Madison Corridor Bus Rapid Transit

Concept Design Study



Madison Corridor BRT Open House Maria Koengeter, SDOT November 16, 2015



Our mission, vision, and core values

Mission: deliver a high-quality transportation system for Seattle

Vision: connected people, places, and products

Committed to 5 core values to create a city that is:

- Safe
- Interconnected
- Affordable
- Vibrant
- Innovative

For all

Welcome

- Thanks for attending!
- Review the latest design concept for Madison Corridor Bus Rapid Transit
- Give us your feedback:
 - Posting comments on the maps
 - Talk to the project team
 - Fill out a comment card



MADISON CORRIDOR
BUS RAPID TRANSIT STUDY

Presenting the latest design concept

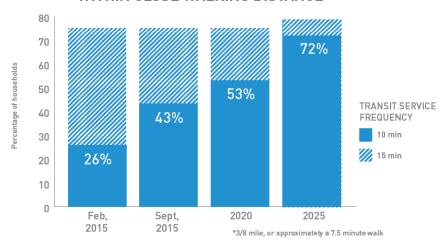


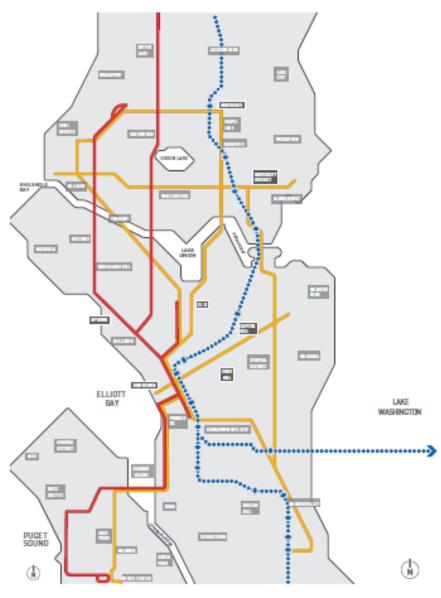
Expanding Seattle's BRT Network

BRT Network

- 7 new RapidRide BRT corridors by 2025
- 72% of residents with 10 min. or better all-day service within a 10-min. walk from their home

HOUSEHOLDS WITH TRANSIT SERVICE WITHIN CLOSE WALKING DISTANCE*

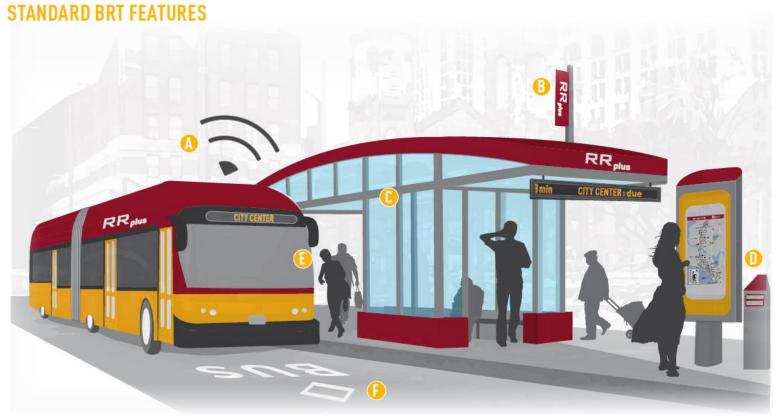




3 existing and 7 proposed Seattle RapidRide BRT Corridors

BRT elements

Investments proposed for Madison will demonstrate success delivering transit speed, reliability, and quality in the most congested, dense areas of Seattle.



Passenger amenities, such as off-board fare payment, real-time arrival info, and improved lighting will be standard



How we got here....

Researched

Evaluated

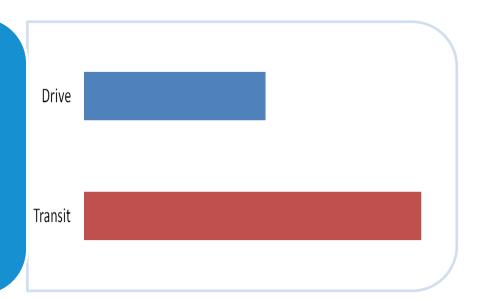
Listened

Designed

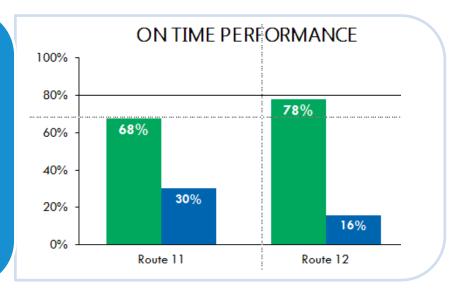


Project need

Transit travel time up to 67% longer than driving



Over 25% of trips on Routes 11 & 12 more than 5 minutes late



Project need

30,000 daily transit boardings within ½ mile of Madison Corridor



80% of AM peak trips have max loads over seated capacity



Evaluation of alternatives

CENTER VS. SIDE RUNNING BRT FACILITIES Transit (COULD VARY BY SEGMENT) Capital Pedestrian Reliability Cost Travel and Bicycle Impacts 23RD AVENUE OR MLK TERMINUS Ridership Capital Operations & Maintenance Cost Support SPRING STREET VS. MARION STREET EASTBOUND PATHWAY Operations & Capital Public Impacts and Maintenance Impacts Support Benefits for Other Transit Users 1ST AVENUE, WESTERN AVENUE, OR ALASKAN Quality of WAY TERMINUS STREET Impacts Connections/ Transfers I-5 AREA STATION LOCATION

Proximity to

Land Use/Demand

Generators

Pedestrian

Access

Traffic

Impacts

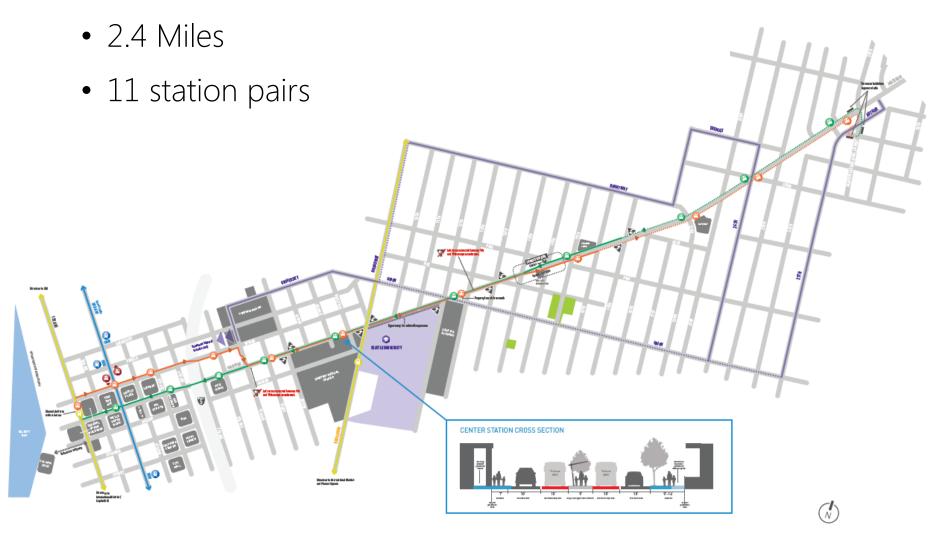
Loading

Impacts

Scoring individual metrics helps determine the best alternative for each decision factor

Proposed preferred concept

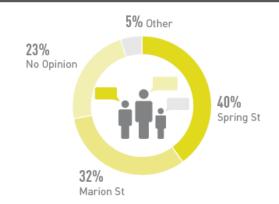
1st Ave to Martin Luther King Jr. Way S



Downtown alignment

- Offers connectivity within one block of the Downtown Seattle Transit Tunnel
- Allows Route 2 to take advantage of future bus-only lanes
- Offers opportunity for a seamless transfer to the Center City Connector streetcar with a shared platform
- Station provides a one block, level walk to the pedestrian causeway to Colman Dock





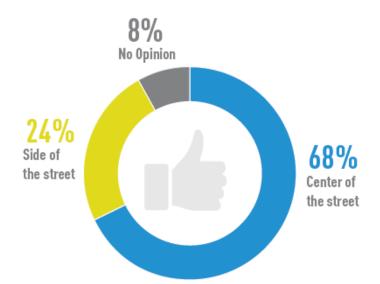


Center transit lanes

- Faster and more reliable BRT service (40% faster) by separating transit vehicles from lanes with right-turn movements.
- Over time, as pedestrian and right-turn volumes increase, transit service will remain fast and reliable (travel time variability of less than a minute per trip).
- Separates transit waiting areas from sidewalks to increase overall pedestrian space in the corridor.
- Creates opportunities for landscaping and sidewalk improvements along the corridor.

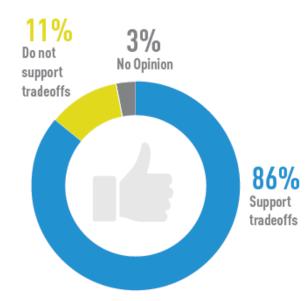
SURVEY RESPONSE

Where would you prefer transit lanes between 8th and 20th Avenues?



SURVEY RESPONSE

How do you feel about the tradeoffs between auto and transit travel time?



Extent of transit lanes

1st to 6th

BAT Lanes

6th to 9th

 Westbound Transit Only Lane

9th to 15th

Median Transit
 Only Lanes

15th to 18th

BAT Lanes

18th to MLK

• Mixed Traffic

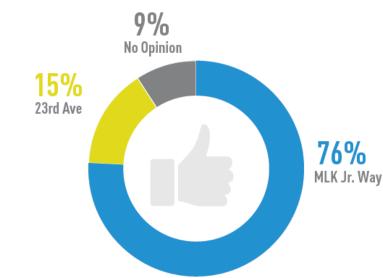
65% in Dedicated Lanes



Median lanes are more reliable for transit, but also help accommodate stations where street widths are narrow

Eastern terminus

- Extent of dedicated transit facility balanced with overall travel needs in the corridor, including maintaining left turns and some parking.
- Leverages wider sidewalks and existing stop locations to minimize extent of roadway reconstruction.
- Provides zero-emission, quiet, all-electric, high-frequency transit service to Madison Valley
- Responds to community request by providing an additional station pair and crossing improvements at 24th Ave.

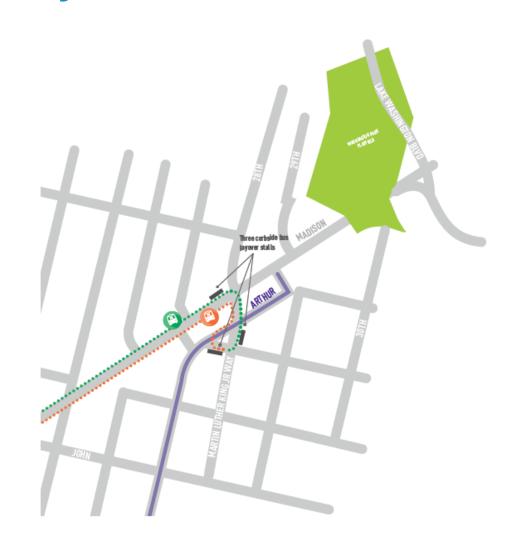


SURVEY RESPONSE

Of the two options for an eastern end to the BRT service, which do you prefer?

Madison Valley layover

- Consolidate layover in one location
- Stay off residential streets
- Reduce business and neighborhood impacts



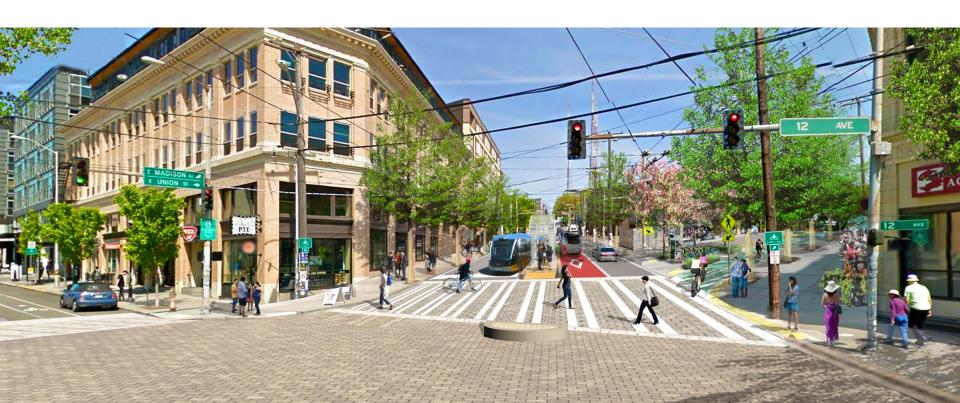
Stations

- Full featured including real time information and platform level boarding
- Terry, Boylston, 12th Ave, & 22nd Ave are opportunities for signature stations



Pedestrian realm

- New sidewalks, curb ramps, & landscaping on station blocks
- Sidewalk repair where conditions are poor
- I-5 crossing improvements



BRT Vehicles

- Boarding doors on both sides
- Electric Trolley Buses for quiet, fast operations



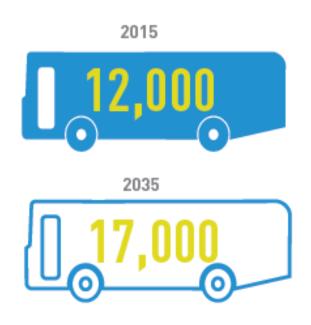
Bike route design alternatives

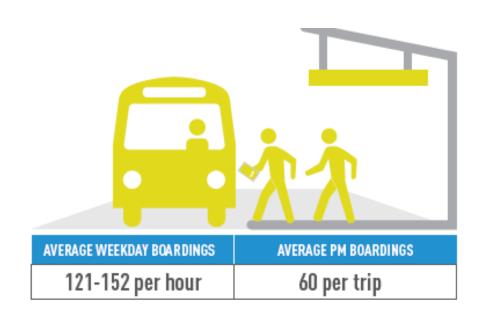


Project performance

AVERAGE WEEKDAY BOARDINGS

PRODUCTIVITY + LOADS





Average cost per trip ranges from \$1.40 to \$1.60, less than Metro's transit fare

TRANSIT RELIABILITY

Today a transit trip betwen 6th and 13th Avenues, westbound in the PM peak hour, may take as little as 7 minutes and as much as 14 minutes. Transit travel time in the corridor varies by an average of 7 minutes; nearly 50% of the corridor travel time. The BRT project would reduce travel time variability per trip to under a minute.

7.0 min.
variability between
shortest and longest run



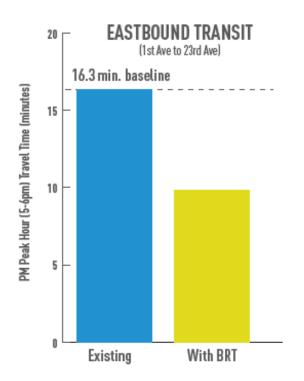
0.6 min. variability between

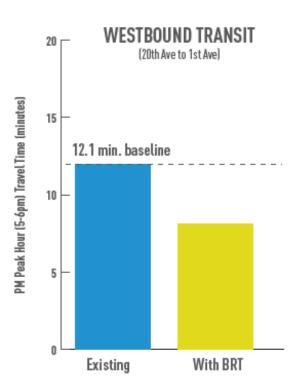
shortest and longest run



TRANSIT TRAVEL TIME

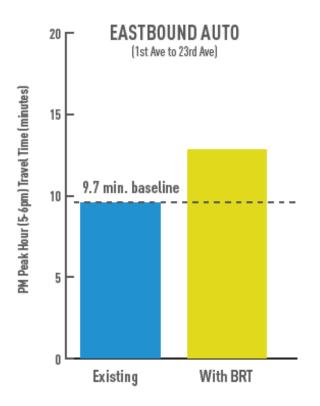
Transit travel time from 23rd to 1st Avenue improves 40% from 16.3 minutes to 9.8 minutes.

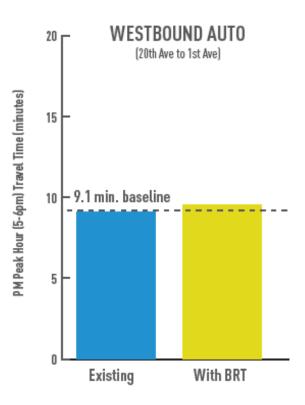




AUTO TRAVEL TIME

Auto travel time increases by 3.6 minutes eastbound and 20 seconds westbound.









Project cost and potential funding

Project Cost Estimate: \$120M

Funding Sources:

Levy to Move Seattle: \$15M (Secured)

Potential Sources: \$120M

- FTA Small Starts
- ST3
- State Legislature
- Regional funds and partnerships

What is Next?

- 2015: Preferred Concept finalized and presented to City Council
- Early 2016: SDOT will begin preliminary design and environmental assessment
- September 2016: Target date to apply for Federal grant funds
- 2018: Project construction start
- 2019: Projected opening of service

Questions?

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www.seattle.gov/transportation









