



## Somerville Bicycle Advisory Committee

29 February 2016

**To:**

Brad Rawson, OSPCD  
Suzanne Renfret, Traffic & Parking

**CC:**

Jennifer Molina, OSPCD	Stan Koty, DPW
Daniel Hadley, Mayor's Office	Charles Quigley, Engineering
Matt McLaughlin, Alderman	Michael Glavine, OSPCD
Terry Smith, Traffic & Parking	Rob King, Capital Projects & Planning
Steve Carrabino, Police Department	

**Subject:** SBAC Park Street Recommendations for Cyclists, Motorists & Busses

Dear Brad and Suzanne:

As Somerville's cycling network matures on major streets (e.g. Broadway, Summer Street, Somerville Avenue and Beacon Street), side streets that provide north & south connections are becoming more important. Accordingly, Park Street has become an important cycling connector, especially with the bike lanes on Somerville Avenue, bike lane on Central Street, contra-flow lane on Scott Street and the upcoming cycle tracks on Beacon Street. Park Street is also home to the MBTA #83 bus that traverses the street three times an hour in each direction. Increasing cycling traffic on Park Street justifies a complete streets design that improves the safety and comfort of cyclists and motorists, yet without unduly inconveniencing those who must park their private vehicles on the public way.

The SBAC Engineering Team prepared the following and attached an analysis of how Park Street can be improved for the transit of cyclists, motorists and busses. The SBAC's preferred solution prioritizes the safety of the traveling public by providing bike lanes in both directions and travel lanes wide enough to carry regular bus traffic, at the expense of street parking. The SBAC acknowledges that the neighborhood residents rely on street

parking. The Engineering Team studied the existing parking and also proposed a compromise plan that retains a majority of the parking on Park Street.

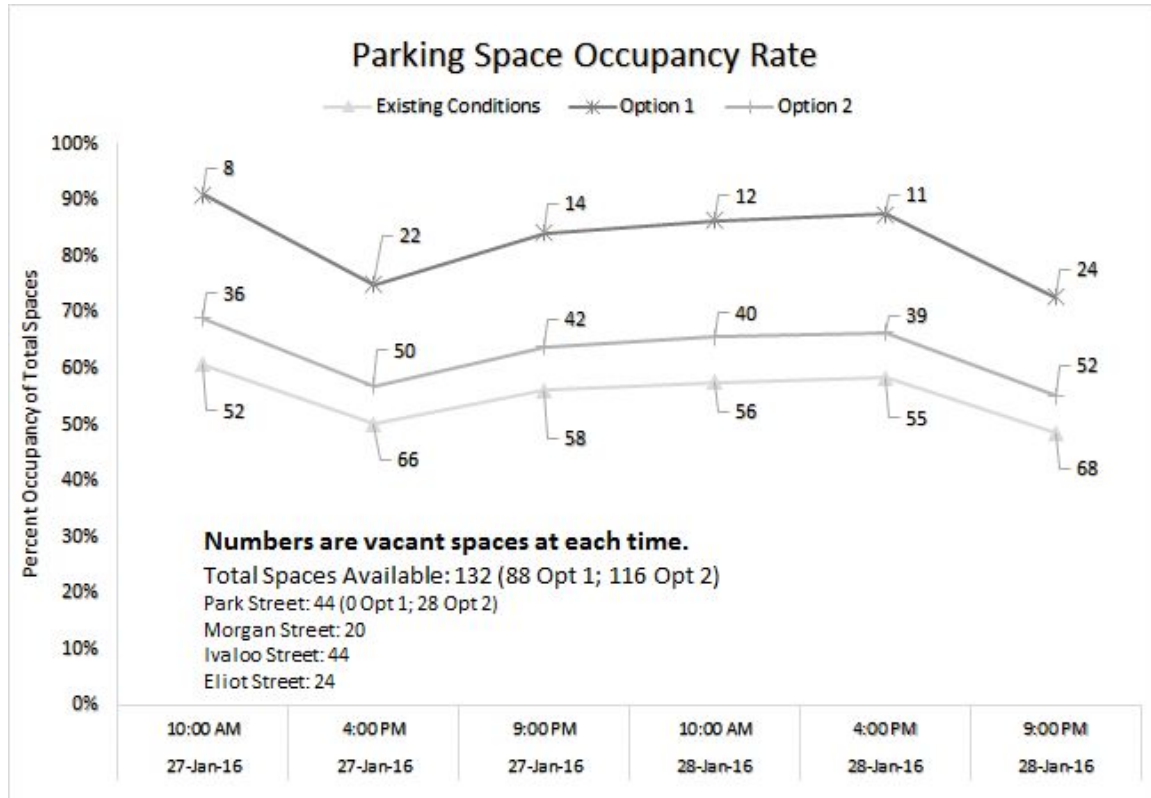
It is worth noting that motorists and cyclists will use Park Street more regularly during the upcoming Beacon Street reconstruction; the implementation of improvements is time sensitive. The following recommendations were fully endorsed during the SBAC January meeting and confirmed during their February meeting.

## **Existing Conditions**

Park Street is composed of two distinct sections, north of the tracks and south of the tracks (Figure, Existing Conditions). North of the tracks, the road is primarily abutted by commercial uses, though there are a couple residential buildings. This section is two-way with parking only on the east side. The travel lanes are 12.5' wide, and a short bike lane with a bike box is provided at the Somerville Avenue approach. The roadway width is wide enough to allow for a bike lane in one direction with no change in parking.

South of the tracks the road is primarily abutted by residential buildings, though there are a couple of industrial/commercial buildings. This two-way section includes parking on both sides of the roadway. Accordingly, the travel lanes are much narrower, at 9.5' wide; this is a half foot narrower than the 10' preferred minimum width for bus routes. There are shared lane markings for cyclists and an advanced stop line at the Beacon Street approach to allow for the wide turn of the #83 bus. This section is also a hill with its high point 1/3 of the way from Beacon Street to the tracks. The hill causes slower cycling traffic and limited sight visibility over the crest; coupled with narrow lanes, this makes it is very difficult for motorists to pass cyclists. Yet motorists often pass slower moving cyclists, despite limited visibility of oncoming traffic, which is exacerbated by bus traffic in the narrow lane.

The SBAC Engineering Team counted street parking on Park Street and on the adjacent Eliot, Morgan and Ivaloo Streets. At first the team counted the available parking spaces that were regularly used legally (following the zoning bylaw rule for 22' spaces would have yielded fewer spaces). Then the Team counted the number of spaces occupied on each street at 10am, 4pm & 9pm on two midweek days (Jan 27 & Jan 28). The following chart, Parking Space Occupancy Rate, describes the data. The streets were never more than 61% occupied, with an average occupancy rate of 55%.



## Option 1

To provide the greatest clarity and safety to traffic (motorists, cyclists and busses), the preferred solution is bike lanes for the full length of Park Street in both directions with bike boxes at both intersections. This would allow for 11' travel lanes and 5.5' bike lanes in both directions (Figure, Option 1). This design would allow for free flow of motorists and cyclists passing each other, and provide at least the preferred minimum 10' lane for a bus route. This design would also easily accommodate the permanent bus stop relocation to Park Street from Beacon Street that will occur due to the Beacon Street reconstruction project.

In order to accomplish this preferred design, the City would need to remove the 44 parking spaces on Park Street. Given the modest parking utilization in the neighborhood, the available parking on the adjacent streets is sufficient to accommodate the lost parking spaces and still have a few spaces left over. The resulting occupancy would range from 91% to 73%, averaging 83% (see Chart, above). This means there would always be a space available, but often it would be on an adjacent street.

## Option 2

Though Option 1 is the most comfortable and safe for the traveling public, it may not be palatable to the neighborhood. With the parking changes on Beacon Street, and street sweeping & snow emergency restrictions, it may be prudent to consider a compromise.

Option 2 proposes a 5' bike lane in only one direction and 10.5' travel lanes, allowing for parking to remain on one side of the street (Figure, Option 2). To utilize this section most efficiently, the bike lane would be on the northbound side from the tracks to Somerville Ave., and on the southbound side from the tracks to Beacon St. Thus the bike lanes are always on the approach to the major intersections to feed into bike boxes at both intersections. In addition, the design allows for the bike lane to be on the uphill segment towards Beacon Street. Shared lane markings would be provided where bike lanes are absent.

## **Conclusion**

By only removing sixteen spaces, parking is minimally impacted with significant improvement to street operations. The resulting parking occupancy would range from 55% to 69%, averaging 63% (see Chart, above).

The existing conditions on Park Street are not acceptable for cyclists' comfort or safety, and bus traffic is severely constrained. During the Beacon Street construction, many of the cyclists from Beacon Street (the City's busiest cycling route) will detour via Park Street, further justifying improvements to Park Street.

Option 1, replacing Park Street on-street parking spaces with bike lanes and moderate width travel lanes would create a safe passage for both motorists, busses and cyclists. The SBAC recommends this solution.

The SBAC understands that public safety can limit neighborhood convenience, and it can be challenging to find an acceptable compromise. Accordingly, the SBAC has chosen to address that challenge here. If the SBAC's preferred Option 1 is not politically feasible, please consider Option 2 as a compromise that minimally impacts on-street parking, yet provides an acceptable level of comfort and safety for all Park Street travelers.

Sincerely,



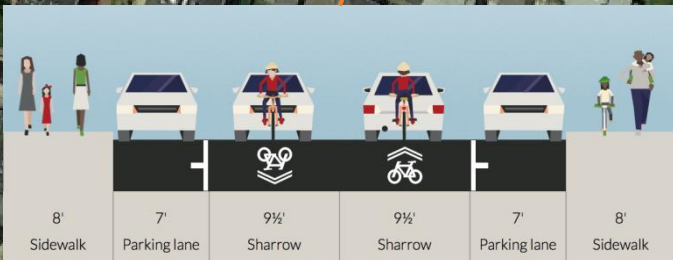
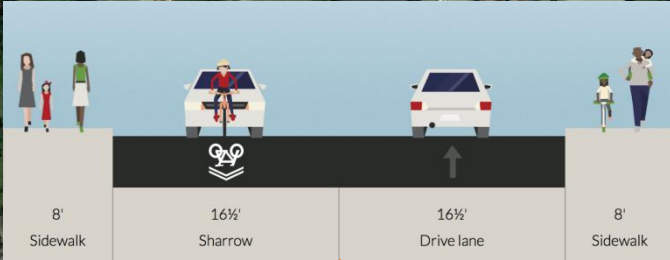
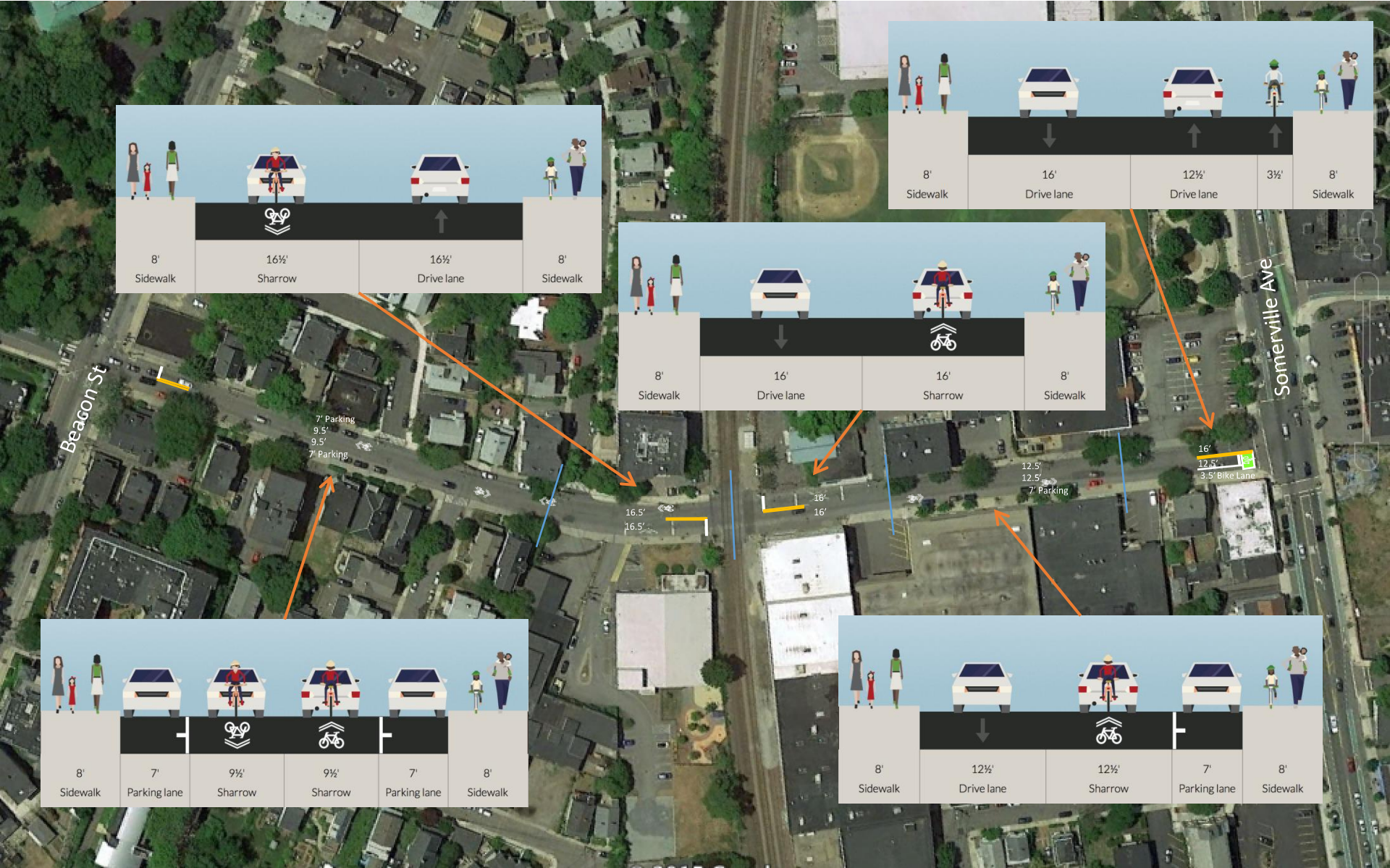
Brian C. Postlewaite, P.E.  
SBAC Engineering Team Leader  
on behalf of the Somerville Bicycle Advisory Committee



# Park Street Proposal

## Existing Conditions

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# Park Street Proposal

## Option 1 – Continuous Bike Lanes

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# Park Street Proposal

## Option 2 – Bike Lanes/Sharrows

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