

SOUTH BOSTON WATERFRONT – EMERGENCY ACCESS RAMP SILVER LINE

South Boston Waterfront – Emergency Access Ramp **Overview**

- Emergency Access Ramp is **not safe** for use under some conditions
- MBTA and MassDOT Highway Division have been working together to develop and deliver a solution for Silver Line buses to **safely use** the ramp in order to provide customers with improved service (shorter run times)
- MassDOT and the MBTA conducted an operations test to demonstrate use of the Emergency Access Ramp by Silver Line vehicles on August 27 through August 29 between 3PM-6PM.
 - PM peak hours were chosen as I-90 experiences high congestion during that time period – ramp use allowed only when I-90 is below 30MPH



Silver Line Transitway

Silver Line Way Station

I-90 (Eastbound)

I-90 (Westbound)

Tow Lot

HOV Lane

"Ramp A"

Access Ramp

Haul Road

HOC

Haul Road

State Police

Pumphouse Road

South Boston Waterfront – Emergency Access Ramp
Existing Conditions

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Preliminary Findings and Takeaways

- Based on the preliminary data, Highway Division and MBTA recommend continuing to advance design to move towards permanent implementation.
- Feedback from bus operators has been positive.
- Speeds on I-90 never exceeded 30 MPH during the duration of the test – based on restricting ramp use to when speeds are less than 30 MPH, this would suggest that the ramp could be open for a longer period of time.
 - Silver line vehicles using the ramp had an average time savings of **3-8 minutes** but as much as **17 minutes** during the pilot when compared to the previous week

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Safety Challenges

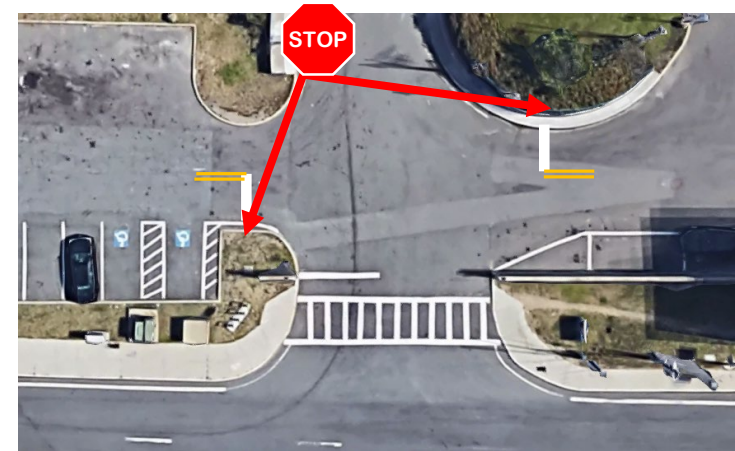
- 1) There is a wall at the entrance of the State Police barracks that obstructs views between State Police vehicles, tow truck operators, and entering Silver Line Buses.
- 2) Additionally, potential conflicts between vehicles at the driveway entrance
- 3) Potential for more than one vehicle on the ramp at the same time



Wall obstructs views at driveway entrance

South Boston Waterfront – Emergency Access Ramp **Safety Solutions**

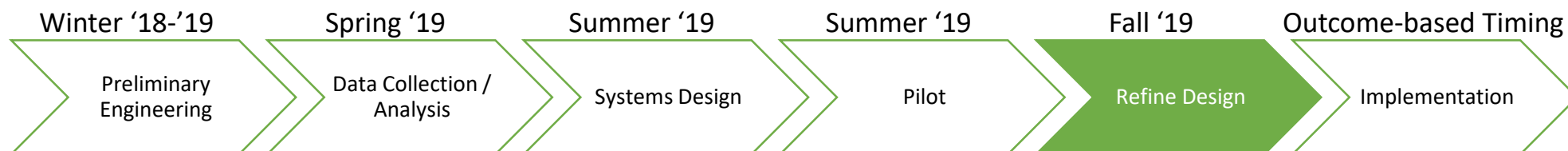
- 1) Recommend investigating if the wall can be removed.
- 2) Recommend striping and signage changes to formalize driveway entrance.
- 3) Provide vehicle detection on ramp to warn ramp users of other vehicles.



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Next Steps

- Highway Division is working with MBTA to evaluate all feedback and data collected during the pilot.
- Advancing the Intelligent Transportation Systems design could determine if additional tests are required, or if design could lead directly to procurement and implementation.
- MassDOT, working with the MBTA, to design and evaluate each Safety Solution
 - Will return to the Boards in the coming weeks with an update



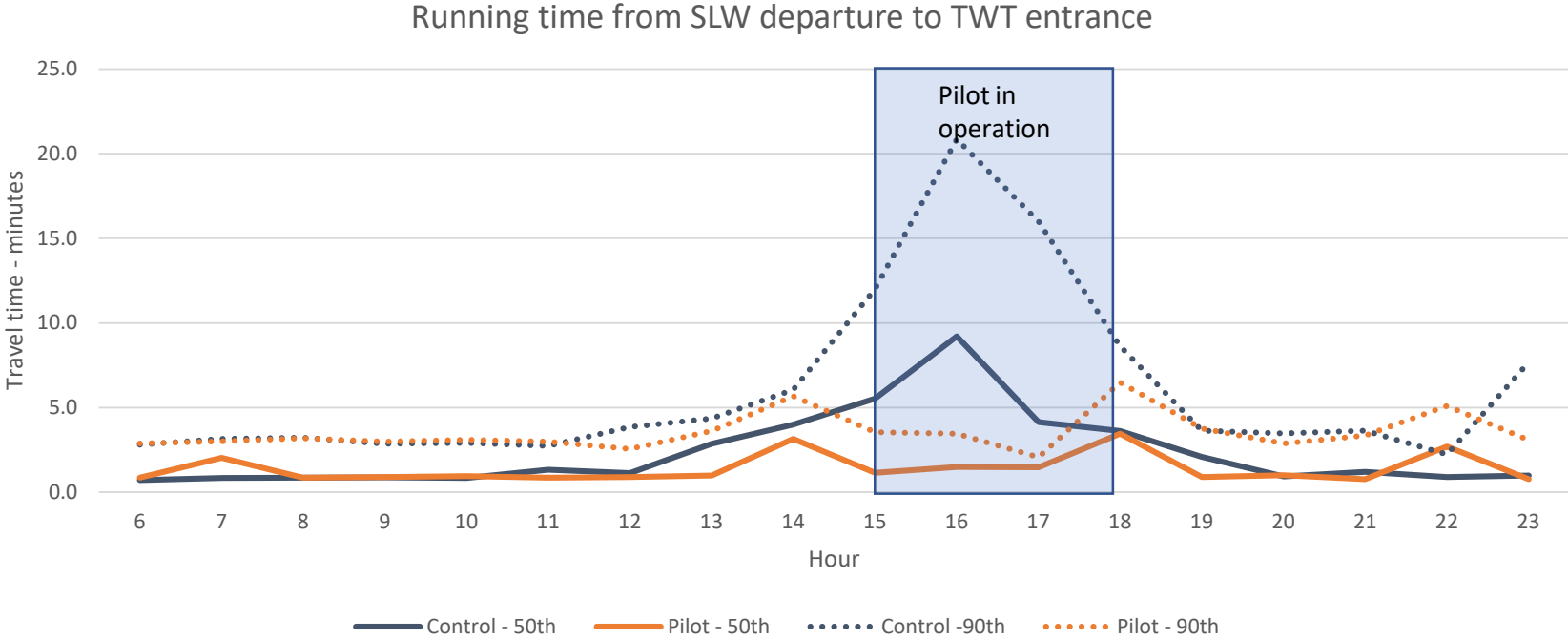
APPENDIX

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Appendix – Runtime Savings

1) Running time savings in minutes

Hour	Run time @ Median			Run time @ 90th percentile			
	Control	Pilot	Savings	Control	Pilot	Savings	
15:00		5.5	1.2	-4.4	12.0	3.6	-8.5
16:00		9.2	1.5	-7.7	20.9	3.5	-17.4
17:00		4.1	1.5	-2.7	16.0	2.1	-13.9



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Appendix – Runtime Savings

2) Ridership (data from Spring 2019)

Passengers directly experiencing the savings

Hour	Total avg loads from SLW	Cumulative savings / day in Passenger-hours	
		Normal day	Bad Day
15:00	340	-24.8	-47.8
16:00	373	-48.0	-108.4
17:00	298	-13.2	-69.2
Total	1011	-86	-225

3) Additional notes on ridership

Total riders experiencing the savings	1011 <<<--- # of SL1 & SL3 riders directly experiencing the savings
Total boardings on these OB trip	1472
	69% <<<--- % of OB SL1 & SL3 ridership between 3 PM & 6 PM who directly experience this savings
Total SL1 & SL3 riders (3-6 PM)	3070
	2058 <<<--- # of SL1 & SL3 riders indirectly benefitting due to better cycle times and reliability
Total SL1 & SL3 riders per day	14491
	7% <<<--- % of all SL1 & SL3 riders directly benefitting
	14% <<<--- % of all SL1 & SL3 riders indirectly benefitting

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Appendix – Operator Surveys

- Summary of operator surveys (18 respondents):

How easy was it to understand the signs at the top of the ramp?

- 94% Very easy to understand
- 6% Somewhat easy to understand
- 0% Average
- 0% Somewhat difficult to understand
- 0% Very difficult to understand

If you used the ramp, how safe did the merge feel?

- 89% Very safe
- 0% Somewhat safe
- 0% Average safety
- 0% Somewhat unsafe
- 11% Very unsafe*

* These responses are inconsistent with written comments on those forms that indicated the operators had positive feelings towards the test.

"The pilot should be continued on a regular basis."

"Excellent diversion especially for rush hour"

If you used the ramp, how well were you able to see traffic on the highway at the bottom of the ramp?

- 94% Very well
- 6% Somewhat well
- 0% Average sight lines
- 0% Somewhat poorly
- 0% Very poorly

Very convenient ♥

please keep it open
about time

I just want to say
thank you. You saved
me alot of time in traffic
great Idea 😊

THE RAMP IS NECESSARY during
RUSH HOURS -

THANKS!!!