

Seattle Department of Transportation

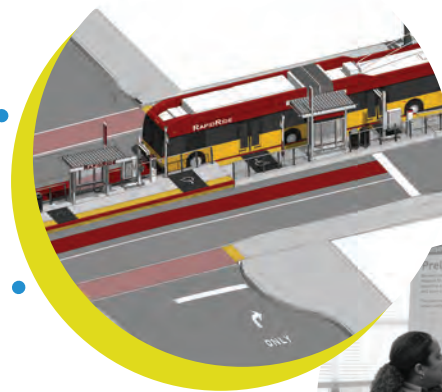
## Madison Street Bus Rapid Transit (BRT)

# UPDATED DESIGN OUTREACH SUMMARY

July 2017

### Connectivity

Madison Street BRT will connect the surrounding area future transit systems including bus and light rail. This map shows the proposed BRT route and the surrounding area. The map also shows the proposed BRT station and the surrounding area. The map also shows the proposed BRT station and the surrounding area.



## Introduction

In March 2017, the Madison Street BRT team returned to the public with an updated project design and a preliminary draft construction phasing plan. The updated design reflected changes made over the winter in response to feedback received during a similar public comment period held in summer 2016. The preliminary draft construction phasing plan was the project team's first attempt at synthesizing community preferences for construction timing and sequencing, safety requirements, and technical constraints.

Design conversations continued in May and June 2017 when the project team held 2 walking tours. On May 19, a small group of neighbors and community stakeholders toured the intersection of E Madison St, E John St, and 24th Ave to discuss the updated design. On June 29, the project team met another group of neighbors and stakeholders. They toured the E Madison St, E Union St, and 12th Ave intersection and the E Madison St and 14th Ave intersection to discuss the current design, which had been updated following the public comment period in March.

This report summarizes the feedback we heard in March into topics and themes, and provides project team responses to each theme. Where appropriate, the summary also includes feedback we heard from the 2 walking tours. Members of the public submitted comments in several ways:

- At open houses held March 9 at Town Hall and March 15 at First AME Church
- Online via an online open house, from March 8 – 22
- Via email to the project inbox ([MadisonBRT@seattle.gov](mailto:MadisonBRT@seattle.gov))
- Verbally during the walking tours and via follow-up emails

## Comment types and counts

In March 2017, we received **622 total comments** and **452 unique comments** on the updated design (the difference between the two totals is due to the project receiving 170 identical form letters regarding bicycle infrastructure). Comments that touched on multiple topics were counted in each topic as appropriate; therefore, each person's feedback is counted in at least 1 topic and up to 11 topics.

## Public Feedback on Updated Design – Topics and Themes

### TOPIC: 12TH AVE, E UNION ST, AND E MADISON ST INTERSECTION

We received 87 unique comments addressing the intersection of E Madison St, 12th Ave, and E Union St this past spring. Commenters raised strong concerns about the design of the intersection, especially for those walking and biking. In response to those concerns, the project team met on-site with neighbors and community stakeholders on June 29, 2017 to tour the intersection and discuss concerns and updates to the design since March 2017. Key themes from the spring outreach and the June walking tour are included below; refer to Appendix A for a detailed summary of the walking tour and the project team's responses to specific questions.

**Theme heard: Include crosswalk, lighting, and signal improvements in the design to make the intersection safer and more intuitive for people walking and bicycling.**

In the feedback received this spring, commenters expressed concern about safety and navigability while walking or biking across the intersection. Common requests included:

- Dedicated bike lanes through the intersection
- All-way scramble signal for those biking and walking
- Better separation between people who walk and bike so those walking do not use the sidewalk at the intersection
- Widen the sidewalk on the south side of E Madison St approaching 12th Ave
- Add mid-block crosswalks on E Madison St to reach the center-running station
- Improve safety for people crossing 12th Ave on the south side of E Madison St

Project team response: Based in part on feedback received in March 2017, the design was updated to streamline navigation for and better separate those walking and biking. The current design provides a number of safety improvements over today's conditions, such as restricting left turns, extending sidewalk areas to shorten crossing distances, and increased separation between pathways for those biking and walking. Please view the handout in Appendix B for detailed responses to the comments above.

**Theme heard: Allow left turns through the intersection.**

Commenters expressed concern that restricted left turns will increase congestion on side streets once Madison Street BRT is in operation. However, most feedback indicated support for the proposed turn restrictions and channelization at the 12th Ave intersection.

Project team response: Left turns are restricted through the busiest part of the corridor to keep all traffic moving. The center-running bus-only lanes on Madison St prevent westbound vehicles from turning left onto 12th Ave. 12th Ave is also too narrow for left turn lanes, and allowing left turns would mean cars turning left would block the single through lane.

## **TOPIC: 14TH AVE AND E MADISON ST INTERSECTION**

We received 20 unique comments about the 14th Ave and E Madison St intersection.

**Theme heard: Preserve natural walk lines and consider a light cycle that allows those walking to cross both Madison St and E Pike St in 1 cycle.**

Commenters expressed concern the design does not accommodate how people walk through the intersection, and will require those walking to wait through multiple light cycles. They requested the existing crosswalk at E Pike St and 14th Ave remain. Commenters also suggested the design allow left turns to accommodate heavy traffic prohibited from left turns nearby.

Project team response: Based in part on feedback received in March 2017, the crosswalk across E Pike St on the west side of 14th Ave has been added to Madison Street BRT design. Additionally, the triangular

island has been enlarged and will include landscaping, to make waiting for the next light signal more comfortable. Left turns are restricted through the busiest part of the corridor to keep all traffic moving.

## **TOPIC: 24TH AVE E, E JOHN ST, AND E MADISON ST INTERSECTION**

We received 63 unique comments that mentioned the intersection of E Madison St with 23rd Ave E or 24th Ave E and E John St. Strong concerns were raised about the design of the intersection, especially for those walking and biking. In response to those concerns, the project team met on-site with neighbors and community stakeholders on May 19, 2017 to discuss design concerns and tour the intersection. Key themes from the spring outreach and the May walking tour are included below; refer to Appendix C for a detailed summary of the walking tour and the project team's responses to specific questions.

Commenters also expressed frustration that the current design does not make the intersection safe or intuitive for people walking or biking. Commenters expressed both support for and opposition of the westbound 24th Ave station's move closer to 23rd Ave.

During the May walking tour, tour participants approved of the updated design's shorter, straighter crosswalks. Participants asked if E John St could be converted to one-way, and suggested a combination of four-way stop and traffic circle at the intersection of 25th Ave E and E John St. The design team will take a further look at both of these suggestions. See Appendix C for a summary of the walking tour and design team responses to specific questions.

### **Theme heard: Provide a direct crossing and extend signals for those walking and biking through the intersection.**

In the feedback received in spring 2017, commenters suggested the following changes to the design to create a direct crossing of the intersection for those walking and biking:

- Add crosswalk across E Madison St on the west side of 24th Ave E. Move the eastbound stop bar back to make room for the crosswalk.
- Add crosswalk across 24th Ave E on the south side of E Madison St
- Direct bike route on 24th Ave E crossing E Madison St that does not push bikes onto the sidewalk or require 2 light phases to complete
- Add a crosswalk across E John St on the north side of the intersection. Some commenters suggested a raised crossing or rapid flashing beacon to protect those walking from cars making high-speed turns from E Madison St onto E John St.
- All-way scramble signal for those walking and biking

Project team response: The current design provides several safety improvements over existing conditions. In the current design, most crosswalks are shorter and straighter than they are today, which reduces the crossing distance and makes those walking more visible. These changes also make the intersection function more like a traditional 4-way intersection than today's 5- or 6-way intersection, which improves safety by making behavior more predictable. Beyond these improvements, the design team is looking at other options that can improve the intersection while maintaining balanced functionality for all roadway users. Please view the handout in Appendix D for detailed responses to the comments above.

**Theme: Make E John St one-way east of E Madison St to prevent cut-through traffic.**

Commenters noted the design changes may encourage use of E John St as an alternative route and requested the project team explore design options to discourage people from using E John St as an alternative to E Madison St. They suggested making E John St a one-way street between 24th Ave E and 25th Ave E, as well as a four-way stop at the intersection of 25th Ave E and E John St.

Project team response: Both SDOT Traffic Operations and the design team continue to study this option as well as the addition of a four-way stop at 25th Ave E and E John St.

## **TOPIC: BUS LAYOVER AND MARTIN LUTHER KING JR WAY E INTERSECTIONS**

We received 28 unique comments that touched on the intersection of E Madison St and Martin Luther King Jr Way E or the bus layover at E Arthur Pl.

**Theme heard: Consider additional infrastructure such as crosswalks near the layover station.**

Commenters requested additional crosswalks and improved bicycle infrastructure to facilitate safe, natural movements for those walking and biking at the intersections of Martin Luther King Jr Way E with E Arthur Pl and E Harrison St near the layover station.

Project team response: The updated design adds a crosswalk near the bus layover, at the intersection of Martin Luther King Jr Way E and E Harrison St. This is the only location near the bus layover where SDOT currently anticipates pedestrian volumes will be sufficient to warrant a crosswalk.

**Theme heard: Improve traffic flow on Martin Luther King Jr Way E near E Madison St and the bus layover. Additional buses will cause congestion.**

Those providing feedback expressed concern traffic will worsen on northbound Martin Luther King Jr Way E, in part due to the new light at E Harrison St and bus volume. They requested the project team reevaluate the E Harrison St signal, add a left-turn signal at Martin Luther King Jr Way E, and remove on-street parking on E Harrison St.

Project team response: An analysis done on Madison Street BRT's effect on traffic shows that the intersection of E Madison St and Martin Luther King Jr Way E will meet standards for traffic in all directions. To keep traffic moving near the layover station, through the intersection of E Harrison St and Martin Luther King Jr Way, the light will remain green for traffic on Martin Luther King Jr Way E unless a bus is ready to leave. When buses leave the layover station, they will trigger a new bus sensor in the pavement, allowing the driver to pull onto Martin Luther King Jr Way E. Left turns will be preserved from northbound Martin Luther King Jr Way E onto E Madison St. For those traveling southbound on 28th Ave E, the traffic pattern will remain as it is today, with traffic able to turn left or right, or continue straight through the intersection. SDOT will examine curb use options on E Harrison St that balance preserving traffic flow and maintaining on-street parking.

**Theme heard: The design for the area near the E Arthur Pl layover does not provide sufficient space for buses to turn and those walking to navigate safely. The additional buses and layover station will be an eyesore.**

Commenters noted buses currently run over the curb at the southwest corner of E Madison St and Martin Luther King Jr Way E. Due to the limited space, commenters observed it may be more difficult to see people walking and expressed concern the tight turning movements would impair pedestrian safety.

Those providing feedback also noted the combination of additional buses in the area and the facilities at the layover station would be unattractive.

Project team response: Computer modeling shows buses will be able to make the turns required for the layover station. Currently, buses often run over the curb at the southwest corner of E Madison St and Martin Luther King Jr Way E. The current design will narrow the sidewalk at the southwest corner of E Madison St and Martin Luther King Jr Way E to provide sufficient space for buses to make the turn without running over the curb. The visual look of the layover station will be determined at a later phase in the project and will be designed to blend into the area.

## **TOPIC: RESTRICTED LEFT TURNS, CHANNELIZATION, AND DIVERSION**

We received 129 unique comments that touched on left turns, how the road is striped and painted (known as channelization), and/or diversion on side streets.

**Theme heard: Changes to the location of bus-only lanes would improve traffic flow and transit performance.**

In downtown and First Hill, commenters suggested separating the bus-only lanes and turn lanes to prevent turning vehicles from blocking the bus-only lanes, especially near I-5. Commenters also suggested extending the bus-only lanes farther east in the corridor, to support transit reliability.

Project team response: Bus-only lanes will be clearly indicated as bus-only with red paint and signage. SDOT will coordinate with the Seattle Police Department if behavior shows specific enforcement is required. Current traffic analysis indicates bus-only lanes are not needed for reliable transit performance east of 18th Ave, but if travel times or transit reliability worsen in the future, SDOT will consider extending the bus-only lanes.

**Theme heard: Restricted turns in the current design will cause those driving to divert to nearby side streets. Surrounding streets cannot handle the diverted traffic.**

Many commenters suggested changes to traffic flow on different streets near E Madison St in Capitol Hill, but no consensus recommendations emerged. Commenters expressed support for turn restrictions at E Union St / 12th Ave / E Madison St intersection; these comments are addressed in the section dedicated to that intersection.

Project team response: The traffic analysis shows there will be some diversion to neighboring streets, but surrounding streets are largely able to handle the additional traffic. SDOT will look at signal improvements at key intersections where the analysis suggests a change would improve traffic flow.

## **TOPIC: OTHER PEDESTRIAN AND BICYCLE INFRASTRUCTURE**

We received 135 unique comments addressing pedestrian infrastructure and 200 unique comments on bicycle infrastructure. Comments specific to pedestrian and bicycle infrastructure at 12th, 14th, 23rd, and 24th avenues and Arthur Pl and Martin Luther King Jr Way E are included in those respective topics. The themes below cover feedback that applies to the entire Madison Street BRT corridor or to specific intersections not covered elsewhere.

**Theme heard: Include additional crosswalks at various specific locations along the corridor and consider automatic pedestrian signals.**

Commenters expressed appreciation of some of the improvements made to the design to date, but requested additional crosswalks at specific Madison St intersections, including, Terry Ave, Broadway Ct, 10th Ave, 11th Ave, 18th Ave, 25th Ave, 26th Ave, and 27th Ave. Commenters also stated crosswalk lights should not require a button to be pressed to signal the pedestrian walk sign.

Project team response: The design team is continuing to look at pedestrian improvements at certain intersections, such as 12th Ave, 14th Ave and 24th Ave, to address the needs of all roadway users. The current design includes improvements to pedestrian crossings at station locations so people can safely reach stations. Additional crosswalks may be considered in the future if pedestrian volumes suggest a crosswalk is needed. Automatic pedestrian signals are used in areas with especially high-density traffic and pedestrian volumes, such as downtown. Where traffic and pedestrian volumes are lower, automatic signals may unnecessarily increase the time those walking wait to cross the street.

**Theme heard: Build additional bicycle infrastructure such as protected bike lanes and fully separate people walking and biking.**

Commenters suggested various ways to improve safety for people biking on the corridor, including:

- Install protected bike lanes and bike boxes in more locations along the corridor
- Keep bike lanes out of “door zones” next to parked cars. Commenters expressed concern that placing bike lanes next to parked cars may create an unnecessary and unsafe conflict between people biking and people in parked cars.
- Fully separate people biking and people walking, with no mixing zones. Commenters expressed concern mixing zones create unnecessary conflicts between people walking and people biking.

Project team response: Bike lanes between 1st Ave and 9th Ave, and between 11th and 12th Ave on E Union St, will be separated from parked cars by a painted buffer. This will help prevent conflicts between people biking and people exiting or entering parked cars. The bike lane on Spring St will also remain on the north side of the street, to keep those biking separated from bus traffic and the I-5 on-ramp. Bike boxes are included as one of the bicycle infrastructure components along the corridor. They are placed at intersections with high traffic and bicycle volumes. Mixing zones are used to balance the needs of those walking and biking in the many areas along the corridor with limited public right of way. Where full separation is feasible and bicycle and pedestrian volumes are high, such as at the E Union St, 12th Ave and E Madison St intersection, the design has been modified to increase separation between those walking and biking.

**Theme heard: Connect Madison Street BRT bicycle infrastructure to the existing and planned bike network throughout the city.**

Commenters suggested various ways to improve connectivity for people biking on the corridor and emphasized their desire for new bike infrastructure to connect to the existing network. Feedback indicated concern the current design does not meet the project’s original promises or fulfill Seattle’s Complete Streets Ordinance.

Project team response: Based on feedback throughout the project, the current Madison Street BRT design includes additional bicycle infrastructure to better connect to the protected bike lane on Broadway, and to improve connections at the 12th and 24th avenue intersections. Connections near Madison St will continue to be planned and implemented separately.

## **TOPIC: PARKING AND LOADING**

We received 37 unique comments about parking and 18 comments about loading zones.

**Theme heard: Remove on-street parking to facilitate bus or bike lanes. However, removing on-street parking in Capitol Hill will exacerbate existing parking limitations.**

Some commenters suggested removing on-street parking would create more space for bus or bike lanes. Other commenters pointed out the potential impacts on-street parking removal may have, especially on areas such as Capitol Hill, where they noted on-street parking removal would significantly reduce parking availability.

Project team response: Due to the limited right of way on Madison St, most parking west of 24th Ave E will be removed to accommodate the lane changes accompanying BRT operations. The project team will reach out to business and property owners along the corridor regarding parking, loading and other potential impacts, and mitigation for removed parking and loading. SDOT's curb space management team will continue to be part of the design process and discussion.

## **TOPIC: CONSTRUCTION AND SCHEDULE**

We received 22 unique comments touching on construction and schedule.

**Theme heard: Construction should happen soon and quickly at specific locations.**

Commenters were concerned about general construction fatigue, as well as impacts to specific locations. They encouraged construction to happen as quickly as possible.

Project team response: The project team developed a preliminary draft construction phasing schedule based on conversations with property and business owners about their operations and needs. This plan went to the public for review in March and is still in development. The project team will continue to talk to businesses and properties along the corridor. The project team is also working closely with the Office of Economic Development to identify small business assistance opportunities.

## **TOPIC: BRT STATION DESIGN AND OTHER KING COUNTY METRO ROUTES**

We received 58 unique comments concerning station locations and the design of stations, and 56 unique comments regarding other King County Metro routes. Comments specific to 12th, 14th, 23rd, and 24th avenues and Arthur Pl and Martin Luther King Jr Way E are included in those respective topics. The themes below cover feedback that applies to the entire Madison Street BRT corridor or to specific intersections not covered elsewhere.



**Theme heard: Move, eliminate, or consolidate BRT stations to improve transit connections.**

Commenters expressed both support for and opposition to the westbound 24th Ave station's move closer to 23rd Ave. Some commenters suggested consolidating the 22nd Ave E and 23rd Ave E BRT stations into a single stop.

Project team response: The current BRT station locations are spread along the corridor to maximize coverage while facilitating connections to current or future public transportation such as Link light rail, Seattle Streetcar, and the future RapidRide on 23rd Ave. Consolidating the 22nd and 23rd Ave stations would eliminate a BRT station, increasing the distance between stations in this hilly area. Locating the westbound Madison Street BRT station closer to 23rd Ave facilitates connections to the future RapidRide line on 23rd Ave.

**Theme: Maintain service on bus routes currently serving the Madison St corridor and nearby communities.**

Commenters expressed uncertainty over changes to existing service. They also suggested using limited resources to improve existing service instead of building Madison Street BRT.

Project team response: King County Metro continues to analyze service options along the corridor. About a year before Madison Street BRT service begins, King County Metro will ask the community for input on any proposals for route revisions along the corridor. The Madison St corridor is already one of the densest in Seattle and is expected to continue growing. The current bus lines on Madison St (8, 11, and 12) frequently reach capacity and are delayed by traffic, especially during the busy rush hours. Madison St was prioritized for future bus rapid transit (BRT) service in the 2012 City of Seattle Transit Master Plan in part because of the popularity of these existing bus routes and anticipated increase in ridership. Many of the planned improvements, such as level boarding at stations and dedicated bus lanes through the busiest part of the corridor, require roadway and station improvements to translate into fast, frequent, and reliable transit service on Madison St.

**Theme heard: Extend Madison Street BRT east into Madison Park to better serve that neighborhood.**

Commenters suggested the project extend into Madison Park to serve communities east of Madison Valley, and avoid loss of service or transfers. They noted the existing turnaround for the Route 11 could be used as the layover location.

Project team response: Transit service to Madison Park will be maintained. However, the extension of Madison Street BRT further east is currently outside the scope and available funding for the project. The design does not preclude expansion, should additional funding become available.

## Next steps

Later this summer and into fall, we will continue to refine the design, incorporating public input. We will also share design progress and work to ensure neighbors are prepared for construction. The federal funding process is taking longer than originally anticipated, so we needed to adjust our construction schedule. We now expect construction to begin in mid-2018. We will continue to provide schedule updates and next steps throughout the project to provide the community with the latest information.

The latest information will also be available on our project website ([www.seattle.gov/transportation/MadisonBRT.htm](http://www.seattle.gov/transportation/MadisonBRT.htm)), which includes a form to sign up for the project contact list. Questions about the open houses or the comments we heard can be sent to the project inbox at [MadisonBRT@seattle.gov](mailto:MadisonBRT@seattle.gov) or by calling 206-484-2780.

## Appendix A. E Madison St/12th Ave/E Union St Walking Tour Summary

### Madison Street BRT

DRAFT – Walking Tour Summary for Madison St at 12th Ave and 14th Ave



### Overview

Staff from the Madison Street Bus Rapid Transit (BRT) team met with 13 community stakeholders on Thursday, June 29, 2017 to discuss the current design and suggested changes from the community, focused on the intersections of E Madison St with 12th Ave and 14th Ave (see Exhibit A for photos). Additional analysis and potential design updates as a result of this walking tour are expected in fall 2017.

### Briefing Details and Attendees

ORGANIZATION	Multiple (see below)
BRIEFING DATE	Thursday, June 29, 2017
BRIEFING LOCATION	Intersection of E Madison St with 12th Ave/Union St and 14th Ave
PROJECT TEAM ATTENDEES	Eric Tweit, Project Manager Emily Reardon, Communications Lead Sara Colling, Communications Team Ron Leimkuhler, Design Team (KPFF) John McMillan, Design Team (KPFF) Chris Cunningham, Design Team (KPFF) Meagan Powers, Design Team (Concord Engineering) Tricia Tillmann, Outreach Team (EnviroIssues) Marcela Diaz, Outreach Team (G3 & Associates) Monisha Harrell, Outreach Team (Rule 7)
COMMUNITY ATTENDEES	<ul style="list-style-type: none"><li>• Brie Gyncild, Central Seattle Greenways</li><li>• Joanna Cullen, Squire Park Community Council</li><li>• Roland Hyre, Madison Pub</li><li>• Colleen Pike, Seattle University</li><li>• Anne Knight, Madrona Community Council</li><li>• Zev Siegel, Union Art Co-op</li><li>• Beth Gaska, Alliance Residential</li><li>• Bill Zosel, 12th Ave Stewards</li><li>• Katie Sullivan, Viva Apartments</li><li>• Kelli Refer, Cascade Bicycle Club</li><li>• Doug Ambach, Seattle Academy of Arts &amp; Sciences</li><li>• Autumn Ledbetter, State Farm Insurance</li><li>• Jason Townsend, Essensuals Hair Salon</li></ul>

### Meeting Purpose

- Listen to and understand participants' goals for the design of Madison Street BRT, focused on the intersections of Madison St with 12th and 14th avenues

- Share and understand the operational and technical requirements of the design, as well as the criteria by which the design must be evaluated
- Review the updated design for the intersection of Madison St with 12th and 14th avenues
- Discuss participants' ideas and options for design (especially intersection design)
- Discuss the feasibility of various design ideas and how they would affect intersection performance for all roadway users, given the technical and operational requirements and participants' goals for Madison Street BRT
- Identify design elements or alternatives for further analysis and traffic modeling, to determine if they will be included in the project design
- Share and understand how information gathered will be used and considered, when results of follow-on analysis will be available, and what role participants will have going forward

## Handouts and Presentation Materials

- Presentation
- Meeting agenda
- Project factsheet
- Project contact card
- Handout showing current design on one side and on the other side, suggested design changes from the community and the design team response

## Questions and Comments – Responses in *Italics*

### E Union St, between 11th and 12th avenues

- The design of westbound E Union St between 11th and 12th avenues is now clearer.
- Cars exiting Viva Apartments wait for the garage to close before continuing. How will that operation be managed with the new bike lane?
- Garbage trucks and delivery trucks also need room to maneuver near Viva. How will that be accomplished without conflicts with those biking and buses?
- Could E Union St between 12th and 11th avenues be one-way westbound entirely, and be accessible to both buses and cars? *Allowing cars to go westbound on this block would increase the chance for pedestrian interactions and may be a safety risk; pedestrians would be less safe than in the current design. Another pedestrian signal phase would be needed as a result. The design team will assess the level of service at the intersection if this block were westbound for cars and buses, compared to the current design.*
  - In response to this suggestion, 3 participants encouraged the design remain as it is currently shown because it calms traffic. Someone observed they like the raised crosswalk as well.
- The area looks too small for all that is proposed. The suggestion was made to look for alternative loading zones near Viva Apartments.

- Prior to the meeting, Ferrari reviewed the design and emphasized they would like to preserve their driveway access on E Union St between 11th and 12th avenues. *The driveway will remain in the current design.*
- Please keep the eastbound bus stop at E Union St and 11th Ave.

### **Bicycle and pedestrian infrastructure**

- Two participants stated they liked the pedestrian and bicycle infrastructure improvements in the current design, especially those near Mighty O donuts on the northeast corner of E Madison St and 12th Ave.
- How many bikes can stage at the northeast corner of E Madison St and 12th Ave, near Mighty O donuts? *The design team will assess and respond to this question at a later date.*
- Could there be a straight crossing between the northeast corner of E Madison St and 12th Ave (near Mighty O donuts) and the southeast corner of E Madison St and E Union St (right in front of SAAS)? This would eliminate the uphill grade and better match the way people want to naturally cross the street. *This is a design option the team has studied many times in detail. It would result in less queuing area for both those walking and biking, and would mean those walking and biking would no longer be separated as is achieved in the current design.*

### **E Union St, between 12th and 14th avenues**

- To prevent traffic from backing up to the west, could the street be redesigned so cars can go around eastbound buses stopped at E Union St and 13th Ave E? A narrower platform may make this possible. *The current bus stop location allows for a few cars to queue behind the bus. Allowing cars to go around in this location would increase the chance of conflicts with pedestrians crossing E Union St at 13th Ave E. A pedestrian signal may be needed as a result. The design team will assess options that would allow cars to go around buses in this area.*
- For those traveling westbound on E Union St to E Madison St, they will use 13th Ave to connect. The design shows there will now be 1 lane instead of 2 lanes feeding onto E Madison St from E Union St. Will this lane reduction increase the bus queue? Could the parking on the east side of Pony Bar be removed to preserve 2 lanes feeding onto E Madison St? Could it remain 2 lanes instead? *SDOT will look into the effect on the bus queue from the proposed design.*

### **General feedback**

- Prior to the meeting, Banner Bank and Pony Bar stated they liked the current design. Two additional participants in the meeting concurred.
- Where will traffic divert as a result of Madison Street BRT, in particular the left turn restrictions between 12th and 18th avenues? Could SDOT share the results of the traffic diversion analysis? For example, what

happens to traffic at 14th Ave and Cherry St? This area already experiences delays. *SDOT will share the results of the traffic diversion analysis.*

- Consider making 13th Ave and 14th Ave each one-way streets in opposite directions to improve traffic flow in this area. *This would be a concern for at least 2 stakeholders (Chloe and First AME Church) on or near 14th Ave.*
- How will those driving travel from the Pike/Pine corridor to the Union/Madison corridors? *14th Ave is an option.*
- Please include ORCA readers at both ends of the stations. *The current design includes ORCA readers at both ends of the station, as well as on the real-time arrival display.*
- At the southwest corner of 12th Ave and E Madison St, please consider including a buffer between the street and the sidewalk.

### Actions Item(s) and Commitments

ACTION ITEM(S)/COMMITMENT(S)	ASSIGNED TO	CURRENT STATUS (as of July 26, 2017)
Share results of traffic diversion analysis	Emily Reardon	The analysis will be shared following Federal Transit Administration review.
Assess the duration of the bus queue in the current design compared to current conditions, for buses traveling westbound on E Union St via 13th Ave onto E Madison St	SDOT/KPFF	In progress
Assess options to allow cars to go around buses on eastbound Union St at 13th Ave, near the bus stop	KPFF	In progress
Determine approximately how many bikes can queue at the northeast corner of E Madison St and 12th Ave (near Mighty O donuts) in the current design	KPFF	In progress
Assess the level of service at the E Union St/E Madison St/12th Ave intersection if E Union St were accessible to both buses and cars instead of buses only	KPFF	In progress

### Summary Prepared By

- Tricia Tillmann, EnviroIssues

## Madison Street BRT

Walking Tour Summary for Madison St at 12th Ave and 14th Ave (DRAFT)

### Exhibit A. Photos



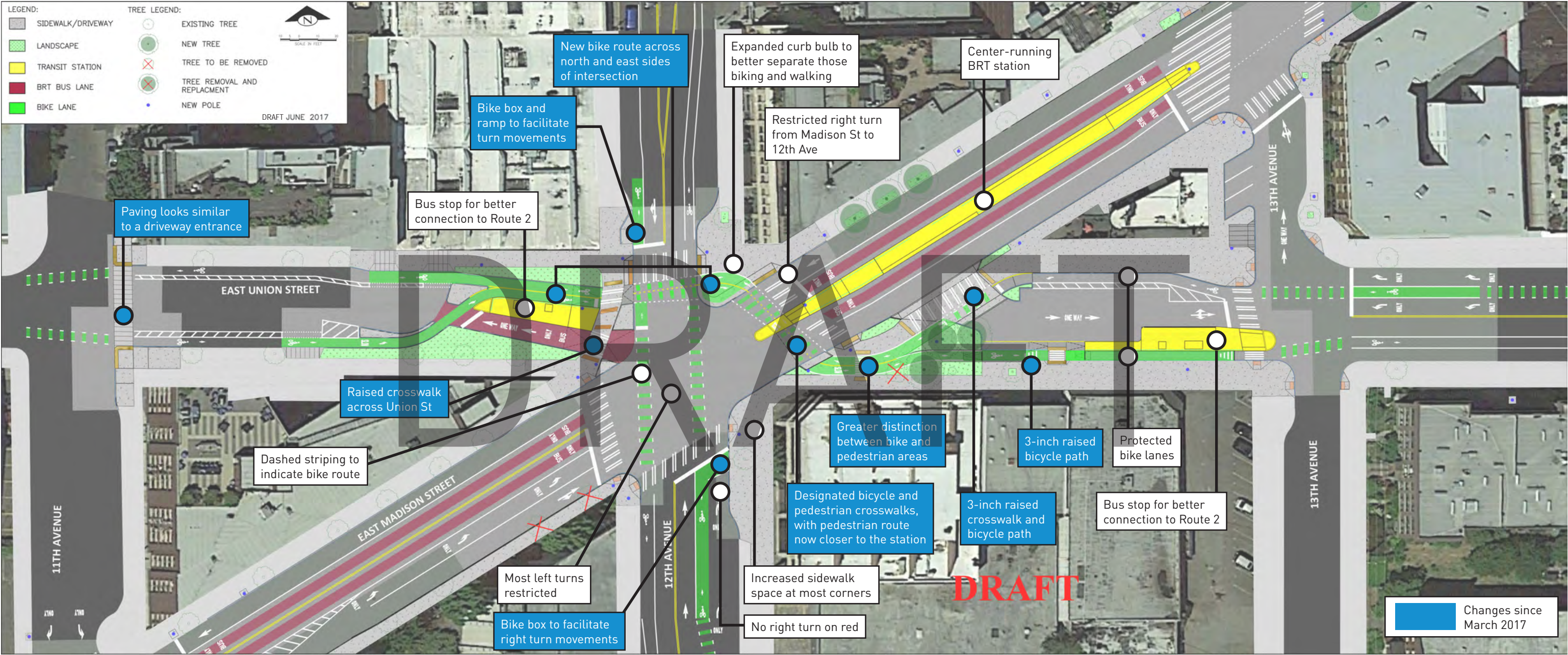
Participants discuss the current design for the southeast corner of E Madison St, E Union St, and 12th Ave.



Compared to today, the current design (shown at bottom) includes shorter crossing distances, improved infrastructure for those biking and walking, and street improvements to support BRT operations.



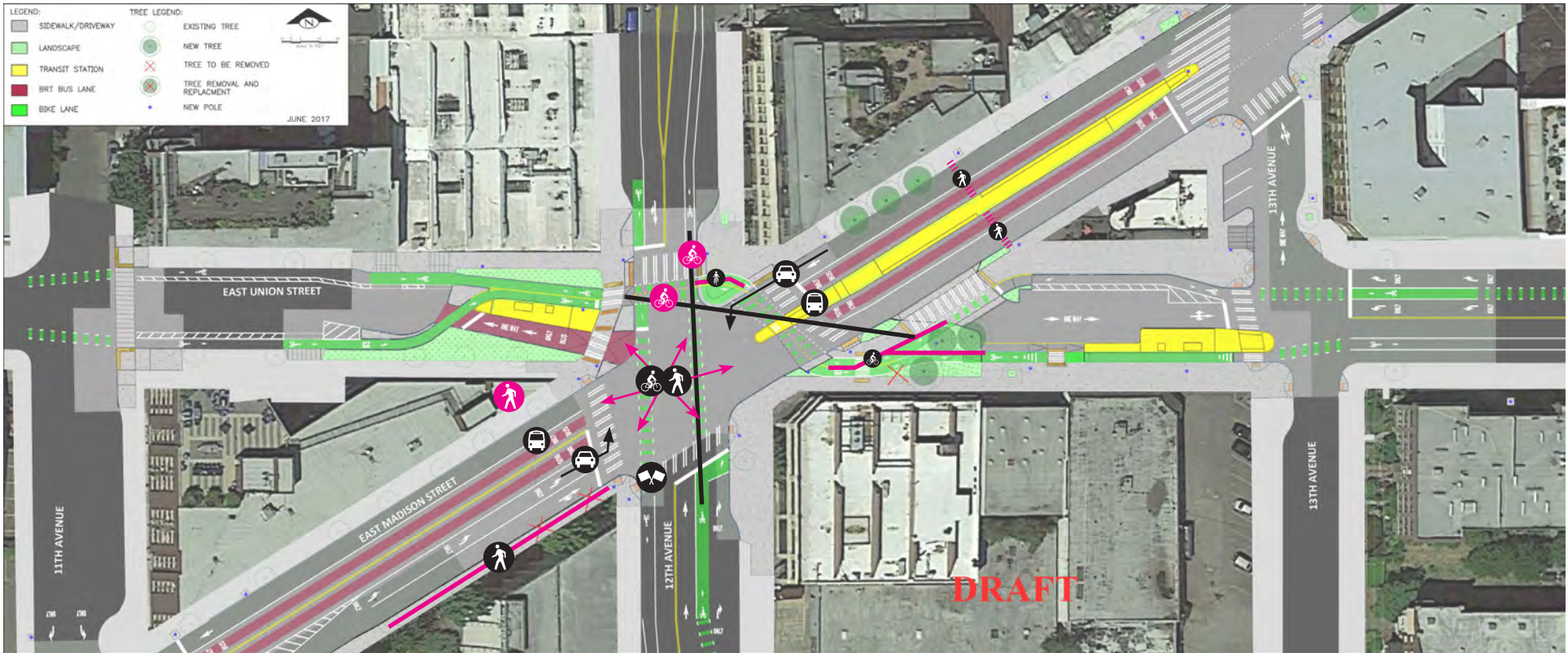
# MADISON STREET BUS RAPID TRANSIT (BRT) CURRENT DESIGN





# MADISON STREET BUS RAPID TRANSIT (BRT)

## SUGGESTED CHANGES FROM THE COMMUNITY



Map icons	Suggested change	Effect on intersection performance or project team response
	1. Dedicated bike lanes through intersection	<ul style="list-style-type: none"><li>Dashed striping indicates 12th Ave bike route in current design</li><li>A direct crossing of Union St increases intersection complexity and would significantly delay vehicles and transit in all directions</li></ul>
	2. All-way scramble signal for those biking and walking	<ul style="list-style-type: none"><li>Increases intersection complexity and significantly reduces overall intersection performance for those driving and riding transit.</li><li>The average delay at the intersection would be more than 3 minutes. Traffic would back up several blocks on E Madison St and 12th Ave.</li><li>Over half of the time in each signal phase would be used for the pedestrian crossing.</li></ul>
	3. Pedestrian crossing to reach the bus where it stops at the station	<ul style="list-style-type: none"><li>A crosswalk without a signal raises safety concerns</li><li>Crosswalks in the current design are along the most common walking routes to and from the station</li></ul>
	4. Separation between people who walk and bike so those biking do not use sidewalk at intersection	<ul style="list-style-type: none"><li>New, expanded curb bulb at the northeast corner better separates those biking and walking</li><li>Those biking on 12th Ave are already separated from those walking with dedicated bike lanes through the intersection</li><li>At the southeast corner, the mixing zone balances the needs of those walking and biking in an area with limited public right of way</li></ul>
	5. Wider sidewalk on south side of E Madison St approaching 12th Ave	<ul style="list-style-type: none"><li>Public right of way space is limited on E Madison St and cannot accommodate a wider sidewalk at this location. However, near the intersection where trees will be removed, there will be more space to walk than there is today.</li></ul>
	6. Safety improvements for people crossing 12th Ave on the south side of E Madison St	<ul style="list-style-type: none"><li>All crosswalks at the intersection will be signalized, with lights and textured curb ramps</li><li>Restricting left turns to and from 12th Ave reduces the chance of car and pedestrian interactions</li></ul>
	7. Include more placemaking design at the intersection to drive enthusiasm for the project	<ul style="list-style-type: none"><li>Outreach for Madison Street BRT public art includes opportunities to discuss placemaking</li><li>Landscaping in current design provides some placemaking</li></ul>
	8. Allow left turns through the intersection	<ul style="list-style-type: none"><li>Left turns are restricted through the busiest part of the corridor to keep all traffic moving</li><li>The center-running bus-only lanes on Madison St prevent westbound vehicles from turning left onto 12th Ave</li><li>12th Ave is too narrow for left turn pockets. Turning cars would block the through lane.</li></ul>
	9. Remove bus-only lanes at intersection to decrease congestion and allow for more parking	<ul style="list-style-type: none"><li>The bus-only lanes are needed in this area to ensure fast, frequent, reliable transit service</li></ul>
	10. Include “real time” bus arrival display at the intersection	<ul style="list-style-type: none"><li>All Madison Street BRT stations will include real-time arrival displays</li></ul>



**Madison Street BRT**

DRAFT – E Madison St/24th Ave E/E John St Walking Tour Summary

**Overview**

Staff from the Madison Street Bus Rapid Transit (BRT) team met with 6 community stakeholders on Friday, May 19, 2017 to discuss the current design and suggested changes from the community for the intersection of E Madison St, 24th Ave E and E John St (see Exhibit A for photos). Additional analysis and potential design updates as a result of this walking tour are expected in fall 2017.

**Briefing Details and Attendees**

ORGANIZATION	Multiple (see below)
BRIEFING DATE	Friday, May 19, 2017
BRIEFING LOCATION	Intersection of E Madison St, E John St and 24th Ave E
PROJECT TEAM ATTENDEES	Eric Tweit, Project Manager Emily Reardon, Public Information Officer Brian Dougherty, Project Development John Marek, Traffic Operations Ron Leimkuhler, Design Team (KPFF) John McMillan, Design Team (KPFF) Nicholas Mirra, Outreach Team (EnviroIssues) Tricia Tillmann, Outreach Team (EnviroIssues)
COMMUNITY ATTENDEES	<ul style="list-style-type: none"> <li>• Brie Gyncild, Central Seattle Greenways</li> <li>• David Seater, Pedestrian Advisory Board and Neighborhood Greenways</li> <li>• Joanna Cullen, First Hill Improvement Association</li> <li>• Kathleen Allen, Madison Parkview Condominiums</li> <li>• Kelsey Mesher, Cascade Bicycle Club</li> <li>• Merlin Rainwater, Bicycle Advisory Board</li> </ul>

**Meeting Purpose**

- Listen to and understand participants' goals for the design of Madison Street BRT, focused on the intersections of Madison St with 24th Ave
- Share and understand the operational and technical requirements of the design, as well as the criteria by which the design must be evaluated
- Review the updated design for the intersection of Madison St with 24th Ave
- Discuss participants' ideas and options for design (especially intersection design)
- Discuss the feasibility of various design ideas and how they would affect intersection performance for all roadway users, given the technical and operational requirements and participants' goals for Madison Street BRT
- Identify design elements or alternatives for further analysis and traffic modeling, to determine if they will be included in the project design

- Share and understand how information gathered will be used and considered, when results of follow-on analysis will be available, and what role participants will have going forward

## Handouts and Presentation Materials

- Handout showing current design on one side and on the other side, suggested design changes from the community and how they would affect intersection performance if implemented

## Questions and Comments – Responses in *Italics*

- The shorter, straighter crosswalks are an improvement from current conditions.
- Would SDOT consider a crosswalk across 24th Ave E on the south side of E Madison St or across E Madison St on the west side of 24th Ave E? *Both of these options would create a delay on side streets for vehicle traffic. Traffic would back up into neighborhoods.*
  - A traffic back-up into neighborhoods does not make sense.
- Cyclists will want to cross E Madison St directly. The design should accommodate these natural movements. *The design team will re-assess options for those biking to directly cross E Madison St.*
- Could E John St be a one-way street between E Madison St/24th Ave E and 25th Ave E? *The design team will assess this option.*
- The combination of a four-way stop and traffic circle at 25th Ave E would make the intersection even safer. It has worked in other areas. Will SDOT consider it? *SDOT will assess this option.*
- It is important to facilitate easy connections to nearby routes such as the Route 8 and Route 12.

## Actions Item(s) and Commitments

ACTION ITEM(S)/COMMITMENT(S)	ASSIGNED TO	CURRENT STATUS (as of July 26, 2017)
Assess making E John St a one-way street between E Madison St and 25th Ave E	SDOT Traffic Operations	Additional analysis and potential design updates are expected in fall 2017.
Assess adding a 4-way stop to the intersection of E John St and 25th Ave E	SDOT Traffic Operations	Additional analysis and potential design updates are expected in fall 2017.
Survey condominium owners about their thoughts on making E John St a one-way street between E Madison St and 25th Ave E	Kathleen Allen	Kathleen surveyed the 7 homeowners who use the E John St garage. All were in favor of making E John St a one-way street; 2 homeowners affirmed they would also like a 4-way stop at 25th Ave E.
Re-assess options for those biking to directly cross E Madison St	KPFF	Additional analysis and potential design updates are expected in fall 2017.

## Summary Prepared By

- Tricia Tillmann, EnviroIssues

Exhibit A. Photos



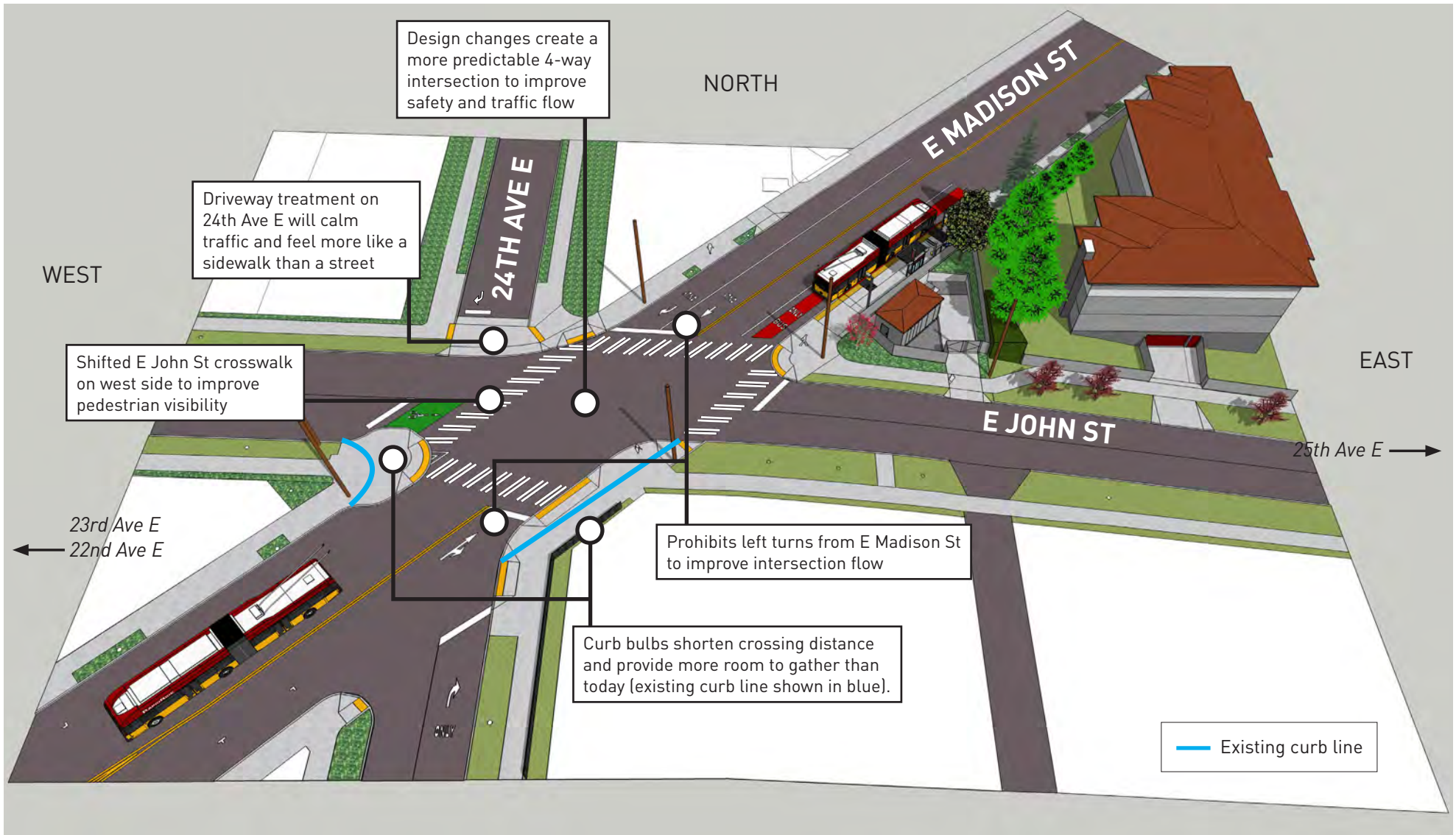
Participants discuss the current design for the north side of the intersection, including the shorter distance to cross E John St (seen in background, looking west), driveway design across 24th Ave E, and bicycle infrastructure through the intersection.

The intersection today, looking southwest (left) and west (right).





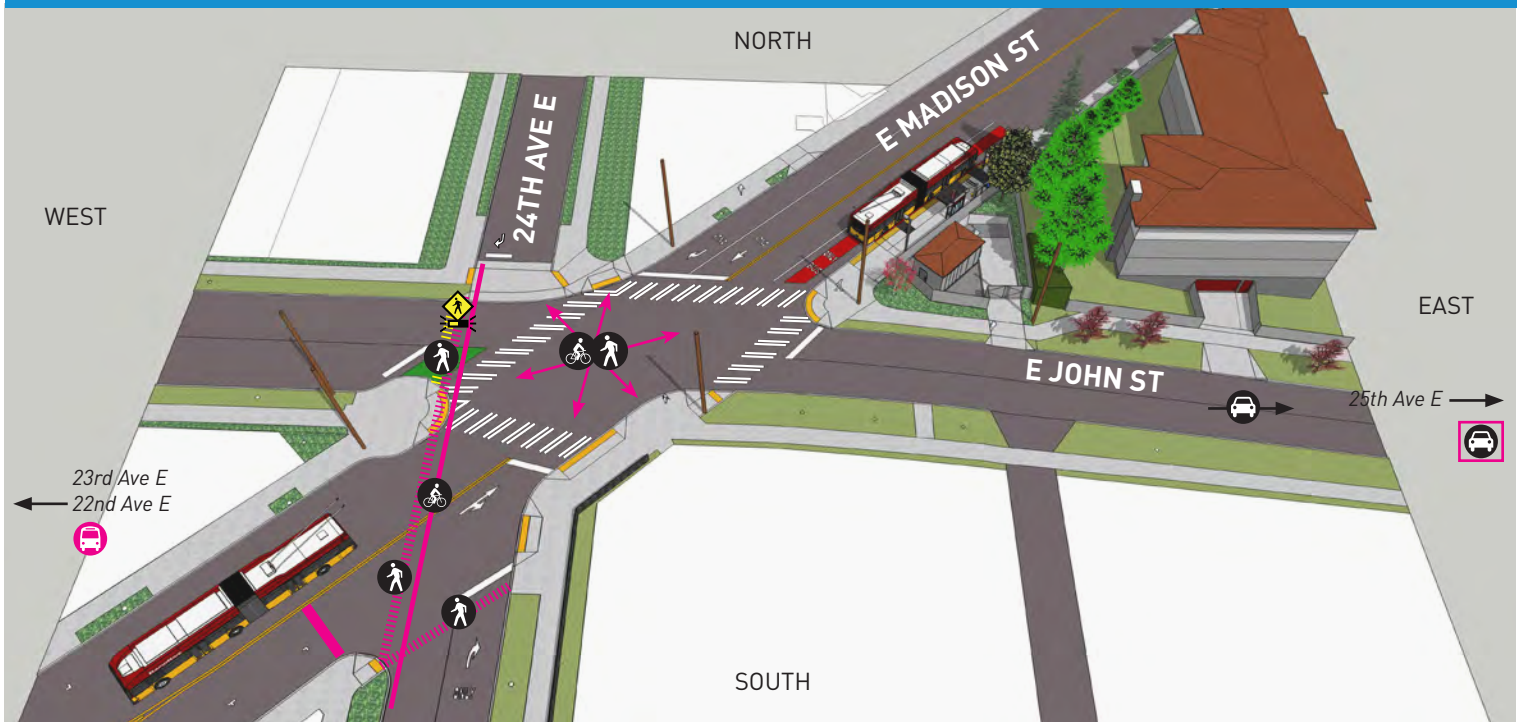
# MADISON STREET BUS RAPID TRANSIT (BRT) CURRENT DESIGN



DRAFT

MARCH 2017

# MADISON STREET BUS RAPID TRANSIT (BRT) SUGGESTED CHANGES FROM THE COMMUNITY



Map icons	Suggested change	Effect on intersection
	<ol style="list-style-type: none"> <li>1. Crosswalk across E Madison St on west side of 24th Ave E</li> <li>2. Crosswalk across 24th Ave E on south side of E Madison St</li> <li>3. Create direct bike route on 24th Ave E crossing E Madison St that does not push bikes onto sidewalk or require 2 light phases to complete</li> <li>4. Move eastbound E Madison St stop bar back to before 24th Ave E intersection</li> </ol>	<ul style="list-style-type: none"> <li>• Recreates a 6-way intersection</li> <li>• Side street traffic waits longer for green light</li> <li>• Almost 3 min delay for eastbound E John St</li> <li>• Straight pedestrian crossing on 24th Ave E is too long to complete in 1 light cycle</li> </ul>
	<ol style="list-style-type: none"> <li>5. Flashing crosswalk across E John St on north side to protect those walking from cars making high-speed turns from E Madison St onto E John St</li> <li>6. Raised crosswalks across E John St to protect pedestrians from cars making high-speed turns from Madison onto E John St</li> <li>7. Crosswalk directly across E John St on west side of 24th Ave E</li> </ol>	<ul style="list-style-type: none"> <li>• A crossing at E John St means those walking are less visible</li> <li>• Current design moves crosswalk parallel to E Madison St, so those walking are more visible</li> </ul>
	<ol style="list-style-type: none"> <li>8. All-way scramble signal for bicycles and pedestrians</li> </ol>	<ul style="list-style-type: none"> <li>• Those walking would have about 45 seconds to cross; if the "no walk" signal is on, the longest wait would be about 45 seconds</li> <li>• Side street traffic waits longer for green light</li> <li>• On E John St, about 2 min delay for westbound and 5 min delay for eastbound traffic</li> <li>• Traffic would back up into neighborhoods</li> </ul>
	<ol style="list-style-type: none"> <li>9. Consolidate 22nd Ave E and 23rd Ave E BRT stations into one stop</li> </ol>	<ul style="list-style-type: none"> <li>• Eliminates a BRT station, increasing distance between stations in this area</li> </ul>
	<ol style="list-style-type: none"> <li>10. Make E John St one-way eastbound between 24th Ave E and 25th Ave E</li> <li>11. Create a four-way stop at 25th Ave E and E John St</li> </ol>	<ul style="list-style-type: none"> <li>• One way street further simplifies intersection and calms street for those walking and biking</li> </ul>

*Note: A delay refers to how much longer it would take someone to cross the intersection, compared to what is expected with the current design. The current design improves overall intersection performance compared to today's conditions. The results presented here are draft only and subject to change.*