FRP Bridge Drain Pipe Case History

Chapel Lane Extension – Hoover, AL 2013

Service
When a segment of I-459 was built through the Birmingham, AL suburb of Hoover, the area began to undergo significant changes. A few decades later, Hoover now boasts an impressive mixed economy with plenty of residential housing, offices, and retail shopping. In early 2013, a plan was formulated to link one of the still isolated pockets of residential houses to a nearby shopping center by extending Chapel Lane. The drainage on the existing I-459 structure presented a problem because no system was in place to stop free-falling storm water runoff from impeding the Chapel Lane traffic. FRP Bridge Drain Pipe was approached to help design a custom drain system to retrofit the I-459 drainage and ensure Chapel Lane traffic could flow unabated.

Features & Benefits
Dimensionally speaking, the existing I-459 drains were located too close for standard collector and downspout piping to fit. Because of this limitation, engineers needed a creative alternative which opened the door for exploring a trough drain design. Approval for the custom trough drains was granted by ALDOT. To deter birds from nesting, the top of the trough would remain flush with the bottom of the roadway deck while maintaining a minimum slope to ensure the system's hydraulic flow. In all, eight troughs measuring approximately 50' in length were installed. The trough design made it possible for the I-459 deck to remain in its existing state. We take great pride in the fact that we were able to help develop a solution for the problem and deliver the project all within the year helping the contractor meet their year-end holiday season deadline.

Pipe System
- 400' of Sloping 'U' Shaped Troughs
- 473' of 8" Pipe
- 24 86° Elbows w/ Cleanouts