SP-150197a
(Replaces SP-150197)

SPECIAL PROVISIONS
FOR
AERIAL OBSTRUCTION BEACON

Scott County
IM-NHS-074-1(198)5--03-82

Effective Date
April 25, 2017

THE STANDARD SPECIFICATIONS, SERIES 2015, ARE AMENDED BY THE FOLLOWING MODIFICATIONS AND ADDITIONS. THESE ARE SPECIAL PROVISIONS AND THEY SHALL PREVAIL OVER THOSE PUBLISHED IN THE STANDARD SPECIFICATIONS.

150197a.01 DESCRIPTION.

A. This work shall consist of furnishing and installing airway hazard obstruction lighting as shown on the plans and as specified herein.

B. Materials and equipment installed for this work shall meet the requirements of the following publications to the extent referenced:
- Federal Aviation Administration (FAA) – Advisory Circulars AC 150/5345-43 and AC 70/7460-1K.
- Code of Federal Regulations 14 CFR Part 77

C. Installation and orientation of the aerial obstruction lighting shall be respectively in accordance with the approved plans, rules and regulations of the FAA. Any rules and regulations of the local agencies having jurisdiction shall also apply.

D. The permit for the proposed arch superstructure has been applied for and approved by the Federal Aviation Administration. The Contractor shall be responsible to apply for and obtain any permits required from the FAA for airspace utilization for temporary erection of the arch structure. The approval permit letters shall be provided to the Engineer. The Contractor shall comply with the criteria set forth by the FAA during the permit process.

150197a.02 MATERIAL.

A. Airway hazard obstruction lighting shall meet requirements of the Federal Aviation Administration (FAA) for use on skeletal structures for marking aviation obstructions. The aerial obstruction light fixture shall be FAA type L-864/L-865, medium intensity Type A/Type B aviation obstruction beacon providing a white flashing light for day and red flashing light for night.

B. The light fixture shall have high efficiency LED's. Each white and red light shall have high flux LED arrays mounted in a parabolic reflector. A twist-lock, three-prong photoelectric controller shall be provided with the system.

C. The power supply system shall have power electronic, timing, and monitoring circuitry for the lighting system. The system shall automatically switch the dual strobe light fixture between day, twilight, and night intensities by the use of the calibrated photoelectric controller. Wireless synchronization shall be provided for all aerial obstruction beacons. The power supply shall constantly monitor the operation of the lighting system, and shall provide alarm contact closures upon a system failure.

D. The cable interconnecting the remote power supply and the dual strobe light fixtures shall be supplied by the light manufacturer and included with the system. The cable shall have sufficient length from the power supply to the dual strobe light fixture and shall consist of a minimum of six conductors sized by the manufacturer for the required cable length. The cable shall be rated 600 volts, meeting U.L. standard 1277 and shall have a sun-light resistant jacket.

150197a.03 CONSTRUCTION.

A. The aerial obstruction lighting shall be installed in accordance with the requirements of the FAA.

B. After installation, each light fixture of the aerial obstruction shall be visually verified from a distance to ensure the proper display of light.

C. The aerial obstruction lighting shall be temporarily provided while the bridge arches are under construction, as recommended by the FAA Advisory Circular 70/7460-1K, or as required by the regional FAA agency having jurisdiction. In general, when any one of the arches of the bridge with all appurtenances are erected to a height of 200 feet above ground level, temporary aerial obstruction lighting shall be provided at the highest point of the arches and at all times during the construction until the permanent lighting is installed in place and is operative.

D. Upon notice to proceed the Contractor shall become responsible to maintain and operate the temporary lighting systems until the permanent lighting systems are in operation. In addition, the Contractor shall be responsible for and maintain all circuits, switching, relamping, and power service for the temporary and permanent aerial obstruction lighting until the final and formal acceptance of the complete work.

E. Light fixtures used for the temporary aerial obstruction lighting may be re-used for the permanent lighting system with the approval of the Engineer. The light fixtures to be re-used for the permanent lighting system shall be like-new condition without any damage, scratch or dent, and shall have new lamps installed. Temporary wiring shall not be re-used for the permanent system.

150197a.04 METHOD OF MEASUREMENT.
Lump sum. No method of measurement.

150197a.05 BASIS OF PAYMENT.
Payment for the Aerial Obstruction Lighting systems, complete and accepted, will be made at the contract lump sum price bid. Such price bid shall be full compensation for furnishing and installing all cable, conduits, controllers, light fixtures and lamps, supports, temporary lighting, and for all labor, tools, equipment and incidentals necessary to complete the work.