RapidRide J Line

Community Design Conversation
September 14, 2022
Agenda

- Welcome and introductions
- Why RapidRide J Line?
- Project design update
- Activity: Share your input on design elements
- Q&A
- Next steps
- End
All attendees are muted.

Use the **Q&A window** to submit a question.
Why RapidRide J Line?

- Provide transit service to support housing and employment growth
- Improve transit travel time and reliability throughout the corridor
- Reduce overcrowding of existing bus capacity
- Provide neighborhood connections to future Link light rail, RapidRide Lines, and Seattle Streetcar
- Improve pedestrian and bicycle safety and connections to transit with protected bike lanes
- Reduce greenhouse gas emissions
King County Metro RapidRide key features

**Convenient and easy to use**
- Service starts early and runs late, every day
- Buses come at least every 10 minutes during busiest hours
- All-door boarding is available on all coaches
- Riders with mobility aids can secure themselves easily

**Safe and smart**
- Stations have real-time arrival signs
- Transit signal priority synchronizes traffic lights with buses
- Shelters are well lit, and all buses have security cameras

**Move more, stop less**
- Bus stop spacing helps speed up your ride
- Street and traffic improvements make it easier to get to/from the bus
Project history & key decisions

- **2014-2016** Project development including preparation of Transit Master Plan and Bike Master Plan
- **2016** RapidRide Roosevelt bus rapid transit project partially funded by voter-approved Levy to Move Seattle
- **2017** Locally Preferred Alternative adopted with route ending at Roosevelt Link station
- **2018** Community-requested evaluation of 9 bicycle routes determined the protected bike lanes on Eastlake Ave E are the option that best meet evaluation criteria
- **2018** Full paving of Eastlake Ave E confirmed and included in project
- **2020** Submitted draft Environmental Assessment (EA) to Federal Transit Administration (FTA)
- **2021** Submitted supplemental environmental assessment for U District option.
- **2022** $60.1M funding recommendation (FTA Small Starts) included in FY 2023 USDOT budget
- **2022** Finding of No Significant Impact (FONSI) by FTA
- **2022** Continue community engagement through final design phase
Project design update
Roll plot - Eastlake
Roll plot – Eastlake and Belltown
E Lynn St to E Louisa St
E Lynn St to E Boston St
Activity: Share Your Input on Design Elements
Your input matters

- Your input will inform final design decisions
- Construction begins as soon as 2023
- Your feedback provides us with helpful information as we continue to refine the project design
- This session is not a “voting” exercise but a great opportunity to see your feedback in real time
- You may also share your feedback in a survey available from our project website
How to participate

- We’ll walk through several key intersections and outstanding design decisions
- You can participate at menti.com and enter the code shown on the screen during the participation moments
- Options may display in a random order, so please confirm your entries before submitting
- You may also participate via the online survey
Your turn

- Q1: Which portion of the RapidRide J Line project area do you live, work or visit most often?
Pedestrian lighting at RapidRide stations

Option 1  Option 2  Option 3  Option 4  Option 5  Option 6
Your turn

- Q1: Which lighting option do you prefer?
Protected Bike Lane Buffer Types

Base design for J Line: Paint and Post

Project concepts:
• Concept #1: Concrete Guard
• Concept #2: Concrete Parking Stop
• Concept #3: Raised Curb
Protected Bike Lane Buffer Types

Base design for J Line: Paint and Post

Benefits
- Already included in project design
- Quick installation that can be done by SDOT crews
- Provides flexibility for emergency services
- Very low purchase cost and widely available
- Good for special uses such as pilot projects to evaluate a permanent design, on bridge decks with limited capacity for additional weight or holes

Trade-offs:
- Post don’t provide as much physical protection as other barriers
- Requires replacement much more frequently than other materials, incurring costs and adding to maintenance workloads
- Despite low installation costs, may have the highest overall lifecycle cost
Protected Bike Lane Buffer Types

Concept #1: Concrete Guard

Benefits:
+ Concrete is a long-lasting material
+ The size and height of the concrete guard provides robust protection
+ Manufactured with built-in drainage feature
+ Easier to install than full-size concrete dividers
+ The surface area provides opportunities for public art and placemaking

Trade-offs:
- Due to the weight and the precast nature of the concrete guard, it requires being forklifted into place
- Logistically difficult to build on a large scale due to the current lack of local suppliers, which may result in a slower project delivery
- The surface area, especially if left bare, is a tempting target for graffiti
Protected Bike Lane Buffer Types

Concept #2: Concrete Parking Stop

Benefits:
+ The wide availability of parking stops makes them easier to build quickly
+ Ease of implementation helps contribute to timely project-delivery
+ The concrete material is long lasting and provides substantial protection

Trade-offs:
- Less vertical height and therefore, less visible to drivers (This can be supplemented with the addition of plastic posts on top of the parking stops)
- Larger sized parking stop requires forklifts to install
Protected Bike Lane Buffer Types

Concept #3: Raised Curb

Benefits:
+ Concrete is a long-lasting material
+ Can be molded in a variety of forms, curves, and heights accommodating turns, bump-outs, and other street features

Trade-offs:
- Can be expensive for longer segments
- May be less durable at locations like curves
- Less vertical height and therefore, less visible to drivers (This can be supplemented with the addition of plastic posts at intersections)
Your turn

- Q1: Which protected bicycle buffer option do you prefer?
Bike Rack Locations

Typical bike rack dimensions

Bike rack siting considerations

Bike racks are planned for RapidRide stations
Your turn

Q1: Where in the corridor would you recommend SDOT install additional bike racks?

Think about listing intersections, key businesses, key points of interest, etc.
Channelization on Eastlake at Fuhrman

Option 1 – Standard bicycle lane
Channelization on Eastlake at Fuhrman

Option 2 – Buffered bicycle lane
Channelization on Eastlake at Fuhrman

Option 1 – Standard bicycle lane

Option 2 – Buffered bicycle lane
Your turn

- Q1: Which option do you prefer?
Southbound Station on Roosevelt Way NE - J Line RapidRide Station Options

Options shown reflect potential locations for the southbound RapidRide J Line station(s) on Roosevelt Way NE

**Option 1**: Two southbound Stations on Roosevelt Way NE, one at NE Campus Parkway and one at NE 42nd St

**Option 2**: Station at northwest corner of NE 42nd St

**Option 3**: Station at southwest corner of NE 42nd St
Southbound Station on Roosevelt Way NE - J Line
RapidRide Station Options

Option 1: Stations at Roosevelt Way NE and NE Campus Parkway and NE 42nd St

Benefits
- Provides adjacent access to UW Medical Center
- Campus Parkway Station provides access to Burke-Gilman Trail
- Visibility to northbound station

Trade-offs
- Congested with buses
- Proximity of 2 stations reduces speed and reliability
Southbound Station on Roosevelt Way NE - J Line
RapidRide Station Options

Option 2: Station at northwest corner of NE 42nd St

Benefits
- Decreases congestion at UW Medical Center stop
- Cost effective to only build one station
- Better speed and reliability for J Line with only one stop on Roosevelt

Trade-offs
- Conflicts with southbound to westbound right-turning vehicles
- 1-block walk to UW Medical Center & Burke-Gilman Trail
- Lacks visibility to northbound station pair on 11th Ave NE
- Removes existing curb bulb on NE corner, increasing pedestrian crossing times.
Southbound Station on Roosevelt Way NE - J Line
RapidRide Station Options

Option 3: Station at southwest corner of NE 42nd St

Benefits
- Decreases congestion at UW Medical Center stop
- Cost effective to only build one station
- Best speed & reliability of J Line with one stop on Roosevelt and placed far side of the intersection
- Provides visibility to northbound station pair on 11th Ave NE
- Adjacent to proposed pedestrian crossing signals at 41st

Trade-offs
- 1½-block walk to UW Medical Center; ½-block walk to Burke-Gilman Trail
Your turn

- Q1: Which RapidRide station location option do you prefer?
Protected Bike Lane Crossing at 11th/43rd

Option 1: NO SPECIAL TREATMENT
Option 2: DIAGONAL BIKE CROSSING
Option 3: BIKE BOX ON EASTBOUND NE 43RD ST AND NORTHBOUND 11TH AVE NE
Option 4: CURB BULB EXTENSION
## Protected Bike Lane Crossing at 11th/43rd

### Option 1: No Special Treatment

#### Details
- Bike crossing treatments are provided for eastbound and westbound cyclists
- Northbound cyclists use crosswalks and pedestrian sidewalk areas to continue through the intersection

#### Benefits
- Provides basic marking treatment so that east/west movements are clearly covered

#### Trade-offs
- Northbound cyclists may have difficulty navigating intersection
- Cyclists making turns do not have space clear of the waiting area

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**NO SPECIAL TREATMENT**
Protected Bike Lane Crossing at 11th/43rd

Option 2: Diagonal Bike Crossing

Details
• Adds diagonal bike crossing treatment through the intersection to transition northbound cyclists from right to left side of the road
• Eastbound cyclists are provided a bike box to queue prior to a left turn

Benefits
• Provides basic marking treatment for east/west movements
• Provides markings for cyclists turning/traveling northbound
• Provides northbound cyclist crossing transition in single state
• Provides clear waiting area for eastbound cyclists turning northbound

Trade-offs
• Including both the diagonal bike crossing treatment and bike box behind the south crosswalk may lead to unexpected cyclist presence for drivers
• Some eastbound cyclists turning northbound may have difficulties accessing the bike box if high pedestrian volumes present
• Additional northbound bike-only signal phase may cause vehicle delays
Protected Bike Lane Crossing at 11th/43rd

Option 3: Bike Boxes

Details

• Northbound cyclists are provided a bike box behind the crosswalk on south leg to allow for transition from right to left side of the road

Benefits

• Provides basic marking treatment for east/west movements
• Allows northbound vehicles and cyclist to continue through the intersection at the same time
• Allows northbound cyclists to safely use bike box to cross to west side of 11th Ave NE

Trade-offs

• Some eastbound cyclists turning northbound may have difficulties accessing the bike box if high pedestrian volumes present
## Protected Bike Lane Crossing at 11th/43rd

### Option 4: Curb bulb extension on NE Corner

#### Details
- Provision for protected intersection at NE corner

#### Benefits
- Provides basic marking treatment for east/west movements
- Clear routing of northbound cyclists via curb bulb provides protected space behind curb for two-stage crossing

#### Trade-offs
- May require additional reconstruction at NE corner and modifications of crosswalk alignments
Your turn

Q1: Which option do you prefer?

Option 1: No special treatment
Option 2: Diagonal bike crossing
Option 3: Bike box on eastbound NE 43rd St and northbound 11th Ave NE
Option 4: Curb bulb extension
Fairview/Eastlake – Current Design

- Bike buffers not provided
- Cyclist visibility concerns for right turn vehicles
- Bicycle crossing not provided
- Two northbound through lanes
- Merge lane
- Bike buffers not provided
Fairview/Eastlake – Option 1

**Benefits**
- Mitigates southbound right turn vs southbound bike conflict
- Provides standard channelization widths

**Trade-offs**
- Need new signal infrastructure and coordination for southbound bikes vs. southbound right turns
- Potential trolley wire adjustments
- Impact to delay at intersection
- Bus operators may need to merge with northbound traffic on Fairview through intersection

**Provides**
- Signalized movement for bikes
- Bike buffers on Eastlake
- Removes northbound merge lane on Eastlake

**Removes**
- Northbound merge lane on Eastlake

**Transit & right-turn only lane**
Fairview/Eastlake – Option 2

Benefits
- Removes southbound right turn vs southbound bike conflict
- Provides standard channelization widths

Trade-offs
- Circuitous route for cyclists may result in low compliance
- Impact to delay
- Bus operators may need to merge with northbound traffic on Fairview through intersection

Cyclists use existing crossing
Removes cross-bike markings for southbound through movement
Provides bike buffers on Eastlake
Removes northbound merge lane on Eastlake
Provides signalized movement for bikes
Transit & right-turn only lane
Fairview Ave N
Eastlake Ave E
E Galer St
Fairview/Eastlake – Option 3

Benefits
- Removes southbound right turn vs southbound bike conflict
- Low impact to project scope

Trade-offs
- Circuitous route for cyclists may result in low compliance
- Non-standard lane widths

Cyclists use existing crossing

Removes cross-bike markings for southbound through movement

Provides signalized movement for bikes
**Benefits**

- Provides signal for southbound vehicle and bicycle movements
- Expected to reduce southbound transit delay

**Trade-offs**

- Northbound impact to delay at intersection
- Bus operators may need to merge with northbound traffic on Fairview through intersection
- Additional infrastructure and cost
- Southbound right turn queue lengths may block southbound bus lane
Fairview/Eastlake Intersection Configuration

Option 1 adds a transit and right-turn only lane on Fairview Ave N, removes a merge lane on Eastlake Ave E, provides a signal for bikes, and adds bicycle buffers on Eastlake Ave E.

Option 2 also adds a transit and right-turn only lane on Fairview Ave N, removes cross-bike markings for southbound bicycle movements on Eastlake Ave E, removes a merge lane on Eastlake Ave E, and adds bicycle buffers on Eastlake Ave E.

Option 3 removes cross-bike markings for southbound bicycle movements, adds bicycle buffers on Eastlake Ave E, and moves cyclists to use an existing crossing on Fairview Ave N.

Option 4 creates a transit-only and right-turn lane from Eastlake Ave E to Fairview Ave N, removes a southbound through movement for cyclists on Eastlake Ave E, creates a new bicycle and pedestrian crossing across Eastlake Ave E, and eliminates an existing crossing on Fairview Ave N.
Your turn

- Q1: Which option do you prefer?
Q & A
Next steps
Ongoing engagement opportunities

- Share the survey with your friends, neighbors and colleagues: [www.surveymonkey.com/r/jlinedesign](www.surveymonkey.com/r/jlinedesign)
- Sign up for project email updates to be kept in the loop for next steps
- Stay tuned for information on future engagement opportunities
Project timeline

- **Design**: 2017 – 2023
- **Construction starts**: 2023/2024
- **Service starts**: As soon as 2026
Keep in touch

Have Questions or Ideas?
- Email RapidRide@seattle.gov

Want to Stay Informed?
- Check out the latest project information
- Sign up for email updates

www.seattle.gov/Transportation/RapidRideJLine

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Thank you!