



**T. BAKER SMITH**  
A CENTURY OF SOLUTIONS



# INDUSTRIAL

*T. Baker Smith (TBS) leverages a suite of integrated professional services to our clients* in the industrial market who work diligently producing petrochemicals, refined products, manufacturing supplies, and energy to provide us with the goods necessary to sustain and improve our way of life. With safety at our core, we continuously develop new and innovative approaches to efficiently and safely deliver project outcomes. Through our understanding of clients' needs and dedicated responsiveness, TBS becomes a trusted advisor, providing integrated solutions during the planning, design, construction, and operations and maintenance phases of our clients' projects.



## INDUSTRIAL SOLUTIONS

### + Planning

- Due Diligence
- Site Feasibility Analysis
- Conceptual Site Layout
- Conceptual Drainage Analysis
- Master Planning

### + Design & Engineering

- Permitting & Agency Coordination
- Biological & Natural Resources Surveys
- Civil, Structural, & Mechanical Engineering
- Land Surveying
- Hydrographic Surveying
- Unmanned Aerial Systems (UAS)
- Subsurface Utility Engineering (SUE)

### + Construction

- Construction Layout/Monitoring
- Laser Scanning
- Dimensional Control Surveying
- As-built Surveying & Documentation
- Environmental Inspection & Monitoring
- SWPPP Development & Inspection

### + Operations & Maintenance

- Security Plans, Emergency Plans, Spill Plans, & Operations Manuals
- Civil, Structural, & Mechanical Engineering
- Laser Scanning
- Aerial Inspections & Assessments
- U.S. Army Corps of Engineers 404/10 or 408 Permitting
- Geospatial Solutions



## New Transmission Line Installation



Entergy Louisiana planned to build a new 15-mile transmission line to increase electrical service reliability to businesses and residents located south of New Orleans. TBS' role in this project was to assist in the overall goal of reducing impacts to wetlands, wildlife habitats, water quality, and the valuable resources located in Jean Lafitte National Historical Park and Preserve. TBS provided the following integrated services: environmental surveys and permitting; land surveying; regulatory compliance/permitting services; and feasibility/planning/alternative analysis.

## Petrochemical Facility Wastewater Line Relocation Over Levee



Two petrochemical facilities located adjacent to the Mississippi River were required to relocate their existing wastewater pipelines as part of the U.S. Army Corps of Engineers (USACE) levee improvement project in this area. TBS provided survey, engineering, and regulatory and permitting support for the relocation of the 14" and 12" wastewater pipelines over the Mississippi River Levee as a part of the USACE levee improvement project. Engineering included the addition of a concrete air bridge over the levee, sleeper design, paving, and grading. Coordination with local, state and federal agencies, including the local levee district, CPRA and USACE, was conducted and project permits were granted. The TBS survey team conducted prompt and accurate as-builts to confirm the project was constructed in accordance with project plans and project permits.

## Industrial Measurement – Pipe Spool Surveying



TBS monitored and performed dimensional control surveying in "real-time" of pipe spool fabrication operations, maintaining 1mm accuracies throughout fit-up and welding process. TBS conducted dimensional control operations utilizing highly accurate robotic total station surveying instruments and industrial measurement software to monitor and measure pipe spools during fabrication operations. Surveyors worked 12-hour shifts day and night to ensure pipe spools were fabricated to within the project specifications of 1.5mm. Lengths, heights, flange face squareness, bolt hole orientation, and isometric redlining were some of the measurements taken in real time on location to allow the fabrication team to quickly resume operations.

## Industrial Measurement at Refineries and Chemical Plants



TBS was tasked with gathering "as-is" 3-D laser scan data for structural and piping design teams to accurately plan, create, design, and route new piping and structural tie-ins from existing multi-level infrastructure. TBS performed several laser-scanning surveys to accurately 3-dimensional map existing pipe racks, structural components, and electrical and instrumentation trays. The field data was gathered using a combination of traditional surveying techniques with advanced total stations and 3-D laser scanning to complete the project. The 3-D point cloud field data was gathered in a couple of days, georeferenced to plant coordinates, and delivered to structural and piping designers to create as-built intelligent 3-D models.

## Petrochemical Facility – SUE Services



T. Baker Smith, LLC was contracted to assist in the placement of a new electric distribution structure within an existing facility in Louisiana. The design of the structure included an elevated platform, multiple poles and transformers as well as associated buried cabling and conduits, all within a very congested area. Records research was conducted, but no drawings or as-built data for existing utilities was available. Surveying the above-ground appurtenances within the area revealed the likely presence of multiple telecommunications lines, buried electric lines, gas and fuel pipelines, and water lines. These utilities were designated electronically, surveyed, and mapped according to CI/ASCE 38-92 standards. Several conflicts were identified between the design and the existing buried facilities. TBS performed a SUE Level A to verify the precise locations of the existing lines at the areas of potential conflict, which allowed the project engineer to adjust the placement of key structures and resolve these conflicts prior to construction.

### LOCATIONS

Lafayette, Louisiana.....	337.735.2800	Metairie, Louisiana.....	504.323.3460
Baton Rouge, Louisiana.....	225.744.2100	Houston, Texas.....	281.240.0113
Thibodaux, Louisiana.....	985.446.7970	San Antonio, Texas.....	210.892.4700
Covington, Louisiana.....	985.302.0730	Pass Christian, Mississippi....	228.332.3970

### CORPORATE HEADQUARTERS

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