK / WORK DESCRIPTION	(Estimated Average Labor Rates)							TOTAL HRS
	A \$ 70.00	B \$ 60.00	C \$ 50.00	D \$ 40.00	E \$ 30.00	F \$ 20.00		
2.5 Project Oversight - Pre Construction [Code 13710]								
2.5.1 Project Management	16	120	80	200	80	80	576	
2.5.2 Project Reporting	40	40	40	24	80	40	264	
2.5.3 Project Scheduling	8	24	80	40	120	48	320	
2.5.4 Segment Design Consultant Management	16	120	200	40	120	120	616	
2.5.5 Segment Design Consultant Document Reviews	80	160	200	120	120	120	800	
2.5.6 Project Meetings & Documentation	8	40	40	20	20	40	168	
							0	
							0	
							0	

TOTAL DIRECT LABOR	168	504	640	444	540	448	2744
% Total by Classification	6.12%	18.37%	23.32%	16.18%	19.68%	16.33%	
Labor Costs	\$ 11,760	\$ 30,240	\$ 32,000	\$ 17,760	\$ 16,200	\$ 8,960	\$ 116,920
Overhead Costs	1.6849 \$ 19,814	\$ 50,951	\$ 53,917	\$ 29,924	\$ 27,295	\$ 15,097	\$ 196,999
Profit	12.0% \$ 3,789	\$ 9,743	\$ 10,310	\$ 5,722	\$ 5,219	\$ 2,887	\$ 37,670
Total Loaded Labor	\$ 35,363	\$ 90,934	\$ 96,227	\$ 53,406	\$ 48,715	\$ 26,944	\$351,589

Direct Expenses	
Plotting and Reproduction	\$ 8,000
Mail and Deliveries	\$ 2,000
Misc Expenses	\$ 1,500
Travel and Field Expenses	\$ 2,500
Total Direct Expenses	\$ 14,000

Total \$ 365,589

Attachment B - Fee Estimate

CTRMA General Engineering Consultant
 PBS&J - Man-hour Breakdown & Fee Estimate
 290E Corridor GEC Services

**PBS&J SUPPLEMENTAL WORK AUTHORIZATION #1 TO WORK AUTHORIZATION #1
 290E TURNPIKE PROJECT**

2.0 - 290E Segments 2 & 3 Services

TASK / WORK DESCRIPTION	(Estimated Average Labor Rates)							TOTAL HRS
	A \$ 70.00	B \$ 60.00	C \$ 50.00	D \$ 40.00	E \$ 30.00	F \$ 20.00		
2.6 Project Oversight - CDA [Code 13730]								
2.6.1 Request for Qualifications	40	80	120	120	0	40	400	
2.6.2 Draft Request for Detailed Proposals (RFDP)	400	620	520	520	240	200	2500	
2.6.3 Final Request for Detailed Proposals (RFDP)	80	160	240	240	0	80	800	
2.6.4 Proposal Coordination Support	80	80	120	80	0	40	400	
2.6.5 Proposal Review Support	120	200	200	200	0	80	800	
2.6.6 CDA Contracting Support	40	80	80	60	0	40	300	
2.6.7 Bond Sale Support (Award to Receipt of Funds)	80	80	120	40	80	120	520	
							0	
							0	

TOTAL DIRECT LABOR	\$40	1300	1400	1260	320	600	5720
% Total by Classification	14.69%	22.73%	24.48%	22.03%	5.59%	10.49%	
Labor Costs	\$ 58,800	\$ 78,000	\$ 70,000	\$ 50,400	\$ 9,600	\$ 12,000	\$ 278,800
Overhead Costs	1.6849 \$ 99,072	\$ 131,422	\$ 117,943	\$ 84,919	\$ 16,175	\$ 20,219	\$ 469,750
Profit	12.0% \$ 18,945	\$ 25,131	\$ 22,553	\$ 16,238	\$ 3,093	\$ 3,866	\$ 89,826
Total Loaded Labor	\$ 176,817	\$ 234,553	\$ 210,496	\$ 151,557	\$ 28,868	\$ 36,085	\$838,376

Direct Expenses	
Plotting and Reproduction	\$ 8,000
Mail and Deliveries	\$ 2,000
Misc Expenses	\$ 1,500
Travel and Field Expenses	\$ 7,500
Total Direct Expenses	\$ 19,000

Total \$ 857,376