Serves as Project Engineer for the more difficult and unusual electrical engineering projects. These projects usually consist of building campuses that include office buildings, dormitories, educational facilities, and maintenance and repair facilities on military installations and at civil works projects. Manages the electrical design work on such projects, including assigning tasks to other engineers, assembling, and disseminating pertinent criteria, and establishing criteria where none exists. Adapts or develops approaches to be used by less experienced engineers and provides guidance on especially difficult problems.

1. Performs design on military and civil projects. Designs include interior electrical power systems, interior lighting and lighting control systems, interior building communications systems (voice and data), interior fire detection and alarm and mass notification systems, site power systems (primary and secondary), site communication systems (Outside Plant Systems), and site lighting and lighting control systems. Assignments involve interpretation of criteria, application of industry and government standards, preparation of contract drawings and specifications, and preparation of design analyses (fault current calculations, voltage drop calculations, demand load calculations, and lighting calculations). Studies and evaluates engineering alternatives and proposes several configurations that meet the project objectives and are consistent with other technical discipline requirements. Makes large-scale field surveys of electrical systems, analyzing data and making recommendations for accomplishing desired results. Scope of surveys includes obtaining primary loading data for major portions of military base distribution systems, making reference maps of distribution systems, and determining most feasible means of modifying existing electrical systems in industrial-type buildings.

2. Reviews and modifies plans and specifications prepared by A-E firms. Designs are reviewed for technical adequacy, economy of design, operational safety, system capacity, and compliance with pertinent criteria and good engineering practice. Reviews include military and civil works projects.

3. Checks compatibility of project equipment for consistency with existing equipment used throughout the installation. Reviews shop drawings and manufacturer's technical proposals, including deviations, and recommends approval or disapproval. Recommends modifications to proposed designs where appropriate.