



**CUSTOMIZED RINKER MATERIALS® STORMWATER SYSTEM  
IMPROVES TRAFFIC CONGESTION AND SAFETY IN RIO RANCHO**  
*Navigates Shallow Cover and Sewer Lines in Southern Boulevard Reconstruction*



“Southern Boulevard is at the heart of Rio Rancho,” said Savina Garcia, project manager for consulting engineer Wilson and Co., “It’s a very important corridor.” Understanding the gravity of keeping this aging route in good working condition, the City is reconstructing the heavily trafficked roadway to improve congestion and safety for residents and businesses.

Completed at the end of 2019, the first of three phases in the reconstruction process features a four-lane road with turn lanes and median, bicycle lanes, intersection improvements, signing and striping, a multi-use trail and a sidewalk, traffic signals, lighting, utilities and landscaping. This new stretch of Southern Boulevard between New Mexico State Road 528 and Gold Course Road has the benefit of long-term protection provided by a Rinker Materials® stormwater management system expertly installed in shallow cover and next to an existing sewer system by New Concepts, Inc.

“With flat terrain that limited cover to less than two feet over the storm drain, the best option was precast reinforced concrete boxes that can accommodate high volumes of water under heavy vehicle loads” said Stew Waller, regional engineer for Rinker Materials. “In addition, some existing sanitary sewer locations running lateral to the storm drain weren’t known until excavation during the job. This necessitated very careful compaction of the bedding under the

boxes at these locations to provide proper support for the boxes while not damaging the existing sanitary sewer lateral pipe. The evolving nature of the project as well as its curved design also meant customizing a number of the Rinker® components for the drainage system.”

More than 3,200 feet of 8’x 4’, 7’ x 4’ and 6’ x 4’ precast reinforced concrete box culverts, 13 manhole cutout fittings, 21 tee cutout fittings, three concentric box transition fittings, two elbow fittings, seven short joints, 58 skewed joints and seven invert slab cutout fitting make up the stormwater management system. Fabricating many of the tees, manholes and invert cutout fittings, elbows, joints and concentric box transitions with little lead-time proved to be critical in success of the installation.



Jamie Marrufo, Deputy Public Works Director for City of Rio Rancho offered, “Phase I of the Southern Boulevard project had difficult drainage design issues regarding conveyance of a large volume of storm runoff and very little slope. The project required a lot of wide, short box culverts. Rinker Materials took on the task of providing box culvert cut sheets to meet the requirements of the construction plans and delivered them without issues in the field.”

In fact, New Mexico Department of Transportation specifications required the reinforced concrete box culverts to be sealed by an engineer registered in the state. So, in collaboration with Wilson & Co, the precast system components were designed, sealed and produced by Rinker Materials to not only meet the current structural demands on Southern Boulevard, but also accommodate the needs of projected traffic on the roadway in 2035.

Confirmed Chris Perea, Associate Vice President at Wilson & Co., “Rinker® provided a high level of service by quickly reacting to changing field conditions that required rapid design and fabrication changes to their boxes.”

The \$15-million Phase I project was completed on budget and on schedule. The next two phases will extend from Golf Course Road to Unser Boulevard and then Rainbow Boulevard following the same plan to improve traffic flow and safety on Southern Boulevard. According to Garcia, of the 654 accidents from 2009 to 2011, 20 percent were caused by failure to yield, 24 percent by following too closely and 26 percent by driver inattention. The reconstruction of Southern Boulevard should reduce delays and decrease accidents by limiting the opportunities

for traffic to cross paths. The inclusion of a high-performance, high-capacity stormwater management system that eliminates potentially dangerous deep and standing water makes Southern Boulevard even safer for drivers, residents and businesses moving forward.

