



Rocky River WWTP Expansion City of Anderson

The Rocky River Wastewater Treatment Plant (WWTP) serves the City of Anderson, Anderson County, and Homeland Park Water and Sewer District. In 2005 Design South was retained to perform the design services for the expansion and upgrade of the Rocky River WWTP from 6.1 MGD to 9.5 MGD. The hydraulic capacity of the WWTP is 20.7 MGD. The existing WWTP utilizes a two stage fixed film biological treatment process and employs chemical addition to meet a stringent effluent phosphorus limit.

Construction was completed in 2011 with less than one percent change orders on a \$26.7 million project. Relevant services and facilities provided include:

- Preliminary engineering to include future wastewater flow projections, filter pilot study to evaluate the effectiveness of deep bed filters, and a cost analysis of ultraviolet disinfection versus chlorination and dechlorination.
- Design of a new 3.4 MGD process treatment train including primary clarification, trickling filter, rotating biological contactors, final flocculating clarifiers, new alum, magnesium hydroxide and polymer feed systems, primary and final sludge pumping systems, and recirculation pumping system
- Design of a new 20.7 MGD deep bed tertiary filter complex that includes 5 deep bed filters with future denitrification capabilities, air backwash blowers, backwash pumps, and backwash waste pumps. The filters also include passive filter bypass to prevent hydraulically overloading the filters.

- Design of a new 20.7 MGD ultraviolet disinfection system including low pressure high output disinfection equipment, online ultraviolet transmittance monitoring, hydraulically controlled level control system, and effluent flow monitoring.
- Miscellaneous design included a new PLC based distributed Plant Control System, fiber optic communications network, new perforated plate influent screens, new grit removal and handling equipment, retrofit of the existing clarifier drives, an upgrade of the existing anaerobic digesters with an external draft tube mixing system, new boiler heat exchanger and recirculation and transfer pumps, the addition of 1400 kW of emergency power capacity
- Permitting included an Anderson County Building Permit, SCDHEC Construction Permit, and SCDHEC Land Disturbance Stormwater Permit.

The Project: [Entire Project](#)
[Preliminary Engineering Report](#)
[Preliminary Design](#)
[Field Location Survey](#)
[Final Design](#)
[Construction Services](#)

Estimated Cost: \$27,000,000
 Contract Value: \$26,000,000
 Est. Contract Time: 820 days
 Contract Time: 836 days
 Principal Contractor: Wharton-Smith, Inc.



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PROFESSIONALS, INC.
 engineers architects planners