

Transitway Impacts Research Program

A research program developed through collaboration between Twin Cities public agencies and the University of Minnesota

The Twin Cities metropolitan region is building out a system of transitways that includes light-rail transit (LRT), commuter rail, and bus rapid transit (BRT). These investments have the potential to significantly change long-term land-use patterns and travel behavior. They also raise important questions regarding the potential return on investment.

The Transitway Impacts Research Program is designed to provide an objective analysis of data, public perceptions, and complex impacts resulting from these investments. The research is unique in its breadth, scope, and ability to provide real-time analysis of the changes experienced when a region introduces high-quality transit service.

The research program has the following priorities:

- Economic and business impacts
- Housing market impacts
- Land-use impacts
- Land value impacts
- Neighborhood and social issues
- Traffic and parking impacts
- Environment and health issues

There are a number of benefits of this collaborative approach:

- Support of local jurisdictions ensures that research is relevant and responds to local needs.
- Research protocols meeting academic standards will allow for greater comparability between various studies and transitways.
- Communication with the public about the impacts of transitways will be more consistent and credible.
- It provides the ability to demonstrate a new approach to responding to the revised New Starts rating system, which considers mobility improvements, cost-effectiveness, economic development effects, land use that supports public transportation, environmental benefits, and operating efficiencies.
- The research methodology developed could become a national model for inter-jurisdictional collaboration.

The Transitway Impacts Research Program (TIRP) was launched in 2006 by the Hennepin–University Partnership and has grown to include a mix of funding partners and program supporters, including Anoka County, Center for Transportation Studies, Center for Urban and Regional Affairs, Central Corridor Funders Collaborative, City of Bloomington, City of Minneapolis, City of Saint Paul, Dakota County, Federal Transit Administration, Hennepin County, Hennepin–University Partnership, Humphrey School of Public Affairs State and Local Policy Program, Itasca Group, McKnight Foundation, Metropolitan Council, Metro Transit, Minneapolis Chamber of Commerce, Minnesota Department of Transportation, Ramsey County, University Metropolitan Consortium, Saint Paul Chamber of Commerce, and Washington County.



Completed research

- ***The Hiawatha Line: Impacts on Land Use and Residential Housing Value*, Edward Goetz.** Examined how Hiawatha LRT affected residential property values, land use patterns, and housing investments.
- ***Demographic and Behavioral Differences Between Hiawatha Light-Rail and Other Transit Riders*, Jason Cao.** Examined the profile of transit riders in the Twin Cities and the factors that influence mode choice.
- ***How Light-Rail Transit Improves Job Access for Low-Wage Workers*, Yingling Fan.** Examined how Hiawatha LRT affected the number of suitable job opportunities accessible to low-wage workers in 30 minutes or less.
- ***Impacts of the Hiawatha Light-Rail Line on Commercial and Industrial Property Values in Minneapolis*, Jason Cao.** Examined how Hiawatha LRT affected commercial and industrial property values.
- ***Assessing Neighborhood and Social Influences of Transit Corridors*, Yingling Fan.** Examined neighborhood and social influences associated with major transit improvements.
- ***Transportation, Environmental, and Health Impacts of Transitways: A Case Study of the Hiawatha Line*, Jason Cao.** Investigated the impact of Hiawatha LRT on transit use for residents who moved to the corridor before and after its opening, as well as the carryover effect of the LRT and built environment on walking.

Active research

- ***Evaluating Twin Cities Transitways' Performance and their Interaction with Traffic on Neighboring Major Roads*, John Hourdos.** Develops a multi-resolution traffic analysis tool to study the impact of transitways on modal shift.
- ***Exploring Strategies for Promoting Modal Shifts to Transitways*, Jason Cao.** Develops models to identify transit planning strategies and transit-supportive policy that can effectively promote transit ridership and encourage mode shifts.
- ***Transit Station and Stop Design and Travel Time Perceptions*, Yingling Fan.** Surveys transit passengers on perceptions of



wait and transfer time and analyzes data to identify transit stop and station features associated with perceptions of shorter travel times.

Newly funded

- ***Economic Development Impacts of Bus Rapid Transit*, Andrew Guthrie.** Analyzes the economic development impacts of bus rapid transit in relation to the impacts of light-rail transit to create regression models that explain net changes in workforce makeup following transitway implementation.
- ***Specific Strategies for Achieving Transit-Oriented Economic Development: Applying National Lessons to the Twin Cities*, Yingling Fan.** Recommends specific economic development programs, policies, and implementation efforts to maximize the economic benefits of the Twin Cities' regional transit system.
- ***The Effects of Transitways on Auto Ownership and Auto Use: Evidence from the Hiawatha LRT*, Jason Cao.** Quantifies the impact of the Hiawatha light-rail transit line (Blue Line) and neighborhood characteristics on auto ownership and auto use of station area residents.

Researchers

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