

Linden Street Bridge Replacement

Allentown, PA



Project Description: Replacement of the historic Linden Street Bridge over Jordan Creek and the R.J. Corman Railroad required foundation support in challenging subsurface conditions (Karst geology).

GeoStructures provided design consultation and installation of high capacity micropiles bonded into rock for support of the Linden Street Bridge replacement abutments and piers in pinnacled limestone. GeoStructures engineers worked with the General Contractor's Structural Engineer to develop the most cost effective micropile design and testing approach for the project. Pre-production verification testing was used to verify pile load capacity and to optimize the pile design. The design utilized LRFD (Load and Resistance Factor Design) methodology in accordance with PennDOT DM4 requirements. The installation of ninety six (96) micropiles with a design load of 250 kips was completed in the first quarter of 2009.

Owner: County of LeHigh, Allentown, PA

General Contractor: J.D. Eckman, Inc., Atglen, PA

Structural Engineer: McTish Kunkel & Associates, Minersville, PA

Geotechnical Engineer: CMX, Kulpville, PA