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Introduction

The Massachusetts Department of Transportation (MassDOT) is planning to conduct a pilot program that will temporarily modify access restrictions on the South Boston Bypass Road (SBBR) and segments of the High Occupancy Vehicle (HOV) lane system. The modification of access restrictions will allow all motorists and those driving by themselves (i.e., single occupancy vehicles) to use the SBBR (into South Boston) and select portions of the HOV lane system that lead to I-90 eastbound, the Ted Williams Tunnel and Logan Airport.

This proposed 12-month Pilot Re-Evaluation Program intends to build upon the information collected during a similar six-month Pilot Program conducted in late 2015/early 2016. The new 2018-2019 pilot program is anticipated to commence in early October 2018, and terminate on September 30, 2019.

MassDOT needs to be granted permission by State Environmental Regulators to be able to conduct the pilot. MassDOT submitted a Request for Advisory Opinion (RAO) to the Massachusetts Environmental Policy Act (MEPA) Office in a letter dated August 15, 2018 related to a proposed 2018-2019 Pilot Program. MassDOT provided a technical report with the RAO that provides additional information supporting the proposed pilot program. MassDOT expects a MEPA determination by October 1, 2018.

The 2018-2019 Pilot Re-Evaluation Program allows MassDOT to assess the potential for the SBBR and HOV lane system to address traffic congestion related to recent and continued growth and activity in South Boston. The pilot is one measure MassDOT is exploring to enhance mobility within the South Boston Waterfront area and reduce congestion in South Boston neighborhoods.

Pilot Re-Evaluation Program Monitoring and Evaluation

During the 2018/2019 Pilot Re-Evaluation Program, MassDOT will assess potential benefits and impacts related to modifying access restrictions along the SBBR and HOV lane system. MassDOT will be continually monitoring the SBBR, HOV system and surrounding roadways throughout the pilot program. If travel time/ delay, safety, noise or air quality are significantly impacted by the pilot suspension of the 2018/2019 Pilot Re-Evaluation Program will be considered. The monitoring criteria, performance measures, and evaluation thresholds include:

Traffic

Traffic Volume Monitoring

Traffic (volumes and speed) along the SBBR will be monitored continually (24/7) through use of remote monitoring sensors installed as part of the pilot program. Additional traffic counts will be conducted periodically during the pilot program at roadways and intersections that may experience a change in conditions associated with the opening of the SBBR and the removal of the 2+ person occupancy requirement for the HOV lane system. In addition to the continual (24/7) monitoring, traffic counts will be conducted during three distinct periods of the pilot and include:

- Roadway/street traffic volume counts for a continuous 7-day period at 27 locations;
- Intersection weekday morning (6:00 AM to 10:00 AM) and evening (3:00 PM to 7:00 PM) peak period turning movement and classification counts at 22 locations.

Traffic Volume Performance Measures

Based on the monitoring program detailed above, MassDOT will track traffic volume shifts on key roadways including the SBBR, I-93 and I-90 mainline, HOV and ramps, I-93 Frontage Roads, and South Boston corridors to verify that

lifting the inbound SBBR/HOV system restrictions do not create an adverse effect to travel along the SBBR, HOV system and in other parts of the Seaport district.

Evaluation Threshold: A comparison of volumes observed during the Pilot Re-Evaluation Program versus pre-Pilot conditions indicate volumes exceeding established roadway capacity would lead to consideration of suspension of the program. Where pre-Pilot conditions already exceed roadway capacity, additional criteria such as queuing and delay will be evaluated as part of the pilot.

Travel Time Monitoring

Conduct travel time runs using field observations along the following routes:

- All traffic: I-93 northbound to TWT (from I-93 Exit 20 to I-90 Exit 26), via the general-purpose lanes and the HOV lane system.
- Commercial traffic: SBBR from the I-93 Frontage Road to Ramp A/Tunnel entrance. Travel times will along the SBBR also be collected 24/7 using remote sensors along the SBBR.
- Silver Line: from Silver Way Station to Logan Airport Terminal A.

Travel Time Performance Measures

Identify travel time changes along key routes for general, commercial, and Silver Line traffic. Establish pre-Pilot conditions and perform checkpoint field travel time runs during pilot to measure any changes. Use remote traffic monitoring sensors to capture set route travel times along the SBBR continuously throughout the pilot period.

Evaluation Threshold: A notable increase in travel time during the Pilot Re-Evaluation Program compared to pre-Pilot conditions. MassDOT will coordinate and communicate with impacted users of these facilities to evaluate whether this increase represents a hardship to a degree that would lead to consideration of suspension of the program.

Operations Monitoring

Using the pre-Pilot traffic volumes for the study area network, determine the intersection delay, queueing, and levels of service (LOS) to establish the control measures for evaluation.

Operations Performance Measures

Establish operational conditions for the study area intersections and ramp junctions that include tracking changes to vehicle delay, LOS, and/or vehicle queue lengths related to the Pilot program. Perform an intersection analysis to examine any patterns of operational change that improves or worsens conditions at critical intersections/ramps.

Evaluation Threshold: A comparison of intersection delay, queueing, and LOS during the Pilot Re-Evaluation Program versus pre-Pilot conditions indicates a change in delay that results in a drop in LOS to overall LOS E (55 seconds per vehicle) or LOS F (80 seconds per vehicle) and/or observed queuing that extends through adjacent locations. (Existing locations that provide for LOS E or F during peak periods will be evaluated based on the queuing criteria detailed above).

Air Quality

Air Quality Monitoring

Using all relevant traffic data (including but not limited to roadway and intersection traffic counts and travel time runs), a model will be prepared to run a microscale (hotspot) analysis to confirm that the National Ambient Air Quality