



## Career Service Authority

# Engineer/Architect Specialist

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### **GENERAL STATEMENT OF CLASS DUTIES**

Performs specialized, advanced professional engineering/architectural work in one or more of the following areas: 1) project management work on complex, multifaceted projects from inception to completion including the management and coordination of projects that have city-wide impact and requires a global, strategic understanding of city agencies and city policies, standards, and systems; 2) identifies the department's engineering needs by initiating analytical studies to improve operating efficiency and meet city, federal, and state regulatory mandates; 3) responsible for engineering quality control involving all components of the department's complex engineering programs; 4) monitors, evaluates, and modifies existing department engineering programs, systems, and processes for optimum efficiency and changing objectives and participates in strategic planning activities; 5) functions as the city-wide technical expert in one or more functional areas.

### **DISTINGUISHING CHARACTERISTICS**

This class performs specialized, advanced professional engineering/architectural work. This class is distinguished from the Project Manager II that performs advanced professional level project management work on complex, multifaceted projects from inception to completion including the management and coordination of projects that have city-wide impact and requires a global, strategic understanding of city agencies and city policies, standards, and systems. Additionally, some Senior Engineer/Architect positions will work on the same type of complex, multifaceted projects as a Project Manager II; however, the distinguishing difference is that a Senior Engineer/Architect possesses a professional license and works on projects that require the project manager to have a professional license.

An Engineer/Architect Specialist is distinguished from an Engineer/Architect Supervisor that performs professional and supervisory work over professional, licensed engineers and architects, develops, implements, and evaluates engineering plans, work processes, systems, and procedures to achieve annual goals and objectives, and makes budgetary and resource allocation decisions.

#### ***Guidelines, Difficulty and Decision Making Level:***

Guidelines are generally in the form of stated objectives only, with issues and factors largely undefined, requiring the employee to exercise creativity and ingenuity in devising criteria, techniques, strategy, and methodologies for approaching assigned projects.

Duties performed involve concepts, theories, and concrete factors to be evaluated and weighed requiring a high degree of analytical ability, independent judgment, and decision-making.

Work assignment is generally unstructured and employee is responsible for organizing complex, varied, and simultaneous coordination of several projects in various stages of completion.

#### ***Level of Supervision Received and Quality Review:***

Under administrative supervision, the employee has personal accountability for carrying out an assigned function, program, or project within the scope of established guidelines and objectives and is expected to resolve problems that arise in the normal course of the work. Completed work

is generally reviewed for soundness of judgment, conclusion, adequacy, and conformance to policy.

***Interpersonal Communications and Purpose:***

Contacts of a remedial nature involving the resolution of problems and where some degree of discretion and judgment are required in carrying out a major project(s) of the organization.

***Level of Supervision Exercised:***

Matrix manages and/or coordinates the work of consultants/contractors and other employees who are assigned to specific projects OR may perform lead work OR supervises subordinate technical staff.

**ESSENTIAL DUTIES**

Performs project management work by managing, coordinating, and directing large, complex, multi-disciplinary development, redevelopment, and capital improvement projects including project initiation, development, production/execution, and closing/maintenance and project coordination with city departments, elected officials, affected community and business organizations, and other internal/external stakeholders.

Conducts studies and surveys of department programs/projects, evaluates collected information/data and existing programs/projects to determine cost effectiveness/benefits and whether program/project objectives are being met, prepares systematic and objective conclusions using study data, and recommends corrective actions based upon departmental policies, sound engineering principles, and city, federal, and state regulatory mandates.

Confers with managers and other engineering professionals to discuss current objectives and problems regarding existing engineering programs, identifies the existence and causes of inefficient engineering methods, practices, and applications, and makes recommendations for appropriate corrective action, policy changes, and/or program improvement.

Determines the department's current and projected engineering needs through participation in strategic planning activities in conjunction with top level managers and other leaders in the department and participates in the development and implementation of goals, objectives, policies, priorities, and programs.

Coordinates and prioritizes programs/projects with other city departments, counties/jurisdictions, and other relevant agencies/parties and serves as a liaison for the department in order to negotiate and resolve sensitive and controversial issues.

Functions as the city's technical subject matter expert in one or more functional areas, recommends alternative engineering applications based on changing conditions or new developments in the field, and investigates the feasibility and cost of implementing updated engineering/architectural methods, techniques, and/or processes.

Prepares reports and makes presentations to City Council and other stakeholders regarding programs/projects, policy, and planning issues, anticipates any repercussions, and responds to stakeholder concerns and questions.

Serves as a technical and/or subject matter expert and provides training and mentoring to other staff members in the areas of project development, project design, project specification preparation, project management, contract management, quality control, and/or work program implementation.

Performs other related duties as assigned.

Any one position may not include all of the duties listed. However, the allocation of positions will be determined by the amount of time spent in performing the essential duties listed above.

## MINIMUM QUALIFICATIONS

### ***Competencies, Knowledges & Skills:***

**Project Management** – Applies principles, methods, or tools for developing, scheduling, coordinating, monitoring, evaluating, and managing projects and resources including technical performance.

**Engineering** – Knowledge of the concepts, principles, and theories of engineering and their practical applications.

**Architecture** – Knowledge of the concepts, principles, theories, and practices used in planning, design, construction, and maintenance of buildings, or other structures taking into consideration aesthetic and functional concerns.

**Building and Construction** – Knowledge of the materials, methods, systems, and tools used to construct objects, structures, and buildings.

**Public Planning** – Knowledge of functions, principles, methods, and techniques of public planning including those related to community planning, outdoor recreation planning, and natural resource management such as demand forecasting, environmental impact analysis, financial forecasting, and land use planning and zoning

**External Awareness** – Identifies and understands economic, political, and social trends that affect the organization.

**Technical Competence** – Uses knowledge that is acquired through formal training or extensive on-the-job experience to perform one's job, works with, understands, and evaluates technical information related to the job, and advises others on technical issues.

**Strategic Thinking** – Formulates effective strategies, determines objectives, and sets priorities and anticipates potential threats or opportunities.

**Vision** – Understands where the organization is headed and how to make a contribution, takes a long-term view, and recognizes opportunities to help the organization accomplish its objectives or move toward the vision.

**Risk Management** – Knowledge of the principles, methods, and tools used for risk management and mitigation including assessment of failures and their consequences.

**Decision Making** – Makes sound, well-informed, and objective decisions, perceives the impact and implications of decisions, commits to action even in uncertain situations to accomplish program goals, and causes change.

**Reasoning** – Identifies rules, principles, or relationships that explain facts, data, or other information, analyzes information, and makes correct inferences or draws accurate conclusions.

**Financial Management** – Prepares, justifies, and/or administers the budget for project area, plans, administers, and monitors expenditures to ensure cost-effective support of project policies, and assesses financial conditions.

**Influencing/Negotiating** – Persuades others to accept recommendations, cooperate, or change their behavior, works with others toward an agreement, and negotiates to find mutually acceptable solutions.

**Planning and Evaluating** – Organizes work, sets priorities, and determines resource requirements, determines short- or long-term goals and strategies to achieve them, coordinates with other organizations or parts of the organization to accomplish goals, and monitors progress and evaluates outcomes.

**Interpersonal Relationship and Service Orientation** – Demonstrated competency in working with a wide range of government departments with diverse business needs, interests, expectations, and requirements.

**Oral Communication** – Clearly communicates and explains organizational and program policies and work assignments to staff and communicates information about the program area's activities to peers, higher-level managers, administrative staff of other organizations, and internal and external customers.

**Written Communication** – Composes, reviews, edits, and issues written materials for diverse audiences and communicates purpose in a succinct and organized manner appropriate for context, time, and place. Written materials are of a routine nature and affect the immediate program area(s).

**Interpersonal Skills** – Establishes and maintains constructive and cooperative interpersonal relationships with staff, peers, higher-level managers, staff from other organizations, internal and external customers, and local stakeholder groups to accomplish a program's mission. Adapts approach to different people and situations.

**Teamwork** – Encourages and facilitates cooperation, pride, trust, and group identity, fosters commitment and team spirit, and works with others to achieve goals.

**Conflict Management** – Manages and resolves conflicts, grievance, confrontations, or disagreements in a constructive manner to minimize negative personal impact.

**Problem Solving** – Identifies problems, determines accuracy and relevance of information, uses sound judgment to generate and evaluate alternatives, and makes recommendations.

**Performance Assessment** – Knowledge of the principles, methods, and tools for conducting performance assessment to enhance and validate project performance and user acceptance.

**Diversity** – Is sensitive to cultural diversity, race, gender, and other individual differences in the workforce.

**Integrity/Honesty** – Contributes to maintaining the integrity of the organization, displays high standards of ethical conduct, understands the impact of violating these standards on an organization, self, and others, and is trustworthy.

**Self-Management** – Sets well-defined and realistic personal goals, displays a high level of initiative, effort, and commitment towards completing assignments in a timely manner, works with minimal supervision, is motivated to achieve, and demonstrates responsible behavior.

**Organization Awareness** – Knows the organization's mission and functions and how its social, political, and technological systems work and operates effectively within them including the programs, policies, procedures, rules, and regulations of the organization.

**Research** – Knowledge of the scientific principles, methods, and processes used to conduct a systematic and objective inquiry including study design, collection, analysis, interpretation of data, and reporting of results.

**Administration and Management** – Knowledge of planning, coordination, and execution of business functions, resource allocation, and production.

**Cost-Benefit Analysis** – Knowledge of the principles and methods of cost-benefit analysis including the time value of money, present value concepts, and quantifying tangible and intangible benefits.

Knowledge of supervisory theories and methods sufficient to be able to perform a variety of lead work functions.

***Physical Demands:***

Sitting: remaining in the normal seated position.

Carrying: transporting an object usually by hand, arm, or shoulder.

Balancing: maintaining body equilibrium to prevent falling over.

Reaching: extending the hand (s) and arm(s) in any direction.

Handling: seizing, holding, grasping, or otherwise working with hand(s).

Fingering: picking, pinching, or otherwise working with fingers.

Talking: expressing or exchanging ideas by means of spoken words.

Hearing: perceiving the nature of sounds by the ear.

Repetitive motions: making frequent movements with a part of the body.

Eye/hand/foot coordination: performing work through using two or more.

Far Acuity: ability to see clearly at 20 feet or more.

Near Acuity: ability to see clearly at 20 inches or less.

Dept Perception: ability to judge distance and space relationships.

Field of Vision: ability to see peripherally.

Color Vision: ability to distinguish and identify different colors.

Accommodation: ability to adjust vision to bring objects into focus.

***Working Environment:***

Pressure due to multiple calls and inquiries.

Subject to many interruptions.

Subject to varying and unpredictable situations.

Subject to long irregular hours.

***Education Requirement:***

Baccalaureate Degree in Engineering or Architecture.

***Experience Requirement:***

Three years of experience at the type and level of a Senior Engineer or Senior Architect.

***Education/Experience Equivalency:***

Additional appropriate education may be substituted for one year of the minimum experience requirement.

***Licensure and/or Certification:***

Registration as a Professional Engineer (PE) by the Colorado State Board of Registration for Professional Engineers at the time of application. Registration as a Professional Engineer (PE) by another state will be accepted in lieu of this requirement providing the applicant is registered by the State of Colorado by the completion of the probationary period.

**OR**

Registration as an Architect by the Colorado State Board of Registration at time of application. Registration in another state will be accepted in lieu of this requirement, provided that the applicant have Colorado registration at completion of probation.

Possession of a valid driver's license at the time of application.

**CLASS DETAIL**

***FLSA CODE:*** Exempt

***ESTABLISHED DATE:*** 08/24/2008

***REVISED DATE:***

***ESTABLISHED BY:*** Patricia Anderson

***CLASS HISTORY*** This is a new class.