MANAGER OF COMPUTER SYSTEMS ENGINEERING

JC: EF119
PB: 10
FLSA: Exempt

BU: 95 (NR)
Created: June 2004
Revised: June 2019

*Class specifications are intended to present a descriptive list of the range of duties performed by employees in the class. Specifications are **not** intended to reflect all duties performed within the job.*

DEFINITION

Under general direction, manages and oversees computer systems engineering efforts including support and development of yard/mainline/traction power in house systems, data analytics, SCADA, audio/sign systems, third party interfaces, and CBTC; manages the Computer Systems Engineering Division within the Maintenance and Engineering Department including central control, central displays, automatic fare collection, station data gathering and other systems that support real-time train operations; performs related duties as assigned.

CLASS CHARACTERISTICS

This is the full-scope managerial level classification which is responsible, through subordinate professionals, for managing computer systems engineering activities whether accomplished by contract or District staff, and are accountable for accomplishing division goals and objectives and for furthering District goals and objectives within general policy guidelines. This classification is distinguished from the Deputy Director of Systems Engineering in that the latter has overall responsibility for electronics, computer systems, communications systems, fare collection systems, revenue vehicle automatic train control and special projects engineering activities.

REPORTS TO

Deputy Director of Systems Engineering or designee.

EXAMPLES OF DUTIES – *Duties may include, but are not limited to, the following:*

1. Assumes management responsibility for the activities and operations of the Computer Systems Engineering Division including central control, control displays, automatic fare collection, station data gathering and other systems that support real-time train operations.

2. Manages and participates in the development and implementation of goals, objectives, policies and priorities for assigned programs; recommends and administers policies and procedures.

3. Monitors and evaluates the efficiency and effectiveness of service delivery methods and procedures; recommends, within departmental policy, appropriate service and staffing levels.

4. Manages M&E Capital Engineering Projects. Directs the preparation of conceptual plans, detailed systems design, architecture and cost estimates; coordinates and finalizes design concept review; coordinates all aspects of project implementation.

5. Plans, directs, coordinates and reviews the work plan for computer systems engineering activities and staff; assigns work activities, projects and programs; reviews and evaluates work products, methods and procedures; meets with staff to identify and resolve problems.

6. Oversees, prepares, administers and monitors computer systems engineering consultant contracts for assigned computer systems projects.

7. Monitors developments and legislation related to assigned area of responsibility; evaluates impact upon district operations; recommends and implements equipment, practice and procedural improvements.

8. Selects, trains, motivates and evaluates computer systems engineering personnel; provides or coordinates staff training; works with employees to correct deficiencies; implements discipline and termination procedures.

9. Oversees and participates in the development and administration of the division's annual budget; participates in the forecast of funds needed for staffing, equipment, materials and supplies; monitors and approves expenditures; implements adjustments.

10. Serves as the liaison for the computer systems engineering division with other divisions, departments and outside agencies; provides technical assistance to the legal department and serves as an expert witness; negotiates and resolves sensitive and controversial issues.

11. Serves as staff on a variety of boards, commissions and committees; prepares and presents periodic and special reports regarding division activities to management staff or other departments and other necessary correspondence.

12. Represents the District meetings with representatives of governmental agencies, transit and professional organizations and the public.

13. Provides responsible staff assistance to the Group Manager, Systems Engineering.

14. Directs the preparation of and approves final plans, specifications, cost estimates, requests for proposals and bid documents; conducts or directs analytical studies.

15. Responds to and resolves difficult and sensitive citizen inquiries and complaints.

16. Attends and participates in professional group meetings; stays abreast of new trends and innovations in the field of computer systems engineering.

QUALIFICATIONS

Knowledge of:
-   Operations, services and activities of a comprehensive computer systems engineering program.
-   Principles and practices of computer hardware and software engineering including real time control systems.
-   Methods and techniques of estimating and scheduling computer system modifications.
-   Principles and practices of program development and administration.
-   Principles and practices of project scheduling and management.
-   Principles and practices of cost estimating.
-   Principles and practices of budget preparation and administration.
-   Fare collection operations and business rules.
-   Principles of supervision, training and performance evaluation.
-   Related Federal, State and local laws, codes and regulations.

Skill/Ability in:
-   Overseeing and participating in the management of a comprehensive computer systems engineering program.
-   Overseeing, directing and coordinating the work of lower level staff.
-   Selecting, supervising, training and evaluating staff.
-   Planning, organizing, directing, reviewing, and evaluating the activities of contract consultants.
-   Participating in the development and administration of division goals, objectives and procedures.
-   Overseeing and preparing project feasibility studies and cost estimates.
-   Preparing and administering large program budgets and contracts.
-   Resource planning and prioritization.
-   Project management and strategic planning.
-   Preparing clear and concise administrative and financial reports.
-   Analyzing problems, identifying alternative solutions, projecting consequences of proposed actions and implementing recommendations in support of goals.
-   Researching, analyzing and evaluating new service delivery methods and techniques.
-   Interpreting and applying Federal, State and local policies, laws and regulations.
-   Establishing and maintaining effective working relationships with those contacted in the course of work.

MINIMUM QUALIFICATIONS

Education:
Bachelor's degree in Computer Science or a closely related field from an accredited college or university.

Experience:
Five (5) years of (full-time) professional verifiable infrastructure management or related experience which must include two (2) years of supervisory experience.

Substitution:
Additional professional experience as outlined above may be substituted for the   education on a year-for-year basis. A college degree is preferred.

WORKING CONDITIONS

Environmental Conditions:
Office environment; exposure to computer screens; station environment; equipment room environment; wayside environment.

Physical Conditions:
May require maintaining physical condition necessary for walking, standing or sitting for prolonged periods of time.

BART EEO-1 Job Group: 0500 – Executives/Managers
Census Code: 0300 – Architectural & Engineering Managers
Safety Sensitive: No