Innovations from Coast to Coast
Light Rail Meets Light Fill on the UTA Airport TRAX Line

Innovation: Geofoam fill
Owner: Utah Transit Authority (UTA)
Partners: Stacy and Witbeck, Inc./Kiewit Western a joint venture and CD Smith
Location: Salt Lake City, Utah
Cost: $208 million (Construction)
Completion Date: April 2013

Stacy and Witbeck, Inc. and Kiewit Western Company (SWK) are partners in building the Utah Transit Authority (UTA) Airport TRAX Line, a six-mile light rail project that will connect downtown Salt Lake City with its international airport. A critical part of the project, the North Temple Viaduct, presented severe settlement risks due to old Lake Bonneville clay deposits, estimated to be over three feet deep. In order to prevent the bridges’ embankments from settling and impacting existing tracks beneath and historic structures nearby, the team elected to go with a geofoam fill, which weighs one to three pounds per cubic foot—100 times lighter than soil. The weight difference meant no earth moving equipment was needed and the material was unaffected by adverse weather conditions, which accelerated construction schedules. SWK officials estimate the use of geofoam, produced by ACH Foam Technologies, will allow the project to be completed two years ahead of schedule. The selection of geofoam was a strategic financial decision. Facing funding challenges, project stakeholders developed a unique team approach they called the Alliance Contracting Method. The UTA, City of Salt Lake, and Stacy Witbeck, worked as a team to identify cost-saving approaches such as geofoam, and then split the savings three ways.