

## 3.0 PROJECT DESCRIPTION

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### 3.1 INTRODUCTION

The campus master-planning process provides the opportunity for an academic institution to reflect upon its past, consider its current condition, and create a vision for the future. The California State University (CSU) East Bay (CSUEB) has prepared an update to the CSUEB Hayward Campus Master Plan, a comprehensive document that evaluates existing conditions and updates all aspects of future campus development and land use to accommodate the previously approved enrollment level of 18,000 Full-Time Equivalent (FTE) students (FTES) (25,000 total students). In this context, the term FTES is defined as the equivalent to 15 units taken for undergraduates and 12 units for graduate students for the three-quarter academic year excluding summer enrollment and students who do not require instructional space on campus, such as students participating in online courses or field studies. The proposed Master Plan provides a framework for future campus development and encompasses enrollment, program and space growth, land use, open space, circulation, and utilities. It is a long-range plan, designed to direct growth on campus for the next 21 to 22 years. The Master Plan is not a commitment to a specific project, site plan, or schedule for implementation of buildings, grounds, or utilities improvements. Rather, it is a guide to future patterns of development and is intended to provide a clear framework with considerable flexibility for responding to opportunities during the planning horizon. This section describes existing conditions on the CSUEB Hayward Campus (hereinafter the campus or Hayward campus), the projected campus growth, and key aspects of the proposed Master Plan.

### 3.2 PROJECT LOCATION

The Hayward campus is located at 25800 Carlos Bee Boulevard in the Hayward Hills, approximately 2 miles east of downtown Hayward. As shown in **Figure 3.0-1, Regional and Site Location**, the campus is located in Alameda County, approximately 0.5 mile east of State Route 238 (SR-238) and approximately 2.25 miles south of Interstate 580 (I-580). **Figure 3.0-2, Existing CSUEB Hayward Campus**, depicts the campus boundary on an aerial photograph. The campus is approximately 364 acres in size. However, the developed portion of the campus is confined to the flattest portion of the site, which is approximately 180 acres in size. The remainder of the campus is undeveloped owing largely to the presence of challenging terrain and steep slopes found in the south and at other edges of the site. The developed portion of the campus is generally bordered by Hayward Boulevard to the north; Harder Road and open space owned by the CSU to the south; Bunker Hill Boulevard to the west; and East Loop Road to the east.

Primary campus access is provided from Mission Boulevard on the west via Carlos Bee Boulevard on the north and Harder Road on the south. A secondary campus access is located from the north from Foothill

Boulevard to 2<sup>nd</sup> Street to Campus Drive, which terminates on the northeast side of the campus at Hayward Boulevard. The campus is also accessed via shuttle and bus service, which connects the campus with the downtown Hayward Bay Area Rapid Transit (BART) station, other areas of the City of Hayward, and communities to the north and south.

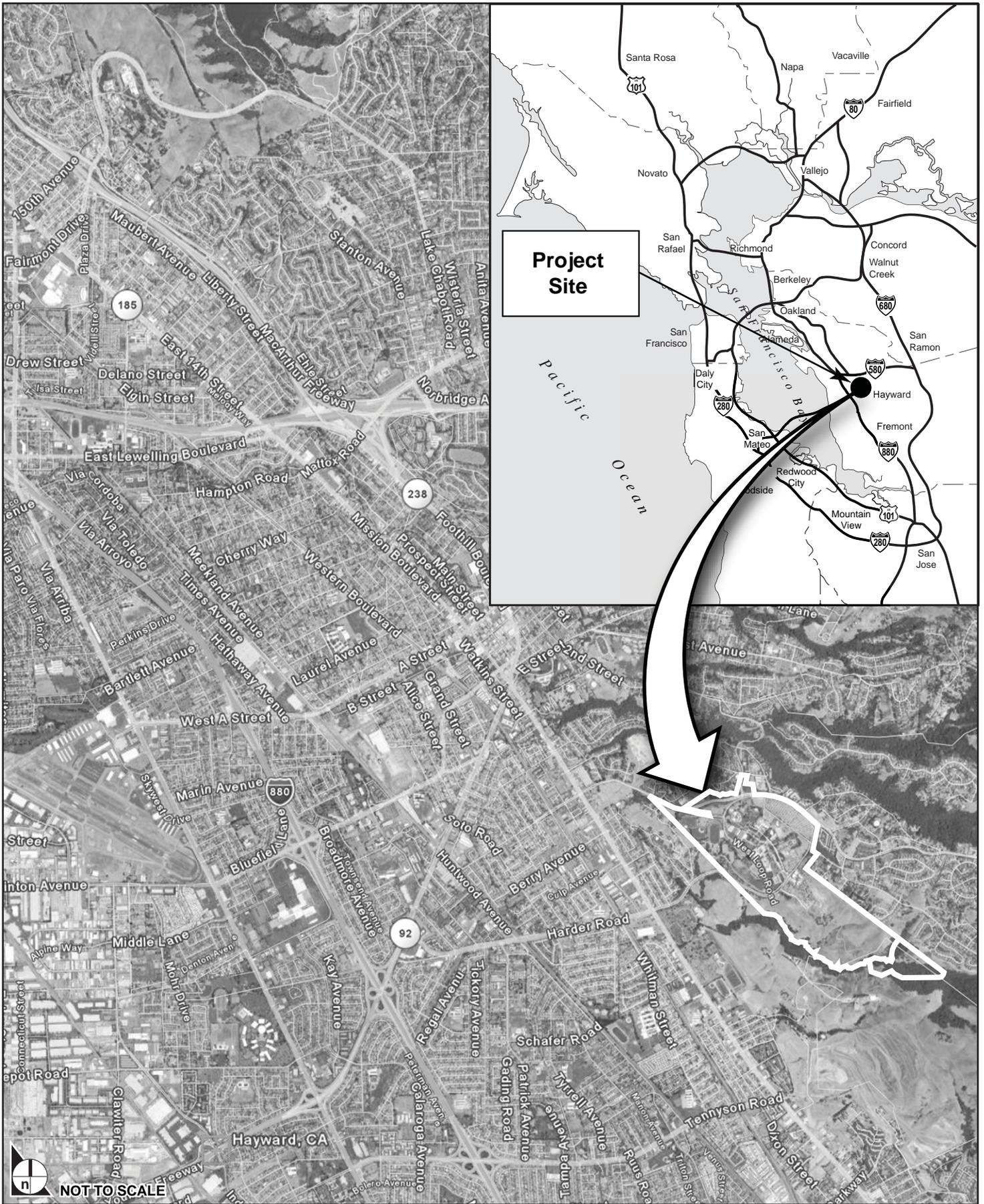
### 3.3 SURROUNDING LAND USES

Surrounding land uses are shown in **Figure 3.0-3, Surrounding Land Uses**, and include single- and multi-family residential developments, open space, public, and quasi-public uses, and commercial uses. Multi-family residential developments are located to the north and east of the campus. The former Highland Elementary School (currently Anchor Education, Inc.) is also located to the north of the campus across Hayward Boulevard and is designated as public and quasi-public land. Single-family residential developments abut the campus to the east. Commercial uses are located south of Hayward Boulevard, east of the campus. Open space abuts the southeastern boundary of the campus. Garin Regional Park is adjacent to the campus to the south. To the west, the campus is bordered by property previously acquired by the California State Transportation Agency (Caltrans) as a right-of-way for the extension of SR-238. SR-238 was extended approximately 2,000 feet west of, rather than adjacent to, the Hayward campus. A limited number of residences as well as undeveloped parcels are found within this area. Further to the west beyond the Caltrans property, a mix of residential, retail and commercial, and auto-oriented and auto-serving uses adjoin Mission Boulevard, a major north-south arterial in the City.

The nearest retail center is found on Mission Boulevard; a small retail center is also located less than 0.25 mile southeast of the campus on Hayward Boulevard.

### 3.4 EXISTING SITE CONDITIONS

A map of the developed portion of the campus is shown in **Figure 3.0-4, Existing Hayward Campus**. The developed campus is generally characterized by a core academic zone, including academic and administrative buildings and a library arrayed around quadrangles and courtyards, in the relatively flat, central area; the Pioneer Heights student-housing area to the south; athletic facilities to the west; and surface parking lots to the north, east, and west. Currently, the campus consists of approximately 1.4 million gross square feet of building space contained in more than 30 buildings.



SOURCE: Google Earth - 2007

FIGURE 3.0-1

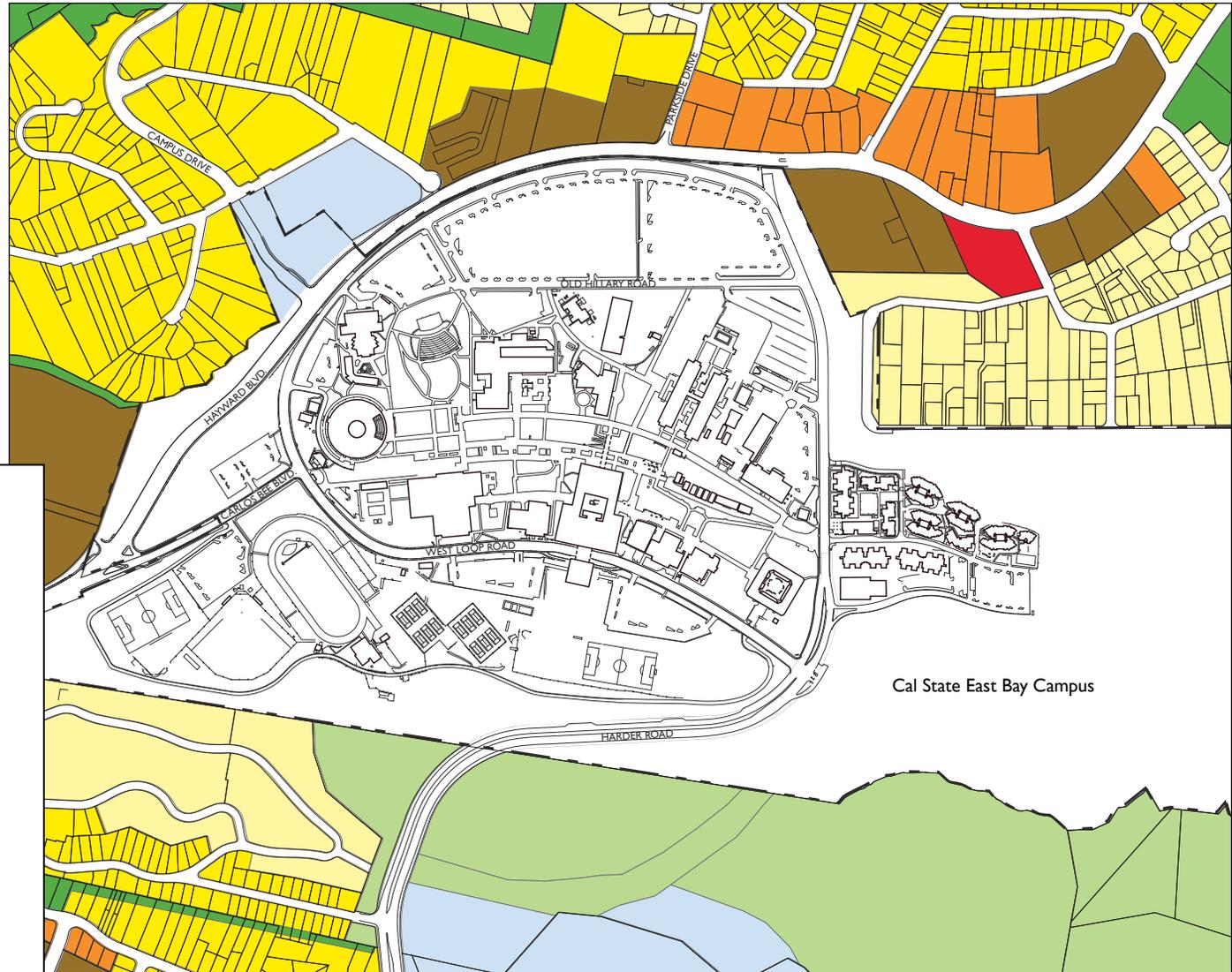
Regional and Site Location



SOURCE: CSU East Bay Hayward Campus Master Plan Study - April 2008

FIGURE 3.0-2

Existing CSUEB Hayward Campus



**LEGEND**

-  Property Line
-  Suburban Density Housing (1.0-4.3 units/acre)
-  Low Density Housing (4.3-8.7 units/acre)
-  Medium Density Housing (8.7-17.4 units/acre)
-  High Density Housing (17.4-34.8 units/acre)
-  Commercial
-  Institutional
-  Parks & Recreation
-  Undeveloped Open Space

Cal State East Bay Campus



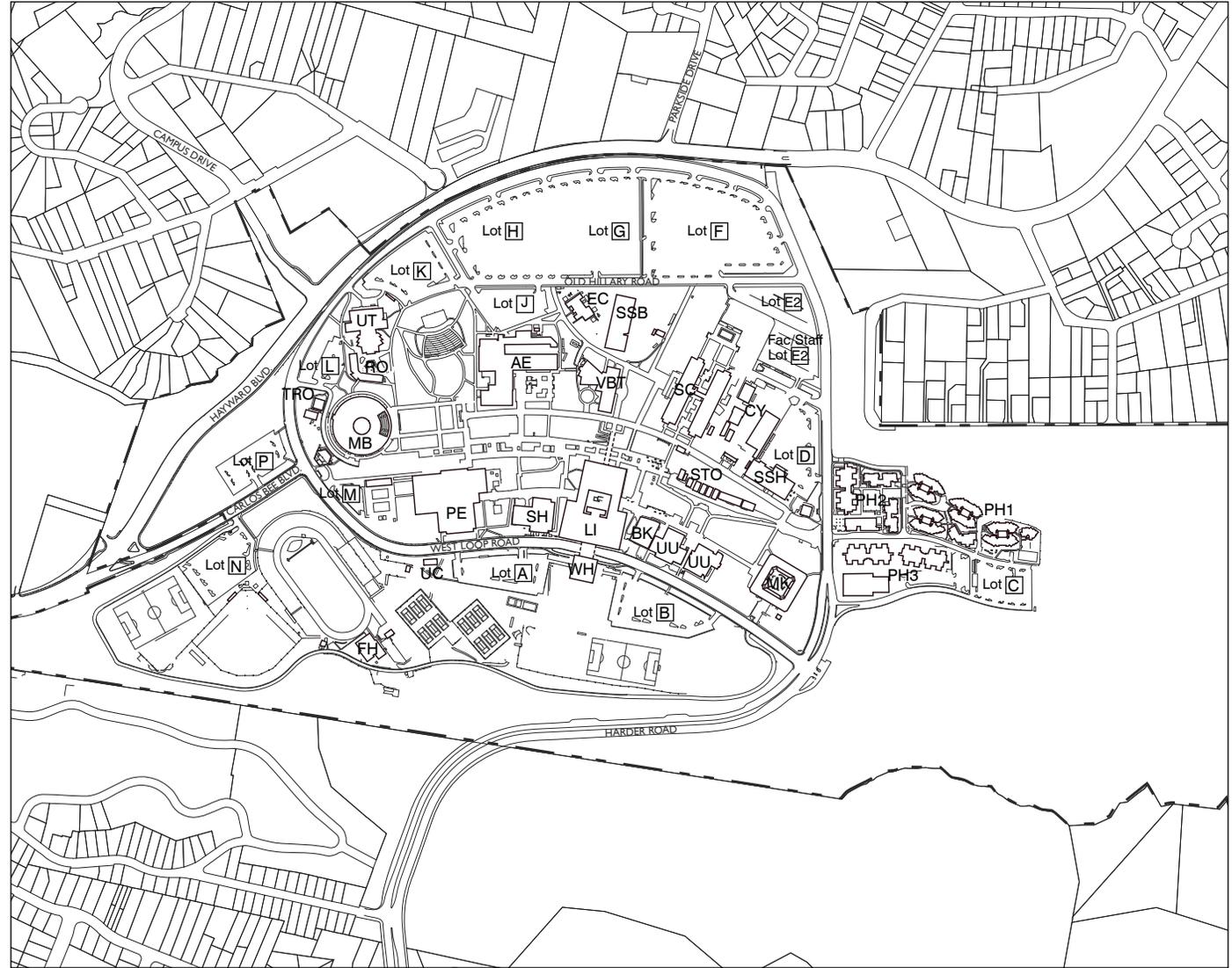
SOURCE: CSU East Bay Hayward Campus Master Plan Study - October 2008

FIGURE 3.0-3

Surrounding Land Uses

**LEGEND**

- AE Art & Education
- BK Pioneer Bookstore
- CY Corporation Yard
- EC Early Childhood Center
- FH Field House
- LI University Library
- MK Meiklejohn Hall
- MB Music Building
- PE Physical Education & Gym
- PH1 Pioneer Heights I
- PH2 Pioneer Heights II
- PH3 Pioneer Heights III
- RO Robinson Hall
- SC Science Building - North & South
- STO Support Temporary Offices
- SH Student Health Center
- SSH Student Services Hub  
Student Services and  
Administration Replacement  
Building
- TRO Temporary Resource Offices
- UC University Club
- UT University Theatre
- UU University Union
- VBT Valley Business & Technology  
Center
- WH Warren Hall



SOURCE: CSU East Bay Hayward Campus Master Plan Study -October 2008

FIGURE 3.0-4

Existing Hayward Campus Map

The campus was established at its current site in 1963. The ages of campus buildings are shown on **Figure 3.0-5, Age of Campus Buildings**. The first buildings constructed were the Science, Music, and Art and Education buildings. The early years of the new campus were characterized by rapid growth and concurrent construction of facilities; by the end of 1974, most of the existing campus facilities had been built. From 1974 to 2000, CSUEB experienced a slow rate in growth, with only a few facilities constructed during this period. New facilities included the renovation and expansion of the cafeteria (renamed the Student Union), and Pioneer Heights I, consisting of 404 student housing beds, marking the campus' first on-campus student housing. Since the early 2000s, the campus has seen more construction than at any time since its early years at the current site. The Valley Business and Technology building and the new University Union opened in 2006. A new Student Services Replacement Building is under construction and is scheduled to open in the fall 2009. The third phase of student housing at Pioneer Heights and dining commons was completed in fall 2008.

On-campus buildings range in height from 1 to 10 stories. The tallest building on campus is the 13-story Warren Hall, which is located along West Loop Road in the southern portion of the campus. The reduction of Warren Hall from 13 to 5 stories has been approved in order to address the seismic safety of the building and will be renovated when the Student Services Replacement Building is complete.

Approximately 800 student-housing beds are provided within the Pioneer Heights I and II student housing complexes. Pioneer Heights III, which includes 472 new student housing beds and a dining facility, is in the final stages of construction and will open in fall 2008, bringing the total number of students living on campus to nearly 1,300.

The Pioneer Amphitheatre is located between the Art and Education building and the University Theatre. Events held at the amphitheatre include concerts, plays, and other live performances.

Information on existing recreational and athletic facilities on the campus include the Pioneer Stadium, the campus gymnasium, swimming pools, tennis courts, baseball diamonds and soccer fields. In addition to these facilities, a new Recreation and Wellness Center is slated to be built and open for operation for the year 2010. The Recreation and Wellness Center will include a gymnasium, indoor jogging track, two activity rooms, outdoor adventure center, two massage therapy rooms, and other amenities within a 55,000-square-foot building. Existing quads and courtyards are located throughout the developed portion of the campus and easily seen in **Figure 3.0-2**.

All campus traffic currently passes through one of two gateway intersections: Carlos Bee Boulevard/Hayward Boulevard and Harder Road/West Loop Road. These four-lane gateways connect to a loop roadway consisting of West Loop Road, a relatively straight two-lane connector running near the west edge of the campus, and East Loop Road, which varies from two to three lanes and loops around the east edge of the campus providing access to the largest parking area on the campus along on the eastern campus boundary. East Loop Road parallels Hayward Boulevard along the easternmost edge of the campus, but there is no connection between the campus and City roadways. A secondary cross-campus connection is provided by Old Hillary Road, which also provides access to the east-end parking lots.

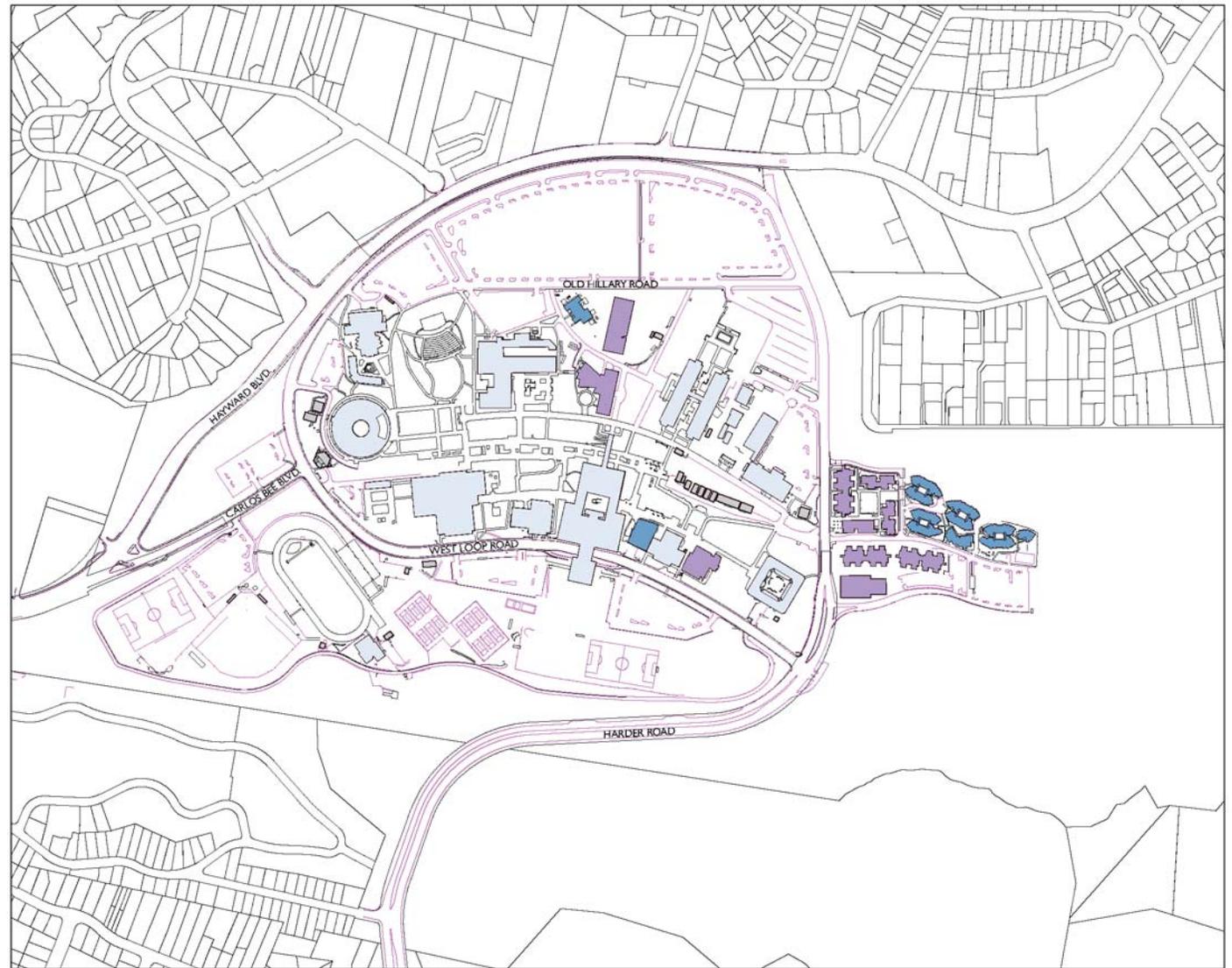
Primary parking facilities for faculty, staff, students, and visitors are large surface lots located on the east and west edges of the campus. Short-term (1-hour) parking spaces and spaces reserved for service vehicles are located on street on West Loop Road and near several campus buildings. The campus currently provides approximately 4,800 parking spaces for students, faculty, staff, and University-owned vehicles.

As shown in **Figure 3.0-2**, existing surface parking lots are located primarily in the east and west edges and the northern portion of the developed campus.

Approximately 180 acres of the Hayward campus remains undeveloped at this time. As shown in **Figure 3.0-2**, the undeveloped portion of the campus is located southeast of the developed area described above. A 35-acre area at the southeastern boundary of the Hayward campus, shown by the red dashed line that defines the campus boundary, is owned by the CSUEB Foundation and is considered a part of the Hayward campus.

### 3.5 ENVIRONMENTAL SETTING

The campus is located in the Hayward Hills, rising in elevation from west to east. The site involves an elevation change of nearly 500 feet, from a low point of 283 feet to a high point of 775 feet. The majority of this elevation change occurs outside the developed campus core; the core itself varies by approximately 70 feet. The developed portion of the Hayward campus has been graded into a series of terraces to accommodate construction of the campus facilities. Steep slopes form the transitions between the terraces, making accessibility a challenge on the campus. Outside of the developed areas of the campus, slopes are steep, generally greater than 15 percent. A significant amount of the site, in particular the area to the southeast, contains slopes greater than 40 percent. The Hayward Fault lies close to the western boundary of the campus.



**LEGEND**

- Property Line
- Built by 1974
- Built between 1975 - 1996
- Built/Under Construction 1997 - Present



800 400 0 800

**APPROXIMATE SCALE IN FEET**

SOURCE: CSU East Bay Hayward Campus Master Plan Study - April 2008

FIGURE 3.0-5

Age of Campus Buildings

The developed areas of the campus have been heavily landscaped with trees, planted shrubs, and groundcovers. Planted trees on the campus include eucalyptus, Monterey pine, coast live oak, and various ornamental species. Quads and lawns are planted in turf.

The undeveloped hills surrounding the developed campus generally consist of annual grasslands, comprised mostly of non-native, annual grass species, and other herbaceous plants. A steep ravine/canyon runs through the grasslands from the southeastern edge of the campus continuing along the property line to the south. Another small drainage originates south of the existing stadium. A segment of this drainage is lined in concrete. A small riparian area is located in the western portion of the campus site along the southern edge of Carlos Bee Boulevard.

### **3.6 PROJECT BACKGROUND**

#### **3.6.1 The California State University**

The CSU system is part of the state's three-tiered educational system defined under the 1960 California Master Plan for Higher Education, also known as the Donahoe Education Act of 1960. This system also includes the University of California four-year system and the two-year California Community College system. In 1972, the state college system was renamed the California State University and Colleges. In 1982, the system became the CSU. The CSU includes 23 campuses throughout the state, including 10 within Northern California. The mission of the CSU was adopted by the Board of Trustees (BOT) in 1985 and states that the system will provide access to postsecondary educational opportunities throughout California, including undergraduate and graduate instruction, through the university and its communities (i.e., campuses).

The BOT is the decision making body for the CSU and is appointed by the California governor. Responsibilities of the BOT include electing the chancellor, the chief executive officer of the CSU, and the development of system-wide administrative policies, curriculum, and campus facilities.

The CSU is required by the State Board of Education to accept the top academic one-third of graduating high school students in California. Each campus within the CSU system is required by the California Education Code to accommodate its share of current and expected student enrollment. In 2003, the BOT directed campuses within the system to plan for a projected enrollment increase of 107,000 FTES by 2011 (California State University Committee on Educational Policy 2003). In addition to compliance with the requirement of maintaining a campus master plan, the CSUEB Hayward Campus Master Plan plans for anticipated enrollment increases through 2011 and beyond.

### **3.6.2 California State University East Bay**

The CSUEB was founded as a two-year institution in 1957 under the name State College for Alameda County. The college offered its first classes at Sunset High School in Hayward in 1959. Student enrollment included 293 full- and part-time undergraduates with an average age of 35 and 25 faculty were employed by the college. Initially, two associate degrees were offered, including elementary education and business administration. In 1960, the college relocated to Hayward High School. In 1963, the college moved to its current location in the Hayward Hills at the Hauschildt Ranch site and its name was changed to California State College at Hayward. At that time, student enrollment totaled 2,500 and 21 bachelor's degrees were offered. In 1964, Master's degrees in Mathematics and English were offered. The 10 years that followed were characterized by rapid development on the campus. In 1972, the school was granted university status and renamed California State University, Hayward. In the fall of 1981, a branch of the university was established in Concord at the Pleasant Hill High School under the name Contra Costa Campus. In 1986, the BOT approved the construction of a permanent campus on the former Cowell Ranch and the Concord Campus opened in 1989. The CSUEB also includes the Oakland Professional Development and Conference Center. The name of the university and its two campuses was changed again in 2005 to California State University, East Bay. The CSUEB currently offers bachelor's degrees in 42 disciplines, 66 minors, 9 graduate degree programs, and several credential and certificate programs in education.

An important component to the CSUEB mission and identity is its role as a regional university in the East Bay. Approximately 70 percent of students attending CSUEB live in Alameda and Contra Costa Counties and 80 to 85 percent of alumni remain in the region. The campus prioritizes regional stewardship through promoting economic and social vitality of East Bay communities, regional workforce development, and a commitment to other regional issues, such as health care for residents.

### **3.7 MASTER PLAN PROCESS**

The Hayward Campus Master Plan was drafted in close collaboration with the Master Plan Steering Committee, the City of Hayward, and a wide variety of campus and community constituents. Campus administration, students, faculty, and staff in particular contributed considerable time and energy in many meetings reviewing and discussing data, concept and plans and provided invaluable input and feedback.

The master plan process began with the arrival of the new president and a series of town hall meetings to discuss the future of CSUEB. This process resulted in the Framework for the Future, consisting of seven mandates to guide change at CSUEB.

In the fall of 2007 a committee was formed to prepare the Academic Plan. Through fall this group tackled issues and opportunities relating to future academic programs and enrollment, and defined the role of each of the CSUEB campuses in Hayward, Concord, and Oakland, including the online campus. The discussions of this group were important in informing the enrollment, facilities planning, and student life components of the Hayward Campus Master Plan.

The Master Plan Steering Committee was appointed by the president to guide the Master Plan and met seven times over a nine-month period to review progress on the entire range of master plan topics. The committee provided insight into the nature of the Hayward campus, the issues facing the faculty and staff, and ideas for an improved campus.

### **3.8 MASTER PLAN OBJECTIVES**

Section 15124 (b) of the *2008 California Environmental Quality Act (CEQA) Statutes and Guidelines* states that a clearly written statement of project objectives sought by the project applicant, including the underlying purpose of the project, shall be included in the project description of the EIR. Project objectives are intended to assist the lead agency develop a reasonable range of alternatives to evaluate in the EIR and to aid the decision makers in preparing findings.

The primary objective of the Hayward Campus Master Plan is to comply with the CSU system-wide requirement to maintain a master plan for guiding campus development and meeting the educational mission of the University, as defined in the California Education Code. The following project objectives are based on the physical planning principles derived from the long-term academic vision for the campus as established in the CSUEB Strategic Plan and Hayward Campus Master Plan:

- Enhance the campus learning environment within a walkable campus core by providing adequate sites for planned and future programs and to accommodate growth in campus enrollment up to the CPEC-approved Master Plan ceiling of 18,000 FTES.
- Create supportive student neighborhoods that would help create a sense of community for both residents and commuting students, and increase on-campus housing to accommodate 5,000 students. In addition, identify locations on campus for faculty and staff housing to strengthen the sense of campus community.

- Plan for other design improvements, including improved campus entry and image to help orient visitors and make destination finding easier; special landmark building sites to create a memorable impression of the campus; and improved campus pedestrian promenades
- Implement comprehensive environmentally sustainable development and operations strategies, including land use and transportation, as well as resource consumption and waste generation.
- Continue the planning and design criteria from the original campus master plan that aim at preserving views of the bay and the hills; creating a clear design vocabulary; and protecting the users from the elements.

### 3.9 MASTER PLAN VISION

Several important concepts have guided the arrangement of uses and spaces in the proposed Master Plan for the Hayward campus. These concepts embody a vision for the future character of the campus. While over time details of the plan may evolve, these concepts should remain clear and consistent as the campus grows to realize the vision of a “vibrant university village.”

#### 1. Enhance the Campus Learning Environment

- New formal, visitor entry to campus
- Provides more clear and direct entry for visitors
- Terminates in a major campus quad
- Provides direct access to services for new and prospective students
- Provides direct access to sites for future community-oriented buildings (performing arts, library)

#### 2. Campus Neighborhoods

- Many more students housed on campus
- Supports more and diverse campus activities
- Safer, more vital campus environment
- Encourages socialization, interaction among students supportive of learning experience
- Two “neighborhoods” ensure a manageable scale to support student success
- Neighborhoods include dining, informal recreation areas, variety of socialization spaces and furnishings

3. Pedestrian Promenade

- One primary cross-campus pedestrian route improved as major mall and locus of activity
- Links student housing neighborhood with all parts of campus
- Accessible, direct route to many campus destinations
- Special, distinctive design
- Adjoining, complementary entry plazas from parking and residential areas

4. New Identity Building Sites

- Key building sites suitable for special buildings
- Highly visible sites will transform the dated image of campus
- Identity buildings have high public (community and campus) use
- Site for vertical identity element (e.g., wind turbine, campanile) located on major campus cross axis

5. Compact Development Pattern

- Infill development within existing academic core ensures easy walking access to all academic destinations
- Redevelopment of currently underutilized sites enhances accessibility
- Development pattern protects major open spaces and creates new usable courtyards and quad were surface parking or storage currently exist
- Compact pattern lends higher level of “energy” and activity to campus throughout the day
- Parking remains on periphery and traffic calmed on loop roads to minimize pedestrian/vehicular conflicts

6. Sustainable Development and Operations

- Comprehensive approach to elements of sustainable development and operations
- Regional model and leader
- Cooperation and coordination with City of Hayward

### **3.10 PROJECT CHARACTERISTICS**

#### **3.10.1 Master Plan Horizon**

The Master Plan outlines all aspects of physical development and planned land use to support the academic and enrollment goals established through strategic planning efforts conducted in 2006 and 2007. The Master Plan is intended to allow the campus to accommodate a student population of 18,000 FTE, and allow for the existing academic programs and support services to modernize, expand, and improve. The Master Plan is based on a horizon year of 2030 and would be implemented gradually over the next 22 years and beyond.

#### **3.10.2 Planned Enrollment, Faculty, and Staff Growth**

As discussed previously, when the campus was moved to the present location in 1963, the enrollment level of 18,000 FTES was approved by the California Postsecondary Education Commission (CPEC). The Hayward Campus Master Plan does not plan to change this previously approved enrollment cap and it therefore outlines planned physical development on the campus to support academic programs for a student population of 18,000 FTES. Enrollment in the fall of 2007 included 8,758 FTES. Existing facilities on the campus can support a student enrollment of up to 12,586 FTES.

In addition to FTES, headcount figures, which include all enrolled individuals, are required to plan for growth on the campus. Generally, the FTES to headcount ratio is approximately 3:4 for students. Faculty and staff involved in online instruction are included in headcount figures because they require office space and other facilities. Headcount figures for the fall of 2007 were 12,224 students, 741 faculty, and 850 staff.

In order to accommodate the planned growth in student enrollment, additional faculty and staff positions would be created during buildout of the campus under the proposed Master Plan. The proposed Master Plan would generate an additional 765 faculty and 878 staff positions. The number of faculty and staff employed by the campus would increase slowly over the course of master plan buildout as facilities are constructed and academic programs are expanded.

### 3.10.3 Master Plan Components

The Hayward Campus Master Plan includes eight planning components: Sustainable Campus Framework; Facilities Development Framework; Open Space Framework; Access, Circulation, and Parking Framework; Infrastructure and Utilities Framework; Landscape Master Plan; Building Design Guidelines; and Special Area Plans. Each of the planning components is described below.

#### *Sustainable Campus Framework*

The CSUEB views the master planning process as an important opportunity to establish a sustainable university community that can be a model for the region and the CSU system. As new facilities are added and more students reside on the campus, patterns of development and operations can evolve to achieve significant advances in all aspects of sustainable planning, design and operations.

The purpose of the Sustainable Campus Framework section of the Master Plan is to present an overview of the University's vision for sustainability at CSUEB utilizing a comprehensive approach which addresses the full range of focus areas. Each sustainability focus area incorporated into the Master Plan along with the goals, strategies, targets, and benefits, is included in **Table 3.0-1, Sustainable Campus Framework Summary**, below.

The Leadership in Energy and Environmental Design (LEED™) Green Building rating system is a nationally recognized standard administered by the US Green Building Council (USGBC). The LEED rating system places emphasis on energy use and applies to existing buildings as well as to new construction. The BOT has adopted a policy that requires all new buildings on CSU campuses be built to a LEED NC Silver rating or higher, although this policy does not require CSU buildings to pursue actual LEED certification from the USGBC. Among other promising commitments made by the University are executive orders addressing the reduction of energy consumption and the use of sustainable materials and practices by students, staff, and faculty.

**Table 3.0-1  
Sustainable Campus Framework Summary**

<b>Focus Area</b>	<b>Goals</b>	<b>Strategies</b>	<b>Targets</b>	<b>Benefits</b>
Energy	Achieve a sustainable energy balance that is resilient, efficient, and leads to carbon neutrality.	<ol style="list-style-type: none"> <li>1. Existing building retrofits and Re-Commissioning</li> <li>2. Energy Load Reduction (orientation, thermal massing)</li> <li>3. Passive Energy Efficiency Strategies (bio-climatic design approach)</li> <li>4. Active Energy Strategies (radiant systems, under floor air distribution)</li> <li>5. Recover Energy (heat pipe, heat wheel)</li> <li>6. Renewable Energy Generation (PVs, wind, fuel cell)</li> <li>7. Offsetting</li> </ol>	<p>Achieve 30% energy savings in existing buildings.</p> <p>Achieve 50% energy savings in new buildings.</p>	<p>Reduced peak demand.</p> <p>Reduced costs.</p> <p>Reduced carbon emissions.</p> <p>Improved occupant control.</p>
Water	Reduce future potable water needs to a level lower than existing use.	<ol style="list-style-type: none"> <li>1. Water Efficiency (Exterior)</li> <li>2. Water Efficiency (Interior)</li> <li>3. Alternate Water Sources (Low Energy)</li> <li>4. Alternate Water Sources (High Energy)</li> </ol>	<p>Achieve 75%–100% solid waste diversion from landfills by 2030.</p> <p>Compost 100% of campus organic waste on site.</p>	<p>Increase landfill diversion.</p> <p>Conservation of energy in production of new materials.</p> <p>Creation of organic compost for campus use.</p> <p>Reduction in greenhouse gas production. Reduced GHG emissions</p>

Focus Area	Goals	Strategies	Targets	Benefits
Solid Waste	Develop a campus that leads the regional and global efforts for closed material loops, landfill diversion, and self-sustenance.	<ol style="list-style-type: none"> <li>1. Minimize Waste Generation</li> <li>2. Maximize Recycling</li> <li>3. Reuse Buildings and Demolition Materials</li> <li>4. Compost Green Waste on Campus</li> <li>5. Engage Students, Faculty, Staff, and Visitors.</li> </ol>	<p>Achieve 75%–100% solid waste diversion from landfills by buildout.</p> <p>Compost 100% of campus organic waste on site.</p>	<p>Increase landfill diversion.</p> <p>Conservation of energy in production of new materials.</p> <p>Creation of organic compost for campus use.</p> <p>Reduction in greenhouse gas production.</p> <p>Reduction in landfill contributions</p>
Carbon	Achieve operational carbon neutrality.	<ol style="list-style-type: none"> <li>1. Right-size buildings</li> <li>2. Reduce movement</li> <li>3. Minimize energy use</li> <li>4. Maximize use of renewables</li> </ol>	<p>Achieve a 60% carbon emissions reduction through operational, policy and design strategies.</p> <p>Pursue off-site regenerative and credit programs to offset the balance of emissions.</p>	<p>Reduced greenhouse gas emissions.</p>
Transportation	Create a campus community utilizing alternate modes of transportation and with a larger on-campus population to help achieve carbon neutrality.	<ol style="list-style-type: none"> <li>1. Provide highly accessible, frequent bus and shuttle transit</li> <li>2. Promote transit use through incentives</li> <li>3. Discourage auto use by residents and commuters</li> </ol>	<p>Reduce drive alone rates for commuters from 79% to 64% and increase carpooling rates from 4% to 8%.</p> <p>Increase transit ridership from 16% to 29%.</p> <p>Reduce future parking supply from 0.49 spaces per FTE to 0.37 spaces per FTE.</p>	<p>Reduced greenhouse gas emissions</p> <p>Less congestion on campus and regional roads</p>

Focus Area	Goals	Strategies	Targets	Benefits
Materials		<ol style="list-style-type: none"> <li>1. Reduce energy use</li> <li>2. Reduce and reuse materials</li> <li>3. Recycle and replenish</li> </ol>		<p>Reduced use of virgin materials.</p> <p>Create markets for recycled and rapidly renewable materials.</p> <p>Reduced greenhouse gas emissions from production and transportation.</p> <p>Less solid waste produced.</p>
Landscape	Create and beautiful and sustainable campus setting to enhance the life of the university.	<ol style="list-style-type: none"> <li>1. Understand soil and plant conditions</li> <li>2. Create plant palettes with an emphasis on native species and those suited to the local climate</li> </ol>		<p>Enhanced aesthetic value on campus.</p> <p>Long-lived plant communities</p> <p>Reduced water use</p>
Land Use and Site Development	<p>Create a robust learning community that creates many opportunities for interaction.</p> <p>Keep the campus compact and walkable with abundant usable open space.</p> <p>Develop at adequate densities to ensure long-term flexibility</p>	<ol style="list-style-type: none"> <li>1. Develop academic uses within a walkable core area</li> <li>2. Locate residential neighborhoods in close proximity</li> <li>3. Locate parking on periphery</li> <li>4. Provide generous and well furnished open spaces</li> </ol>	<p>5,000 student resident beds</p> <p>Provide appropriate balance of built and open space</p> <p>Provide convenient access to transit stops</p>	<p>A vital and energizing campus community</p> <p>A critical mass of activity which supports the learning environment</p> <p>A compact academic environment</p> <p>Flexibility for long-term program growth or change</p>

### *Facilities Development Framework*

The Facilities Development Framework component of the Master Plan outlines the proposed building concept for the Hayward campus. The proposed land use plan is shown in **Figure 3.0-6, Hayward Campus Proposed Land Use Plan**. As shown, the proposed land use plan divides the campus into areas by land use type. Land use types include academic/administrative, student support, campus support, student housing, athletics/recreational, parking, functional open space, open space reserve, and faculty/staff housing.

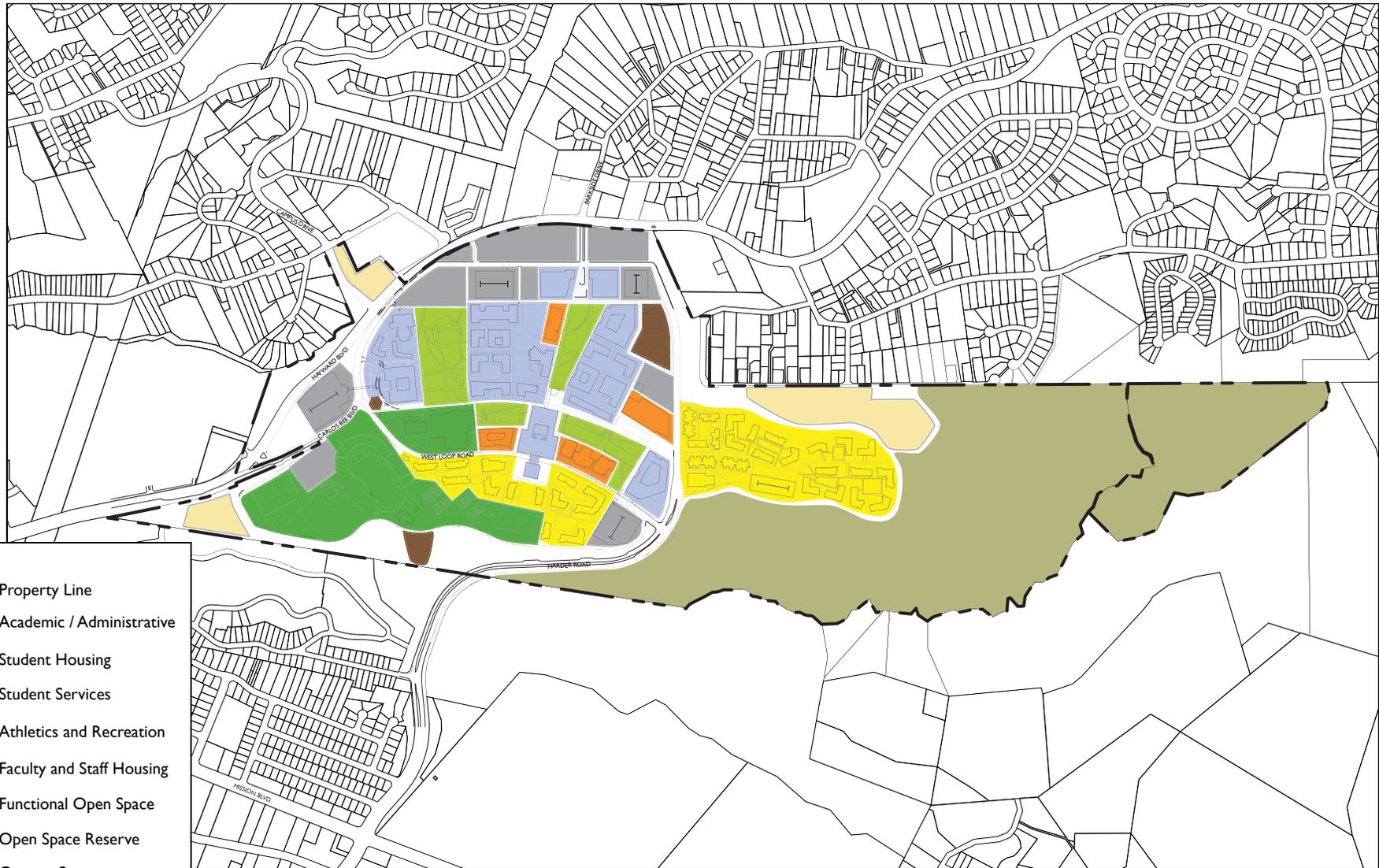
The Hayward campus benefits from a compact campus layout. However, the developable area of the campus is relatively limited, and in order to accommodate 18,000 FTES, future development would need to be at higher densities than currently exist. Placement of academic buildings is based, in part, on the walkable distance from other academic uses. Generally, a 10-minute walk is considered a reasonable measure of convenience in a campus environment since this typically corresponds to the class-change time. The land use plan assumes that the remaining academic development parcels will be developed at higher densities than the currently developed areas of the campus.

New building construction would add approximately 1.1 million square feet of building space to the campus to support projected growth of existing academic programs. The Master Plan includes 951,000 square feet of academic building space and approximately 145,000 square feet of academic and campus support building space. **Figure 3.0-7, Hayward Campus Parcel Plan**, and **Figure 3.0-8, Parcel Plan Matrix**, provide details on land uses proposed in the land use plan. Existing buildings on the Hayward campus may be demolished if renovation is determined to be infeasible. Academic uses are planned almost entirely within the existing academic zone bordered by the loop roads, Carlos Bee Boulevard, and Harder Road. The existing library would be renovated to include offices or classrooms and a new library would be constructed in a location with high visibility and improved access. The land use plan includes new large event spaces that would accommodate special events such as conferences and expanded curriculum in the arts. Food service on the campus would be provided within dining commons within the student housing neighborhoods, University Union, and small distributed café, kiosk, and venter locations throughout campus

Currently, the campus provides approximately 800 beds within the Pioneer Heights I and II student housing complexes. Pioneer Heights III, which includes 472 new student-housing beds, is in the final stages of construction and will open in fall 2008. At Master Plan buildout, the campus would include a total of 5,000 student-housing beds. This overall total of 5,000 beds would include the Pioneer Heights IV development, which is planned for construction in 2009–2010 and analyzed in Volume 2 of this Draft EIR. The overall increase in student housing beds may include the demolition of the 400-bed Pioneer Heights I

complex and replacement of those beds within one of the two designated student-housing areas. The completion of Pioneer Heights III and potential removal of Pioneer Heights I units are included in the overall planned student housing bed count of 5,000 beds, or an increase of 3,700 new student-housing beds compared to existing conditions. The areas within the campus designated for proposed student housing are shown in **Figure 3.0-6** and include two areas: the first area is southeast of Pioneer Heights and the second is southwest of the West Loop Road, between the soccer field and Harder Road. The Pioneer Heights neighborhood would be completed to include approximately 3,000 student-housing beds along with dining, recreation, and support facilities. The second student-housing area, the Bayview neighborhood, would include the same amenities as the Pioneer Heights neighborhood and accommodate approximately 2,000 students.

At this time, faculty/staff housing is being considered as an option for the Hayward campus that may or may not be implemented within the Master Plan horizon. As the Master Plan is implemented, the CSU will evaluate the need for faculty/staff housing based on several factors including demand, economic feasibility, and academic goals. A maximum of 220 faculty/staff housing units could be constructed under the proposed Master Plan. Three possible locations at the periphery of the campus are being considered for faculty housing and are shown in **Figure 3.0-6**. The three sites are alternative sites for faculty/staff housing and it should be noted that it is unlikely that all three sites would be developed with faculty/staff housing. On the northwest, the first site occupies 2.5 acres of land just north of the playing field area. This site lies adjacent to the property currently owned by Caltrans. The campus-owned site can accommodate from 25 to 50 units of housing, at densities of 10 to 20 dwelling units per acre (du/acre), which is typical of townhouse, duplex or low-density apartment projects. With the addition of a contiguous parcel that lies on the Caltrans property, the combined sites could accommodate from 90 to 180 units. Access to this site would be from Carlos Bee Boulevard and Bunker Hill Boulevard in the adjoining residential area. The second site is 2 acres in size and lies off Hayward Boulevard and Campus Drive. The second site is currently vacant and adjacent to the former primary school site, which is also vacant at this time. A range of 40 to 60 units of housing at densities of 20 to 30 (du/acre) could be accommodated within the campus-owned parcel. If combined with the adjoining parcel, the site could accommodate from 140 to 210 units. The third site is located just east and above the Pioneer Heights student housing area. This site would be accessed most easily from Grandview Avenue and possibly from the existing student housing area. Assuming densities of 4 to 12 (du/acre), the third site has a capacity of 35 to 110 units. Because these sites differ in acreage and the density of development at each of the three sites could vary, the maximum number of housing units that could be built at each site is evaluated in this Draft EIR.



**LEGEND**

- Property Line
- Academic / Administrative
- Student Housing
- Student Services
- Athletics and Recreation
- Faculty and Staff Housing
- Functional Open Space
- Open Space Reserve
- Campus Support
- Parking

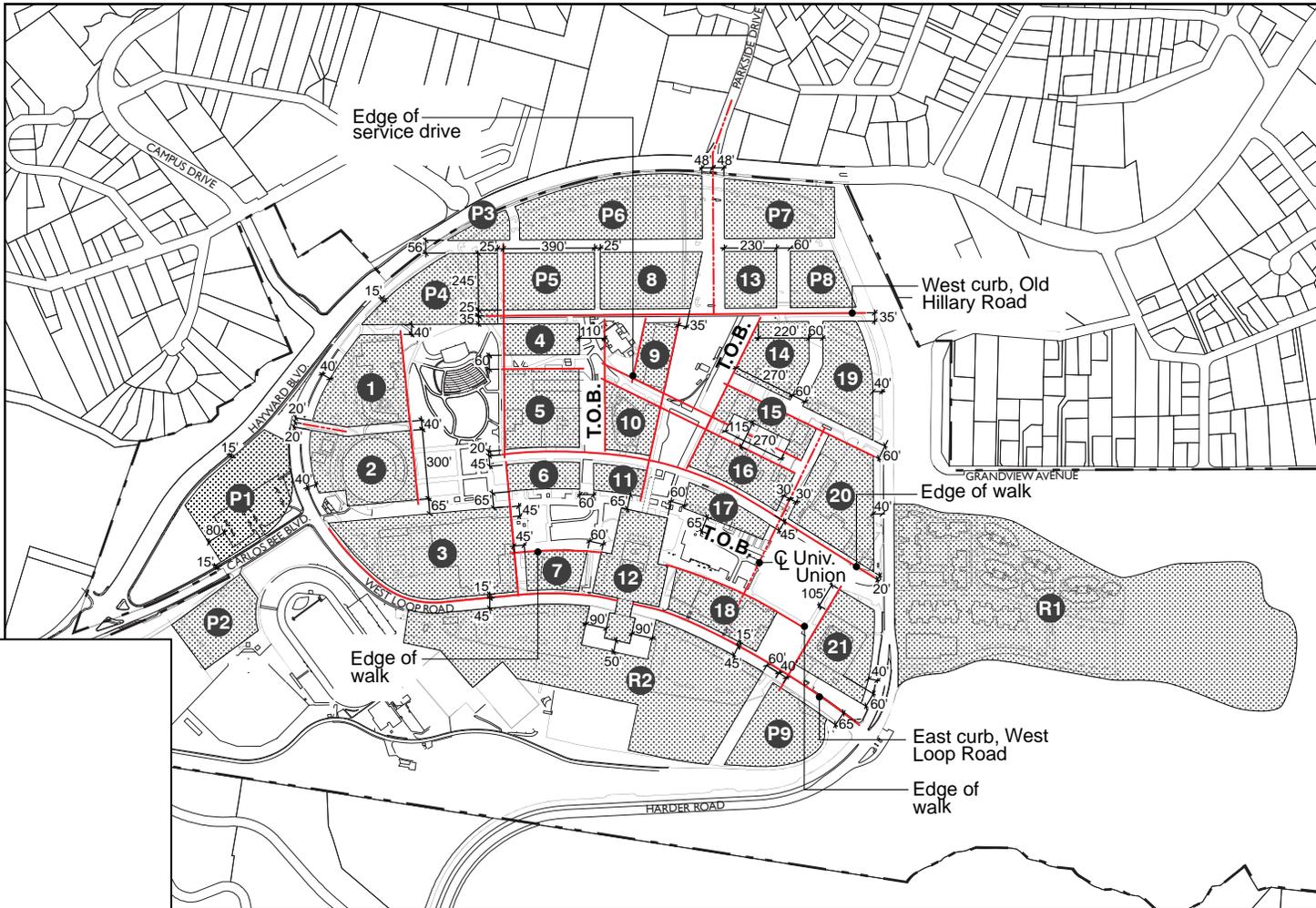


**NOT TO SCALE**

SOURCE: CSU East Bay Hayward Campus Master Plan Study - October 2008

FIGURE **3.0-6**

**Hayward Campus Proposed Land Use Plan**



LEGEND

- Property Line
- Alignment Line
- + Key Dimension
- ▨ Parcel
- ① Parcel Numbers
- T.O.B Top of Bank
- ⊕ Centerline



SOURCE: CSU East Bay Hayward Campus Master Plan Study - October 2008

FIGURE 3.0-7

Hayward Campus Parcel Plan

Parcel No.	Existing Use	Parcel Area (S.F.)	Parcel Area (Acre)	Existing Bldg GSF	Potential Use	Max. Allowable Floors Above Grade	Max Potential GSF	Total GSF Parcel Capacities
1	University Theatre / Robinson Hall	122,300	2.8	60,500	Academic / Admin	2	17,400	69,200
2	Music Building	125,400	2.9	86,735	Academic / Admin	5	302,500	302,500
3	Gymnasium	236,900	5.4	116,000	Recreation / Athletics		0	116,000
4	Parking Lot J	43,900	1.0		Academic / Admin	5	203,000	203,000
5	Art & Education Building	109,500	2.5	116,097	Academic / Admin	5	304,000	304,000
6	Open Space / Circulation	35,900	0.8		Academic / Admin	3	78,900	78,900
7	Student Health Center	41,600	1.0	23,900	Academic / Admin	3	101,100	101,100
8	Parking Lot G	101,300	2.3			5	237,000	237,000
9	SSRB / Childcare	39,800	0.9	101,430	Academic / Admin		0	101,430
10	VBT Center	56,300	1.3	67,872	Academic / Admin		0	67,872
11	Open Space / Circulation	25,300	0.6		Academic / Admin	3	35,100	35,100
12	Library / Warren Hall	111,200	2.6	362,300	Academic / Admin		0	362,300
13	Parking Lot F	54,700	1.3			5	174,000	174,000
14	Open Space	76,800	1.8		Academic / Admin	5	314,500	314,500
15	Science Building and Corp Yard (East)	51,300	1.2	209,328	Academic / Admin	5	151,500	151,500
16	Science Building and Corp Yard (West)	72,800	1.7		Academic / Admin	5	296,500	296,500
17	Open Space	37,100	0.9		Academic / Admin	3	56,700	56,700
18	Student Union Complex	84,700	1.9	107,934	Student Support		0	107,934
19	Parking Lots E1 & E2	101,600	2.3		Campus Support	3	209,700	209,700
20	Student Services Hub / Parking Lot D	134,600	3.1		Academic / Admin. & Recreation / Athletics	2	81,000	81,000
21	Meiklejohn Hall	100,400	2.3	111,662	Academic / Admin	5	293,500	293,500

Summary Existing		Summary Parcel Capacities	
Existing Academic	1,014,494	New Academic	2,565,700
Existing Student & Campus Support	233,264	New Student & Campus Support	209,700
Core F.A.R.	0.40	Core F.A.R.	1.01
<b>Total Existing GSF</b>	<b>1,363,758</b>	<b>Total New GSF</b>	<b>2,856,400</b>
			<b>3,663,736</b>

SOURCE: CSU East Bay Hayward Campus Master Plan Study - November 2008

FIGURE 3.0-8

Parcel Plan Matrix

The field areas currently in athletics and recreation use would be maintained under the Master Plan. The current practice soccer field that lies below Parking Lot A would be relocated slightly to the north. Minor reconfiguration of some field areas would allow for more efficient use of the fields by the full variety of sports activities. The gym complex would remain as located, with room to expand and/or reconfigure the main building and pool area. This zone would be supplemented with informal recreation facilities, such as grass fields, basketball courts, volleyball areas, to be provided within the student housing neighborhoods.

### *Open Space Framework*

The Hayward campus has a clear pattern of open space that was based on the original master plan concepts. The strategies in the proposed Master Plan build on those existing patterns and supplement them with spaces of all scales and purposes. Open space areas exist and are proposed in the form of primary campus quads, secondary campus quads, courtyards, entry plazas, residential greens, and pedestrian promenades. Landscaping within the proposed open space areas and the entire Hayward campus would be governed by the Landscape Master Plan.

The largest open space areas on the Hayward campus are the primary campus quads. The existing quad near the Pioneer amphitheatre and the adjoining landscaped areas extending west to the front of the Music Building is the most highly landscaped, mature, and complete of the campus' open areas. This area will be retained and managed to preserve its glade-like character. A second major quad is in the early stages of implementation and lies in front of the Valley Business Center and the Student Services Replacement Building. This quad would become prominently visible with the proposed campus entry sequence, which is discussed below under the Access, Parking, and Circulation Framework. The third major campus quad area is associated with student activities and adjoins the University Union building and Bookstore, and Mieklejohn Hall. This space is intensively used, particularly at midday, and significant landscape improvements are proposed to improve its appearance.

Secondary campus quads are not of the scale of the primary quads, but provide landscaped outdoor spaces in highly developed areas of the campus. One secondary quad exists within the open space fronting the Gym and Student Health Center. Two additional secondary campus quads are proposed, each in areas of the campus where long-term development of academic facilities will likely focus. These proposed secondary quads would be located to the north and south of the primary entry quad and provide smaller spaces that can serve as the building entry quads for their respective districts.

Small courtyards with seating areas would be incorporated into or placed between buildings throughout the campus. Entry plazas would be furnished with campus maps, directional signage, seating, and special

paving to create attractive entry points from parking structures and lots, transit facilities, and residential neighborhoods. Residential greens would be provided in the student housing neighborhoods in the form of large grass play areas and ball courts and smaller gathering spots or seating associated with building entries and grade transitions. Pedestrian promenades would consist of existing and proposed pathways throughout campus. Three existing primary north/south routes would be improved with new paving, lighting, and furnishings. New pathways that provide east/west linkages would be added to the Hayward campus.

Approximately 130 acres of land lying primarily to the south of the campus are designated as Campus Reserve. At this time these lands are not needed to meet the 18,000 FTES enrollment space needs. In addition, the slopes associated with these areas and their distance from the center of the developed campus make them costly and inconvenient to develop. Access would be limited to maintenance activities with informal trails available for walking. Some existing remains of small structures as well as some debris remaining in these areas would be removed.

### *Access, Circulation, and Parking Framework*

The Access, Circulation, and Parking Framework component of the Master Plan includes proposed improvements to the existing campus circulation system, including points of access and parking supply. This portion of the Master Plan is designed to move the campus toward a more sustainable transportation system, in which commuters and visitors have multiple convenient modes of access to and from the campus, and campus residents have minimal need to maintain a personal auto on the campus. The Access, Circulation and Parking Framework consists of physical, operational, and policy changes.

The existing major on-campus roadways would continue to support vehicular circulation through the Hayward campus. Proposed modifications to the existing vehicle circulation system include the following:

- A third four-lane primary campus entrance from Hayward Boulevard on the east edge of the campus, opposite Parkside Drive and a second two-lane connection roughly midway between Campus Drive and the new campus entrance
- A new north-south four-lane roadway near the east end of the campus that serves as the new East Loop connection and also provides access to the parking lots and parking structures in that area; additionally, Old Hillary Road becomes a pedestrian mall in the central section

A redesigned two-lane West Loop Road intended to serve primarily service and emergency access and some cross-campus traffic; the West Loop/ Carlos Bee intersection would be realigned to allow West Loop to 'T' into Carlos Bee-East Loop, thus emphasizing the latter alignment as the through route

- A right-turn lane serving inbound traffic from Hayward Boulevard to the planned parking structure located between Hayward Boulevard and Carlos Bee Drive

Under the proposed modifications to the campus circulation network, it is expected that traffic signals would ultimately be needed at the intersections of Hayward Boulevard and the new primary campus entrance; Hayward Boulevard and the new secondary gateway; Harder Road and West Loop Road; and Carlos Bee Road and West Loop Road. All-way stops would be needed at other locations along the new West Loop Road alignment and the redesigned East Loop Road alignment. Traffic calming treatments such as raised crosswalks, in-pavement flashers on crosswalks, curb extensions, and stop signs would be considered in the redesign of West Loop Road and the portion of Harder Road that divides the Pioneer Heights neighborhood from the academic core of the campus. The route from Hayward Boulevard to Mission Boulevard via the new primary campus entry and East Loop Road would be available to non-campus traffic, but would be designed as a slower route than Hayward Boulevard and Carlos Bee Boulevard, which are designated as major arterials.

A key component of the Access, Circulation, and Parking Framework is the development and promotion of a travel demand management (TDM) program. The goal of the TDM program is to shift commuters out of single-occupant cars and into carpools, vanpools, transit, bicycling, and walking. The following programs and services are identified in the Master Plan as potential methods to achieve the goal of reducing the use of single-occupant cars by students, faculty, and staff:

- Free AC Transit passes for all students, faculty and staff
- Discounted BART tickets for students, faculty and staff through the Commuter Check program or a similar program or a "Clean Air Cash" program where those choosing to commute by BART receive a cash payment and are not allowed to purchase a normal parking permit
- Carpool matching service and vanpool program
- Preferential parking for carpools and vanpools
- Continued participation in the Alameda County Congestion Management Agency's Guaranteed Ride Home program for alternative mode users
- Provision of a flexible car rental service program (carsharing) on campus to provide access to vehicles for those who choose not to commute to campus by car or residents who do not maintain a car on campus

- Provision for participants in alternative mode programs to purchase a certain number of single-day parking permits to allow for commute flexibility and promote alternative mode use for those who may occasionally need to use a car.
- Provide a scaled parking permit pricing structure that ties the cost of parking to the level of use and location, and that provides the funding needed to maintain and operate the parking system, including provision of new parking lots/structures
- Discourage on-campus residents from bringing cars to campus, and encourage the use of transit service(s) and the flexible rental car service (when instituted) for travel off campus.

**Table 3.0-2, Travel Demand Management Effectiveness**, includes the projected effect on peak-hour trip generation and peak parking demand if all of the programs listed above were to be implemented.

**Table 3.0-2  
Travel Demand Management Effectiveness**

	Existing	Without TDM	With TDM
<b>Mode Share</b>			
Drive Alone	79%	79%	64%
Carpool	4%	4%	8%
Transit	16%	16%	29%
<b>Total Parking Spaces</b>	4,860	8,500	6,490
<b>Vehicle Trip Generation</b>			
AM Peak Hour	1,663	2,623	2,298
PM Peak Hour	2,611	4,119	3,712

*Source: Cal State East Bay, Hayward Campus Master Plan, July 2008.*

Based on current and historic trends, buildout of the proposed Master Plan would require 8,750 parking spaces, including 4,900 spaces for commuting students, 1,225 spaces for resident students, 2,100 spaces for faculty/staff, and 450 spaces for visitors and University-owned vehicles. This would be an increase of about 3,900 spaces over the inventory available in January 2007. However, rather than assuming future parking demand and resulting supply needs will mimic past trends, the parking plan proposes carefully growing the parking supply while managing the growth in parking demand with the goal of reducing that growth by approximately 50 percent. Thus, rather than adding 3,900 spaces to the current 4,800, the addition is proposed to be 1,900, for a maximum of 6,700 spaces. While the campus has space sufficient to provide up to the full 8,750 spaces should they ultimately be needed, the plan proposes four or five strategically located parking structures which would be constructed depending on size, configuration,

and demand to provide a total of 6,700 spaces. Potential locations and sizes of proposed parking structures include the following:

- Carlos Bee Gateway Structure – a structure providing about 1,400 spaces would be built to the north of the intersection of Carlos Bee Boulevard and West Loop Road
- East Campus Structures – two structures providing 800–1,000 spaces each would be built within the area between the realigned East Loop Road and Old Hillary Road along with the remaining East Campus surface lots providing about 1,700 spaces
- Harder Road Structure – a garage providing about 1,100 spaces will be built to the northwest of the intersection of Harder Road and West Loop Road. The single access/egress point for this garage will be on West Loop Road
- Residential Structure – a 500-space parking structure would be built for use by the residents of the Pioneer Heights residence halls

The remaining parking supply would be composed of parking lots that would remain or be expanded through restriping. The proposed parking plan is illustrated in **Figure 3.0-9, Parking Plan**.

The Master Plan addresses alternative modes of transportation through a Transit Plan and a Pedestrian Circulation Plan. The Transit Plan is shown in **Figure 3.0-10, Transit Plan**, and includes a bus/shuttle connection linking the downtown Hayward BART station to the campus. The Pedestrian Circulation Plan is shown in **Figure 3.0-11, Pedestrian Circulation Plan**, and outlines the locations of proposed primary pedestrian malls, major pedestrian circulation pathways, primary pedestrian entries, and pedestrian bridges.

Bicycle circulation is also included in the Access, Circulation, and Parking Framework. The topography of the Hayward campus is largely responsible for the limited bicycle use on and around the campus. Nevertheless, the Master Plan circulation system will accommodate bicycles used for cross-campus trips. Bicycles can share the road on East Loop Road and West Loop Road, which are intended to be 25-mile-per-hour (mph) roadways. Bicycles can also use the wider pedestrian walkways; bicycle traffic is not expected to be so heavy that pedestrian-bicycle conflicts would be a problem on this campus. However, the University will consider designating dismount zones if safety concerns arise. Bicycle racks would be provided on campus and on transit vehicles to encourage on-campus bicycling.

The Access, Circulation, and Parking Framework includes a Service and Emergency Access component that addresses the need for adequate service and emergency access on the Hayward campus. The proposed Service Access plan is shown in **Figure 3.0-12, Service Access Plan**. The Master Plan also includes a Universal Accessibility Plan, which is shown in **Figure 3.0-13, Universal Accessibility Plan**. Primary service access to the various yards/buildings would be provided from several locations on West

Loop Road, East Loop Road, Old Hillary and the Pioneer Heights access roads. From these entry points to the central campus, service vehicles would use the major pedestrian circulation routes to travel to and from the internal service yards. The emergency access plan is designed to

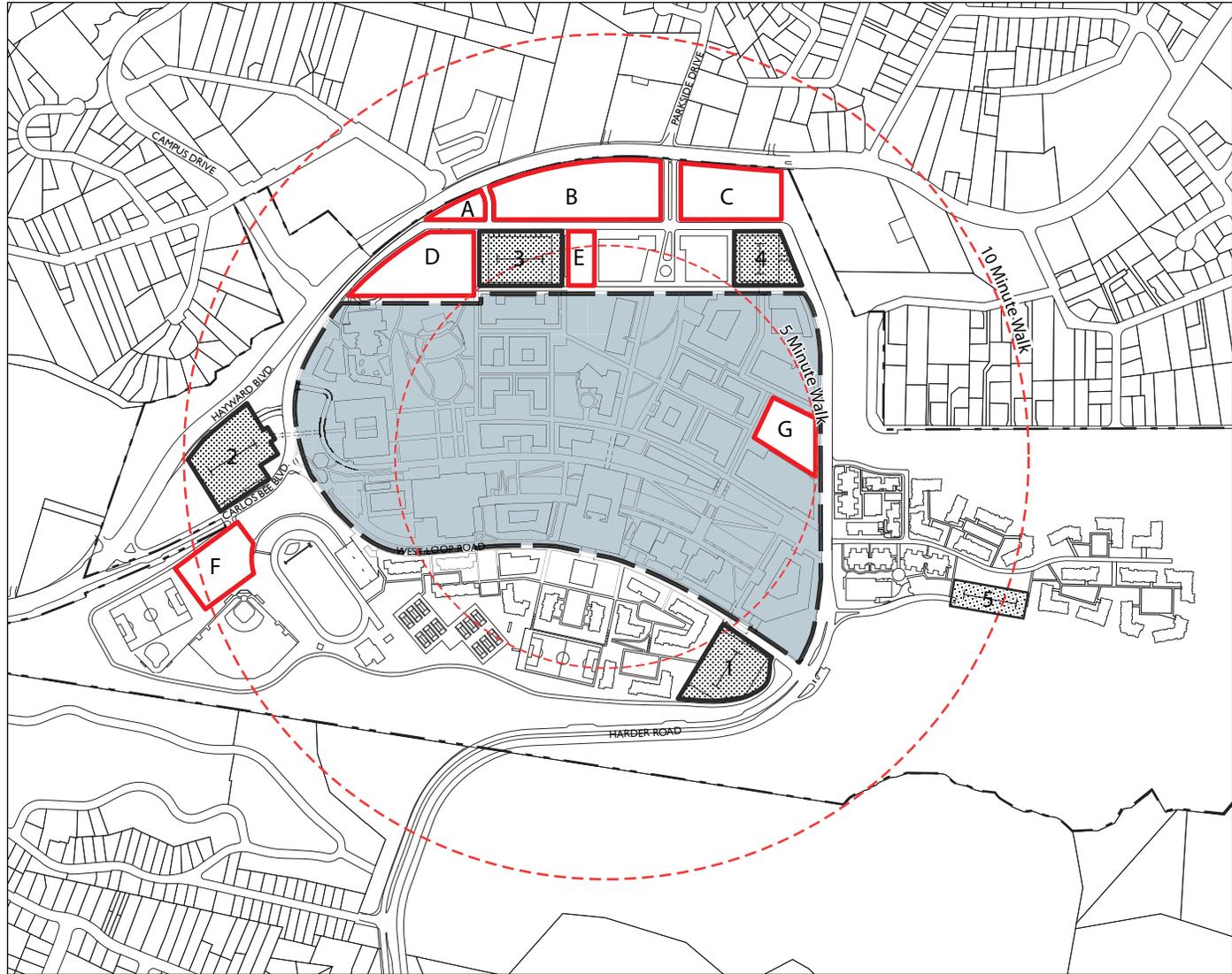
- provide access to all buildings by fire department vehicles on appropriately surfaced access routes with a minimum 20-foot width; where buildings exceed 35 feet in height, these access routes will be 26 feet in width. Rooftop access will be provided along one full side of each building;
- ensure access by vehicular fire apparatus to within 150 feet of all portions of a non-sprinklered building, or within 200 feet of a sprinklered building; and
- provide adequately sized cul-de-sac or hammerhead turn-around areas for fire vehicles at fire road dead ends and where appropriate to limit the need to traverse interior plazas and walkways to exit building sites.

The City of Hayward Fire Department would review the Service and Emergency Access component along with the remainder of the Master Plan to ensure that adequate emergency service would continue to be provided to the campus. Additionally, emergency access requirements for specific campus buildings or projects as the Master Plan is implemented would be required to meet fire code provisions applicable at the time of design and construction.

### ***Infrastructure and Utilities Framework***

The Infrastructure and Utilities Framework is related to the Facilities Development Framework and is divided into four major topic areas: energy, water and wastewater, solid waste, and communications. Improvements to electricity, natural gas, water, wastewater, stormwater conveyance, and telecommunications infrastructure to support the campus as it grows under the Master Plan are outlined. Proposed sustainability strategies include measures such as renewable and emerging technology energy systems, energy monitoring systems, and recycled water use for landscape irrigation and other non-potable campus water needs.

Proposed underground utility systems would be designed for long-term use with capacity and service lives of 20 to 50 years. To avoid the costly relocation of major utility systems in the future, utility corridors would be identified and utilized throughout the future development of the campus. In planning for new underground utility corridors, consideration will be given to locating them beneath paved roadways and walkways, avoiding future disruption of open space areas. The existing utility systems are described below along with improvements that are likely to be constructed under the Master Plan.



LEGEND

-  Property Line
-  Structured Parking Site
-  Surface Parking Site
-  Limited Access Parking Zone



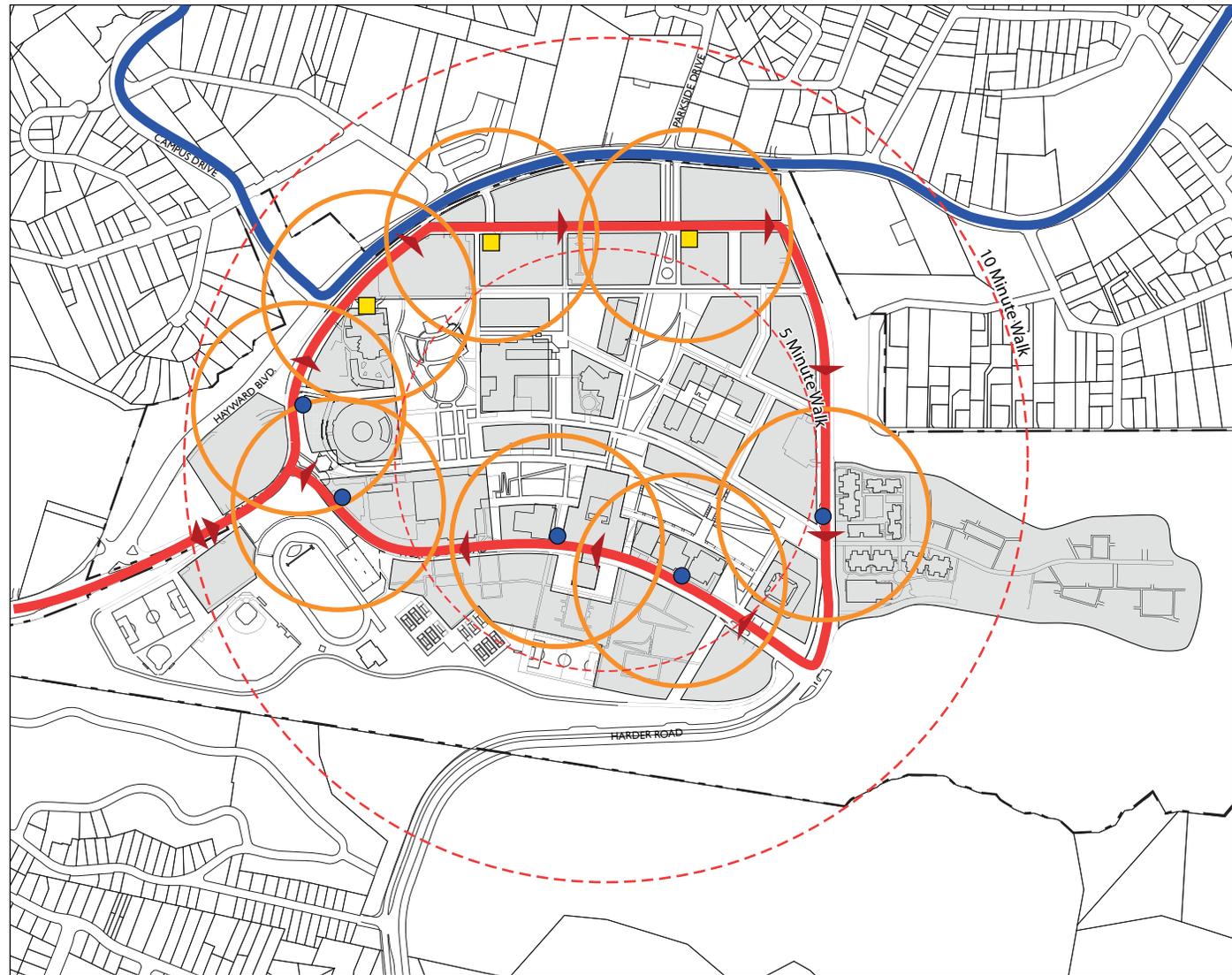
NOT TO SCALE

California State University Easy Bay Master Plan EIRs

SOURCE: Fehr & Peers – October 2008

FIGURE 3.0-9

Parking Plan



- LEGEND
- Property Line
  - AC Transit, Route 94
  - AC Transit, Route 92
  - Existing Shuttle Stop
  - Relocated Shuttle Stop
  - 2-3 Minute Walk
  - Parcels



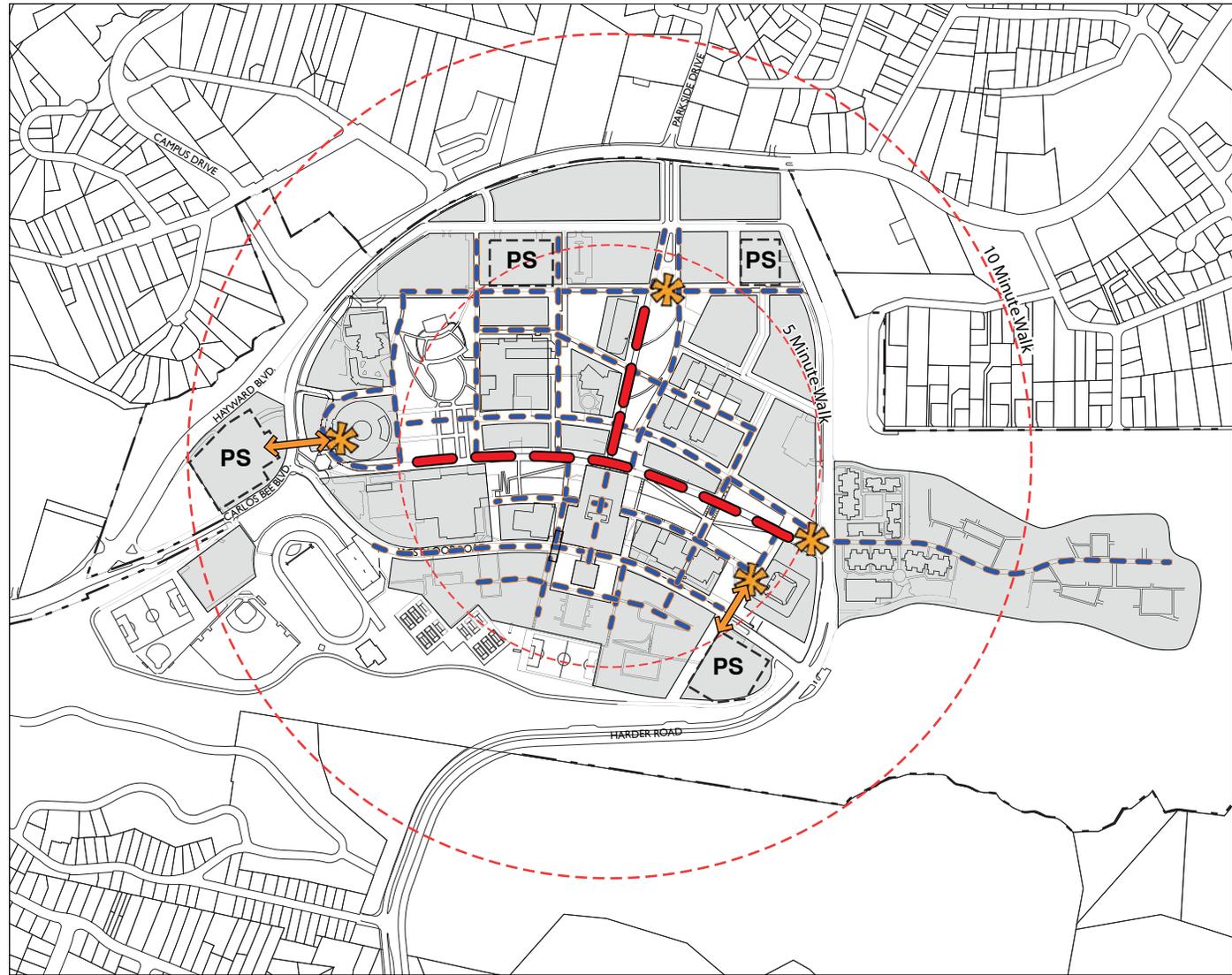
NOT TO SCALE

California State University Easy Bay Master Plan EIRs

SOURCE: Fehr & Peers –October 2008

FIGURE 3.0-10

Transit Plan



**LEGEND**

- · · — Property Line
- — — Primary Pedestrian Promenades
- — — Pedestrian Circulation
- ★ Primary Pedestrian Entries
- ↔ Pedestrian Bridge
- ▒ Parcels
- [ PS ] Parking Structures

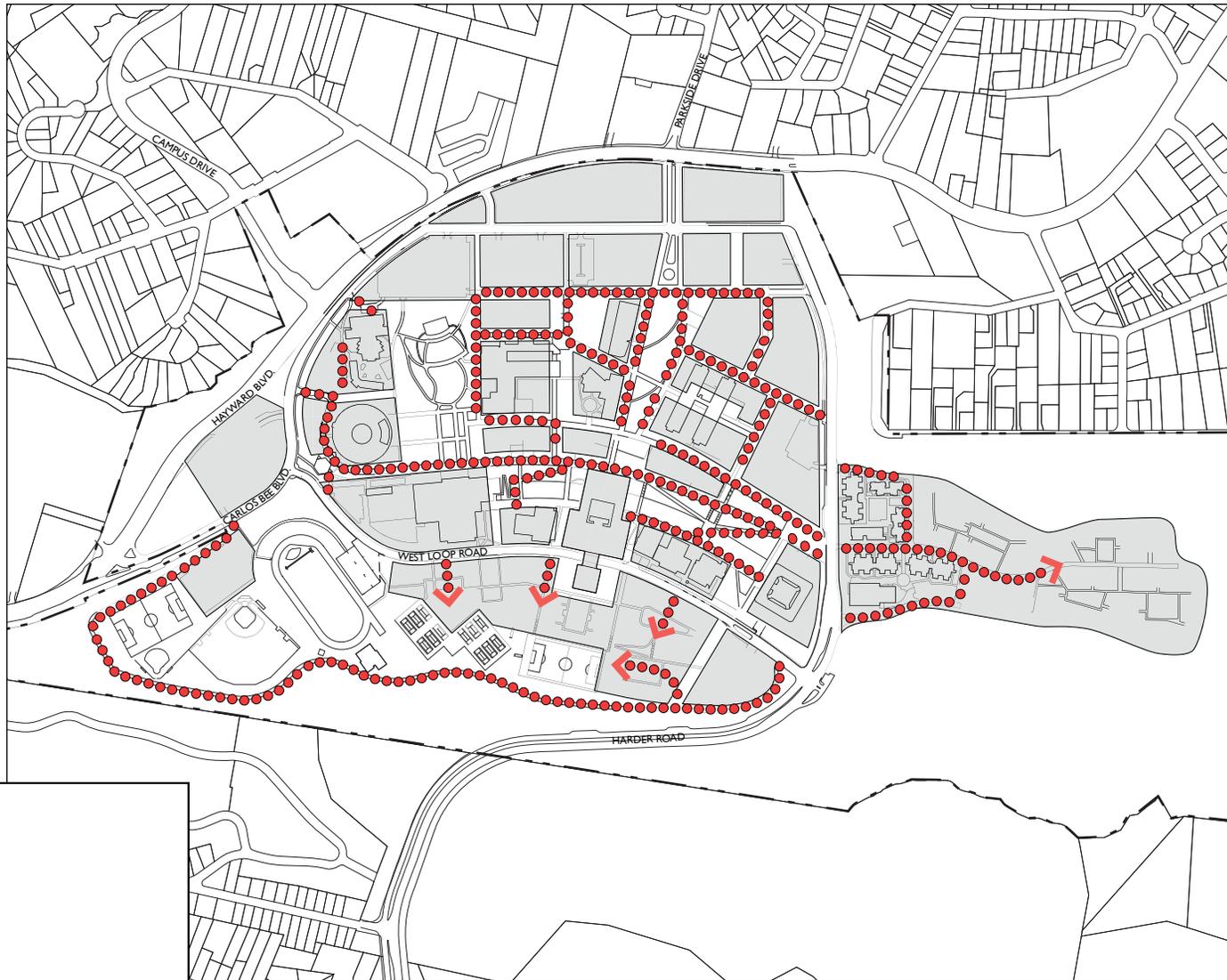


**NOT TO SCALE**

SOURCE: Fehr & Peers –October 2008

**FIGURE 3.0.11**

**Pedestrian Circulation Plan**



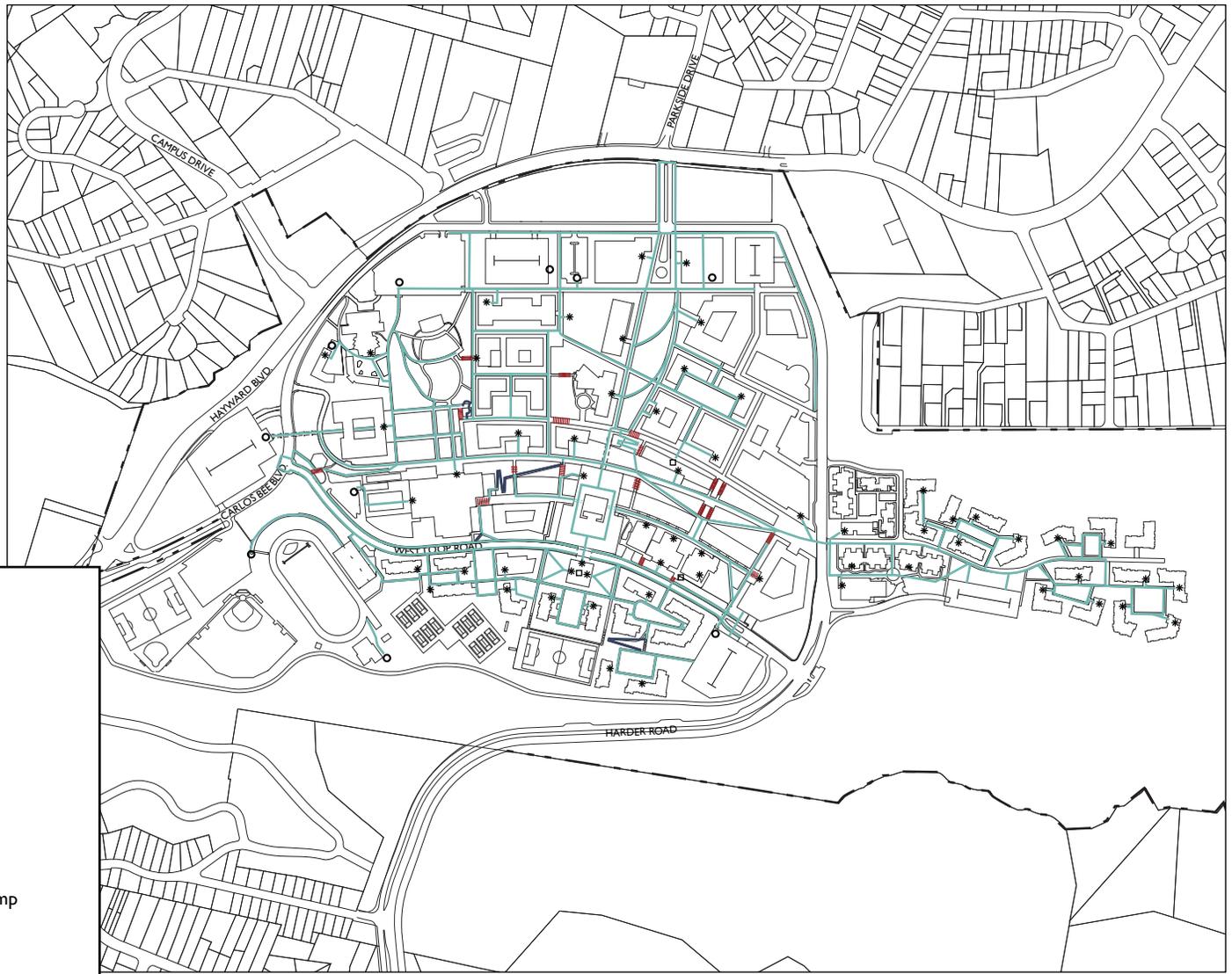
- LEGEND**
- Property Line
  - Service Access
  - Parcels



SOURCE: CSU East Bay Hayward Campus Master Plan Study - October 2008

FIGURE 3.0-12

Service Access Plan



**Legend:**

-  Stairway
-  Accessible Parking
-  Elevator Associated with Path of Travel
-  Primary Accessible Entry
-  Path of Travel (0-5% Slope)
-  Path of Travel Accessible Ramp (5-8.33% Slope)



800 400 0 800

APPROXIMATE SCALE IN FEET

SOURCE: CSU East Bay Hayward Campus Master Plan Study - October 2008

FIGURE 3.0-13

## Electricity

As stated in the Master Plan, the existing electrical demand on the campus is approximately 18,800 megawatt hours (MWh) with a peak demand of 5,800 kilowatts (kW). Electricity is purchased from Arizona Public Service Corporation (APSC) and is brought to the campus via Pacific Gas & Electric (PG&E) lines. The main electrical feed is via the Switch Gear House northeast of Carlos Bee Boulevard. The switch gear is 12,000 kilovolts (kV). From here, a main electrical line runs to Manhole 1 and from there through the main part of campus southeast to Harder Road at Pioneer Heights. There are five branch electrical lines on the campus. There are also several lateral duct banks. Pioneer Heights student housing is not fed from the main campus system but is supplied from a separate feed located east of the campus along Grandview Avenue. There are three electrical loops on the campus: A, B, and C. Most buildings are fed from loops B and C, but the Data Center is fed from loops A and B. Several electrical manholes are starting to fail and are currently being rebuilt. The electrical distribution system is starting to reach the end of its design life. The Hayward campus is currently developing a plan to replace the electrical distribution system throughout the campus. This plan will be implemented in order to provide more reliable electrical service. In addition, the Hayward campus has a one MW photovoltaic system, which is one of the largest photovoltaic installations in northern California. The Campus is also in the final stages of procuring a multi-resource fuel cell installation.

A central heating and cooling plant would serve new buildings proposed within the Master Plan. The proposed central plant system is shown in **Figure 3.0-14, New Central Plant Schematic**. The plant would house centralized chillers and boilers that would serve the campus buildings through a buried utility network. The plant would grow as the campus is built out and would allow existing distributed building plants to tie into the utility loop, allowing for satellite growth and maximum capacity benefit. A central plant currently exists on the campus near the Corporation Yard, but is not in use.

The proposed electrical distribution system is shown in **Figure 3.0-15, Electrical System Schematic**. The systems are shown in **Figures 3.0-14 and 3.0-15** along with building design and renewable energy options, including wind and solar power. The Campus plans to achieve overall carbon neutrality in its operations and has established a goal to achieve a 45 percent reduction in carbon emissions compared to business as usual at full buildout under the proposed Master Plan. Without the implementation of sustainability measures, electrical demand at buildout is expected to increase to approximately 10,000 kW or 30,000 MWh per year.

## Natural Gas

Existing natural gas demand for the campus is approximately 580 therms per hour or 760,000 therms per year. The Hayward campus natural gas system is fed from the PG&E system at Carlos Bee Boulevard. The main meter is at the old Boiler Plant, with a second meter near the Music Building. The distribution system is not looped. The main gas line is a 4-inch-diameter line running along Carlos Bee Boulevard and Old Hillary Road to the site of the former central plant at the Corporation Yard. There are five branch lines within the campus. The natural gas pressure on the campus is 10 psi. There have not been any significant problems with meeting natural gas demands on the campus.

The proposed natural gas system is shown in **Figure 3.0-16, Gas and Steam Schematic**. Depending on the ultimate location and configuration of new buildings, several gas lines might need to be relocated. Natural gas demand is expected to increase to 990 therms per hour or 1,297,000 therms per year. This increased demand is not anticipated to have a significant impact on the distribution system, because the distribution system was sized for a central plant facility that is not longer used and so the system has excess capacity. However, the natural gas distribution system is approaching the end of its design life, and so gas leaks may become more frequent. The Hayward campus may consider replacing the natural gas distribution system over the next 10 to 15 years, especially if the number of leaks increases significantly.

## Steam

The Hayward campus previously had a central plant facility located near the Corporation Yard. This system was taken out of service over 10 years ago, but most of the steam distribution system is still in place. There are four main branch steam lines. Because the steam lines have not been used for over 10 years, many of the lines are no longer usable. Therefore, it is expected that a new central plant distribution system would be required to distribute both hot and chilled water.

## Water

The Hayward campus is served by the City of Hayward water system, which in turn purchases water from the San Francisco Hetch Hetchy Water System. There are two feed points from the City of Hayward water system; the first one is located at Campus Drive between Hayward Boulevard and Highland Boulevard (northeast side of the campus). This connection feeds into a 10-inch-diameter pipeline which connects to the main campus distribution system near the Campus Theater. The second connection is located at East Loop Road near Parking Lot F (southeast side of campus). This connection feeds into a 10-inch-diameter pipeline which connects to the main campus distribution system at two points: the intersection of Old Hillary Road and East Loop Road; and near the Corporation Yard.

**NOTES:**

1. THIS SCHEMATIC IS BASED ON A SKETCH PROVIDED BY ARUP.

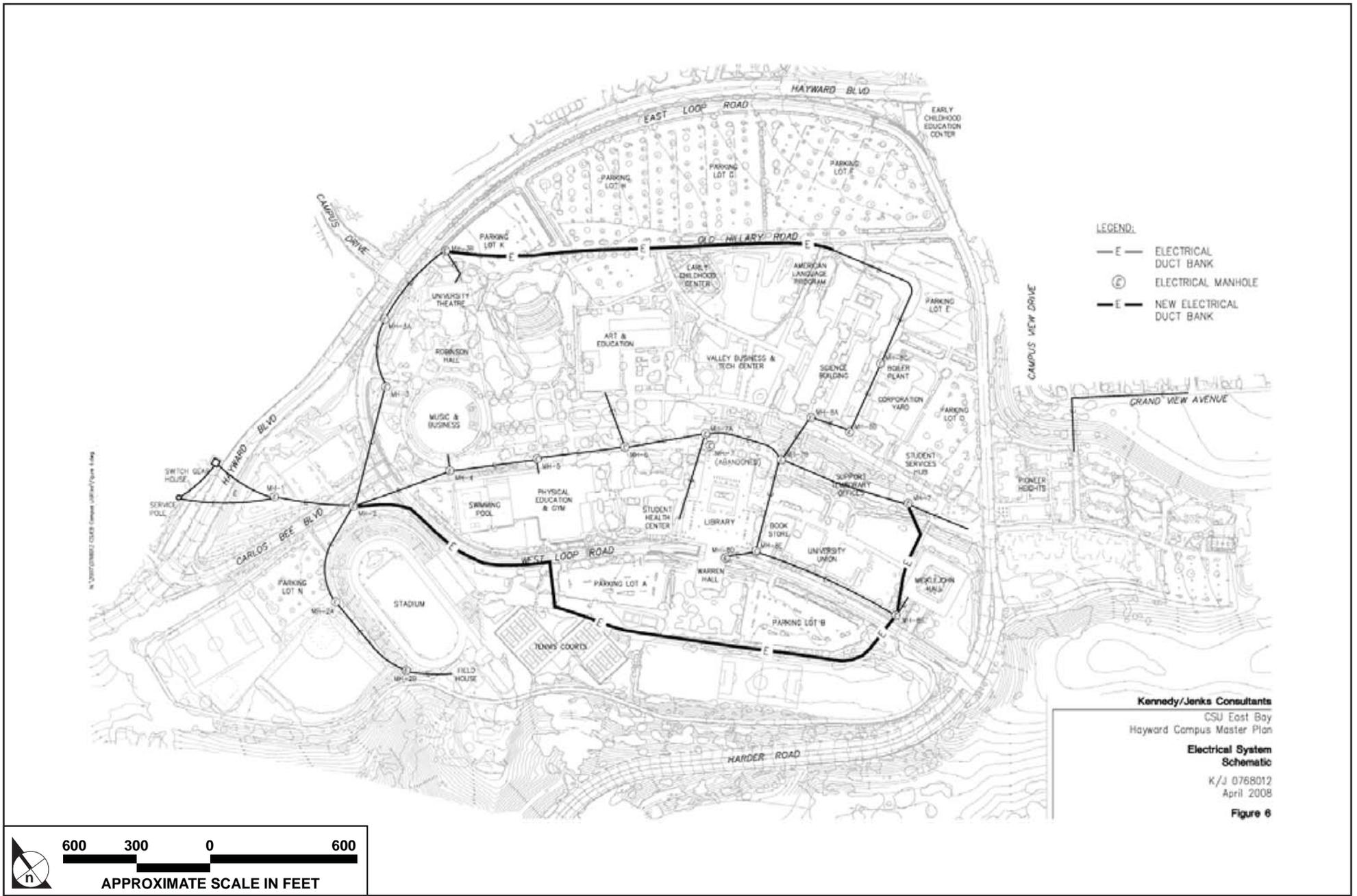


**Kennedy/Jenks Consultants**  
 CSU East Bay  
 Hayward Campus Master Plan  
**New Central Plant Schematic**  
 K/J 0768012  
 April 2008  
**Figure 8**

SOURCE: CSU East Bay Hayward Campus Master Plan Study - April 2008

FIGURE 3.0-14

New Campus Plant Schematic



SOURCE: CSU East Bay Hayward Campus Master Plan Study - April 2008

FIGURE 3.0-15

Electrical System Schematic

**NOTES:**

1. IT IS ASSUMED THAT NATURAL GAS SERVICE IS NOT NEEDED FOR THE HOUSING AREAS.



**LEGEND:**

- GAS LINE
- STEAM
- GAS VALVE
- STEAM MANHOLE
- GAS METER
- NEW GAS LINE
- GAS LINE TO BE ABANDONED

**Kennedy/Jenks Consultants**

CSU East Bay  
Hayward Campus Master Plan

**Gas & Steam System  
Schematic**

K/J 0768012  
April 2008

**Figure 5**



SOURCE: CSU East Bay Hayward Campus Master Plan Study - April 2008

FIGURE 3.0-16

**Gas and Steam Schematic**

Each connection has a water meter in a vault. There are approximately 23 existing fire hydrants located within the Hayward campus. The fire hydrants are connected directly to the water distribution system. These fire hydrants are served by 6-inch-diameter or larger pipelines; this ensures that fire water can be provided at the hydrants at 1,500 gallons per minute (gpm) at less than 20 feet per second.

The proposed potable water system is shown in **Figure 3.0-17, Potable Water Schematic**. Under the proposed Master Plan, several of the planned buildings would be constructed on top of existing water pipelines, and so those pipelines would need to be relocated. These pipelines include a 6-inch water line southeast of the Science building, and a 6-inch water line southeast of the Corporation Yard. The main distribution pipelines within the campus are of adequate size to serve the campus at buildout; it does not appear that new pipelines would be required to handle the increased water demand.

Current water demand ranges from approximately 100,000 gallons per day (gpd) in the winter to 300,000 gpd in the summer. This variation is mainly due to increased irrigation demands in the summer, which account for over 75 percent of the water used during the summer. The campus also meters water flow into each building. The largest water user is the swimming pool. Irrigation system backflow preventers are currently being installed.

The University has established ambitious water use reduction goals as part of the Sustainable Campus Framework. The goal is to reduce water consumption by 35 percent to 60 percent as compared to a business as usual scenario. Average water demand for the campus is anticipated to increase to up to 566,000 gpd at Master Plan buildout, with maximum water demand increasing to 865,000 gpd at buildout (ARUP 2008). The conservation goal of 35 percent reduction is achievable through implementation of xeriscaping, irrigation controls, artificial turf, and building fixture retrofit strategies. The Hayward campus intends to implement these measures. The higher target of 60 percent includes the introduction of an on-site recycled water program. The City of Hayward currently does not have plans to bring recycled water to the campus (Utility Meeting February 2008). However, the campus is considering installing a recycled water system.

### **Sanitary Sewer**

The Hayward Campus sanitary sewer system discharges to the City of Hayward's system via an 8-inch-diameter sewer along Carlos Bee Boulevard. There are four main branches discharging into the Carlos Bee Boulevard sanitary sewer, including an 8-inch-diameter sanitary sewer running from the University Theater to Carlos Bee Boulevard; a 15-inch- to 18-inch-diameter sanitary sewer running from Pioneer Heights southwest of West Loop Road to Carlos Bee Boulevard; an 8-inch- to 12-inch-diameter sanitary sewer running from the Science Building to the West Loop Road sanitary sewer near the Tennis Courts;

and a 6-inch- to 8-inch-diameter sanitary sewer running from the Art and Education Building to the Science Building sanitary sewer. All of the sanitary sewers are gravity flow, except for near the Field House where a lift station is located. Existing sanitary sewer flows were estimated based on water demand. Assuming that 0 percent of irrigation water flows into the sanitary sewer, and assuming that 100 percent of water demand at student housing and academic buildings flows into the sanitary sewer, existing average sanitary sewer flows are approximately 100,000 gpd.

The proposed sanitary sewer system is shown in **Figure 3.0-18, Sanitary Sewer Schematic**. Under the proposed Master Plan, several of the planned buildings would be constructed on top of existing sanitary sewers, and so these sewers would need to be relocated. These pipelines include a 12-inch to 15-inch sanitary sewer running between Meiklejohn Hall and the Stadium, and a 12-inch sanitary sewer running between the Science Building and the Student Health Center

At buildout, average sanitary sewer flows are expected to increase to 450,000 gpd and maximum sanitary sewer flows are expected to increase to 650,000 gpd. This maximum flow rate equates to about 450 gpm. Most of the increased flows would come from new student housing, and so the sanitary sewers in these areas will need to be replaced. Specifically the existing 18-inch-diameter sanitary sewer from Pioneer Heights to Parking Lot B will require replacement with a 24-inch-diameter sanitary sewer. A pump station and force main will be required to transport sanitary sewage from the housing proposed for the Tennis Courts area to the sanitary sewer along West Loop Road. The sanitary sewer from Parking Lot B to the Stadium is already being replaced to accommodate new buildings. This sanitary sewer would also require upsizing to 24-inch-diameter line to handle the increased flows from new and existing student housing areas. The sanitary sewer from the Stadium would require replacement with an 18-inch-diameter sanitary sewer to handle the increased flows from the campus. Limited information is available on the existing inverts, so it may be possible to downsize some of these new pipelines if the slopes available are greater than assumed.

### **Storm Drains**

The Hayward campus storm drains discharge to several drainages located northeast and southeast of the campus. Other storm drains from off-campus areas discharge to Ward Creek, which is carried under Lots F, G, H, and K through a 48-inch-diameter pipeline. The creek flows from southeast to northwest.

**NOTES:**

1. SERVICES TO NEW BUILDINGS NOT SHOWN.
2. DRAWINGS FOR THE PIONEER HEIGHT WATER SYSTEM WERE UNAVAILABLE SO THE ALIGNMENT OF THE WATER SYSTEM IN THIS AREA IS UNKNOWN.

**LEGEND:**

- WATER LINE
- CV GATE VALVE
- PR PRESSURE RELIEF VALVE
- M WATER METER
- FH FIRE HYDRANT
- NEW WATER LINE
- WATER LINE TO BE ABANDONED
- FH NEW FIRE HYDRANT



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**Potable Water System Schematic**  
 K/J 0768012  
 April 2008  
**Figure 2**



SOURCE: CSU East Bay Hayward Campus Master Plan Study - April 2008

FIGURE 3.0-17

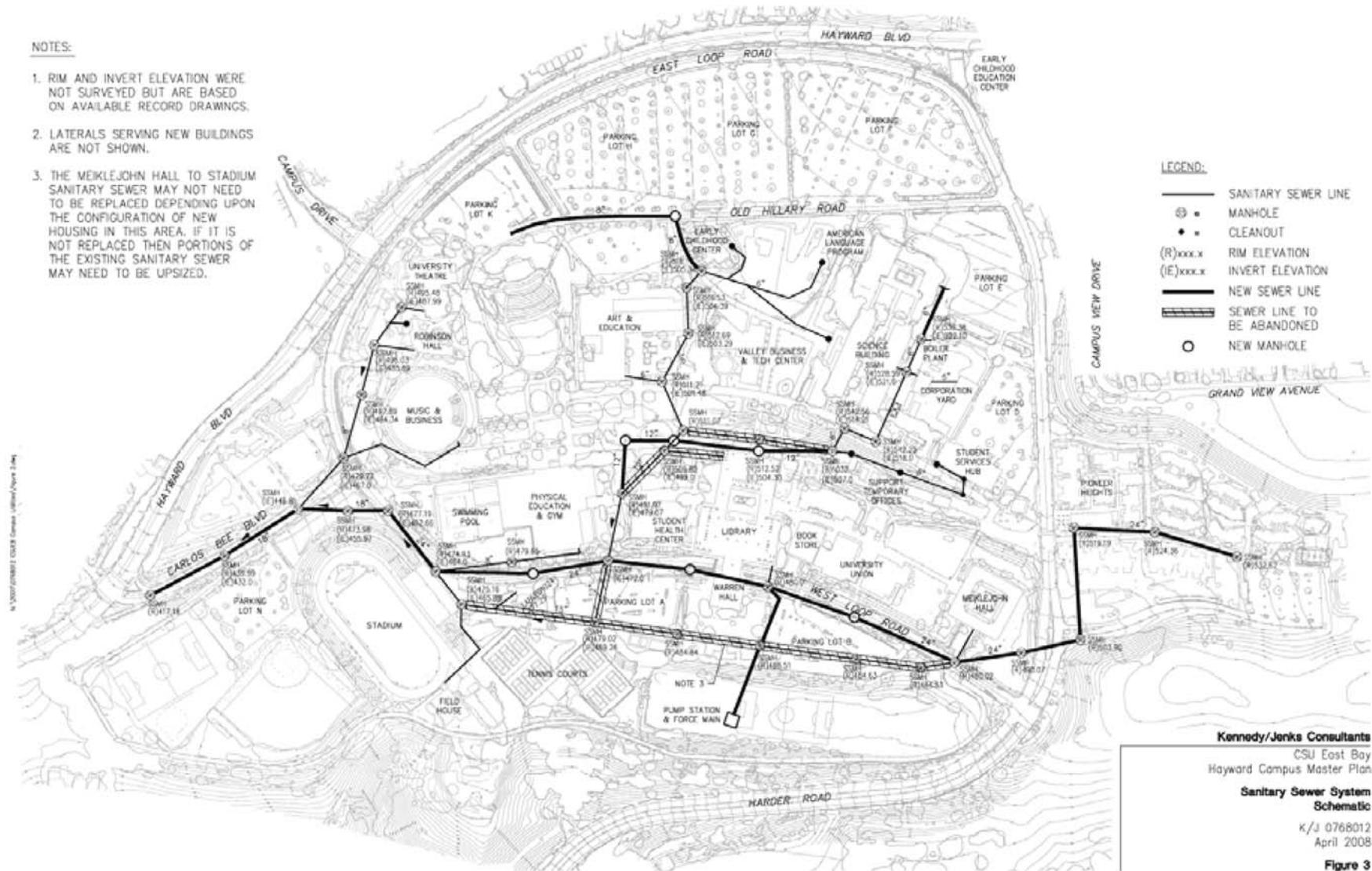
Potable Water Schematic

**NOTES:**

1. RIM AND INVERT ELEVATION WERE NOT SURVEYED BUT ARE BASED ON AVAILABLE RECORD DRAWINGS.
2. LATERALS SERVING NEW BUILDINGS ARE NOT SHOWN.
3. THE MEIKLEJOHN HALL TO STADIUM SANITARY SEWER MAY NOT NEED TO BE REPLACED DEPENDING UPON THE CONFIGURATION OF NEW HOUSING IN THIS AREA, IF IT IS NOT REPLACED THEN PORTIONS OF THE EXISTING SANITARY SEWER MAY NEED TO BE UPSIZED.

**LEGEND:**

- SANITARY SEWER LINE
- ⊗ MANHOLE
- CLEANOUT
- (R)xxxxx RIM ELEVATION
- (E)xxxxx INVERT ELEVATION
- ▬▬▬ NEW SEWER LINE
- ▬▬▬ SEWER LINE TO BE ABANDONED
- NEW MANHOLE



SOURCE: CSU East Bay Hayward Campus Master Plan Study - April 2008

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**Sanitary Sewer System Schematic**  
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 April 2008  
**Figure 3**

FIGURE 3.0-18

Sanitary Sewer Schematic

There are six main campus storm drain branches. These include a 48-inch Ward Creek storm drain; a 12-inch to 24-inch storm drain running from the Science Building area to Old Hillary Road, and then along Old Hillary Road to Hayward Boulevard; an unknown size storm drain running from the Science Building area to the Music Building; an 8-inch-diameter storm drain running along West Loop Road; a 15-inch- to 18-inch-diameter storm drain running from Pioneer Heights to the Tennis Courts, and a 10-inch-diameter storm drain running from the tennis courts to the soccer field. It appears that this storm drain discharges to grade near the Field House. There have been some drainage problems along West Loop Road, including a main which backed up into an adjacent building. Therefore the campus is currently televising the storm drains. A bioswale has been installed near the Valley Business and Technology Building.

The proposed storm drain plan is shown in **Figure 3.0-19, Storm Drainage System Schematic**. Several of the planned buildings would be constructed on top of existing storm drains, and so these storm drains would need to be relocated. These pipelines include three storm drain systems in new student housing area southwest of Pioneer Heights; storm drains in the Lot K area; a 21-inch storm drain running between Carlos Bee Boulevard and Hayward Boulevard; a 15-inch to 36-inch storm drain running from Harder Road at West Loop Road southwest to Harder Road. Other smaller storm drain laterals would also be constructed as required by new building footprints.

With implementation of best management practices (BMPs) and because much of the future development would occur in already developed areas, it is expected that the volume of stormwater runoff at buildout of the proposed Master Plan would be significantly less than the existing condition.

### **Communications**

The campus communication system is connected to AT&T's system near the Switch Gear House and near the Early Childhood Education Center. There are four main branches in the telecommunications system on the campus, which was recently upgraded.

Planned buildings would be constructed on top of several existing communication lines, requiring them to be relocated. Additional communication lines would be installed within the campus to serve the new development.

### ***Landscape Master Plan***

The Landscape Master Plan proposes plantings to achieve a "campus in the oaks" identity. The Landscape Master Plan incorporates California native plant species and focuses specifically on the three primary naturally occurring plant communities in the East Bay: oak grassland, riparian, and hard

(Diablan) chaparral. Proposed plantings consist of native and compatible species organized in assemblages associated with the oak grassland, riparian, and hard (Diablan) chaparral communities. Other plants listed may be utilized for specialized applications such as living roofs, living walls, bioswales, and the more ornamental landscapes of small courtyards and other limited areas associated with buildings and special uses. As part of the Sustainable Campus Framework, the Landscape Master Plan includes landscape elements that are intended to lower consumption of resources and carbon output. The Landscape Master Plan includes plants that are long lived, slow growing, drought tolerant, tolerant of seasonal rainfall and poor soils, and provide seasonal flowers as well as food, shelter, and nectar sources for wildlife.

The Landscape Master Plan includes distinct landscape design guidelines for campus gateways and edges; promenades and walkways; quads and plazas; courtyards and greens; groves and buffers; slopes and banks; riparian and detention areas; and green roofs. The site furnishings subsection of the Landscape Master Plan includes detail on types of paving, lighting, seating, signage, bicycle racks, and trash receptacles. Generally, landscape improvements would be made on an incremental basis in conjunction with major capital projects and as funds are available for significant maintenance or replanting. Whenever funds are available, however, more sizeable landscape projects such as the main promenade or entry quad would be prioritized.

#### **3.10.4 References**

ARUP. 2008. E-mail communication between A. Khanna, ARUP and S. Barati, Impact Sciences. September.

Cal State University, East Bay. 2008. Cal State East Bay Hayward Campus Master Plan. Prepared by BMS Design Group. Draft. November.

California State University Committee on Educational Policy 2003.

**NOTES:**

1. RIM AND INVERT ELEVATION WERE NOT SURVEYED BUT ARE BASED ON AVAILABLE RECORD DRAWINGS.
2. THESE TWO STORM DRAINS MAY BE CONNECTED.
3. THESE TWO STORM DRAINS MAY BE CONNECTED.

**LEGEND:**

- STORM DRAIN LINE
- MANHOLE
- DROP INLET
- CURB INLET
- AREA DRAIN
- CLEANOUT
- RIM ELEVATION
- INVERT ELEVATION
- NEW STORM DRAIN LINE
- STORM DRAIN LINE TO BE ABANDONED



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 April 2008  
**Figure 4**



SOURCE: CSU East Bay Hayward Campus Master Plan Study - April 2008

FIGURE 3.0-19

Storm Drainage System Schematic