



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

Award Contract Grant

Requested Board Meeting Date: 11/21/17

* = Mandatory, information must be provided

or Procurement Director Award

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

AECOM Technical Services, Inc.

***Project Title/Description:**

Bopp Road, Sarasota Boulevard at Kinney Road Improvements (4KINBO)

***Purpose:**

Amendment of Award: Contract No. CT-TR-17-270. Amendment No. One (1). This amendment increases the not-to-exceed contract amount by \$84,087.00. Administering Department: Transportation

This amendment increases the funding for the consultant to provide additional drainage studies, environmental studies and reporting for utility discovery due to a requirement change in ADOT policies for federal projects.

***Procurement Method:**

Pursuant to Direct Selection authority of A.R.S §34-103 the Board of Supervisors awarded a contract for Requisition No. 248340 on 02/21/17 in the not-to-exceed amount of \$380,000.00 for a contract term of 02/21/17 to 06/30/19.

Attachment: Amendment No. One (1)

***Program Goals/Predicted Outcomes:**

Final plans will be available for the bidding and construction of Bopp Road, Sarasota Boulevard at Kinney Road Improvements Project.

***Public Benefit:**

The project will improve safety, reduce congestion, improve operations, and increase mobility for commuters along the Kinney Road corridor.

***Metrics Available to Measure Performance:**

Project design is complete, allowing for bidding and construction of intersection.

***Retroactive:**

No.

*To: COB - 10-30-17
Pgs. - 25*

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: TR Contract Number (i.e., 15-123): 17-270
Amendment No.: One (1) AMS Version No.: Three (3)
Effective Date: 11/21/2017 New Termination Date: _____

Prior Contract No. (Synergen/CMS): _____

Expense or Revenue Increase Decrease Amount This Amendment: \$ 84,087.00

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

***Funding Source(s) required:** DOT 57 Highway User Revenue Funds (HURF)

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: Christy Bustillos, Senior Buyer *Christy Bustillos* 10-23-17

Department: Procurement *M. J. ...* 10/24/17 Telephone: 724-8414

Department Director Signature/Date: *William ...* 10/24/17

Deputy County Administrator Signature/Date: *[Signature]* 10/25/17

County Administrator Signature/Date: *[Signature]* 10/25/17
(Required for Board Agenda/Addendum Items)

PIMA COUNTY DEPARTMENT OF TRANSPORTATION					
PROJECT: Bopp Road, Sarasota Boulevard at Kinney Road Improvements (4KINBO)	<table border="1"> <tr> <td align="center">CONTRACT</td> </tr> <tr> <td>NO. <u>CT-TR-17-270</u></td> </tr> <tr> <td>AMENDMENT NO. <u>1</u></td> </tr> <tr> <td><small>This number must appear on all invoices, correspondence and documents pertaining to this contract.</small></td> </tr> </table>	CONTRACT	NO. <u>CT-TR-17-270</u>	AMENDMENT NO. <u>1</u>	<small>This number must appear on all invoices, correspondence and documents pertaining to this contract.</small>
CONTRACT					
NO. <u>CT-TR-17-270</u>					
AMENDMENT NO. <u>1</u>					
<small>This number must appear on all invoices, correspondence and documents pertaining to this contract.</small>					
CONSULTANT: AECOM Technical Services, Inc. 333 E. Wetmore Road Tucson, AZ 85705					
CONTRACT NO.: CT-TR-17-270					
AMENDMENT NO.: One (1)					
FUNDING: DOT 57 HURF					

CONTRACT TERM: 02/21/17 - 06/30/2019	ORIGINAL CONTRACT AMOUNT:	\$	380,000.00
TERMINATION PRIOR AMENDMENT: N/A	PRIOR AMENDMENT(S):	\$	-
TERMINATION THIS AMENDMENT: 06/30/2019	AMOUNT THIS AMENDMENT:	\$	84,087.00
	REVISED CONTRACT AMOUNT:	\$	464,087.00

CONTRACT AMENDMENT

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

WHEREAS, COUNTY requested the CONSULTANT to perform additional drainage studies and environmental studies and reporting for utility discovery due to a requirement change in ADOT policies for federal projects; and

WHEREAS, CONSULTANT submitted a Scope of Work and a Fee Schedule that is acceptable to the COUNTY; and

WHEREAS, COUNTY and CONSULTANT have agreed to modify the Contract to reflect these changes.

NOW, THEREFORE, it is agreed as follows:

CHANGE the first sentence of **ARTICLE 2 – SCOPE OF SERVICES** as follows:

From: CONSULTANT agrees to provide Engineering Design Services for the Bopp Road, Sarasota Boulevard at Kinney Road Improvements Project for the COUNTY as described in EXHIBIT A: SCOPE OF WORK (18 pages), attached to this Contract.

To: CONSULTANT agrees to provide Engineering Services and Post Design Services for the COUNTY as described in EXHIBIT A: SCOPE OF WORK (18 pages) and **EXHIBIT A-1: ADDITIONAL SERVICES TO SCOPE OF WORK** (6 pages), attached hereto and made part of this Contract.

CHANGE the first two sentences of **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 Eighty Thousand Dollars and Zero Cents (\$380,000.00). CONSULTANT'S fees are as stated in **EXHIBIT B: CONSULTANT FEE PROPOSAL** (20 pages), attached to this Contract.

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To: In consideration of the services specified in this Contract, COUNTY agrees to pay CONSULTANT Not to Exceed Four Hundred Sixty-Four Thousand Eight-Seven Dollars and Zero Cents (\$464,087.00). CONSULTANT'S fees are as stated in EXHIBIT B: CONSULTANT FEE PROPOSAL (20 pages) and EXHIBIT B-1: CONSULTANT FEE PROPOSAL ADDITIONAL SERVICES (17 pages), attached to this Contract.

ADD attached:

EXHIBIT A-1: ADDITIONAL SERVICES TO SCOPE OF WORK (6 pages)

EXHIBIT B-1: CONSULTANT FEE PROPOSAL ADDITIONAL SERVICES (17 pages)

This Amendment shall be effective on November 21, 2017.

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

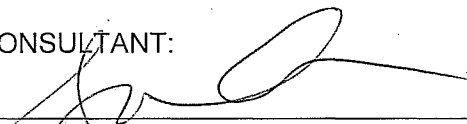
IN WITNESS WHEREOF, the Parties have affixed their signatures to this Amendment on the dates written below.

APPROVED:

Chair, Board of Supervisors

Date

CONSULTANT:



Signature
Jenna for Pyne
Associate Vice President

Name and Title (Please Print)

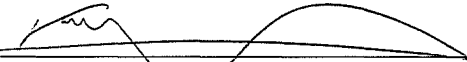
Date

10/27/17

ATTEST:

Clerk of the Board

APPROVED AS TO FORM:



Deputy County Attorney

TOBIN ROSEN

Name (Please Print)

Date

10/25/17

**ADDITIONAL SERVICES TO THE ORIGINAL SCOPE OF WORK
FOR
Design Engineering Services for Bopp Road –
Sarasota Boulevard at Kinney Road Improvements (4KINBO)**

Contract Modification No. 1

During the term of this Agreement, the engineering consultant, **AECOM**, (CONSULTANT) shall perform professional services for Pima County (County) in connection with the above referenced project. This scoping document shall be used to plan, conduct, and complete the CONSULTANT's work on the project. The subconsultants requiring a Contract Modification (CM) has included their respective scope of work.

I. BACKGROUND

The existing intersection of Bopp Road (Rd.) and Kinney Rd. is functionally obsolete and needs improvements to accommodate current and future travel demands safely. Current travel demands on Bopp Rd. are causing operational issues at the intersection with Kinney Rd. Traffic is using Donald Avenue as a cut-through route to avoid the existing intersection at Bopp Rd. and Kinney Rd. Improved access to and from Kinney Rd. is needed for traffic on Bopp Rd. The improvements are necessary to reduce the number and severity of crashes and to provide capacity for current and future travel demands. The proposed improvements will result in increased safety and better traffic operations. The project will be developed with DOT 57 HURF Bond funds. The project will be constructed with a combination of federal STP funding and DOT 57 HURF Bond funds and funding from Southwest (SW) Area Impact fees. Because the project will be using federal funds for construction, the project is being coordinated with the Arizona Department of Transportation (ADOT).

II. PROJECT DESCRIPTION

This project consists of realigning Bopp Rd. from where it currently connects with Kinney Rd. to where it will connect with the southerly extension of Sarasota Boulevard (Blvd.) Realigning Bopp Rd. with Sarasota Blvd. will create a four-way intersection at Kinney Rd. and Sarasota Blvd. This will improve traffic safety and operations. The existing alignment of Bopp Rd. will be maintained to provide access for local traffic only. A cul-de-sac at the west end of Bopp Rd. will prevent traffic from continuing west on Bopp Rd. The design activities include: roadway; structures; drainage; utility location and relocation coordination; survey; right-of-way documentation; traffic analysis for the traffic signal; signing and pavement marking; geotechnical investigations for pavement design; and National Environmental Policy Act (NEPA) environmental documentation.

Tasks that address the additional services include:

- **Task 3.18.4. Utility Coordination and Environmental Documentation for Utility Potholing.** This work involves the preparation of the utility pothole information and environmental documentation to perform subsurface utility investigations for existing utilities.
- **Task 3.20.7. Tucson Water System Modifications.** This work involves developing the Plans, Specifications & Estimate (PS&E) for the Tucson Water System Modifications in accordance with Tucson Water requirements and standards.
- **Task 3.20.8. Additional Services for Geometry Changes.** This task describes the work to date that resulted from changes to the original scope of services.

III. DESIGN CRITERIA - *Revised to include Tucson Water Design Criteria*

The design criteria for the Tucson Water System Modifications will comply with Tucson Waters' Specifications, Standards and Details, 2011 Edition.

IV. PROJECT SCHEDULE - *No change from original Scope of Work.*

V. ITEMS AND SERVICES TO BE FURNISHED BY THE COUNTY - *No change from original Scope of Work.*

VI. ABBREVIATIONS - *No change from original Scope of Work.*

VII. PROJECT DOCUMENTATION - *No change from original Scope of Work.*

VIII. WORK TASKS - *Changes from the original Scope of Work are summarized below.*

TASK 3.1 PROJECT MANAGEMENT – *Change to Task 3.1.1. Project Management*

Task 3.1.1. Project Management. Hours were included to cover the work necessary to update the project budget, subconsultant contracts and project administration. All other work is as stipulated in the original Scope of Work.

TASK 3.2 QUALITY CONTROL – *Change to Task 3.2.2. Meetings and Communication.*

Task 3.2.2. Meetings and Communication. This task is revised as follows:

- a. Conduct kickoff meeting with the project team (1 total). **Completed**
- b. Attend project field meeting (1 total). **Completed**
- c. Conduct bi-monthly progress meetings with the project team (6 total). **Meetings were held monthly in order to keep the project on track. This Contract Modification includes an additional three progress meetings to be held over the remainder of the contract period.**
- d. Conduct over-the-shoulder (OTS) review meetings with County reviewers after major submittals to review and resolve comments on each submittal (3 total). **The original Scope of Work combined the Stage I/II submittal. However, due to the changes in the vertical alignment and drainage design, a separate Stage II package was prepared and submitted for review and an OTS review meeting was held for this submittal. An additional OTS review meeting will be included in this Contract Modification to cover this review and maintain the future OTS review meeting for the Stage IV submittal.**

TASK 3.3 UTILITY COORDINATION - *No change from original Scope of Work*

TASK 3.4 PUBLIC PARTICIPATION - *No change from original Scope of Work.*

TASK 3.5 FEDERAL, STATE AND LOCAL COORDINATION - *No change from original Scope of Work.*

TASK 3.6 PUBLIC ART - *No change from original Scope of Work.*

TASK 3.7 DATA GATHERING - *No change from original Scope of Work.*

TASK 3.8 ENVIRONMENTAL IMPACT SCREENING - *No change from original Scope of Work.*

TASK 3.9 LOCATION REPORT - *No change from original Scope of Work.*

TASK 3.10 SURVEY AND MAPPING - No change from original Scope of Work.

TASK 3.11 DRAINAGE REPORT - This task modified to include Task 3.11.8. Alternative Development and Analysis.

Task 3.11.8 Alternative Development and Analysis. Refer to SCE's Scope of Work Contract Modification No. 1.

TASK 3.12 GEOTECHNICAL INVESTIGATION - No change from original Scope of Work.

TASK 3.13 PAVEMENT DESIGN REPORT - No change from original Scope of Work.

TASK 3.14 BRIDGE STRUCTURE SELECTION REPORT - No change from original Scope of Work.

TASK 3.15 TRAFFIC ENGINEERING STUDY - No change from original Scope of Work.

TASK 3.16 ARTERIAL STREET LIGHTING DESIGN REPORT - No change from original Scope of Work.

TASK 3.17 DESIGN CONCEPT REPORT - No change from original Scope of Work.

TASK 3.18 ENVIRONMENTAL ASSESSMENT AND MITIGATION - This task modified to include Task 3.18.9. Utility Coordination and Environmental Documentation for Utility Potholing

Task 3.18.9. Utility Coordination and Environmental Documentation for Utility Potholing. This work involved the preparation of the utility pothole information and environmental documentation to obtain an environmental clearance to perform subsurface utility investigations for existing utilities. AECOM coordinated with the utility companies to identify the pothole locations and develop a potholing plan. In addition, AECOM conducted the review and prepared the Technical Memorandum for the Cultural Resource Review and the Biological Evaluation Short Form (BESF). These documents were distributed to Pima County and ADOT for use to develop the Categorical Exclusion Checklist for the environmental clearance.

TASK 3.19 RIGHT-OF-WAY ACQUISITION SUPPORT - No change from original Scope of Work.

TASK 3.20 PREPARATION OF CONSTRUCTION DOCUMENTS – This task modified to include Task 3.20.7. Tucson Water System Modifications and Task 3.20.8. Additional Services for Geometry Changes

Task 3.20.7. Tucson Water System Modifications. The CONSULTANT will develop the Tucson Water System Modification PS&E to include in the Stage III – Stage V construction documents submittal. We anticipate the following plans sheets:

- Cover Sheet (1)
- Notes, Legend, Abbreviations & Materials Quantities Summary Sheet (1)
- Plan Sheets (7)
- Plan and Profile Sheets (2)
- Detail Sheets (2)

Task 3.20.8. Additional Services for Geometry Changes. The original design was based on previous projects from 2002 and 2007, and the Project Charter prepared by Pima County on December 19, 2016. The design in these documents raised the intersection to pass 100-year storm events under Kinney Rd. and the new alignment of Bopp Rd. Sarasota Blvd. was designed with a dip section to allow flows to cross the road. Based on this design, the original Scope of Work accounted for the following submittals: Stage I/II combined, Stage III, Stage IV, and Stage V Plans, Specifications, and Estimates (PS&E) packages. Due to the high

construction cost and impacts to existing Pima County parcels of the proposed roadway and drainage design, the consensus was to lower the vertical alignment. This decision occurred after the Stage I submittal; which included the Stage I plans and estimate, Drafts of the Project Assessment, Drainage Memorandum, Geotechnical Report, Pavement Design Report, Traffic Technical Memorandum, and the Visual Assessment. The Stage II plans and estimate and the applicable technical documents were revised to address the lower vertical alignment. Due to major changes to the vertical and horizontal alignments, the AECOM project team revised the documents and prepared a separate submittal for the Stage II package. Following is a description of the geometric changes:

- Vertical Alignment – The original vertical alignment for Bopp Rd., Kinney Rd. and Sarasota Blvd. were approximately four feet above the existing ground level. Lowering the vertical alignment resulted in the following rework and changes:
 - Several iterations of revisions to the vertical alignment on all three roadways to meet the design criteria and the Floodplain Ordinance requirements; which involved close coordination with SCE.
 - Revisions to the vertical profile in Inroads and on the plan sheets.
 - Remodeling the geometry to revise the earthwork quantities and update the cut-fill lines.
 - Revisions to the cross sections and quantities.
- Horizontal Alignment – The changes to the horizontal alignment included:
 - Revising the cross slope of Bopp Rd., Kinney Rd. and Sarasota Blvd. to superelevate it to allow drainage to continue to flow in its current drainage pattern.
 - Revisions to the edge of pavement to include a bump out with concrete ford wall on the downstream side at major at-grade drainage crossings. Concrete ford walls were added to the edge of pavement on the upstream side.
 - Eliminating the vertical curb in the medians and replacing it with concrete header. This change was made so that flows could continue crossing the roadway and not impeded by the raised curb.

Other major changes to the horizontal alignment included:

- Revising the horizontal alignment to eliminate the connection of the existing Bopp Rd. alignment to the new Bopp Rd. alignment and the cul-de-sac at the east end of the existing Bopp Rd. alignment. The existing Bopp Rd. alignment was revised to maintain the Kinney Rd./Bopp Rd. intersection and a cul-de-sac was designed at the west end of the road. The existing Bopp Rd. alignment will be maintained for local traffic use only.
- Modifying the travel lane width from 12 feet to 11 feet. The original layout was based on the horizontal alignment from the previous projects and matched the lane widths on the existing roadways. Based on comments on the Stage I plans from the County, the through lanes were narrowed to 11 feet, resulting in resetting the edges of pavement and revising the typical sections, roadway plan and profile sheets, geometric data sheets, and the pavement marking sheets. The work also involved remodeling the roadways to update the earthwork.

SCOPE OF WORK

Contract Modification No. 1

Design Engineering Services for Bopp Road – Sarasota Boulevard at Kinney Road Improvements (4KINBO)

During the term of this agreement, the engineering consultant, SCE Engineering, (SCE) shall perform professional services for Pima County & AECOM in connection with the above referenced project. This contract modification is to accompany the master contract modification prepared by AECOM. To be consistent with the master contract modification, the tasks are organized and numbered to coincide with that of the master document.

An initial design for this project was prepared using the plan layouts from the initial 2002 project, the following 2007 project, and the 2016 Project Charter prepared by Pima County as the basis of design. All of these plans followed Pima County guidelines of passing flows from the 100-year event under Kinney Road and Bopp Road. However, the hydrologic analysis for the current project produced significantly larger flows at the concentration point for the box culvert under Kinney Road. To mitigate the increased size/cost of a larger box culvert, Pima County requested an arch culvert be considered as a cost savings measure. However, based on the design for the 15% plans, the construction costs for roadway and drainage were still found to be higher than the available project funding.

The parcel downstream of Kinney Road is designated as 'open space'. Research by Pima County showed that excavation is allowed on the parcel, and direction was provided to allow excavation for an outfall channel for the new box culvert under Kinney Road. However, at the 15% plan review, environmental concerns for the parcel downstream of the new box culvert under Kinney Road were expressed, and direction was given to modify the design to minimize the excavation.

Development of alternatives that fell within the available project construction budget and addressed concerns for the open space parcel was required. This affected both the roadway vertical alignments for Kinney Road, Bopp Road, and Sarasota Boulevard, and the cross drainage for both roadways. Alternative development and analyses were not included in the original scope of work. This contract modification is being prepared to address the alternative analyses.

TASK 3.11 DRAINAGE REPORT (SCE)

Task 3.11.8 Alternative Development and Analysis.

Alternative analyses have been performed between the 15% and 30% plan submittal, and after the 30% plan submittal.

Between the 15% and 30% submittal, two alternative roadway vertical profiles that met design speed criteria were developed by AECOM for Kinney Road and for Bopp Road. FLO-2D models were created for each, but the concepts did not meet the Pima County Flood Control Ordinance requirement of a maximum 0.1 foot increase in water surface elevation on private properties.

After the 30% plan submittal, SCE developed 6 alternative roadway vertical alignments for Kinney Road, Bopp Road, and Sarasota Boulevard with the goal of meeting the requirements of the Floodplain Ordinance. SCE developed roadway models for each roadway, created the associated FLO-2D models, and analyzed results for each of the six alternatives. The alternative most closely meeting the Floodplain Ordinance requirements is being carried forward in the 60% design.

Coordination with AECOM has been required. The vertical alignment for the best alternative was provided to AECOM for adjusting the geometry as needed to meet roadway criteria established by AECOM and Pima County. AECOM provided dtm's for the three revised roadways, and the FLO-2D model was updated. Revisions are required to the design portion of the drainage report with the new direction the design has taken.

EXHIBIT B-1: CONSULTANT FEE PROPOSAL ADDITIONAL SERVICES (17 pages)



PIMA COUNTY
FEE ESTIMATE SUMMARY

PROJECT:	Roadway Planning & Engineering Design Services: Bopp Road – Sarasota Boulevard at Kinney Road Improvements (4KINBO)	DATE:	9/27/2017
PREPARED BY:	Charlene Robinson, PE	CONTRACT NO.:	CT-TR-KINBO
EFFECTIVE DATE:	1/17/2017	CONSULTANT:	AECOM Technical Services, Inc.
CONTRACT TIME:	14-Months from N.T.P.	CONTRACT TYPE:	
COMPENSATION:	CPFF		

DIRECT LABOR COST

DESCRIPTION	CLASSIFICATION	No. HOURS	HOURLY RATE	TOTAL COST
		Estimated Hours	Estimated Rates	Estimated Cost
1 Additional Services to the Original Scope of Work	Project Principal	2	\$85.32	\$170.64
	Project Manager	61	\$69.74	\$4,254.14
	Senior Project Engineer	72	\$66.64	\$4,798.08
	Project Engineer/Planner	136	\$54.35	\$7,391.60
	Drafting/CADD/Graphics	202	\$33.82	\$6,831.64
	Senior Environmental Scientist	38	\$48.40	\$1,839.20
	Project Environmental Scientist	24	\$31.39	\$753.36
	Survey Manager	0	\$43.92	\$0.00
	Survey Technician	0	\$38.10	\$0.00
	Project Admin	10	\$27.89	\$278.90
(A) Direct Labor		545 Hrs.		<u>\$26,318</u>

OVERHEAD

(B) OH Rate x (A) or 139.140% x \$26,318 = \$36,618

PROFIT

(C) % Profit Rate x (A+B) or 10.0% x \$62,936 = \$6,294

ESTIMATED OTHER DIRECT EXPENSES

TRAVEL (Phoenix Staff)	=	\$0
COMMUNICATIONS	=	\$0
REPRODUCTIONS	=	\$0
EXHIBITS	=	\$0
SPECIALIZED VENDORS	=	\$0

(D) Estimated Other Direct Expenses = \$0

(E) ESTIMATED OUTSIDE SERVICES & SUBCONSULTANT COSTS

SCE	=	\$13,128
Wheat Design Group	=	\$1,730
Golder Associates	=	\$0
Sound Solutions Acoustical Consulting	=	\$0
Traffic Research & Analysis, Inc	=	\$0

(F) TOTAL COST FOR ALL SUBCONSULTANT AND OUTSIDE SERVICES = \$14,858

ADDITIONAL SERVICES = \$0
POST DESIGN SERVICES = \$0

ESTIMATED FEES

(G) TOTAL CONSULTANT FEE = \$84,087

** 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 Estimate by Task

MAIN TASK #	Main Task Description	SUB-TASK #	Sub-Task Description	Project		Senior		Project		Drawing		Survey		Design		Project		TOTAL	
				Principal	Project Manager	Project Engineer	Engineer	Checker	Checker/Designer	Manager	Technician	Staff Scientist	Staff Scientist	Admin					
1	PROJECT MANAGEMENT	3.1	Project Management	2	0	4	0	0	0	0	0	0	0	0	0	0	0	14	
		3.2	Quality Control Process	0	0	22	10	0	0	0	0	6	0	0	0	0	0	0	40
		3.3	Coordination with Government Agencies	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Task Totals	2	0	26	10	0	0	0	6	0	0	0	0	0	0	54	
2	PUBLIC INVOLVEMENT	3.4	Public Participation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
3	ARTWORK	3.6	Public Art	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4	ENVIRONMENTAL SERVICES	3.8	Environmental Impact Screening	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		3.18	Environmental Assessment/Mitigation	0	24	0	8	0	0	0	0	32	23	0	0	0	0	88	
			Task Totals	0	24	0	8	0	0	0	0	32	23	0	0	0	0	90	
5	ENGINEERING SERVICES	3.7	Gathering Data	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		3.9	Location Report	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		3.10	Surveying and Mapping	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		3.11	Drainage Report	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	4
		3.12	Geotechnical Investigation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		3.13	Pavement Design Report	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		3.15	Traffic Engineering Report	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		3.16	Aerial Street Lighting Design Report	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		3.17	Design Concept Report	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		3.19	ROW Acquisition Support	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		3.20	Preparation of Construction Documents	0	35	44	118	202	0	0	0	0	0	0	0	0	0	0	399
					Task Totals	0	37	46	118	202	0	0	0	0	0	0	0	0	403
6	UTILITY	3.3	Utility Coordination	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
7	BRIDGE	3.14	Bridge Structure Selection Report	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
TOTAL WORKHOURS				2	61	72	136	212	0	6	33	23	0	0	0	0	544		

Main

Workhour Estimate by Task

Task/Item	Project Principal	Project Manager	Senior Project Engineer	Project Engineer	Drafting/CADD/Graphic	Survey Manager	Survey Technician	Senior Professional	Professional	Admin	TOTAL
Task 3.10											
5 Preparation of Construction Documents											
3.10.1 - Stage III Final Design Plans (Conceptual Phase)	0	0	0	0	0	0	0	0	0	0	0
3.10.2 - Stage III Initial P&E Plans (Verification Phase)	0	0	0	0	0	0	0	0	0	0	0
3.10.3 - Stage IV Final P&E Plans (Verification Phase)	0	0	0	0	0	0	0	0	0	0	0
3.10.4 - Stage V Final P&E Assembly (P&E Phase)	0	0	0	0	0	0	0	0	0	0	0
3.10.5 - Civil Detail Services	0	0	0	0	0	0	0	0	0	0	0
3.10.6 - Field Services	0	0	0	0	0	0	0	0	0	0	0
3.10.7 - Test or Water System Modifications	0	0	0	0	0	0	0	0	0	0	0
3.10.8 - Additional Services for Geometry Changes	0	0	0	0	0	0	0	0	0	0	0
Subtotal	0	35	44	118	202	0	0	0	0	0	399
TOTAL WORKHOURS	2	61	72	136	202	0	0	38	24	10	545

ADDITIONAL AECOM HOUR BACKUP INFORMATION & ASSUMPTIONS

Task	Classification										Totals	
	PP	PM	Snr PE	PE	Drafter	SM	S Tech	Snr Env Sc	Env Sc	Prj Admin		
Project Management:												
3.1.1 - (PM - 14 Months @ 8 hrs/Mth) Project Management Tasks	2		4								8	14
Quality Control Process:												
3.2												
3.2.1 - Quality Control Plan												0
3.2.2 - Meetings and Communication												
(1 @ 2 hrs/per) Kickoff Meeting												0
(1 @ 4 hrs) Project Field Meeting												0
(3 @ 2 hrs) As-needed Progress Meetings			6	6				6				18
(1 @ 4 hrs) Stage submittal/OTS Meetings			4	4						2		10
Graphics/Handouts/Summaries			12									12
Sub Total	0	0	22	10	0	0	0	6	0	2		40
3.2.3 - Schedule (Create Project Schedule)												0
(6 @ 2 hrs) Bi-Monthly Schedule Updates												0
Sub Total	0	0	0	0	0	0	0	0	0	0		0
Total	0	0	22	10	0	0	0	6	0	2		40
Utility Coordination:												
3.3												
3.3.1 - Utility Base File Creation												0
3.3.2 - Data Gathering, Prelim Design Notifications, As-Built Requests												0
3.3.3 - Design Coordination, Utility Impact Identification												
(6 meetings @ 2 hrs) Utility Coordination Meetings												0
3.3.4 - Utility Mitigation Measures												0
3.3.5 - Quality Control Review												0
Total	0	0	0	0	0	0	0	0	0	0		0
Public Participation:												
3.4												
3.4.1 - Public Meetings												
Prep Meetings (2 @ 2 hrs)												0
Public Open House Meeting (1 @ 8 hrs)												0
Sub Total	0	0	0	0	0	0	0	0	0	0		0
3.4.2 - One-on-One Property Owner Meetings (4 @ 2 hrs)												0
3.4.3 - Quality Control Review												0
Total	0	0	0	0	0	0	0	0	0	0		0
Federal, State and Local Coordination:												
3.5												
3.5.1 - Coordinate Between Participating Agencies												
404 Pre-Application Meetings (3 meetings @ 3 hrs) includes prep time												0
ADOT/FHWA Coordination Meetings (2 meetings @ 3 hrs) includes prep time												0
Total	0	0	0	0	0	0	0	0	0	0		0
Public Art:												
3.6												
N/A												
Total	0	0	0	0	0	0	0	0	0	0		0
Data Gathering:												
3.7												
3.7.1 - Gather Existing Information												0
3.7.2 - Site Visits During Project Design												0
3.7.3 - Quality Control Review												0
Total	0	0	0	0	0	0	0	0	0	0		0

ADDITIONAL AECOM HOUR BACKUP INFORMATION & ASSUMPTIONS

Task	Classification										Totals
	PP	PM	Snr PE	PE	Drafter	SM	S Tech	Snr Env Sc	Env Sc	Prj Admin	
3.20.7 - Tucson Water System Modifications											
Cover		1	6		10						17
Notes, Legend, Abbreviations & Materials Quantities Summary Sheet		1	2		8						11
Plan Sheets		2	12	32	80						126
Plan and Profile Sheets		1	6	16	24						47
Detail Sheets		2	6	12	20						40
Quantities and Cost Estimate		2		12							
Special Provisions		2	12	6							
Quality Control Review		16									16
Tucson Water System Modifications Total	0	27	44	78	142	0	0	0	0	0	291
3.20.8. Additional Services for Geometry Changes											
Changes to the Plans, Quantities and Cost Estimate		8		-40	60						108
Additional Services for Geometry Changes Total	0	8	0	-40	60	0	0	0	0	0	108
Preparation of Construction Documents Total	0	35	44	118	202	0	0	0	0	0	399
PROJECT Workhours Total	2	61	72	136	202	0	0	38	24	10	545



FEE ESTIMATE SUMMARY

PROJECT: Bopp Road: Sarasota Blvd at Kinney Rd DATE: 09/20/17
 PREPARED BY: Edie Griffith-Metty, SCE Engineering CONTRACT NO.: 4KINBO
 EFFECTIVE DATE: CONSULTANT (PRIME) AECOM
 CONTRACT TIME: CONTRACT TYPE: Time & Materials
 METHOD OF COMPENSATION: Monthly

DIRECT LABOR COST

ITEM No.	TASK DESCRIPTION	CLASSIFICATION	No. HOURS Estimated	HOURLY RATE Estimated	TOTAL COST Estimated
			Hours	Rates	Cost
1	Final Plans, Specs and Estimate Including Drainage Report	Principal Engineer	0	\$75.00	\$0.00
		Project Manager	4	\$60.00	\$240.00
		Project Engineer	65	\$46.00	\$2,990.00
		Engineer/Designer	40	\$40.00	\$1,600.00
		Project Admin	0	\$30.00	\$0.00
(A) Direct Labor			109 Hrs.		<u>\$4,830</u>
OVERHEAD					
(B) OH Rate x (A)			or 151.67%	x \$4,830	= <u>\$7,326</u>
PROFIT					
(C) % Profit Rate x (A+B)			or 8.0%	x \$12,156	= <u>\$972</u>

ESTIMATED OTHER DIRECT EXPENSES

TRAVEL	\$0.00
PLOTTING	\$0.00
REPRODUCTIONS	\$0.00
EXHIBITS	\$0.00
SPECIALIZED VENDORS (PAG)	\$0.00
INDEPENDENT PEER REVIEW	\$0.00
REPORTS	\$0.00
VAN/BUS RENTAL	\$0.00

(D) Estimated Other Direct Expenses = \$0

(E) ESTIMATED OUTSIDE SERVICES & SUBCONSULTANT COSTS

(F) TOTAL COST FOR ALL SUBCONSULTANT AND OUTSIDE SERVICES = \$0

ESTIMATED FEES

(G) TOTAL CONSULTANT FEE = \$13,128


Signature

9-20-2017

Date



Workhour Estimate by Task

Main Task #	Description	Principal Engineer	Project Manager	Project Engineer	Engineer/Designer	Project Admin	TOTAL
	Task 3.11						
3.11	Drainage Facility Design						
3.11.8	Alternative Development and Analysis		4	65	40		109
	Subtotal	0	4	65	40	0	109
TOTAL WORKHOURS		0	4	65	40	0	109

**PIMA COUNTY
FEE ESTIMATE SUMMARY**

PROJECT:	Contract Modification No. 1 Bopp Road: Sarasota Blvd to Kinney Road Improvements	DATE:	09/26/17
PREPARED BY:	Laura Mielcarek, Principal	CONTRACT NO.:	
EFFECTIVE DATE:		CONSULTANT:	Wheat Design Group, Inc.
CONTRACT TIME:		CONTRACT TYPE:	CPFF
METHOD OF COMPENSATION:			

DIRECT LABOR COST

		No. HOURS Estimated <u>Hours</u>	HOURLY RATE Estimated <u>Rates</u>	TOTAL COST Estimated <u>Cost</u>
	<u>CLASSIFICATION</u>			
	Principal	2	\$48.00	\$96.00
	Project Manager/RLA	8	\$36.00	\$288.00
	Designer	6	\$27.00	\$162.00
(A) Direct Labor		16 Hrs.		<u>\$546</u>
OVERHEAD				
(B) OH Rate x (A)	or	188.10%	x	\$546 =
				<u>\$1,027</u>
PROFIT				
(C) % Profit Rate x (A+B)	or	10.0%	x	\$1,573 =
				<u>\$157</u>
ESTIMATED OTHER DIRECT EXPENSES				
TRAVEL				\$0.00
PLOTTING				\$0.00
REPRODUCTIONS				\$0.00
EXHIBITS				\$0.00
SPECIALIZED VENDORS				\$0.00
REPORTS				\$0.00
VAN/BUS RENTAL				\$0.00
(D) Estimated Other Direct Expenses				=
				<u>\$0</u>
(E) ESTIMATED OUTSIDE SERVICES & SUBCONSULTANT COSTS				\$0
(F) TOTAL COST FOR ALL SUBCONSULTANT AND OUTSIDE SERVICES				=
				<u>\$0</u>
ESTIMATED FEES				
(G) TOTAL CONSULTANT FEE				=
				<u>\$1,730</u>

Workhour Estimate by Task

MAIN TASK #	Main TASK Description	Sub TASK Description	Principal	Project Manager/RLA	Designer	TOTAL
3.1	PROJECT MANAGEMENT	Design Coordination	2	4	0	6
3.20.3	STAGE III - INITIAL PS&E PLANS	Native Plant Inventory	0	4	6	10
		TOTAL HOURS	2	8	6	18