



**BOARD OF SUPERVISORS AGENDA ITEM REPORT  
CONTRACTS / AWARDS / GRANTS**

Award  Contract  Grant

Requested Board Meeting Date: 11/07/17

\* = Mandatory, information must be provided

or Procurement Director Award

**\*Contractor/Vendor Name/Grantor (DBA):**

AECOM Technical Services, Inc.

**\*Project Title/Description:**

Aerospace Parkway Widening: Phase 1 Southern Extension (4AERO2)

**\*Purpose:**

Amendment: Contract No. CT-PW-17-281, Amendment No. One (1). This amendment amends the scope of work and increases the contract amount by \$6,600.00. Administering Department: Public Works.

This amendment shifts additional services capacity to added scope and adds additional cost to the post-design services.

**\*Procurement Method:**

Pursuant to the Direct Selection authority of A.R.S. § 34-103, the Board of Supervisors awarded a contract for Requisition No. 247706 on 03/07/17 in the amount of \$328,599.00 for a contract term of 03/07/17 to 06/30/19.

Attachment: Contract recap and Amendment No. One (1).

**\*Program Goals/Predicted Outcomes:**

This contract is to design the southern extension of Raytheon Way to access County land south of Aerospace Parkway for incoming employers, including Vector Space. This work also includes improvements at the intersection of Aerospace and Raytheon Parkways.

**\*Public Benefit:**

The construction of this expansion will provide the infrastructure needed for both the commercial and industrial growth being promoted in the area of the aerospace corridor. The result of this development will be the growth in the local economy which will benefit the entire region.

**\*Metrics Available to Measure Performance:**

The performance will be measured using the consultant evaluation process as outlined in BOS Policy D29.1(E)(II).

**\*Retroactive:**

No

To: COB- 10-25-2017  
pgs- 22

**Contract / Award Information**

Document Type: \_\_\_\_\_ Department Code: \_\_\_\_\_ Contract Number (i.e., 15-123): \_\_\_\_\_

Effective Date: \_\_\_\_\_ Termination Date: \_\_\_\_\_ Prior Contract Number (Synergen/CMS): \_\_\_\_\_

Expense Amount: \$\* \_\_\_\_\_  Revenue Amount: \$ \_\_\_\_\_

**\*Funding Source(s) required:**

Funding from General Fund?  Yes  No If Yes \$ \_\_\_\_\_ % \_\_\_\_\_

Contract is fully or partially funded with Federal Funds?  Yes  No

**\*Is the Contract to a vendor or subrecipient?**

Were insurance or indemnity clauses modified?  Yes  No

If Yes, attach Risk's approval

Vendor is using a Social Security Number?  Yes  No

If Yes, attach the required form per Administrative Procedure 22-73.

**Amendment / Revised Award Information**

Document Type: CT Department Code: PW Contract Number (i.e., 15-123): 17-281

Amendment No.: One (1) AMS Version No.: Five (5)

Effective Date: 11/07/17 New Termination Date: \_\_\_\_\_

Prior Contract No. (Synergen/CMS): \_\_\_\_\_

Expense or  Revenue  Increase  Decrease Amount This Amendment: \$ 6,600.00

Is there revenue included?  Yes  No If Yes \$ \_\_\_\_\_

**\*Funding Source(s) required:** HURF 12.6%

Funding from General Fund?  Yes  No If Yes \$ \_\_\_\_\_ % \_\_\_\_\_

**Grant/Amendment Information** (for grants acceptance and awards)  Award  Amendment

Document Type: \_\_\_\_\_ Department Code: \_\_\_\_\_ Grant Number (i.e., 15-123): \_\_\_\_\_

Effective Date: \_\_\_\_\_ Termination Date: \_\_\_\_\_ Amendment Number: \_\_\_\_\_

Match Amount: \$ \_\_\_\_\_  Revenue Amount: \$ \_\_\_\_\_

**\*All Funding Source(s) required:**

\*Match funding from General Fund?  Yes  No If Yes \$ \_\_\_\_\_ % \_\_\_\_\_

\*Match funding from other sources?  Yes  No If Yes \$ \_\_\_\_\_ % \_\_\_\_\_

**\*Funding Source:** \_\_\_\_\_

**\*If Federal funds are received, is funding coming directly from the Federal government or passed through other organization(s)?**

Contact: Matt Sage, Commodity/Contracts Officer MHS 10-19-17

Department: Procurement May 20 10-19-17 Telephone: 724-8586

Department Director Signature/Date: \_\_\_\_\_ 10/19/17

Deputy County Administrator Signature/Date: \_\_\_\_\_ 10/20/17

County Administrator Signature/Date: \_\_\_\_\_ 10/23/17

(Required for Board Agenda/Addendum Items)

## Aerospace Parkway Widening: Phase 1 Southern Extension (4AERO2) Design Engineering Services

### Contract Recap:

Original Contract: \$328,599

Contractor: AECOM Technical Services, Inc

Original Expiration Date: 6/30/2019

**Amendment No. 1: add \$6,600 (convert some additional and post design services at no add)**

**Total Contract if approved: \$335,199**

### Original Contract:

The scope of this project includes:

This project is part of an overall project to construct a four-lane desert parkway expansion along Aerospace Parkway from the Nogales Highway to 3800 Linear Feet east of Raytheon Parkway, approximately 1.5 miles long, including a widening of the existing UPRR crossing near Nogales Highway using the alternative delivery method of Construction Manager at Risk (CMAR). However, this phase of project only consists of extending Raytheon Parkway from the existing Aerospace Parkway intersection southwesterly for approximately 0.4 miles which will create a four-way intersection at Aerospace Parkway and Raytheon Parkway in coordination with the CMAR. This southern extension must provide a business access for Vector and other adjacent parcels currently available for development. In addition, this project will plan and design the ultimate Aerospace Parkway/Raytheon Parkway intersection for the overall project. The design activities include: roadway; structures; drainage; utility location and relocation coordination; survey; right-of-way documentation; traffic analysis for the traffic signal and design; signing; pavement marking and geotechnical investigations for pavement design

The scope of work for this project includes the CONSULTANT providing:

- Preliminary DSR Planning and Engineering. This work includes preliminary design and developing technical reports needed to produce a Design Summary Report. This work also includes the development of design documents addressing issues such as alignment, channelization, drainage, right-of-way, minor structures, and a cost estimate. An EAMR document will not be produced.
- Final Engineering Phase. (Stages III/IV and V as referenced in the Pima County Roadway Design Manual) involves developing the Plans, Specifications & Estimate (PS&E) documents for construction. This work also includes coordination with the CMAR in the development of their Guaranteed Maximum Price (GMP) for the project. This scope assumes only one (1) GMP will be developed for this project.
- Post-Design Construction Phase Services. As part of the CMAR process, this task includes responding to questions or providing clarification for the CMAR-GMP coordination. This task includes time for reviewing submittals, shop drawings and developing as-built drawings.
- Additional Services. This task includes any additional scope items for any and all activities related to the project on an as requested/as needed basis.

**Amendment No. 1: Convert \$11,638 Additional Services to available fee (balance \$8,362); Convert \$20,000 Post Design Services to available fee; Add \$6,600 to Post Design services.**

This amendment includes two cost proposals, Exhibit B-1 which shifts additional services capacity to added scope; and Exhibit B-2 to both utilize post-design services capacity and add additional cost to the post-design services line item as outlined in the scope of work and proposals. The additional services work is to increase the level of effort

relating to the Utility Coordination, Geotechnical Analysis, and the Drainage Report. This work includes work by both consultant and sub consultant. This amendment additionally includes the Post Design services anticipated for the project, per the attached scope and proposal.

**Justification:**

These additional services were to ensure that the most efficient pavement design was determined for the project, to value engineer paving thicknesses and soil treatments. The additional drainage work was to also determine future additional drainage conveyance related to future development south of Raytheon way (related to public drainage basins) not originally anticipated in the scope of work. Additional utility coordination includes the owner added scope of the joint utility trench along Raytheon Parkway southern extension to meet current and future utility needs. Finally, this amendment outlines the estimate tasks and level of effort for post design services for the construction of phase 1. These include necessary services to ensure project is installed per plans and specifications as well as any design clarifications as needed and development of as-built plans.

**Funding Source:**

Project budget is \$10,000,000, funded via 12.6% funds in the 4AERO2 project for transportation. The project budget has up to \$350,000 in design funds planned for phase 1 engineering; this contract increase fits within the proposed project design costs. This contract was procured via a direct select method via title 34.

<b>PIMA COUNTY PUBLIC WORKS</b>		
<b>PROJECT:</b>	Aerospace Parkway Widening: Phase 1 Southern Extension (4AERO2)	<b>CONTRACT</b>
<b>CONSULTANT:</b>	AECOM Technical Services, Inc. 333 E. Wetmore Road Tucson, Arizona 85705	<b>NO. <u>CT-PW-17-281</u></b>
<b>CONTRACT NO.:</b>	CT-PW-17000000000000000281	<b>AMENDMENT NO. <u>01</u></b>
<b>AMENDMENT NO.:</b>	One (1)	This number must appear on all invoices; correspondence and documents pertaining to this contract.
<b>FUNDING:</b>	HURF 12.6%	

<b>CONTRACT TERM:</b> 03/07/17 to 06/30/2019	<b>ORIGINAL CONTRACT AMOUNT:</b>	\$	328,599.00
<b>TERMINATION PRIOR AMENDMENT:</b> N/A	<b>PRIOR AMENDMENT(S):</b>	\$	-
<b>TERMINATION THIS AMENDMENT:</b> 06/30/2019	<b>AMOUNT THIS AMENDMENT:</b>	\$	6,600.00
	<b>REVISED CONTRACT AMOUNT:</b>	\$	335,199.00

**CONTRACT AMENDMENT**

**WHEREAS,** COUNTY and CONSULTANT have entered into the Contract referenced above; and

**WHEREAS,** COUNTY and CONSULTANT agree to reallocate funds from Additional Services to added scope; and

**WHEREAS,** COUNTY has determined the need for additional post-design and geotechnical services to include utility coordination, geotechnical analysis, and the drainage report; and

**WHEREAS,** COUNTY and CONSULTANT agree to reallocate funds from Post-Design Services to added scope; and

**WHEREAS,** COUNTY and CONSULTANT agree to modify the scope and contract amount to provide payment for said modifications; and

**NOW, THEREFORE,** it is agreed as follows:

**CHANGE:** The first paragraph in Article 3 – COMPENSATION AND PAYMENT as follows:

From: "In consideration of the services specified in this Contract, COUNTY agrees to pay CONSULTANT Not to Exceed Three Hundred Twenty-eight Thousand Five Hundred Ninety-nine Dollars and Zero Cents (\$328,599.00). CONSULTANT'S fees are as stated in EXHIBIT B: CONSULTANT FEE PROPOSAL (9 pages), attached to this Contract. Hourly rates and all other rates included under this Contract will remain fixed throughout the term of the Contract. COUNTY may consider adjustments to rates in connection with any extensions of the Contract term."

To: "In consideration of the services specified in this Contract, COUNTY agrees to pay CONSULTANT Not to Exceed **Three Hundred Thirty-five Thousand One Hundred Ninety-nine Dollars and Zero Cents (\$335,199.00)**. CONSULTANT'S fees are as stated in EXHIBIT B: CONSULTANT FEE PROPOSAL (9 pages), **Exhibit B-1 (16 pages)**, and **Exhibit B-2 (3 pages)** attached to this Contract. Hourly rates and all other rates included under this Contract will remain fixed throughout the term of the Contract. COUNTY may consider adjustments to rates in connection with any extensions of the Contract term."

**ADD:** EXHIBIT B-1 (16 pages)  
EXHIBIT B-2 (3 pages)

**REALLOCATE FUNDS** as follows:

Reduce: Additional Design Services by \$11,638.00.

Increase: Task 3.2 by \$3,245.00

Increase: Task 3.20.3 by \$3,556.00

Increase: Golder Associates, Inc. by \$4,837.00.

This Amendment shall be effective on November 7, 2017.

All other provisions of the Contract, not specifically changed by this Amendment, shall remain in effect and be binding upon the Parties.

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IN WITNESS WHEREOF, the Parties have affixed their signatures to this Amendment on the dates written below.

APPROVED:

CONSULTANT:

\_\_\_\_\_  
Chair, Board of Supervisors

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Name and Title (Please Print)

\_\_\_\_\_  
Date

ATTEST:

\_\_\_\_\_  
Clerk of the Board

APPROVED AS TO FORM:

  
\_\_\_\_\_  
Deputy County Attorney

**TOBIN ROSEN**  
\_\_\_\_\_  
Name (Please Print)

10/20/17  
\_\_\_\_\_  
Date

**REALLOCATE FUNDS** as follows:

Reduce: Additional Design Services by \$11,638.00.

Increase: Task 3.2 by \$3,245.00

Increase: Task 3.20.3 by \$3,556.00

Increase: Golder Associates, Inc. by \$4,837.00.

This Amendment shall be effective on November 7, 2017.

All other provisions of the Contract, not specifically changed by this Amendment, shall remain in effect and be binding upon the Parties.

---

IN WITNESS WHEREOF, the Parties have affixed their signatures to this Amendment on the dates written below.

APPROVED:

\_\_\_\_\_  
Chair, Board of Supervisors

\_\_\_\_\_  
Date

CONSULTANT:

*Randall Beck*  
\_\_\_\_\_  
Signature  
*Randall Beck / Vice President*  
\_\_\_\_\_  
Name and Title (Please Print)

*10.23.17*  
\_\_\_\_\_  
Date

ATTEST:

\_\_\_\_\_  
Clerk of the Board

APPROVED AS TO FORM:

  
\_\_\_\_\_  
Deputy County Attorney

**TOBIN ROSEN**

\_\_\_\_\_  
Name (Please Print)

*10/20/17*  
\_\_\_\_\_  
Date

# EXHIBIT B-1 (16 PAGES)



PROJECT: Roadway Planning & Design Engineering Services:  
Aerospace Parkway – Raytheon Parkway Southern Extension

PREPARED BY: Brian Ravesloot, PE CONTRACT NO.: TBD

EFFECTIVE DATE: CONSULTANT: AECOM

CONTRACT TIME: CONTRACT TYPE: Cost Plus Fixed Fee

COMPENSATION: CPFF

**DIRECT LABOR COST**

	HOURS	HOURLY RATE	LABOR COST
<u>CLASSIFICATION</u>			
Project Principal	0	\$89.20	\$0.00
Project Manager	0	\$69.01	\$0.00
Senior Project Engineer	6	\$52.38	\$314.28
Project Engineer/Planner	20	\$41.93	\$838.60
Drafting/CADD/Graphics	44	\$32.56	\$1,432.64
Project Admin	0	\$34.71	\$0.00
 (A) Direct Labor	 70 Hrs.		 <b><u>\$2,586</u></b>

**OVERHEAD**

(B) OH Rate x (A)	or	139.140%	x	\$2,586	=	<b><u>\$3,597</u></b>
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**PROFIT**

(C) % Profit Rate x (A+B)	or	10.0%	x	\$6,183	=	<b><u>\$618</u></b>
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**ESTIMATED OTHER DIRECT EXPENSES**

TRAVEL (Phoenix Staff)		=	\$0
COMMUNICATIONS		=	\$0
REPRODUCTIONS		=	\$0
EXHIBITS		=	\$0
SPECIALIZED VENDORS		=	\$0
 (D) Estimated Other Direct Expenses		 =	 <b><u>\$0</u></b>

(E) ESTIMATED OUTSIDE SERVICES & SUBCONSULTANT COSTS		=	
HDR Engineering, Inc.		=	\$0
Kimley Horn Associates, Inc.		=	\$0
Wheat Design Group, Inc.		=	\$0
Golder Associates Inc.		=	\$4,837
 (F) TOTAL COST FOR ALL SUBCONSULTANT & OUTSIDE SERVICES		 =	 <b><u>\$4,837</u></b>

**ESTIMATED FEES**

(G) TOTAL CONSULTANT FEE		=	<b><u>\$11,638</u></b>
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*\* The cost estimates included in this proposal are valid for six months from the date of submittal. If the proposal is accepted after said period, AECOM reserves the right to review and retain or modify the cost estimates stated herein in order to appropriately reflect changing costs and salaries and similar economic considerations. Any changes to this scope of work may require a modified estimate.*

*\*\*Totals may not sum due to rounding.*













**AECOM Workhour Breakdown by Task**

Task	Classification						Totals
	Project Principal	Project Manager	Senior Project Engineer	Project Engineer	Drafter	Project Admin	
Task 3.20.3. Stage V – (Final Plans-100%)							
Cover							0
General Notes							0
Design Data & Pavement Sections							0
Typical Sections							0
Summary Sheets							0
Roadway Details							0
Horizontal Control Sheets							0
Staking Plans							0
Drainage Details							0
P&P Sheets							0
Cross Culvert Details							0
Cross Culvert P&P							0
Channel P&P							0
Signing and Marking							0
Signing Summary							0
Traffic Signal Plans							0
Landscaping Plans							0
Erosion Control Plans							0
Joint Trench Plans/JOC Utility Plans/Water/Utility Plans			2	8	28		38
Water Modification Plan							0
Sewer Modificaion Plan							0
Value Engineering/Constructability Reviews							0
Stage V Cost Estimate							0
Stage V Final Special Provisions							0
<b>Stage V Total</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>8</b>	<b>28</b>	<b>0</b>	<b>38</b>
3.20.4 - Quality Control Review	0	0	0	0	0	0	0
<b>Preparation of Construction Documents Total</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>8</b>	<b>28</b>	<b>0</b>	<b>38</b>
<b>Additional PROJECT Workhours Total</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>20</b>	<b>44</b>	<b>0</b>	<b>70</b>

TRAVEL: Phoenix Staff		avg. mi.			
Mileage:	<u># of Trips</u>	<u>per trip</u>		<u>Cost/mi.</u>	<u>Cost</u>
	0		0	\$0.55	\$0.00
Car:	<u># of Trips</u>			<u>Cost/trip</u>	<u>Cost</u>
	0			\$150.00	\$0.00
Air:	<u># of Trips</u>			<u>Cost/trip</u>	<u>Cost</u>
					\$0.00
Lodging:	<u>Nights</u>	<u>People</u>		<u>Cost/night</u>	<u>Cost</u>
	0	0		\$65.00	\$0.00
		Exhibit A			
Per Diem:	<u>Meal</u>	<u># of Meals</u>		<u>Cost/Meal</u>	<u>Cost</u>
	Breakfast	0		\$8.00	\$0.00
	Lunch	0		\$12.00	\$0.00
	Dinner	0		\$15.00	\$0.00

**TOTAL TRAVEL = \$0**

COMMUNICATIONS

	<u>No. of Deliveries</u>	<u>Cost per Delivery</u>	<u>Cost</u>
Fed-Ex, DDS Delivery, etc.	0	\$15.00	\$0.00
			\$0.00
<u>Project Website</u>			
Web Hosting Setup			\$0.00
Web Hosting (IH&M) (6 months @ \$50/month)			\$0.00

**TOTAL COMMUNICATIONS = \$0**

REPRODUCTIONS:

Plan Submittal/Reports Reproduction (See EXHIBIT B)	\$0
PAG (Pima Association of Governments) Orthophoto and DEM/LIDAR	\$0

Copies other than reports

	<u>No. of Copies</u>	<u>Cost per Copy</u>	<u>Cost</u>
Color Copies			
8 1/2"x11"	0	\$1.00	\$0.00
11"x17" (Exhibits)	0	\$1.50	\$0.00
Black & White Copies			
8 1/2"x11"	0	\$0.25	\$0.00
11"x17"	0	\$0.35	\$0.00
PS&E 24"x36" Mylars		\$10.00	\$0.00

**TOTAL REPRODUCTIONS = \$0**

EXHIBITS:

	<u>No. of Copies</u>	<u>Cost per Copy</u>	<u>Cost</u>
Meeting Exhibits on Aerial Photo_200 scale	0	\$8.00	\$0.00
Misc. Meeting Exhibits on Aerial Photo_200 scale	0	\$8.00	\$0.00

**TOTAL EXHIBITS = \$0**

SPECIALIZED VENDORS:

<u>Cost</u>
\$0.00
\$0.00

**TOTAL SPECIALIZED VENDORS = \$0**

**TOTAL OF DIRECT EXPENSE ITEMS = \$0**

Type of Report	Covers & Binding	Black & White				Color Copies				COST PER REPORT	No. of Copies	TOTAL
		8 1/2"x11"		11"x17"		8 1/2"x11"		11"x17"				
		Pages	Cost per Copy	Pages	Cost per Copy	Pages	Cost per Copy	Pages	Cost per Copy			
3.2.1 - Quality Control Plan	\$5.00	0	\$1.00	0	\$0.35	0	\$0.75	0	\$1.50	\$5.00	0	\$0
3.20.1 - Stage I/II Plans	\$5.00	0	\$0.25	0	\$0.35	0	\$0.75	0	\$1.50	\$5.00	0	\$0
3.20.2 - Stage III/IV Plans	\$5.00	0	\$0.25	0	\$0.35	0	\$0.75	0	\$1.50	\$5.00	0	\$0
3.20.3 - Stage V Plans	\$5.00	0	\$0.25	0	\$0.35	0	\$0.75	0	\$1.50	\$5.00	0	\$0
REPORTS TOTAL =											\$0	



Mr. Brian Ravesloot, PE  
AECOM  
333 E. Wetmore Road  
Suite 400  
Tucson, Arizona 85705

**RE: REQUEST FOR CONTRACT MODIFICATION 1 –  
RAYTHEON PARKWAY SOUTHERN EXTENSION**

Dear Brian:

Golder Associates Inc. (Golder) requests a contract modification (CM1) for Task Order 87382 under our March 6, 2017 Master Consulting Services Subcontract. Golder's original scope and fee for the PCDOT Aerospace Parkway Widening – Phase 1 project under the Task Order was executed on March 22, 2017 in the amount of \$11,302.00. The purpose of this contract modification is to adjust for out of scope meetings and coordination, and additional time expended on pavement analysis and design.

## 1.0 JUSTIFICATION

Golder's approach to scoping this project was based on the assumption that this relatively straightforward project would utilize our previous work completed for the Hughes Access Road Project, so that we could supplement it with minimal additional field and laboratory data, and produce new geotechnical and pavement recommendations in essentially a linear fashion. The amount of time required for meetings, coordination with our team and the Phase 2 team, as well as reduction of traffic data, and iterative analysis of traffic data and pavement design required more effort than we originally budgeted.

Specifically, we only budgeted for one meeting (project kick-off) at 3 hours in our original cost proposal. We have attended two additional meetings and several conference calls totaling approximately 10 hours to date. We have also exhausted our total allocated budget for Task 3.13, Pavement Design Report, while only the draft report has been issued. The reason for this is that we need to consider multiple traffic loading scenarios and to coordinate with other project team members to determine the appropriate plan forwarded to analyze the traffic numbers. Additionally, the change from the ADOT R-Value correlation equation to the new PCDOT R-Value correlation equation has required additional analysis and coordination with the team than we originally anticipated.

We also request a small adjustment to the project direct expenses associated with the Dynamic Cone Penetrometer (DCP) investigation. We had estimated a rental charge of \$140 for the equipment. We did not charge this fee, but we did incur shipping charges associated with mobilization of this equipment from another site.

## 2.0 ADDITIONAL SCOPE

A summary of the additional services provided to the project beyond our original scope includes:

- Twelve additional labor hours for Task 3.2.3 (meetings)
- A total of 16 additional labor hours for Task 3.13 (Pavement Design Report)
- An increase of \$99 in direct expenses associated with the difference between actual (\$239) and estimated (\$140) costs to utilize the DCP equipment

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**Golder Associates Inc.**  
4730 N. Oracle Road, Suite 210  
Tucson, AZ 85705 USA  
Tel: (520) 888-8818 Fax: (520) 888-8817 www.golder.com



### 3.0 ESTIMATED ADDITIONAL COSTS

Golder's approved contract amount for this project is \$11,302. The total time and materials costs for this contract modification request is \$4,837, which would bring the total project cost to \$16,139. The overall Derivation of Additional Cost is attached as Table 1. Backup for additional direct job costs is included as Attachment 1. Golder will only charge for productive time completed on the project and will not exceed the total approved budget without prior written approval.

Please contact us at (520) 888-8818 if you have any questions or comments regarding this proposal.

#### **GOLDER ASSOCIATES INC.**



Randy Post, PE  
Senior Engineer



Michael Pegnam, PE  
Associate/Senior Consultant

Attachments: Table 1  
Attachment 1 – Direct Job Costs Backup

RMP/MLP/rt

## TABLE

**TABLE 1: DERIVATION OF ADDITIONAL COSTS - Raytheon Parkway Southern Extension**

**PROJECT NUMBER:** 1773477  
**CLIENT:** AECOM  
**PROJECT:** Raytheon Parkway Southern Extension  
**ESTIMATED CO 1 TOTAL:** \$4,837

GOLDER PERSONNEL	PROF. LEVEL	HOURLY RATE	TOTAL HOURS	TOTAL BILLINGS	Task 3.2.3 Meetings and Communication		Task 3.12 Geotechnical Investigation		Task 3.13 Pavement Design Report	
					Hours	Cost (\$)	Hours	Cost (\$)	Hours	Cost (\$)
<b>PROFESSIONAL STAFF</b>										
Associate / Senior Consultant	C6	\$194.23	3	\$582.69	2	\$388.46			1	\$194.23
Senior Engineer	C5	\$166.22	25	\$4,155.50	10	\$1,662.20			15	\$2,493.30
Senior Project Engineer	C4	\$158.91								
Project Engineer	C3	\$110.51								
Staff Engineer	C2	\$101.21								
Engineer	C1	\$79.53								
<b>Total Professional Staff Labor</b>			28	\$4,738.19	12	\$2,050.66			16	\$2,687.53
<b>SUPPORT STAFF</b>										
Staff Administrative Support	B2	\$63.84								
Staff Draftsperson	D2	\$79.92								
<b>Total Support Staff Labor</b>										
<b>TOTAL GOLDER LABOR</b>			28	\$4,738.19	12	\$2,050.66			16	\$2,687.53
<b>DIRECT JOB COSTS</b>										
DIRECT JOB COSTS	Rate	Subtotal (\$)	Total (\$)	Field Investigation		Lab Investigation		Reporting		
				Units	Cost (\$)	Units	Cost (\$)	Units	Cost (\$)	
OFFICE SERVICE FEE (% of Labor)										
<b>MISC. EXPENSES</b>			\$99.00							
Sample Shipping		\$239.00				\$239.00				
Miscellaneous Field Supplies										
Field Tablet for Logging (\$165/week)	\$165.00									
Nuclear Density Gauge (\$300/week)	\$300.00									
Dynamic Cone Penetrometer (DCP, \$140/wk)	\$140.00	-\$140.00				-1	-\$140.00			
<b>TRAVEL/SUBSISTENCE</b>										
Per Diem										
Fuel										
<b>TOTAL DIRECT JOB COSTS</b>				\$99.00			\$99.00			
<b>SUBCONTRACTED SERVICES</b>										
SUBCONTRACTED SERVICES	Rate	Subtotal (\$)	Total Costs (\$)	Field Investigation Costs (\$)		Lab Investigation Costs (\$)		Reporting Costs (\$)		
				Units	Cost (\$)	Units	Cost (\$)	Units	Cost (\$)	
<b>SUBCONTRACTORS</b>										
Southlands Engineering (Test Pits, DCP Support)										
A TEK (Lab Testing)										
<b>Total Subcontracted Charges</b>										
<b>Administration Charges (% markup)</b>										
<b>TOTAL SUBCONTRACTOR BILLINGS</b>										
<b>TOTAL BILLINGS</b>				\$4,837.19		\$2,050.66	\$99.00		\$2,687.53	



**ATTACHMENT 1  
DIRECT JOB COST BACKUP**



<b>Invoice Number</b> 5-825-45299	<b>Invoice Date</b> Jun 06, 2017	<b>Account Number</b> 1601-6083-7	<b>Page</b> 13 of 16
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Tracking ID: 721247416012 continued

Svc Area	A1	Fuel Surcharge	0.51
Signed by	C.DONALDSON	Earned Discount	-2.12
FedEx Use	00000000/1305/_	<b>Total Charge</b>	<b>USD \$18.92</b>

**1671594 Reference Subtotal USD \$56.76**

**Ship Date: May 30, 2017**      **Cust. Ref.: 1773477**      **Ref.#2: ATLANTA LAB**  
**Payor: Shipper**      **Ref.#3: PHASE 200**

- Fuel Surcharge - FedEx has applied a fuel surcharge of 2.75% to this shipment.
- The Earned Discount for this ship date has been calculated based on a revenue threshold of \$ 14122.40
- Distance Based Pricing, Zone 7

Automation	CAFE	Sender	Recipient	
Tracking ID	721247415921	LAB	RANDY POST	
Service Type	FedEx 2Day	GOLDER LAB	GOLDER ASSOCIATES	
Package Type	Customer Packaging	3730 CHAMBLEE TUCKER RD	4730 NORTH ORACLE ROAD	
Zone	07	ATLANTA GA 30341 US	TUCSON AZ 85705 US	
Packages	1			
Rated Weight	64.0 lbs, 29.0 kgs	Transportation Charge		319.99
Delivered	Jun 01, 2017 11:14	Discount		-128.00
Svc Area	A1	Additional Handling Charge - Package		11.00
Signed by	A.GARCIA	Courier Pickup Charge		0.00
FedEx Use	00000000/6090/_	Fuel Surcharge		4.75
		Earned Discount		-19.20
		<b>Total Charge</b>	<b>USD</b>	<b>\$188.54</b>

**1773477 Reference Subtotal USD \$188.54**

**Ship Date: May 30, 2017**      **Cust. Ref.: 3321**      **Ref.#2: TUCSON**  
**Payor: Shipper**      **Ref.#3: TUCSON**

- Fuel Surcharge - FedEx has applied a fuel surcharge of 2.75% to this shipment.
- The Earned Discount for this ship date has been calculated based on a revenue threshold of \$ 14122.40
- Distance Based Pricing, Zone 7

Automation	CAFE	Sender	Recipient	
Tracking ID	721247415900	KATHRYN LAWRENCE	MS. ROSINA THORNE	
Service Type	FedEx Standard Overnight	GOLDER ASSOCIATES	GOLDER ASSOCIATES INC.	
Package Type	FedEx Envelope	3730 CHAMBLEE TUCKER ROAD	4730 NORTH ORACLE STREET	
Zone	07	ATLANTA GA 30341 US	TUCSON AZ 85705 US	
Packages	1			
Rated Weight	N/A	Transportation Charge		37.25
Delivered	May 31, 2017 11:10	Discount		-17.88
Svc Area	A1	Fuel Surcharge		0.47
Signed by	B RAMSEY	Earned Discount		-2.24
FedEx Use	00000000/255/_	<b>Total Charge</b>	<b>USD</b>	<b>\$17.60</b>

**3321 Reference Subtotal USD \$17.60**

**Ship Date: Jun 01, 2017**      **Cust. Ref.: 3323**      **Ref.#2: PORTLAND**  
**Payor: Shipper**      **Ref.#3: PORTLAND**

- Fuel Surcharge - FedEx has applied a fuel surcharge of 2.75% to this shipment.
- The Earned Discount for this ship date has been calculated based on a revenue threshold of \$ 14122.40
- Distance Based Pricing, Zone 8

Automation	CAFE	Sender	Recipient	
Tracking ID	721247416090	KATHRYN LAWRENCE	CARLY SCHAEFER	
Service Type	FedEx Standard Overnight	GOLDER ASSOCIATES	GOLDER ASSOCIATES INC.	
Package Type	FedEx Envelope	3730 CHAMBLEE TUCKER ROAD	9 MONROE PARKWAY	
Zone	08	ATLANTA GA 30341 US	LAKE OSWEGO OR 97035 US	
Packages	1			
Rated Weight	N/A	Transportation Charge		38.96
Delivered	Jun 02, 2017 14:14	Discount		-18.70
Svc Area	A2	Courier Pickup Charge		0.00
Signed by	W.POLLO	Fuel Surcharge		0.49
FedEx Use	00000000/266/_	Earned Discount		-2.34
		<b>Total Charge</b>	<b>USD</b>	<b>\$18.41</b>

**3323 Reference Subtotal USD \$18.41**



<b>Invoice Number</b> 5-842-33469	<b>Invoice Date</b> Jun 22, 2017	<b>Account Number</b> 3619-4884-0	Page 5 of 5
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<b>Ship Date:</b> Jun 08, 2017	<b>Cust. Ref.:</b> 1773477.200	<b>P.O.#:</b>	
<b>Payor:</b> Shipper	<b>Dept.#:</b>		
<ul style="list-style-type: none"> <li>The Earned Discount for this ship date has been calculated based on a revenue threshold of USD 14,054.42</li> </ul>			
<b>Tracking ID</b> 779324130243	<b>Sender</b>	<b>Recipient</b>	<b>Transportation Charge</b> 50.88
<b>Service Type</b> Ppd, Domestic	Administrative Assistant	HENRY MOCK	AHS - Dimensions 11.00
<b>Zone</b> 07	Golder Associates Inc	GOLDER ASSOCIATES INC	NDOC P/U- Auto Comm 3.00
<b>Packages</b> 1	4730 N. Oracle Road	3730 CHAMBLEE TUCKER RD	Earned Discount -3.05
<b>Rated Weight</b> 64 lbs	TUCSON AZ 85705	ATLANTA GA 30341-441430	Performance Pricing -13.23
<b>Delivered</b> Jun 13, 2017			Fuel Surcharge 1.70
			<b>Total Charge USD \$50.30</b>
<b>1773477.200 Reference Subtotal</b>			<b>USD =&gt; \$50.30</b>

<b>Ship Date:</b> Jun 09, 2017	<b>Cust. Ref.:</b> 1774992.2000	<b>P.O.#:</b>	
<b>Payor:</b> Shipper	<b>Dept.#:</b>		
<ul style="list-style-type: none"> <li>The Earned Discount for this ship date has been calculated based on a revenue threshold of USD 14,054.42. Net Charge represents minimum package charge for this parcel. As a result, full discounts may not apply.</li> <li>Net charge represents minimum package charge for this parcel.</li> </ul>			
<b>Tracking ID</b> 779339244153	<b>Sender</b>	<b>Recipient</b>	<b>Transportation Charge</b> 8.14
<b>Service Type</b> Ppd, Domestic	Administrative Assistant	GILMER DE LA CRUZ	Fuel Surcharge 0.64
<b>Zone</b> 04	Golder Associates Inc	GILMER DE LA CRUZ	NDOC P/U- Auto Comm 3.00
<b>Packages</b> 1	4730 N. Oracle Road	3212 S 3740 W	Residential 3.85
<b>Rated Weight</b> 1 lbs	TUCSON AZ 85705	WEST VALLEY CITY UT 84120-212812	Performance Pricing -0.89
<b>Delivered</b> Jun 13, 2017			<b>Total Charge USD \$14.74</b>
<b>1774992.2000 Reference Subtotal</b>			<b>USD \$14.74</b>
<b>Total FedEx Ground</b>			<b>USD \$322.41</b>

$$\$188.54 + \$50.30 = \$238.84$$

# EXHIBIT B-2 (3 PAGES)



PROJECT: Roadway Planning & Design Engineering Services:  
Aerospace Parkway – Raytheon Parkway Southern Extension

PREPARED BY: Brian Ravesloot, PE CONTRACT NO.: TBD

EFFECTIVE DATE: CONSULTANT: AECOM

CONTRACT TIME: CONTRACT TYPE: Cost Plus Fixed Fee

COMPENSATION: CPPF

**DIRECT LABOR COST**

	HOURS	HOURLY RATE	LABOR COST
<u>CLASSIFICATION</u>			
Project Principal	0	\$89.20	\$0.00
Project Manager	0	\$69.01	\$0.00
Senior Project Engineer	28	\$52.38	\$1,466.64
Project Engineer/Planner	84	\$41.93	\$3,522.12
Drafting/CADD/Graphics	54	\$32.56	\$1,758.24
Project Admin	8	\$34.71	\$277.68
(A) Direct Labor	174 Hrs.		<b><u>\$7,025</u></b>

**OVERHEAD**

(B) OH Rate x (A)	or	139.140%	x	\$7,025	=	<b><u>\$9,774</u></b>
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**PROFIT**

(C) % Profit Rate x (A+B)	or	10.0%	x	\$16,799	=	<b><u>\$1,680</u></b>
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**ESTIMATED OTHER DIRECT EXPENSES**

TRAVEL (Phoenix Staff)	=	\$0
COMMUNICATIONS	=	\$0
REPRODUCTIONS	=	\$121
EXHIBITS	=	\$0
SPECIALIZED VENDORS	=	\$0
(D) Estimated Other Direct Expenses	=	<b><u>\$121</u></b>

(E) ESTIMATED OUTSIDE SERVICES & SUBCONSULTANT COSTS		
HDR Engineering, Inc.	=	\$3,000
Kimley Horn Associates, Inc.	=	\$3,000
Wheat Design Group, Inc.	=	\$1,000
Golder Associates Inc.	=	\$1,000
(F) TOTAL COST FOR ALL SUBCONSULTANT & OUTSIDE SERVICES	=	<b><u>\$8,000</u></b>

**ESTIMATED FEES**

(G) TOTAL CONSULTANT FEE	=	<b><u>\$26,600</u></b>
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*\* The cost estimates included in this proposal are valid for six months from the date of submittal. If the proposal is accepted after said period, AECOM reserves the right to review and retain or modify the cost estimates stated herein in order to appropriately reflect changing costs and salaries and similar economic considerations. Any changes to this scope of work may require a modified estimate.*

*\*\*Totals may not sum due to rounding.*



**AECOM Post Design Workhour Breakdown by Task**

Task	Classification						Totals
	Project Principal	Project Manager	Senior Project Engineer	Project Engineer	Drafter	Project Admin	
<b>Post Design Services:</b>							
(PM - 6 Months @ 4 hrs/Mth) Project Management Tasks			24			8	32
(1 @ 1 hrs) Weekly Construction Meeting				20			20
(RFI) Request For Informaion, Submittal Review, Misc Requests			2	20			22
As-builts			2	16	24		42
<b>PD Subtotal</b>	<b>0</b>	<b>0</b>	<b>28</b>	<b>56</b>	<b>24</b>	<b>8</b>	<b>116</b>
<b>Water Modifications:</b>							
(2 @ 2 hrs) Design Coordination Meetings				4			4
<b>Water Meeting Subtotal</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>4</b>
Stage III (60%) Water Submittal							
Cover				2	2		4
General Notes				2	2		4
Quantities				2	2		4
Plan & Profile				8	8		16
Details				2	4		6
<b>Water 60% Subtotal</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>16</b>	<b>18</b>	<b>0</b>	<b>34</b>
Final (100%) Water Submittal							
Cover					2		2
General Notes					2		2
Quantities				2	2		4
Plan & Profile				4	4		8
Details				2	2		4
<b>Water 100% Subtotal</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>12</b>	<b>0</b>	<b>20</b>
<b>Total</b>	<b>0</b>	<b>0</b>	<b>28</b>	<b>84</b>	<b>54</b>	<b>8</b>	<b>174</b>

TRAVEL: Phoenix Staff		avg. mi.			
Mileage:	<u># of Trips</u>	<u>per trip</u>		<u>Cost/mi.</u>	<u>Cost</u>
	0		0	\$0.55	\$0.00
Car:	<u># of Trips</u>			<u>Cost/trip</u>	<u>Cost</u>
	0			\$150.00	\$0.00
Air:	<u># of Trips</u>			<u>Cost/trip</u>	<u>Cost</u>
					\$0.00
Lodging:	<u>Nights</u>	<u>People</u>		<u>Cost/night</u>	<u>Cost</u>
	0	0		\$65.00	\$0.00
		Exhibit A			
Per Diem:	<u>Meal</u>	<u># of Meals</u>		<u>Cost/Meal</u>	<u>Cost</u>
	Breakfast	0		\$8.00	\$0.00
	Lunch	0		\$12.00	\$0.00
	Dinner	0		\$15.00	\$0.00

**TOTAL TRAVEL = \$0**

COMMUNICATIONS

	<u>No. of Deliveries</u>	<u>Cost per Delivery</u>	<u>Cost</u>
Fed-Ex, DDS Delivery, etc.	0	\$15.00	\$0.00
			\$0.00
<u>Project Website</u>			
Web Hosting Setup			\$0.00
Web Hosting (IH&M) (6 months @ \$50/month)			\$0.00

**TOTAL COMMUNICATIONS = \$0**

REPRODUCTIONS:

Plan Submittal/Reports Reproduction (See EXHIBIT B)	\$0
PAG (Pima Association of Governments) Orthophoto and DEM/LIDAR	\$0

Copies other than reports

	<u>No. of Copies</u>	<u>Cost per Copy</u>	<u>Cost</u>
Color Copies			
8 1/2"x11"	26	\$1.00	\$26.00
11"x17" (Exhibits)	30	\$1.50	\$45.00
Black & White Copies			
8 1/2"x11"	0	\$0.25	\$0.00
11"x17"	0	\$0.35	\$0.00
Water 24"x36" Mylars	5	\$10.00	\$50.00

**TOTAL REPRODUCTIONS = \$121**

EXHIBITS:

	<u>No. of Copies</u>	<u>Cost per Copy</u>	<u>Cost</u>
Meeting Exhibits on Aerial Photo_200 scale	0	\$8.00	\$0.00
Misc. Meeting Exhibits on Aerial Photo_200 scale	0	\$8.00	\$0.00

**TOTAL EXHIBITS = \$0**

SPECIALIZED VENDORS:

<u>Cost</u>
\$0.00
\$0.00

**TOTAL SPECIALIZED VENDORS = \$0**

**TOTAL OF DIRECT EXPENSE ITEMS = \$121**