



**DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND MARIANAS
PSC 455, BOX 195
FPO AP 96540-2937**

**IN REPLY REFER TO:
N40192-15-Q-7057
18 September 2015**

**N40192-15-Q-7057 Airfield Lighting Control and Monitoring System (ALCMS) for Andersen Air
Force Base, Guam
AMENDMENT 1**

In reference to the Request for Quotes (RFQ) posted for project N40192-15-Q-7057 Airfield Lighting Control and Monitoring System (ALCMS) for Andersen AFB, Guam the following changes have been made:

1. Responses are being included in response to Requests for Information (RFIs).
2. A revised Statement of Work is included.
3. The quotes submissions date has been changed:
From: 17 September 2015 at 1500 hours, Chamorro Standard Time (Guam time).
To: 21 September 2015 at 1500 hours, Chamorro Standard Time (Guam time).
4. All other terms and conditions remain unchanged.

Should you have any questions, contact RoAnna K. Peredo at roanna.peredo@us.af.mil.

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REQUESTS FOR INFORMATION
N40192-15-Q-7057

Question (Q1): Can we get the drawings that depict the existing ALCMS? In the synopsis there is a reference to the proposed ALCMS block diagram. I was unsuccessful in finding this. Can you add the ALCMS block diagram in an addendum to Fed Biz Op or send it to me?

This is typically a one line diagram that shows the locations of the control systems computers and touchscreens, the communication between the tower, vault and other computers (Total 5). This would reflect the redundant fiber optic communication as well as the Radio back up, UPS, Vault equipment

Answer (A1): The Government has diagram of the connection of the ALCMS and the vault, but is not updated with the latest communication lines. Drawings are unable to be released as public information due to the sensitive information of the Air Traffic Infrastructure. Information and drawings can be shared on-site during installation and commissioning.

(Q2): Can we get a drawing of the number of Constant Current Regulators (CCR's) and the steps and circuits operating that will be controlled and monitored by the ALCMS? Also any other equipment to be controlled and monitored (i.e. Beacon, PAPI's if voltage powered, Generator (what point are available to monitor and what is required to be monitored and what if anything needed to be controlled, Automatic Transfer Switch (ATS) what monitored and if they want to control) Typically the Generator /ATS will have the ability to turn on and off as well as feedback it actually came on and went off. In addition if the Generator has the contact points we can monitor temperature, fuel levels, etc.

(A2): Yes, the Government has drawings of each CCR and the where it is located in the vault, to include also has the listing of nameplate data for each CCR. It is unnecessary to monitor the status of the Generator and ATS. Drawings and CCR information can't to be released as public information due to the sensitive information of the Air Traffic Infrastructure. Information and drawings can be shared on-site during installation and commissioning.

(Q3): Is there any spare parts requirement?

(A3): 2 each - 2.4 Gigahertz Radio, 2 each – Antennas, spare touchscreen unit.

(Q4): Does the ALCMS need to be FAA Approved and ETL Certified to the FAA L-890 Specification? As long as the System supplied meet these requirements and the functional design intent of the ALCMS identified in the synopsis does it matter if the proposed system is PLC or PC based?

(A4): ALCMS must comply with FAA AC 150/5345-56. System can be PC or PLC based.

(Q5): Are the computers in the Tower and Vault Redundant or just the communication? (This would be reflected in the one line drawing of the ALCMS).

(A5): The computers are redundant.

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(Q6): Is the fiber optic between the vault and the tower to be re-used?

(A6): Existing Fiber optic shall be re-used.

(Q7): Is the fiber proposed between the vault and the tower Single Mode or Multi Mode Fiber?

(A7): Fiber Optic needs to be investigated to determine if the cable is single or multi-mode.

(Q8): What is the distance between the Vault and other computers, other than the Tower? Is there a plan showing the buildings the computers will reside in.

(A8): Computers will be installed at the Vault and Air Traffic Control Equipment Area and will be coordinated by 36 CES Operations and ATC. There is no pre-determined distance of where the computers will be placed.

(Q9): Is the communication between the vault and other 3 locations also fiber optics? If so what type (Single Mode or Multi Mode).

(A9): There will be two computers at the Air Traffic Control Tower and two computers at the vault, with the touchscreen being at the Main Air Traffic Control Center. Communication will be fiber optics.

(Q10): Is the radio link used for the back-up communication just between the vault and the tower only? If so is this line of sight or are there obstructions?

(A10): The radio link will be used for redundancy for communication for the computers.

(Q11): Do the other computer location also require radio back up?

(A11): The radio will be located within close vicinity of both the vault and ATC Equipment Room. The radio will be a means of communication and used as redundancy to the fiber connection in the event that circuit should go down.

(Q12): Where is the beacon located?

(A12): The beacon is south of Building 20018.

(Q13): Where is the beacon powered from?

(A13): It is powered from Panel A with 60 amp main breaker and connected to circuit #1 on a 20 amp single pole adjacent to the beacon tower.

(Q14): Is there a diagram of the tower that shows elevation and location of the tower computer, distance to the cab where the touchscreen will be located in comparison to the ALCMS Computer?

(A14): There are no diagrams or drawings showing the elevation and location of each computer and will have to be investigated or verified out on the field.

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(Q15): Is there any requirement for a Factory Acceptance Test (FAT) before the system ships to site?

(A15): Equipment shall be Factory Acceptance Test individual and tested as a whole system during the commissioning stage.

(Q16): Is the option of Auto Meggering required for the CCR's?

(A16): Existing system has the capability of providing megger readings on the CCRs. No CCRs are to be provided as part of this contract.

(Q17): The synopsis indicated a 60 day delivery after award.

(Q17a): Does the 60 days include the submittal process?

(Q17b): How much time will be allocated for the graphic screens review stage with the end users (Tower Controllers and Electricians)?

(Q17c): Please confirm the Delivery does not include Installation, Commissioning and Training?

(A17a): The 60 day Delivery should begin at least after submittals are approved not after award. The submittal approval process is mostly out of our control other than the typical 1 week to generate submittals material.

(A17b): Past experience this could take several weeks to a month depending on the end user and the number of revisions needed

(A17c): Please refer to the SOW for the subject RFQ.

(Q18): How long do you expect before we may get a reply to our questions?

(A18): Please refer to Amendment 1 of the Request for Quotation (RFQ).

(Q19): Based on the response time to our questions is it possible to get the bid date extended?

(A19): Please refer to Amendment 1 of the Request for Quotation (RFQ).

(Q20): Is there a Buy America Requirement for this project?

(A20): Please refer to the Synopsis of the RFQ which contain all applicable FAR clauses for the requirement.

(Q21): Can you address the following items? I did not see anything in the synopsis about them:

Hold Time for Bid

Liquidated Damages (if any)

Bid Bond and % (if needed)

(A21): All requirements for this RFQ were included in the synopsis and SOW.

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(Q22): On page one of the synopsis there is a reference to the proposed ALCMS block diagram. This document is not included with the download materials. Can you add the ALCMS block diagram or send a copy to me?

(A22): The ALCMS diagram was included in the initial synopsis and has been provided in Amendment 1.

(Q23): How many items will be controlled by the system? Can you provide a list?

(A23): See CCR Nameplate Data and two sequence flashers that are not run by CCRs.

(Q24): How many constant current regulators are in the vault that will need to be controlled?

(A24): There are 24 active CCRs and 5 spare CCRs.

(Q25): Are existing fiber optic cables and patch panels to be reused? What type fiber optic cable is in use now? What is the strand count on the cable?

(A25): Existing fiber optic cables and patch panels will be reused. Contractor shall conduct field verification to determine if fiber optic cable is single or multi-mode and the number of strands that are being used for the communication link for ALCMS.

(Q26): Is there a plan that shows the building lay outs and proposed locations for the equipment?

(A26): There are no drawings of the location of the equipment and would have to be coordinated with 36th CES Operations and Air Traffic Control.

(Q27): What is the distance from the vault to the tower?

(A27): The estimated conduit length is about 300 feet and estimated linear feet are 200 feet.

(Q28): How tall is the tower?

(A28): The estimated height of the tower is 140 feet.

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**Scope of Work to
Upgrade Equipment of Airfield Lighting Control and
Monitoring System (ALCMS)
At
Andersen Air Force Base
Yigo, G.U.**

August 2015

Project Description: This project is to upgrade the existing outdated Cooper Crouse-Hinds Airfield Lighting System for communication redundancy, controls, and monitoring functionality. The ALCMS is the computer control system that air traffic controllers use to turn on and off runway lights, approach lights, and taxiway lights. It is also used to adjust the brightness levels of these systems when visibility for approaching aircraft changes.

The ALCMS includes hardware and software (five systems) housed in the airfield lighting vault (facility) located in Building 18010 and Building 18015. Building 18010 includes two (primary and secondary) and three additional units (primary, secondary, and alternate tower TBD) in Building 18015. The system is integrated by fiber optic cables linking Air Traffic Control Tower and the hardware and software housed in a vault. The ALCMS computer system is integrated into the runway lighting system by using patented DigiTrac units at each constant current regulator.

SCOPE: Contractor shall supply, deliver, install, commission, test and verify of all necessary equipment and service to deliver a complete and usable Airfield Lighting Control and Monitoring System (ALCMS). Upon completion and acceptance of upgraded system, contractor will provide a through training to operate and maintain the ALCMS equipment.

SCHEDULE OF WORK: Delivery and commissioning of required equipment shall be accomplished within 60 calendar days from contract award.

INSPECTION AND ACCEPTANCE: 36th Civil Engineering Squadron Operations – Requirements and Optimization and Electrical Shop and 36th Operation Support Squadron/Air Traffic Control will accomplish inspection and acceptance of delivered equipment.

SCOPE: Contractor shall supply, deliver, install, commission, test and verify of all necessary equipment and service to deliver a complete and usable Airfield Lighting Control and Monitoring System (ALCMS). Upon completion and acceptance of upgraded system, contractor will provide a through training to operate and maintain the ALCMS equipment. Setup and operations shall be compliance with Proposed ALCMS Block Diagram.

The scope of work includes, but is not limited to, the following:

1. Perform site survey Bldg. 18015 (Andersen control tower) and Bldg. 18010 (airfield lighting vault)
 - a. Ensure planned system installation effectively assimilates current communication infrastructure.

2. Provide and Install the following equipment at Air Traffic Control Tower:
 - a. Two Industrial Computers that rack-mounted with Windows 7 Operating System, the latest ALCMS Software with Keyboard and Tray, one 21" Touch Screen, and 17" Service Monitor
 - b. One 2000 Watts Uninterruptable Power Supply
 - c. One Ethernet and Selector (A/B) Switch
 - d. 2.4 Gigahertz Radio with Antenna with Lighting Arrestor

3. Provide and Install the following equipment at Electrical Vault:
 - a. Two Industrial Computers that rack-mounted with Windows 7 Operating System with the latest ALCMS Software, Keyboard and Tray, and 17" Service Monitor
 - b. One 2000 Watts Uninterruptable Power Supply
 - c. One Ethernet and Selector (A/B) Switch
 - d. 2.4 Gigahertz Radio with Antenna with Lighting Arrestor

4. Provide test/commissioning reports, detail network diagram(s), and as-built drawings.
5. Perform all work to engineered performance standards.
6. ALCMS shall be FAA Certified and comply with FAA AC 150/5345-56.

The contractor shall be responsible to verify all existing site conditions, dimensions and other requirements necessary to complete the project. Any adjustments to suit field conditions shall be made without the additional cost to the Government including the restoration of damages borne by the contractor in the performance of this contract. Contractor shall be responsible for proper handling and disposal of all materials removed and/or demolished from construction site.

Proposed ALCMS
Block Diagram

