

Blue Hill Ave Cross Sections: Will Protected Bike Lanes Fit?

On February 28, 2024, Mayor Wu announced that a redesigned Blue Hill Ave. will have center-running bus lanes. To be determined in the next few months: **will there be protected bike lanes as well?**

To gain community acceptance, it will have to be demonstrated that protected bike lanes won't mean losing parking lanes, mature trees, or traffic capacity.

This exercise in drawing cross-sections is meant to show how cycle tracks, also called protected bike lanes, can fit without sacrificing trees, traffic capacity, or parking lanes.

Assumptions and Sketch Conventions

Center bus lanes will be 11 ft wide

- 12 ft would be nice but isn't needed for safety or efficiency
- No barrier / buffer between bus lanes and travel lanes except where stations create a barrier

Bus stations are 11 ft wide, with 8 ft for the platform and 3 ft for a barrier

- Stations are on the far-side of intersections for effective transit signal priority
- Northbound buses will stop on the north side of the intersection, and southbound buses on the far side.

Travel lanes are 10 ft wide, plus an extra foot next to a right-side curb and an extra 0.5 ft next to a left-side curb.

Parking lanes are 8 ft wide and are on both sides of the street, except for short interruptions to create space for bus stops and turn lanes.

Bike lanes are 1-way cycle tracks (protected bike lanes) on each side of the street.

- For comparison, this set includes a cross section with a 2-way cycle track instead. A single two-way cycle track consumes a little less space (3 ft less) than a pair of 1-way cycle tracks, but would add to the “chaos and confusion” that residents want to eliminate from Blue Hill Av, and aren't as safe as 1-way cycle tracks.
- To further minimize “chaos and confusion,” cycle tracks are at street level in order to maximize separation from pedestrians. However, at intersections, cycle tracks incorporated into wide corner bulbs (the “protected intersection” layout) in order to minimize crossing distance; there, they are shrunk to 4 ft wide to reduce bike speed and maximize pedestrian space

Curbs cannot be moved where there are mature trees, which will be protected. In the sketches, *palm trees* indicate trees that will be newly planted, while *'normal' looking trees* represent existing trees as well as newly planted trees next to a curb that has not been moved.

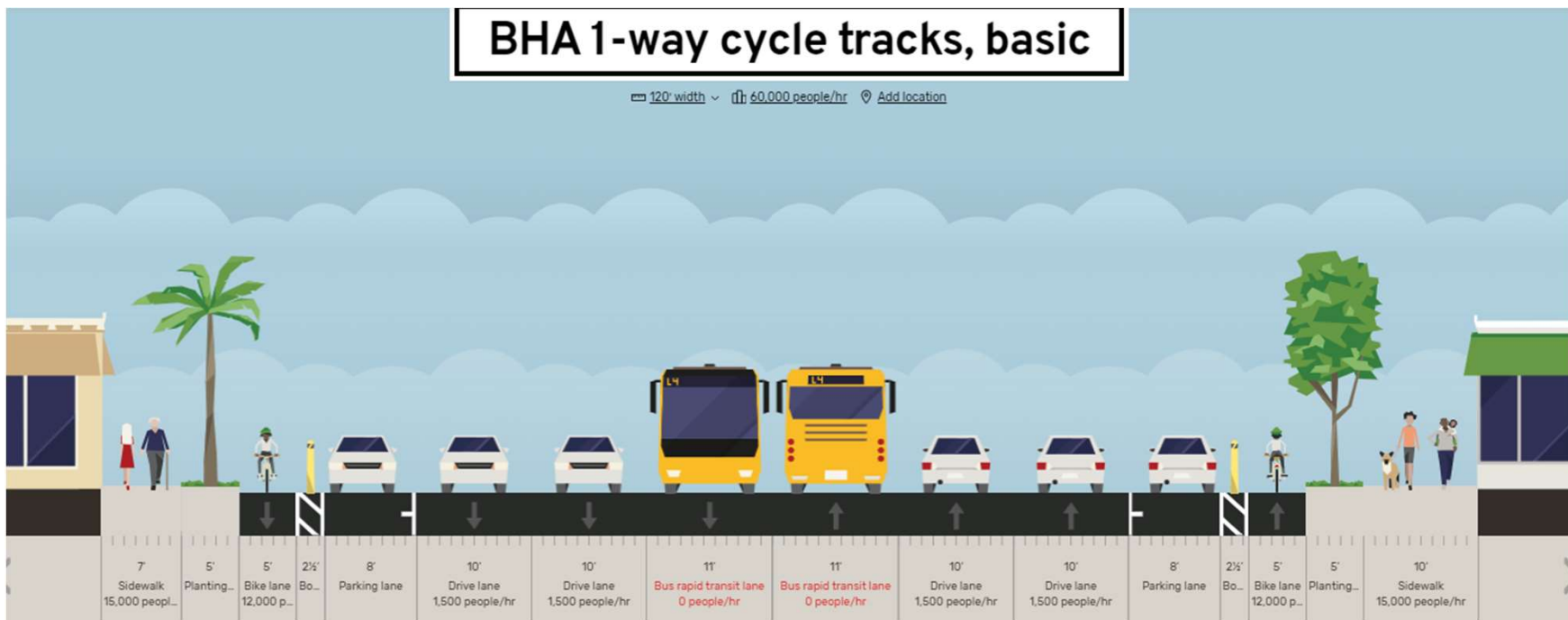
Typical Existing Basic Cross Section

- Right of way is 120 ft wide (110 ft where the street borders Franklin Park)
- 15 ft sidewalks and 5 ft bike lanes
- This sketch show an existing on one sidewalk only because the number of existing mature trees is limited; most blocks have none, and only one block has continuous trees on both sides. Still, the other side has a 5-ft space that could hold a tree.



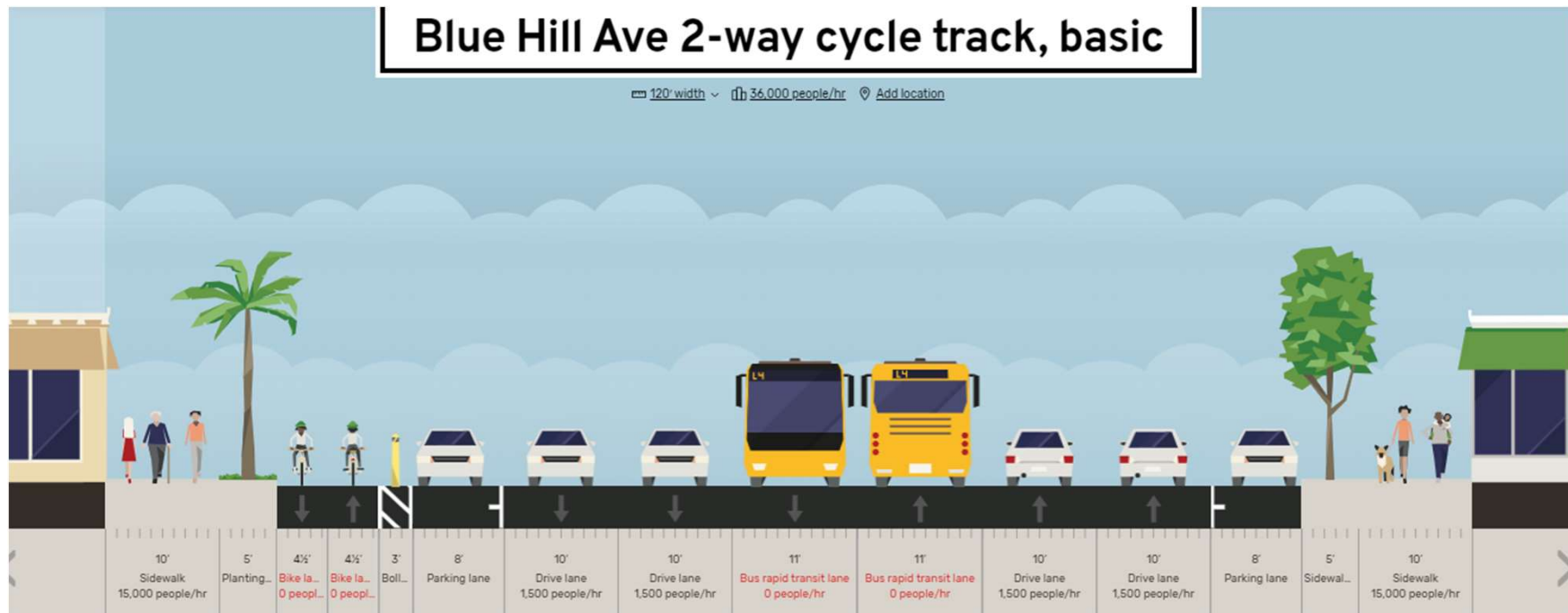
1-Way Cycle Tracks, Basic Section

- Preserves 1 curb where it is, preserving existing mature trees on that side of the street
- Curb on the other side is moved 3 ft, reducing sidewalk width from 15 to 12 ft
- Trees are provided on both sides of the street. The side with a 12-ft wide sidewalk has ample room for walking and a new tree that can grow to become large.



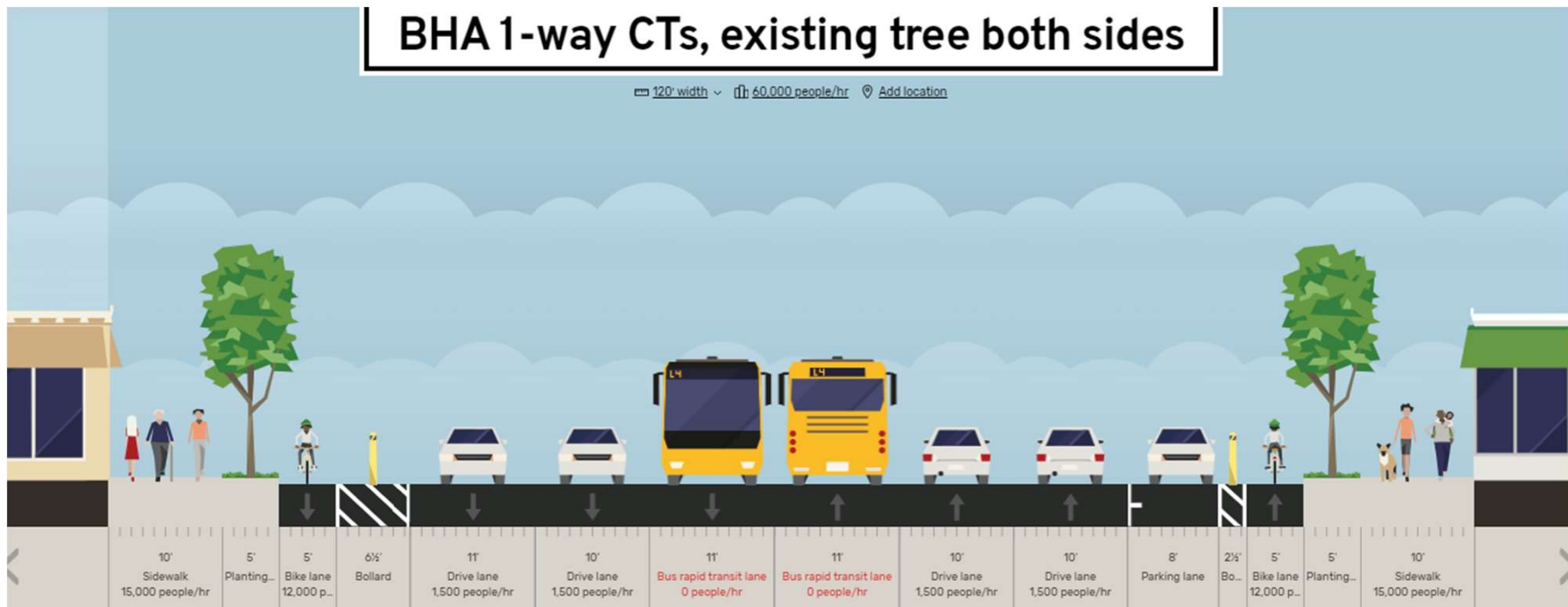
2-Way Cycle Track, for Comparison

- Not the preferred layout; shown only for comparison's sake.
- Appears to be the only way to have cycle tracks, bus lanes, and parking on both sides without moving a curb
- However, a 2-way cycle track will contribute to a sense of chaotic, confusing traffic that residents complain about, and is not as safe as 1-way cycle tracks



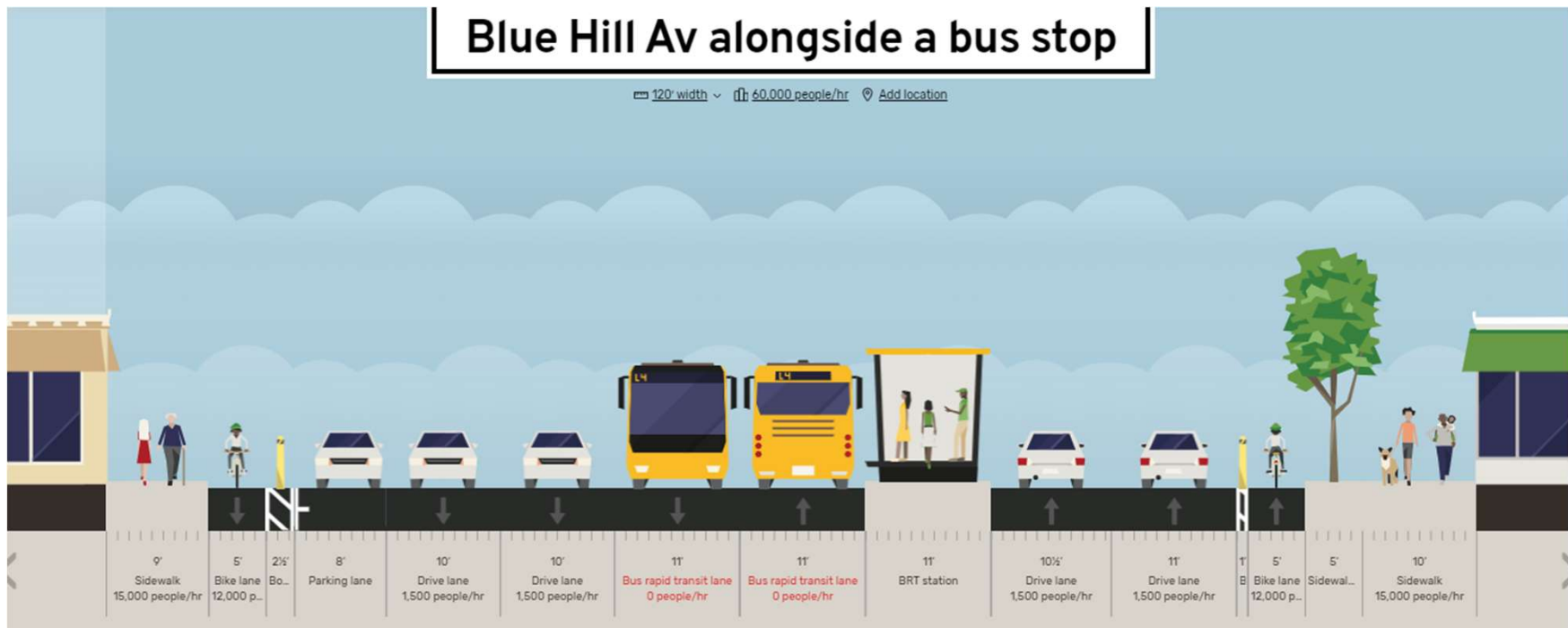
Where There Are Mature Trees on Both Sides

- To preserve trees on both sides, curbs next to each should not be moved
- As in the basic plan, one side of the street keeps its existing curb
- On other side of the street, where curb line shifts 3 ft, the curb at any existing tree shifts back to original position, creating a “tree bulb” for which 1 parking space is lost



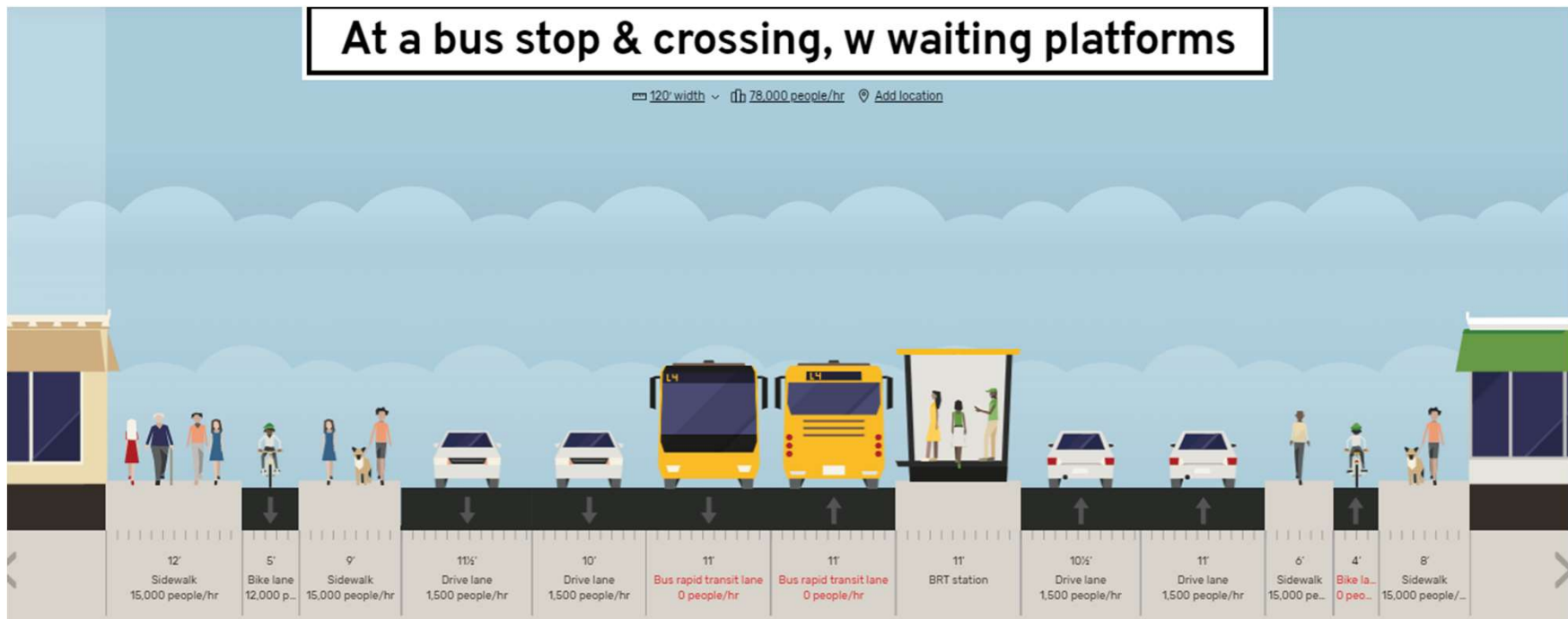
Alongside a Bus Stop or Left Turn Lane

- Sketch shows a bus stop; for a left turn lane, replace it with a turn lane.
- To find the needed space, one parking lane is eliminated and one sidewalk width is decreased by 3 ft.
- 11 ft needed for bus stop; 10 ft needed for a turn lane
 - For effective transit signal priority, stops should be far-side, one on each side of an intersection
- What's shown is the 12 ft sidewalk has been shrunk to 9 ft, but it's also possible to instead shrink the 15 ft sidewalk 12 ft.



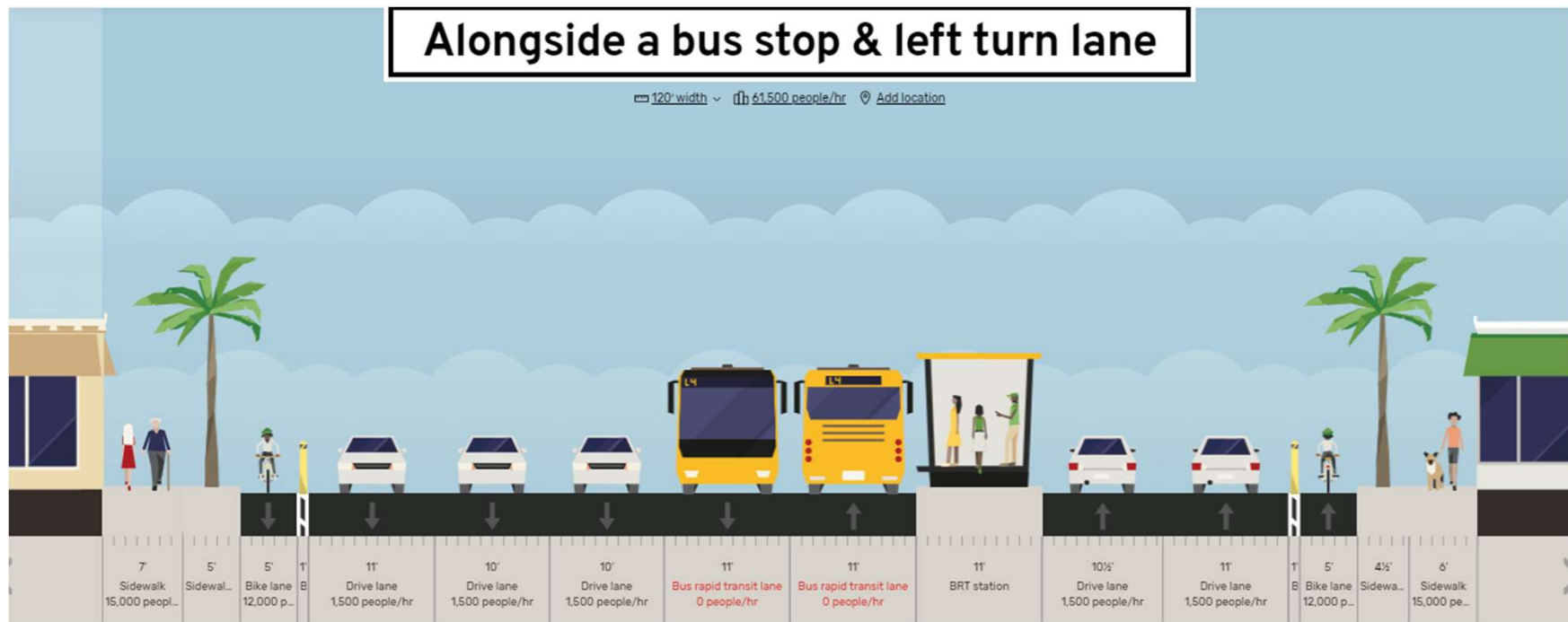
At a Crossing at a Bus Stop

- Large corner bulbouts (“protected intersection”) hold sidewalk, narrow cycle track, and pedestrian waiting platforms
- Pedestrian waiting platforms minimize pedestrian crossing distance, making crossings safer and making traffic flow more efficient



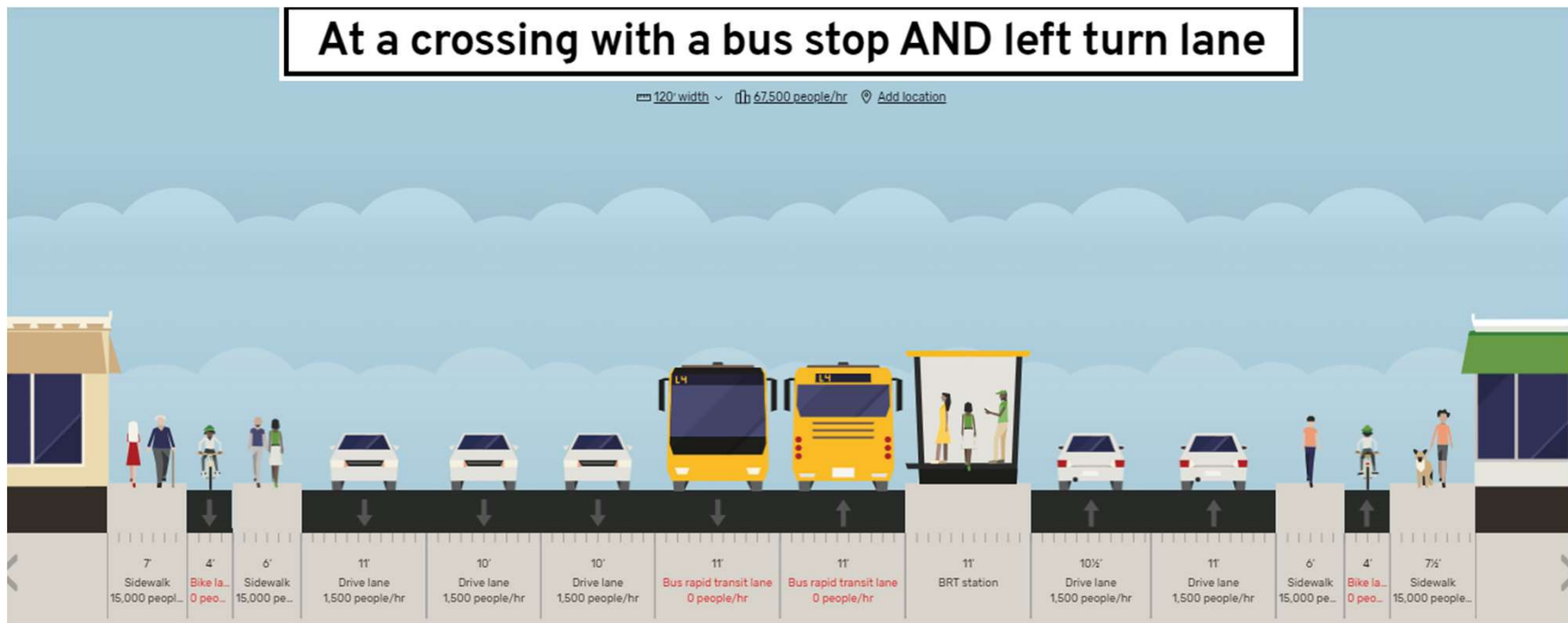
Alongside a Bus Stop AND a Left Turn Lane

- Some places, like at Walk Hill Ave., will need both a left turn lane and a bus stop
- 10 ft is enough for a turn lane (low speed travel in that lane).
- To find the needed space, both parking lanes are eliminated and 4.5 ft total are taken from sidewalks
- Relative to the basic cycle track case, the 15 ft sidewalk has been shrunk 4.5 ft and the 12-ft sidewalk is unchanged.



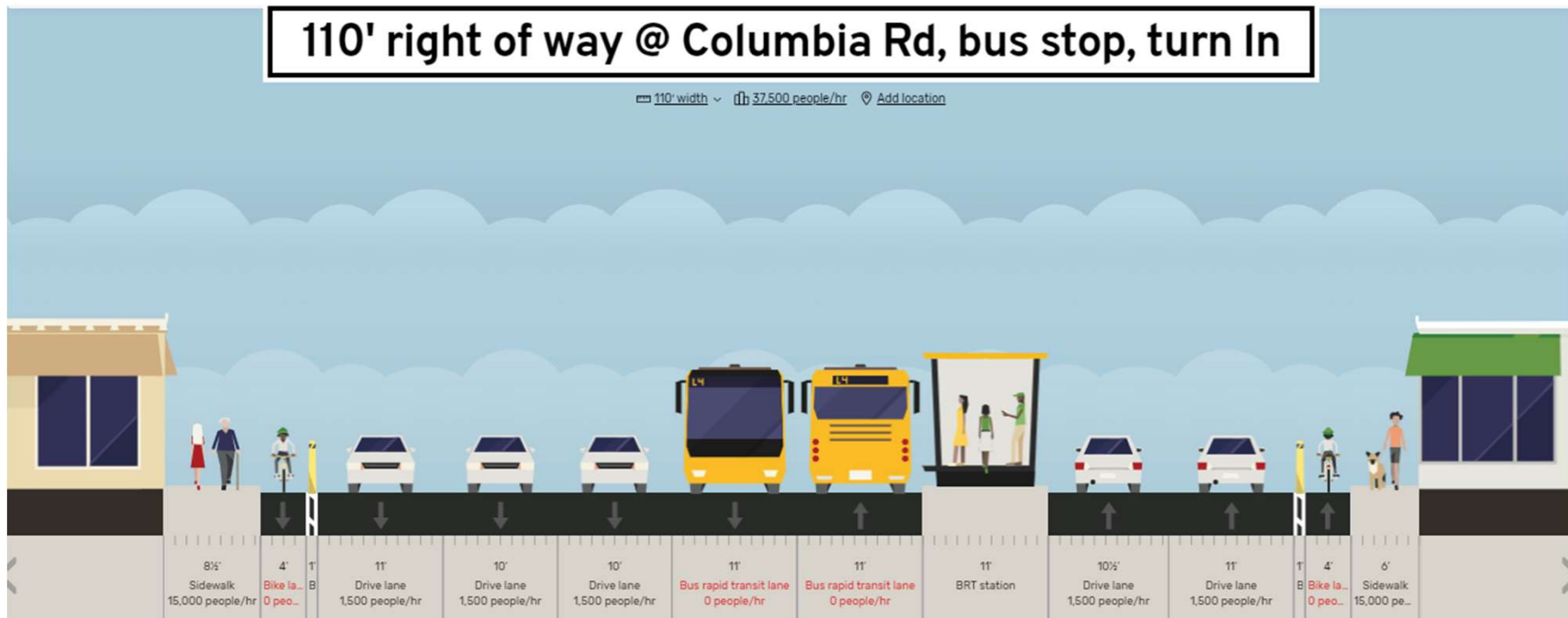
A Crossing at a Bus Stop AND a Left Turn Lane

- Large corner bulbouts are divided into sidewalk, narrow (4 ft) bike path, and pedestrian waiting platform.
- Ped waiting platforms minimize crossing distance.
- Narrow (4 ft) bike lane is wide enough for cycling because there are no side obstructions, and it helps lower bike speed.



The “Big Squeeze” – at Columbia Road, Only 110 ft Right of Way, a Bus Stop, Left Turn Lane, and Perhaps a Third Travel Lane in One Direction

- Franklin Park is on the right side of the sketch (sketch is looking south, toward the Blue Hills).
- Bike lane is shrunk to 4 ft, brought to sidewalk level
- Pedestrians now waiting on the sidewalk the bus will be on the central station platform instead.
- Third thru lane in one direction may or may not be needed. (Note, there isn't space, with or without bike lanes, for a third travel lane in each direction once center-running bus lanes are added.)



Will Churchgoers Still Be Able to Double Park on Sunday?

Sunday parking demand is especially high at two churches:

- Morningstar Baptist Church (southbound Blue Hill Ave @ Gooddale): cars double park on Sundays.
- St. Angela's Church (northbound Blue Hill Ave @ Fremont): A parking lane has been carved out of the median, partly to meet Sunday parking demand

Solution: Permit Sunday parking for short sections of the bus lanes near these churches

- Blue Hill Ave is not congested on Sunday
- Buses will divert into general travel lanes for these short sections
- The sections open to parking must not include any bus stops, because buses will still need to get to their stops on Sunday.

What if Blue Hill Ave. Doesn't Get Protected Bike Lanes?

Many residents won't mind; they can't imagine themselves or their loved ones riding a bike.

But for residents who want the freedom to ride a bike safely for themselves and their children, it would be very difficult to explain how Blue Hill Ave. didn't get protected bike lanes when every other rebuilt street in Boston did.

Can't the City create a safe bike route on a parallel street?

No, in the street network, there are no nearby parallel streets.

If there are no protected bike lanes on Blue Hill Ave, thousands of people will be unable to safely get to jobs, schools, and shops on a bike.