



CITY OF SAINT PAUL

Christopher B. Coleman, Mayor

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TRANSPORTATION COMMITTEE OF THE PLANNING COMMISSION

Monday, November 18, 2013, 4:00 p.m. – 5:30 p.m.

*All meetings are held in the City Hall Annex 13th floor
Conference room at 25 West 4th Street in Saint Paul*

1. Randolph Avenue Reconstruction 2015 – Beth Engum, Ramsey County, 20 minutes
2. Saint Paul Streetcar Feasibility Study – Michelle Beaulieu, PED, 60 minutes

Upcoming Transportation Committee Meetings

- December 9 – Complete Streets
- January – GreenSteps Walkability Survey

Meetings are open to the public. The Chair may allow five minutes for informal public comment (from non-committee members) at the beginning of each agenda as needed. Additional time may be allocated for comments or further discussion at the discretion of the Chair. Meetings will be cancelled if there is not a quorum expected, or if there are no agenda items. For additional information on the Transportation Committee of the Planning Commission, please visit our website at bit.ly/StPaulTC or contact Hilary Holmes at hilary.holmes@ci.stpaul.mn.us or 651-266-6612.

Transportation Committee Staff Report

Committee date: 11/18/13

Project Name	<i>Randolph Avenue Reconstruction</i>
Geographic Scope	<i>Brimhall Street to I-35E</i>
Ward(s)	
District Council(s)	<i>Highland, Macalester-Groveland</i>
Project Description	<i>Roadway reconstruction, drainage improvements, utility improvements</i>
Project Contact	<i>Beth Engum, Project Manager</i>
Contact email/phone	<i>Beth.engum@co.ramsey.mn.us/651.266.7115</i>
Lead Agency/Department	<i>Ramsey County Public Works</i>
Purpose of Project/Plan	<i>Replace deteriorating pavement</i>
Planning References	<i>Included in Ramsey County Public Works 2013-2017 Transportation Improvement Plan (TIP)</i>
Project stage	<i>Preliminary engineering/design</i>
General Timeline	<i>Begin construction March 2015, end construction TBD (likely November 2016)</i>
District Council position (if applicable)	<i>Support</i>
Level of Committee Involvement	<i>Inform</i>
Previous Committee action	<i>None</i>
Level of Public Involvement	<i>1st Public Open House held 11/12/13 to inform and solicit feedback, 2nd Public Open House planned for Summer 2014</i>
Public Hearing	<i>Unknown. One will be required since City plans to assess for roadway and lighting improvements.</i>
Public Hearing Location	<i>Unknown</i>
Primary Funding Source(s)	<i>County State Aid Highway (CSAH) Funds</i>
Cost	<i>Estimated \$6.8 million</i>

Staff recommendation	<i>N/A</i>
Action item requested of the Committee	<i>N/A</i>
Committee recommendation	
Committee vote	

Level of Committee Involvement

<p>INFORM: Informational briefings</p>	<p>Projects that are in implementation phase; projects from other jurisdictions; policy documents from other agencies/jurisdictions</p>
<p>ADVISE AND CONSENT: Informational briefings with policy discussion, general directives to staff for follow-through</p>	<p>Project and program reviews primarily initiated by staff; or involvement with program development by others</p>
<p>INVOLVE: Discussions to develop directions for projects & programs</p>	<p>Policy involvement from inception through design, inc. policy development; environmental documentation,</p>
<p>DEVELOPMENT OF PROJECT/PROGRAM: Discussion to form process; screening of ideas; development of recommendations; and managing outreach to the community</p>	<p>Committee has primary responsibility for concept development, and/or overseeing participation process, and/or making specific recommendations to Planning Commission, Mayor and/or City Council</p>

Randolph Avenue Reconstruction - Brimhall Street to Interstate 35E

Project Purpose:

Overlay in 2002

Pavement in poor condition

Improvements

- Roadway Reconstruction
- Drainage Improvements
- Utility Improvements
- Lantern-Style Lighting

Typical Section shows 5 foot sidewalks, 15 foot boulevard, 9 foot parking lane, 11 foot through lane

- Proposed maintaining existing typical section:
 - minimizes impact to trees
 - maintains parking
 - balances roadway/pedestrian environment
 - requires variance from MnDOT State Aid Office
- Possible exceptions:
 - Minor widening for left-turn lanes at Hamline Avenue
 - Considering widening at Lexington Avenue
- Reconstruct from back-of-sidewalk to back-of-sidewalk
- Intersection improvements include signal upgrades, ADA-compliant pedestrian ramps, some bumpouts

Drainage Improvements:

- Replace curb & gutter
- Replace storm sewer pipes & structures
- Add infiltration features to meet watershed district requirements

Utility Improvements:

Water System (St. Paul Regional Water Services)

- Replace mains crossing on side streets
- Replace fire hydrants
- Replace lead services (some tree removal required)

Private Utilities

- Xcel Electric & Gas
- CenturyLink
- Xfinity

Sanitary Sewer System

- Rebuild top manhole sections and replace castings
- Line main
- Replace problem services within right-of-way at the owner's request and expense (potential for tree impact)

Funding:

- County State Aid Highway (CSAH) Funds
- City Assessments (Roadway & Lighting)
- MnDOT Cooperative Agreement Funding for Pedestrian Improvements at I-35E Ramp Terminals

Process/Schedule:

Request Variance	December 2013
Begin Final Design	January 2014
2 nd Open House	Summer 2014
Begin Construction	Spring 2015

Transportation Committee Staff Report

Committee date: 11-18-2013

Project Name	Saint Paul Streetcar Feasibility Study; Phase 3 Evaluation Results, Starter Network and Starter Line
Geographic Scope	Citywide
Ward(s)	All
District Council(s)	All
Project Description	Phase 3 of the Streetcar Feasibility Study has been completed, and a proposed starter line and starter network has been recommended.
Project Contact	Michelle Beaulieu, City Planner
Contact email/phone	651-266-6620, michelle.beaulieu@ci.stpaul.mn.us
Lead Agency/Department	Planning and Economic Development
Purpose of Project/Plan	To evaluate the feasibility of developing streetcar services in Saint Paul; to identify corridors that best meet the goals identified in the City's Comprehensive Plan; and to prioritize potential initial segments for streetcar service.
Planning References	Comp Plan T 2.1, 2.9, 2.10
Project stage	System Planning
General Timeline	September 2012 – February 2014
District Council position (if applicable)	None at this time.
Level of Committee Involvement	Steering Committee to the Feasibility Study
Previous Committee action	Reviewed and informed: Evaluation Criteria; Phase 1; Phase 2
Level of Public Involvement	Advise and provide feedback
Public Hearing	Yes: date TBD
Public Hearing Location	Planning Commission
Primary Funding Source(s)	Central Corridor Funders Collaborative; McKnight and Saint Paul Foundations; Ramsey County Regional Rail; City of Saint Paul
Cost	\$250,000

Staff recommendation	Provide feedback on study conclusions, and recommend approval (see below).
Action item requested of the Committee	Consistent with the Saint Paul Streetcar Feasibility Study report, recommend approval of: the long-term streetcar network; the starter network as the priority corridors of the long-term network; and the starter streetcar line connecting East and West 7 th Streets from Arcade to Randolph, as the first line for further study.
Committee recommendation	To be filled in at the meeting
Committee vote	To be filled in at the meeting

Level of Committee Involvement

<p>INFORM: Informational briefings</p>	<p><i>Projects that are in implementation phase; projects from other jurisdictions; policy documents from other agencies/jurisdictions</i></p>
<p>ADVISE AND CONSENT: Informational briefings with policy discussion, general directives to staff for follow-through</p>	<p><i>Project and program reviews primarily initiated by staff; or involvement with program development by others</i></p>
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<p>DEVELOPMENT OF PROJECT/PROGRAM: Discussion to form process; screening of ideas; development of recommendations; and managing outreach to the community</p>	<p><i>Committee has primary responsibility for concept development, and/or overseeing participation process, and/or making specific recommendations to Planning Commission, Mayor and/or City Council</i></p>

Introduction

Since late 2012, the City of Saint Paul has been conducting a streetcar feasibility study to:

- Evaluate the feasibility of developing streetcar services in Saint Paul
- Identify a long-term network of proposed lines where streetcar could improve transit options and stimulate development, and where the types of changes that streetcar could bring would be desired by the communities that it would serve.
- Prioritize potential initial segments for streetcar investment.

The study is being conducted in three phases.

- A **Phase 1 Corridor Screening** that screened the universe of candidate *corridors* to where streetcar could provide the benefits described above.
- A **Phase 2 Detailed Evaluation** that consisted of the development of potential streetcar *lines* that could serve the individual corridors or combinations of corridors, and the evaluation of those lines.
- A **Phase 3 Determination of Initial Operating Segments** that determined which of the Phase 2 lines, or portions of those lines, should become Saint Paul's first modern streetcar line. Phase 3 was divided into two parts; Part 1 selected the initial streetcar line and Part 2 refined the line's alignment, given a reasonable fiscal constraint.

This document presents the results of the study through the end of Phase 3, including the presentation of the recommended initial streetcar line, which is described at the end of the document and shown in Figure 12 on the last page.

What Is Streetcar Service?

Put simply, in most respects, streetcar service is scaled-down light rail service. It is scaled back to the extent that it typically operates in mixed traffic rather than in a dedicated right-of-way, operates for shorter distances, and has smaller stations that are spaced more closely together (see Figures 2 and 3).

Beyond those basic differences, streetcar service is flexible in that it can operate in many different ways. One of the most visible differences is with the type of vehicles used. As is planned for Saint Paul, most new streetcar services that are being developed do or will use "modern streetcars" (for example, Portland, Seattle, Minneapolis, and Kansas City) that are very similar to light rail vehicles, but sometimes narrower and that usually operate as single vehicles (see Figure 4). However, many older streetcar services use historic vehicles. This is usually done to maintain the same type of service that has always been run and/or to appeal to tourist markets (for example, New Orleans, Memphis, and San Francisco's F Line). Streetcars can also operate more like light rail service. For example, lines that operate in tunnels as light rail in downtown Boston, Pittsburgh, and San Francisco operate as streetcar service in mixed-traffic outside of downtown. Other differences are summarized in Table 1.

Over the past decade, streetcar service has become increasingly popular. There are now over 45 different lines in various stages of development throughout the United States, including in Minneapolis on Central and Nicollet Avenues. The current desire to develop streetcar service is for two reasons. First, newer shorter lines have proven to be very effective at serving shorter trips within neighborhoods and downtowns and thus add a new type of transit service that can fill gaps in existing bus services. Second, it has also proven to be very effective in stimulating development. Most new streetcar services are being developed to both stimulate development and improve transportation.

Phase 1 Screening

Phase 1 Process

As described above, the long-term network and the recommended initial streetcar line were developed as part of a screening process that began with the development of a long list of potential streetcar corridors that included nearly all major arterial corridors in Saint Paul (see Figure 5).

Those corridors were screened using seven criteria:

- **Grade.** Saint Paul has a number of steep grades that could inhibit streetcar operation, or make streetcar operation too expensive. While modern streetcars can climb grades as much as 9% for short distances (approximately 700-800 feet), sustained grades over 7% are generally discouraged, particularly in climates where snow and ice are regular occurrences. Thus, corridors with grades between 7 and 9% were carried forward to Phase 2 only if they pass all other screening criteria.
- **Street Geometry.** Especially between downtown and the neighborhoods, there are a number of streets in Saint Paul where streetcars may be difficult to operate due to street geometry. This criterion identifies whether street geometry would *inhibit* streetcar operation, or require significant capital investments that make operation infeasible. These include major modifications to interchanges, exclusive right-of-way needs or other types of transit infrastructure that would be required (such as bridges, underpasses, etc.).
- **Other Physical Barriers.** Other physical barriers besides grade and street geometry may inhibit streetcar operations without significant capital expenses and were identified. Examples include low bridges or skyways, streets that are too narrow and at-grade freight railroad crossings. As noted above, some bridges may exhibit steep grades, but were also identified here if these bridges could inhibit streetcar operation.
- **Terminal Location.** As with any transit service, a strong destination—or terminal—helps improve the attractiveness of service. Thus, this criterion evaluated whether there is a reasonable location for a streetcar line to terminate where connections to other transit service can be made, such as a university/college, transit center, Green Line LRT station or other major activity center.
- **Transit Speed and Reliability.** As with any transit service, but especially for a transit investment like streetcar that will operate entirely or largely in mixed flow traffic, it is important to maintain adequate speed and operate reliably. Thus, corridors with substantial traffic congestion, and where exclusive ROW is not possible, may be unable to meet minimum service standards.
- **Other Transit Investments.** There are a number of new or potential additional transit investments that are currently being considered in Saint Paul. Additionally, some projects may already be under construction or in design, which could conflict with a potential streetcar alignment. This criterion determined the degree to which streetcar service could compliment those other efforts, duplicate them, or potentially replace them, without unfairly penalizing corridors that have not been studied or considered for transit investment.
- **Transit Supportive Land Use.** As a major transit investment, it is important to ensure that any new streetcar investment serve areas that are as “transit supportive” as possible. Transit supportive land uses are generally medium or high intensity development, but could also be a major activity center such as a college or university. This criterion evaluated planned land use types (by square footage or units per acre) within ½-mile of each potential streetcar corridor.

The first three criteria—Grade, Street Geometry, and Physical Barriers—were used to ensure that there were no fatal flaws that would preclude the development of streetcar service or make it prohibitively expensive. The second four criteria—Terminal Location, Transit Speed and Reliability, Other Transit

Investments, and Transit-Supportive Land Use—were as an initial screening of how well streetcar service would likely perform.

For each criterion, the screening was designed to evaluate corridors using both qualitative and quantitative data, as well as comparing and contrasting the corridors against each other. Based on the result, for each criterion, a rating of Best, Good, and Fair was assigned. The ratings reflected relative, rather than absolute, scores.

Phase 1 Results

It was determined that none of the corridors would have construction-related fatal flaws, and thus the Phase 1 recommendations were based on the four effectiveness criteria, and all corridors that received at least three best or good rankings were brought forward into Phase 2 (see Table 2 and Figure 6). On this basis, 16 of 28 corridors were brought forward into Phase 2.

These corridors were:

- Cleveland
- Cretin
- Grand
- East 7th
- Ford Parkway
- Ford Spur Lexington
- Marshall
- Payne
- Randolph
- Raymond
- Rice Robert
- Selby
- Snelling
- Wabasha
- West 7th

In addition, after the Phase 1 screening had been completed, Canadian Pacific (CP) indicated to the city that they could be interested in selling their spur line that runs between West 7th Street and Shepard Road, and this spur could logically connect to the Ford Spur. Rather than go back and conduct the Phase 1 screening on this option, the study team agreed to bring the CP Spur and the Ford Spur forward to Phase 2 for more detailed evaluation.

4. Phase 2 Detailed Evaluation

Phase 2 Process

Once the Phase 2 corridors had been determined, the next step was to determine how streetcar service could logically operate in the corridors. In this respect, important considerations were service within the corridor, logical terminal points, and connections to downtown Saint Paul, other transit services (particularly the Green Line), and major activity centers.

Once the 19 lines were developed, they were evaluated, and the proposed long-term network developed as part of a three-step process:

1. First, each line was evaluated based on the **three primary criteria**, which were potential demand, land use, and development potential. These three criteria were considered to be the most important for the following reasons:
 - a. **Potential Demand:** First and foremost, streetcar lines provide transportation, and to be successful, they must be implemented in areas where there is sufficient demand for the type of service that they provide.
 - b. **Land Use:** Streetcar lines are most successful when they operate in areas where there is activity throughout the day and night, which are areas with mixed-use development. In areas dominated by a single land use type (for example, residential or industrial), most activity occurs during commute hours, with much less activity during the midday and at night.
 - c. **Development Potential:** A second major benefit of streetcar service is that it can stimulate economic development, and this is an explicit goal for streetcar service in Saint Paul. Areas that would provide the greatest potential are those where there is local demand for development, potential for mixed-use development, and a significant amount of undeveloped or underdeveloped land that could be redeveloped to higher value transit-oriented uses.

For these reasons, the first step in the development of the long-term network was to screen for consistency with the above three criteria, and lines that did not meet all three were eliminated.

2. Next, for the lines that met all three primary criteria, each was further examined to determine whether all three conditions would be met along the entire line. In cases where they would not, the lines were shortened to the lengths that would meet all three.
3. After the lines were screened based on the primary criteria, they were further screened using supplemental criteria. This was done for two reasons:
 - a. To determine whether there were issues that could preclude the development of a specific line.
 - b. In cases where two lines would serve a similar area (Robert and Wabasha, and Payne and Maryland + Arcade) to determine which of the two would be more desirable.

In many respects, this was a process of elimination—the elimination of lines that did not meet the primary criteria, and the elimination of lines that would largely duplicate others. The remaining lines then became the recommended long-term network described at the end of this section.

Phase 2 Evaluation Results

As described above, the lines, or segments of lines, included in the long-term network are those that ranked well (Best or Good) in terms of potential demand, land use, and development potential (see Table 3). These lines and segments would be:

- Arcade + Maryland
- East 7th
- Grand + Cleveland
- Grand + Cretin Payne
- Rice
- Robert
- Selby + Marshall Selby + Snelling
- Wabasha
- West 7th

- West 7th + Ford Spur

These lines were then further screened using the two supplemental criteria. The first criterion determined whether there were issues that could preclude the development of a specific line. While there would be some issues with all of the potential lines, none would be seen as sufficiently significant to preclude a line from further consideration. The second selected the most desirable line(s) of lines serving a similar area:

1. **Arcade + Maryland, Payne, and East 7th Street.** These three lines serve a similar area east of downtown Saint Paul. Of these three, Payne and East 7th Street were selected as the most desirable for a number of reasons, including greater community support, greater potential demand, maximized coverage and minimized service duplication.
2. **Robert and Wabasha.** Both lines serve a similar area south of downtown Saint Paul. Robert was selected due to greater ridership and development potential, and greater community support

The Long-Term Network

The recommended long-term network consists of seven lines (see Figure 8). This represents a long-term vision of streetcar service throughout Saint Paul. As previously demonstrated, all of these lines would generate significant ridership and have the potential to spur significant development. With names revised to reflect proposed origins and destinations, the lines would be as follows:

<u>Line</u>	<u>Origin-Destination</u>
East 7th	Hazelwood Street - Downtown
Grand	University /Cretin - Downtown
Payne	Maryland Avenue - Downtown
Rice	City Line/Larpenteur Avenue - Downtown
Robert	George Street - Downtown
Selby/Snelling	Hamline University - Downtown
West 7th	Victoria Park - Downtown

Most of these lines would be subsets of the Phase 2 lines, and would represent the segments that would provide the strongest potential for streetcar service. Exceptions are Payne and Rice, which would be the same as the Phase 2 lines, and Selby/Snelling, which would be extended to Hamline University.