

Project Conformity Detailed Report

System Determined POAQC: Non-Exempt

Project Information

Project Name: **Bayview Transportation Improvements**
Sponsor: **San Francisco Dept of Public Works** TIP ID: **SF-010038** RTP ID: **21549**
Agency: **San Francisco Dept of Public Works** Mode: **LOCAL ROAD** Sub Mode: **BIKE**
Project Type: **OTHER** Trans. System: **LOCAL RD** Purpose: **EXPANSION** County: **San Francisco**
Proj. Desc.: **San Francisco: Hunters Point Shipyard - Highway 101; Construct direct access to Hunters Point Shipyard from Highway 101. construct direct access route from the north and south**
RTP Title: **Implement direct access route from Hunters Point Shipyard to U.S. 101, including repaving existing roadway and adding new curbs and curb ramps, sidewalks, street lighting, trees and route signage**

Step 1: Project Identification

- | | |
|---|------------|
| 1: Does this project have any federal funding? | Yes |
| 2: Does this project (or any phases of the project) require any federal action (such as federal authorization or approval for funding or environmental review) after December 14, 2010? | Yes |
| 3: Is the project exempt from both regional and project-level air quality conformity under 40 CFR 93.126?
Project Type Selected: None Applies | No |
| 4: Is the project exempt from regional air quality conformity under 40 CFR 93.127?
Project Type Selected: None Applies | No |
| 5: Is the project exempt from regional air quality conformity under 40 CFR 93.128?
Project Type Selected: None Applies | No |
| 6: Does this project meet the definition of a "project of air quality concern" under 40 CFR 93.123(b)(1)?
Project Type Selected: New or expanded highway projects that have a significant number of or significant increase in diesel vehicles; | Yes |

Dates for Interagency Consultation

Requested Date of Interagency Consultation: **APR-JUN, 2011**
Meeting Date of PM2.5 consultation via Air Quality Conformity Task Force to determine POAQC:
Action Date of PM2.5 consultation via Air Quality Conformity Task Force to determine POAQC:

Dates for PM2.5 Hot-Spot Analysis

Meeting Date of PM2.5 consultation via Air Quality Conformity Task Force to determine review hot-spot analysis:
Action Date of PM2.5 consultation via Air Quality Conformity Task Force to determine review hot-spot analysis:

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RTIP ID# *(required)* SF MTC Transportation 2035 Change in Motion RTP #21549

TIP ID# *(required)* SF MTC TIP 2011 #SF-010038/SF-110006

Air Quality Conformity Task Force Consideration Date
June 23, 2011

Project Description *(clearly describe project)*

Bayview Transportation Improvements – Summary of project description

The Department of Transportation (Department) as assigned by the Federal Highway Administration (FHWA) in cooperation with the City and County of San Francisco (CCSF) proposes to improve the existing roadway network within the Southeast Waterfront community of San Francisco. The Bayview Transportation Improvements (BTI) project includes reconstructing, repaving and limited widening of existing city streets and constructing new street segments to create a multi-modal transportation network. The network will promote expanded bus service, provide new bus rapid transit (BRT) service to proposed transit centers, create pedestrian and bicycle linkages throughout the community and improve vehicular connections to and within the community. These transportation improvements will serve the existing Bayview and Hunters Point neighborhoods and the future community envisioned in the CCSF's Candlestick Point/Hunters Point Phase 2 (CPHPS) Development Project. The BTI project will provide enhanced transit, vehicular and non-motorized transportation infrastructure within the BTI project area and retain connections to the regional highway network (Highway 101 and 1-280) integrating the community into the citywide San Francisco Metropolitan Transportation Agency (SFMTA) transit network, with a goal to reallocate future motor vehicle trips to transit, pedestrian and non-motorized transportation.

The BTI project will develop more direct access routes to and from U.S. Highway 101, Interstate 280, and the City of San Francisco to the future neighborhoods located at Hunters Point Shipyard, Candlestick Point, and the existing South Basin industrial area. Roadways will be rehabilitated or reconstructed as necessary and include improvements for pedestrians, bicyclists, and public transit. Additionally, the proposed project will enhance connectivity to existing local and regional transit hubs and freeways, retaining existing levels of service at key intersections.

While the BTI project would improve streets and transit routes serving the planned developments, the BTI project does not create new roadway capacity. The project is intended to implement specific transit elements of the Candlestick Point and Hunter's Point Shipyard Phase II Transportation Plan which was completed as part of the CPHPS redevelopment plan. These plans have undergone CEQA environmental review process and were approved June 3, 2010. However, because portions of the BTI plan are likely to use federal funding and require federal approval, certain elements, specifically the proposed new transit center, may require a PM_{2.5} hot-spot analysis under the Federal Transportation Conformity Rule if the project is deemed a project of local air quality concern.

Figure 1 depicts the planned improvements. Below is a summary of the detailed project description.

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DESCRIPTION OF TRANSIT IMPROVEMENTS

In addition to the aforementioned roadway improvements, the BTI project will improve access to and the circulation of public transit by providing the infrastructure for a new BRT line connecting the regional transit hubs (Bayshore Caltrain Station, Balboa Park BART) to the Candlestick Point and Hunters Point Shipyard redevelopment areas, infrastructure for express bus lines connecting both the future Hunters Point Shipyard Transit Center and the Candlestick Point redevelopment area with Downtown San Francisco, and transit preferential street (TPS) improvements along the Palou Avenue transit corridor. In addition to typical roadway improvements like pavement rehabilitation and resurfacing, enhanced landscaping, and improved lighting; specific transit improvements including bus bulb-out extensions and transit-only lanes improve the speed and reliability of transit services and compliment the limited existing public transit services to meet future needs.

The new BRT route will serve residents and businesses in the Candlestick Point and Hunters Point Shipyard areas. The BRT route will travel on existing roadway between the Bayshore Caltrain Station to Alana Way and Harney Way, traveling in mixed flow travel lanes. It then travels in exclusive lanes on Harney Way to Egbert Ave. and to the intersection of Arelious Walker Drive and Carroll Ave. (Prior to the extension of Harney Way being constructed at Candlestick Point, the BRT route will travel as an express bus along the interim Hunters Expressway to Arelious Walker Drive to Carroll Avenue.) The route continues in mixed flow along the improved sections of Carroll Ave to Ingalls St. and Thomas Ave. to Griffith St., much like an express bus route, and returns to exclusive lanes at Arelious Walker Drive at Crisp Road continuing to the Hunters Point Shipyard Transit Center.

The Palou Avenue TPS corridor will be improved with enhanced traffic controls, transit facility enhancements such as bulb-outs, shelters and NextBus real-time arrival predictions. Roadway and streetscape improvements will be made from Third Street to the Hunters Point Shipyard Transit Center and will include transit-only lanes, enhanced landscaping and ADA curb ramps.

Lastly, these improvements will include the construction of a new transit center at Hunters Point Shipyard, serving as the terminus of the BRT and express bus routes and a central hub of the community. The combination of roadway and transit improvements will improve the speed and reliability of public transit, and when paired with the infrastructure for new express bus and BRT service, it will help to unify existing neighborhoods with the future Candlestick Point and Hunters Point Shipyard communities, and the rest of the city.

HUNTERS POINT SHIPYARD TRANSIT CENTER

The Hunters Point Shipyard Transit Center, located along two blocks in the northeast corner of the Hunters Point Shipyard, will feature ten bus bays, shelters, ticketing kiosks, real-time transit information technology and operator restrooms. Most of the bus lines (6 lines) serving Hunters Point Shipyard will stop at the transit center allowing quick and immediate transfers to other lines.

The intention of the Transit Center is to consolidate the terminus of all transit lines in one location to allow for convenient transfers and bus layovers. It is located at the nexus of residential, retail, and research and development land uses.

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TRAFFIC SIGNAL IMPROVEMENTS

As part of the project, traffic signals will be installed at the following intersections along the project route:

- Harney Way / Alana Way
- Harney Way / Thomas Mellon Drive
- Harney Way / Executive Park Drive
- Harney Way / Executive Park Drive East
- Harney Way / Arelious Walker Drive Extension
- Harney Way / 8th Street*
- West Harney Way / Ingerson Avenue
- West Harney Way / Gilman Avenue
- West Harney Way / Egbert Avenue
- Egbert Avenue / Earl Street
- Arelious Walker / Jamestown Avenue
- Arelious Walker / Bill Walsh Drive
- Arelious Walker / Ingerson Avenue
- Arelious Walker / Gilman Avenue
- Arelious Walker / Egbert Avenue
- Arelious Walker / Carroll Avenue
- Ingalls Avenue / Carroll Avenue
- Ingalls Avenue / Thomas Avenue
- Palou Avenue / Lane Street
- Palou Avenue / Keith Street
- Palou Avenue / Jennings Street
- Palou Avenue / Ingalls Street
- Palou Avenue / Hawes Street
- Palou Avenue / Griffith Street
- Crisp Road / Arelious Walker Drive
- Crisp Road / Outer Ring Road (West)
- Crisp Road / Inner Ring Road (West)
- Crisp Road / Inner Ring Road (East)
- Crisp Road / Outer Ring Road (East)
- Fischer Street / Spear Avenue
- Fischer Street / Robinson Street
- Donahue Street / Robinson Street
- Innes Avenue / Donahue Street
- Innes Avenue / Arelious Walker Drive
- Evans Avenue / Jennings Street
- Pennsylvania Street / 25th Street

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Type of Project: (Project involves multiple project types)				
<ul style="list-style-type: none"> • Change to existing regionally significant streets • Intersection channelization • Intersection signalizations • New Bus terminal/transfer point 				
County SF	Narrative Location/Route & Postmiles Please see above project description for narrative location and transit routes concerning the BTI project elements.			
Caltrans Projects – EA# The Environmental Assessment is currently under preparation. PM = 4-SF-0-CR and Federal Aid number HP21L-5934(115).				
Lead Agency: NEPA – Caltrans CEQA – San Francisco Department of Public Works				
Contact Person Howell Chan (Caltrans)	Phone# 510.286.6523	Fax# 510.286.5600	Email howell_chan@dot.ca.gov	
Frank Filice (San Francisco DPW)	415.558.4011	415.888.4519	Frank_filice@sf.dpw.org	
Federal Action for which Project-Level PM Conformity is Needed (check appropriate box)				
Categorical Exclusion (NEPA)	<input checked="" type="checkbox"/> EA or Draft EIS	<input type="checkbox"/> FONSI or Final EIS	<input type="checkbox"/> PS&E or Construction	<input type="checkbox"/> Other
Scheduled Date of Federal Action: Estimated February 2012				
NEPA Delegation – Project Type (check appropriate box)				
<input type="checkbox"/> Exempt	<input type="checkbox"/> Section 6004 – Categorical Exemption		<input checked="" type="checkbox"/> Section 6005 – Non-Categorical Exemption	
Current Programming Dates (as appropriate)				
	PE/Environmental	ENG	ROW	CON
Start	June 2004	January 2003	June 2012	June 2012
End	June 2012	December 2012	December 2020	December 2026
Project Purpose and Need (Summary): (please be brief)				
The purpose of the Bayview Transportation Improvement (BTI) project is:				
<ul style="list-style-type: none"> • To be consistent with planned local development envisioned in the Candlestick Point / Hunters Point Shipyard (CPHPS) Phase II Redevelopment Plan • To improve traffic circulation within the Southeast community • To develop a more direct access route from U.S. Highway 101 (US 101) to the Candlestick Point and Hunters Point Shipyard areas 				

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Project Purpose and Need (Continued):

The BTI project would provide key components of the comprehensive transportation system envisioned in the CPHPS. The redevelopment plan laid out in the CPHPS plan combines two major redevelopment areas in the southeast portion of San Francisco community and proposes a multi-modal transportation system to serve proposed redevelopment and new development in the two areas. The BTI project improvements which are consistent with CPHPS would also improve access to the regional freeway system from within the redevelopment area. Improvements would enhance connectivity to existing local and regional transit operations, retain existing levels of service at key intersections in preparation for the planned build-out of CPHPS developments, and support goals for creating sustainable communities by designing thoroughfares that encourage biking and walking, and benefit public transit.

The BTI project is needed to ensure that traffic demand generated by the planned and approved development of CPHPS will not overwhelm the existing constrained transportation network in the project area. Future increases in transportation demand on the existing roadway network will create localized congestion, disproportionately impact existing residents and businesses, and will fail to adequately serve planned developments.

The BTI project is also consistent with the City's "Transit First" policy to capture potential future vehicle trips and convert these into multi-modal transit trips. Currently, approximately 16% of modal trips are transit. The ultimate goal of the proposed transit improvements project is to reallocate future motor vehicle trips to transit, pedestrian and non-motorized transportation by doubling the modal split to 30% of all trips via local and regional transit.

Surrounding Land Use/Traffic Generators (especially effect on diesel traffic)

Land Use

The proposed BTI project would not change land uses in the project vicinity that have not already been planned, reviewed through the CEQA process, and adopted as part of the CPHPS Project, including the Shipyard Transit Center. The proposed BTI improvements would be located within the existing Bayview and Hunter's Point neighborhoods. Currently, land use in the Bayview community is residential, neighborhood retail, and office. The Hunters Point neighborhood is a mostly vacant former naval shipyard that at one time included industrial activities. With the planned and approved CPHPS Project, the Shipyard and Candlestick Point would be substantially redeveloped in phases over more than 20 years. The planned CPHPS land use program presented in **Figure 2** depicts the planned and adopted land uses for the Hunters Point Shipyard and Bayview Hunters Point Redevelopment Plans. The proposed transit center is located within the planned Shipyard Research and Development area as well as a portion of the mixed use Retail/Residential area adjacent to the Hunters Point Shipyard Village Cultural center. The nearest likely residences would be located northeast of the transit center along the proposed route traveled by transit vehicles approaching the transit center.

Traffic Generators

As part of the proposed BTI, additional urban transit vehicles would be added to the future baseline traffic condition by adding a Bus Rapid Transit (BRT) route between the Candlestick and Hunters Point neighborhoods connecting to regional transit.

The additional vehicles resulting from the proposed BTI improvements would not affect delay (idle time) of future baseline diesel traffic at intersections in the project vicinity nor would it significantly increase the volume of heavy-duty diesel vehicles on local roads as presented in the next sections (please see next section for discussion of project impacts to roadway volumes, congestion/delay).

Figure 2. Candlestick Point/Hunters Point Phase II Redevelopment Plan Proposed Land Use Plan



SOURCE Lennar, BHP, LLC, 2009.

CP-HPS PHASE II DEVELOPMENT PLAN TRANSPORTATION STUDY

FIGURE 3: CANDLESTICK POINT - HUNTERS POINT SHIPYARD PHASE II PROPOSED LAND USE PLAN

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Brief summary of assumptions and methodology used for conducting analysis (please keep this concise – specifics may include date of when traffic counts were conducted, studies where truck percentages were derived)

The methodology used to conduct the analysis consisted of two components, an on-road analysis and an analysis of the transit center. On-road analysis consisted of an evaluation of the project's effect to roadway volumes and congestion in the project area using traffic data provided in the project traffic study prepared by the project traffic engineers, Fehr & Peers Associates. **Figure 1** indicates the project area and improvements associated with the project. This traffic data consisted of roadway intersection peak hour volumes, peak hour truck volumes, AADT, truck AADT, LOS, and delay. The transit center analysis consisted of an evaluation of increased transit vehicles at the new transit facility, as well as increased transit operations on the roadway network. Data was based on traffic data provided by the project traffic study prepared by the project traffic engineers, Fehr & Peers Associates. In addition, the analysis also evaluated the types of transit vehicles (fuel type) that would operate at the transit facility and on the roadway network, as well as service frequency and number of daily and hourly arrivals.

Opening Year: If facility is a highway or street, Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility

As previously discussed, the proposed BTI improvements are not expected to affect traffic volumes or delays at intersections in the study area. **Table 1**, attached to this document, summarizes the traffic study data completed by Fehr & Peers comparing future opening year (2016) traffic conditions with and without the proposed improvements. It should be noted that the proposed project will be implemented in phases, based on demand and redevelopment of the neighborhoods. In 2016, the only BTI improvements would be infrastructure changes to enhance transit connectivity between the redeveloped neighborhoods and other transit connections.

In 2016, total traffic volumes and average vehicle delays would generally remain the same at most study intersections, compared to the no build condition. Of the 37 intersections evaluated, two would experience improvements (decreases) in volume, four would experience improvements (decreases) in delay, and one would experience a two second decline (increase) in delay. Intersections experiencing an improvement (decrease) in volume or delay are indicated in underline in **Table 1**, while intersections experiencing a decline (increase) in volume or delay are indicated in **bold** in **Table 1**.

Five intersections (indicated in **red** text in **Table 1**) would perform at LOS D or worse with or without the proposed improvements (Harney Way/Thomas Mellon Dr, Third St/Palou Ave, Evans/Napoleon/Toland, Third St/Evans Ave, and Cesar Chavez/Pennsylvania/I-280). Of these five intersections, two would experience improvements (decreases) in delay at the Harney Way/Thomas Mellon Dr and Cesar Chavez/Pennsylvania/I-280 intersections, while the remaining three intersections would experience no change in delay. The Harney Way/Thomas Mellon Dr intersection would also experience an improvement (decrease) in intersection volume, while the remaining four intersections would experience no change in volume.

Of interest for this assessment, diesel truck activity would not be affected by the BTI project at study intersections, as the project would not increase or change the diesel truck volumes due to the project (i.e., there is no change in volumes between the no project and with project conditions), as reflected in the data for the PM-peak period (**see Table 1**). Overall, truck percentages are anticipated to account for about 3.5% of total AADT (based on data provided by the project traffic engineers, Fehr & Peers), with total truck AADT volumes between the range of 69 and 2,569 under both no project and with project conditions (**see Table 1**). Based on this data, the proposed project is not likely to affect a significant number of heavy-duty trucks. The project traffic study assumed that PM peak hour volumes are approximately 10% of the daily traffic volumes (AADT).

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RTP Horizon Year / Design Year: If facility is a highway or street, Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility

By 2035, the new development associated with the CPHPS Project would be completed. Likewise, the BTI improvements are also likely to be fully implemented. In 2035, most intersections would be congested (LOS F) due to projected future cumulative growth in the project study area.

In 2035, total traffic volumes and average vehicle delays would generally improve at most study intersections, compared to the no build condition. Of the 37 intersections evaluated, 29 would experience improvements (decreases) in volume, 25 would experience improvements (decreases) in delay, and three would experience declines (increases) in delay. Intersections experiencing an improvement (decrease) in volume or delay are indicated in underline in **Table 2**, while intersections experiencing a decline (increase) in volume or delay are indicated in **bold** in **Table 2**.

Compared to opening year (2016) conditions, more intersections would operate at LOS D or worse with or without the proposed improvements. Although more intersections would operate at LOS D or worse under Horizon Year (2035) conditions when compared to Opening Year conditions, the traffic study results completed by Fehr & Peers show that the BTI project would actually improve intersection performance at most locations within the study area compared to the no build condition. Without the BTI project, 31 of 37 intersections would operate at LOS D or worse (indicated in **red** text in **Table 2**). With the BTI transit improvements, intersection performance during the PM peak hour improves at six intersections, resulting in 25 intersections remaining at LOS D or worse (indicated in **red** text in **Table 2**). Of the 31 intersections operating at LOS D or worse, 26 would experience improvements (decreases) in volume, 25 would experience improvements (decreases) in delay, and three would experience declines (increases) in delay. Intersection LOS, delay, and volume data is included in **Table 2** to show the potential impact of the BTI project on vicinity intersections.

At two intersections, Evans/Napoleon/Toland, Crisp/Palou, and Third St/Evans Ave, average delays increase by 59, 57, and 34 seconds respectively and operate at LOS F under with-project condition (Evans/Napoleon/Toland and Third St/Evans Ave both also operate at LOS under no-project conditions, while Crisp/Palou operates at LOS D under no-project conditions). Although average delays increase at these three intersections, peak hour volumes remain the same or decrease slightly. At these intersections, total volumes are less than 40% of the peak hour traffic at the most congested intersection – Alana Way/Beatty Ave) with 3,230 and 2,090 vehicles respectively. Although increases are expected, these changes in delay affect a relatively small volume of traffic compared to other more congested intersections in the study area and could be considered minor.

Similar to the 2016 traffic conditions, diesel truck activity would not be affected by the BTI project at study intersections and no increases in diesel truck volumes are anticipated. Truck traffic with the proposed BTI project also decreases compared to the 2035 No Project condition at 29 of 37 intersections. At the remaining 8 intersections truck traffic volumes are expected to remain the same. Overall, truck percentages are anticipated to account for about 3.5% of total AADT (based on data provided by the project traffic engineers, Fehr & Peers), with total truck AADT volumes between the range of 217 and 3,043 under both no project and with project conditions (**see Table 2**). Based on this data, the proposed project is not likely to affect a significant number of heavy-duty trucks.

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Opening Year: If facility is a bus, rail or intermodal facility/terminal/transfer point, # of bus arrivals for Build and No Build, % and # of bus arrivals will be diesel buses

Existing peak hour arrivals for the transit service routes in the project vicinity are presented in **Table 3**. In 2016, the transit frequency activity would be the same because the BTI project would include only non-vehicle related improvements. Most transit service improvements would not begin until 2017 with Hunters Point Transit Center coming online mid or late 2018, and a new BRT route would be added in 2020. By 2035, the BTI project would be completed.

Table 3. Existing and Future Muni transit routes Comprising the BTI Project at Full Build

Route	Frequency of Service (mins) under Existing Conditions			Change in Frequency at full build	Approx. 2035 Transit Arrivals at the HPS Transit Center ^a Daily (PM Peak)
	AM Peak (7-9AM)	Midday Peak (9AM – 4PM)	PM Peak (4-6PM)		
#24 – Divisadero (Trolley – Electric)	8.5	10	10	6 mins (AM / PM peak periods)	158 (10)
#44 – O’Shaughnessy	6	15	7.5	6.5 mins	87 (10)
#48 – Quintara and shortline	12	20	12	10 mins	85 (6)
#29 – Sunset and shortline	10	15	10	5 mins (AM / PM peak periods)	NA
#28L-19th Ave (BRT) and shortline	10	--	10	5 mins (into HPS)	138 (30)
HPS Express	--	--	--	10 (AM / PM peak periods)	25 (6)
CP Express	--	--	--	12 (AM / PM peak periods)	NA

^a Daily Inbound Trips from data provided by Fehr & Peers to ENVIRON for the CPHPS GHG Technical Report.

Routes in **bold** represent new transit routes proposed by the BTI project.

Source: Fehr & Peers, CPHPS Transit Operating Plan, May 2010

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RTP Horizon Year / Design Year: If facility is a bus, rail or intermodal facility/terminal/transfer point, # of bus arrivals for Build and No Build, % and # of bus arrivals will be diesel buses

The proposed BTI improvements would increase urban transit vehicles in the project vicinity. As part of the BTI project, the number of transit buses traveling on local roads would change. Transit buses on local roads would increase slightly because the BTI project would add one BRT route (#28L) in 2020. Circulation changes would also occur because the new HP Transit Center would serve as a common transfer point for several transit routes serving the CPHPS and Bayview neighborhoods.:

Of interest to this submittal is the composition of the existing and future transit fleet serving the BTI project area. The SFMTA transit bus fleet utilizes a substantial number of near-zero emission buses. Currently, nearly half of its diesel coach fleet is comprised of diesel-electric hybrid vehicles that emit very low levels of PM compared to typical urban diesel buses of a decade ago. In addition to the hybrid fleet, the remaining diesel buses use B20 biodiesel fuel in addition to Type I particulate filter technology, which also reduces particulate emissions. SFMTA's current procurement plan calls for all remaining diesel coaches in the transit fleet (NABI and Neoplan) to be replaced with hybrid buses by FY 2017. The combination of technologies used with the service fleet, in addition to SFMTA's procurement plan to remove diesel coaches and nearly eliminate all emissions from urban buses, results in very low and insignificant emissions from the transit fleet serving the BTI project once full buildout is reached. The changes to the transit routes are summarized below in order to present the proposed transit activities within the BTI project vicinity and provide arrival activity associated with the proposed new transit center. **Table 3** presents the existing and future Muni transit routes at full build that comprise the BTI project.

The addition of the BRT line (#28) would increase the net volume of transit traffic (buses and stops along the BRT route) in the project vicinity, but would not result in significant diesel activity in any one location. Approximately 30 transit buses would travel along the BRT route and stop at existing or future transfer points during a peak hour.

The proposed Hunters Point Shipyard Transit Center would accommodate up to 10 buses at any one time serving 5 transit routes (and 2 short lines) where buses would layover for brief periods. It is assumed that layover idle time would be limited to two minutes after each trip, based on assumptions presented in the GHG technical analysis for the CPHPS Phase II project. Approximately 335 new transit arrivals (all routes from Table 3 except Route #24) and 158 electric trolley arrivals are expected daily, 52 during the peak hour. (See **Table 3**) The transit center is the only element of the BTI project where significant numbers of transit vehicles could be located at any one time.

Describe potential traffic redistribution effects of congestion relief (*impact on other facilities*)

Based on the traffic study prepared by Fehr & Peers (2011), the proposed transit improvements would reduce traffic volumes on local streets and at congested intersections by the design year 2035, assuming ridership demand for regional transit (see preceding table). Efforts to expand and increase transit service throughout the CPHPS neighborhoods would require some access routes and intersections be revised by adding signalization and transit-oriented improvements such as BRT-only lanes, but these improvements are expected to improve overall system performance in the project vicinity through decreased traffic volumes, LOS, and delay. (See Tables 1 and 2) Although operational performance at several intersections in 2035 would remain LOS F with and without the project, improvements in traffic volumes and delays are expected at most of these congested intersections with the proposed BTI project, as indicated in the RTP Horizon Year discussion above and Table 2.

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Comments/Explanation/Details *(please be brief)*

EPA Project of Air Quality Concern Guidance

Section 93.123(b)(1) of the conformity rule defines the projects that require a PM_{2.5} or PM₁₀ hot-spot analysis as:

- (i) New highway projects that have a significant number of diesel vehicles, and expanded highway projects that have a significant increase in the number of diesel vehicles;
- (ii) Projects affecting intersections that are at Level-of-Service D, E, or F with a significant number of diesel vehicles, or those that will change to Level-of-Service D, E, or F because of increased traffic volumes from a significant number of diesel vehicles related to the project;
- (iii) New bus and rail terminals and transfer points that have a significant number of diesel vehicles congregating at a single location;
- (iv) Expanded bus and rail terminals and transfer points that significantly increase the number of diesel vehicles congregating at a single location; and
- (v) Projects in or affecting locations, areas, or categories of sites which are identified in the PM_{2.5} or PM₁₀ applicable implementation plan or implementation plan submission, as appropriate, as sites of violation or possible violation.

Appendix B from the EPA's federal guidance document, Transportation Conformity Guidance for Quantitative Hot-spot Analyses in PM_{2.5} and PM₁₀ Nonattainment and Maintenance Areas, (EPA-420-B-10-040) issued on December 20, 2010, provides examples of what might be considered a project of local air quality concern in (POAQC). While there is no specific 'significance' threshold cited in these examples, the guidance provides examples of POAQCs, including:

- A project on a new highway or expressway that serves a significant volume of diesel truck traffic, such as facilities with greater than 125,000 annual average daily traffic (AADT) and 8% or more of such AADT is diesel truck traffic (which equates to 10,000 truck AADT);
- New exit ramps and other highway facility improvements to connect a highway or expressway to a major freight, bus, or intermodal terminal;
- Expansion of an existing highway or other facility that affects a congested intersection (operated at Level-of-Service D, E, or F) that has a significant increase in the number of diesel trucks;
- Similar highway projects that involve a significant increase in the number of diesel transit busses and/or diesel trucks;
- A major new bus or intermodal terminal that is considered to be a "regionally significant project" under 40 CFR 93.101; and
- An existing bus or intermodal terminal that has a large vehicle fleet where the number of diesel buses increases by 50% or more, as measured by bus arrivals

The proposed BTI project is not considered a POAQC based on the following reasons:

Consideration for hot-spots at intersections:

Based on the LOS analysis, impacts on diesel vehicles at congested intersections would be minimal because the project would generally improve roadway and intersection operations by reducing volumes and congestion/delay at two intersections and four intersections, respectively, in the opening year and at most intersections in the horizon year (See **Tables 1 and 2**). It is anticipated that the improvements in roadway and intersection operations would decrease the number of potential hot spots associated with vehicle activity. Also, roadway volumes and diesel truck volumes would be well below the EPA's POAQC guidance level of 125,000 ADT and 10,000 truck ADT, with a maximum of 89,950 total ADT and 3,043 truck ADT anticipated in the horizon year (See **Tables 1 and 2**) Therefore, this project would not require a hot spot analysis for particulate emissions near congested intersections.

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Comments/Explanation/Details *(please be brief)*

Particulate Emissions from Transit Vehicles

The City of San Francisco's transit fleet servicing the project vicinity is comprised of electric trolleys, diesel electric-hybrid motor coaches and other coaches using B20 biodiesel. Over the past decade, the particulate emissions from its diesel fleet have been reduced beyond the state-mandated reduction level of 85% for urban buses. In addition, the replacement schedule included in the Transit Fleet Plan <http://www.sfmta.com/cms/rfleet/TransitFleetManagementPlan.htm>) shows the City's dedication to further reductions in emissions. Based on the procurement plan, the remaining diesel coaches in the transit fleet (NABI and Neoplan) will all be replaced by FY 2017 with hybrid buses.

Using a combination of technologies, Tier 1 particulate filters and biodiesel fuels, and replacement of its older fleet using near-zero emissions vehicles (electric hybrids and prototype technologies) the transit fleet is on the pathway to the 2020 Zero Emissions and 2011 Climate Action Plan targets. While these targets may not be fully realized by 2020, the emissions associated with the transit fleet would be minimal after the 2017 replacement, which is one year after the project opening year, and before the addition of the transit center and new BRT route.

Because the emissions associated with existing buses have been reduced substantially over the past decade (up to at least 95% over conventional older buses) and that the proposed BTI improvements are limited to expansion of only one transit route, potential particulate emissions from the transit vehicles at any one location in 2016 would be insignificant.

By 2017, with the City's fleet replacement strategy, particulate emissions associated with the transit vehicles traveling along existing or future routes, at or near existing or future transfer points or bus stops, or congregating at the Hunters Point Shipyard Transit Center would be further reduced by utilizing additional hybrid-electric buses. These buses would likely be servicing the proposed Hunters Point Shipyard Transit Center expected to be completed in 2018. With the completion of the BTI elements by 2035, the future transit fleet is likely to be nearly all zero-emission vehicles. Although a large amount of transit buses would likely congregate at one location (up to 52 during the peak hour at the Hunters Point Shipyard Transit Center), particulate emissions resulting from future transit vehicles would be minimal, if not near zero emissions, due to SFMTA's procurement plan to remove diesel coaches. Because nearly all transit vehicles anticipated to operate at the Transit Center and along transit routes would be zero-emission vehicles, the BTI project would not be considered a POAQC for buses traveling along existing or future routes, at or near existing or future transfer points or bus stops, or congregating at the Hunters Point Shipyard Transit Center because it would not result in a significant number of diesel vehicles congregating at a single location or along the transit routes and would not result in elevated PM_{2.5} hot spots.

Table 1 - Traffic Analysis Data (2016) BTI Improvements

INTID Intersection	Traffic Control	2016 No Improvements			ADDT		2016 w/ Improvements			ADDT		Project v No Project				
		PM Peak Hour Total Volume	Avg. Veh. Delay (Sec)	LOS	Volume	# Truck (3.5%)	PM Peak Hour Total Volume	Avg. Veh. Delay (Sec)	LOS	Volume	# Truck (3.5%)	Change in Volume (peak hr)	Change in Truck Volume (peak hr) ¹	Change in Delay (sec)	Change in Volume (AADT)	Change in Truck Volume (AADT)
1 25th St/Pennsylvania Ave	4-Way Stop	1142	13	B	11,420	400	1142	13	B	11,420	400	0	0	0	0	0
2 Third St/25th St	Signal	1612	18	B	16,120	564	1612	18	B	16,120	564	0	0	0	0	0
3 25th St/Illinois St	4-Way Stop	197	8	A	1,970	69	197	8	A	1,970	69	0	0	0	0	0
4 Cesar Chavez St/Evans Ave	Signal	3080	22	C	30,800	1078	3080	22	C	30,800	1078	0	0	0	0	0
5 Cesar Chavez/Penns / I-280	Signal	2746	39	D	27,460	961	2746	36	D	27,460	961	0	0	-3	0	0
6 Third St/Cesar Chavez St	Signal	2244	33	C	22,440	785	2244	33	C	22,440	785	0	0	0	0	0
7 Cesar Chavez St/Illinois St	Signal	419	21	C	4,190	147	419	21	C	4,190	147	0	0	0	0	0
8 Evans/Napoleon/Toland	Signal	1534	46	D	15,340	537	1534	46	D	15,340	537	0	0	0	0	0
9 Third St/Cargo Way	Signal	1991	20	B	19,910	697	1991	20	B	19,910	697	0	0	0	0	0
10 Amador St/Cargo Way	Signal	764	17	B	7,640	267	764	17	B	7,640	267	0	0	0	0	0
11 Third St/Evans Ave	Signal	1982	47	D	19,820	694	1982	47	D	19,820	694	0	0	0	0	0
12 Third St/Jerrold Ave	Signal	1493	23	C	14,930	523	1493	23	C	14,930	523	0	0	0	0	0
13 Third St/Oakdale Ave	Signal	1571	18	B	15,710	550	1571	18	B	15,710	550	0	0	0	0	0
14 Third St/Palou Ave	Signal	1857	61	E	18,570	650	1857	61	E	18,570	650	0	0	0	0	0
15 Third St/Revere Ave	Signal	1819	31	C	18,190	637	1819	31	C	18,190	637	0	0	0	0	0
16 Third/Williams/Van Dyke	Signal	1639	22	C	16,390	574	1639	22	C	16,390	574	0	0	0	0	0
17 Third St/Carroll Ave	Signal	1312	15	B	13,120	459	1312	15	B	13,120	459	0	0	0	0	0
18 Third St/Paul Ave	Signal	1767	28	C	17,670	618	1767	28	C	17,670	618	0	0	0	0	0
19 Third St/Ingerson Ave	Signal	1284	5	A	12,840	449	1284	5	A	12,840	449	0	0	0	0	0
20 Third St/Jamestown Ave	Signal	1433	16	B	14,330	502	1433	16	B	14,330	502	0	0	0	0	0
21 Third/Le Conte/US 101 nb off	Signal	683	11	B	6,830	239	683	11	B	6,830	239	0	0	0	0	0
22 Evans Ave/Jennings St	4-Way Stop	1237	13	B	12,370	433	1237	14	B	12,370	433	0	0	0	0	0
23 Innes Ave/A Walker Drive	2-Way Stop	600	10	B	6,000	210	600	10	B	6,000	210	0	0	0	0	0
24 Innes Ave/Earl St	2-Way Stop	557	9	A	5,570	195	557	9	A	5,570	195	0	0	0	0	0
25 Innes Ave/Donahue St	Signal	574	18	B	5,740	201	554	17	B	5,540	194	-20	-1	-2	-200	-7
26 Crisp Road/Palou Ave	Signal	828	25	C	8,280	290	828	25	C	8,280	290	0	0	0	0	0
27 Ingalls St/Palou Ave	4-Way Stop	829	11	B	8,290	290	829	12	B	8,290	290	0	0	0	0	0
28 Keith St/Palou Ave	4-Way Stop	748	11	B	7,480	262	748	11	B	7,480	262	0	0	0	0	0
29 Ingalls St/Thomas Ave	2-Way Stop	537	4	B	5,370	188	537	4	B	5,370	188	0	0	0	0	0
30 Ingalls St/Carroll Ave	Signal	473	9	A	4,730	166	473	10	B	4,730	166	0	0	2	0	0
31 Ingalls St/Egbert Ave	4-Way Stop	260	8	A	2,600	91	260	8	A	2,600	91	0	0	0	0	0
32 A.Walker/Gilman Ave	2-Way Stop	385	10	B	3,850	135	385	9	A	3,850	135	0	0	-1	0	0
33 Harney Way/Jamestown Ave	4-Way Stop	196	9	A	1,960	69	196	9	A	1,960	69	0	0	0	0	0
34 Harney Way/Executive Park East	2-Way Stop	492	4	B	4,920	172	492	4	B	4,920	172	0	0	0	0	0
35 Alana Way/Harney Way/Mellon	Signal	614	10	B	6,140	215	614	10	B	6,140	215	0	0	0	0	0
36 Alana Way/Beatty Ave	4-Way Stop	949	11	B	9,490	332	949	11	B	9,490	332	0	0	0	0	0
37 Harney Way/Thomas Mellon Dr	Signal	7340	217	F	73,400	2569	7310	216	F	73,100	2559	-30	-1	-1	-300	-11

Notes: Red indicates intersection performance is LOS D, E, or F;

Bold indicates increases in volume or delay;

Underline indicates decreases in volume or delay

¹ Peak hour truck volume = 10% of the AADT Truck volume.

Table 2 Traffic Analysis Data (2035) BTI Improvements

ID	Intersection	Traffic Control	2035 No Improvements			AADT		2035 w/ Improvements			AADT		Project v No Project				
			PM Peak Hour Total Volume	Avg. Veh. Delay (Sec)	LOS	Volume	# Truck (3.5%)	PM Peak Hour Total Volume	Avg. Veh. Delay (Sec)	LOS	Volume	# Truck (3.5%)	Change in Volume (peak hr)	Change in Truck Volume (peak hr) ¹	Change in Delay (sec)	Change in Volume (AADT)	Change in Truck Volume (AADT)
1	25th St/Pennsylvania Ave	Signal	<u>2450</u>	<u>117</u>	F	<u>24,500</u>	<u>858</u>	<u>2450</u>	<u>40</u>	D	<u>24,500</u>	<u>858</u>	0	0	-77	0	0
2	Third St/25th St	Signal	<u>5510</u>	<u>437</u>	F	<u>55,100</u>	<u>1929</u>	<u>5490</u>	<u>434</u>	F	<u>54,900</u>	<u>1922</u>	-20	-1	-3	-200	-7
3	25th St/Illinois St	4-Way Stop	1190	14	B	11,900	417	1190	14	B	11,900	417	0	0	0	0	0
4	Cesar Chavez St/Evans Ave	Signal	<u>4940</u>	<u>161</u>	F	<u>49,400</u>	<u>1729</u>	<u>4940</u>	<u>161</u>	F	<u>49,400</u>	<u>1729</u>	0	0	0	0	0
5	Cesar Chavez/Penns/I-280	Signal	<u>4230</u>	<u>98</u>	F	<u>42,300</u>	<u>1481</u>	<u>4230</u>	<u>96</u>	F	<u>42,300</u>	<u>1481</u>	0	0	-2	0	0
6	Third St/Cesar Chavez St	Signal	<u>7000</u>	<u>319</u>	F	<u>70,000</u>	<u>2450</u>	<u>6980</u>	<u>317</u>	F	<u>69,800</u>	<u>2443</u>	-20	-1	-3	-200	-7
7	Cesar Chavez St/Illinois St	Signal	1950	23	C	19,500	683	1950	23	C	19,500	683	0	0	0	0	0
8	Evans/Napoleon/Toland	Signal	<u>3230</u>	<u>302</u>	F	<u>32,300</u>	<u>1131</u>	<u>3230</u>	<u>361</u>	F	<u>32,300</u>	<u>1131</u>	0	0	59	0	0
9	Third St/Cargo Way	Signal	<u>5480</u>	<u>302</u>	F	<u>54,800</u>	<u>1918</u>	<u>5460</u>	<u>301</u>	F	<u>54,600</u>	<u>1911</u>	-20	-1	-1	-200	-7
10	Amador St/Cargo Way	Signal	2450	59	E	24,500	858	2450	59	E	24,500	858	0	0	0	0	0
11	Third St/Evans Ave	Signal	<u>6460</u>	<u>212</u>	F	<u>64,600</u>	<u>2261</u>	<u>6440</u>	<u>260</u>	F	<u>64,400</u>	<u>2254</u>	-20	-1	47	-200	-7
12	Third St/Jerrold Ave	Signal	<u>4320</u>	<u>219</u>	F	<u>43,200</u>	<u>1512</u>	<u>4300</u>	<u>216</u>	F	<u>43,000</u>	<u>1505</u>	-20	-1	-3	-200	-7
13	Third St/Oakdale Ave	Signal	<u>4700</u>	<u>61</u>	F	<u>47,000</u>	<u>1645</u>	<u>4680</u>	<u>60</u>	F	<u>46,800</u>	<u>1638</u>	-20	-1	-1	-200	-7
14	Third St/Palou Ave	Signal	<u>5450</u>	<u>1141</u>	F	<u>54,500</u>	<u>1908</u>	<u>5430</u>	<u>721</u>	F	<u>54,300</u>	<u>1901</u>	-20	-1	-420	-200	-7
15	Third St/Revere Ave	Signal	<u>4675</u>	<u>97</u>	F	<u>46,750</u>	<u>1636</u>	<u>4650</u>	<u>95</u>	F	<u>46,500</u>	<u>1628</u>	-25	-1	-3	-250	-9
16	Third/Williams/Van Dyke	Signal	<u>4675</u>	<u>109</u>	F	<u>46,750</u>	<u>1636</u>	<u>4650</u>	<u>107</u>	F	<u>46,500</u>	<u>1628</u>	-25	-1	-2	-250	-9
17	Third St/Carroll Ave	Signal	<u>4495</u>	<u>77</u>	E	<u>44,950</u>	<u>1573</u>	<u>4470</u>	<u>75</u>	E	<u>44,700</u>	<u>1565</u>	-25	-1	-2	-250	-9
18	Third St/Paul Ave	Signal	<u>5835</u>	<u>838</u>	F	<u>58,350</u>	<u>2042</u>	<u>5800</u>	<u>792</u>	F	<u>58,000</u>	<u>2030</u>	-35	-1	-46	-350	-12
19	Third St/Ingerson Ave	Signal	<u>3585</u>	<u>44</u>	D	<u>35,850</u>	<u>1255</u>	<u>3580</u>	<u>43</u>	D	<u>35,800</u>	<u>1253</u>	-5	0	-1	-50	-2
20	Third St/Jamestown Ave	Signal	<u>4710</u>	<u>1671</u>	F	<u>47,100</u>	<u>1649</u>	<u>4700</u>	<u>1170</u>	F	<u>47,000</u>	<u>1645</u>	-10	0	-501	-100	-4
21	Third/Le Conte/US 101 nb off	Signal	1515	23	C	15,150	530	1510	23	C	15,100	529	-5	0	0	-50	-2
22	Evans Ave/Jennings St	All Stop	<u>3955</u>	<u>256</u>	F	<u>39,550</u>	<u>1384</u>	<u>3950</u>	<u>216</u>	F	<u>39,500</u>	<u>1383</u>	-5	0	-40	-50	-2
23	Innes Ave/A.Walker Drive	Signal	2140	< 10	A	21,400	749	2130	< 10	A	21,300	746	-10	0	0	-100	-4
24	Innes Ave/Earl St	TWSC	1790	20	C	17,900	627	1780	19	C	17,800	623	-10	0	0	-100	-4
25	Innes Ave/Donahue St	Signal	<u>1650</u>	<u>95</u>	F	<u>16,500</u>	<u>578</u>	<u>1640</u>	<u>27</u>	C	<u>16,400</u>	<u>574</u>	-10	0	-68	-100	-4
26	Crisp Road/Palou Ave	Signal	<u>2110</u>	<u>55</u>	D	<u>21,100</u>	<u>739</u>	<u>2090</u>	<u>89</u>	F	<u>20,900</u>	<u>732</u>	-20	-1	34	-200	-7
27	Ingalls St/Palou Ave	Signal	<u>1820</u>	<u>1512</u>	F	<u>18,200</u>	<u>637</u>	<u>1810</u>	<u>22</u>	C	<u>18,100</u>	<u>634</u>	-10	0	-1490	-100	-4
28	Keith St/Palou Ave	Signal	<u>1390</u>	<u>44</u>	E	<u>13,900</u>	<u>487</u>	<u>1380</u>	< 10	A	<u>13,800</u>	<u>483</u>	-10	0	0	-100	-4
29	Ingalls St/Thomas Ave	Signal	<u>1590</u>	<u>209</u>	F	<u>15,900</u>	<u>557</u>	<u>1580</u>	<u>33</u>	C	<u>15,800</u>	<u>553</u>	-10	0	-176	-100	-4
30	Ingalls St/Carroll Ave	Signal	<u>2240</u>	<u>169</u>	F	<u>22,400</u>	<u>784</u>	<u>2220</u>	<u>38</u>	D	<u>22,200</u>	<u>777</u>	-20	-1	-131	-200	-7
31	Ingalls St/Egbert Ave	4-Way Stop	620	< 10	A	6,200	217	620	< 10	A	6,200	217	0	0	0	0	0
32	A.Walker/Gilman Ave	Signal	<u>3285</u>	<u>64</u>	E	<u>32,850</u>	<u>1150</u>	<u>3230</u>	<u>35</u>	D	<u>32,300</u>	<u>1131</u>	-55	-2	-29	-550	-19
33	Harney Way/Jamestown Ave	Signal	<u>3060</u>	<u>62</u>	E	<u>30,600</u>	<u>1071</u>	<u>3030</u>	<u>41</u>	D	<u>30,300</u>	<u>1061</u>	-30	-1	-21	-300	-11
34	Harney Way/Executive Park East	Signal	<u>4120</u>	<u>122</u>	F	<u>41,200</u>	<u>1442</u>	<u>4090</u>	<u>26</u>	C	<u>40,900</u>	<u>1432</u>	-30	-1	-95	-300	-11
35	Alana Way/Harney Way/Mellon	Signal	<u>4870</u>	<u>113</u>	F	<u>48,700</u>	<u>1705</u>	<u>4840</u>	<u>26</u>	C	<u>48,400</u>	<u>1694</u>	-30	-1	-88	-300	-11
36	Alana Way/Beatty Ave	Signal	<u>8695</u>	<u>1032</u>	F	<u>86,950</u>	<u>3043</u>	<u>8680</u>	<u>1034</u>	F	<u>86,800</u>	<u>3038</u>	-15	-1	-3	-150	-5
37	Harney Way/Thomas Mellon Dr	Signal	<u>7340</u>	<u>217</u>	F	<u>73,400</u>	<u>2569</u>	<u>7310</u>	<u>216</u>	E	<u>73,100</u>	<u>2559</u>	-30	-1	-1	-300	-11

Notes: **Red** indicates intersection performance is LOS D, E, or F;

Bold indicates increases in volume or delay;

Underline indicates decreases in volume or delay

¹ Peak hour truck volume = 10% of the AADT Truck volume.