

Molokai Airport Obstruction Light Replacement

A. Scope of Work

This basic scope of work of this project is to replace the obstruction lights at the Waipuna and Waihee sites located to the west of Molokai Airport. Specifically:

1. Replace the obstruction lights located at the Waihee and Waipuna sites as shown on the attached location map.
 - a. MKK Obstruction Light "Waihee" located at (Lat, Lon)
21° 8'11.64"N, 157° 7'23.83"W (Decimal: 21.136566°, -157.123287°)
 - b. MKK Obstruction Light "Waihuna" located at (Lat, Lon):
21° 9'22.29"N, 157° 7'43.38"W (Decimal: 21.156192°, -157.128717°)

Both sites are not accessible by vehicles. The Contractor will need to either hike to both sites with all tools, equipment, and materials necessary for the installation or arrange for helicopter transport. It also may not be possible to land at either site, therefore a hike may be required with all tools, equipment, and materials being airlifted to the site.

New obstruction light equipment shall be installed per the plans and the attached documentation listed under "Reference Documents".

2. Limited demolition of the existing obstruction lighting equipment including the batteries, cabinets, solar panels, cabling, and miscellaneous equipment as shown on the plans. The Contractor shall transport the demolished equipment from each site back to the Airport for State personnel to confirm the removal. Once State personnel have confirmed that all demolished equipment and materials are accounted for, the Contractor shall properly dispose of all demolished equipment and materials off airport property.
3. Provide any required materials that are not provided by the State. The State will assume that bidders have thoroughly reviewed all nine (9) of the reference documents attached to these specifications and noted all of the parts and materials required to complete the installation.
4. Provide and install a new lightning rod system at both sites to protect the new obstruction light. Each lightning rod system shall possess the following characteristics as noted on page 10 of the "FTS-371 Smart Product Manual"
 - a. Extends a minimum of (36) inches above the top of the obstruction light
 - b. Offset a minimum of eighteen (18) inches from the body of the obstruction light
 - c. Lightning rod conductor cabling shall be mounted on the opposite side of the pole from the control & power wiring, as well as the enclosures.

The Contractor shall provide all parts required for the lightning rod system, but shall reuse the existing grounding rods for the existing lightning rod system.

5. Neatly secure all wiring and cabling to the pole or enclosures with wire staples or equivalent fasteners. Control & power wiring and cabling shall be mounted on the opposite side of the pole from the lighting rod conductor cabling.
6. Properly ground all equipment as required by the manufacturer(s).
7. The obstruction light located at Kualapuu to the east of the Airport has already been replaced by State personnel. Bidders may request access to this site to see a completed system. Access to the site is via a 4-wheel drive access road. Bidders that wish to visit the Kualapuu site shall call Mr. Antone Kalilikane at 808-281-9898 during regular business hours.

B. Licensing, Permits, & Insurance

The Contractor shall possess all appropriate licenses for the type of work required and adhere to the most current methods of construction and installation of required items.

The awarded contractor shall complete all work required to replace the existing obstruction light system and lightning rod system, as well as comply with all Federal, State, County, and Airport rules and regulations, inclusive of OSHA, DLIR, etc.

If requested, contractor shall provide the contract manager copies of all salaries/benefits notated on the appropriate forms (DLIR and SPO websites.) Current wage rates may be found at <http://dhrd.hawaii.gov/state-hr-professionals/class-and-comp/>.

Contractor is required to acquire any building permits if necessary to perform this work.

Work site is not located in the airport operational area, however, regular work hours shall be the same as for the Molokai Airport Baseyard. The contractor(s) shall provide to the State a copy of their insurance showing the State of Hawaii, DOT Airports, Molokai Airport as additional insured for a minimum of \$1,000,000 per occurrence (vehicle and general liability.)

Performance bond is required.

C. Reference Documents

The following reference documents are provided as attachments to these specifications (filenames):

1. MKK Obstruction Light REF 001 - Location Map and Kualapuu Site Photos.pdf
2. MKK Obstruction Light REF 002 – Molokai Solar Obstruction Assembly Information.pdf
3. MKK Obstruction Light REF 003 - 7913800-FTS-371 SMART Product Manual Rev3.pdf
4. MKK Obstruction Light REF 004 - F7904219-FTS-371 Vanguard QSG DC Basic REV2.pdf
5. MKK Obstruction Light REF 005 - Data Sheet 1 SPM085P WP F.pdf
6. MKK Obstruction Light REF 006 - 1X-SPM.pdf
7. MKK Obstruction Light REF 007 - BBA-2-Enclosure.pdf
8. MKK Obstruction Light REF 008 - 8G31_DEKA.pdf
9. MKK Obstruction Light REF 009 - FTS-371 Data Sheet.pdf

D. Materials

The following materials/hardware will be provided by the State and are available for bidders to inspect at the Molokai Airport.

- Two (2) Flash Technology Flash 371 FH red medium intensity flash heads
- Two (2) photodiodes (Part No. F1855516 or equivalent)
- Two (2) Flash Technology FTS 371 FTC Controller
- Two (2) Solartech SPM085P-WP-F 85 watt solar panels (or equivalent)
- Two (2) 1X-SPM series side of pole mount (for solar panels)
- Four (4) single conductor PV cable (positive and negative)
- Four (4) Deka 8G31 solar batteries
- Two (2) BBA-2 battery enclosures

All equipment & materials required to complete the work, if not listed above, shall be provided by the contractor. This shall include, but is not limited to the following:

- Lightning rod system (rod mounting, conductor cables, etc.)
- Pole standoff bracket for the lightning rod (Wilcor WA24SBS or equal approved by the State Project Manager)
- Stainless steel lag bolts, washers, and lock washers to be used with all stainless steel items
- Galvanized steel lag bolts, washers, and lock washers to be used with all stainless steel items

E. Measurement & Payment

Work under this section will not be measured nor paid for separately, but shall be considered incidental to and included in the price bid for all the work necessary to complete the scope of work resulting in fully operational obstruction lights at the locations noted in these specifications.