

BRT for Berkeley

Proposal for Discussion



This document describes elements of the City of Berkeley's staff proposal for a Locally Preferred Alternative (LPA) of the East Bay Bus Rapid Transit project. The proposal is *not final*. It is merely meant to provide a framework for community discussion.

Bus Rapid Transit and Traffic

Population and employment in this corridor are growing. By 2025, the corridor's population is anticipated to grow by 16% and the number of jobs is expected to grow by 23%. In coming years many more trips will be made to and from major employment centers, educational institutions, and residential areas along the corridor, including UC Berkeley, downtown Berkeley, and the Southside. As a result, motorists and transit vehicles will experience more congestion with or without BRT. For example, with no new BRT in Berkeley, by 2025 there will be four additional severely congested intersections in Berkeley (there is one today).¹

There are limited options to manage traffic congestion in a dense, built-up urban area where the costs and feasibility of expanding roads are prohibitive. In urban areas such as Berkeley, it is more feasible to focus on improving traffic flow through signal improvements and improving alternatives to the automobile. The East Bay Bus Rapid Transit project is designed to improve transit performance and counter increasing traffic congestion in three ways:

1. Avoiding a decline in ridership that would result from degradation in transit service caused by worsening traffic congestion. Such a decline would exacerbate the traffic problem.
2. Providing an attractive alternative to driving would attract new transit riders and decrease congestion.
3. Separating buses into their own lane would eliminate the frustration of drivers who are "stuck behind a bus" and would eliminate the weaving movements of buses getting in and out of the traffic lane.

However, converting a travel lane to a BRT-only lane would also increase traffic congestion in some locations, increasing delays to drivers at intersections along Telegraph. Sufficient capacity exists along Telegraph to dedicate lanes to transit without degrading traffic flow to unacceptable levels, even at evening rush hour, but motorists *would* experience greater delays with BRT.

The impacts of BRT on traffic flow are mixed. The proposed design of the BRT project would reduce traffic delays and improve safety in some locations. For example, there would no longer be conflicts or delays caused by vehicles turning left off of Telegraph because new left turn pockets would be provided wherever turns are permitted; all other left turns would be prohibited. However, a single motor vehicle lane in each direction could also cause some new delays – for instance, drivers turning right off of Telegraph that are delayed by pedestrians in the crosswalk could impact traffic flow in the single remaining through lane.

These impacts are site-specific and there would be relatively little impact in many areas. Impacts on Telegraph north of Dwight would be less significant because traffic volumes are lower than those south of Dwight. BRT on Bancroft and Durant would also have relatively little impact on traffic, as both streets generally operate well below capacity.

Changes to Traffic Patterns

The EBBRT project would make two primary operational changes to traffic patterns along the corridor. It would:

- Reduce capacity for auto traffic by one lane in each direction on Telegraph Avenue, Bancroft Way, and Durant Avenue (with the exception of the northernmost block of Telegraph where both lanes are maintained).
- Restrict left turns at many intersections in the corridor.ⁱⁱ

These two changes have the following implications on traffic flow:

1. **Increased congestion in some parts of the corridor** (including Telegraph at Derby, Ashby, Woolsey, Durant and Dwight).ⁱⁱⁱ
2. **Altered circulation options in some places**, primarily through restrictions on turn movements at a number of places along the corridor, but also through creating a southbound travel direction for buses, delivery and emergency vehicles between Durant and Dwight on Telegraph.^{iv}
3. **Changes in traffic patterns on neighborhood streets.** To date, studies show that Telegraph with BRT would still be faster for drivers in 2025 than taking alternate routes through neighborhoods. Even though the total number of new cars on any single street should be small, the City is continuing to expand and strengthen the analysis in order to better predict and mitigate neighborhood traffic diversion.^v

Mitigating Increased Traffic Congestion

There are a variety of strategies that have been proposed by AC Transit and City of Berkeley staff to mitigate some of the traffic impacts of the EBBRT project. For example:

- Signal timing adjustments and addition of turn lanes are both proposed at various intersections to reduce evening rush hour delay.^{vi}
- At major pedestrian crossings near the University “all-way” green scramble signals would be used to prevent pedestrians in crosswalks from causing delays for drivers turning left at Haste, right at Durant or left at Bancroft,
- Transportation Demand Management measures, such as expansion of AC Transit’s Easy Pass program, could reduce demand for roadway and parking space.

Traffic analysis will be updated with the most current traffic data for the Final Environmental Impact Statement and some mitigation measures may change.

ⁱ Source: Alameda Contra Costa Transit District, AC Transit East Bay Bus Rapid Transit Project Draft Environmental Impact Statement/Environmental Impact Report, May 2007.

ⁱⁱ The proposed elimination of left turns is to reduce the numbers of auto and truck crossings of transit lanes, which slow down buses and are potentially unsafe. Turn restrictions can have both positive and negative impacts on congestion. They require some drivers to take longer routes to their destinations, adding to traffic congestion along the way, and could result in neighborhood “diversions” or spillover traffic. However, where turn lanes are not provided but turns are allowed, cars and trucks waiting to turn can block traffic. In the proposed LPA, where buses would operate in median lanes on Telegraph south of Dwight, turn lanes would be provided wherever left turns would be allowed, reducing impacts on congestion.

ⁱⁱⁱ The traffic engineering “unacceptable” standard for urban arterials like Telegraph is a level of service (LOS) of “D” or higher, defined as more than 55 seconds of average delay. Major changes to the average intersection delay

experienced by motorists during the peak period on Telegraph: at Woolsey, an additional 27 seconds, at Ashby, an additional 11 seconds, at Derby, an additional 17 seconds, at Dwight, an additional 22 seconds, at Durant, an additional 12 seconds. At Bancroft and Oxford motorists would experience an additional 27 seconds of delay far less than the other alternatives (which would increase delays by up to 660%). Source: Alameda Contra Costa Transit District, AC Transit East Bay Bus Rapid Transit Project Draft Environmental Impact Statement/Environmental Impact Report, May 2007.

^{iv} Left-turn lanes would only be provided on Telegraph at Woolsey, Webster, Ashby, Russell, Stuart, Derby, Blake, Haste, and Bancroft. Left turns from or onto Telegraph at all other intersections would be restricted.

^v Traffic could increase somewhat on cross streets that have signalized intersections with Telegraph (Woolsey, Webster, Ashby, Russell, Stuart, Derby, Blake, Dwight, Haste, Durant), and decrease on streets with left turn prohibitions (Prince, Dowling, Howe, Oregon, Ward, Carleton, Parker, and Channing). Studies conducted thus far by AC Transit show that, even with BRT, along eight routes that were examined, Telegraph was between 19 and 145 seconds faster for drivers in 2025 than cutting through neighborhoods to either the east or west. Studies on the number of cars the EBBRT project would displace from Telegraph onto parallel arterial streets (including Martin Luther King Jr. Way, Adeline Street, Shattuck, and College) show that, at a point just north of Ashby, a combined total of 428 vehicles during the P.M. peak hour shift from Telegraph to other arterials, or an increase of about one to three per minute per parallel street. Only on College would there be a relatively significant increase in traffic, 17%. AC Transit has proposed mitigations at the intersection of College and Ashby. Staff and consultants are currently doing a more in-depth study of neighborhood traffic diversions. City staff is also recommending that AC Transit provide a more detailed detour/diversion analysis in the Final Environmental Impact Statement. Particular attention will be paid to potential auto traffic increases on adjacent bicycle facilities (primarily the Hillegass-Bowditch Bicycle Boulevard). In addition, staff is recommending that the City of Berkeley require AC Transit to implement a traffic diversion monitoring program if the project is constructed, and to include a reserve fund for installation of additional traffic-control devices.

^{vi} For example, traffic signals would be adjusted at Adeline and Ashby and Adeline and Alcatraz to reduce evening rush hour delay. A left-turn lane would be added from southbound College onto eastbound Ashby to reduce evening rush hour delay (requiring removal of some parking spaces).