

TRAX West Valley Lightrail

Application

Second largest Geofoam project since the I-15 project in 2001. An estimated 2,131,260 cubic feet (70,000 cubic yards) of EPS Geofoam was used as lightweight embankment fill beneath the TRAX West Valley Lightrail line in Salt Lake City, Utah.

Project Details

June 18, 2009, Utah Transit Authority (UTA) began construction on a light rail line to the new West Valley city hub. The entire project was estimated to cost \$250 million and spans 5.1 miles. The West Valley line is anticipated to open in 2011.

639 truckloads of EPS 19, EPS 22 and EPS 39 Geofoam was used in the construction of embankments along the light rail line. Ryan Snow, Project Manager, West Valley TRAX, Stacey & Witbeck/Kiewit Western, explained "TRAX required construction of embankments up to 40 feet high. The problem was caused by the Lake Bonneville deposits in the area. The Salt Lake Basin used to be under Lake Bonneville. That basin left deposits under Lake Bonneville that are subject to settlement. Geotechnical reports stated that in the construction areas, the existing soil conditions could have settled up to five feet and that would have taken up to three years. We didn't have that much time. The existing soil conditions dictated that Geofoam would be the most appropriate fill material."

Geofoam

TRAX West Valley Lightrail

- Salt Lake City, UT
- 2009-2010
- Foam-Control® EPS Geofoam
- 2,131,260 Cubic Feet (70,000 Cubic Yards)

General Contractor

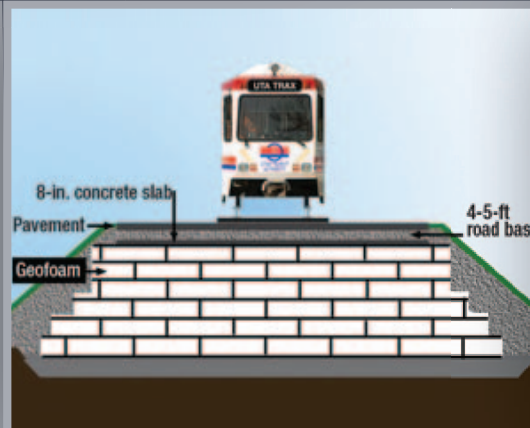
Oracle Construction

Project Manager

Ryan Snow
Stacey & Witbeck/
Kiewit Western

Engineer

Marv Cook
Oracle Group



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Snow estimated that the 6-month long Geofoam installation for TRAX would have taken about 3 years, had traditional fill been used. He stated, "we saved potentially two and a half years. If we had used soil we would have waited for settlement, or maybe filled partially and then waited some more and then finished construction later. There are geotechnical methods to expedite settlements, such as soil stabilization and wick drains, but those would also add costs. In the end, Geofoam proved to be the most economical choice."

ACH Foam Technologies' EPS Geofoam helped both the I-15 and TRAX projects maintain extremely tight construction schedules that would not have allowed enough time for conventional embankment construction. Both projects illustrate the ease and speed with which EPS Geofoam can be used for construction of embankments.

Shear keys were utilized to prevent horizontal movement between layers of Geofoam blocks. Intermittent blocks of ACH Foam Technologies' EPS Geofoam span between two horizontal layers to lock the layers into place. In addition to shear keys, fascia panels were installed with pin connections which allows for 8 inches of vertical movement of the Geofoam blocks and panels.

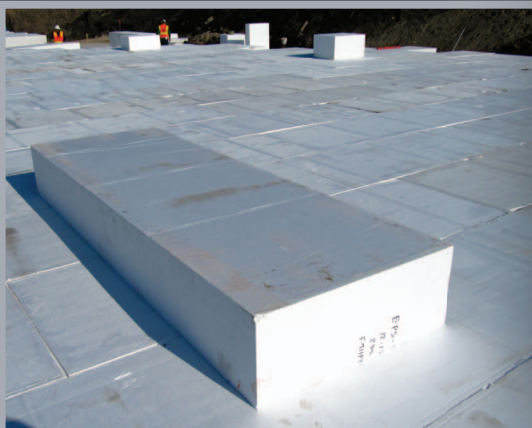
Once installed, the Geofoam was covered by a geotextile fabric or a load distribution slab to protect it from potential chemical spills, such as petroleum, even though the train operates with electricity.

Application

- EPS 19, EPS 22 & EPS 39 Geofoam Embankment Fill
- 7 Sections of Lightweight Fill Along a Lightrail Line

Geofoam Facts

- Extremely lightweight to reduce lateral or bearing loads
- Predictable engineered performance
- Speeds construction time
- Various densities available
- Long-lasting, strong & stable



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