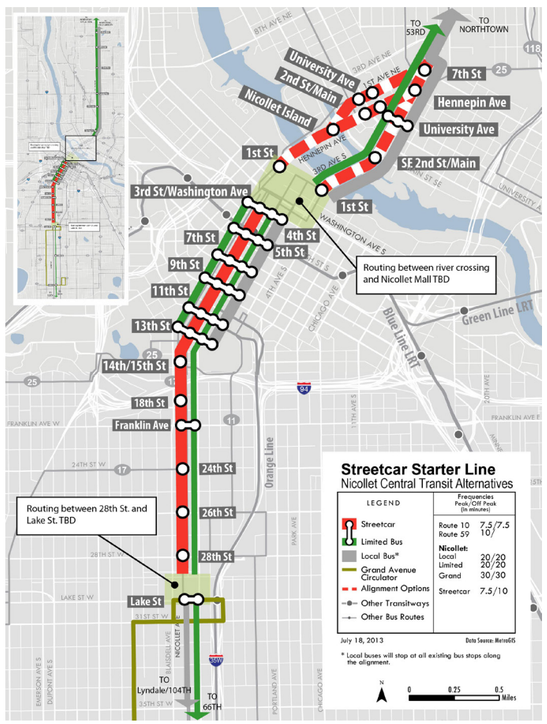
Evaluation of Initial Starter Streetcar Line

An evaluation of an initial starter line for the modern streetcar alternative was completed to identify a "minimal operable segment". Modern streetcar systems are relatively new in the United States and most starter lines have been 1-3 miles in length. To compete for Small Starts funding, the project shuold have a capital cost in 2013 dollars of no more than $200 million. Additionally, it is important that this starter line be able to serve as the downtown hub or spine for future streetcar lines, have strong anchors (both existing and future development density), and have strong east-west transit connections.



Multiple options for a starter line were evaluated based on population and employment served, economic development opportunity, capital cost, and the ability to replace existing bus service. The section between "Lake and 8th Street NE" was identified as the best starter line because it:

- Serves the highest population and employment
- Serves the highest number of people currently living in poverty, the highest number of transit reliant persons, and the legally binding affordable housing units.
- Serves 5 of 9 identified development opportunity sites and has the highest potential development capacity (square feet and dollars).
- Has the highest potential for replacing existing buses.
- The initial streetcar starter line is anticipated to have capital cost of $182 million in Year 2013 Dollars and annual operating cost of $10.6 million in Year 2013 Dollars.
- The intitial streetcar starter line is forecast to have 9,200 boardings in 2030.

Next Steps

Following the public comment period, the next steps in the project development process are:

- Recommendation of Locally Preferred Alternative (LPA) by Project Advisory Committee
- Adoption of LPA by City Council
- Complete environmental review process as outlined in FTA rules
- Amend Regional Transportation Policy Plan to include LPA
- Develop funding plan and secure interagency agreements to allow study to continue in federal project funding process

Let us know your opinions:

Go to www.minneapolismn.gov/nicollet-central to participate in an on-line survey. For additional information or to submit comments, contact Charleen Zimmer, acting project manager at:

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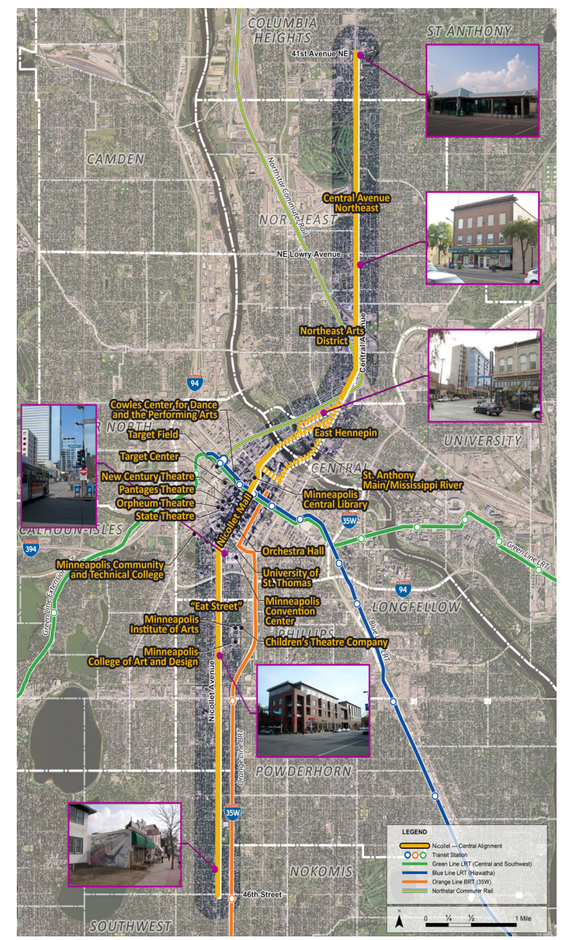
August 2013

Detailed Evaluation of Alternatives

Vol. 3

Characteristics of the Nicollet-Central Transit Corridor

The Nicollet-Central Transit Corridor is a very promising corridor for transit improvements. It is 9.2 miles long and stretches between 46th Street/Nicollet Avenue (I-35W transit station) and 41st/Central Avenues (Columbia Heights transit station).



The Nicollet-Central Transit Corridor is home to 90,000 residents and is expected to see an increase of 25,000 residents between now and 2030. Twenty-five percent of households within one-half mile of the corridor are without cars, and 24 percent of residents live in poverty. There are currently 125,000 jobs within the corridor, and by 2030, there are projected to be 50,000 more.

Alternatives

Following the initial screening of alternatives, three alternatives were selected for detailed evaluation:

No Build – conventional buses operating as they do today along Routes 10, 18 and 59.

Modern Streetcar – modern streetcar vehicles that stop approximately every 1/4 mile (about every two blocks), with off-board fare collection, improved transit stops/shelters, signal adjustments for improved transit speed, and other transit and pedestrian amenities.

Enhanced Bus – hybrid electric articulated buses designed to mimic streetcar service and facilities.

Purpose of Alternatives Study

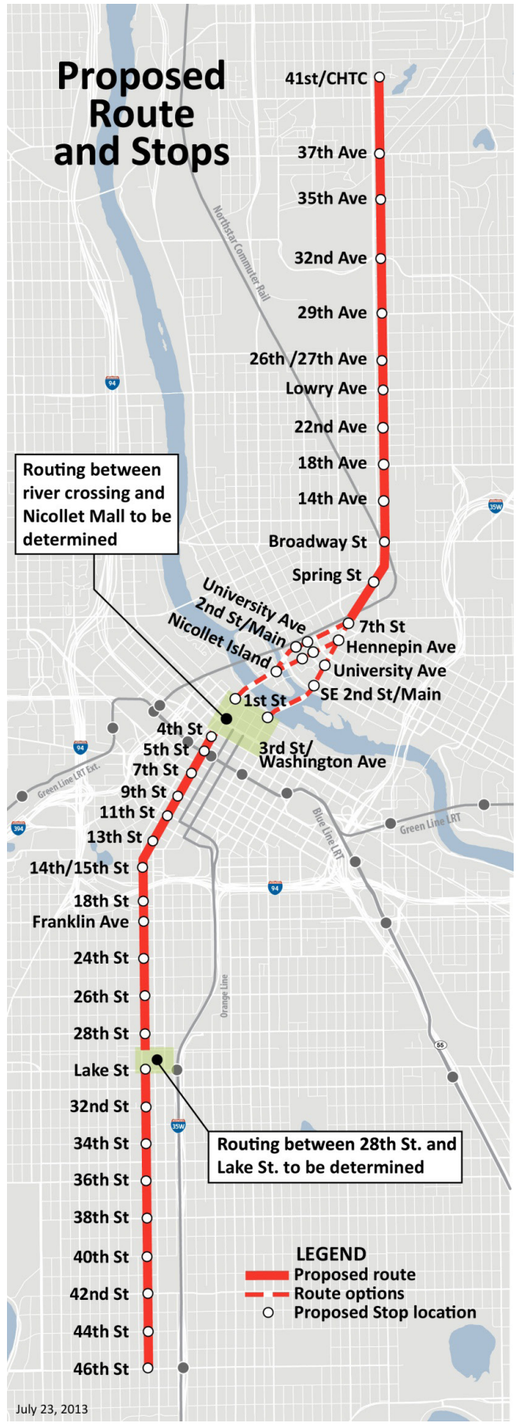
On October 25, 2012, the Policy Advisory Committee (PAC) approved the following statement of purpose for improving transit in the Nicollet-Central Corridor:

"The purpose of the Nicollet-Central Transit Alternatives Project is to improve transit connectivity, enhance the attractiveness of transit service, and catalyze development through an investment in transit infrastructure within the Nicollet-Central Corridor."

Goals and Evaluation Measures

Six goals were identified, along with numerous evaluation measures related to those goals, for the purposes of evaluating how well transit alternatives addressed the above stated purpose of the project. Those goals are:

- ***Connect people and places*** (measured by the number of people, jobs and activity centers served as well as the quality of transit, bicycle and pedestrian connections)
- ***Increase the attractiveness of transit*** (measured by projected transit ridership and potential for future growth in ridership)
- ***Catalyze and support economic development*** (measured by potential development capacity and potential to spur economic development)
- ***Integrate with the existing transportation system*** (measured by impacts on traffic, parking and freight railroads)
- ***Support healthy communities and environmental practices*** (measured by impacts to historic, cultural, and natural resources, benefits to environmental justice communities and transit-reliant population, and environmental benefits)
- ***Develop an implementable project with community support*** (measured by capital costs, operating and maintenance cost, cost-effectiveness, and public/business support)



Evaluation of Modal Alternatives

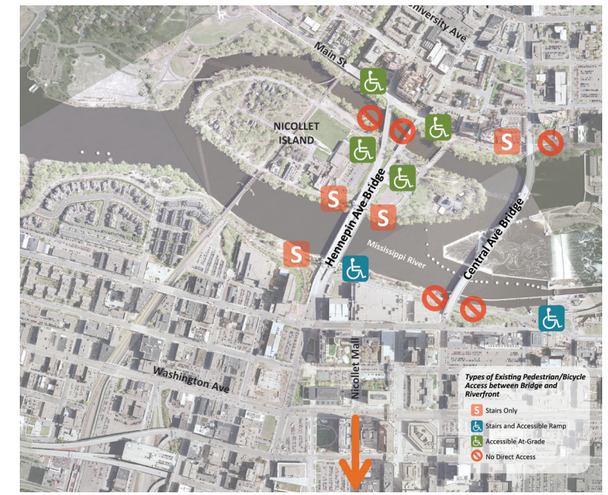
The following are results of the detailed evaluation when comparing streetcar and enhanced bus:

- ***Goal 1*** - Connecting people and places: There is no difference between the alternatives because both serve the same population, employment and activity centers and both provide the same transit, pedestrian and bicycle connections.
- ***Goal 2*** – Increase the attractiveness of transit: Streetcar has higher projected ridership (19,900 boardings per weekday compared to 13,400 boardings on enhanced bus, in 2030).
- ***Goal 3*** – Catalyze and support economic development: Streetcar has greater potential to catalyze development based on a review of peer cities and discussion at a local developer forum.
- ***Goal 4*** – Integrate with existing transportation systems: Both streetcar and enhanced bus operate in the same lanes as general traffic. Enhanced bus and streetcar will stop in traffic and this will have some impact on traffic. However, both will have faster boardings and will have signal timing improvements that will benefit traffic. Both may have a small impact on parking at some stops but may have no impact or a positive impact at others.
- ***Goal 5*** – Support healthy communities and environmental practices: Streetcar is expected to serve a higher number of transit-reliant riders (7,500 weekday riders compared to 4,500 weekday riders for enhanced bus). It is not anticipated that there will be a significant difference in the air pollutant or energy used between the alternatives.
- ***Goal 6*** – Develop an implementable project with community support: Enhanced bus has a lower capital cost ($94 million compared to $393 million for streetcar) and a lower annual operating and maintenance cost ($13.6 million compared to $20.1 million for streetcar). However, the O&M cost per passenger boarding are approximately the same. The degree of public/business support will be assessed following public meetings and a public comment period during August 2013.

Evaluation of River Crossing Alternatives

The Hennepin Avenue Bridge and the Central/Third Avenue Bridge were evaluated as alternative river crossings. The evaluation results are:

- The Hennepin alignment has higher projected transit ridership and faster transit travel times.
- The Central alignment is the current route for Route 10 (Central Avenue service), resulting in increased walk distances for some existing riders if the alignment were shifted to Hennepin.



- The Central/Third Avenue Bridge is listed in the National Register of Historic Places. Due to its age and historic status, it will be more expensive to modify for streetcar.
- There are better existing pedestrian and bicycle connections to the River from Hennepin Avenue and Hennepin Avenue provides a direct connection to Nicollet Island.
- Installing streetcar on Hennepin/First would not preclude future two-way operation on Hennepin/First Ave.
- Installing streetcar and bicycle lanes tracks on this section of Central Avenue (currently sharrows) would require the removal of on-street parking. There is sufficient existing right-of-way on Hennepin and First Avenues to install streetcar tracks without impacting on-street parking or bicycle lanes.