

Summary

The Alameda-Contra Costa Transit District (AC Transit) proposes to implement the East Bay Bus Rapid Transit (BRT) Project, a 14.38-mile BRT line connecting Berkeley, Oakland, and San Leandro. The Locally Preferred Alternative (LPA) will include the following features:

- Dedicated median bus lanes for exclusive use by buses and emergency vehicles in most of the corridor. (Segments of the alignment with median bus lanes are referred to as median running transitways).
- Single-platform, center median stations with level boarding in median running transitways.
- Shared right hand bus lanes on some segments that give preference to transit operations but permit right-turns and access to parking. (Segments of the alignment with shared right hand bus lanes are referred to as side running transitways).
- Curbside stations with level or near-level boarding in side-running transitways.
- Stations spaced on average 0.31 miles apart
- Proof of payment ticket validation
- Transit signal priority (TSP), new traffic signals, pedestrian signals, and transit-only signals
- Real-time traveler information
- Substantial shelters that include extended canopies with amenities for the comfort and convenience of passengers
- Lighting
- Security features (e.g., closed circuit television and emergency phones)
- Pedestrian access and safety improvements at stations
- Bus service operating at 5-minute headways during peak and midday periods
- Low-floor, low-emission vehicles
- Bicycles allowed inside of buses

The proposed BRT service will be supported by the existing local bus network; bus routes along the proposed BRT project alignment serve approximately 25,000 riders per day—10 percent of AC Transit’s total ridership.

A shorter segment of the LPA is also evaluated, should funding limitations or other conditions not permit implementation of the full LPA. This shorter alternative is referenced as the Downtown Oakland-San Leandro (DOSL) Alternative.

The project location and vicinity are shown in Chapter 1, Figure 1.1-1.

S.1 Purpose and Need

Project Background

Various alternatives considered as part of this project were developed as part of the Alameda-Contra Costa Transit District Major Investment Study (MIS) conducted by AC Transit between 1999 and 2002. The MIS considered three modal alternatives: Light Rail Transit (LRT), BRT, and Enhanced Bus. BRT was chosen as the mode for the Locally Preferred Alternative (LPA), with the understanding that LRT service would be considered the long-term goal in the corridor. The MIS also considered two primary alignment alternatives, as well as alignment variations to serve specific activity centers. The alignment studied in the Draft Environmental Impact Statement/Environmental Impact Report (Draft EIS/EIR) was identified as the LPA alignment on the basis of several evaluation factors, principally ridership, engineering feasibility, and impacts including additional right-of-way requirements. Further discussion of the vehicle/mode and alignment alternatives and variations considered in developing the strategy for the East Bay BRT Project is in Section 1.2, Summary of MIS Process and Selection of Preferred Mode/Alignment.

Alternatives evaluated in the May 2007 Draft EIS/EIR included:

- No-Build Alternative
- Build Alternative 1 – Separate BRT and Local Service to Bay Fair BART
- Build Alternative 2 – Separate BRT and Local Service to San Leandro BART
- Build Alternative 3 – Combined BRT and Local Service to Bay Fair BART
- Build Alternative 4 – Combined BRT and Local Service to San Leandro BART

After considering all alternatives evaluated in the Draft EIS/EIR, AC Transit determined that improvements would be needed in the corridor to meet the study purpose and need. Of the Build Alternatives studied in the Draft EIS, BRT service from Berkeley to the San Leandro BART station (most closely resembling Draft EIS/EIR Alternative 4), in a combination of mixed-flow and dedicated BRT lanes, was selected as the locally preferred alternative.

To refine the LPA following review of the DEIS/EIR, the cities of Berkeley, Oakland and San Leandro conducted public outreach to develop support for and refine the LPA for inclusion in the Final EIS/EIR. In spring 2010, each city took action to recommend to AC Transit its preferred configuration. Based on the actions of the cities of Oakland and San Leandro, the project would have dedicated bus travel lanes throughout most of Oakland and in north San Leandro, with level station boarding. The Berkeley City Council voted unanimously to support a new alternative with a mix of transit and non-transit elements, called “Alternative B.” Alternative B would involve no dedicated bus lanes on Telegraph Avenue and Shattuck Avenue, with extension of the project beyond University Avenue and Shattuck Avenue. It also called for the conversion of several streets from one-way to two-way operations, requiring installation of up to 10 new traffic signals. The city also recommended that AC Transit evaluate curb extension stations with platforms level with the bus floor and bus queue jump lanes to bypass auto traffic at congested intersections. A description of the provisions of each city’s decision is included in Section 1.2, AC Transit Action and LPA Process.

The AC Transit Board of Directors gave consideration to the recommendations of each city and made their LPA decision for the project on June 23, 2010. The LPA adopted by the AC Transit Board is consistent with the recommended alternatives of each city, with the exception of the City of Berkeley. AC Transit staff recommended against Berkeley's proposed alternative because the conversion of one-way streets to two-way operations would not be eligible for Small Starts funding; that funding is being sought by AC Transit for BRT implementation. In addition, the Berkeley LPA would not be positive or even neutral to transit operations but rather would be detrimental to transit riders and efficient transit operations. Instead, AC Transit adopted as part of the project's LPA a limited improvements alternative in Berkeley, which includes the minimum features required to allow consistent, although less optimal, service with the rest of the corridor. The LPA under consideration in this Final EIS/EIR, as adopted by AC Transit, includes limited BRT improvements from Downtown Berkeley to the Berkeley-Oakland border, with more significant improvements such as dedicated BRT lanes and station amenities from Oakland to San Leandro.

The AC Transit Board of Directors at its June 23, 2010 meeting also recommended an additional alternative for study. This decision was made upon consideration of funding, community acceptance, and BRT operational issues associated with a major capital improvements project in the corridor from Downtown Berkeley to San Leandro BART. The Downtown Oakland to San Leandro (DOSL) Alternative was recommended for study in the Final EIS/EIR as a lower cost alternative that could have fewer environmental effects and more reliable operational performance than the LPA. The DOSL Alternative follows the same alignment from Downtown Oakland to San Leandro BART, and has the same features as the LPA in this portion of the LPA's alignment, including the same changes to the project definition that were adopted in 2010 and 2011. The DOSL Alternative is approximately 9.52 miles in length and includes 32 stations. The DOSL Alternative is discussed in greater detail in Section 2.3.3.

In the latter months of 2010 and during the first half of 2011, consistent with the direction of corridor cities and its Board, AC Transit refined the project definition. Conceptual designs were developed which reflected the proposed changes in BRT features that emerged following public review of the Draft EIS/EIR. Travel demand forecasts, including projected future ridership on the project in 2015 and 2035 were generated, and preliminary analysis of traffic, parking and other environmental effects of the project were completed. Extensive coordination with Caltrans on project features and impacts in the segment of the project within state rights-of-way was undertaken: this included State Route 185 along International Boulevard and E. 14th Street, from 42nd Avenue in East Oakland to Davis Street in Downtown San Leandro, and State Route 61 along Davis Street from E. 14th Street to San Leandro Boulevard in San Leandro. The revised project definition and its environmental consequences were initially detailed in a preliminary environmental document.

In response to preliminary findings for the revised project and additional community input, AC Transit determined to make additional refinements to the project, largely to reduce traffic and parking impacts. Improvements to traffic operations at several major intersections and along several roadway segments were proposed and reviewed with city traffic staff and Caltrans. AC

Transit also made a commitment to procure BRT buses that can load and unload passengers on both sides of the vehicle (dual sided door buses). This allows the construction of a single center platform—rather than two separate platforms—at each BRT stop in median running BRT alignments. The center median station configuration has less displacement of curbside parking along the BRT alignment. This Final EIS/EIR includes design features in the project definition and proposes mitigation measures that have received extensive review by stakeholders and the public from 2007 through 2011.

Given that more than three years have passed since circulation of the Draft EIS/EIR and this Final EIS/EIR, a re-evaluation was prepared in accordance with 23 CFR 771.129 (a). The purpose of the re-evaluation was to determine whether or not a supplement to the Draft EIS/EIR or a new EIS would be needed. That re-evaluation determined that all of the changes to the project definition made between the Draft and the current analysis documented in the Final have been made in response to public and agency concerns. These changes reduce project impacts, and as a result, reduce public controversy.

No major changes have occurred in the project corridor since the Draft EIS/EIR, and no new significant impacts not already disclosed have been identified in the current analysis. Changes in impacts for one area, transportation, are attributed to: 1) a new analysis year (2025 in the Draft v. 2015 and 2035 in the Final) and: 2) an increase in the number of study area intersections based on public and agency requests. The current analysis is fully documented in the Final EIS/EIR and shows no new impacts.

Because there are no new impacts, AC Transit has determined that there is no need to circulate a supplemental DEIS for disclosure of the changed impacts. The Federal Transit Administration concurred with this determination in a letter dated November 28, 2011. The re-evaluation and FTA's letter are contained in Appendix K.

Project Purpose and Need

Recognizing the importance of the Berkeley/Oakland/San Leandro transit corridor, the East Bay BRT project is designed to:

- Improve transit service and better accommodate high existing bus ridership.
- Increase transit ridership by providing a viable and competitive transit alternative to the private automobile.
- Improve and maintain efficiency of transit service delivery and lower AC Transit's operating costs per rider.
- Support local and regional planning goals to organize development along transit corridors and around transit stations.

The East Bay BRT project will respond to the following corridor and AC Transit needs:

- Improve transit schedule reliability and reduce transit travel times.
- Improve transit service efficiency by reducing AC Transit's operating cost per rider.

- Enhance accessibility by public transit to jobs and corridor activity centers by expanding transit capacity and making transit more competitive with the automobile.
- Improve boarding and alighting of buses and make transit more convenient for passengers with disabilities or other mobility restrictions.
- Expand travel options and reduce reliance on automobile travel along the increasingly congested roadways, thereby helping to improve the capacity and efficiency of the local transportation network.
- Support transit-oriented residential and commercial development of the project corridor.
- Better serve low-income and transit-dependent populations.

S.2 Project Alternatives

S.2.1 No-Build Alternative

Consistent with the definition of the No-Build Alternative described in the Draft EIS/EIR, the No-Build Alternative in this Final EIS/EIR includes all transportation improvements that are currently planned and programmed in the project area except for the East Bay BRT Project itself. The currently planned improvements in the project area have been updated to reflect any changes that have occurred in the period between circulation of the Draft EIS/EIR and preparation of this Final EIS/EIR. A complete list of specific projects, plans, and policies included as part of the No-Build Alternative for analysis purposes is provided in **Table 2.3-1**.

As of spring/summer 2010, AC Transit operated several local and limited stop services within the transportation corridors connecting Downtown Berkeley, Downtown Oakland, and southern San Leandro. From Downtown Berkeley to Downtown Oakland, services operating parallel to and within one mile of the East Bay BRT alignment include Route 51 along College Avenue and Broadway, Route 15 along Martin Luther King Junior Way, and Route 18 along Shattuck Avenue and Martin Luther King Junior Way. From Downtown Oakland to Bay Fair BART the only other service parallel to and within one mile of the East Bay BRT alignment is Route 40/40L operating along Foothill Boulevard and Bancroft Avenue.

These routes carry some of the highest ridership in AC Transit's service area. Prior to the implementation of Route 1R, Route 82/82L was the primary route between Downtown Oakland and Bay Fair BART along International Boulevard and East 14th Street. This route had greater than 20,000 boardings on an average weekday. To accommodate high demand during peak commute periods, service frequencies were as often as every six minutes; however, service reliability was poor and travel times highly variable due to problems of operating in congested mixed-flow traffic lanes.

To mitigate some of these issues, in June 2007 AC Transit implemented capital and service improvements in the East Bay BRT corridor as part of its Rapid Bus program. The main existing transit services in the corridor are the new Route 1 and Route 1R, shown in **Figures 2.3-1a-c**. Both of these routes operate primarily along Telegraph Avenue from downtown Berkeley to downtown Oakland; International Boulevard from downtown Oakland to the Oakland/San Leandro border; and East 14th Street from the Oakland/San Leandro border to Bay Fair BART, which essentially follows the same alignment proposed for East Bay BRT.

The Rapid Bus improvements are included in the No-Build Alternative for year 2035 with incremental improvements assumed as the service matures and ridership grows.

S.2.2 Locally Preferred Alternative and DOSL Alternative

S.2.2.1 BRT Alignment and Service Plan

In general from north to south, the LPA begins in downtown Berkeley, proceeds along the south side of the University of California, Berkeley campus to Telegraph Avenue, then along Telegraph Avenue to downtown Oakland, then along International Boulevard to San Leandro. In San Leandro, the alignment runs along East 14th Street to Davis Street, then San Leandro Boulevard to San Leandro BART, on the west edge of downtown, serving the city's planned Transit Oriented Development area. Section 2.3.2.2, Alignment, describes the alignment in greater detail within each corridor city.

Combined BRT and local service is proposed as part of the LPA. This proposes that routes 1 and 1R bus service in the project corridor be eliminated and replaced by BRT operating in the transitway (with the exception of the City of Berkeley). Other local routes will be designated to carry passengers who may be continuing on to Bay Fair BART in San Leandro, which will require a transfer at San Leandro from the BRT bus. To compensate for removal of local bus stops, the combined BRT and local service will space BRT stations closer together to allow and encourage use of BRT for local trips along the corridor. Impacts to the existing bus system are discussed further in Section 3.1.

Weekday BRT service will be provided at five-minute frequencies throughout the day, 10-minute frequencies in the evening, and hourly service from midnight to 5:00 a.m. On weekends, daytime service will be at 15-minute intervals in the northern part of the corridor and 7.5-minute intervals in the southern portion. Weekend evening service will be at 15-minute intervals. Over time, service could become more frequent as demand warrants.

For the DOSL Alternative, the alignment would remain the same as the LPA, but the BRT lane features are different. The DOSL Alternative begins at 20th Street (Uptown station). Under this alternative, there will not be dedicated BRT lanes north of this point. South of this point, the BRT runs in center-running or side-running BRT lanes as described in the LPA.

In order to preserve the reliability of buses operating in the dedicated bus lanes in south Oakland, the bus route will be split at 20th Street. One bus route will operate between downtown Berkeley and downtown Oakland. The other will operate as the DOSL Alternative between downtown Oakland and San Leandro BART. Hours of operation and service frequencies for the DOSL Alternative will be the same as proposed for the LPA in the Downtown Oakland to San Leandro BART segment of the corridor.

This Final EIS/EIR describes the characteristics and potential environmental effects of the LPA and DOSL Alternative.

S.2.2.2 Transitway

The BRT transitway will typically consist of dedicated lanes for transit only. Other traffic with the exception of emergency vehicles will be prohibited from using the transit way. Median

transitways will be 22 to 24 feet in width for two-directional travel and side-running transitways will be 11 to 12 feet in width for single direction travel. Transitways will be separated from mixed-flow traffic lanes by only striping, a rumble strip, or a low a mountable curb. Along several roadways, transit lanes will be established by converting mixed-flow traffic lanes to transit-only lanes. The extent of dedicated BRT lanes in the project corridor is illustrated in **Table S-2.1**.

Table S.2-1. Extent of Dedicated BRT Lanes

From	To	Total Length (miles)	Extent of Dedicated Lanes
Shattuck at Center	Shattuck at Allston	0.07	0%
Shattuck at Allston	Shattuck at Bancroft/Durant	0.15	0%
Bancroft/Durant at Shattuck	Bancroft/Durant at Telegraph	0.47	0%
Telegraph at Bancroft/Haste	Telegraph at Dwight	0.22	0%
Telegraph at Dwight	Telegraph at Woolsey	0.85	0%
Telegraph at Woolsey	20th at Broadway	3.10	100%
Broadway at 20th	Broadway at 11/12th	0.49	0%
11/12th at Broadway	11/12th at 14 th /Lake Merritt	0.61	100%
11/12th at 14 th /Lake Merritt	11/12th at 1st	0.27	0%
11/12th at 1st	International at Fruitvale	2.32	100%
International at Fruitvale	International at 40th	0.50	100%
International at 40th	International at 41st	0.06	100%
International at 41st	International at 44th	0.20	100%
International at 44th	International at 45th	0.07	100%
International at 45th	International at 64th	1.12	100%
International at 64th	International at 65th	0.07	100%
International at 65th	International at 66th	0.06	100%
International at 66th	International at 67th	0.10	100%
International at 67th	International at 68th	0.05	100%
International at 68th	International at 81st	0.67	100%
International at 81st	International at 99th	1.05	100%
International at 99th	E 14th at Bristol	0.50	100%
E 14th at Bristol	E 14th at Georgia	0.43	100%
E 14th at Georgia	San Leandro BART	0.94	0%
TOTAL		14.38	76% (10.92 miles)

Source: Cambridge Systematics, 2011.

Sections 2.3.2 and 2.3.3 of the Alternative chapter provide detail on BRT alternatives, and Figure 2.3-2 shows the limits of the alignment types.

S.2.2.3 Stations

There are 47 stations proposed as part of the LPA, including six stations in Berkeley, 36 stations in Oakland, and five stations in San Leandro. Other than crossing Lake Merritt Dam and I-580, all stations are less than 0.45 miles apart, with 90 percent of stations less than 0.4 miles apart. Average station spacing is 0.31 mile. The DOSL Alternative includes 32 of these stations, from 20th Street south to San Leandro BART.

For passengers, BRT stations in Oakland and San Leandro will be the most recognizable feature of the East Bay BRT Project. Stations in the roadway median will be designed to provide passenger platforms typically 12-foot wide and 60-foot long, raised 13 to 15 inches above the top of the roadway pavement. Stations along the curb will extend approximately six to eight feet from the curb and be raised 13 to 15 inches above pavement at the boarding edge, be integrated into the adjacent sidewalk, and also be 60-foot long. Platforms will be at or slightly lower than the floor level of BRT buses, allowing fast and convenient passenger loading and unloading. Buses will pull into the station for boarding and alighting through either left-side (median stations) or right-side doorways (curbside stations). For median stations, which there are 28, boarding will occur via left-side doorways. The median stations are located in segments where there is a dedicated median transitway. Curbside stations occur where there is no dedicated transitway or in the limited segments with dedicated transitway along the outside travel lanes.

The typical BRT operational configuration is to have only one bus picking up or dropping off passengers at a station at any time. In certain locations, where local buses operating on other routes follow the BRT alignment and also could stop to pick up and drop off passengers, stations will be extended to 120 feet to accommodate two buses simultaneously.

Curbside stations in Berkeley will include ticket vending machines, passenger information, and passenger shelters. BRT stations in Oakland and San Leandro will provide a high level of amenities and provide convenient, safe, and secure areas for system users. All stations will include the following features:

- Raised platforms with lighting.
- Ticket vending machines and ticket validators; a minimum of one at each station platform. Passengers will be able to buy fare cards using cash and credit/debit or smart cards.
- Passenger information kiosks featuring active data displays and ADA-compliant audio capability for announcing information such as actual bus arrival times, and display space for maps, schedules and other passenger information.
- Windscreens and framed canopy shelters with benches for the comfort of waiting passengers. Canopy shelters will be well lit and open to view from the street. Examples of canopy shelters and other station features are shown in Section 4.6, Visual/Aesthetics.
- ADA-compliant routes of access and egress from the street crosswalk or sidewalk.

- Emergency telephones (or intercoms) and security cameras at all stations.
- Tactile warning bands of contrasting color and detectable materials along platform edges. Edges will be raised at least 14 inches above street level. The bands are similar to those incorporated into rail platforms and will be ADA-compliant.
- Protected pedestrian crossings at all designated crossings of the arterials along which BRT service is proposed, including crosswalks providing access to and from BRT stations.

BRT stations in Oakland and San Leandro will be constructed either in the street median or along the outside curb—the latter designated as “curbside” stations. Median stations will serve transitways constructed in the middle of the street and will not be affected by curb and sidewalk activities (e.g., parking maneuvers and pedestrian traffic). It should be noted that all stations in Berkeley will be curbside stations and will include a ticket vending machine and real-time passenger information signs. Berkeley stations will not have raised platforms or any other features discussed in this section.

S.2.2.4 Pedestrian Amenities and Landscape Treatments

The LPA will alter pedestrian environments along the alignment of the BRT transitway. On a general level, the East Bay BRT Project has the potential to improve the overall pedestrian environment. Recommended pedestrian treatments include crosswalks, curb ramps, pedestrian push buttons, curb extensions, and pedestrian refuge islands. For signalized intersections, also included will be accessible pedestrian signals (APS), countdown timers, and signal timing and re-timing. Unsignalized intersections will include in-roadway warning lights and pedestrian crossing signals.

S.2.2.5 Fare Collection

The proposed East Bay BRT fare system will be barrier-free self-service, proof of payment fare collection. All BRT stations will have ticket vending machines so that passengers can pay their fares in advance of the bus arriving, thereby speeding up passenger boarding. Single ride fares will require a receipt validated at the boarding stations showing date and time of initial use. Ticket validating machines will be provided alongside ticket vending machines for this purpose. Under self-service fare collection, passengers can use any door to board buses, which will greatly reduce bus idling time at bus stops during fare collection.

S.2.2.6 ITS Components

The East Bay BRT Project will include technologically advanced passenger information and traffic control features, referred to as ITS. These systems are included with Rapid Bus Route 1R under the No-Build Alternative and will be enhanced under the Build Alternatives, where practicable. The two primary ITS elements will include real-time bus arrival information, displayed (and announced) at stations and available on the Internet; and transit signal priority for buses at traffic signals along the alignment with real-time adjustments to maintain even spacing between buses.

S.2.2.7 Low-Floor, Dual-Sided Door Buses

The Draft EIS/EIR assumed that initially, the same or similar buses as those currently deployed by Rapid Bus Route 1R would be used by the East Bay BRT Project. However, the East Bay BRT Project is now defined to include the purchase of new dual-sided door buses, where boarding and alighting can occur on either the left-side or the right-side of the bus. These buses allow for the provision of platforms between the opposing median-running transitway lanes, as opposed to split platforms for each station, located between each transitway lane and the general purpose lanes. A single platform can serve both directions of travel, allowing for a more efficient use of station space. This reduces both project cost as well as parking space displacement.

S.2.2.8 Other Related Improvements

The stakeholder cities of Oakland and San Leandro and the California Department of Transportation (Caltrans) have indicated their desire to identify in the Final EIS/EIR improvements they propose be undertaken separate from, but contingent upon, implementation of the East Bay BRT Project (hereinafter referred to as “Other Related Projects”). These projects are not needed to implement the BRT project, nor do they represent mitigation by AC Transit for any impact of the BRT project. Rather, they are desired improvements that will be developed and paid for by the sponsoring agencies.

The costs of implementing these Other Related Projects are included in the total cost of the East Bay BRT project, whether implemented as the LPA or the DOSL Alternative. They are, however, not part of the Small Starts project for which AC Transit is requesting a Section 5309 grant from the FTA. If funding is available when the Small Starts project is to be constructed, the Other Related Projects may be built at the same time as the BRT project, and if it is efficient to do so, may be completed by the contractor selected by AC Transit to build the BRT project. If constructed by the BRT contractor, the construction documents will clearly separate the Other Related Project activities and costs to meet the requirements of FTA and Small Starts.

The proposed Other Related Projects will be adjacent to or outside of the East Bay BRT construction boundaries. The types of Other Related Projects are listed below and discussed in greater detail in Section 2.3.4, Other Related Improvements:

- **Additional roadway repaving** - Mixed-flow traffic lanes adjacent to the BRT transitway and between stations, where in poor or substandard condition, have been proposed for repaving when BRT construction is underway.
- **Bulbouts and Extra Streetscape Features at Pedestrian Crossings** - Improved, restriped crosswalks and pedestrian crossing protection to access BRT stations are part of the base project; however, local cities have proposed to include curb bulbouts at intersections and streetscape treatments (e.g., highly distinguished pathways) at selected locations.

- **Pedestrian “Safe Crossing” Refuge Islands** - As part of a complete streets design for BRT arterials, cities have proposed adding raised (i.e., curb separated) islands between the traffic and BRT lanes where the roadway cross section permits.
- **Additional Sidewalk and Streetscape Improvements** - Outside of median landscaping adjacent to the transitway and station/crosswalk improvements, additional landscaping and sidewalk improvements are proposed by cities to be made in conjunction with BRT construction.
- **Utility Upgrades** - Improvements beyond the limits of the transitway and stations or upgrading size and/or capacity of utilities.
- **Additional Parking Facilities** – The project will include replacement parking where BRT facilities remove curb spaces along the project alignment and the mitigation threshold is triggered, however; additional parking capacity could be provided to address neighborhood concerns about changes in site access and circulation.

S.2.2.9 Changes Between Draft EIS/EIR and Final EIS/EIR

No Build Alternative

Since the publication of the Draft EIS/EIR, AC Transit has implemented Rapid Bus enhancements along the proposed BRT corridor. These enhancements include low-floor buses, widened stop spacing, shelters installed at selected bus stops, limited ITS elements consisting primarily of transit signal priority, and real time bus arrival information. This new Rapid Bus route is designated as Route 1R. Existing local service through the corridor is Route 1.

The No-Build Alternative also includes several plans, policies and project that have been programmed or adopted since the Draft EIS/EIR was published, as summarized in Table 2.3-1 of the Final EIS/EIR.

Locally Preferred Alternative (LPA)

The LPA most closely follows Draft EIS/EIR Alternative 4 – Combined BRT and Local Service to San Leandro BART. A general comparison of the changes between Draft EIS/EIR Alternative 4 and the LPA are summarized in **Table S.2-2**. The most notable changes relate to station locations, inclusion of dual-sided door buses and the selection of no dedicated lanes in the City of Berkeley.

Table S.2-2. Summary of Changes Between the Draft EIS/EIR Alternative 4 and Final EIS/EIR LPA

Draft EIS/EIR Alt. 4	Final EIS/EIR LPA	Reason for Change
44 stations	47 stations	Station at Bancroft/Durant at Ellsworth dropped due to low ridership and proximity to other nearby BRT stations. Stations added at Telegraph at 55th, International at 39th, International at 48th. One station at International at 90th replaced by two stations at International at 87th and at 94th.
Station locations	A number of stations shifted in location (typically one block or less)	Traffic mitigation; accommodation of intersections/turning movements; response to concerns about traffic and pedestrian access revealed through the public outreach process
Right-side boarding only at all stations	Dual-sided door buses allow for left-side boarding at median stations	Accompanying reduction in parking impact and infrastructure cost due to consolidation of split right-side median stations into dual-direction left-side median stations
BRT headways 3.6 minutes weekday peak	BRT headways 5.0 minutes weekday peak	Adjusted to match rider demand at peak bus load points along the BRT alignment
Dedicated lanes in the City of Berkeley	No dedicated lanes in the City of Berkeley	Request of the City of Berkeley
Center-running couplet on International-East 12 th Street	Side running couplet on International-East 12th Street	Outcome of public outreach process; city policy
Median bus lanes from Oakland border to Davis in San Leandro	Median bus lanes from Oakland border to Sunnyside Drive in San Leandro, mixed flow from Sunnyside to Davis	Request of the City of San Leandro

Draft EIS/EIR Alt. 4	Final EIS/EIR LPA	Reason for Change
Potential alignment to Bay Fair BART considered	Alignment terminates at San Leandro BART	LPA adopted by the City of San Leandro/AC Transit
Bike lanes by others	Bike lanes now included within project definition	Request per City of Oakland
Estimated project cost \$340 million	Estimated project cost \$205.1 million	Reduction of project limits dropping dedicated lanes in Berkeley and downtown San Leandro; reduced level of improvements in Berkeley; reduced level and extent of pavement reconstruction; scaling back the operations control center; refinement of calculations.
<p><i>Source: Cambridge Systematics, List of BRT Stations, August 12, 2011</i> Cambridge Systematics, Change in Project Definition from DEIS/Small Starts</p>		

S.3 Transportation Impacts

S.3.1 Changes to Corridor Transit Services with Proposed Build Alternatives

High weekday peak frequencies of five minutes and base frequencies of five minutes are proposed for BRT service throughout the East Bay Corridor in 2015. Five-minute peak headways are necessary to accommodate estimated peak hour, peak direction demand at the maximum load points along the alignment. In 2035, additional peak period, peak direction bus trips are proposed to supplement the five minute background headways in the maximum load segment between downtown Oakland and East Oakland. These trips, to downtown in the a.m. and from downtown in the p.m. are assumed to begin (a.m.) or end (p.m.) near International Boulevard and Seminary Avenue. The additional peak trips increase the peak vehicle requirement by three buses, from 31 in 2015 to 34 in 2035. Elsewhere in the LPA corridor, service levels in 2035 would be the same as in 2015 although allowed load factors (persons per bus, both seated and standees) would be somewhat higher. Load factor assumptions are the same as for the No-Build Alternative.

The LPA operating plan proposes that weekend/holiday service will also increase relative to combined Route 1R and Route 1 service. A split weekend schedule is proposed to reflect the differing levels of demand in the north and south segments of the corridor (demand tends to be relatively higher on weekends in the south). A split schedule of 7.5 minutes between downtown Oakland and San Leandro BART and 15 minutes between downtown Oakland and downtown Berkeley BART provides for every other bus from San Leandro BART continuing through downtown Oakland to Berkeley and returning on the same route. It also means the every other bus originating at San Leandro BART will terminate in downtown Oakland, and then return on the same route.

Throughout the week, weekdays and weekends, owl service will be provided between San Leandro BART and downtown Berkeley on 60-minute headways. On weekends this results in several fewer trips than operated on Route 1 (which under the Baseline/No-Build incorporates current service on Routes 800 and 801) but is adequate to meet demand. This is the only instance where BRT service levels will be lower than the No-Build.

Overall, higher frequency weekday and weekend service results in an increase in bus hours of approximately 6 percent and total bus miles of 18 percent in 2015 relative to the No-Build Alternative.

S.3.2 Transit Performance

Table S.3-1 summarizes the changes in selected patronage and quality of transit service parameters under the No-Build Alternative and LPA in 2015 and 2035. Table S.3-2 summarizes the changes between the No-Build Alternative and DOSL Alternative in the same timeframes.

Table S.3-1. Average Weekday Transit Patronage: Existing Conditions, 2015 and 2035 No-Build Alternative and 2015 and 2035 LPA

Final EIS/EIR Ridership Results	2015 No-Build	2015 LPA	Increase	2035 No-Build	2035 LPA	Increase
BRT Alignment Average Weekday Boardings	24,600	41,700	17,100	34,000	61,800	27,800
AC Transit Average Weekday Boardings	244,000	251,100	7,100	324,400	338,100	13,700
BART Average Weekday Boardings ¹	269,600	266,700	-2,900	340,300	337,900	-2,400
Average Weekday Linked Transit Trips (New Riders)			3,700			9,000
Notes: ¹ BART boardings includes only those riders going to/from/thru Alameda County Stations. The LPA's net effect on BART ridership will be a relatively small, reflecting less than one percent of future riders. Source: Cambridge Systematics, October 2010 Travel Forecasts						

Implementing the East Bay BRT Project will increase route corridor boardings, AC Transit systemwide boardings, and region wide transit trips as compared to future No-Build conditions for the following reasons:

- Improved transit travel time;
- Improved service frequency;
- Improved reliability; and
- Improved amenities and convenience.

There would be approximately 61,800 average weekday BRT boardings in 2035 under the LPA, an increase of 82 percent over the No-Build Alternative. AC Transit systemwide average weekday boardings will be approximately 338,100, an increase of 4 percent compared to the No-Build. Although a substantial portion of the ridership increase on BRT would be due to riders shifting from other AC routes, approximately 9,000 new riders would use BRT and/or possibly other transit services in 2035. Most of these new users would have formerly traveled by auto.

Table S.3-2. Average Weekday Transit Patronage: Existing Conditions, 2015 and 2035 No-Build Alternative and 2015 and 2035 DOSL Alternative

FINAL EIS/EIR Ridership Results	2015 No-Build	2015 Build	Increase	2035 No-Build	2035 Build	Increase
BRT Alignment Average Weekday Boardings	24,600	36,000	11,400	34,000	53,300	19,300
AC Transit Average Weekday Boardings	244,000	249,800	5,800	324,400	336,900	12,500
BART Average Weekday Boardings ¹	269,600	268,800	-800	340,300	340,200	-100
Average Weekday Linked Transit Trips (New Riders)			2,500			6,700
Notes: ¹ BART boardings includes only those riders going to/from/thru Alameda County Stations. The LPA's net effect on BART ridership will be relatively small, representing less than one percent of future riders.						
Source: Cambridge Systematics, November 2010 Travel Forecasts						

AC Transit systemwide average weekday boardings will be approximately 249,800 in 2015 and 336,800 in 2035 with implementation of the DOSL Alternative. These totals are slightly less than the total forecast system boardings under the LPA.

S.3.3 Traffic Impacts

Traffic operations impacts resulting in operations below established local standards would occur at 34 of the 129 study intersections in either Year 2015 or Year 2035 with implementation of the LPA. All but one location in Year 2015 could be mitigated through physical and operational improvements to not exceed impact thresholds. In 2035, all but six locations could be mitigated.

For the DOSL Alternative, traffic operations impacts resulting in operations below established local standards would occur at 17 of the 129 study intersections in either Year 2015 or Year 2035. All locations in Year 2015 could be mitigated through physical and operational improvements to not exceed impact thresholds. In 2035, all but one location could be mitigated.

Both the LPA and DOSL Alternative, in various locations, convert two traffic lanes to transit-only lanes, thereby reducing roadway capacity on the BRT alignment and diverting some vehicles to alternate routes, causing of the intersection congestion issues discussed above. The inclination of drivers to avoid these congested intersections may cause turning movements at other intersections, diverting traffic onto local streets. Placement of dedicated transitways may also prohibit left-turns or certain through-movements, forcing U-turns or other turning movements into neighborhoods.

Mitigation for traffic impacts has been closely coordinated with the cities of Berkeley, Oakland, and San Leandro. Some intersections could not be fully mitigated. In year 2035, the 6 impacted intersections that will not be fully mitigated with implementation of the LPA are located in Berkeley (1 intersection) and Oakland (5 intersections). With implementation of the DOSL

Alternative, the impacted intersection that would not be fully mitigated is located in the City of Oakland. The cities, in coordination with AC Transit, have come to the conclusion that the level of improvements needed to fully mitigate these intersections for traffic impacts will result in greater impacts to other areas, such as right-of-way and relocation of business and residential structures.

S.3.4 Pedestrian Impacts

The LPA and the DOSL Alternative will not adversely impact existing or planned pedestrian facilities and pedestrian movements in the project corridor. In a number of locations the pedestrian environment will improve due to the amenities provided by the East Bay BRT Project at and near stations and due to a reduction in traffic. Lower traffic volumes along BRT arterials are expected to decrease potential auto-pedestrian conflicts. For example, reducing the number of traffic lanes, from two to one lane, in each direction along such arterials as Telegraph Avenue and International Boulevard benefits pedestrians by reducing the “multiple threat” to pedestrians having to cross two mixed-flow traffic lanes in each direction. Drivers’ views of the crosswalk will not be obstructed by an adjacent vehicle.

Physical features of the LPA and DOSL Alternative, such as improved high-visibility pedestrian crossings, signs and median refuge islands along the corridor, will enhance the existing pedestrian environment. (These features are identified in the project concept design presented in Appendix A.) AC Transit will design the East Bay BRT Project, whenever practicable and within the overall funding available, to support the pedestrian-friendly objectives established specifically for this corridor by local cities.

No mitigation of impacts is therefore warranted other than AC Transit will continue to coordinate with local cities on the integration of pedestrian and bike facilities with bus improvements as the project enters the design phase.

S.3.5 Bicycle Impacts

Under both the LPA and the DOSL Alternative, conditions for bicyclists will generally be improved, compared to the No-Build condition, in segments where buses operate in dedicated lanes and Class II bike lanes are designated. Class II lanes are proposed to be constructed along with the transit improvements on Telegraph Avenue from the SR 24 crossing to 20th Street/Thomas Berkley Way in Downtown Oakland. They also will be provided on East 12th Street from 3rd Avenue through 14th Avenue, and along International Boulevard from 54th Avenue to 81st Avenue. Additionally, existing bike lanes or sharrows will be preserved on Telegraph Avenue in Berkeley and Oakland and for a portion of East 14th Street in San Leandro.

Elsewhere, sharrow class 2.5 or unstriped class III bike routes are currently designated or are proposed, including along Bancroft Way and portions of Telegraph Avenue in Berkeley and along International Boulevard/East 14th Street from 81st Avenue in Oakland to Euclid Avenue in San Leandro. In these locations, where separation of bicyclists from mixed-flow traffic will not

occur, the environment is less supportive for bicyclists. Constrained traffic under the LPA and DOSL Alternative due to the reduction in traffic lanes potentially creates increased bike-auto conflicts. Off-setting the increase in traffic volumes is the fact traffic will move more slowly than if two traffic lanes were retained and roadway capacity was greater, as under the No-Build Alternative. Also, where autos and bikes must share the traffic lanes, where practicable, lane widths are increased (i.e., widened) to provide additional room for the mixing of these two modes.

Bicyclists will continue to be allowed on buses. The BRT buses will have hooks inside the vehicles where 2 to 4 bicycles can be hung in each bus. Since BRT buses will operate more frequently through the corridor, whether on the alignment for the LPA or the DOSL Alternative, there will be more opportunities for bicyclists to use transit for a portion of their trip. No mitigation of impacts to bicycling from either the LPA or DOSL Alternative is warranted. AC Transit will continue to coordinate with local cities on the integration of bike and bus facilities as the project advances through the design phases.

S.3.6 Parking Impacts

Both the LPA and DOSL Alternative will result in the displacement of on-street parking spaces. Under the LPA, 1,071 curbside spaces will be displaced. Approximately 50 percent of displaced spaces will be mitigated through parking replacement or metering of currently unrestricted parking along commercial frontages to ensure availability for local business customers. Under the DOSL Alternative, 607 curbside spaces will be displaced, and approximately 37 percent of these spaces will be mitigated.

The deployment of dual sided door buses along the BRT alignment has been integrated into the project. These vehicles have doors for boarding and alighting on both sides and can stop at center median stations where riders use the left side doors. The advantage to parking is that only one platform is required instead of two platforms. In addition, less space is required along the curb to transition into and out of stations.

S.4 Affected Environment, Impacts, and Mitigation Measures

Table S.4-1 summarizes the long-term environmental impacts of the LPA and DOSL Alternative, other than traffic and parking, and identifies the proposed avoidance, minimization and/or mitigation measures for each impact. A detailed description of the impacts and mitigation measures for each impact category is presented in Chapter 4.

Table S.4-1: Summary of Build Alternatives Long-Term Impacts and Proposed Mitigation Measures		
Impact Category	Impacts of LPA and DOSL Alternative¹	Proposed Avoidance, Compensation and Minimization Measures
Long-Term Impacts		
Land Use	Neither LPA nor DOSL Alternative will result in conversion of existing land to transportation uses. Project will support intensified corridor development that is consistent with regional Smart Growth and transit-oriented development policies rather than contribute to land use changes. Land use benefits will tend to focus on the downtown centers where densities are highest and there is the greatest potential for more intensified land use development.	None required.
Growth Inducement	Both the LPA and DOSL Alternative will support infill growth strategies of corridor cities and will be consistent with regional Smart Growth policies and transit-oriented development objectives that call for the development of higher-density, mixed-use activity nodes around rapid transit stations and along major transit corridors in the region.	None required.
Agricultural/ Farmland Impacts	There are no agricultural lands present in the project corridor and no impacts to agricultural lands.	None required.

Table S.4-1: Summary of Build Alternatives Long-Term Impacts and Proposed Mitigation Measures

Impact Category	Impacts of LPA and DOSL Alternative ¹	Proposed Avoidance, Compensation and Minimization Measures
Community Impacts	<p>Both the LPA and DOSL Alternative will result in community cohesion benefits as station areas provide focal points for community activity and development. The project will be constructed on existing roadways; it will not disrupt community cohesion.</p> <p>The LPA and DOSL Alternative will improve access to community facilities, which will benefit corridor communities. No community facilities will be displaced or moved under either alternative.</p> <p>The FTA has determined in consultation with AC Transit that Section 4(f) analysis was not applicable to this project because the adopted design for the project will not use any Section 4(f) properties; therefore, a full Section 4(f) evaluation is not necessary in this Final EIS/EIR.</p> <p>Limited right-of-way impacts may result from traffic and parking mitigation as discussed in Chapter 3. Implementation of the Fruitvale bypass will require right-of-way acquisition totaling 6,090 square feet along Derby Avenue, west of East 12th Street; 10th Street, north of Fruitvale Avenue; and San Leandro Street, between Fruitvale Avenue and 33rd Avenue. There are also three potential off-street parking lots identified in Temescal, Fruitvale, and Elmhurst that may result in right-of-way impacts.</p> <p>No residential units or businesses will be relocated as a result of the proposed project.</p>	<p>None required.</p> <p>AC Transit has not made a commitment to provide off-street parking, but the intent is to coordinate with the city and local businesses and residents on the parking strategy, including the number and location of spaces to be developed. A final determination on the need for and the type and location of off-street parking will be made following the approval of a project for construction and during detailed design. If warranted, supplemental environmental analysis will be completed at that time to fully assess the effects of off-street parking lot development including right-of-way acquisition.</p>

Table S.4-1: Summary of Build Alternatives Long-Term Impacts and Proposed Mitigation Measures

Impact Category	Impacts of LPA and DOSL Alternative¹	Proposed Avoidance, Compensation and Minimization Measures
Utilities	<p>The LPA or DOSL Alternative will not create new demands on water supply, stormwater, or wastewater infrastructure. Relocation of underground utilities may be required in areas of major improvements (e.g. stations) and where maintenance activities would conflict with BRT operations. Utilities that pose potential conflicts with the BRT project are identified in Table 4.5-1. Relocation of parallel utilities under the BRT transitway is not planned.</p> <p>Temporary utility impacts will occur during construction, as described in Table S.4-2.</p>	<p>During detailed design of the East Bay BRT project, AC Transit will coordinate closely with utility providers to ensure that all existing utilities are identified and to develop utility relocation plans. Initial plans showing utility locations, potential conflicts, and proposed relocations and improvements are being prepared as part of the Final EIS/EIR process, and will be further refined during final design.</p>
Visual/Aesthetics	<p>The LPA or DOSL Alternative will not result in a substantial change to the visual character of the corridor as a whole. In some areas, particularly Fruitvale and at the San Leandro-Oakland border, some streetscape elements that contribute to the visual character will be removed, which could adversely affect the visual environment of these specific locations.</p>	<p>The project will be designed to replace or add streetscape elements similar to those being removed. The LPA will include the addition of new landscaped median such that the total length of median landscaping will increase by approximately 4,700 feet after all proposed traffic mitigation improvements are incorporated into the project.</p> <p>Station amenities will be designed in in coordination with the cities of Berkeley, Oakland, and San Leandro.</p>

Table S.4-1: Summary of Build Alternatives Long-Term Impacts and Proposed Mitigation Measures

Impact Category	Impacts of LPA and DOSL Alternative¹	Proposed Avoidance, Compensation and Minimization Measures
Archaeological Resources	<p>The LPA or DOSL Alternative will be constructed largely on the surface of existing streets and sidewalks and disturbance of existing pavement will not extend below levels previously disturbed; therefore, the potential for impacts to archaeological resources is extremely low.</p> <p>During the Final EIS/EIR process, a revised Area of Potential Effect (APE) was defined to reflect the LPA. An addendum was prepared that updated the analyses undertaken in 2005, and submitted to SHPO in December 2010. A copy of the letter FTA submitted in January of 2011 stating the project will have no adverse impacts to historic properties is included in Appendix G. A copy of the SHPO's May 17, 2011 letter restating its concurrence with the eligibility and effects determinations, based on the 2010 update, is also provided in Appendix G.</p> <p>As a result of further changes to the project subsequent to May 2011, additional archaeological evaluations were performed and documented in a second addendum. This addendum was submitted to SHPO in December 2011, and SHPO concurrence with the supplemental findings is anticipated prior to AC Transit and FTA making any final environmental determination on the preferred project for implementation.</p>	<p>An archeologist will monitor construction work in sensitive locations identified in the Site Treatment Plan for the Alameda-Contra Costa Transit District's East Bay Rapid Transit Project in Berkeley, Oakland, and San Leandro. If buried cultural materials are encountered during construction, work will stop and measures will be taken as specified in the plan.</p>

Table S.4-1: Summary of Build Alternatives Long-Term Impacts and Proposed Mitigation Measures

Impact Category	Impacts of LPA and DOSL Alternative ¹	Proposed Avoidance, Compensation and Minimization Measures
<p>Historic Resources</p>	<p>No historic properties will be altered or destroyed for the Build Alternatives. The proposed project will not result in noise or vibration impacts to historic properties. Changes to the setting of eligible historic resources will be in keeping with the dense, urban setting of the area and will not substantially alter features of the properties that render them eligible for listing in the National Register of Historic Places or the California Register of Historic Places.</p> <p>The LPA or DOSL Alternative will be constructed largely on the surface of existing streets and sidewalks and disturbance of existing pavement will not extend below levels previously disturbed; therefore, the potential for impacts to archaeological resources is extremely low.</p> <p>During the Final EIS/EIR process, a revised Area of Potential Effect (APE) was defined to reflect the LPA. An addendum was prepared that updated the analyses undertaken in 2005, and submitted to SHPO in December 2010. A copy of the letter FTA submitted in January of 2011 stating the project will have no adverse impacts to historic properties is included in Appendix G. A copy of the SHPO's May 17, 2011 letter restating its concurrence with the eligibility and effects determinations, based on the 2010 update, is also provided in Appendix G.</p> <p>As a result of further changes to the project subsequent to May 2011, additional historic architectural evaluations were performed and documented in a second addendum. This addendum was submitted to SHPO in December 2011, and SHPO concurrence with the supplemental findings is anticipated prior to AC Transit and FTA making any final determination on the preferred project for implementation.</p> <p>The FTA has determined in consultation with AC Transit that Section 4(f) analysis was not applicable to this project because the adopted design for the project will not use any Section 4(f) properties; therefore, a Section 4(f) evaluation is not necessary in this Final EIS/EIR.</p>	<p>No mitigation is required for historic structures.</p>

Table S.4-1: Summary of Build Alternatives Long-Term Impacts and Proposed Mitigation Measures

Impact Category	Impacts of LPA and DOSL Alternative¹	Proposed Avoidance, Compensation and Minimization Measures
Floodplain/ Hydrology	The LPA or DOSL Alternative will cross creeks, channels, and canals on existing bridges in areas that are fully developed; therefore, impacts or encroachments on these bodies of water are not anticipated. No encroachments or impacts to the floodplain are anticipated as a result of either alternative.	None required.
Water Quality/ Stormwater	No special requirements or concerns have been raised by the San Francisco Bay Regional Water Quality Control Board regarding this project. As the LPA or DOSL Alternative will add landscaping and require little or no widening of pavement along the shoulders, there will be no increase in impervious surfaces.	None required; see Construction Impacts for construction-related mitigation measures. Post-construction, stormwater will be collected and conveyed into the existing municipal system. As the Project is advanced into final design, specific BMPs will be identified in the plans developed for the project.
Geology/Soils/ Seismicity	Although no active faults cross the project corridor, it is located in a seismically active region which has been subjected to several strong earthquakes. In the portions of the study corridor south of Lake Merritt and at International Boulevard at 13 th Avenue, there is a high susceptibility to liquefaction. No substantial geologic hazard impacts have been identified which will not be fully addressed by design requirements.	Project will be designed to current seismic and geotechnical design standards. No additional mitigation measures are proposed.

Table S.4-1: Summary of Build Alternatives Long-Term Impacts and Proposed Mitigation Measures

Impact Category	Impacts of LPA and DOSL Alternative ¹	Proposed Avoidance, Compensation and Minimization Measures
Hazardous Waste/Materials	<p>A total of 103 potential environmental risk sites were identified in the study corridor, including 30 adjacent to the LPA alignment and an additional 73 within the ¼-mile study area with respect to the regional groundwater flow direction.</p>	<p>Mitigation measures for potential hazardous waste-related impacts will include:</p> <ul style="list-style-type: none"> • Preconstruction field surveys of identified environmental risk sites to observe current conditions. • Regulatory file review of environmental risk sites to determine current status of sites and extent of contamination. • Subsurface exploration of segments of the project alignment next to or downgradient from any environmental risk site. (If construction of the project warrants.)
Air Quality	<p>The LPA will decrease regional emissions because regional VMT will be reduced with project implementation; therefore, under NEPA, the LPA will result in a beneficial impact related to regional operational emissions.</p> <p>The LPA has been determined to generate minimal air quality impacts for CAAA criteria pollutants and has not been linked with any special MSAT concerns. As such, the LPA will not result in any increases in traffic volumes, vehicle mix, basic project location, or any other factor that will cause an increase in MSAT impacts of the LPA from that of the No-Build Alternative. Moreover, EPA regulations for vehicle engines and fuels will cause overall MSAT emissions to decline significantly during the next several decades.</p> <p>Complies with federal transportation conformity criteria (40 CFR Part 93).</p>	<p>None required, see Construction Impacts for construction-related mitigation measures.</p>

Table S.4-1: Summary of Build Alternatives Long-Term Impacts and Proposed Mitigation Measures

Impact Category	Impacts of LPA and DOSL Alternative ¹	Proposed Avoidance, Compensation and Minimization Measures
Noise and Vibration	<p>Generally, the project will reduce noise levels along the alignment because future traffic volumes with the project are lower than future traffic volumes without the project (See Section 3.2, Vehicular Traffic). There are no category 1, 2, or 3 impacts; therefore, no significant impact will occur as a result of the project.</p> <p>The Draft EIS/EIR identified one area along that alignment that will be affected by noise levels at the moderate level. This area was identified as Durant Avenue between Shattuck Avenue and Telegraph Avenue. BRT service in dedicated lanes is no longer part of the LPA in this area; therefore, the impacts no longer apply.</p> <p>Because buses have rubber tires and suspension systems that isolate vibrations from the ground, no vibration impact is anticipated.</p>	No abatement is proposed.
Energy	Energy consumption under the LPA or DOSL Alternative is comparable to that under the No-Build Alternative.	None required.
Biological Environment	Vicinity of the LPA or DOSL Alternative is fully developed; no sizable natural habitats remain and no wetlands are present within the construction area. The proposed project will be constructed along existing roadways and bridges. Crossings of San Leandro Creek and Estudillo Canal will not widen existing structures or pavement.	None required, see Construction Impacts for construction-related mitigation measures.

Table S.4-1: Summary of Build Alternatives Long-Term Impacts and Proposed Mitigation Measures

Impact Category	Impacts of LPA and DOSL Alternative ¹	Proposed Avoidance, Compensation and Minimization Measures
Environmental Justice	<p>The 34 traffic intersections with potentially significant impacts in year 2035 are scattered throughout the corridor, in both minority (Fruitvale, Central East Oakland) and non-minority (Berkeley, North Oakland) areas. However, 19 of the 34 intersection impacts do occur on the alignment, which is higher minority concentration. Each of the 19 impacted intersections located on the proposed alignment is located within a minority population of over 50 percent, with only one exception (intersection number 29 in Berkeley). A similar pattern occurs for low-income populations, although not to the extent of the minority populations. This is not unusual given the overall high ethnic and low-income composition of the corridor, however, Minority and low-income populations may be disproportionately affected by traffic impacts.</p> <p>Overall, the proposed project is expected to result in substantial benefits to minority and low-income populations by providing higher quality transit service measured in travel time and service frequency. Service reliability, convenience and safety will improve substantially under the LPA and DOSL Alternative compared to the No-Build condition.</p>	<p>In year 2035, six of the 34 intersections are forecast to have an impact that will not be mitigated to less than significant with implementation of the LPA. With implementation of the DOSL Alternative, one intersection is forecast to have an impact that will not be mitigated to less than significant. The cities, in coordination with AC Transit, have decided that the level of improvements needed to mitigate these intersections to less than significant will result in greater impacts to other areas, such as right-of-way and property impacts. Therefore, these intersections will not be mitigated to less than significant and these other impacts will be avoided.</p> <p>It should be noted that five of these six intersections are located in the northern part of the corridor, which while still within high concentrations of minority populations, has a lower concentration than the San Antonio through Elmhurst subareas, which have the highest percentages of minority and low income populations in the corridor.</p>

Notes:
¹ Impacts other than traffic and parking
 Source: Kimley-Horn, 2011

Table S.4-2 summarizes the temporary, construction phase impacts of the LPA and DOSL Alternative and identifies proposed avoidance, minimization and/or mitigation measures for each impact.

Table S.4-2: Summary of Build Alternatives Construction Impacts and Proposed Mitigation Measures		
Impact Category	Build Alternative Impacts	Proposed Avoidance, Compensation and Minimization Measures
Construction Stages, Schedule, and Work Hours	<p>Construction stages will include: utility relocation, removal of existing pavement, BRT transitway construction (pavement, curbs, and medians, where proposed), BRT station construction, replacement of existing curbs and sidewalks (where applicable), and the addition or update of signals, signage, and pavement markings.</p> <p>Major work will be localized to station areas and roadway segments where the full pavement cross section will be reconstructed and should not disrupt any individual area for more than a few weeks at a time. Elsewhere, construction will be confined largely to the area of the median or side-running transitway, with at least one traffic lane open at all times.</p> <p>Several non-contiguous areas could be constructed simultaneously to minimize impacts and shorten the duration of construction. Most work will be accomplished during daylight hours; however, some night work may be necessary to minimize traffic impacts.</p>	<p>All construction will be planned and staged to minimize disruption of traffic and utility service. Specific construction staging will be developed during final design.</p>

Table S.4-2: Summary of Build Alternatives Construction Impacts and Proposed Mitigation Measures

Impact Category	Build Alternative Impacts	Proposed Avoidance, Compensation and Minimization Measures
Traffic	<p>Traffic disruption will be due largely to the closure of one lane of traffic in each direction. Sidewalks and bikeways may be temporarily closed during construction of BRT stations and the transitway.</p> <p>Depending upon agreements with local jurisdictions, individual intersections along the BRT alignment could be closed fully or in part for a few weeks.</p>	<p>One lane of vehicular traffic will be maintained in each direction during business hours. Pedestrian access (including wheelchair accessible ramps and temporary sidewalks) will be maintained during construction.</p> <p>Traffic detours will be designated.</p> <p>Bicycle traffic may have to be rerouted to parallel facilities during construction.</p> <p>AC Transit will establish traffic, pedestrian, and bicycle control plans for the construction period. These plans will be approved by local cities.</p> <p>A transportation management plan (TMP) will be developed to provide advance notice of information on construction activities and durations, detours, and access issues during each state of construction.</p>

Table S.4-2: Summary of Build Alternatives Construction Impacts and Proposed Mitigation Measures

Impact Category	Build Alternative Impacts	Proposed Avoidance, Compensation and Minimization Measures
<p>Community Impacts</p>	<p>Project construction will result in short-term impacts to automobile accessibility and on-street parking along the project alignment, which could temporarily affect certain types of business activity in certain locations and the passage of emergency vehicles through the work area.</p>	<p>AC Transit will coordinate with local emergency service providers in developing detour plans.</p> <p>Emergency service providers will be provided with advance notice of road closures and detour routes. Motorized and non-motorized traffic management plans will be prepared by the contractor in conjunction with local municipalities. The plans will demonstrate how safe access is to be provided during business hours. Complete closures of roadways will be the exception, with times and locations to be identified in the traffic management plan and approval of closures required by AC Transit and the appropriate city in which the work is proposed.</p> <p>AC Transit will:</p> <ul style="list-style-type: none"> • Conduct public outreach in areas of construction to advise individuals and businesses of planned activities. Construction activity schedules will be publicly available and posted on a project status web site maintained by AC Transit. • Establish a database of property owners along the project corridor and of other individuals or agencies expressing interest in notification of construction activity. The database will allow AC Transit to contact property owners directly, by mail, or phone, in advance of construction. • Provide signage in construction zones identifying travel routes and times and specific zones of construction activity. Community facilities and businesses will be provided signs indicating points of access, parking areas as appropriate, and hours of operation.

Table S.4-2: Summary of Build Alternatives Construction Impacts and Proposed Mitigation Measures

Impact Category	Build Alternative Impacts	Proposed Avoidance, Compensation and Minimization Measures
Utilities/Service Systems	Existing utilities will be identified and necessary relocations accomplished in advance of construction for each of the proposed station locations. Short-term scheduled and unscheduled interruptions of utility services may occur or unanticipated utilities may be encountered.	AC Transit and its contractors will coordinate closely with utility providers to give advance notice of any required short-term interruptions of service to customers. Contingency plans will be developed in coordination with utility providers to address unanticipated encounters with buried utilities and/or unscheduled interruptions in service.
Visual/Aesthetics	Construction will take place in the existing roadway in an urbanized area. Transportation improvements such as the proposed BRT project have become an accepted aspect of the urban scene. No substantial adverse impacts are anticipated.	Materials will not be stockpiled on site, and demolition materials will be hauled away. Debris will be cleared daily. Best Management Practices will be implemented to protect mature trees, other vegetation, and the existing streetscape during construction. Best Management Practices will be employed for the protection of mature trees, other vegetation, and the existing streetscape during construction.
Cultural Resources	The East Bay BRT Project will be constructed largely within the surface of existing streets and sidewalks. There is little potential to disturb subsurface areas not previously disturbed for construction of the original street or utilities. No historic resources will be affected during construction.	During construction, an archeologist will monitor work in sensitive locations identified in the Site Treatment Plan. If buried cultural materials are encountered during construction, work will stop until a qualified archaeologist could evaluate the find. If applicable, AC Transit and FTA will comply with 36 CFR 800.13 regarding late discoveries.
Section 4(f)	Project construction will not adversely affect any known section 4(f) resources.	None required other than monitoring in sensitive locations, as proposed above.

Table S.4-2: Summary of Build Alternatives Construction Impacts and Proposed Mitigation Measures

Impact Category	Build Alternative Impacts	Proposed Avoidance, Compensation and Minimization Measures
Hydrology and Water Quality	The Build Alternatives will remove roadway pavement and excavate and grade along the transitway and in station areas. Exposure and loosening of soils and subsurface materials have potential to affect stormwater runoff into storm drains along the BRT alignment.	Best Management Practices will be implemented to prevent dust, debris, and sediment from entering runoff. Drain basins will be equipped with temporary devices to collect any sediment and debris that does enter runoff during construction. AC Transit will require the contractor to develop and implement a Storm Water Pollution Prevention Plan, Erosion and Sediment Control Plan, and a Spill Prevention, Contaminant and Clean-up Plan (SPCCP). The SPCCP will address containment of fuels, oils, lubricants and other construction materials that could enter runoff.
Hazardous Waste/Materials	Construction activities in a densely developed urban area have potential to affect workers and surrounding residents, business owners, employees, and others as well as resources if hazardous materials used in construction are released to the surrounding environment.	AC Transit will require the contractor to develop and implement a Worker Health and Safety Plan (WH&SP) to address the handling and storage of hazardous construction materials. A plan that effectively protects those in closest proximity to the source of contaminants would protect corridor residents and others.

Table S.4-2: Summary of Build Alternatives Construction Impacts and Proposed Mitigation Measures

Impact Category	Build Alternative Impacts	Proposed Avoidance, Compensation and Minimization Measures
<p>Air Quality</p>	<p>Construction of the proposed project (LPA or DOSL Alternatives) has the potential to create air quality impacts through the use of heavy-duty construction equipment and through vehicle trips generated by construction workers traveling to and from the proposed project site. Construction activity will generate regional emissions, toxic air contaminant (TAC) emissions, and odors. It also will increase localized pollutant concentrations near construction. Construction emissions will be temporary, and not result in any long-term impacts. Therefore, under NEPA, the proposed project will not result in an adverse impact.</p>	<p>Basic Construction Mitigation Measures:</p> <ul style="list-style-type: none"> • All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, unpaved access roads) shall be watered twice daily. • All haul trucks transporting soil, sand, or other loose material off-site shall be covered. • All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited. • All vehicle speeds on unpaved roads shall be limited to 15 mph. • All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used. • Idling times shall be minimized either by shutting equipment off when not in use or reducing maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points. • All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation. • Post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. • The Air District's phone number also shall be visible to ensure compliance with applicable regulations.

Table S.4-2: Summary of Build Alternatives Construction Impacts and Proposed Mitigation Measures

Impact Category	Build Alternative Impacts	Proposed Avoidance, Compensation and Minimization Measures
Noise and Vibration	Noise impacts are anticipated at any residential location within 25 to 90 feet of construction activities, depending on the construction phase. Night time construction may be necessary. Vibration impacts will need to be mitigated if construction equipment operates in close proximity to wood-framed buildings along the project alignment (close proximity is defined by the vibration impact distances for construction equipment discussed in Section 4.13.	<p>Contractor will:</p> <ul style="list-style-type: none"> • Conduct noise and vibration testing and monitor and inspect equipment to ensure that they meet noise standards; • Place temporary noise barriers for asphalt cutting and other noisy activities; • Turn off idling equipment; • Choose haul routes and conduct loading and unloading operations to minimize noise in residential and other sensitive areas; • Minimize construction activities during nights, weekends, and holiday periods; • Adhere to local and FTA noise thresholds and ordinances.
Biological Environment	No construction phase impacts to the biological environment are anticipated as there are few biological resources in the project area. However, measures should be taken to protect existing resources.	<ul style="list-style-type: none"> • Best Management Practices will be followed to avoid effects to surface water. In compliance with the Executive Order on Invasive Species, E.O. 13112, landscaping included in the proposed project will not use species listed as noxious weeds. • All potential nest tree removal activities shall be conducted during the nonbreeding season under the supervision of a qualified biologist, if feasible. The size of the nest buffer shall be determined by the biologist in consultation with CDFG and will be based on the nesting species and its sensitivity to disturbance at the nest. • Mature trees will not be removed during breeding season.

Table S.4-2: Summary of Build Alternatives Construction Impacts and Proposed Mitigation Measures

Impact Category	Build Alternative Impacts	Proposed Avoidance, Compensation and Minimization Measures
Environmental Justice	Project construction will result in short-term impacts to automobile accessibility and on-street parking along the project alignment, which could temporarily affect certain types of minority business activity in certain locations and the passage of emergency vehicles through the work area.	<p>AC Transit will coordinate with local emergency service providers in developing detour plans.</p> <p>Emergency service providers will be provided with advance notice of road closures and detour routes. Motorized and non-motorized traffic management plans will be prepared by the contractor in conjunction with local municipalities. The plans will demonstrate how safe access is to be provided during business hours.</p> <p>Complete closures of roadways will be the exception, with times and locations to be identified in the traffic management plan and approval of closures required by AC Transit and the appropriate city in which the work is proposed.</p>

Source: Kimley-Horn, 2011

S.5 Cumulative Impacts

NEPA defines cumulative impact as “the impact...which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions.” CEQA defines cumulative impacts as "two or more individual effects which, when considered together are considerable," and suggests that “cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time” (State CEQA Guidelines Section 15355).

The environmental document has evaluated cumulative effects of the East Bay BRT Project and other past, present, and reasonably foreseeable future project in the study area. Because the proposed project will use existing paved street right-of-way, there is no potential for it to contribute to cumulative impacts on land use, neighborhood character or cohesion, or biological and wetlands resources in the general project corridor. Its primary impacts will be to travel demand, including mode choices, parking, and traffic circulation.

S.5.1 Assessment of Cumulative Impacts: Regional Context

Because this document is based on accepted regional land use forecasts for 2035 and assumes transportation improvements programmed within the same time frame, effects evaluated under the Locally Preferred Alternative (LPA) and Downtown Oakland-San Leandro (DOSL) Alternative for the East Bay Bus Rapid Transit (BRT) Project include the cumulative effects of development within the region. Thus, additional analysis of cumulative effects related to specific development and transportation improvement projects within the region is not necessary for impacts such as land use, transportation (including traffic and transit), air quality, and noise.

S.5.2 Assessment of Cumulative Impacts: Local Context

Because the proposed project will use existing paved street right-of-way, there will be no potential for it to contribute to impacts to biological and wetlands resources in the general project corridor. Its primary impacts will be to traffic circulation and parking. Other major projects assumed in the 2035 No-Build Alternative and other related projects described in Section 1.3.1, Related Projects and Planning that might also contribute to these impacts are as follows:

- Telegraph Avenue Streetscape Improvements (LPA; portion between 20th Street and 16th Street also affects DOSL Alternative)
- Telegraph Avenue Bike Lane project (LPA; portion between 20th Street and 16th Street also affects DOSL Alternative)
- Oakland Bicycle Facility Improvements projects (LPA and DOSL Alternative)
- 12th Street Reconstruction Project (LPA and DOSL Alternative)
- Fruitvale Transit Village phase I, completed in 2004 (LPA and DOSL Alternative)
- International Boulevard Streetscape Project in the City of Oakland (LPA and DOSL Alternative)
- East 14th North Area Study (LPA and DOSL Alternative)
- Caldecott Improvement Project (LPA and DOSL Alternative)

Each of the projects identified above was evaluated for the potential to add to impacts of the LPA or DOSL Alternative as described in Chapters 3 and 4. Most of the projects were determined not to contribute substantially to cumulative impacts in any environmental category when combined with the proposed East Bay BRT Project as defined in the Draft EIS/EIR, with the exception of two proposed projects – the East 14th Street North Area Study in San Leandro, and the bicycle lane project along Telegraph Avenue between Aileen Street/State Route 24 and 16th Street in Oakland. Through changes between the Draft EIS/EIR and the LPA and DOSL Alternatives under consideration in this Final EIS/EIR, the potential for cumulative impacts associated with these two projects has been eliminated. Cumulative impacts have been addressed adequately in the impact chapters of this document, based on accepted regional land use forecasts for 2035. No additional cumulative impacts are anticipated to result from implementation of the LPA or DOSL Alternative in conjunction with other proposed local projects as outlined in Section 5.3; therefore, no mitigation is required.

S.6 California Environmental Quality Act Evaluation

The impacts evaluated in Chapters 3 and 4 of this document were also evaluated under California Environmental Quality Act (CEQA) significance criteria defined in Table 6.2-1. The proposed project's impacts and their level of significance before mitigation with respect to CEQA criteria of significance are presented below. No other impacts of the proposed BRT project rise to the level of significance under CEQA.

6.1.1 Transportation/Traffic Impacts

As shown in Tables 6.3-2 and 6.3-3 in Chapter 6, with existing 2009 plus project conditions the proposed project will create a significant impact at three intersections during the morning peak hour, and nine locations during the afternoon peak hour. Implementation of the mitigation measures identified for each of these locations in Section 3.2.9 will reduce the project's impacts to a less-than-significant level at all intersections in this scenario.

6.1.2 Hazardous Waste/Materials Impacts

As discussed in Section 4.11, there are 30 potential environmental risk sites along the LPA alignment (25 along the DOSL alignment) and 73 potential environmental risk sites within a 0.25-mile radius of LPA alignment (66 along the DOSL alignment). An impact would occur if construction workers or members of the public were exposed to hazardous materials during excavation, grading, and related construction activities or if the likelihood of hazardous waste migration were increased by construction activities. This impact is considered significant under CEQA. However, implementation of the mitigation measures will reduce this impact to a less-than-significant level.

6.1.3 Construction-Related Impacts – Air Quality

As discussed in Section 4.17.9, construction of the proposed project will result in NO_x emissions from construction vehicle exhaust. Quantities will exceed the significance threshold established by the BAAQMD. The proposed project will not result in any other significant construction-related air quality impacts. Implementation of mitigation measures will reduce NO_x emissions by 25 percent; however, mitigated emissions will remain above BAAQMD's significance threshold.

6.1.4 Construction-Related Impacts – Noise and Vibration

As described in Section 4.17.10, the project-related noise emissions will exceed FTA at noise sensitive areas within 100 feet of planned construction activities. Similarly, construction-related vibration will be in excess of FTA significance criteria within 85 feet of planned construction activities. However, implementation of mitigation measures described in this section will reduce impacts for both noise and vibration to a less-than-significant level.

6.1.5 Significant Unavoidable Adverse Environmental Effects

As described in the preceding section, the incorporation of mitigation measures will not reduce construction-related NO_x emissions to below the BAAQMD significance threshold. Accordingly, the proposed project will have a significant and unavoidable air quality impact with respect to NO_x emissions associated with construction activities.

6.1.6 Conclusion

The DOSL Alternative is expected to have fewer impacts with respect to traffic and transportation. For all other resources examined, The DOSL Alternative will have similar impacts to the LPA.

The DOSL Alternative is also the environmentally superior alternative because it will result in fewer traffic impacts than the LPA. In addition, the DOSL Alternative substantially meets the project objectives; and therefore, is considered feasible.

S.7 Consultation and Coordination

S.7.1 Project Organization and Public Participation

Consultation with the general public and appropriate public agencies began during the Major Investment Study (MIS) for this project, conducted from 1999 to 2002 and continued during preparation of the Draft EIS/EIR and Final EIS/EIR. A particular focus of the public participation process was to inform low income and ethnic minority communities about the project and obtain comment on issues of concern. The East Bay BRT project is aligned through neighborhoods with higher than average concentrations (compared to the AC Transit service area and Alameda County as a whole) of low income, mobility dependent, and minority populations. These populations could substantially benefit from proposed project improvements; however, they could also be affected by long-term project impacts on traffic and parking and short-term construction impacts.

Another focus of outreach was businesses in the corridor. Small businesses especially are subject to the effects of parking displacements and access disruption from construction. Meetings were held with business associations and merchant groups along the corridor. Outreach to communities and businesses are described in Chapter 7, Consultation and Coordination.

Meetings were announced through direct-mail flyers, telephone calls to community organizations, newspaper advertisements and announcements posted in AC Transit buses. A Policy Steering Committee (PSC) and Technical Advisory Committee (TAC) advised the project team on strategic directions and technical issues in project development and environmental review.

The AC Transit Board of Directors adopted the Locally Preferred Alternative (LPA), calling for BRT along an alignment using Telegraph Avenue and International Boulevard/East 14th Street, on August 2, 2001. The LPA was carried forward into the Draft EIS/EIR for further evaluation.

The Draft EIS/EIR documented public outreach meetings beginning in 1999, up to the release of the Draft EIS/EIR in May of 2007. The Final EIS/EIR incorporates this documentation by reference. The documentation of meetings and other coordination activities after circulation of the Draft EIS/EIR, through the Locally Preferred Alternative (LPA) decision-making process and the Final EIS/EIR evaluation process is included within this Final EIS/EIR.

The focus of the outreach activities since the Draft EIS/EIR has been on refinements to the LPA and the local city processes for selection of the LPA. After the Draft EIS/EIR was released in May 2007, several of the committees convened during that process were put on hold. Select committees were reconvened as the focus shifted to the selection of the LPA and preparation of the Final EIS/EIR. The Technical Advisory Committee (TAC) reconvened meetings in August 2008, and met on a monthly basis. The Policy Steering Committee (PSC) reconvened in February 2009 and met on a monthly basis. In addition, sub-TACs consisting of city and AC Transit staff were held to identify local concerns and work toward their resolution.

Outreach in each of the corridor cities also took place as part of the LPA process. Each of the respective cities conducted public outreach to develop support for and finalize the LPA. In the

fall of 2009 a series of public meetings were held in Berkeley and San Leandro to determine public support for the BRT project in those communities and to seek city council support for the LPA. A similar series of meetings were held in Oakland in the spring of 2010. A summary of these meetings, including a summary of public comments received, is included in Section 7.1.1. These public meetings were followed by the official action by each city in adopting the LPA, and subsequently, the AC Transit Board LPA decision on June 23, 2010.

S.7.2 Agency Consultations

FTA and AC Transit have coordinated with the State Historic Preservation Officer (SHPO) to delineate the Area of Potential Effects (APE) for archaeological and historic resources. A Historic Properties Survey Report (HPSR), a Finding of Effect (FOE), and a Site Treatment Plan to address unanticipated encounters of archaeological resources were prepared.

During the Final EIS/EIR process, a revised Area of Potential Effect (APE) was defined to reflect the LPA. An addendum was prepared that updated the analyses undertaken in 2005, and submitted to SHPO in December 2010. A copy of the letter FTA submitted in January of 2011 stating the project will have no adverse impacts to historic properties is included in Appendix G. A copy of the SHPO's May 17, 2011 letter restating its concurrence with the eligibility and effects determinations, based on the 2010 update, is also provided in Appendix G.

As a result of further changes to the project subsequent to May 2011, additional historic architectural and archaeological evaluations were performed and documented in a second addendum to the HPSR. This addendum was submitted to SHPO in December 2011 and SHPO concurrence with the supplemental findings is pending.

A full summary of agency coordination activities may be found in Section 7.3 and Section 7.5.

S.7.3 Comments on the Draft EIS/EIR

Following the circulation of the Draft EIS/EIR for public review in May 2007, 234 agencies, individuals, and organizations provided review comments on the draft document. These comments came in various forms including letters, e-mails, web site comments, and testimony at public hearings in Berkeley, Oakland, and San Leandro. Several individuals provided comments in two or more of these forms. Following the review and parsing of the public comments, approximately 1,000 individual comments were identified.

AC Transit performed a detailed analysis of the review comments and developed a coding scheme for organizing the comments. AC Transit's review of the public comments identified 16 major themes that were present in many of the letters, such as fares, safety and security, traffic, and parking. Responses to these themes comprehensively address multiple comments, with data contained in various documents including the MIS documents, technical studies, and the Draft EIS/EIR. The responses to common comments are cross-referenced in the responses to individual comments, and can be found in Section 7.9, Response to Common Comments.

Volume II provides copies of each letter received on the Draft EIS/EIR and responses to each individual comment. The responses to individual comments do not significantly alter the

proposed project, change the Draft EIS/EIR's conclusions about the significance of any given impact, or result in a conclusion that significantly more severe environmental impacts will result from the proposed project.

S.8 Financial Analysis

S.8.1 Capital Costs and Funding Options

The construction costs of the LPA project elements are estimated at \$205.1 million (year-of-expenditure [YOE] dollars) including \$9.6 million in finance charges. Anticipated funding sources are summarized in Table S.8-1 and described in more detail in Section 8.2.2.1, Capital Funding.

Table S.8-1. Source of Funding for LPA (Millions of YOE Dollars)

Sources of Funds	Funding Level	Funding Share	Level of Commitment	Evidence of Commitment
Federal Sources:				
<i>Section 5309 New Starts</i>	75.0	36.6%	N/A	N/A
<i>FTA Section 5309 Bus</i>	3.1	1.5%	Committed	Grant No. CA-03-0684 and Grant No. CA-04-0023
Total Federal Funds	\$78.1	38.1%		
Nonfederal Sources:				
<i>Regional Measure 2</i>	43.4	21.2%	Committed	MTC's RM2 List of capital projects
<i>Alameda County Measure B</i>	5.5	2.7%	Committed	ACTC Projects Summary (2008)
<i>Alameda CTC STIP funds</i>	40.0	19.5%	Committed	ACTC's Adopted 2008 Countywide Transportation Plan (FY 2009-2035)
<i>State Infrastructure Bond funds, AB 664 Bridge Tolls, other AC Transit District revenues</i>	4.9	2.4%	Committed	
<i>Other funding sources/bonding</i>	33.2	16.2%	Planned	
Total Nonfederal Funds	\$127.0	61.9%		
Total Project Budget	\$205.1	100%		

Note: Total may not add up due to rounding

When the funding plan for an East Bay BRT Project was reviewed post circulation of the Draft EIS/EIR and revised in September 2008 to match the anticipated preferred alternative, \$35 million in CMAQ funding was dedicated to the project; however, in an effort to preserve existing services and address budget issues as a result of the national economic recession, AC Transit determined that it was necessary to exchange the CMAQ for operating revenues to balance the agency's budget. Therefore, those CMAQ funds are no longer available for the East Bay BRT Project, leaving a funding gap of \$33.2 million for the LPA project. To address this funding gap for the LPA, AC Transit is actively examining other funding options, as described in Section

8.2.2, Sources of Funding. The DOSL Alternative offers another option to implement BRT if the gap cannot be filled immediately. The Final EIS/EIR has defined and discloses the impacts of this shorter alternative that can be implemented with anticipated funding. BRT improvements could be completed in phases, consistent with funding availability. No funding gap is shown to exist should AC Transit decide to construct the DOSL Alternative rather than LPA. BRT improvements through the full corridor (i.e., north from downtown Oakland) could be completed as funding becomes available.

S.8.2 Operating Costs and Funding Options

BRT farebox revenues are estimated to cover 44 percent of the LPA's O&M expenses. After accounting for farebox revenues, the required subsidy is estimated at \$3.1 million by opening year (2016). Funding source Regional Measure 2 (RM-2) is generated from \$1.00 tolls on the state-owned bridges within the San Francisco Bay area to support a variety of transportation investments. RM-2 also provides an annual allocation of \$3 million dedicated to bus service in the East Bay BRT Project corridor to cover any O&M subsidy. In addition to the existing O&M revenues, other potential sources to subsidize LPA operations include any operating surplus available to support AC Transit's annual O&M expenses.

Existing O&M funding sources in addition to farebox revenue for systemwide expenses are summarized in Section 8.2.2.2, O&M Funding.

S.8.3 Analysis of Results

The financial analysis demonstrates that AC Transit has funding commitments for a significant share of the East Bay BRT non-Small Starts funding, and additional farebox revenues and RM-2 funding dedicated to BRT operations can support the future O&M cost increase related to the LPA Small Starts project. AC Transit is considering funding options, including borrowing, to cover 17 percent of the project costs that remain uncommitted, which is reasonable at the current stage of project development. Regional efforts to increase transportation funding are expected to provide an opportunity for additional O&M revenues that will support AC Transit's systemwide operations.

Alternatively, the DOSL project could be implemented. Additional farebox revenues and RM-2 funding dedicated to BRT operations can support the future O&M costs related to the project. This approach also would help address any potential risks to the LPA funding plan, not already identified. Such risks include:

- **Inflation of Small Starts Project Capital Costs Over Time** – Construction costs for the East Bay BRT Project have been converted into YOY dollars assuming an annual inflation rate of 3.3 percent based on *Engineering News-Record's* building cost index (BCI). A higher or lower rate of inflation than that assumed in the East Bay cost estimates would impact the agency's funding capacity.
- **Construction Cost Schedule** – Delays and the extension of the construction schedule would increase the capital costs of a project.

- **Increases in Project Capital Costs** – Construction costs of the East Bay BRT Project are subject to uncertainty due to a number of factors, such as unforeseen field conditions and variations in unit costs.
- **Ridership and Fare Assumptions** – Fare revenues are a function of ridership and average fare assumptions. Changes to any of these assumptions would affect passenger revenues, impacting both the operating and capital plans.

S.8.4 Other Related Project Improvements

As noted above, the financial analysis was performed for the LPA project, and was conducted in accordance with FTA requirements. Consistent with those requirements, the set of other related project improvements cannot be included within the project and its capital cost that will be paid for in part by FTA Section 5309 Small Starts funds.

As explained in more detail in Section 2.3.4, those other related project improvements are not integral to the East Bay BRT project, but will be developed and paid for by the sponsoring agencies or by AC Transit on their behalf. For the LPA, the estimated cost of those other improvements is \$35.4 million. The costs of those improvements to be implemented in conjunction with the DOSL Alternative are estimated at \$29.7 million. Again, the ability to implement these other related projects will be contingent upon the identification of sources of additional funds, beyond those already identified for the East Bay BRT project.

S.9 Evaluation of Alternatives

Table S.9-1 presents a qualitative comparison of the LPA and DOSL Alternative based on project features and performance measures that follow from the project Purpose and Need presented in Chapter 1. Chapter 8, Financial Analysis and Alternatives Evaluation, provides additional detail on the comparison of alternatives based on the information included in this environmental document.

Unless noted, comparisons in Table S.9-1 are relative to the No-Build Alternative and assume 2035 conditions. The assessment was conducted for 24 measures, categorized under the four basic purposes established for the East Bay BRT Project and a fifth category covering environmental impacts. Further discussion of these measures, and the comparison of alternatives, is included in Chapter 9.0, Evaluation of Alternatives.

Table S.9-1 Summary of Effects Relative to Project Goals and Objectives

Measure	LPA	DOSL Alternative
Improve Transit Service in the Project Corridor		
Express buses per hour (frequency)	++	++
Capacity		
- Bus seat-miles operated	+++	++
- Roadway auto capacity	--	-
- Roadway person-trip capacity	0	0
Speed		
- BRT bus average speed	+	+
- Auto average speed	-	-
Express bus travel time (Berkeley to San Leandro BART)	++	+
Express bus boarding time	+	+
Reliability (Berkeley to San Leandro BART)	++	+
Security, comfort and cleanliness	+	+
Improve Transit Ridership by Providing Transit Alternative to Automobile		
Weekday boardings		
- New trips and total corridor/system	+++	++
- Auto vehicle VMT/trips	+	+
Improve and Maintain Efficiency of Transit Service Delivery		
Capital costs – total	--	-
Net operating costs – total	--	-
Net operating costs – per trip	++	+
Annualized total cost – per new transit trip	++	+
Support Local and Regional Planning Goals		
Weekday express buses between key activity centers (trips)	++	+

Measure	LPA	DOSL Alternative
Point-to-point peak-period express bus travel time between key activity centers	+	+
Potential for transit-oriented development	++	+
Environmental Impacts		
Parking displaced	--	-
Intersection and roadway LOS	--	-
Construction impacts (traffic, utilities)	--	-
Environmental Justice (effect on low-income/minority)	++	+
Other environmental effects (air quality, hazardous materials, land use)	0	0