City of Benson
City Council Communication

Regular Meeting **November 10, 2014**

To: Mayor and Council Agenda Item # 6

From: Bradley J. Hamilton, P.E. Director of Public Works/City Engineer

Subject:

Resolution 29-2014 of the Mayor and Council of the City of Benson, Arizona, authorizing Armstrong Consultants, Inc. to proceed with design services for the construction of helicopter parking apron and lighting rehabilitation in an amount not to exceed $86,661.00

Discussion:

This project, the majority of which will be covered by federal and state aviation grants, consists of the design construction of improvements to Benson Municipal Airport in Benson, Arizona. The Proposed development includes:

- Helicopter Parking Apron (Helipad approximately 75' x 75')
- Replace Existing Beacon
- Relocate Taxiway Hold Signs
- Replace Runway 10 Threshold Lights
- Replace REILs
- Design of associated Reflective Markers/Lighting, Utility, Drainage and Site Preparation / Improvements & Pavement Markings
- Coordination with appropriate funding agencies.

Staff Recommendation:

Approval of Resolution 29-2014

RESOLUTION 29-2014

A RESOLUTION OF THE MAYOR AND COUNCIL OF THE CITY OF BENSON, ARIZONA, AUTHORIZING ARMSTRONG CONSULTANTS, INC., TO PROCEED WITH DESIGN SERVICES FOR THE CONSTRUCTION OF HELICOPTER PARKING APRON AND LIGHTING REHABILITATION IN AN AMOUNT NOT TO EXCEED $86,661.00

WHEREAS, the City Council approved on January 27, 2014 the independent contractor's agreement with Armstrong Consultants, Inc., for professional services for On-Call Airport Consulting, Engineering Design and Review Services; and

WHEREAS, the City Council has now determined that it is necessary for the City of Benson to authorize Armstrong Consultants, Inc., to proceed with Design Services for the Construction Helipad and Lighting Rehabilitation Project in the amount of $86,661.00

NOW, THEREFORE, BE IT RESOLVED that the City of Benson hereby authorizes Armstrong Consultants, Inc., to proceed with Design Services for the Construction Helipad and Lighting Rehabilitation Project in the amount of $86,661.00

BE IT FURTHER RESOLVED that the City of Benson hereby authorizes Bradley J. Hamilton, P.E., to execute the Authorization for Additional Services on behalf of the City of Benson.

PASSED AND ADOPTED by the Mayor and Council of the City of Benson, Arizona, this 10th day of November, 2014.

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TONEY D. KING, SR., Mayor

ATTEST:

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VICKI L. VIVIAN, CMC, City Clerk

APPROVED AS TO FORM:

_____
MESCH, CLARK AND ROTHSCHILD, P.C.
By Gary J. Cohen
City's Attorney

Detailed Engineering Fee Breakout

AIRPORT: City of Benson
LOCATION: Benson, AZ
ADOT GRANT NO.: E4S2V REILS
AIP No.: TBD
PROJECT DESCRIPTION: Construct New Helicopter Parking Pad, Replace Existing Beacon, Rolocate Taxiway Signs, Replace Runway 10 Threshold Lights, Replace REILs

Note: This spreadsheet is provided to show how the lump sum totals for each phase have been established. The monthly billing will be a simple percentage of each phases total lump sum amount.

	ENGINEERING BASIC SERVICES	Proposed Fee	Independent Fee Analysis	Negotiated Fee
1.0	PHASE 1: PRELIMINARY DESIGN	$29,220.00		
2.0	PHASE 2: FINAL DESIGN	$9,020.00		
3.0	BIDDING SERVICES	$6,910.00		
	TOTAL ACI DESIGN SERVICES	$45,150.00		
	DIRECT SUBCONSULTANTS			
	Design Survey	$2,740.00		
	Quality Acceptance Testing***	$0.00		
	TOTAL SUBCONSULTANTS	*$2,740.00*		
	ACI 15% Overhead on Subconsultants	$411.00		
	TOTAL DESIGN COST	$48,301.00		
4.0	CONSTRUCTION SERVICES	$38,360.00		
	Total Engineering Basic Services	**$86,661.00**		

*** The Quality Acceptance Testing consultant will contract directly with the Sponsor. Armstrong will coordinate the contract for the Sponsor.

DESIGN SERVICES

Item No.		Principal Engineer	Project Manager	Project Engineer / Planner	Staff Engineer	Draftsman	Clerical	Total Hours		Cost Summary
1.0	**PHASE 1: PRELIMINARY DESIGN**	$230.00	$190.00	$170.00	$140.00	$130.00	$70.00			
1.1	Coordinate w/Owner, ADOT, and FAA	1	4	2	1	0	0	8		$1,470.00
1.2	Prepare Project Scope of Work and Fee Estimates	2	6	0	0	0	2	10		$1,740.00
1.2	Scoping meeting	0	4	4	0	0	0	8		$1,440.00
1.2	Prelim Cost Estimates, Schematic Designs	0	1	2	4	4	0	11		$1,610.00
1.3	Prepare Grant Application and Reimbursement Requests for Desig	0	1	0	2	0	2	5		$610.00
1.4	Prepare and Coordinate Survey RFP	0	1	0	2	1	0	4		$600.00
1.4	Compile, Analyze and Prepare Survey Data									
1.5a	Input Raw Data	0	0	0	0	2	0	2		$260.00
1.5b	Sort Survey Data for Computer Modeling	0	0	0	0	2	0	2		$260.00
1.5c	Prepare Surface Model	0	0	0	0	2	0	2		$260.00
1.5d	Generate and Verify Contour Model	0	0	0	1	1	0	2		$270.00
1.5e	Prepare Surface for Profiles, Grading and X-sections	0	0	0	2	2	0	4		$540.00
1.6	Prepare Project Safety Plan	0	1	0	4	2	2	9		$1,150.00
1.7	Evaluate Local Conditions									
1.7a	Inventory Local Material Suppliers, Sources and Capabilities	0	0	0	2	0	0	2		$280.00
1.7b	Evaluate Drainage Alternatives	0	1	0	1	2	0	4		$590.00
1.7c	Review Lighting Layouts	0	4	0	4	0	0	8		$1,320.00
1.8	Review and Evaluate Project Layout									
1.8a	Complete and Submit Cat Ex	0	4	0	16	2	2	24		$3,400.00
1.8b	Review Alignments and Make Recommendations to Owner	0	0	2	0	1	0	3		$470.00
1.10	Prepare Construction Plans									
1.10a	Cover Sheet	0	0	0	1	1	0	2		$270.00
1.10b	Survey Control Map, Quantities, General Notes	0	1	0	2	2	0	5		$730.00
1.10c	Construction Operations & Phasing	0	1	2	0	2	0	5		$790.00
1.10d	Helicopter Parking Pad Layout and Grading	0	1	0	2	8	0	11		$1,510.00
1.10e	Helicopter Parking Pad Marking and Marking Details	0	1	0	1	2	0	0		$590.00
1.10f	Beacond Layout and Details	0	1	0	1	2	0	4		$590.00
1.10g	Taxiway Hold Sign Layout	0	1	0	1	2	0	4		$590.00
1.10h	Runway 10 Threshold Light and REIL Layout	0	1	0	1	2	0	4		$590.00
1.10i	Electrical Details	0	1	0	1	2	0	4		$590.00
1.11	Prepare Contractor Contract	0	1	0	0	0	2	3		$330.00
1.12	Prepare Technical Specifications	1	4	0	16	0	8	29		$3,790.00
1.13	Solicit Preliminary Design Comments Including 30% Meeting	0	3	0	3	0	0	6		$990.00
	Estimated Total Man-hours	**4**	**43**	**12**	**68**	**44**	**18**	**185**		
	Summary Costs	**$920.00**	**$8,170.00**	**$2,040.00**	**$9,520.00**	**$5,720.00**	**$1,260.00**			**$27,630.00**
1.90	**Reimbursables**									
1.92	Miscellaneous	0	500	0	0	0	0	500	$500.00	$500.00
1.93	Auto Rental	0	0	0	0	0	0	0 Days	$70.00	$0.00
1.94	Mileage	0	54	0	0	0	0	54 Mi	$0.445	$24.03
1.95	Pilot Time	0	8	0	0	0	0	8	$70.00	$560.00
1.96	C 182 Aircraft Miles	0	448	0	0	0	0	448	$0.995	$445.76
1.97	P 210 Aircraft Miles	0	0	0	0	0	0	0	$0.995	$0.00
1.98	Lodging and Per Diem	0	2	0	0	0	0	2 Days	per ADOT	$68.00
1.99	Commercial Travel	0		0	0	0	0	0 Trips	$400.00	$0.00
									Total Preliminary Design Phase:	**$29,227.79**
										Checks
									use	$29,220.00

Item No.		Principal Engineer	Project Manager	Project Engineer / Planner	Staff Engineer	Draftsman	Clerical	Total Hours		Cost Summary
2.0	**PHASE 2: FINAL DESIGN**	$230.00	$190.00	$170.00	$140.00	$130.00	$70.00			
2.1	Incorporate Preliminary Comments and Respond to RFI	0	1	0	2	2	0	5		$730.00
2.2	Calculate Quantities	0	0	0	1	2	0	3		$400.00
2.3	Prepare Estimate of Probable Construction Cost	0	1	0	2	0	0	3		$470.00
2.4	Prepare Engineer's Design Report	0	2	0	6	0	2	10		$1,360.00
2.5	Coordinate Schedules for Construction	0	1	0	2	0	2	5		$610.00
2.5	Update Plans to Accommodate Schedules	0	1	0	4	4	0	9		$1,270.00
2.5	Update Specs to Accommodate Schedules	0	1	0	4	0	4	9		$1,030.00
2.6	Prepare and Submit 100% Plans and Specifications for review	4	4	0	1	2	1	12		$2,150.00
2.6	Prepare As Bid Plans and Specifications	0	1	0	2	2	1	6		$800.00
	Estimated Total Man-hours	**4**	**12**	**0**	**24**	**12**	**10**	**62**		
	Summary Costs	**$920.00**	**$2,280.00**	**$0.00**	**$3,360.00**	**$1,560.00**	**$700.00**			**$8,820.00**
2.90	**Reimbursables**									
2.92	Miscellaneous		500					500	$200.00	$200.00
2.93	Auto Rental							0 Days	$70.00	$0.00
2.94	Mileage							0 Mi	$0.445	$0.00
2.95	Pilot Time							0	$70.00	$0.00
2.96	C 182 Aircraft Miles							0	$0.995	$0.00
2.97	P 210 Aircraft Miles							0	$0.995	$0.00
2.98	Lodging and Per Diem							0 Days	per ADOT	$0.00
2.99	Commercial Travel							0 Trips	$400.00	$0.00
									Total Engineering Phase:	**$9,020.00**
										Checks
									use	$9,020.00

Detailed Engineering Fee Breakout

AIRPORT: City of Benson
LOCATION: Benson, AZ
ADOT GRANT NO.: E4S2V REILS

No.		Engineer	Project Manager	Engineer/	Staff Engineer	Draftsman	Clerical	Total		Cost
3.0	**BIDDING SERVICES**	$230.00	$190.00	$170.00	$140.00	$130.00	$70.00	Hours		Summary
3.1	Assist Owner with Advertising	0	2	0	1	0	2	5		$660.00
3.1	Conduct Pre-Bid Meeting	0	4	0	0	0	0	4		$760.00
3.1	Issue Addenda and Address RFIs	0	1	0	2	2	2	7		$870.00
3.2	Provide Technical Assistance During Bidding	1	6	0	2	0	1	10		$1,720.00
3.3	Conduct Bid Opening	0	0	0	3	0	0	3		$420.00
3.4	Prepare Bid Abstract and Award Recommendation	0	0	0	1	0	2	3		$280.00
3.5	Assist with Award Notification and Return Bonds	0	1	0	4	0	2	7		$890.00
	Estimated Total Man-hours	**1**	**14**	**0**	**13**	**2**	**9**	**39**		
	Summary Costs	**$230.00**	**$2,660.00**	**$0.00**	**$1,820.00**	**$260.00**	**$630.00**			**$5,600.00**
3.90	**Reimbursables**									
3.92	Miscellaneous (Printing, Copying & Mailing)		$500					$500.00	$500.00	$500.00
3.93	Auto Rental							0 Days	$0.00	$0.00
3.94	Mileage		54					54 Mi	$0.445	$24.03
3.95	Pilot Time		4					4	$70.00	$280.00
3.96	C 182 Aircraft Miles		448					448	$0.995	$445.76
3.97	P 210 Aircraft Miles							0	$0.995	$0.00
3.98	Lodging and Per Diem		2					2 Days	per ADOT	$68.00
3.99	Commercial Travel							0 Trips	$0.00	$0.00
									Total Final Design Phase:	**$6,917.79**
										Checks
									use	$6,910.00

Item No.	**CONSTRUCTION SERVICES**	Principal Engineer	Project Manager	Project Engineer/ Planner	Resident Engineer	Draftsman	Clerical	Total		Cost
4.0	**(based on 21 Calendar Days)**	$230.00	$190.00	$170.00	$110.00	$130.00	$70.00	Hours		Summary
4.1	Coordinate Construction Agreement, Review Bonds, Certs, Construction Schedule	0	1	0	2	0	0	3		$410.00
4.2	Review Construction Safety Compliance Doc	0	1	0	0	0	0	1		$190.00
4.4	Conduct Pre-Construction Conference	0	4	6	0	0	1	11		$1,850.00
4.5	Review Submittals, Shop Drawings and RFI	0	1	0	3	0	2	6		$660.00
4.6	Provide Technical Assistance During Construction	2	21	11	0	0	4	38		$6,600.00
4.7	Provide Full Time Inspection	0	0	0	135	0	0	135		$14,850.00
4.8	Prepare Change Orders, Supplemental Agreements	1	1	2	0	4	0	8		$1,280.00
4.9	Prepare Weekly Inspection Reports	0	0	4	0	0	2	6		$820.00
4.10	Confirm Contractor Payment Requests	0	1	2	0	0	1	4		$600.00
4.10	Prepare Owner Reimbursement Requests	0	2	0	0	0	2	4		$520.00
4.11	Prepare QA Test Summary	0	1	4	0	0	6	11		$1,290.00
4.12	Conduct Final Inspection	0	4	6	0	0	1	11		$1,850.00
4.13	Prepare Record Drawings	0	2	0	2	2	0	6		$860.00
4.13	Prepare Final Engineers Report	0	2	6	2	0	0	10		$1,620.00
4.14	Update ALP	0	1	1	0	1	0	3		$490.00
	Estimated Total Man-hours	**3**	**42**	**42**	**144**	**7**	**19**	**257**		
	Summary Costs	**$690.00**	**$7,980.00**	**$7,140.00**	**$15,840.00**	**$910.00**	**$1,330.00**			**$33,890.00**
4.90	**Fixed Fee/Reimbursables**									
4.92	Miscellaneous								$500.00	$500.00
4.93	Auto Rental							0 Days	$70.00	$0.00
4.94	Mileage		81		1095			1176 Mi	$0.445	$523.32
4.95	Pilot Time		12					12	$70.00	$840.00
4.96	C 182 Aircraft Miles		672					672	$0.995	$668.64
4.97	P 210 Aircraft Miles				532			532	$0.995	$529.34
4.98	Lodging and Per Diem		3	2	21			26 Days	per ADOT	$1,416.00
	Total Construction Phase Services								**Total Construction Phase Services:**	**$38,367.30**
										Checks
									USE	$38,360.00