Transitway Impacts Research Program (TIRP) Research Brief

METRO A Line increases transit capacity and ridership without slowing traffic

Why was the study needed?

The METRO A Line, the first arterial bus rapid transit (BRT) line in the Twin Cities transit network, launched service in the summer of 2016. Since then, its ridership has grown rapidly, and the overall response has been positive. However, more information was needed about the operations and impact of the line.

This study answered these key questions:

- What are the effects of the METRO A Line on the corridor's transit capacity?
- What impact does the line's operation have on surrounding traffic?
- How do riders and corridor residents perceive METRO A Line service?
- What factors are most important in affecting rider satisfaction?

Key Findings

- Adding the A Line significantly increased the transit capacity per hour along the Snelling Avenue corridor.
- Ridership on the A Line is higher than previous bus service in the same corridor for almost all stops and hours of the day, particularly during the afternoon.
- The A Line appears to attract additional riders, encourage transfers, and promote transit use for non-work trips.

- When an A Line bus stopped at a station, there was no measurable impact on traffic flow or the number of vehicles stopped at intersections.
- Any impact A Line buses had on surrounding traffic dissipated within the traffic light cycle in which the bus arrived, or one signal later.

- A Line riders were more satisfied with the overall service of the A Line than with local buses. Their satisfaction is equivalent to the higher ratings for Twin Cities' express buses, light rail, and commuter rail.
- Non-users had largely positive perceptions of the A Line, and some believe it has improved the image of the corridor.

- The top three factors influencing overall rider satisfaction with A Line service were easy fare payment, hours of operation, and handling of concerns/complaints.

"The study underscores that investing in transit speed and customer experience attracts more riders. And as we continue to grow the region's network of fast, frequent, and reliable bus transitways, this research provides key feedback on how to use tools in the street design toolbox to keep transit moving."

—Katie Roth, Metro Transit's Manager of Arterial BRT

TIRP Partners and Supporters:

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About the METRO A Line

The METRO A Line is designed to give Twin Cities transit users a fast, reliable, and safe transit option along the high-demand Snelling Avenue corridor. It serves as the blueprint for future BRT implementation in the area. Features include:

- Frequent, all-day service: every 10 minutes at most times of day
- Fewer stops than local bus service
- Unique, recognizable buses with wider doors and aisles
- Curbside stations (rather than bus stops)
- Pre-payment of fares at stations and transit signal priority for faster travel
- Enhanced stations with more amenities
- Added security features

Project Methodology

Researchers calculated transit capacity and bus occupancy using passenger count data for the A Line and for Route 84 (the local bus service on Snelling) before and after the launch.

They analyzed traffic capacity using video cameras at two of the busiest METRO A Line stations to record and measure traffic conditions such as the queue length and the flow rate of surrounding traffic. They did this during both regular and special event (Minnesota State Fair) traffic periods.

To study rider perceptions, they used data from the 2016 Metro Transit Rider Survey. To learn what non-riders think, they conducted a field survey of different stakeholders in the corridor.

Learn More

Final report: *After Study of the Bus Rapid Transit A Line Impacts*, CTS Report 18-24 / MnDOT Report 2018-35, Dec. 2018.

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"The implementation of the METRO A Line had negligible impact on surrounding traffic. It simultaneously improved transit capacity in the corridor. And it improved both users' and non-users' perception of the service and the general transit corridor."

—Alireza Khani, Principal Investigator

The TOP 3

important service attributes to overall RIDER SATISFACTION are **easy fare payment**, **hours of operation**, and **handling of concerns/complaints**.

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