



CEE 595 – Geotechnical Engineering Seminar

Wednesday, February 21, 2018
4:00PM, Newmark Lab 3310

Jet Grouting for Water Cutoff and Excavation Support

*Matt Niermann, P.E.
Schnabel Foundation Company*

Abstract

Jet grouting is a versatile ground treatment method for water cutoff and excavation support applications. The jet grouting method uses small diameter tooling and high velocity fluids to erode soil and mix with cementitious grout, creating soil-cement columns in a variety of shapes and sizes. This presentation will describe the basics of jet grouting and outline the key parameters for its use. Three case histories will be presented to illustrate the versatility of the method for water cutoff and excavation support. The first project used jet grouting to build a partially unreinforced circular shaft and tunnel structure that was tied into an existing brick sewer. The second project used jet grouting to seal full-depth gaps in a cement deep soil mix wall for a cut and cover subway tunnel. The third project used jet grouting to form a seal slab at the bottom of a braced sheetpile excavation in sand beneath the water table.