

Turnpike Lighting & Electrical Design Guidance

Box Girder Maintenance Lighting and Power

- Per **FDOT Standard Plans, Index 715-240 - Maintenance Lighting for Box Girders** provide design standards for box girder maintenance lighting. Project specific details and/or notes should be provided as needed.
- Welding or burning of the structure is not allowed.
- Electrical work associated with the box girders involves working in confined space areas. All precautions and rules according to "confined spaces" of **29 CFR part 1910.146** apply.
- Emergency lighting must be provided within each box girder per **NFPA 101, Life Safety Code (Current Edition)**.
- The minimum conductor size is #10 AWG. Install a green insulated conductor in each conduit run. The minimum conduit size is 1 inch.
- Six-hour timers should control the lighting contactors. Provide timers at each hatch entrance and mid-span.
- Connect the light fixtures to branch circuit breakers separate from the receptacle branch circuit breakers.
- The service voltage for the box girders should be 240/480 volts, single-phase, three-wires, and then step down to 120/240 volts through the mini power centers.
- Provide a main disconnect switch immediately adjacent to the hatch door of each girder.
- Terminate the 240/480-volt feeder in a distribution panelboard.
- The distribution panelboard should provide 480-volt power to each mini power center.
- Determine the number of mini power centers within each box girder based on the number of lights and receptacles. The maximum number of lights and receptacles within a mini power center must be as indicated on **FDOT Standard Plans, Index 715-240 - Maintenance Lighting for Box Girders**.