Chapter 3  Project Description

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3.1 **INTRODUCTION**

SF State is currently updating the SF State Campus Master Plan, creating a comprehensive document that addresses all aspects of future physical development and land use on the campus to accommodate the proposed increased enrollment ceiling of 25,000 FTE.\(^1\) The proposed Campus Master Plan will guide change to the campus over the long term and will ultimately give physical form to the University’s strategic vision and values. The purpose of the proposed Campus Master Plan is to address the recent acquisition of property, aging facilities, changing student demographics, and the need for additional academic building space and other support space to accommodate the growth in enrollment anticipated to occur through the planning horizon (2020).

The CSU system requires each campus to maintain a master plan for guiding its development. The CSU system further requires that the campuses undertake periodic review and revision of their master plans, in part to ensure that proposed capital improvement programs remain in compliance with those plans. The CSU system is designed to accept the top academic one-third of graduating high school students, and each campus within the system is required to accommodate its share of present and anticipated future students. The CSU system is facing increased projected demand for higher education over the next 10 years and beyond. Consequently, the new Campus Master Plan for SF State is intended to accommodate the proposed increased enrollment ceiling to 25,000 FTE, a 25 percent increase in enrollment capacity.

The previous SF State Campus Master Plan that comprehensively addressed campus growth and development was completed in 1989, almost 20 years ago, and has been updated numerous times since then to accommodate physical changes to the campus. More recently, the University has acquired new properties to the north and south of the campus and is preparing this updated Campus Master Plan in part to integrate these new properties into the campus. SF State will use the proposed Campus Master Plan as a means to evaluate existing conditions, assess the influence of enrollment growth, recommend capacity limits for new development, and establish guidelines and recommendations for future building projects. The proposed Campus Master Plan addresses only the SF State main campus and does not include the University’s off-campus centers, including the Downtown Center on Market Street and a field station called the Romberg Tiburon Center in Marin County.

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\(^1\) SF State uses the student full time equivalent (FTE) for enrollment planning and for physical planning purposes. One FTE is defined as one student taking 15 course units, which represents a full course load. Students taking fewer course units are considered to constitute a fraction of an FTE (10 course units = 0.66 FTE), whereas students taking more than 15 course units constitute more than one FTE (20 units = 1.33 FTEs). While this is the case, student headcount (HC) will be used as the basis for analysis in the EIR, as it accounts for the total number of students enrolled on campus. However, total student headcount may be adjusted for some environmental topics (e.g., traffic) to account for the number of SF State-related population that could be on campus at any given time.
3.2 PROJECT LOCATION AND VICINITY

The existing 134-acre SF State campus is located in the southwestern corner of the City and County of San Francisco, in California (see Figure 1-2, SFSU Campus and Vicinity). The proposed Campus Master Plan project boundary encompasses an additional 10 acres of land, including: (1) the three blocks of University Park South and the Tapia Triangle, owned by the San Francisco State University Foundation, and (2) the School of the Arts (SOTA) site, under negotiation for purchase by the University at the time of this writing (see Figure 3-1, Campus Master Plan Boundary). The proposed Campus Master Plan contemplates the eventual transfer of the SF State Foundation property to SF State. However, it should be noted that any proposed development of this property anticipated by the proposed Campus Master Plan would not take place until such a land transfer takes place. Additionally, the proposed Campus Master Plan also contemplates the possibility that the SOTA site could ultimately be purchased by SF State. If this purchase does not occur, the proposed use of this site identified in the Campus Master Plan would no longer be applicable to the site.

The 144-acre planning area is generally bounded by: (1) Lake Merced Boulevard and the lake and its associated open spaces, including Harding Park, public and private golf courses, Fort Funston, and the San Francisco Zoo on the west; (2) 19th Avenue (State Route 1) and residential development in the Ingleside neighborhood on the east; (3) the Stonestown Galleria shopping center, Lowell High School, and Lakeshore Alternative Elementary School to the north; and (4) Parkmerced and other residential development to the south. The Pacific Ocean lies to the west of the campus, beyond Lake Merced.

3.3 EXISTING SITE CONDITIONS

3.3.1 Built Environment

The campus is located in an urban area of San Francisco and has been mostly built out with man-made improvements and urban and suburban uses. The campus is composed of more than 50 buildings that were built between 1939 and the present. The buildings provide for academic, library, student services, administrative, support services, parking, and residential uses. The existing buildings range in size from less than 1,000 gross square feet (gsf) to over 600,000 gsf. In total, there is approximately 3.6 million gsf of space in these buildings, not including the recently acquired University Park North (UPN) and University Park South (UPS) complexes (see Figure 3-2, Existing Campus Facilities). The UPN and UPS complexes together provide approximately 960 units of housing and approximately 30 percent of these units are currently occupied by SF State affiliates (i.e., faculty, staff, and students). Most academic and residential buildings on the SF State campus are 1 to 6 stories tall. Notable exceptions are the Towers at 17 stories, Thornton Hall at 9 stories and Hensill Hall at 8 stories.

In general, current campus land uses are grouped geographically. Academic buildings and the library surround the Quad. Groups of residential buildings lie to the north, west, and south of the academic core. Student services are spread between academic and residential areas. Administrative and support services are dotted throughout the campus. The campus has five very large open spaces—the Quad and four playing fields, three of which sit within the valley, which is further described below. There is limited curbside parking along the perimeter of the campus, and a few on-campus surface parking lots. The bulk
of the University’s parking needs is met through the multi-story parking garage east of Maloney Field (See Figure 3-3, Existing Campus Land Use).

Most of the University's courses are taught in one of the ten main academic buildings, to the east and west of the main quadrangle. Colleges also use space within the Administration Building, Gymnasium, and Lakeview Center for academic programs. Of the nine colleges, six occupy at least two buildings, and five of the ten main academic buildings are shared by two to three colleges each. Thus, rather than a direct relationship of “single college, single building,” most colleges are spread out and/or share buildings.

3.3.2 Environmental Setting

The campus has considerable topographic change. The most prominent feature is the valley running east-west between 19th Avenue and Lake Merced Boulevard, just north of the academic core. The valley is the remnant of a steep, V-shaped canyon cut by a seasonal stream that historically flowed into Lake Merced. The canyon was filled in the early 1940s to form three terraces descending westward. The upper level, just west of 19th Avenue, was initially intended as a playfield and currently contains construction trailers. Cox Stadium occupies the middle level. The lowest level was originally maintained as a lawn and served as an additional playfield, but is now occupied by the parking garage, the Central Plant, Maloney Field, and other recreational fields. Despite these alterations, the valley is still recognizable as part of the landform associated with Lake Merced.

The campus landscape includes a variety of open spaces, from open lawn areas and playfields to dense forest and sheltered courtyards. Open spaces are defined by building forms and tree masses. The campus landscaping is dominated by mature stands of Monterey Cypress, Monterey Pine, and Eucalyptus. Several of these small groves located in and around the Quad formerly stood amid agricultural fields and constitute the only surviving pre-campus vegetation. These original Monterey Cypress and Monterey Pine groves have dictated the location and footprint of many of the campus buildings in the core. Along Holloway Avenue, London Plane trees and Canary Island Pine also exist. Figure 3-4, Existing Landscape, illustrates the location of existing vegetation on the campus. There are no surface water bodies, sensitive habitats, or wetlands on the campus, and no special-status species are known to occupy the campus.

3.4 PROJECT BACKGROUND

3.4.1 Campus History

The area that the campus now occupies underwent rapid development in a 25-year period beginning in the late 1930s. The State of California acquired the land in 1939, following the introduction of the “M” streetcar line along 19th Avenue and the construction of Lake Merced Boulevard, whose original alignment made a pronounced eastward jog to avoid the northeast arm of the lake. The University’s earliest temporary buildings and athletic fields replaced farmland. The campus remained largely in this form during the first decade.

In the late 1940s and early 1950s, construction exploded on and around campus. SF State saw the construction of the campus core, while Parkmerced and Stonestown apartments were fully completed by the end of the decade. New buildings continued to replace the older temporary structures, as the 1960s
and 1970s saw the campus receive its first dormitories, a student center, two library expansions, and a pair of towering new science buildings. Even the valley, a remnant of the former stream canyon, had accumulated several structures. The last 15 years on campus have seen development across all building types, including an expansion in student housing, new academic and student support facilities, and an ongoing program of seismic upgrading of the University’s building stock. Moreover, since 1989, the campus has grown from 95 to 134 acres—more than a 40 percent increase—with the acquisition of Lakeview Center, Lots 41 and 42 (a portion of UPS), and UPN (formerly the Stonestown Apartments). In addition, as indicated above, the San Francisco State University Foundation now owns three blocks of UPS east of 19th Avenue and the block known as the Tapia Triangle. Negotiations are underway with the San Francisco Unified School District to purchase the now-vacant site that formerly housed the SOTA (See Figure 3-1, Campus Master Plan Boundary).

3.4.2 California State University (CSU) Mission

The CSU originated with the passage of the Donahoe Higher Education Act of 1960, which united the individual state college campuses in a single system. Before 1960, the State Board of Education had oversight of the individual campuses. In 1972, the state college system was renamed the California State University and Colleges, subsequently becoming the California State University in 1982. Today, the CSU system comprises 23 campuses throughout California, including 10 campuses in southern California. The mission of the CSU, as adopted by the Board of Trustees in 1985, includes the provision of access to postsecondary educational opportunities throughout California, including undergraduate and graduate instruction, through the University and its communities (i.e., campuses).

The Board of Trustees, a body appointed by the Governor and responsible for electing the Chancellor, the chief executive officer of the CSU, oversees the CSU. The Board of Trustees’ authority includes the development of system-wide administrative policies, curriculum development, and the development of facilities. In 1962, shortly after its establishment, the Board of Trustees mandated that all state college campuses accommodate a student enrollment of 20,000 FTEs. The CSU system is required by the State Board of Education to accept the top academic one-third of graduating high school students in California, and each campus within the system is required by the state’s Education Code to accommodate its share of present and anticipated future enrollment. More recently, in 2003, the Board of Trustees directed each campus within the CSU to plan for a projected system-wide enrollment increase of 107,000 FTEs by 2011 (California State University Committee on Educational Policy, 2003). The proposed Campus Master Plan for SF State is intended to respond to the Board of Trustees’ directive to plan for its share of increased enrollment and accommodate the evolving needs of the CSU System’s academic, administrative, and student- and campus-support programs.

3.4.3 Campus Master Plan History

The Board of Trustees adopted the 1989 Campus Master Plan to serve as a guide for the physical development of the SF State campus and campus enrollment growth through 20,000 FTE students. This was in response to the 1962 mandate by the Board of Trustees that all state college campuses accommodate a student enrollment of 20,000 FTEs. The campus is nearing its current enrollment ceiling and facilities are at or reaching capacity. Moreover, as indicated above, the Board of Trustees has directed...
each campus within the CSU to plan for projected system-wide enrollment increases. Therefore, in 2005 the SF State campus launched the process of updating its Campus Master Plan, as further described below.

### 3.5 PLANNING PROCESS

The University has adopted an ambitious strategic plan that calls for San Francisco State University “to become the nation’s preeminent public urban university.” Translating this vision into physical terms was the challenge of the proposed Campus Master Plan.

The development of the proposed Campus Master Plan was initiated in November 2005. The proposed Campus Master Plan is the product of more than a year of collaborative planning, guided by the SF State Master Plan Steering Committee, composed of faculty, staff, administrators, and student representatives, and supported by Wallace Roberts & Todd, LLC/Solomon E.T.C., a firm of campus planners, urban designers, architects, and their subconsultants. The Steering Committee has met regularly with the planners to review work produced at each stage of the process, from the analysis of existing campus conditions through the various iterations of the campus design concept. Members of six sub-committees met with the planning team at the outset of the project to provide insight into their respective areas of expertise, and again at a workshop in May 2006 to evaluate preliminary design concepts.

As part of the initial planning steps, a group of deans, vice presidents, faculty, staff, and students—including members of the Master Plan Steering Committee—participated in a visioning charrette in December 2005. The purpose of the workshop was to brainstorm about the future campus and ways to translate into physical terms the core values and related themes articulated in the University’s Strategic Plan. The Strategic Plan identifies goals designed to further the University’s academic mission. The charrette proved to be a seminal event in the planning process, resulting in a collective vision for the campus that guided development of the Campus Master Plan and served as the litmus test as each design option was explored.

A series of open houses engaged the broader campus community as well as SF State’s neighbors, and confirmed the campus vision and design approach. The planning team presented the analysis findings, vision statement, and initial design concepts at two open houses in April 2006; further concept refinements at an open housing in May 2006; and preferred Campus Master Plan concepts at two open houses held in September 2006. The team presented the draft Campus Master Plan at three open houses in early December 2006, and the draft Campus Master Plan was released in January 2007. Throughout the process, the Campus Master Plan Web site ([www.sfsumasterplan.org](http://www.sfsumasterplan.org)) chronicled the progress of the Master Plan and provided an additional vehicle for community review and comment.

Ultimately, a final Campus Master Plan will be developed that considers public input received on the draft Campus Master Plan and any modifications required as a result of the environmental review process. The CSU Board of Trustees will consider the final Campus Master Plan for approval in Summer 2007.
3.6 CAMPUS MASTER PLAN OBJECTIVES

CEQA indicates that the statement of project objectives should be clearly written to define the underlying purpose of the project, in order to permit the development of a reasonable range of alternatives and aid the Lead Agency in making findings.

The objectives of the proposed Campus Master Plan project originate in the obligation SF State has to meet its educational mission as defined by the California Education Code. The University undertook a lengthy Campus Master Plan development process, led by a Steering Committee comprising the academic and administrative communities on the SF State campus. The project objectives that are drawn from the Campus Master Plan are based on the physical planning principles derived from the long-term vision for the SF State campus, consistent with the University’s strategic plan. The long-term vision and the University’s Strategic Plan are further described in the proposed Campus Master Plan. The project objectives are provided below.

1. Provide facilities for expansion of academic programs and administrative functions to support the proposed enrollment ceiling increase of 25,000 FTEs, required by the CSU and California Education Code;

2. Provide student, faculty, and staff housing to aid in recruitment and retention;

3. Implement the planning principles provided in the proposed Campus Master Plan as follows:

   **A vibrant on-campus community**
   - Reinforce the academic core and extend it westward
   - Integrate residential properties to create a unified campus
   - Provide more close-in, affordable housing that enables faculty, staff, and students to walk to school and work.
   - Redefine Holloway and Buckingham as “college main streets” offering neighborhood retail and services

   **Strong connections to the surrounding city**
   - Strengthen the University’s connections to Lake Merced and the surrounding neighborhoods
   - Work with neighbors, the City of San Francisco, and other entities to improve public transportation and other services that benefit the entire district.

   **Emphasis on the pedestrian and alternative transportation**
   - Cluster development around high-frequency transit connections to encourage transit use
   - Establish bicycle and pedestrian networks that provide safe, direct and attractive connections to work and school
   - Develop the 19th Avenue edge as a transit-, bicycle-, and pedestrian-friendly parkway
   - Implement Transportation Demand Management strategies to reduce parking demand
   - Decentralize campus parking over time from the current central garage to a series of smaller perimeter parking facilities to disperse traffic and parking impacts, claim the
campus core for pedestrians and bicycles, and allow for the eventual removal of the central parking garage from the valley

Recognition in the city and region
- Position semi-public uses at the corners of campus, creating icons that redefine the University’s external identity and engage the larger community
- Create an identifiable and inviting campus perimeter

A continuous greenbelt between 19th Avenue and Lake Merced
- Establish the valley as the central open space of campus
- Provide expanded recreational fields
- Restore ecological landscapes in the valley

Universal design and access
- Ensure that all aspects of the campus physical environment—notably primary circulation routes and main building entrances—are comfortably usable by and inviting to the widest group of people possible
- Organize and design primary pathways and graphic signage to facilitate wayfinding, using a combination of visual, tactile, and auditory cues
- Establish strong north-south connections across the valley and Buckingham Way and Holloway Avenue that link the University to its residential districts and to the surrounding neighborhoods
- Establish clear east-west functional and visual connections across campus and to the surrounding district

A campus that models sustainability
- Develop transportation and land use patterns that encourage greater use of transit, walking, and bicycle commuting and reduce dependence on automobiles
- Make efficient use of redevelopment sites
- Promote sustainability through green building and site design, native landscape, natural storm water management, alternative transportation, higher-density housing, and walkable neighborhood retail.

These project objectives guided the proposed Campus Master Plan development process and the identification of physical improvements necessary and appropriate for the SF State campus to fulfill its educational mission as well as implement its strategic vision and core values.

### 3.7 PROJECT CHARACTERISTICS

#### 3.7.1 Planning Horizon

As indicated above, the proposed Campus Master Plan addresses all aspects of future physical development and land use on the campus through 2020 to accommodate the proposed increased enrollment ceiling to 25,000 FTE. The proposed Campus Master Plan is guided by a long-term vision for the campus that looks beyond 2020, which is further described in the proposed Campus Master Plan. However, the proposed Campus Master Plan to be considered by the CSU Board of Trustees is based on
campus development only through 2020 under the proposed new enrollment ceiling to 25,000 FTE. Growth beyond that point is not currently being contemplated by CSU as it is uncertain in terms of timing, extent, configuration, and program, and therefore, is too speculative to evaluate in this EIR. Moreover, if growth beyond 25,000 FTE is considered by CSU in the future, beyond the 2020 planning horizon for the proposed Campus Master Plan, it will be the subject of a subsequent planning and public involvement process, and will require subsequent review under CEQA.

### 3.7.2 Enrollment and Population Growth

SF State uses the Fall semester student full time equivalent (FTE) for enrollment planning and for physical planning purposes. While this is the case, student headcount (HC) is used as the basis for this EIR, as it accounts for the total number of students enrolled on campus. Table 3-1 provides both FTE and HC for students.

<table>
<thead>
<tr>
<th>Table 3-1</th>
<th>Existing And Projected SF State Total Campus Population</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FTE</td>
</tr>
<tr>
<td>SF State Population</td>
<td></td>
</tr>
<tr>
<td>Students</td>
<td>20,000</td>
</tr>
<tr>
<td>Faculty and Staff</td>
<td>3,428</td>
</tr>
<tr>
<td>Subtotal</td>
<td>30,024</td>
</tr>
<tr>
<td>Non-SF State Population</td>
<td></td>
</tr>
<tr>
<td>Campus Visitors</td>
<td>300</td>
</tr>
<tr>
<td>Hotel/Conference Center</td>
<td></td>
</tr>
<tr>
<td>• Employees</td>
<td>----</td>
</tr>
<tr>
<td>• Visitors</td>
<td>----</td>
</tr>
<tr>
<td>Subtotal</td>
<td>300</td>
</tr>
<tr>
<td>TOTAL</td>
<td>30,324</td>
</tr>
</tbody>
</table>

Notes:
1. Existing student FTE and HC population is based on 2006 fall semester enrollment data for the main campus, which is the most recent enrollment data available.
2. The number of employees is based on comparable conference center/hotels at three other universities in the country, including the Hilton University of Florida Conference Center Gainesville; the Inn & Conference Center, University of Maryland; and University Place Conference Center & Hotel a joint complex of Purdue University and the University of Indiana.
3. The number of visitors in the hotel is based on 90% occupancy of 250 rooms.

The proposed Campus Master Plan was prepared in part to address the proposed increase in the enrollment cap at SF State to 25,000 FTE. Currently, the campus is nearing its existing enrollment cap of 20,000 FTE. In terms of a headcount, there are about 26,596 students enrolled at the main SF State campus, as of Fall 2006. As indicated above, under the proposed Campus Master Plan, the campus student enrollment is proposed to increase to 25,000 FTE by 2020, which would represent a headcount of about 32,113 students, or a net increase of about 5,517 students. There would be an associated increase in faculty and staff as a result of this enrollment increase. SF State is projecting that faculty and staff would increase from about 3,428 employees at the present time to about 4,139 at an enrollment level of 25,000 FTE.
FTE students, for a net increase of about 711 employees. The proposed Campus Master Plan would facilitate the construction of new building space to serve this increased population.

In addition to students, faculty, and staff, other persons who may be on campus on a given day include campus visitors, who currently make up an estimated 300 people. By 2020 under the proposed Campus Master Plan, this population could increase related primarily to the visitors to the proposed Hotel and Conference Center. Additionally, non-SF State employees at the Hotel and Conference Center would also be on campus. Overall, there would be a net increase in non-SF State population under the proposed Campus Master Plan of about 490 people. Apart from these daily populations, additional visitors would be present on the campus on some days attending special events such as concerts, graduation ceremonies, and athletic events.

3.7.3 Master Plan Building Concept

3.7.3.1 Building Capacity

The charge of the proposed Campus Master Plan is to accommodate an enrollment of 25,000 FTES on campus. The SF State’s 2007-2008 5-Year Capital Improvement Plan (CIP) and subsequent FTE building projects add sufficient “capacity space” to the campus to meet this enrollment increase. Capacity space, measured in FTE, is instructional space that, by CSU formula, determines the physical capacity of the campus to support enrollment. The campus’s total capacity cannot exceed its approved enrollment ceiling—for example, a campus with an enrollment cap of 25,000 FTEs is limited to capacity space of 25,000 FTE. All academic departments contribute to the campus’s total capacity.

To accommodate enrollment growth and program needs, and to rectify existing building deficiencies, the University each year identifies capital improvement projects in 5-year increments, approved by the CSU Board of Trustees. SF State’s 2007-2008 5-Year CIP includes six replacement buildings: Creative Arts Phases 1 and 2, Clinical Sciences, Behavioral and Social Sciences (BSS), Health and Human Services (HHS), and a Gym and Recreation Center. The renovation of the Paul Leonard Library, currently in design, was part of the previous funding cycle.

The proposed Campus Master Plan addresses additional FTE projects that will be included in subsequent CIPs. A new Facilities Building and Corporation Yard becomes the seventh replacement building in order to free a key site for the Gym and Recreation Center. Five subsequent projects include replacement buildings for Science, Business, and Ethnic Studies and Psychology, and two unassigned academic buildings, one of which will house the University Club. Collectively, these 2007/2008 CIP and subsequent FTE projects add approximately 809,000 gross square feet (GSF) of academic and academic/support space to the campus by 2020, as illustrated in the Table 3-2.

In addition to projects that provide for FTE capacity, the proposed Campus Master Plan also provides additional building space to include a new 250-room Hotel and Conference Center and a new satellite power plant. Overall, the proposed Campus Master Plan will result in the construction of a net increase in non-residential building space of about 1.2 million gsf. New housing will also be constructed and converted on campus through the planning horizon of the proposed Campus Master Plan. Overall, a net increase of about 846 units of new and converted housing will be provided by 2020. All of these development projects are further described in Section 3.7.3.3, Urban Design Plan, below.
Table 3-2
Building Capacity Identified in 2007/2008 CIP and Subsequent Projects

<table>
<thead>
<tr>
<th>Five-Year Capital Improvement Program 2007/2008 – 2011/2012</th>
<th>Existing Space to be Demolished¹</th>
<th>Proposed</th>
<th>Net Change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>GSF</td>
<td>FTE</td>
<td>GSF</td>
</tr>
<tr>
<td>Joint J. Paul Leonard Library and Sutro Library</td>
<td>282,210</td>
<td>0</td>
<td>377,610</td>
</tr>
<tr>
<td>Clinical Sciences</td>
<td>38,923</td>
<td>0</td>
<td>150,000</td>
</tr>
<tr>
<td>Creative Arts Phase 1</td>
<td></td>
<td></td>
<td>133,500</td>
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<tr>
<td>Creative Arts Phase 2</td>
<td>174,660</td>
<td>1,021</td>
<td>107,200</td>
</tr>
<tr>
<td>Behavioral &amp; Social Sciences (BSS) Classroom²</td>
<td></td>
<td></td>
<td>2,261</td>
</tr>
<tr>
<td>Health &amp; Human Services (HHS) Classroom³</td>
<td>132,964</td>
<td></td>
<td>79,200</td>
</tr>
<tr>
<td>Gym &amp; Rec Center⁴</td>
<td>157,011</td>
<td>484</td>
<td>250,000</td>
</tr>
</tbody>
</table>

Other Future FTE Projects

| Facilities & Corporation Yard                              | 114,769 | 0     | 141,000 | 0     | 26,231  | 0     |
| Science                                                   | 130,679 | 1,805 | 169,000 | 2,286 | 38,321  | 481   |
| Existing Business                                         | 59,085  | 2,126 | 59,085  | 0     | 0       | -2,126|
| New Business³                                             | 0       | 0     | 67,000  | 2,658 | 67,000  | 2,658 |
| Ethnic Studies & Psychology                               | 60,017  | 394   | 75,000  | 493   | 14,983  | 99    |
| Classroom/Faculty Office                                  | 0       | 0     | 149,000 | 1,000 | 149,000 | 1,000 |
| Classroom/Faculty Office & University Club                | 0       | 0     | 27,000  | 200   | 27,000  | 200   |

SUBTOTAL FTE CAPACITY | 1,150,318 | 8,091 | 1,959,295 | 13,464 | 808,977 | 5,373 |

Other Future Projects

| Hotel                                                      | 0       | 0     | 260,000 | --    | 260,000 | --    |
| Conference Center                                         | 0       | 0     | 106,000 | --    | 106,000 | --    |
| Satellite Power Plant                                     | 0       | 0     | 13,438  | --    | 13,438  | --    |

SUBTOTAL OTHER CAPACITY | 0       | 0     | 379,438 | --    | 379,438 | --    |

NET NEW CAPACITY | 1,150,318 | 8,091 | 2,338,733 | 13,464 | 1,188,415 | 5,373 |

Notes:
1. Existing Humanities and Social Sciences (HSS) includes BSS and HHS.
2. New BSS building includes 30,377 gsf of interdisciplinary space.
3. New HHS building includes 22,792 gsf of interdisciplinary space.
4. CIP calls for 212,000 gsf for gym.
5. Existing Business building to be converted to faculty offices.
3.7.3.2 Campus Land Use Plan

As illustrated in Figure 3-5, Land Use Plan, the proposed Campus Master Plan provides a land use plan that would reinforce existing patterns and create new linkages. The proposed Campus Master Plan envisions a clear definition of districts. Each of the districts provides clarity of function within the campus, as well as presenting a distinct and definable edge character to the external community.

The Land Use Plan concentrates academic uses around the Quad, strengthening the academic core and extending it westward along the new Arts Allée. The academic uses are flanked by residential villages to the north, south, and west. The plan establishes distinct residential districts, with undergraduate housing to the west and new housing villages to the north and south on the recently acquired University Park North and University Park South properties. The proposed Campus Master Plan also establishes vibrant college main streets along Holloway and Buckingham as the anchors to the new residential districts.

Semi-public uses—the Creative Arts complex, the Gymnasium/Recreation-Wellness Center, and the Conference Center/Hotel—are located at key corners of the campus to heighten the University’s visibility and provide inviting and convenient access for visitors and community members attending campus events. These uses have both an internal campus function and a public function that attracts the larger community. Facilities and the corporation yard are relocated to the northernmost part of campus, freeing land closer to core and in the valley for recreation and academic use. Open space unifies and gives the campus its distinctive identity. By clustering like uses and utilizing land more efficiently, the proposed Campus Master Plan allows for significant areas of open space the valley, Quad, 19th Avenue entry that provide needed gathering and recreation space and serve as powerful emblems for the University, making the campus uniquely memorable.

3.7.3.3 Urban Design Plan

The Urban Design Plan for the campus, described in Figure 3-6, Master Plan Diagram, expands upon the identified building capacity and Land Use Plan concepts discussed above. The Urban Design Plan designates sites for proposed buildings identified in Table 3-2 in accordance with the Land Use Plan.

Overall, campus land would be used more effectively and efficiently through more purposeful siting of new and replacement buildings to create a well-defined network of open space, internal courtyards, strengthened campus edges and vistas, and better connections between open spaces, thus generally creating a unique special language for the campus defined by strong built form and distinctive open space.

Proposed changes under the proposed Campus Master Plan involve the demolition of existing buildings that are at or beyond their useful life, and the construction of new modern, efficient and larger buildings on those sites to serve the planned increased population, as described in Table 3-2 above. The proposed new and replacement buildings are further described below and located on Figure 3-6, Master Plan Diagram.

Academic and Support Buildings

The Urban Design Plan will locate new academic buildings close to the Quad on redevelopment sites vacated by buildings slated for demolition (see Table 3-2). Early projects include the BSS and HHS buildings that will be relocated to the site of the former Creative Arts Building. A new Science building will be located on the site of the existing gym, putting it in close proximity to the science facilities in
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Hensill and Thornton Halls. The proposed Campus Master Plan calls for the SOTA site, at Tapia Drive and Font Boulevard, to accommodate the new Clinical Sciences Building. This site offers good access for drop-off for those using the childcare and nursing facilities that will be housed in this building.

Building C of the Villages, which currently contains 49 units of student housing, will be converted to much-needed space for Student Services facilities. The building is immediately adjacent to the existing student services building on Centennial Way, centrally located to housing and the academic core.

Semi-Public Buildings

Each of the proposed semi-public buildings, including the Gymnasium/Recreation-Wellness Center, the Creative Arts Building, and the Conference Center/Hotel will have an impact on the campus’s external identity, public accessibility, and the relationship with surrounding land uses, buildings and spaces. These buildings are further described below.

The new Creative Arts building will be located on the existing softball field, between Font Avenue and Lake Merced Boulevard. This facility will be built in two phases and is intended to house both academic facilities as well as auditoria for public performances. In keeping with the character of other academic buildings on the campus, the new buildings will be located around an internal courtyard that will serve as an outdoor gathering space and breakout area during public events.

The Gymnasium/Recreation-Wellness Center will house a NCAA regulation-size basketball/volleyball court, an Olympic-size swimming pool and a multi-court gym and fitness center, in addition to locker rooms and other support spaces. It also will house academic and office space for the Kinesiology program. It will be one of a new breed of recreation centers that takes a holistic approach to wellness and plays a much-expanded role as a social center of the campus. The Gymnasium/Recreation-Wellness Center will be located on the site of the existing Lakeview Building and Corporation Yard, overlooking the existing athletic fields in the valley. Pedestrian access to the center from the rest of the campus will be via a new network of paths described in Section 3.9, Circulation Plan. Public vehicular access will be from Lake Merced Boulevard and Winston Drive.

The new Conference Center/Hotel will be located in the northeast corner of the campus at the intersection of the realigned Buckingham Way and 19th Avenue, which will take advantage of proximity to transit and the Stonestown Galleria. The new facility will contain a small conference center, a hotel of approximately 250 rooms, and a visitor center for prospective students and families and other University guests, overlooking the valley. The Conference Center/Hotel will serve SF State as well as the larger community. The Conference Center will provide much-needed space for University-sponsored conferences and events and a venue—unique in this area of the city—for programs, meetings, retreats, and seminars. Campus access will be via the new pedestrian bridge linking the UPN housing on Buckingham Way with the core and through the building courtyard to the new softball field along 19th Avenue, between Hensill and Thornton Halls.

Residential Buildings

The Land Use Plan in the proposed Campus Master Plan indicates that residential uses will be located north, south, and west of the academic core (see Figure 3-5, Campus Land Use). Housing west of the academic core is designated primarily for freshmen students. The campus currently provides 2,252
bedspaces in this portion of campus for students. Additionally, the campus and the SF State Foundation have acquired numerous apartment buildings north and south of the academic core. These include the former Stonestown apartments along Buckingham Way, now called UPN, and several buildings formerly part of Villa Parkmerced along Holloway Avenue, now called UPS (see Figure 3-1, Campus Master Plan Boundary). The proposed Campus Master Plan calls for a combination of housing options for faculty, staff, upper division and graduate students, and students with families in UPS and UPN, as further described below.

The Urban Design Plan identifies three sites to be redeveloped with housing in more compact and dense configurations in order to increase the supply of housing (see Figure 3-6, Master Plan Diagram). New housing is planned on the existing Sutro Library site, on the UPN site north of Cox Stadium, and on the block of UPS west of Cardenas Avenue. The Sutro Library site is a potential site slated for construction of for-sale housing for faculty and staff. Redeveloped housing in UPN and UPS will be rental housing. As indicated in Section 3.2, Project Location and Vicinity above, development on UPS will not take place until that property, currently owned by the SF State Foundation, is transferred to SF State. The new buildings will be 4-story stacked flats over structured parking with 2-bedroom units that the University can rent either by bed (to upper division students) or by unit. Overall, the new housing construction in UPN (including that provided on the Sutro Library site) and UPS provide for a total of about 542 new and replacement housing units.

Additionally, as indicated in Section 3.3.1, Built Environment above, of the 960 units currently in UPS and UPN, only about 30 percent are currently occupied by SF State affiliates. The proposed Campus Master Plan acknowledges that the number of SF State affiliates in these units will likely increase over time as units become available to SF State through attrition (i.e., as existing tenants voluntarily vacate their units). For the purposes of this EIR, it is expected that about 85 percent of these units will be occupied by SF State affiliates by 2020. Therefore, the conversion of existing housing units to SF State uses will likely result in about 354 additional units of housing being available for SF State uses through the planning horizon. This accounts for the anticipated demolition of about 205 units that would be required to allow for the proposed construction of new units in UPN and UPS. The number of student beds in the campus core will decrease by about 49 units (about 148 beds), due to the conversion of Village Building C to Student Services. Overall, a net increase in about 846 units of new and converted housing would be provided by 2020 (see Table 3-3). For the purposes of this EIR, it is assumed that students would occupy approximately half of the 846 additional units and faculty and staff would occupy the remaining units.
### Table 3-3
Net Increase in On-Campus Housing Through 2020

<table>
<thead>
<tr>
<th>HOUSING SITE</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing UPS/UPN</td>
<td></td>
</tr>
<tr>
<td>Existing Units Occupied by SF State Affiliates¹</td>
<td>288</td>
</tr>
<tr>
<td>Existing Remaining Units Occupied by SF State Affiliates by 2020²</td>
<td>642</td>
</tr>
<tr>
<td>Net Increase</td>
<td>354</td>
</tr>
<tr>
<td>New Construction UPN/UPS</td>
<td>542</td>
</tr>
<tr>
<td>Core Housing</td>
<td>-49</td>
</tr>
<tr>
<td><strong>NET INCREASE</strong></td>
<td><strong>846</strong></td>
</tr>
</tbody>
</table>

Source: Program Assumptions, San Francisco State University Master Plan, June 2006; Campus Master Plan, January 2007.

Notes:
1. Currently, about 30% of existing 960 UPS and UPN units are occupied by SF State affiliates.
2. The proposed Campus Master Plan acknowledges that the number of SF State affiliates in these units will likely increase over time as units become available to SF State through attrition (i.e., as existing tenants vacate their units). For the purposes of this EIR, it is expected that about 85 percent of these units will be occupied by SF State affiliates by 2020. The number of remaining units provided above is based on that assumption. The number of existing remaining units also accounts for the demolition of about 205 units that will result from the proposed new construction in UPN and UPS by 2020.

### Facilities and Maintenance

The corporation yard and facilities offices will be relocated to Lot 25 on the north side of Winston Drive, vacating the site for the new Gym/Recreation-Wellness Center. Somewhat expanded space will be provided in this location to account for existing and anticipated needs. A new vehicular underpass beneath Winston Drive will permit maintenance and delivery vehicles to have unimpeded access to the rest of the campus. Additionally, a new satellite power plant would also be located on the northern edge of the campus to provide adequate power generation and heating hot water capacity on campus.

### 3.7.3.4 Design Standards

In order to achieve a unified and coherent architectural identity in keeping with the proposed Campus Master Plan principles of sustainability and environmentalism, the following architectural and urban design standards will govern the design of all new buildings.

#### Adherence to Build-To-Lines

The plan establishes build-to-lines across the campus that will define campus spaces, pedestrian and landscape spines, and axes. The build-to-lines will determine each new building’s configuration and major frontages on the main campus spaces, in a manner similar to the street and block-pattern of a town. Build-to-lines will define the limits of new construction, ensuring that new buildings, by their location and massing, will contribute to shaping the larger campus spaces. See Build-to-Lines on page 48 of the proposed Campus Master Plan.

#### Height Limits

Height limits proposed in the Campus Master Plan will maintain a consistent scale on the campus, relating to existing buildings where appropriate, and allowing iconic buildings such as the Student Center to maintain their unique identity. As illustrated in the Figure 3-7, Building Height Limits, academic
buildings around the Quad and residential buildings will maintain a 50-foot height limit, which will accommodate a number of floor-to-floor arrangements, depending on the building type. In other words, the number of stories will vary depending upon the building type.

The height limit will be raised to 70 feet along 19th Avenue to reinforce the campus’s urban frontage, along Centennial Walk consistent with the existing Humanities and Village buildings, and for portions of the Creative Arts Building and the Gymnasium/Recreation-Wellness Center. A 100-foot limit applies to the Hotel/Conference Center and the high-volume space in the Creative Arts buildings.

**Daylighting**

According to the proposed Campus Master Plan, natural daylight will be used as the primary means of lighting campus buildings. As part of the campus goal of creating a sustainable environment, new buildings will be required to rely on daylight for all spaces unless program requirements dictate otherwise. Narrow-width buildings will be preferred instead of deep-plan configurations to avoid the need for extensive artificial lighting. Because of the ambient light and frequent occasions when the campus is shrouded in fog, the majority of building elevations can be transparent. Sun shading will be appropriate on southern exposures and the use of light-shelves is advantageous in avoiding the problems of glare and the need to bounce light deep into interior spaces. In large spaces such as studios, skylights and north-lights will be encouraged.

**Natural Ventilation**

According to the proposed Campus Master Plan, natural ventilation will be used for all offices, classrooms, labs, and teaching spaces, except for those spaces that code requires to be mechanically ventilated. Because of SF State’s benign ocean climate, natural ventilation is easily achieved through operable windows, louvers, and the use of skylights and north-lights to achieve a thermal chimney stack-effect.

**Architectural Character**

In keeping with the design of several of the original campus buildings and the recent renovation of others, an architectural language that responds to climate and setting will be developed under the proposed Campus Master Plan. The design standards related to architectural character are summarized below.

- Architectural elements such as horizontally proportioned windows, overhanging sun-shading elements on southern exposures, light-colored stucco cladding, or poured-in-place concrete are common features of both the oldest and most recent campus buildings that should be applied.
- Arcades, porches, balconies, and portals are responsive to the campus’s benign climate, and will be used to encourage pedestrian activity and to provide shade, natural ventilation, and day-lighting to interior spaces.
- Transparency in buildings at ground level, which invites pedestrians inside, is particularly important along the two proposed campus main streets—Holloway Avenue and Buckingham Way.
- Roof spaces should be either useable roof terraces, providing additional open space, or they should be planted as green roofs, allowing the roof to reduce heating and cooling loads and reduce storm water runoff. These strategies can also be used in combination.
• Special attention should be paid to the design and location of front entrances to buildings. They should be bright, glazed, and easy to find. Provision should be made for treating the design of doorways as an integrated art component.

3.8 **LANDSCAPE AND OPEN SPACE**

The campus is situated within a larger green space network that includes Lake Merced, Stern Grove, San Francisco Zoo, Fort Funston, and several public and private golf courses. This collection of recreational resources rivals other major urban parks within San Francisco including Golden Gate Park and the Presidio. Also part of this green network are the district’s landscaped streets and boulevards, including Sloat, Sunset, Font, and Junipero Serra (19th Avenue, although part of the city’s original parkway plan was never realized as such). Because of the way in which development and infrastructure have evolved in this part of the city, however, the campus remains relatively isolated, cut off from these exceptional recreational and natural resources.

The proposed Campus Master Plan outlines a set of strategies to connect the campus more firmly to its surroundings. These include both on-campus improvements that are under the University’s purview and evaluated in this EIR, as well as off-campus improvements under the jurisdiction of other entities. These latter strategies have benefits for both the campus and the surrounding district, but are offered in the proposed Campus Master Plan only as recommendations. Overall, the strategies would strengthen the campus’s connection to Lake Merced; transform 19th Avenue, Font Boulevard, and Lake Merced Boulevard into parkway streets; and provide for connection to Parkmerced’s green space network. The proposed Campus Master Plan defines landscape character zones, as well as ecological zones, landscape and site design guidelines, and a storm water management plan that seek to implement the strategies described further below.

3.8.1 **Landscape Character Zones**

The character of the campus landscape derives as much from the special light and climate conditions of this coastal site, as from the distinctive vegetation. The interplay of sun and fog, dark massive cypress trees and lawns, and the rich combinations of Mediterranean and native species all combine to create this unique environment. The proposed Campus Master Plan draws on these characteristics and enhances and extends them throughout the open space network. The proposed Campus Master Plan establishes six Landscape Character Zones (see Figure 3-8, Landscape Character Zones) on campus, including Valley and Creek, Arts Allee, Campus Core/Quad, Courtyards, Passageway Spaces, City Streets, and Retail Streets, which are further described below. Perhaps most significantly, the proposed Campus Master Plan establishes the central valley as an expanded recreational zone with a strong natural landscape framework that is inspired by the historic ecology of the Lake Merced basin (see description of Valley and Creek below).

3.8.1.1 **Valley and Creek**

The valley landscape recognizes the campus’s position in the historic ecosystem at the junction of a former estuary (now a freshwater lake), creek, and upland forest and establishes plant communities
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appropriate to that ecosystem (see Campus Ecological Zones diagram on page 63 of the proposed Campus Master Plan).

- Upland woodland: sloped areas rising from the valley floor are designated as upland woodland with a mix of coastal hardwoods—mainly coast live oak—and understory scrub.
- Valley scrub zone: the valley floor (bordering recreational fields) is designated as valley scrub and has a mix of low shrubs and groundcovers typical of this ecosystem, such as coyote brush, manzanita, and ceanothus.
- Riparian Corridor: the creek itself is designated as riparian corridor, including plants typical of coastal creeks in the area with a predominance of willow in low areas and hardwoods—predominantly oaks—as the banks begin to rise. The creek’s ultimate connection to Lake Merced completes the historical and ecological link.

More detailed plant palettes describing the composition of these communities are provided below under Section 3.8.2, Landscape and Site Design Guidelines. The valley landscape zones—upland woodland, valley scrub, riparian corridor—would be introduced in specific areas bordering and separating the recreational facilities. In general, these landscapes would be installed gradually over time in conjunction with the development of adjacent projects such as the Gymnasium/Recreation-Wellness Center, or the Millennium Bridge.

The upland woodland zones would be introduced as a part of a prescribed gradual reforestation plan for the eucalyptus trees that now cover the slopes bordering the valley. The valley scrub zones would be introduced to serve a dual function as storm water retention/filtration zones described later in this chapter. The riparian corridor zone would be timed with a larger creek daylighting project and construction of a bridge/pedestrian underpass to allow the creek to flow under Lake Merced Boulevard into Lake Merced. The above improvements will enhance the existing conditions, both within the valley and at the creek connection to Lake Merced.

3.8.1.2 Arts Allée

The Arts Allée zone will be an important new connector from the Quad to the new Creative Arts complex, and will clearly be distinguished from other parts of campus by its unique landscape. A double row of medium-to-large ornamental trees will line a landscaped linear green. The selected tree species should have a distinctive, upright habit and striking fall color, such as ginkgo, red maple, Bradford pear, or sweetgum. Borders will be ornamental in nature taking on the character of adjacent landscapes and similar to other passageway spaces (see description below).

3.8.1.3 Campus Core / Quad

The existing Quad landscape is characterized by large stands of Monterey cypress and Monterey pine with broad lawns and sweeping borders of lush, green, clumping masses of plants like agapanthus, bergenia, camellia, and azalea; flowering is rather minimal and seasonal. According to the proposed Campus Master Plan, new landscaping in the Quad and in new extensions of the Quad landscape zone should follow this same palette. A replacement program for the Monterey cypress and Monterey pines should be started so that as these trees decline, others are sufficiently mature to take their place.
3.8.1.4 Courtyards

The interior courtyards of both new and existing buildings should be landscaped with varied plant palettes. These are places where the individuality of each building can be expressed, using variations of perennial borders or Mediterranean, tropical, and California native plants. Each courtyard should be distinctive and unique creating a series of “special spaces” throughout campus that are accessible and encourage people to gather.

3.8.1.5 Passageway Spaces

Perhaps the most ubiquitous landscape zone in the proposed Campus Master Plan comprises all of the passageways and in-between spaces among buildings throughout campus. The desired character of these spaces is largely evident in the existing campus landscape. New spaces should be composed of similar small ornamental accent trees such as princess tree and dogwood and occasional large accent trees such as Monterey cypress, Deodor cedar, and maple. Ornamental borders should follow cues from existing landscapes adjacent to any given segment of passageway that is installed.

3.8.1.6 City Streets

19th Avenue

19th Avenue is SF State’s urban frontage, envisioned in the proposed Campus Master Plan as a gracious civic boulevard with continuous, tightly spaced rows of street trees, a landscaped median separating the two directions of traffic, a landscaped border with heavy screen planting on the residential side (east), and the campus landscape border on the west side. The campus landscape will vary, reflecting the different planting zones that interface with the 19th Avenue edge, whether it is the Quad, passageway, courtyard, or the valley natural area (see Figure 3-8, Landscape Character Zones). For the purposes of analysis for this EIR, it is assumed that only the landscaping along the campus edge will be implemented by SF State as part of the proposed Campus Master Plan.

Lake Merced Boulevard

Lake Merced Boulevard is one of San Francisco’s important parkway streets as it passes between Harding Park Golf Course, Lake Merced, and SF State. As such, along the campus, Lake Merced Boulevard should be landscaped as a parkway, with continuous street trees, median plantings, and campus border landscape. The palette of the campus border landscape will align with the natural plantings of Lake Merced and the re-naturalized valley landscape within campus, using upland woodland and upland scrub native plants, as well as the signature Monterey cypress and Monterey pines typical of the area. For the purposes of analysis for this EIR, it is assumed that only the landscaping along the campus edge will be implemented by SF State as part of the proposed Campus Master Plan.

Font Boulevard

Font Boulevard is another important parkway street at the campus edge. Since it runs through a residential district, it should have a distinctly different character than 19th Avenue or Lake Merced Boulevard. Font should feel like a very pedestrian-friendly residential boulevard with gracious sidewalks shaded by tightly spaced street trees, on-street parking, and ample bike lanes separated from the sidewalks by a landscaped...
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strip and a planted center median—potentially with a bioswale—also with tightly spaced street trees. For the purposes of analysis for this EIR, it is assumed that only the landscaping along the campus edge will be implemented by SF State as part of the proposed Campus Master Plan.

Winston Drive

Winston Drive is an important border street for the campus, forming much of its northern edge. It, too, should be characterized by tightly spaced street trees and a landscape strip separating the pedestrian zone from the vehicular thoroughfare. The campus edges will reflect the various planting zones that interface with Winston Drive, such as passageway, courtyard, or valley natural area. For the purposes of analysis for this EIR, it is assumed that only the landscaping along the campus edge will be implemented by SF State as part of the proposed Campus Master Plan.

3.8.1.7 Retail Streets

The proposed Campus Master Plan calls for Holloway and Buckingham to be designated as the campus village main streets, enlivened by retail and residential activity. These corridors are conceived as shady main streets where strolling and outdoor dining feel safe and inviting. Rows of tightly spaced street trees with a high canopy, such as London Plane trees or Brisbane Box, should be used. Along Holloway, the campus edge will assume the characteristics of the campus landscape zones interfacing with the street, such as passageway or courtyards.

3.8.2 Landscape and Site Design Guidelines

The landscape and site design guidelines provided in the proposed Campus Master Plan include guidelines for planting, paving, site furnishings, wayfinding, and lighting. Each of these are briefly described as follows:

- **Planting.** The proposed Campus Master Plan provides a plant list for each landscape character zone described above, which indicates the primary character-defining plants within each zone. These character-defining plants are described above in general terms for each zone. The proposed Campus Master Plan provides specific plant lists for each zone.

- **Paving.** The proposed Campus Master Plan recommends a hierarchy of paving categories to distinguish pathways, intersections, building entries, and gathering spaces throughout the campus. A simple palette of materials will be used, reserving distinctive visual and tactile effects to highlight areas of importance and to help with wayfinding. The paving categories are further described in the proposed Campus Master Plan.

- **Site Furnishings.** The proposed Campus Master Plan recommends the continued use of metal furnishings that adhere to the principle of universal design, are durable, low-maintenance, use non-toxic finishes, contain recycled content, and can be recycled or re-used at the end of their useful life.

- **Wayfinding.** The proposed Campus Master Plan provides a system of wayfinding beacons and signage elements that will help orient and guide users around campus.

- **Lighting.** Exterior lighting will adhere to LEED-NC guidelines for light pollution reduction and energy efficiency.
3.8.3 Storm Water Management

3.8.3.1 Design Concept

Storm water management is a mechanism for controlling storm water runoff for the purposes of reducing downstream erosion and flooding, reducing the strain on municipal infrastructure, and mitigating the impacts of urbanization on water quality. The valley running through the center of SF State Campus was formerly a streambed drainage into Lake Merced. As the area was developed the stream was placed underground by the City and County of San Francisco in large diameter concrete pipes that carry the water south and eventually to the combined wastewater treatment facility rather than towards Lake Merced. The valley has been converted to athletic fields and is also the location of the parking garage. The surface runoff is now collected by a network of drains and pipes that tie to the large concrete pipes.

The proposed Campus Master Plan proposes a strategy to reduce the quantity of storm water collected and piped directly into the City and County of San Francisco sewer system by introducing rain gardens, bio-swales, pervious pavements, vegetated open channels and, perhaps most important to the overall master plan vision, re-connecting the entire network to Lake Merced. Connecting to the lake returns seasonal runoff, thereby contributing to raising lake water levels, improving water quality by creating movement in the volume of the lake, and enhancing recreational and habitat value.

It should be noted that the system emphasizes on-site filtration. Any water flowing directly into Lake Merced would be filtered and cleansed to meet the highest applicable standards for water quality, in keeping with the objectives of the San Francisco Public Utilities Commission. In areas of the campus with potential concentrations of pollutants, such as the corporation yard and loading docks, runoff would be directed to San Francisco’s combined sewer system.

The proposed Campus Master Plan uses a tiered approach to conveying and filtering storm water (see Figure 3-9 Storm Water Management System). The First Tier includes roof collection, rain gardens and/or bio-swales close to buildings and hardscape areas. The Second Tier includes small, shallow vegetated open channels to convey storm water from the rain gardens and bio-swales. The Third Tier includes broad detention/filtration zones within the natural valley landscape. Residual storm water that does not get absorbed will ultimately be conveyed to a larger vegetated open channel that starts north of the Central Parking Structure and west of Cox Stadium and simulates at a smaller scale the seasonal stream that once flowed through the valley into Lake Merced.

A minor vegetated channel is proposed in the portion of the valley east of Cox Stadium, requiring an expanded gravel under-drain system beneath Cox Stadium to accommodate the added flows. This system would allow the up-valley creek flow to collect, infiltrate, and flow below the field into the main creek to the west. Installation of the under-drain needs to occur in conjunction with an upgrade to Cox Stadium. Similarly, other athletic fields should incorporate under-drain/collection/infiltration systems. The sum total of these systems would provide a significant collection, infiltration, and/or storage capacity for the storm water network.

This combination of elements best fits the campus conditions and recreates some measure of natural hydrological function that existed prior to development of the campus. In a more conventional system, storm water management is concentrated in a single location with a detention/retention pond. The
proposed approach identified in the Campus Master Plan responds to the site’s natural topography and soil characteristics, as well as the University’s desire to enhance the sustainable function of the campus by using more natural surface features. Conceptual cross-sections for storm water features are provided in the proposed Campus Master Plan on pages 77 and 78.

It is important to note that the system will need to be constructed in many increments—some quite small, others larger—that coincide with other campus facilities projects. In some cases, a new storm water feature may be isolated from the larger storm water system due to the location of its associated building project and, as a result, may need to be tied temporarily to the existing City and County sewer line until the connective segments are in place. Specific storm water improvements are further described below.

### 3.8.3.2 Storm Water Infrastructure Improvements

Each individual building project will incorporate design elements, such as bioswales and rain gardens to collect and clean rainwater. These elements will also afford an opportunity for water to percolate back into the ground, reducing the overall site runoff. At a campus-regional scale, the storm drainage system will collect the drainage from several adjoining project areas by means of vegetated channels. These regional elements will further enhance the potential for storm water to be reintroduced into the ground water table. Where possible, these elements will be tied together and directed into the valley. Due to the size of the campus and the topography, it is not possible for all portions of the campus to be tied into the drainage system to the valley. For instance, the areas north of Buckingham and south of Holloway will drain via a traditional piped system and be connected to the City combined sewer main, whereas many redeveloped areas of the campus core will drain via the new storm system. However all projects at a minimum will include site-specific measures to improve storm water quality and increase infiltration. The proposed storm water system connections from proposed building sites, are summarized below:

- Direct connections to public mains in Holloway Avenue will be made as required to serve the new UPS housing.
- Direct connection to public mains in Winston Drive will be made as required to partially serve the new UPN housing and Facilities/Maintenance.
- All other projects will be designed to connect to the new system to the extent possible given phasing constraints.

The proposed Campus Master Plan development will cause an approximate 2 percent increase in storm runoff from new building areas. This minimal increase in storm water runoff is due to the fact that the vast majority of new development would consist of redevelopment of existing building sites, and therefore the overall amount of impervious surfacing will be minimized. Overall, the quantity of storm runoff directed to the San Francisco combined sewer system will be decreased by approximately 12 percent, due to the new open storm water system, for a net reduction of 10 percent from the runoff rate and quantity of the existing campus. The open system will filter and percolate storm runoff through the campus using surface swales where possible and convey runoff to Lake Merced, thereby reducing the quantity of storm runoff that enters the public system for treatment.

It should be noted, however, that the net reduction of runoff directed into the City’s system of 10 percent, does not account for the reduction of runoff volume that will occur with the infiltration of storm water.
into the ground water table via the proposed project-specific design elements (e.g., rain gardens). Therefore, the actual reduction is likely to be greater than that estimated above.

### 3.9 CIRCULATION PLAN

The proposed Campus Master Plan provides for improvements related to pedestrian and bicycle circulation, transit, parking, and transportation management, as further described below.

#### 3.9.1 Pedestrian Circulation

The proposed Campus Master Plan provides for a comprehensive and accessible pedestrian circulation network throughout campus (see Figure 3-10, Pedestrian Path Network). Key features include the Millennium Bridge across the valley connecting the academic core and UPN, two major east-west walkways—the campus Allées—and the Lake Merced Boulevard undercrossing linking the campus to Lake Merced. These pedestrian improvements will contribute to improved pedestrian amenity and connectivity between the campus and surrounding neighborhoods.

The proposed Campus Master Plan makes extensive modifications to the campus’s pathway system to provide universal access throughout, as illustrated in Figure 3-10, Pedestrian Path Network. Notable improvements are the new 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; and 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 proposed Campus Master Plan provides a ramp connection from the parking garage to Maloney Field.

The proposed Campus Master Plan improves a number of existing discontinuities in disabled access around campus. Deficient entries to existing buildings will be addressed through the ultimate replacement of these buildings during the planning horizon. In the interim, accessibility projects should move forward.

Increased provision of on-campus housing also has a positive effect on pedestrian access and circulation at SF State. Housing development at UPN and UPS 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.

The proposed Campus Master Plan will also provide for a system of wayfinding beacons and signage elements to help orient and guide users around the campus. These are further described in the proposed Campus Master Plan (pages 82 and 83).

#### 3.9.2 Bicycle Circulation

##### 3.9.2.1 On-Campus Bike Network

In order to facilitate safe and convenient bicycle access across campus, an on-campus bicycle network will be provided under the proposed Campus Master Plan along dedicated bike paths separated from
pedestrian paths. These facilities will be marked with pavement marking and 8 mph bicycle speed signs at the entrance to the campus. As illustrated in Figure 3-11, Bicycle Routes and Storage, 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 new Millennium Bridge and east edge of the Quad; and (4) the relatively flat east-west axis from the second roundabout on Font Boulevard via the west side of the Humanities building to the south side of Cox Stadium. In addition, 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.

3.9.2.2 Bicycle Racks

To improve the convenience of bicycle access to campus, bicycle racks will be provided on campus. Bicycle racks in visible locations near building entrances will be provided for all new buildings. 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, Student Health Center, Ethnic Studies and Psychology building, Gym building, Thornton Hall, 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.

3.9.2.3 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. The 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.

3.9.2.4 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.

3.9.2.5 Off-Campus Improvements

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 Campus Master Plan and fall within the jurisdiction of other agencies such as the City and County of San Francisco, Caltrans, and the private owner of Stonestown Galleria. Implementation of these improvements will affect the campus’s ability to attract bicycle commuters and reduce traffic impacts in the surrounding
neighborhoods. Please refer to the proposed Campus Master Plan (page 86) for additional information about the recommended off-campus bicycle improvements.

3.9.3 Transit and Carshare Programs

3.9.3.1 Transit

Transit is a key access mode for commuters and visitors to SF State, and these trips contribute to the University’s important role as the main transit anchor for the southwest quadrant of San Francisco Muni and BART. Approximately 21 percent of SF State commuters ride Muni and 20 percent ride BART for some portion of their journey to campus. Of those commuters who ride Muni to the campus, 49 percent ride bus route 28, and 39 percent ride Metro M Line for some portion of their journey to campus. Transit access at SF State is also supplemented with University-provided shuttle services between the campus and Daly City BART station. Approximately 14 percent of SF State commuters use the campus shuttle as part of their journey to campus (Wallace, Roberts and Todd/Solomon E.T.C., February 2006).

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 the 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.

SF State Shuttle Service

SF State will also undertake a number of strategies to improve the capacity of shuttle services between the campus and the Daly City BART station, under the proposed Campus Master Plan. 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 the Daly City BART station, including co-location of the 28-Local, 28-Limited, and SF State shuttle stops. 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 the Daly City station.
Off-Campus Transit Improvements

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 Municipal Transportation Agency’s Transit Efficiency Project (TEP) and the San Francisco County Transportation Authority (SFCTA) 19th Avenue study. Specific improvements sought by SF State are listed in the proposed Campus Master Plan (page 91).

3.9.3.2 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. 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 and trip generation 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, weekends, and other trips without needing to own and park a car on the campus or in the neighborhood.

3.9.4 Parking

3.9.4.1 Existing Facilities

Existing on-campus parking includes the large parking structure near the baseball field in the valley, which is accessed by South State Drive and North State Drive, as well as a number of smaller lots at different locations around the periphery of the current main campus. A total of 3,172 parking spaces currently exist on campus. On average, a maximum overall campus parking occupancy of 80 percent is reached between 11AM and 2PM on weekdays when the campus is in session. Currently, 26 percent of those who commute by driving park on campus and 67 percent park near campus. The remainder park at other locations (e.g., BART stations). Off-campus parking is available in adjacent residential neighborhoods, although much of this parking is subject to two hour parking restrictions imposed by the City and County of San Francisco residential parking permit program. Free, unrestricted on-street parking
exists along both sides of 19th Avenue on the east side of campus. There is also metered on-street parking on Tapia and Holloway Avenue (Wallace, Roberts and Todd/Solomon E.T.C., February 2006).

3.9.4.2 Parking Demand Management

As indicated in the proposed Campus Master Plan, 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 will 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 parking 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 proposed 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.

### 3.9.4.3 Parking Replacement Program

As new campus buildings are developed, replacement parking will be provided as illustrated Figure 3-12, Parking. 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.

- **Clinical Sciences.** A surface lot with 121 spaces 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 with 178 spaces. This site is also proposed as a possible alternative structured parking site at a later stage.
- **New Gym/Recreation-Wellness Center.** This facility will add 378 parking spaces, including 88 surface parking spaces and one level of underground structured parking with 290 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, providing 176 spaces.
- **Hotel and Conference Center.** This facility will provide 440 new parking spaces on 2 levels of structured, underground parking beneath a new hotel/conference center at the corner of Buckingham Way and 19th Avenue.
- **Softball Field Site.** The site is proposed as a possible alternative structured parking site, with a softball field on the top level.

### 3.9.4.4 Parking Fee Program

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, as stated above. In order to keep pace with the current and future cost to supply parking, average parking fees will increase to over $16 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.

### 3.9.4.5 On-Street Parking In Neighborhoods

The City and County of San Francisco manages parking on all public streets surrounding the SF State campus. The proposed Campus Master Plan indicates that 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.

### 3.9.5 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.
3.10 UTILITIES AND INFRASTRUCTURE

SF State has a complex system of utilities that provide services to about 25 buildings on the campus. These services include sanitary sewer and storm drainage, domestic and fire water supply, natural gas, heating hot water, electrical power, and telecom services. Most of the buildings are tied to the campus systems; however there are a few with individual services. For instance the Mary Park and Mary Ward residence halls have individual boilers for heating hot water and are not connected to the Central Plant. Since they were originally constructed as independently owned facilities, the UPS and UPN complexes are also not tied to the campus infrastructure. The proposed Campus Master Plan calls for a number of improvements in order to efficiently serve proposed new development and increased campus population. However, in general, there is capacity in the infrastructure to accommodate the planned growth in the campus.

The discussion below describes the existing utility infrastructure on the campus, the projected increase in demand for campus utilities under the proposed Campus Master Plan, and the new facilities that could be developed on the campus to meet this projected demand. Storm drainage is discussed in Section 3.8.3, Storm Water Management. Table 3-4 summarizes existing and projected demand for utilities through 2020.

Table 3-4
Existing and Projected Demand For Utilities

<table>
<thead>
<tr>
<th>Utility</th>
<th>2006 Demand</th>
<th>Campus Master Plan- 2020 Demand</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Annual</td>
<td>Average Daily</td>
</tr>
<tr>
<td>Potable Water</td>
<td>110 mg</td>
<td>300,000 gpd</td>
</tr>
<tr>
<td>Wastewater</td>
<td>55 mg</td>
<td>150,000 gpd</td>
</tr>
<tr>
<td></td>
<td></td>
<td>500 gpm&lt;sup&gt;1&lt;/sup&gt;</td>
</tr>
<tr>
<td>Natural Gas</td>
<td>-----</td>
<td>450 therms/hour&lt;sup&gt;1&lt;/sup&gt;</td>
</tr>
<tr>
<td>Electricity</td>
<td>-----</td>
<td>3,430 kW&lt;sup&gt;2&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>8,664 kW&lt;sup&gt;1,2&lt;/sup&gt;</td>
</tr>
<tr>
<td>Heating Hot Water</td>
<td>-----</td>
<td>36,000,000 btuh&lt;sup&gt;2&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

Notes:
mg = million gallons; gpd = gallons per day; gpm = gallons per minute, kW = kilowatt, btuh = British thermal units per hour
1. Reported as maximum or peak demand.
2. The existing equipment at the Central Plant currently provides only about 16,000,000 btuh per hour and 2,125 kW of electricity.

3.10.1 Sanitary Sewer

3.10.1.1 Existing Infrastructure

The sanitary sewer system on the SF State campus is a mixture of gravity lines and pumped force mains. Since the campus is situated around a valley there are two pump stations to lift sewage out of the low points. The first lift station is located in the western athletic fields between the tennis courts and the baseball field. It collects sewage from the western residential buildings to the south and the Lakeview Center and Corp Yard facilities to the north. This is all pumped out via a 6-inch force main to a connection to the city system in Winston Drive. Most of the buildings around the academic core, the
Towers, and the Village drain to the northeast corner of the Student Services Center. From here a 12-inch gravity line ties out to Font Boulevard where it connects to the City’s combined sewer system. The second pump station is located in the upper athletic field. This pump station is much smaller and only collects the field house and restroom building serving Cox Stadium. The sewage is pumped up to the Student Services Center where it drains into the 12-inch main towards Font. There are three other connections to the public system, all smaller in size and serving between one and four buildings. Storm drainage is discussed in Section 3.8.3, *Storm Water Management*.

### 3.10.1.2 Increase in Demand and Proposed Improvements

Growth under the proposed Campus Master Plan would increase the volume of wastewater discharged into the sanitary system from 150,000 gallons per day (gpd) to an average of about 200,000 gpd by 2020 when school is in session. The peak wet weather flow rate would increase from about 500 gallons per minute (gpm) to about 700 gpm by 2020.

Under the proposed Campus Master Plan, new sanitary sewer construction on campus would be limited to repair, maintenance, upgrades (e.g., replacement of pump stations and/or gravity lines), and extensions. Specifically, improvements will include the following:

- Direct connections to public mains in Holloway Avenue will be required to serve the new BSS/HHS building, Library expansion, and the new UPS housing.
- Direct connections to public mains in Font Boulevard will be required to serve the new Clinical Sciences building.
- Direct connections to campus sewer mains will be required for the new Science/Ethics and Academic/Business buildings.
- Connections to the campus sewer mains will also be required to serve the new UPN housing and the new Facilities/Maintenance facilities via the installation of about 700 feet of 8-inch sewer main.
- Approximately 700 feet of 24-inch public main will need to be relocated to prepare the Creative Arts site.
- Relocation of an existing Sanitary Lift Station and 900 feet of 6-inch force main will be required for the new Gym/Recreation/Wellness Center.
- Relocation of 1225-feet of 8-inch public sewer main will be required to clear the site for the Conference Center/Hotel.

### 3.10.2 Water

#### 3.10.2.1 Existing Infrastructure

The City and County of San Francisco Public Utilities Commission supplies water to the campus at two points of connection, located in 19th Avenue and Lake Merced Boulevard. The SF State campus water system is unusual in that while it has two different onsite water systems, one for fire and one for domestic and irrigation water, they are interconnected to each other and served by the same connections to the public water supply. This onsite distribution system is made up of 6- and 8-inch piping and forms several
interconnecting loops with isolation valves so portions of the line can be shut down for repairs as needed. In 1997 a second loop of 8-inch piping dedicated to fire water was constructed around the academic core. All hydrants and fire services in this area were shifted to the new system. The remainder of campus is still served by the single interconnected system for both fire and domestic services.

3.10.2.2 Increase in Demand and Proposed Improvements

In 2006, the campus used about 110 million gallons of water per year, or an average of 300,000 gpd. Growth under the proposed Master Plan would increase the demand for water to approximately 400,000 gpd by 2020. Table 3-4 provides a summary of existing and projected campus water use. Under the proposed Campus Master Plan, new domestic and fire water system construction on campus would consist of repairs, maintenance, upgrades (e.g. pipe size upgrades), and extensions. Specifically, improvements will include the following:

- Direct connections to the campus domestic water system and fire water system will be required to serve the BSS/HHS buildings, Library expansion, the Science and Ethic Studies & Psychology buildings, and the Academic and Business buildings.

- Extend the 6-inch campus domestic water piping and 8-inch fire water piping about 875 feet cross Font Boulevard to serve the new UPS Housing, Clinical Sciences and Creative Arts.

- Extend the 6-inch campus domestic water piping about 1,250 feet to serve new UPN Housing on the Sutro Site and Facilities/Maintenance facilities, about 700 feet to serve the Gym/Recreation/Wellness Center and about 700 feet to serve the Conference Center/Hotel and new the remaining UPN housing. Eight-inch campus fire water piping will be extended similar distances to serve the above facilities.

3.10.3 Natural Gas

3.10.3.1 Existing Infrastructure

Most campus buildings at SF State are heated with natural gas, either directly through the use of gas-fired heating equipment with the building, or indirectly through the use of hot water from gas-fired boilers in the Central Plant. The natural gas system for the campus is relatively simple. The two main feeds are a 4-inch PG&E line from 19th Avenue to the north side of the Gymnasium and a 2-inch PG&E line from Lake Merced Boulevard to the Central Plant. From the Gymnasium, smaller campus-owned piping distributes the gas to the buildings in the vicinity that utilize natural gas. The Central Plant feed is also used to supply the steam boilers in both the Business and Gymnasium buildings. Other campus buildings that are not in the vicinity of the Gymnasium have individual services from PG&E. Since the campus utilizes central heating hot water and domestic hot water, the need for gas in most buildings is relatively minimal.

3.10.3.2 Increase in Demand and Proposed Improvements

Natural gas system demand for the entire campus in 2006 was approximately 450 therms/hour. Maximum demand anticipated under the proposed Campus Master Plan would be about 590 therms/hour. Under the
proposed Campus Master Plan, about 1,200 feet of 6-inch medium pressure gas main for connection to PG&E services will be extended to serve the new North Satellite Plant, which is further described below.

### 3.10.4 Central Plant (Power Generation & Heating)

#### 3.10.4.1 Existing Infrastructure

The SF State campus receives electrical service from PG&E at 12 kilovolts (kV). The campus has two electrical services, both connected to PG&E at a manhole located near the campus entrance at 19th Avenue and Holloway Avenue. The service cables are fully redundant as one service can carry the entire campus load of approximately 350 amperes or 7.6 megavolt amperes (MVA). The services run through the central campus in an underground concrete encased duct bank to the campus main 12kV substation located near the southeast corner of Cox stadium.

The Central Plant at SF State also produces electricity, as well as and heating and domestic hot water. Constructed between 1997 and 1999, the plant fulfills two primary functions; it provides electrical power generation and heating hot water. As a secondary function the plant also supplies domestic hot water to the campus for sinks and showers. The current equipment allows the plant to provide a theoretical capacity of 36 million Btuh of heating energy, although the plant has an actual capacity of about 16,000,000 Btuh to allow of equipment redundancy, and 2,125 kW of electricity. The power generation and heating systems of the Central Plant are further described below.

**Power Generation**

Two reciprocating engines, one (a Waukesha rated 725 kW) running on natural gas and the second (a Fairbanks Morse rated 1400 kW) running on either natural gas or diesel fuel provide the power generation. The power is generated at 480 volts and the generator control / paralleling switchgear for each generator connects to the 480 volt double-ended switchgear that serves the Central Plant. The Central Plant switchgear is connected to the campus 12kV power distribution system through secondary substation transformers located outdoors on the north side of the Central Plant. The waste heat from the two engines is used to pre-heat the campus heating water however it is not sufficient on its own to meet the heating requirements of the current campus.

**Heating Hot Water**

The high-temperature heating water system consists of two 600 hp gas boilers and two 2000 gpm pumps. The current campus load is satisfied by operating one boiler and one pump. The second boiler and pump are redundant equipment. The high temperature heating water is pre-heated via engine-stack heat recovery from the two reciprocating engines. Prior to entering the heat recovery system, the high temperature heating water is cooled by a waste heat radiator system (cooling towers on the roof) and utilized to cool the engine lubrication system.

#### 3.10.4.2 Increase in Demand and Proposed Improvements

The proposed Campus Master Plan assumes that the Central Plant, or campus systems in general, will need to meet the following criteria: (1) Provide for all of the heating needs of campus, including all campus owned residential buildings; (2) Provide adequate power generation capacity to meet the average
power demands of the campus including all campus owned residential buildings; and (3) Ensure that part of the generation capacity is capable of operating during an emergency via an on-site fuel source. To develop a system that can meet the first two criteria, the proposed Campus Master Plan provides a projection of the future electrical and heating demands for the campus by 2020, which indicates that the heat load for the campus in 2020 will be about 47 million Btuh and the average power demand will be about 4,119 kW. The existing equipment at the Central Plant currently provides approximately 16 million Btuh of heating and 2,125 kW of electricity.

To meet future energy demands at the campus, the Campus Master Plan envisions that the capacity of the Central Plant will be expanded and that a new Northern Satellite Plant will be installed (see Figure 3-6 Campus Master Plan Diagram). The new power generation and heating equipment in the Central Plant will include: (1) replacement of an existing 725 kW engine, that will be beyond its useful life during the planning horizon, with a 1,500 kW engine and (2) the addition of a new 10 million Btuh boiler. The new power generation and heating equipment in the new Northern Satellite Plant will include: (1) a new 2,500 kW gas turbine generator with waste heat boiler and (2) a new 10 million Btuh boiler with a second similar boiler for redundancy. Generally the Northern Satellite Plant will house equipment to meet the demands on the north side of campus and the existing Central Plant will be utilized to meet increased demands in the south. The two plants will tie to the same electrical distribution system making it possible to share loads if needed and provide additional redundancy to the system. Additional improvements to the electrical and heating hot water distribution system required to serve proposed development are described in the proposed Campus Master Plan (page 100 through 108).

As described in Table 3-5 below, the expanded Central Plant will provide for 2,900 kW of electricity and a heating capacity of 26 million Btuh. The new Northern Plant will provide for 2,500 kW of electricity and a heating capacity of 28 million Btuh, including waste heat. Overall, the expanded Central Plant and new Northern Satellite Plant will provide for 5,400 kW of electricity or an increase of 3,275 kW and a heating capacity of 54 million Btuh or an increase of 38 million Btuh.

<table>
<thead>
<tr>
<th>Source of Supply</th>
<th>Existing Capacity</th>
<th>2020 Capacity</th>
<th>Net Increase in Capacity by 2020</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Heat Load (million Btuh)</td>
<td>Average Electrical Demand (kW)</td>
<td>Heat Load (million Btuh)</td>
</tr>
<tr>
<td>Central Plant</td>
<td>16</td>
<td>2,125</td>
<td>26</td>
</tr>
<tr>
<td>Northern Plant</td>
<td>---</td>
<td>---</td>
<td>28(^1)</td>
</tr>
<tr>
<td>Total Capacity</td>
<td>16</td>
<td>2,125</td>
<td>54</td>
</tr>
</tbody>
</table>

Notes:
1. The heat load of 28 million Btuh includes about 18 million Btuh of waste heat capacity.
CHAPTER 3. PROJECT DESCRIPTION

3.11 IMPLEMENTATION

The changes proposed by the proposed Campus Master Plan will be implemented gradually over the course of the planning horizon to 2020. For this reason, it is essential that projects be strategically sequenced to ensure that critical priorities are accommodated early and that each individual project is structured in a way that makes it fully functional and independent of subsequent development.

Also critical is the need to minimize disruption to the programs that are relocating. Ideally, any program would need to move only once from its current to its new location. However, this may not always be possible, and surge space will be required to accommodate users in the interim. The phasing plan tries to minimize multiple moves to the greatest extent possible.

An essential part of the implementation strategy is putting key framework elements of the proposed Campus Master Plan in place from the outset. The early implementation of projects that have a significant and perceptible impact on the quality of life and smooth functioning of the campus—such as the Millennium Bridge across the valley, the Arts Allée, or the Gym/Recreation-Wellness Center—are necessary to generate support and build momentum for the plan, thereby ensuring its success.

Implementation is organized in two phases, as further described below. Fixed projects are those that rely on State funding and they are part of the 2007-2008 CIP or are likely to be included in subsequent CIPs. These fixed projects have a specific timetable. Flexible projects are not tied to a specific timeframe, however, their implementation is recommended to occur in a specified sequence. These projects are further described below by phase and in the proposed Campus Master Plan (pages 112 through 118).

3.11.1 Phase One (1-5 years)

3.11.1.1 Fixed Projects

Fixed projects for years 1–5 begin with the library expansion in the first year, followed by a double-project year with the first phase of the Creative Arts complex along with the Clinical Sciences building on the former SOTA site. The third year brings the second phase of the Creative Arts complex along with its associated replacement parking. Once the new Creative Arts complex is complete, the old facility can be demolished in the fourth year making way for the new BSS academic building. The fifth year again is a double-project year with the completion of the new HHS academic building as well as the relocation of the Facilities building and corporation yard to Lot 25 at the northern edge of campus. A portion of Lot 25 will be reconfigured for surface parking; the balance of parking lost from Lot 25 already will have been replaced by the Clinical Sciences and Creative Arts Phase II parking projects.

3.11.1.2 Flexible Projects

Flexible projects for years 1–5 begin with the Arts Allée, timed ideally to coincide with completion of the Creative Arts Phase I building in order to connect this new facility to the academic core. Included in this project is a north-south pedestrian and bike path along the west side of Humanities. The second project is Millennium Bridge across the valley east of Cox Stadium, the addition of a bike path and pedestrian improvements extending south from the bridge to Holloway Avenue, and a promenade along the northern rim of the valley connecting the UPN residential area to the new bridge and the academic core to the...
south. The third project is housing located on the site of the former Sutro Library, made obsolete by construction of the new library expansion in year 1. The next set of flexible projects in this phase is the replacement softball field in the open area behind Hensill and Thornton Halls including a minor vegetated channel north of the field, remodel of Building C at the Villages to provide expansion space for Student Services, and installation of a new tree row along State Drive, the first segment of the new Pacific Allée. The final project is housing in UPS along Holloway Avenue.

Also included in this phase is the addition of abundant bike racks across campus, secure bike facilities, a bike station located in the new BSS Building on Holloway Avenue, and on-street bike lanes along Font Boulevard.

### 3.11.2 Phase Two (6-10 years)

#### 3.11.2.1 Fixed Projects

The first fixed project in the second phase—and the sixth project overall—is the Gym/Recreation-Wellness Center. Having relocated uses from the Lakeview Center to the new Clinical Science building and the Corporation Yard to Lot 25, the site for the new Gym/Recreation-Wellness Center will be available. Included with this project will be accessible paths connecting the Gym with Centennial Walk and with the athletic fields, reconfigured parking on State Drive, and an underpass below Winston Drive that will allow maintenance vehicles to move unimpeded between the corporation yard and campus.

With the former Gym vacated, its site is free for the next and seventh overall project—a new Science building that takes advantage of proximity to Hensill and Thornton Halls, which house related College of Science and Engineering programs. A new Business building, is next project, taking advantage of the site of the former HSS building, followed by a new Ethnic Studies and Psychology building, on the remaining portion of the old gym site. Project 10 is an academic building on the site of the former Science building fronting 19th Avenue, now available, which completes the campus’s 19th Avenue frontage. The final project is a new academic building and University Club on the site of the former Ethnic Studies and Psychology building.

#### 3.11.2.2 Flexible Projects

Flexible projects begin with the creation of an undercrossing beneath Lake Merced Boulevard and a surface creek that flows along the valley bottom from west of the parking garage into the lake. Since the gym project includes an associated increment of new replacement parking, the existing tennis courts are relocated to the upper deck of the existing parking garage, taking those spaces effectively “off-line.” The tennis court relocation then frees that portion of the valley for a new multipurpose field. The next project is the resurfacing of Cox Stadium including installation of a gravel under-drain and water storage system beneath the field that allows a minor creek created upstream of the stadium to flow below the field into the main creek to the west.

Next is the north campus Northern Satellite Plant. The next project is the new Conference Center and Hotel at the northeast corner of the campus at Buckingham Way and 19th Avenue. This project involves the realignment of Buckingham Way to facilitate creation of the college main street. New housing along...
Buckingham Way is next, followed by the new campus entry landscape in conjunction with the reconfigured site of the former HSS building. The last projects in this phase are the Holloway Avenue streetscape, which creates the framework for the new college main street, and new housing in UPS fronting Holloway.

Also included in this phase are several east-west segments that complete the campus bike network, providing connection to the existing bike route on Winston Drive, and the addition of bike lanes on Holloway Avenue and Buckingham Way.

3.12 REFERENCES
CSU Committee on Educational Policy. 2003. Campus Options to Achieve CSU Enrollment and Access Goals (REP 05-03-04). May.

