

CITY OF MADISON POSITION DESCRIPTION

1. Name of Employee: Pete Holmgren Work Phone: 608-261-5530	5. Department, Division & Section: Water Utility Engineering Section
2. Class Title (i.e. payroll title): Engineer 2	6. Work Address: 119 E. Olin Ave Madison, WI 53713-1431
3. Working Title (if any): Design Engineer	
4. Name & Class of First-Line Supervisor: Dennis Cawley Water Utility Engineer 4 Work Phone: 608-261-9243	7. Regular daily hours of work: Hours/Week: 38.75 From: 7:00 To: 3:30
8. Date of hire in this position:	1/1/2011
9. From approximately what date has employee performed the work currently assigned:	6/28/2010
10. Position Summary: This is professional public works engineering work performed in association with the design and construction of public works projects and/or other activities requiring engineering education and engineering expertise. This position requires engineering skill and responsibility, independence of action, and experience in and knowledge of Water Utility and City systems. The position will be filled at either an Engineer 1, 2, or 3 level depending on experience of the applicant. The position is structured to provide for a career progression from Engineer 1 to 2 and 2 to 3 over several years based on increased employee expertise, responsibility, independence of action, job performance, and experience in and knowledge of City systems and processes associated with the work. This is a professional engineering career ladder position with work performed in the office and the field in connection with the design and construction of public works projects for Madison Water Utility, database work, report preparation and research. Assignments are received from higher-level water utility engineers who define the scope of the work, guide the progress of the work, and review the work in progress and upon completion and certify the results. The work is characterized by the independent application of theoretical engineering knowledge and expertise and the application of procedural knowledge and experience. This position will work closely with subordinates, Utility technicians, and other City departments on public works projects, plans, and reports. At the Engineer 2 and 3 levels, independent work with minimal supervision on technically demanding projects while maintaining high quality and standards is expected and required in this position. Madison Water Utility recognizes the need and water industry requirement to continually upgrade technologically to keep pace with the rapidly changing field of public works and water supply engineering. In the coming years, the Utility will continue to add technical systems and complex software to improve efficiency, consistently meet federal and state regulations, conserve power and water, and renew its aging infrastructure. To meet this need, engineering positions will be used to provide the staff with the education and expertise to develop, expand, and sustain these technical systems, maintain the Utility's level of service, and support the operation and maintenance of the City's drinking water system.	

11.

Time Functions and Worker Activities: (Do not include duties done on an "Out-of-Class" basis.)

%

Work with limited supervision, guidance, and mentoring from higher level Utility engineers. Take on technical tasks, work independently, take the lead on projects, and assume a gradual increase in level of responsibility from the Engineer 1 position.

- 40** Prepare engineering drawings and specifications for Water Utility projects. Using computer aided design software, develop designs for water pipeline projects, pressure reducing stations, and other projects as assigned. Coordinate assigned design activities with developers, private entities, other engineering units, City Engineering, City Planning, and other governmental entities as necessary. Prepare and evaluate project construction cost estimates. Develop project planning budgets, evaluate project feasibility, and complete life cycle cost analysis of proposed projects and improvements. Work with consultants as assigned on Utility pump stations, reservoirs and special projects. Manage and schedule consultant work and review results.
- 30** Conduct engineering research and complete special studies as assigned by higher level Utility engineers. Prepare narrative and statistical reports, maps, documents, and other materials as necessary. Gather and evaluate GPS field data as needed. Work with Utility Mapping section as needed to maintain utility records and update the Utility's GIS records. Complete quality control reviews of completed designs and completed construction documents. Maintain records of construction progress, costs and other related details. Develop and implement wellhead protection plans for Utility wells. Provide engineering support to other areas of the Water Utility. Organize, coordinate, and author Utility standard operating procedures. Develop process flow charts and decision matrix to characterize and document current procedures. Using the information gathered, engineer and optimize standard procedures and processes to improve efficiencies with an objective of conserving costs, energy, water, and labor. Perform related work as required and assigned.
- 15** Supervise and administer construction contracts as assigned. Review, negotiate, and approve change order requests. Review requests for information from the field. Evaluate and approve contractor payment requests. Review and approve construction schedules and progress toward completion. Prepare summary field reports as necessary and assigned. Close out completed contracts. If delegated, collaborate with construction inspectors and other field personnel in the completion of construction work. Work closely with field personnel to apply Utility standards and details of construction to meet Utility requirements.
- 15** Answer technical questions from the public, contractors, property owners, and elected officials about engineering considerations and plans. Attend public hearings and other public information meetings with higher-level engineers and provide project-related information as requested. Perform related work as required and assigned.
- (< 5)** Work with the Utility's distribution computer model to analyze the system and recommend improvements. Update, maintain, and calibrate the Utility's distribution system hydraulic model as assigned. Independently conduct complex engineering analysis of the distribution system to allow higher level engineers and managers to make multifaceted long term system capital improvement decisions and establish budgets. Provide fire flow evaluation and identify deficiencies of the system. Recommend improvements to correct or mitigate fire flow deficiencies. Analyze the system for well supply capacity and need. Evaluate system performance and recommend improvements to optimize operations while conserving water and energy. Routinely add improvements to the model as they occur, update system water demands and projected service expansion, develop standard planning scenarios, manage software updates, and prepare reports of findings. Conduct regular and routine training sessions for other Utility employees. Troubleshoot and maintain software and hardware problems in coordination with City IT.

12. Primary knowledge, skills and abilities required:

Knowledge of the principles, theories, and practices of public works engineering, particularly as they relate to the design and construction of public works projects. Ability to independently make engineering computations and document them. Ability to read maps and locate facilities in the field. With minimal training, ability to perform GIS functions, Computer Aided Design (CAD), database development and management, and spreadsheet analysis. Ability to exercise independent professional expertise quickly and efficiently in the resolution of engineering problems. Ability to independently collect, analyze, and compile data and prepare technical reports. Ability to communicate effectively, both orally and in writing. Ability to develop and maintain effective working relationships and day-to-day communication with managers, supervisors, co-workers, contractors, the general public and other parties. Ability to maintain accurate records related to construction and engineering activities. Ability to aid in the inspection of public works construction projects. Ability to maintain adequate attendance.

Training and Experience:

General: Graduation from an accredited college or university with a degree in engineering or a closely related technical field. Other combinations of training and/or experience which can be demonstrated to result in the possession of the knowledge, skills, and abilities necessary to perform the duties of this positions will also be considered.

One to three years experience working at an Engineer 1 level (Engineer 2), or one to two years experience working at an Engineer 2 level (Engineer 3), in the public or private utility or public works field. Demonstrated experience working independently on technical projects applying engineering knowledge and expertise to make sound recommendations.

13. Special tools and equipment required:

CAD software and supplementary programs (Microstation/InRoads/Eagle Point)
Microsoft Office programs
Adobe Acrobat
Surveying Equipment and related software

14. Required licenses and/or registration:

Possession of a valid certificate of Engineer-in-Training, or ability to obtain one within the probationary period.
Possession of a valid driver's license.

15. Physical requirements:

Ability to work at a computer workstation and desk all day long for weeks or possibly months at a time, to operate a motor vehicle, to get to and around construction sites and be on site in all weather conditions, and to carry a 25-pound backpack. Ability to walk 50 yards over rough varying terrain and up and down low hills multiple times during a work shift carrying up to 30 pounds.

16. Supervision received (level and type):

General supervision by Water Utility Design and Construction Engineer and the Principal Engineer.

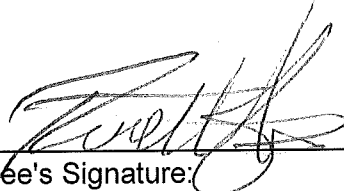
17. Leadership Responsibilities:

This position:

- is responsible for supervisory activities (Supervisory Analysis Form attached).
- has no leadership responsibility.
- provides general leadership (please provide detail under Function Statement).

18. Employee Acknowledgment:

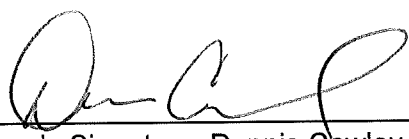
- I prepared this form and believe that it accurately describes my position.
- I have been provided with this description of my assignment by my supervisor.
- Other comments (see attached).


Employee's Signature: _____

2/27/2013
Date

19. Supervisor Statement:

- I have prepared this form and believe that it accurately describes this position.
- I have reviewed this form, as prepared by the employee, and believe that it accurately describes this position.
- I have reviewed this form, as prepared by the employee, and find that it differs from my assessment of the position. I have discussed these concerns with the employee and provided them with my written comments (which are attached).
- I do not believe that the document should be used as the official description of this position (i.e., for purposes of official decisions).
- Other comments (see attached).


Manager's Signature: Dennis Cawley, P.E.

2/28/13
Date: