Special Specification 6334
LED Gabion Lighting

1. DESCRIPTION

This Item will consist of furnishing all materials, equipment, labor, and incidentals necessary for installing Light Emitting Diode (LED) gabion lighting as designated on the plans and as specified by the Engineer.

2. MATERIALS

All materials and construction methods utilized must conform to the details on the plans, the requirements of this Item, and to the pertinent requirements of the following Items:
- Item 616, “Performance Testing of Lighting Systems,”
- Item 618, “Conduit,” and
- Item 620, “Electrical Conductors,”

Provide new materials that comply with the details shown on the plans, the requirements of this Item, and the pertinent requirements of the National Electrical Code (NEC), Underwriters laboratories (UL), National Electrical Manufacturers Association (NEMA).

Provide 6 sets of submittals of all materials to the Engineer at the project address. Obtain the Engineer’s approval on the submittals before purchasing materials and beginning work.

Provide all materials, including but not limited to: enclosures; lighting transformers; LED strips; mounting components, conduit and conductors or landscape lighting cable for connection between the transformers and LED strips; and incidental components for installation of the LED gabion lighting system from the associated lighting transformers to the LED strips.

Provide UL listed low voltage lighting transformers rated for outdoor use in wet locations, with 120VAC input and the correct output voltage to operate the LED strips.

Provide flexible low voltage LED light strips rated for outdoor use in wet locations. Provide strips with 4 watts of lighting output per foot and a color temperature of 4000K.

Provide waterproof electrical connections for splices and terminations.

2.1.1. Warranty. Provide manufacturer's warranty for each LED lighting assembly that will replace failed components or parts for a period of five years from the purchase date.

3. CONSTRUCTION

Perform work in accordance with the details shown on the plans and the requirements of this Item. Consult with the proper utility company before beginning work. Coordinate conduit layout and mounting design on bridge beams with the respective fabricator. Prevent scarring or marring of assembly. Replace damaged components.

Furnish and install each lighting assembly as shown on the plans and in coordination with the lighting assembly manufacturer. Field verify dimensions and coordination of conduit entry and all other mounting conditions with the entity manufacturing lighting fixtures. The Department may shift an assembly's location, if necessary to secure a more desirable location or to avoid conflicts.
Install cables and equipment necessary for fixture connection in a manner that minimizes visibility from pedestrian and roadway traffic.

Support and align lighting fixtures with necessary hangers, supporting members, and plaster frames for proper installation, as shown in the Contract Drawings and the Specifications, and as approved by the Engineer. Aim fixtures initially as shown on the plans for review. Make provisions for trial lighting to review and adjust fixture angle for final positioning as directed by the Engineer.

Manufacture and install lighting assembly components in accordance with the details, dimensions, and requirements shown on the plans and in coordination with the manufacturer to assure the components are installed thru the appropriate conduits for acceptable visual appearance and functionality.

Follow NEC and local utility company requirements when installing the lighting assemblies. All lighting fixtures will be properly wired and connected to branch circuits, tested, and left ready for operation. Lighting fixtures and metal accessories must be bonded to the branch circuit-grounding conductor. Coordinate the utility companies’ work for providing service.

Complete performance test of all systems per Item 616, “Performance Testing of Lighting Systems.”

4. **MEASUREMENT**

This Item will be measured by the linear foot of LED Gabion Lighting, complete and in place.

5. **PAYMENT**

The work performed and material furnished in accordance with this Item and measured as provided under “Measurement” will be paid for at the unit price bid for “LED Gabion Lighting.” This price will be full compensation for furnishing, installing and testing all LED strips; lighting transformers; conduit, conductors, and landscape lighting cable; connecting transformers to the LED strips; connections of equipment; and for all manipulations, labor, tools, equipment and any incidentals.

New conduit, except for conduit between the transformers and LED strips, will be paid for under Item 618, “Conduit.” New conductors, except for the conductors between the transformers and LED strips, will be paid for under Item 620, “Electrical Conductors.” New ground boxes will be paid for under Item 624, “Ground Boxes.” New electrical services will be paid for under Item 628, “Electrical Services.”