

CHAPTER SUMMARY: This chapter of the EIS/EIR summarizes environmental impacts of the project alternatives, including the LPA, pursuant to the California Environmental Quality Act (CEQA). CEQA requires that environmental documents determine significant or potentially significant impacts. While CEQA requires that identification of the level of significance for each impact be stated in an EIR, the National Environmental Policy Act (NEPA) regulations do not require such a discussion. Additionally, CEQA, unlike NEPA, does not require a discussion of socioeconomic effects except where they would result in physical changes and states that social or economic effects shall not be treated as significant effects. Therefore, because this is a joint NEPA/CEQA environmental document, this chapter differentiates the CEQA-specific impact findings and mitigation measures to clarify the distinctions for the reader.

CHAPTER 7

California Environmental Quality Act Evaluation

7.1 The Relationship between NEPA and CEQA

This combined EIS/EIR has been prepared in accordance with NEPA and CEQA, and related environmental statutes and regulations. While CEQA requires that identification of the level of significance for each impact be stated in an EIR, NEPA regulations do not require such a discussion. Because of this difference, the CEQA significance criteria and the determinations of significant impacts have not been included in other sections of this joint NEPA/CEQA document, but rather are identified and described in this chapter.

CEQA requires identification of the level of significance for each impact—NEPA regulations do not. The other sections of this joint NEPA/CEQA analysis follow NEPA impact finding requirements. The more detailed requirements of CEQA impact analysis are identified and described in this chapter.

7.2 Significance of the Proposed Project's Impacts under CEQA

This chapter of the EIS/EIR summarizes environmental impacts of the project alternatives, including the LPA (with or without the Vallejo Northbound Station Variant), pursuant to CEQA. The analysis is conducted following the State CEQA Guidelines contained in Title 15, California Code of Regulations (CCR), sections 15000 *et seq.*

The CEQA impact levels consist of potentially significant impact, less than significant impact with mitigation, less than significant impact, and no impact. Please refer to the following reference documents for detailed discussions regarding determination of impacts under CEQA:

- CEQA Statutes: Division 13, California PRC, Sections 21000-21178.1 (http://www.ceres.ca.gov/topic/env_law/ceqa/stat/).
- CEQA Guidance: Title 14, Chapter 3, CCR, Sections 15000 *et seq.* (http://www.ceres.ca.gov/topic/env_law/ceqa/guidelines/).
- Major Environmental Analysis Division of the San Francisco Planning Department CEQA Initial Study Checklist.

CEQA requires that environmental documents determine significant or potentially significant impacts. The CEQA significance thresholds applicable to the proposed project are qualitative and quantitative. Some impact categories lend themselves to scientific or mathematical analysis and, therefore, to quantification. For other impact categories that are more qualitative

or are dependent on changes to the existing setting, a hard-and-fast threshold is not generally feasible. In these cases, the definition of significant effects from the CEQA Guidelines (Section 15382), “a substantial adverse change in physical conditions,” has been applied as the significance criterion. In addition, CEQA, unlike NEPA, does not require a discussion of socioeconomic effects except where they would result in physical changes and states that social or economic effects shall not be treated as significant effects (see CEQA Guidelines Sections 15064 (f) and 15131). Section 4(f) constructive use analysis is also not required by CEQA. For this reason, socioeconomic (community impacts and environmental justice) and Section 4(f) criteria are not included in Tables 7-1 and 7-2. In addition, the project would result in no impact to mineral resources, agricultural and forest resources, or wind resources; therefore, these disciplines are not included in Tables 7-1 and 7-2. Growth impacts are addressed under Population and Housing, and are discussed in detail in Section 4.3 Growth. Wind and shadow impacts are analyzed under Aesthetics. Cumulative impacts are summarized in Table 7-2, and are discussed in detail in Chapter 5 Cumulative Impacts. Irreversible and irretrievable commitment of resources is discussed in Section 4.16.

Questions, comments, and requests for additional information regarding CEQA significance thresholds may be addressed to:

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7.3 Findings of Significance under CEQA

Table 7-2 provides a summary of environmental impacts and their significance, as well as associated mitigation and improvement measures recommended for implementation by the project sponsor.

A summary of the significance thresholds applied in impact analysis is provided in Table 7-1. A summary of environmental impacts that would result under each project alternative, including the LPA, is provided in Table 7-2, broken down by impact category. A determination as to the significance of the impacts and associated mitigation measures and improvement measures recommended for implementation are also identified in Table 7-2. The improvement and mitigation measures summarized in Table 7-2 would be implemented by the project sponsor. The detailed discussion of impacts and associated improvement measures and mitigation measures is provided in Chapter 3, Transportation, and Chapter 4, Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures.

All potentially significant impacts that would result from any of the project alternatives, including the LPA (with or without the Vallejo Northbound Station Variant), can be mitigated to a less-than-significant level, except those related to transportation. These impacts are discussed below. The CEQA Mandatory Findings of Significance are presented in Table 7-3.

7.4 Mitigation Measures Pursuant to CEQA Impacts

DEFINITIONS

MITIGATION MEASURES:
Measures required to address a potentially significant impact to make it less than significant.

IMPROVEMENT MEASURES:
Measures recommended to reduce or avoid impacts that are identified as being less than significant; are often standard or best practices.

Analysis of each environmental factor in Chapters 3, 4, and 5 of this EIS/EIR includes discussion of the affected environment, environmental consequences (including permanent/project operational impacts, construction impacts, and cumulative impacts), and avoidance, minimization, and compensation measures for each project alternative. The avoidance, minimization, and compensation measures are identified in the following two categories: “improvement measures” and “mitigation measures.” Mitigation measures are measures required to address a potentially significant impact. Improvement measures are measures recommended to reduce or avoid impacts that are identified as being less than significant and are often standard or best practices. Improvement measures may also include steps taken to achieve beneficial effects beyond best practices or permits requirements.

Table 7-1. CEQA Significance Criteria

IMPACT CATEGORY	CEQA SIGNIFICANCE THRESHOLD/MEASUREMENT	SOURCE
Aesthetics	<p>The project would have a significant impact if it would: have a substantial effect on a scenic vista, obstruct publicly accessible views, or damage scenic resources; Substantially degrade the existing visual character or the quality of a site and its surroundings, or generate obtrusive light or glare that would adversely affect day and nighttime views or substantially affect other properties.</p> <p>A project would have a significant effect if it would result in substantial new shadow on public open space under the jurisdiction of the Recreation and Park Commission during the period from one hour after sunrise to one hour before sunset, at any time of the year. Or if it would cast shadow so that direct sunlight was not maintained on sidewalks as defined in San Francisco Planning Code Section 146.</p>	<ul style="list-style-type: none"> • State CEQA Guidelines Appendix G • San Francisco Planning Department Initial Study Checklist • San Francisco General Plan • San Francisco Planning Code, Section 146 • San Francisco Better Streets Plan
Air Quality	<p>A significant impact would occur if the project would: violate any ambient air quality standard (NAAQS or CAAQS) or obstruct implementation of the current BAAQMD Clean Air Plan; increase the number or frequency of violations of air quality standards; contribute substantially to an existing or projected air quality violations; expose sensitive receptors to substantial pollutant concentrations or cause objectionable odors affecting a substantial number of people.</p>	<ul style="list-style-type: none"> • State CEQA Guidelines Appendix G • San Francisco Planning Department Initial Study Checklist • US EPA • BAAQMD, California Environmental Quality Act Air Quality Guidelines, May 2010, and CEQA Guidelines Update, Thresholds of Significance, Appendix D, June 2, 2010.
Greenhouse Gas Emissions	<p>A project would have a significant impact if it would generate greenhouse gas emissions that either directly or indirectly have a significant impact on the environment; or conflict with applicable plan, policy or regulation adopted for the purpose of reducing greenhouse gas emissions. Climate change plans and policies include Climate Action Team Greenhouse Gas Reduction Strategies, Attorney General Greenhouse Gas Reduction Measures, and the California Air Resources Board AB 32 Scoping Plan.</p>	<ul style="list-style-type: none"> • State CEQA Guidelines Appendix G • San Francisco Planning Department Initial Study Checklist • BAAQMD, California Environmental Quality Act Air Quality Guidelines, May 2010. • California Air Pollution Control Officers Association, CEQA & Climate Change, January 2008 • American Public Transportation Association, <i>Recommended Practice for Quantifying Greenhouse Gas Emissions from Transit</i>, August 2009.
Biological Resources	<p>A project would have significant impact if there were a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or if there would be a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.</p> <p>A significant impact would also occur if the project were to substantially conflict with any local policies or ordinances protecting biological resources, such as natural areas or policies of the Open Space/Recreation Element or with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.</p>	<ul style="list-style-type: none"> • State CEQA Guidelines Appendix G • San Francisco Planning Department Initial Study Checklist

Table 7-1. CEQA Significance Criteria

IMPACT CATEGORY	CEQA SIGNIFICANCE THRESHOLD/MEASUREMENT	SOURCE
Cultural Resources	<p>A significant impact to cultural resources would occur if the project would have a substantial, adverse change to a historic resource (an archaeological site, historic architectural structure, or historic district). A “historic resource” is defined as a resource that is listed in or determined eligible for listing in the California Register of Historic Resources; listed in or determined eligible for listing in the National Register of Historic Places; one that is included as significant in a locally adopted register such as Article 10 and 11 of the San Francisco Planning Code or California Historical Landmarks and Points of Interest publications; or one determined by the lead agency to be historically significant. A resource that is deemed significant due to its identification in a historic resource survey that meets the criteria of Public Resources Code Section 5024.1(g) would be presumed a historic resource unless a preponderance of evidence demonstrates otherwise.</p> <p>A “substantial adverse change” is defined as demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the resource would be materially impaired (a major change to the defining elements of historic character).</p> <p>A project may be found to have a significant impact on an archeological resource if it would impair or have a substantial adverse change to a resource that has been deemed a “historical resource” or a “unique archeological resource” or where it can be demonstrated that there is a potential for the resource to significantly contribute to questions of scientific or historical importance.</p> <p>Destruction of a unique paleontological site or geological feature or disturbance of human remains would also be considered a significant impact of a project.</p>	<ul style="list-style-type: none"> • State CEQA Guidelines Appendix G, Section 21084.1 and Section 15064.5 • San Francisco Planning Department Initial Study Checklist • San Francisco Preservation Bulletin 16: City and County of San Francisco Planning Department CEQA Review Procedures for Historic Resources • Advisory Council on Historic Preservation implementing regulations • National Historic Preservation Act
Geology and Soils	<p>A significant impact would occur if the project would expose people or structures to major geologic hazards such as rupture of a known earthquake fault, strong seismic ground-shaking, liquefaction or landslides. A significant impact would also occur if the project resulted in substantial soil erosion, loss of topsoil or a substantial change in the topography of any unique geologic or physical features or if it were located on unstable or expansive soils so that there were substantial risks to life or property.</p>	<ul style="list-style-type: none"> • State CEQA Guidelines, Appendix G • San Francisco Planning Department Initial Study Checklist
Hazards and Hazardous Materials	<p>A significant impact would occur if the project would create a potential public health hazard involving the transport, use, production, or disposal of materials which pose a hazard to people or animal or plant populations; emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school; or be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code 65962.5 or within the area in San Francisco identified pursuant to Article 20 of the S.F. Health Code (Maher Area) and, as a result, would create a significant hazard to the public or the environment.</p> <p>A significant impact would also occur if the project would impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation.</p>	<ul style="list-style-type: none"> • State CEQA Guidelines, Appendix G • San Francisco Planning Department Initial Study Checklist • City and County of San Francisco Health Code • San Francisco General Plan

Table 7-1. CEQA Significance Criteria

IMPACT CATEGORY	CEQA SIGNIFICANCE THRESHOLD/MEASUREMENT	SOURCE
Hydrology and Water Quality	<p>A significant impact would occur if the project would violate any water quality standards or waste discharge requirements, substantially change the existing drainage patterns, create or contribute substantially to runoff water that exceeds the existing or planned stormwater system or cause substantial flooding, erosion, or siltation, or would substantially degrade water quality, or would substantially degrade or deplete ground water resources.</p>	<ul style="list-style-type: none"> • State CEQA Guidelines, Appendix G • San Francisco Planning Department Initial Study Checklist • San Francisco Better Streets Plan • SFPUC Keep it on Site Guide requirements • National Pollutant Discharge Elimination System (NPDES) Permit requirements
Land Use and Planning	<p>A significant impact would occur if the project would physically divide an established community; have a substantial adverse impact upon the existing character of the project's vicinity or conflict with any applicable land use plan, policy or regulation adopted for the purpose of avoiding or mitigating an environmental effect.</p>	<ul style="list-style-type: none"> • State CEQA Guidelines, Appendix G • San Francisco Planning Department Initial Study Checklist • San Francisco General Plan
Noise and Vibration	<p>Significant impacts would result if people are exposed to noise or vibration levels in excess of established standards. Standards established by FTA and the City are considered. The FTA thresholds were applied to determine impacts because the FTA Transit Noise and Vibration Impact Assessment (FTA, 2006) methodology and thresholds are the established method for evaluating noise and vibration impacts of transit improvements such as the proposed project.</p> <p>The generally accepted threshold for a clearly perceptible sound increase from stationary objects is 5 dB. "Section 2909. Noise Limits" from the City's municipal code (San Francisco, 2008) includes a 5-dB increase threshold for stationary objects. Accordingly, if this criterion was applied to the proposed project, an impact would occur if either project-generated noise along Van Ness Avenue or increased traffic volumes on parallel facilities such as Franklin and Gough streets resulted in a 5-dB or greater noise increase. The City does not specify a threshold for evaluating transportation noise. Nonetheless, the 5-dB increase was used as another factor in evaluating the noise effects of the BRT project on Van Ness Avenue.</p> <p>FTA Transit Noise and Vibration Impact Assessment criteria are used to evaluate vibration impacts. Evaluation of vibration impacts can be divided into two categories: (1) human annoyance, and (2) building damage. Per human annoyance criteria, the maximum vibration level cannot exceed 72 VdB for residences/hotels and 75 VdB for school buildings. For building damage criteria, the damage thresholds vary 0.12 from 0.5 in/sec depending on building type.</p> <p>Violation of the City Municipal Code noise regulation would be considered a significant impact. Per the City Municipal Code, construction activities are permitted between 7am and 8pm provided that operation of any powered construction equipment, regardless of age or date of acquisition, does not emit noise at a level in excess of 80 dBA when measured at a distance of 100 feet. Impact tools and equipment are exempt from this restriction if they are equipped with intake and exhaust mufflers recommended by the manufacturers thereof, and approved by the Director of Public Works. Non-emergency construction activities are not permitted during nighttime hours (8 pm to 7 am) if construction noise is more than 5 dB in excess of the ambient noise at the nearest property line, unless permission has been granted by the Director of Public Works.</p>	<ul style="list-style-type: none"> • State CEQA Guidelines, Appendix G • San Francisco Planning Department Initial Study Checklist • FTA Transit Noise and Vibration Impact Assessment • FTA Transit Noise and Vibration Impact Assessment • Clear Perception Threshold in many publications, San Francisco Municipal Codes (Article 29: Regulation of Noise) • San Francisco Municipal Codes (Article 29: Regulation of Noise)

Table 7-1. CEQA Significance Criteria

IMPACT CATEGORY	CEQA SIGNIFICANCE THRESHOLD/MEASUREMENT	SOURCE
	<p>Additionally, the City’s Municipal Code Section 2909 considers a “clear perception” threshold of a 5-db increase above ambient noise conditions from a stationary source as being potentially, clearly perceived by receptors. Thus, a 5-db increase above ambient noise conditions on the project corridor or parallel streets receiving increased traffic volumes could be considered a potentially significant impact. Again, the City’s Municipal Code Section 2909 has no intended transportation project application and is considered as a frame of reference since no such threshold for a transportation project has been established by the City of San Francisco.</p>	
<p>Population and Housing</p>	<p>A significant impact would occur if the project would directly or indirectly induce substantial population growth in an area or displace substantial numbers of existing housing units or residents, requiring the construction of replacement housing elsewhere.</p> <p>Unlike NEPA, CEQA does not require a discussion of socioeconomic effects, except where they would result in physical changes, and states that social or economic effects shall not be treated as significant effects unless there is a physical effect.</p>	<ul style="list-style-type: none"> • State CEQA Guidelines, Appendix G Sections 15064(e) and 15131 • San Francisco Planning Department Initial Study Checklist
<p>Public Services</p>	<p>A significant impact would occur if the project would: conflict with established recreational, educational or religious uses; conflict with adopted plans and goals of the community; or create additional demand for public service facilities, the expansion of which would result in significant environmental impact. A significant impact would occur if acceptable service ratios, response times or other performance objectives for fire, police, schools, parks or other public facilities would not be maintained, or if the project would increase the use of public facilities such that substantial physical deterioration would occur or be accelerated.</p>	<ul style="list-style-type: none"> • State CEQA Guidelines, Appendix G. • San Francisco Planning Department Initial Study Checklist
<p>Transportation and Circulation</p>	<p>A potentially significant impact to traffic circulation would occur if the project conflicts with applicable plans, ordinances or policies that establish measures of effectiveness for a circulation system, including all modes of transportation and on all transportation facilities, including streets, highways, pedestrian and bicycle paths and mass transit.</p> <p><u>Vehicular Traffic:</u> A potentially significant traffic congestion impact would occur if the project conflicts with applicable congestion management program, including level of service standards and travel demand measures, and other standards for designated roads. The operations method of the 2000 Highway Capacity Manual shall be used in the analysis of intersections, unless otherwise noted. The San Francisco Planning Department’s Traffic Impact Analysis criteria for significant impact at intersections is based on intersection level of service (LOS) and is applicable to developmental projects in San Francisco. Based on the SFCTA staff input, these guideline criteria were modified to gauge significant impacts by a transportation improvement project in the City of San Francisco. The operational impact on signalized intersections is considered significant when project-related traffic causes the intersection level of service to deteriorate from LOS D or better in Baseline to LOS E or F, or from LOS E to LOS F in with Project scenario. The project may result in significant adverse impacts at intersections that operate at LOS E or F under Baseline conditions depending upon the magnitude of the project’s contribution to the worsening of the average delay per vehicle. Based on the input from SFCTA staff, the significance criteria for intersections that remain at LOS E or F was defined as follows:</p>	<ul style="list-style-type: none"> • State CEQA Guidelines, Appendix G. • San Francisco Planning Department Initial Study Checklist • San Francisco Traffic Impact Analysis Guidelines for Environmental Review (2002) • 2000 Highway Capacity Manual • San Francisco Blue Book, Uniform Traffic Control Devices and related SFDPW Codes governing construction in roadways. • San Francisco Better Streets Plan • San Francisco Bicycle Plan • San Francisco General Plan • San Francisco Countywide Transportation Plan • MUNI Short-Range Transit Plan • San Francisco Transit First Policy & Complete Streets Plan

Table 7-1. CEQA Significance Criteria

IMPACT CATEGORY	CEQA SIGNIFICANCE THRESHOLD/MEASUREMENT	SOURCE
	<ul style="list-style-type: none"> If the project traffic is less than 5 percent of the total growth in traffic between existing conditions and with project scenarios, then the project does not have a significant impact. If the project traffic is greater than 5 percent of the total growth in traffic between existing conditions and the with-project scenarios, then the contribution of project traffic to critical movements at that intersection is calculated. If the project traffic is less than 5 percent of the total growth in critical movement traffic between existing conditions (2007) and the with-project scenarios, then the Project does not have a significant impact. Otherwise, the project has a significant impact. 	
	<p>A project would result in a significant impact if it would substantially change traffic circulation patterns creating an unusual safety hazard, or result in inadequate emergency access.</p>	
	<p>A project would result in a significant impact if it would conflict with adopted polices and plans for public transit, bicycle and pedestrian facilities, or otherwise decrease the performance or safety of such facilities.</p>	
	<p><u>Transit:</u> Potentially significant impacts would occur if a project would conflict with transit supportive policies in the San Francisco Countywide Transportation Plan, MUNI Short-Range Transit Plan, and San Francisco Transit First Policy & Complete Streets Plan. Also, national standard guidelines for transit platform crowding of 5 square feet per person were applied (which are more than twice as strict as the San Francisco guidelines).</p>	
	<p><u>Non-Motorized Transportation:</u> Potentially significant non-motorized impacts would occur if the project conflicts with City-adopted policies regulating the design and development of the pedestrian realm or the bicycle system. City adopted policies, include the San Francisco Better Streets Plan, the San Francisco Bicycle Plan, Transit First Policy and Complete Streets policy. These policies deal with improving the safety and security of non-motorized transport modes, extending existing bicycle and pedestrian networks, but also ensuring legally-mandated accessibility requirements for public rights-of-way, as well as facilitating convenient and easy access to transit.</p>	
	<p>San Francisco Transportation Impact Analysis Guidelines for Environmental Review provide the following discrete guidelines, applicable to the proposed project, to determine impacts: (i) extent of potential conflicts between bicycle and pedestrians and motor vehicles; (ii) presence of ingress and egress accessible to disabled, including curb cuts, ramps, or other on-street aids; and (iii) pedestrian crossing conditions.</p>	
	<p>Regulations for Working in San Francisco Streets outline specific regulations for contractors to be in compliance to avoid any impacts during the construction phase. A project could result in a significant impact if, during the construction phase, the project did not comply with the regulations set pertaining to Sidewalk Closures (Section 5) and Bicycle Routes (Section 9).</p>	
	<p><u>Parking:</u> A project would result in a potentially significant impact if it would result in inadequate parking capacity. San Francisco does not consider parking supply as part of the permanent physical environment as defined by CEQA, and considers parking deficits to be social effects. Under CEQA, a project’s social impacts need not be treated as significant impacts on the environment. Environmental documents should, however, address the secondary physical impacts</p>	

Table 7-1. CEQA Significance Criteria

IMPACT CATEGORY	CEQA SIGNIFICANCE THRESHOLD/MEASUREMENT	SOURCE
	<p>that could be triggered by a social impact. (CEQA Guidelines § 15131(a).) The social inconvenience of parking deficits, such as having to hunt for scarce parking spaces, is not an environmental impact, but there may be secondary physical environmental impacts, such as increased traffic congestion at intersections, air quality impacts, safety impacts, or noise impacts caused by congestion. Secondary environmental impacts which may result from a shortfall in parking in the vicinity of the proposed project are included and addressed in traffic assignments used in the transportation analysis, as well as in the associated air quality, noise and pedestrian safety analyses.</p>	
<p>Utilities and Service Systems</p>	<p>A significant impact would occur if the project would conflict with wastewater treatment requirements of the Bay Area Regional water Quality Control Board or require or result in the construction of new water or wastewater treatment facilities or new storm water drainage facilities the construction of which would cause significant environmental effects. A significant impact would also occur if there were not sufficient water, wastewater treatment or landfill facilities available to serve the projects needs.</p> <p>A significant impact would occur if the project would encourage activities which result in the use of large amounts of fuel, water or energy; or use fuel, water, or energy in a wasteful manner.</p>	<ul style="list-style-type: none"> • State CEQA Guidelines, Appendix G. • San Francisco Planning Department Initial Study Checklist

When impacts were found to be potentially significant, as determined under CEQA, then mitigation measures were developed to reduce the impacts to a less than significant level. CEQA requires that each significant effect on the environment resulting from the project be identified and, to the extent feasible, mitigated. All mitigation measures and improvement measures are summarized in Table 7-2.

Table 7-2: Summary of Environmental Impacts under CEQA

ENVIRONMENTAL AREA/ IMPACTS	NO-BUILD ALTERNATIVE	BUILD ALTERNATIVE 2: SIDE-LANE BRT WITH STREET PARKING	BUILD ALTERNATIVE 3: CENTER-LANE BRT WITH RIGHT-SIDE BOARDING AND DUAL MEDIANS	BUILD ALTERNATIVE 3 WITH DESIGN OPTION B	BUILD ALTERNATIVE 4: CENTER-LANE BRT WITH LEFT- SIDE BOARDING AND SINGLE MEDIAN	BUILD ALTERNATIVE 4 WITH DESIGN OPTION B	LPA (COMBINES ALTERNATIVES 3 AND 4) ¹
Aesthetics/ Visual Resources Construction	<u>No impact.</u>	<u>Less than significant impact.</u> Less than significant impacts to aesthetics would result from temporary visual disruptions by construction activity, such as signage, soil stockpiles, and construction equipment. Nighttime construction would require artificial lighting, which would be minimized in residential areas and set up to avoid significant light and glare impacts on adjacent residential properties. <i>Improvement Measures:</i> IM-AE-C1: During project construction, SFMTA will require the contractor to maintain the site in an orderly manner, removing trash and waste, and securing equipment at the close of each day's operation. IM-AE-C2: To reduce glare and light used during nighttime construction activities, SFMTA will require the contractor to direct lighting onto the immediate area under construction only and to avoid shining lights toward residences, nighttime commercial properties, and traffic lanes.	<u>Less than significant impact.</u> Same as Build Alternative 2.	<u>Less than significant impact.</u> Same as Build Alternative 2.	<u>Less than significant impact.</u> Same as Build Alternative 2.	<u>Less than significant impact.</u> Same as Build Alternative 2.	<u>Less than significant impact.</u> Same as Build Alternative 2.
Aesthetics/ Visual Resources Operation	<u>No impact.</u>	<u>Less than significant impact with mitigation.</u> Mitigation measures will be implemented to address impacts to visual character and scenic resources resulting from the following project features: replacement of the existing OCS support pole/streetlight network with taller network that meets current sidewalk and roadway lighting standards and can accommodate the BRT OCS loads, introduction of BRT stations and streetscape features, and reconstruction of the Van Ness Avenue median and implementation of new BRT stations adjacent to the sidewalk, which would involve removal of approximately 14 percent of existing sidewalk and median trees. <i>Mitigation Measures:</i> M-AE-1: Design sidewalk lighting to minimize glare and nighttime light intrusion on adjacent residential properties and other properties that would be sensitive to increased sidewalk lighting. M-AE-2: Design and install a replacement OCS support pole/streetlight network that (1) retains the aesthetic function of the existing network as a consistent infrastructural element along Van Ness Avenue, (2) assures a uniform architectural style, character, and color throughout the corridor that is compatible with the existing visual setting, and (3) retains the architectural style of the original OCS support pole/streetlight network. Within the Civic Center Historic District, design the OCS support pole/streetlight network to comply with the Secretary of Interior's Standards for the Treatment of Historic Properties and be compatible with the character of the historic district as described in the Civic Center Historic District designating ordinance as called for by the San Francisco Planning Code. M-AE-3: To the extent that the project alters sidewalk and median landscaping, design and implement a project landscape design plan, including tree type and planting scheme for median BRT stations and sidewalk plantings, that replaces removed landscaping and re-establishes high-quality landscaped medians and a tree-lined corridor. To the extent feasible, use single species street trees and overall design that provides a sense of identity and cohesiveness for the corridor. Place new trees close to corners, if feasible, for visibility. The project landscape design plan will require review and approval by the San Francisco Arts Commission, as well as review and approval by the SFDPW, as part of their permitting of work in the street ROW, which ensures consistency with the San Francisco Better Streets Plan. The median landscape design plan within the Civic Center Historic District will be reviewed by the San Francisco HPC and the City Hall Preservation Advisory Commission. A Certificate of Appropriateness must be obtained from the HPC for the landscape plans within the Civic Center Historic District. M-AE-4: Design and install landscaped medians so that median design promotes a unified, visual concept for the Van Ness Avenue corridor consistent with policies in the Van Ness Area Plan, Civic Center Area Plan, and San Francisco Better Streets Plan. This design goal for a unified, visual concept will be balanced with the goal of preserving existing trees; thus, new tree plantings would be in-filled around preserved trees. M-AE-5: Design and install a project BRT station and transitway design plan (including station canopies, wind turbines and other features) that is consistent with applicable City design policies in the San Francisco General Plan and San Francisco Better Streets Plan; and for project features located in the Civic Center Historic District, apply the Secretary of Interior's Standards for the Treatment of Historic Properties, Planning Code Article 10, Appendix J pertaining to the Civic Center Historic District, and other applicable guidelines, local interpretations, and bulletins concerning historic resources. Review and approval processes supporting this measure include: (1) San Francisco Art Commission	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 2, except 25 percent of existing trees would be removed, all of them along the median. The same mitigation measures as Build Alternative 2 would be implemented.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 3.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 2, except 15 percent of existing trees would be removed. The same mitigation measures as Build Alternative 2 would be implemented.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 4.	Same as Build Alternative 2, except 19 percent of existing trees would be removed. The same mitigation measures as Build Alternative 2 would be implemented.

¹ The summary of impacts and mitigation for the LPA includes all impacts and mitigation that would pertain to the LPA with or without incorporation of the Vallejo Northbound Station Variant into the project design.

Table 7-2: Summary of Environmental Impacts under CEQA

ENVIRONMENTAL AREA/ IMPACTS	NO-BUILD ALTERNATIVE	BUILD ALTERNATIVE 2: SIDE-LANE BRT WITH STREET PARKING	BUILD ALTERNATIVE 3: CENTER-LANE BRT WITH RIGHT-SIDE BOARDING AND DUAL MEDIANS	BUILD ALTERNATIVE 3 WITH DESIGN OPTION B	BUILD ALTERNATIVE 4: CENTER-LANE BRT WITH LEFT- SIDE BOARDING AND SINGLE MEDIAN	BUILD ALTERNATIVE 4 WITH DESIGN OPTION B	LPA (COMBINES ALTERNATIVES 3 AND 4) ¹
		<p>approval of the station and transitway design plan as part of its review of public structures; (2) SFDPW approval of the station and transitway design plan as part of its permitting of work in the street ROW, which will include review for consistency with the San Francisco Better Streets Plan; (3) HPC approval of the portion of the station and transitway design plan located within the Civic Center Historic District as part of granting a Certificate of Appropriateness; and (4) City Hall Preservation Advisory Commission and City Planning Department advisement on design to HPC.</p> <p>M-AE-6: Context-sensitive design of BRT station features will be balanced with the project objective to provide a branded, cohesive identity for the proposed BRT service. The following design objectives that support planning policies described in Section 4.4.1 will be considered in BRT station design and landscaping:</p> <ul style="list-style-type: none"> Architectural integration of BRT stations with adjacent Significant and Contributory Buildings through station canopy placement, materials, color, lighting, and texture, as well as the presence of modern solar paneling and wind turbine features to harmonize project features with adjacent Significant and Contributory Buildings. Integration of BRT stations and landscaping with existing and proposed streetscape design themes within the Civic Center Historic District. Within the Civic Center Historic District in conformance with the Secretary of Interior's Standards for the Treatment of Historic Properties and compatible with the character of the historic district as described in the Civic Center Historic District designating ordinance as called for by the San Francisco Planning Code. Marking the intersection of Van Ness Avenue and Market Street as a visual landmark and gateway to the city in design of the Market Street BRT station. 					
Aesthetics/ Visual Resources Cumulative	<u>No cumulative impacts.</u>	<u>No cumulative impacts.</u>	<u>No cumulative impacts.</u>	<u>No cumulative impacts.</u>	<u>No cumulative impacts.</u>	<u>No cumulative impacts.</u>	<u>No cumulative impacts.</u>
Air Quality Construction	<u>No impact.</u>	<p><u>Less than significant impact with mitigation.</u></p> <p>Construction activity would result in a less than significant impact under CEQA due to exceedances of nitrogen oxide (NOx) emissions. Implementation of Bay Area Air Quality Management District (BAAQMD) control measures would reduce this impact to a less than significant level.</p> <p><i>Mitigation Measures:</i></p> <p>M-AQ-C1: Construction contractors shall implement the BAAQMD <i>Basic Construction Mitigation Measures</i> listed in Table 4.15-4 and the applicable measures in the <i>Additional Construction Mitigation Measures</i>. This includes Measure 10 in the <i>Additional Construction Mitigation Measures</i>.</p> <p>M-AQ-C2: Construction contractors shall comply with BAAQMD Regulation 11 (Hazardous Pollutants) Rule 2 (Asbestos Demolition, Renovation, and Manufacturing). The requirements for demolition activities include removal standards, reporting requirements, and mandatory monitoring and record keeping.</p>	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 2.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 2.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 2.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 2.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 2.
Air Quality Operation	<u>Less than significant impact.</u>	<p><u>Less than significant impact.</u></p> <p>Localized carbon monoxide (CO) concentrations would result in less-than-significant impacts. An analysis of emissions from idling vehicles during peak congestion period at the most congested intersection showed idle emissions would be well below the State standards after implementation of the BRT in year 2035 traffic conditions. TAC emissions would result in a less-than-significant impact under CEQA. The project would not increase toxic air contaminant (TAC) emissions. The proposed BRT would reduce regional operational emissions, resulting in a beneficial impact. Localized CO concentrations associated with each of the alternatives would not exceed State ambient air quality standards, and all alternatives would be consistent with the BAAQMD regional air quality plans. The project would reduce the volume of cars by providing the public with alternative means of transportation, which results in lower Citywide vehicle miles traveled (VMT), reducing regional operational emissions.</p>	<u>Less than significant impact.</u> Same as Build Alternative 2.	<u>Less than significant impact.</u> Same as Build Alternative 2.	<u>Less than significant impact.</u> Same as Build Alternative 2.	<u>Less than significant impact.</u> Same as Build Alternative 2.	<u>Less than significant impact.</u> Same as Build Alternative 2.
Air Quality Cumulative	<u>No cumulative impacts.</u>	<p><u>Less than significant impact with mitigation.</u></p> <p>Mitigation Measures M-AQ-C1 and M-AQ-C2 would avoid significant, cumulative air quality impacts during construction of the proposed project and other planned projects in the vicinity.</p>	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 2.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 2.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 2.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 2.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 2.

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Table 7-2: Summary of Environmental Impacts under CEQA

ENVIRONMENTAL AREA/ IMPACTS	NO-BUILD ALTERNATIVE	BUILD ALTERNATIVE 2: SIDE-LANE BRT WITH STREET PARKING	BUILD ALTERNATIVE 3: CENTER-LANE BRT WITH RIGHT-SIDE BOARDING AND DUAL MEDIANS	BUILD ALTERNATIVE 3 WITH DESIGN OPTION B	BUILD ALTERNATIVE 4: CENTER-LANE BRT WITH LEFT- SIDE BOARDING AND SINGLE MEDIAN	BUILD ALTERNATIVE 4 WITH DESIGN OPTION B	LPA (COMBINES ALTERNATIVES 3 AND 4) ¹
Greenhouse Gas Emissions Operation	<u>No impact.</u>	<u>No impact.</u> The proposed project would decrease automobile VMT and associated greenhouse gas emissions compared to baseline conditions, and it would cause a beneficial global warming impact.	<u>No impact.</u> Same as Build Alternative 2.	<u>No impact.</u> Same as Build Alternative 2.	<u>No impact.</u> Same as Build Alternative 2.	<u>No impact.</u> Same as Build Alternative 2.	<u>No impact.</u> Same as Build Alternative 2.
Greenhouse Gas Emissions Cumulative	<u>No cumulative impacts.</u>	<u>No cumulative impacts.</u> Transit projects, like the proposed project, reduce the volume of cars resulting in overall reduction in greenhouse gas emissions.	<u>No cumulative impacts.</u>	<u>No cumulative impacts.</u>	<u>No cumulative impacts.</u>	<u>No cumulative impacts.</u>	<u>No cumulative impacts.</u>
Biological Environment Construction	<u>No impact.</u>	<u>Less than significant impact with mitigation.</u> Less than significant impacts to trees and nesting birds would result from temporary construction activity the disturbance of bird nests during breeding season. Mitigation measures will avoid disturbance of protected bird nests during breeding season, and require measures to preserve tree health during construction. Mitigation measures are required to address potential impacts to trees and nesting birds during project construction. <i>Mitigation Measures:</i> M-BI-C1: Best Management Practices (BMPs) identified in tree protection plans and tree removal permits resulting from the preconstruction tree survey will be implemented to preserve the health of trees during project construction. M-BI-C2: Disturbance of protected bird nests during the breeding season will be avoided. Tree and shrub removal will be scheduled during the non-breeding season (i.e., September 1 through January 31), as feasible. If tree and shrub removal are required to occur during the breeding season (i.e., February 1 through August 31), then the following measures will be implemented to avoid potential adverse effects to nesting birds: A qualified wildlife biologist will conduct preconstruction surveys of all potential nesting habitats within 500 feet of construction activities where access is available. Exclusionary structures (e.g., netting or plastic sheeting) may be used to discourage the construction of nests by birds within the project construction zone. A preconstruction survey of all accessible nesting habitats within 500 feet of construction activities is required to occur no more than 2 weeks prior to construction. If preconstruction surveys conducted no more than 2 weeks prior to construction identify that protected nests are inactive or potential habitat is unoccupied during the construction period, then no further mitigation is required. Trees and shrubs within the construction footprint that have been determined to be unoccupied by protected birds or that are located outside the no-disturbance buffer for active nests may be removed. If active protected nests are found during preconstruction surveys, then the project proponent will create a no-disturbance buffer (acceptable in size to the California Department of Fish and Wildlife [CDFW]) around active protected bird and/or raptor nests during the breeding season, or until it is determined that all young have fledged. Typical buffers include 500 feet for raptors and 50 feet for passerine nesting birds. The size of these buffer zones and types of construction activities restricted in these areas may be further modified during consultation with CDFW, and it will be based on existing noise and human disturbance levels at the project site. Nests initiated during construction are presumed to be unaffected, and no buffer will be necessary; however the “take” (e.g., mortality, severe disturbance to) of any individual protected birds will be prohibited. Monitoring of active nests when construction activities encroach upon established buffers may be required by CDFW.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 2.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 2.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 2.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 2.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 2.

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Biological Environment Operation	<u>No impact.</u>	<u>Less than significant impact.</u> Less than significant impacts would result from removal of existing trees and landscaping. Build Alternative 2 would result in the removal of some median and sidewalk trees within the project limits. Replacement trees would be planted. Benefits of mature tree canopies would be reduced until new plantings mature, and replacement trees would not offer the same width canopy of many existing trees due to the OCS clearance requirements. The project would offset these impacts by planting more trees in the Van Ness corridor than currently present, resulting in less than significant impacts. <i>Improvement Measures:</i> Potential disturbance to migratory birds during project construction and tree removal is discussed in Section 4.15.11, Construction Impacts. To minimize impacts from removal of existing trees and landscaping, the following improvement measures and permit requirements would be incorporated into project design for each build alternative, including Design Option B: IM-BI-1: In compliance with local tree protection policies, mature trees shall be preserved and incorporated into the project landscape plan as feasible. Planting of replacement trees and landscaping will be incorporated into the landscape plan as feasible (also refer to mitigation measure M-AE-3, addressing aesthetic/visual impacts). IM-BI-2: A certified arborist will complete a preconstruction tree survey to identify protected trees that will be potentially impacted by the proposed project, and to determine the need for tree removal permits and tree protection plans under San Francisco Public Works Code requirements. IM-BI-3: In compliance with the Executive Order on Invasive Species, E.O. 13112, the landscaping included in the proposed project would not use species listed as noxious weeds.	<u>Less than significant impact.</u> Build Alternative 3 would likely result in the removal of all median trees within the project limits, Replacement trees would be planted in the median. Sidewalk trees would not be affected under this alternative. Benefits of mature tree canopies would be reduced until new plantings mature, and replacement trees would not offer the same width canopy of many existing trees due to the OCS clearance requirements. The project would offset these impacts by planting more trees in the Van Ness corridor than currently present, and implementation of Improvement Measures IM-BI-1, IM-BI-2 and IM-BI-3 listed under Build Alternative 2, resulting in less than significant impacts.	<u>Less than significant impact.</u> Same as Build Alternative 3.	<u>Less than significant impact.</u> Build Alternative 4 would result in the removal of approximately 64 median trees, or 15 percent of median trees within the project limits. Sidewalk trees would not be affected. Replacement trees would be planted. Benefits of mature tree canopies would be reduced until new plantings mature, and replacement trees would not offer the same width canopy of many existing trees due to the OCS clearance requirements. The project would offset these impacts by planting more trees in the Van Ness corridor than currently present, and implementation of Improvement Measures IM-BI-1, IM-BI-2 and IM-BI-3 listed under Build Alternative 2, resulting in less than significant impacts.	<u>Less than significant impact.</u> Same as Build Alternative 4.	<u>Less than significant impact.</u> The LPA would result in the removal of approximately 90 median trees, or 82 percent of median trees within the project limits. Approximately 95 new median trees would be planted. Sidewalk trees would not be affected. Replacement trees would be planted. Benefits of mature tree canopies would be reduced until new plantings mature, and replacement trees would not offer the same width canopy of many existing trees due to the OCS clearance requirements. The project would offset these impacts by planting more trees in the Van Ness corridor than currently present, and implementation of Improvement Measures IM-BI-1, IM-BI-2 and IM-BI-3 listed under Build Alternative 2, resulting in less than significant impacts.
Biological Environment Cumulative	<u>No cumulative impacts.</u>	<u>No cumulative impacts.</u>	<u>No cumulative impacts.</u>	<u>No cumulative impacts.</u>	<u>No cumulative impacts.</u>	<u>No cumulative impacts.</u>	<u>No cumulative impacts.</u>
Cultural Resources Construction	<u>No impact.</u>	<u>Less than significant impact with mitigation.</u> Less than significant impacts would occur to significant historic and architectural properties. Excavation work would occur within the Van Ness Avenue ROW, where there is a low probability of uncovering significant archaeological deposits. Implementation of mitigation measures are required to address potential impacts to archaeological resources and human remains that may be encountered during project construction.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 2.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 2.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 2.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 2.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 2.

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		<p><i>Mitigation Measures:</i></p> <p>M-CP-C1: Focused archival research will identify specific areas within the APE that are likely to contain potentially significant remains. Methods and findings will be documented as an addendum to the 2009 survey and sensitivity assessment (Byrd <i>et al.</i>, 2013). Research will be initiated once the project’s APE map is finalized identifying the major Areas of Direct Impact (the stations and sewer relocation). Many documents, maps, and drawings cover long stretches of Van Ness Avenue, while other locations may be researched if documents indicate potential sensitivity in adjacent areas.</p> <p>The Addendum Survey Report will include the following:</p> <ul style="list-style-type: none"> • A contextual section that addresses the development of urban infrastructure along Van Ness Avenue, as well as widening and grading activities along the thoroughfare. This overview will provide a basis for evaluating potential resources as they relate to the history of San Francisco and to its infrastructure. • Documentary research that identifies the types of documents available for the identified station locations: street profiles for grading, street widening maps showing demolished building sites, utility work plans, and others as appropriate. This will include researching various archives and records of public agencies in both San Francisco and Oakland (Caltrans). • Locations apt to have historic remains present within select areas of the APE (i.e., not removed by later grading or construction). • A cut-and-fill reconstruction of the entire APE corridor, comparing the modern versus mid-1800s ground surface elevations, to fine-tune the initial prehistoric sensitivity assessment and refine the location of high-sensitivity locations where prehistoric remains may be preserved. • Relevant profiles and plan views of specific blocks to illustrate the methods used in analyzing available documentation. • Summary and conclusions to provide detailed information on locations that have the potential to contain extant prehistoric archaeological and historic-era remains that might be evaluated as significant resources, if any. <p>Two results are possible based on documentary research:</p> <ul style="list-style-type: none"> • No or Low Potential for Sensitive Locations – Major Areas of Direct Impact have no potential to retain extant archaeological remains that could be evaluated as significant resources. No further work would be recommended, beyond adherence to the Inadvertent Discovery Plan (M-CP-3). • Potentially Sensitive Locations – If the major Areas of Direct Impact contain locations with a moderate to high potential to retain extant historic or prehistoric archaeological remains that could be evaluated as significant resources, further work would be carried out, detailed in a Testing and Treatment Plan (see M-CP-2). <p>The Phase I addendum report will be submitted to the SHPO for review and concurrence prior to initiation of construction.</p> <p>M-CP-C2: The Testing/Treatment plan, if required, would provide archaeological protocols to be employed immediately prior to project construction to test areas identified as potentially significant or having the potential to contain buried cultural resources. If such areas might be unavoidable, mitigation measures would be proposed.</p> <p>For historic-era resources, work would initially entail detailed, focused documentary research to evaluate the potential significance of any archaeological material identified during initial research that might be preserved. Significance would be based on the data-potential of possible remains applied to accepted research designs. Two results could ensue:</p> <ul style="list-style-type: none"> • No Potentially Significant Remains. If no locations demonstrate the potential for significant remains, no further archaeological testing would be recommended. • Potentially Significant Remains. If any locations have the potential to contain significant remains, then appropriate field methods will be proposed, including compressed testing and data-recovery efforts. Testing will be initiated immediately prior to construction, when there is access to historic ground levels. Should a site or site feature be found and evaluated as potentially significant, mitigation in the form of data recovery will take place immediately upon discovery should avoidance of the site not be possible. 					

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		<p>If required for prehistoric resources, a Treatment Plan would identify relevant research issues for resource evaluation, and pragmatic field methods to identify, evaluate, and conduct data recovery if needed. This could include a pre-construction geoarchaeological coring program or a compressed three-phase field effort occurring prior to construction, when the ground surface is accessible.</p> <p>The procedures detailed in the Treatment Plan would be finalized in consultation with the SHPO.</p> <p>A Phase 2 Test/Phase 3 Mitigation report will document all testing and data-recovery excavation methods and findings.</p> <p>M-CP-C3: If buried cultural resources are encountered during construction activities, pursuant to 36 CFR 800.13, construction would be halted and the discovery area isolated and secured until a qualified professional archaeologist assesses the nature and significance of the find. Unusual, rare, or unique finds—particularly artifacts or features not found during data recovery—could require additional study. Examples of these would include the following:</p> <ul style="list-style-type: none"> • Any bone that cannot immediately be identified as non-human. • Any types of intact features (e.g., hearths, house floors, cache pits, structural foundations, etc.). • Artifact caches or concentrations. • Rare or unique items (i.e., engraved or incised stone or bone, beads or ornaments, mission-era artifacts). • Archaeological remains that are redundant with materials collected during testing or data recovery and that have minimal data potential need not be formally investigated. This could include debitage; most flaked or ground tools, with the exception of diagnostic or unique items (e.g., projectile points, crescents); shell; non-human bone; charcoal; and other plant remains. • Diagnostic and unique artifacts unearthed during construction would be collected and their origins noted. Artifact concentrations and other features would be photographed, flotation/soils/radiocarbon samples taken (as appropriate), and locations mapped using a GPS device. <p>Upon discovery of deposits which may constitute a site, the agency official shall notify the State Historic Preservation Officer (SHPO) and any Indian tribe that might attach religious and cultural significance to the affected property. The notification shall describe the agency official's assessment of National Register eligibility of the property and proposed actions to resolve the adverse effects (if any). The SHPO, Indian tribe, and Advisory Council on Historic Preservation (the Council) shall respond within 48 hours of the notification. The agency official shall take into account their recommendations regarding National Register eligibility and proposed actions, and then carry out appropriate actions. The agency official shall provide the SHPO, Indian tribe, and the Council a report of the actions when they are completed.</p> <p>The above activities could be carried out quickly and efficiently, with as little delay as possible to construction work.</p> <p>The methods and results of any excavations would be documented, with photographs, in an Addendum Report. Any artifacts collected would be curated along with the main collection. Samples would be processed in a lab and analyzed, or curated with the collection for future studies, at the discretion of the project proponent.</p> <p>If major adjustments are made to the final project design, a qualified professional archaeologist should be consulted before work begins to determine whether additional survey, research, and/or geoarchaeological assessments are needed.</p> <p>M-CP-C4: If human remains are discovered during project construction, the stipulations provided under Section 7050.5 of the State Health and Safety Code will be followed. The San Francisco County coroner would be notified as soon as is reasonably possible (CEQA Section 15064.5). There would be no further site disturbance where the remains were found, and all construction work would be halted within 100 feet of the discovery. If the remains are determined to be Native American, the coroner is responsible for contacting the California Native American Heritage Commission within 24 hours. The Commission, pursuant to California Public Resources Code Section 5097.98 would notify those persons it believes to be the MLD. Treatment of the remains would be dependent on the views of the MLD.</p>					

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Cultural Resources Operation	<u>No impact.</u>	<u>Less than significant impact.</u> Less than significant impacts would occur to significant historic and architectural properties. No impacts to archaeological resources would result during project operation. Mitigation measures M-AE-2, M-AE-3, M-AE-5, and M-AE-6, presented in Section 4.4.4, and in this table under Aesthetics/Visual Resources, ensure compatibility of the BRT project with historic elements such as the Civic Center Historic District.	<u>Less than significant impact.</u> Same as Build Alternative 2.	<u>Less than significant impact.</u> Same as Build Alternative 2.	<u>Less than significant impact.</u> Same as Build Alternative 2.	<u>Less than significant impact.</u> Same as Build Alternative 2.	<u>Less than significant impact.</u> Same as Build Alternative 2.
Cultural Resources Cumulative	<u>No cumulative impacts.</u>	<u>No cumulative impacts.</u>	<u>No cumulative impacts.</u> Same as Build Alternative 2.	<u>No cumulative impacts.</u> Same as Build Alternative 2.	<u>No cumulative impacts.</u> Same as Build Alternative 2.	<u>No cumulative impacts.</u> Same as Build Alternative 2.	<u>No cumulative impacts.</u> Same as Build Alternative 2.
Geology/Soils/ Seismicity/ Topography Construction	<u>No impact.</u>	<u>Less than significant impact with mitigation.</u> Mitigation measures are required to avoid slope instability impacts during project construction. <i>Mitigation Measures:</i> M-GE-C1: All cuts deeper than 5 feet must be shored (AGS, 2009a). Shoring design of open excavations must be completed in consideration of the surcharge load from nearby structures, including an examination of the potential for lateral movement of the excavation walls as a result. The following construction BMPs related to shoring and slope stability will be implemented: <ul style="list-style-type: none"> • Heavy construction equipment, building materials, excavated soil, and vehicle traffic shall be kept away from the edge of excavations, generally a distance equal to or greater than the depth of the excavation. • During wet weather, storm runoff shall be prevented from entering the excavation. Excavation sidewalls can be covered with plastic sheeting, and berms can be placed around the perimeter of the excavated areas. • Sidewalks, slabs, pavement, and utilities adjacent to proposed excavations shall be adequately supported during construction. 	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 2.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 2.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 2.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 2.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 2.
Geology/Soils/ Seismicity/ Topography Operation	<u>No impact.</u>	<u>No impact.</u> The project would not result in soil erosion, and project design would avoid potential seismic hazards. There are no substantial geologic hazard impacts that would not be fully addressed by design requirements. <i>Improvement Measures:</i> IM-GE-1: Localized soil modification treatments will be performed as needed at locations where station platforms would be located in areas of fill or areas mapped as a liquefaction area. Such soil modification may include soil vibro-compaction or permeation grouting. IM-GE-2: Fill soils will be overexcavated and replaced with engineered fill as needed in areas where proposed project structures would be located in areas of fill or in liquefaction zones. IM-GE-3: Deeper foundations will be designed for station platforms and canopies located in areas of fill or areas mapped as a liquefaction area, as needed.	<u>No impact.</u> Same as Build Alternative 2.	<u>No impact.</u> Same as Build Alternative 2.	<u>No impact.</u> Same as Build Alternative 2.	<u>No impact.</u> Same as Build Alternative 2.	<u>No impact.</u> Same as Build Alternative 2.
Geology/Soils/ Seismicity/ Topography Cumulative	<u>No cumulative impacts.</u>	<u>No cumulative impacts.</u>	<u>No cumulative impacts.</u> Same as Build Alternative 2.	<u>No cumulative impacts.</u> Same as Build Alternative 2.	<u>No cumulative impacts.</u> Same as Build Alternative 2.	<u>No cumulative impacts.</u> Same as Build Alternative 2.	<u>No cumulative impacts.</u> Same as Build Alternative 2.
Hazardous Waste/ Materials Construction	<u>No impact.</u>	<u>Less than significant impact with mitigation.</u> Mitigation measures are required to avoid and minimize hazardous materials exposure during project construction. <i>Mitigation Measures:</i> M-HZ-C1: A Worker Site Health and Safety Plan will be created with the following components, in response to potential recognized environmental conditions (RECs) identified in the Phase II review or other follow-up investigations, and results from preconstruction lead-based paint (LBP) and aerially deposited lead (ADL) surveys specified in Sections 4.8.3 and 4.8.4: <ul style="list-style-type: none"> • A safety and health risk/hazards analysis for each site task and operation in the work plan; • Employee training assignments; • Personal protective equipment requirements; 	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 2.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 2.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 2.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 2.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 2.

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ENVIRONMENTAL AREA/ IMPACTS	NO-BUILD ALTERNATIVE	BUILD ALTERNATIVE 2: SIDE-LANE BRT WITH STREET PARKING	BUILD ALTERNATIVE 3: CENTER-LANE BRT WITH RIGHT-SIDE BOARDING AND DUAL MEDIANS	BUILD ALTERNATIVE 3 WITH DESIGN OPTION B	BUILD ALTERNATIVE 4: CENTER-LANE BRT WITH LEFT- SIDE BOARDING AND SINGLE MEDIAN	BUILD ALTERNATIVE 4 WITH DESIGN OPTION B	LPA (COMBINES ALTERNATIVES 3 AND 4) ¹
		<ul style="list-style-type: none"> Medical surveillance requirements; Air monitoring, environmental sampling techniques, and instrumentation; Safe storage and disposal measures for encountered contaminated soil, groundwater, or debris, including temporary storage locations, labeling, and containment procedures. Emergency response plan; and Spill containment program. <p>M-HZ-C2: Procedures will be included in the project Storm Water Pollution Prevention Plan (SWPPP) to contain any possible contamination, including protection of storm drains, and to prevent any contaminated runoff or leakage either into or onto exposed ground surfaces, as specified in Section 4.15.8, Hydrology and Water Quality Construction Impacts.</p> <p>M-HZ-C3: Necessary public health and safety measures will be implemented during construction.</p>					
Hazardous Waste/ Materials Operation	<u>No impact.</u>	<p><u>Less than significant impact with mitigation.</u></p> <p>Mitigation measures are required to reduce or eliminate hazardous materials-related impacts from ADL, LBP, and nearby database listed, hazardous materials sites.</p> <p><i>Mitigation Measures:</i></p> <p>M-HZ-1: Phase II review, or follow-up investigation, for identified recognized environmental conditions (RECs) will be conducted prior to construction, including:</p> <ul style="list-style-type: none"> Field surveys of identified RECs to verify the physical locations of the REC sites with respect to the preferred build alternative project components and proposed construction earthwork, and observe the current conditions of the sites. A regulatory file review for each identified REC to determine the current status of the sites and, if possible, the extent of the contamination. <p>If the aforementioned field survey and file review reveal a likelihood of encountering contaminated soil or groundwater during project construction, then a subsurface exploration will be conducted within the areas proposed for construction earthwork activities. The subsurface investigation will be conducted within the project limits, adjacent to, or downgradient from the REC sites. If soil profiling reveals contaminant concentrations that meet the definition of hazardous materials, then the project contractor will be required to address the management of various hazardous materials and wastes in the Construction Implementation Plan, consistent with the federal and state of California requirements pertaining to hazardous materials and wastes management.</p> <p>M-HZ-2: Soils in landscaped medians that will be disturbed by project activities will be tested for ADL according to applicable hazardous material testing guidelines. If the soil contains extractible lead concentrations that meet the definition of hazardous materials, then a Lead Compliance Plan to be approved by Caltrans will be required prior to the start of construction or soil-disturbance activities. If lead levels present in surface soils reach concentrations in excess of the hazardous waste threshold, then onsite stabilization or disposal at a Class 1 landfill may be required, which will be specified in the Lead Compliance Plan.</p> <p>M-HZ-3: Paint used for traffic lane striping and on streetscape features, including the OCS support poles/streetlights, will be tested for LBP prior to demolition/removal to determine proper handling and disposal methods during project construction. If lead is detected, then appropriate procedures will be included in the Construction Implementation Plan to avoid contact with these materials or generation of dust or vapors.</p>	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 2.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 2.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 2.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 2.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 2.
Hazardous Waste/ Materials Cumulative	<u>No cumulative impacts.</u>	<p><u>Less than significant impact with mitigation.</u></p> <p>Mitigation Measures M-HZ-C1 through M-HZ-C3 would avoid significant, cumulative impacts from hazardous materials exposure during construction of the proposed project and other planned projects in the vicinity.</p>	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 2.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 2.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 2.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 2.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 2.

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Table 7-2: Summary of Environmental Impacts under CEQA

ENVIRONMENTAL AREA/ IMPACTS	NO-BUILD ALTERNATIVE	BUILD ALTERNATIVE 2: SIDE-LANE BRT WITH STREET PARKING	BUILD ALTERNATIVE 3: CENTER-LANE BRT WITH RIGHT-SIDE BOARDING AND DUAL MEDIANS	BUILD ALTERNATIVE 3 WITH DESIGN OPTION B	BUILD ALTERNATIVE 4: CENTER-LANE BRT WITH LEFT- SIDE BOARDING AND SINGLE MEDIAN	BUILD ALTERNATIVE 4 WITH DESIGN OPTION B	LPA (COMBINES ALTERNATIVES 3 AND 4) ¹
Water Quality and Hydrology Construction	<u>No impact.</u>	<u>Less than significant impacts.</u> Compliance with permit requirements and standard best practices would avoid significant impacts to water quality during construction. <i>Improvement Measures:</i> IM-HY-C1: Preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP) during project construction will minimize or avoid significant impacts to water quality. Completion of an SWPPP for the National Pollutant Discharge Elimination System (NPDES) General Permit will be required for construction of each build alternative and for earthwork activities under the No Build Alternative, such as the OCS support pole/streetlight replacement and repaving activities. The SWPPP will address water quality impacts associated with construction activities, including identification of all drainage facilities onsite, placement of appropriate stormwater and non-stormwater pollution controls, erosion and sediment control and best management practices (BMPs), spill response and containment plans, inspection scheduling, maintenance, and training of all construction personnel onsite. The SWPPP will specify how construction-related stormwater impacts can be mitigated throughout the project site through practices such as: <ul style="list-style-type: none"> The appropriate treatment of overflow stormwater during construction, including inlet protection devices, temporary silt fencing, soil stabilization measures, street sweeping, stabilized construction entrances, and temporary check dams. Lining storage areas. Proper and expeditious disposal of items to be removed, such as landscaping, curb bulb waste, existing bus stop shelters, and demolished OCS support poles/streetlights and signal poles. IM-HY-C2: Any construction work that impacts the combined sewer system (CSS) will require coordination with the San Francisco Public Utilities Commission (SFPUC), and construction-related activities shall conform to the “Keep it on Site” guide (SFPUC, 2009). IM-HY-C3: If groundwater is encountered during project excavation activities, the water will be pumped from the excavated area and contained and treated in accordance with all applicable State and federal regulations before being discharged to the existing local CSS. A batch discharge permit from SFPUC will be required prior to commencement of discharge to the CSS.	<u>Less than significant impacts.</u> Same as Build Alternative 2.	<u>Less than significant impacts.</u> Same as Build Alternative 2.	<u>Less than significant impacts.</u> Same as Build Alternative 2.	<u>Less than significant impacts.</u> Same as Build Alternative 2.	<u>Less than significant impacts.</u> Same as Build Alternative 2.
Water Quality and Hydrology Operation	<u>No impact.</u>	<u>No impact.</u> The project would slightly increase pervious surface area and improve drainage and runoff water quality. <i>Improvement Measures:</i> IM-HY-1: Landscape areas provided by the project will be designed to minimize and reduce total runoff. The overuse of water and/or fertilizers on landscaped areas will be avoided. IM-HY-2: Opportunities to incorporate stormwater management tools set forth in the <i>San Francisco Better Streets Plan</i> will be investigated for implementation as project design progresses. Streetscape geometry, topography, soil type and compaction, groundwater depth, subsurface utility locations, building laterals, maintenance costs and safety, and pedestrian accessibility will be major considerations in determining the feasibility of implementing stormwater management tools. Permeable paving, infiltration planters, swales, and rain gardens will be considered. IM-HY-3: In compliance with the City Integrated Pest Management Policy (City Municipal Code, Section 300), prevention and non-chemical control methods will be employed in maintaining landscaping in the Van Ness Avenue corridor, including monitoring for pests before treating, and using the least-hazardous chemical pesticides, herbicides, and fertilizers only when needed and as a last resort. IM-HY-4: Proposed BRT stations will be equipped with trash receptacles to minimize the miscellaneous waste that may enter the storm drain system and clog storm drains or release pollutants.	<u>No impact.</u> Same as Build Alternative 2.	<u>No impact.</u> Same as Build Alternative 2.	<u>No impact.</u> Same as Build Alternative 2.	<u>No impact.</u> Same as Build Alternative 2.	<u>No impact.</u> Same as Build Alternative 2.
Water Quality and Hydrology Cumulative	<u>No cumulative impacts.</u>	<u>Less than significant impact.</u> Compliance with permit requirements and standard best practices would avoid significant cumulative impacts to water quality during construction of the proposed project and other planned projects in the vicinity.	<u>Less than significant impact.</u> Same as Build Alternative 2.	<u>Less than significant impact.</u> Same as Build Alternative 2.	<u>Less than significant impact.</u> Same as Build Alternative 2.	<u>Less than significant impact.</u> Same as Build Alternative 2.	<u>Less than significant impact.</u> Same as Build Alternative 2.

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Land Use Construction	<u>No impact.</u>	<u>Less than Significant impact.</u> Construction would not change land uses or displace properties. Construction planning would minimize nighttime construction in residential areas and daytime construction in retail and commercial areas, as part of the Traffic Management Plan (TMP) implementation. The temporary removal of colored parking spaces during project construction would be addressed by improvement measures IM-C-1 and IM-C-2. IM-CI-1²: SFMTA will coordinate with all businesses that would be affected by removal of colored parking spaces, including short-term parking, to confirm the need for truck and/or passenger loading spaces and to identify appropriate replacement parking locations to minimize the impacts to these businesses. IM-CI-2²: SFMTA will apply parking management tools as needed to offset any substantial impacts from the loss of on-street parking, including adjustment of residential parking permits in the residential community north of Broadway, or SFpark, which is a package of real-time tools to manage parking occupancy and turnover through pricing (appropriate in areas of high-density commercial uses that rely on high parking turnover).	<u>Less than significant impact.</u> Same as Build Alternative 2.	<u>Less than significant impact.</u> Same as Build Alternative 2.	<u>Less than significant impact.</u> Same as Build Alternative 2.	<u>Less than significant impact.</u> Same as Build Alternative 2.	<u>Less than significant impact.</u> Same as Build Alternative 2.
Land Use Operation	<u>No impacts.</u>	<u>No impacts.</u>	<u>No impacts.</u>	<u>No impacts.</u>	<u>No impacts.</u>	<u>No impacts.</u>	<u>No impacts.</u>
Land Use Cumulative	<u>No cumulative impacts.</u>	<u>No cumulative impacts.</u>	<u>No cumulative impacts.</u>	<u>No cumulative impacts.</u>	<u>No cumulative impacts.</u>	<u>No cumulative impacts.</u>	<u>No cumulative impacts.</u>
Noise and Vibration Construction	<u>No impact.</u>	<u>Less than significant impacts.</u> Increases in noise and vibration at some locations would be temporary and are thus considered a less than significant impact. Project construction would comply with the City Noise Ordinance. <i>Improvement Measures:</i> Mitigation measure M-CI-C6 presented in Section 4.15 provides a program for accepting and addressing noise and other complaints during project construction. To further reduce noise and vibration impacts during construction, the following best practices, identified as improvement measures, would be implemented: IM-NO-C1: Project construction will implement best practices in equipment noise and vibration control as feasible, including the following: <ul style="list-style-type: none"> Use newer equipment with improved noise muffling and ensure that all equipment items have the manufacturers' recommended noise abatement measures, such as mufflers, engine covers, and engine vibration isolators intact and operational. Newer equipment will generally be quieter in operation than older equipment. All construction equipment should be inspected at periodic intervals to ensure proper maintenance and presence of noise control devices (e.g., mufflers and shrouding). Perform all construction in a manner that minimizes noise and vibration. Utilize construction methods or equipment that will provide the lowest level of noise and ground vibration impact. Turn off idling equipment. When possible, limit the use of construction equipment that creates high vibration levels, such as vibratory rollers and hammers. When such equipment must be used within 25 feet of any existing building, select equipment models that generate lower vibration levels. Restrict the hours of vibration-intensive equipment or activities, such as vibratory rollers, so that annoyance to residents is minimal (e.g., limit to daytime hours as defined in the noise ordinance). IM-NO-C2: Project construction will conduct truck loading, unloading, and hauling operations so that noise and vibration are kept to a minimum by carefully selecting routes to avoid passing through residential neighborhoods to the greatest possible extent. IM-NO-C3: Perform independent noise and vibration monitoring in sensitive areas as needed to demonstrate compliance with applicable noise limits. Require contractors to modify and/or reschedule their construction activities if monitoring determines that maximum limits are exceeded at residential land uses per the City Noise Ordinance. IM-NO-C4: The construction contractor will be required by contract specification to comply with the City noise ordinances and obtain all necessary permits, particularly in relation to nighttime construction work.	<u>Less than significant impacts.</u> Same as Build Alternative 2.	<u>Less than significant impacts.</u> Same as Build Alternative 2.	<u>Less than significant impacts.</u> Same as Build Alternative 2.	<u>Less than significant impacts.</u> Same as Build Alternative 2.	<u>Less than significant impacts.</u> Same as Build Alternative 2.

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² M-CI-IM-1 and M-CI-IM-2 constitutes a mitigation measure under NEPA and an improvement measure under CEQA.

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ENVIRONMENTAL AREA/ IMPACTS	NO-BUILD ALTERNATIVE	BUILD ALTERNATIVE 2: SIDE-LANE BRT WITH STREET PARKING	BUILD ALTERNATIVE 3: CENTER-LANE BRT WITH RIGHT-SIDE BOARDING AND DUAL MEDIANS	BUILD ALTERNATIVE 3 WITH DESIGN OPTION B	BUILD ALTERNATIVE 4: CENTER-LANE BRT WITH LEFT- SIDE BOARDING AND SINGLE MEDIAN	BUILD ALTERNATIVE 4 WITH DESIGN OPTION B	LPA (COMBINES ALTERNATIVES 3 AND 4) ¹
Noise and Vibration Operation	<u>No impact.</u>	<u>No impact.</u> BRT operation would not increase noise and vibration; it would operate a less noisy fleet of diesel-electric hybrid and electric-powered vehicles than exists today. Noise levels along Van Ness Avenue and the parallel Franklin and Gough streets would remain below FTA and Caltrans impact criteria. <i>Improvement Measure:</i> IM-NO-1: Upkeep of roadway surface will be maintained throughout project operation to avoid increases in BRT noise and vibration levels.	<u>No impact.</u> Same as Build Alternative 2.	<u>No impact.</u> Same as Build Alternative 2.	<u>No impact.</u> Same as Build Alternative 2.	<u>No impact.</u> Same as Build Alternative 2.	<u>No impact.</u> Same as Build Alternative 2.
Noise and Vibration Cumulative	<u>No cumulative impacts.</u>	<u>Less than significant impact.</u> Control measures IM-NO-C1 through IM-NO-C4 would be implemented to minimize noise and vibration disturbances at sensitive areas during construction. Project construction would comply with the City Noise Ordinance to avoid significant impacts during construction of the proposed project and other planned projects in the vicinity. Construction phasing would be coordinated with these projects to minimize construction-related impacts to sensitive receptors.	<u>Less than significant impact.</u> Same as Build Alternative 2.	<u>Less than significant impact.</u> Same as Build Alternative 2.	<u>Less than significant impact.</u> Same as Build Alternative 2.	<u>Less than significant impact.</u> Same as Build Alternative 2.	<u>Less than significant impact.</u> Same as Build Alternative 2.
Population and Housing/Growth Construction	<u>No impact.</u>	<u>No impact.</u> Project construction would not lead to unplanned growth in the Van Ness Avenue corridor or the larger region, nor would it displace housing.	<u>No impact.</u> Same as Build Alternative 2.	<u>No impact.</u> Same as Build Alternative 2.	<u>No impact.</u> Same as Build Alternative 2.	<u>No impact.</u> Same as Build Alternative 2.	<u>No impact.</u> Same as Build Alternative 2.
Population and Housing/Growth Operation	<u>No impact.</u>	<u>No impact.</u> The project would not lead to unplanned growth in the Van Ness Avenue corridor or larger region, nor would it displace housing.	<u>No impact.</u> Same as Build Alternative 2.	<u>No impact.</u> Same as Build Alternative 2.	<u>No impact.</u> Same as Build Alternative 2.	<u>No impact.</u> Same as Build Alternative 2.	<u>No impact.</u> Same as Build Alternative 2.
Population and Housing/Growth Cumulative	<u>No cumulative impacts.</u>	<u>No cumulative impacts.</u>	<u>No cumulative impacts.</u>	<u>No cumulative impacts.</u>	<u>No cumulative impacts.</u>	<u>No cumulative impacts.</u>	<u>No cumulative impacts.</u>
Public Services Construction	<u>No impact.</u>	<u>Less than significant impact with mitigation.</u> Less than significant impacts to public services would result from construction activities, such as temporary rerouting and loss of on-street parking. No sidewalk closures would be required. These impacts would cause temporary inconvenience to area residents, businesses, and people traveling through the corridor. Mitigation measures M-CI-C1 through M-CI-C7, described in Section 4.15.2 would minimize impacts to Civic Center facilities and other public services during project construction. The measures described in Section 4.15.2 include: <i>Mitigation Measures:</i> M-CI-C1: A TMP that includes traffic rerouting, a detour plan, and public information procedures will be developed during the design phase with participation from local agencies, other major project proponents in the area (e.g., CPMC Cathedral Hill, Hayes Two-Way Conversion, and the Geary Corridor BRT projects), local communities, business associations, and affected drivers. Early and well-publicized announcements and other public information measures will be implemented prior to and during construction to minimize confusion, inconvenience, and traffic congestion. M-CI-C2: As part of the TMP, construction planning will minimize nighttime construction in residential areas and minimize daytime construction impacts on retail and commercial areas. M-CI-C3: As part of the TMP, construction scheduling and planning in the Civic Center area will take into consideration major civic and performing arts events. M-CI-C4: As part of the TMP public information program, SFMTA will coordinate with adjacent properties along Van Ness Avenue to determine the need for colored parking spaces and work to identify locations for replacement spaces or plan construction activities to minimize impacts from the loss of these spaces. M-CI-C5: As part of the TMP public information program, SFMTA will coordinate with adjacent properties along Van Ness Avenue to ensure that pedestrian access to these properties is maintained at all times. M-CI-C6: As part of the TMP, SFMTA's process for accepting and addressing complaints will be implemented. This includes provision of contact information for the Project Manager, Resident Engineer, and Contractor on project signage with direction to call if there are any concerns. Complaints are logged and tracked to ensure they are addressed.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 2.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 2.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 2.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 2.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 2.

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Table 7-2: Summary of Environmental Impacts under CEQA

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		M-CI-C7. As part of the TMP, adequate passenger and truck loading zones will be maintained for adjacent land uses, including maintaining access to driveways and providing adequate loading zones on the same or adjoining street block face.					
Public Services Operation	<u>No impact.</u>	<u>No impact.</u> The BRT would not result in the need for new or physically altered governmental facilities and would not hinder service rations and response times. The project would benefit community facilities with improved transit access.	<u>No impact.</u> Same as Build Alternative 2.	<u>No impact.</u> Same as Build Alternative 2.	<u>No impact.</u> Same as Build Alternative 2.	<u>No impact.</u> Same as Build Alternative 2.	<u>No impact.</u> Same as Build Alternative 2.
Public Services Cumulative	<u>No cumulative impacts.</u>	<u>Less than significant impact with mitigation.</u> Mitigation Measures M-CI-C1 through M-CI-C7 would lessen potentially significant, cumulative impacts to community facilities and government services during construction of the proposed project and other planned projects in the vicinity.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 2.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 2.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 2.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 2.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 2.
Transportation and Circulation Construction	<u>No impact.</u>	<u>Less than significant impact with mitigation.</u> Circulation impacts during construction due to lane closures, short-term detours, and reduced speeds would be temporary and are considered a less than significant impact with implementation of mitigation measures. All construction activity will be carried out in compliance and accordance with the California Manual on Uniform Traffic Control Devices (MUTCD), and applicable regulations of the SFPUC and San Francisco Department of Public Works (SFPDW) Bureau of Street Use and Mapping (BSM), and SFMTA Regulations for Working in San Francisco Streets Blue Book. <i>Mitigation Measures:</i> M-TR-C1: Temporary conversion of parking lanes to mixed-flow traffic lanes will be implemented to generally maintain two open traffic lanes in each direction and minimize traffic impacts. M-TR-C2: A contraflow lane system, including elimination of left turns in either direction along Van Ness Avenue, will be implemented during daytime construction under Build Alternative 2 to enable two lanes of mixed-flow traffic to generally remain open in each direction during construction and minimize traffic congestion on Van Ness Avenue. Appropriate signage and temporary traffic signals will be used to guide drivers, augmented by flagmen as needed. M-TR-C3: Plan required closures of a second mixed-flow traffic lane and detours for nighttime or off-peak traffic hours as feasible, and as in conformance with approved noise requirements. M-TR-C4: Maintain one east-west and north-south crosswalk leg open at all times at all intersections. M-TR-C5: Install sufficient barricading, signage, and temporary walkways as needed to minimize impacts to pedestrians and bicyclists. M-TR-C6: SFMTA will coordinate with GGT as part of the Transportation Management Plan (TMP) to plan temporarily relocated transit stops as needed, and minimize impacts to GGT service. M-TR-C7: Implement a TMP to minimize delay and inconvenience to the traveling public, including a public information program and wayfinding to provide local businesses and residents with information related to the construction activities and durations, temporary traffic closures and detours, parking restrictions, and bus stop relocations.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 2, except a contraflow lane system would not be required for Build Alternative 3; therefore, Mitigation Measure M-TR-C2 would not apply.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 3 without Design Option B.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 3.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 3with Design Option B.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 3.
Transportation and Circulation Operation	<u>No impact.</u>	<u>Significant Impact (to traffic).³</u> The project would not significantly impact traffic conditions on Van Ness Avenue. Traffic congestion would occur on streets parallel to Van Ness Avenue that would receive increased traffic that has diverted from Van Ness Avenue. Traffic impact significance findings for the near-term and horizon years follow. <u>Less than significant impact (to traffic).</u> Less than significant vehicular traffic circulation impacts would result in Year 2015 at the following intersection: <ul style="list-style-type: none"> Gough/Green South Van Ness/Mission/Otis and Duboce/Mission/Otis/US 101 Off-Ramp Less than significant vehicular traffic circulation impacts would result in Year 2035 at the following intersections: <ul style="list-style-type: none"> Gough/Green 	<u>Significant Impact (to traffic).³</u> The project would not significantly impact traffic conditions on Van Ness Avenue. Traffic congestion on streets parallel to Van Ness Avenue would receive increased traffic that has diverted from Van Ness Avenue. Traffic impact significance findings for the near-term and horizon years follow, including those impacts that are less than significant and those that are significant. Mitigation	<u>Significant Impact (to traffic).³</u> The project would not significantly impact traffic conditions on Van Ness Avenue. Traffic congestion on streets parallel to Van Ness Avenue would receive increased traffic that has diverted from Van Ness Avenue. Also, the elimination of all but two left turn opportunities off of Van Ness Avenue will result in an increase in drivers making	<u>Significant Impact (to traffic).³</u> Same as Build Alternative 3 without Design Option B. Mitigation Measure M-Traffic Management Toolbox under Build Alternative 2 also applies. <u>Less than Significant Impact (to traffic).</u>	<u>Significant Impact (to traffic).³</u> The project would not significantly impact traffic conditions on Van Ness Avenue. Traffic congestion on streets parallel to Van Ness Avenue would receive increased traffic that has diverted from Van Ness Avenue. Also, the elimination of	<u>Significant Impact (to traffic).³</u> Same as Build Alternative 3 without Design Option B. Mitigation Measure M-Traffic Management Toolbox under Build Alternative 2 also applies. <u>Less than Significant Impact (to traffic).</u>

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³ These types of mitigation measures, while reducing localized traffic delays in the short term, may ultimately be found by the Authority Board to not be feasible due to policy conflicts, specifically the need to balance traffic circulation with pedestrian and transit circulation and safety. In addition, these engineering techniques function by increasing automobile traffic capacity and are unlikely to be effective in the long term due to the risk of induced demand. Thus, a conservative worst-case finding of significant and unavoidable impact under CEQA is assumed (see Section 3.3.4).

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		<ul style="list-style-type: none"> Gough/Clay Mission/South Van Ness/Otis Mission/Duboce/Otis/US 101 Off-Ramps Van Ness/Pine <p><u>Significant impact (to traffic).</u>³</p> <p>Significant impacts that may not be mitigated would result in Year 2015 at the following intersections:</p> <ul style="list-style-type: none"> Gough/Hayes <p>Significant impacts that may not be mitigated would result in Year 2035 at the following intersections:</p> <ul style="list-style-type: none"> Gough/Hayes Franklin/Pine Franklin/O'Farrell Franklin/Eddy Franklin/ McAllister <p><i>Mitigation Measures</i></p> <p>M-Traffic Management Toolbox</p> <p><u>Develop and implement a traffic management toolbox</u> to raise public awareness of circulation changes; advise drivers of alternate routes; and pedestrian improvements. Toolbox actions will include:</p> <ul style="list-style-type: none"> <u>Provide driver wayfinding and signage</u>, especially to assist infrequent drivers of the corridor who may not be aware of alternate routes, such as along the Larkin/Hyde and Franklin/Gough corridors. Coordinate with Caltrans to develop the driver wayfinding and signage strategy as part of mitigation measure and M-TR-C5. Continue to monitor traffic after construction and during project operation. <u>Public Awareness Campaign and Transportation Management Plan (TMP) during and after Project Construction</u>. As discussed as part of mitigation measure M-TR-C7, the TMP will implement a public awareness program of wayfinding during construction and will coordinate the public information program with regional agencies, including Caltrans and GGT. Continue to monitor traffic after construction and during project operation. <u>Pedestrian Amenities at Additional Corridor Locations</u>. After construction, during project operation, monitor travel in the corridor to identify additional locations for pedestrian improvements based on a combination of pedestrian and vehicle volumes, infrastructure capabilities, and collision history. <p><u>Less than significant impact (to transit).</u></p> <p>No significant impacts to transit would result. While one transit line that cross Van Ness Avenue would experience increased delay, this delay would not result in significant impacts to service reliability and travel time. BRT service would substantially improve transit service on Van Ness Avenue.</p> <p><u>Less than significant impact (to nonmotorized transportation).</u></p> <p>No significant impacts to nonmotorized travel would result. While transit stop consolidation would increase the physical effort required to reach transit for some patrons relative to existing conditions, the average distances between stops are consistent with applicable Muni guidelines for rapid bus and light rail, and the project would offer pedestrian accessibility and safety benefits. The proposed project would not substantially change or degrade bicycle conditions.</p> <p><i>Improvement Measures:</i></p> <p>IM-NMT-1: Include comprehensive wayfinding, allowing all users to navigate to and from the correct platform.</p> <p>IM-NMT-4: Provide sufficient information to educate less-ambulatory passengers that board at BRT stations that they would need to exit through the front, right doors for stops outside the Van Ness Avenue corridor.</p> <p><u>Less than significant impact (to parking).</u></p> <p>No significant impacts to parking would result. Introduction of BRT stations and streetscape features, and reconstruction of the Van Ness Avenue median and implementation of new BRT stations adjacent to the sidewalk, would result in the removal of approximately 33 total parking spaces.</p>	<p>Measure M-Traffic Management Toolbox under Build Alternative 2 also applies.</p> <p><u>Less than significant impact (to traffic).</u></p> <p>Less than significant vehicular traffic circulation impacts would result in Year 2015 at the following intersection:</p> <ul style="list-style-type: none"> Gough/Green Duboce/Mission/Otis/US 101 off-ramp <p>Less than significant vehicular traffic circulation impacts would result in Year 2035 at the following intersections:</p> <ul style="list-style-type: none"> Gough/Green Franklin/Pine Van Ness/Pine Mission/Duboce/Otis/US 101 Off-Ramps <p><u>Significant impact (to traffic).</u>²</p> <p>Significant impacts that may not be mitigated to a less than significant level would result in Year 2015 at the following intersections:</p> <ul style="list-style-type: none"> Gough/Hayes Franklin/O'Farrell Mission/South Van Ness/Otis <p>Significant impacts that may not be mitigated to a less than significant level would result in Year 2035 at the following intersections:</p> <ul style="list-style-type: none"> Gough/Sacramento Gough/ Eddy Gough/Hayes Franklin/O'Farrell Franklin/Eddy Franklin/McAllister Van Ness/Hayes South Van Ness/Mission/Otis <p><u>Less than significant impact with mitigation (to transit).</u></p> <p>A potentially significant impact to transit service could occur in year 2035 due to vehicle crowding. The following mitigation measure is required to reduce this impact to</p>	<p>multiple right turns in the project vicinity, causing some additional traffic on these adjacent collector streets. Traffic impact significance findings for the near-term and horizon years follow, including those impacts that are less than significant and those that are significant. Mitigation Measure M-Traffic Management Toolbox under Build Alternative 2 also applies.</p> <p><u>Less than significant impact (to traffic).</u></p> <p>Less than significant vehicular traffic circulation impacts would result in Year 2015 at the following intersection:</p> <ul style="list-style-type: none"> Gough/Green South Van Ness/Mission/Otis and Duboce/ Mission/ Otis/US 101 Off-Ramp <p>Less than significant vehicular traffic circulation impacts would result in Year 2035 at the following intersections:</p> <ul style="list-style-type: none"> Gough/Green Gough/Clay Franklin/Pine Mission/Duboce/Otis/US 101 Off-Ramps <p><u>Significant impact (to traffic).</u>²</p> <p>Significant impacts that may not be mitigated to a less than significant level would result in Year 2035 at the following intersections:</p> <ul style="list-style-type: none"> Gough/Hayes Franklin/O'Farrell Franklin/Market <p>Significant impacts that may not be mitigated to a less than significant level would result in Year 2035 at the following intersections:</p> <ul style="list-style-type: none"> Gough/Sacramento Gough/Eddy Gough/Hayes 	<p>Same as Build Alternative 3.</p> <p><u>Significant impact.</u>²</p> <p>Same as Build Alternative 3.</p> <p><u>Less than significant impact with mitigation (to transit).</u></p> <p>Same as Build Alternative 3 without Design Option B.</p> <p><u>Less than significant impact (to nonmotorized transportation).</u></p> <p>Same as Build Alternative 3 without Design Option B, in addition to the following improvement measures:</p> <p>IM-NMT-2: For Build Alternative 4, bus vehicle design should incorporate an intuitive seating space for users requiring level boarding that is easily accessible to both the front door on the right side and the door behind the operator on the left side.</p> <p>IM-NMT-3: For Build Alternative 4, bus vehicle design should incorporate audible cues, such as stop announcements, of which door will open to avoid any confusion for passengers.</p> <p><u>Less than significant impact (to parking).</u></p> <p>Same as Build Alternative 2, except 45 parking spaces would be removed along Van Ness Avenue. The same improvement measure as Build Alternative 2</p>	<p>all but two left turn opportunities off of Van Ness Avenue will result in an increase in drivers making multiple right turns in the project vicinity, causing some additional traffic on these adjacent collector streets. Traffic impact significance findings for the near-term and horizon years follow, including those impacts that are less than significant and those that are significant. Mitigation Measure M-Traffic Management Toolbox under Build Alternative 2 also applies.</p> <p><u>Less than Significant Impact (to traffic).</u></p> <p>Same as Build Alternative 3 with Design Option B.</p> <p><u>Significant impact (to traffic).</u>²</p> <p>Same as Build Alternatives 3 with Design Option B.</p> <p><u>Less than significant impact with mitigation (to transit).</u></p> <p>Same as Build Alternative 3 with Design Option B.</p> <p><u>Less than significant impact (to parking).</u></p> <p>Same as Build Alternative 2, except 105 parking spaces would be removed along Van Ness Avenue. The same improvement measure as Build Alternative 2 would be implemented.</p>	

¹ The summary of impacts and mitigation for the LPA includes all impacts and mitigation that would pertain to the LPA with or without incorporation of the Vallejo Northbound Station Variant into the project design.

³ These types of mitigation measures, while reducing localized traffic delays in the short term, may ultimately be found by the Authority Board to not be feasible due to policy conflicts, specifically the need to balance traffic circulation with pedestrian and transit circulation and safety. In addition, these engineering techniques function by increasing automobile traffic capacity and are unlikely to be effective in the long term due to the risk of induced demand. Thus, a conservative worst-case finding of significant and unavoidable impact under CEQA is assumed (see Section 3.3.4).

Table 7-2: Summary of Environmental Impacts under CEQA

ENVIRONMENTAL AREA/ IMPACTS	NO-BUILD ALTERNATIVE	BUILD ALTERNATIVE 2: SIDE-LANE BRT WITH STREET PARKING	BUILD ALTERNATIVE 3: CENTER-LANE BRT WITH RIGHT-SIDE BOARDING AND DUAL MEDIANS	BUILD ALTERNATIVE 3 WITH DESIGN OPTION B	BUILD ALTERNATIVE 4: CENTER-LANE BRT WITH LEFT- SIDE BOARDING AND SINGLE MEDIAN	BUILD ALTERNATIVE 4 WITH DESIGN OPTION B	LPA (COMBINES ALTERNATIVES 3 AND 4) ¹
		<p><i>Improvement Measures:</i></p> <p>IM-TR-1: On-street parking will be created where bus stops are consolidated or moved to the center of the street.</p> <p>IM-TR-2: Additional on-street parking will be provided where feasible by lane striping.</p> <p>IM-TR-3: Infill on-street parking spaces will be provided where they do not exist today as feasible.</p> <p>IM-TR-4: SFMTA will give priority to retaining color-painted on-street parking spaces, such as yellow freight zones white passenger loading zones, green short-term parking, and blue disabled parking.</p> <p>IM-TR-5: Blue handicapped parking spaces will be designed to provide a curb ramp behind each space.</p>	<p>less than significant:</p> <p>M-TR-1: An additional vehicle will be added to the fleet as needed to provide additional service and reduce station vehicle crowding impacts.</p> <p><u>Less than significant impact (to transit)</u></p> <p>While some transit lines that cross Van Ness Avenue would experience some increased delay, this delay would not result in significant impacts to service reliability and travel time. BRT service would substantially improve transit service on Van Ness Avenue.</p> <p><u>Less than significant impact (to nonmotorized transportation).</u></p> <p>Same as Build Alternative 2.</p> <p><u>Less than significant impact (to parking).</u></p> <p>Same as Build Alternative 2, except 68 parking spaces would be removed along Van Ness Avenue. The same improvement measure as Build Alternative 2 would be implemented.</p>	<ul style="list-style-type: none"> Franklin/O'Farrell Franklin/Eddy Franklin/McAllister Franklin/Market/Page Mission/South Van Ness/Otis <p><u>Less than significant impact with mitigation (to transit).</u></p> <p>Same as Build Alternative 3 without Design Option B.</p> <p><u>Less than significant (to transit).</u></p> <p>Same as Build Alternative 3 without Design Option B.</p> <p><u>Less than significant impact (to nonmotorized transportation).</u></p> <p>Same as Build Alternative 3 without Design Option B.</p> <p><u>Less than significant impact (to parking).</u></p> <p>Same as Build Alternative 2, except 31 parking spaces would be removed along Van Ness Avenue. The same improvement measure as Build Alternative 2 would be implemented.</p>	would be implemented.	Ness Avenue. The same improvement measure as Build Alternative 2 would be implemented.	
Transportation and Circulation Cumulative	<u>No cumulative impacts.</u>	<u>Less than significant impact with mitigation.</u> Mitigation Measures M-TR-C1 through M-TR-C7 would lessen significant, cumulative circulation impacts during construction of the proposed project and other planned projects in the vicinity. These impacts would be temporary and are thus considered less than significant with mitigation. Cumulative circulation impacts during operation of the proposed project and other planned projects in the vicinity are accounted for in the Operations section.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 2, except a contraflow lane system would not be required for Build Alternative 3; therefore, Mitigation Measure M-TR-C2 would not apply.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 3 without Design Option B.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 3.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 3 with Design Option B.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 3 with Design Option B.
Utilities and Service Systems Construction	<u>No impact.</u>	<u>Less than significant impact.</u> Compliance with standard procedures will minimize the potential for damage to utilities, injury to construction workers, and proper completion of construction work. <i>Improvement Measures:</i> IM-UT-C1: Construction work involving utilities will be conducted in accordance with contract specifications, including the following requirements: <ul style="list-style-type: none"> Obtain authorization from utility provider before initiating work Contact Underground Service Alert in advance of excavation work to mark-out underground utilities Conduct investigations, including exploratory borings if needed, to confirm the location and type of underground utilities and service connections Prepare a support plan for each utility crossing detailing the intended support method Take appropriate precautions for the protection of unforeseen utility lines encountered during construction Restore or replace each utility as close as planned and work with providers to ensure its location is as good or better than found prior to removal 	<u>Less than significant impact.</u> Same as Build Alternative 2.	<u>Less than significant impact.</u> Same as Build Alternative 2.	<u>Less than significant impact.</u> Same as Build Alternative 2.	<u>Less than significant impact.</u> Same as Build Alternative 2.	<u>Less than significant impact.</u> Same as Build Alternative 2.

¹ The summary of impacts and mitigation for the LPA includes all impacts and mitigation that would pertain to the LPA with or without incorporation of the Vallejo Northbound Station Variant into the project design.

³ These types of mitigation measures, while reducing localized traffic delays in the short term, may ultimately be found by the Authority Board to not be feasible due to policy conflicts, specifically the need to balance traffic circulation with pedestrian and transit circulation and safety. In addition, these engineering techniques function by increasing automobile traffic capacity and are unlikely to be effective in the long term due to the risk of induced demand. Thus, a conservative worst-case finding of significant and unavoidable impact under CEQA is assumed (see Section 3.3.4).

Table 7-2: Summary of Environmental Impacts under CEQA

ENVIRONMENTAL AREA/ IMPACTS	NO-BUILD ALTERNATIVE	BUILD ALTERNATIVE 2: SIDE-LANE BRT WITH STREET PARKING	BUILD ALTERNATIVE 3: CENTER-LANE BRT WITH RIGHT-SIDE BOARDING AND DUAL MEDIANS	BUILD ALTERNATIVE 3 WITH DESIGN OPTION B	BUILD ALTERNATIVE 4: CENTER-LANE BRT WITH LEFT- SIDE BOARDING AND SINGLE MEDIAN	BUILD ALTERNATIVE 4 WITH DESIGN OPTION B	LPA (COMBINES ALTERNATIVES 3 AND 4) ¹
Utilities and Service Systems Operation	<u>No impact.</u>	<u>Less than significant impact with mitigation.</u> Operation would not result in changes to utility demand and capacity. Some utilities would require relocation or modification for construction and to maintain access for utility providers to conduct maintenance, repair, and upgrade/replacement activities. These would result in less than significant impacts to utilities and service systems. Mitigation measures are required to avoid adverse impacts to utility systems and services. <i>Mitigation Measures:</i> M-UT-1: BRT construction will be closely coordinated with concurrent utility projects planned within the Van Ness Avenue corridor. M-UT-3: During planning and design, consideration must be given to ensure that the proposed BRT transitway and station facilities do not prevent access to the underground auxiliary water supply service (AWSS) lines. There must be adequate access for specialized trucks to park next to gate valves for maintenance. The gate valves must not be located beneath medians or station platforms. M-UT-4: In situations where utility facilities cannot be relocated, SFMTA will create a plan to accommodate temporary closure of the transitway and/or stations in coordination with utility providers to allow utility providers to perform maintenance, emergency repair, and upgrade/replacement of underground facilities that may be located beneath project features such as the BRT transitway, station platforms, or curb bulbs. Signage for BRT patrons and safety protocols for Muni operators and utility providers will be integrated into this plan.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 2, except the following additional mitigation measure would also be required: M-UT-2: An inspection and evaluation of the sewer pipeline within the project limits will be undertaken to assess the condition of the pipeline and need for replacement. Coordination with SFPUC and SFDPW will continue and be tracked by Committee for Utility Liaison on Construction and Other Projects (CULCOP).	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 3 without Design Option B.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 3.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 3 with Design Option B.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 3.
Utilities and Service Systems Cumulative	<u>No cumulative impacts.</u>	<u>Less than significant impact with mitigation.</u> Mitigation Measure M-UT-C1 would avoid significant cumulative impacts to utilities during construction of the proposed project and other planned projects in the vicinity.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 2.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 2.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 2.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 2.	<u>Less than significant impact with mitigation.</u> Same as Build Alternative 2.

¹ The summary of impacts and mitigation for the LPA includes all impacts and mitigation that would pertain to the LPA with or without incorporation of the Vallejo Northbound Station Variant into the project design.

Table 7-3: CEQA Mandatory Findings of Significance

MANDATORY FINDINGS OF SIGNIFICANCE – WOULD THE PROJECT:	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

NOTE: Authority cited: Section 21083, Public Resources Code; Reference: Section 21001 and 21068, Public Resources Code.

SOURCE: San Francisco Planning Department Initial Study Checklist.

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7.5 Unavoidable Significant Effects under CEQA

Each of the build alternatives, including the LPA (with or without the Vallejo Northbound Station Variant), would result in significant traffic impacts, as explained in detail in Section 3.3, Vehicular Traffic. The mitigation measures identified in Section 3.3.4, while reducing localized traffic delays in the short term, may ultimately be found by the Authority Board to not be feasible due to policy conflicts, specifically the need to balance traffic circulation with pedestrian and transit circulation and safety. In addition, these engineering techniques function by increasing automobile traffic capacity and are unlikely to be effective in the long term due to the risk of induced demand. Thus, a conservative worst-case finding of significant and unavoidable impact under CEQA is assumed.

In determining the level of impact for each build alternative, including the LPA, comparisons are made of corridor performance (i.e., measured in terms of average speed) and traffic operating characteristics of intersections (i.e., measured in terms of LOS) for the near-term year (2015) and the design/horizon year (2035) against the baseline year (2007) for the traffic study area. The traffic study area for the Van Ness Avenue corridor covers the area bounded by Lombard Street to the north, Duboce Avenue (at the Mission Street/US 101 Freeway off-ramp) to the south, Hyde Street to the east, and Gough Street to the west, as shown in Figure 3.3-1 in Section 3.3.

As explained in Section 3.3, Vehicular Traffic, unavoidable, significant impacts to traffic circulation would occur under each build alternative, including the LPA (with or without the Vallejo Northbound Station Variant), based on the following thresholds:

- If the intersection LOS declines from LOS A, B, C, or D in no build to LOS E or F in the with-project scenario, then the project would cause a significant impact.
- If the intersection LOS declines from LOS E in no build to LOS F in the with-project scenario, then the project would cause a significant impact.
- If the intersection performs the same at either LOS E or F in both no-build and with-project scenarios, then the project's contribution to significant impacts (i.e., contribution calculations) are performed as follows:
 - If the project traffic is less than 5 percent of the cumulative growth in intersection traffic, then the project does not have a significant impact.

Table 7-2 lists the traffic impacts for each of the build alternatives and LPA.

Potential mitigation measures (e.g., intersection signalization, adding right-turn lanes, adding through lanes, and use of peak-hour tow-away zones) are discussed in Section 3.3.4 of this EIS/EIR. These measures could minimize traffic congestion at several intersections projected to be significantly impacted; however, not all traffic impacts would be eliminated with implementation of these mitigation measures. The identified, possible mitigations for significant traffic impacts may ultimately be found by decision makers at the time of project approval to not be feasible, as discussed in Section 3.3.4. While the identified mitigation measures may alleviate some traffic impacts, this benefit would come at the expense of the worsening pedestrian conditions, transit conditions, and bicycle conditions. Furthermore, rather than alleviating traffic congestion, the mitigation measures may be demand inducing. The Transit First Policy states that “Decisions regarding the use of limited public street and sidewalk space shall encourage the use of public rights-of-way by pedestrians, bicyclists, and public transit” (City Charter Article VIII A, 115, Transit First Policy). If the decision makers find the measures infeasible, the traffic impact analysis shows that several locations would experience “significant and unavoidable” automobile traffic delay impacts by 2015 and 2035. These impacts (referred to as “significant”) are summarized below, by project build alternative, including the LPA.

Each of the proposed build alternatives, including the LPA, would result in potentially significant impacts to traffic. The project sponsor is not recommending the identified, possible mitigations for significant traffic impacts because they conflict with the City's Transit First Policy.

The traffic impact analysis concludes that several locations would experience a “significant and unavoidable” automobile traffic delay impacts in Years 2015 and 2035.

Build Alternative 2: Side-Lane BRT with Street Parking

Build Alternative 2 would cause a significant impact at the following two intersections by Year 2015 (representing existing plus project conditions):

- Gough/Hayes
- Franklin/O'Farrell

Build Alternative 2 would cause a significant impact at the following intersections by Year 2035:

- Gough/Hayes
- Franklin/Pine
- Franklin/O'Farrell
- Franklin/Eddy
- Franklin/ McAllister

Build Alternatives 3 and 4: Center-Lane BRT with Right- or Left-Side Boarding and Dual or Single Medians

Project traffic under Build Alternatives 3 and 4 would cause a significant impact at the following intersections by Year 2015 (representing existing plus project conditions):

- Gough/Hayes
- Franklin/O'Farrell
- South Van Ness/Mission/Otis

Project traffic under Build Alternatives 3 and 4 would cause a significant impact at the following intersections by Year 2035:

- Gough/Sacramento
- Gough/ Eddy
- Gough/Hayes
- Franklin/O'Farrell
- Franklin/Eddy
- Franklin/McAllister
- Van Ness/Hayes
- South Van Ness/Mission/Otis

Build Alternatives 3 and 4 with Design Option B

The project traffic under Build Alternatives 3 and 4 with Design Option B (elimination of left turns) would cause a significant impact at the following intersections by Year 2015 (representing existing plus project conditions):

- Gough/Hayes
- Franklin/O'Farrell
- Franklin/Market

Project traffic under Build Alternatives 3 and 4 with Design Option B would cause a significant impact at the following intersections by Year 2035:

- Gough/Sacramento
- Gough/Eddy
- Gough/Hayes
- Franklin/O'Farrell
- Franklin/Eddy
- Franklin/McAllister
- Franklin/Market
- South Van Ness/Mission/Otis

LPA

The project traffic under the LPA (with or without the Vallejo Northbound Station Variant) includes elimination of left turns presented as Design Option B, and would cause a significant impact at the following intersections by Year 2015 (representing existing plus project conditions):

- Gough/Hayes
- Franklin/O'Farrell
- Franklin/Market/Page

Project traffic under the LPA would cause a significant impact at the following intersections by Year 2035:

- Gough/Sacramento
- Gough/Eddy
- Gough/Hayes
- Franklin/O'Farrell
- Franklin/Eddy
- Franklin/McAllister
- Franklin/Market/Page
- South Van Ness/Mission/Otis

7.6 Environmentally Superior Alternative

CEQA Guidelines (Section 15126.6(e)(2)) require that an environmentally superior alternative be identified among the alternatives considered. The environmentally superior alternative is generally defined as the alternative that would result in the least adverse environmental impacts to the project site and surrounding area. If the No Build Alternative is found to be the environmentally superior alternative, the document must identify an environmentally superior alternative among the build alternatives. The environmentally superior alternative has been determined following receipt of agency, stakeholder, and public input on the impact findings in the Draft EIS/EIR, and stakeholder and agency input during the LPA selection process.

The environmentally superior alternative is the No Build Alternative because it would not result in significant impacts. The No Build Alternative would not result in significant operational traffic congestion impacts at multiple intersections.¹⁰² The No Build Alternative would not result in adverse impacts associated with removal of mature trees. Moreover, the No Build Alternative would not result in the temporary construction impacts such as traffic detours and congestion, parking restrictions, and air quality, dust and noise disturbances that would result from the build alternatives, including the LPA. However, the No Build Alternative would not meet the project purpose and need, and thus a build alternative was selected as the LPA.

Of the Build Alternatives, including the LPA, Build Alternative 2 would be the environmentally superior alternative, for the following reasons:

- Build Alternative 2 would result in significant operational traffic congestion impacts at fewer intersections than the other build alternatives, including the LPA;
- Build Alternative 2 would require removal of notably fewer trees (particularly in the median) than the other build alternatives, including the LPA; and
- Construction of Build Alternative 2 would not trigger replacement or relocation of segments of the aging sewer pipeline, as would occur in varying degrees under the build alternatives, including the LPA.

¹⁰² Significant operational traffic congestion impacts would occur at multiple intersections in Years 2015 and 2035 under the No Build Alternative, but at fewer intersections than any of the build alternatives, including the LPA.

While Build Alternative 2 would be the environmentally superior alternative for the aforementioned reasons, it is important to note that all the build alternatives, including the LPA, would result in the same CEQA impact findings as summarized in Table 7-2, and would result in the same Mandatory Findings of Significance presented in Table 7-3. Each build alternative, including the LPA, would result in similar environmental benefits and impacts, and it is the degree of impact that separates Build Alternative 2 from the other build alternatives, including the LPA, as the environmentally superior alternative. After consideration of environmental impacts and the alternatives analysis process, including consideration of stakeholder, agency and public comments, Build Alternative 2 was not selected as the LPA because it would not achieve the project purpose and need to the extent the LPA (a refinement of Build Alternatives 3 and 4 with Design Option B) would achieve. Chapter 10 provides additional detail on the process and criteria for selection of the LPA.

Determination of the environmentally superior alternative does not preclude the other alternatives from being selected. The lead agency may adopt a statement of overriding considerations which expresses the agency's views on the merits of approving a project despite its significant impacts. The statement of overriding considerations provides a justification for approving a project despite its environmental impacts, including an explanation of how the trade-offs between project benefits and impacts were considered, including factors such as cost and risk analysis. Since the SFCTA has selected an LPA that has significant traffic impacts that are not mitigated, similar to the build alternatives in the Draft EIS/EIR, SFCTA's approval of the LPA will require the preparation of a Statement of Overriding Considerations.

7.7 Areas of Controversy

Primary areas of controversy raised by the public during review of the Draft EIS/EIR consist of: traffic congestion on Van Ness Avenue and diversion onto parallel streets in the project vicinity; how increased traffic congestion would affect air quality and noise in the project area; the project's effects on trees on Van Ness Avenue and the desire to preserve trees; the effects of relocating existing bus stops and stop consolidation (limiting of stops); and concern about how the project alternatives were defined and that there should be more consideration of less costly express bus alternatives.

Traffic Congestion and Diversion Impacts and Resulting Noise and Air Quality

Each of the build alternatives, including the LPA (with or without the Vallejo Northbound Station Variant), would result in significant and unavoidable vehicular traffic delay impacts at several intersections in the project vicinity, in both the near-term 2015 year and horizon 2035 year (see Sections 3.3.3 and 7.5). Concern that the project would result in increased traffic congestion was the most common topic expressed in comments received during the public review period for the Draft EIS/EIR. Much of this concern was related to increased traffic volumes on streets parallel to Van Ness Avenue that would receive diverted traffic – primarily Franklin and Gough streets. The traffic analysis presented in Chapter 3 shows that drivers would change routes, or divert, from Van Ness Avenue to use parallel streets due to the reduction of traffic lanes on Van Ness Avenue needed to accommodate the proposed BRT lanes and the elimination of left turns to facilitate transit operations. Many members of the public are concerned that the increased vehicular traffic will make these streets noisier, less pedestrian friendly, and degrade air quality.

As explained in Section 3.3.3, the proposed project would not result in significant vehicular traffic delay impacts on Van Ness Avenue; however, the project would increase congestion on some nearby streets. The traffic modeling analysis shows that in 2015, under Build Alternatives 2-4, including the LPA, approximately 105 to 450 total vehicles in both directions (2 to 7 vehicles per minute) could divert away from Van Ness Avenue and make their trip on a parallel street within the corridor during the PM Peak instead. Franklin Street

would be the parallel route most frequently used during the PM peak hour, compared with Gough, Polk, Larkin, and Hyde streets. The amount of additional private vehicle traffic varies widely up and down the 2-mile stretch of corridor analyzed, but any given segment of Polk, Franklin, or Gough streets could experience an additional 50 to 250 vehicles per hour (vph), or roughly one to four additional vehicles per minute during the PM peak hour in 2015. Larkin and Hyde streets could also see an increase in traffic volume of approximately 20 to 100 vph (less than two vehicles per minute between the two streets combined during the PM peak hour).¹⁰³

The noise analysis showed that this amount of increased vehicles on parallel streets would not result in substantial changes in ambient noise and would not result in a significant noise impact. As part of the air quality analysis, pollutant concentrations were modeled using worst-case, stagnant air conditions for the peak congestion period. The Toxic Air Contaminant (TAC) emissions on parallel streets from this diverted traffic were found to be below standards set by the BAAQMD, and less than significant under each build alternative, including the LPA. An additional analysis was undertaken to specifically address air quality effects from increases in vehicle idling, using the CAL3QHC dispersion model, at intersections that would experience the highest vehicle delay in the 2035 horizon year. The idle emissions were found to be well below the State standards after implementation of the BRT in year 2035 traffic conditions. Thus, the project would not result in significant, localized air quality emissions on parallel streets due to increased traffic congestion caused by the project.

More detail on traffic diversion and related noise and air quality impacts can be found in Appendix I, Section 2.1, Master Response #8, 9, 10, and 11.

Impacts to Existing Trees

The effect of the proposed project on existing trees is another major concern expressed in comments. There is a strong desire among the public and local agencies to preserve existing trees. The San Francisco Department of Public Works (DPW) requested that additional analysis be completed pertaining to removal of median trees, which is reflected in Sections 4.4.2.5 and 4.4.3.4 of the Final EIS/EIR. A more comprehensive Tree Removal Evaluation and Planting Opportunity Analysis was undertaken in fall 2012 to identify the maturity and health of trees in the corridor and the opportunities for preserving trees, and the parameters of new tree plantings (BMS, 2013). Emphasis was placed on preserving existing mature and healthy trees, particularly trees that DPW labeled as high priority for their biological and/or aesthetic value, such as trees located near the civic center. As explained in Section 4.4.3.4, due to the OCS clearance requirements, the median replacement trees under the LPA would be shorter and narrower than existing trees, with smaller canopies, which would not offer the same benefits of a full canopy. In addition, there would be a plant establishment period lasting several years for new trees to reach maturity, therefore causing a period of reduced benefits compared with the benefits offered by existing mature trees and their canopies.

Like Build Alternatives 3 and 4, the LPA (with or without the Vallejo Northbound Station Variant) would not affect any existing sidewalk trees; however, it would result in the removal of approximately 90 median trees. Twenty-three (23) of these trees are mature and healthy, which is approximately 82 percent of all the existing healthy and mature median trees in the corridor. This tree removal is due to the reconfiguration of existing medians to construct the

¹⁰³ The greatest increase in traffic volumes in the study area would be on Franklin Street, north of Market Street for Design Option B and the LPA. Due in large part to the reduction of left-turn pockets along Van Ness Avenue, left-turning vehicles under the Design Option B and LPA would use that segment of Franklin Street to go north, and thus would experience an increase of up to 560 vehicles in 2015 and 620 vehicles in 2035 with the implementation of the LPA. These increases in traffic volumes are significantly higher than the increases at other segments along Franklin Street (more than 3 times the average of increased volumes at other screenline intersections along the corridor), and even higher than intersections on other parallel streets (more than 5 times the increase on Gough Street). This causes operations at the intersection of Franklin and Market streets to operate at LOS F, with more than 100 seconds of delay for the left turn from Market Street onto Franklin Street in 2015 (see Section 3.3.3.2).

single-median, center-lane transitway on blocks without a station while meeting Caltrans and SFMTA standards for mixed traffic and transit lanes. In addition, trees would be removed due to the nearly complete reconstruction of existing medians on blocks with stations. Under the LPA (with or without the Vallejo Northbound Station Variant), 143 new trees would be planted along the corridor, bringing the total number of trees to 469; a net gain of 53 trees.

In conclusion, while the proposed project would result in the removal of a substantial number of existing trees, efforts were undertaken by SFCTA, SFMTA, and partnering agencies to avoid removal of trees best suited for preservation. SFCTA, SFMTA, and DPW worked closely with Caltrans staff to obtain design exception approvals from Caltrans to allow for a reduced tree planting setback and to provide narrower mixed traffic lane widths to increase the size of the median for trees deemed suitable for preservation. In addition to replacement median tree plantings, the project proponents will plant 48 additional sidewalk trees in the project corridor to help offset some of the impacts resulting from the removal of existing median trees. Increased sidewalk and median tree plantings over existing conditions would improve the visual setting, with improvements growing over time as plantings mature, resulting in long-term, beneficial effects. At the same time, however, there would be a plant establishment period lasting for several years for new trees to reach maturity. The trade-offs between increased plantings in the corridor and the loss of existing trees is discussed in detail for each build alternative, including the LPA, in Section 4.4.3.4 of this document. In addition, a summary of tree removal and planting opportunities is provided in Appendix I, Section 2.1, Master Response #7.

Transit Stop Consolidation

Members of the public expressed concerns about the removal and/or relocation of existing bus stops. The proposed project would increase the distance between stops, which would increase the physical effort required to reach transit relative to existing conditions. This may pose a burden to some bus patrons.

As described in Section 2.2.2, under the LPA, 7 NB and 5 SB (6 with implementation of the Vallejo Northbound Station Variant) existing Muni bus stops, which serve the 49 and 47 Muni lines on Van Ness Avenue in the project study area, would be removed. Under the LPA, the proposed project would have 8 NB stations (9 with the Vallejo Northbound Station Variant), and 9 SB BRT stations, instead of the 15 NB and 14 SB Muni stops in each direction currently on Van Ness Avenue in the project study area. The reason for eliminating or consolidating stops is to reduce dwell time, achieve greater reliability of service, and take better advantage of transit signal priority. Figures 2-2 and 2-3 show the locations of existing Muni bus stops and the locations of the proposed LPA stations.

The average spacing of the proposed BRT station locations under the LPA would be approximately 1,150 feet (1,080 feet under the Vallejo Northbound Station Variant), requiring an average walk of up to 570 feet (540 feet under the Vallejo Northbound Station Variant) from a location halfway between two stops. This would constitute an increase, on average, of up to 220 feet of additional walking to access stops if a person had an origin or destination half-way between the proposed BRT station locations. A distance of 220 feet is less than one block along Van Ness Avenue. On average, the proposed project complies with the applicable 1,000- to 1,200-foot spacing guideline for light rail lines and has an average spacing slightly greater than the 800- to 1,000-foot spacing guideline for bus stops (Source: SFMTA FY 2008-FY2027 Draft Short Range Transit Plan, 2007).¹⁰⁴ In addition to considering Muni's stop spacing guideline, the BRT station locations are based on three goals: (1) place stops as evenly spread out as possible within the project corridor; (2) consider ridership and place stations where the largest numbers of passengers board and alight; and (3) facilitate easy connections with other Muni lines, particularly other Rapid

¹⁰⁴ There are no SFMTA stop spacing guidelines for BRT.

network lines. The degree of slope was also considered, and stations were not proposed on blocks with grades greater than 8 percent, consistent with ADA standards.

The Van Ness Avenue BRT project is designed to be as universally accessible as possible. The Draft EIS/EIR provides a full evaluation of the impacts of the project on accessibility for all users in Section 3.4.3.1. The evaluation is based on the principles of Universal Design and recognizes that users, including the elderly and disabled, may have different concerns. Some may depend on transit to meet their need for efficient travel through the Van Ness Avenue corridor, while others may prefer more frequent stops for local access and to minimize walking distances. While the project would increase the physical effort required to reach a transit stop for some riders, it would offer accessibility benefits like level or near level boarding at BRT stations, which would reduce the physical effort required to board transit vehicles. Additional benefits would include curb bulbs, nose cones, pedestrian countdown signals, and accessible pedestrian signals at intersections that allow people with a reduced range of physical abilities to safely cross the street. The project team has met with local groups and organizations that focus on accessibility issues during preparation of the Feasibility Study and Draft EIS/EIR, including the Lighthouse for the Blind and Visually Impaired, the Mayor's Disability Council Physical Access Committee, and the Muni Accessibility Advisory Committee, to gather input for the BRT project and best address stop consolidation and other accessibility aspects of the proposed project.

Proposed BRT station locations were refined based on public and agency input into the design process. For example, in response to comments regarding wider stop spacing in the vicinity of the Van Ness Avenue and Vallejo Street intersection, which has higher grades than other parts of the corridor, the LPA includes a SB station at the intersection of Vallejo Street and Van Ness Avenue. A NB transit station in this same location, referred to as the Vallejo Northbound Station Variant, could also be implemented, and will be decided at the time of project approval. SFMTA will continue to meet with groups throughout the final design and operation phases of the project to incorporate universal design principles and will work with the community and businesses to inform patrons of upcoming changes in station locations.

See Appendix I, Section 2.1, Master Response #5 for a more detailed response to this common comment.

Definition of Project Alternatives and Limits and Consideration of Less Costly Alternatives

A number of comments received during the Draft EIS/EIR circulation questioned how the project alternatives had been defined and if an express bus service could offer similar transit benefits as the BRT for reduced cost. Many commenters also questioned how the project limits were determined.

As explained in Sections 1.1 and 1.2.1, the City has identified the Van Ness Avenue corridor in long-range planning documents as a top priority route for rapid transit treatments dating back to the mid-1990s. The existing land use and transportation characteristics of the Van Ness Avenue corridor are highly conducive to transit use and particularly well suited to BRT. Van Ness Avenue functions as the key north/south transit "spine" of the Muni network, with 32 intersecting Muni routes between Mission and Lombard streets. The avenue supports key regional destinations such as the Civic Center and Fort Mason, and the Van Ness Avenue corridor is one of the region's major employment and commercial centers. It supports one of the highest population densities of any transit corridor in San Francisco, and the percentage of households in the Van Ness Avenue corridor that do not own cars is 17 percent higher than the citywide average (SFCTA, 2009). The 2003 Proposition K Expenditure Plan and the 2004 Countywide Transportation Plan (CWTP) identify BRT on Van Ness Avenue as part of a strategic investment in a citywide network of rapid transit.

The reason that express bus service, despite its lower cost to construct, was not pursued instead of BRT is because the magnitude of expected benefits is low when compared with BRT. Rapid bus, or TPS, treatments would provide approximately half of the reduction in travel times as BRT (Van Ness Avenue BRT Feasibility Study). Without a dedicated bus lane, buses would continue to operate in mixed traffic and experience associated reliability impacts. Moreover, a peak-period-only bus lane would only provide transit travel time and reliability benefits intermittently. Van Ness Avenue transit experiences delays and reliability problems throughout the day and on weekends, and transit ridership in the corridor is strong throughout the day and not just during the peak commute periods (Van Ness BRT Feasibility Study; 2007 APC Data).

The project limits were defined based on the findings of the planning studies and supporting analysis described in Section 1.2.1, Countywide Planning Context. The northern terminus of the project limits is defined as Lombard Street because traffic patterns show a significant decrease in vehicular traffic north of Lombard Street, with significantly less transit delay than south of Lombard Street. The southern terminus of the project limits is defined as Mission/South Van Ness Avenue largely because the width of Mission Street does not allow for the same types of BRT treatments as on Van Ness Avenue. Additionally, this intersection marks the start of the corridor where the 47 and 49 routes travel along the same ROW; thus, Mission/South Van Ness Avenue was determined to be a logical southern limit of the project.

The Van Ness Avenue BRT Feasibility Study, completed by the Authority in 2006, identified the need for BRT on Van Ness Avenue and developed conceptual BRT design alternatives. The feasibility study found that several BRT configurations are possible on Van Ness Avenue and are likely to provide significant benefits.

Chapter 2 describes the scoping and screening process for the EIS/EIR. As part of the screening process, a wide range of alternatives was considered for further evaluation, including potentially lower-cost transit improvements such as Transit Preferential Streets (TPS) treatments without a dedicated lane and express buses. Alternatives were screened out of further environmental analysis if they contained a “fatal flaw” or an overall low performance in meeting the project purpose and need. Section 2.6 of the EIS/EIR includes additional information on alternatives considered and withdrawn (and the rationale for withdrawing them from consideration).

Following environmental scoping and screening, four alternatives were defined and carried forward for evaluation in the Draft EIS/EIR, including one no build alternative and three build alternatives. The LPA is a refinement of the two center-running configurations, Build Alternatives 3 and 4, and its selection process is described in Section 10.3.

Additional explanation of the definition of alternatives and cost effectiveness of BRT compared with express bus service is provided in Appendix I, Section 2.1, Master Responses #2 and #4.