January 2015

VISION 2025

CHAFFEY
COMMUNITY COLLEGE DISTRICT

Chaffey College

CHAFFEY COMMUNITY COLLEGE DISTRICT

BOARD OF TRUSTEES

Lee C. McDougal
Gary L. George
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PRESIDENT

Henry D. Shannon, Ph.D

VISION 2025

January 2015

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2 RANCHO CUCAMONGA

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LETTER
FROM THE PRESIDENT

Thanks to the hard work and commitment of the Facilities Master Plan work group, I'm proud to share the Facilities Master Plan for the Chaffey Community College District. This plan conceptualizes and summarizes the elements and discussions by faculty, staff, and administrators in the Facilities Master Plan work group.

The Facilities Master Plan gives physical form to the college's mission to engage, involve and partner with students, faculty, staff, and the community. The plan provides a guideline for future planning and decision-making throughout the District. The goal of the Facilities Master Plan is to guide future growth and development over the next ten years and provide a physical campus framework that embodies the Chaffey College's mission.

Since its establishment more than 130 years ago, Chaffey College has become a world-class institution recognized nationally for its outstanding academic programs and support services. The college moved to the Rancho Cucamonga campus in 1960, opened the Fontana Center in 1996, and the Campus Chino Campus in 2008. Chaffey College has grown dramatically in response to a wide range of factors including enrollment growth, trends in education, and funding opportunities. The campuses will continue to grow, accommodating more students, learning, instruction, and community needs.

I'd like to thank the members of the Facilities Master Plan work group for their time, energy and commitment to Chaffey College and our students. Their vision has created this document which is designed to guide our decisions about facilities, landscaping, traffic flow, building use, landscaping, and other issues over the next ten years.

HENRY D. SHANNON, PH.D.
SUPERINTENDENT/PRESIDENT

Henry D. Shannon

MISSION
AND COMMITMENT

CHAFFEY COLLEGE

Chaffey College improves lives within the diverse communities it serves through equal access to quality occupational, transfer, general education, and foundation programs in a learning-centered environment where student success is highly valued, supported, and assessed.

~Adopted December 10, 2009

ART COMMITTEE

To enhance learning and environmental aesthetics through advancing the presence of public art on the Chaffey College campuses. The mission is guided by the principle that public art contributes to the College's educational mission, enlivens and distinguishes the campus environment, and is a source of pleasure and inspiration to students and the community.

GREEN EARTH MOVEMENT (GEM) COMMITTEE

The Chaffey College Green Earth Movement Sustainability Committee (GEM) is dedicated to providing sustainability education, research, and stewardship to the members of the Chaffey Community College District. We encourage innovation, inquiry, and involvement in green issues at Chaffey College and in our diverse communities we serve. GEM advances the mission of Chaffey College by contributing to the educational and cultural lives of our students.

TREE COMMITTEE

The Tree, Plants, and Grounds Committee works to maximize the pedagogical interest and utility of the college's grounds and collaborates with the provide input into and advice on the design and maintenance of the college's landscaping.

ACKNOWLEDGE

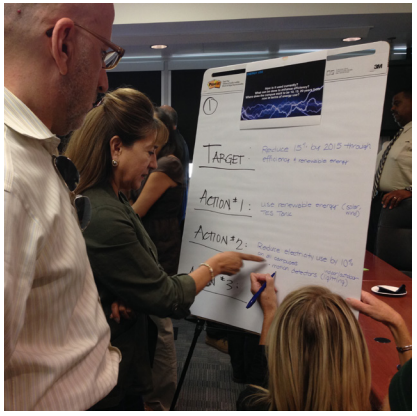
FACILITIES MASTER PLANNING WORK GROUP

Henry D. Shannon, Ph.D., President
Melanie Siddiqi, Interim Vice President of Administrative Services
Tina Altis, Senior Accounting Technician
Troy Ament, Administrator of Maintenance and Operations
Myriam Arellano, Project Controller
Lisa Bailey, Interim Associate Superintendent of Business Services and Economic Development
Cynthia Barney, Educational Services Generalist
Marie Boyd, Librarian/Curriculum Chair
Andrea Dutton, Instructor/Coordinator, Radiologic Technology
Michael Fink, Director of Technical Services
Tim Greene, Instructor, History
Sherrie Guerrero, Associate Superintendent of Instruction and Institutional Effectiveness
Stephen Lux, Administrator of Campus Police
Michael O'Bannon, Technical Support Specialist
Bruce Osburn, Instructor, Automotive Technology
Sarah Riley, Manager of Facilities Development
Jim Fillpot, Dean of Institutional Research and Resource Development
Eric Bishop, Interim Vice President, Student Services

MASTER PLANNING TEAM

HMC Architects, Facilities Planning
EPT Design, Landscape Architect

MENT



SUSTAINABILITY WORKSHOP PARTICIPANTS

Henry D. Shannon, Ph.D., President
Melanie Siddiqi, Interim Vice President of Administrative Services
Tina Altis, Senior Accounting Technician
Troy Ament, Administrator of Maintenance and Operations
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Theodore Younglove, Dean, Mathematics & Science
Anthony DiSalvo, Dean, Language Arts
Ardon Alger, Faculty Senate President
Trisha Albertsen, Accountant
Bret McMurran, Instructor, Economics
Linda Lamp, Educational Program Assistant
Sam Gaddie, Chemical Hygiene Officer
Julie Sanchez, Executive Assistant
Sheryl Herchenroeder, Public Information Specialist
Allison Clapper, Help Desk Coordinator
Kyle Pennett, Instructor, English as a Second Language

CCCD

CCCD

OVERVIEW

This chapter includes the following:

Overview

Purpose

Chaffey Community College District *Vision 2025* is the District's facilities master plan. Chaffey CCD is a single-college district with three sites: the Rancho Cucamonga Campus, the Chino Campus, and the Fontana Campus. *Vision 2025* serves as a guide for future development of the District's three campuses. It provides a quantitative and qualitative description of how Chaffey CCD will address the long range forecast for enrollment, address current challenges, serve changing needs, and position the College to maximize funding opportunities.

Through a series of graphic and written descriptions, *Vision 2025* describes how the future development of the campuses will be guided by the College's Institutional Goals and translates the projected enrollment into site and facilities recommendations. In addition, *Vision 2025* identifies Phase 1 projects as projects the District is looking to complete ahead of the master plan.

1 Prepare

2 Analyze

3 Explore

4 Solve

5 Document

Planning Process

Through dialogue with the College, a five-step process and timeline is developed. Master plans gain legitimacy through stakeholder participation and support, so each step involves the participation of stakeholders through a series of interactive work group meetings.

The five steps are:

1. **Prepare** – establish the project process and timeline through a dialogue about the purposes and desired outcomes of the master plan.

2. **Analyze** – understand the existing physical constraints, issues, and opportunities.

3. **Explore** – establish facilities and spatial needs, both qualitative and quantitative.

4. **Solve** – prepare and assess a range of planning options leading to the selection of a preferred option.

5. **Document** – develop and document the master plan recommendations.

The planning process was a participatory one involving many individuals from the College. The Planning Team worked closely with the designated Facilities Master Plan Work Group to define planning goals, review the analysis of existing conditions, evaluate a series of development options, and make decisions that led to the development of the master plan recommendations.

Through a hands-on sustainability workshop, key strategies were identified and ideas on how these strategies will be implemented were discussed. The process and results of this workshop are summarized in this section.

Overview

Institutional Goals

The Chaffey College Educational Master Plan reflects innovative initiatives that support the College's mission statement where Chaffey College is "a learning-centered environment where student success is highly valued, supported, and assessed." The Institutional Goals listed are initiatives where the Facilities Master Plan (FMP) can link to in order to frame recommendations for strategies to provide adequate and appropriate spaces that support the current and future curriculum, instructional delivery modes, leaning environment, and any necessary support structures.

Master planning involves long-term vision as well as addressing short-term goals. In addition to these Institutional Goals, forecasting the future program of instruction unfolds through the analysis of Weekly Student Contact Hours (WSCH) in the Planning Data section. While curricular content cannot be accurately predicted to the year 2025, certain assumptions can be made that are pertinent to a long-range forecasting process. It is assumed that the educational mission will remain consistent with past practice.

Institutional Goals (cont'd)

Institutional Goal 1: *Chaffey College will provide quality learning experiences that promote holistic student development and support success and completion in a timely manner.*

- Objective 1: Increase the number of students who engage in academic support activities.
- Objective 2: Decrease the time students take for goal completion.
- Objective 3: Increase the Basic Skills Completion rate (state defined metric) among students who identify transfer as their goal.
- Objective 4: Increase the number of award earners.

Institutional Goal 2: *Chaffey College will create, maintain, and support innovative and effective learning environments that engage students toward success and completion.*

- Objective 1: Broaden participation in the activities that encourage reflective teaching practices.
- Objective 2: Increase the amount of instructional and collaborative spaces at all three campuses.
- Objective 3: Improve and expand the use of current technologies that facilitate student learning and success.
- Objective 4: Implement cost effective investments in current technologies and equipment that support the learning infrastructure.
- Objective 5: Create and maintain an effective online/ electronic learning atmosphere (virtual environment).
- Objective 6: Improve and expand upon the security systems at all campuses.

Institutional Goal 3: *Chaffey College will provide an effective organizational structure and workforce through strategic hiring practices in which all employees are given the encouragement and resources needed to achieve excellence.*

- Objective 1: Ensure that the District's organizational structure matches the financial and learning needs of the College.
- Objective 2: Develop strategic hiring plans and practices.
- Objective 3: Implement appropriate training orientation and professional development for all employee groups.
- Objective 4: Expand recruitment efforts to achieve increased diversity among applicants.

Institutional Goal 4: *Chaffey College will support the needs of the communities through meaningful external relations, workforce development, outreach, partnerships, and linkages.*

- Objective 1: Increase contact points with all of our K-12 partners.
- Objective 2: Create multiple entry points for educational partners, including K-12 and Adult Educational Programs.
- Objective 3: Increase and strengthen the relationships with all of our business partners.
- Objective 4: Increase and strengthen the relationships with all of our government partners.
- Objective 5: Increase and strengthen the relationships with all of our community stakeholders.

Institutional Goal 5: *Chaffey College will decrease the achievement gap.*

- Objective 1: Research key achievement gap indicators that affect student achievement and widely disseminate findings.
- Objective 2: Increase the number of underrepresented students' participation in programs and support services.
- Objective 3: Conduct research to understand performance disparities and identify strategies to improve student success.
- Objective 4: Implement a consistent opportunity for culturally responsive strategies in college training and professional learning.
- Objective 5: Address financial assistance strategies for socioeconomically challenged students.

Institutional Goal 6: *Chaffey College will responsibly manage financial, physical, technological, and environmental resources through effective planning, decision-making, and implementation.*

- Objective 1: Develop and maintain effective practices of identifying and applying for grants.
- Objective 2: Ensure that resources are allocated based on institutional planning.
- Objective 3: Improve the alignment of expenditures with revenue
- Objective 4: Reduce the College's carbon footprint.

Planning Principles

Chaffey CCD *Vision 2025* presents a model that is based on the College's Institutional Goals and addresses the needs of the current and projected enrollment through the year 2025. A series of facilities planning principles were developed and used throughout the planning process to guide the discussions that led to the development of the recommendations.

The following is a summary of the principles:

MAXIMIZE FUNCTIONAL SPACE

- / Renovate facilities.
- / Address program needs.

ELIMINATE NON-FUNCTIONAL SPACE

- / Remove temporary buildings.
- / Replace aging facilities.

IMPROVE EFFICIENCY/UTILIZATION OF FACILITIES

- / Consolidate related programs.
- / Create flexible, interdisciplinary spaces.

RIGHT-SIZE THE CAMPUS TO ADDRESS PROGRAM NEEDS

- / Align the projected space inventory with state guidelines.

IMPROVE THE CAMPUS IDENTITY

- / Develop campus edges and identity.
- / Define clear inviting campus entry points.

POSITION THE DISTRICT TO MAXIMIZE FUNDING (STATE AND LOCAL, GRANTS, COMMUNITY/CORPORATE PARTNERSHIPS, ETC.)

- / Position Chaffey College to maximize state and local funding.

SIMPLIFY IMPLEMENTATION

- / Limit disruption to campus and programs.
- / Reduce swing space costs.
- / Reduce number of temporary moves.

Overview

District Service Area

The Chaffey Community College District (CCCD) serves western San Bernardino County, where the communities of Chino, Chino Hills, Fontana, Guasti, Montclair, Mt. Baldy, Ontario, Rancho Cucamonga (Alta Loma, Cucamonga, and Etiwanda), Corona and Upland are located. This region is characterized by mountain ranges and valleys and the active geology is evident in the striking contrast between the snow covered peaks of the San Gabriel Mountains and the broad, open expanse of the San Bernardino Valley within which the District resides.

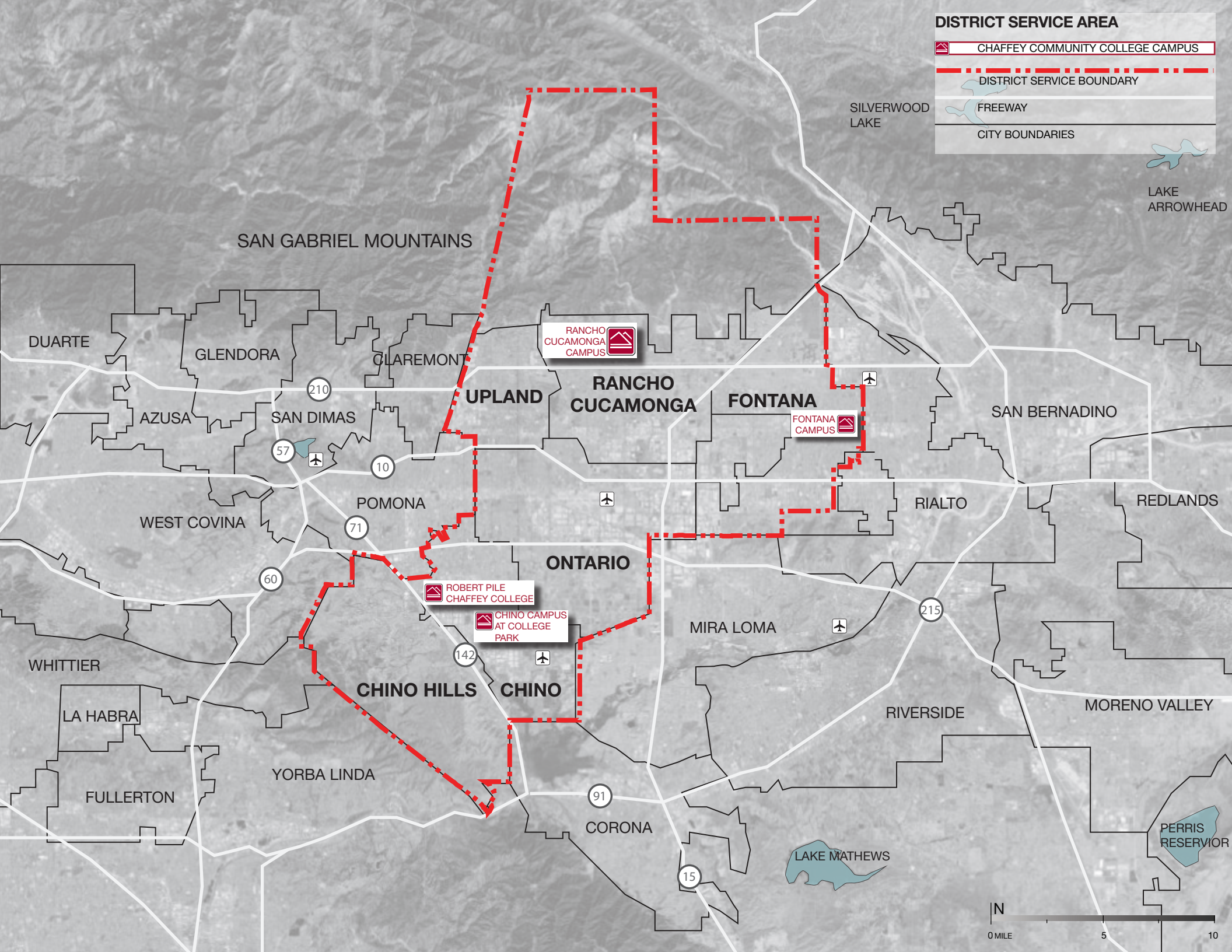
CCCD consists of three main campuses. The Rancho Cucamonga Campus, established in 1960. The Fontana Campus, opened in 1998, and the Chino Campus, opened in January 2000. Chaffey College also includes buildings at the College Park location as well as at the Chino Center in downtown Chino.

The Rancho Cucamonga Campus is located on the northern side of the CCCD service area, as illustrated on the graphic on the opposing page. It is situated in Rancho Cucamonga in San Bernardino County.

The Fontana Campus is located on the eastern side of the CCCD service area.

The Chino Campus is located on the southern part of the CCCD service area.

1 Rancho Cucamonga Campus
2 Fontana Campus
3 Chino Campus


DISTRICT SERVICE AREA
CHAFFEY COMMUNITY COLLEGE CAMPUS
DISTRICT SERVICE BOUNDARY
FREEWAY
CITY BOUNDARIES
SILVERWOOD LAKE
LAKE ARROWHEAD
SAN GABRIEL MOUNTAINS
DUARTE
GLENDORA
CLAREMONT
AZUSA
SAN DIMAS
UPLAND
RANCHO CUCAMONGA
FONTANA
SAN BERNADINO
RANCHO CUCAMONGA CAMPUS
FONTANA CAMPUS
POMONA
WEST COVINA
RIALTO
REDLANDS
ONTARIO
ROBERT PILE CHAFFEY COLLEGE
CHINO CAMPUS AT COLLEGE PARK
MIRA LOMA
WHITTIER
CHINO HILLS
CHINO
LA HABRA
RIVERSIDE
MORENO VALLEY
YORBA LINDA
FULLERTON
CORONA
LAKE MATHEWS
PERRIS RESERVIOR
210
57
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71
60
142
91
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215
N
0 MILE
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10


SUCCEED
ENGAGE
GOD Loves Ugly
The greatest glory in Living lies not in never falling, But in rising every time we fall.
- Nelson Mandela
#MyDayWear

PLANNING DATA

Introduction

The *Planning Data* section includes a summary of the methodology used to establish the amount and type of space necessary to support the programs of instruction and student support services for the year 2025 master plan horizon. This section includes the following sub-sections:

FACILITIES PLANNING FORECASTS

CALCULATING SPACE NEEDS

SPACE INVENTORY ANALYSIS

MASTER PLAN SPACE PROGRAMS

- Rancho Cucamonga Campus
- Fontana Campus
- Chino Campus

Planning Data

Facilities Planning Forecasts

The *Long Range Enrollment and Weekly Student Contact Hours (WSCH) Forecasts* are issued by the Chancellor's Office, California Community Colleges, each year. It includes historical data from previous years and projects total enrollment and WSCH for using an average anticipated change. These forecasts are coordinated with each District and serve as the basis for projecting long term space needs.

The Tables 1 and 2 summarize the enrollment and WSCH forecasts for each of the campuses within the Chaffey Community College District. An important element of these forecasts is that the baseline percentage split between the three campuses is projected to shift for the master plan horizon year of 2025. This is based on the District's desire to increase access to education throughout the district service area and take advantage of the Chino and Fontana Campus locations.

TABLE 1: ENROLLMENT AND WSCH (BASELINE)

Fall 2013	TOTAL	Rancho 77%	Chino 13%	Fontana 10%
WSCH	192,213	148,221	25,166	18,826
Headcount		16,500	3,500	3,270

TABLE 2: ENROLLMENT AND WSCH FORECAST (MASTER PLAN 2025)

Fall 2025	TOTAL	Rancho 75%	Chino 15%	Fontana 10%
WSCH	261,905	195,790	3,9507	26,608
Headcount		22,000	5,500	4,600

Source: California Community Colleges Chancellor's Office (CCCCO) Management Information Systems (MIS) Data Mart

Planning Data

Calculating Space Needs

The inventory of facilities is an important tool in planning and managing college campuses. FUSION (Facilities Utilization, Space Inventory Options Net) is a database of all the California community college facilities which includes descriptive data on buildings and rooms for each college and district within the state. This information is essential for developing the annual five-year construction plans, planning for capital outlay construction projects, projecting future facility needs, and analyzing space utilization.

The California Community Colleges Chancellor's Office (CCCCO) mandates annual updates of the inventory of all facilities in the District. By combining existing and future enrollment and program forecasts with appropriate space standards, space requirements for current and future needs are developed. Space capacity/load ratio is the direct relationship between the amount of space available, by type, which may be used to serve students, and the number of students participating in campus programs.

The line item in adjacent Table 3 for space type “other” includes a number of spaces on campus that are considered to be in non-capacity/load categories. These are spaces that are not analyzed by the CCCCO in relation to utilization and efficiency, but are important as part of the college’s inventory related to maintenance and operations.

TABLE 3: ROOM USE CATEGORIES

Space Type	Room Use Numbers	Description
Lecture	100s	Classrooms and support spaces
Lab	200s	Teaching Labs and support spaces
Offices/ Conference Room	300s	Offices and support spaces; all offices, including administrative and student services
Library/LRC Study/Tutorial	400s	Library and Learning Resources Center; including study, tutorial and support spaces
Instructional Media AV/TV	530s	AV/TV and Radio; Technology and support spaces
Other	520, 540 to 800s	PE, Assembly, Food Service, Lounge, Bookstore, Meeting Rooms, Data Processing, Physical Plant, Health Service

Source: California Community Colleges Chancellor’s Office (CCCCO) Space Inventory Handbook

Planning Data

Calculating Space Needs

To determine the amount of space required to support the programmatic needs for a college, the enrollment and program forecasts are applied to a set of standards for each type of space.

The required utilization and space standards for classroom, laboratory, office, library, and audio-visual are contained in the *California Code of Regulations* (CCR), Title 5, Chapter 8, Section 57020–57032. These standards refer to the *Board of Governors of the California Community Colleges Policy on Utilization and Space Standards* dated September 2010.

These space standards, when applied to the total Weekly Student Contact Hours (WSCH), produce total capacity requirements that are expressed in assignable square feet (allocated on a per student or per faculty member basis). The space standards and formulas used to determine both existing and future capacity requirements are summarized in Tables 4 and 5 on the following pages.

Each component of these standards is applied to projected enrollment to produce a total assignable square foot (ASF) capacity requirement for each category of space. The sum of these areas represents the total building area requirement for each campus.

The space standards are based on the following assumptions:

- Utilization standards refer to the amount of time rooms and “stations” (such as a desk, laboratory bench, or computer terminal) should be in use. “Utilization” is the amount of time rooms and stations are actually in use. Utilization standards address utilization on an “hours-per-week” basis.
- Office space includes academic offices, administrative offices, clerical offices, office service rooms, and conference rooms.
- Library space includes all study areas on campus.
- Areas such as the main lobby (excluding card catalog area), elevators, stairs, walled corridors, restrooms, and areas accommodating building maintenance services are not deemed usable/assignable.

Planning Data

Space Inventory Analysis

The *2013 Chaffey College Space Inventory Report* was used as the basis for the analysis of space. The tables on the following page summarize the current inventory of assignable space at each of the three campuses within the Chaffey Community College District.

It is important to note that the *Space Inventory Report* includes all facilities on campus that are in use, including temporary facilities. As described in Existing Conditions section for each campus, there are facilities that are recommended to be removed. Table 5, 6 and 7 include an “adjusted inventory” column in which space to be removed, including temporary space, is subtracted and the space of projects currently in planning or under construction is added, by space type category.

TABLE 5: RANCHO CUCAMONGA–
SPACE INVENTORY:
CURRENT AND ADJUSTED

Space Type	Current Inventory (ASF)	Adjusted Inventory (ASF)
Lecture and Lab	149,568	134,748
Office/Conference	67,986	59,141
Library/LRC/Study	36,482	36,482
Instructional Media	940	721
Other	152,017	148,055
TOTALS	**406,993**	**379,147**

Source: California Community Colleges Chancellor's Office (CCCCO) FUSION database and HMC Architects

*** ADJUSTMENTS INCLUDE THE FOLLOWING:*
Temporary buildings have been removed from the inventory
4 permanent buildings have been removed from the inventory (Wargin, Admin, VSS and Library)

TABLE 6: FONTANA–
SPACE INVENTORY:
CURRENT AND ADJUSTED

Space Type	Current Inventory (ASF)	Adjusted Inventory (ASF)
Lecture and Lab	17,076	13,125
Office/Conference	3,897	3,405
Library/LRC/Study	4,946	3,298
Instructional Media	0	0
Other	9,445	8,690
TOTALS	**35,364**	**28,518**

Source: California Community Colleges Chancellor's Office (CCCCO) FUSION database and HMC Architects

*** ADJUSTMENTS INCLUDE THE FOLLOWING:*
Removal of original Fontana Center Building

DATA SET 7: CHINO–
SPACE INVENTORY:
CURRENT AND ADJUSTED

Space Type	Current Inventory (ASF)	Adjusted Inventory (ASF)
Lecture and Lab	30,589	30,589
Office/Conference	9,562	9,562
Library/LRC/Study	3,862	3,862
Instructional Media	225	225
Other	20,119	20,119
TOTALS	**64,357**	**64,357**

Source: California Community Colleges Chancellor's Office (CCCCO) FUSION database and HMC Architects

Planning Data

Master Plan Space Programs

The master plan space program forms the basis for developing recommendations for facilities. The space inventory analysis combined with the space needs forecast is summarized in Tables 8, 9 and 10 and indicates the total amount of additional assignable space needed to accommodate Chaffey College's needs in the year 2025 master plan horizon.

The methodology for projecting future space needs is summarized as follows:

- Facilities planning forecasted projections were applied in combination with appropriate space planning standards to result in a total space requirement in ASF by type of space.
- The 2013 space inventory was adjusted to reflect the proposed removal of temporary facilities and the addition of projects currently under construction or in capital outlay planning. This is referred to as the "adjusted inventory."
- The "adjusted inventory" was subtracted from the total space requirements described above to result in the net ASF overage or need by type of space for the master plan horizon.
- The result, net assignable square footage by type of space, served as the basis for developing facilities options.

The **Rancho Cucamonga Campus** Master plan Space Program indicates a need to provide additional space in the following categories:

- Lecture and Lab
- Library/LRC/Study
- Instructional Media

The combined total ASF needed to address these needs is 103,087 which would be accommodated in approximately 160,000 GSF (gross square feet) of building space.

TABLE 8: RANCHO CUCAMONGA CAMPUS–MASTER PLAN SPACE PROGRAM

Space Type	Adjusted Inventory (ASF)	Master Plan Space Program (22,000 HC)	Difference (ASF)
Lecture and Lab	134,748	200,531	(65,783)
Office/Conference	59,141	52,211	6,930
Library/LRC/Study	36,482	59,939	(23,457)
Instructional Media	721	14,568	(13,847)
Other	148,055	139,195	8,860
TOTALS	**379,147**	**466,444**	

Master Plan Space Programs (cont'd)

The **Fontana Campus** Master Plan Space Program indicates a need to provide additional space in the following categories:

- Lecture and Lab
- Office
- Library/LRC/Study
- Instructional Media
- Other

The combined total ASF needed to address these needs is 55,283 which would be accommodated in approximately 85,000 GSF (gross square feet) of building space.

TABLE 9: FONTANA CAMPUS–MASTER PLAN SPACE PROGRAM

Space Type	Adjusted Inventory (ASF)	Master Plan Space Program (4,600 HC)	Difference (ASF)
Lecture and Lab	13,125	18,551	(5,426)
Office/Conference	3,405	7,095	(3,690)
Library/LRC/Study	3,298	17,356	(14,058)
Instructional Media	0	8,458	(8,458)
Other	8,690	32,341	(23,651)
TOTALS	**28,518**	**83,802**	

The **Chino Campus** Master Plan Space Program indicates a need to provide additional space in the following categories:

- Lecture and Lab
- Office
- Library/LRC/Study
- Instructional Media
- Other

The combined total ASF needed to address these needs is 45,944 which would be accommodated in approximately 70,000 GSF (gross square feet) of building space.

TABLE 10: CHINO CAMPUS–MASTER PLAN SPACE PROGRAM

Space Type	Adjusted Inventory (ASF)	Master Plan Space Program (5,500 HC)	Difference (ASF)
Lecture and Lab	30,589	31,767	(1,178)
Office/Conference	9,562	10,535	(973)
Library/LRC/Study	3,862	19,751	(15,889)
Instructional Media	225	8,988	(8,763)
Other	20,119	39,260	(19,141)
TOTALS	**64,357**	**110,302**	

SUSTAINABILITY

Overview

In 2014 Chaffey College started the master planning effort for their three campuses. From the outset it was the College's intent to achieve a master plan which would inspire students to become stewards of the environment, reflect the high-performance curriculum which the College has to offer and further the sustainability goals of the College as a whole.

As part of the planning process, and in order to clearly identify opportunities for sustainable strategies, an interactive sustainability workshop was held during the master planning process for Chaffey College. The sustainability workshop provided a forum for college stakeholders to voice their visions and goals, and to exchange information about opportunities that might be pursued. The result was a focused set of strategies for sustainable practices based on opportunities identified by the sustainability workshop participants. These ideas will serve as a starting point to guide the integration of sustainability into the development of the master plan.

The sustainability workshop was divided into Parts 1, 2, and 3.

PART 1

Part 1 the participants shared their visions and goals.

PART 2

Part 2 consisted of an overview of the existing environmental conditions of the campuses.

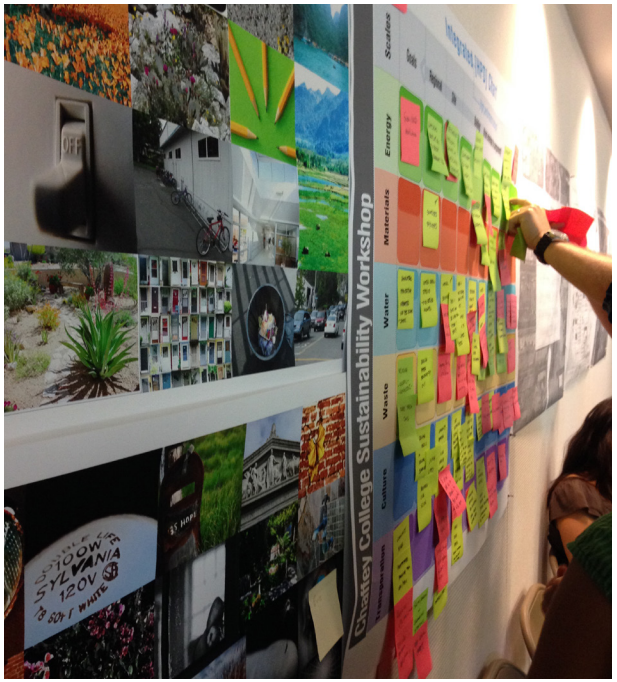
PART 3

Part 3 included a discussion of sustainability targets and strategies needed to achieve the goals identified by participants in Part 1 of the workshop.

Sustainability

Part 1: Sustainability Visioning and Goals Setting

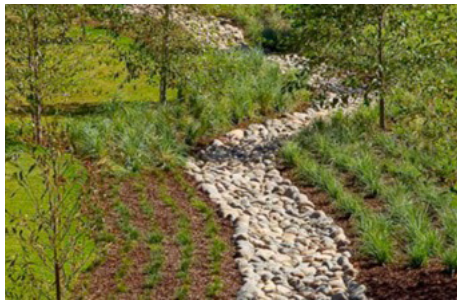
Part 1 consisted of a sustainability visioning exercise. Participants were asked to share their sustainability aspirations for Chaffey College, through inspirational imagery, or through brief verbal descriptions. Ideas from all participants were recorded onto post-its. The images located on the opposing and following pages were selected from among the images brought to the sustainability workshop by the participants.



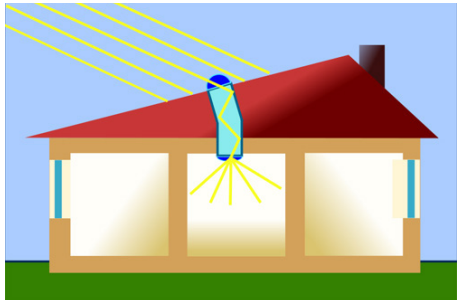

24 hour cash

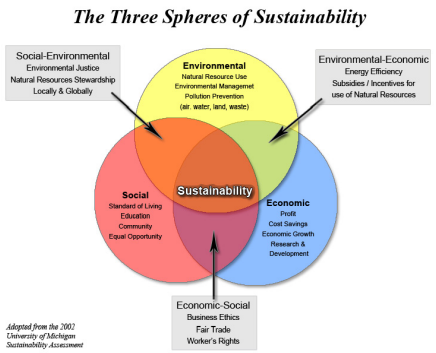

Bioswale
A Ditch that Cleanses Water


Discover Your Super Powers




BUFFALO GRASS
THESE PARKING AREAS ARE PAVED WITH
POROUS PAVEMENT
PAVEMENT THAT LEAKS
SINCE 1977, IT HAS RAISED THE LOCAL WATER TABLE WHILE REDUCING EROSION, POLLUTION, AND THE NEED FOR STORM DRAINS OR ROAD SALT.
A BROCHURE IS AVAILABLE
A DEMONSTRATION PROJECT BY
MASS. D.E.P. & MASS. DEM.




The Three Spheres of Sustainability
Social-Environmental
Environmental Justice
Natural Resources Stewardship
Locally & Globally
Environmental
Natural Resource Use
Environmental Managemet
Pollution Prevention
(air, water, land, waste)
Environmental-Economic
Energy Efficiency
Subsidies / Incentives for use of Natural Resources
Sustainability
Social
Standard of Living
Education
Community
Equal Opportunity
Economic
Profit
Cost Savings
Economic Growth
Research & Development
Economic-Social
Business Ethics
Fair Trade
Worker's Rights
Adopted from the 2002 University of Michigan Sustainability Assessment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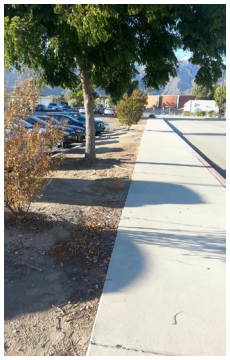
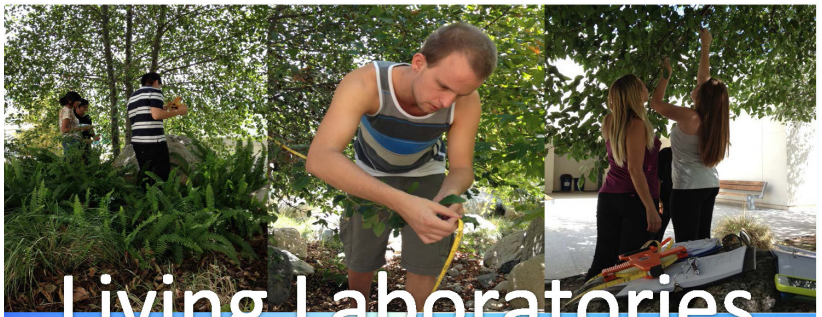
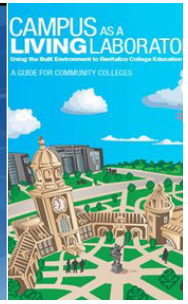
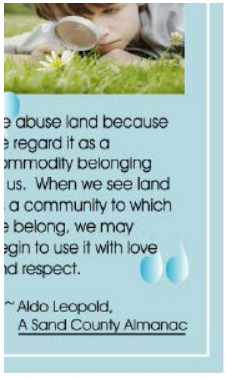
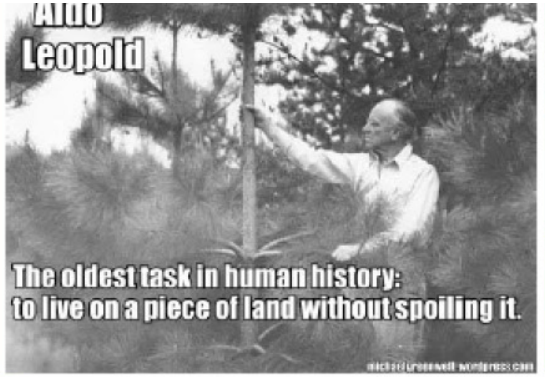


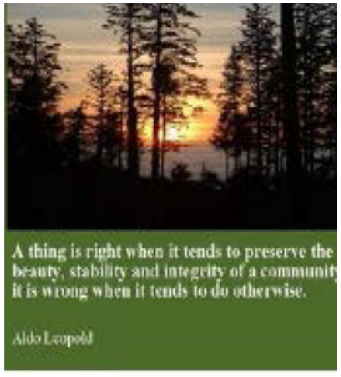
Living Laboratories

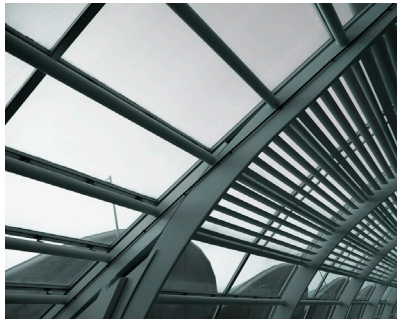


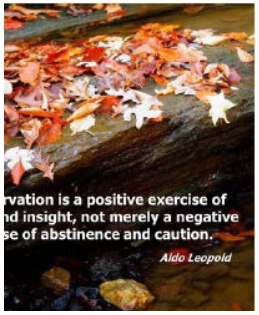


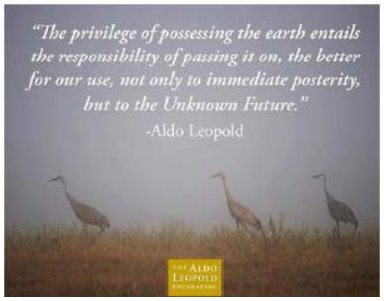


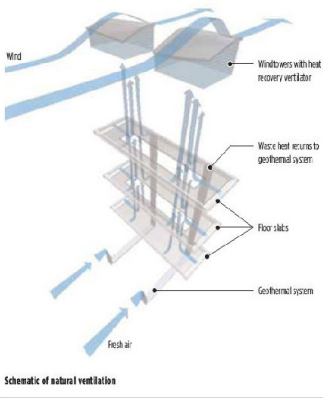












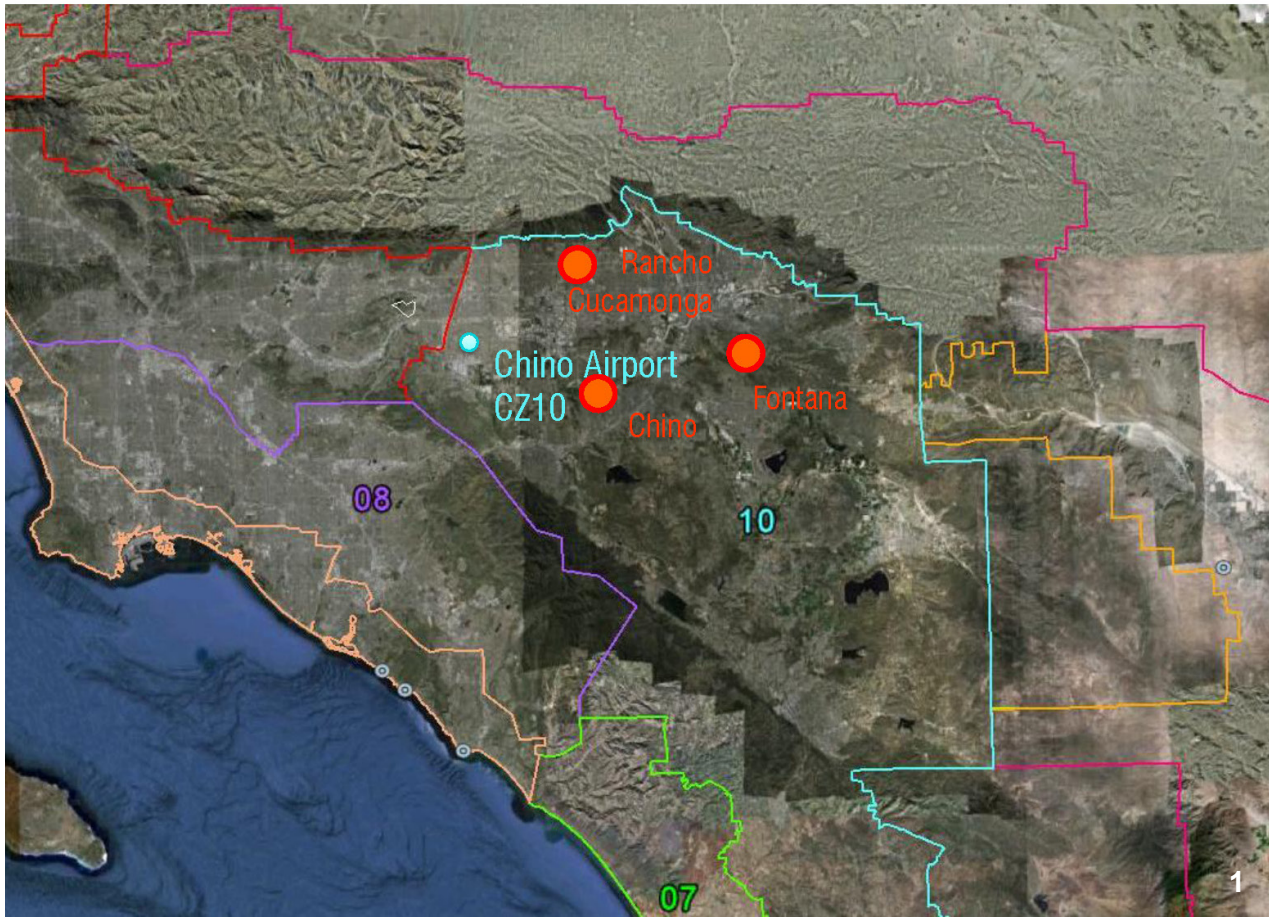
Schematic of natural ventilation

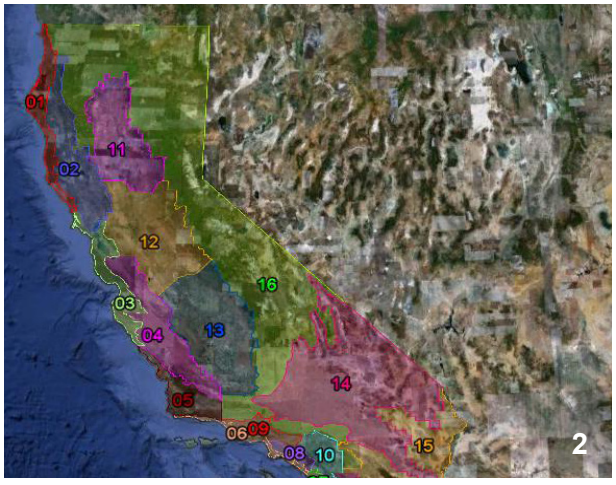
Sustainability

Part 2: Environmental Analysis

During Part 2 of the sustainability workshop, a preliminary site analysis of existing environmental conditions was reviewed in order to establish a shared understanding of the climate context. All three of Chaffey College's campuses are located in Climate Zone 10. The area is characterized by interior valleys which are hilly and influenced by thermal belts. Hilltops and valleys are colder in the winter (with the possibility of frost) and warmer in the summer than the slopes and hillsides from which cold air drains.

The temperature variation over the year is more extreme, with hotter summers and colder winters than experienced in the coastal climates to the west. Cooling and heating is necessary to maintain thermal comfort.

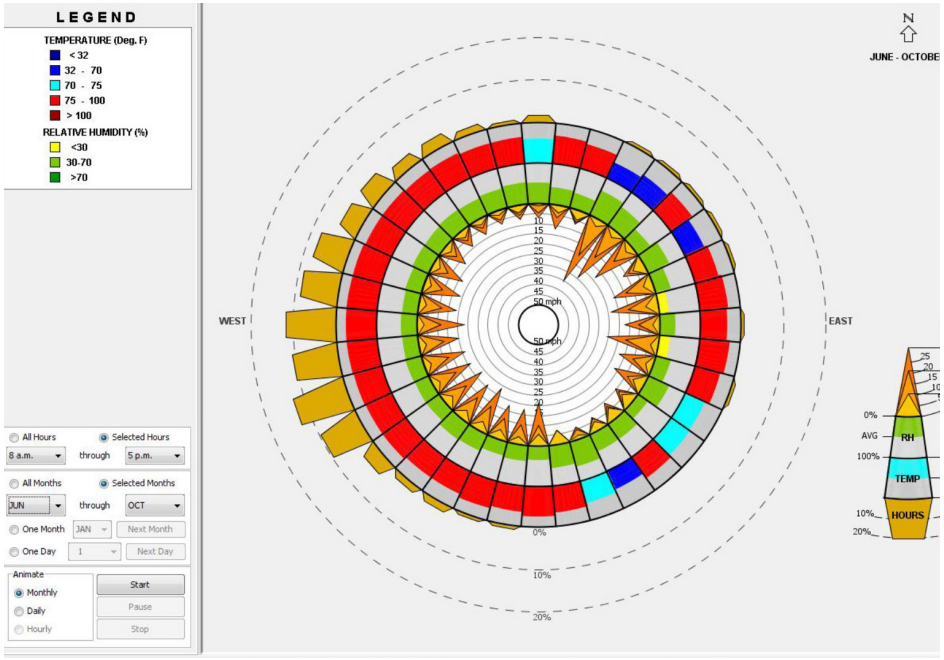


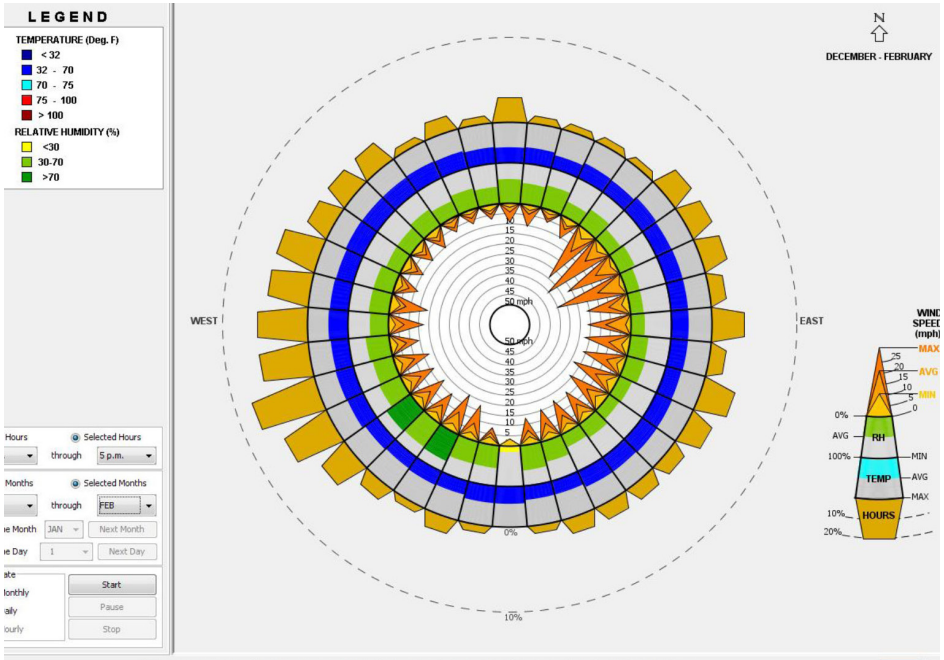


1 Weather Station Location
2 California Climate Zones

Weather data was imported into Climate Consultant v5.2 software and was graphed within a series of charts. The wind rose charts below illustrate wind frequency, temperature, humidity, and rainfall levels for the summer and winter months.
During the summer, the prevailing winds come from the west at an average velocity of 5-20 mph. Occasionally, gusts up to 35 mph blow in from the east. Temperatures range between 75-100 degrees Fahrenheit during the day and cool down by 15-20 degrees at night.

During the winter, the prevailing winds come in from the west at an average velocity range of 5-15 mph. Occasionally, gusts up to 35 mph in blow from the east. Temperatures range between 30-70 degrees Fahrenheit.

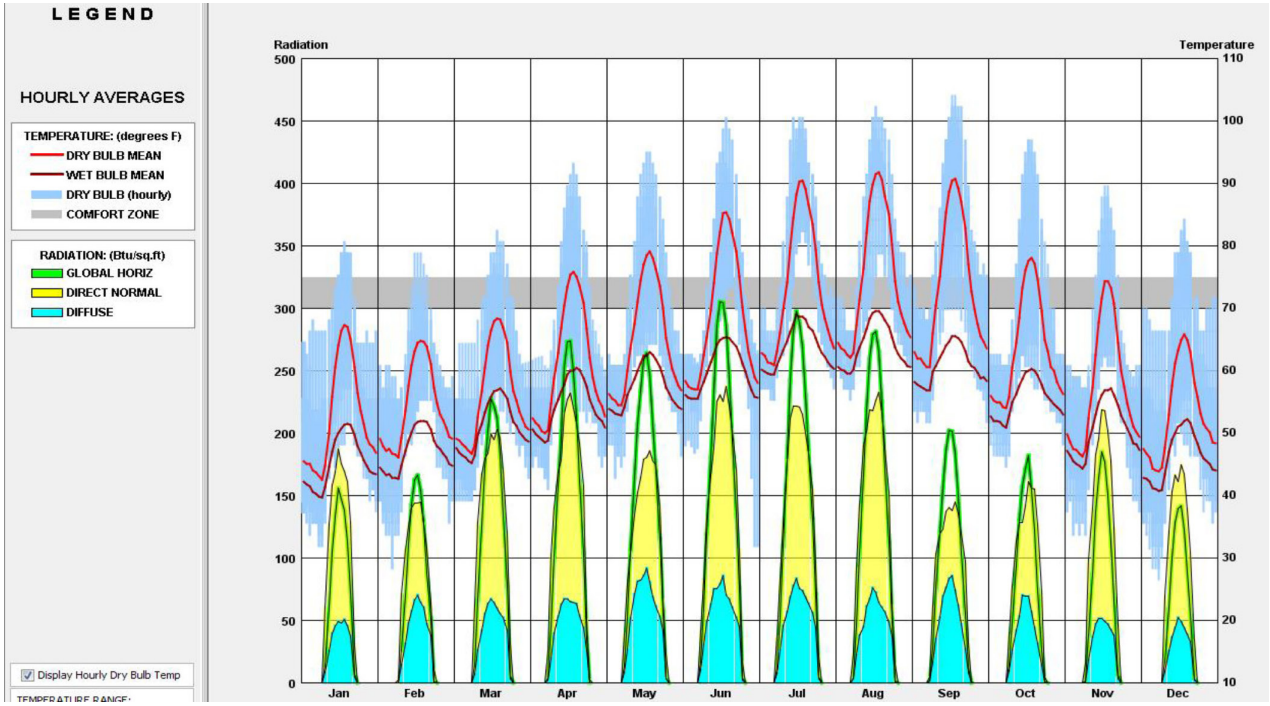




Comfort Zone

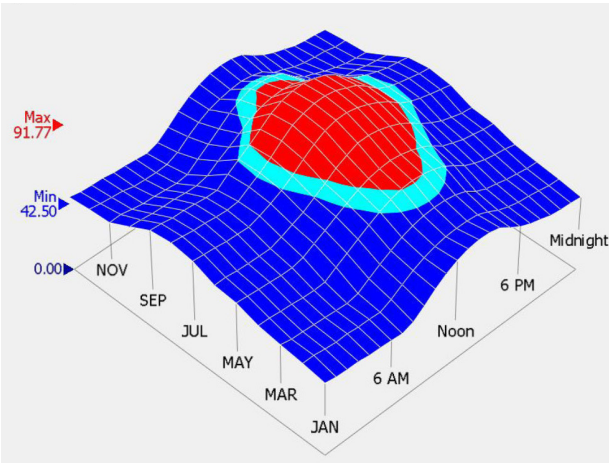
Thermal comfort is a result of the combined effects of solar radiation, temperature, air movement and relative humidity. The diurnal chart (opposite page) diagrams bioclimatic needs and ratifies that most of the time dry bulb temperatures are within the thermal comfort zone. Temperatures are within or slightly below the comfort zone during most of the year. During the summer months, temperatures can get as much as 20 degrees higher than the comfort zone. These warmer conditions would be best mitigated by a passive cooling strategies which are potentially supplemented by the use of regulated mechanical cooling to achieve thermal comfort. Similarly, during the winter, temperatures are approximately 10 degrees lower than the comfort zone, but can be as low as 20 degree below the comfort zone. These cooler conditions would be best mitigated by employing passive heating strategies which are supplemented by mechanical heating.

COMFORT ZONE DIAGRAM



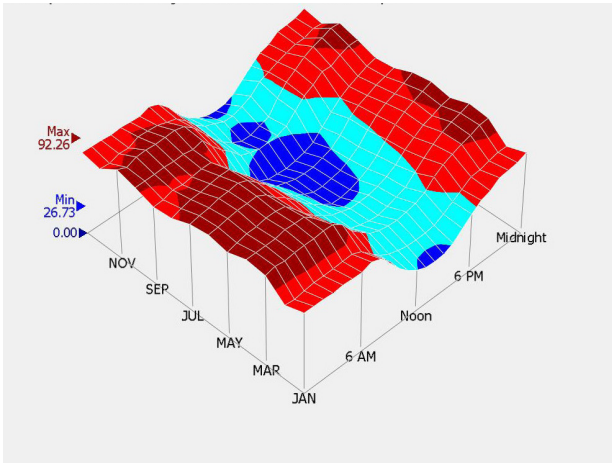
DRY BULB TEMPERATURE

The dry bulb temperature graph demonstrates that 74% of the year, the temperature remains between 32-70 degrees. 26% of the year during the summer the temperature can range between 75-100 degrees and higher.



RELATIVE HUMIDITY

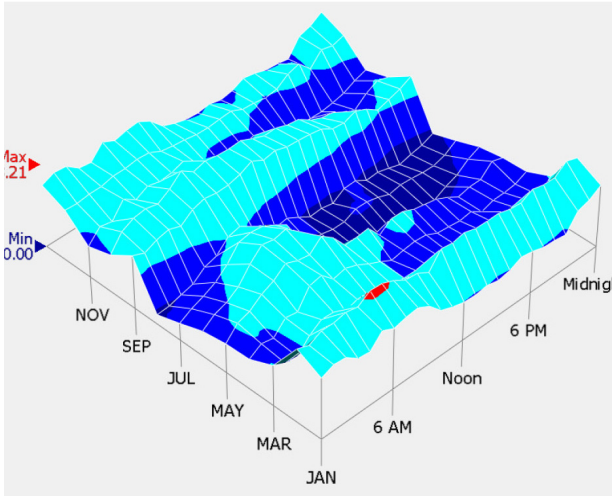
The annual relative humidity graph indicates that 66% of the year, the relative humidity drops below 60%. A drop in humidity occurs between 10 am and 5 pm during much of the year.



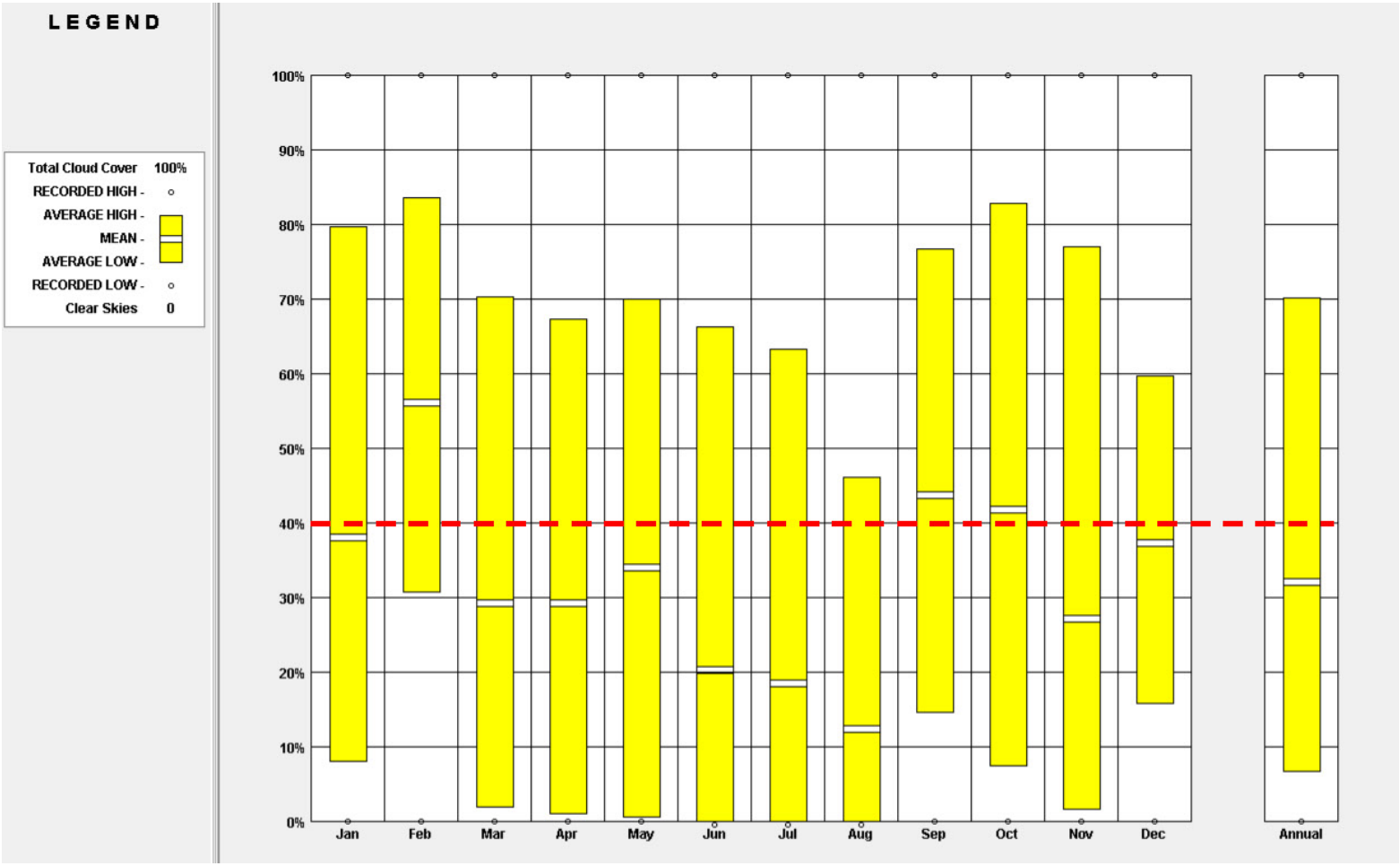
Sustainability

Sky Cover Range

There is less than 40% average cloud cover annually. This area experiences 55% cloud cover from November to January for most of the day and 32% cloud cover rest of the year. The least amount of cloud cover occurs between July and Sept.



SKY COVER DIAGRAM



Solar Access

Weather data was graphed within a psychrometric chart. The chart lists effective, potential design strategies specific to the project site's climatic conditions. The results of this analysis indicate that there is a higher demand for cooling than for heating. All hours in an average year are represented by the green points within the psychrometric chart. The points that are captured within the color-coded boxes represent hours during which comfort can be achieved by using the correspondingly colored strategy. The majority of these points are located in the moderate temperature zone. In order to capture as many green points in the chart as possible, it is necessary to identify passive solar and active systems strategies which have the most effect.

Solar Passive Strategies for warm months of the year

The psychrometric chart on the opposing page graphically depicts potential passive strategies. The psychrometric chart reveals that during the summer comfort can be achieved for 97.4% of the summer hours by using the following strategies.

Thermal Mass

Thermal mass is a passive solar strategy that uses the mass of the building to provide a consistent building temperature. For example, when outside temperatures are fluctuating throughout the day, a large thermal mass within the insulated envelope of a building can serve to regulate the daily temperature fluctuations. The thermal mass of the building will absorb the thermal energy of the external environment when the surroundings are higher in temperature than the mass. The thermal energy will then be radiated back to the environment when the surroundings are cooler. Building materials with significant thermal mass properties include concrete, masonry, insulated concrete forms (ICF) and structurally insulated metal panels (SIPS).

Natural Ventilation

By locating building openings and courtyards along natural wind paths, natural ventilation can provide building occupants with access to cooling breezes. By combining natural ventilation with a water feature such as a fountain or water misting fixtures, the effective cooling of the wind will increase significantly. This will result in less reliance on mechanical cooling, thus reducing the energy consumption of the campus as a whole.

Sun Shading of Windows

Effective sun shading of windows that are specifically selected and designed for each façade orientation can significantly reduce the intensity of solar gain within a building. By implementing deep overhangs along the south façades of buildings and vertical fins along the east and west facades of buildings which are angled specifically to block out glare, natural daylighting can be achieved while deflecting direct solar exposure. Sun shading design combined with efficient insulated glazing units can substantially increase occupant comfort and building efficiency. Glazing units with a solar heat gain coefficient of 0.27 (low) and a visual transmittance of 63% (nearly clear) can provide occupants with access to views and daylight, while blocking out much of the solar radiation from the sun.

Building Insulation Optimization

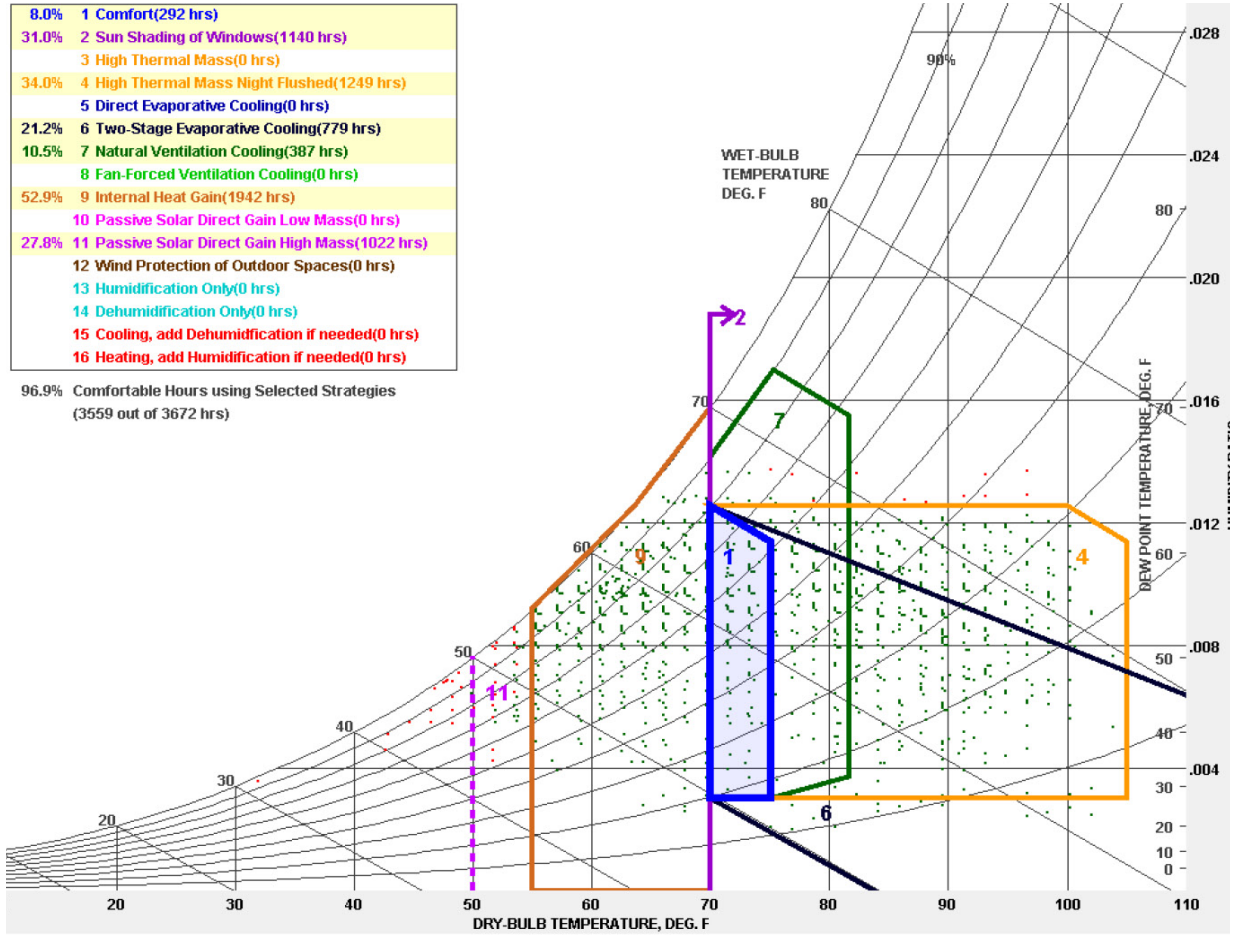
Building efficiency can be optimized by designing tight building envelopes with R21 insulation in the walls, R30 insulation in the roof, high performance insulated glazing units with responsive sun shading devices, and cool roofs.

Mechanical Cooling

In order to maintain occupant comfort, some mechanical cooling will be necessary during the warmer months. As described in previous sections, an indirect-direct mechanical cooling system is recommended for consideration, due to the campus' low humidity levels. This system would provide effective and efficient evaporative cooling. However, by implementing the solar passive strategies described above, reliance upon any mechanical cooling system that is implemented will be decreased, and thus building energy performance will be optimized.

Passive cooling strategies such as sun shading of windows, thermal mass and natural ventilation would be the most effective in order to mitigate heat gains during the warmer months. Controlling internal heat gains by monitoring the use of appliances and electrical lighting will also aid in maintaining cooler temperatures.

PSYCHOMETRIC CHART



Sustainability

Solar Access

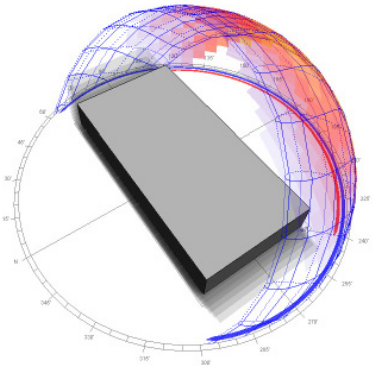
Solar Passive Strategies for cool months of the year

The psychrometric chart on the opposing page graphically depicts potential passive strategies. During the winter, the psychrometric chart reveals that comfort can be achieved for 94.4% of the winter hours by using the following strategies.

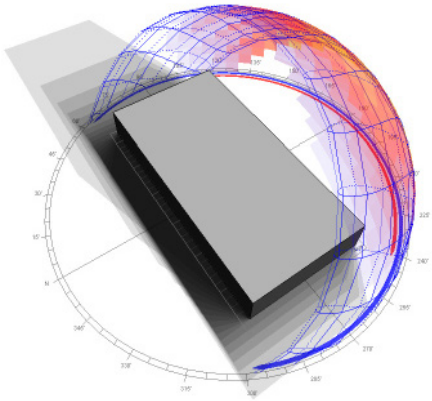
Controlling Internal Heat Gains

By controlling use of appliances, equipment and lighting in buildings, building efficiency can increase by as much as 30%. This can be facilitated through simple but effective measures such as building occupant training as well as mechanical measures such as occupancy sensors, smart power strips and photosensors.

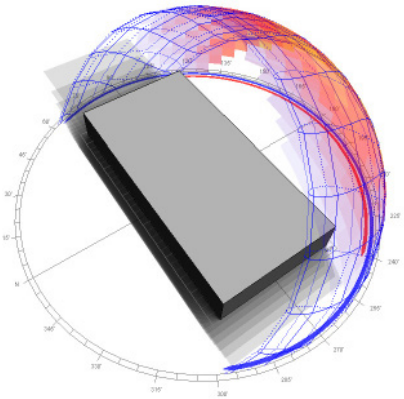
Summer Solar Paths/Shading Diagram



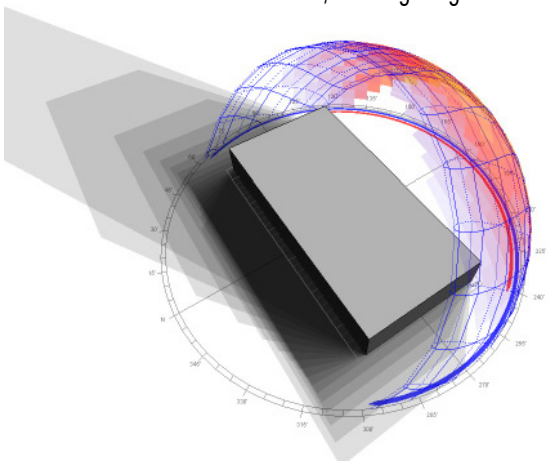
Spring Solar Paths/Shading Diagram



Fall Solar Paths/Shading Diagram



Winter Solar Paths/Shading Diagram



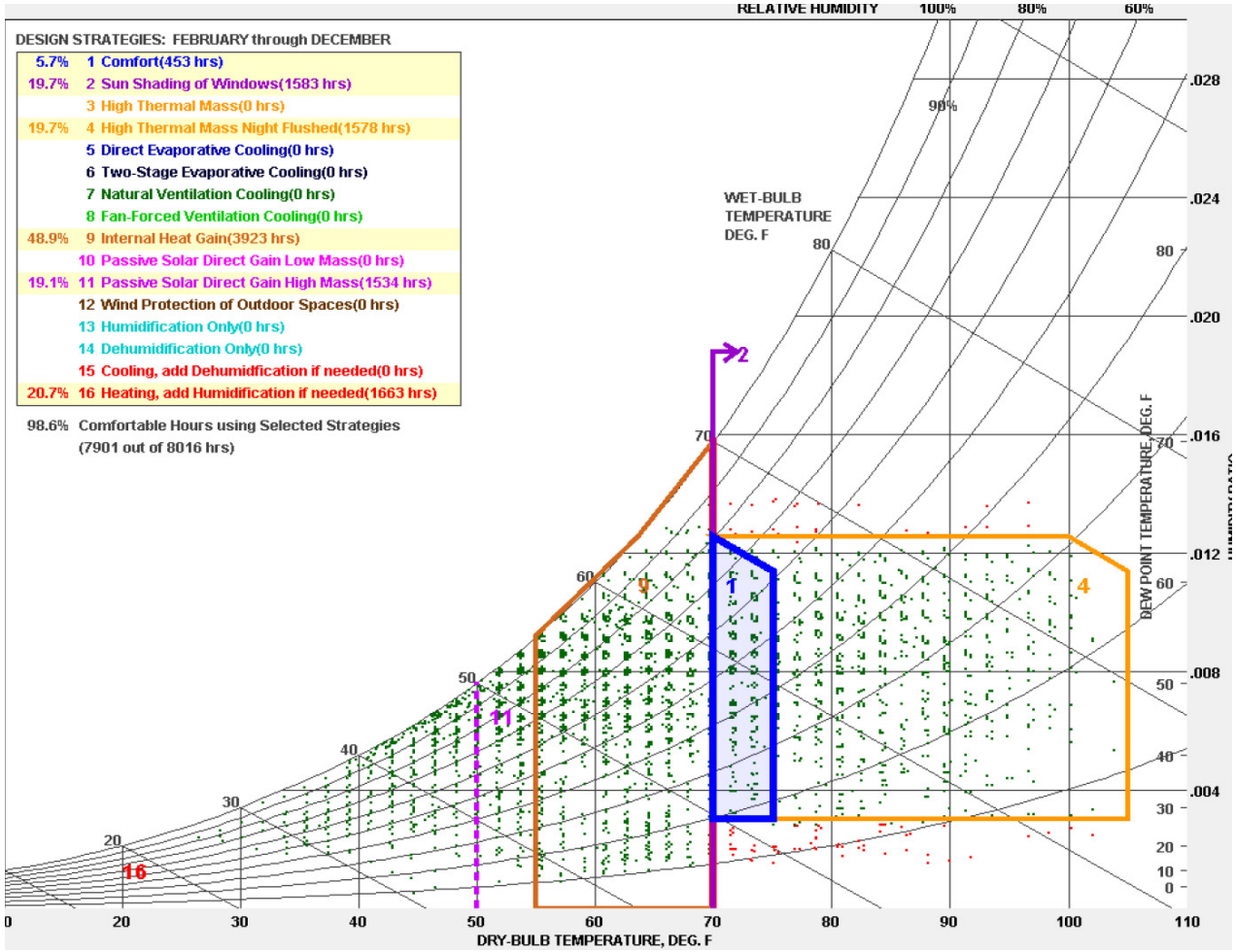
Passive Solar Direct Gain

Thermal mass is a passive solar strategy that combines direct solar radiation with the mass of the building to provide a consistent building temperature. For example, when outside temperatures are fluctuating throughout the day, a large thermal mass within the insulated envelope of a building can serve to regulate the daily temperature fluctuations. The thermal mass of the building will absorb the thermal energy of the external environment when the surroundings are higher in temperature than the mass. The thermal energy will then be radiated back to the environment when the surroundings are cooler. Building materials with significant thermal mass properties include concrete, masonry, insulated concrete forms (ICF) and structurally insulated metal panels (SIPS).

Heating and Humidification if needed

During the winter, buildings may need to be heated through mechanical means. To ensure there occupancy comfort, there should be enough humidity in the air. In the heating and humidification process, the dry bulb temperature as well as the humidity of the air increases. The heating and humidification process is carried out by passing the air over spray of water, which is maintained at temperature higher than the dry bulb temperature of air or by mixing air and the steam.

PSYCHOMETRIC CHART



Existing Energy Use Intensity

Energy Use Intensity (EUI) is a unit of measurement that describes energy use in kBTU per/square foot/year. EUI takes into account the amount of electricity and gas used in a building.

In order to best determine a target energy use intensity, (EUI), a better understanding of each campuses' energy consumption has been provided. Each campuses' energy use has also been compared to three benchmark metrics:

- The California Energy Commission 2006 survey of energy use in California Higher Education Buildings; (Figure 3)
- Energystar energy use for a higher education building located in the Rancho Cucamonga zip code. (Figure 4)
- Architecture 2030 (a voluntary energy use reduction program which challenges the building industry to reduce emissions caused by buildings and sets targets for milestone years.) (Figure 5)

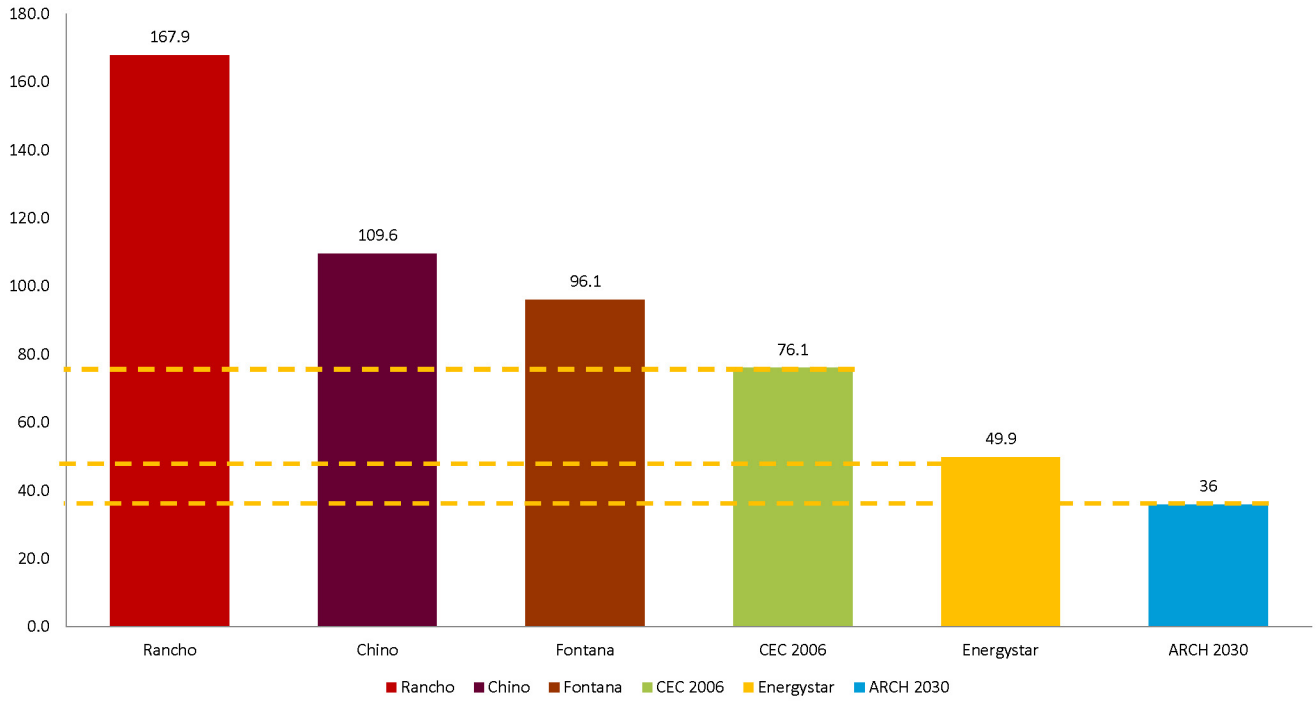
2030 CHALLENGE Targets: U.S. National Averages

U.S. Averages for Site Energy Use and 2030 Challenge Energy Reduction Targets by Space/Building Type[1]

From the Environmental Protection Agency (EPA): Use this chart to find the site fossil-fuel energy targets

Primary Space / Building Type[2]	Available in Target Finder[3]	Average Source EUI[4] (kBtu/Sq.Ft./Yr)	Average Percent Electric	Average Site EUI[4] (kBtu/Sq.Ft./Yr)	2030 Challenge Site EUI Targets (kBtu/Sq.Ft./Yr)				
					50% Target	60% Target	70% Target	80% Target	90% Target
Administrative / Professional & Government Office	✓								
Education		170	63%	76	**38.0**	30.4	22.8	15.2	7.6
College / University (campus-level)		280	63%	120	**60.0**	48.0	36.0	24.0	12.0
K-12 School	✓								
Food Sales		681	86%	225	**112.5**	90.0	67.5	45.0	22.5
Convenience Store (with or without gas station)		753	90%	241	**120.5**	96.4	72.3	48.2	24.1
Grocery Store / Food Market	✓								
Food Service		786	59%	351	**175.5**	140.4	105.3	70.2	35.1
Fast Food		1306	64%	534	**267.0**	213.6	160.2	106.8	53.4

The EUI for all three campuses are currently above the benchmarks, which indicates that the College can benefit from implementing additional efficiency measures.



Existing Carbon Emissions and the American College and University Presidents' Climate Commitment Program

In 2011, Chaffey Community College signed the American College and University Presidents' Climate Commitment. ACUPCC institutions agree to:

- Complete an emissions inventory.
- Within two years, set a target date and interim milestones for becoming climate neutral.
- Take immediate steps to reduce greenhouse gas emissions by choosing from a list of short-term actions.
- Integrate sustainability into the curriculum and make it part of the educational experience.
- Make the action plan, inventory and progress reports publicly available.

In order to assess Chaffey College's carbon footprint, a comparison with educational institutions who have also signed onto the ACUPCC has been provided. These institutions are located within similar climate zones as Chaffey College's three campuses.

Two scenarios have been provided:

- No transportation taken into consideration
- Transportation taken into consideration

This scenario building provides an opportunity to see the effect that transportation has on the College's carbon footprint. All three campuses have been combined into one carbon footprint. Two reporting years have been provided for comparison: 2008 and 2012. This provides a snapshot of how the College has performed over a span of 4 years.

In the first scenario, (transportation not included), in 2008 Chaffey College had the largest carbon footprint, at 28.4 lbs of CO2e/sf/year. However, in 2012 Chaffey College had the lowest carbon footprint, at 10.4 lbs of CO2e/sf/year.

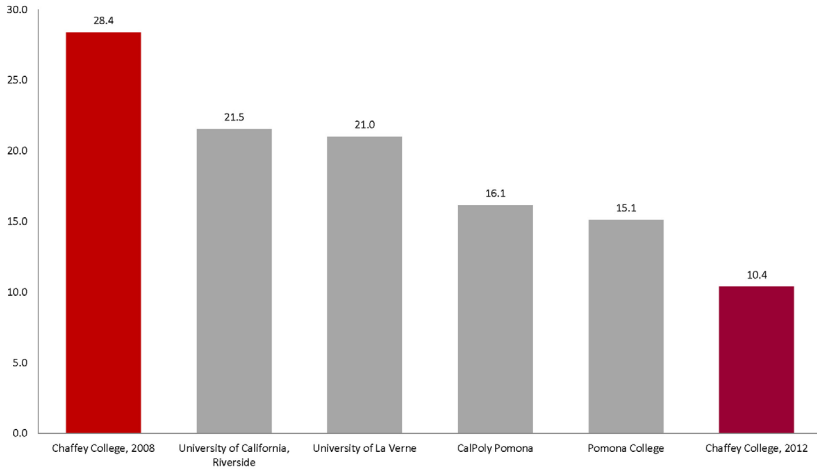
In the second scenario (transportation included), Chaffey College (2012) and Chaffey College (2008), dropped to the second and third largest carbon footprints, at 46.7 lbs of CO2e/sf/year and 43.3 lbs of CO2e/sf/year, respectively. Transportation had a major impact on Chaffey College's carbon footprint during the 2012 reporting year. This indicates that while building efficiencies may have been among the best, relative to other institutions and relative to the 2008 reporting year, transportation must have increased significantly, thereby resulting in a much larger carbon emission measurement.

American College & University Presidents' Climate Commitment

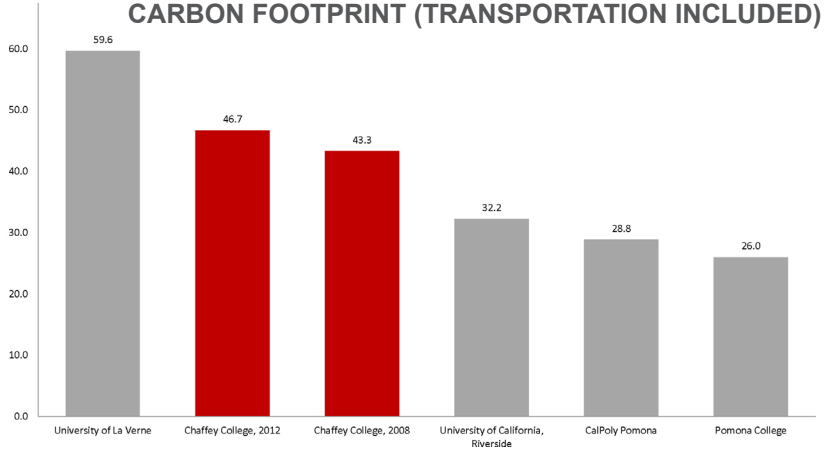
This suggests that building efficiencies should continue to be administered, as the College's plan of action is proving to be productive. Simultaneously the College could research methods of improving access to each campus and promote alternative modes of transportation since transportation is a significant source of the College's carbon emissions.

When studying the impact of the College's carbon footprint on the student population, the carbon footprints of each reporting year have been calculated per capita. Excluding transportation, Chaffey College (2012) equated to 1,393 lbs/CO2e/student/year. Chaffey College (2008) equated to just 206 lbs/CO2e/student/year.

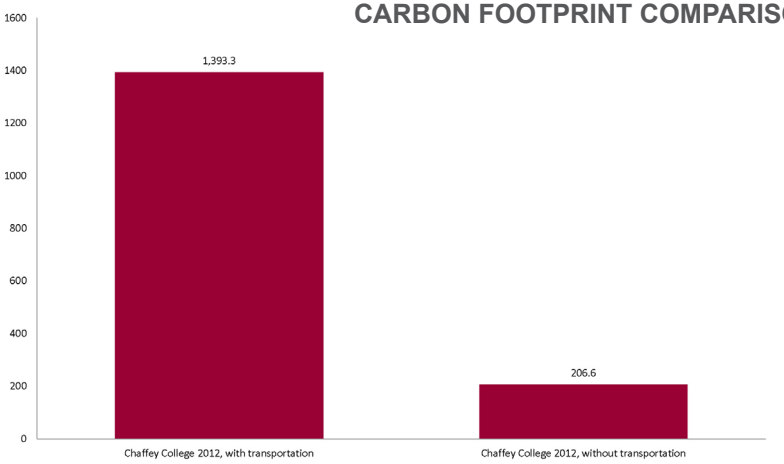
CARBON FOOTPRINT (TRANSPORTATION NOT INCLUDED)



CARBON FOOTPRINT (TRANSPORTATION INCLUDED)



CARBON FOOTPRINT COMPARISON

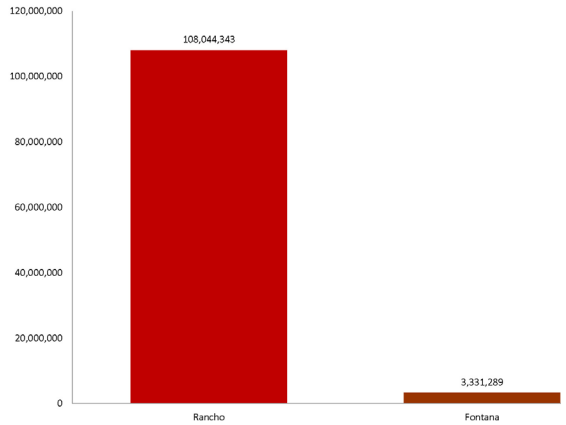


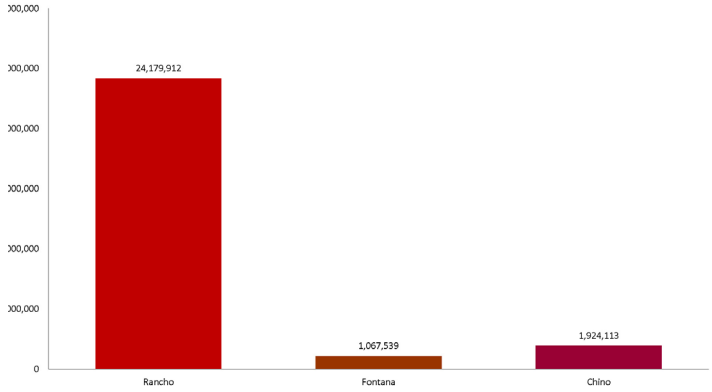
Existing Water Consumption

Water consumption for each campus was also studied. Water data was collected from each campus' utility provider. The data commingled building water use and irrigation/landscape water use. However, the information still provides a snapshot of how much water overall the College's three campuses are utilizing. Since California is suffering from an extended drought, water consumption is of the utmost importance.

In 2014, the Rancho Cucamonga campus consumed about 105 million gallons of water, while the Fontana campus consumed approximately 3.3 million.

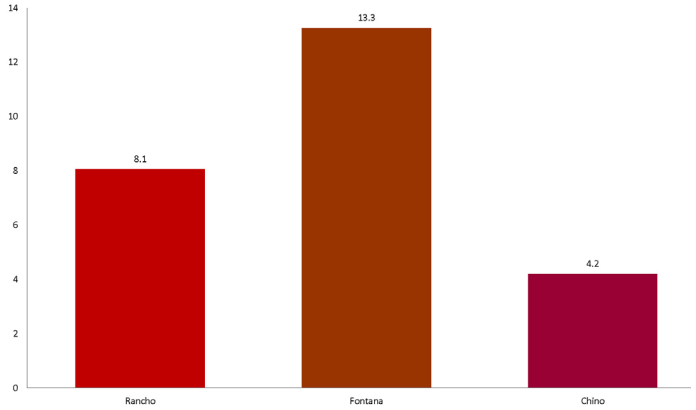
Water data for the Chino campus was obtained for the months April-June of 2014. Isolating these three months of the year, (when water use is near its annual peak) the data shows that the Rancho Cucamonga campus is consuming about 24 million gallons, the Fontana campus is consuming about 1 million gallons, and the Chino campus is consuming 1.9 million.





When analyzed relative to overall square footage on campus, the data indicates that the Fontana campus consumes the most water, followed by the Rancho Cucamonga campus and then the Chino campus.

This indicates that further water efficiencies could be explored, particularly at the Fontana location, in order to optimize water conservation practices.

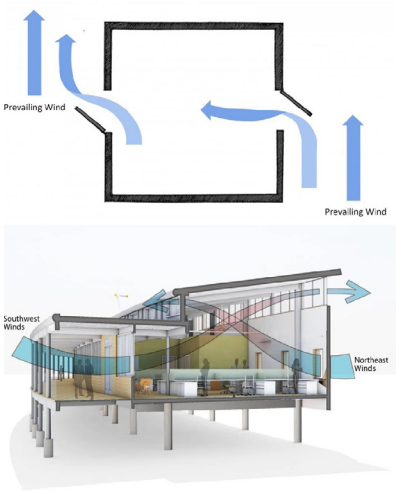


Strategies for Energy Efficiency

In order to best optimize energy performance and reduce overall carbon emissions, several sustainable energy strategies would be of benefit to the College.

Natural Ventilation

Natural ventilation is the process of supplying and removing air through an indoor space without using mechanical systems. In Climate Zone 10, this strategy is effective particularly during the summer evenings and mornings, when it is possible to “flush out” the building’s hot air and replace it with fresh, cool outside air. When combined with interlocks (mechanisms which automatically shut off mechanical systems when a window or door is open), natural ventilation is especially effective.



Cool Roof

Upgrading existing rooftops with a cool roof coating and utilizing a cool roof product on new buildings will greatly increase the energy efficiency of the building. A cool roof, with a minimum of solar reflectance index of 104, can benefit a building and its occupants by:

- Reducing energy bills by decreasing air conditioning needs
- Improving indoor comfort for spaces that are not air conditioned
- Decreasing roof temperature, which may extend roof service life.

Beyond the building itself, cool roofs can also benefit the environment, especially when many buildings in a community have them. Cool roofs can:

- Reduce local air temperatures (sometimes referred to as the urban heat island effect)
- Lower peak electricity demand, which can help prevent power outages
- Reduce power plant emissions, including carbon dioxide, sulfur dioxide, nitrous oxides, and mercury, by reducing cooling energy use in buildings.

Central Plant Upgrades

By upgrading the central plant, and right sizing mechanical systems, overall campus energy efficiency will improve. When implemented holistically, central plant optimization can deliver sustained energy savings of up to 60%. Achieving plant efficiency potential is determined by both the design and operating decisions made. The following steps should be considered when upgrading the central plant:

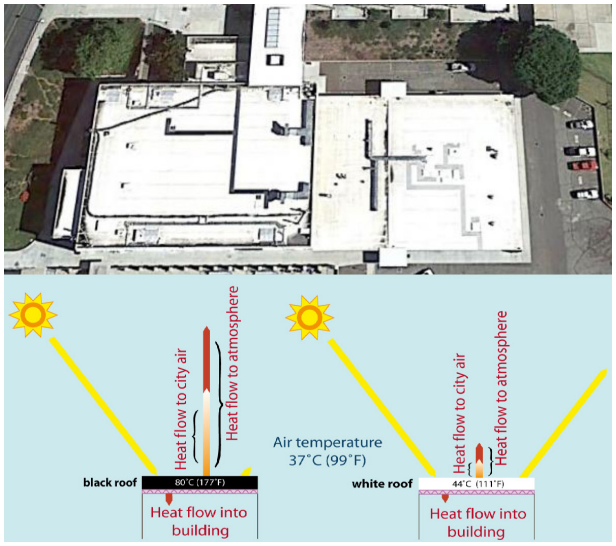
- Design of system infrastructure
- Selection of system components
- Application of components
- Automation of system
- Optimization
- Maintenance
- Measurement and verification

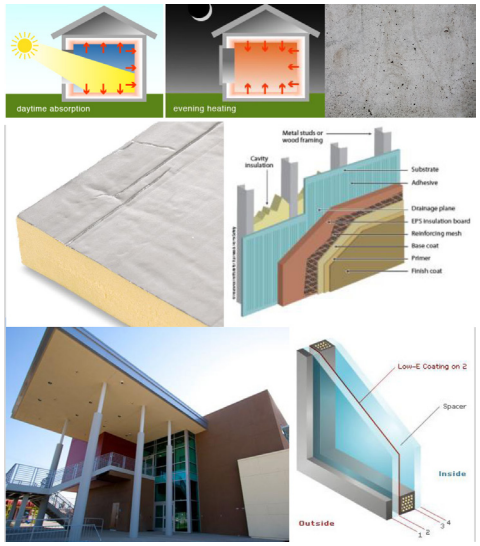
Building Insulation

All three campuses are located in Climate Zone 10, which experiences both extreme heat and cold. To help regulate the thermal comfort of the buildings, and thereby reduce dependence on mechanical cooling and heating, building insulation should be considered. An exterior layer of rigid insulation will benefit the buildings on campus by providing a consistent thermal barrier across the building envelope. Less heat exchange will occur from the metal structure of the building to the exterior environment and vice versa.

High Performance Glazing and Overhang Structures

By utilizing a high performing glass unit for all new construction and building fenestration upgrades, the energy efficiency of the campus will also greatly improve. Glass units with a low solar heat gain coefficient (SHGC) of 0.26 or better and a visible light transmittance of 46% or better, should be considered. This will result in optimal transparency, while maintaining resistance to solar glare and radiation.





Strategies for Water Efficiency

Water Fixtures

New buildings will include efficient plumbing fixtures to allow the building to be, at a minimum, 40% below the Energy Policy Act water usage baseline in effect at the time of construction. With the current baseline, a 40% reduction can be achieved with standard fixtures that the maintenance staff will be able to maintain in a similar manner to existing plumbing fixtures throughout the campuses. They will not require additional maintenance, as waterless urinals require.

The College has implemented a phase out of older plumbing fixtures in existing buildings. This project should continue to be implemented. Under the current EPA baseline the following fixtures should be installed throughout campuses: 1.28 gpf water closets, 0.125 gpf urinals, 0.5 gpm lavatories, 1.0 gpm sinks and 1.5 gpm shower heads.

Condensate Recovery

HVAC cooling coils inherently produce condensate. This gray water is discharged into the sanitary sewer system instead of being kept on campus for use. It is recommended that existing and new buildings have condensate recovery vessels adjacent to the buildings in the local landscape area. HVAC equipment will have the associated condensate piped to these retention vessels where it can be used to irrigate the local landscape areas, saving the nearly half million gallons of water each year sent down the drain.

Landscape Irrigation

One of the main benefits of the recommended landscaping concept is the reduced need for irrigation. Once established, native, drought tolerant plants will will require minimum, if any irrigation. Turf can be provided where it is appropriate for the programmed use.

Part 3: Sustainability Strategies and Targets

In Part 3 of the sustainability workshop, an in-depth discussion was held to consider action plans to achieve the aspirations voiced in Part 1. The discussion focused on opportunities to conserve in six categories: Energy, Water, Building Materials, Waste, Transportation, and Culture. Workshop participants were asked to spend five minutes on each category to brainstorm the following:

- A Target for the category
- Three significant Actions that would help achieve the Target

Ideas were recorded onto large flip charts. This section is a summary of the comments shared during Part 3.

The Chaffey College Sustainability Workshop is one step along the journey towards an increasingly sustainable culture. The next steps will involve allocation of resources and focus on the details of implementation.

For the long term, the master plan recommends an ongoing process that focuses on sustainability, involving the College's stakeholders in a continuous cycle of visioning, planning, implementation, and assessment.

Energy

Target: Reduce electricity usage 10-20% in 5 years.

- Action #1: Audit electrical usage.
- Action #2: Install interior solar tube lights.
  - / 2A: Switch to LED(s).
  - / 2B: Monitor lighting use and turn off lights when not needed.
- Action #3: Build Solar Panel Parking Covers.
- Action #4: Employ Natural Air Ventilation.

Target: Reduce 15% by 2015 through efficiency & renewable energy. Reduce 25% by 2025.

- Action #1: Use renewable energy (Solar, Winds) and install a Thermal Energy Storage (TES) tank.
- Action #2: Implement the following to achieve the targeted 15% reduction by 2015:
  - / Motion detectors & Timers (Indoor/Outdoor Lighting)
  - / Keep doors closed
  - / Adjust thermostat setpoints
  - / Window Treatments/upgrades
  - / Shade
- Action #3: To meet the 25% targeted reduction by 2025, continue to explore and develop strategies.

Target: Be the Community College model for energy efficiency in the state

- Action #1: Use the most effective technologies, supported by a skilled work force.
- Action #2: Establish curricular connections.

Target: Reduce Grid-sourced electricity use by 25%

- Action #1: Implement energy efficiency measures.
- Action #2: Implement cost effective solar power.
- Action #3: Use natural lighting where feasible.
- Action #4: Build to LEED Platinum.

Target: Reduce Energy Usage

- Action #1: Replace fume hoods in chemistry labs.
- Action #2: Employ daylight harvesting.
- Action#3: SOLAR!!/Wind Turbines

Construction, Interior Building Materials and Purchasing

Target: Zero waste

- Action #1: Material Assessment
  - / Identify “What’s coming in?”
  - / Identify: “What are the goals?”
- Action #2: Identify Best Practices
- Action #3: Establish End-User Partnerships

Target: Build with Maximum Allowable Recycled Content.

- Action #1: Implement Reduce, Reuse, and Recycle as District policy/procedure.
- Action #2: Purchase recycled materials where applicable.

Target: Reuse removed building materials & obtain renewable materials for new construction.

- Action #1: Install permeable walkways & driveways and reuse removed “cement” materials (i.e. Planters, etc.).
- Action #2: Repurpose existing buildings rather than demolish them.
- Action # 3: When grading, crush and reuse rock for landscaping, bioswales, etc.

Target: Use 5-% renewable, reused materials for 2015

- Action #1: Use renewable construction materials.
- Action #2: Buy local, source local (i.e. rock for land scaping) renewable materials (i.e. bamboo flooring).
- Action # 3: Use recycled construction materials (blue jeans for insulation).

Target: Further the development of the “Campus as a Living Lab” concept.

- Action #1: Incorporate sgnage that educates the community on measures Chaffey College has taken to reduce our carbon footprint.

Transportation

Target: Start an Alternative Transportation Program

- Action #1: Explore strategies to suppor bike use in the interior of campus (bike racks).
- Action #2: Study and implement electric car charging stations.
- Action #3: Study and implement a preferred parking program and discounted parking permits for students with green vehicles (telecommute 1 day/week for staff).

Target: Encourage Alternate Transportation & Reduce CO2 Emissions by 50% by 2015.

- Action #1: Provide preferred parking for carpooling & “green” vehicles.
- Action #2: Install charging stations & encourage Zip Car use.
- Action #3: Install more bike racks.

Target: Reduce Emissions

- Action #1: Provide preferred parking for low-emissions vehicles (LEVs).
- Action #2: Reduce student parking permit fees for student with LEVs.
- Action#3: Employ LEV/Electric Vehicles as a large part of the District’s fleet.

Target: Reduce the number of gasoline-powered vehicles.

- Action #1: Preferred parking incentives for LEVs/FEVs.
- Action #2: Partner with dealers for discounts on LEVs/FEVs.
- Action #3: Install solar powered electric charging stations.

Waste Management

Target: Reduce Waste Production by 50% by 2015

- Action #1: Recycling campaign for College community (Education, contests & tours).
- Action #2: Sorting bins for recyclables
- Action #3: Increase the composting program (Vermiculture).

Target: Reduce Waste by 20%

- Action #1: Implement composting at food services and re-use as fertilizer for the College's landscaping.
- Action #2: Consolidate the use of printers.
- Action # 3: Eliminate personal refrigerators!

Target: Reduce Waste by 10%

- Action #1: Install water bottle filling stations.
- Action #2: Implement better separation of waste.
- Action #3: Increase the number of recycling bins.

Target: Reduce Waste Streams

- Action #1: Promote student involvement by providing accessible bins.
- Action #2: Eliminate 1 use water bottles, install refill stations (Filtered)
- Action #3: Reduce water runoff by use of permeable surfaces or capture

Target: Reduce Waste by 50%

- Action #1: Easily identifiable (bigger), very visible recycle/trash bins
- Action #3: Permit any refillable coffee/beverage cup (not just starbucks/Chaffey cups) and reward to have reduced cost on beverage refill.

Culture

Target: Increase Awareness, Engagement and Stewardship

- Action #1: Integrate stewardship into curriculum
- Action #2: Support with infrastructure
- Action #3: Create partnership

Target: Increase Student/Staff Awareness and Involvement in Sustainability Metrics

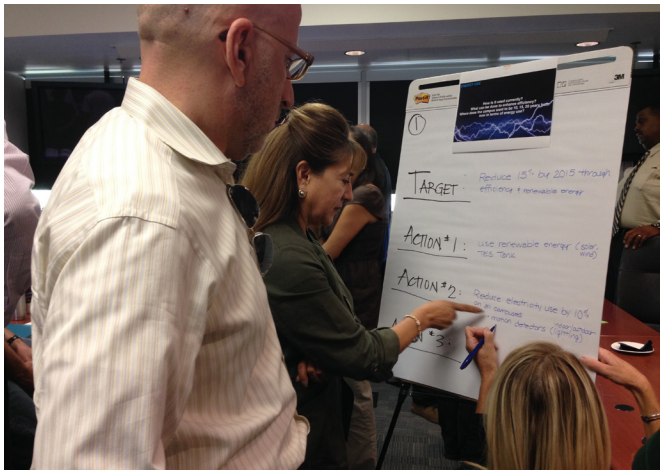
- Action #1: Publish success
- Action #2: Develop re-posting mechanism for student Use
- Action #3: Identify metrics with published dashboard

Target: Educate the Community on and involve them in Sustainability Efforts

- Action #1: Locate educational signage throughout
- Action #2: Create earth day/arbor day activities and contests
- Action # 3: Integrate sustainability in the curriculum (i.e. College Book, Course Topics, Forms, Workshops, etc.)

Target: Increase Sustainability Culture on Campus to 100% by 2025

- Action #1: Add sustainability to Mission Statement & curriculum
- Action #2: Create certificated programs in sustainability (Photovoltaic, Wind Turbines)
- Action #3: “Preserve the Preserve!!!”



Water

Target: Waste No Water

- Acton #1: Complete a comprehensive assessment for total water system
- Action #2: Engage outside partnerships that can enhance access to:
  - / Latest technology & equipment
  - / Best managed practices
- Action #3: Educational poll-out

Target: Reduce its Consumption 30% Outdoors and 20 % Indoors

Outdoor:

- Action # 1: Identify and report leaks (Audit?)
- Action # 2: Replace grass with lawn that is drought tolerant
- Action #3: Replace stadium turf

Indoors:

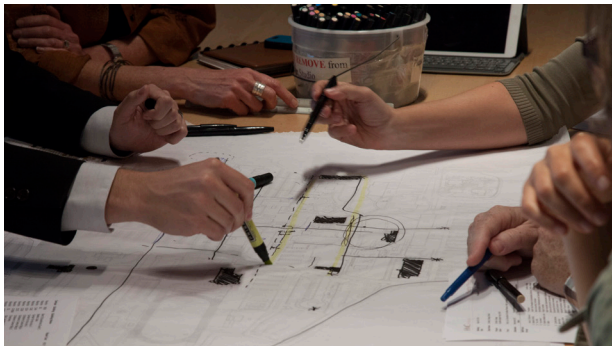
- Install signage
- Install low flow fixtures
- Install low flow showers
- Install aerators

Target: Reduce Water Usage

- Action #1: Replace some sections of grass with rock gardens and drought tolerant plants
- Action #2: capture and reuse hvac condensation run-off
- Action #3: Sanitary hand dryers, reclaimed water for irrigation and rainwater harvesting

MASTER PLAN

The campuses of Chaffey College exhibit a variety of natural characteristics that develop unique identities for each of the three campus environments. The master plan seeks to preserve and celebrate these unique characteristics while at the same time, implement common planning elements that work to bind the experiences across the District so that every student of Chaffey College can experience high quality academic and social experiences regardless of which campus they attend. The Planning Team, working closely with campus stakeholders, has identified two unifying planning concepts that provide the organizational framework for each campus as illustrated in the master plan recommendations.



The first is the development or further definition of a main open space, akin to a traditional campus quad, where students can gather. This open space would be intended as the social hub for each campus. The second is the development of a pedestrian promenade that links the campus buildings, brings clarity to campus way-finding, and leads to the aforementioned main space. While the development of these elements will be common to each campus, the implementation will differ in response to the unique spatial layout and natural characteristics of each site.

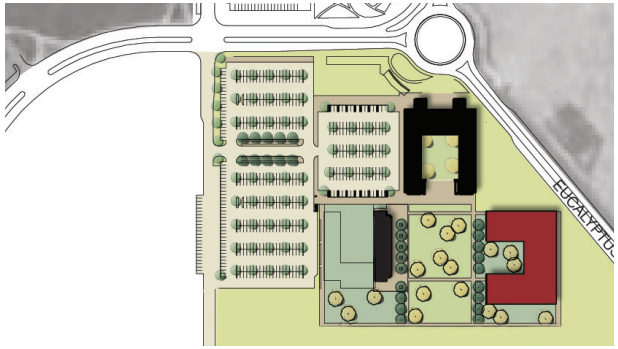
RANCHO CUCAMONGA CAMPUS

The defining characteristic of the Rancho Cucamonga Campus is the dramatic topography of the site. Nestled along the foothills of Rancho Cucamonga, the plan seeks to capitalize on the dynamic views of the valley below by reorganizing the campus into precincts defined by a series of terraces running east-west along the natural patterns of the hillside and defined by the main pedestrian paths across campus.

CONCEPTS

FONTANA CAMPUS

The context of the Fontana Campus brings a semi-urban feel to the campus plan. Influenced heavily by the strong local wind patterns, the campus buildings are used to shield the core campus spaces from the winds. Aligning the buildings along the edge of the defining streets of the area enhances the urban streetscape and also creates a buffer between the fast pace of the city streets and the gathering spaces at the campus core.



CHINO CAMPUS

The history of the Chino Campus site plays a key role in its development. As former farmland, an agrarian concept of gridded patches creates a formal organization pattern reminiscent of crop patches and irrigation lines. Building upon the previous master plan, the rigid orthogonal layout of the campus buildings works to support the theme.


JANSPORT

RANCHO CUCAMONGA

RANCHO CUCAMONGA

OVERVIEW

This chapter includes a series of graphic plates and narrative descriptions that illustrate the physical characteristics and usage of the existing sites and facilities and identify important aspects of the College's physical context.

Through this examination, key planning challenges and opportunities were identified in order to frame the exploration of options and inform the development of facilities recommendations.

EXISTING CONDITIONS

- / Regional Context
- / Local Context and Community
- / Campus Development History
- / Campus Plan
- / Facilities Condition Assessment
- / Campus Zoning
- / Vehicular Circulation and Parking
- / Pedestrian Circulation
- / Campus Edges and Streetscape
- / Gateways
- / Campus Gathering Places
- / Landscape Character
- / Summary of Findings

RECOMMENDATIONS

- / Summary of Recommendations
- / Demolition/Removal
- / New Facilities
- / Renovations
- / Landscape Vision and Design Principles
- / Landscape Plan
- / Landscape Character
- / Site Improvement Projects
- / Campus Zoning
- / Vehicular Circulation and Parking
- / Pedestrian Circulation

BUILDING KEY

AERO	Applied Technology
AD	Administration
ATL	Automotive Technology
B	Bookstore
BE	Business Education
BEB	Berz Excellence Building
BL	Beeks Labs
CAA	Center for the Arts–A
CAB	Center for the Arts–B Studio Art
CAC	Center for the Arts–C 3D Studio Art
CAE	Center for the Arts–E Music
CCE	Campus Center East
CD	Child Development Center
CHEM	Chemistry
CP	Campus Police
DL	des Lauriers Labs
GYM	Earl Sicosky Gymnasium
HS	Health Science
IS	Information Services
LA	Language Arts
LI	Library
MACC	Michael Alexander Campus Center
MATH	Math
MOD	Modular Classroom/Offices
PL	Milliken Planetarium
PS	Physical Science
SL	Skills Lab
SPRT	Sports Center
SS	Social Science
SSA	Student Services/Administration
TA	Theatre
VSS	Vocational & Student Support
WH	Wargin Hall
WM	Wignall Museum of Contemporary Art
ZH	Zimmermann Hall

Existing Conditions

Existing Conditions

EXISTING CONDITION

The planning process began with information and data collection and campus tours. The planning team listened to the insights of multiple stakeholders regarding the condition and functionality of the existing campus and overlaid this with their own research and observations.

The resulting site and facilities analysis of the existing conditions shape the use of the Rancho Cucamonga Campus and the key issues to be addressed by the Facilities Master Plan (FMP).

1 Chaffey College Entrance Marquee
2 MACC Courtyard

1


2

Existing Conditions

Regional Context

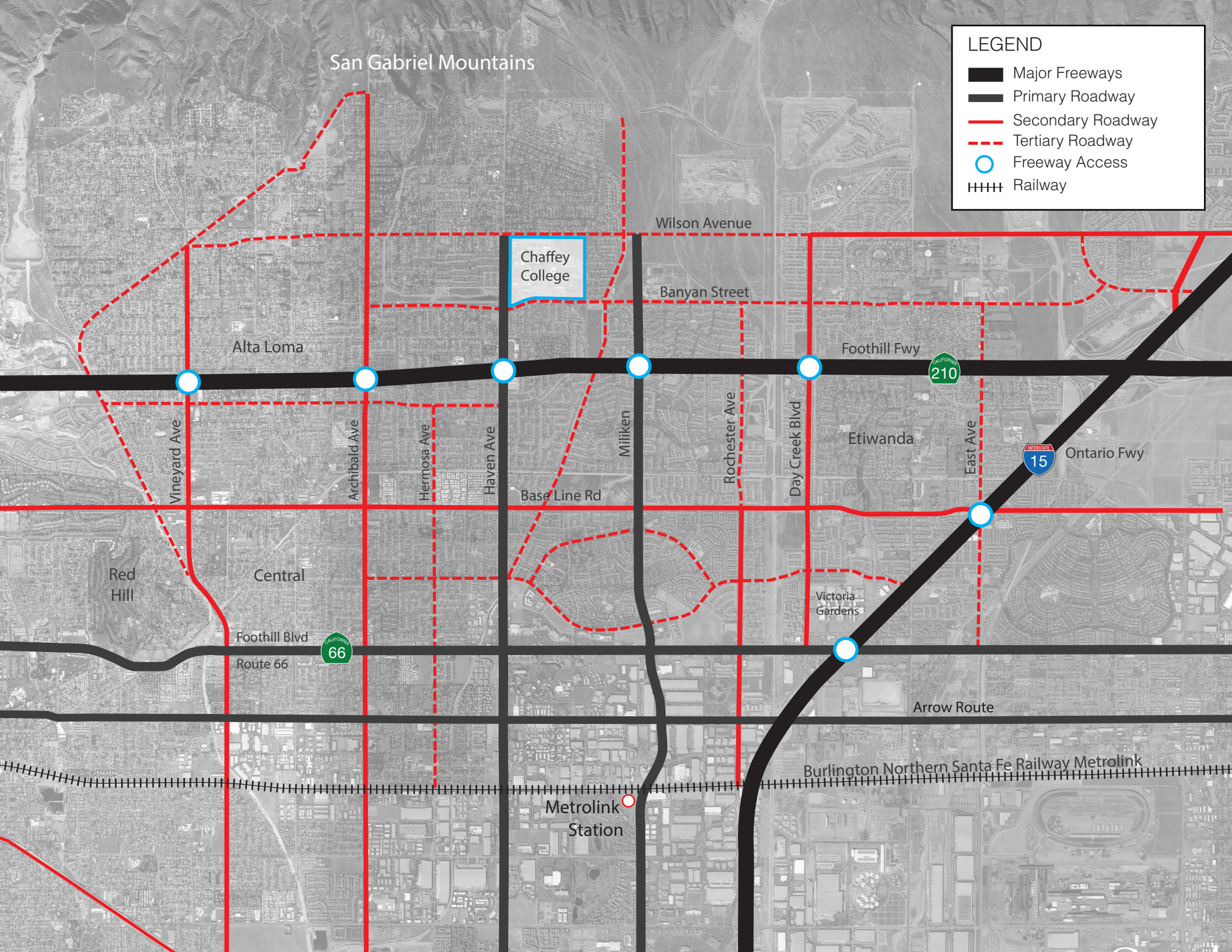
Chaffey College resides in the suburban city of Rancho Cucamonga, with dense housing developments that are known for its family oriented, safe and prosperous communities. The Rancho Cucamonga Campus is located near the convergence of major freeways, making it convenient for students to commute to campus. The campus is located north of the 210 freeway with Haven Avenue as the primary roadway exit from State Route 210 and Interstate Highway 10.

The Rancho Cucamonga Campus is on a site with significant topographical grade change from Wilson Avenue to Banyan Street providing vistas to the surrounding geography. The majestic views of the San Gabriel Mountains serve as the backdrop when you look north from campus. Looking south there are amazing views through the valley.

OBSERVATIONS:

- This Campus is well served by major freeways and streets.
- The existing topography provides a unique characteristic for this Campus.
- The Campus is nestled amongst a dense residential neighborhood.

1 View looking north of the San Gabriel Mountains
2 View looking south on Haven Avenue


San Gabriel Mountains
LEGEND
Major Freeways
Primary Roadway
Secondary Roadway
Tertiary Roadway
Freeway Access
Railway
Wilson Avenue
Chaffey College
Banyan Street
Alta Loma
Foothill Fwy
210
Vineyard Ave
Archibald Ave
Hermosa Ave
Haven Ave
Miliken
Rochester Ave
Day Creek Blvd
Etiwanda
East Ave
15
Ontario Fwy
Base Line Rd
Red Hill
Central
Victoria Gardens
Foothill Blvd
Route 66
66
Arrow Route
Burlington Northern Santa Fe Railway Metrolink
Metrolink Station

Existing Conditions

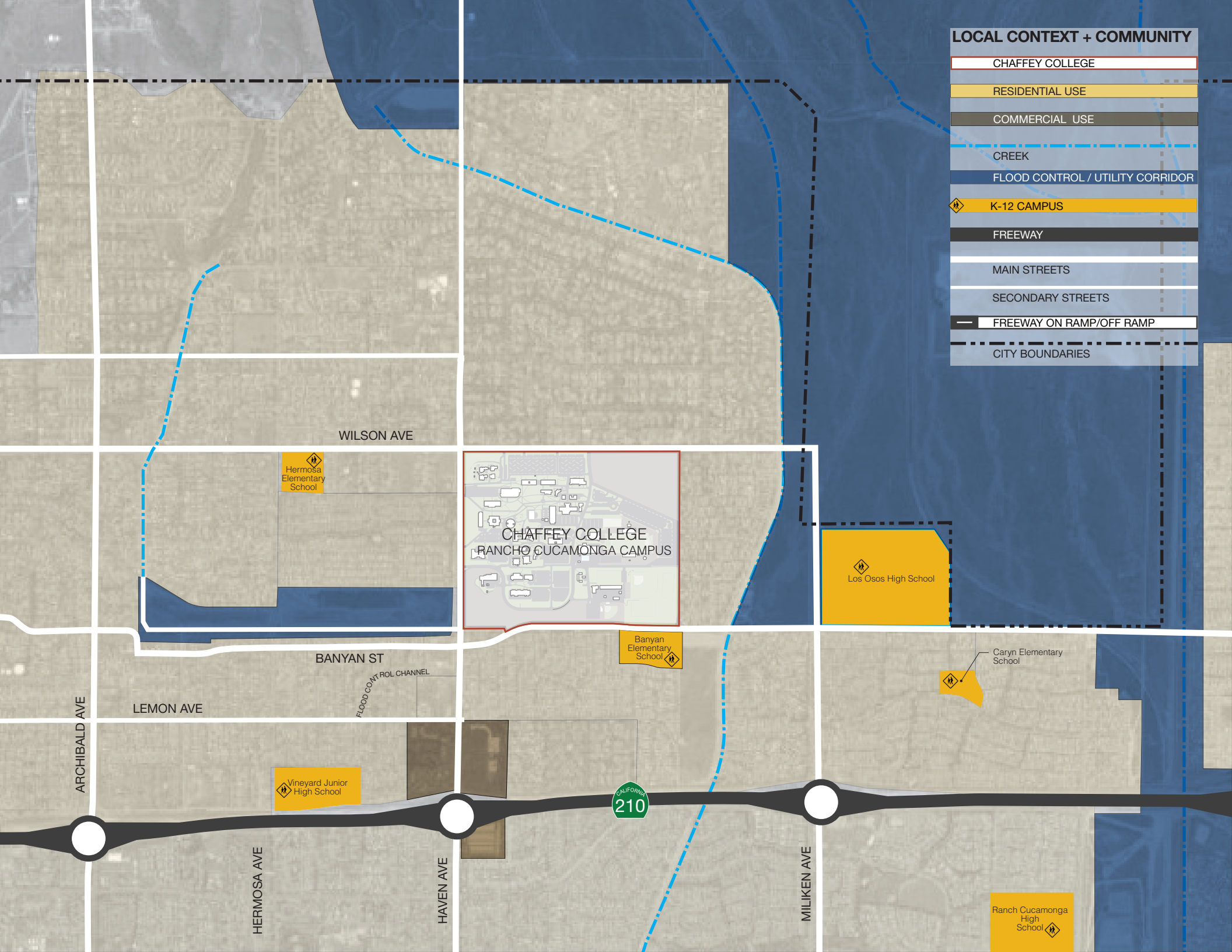
Local Context and Community

Chaffey College, one of the first colleges to be established in California, is a two-year public community college situated in an area of natural and tranquil beauty in Southern California. Its campus occupies 200 acres of rolling lawns and native foliage in the foothills of the majestic San Gabriel mountains.

The Campus is situated north of State Route 210 with the main entrance on Haven Avenue between Wilson Avenue and Banyan Street. The northeast corner of the campus remains as a Nature Preserve where students research and monitor the vegetation and fauna.

The immediate residential surrounding neighborhood includes public and private schools; with Los Osos High School one mile east of the Campus and Banyan School Elementary also on Banyan Street.

1 Haven Avenue, looking north to the San Gabriel Mountains
2 Los Osos High School
3 Chaffey College Nature Preserve
4 Main Entry to the Campus


LOCAL CONTEXT + COMMUNITY
CHAFFEY COLLEGE
RESIDENTIAL USE
COMMERCIAL USE
CREEK
FLOOD CONTROL / UTILITY CORRIDOR
K-12 CAMPUS
FREEWAY
MAIN STREETS
SECONDARY STREETS
FREEWAY ON RAMP/OFF RAMP
CITY BOUNDARIES
WILSON AVE
Hermosa Elementary School
CHAFFEY COLLEGE
RANCHO CUCAMONGA CAMPUS
Los Osos High School
Banyan Elementary School
BANYAN ST
Caryn Elementary School
FLOOD CONTROL CHANNEL
LEMON AVE
ARCHIBALD AVE
Vineyard Junior High School
CALIFORNIA
210
HERMOSA AVE
HAVEN AVE
MILIKEN AVE
Ranch Cucamonga High School

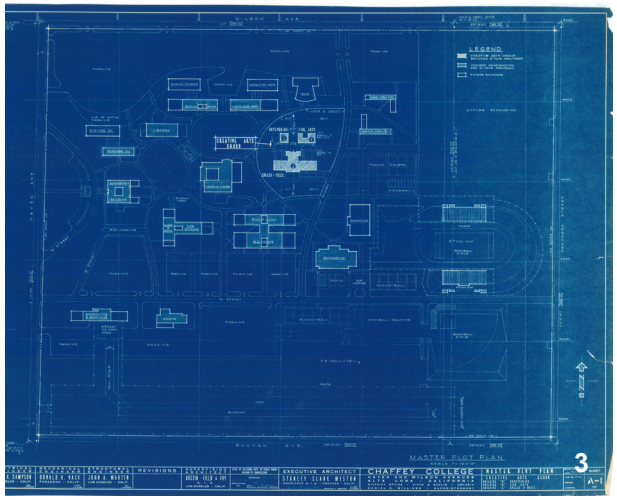
Existing Conditions

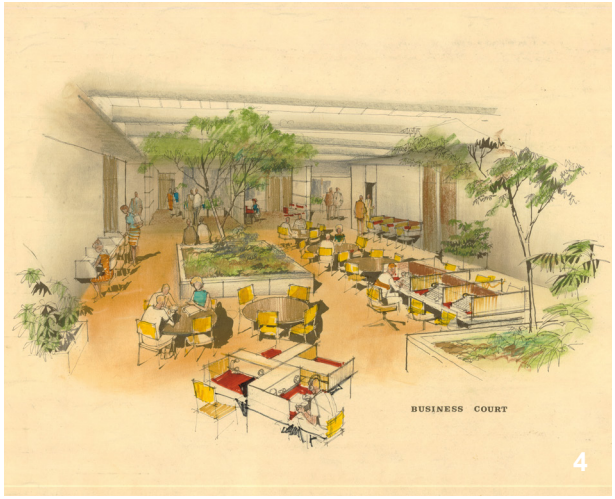
Campus Development History

The school was established in Ontario, California in 1883, when city founders and brothers George and William Chaffey donated land and established an endowment for a private college. The private school was founded as the Chaffey College of Agriculture of the University of Southern California. The cornerstone of the new school was laid on March 17, 1883 at Fourth and Euclid in Ontario and it opened on October 15, 1885. The original institution included a secondary school and was run by USC until 1901. Financial reasons brought the closure of the college in 1901 and the buildings were then occupied by the new high school. On February 1, 1957, the voters approved a bond supporting a complete separation of the high school and college facilities. Three years later in 1960, the Chaffey College campus in Alta Loma (now Rancho Cucamonga) opened.

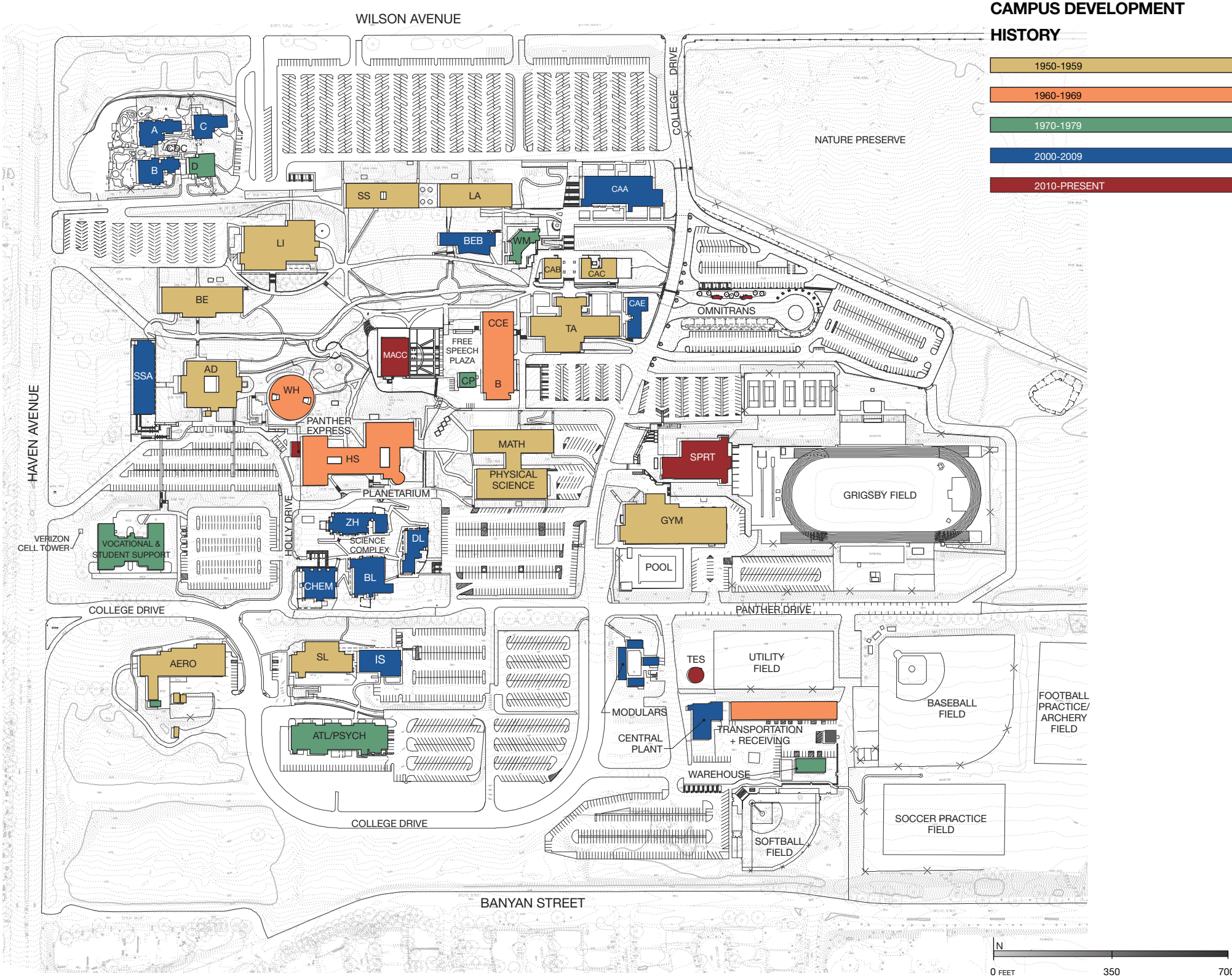
The majority of the buildings were built in the 1950's & 1960's, and most of the original buildings have been partially remodeled, except for the following:

- Administration (AD)
- Aeronautics (AERO)





1 Chaffey College of Agriculture, 1885
2 Aerial Photo, 1995
3 Site Plan, 1958
4 Preliminary studies for the business court


CAMPUS DEVELOPMENT HISTORY
1950-1959
1960-1969
1970-1979
2000-2009
2010-PRESENT
WILSON AVENUE
COLLEGE DRIVE
NATURE PRESERVE
HAVEN AVENUE
A
B
C
D
CLC
SS
LA
CAA
LI
BEB
WM
CAB
CAC
BE
CAE
OMNITRANS
TA
CCE
B
MACC
FREE SPEECH PLAZA
CP
SSA
AD
WH
PANTHER EXPRESS
HS
MATH
PHYSICAL SCIENCE
SPRT
GRIGSBY FIELD
PLANETARIUM
HOLLY DRIVE
ZH
SCIENCE COMPLEX
DL
GYM
VERIZON CELL TOWER
VOCATIONAL & STUDENT SUPPORT
CHEM
BL
POOL
COLLEGE DRIVE
PANTHER DRIVE
AERO
SL
IS
TES
UTILITY FIELD
MODULARS
CENTRAL PLANT
TRANSPORTATION + RECEIVING
BASEBALL FIELD
FOOTBALL PRACTICE/ ARCHERY FIELD
ATL/PSYCH
WAREHOUSE
SOCCER PRACTICE FIELD
SOFTBALL FIELD
COLLEGE DRIVE
BANYAN STREET
N
0 FEET
350
700

Existing Conditions

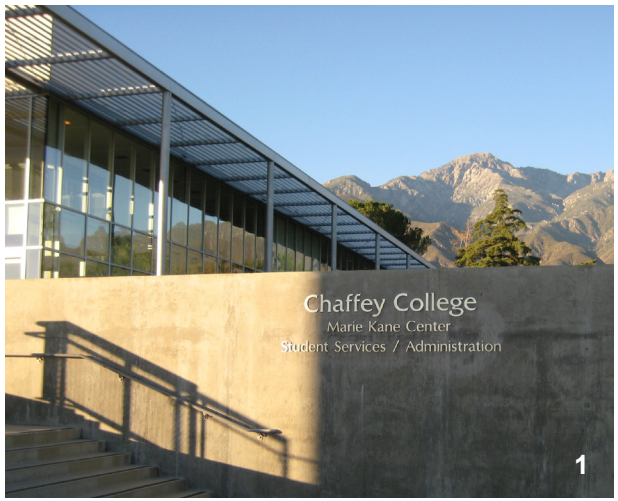
Campus Plan

The graphic plan on the opposing page illustrates the existing campus. Most buildings on campus are permanent structures except for three temporary buildings.

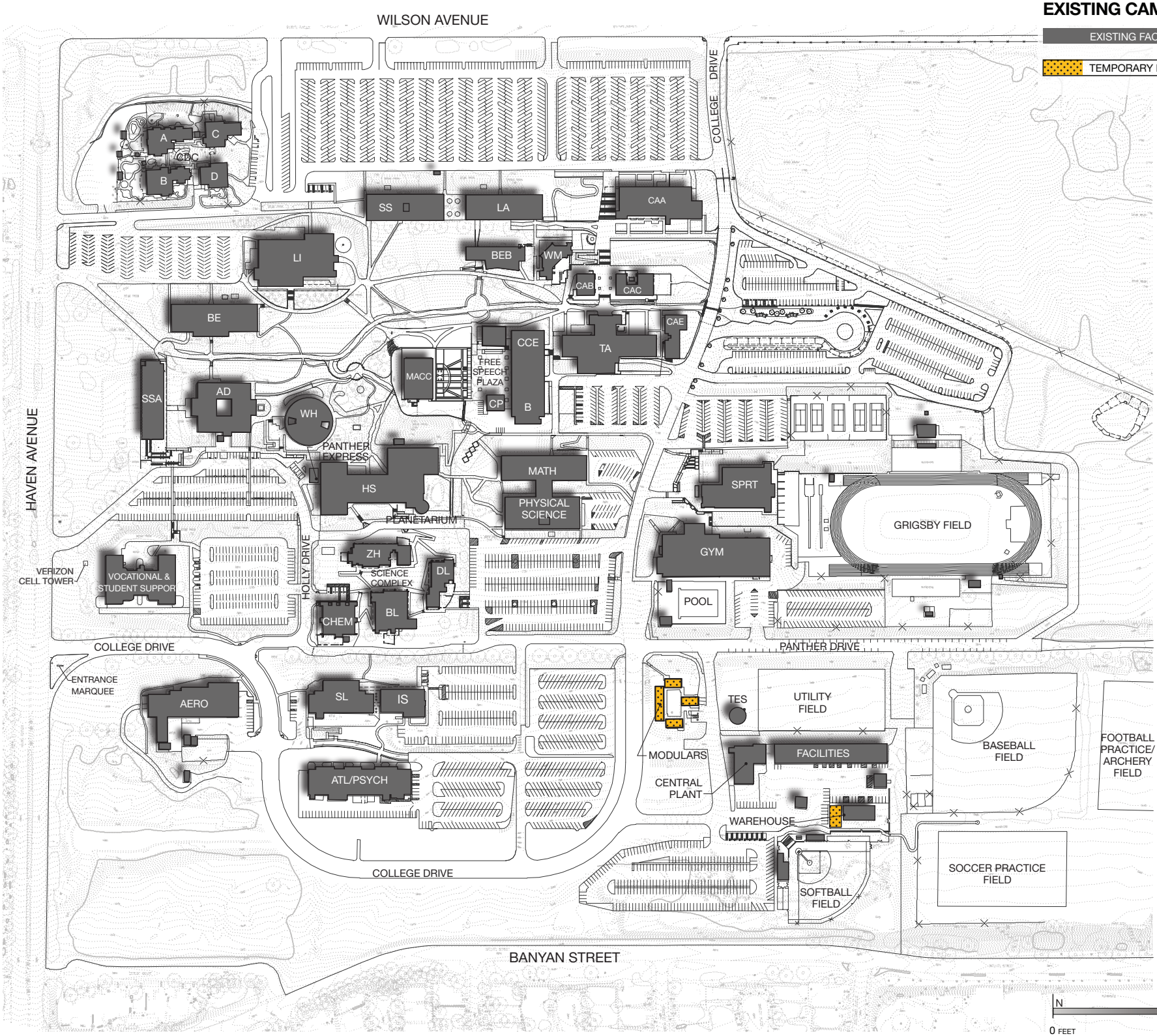
OBSERVATIONS:

- Many of the original buildings do not positively support students' learning experiences.
- Much of the campus property consists of parking lots.
- The outdoor space at Michael Alexander Campus Center (MACC) is under-utilized because there is not enough shelter or shade.
- Many outdoor landscaped area are under-utilized.
- The campus would benefit from a signage and wayfinding program.
- The existing marquee on Haven Avenue at College Drive denotes the main entrance.

1 Student Services/Administration
2 Center for the Arts walkway
3 MACC courtyard
4 Science Complex



EXISTING CAMPUS PLAN



Existing Conditions

Facilities Condition Assessment

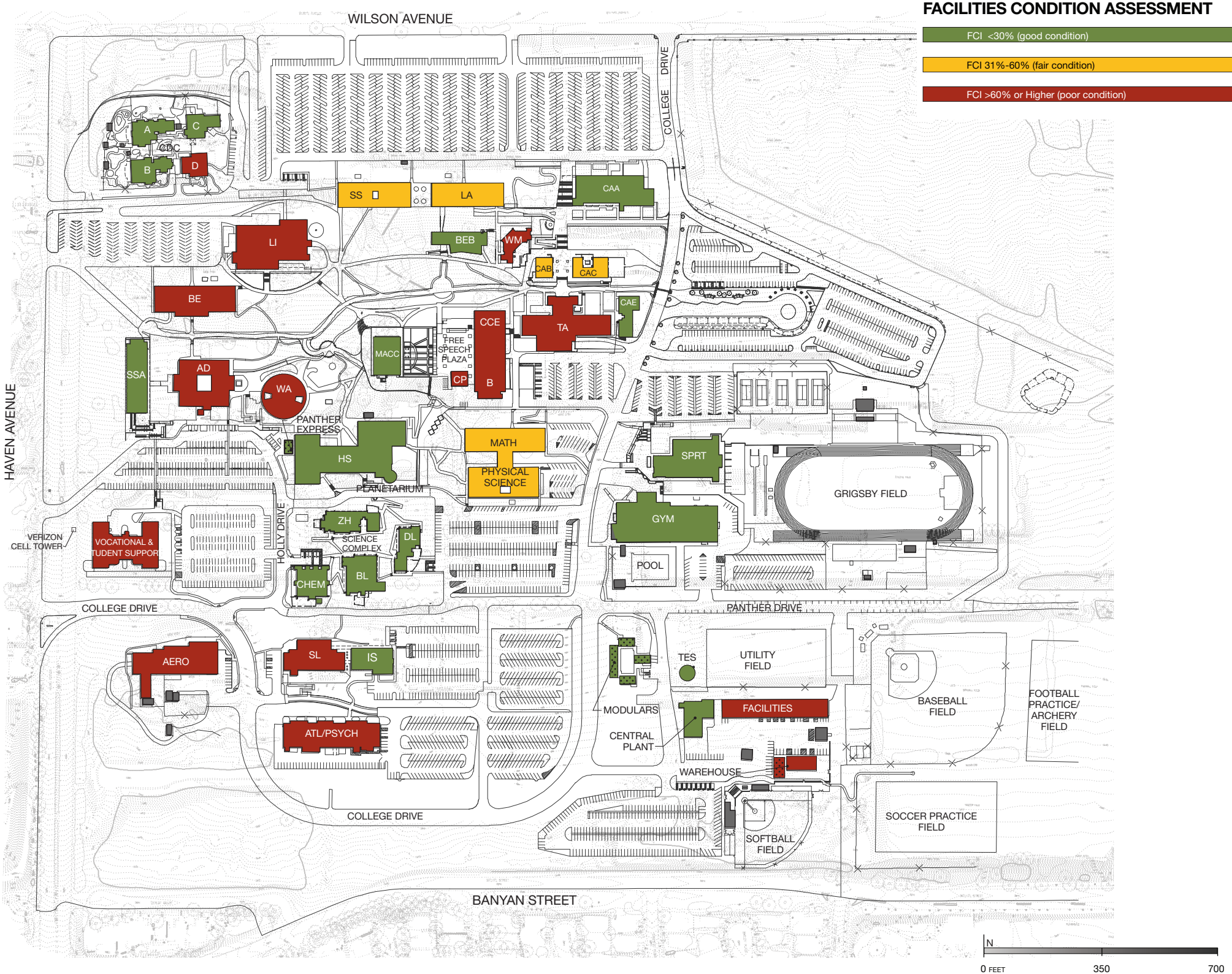
Chaffey College participates in the California Community College Facility Condition Assessment program, which includes a tool for the assessment of existing community college buildings and the planning repair work. The Facility Condition Index (FCI) is the ratio of the cost of addressing all of the facility's deficiencies versus that facility's replacement value. The FCI was calculated for each existing facility. Facilities were placed in one of the three categories.

- Good Condition indicates an FCI of less than 30% (Green)
- Fair Condition indicates an FCI of 31% to 60% (Yellow)
- Poor Condition indicates an FCI of greater than 61% (Red)

Decisions regarding renovation versus replacement of existing facilities are incorporated into the *Recommendations* section of this document.

The majority of the facilities at the Rancho Cucamonga Campus were built in the 50s and 60s and several of them are in poor condition.

1 Center for the Arts A, good condition.
2 Language Arts, fair condition.
3 Library, poor condition.


FACILITIES CONDITION ASSESSMENT
FCI <30% (good condition)
FCI 31%-60% (fair condition)
FCI >60% or Higher (poor condition)
WILSON AVENUE
COLLEGE DRIVE
HAVEN AVENUE
A
B
C
D
SS
LA
CAA
LI
BEB
WM
CAB
CAC
BE
CAE
TA
CCE
B
MACC
FREE SPEECH PLAZA
CP
SSA
AD
WA
PANTHER EXPRESS
HS
MATH
PHYSICAL SCIENCE
PLANETARIUM
SPRT
GRIGSBY FIELD
GYM
POOL
VERIZON CELL TOWER
VOCATIONAL & STUDENT SUPPORT
HOLLY DRIVE
ZH
SCIENCE COMPLEX
DL
CHEM
BL
COLLEGE DRIVE
PANTHER DRIVE
AERO
SL
IS
ATL/PSYCH
MODULARS
CENTRAL PLANT
TES
UTILITY FIELD
FACILITIES
WAREHOUSE
BASEBALL FIELD
FOOTBALL PRACTICE/ ARCHERY FIELD
SOCCER PRACTICE FIELD
SOFTBALL FIELD
BANYAN STREET
N
0 FEET
350
700

Existing Conditions

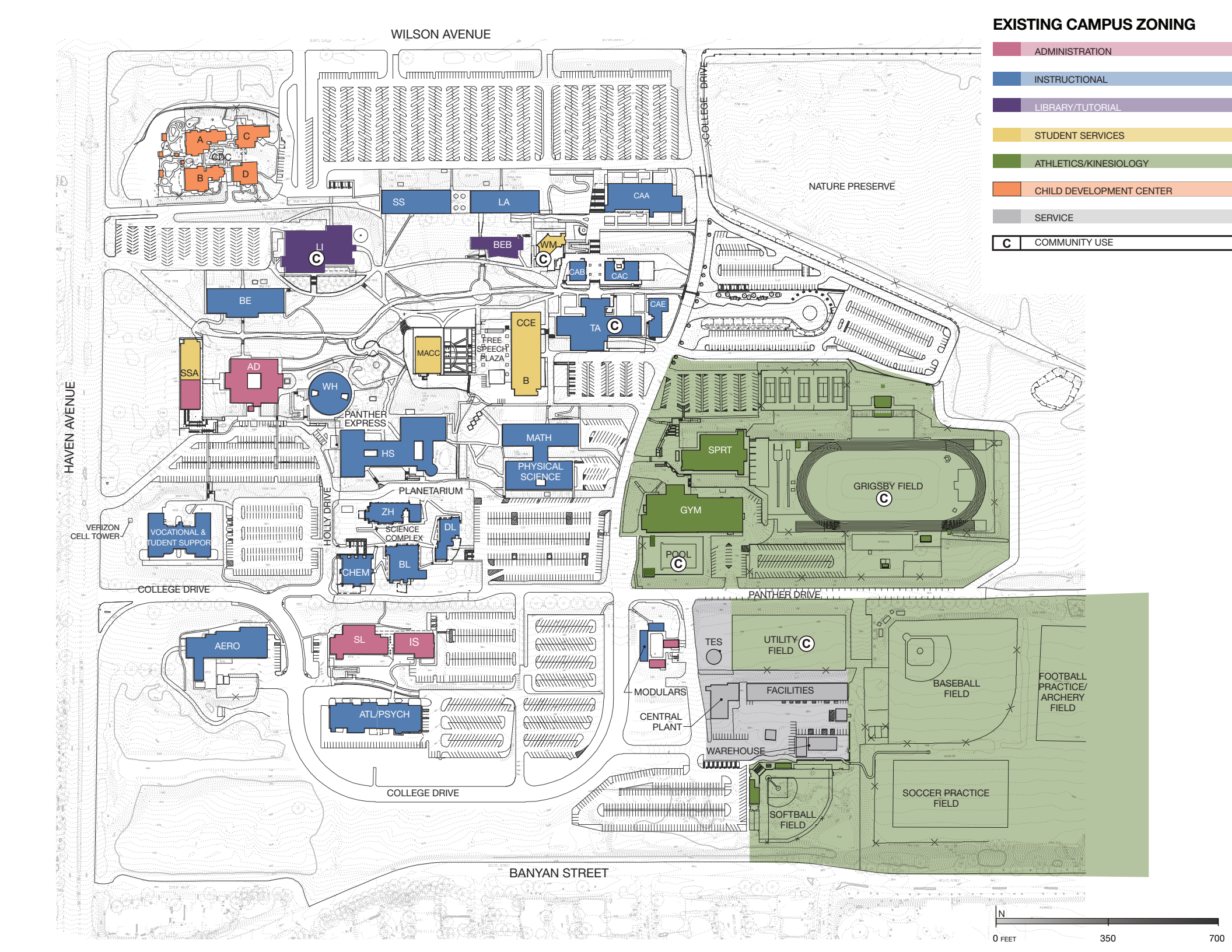
Campus Zoning

The following graphic highlights the zoning of main functional categories, including administration offices, library, instructional, library/tutorial, student services, athletics/kinesiology, child development center, service, and spaces that are being used by the community.

OBSERVATIONS:

- The student support services spaces are not centralized.
- Administrative spaces are not centralized.
- There is a need for additional student support spaces.

1 Art Precinct
2 Administration Building


EXISTING CAMPUS ZONING
ADMINISTRATION
INSTRUCTIONAL
LIBRARY/TUTORIAL
STUDENT SERVICES
ATHLETICS/KINESIOLOGY
CHILD DEVELOPMENT CENTER
SERVICE
C COMMUNITY USE
WILSON AVENUE
HAVEN AVENUE
COLLEGE DRIVE
NATURE PRESERVE
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VOCATIONAL & STUDENT SUPPOR
HOLLY DRIVE
COLLEGE DRIVE
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POOL
PANTHER DRIVE
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CENTRAL PLANT
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UTILITY FIELD
FACILITIES
WAREHOUSE
BASEBALL FIELD
FOOTBALL PRACTICE/ ARCHERY FIELD
SOCCER PRACTICE FIELD
SOFTBALL FIELD
BANYAN STREET
N
0 FEET
350
700

Existing Conditions

Vehicular Circulation and Parking

The graphic plan on the opposing page illustrates campus vehicular circulation patterns. Campus entry points and major vehicular circulation routes are shown along with areas allocated for parking, passenger loading, and public transit stops.

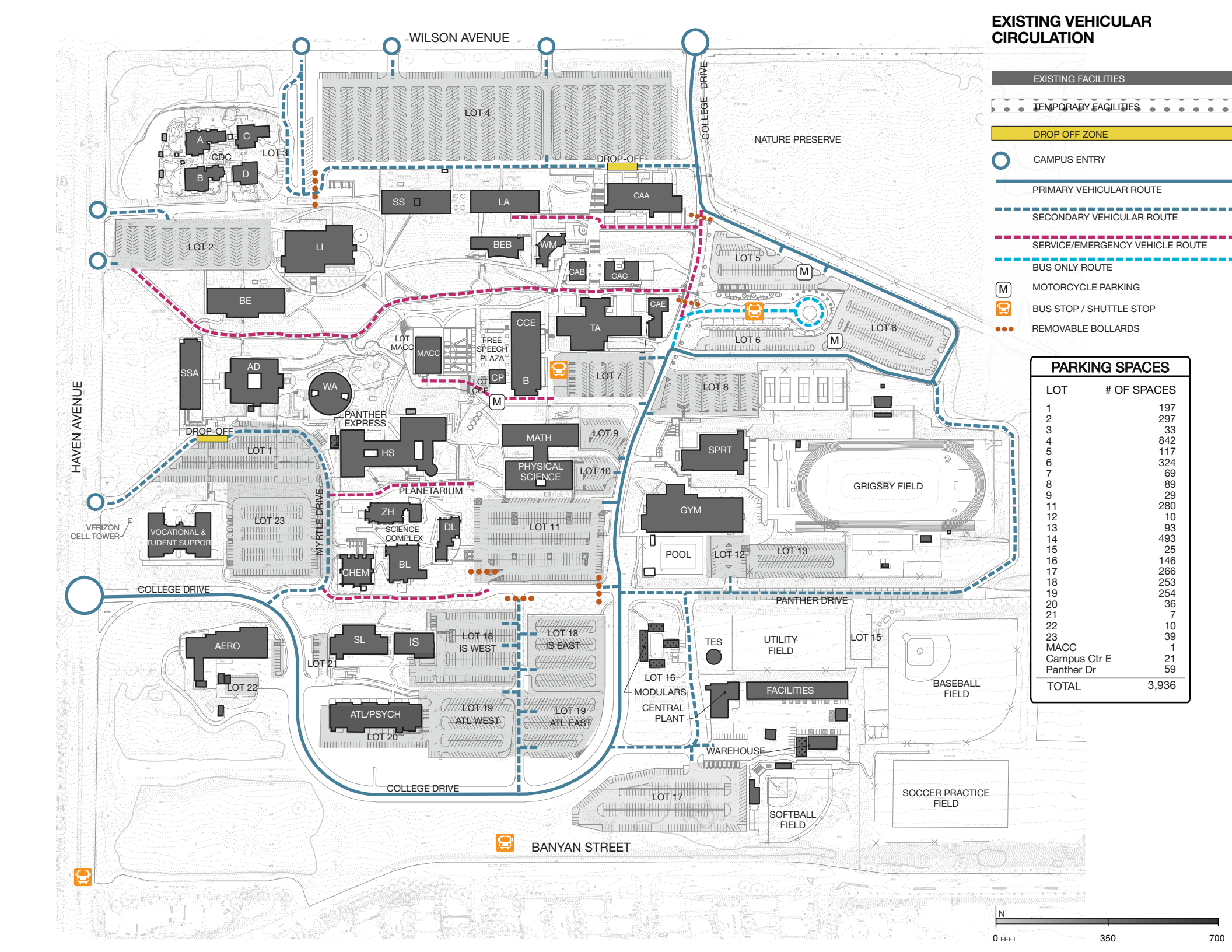
There are two primary entrances to the campus: one off Haven Avenue and one off Wilson Avenue. The primary vehicular route on campus is along College Drive and loops around the perimeter of parking lots adjacent to the Omnitrans Transportation Center, which provides access to and from campus for students and the community at large. The bus stop east of Campus Center East is used by Disability Programs and Services (DPS).

Parking lots utilize the majority of open space on the campus.

OBSERVATIONS:

- Primary vehicular circulation is unclear due to the removable bollards and lack of signage.
- College Drive is congested during peak hours.
- There is a need for designated bicycle parking.
- Campus lacks clear passenger drop-off zones.
- There are many vehicular and pedestrian circulation conflicts on campus.
- Access to parking Lot 11 is often congested due to its narrow entrance driveway and the site topography.

1 College Drive looking north
2 North Parking Lot 4
3 DPS Shuttle stop at Campus Center East
4 Omintrans Transportation Center



EXISTING VEHICULAR CIRCULATION

- EXISTING FACILITIES
- TEMPORARY FACILITIES
- DROP OFF ZONE
- CAMPUS ENTRY
- PRIMARY VEHICULAR ROUTE
- SECONDARY VEHICULAR ROUTE
- SERVICE/EMERGENCY VEHICLE ROUTE
- BUS ONLY ROUTE
- M MOTORCYCLE PARKING
- BUS STOP / SHUTTLE STOP
- REMOVABLE BOLLARDS

PARKING SPACES

LOT	# OF SPACES
1	197
2	297
3	33
4	842
5	117
6	324
7	69
8	89
9	29
11	280
12	10
13	93
14	493
15	25
16	146
17	266
18	253
19	254
20	36
21	7
22	10
23	39
MACC	1
Campus Ctr E	21
Panther Dr	59
TOTAL	3,936

N

0 FEET 350 700

Existing Conditions

Pedestrian Circulation

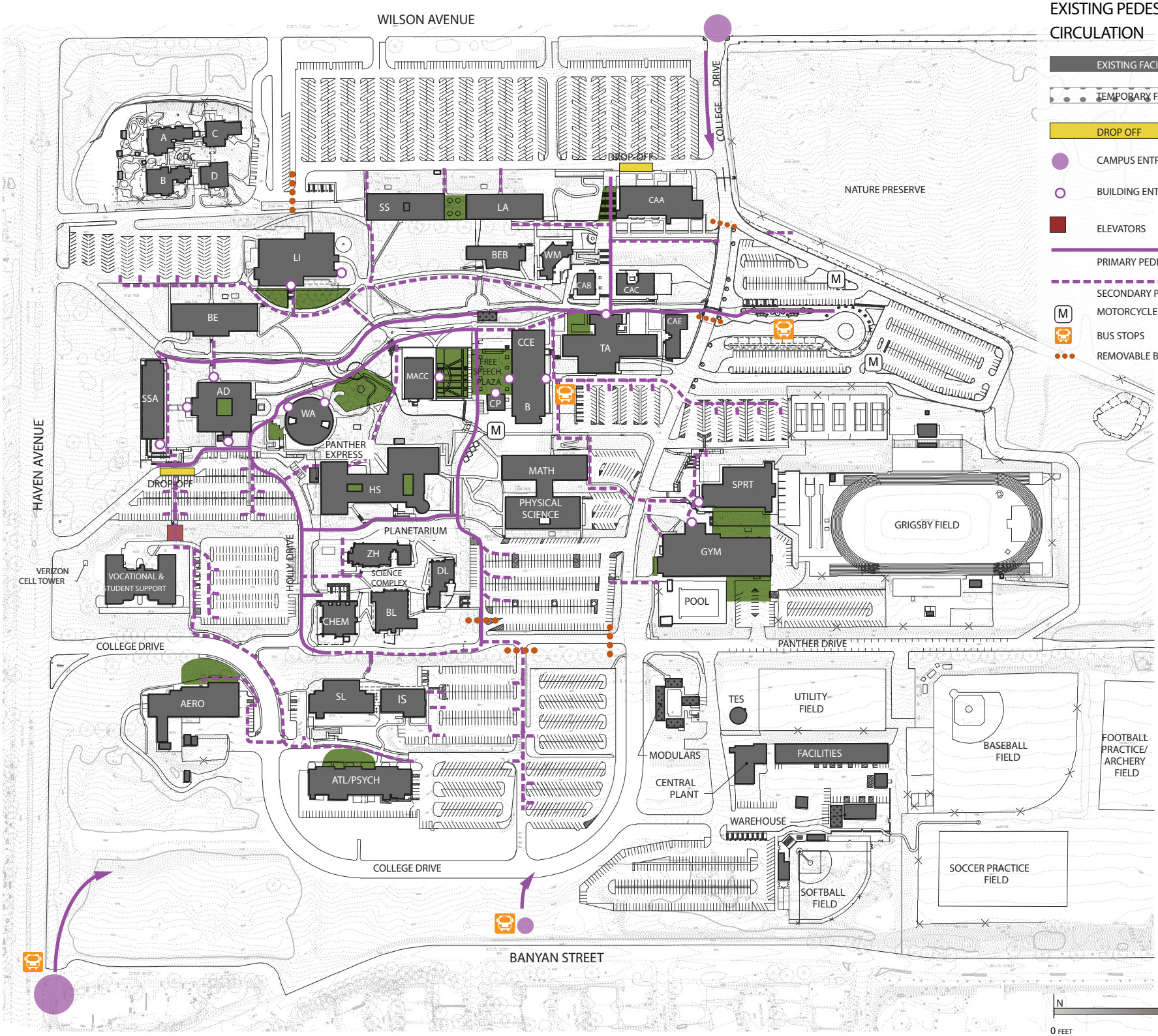
The graphic on the opposing page shows the primary and secondary pedestrian routes as well as crosswalks, drop-offs, bus stops, and motorcycle parking areas.

Due to the varied topography across campus most pedestrian paths are in the east-west direction, and ramps and stairs are in the north-south direction.

OBSERVATIONS:

- The college lacks sidewalks along Haven Avenue or Wilson Avenue.
- There is a safety concern for the students that park outside of Campus and walk into campus on the entrance road.
- The college lacks formal pedestrian entrances to campus.
- It is unsafe for the students walking into campus from Banyan Street, since there aren't pedestrian dedicated walkways.
- There is a pedestrian circulation conflict with service vehicles between the CCE & Math buildings.
- Pedestrian circulation conflicts exist at crosswalks near the Aeronautics Buildings.
- Pedestrian conflicts exist with traffic vehicles south of the SSA Building.

1 Fire lane doubling as primary pedestrian route
2 Pedestrian pathways
3 Exterior elevator between SSA and VSS


WILSON AVENUE
COLLEGE DRIVE
DROP OFF
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BASEBALL FIELD
FOOTBALL PRACTICE/ ARCHERY FIELD
ATL/PSYCH
WAREHOUSE
SOCCER PRACTICE FIELD
SOFTBALL FIELD
BANYAN STREET
EXISTING PEDESTRIAN CIRCULATION
EXISTING FACILITIES
TEMPORARY FACILITIES
DROP OFF
CAMPUS ENTRY
BUILDING ENTRY
ELEVATORS
PRIMARY PEDESTRIAN ROUTE
SECONDARY PEDESTRIAN ROUTE
MOTORCYCLE PARKING
BUS STOPS
REMOVABLE BOLLARDS
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700

Existing Conditions

Campus Edges and Streetscape

Chaffey College's "front lawn" along Haven Avenue presents a clean and collegiate appearance to the campus with open lawn and large trees. While welcoming and park-like, in the context of years of drought and a focus on resource-conservation, the expansive lawn is now a relic of another time when water was treated as an unlimited resource in our semi-arid climate. The northwest corner around the Child Development Center is a fantastic reflection of the history of the area, as it has been improved as a functioning grape harvesting field.

The remaining edges of Chaffey College vary, with most providing a nice view into the campus, except for a portion of the northern edge at Wilson Avenue which is dominated by parking. The natural edge dominates most of the perimeter, providing a view of mature vegetation for the surrounding communities. Public sidewalks do not exist along all three of the campus major perimeter streets, so pedestrian engagement along the campus edge is poor.

OBSERVATIONS:

- Campus edges are unsecured and accessible by the public
- Campus edge along Banyan Street has many boulders and rocks, and does not have a walking path leading into campus
- All campus buildings are set back from the campus edges

1 Campus edge along Haven Avenue "Front Lawn"
2 Campus edge along Wilson Avenue


Urban Edge
Vineyard Edge
Front Lawn
Natural Edge
WILSON AVE
HAVEN AVE
COLLEGE DR
BANYAN ST
0 25 50 100 200

Existing Conditions

Gateways

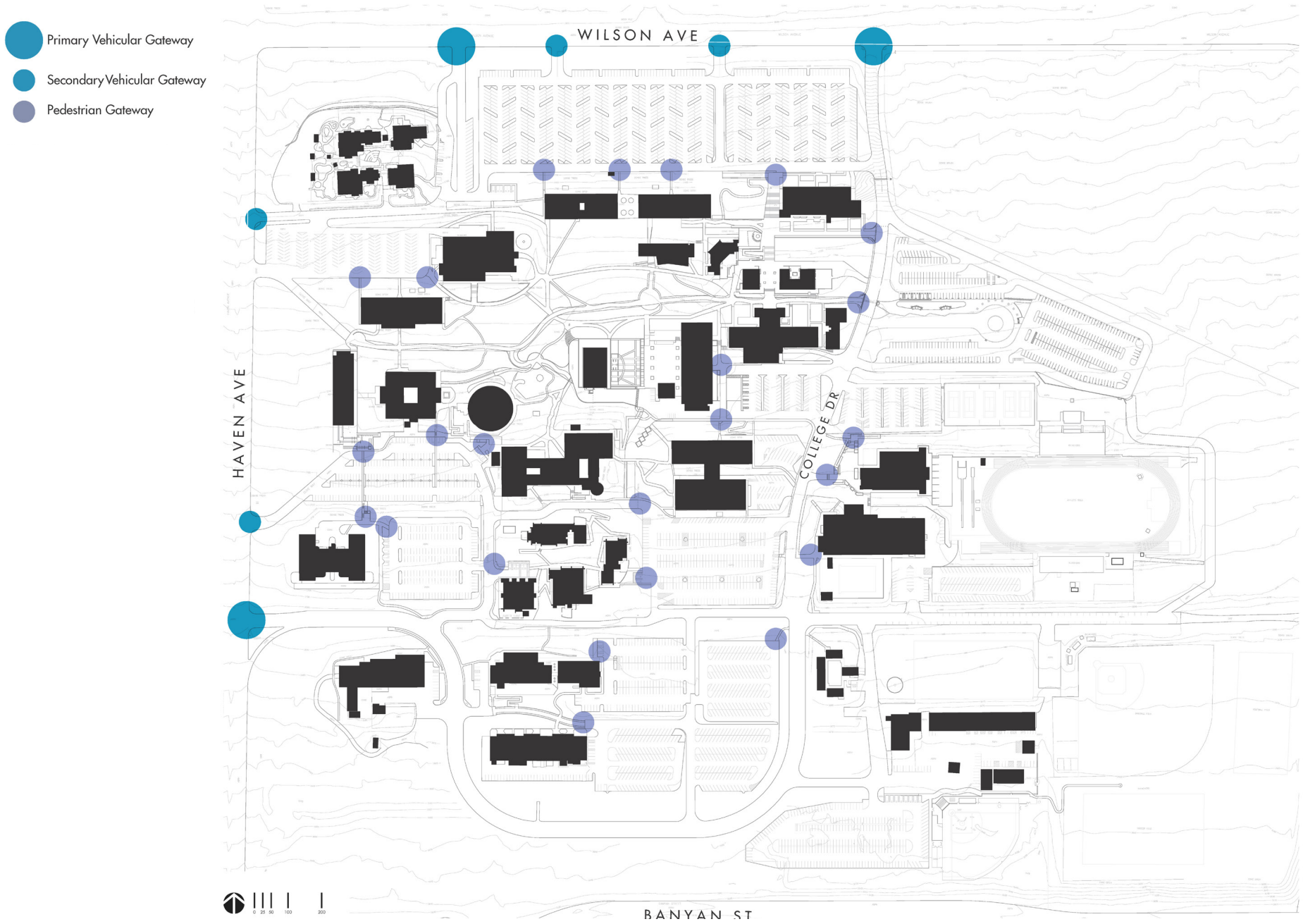
The vehicular gateways are not only used for wayfinding, but provide the first impression of the campus to both visitors and the surrounding community. Modest signage welcomes visitors at two of the primary gateways. The secondary gateways have no signage.

The pedestrian gateways represent the areas where pedestrians transition from parking spaces to the campus, providing opportunities for enhanced wayfinding and signage.

OBSERVATIONS:

- Along Haven Avenue, the primary vehicular gateway is at College Drive indicated with the marquee.
- Vehicular gateways are along Haven and Wilson Avenue
- Due to the lack of sidewalks, there are no formal pedestrian gateways along Haven and Wilson Avenue

1 View into campus from Haven Avenue
2 View into campus from Wilson Avenue


Primary Vehicular Gateway
Secondary Vehicular Gateway
Pedestrian Gateway
WILSON AVE
HAVEN AVE
COLLEGE DR
BANYAN ST
0 25 50 100 200

Existing Conditions

Campus Gathering Places

Places are where people gather around outdoor seating. The large green space in the center of the college is used mainly for circulation with opportunities for informal seating on the turf. Although this area is punctuated by trees, it's openness allows for long views, especially along the northern edge. The campus quad is defined as the rectangular space framed by the two campus centers. This area attracts a large number of students, representing the heart of the campus.

Chaffey College has a wealth of small courtyards, which are defined as outdoor space being contained by buildings on two or more sides. Smaller places for gathering are the patios (attached to buildings), and the nodes (located in open areas). Many of these areas have small water features. The sound of the operating fountains creates a very relaxing and pleasing atmosphere.

The nature preserve at the northeast corner of the campus is a great campus asset, however it is disconnected from the campus by roads and fencing, probably for safety and preservation reasons. The fields are also separated to the southeast corner which helps to define a specific athletics precinct.

1 Campus Green
2 Campus Quad
3 Courtyard
4 Courtyard

- Campus Green
- Campus Quad
- Courtyard
- Patio
- Field
- Node
- Nature Preserve

Existing Conditions

Landscape Character

The overall character of Chaffey College's Rancho Cucamonga campus is park-like and expansive with stunning views north of San Gabriel Mountains and to the south the valley below. The College's gradual development over time has resulted in a variety of materials and a network of pedestrian walks through campus that lack a clear and unified hierarchy.

The campus grounds team has been reclaiming cobblestone and boulders from on-site projects to use as ground cover along drainage courses and pathways. This resourceful strategy combined with large areas where pine needles are left to cover the ground below provides an appropriate and natural National Park feel to the campus.

1 Cobblestone swale for stormwater treatment
2 Pavers on edge of fire lane
3 Cobblestone in courtyard
4 North-south steps with view to San Gabriel Mountains

1 Gravel groundcover
2 Reuse of on-site boulders and cobblestone
3 Ground cover on steep slope
4 Stone pines between Lots 7 & 9
5 Pine needles as a weed-deterrant mulch
6 Mulch on steep slope to prevent erosion

SUMMARY OF FINDINGS

The Rancho Cucamonga Campus presents advantages, opportunities, and challenges as noted on the previous pages. To plan for the future, the facilities master plan addresses the challenge to maximize its functional space and eliminate its non-functional spaces – focusing on the renovation of aging facilities that are not supporting effective learning environments and are costly to maintain and operate.

The facilities master plan, addresses the needs of the projected student population by providing effective space for instruction, support services, and parking. Along with these challenges is the opportunity to enhance and complete the campus environment and integrate its unique parts into a cohesive whole.

Key Campus Planning Challenges

01 **Clear Vehicular route:** The primary vehicular route does not take students to the main campus' buildings.

02 **Restricted Vehicular Access:** The primary, secondary, and service routes are not clearly defined requiring the use of temporary bollards.

03 **Character of Open Space:** The campus lacks a fluid, interconnected campus open space framework that supports campus life. Open spaces lack adequate shading.

04 **Sloping Topography:** The campus is characterized by its topography and breathtaking views. The views and change in elevation is an advantage, but limits the heights of buildings to avoid blocking important views across campus. The topography also poses accessibility challenges for north-south pedestrian pathways.

05 **Dispersed Student Services:** Student services spaces are not centralized. It is difficult for new students to navigate through campus from the current main entrance on Haven Avenue.

06 **Dispersed Instructional and Administration Spaces:** Math, English, and Psychology classes are not ideally located. Faculty offices and faculty success spaces are not centralized.

07 **Many Surface Parking Lots:** Surface parking lots occupy much of the campus area and are dispersed throughout campus.


DON BERZ
EXCELLENCE
BUILDING

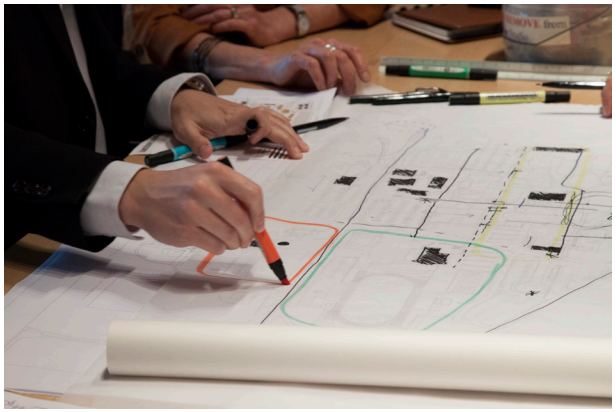
Recommendations

Recommendations

RECOMMENDATIONS

The Facilities Master Plan Recommendations for the Rancho Cucamonga Campus presents an overall picture of the future developed campus and includes proposed sites for new facilities and site development projects. The recommendations described in this section address the discussion that took place during the planning process.

While drawings in the plans appear specific, the forms are conceptual sketches that highlight the location and purpose of improvements. The final design of each site and facility project will take place as projects are funded and detailed programming and design occur.



SUMMARY
OF RECOMMENDATIONS

The recommendation for new and renovated construction projects are included on the following pages. These projects address the facilities planning priorities of eliminating non-functional space and replacing the oldest and most aged facilities with new facilities.

These projects address the following facilities planning principles:

- Maximize functional space
- Eliminate non-functional space
- Improve efficiency/utilization of facilities
- Improve campus identity
- Position the District to maximize funding (potential state and local)

This section describes the building and the site projects identified in the FMP and consist of the following elements:

FACILITIES RECOMMENDATIONS

/ 2025 Facilities Master Plan
/ Demolition and Removal of Facilities
/ New Facilities
/ Renovations

SITE IMPROVEMENT RECOMMENDATIONS

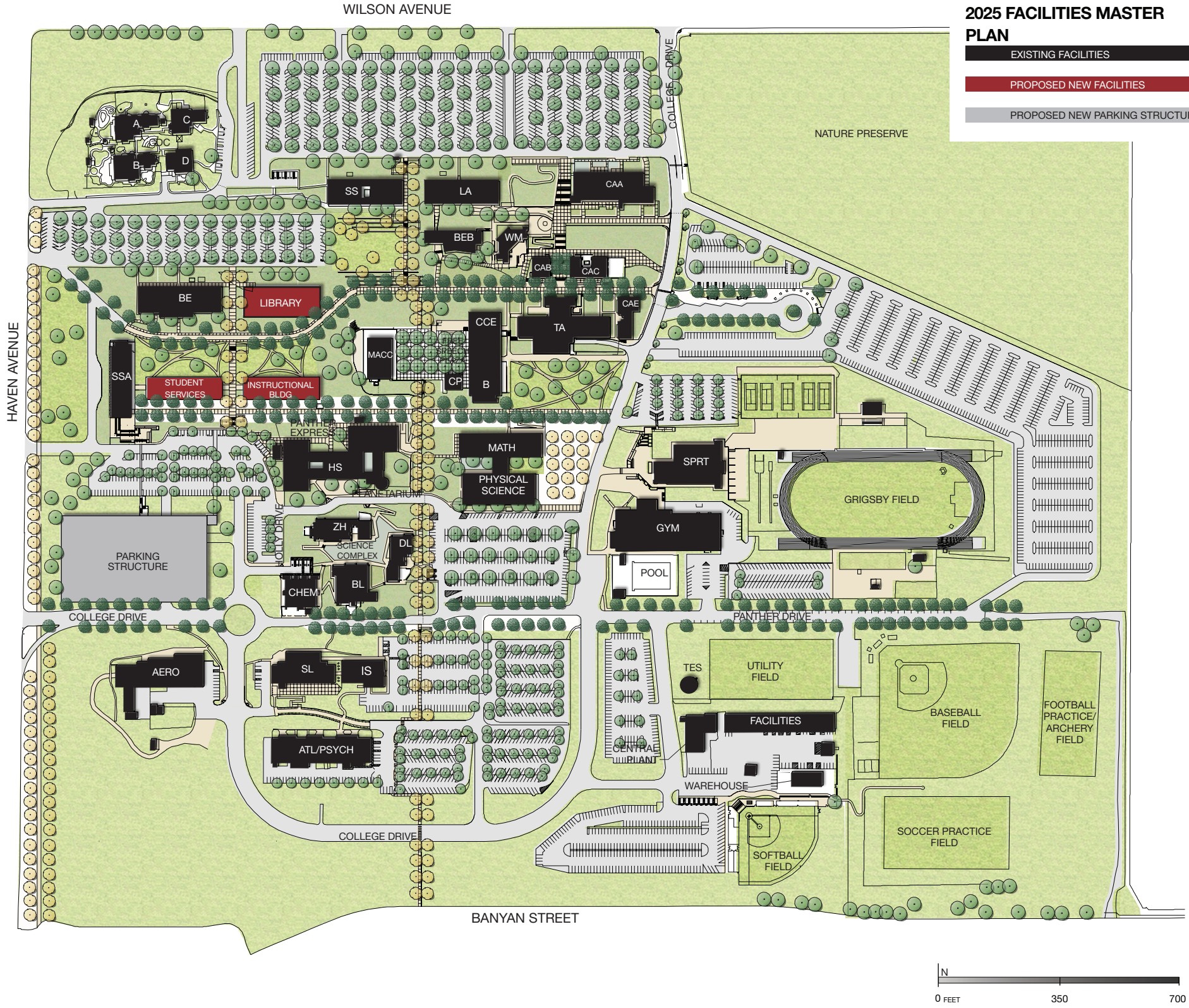
/ Landscape Vision and Design Principles
/ Landscape Plan
/ Landscape Character
/ Site Improvement Projects
/ Campus Zoning
/ Vehicular Circulation and Parking
/ Pedestrian Circulation

2025 FACILITIES MASTER PLAN

EXISTING FACILITIES

PROPOSED NEW FACILITIES

PROPOSED NEW PARKING STRUCTURE



Recommendations

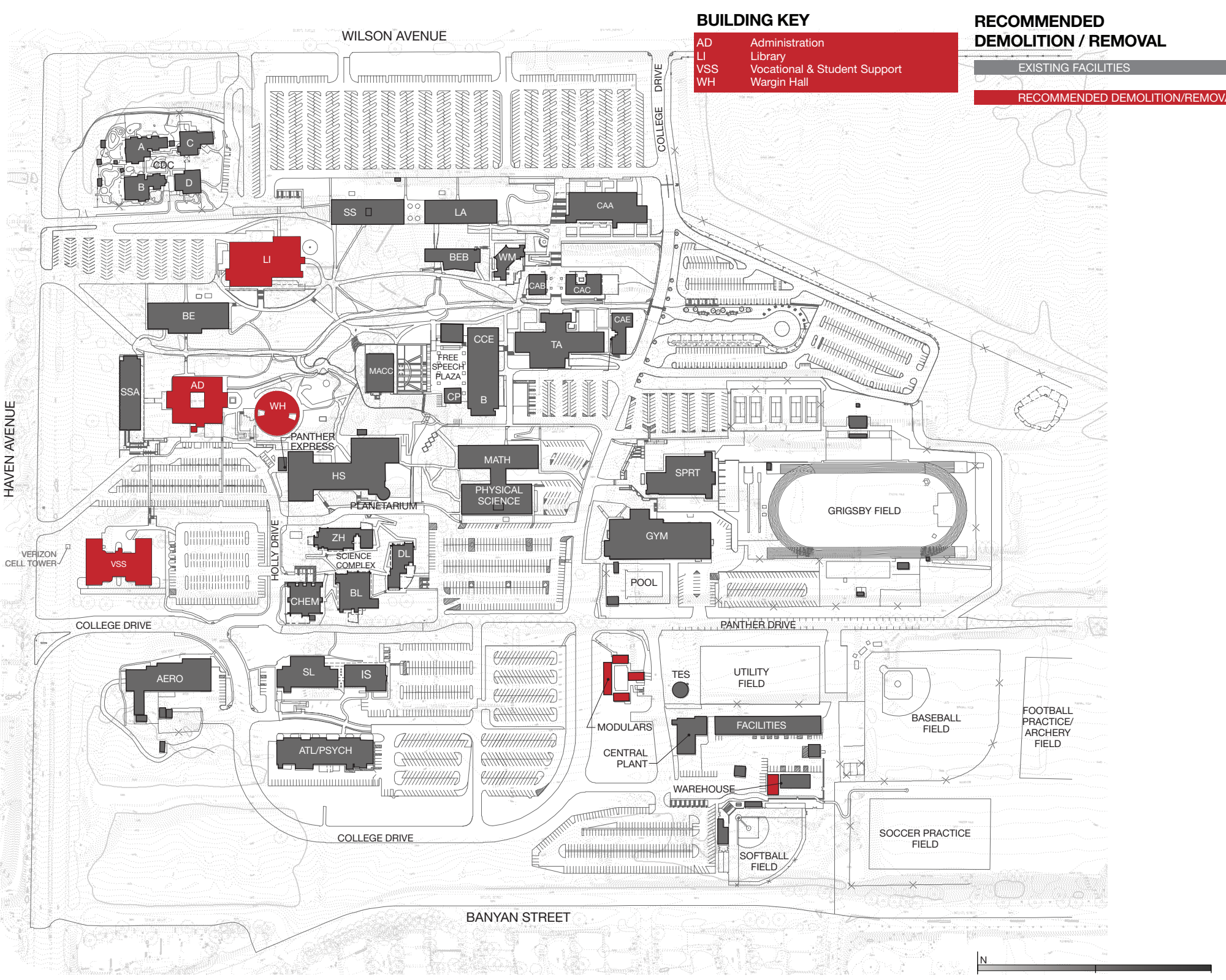
Demolition/Removal

In the exploration phase of the planning process, the campus development history was studied. The campus currently still has many of its original buildings that were constructed in the 1950's. A facilities conditions assessment was evaluated for all the buildings on campus, and each of the building were color-coded based on its facilities conditions index (FCI) rating, which identifies buildings that are in good condition, moderate condition, or poor condition.

It is recommended that all temporary/modular buildings be demolished and removed from the campus space inventory. Current spaces in the temporary/modular buildings should be relocated to a permanent building and adjacent to related uses.

Four permanent buildings are recommended to be demolished and removed based on their FCI rating, and some of the spaces in these buildings are not appropriate for their current uses. The removal of these structures will allow for parking expansion, improved pedestrian circulation flow, and consolidation of activity zones.

1 AD - Administration Building
2 WH - Wargin Hall
3 LI- Library
4 VSS - Vocational & Student Support


BUILDING KEY
AD Administration
LI Library
VSS Vocational & Student Support
WH Wargin Hall
RECOMMENDED DEMOLITION / REMOVAL
EXISTING FACILITIES
RECOMMENDED DEMOLITION/REMOVAL
WILSON AVENUE
COLLEGE DRIVE
HAVEN AVENUE
HOLLY DRIVE
PANTHER DRIVE
BANYAN STREET
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CENTRAL PLANT
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UTILITY FIELD
FACILITIES
WAREHOUSE
BASEBALL FIELD
FOOTBALL PRACTICE/ ARCHERY FIELD
SOCCER PRACTICE FIELD
SOFTBALL FIELD
N
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350
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New Facilities

The recommended new facilities will provide additional instructional space to address the current and projected growth in enrollment and create spaces that accommodate programs that promote health and wellness, support a collaborative and collegial work environment, and replace temporary facilities.

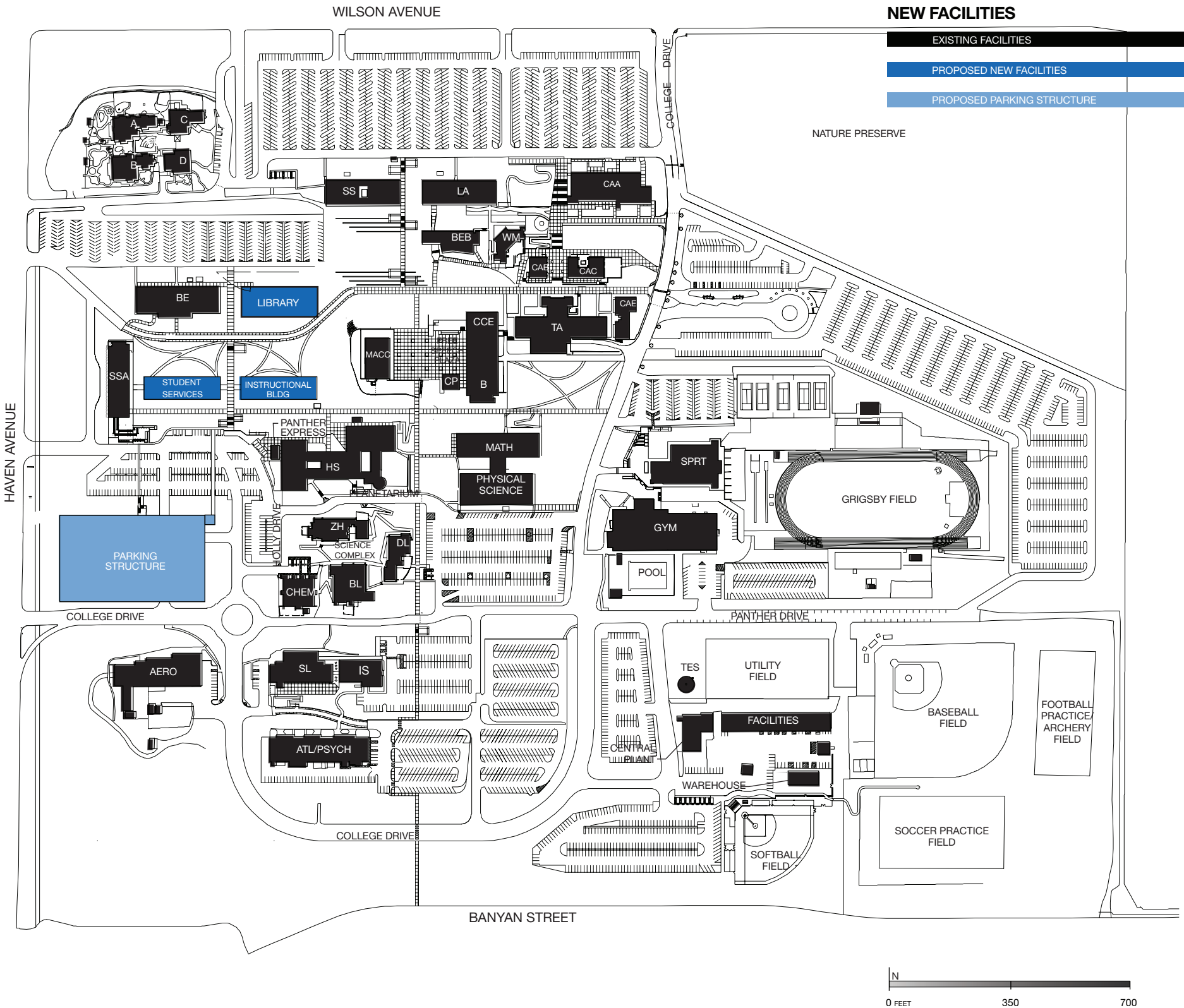
The proposed facilities are located to reinforce the campus' strong and established functional zoning concept. At this conceptual planning level, the proposed buildings are sited, massed, and oriented to enhance the existing campus pattern of development, work with environmental conditions, and strengthen circulation patterns.

Descriptions of each recommended construction project are included in the following pages. The order of the projects reflects a priority order and a recommended sequence of development.

It is recommended that all future buildings are planned and programmed to provide flexible program space for ongoing pursuit of grant-funded programs. The graphic plan on the opposing page illustrates the recommended new facilities.

NEW FACILITIES PROJECTS

- / Library
- / Student Services Building
- / Instructional Building
- / Parking Structure


NEW FACILITIES
EXISTING FACILITIES
PROPOSED NEW FACILITIES
PROPOSED PARKING STRUCTURE
WILSON AVENUE
COLLEGE DRIVE
NATURE PRESERVE
HAVEN AVENUE
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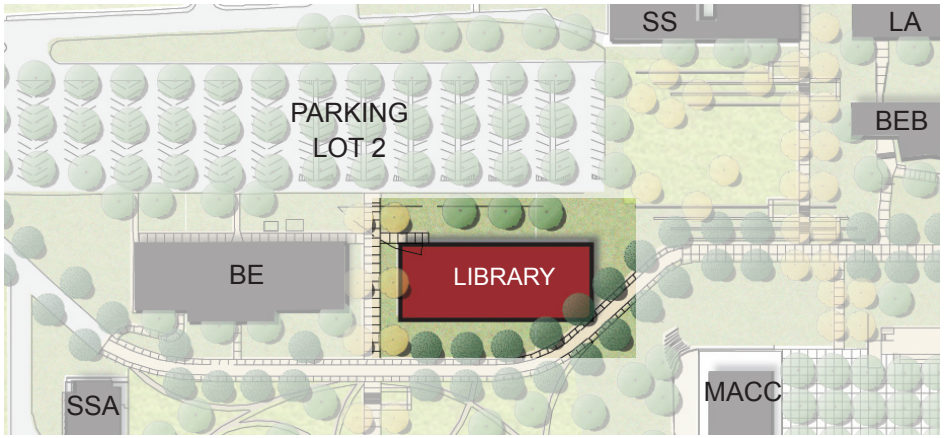
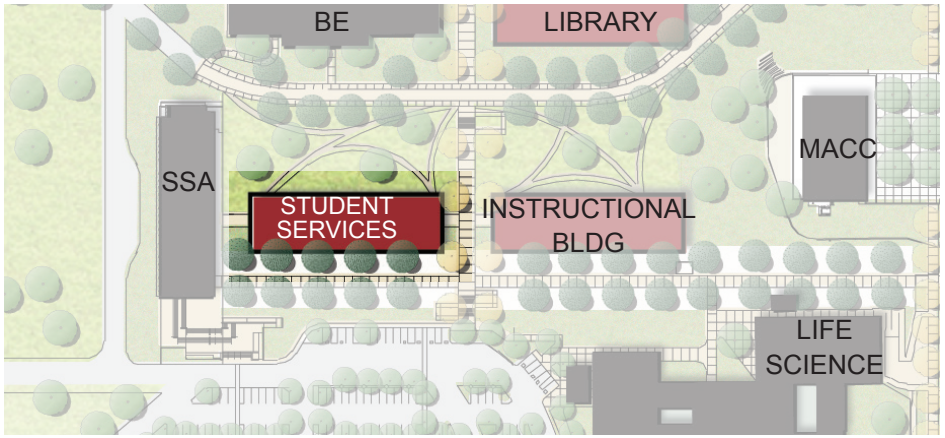




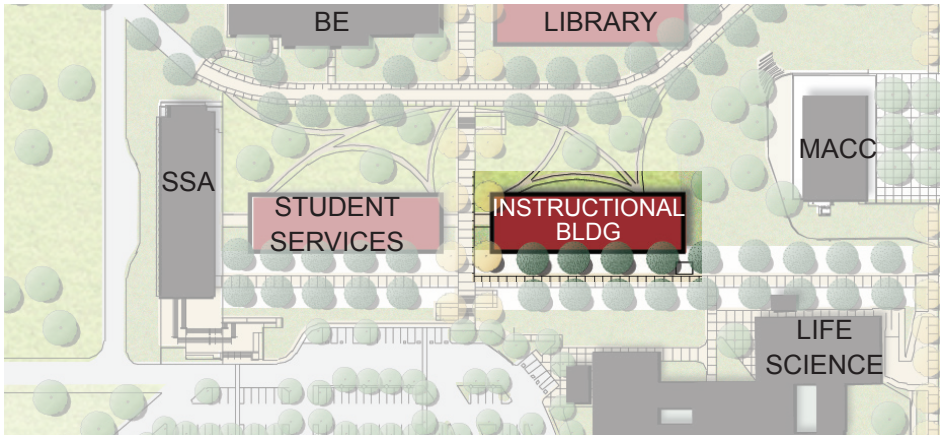
Library

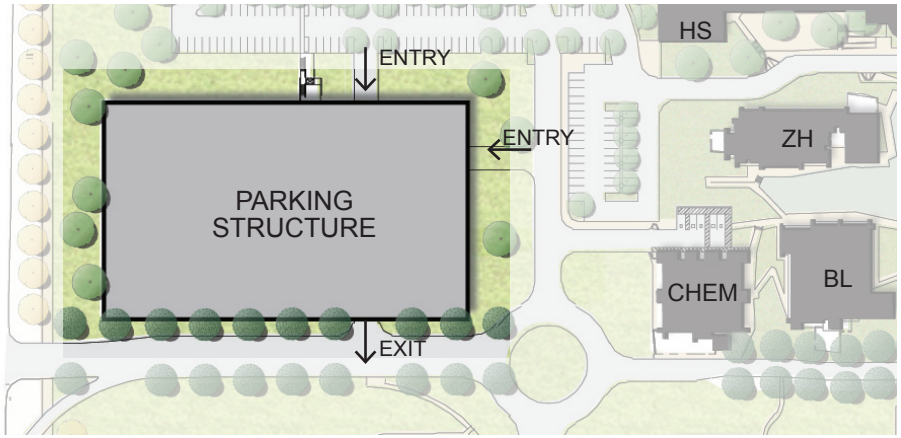
The analysis of planning data indicates that there is a need for additional library, tutorial and instructional media space on campus. In addition, the existing library carries a low facilities conditions index (FCI) rating that shows the facility is in poor condition. The combination of these factors has led the planning committee to recommend demolition of the existing library and the construction of a new library to take its place.

The new library is located within the newly defined student support core of campus. Adjacent to the new Student Services Building, the new Library will work in conjunction with the existing Student Center Buildings and the new Student Services Building to create a family of facilities that are dedicated to helping students succeed academically and keep them on campus throughout the day.

Student Services Building

A new Student Services Building is recommended for the campus in order to relieve the congestion within the existing Student Services/Administration (SSA) Building and offer the opportunity for service program expansion. Located within the student support core of campus, the new building is placed immediately east of SSA and just north of the new campus entry off of Haven Avenue. This prominent location provides the opportunity to redefine the main pedestrian entry sequence for students while visibly displaying the variety of student service programs the college has to offer. A strong start is critical to a students' academic success, and this new facility at the campus entry will point them in the right direction.





Instructional Building

The planning data for the master plan indicates the need for new instructional spaces to replace facilities with low FCI ratings that are slated for removal. The recommended instructional building will house a variety of classroom types to support the curriculum campus wide and provide spaces equipped with 21st century learning technologies. Instructional spaces within will be flexible, adaptable and designed to facilitate collaboration within and across disciplines.

The new instructional building is located within the academic zone of the campus along the site's northern tier, to the east of the existing Business Education building. Located along the main east-west pedestrian promenade of campus, the new instructional building will be easy to locate for students and a welcome addition to the academic core.

Parking Structure

A parking structure is recommended when and if it is necessary based on the campus' growing parking needs. The diagram is conceptual for this master plan. However, when the College has the funds for a parking structure, further studies involving a traffic engineer are recommended to address issues relating to traffic flow, count and efficiency and mitigation of additional traffic congestion along College Drive.

The structure would be situated on the south-west edge of the campus, located north of the Aeronautics Building. The structure will be visible along Haven Avenue and provide parking to students from the new Haven Avenue entry point and will balance the distribution of parking on campus. The structure is an ideal location because it can provide for college signage opportunities along Haven Avenue.

Using the topography differential at that location, the entrance to the parking structure is at grade level from the parking lot of the Administration, but the exit is from the lower level onto College Drive.

A new location for Campus Police is recommended to be incorporated into the new parking structure in an easily identifiable location.

Renovations

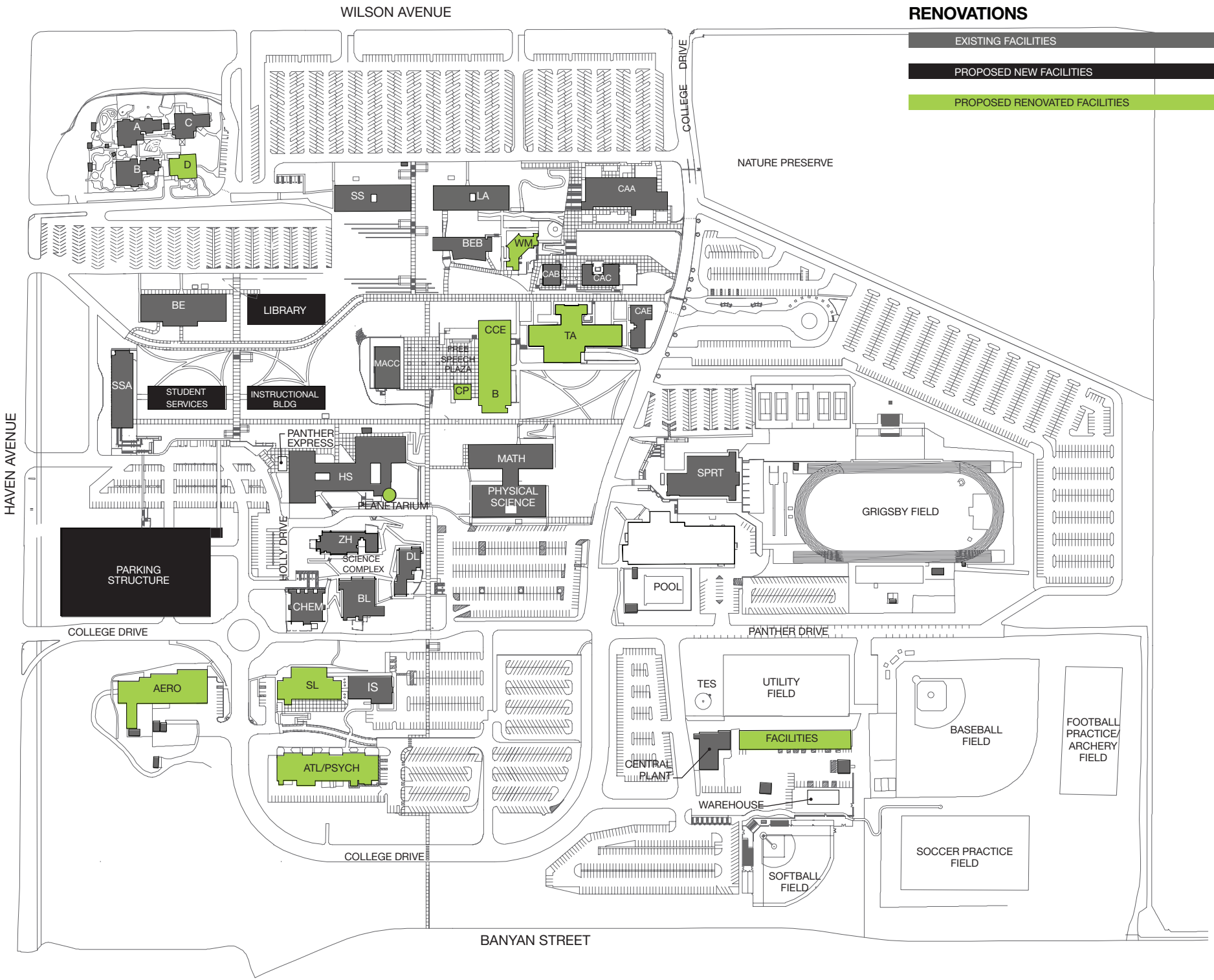
Most of the Chaffey College buildings were constructed in the 1950's and 1960's and do not have many useful years remaining. Renovation is recommended for many of these facilities. Renovation will renew and lengthen the lifespan of these facilities by replacing aging building components and creating welcoming spaces to accommodate new and existing functions.

Changes in programming will be made to improve campus zoning and address the effects of new construction. Instructional technology will be updated to support successful student learning through innovative modes of instruction. Energy and water efficiency will be improved and upgrades made to support sustainability. Facilities will be brought into compliance with current safety and accessibility regulations for the benefit of the students, faculty, staff, and the community. Finishes and furniture systems will be updated.

The graphic plan on the opposing page illustrates the recommended renovations.

RENOVATION PROJECTS

- Aeronautics
- Automotive Technology
- Campus Center East+Bookstore
- Campus Police
- Child Development Center D
- Facilities
- Planetarium
- Skills Lab
- Theatre
- Wignall Museum of Contemporary Art


WILSON AVENUE
RENOVATIONS
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PROPOSED NEW FACILITIES
PROPOSED RENOVATED FACILITIES
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CENTRAL PLANT
WAREHOUSE
SOCCER PRACTICE FIELD
SOFTBALL FIELD
COLLEGE DRIVE
BANYAN STREET
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Site Improvements Recommendations

Overview

When creating a campus environment, both the architectural language and the landscape language are of equal importance. Campus landscape connects the buildings on a campus and, by design is the unifying element that creates the campus as a whole.

The site improvement recommendations address the key site issues identified in the analysis of the existing conditions and plan for sustainability by incorporating more water and energy-efficient landscaping.

The following graphics illustrate:

- Landscape Vision and Design Principles
- Landscape Plan
- Campus Zoning
- Vehicular Circulation and Parking
- Pedestrian Circulation
- Landscape Character
- Site Improvements Projects

Landscape Vision and Design Principles

Chaffey College's Rancho Cucamonga campus holds an abundance of natural resources, stunning views to the San Gabriel Mountains and valley below, and plenty of space. The recommended landscape plan is inspired by the informal National Park sensibility of the existing campus and the resourceful way the grounds team has been harvesting natural materials to reuse on site.

Combined with the desire to ease wayfinding through the campus, the landscape vision is to organize pedestrian circulation and to graduate the use of resources with a concentration of more formal, greener landscape in the center of campus and a more natural and resource-efficient landscape character towards the north, east, and south edges of campus.

DESIGN PRINCIPLES:

1. Create a clear and organized framework for vehicular and pedestrian circulation to ease wayfinding into and through the campus.
2. Create a hierarchy of pathways and places to establish main corridors and meeting points in the campus. This will strengthen campus identity and memorability.
3. Design with people in mind to create pedestrian-scaled places that encourage studying, teaching and gathering outside.
4. Design to reveal natural systems that provide teaching and research opportunities and raise awareness of California friendly landscapes and the importance of climate and context-appropriate design.
5. Design with nature to provide comfortable and healthy places with as little resource consumption as possible.
6. Design for the long term to create places and systems that age gracefully and sustain purpose over time.

Landscape Plan

The landscape plan takes advantages of the site's terraced topography, and beautiful mountain and valley views by creating an organized framework of pedestrian pathways that connect Quads, Courtyards, and Parking Lots.

INTEGRATING SUSTAINABILITY

The following strategies will help minimize resource use:

Transportation

- Encourage bus and/or train ridership by offering discounts or easy access to bus and rail passes in lieu of parking passes.
- Provide bicycle parking (including lock boxes) and showers for faculty, staff and students.
- Provide universal access into and through campus.

Sustainable building processes and materials

- Encourage locally crafted and sourced materials and systems.
- Use reclaimed materials, natural and local materials, non-toxic and recycled/recyclable materials.

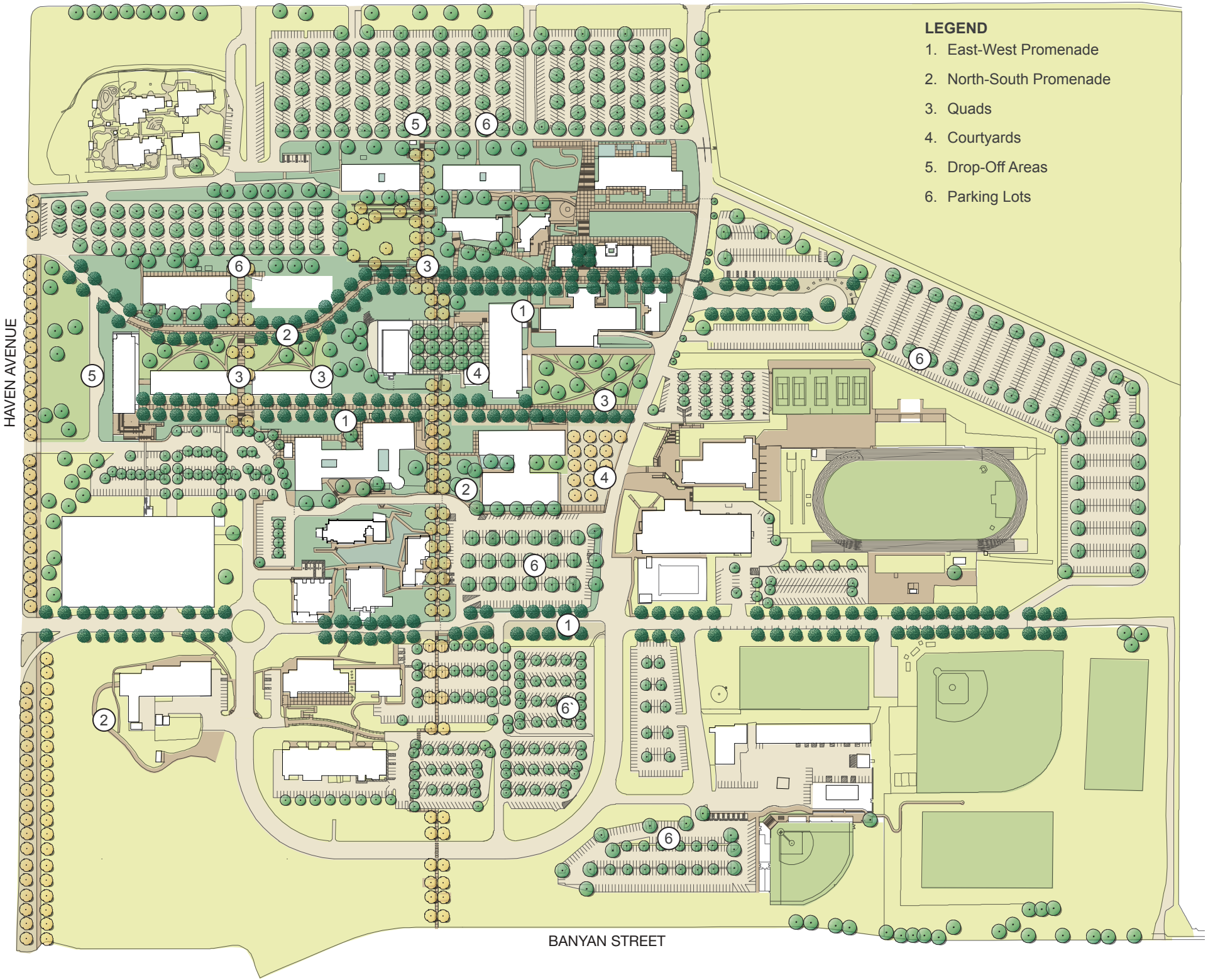
Encourage closed-loop systems (cradle to cradle design) to conserve natural and economic resources

- Use graywater in irrigation and toilet flushing.
- Mulch greenwaste and use on site to conserve soil moisture and minimize waste stream.
- Incorporate food waste into compost for landscape.
- Serve locally grown/sourced foods with reusable dishes, tableware and linens.
- Use graywater from washing machines (for linens) as irrigation for landscape

Use nature as a guide

- Use Low Impact Development (LID) strategies to direct runoff from roofs and paving to planting areas where it can encourage deep root growth of plants, be cleaned and infiltrated into the groundwater table, and act as an educational resource.
- Plant shade trees strategically for human comfort in outside gathering areas and to shade the south and west building walls to reduce energy use.
- Place buildings and trees to harness cooling southwest winds and mitigate/diffuse hot desert winds.
- Use native and adapted plants with smart placement and sizing to grow into the planting areas to reduce maintenance and irrigation needs.
- Encourage integrated pest management and organic plant management to minimize the use of chemical pesticides, herbicides and fertilizers.

LANDSCAPE PLAN



Site Improvement Recommendations

Landscape Character

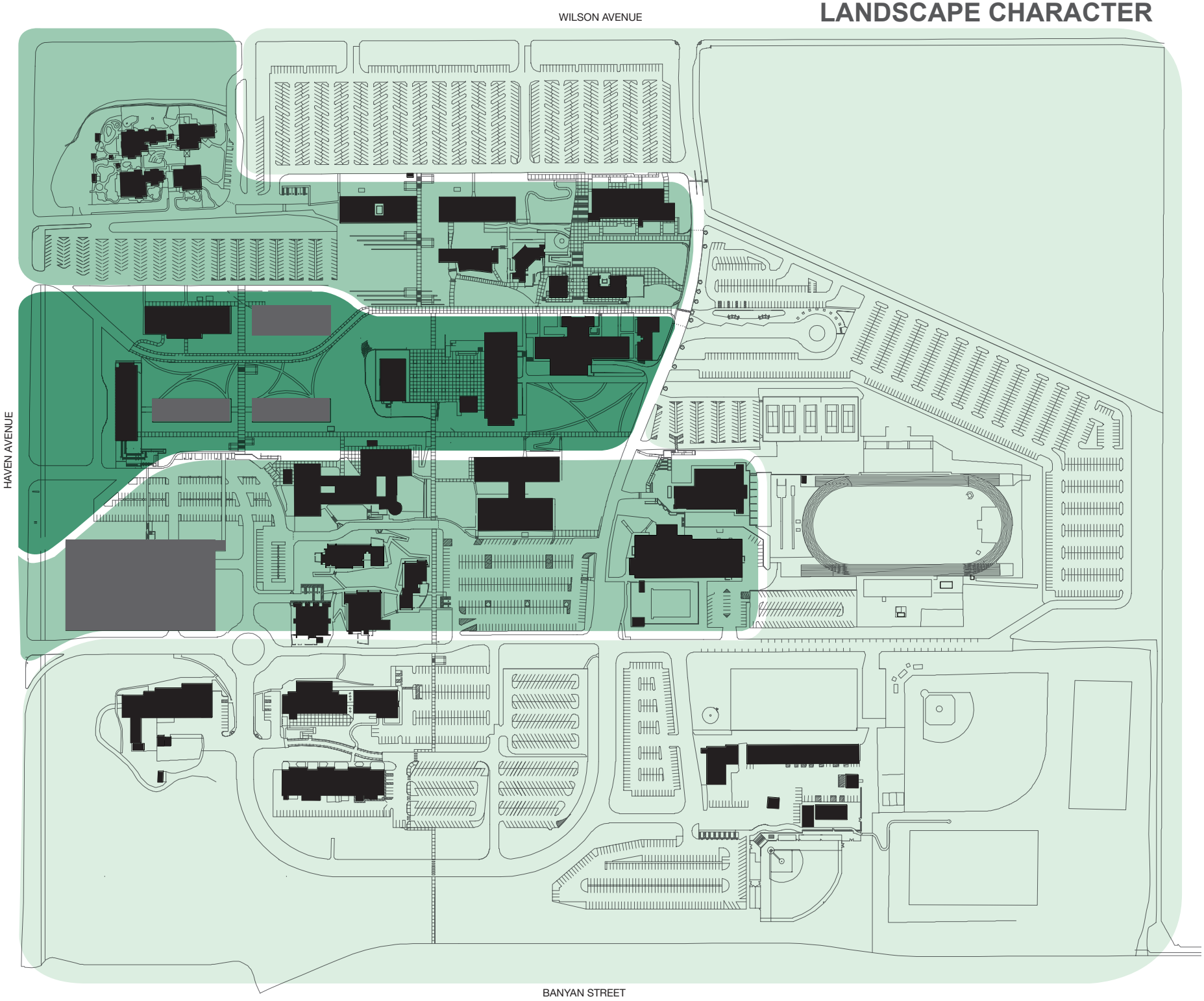
Chaffey College's Rancho Cucamonga campus is generously sized and characterized by large open landscapes with lots of turf grass, cobblestone and gravel areas, and large canopy trees in beds of pine needles and mulch. In order to reduce the amount of resources used to maintain the landscape, the FMP recommends dividing the campus into three overall hydrozones according to the intensity of water use.

FORMAL
The center of campus, where students come to first visit the campus, and where administrative and student services offices are located, will be the most formally designed landscape, and allow for turf grass and moderate water-using plantings.

INFORMAL
The two campus areas to the north and south of the campus center are designated as informal areas, where drought-tolerant trees provide plenty of shade and climate-appropriate planting provides seasonal change and habitat with minimal water use.

NATURAL
The natural landscape hydrozone is made up of predominantly native plants and trees to maximize resource efficiency, reduce maintenance, provide habitat that blends into the surrounding landscape.

LANDSCAPE CHARACTER

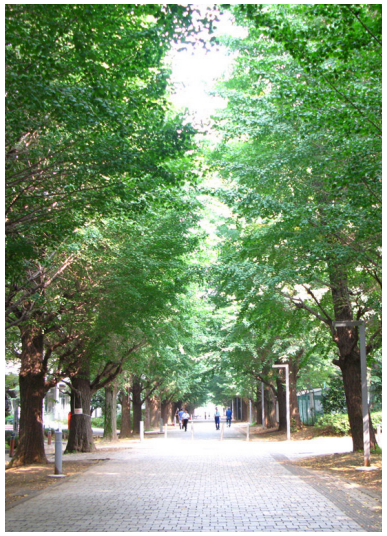


Site Improvement Recommendations

Landscape Character

1-4 Formal Landscape

1-4 Informal Landscape
5-6 Natural Landscape



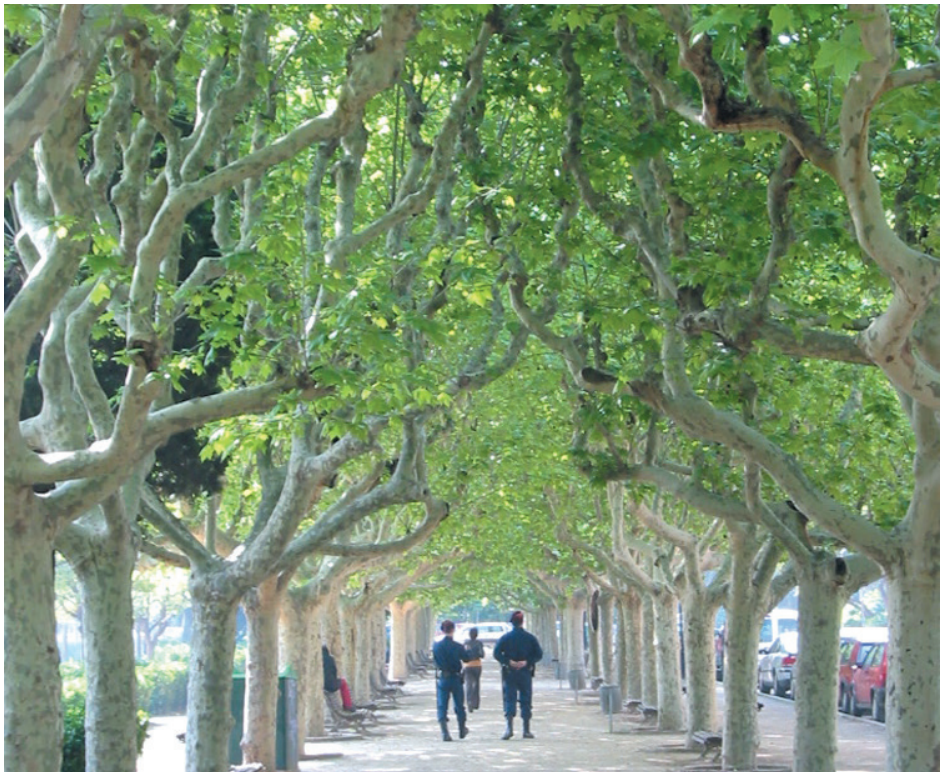
Site Improvement Projects

Campus Promenades

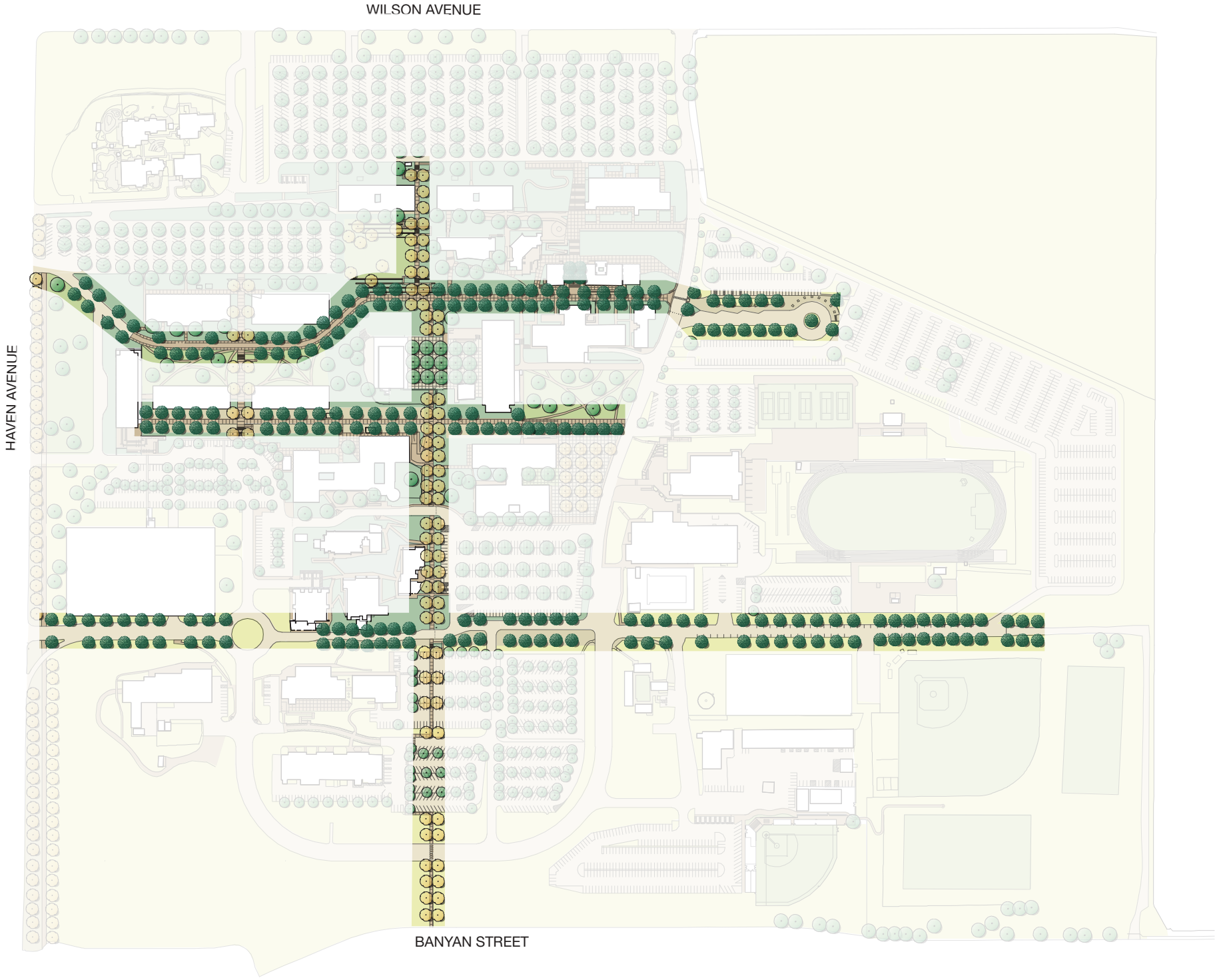
A framework of promenades planted with shade trees organizes the campus and eases wayfinding.

Specific design recommendations include:

- Plant large canopied trees along both sides of the promenades, to provide shade, habitat and aid in wayfinding and campus identity.
- Wherever feasible, preserve existing tree rows and incorporate them into the promenades, such as the mature Stone Pines.
- Promenades should connect through parking lots with clearly marked pedestrian routes to increase pedestrian safety and improve wayfinding through campus.
- The north-south promenades are planted with deciduous trees to ease wayfinding and allow mountain views in winter.
- The east-west promenades are planted with evergreen shade trees in mulch to ease maintenance and reduce water use. Pine and oak species will create their own weed-deterrant mulch.



CAMPUS PROMENADES



Site Improvement Projects

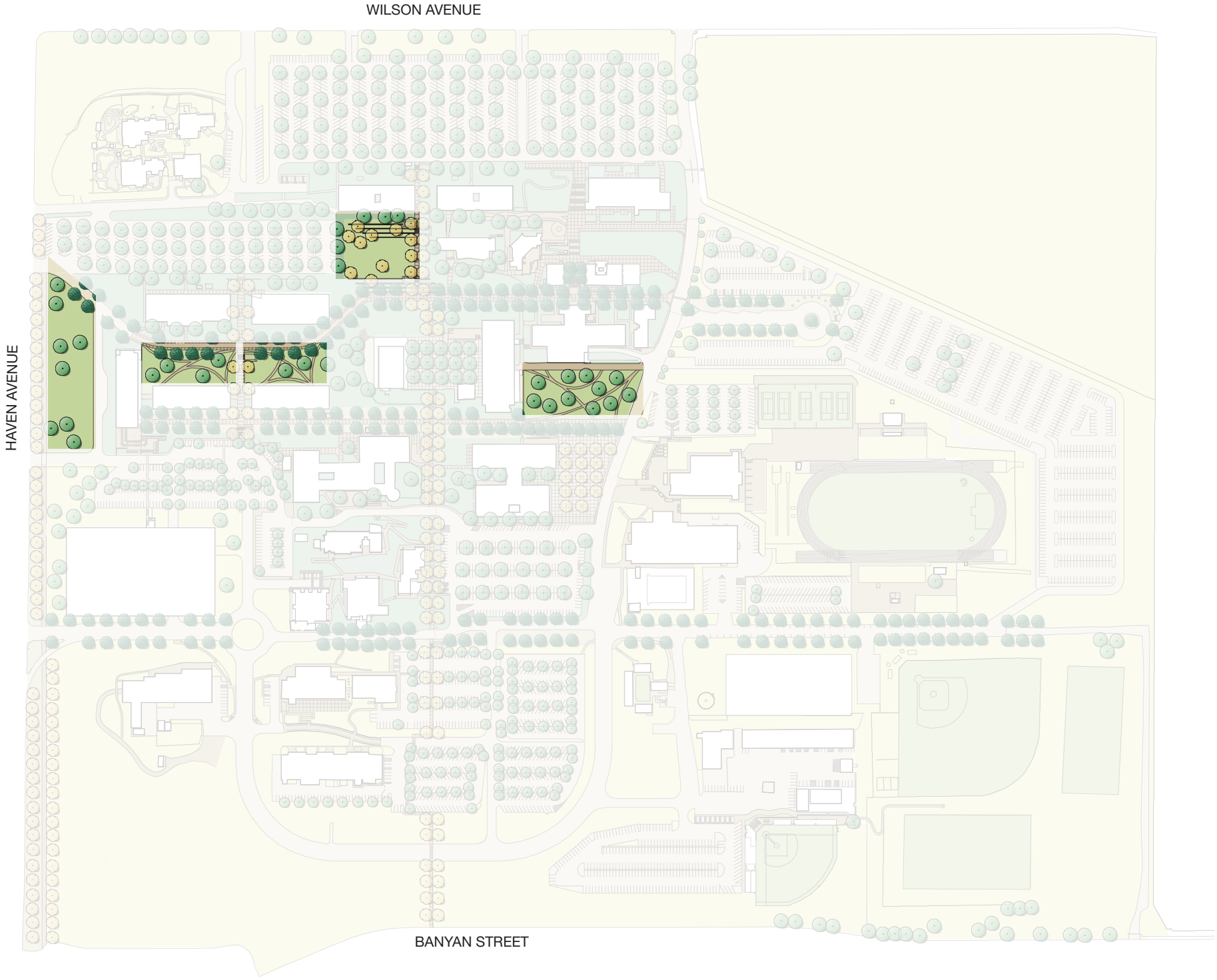
Campus Quads

The FMP proposes four new campus quads placed where students have the best access from academic, administrative and services buildings. One of the new campus quads is the re-purpose use of parking lot 7 to a landscaped area with seating. Quads are characterized by large expanses of turf grass for informal recreational and restorational use and where the college can hold formal and informal events.

Specific design recommendations include:

- Turf grass should be limited to areas that can be actively used, to minimize the amount of maintenance and resources required for upkeep.
- Large canopied trees that can withstand regular waterings needed for turf grass will provide important shade and habitat in quads.
- Existing large trees should be preserved to the greatest extent feasible.
- Drought-tolerant species of turf grass should be specified to conserve on water used for irrigation.

CAMPUS QUADS



Site Improvement Projects

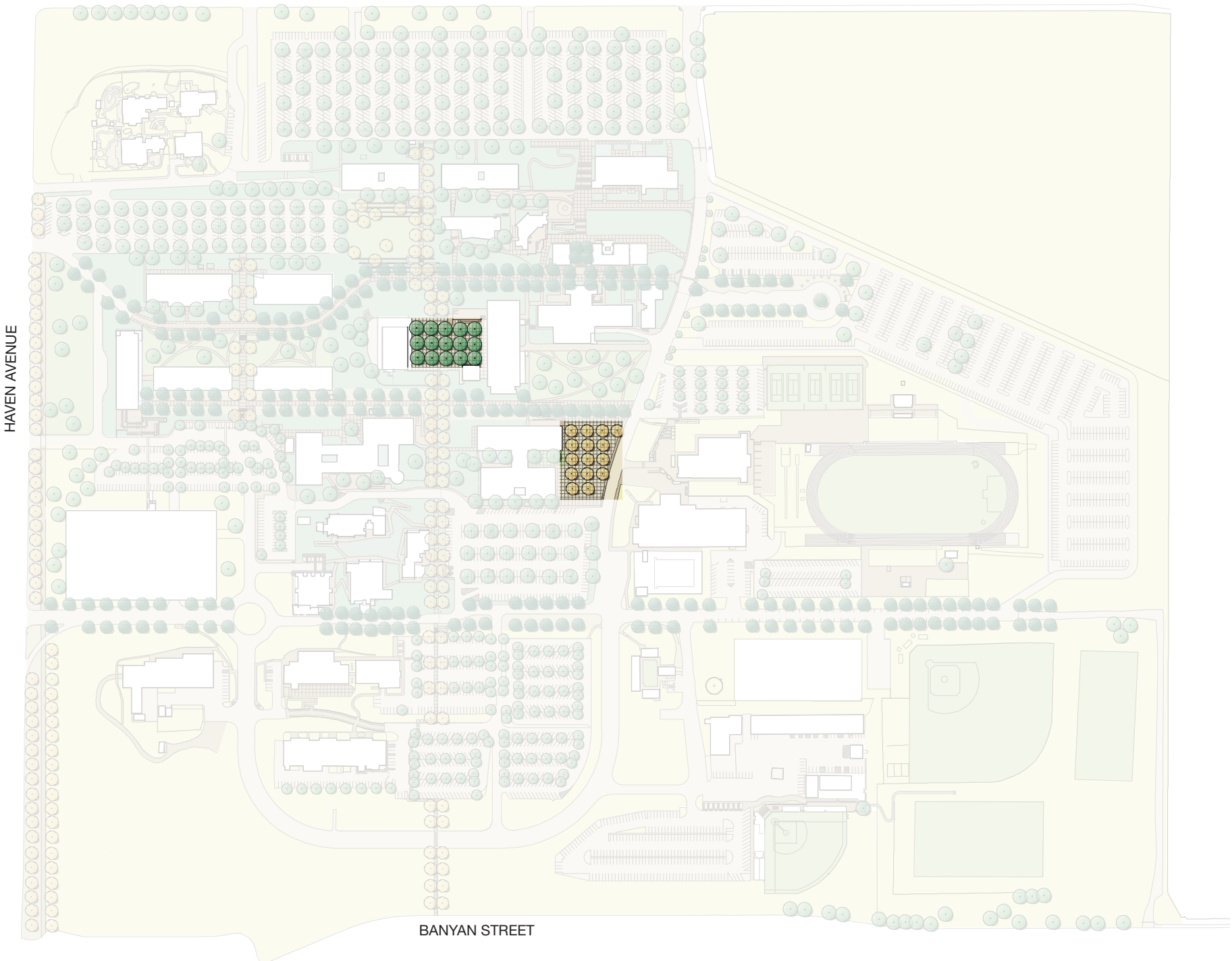
Campus Plazas

Plazas are predominantly hardscaped areas that act as hubs of activity and provide space for studying, dining and socializing. Two new plazas are recommended to compliment the new campus quads and the existing network of courtyards and patios illustrated in the Existing Campus Places plan. A new plaza east of the MACC building will include a large shade structure.

Specific design recommendations include:

- Plant large shade trees to support human comfort and to shade paving which in turn reduces the heat island effect and energy used for air conditioning.
- Provide plenty of seating for large and small groups.
- Existing large trees should be preserved to the greatest extent feasible.
- Drought-tolerant species of trees should be specified to conserve on water used for irrigation.

CAMPUS PLAZAS



Softscape

Recommendations are made to improve soil health, conserve soil moisture, integrate learning opportunities into the landscape, reduce waste, simplify ground cover treatments and reduce maintenance.

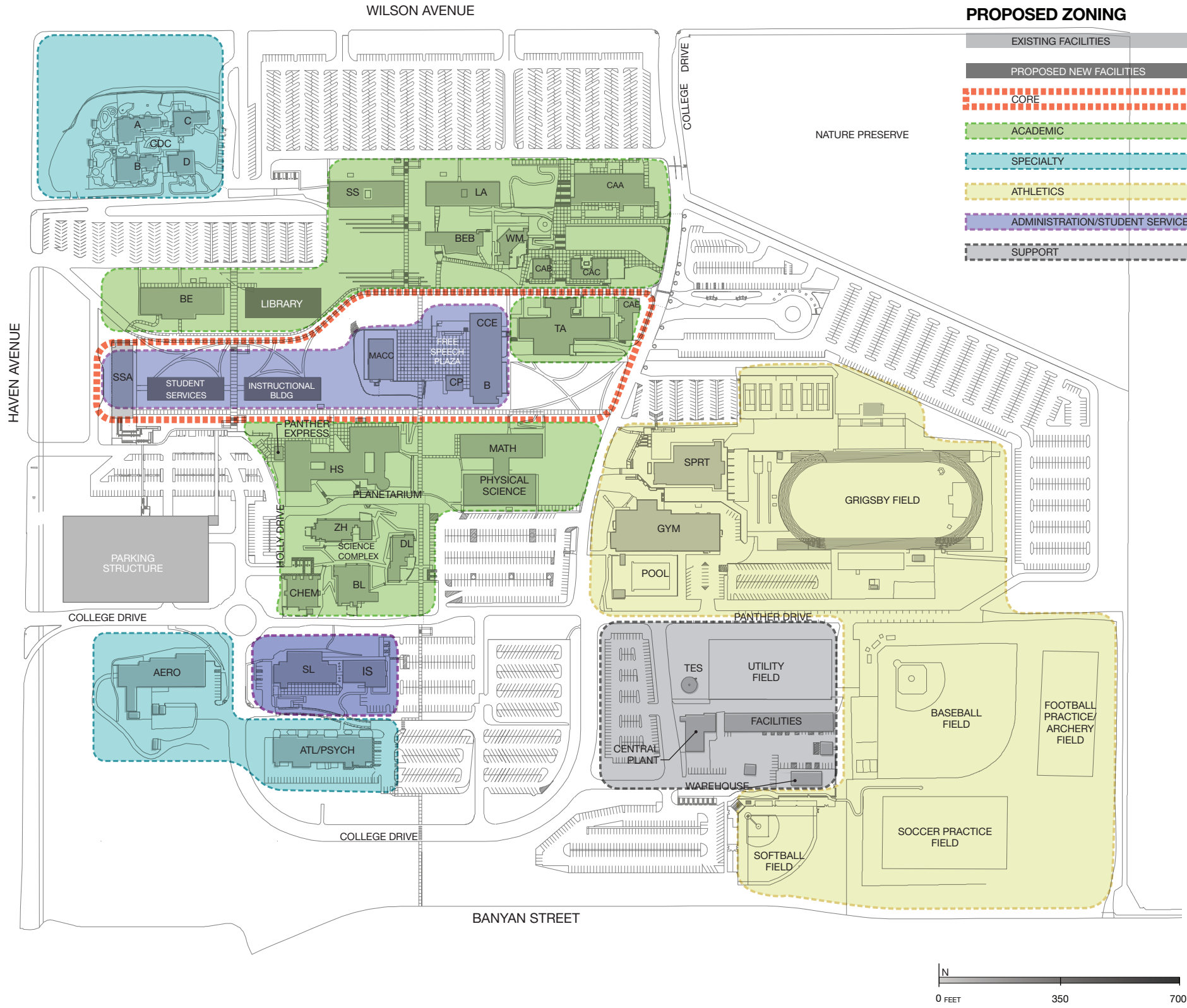
Specific design recommendations include:

- Use nature as a guide in Low Impact Development (LID) strategies to reveal the flow and treatment of stormwater and provide educational opportunities.
- Plant native and drought-tolerant flowering plants only in areas where people gather to reduce the pressure on campus landscape maintenance.
- Use native and drought tolerant flowering shrubs in large drifts to provide seasonal interest and habitat without establishing the need for intricate maintenance.
- Allow pine needles and oak leaves to stay under Pines and Oaks for weed control and to preserve soil moisture.
- Apply heavy mulch at steep slopes or plant resilient ground covers to reduce soil erosion and preserve soil moisture.
- Use gravel, mulch or leaves as a permeable, low-maintenance ground cover under shade trees to conserve water and reduce maintenance.
- Choose native and drought tolerant trees and shrubs that reflect the San Gabriel Mountain foothill location of campus and provide important habitat for beneficial insects and birds.
- Encourage integrated pest management and organic plant management to minimize the use of chemical pesticides, herbicides and fertilizers.

1 Low Impact Development (LID)
2 Massed ground cover plantings
3 Massed groundcover on steep slope
4 Massed native flowering shrubs
5 Oak leaves as mulch along promenade
6 Gravel ground cover

Campus Zoning

The proposed demolition/removal of the old library, Wargin Hall, and VSS building presents an opportunity to define the campus core. The campus core encompasses buildings that support student life and enhance student's college experiences. Academic zones are easily accessible from the campus core, and they are located north and south of it. Administration and service spaces are located south of the campus and buildings furthest from the core are specialty spaces such as the Child Development Center (CDC) and the Aeronautic building.


WILSON AVENUE
PROPOSED ZONING
EXISTING FACILITIES
PROPOSED NEW FACILITIES
CORE
ACADEMIC
SPECIALTY
ATHLETICS
ADMINISTRATION/STUDENT SERVICES
SUPPORT
COLLEGE DRIVE
NATURE PRESERVE
HAVEN AVENUE
A
C
CDC
B
D
SS
LA
CAA
BEB
WM
CAB
CAC
BE
LIBRARY
CAE
TA
CCE
MACC
FREE SPEECH PLAZA
SSA
STUDENT SERVICES
INSTRUCTIONAL BLDG
CP
B
PANTHER EXPRESS
MATH
HS
PHYSICAL SCIENCE
PLANETARIUM
SPRT
GRIGSBY FIELD
GYM
POOL
HOLLY DRIVE
ZH
SCIENCE COMPLEX
DL
BL
CHEM
PARKING STRUCTURE
COLLEGE DRIVE
PANTHER DRIVE
AERO
SL
IS
ATL/PSYCH
TES
UTILITY FIELD
FACILITIES
CENTRAL PLANT
WAREHOUSE
BASEBALL FIELD
FOOTBALL PRACTICE/ ARCHERY FIELD
SOCCER PRACTICE FIELD
SOFTBALL FIELD
COLLEGE DRIVE
BANYAN STREET
N
0 FEET
350
700

Site Improvement Recommendations

Vehicular Circulation and Parking

The vehicular circulation recommendations focus on improving the flow of traffic, especially during the peak hours at the beginning of semesters that are the most challenging for this campus. The current entrance at College Drive is maintained as the primary vehicular entrance since it is the only signalized intersection on Haven Avenue. A secondary entrance at Olive Way provides a point of entry welcoming students directly to the Student Services/Administration (SSA) building, minimizing the need to navigate throughout campus and reduces the amount of vehicular congestion.

Recommended vehicular circulation improves the flow of traffic from the main entrance at Haven Avenue to the exit at Wilson Avenue. The primary route allows students to access the parking lots in the campus core. Otherwise, perimeter parking lots are directly accessible from Haven or Wilson Avenue.

Vehicular circulation improvements are recommended to promote safe and efficient circulation and clear wayfinding. The improvements focus on the following:

- Reconfigured Olive Way as a secondary vehicular entrance for convenient access to student services.
- New pick up/drop off area in front of SSA building
- A roundabout is introduced to the south-east of the parking structure. Roundabouts are traffic control devices which can slow down vehicles, more so than traditional devices such as traffic signals or stop signs. Roundabouts produce an even flow of traffic as opposed to the abrupt starting and stopping that might otherwise occur. A roundabout would be provided near the primary entrance so that the vehicles entering will pass through it to get to the Aeronautics Building. To function properly, these roundabouts should be designed to current design standards including an appropriate inside radius and the use of splitter islands to slow traffic
- Vehicular circulation in the campus core is limited to service vehicles, DPS pick-up and drop-off, and Omnitrans.

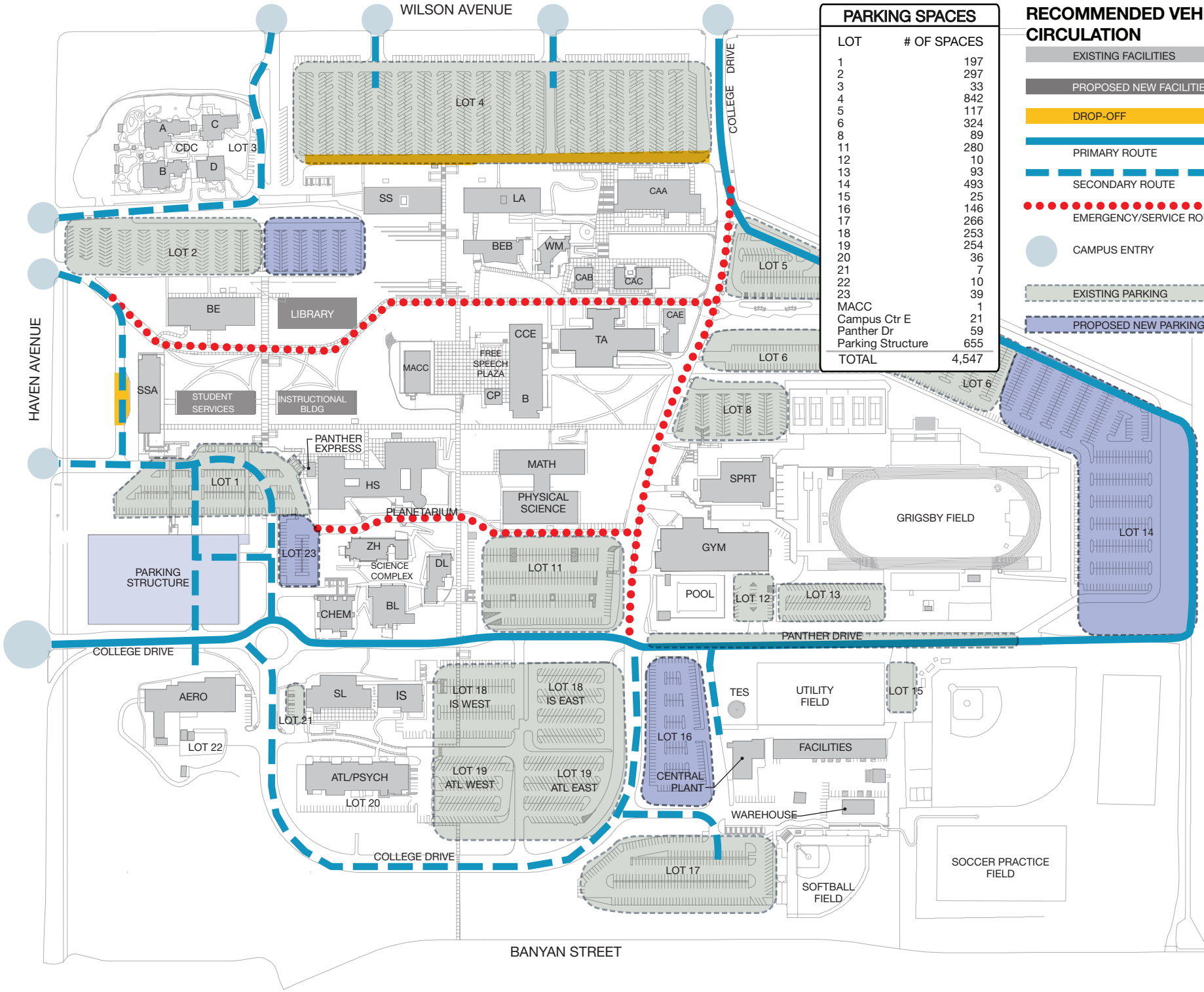
Parking

With primary and secondary vehicular routes defined, student and staff parking lots are eliminated from the campus core to eliminate vehicular and pedestrian circulation conflicts. Surface parking lots are located at the perimeter of campus so that students are able to park their vehicles from either Haven Avenue or Wilson Avenue.

The recommendation for the FMP indicate the need for 1,112 additional parking stalls based on the projected growth of the Campus. Therefore, if needed, a parking structure is recommended at the location of the existing Vocational & Student Support (VSS) building. Taking advantage of the existing topography, the structure will be built with vehicular access at two levels – from the entrance level at grade level as Student Services/ Administration (SSA) building, and exits at the grade level onto College Drive.

PARKING CURRENT AND PROJECTED

	Headcount	Parking
Baseline (2013)	16,500	3,288
Master Plan (2025)	22,000	4,400 (@1:5)



PARKING SPACES

LOT	# OF SPACES
1	197
2	297
3	33
4	842
5	117
6	324
8	89
11	280
12	10
13	93
14	493
15	25
16	146
17	266
18	253
19	254
20	36
21	7
22	10
23	39
MACC	1
Campus Ctr E	21
Panther Dr	59
Parking Structure	655
TOTAL	4,547

RECOMMENDED VEHICULAR CIRCULATION

- EXISTING FACILITIES
- PROPOSED NEW FACILITIES
- DROP-OFF
- PRIMARY ROUTE
- SECONDARY ROUTE
- EMERGENCY/SERVICE ROUTE
- CAMPUS ENTRY
- EXISTING PARKING
- PROPOSED NEW PARKING

Site Improvement Recommendations

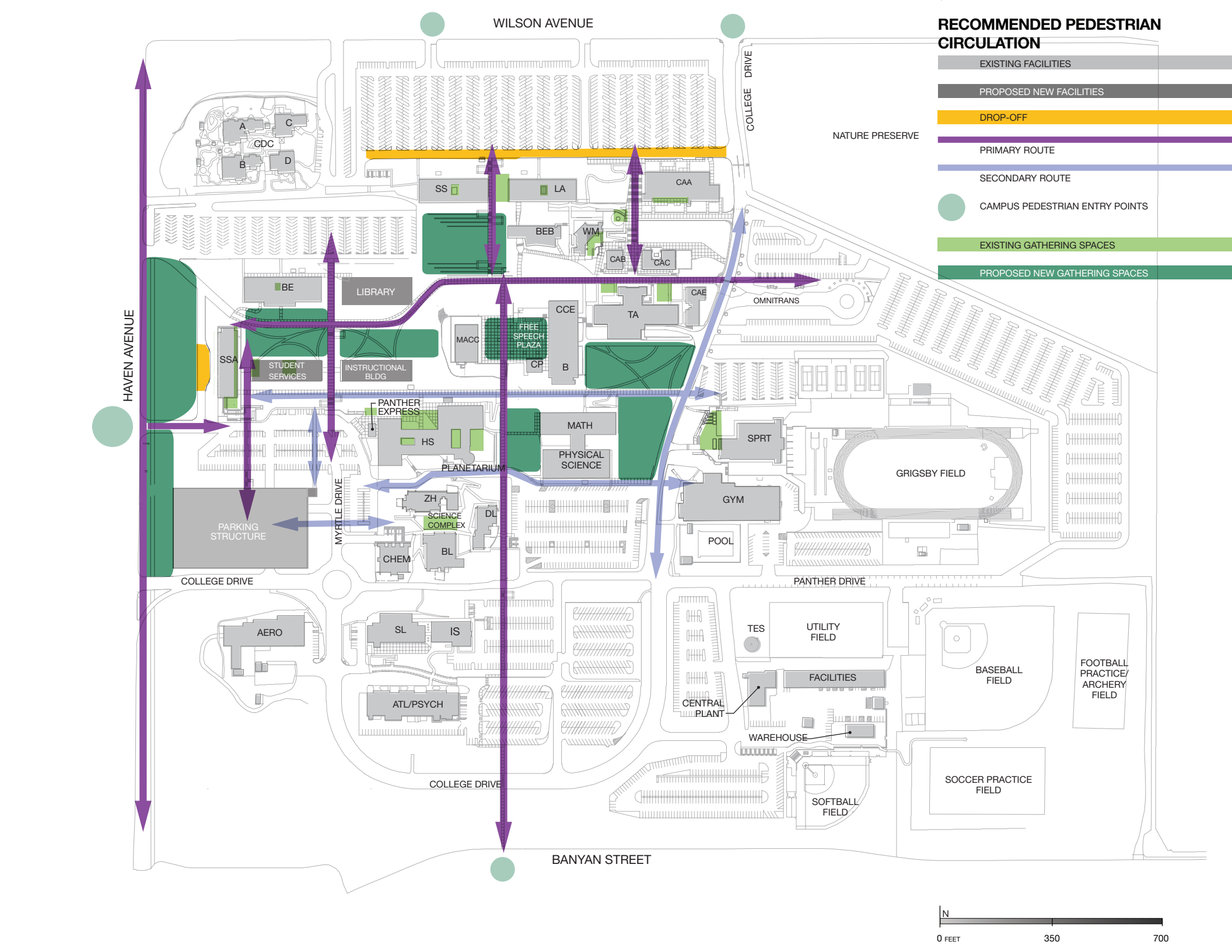
Pedestrian Circulation

The FMP proposes a new system of pedestrian pathways aligning with existing major access routes and the edges of major changes in elevation. These corridors and promenades ease wayfinding into and through the campus with clear paths between campus precincts, from parking into academic areas, and from the surrounding community and bus stops into the campus core.

The campus topography of three plateaus separated by steep slopes is an opportunity to create three east-west promenades, one on each campus level. A major north-south promenade will allow for universal access and accessibility and ease wayfinding through campus from the main parking lots and connect the campus visually to the San Gabriel Mountains to the north and the valley to the south.

These corridors and promenades are easily identifiable as major pedestrian pathways with trees on either side and special paving material. Primary pathways will be 20-24’ wide, with secondary pathways at 10-12’ wide.

These circulation patterns are continued and incorporated into the campus core where new facilities are being recommended.


RECOMMENDED PEDESTRIAN CIRCULATION
EXISTING FACILITIES
PROPOSED NEW FACILITIES
DROP-OFF
PRIMARY ROUTE
SECONDARY ROUTE
CAMPUS PEDESTRIAN ENTRY POINTS
EXISTING GATHERING SPACES
PROPOSED NEW GATHERING SPACES
WILSON AVENUE
COLLEGE DRIVE
NATURE PRESERVE
HAVEN AVENUE
MYRTLE DRIVE
COLLEGE DRIVE
PANTHER DRIVE
BANYAN STREET
A
C
CDC
B
D
SS
LA
CAA
BEB
WM
CAB
CAC
BE
LIBRARY
CAE
OMNITRANS
CCE
TA
MACC
FREE SPEECH PLAZA
CP
B
SSA
STUDENT SERVICES
INSTRUCTIONAL BLDG
PANTHER EXPRESS
HS
MATH
PHYSICAL SCIENCE
SPRT
GRIGSBY FIELD
PLANETARIUM
ZH
SCIENCE COMPLEX
DL
GYM
PARKING STRUCTURE
CHEM
BL
POOL
AERO
SL
IS
TES
UTILITY FIELD
FACILITIES
BASEBALL FIELD
FOOTBALL PRACTICE/ ARCHERY FIELD
ATL/PSYCH
CENTRAL PLANT
WAREHOUSE
SOCCER PRACTICE FIELD
SOFTBALL FIELD
N
0 FEET
350
700

FONTANA

FONTANA

OVERVIEW

This chapter includes a series of graphic plates and narrative descriptions that illustrate the physical characteristics and usage of the Fontana Campus, and describes the important aspects of the physical context.

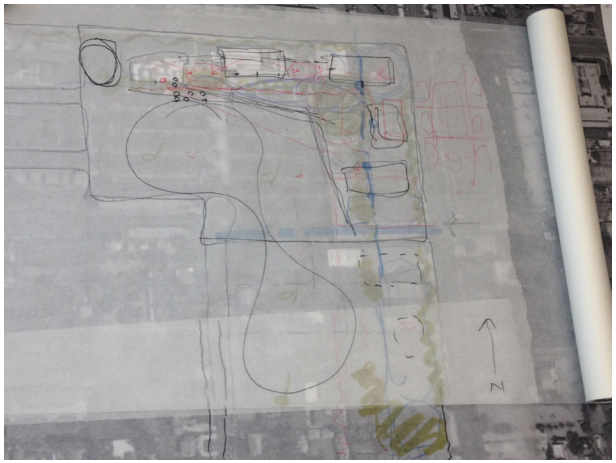
Through this examination, key planning challenges and opportunities were identified in order to frame the exploration of options and inform the development of facilities recommendations.

EXISTING CONDITIONS

- / Local Context and Community
- / Development History
- / Facilities Condition Assessment
- / Campus Plan
- / Campus Zoning
- / Circulation
- / Landscape Character
- / Summary of Findings

RECOMMENDATIONS

- / Summary of Recommendations
- / Beyond 2025
- / Demolition/Removal
- / New Facilities
- / Landscape Concept Plan
- / Landscape Plan
- / Landscape Character
- / Circulation




CHAFFEY

Existing Conditions

Existing Conditions

EXISTING CONDITIONS

The planning process began with information and data collection and campus tours. The planning team listened to the insights of multiple stakeholders regarding the condition and functionality of the existing campus and overlaid this with their own research and observations.

The resulting site and facilities analysis of the existing conditions that shape the use of the Fontana Campus and key issues to be addressed by the Facilities Master Plan (FMP) were identified.

The findings are summarized in a series of graphic plates that illustrate patterns and characteristics to be considered in the planning of future development.

1 Fontana Center (FNFC)
2 Ralph M. Lewis Center (FNLC)
3 Academic Center (FNAC)

1


2


3

Existing Conditions

Local Context and Community

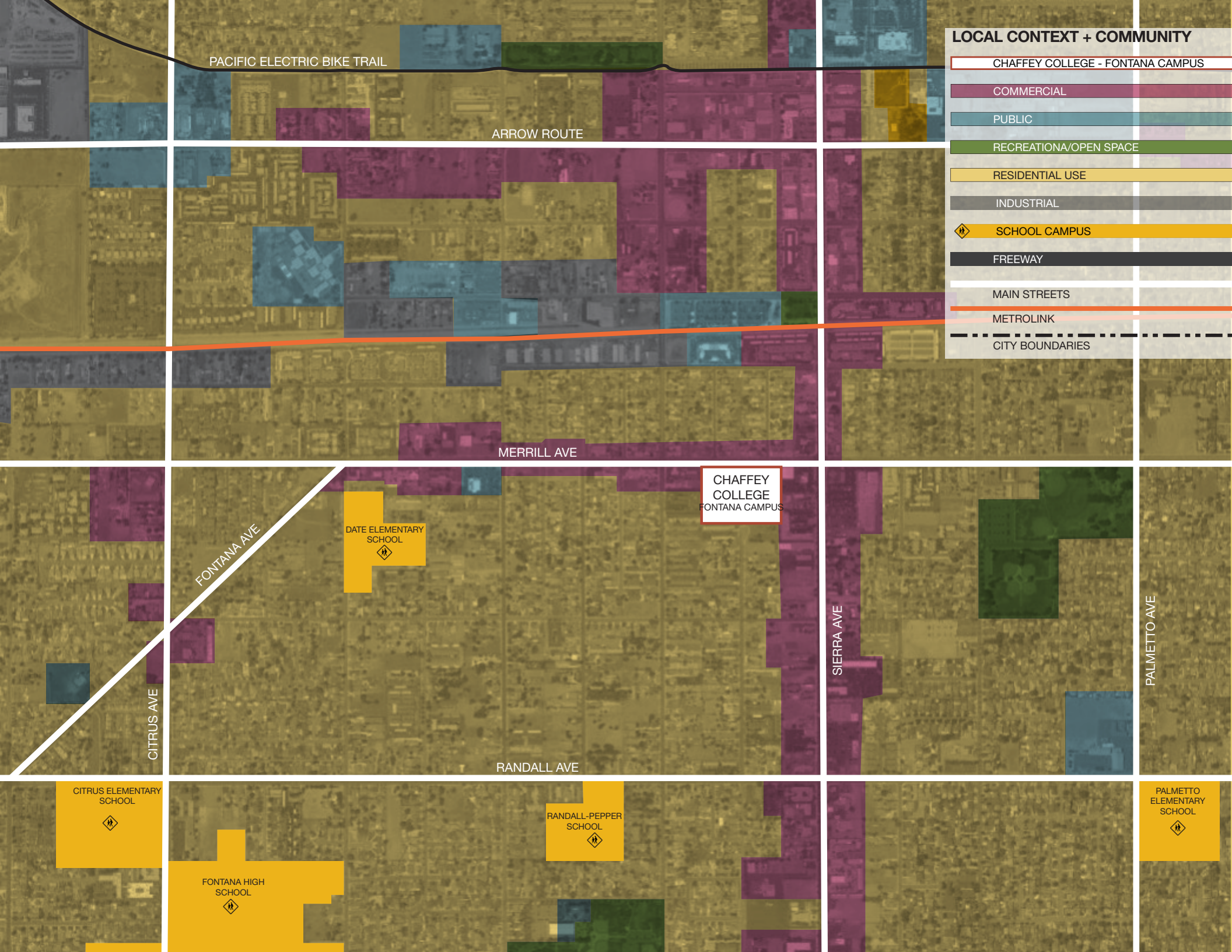
The Fontana Campus opened its doors in September 1996 to better serve the residents of the eastern portion of the Chaffey Community College District.

The campus is in the city of Fontana and near the cities of Rancho Cucamonga, Rialto, Bloomington and Jurupa Valley. It is located north of the 10 freeway and blocks away from a Metrolink station which serves the community. Sierra and Merrill Avenues are the closest main streets with commercial uses on both sides of the street.

OBSERVATIONS:

- The campus is only visible from Merrill Avenue.
- The campus is nestled in between commercial and residential zones.
- The campus is land locked, with no space to expand without acquiring adjacent properties.
- The Campus is in close proximity to public schools in the Fontana USD including Fontana High School on Citrus Avenue, about a mile southwest of the campus.

1 Fontana Metrolink station
2 Corner of Sierra and Merrill Avenues
3 Existing drop-off zone along Merrill Avenues
4 Corner of Merrill and Juniper Avenue


PACIFIC ELECTRIC BIKE TRAIL
ARROW ROUTE
MERRILL AVE
CHAFFEY COLLEGE
FONTANA CAMPUS
DATE ELEMENTARY SCHOOL
FONTANA AVE
CITRUS AVE
SIERRA AVE
PALMETTO AVE
RANDALL AVE
CITRUS ELEMENTARY SCHOOL
FONTANA HIGH SCHOOL
RANDALL-PEPPER SCHOOL
PALMETTO ELEMENTARY SCHOOL
LOCAL CONTEXT + COMMUNITY
CHAFFEY COLLEGE - FONTANA CAMPUS
COMMERCIAL
PUBLIC
RECREATIONA/OPEN SPACE
RESIDENTIAL USE
INDUSTRIAL
SCHOOL CAMPUS
FREEWAY
MAIN STREETS
METROLINK
CITY BOUNDARIES

Campus Development History

In 1996 Chaffey College opened the Fontana Education Center on Merrill Avenue in a building that used to be a hardware store. Enrollment increases allowed the college to open a second 10,000 sq. ft. building, the Ralph M. Lewis Center, in January 2007. In 2011 the Fontana Campus dedicated a 30,000 square foot academic center, making it the third building on the Fontana Campus. The campus provides a full array of student services and instruction in a multitude of general education and occupational courses. Students have access to a multidisciplinary student assistance center and two up-to-date multipurpose computer labs.

CAMPUS DEVELOPMENT HISTORY

1960-1969

2000-2009

Facilities Condition Assessment

Chaffey College participates in the California Community College Facility Condition Assessment program, which includes a tool for the assessment of existing community college buildings and the planning repair work. The Facility Condition Index (FCI) is the ratio of the cost of addressing all of the facility's deficiencies versus that facility's replacement value. The FCI was calculated for each existing facility. Facilities were placed in one of the three categories.

- Good Condition indicates an FCI of less than 30% (Green)
- Fair Condition indicates an FCI of 31% to 60% (Yellow)
- Poor Condition indicates an FCI of greater than 60% (Red)

Decisions regarding renovation versus replacement of existing facilities are incorporated into the *Recommendations*.

One of three permanent building in Campus was built in the 1950's and is in poor condition.

FACILITIES CONDITION ASSESSMENT

FCI < 60% (good condition)

FCI >30% (poor condition)

Existing Conditions

Campus Zoning

The diagram on this page illustrates the location of the functions which are on this campus including administrative spaces and instructional spaces. The majority of building space on the campus is used for instruction.

OBSERVATIONS:

- Fontana Center (FNFC) has both administration and instructional spaces.
- Spaces in FNFC need to be remodeled for tutorial space.
- There is a need for general multi-purpose space.
- The campus has limited student services. There is a need to balance support services.
- The campus has too much hardscape.
- There is a lack of shaded outdoor areas for the students.

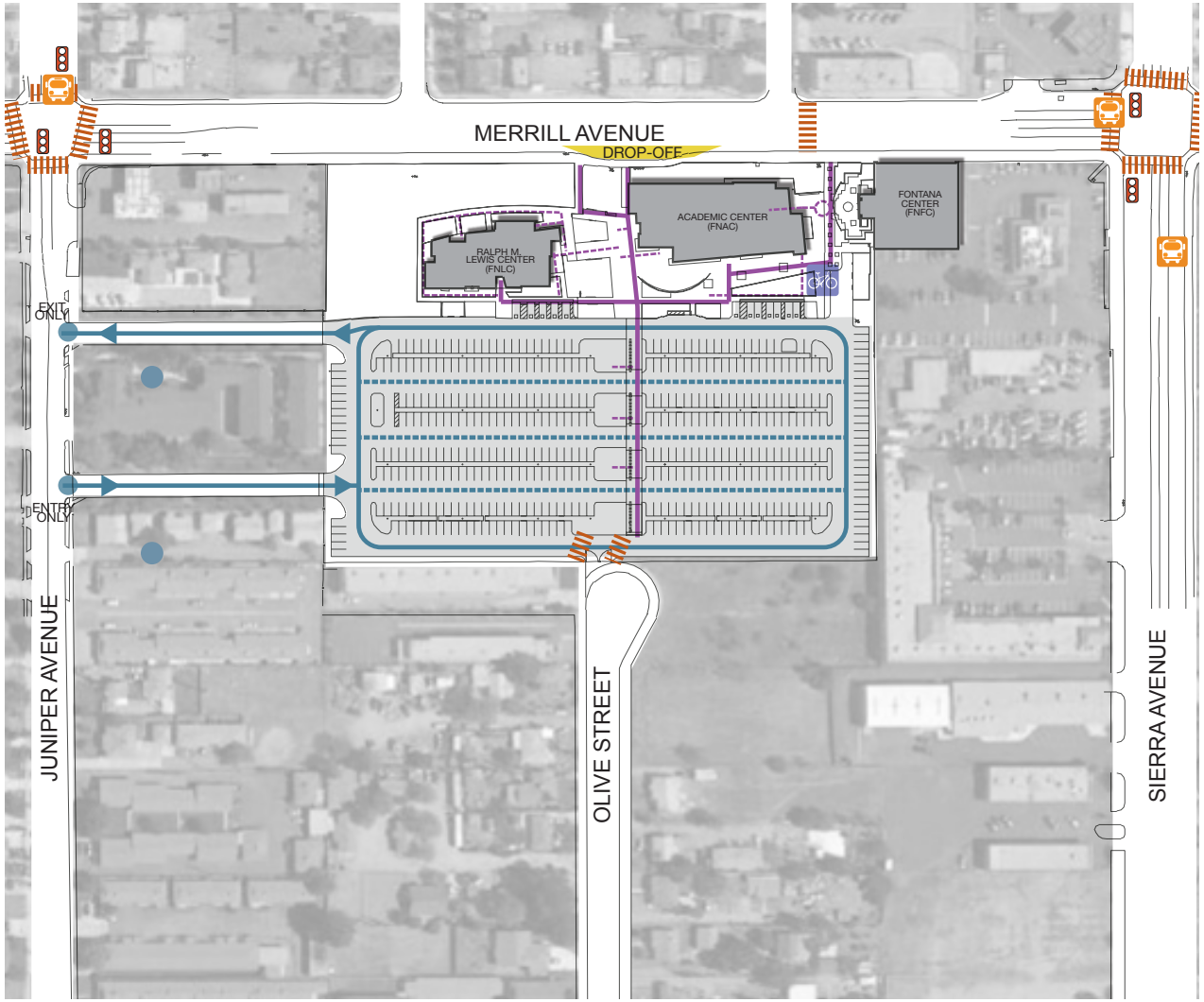
CAMPUS ZONING

ADMINISTRATION

INSTRUCTIONAL

EXISTING VEHICULAR + PEDESTRIAN CIRCULATION

EXISTING FACILITIES
DROP-OFF
CAMPUS ENTRY
PRIMARY VEHICULAR ROUTE
SECONDARY VEHICULAR ROUTE
PRIMARY PEDESTRIAN ROUTE
SECONDARY PEDESTRIAN ROUTE
CROSSWALK
BUS STOP
TRAFFIC LIGHT
BICYCLE



Circulation

The plan on this page illustrates the existing vehicular and pedestrian circulation patterns. Bus stops exist at the intersection of Sierra and Merrill Avenues. Some students use public transportation, but most students drive to this campus.

There is a lack of signage indicating the main pedestrian entrance from Merrill Avenue. The main vehicular entrance is on Juniper Avenue, where there is a dedicated entrance lane and exit lane. The campus is currently fenced off at three sides of the parking lot. The single parking lot provides sufficient parking for the students.

OBSERVATIONS:

- There is a need for better signage. The address for the campus is on Merrill Ave, but the vehicular entrance is off a residential street, Juniper Avenue.
- Most of the property is dedicated to surface parking, and not for instructional spaces.
- It is difficult to find the entrance of the campus; no clear signage.
- There is adequate parking on campus.
- The drop-off zone on Merrill Avenue is dangerous, and is in an awkward location.
- Double gates at the end of Olive Street are locked and not used as entrance to campus.

Existing Conditions

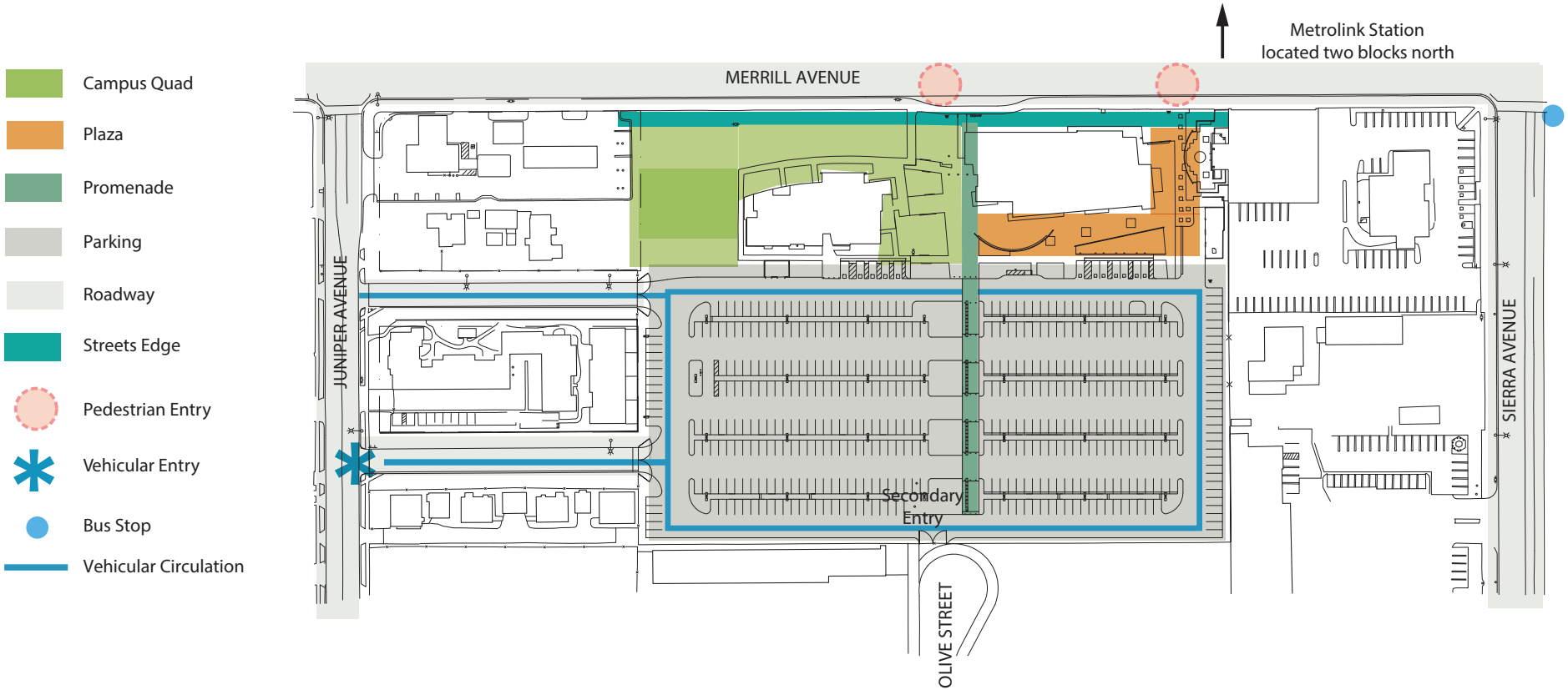
Landscape Character

The Fontana campus sits in a moderately dense neighborhood, set off the main street and invisible except on Merrill Avenue. The main vehicular entry is off of Juniper Street, a neighborhood residential street, with a secondary vehicular entrance on the cul-de-sac, Olive Street. The lack of presence on Sierra Avenue, the main north-south artery, is a missed opportunity for Chaffey College to gain visibility in the community and make it easier for prospective students to find the campus.

OBSERVATIONS:

- The campus has too much hardscape.
- There is a lack of shaded outdoor areas for the students.
- Parking lots have no shading for parking vehicles.
- A tree-lined bio-swale runs through the center of the parking lot.

1 Bio-swale at Parking Lot
2 Academic Center - Outdoor Gathering Space
3 Entrance Signage on Juniper Avenue
4 Existing landscape


Campus Quad
Plaza
Promenade
Parking
Roadway
Streets Edge
Pedestrian Entry
Vehicular Entry
Bus Stop
Vehicular Circulation
Metrolink Station
located two blocks north
MERRILL AVENUE
JUNIPER AVENUE
SIERRA AVENUE
OLIVE STREET
Secondary
Entry

SUMMARY OF FINDINGS

The Fontana Campus presents advantages, opportunities, and challenges as noted on the previous pages. To plan for the future, the FMP addresses the challenge to maximize its functional space and eliminate its non-functional spaces – focusing on the renovation of aging facilities that are not supporting effective learning environments and are costly to maintain and operate.

The FMP addresses the needs of the projected student population by providing effective space for instruction, support services, and parking. Integrated with these challenges is the opportunity to enhance and complete the campus environment and integrate its unique parts into a cohesive whole.

Key Campus Planning Challenges

01 **Clear Vehicular Access:** The main vehicular entrance is unclear and easily missed. There is a lack of signage from Merrill and Sierra Avenue for wayfinding.

02 **Lack of Visual Identity:** The Fontana Campus lacks presence and identity in the City of Fontana in large part because the campus is tucked behind a dense commercial corridor along Sierra Avenue. The campus is currently only visible from Merrill Avenue.

03 **Underused Open Spaces:** The campus lacks student activity zones in the outdoor spaces. There is a lot of hardscape area with very little shade. Much of the existing open spaces are underused because it is too uncomfortable for the students to use with the lack of shaded areas.

04 **Gusty Winds:** The velocity of the winds flowing through the campus often renders outdoor space uncomfortable or unusable.

05 **Dispersed Student Services:** Spaces for Student Services and Library are dispersed in different buildings.


Chaffey College
Campus Store
books.chaffey.edu
Chaffey College
Fontana
Campus Store
Featuring
The Coffee Bean
THE ORIGINAL
FNAC-119
Conference Room
PROMOP

Recommendations

Recommendations

RECOMMENDATIONS

The Facilities Master Plan Recommendations for the Fontana Campus present an overall picture of the future developed campus and include proposed sites for new facilities and site development projects. The recommendations described in this section address the discussion that took place during the planning process.

While drawings in the plans appear specific, the forms are conceptual sketches that highlight the location and purpose of improvements. The final design of each site and facility project will take place as projects are funded and detailed programming and design occurs.

SUMMARY
OF RECOMMENDATIONS

The recommendation for new construction projects are included in the following pages. These projects address the facilities planning priorities of eliminating non-functional space and replacing the oldest and most aged facilities with new facilities.

These projects address the following facilities planning principals:

- Maximize functional space
- Eliminate non-functional space
- Improve efficiency/utilization of facilities
- Right –size the campus to address program needs
- Improve campus identity
- Position the District to maximize potential funding (state and local)
- Simplify Implementation

The Fontana Campus is currently in discussion with the City of Fontana and adjacent property owners for land opportunities or acquisition allowing for future expansions of the Fontana Campus. The parcels of land that may be available for the College are along Sierra Avenue up to Athol Street. In addition, the parcel with the existing gas station at the corner of Merrill Avenue and Juniper Avenue may also be available for the College to acquire.

This section describes the building and the site projects identified in the FMP and consist of the following elements:

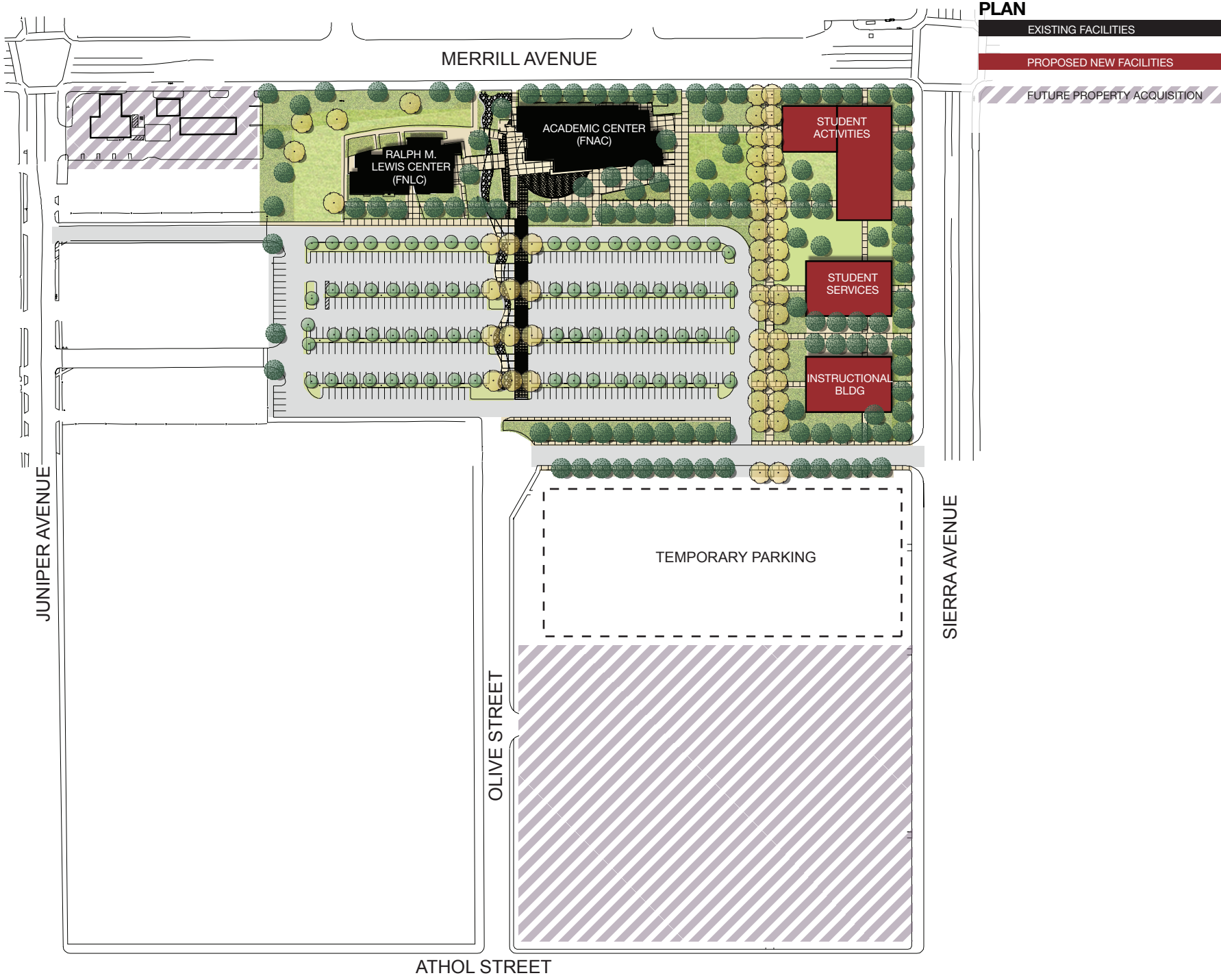
FACILITIES RECOMMENDATIONS

/ 2025 Facilities Master Plan
/ Beyond 2025
/ Demolition and Removal
/ New Facilities

SITE IMPROVEMENT RECOMMENDATIONS

/ Landscape Concept Plan
/ Landscape Plan
/ Landscape Character
/ Circulation

2025 FACILITIES MASTER PLAN



Facilities Recommendations

Beyond 2025

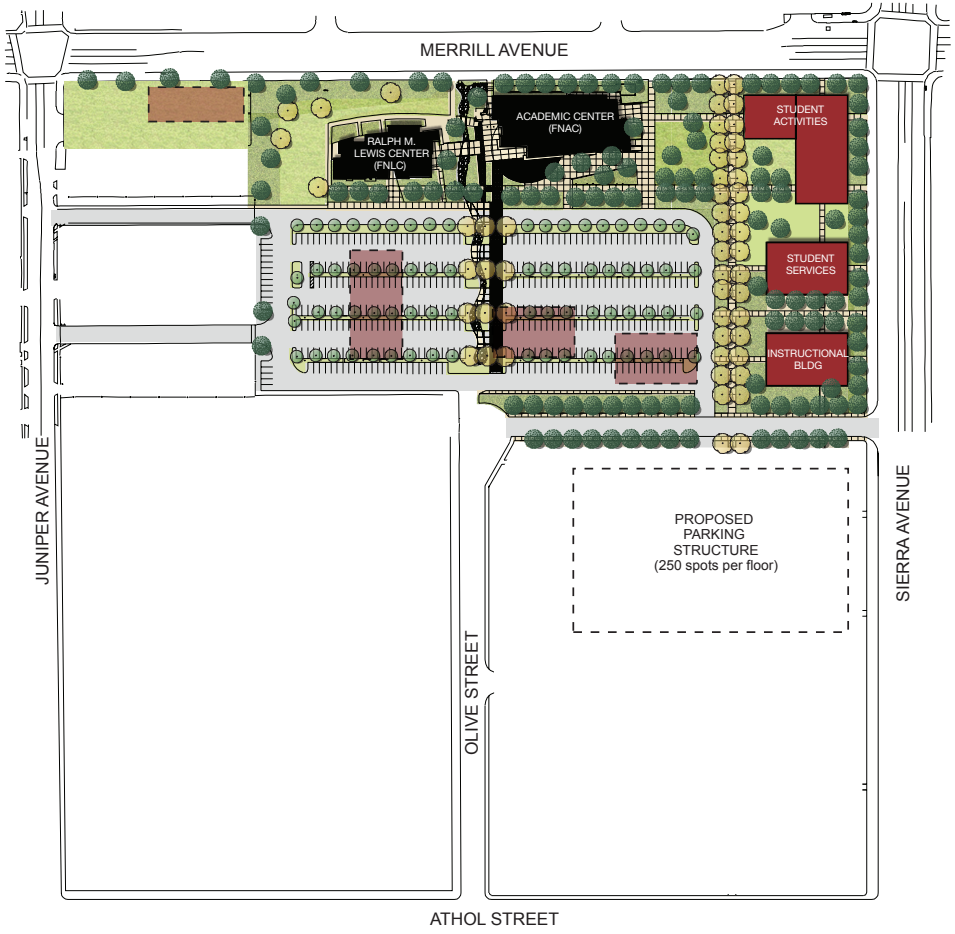
The adjacent diagrams illustrate two options for campus development for Beyond 2025 assuming the College has acquired all land parcels. The College's Educational Master Plan will determine the needs for future buildings.

BEYOND 2025 - OPTION 1

EXISTING FACILITIES

PROPOSED NEW FACILITIES

FUTURE FACILITIES

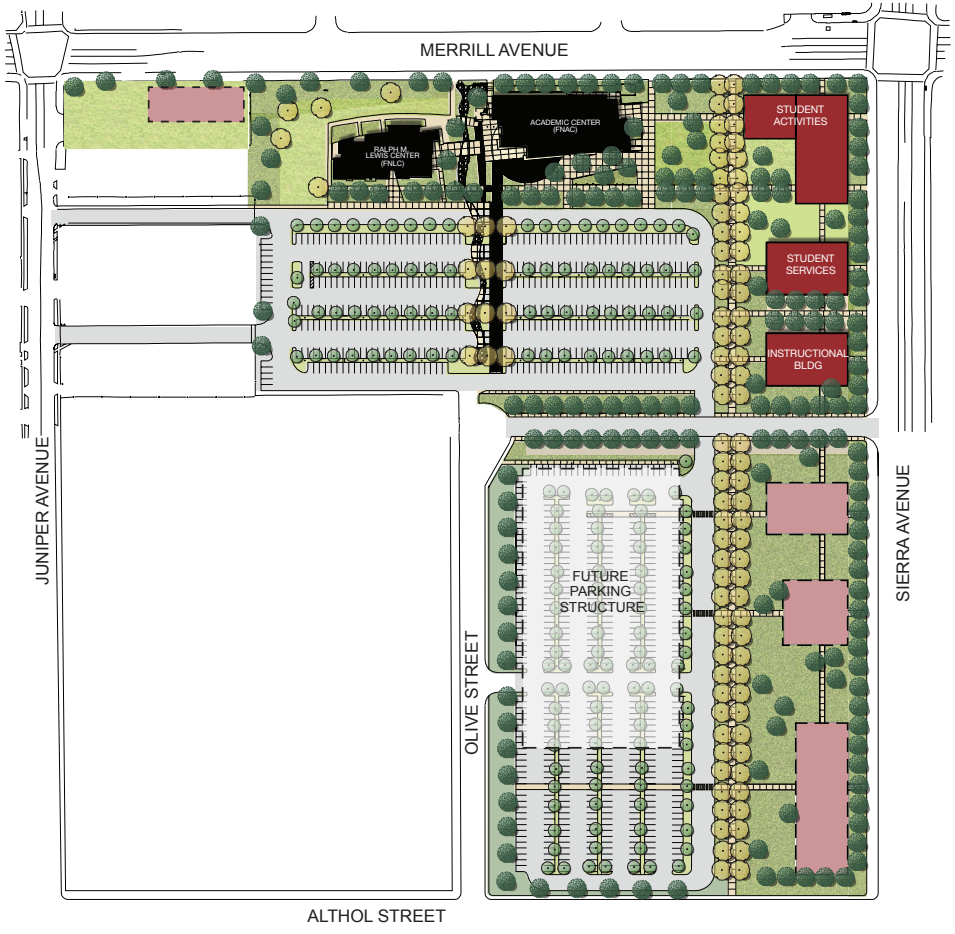


BEYOND 2025 - OPTION 2

EXISTING FACILITIES

PROPOSED NEW FACILITIES

FUTURE FACILITIES



Option 1

This option illustrates all facilities are clustered on the north side of the campus creating a series of central courtyard space linked with tree-lined pedestrian walkways. Surface parking lots are to be south of the proposed new entry at Sierra Avenue. A future parking structure could be considered as the enrollment increases with the campus expansion.

Option 2

This option illustrates the campus growing along Sierra Avenue creating an urban edge. Sierra Avenue is lined with commercial retail use. With the new buildings forming the urban edge, it gives the campus a face and presence in the city of Fontana. The tree-lines pedestrian walkways serve as the primary circulation linking the buildings. Parking lots are planned to be in the interior of the campus, but are easily accessible from Olive Street. A future parking structure could be considered as the enrollment increases with the campus expansion.

Facilities Recommendations

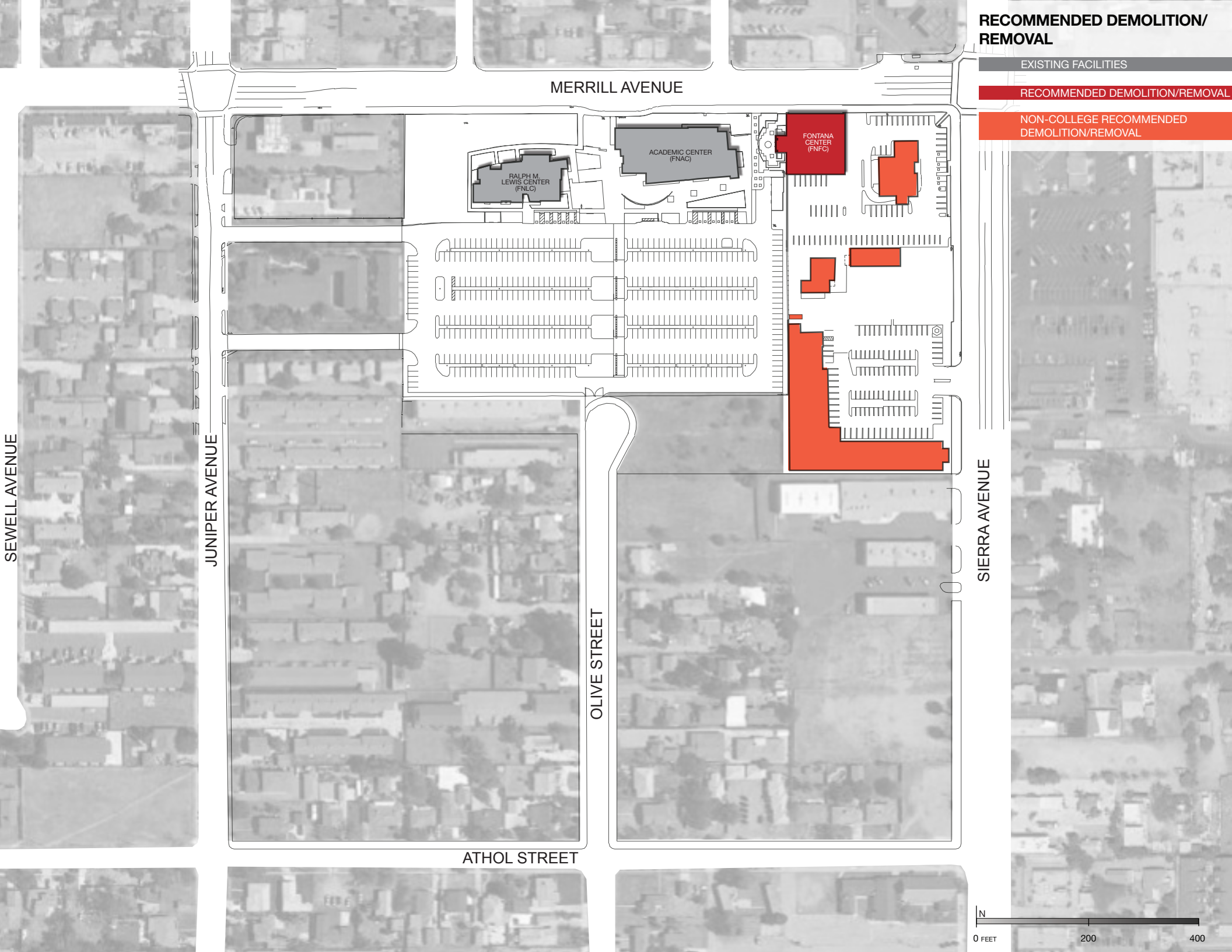
Demolition/Removal

Fontana Center was originally a hardware store and is the oldest building on campus. From the analysis of the planning data, the FCI rating indicates that Fontana Center is in poor condition. Based on these factors, the recommendation is to demolish Fontana Center and construct a new Student Activities Building on Merrill Avenue.

The FMP for Fontana Campus recommends demolition of the following:

- Fontana Center
- Non-college buildings

1 FNFC-Fontana Center


RECOMMENDED DEMOLITION/ REMOVAL
EXISTING FACILITIES
RECOMMENDED DEMOLITION/REMOVAL
NON-COLLEGE RECOMMENDED DEMOLITION/REMOVAL
MERRILL AVENUE
RALPH M. LEWIS CENTER (FNLC)
ACADEMIC CENTER (FNAC)
FONTANA CENTER (FNFC)
SEWELL AVENUE
JUNIPER AVENUE
OLIVE STREET
SIERRA AVENUE
ATHOL STREET
N
0 FEET
200
400

New Facilities

Student Activities

Since Fontana Campus is a satellite campus, many of the spaces in the Ralph M. Lewis Center, Academic Center and Fontana Center contain multiple functions. This new facility replaces the Fontana Center Building and will contain a hybrid of spaces, with its primary focus on student support services, library, student success centers, and tutorial spaces.

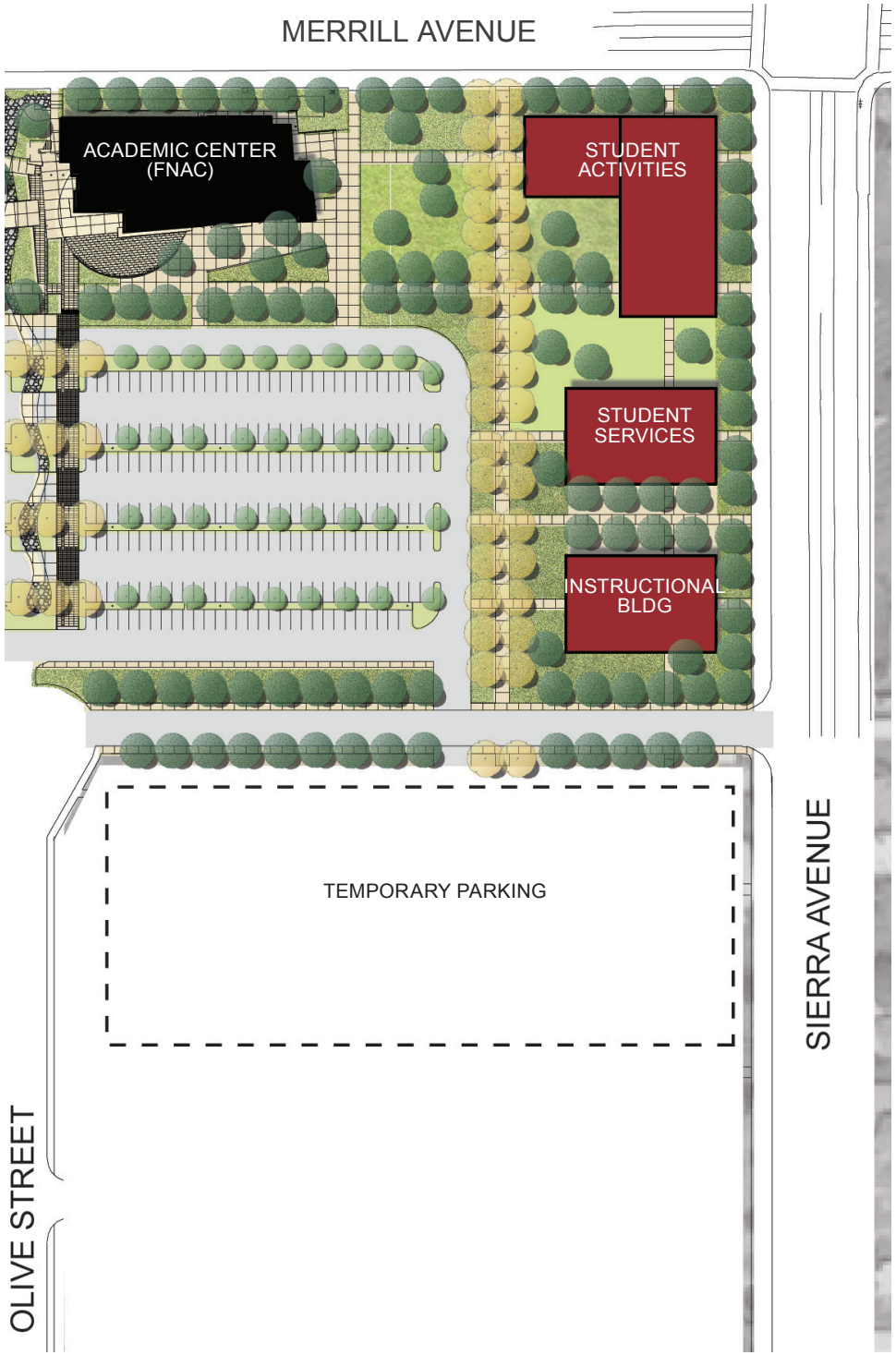
This corner building is oriented in the north-south direction along Sierra Avenue to help limit the disruption to the campus and programs. The building can be in construction and completed prior to the demolition of Fontana Center which reduces the need for swing space costs and eliminates the need for temporary moves. Located at the corner of major city streets, the building provides the College the opportunity to create an architectural statement and/or prominent signage.

Student Services

A Student Services building is recommended to be adjacent to the Student Activities building. Together, these buildings will create a central location for students to gather and provide a space to enrich their campus experience. The position of these buildings not only provides shade during the summer months, but also help block the Santa Ana winds from the north-east direction. Some of the functions recommended in this building are food services, bookstore, health services, admissions, counseling, and Disability Programs and Services (DPS) spaces.

Instructional Building

The planning data for the Master Plan indicates the need for additional instructional space. The recommended instructional building will include general instructional space, specialized labs, additional collaboration spaces, and career development spaces. The new instructional building is located to the south of the Student Services building along Sierra Avenue. The location of this building establishes the growth pattern as the campus acquires land and grows to the south.



Site Improvements Recommendations

Overview

When creating a campus environment, both the architectural language and the landscape language are of equal importance. Campus landscape connects the buildings on a campus and, by design is the unifying element that creates the campus as a whole.

The site improvement recommendations address the key site issues identified in the analysis of existing conditions and planning for sustainability by incorporating more water and energy-efficient landscaping.

The following graphics illustrate:

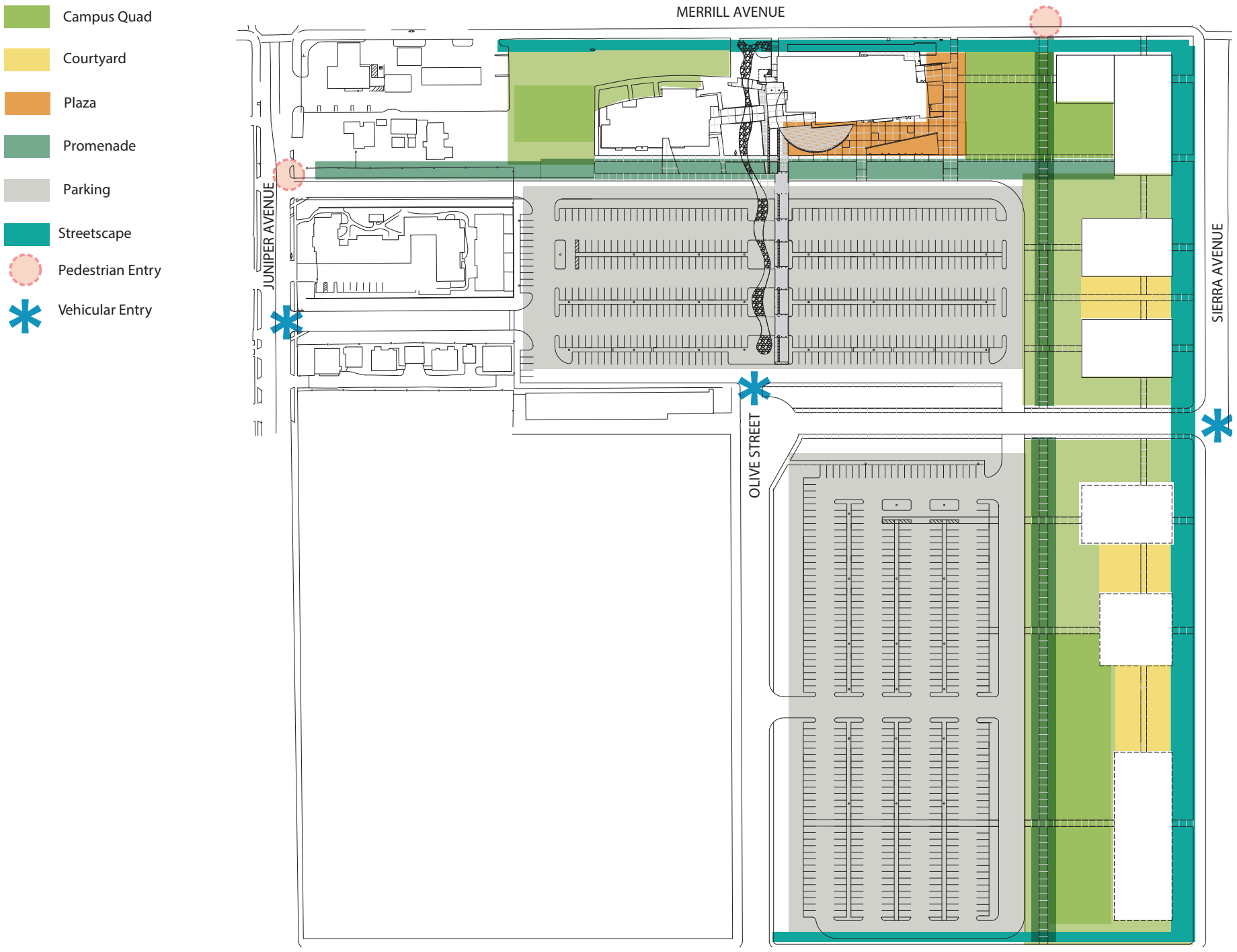
- Landscape Concept Plan
- Landscape Plan
- Landscape Character
- Circulation

Site Improvement Recommendations

Landscape Concept Plan

The new proposed Fontana Campus landscape plan creates two new pedestrian promenades to organize circulation and ease wayfinding through campus. A new campus quad occupies the center of campus, with a courtyard between the two southernmost proposed buildings and planned for potential future expansion. A new vehicular entry and campus streetscape edge along Sierra increase campus visibility to the community.

The Concept Plan shows the campus at its potential full buildout, beyond the 2025 plan.


Campus Quad
Courtyard
Plaza
Promenade
Parking
Streetscape
Pedestrian Entry
Vehicular Entry
MERRILL AVENUE
JUNIPER AVENUE
OLIVE STREET
SIERRA AVENUE

Site Improvement Recommendations

Landscape Plan

Chaffey College's Fontana campus landscape plan creates an organized and context-appropriate framework for the college's future development.

Large canopy trees shade the sidewalk and create an urban streetscape along Sierra and Merrill Avenues. The North-South promenade parallels Sierra Avenue with a double row of trees to create a pedestrian-scaled campus spine. The East-West Promenade connects the campus's existing two buildings with the new quad and expanded campus. The plan draws upon Chaffey College's overall landscape vision for a contextually-relevant, resource-efficient campus identity.

LANDSCAPE PLAN

LEGEND

The landscape plan organizes campus into clearly defined spaces to ease wayfinding and strengthen campus identity.

1. East-west promenade
2. North-south promenade
3. Quad
4. Courtyard
5. Parking lot

Landscape Character

A framework of promenades planted with shade trees organizes the campus and eases wayfinding.

Specific design recommendations include the following:

- Provide a variety of gathering space sizes to encourage outdoor meetings, studying and socializing.
- Plant large trees at campus entries to establish a strong campus identity and aid in wayfinding from the street and parking lots.
- Plant large canopied trees along both sides of the promenades, to provide shade, habitat and aid in wayfinding and campus identity.
- Plant large canopy trees in parking lots to reduce the heat island effect and help take up and treat stormwater runoff.
- Plant large canopied evergreen trees to provide year-round shade in this sunny semi-arid climate.
- Limit turf grass to the quads where students, faculty and staff congregate for informal recreation, studying and large events.
- A mix of large canopied deciduous and evergreen shade trees in turf areas will provide an important variety of shady and sunny places.
- Rely on resilient native and Mediterranean plant species to minimize water used in irrigation and provide important habitat for beneficial insects and birds.
- Select plants for their mature size to allow shrubs to maintain their natural size and character. Locate plants far enough away from walks and buildings to prevent the need to be hedged or sheered.
- Encourage integrated pest management and organic plant management to minimize the use of chemical pesticides, herbicides and fertilizers.
- Use alternative groundcovers such as gravel or mulch to reduce water use while conserving soil moisture and permeability.
- Use nature as a guide in Low Impact Development (LID) strategies to reveal the flow and treatment of stormwater and provide educational opportunities.

1 Courtyard shade trees
2 Native flowering shrubs
3 Gravel groundcover
4 Shady and sunny Quad
5 Massed groundcover planting
6 Low Impact Development (LID)

Site Improvement Recommendations

Circulation

Vehicular Circulation

The vehicular circulation recommendations redefine the main entrance to the campus. With the opportunity for the College to acquire additional parcels of land along Sierra Avenue, the entrance and campus presence is greatly improved. With the proposed main vehicular entrance from Sierra Avenue, a new driveway is flanked on both sides with existing parking and new temporary parking. Vehicles entering into campus have direct access to both the existing and new surface parking lots. The original points of entrance and exit from Juniper Avenue are maintained, but serve as secondary access points.

Vehicular circulation improvements are recommended to promote safe and efficient circulation and clear wayfinding. The improvements focus on the following:

- Provide a clear campus entrance from Sierra Avenue
- Allow Fontana Campus to have a presence in the community
- Provide convenient student parking close to the Student Services Building and Instructional Buildings.

Pedestrian Circulation

The growth pattern for Fontana Campus depends on the rate Chaffey College will be able to acquire the adjacent land parcels. The organization of the campus naturally follows a grid like pattern, as the buildings create an urban edge along Sierra Ave and Merrill Ave. Buffering between the buildings and the surface parking lots are tree lined promenades that become the primary pedestrian pathways linking the buildings. These pedestrian pathways link to a share node, which will be a shaded student gathering space. This node or shared outdoor space is adjacent to the new student services building. With the position of the new student services building, the gathering space is shielded from the extreme heat and wind that occur throughout the year.

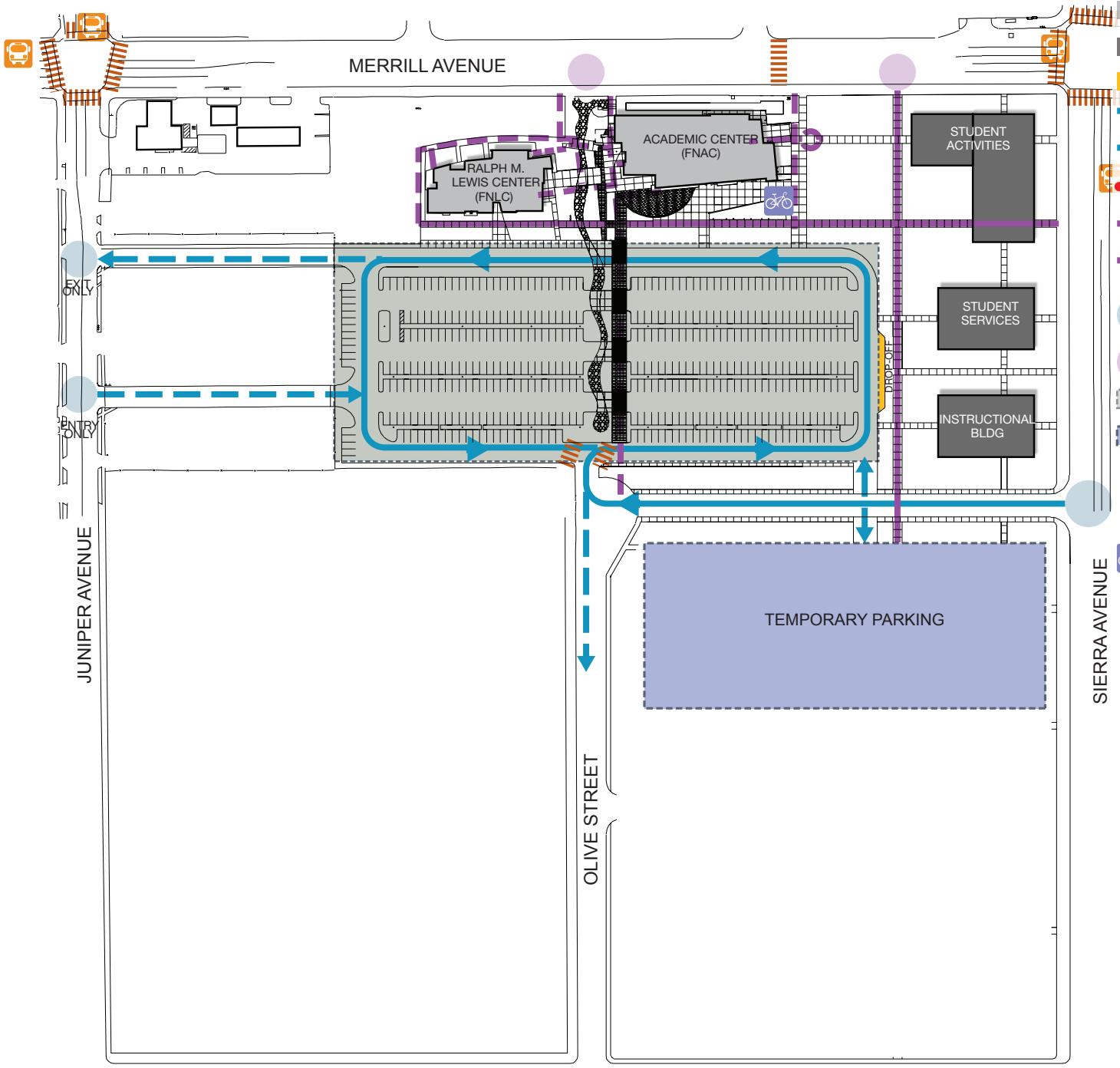
Parking

The FMP indicates the need for 457 additional parking stalls based on the increased square footage in the 3 new facilities. As land parcels are acquired by the College, the new entrance driveway off of Sierra Avenue defines the limit to the recommendation. A new parking lot is recommended on the other side of the new main entrance driveway.

PARKING: CURRENT AND PROJECTED

	Headcount	Parking spaces
Baseline (2013)	3,270	463
Master Plan (2025)	4,600	920 (@1:5)

RECOMMENDED CIRCULATION



EXISTING FACILITIES

PROPOSED NEW FACILITIES

DROP-OFF

PRIMARY VEHICULAR ROUTE

SECONDARY VEHICULAR ROUTE

EMERGENCY ROUTE

PRIMARY PEDESTRIAN ROUTE

SECONDARY PEDESTRIAN ROUTE

VEHICULAR CAMPUS ENTRY

PEDESTRIAN CAMPUS ENTRY

EXISTING PARKING

PROPOSED NEW PARKING

CROSSWALKS

BUS STOPS

TRAFFIC SIGNALS

BICYCLE

N

0 FEET 350 700


Chaffey College
Fontana Campus

CHINO

CHINO

OVERVIEW

This chapter includes a series of graphic plates and narrative descriptions that illustrate the physical characteristics and usage of the existing Chino Campus, and describes the important aspects of the physical context.

Through this examination, key planning challenges and opportunities were identified in order to frame the exploration of options and inform the development of facilities recommendations.

EXISTING CONDITIONS

- / Local Context and Community
- / Development History
- / Facilities Condition Assessment
- / Campus Zoning
- / Circulation
- / Landscape Character
- / Summary of Findings

RECOMMENDATIONS

- / Summary of Recommendations
- / Beyond 2025
- / New Facilities
- / Landscape Concept Plan
- / Landscape Plan
- / Landscape Character
- / Circulation


Chaffey College

Existing Conditions

Existing Conditions

EXISTING CONDITIONS

The planning process began with information and data collection and campus tours. The planning team listened to the insights of multiple stakeholders regarding the condition and functionality of the existing campus and overlaid this with their own research and observations.

After completing the site and facilities analysis of the existing campus, key issues were identified that are addressed in the Facilities Master Plan (FMP).

The findings are summarized in a series of graphic plates that illustrate patterns and characteristics to be considered in the planning of future development.

1 Chaffey College Community Center (CHCM)
2 Main Instructional Building (CHMB)
3 Health & Science Center (CHHC)

Existing Conditions

Local Context and Community

The Chino Campus is located in the southwestern corner of San Bernardino County, in the City of Chino, near the cities of Chino Hills, Yorba Linda, Pomona, Ontario, Norco, and Corona and within one of the most rapidly growing areas of the state. The campus is situated in the Chino Valley, a shallow, broad basin that gently slopes south-southwest.

The Chaffey College Chino Campus includes five buildings: three of which are at the College Park location and two buildings are at the downtown Chino location. This Master Plan only addresses the buildings at the College Park location.

The campus provides a full array of student services including admissions, cashiering, financial aid, academic counseling, and a full service bookstore. Students have access to a library, and a multidisciplinary Student Success Center serving students in all subjects.

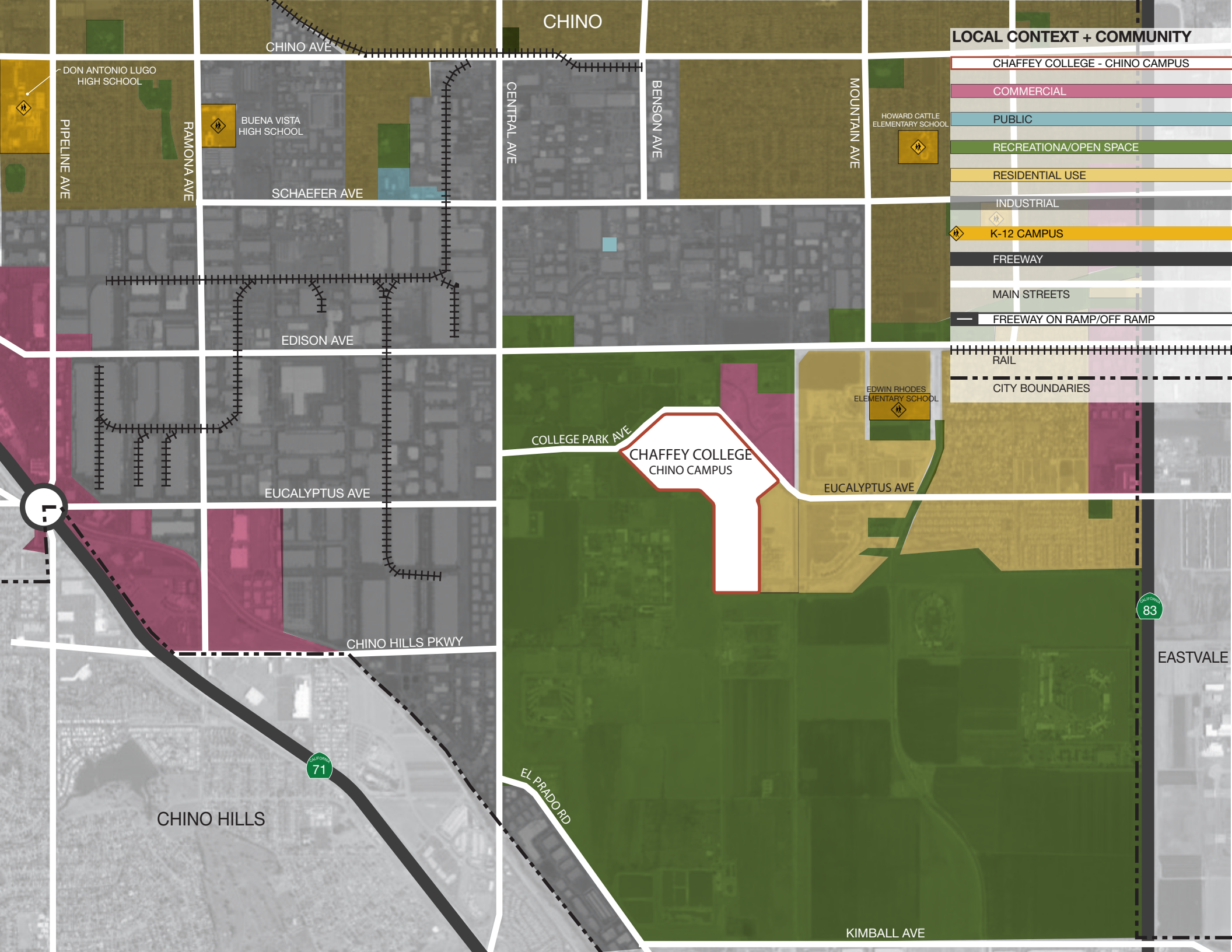
Located at the northeastern boundary of the College Park is the Chaffey College Chino campus. The area is currently owned by the State of California, set aside for the California Institution for Men (CIM). In 2003, the State of California Department of General Services (DGS) identified the 710-acre vacant portion of the California Institution for Men (CIM) facility surplus property.

As such, DGS proposes to convey, sell, or otherwise transfer the surplus property from state ownership to the three parties: City of Chino, Chaffey Community College District, and a private developer.

The City and its Community Development Department, Chaffey Community College District, and the DGS signed a Memorandum of Understanding to carry forth the planning, entitlement, and ultimately the development of the surplus property. The Specific Plan was prepared based on the project description provided within the Memorandum of Understanding. The City of Chino has prepared a Master Environmental Impact Report for the 710-acre site.

Of the 710-acre project, Chaffey College owns approximately 100 acres. In early 2003, the State of California General Services (CGS) commenced the private developer selection process for the purchase of the remaining 470-acre portion of the surplus land and development of a neo-traditional master planned community. The developer is working in conjunction with the City of Chino and Chaffey Community College District to provide an integrated mixed-use master planned community. This Specific Plan and other regulations, as adopted by the City, would control the land use development of the surplus property.

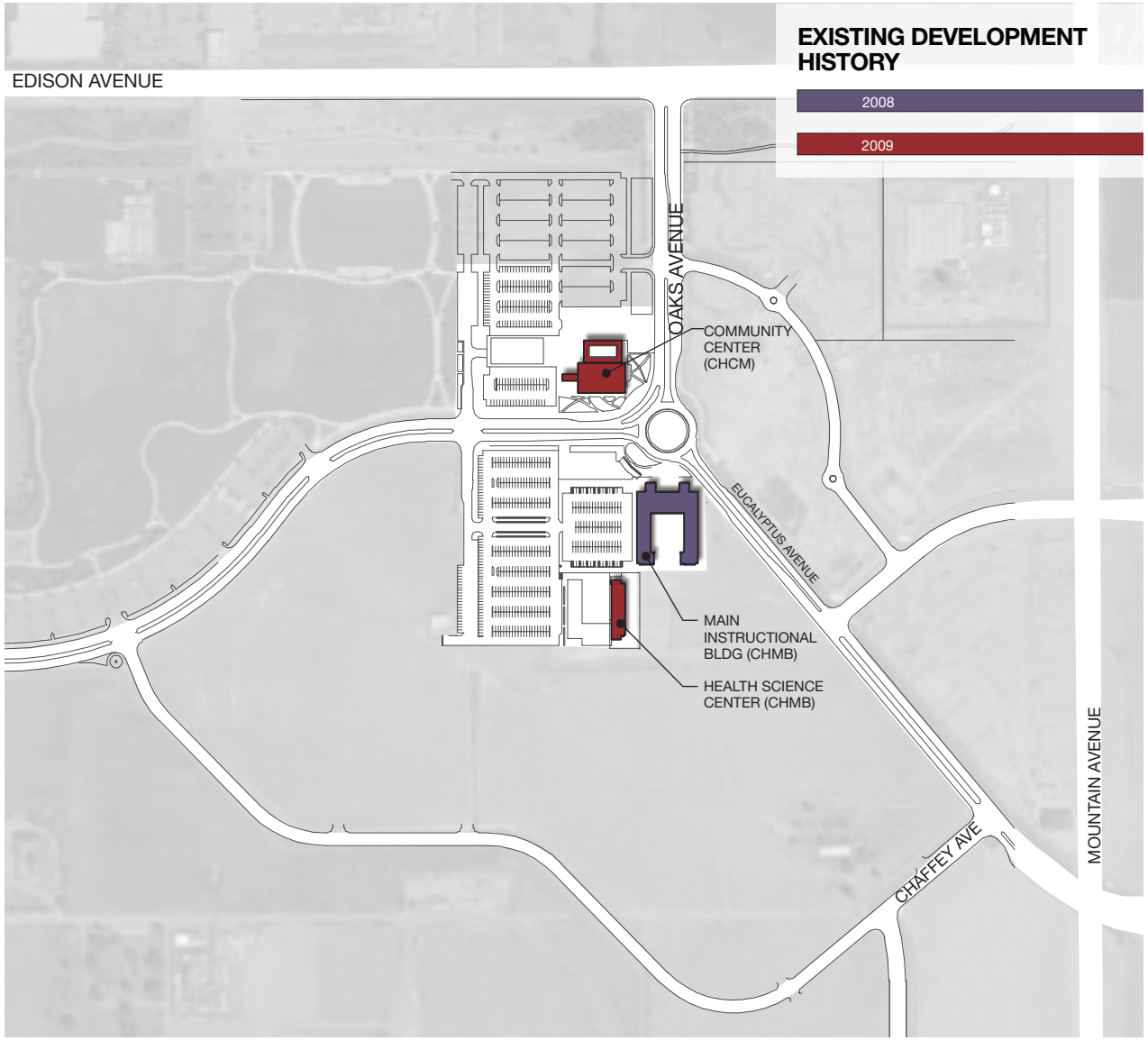
1 View to the South
2 View to the detention center
3 Conceptual rendering of College Park Recreation Center


CHINO
CHINO AVE
DON ANTONIO LUGO HIGH SCHOOL
PIPELINE AVE
RAMONA AVE
BUENA VISTA HIGH SCHOOL
SCHAEFER AVE
CENTRAL AVE
BENSON AVE
MOUNTAIN AVE
HOWARD CATTLE ELEMENTARY SCHOOL
EDISON AVE
EUCALYPTUS AVE
CHINO HILLS PKWY
CHINO HILLS
71
EDWIN RHODES ELEMENTARY SCHOOL
COLLEGE PARK AVE
CHAFFEY COLLEGE
CHINO CAMPUS
EUCALYPTUS AVE
83
EASTVALE
EL PRADO RD
KIMBALL AVE
LOCAL CONTEXT + COMMUNITY
CHAFFEY COLLEGE - CHINO CAMPUS
COMMERCIAL
PUBLIC
RECREATIONA/OPEN SPACE
RESIDENTIAL USE
INDUSTRIAL
K-12 CAMPUS
FREEWAY
MAIN STREETS
FREEWAY ON RAMP/OFF RAMP
RAIL
CITY BOUNDARIES

Campus Development History

In 2008 the Chaffey College Chino Campus opened. The 55,000-square-foot Main Instructional building (CHMB), was the beginning of a larger, long-term project to meet the needs of a growing population in the area. The Health Science Center (CHMB) and Community Center (CHCM) were both constructed in 2009.

2008 Aerial View



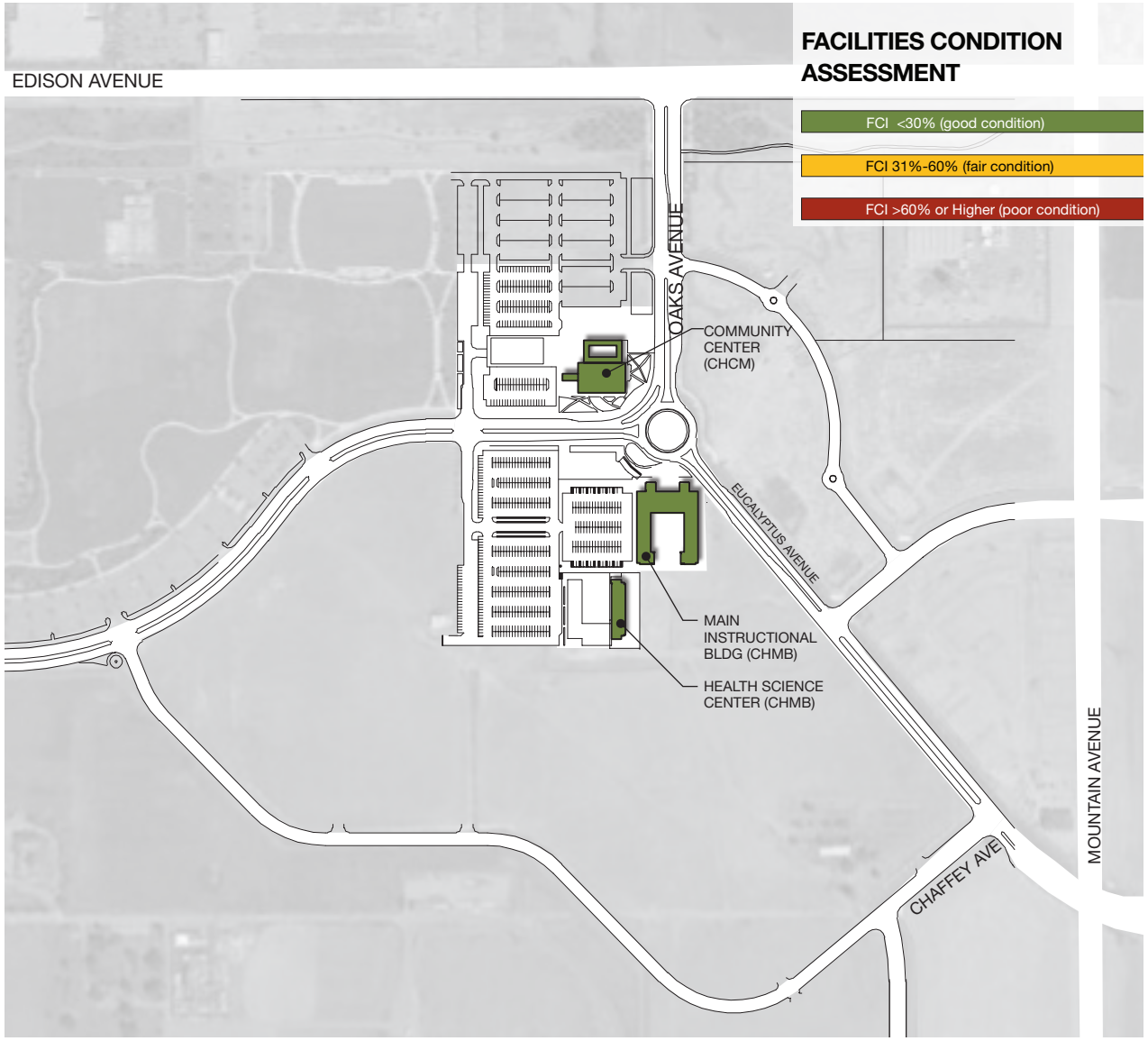
Facilities Condition Assessment

Chaffey College participates in the California Community College Facility Condition Assessment program, which includes a tool for the assessment of existing community college buildings and the planning repair work. The Facility Condition Index (FCI) is the ratio of the cost of addressing all of the facility's deficiencies versus that facility's replacement value. The FCI was calculated for each existing facility. Facilities were placed in one of the three categories.

- Good Condition indicates an FCI of less than 30% (Green)
- Fair Condition indicates an FCI of 31% to 60% (Yellow)
- Poor Condition indicates an FCI of greater than 60% (Red)

Decisions regarding renovation versus replacement of existing facilities were incorporated into the *Recommendations*.

Chino Campus has all new permanent facilities in good condition, and they are not in need of renovation.



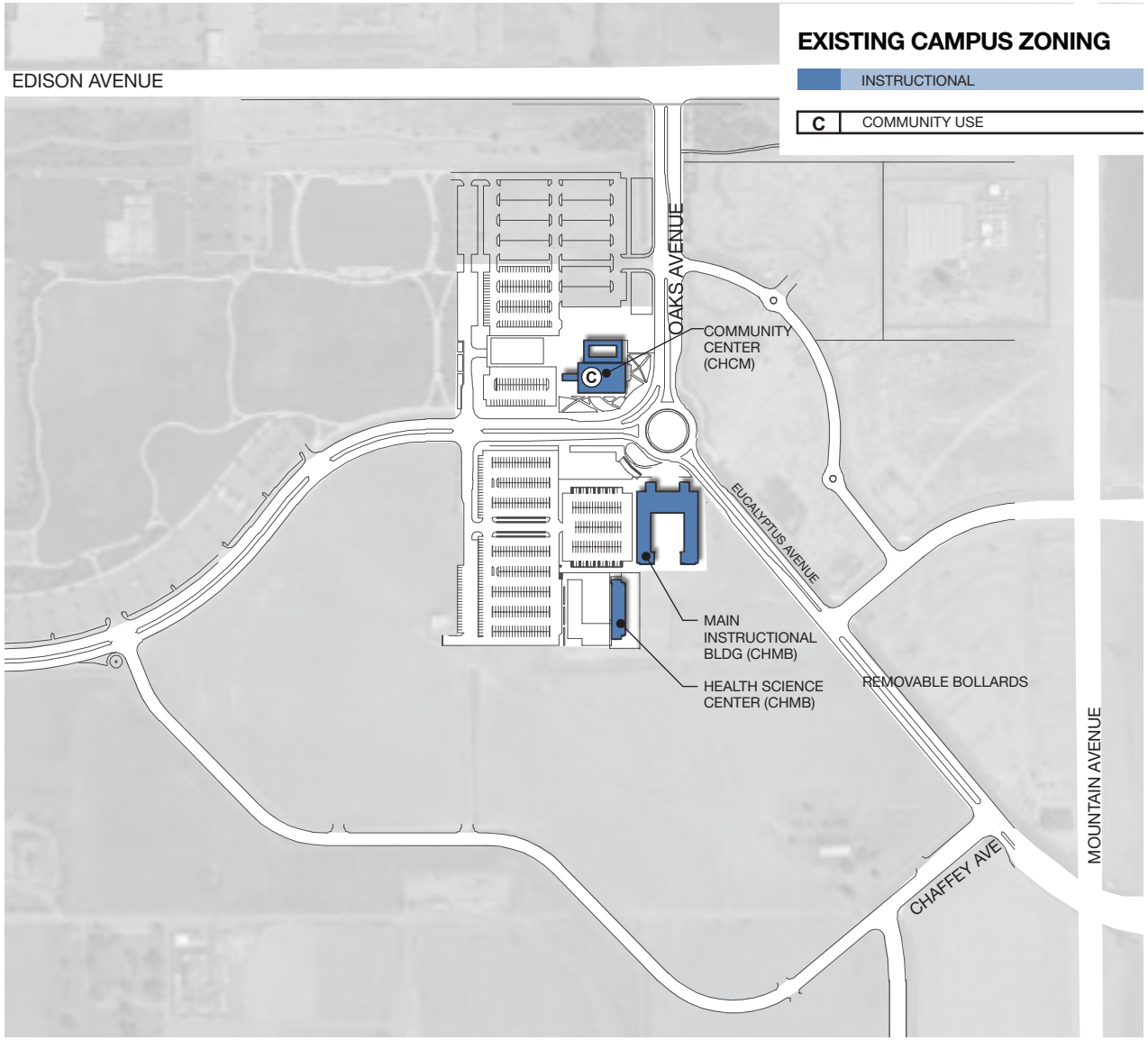
Existing Conditions

Campus Zoning

The campus provides a full array of student services including admissions, cashiering, financial aid, academic counseling, and a bookstore. Students have access to a library, and a multidisciplinary Student Success Center serving students in all subjects. Students are offered instruction in a multitude of general education and occupational courses. Students can complete the following courses uniquely at the Chino Campus: Vocational Nursing, Industrial Electrical Technology, CISCO, Hotel and Food Service Management, Fashion Design/Fashion Merchandising, and Interior Design.

OBSERVATIONS:

- Current focus on this campus is vocational nursing.
- A variety of programs are currently held in off-site facilities.
- This campus needs more student services such as student support services, DPS and food services.
- There is a need for maintenance and operations (M&O) spaces.



Circulation

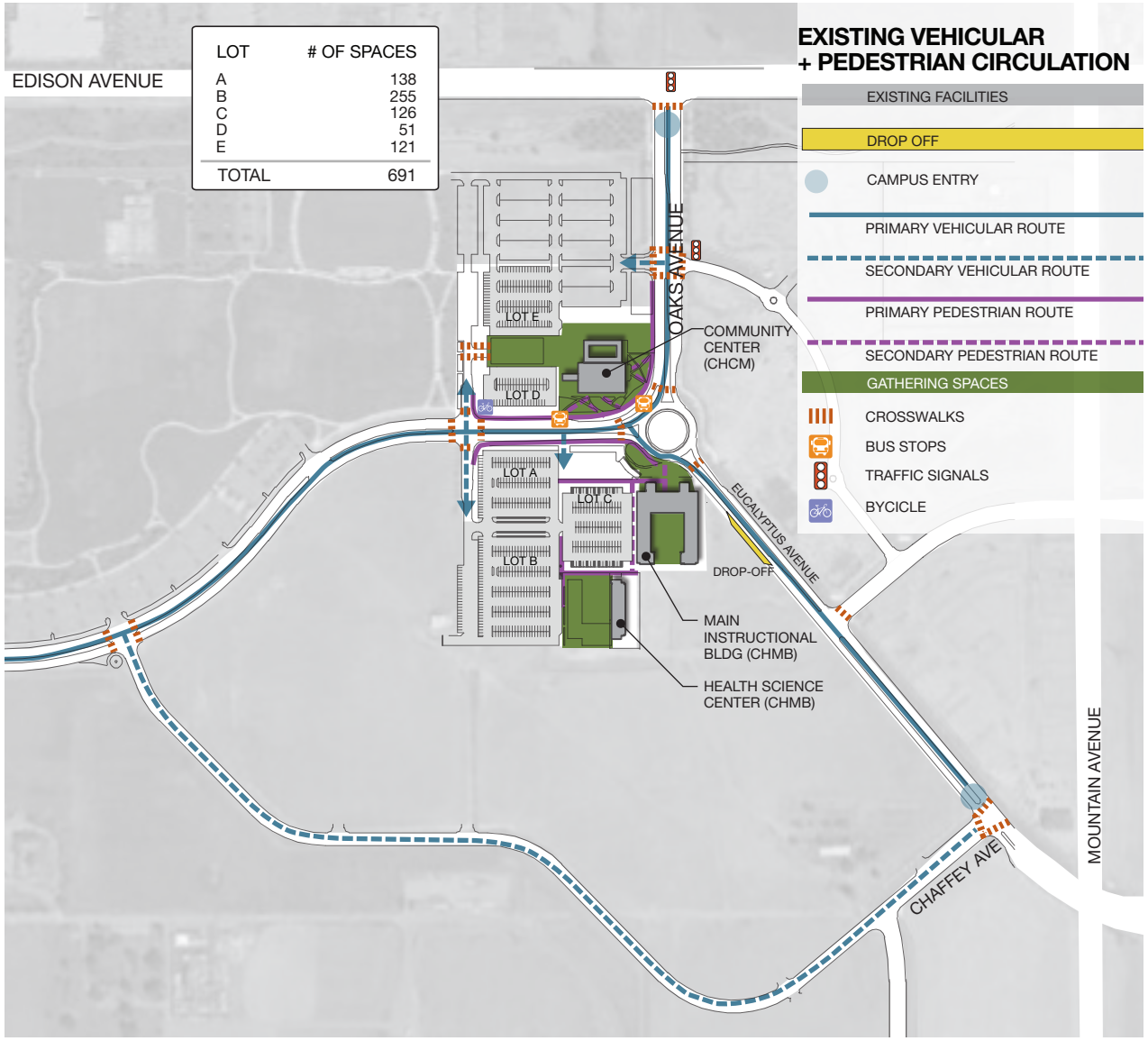
The plan on this page illustrates the existing vehicular and pedestrian circulation patterns. Bus stops exist at the intersection of Oaks and Eucalyptus Avenue, however most students drive to this campus.

There is a lack of signage indicating the main vehicular entrance from Edison Avenue and Central Avenue. The campus is confusing to navigate because most students and visitors to the campus take Central Avenue and enter at College Park Avenue. Central Avenue is a longer/ scenic route through College Park to Chino Campus. The Edison Avenue entrance is the main vehicular entrance and a shorter/direct route to the campus.

With the recent development of housing on the east side of Eucalyptus Avenue, there is an increased amount of vehicular traffic from the southeast direction.

OBSERVATIONS:

- The main vehicular entrance is from Edison Avenue
- There is a need for clear signage to the Chino Campus
- The current parking count is sufficient.



Existing Conditions

Landscape Character

The Chino campus is located amid newly developing neighborhoods and remnant agricultural fields. The transitional quality is exemplified by the campus' two academic buildings sited in fallow fields and a half developed landscape. A courtyard with small ornamental trees and a plaza without trees await future development that will bring important shade and a more collegial feel with the vision of the master plan.

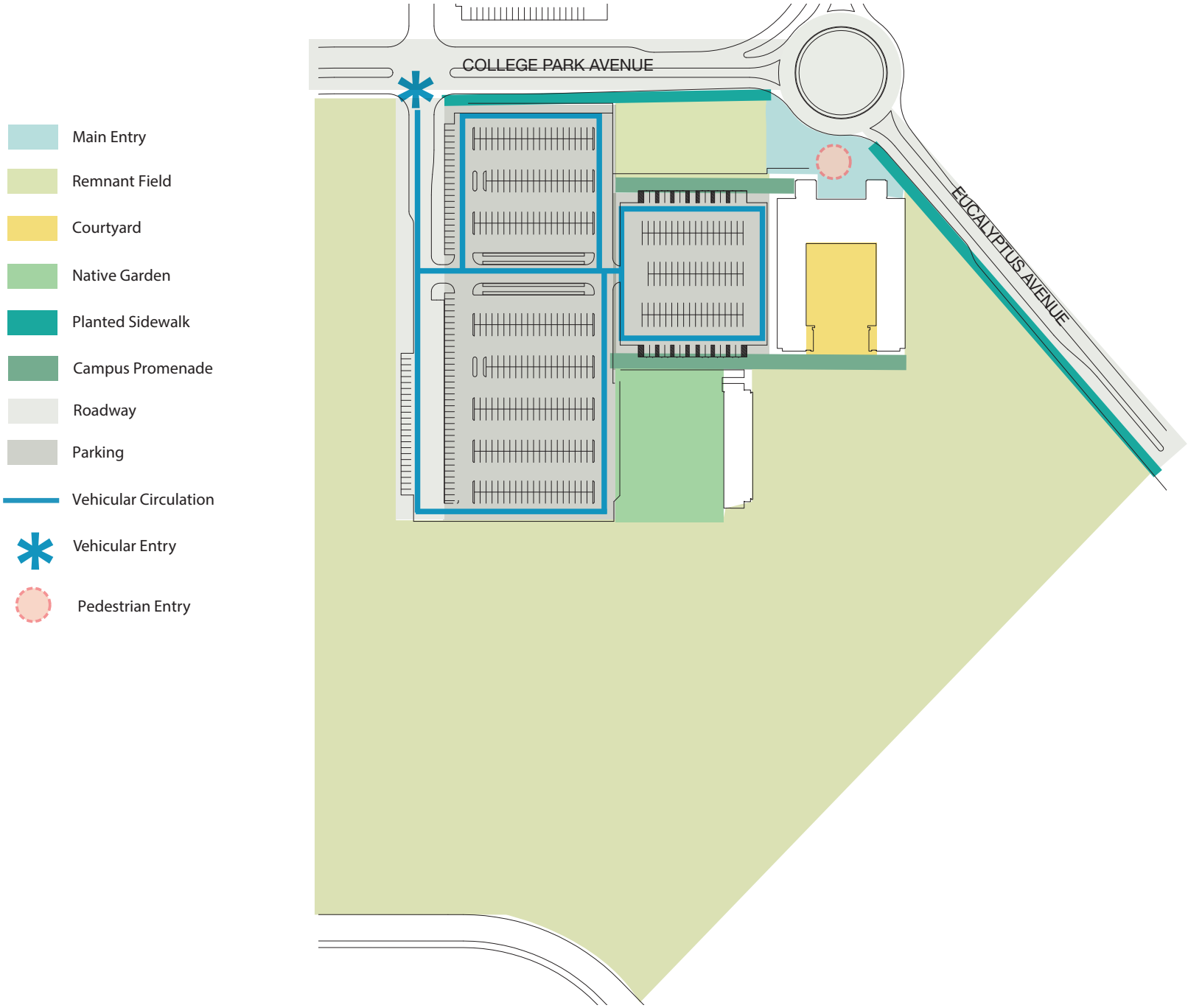
1 Chino Campus - Entrance
2 Existing Landscaping
3 CHMB - Courtyard Seating
4 CHMB - Courtyard

1


2


3


4


Main Entry
Remnant Field
Courtyard
Native Garden
Planted Sidewalk
Campus Promenade
Roadway
Parking
Vehicular Circulation
Vehicular Entry
Pedestrian Entry
COLLEGE PARK AVENUE
EUCALYPTUS AVENUE

SUMMARY OF FINDINGS

The Chino Campus presents, opportunities, and challenges as noted on the previous pages. To plan for the future, The FMP addresses the maximizing its functional space and eliminating its non-functional spaces. Since the facilities on the Chino Campus are relatively new and in good condition, there is no need to renovate these buildings in the near future.

The FMP addresses the needs of the projected student population by providing effective space for instruction, support services, and parking. Integrated with these challenges is the opportunity to enhance and complete the campus environment and integrate its unique parts into a cohesive whole.

Key Campus Planning Challenges

01 **Clear Vehicular Access:** The main vehicular entrance is unclear and lacks proper signage. There is existing signage at Central Avenue and College Park Avenue, but it leads visitors to a longer route into campus.

02 **Lack of Visual Identity:** Nestled in College Park, the Chino Campus is not visible from the main streets. The Chino Campus lacks presence and identity in the City of Chino.

03 **Underused Open Spaces:** The campus lacks student activity zones in the outdoor spaces. Much of the existing open space is underused because the campus lacks student services to keep the students engaged on campus throughout the day.

04 **Extreme Temperature:** Lack of shaded outdoor spaces and high temperatures on campus. During the summer months often renders outdoor space uncomfortable or unusable.

05 **Lack of Student Services:** Additional Student Services and Student Support Spaces are needed on this campus.


USE MAIN ENTRANCE

Recommendations

Recommendations

RECOMMENDATIONS

The Facilities Master Plan Recommendations for the Chino Campus present an overall picture of the future developed campus and include proposed sites for new facilities and site development projects. The recommendations described in this section address the discussion that took place during the planning process.

While drawings in the plans appear specific, the forms are conceptual sketches that highlight the location and purpose of improvements. The final design of each site and facility project will take place as projects are funded and detailed programming and design occurs.

SUMMARY
OF RECOMMENDATIONS

The recommendation for new construction projects are included on the following pages.

These projects address the following facilities planning principles:

- Maximize functional space
- Improve efficiency/utilization of facilities
- Right –size the campus to address program needs
- Improve campus identity
- Position the District to maximize potential funding (state and local)
- Simplify Implementation

The Chino Campus includes five buildings: three of which are at the College Park location and two buildings are at the downtown Chino location. In this section, the master plan recommendation is only for the College Park location, which has a previous master plan that was completed by Johnson Favaro Architects in 2009. The recommendation is to build the next building identified in the 2009 master plan for this campus, which would create a central quad area. With the projected enrollment and WSCH forecast, there is a need for an additional 70,684 GSF, but no additional parking is needed.

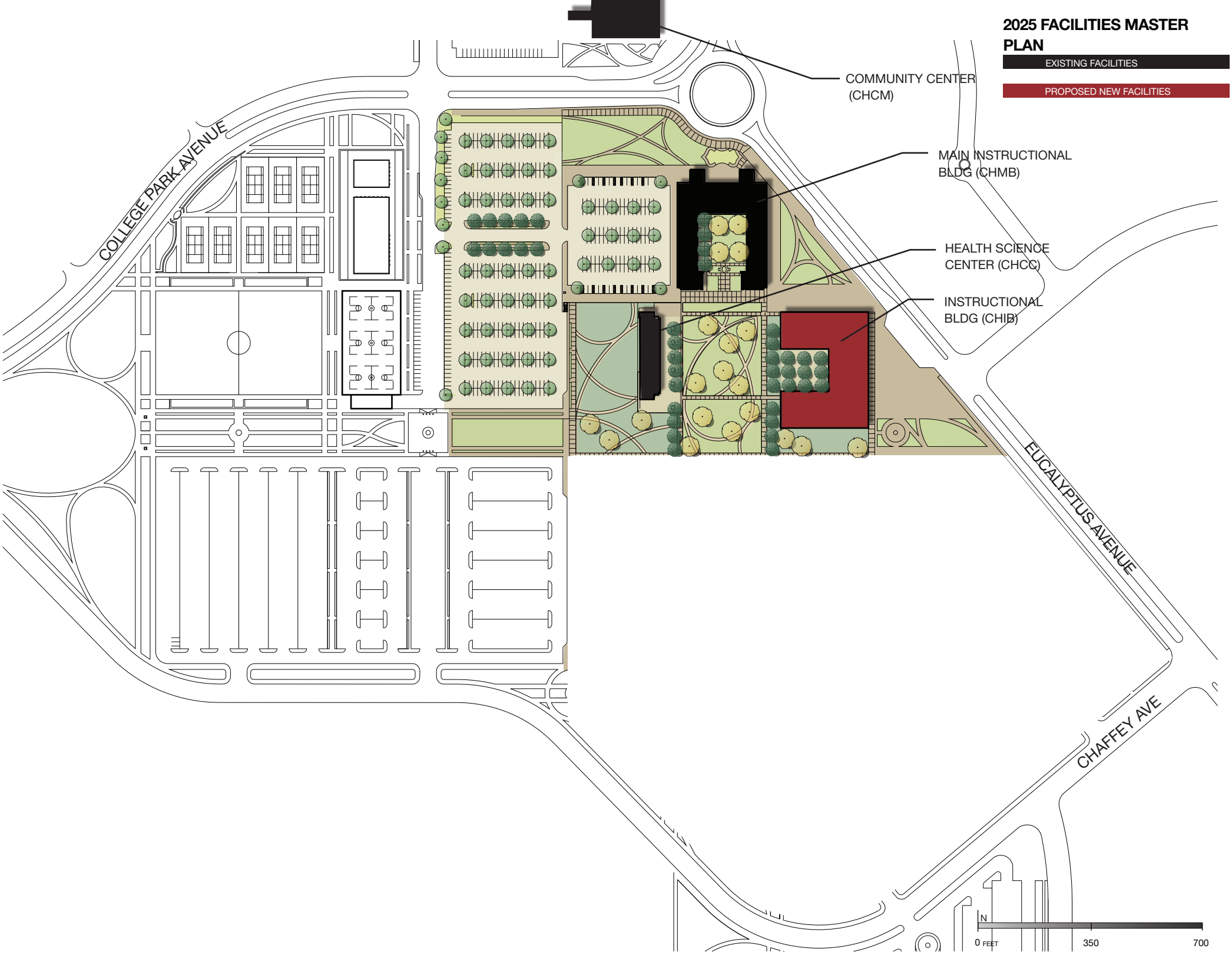
This section describes the building and the site projects identified in the FMP and consist of the following elements:

FACILITIES RECOMMENDATIONS

/ 2025 Facilities Master Plan
/ Beyond 2025
/ New Facilities

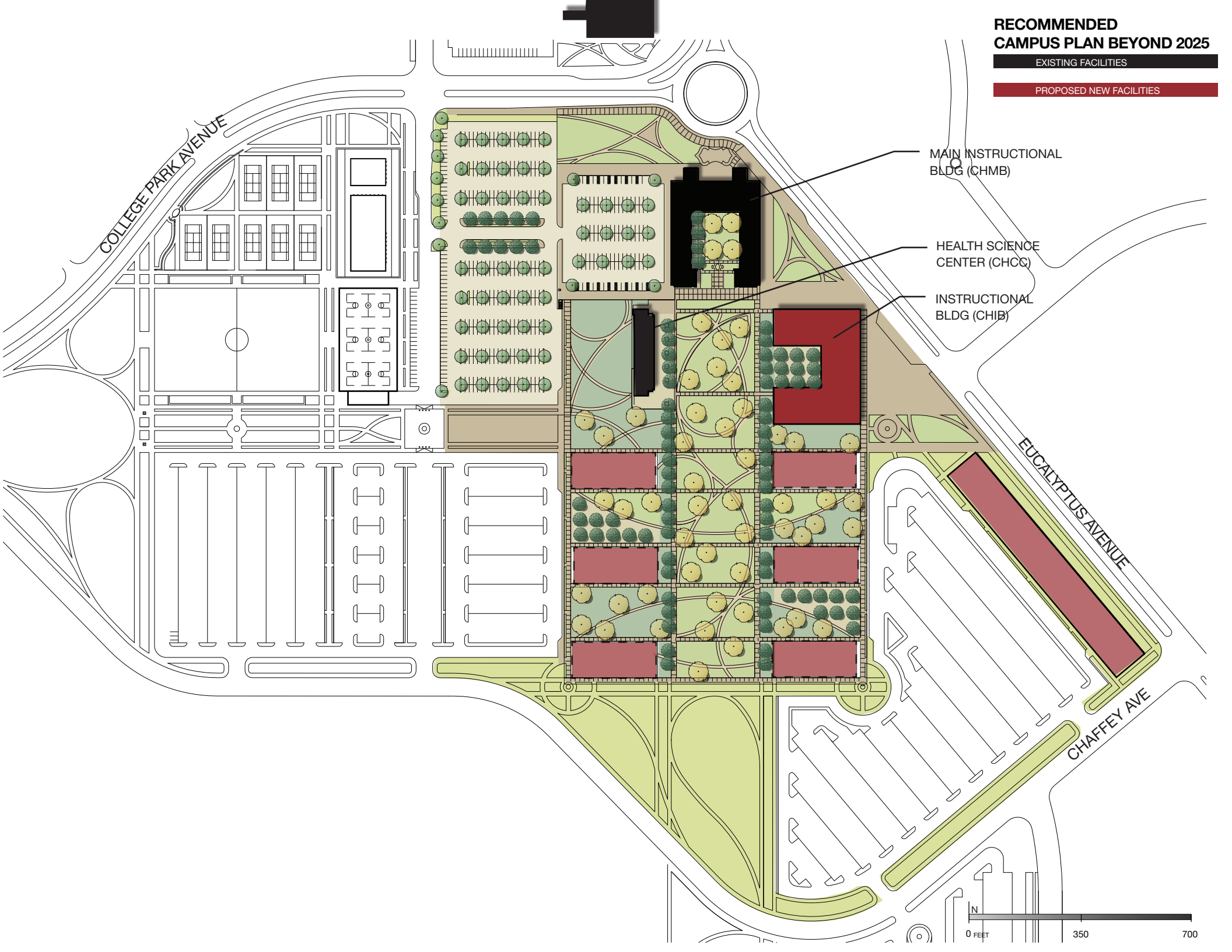
SITE IMPROVEMENT RECOMMENDATIONS

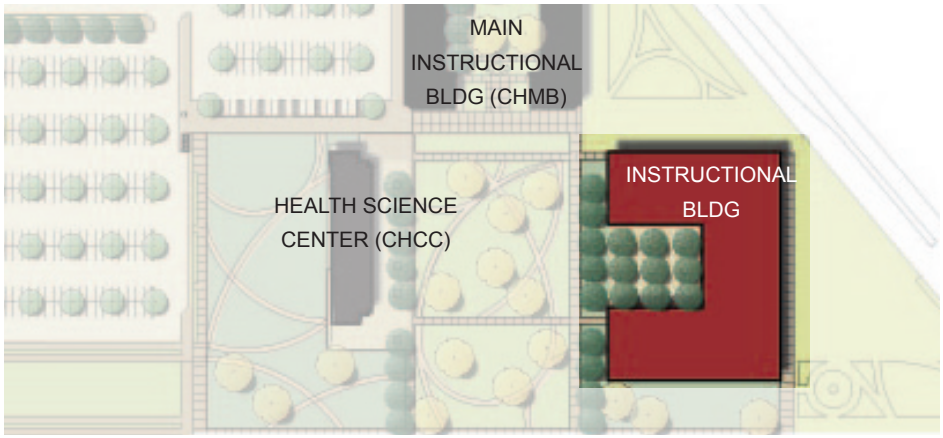
/ Landscape Concept Plan
/ Landscape Plan
/ Landscape Characters
/ Circulation


2025 FACILITIES MASTER PLAN
EXISTING FACILITIES
PROPOSED NEW FACILITIES
COMMUNITY CENTER (CHCM)
MAIN INSTRUCTIONAL BLDG (CHMB)
HEALTH SCIENCE CENTER (CHCC)
INSTRUCTIONAL BLDG (CHIB)
COLLEGE PARK AVENUE
EUCALYPTUS AVENUE
CHAFFEY AVE
N
0 FEET
350
700

Beyond 2025

Beyond 2025 the recommendation is to complete the previous 2009 master plan for this campus, and extend the central quad area, creating an outdoor gathering space for the students. The College's Educational Master Plan will determine the needs for future buildings.


RECOMMENDED
CAMPUS PLAN BEYOND 2025
EXISTING FACILITIES
PROPOSED NEW FACILITIES
COLLEGE PARK AVENUE
MAIN INSTRUCTIONAL BLDG (CHMB)
HEALTH SCIENCE CENTER (CHCC)
INSTRUCTIONAL BLDG (CHIB)
EUCALYPTUS AVENUE
CHAFFEY AVE
N
0 FEET
350
700



Facilities Recommendations

New Facilities

Instructional Building

With agrarian style planning, the natural growth of the campus suggests that the central quad extends southward to build out the College land. The proposed new building will have a hybrid of interdisciplinary spaces similar to what currently exists in the two instructional buildings. The central quad will be the central gathering space for student activities and have tree-lined promenades as primary pedestrian pathways.

As the campus grows and building additional buildings, Chino campus will have a Health Science focus. Some of the functions that will be in the new instructional building will be a combination of instructional, simulation labs, offices, student support services, food services, meeting, and health services.

Site Improvement Recommendations

Overview

When creating a campus environment, both the architectural language and the landscape language are of equal importance. Campus landscape connects the buildings on a campus and, by design, is the unifying element that creates the campus as a whole.

The site improvement recommendations address the key site issues identified in the analysis of existing conditions and planning for sustainability by incorporating more water and energy-efficient landscaping.

The following graphics illustrate:

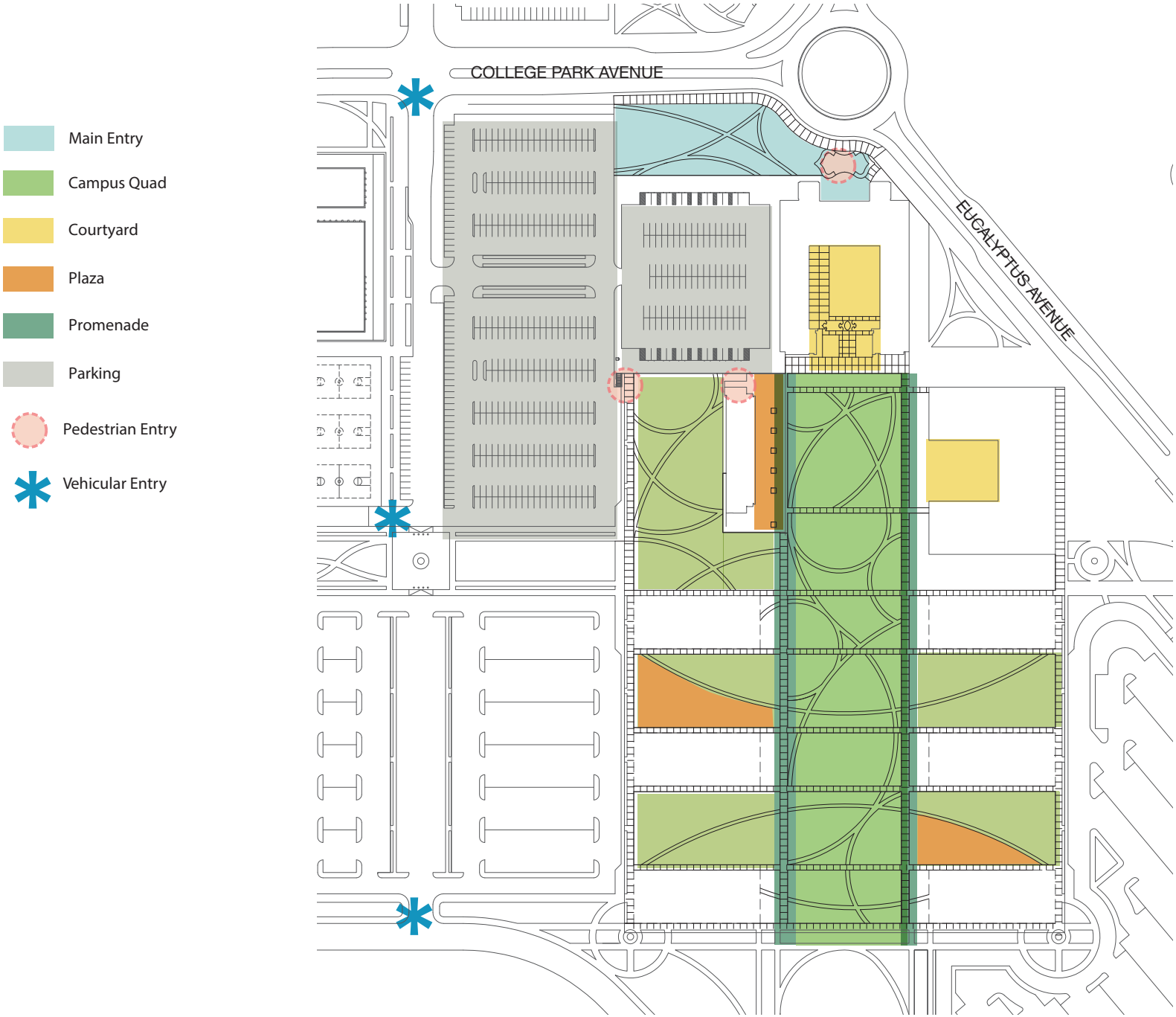
- Landscape Concept Plan
- Landscape Plan
- Circulation
- Landscape Character

Site Improvement Recommendations

Landscape Concept Plan

The new Chino landscape plan creates a rectangular framework of pedestrian walks to organize circulation and ease wayfinding through campus. The main entry creates a welcoming and collegial front. The campus quad occupies the center of campus, with courtyards nested in the two main buildings and planned plazas spread out through campus for outdoor eating, studying and social events.

The Concept Plan shows the campus at its potential full buildout, beyond the 2025 plan.

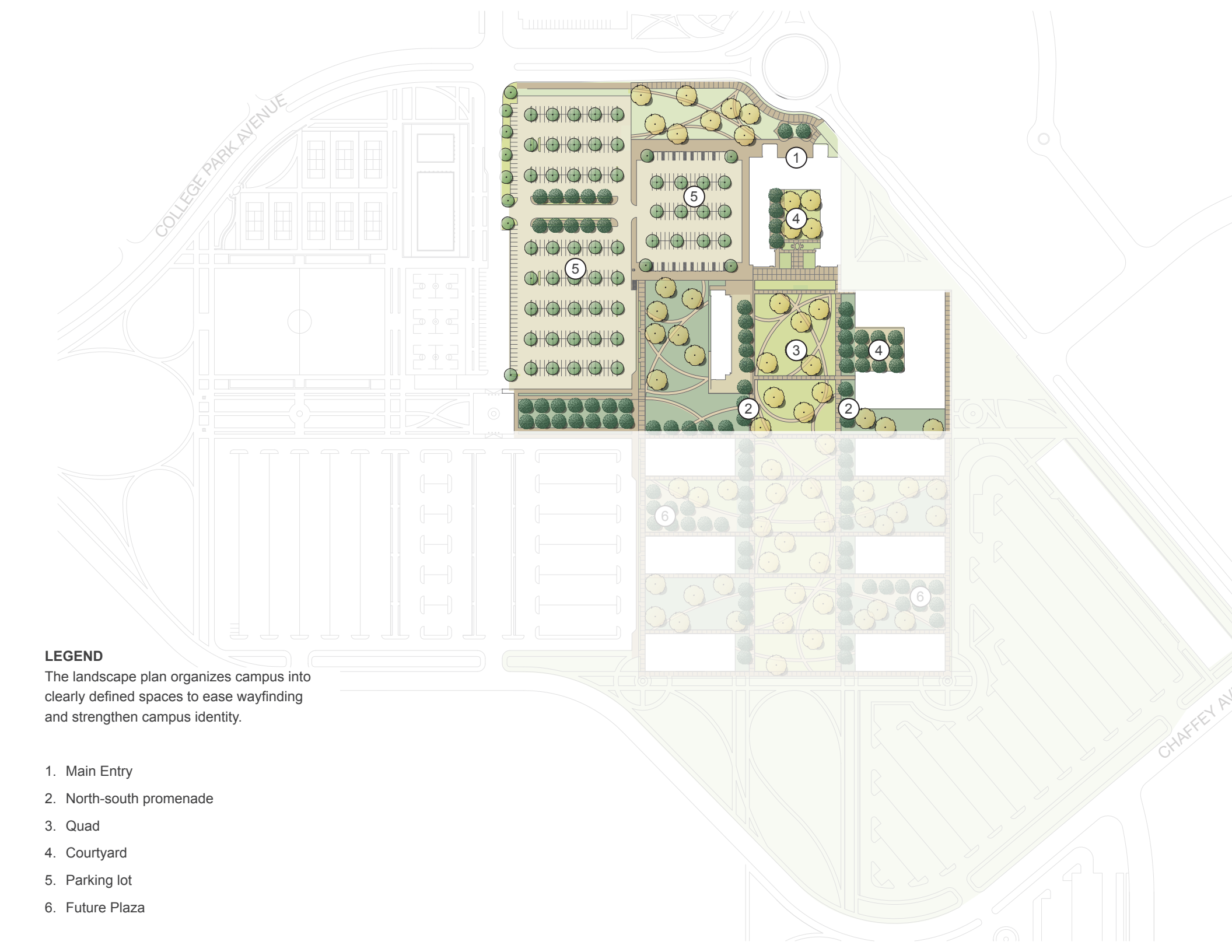

Main Entry
Campus Quad
Courtyard
Plaza
Promenade
Parking
Pedestrian Entry
Vehicular Entry
COLLEGE PARK AVENUE
EUCALYPTUS AVENUE

Site Improvement Recommendations

Landscape Plan

Chaffey College's Chino campus landscape plan creates an organized and context-appropriate framework for the college's future development.

The Chino campus plan draws inspiration from the campus's rectilinear agricultural context and the original 2009 campus master plan's sweeping walks with a language that incorporates fields and curves. The plan draws upon Chaffey College's overall landscape vision for a contextually-relevant, resource-efficient campus identity.



LEGEND

The landscape plan organizes campus into clearly defined spaces to ease wayfinding and strengthen campus identity.

1. Main Entry
2. North-south promenade
3. Quad
4. Courtyard
5. Parking lot
6. Future Plaza

Landscape Character

A framework of promenades planted with shade trees organizes the campus and eases wayfinding.

Specific design recommendations include:

- Provide a variety of gathering space sizes to encourage outdoor meetings, studying and socializing.
- Plant large trees at campus entries to establish a strong campus identity and aid in wayfinding from the street and parking lots.
- Plant large canopied trees along both sides of the promenades, to provide shade, habitat and aid in wayfinding and campus identity.
- Plant large canopy trees in parking lots to reduce the heat island effect and help take up and treat stormwater runoff.
- Plant large canopied evergreen trees to provide year-round shade in this sunny semi-arid climate.
- Turf grass should be limited to the quads where students, faculty and staff congregate for informal recreation, studying and large events.
- A mix of large canopied deciduous and evergreen shade trees in turf areas will provide an important variety of shady and sunny places.
- Rely on resilient native and Mediterranean plant species to minimize water used in irrigation and provide important habitat for beneficial insects and birds.
- Select plants for their mature size to allow shrubs to maintain their natural size and character. Locate plants far enough away from walks and buildings to prevent the need to be hedged or sheered.
- Use alternative groundcovers such as gravel or mulch to reduce water use while conserving soil moisture and permeability.
- Encourage integrated pest management and organic plant management to minimize the use of chemical pesticides, herbicides and fertilizers.
- Use nature as a guide in Low Impact Development (LID) strategies to reveal the flow and treatment of stormwater and provide educational opportunities.

1 Courtyard shade trees
2 Native flowering shrubs
3 Gravel groundcover
4 Shady and sunny Quad
5 Massed groundcover planting
6 Low Impact Development (LID)

Site Improvement Recommendations

Circulation

Vehicular Circulation
The unique location of the Chino Campus in the College Park provides a park like atmosphere for the campus, however, the Chino Campus is not easily identifiable from the streets. The vehicular circulation recommendation includes a gateway structure at Edison Avenue and Oaks Avenue to identify the main entrance to the Campus.

Vehicular circulation improvements are recommended to promote safe and efficient circulation and clear wayfinding. The improvements focus on the following:

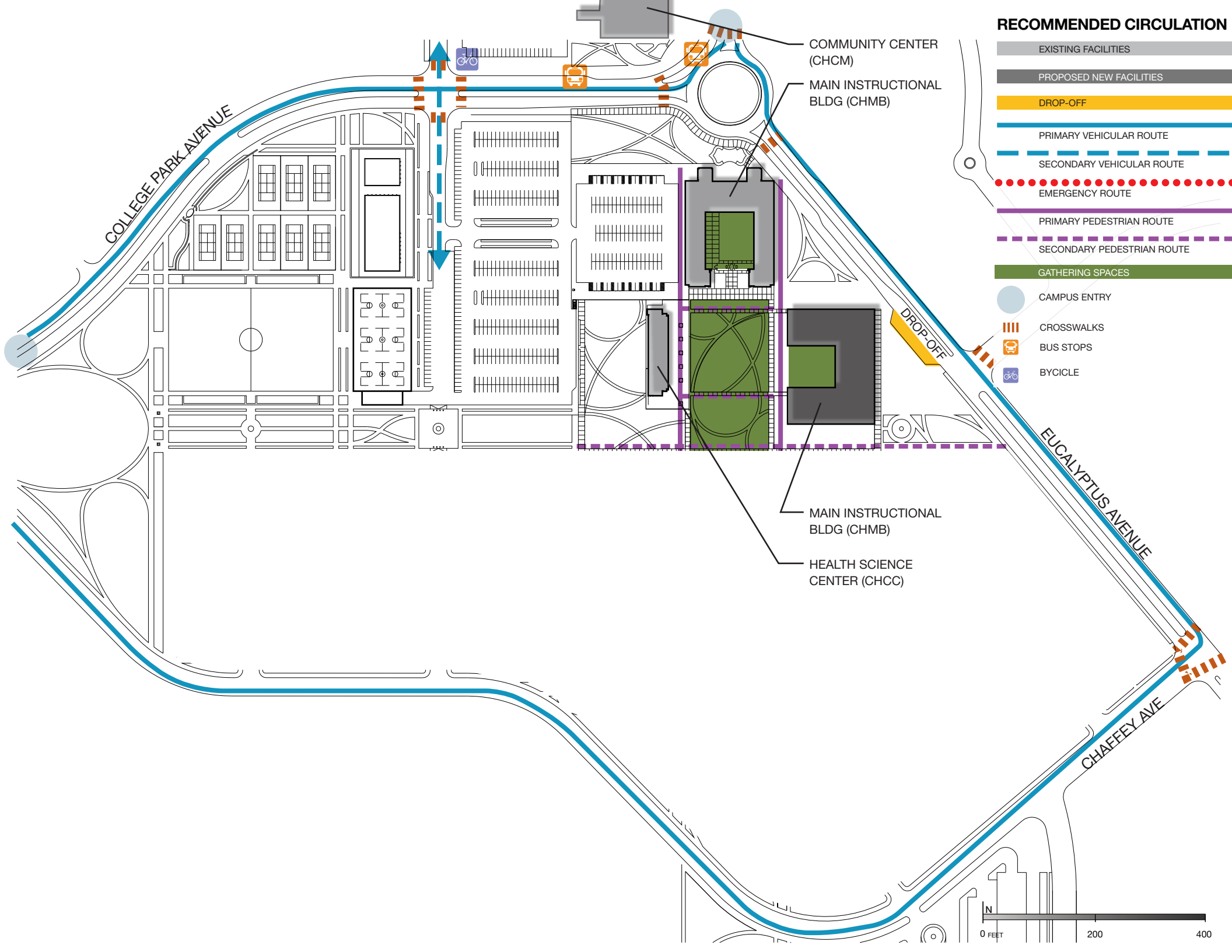
- Provides a clear campus entrance from Edison Avenue
- Quick and direct access to parking lots

Pedestrian Circulation
The organization of this campus is a grid like pattern with a large central quad area. The primary pedestrian circulation is tree-lined pathways that link the buildings into a network of shaded walkways.

Parking
No additional parking is needed.

PARKING: CURRENT AND PROJECTED

	Headcount	Parking spaces
Baseline (2013)	3,500	1,070
Master Plan (2025)	5,500	1,100 (@1:5)


RECOMMENDED CIRCULATION
EXISTING FACILITIES
PROPOSED NEW FACILITIES
DROP-OFF
PRIMARY VEHICULAR ROUTE
SECONDARY VEHICULAR ROUTE
EMERGENCY ROUTE
PRIMARY PEDESTRIAN ROUTE
SECONDARY PEDESTRIAN ROUTE
GATHERING SPACES
CAMPUS ENTRY
CROSSWALKS
BUS STOPS
BYCICLE
COMMUNITY CENTER (CHCM)
MAIN INSTRUCTIONAL BLDG (CHMB)
MAIN INSTRUCTIONAL BLDG (CHMB)
HEALTH SCIENCE CENTER (CHCC)
COLLEGE PARK AVENUE
DROP-OFF
EUCALYPTUS AVENUE
CHAFFEY AVE
N
0 FEET
200
400

HMC Architects