

City of
EDMONDS
Washington

ASSOCIATE ENGINEER

Department:	Public Works - Engineering	Pay Grade:	NR-09
Bargaining Unit:	Non Represented	FLSA Status:	Exempt
Revised Date:	January 2018	Reports To:	Varies

POSITION PURPOSE: Under general direction, performs entry to mid-level civil engineering work in the planning, analysis, design, construction, operation and management of public works projects.

ESSENTIAL FUNCTIONS AND RESPONSIBILITIES:

*The following duties **ARE NOT** intended to serve as a comprehensive list of all duties performed by all employees in this classification, only a representative summary of the primary duties and responsibilities. Incumbent(s) may not be required to perform all duties listed and may be required to perform additional, position-specific duties.*

- Be able to perform the following fundamental principles of civil engineering design:
 - a. Hydraulic analyses of piped sewer and storm systems.
 - b. Hydraulic analyses of channeled systems.
 - c. Pressure analyses of potable water systems.
 - d. Drainage basin delineation and associated hydrologic analyses.
 - e. Cut/fill calculations in grading and roadway design.
 - f. Sight distance calculations for roadway design.
 - g. Buoyancy calculations for construction in high groundwater locations.
 - h. Basic retaining wall design.
 - i. Basic road design.
- Prepares and interprets design drawings, specifications and cost estimates for various Public Works and Utilities projects.
- Manages public works projects of smaller scope.
- Coordinates project improvements with City Departments, private utilities, other public agencies and citizens.
- Makes recommendations for, prepares and secures, necessary easements for project construction.
- Assists with/Conducts engineering studies and provides recommendations relating to present activities and future projects
- Collects, interprets and analyzes data, provides recommendations and confers with supervisors regarding the feasibility of design.
- Independently performs a variety of routine and complex inspections on public works construction projects; assures safety, work quality, and compliance with approved plans, drawings and specifications, permits, standards and codes, including environmental protection laws.
- Prepares daily inspection reports, calculates and prepares field notes records of contractor quantities and materials installed in the field.
- Assists with contract administration on large public works construction projects.
- Independently performs contract administration on public works construction projects of smaller scope.

JOB DESCRIPTION

Associate Engineer

- Researches new methods, products and materials related to Public Works projects and makes recommendations to supervisors for their implementation.
- Uses AutoCAD, Civil 3D, WWHM, HEC-RAS and related engineering and graphics software to prepare detailed design drawings.
- Performs related work as required and other duties as assigned.

Required Knowledge of:

- Engineering mathematics, standards, practices and principles in design and construction.
- Engineering calculators and modeling programs.
- Basic hydraulics including weirs, flumes, and open ditches.
- Interpersonal skills using tact, patience and courtesy.
- Basic construction techniques and operation and maintenance principles of Public Works infrastructure.
- Basic knowledge in field inspection techniques of Public Works facilities.
- Property owners' rights and privileges.
- Record-keeping and retrieval techniques.
- Personal computers and software (AutoCAD, ArcGIS, Civil 3D, MS Word and Excel, databases and asset management).
- Drafting practices and standards, including operating AutoCAD and Civil 3D to develop project drawings.
- Interpersonal skills using tact, patience, and courtesy.
- Modern office procedures, methods, and equipment including computers and computer applications sufficient to perform assigned duties.
- English usage, spelling, grammar and punctuation.
- Principles of business letter writing.

Required Skill in:

- Working with residents, business owners and contractors on a wide range of Capital Project related issues including enforcement of City requirements.
- Organizing and interpreting large amounts of data related to inspections and design.
- Using personal computers, productivity software such as Microsoft Office, ArcGIS.
- Using personal computers, with design software such as AutoCAD to develop project drawings.
- Using field survey and GPS equipment and other field equipment as assigned.
- Effectively applying City code, local, state and federal laws relating to assigned work.
- Effectively reading and understanding engineered plans and specifications.
- Communicating effectively both orally and in writing using correct English.
- Preparing and delivering oral presentations in an effective manner.
- Accurately maintaining records and preparing correspondences, professional reports and presentations of data.
- Prioritizing and scheduling work appropriately.
- Consistently meeting schedules and time lines.
- Establishing and maintaining cooperative and effective working relationships with others.

MINIMUM QUALIFICATIONS:

Education and Experience:

Bachelor's Degree in Civil Engineering or related field preferred; OR an equivalent combination of education, training and experience that provides the required knowledge, skills and abilities.

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Associate Engineer

Required Licenses or Certifications:

Valid State of Washington Driver's License.

Must be able to successfully complete and pass a background check.

WORKING CONDITIONS:

Environment:

- Indoor and outdoor work environment.
- Driving a vehicle to conduct work.

Physical Abilities:

- Walking or otherwise moving over rough terrain.
- Sitting, standing or otherwise remaining in a stationary position for extended periods of time.
- Hearing, speaking or otherwise communicating to exchange information in person or on the phone.
- Operating various equipment and tools.
- Reaching overhead, above the shoulders and horizontally, bending at the waist, gripping, kneeling or crouching, stooping, crouching, reaching, pushing, pulling and twisting or otherwise positioning oneself to accomplish tasks.
- Ascending/descending, ladders and inclines.
- Working at heights, working on a high ladder and working in a confined space.
- Working in a noisy work area, working in direct sunlight, working in outside temperature extremes and working in dampness.
- Performing heavy physical labor, including lifting/carrying or otherwise moving or transporting 50-100 pounds.
- Operating a passenger vehicle, heavy truck, heavy equipment and rotating machinery.
- Reading and understanding printed and electronic messages and related materials.
- Hearing voice conversations and hearing alarms.
- Possessing close vision, far vision, side vision, depth perception, night vision and color vision.
- Wearing appropriate personal protective equipment based on required City Policy.

Hazards:

- Working around and with machinery having moving parts.
- Adverse weather conditions.
- Exposure to smoke, noxious odors, toxic fumes and chemicals, epoxy chemicals, poison oak or ivy, dust or pollen, insect stings solvents, oil and ink.

Incumbent Signature: _____

Date: _____

JOB DESCRIPTION
Associate Engineer

Department Head: _____

Date: _____