

Geotechnical Engineering Seminar

Tuesday, September 25, 2018 | 5:00 – 6:00 pm Newmark Lab 2311

Overcoming Grouting Difficulties During Retaining Wall Stabilization**Jared M. Green, P.E.** | Langan Engineering & Environmental Services, Inc.**ABSTRACT**

This presentation will introduce the wall-stabilization design and implementation for a 165-linear-meter masonry and concrete gravity-type retaining wall flanking the west perimeter of a 29,825-square-meter parcel in the Bronx, New York. Discussion includes the results of static and dynamic stability analyses performed for the pre- and post-excavation phases for the proposed 91-meter-wide excavation extending up to 4.3 meters below the toe of the retaining wall. The wall stabilization consisted of over 74 inclined drilled and grouted anchor dowels, and 55 tiebacks drilled and grouted to the underlying mica-schist bedrock. Three overlapping rows of jet grout columns were used as the foundation stabilization for the existing retaining wall. The jet grout wall served three purposes: (1) as underpinning and excavation support for the removal of contaminated site soils, (2) as a permanent hydraulic barrier, and (3) as resistance against a deep-seated failure within the thick clay layer at the site. The originally designed jet grout wall had unexpected negative effects on the existing retaining wall. The jet grouting program was modified while the Observational Method (Peck 1969) was employed to minimize wall movements during installation. The diagnostic methods used to determine the cause of the movement of the retaining wall, the implementation of a remedial ground-improvement program, the modification to the jet grout installation procedure and the ultimate performance of the jet grout wall will be addressed in the presentation.

BIO

Jared, originally from southwest Philadelphia, Pennsylvania, graduated from Syracuse University's College of Engineering in 2001 with a B.S. in Civil Engineering. He later went on to attain his M.S in Civil Engineering (Geotechnical Focus) from the University of Illinois, Urbana-Campaign in 2002. In 2003, he began working in the New York City office of Langan. He has since become a Senior Associate / Vice President and is one of the owners of this international land development engineering consulting firm. After 15 years at Langan, Jared has moved to the Philadelphia Office and is one of the geotechnical practice leaders in that office.

Jared serves on boards and committees within the Deep Foundations Institute; the American Council of Engineering Companies; the American Society of Civil Engineers; the American Institute of Architects; and within pre-collegiate STEM organizations such as the Salvadori Center. Jared was recently named one of ENR New York's Top 20 Engineers Under 40 years old. Jared is very active within his community, and his local church.

Jared currently resides in Flemington, New Jersey with his beautiful and brilliant wife of over thirteen years. They have three energetic and awesome children.

(presentation is open to all, with pizza provided!)