

**Registered Civil/Environmental Engineer
City of Albert Lea**

Title of Class: Registered Civil/Environmental Engineer
Effective Date: May 2007

DESCRIPTION OF WORK

General Statement of Duties: Performs responsible professional engineering work in the design, inspection, construction, and mapping of public works projects, transportation and traffic control, and by managing compliance with federal and state requirements related to solid waste management, wastewater treatment, recycling, water quality, wetland conservation, wastewater pre-treatment, erosion control and storm water quality; performs related duties as required.

Supervision Received: Works under the general supervision of the City Engineer/Public Works Director.

Supervision Exercised: Provides general supervision to the Transfer Station staff.

TYPICAL DUTIES PERFORMED

The listed examples may not include all duties performed by all positions in this class. Duties may vary somewhat from position to position within a class.

- *Compiles, analyzes, and interprets engineering data.
- *Designs and manages public works projects including streets, sidewalks, water mains, storm sewers, sanitary sewers, and earth grading.
- *Draws or oversees the drawing of construction plans; prepares project cost estimates and specifications.
- *Conducts traffic count surveys including installation of the traffic counter equipment and presentation of the count data.
- *Conducts on-site inspections of construction projects based on local and state construction and materials sampling procedures.
- *Conducts construction site testing of ready mix concrete for air content and slump.
- *Conducts checks with surveying instruments including GPS, Total Station, transit, level and measuring chain, to confirm utility is being installed according to plans and specifications.
- *Prepares application and supporting material to apply for permits and grants.
- *Schedules and facilitates pre-construction meetings on contracted City projects with contractors, engineering technicians, street and utility Superintendents, the city engineer and possibly the developer; holds additional meetings during construction if significant issues arise.

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- *Documents construction progress, maintains daily construction diaries, acts as liaison between contractors and the City and calculates the cost of the work completed.
- *Prepares or oversees preparation of feasibility studies for the City with estimates of the costs of contracted work.
- *Calculates preliminary assessments before construction, holds and facilitates neighborhood meetings to discuss the project and potential assessments and calculates final assessments after construction.
- *Provides professional engineering advice and assistance including mapping, drawing, and surveying to other city divisions.
- *Answers, interprets, and responds to telephone requests from the public for information, complaints, and construction project requests.
- *Interacts with the State Aid Office, through correspondence and in person, to comply with the State's project design and plan preparation requirements.
Represents the City at meetings with residents, regulatory agencies and at the State Capital and makes presentations or testifies as appropriate.
- *Updates plat book with new and revised subdivisions and utilities and records new construction information in street and house files.
Schedules and delivers samples to laboratories at the District and MN/DOT for testing, analysis, and/or design purposes for projects inspected.
- *Installs and operates computer programs which aid in the design of alleys and streets.
- *Assists in the preparation and presentation of materials and documents for variance requests to the MN/DOT State Variance Committee from the Road Design Standards.
Attends computer program seminars for the documentation (of financing) for Federal projects.
Schedules and secures department materials and equipment, or repair of, for surveying, printing, or testing.
- *Conducts background research on road right-of-ways and locates existing property and right-of-way measurements.
- *Confirms existing benchmark elevations and establishes additional benchmark circuits over the construction project area.
- *Installs line and elevation reference stakes for projects that include grading, curb and gutter, paving, sewer and water, and buildings.
- *Organizes engineering fieldwork to accommodate contractor's work schedule when possible.
May maintain traffic signal control cabinets and adjust controller timing.
- *Directs the wastewater pre-treatment program to ensure compliance with the permit; determines capacity, reviews pre-treatment processes, analyzes lab results of sampling and performs inspections; prepares violation notices and may recommend liquidated damages to the PCA; prepares and submits annual report to the State.
- *Plans and oversees compliance with NPDES permit requirements for the garage, airport, Wastewater Treatment Plant and storm sewer system.

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- *Directs operations at the transfer station, including acting as liaison between the gate tenders and city engineer, setting rates and preparing and overseeing the budget; performs quarterly inspections to ensure compliance with state regulations and prepares the annual report for the state and county;
- *Represents the City in ensuring compliance with the Wetland Conservation Act; prepares and submits the application, approves wetland replacement and prepares an annual report.
- *Prepares the annual report to the Department of Health for the Water Department permit. Estimates and prepares the request for State Aid and submits to the state. Collects information and prepares reports for the City Council as directed. Acts as a liaison to the Shellrock River Watershed District Advisory Committee.
- *Submits project estimates for the five-year capital improvement plan.
- *Surveys demolition at the transfer station, calculating the increase in volume each year.
- *Assist in collecting information and preparing the annual report on City projects; updates the database with all infrastructure changes. Performs other duties as needed or required.

KNOWLEDGE, SKILLS, AND ABILITIES

- *Considerable knowledge of the standards, and practices of municipal civil engineering and requirements for obtaining and maintaining permits from the State Department of Health, MPCA and DNR.
- *Considerable knowledge of construction standards, methods and materials used in municipal public improvement projects.
- *Considerable knowledge of the environmental laws, rules, and regulations related to municipal public improvement projects and maintenance of infrastructure.
- *Considerable knowledge of State Aid Street Construction, NPDES, and solid waste and wetland conservation requirements.
- *Considerable ability to perform mathematical calculations, prepare cost estimates and feasibility studies, accurately record information and prepare reports.
- *Considerable ability to plan, analyze and make effective decisions.
- *Considerable ability to communicate effectively, both orally and in writing, with state regulatory agencies, City staff, contractors, and the general public, including making presentations.
- *Considerable ability to work independently to inspect, manage and evaluate public works construction projects.
- *Considerable ability to use fine motor skills for computer work, drawing and surveying.
- *Considerable ability to see, read and understand plans, perform surveys and to distinguish color for mapping designations and utility markings.
- *Considerable ability to use Auto-CAD programs to draw construction plans and maps.
- *Considerable ability to compile and interpret engineering data, design public works projects and facilitate pre-construction and neighborhood meetings.

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- *Working ability to crouch, kneel, twist, turn, maintain balance and work in confined spaces and trenches, sometimes in adverse weather conditions, around fumes or loud noises.
- *Working ability to sit, walk or stand, sometimes for extended periods of time.
- *Working ability to lift and carry boxes of construction records, construction equipment, lift station access doors and utility hole covers weighing up to 50 pounds.
- *Working ability to safely operate a motor vehicle to travel to job sites.

MINIMUM QUALIFICATIONS

Bachelor's degree in civil engineering with an environmental emphasis from an accredited 4-year university or college and four years of professional environmental and civil engineering experience. Must be a registered professional engineer in Minnesota and possess and maintain a valid Minnesota Driver's license.

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Note: Asterisked items are essential to the job.