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## Light Rail Comes to Minnesota

Commuters get set to greet the 12-mile Hiawatha Line.

By Sam Newberg



Fifty years after the last streetcars ceased service in the Twin Cities, light rail is getting ready to begin again in Minneapolis. Originally scheduled to open last month, the 12-mile Hiawatha Light Rail Transit Line has been delayed by a bus drivers' strike that began March 3. The strike interrupted the bus drivers' training to become train operators.

When fully operational — in December if all goes as planned — the line will connect downtown Minneapolis with the Minneapolis-St. Paul International Airport and the Mall of America, the giant shopping center in suburban Bloomington.

Like other light rail systems recently built in the U.S., this one has required considerable preparation and planning to accommodate expected land-use changes along the line — including increased housing densities and new retail opportunities. "Through the planning process," says Mike Larson, a senior planner for the city of Minneapolis, "we are developing an understanding of the issues. We are seeing little changes already, but we are laying the groundwork for future change."

### Nuts and bolts

The January 2001 groundbreaking for the Hiawatha Line was generally greeted with applause, although not by everyone. Various routes and alignments had been batted about for years. In the end, Hiawatha Avenue was chosen because extensive right-of-way had been acquired along the west side of the corridor.

In fact, light rail almost didn't happen in the Twin Cities. APA's executive director, Paul Farmer, AICP, recalls the rampant skepticism about any sort of urban rail line during his tenure as Minneapolis planning director in the 1990s.

"State highway advocates had been advancing their own version as part of a back-door deal to expand a freeway. David Sonnenberg, the city's public works director, and I got the mayor to consider this project instead," he says. Farmer credits the planning commission — and particularly the late Dick Little — with playing an important role in bringing light rail to Minneapolis.

According to Farmer, what's now light rail was originally promoted as a bus rapid transit line, with a possibility of later conversion to rail. When rail advocates saw that it was possible, "it became the fastest conversion of BRT to LRT in history," he says.

From downtown Minneapolis, the line follows Hiawatha Avenue (Minnesota State Highway 55) diagonally across the southeastern portion of the city. It then tunnels under the airport to the eastern part of the suburb of Bloomington, with a station at the Mall of America.

By 2020, according to a forecast by the Minnesota Department of Transportation, the ridership is expected to reach 25,000 a day.

There is an obstacle, however. In much of south Minneapolis, the Hiawatha Line runs just to the west of Hiawatha Avenue, a four-lane divided arterial with a 40-mile-per-hour speed limit. The east side of the street is lined with industrial uses, creating an additional barrier for riders walking to the station from that direction. However, redevelopment of the industrial uses is a long-term potential for the area.

Two tunnels, each 7,400 feet long, will carry trains north and south, with an underground station at the Lindbergh Terminal, the main passenger terminal at the Minneapolis-St. Paul International Airport.

The cars, built by Montreal-based Bombardier, Inc., are 94 feet long, with a capacity of 187 passengers. They are fully ADA compliant and equipped with luggage racks and bicycle storage hangers. Trains will operate at an average of 30 to 35 miles per hour, with a top speed of 55 miles per hour. Rush-hour trains are expected to run at seven-and-a-half-

minute intervals, with 15- to 30-minute service in the early morning and late night.

## Costs



Total construction costs will be approximately \$715 million, with funding to come from a variety of sources. They include the Federal Transit Administration (\$334 million), the state of Minnesota (\$100 million), the Metropolitan Airports Commission (\$87 million), and the Hennepin County Regional Rail Authority (\$84 million).

In addition, the project received a \$50 million federal congestion mitigation and air quality grant, a \$20 million grant from the state transportation department, and a \$40 million transit capital grant from TEA's New Starts program.

To encourage rail ridership, the Metropolitan Council and its subsidiary, Metro Transit, which will operate the light rail system, will reroute and retime some bus routes to connect with the Hiawatha Line. Forty-six bus routes will serve 13 of the 17 rail stations.

The Metropolitan Council and the city of Minneapolis have also proposed (but not yet received funding for) a new downtown bus circulator route; a connection to the University of Minnesota from the Downtown East station; a connection to a tram at the main terminal of the airport; and a link to the largest transit center in the Metro Transit system, located at the Mall of America.

Stations in downtown Minneapolis will serve the Warehouse District (an entertainment area); the high-density office core, the Minneapolis City Hall and the Hennepin County Government Center; and the Metrodome stadium. Outside downtown, the line will serve the West Bank area of the University of Minnesota, a commercial district at Lake Street, and residential areas in southeastern Minneapolis.

Each of the 17 stations was individually designed by different architects to fit into the surrounding neighborhood. The Downtown East station clearly imitates the Stone Arch Bridge, a historic pedestrian bridge spanning the Mississippi River. Other stations, such as 38th Street, echo the architecture of nearby homes.

Several stations will have "kiss-and-ride" lanes for passenger dropoffs, and others, like the Mall of America, with its immense parking ramps, will offer park-and-ride service.

## A complex process

Way back in 1998, when planning started for the Hiawatha Line, city planners set forth five goals for the system: to "preserve the livability of all adjacent neighborhoods through careful planning for land use and station area development"; to "strengthen neighborhoods by reinvestment in housing, multi-use facilities, and renovation projects"; to "attract new employment opportunities throughout the corridor"; to "improve alternate transportation options [including bus service]"; and to "promote the continued growth, accessibility and economic vitality of downtown Minneapolis."

Working with the Metropolitan Council and Hennepin County Commission, the city initiated a planning process for six areas that will be particularly affected by the new line. The plans are being created by neighborhood residents and business groups, aided by consultants hired by the city. They are designed to serve as a guide for changes that will occur after rail service begins and to ensure that each station is a positive influence on the neighborhoods affected.

"What is striking," says Mark Garner, a planner with the city, "is that the more planning that has been done, the more engaged the neighborhood has been." The plans assess land uses within a half-mile of each station. Recommendations range from proposing new pedestrian connections to the stations to identifying specific sites for redevelopment.

The plan for 38th Street is in progress, while the 50th Street plan has not yet received funding. But three station-area plans were approved in 2001, including the combined Franklin-Cedar/Riverside transit-oriented development plan, which was prepared by a consulting team led by the SRF Consulting Group of Minnetonka with considerable community input. This plan grappled with some of the greatest challenges along the Hiawatha Line.

For one thing, both station areas are almost entirely built up. They are also divided by two interstate highways and a major intersection at Franklin Avenue that created a no man's land. "Considerable design effort and community attention was focused on how to recapture that area," says Monique MacKenzie, AICP, a former Minneapolis planner who is now with SRF. The plan calls for realigning the intersection and reducing lanes on Franklin. Little has happened to date, however.

So far, no specific development proposals have emerged for the Franklin Avenue station area, but at Cedar/Riverside, a new restaurant abuts the station.

The plan for the Hiawatha/Lake Street station area, by Calthorpe Associates in Berkeley, California, and the IBI Group of Vancouver, British Columbia, was also approved in 2001. It covers an automobile-oriented retail center that includes a new YWCA, a tired-looking retail mall, and assorted industrial uses.

The plan recommends streetscape improvements to Lake Street ; the establishment of pedestrian connections to the station from the surrounding neighborhoods; and a public plaza adjacent to the station. "We encouraged mixed use in a pedestrian-friendly environment," says Gary Andrishak of the IBI Group.

The aging mall, the Hi-Lake Shopping Center, is a focus of the plan, which recommends relatively high-density development — up to 450 residential units (at a floor-area-ratio of 2.5 to 3.0), with retail uses moved forward to front on Lake Street. No proposals have been submitted to date, Andrishak says, but a recent change in ownership could bode well. The area's long-term potential is significant, and "the LRT station is the key to start," he says.

### **Slow to change**



Forty-Sixth and Hiawatha is another auto-dominated area. The 46th Street station area plan, created by a team led by Farr Associates of Chicago, and adopted by the city council in December 2001, calls for a variety of changes ranging from a town square to mixed-use development in three- and four-story buildings. So far, little has happened in this relatively prosperous area.

In addition to these plans, another document, the Downtown East/North Loop master plan, by the IBI Group and the Hoisington Kogler Group of Minneapolis, was released last June, and has since been adopted. It encompasses all five Hiawatha Line stations in the downtown,

This plan was not commissioned specifically to address light rail service. But since the light rail was under construction and was sure to affect future land use, the plan recommended that development be concentrated near the stations. It also encourages high-quality public spaces and streetscapes and recommends that a new "downtown mixed-use district" be added to the zoning code.

### **TOD potential**

The 38th Street station area master plan should be finished within a few months. Public meetings began last summer with SRF Consulting as the lead planner on the project.

Potential changes include creating active street life along 38th Street, improving landscaping, making walking and biking to the station easier, and maintaining and rehabilitating older buildings. "The plan foresees a compact core of activity around the station site, up to one-quarter mile east and west of the platform," says Monique MacKenzie, leader of the SRF team.

This area also includes an early example of a small transit- oriented development project, this one on the site of a former gas station. Hiawatha Square, which includes 16 residential units with a small amount of retail space, is under construction a block west of the 38th Street station.

The Hiawatha Square project is typical of other small infill projects in the Minneapolis area, but its proximity to the Hiawatha line is an added attraction. It's an encouraging sign that developers understand the attraction of light rail nearby.

A December 1999 market study completed by a consulting team estimated development potential for transit-oriented development in each station area, and recommended four "catalyst stations" for development. They are: Downtown East, Lake Street, 46th Street, and Bloomington Central. (The consultants were ZHA, Inc., of Annapolis, Maryland, and Zimmerman/Volk Associates of Clinton, New Jersey.)

In fact, infill development has been occurring near the proposed Hiawatha Line for years, in part because of renewed interest in the central city. The presence of light rail service connecting the downtown employment and entertainment center, the airport, and the Mall of America makes the idea even more attractive.

### **Bloomington blossoms**

To date, there has been substantial interest in development along the Minneapolis light rail corridor. Numerous housing and mixed-use projects have been proposed, and some are even under construction.

What's surprising is that the most notable project along the Hiawatha Line to date is at the Bloomington Central station. It is notable because, unlike Minneapolis, the city of Bloomington has not undertaken a formal planning process for the area.

The proposal, by McGough Companies of Roseville, calls for a \$600 million, 45-acre pedestrian-oriented town center development, including a 400-room hotel, an indoor water park, 1,000 condominium units, and 1.2 million square feet of retail and office space. The first 250-unit condominium development is proposed to be completed by mid-2005. Great Northern Resorts will be the developer of the hotel component.

The advantage of the Bloomington Central site is that it is essentially a greenfield development, with one existing office tower, some one-story industrial uses, and several acres of surface parking. The project would be completed in phases. A major draw is the site's proximity to the Mall of America, only one mile to the west. The airport and Interstate 494 are also just minutes away.

There has been no station-area planning for Bloomington's Mall of America. In 2003, however, the mall owners agreed to allow Metro Transit to locate the light rail station near the entrance to the mall and next to the existing bus station, the most heavily used in the Twin Cities area. Originally, the station was to be beyond the mall's east parking ramp, requiring riders to cross a major arterial to reach the shops.

### Looking ahead

Clearly, Minneapolis's extensive station-area planning has been useful, but the ongoing cooperation of private and public entities is critical to create transit-oriented development. "Master plans must be well-coordinated to achieve success," says Mark Garner. "When you are talking about intensification of land uses, phasing and implementation need to be discussed at a much higher level of detail. There are lots of pieces that have to be worked out together, but it will become easier as we go forward."

Looking ahead, one thing is certain. Light rail will change land-use and travel patterns along its route. Says Gary Andrishak, "Minneapolis is in for a pleasant surprise with regard to how light rail brings development and fits into the streetscape."

To this end, the collective planning processes of neighborhood groups, the cities of Minneapolis and Bloomington, along with guidance from the Metropolitan Council, have helped to prepare areas along the Hiawatha Line for future changes.

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## Resources

**Images:** Top — Hiawatha Line cars, built by the Canadian firm, Bombardier, are 94 feet long, with capacity of 187 passengers. Middle — Minneapolis's Downtown East/Metrodome Station is intended to evoke the Stone Arch Bridge, a pedestrian bridge across the Mississippi River. Architects for the station and plaza are Hammel Green and Abrahamson, who worked in collaboration with nationally known artist Andrew Leicester. Bottom — The sloped roof, colors, materials, and art images at the 46th Street Station will reflect nearby residential neighborhoods. Architects Meyer Scherer Rockcastle worked with Minneapolis artist Karen Wirth on this project. Artwork for the station was commissioned by the Hiawatha Public Art and Design Committee. Photos by Sam Newberg.

**Online.** For the latest news on the Hiawatha line, check out [www.ci.minneapolis.mn.us/planning](http://www.ci.minneapolis.mn.us/planning) and [www.metrocouncil.org](http://www.metrocouncil.org). For other cities, see [www.lightrail.com](http://www.lightrail.com).

**Northstar.** Minnesota rail advocates are pushing for another project: the Northstar Commuter Rail Corridor. The latest proposals for the controversial project call for a route between downtown Minneapolis and Big Lake, 40 miles northwest. Supporters testified in February before a state legislative committee. "A continued stalemate on this issue will only result in more congestion," said Margaret Donohoe, then acting executive director of the Minnesota Transportation Alliance.

**News.** The Transportation Research Board in Washington, D.C., "intermittently" publishes an online newsletter called *LRT News*. The last issue, which appeared late last year, included several articles on streetcars. The Fall 2001 issue featured an article on "Minnesota's Hiawatha Line: From Streetcar to Light Rail." Find the newsletter at [www4.trb.org/trb/onlinepublis.nsf](http://www4.trb.org/trb/onlinepublis.nsf).

**TRB meeting.** Papers from TRB's 83rd annual meeting, held in Washington in January, are available on CD-ROM. The disk, which includes more than 1,500 papers searchable by title and author, may be purchased for \$55.

**Conference.** Check out Los Angeles's light rail lines at the 10th annual Rail~Volution conference, September 18-22,

2004. Call 1-800-788-7077, or visit [www.railvolution.com](http://www.railvolution.com).

**Read about rail.** *The Returning City: Historic Preservation and Transit in the Age of Civic Revival*, by Dan Costello, is a joint effort of the Federal Transit Administration and the National Trust for Historic Preservation. Case studies provide practical information about transit, development, and historic preservation in communities across the U.S. The book may be downloaded free from [www.nationaltrust.org/issues/transportation/returning\\_city.html](http://www.nationaltrust.org/issues/transportation/returning_city.html).

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