

**San Francisco State University
Campus Master Plan**

**Chapter 9.
Campus Circulation**

9. Campus Circulation

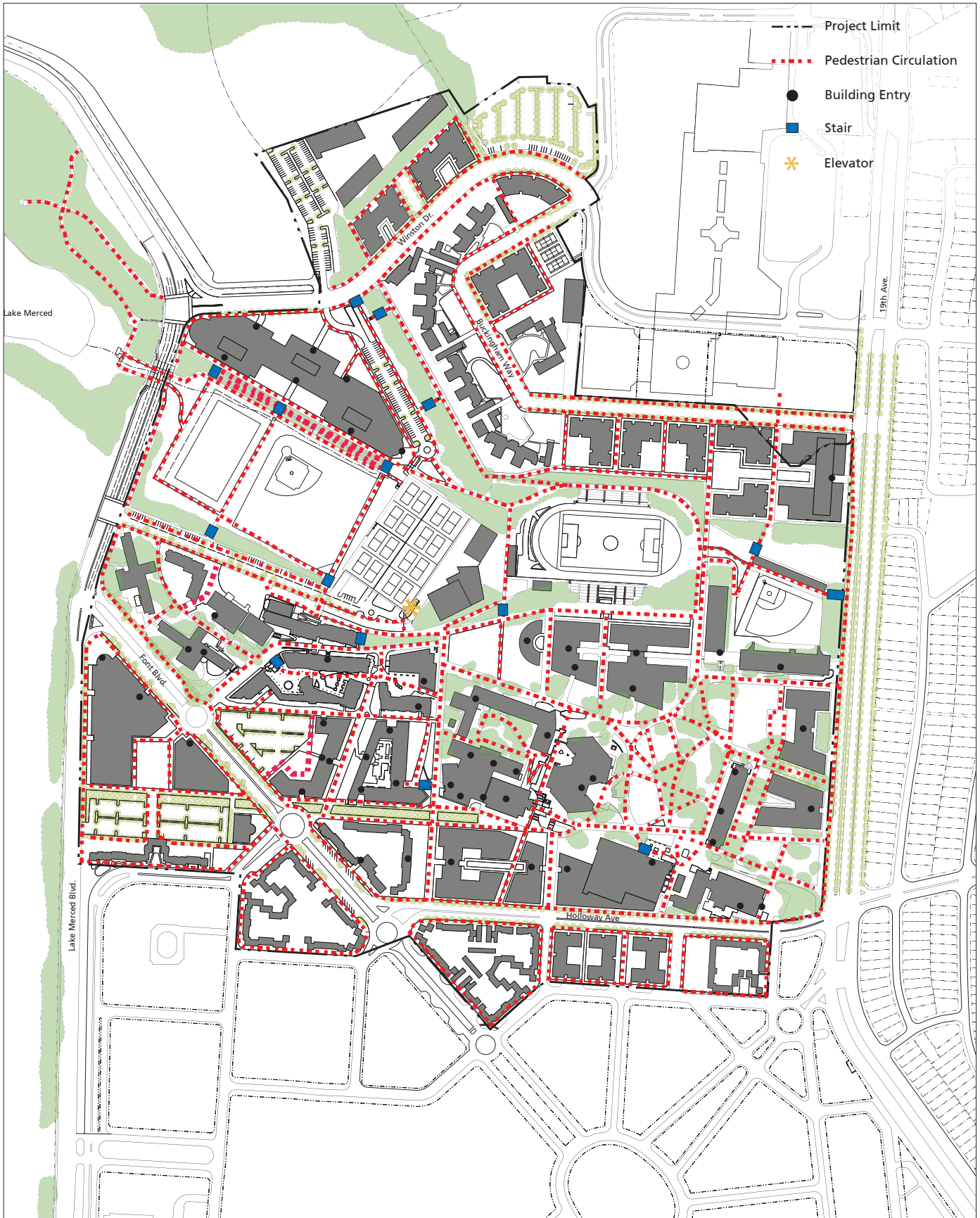
Pedestrian Circulation

Comprehensive network

The master plan emphasizes the pedestrian, providing a comprehensive, accessible circulation network throughout campus (see Pedestrian Path Network diagram). Key features include the Millennium Bridge across the valley connecting the academic core and University Park North (UPN), two major east-west walkways—the Arts Allée and Pacific Allée—and the Lake Merced Boulevard undercrossing linking the campus to Lake Merced. These pedestrian improvements, described in detail in Chapter 8: Landscape and Open Space, contribute to improved pedestrian amenity and connectivity between the campus and surrounding neighborhoods.



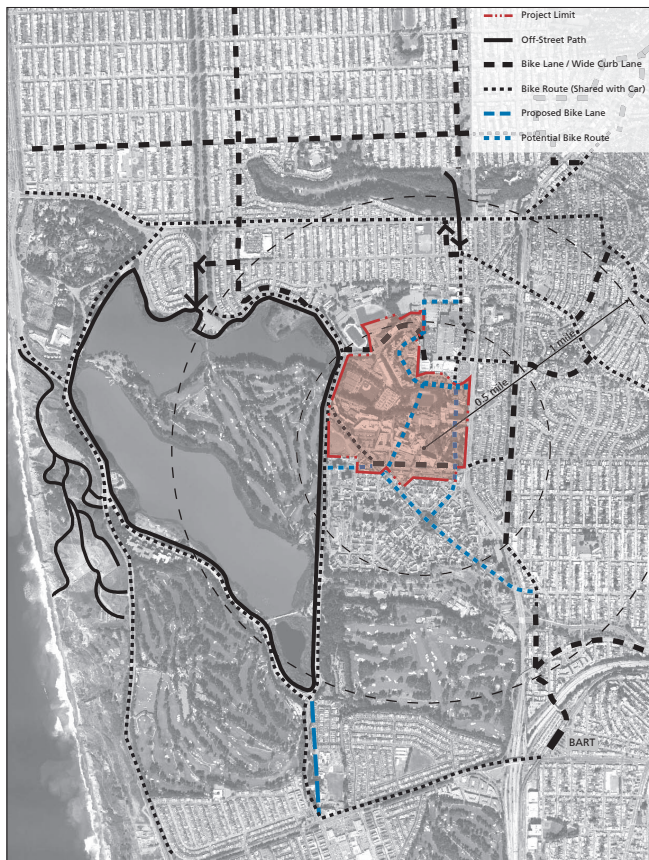
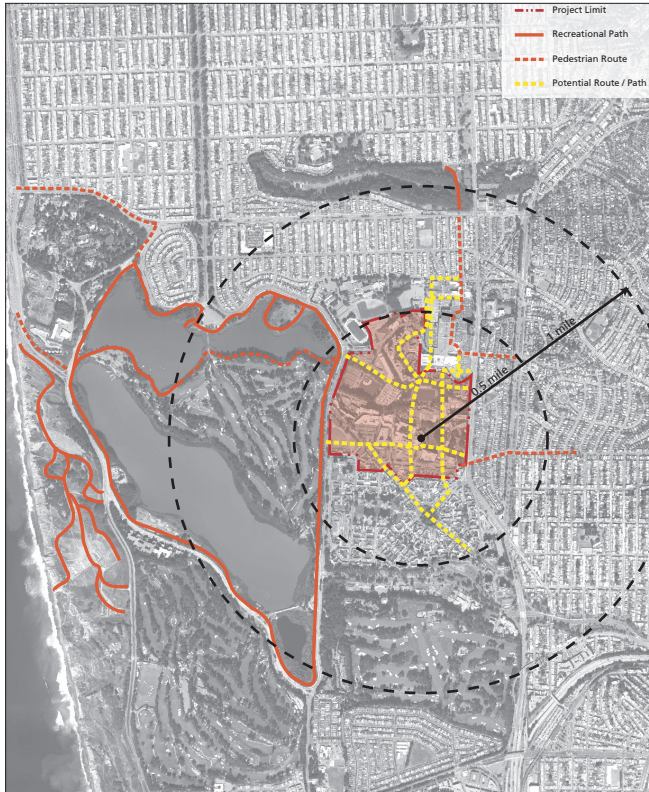
Top: Lake Merced
Boulevard bridge and
undercrossing section
Bottom: Millennium
Bridge section



Pedestrian Path Network - Master Plan

San Francisco State University Campus Master Plan





Top: District Pedestrian Circulation Bottom: District Bike Circulation

Campus Circulation

Housing

Increased on-campus housing also has a positive effect on pedestrian access and circulation at SF State. Housing development at UPN and UPS (University Park South) will increase the proportion of SF State affiliates who commute to campus by walking. The Millennium Bridge connecting across the valley will improve pedestrian amenity, connectivity, and permeability for those who access campus from neighborhoods to the north.

Universal design and access

The master plan makes extensive modifications to the campus pathway system to provide universal access throughout, as illustrated in the accompanying Pedestrian Path Network diagram. Notable improvements are the Millennium Bridge and a new north-south cross-campus axis bordering the east edge of the Quad; a new pedestrian spine (the Arts Allée) from the Quad to the new Creative Arts complex; a gently sloping landscaped entry at 19th and Holloway Avenues; accessible paths from the northern end of Centennial Walk into and across the valley to the new gym/recreation-wellness center; and accessible paths from the gym to the recreation fields on the valley floor. The master plan provides a ramp connection from the parking garage to Maloney Field.

Deficient entries to existing buildings—including the Holloway Avenue entrances to the Creative Arts building and entries to Science, HSS, and Business—will be addressed through the ultimate replacement of these buildings during the planning timeframe. In the interim, accessibility projects will continue to move forward.

Wayfinding

The master plan provides a system of wayfinding beacons and signage elements to help orient and guide users around campus.

Beacons – Beacons at two levels provide visual and auditory landmarks at key campus entries and crossings. At one level, important new building entries are conceived as tall cylindrical glazed foyers that glow with interior lighting, providing distinct and recognizable “lantern” elements around campus. Included are the northern corner of the Creative Arts complex and the eastern corner of the new gym-recreation/wellness center.

At a smaller scale, a series of entry markers and vertical elements topped with a lighting feature mark important entries, portals, or crossings. These include pylons at the main entrance to campus at Holloway and 19th Avenues.

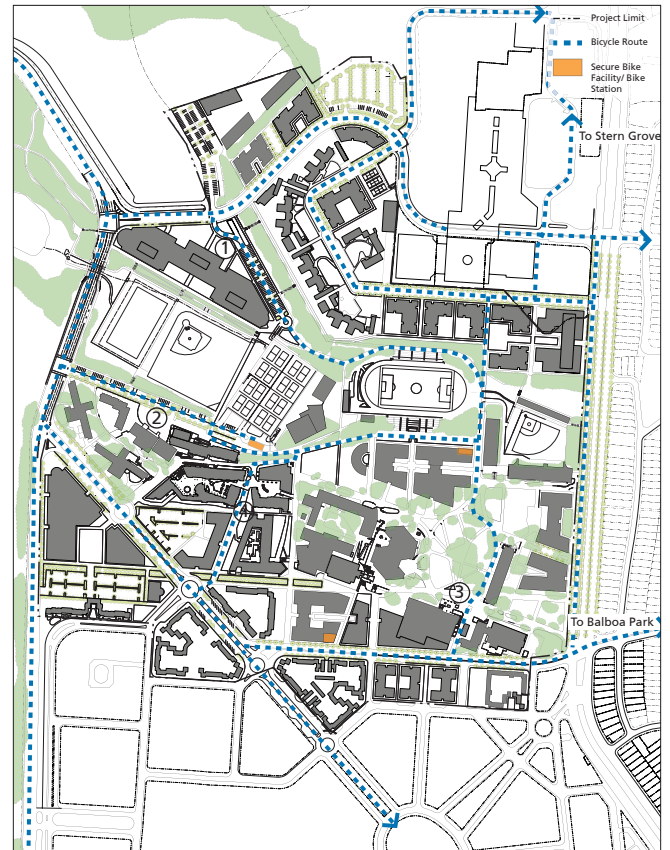
Both types of beacons also have an audible signal (wind chime or automated sound) associated with them. The larger, building entry beacons would have one family of audible signal and the smaller markers and vertical elements would have another. This way, all campus users—whether sighted or blind/visually impaired—would perceive a network of recognizable landmarks throughout the campus associated with specific areas and functions.

Bicycle Circulation

On-campus bike network

In order to facilitate safe and convenient bicycle access across campus, an on-campus bicycle network is provided along dedicated bike paths separated from pedestrian paths. These facilities will have pavement marking and 15-mph bicycle speed signs at the entrance to the campus.

As illustrated in the accompanying Bicycle Routes and Storage diagram, these routes include: 1) the existing east-west route from Lake Merced Boulevard via State Drive to the south side of Cox Stadium; 2) the existing east-west route from Lake Merced Boulevard via Winston Drive, through the newly configured North State Drive to the north side of Cox Stadium; 3) the north-south axis from Stonestown to Cardenas Avenue via the Millennium Bridge and east edge of the Quad; and 4) the relatively flat east-west route from the second roundabout on Font Boulevard via the west side of the Humanities and Student Services buildings to the south side of Cox Stadium. In addition on-street bike lanes are located on Holloway Avenue, Font Boulevard, Buckingham Way, and Winston Drive. SF State will work with the City and Caltrans to explore a bike path along 19th Avenue, taking care to address bicycle/pedestrian conflicts at the transit plaza at 19th and Holloway.



Bicycle Routes and Storage

UC Davis closed its core campus to motor vehicles in 1966. Since then, bicycles are allowed on the street while sidewalks are for pedestrian use only. A full-time bicycle police officer enforces this system of separated bicycle and pedestrian rights-of-way and campus bicycle parking. Adequate and convenient bicycle parking is provided throughout the campus including bike racks in the front of each and every facility. Other bicycle amenities include a gym and a bike repair shop located near the center of campus.

Approximately 38 percent of UC Davis affiliates commute to campus by bicycle, including 43 percent of undergraduates, 48 percent of graduate students, 37 percent of faculty, and 16 percent of staff.



Abundant bicycle parking at UC Davis

Stanford University

permits bicycles on all pathways and provides bike lanes on all main roads within the campus. Bike parking is available at every building and campus planners are required to consult with transportation staff regarding integration of bike facilities for all new developments on campus. Combination-encoded bicycle cages are also provided in four locations on campus.

Approximately 37 percent of Stanford affiliates commute by bicycle, including over 70 percent of undergraduates, 48 percent of graduate students and 10 percent of employees.

Abundant bicycle racks

To improve the convenience of bicycle access to campus, the master plan calls for all new buildings to have bicycle racks in visible locations near building entrances. In the immediate term, new bicycle racks will be provided near entrances to the library and Business building. In the near term, bicycle racks will also be provided near entrances to the Towers (Centennial Square), Student Services, the Student Health Center, Ethnic Studies and Psychology building, the gym, Thornton Hall, the Science building, Administration building, Creative Arts building, and the Humanities building (near Tapia). In all cases, racks will be sited alongside designated bike paths or routes. Inverted “U” bicycle racks will be used, as specified in Chapter 8: Landscape and Open Space, Site Furnishings.

Similar best practice bicycle facilities include UC Davis and Stanford University. Approximately, 38 percent of the campus population at UC Davis and 37 percent at Stanford commute by bicycle.

Secure bicycle facilities

To provide a range of bicycle parking facilities, covered, secure bicycle facilities will be provided at multiple locations on campus, expanding upon the successful campus Bike Barn. These facilities may have card-coded locks and be rented out to students or employees on a monthly or semester basis. Within each bike facility, bicyclists may lock their bicycles against space-efficient hanging or double stacked bike racks.

On-campus bike station

As the campus is developed, the SF State Bike Barn will be replaced with a Bike Station to be located on Holloway Avenue as part of the new BSS building. This facility will provide attended bicycle parking with extended hours of service and/or 24-hour access for registered members. It will also provide bicycle repairs, an air pump, bicycle rentals, transportation information, an outdoor café, and an Internet station. The Bike Station will extend services to SF State students, faculty, and staff, as well as potentially providing retail and rental services for the wider community.

Similar best practice bike station facilities include Bikestation Long Beach at the First

Case Study:

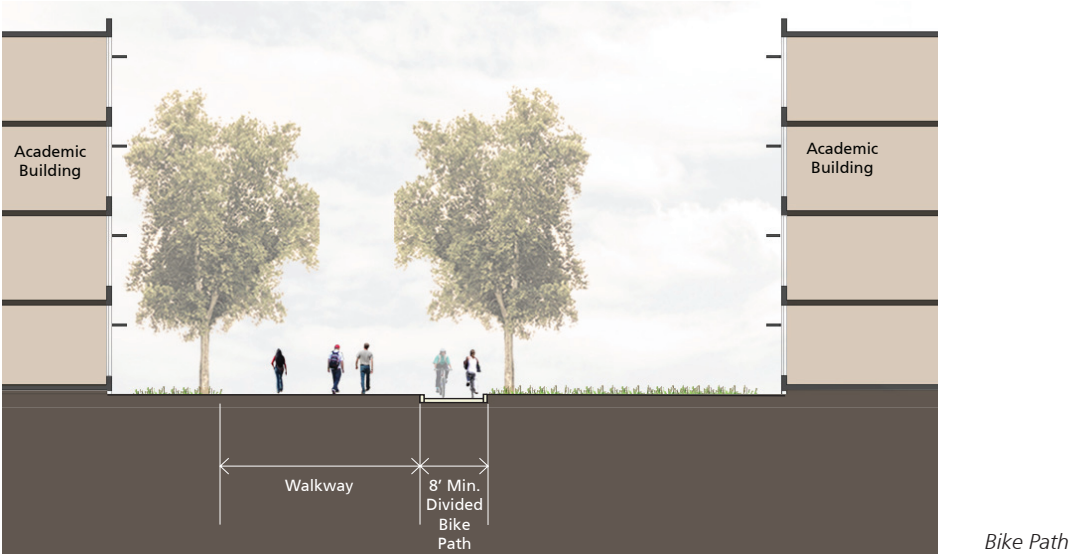
Millennium Park Bike Station in Chicago contains secure parking for 300 bicycles, free bicycle valet parking for events, lockers, showers and towel service, bicycle rental, a bicycle repair shop, guided bicycle tours, a bicycle camp for children, car sharing facilities, a outdoor café and an Internet station.



Outdoor seating at Millennium Park Bike Station

Bikestation, Long Beach

provides attended bicycle parking, 24-hour access for members, bicycle repairs and air, bicycle rentals and loans for members, bicycle sales, information, and a snack bar.



Transit Mall in Long Beach, and the Millennium Park Bicycle Station in Chicago. Best practice bicycle rental facilities include self-hire Velov bikes in Lyon, France, which are managed by JCDecaux in exchange for advertising space on city bus shelters.

Participation in local planning processes

SF State representatives will advocate for improved bicycle access facilities between the campus and surrounding neighborhoods. These improvements are beyond the scope of the SF State master plan and fall within the jurisdiction of other agencies such as the City of San Francisco, Caltrans, and the private owner of Stonestown Galleria. Implementation of these improvements affect the campus’s ability to attract bicycle commuters and reduce traffic impacts in the surrounding neighborhoods. SF State’s specific concerns and recommendations are listed in the following table:

Short- to mid-term bicycle improvements
<ul style="list-style-type: none">• Improve bicycle access through Stonestown Galleria to improve connections to the 20th Avenue route.• Provide missing pedestrian signals at key bicycle intersections on Lake Merced Boulevard including both approaches to South State Drive, North State Drive, Winston Drive, 34th Avenue, and Skyline Boulevard.• Complete the gap in the designated bike lane on both sides of Font Boulevard between Holloway Avenue and Lake Merced Boulevard including re-striping for nose-out angle parking to improve bicycle safety.• Close the gap in the designated bike lane on both sides of Holloway Avenue between 19th Avenue through to Junipero Serra, including removal of one lane of traffic.• Improve enforcement of double-parking violations on Holloway from 19th Avenue to Font.• Improve bicycle safety to Balboa Park BART station along Ocean Drive near Balboa BART station.• Add signage at Stern Grove to direct riders along the 20th Avenue bike route through the park.

Vehicular Circulation, Transportation and Parking

Transportation management

SF State will consolidate, enhance, and expand existing transportation programs and activities operated by the campus and ensure University representation on transportation matters in local planning processes. This coordinated transportation management program will seek to maximize the efficiency of on-campus parking, while minimizing negative impacts of automobile trips to and from campus. It will also seek to ensure that SF State's interests are expressed and achieved in local planning processes and negotiations. Specific activities that the University will maintain, enhance, or undertake include:

- Parking management and pricing;
- Management of the SF State Bike Station or Bike Barn;
- Management and enhancement of the campus shuttle;
- Participation in planning and enforcement of on-campus bicycle and pedestrian facilities;
- Negotiation for a universal transit pass program with Muni and other transit providers;
- Advocacy and negotiation for SF State interests in local planning processes affecting bicycle transportation;
- Advocacy and negotiation for SF State interests in local planning processes affecting transit service and capacity;
- Management of a guaranteed ride home program for employees who choose to use transit, bike or walk but face an emergency situation during the day; and
- Management of the campus carshare program.

Universal transit pass program

Because the Daly City BART Station is just beyond the San Francisco County line, it is not included in the Muni Fast Pass program; moreover, BART charges a steep penalty at the county line, so BART rides from San Francisco to Daly City cost nearly twice that of same-distance rides within San Francisco. Since Daly City Station best serves SF State, the campus will negotiate with BART and Muni to address this problem. One potential solution could follow a similar program at Stanford University, wherein SF State would fund a universal transit pass program at a certain price per person per semester. The highest priority in enhancing transit ridership at SF State would be to provide free access to all Muni lines, plus access to BART stations from Embarcadero to Daly City Station—and perhaps as far as Millbrae. Ideally, the program would also be valid on SamTrans and would provide discounted access to BART stations in the East Bay. The estimated cost of this strategy is between \$50 and \$70 per person per semester, but all students and/or all faculty/staff would need to be covered.

In the short run, if a universal pass program cannot be funded, SF State will explore the creation of a special Fast Pass valid at Daly City Station, offered for sale to SF State affiliates only.

	Cost / student / semester	Cost / student or employee / semester
Estimated cost for class pass	\$62.27	\$55.37
Estimated cost for class pass, including capital and operating costs for Muni Route 28, 28L and M-line	\$72.50	\$64.47

Shuttle program

SF State will undertake a number of strategies to improve the capacity of shuttle services between the University and Daly City BART station.

Currently the University provides its own shuttle service using 28-passenger vehicles. In order to increase the capacity and efficiency of shuttle services, the campus will replace the current shuttle services with more frequent, higher-capacity services. In particular, SF State will evaluate the relative merits of doing away with its existing fleet and contracting out shuttle service to a third party provider who can provide more frequent services using larger, 40-foot, low-floor vehicles.

SF State will also continue to work with Muni to improve boarding arrangements at Daly City BART station, including co-location of the 28-Local, 28-Limited, and SF State shuttle stops. In the long term, SF State will work with private developers at Parkmerced to identify potential synergies in providing access to the campus and community from BART through shared shuttle services.

SF State will also examine establishing a shuttle connection to Balboa Park station and City College, particularly if the University cannot create a pass program that covers Daly City station.

Carshare program

SF State will explore expanding the successful carshare program recently established on campus. Three organizations—City Carshare, FlexCar, and Zipcar—currently offer hourly, neighborhood-based rental car services in San Francisco. In San Francisco and nationally, each carshare vehicle provided tends to eliminate between 7 and 24 private vehicles, according to the 2005 Transit Cooperative Research Program Report 108: Car-Sharing—Where and How it Succeeds. These programs work best where a significant share of residents can accomplish their daily needs without needing access to a car, so carshare vehicles are concentrated in the more urban neighborhoods of the city. SF State may need to provide some risk-sharing, such as providing minimum revenue guarantees to the carshare provider at the outset, at least until residential population densities increase and additional neighborhood retail services are provided.



Shuttle Routes

Potential locations for carshare pods include:

- On-street spaces on Holloway Avenue near or adjacent to the Administration Building or the 19th Avenue corner—to be redesignated in consultation with the City and County of San Francisco;
- Surface parking spaces in Lot 2 adjacent to the Administration Building; or
- Surface parking spaces along State Drive near the parking garage.

The carshare program will reduce parking demand on campus through two mechanisms: commuters will be able to run errands and make short trips during the day without having to bring their car to campus, and residents will have access to a vehicle for evenings, weekend, and other trips without needing to own and park a car on the campus or in the neighborhood.

Minimizing parking spillover and keeping the parking system financially solvent

Parking and transportation finance is challenging at all state-funded universities in California. State law restricts the use of academic funds for construction of new parking facilities—all parking must be financed through user fees. Each new space in a parking structure costs upward of \$20,000, not including the cost of land. Underground parking can cost 50 percent to 100 percent more. Annualizing the capital costs and factoring in maintenance costs means that SF State would need to charge nearly \$20 a day to cover the cost of a new structured or underground parking space. However when a new parking structure is built, the cost of that facility gets averaged into the price of all parking permit fees, so the fee impact of building a small new parking structure may, in reality, be modest.

Currently, students pay \$5 a day for parking and most faculty and staff pay less than \$1 a day. Adding too much parking too quickly, would increase the price of parking sharply. The result would be a big drop in parking demand, as commuters find other ways of getting to campus or simply park in the surrounding neighborhoods. If parking spaces sit empty, the price of parking must be raised higher on the spaces that are full in order to pay off the parking construction debt. For the parking system to be financially stable, about 85–90 percent of spaces should be full at peak—just as the central garage currently operates. Ironically, building more parking on campus results in fewer parkers on campus—and more commuters parking in surrounding neighborhoods.

It is important, therefore, that parking losses and additions be balanced with one another in such a way that resulting price increases keep demand steady. Adding parking spaces too slowly or too quickly will both create access and parking spillover problems for the campus. The campus master plan therefore proposes a phased replacement of the existing central garage with a combination of surface parking facilities and smaller perimeter parking structures in order to disperse traffic, serve hubs of activity throughout campus, and free the campus core for pedestrians. Building these new facilities will result in a steady increase in parking fees as the campus population grows, making it all the more important for these increases to be carefully and strategically managed to maintain the proper level of demand.

Applying a conservative, suburban price elasticity of parking demand formula, parking demand remains constant even as the number of campus commuters increases, simply because the cost of parking rises relative to the cost of other transportation choices, such as transit, carpooling or vanpooling. Many commuters will continue to drive at any price, but enough are at the “margin” that a significant mode shift is likely, as has been seen at many other campuses such as Stanford, UC Berkeley, UC Davis, CU Boulder, etc.

For commuters to choose modes other than driving, those other modes must be improved, particularly addressing transit capacity concerns on 19th Avenue. The San Francisco County Transportation Authority’s (SFCTA) 19th Avenue project and the Municipal Transportation Agency’s (MTA) Transit Efficiency Project may address these problems, but in the meantime, SF State is committed to expanding its own shuttle system to meet its commuters’ needs. Carpool, vanpool, bicycle and pedestrian improvements are also provided.

While SF State has no control over commuter parking on surrounding city streets, it is eager to work with the MTA on improved parking management in the surrounding neighborhoods.

Parking replacement

As new campus buildings are developed, replacement parking will be provided as illustrated in the accompanying parking diagram. To ensure flexibility with respect to timing and financing of new parking facilities, several options are offered. The following is a summary of preferred and alternative parking solutions. Construction costs are outlined in Chapter 11: Implementation.

- Clinical Sciences. A surface lot will be developed on the SOTA site in conjunction with the construction of the new Clinical Sciences building.
- New Creative Arts complex. The new Creative Arts complex will include a surface lot. This site is also proposed as a possible alternative structured parking site at a later stage.
- New gym. This facility will add one level of underground structured parking with 290 spaces plus 88 surface parking spaces.
- Lot 25 Parking Site. This site is proposed as a reduced and reconfigured surface parking lot.
- Science. This facility will add 10 new surface parking spaces.
- State Drive. State Drive will be reconfigured more efficiently with 90 degree parking.
- University Conference Center. This facility will provide two levels of structured, underground parking beneath a new conference center at the corner of Buckingham Way and 19th Avenue.

The following table outlines the sequence of adding new and removing existing parking. In order to keep the parking system financially solvent and minimize spillover parking into surrounding neighborhoods, additions and subtractions of parking are evenly matched over time.

Calendar Year	Additions	Project	Losses	Project	Total*	net change
2006					3172	0
2007					3172	0
2008					3172	0
2009					3172	0
1 2010-11					3172	0
2 2011-12	121	Clinical Sciences			3293	121
3 2012-13	178	Creative Arts II	156	Lot 25 (leave 155)	3315	143
4 2013-14			109	North State Drive	3206	34
5 2014-15					3206	
6 2015-16	378	Gym + surface parking	440	Garage Roof	3144	-28
8 2016-17	176	State Drive	86	State Drive (st. + lot outside garage)	3234	62
7 2017-18	10	Science	76	Lot 6 (existing gym)	3168	-4
9 2018-19	220	Winston surface parking**			3388	216
10 2019-20	236	Conference Center	436	Garage Basement	3188	16

* 3,172 total parking spaces as of fall 2005, excluding residential parking at the Village, UPN, and UPS

** Total Surface Parking (290)—includes allowance for shared parking with Stonestown Galleria (70)
(To offset loss at 19th Ave. and Buckingham Way)

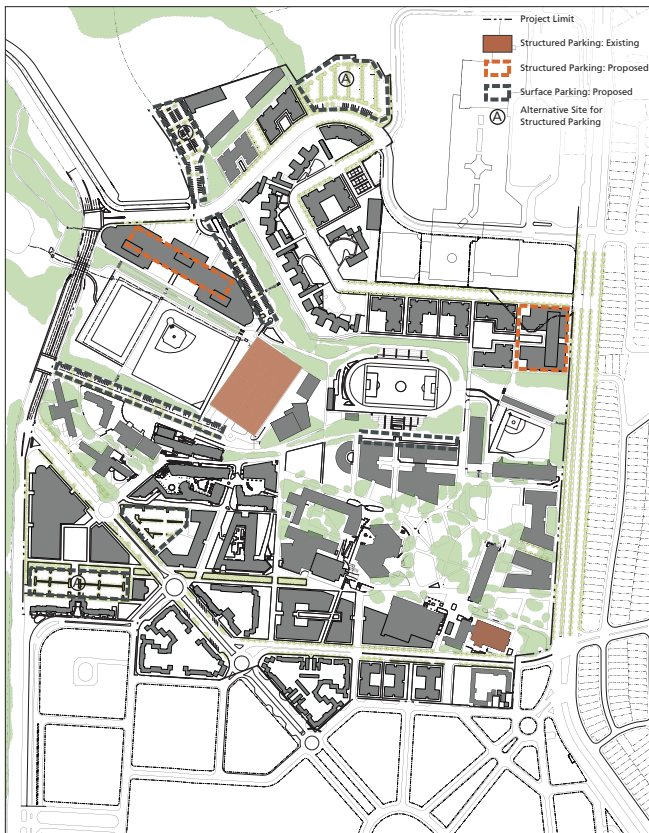
Parking Supply Sequence

Parking fee restructure

As a state institution, the University is not permitted to use state funds, such as those associated with construction of new academic buildings, to help finance the capital cost of parking facilities. This means that new or replacement parking supply will be funded by increased parking fees. In order to keep pace with the current and future

cost to supply parking, average parking fees will increase to over \$16 per day by 2020. This increase will occur through a series of steps reflecting the cost of new parking gains and the loss of existing parking within each year. To ensure that the University is able to service debts when needed, SF State may prefer to ramp up fees in advance of the required cost increments. This practice is employed at other state universities in California as a means of securing initial debt repayments and providing a more graduated price increase for commuters.

In addition to increasing average fees, the parking pricing structure will be readjusted to remove the current incentive for parking on campus more often and to provide a direct financial benefit to those who leave their car at home each time they do so. This incentive may be provided through a strategy of fee equalization. This strategy will remove the existing quantity discount for annual and semester passes whereby annual pass holders pay approximately 85 cents per day compared to \$5 to \$8 per day for daily or hourly passes. Instead, all people parking on campus will be charged an amount that reflects the cost to provide this parking and administer the parking fee transaction. Long-term passes will therefore be replaced with a system of either manual hangtags or electronic lot access and fee collection.



Parking

Campus Circulation

Participation in local processes affecting on-street parking

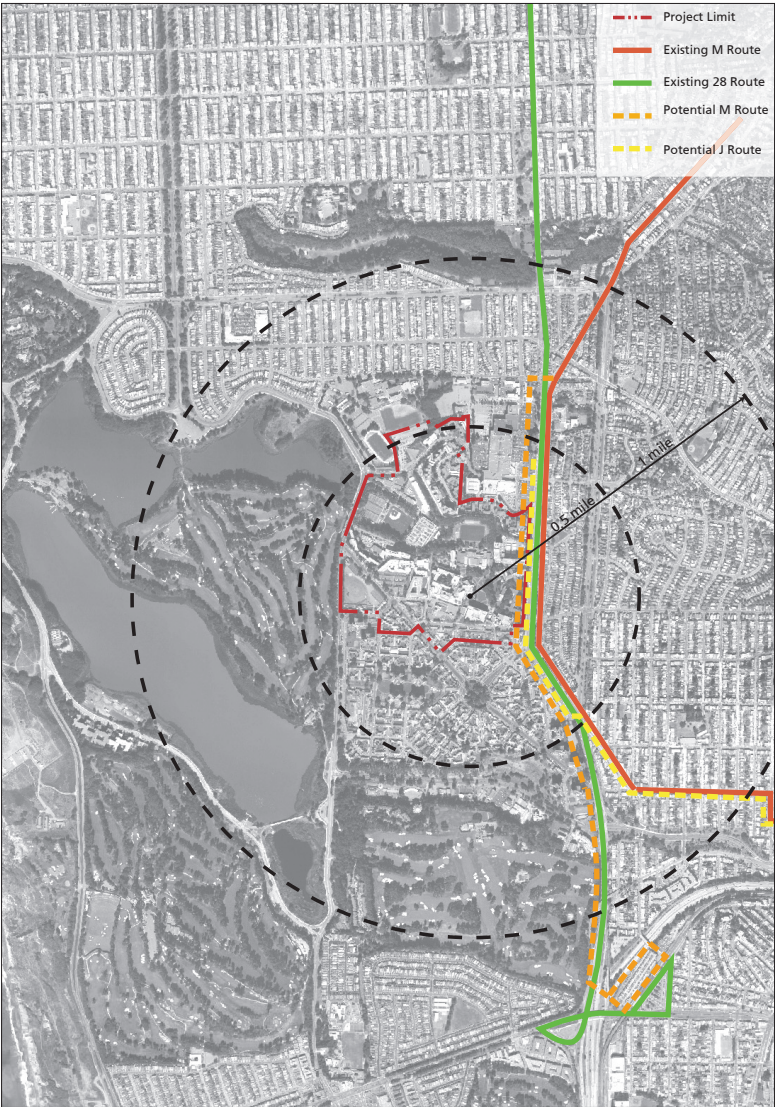
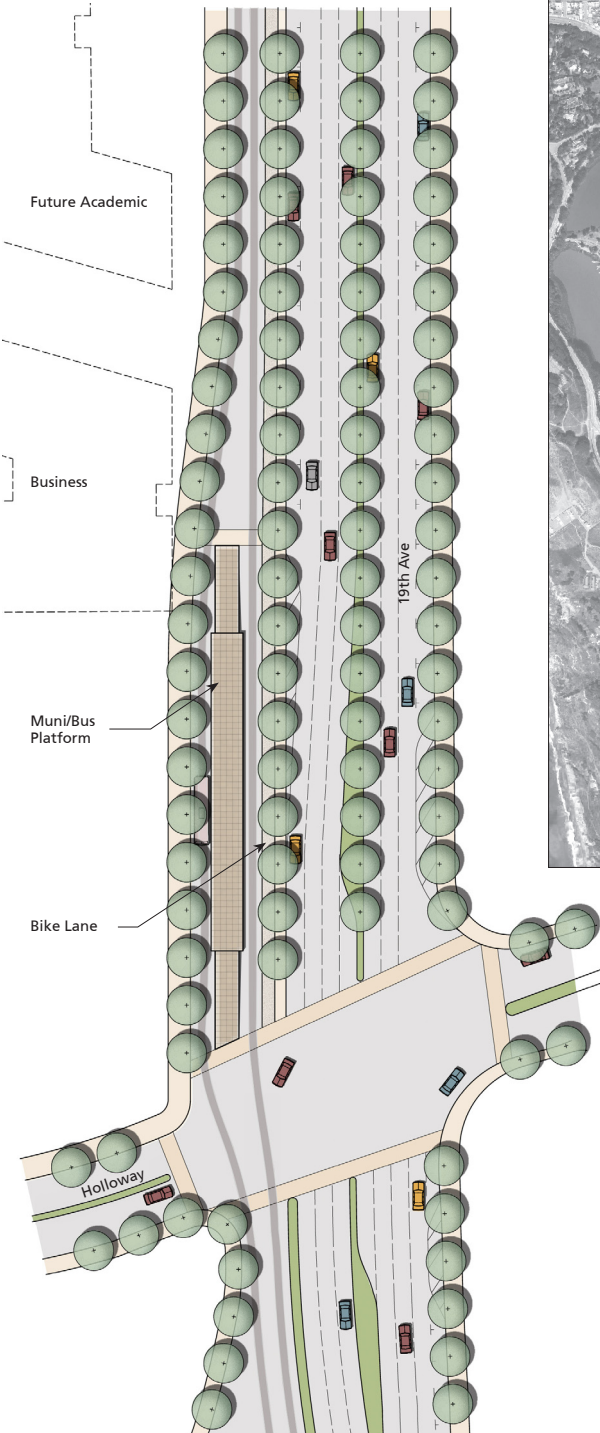
SF State representatives will participate in local planning efforts relating to on-street parking programs in the vicinity of the campus. This involvement will aim to ease local neighbors' concerns and ensure that changes in local parking permit programs are implemented in an appropriate manner to accommodate campus needs. For example, SF State students living in UPS might be restricted from participating in the Parkmerced Residential Parking Permit program, in order to reduce student "spillover" parking into the surrounding neighborhood. The City may consider other adjustments to surrounding Residential Parking Permit policies, such as reducing the two hours of free parking currently provided to one hour or less. A "Parking Benefit District," currently being studied for other San Francisco neighborhoods, could also be considered by the City; in such programs, a limited number of neighborhood permits are sold to commuters, with the net revenue being dedicated to local neighborhood improvements. The City and County of San Francisco manages parking on all public streets surrounding SF State.

Participation in local transportation planning processes affecting transit service

SF State representatives will participate in local planning efforts to advocate for prioritization and funding of improvements in transportation access and transit services affecting SF State commuters. These efforts may include the MTA's Transit Efficiency Project and the SFCTA's 19th Avenue study. Specific improvements sought by SF State are listed as follows:

Short-term transit improvements	Mid-term transit improvements	Long-term transit improvements
<ul style="list-style-type: none"> Improved transit connections at Daly City through more frequent Route 28 and 28L services. (High priority) Optimized schedule and service allocation for Muni Route 28 to SF State, including more frequent services, more 28-Limited service, operating 28-Limited service later into the night, and reviewing peak period allocations to match actual peak demand. (High priority) Reestablishing the M short line between Embarcadero station and SF State, to reduce roundtrip times, improve reliability and increase frequency on the most heavily used portion of the route. (High priority) Improved stop spacing for the 28-Local to improve its speed and reliability. Multimodal transportation solutions along 19th Avenue, such as bus bulbs and signal prioritization, to reduce transit delays. Improved travel speed and reliability on the M Line by addressing causes of delay between West Portal and Eucalyptus. Improved M Line crossing at 19th Avenue by enlarging the "keep clear" area; repainting with more durable materials; using more effective "keep clear" markings; and providing a northbound traffic signal at Mercy High School with a red light that is triggered by the approach of Muni M Line vehicles and/or stopped traffic that may be blocking the tracks. Increased capacity on the M Line boarding platform through modifying the design of railings near the platform, moving fare vending machines to the center of platform, and placing fare vending machines at campus locations. Improved boarding at the Daly City BART station, with co-location of the 28-Local, 28-Limited, and SF State shuttle. 	<ul style="list-style-type: none"> Class pass program developed in negotiation with Muni and other transit agencies. (High priority) Rationalizing fare policies for the SF State area including extension of the BART component of the Muni Fast Pass to Daly City in conjunction with the roll out of the Translink system for electronic tickets that will work on all transit agencies in the Bay Area. Rethinking Route 17 to provide more direct and useful service for SF State commuters and Park Merced residents. Rearranging Muni's M and J Lines with the M Line terminating at SF State, and the J Line extending along the current M Line tracks to terminate at Stonestown. This improvement would also require construction of tailing track within the 19th Avenue right-of-way for streetcars to turn around and drivers to take breaks. 	<ul style="list-style-type: none"> Moving M and J tracks to west side of 19th Avenue to provide a safe and accessible Muni connection to SF State and Stonestown. Extending the M Line to Daly City BART following rearrangement of the M and J Lines.

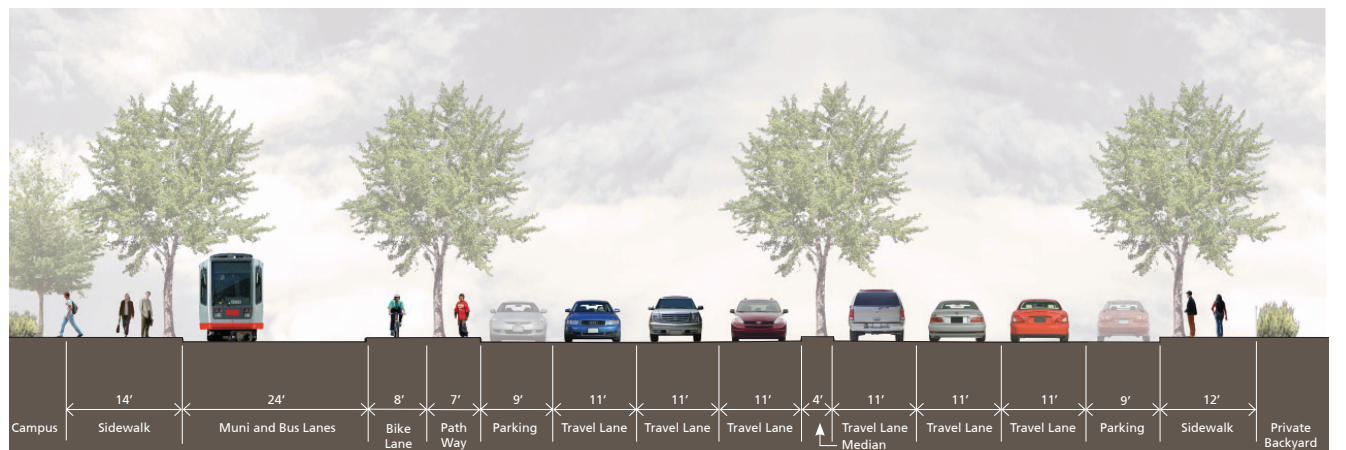
SF State's wish list of transit improvements to be implemented by, or negotiated with, other entities



Right: District Public Transportation Routes
Left: 19th Avenue Concept Plan



Top: Proposed Muni Routes
Bottom: 19th Avenue Section





Service Routes and Loading Bays

Service Access

Service access routes are designed to provide vehicular access to all buildings and loading bays on campus. These routes include narrow vehicular streets on campus as well as pedestrian-priority routes that require card-control access for slow-speed vehicles.