

Job Title: Graduate Water Engineer

Job Status: Full-Time

Department: Water Engineering

Job Grade: 700

Reports To: Chief Engineer of Water Systems

Work Setting: On-Site

Pay Status: Exempt

Date Created/Updated: 10/24/2024

Location: Service Center

Position Summary

The Graduate Water Engineer is responsible for providing assistance to staff engineers as well as providing engineering expertise to the Water Systems Line of Business with plan reviews, project management, design, analysis, implementing systems design criteria, hydraulic modeling, NBU standards, master plans, and managing new development.

Essential Duties & Responsibilities

NEW DEVELOPMENT

- Review plans submitted by developers for compliance with NBU's Water Systems Connection and Construction Policy, all applicable regulations, and systems availability and capacity
- Meet with developers during planning stage regarding water & sewer capacity and feasibility for service
- Under the direction of staff engineers, perform calculations and modeling to determine pressure/flow, capacity data, and all other water and wastewater system characteristics related to service. Identify required system improvements to serve proposed developments
- Under the direction of staff engineers, create exhibits and figures of the water and sewer system for developers and consulting engineers
- Perform preliminary and final plat and letter of certification (LOC) review with respect to water and sewer availability and future system needs
- Assist NBU water system inspectors in working with developers on issues involving NBU's Water Systems Connection and Construction Policy and plans approved for construction
- Conduct site visits to observe developers when necessary

PROJECT MANAGEMENT

- Manage projects from inception to closeout to accomplish scope
- Ensure projects are delivered on schedule, within scope, and within budget
- Prepare various project management documents including: Project Charters, Project Plans, Authorizations for Expenditures, schedules, and budgets
- Coordinate with consulting engineers, contractors, and other NBU divisions regarding project status, Requests for Information, change orders, or other issues
- Coordinate project communication and visit job sites as needed
- Provide regular updates on scope, schedule, quality, and budget of all projects

UTILITY ENGINEERING

- Under the direction of staff engineers; provide design, analysis, troubleshooting, and assist in other engineering services for the Water Services Line of Business
- Under the direction of staff engineers, perform engineering calculations and cost estimates for various water and sewer improvements
- Work with NBU's Real Estate Services department on engineering requirements for securing easements and

permits

- Analyze system /operations issues and design solutions
- Maintain the Water Systems Connection and Construction Policy
- Under the direction of staff engineers; develop design alternatives and recommendations based on technical considerations and cost/benefit analysis
- Utilize ArcGIS and AutoCAD to design and edit systems information. Produce professional maps that communicate clearly and are easy to understand
- Work with NBU Real Estate Services department on engineering requirements for securing required easements and permits, and easement encroachment and abandonment applications
- Under the direction of staff engineers, produce construction plans and specifications

GENERAL RESPONSIBILITIES

- Exercise sound problem solving and judgment
- Possess and utilize technical skills capable of analyzing numerous choices and alternatives, and determining the best overall solution
- Explore creative and innovative ways of performing tasks and solving problems
- Gather and assimilate complex technical information on NBU's water and wastewater systems and assemble into concise professional reports, drawings, and presentations which illustrate any necessary changes to the current infrastructure.
- Maintain regular attendance; leave schedule should be managed so as to not interfere with ability to accomplish tasks, including special projects and assignments with deadlines
- Adhere to NBU safety guidelines and practices at all times and in all situations
- Maintain a clean and safe work area, office, field site and vehicle as applicable
- Develop & maintain effective customer service skills for communications with co-workers, customers and the public in general
- Maintain strict confidentiality of business, employee and customer information in written and oral communications and safeguard sensitive documents
- Adhere to NBU policies and procedures
- Participate in and support initiatives to reach annual NBU Performance Measures
- Exemplify NBU Core Values of Integrity, Customer Focus, Respect for Others and Safety
- Shows initiative-takes ownership of work, does what is needed without being asked, follows through
- Establishes priorities and multi-tasks so that assigned duties are completed under pressures of time constraints and deadlines.
- Adapts and responds well to change; manages pressure effectively and copes with setbacks and changes in priorities.
- Demonstrates effective oral and written communication skills with peers, employees, superiors, and appropriate entities.
- Ability to deal effectively with matters of a highly visible and confidential nature when applicable
- Conversations are kept on matters related to NBU business so as to maximize efficiency and productivity
- Shows evidence of clear analytical thinking; gets to the heart of complex problems/issues; applies own expertise effectively
- Open to new ideas and experiences; seeks out learning opportunities; supports and drives organizational change
- Seeks opportunities for self development and career advancement
- Goes out of the way to be helpful and pleasant to internal and external customers
- Supports others and shows respect and positive regard for them; works effectively with individuals, groups, and customers via positive interpersonal skills.
- Successfully persuades and influences others
- Focuses on customer satisfaction and delivers a quality service or product to the agreed standards
- Resolves conflict by applying expert knowledge of customer or employee situations to identify disparities and recommend sound solutions.
- Helpful, respectful, approachable and team oriented; builds strong relationships and a positive work

environment.

- Demonstrates receptivity to new ideas and approaches and adapts with flexibility to accommodate any changes in priorities, circumstances or schedule.
- Is receptive to feedback, willing to learn
- Exemplifies NBU Core Values of Integrity, Stewardship, Team, Culture and Safety

Formal Education and Work Experience Requirements

Degree/Diploma Obtained: Bachelors

Field of Study: Engineering

Work Experience Time Frame: One Year or More

Other: [Click or tap here to enter text.](#)

Certification and Licensures Requirements

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Other Minimum Qualifications

- Accredited Civil, Mechanical, or Environmental Engineering degree is required.
- One year of experience in the design and/or construction of water and wastewater systems is required or applicable engineering internship. Experience gained in a municipal setting is preferred.
- Familiarity with basic computer software programs such as Microsoft Excel, Microsoft Word, and PowerPoint is required.
- Familiarity with Engineering computer software such as AutoCAD, water modeling, and GIS is required
- A valid Texas Driver's License is required to operate a company vehicle when necessary.
- Flexibility in available hours, including holidays, weekends, and/or after hours, is required.

Knowledge of Computer Software

	No Knowledge	Beginner	Intermediate	Expert
ArcGIS	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
AutoCAD	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Crystal Reports	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Microsoft Access	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Microsoft Excel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Microsoft Word	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Microsoft Publisher	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Microsoft PowerPoint	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Other Software Knowledge

[Click or tap here to enter text.](#)

Experience with Machines, Tools, Equipment and Other Work Aids

Telephone, calculator, copier, fax machine, scanner, camera, motor vehicle, computer, printer

Physical Demands

Standing: Occasionally

Making Presentations

Observing Work Sites

Observing Work Duties

Communication with Co-Workers

Fine Dexterity: Frequently

- Computer Keyboard
- Telephone Keypad
- Calculator
- Calibrating Equipment

Walking: Occasionally

- To Other Departments/Office/Office Equipment
- Around Worksite

Lifting: Occasionally

- Supplies
- Equipment
- Files

Carrying: Rarely

- Supplies
- Equipment
- Files

Sitting: Frequently

- Desk Work
- Meetings
- Driving

Reaching: Rarely

- For Supplies
- For Files

Handling: Rarely

- Paperwork
- Monies

Kneeling: Rarely

- Filing in Lower Drawers
- Retrieving Items from Lower Shelves/Ground

Pushing/Pulling: Rarely

- File Drawers
- Equipment
- Table and Chairs
- Hose

Climbing: Rarely

- Stairs

Other: Click or tap here to enter text.

- Ladder
- Step Stool
- Onto Equipment

Vision: Constantly

- Reading
- Computer Screen
- Driving
- Observing Worksite

Foot Controls: Rarely

- Driving
- Operating Heavy Equipment
- Dictaphone

Balancing: Rarely

- On Ladder
- On Equipment
- On Step Stool

Bending: Rarely

- Filing in Lower Drawers
- Retrieving Items from Lower Shelves/Ground
- Making Repairs

Crouching: Rarely

- Filing in Lower Drawers
- Retrieving Items from Lower Shelves/Ground

Crawling: Rarely

- Under Equipment
- Inside Attics/Pipes/Ditches

Hearing: Occasionally

- Communication Via Telephone/Radio/To Co-Workers/Public
- Listening to Equipment

Twisting: Occasionally

- From Computer to Telephone
- Getting Inside Vehicle

Talking: Frequently

- Communication Via Telephone/Radio/To-Co-Workers/Public

Environmental Factors

	Never	Seasonally	Several Times Per Year	Several Times Per Month	Several Times Per Week	Daily
Extreme Temperature (Heat, cold, extreme temp. change)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wetness and/or humidity (bodily discomfort from moisture)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Respiratory Hazards (Fumes, gases, chemicals, dust, and dirt)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Noise and Vibration (sufficient to cause hearing loss)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Physical Hazards (High voltage, dangerous machinery, aggressive Customers)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Health and Safety Conditions

	Never (Never Occurs)	Rarely (Less than 1 hour per week)	Occasionally (1/3 or more of the time)	Frequently (From 1/3 to 2/3 of the time)	Constantly (2/3 or more of the time)
Mechanical Hazards	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Chemical Hazards	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Electrical Hazards	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fire Hazards	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Explosives	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Communicable Diseases	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Physical Danger or Abuse	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Other: Click or tap here to enter text.

Primary Work Environment: Office Environment

Other: Click or tap here to enter text.

Overall Strength Demands

- Sedentary - Exerting up to 10 pounds occasionally or negligible weight frequently, mostly sitting
- Light - Exerting up to 20 pounds occasionally, 10 pounds frequently, walking or standing often
- Medium - Exerting 20 - 50 pounds occasionally, 10 - 25 pounds frequently, or 10 pounds constantly
- Heavy - Exerting 50 - 100 pounds occasionally, 25 - 50 pounds frequently, or 10 - 20 pounds constantly
- Very Heavy - Exerting 50 pounds constantly

Non-Physical Demands

	Never	Rarely	Occasionally	Frequently	Constantly
Time Pressure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Emergency Situations	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Frequent Change of Task	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Irregular Schedule/Overtime	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Performing Multiple Tasks Simultaneously	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Working Closely with Others as Part of a Team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Tedious or Exacting Work	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Noisy/Distracting Environment	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Other: Click or tap here to enter text.

Employee Statement of Understanding

THIS JOB DESCRIPTION DOES NOT CONSTITUTE AN EMPLOYEE AGREEMENT BETWEEN NEW BRAUNFELS

UTILITIES (NBU) AND THE EMPLOYEE. Nothing in this position description restricts NBU's ability to assign, reassign or eliminate duties and responsibilities of this job at any time.

I HAVE READ AND RECEIVED A COPY OF THIS JOB DESCRIPTION.

Employee's Signature

Employee's Printed Name

Date