



St. Louis Ballpark Village Site



Ground Improvement – Installing Vibratory Stone Columns

PROJECT OVERVIEW

We installed top feed Vibratory Stone Columns for ground improvement on the proposed site so that the load requirements for the structure can be met. Vibratory Stone Columns are used to mitigate future settlements and increase the bearing pressure of the soils.

REQUIREMENTS AND CHALLENGES

What's unique about this job is that the subsurface soils vary from soft silts to clays with urban fill depths varying greatly across the site with the deepest urban fills being approximately 20 feet in depth. These urban fills consist of primary clay soils with varying amounts of concrete debris and rubble as the location of this job site was once Busch Stadium 2.

SOLUTION AND RESULTS

Due to the concrete debris in these urban fills, we could not drive the vibratory stone column float through the soils to the required vibratory stone column depth. For this reason, we utilized a drill rig to pre-auger the holes to allow the construction of the vibratory stone columns.

All of the VSCs on this job site were placed in a grid pattern and extended to a minimum of 30 feet to ensure all of the VSC elements extended through all of the urban fills that were present. The foundations were designed for an allowable bearing pressure in excess of 4,000 psf (pounds per square feet). The largest foundations have a total column load in excess of over 700 kips.

Given CNC Foundations' vast experience in geotechnical science, with our Ground Improvement methods, whether your job site has peats, organics, soft soils, or like at this project, urban fills, we are able to still provide cost-effective solutions for our clients and owners.

Project Details

CNC Foundations recently completed a project in Downtown St. Louis at the proposed addition to Ballpark Village. Ballpark Village is a dining and entertainment district adjacent to Busch Stadium 3 where the St. Louis Cardinals play in downtown St. Louis, Missouri, occupying the site of the previous Busch Stadium. This next phase of development includes 700,000 square feet for a 29-story residential tower, a 10-story office building, an 8-story hotel, and a 3-story retail and entertainment building.

