

Iowa Department of Administrative Services – Human Resources Enterprise
Job Classification Description

Transportation Engineer Administrator

Definition

Manages an office, supervising several program areas or engineering sections; manages maintenance, construction, or development programs for a district; supervises professional engineer(s) or transportation planner(s); performs related work as required.

The work examples and competencies listed below are for illustrative purposes only and not intended to be the primary basis for position classification decisions.

Work Examples

Supervises and evaluates the work of subordinates; recommends personnel actions related to selection, disciplinary procedures, performance, leaves, grievances, work schedules, and assignments; administers personnel policies and procedures.

Assists an office director in planning and implementing the activities of the office; coordinates the day-to-day programs carried out by staff; manages funds, staffing, equipment, materials, and related resources.

Manages projects and supervises staff in the development of plans for highway improvement design, highway location, preparation and letting of contracts for highway construction, materials inspection, and materials laboratory testing.

Provides direction, consultation, and specialized services to field construction staff in areas concerning specifications, methods, techniques, and policies in construction and inspection of highways and structures.

Coordinates, directs, and supervises project development activities of interstate and primary highways; cities, counties, state parks; institutional road programs, and associated multi-modal systems within a district; provides professional engineering judgement and oversight for development of transportation related structures, facilities and processes; participates in statewide production scheduling.

Supervises and directs the engineering, inspection, and administrative staff responsible for construction contract administration and materials inspections of transportation improvements within a district; manages resources of the district construction, materials, and resident construction offices.

Administers and directs the maintenance engineering and management functions of a district; provides consultation and assistance to other governmental agencies on transportation system maintenance issues.

Manages a statewide technical engineering program of safety engineering or traffic engineering, including the development of policy and standards; directs statewide program of technical or fiscal assistance; or maintains and administers statewide systems for roadway inventory database, and all computer aided mapping programs for state, county, and city map products, and critical incident/strategic information.

Assesses the performance, engineering achievements, and effectiveness of units supervised; recommends program changes; trains and instructs employees on the job in specific work methods, techniques, and subject matter.

Directs work assignments of engineering staff pertaining to the implementation of transportation related construction/maintenance projects; reviews and interprets project plans and specifications; investigates materials, work methods, and construction problems; negotiates with utilities, contractors, and other governmental agencies; investigates and resolves engineering problems caused by unforeseen circumstances (weather, accidents, and materials).

Initiates the collection of transportation-related data and the formulation of policies and plans to meet future needs; evaluates developmental plans and proposals submitted by employees; develops single or alternative plans, policies, programs, and recommendations based upon cost, benefits, and overall feasibility; presents program plans and proposals to higher level management, other agencies, public bodies, or other groups; evaluates program progress to obtain cooperation, assistance, and assurance that plan objectives are realized.

Develops performance criteria, test and inspection methods, policies, procedures, and related data to be used in evaluating products, services, materials, and methods; reviews project specifications prepared by others (e.g., cities and consultant engineers); provides interpretation of standards and specifications to other staff members, consultants, or engineers of other jurisdictions to maintain the integrity.

Competencies Required

Knowledge:

- Engineering and Technology – Practical application of engineering science and technology. This includes applying principles, techniques, procedures, and equipment to the design and production of various goods and services.
- Design – Design techniques, tools, and principles involved in production of precision technical plans, blueprints, drawings, and models.
- Administration and Management – Business and management principles involved in strategic planning, resource allocation, human resources modeling, leadership technique, production methods, and coordination of people and resources.
- Transportation – Principles and methods for moving people or goods by air, rail, sea, or road, including the relative costs and benefits.
- Building and Construction – Materials, methods, and the tools involved in the construction or repair of houses, buildings, or other structures such as highways and roads.
- Mathematics – Arithmetic, algebra, geometry, calculus, statistics, and applications.
- Customer Service – Principles and processes for providing customer services, including customer needs assessment, meeting quality standards for services, and evaluating customer satisfaction.
- Personnel and Human Resources – Principles and procedures for personnel recruitment, selection, training, compensation and benefits, labor relations and negotiation, and personnel information systems.

Abilities:

- Deductive Reasoning – Apply general rules to specific problems to produce answers that make sense.
- Information Ordering – Arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
- Oral Comprehension – Listen to and understand information and ideas presented through spoken words and sentences.
- Problem Sensitivity – Tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
- Written Comprehension – Read and understand information and ideas presented in writing.
- Mathematical Reasoning – Choose the right mathematical methods or formulas to solve a problem.

Skills:

- Complex Problem Solving – Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
- Critical Thinking – Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions, or approaches to problems.
- Speaking – Talking to others to convey information effectively.
- Judgment and Decision Making – Considering the relative costs and benefits of potential actions to choose the most appropriate one.
- Operations Analysis – Analyzing needs and product requirements to create a design.
- Reading Comprehension – Understanding written sentences and paragraphs in work-related documents.
- Coordination – Adjusting actions in relation to others' actions.
- Mathematics – Using mathematics to solve problems.
- Systems Analysis – Determining how a system should work and how changes in conditions, operations, and the environment will affect outcomes.
- Monitoring – Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.
- Management of Personnel Resources – Motivating, developing, and directing people as they work, identifying the best people for the job.
- Management of Material Resources – Obtaining and seeing to the appropriate use of equipment, facilities, and materials needed to do certain work.

Minimum Qualification Requirements

Applicants must meet at least one of the following minimum requirements to qualify for positions in this job classification:

- 1) All of the following (a and b):
 - a. Licensure as a professional engineer; and
 - b. Four years of full-time professional work experience in transportation engineering or civil engineering, one year of which must have included supervisory/managerial responsibilities.
- 2) All of the following (a, b, and c):
 - a. Licensure as a professional engineer; and
 - b. Three years of full-time professional work experience in transportation engineering or civil engineering, one year of which must have included supervisory/managerial responsibilities; and
 - c. Graduation from an accredited college or university with a master's degree in chemical, civil, construction, environmental, materials, structural, or transportation engineering; engineering management; or a field closely related to transportation engineering.
- 3) Current, continuous experience in the state executive branch that includes two years of full-time work as a Transportation Engineer Manager or Transportation Engineer Senior or three years of full-time work as a Transportation Engineer Specialist.

Notes

Prior to appointment, applicants must possess active licensure as a professional engineer by the Iowa Engineering & Land Surveying Examining Board.

Effective date: 09/20 SA