

4.5 TRANSPORTATION

This section of the Focused Tiered Draft EIR presents potential transportation impacts of the proposed Creative Arts and Holloway Mixed-Use Project (Project). Preparation of this Focused Tiered Draft EIR was preceded by the Tiered Initial Study, which determined that an EIR would be prepared to consider the potential for the Project to result in new significant impacts related to transportation or substantially more severe impacts compared to those identified in the Campus Master Plan (CMP) EIR. . Section 4.11 of the 2007 CMP EIR (SF State 2006 and 2007a) addresses the traffic, circulation, and parking effects of campus growth under the 2007 CMP (SF State 2007b).

This section presents the environmental setting, impacts of the Project on the environment, and proposed measures to mitigate any identified significant impacts. Information is incorporated by reference from the 2007 CMP EIR, from which this EIR is tiered, as described in Chapter 2. Additionally, a Transportation Memorandum was prepared for the Project by Fehr & Peers and Dudek to document Project trip generation and the potential for impacts beyond those evaluated in the CMP EIR. This report is incorporated into this section of the EIR as relevant and contained in its entirety in Appendix E.

Public and agency comments related to transportation were received during the public scoping period in response to the Notice of Preparation, and are summarized below:

- Consider impacts related to 19th Avenue and prioritize direct connection to Daly City BART.
- Concerns related to existing parking demand and future parking demand with the removal of the Central Parking Garage.
- Current lack of bicycle safety in the Project vicinity.
- Provide the number of Class I bicycle parking spaces in the report.
- Speeding vehicles in the Project vicinity causing dangerous conditions for pedestrians.
- Provide an assessment of loading conditions such as turning radii and locations.
- An encroachment permit for traffic controls may be required from Caltrans if changes to state right-of-way are made and a construction transportation management plan may be required.
- Discuss how transportation impacts are to be assessed and whether transportation conditions today reflect what was assumed for 2016 in the CMP EIR.
- The San Francisco County Transportation Authority (SFCTA) and City and County of San Francisco (City) Planning Department currently base its future transportation projections on a 2040 horizon.

- Evaluate all four screenlines for impacts related to transit.
- Any modification of the public right-of-way that deviates from the City's *Public Works Standard Plans and Specifications* may require a Major Encroachment Permit (MEP). Street vacation requests are subject to the Planning Department's review and approval. (See Chapter 3 for discussion on the City's review and approval process for the vacation of Tapia Drive).
- Include a review of possible pedestrian impacts in light of potential conflicts with driveways, walkways and unsafe conditions.
- Describe the Vision Zero policy framework and note the 19th Avenue is a Vision Zero Corridor. Prioritize improving safety for users of this corridor.
- Access ramps are missing at locations around the Project site.
- Consider how bicycle routes connect to the Project and address any impacts related to bicycles access or conflicts with vehicle access.
- Ensure the Project is consistent with the San Francisco Better Streets Plan.
- Include details relating to SF State's transportation demand management program and public realm improvements that would occur as part of the Project.

To the extent that issues identified in public comments involve potentially significant effects on the environment according to CEQA, and/or were raised by responsible and trustee agencies, they are identified and addressed in this EIR. For a complete list of public comments received during the public scoping period refer to Appendix B.

4.5.1 Environmental Setting

Study Area

The study area for the evaluation of vehicular traffic impacts in the CMP EIR includes the southwestern portion of the City and County of San Francisco (City) bounded by Sloat Boulevard to the north, Junipero Serra to the east, John Daly Boulevard to the south, and Lake Merced Boulevard to the west. Impacts on pedestrian and bicycle facilities were evaluated for a smaller area around the campus, as described below, that included only those facilities that experience high use by campus affiliates.

The proposed Project is on the existing 144-acre campus of San Francisco State University (SF State), located in the southwestern corner of the City (see Figure 3-1, Regional Map, in Chapter 3). There are "gateways" to the campus from 19th Avenue and Lake Merced Boulevard. Circulation within the campus is primarily bicycle and pedestrian oriented with some east-west roadways that provide access to parking, housing and athletics facilities. The 2007 CMP EIR (SF

State 2007a) provides detailed descriptions of the transportation conditions in and around the campus. The information provided below summarizes the setting information from the CMP EIR, where relevant, and provides additional detail related to Project-specific conditions and/or describes new and changed transportation related conditions since 2007.

The approximately 3.6-acre Project site is located in the south campus, with one parcel (Block 6) on the south side of Holloway Avenue between Cardenas and Varela Avenues, and one parcel (Block 1), referred to as the Tapia Triangle, bounded by Tapia Drive, Holloway Avenue, and Font Boulevard (see Figure 3-3, Project Setting, in Chapter 3). The analysis related to pedestrian and bicycle access and safety addresses the Project site and immediate vicinity.

Roadway Network

The SF State campus is served by two primary roadways: 19th Street (California State Route 1) and Lake Merced Boulevard. The Project site is located to the west of the California State Route 1 (CA SR-1)/19th Avenue at its intersection with Holloway Avenue. The student housing/mixed-use building site is located to the immediate west of this intersection and the Creative Arts building and concert hall site is located at the intersection of Holloway Avenue and Font Boulevard, approximately 0.3 mile from 19th Avenue. Key off-campus streets that are used by traffic associated with the campus are shown in Figure 4.5-1 and are briefly described below.

19th Avenue is a north-south arterial road with three travel lanes in each direction and on-street parking and sidewalks on both sides. Muni light rail lines travel through the center of 19th Avenue in both directions in a dedicated right-of-way. 19th Avenue provides the primary north-south connection between the west side of San Francisco and Interstate (I) 280. I-280 is located approximately 1 mile away and provides the primary regional connection to the Project site. 19th Avenue is a Vision Zero Corridor, which is characterized as a high injury network for pedestrians and vehicles.

Junipero Serra Boulevard is a six-lane arterial street extending north-south from I-280 and Highway 1 to Sloat Boulevard.

Sloat Boulevard is a six-lane arterial street extending east-west from Junipero Serra Boulevard to Great Highway.

Lake Merced Boulevard is a four-lane secondary arterial extending north-south from Skyline Boulevard to John Daly Boulevard.

Holloway Avenue is a two-way east/west road that provides primary local access to the Project site. Holloway Avenue has one travel lane in each direction, a narrow concrete median, on-street parking, and sidewalks, and Class 2 bicycle facilities (i.e., painted bike lanes).

Font Boulevard is a two-way northwest-southeast road with one wide travel lane in each direction, angled parking on both sides, and a wide planted median and standard concrete sidewalks on both sides.

Tapia Drive is a one-way neighborhood street with one travel lane and on-street parking on both sides of the street adjacent to the Creative Arts building and concert hall site. Tapia Drive is northbound north of Holloway Avenue and westbound east of Font Boulevard. From Holloway Avenue, Tapia Drive can only be accessed from the westbound direction.

Varela Avenue and Cardenas Avenue are neighborhood streets with one travel lane in each direction as well as on-street parking and sidewalks on both sides.

Serrano Drive is also a neighborhood street with one-way operations (westbound) between Varela Avenue and Cardenas Avenue. Between Cardenas Avenue and Arellano Avenue, Serrano Drive is two-way with one travel lane in each direction, angled parking on both sides and sidewalks on both sides.

The intersection of 19th Avenue and Holloway Avenue is signalized and includes marked white standard crossings with push-buttons and signals with countdowns for pedestrians. The intersection of Holloway Avenue, Tapia Drive (northbound) and Font Boulevard has a traffic circle with marked yellow continental pedestrian crossings. There is another traffic circle at the intersection of Font Boulevard and Tapia Drive (westbound), with marked yellow continental crossings across the northeast and southeast legs of the intersection, across Tapia Drive and Font Boulevard, respectively; all other crossings are unmarked. The CMP EIR reports on existing intersection level of service on intersections in the study area (see Table 4.11-3 in Section 4.11 of the 2007 CMP EIR).

Transit

Transit is a major component of the transportation system at SF State. Transit services near the Project site are shown in Figure 4.5-1. Primary public transit access to the Project site is provided by San Francisco Municipal Railway (“Muni”) bus and light rail services. According to the 2016 Transportation Survey (Nelson/Nygaard 2016) more than 30% of students, staff and faculty arrive to campus by Muni and 45% use Muni for some part of their commute.

Four Muni bus routes run in proximity to the Project site: 28/28R 19th Avenue, 29 Sunset, 57 Parkmerced, and 91 Owl. Bus stops nearest to the Project site are located at 19th

Avenue/Holloway Avenue (serving the 28/28R 19th Avenue, 29 Sunset and 91 Owl), Crespi Drive/Varela Avenue (serving the 29 Sunset), Font Boulevard/Tapia Drive (serving the 57 Parkmerced), and Font Boulevard/Arballo Drive (serving the 57 Parkmerced). The M Ocean View Muni light rail line also runs near the Project site, with a stop on the north side of the 19th Avenue/Holloway Avenue intersection, in the center of 19th Avenue's right-of-way. Additionally, the Daly City and Balboa BART stations are approximately 1.5 miles and 2.0 miles, respectively, away from the Project site and serve the four BART lines running through San Francisco: Richmond–SFO/Millbrae, Pittsburg/Baypoint–SFO/Millbrae, Dublin/Pleasanton–Daly City, and Fremont–Daly City.

Other regional transit services that serve a very small number of campus affiliates include SamTrans, Golden Gate Transit, Caltrain, and AC Transit. Section 4.11 of the 2007 CMP EIR describes each of these services in detail. More recent changes in services are presented below.

In March 2014, the San Francisco Municipal Transportation Agency (MTA) Board of Directors approved many recommendations designed to make Muni service more reliable, quicker, and more frequent. These recommendations emerged from the Muni Forward Program, which was a review of the City's public transit system. These recommendations include new routes and route extensions, service-related capital improvements, more service on busy routes, designation of rapid transit routes and travel time reduction proposals on those routes, and elimination or consolidation of certain routes or route segments with low ridership. The Muni Forward Implementation Strategy anticipates that many of the service improvements would be implemented between 2016 and 2017, pending resource availability. Muni Forward proposes the following changes for lines in the vicinity of the proposed Project:

- **28(R) 19th Avenue (Rapid)** – The 28 19th Avenue would increase frequency during AM and PM peak from 10 to 9 minutes and during midday from 12 to 9 minutes. The 28R 19th Avenue Rapid service would increase operations, operating seven days a week between 6AM and 8PM with 9-minute headways during the AM and PM peak periods. The route for these two services would be modified near Fort Mason, by eliminating a section on Laguna, Beach, Buchanan and Bay streets. In addition, new transit and pedestrian bulbs are planned for the intersection of 19th Avenue/Holloway Avenue, near the Project site.
- **29 Sunset** – The 29 Sunset would increase in frequency during the AM peak from 9 to 8 minutes. The route has been modified (2014) so that buses make a left from Lincoln Way to Crossover Drive (instead of a series of three right turns). In addition, part of the route – on Geneva Avenue and Mission Street south of Ocean Avenue – would be eliminated; buses would travel directly on Ocean Avenue.

- **57 Parkmerced** – The 57 Parkmerced has been renumbered – from 17 to 57 Parkmerced – and would increase in frequency, from 30 to 20 minutes. The route would also be modified. The modified route travels on 20th Avenue, Buckingham Way, Winston Drive and Font Boulevard but no longer travels on Winston Drive, 19th Avenue, Crespi Drive, Gonzalez Drive, Carendas Avenue and Cambon Drive. The portion of the route that traveled on Arballo Drive, Garces Drive and Gonzalez Drive would also be eliminated.

In addition, the MTA is studying options to improve the M Ocean View Muni light rail line (M-line) through the Muni Subway Expansion Project. In 2011, as part of Parkmerced’s Development Agreement, an alternative, which would extend the existing M-line into Parkmerced and add an M-line crossing at 19th Avenue at Holloway Avenue, was developed and approved. In 2014, as part of the Pre-Environmental Study, another alternative was developed, which proposed building a full subway under 19th Avenue between West Portal and Parkmerced and introduces a new transfer at SF State for the M- and J-lines.¹ The 19th Avenue Transit Study (SFCTA 2014), developed for the Muni Subway Expansion Project considers several alternatives for building a subway: Baseline, Longer Subway and Bridge, and Shorter Subway and Tunnel. The alternatives studied for the M-line included simplifying the crossing at 19th Avenue and Winston Avenue or 19th Avenue and Holloway Avenue, with a shorter distance across the street and fewer light-rail tracks to cross. In addition, the Longer Subway and Bridge alternative would add a new protected bike connection over Junipero Serra in the southern part of the corridor as a part of the light-rail bridge, a connection seen as particularly important for improving the bike connection between SF State and Daly City BART.

While the 19th Avenue Transit Study (SFCTA 2014) does include initial analysis of options for improving transit connections to the Daly City BART station, the study’s main focus was on assessing the feasibility and benefits of grade-separating the M-Ocean View crossings of 19th Avenue. All alternatives considered in the study for the M-line include a trail track, which would enable a future extension of the light-rail to Daly City BART. However, because of the time-sensitive need to advance the grade-separation project, as it relates to the Parkmerced Development Agreement timeline provisions, and because of the significant and independent benefit the grade separation project would provide, the next phase of project development will focus exclusively on advancing the grade-separation project. The next steps for the Daly City transit access upgrades, will be a future phase of work and are not included as part of the Muni Subway Expansion Project. The potential improvements to the M line have not undergone environmental review yet.

¹ More information on the Muni Subway Expansion Project is available from the MTA: <https://www.sfmta.com/projects-planning/projects/muni-subway-expansion-project> (Accessed August 29, 2016)

Bicycle and Pedestrian

According to the 2016 Transportation Survey (Nelson/Nygaard 2016) 17.5% of people arrive to campus walking and only 3.4% of people arrive to campus on bicycle. The CMP EIR (SF State 2007a) discusses campus wide facilities and deficiencies. Deficiencies near the Project site include a gap in bicycle facilities between 19th Avenue and Junipero Serra and a lack of bicycle parking near classrooms. Additionally, bike riding is not currently permitted in the campus core.

Pedestrian facilities within the vicinity of the Project include sidewalks, crosswalks, directional or diagonal curb ramps, pedestrian signals, and streetscape and landscape features (e.g., trees, planters, street lighting). The intersection of 19th Avenue and Holloway Avenue is signalized and includes marked white standard crossings with push-buttons and signals with countdowns for pedestrians. The pedestrian crossings across Holloway Avenue at Varela Avenue, Cardenas Avenue and Arellano Avenue are marked, standard crosswalks. However, the south leg of the crossing at Holloway Avenue/Cardenas Avenue, across Cardenas Avenue, is not marked. The marked crosswalks at the traffic circles on Font Boulevard—at Holloway Avenue/Tapia Drive and at Arballo Drive/Tapia Drive—are high-visibility crosswalks, with yellow continental pattern striping. However, only about half of the crossings at these two traffic circles are marked. Crossings are generally not marked on neighborhood streets such as Varela Avenue, Cardenas Avenue, Arellano Avenue and Serrano Drive.

There are Class 2 bicycle facilities (i.e., painted bicycle lanes) in both directions on Holloway Avenue adjacent to the Project site, between Font Boulevard and Junipero Serra Boulevard. Font Boulevard between Holloway Avenue and Lake Merced Boulevard is designated as a Class 3 bicycle facility that does not have painted “sharrows.”

There are a number of bicycle parking facilities on the SF State campus. Near the Project site, there is Class 2 bicycle parking (i.e., outdoor bicycle racks) adjacent to the existing Creative Arts Building on Tapia Drive (where the road curves) and near the intersection of Font Boulevard and the access road to the Village parking lot, which can accommodate 80 and 40 bicycles, respectively.

Existing pedestrian conditions were evaluated during field visits to the Project site during the evening peak period (4 p.m. to 6 p.m.) on Tuesday, May 24, 2016. Pedestrian activity was observed to be moderate along Holloway Avenue and Font Boulevard. Fewer pedestrians were observed on Tapia Drive and the residential streets south of Holloway Avenue. Pedestrian activity was observed to be higher at the 19th Avenue/Holloway Avenue intersection; pedestrians were observed accessing and egressing Muni bus stops on 19th Avenue as well as the M Ocean View light rail station. Few cyclists were observed traveling along Font Boulevard and Holloway Avenue during the evening peak period. On Holloway Avenue, cyclists were

observed using the bicycle lanes. One cyclist was observed using the sidewalk on 19th Avenue at Holloway Avenue.

Transportation Demand Management (TDM)

The SF State TDM plan (Nelson/Nygaard 2009) includes two key elements: a TDM implementation plan and a monitoring plan. The implementation aspect of the plan identifies a number of programs and policies to improve access to alternative transportation and reduce single occupancy vehicle trips.² The following elements of the TDM plan have been implemented:

- **Shuttle Service:** SF State provides a free shuttle service and has continually increased its frequency and vehicle capacity. In spring 2015, following a competitive RFP process, SF State contracted with transMetro for turnkey shuttle services, including larger-capacity, 2-door, low-floor shuttles. A mobile app is available for download that tracks the express shuttles.
- **Transit:** SF State sales Clipper Cards at the information desk of the Student Center as well as provides information services for transit connectivity and access such as real-time arrival updates for Muni on screens posted at a number of locations around campus including the Student Center, the Cesar Chavez Administration Building, the Library and Student Services.
- This past spring, SF State students passed a referendum implementing a mandatory student fee, which will give each student unlimited rides on Muni (excluding cable cars), and a 25% discount on BART fares on rides to and from the Daly City Station.
- Additionally, SF State has funded a number of transit improvements including maintenance of the 19th/Holloway Avenue M-line platform, improvements at the Daly City BART station, and contributions towards the M-line realignment.
- **Bicycle:** There are multiple bicycle facilities around campus including separated paths, bicycle lanes and designated bicycle routes. SF State also provides several amenities and services for bicyclists including attended, secure bike parking, community events and classes as well information resources.
- **Carpooling and Car Share:** A ridematch program has been implemented through 511.org and zipcars are available on campus.
- **Parking:** Fees have been increased and the Go! State marketing program has shifted the emphasis of transportation information away from parking and vehicle access towards other modes of transportation.

² For more information on the TDM measures provided by SF State, see <https://parking.sfsu.edu/>.

- **Employee Programs:** A pre-tax benefits program allows employees to use pretax dollars to pay for transit, vanpool or parking expenses. Additionally, SF State participates in the Emergency Ride Home (EHR) program, which provides a free ride home in cases of emergencies for employees that commute to work by public transportation, biking, walking, or ridesharing.
- **Marketing:** After adopting the TDM Plan, SF State rebranded Parking and Transportation Services messaging to include a slogan (Go! State) and consistent positive messaging for the use of non drive-alone modes of travel. The website was updated to include this new branding and messaging and many new resources, as described above, have been added around campus to make using non drive-alone modes of travel easier.

The TDM monitoring plan includes an online transportation survey and cordon count at least every three years. SF State began monitoring in April 2008, which is considered the baseline survey under the CMP Mitigation TRA-1, with subsequent surveys and counts taking place in April 2011, April 2014, and April 2016. Survey data are used to track a number of key factors such as mode split, peak hour vehicle trips, peak hour Muni ridership, and greenhouse gas emissions. Since 2008, the drive-alone rate for commute trips to SF State has decreased, with 26% of campus affiliates driving alone to campus in 2008 compared to 20% in 2016. Transit usage has increased since 2008, with 45% of campus affiliates using Muni and 27% using BART for a portion of their trip to campus.

4.5.2 Impacts and Mitigation Measures

2007 CMP EIR Standards of Significance

The following standards of significance are based on Appendix G of the CEQA Guidelines and standards used by the City to evaluate transportation related impacts at the time the 2007 CMP EIR was prepared. An impact related to transportation/traffic would be considered significant if the proposed Project would:

1. Cause an increase in the traffic that is substantial in relation to the existing traffic load and capacity of the street system (as indicated by level of service (LOS) standards for congestion at intersections), or exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways.
2. For purposes of this EIR, the following specific thresholds have been used to evaluate project vehicle impacts on the street system.
 - a. **Signalized Intersections.** The project's traffic impact at a signalized intersection would be considered significant if:

- i. Project-related traffic causes the level of service to deteriorate from LOS D or better to LOS E or F, or from LOS E to LOS F, or
 - ii. If a signalized intersection operates at LOS E or F under without project conditions, (1) project related traffic contributes 5% or more of the total traffic at the intersection, and (2) the project related traffic contributes 5% or more of the cumulative growth in traffic volumes at the affected intersection.
- b. **Unsignalized Intersections.** The project’s traffic impact at an unsignalized intersection would be considered significant if:
- i. Project-related traffic causes the level of service at the worst approach of an unsignalized intersection to deteriorate from LOS D or better to LOS E or LOS F and Caltrans signal warrants are met,
 - ii. Where the worst approach at the unsignalized intersection without the addition of project traffic is already at LOS E or F, project traffic causes Caltrans signal warrants to be met.
3. Cause a substantial increase in transit demand that could not be accommodated by adjacent transit capacity, resulting in unacceptable levels of transit service; or cause a substantial increase in operating delay or costs such that significant adverse impacts in transit service levels could result.
 4. For purposes of this EIR, the proposed Project would have a significant effect on the transit provider if project-related transit trips would cause the capacity utilization standards to be exceeded during the weekday PM peak hour.
 5. Result in substantial overcrowding on public sidewalks, create potentially hazardous conditions for pedestrians, or otherwise interfere with pedestrian accessibility to the site and adjoining areas.
 6. Substantially increase hazards due to a design feature or incompatible uses or create potentially hazardous conditions for bicyclists or otherwise substantially interfere with bicycle accessibility to the site and adjoining areas.
 7. Conflict with applicable adopted policies, plans, or programs supporting alternative transportation.

Standards of Significance Changes Since 2007 CMP EIR

Parking

The 2007 CMP EIR standards of significance also included a standard to address the adequacy of parking. However, since the 2007 CMP EIR was certified, parking has been removed from the

CEQA Guidelines and is no longer considered in Appendix G of the CEQA Guidelines. Therefore, parking is not considered in the standards of significance for the proposed Project and CMP Impact TRA-5 and an associated Project impact is not considered further in this section.

Additionally, the absence of available parking spaces, in conjunction with available alternatives to vehicular travel (e.g., transit, bicycling or walking) and a dense pattern of urban development, induces many drivers to seek out other modes of travel or change their overall travel habits. Any such resulting shifts to transit service in particular would be in keeping with the City's Transit First Policy (CCSF 2007). The City's Transit First Policy provides that parking policies for areas well served by public transit shall be designed to encourage travel by public transportation and alternative transportation.

The Project site is well served by numerous Muni and transit lines. There is also substantial existing parking available on campus and in on-street parking surrounding the campus. Overall, the proposed Project would not result in secondary physical effects on the environment due to the removal of parking on the Project site.

Vehicle Miles Traveled

In September 2013 Governor Brown signed Senate Bill 743 which made significant changes to how transportation impacts are to be assessed under CEQA. SB 743 directs the Governor's Office of Planning and Research to develop a new metric and approach that replaces level of service (LOS) analysis and suggests vehicle miles travelled as a metric. SB 743 also creates a new exemption for certain projects that are consistent with the regional Sustainable Communities Strategy and, in some circumstances, eliminates the need to evaluate aesthetic and parking impacts of a project.

The Governor's Office of Planning and Research has released Draft CEQA Guidelines; however, at the time this analysis was completed the Guidelines have not been finalized or adopted. It is anticipated that the revisions to the CEQA Guidelines will be finalized in early 2017. According to the most recent Draft CEQA Guidelines released by the Governor's Office of Planning and Research, lead agencies would have a grace period of two years to update and adopt new thresholds once the new Guidelines have been adopted. Although the City has updated its transportation standards of significance to reflect SB 743 requirements, the California State University (CSU) system has not. Because there are no adopted thresholds for CSUs and the CEQA Guidelines have not yet been finalized, vehicle miles travelled is not analyzed as a standard of significance in this EIR. Additionally, for the purposes of tiering, the standards of significance for this EIR are consistent with the 2007 CMP EIR (SF State 2007a), as provided above.

Analytical Method

To determine whether the Project would result in a substantial increase in traffic or transit demand in comparison to the 2007 CMP, a travel demand analysis was completed by Fehr & Peers and Dudek (Fehr & Peers and Dudek 2016). This evaluation is consistent with the California State University's *Transportation Impact Study Manual* (November 2012) (herein "CSU TIS Manual"), with input from the City's *Transportation Impact Analysis Guidelines* (October 2002) (herein "SF Guidelines").

The 2007 CMP EIR (SF State 2007a) estimated that the projected campus expansion by 2020 would result in an additional 466 vehicle trips and 387 public transit or shuttle trips during the PM peak hour by 2020. The 2007 CMP EIR evaluated transportation impacts based on this "CMP Trip Envelope" for vehicle and transit trips. The Project was evaluated to determine whether the trips would fit within this envelope, accounting for an updated 2016 baseline. Additional detail about the methodology use in the analysis is provided below.

The CSU TIS Manual states that a full TIS, including LOS analysis, would be required if an assessment of a project's trip generation indicated that potential new significant impacts to traffic conditions could result based on the CEQA Guidelines Appendix G Checklist. As presented below, the Project's trip generation would not exceed the CMP Trip Envelope, which indicates no potential new significant impacts to traffic conditions. Additionally, the number of vehicle trips generated by the campus in the PM peak hour has declined due to an effective TDM program and changing demographics and population. Therefore, even with event day conditions for the Project, the number of vehicle trips generated would not result in an increase in PM peak hour vehicle trips over the CMP EIR baseline (2007) conditions. Thus, a LOS analysis was not conducted for the Project.

Vehicle Travel Demand Analysis

This section presents the Project's travel demand and the changes in SF State's campus travel demand between 2007 and 2016.

Student Housing/Mixed-Use Building. The Project's new on-campus student housing/mixed use building would provide a net increase of 355 beds. These units are expected to be occupied by existing SF State students that are currently living off-campus. PM peak hour trip rates and mode splits for the new student housing were estimated for students living both on- and off-campus based on the results of the 2016 Travel Survey (Nelson/Nygaard 2016). This following analysis is inclusive of both internal and external trips. Table 4.5-1 presents the net change in trips by mode to/from and within campus during the PM peak hour that would result from the addition of the 355 on-campus beds. External vehicle and transit trips would decrease as students currently living off-campus move on-campus while internal walk and bike

trips would increase. Overall, the total number of person trips generated by on-campus students during the PM peak hour is slightly less than for off-campus students. In net, the Project's new on-campus student housing/mixed use building would reduce trips external to the campus by 18 vehicle trips and 39 public transit trips.

**Table 4.5-1
PM Peak-Hour Student Housing Trip Generation**

	Existing 355 Off-Campus Students		Project 355 On-Campus Students		Net Change ¹
	Trips	Percent	Trips	Percent	Trips
Total Person Trips²	96	100%	85	100%	-11
Person Trip Rate ³	0.27	-	0.24	-	-
Drive Alone, Motorcycle	17	17.9%	0	0.5%	-17
Carpool ⁴	1	1.4%	0	0.0%	-1
Taxi, Transportation Network Company (TNC), Pick up/Drop off ⁵	4	3.7%	3	3.8%	-1
Public Transit	54	55.9%	15	18.1%	-39
Walk/Bike	20	21.1%	60	70.0%	40
Other ⁶	0	0.0%	6	7.6%	6
Vehicle Trips⁴	21	-	3	-	-18
Public Transit Trips⁷	54	-	15	-	-39

Source: Fehr & Peers and Dudek 2016.

1. Net change in trip generation due to the Project, i.e. trips generated by 355 students living on-campus minus trips generated by 355 students living off-campus.
2. Person trips include all trips made by each person.
3. The 2016 Travel Survey asked about trip making behavior during the two hour PM peak period for a typical day on campus. Therefore, the PM peak hour trip rates shown here include the following assumptions: the PM peak hour generates 60% of the trips from the two-hour PM peak period (based on the peak hour factors in SF-CHAMP, the City of San Francisco's travel demand model), and 80% of students will be present on-campus on any one day (based on the responses to the SF State 2016 Travel Survey and survey data from other university campuses in San Francisco).
4. Vehicle trips include drive alone, motorcycle, carpool, and taxi/TNC/pick-up and drop-off. Vehicle occupancy for carpool trips is 2.2 people per vehicle, based on cordon counts performed on April 6, 2016. Because so few students are currently using carpool, this number was rounded down for a conservative assessment.
5. Transportation Network Companies, or TNCs, connect paying passengers with drivers who transport people in their own private vehicles. Examples include Lyft, Uber, and Cabify.
6. Mode for "Other" trips were not specified by 2016 Travel Survey respondents. These are assumed to be people using skateboards or other active modes typically used on university campuses. i.e. not vehicle or transit trips.
7. Public transit trips include the SF State campus shuttle.

The mixed-use component of the Project includes campus-serving retail, student support services, bike storage, study rooms, a copy center, and retail dining. These land uses supplement or replace existing on-campus services and primarily cater to SF State affiliates, although the retail options will also be open to nearby residents of the adjacent Parkmerced neighborhood, similar to existing on-campus retail services. As a result of these new on-campus services, SF State affiliates may choose to stay on campus for activities they would have otherwise done off campus. This effect may decrease the number of trips from campus. In

contrast, nearby residents may travel to these new on-campus services whereas they would not previously have traveled to campus. These effects have not been quantified as part of this analysis, although patrons of the businesses are expected to be within walking or biking distance. Thus, the campus-serving retail and student support services are assumed not to generate new vehicle or transit trips to campus.

Creative Art Replacement Building. The Project would also include the construction of the Creative Arts replacement building. This building would provide a new home for the existing BECA program. There are not currently plans to use the old Creative Arts building to add new programs, students, staff, or faculty to the existing services provided at SF State. As indicated in Chapter 3 of this EIR, SF State is at its enrollment ceiling of 25,000 FTE students. Therefore, this building would not increase the enrollment or full-time employees above current levels nor result in an increase in the number of trips to/from campus.

Concert Hall. The Project would also include an 800-seat concert hall that would provide hands-on learning for BECA students and would serve as a performance venue and state of the art recording studio. On a typical day, the concert hall would function as a teaching and learning environment for existing BECA students. The addition of the concert hall would not result in additional students or faculty and staff on non-event days. Therefore, when there are no events, the concert hall would not result in additional vehicle or transit trips.

Events at the concert hall would vary in size and purpose. Some events would cater only to students while others would have a regional draw. To calculate the trip generation for the concert hall on an event day, a large event scenario was assumed based on input from SF State. The large event scenario assumes full capacity, or 800 attendees, with 85% of attendees coming from off-campus and 15% of attendees coming from on-campus.³ Four additional employees would be needed to staff the concert hall on event days. Most weekday events would not begin until 7:30 p.m. or 8:00 p.m., in which case attendees would not be traveling to campus during the PM peak hour. However, for the purpose of presenting a “worst-case large event scenario” analysis, the event day trip generation assumes that all attendees and staff would travel during the PM peak hour.

Table 4.5-2 presents the resulting number of person trips by mode on event days related to the new concert hall. Assuming the worst-case large event scenario—the event is at full capacity and all attendees travel to the concert hall during the PM peak—the concert hall would result in 251 new vehicle trips and 109 new transit trips during the PM peak hour of an event day.

³ Provided by SF State staff. These percentages are based on attendance data from existing events at other comparable theaters on campus.

**Table 4.5-2
Event-Day PM Peak-Hour Trip Generation due to New Concert Hall Only**

		Person Trips	Mode Split	Vehicle and Transit Trips
Staff (Drive Alone Trips)		4	-	-
Event Attendees		800	-	-
Total Person Trips		804	-	-
Off-Campus Person Trips¹		684	85% of attendees and 100% of staff	-
Off-Campus Mode Split ²	Vehicle ³	523	76.3%	251
	Transit	109	16.1%	109
	Walk	37	5.4%	-
	Other	15	2.2%	-

Sources: Fehr & Peers and Dudek 2016

1. Based on information provided by SF State regarding existing on-campus events, 85% of event attendees are assumed to come from off-campus. It is assumed that on-campus attendees would walk, bicycle or use a form of transportation other than driving or transit.
2. Modes splits are based on Table E-17 from the City and County of San Francisco Transportation Impact Analysis Guidelines (October 2002) (herein referred to as "SF Guidelines").
3. Vehicle occupancy is 2.1 for Visitors to "Other" land uses, based on the SF Guidelines. The number of vehicle trips also includes four additional staff, all of which are assumed to be living off campus and driving alone.

Total Net New Project Trips. On a typical, non-event day, which would occur over 75% of the time the Project would result in a reduction of vehicle trips due to existing students moving from off-campus locations to on-campus housing. Table 4.5-3 demonstrates the reduction that would occur with the Project on non-event days.

**Table 4.5-3
Total PM Net New Peak-Hour Project Trip Generation – Typical Non-Event Day**

	Student Housing/Mixed-Use Net New Trips ¹	Creative Arts Building and Concert Hall Net New Trips	Net New Trips
Person Trips	-11	0	-11
Vehicle Trips ²	-18	0	-18
Public Transit Trips	-39	0	-39
Walk/Bike ³	40	0	40
Other ³	6	0	6

Sources: Fehr & Peers and Dudek 2016; Nelson/Nygaard 2016.

1. As presented in Table 4.5-1.
2. Vehicle occupancy is 2.2 for carpool trips to/from the new student housing and 2.1 for visitor trips to concert hall, as presented in Table 4.5-1 and Table 4.5-2.
3. Mode split was obtained from two different sources and each categorizes mode split differently. The housing land use mode split was used from the 2016 Travel Survey. The concert hall mode split was obtained from the SF Guidelines using "visitor trips" because campus specific mode split for events was not collected in the 2016 Travel Survey. Due to the differences in how mode split data was collected, "Walk/Bike" trips includes walking and bicycle trips for the student housing/mixed-use land use, whereas it only includes walking trips for the Creative Arts building land use. Biking trips are characterized under "other" for the concert hall and cannot be extracted based on available data.

On event days, the Project would generate a total of 233 net new vehicle trips and 70 net new public transit trips during the PM peak hour assuming the worst-case large event scenario described above. The types of events that would result in this worst-case large event scenario would be expected to occur up to 80 times per year or about 7 times a month. The total number of net new event-day trips generated by the Project alone is shown in Table 4.5-4. However, since 2007, total campus-related vehicle trips have substantially declined below the CMP EIR base year. Therefore, campus-wide, the Project would not result in a net increase in PM peak hour vehicle trips, as further described below.

**Table 4.5-4
Total PM Net New Peak-Hour Project Trip Generation – Event Day Only**

	Student Housing/Mixed-Use Net New Trips ¹	Creative Arts Building and Concert Hall Net New Trips ²	Net New Trips
Person Trips	-11	804	793
Vehicle Trips ³	-18	251	233
Public Transit Trips	-39	109	70
Walk/Bike ⁴	40	37	77
Other ⁴	6	15	21

Sources: Fehr & Peers and Dudek 2016; Nelson/Nygaard 2016.

1. As presented in Table 4.5-1.

2. As presented in Table 4.5-2.

3. Vehicle occupancy is 2.2 for carpool trips to/from the new student housing and 2.1 for visitor trips to concert hall, as presented in Tables 4.5-1 and 4.5-2.

Mode split was obtained from two different sources and each categorizes mode split differently. The housing land use mode split was used from the 2016 Travel Survey. The concert hall mode split was obtained from the SF Guidelines using “visitor trips” because campus specific mode split for events was not collected in the 2016 Travel Survey. Due to the differences in how mode split data was collected, “Walk/Bike” trips includes walking and bicycle trips for the student housing/mixed-use land use, whereas it only includes walking trips for the Creative Arts building land use. Biking trips are characterized under “other” for the concert hall and cannot be extracted based on available data.

2007 CMP EIR Trip Envelope. The 2007 CMP EIR (SF State 2007a) estimated that the projected campus expansion by 2020 would result in an additional 466 vehicle trips and 387 public transit trips during the PM peak hour by 2020. The 2007 CMP EIR evaluated transportation impacts based on this “CMP Trip Envelope” for vehicle and transit trips. However, since 2007, which is the CMP EIR base year for transportation, the total campus population has remained flat or even declined in some years. In addition, fewer students, staff, and faculty currently drive to campus compared to 2007 due to the successful implementation of SF State TDM measures. The combination of these two factors has reduced the number of

campus-related vehicle trips since the completion of the 2007 CMP and CMP EIR. Table 4.5-5 shows the estimated PM peak-hour travel demand for the campus in 2007 and in 2016, and calculates the change in the number of trips generated by the campus between 2007 and 2016. During the PM peak hour, SF State generates 561 fewer vehicle trips and 224 additional public transit trips during the PM peak hour in 2016 compared to 2007.

**Table 4.5-5
SF State Campus PM Peak-Hour Travel Demand 2007–2016**

	2007		2016		Change 2007– 2016
	Trips	Percent ²	Trips	Percent ¹	Trips
Headcount Students, Faculty, and Staff ¹	33,612		33,563		-49
Total Person Trips	10,083	100%	10,068	100%	
Trip Rate ^{3,4}	0.30		0.30		-
<i>Drive Alone, Motorcycle</i>	2,692	26.7%	2,084	20.7%	-608
<i>Carpool</i>	494	4.9%	181	1.8%	-313
<i>Taxi, Transportation Network Company, Pick up/Drop off</i>	242	2.4%	413	4.1%	171
<i>Public Transit</i>	4,941	49.0%	5,165	51.3%	224
<i>Walk/Bike</i>	1,593	15.8%	2,104	20.9%	511
<i>Other</i>	121	1.2%	121	1.2%	0
Vehicle Trips	3,140⁵		2,579⁶		-561
Public Transit Trips	4,941		5,165		224

Sources: Fehr & Peers and Dudek 2016; Nelson/Nygaard 2016.

1. Population data from "SF State Facts" website: <http://puboff.sfsu.edu/sfsufact/archive>. See also Chapter 3, Project Description.
2. Mode splits are based on Travel Survey results analyzed by Nelson/Nygaard in 2008 and 2016.
3. The 2016 Travel Survey asked about trip making behavior during the two hour PM peak period for a typical day on campus. Therefore, the PM peak hour trip rates shown here include the following assumptions: the PM peak hour generates 60% of the trips from the two-hour PM peak period (based on the peak hour factors in SF-CHAMP, the City of San Francisco's travel demand model), and 80% of students would be present on-campus on any one day (based on the responses to the SF State 2016 Travel Survey and survey data from other university campuses in San Francisco).
4. Trip rate is a weighted average for students, faculty, and staff. It is assumed to be the same for 2007 as for 2016, i.e. assumes the number of trips generated per person were the same in 2007 as they are in 2016.
5. Vehicle occupancy for carpool trips in 2007 is assumed to be 2.4, based on travel survey results presented in the Transportation Demand Management Plan, Fall 2009.
6. Vehicle occupancy for carpool trips in 2016 is assumed to be 2.2, based on cordon counts performed on April 6, 2016.

Table 4.5-6 presents the changes in travel demand from 2007 to 2016 and the Adjusted CMP Trip Envelope to reflect these changes. This Adjusted CMP Trip Envelope represents the number of trips that could be added to the campus between 2016 and 2020 without creating new impacts to the roadway and transit networks beyond those presented in the 2007 CMP EIR. The Adjusted CMP Trip Envelope is 1,027 vehicle trips and 163 public transit trips during the PM peak hour. In comparison, the Project alone generates a total of 233 vehicle trips and 70 public transit trips during the PM peak hour on event days. On a typical day, the Project would result in a decrease of 18 vehicle trips and a decrease of 39 transit trips.

Further, given that the number of PM peak hour vehicle trips campus wide has declined by 561 trips between 2007 (CMP EIR base year) and 2016, the net new PM peak hour vehicle trips associated with the event-day Project conditions, as shown in Table 4.5-4, would not result in an increase in PM peak hour vehicle trips over the CMP EIR baseline 2007 conditions.

**Table 4.5-6
PM Peak-Hour CMP Trip Envelope Adjustments and Project Trip Generation**

	2007 CMP EIR Trip Envelope	SF State Campus Travel Demand Change 2007–2016	Adjusted 2016 CMP Trip Envelope	Event-Day Project Trip Generation	Typical Day Project Trip Generation
Vehicle Trips	466	-561	1,027	233	-18
Public Transit Trips	387	224	163	70	-39

Sources: Fehr & Peers and Dudek 2016; Nelson/Nygaard 2016.

Intersection Level of Service

The CMP EIR reported on existing and future 2020 intersection level of service on intersections in the study area and added the CMP Trip Envelope to determine the impact of campus growth on traffic congestion in the vicinity of campus under Project and cumulative conditions (see Section 4.11 of the 2007 CMP EIR). The PM peak-hour trips from the campus have declined substantially since 2007/2008 due to an effective TDM program and changing demographics and population. Therefore, even with the worst-case large event scenario for the Project, the number of vehicle trips generated would not result in an increase in PM peak hour vehicle trips over the CMP EIR baseline (2007) conditions. Thus, the CMP EIR Project and cumulative intersection level of service analysis was not updated for this EIR.

Transit Screenline Analysis

The CMP EIR evaluated the impact of campus growth on transit services using a screenline analysis. A downtown transit screenline analysis was also conducted for the Project as described in the SF Guidelines, as part of this EIR. A screenline is an imaginary line on a map, composed of one or more straight line segments. Various screenlines were created by the City that intercept groups of transit lines at or near their maximum load point. The SF Guidelines establishes that a project would have a significant effect on the transit provider if project-related transit trips would cause the capacity utilization standard to be exceeded during the peak hour at those screenlines. For the Muni transit screenlines, the capacity utilization standard is 85%.

The impact analysis reviews the potential transit impacts due to the Project and compares them to what was presented in the 2007 CMP EIR. In particular, the impact is compared to the results presented in the CMP EIR under 2020 conditions. A planning horizon beyond 2020 is

not considered in the transit analysis, as the EIR is tiered to the CMP EIR, which has a horizon of 2020. Additionally, a planning horizon beyond 2020 is not considered given that SF State does not have an adopted CMP that covers growth and development beyond 2020 and therefore projecting growth on the campus beyond 2020 is considered to be speculative.

Bicycle and Pedestrian Analysis

The Project was also reviewed for potentially hazardous bicycle and pedestrian conditions and potential conflicts with adopted policies, plans or programs supporting alternative transportation.

CMP Mitigation Measures Included in the Project

The adopted mitigation measures for transportation included in the 2007 CMP EIR and applicable to the Project are presented below. These measures are already being implemented as part of the CMP, the adopted CMP EIR Mitigation Monitoring and Reporting Program, and the Project and therefore they are considered to be part of the Project, as described in Chapter 3 of this EIR. Additional mitigation measures, if needed, are provided under Impacts and Mitigation Measures below to reduce or minimize any additional impacts of the Project.

CMP Mitigation TRA-1: The campus shall implement the following monitoring and mitigation program:

- As a first step, the campus shall conduct a new baseline cordon survey no less than 18 months following the certification of this EIR. Alternatively, the campus may use the 2006 cordon survey as a baseline.
- Next, at intervals of no more than every three years, and no later than the addition of each 1,000 students in enrollment, SF State will hire an outside transportation planning or data analysis firm to conduct a statistically significant cordon survey of campus commuters during the PM peak hours. The cordon survey will cover all major entrances to the campus and will examine the travel behavior of SF State affiliates. The survey will be conducted during typical days while classes are in session, excluding final examination, national holiday or orientation weeks.
- If cordon surveys show that the PM peak period auto trips to and from campus are greater than 5% above the baseline, the campus shall conduct the cordon surveys annually until such trips fall below 5% above the baseline for 2 years in a

row. If and when this occurs, cordon surveys will continue in accordance with the second bullet above.

- If the cordon surveys show an increase in PM peak period auto trips sufficient to result in project impacts at the two affected intersections, the campus will increase the level of TDM programs until the impacts associated with project traffic increases are mitigated to a less-than-significant level.
- If the campus fails to reduce its traffic impacts to a less-than-significant level for more than two years in a row, it will contribute its “fair share” (as defined in the CMP EIR) of the cost of identified intersection improvements to the City and County of San Francisco, as appropriate, provided that the legislature appropriates funds as requested by CSU in the State budget process.

CMP Mitigation TRA-2A:

The San Francisco Municipal Transportation Agency (MTA) and the San Francisco County Transportation Authority (SFCTA) can and should implement improvements to transit services along 19th Avenue via the implementation of MTA’s Transit Effectiveness Project and SFCTA’s 19th Avenue Project, which are in the planning stages. Improvements ultimately included in these programs could include, but would not be limited to, travel time improvements along the M-line and 28/28L lines (e.g., bus rapid transit, improved stop spacing, transit prioritization treatments, expanded Proof-of-Payment, in-lane bus stops), re-establishing a “short-run” of the M-line between the Embarcadero and the SF State stations, etc.

CMP Mitigation TRA-2B:

In the event that transit capacity enhancements listed in the Campus Master Plan are not implemented in a timely manner by Muni and/or SFCTA, the campus will extend the Campus Shuttle service to West Portal Station on an interim basis, based on the following program:

- The University will collect data from Muni to establish the baseline average peak period, peak direction passenger loading between the campus and West Portal Station.
- The University will monitor SF State peak period transit use by conducting cordon counts as specified in Mitigation TRA-1.

- If Muni reports that M line average peak period, peak direction passenger loading between the campus and West Portal Station exceeds 85% of combined seating and standing load capacity for two years in a row, and if the cordon surveys show that peak period transit trips on the M-line between the campus and West Portal Station are greater than 5% above the baseline, the University will extend campus shuttle service to West Portal Station during the peak period(s).
- This additional campus shuttle service will be operated with adequate capacity (i.e., it will not exceed a 85% combined seated/standing passenger capacity target).
- This additional campus shuttle service will be operated until MTA's and SFCTA's planned transit capacity enhancements related to 19th Avenue are implemented, as described in Mitigation TRA-2A above.

CMP Mitigation TRA-2C: The campus shall monitor peak hour utilization of Campus Shuttle buses on an annual basis and if average peak period, peak direction passenger loading exceeds 85% of combined seated and standing load capacity for shuttle service between the campus and the Daly City BART station, the campus shall increase shuttle frequency or otherwise increase the capacity of the shuttle services during the peak period(s) until this standard is met.

Impacts and Mitigation Measures

Tiered Initial Study Results

As described in the Tiered IS (Appendix A), the 2007 CMP and the subsequent adopted TDM Program (Nelson/Nygaard 2009) indicates that it is the campus's objective to continue to grow and develop, as proposed under the CMP, while minimizing the transportation impacts of the increase in enrolled students and employees. More specifically, the TDM plan outlines a program that would minimize the daily AM and PM peak-period vehicle trips to the campus. The 2007 CMP EIR indicated that the combined effect of the baseline TDM, parking, transit, and housing programs of the CMP would likely be to maintain campus-related vehicle traffic levels at their then-current (2006/2007) rates through 2020. The 2007 CMP EIR considered this no-net-increase in vehicle trips scenario in a traffic analysis that also provided a more conservative traffic scenario that estimated trip generation from proposed campus growth more

traditionally. The more conservative analysis indicated that campus growth could potentially result in significant traffic-related impacts on vicinity roadways when considering existing and future 2020 conditions. To address these potential impacts, the campus is implementing CMP EIR Mitigation TRA-I (see above), which required the campus to conduct a new baseline cordon survey, completed in 2008. Subsequent cordon surveys are required every 3 years and no later than the addition of each 1,000 students in head count enrollment. If vehicle trips increase over the base year, various measures, including increasing the frequency of cordon surveys and increasing TDM programs, are called for. The most recent cordon survey, conducted in 2016, revealed that daily and peak-hour campus-related vehicle trips have decreased since the 2008 survey base year, as described in Section 4.5-1, above (Nelson/Nygaard 2016).

The Tiered IS concluded that the EIR will estimate trip generation associated with the Project, and evaluate transportation hazards, emergency access, and conflicts with adopted transportation policies to determine whether the Project could result in new or increased impacts compared to those identified in the 2007 CMP EIR. This analysis is provided below and is based on Appendix E.

Project and Cumulative Impacts

For each impact presented below, the CMP EIR impact is presented first in gray text for easy reference to the CMP EIR's prior impact conclusions. The Project impact is presented second and emphasizes whether new or increased impacts would result with the Project.

CMP Impact TRA-I:	Implementation of the Campus Master Plan could potentially contribute substantial traffic at two intersections in southwest San Francisco (<i>Significant unavoidable impact</i>)
Project Impact TRA-I:	The proposed Project would not increase vehicle trips above the adjusted CMP EIR Trip Envelope and therefore would not result in new or increased level of service impacts over those identified in the CMP EIR (<i>Less-than-significant impact / No new or increased impact</i>)

Since the adoption of the 2007 CMP, the campus has achieved the no-net-increase in vehicle trips objective identified in the CMP and CMP Impact TRA-I. To date, a net reduction of PM Peak hour vehicle trips has been achieved since 2007, as described in Section 4.5.1 and shown in Table 4.5-5. SF State adopted a TDM Plan (Nelson/Nygaard 2009) and in accordance with CMP Mitigation TRA-I above, has conducted an online transportation survey and cordon count

at least every 3 years beginning in April 2008 with subsequent surveys taking place in April 2011, April 2014, and April 2016. Based on the 2016 cordon counts the number of peak-hour trips decreased by 3% since 2008 and the number of automobile trips per day decreased by 22%. The percentage of respondents driving alone has decreased from 26% in 2008 to 20% in 2016 (Nelson/Nygaard 2016).

The addition of housing and neighborhood retail services with the Project supports SF State's goal to further minimize drive-alone vehicle trips to reduce traffic congestion and vehicle miles traveled. Consistent with the TDM plan (Nelson/Nygaard 2009), new residential and retail development should use strategies that minimize the need for vehicle parking, such as car sharing, bike facilities, and access to transit. The new student housing/mixed-use building at the southeast corner of Holloway Avenue and Varela Avenue would include secure, covered bicycle storage on the first floor of the building (discussed below). These spaces are part of a campus-wide planning effort to improve bicycle infrastructure and access to campus, addressing routes, safety, and centralized bike parking areas that include a mix of racks and secure facilities.

The Project is also directly accessible to 19th Avenue and the M Line as well as Routes 28/28R, 29 and 57, as shown in Figure 4.5-1. Other TDM measures implemented as part of the Project include car sharing and pedestrian amenities (discussed below). Additionally, the Project is by nature a TDM strategy to reduce vehicle trips, as it relocates students who would otherwise live off-campus into on-campus housing.

As part of the Project Tapia Drive would be vacated. During site observations, vehicle volumes on Tapia Drive were observed to be low because it does not provide through access to any destinations. Existing vehicles on Tapia Drive are typically looking for parking spaces or picking-up or dropping-off passengers. Therefore, the closure of Tapia Drive would cause that parking and pick-up/drop-off activity to shift to other locations on campus, but would not cause congestion on adjacent streets.

On typical, non-event days, the Project would contribute to further reducing vehicle trips on campus during the PM peak hour (see Table 4.5-3), as existing students living off campus relocate to the student housing/mixed use building. On event days, the Project alone would add 233 net new vehicle trips during the PM peak hour, which is less than the Adjusted CMP Trip Envelope of 1,027 vehicle trips (see Table 4.5-6). This increase in vehicle trips would occur during concert hall event days only (up to 80 per year or about 7 per month), and only on the rare occasion when there is an early evening, full-capacity event that attracts mostly off-campus attendees. Most evening events are expected to begin at 7:30 or 8:00 p.m., after the PM peak hour. Even under this worst-case scenario, the Project would remain within the Adjusted CMP Trip Envelope. On most days during the year, the Project would result in many fewer, if any, new vehicle trips to SF State's campus.

Further, when considering the Project within the context of campus-wide trip generation, the Project would not generate new PM peak hour trips, as campus-wide PM peak-hour trips have declined substantially since the CMP EIR base year (see Table 4.5-6). Therefore, with Project implementation, campus-wide trip generation would remain below the CMP EIR base year and the impact would be less than significant. There are no new or increased impacts compared to the CMP EIR as a result of vehicle trips generated by the Project.

Project Mitigation TRA-1: No additional mitigation required.

CMP Impact TRA-2: Implementation of the Campus Master Plan would result in a substantial increase in transit (*Potentially significant impact / Less than significant with mitigation*).

Project Impact TRA-2: The Project would not increase transit trips above the adjusted CMP EIR Trip Envelope and therefore would not result in new or increased impacts over those identified in the CMP EIR (*Less-than-significant impact / No new or increased impact*).

The 2007 CMP EIR concluded that implementation of the CMP could result in a substantial increase in transit demand that could not be accommodated by transit capacity.

Mitigation measures included the following (SF State 2007a):

- Improvements to transit services on 19th Avenue, including the M line.
- Extended campus shuttle service to West Portal station on an interim basis in the event that improvements to 19th Avenue transit services are not implemented in a timely manner. This extended service would be provided if certain criteria are met: if Muni reports that the M line average PM peak period, peak direction passenger loading between the campus and West Portal station exceeds 85% for two or more years in a row and if the cordon surveys show that peak period transit trips on the M-line between the campus and West Portal station are greater than 5% above the baseline.
- Additionally, if the campus shuttle exceeds 85% load capacity for service between the campus and the Daly City BART station then additional shuttle service will be provided via higher frequency service and/or higher capacity vehicles.

SF State has funded a number of transit improvements including maintenance of the 19th/Holloway Avenue M-line platform, improvements at the Daly City BART station, and

contributions towards the M-line realignment. Since 2008 campus generated ridership on the M-line has decreased as campus affiliates shift to other routes or other forms of transit. Additionally, a number of shuttle improvements have been implemented including increased shuttle frequency and vehicle capacity. (See subheading “Transportation Demand Management” in Section 4.5.1 for more information on the SF State TDM program.)

The Project would add 70 net new public transit trips during the PM peak hour, which is less than the Adjusted CMP Trip Envelope of 163 public transit trips during the PM peak hour. As indicated in Tables 4.5-3 and 4.5-4, the Project would result in an increase in transit trips on event days only. On non-event days, the Project would actually result in a decrease of 39 transit trips due to existing students moving into on-campus housing from off-campus locations.

The Project’s contribution to transit screenlines was evaluated using the SF Guidelines methodology to determine whether the Project would cause an existing transit line to exceed its capacity. The SF Guidelines methodology requires analysis of outbound trips from Downtown. The proposed student housing/mixed building would generate a net decrease of 39 public transit trips in the PM peak hour. Based on the 2016 Travel Survey results, only 8% of these trips (i.e. three trips) represent trips towards the SF State campus (i.e. Muni’s outbound direction, away from downtown), which would affect the PM peak hour Muni screenline analysis. This small reduction in transit trips would have a negligible effect on the Downtown transit screenline analysis and was therefore not taken into account in this analysis.

On event days, the concert hall would generate 109 transit trips. Based on the 2016 Travel Survey, of the 109 transit trips generated by the concert hall during the PM peak hour, 33% of the trips would use the M line to SF State (i.e., Muni’s outbound direction, away from downtown). This represents 36 additional trips on the M line across the Downtown screenline. The remainder of the transit trips would use the SF State shuttle or other Muni lines that do not cross the transit screenlines: routes 28/28R 19th Avenue, 29 Sunset, and 57 Parkmerced.

As presented in Table 4.5-7, based on the worst-case large-event scenario, Project trips represent a less than 1% increase in the number of transit riders crossing the Downtown screenline. Even with the addition of these 36 trips, neither the individual M line nor the Southwest screenline total would exceed the 85% PM peak hour capacity utilization and the Project impact would be less than significant. This conclusion is consistent with the CMP EIR conclusion that buildout under the CMP would not substantially impact the peak hour capacity utilization at the screenlines for 2020 conditions. Therefore, there are no new or increased impacts compared to the CMP EIR, as a result of transit trips generated by the Project.

**Table 4.5-7
PM Peak-Hour Muni Downtown Screenlines – Southwest Screenline¹**

Outbound Screenline	Existing			Existing Plus Project		
	PM Peak Hour ¹ Ridership	PM Peak Hour ¹ Capacity	PM Peak Hour ¹ Capacity Utilization	PM Peak Hour ² Project Ridership ³	Existing Plus Project Ridership	PM Peak Hour ¹ Capacity Utilization
Subway lines	4,904	6,164	80%	36	4,940	80%
Haight/Noriega	977	1,554	63%	0	977	63%
Other lines	555	700	79%	0	555	79%
Southwest Screenline Total	6,435	8,418	76%	36	6,471	77%

Sources: San Francisco Planning Department, May 2015; Fehr & Peers and Dudek 2016; Nelson/Nygaard, 2016.

1. As discussed above the other transit screenlines are not affected by the Project.
2. PM peak hour outbound (i.e. away from Downtown, inbound to SF State) only.
3. Data is based on the 2016 Travel Survey. Transit riders using BART (the subway) have to use another mode to arrive to campus because the nearest BART stop is over 1.5 miles away. Some of these BART riders are likely to take MUNI. Therefore, the total number of transit trips would be greater than 109 as some people would take both BART and MUNI to get to campus.

Project Mitigation TRA-2: No additional mitigation required.

CMP Impact TRA-3: Implementation of the Campus Master Plan would not adversely affect conditions for pedestrians or otherwise interfere with pedestrian accessibility (*Less-than-significant impact*).

Project Impact TRA-3: Implementation of the Project would not adversely affect conditions for pedestrians or otherwise interfere with accessibility, nor would the Project create hazardous conditions for pedestrians (*Less-than-significant impact / No new or increased impact*).

As shown in Tables 4.5-3 and 4.5-4 the Project would add 77 net new pedestrian and bicycle trips on event days and 40 net new on-campus pedestrian and bicycle trips on non-event days. SF State is applying to the City to “vacate” Tapia Drive, as part of the Project. This would allow SF State to incorporate the street right-of-way into the Project site and to integrate the site into the campus, specifically the academic core. SF State owns the property on both sides of Tapia Drive, and closing the street is consistent with the 2007 CMP, which envisioned a major east/west walkway connecting the central academic core with sites to the west, including the Mashouf Wellness Center (SF State 2007b). Some vehicular access would be required for loading at the existing Creative Arts and Humanities buildings, but the area currently occupied by the street right-of-way would be developed as part of the site for the proposed Creative Arts replacement building and concert hall, and would be used primarily by pedestrians.

The Project's closure of Tapia Drive to through vehicular traffic would create a more pedestrian-scale environment on campus near the Project site. Commercial loading access to the concert hall and College of Liberal and Creative Arts on Tapia Drive and vehicle access to the parking garage at the new student housing/mixed-use building along Holloway Avenue would be designed to minimize conflicts with pedestrians by providing adequate sight distance and conforming to the SF Planning Code. Access to most vehicles would be limited through the provision of bollards or signage on the vacated Tapia Drive, similar to the designs of other mixed commercial loading and pedestrian spaces on campus. Therefore, the proposed changes to Tapia Drive due to the Project would not worsen conditions for pedestrians and the existing facilities would be able to accommodate the new pedestrians.

The proposed changes to Tapia Drive due to the Project would improve conditions for pedestrians by reducing intermodal conflicts due to the presence of cars and pedestrians. Sidewalks installed as part of the Project would be consistent with the Better Streets Plan and would have the capacity to accommodate Project pedestrian trips. Other pedestrian improvements as part of the Project include direct pedestrian access from Block 1 to paths accessing the campus core by reallocating street space on Tapia Drive to the pedestrian realm and adding outdoor active space to the site at Block 6. The Project would also provide for bulb outs and wider sidewalks consistent with the Better Streets Plan, improved crosswalks and new access ramps.

Varela Avenue is envisioned as a shared street. The Project would be designed to connect to the future Parkmerced transit station by adding pedestrian amenities and a courtyard that opens towards the transit hub. The alignment of the courtyard to this potential transit hub would promote movement of visitors through the courtyard from the new transit hub, ultimately connecting pedestrians to the SF State campus via Holloway Avenue. Once the future transit hub is completed, Varela Avenue may be restricted to shuttles and Muni buses as part of that future project such that pedestrians would be prioritized and the courtyard would act as an extension of the transit hub on the opposite side of the street. Improvements will include eliminating parking on Varela Avenue, a strategy to modify and reduce curbs so that ease of movement is promoted across Varela Avenue, and pavers that strengthen the pedestrian connection as well as provide a safe street crossing.

While pedestrian trips are expected to increase due to the Project, the Project would not create unsafe conditions for pedestrians, nor would the additional walk and bike trips cause crowding on nearby sidewalks. In addition, the Project's closure of Tapia Drive to vehicles (except commercial loading and deliveries) and other pedestrian improvements on adjacent roadways would improve pedestrian conditions on campus near the Project site. These improvements include new access ramps, bulbouts, crosswalks, improved sidewalks, and other pedestrian amenities that will ensure safer access. Thus, the Project impact would be less than

significant as the Project would not cause substantial overcrowding on public sidewalks, create potentially hazardous conditions for pedestrians, or otherwise interfere with pedestrian accessibility to the site and adjoining areas. The Project would not result in new or increased impacts to pedestrians compared to those identified in the CMP EIR.

Project Mitigation TRA-3: Mitigation not required.

CMP Impact TRA-4: Implementation of the Campus Master Plan would not adversely affect conditions for bicyclists (*Less-than-significant impact*).

Project Impact TRA-4: Implementation of the Project would not adversely affect conditions for bicyclists or otherwise interfere with accessibility, nor would the Project create hazardous conditions for bicyclists (*Less-than-significant impact / No new or increased impact*).

As shown in Tables 4.5-3 and 4.5-4 the Project would add 79 net new pedestrian and bicycle trips on event days and 42 net new on-campus pedestrian and bicycle trips on non-event days. As indicated in Project Impact TRA-3, SF State is applying to the City to “vacate” Tapia Drive, as part of the Project. The area currently occupied by the street right-of-way would be developed as part of the site for the proposed Creative Arts replacement building and concert hall, and would be used primarily by pedestrians, but also bicyclists.

The Project’s closure of Tapia Drive to through vehicular traffic would create a more pedestrian-scale environment on campus near the Project site that would also be accessible by bicycle. Commercial loading access to the concert hall and College of Liberal and Creative Arts on Tapia Drive and vehicle access to the parking garage at the new student housing/mixed-use building along Holloway Avenue would be designed to minimize conflicts with bicyclists by providing adequate sight distance and conforming to the SF Planning Code. Access to most vehicles would be limited through the provision of bollards or signage at the former Tapia Drive, similar to the designs of other mixed commercial loading and pedestrian/bicycle spaces on campus. Therefore, the proposed vacation of Tapia Drive would not worsen, but rather would improve conditions for bicyclists by reducing intermodal conflicts that currently exist in this area due to presence of cars and bicycles. Further, the existing facilities near the Project site would be able to accommodate the new bicyclists associated with the Project.

The new student housing/mixed-use building at the southeast corner of Holloway Avenue and Varela Avenue would include secure, covered bicycle storage on the first floor of the building. Approximately 185 Class I secure, covered bicycle storage spaces would be provided in the building. Approximately 12 Class II bicycle parking spaces would also be provided in the vicinity

of the Creative Arts replacement building and concert hall and would be in a visible location, easily accessible to the buildings. These spaces are part of a campus-wide planning effort to improve bicycle infrastructure and access to campus, addressing routes, safety, and centralized bike parking areas that include a mix of racks and secure facilities.

While bicycle trips are expected to increase due to the Project, the Project would not create unsafe conditions for bicyclists, nor would the additional bicycle trips cause crowding on nearby bicycle facilities or roadways. In addition, the Project's closure of Tapia Drive to vehicles (except commercial loading and deliveries) and other improvements along Holloway Avenue and Varela Avenue would improve bicycling conditions on campus near the Project site. Thus, the Project impact would be less than significant as it would not substantially increase hazards due to a design feature or incompatible uses or create potentially hazardous conditions for bicyclists or otherwise substantially interfere with bicycle accessibility to the site and adjoining areas. The Project would not result in new or increased impacts to bicyclists compared to those identified in the CMP EIR.

Project Mitigation TRA-4: Mitigation not required.

CMP Impact TRA-6: Implementation of the Campus Master Plan would not conflict with any adopted plans, policies or programs supporting alternative transportation (*Less-than-significant impact*).

Project Impact TRA-6: Implementation of the Project would not conflict with any adopted plans, policies or programs supporting alternative transportation (*Less-than-significant impact / No new or increased impact*).

CMP EIR Impact TRA-6 indicates that the CMP includes a parking and housing strategy, bicycle and pedestrian improvements, and shuttle service improvements designed to discourage automobile use and encourage the use of alternate means of transportation. These and other TDM measures were included in the SF State TDM Plan (Nelson/Nygaard 2009) and have been implemented as described under the subheading "Transportation Demand Management" in Section 4.5.1. Monitoring conducted under CMP Impact TRA-1 since 2008 indicates that the number of automobile trips per day decreased by 22%. The percentage of respondents driving alone has decreased from 26% in 2008 to 20% in 2016 (Nelson/Nygaard 2016). Transit usage has increased since 2008, with 45% of campus affiliates using Muni and 27% using BART for a portion of their trip to campus.

The City has a "Vision Zero" policy that is a safety policy committing to build safer streets, educate the public on traffic safety, enforce traffic laws, and adopt policy changes that result in

zero fatalities and reduced accidents. The goal is to create a culture that prioritizes traffic safety and to ensure that zero deaths occur by the year 2024. 19th Avenue is a Vision Zero Corridor, which is characterized as a high injury network for pedestrians and vehicles. While the Project is not on 19th Avenue and would not be proposing changes to 19th Avenue, improvements on or adjacent to the Project site such as new access ramps, bulbouts, crosswalks, improved sidewalks, and other pedestrian amenities would ensure safer access to the Project from 19th Avenue. Additionally, Block 6 has been designed to interface and connect with the future Parkmerced transit hub, which would improve access and safety for people accessing the future realigned M-line and other transit services.

Many of these improvements are also consistent with San Francisco's Better Streets Plan, as they improve pedestrian access, safety, and the overall pedestrian environment. The Project includes applying for a vacation of Tapia Drive, which, based on preliminary review would not require a Major Encroachment Permit. The vacation request will be reviewed by the City Planning Department for consistency with the City's General Plan and Better Streets Plan. A matrix of relevant plans, policies and programs is provided as Appendix A-2 to the Tiered Initial Study and demonstrates that the proposed vacation of Tapia Drive would not result in conflicts with adopted plans, policies or programs supporting alternative transportation. Therefore, the impact of the Project is less than significant and would not result in new or increased impacts compared to those identified in the CMP EIR.

Project Mitigation TRA-6: Mitigation not required.

4.5.3 References

CCSF (City and County of San Francisco). 2007. City's Charter Section 16.102: Transit First Policy.

Fehr & Peers and Dudek. 2016. *Transportation Memorandum*. August 2016.

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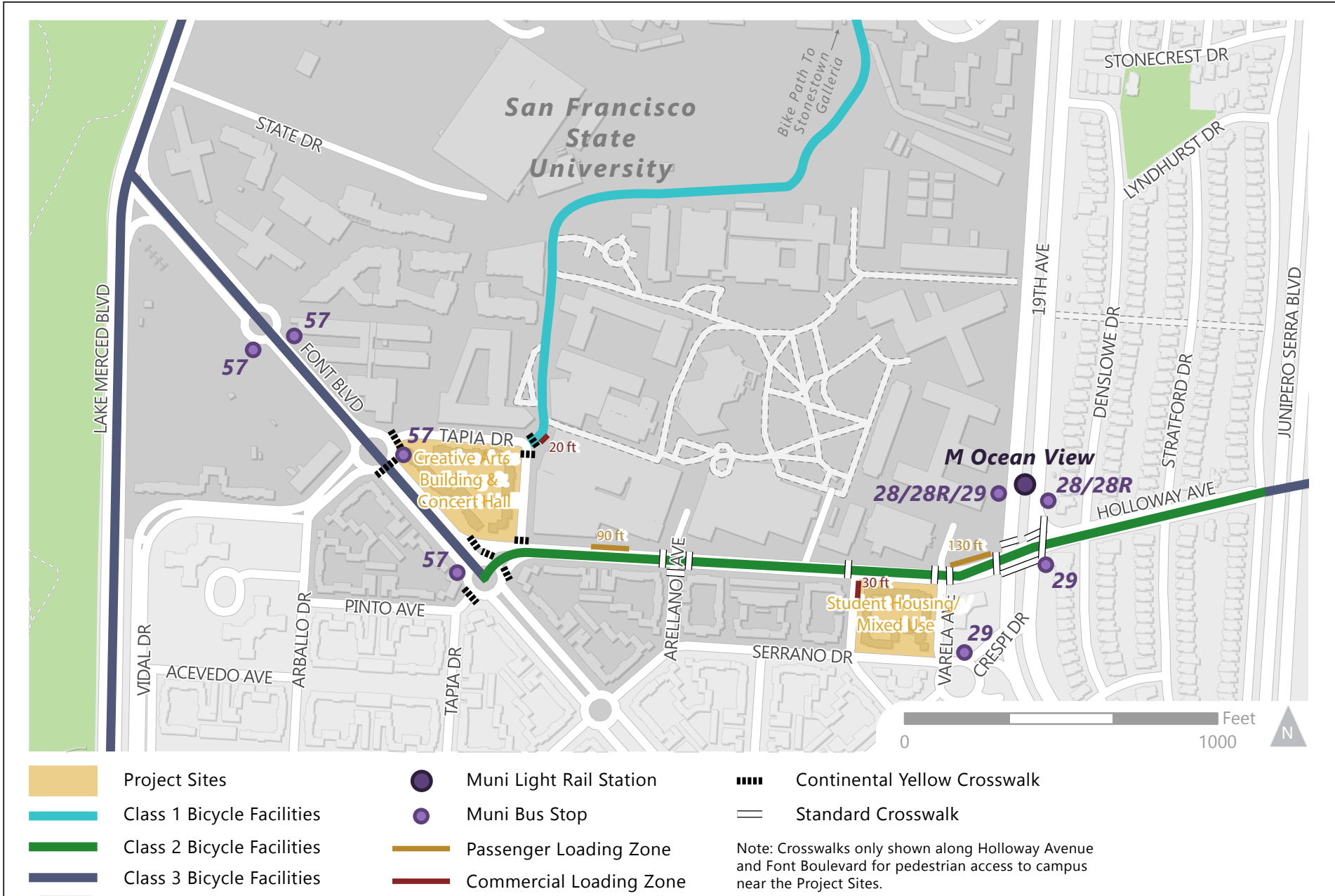
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SOURCE: Fehr & Peers (2016)

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FIGURE 4.5-1
Project Sites and Existing Bicycle and Transit Network

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