

CIVIL ENGINEERING

PROGRAM/PROJECT MANAGEMENT
CONSTRUCTION/CONSTRUCTION MANAGEMENT
COASTAL ENGINEERING
ENVIRONMENTAL SERVICES
OIL & GAS SERVICES

CIVIL ENGINEERING

Since inception, Royal has delivered civil engineering services to public, private, and governmental sectors.

Since inception, Royal has delivered civil engineering services to public, private, and governmental sectors. Royal offers clients a professional and knowledgeable staff of engineers, architects, planners, and support staff who are well versed in providing planning, design, and construction services for civil engineering projects. Royal provides its clients with the confidence that the execution and management of our civil projects ranging from road and bridge, water and wastewater, to structural engineering projects will be completed on time, within budget, and at the highest quality. Royal prides itself in overseeing a project from the planning stages through design and construction. We possess extensive experience in data collection and analysis including, coordinating surveys, geotechnical investigations, utility locations, etc. Royal's ability to deliver clear, concise, and complete construction bid documents is unparalleled. We will incorporate all aspects of data collection, into detailed construction plans, and prepare contract specifications which will ensure a successful construction completion.



Our Civil Engineering Services and Experience includes:

- ⊗ Roadway and Transportation Systems
- ⊗ Storm Drainage Collection and Pumping Systems
- ⊗ Wastewater Collection and Pumping Systems
- ⊗ Water Distribution Systems
- ⊗ Subdivision Planning and Design
- ⊗ Floodplain Analysis
- ⊗ Water Quality Engineering
- ⊗ Master Plans and Feasibility Studies
- ⊗ Storm Water Management and Erosion Control Plans
- ⊗ Preparation of Design Standards and Specifications
- ⊗ Structural Assessments and Design

CORPORATE HEADQUARTERS

601 Elysian Fields Avenue
New Orleans, Louisiana 70117
Phone: 504.309.4129
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ADDITIONAL LOCATIONS

- ⊗ New Orleans, Louisiana
- ⊗ Cameron, Louisiana
- ⊗ St. Bernard Parish, Louisiana
- ⊗ Lafayette, Louisiana
- ⊗ Houston, Texas
- ⊗ Mobile, Alabama

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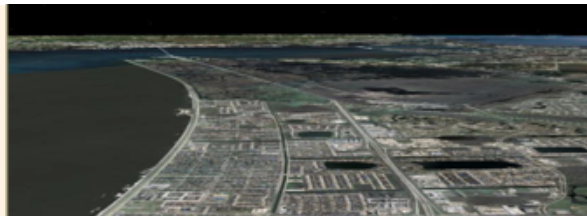
ROYAL DIVISIONS

South Shore Basin Sanitary Sewer System Rehabilitation

Client: City of New Orleans Sewerage and Water Board

Location: New Orleans, Louisiana

Project Type: Remedial Designs, Planning, Restoration, Vulnerability Assessments, GIS Support, Data Validation, Pumping and Piping Systems



The South Shore Area Sewer System is comprised of approximately 4500 acres and has a sewer system that contains 2200 manholes and over 546,000 linear feet of gravity sewers. Royal was contracted to manage the design and restoration of the South Shore Area Sewer System in Eastern New Orleans. All system assessments are catalogued in a sophisticated electronic data management system driven by GIS software. Management responsibilities include review of closed caption television (CCTV) footage of sewer lines, evaluation of defect coding, field inspection of sites to be excavated, evaluation of the appropriateness of repairs generated by a computer algorithm, recommendation of alternate repair methods where indicated by field conditions, estimating and assistance during construction.

Central Yard Facilities Rehabilitation

Client: City of New Orleans Sewerage and Water Board

Location: New Orleans, Louisiana

Project Type: Civil Engineering, Construction Management, Energy Efficiency Design, Geotechnical Engineering, Construction Inspection, QA/QC Management, Testing Laboratory Management



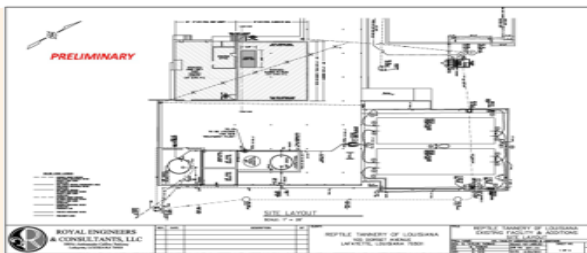
Royal was contracted to evaluate, design, repair, and restore (5) buildings that make up the master maintenance facility for the Sewerage and Water Board Central Yard. Following Katrina, the buildings that make up the Central Yard all sustained significant damage from both water and wind. Royal performed inspections to determine whether the buildings were sound enough to be refurbished or if demolition would be more feasible. Royal is supplying engineering services during construction, including technical inspections, confirmation of proper installation of electrical and HVAC systems, witnessing of testing and balancing of air flow systems and technical review of shop drawings, submittals & product data.

Wastewater Treatment Plant Upgrade

Client: Reptile Tannery of Louisiana

Location: Lafayette, Louisiana

Project Type: Wastewater treatment, NPDES Compliance, Environmental Permitting, Civil Engineering, Environmental Engineering, Geotechnical Engineering.



Royal was contracted to evaluate alternatives for increased efficiency in waste water treatment and discharge for RTL and include our findings and recommendations in a feasibility level report/technical memorandum. The technical memorandum includes two alternative wastewater treatment systems for the upgrade to the current waste water treatment system. The memorandum also addressed detailed descriptions of each waste water treatment system, including the ability of each system to achieve LUS discharge requirements for flow rates and effluent concentrations at the maximum plant flow rate requirements of approximately 39,000 gallons per day. We also evaluated the need for backup systems, and the ability of effluent water being suitable for reuse within the tannery.