



Maura Healey, Governor  
Kimberley Driscoll, Lieutenant Governor  
Monica Tibbitts-Nutt, Secretary & CEO  
Phillip Eng, General Manager & CEO



## DESIGN DIRECTIVE

To: Distribution

From: Sam Zhou  
Chief Engineer – Engineering & Capital

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RE: Pedestrian Crossing Control at MBTA Busway Traffic Signalized Intersections

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### **PURPOSE**

This Engineering Directive is issued in response to a recent tragic incident where an MBTA bus exiting a busway fatally struck a pedestrian who had the right-of-way to cross the street. The purpose of this directive is to enhance pedestrian safety at intersections and crossings where MBTA bus operations interface with public roadways by eliminating concurrent traffic signal phasing for pedestrian crosswalks and busway exits.

### **RESPONSIBILITIES**

This directive applies to internal MBTA design teams, design consultants engaged by the MBTA, and municipalities operating in proximity to the MBTA's network, whom shall be responsible for the following:

1. Internal MBTA design teams: Ensure compliance with this directive in all ongoing and future projects.
2. Design consultants engaged by MBTA: Integrate the requirements of this directive into all designs involving busway and pedestrian interfaces.
3. Municipalities operating in proximity to the MBTA's network: Coordinate with MBTA to ensure traffic signal modifications align with the requirements of this directive.

### **CODES AND STANDARDS**

All designs shall be prepared in accordance with the requirements of the latest edition of the following:

- Manual for Uniform Traffic Control Devices for Streets and Highways (MUTCD) including Massachusetts amendments

## **DIRECTIVE**

Effective immediately, all parties involved in the design, installation, or modification of traffic signal systems at intersections with MBTA busways must adhere to the following requirements:

1. **Design of traffic signal phasing and sequencing shall prioritize control of busway movements to be non-concurrent during pedestrian movements.**
  - Design of traffic signal phasing and sequencing must make every attempt to avoid pedestrian crosswalk signals that display a "Walk" indication during the green signal phase for buses exiting a busway.
  - Conversely, busway green phases must be avoided when pedestrian crosswalk signals display a "Walk" or "Flashing Don't Walk" indication.
2. **Traffic Signal Phasing Design:**
  - Traffic signal phase timing must prioritize safety and ensure adequate clearance times between pedestrian crossing phases and busway movement phases.
  - The traffic signal phasing design shall include an exclusive or non-concurrent pedestrian phasing to eliminate a pedestrian movement in a crosswalk that is concurrent with the travel path of a busway movement.
3. **Implementation of Advance Warnings:**
  - Advance warning signs or signals must be installed to alert bus operators of pedestrian crosswalk activity where applicable.
4. **Audits and Reviews:**
  - All ongoing and future designs must be reviewed and audited to ensure every effort is made to comply with this directive.
  - Existing traffic signalized intersection operations at MBTA busways where pedestrian movements run concurrent with busway movements must be reviewed with the public operating agency to determine if existing signal operations that aren't consistent with this Directive can be modified per these recommendations.