

## University of Louisiana at Lafayette

80,000 GPD Wastewater Treatment Plant



### ➔ The Challenge

The University of Louisiana at Lafayette needed to expand student housing, but its municipal sewer capacity was maxed out, leaving no option to tie into the city system.

A fully independent wastewater treatment solution had to be installed in the heart of campus, bringing several critical constraints:

- Strict DEQ nutrient and ammonia limits
- Tight footprint surrounded by buildings and walkways
- Protected century-old live oak trees
- High-traffic area with students and faculty nearby
- Zero tolerance for odor, noise, or visual disruption

### ➔ The Solution

Gainey's designed and manufactured a custom precast extended aeration system built specifically for the site and regulatory demands. Using a combination of aerobic and anoxic treatment zones, the system biologically removes ammonia and nutrients – without chemical additives.

The solution included:

- Tailored system sizing and technical guidance
- Crane-access installation to protect existing oak trees
- Air-driven returns and aeration to reduce noise and eliminate pumps
- Flow equalization and sludge management for stable performance

### ➔ The Result

The system exceeded expectations from day one, even with high-strength influent, delivering exceptional treatment performance:

- BOD: 296 → 3 mg/L
- TSS: 372 → 4 mg/L
- Ammonia: 57 → 0.4 mg/L (99%+ reduction)
- Total Nitrogen: 100 → 11.6 mg/L
- Total Phosphorus: 11.8 → 6.4 mg/L

Today, UL Lafayette operates a quiet, odor-free, fully compliant system that supports campus growth, without impacting surrounding infrastructure or daily campus life.

Students walk past it every day... most never realize it's there.

