

Transit Impacts Research Program: 20 Years of Collaborative Regional Research

Eric M. Lind

UMN Center for Transportation Studies

Ramsey County Board Presentation

19 Aug 2025

About Center for Transportation Studies

CTS cultivates improvements and innovation in transportation through research, engagement, and education



- University-wide center
- ~30 staff
- Education (K-12 to Professional)
- Outreach & events
- **Research coordination**



Transit Impacts Research Program (TIRP)

- Launched 2006 as Transitway Impacts Research Program
- Collaboration between:
 - Ramsey County
 - Washington County
 - Hennepin County
 - Met Council
 - University of Minnesota
 - Minnesota Department of Transportation (MnDOT)





How TIRP Works

Funding & Contracting

- Counties* + Met Council fund
- CTS facilitates (in-kind contribution)
- UMN Researchers investigate

Guidance & Direction

- Program Management Team (each funder + CTS)
- Project Technical Advisory Panels
- 18 – 24 month research projects

TIRP Research Examples



CENTER FOR TRANSPORTATION STUDIES

Transit Impacts Research Program

Research at a Glance

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

The Transit Impacts Research Program studies the contributions of transit to mobility, economic development and job access, equity and opportunity, public well-being and safety, and sustainability. The program aims to provide information to optimize transportation investments, regional connectivity, and system effectiveness.

Project Title	End Date	Principal Investigator
Active Research		
Workers as Co-designers of Workforce Development: Lessons for Transit Workforce Planning		Nichola Lowe
Strategies for Promoting Rider Connections to Suburban Transitways Stations		Jason Cao
Completed Research		
Value of Dedicated Right-of-Way: Transit Service Reliability and User Impacts	2025	Yingling Fan
Transfer Behavior and Off-Peak Commutes	2024	Alireza Khani
The Values of Dedicated Right of Way to Transit Ridership and Carbon Emissions	2024	Jason Cao
Assessing the Effects of Highway Improvements on Adjacent Businesses	2023	Yingling Fan
Transitway Development and Commercial Gentrification	2022	Yingling Fan
Addressing Accessibility and Equity Along Transitways: Toward a Mixed Methods Toolkit	2021	Tom Fisher
Impact of Transitways on Travel on Parallel and Adjacent Roads and Park-and-Ride Facilities	2021	Alireza Khani
Value of Transitways to Regional Economies: National and Twin Cities Perspectives	2019	Yingling Fan
Multimodal Connections with Transitways: Ridership, Access Mode and Route Choice Implications	2019	Yingling Fan
After Study of the Bus Rapid Transit 'A Line' Impacts	2019	Alireza Khani
Those Who Need It Most: Maximizing Transit Accessibility and Removing Barriers to Employment in Racially Concentrated Areas of Poverty	2017	Yingling Fan
Exploring Walking Tolerance of Transitway Users	2017	Jason Cao
Specific Strategies for Achieving Transit-Oriented Economic Development: Applying National Lessons to the Twin Cities	2017	Yingling Fan
Transit Station and Stop Design and Travel Time Perceptions	2016	Yingling Fan
Exploring Strategies for Promoting Modal Shifts to Transitways	2015	Jason Cao
The Effects of Transitways on Auto Ownership and Auto Use: Evidence from the Hiawatha LRT	2015	Jason Cao
Economic Development Impacts of Bus Rapid Transit	2015	Andrew Guthrie

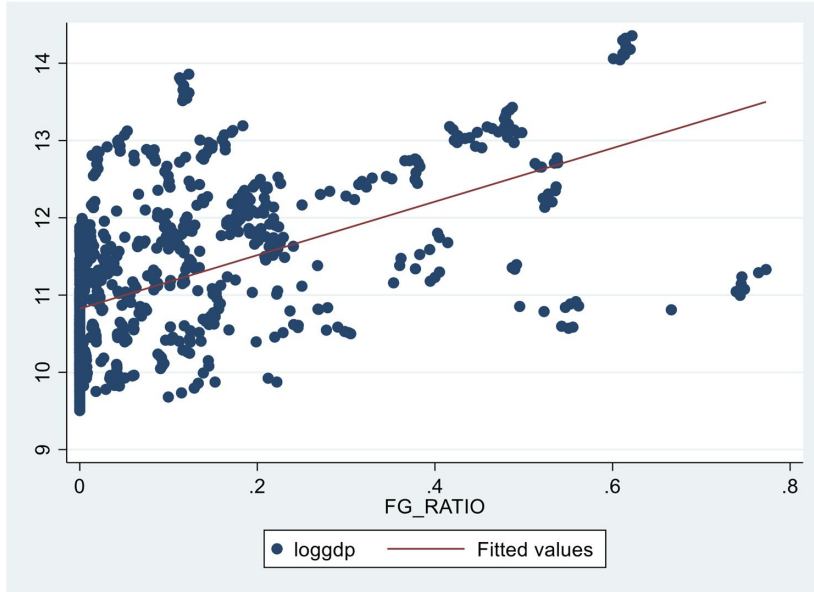


z.umn.edu/TIRP



UNIVERSITY OF MINNESOTA

The Value of Transitways to the Regional Economy



- US: Increased proportion of fixed guideway -> higher GPD per region
- In MSP, current & future transitways support equitable access

Commercial Changes Following Transitway Construction

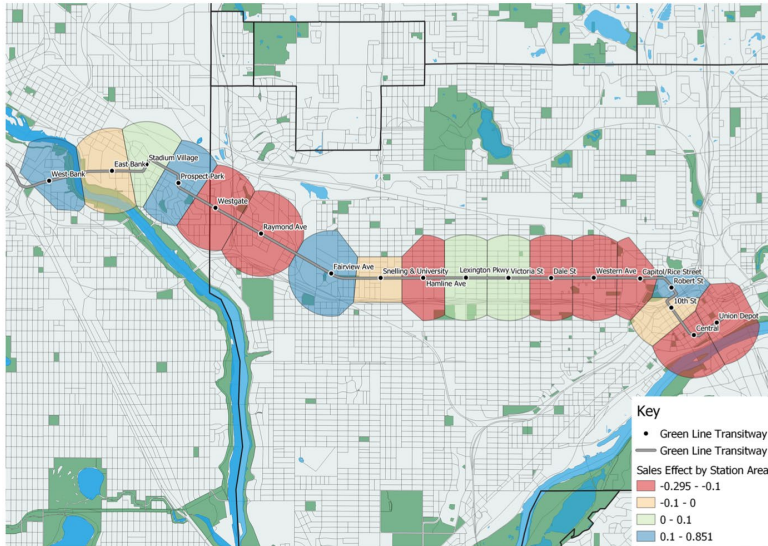


FIGURE 7.1: 2017 Sales Effects of the Green Line on Single Location Firms by Station Area

- Single-location firms most impacted by Green Line construction
- Impacts differ by station area
- Similar MnDOT study on highway construction impacts

Design of Transit Stations Impacts Perception of Wait Time

- Observed and asked:
How long did you wait?
- Shelter, bench, real-time information made wait *seem* shorter to riders
- Applied research: Findings put into practice for A Line, subsequent BRT lines

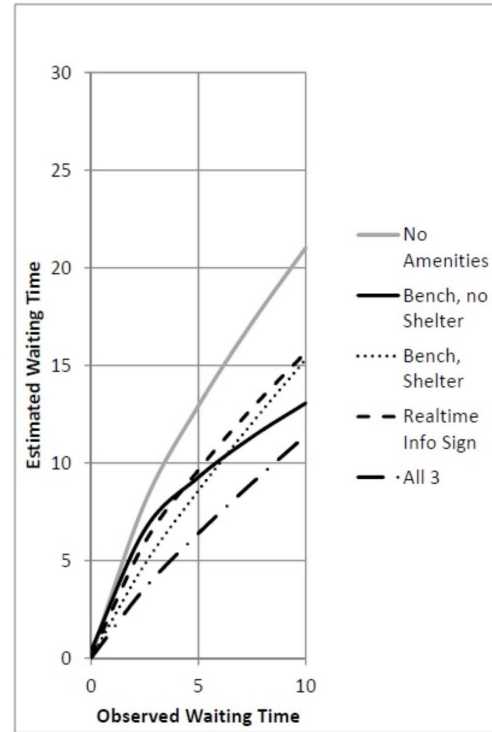


Figure 4-9: Model predictions, stop amenities



- UNIVERSITY OF MINNESOTA

What Happened to Snelling Ave Traffic with the A Line?

- A Line has no impact on typical traffic operations
- A Line has minimal impacts under max traffic (State Fair) operations

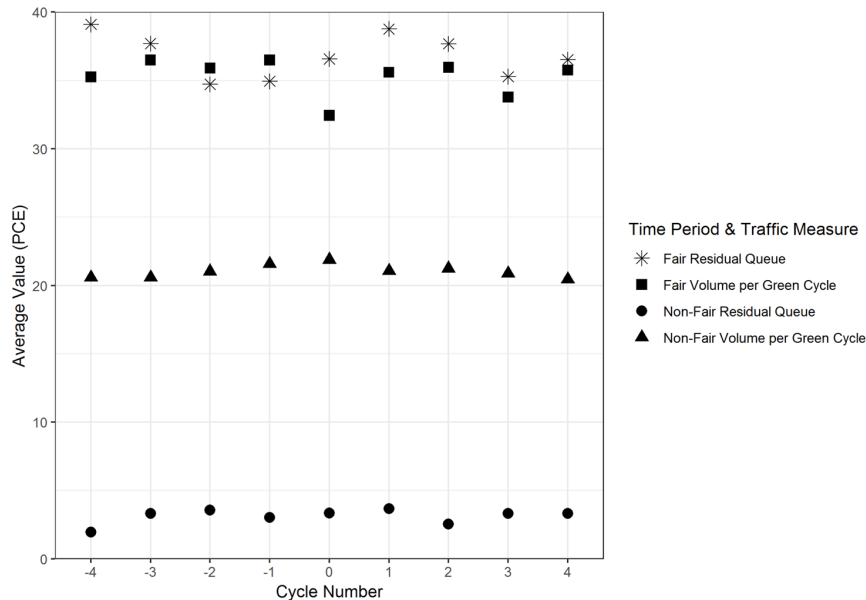


Figure 7: Traffic conditions as a function of cycle number (Snelling and University)



Current TIRP Research Projects

- Suburban connections

- Strategies for Promoting Rider Connections to Suburban Transitway Stations
- Prof. Jason Cao, Humphrey School of Public Affairs
- 2024-2026

- Transit workforce

- Workers as co-designers of Workforce Development: Lessons for Transit Workforce Planning
- Prof. Nichola Lowe, Humphrey School of Public Affairs
- 2025-2027



Up Next for TIRP

- October: TIRP PMT
 - Review ongoing work
 - Discuss and prioritize future research
- 2026: TIRP @ 20
 - To be celebrated as part of CTS 40th Anniversary
 - Research highlights, impacts, people and careers



Thank You!

Questions, Discussion, Research Ideas?