

University of Portland, Franz River Campus

Portland, Oregon

Keller provided a ground improvement solution to mitigate lateral spreading and foundation support for new structures on the 35-acre Franz River campus.



The project

As part of the University of Portland's 2013 Master Plan, several new facilities were constructed on the Franz River Campus, adjacent to the Willamette River. The structures include a track and field complex, boathouse, environmental labs, and a physical plant for campus operations. Because the weak soils were liquefiable and subject to significant lateral spreading during a seismic event, a ground improvement solution was required that met all code requirements.

The challenge

- A single-track Union Pacific Railroad line bisects the property.
- Buried debris from previous site use was encountered, including a concrete pier, old ship parts, and timber piles.

The solution

Working with the geotechnical engineer, Keller designed a ground improvement solution consisting of cutter soil mixing (CSM) and single-axis deep soil mixing. Because the active rail line split the site, Keller set up two batch plants on either side and used multiple rigs to install approximately 1000 soilcrete columns and 164 CSM panels. Nearly 60,000 cubic yards of soils were treated to depths ranging from 30 ft to 110 ft. As obstructions were encountered, Keller closely coordinated with other parties to remove/excavate debris and continue installing columns.

Keller completed the ground improvement program, meeting all code requirements, and prepared the site for the general contractor to perform the project's next phase.

Project facts

Owner(s)

University of Portland

Keller business unit(s)

Keller

Main contractor(s)

Lease Crutcher Lewis
Keller Core Trader Partner to Owner

Engineer(s)

Keller
GRI

Solutions

Ground improvement
Liquefaction mitigation

Markets

Institutional
Education

Techniques

Cutter soil mixing (CSM)
Wet soil mixing

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