# Chapter 5—Project Alternatives – Bowker Overpass

## 5.1 INTRODUCTION

This chapter describes four new alternatives developed by MassDOT for the Bowker Overpass and its associated roadways to meet the study's goals identified below:

- Reduce traffic within the study area on the arterials and local streets.
- Improve highway connections between Back Bay and crucial locations to the east, including but not limited to the Seaport District and Logan Airport.
- Improve regional highway connections to the Longwood Medical Area without having an impact on local roads.
- Determine locations to reconstruct parkways and related roadway elements to lower capacity standards.

## 5.2 BOWKER OVERPASS ALTERNATIVES

The Bowker Overpass was constructed in 1965 and was under the Department of Conservation and Recreation's (DCR) ownership until 2009. As part of the Massachusetts transportation agencies' reconfiguration, ownership and maintenance of the Bowker Overpass was transferred to MassDOT in 2009. Since the transfer of ownership, the Bowker Overpass has required significant, annual maintenance repairs because of the deteriorating conditions of the overpass. In 2009, a new ramp was built, and in the fall of 2014, a significant project began to provide repairs to sustain the overpass for the next 10 years.

In June of 2012, MassDOT held a public meeting to provide an overview of the Bowker Overpass study and to begin planning a long-term strategy, which will help identify the significance of the Bowker Overpass. Several factors considered for the long-term strategy were:

- The Bowker Overpass is a major connection across the Massachusetts Turnpike, carrying approximately 52,500 vehicles per day.
- The overpass is a major pedestrian connection across the Massachusetts Turnpike.
- The overpass disrupts the connection between the Emerald Necklace and the Charles River Esplanade.
- The overpass serves as a barrier or border between the Kenmore and Back Bay neighborhoods.

At the June 2012 meeting, four preliminary Bowker Overpass alternatives were presented. The alternatives were developed in response to organizations that showed interest in altering or removing the Bowker Overpass. These preliminary alternatives have been further refined to meet this study's goals. The final Bowker Overpass alternatives are:

- Bowker Overpass Alternative 1: Bowker Overpass Removed
- Bowker Overpass Alternative 2: Bowker Overpass At-Grade
- Bowker Overpass Alternative 3: New Regional Access
- Bowker Overpass Alternative 4: New Regional and Local Access

These alternatives will not impact the proposed Charlesgate Greenway Connection, which would provide a shared-use path from Beacon Street to the Charles River path via Massachusetts Avenue. The shared-use path is included as part of all four alternatives.

### 5.2.1 Bowker Overpass Alternative 1: Bowker Overpass Removed

Bowker Overpass Alternative 1 eliminates the overpass, which connects the Massachusetts Turnpike to Storrow Drive. Figure 5-1 provides a conceptual design of the proposed alternative. The alternative's basic concept is to replace the flyover connection with reconstructed Charlesgate East and West roadways, bringing the traffic down to the at-grade roadways.

Bowker Overpass Alternative 1 requires a new bridge over the Massachusetts Turnpike and the ramps that access Commonwealth Avenue East (as shown in Figure 5-2). This new, five-lane structure would include sufficient width, improving pedestrian and bicycle accommodations.

Charlesgate East would be widened to accommodate increased traffic because of the removal of the overpass (as shown in Figure 5-3). Charlesgate East would become four lanes in the area between Commonwealth Avenue East and West. Charlesgate East would be widened to three lanes, with the addition of a bicycle lane between Commonwealth Avenue West and Beacon Street. Charlesgate West would remain with its current three-lane configuration, but it would be widened to accommodate a bicycle lane (as shown in Figure 5-4). The flyover ramps to Storrow Drive would be removed and the at-grade connections would be improved to accommodate the additional traffic. While there are benefits to the proposed Bowker Overpass Alternative 1, there are a number of issues and impacts associated with it. The list below provides a summary of the benefits and issues/impacts of the alternative:

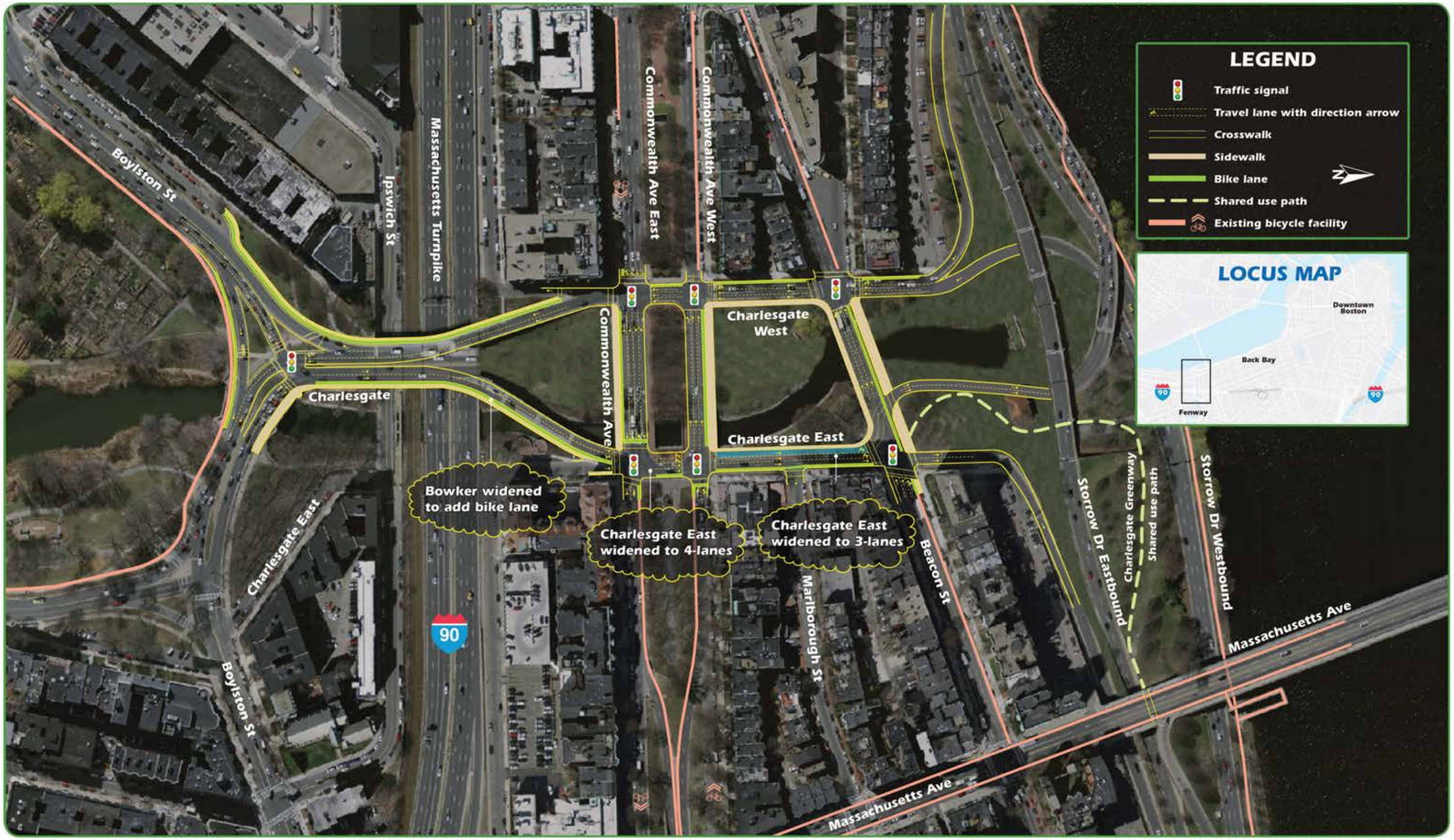


**FIGURE 5-1**
**Bowker Alternative 1**
**Bowker Overpass Removed**

- The reconstructed bridge over the Massachusetts Turnpike and the reconstructed Charlesgate East and West ramps provides an opportunity to improve north-south pedestrian and bicycle accommodations.
- By removing the Bowker Overpass, the park's open space is increased.
- Other than the Charlesgate Greenway Connection, Alternative 1 does not improve access to the Charles River and pathways.
- The removal of the overpass would significantly increase traffic volumes on Charlesgate East and West roadways.
- The increase in traffic volumes on Charlesgate East and West roadways would significantly impact the adjacent residential area.
- The increase in Charlesgate traffic volumes would impact pedestrian east/west flows.
- A decrease in available traffic capacity from Storrow Drive over the Massachusetts Turnpike would cause traffic diversions to other local streets, specifically those in Kenmore Square.

**Figure 5-2**
**Reconstruction of Bowker Bridge over the Massachusetts Turnpike**

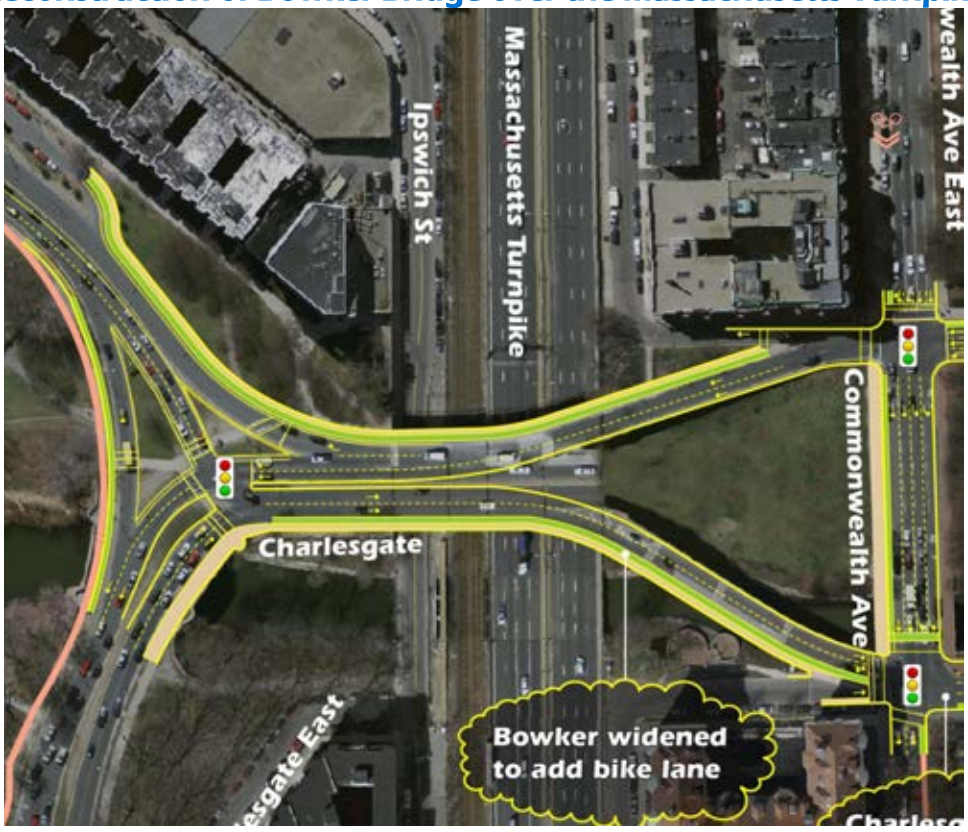

**Figure 5-3**
**Charlesgate East Widening**


**Figure 5-4**
**Charlesgate West**


### 5.2.2 Bowker Overpass Alternative 2: Bowker Overpass At-Grade

Bowker Overpass Alternative 2 eliminates the overpass from the Massachusetts Turnpike to Storrow Drive. Figure 5-5 provides a conceptual design of the proposed alternative.

The alternative's basic concept is to replace the flyover connection with a new at-grade roadway between the Massachusetts Turnpike and Storrow Drive. Charlesgate East and West roadways would also be reconstructed.

Bowker Overpass Alternative 2 constructs a new bridge over the Massachusetts Turnpike (as shown in Figure 5-5), a new at-grade roadway in place of the overpass,

and new ramp connections to Storrow Drive. The bridge and the at-grade roadway would require six lanes, three lanes in each direction. By introducing a new at-grade roadway (in place of the overpass), three new signalized intersections would be constructed.

The Storrow Drive ramp connections would be reconstructed to provide access to/from the new at-grade roadway (as shown in Figure 5-6). Access to/from Storrow Drive would no longer be provided by Charlesgate East and West. Charlesgate East and West, north of Beacon Street, would only provide local access to its adjacent properties. These roadways would be reduced to one travel lane, with the addition of new bicycle lanes.

Only right turns would be allowed at the three new intersections. Left turns would be accommodated at the Commonwealth Avenue, Beacon Street, and Charlesgate East and West intersections (as shown in Figure 5-7).

While there are benefits to the proposed Bowker Overpass Alternative 2, there are a number of issues and impacts associated with it. The list below provides a summary of the benefits and issues/impacts of the alternative:

- The reconstructed bridge over the Massachusetts Turnpike and the reconstructed Charlesgate East and West roadways provide an opportunity to improve north-south pedestrian and bicycle accommodations.
- The reconstructed bridge over the Massachusetts Turnpike and the reconstructed Charlesgate East and West roadways moves traffic volumes away from adjacent residences on Charlesgate East and West.
- The new at-grade roadway creates a new east/west barrier for pedestrians and bicyclists due to high traffic volumes.
- The new at-grade roadway increases the impact to the park's open space.
- Other than the Charlesgate Greenway Connection, alternative 2 does not improve access to the Charles River and pathways.
- Alternative 2 increases delays and conflicts to vehicles, pedestrians, and bicyclists with the introduction of three new signalized intersections.

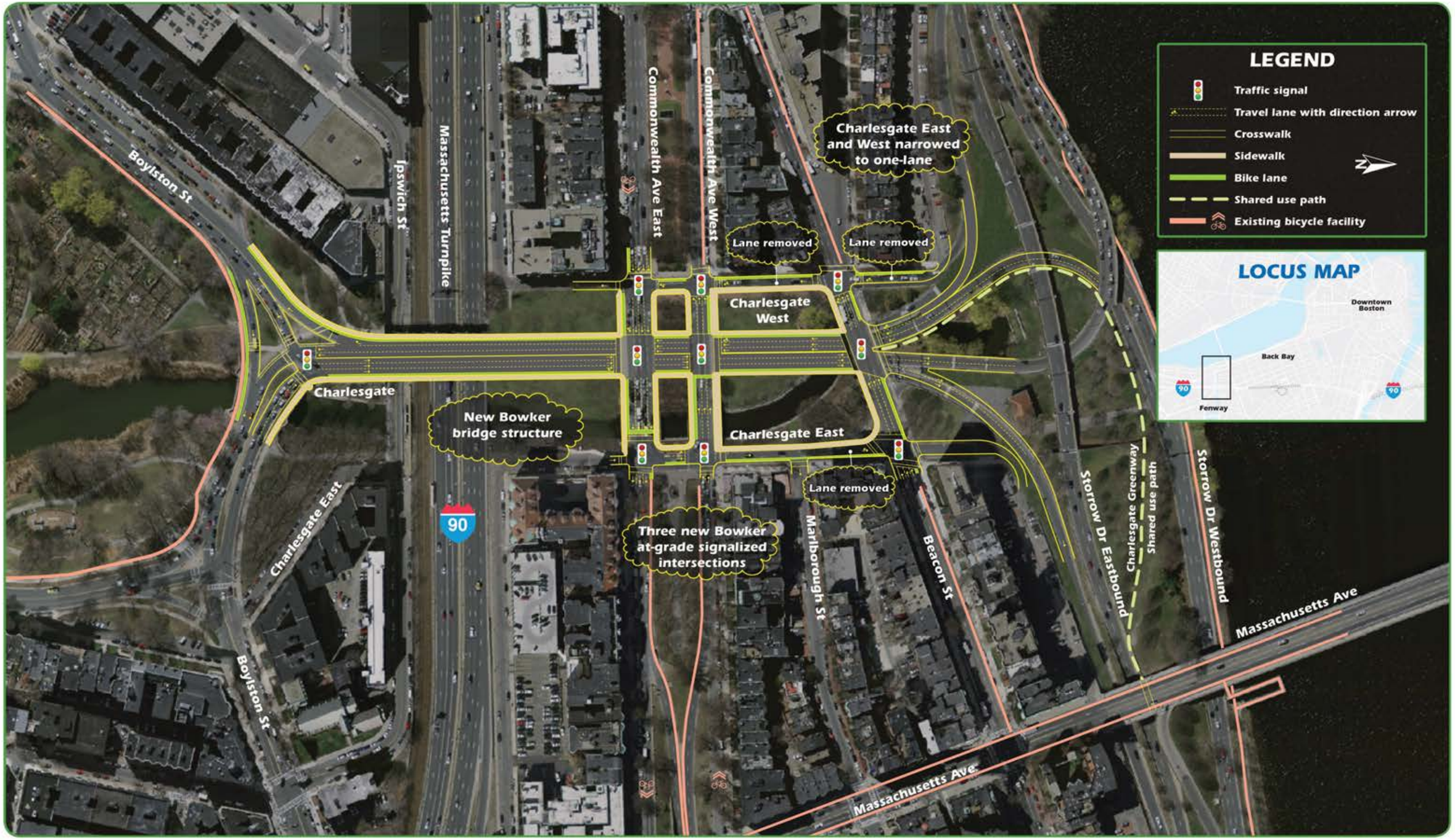


**FIGURE 5-5**
**Bowker Alternative 2**
**Bowker Overpass At-grade**

## Figure 5-6
## New Storrow Drive Ramp Connections


## Figure 5-7
## New At-Grade Intersections

### 5.2.3 Bowker Overpass Alternative 3: New Regional Access

Bowker Overpass Alternative 3 constructs a new Massachusetts Turnpike interchange and eliminates the overpass from the Massachusetts Turnpike to Storrow Drive. Figure 5-8 provides a conceptual design of the proposed alternative.

This alternative constructs a new full interchange (providing on and off ramps to the Massachusetts Turnpike in both directions) at the Bowker Overpass bridge. This interchange would provide new regional access to the Fenway neighborhood and Longwood Medical areas, as well as portions of Back Bay. The existing Bowker Overpass from the Massachusetts Turnpike to Storrow Drive would be removed, and there would no longer be a connection from Storrow Drive to Boylston Street and the Fenway neighborhood and Longwood Medical Area. Storrow Drive would only provide access to these areas via other streets, such Massachusetts Avenue and those around Kenmore Square.

The existing Bowker Overpass bridge over the Massachusetts Turnpike would be reconstructed into a diamond interchange configuration to provide east and west access to the Massachusetts Turnpike. The new interchange requires the reconstruction of the Massachusetts Turnpike from approximately Brookline Avenue to Massachusetts Avenue. The Massachusetts Turnpike would be shifted northward significantly (as shown in Figure 5-9). This northward shift would impact the properties along Newbury Street, and because of the northward shift and the new westbound off-ramp, the existing Massachusetts Avenue westbound on-ramp would need to be removed.

The Boylston Street and Charlesgate intersection would be reconstructed to provide a new left turn from Charlesgate to Boylston Street (as shown in Figure 5-10). This reconstructed intersection would be coordinated with the two new signalized intersections at the new Bowker Bridge and the on/off Massachusetts Turnpike ramps. All of the intersections would provide access/egress to the new Massachusetts Turnpike on/off ramps.

Pedestrian and bicycle accommodations would be added over the Massachusetts Turnpike. These accommodations would connect with pedestrian and bicycle ramps at the northern end of the bridge and also would connect with a new shared-use path to Commonwealth Avenue.

While there are benefits to the proposed Bowker Overpass Alternative 3, there are a number of issues and impacts associated with it. The list below provides a summary of the benefits and issues/impacts of the alternative:

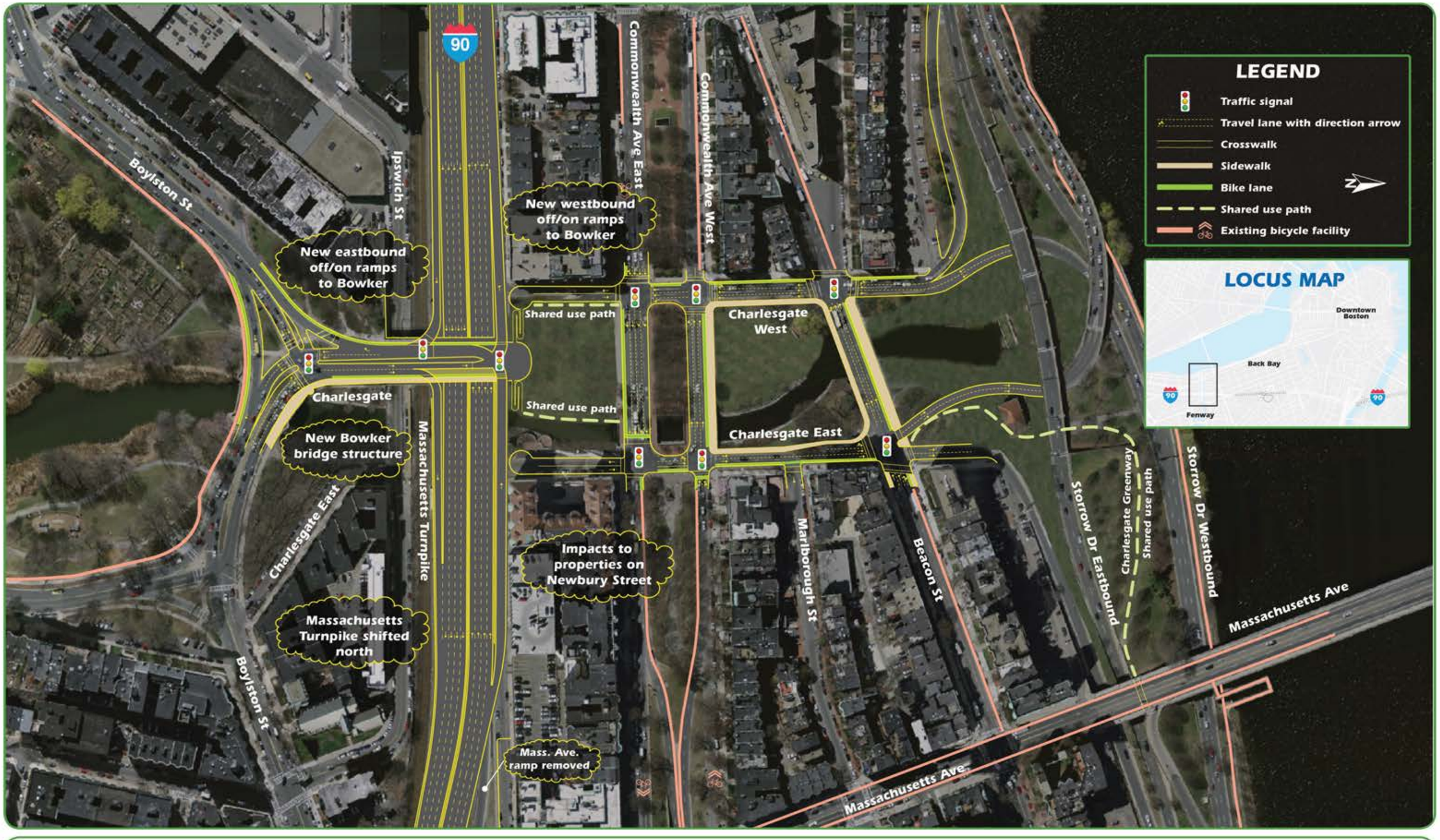


**FIGURE 5-8**
**Bowker Alternative 3**
**New Regional Access**

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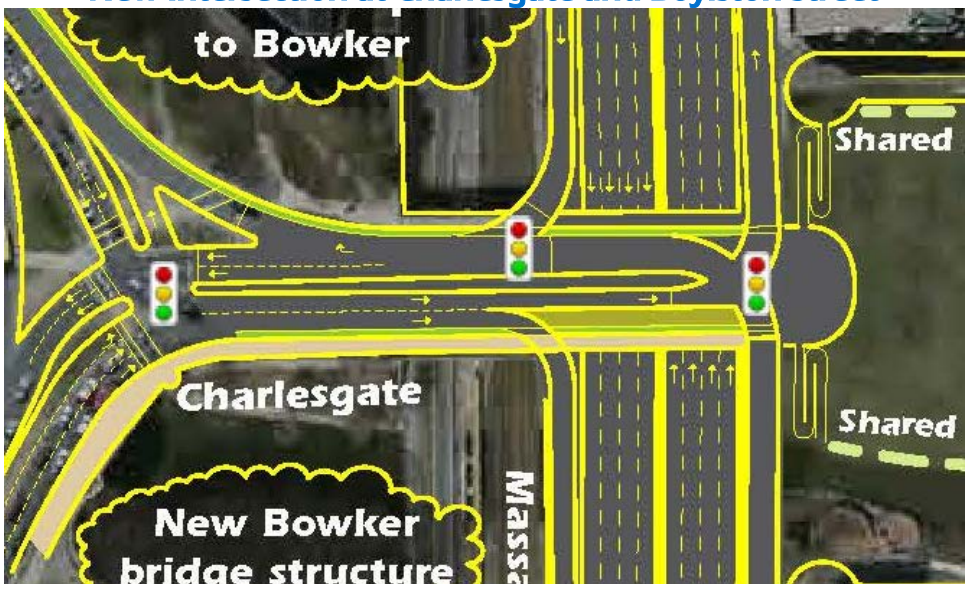
Massachusetts Turnpike Boston Ramps and Bowker Overpass Study

- The reconstructed bridge over the Massachusetts Turnpike provides an opportunity to improve north-south pedestrian and bicycle accommodations.
- The reconstructed bridge provides new regional access from the Massachusetts Turnpike.
- By removing the Bowker Overpass, the park's open space is increased.
- By shifting the Massachusetts Turnpike northward, the properties along Newbury Street are significantly impacted by the new on- and off-ramps.
- By removing the Bowker Overpass, the removal of the existing Massachusetts Avenue westbound on-ramp is required.
- Other than the Charlesgate Greenway Connection, Alternative 3 does not improve access to the Charles River and pathways.
- Alternative 3 increases diverted traffic from Storrow Drive to other routes.

**Figure 5-9**
**New Interchange with Massachusetts Turnpike Shifted**

**Figure 5-10**
**New Intersection at Charlesgate and Boylston Street**




### 5.2.4 Bowker Overpass Alternative 4: New Regional and Local Access

Bowker Overpass Alternative 4 constructs a new Massachusetts Turnpike interchange; eliminates the overpass from the Massachusetts Turnpike to Storrow Drive; and constructs a new diamond interchange at Storrow Drive and Massachusetts Avenue. Figure 5-11 provides a conceptual design of the proposed alternative.

Similar to Bowker Overpass Alternative 3, this alternative constructs a new full interchange at the Bowker Overpass Bridge and the Massachusetts Turnpike. This interchange would provide regional access to the Fenway neighborhood and Longwood Medical areas, with nearby access to Back Bay. In addition to the Massachusetts Turnpike interchange, a diamond interchange would be constructed at the intersection of Storrow Drive and Massachusetts Avenue (as shown in Figure 5-12).

Storrow Drive would be reconstructed to straighten its alignment and future designs could provide an improved connection to the Charles River and its multi-use path. The proposed Charlesgate Greenway Connection is shown with this alternative.

The existing section of the Bowker Overpass from the Massachusetts Turnpike to Storrow Drive would be removed, and there would no longer be a connection from Storrow Drive to Boylston Street and the Fenway neighborhood and Longwood Medical Area. Vehicles would use the Storrow Drive/Massachusetts Avenue interchange to access these areas via other streets, such as Massachusetts Avenue and those around Kenmore Square.

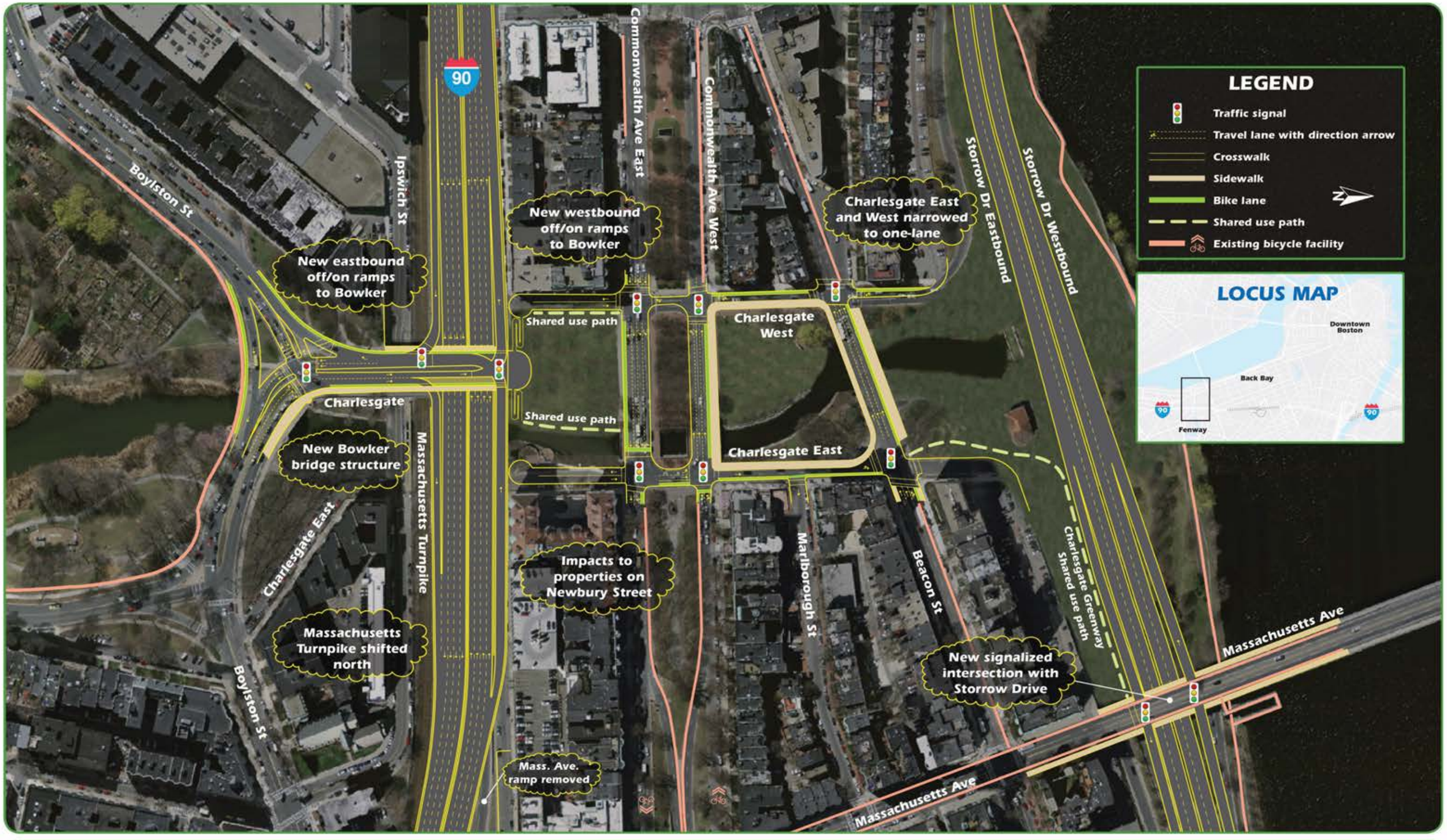



**FIGURE 5-11**
**Bowker Alternative 4**
**New Regional and Local Access**

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A benefit of this alternative is increased access to the Charles River for area residents. By realigning Storrow Drive and removing the Bowker Overpass and the Storrow Drive ramps, this alternative provides increased open space for the park and improves access to the Charles River and its multi-use path (as shown in Figure 5-13).

While there are benefits to the proposed Bowker Overpass Alternative 4, there are a number of issues and impacts associated with it. The list below provides a summary of the benefits and issues/impacts of the alternative:

- The reconstructed bridge over the Massachusetts Turnpike provides an opportunity to improve pedestrian and bicycle accommodations.
- The alternative provides new regional access from the Massachusetts Turnpike.
- The removal of the Bowker Overpass increases the park's open space.
- The Storrow Drive realignment increases the park's open space and provides an opportunity to improve access to the Charles River and its multi-use pathway.
- The alternative maintains access from Storrow Drive to the Back Bay, Fenway, and Longwood Medical areas.
- The alternative constructs new signalized intersections on the heavily traveled Massachusetts Avenue, which will cause additional congestion and delays as well as increase conflicts between vehicles, pedestrians, and bicyclists.
- The alternative increases diverted traffic from Storrow Drive to Massachusetts Avenue and the streets around Kenmore Square.

## Figure 5-12
## New Interchange – Storrow Drive and Massachusetts Avenue

**Figure 5-13**
**Realignment of Storrow Drive and Park Open Space**


## 5.3 BICYCLE AND PEDESTRIAN ACCOMMODATIONS-AREAS FOR IMPROVEMENT

The Bowker Overpass crosses perpendicularly over a grid of streets and avenues. It provides a connection in the north-south direction across the area, and allows cars, pedestrians, and bicycles to travel below it uninhibited (primarily in an east-west direction) While the primary traffic direction is east-west, there is considerable car, pedestrian, and bicycle traffic traveling northbound and southbound.

There is also significant bicycle and pedestrian usage in the east-west movement, which parallels the Commonwealth Mall. All of the sidewalks are at least 10 feet wide and there is landscaping in much of the area, which provides a buffer between the

cars and pedestrians. Additionally, new pedestrian signals recently have been installed, and most of the Bowker area streets are wide enough to include dedicated bicycle lanes or sharrows for the bicyclists throughout the study area.

The Charlesgate Greenway Shared Use Path—considered vital to the area's overall bicycle and pedestrian environment—would improve north-south pedestrian and bicycle traffic by connecting the Charlesgate Greenway to Storrow Drive. The proposed pedestrian/bicycle trail would connect at the intersection of Charlesgate East and Beacon Street. It would then travel north under the Storrow Drive overpass, through the grassy area, and would meet the roadway at Massachusetts Avenue as shown in Figure 5-12.