



RINKER MATERIALS® CUSTOM JOINT TREATMENT OVERCOMES TOUGH STORMWATER MANAGEMENT SPECIFICATIONS

The recent reconstruction of Main Street in Springtown, Texas is providing more than 3,000 area residents with safer and less congested travel between Old Cottondale Road to Texas Drive in Parker County. Officially Farm to Market Road 51 or FM51, the two-lane Main Street was upgraded with a center lane, bridge replacement, sidewalks, right-of-ways, traffic signals and stormwater management system to deliver improved mobility for both vehicle and pedestrian traffic. Installed by Fort Worth Civil Construction LLC, the 1.6-mile stormwater management system was constructed using Rinker Materials® reinforced concrete pipe (RCP) and reinforced concrete box culverts (RCB) with a custom joint treatment to meet rigorous project specifications.

“The initial ASTM C1677 specification called for rubber gaskets used on box culverts, but we quickly realized that the hydrostatic head on this project exceeds those PSI performance capabilities,” said Alex Aldridge, product resource specialist at Rinker Materials. “So, we proposed a new joint treatment to meet the ASTM C990 leak resistant requirements of the project, which was approved by Fort Worth Civil Construction and the Texas Department of Transportation. Once we cleared that technical



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hurdle, the only other major challenge was navigating low-hanging power lines downtown to safely place the box culverts, RCP and other precast concrete elements of the drainage systems.”

Designed by engineering firm Freese and Nichols, the stormwater management system features more than 6,700 linear feet of RCP ranging in diameter from 18” to 78”, nearly 2,500 linear feet of 10’ x 6’ box culverts and two 48” storm structures. In addition, nearly 30 sections of RCP bent at 30-degrees and 35-degrees were incorporated to accommodate turns in the Main Street project, which was a collaboration between the City of Springtown, Parker County and the Texas Department of Transportation.

“Rinker Materials provided us with a value-added culvert solution that met the needs of our customer with a box and joint treatment that was able to accommodate the project specifications,” said Doug Alumbaugh, executive manager at Fort Worth Civil Construction LLC. “Communication throughout the design and submittal process was great, and communication continues during any installation challenges.”

