Statement of Work
Install Remote Controlled PAPIs
AWUB 00-0012 FAC #99800 Project #1018299
23 February 2026

Reference latest versions of UFC 3-535-01 Visual Air Navigation Facilities, 3-535-02 Design Drawings for Visual Air Navigation Facilities and UFC 3-260-01 Airfield and Heliport Planning and Design.

Precision Approach Path Indicator (PAPI) is an unattended system that provides visual glide path guidance for landing aircraft. PAPI are currently fed by photocell, step 4 at night and step 5 during the day per UFC

PAPI light construction work should be completed on one end of the runway at a time. Coordination with 2OSS and the tower is required.

The contractor must maintain existing PAPI system during the installation of the new system.

The contractor must test new system using tower and vault control prior to cutover and demolition of existing system.

Work required:

Install one singular new 4kW, 480-volt constant current regulator (Not SCR per UFC 3-535-01) in the vault, with a programmed electric interlock, feed power from the existing panel, which is on generator (as required). Install breakers in panel as required. All must be controlled via the touchscreen system.

The contractor will trench and install approximately 170 feet of new 2” PVC conduit where the existing duct bank was found to be unusable on the south end of the runway near taxiway Charlie as shown on the map in yellow. Direct bury is not allowed, the entire pathway must be in conduit to match existing type and depth. This will be 2” PVC with external ground that shall be tied in with existing ground loop counterpoise.

The contractor will install 2 - #8, 5kV conductor (series) from the vault to each of the four PAPI fixtures on each the end of the runway. Each new fixture box shall require 3 new IL transformers in the associated hand hole.

Install PLC control from tower and vault via touchscreen system to the regulators. Add components to PLC cabinet as required and reprogram. Requires soft start programming with pauses in between each step. Install controls for PAPIs in accordance with all current UFC 3-535-01 and FAA standards. Coordinate this work with ongoing airfield lighting control project as necessary.

Test new system with tower and vault control prior to cutover and demolition of existing system.

Once the new PAPI system and fixtures have been installed and tested demo the existing PAPI regulators and everything associated with the regulators (bollards, pads etc.) and the service from the regulators back to the transformer located on each end of the runway. Remove all from Barksdale AFB. The transformer on the north end that currently feeds the PAPIs also feeds ILS. The transformer on the south end currently feeds the barrier shack and wind sock and therefore these transformers cannot be removed. Power outage notification/coordination will be required when service from the regulators is removed back to the transformer.

Install new PAPI fixtures: new fixtures will have to be adjusted and aligned in accordance with UFC regulations and then FAA certified. The PAPIs are located 950' from the end of the runway (each fixture/ box has three bulbs, four boxes on each end of the runway). New fixtures shall be four leg support system. Mounting hardware must be stainless steel sized per manufacturer's requirements. Installation must be per manufacturer's requirements. Remove old PAPI fixtures from Barksdale AFB.

The tower also has a electronic glideslope.

The contractor shall confirm that the existing duct bank system goes all the way to the existing PAPI lights in duct bank. Contractor shall include all material and labor cost for conduit, trench and backfill required from existing manholes to the PAPI fixture location. New conduit will be 2" PVC with external ground that shall be tied in with existing ground loop counterpoise. **Minimum #4 bare ground wire.**

The PAPI lights must be operational at the end of each day as required by OSS. The proposed work will occur within an explosive clear zone and the runway requiring an explosive safety brief and other actions prior to construction.

PAPI fixture information – Siemens L-880 & L-881 precision approach path indicator, 3 lamp, match existing, No LED lamps.

3-7.6 Control Requirements.

Control the PAPI on/off manually from the air traffic control tower and from the airfield lighting vault. Brightness control will be manual; however, the PAPI may also be controlled by photocell or pilot radio control at airfields without air traffic controllers, or where the air traffic control tower is not manned full time. At these locations, provide an electrical interlock between the PAPI and the runway edge lights. This interlock may be an electrical contractor or radio interface unit to ensure that, during the hours of darkness the PAPI is on only when the runway edge lights are on. During daylight hours, the PAPI will be capable of operating independently of the runway edge lights. PAPI on/off and intensity controls must be included on the airfield lighting control panel. Coordinate this work with ongoing airfield lighting control project as necessary.

3-7.6.1
Provide radio control when required by using an FAA L-854 radio controller (see FAA AC 150/5345-49), which allows the PAPI to be turned on by a pilot on approach or by a ground control station.

3-7.6.2
The photocell must operate per requirements in FAA AC 150/5345-28. The photoelectric control requires a time delay of at least 30 seconds to prevent false switching caused by stray light or temporary shadows. Install the photocell at an unobstructed location and aim it towards the northern horizon.

Temporary airfield construction waiver will be required. The contractor must provide maximum vehicle height, proposed haul routes, estimated number of personnel working on the airfield at any given time etc. FAA form 7460-1 shall be submitted regarding equipment on the airfield. The removal of the regulators will require lifting equipment. Construction vehicles should be marked with company name and/or flagged for high daytime visibility and if appropriate, lighted for nighttime operations, UFC 3-260-01 B14-6.5.1. Vehicles needing intermittent identification could be marked with tape or magnetically attached markers.

Cables in manhole shall be labeled with feeder number, wire size, wire type, destination/origination. Engraved ½" letters black background with white letters. Example NORTH PAPI and SOUTH PAPI. Cables shall be securely supported from walls by hot dipped galvanized cable racks with stand offs fitted with porcelain insulators. Where splices are required use joy splices and heat shrink over the entire splice. All splices will be supported between racks.

Provide as built drawings.

Provide submittals for approval for the PAPI fixtures, all conductor/cable/wire, regulators, equipment, breakers, etc.

According to UFC 3-260-01 - Appendix B, a construction phasing plan must be included in the contract documents establishing all guidelines and constraints the contractor must follow during construction.

Construction Phasing Plan

Description of proposed construction activity phasing:

Phase One: the contractor will install all required equipment in the air field vault, B6414: north and south regulators, breakers, control cabinet hardware, touch screen software, wire etc.

Phase Two: The contractor will trench and install conduit if necessary to extend the lighting system duct bank to the PAPIs and install wire from the new equipment in B6414, through the duct bank system, to the PAPI fixtures on one end of the runway. 2OSS will determine the order of completion depending on which end is most used at the time of construction. (Coordinate with 2OSS). This will require pumping water out of manholes, racking and labeling cable and splicing cable in every other manhole. The home run section from the vault to the runway will require wire and splices for both the north and south PAPI fixtures. There is approximately fifty manholes per end so this phase will take the most man-hours to complete. Manhole location: first manhole is located outside the airfield vault, duct bank goes across the apron to the runway and runs parallel along the runway approximately 100 feet away. When the contractor is working within 100 feet of the runway constant radio contact with the tower is required. Daily coordination with 2OSS and the tower is required when working on the airfield and if work affects control of PAPI lighting. Controlled restricted area from vault to fence will require escorts. Excavations and open trenches along runways must be signed, lighted and marked with orange flags and lighted with flashing red or yellow light units during hours of restricted visibility and/or darkness. Equipment: a trencher.

Phase Three: The contractor will test the newly installed wire and test the new controls (new hardware/software). This test can be done from the vault. This will not affect any airfield operation.

Phase Four: The contractor will coordinate with 2OSS and the tower to shut off PAPI lights, demo the existing PAPI fixtures and install the new. The new fixtures will require siting to verify correct height and angle requirements as required in UFC 3-535-01 section 12. This is very important. Use of a clinometer and surveyor is required. Once the new fixtures have been installed and the height and angle verified, install/tie in the new IL transformers in corresponding hand holes. Request 2OSS schedule FAA

certification. The contractor must be present during FAA certification to make adjustments if necessary. Coordinate with 2OSS for temporary certification via pilot until FAA can certify.
Lights must be operational at the close of each day as required by OSS.

~~^^^ BOTH SIDES?~~

Phase Five: demo/remove the old existing PAPI regulator, regulator pad (everything associated with the regulator bollards, pad etc.) and the service from the regulator back to the transformer. This will require a power outage and coordination. Equipment: lifting equipment will be required to pick up the regulator so that it can be hauled off base. This will conclude the PAPI system construction for one end of the runway.

Note: The north end regulator being removed is located approximately 320' from the edge of the runway. The south end regulator being removed is located approximately 981' from the edge of the runway.

Phase Six: This phase will begin PAPI construction for the other end of the runway. The contractor will trench and install conduit if necessary to extend the lighting system duct bank to the PAPIs and install wire from the end of the home run section at the runway through the duct bank system, to the PAPI fixtures on the other end of the runway. (Coordinate with 2OSS). This will require pumping water out of manholes, racking and labeling cable and splicing cable in every other manhole. The home run section from the vault to the runway was completed in phase two. There is approximately fifty manholes per end. When the contractor is working within 100 feet of the runway constant radio contact with the tower is required. Daily coordination with 2OSS and the tower is required when working on the airfield and if work affects control of PAPI lighting. Equipment: a trencher.

Phase Seven: The contractor will test the newly installed wire and test the new controls (new hardware/software). This test can be done from the vault. This will not affect any airfield operation.

Phase Eight: The contractor will coordinate with 2OSS and the tower to shut off PAPI lights, demo the existing PAPI fixtures and install the new. The new fixtures will require siting to verify correct height and angle requirements as required in UFC 3-535-01 section 3 and section 12 attached. This is very important. Use of a clinometer and surveyor is required. Once the new fixtures have been installed and the height and angle verified, install/tie in the new IL transformers. Request 2OSS schedule FAA certification but contractor must be present to make adjustments if necessary. Coordinate with 2OSS for temporary certification via pilot until FAA can certify.

Lights must be operational at the close of each day.

Phase Nine: demo/remove the old existing PAPI regulator, regulator pad (everything associated with the regulator bollards, etc.) and the service from the regulator back to the transformer. This will require a power outage and coordination. Equipment: lifting equipment will be required to pick up the regulator so that it can be hauled off base.

Note: The north end regulator being removed is located approximately 320' from the edge of the runway. The south end regulator being removed is located approximately 981' from the edge of the runway.

SOW Additions

Lay-down Area Temporary Fencing

1. The Contractor shall furnish all labor, materials, and equipment necessary to provide secure and visually aesthetic temporary fencing for surrounding project equipment and material in lay-down areas.

Work shall include:

a. Clearing area of all encumbrances to safe erection of fencing.
b. Provide fence that is: metal tube frame; metal woven wire mesh (minimum 11 gauge); minimum 6 feet In height.
c. Provide integral to fence visual blocking material, either slat weave or sheet goods.
d. Erecting fence in such manner as to prevent loss of fencing or blocking due to inclement weather.
e. At no time shall fence interfere with fire egress paths or fire equipment ingress, to include periods when gates are in operation.

Contractor shall submit cut sheets on all items for installation, prior to procurement, for approval by the C.E. Architect. Complete the design as indicated on drawings in accordance with UFC 1-200-01 General Building Requirements which includes the latest editions of the Internationals Building Code and NFPA Life Safety Code, and Americans with Disabilities Act. All required work shall be accomplished in accordance with the Barksdale AFB Design Compatibility Guidelines (DCG). All colors and materials shall be selected by the Civil Engineer Architect in accordance with the DCG. Construction shall be conducted in a quality workmanlike manner. Contractor shall take any steps necessary to protect government and occupant property from damage caused by weather or other occurrence while work is in progress.

2. Upon notification of completion by the contractor a determination will be made as to the satisfactory completion and acceptance of the contract specification(s). Any segment of the operation that is not acceptable because of an unsightly or unprofessional appearance will be justification for rejection of the treatment. The contractor will incur all costs, both labor and materials, for reaccomplishment of any unacceptable work identified.

3. The contractor will be responsible for and incur any and all labor and material costs required to repair any damages to government facilities that occurred during and as result of repair work, replacement operations, or new work, under this contract. This damage will be identified as separate from the condition of the facilities as identified during the initial inspection. The damage will be identified, but not limited, to the following items:

a. Government gas, water and electric transmission and distribution systems
b. Occupant personal property

Additional Information

a. The contractor will begin work not earlier than 7:00 am each workday. Work will not be performed later than 4:30 pm.
b. Inspections will be conducted by the Contracting Officer and /or Contracting Officer's Representative and the Contractor's Manager.
c. Any discrepancies should be noted and forwarded to the Architect.

Background Checks for Contractor Personnel Requiring Entry/Access to Barksdale AFB (Jan 2005) Security Forces will conduct a National Crime and Information Center (NCIC) background check on all contractor or subcontractor personnel prior to granting access to the installation.

CONSTRUCTION AND DEMOLITION DEBRIS REPORTS

The following requirement is listed in Attachment 2 of the basic contract, Environmental Requirements for Contractors Working on Barksdale Air Force Base. These reports are required to be submitted on an AF 3000 Material Submittal and should be incorporated into the AF66 Material Submittal Schedule at time of contract award. Final payment will not be released until C&D reports have been submitted and accepted by the Government. "Construction and Demolition (C&D) debris is generated as a result of construction, renovation, or demolition activities. Although C&D debris is usually considered a single waste stream, the composition actually varies with each activity and the type, size, and location of the structures involved. Disposing of C&D debris in landfills consumes enormous amounts of space and is both economically and environmentally costly. In accordance with AFI 32-7042 and BAFB's Integrated Solid Waste Management Plan (ISWMP), ALL WEIGHTS OF C&D MATERIALS RECYCLED AND DISPOSED MUST BE REPORTED TO THE RECYCLE PROGRAM MANAGER."

CONTRACT COMPLETION INSPECTIONS

The contractor will schedule (preferably with 3 working days' notice) a pre-completion inspection to be held approximately 10 calendar days prior to the expiration of the contract. This inspection may result in a "punch list" indicating items to be furnished or work to be completed by the contractor or subcontractors in order to complete the work specified in the contract documents. This list may not be construed to be all inclusive. A copy of the list will be furnished to the contractor within 2 workdays for his use in completing the contractual work. If the pre-completion inspection results in no "punch list" and the work is complete, this inspection may be considered the "final" inspection as determined by the Contracting Officer. If required, the contractor will be responsible for scheduling the contract completion inspection (preferably with 3 working days' notice) to be held no later than the final day of contract performance. Should this inspection result in a "punchlist", the contractor will have 10 calendar days (after receipt of punchlist) to complete all punchlist items and notify the Contracting Officer of this. NO FINAL INVOICE SHALL BE PAID UNTIL ALL PUNCHLIST ITEMS ARE COMPLETED TO THE SATISFACTION OF THE CONTRACTING OFFICER. Should a contractor exceed the time allowed for these corrections, it may result in negative past performance which could affect future contract awards.

PERFORMANCE INFORMATION

NOTICE TO PROCEED will be issued within 15 calendar days after award of contract. Award date shall be established as the date of mailing or otherwise furnishing a properly executed award document to the successful offeror.

WORK SCHEDULE

Working hours for the contractor will normally be between the hours of 7:00 a.m. and 4:30 p.m. excluding Saturdays, Sundays, and Federal Holidays (New Year's Day, Birthday of Martin Luther King, Jr., Presidents Day, Memorial Day, Juneteenth, Independence Day, Labor Day, Columbus Day, Veteran's Day, Thanksgiving Day and Christmas Day). If the contractor desires to work during periods other than above, additional government inspection forces may be required. The contractor must notify the contracting officer three days in advance of his/her intention to work during other periods to allow assignment of additional inspection forces when the contracting officer determines they are reasonably available. If such force is reasonably available, the contracting officer may authorize the contractor to perform work during periods other than normal duty hours/days, however, if inspections are required to perform in excess of their normal duty hours/days solely for the benefit of the contractor, the actual cost of inspection at overtime rates will be charged to the contractor. These adjustments to the contract price may be made periodically as directed by the contracting officer.

DELIVERY TIME

The period of performance on this project will be 150 Calendar days from the Notice to Proceed (NTP) date.

--------END OF SOW--------