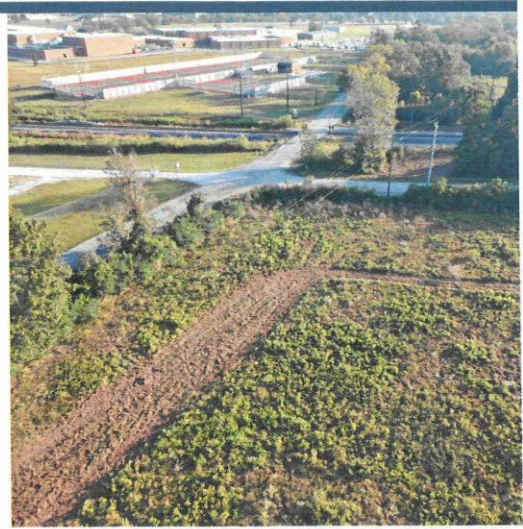


Summary of Qualifications Scoring

For
Professional Engineering Services for the
Water Plant No. 4
City of Montgomery, Texas

	Qualifications and Availability (10%)	Proposed Staff (30%)	Project Experience (40%)	Project Approach (20%)	Weighted Score (Max = 10)
Baxter & Woodman Consulting Engineers	8	8.5	8.5	9	8.6
Lightpoint Engineering	8	7	9	7	7.9
Half Associates, Inc.	9	8	8.5	8.5	8.4



City Of
★ Montgomery ★
TEXAS

**Professional Engineering Services for
Water Plant No. 4**

City of Montgomery, Texas

Submitted by:

October 10, 2024



Baxter & Woodman, Inc. seeks an exception to the disclosure requirements of Texas Government Code Chapter 552 for the information in this proposal. Please contact Baxter & Woodman, Inc. at marketing@baxterwoodman.com before disclosing any part of this information, as it is considered proprietary under Sec. 552.1101(a) of the Texas Government Code.



City of Montgomery, Texas
Professional Engineering Services for Water Plant No. 4

Contents

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Proposed Staff	2
Project Experience	12
Project Approach.....	17



The nationally recognized Engineering News Record (ENR) publishes annually the ENR Top 500 largest U.S.-based design firms, both publicly and privately held, based on design-specific revenue. In 2024, Baxter & Woodman climbed to #282 with revenues over \$77 million.

Diana Titus
Deputy City Secretary
City of Montgomery City Hall
101 Old Plantersville Rd.
Montgomery, TX 77316

October 10, 2024

Subject: City of Montgomery RFQ Professional Engineering and Design Services for Water Plant No. 4

Dear Ms. Titus:

For 78 years, Baxter & Woodman has been dedicated to aiding communities, particularly in the areas of water and wastewater treatment and utilities, catering to small and expanding municipalities throughout the Greater Houston area. Our team of experienced project managers work on water and wastewater projects on a daily basis, delivering unmatched project solutions that benefit our communities. Our approach offers an economical and operator-friendly plant design that demonstrates our team's:

Relevant Experience: Over the past five years, our Houston offices have successfully finished several water plant projects, which include eight new water well projects, two elevated storage tank (EST) projects, and 10 emergency generator installations. During this period, Project Manager Janice Noeldner, PE successfully managed the design of five water plant expansion projects and rehabilitated seven water plants. She is supported by a "deep bench" of nearly 400 in-house technical experts of various disciplines and two national expert firms in Geotechnical Engineering and Land Surveying.

Local Knowledge: Our team includes experts in a wide range of services, including infrastructure design, treatment facility design, and construction management and inspection services. We will assign a tailored team based on the City's project scope and schedule. For over 30 years, Baxter & Woodman has designed various water projects throughout Montgomery County, giving us an understanding of requirements and anticipated challenges. Current clients with active projects nearby include the City of Magnolia, San Jacinto River Authority, Aqua Texas, Inc., Conroe-ISD, and Montgomery County WC&ID No. 1.

Proven Track Record: Over 50 communities and public agencies have relied on Baxter & Woodman as their municipal engineer for capital improvement planning, budgeting, and funding to help manage and sustain municipal infrastructure. More than 90% of our projects are from repeat clients, showcasing our successful track record and client satisfaction upon project completion.

Choosing Baxter & Woodman for Water Plant No. 4 confirms that the City will benefit from a cost-effective solution designed to last, brought to you by skilled engineers. If you have questions or need additional information after your review of our qualifications, please contact Project Manager Janice Noeldner, PE at 281-350-7036 or jnoeldner@baxterwoodman.com.

Sincerely,

BAXTER & WOODMAN, INC.
CONSULTING ENGINEERS



Michael A. Kurzy, PE
Principal-In-Charge/Executive Vice President

Qualifications and Availability

Legal Name

Baxter & Woodman, Inc.

Federal Employer ID

36-2845242

Point of Contact



Janice Noeldner, PE

Project Manager

281-350-7036

jnoeldner@baxterwoodman.com

Legal Entity; License

Corporation (Incorporated in Illinois) F-21783

Date of Firm Formation

January 19, 1946

Location of Office(s)



Houston/Spring

11450 Compaq Center Drive West, Suite 660
Houston, TX 77070

Katy

24285 Katy Freeway, Suite 550
Katy, TX 77494

Statement on the Availability and Commitment of the Firm

At Baxter & Woodman, we prioritize responsiveness to our clients' needs and adherence to promised timelines. We conduct bi-weekly meetings to review schedules and ensure our projects stay on track.

Our staff is available to begin design on this project. Reporting responsibilities are handled through Principal-In-Charge/Executive Vice President, Mike Kurzy, PE and Project Manager, Janice Noeldner, PE will serve as the City's Point of Contact and primary liaison for communications and correspondence with the City.

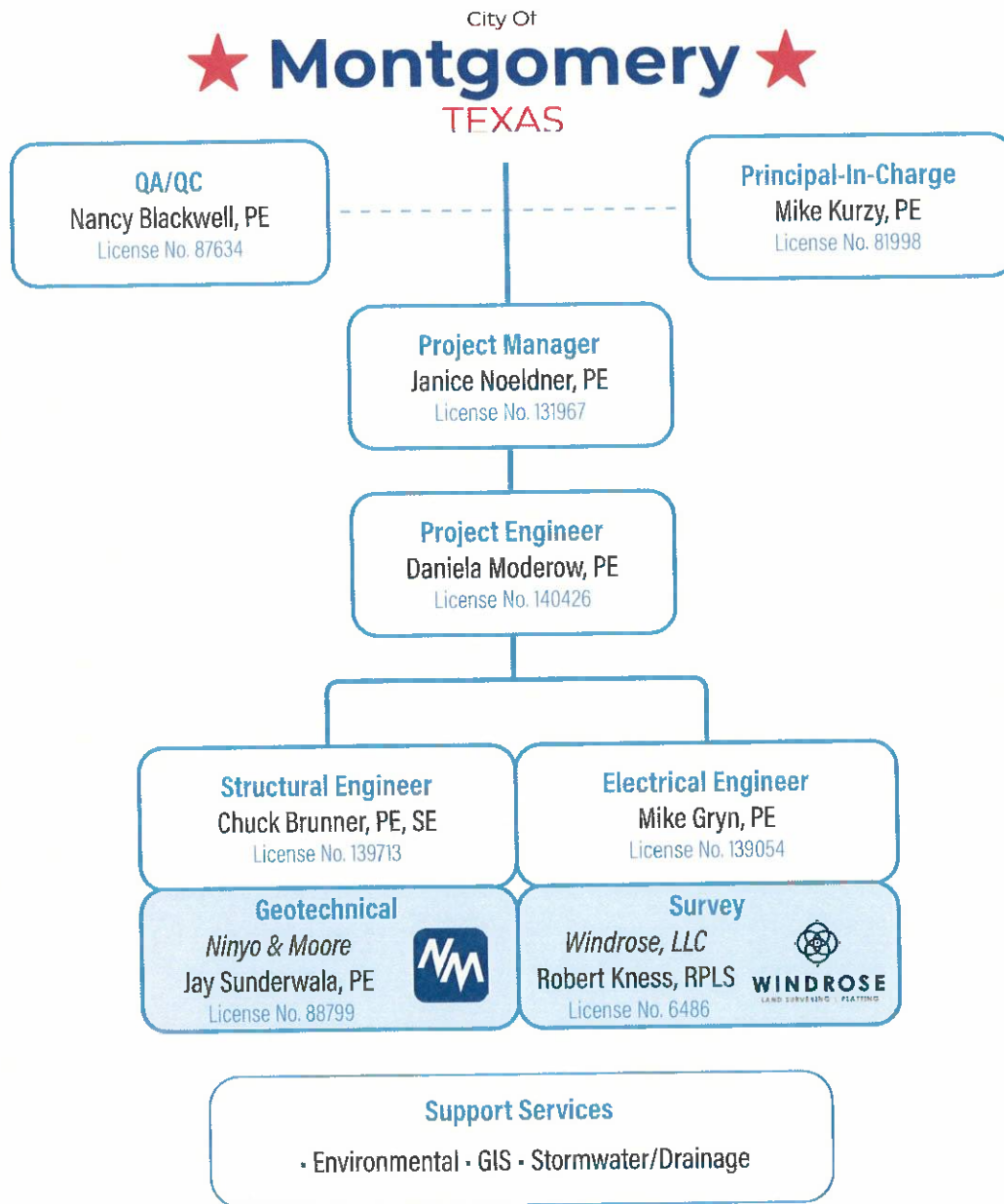
Statement of Interest

Our extensive experience designing new water plants, water wells, and water towers provide us the insight to anticipate construction and maintenance problems. We are confident we can provide workable solutions for the City of Montgomery's Water Plant No. 4.

Proposed Staff

Baxter & Woodman has a local workforce ready to serve the City of Montgomery in the planning and design of a new water plant. Our team is structured to include you in each project phase promoting open and continual communication through a single point contact with the authority to resolve issues promptly.

Resumes for key personnel are included in the following pages.



The City of Montgomery will receive the benefits of a comprehensive, well-coordinated project team with expertise in the effective and timely delivery of infrastructure projects. We will dedicate the necessary resources so our project team will meet defined schedules and project budgets for the City's projects.

The table to the right provides **staffing size by area of expertise (D)**.

CURRENT WORKLOAD (E)

Baxter & Woodman is committed to serving our clients, and we carefully monitor the current and projected workload for each of our employees. We understand the importance of being responsive to our clients' needs, and we always consider the impact an awarded project will have on the workload of our staff.

To best serve our clients, we actively manage employee workloads and rely on a deep bench of experienced staff members to assist with the City's projects. We are confident that – with our resources, experience, and manpower – we will provide you with successful, efficient, and cost-effective engineering services.

STAFF AVAILABILITY (F)

Key staff members for the City of Montgomery's project are currently concluding activities on major projects. Based on current and projected project workloads, our key and support staff will have adequate time and the necessary resources available to serve the City.

WORKLOAD CAPACITY

Key Personnel	Role	Availability
Michael A. Kurzy, PE	Principal-in-Charge	20%*
Nancy Blackwell, PE	Quality Assurance/Quality Control	15%*
Janice Noeldner, PE	Project Manager	50%*
Daniela Moderow, PE	Project Engineer	50%*
Chuck Brunner, PE, SE	Structural Engineer	10%*
Mike Gryn, PE	Electrical Engineer	10%*

**We have the ability to increase our availability as the project requires.*

BAXTER & WOODMAN STAFF		
Total Staff Members: 403		
TRANSPORTATION 48	PLANNING 5	CADD 15
INFRASTRUCTURE 20	ELECTRICAL 12	SURVEY 9
STORMWATER 29	GEOLOGIST 2	CONSTRUCTION 61
WATER/ WASTEWATER 52	SPATIAL TECHNOLOGY 9	SCADA/CONTROLS 37

Staffing size by area of expertise (D)

As of 07/2024

Janice Noeldner, PE Project Manager



Joined Firm in 2015
Years of Experience: 10

EDUCATION

B.S., Civil Engineering,
Missouri University of
Science and Technology,
2014

B.S., Architectural
Engineering, Missouri
University of Science and
Technology, 2014


REGISTRATIONS

Licensed Professional
Engineer: Texas No. 131967

LOCATION

Houston, TX

AWARDS

 2023 Texas Society of
Professional Engineers
(TSPE) Greater Houston
Chapter **Young Engineer of
the Year Award**

BAXTER & WOODMAN
Consulting Engineers

Janice has over 10 years of experience in civil engineering planning and design, primarily in the areas of water distribution, water supply and treatment, wastewater collection and treatment, and stormwater quality. She has experience in aspects of municipal utility districts, including preparation of capital improvement plans, bond application reports, feasibility studies, and TPDES permit renewals. Her experience with cities includes impact fee analyses, rate analyses, capital improvement plans, and water and sewer demand projections.

REPRESENTATIVE PROJECTS

City of Magnolia, TX

Water Plant No. 3 Phase I

Project Manager for the design of a new 1,000 gpm water well, 10,000 gallon hydropneumatics tank, chemical disinfection system and fiberglass buildings, associated piping, electrical work, fencing, crushed stone driveway, and site restoration.

City of Magnolia, TX

Water Plant No. 3 Site Study

Project Manager for the evaluation and determination of the best location for a water plant within the 44-acre site. The site was evaluated for existing contaminants, adjacent site use, potential wetlands and jurisdictional waters, and location to existing public and private utilities. Two potential water plant sites were selected which provided a safe and convenient location for a water plant, while using a less desirable site location to keep the best location available for economic development.

Lake Forest Utility District, TX

Water Well No. 3 Emergency Rehabilitation

Project Manager responsible for coordinating with the operator and a water well contractor to determine the feasibility of the existing equipment. Because the District's other water source was only one other water well, a request was sent to the TCEQ to forgo bids and negotiate a contract to reduce the amount of time the well would be out of service. Janice worked closely with the water well contractor to determine the repair of installing new screens and blank liner, as well as installing a new pump.

Montgomery County MUD No. 15, TX

Water Plant No. 1 15,000-Gallon and 20,000-Gallon HPT Rehabilitation

Lead Design Engineer for the evaluation of a recent inspection report of the two HPTs; designed a comprehensive interior and exterior blast and recoating system to extend the HPTs' useful service life.

Mike Kurzy, PE

Principal-In-Charge



Joined Firm in 1997
Years of Experience: 34

EDUCATION

B.S., Civil Engineering, Texas
A&M University, 1990

REGISTRATIONS

Licensed Professional
Engineer: Texas No. 81998

LOCATION

Houston, TX

ASSOCIATIONS

American Society of Civil
Engineers (ASCE)
Texas American Water Works
Association
North Houston Association
Major - USAR Retired (MOS
Combat Engineer and
Facilities Engineer)

BAXTER & WOODMAN
Consulting Engineers

Mike Kurzy has over 34 years of experience in civil engineering planning and design, primarily in the areas of commercial and residential land development, drainage, water and wastewater, and construction project management. Mike has significant experience in providing water, sanitary sewer, drainage, detention, and paving facilities to serve land development projects. Mike's expertise includes design of groundwater wells, resolving problematic drainage issues for various entities, and construction management.

REPRESENTATIVE PROJECTS

Montgomery County MUD No. 15, TX

Water Plant No. 2

Evaluation of the District growth indicated the need for additional water well, water storage and booster pump capacity. As Project Manager, Mike prepared a chart of growth that indicated growth by connections with capacity of the existing plant, when design and construction of the future plant was anticipated so as to not have any issues serving the growing population.

Harris County MUD No. 102, TX

Water Well No. 6 Rehabilitation

Project Manager for the design and managed construction of well rehabilitation improvements, including complete replacement of the motor, pump, and column assembly. During construction, bacterial growth discovered down hole required wire brushing and chemical treatment.

Northwest Harris County MUD No. 36, TX

Water Plant No. 1

Project Manager for the design of a complete water plant to serve Northwest Harris County MUD No. 36 and Northwest Harris County MUD No. 28. Design included a 1,000 gpm well, 225,000-gallon ground storage tank, three 500 gpm booster pumps, and a 20,000-gallon hydropneumatic tank.

Northwest Harris County MUD No. 36, TX

Water Plant No. 2 and Remote Well Line

Project Manager for the design of a remote water well and approximately 3,500 linear feet of 12-inch water line to bring the water to Water Plant No. 1 and allow water to feed directly into the District system. The Plant consisted of a 1,000 gpm well and a control building. The site plan also included provisions for future facilities to include ground storage capacity, booster pump capacity, and hydro-pneumatic tank capacity.

Nancy Blackwell, PE QA/QC



Joined Firm in 1996
28 Years of Experience

REGISTRATIONS

Licensed Professional
Engineer: Texas No. 87634

LOCATION

Houston, TX

ASSOCIATIONS

Texas Society of
Professional Engineers
National Society of
Professional Engineers
American Water Works
Association
American Society of Civil
Engineers
Texas Water Conservation
Association
Chi Epsilon, Civil
Engineering Honor Society



Nancy has more than 28 years of experience in civil engineering planning and design, primarily in the areas of municipal water supply and distribution, and municipal wastewater collection and treatment. Nancy has served as district engineer for more than 15 different utility districts in Montgomery and Harris counties over the last 25 years, providing capital improvement planning services, rate analyses, feasibility studies, plan reviews, water and wastewater capacity studies, and management and oversight of a wide range of general consultation services as well as water and wastewater infrastructure improvement projects. Nancy has developed significant experience in all aspects of municipal facilities, including water systems, drainage systems and land development projects, by serving as a client representative for several municipal utility districts and other government clients.

REPRESENTATIVE PROJECTS

Multiple Clients, TX

Lead & Copper Service Line Compliance

Currently managing preparation of Lead & Copper Service Line inventories for eight different water utilities across Texas in compliance with the EPA Lead & Copper Rule and TCEQ Guidance. The projects include records research, coordination with operations personnel and field investigations to prepare detailed inventories of all services lines within the utility boundaries and submittal of required documentation to the regulatory agencies.

Various Municipalities, TX

Drinking Water System Risk & Resiliency Plans

Managed preparation of Risk & Resiliency Plans for 22 different water utilities across Texas in compliance with America's Water Infrastructure Act and EPA Guidance. The projects included site visits and facility assessments, preparation of detailed and confidential Risk & Resiliency documentation and assisting municipalities with hardening their systems to improve susceptibility to various risk categories.

Multiple Clients, TX

Utility District Engineer

Nancy has served as district engineer for more than 15 different utility districts in Harris and Montgomery counties over the last 25 years. She has provided capital improvement planning services, rate analyses, feasibility studies, plan reviews, water and wastewater capacity studies, and management and oversight of a wide range of general consultation services as well as water infrastructure improvement projects.

Daniela Moderow, PE

Project Engineer



Joined Firm in 2016
Years of Experience: 8

EDUCATION

B.S., Petroleum Engineering
University of Houston, 2015

REGISTRATIONS

Licensed Professional
Engineer: Texas No. 140426

LOCATION

Katy, TX

ASSOCIATIONS

American Water Works
Association
Texas Society of Professional
Engineers



Daniela has eight years of engineering experience in the civil disciplines of planning and design, primarily in water and wastewater treatment facilities and distribution. Additionally, she has experience with municipal utility districts, including preparation of bond application reports, feasibility studies, and TPDES permit renewals.

REPRESENTATIVE PROJECTS

City of Magnolia, TX

Water Plant No. 3 Phase I

Project Engineer responsible for the design and construction of the first phase to construct Water Plant No. 3 to meet future demand. The project was divided into multiple phases to allow for the water plant to be put into service while additional components are added to the plant. The scope for Phase I included a new 1,000 GPM water well in the Jasper Aquifer, 10,000-gallon HPT, chemical disinfection system and fiberglass buildings, associated piping, associated electrical work, temporary all-weather access road, chain link fence and gate.

City of Magnolia, TX

Water Well No. 8

Project Manager for design and construction of Water Well No. 8. The design phase of this project included a new 500 gallon per minute (GPM) water well in the Jasper Aquifer, yard piping, chemical disinfection system, fiberglass buildings, associated electrical work, permeable paver driveway, chain link fence extension and site restoration.

Conroe ISD, TX

Water Well Replacement

Project Engineer for assisting the school district in obtaining emergency replacement approval and permitting of the new well from TCEQ and Lone Star Groundwater Conservation District after the failure of an existing well. This included coordination of a Phase 1 Environmental Site Assessment and review of the proposed well design. This emergency project was completed quickly to return to operational capacity.

Harris County WC&ID No. 116, TX

Water Plant No. 1 Improvements

Project Engineer for providing design and construction phase services for improvements to Water Plant No. 1, replacing obsolete equipment to ensure continued efficiency. The proposed improvements included the replacement of two existing booster pumps and motors, one booster pump motor, recoating of piping, valves and fittings, removal of existing booster pump metal building, replacement of concrete driveway, installation of new 10,000-gallon hydropneumatic tank, and discharge header piping modifications.

Chuck Brunner, PE, SE

Structural Project Engineer



Joined Firm in 1987
Years of Experience: 41

EDUCATION

B.S., Civil Engineering,
Purdue University, 1983

REGISTRATIONS

Licensed Professional
Engineer: Texas No. 139713
Licensed Structural
Engineer: Illinois

CERTIFICATIONS

NBIS Certified Program
Manager, Illinois Department
of Transportation

LOCATION

Crystal Lake, IL

ASSOCIATIONS

International Code of Council
American Society of Civil
Engineers
Structural Engineers Institute
American Concrete Institute
American Institute of Steel
Construction



Chuck is called upon to review the structural design of all projects, including well houses, pumping stations, water storage facilities, water and wastewater treatment facilities, bridges, retaining walls, and drainage structures.

REPRESENTATIVE PROJECTS

City of Magnolia, Texas

Water Plant No. 3 Phase II

Structural Engineer of Record for CMU control building and ground storage tank foundation.

City of Magnolia, Texas

Water Plant No. 3 Phase I

Structural Engineer of Record for water well foundation, HPT foundations, and temporary storage building foundations.

Northwest Harris County MUD No. 30

Water Well No. 2

Structural Engineer of Record for water well foundation.

Cary, IL

Well 13 Water Treatment Plant and Reservoir

Structural Engineer of Record for water treatment plant building and 2,500,000-gallon prestressed concrete water storage reservoir.

Crystal Lake, IL

Water Treatment Plant No. 2

Structural Engineer of Record for design of water treatment plant building.

Gilberts, IL

Water Treatment Facility

Structural Engineer of Record for design of water treatment plant building.

Huntley, IL

Well 7 and Well 11 Water Treatment Plant

Structural Engineer of Record for design of water treatment plant buildings.

DeKalb, IL

Lincoln Highway and County Farm Road Water Treatment Plants

Structural Engineer of Record for design of well house buildings and water treatment plant buildings.

Michael Gryn, PE

Electrical Engineer



Joined Firm in 2017
Years of Experience: 24

EDUCATION

M.B.A Strategy, Execution and Valuation; DePaul University - Charles H. Kellstadt Graduate School of Business - Chicago, IL, 2008
B.S. Electrical Engineering; Purdue University, West Lafayette, IN, 2002

REGISTRATIONS

Licensed Professional Engineer: Texas No. 139054
LEED Associated Professional

LOCATION

Chicago, IL

ASSOCIATIONS

Consulting Electrical Engineers - President 2014-2016, Board Member since 2007
Chicago Safety & Sustainability Conference Planning Committee - Member since 2008



Mike has been responsible for electrical and instrumentation designs for many project types including designs for both small and very large plant expansions as well as new plant and pumping station facilities. He also has experience in power/generator load studies and electrical distributions designs along with PLC upgrades, connection to master control stations, and instrumentation design. Over the last seven years, Mike has been overseeing all project aspects from proposal through construction for electrical and controls designs. Mike's passion is making sure owners and contractors achieve success together while completing their project.

REPRESENTATIVE PROJECTS

City of Magnolia, TX

Water Plant No.3 Improvements

Electrical and Automation Engineer responsible for the installation of a new water treatment plant across three phases. Phase 1 involved installing a new well pump and implementing chemical disinfection to supply water to an existing elevated storage tank. Phase 2 included setting up a new booster station, relocating the electrical power for the existing well pump, and installing new power distribution equipment, a generator, and an automatic transfer switch. Automation enhancements were made to monitor and operate a new ground storage tank, a hydro-pneumatic tank, booster pumping, and chemical addition systems.

Terranova West, TX

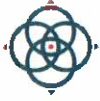
Water Plant Electrical Improvements

Electrical and Automation Engineer responsible for the rehabilitation of an existing water plant. The work involved installing a new motor control center to power the booster pumps, well pumps, and other ancillary loads. Additionally, automation improvements were implemented to monitor and operate the ground storage tank, hydro-pneumatic tank, and booster pumping.

Kleinwood Joint Powers Board, TX

WWTP Phase 3 Electrical Improvements

Electrical Engineer responsible for installing three new motor control centers to replace aging infrastructure. The project provided new power to existing blowers for aeration, clarifiers, and various pumping systems throughout the plant. The design required the new equipment to fit within an existing electrical building with spacing constraints. The project included the addition of safety disconnect switches and other electrical safety features to enhance plant operations. The new power distribution system was also designed to utilize the existing on-site backup generators.



WINDROSE
LAND SURVEYING | PLATTING

Robert Kness RPLS 6486
Principal / Chief Operating Officer



BIOGRAPHY

Robert is the principal owner and the Chief Operating Officer of Windrose Surveying & Services, LLC. Robert is head of operations for all 3 Texas market offices including Austin, Dallas, & Houston. Robert began his career at Windrose in 1999 and was a founding member of the Commercial Surveying Division. With 25 years of field and office experience, Robert has managed a wide variety of projects from major multi-million-dollar roadway and municipal surveying projects to concurrent management of multiple small site development and platting projects. His expertise and complete understanding of the processes involved in land development allows for our final survey product to work seamlessly with the civil design function. Since Robert joined Windrose he has spearheaded the firm's vigorous commitment to stellar service balanced with a quality product. His final review of each project that is delivered to our clients ensures a very thorough level of quality control is maintained. He leads the firm with that commitment and provides support and leadership to all levels of the company. Mr. Kness leads Windrose employees by example of his own strong ethics and character as well as his ability to apply technical processes and experiences to all projects in which the company participates.

EDUCATION & LICENSURE

University of Houston, B.A., Major in History, Minor in Advanced Surveying State of Texas; RPLS #6486, Expiration 12/31/2024

EXPERIENCE & LOCATION

25 Years, State of Texas

PROFESSIONAL ORGANIZATIONS

Texas Society of Professional Surveyors

RELEVANT PROJECT EXPERIENCE

CITY OF CONROE, SH 242 WATER & SANITARY, CONROE, TX – QA/QC Manager

Project Scope: Approx. 1800 feet between Conroe ISD Access and Edith Lane. Surveying Services: Established Vertical and Horizontal Control Monuments, provided Boundary Orientation & Abstract/Strip Map to identify Right-of-way lines and parcel boundary to facilitate easement creation, performed Topographic and Utility Survey of within proposed subject area including an additional 20 feet on both sides of Access Drive.

CITY OF THE WOODLANDS, SJRA LIFT STATIONS 3&4, THE WOODLANDS, TX - QA/QC Manager

Project Scope: 1-acre lift station site rehabilitation on Crystal Lake Lane, Village of the Woodlands, to facilitate rehabilitation design for the district, cross-section information of existing detention channel, structures, and ponds.
Surveying Services: Provided project control, recovered property boundaries, and provided a detailed topographic site survey of the site and profile drawings of existing wet well.

CITY OF PATTON VILLAGE WATER SYSTEM, Patton Village, TX- QA/QC Manager

Project Scope: Approx. 3,321-acres to facilitate rehabilitation of the City's added sanitary sewer system and to delineate the boundary of the City of Patton Village for regional planning and federal/state aid purposes.
Surveying Services: Provided boundary in addition to a topographic & utility survey for future design and construction of a proposed wastewater treatment plant. Specific services provided include Boundary survey of the entire municipal limits of the City of Patton Village consisting of 3, 321 acres and Topographic & utility survey and boundary verification to create a 9-acre tract from a 21-acre tract for a proposed wastewater treatment plant location.

ADDITIONAL PROJECTS

1. Montgomery County WCID No.1
2. Montgomery County Water Plant No. 2
3. Montgomery County Water Plant No. 4
4. City of Magnolia Water Plant Site
5. Aqua Texas Brittmore Water System Improvements

Jay Sunderwala, PE

Principal Engineer



EDUCATION

M.S., Civil Engineering, 1998,
San Jose State University

B.S., Civil Engineering, 1993,
San Jose State University

REGISTRATIONS/CERTIFICATIONS

PE 88799 (Texas)

PE 16758 (Nevada)

PE 58666 (California)

PROFESSIONAL AFFILIATIONS

American Council of Engineering
Companies of Texas

American Public Works Association

American Society of Civil Engineers

Texas Public Works Association

Texas Society of Professional Engineers

Mr. Sunderwala's professional experience spans over 30 years and includes coordinating and supervising all technical and administrative functions for the Houston office. Mr. Sunderwala has performed and managed numerous geotechnical evaluations for commercial, industrial, federal, transportation (road and railway), utility pipeline, public works, educational, and retail projects. He has significant experience in foundation design, earthwork operations, soil treatment, and construction phase geotechnical services. He provides supervision and technical support for both geotechnical and construction services.

REPRESENTATIVE EXPERIENCE

Chambers Creek Water Plant, Willis, Texas: Technical Advisor during geotechnical observation and materials testing services for the project which consisted of the construction of a water storage tank and pump building.

The Highlands Water Plant, Porter, Texas: Technical Advisor during geotechnical observation and materials testing services for the project which consisted of the construction of the water well, water storage tank and paving for the facility.

Huntsville Bond No. 3 Water Systems Improvement, Huntsville, Texas: Principal Engineer during the geotechnical evaluation for the City of Huntsville Bond No. 3 Water System Improvements project. The program included the design and construction of two new pump stations, one ground storage tank, one elevated storage tank and a water transmission line. The elevated storage tank has a 2 million gallon capacity with approximately 25,700 linear feet of water transmission lines.

Water Plant no. Expansion for Montgomery County Municipal District (MCMUD) No. 105 - Woodson's Reserve Development, Spring, Texas: Technical Advisor during geotechnical observation and materials testing services for the project which consisted of the construction of the water well, water storage tank and paving for the facility.

Harris County Municipal Utility District, No. 71 Water Plant No. 3, Houston, Texas: Principal Engineer during geotechnical engineering services for the construction of a new water plant. The improvements included two new 50-foot diameter, 24-foot high ground-supported water tanks, two hydropneumatic tanks, booster pump, control building, and associated pavements.

Harris County Municipal Utility District, No. 120 Water Treatment Plant No. 2, Houston, Texas: Principal Engineer during geotechnical evaluation services for the planned expansion of the Water Treatment Plant No. 2. The expansion consisted of the design and construction of approximately 158-square foot generator pad and a new Motor Control Center (MCC) building.

Harris County Municipal Utility District, 559 Water Plant, Houston, Texas: Principal Engineer during geotechnical evaluation services for the design and construction 55-foot diameter, 32-foot high 540,000-gallon ground storage tank, 15,000 high-pressure technologies (HPT) booster pump, an approximate 800-square foot generator pad, and an approximate 2,800-square foot MCC/Disinfection building.

Project Experience

Firm Overview

Founded in 1946, Baxter & Woodman, Inc. provides consulting engineering and technology services to municipalities, state agencies, county governments, and sanitary districts throughout Texas, Illinois, Wisconsin, and Florida. Dedicated to promoting a sustainable future, our staff of more than 400 talented engineers, surveyors, technicians, and support personnel incorporates innovative techniques along with tried and true processes.

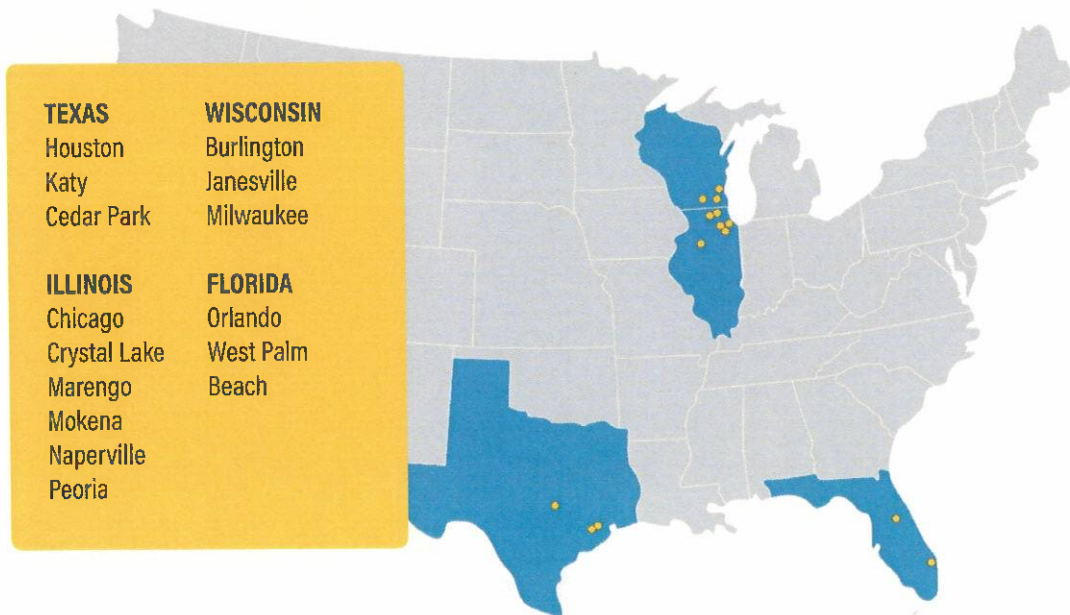
Baxter & Woodman provides planning, design, construction and technology services for water, wastewater, stormwater and transportation facilities for municipalities, counties and state agencies and more. Environmental, geographic information systems (GIS), water and wastewater operations, and advanced technology needs complement the firm's civil engineering expertise. The company has several subsidiaries including ones focused on Natural Resources, Municipal Technology, and Design-Build project delivery.

Baxter & Woodman has achieved the ranking of **#282** on the Engineering News Record list of Top Design Firms in the Country!



Regional Offices

Baxter & Woodman's 14 regional offices provides our clients with local presence and responsive service. Our team offers services that stretch well beyond typical engineering consulting. We are committed to building community value with each and every project we complete.



Water Plant No. 4 500,000-Gallon Elevated Storage Tank

1

City of Magnolia, TX

SERVICES

- Design Engineering
- Construction Management
- Piping and Electrical Work
- Agency Approvals

DATES

2024 – Present

BID COST

\$3,768,000

PROJECT MANAGER

Janice Noeldner, PE

REFERENCE

Tim Robertson
City Engineer
979-551-6868

trobertson@cityofmagnolia.com



Baxter & Woodman was selected by the City to design Water Plant No. 4 500,000-Gallon Elevated Storage Tank. The scope of work for Water Plant No. 4 includes the construction of a composite elevated storage tank, associated piping, associated electrical work, crushed stone driveway, and site restoration.

During preliminary engineering, multiple EST types and life-cycle costs were presented to the Council, including single pedestal, multi-pedestal, fluted, and composite. Due to its low life-cycle cost, the City authorized design of a composite-style EST.

The EST is designed to provide pressure to the entire current water distribution system. Its overflow weir elevation is set at the same elevation as the EST at Water Plant No. 2 (Kelly Road Water Plant) overflow weir. The EST can provide acceptable water pressures to the highest point in the water distribution system, which is currently near Dogwood Trail at Rolling Hills Drive.

Also included was the development of the preliminary opinion of probable construction cost and included a 20% contingency, based on escalating construction costs and historical bid prices for other projects of similar work and input from EST manufacturers.



Drone imagery of the construction site of Water Plant No. 4 500,000-gallon Elevated Storage Tank (EST).

Water Plant No. 3 Phase II

City of Magnolia, TX

2

SERVICES

- Phased Design and Construction Engineering
- Electrical Design
- Structural Design
- Bid Services
- Agency Coordination

DATES

2022 – Present

BID COST

\$4,326,395

PROJECT MANAGER

Janice Noeldner, PE

REFERENCE

Tim Robertson
City Engineer
979-551-6868

trobertson@cityofmagnolia.com



The construction of Water Plant No. 3 was divided into multiple phases to allow the water plant to be in service while additional components are added to the plant. The scope of work for Water Plant No. 3 – Phase II includes the construction of a 410,000-gallon glass-lined GST, CMU control building, three 1,000-gpm vertical turbine booster pumps, motor control center, chemical disinfection system, diesel emergency power generator, detention pond and drainage system, chain link fencing, 10,000-gallon HPT, chemical disinfection system and fiberglass buildings, associated piping, associated electrical work, and site restoration.

Design was provided on an accelerated schedule in order to meet the City's need for the water plant. A glass-lined GST was chosen for its lower up-front cost. The control building is designed for ease of maintenance and includes an office for operators. The generator is sized to run the ultimate build-out of the plant, including running both water wells at once.



Drone imagery of the construction site of Water Plant No. 3 Phase II.

Water Plant No. 3 Phase I

City of Magnolia, TX

3

SERVICES

- Design Services
- New Water Well Construction
- Chemical Disinfection System and Fiberglass Buildings

DATES

2021 - 2023

CONSTRUCTION COST

\$3,600,219

PROJECT MANAGER

Janice Noeldner, PE

REFERENCE

Tim Robertson
City Engineer
979-551-6868

trobertson@cityofmagnolia.com



The scope of work for Water Plant No. 3 – Phase I included the construction of a new 1,000 gpm water well in the Jasper Aquifer, 10,000-gallon HPT, chemical disinfection system and fiberglass buildings, associated piping, associated electrical work, temporary permeable pavers access road, chain link fence, and gate.

In order to put the water well online without waiting for the long-delivery lead time items, the well was designed with a VFD and a water well discharge bypass line that allows the well to pump directly into the City's water distribution system. The bypass line will be used to supply the City with water until construction is completed on Phase II.

Baxter & Woodman submitted and coordinated the water well permit with Lone Star Groundwater Conservation District (LSGCD) and obtained Texas Commission on Environmental Quality (TCEQ) project approval. The firm provided bid phase services for the project including the advertisement, the pre-bid conference, and the bid opening. The team reviewed bids and made recommendations for award of the contract



Drone imagery of the construction site of Water Well No. 7 in the City of Magnolia.

Water Well No. 2

Northwest Harris County MUD 30, TX

SERVICES

- Design Engineering
- Construction Management
- Site Restoration, Clearing and Grubbing
- Chemical Disinfection System

DATES

2024 - Ongoing

CONSTRUCTION COST

\$3,659,470

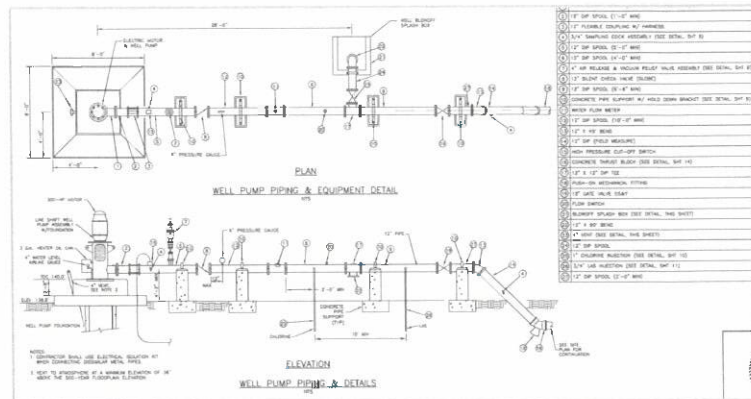
PROJECT MANAGER

Daniela Moderow, PE

REFERENCE

Jim Attaway
Board President
281-536-3719

jdattaway@sbcglobal.net



Water Well No. 2 Pump Piping Elevation Exhibit

The District's water system currently relies on a single active water well located at the water plant, known as Water Well No. 1, which was constructed in the Evangeline Aquifer in 1987. In August 2022, Water Well No. 1 underwent significant rehabilitation due to structural issues. This rehabilitation involved the installation of an interior liner and the replacement of the existing pump with a submersible pump. As a result of these modifications, the design capacity of Water Well No. 1 decreased from 1,200 gallons per minute (gpm) to 950 gpm.

In addition to Water Well No. 1, the District also receives water from the North Harris County Regional Water Authority (NHCRWA).

Water Well No. 1 serves as a backup to ensure the District can continuously meet its water demand. However, without the availability of surface water, the existing well would struggle to provide sufficient water during periods of high demand. To address this issue and ensure an adequate water supply for its residents, the District has authorized the design and construction of a new water well within Water Plant No. 1.

The new water well, designated as Water Well No. 2, will be constructed in the Jasper Aquifer. The scope of work for Water Well No. 2 includes the construction of a new 1,500 gpm water well, along with associated tasks such as clearing and grubbing, installation of a chemical disinfection system, associated piping and electrical work, fencing, permeable pavers, and site restoration.

This project aims to enhance the District's water supply infrastructure, ensuring a reliable and sufficient water source for its residents, even during periods of high demand.



Pre-construction project team site visit photos

Project Approach



Aerial view of proposed project site

Project Understanding

As the City undergoes expansion, there is a pressing need for engineering solutions that allocate funds prudently to incorporate significant water plant components into the water system. This project aims to achieve two primary objectives:

- Confirm sufficient water capacity and pressure on the City's west side.
- Design a water plant system that accounts for future growth and the corresponding demands on water pressure and volume.

Baxter & Woodman has assembled a comprehensive approach that includes a highly experienced team that will deliver efficient, reliable, and cost-effective design engineering services for the City's Water Plant No. 4 project. Together, we have the personnel, support, and expertise to effectively complete the City's projects. Our team will work on behalf of the City to deliver this project to your residents and business owners.

Project Approach

PROJECT INITIATION

1. Condition Assessment and Preliminary Engineering

Water plants are designed to provide the necessary volume at a constant distribution system pressure minimizing system surges. This is typically achieved by either providing an elevated storage tank (EST) which the well pumps into or by providing the well with a ground level storage tank (GST), system pressure booster pumps, and a hydro-pneumatic tank (HPT) that maintains a constant system pressure. During project initiation, Baxter & Woodman will evaluate with the City the most appropriate design that reliably and economically serves the City.



Baxter & Woodman starts each project with an initiation meeting to lay out the project plan and coordination. We discuss points of contact, team communication, agency regulations, client needs, anticipated project pitfalls, and the project's scope, budget, and schedule. We review previous design reports, studies, plans, and project manuals for the water system.

Baxter & Woodman has designed **eight new water wells** and **two new ESTs** in the last five years alone!



Our approach focuses on proactive communication. We discuss project issues to minimize impact and quickly alert the City of any concerns. Listening, consulting, and designing with the operator's needs in mind are essential for achieving a successful project. We conduct monthly status meetings to review work and discuss progress, documenting notes to share with project stakeholders.

Site conditions are measured through both topographical survey and geotechnical investigations. While our team of engineers is reviewing existing data and performing preliminary engineering, our surveyor, **Windrose Surveying**, and geotechnical experts, **Ninyo & Moore** will be gathering topographic and subsoil information necessary for a reliable and sound design.

Baxter & Woodman will start with a pollution hazards report to identify nearby pollutants before drilling the water well. This step confirms safe water and the report will be sent to the Texas Commission on Environmental Quality (TCEQ) for well construction approval. We will also review the City's water model to find the best water system pressures for the area.

We will provide a life-cycle cost analysis for different EST types to present to the City Council for final determination. We will evaluate the upfront costs, along with major maintenance costs, to determine the EST's total cost over its 50+-year lifetime.

2. FINAL ENGINEERING DESIGN

Constructing a water well and constructing an EST each require a large construction footprint. The 1.1-acre site creates a very tight, workable space for the two projects to be constructed at the same time. We will leverage our relationships with local water well drillers and with EST manufacturers to determine if the 1.1-acre site will allow for both projects to be constructed simultaneously. We will work with both entities to determine layouts that allow them enough room for their work.

Anywhere the water well is able to be located on the water plant site will put its 150-foot sanitary control radius in Montgomery County right-of-way. A sanitary control easement cannot be obtained in a right-of-way outside of a city's boundary. This will require filing a sanitary control easement exception with the TCEQ, which involves sending additional well construction data to the TCEQ's technical review team. Baxter & Woodman will do this as part of the project design.

Potential Issue	Approach
Small site for simultaneous construction of water well and EST	Coordinate with water well drillers and EST manufacturers at the beginning of design to determine layout that works for both
Cannot obtain sanitary control easement in Montgomery County right-of-way	Obtain TCEQ sanitary control easement exception

Once we receive their input on facility location, we will review a proposed site plan with the City. The site plan will be designed to provide possible future expansion, a well location that meets Lone Star Groundwater Conservation District (LSGCD) requirements, and an EST at the northernmost corner, all while optimizing layout to confirm the water plant operates efficiently.

Upfront costs are a part of the water plant's life cycle cost, but maintenance can cause significant recurring expenses. The project will be designed to reduce future maintenance costs. For example, traditional tank coating systems will last for about 12 years, but newer coating systems have proven to protect the tank and retain shine for 20 years, reducing EST rehabilitation costs.

After design completion, the project will undergo a QA/QC review by a minimum of two senior Baxter & Woodman engineers. The plans and project manual will be provided to the City for review and approval.

3. AGENCY REVIEW AND BID

Baxter & Woodman will submit the project to agencies and obtain approval for construction from Montgomery County, TCEQ, and LSGCD. It is understood the water well capacity has been approved by the LSGCD, and only the permit for the well itself will need to be obtained.

During design, we seek opinions from reputable contractors on bidding time, duration, and construction scheduling. Our goal is to obtain competitive bids from efficient contractors. We assist in contractor procurement, hold pre-bid conferences and bid openings, review bids and bidder qualifications, and issue recommendation letters for project awards.



Baxter & Woodman will secure permits, assist with contractor procurement, and confirm competitive bids to drive an efficient construction process.

4. CONSTRUCTION MANAGEMENT

Construction administration and inspection services will be performed by the City Engineer. Baxter & Woodman will assist with submittal review, respond to questions and change requests, and attend progress meetings and walkthroughs.

During water well drilling, Baxter & Woodman will review logs to determine the optimal locations and lengths of screened areas, collaborate with the water well driller to determine the best pump selection, and submit final data to the TCEQ for well use approval. Additionally, in-house **NACE-certified** construction staff can perform coating inspections to confirm proper surface preparation and coating application are performed, leading to a long service life.

CONSTRUCTION FUNDING ASSISTANCE

Baxter & Woodman offers 50 years of experience with federally funded grant program projects. We assist our clients with identifying and securing funding for their capital improvements, including obtaining Texas Water Development Board (TWDB) grants and loans as well as Community Development Block Grants (CDBG) from the Texas Department of Agriculture (TDA). You can rely on our local expertise and proven funding reporting and project delivery experience.

A small sample of similar projects that required complying with the funding agency requirements include:

City/Municipality	Funding Source	Project	Services Provided	Project Objective(s)
City of Patton Village, TX	CDBG	Water Well Rehabilitation	Rehabilitation of existing water well	Improve water quality/reliability
City of Patton Village, TX	USDA	Tram Road Water Plant	Design - New water plant	Improve water quality/reliability
City of Patton Village, TX	USDA	City Wide Replacement of Water System	Design - Complete water distribution system	Improve water quality/reliability
City of Houston, TX	FEMA	Hurricane Harvey Disaster Cost Recovery for Wastewater Lift Stations	Facility Assessment & Evaluation - 38 lift stations	Storm recovery and mitigation

PROJECT LEADERSHIP AND COMMUNICATION

Regular communication between Baxter & Woodman and the City is crucial to avoid delays and incorporate the City's input into the water plant design. We will start with a kick-off meeting and hold regular status meetings throughout the project. These meetings will allow us to discuss any items that may require a City decision. These meetings will address any issues needing City decisions and will use the City's preferred method, although Microsoft Teams meetings with agendas have proven effective.



Janice Noeldner, PE will serve as Project Manager and the main point of contact with the City. She will be responsible for confirming the project meets the scope, schedule, and budget. **Daniela Moderow, PE** will serve as Design Engineer and will be responsible for the technical aspects of the project. **Mike Gryn, PE** will lead the electrical design team and **Chuck Brunner, PE, SE** will lead the structural design team. **Nancy Blackwell, PE** will provide QA/QC support and review services at major project milestones. We have partnered with **Windrose Surveying** to provide expert survey engineering services to the City, and **Ninyo & Moore** to provide geotechnical engineering services.

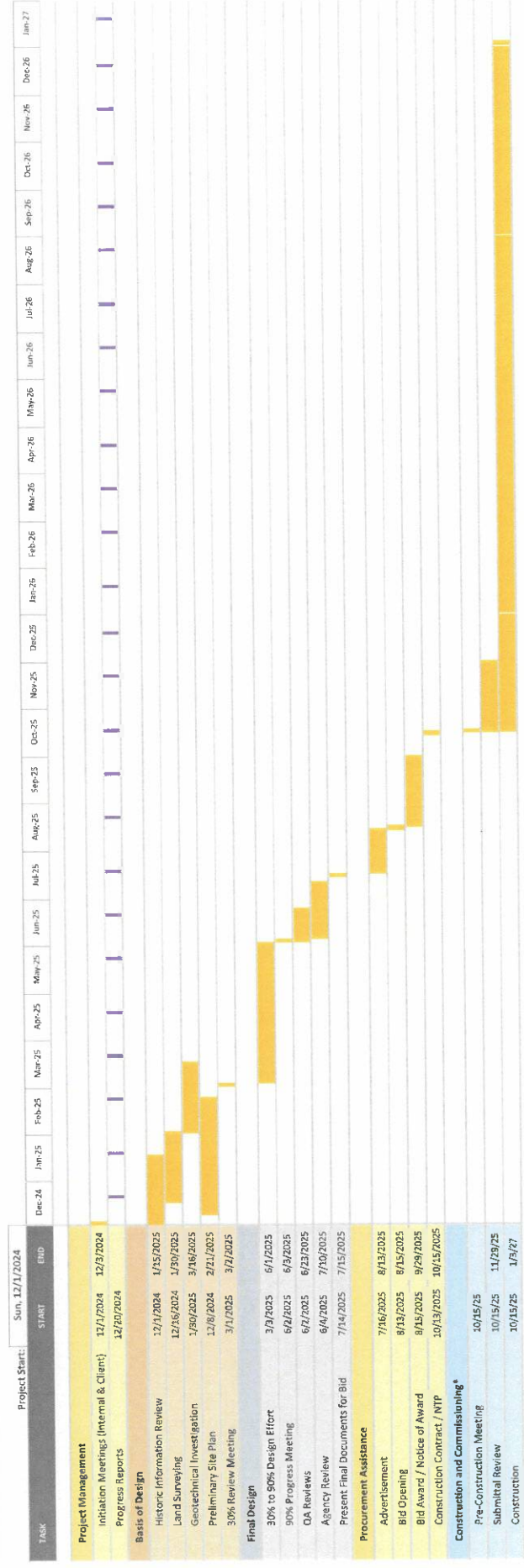


Preliminary Project Schedule

Baxter & Woodman will monitor the progress of your project on a biweekly basis to verify that our timing projections are accurate and that we are performing per your required schedule. Below, we have outlined the proposed schedule of the services including significant milestones.

WATER PLANT NO. 4

Baxter & Woodman, Inc.



* Construction duration will vary with contractor performance.

