

CITY OF ANN ARBOR, MICHIGAN
JOB DESCRIPTION

JOB TITLE: CIVIL ENGINEERING SPECIALIST

Job Number: 112014/24/34

Date Finalized: 7/12/2017

Service Area: Public Services Service Unit: Engineering	Accountable To Supervisor – Civil Engineering Specialists
Mission Statement The City of Ann Arbor’s mission is to deliver exceptional services that sustain and enhance a vibrant, safe and diverse community.	
Role Summary As a Civil Engineering Specialist, perform civil engineering construction inspection of, including but not limited to, roads, sidewalks, bike paths, bridges, buildings, structures, sewers, water mains, landfills and environmental projects. Responsibilities include plan review and inspection of construction, ordinance enforcement, traffic control and basic design-drafting-surveying tasks. Perform drafting duties required in support of civil engineering projects. Responsibilities include computer aided drafting (currently AutoCAD), records and data management, office work associated with surveying and construction inspection functions, construction plan review and basic design. Perform surveying duties required in support of civil engineering projects. Responsibilities include field surveying, office work associated with surveying requirements, plan review and assist in construction inspection, basic design and drafting tasks. The work involves a range of competencies in a variety of areas.	
Duties Incumbent is responsible for, but not limited to, the following duties: <u>Essential Duties by Specialty Track</u> <u>Specialty Track 1 - All Construction Inspection related work, including but not limited to:</u> <ul style="list-style-type: none">• Road, sidewalk and path inspection• Sewer inspection• Water main inspection• Construction traffic control <u>Specialty Track 2 - All Drafting related work, including but not limited to:</u> <ul style="list-style-type: none">• AutoCAD Drafting – minor and major infrastructure projects, as-builts from field mark-ups• General Duties – provide assistance to Surveying and Construction Inspection Specialists and Project Managers on AutoCAD• Records and Data Management <u>Specialty Track 3 - All Surveying related work, including but not limited to:</u> <ul style="list-style-type: none">• Survey Leveling• Topographical Surveying• Construction Layout• Control Traversing• Legal Descriptions• GPS Surveying <u>Related Work</u>	

- General duties associated with construction inspection as delineated in the Construction Inspection Functional Assessment dated 4/18/06
- Surveying duties as delineated in the Survey Functions for Construction Inspectors dated 4/18/06
- Drafting duties as delineated in the Draftsperson Functions for Surveyors and Construction Inspectors dated 4/18/06
- City of Ann Arbor ordinance enforcement relating to construction activities
- General/Miscellaneous duties associated with Drafting as delineated in the Draftsperson Functional Assessment dated 4/18/06
- Construction Inspection duties as delineated in the Construction Inspection Functions for Draftspersons dated 4/18/06
- Survey duties as delineated in Surveyor Functions for Draftsperson dated 4/18/06
- General/Miscellaneous duties associated with Surveying as delineated in the Surveyor Functional Assessment dated 4/18/06
- Construction Inspection duties as delineated in the Construction Inspection Functions for Survey dated 4/18/06
- Minor field design and design revisions as delineated in the Design Functional Assessment dated 4/18/06
- Project Facilitation duties as delineated in the Project Facilitation Functions dated 4/18/06
- Other duties as assigned

Knowledge of: (position requirements at entry)

For Construction Inspection Specialty Track 1

Construction methods, materials, processes, procedures, principles and practices for the following:

- Road Work, Sidewalk and Bike path
- Sewer
- Water Main
- Soil erosion control
- Construction traffic control
- General duties associated with construction inspection
- Work safety procedures and precautions

For Drafting Specialty Track 2

Drafting principles, practices, procedures, methods and instruments

- AutoCAD drafting from design markups
- AutoCAD drafting of as-builts
- Create model and paper space layouts in AutoCAD
- Create base sheets in AutoCAD
- Records and data management associated with drafting
- Computer and software applications used in drafting

For Surveying Specialty Track 3

Surveying methods, processes, procedures, principles and practices for the following:

- Survey Leveling
- Topographical Surveying
- Construction Layout
- Control Traversing
- Legal Descriptions
- Global Positioning System (GPS) Surveying
- General/miscellaneous duties associated with surveying

- Work safety procedures and precautions

For All Incumbents

Computers and software applications used in an office setting (e.g. Microsoft Office, Access, PowerPoint, Excel, Word)

Skills and Ability to: (position requirements at entry)

- Accurately perform the essential and related duties associated with construction inspection **or** drafting **or** surveying
- Effectively communicate through oral and written instruction
- Read, interpret and follow manuals, plans and technical drawings
- Read and interpret maps, diagrams, record and reporting systems, blueprints and design specifications
- Identify project related problems and implement solutions
- Use computers and related software applications
- Maintain effective, professional working relationships with fellow employees and the public
- Listen to understand the intended meaning of the message
- Function independently and as a part of a team

Equipment

Computer, standard office equipment, two-way radio, motor vehicle, photographic equipment, cell phone, hand tools, power tools and level and grade rod, drafting equipment and supplies and surveying equipment. **Must wear and maintain all required Personal Protective Equipment on job site.**

Training and Experience (position requirements at entry)

- High School Diploma / GED
- Minimum 3 years progressive construction inspection **or** surveying **or** drafting experience
- Determined by the Civil Engineering Specialist Job Progression dated 6/19/06 (attached)
- **Must attend all Safety Training required by Supervisor or Regulatory agencies**

Licensing Requirements (position requirements at entry)

Valid Driver's License

Physical Requirements

The physical demands described here are representative of those that must be met by an employee to successfully perform the essential duties of the **Civil Engineering Specialist job for the Construction Inspection and Surveying Specialty Tracks**. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential duties.

Physical abilities include, climbing, balancing, stooping, kneeling, crouching, crawling, reaching, standing, walking, driving, pushing, pulling, lifting, fingering, grasping, feeling, talking, hearing, seeing and repetitive motions.

Physical abilities may also include, but are not limited to, setting construction hubs with sledge hammer, brushing through thicket and woods with machete (for line and grade), opening manholes with pick, using spud bar to chip through ice and hard ground, shoveling (snow and earth), lifting miscellaneous water and sewer appurtenances, turning on/off water gate valves, moving barricades and construction signs, and locating property irons/monuments.

Incumbent may be subject to hazardous conditions including, but not limited to, working in extreme heat and cold for long durations, dust and noise from construction sites, working in traffic, working around construction equipment, poison ivy, chemicals (chlorine), and confined space entry.

Heavy Work: Exerting up to 100 pounds of force occasionally, and/or up to 50 pounds of force frequently, and/or up to 20 pounds of force constantly to move objects.

Physical Requirements

The physical demands described here are representative of those that must be met by an employee to successfully perform the essential duties of **Civil Engineering Specialist Job for the Draftsperson Specialty Track**. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential duties.

The physical ability to walk, stand, stoop, bend reach, pull, push, lift, finger, feel, grasp, talk, see, hear and perform repetitive motions.

The ability to safely operate a motor vehicle as incumbents may be subject to local travel. Move and lift light objects less than 20 pounds such as mail, supplies and files. Operating office equipment requiring continuous or repetitive hand/arm movements. The ability to remain in a sitting position for extended periods of time.

Sedentary work: Exerting up to 10 pounds of force occasionally, and/or a negligible amount of force frequently or constantly to lift, carry, push, pull, or otherwise move objects, including the human body. Sedentary work involves sitting most of the time.

Description Prepared By

Engineering Tech - Drafting Tech Design Team – 5/26/06 / Finalized by Public Services Steering Committee 6/19/06/ Service Unit Name Change 6/22/2017/Approved by Curtis Morris, AFSCME Union President on 7/12/2017