

Client:
Minnesota
Department of
Transportation
(MNDOT)

**Project
Construction
Cost:**
\$300 million

Project Duration:
September 2000–
November 2004

Parsons Services:
Member and equity
partner of design-
build team respon-
sible for design of
all civil, bridge,
architectural and
systems elements



Hiawatha Light Rail Transit

Minneapolis, Minnesota
April 2003

A 2002 study from the Texas Transportation Institute indicates that the Twin Cities of Minneapolis and St. Paul have experienced the second highest rate of congestion growth in the nation. Since the mid-1970s, transportation planners have researched several potential routes in the Twin Cities to ease traffic congestion. Early proposals for light-rail systems never left the drawing board.

The Hiawatha corridor was originally proposed to be a multi-lane freeway, but local residents objected to this plan and kept it from moving forward. Finally in the late 1990s, the Minnesota Department of Transportation (MNDOT) began planning the Hiawatha Light Rail Transit (LRT) project, the first rail transit system in the Twin Cities. Upon completion, the 11.6-mile Hiawatha line will take travelers to four of Minnesota's most popular destinations: downtown Minneapolis, the Metrodome, the Minneapolis/St. Paul International Airport and the Mall of America.



Crosstown bridge near Minneapolis-St. Paul International Airport. This concrete box girder bridge required creative design solutions to satisfy airport air-space requirements.

Parsons is an equity partner of the design-build team of Granite Construction Co., McCrossan Inc., and Edward & Kelcey, Inc. responsible for all construction of the Hiawatha Light Rail Line. Our scope of work includes civil and bridge work, track, stations, LRT systems (traction power, signals, communications and operations control center), traffic preemption systems, utility relocations and a maintenance shop.

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Above: Parsons is leading the design joint venture and a partner in the construction joint venture designing and building the 11.6-mile Hiawatha light rail line, which links downtown Minneapolis to the Mall of America in Bloomington, Minnesota.

Parsons' design team has proposed several cost-saving measures on the Hiawatha LRT to the MNDOT. Parsons introduced the concept of concrete box girder bridges, a bridge design seldom used in Minnesota. The concrete box girder design saved time and money allowing the contractor to build the bridge directly without waiting for structural steel deliveries. This design was implemented on the two Hiawatha LRT bridges and saved the client several million dollars.

Parsons' design-build team also implemented a geotechnical approval process that was completed during construction. This plan allowed the contractor to start construction earlier, thus positively impacting the project schedule and budget.



Track construction at Minnehaha Avenue VA Medical Center, South Minneapolis

The design-build process fosters a closer collaboration between the engineers/architects, contractors and suppliers to meet project requirements. Though this project had limited funding available, the design-build approach enabled the owner to select the contractor team that provided the most project scope for the available funding.

Two years after ground was broken in early 2001, the Hiawatha Light Rail project is 69 percent complete. In March 2003, the first vehicle for the Hiawatha Light Rail Line arrived in the Twin Cities. Over 42,000 track feet of rail has been placed in segments along the route, and ground has been broken at 14 of the 17 stations between the Mall of America and the Warehouse District in Minneapolis.

Revenue service from downtown Minneapolis to Fort Snelling is scheduled to begin April 2004, followed by service to the airport and the Mall of America in December 2004.

During a time of national uncertainty with our oil supplies, Hiawatha Light Rail is part of a national trend towards rail construction. It is currently one of 26 active federal grants supporting rail projects around the country.