



Route B over Business Loop 70

The Missouri DOT needed to replace the existing bridge on Route B that crosses over Business Loop 170 in Columbia, MO. The goal was to save cost, reduce the construction time, and create as little disruption to the traffic on Business Loop 170 as possible.



Project: Route B/Business Loop 70

Location: Columbia, MO

Product: Series 50 Reinforced Geogrid Wall

ReCon Manufacturer: Precision Precast, LLC

Wall Area: 3,000 SF

Wall Contractor: APAC Construction

Engineer: Missouri DOT

In 2009 the Federal Highway Administration developed a new approach to bridge abutment design and construction. The new concept is referred to as Geosynthetic Reinforced Soil (GRS) Integrated Bridge System (IBS). The design utilizes a segmental retaining wall block as the facing for the bridge abutment, combined with alternating layers of compacted granular fill and fabric sheets of geotextile reinforcement to provide support for the bridge. The Missouri DOT selected the ReCon Block as the wall facing product. The Block was modified to achieve a zero degree batter, meeting the tight footprint requirements of the project.

The wet-cast air-entrained concrete from which ReCon is manufactured would also provide great protection against the adverse effects of freeze thaw and road salts that the wall will be exposed to. The face of the ReCon Wall / bridge abutment is just 5 feet from the curb of Business Loop 170 and thus within the splash zone for snow and road chemicals

The new bridge for State Highway B that runs over the Business Loop of 170 was completed, with demolition beginning on July 12th and State Highway B reopened for traffic on September 5th.

During construction, Business Loop 170 remained open to traffic except for a short period when the bridge beams were set in place.

The bridge abutment structure eliminated the need for deep seated foundations and piers as well as the heavy equipment and added time needed to construct them. The GRS-IBS also provides a smooth transition from the bridge onto the roadway, and alleviates the “bump at the bridge” problem caused by uneven settlement between the bridge and approaching roadway.

For more information on ReCon products and services, please visit www.reconwalls.com, or call 952-922-0027

