



July 28, 2009

Secretary Ian Bowles  
Executive Office of Energy and Environmental Affairs  
MEPA Office  
100 Cambridge Street, Suite 900  
Boston, MA 02114

RE: Comments on Notice of Project Change for the Silver Line Service Extension to South Station  
EOEA #6826/11707

Dear Secretary Bowles:

WalkBoston appreciates the opportunity to provide comments on the Notice of Project Change (NPC) for the Silver Line Service Extension to South Station.

The proposal calls for improving the service provided by the existing Silver Line by extending its route from Washington Street to South Station. The extension links up the part of the existing Silver Line that runs between downtown Boston and Roxbury and the part that runs between downtown and Logan Airport via the South Boston waterfront. The principal route of the extended bus line is a new loop between Washington Street and South Station via Essex Street, Atlantic Avenue, Summer Street, the Surface Road and Kneeland Street back to Washington Street.

WalkBoston is very pleased to see that EOT is planning to make this cost effective service improvement for Silver Line riders – an important and hopefully effective use of our limited transportation dollars.

Along the proposed route there are several pedestrian issues that should be further explored as part of the planning for the route extension. WalkBoston's key concerns are focused on: the intersection where Essex Street, the Surface Road and Lincoln Street come together; the sidewalk widths on Essex Street; and the location of the bus stop on Essex Street.

#### Essex Street/Surface Road/Lincoln Street Intersection

The proposed bus route passes through this difficult intersection with three one-way streets in a six-legged intersection. The proposed Silver Line surface connection to South Station will pass through the intersection east-west on Essex Street and north-south on Surface Road.

This intersection is already very difficult and hazardous for pedestrians to negotiate. Volumes of traffic are relatively large for downtown streets. The Surface Road above the Artery is especially crowded because it provides access and egress ramps between the surface and the underground Central Artery. These ramps are connected directly with the intersection. It is virtually impossible for pedestrians to cross the intersection on foot without encountering traffic connected with one of the ramps to the Artery.

The intersection is presently designed with auto throughput as the uppermost consideration. The crosswalks are relatively long for downtown Boston; the crosswalk on the west side of the intersection crosses the street at an angle and is about 60 feet long. If it were perpendicular the crossing would be more like the width of Essex Street - about 25-30 feet.

The crossing on the south side of Essex Street is indirect, requiring pedestrians to cross from island to island to make a safe crossing. This results in a crossing of about 70 feet, in three segments not aligned with one another; this configuration, set back to allow access to the underground Artery, requires pedestrians to move east-west, southwest, and northeast to make the three legs of the crossing.

Given the existing difficult conditions and the intent of the project to draw more transit riders to South Station to use the Silver Line, we believe that the proponent should review the intersection, develop an understanding of existing and projected pedestrian volumes, and develop a plan to improve pedestrian safety. In particular, driver behavior when crossing the intersection to one of the two highway ramps should be studied to determine whether better design or signage could increase driver awareness of pedestrians.

#### Sidewalk widths

Pedestrian access along Essex Street is constrained by the narrowness of the street and the adjacent sidewalks. The proposed extension of the Silver Line along Essex Street may or may not increase pedestrian traffic in the section of Essex Street west of its intersection with Lincoln Street/Surface Artery. (As requested above – an assessment of pedestrian volumes would be very useful.) East of this intersection, however, it is entirely reasonable to anticipate foot traffic generated by the proposed bus stop near the intersection of Essex Street and Atlantic Avenue. Unfortunately, sidewalks here are also of minimal width. A pedestrian level of service assessment should be made to determine whether the Essex Street sidewalks are an appropriate width to serve the passengers using the proposed Silver Line bus stop. We have attached the analysis methodology provided by the Highway Capacity Manual as an end-note to our comment letter.

#### The bus stop on Essex Street

The proposed route of the Silver Line extension to South Station uses Essex Street eastbound, Atlantic Avenue northbound, Summer Street westbound and Surface Road southbound. On Atlantic Avenue the loop is northbound to comply with the one-way street pattern. The loop route uses a very short and congested section of Summer Street that may also contribute to significant delay to Silver Line riders. The route of the bus loop may have resulted from a desire to locate the Essex Street bus stop close to Atlantic Avenue.

It might be appropriate to examine a bus stop on Essex Street just before South Street, rather than at Atlantic Avenue. Although the bus stop would be located a half block further west of the current proposed location, this change would allow buses to turn south at South Street, and return to Kneeland Street without needing to go through the Atlantic Avenue, Summer Street and Surface Road intersections in the high-traffic areas near the South Station headhouse. This rerouting would also eliminate the need for the Silver Line buses to pass through the Surface Road/Lincoln Street/Essex Street intersection twice – once eastbound and once southbound.

Thank you for the opportunity to comment on the Notice of Project Change for the Silver Line Service Extension to South Station. The Project’s final design should consider the safety and convenience of pedestrians to create a walkable design that will attract new riders and serve existing passengers better.

Please contact us for any clarification or additional comments that you may need.

Sincerely,

Wendy Landman  
Executive Director

Robert Sloane  
Senior Planner

Cc: Executive Office of Transportation Secretary James Aloisi  
MBTA General Manager Daniel Grabauskas  
MBTA Director of Environmental Affairs Andrew Brennan

**Pedestrian level of Service Analysis Methodology**

The operational performance of the crosswalks, sidewalks and street corners can be evaluated using the concept of level of service (LOS). The 2000 *Highway Capacity Manual* (HCM) methodology for crosswalks, sidewalks and street corners is defined in Table 1 below.

**Table 1: Crosswalk, Sidewalk and Street Corner Level of Service Definitions**

<b>LOS</b>	<b>Crosswalk Circulation Area (ft<sup>2</sup>/p)</b>	<b>Sidewalk Flow Rate<sup>(1)</sup> (p/min/ft)</b>	<b>Street Corner Circulation Area (ft<sup>2</sup>/p)</b>
A	→ 60	≤ 0.5	→ 13
B	→ 40 and ≤ 60	→ 0.5 and ≤ 3	→ 10 and ≤ 13
C	→ 24 and ≤ 40	→ 3 and ≤ 6	→ 6 and ≤ 10
D	→ 15 and ≤ 24	→ 6 and ≤ 11	→ 3 and ≤ 6
E	→ 8 and ≤ 15	→ 11 and ≤ 18	→ 2 and ≤ 3
F	≤ 8	→ 18	≤ 2

Source: *Highway Capacity Manual*, Transportation Research Board, 2000.

Notes:

ft<sup>2</sup>/p = square feet per pedestrian; p/min/ft = pedestrians per minute per foot

<sup>(1)</sup> Platoon-adjusted.