

## Item 6



# Travis County Commissioners Court Agenda Request

**Meeting Date:** February 12, 2013

**Prepared By/Phone Number:** John E. Pena 854-9515, Marvin Brice 854-9765

**Elected/Appointed Official/Dept. Head:** Cyd V. Grimes, C.P.M., CPPO, Purchasing Agent

**Commissioners Court Sponsor:** Judge Samuel T. Biscoe

**Agenda Language:** Approve Modification No. 2 to Contract No. 4400000072 (HTE Contract No. 10AE0198JE), AECOM Technical Services, Inc. for Design Services, Arterial "A".

- **Purchasing Recommendation and Comments:** Purchasing concurs with the department and recommends approval of requested action. This procurement action meets the compliance requirements as outlined by the statutes.

On August 3, 2010, the court approved a Professional Services Agreement (PSA) in the amount of \$463,759.64 with the engineering firm AECOM Technical Services, Inc. for Work Product 1 (WP1) of this project. WP1 included preparing schematics of alignment alternates to determine the most cost effective alignment between US 290 and Parmer Lane. On March 13, 2012, the Court approved Modification No. 1 (WP2) in the amount of \$286,232.77 for the preliminary design plans (up to 30% complete) for the portion of the roadway that is located within Travis County's jurisdiction.

The 30% design is now complete, and AECOM has since submitted a scope and fee proposal for the 60% design (WP3). TNR has completed its negotiations, with the Purchasing Office assistance, for the scope and negotiated fee with the consultant and recommends approval of Modification No. 2 for WP3 in the amount of \$499,938.72.

- **Contract Expenditures:** Within the last 12 months \$314,080.45 has been spent against this contract.

AGENDA REQUEST DEADLINE: All agenda requests and supporting materials must be submitted as a pdf to [agenda@co.travis.tx.us](mailto:agenda@co.travis.tx.us) by Tuesdays at 5:00 p.m. for the next week's meeting.

➤ **Contract-Related Information:**

Award Amount: \$463,759.64

Contract Type: Professional Services

Contract Period: 15 Months from the NTP date.

➤ **Contract Modification Information:**

Modification Amount: \$499,938.72 (WP3)

Modification Type: Professional Services

Modification Period: 4 Months from the NTP date.

➤ **Solicitation-Related Information:** N/A

Solicitations Sent: Responses Received:

HUB Information: % HUB Subcontractor:

➤ **Special Contract Considerations:** N/A

Award has been protested; interested parties have been notified.

Award is not to the lowest bidder; interested parties have been notified.

Comments:

➤ **Funding Information:**

Funds Reservation No.: 0300000466

Fund No.: 4074

Funds Center: 149019000

G/L: 522040

WBS: RDCN.149.000007

**DESIGN SERVICES FOR ARTERIAL "A"**

ISSUED BY: Purchasing Office 700 Lavaca Street Suite 800 Austin, Texas 78701	PURCHASING AGENT ASST: John E. Pena, CTPM TEL. NO: (512) 854-9700 FAX NO: (512) 854-9185	DATE PREPARED:  January 24, 2013
ISSUED TO: AECOM Attn: April Sandoval, P.E. 400 West 15 <sup>th</sup> Street, Suite 500 Austin, Texas 78701	MODIFICATION NO.:  2	EXECUTED DATE OF ORIGINAL CONTRACT:  August 3, 2010
ORIGINAL CONTRACT TERM DATES: <u>January 4, 2011 - Through Completion</u>		CURRENT CONTRACT TERM DATES: <u>January 4, 2011 - Through Completion</u>

FOR TRAVIS COUNTY INTERNAL USE ONLY:  
**Original Contract Amount: \$463,759.64**                      **Current Modified Amount: \$1,249,931.13**

DESCRIPTION OF CHANGES: The above referenced contract is modified to reflect the changes as set forth below:

A. Reference Exhibit 1, Section 1-Compensation for Basic Services, Par. 1.1: The Fixed Fee Total for the performance of Basic Services is changed from \$687,326.01 (as amended by Modification No. 1 dated March 13, 2012) to \$1,126,611.11, an increase of \$439,285.10.

B. Reference Exhibit 1, Section 1-Compensation for Basic Services, Par. 1.1, Sub-paragraph 1.1.1: Sub-section (iii) Work Product 3, in the amount of \$439,285.10, is hereby added.

C. Reference Exhibit 1, Section 4-Reimbursable Expenses, Paragraph 4.1, Non-Labor Reimbursable Expenses: The NTE amount is changed from \$34,768.40 (as amended by Modification No. 1 dated March 13, 2012) to \$68,689.20, an increase of \$33,920.80.

D. Reference Exhibit 1, Section 4-Reimbursable Expenses, Paragraph 4.1, Sub-Consultant Management Fees: The NTE amount (as amended by Modification No. 1 on March 13, 2012) is changed from \$27,898.00 to \$54,630.82, an increase of \$26,732.82.

The Reimbursable Total, Not-to-Exceed (NTE) amount for Non-Labor Reimbursable Expenses and the Sub-Consultant Management Fees is changed from \$62,666.40 (as amended by Modification No. 1 dated March 13, 2012) to the NTE amount of \$123,320.02, an increase of \$60,653.62.

E. Reference Exhibit 1, Section 5-Total Agreement Sum: The Total PSA sum is changed from a NTE amount of \$749,992.41 (as amended by Modification No. 1 dated March 13, 2012) (Work Product 1-\$421,125.64, Non-Labor Reimbursable Expense-\$28,226.00, Sub-Consultant Management Fees-\$14,408.00 and Work Product 2-\$266,200.37, Non-Labor Reimbursable Expense-\$6,542.40 and Sub-Consultant Management Fees-\$13,490.00) to a NTE amount of \$1,249,931.13 (Work Product 1-\$421,125.64, Non-Labor Reimbursable Expense-\$28,226.00, Sub-Consultant Management Fees-\$14,408.00, Work Product 2-\$266,200.37, Non-Labor Reimbursable Expense-\$6,542.40, Sub-Consultant Management Fees-\$13,490.00 and Work Product 3-\$439,285.10, Non-Labor Reimbursable Expense-\$33,920.80, Sub-Consultant Management Fees-\$26,732.82), an increase of \$499,938.72.

F. The attached Scope of Work is hereby made a part of the contract and is added to Appendix A, Scope of Services as: Work Product 3: Phase III, 60% PS&E.

Except as provided herein, all terms, conditions, and provisions of the document referenced above as heretofore modified, remain unchanged and in full force and effect.

Note to Vendor:  
 **XX** | Complete and execute (sign) your portion of the signature block section below for all copies and return all signed copies to Travis County.  
 | DO NOT execute and return to Travis County. Retain for your records.

LEGAL BUSINESS NAME: <u>AECOM TECHNICAL SERVICES, INC.</u>	<input type="checkbox"/> DBA
BY: <u>[Signature]</u> SIGNATURE	<input checked="" type="checkbox"/> CORPORATION
BY: <u>MICHAEL J. HEGARTY</u> PRINT NAME	<input type="checkbox"/> OTHER
TITLE: <u>VICE PRESIDENT</u> ITS DULY AUTHORIZED AGENT	DATE: <u>1/28/2013</u>

TRAVIS COUNTY, TEXAS BY: <u>[Signature]</u> CYD V. GRIMES, C.P.M., CPPO, TRAVIS COUNTY PURCHASING AGENT	DATE:
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TRAVIS COUNTY, TEXAS BY: _____ SAMUEL T. BISCOE, TRAVIS COUNTY JUDGE	DATE:
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**SCOPE OF WORK  
 SERVICES TO BE PROVIDED BY THE ENGINEER  
 ARTERIAL "A" PROJECT**

**WORK PRODUCT 3  
 PHASE III: 60% PS&E**

**Arterial "A" is a proposed MAD4 arterial with a raised grassy median, bike lanes, curb & gutter, sidewalks, and drainage and water quality management infrastructures. The length of the project is approximately 3.5-miles, with 11,300 feet located within Travis County jurisdiction and the remaining inside the City of Austin jurisdiction. The design speed is 45-mph.**

**The work to be performed under this contract will consist of providing engineering services and context sensitive solutions (CSS) to develop 60% PS&E for the portion located within Travis County. The previous work Work Product 2 (30% PS&E phase) will be used to prepare the subsequent design phases. The work will be performed by AECOM, Inc. (AECOM), Adisa Communications (AC), Cox|McLain (CML), Crespo Consulting Services (CCS), InTEC (INT), and Unintech (UNI).**

**All engineering documents will include submittals at the 60% stage of completion, in accordance with the format stipulated by Travis County.**

**The project will be developed using generally recognized engineering methodology and standards of care. The project will be developed in English units.**

<b>PROJECT INVENTORY</b>	
Project Length within Travis County jurisdiction = 13,073 feet	
<b>ROADWAY</b>	<b>RETAINING WALL</b>
Total Roadway Length = 10,909 feet	Number of Retaining Walls = 10 Total Retaining Wall Length = 2,079 feet
<b>BRIDGE</b>	<b>DRAINAGE</b>
Number of Bridge Crossings = 3 Total Bridge Length = 2,164 feet	Number of Bridge Class Culverts = 2 Number of Non-Bridge Class Culverts = 7 Number of Water-Quality Ponds ≤ 10 Number of Detention Ponds ≤ 10

### **SECTION 1: SERVICES TO BE PROVIDED BY AECOM, INC. (AECOM)**

At the completion of Work Product 2 (30% PS&E), the following Work Product will be developed under this contract:

- Work Product 3: 60% PS&E / Context Sensitive Solutions (CSS) / Geotechnical Engineering

Plans will be developed in 11"x17" (half-size) sheet format.

#### **ROADWAY DESIGN**

1. Update and finalize typical section sheets for both existing and proposed Arterial "A", Rundberg Lane, Braker Lane, Cameron Road, and US 290E.
2. Update and finalize independent vertical profiles for northbound and southbound Arterial "A" lanes. This will provide flexibility in reducing retaining wall needs, slope easements, and earthwork quantities for the project.
3. Update and finalize existing and proposed cross street profiles for US 290E westbound frontage road, Rundberg Lane, Springdale Road, Barr Lane, Cameron Road, and Taebaek Drive.
4. Update and finalize roadway plan and profile sheets (1"=100'H/1"=10'V) for Arterial "A". Coordinates, superelevation data, stations, elevations of key alignment features and bench marks will be noted. Roadway P&P sheets will be developed only for the portion of the project that is located within Travis County, approximately 13,073 feet.
5. Update and finalize profile sheets for cross streets including Rundberg Lane, Springdale Road, Barr Lane, Cameron Road, and Taebaek Drive (1"=100'H/1"=10'V).
6. Update and finalize intersection layouts for the intersections of US290 E, Springdale Road, Rundberg Lane, and Cameron Road (1"=50').
7. Develop miscellaneous roadway detail sheet for items such as curb types, standard driveways, traffic barrier modifications, sidewalk details, curb ramp details, etc.
8. Identify limits of necessary right-of-way or easements to be acquired.
9. Update and finalize design cross sections at 100-ft increments and prepare cross section sheets (1"=20').
10. Update and finalize quantities of cut and fill for each cross section.
11. Update and finalize quantities for roadway items for the project. Summary sheets will be prepared and roadway items tabulated on sheets.
12. Determine applicable County, City, and State roadway standards and download from website.

#### **RETAINING WALLS**

1. Develop horizontal alignments and vertical profiles for approximately 10 retaining walls.
2. Develop retaining wall plan and profile sheets layouts (1" = 100'). All permanent retaining walls will be mechanically stabilized earth (MSE) retaining walls. Approximate lengths and locations of retaining walls identified during 30% PS&E will be used as a basis for 60% retaining wall sheet details. Retaining wall plan and profiles sheets will show:
  - a. Plan View
    - Designation of reference line
    - Beginning and ending retaining wall stations
    - Offset from reference line
    - Horizontal curve data
    - Total length of wall
    - Indicate face of wall
    - All wall dimensions and alignment relations
    - Soil boring locations
    - Drainage, signing, etc. that is mounted on or passing through the wall
    - Subsurface drainage structures or utilities which could be impacted by wall construction
  - b. Profile View
    - Top of wall elevations
    - Existing and finished ground line elevations
    - Vertical limits of measurement for payment
    - Type, limits and anchorage details of railing (only if traffic railing foundation standard is not being used on this project)
    - Top and bottom of wall profiles plotted at correct station and elevation
    - Underdrains
    - Drainage, signing, etc. as noted above
    - Drainage structures and utilities as noted above

- c. Typical Section
  - Reinforced volume
  - Underdrain location
3. Coordinate with the County to determine the location of soil borings to be drilled along retaining wall alignments.

#### **DRAINAGE**

1. Update final drainage area maps for inclusion in the plans.
2. Perform final storm sewer analysis and design using *Geopak Drainage* software.
3. Update hydraulic computation sheets to provide all calculations to the County in the form of a printed output file as well as showing the necessary information in the final plan set for the project.
4. Develop final storm sewer plan and profile sheets (1"=100').
5. Develop storm sewer lateral sheets (1"=100').
6. Develop miscellaneous drainage detail sheet.
7. Update and finalize quantities for drainage items for the project. Summary sheets will be prepared and pay items tabulated on sheets.
8. Determine applicable County, City, and State drainage standards and download from website.
9. Prepare and develop erosion control layouts (1"=100'). The Engineer will obtain County standards to develop layouts consistent with the project construction phases that will minimize sediment discharge from the project site through runoff. SW3P standards will be provided by the County and filled in by the Engineer.
10. Calculate quantities for erosion control items for the project. Summary sheets will be prepared and erosion control items tabulated on sheets.

#### **UTILITIES**

1. Determine utility conflicts and coordinate with utility agencies for relocation.
2. Develop final existing utility layouts (1"=100'). The ENGINEER will furnish plans to each serving utility company for coordination. The actual design and relocation of existing utilities will be done by others.
3. Attend one (1) utility coordination meeting. The Engineer will provide technical support when meeting with utility companies.
4. Assist the County with obtaining verification letters from utility companies.

#### **SIGNING, MARKINGS, AND SIGNALIZATION**

1. Prepare signing and pavement marking layouts (1"=100'). The signing and pavement marking layouts will identify the various types of pavement markings, proposed signing, and delineation. Pavement markings will be in accordance with County, City or State standards and noted on the drawings.
2. Prepare a small sign summary sheet.
3. Detail all non-standard signs or marking details required for the project. Standards will be utilized whenever possible.
4. Calculate quantities for signing and pavement marking items for the project. Summary sheets will be prepared and pavement marking items tabulated on sheets.
5. Determine applicable signing and pavement marking standards and download from website.
6. Perform a site visit to obtain existing sign inventory and determine existing signs to be removed and/or relocated.
7. Develop plans for traffic signal installation at future Rundberg Lane intersection. Coordinate with adjacent project at the US290E intersection to revise plans. The traffic signal will be designed using City of Austin specifications. The latest version of the TMUTCD, *Traffic Signal Manual*, and TxDOT roadway and traffic standards will be referenced. The traffic signal layouts will show the proposed location of signal poles, signal controller, electrical service pole and source, vehicle and pedestrian signals, supplementary signs, vehicle detectors, pedestrian push buttons, conduit runs, ground boxes, and any other relevant signal features. A separate plan will contain the proposed phase sequence diagram, signal head schedule, electrical chart, vehicle detector chart, emergency flash operations chart and any other applicable details or notes. Complete signal plans will include:
  - a. Signal phase sequence diagram/quantity sheet
  - b. Existing signal layout plan sheet (1"=40')
  - c. Proposed signal layout plan sheet (1"=40')
  - d. Signal wiring details
  - e. Modified signal standards
  - f. Signal quantities

### **TRAFFIC CONTROL PLAN**

1. Update and finalize TCP narrative sheet outlining the general sequence of construction plan.
2. Prepare a TCP with a sequence of construction plan (1"=100'). The plan will identify work areas, temporary paving, temporary shoring, signing, detour alignment, barricades, and other TCP related items. Intersection reconstruction activity shall be identified by separate details where necessary.
3. Calculate quantities utilized for traffic handling for the project. Summary sheets will be prepared and TCP items tabulated on sheets.
4. Determine applicable TCP County, City, or State standards and download from website.

### **MISCELLANEOUS ROADWAY**

1. Miscellaneous
  - a. Project Title Sheet – update and finalize title sheet formatted to County guidelines to be used for the construction plans. Index of sheets will be included on the title sheet.
  - b. Project Layout – update site layout for the project.
  - c. Horizontal Alignment Data Sheet – finalize horizontal alignment data sheets.
  - d. Summary Sheets – update and finalize summary sheets to tabulate roadway, drainage, and structural items on the project.
2. Project Estimate - prepare a construction estimate of the engineer's opinion of probable costs. The estimate will be prepared for the project.
3. General Notes and Specifications - The Engineer will prepare the general notes, specification data, and Basis of Estimate. Master list of general notes will be provided by the County and modified by the Engineer to identify general notes applicable to the project. Whenever possible, County, City or State standard drawings, standard specifications, or previously approved special provisions and/or special specifications will be used.
4. Submittals and Design Review Meetings - Two (2) copies will be submitted for County review. Comments and revisions requested from County review will be addressed and/or incorporated into the final deliverable under this contract. Submittal will include addressing 30% review comments, final typical sections, final drainage calculations, final bridge layouts, preliminary retaining wall layouts, final utility exhibits, preliminary traffic control plans, preliminary signing and pavement marking layouts, preliminary construction working days schedule, update cross sections, estimates, and project schedule.
  - a. Attend 60% review meeting.
  - b. Provide an electronic deliverable (CD-ROM) of all design documents for the project to the County.

### **PUBLIC INVOLVEMENT AND CSS**

The detailed design is to be developed using principles of CSS— a collaborative, interdisciplinary approach that involves all stakeholders in providing a transportation facility that fits its setting. It is an approach that leads to preserving and enhancing aesthetic, historic, community, and environmental resources, while improving or maintaining safety, mobility, and infrastructure conditions.

1. Public information materials: The project team will develop the necessary materials to be used to communicate what the role of the community is in shaping the decision-making process, how to become involved in the project, and what occurs during the detailed design phase.
  - a. Provide support and assist in the development of one (1) Fact Sheet
  - b. Provide support and assist in the development one (1) FAQs Sheet
  - c. Develop project PowerPoint presentations for stakeholder meetings
  - d. Provide support with the development of meeting notices
2. One-On-Ones: The project team will schedule, prepare for, and attend up to two (2) meetings with key officials whose input is needed. The County will participate in these meetings, as well as the preparation process.
  - a. Develop meeting agendas
  - b. Prepare maps, exhibits, and display boards
3. Community Working Group (CWG) - Consensus on CSS: A small representative working group between 8-12 people composed of community representatives in the project area will be formed that includes County staff. This group will meet once during the detailed 60% design phase to provide review comments on the CSS for the roadway. The project team will coordinate venue arrangements, prepare an invitation for the first meeting for the County to send out and prepare meeting summaries for each meeting. Our objective is to deliver consensus on the roadway design to the County and to the community through the CSS process.
  - a. Identify CWG members - work with County staff and elected officials to identify participants in the CWG and invite them to participate in the CSS process

- b. Assist with the development of invitation letter – invite neighborhood groups to participate, sent out on County letterhead
- c. Develop agenda for each meeting
- d. Develop up to two (2) renderings/sketches to provide additional visual aid
- e. Provide meeting materials – PowerPoint, maps and other materials

#### **LANDSCAPING AND AESTHETICS**

1. Coordinate with Community Working Group, design team, County and City of Austin to develop a landscape and aesthetic program for the project. General consideration will be given to the potential opportunities for creating aesthetic public amenities, such as developing cost-effective alternatives to more conventional pond structures. Examples include rain gardens which would effectively minimize the water quality and detention volume requirements, vegetated filter strips, and wet ponds. Aesthetic elements will be proposed and incorporated into the design details. Design development shall include:
  - a. Identify locations for pedestrian and bike route access
  - b. Develop Xeriscape Plant Palette
  - c. Determine irrigation methods to be implemented
  - d. Hardscape Plan
  - e. Landscape Planting Plan
  - f. Irrigation Plan
  - g. Details and specifications

#### **SURVEY AND ROW**

Develop preliminary ROW strip map displaying the property boundaries along the proposed roadway alignment.

#### **PROJECT MANAGEMENT**

1. Provide overall project management services including project coordination, subconsultant management, and preparation of invoices. Ensure timely delivery of the PS&E submittals, GEOPAK files, electronic files, and hard copies of all pertinent information, all in American Standard System of Measure format.
2. Monitor and update design project schedule as needed throughout development of the project.
3. Design Notebook - Compile a notebook containing the project design calculations and associated data.
4. Project Meetings
  - a. Attend project related meetings with the County, as directed, to discuss the progress of the project and design issues.
  - b. Record and distribute meeting minutes. The Engineer will compile and provide the minutes of all meetings to the County within ten (10) working days of such meetings.
5. Quality Management
  - a. Quality Control/ Quality Assurance Reviews – Perform QA/QC and assure that all work performed, including subconsultant work, goes through a QA/QC process before County receives deliverables.
  - b. Prepare Comment Log Files for documenting, coordinating, and addressing review comments received by the County personnel throughout the development of the PS&E.

### **SECTION 2: SERVICES TO BE PROVIDED BY ADISA COMMUNICATIONS (AC)**

#### **PUBLIC INVOLVEMENT AND CSS**

1. Public Information Materials: The project team will develop the necessary materials to be used to communicate what the role of the community is in shaping the decision-making process, how to become involved in the project, and what occurs during the detailed design phase.
  - a. Develop one (1) Fact Sheet
  - b. Develop one (1) FAQs Sheets
  - c. Develop meeting notice template
2. Stakeholder Database and Public Input Log: The project team will utilize the comprehensive database of key stakeholders that need to be informed about the project. The stakeholder database will continue to be updated after each meeting and provided in electronic format at the end of the project.
  - a. Log of questions and comments from public will be included as part of the stakeholder database



3. One-On-Ones: The project team will schedule, prepare for, and attend up to two (2) meetings with key officials whose input is needed. The County will participate in these meetings, as well as the preparation process.
  - a. Print out meeting materials (agenda, sign-in sheets, Fact Sheets, FAQ sheets, other meeting handouts)
  - b. Prepare summary meeting minutes
4. Community Working Group (CWG) - Consensus on CSS: A small representative working group between 8 -12 people composed of community representatives in the project area will be formed that includes County staff. This group will meet once during the detailed 60% design phase to provide review comments on the CSS for the roadway. The project team will coordinate venue arrangements, prepare an invitation for the first meeting for the County to send out and prepare meeting summaries for each meeting. Our objective is to deliver consensus on the roadway design details to the County and to the community through the CSS process.
  - a. Assist with identification of CWG members - work with project team, County staff and elected officials to identify participants in the CWG and invite them to participate in the CSS process
  - b. Update database for CWG and update throughout Phase I of project
  - c. Develop invitation letter – invite neighborhood groups to participate, sent out on County letterhead
  - d. Print out meeting materials (agenda, sign-in sheets, Fact Sheets, FAQ sheets, Spanish translation, other meeting handouts)
  - e. Prepare summary meeting minutes
  - f. Follow up
5. Project Management and Team Coordination: Regular coordination and communication is a necessity for this CSS process to be successful.

### **SECTION 3: SERVICES TO BE PROVIDED BY COXIMcLAIN (CML)**

#### **ENVIRONMENTAL STUDIES**

1. Assist in project management and communications.
2. Attend CSS workshop.
3. Provide mapped constraints for CSS workshop.
4. Preparation of PCN, Individual Permit, or mitigation plan is not included in this task. If this work is deemed necessary, it shall be negotiation as a Supplemental Agreement to this Work Authorization.

### **SECTION 4: SERVICES TO BE PROVIDED BY CRESPO CONSULTING SERVICES, INC. (CCS)**

#### **DRAINAGE**

1. Hydrologic Studies - Update drainage area maps for culverts for inclusion in the plans. Refine HEC-HMS model to finalize flows at key design points. Other hydrologic calculations will be updated for small culverts and swales using the Rational Method.
2. Hydraulic Computations - Perform necessary hydraulic computations for the design of this project. Hydraulic design calculations will be performed for the following: bridges, culverts, swales, and water quality / detention ponds. Results will include projected water surface elevations and velocities at key locations for various design storms, primarily for the fully developed 25- and 100-Yr storms. The bridge scour analysis will be performed with this task. Layouts and sizing for swales will be performed with simple spreadsheet using the Manning's formula, and depicted on plan sheets with stations, slopes, flows, and generalized channel type. This work will include the use of hydraulic computer program HEC-RAS and culvert/channel spreadsheet models. Floodplain analyses will evaluate measures to prevent or reduce floodplain modifications. The scope includes developing and submission of a CLOMR. All modeling and design will be conducted in conformance with FEMA and County Floodplain Administrator's requirements, and will provide the basis for final design modeling, and CLOMR. Modeling specifically for the CLOMR will utilize FEMA flows for existing conditions. LOMR development is not included since it would be required after near completion of the project element associated with the CLOMR.
3. Culvert Layout - Updated culvert Layout Sheets will be shown at a scale of 1"=40' and prepared for two (2) bridge class culverts. Culvert Profile Sheets will be shown at a scale of 1"=20' and prepared for eight (7) non bridge class culverts. Plan view will show the location of culvert, roadway alignment, utilities, and channel improvements, as required. Profile view information will include size, slope, proposed and existing ground lines above the culvert, and hydraulic data. Culvert layouts, sizes and flowlines are assumed to be fixed on completion of the 60% plan.

4. Water Quality and Detention Ponds – Water quality and detention ponds will be evaluated at 10 sites, with a water quality and detention pond at each site, for a total of 20 ponds. Measures to reduce the size and number of ponds will be further evaluated, including evaluation of the City of Austin's Regional Stormwater Management Program (RSMP), use of alternative water quality controls, and combining structures. Pond design sheets will be developed and will include pond layouts with splitter configurations, spillways and outfalls. Typical pond cross sections will be developed for a representative water quality pond and detention pond with associated splitter, along with typical details. Pond layouts are assumed to be fixed on completion of the 60% plans, unless ponds are eliminated through participation in the RSMP or through additional modeling and analysis.
5. Hydraulic Report - Provide summary hydraulic calculations to the County in the form of a drainage report as well as showing the necessary information in the 60% plan set for the project. The report will be signed and sealed by a Texas registered Professional Engineer. Results of the bridge scour evaluation will be presented here.
6. Hydraulic Data Sheet - Update a Hydraulic Data Sheet for inclusion in the plans for two (2) bridge crossings. A Hydraulic Data Sheet for two (2) bridge class culverts will also be prepared to only include the inputs/outputs of the computer software analyses. Hydraulic data for eight (7) non-bridge class culverts will be displayed alongside the corresponding culvert in the Culvert Profile Sheet.
7. Drainage Easements – Verify the locations and size of any necessary drainage easements previously identified based on the detailed layout design of culverts, swales and ponds.
8. Summary of quantities – Update quantities for drainage items quantified under Work Product 2 for the 60% submittal. Summary sheets will be provided by AECOM and drainage items tabulated on sheets.
9. Conduct site visit and field work to support design and scour observations.

#### **SECTION 5: SERVICES TO BE PROVIDED BY InTEC, INC. (INT)**

##### **GEOTECHNICAL ENGINEERING**

1. Drill total of thirteen (13) borings along the proposed bridge alignment at bent locations to a depth of approximately 70 feet below existing grades. Drill total of twenty (20) borings along the proposed roadway alignment to a depth of approximately 10 feet below existing grade.
2. The field testing of soil samples will include pocket penetrometer in the cohesive soils and Standard Penetration Test (SPT) in the cohesionless soils. Texas Cone Penetration Tests will be performed at 5 foot intervals throughout the boring to termination depth. A depth of groundwater, if any encountered, will be recorded during drilling operations.
3. The laboratory testing program will be conducted on select soil samples. The testing will include Atterberg Limits determinations, moisture contents, unconfined compressions, and a California Bearing Ratio. In addition one grab sample will be pulled from the stream bank to determine the particle size of the stream bank material. Samples collected will be returned to the laboratory for classification testing purposes.
4. Results of the field and laboratory data will be used to develop pavement design recommendations for two different flexible pavement cross sections, should there be a large variation in the insitu subgrade conditions along the alignment.
5. Traffic design data (daily counts, percent trucks, and truck load factors and resultant Equivalent Single Axle Wheel Loads, ESALs) will be developed and approved by the County prior to proceeding with the pavement design. Flexible pavement designs will be prepared using subgrade design parameters based on the results of the geotechnical investigations and a CBR test.
6. Results of the field and laboratory data will be used to develop pavement design recommendations for the road. The subgrade soils in this area can be expansive, therefore, sulfate and chloride testing of the insitu subgrade samples taken at the time of the borings are proposed. Three alternative pavement thickness designs will be provided as follows:
  - a. Hot mix asphalt concrete, asphalt stabilized base, over flexible base;
  - b. Hot mix asphalt concrete, flexible base, over geogrid;
  - c. Hot mix asphalt concrete, flexible base, over lime treated subgrade.
7. The scope of services assumes boring locations will be accessible to a truck mounted geotechnical drilling rig or an ATV-mounted drilling rig. Site clearing (of wooded areas) to provide access to drilling equipment at several boring locations can be managed (subcontracted out), but will require approval by the property owners and the County. Right-of-entry permission will be provided by the County. If any of the drainage feature valleys are classified as "wetlands", permission to access the bridge areas for geotechnical drilling (and possible clearing) might be required by the U.S. Army Corps of Engineers. The County will obtain such permissions.
8. Attend up to one project meeting with AECOM and/or the County to coordinate both field work and design analyses.

9. Prepare and submit a draft engineering report for review by AECOM as well as the County. Upon receipt of review comments, prepare a final engineering report. The following items will be included in the report:
  - a. Vicinity Map
  - b. Geology Map of the Project Site
  - c. Plan of Borings
  - d. Boring Logs including laboratory test results
  - e. Bridge Foundation Recommendations with Wincore
  - f. Pavement designs recommendations
  - g. Retaining wall design recommendations
  - h. General discussion of construction recommendations

#### **SECTION 6: SERVICES TO BE PROVIDED BY SURVEYING & MAPPING, INC. (SAM)**

##### **SURVEY AND ROW**

SAM will not be providing services during the detailed 60% design phase.

#### **SECTION 7: SERVICES TO BE PROVIDED BY UNINTECH (UNI)**

##### **BRIDGE DESIGN**

1. Coordinate with AECOM on overall design.
2. Prepare specifications and estimates
3. Address comments and issues (by email)
4. General project management, including QA, invoicing, etc.
5. Attend two meetings, as needed by AECOM or the County.
6. Provide proposed bridge typical sections (three sheets total)
7. Develop one design of three (3) bridge layouts (7 sheets total) in accordance with the most recent edition of the TxDOT's Bridge Project Development Manual, and Bridge Detailing Manual.
  - a. Provide the following information on each bridge layout plan view, as applicable:
    - Horizontal curve information (provided by others)
    - Horizontal, vertical, and template information for all roadways or railroads crossed (provided by others)
    - Bearing of centerline or reference line (provided by others)
    - Skew angle(s)
    - Slope for header banks and approach fills
    - Control stations and deck elevations at beginning and ending of bridge and at all intersections
    - Approach pavement and crown width
    - Width of bridge roadway, curbs, face of rails, shoulders, and sidewalks
    - Bridge end treatments including cement stabilized backfill details
    - Limits and type of riprap
    - Proposed features beneath structure
    - Location of profile grade line
    - North arrow and scale bar
    - Typical bridge roadway section including preliminary proposed beam types and spacing
    - Cross-slope and superelevation data
    - Locations and calculated values of minimum vertical clearances. Dimension minimum vertical clearance to controlling features
    - Location of soil core holes, including station and offset (data provided by others)
    - Bent stations and bearings
    - Traffic flow directional arrows
    - Railing type(s)
    - Joint type and seal size, if used
    - Beam line numbers consistent with span details
    - Critical horizontal clearances, including distances to railroad tracks, nearby structures, and utilities

- Bearings of utilities
- b. Provide the following information on each bridge layout elevation view, as applicable:
- Foundation type
  - Finished grade elevations at beginning and end of bridge (provided by others)
  - Overall length of structure
  - Lengths and types of spans and units
  - Railing type(s)
  - Locations of minimum vertical clearances. Dimension minimum vertical clearance to controlling features
  - Existing and proposed ground lines
  - Grid elevations and stations
  - Bent numbers
  - Bridge stationing compatible with grid stations
  - Standard title
  - Profile grade data
  - Type of riprap
  - Soil bore holes information with penetrometer test data shown at the correct stations, elevations, and scale
  - Dowel locations at all bents
  - Column "H" heights
  - Number, size, and length of foundations
  - Design and 100-yr peak discharges (discharge provided by others)
  - Design and 100-yr high water (elevation provided by others)
  - Natural and through-bridge velocities for design and 100-yr floods (velocities provided by others)
  - Calculated backwater for design and 100-yr floods (elevation provided by others)
  - Direction of flow at waterway crossings
  - Existing and Proposed Contours at waterway crossings (contours provided by others)
8. Prepare boring log sheets for three bridges, with provided boring logs from others (13 sheets)
9. Prepare abutment layouts and details for three bridges (10 sheets)
10. Prepare bent layouts and details for three bridges (26 sheets)
11. Prepare beam layouts for three bridges (8 sheets)
12. Prepare span details, plan & section, for three bridges (23 sheets)
13. Prepare miscellaneous bridge details for 3 bridges (3 sheets)
14. Prepare deck drain details for 3 bridges (3 sheets). Based on standard designs for deck drains.
15. Prepare aesthetic designs and details for three bridges (2 sheets), structural modifications only. Based on minimal aesthetic features, to include paint, standard modifications for forms with patterns. Design to be the same for all three bridges. Paint, patterns, etc., to be selected by others.
16. Prepare project standards
17. Prepare cost estimate for bridges at 60% submittals.
18. Perform internal QA/QC on all deliverables before submitting to AECOM.
19. Additional services not included in the scope;
- a. Foundation design, other than standard design
  - b. Aesthetic designs
  - c. Modifications to standard sheets or details.
  - d. Design alternatives. Design provided will be based on needs to meet projected profile, alignment and freeboard and/or other vertical requirements. One design will be provided based on the approved horizontal and vertical alignments. Alternative designs for cost comparisons may require additional scope and fee.
  - e. Site visits, unless otherwise included under the provided meetings in Item 5.

### **SECTION 8: PROJECT SUBMITTALS**

Each Work Product will be provided with a separate agreement, fee, and Notice to Proceed (NTP) under the same contract. The Work Product will be submitted for review, and written NTP must be issued by the County before proceeding to the next Work Product. Each submittal will include a certification letter from the Engineer stating who performed a Quality Assurance/Quality Control check. TNR will review and provide written comments and/or approval after submittal.

#### **WORK PRODUCT 3 (60% Design Submittal)**

1. Update plans from 30% submittal including adding preliminary roadway and drainage summaries
2. Completed site layout drawings
3. Final typical sections
4. Final drainage calculations and draft drainage report
5. List of permits and schedule for obtaining permits
6. Final bridge layouts, approval required prior to beginning detailed design
7. Update roadway and drainage quantity summary sheets
8. Final utility exhibits
9. Preliminary traffic control plans and sequence of work
10. Preliminary signing, pavement markings and delineation layouts
11. Preliminary CSS concepts (aesthetic and landscaping)
12. Preliminary construction timeline schedule
13. Update cost estimate
14. Update project schedule
15. Update title sheet with index
16. Update cross-sections
17. Draft geotechnical report
18. Roadway and drainage engineering calculations
19. Certification letter for QA/QC check
20. Submit plans (paper plots), specifications, special provisions, estimate and all supporting paperwork for TNR review

**Timeline: 120 calendar days**

**SUMMARY**  
 Fee Schedule  
 60% Plans, Specifications, and Estimates  
 Arterial "A" Project

Task Description	AECOM	Adisa Communications (AC)	Cox/McLain (CML)	Crespo (CSS)	INTEC (INT)	Survey and Mapping (SAM)	Unintech (UNI)	TOTAL
<b>WORK PRODUCT 3: 60% PS&amp;E</b>								
Roadway Design	\$83,946.00							\$83,946.00
Public Involvement/CSS	\$8,677.00	\$4,579.50						\$13,256.50
Utilities	\$4,022.00							\$4,022.00
Drainage	\$30,087.00			\$67,450.00				\$97,537.00
Signing, Marking, and Signalization	\$19,630.00							\$19,630.00
Traffic Control Plan	\$9,474.00							\$9,474.00
Bridge							\$193,030.00	\$193,030.00
Retaining Walls	\$8,550.00							\$8,550.00
Landscaping and Aesthetics	\$14,538.00							\$14,538.00
Miscellaneous Roadway	\$4,053.00							\$4,053.00
Environmental			\$2,364.60					\$2,364.60
Geotechnical Engineering					\$8,418.00			\$8,418.00
ROW Mapping	\$566.00							\$566.00
<b>Total Labor</b>	<b>\$163,443.00</b>	<b>\$4,579.50</b>	<b>\$2,364.60</b>	<b>\$67,450.00</b>	<b>\$8,418.00</b>	<b>\$0.00</b>	<b>\$193,030.00</b>	<b>\$439,285.10</b>
<b>Total Non-Labor Reimbursable</b>	<b>\$585.00</b>	<b>\$217.50</b>	<b>\$0.00</b>	<b>\$119.50</b>	<b>\$32,334.00</b>	<b>\$0.00</b>	<b>\$664.80</b>	<b>\$33,920.80</b>
<b>Total Labor Reimbursable (Sub Mgmt Fee)</b>	<b>\$26,732.62</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$26,732.62</b>
<b>TOTAL WORK PRODUCT 3</b>	<b>\$190,760.62</b>	<b>\$4,797.00</b>	<b>\$2,364.60</b>	<b>\$67,569.50</b>	<b>\$40,752.00</b>	<b>\$0.00</b>	<b>\$193,694.80</b>	<b>\$499,938.72</b>



**TRANSPORTATION AND NATURAL RESOURCES DEPARTMENT**  
**STEVEN M. MANILLA, P.E., COUNTY EXECUTIVE**

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700 Lavaca Street-5<sup>th</sup> Floor  
Travis County Administration Building  
P.O. Box 1748  
Austin, Texas 78767  
Phone: (512) 854-9383  
FAX (512) 854-4697

Date: January 11, 2013

TO: Marvin Brice, Assistant Purchasing Agent

FROM: Steven M. Manilla, P.E., County Executive - TNR

Subject: Professional Services Agreement for Arterial A project, RFQ #Q100198-JE

The following information is for your use in preparing a Professional Services Agreement (PSA) Modification and agenda item for Commissioners Court action. Please contact Mo Mortazavi at 854-7589 if you have any questions.

**Proposed Motion:**

Consider and take appropriate action on TNR's request to approve a Professional Services Agreement Modification with AECOM Technical Services, Inc. for 60% Design (WP3) for the Arterial A project in Precinct One.

**Summary and Staff Recommendations:**

On August 3, 2010, the Court approved a PSA with the engineering firm of AECOM for Work Product 1 (WP1) of this project. The PSA for WP1 included preparing schematics of alignment alternatives to determine the most cost-effective alignment between US 290 and Parmer Lane. On March 13, 2012, the Court approved Modification No. 1 (WP2) to the contract for the preliminary design plans (up to 30% complete) for the portion of the roadway that is located within Travis County's jurisdiction. The 30% design is now complete, and AECOM has since submitted a scope and fee proposal for the 60% design (WP3). TNR has completed its negotiations for the scope and fee with the consultant and recommends approval of the contract.

**Budgetary and Fiscal Impact:**

In the November 2011 bond referendum, Travis County voters approved 1.7 million dollars for the remainder of the design and to begin ROW acquisition for the County's portion. AECOM has submitted a fee of \$499,938.72 for WP3 (60%).

Fund Reservation Number: 0300000466

Fund: 4074

Fund Center: 1490190000

G/L: 522040

WBS: RDCN.149.000007

TNR will request a new scope and fee proposal from AECOM to complete the design, once additional cash flow becomes available in June 2013. It is expected that additional funds will be needed to complete the ROW acquisition

**Required Authorizations:**

Cyd Grimes, Purchasing  
Jessica Rio, PBO

Attachments: Scope & Fee for WP3

CC: Cyd Grimes, Purchasing Agent  
John Pena, Purchasing Buyer  
Steve Sun, Mo Mortazavi  
Cynthia McDonald, Donna Williams-Jones, Tawana Gardner



