Gall Zeidler Consultants
Geotechnics | Tunnel Design | Engineering

Portal Bridge Capacity Enhancement (PBCE)
New Jersey Transit (NJT)

Location: Hudson County, New Jersey

Date: Feb 2020 - Present

Structure: Bridge with new approaches, overpass bridges, retaining walls

Length: 2.5 miles

Geology: Fill, organic deposits, alluvium and glaciolacustrine deposits overlying glacial till

Cost: US $1.6 Billion

Client: AECOM-STV-JV

Owner: New Jersey Transit (NJT)

Figure 1. Retaining wall E with soldier piles and precast concrete panels.

Geotechnical Consulting:

The Portal Bridge Capacity Enhancement (PBCE) project comprises a 2.5-mile section of the Northeast Corridor between Kearny Junction on the west and the Secaucus Junction Station on the east. The existing Portal Bridge, which spans over the Hackensack River and features a moveable swing-span, is currently more than 100 years old and negatively impacts rail operations due to inadequate under clearance that results in more than 200 annual bridge openings to accommodate marine traffic. To satisfy current as well as future rail operational demands, a new bridge over the Hackensack River is to be constructed just north of the existing Portal Bridge, which will also include new east and west approaches to the bridge, and additional track work and structure crossings east and west of the river.

Gall Zeidler Consultants (GZ) is providing geotechnical consultation and support services to the NJT through the AECOM-STV construction management joint venture. Some of the services provided by GZ include review of geotechnical design for the various structures, review of contractor submittals and Value Engineering proposals and performance of independent calculations.

Figure 2. Benches excavated for retaining wall E for subsequent installation of pervious cellular concrete fill.