

## Civil Engineering Associate (7246)

### Task List- 2024

1. Prepares preliminary studies and environmental documentation in conformance with environmental laws, policies, and procedures for major engineering projects: streets, highways, sewers, sewage treatment plants, water reclamation plants, flood control projects, storm drains, reservoirs, aqueducts, water distribution systems, pumping plants, dams, power generation, transmission and distribution facilities, airport and harbor facilities, and other structures.
2. Designs portions of engineering projects such as streets, highways, sewers, sewage treatment plants, water reclamation plants, flood control projects, storm drains, reservoirs, aqueducts, water distribution systems, pumping plants, dams, power generation, transmission and distribution facilities, airport and harbor facilities, and other structures.
3. Prepares cost estimates and conducts feasibility studies for engineering projects in order to make economic feasibility and project priority recommendations.
4. Makes field investigations to aid in planning and design and inspect the progress of design projects to ensure their compliance with plans and specifications.
5. Prepares and checks plans and specifications for the following projects: streets, highways, sewers, sewage treatment plants, water reclamation plants, flood control projects, storm drains, reservoirs, aqueducts, water distribution systems, pumping plants, dams, power generation, transmission and distribution facilities, airport and harbor facilities, and other structures.
6. Checks and reviews plans prepared by private engineers for conformance with departmental standards and accepted engineering practices.
7. Interprets and uses survey data to perform engineering calculations.
8. Acts as project manager or resident engineer for projects.
9. Acts as resident quality control engineer on construction projects.
10. Develops and maintains construction cost and progress data for financial and budgeting control.
11. Acts as a liaison between squads, sections, divisions, and departments.
12. Acts as a utility coordinator between utility companies, contractors, and the City.

13. Prepares time estimates and schedules for design and construction projects.
14. Analyzes bids for the recommendation of contract awards.
15. Investigates conflicts and possible deviations from construction plans and specifications, and prepares change orders when necessary.
16. Prepares hydrology studies for water supply forecasting and design of reservoir and spillway capacities.
17. Conducts investigations and prepares reports on soils, foundations, and seismic evaluations.
18. Creates hydraulic designs for water supply and distribution facilities, reservoir spillways, hydroelectric power plants, pumping stations, sanitary sewers, sewage treatment and disposal plants, and storm drains facilities.
19. Creates designs for site development, including earthwork quantities, establishing grades, determining runoff, and computing the size and capacity of drainage facilities.
20. Creates structural designs on timber, concrete, masonry, and steel structures.
21. Performs research and prepares design, procedure, and operation manuals and standard plans.
22. Interacts with design or engineering squads.
23. Interprets computations on adjustments to a triangulation system and in engineering activities related to subdivisions, right-of-way, easement, and property acquisition and disposal.
24. Prepares and reviews technical reports and written correspondence.
25. Prepares and reviews recommendations on land use actions requested by private developers.
26. Checks improvement plans and issues permits for private developments.
27. Designs streets for safety, rideability, and longevity.
28. Reviews and approves shop drawings.

29. Obtains permits and assures compliance with regulatory requirements.
30. Supports facility operations personnel by developing plans, designs, and performing economic analyses for various system operations.
31. Prepares contracts to hire engineering consultants to perform all aspects of civil engineering design work for City Capital Improvement Projects (CIPs).

#### **Tasks Occasionally Performed by Civil Engineering Associate level III & IV**

32. Represents the City when interacting with private engineers, contractors, governmental agencies, and the general public.
33. Manages engineering design consultants by performing contract administration, including schedule analysis, progress payment, negotiation of change orders, and contract closeout.
34. Analyzes the impact of proposed regulations and legislation on City operations regarding various matters (such as construction issues and complaints for permits issued by other agencies).
35. Evaluates and recommends standards for construction materials.
36. Conducts testing, investigation, research, and inspection activities in studying the quality of materials and their proper use, application, or installation during construction.
37. Conducts power capability studies in connection with hydroelectric power projects.

#### **Supervision**

*\*Employees at the Civil Engineering Associate III level may supervise, or may serve as a lead over a small group of employees.*

38. Plans the work of Civil Engineering Associates I and II and other staff by assigning and directing work, taking into account the priority and difficulty level of each job, the skill set needed to complete the work, and the schedules and workloads of employees, and assigns work using automated systems, email, verbally, or in hard copy format in order to ensure that the job receives the appropriate level of technical expertise and is completed in a timely manner.
39. Applies the principles of Equal Employment Opportunity through the promotion of a positive work environment through training and discussion and monitoring employees' behavior regarding cultural diversity, sexual harassment, discrimination,

and retaliation and taking appropriate corrective action when necessary to ensure compliance with City and department policies and procedures.

40. Counsels employees regarding personnel issues such as rule infractions or inappropriate conduct, and/or disciplines employees following departmental progressive disciplinary procedures in order to perform personnel policy functions.
41. Discusses completed work with employees, including quantity and quality, timeliness, and problems encountered, and provides verbal and/or written praise and/or constructive criticism in order to provide recognition of good/poor performance and to coach them for effective performance of current and future assignments.