



## Transportation Transit

### Client

Utah Transit Authority

### Location

Salt Lake City, Utah, USA



## University Line Light Rail Transit (LRT) Project

### Project Highlights

- Design-build transit line executed on a fast-track schedule for completion prior to the 2002 Winter Olympics
- Approximately \$4 million in project savings realized through CH2M HILL's value engineering proposals
- Winner of the Best of 2002 Transportation Project Award from Intermountain Contractor magazine

### Project Description

CH2M HILL managed the design for the University Line Light Rail Transit (LRT) design-build project, which connected downtown Salt Lake City and the existing North-South LRT line to the University of Utah's Rice-Eccles Stadium, site of the opening and closing ceremonies for the 2002 Winter Olympics.

CH2M HILL expedited the design package delivery to achieve an aggressive finish date of December 2001 in time for the Olympics opening ceremony. CH2M HILL also provided permitting assistance, agency coordination, and services during construction. Geotechnical engineering services included the design of rail foundation, retaining walls, slope stability, pavement widening, and retaining walls.

The project included 2.5 miles of track, three center-platform and one side-platform LRT stations, two double crossovers, one-half grand union, roadway and intersection reconstruction, and utility relocations. Each station required a complex track alignment to accommodate roadway geometry, maintain positive drainage, provide adequate transit rider comfort, maintain desired train operating speeds, and meet lateral clearance requirements. Train control and traffic signal control systems were also integrated to permit safe flow of traffic movements and clear intersections for train progression.

Expedited early construction was accomplished by providing stakeholder representatives with work space in the project office; holding frequent design coordination meetings with stakeholders, constructors, and designers; and completing "over-the-shoulder" design reviews. This process allowed rapid deployment of utility relocation crews to complete underground work prior to the start of street reconstruction and trackbed construction. Within 2 months of project start, design had progressed to the point where early utility construction commenced, and within 4 months, roadway reconstruction was initiated. On Dec. 15, 2001, UTA's University Light Rail Transit line opened for operation—nearly 2 months ahead of the 2002 Winter Games and nearly 10 months ahead of the contractual substantial completion date.

CH2M HILL design staff supported the public information and outreach program to advise property owners of construction activities well in advance, incorporated their concerns and requirements into design and construction packages, and maintained appropriate traffic capacity during construction



activities. CH2M HILL expedited early construction by involving stakeholders throughout the design process to secure acceptance. A website, a 24-hour telephone hot line, print and radio advertising, newsletters, and signs were all part of the project community outreach effort.

As a result of the consultant team's quality, speed, cost-effectiveness, and concern for businesses and the public, UTA recently gave the team notice to proceed on an extension of the line. This is the first time in history that the Federal Transit Authority has ever authorized any local or regional transit authority to 'change order' a contract of this magnitude without going out for bids. The new section will extend the light rail line 1.6 miles, from the stadium to the University's Health Sciences Center. This segment is the eastern terminus of the future West-East LRT.