

IOWA DEPARTMENT OF ADMINISTRATIVE SERVICES ▼
HUMAN RESOURCES ENTERPRISE

ENGINEERING OPERATIONS TECHNICIAN

DEFINITION

Assists in the preservation and operation of the transportation system by preparing and approving access and utility permits and providing customer service to the public; performs related work as required.

The Work Examples and Competencies listed are for illustrative purposes only and not intended to be the primary basis for position classification decisions.

WORK EXAMPLES

Prepares access permits by meeting with customers to gather information and determine access location, drawing exhibits and filling out entrance permits, and approving or denying requested action on type C and B entrances.

Reviews and prepares utility permits and right-of-way permits which includes meeting with applicants and guiding them through the process.

Computes estimated quantities of materials needed and the time required for road repair projects.

Inspects field projects in progress to ensure all requirements of permits are being met; halts all non-permitted work.

Administers bridge painting contracts that include examining bridges, prioritizing projects, preparing proposals for work, overseeing painting by contractors, inspecting work performed, approving job and authorizing payment vouchers.

Plans, researches, and submits repair projects which includes examining roads, gathering information, and calculating estimated quantities for maintenance projects.

Researches a wide variety of problems or requests by checking locations of intersections, crossing conditions of railroads, providing measurements, ensuring sign are placed and visible, and similar activities.

Organizes and updates construction as-built plans, right-of-way contracts and other files.

Reviews and resolves concerns and complaints brought in by the public regarding signs, traffic problems, drainage, and related issues.

Develops detour routes over the state, county and city highways and streets that include conducting a field review, determining signing needs, and achieving detour agreement with other government agencies.

Designated positions perform duties related to snow and ice removal, which include: accessing the Roadway Weather Information System (RWIS), weather reports, and other related computers software applications to record and receive data and make decisions regarding times, temperatures, weather conditions, and material usage to operate snow and ice removal equipment such as, but not limited to single or tandem axle dump trucks that may be equipped with tailgate or hopper spreader, straight blades or V-plows, wing plows, and underside ice blades; includes preparing and spreading abrasives and de-icing chemicals on the roadway by using a loader for mixing abrasives and chemicals; may perform other maintenance duties as assigned.

COMPETENCIES REQUIRED

Knowledge of surveying, drafting, and plan reading techniques and operations.

Knowledge of highway construction, maintenance, and inspection operations.

Knowledge of office procedures.

Knowledge of basic mathematic principles, algebra, geometry, and trigonometry.

Knowledge of basic engineering drawing and drafting techniques, including using automated drafting and design software.

Knowledge of laws and regulations regarding access permits, utility accommodations, advertising, drainage, traffic control, and other items that pertain to highway right-of-way.

Knowledge of the occupational hazards and safety precautions applicable to the work.

Ability to work outdoors in all types of weather conditions, day or night, in normal and emergency situations.

Ability to climb, kneel, crouch, crawl, stoop and twist and perform duties using appropriate tools and equipment within safety standards.

Ability to walk over uneven ground.

Ability to drive vehicles in a safe and conscientious manner.

Ability to read and write English.

Ability to understand and follow verbal and written directions/instructions given in English.

Ability to operate computers and/or other electronic devices and use programs/applications to conduct Department of Transportation business.

Ability to analyze problems and develop acceptable alternatives.

Ability to accurately perform mathematic calculations.

Ability to read and understand engineering or architectural plans and specifications.

Designated positions will also require the:

Knowledge of effects of weather on road surfaces.

Knowledge of winter maintenance operations, such as anti-icing and de-icing principles.

Ability to occasionally (1-33% of the time) lift /lower, carry and push/pull items weighing up to 75 pounds.

Ability to appropriately use anti-icing or de-icing materials.

Ability to drive equipment with a manual transmission and clutch.

Skill in use of Roadway Weather Information System (RWIS), weather reports and other related computer software applications.

Displays high standards of ethical conduct. Refrains from dishonest behavior.

Works and communicates with all clients and customers providing polite, quality professional service.

Displays a high level of initiative, effort, attention to detail and commitment by completing assignments efficiently with minimal supervision.

Follows policy, cooperates with supervisors and aligns behavior with the goals of the organization.

Fosters and facilitates cooperation, pride, trust, group identity and team spirit throughout the organization.

Exchanges information with individuals or groups effectively by listening and responding appropriately.

EDUCATION, EXPERIENCE, AND SPECIAL REQUIREMENTS

Graduation from an accredited area college with an Associate's Degree in Engineering, Construction Management or related field and two years of full-time experience in highway construction, inspection, or surveying work;

OR

any equivalent combination of education and experience substituting one year of the required full-time experience for each year (30 semester hours) of the required education;

OR

employees with current continuous experience in the state executive branch that includes two years of full-time work as a Construction Technician.

NECESSARY SPECIAL REQUIREMENTS

Designated positions in this class require possession of a valid Commercial Learner's Permit upon hire. Within a timeframe determined by the appointing authority, a valid Class A Commercial Driver's License with the required endorsements and applicable restrictions must be obtained and subsequently maintained in order to continue employment.

If a CDL is not required, all positions are required to have and maintain a minimum of a valid Class C Non-Commercial Operator's License.

In conjunction with Title 49 of the Code of Federal Regulations (parts 40 and 382), designated positions in this job class require a pre-employment drug screen and will require ongoing participation in the employer's random drug and alcohol testing program and will be subject to the regulations regarding the Federal drug and alcohol testing program.

Prior to starting employment, all persons in designated positions are required to have a post offer pre-employment physical verifying the physical ability to perform the duties described.

NOTES

Employees must be able to travel and may be required to stay away from home overnight during assignments.

Employees in designated positions must be able to work up to 16 consecutive hours.

Effective Date: 11/17 SA