

# *Rainier Valley At-Grade Crossing Update*

*System Expansion Committee*

*3/14/24*

# Why we're here

- Background
- Program update
- Next steps



***Background***

# *Rainier Valley corridor*

- Service opened in 2009.
- Approximately 4.5 miles of semi-exclusive right of way.
- 3 at-grade stations – Columbia City, Othello, Rainier Beach.
- 27 at-grade crossings, including 9 pedestrian-only crossings.



# *Program priorities*

- Reduce collisions and near misses with trains, vehicles and pedestrians.
- Provide a consistent and safe passenger experience system-wide.
- Support reliable service, mitigate impacts to operational performance.
- Increase community perception of safety of Sound Transit's service.
- Build positive, proactive relationships with surrounding communities that foster trust.
- Increase ease of access within the immediate community.
- Increase accessibility of the Sound Transit network for all.

# Community Engagement

## *Phase 1 Community Engagement Summary (Winter 2022)*

- Reached out to over 30 community-based organizations.
- 13 organizations and community leaders responded.
- Circulated a survey created by the Accessibility Services Division.
- Surveyed Link operators.
- Partnership Agreement signed with SDOT August 2022.

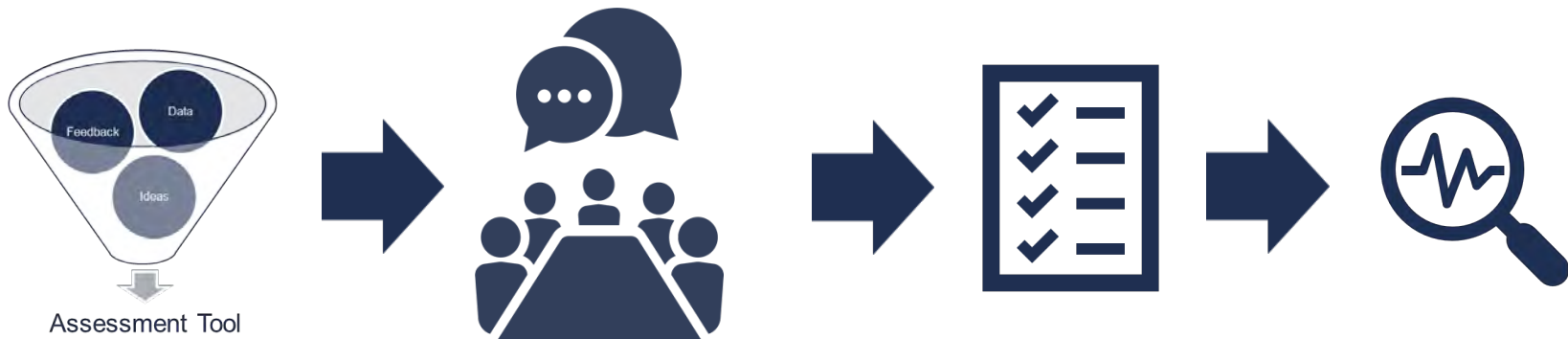
## *Phase 2 Community Engagement (2023 – present)*

- Continue to engage and maintain established relationships.
- Share internal efforts underway to address community concerns.
- Utilize Equitable Engagement Toolkit.

# Screening safety enhancement ideas

## Evaluation process overview

1. Collect all safety enhancement ideas.
2. Team research and discussion.
3. Prioritize efforts based on screening.
4. Further research / planning.





# Safety enhancement ideas

Administrative Controls		Engineering Controls		Roadway Redesign
<p><b>Safety Education</b></p> <ul style="list-style-type: none"> <li>✓ 5 Core Safety Messages</li> <li>✓ Safety campaigns with partners</li> <li>✓ Safety education campaigns</li> <li>✓ Engagement activities</li> <li>✓ Outreach and training on specific mitigations</li> </ul> <p><b>Encouragement</b></p> <ul style="list-style-type: none"> <li>✓ Rainier Area Security Emphasis Team</li> <li>• Crossing guards</li> <li>• Using red light cameras to mail education materials</li> </ul>	<p><b>Operations Procedures</b></p> <ul style="list-style-type: none"> <li>• 10 MPH Station Approach Pilot</li> <li>• Audible warning signage for operators</li> <li>• Training emphasis</li> <li>• Speed adjustments</li> </ul>	<p><b>Audible</b></p> <ul style="list-style-type: none"> <li>• Enhance wayside bells</li> <li>• Localized audible announcements</li> </ul> <p><b>Visual</b></p> <ul style="list-style-type: none"> <li>✓ Updated MUTCD static signage</li> <li>✓ Dynamic no left turn warning signs</li> <li>✓ Dynamic “Another Train Coming” warning signs</li> <li>✓ Retroreflective tape around signal heads (SDOT)</li> <li>✓ Refreshed pavement markings</li> <li>• Paint to visually emphasize trackway</li> <li>• In pavement lights</li> </ul> <p><b>Physical Infrastructure</b></p> <ul style="list-style-type: none"> <li>• Pedestrian gates at station locations</li> <li>• Channelization / fencing</li> <li>• Left turn vehicle gates only, similar to parking garage-style gates</li> </ul>	<p><b>Technology</b></p> <ul style="list-style-type: none"> <li>✓ Leading pedestrian intervals (SDOT)</li> <li>• Traffic signal reprioritization pilot</li> <li>• Video Analytics</li> <li>• V2X</li> <li>• Touchless pedestrian push buttons</li> <li>• Smarter traffic signal controller</li> <li>• Signal system battery backup</li> <li>• ROW detection</li> </ul> <p><b>Vehicle</b></p> <ul style="list-style-type: none"> <li>✓ Adjust LRV bell volume</li> <li>• Wig-wag headlights</li> </ul>	<ul style="list-style-type: none"> <li>• Consolidate crossings</li> <li>• Eliminate crossings</li> <li>• Grade separate</li> <li>• Full corridor quad gates and flashers</li> <li>• 2 Phase crossing</li> <li>• Larger pedestrian refuge areas</li> <li>• Other traffic calming measures</li> </ul>

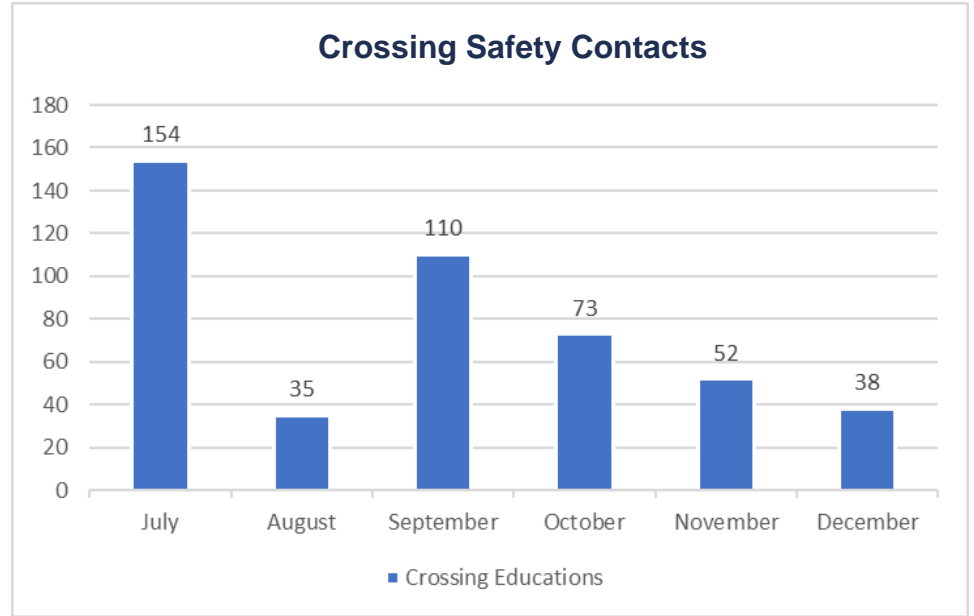


***Program update***

# Safety education



# Encouragement



*Data is through 12/24/2023*

# Completed Engineering projects

## Sound Transit

- Adjust LRV bell volume.

## Seattle Dept. of Transportation

- Leading pedestrian intervals.
- Retroreflective tape around signal heads.

## Partnership

- LOOK Pavement markings.
- RxR Pavement markings in left turn pockets.
- Refreshed all crosswalk and lane line markings.
- Updated static signs.
- Upgraded no left turn dynamic warning sign.
- Upgraded Another Train Coming dynamic warning sign.



# Technology projects in progress

## SMART Grant

- Video analytics.
- Touchless pedestrian push buttons.
- Vehicle to everything (V2X) communications.
- Smart technology traffic signals.
- Signal system battery backup.





# Technology projects in progress

## Signal Reprioritization Pilot

- Change how the signal system prioritizes Line 1 service through the corridor.
- Goal of reducing pedestrian wait time and N/S left turning vehicle wait time.
- Phased Pilot
  - Non-Revenue Service (March 3)
  - Weekend (TBD)
  - Tuesday – Thursday (TBD)



# Exploring pedestrian gates at stations

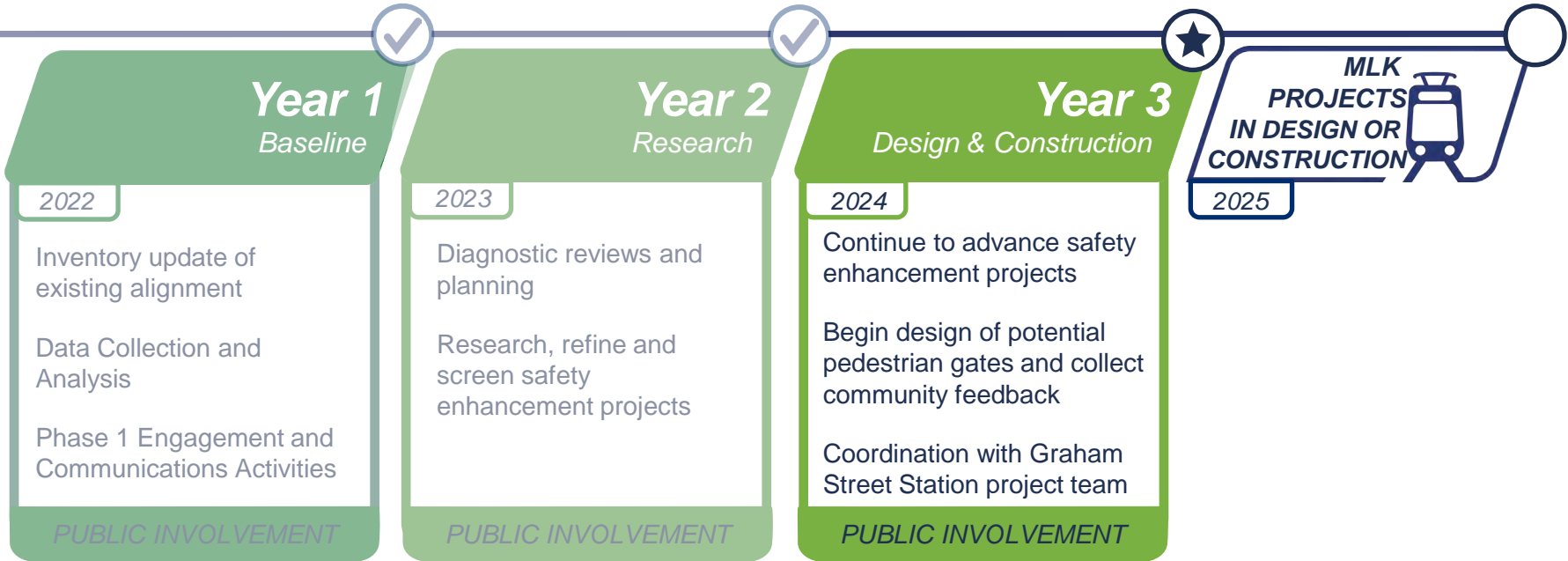


- Phase I community engagement with community-based organizations and accessibility and operator surveys.
- Screen and refine safety enhancement ideas.
- Safety analyses and 30% design.
- Community engagement (including online open house, surveys, email and text notifications and briefings to community-based organizations).
- Report back to the Board on findings, community feedback and next steps.



***Next steps***

# MLK safety enhancements



*Thank you*



 [soundtransit.org](https://www.soundtransit.org)

