Engineering Specialist

CLASS TITLE	CLASS CODE	SALARY GROUP	SALARY RANGE
ENGINEERING SPECIALIST I	2127	B18	$45,521 - $71,055
ENGINEERING SPECIALIST II	2128	B19	$48,244 - $76,028
ENGINEERING SPECIALIST III	2129	B20	$51,158 - $81,351
ENGINEERING SPECIALIST IV	2130	B21	$54,278 - $87,046
ENGINEERING SPECIALIST V	2131	B22	$57,614 - $93,138
ENGINEERING SPECIALIST VI	2132	B24	$65,104 - $106,634

GENERAL DESCRIPTION

Performs engineering work involving conducting inspections, fieldwork, data collection and validation, and materials research and testing; planning and design functions; construction or fabrication; and assessment and modeling.

DISTINGUISHING CHARACTERISTICS

Although employees in the Engineering Specialist job classification series perform engineering work, positions in this series should not be assigned job duties requiring a Professional Engineer license, as outlined within the Texas Engineering Practice Act and Rules, and local codes and ordinances.

EXAMPLES OF WORK PERFORMED

Performs engineering or environmental assessments, modeling, and monitoring.

Prepares plans, specifications, estimates, reports, and related documents for compliance with laws and standards; and makes recommendations for improvements.

Conducts engineering fieldwork, such as surveying, inspecting, drafting, and design.

Conducts material inspection, research and testing activities.

Collects and samples field data for engineering and environmental projects, and analyzes and validates data.

Compiles, reviews, and validates ambient air and water quality data.

Performs related work as assigned.

DESCRIPTION OF LEVELS

Examples of work and descriptions are meant to progress through the levels. For example, an employee at level VI may also perform work listed within the previous levels.

***Note**: Factors that may distinguish between the journey levels include the degree of independence in performing the work and the complexity of the work, and the employee's related experience, education, and certifications. Other factors may include the type, scope, nature, and impact of the assigned project(s). Employees at the journey levels may independently perform the full range of work listed in the examples or may assist others in that work.*

ENGINEERING SPECIALIST I: Performs entry-level to routine (journey-level) engineering work. Works under moderate supervision, with limited latitude for the use of initiative and independent judgment. Employees at this level may have limited experience or no experience and spend the majority of their time performing simple to routine work following standard procedures.

ENGINEERING SPECIALIST II: Performs moderately complex (journey-level) engineering work. Works under general supervision, with limited latitude for the use of initiative and independent judgment. Employees at this level may rely on direction from others to solve problems that are not standard. Employees may also assist other staff in performing work of greater complexity, and may:

- Perform detailed design work on structures, roads, equipment, and machinery.
- Calculate geometric, hydraulic, grade, and quantity estimates.
- Summarize and report ambient air and water quality data to staff and external customers.
- Inspect the work of contractors and operators for compliance with laws and specifications.

ENGINEERING SPECIALIST III: Performs complex (journey-level) engineering work. Works under general supervision, with moderate latitude for the use of initiative and independent judgment. Employees at this level may work more independently than those at the previous levels and may routinely assist other staff in performing work of greater complexity. Employees at this level may:

- Provide technical expertise for programs, activities, studies, and projects.
- Plan, construct, or fabricate structures, supports, or housings to accommodate specialized equipment.
- Investigate complaints.
- Evaluate, validate, and report ambient air and water quality data for environmental monitoring, to determine data quality and to ensure compliance with state and federal monitoring regulations.

***Note:** Any senior-level employee (levels IV-VI) may serve in a lead or supervisory role; however, supervisory responsibilities within this job classification series will typically be found at the level V or VI, depending on the structure and size of the supervised group.*

Senior-level employees may perform the full range of work identified in the levels preceding their own, and/or may coordinate or oversee that work for others. Factors that may distinguish between senior levels include the scope of responsibility, oversight, and authority; the complexity of the work performed; the scope, nature, and impact of the assigned project(s); and the employee's related experience, education, and certifications.

ENGINEERING SPECIALIST IV: Performs highly complex (senior-level) engineering work. Works under limited supervision, with considerable latitude for the use of initiative and independent judgment. Employees at this level may serve as a lead worker providing direction to others and may:

- Coordinate a variety of engineering and environmental programs, activities, studies, and projects.
- Review, process, and transmit design plans.
- Review plans, specifications, estimates, reports, and related documents for compliance with laws and standards; and make recommendations for improvements.
- Review the activities of contractors, operators, and/or civic authorities.
- Prepare correspondence and technical reports.
- Prepare drawings and sketches.
- Conduct inspections of new and/or existing construction projects.
- Evaluate, design, and program computer hardware and software for engineering design applications, and/or data management and validation of applications.
- Provide engineering consultation services.
- Initiate special studies, reduce facts to specific findings, and recommend solutions to problems.

ENGINEERING SPECIALIST V: Performs advanced (senior-level) engineering work. Works under limited supervision, with considerable latitude for the use of initiative and independent judgment. Employees at this level may plan and administer engineering and environmental programs, activities, studies, and projects.

ENGINEERING SPECIALIST VI: Performs highly advanced (senior-level) engineering work. Works under minimal supervision, with extensive latitude for the use of initiative and independent judgment. Employees at this level may:

- Review engineering work for calculation errors and compliance with applicable federal and state laws, industry standards, and guidelines.
- Calibrate equipment and develop procedures for the collection and analysis of engineering and environmental data.

GENERAL QUALIFICATION GUIDELINES

EXPERIENCE AND EDUCATION

Agencies have the discretion to identify the general or specialized experience, education, or certifications required for positions and may tailor qualification requirements to specifically meet

the agency's business needs. Agencies may substitute experience, education, military service, apprenticeships, and relevant credentials for one another, if appropriate and allowed by statute.

KNOWLEDGE, SKILLS, AND ABILITIES

For all levels

- Knowledge of engineering and data analysis techniques, principles, and theories.
- Skill in the use of a computer and computer-aided design equipment and in the use and maintenance of scientific instruments.
- Ability to apply engineering concepts, to conduct inspections, to perform maintenance activities, to perform design work, to perform construction or fabrication work, to operate specialized equipment, to organize and analyze data, and to communicate effectively.

Additional for Engineering Specialist III level

- Ability to plan and coordinate programs and activities.

Additional for Engineering Specialist IV level

- Knowledge of equipment design and development and computer-assisted troubleshooting procedures and techniques.
- Ability to plan and coordinate programs, activities, and construction or fabrication work and projects; to prepare designs and specifications; to evaluate, design, and program computer-hardware and software; and to serve as a lead worker providing direction to others.

Additional for Engineering Specialist V level

- Skill in the use of automated programs.
- Ability to organize and analyze complex data; to evaluate programs, activities, and construction or fabrication work; to perform and review engineering calculations; and to supervise the work of others.

Additional for Engineering Specialist VI level

- Knowledge of data modeling and forecasting.
- Ability to oversee programs, projects, activities, and construction or fabrication plans and work; and to supervise the work of others.