

The Seattle Department of Transportation

Madison Street Corridor Bus Rapid Transit Study Preference Survey Summary Report

June 2015



 **SDOT**
Seattle Department of Transportation


**NELSON
NYGAARD**

in association with:

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1 INTRODUCTION AND METHODOLOGY

Between May 3 and June 1, 2015, SDOT conducted an online preference survey for the Madison Corridor BRT Study. This report summarizes findings.

The purpose of the survey was to better understand the community's preferences for transit service along Madison Street, and what features and characteristics the public would like to see included in the locally preferred alternative for the project now in development. Question topics included BRT features and amenities, major project design decision points including downtown alignment options, station locations, terminus options, and preferred transit lane configuration, impacts on traffic and preferred bike facility configurations. The survey was completed by 414 respondents.

Respondent Demographics

A comparison of the ages of the survey respondents to the age of people living near the planned BRT line¹ is presented in Figure 1. The survey respondent sample is generally consistent with the actual age distribution for those living along the corridor, though people between the ages of 25 and 44 were over-represented by 15 percentage points. According to American Community Survey data from 2013, residents in this age cohort are the largest group in the study area, at 43%. They were also well-represented in the survey, at 58%. Residents aged 65 and over, and between 18 and 24 were under-represented by 3 and 5 percentage points, respectively.

Figure 1 Age, Survey Sample vs. Population

	Under 18	18-24	25-44	45-64	65 and over
Survey Sample	0.7%	9%	58%	24.5%	7.7%
Population ^(a)	9%	14%	43%	23%	11%

Data source: (a) 2013 ACS 5-Year Estimates, Table B01001

Geographically, survey respondents live close to the study area (see Figure 2). More than half of respondents (55%) live within 10 blocks of Madison Street, with another 37% living within Seattle. Few respondents to the survey (8.7%) live outside Seattle.

¹ For the purpose of this analysis, the population living near the planned alignment are all residents of 2013 ACS Block Groups that intersect a 3/8 mile buffer of Madison St between Western Avenue and MLK Jr. Way.

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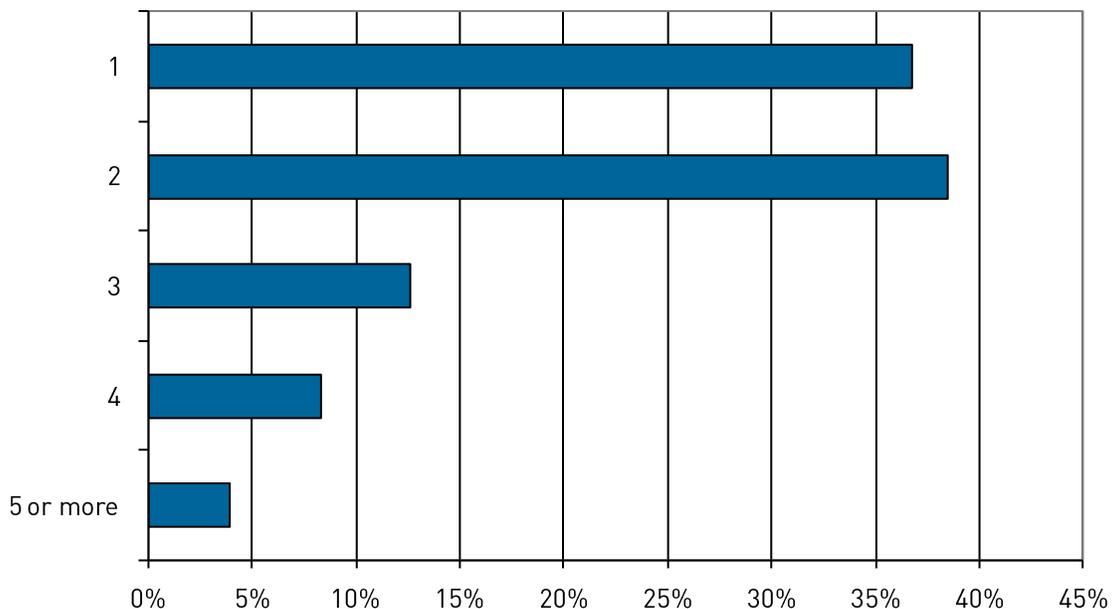
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Figure 2 Home locations of respondents

Home location	Number	Percentage
Within 10 blocks of Madison Street	225	54.6%
In Seattle, but more than 10 blocks of Madison Street	151	36.7%
Outside Seattle, but in Puget Sound area	31	7.5%
Outside Puget Sound area	5	1.2%

Most respondents (75%) live in households of one or two people (Figure 3).

Figure 3 Household Size



Respondent Travel Behavior

The respondents to the survey are frequent users of transit and many own one or no car.

- Approximately one quarter (27%) of the respondents do not own a car, and 46% own one car (Figure 4).
- Seventy-one percent of respondents use public transit 2-4 times a week or more often, while only 25% ride once a week or less often. Only 4% do not use transit (Figure 5).

Figure 4 Vehicle ownership

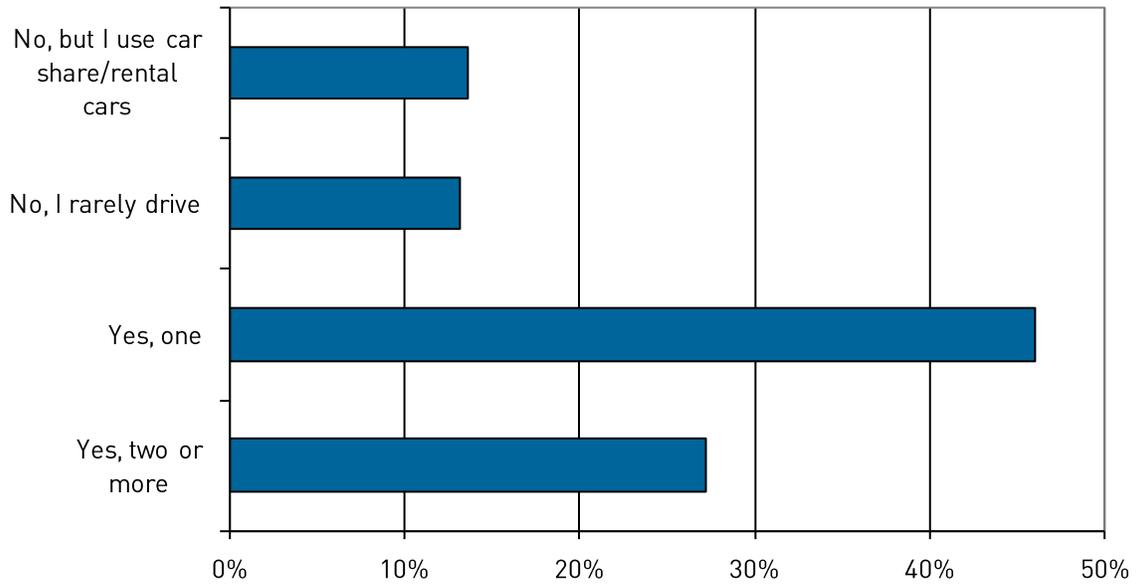
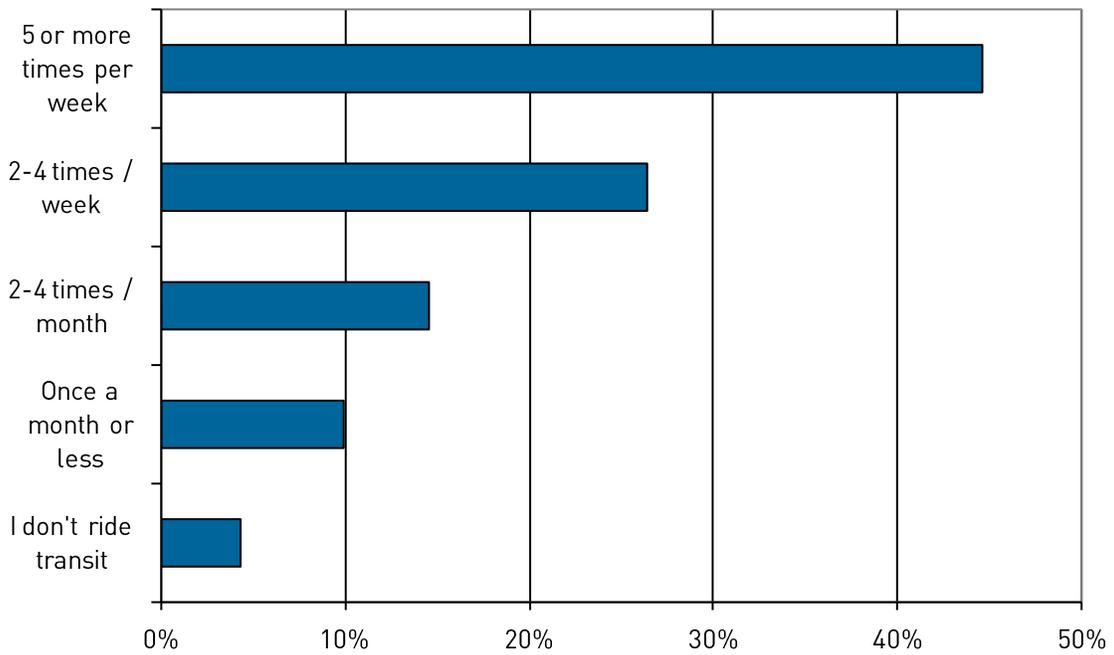


Figure 5 Frequency of transit use



2 KEY FINDINGS

Overall, the respondents use transit often and live close to the proposed BRT corridor. Key findings from the survey include:

- **Preference for real-time data and near level boarding.** The top two BRT amenities supported by respondents are real-time arrival information/better signage, and platforms with near level boarding.
- **Preference for a Spring eastbound pathway downtown.** Sixty percent of respondents preferred an alignment along Spring Street, while only 23% preferred Marion Street as the downtown alignment. This preference was also demonstrated in respondents' preference for the downtown terminus stop, with 61% selecting a terminus along Spring Street, and 22% selecting a terminus stop along Marion Street. Of the individual stops, 25% preferred Spring/1st Ave, followed by 21% for Spring/Alaskan Way. Eighteen percent of respondents had no opinion.
- **Preference for a station in the vicinity of 6th Avenue over one near 8th Avenue.** Forty-five percent of respondents selected a station location on the downtown side of I-5 over a station on the First Hill side, which was favored by 36%.
- **Preference for Martin Luther King Jr. Way as eastern terminus.** There is strong support for an eastern terminus at Martin Luther King Jr. Way, with 76% of all respondents in support. Only 15% indicated support for a terminus at 23rd Avenue.
- **Preference for center-running transit-only lanes.** Between 8th and 20th Avenues, a configuration with transit lanes in the center of the street was favored by 68% of respondents, while a side-running configuration was favored by 24%.
- **Support for improved transit speed/reliability with slight reduction in vehicle travel time.** A plurality of respondents (86%) support establishing dedicated transit lanes to improve transit travel times and reliability, with the tradeoff of slight reductions in vehicle travel time. Only 10% did not support this change.
- **Preference for a two-way protected bike lane on Union.** Respondents expressed a slight preference for this option over one-way lanes.

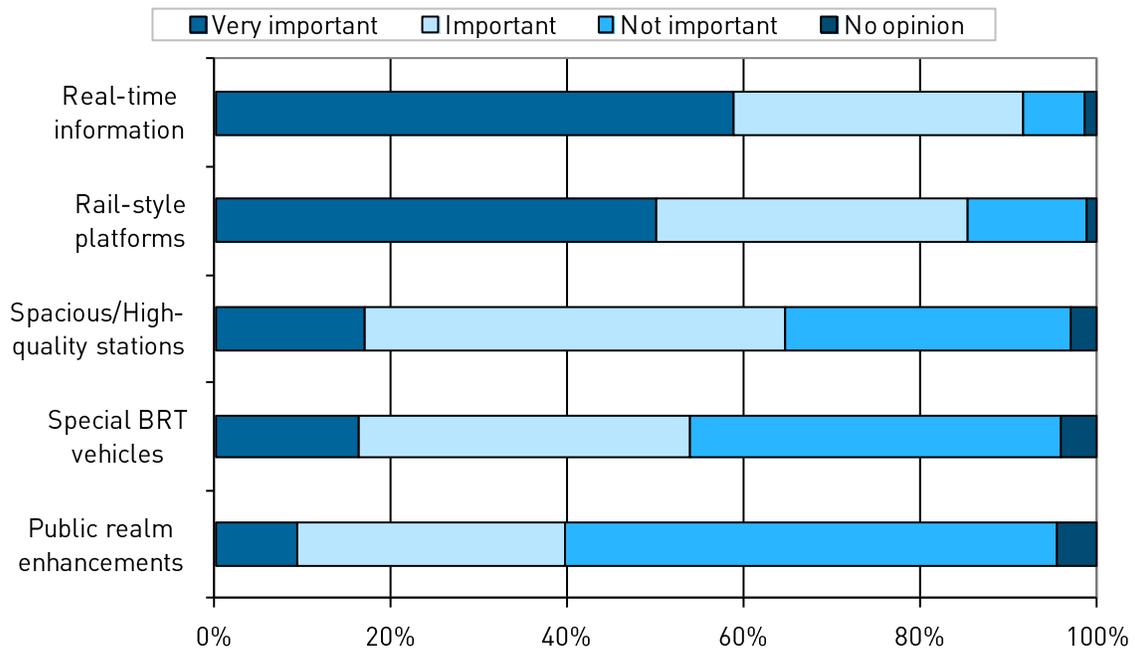
BRT Amenities

Survey respondents were asked to rate the level of importance for various transit amenities. The two amenities ranked with the most importance are real-time information and transit signage, and rail-style platforms with near level boarding

(Figure 6). Real-time information was rated as very important or important by 92% of respondents. Rail-style platforms were rated as very important or important by 86% of respondents.

Both specialized BRT vehicles and public realm enhancements scored with the lowest level of importance. These priorities imply that respondents care more about the service provided along the corridor and less about the appearance or branding of the line.

Figure 6 Amenity preferences



Between respondents who use transit often (two or more times per week) and those that use transit infrequently (once a week or less often), there was little difference in amenity preferences (Figure 7 and Figure 8). Real-time information was the most important, followed by rail-style platforms, spacious station, specialized BRT vehicles and public realm enhancements.

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Figure 7 Amenities; Frequent transit users

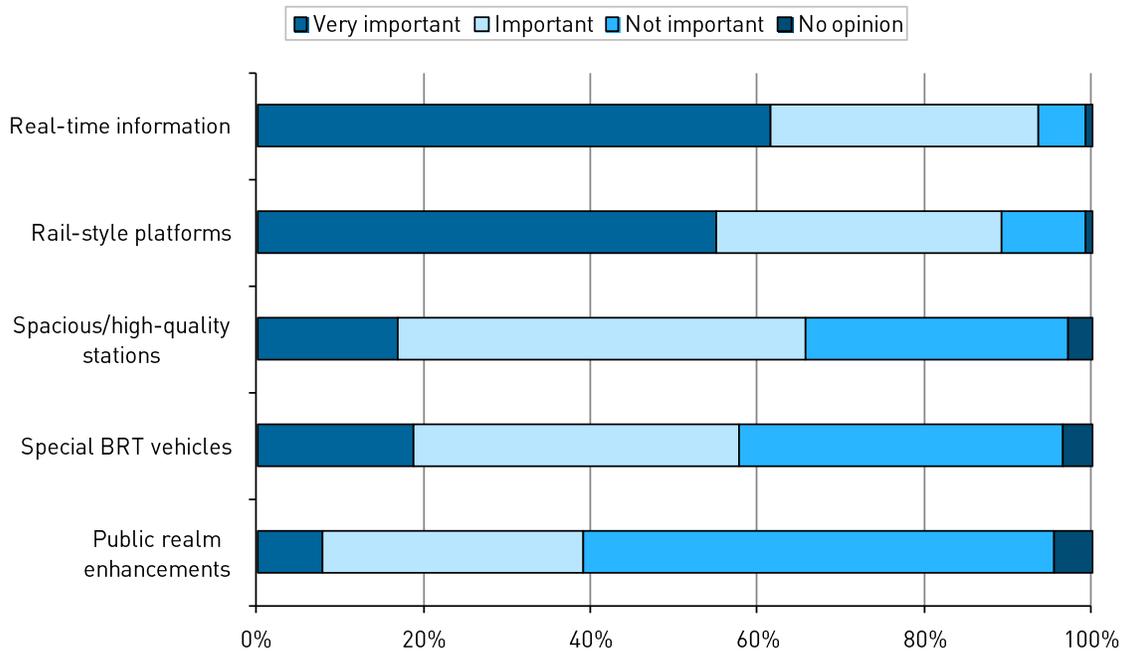
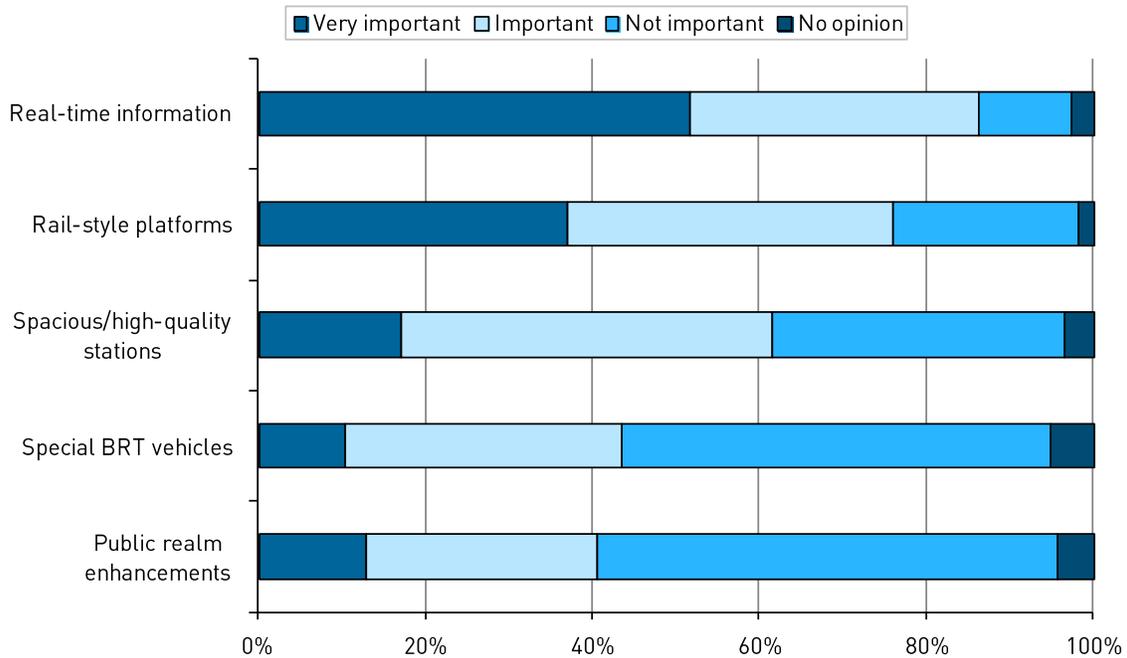


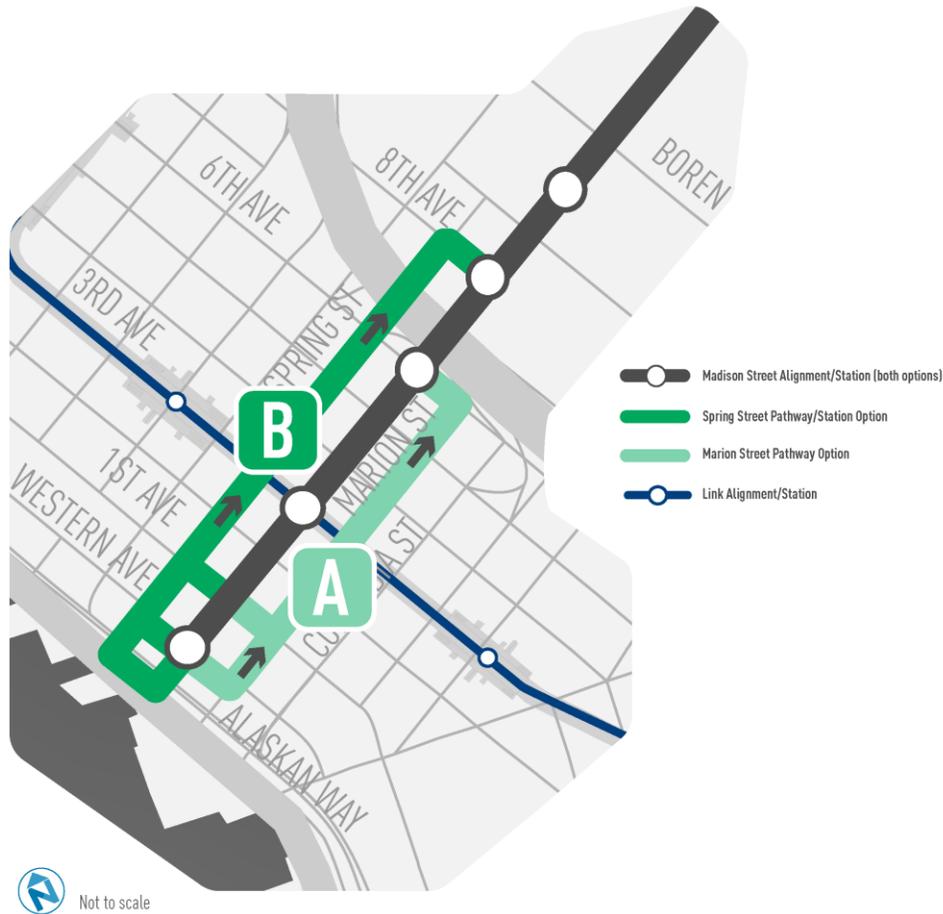
Figure 8 Amenities; Infrequent transit users



Stations, Terminus and Routing

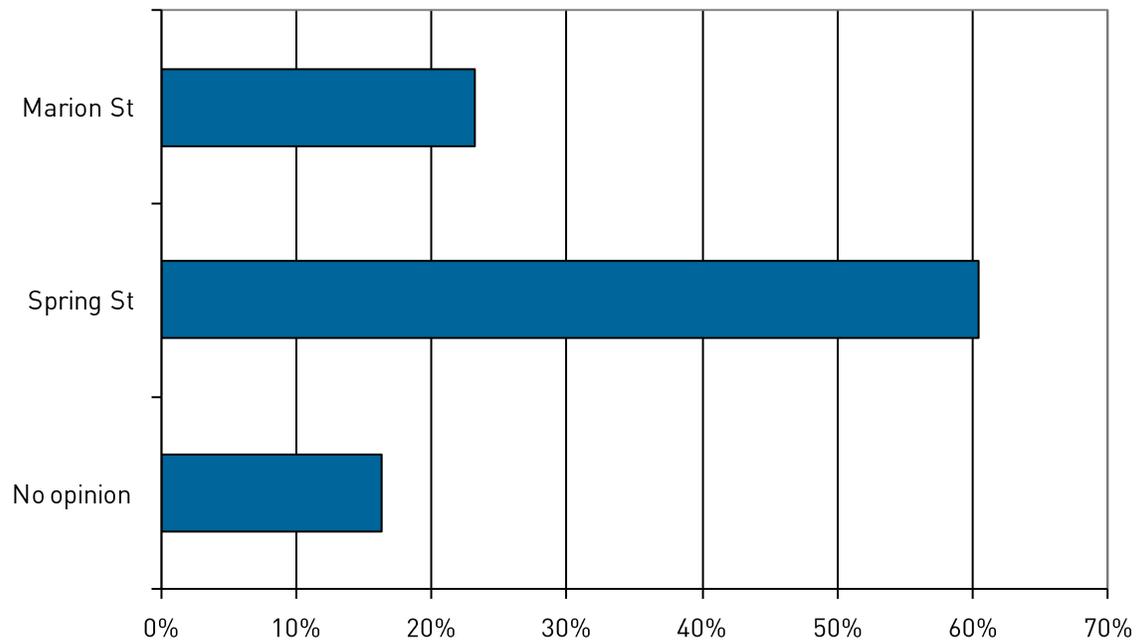
Survey respondents were also asked to select their preferred alternatives for station locations, downtown routing options and terminus locations. Between the two downtown alignments of Marion St or Spring St (Figure 9), most respondents (60%) preferred Spring Street (Figure 10).

Figure 9 Western alignment options



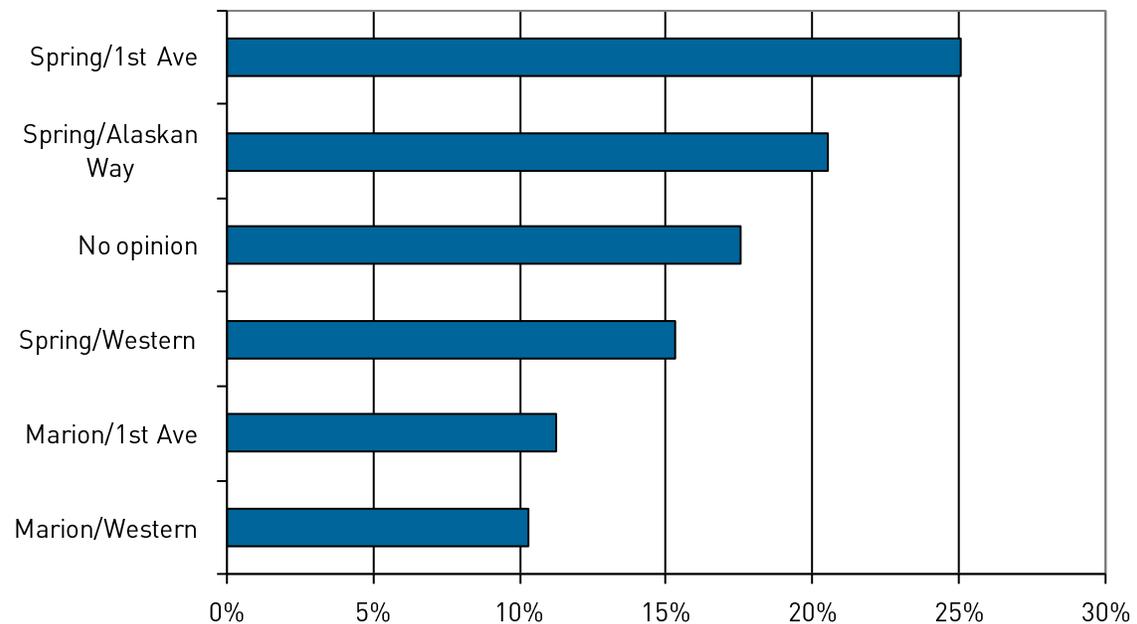
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Figure 10 Preferred Western Alignment



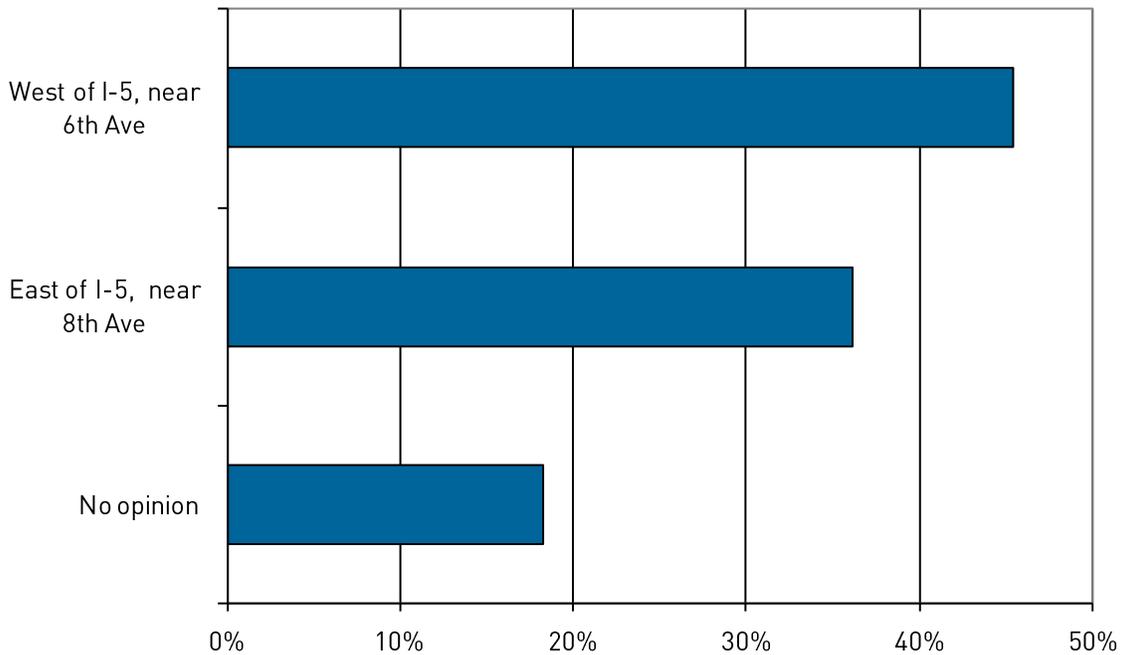
Of the five downtown terminus options (Figure 11), there was a preference for Spring/1st Ave (25%) and Spring/Alaskan Way (21%). A large share of the respondents (18%) had no opinion of the downtown terminus. Terminus locations at Marion/1st and Marion/Western were least preferred, with 11% and 10%, respectively).

Figure 11 Downtown Terminus



When asked to select the location of a station close to I-5 (Figure 12), 45% of respondents chose a station west of I-5 on the downtown side near 6th Avenue, followed by 36% with a preference for a location in the First Hill area east of I-5 near 8th Avenue. A little less than one-fifth of respondents (18%) had no opinion on the station location.

Figure 12 I-5 Station Location



The survey also requested respondents' opinion on an eastern terminus (Figure 13). Three-quarters of respondents selected Martin Luther King Jr. Way (Figure 14).

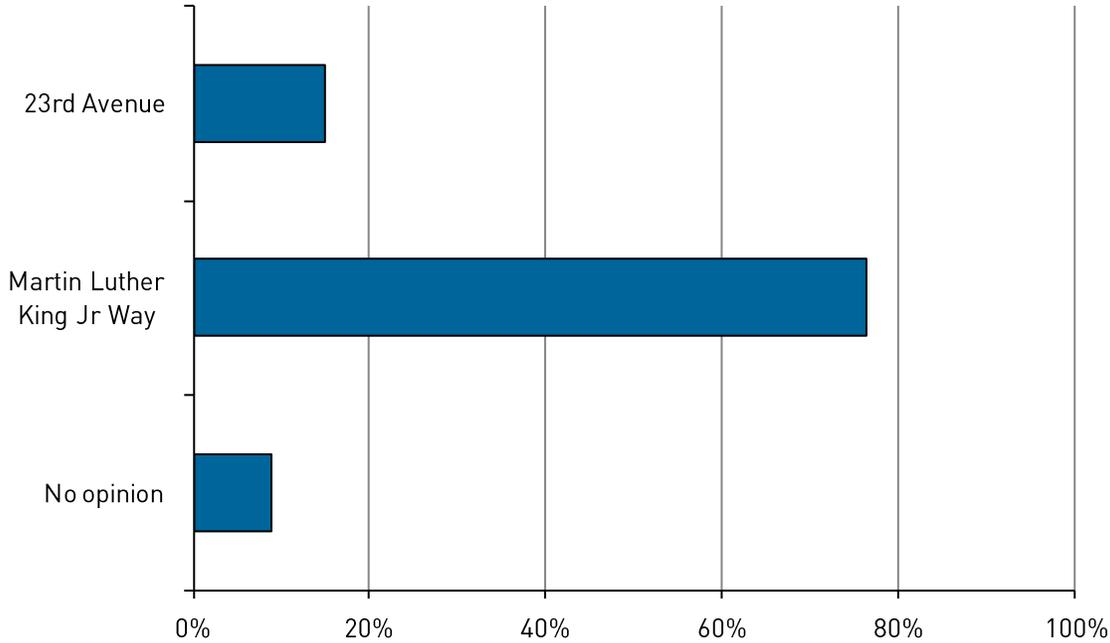
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Figure 13 Eastern alignment options



Figure 14 Preferred Eastern Alignment



Operational Characteristics

The survey also asked for input relating to operational characteristics of the Madison BRT, including the placement of dedicated transit lanes between 8th and 20th Avenues, and how to balance transit and vehicular travel time along the corridor.

The survey indicated a strong preference for center-running transit-lanes (Figure 15), with support by almost 68% of respondents. Respondents also showed a strong support (86% of respondents) to improve transit speed and reliability (Figure 16), despite the slight increase in vehicular travel time that would occur in most scenarios.

Figure 15 Transit Lane Placement

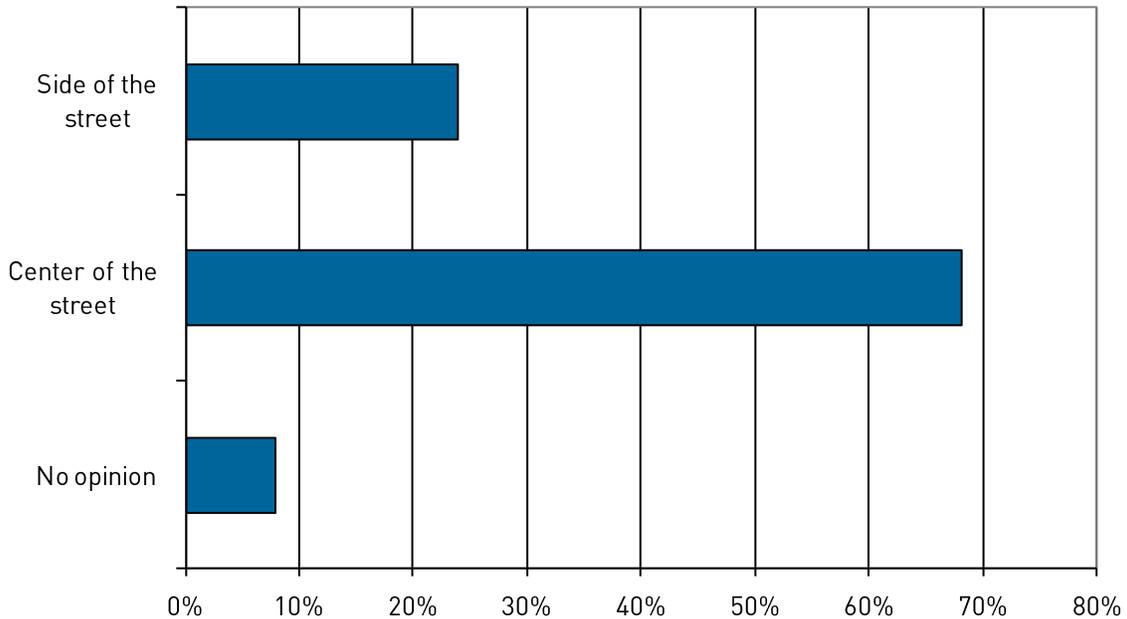
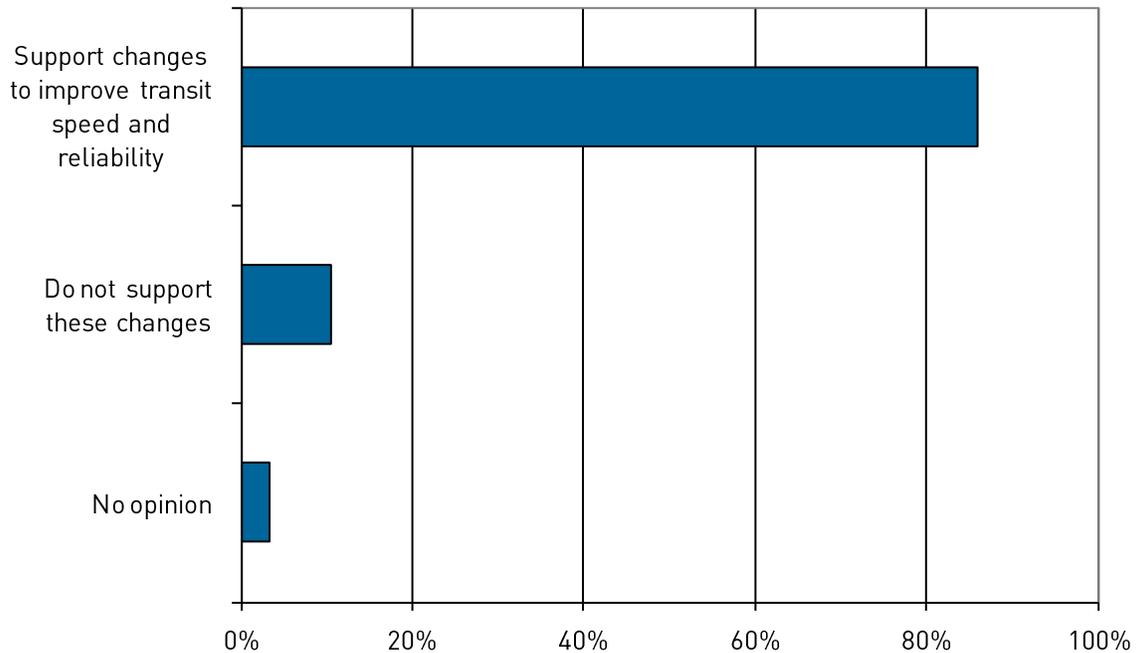


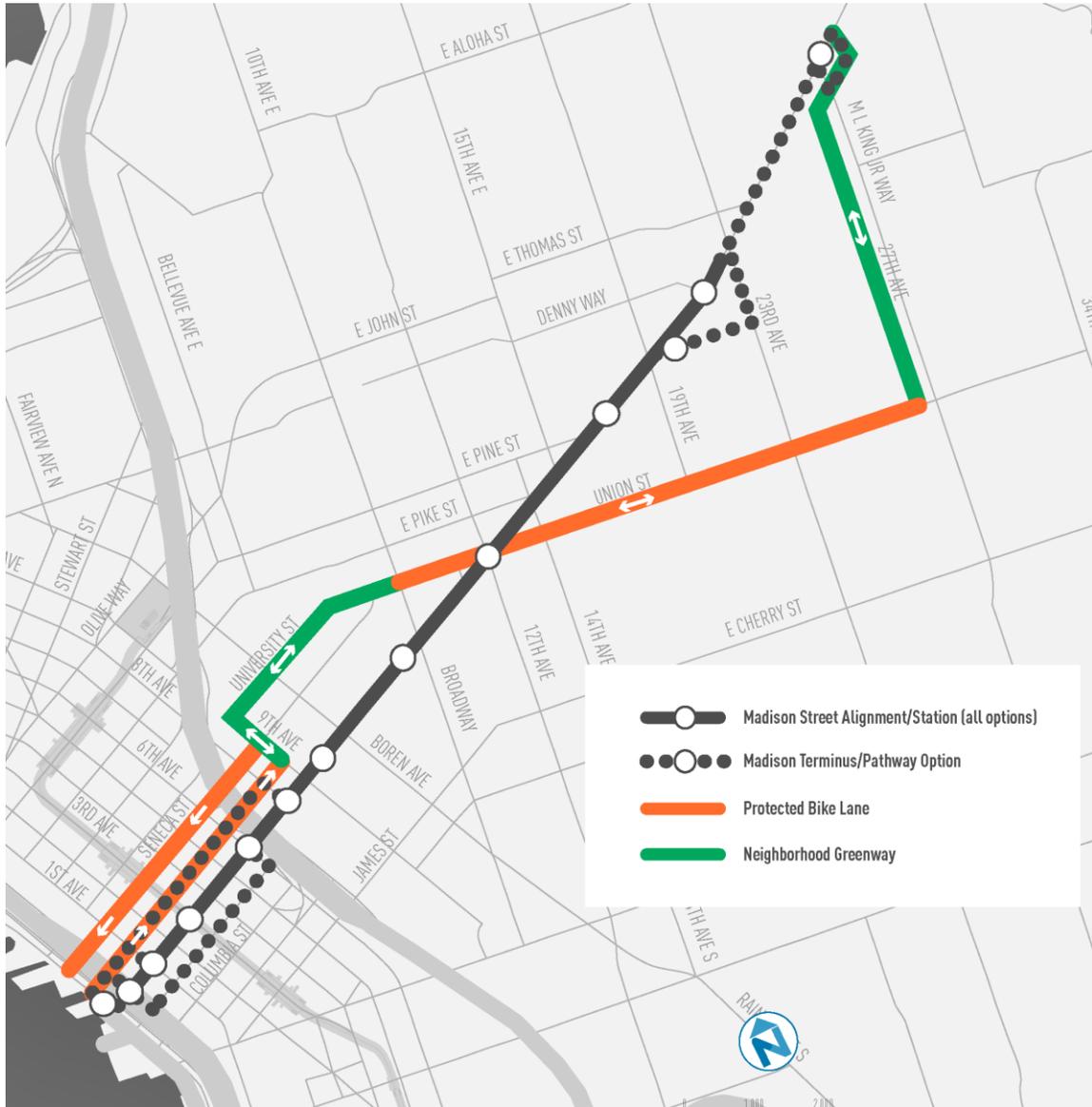
Figure 16 Improvements to Transit Speed and Reliability



Bicycle Design Option

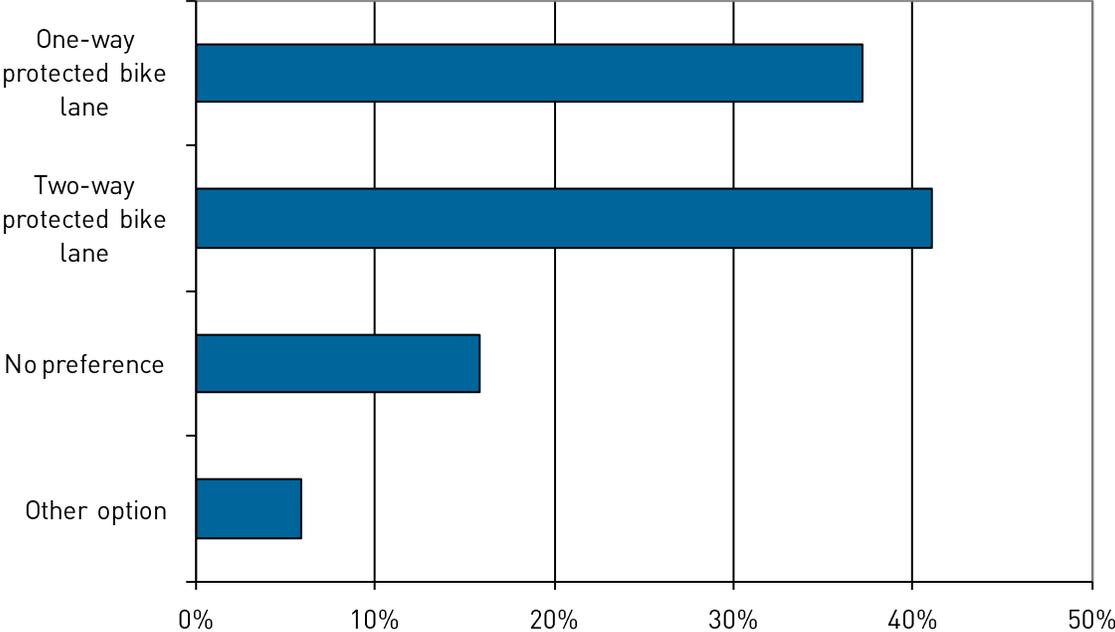
As part of the Madison Corridor BRT project, SDOT is planning improvements on a parallel bicycle facility along Spring and Seneca Streets, University Street, Union Street and 27th Avenue (Figure 17). Segments of this facility will have a protected bike lane. For the segment along Union Street, survey respondents were asked to select between two one-way protected bike lanes on each side of the street, or a single two-way protected bike lane on one side of the street. The two-way option was selected by more respondents, but not by a significant margin (Figure 19).

Figure 17 Proposed Bicycle Facility



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Figure 18 Preferred Bike Lane Placement



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