Background & Project Challenges

The Connecticut Department of Transportation (ConnDOT) is replacing a major bridge in Branford, Connecticut that carries Interstate 95 over US Route 1. The three-span bridge will be replaced with a new, two-span bridge. The existing pile abutment foundations will be reused for support of the new bridge. The project also involves the demolition of the two existing bridge piers and construction of a new center pier, widening and lowering the existing Route 1 roadway. Soil nail walls are being used to support the existing abutments and provide space for roadway widening.

Geocomp Role & Accomplishments

Geocomp is the geotechnical engineer of record for ConnDOT for the bridge replacement project. The roles performed by Geocomp on this project included:

- Design, coordination and supervision of an extensive subsurface investigation program
- Geotechnical laboratory testing of collected soil and bedrock samples
- Abutment pile axial and lateral loading analyses
- Bearing capacity and settlement calculations for the new center pier foundations
- Preliminary design of the soil nail walls
- Geotechnical recommendations for design and construction of the new center piers, reuse of the abutment foundations, the soil nail walls, and associated earthworks and dewatering
- Provided geotechnical specifications
- Review of contractor’s submittals
- Field oversight of the soil nail wall construction.