

**CROSSVILLE MEMORIAL AIRPORT – WHITSON FIELD
RUNWAY 26 PAPI REPLACEMENT**

Work Authorization Number 05-21

Date: July 23, 2021

Atkins No. 1000xxxx
(Project Identification No.)

It is agreed to undertake the following work pursuant to the terms and condition of the Agreement For Professional Airport Services between the City of Crossville (OWNER) and Atkins (ENGINEER) dated the 13th day of June 2019, and which is incorporated herein by reference and whose terms and conditions shall govern and control this Contract unless stated herein.

Scope of Services:

The ENGINEER shall provide professional services for the ***Runway 26 Precision Approach Path Indicator (PAPI) Replacement*** –at the Crossville Memorial Airport – Whitson Field (the Project). Services of the ENGINEER are more particularly described in Attachment A, “Engineer’s Scope of Services”.

Time of Performance:

The ENGINEER shall immediately begin work upon receipt of a fully executed Work Authorization and submit the Project Deliverables to the OWNER and the Tennessee Department of Transportation – Aeronautics Department (TAD) no later than 60 calendar days following receipt of an executed Work Authorization. In conducting the work the ENGINEER shall keep the OWNER informed as to the status of the project, anticipated activities, schedule changes, and any known problem areas by submitting weekly project progress reports. Submittal of final Project Deliverables shall be no later than 30 calendar days following receipt of OWNER/TAD comments.

Compensation:

The OWNER shall compensate the ENGINEER under the herein described Scope of Services a lump sum amount of **Thirty-four thousand Two hundred dollars (\$34,200.00)** for Basic Services as estimated by the ENGINEER and set forth in Attachment B, “Engineer’s Estimate of Compensation Basic Services”. Progress payments to the ENGINEER for Basic Services shall be by an estimate of percent complete.

In addition, the OWNER shall compensate the ENGINEER under the herein described Scope of Services an amount Not-to-Exceed **Two Thousand Five Hundred Dollars (\$2,500.00)** for Special Services related to providing field ground as estimated by the ENGINEER and set forth in Attachment B “Engineers Estimate of Compensation.”

Agreed as to Scope of Services, Time of Performance and Compensation:

OWNER: **City of Crossville**

ENGINEER: **Atkins**

Date: _____

Date: _____

ATTACHMENT A

ENGINEER'S SCOPE OF SERVICES WORK AUTHORIZATION No. 05-21

RUNWAY 26 PAPI REPLACEMENT TAD Project No. TBD

at the

CROSSVILLE MEMORIAL AIRPORT – WHITSON FIELD

PROJECT DESCRIPTION AND GENERAL SCOPE OF SERVICES

The intent of this project is to replace the Runway 26 four box Precision Approach Path Indicator (PAPI) system with FAA-approved LED-style units on concrete pads. The project will entail the following services:

- A field inventory of the existing PAPI system, communications, and power connections
- Review of project records and as-built drawings
- A ground survey of key points along the runway centerline (threshold and touchdown zone)
- An analysis of the applicable siting surfaces pursuant to FAA Order 8200.1D:
 - Obstacle Clearance Surface (OCS)
 - Light Signal Clearance Surface (LSCS)
- The PAPI surface analysis will be based on the existing PAPI location with an established approach angle, runway centerline grades, and Threshold Crossing Height (TCH) following FAA guidelines. Should obstructions be found, then a consultation meeting with the OWNER and Tennessee Department of Transportation – Department of Aeronautics (TAD) will be held to determine whether to place the PAPI in a new location needed to clear the obstructions or seek a temporary waiver to change the glide path slopes. It is assumed the temporary waiver would be in place until the Runway 26 obstructions are removed as part of a planned and separate upcoming project.
- Assist in the preparing the FAA VGSI Data Form as may be required.

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Assumptions:

The following is a list of assumptions forms the basis of the ATKINS cost proposal for providing the services detailed in the Scope of Services for this project. Any modification and/or revision to these clarifications may constitute a change in the project scope and may result in a revision to the ATKINS cost proposal.

1. Existing PAPIs are the property of the City of Crossville. No FAA interface is required.
2. The power for the existing PAPIs originates from the glide slope building site and can be reused for the new PAPIs. The OWNER will provide a conduit path if one does not already exist.

I. BASIC SERVICES

1. DESIGN PHASE
 - A. Consult with OWNER to clarify and define OWNER's requirements for the Project and review available data.
 - B. Advise the OWNER as to the necessity of OWNER's providing or obtaining from others data or services required for the Project other than those provided for herein by the ENGINEER and act as OWNER's representative in connection with any such services.
 - C. Provide analyses of OWNER's needs to perform planning surveys, site evaluations and comparative studies of prospective alternatives and solutions.
 - D. Prepare schematic layouts, sketches and conceptual design criteria with appropriate exhibits to indicate clearly the considerations involved and the solutions available to OWNER and setting forth ENGINEER's findings.
 - E. Examine viable alternatives and advise the OWNER of those that are compatible with the budget and schedule requirements.

ATTACHMENT A

- F. Attend a pre-design conference/project kick-off meeting at the Project site with the OWNER, TAD, and other interested parties to review the requirements and schedule for the Project.
 - G. Perform field reconnaissance/investigation of the Project site to determine the location, extent and method of taxiway pavement rehabilitations.
 - H. ENGINEER will prepare the Contract Documents final drawings to show the character and extent of the Project (hereinafter called "Drawings") and all related Specifications.
 - I. Furnish to OWNER such documents and design data as may be required for, and assist in the preparation of, the required documents so that OWNER may apply for approvals of such governmental authorities as have jurisdiction over design criteria applicable to the Project and assist in obtaining such approvals by participating in submissions to and negotiations with appropriate authorities.
 - J. Advise OWNER of any adjustments to the latest Project quantities caused by changes in scope or design requirements of the Project and furnish a revised opinion of probable quantities and opinion of probable construction cost based on the Drawings and Specifications.
 - K. Prepare bid forms for review and approval as to form and concept by OWNER, its legal counsel and other advisors. As appropriate, the agreement and bond forms, general provisions, special provisions, (invitations to bid and instructions to bidders will be provided to the ENGINEER by the OWNER). All of the above documents, plus bid documentation, bond(s), and the drawings and specifications constitute the Contract Document.
 - L. Furnish four copies of the above documents and present and review them with OWNER, TAD, and other interested parties.
4. CONSTRUCTION CONTRACT BID AND AWARD PHASE
- A. Assist OWNER in advertising for and obtaining bids from prime contractors for construction, materials, equipment and services for the Project.

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- B. Assist OWNER in conducting and attend a pre-bid conference at the Project site.
- C. Consult with and advise OWNER as to the acceptability of subcontractors and other persons and organizations proposed by the prime contractor(s) (hereinafter called "Contractor(s)") for those portions of the work as to which such acceptability is required by the bidding documents.
- D. Consult with and advise OWNER as to the acceptability of substitute materials and equipment proposed by Contractor(s) when substitution prior to the award of contracts is allowed by the bidding documents.
- E. Assist OWNER in evaluating bids or proposals and in assembling and awarding contracts.
- F. Recommend to the OWNER based on ENGINEER's review of the bids, the Contractor that is most responsive to the Project requirements.
- G. Prepare conformed documents incorporating addendum(s), if any issued during the bidding phase, and final contract documents to be issued for construction.

II. SPECIAL SERVICES

1. SURVEY FOR DESIGN

A topographic survey of key points at the runway threshold and along the runway centerline are needed to accurately site the PAPI units. An allowance has been assumed to obtain the necessary ground survey.

2. GEOTECHNICAL TESTING FOR DESIGN

No geotechnical services are included. It is assumed the existing ground surface can adequately support the PAPI foundations.

3. MATERIALS TESTING FOR QUALITY ASSURANCE

Construction phase services are not Included in this Work Authorization.

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III. CONSTRUCTION PHASE SERVICES

Construction phase services are not Included in this Work Authorization

IV. OWNER'S RESPONSIBILITIES

OWNER shall:

- A. Provide all criteria and full information as to OWNER's requirements for the Project, including design objectives and constraints, space, capacity and performance requirements, flexibility and expendability, and any budgetary limitations; and furnish copies of all design and construction standards which OWNER will require to be included in the drawings and specifications.
- B. Assist ENGINEER by placing at his disposal all available information pertinent to the Project including previous reports and any other data relative to design or construction of the Project.
- C. Furnish to ENGINEER upon his request, as required for performance of ENGINEER's Scope of Services, any existing available data in the OWNER's possession prepared by the OWNER or by others, including without limitation core borings, probes and subsurface explorations, hydrographic surveys, laboratory tests and inspections of samples, materials and equipment; appropriate professional interpretations of all of the foregoing; environmental assessment and impact statements; property, boundary, easement, right-of-way, topographic and utility surveys; property description; zoning, deed and other land use restriction; and other special data or consultations, all of which ENGINEER may rely upon in performing his services.
- D. Arrange for access to and make all provisions for ENGINEER to enter upon public and private property as required for ENGINEER to perform his services.

ATTACHMENT A

- E. Examine all studies, reports, sketches, drawings, specifications, proposals and other documents presented by ENGINEER, obtain advice as OWNER deems appropriate and render in writing decisions pertaining thereto within a reasonable time so as not to delay the services of ENGINEER.
- F. Furnish approvals and permits from all governmental authorities having jurisdiction over the Project and such approvals and consents from others as may be necessary for completion of the Project with the assistance of the ENGINEER and pay any permit fees.
- G. Provide such accounting, independent cost estimating and insurance counseling services as may be required for the Project, such legal services as OWNER may require pertaining to the Project.
- H. Give prompt written notice to ENGINEER whenever OWNER observes or otherwise becomes aware of any development that affects the scope or timing of ENGINEER's services, or any defect in the work of Contractor(s).
- I. Bear all costs incident to compliance with the requirements of this Section.

END OF ATTACHMENT A

ATTACHMENT B

CROSSVILLE MEMORIAL AIRPORT - WHITSON FIELD
 RUNWAY 26 PAPI REPLACEMENT
 TAD PROJECT No. TBD

CONSULTANT'S ESTIMATE OF COMPENSATION
 July 23, 2021

PROJECT PHASE / TASK	ATKINS LABOR TOTAL	EXPENSES	SUBCONSULT. FEE	TOTAL FEE (\$)
PHASE I - DESIGN PHASE				
ATKINS	\$29,210.00	\$ 944.00		\$30,154.00
Non-DBE Firms:				
None			\$	-
DBE Firms:				
None			\$	-
Subtotal PHASE I	\$ 29,210.00	\$ 944.00	\$ -	\$ 30,154.00
PHASE II - BID / AWARD				
ATKINS	\$3,778.00	\$ 284.00		\$ 4,062.00
Non-DBE Firms:				
None			\$	-
DBE Firms:				
None			\$	-
Subtotal PHASE II	\$ 3,778.00	\$ 284.00	\$ -	\$ 4,062.00
BASIC SERVICES TOTALS	\$ 32,988.00	\$ 1,228.00	\$ -	\$ 34,216.00
SPECIAL SERVICES -				
Expenses:				
Miscellaneous Permitting / Printing		\$0.00		\$0.00
Sub-total Expenses:		\$0.00		\$0.00
Special Services:				
Geotechnical Investigations (Not Applicable)			\$	-
Field Run Surveys (Allowance - Runway Centerline)			\$ 2,500.00	\$ 2,500.00
Subtotal:	\$ -		\$ 2,500.00	\$ 2,500.00
SPECIAL SERVICES TOTALS	\$ -	\$0.00	\$2,500.00	\$2,500.00
TOTAL COMBINED				
BASIC SERVICES + SPECIAL SERVICES TOTALS	\$ 32,988.00	\$ 1,228.00	\$ 2,500.00	\$ 36,716.00

Round to: **\$ 36,700.00**

LABOR DETAIL

**CROSSVILLE MEMORIAL AIRPORT - WHITSON FIELD
RUNWAY 26 PAPI REPLACEMENT
TAD PROJECT No. TBD**

**CONSULTANT'S ESTIMATE OF COMPENSATION
July 23, 2021**

I. BASIC SERVICES

ITEM NO.	TASK	PROGRAM MANAGER	QA/QC REVIEWER	SENIOR ENGINEER I	SENIOR ELECTRICAL ENGINEER I	JUNIOR ELECTRICAL ENGINEER II	CADD DESIGNER I	SR. PLANNER III	SR. PLANNER II	ADMIN ASSISTANT
PHASE I - DESIGN PHASE										
1	Prepare Agenda, Conduct, and Document Kick-off Meeting / Site Walk			6	16					
2	Review Existing Conditions and As-Built Drawings				4	8				
3	Assemble CADD information / Base Maps				2	2	4			
4	PAPI Siting - OCS Surface Analysis				4			4	12	
5	PAPI Siting - LSCS Surface Analysis				4			4	12	
6	Plan Set									
	> Title Sheet with Index of Drawing and Schedule of Quantities			1			2			
	> General Notes			1			2			
	> Project Layout Plan - Staging/Access/Haul Routes			1			2			
	> Construction Phasing & Sequencing, Notes, Details as Applicable			1			2			
	> Existing Condition Plans / Demolition Plan			1			4			
	> PAPI Siting Plan				8	16				
	> PAPI Electrical Plan				4	12				
	> PAPI Communication Plan				4	20				
	> PAPI Details (3 sheets)				4	12				
7	Specifications			4	8					4
8	Construction Cost Estimates				4	2				
9	In-House QCAP Review		8							
10	Design Review Meeting			6	2					
11	Incorporate Comments from QCAP and Review Meeting			2	2	2				
12	Process Subconsultant Invoices / General Project Admin	2								4
	TOTAL HOURS:	2	8	23	66	74	16	8	24	8
	LABOR RATE	\$245.00	\$171.00	\$130.00	\$171.00	\$90.00	\$115.00	\$167.00	\$115.00	\$60.00
	EXTENDED TOTAL:	\$490.00	\$1,368.00	\$2,990.00	\$11,286.00	\$6,660.00	\$1,840.00	\$1,336.00	\$2,760.00	\$480.00
	ATKINS LABOR SUBTOTAL:									\$29,210.00

PHASE II - BID / AWARD

BID PHASE SERVICES

1	Prepare for, Attend and Conduct PreBid Conference			6	2					
2	Respond to Bidder Questions / Requests for Information (RFIs)			2	2					
3	Prepare Addendums			2	2					
4	Compile Bid Tabulation, Draft Recommendation Concerning Award			2						
5	Prepare and Issue Conformed Plans & Specifications for Construction			2	2	4	2			
	TOTAL HOURS:	0	0	14	8	4	2	0	0	0
	LABOR RATE	\$245.00	\$171.00	\$130.00	\$171.00	\$90.00	\$115.00	\$167.00	\$115.00	\$60.00
	EXTENDED TOTAL:	\$0.00	\$0.00	\$1,820.00	\$1,368.00	\$360.00	\$230.00	\$0.00	\$0.00	\$0.00
	ATKINS LABOR SUBTOTAL:									\$3,778.00

Grand Totals - All Phases	2	8	37	74	78	18	8	24	8	
	\$490.00	\$1,368.00	\$4,810.00	\$12,654.00	\$7,020.00	\$2,070.00	\$1,336.00	\$2,760.00	\$480.00	\$32,988.00

**CROSSVILLE MEMORIAL AIRPORT - WHITSON FIELD
RUNWAY 26 PAPI REPLACEMENT**

**CONSULTANT'S ESTIMATE OF COMPENSATION
EXPENSE DETAIL**

Reference Task No.	Trip Purpose	Design Phase					Bid Phase				
		No. of out of town Personnel	No. of Rental Car Days	No. Of Company Truck Trips	No. of Airfare Trips (RDU/BNA)	No. of Overnight Stays	No. of out of town Personnel	No. of Rental Car Days	No. Of Company Truck Trips	No. of Airfare Trips (RDU/BNA)	No. of Overnight Stays
	Kick-off Design Meeting	1	1	1	1	1					
	90% Design Review Meeting	1		1			1		1		
	Pre-Bid Conference								1		
	Bid Opening								1		
	Total Trips:	2	1	2	1	1	1	0	3	0	0

Item No.	Item	Unit	Est. Unit Cost	Miles/Trip Sheets/Set, etc.	Design Phase		Bid Phase	
					No. of Trips/Sets/Units	Total Est. Cost	No. of Trips/Sets/Units	Total Est. Cost
1	Airfare for Airfield Electrical Specialist	Each	\$ 500.00		1	\$ 500.00	0	\$ -
2	Hotel (GSA Rate + Local Hotel Taxes)	Each	\$ 170.00		1	\$ 170.00	0	\$ -
3	Meals & Incidentals (GSA Rate)	Day	\$ 59.00		2	\$ 118.00	0	\$ -
4	Rental Car / Company Truck	Day	\$ 45.00		3	\$ 135.00	3	\$ 135.00
5	Plan Set Printing	Sheet	\$ 0.48	11	4	\$ 21.12	4	\$ 21.12
6	Color Plan Sheet Printing	Sheet	\$ 3.42	0	4	\$ -	4	\$ -
7	Contract Book Printing	Sheet	\$ 0.08	350	0	\$ -	4	\$ 112.00
8	Contract Book Binding (per 100 pages thickness)	Each	\$ 1.00	4	0	\$ -	4	\$ 16.00
	Subtotal:					\$ 944.12		\$ 284.12
	TOTAL TRAVEL EXPENSES (Rounded):					\$ 944.00		\$ 284.00