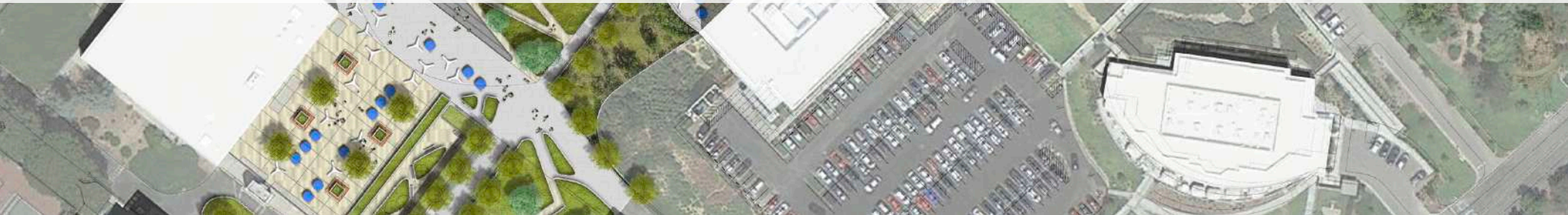
MOORPARK COLLEGE

2015 FACILITIES MASTER PLAN || JUNE 26, 2015 || Gensler



MOORPARK COLLEGE

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Robert Salas
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Sharon Marakes
Tim Samoff

STAKEHOLDER MEETINGS

December 3 2014

Carol Higashida, Health Sciences Coordinator
Dave Anter, A+R / Registrar
Emmanuel Gebru, International Students
Eric Lopez, M+O Custodial Supervisor
Jesus Vega, Outreach
Kim Hoffmans, Dean
Lee Ballestero, Social Science
Mary Swanson, Instructional Lab Tech, Biology
Pat Ewins, Dean - P.A. & Student Life
Scott C., M+O Supervisor
Sharon Miller, Student Activities / AS Advisor
Steve Etter, Instructional Lab Tech, Biology
Steven Timmons, M+O Grounds Supervisor

December 8 2014

John Luprieno, Theater Arts
Maureen Rauchfuss, International Students
Mickey Howell, Performing Arts Technician
Sharon Manak, Student Health Center

December 9 2014

Allam Elhussini, Admin Bldg. CBS
Beth Gillis-Smith, Writing Center
Darlene Melby, Business Services
Dave Anter, A + R
David Mayorga, Math Center Faculty
Elena Lucin, Chem - Lab Tech
Erik Reese, Phys/Astro Prof.
Farisa Moralles, Phys/Astro Faculty
Gerry Zucca, Art Instructor / FCAP Mentor
Helga Winkler, Instructor / Chair
Inajane Nicklas, Dean
Jesus Vega, Outreach
John Dobbins, Learning Resources Supervisor
Judi Gould, Career Transfer Center
Julius Sokenu, Dean - Math & Physical Science
Karen Habib, Library
Kerry Mehle, Graphics Tech / Publications
Kim Hoffmans, Dean Enrollment Svcs., Life + Health Sciences
Kim Krinkle, Financial Aid Officer
Lindy Chau, Grants/Contracts - Admin Bldg.
Lisa Putnam, Dean Digital Media Visual Arts & Athletics
Magda Tucker, Admin Bldg. CBS + Fountain Hall
Maria Perez-Medeiros, Office Assistant / Scholarship Office
Marsha Klipp, Burser
Maureen Rauchfuss, International Students
Moyhanh Tu, Chem - Lab Tech
Pat Ewins, Dean P.A. & Student Life
Ramona Luna, Financial Aid Tech
Reet Sumal, Business Admin
Roberta Chinery, Financial Aid Tech
Robert Keil, Chair- Chem., Eng., Geol., Geog
Ron Wallingford, Chair Engineering, Phys., Astro., C.S.
Ruby Delery, Principal / HS @ MC
Scarlet Relle, Engineering Prof.
Sydney Sims, English Chair
Sharon Manak, Student Health Center
Traci Allen, Counseling - Dept. Chair
Tracy Tennonhouse, Writing Center

FACILITIES MASTER PLAN TEAM

Gensler
Stantec

LETTER FROM THE PRESIDENT

Facilities Master Plan

Letter from the President

This Facilities Master Plan reflects Moorpark College's best effort to anticipate the needs of our students and of our campus through 2025, taking into account projected enrollment trends, program development, and funding opportunities. It is by no means intended to be carved in stone, for we realize that projections can be wrong, so we need to remain amenable to change, and alert to new opportunities. Nevertheless, this Plan is the culmination of considerable qualitative and quantitative research, and the input of quite a few people, including students, faculty, classified staff, managers, and community members, who informed the final product.

We are immensely proud of the beautiful campus we inhabit, and, therefore, one of our guiding principles was to preserve the architectural coherence of this jewel. But form should always follow function, and not the other way around, so our primary consideration was how we can best serve our students. To that end, you will see plans for a new Student Center, which we envision as a lively hub where our students can eat a nutritious hot meal, browse through our bookstore, hang out with friends,

where our students can eat a nutritious hot meal, browse through our bookstore, hang out with friends, meet with their clubs, and study together. As of this moment, there is no clear pathway with which to finance the construction of that center, but finding such a pathway will be one of the top goals of our leadership team.

We also recognize our obligation to be good stewards of our resources, including our natural environment. Thus, we have tried to incorporate principles of sustainability into our plans, such as those you will see reflected in pages 93-96. While I am sure that there are still further improvements to be made in that vein, we are determined to chart progress steadily over time.

And speaking of our natural environment, this Plan should be read in harmony with our Facilities Master Plan (December 22, 2014) for our world-renown gem, America's Teaching Zoo. That plan embraces a visionary expansion of our zoo animals' habitat, which supports our stellar Exotic Animal Training and Management program. As with our plans for a new Student Center, there is no clear pathway to finance the construction of our expanded zoo facilities at this time, but these Plans are an important step toward bringing our dreams to reality. They allow us to tell our story to prospective supporters of this magnificent vision, and they provide us with a visual manifestation of our dreams. And the pursuit of dreams, after all, is our core business.

Luis P. Sanchez, LD, LLM
President
Moorpark College

TABLE OF CONTENTS


01

EXECUTIVE SUMMARY

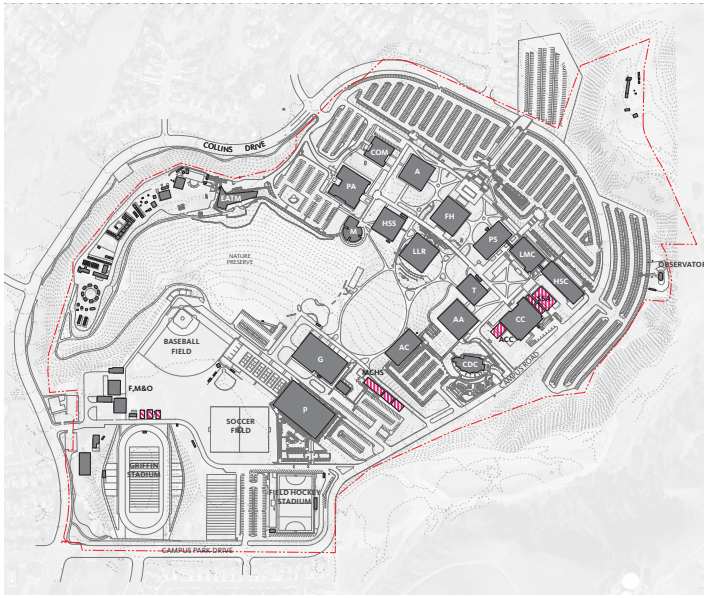
EXECUTIVE SUMMARY

INTRODUCTION

Moorpark College is a public community college and one of three community colleges that are part of the Ventura County Community College District. It is located at 7075 Campus Road, Moorpark, California 93021. The College opened September 11, 1967, with 2,500 students on a 150 acre campus. Today, the College serves approximately 13,000 students and the growth in enrollment projected for the next ten years is modest, estimated at 15,000.

The *2015 Facilities Master Plan* for Moorpark College has been developed to serve as a guide for future development. It provides a qualitative and quantitative description of the College's strategy to support the educational program needs, addresses the long range forecast for enrollment, maximizes funding opportunities and maps out the future physical changes to the Campus. This plan builds on the work of previous studies and strategy documents, ensuring that the Campus setting continues to support students, faculty and staff.

Beginning with this introduction, the following report summarizes the existing conditions, provides an analysis of both planning data and site, offers potential solutions to needs identified by the analysis and finally delivers recommendations for the future of the Campus.



PARTICIPATION AND OUTREACH

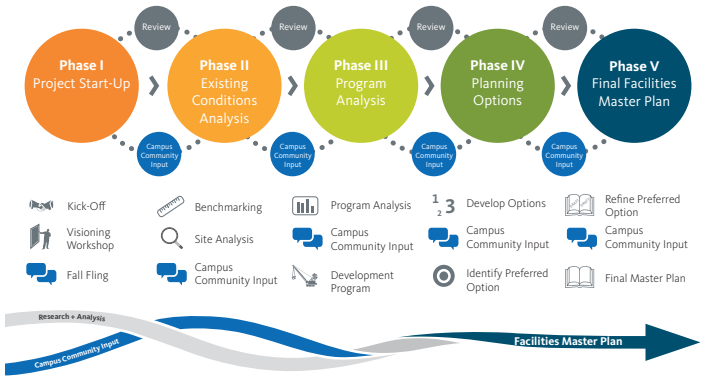
The planning process was a participatory one involving many individuals from the college. It kicked off with a strategic visioning session with the College Leadership and an additional Faculty Information Session to elicit the overarching goals and success criteria, with additional discussion and data informing the plan. The Consultant Team worked continuously with the designated President's Advisory Work Group (PAWG), to further define planning goals, review the analysis of existing conditions, validate the master plan program, evaluate a series of development options, and make decisions that led to the development of the Facilities Master Plan recommendations. Participation with a larger segment of the College community occurred through presentations and feedback in Y'All Come meetings, review sessions with additional user groups, FT/CAP and Faculty Senate.

MASTER PLAN PROGRAM

A master plan horizon year of 2025 was identified and the enrollment for 2025 is projected at 15,000 as the basis of generating the long term needs of the College. The Master Plan Program was developed based on a series of discussions with key stakeholders to identify the qualitative needs, balancing them with a detailed quantitative analysis elicited from the Long Range Enrollment and Weekly Student Contact Hours (WSCH) forecasts projecting long terms facilities space needs. In order to ensure a data driven plan.

Additional space needs were identified as follows:

Lab	56,577 gross square feet
Library	17,684 gross square feet
Instructional Media	12,926 gross square feet



	Current Inventory (ASF)	Space Needs 2025 (State Standard ASF)	Over / Under ASF	ADDITIONAL 65% Efficiency (GSF)
LECTURE	98,919	52,115	-46,804	
LAB	109,489	146,264	36,775	56,577 GSF
OFFICE	57,424	48,882	-8,542	
LIBRARY	29,775	41,270	11,495	17,684 GSF
INSTR. MEDIA	4,578	12,980	8,402	12,926 GSF
OTHER	105,460	87,602	-6,073	
TOTAL ASF	405,645	389,113		

*ASF: Assignable Square Feet
GSF: Gross Square Feet

EXECUTIVE SUMMARY

EXISTING CONDITIONS

The 150 acre Moorpark College Campus is located near the 118 freeway at Collins Drive and Campus Park Drive. Access to the Campus is primarily by car through roads also serving the residential neighbors. The campus occupies a sloping site characterized by stunning views and significant open space areas. Opportunities and challenges of planning were derived from an analysis of the natural and built systems. Those areas with the greatest potential for positive change include:

IDENTITY

- Opportunity: Promote College identity and brand at the entry points and perimeter of Campus.
- Challenge: Clarify the College entries and wayfinding throughout Campus.

CONTEXT

- Opportunity: Utilize and maintain the great views to and from Campus.
- Challenge: Reduce negative impacts on the residential neighbors.

TOPOGRAPHY

- Opportunity: Integrate the dramatic topography with future physical improvements.
- Challenge: Improve pedestrian flow throughout Campus especially between north and south.

OPEN SPACE

- Opportunity: Create shaded, habitable areas for programs and social interaction.
- Challenge: Improve usability of outdoor areas.

FACILITIES

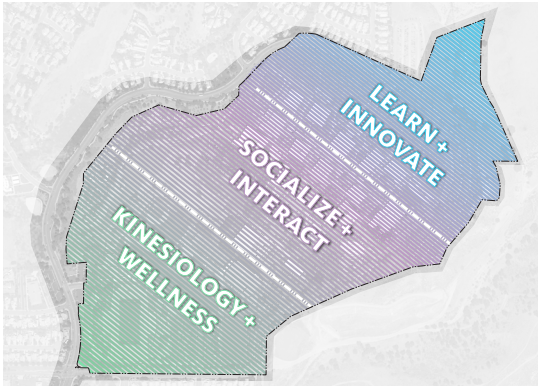
- Opportunity: Provide new facilities and modernize existing buildings to accommodate academic programs, enrich student life, and encourage collaboration.
- Challenge: More than half of existing buildings are over 35 years old and a third are at least 45 years old with over a third of the existing buildings candidates for significant renovation or replacement

CONCEPT

Planning principles form the overarching goals for the Facilities Master Plan formulated from a long term vision for the campus. These principles will inform all design decisions made in the planning process and are the basis of aspirations for the Facilities Master Plan. The principles include:

- **FOCUS ON STUDENTS**
- **WELCOMING AND ACCESSIBLE CAMPUS**
- **COLLABORATIVE CAMPUS ENVIRONMENT**
- **PROGRESSIVE LEARNING SPACES**
- **TECHNOLOGY AND INFRASTRUCTURE**
- **SUSTAINABLE SOLUTIONS**
- **EFFICIENT AND COST EFFECTIVE**
- **STRENGTHEN COLLEGE/ COMMUNITY CONNECTIONS**
- **COHESIVE AESTHETICS**

The concepts for the master plan incorporate broad organizing strategies for the overall campus to ensure legibility and functionality of the Campus and facilities. These scaled ideas include Campus Thresholds, Districts and Zones.



EXECUTIVE SUMMARY

FACILITIES MASTER PLAN

The concept driving the design for developing the Campus is the notion of "centralized campus" where the existing central lawn becomes the new heart of campus. This Central Park becomes an iconic area for informal and collaborative activity and a new exciting connection between the academic core in the upper campus and the sports facilities in the lower campus unifying all aspects of the student experience.

Other notable recommendations of the plan include:

Enhancing the identity and welcome to Campus:

- Creating a hierarchy and clarity to the entrances of the Campus by prioritizing entrances
- Improving the streetscape along Campus Park Drive

Strengthening and increasing pedestrian connections throughout the Campus, including those accessible to the disabled by:

- Separating pedestrian and vehicular circulation when possible
- Adding amenities such as shade trees and benches
- Increasing ramped paths that meet the standards of the American with Disabilities Act

Improving the useability and functionality of outdoor open space by:

- Creating programmable outdoor areas such as the dedicated plazas in the academic core
- Provide spaces of varying scale and character to accommodate a range of uses and group sizes such as the spaces adjacent to the new Central Park

Providing modern facilities that adapt to cutting-edge learning methodologies

- Adding new facilities and renovating facilities that meet the programmatic needs of the future
- Integrating open space with buildings and classrooms

Designing an environment nurturing student success

- Enriching the campus setting to encourage students to spend more time on Campus
- Locating a new student center with facilities to support student life

Employing sustainable measures in all aspects of man made improvements such as:

- Integrating man made improvements with the natural characteristics of the site
- Improving the handling of stormwater run off
- Utilizing native and low water use plants
- Incorporate measures that reduce the use of natural resources

PHASING

The Facilities Master Plan is a framework for growth and as such, is an estimate of the needs of the College over the next decade. Detailed plans and validation for each project will occur as funding becomes available. The Phase 1 and 2 are based on the estimated need at the date of publication.


02

INTRODUCTION

INTRODUCTION

OVERVIEW

PROJECT PURPOSE

The *2015 Facilities Master Plan* for Moorpark College has been developed to serve as a guide for future development. It provides a qualitative and quantitative description of the College's strategy to support the educational program needs, addresses the long-range forecast for enrollment, presents strategies for maximizing funding opportunities and maps out the future physical changes to the Campus. This plan builds on the work of the *2005-2015 Facilities Master Plan*, ensuring that the physical setting continues to support students, faculty and staff.

The growth in enrollment projected for the next ten years is modest. Improvements to the campus will focus on improving the quality and adaptability of facilities creating a learning environment for future generations. A separate master plan has been completed for the America's Teaching Zoo and directly responds to the specialized requirements of the Exotic Animal Training and Management program. This Facilities Master Plan, focused on the main campus, provides a flexible framework for future Campus improvements, including planning principles, placement of new facilities, renovation of existing facilities, enhancement of open spaces and the necessary support for improvements.

BACKGROUND

Moorpark College is a public community college and one of three community colleges that are part of the Ventura County Community College District. It is located at 7075 Campus Road, Moorpark, California 93021. The Moorpark College service area comprises the eastern portions of Ventura County, more specifically, the Conejo Valley, Thousand Oaks, Simi Valley, and Moorpark. The College opened September 11, 1967, with 2,500 students on a 150 acre campus comprised of seven buildings: Administration, Library, Science, Technology, Campus Center, Gymnasium and Maintenance. Currently, approximately 13,000 students select from among 1,500 classes a semester in 70 disciplines, including lower division preparation in a wide variety of transfer majors for the Baccalaureate degree and programs which lead to Associate degrees and Certificates of Achievement. Moorpark College also offers numerous Occupational Majors in areas geared to local and national employment needs and trends.

The previous Facilities Master Plan 2005-20015 has been largely implemented and this new facilities master plan will provide guidance for the next decade and beyond. This facilities master plan is a high level flexible framework for development that serves as a guidance document establishing the needed facilities to support the college's educational master plan, the location of new instructional and supporting facilities and the overall character of the Campus.

1962 - Formation of the district

1967 - Moorpark College campus opens

1980 - Formation of the Moorpark College Foundation

2000 - High School at Moorpark College opens

2002 - Voters passed Measure S

1960-70 80-90 2000

OVERVIEW

RELATED PLANNING STUDIES

The Moorpark College Educational Master Plan 2009-2019 is a central foundation of the Facilities Master Plan, as it articulates the academic direction of the college and guides organizational growth and change. The 2007-2015 Ventura County Community College Master Plan, documenting the VCCCD vision, mission and values, also informed the 2015 Moorpark College Facilities Master Plan. The 2013-2016 Moorpark College Strategic Plan, creating objectives as the basis for institutional effectiveness, contributes to both the Educational and Facilities Master Plans.

MOORPARK COLLEGE VISION STATEMENT

At Moorpark College, we encourage quality and believe our strengths have been, and will continue to be, people–their flexibility, their responsiveness, and their willingness to meet the needs of our students and community. We believe that building on these strengths provides an educational experience appropriate to the students' needs and within the College's mission. Specifically, our actions and decisions are based on the following beliefs:

- We will provide the best services, programs and opportunities for students.
- We encourage creativity and innovation, and we will try new ideas and new things.
- All students attending Moorpark College will receive the support they need to meet their individual educational goals.
- Students who wish to transfer to four-year institutions will receive up-to-date and accurate information to facilitate transfer.
- We will increase our responsiveness to business and industry in changing economic climates.
- We are an integral part of the community.
- To best implement our actions and decisions, our internal working environment is based on the following beliefs:
  - » Shared governance is an accepted part of our decision-making process.
  - » We will strive to build greater trust, understanding, and cooperation between the other segments of the Ventura County Community College District and Moorpark College.
  - » We will provide all staff with support for professional development.

ORGANIZATION OF THE REPORT

Beginning with this introduction, the following report summarizes the existing conditions, provides an analysis of both planning data and site, offers potential solutions to needs identified by the analysis and finally delivers recommendations for the future of the Campus.


Thousand Oaks 9 mi
Newbury Park 14 mi
Moorpark 3.5 mi
Simi Valley 5.5 mi
Moorpark College

PROCESS

The planning process engaged a variety of individuals from the college. The Planning Team worked closely with the designated President's Advisory Work Group (PAWG), to define planning goals, review the analysis of existing conditions, validate the master plan program, evaluate a series of development options, and make decisions that led to the development of the Facilities Master Plan recommendations.

In addition to the PAWG meetings, a series of campus outreach events were integrated into the planning process in order to broaden the plan's perspective and to include the many voices of the Moorpark College community.

The planning process is organized in several distinct phases, enabling a logical progression of analysis, options and solutions, and allowing for a continual process of creative thinking, evaluation and modification.

PHASE 1: PROJECT START-UP

During this phase, agreement and administrative issues were finalized, the project team and stakeholders were formally identified, and strategy for ongoing outreach was finalized.

PHASE 2: EXISTING CONDITIONS

The existing conditions analysis phase includes the review, analysis and synthesis of the current planning documents, site information, planning data, physical constraints and financial conditions to identify the opportunities and constraints for future development.

PHASE 3: PROGRAM

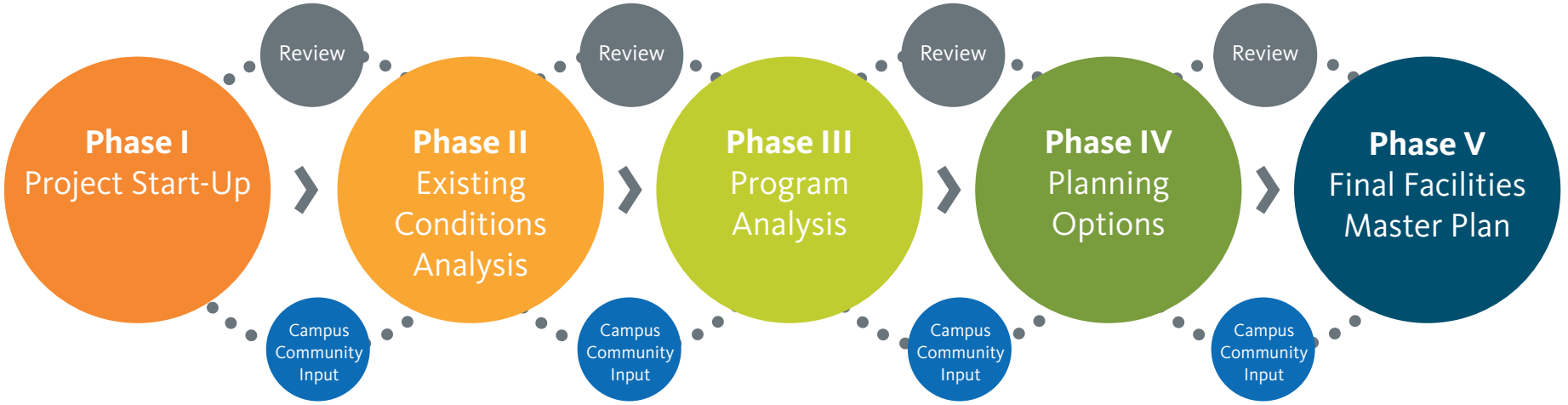
The programming phase provides an understanding of current and future physical facility needs and establishes a development program for the facilities master plan based on current conditions and the fusion data base.

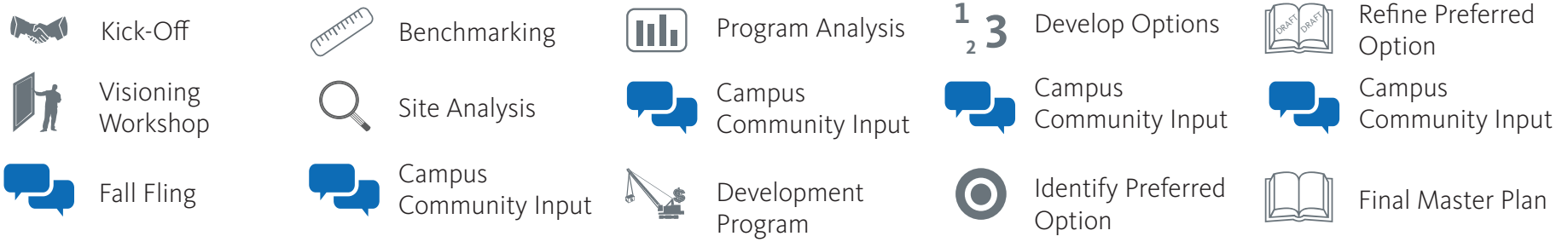
PHASE 4: PLANNING OPTIONS

Using the findings of the completed analysis and the program, alternative means of achieving the planning principles were developed. The studies prepared during this phase illustrate a strong conceptual basis for development as well as physical form.

PHASE 5: FINAL FACILITIES MASTER PLAN

Based on the selected option and feedback from the PAWG and stakeholders, the preferred option was expanded, resulting in a long term strategy for growth.


Review
Review
Review
Review
Phase I
Project Start-Up
Phase II
Existing Conditions Analysis
Phase III
Program Analysis
Phase IV
Planning Options
Phase V
Final Facilities Master Plan
Campus Community Input
Campus Community Input
Campus Community Input
Campus Community Input


Kick-Off
Visioning Workshop
Fall Fling
Benchmarking
Site Analysis
Campus Community Input
Program Analysis
Campus Community Input
Development Program
1 2 3
Develop Options
Campus Community Input
Identify Preferred Option
DRAFT DRAFT
Refine Preferred Option
Campus Community Input
Final Master Plan


Research + Analysis
Campus Community Input
Facilities Master Plan

PLANNING PRINCIPLES

The planning principles form the overarching goals for the Facilities Master Plan formulated from a long term vision for the campus. These principles will inform all design decisions made in the planning process and are the basis of aspirations for the Facilities Master Plan.

FOCUS ON STUDENTS

- Design to support student success
- Align facilities with institutional priorities

WELCOMING AND ACCESSIBLE CAMPUS

- Clear gateways and connections
- Access to program and services
- Safe and secure

COLLABORATIVE CAMPUS ENVIRONMENT

- Formal and informal learning
- Study spaces
- Social gathering spaces

PROGRESSIVE LEARNING SPACES

- Evolving pedagogies
- Cross-disciplinary collaboration
- Flexible facilities

TECHNOLOGY AND INFRASTRUCTURE

- Evolving and adaptable
- Campus and building infrastructure systems

EFFICIENT AND COST EFFECTIVE

- Practical solutions
- Financially feasible

COHESIVE AESTHETICS

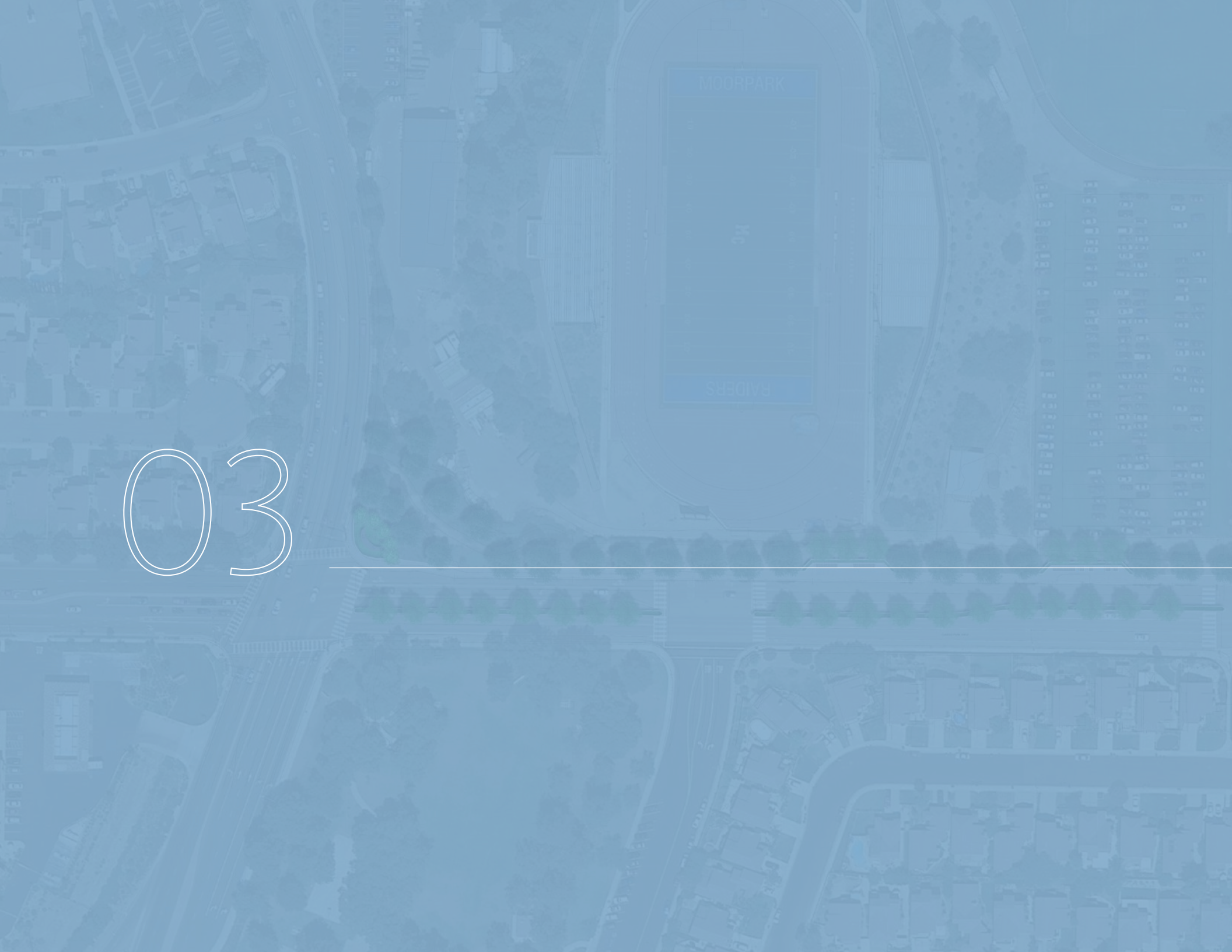
- Respect the existing character and architecture of the campus.

SUSTAINABLE SOLUTIONS

- Operational efficiency
- Responsible planning

STRENGTHEN COLLEGE/ COMMUNITY CONNECTIONS

Welcome the surrounding community



03

PARTICIPATION & OUTREACH

PARTICIPATION & OUTREACH

OVERVIEW

In order to maximize participation and to include the many voices of the Moorpark College community, the planning process included a series of outreach forums. The forums were attended by stakeholder representatives from all areas of the college: administration, faculty, staff, and students.

STRATEGIC VISIONING

In early August 2014, senior administrators and faculty met with the master planning team for an initial visioning session. This high level planning session was focused on defining what a successful master plan would look like, identifying key issues and drivers of change that will impact the future of the college, and assessing Moorpark College's strengths, weaknesses and opportunities for improvement.

FACULTY INFORMATION SESSION

On August 13, 2014, 28 members of the Moorpark College faculty attended an information session on the Master Plan. During that session, they participated in a range of activities designed to elicit each participant's ideas for the future of the Moorpark Campus. Planning issues were identified, discussed and prioritized resulting in shared goals for the facilities master plan.

FALL FLING

Following a Moorpark College tradition, the 2014 Fall Fling brought many representatives of the campus community together to discuss the state of the college. The September event was focused on facilities planning and the planning team facilitated an interactive workshop designed to maximize participation. Thoughts and ideas were recorded on colorful sticky-notes, and priorities were voted on with colored dots. As workshop participants engaged in discussions, their visions and ideas were graphically recorded in real time.

STAKEHOLDER MEETINGS

A series of stakeholder meetings were conducted over a 3 day period and focused on two general topics:

Building and Room Usage

- To identify how facilities are currently being used
- To discuss what works well (supports program needs)
- To discuss what doesn't work well (hinders the program needs)

Master Plan Needs

- Mid Term (3 to 5 years)
- Long Term (5+ years)

The results of these meetings informed the Master Plan Program that is described in the next chapter.

Y'ALL COME

Two Y'All Come Meetings were scheduled during the planning process in order to share information and gather feedback from the campus community. The meetings were open to all and included a cross representation of faculty, staff and students. The information collected informed the development of the Facilities Master Plan.

FT/CAP

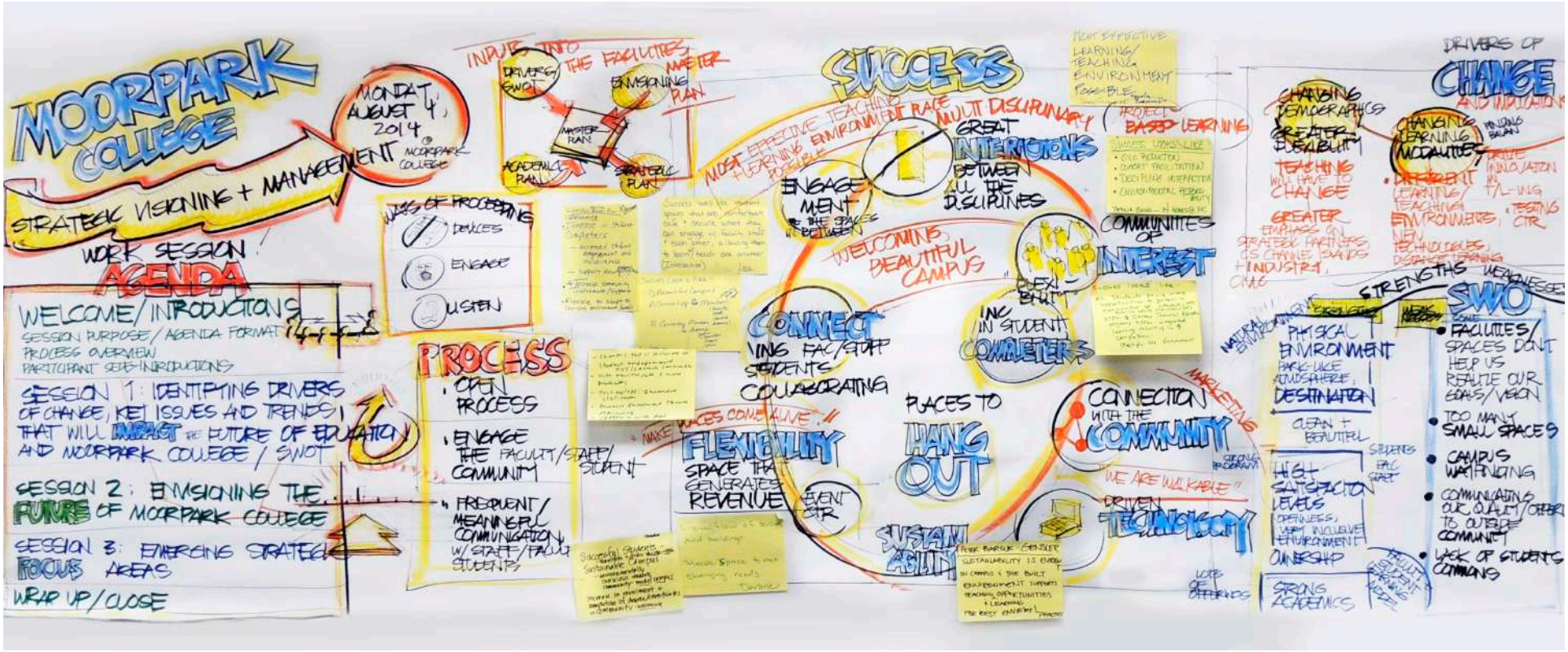
An informational meeting was scheduled with the FT/CAP in the final phase of the planning process. The draft master plan recommendations were shared with this group for review and comment.

FACULTY SENATE

Following the FT/CAP meeting, an informational presentation was scheduled with the Faculty Senate. This final presentation of the draft recommendations provided the opportunity for additional discussion and the finalizing of the *2015 Facilities Master Plan*.

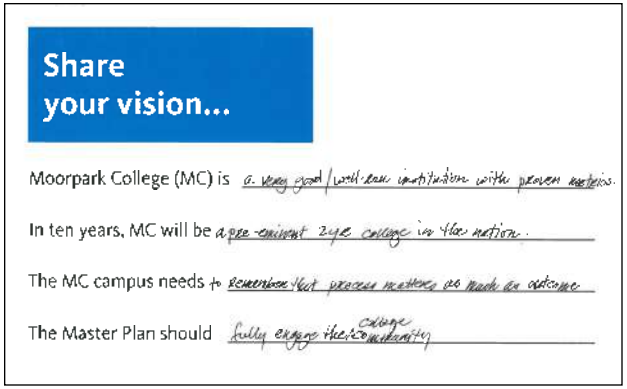
STRATEGIC VISIONING

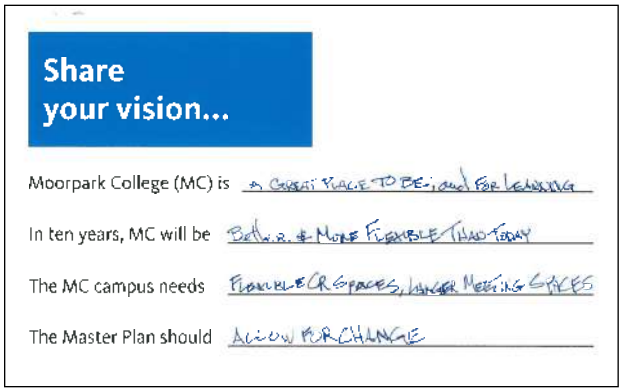
August 2014

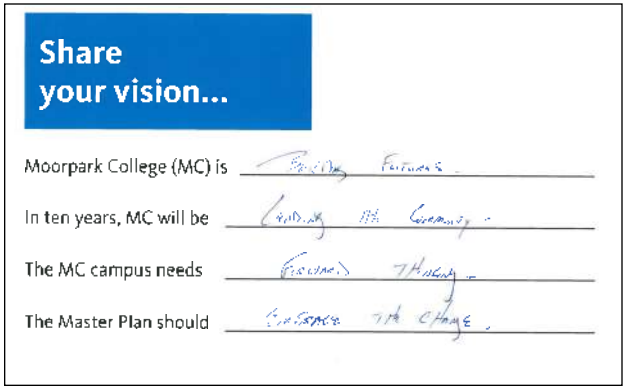


FACULTY INFO SESSION

August 2014

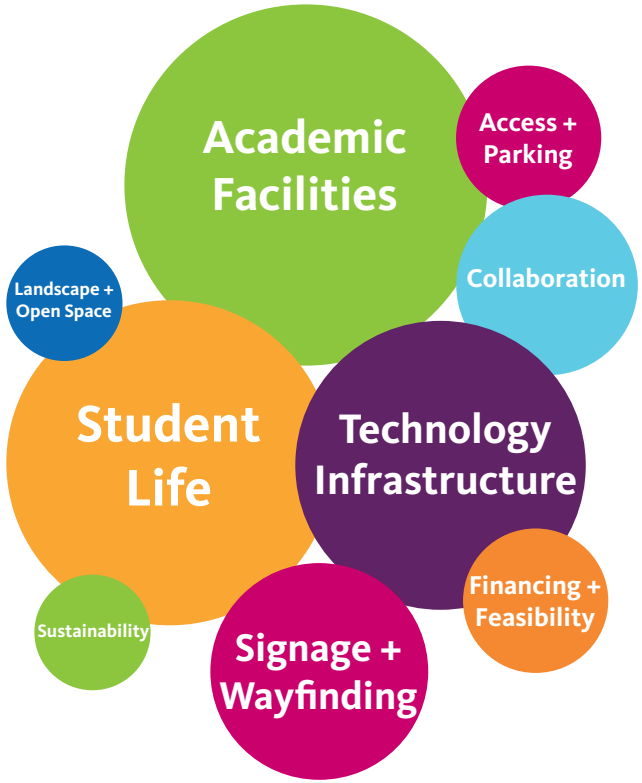






Top Planning Issues

According to Faculty and Staff



FALL FLING
September 2014

WRITE + POST

VOTE

1. Write and Post

2. Discuss and Report

3. Listen and Record

1 EVALUATE THE ISSUES
Tell us what planning issues matter to you

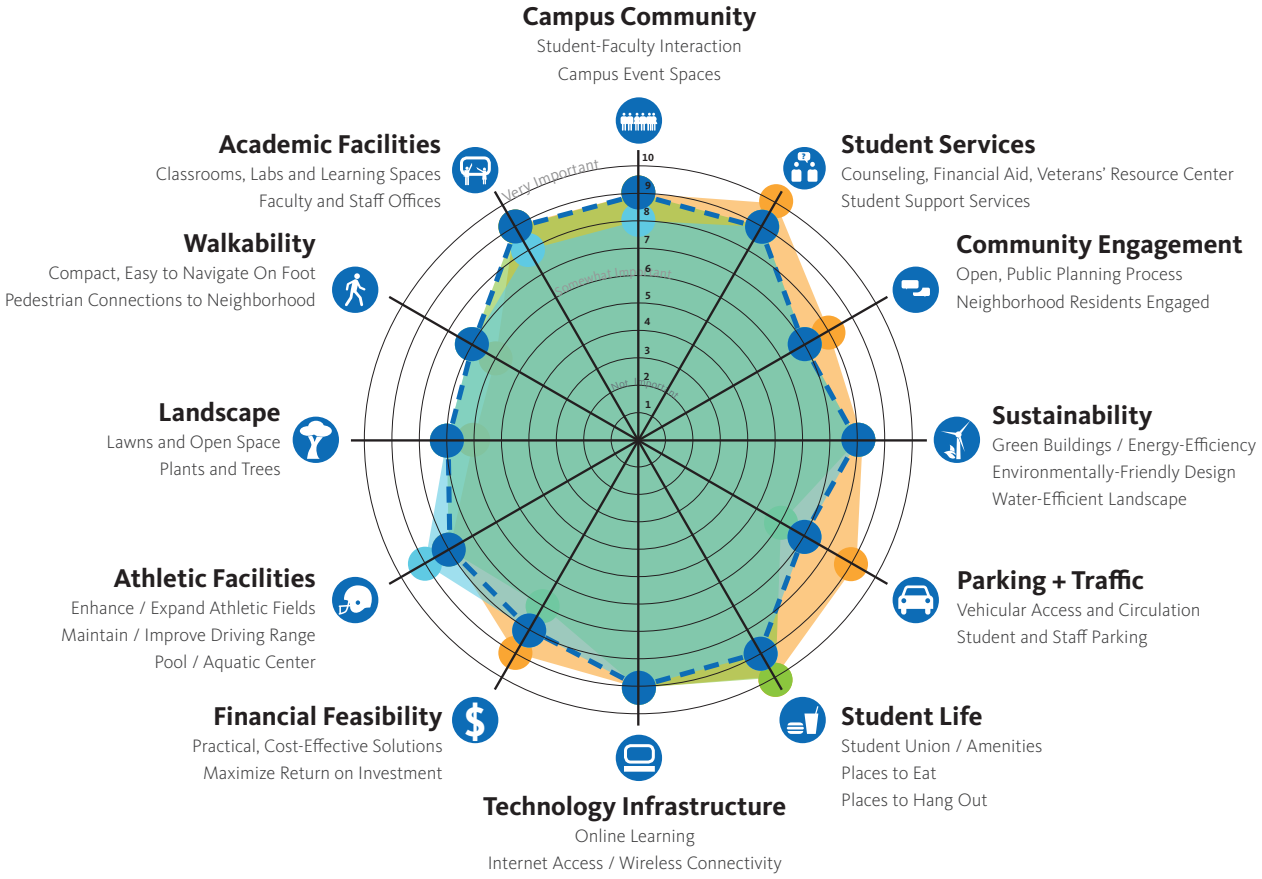
2 MAP YOUR EXPERIENCE
Describe places you like on campus and places that need improvement

3 SHARE YOUR VISION
Write a headline from the future that expresses your vision for Moorpark College

4 RANK YOUR PRIORITIES
Tell us which new facilities you want built

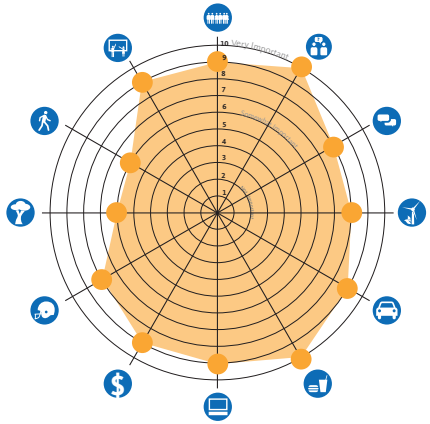
5 NEXT STEPS
See what's next for the Facilities Master Plan and how you can continue to participate

PLANNING ISSUES



PLANNING ISSUES

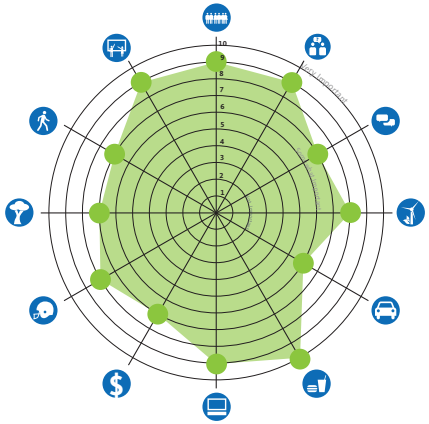
STUDENT



Top Three Issues

1. Student Life
2. Student Services
3. Academic Facilities

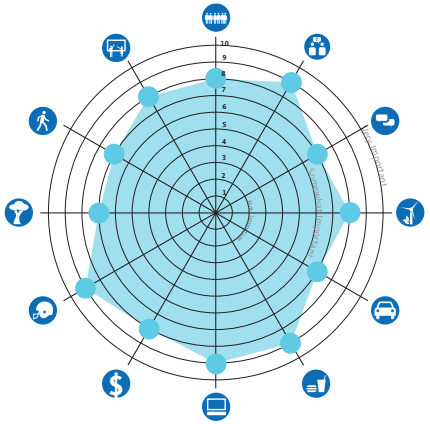
FACULTY



Top Three Issues

1. Student Life
2. Academic Facilities
3. Campus Community

STAFF



Top Three Issues

1. Technology Infrastructure
2. Student Services
3. Student Life


Planning Issues
Use your green dots
Campus Community
Academic Facilities
Student Services
Walkability
Community Engagem
Landscape
Sustainability
Athletic Facilities
Parking + Traffic
Financial Feasibility
Technology Infrastructure


lanning Issues


Map Your Experience
pink post-it notes
weaknesses


Rank Your Priorities
Use Red Dots
Use your red dots to indic
three priorities.
STUDENT CENTER / STUDENT UNION
CAFE / FOOD SERVICE
INFORMAL STUDENT GATHERING SPACE
LARGE MEETING SPACE / EVENT CENTER
ART GALLERY
SCIENCE LABS
COLLABORATIVE PROJECT SPACES
VETERANS' RESOURCE CENTER
TECHNOLOGY INFRASTRUCTURE
ON-CAMPUS HOUSING
OTHER


04

MASTER PLAN PROGRAM

MASTER PLAN PROGRAM

OVERVIEW

The Master Plan Program provides a framework for future development and identifies facilities needs for all types of spaces on campus. This program was developed based on a series of discussions with key stakeholders to identify their qualitative needs and balanced them with a detailed quantitative analysis in order to ensure a data driven plan.

COMMON THEMES

INSTRUCTIONAL SPACE

- CLASSROOMS (MORE, LARGER, RIGHT-SIZED, FLEXIBLE)
- COMPUTER LABS
- TESTING SPACE

STORAGE

MEETING ROOMS / SOCIAL SPACE

- AUDITORIUM
- FOOD SERVICE

OFFICE SPACE

- FULL TIME FACULTY AREAS
- PART TIME FACULTY AREAS
- IMPROVED DIVISION OFFICES

COLLABORATION SPACE

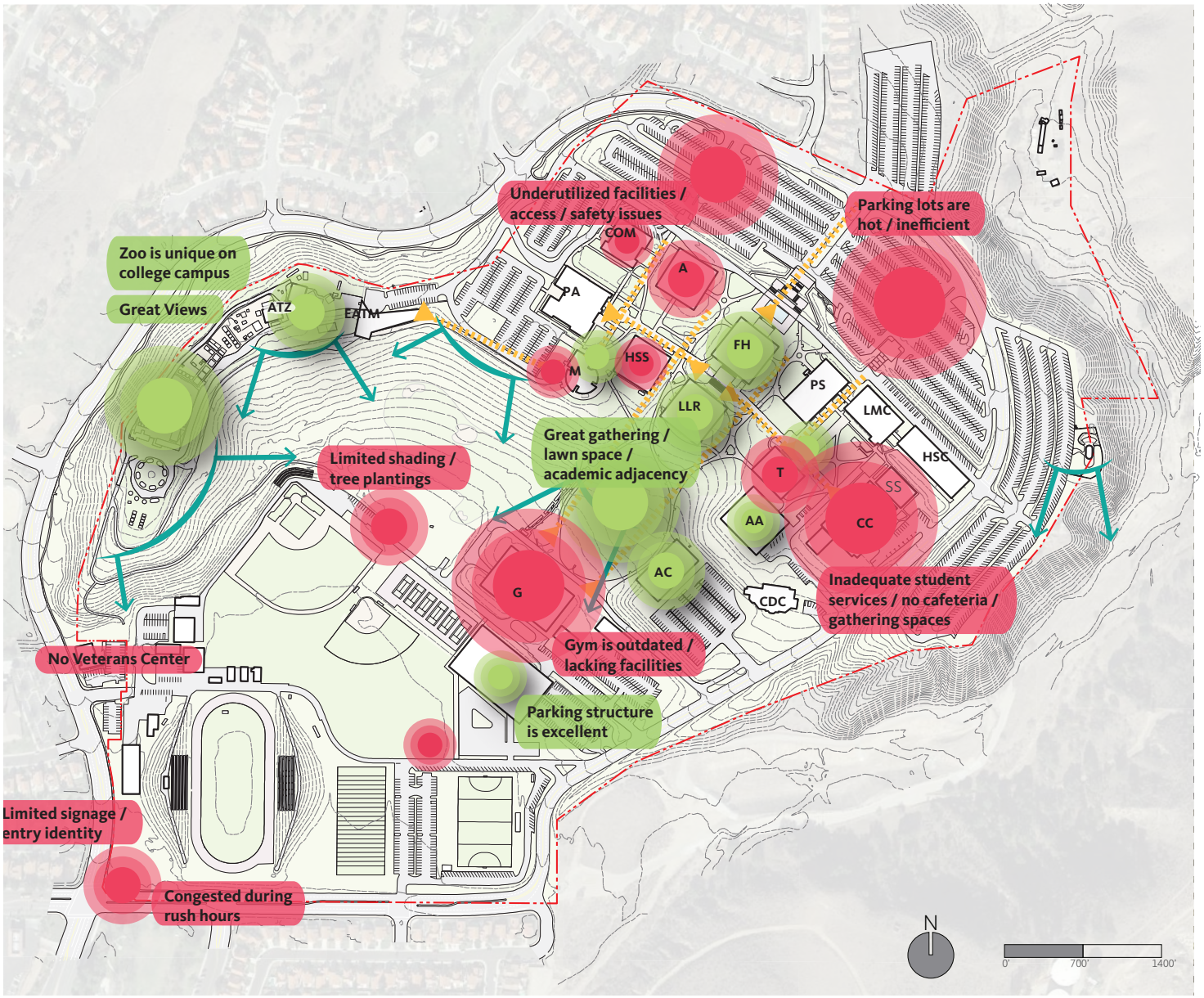
- STUDENT STUDY / COLLABORATION
- FACULTY COLLABORATION

QUALITATIVE

EXPERIENCE MAP

During the Fall Fling community outreach event, a large group of students, faculty, staff and administrators shared their thoughts about positive and negative places on campus. This graphic illustration summarizes the findings and highlights the following:

- The central green space is considered a very positive space on campus
- Views are considered by most all to be a positive
- The majority of negative comments relate to the condition of aging facilities



LEGEND

- Postive Experience
- Negative Experience
- Notable Views
- Cross-campus Views

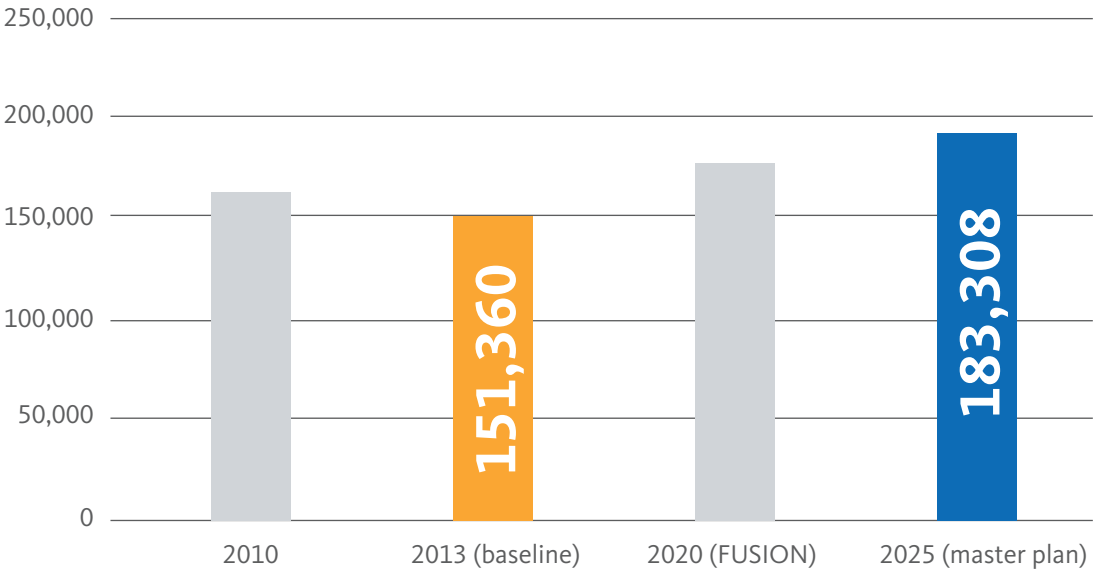
QUANTITATIVE

FACILITIES PLANNING FORECAST

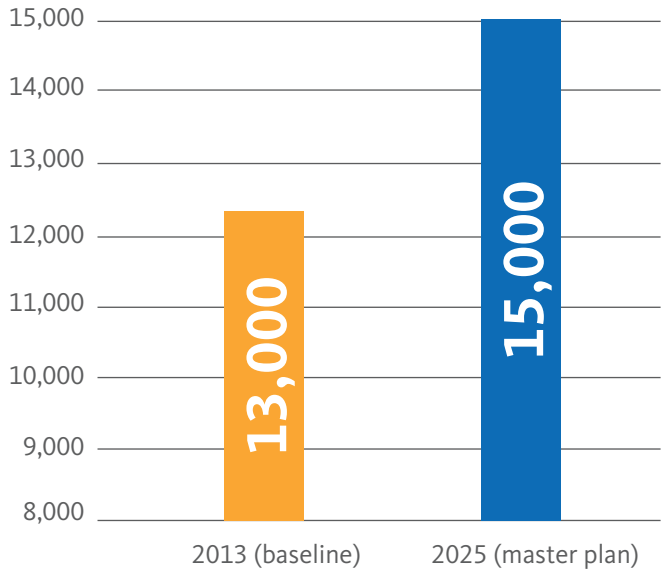
The Long Range Enrollment and Weekly Student Contact Hours (WSCH) Forecasts are issued by the California Community College's Chancellor's Office (CCCCO) each year. It includes historical data from previous years and projects total enrollment using an average anticipated change. These forecasts are coordinated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

Early in the planning process, 2013 was established as a baseline year, since data from the full academic year was available. A master plan horizon year of 2025 was identified as a long term projection and used to forecast data. The charts below summarize the enrollment and total weekly student contact hours (WSCH) forecasts for Moorpark College that were used to develop the Master Plan Space Program.

Weekly Student Contact Hour (WSCH)



Headcount



CALCULATING SPACE NEEDS

The inventory of facilities is an important tool in planning and managing college campuses. The Facilities Utilization Space Inventory Options Net (FUSION) is a database of all the California community college facilities, and 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 projects, projecting future facility needs, and analyzing space utilization across the system.

The 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 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 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.

Room Use Categories

LECTURE

100s

Classrooms
Support Spaces

OFFICE

300s

Offices
Support Spaces
(All offices including administrative and student services)

INSTR. MEDIA

530s

AV/TV
Technology
Support Spaces

LAB

200s

Labs
Support Spaces

LIBRARY

400s

Library
Study
Tutorial
Support Spaces

OTHER

520, 540 - 800s

PE
Assembly
Food Service
Lounge
Bookstore
Meeting Rooms
Data Processing
Physical Plant
Health Service

SPACE INVENTORY ANALYSIS

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, lab, office, library and instructional media 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 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 diagrams 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 used 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, elevators, stairs, walled corridors, restrooms, and areas accommodating building maintenance services are not deemed usable/assignable.

The 2014 Moorpark College Space Inventory Report was used as the basis for the analysis of space. 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 the analysis of existing conditions, there are several facilities that are recommended as part of this Facilities Master Plan to be removed. The program takes into account the removal of these facilities.

In the chart on the following page, the Master Plan Program indicates the projected types of space needed to address the 2025 horizon and the far right column indicates the difference, or the amount of additional space needed to address the college's programmatic needs.

Projected Future Space Needs

	Current Inventory (ASF)	Space Needs 2025 (State Standard ASF)	Over / Under ASF	ADDITIONAL 65% Efficiency (GSF)
LECTURE	98,919	52,115	-46,804	
LAB	109,489	146,264	36,775	56,577 GSF
OFFICE	57,424	48,882	-8,542	
LIBRARY	29,775	41,270	11,495	17,684 GSF
INSTR. MEDIA	4,578	12,980	8,402	12,926 GSF
OTHER	105,460	87,602	-6,073	
TOTAL ASF	405,645	389,113		

*ASF: Assignable Square Feet

GSF: Gross Square Feet

05

EXISTING CONDITIONS

EXISTING CONDITIONS

OVERVIEW

Understanding the existing conditions of the Moorpark College Campus and investigating the various systems of the Campus, both built and natural, provides an understanding of the physical constraints and opportunities for the facilities master plan.

The campus originally occupied 148 acres. Additional land was obtained and the College now occupies approximately 156.78 acres at the eastern edge of the City of Moorpark in Ventura County, in close proximity to the 118 freeway and retail center at Collins Drive and Campus Park Drive, catty-corner from the first glimpse of the Campus on the north east corner of the intersection. A church and multiple residential developments surround the College and precede the primary entrances into the College.

The Campus's physical setting is characterized by stunning views, expansive open space and notable topography and has a reputation as one of the most beautiful community colleges in California. The main campus area (excluding the 5 acre America's Teaching Zoo) has been historically developed at higher elevation with the oldest academic facilities dating from the mid- sixties in that area. The southern portion of the campus, down the hill and nearest to public facilities, is comprised largely of physical education and recreational facilities.

The main mode of transportation to Campus is by personal car, with access to parking areas at the northern and eastern perimeter. Pedestrian circulation through campus is challenging in terms of wayfinding and accessibility to facilities that are not located within the upper academic core.

The outcomes of the analysis phase of the planning process resulted in the identification of opportunities and constraints in formulating physical responses to the needs identified for the Campus.

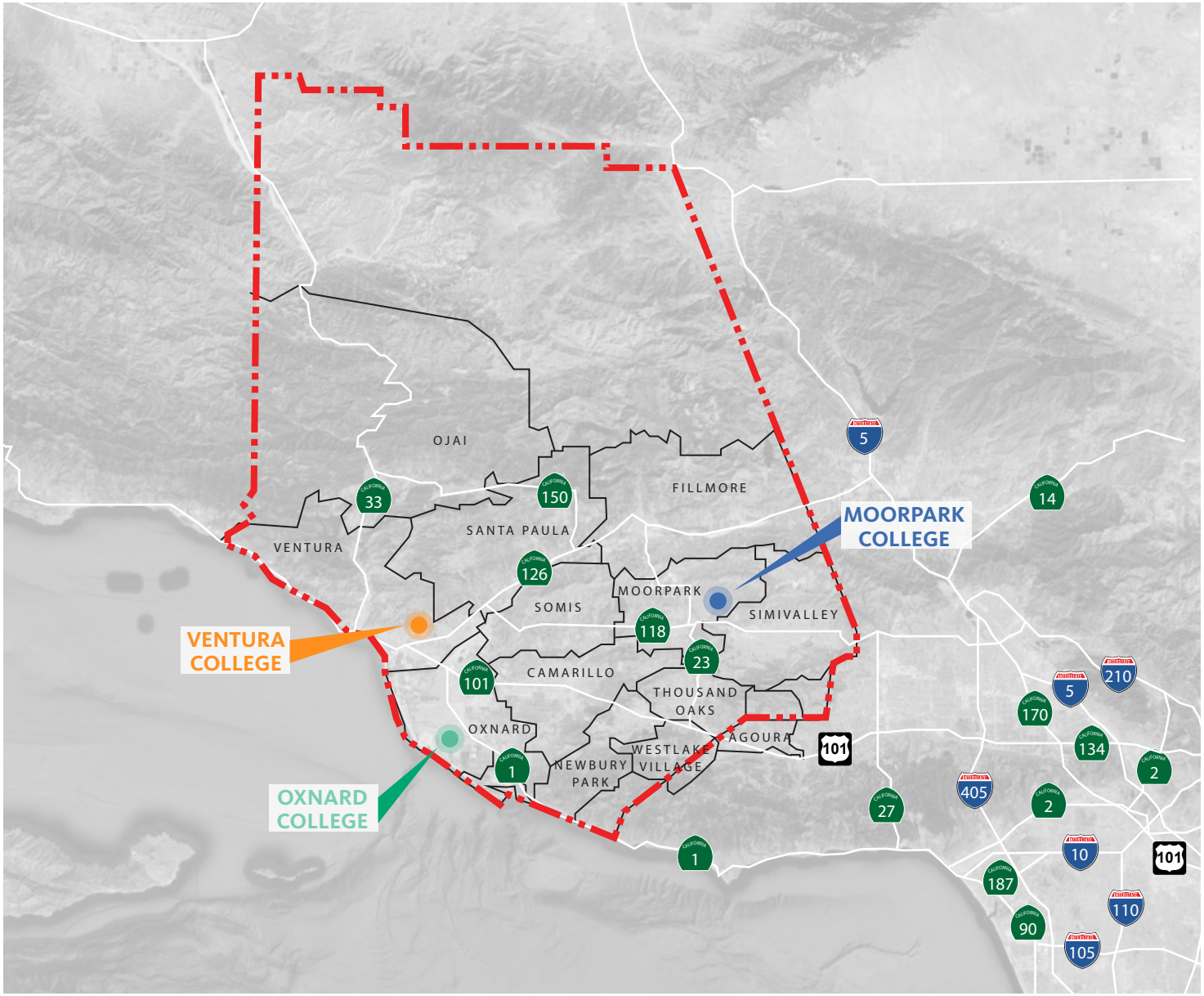
Those opportunities range from the enhancement of open spaces to provide more comfort and informal learning and collaboration areas, to strengthening the pedestrian experience by improved pathways and signage to renovating and adding buildings that respond to current and future pedagogies.

At the current time, the utilities are sufficient to serve the Campus. Upgrades have been made to the major systems, including electrical, gas, sewer, water as well as telephone and data to accommodate the existing capacity. It is expected that routine maintenance will be necessary. Sufficient, domestic water, power and sanitary sewer capacity exists for the future needs suggested in this *2015 Facilities Master Plan*. Changes to the storm water run off, in order to contain it on site will are addressed in a subsequent section.

Significant improvements to the Campus, long term, are possible through a careful phasing and implementation plan that maximizes the value of the current building analysis and recognizes a future that encourages student success by the creation of flexible spaces in both built and open areas.

DISTRICT SERVICE AREA

- Moorpark College lies at the far east end of the Ventura County Community College District. It primarily serves the communities of Moorpark, Simi Valley, and areas of the east side of Ventura County.



LEGEND

DISTRICT SERVICE BOUNDARY

CITY BOUNDARIES

MAJOR ROADS

REGIONAL CONTEXT

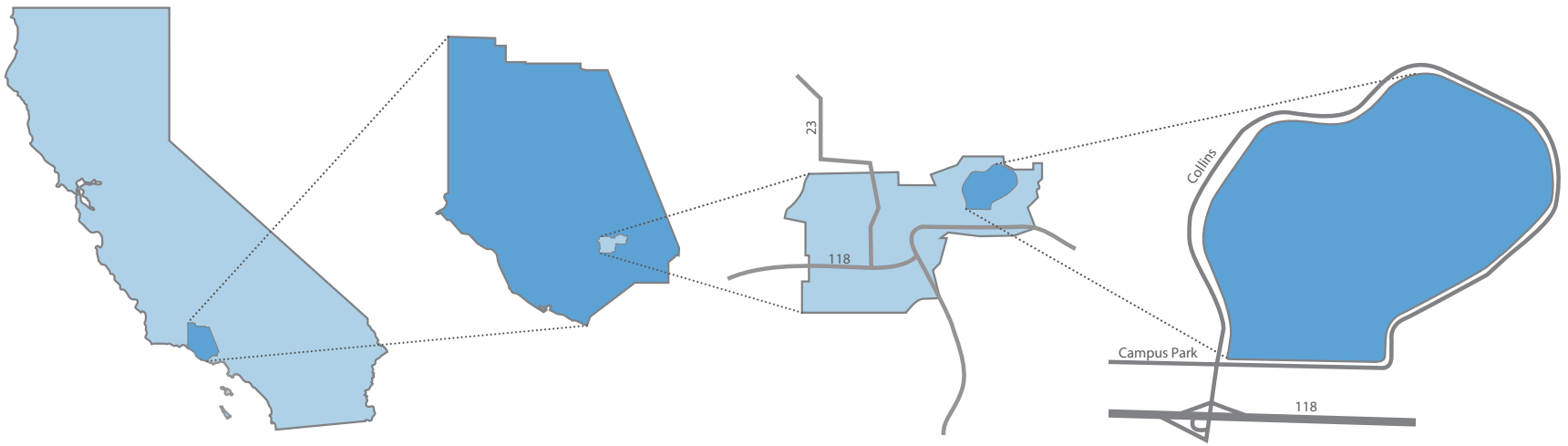
PROJECT LOCATION

California
(38.3 Million Residents)

Ventura County
(823,000 Residents)

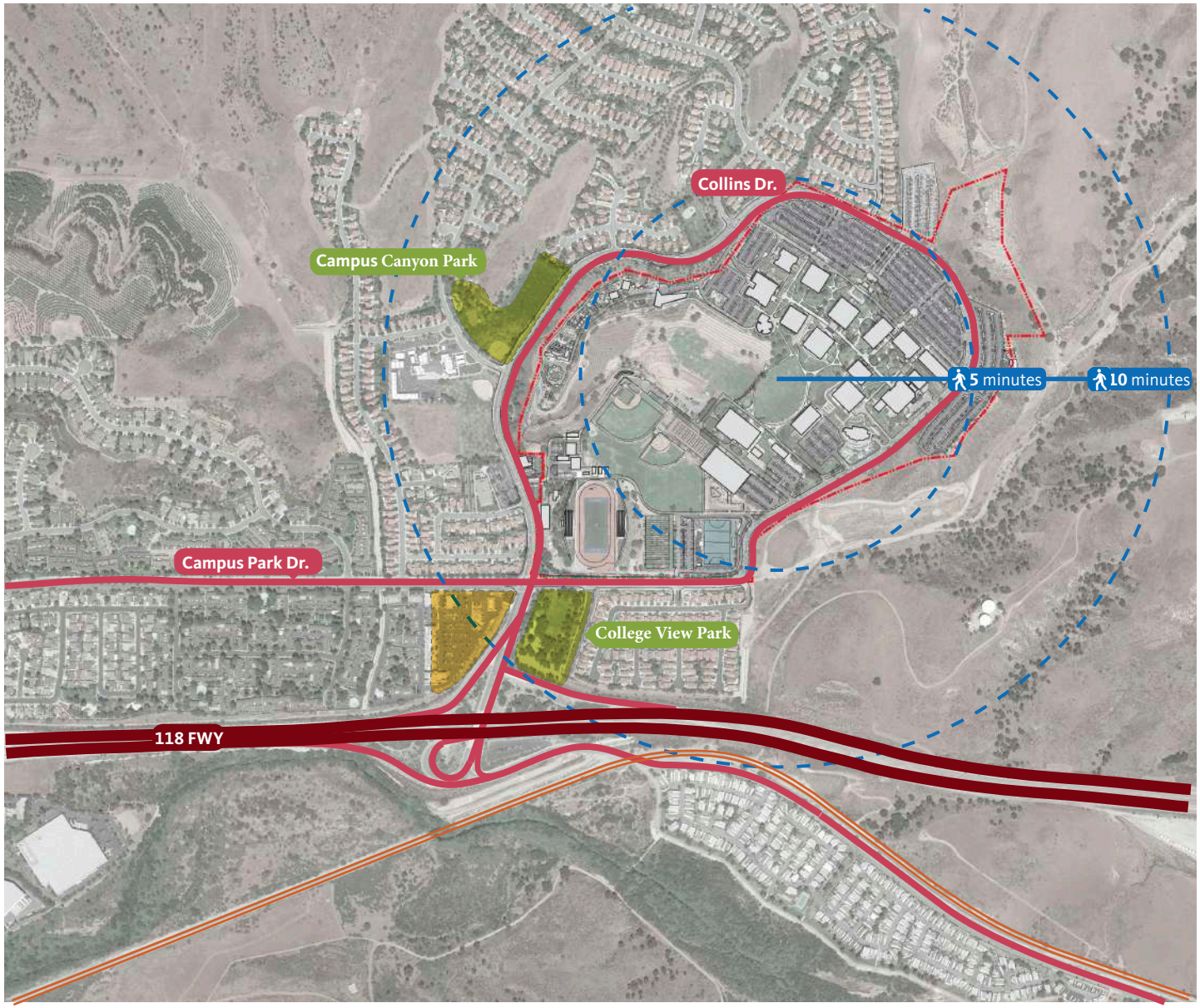
City of Moorpark
(31,415 Residents)

Moorpark College
Campus Master Plan Study Area
(150 acres)



SITE CONTEXT

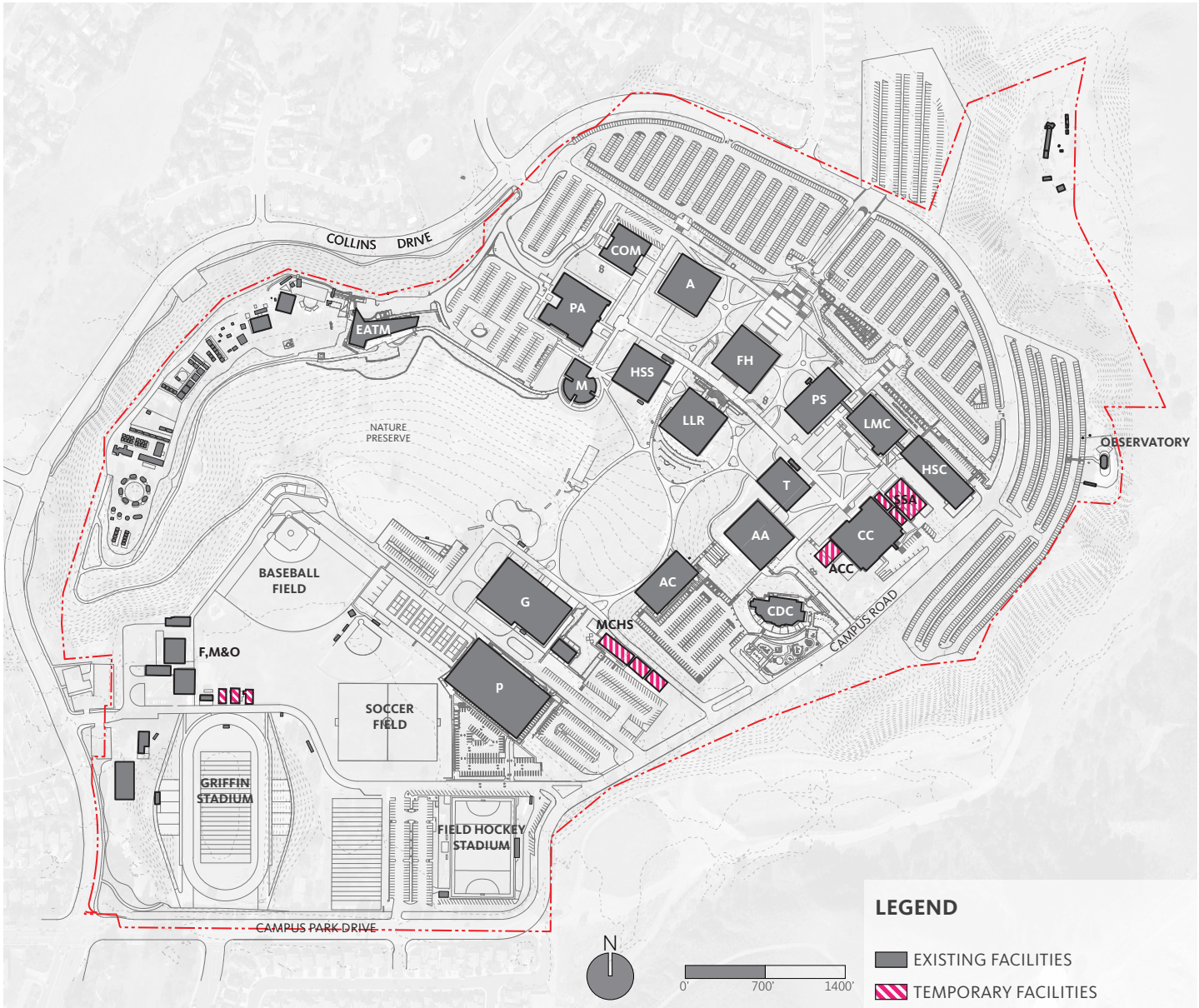
- The Campus gateway and the initial view of the campus is at the intersection of Campus Park Drive and Collins Drive.
- The Campus is in close proximity to the 118 freeway.
- The land uses around Campus are primarily single-family residential.
- There is a retail center within a 10 minute walk of the campus core, at the southwest corner of Collins Drive and Campus Park Drive.



EXISTING CAMPUS

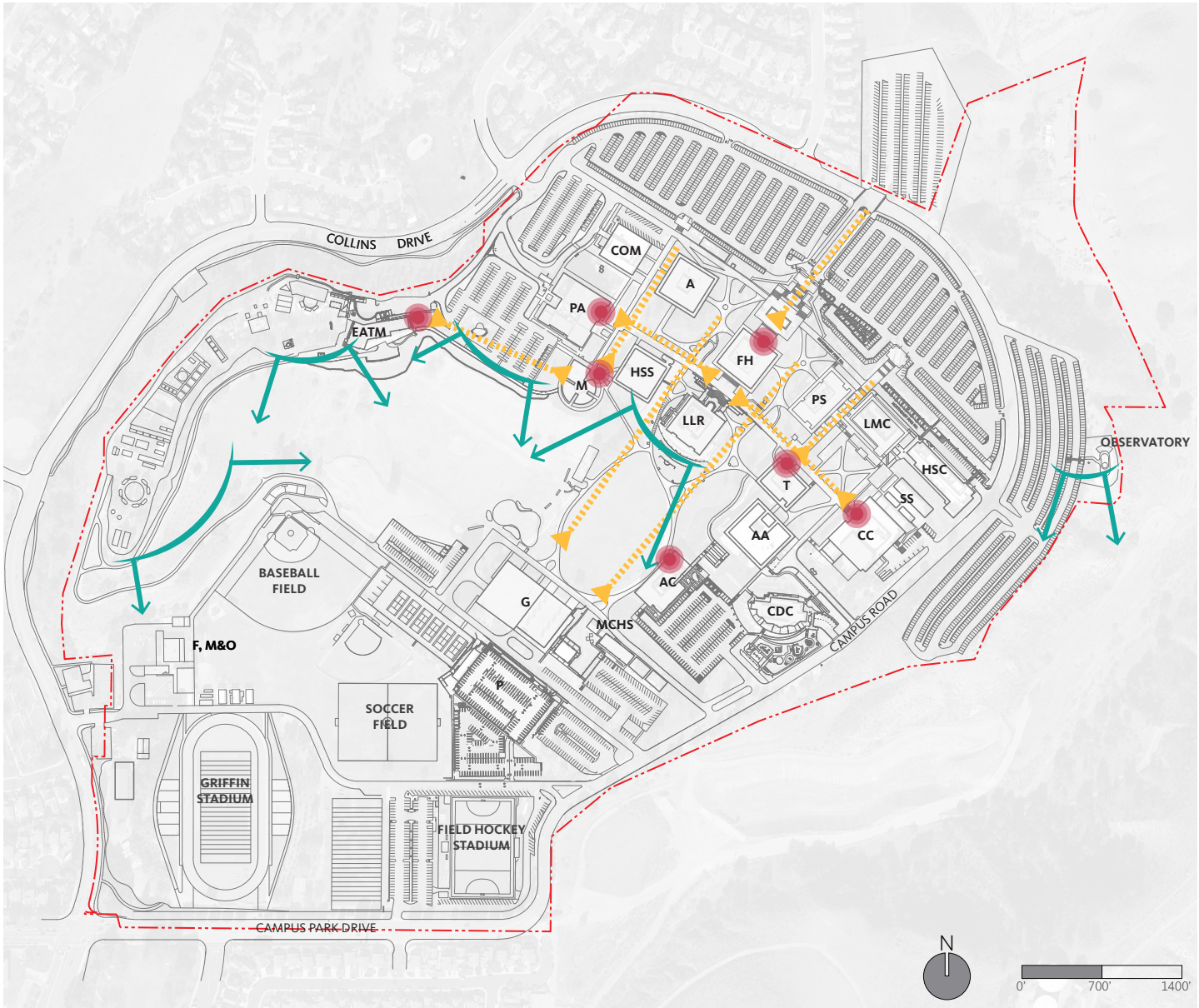
BUILDINGS LIST

(A) Administration
(AA) Applied Arts
(AC) Academic Center
(ACC) Access
(CC) Campus Center
(CDC) Child Development Center
(COM) Communications Building
(CP) Campus Police
(EATM) Exotic Animal Training+Management
(FORUM) AA-147
(FH) Fountain Hall
(G) Gymnasium
(G-BSFD) Baseball Field
(G-FBFD) Football Field
(G-GOLF) Golf Range
(G-SBFD) Softball Field
(G-SCFD) Soccer Field
(G-TNCT) Tennis Courts
(G-TRACK) Track and Field
(HSC) Health Science Center
(MCHS) High School at MC
(HSS) Humanities/Social Science
(LLR) Library Learning Resources
(LMC) Life Science/Math/Comp Studies
(M) Music Building
(F, M&O) Facilities, Maint. & Operations
(O) Observatory
(PA) Performing Arts
(PE) PE Annex Offices
(PS) Physical Science
(SSA) Student Services Annex
(ST) Stadium Annex
(T) Technology/Business
(ZOO) Zoo Buildings 1 and 2



VIEWS

- The hillsides of the Campus offer wonderful views to the south and southwest.
- Deliberate massing of new facilities and carefully locating new pedestrian paths will preserve view corridors.

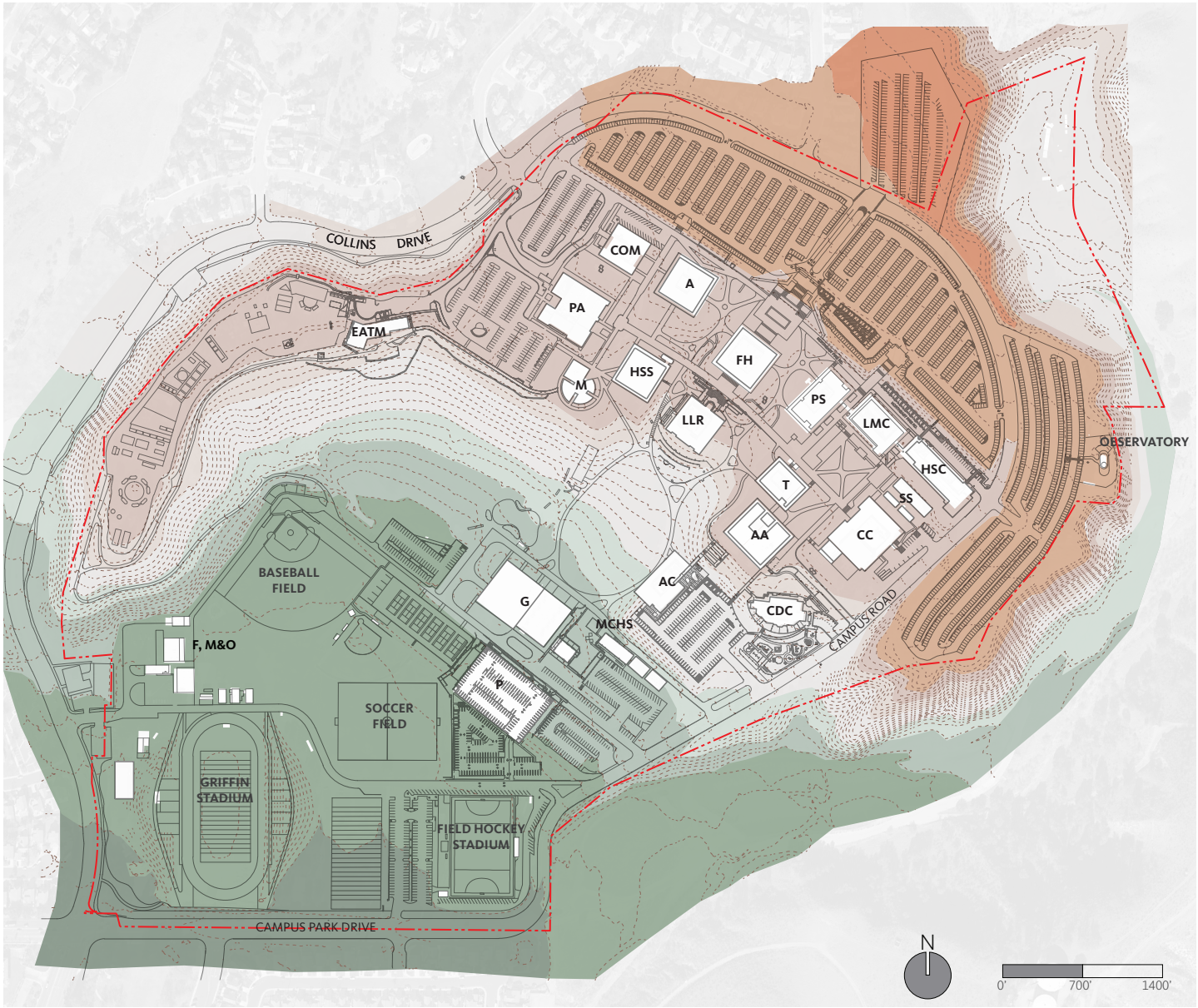


LEGEND

NOTABLE VIEWS
CROSS CAMPUS VIEWS
LANDMARKS

TOPOGRAPHY

- The majority of campus buildings are constructed at higher elevations in the northeast portion of the site.
- The elevation difference affords great cross-campus views to the southern portion of site and beyond.
- The academic buildings, at higher elevations, suggest a location of prominence.
- The campus elevation changes from 770' to 620', a difference of 150'.

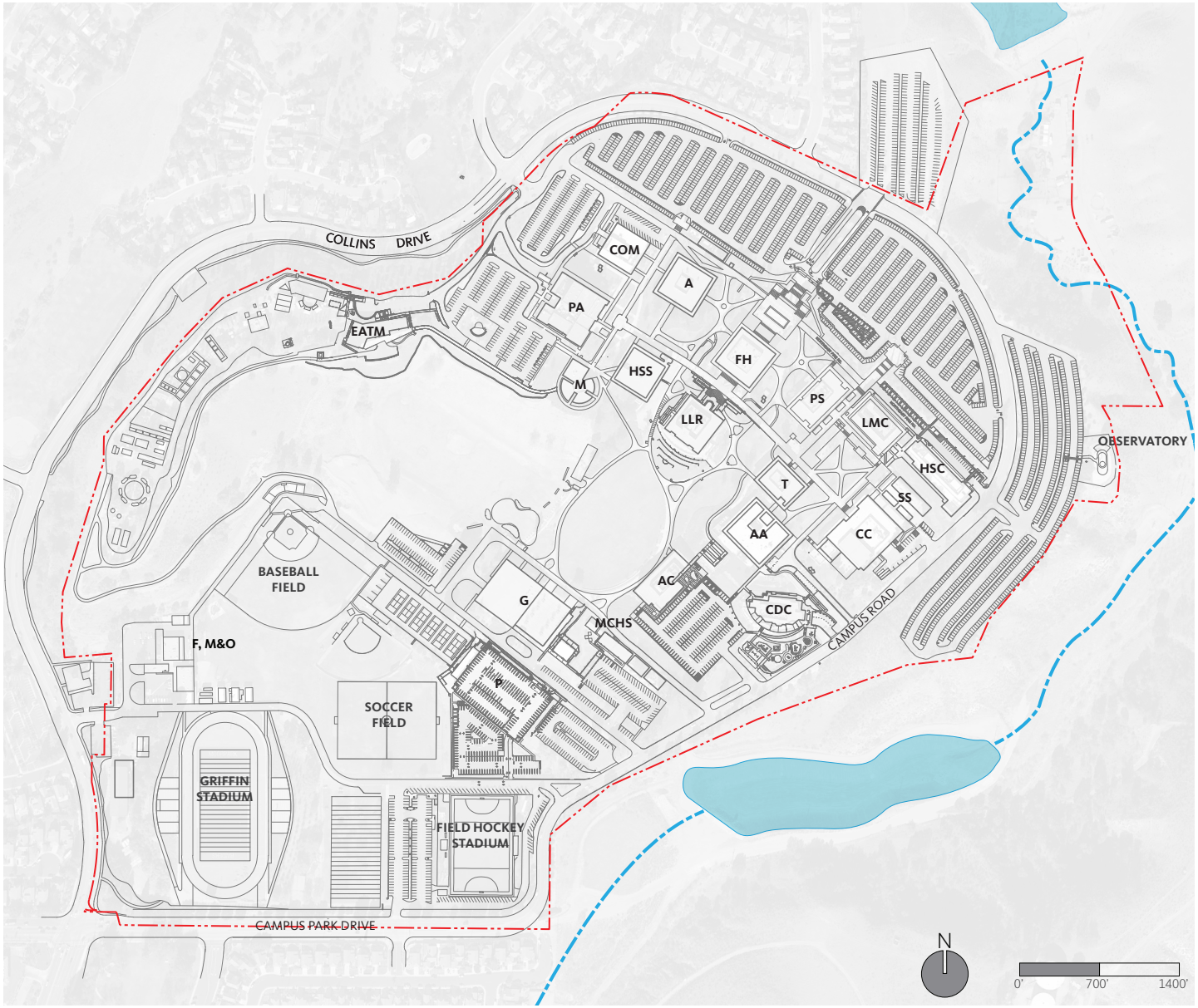


LEGEND

- HIGHER THAN 770'
- 750' TO 770'
- 730' TO 750'
- 710' TO 730'
- 690' TO 710'
- 670' TO 690'
- 650' TO 670'
- 630' TO 650'
- LESS THAN 630'
- INDEX TOPO LINE (5' INTERVAL)

HYDROLOGY

- A small channelized waterway is located within the easternmost site boundary.
- The drainage pattern for the campus flows in a southern direction.
- Currently, 99% of the site drains directly into the Arroyo Simi Accommodation is needed to reduce and/or eliminate turbidity and indroduction of foreign substances into the Arroyo Simi.



Note: additional hydrology information can be found in the appendix

LEGEND

- INTERMITTENT STREAM
- STORMWATER DETENTION BASIN

EXISTING TREES

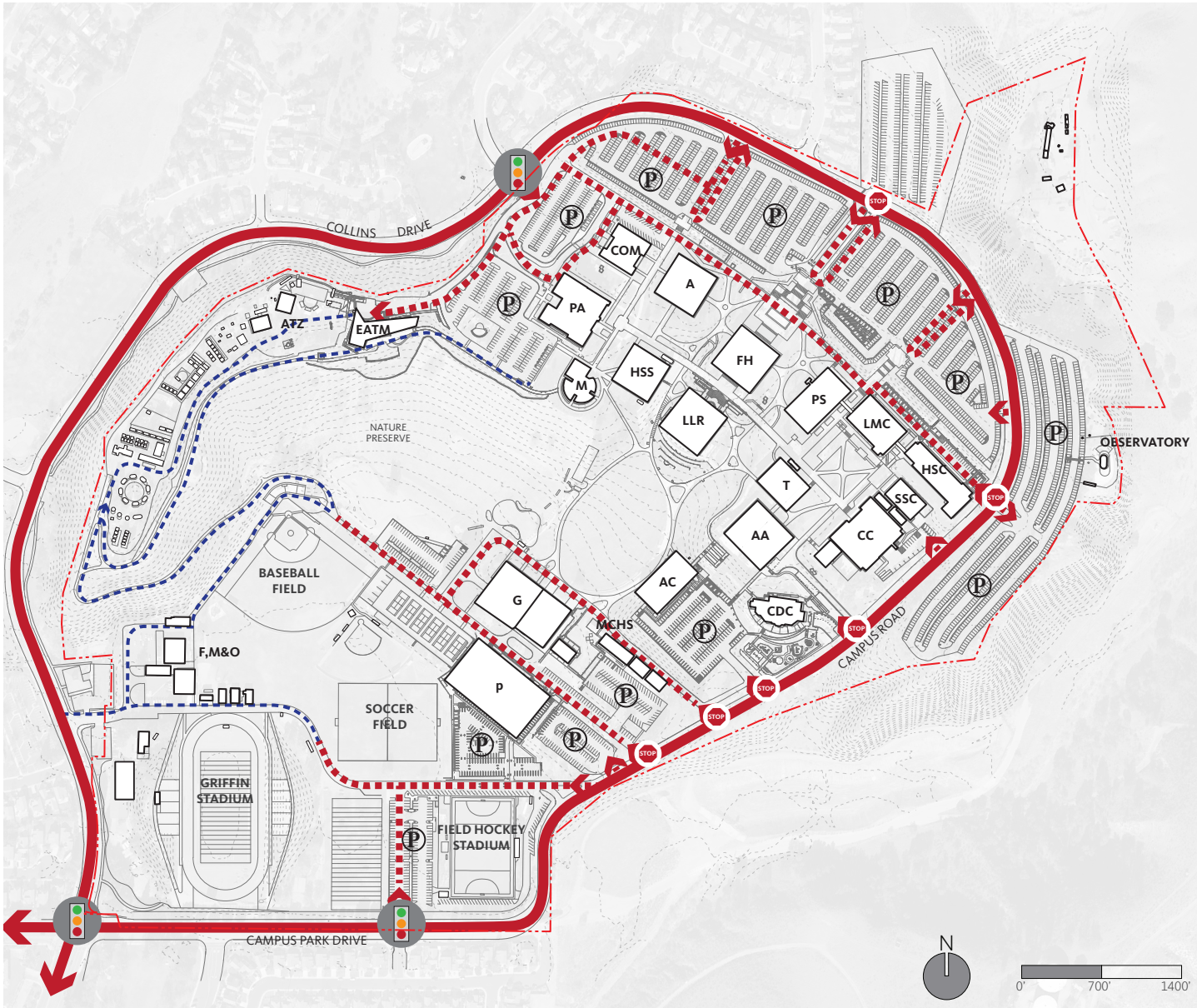
- Preserving or relocating large canopy trees and oak trees is a priority.
- Large areas without shade are focus areas for future tree planting.

LEGEND

EXISTING TREE

VEHICULAR CIRCULATION

- There are numerous points of access to campus on Collins Drive with no clear primary entry.
- Signage and campus branding are largely absent.
- The one parking structure on campus is well received by students who feel that the surface lots are too vast and lack adequate shade.

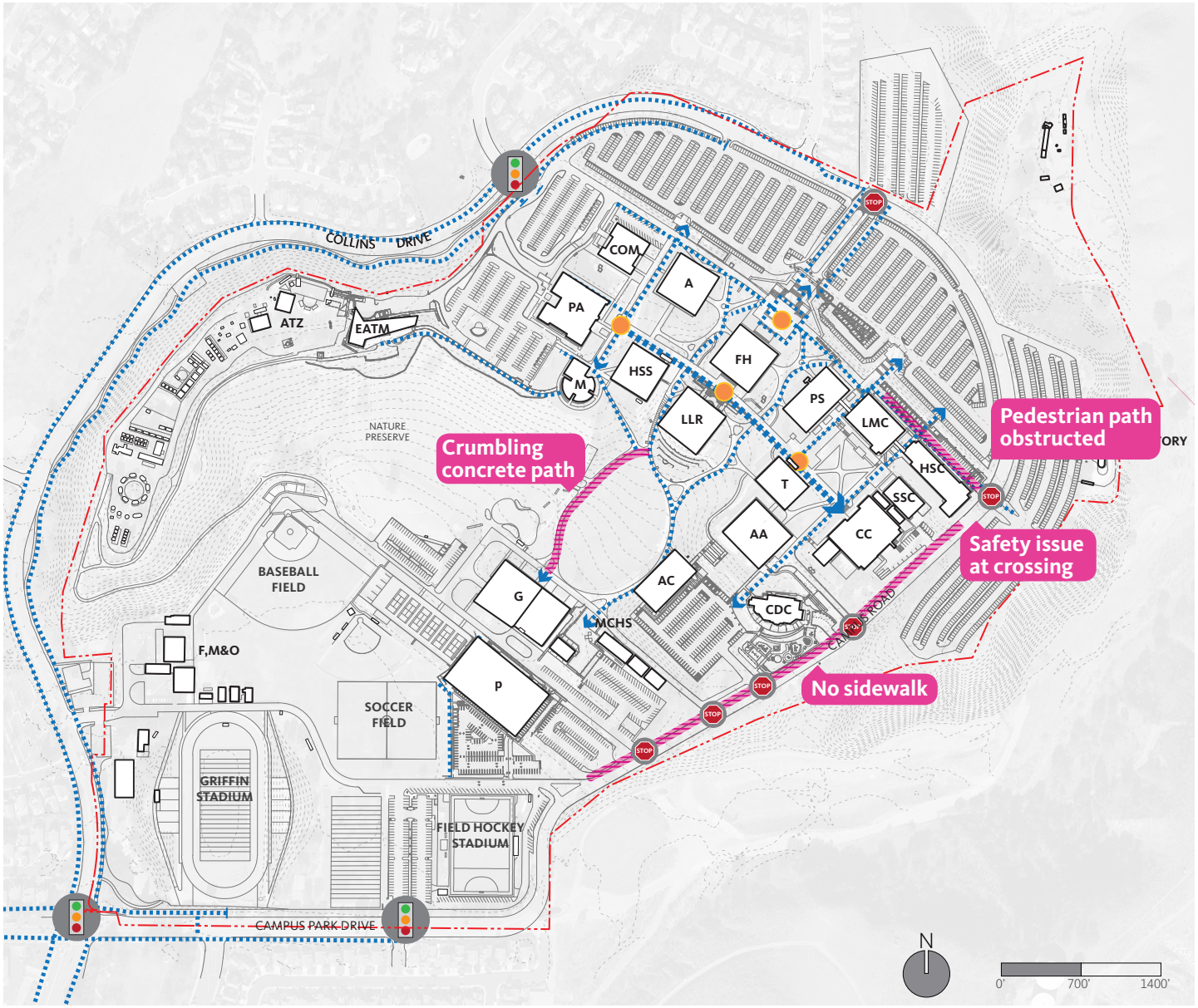


LEGEND

- PRIMARY VEHICULAR CIRCULATION
- SECONDARY VEHICULAR CIRCULATION
- RESTRICTED VEHICULAR CIRCULATION
- SIGNALIZED INTERSECTION
- STOP-CONTROLLED INTERSECTION
- PARKING

PEDESTRIAN CIRCULATION

- There is a lack of comprehensive pedestrian wayfinding throughout campus.
- Currently, pedestrian flow optimization is limited to the campus core.
- In some areas, pedestrians and service access share rights-of-way, creating potential conflicts.
- Pedestrian zones, as well as access for the disabled, need to be clearly delineated especially when adjacent to vehicular circulation.
- Pedestrian access from north to south is limited and access for the disabled is non-intuitive.
- A stronger connection between the retail center and the campus would be beneficial.



LEGEND

- PRIMARY PEDESTRIAN CIRCULATION
- SECONDARY PEDESTRIAN CIRCULATION
- CONNECTION NEEDED
- PEDESTRIAN HAZARD
- PEDESTRIAN NODE
- SIGNALIZED INTERSECTION
- STOP-CONTROLLED INTERSECTION

BUILDING AGE

- Construction of the Administration, Library, Science, Technology, Campus Center, Gymnasium and Maintenance buildings began in 1966.
- The Humanities/Social Science, Music and Student Services buildings were completed in the 1970s.
- The Communications Building and the Performing Arts Center opened in 1990 and 1995, respectively.
- In 1999, the 27,000 square foot Fred Kavli Science Center was constructed.
- A high school for high potential juniors and seniors opened in 2000.
- In 2006 the Child Development Center was constructed.
- The Academic Center was completed in 2010.
- The ETAM building opened in 2011.
- Most recently the Parking structure and Police Station opened in 2015.

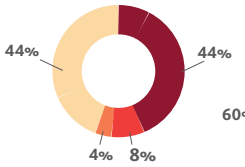
LEGEND

- 1960-1969
- 1970-1979
- 1980-1989
- 1990-1999
- 2000-2009
- 2010-PRESENT

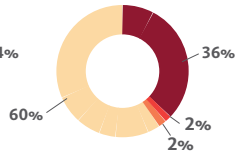
BUILDING CONDITIONS

- Campus buildings built 40 years ago or more are reaching the end of their life-cycle.
- The majority of buildings ranking high on the FCI should be considered for renovation or replacement.

Facility Conditions as % of Total Buildings

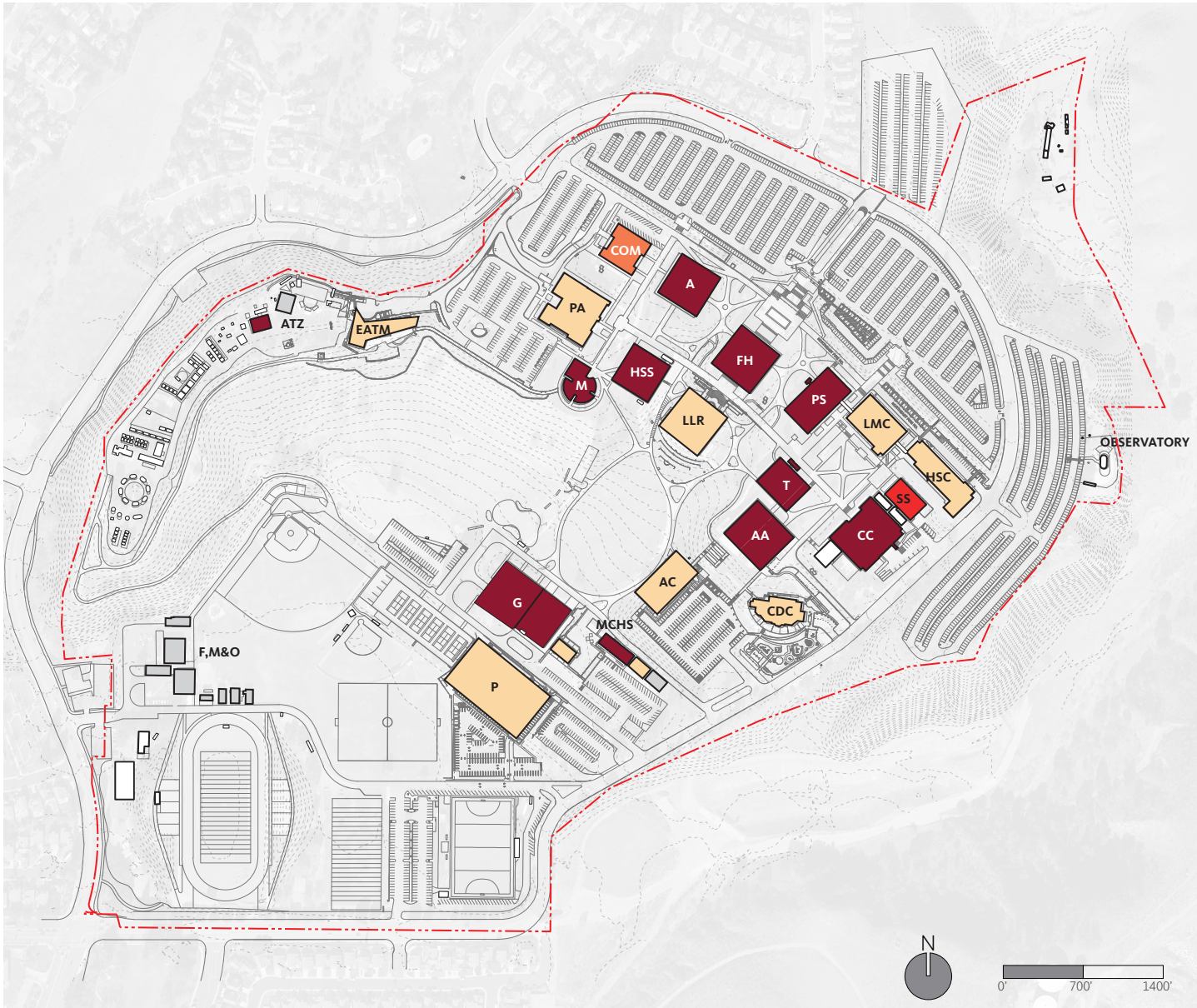


Facility Conditions as % of Total GSF



FCI represents projected repair cost as a percent of replacement cost.

**Source: FUSION*

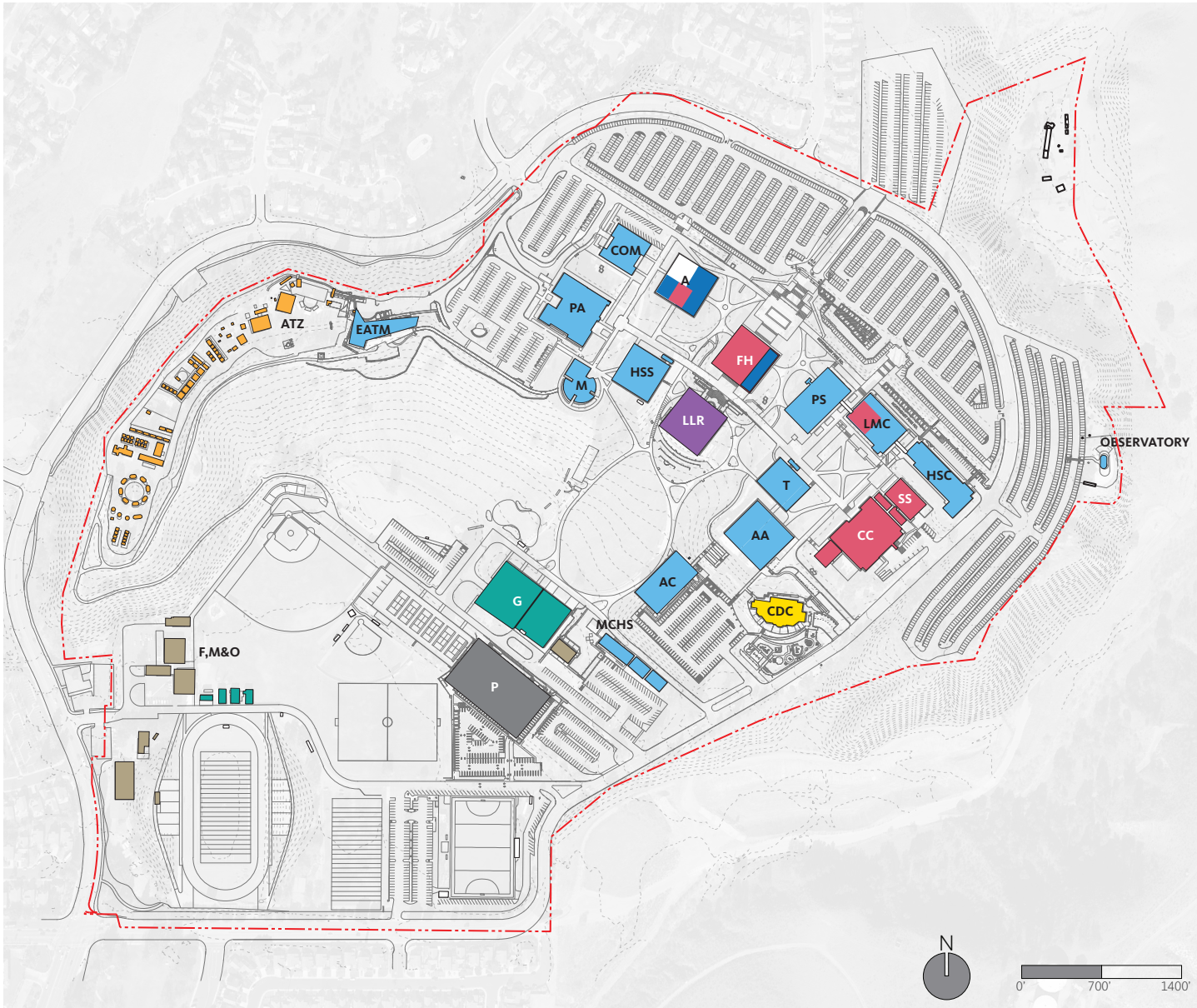


LEGEND

- 50% TO 100%
- 25% TO 50%
- 5% TO 25%
- LESS THAN 5%
- UNKNOWN

BUILDING USE

- Student Services / Activities functions are dispersed across multiple locations.
- The core instructional functions are in relatively close proximity to one another, reinforcing a walkable campus core.
- The Library/Learning Resource Center is centrally located.
- There are limited areas for student gathering and collaboration



LEGEND

- INSTRUCTIONAL
- ADMINISTRATION
- ATHLETICS
- LIBRARY/LEARNING RESOURCE CENTER
- STUDENT SERVICES/ACTIVITIES
- CHILD DEVELOPMENT CENTER
- AMERICAS TEACHING ZOO
- MAINTENANCE/CAMPUS SERVICE
- PARKING

ANALYSIS OUTCOMES

The following opportunities and challenges have been identified through an analysis of the site conditions.

IDENTITY

- **Opportunity**: Promote College identity and brand at the entry points and perimeter of Campus.
- **Challenge**: Clarify the College entries and wayfinding throughout Campus.

CONTEXT

- **Opportunity**: Utilize and maintain the great views to and from Campus.
- **Challenge**: Reduce negative impacts on the residential neighbors.

TOPOGRAPHY

- **Opportunity**: Integrate the dramatic topography with future physical improvements.
- **Challenge**: Improve pedestrian flow throughout Campus, especially between north and south.

OPEN SPACE

- **Opportunity**: Create shaded, habitable areas for programs and social interaction.
- **Challenge**: Improve usability of outdoor areas.

FACILITIES

- **Opportunity**: Provide new facilities and modernize existing buildings to accommodate academic programs, enrich student life, and encourage collaboration.
- **Challenge**: More than half of existing buildings are over 35 years old and a third are at least 45 years old with over a third of the existing buildings candidates for significant renovation or replacement.

06

PLANNING OPTIONS

PLANNING OPTIONS

The following guidelines for developing the future Moorpark College Campus were derived through the planning process outlined in the previous pages. The Master Plan proposes an organizing structure for growth that is embedded in the environmental context, with a respect for the historic, natural, and architectural setting of development and the need for collaborative and social interactions.

The overall design concept adheres to two guiding principles: That the broader community flows organically uphill to a more cloistered academic core; and that the campus can be broken down into a handful of sub-districts that emphasize, respectively, Play + Recreation, Socializing + Interaction and Learning + Innovation. The following master plan options utilize these conceptual frameworks to provide different strategies for growth. The organization of the growth is different on each of the options, and each would result in varying degrees of impact on the current campus.

PLANNING CONCEPT

The organizing concepts for the master plan incorporate broad strategies for the overall campus. These strategies are: Campus Threshold, campus district, and zones.

CAMPUS THRESHOLD

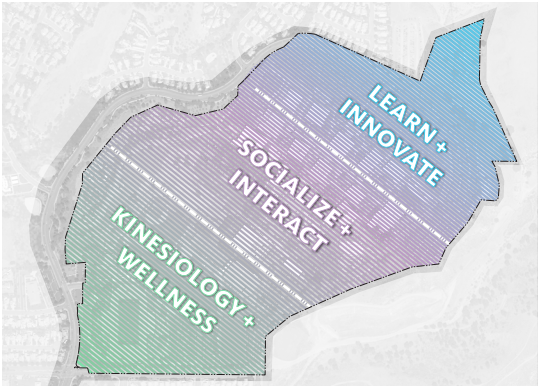
- Acknowledge the active and passive campus environs.
- Reinforce the academic core.
- Encourage community engagement.
- Provide access to the sports and performance facilities to a wider user group.

CAMPUS DISTRICT

- Play + Recreation – Focus on physical activity and outdoor spaces in which the College community may interact.
- Socialize + Interact – Focus on passive and active learning environments, encouraging serendipitous interactions, and fostering moments of rest and respite.
- Learn + Innovate – Focus on active indoor and outdoor learning environments organized around symbiotic programs creating a focused academic hub for the campus.

ZONES

- Create campus zones that further defines the larger campus district to create stronger opportunities for collaboration and a livelier environment, encouraging students to spend more time on campus.

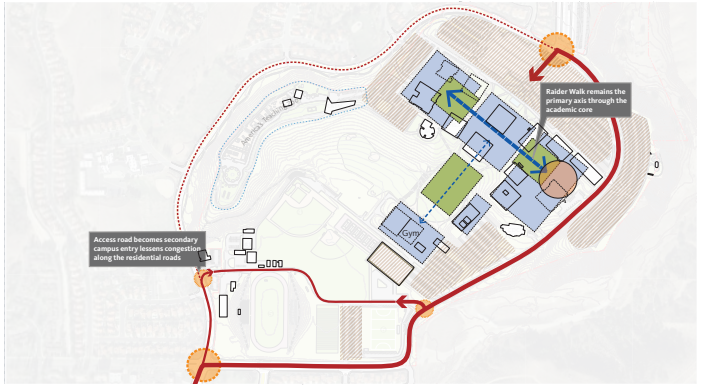


PLANNING OPTIONS

Three options were explored as different approches to achieving the strategic goals.

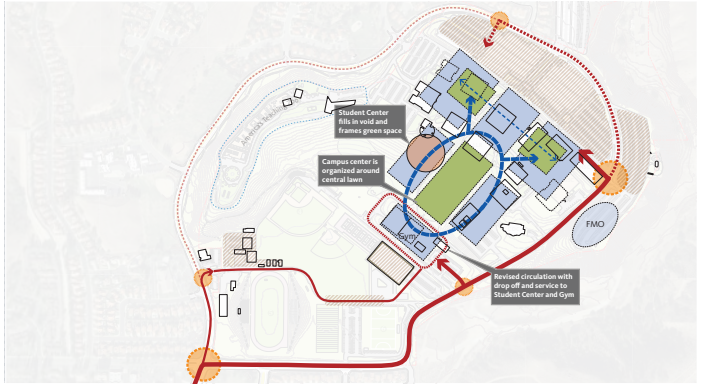
OPTION A - REINFORCED LEGACY

- Organization of existing campus is maintained with minimal disruption to the legacy campus plan.
- The Campus Center is rebuilt in the same location.
- Raider Walk remains the primary armature.
- The Gym is a destination for the north-south pedestrian axis.
- The Southwest ring road becomes the primary vehicular access to parking.
- A hierarchy of gateways creates a stronger campus identity.



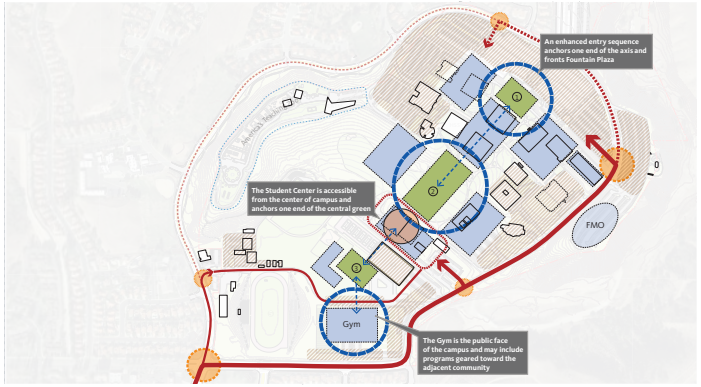
OPTION B - CENTRALIZED CAMPUS

- The existing central lawn becomes the “heart” of the campus.
- The creation of a new quad unifies student services/activities.
- The Student Center is sited on the western boundary of the lawn.
- The southern internal road on campus is widened to accommodate visitors to the sports field and parking structure.
- The southeast vehicular road, as the primary entry to campus, reduces congestion from residential areas.
- A hierarchy of gateways creates a stronger campus identity.



OPTION C - PROMENADE CAMPUS

- Three green spaces organize the campus into zones
- The academics + arts zone celebrates the campus legacy and focuses on Fountain Plaza.
- The central green space is a gathering place for students bound by the Academic Center to the East and West and the proposed Student Center building to the South.
- A hierarchy of gateways creates a stronger campus identity.



07

FACILITIES MASTER PLAN

FACILITIES MASTER PLAN

OVERVIEW

The *2015 Facilities Master Plan* provides a guide for future development on the Campus by creating an adaptable and flexible plan for growth and accommodating the educational needs for Moorpark College over the next decade. The Plan focuses on the following key drivers:

- Creating clear gateways into the Campus
- Strengthening pedestrian connections throughout the Campus
- Improving the usability and functionality of outdoor open space
- Providing modern facilities that respond to 21st century learning
- Designing an environment that will nurture student success by facilitating student life

The Plan is organized by zones responding to the function and context of the Campus. The academic core remains in its historic location at the northern sector of the Campus centered by Fountain Hall. The central zone of the Campus, now an open space lacking activity, is transformed into the new heart of the College, becoming a usable area for socializing and interaction. Community is celebrated in the southern zone of the Campus, where the gym and sports fields are located.

The new heart of the campus, at the central open space of the Central Green, becomes an iconic area for informal and collaborative activity and a new exciting connection between the academic core in the upper Campus and the sports facilities in the lower Campus. The area is large enough for graduations and important events that mark students passage through the College as well as smaller, protective areas for study.

BUILDINGS LIST (bold indicates new buildings)

(AC) Academic Center
(A) Administration
(AA) Applied Arts
(ART) Arts Complex
(CDC) Child Development Center
(CP) Campus Police
(EATM) Exotic Animal Training and Management
(FH) Fountain Hall
(G) Gymnasium
(G-BSFD) Baseball Field
(G-FBFD) Football Field
(G-GOLF) Golf Range
(G-SBFD) Softball Field
(G-SCFD) Soccer Field
(G-TNCT) Tennis Courts
(G-TRACK) Track and Field
(HSC) Health Science Center
(HSS) Humanities/Social Science Building
(IB1) Instructional Building
(IB2) Instructional Building
(LLR) Library Learning Resources
(LMC) Life Science/Mathematics/Computer Studies
(M) Music Building
(MCHS) High School at Moorpark College
(FM&O) Facilities, Maintenance and Operations
(O) Observatory
(PA) Performing Arts
(PE) PE Annex Offices
(PS) Physical Science
(SC) Student Center
(ST) Stadium Annex
(T) Technology/Business
(ZOO) Zoo Buildings 1 and 2
(W) Warehouse

FACILITIES MASTER PLAN

LEGEND

- EXISTING FACILITIES
- RENOVATED/REPURPOSED
- MAJOR RENOVATION/DEMOLITION
- PROPOSED FACILITIES

CONCEPTUAL VISION

PROPOSED DEMOLITION/ REMOVAL

- The demolition of facilities provides an opportunity for improvement and modernization, enhancing the open space and connectivity.
- The temporary facilities will be demolished/removed.
- Renovation and repurposing is a cost effective solution for the buildings noted so they continue to fulfill programmatic and space needs.

LEGEND

- EXISTING FACILITIES
- DEMOLITION PHASE 1
- DEMOLITION PHASE 2

PROPOSED FACILITIES

- Proposed facilities locations support the organizing concepts and the outcome of the planning data.
- Construction of the proposed facilities will depend on available funding.

LEGEND

- EXISTING FACILITIES
- RENOVATED/REPURPOSED
- MAJOR RENOVATION/DEMOLITION
- PROPOSED FACILITIES

CAMPUS ZONING

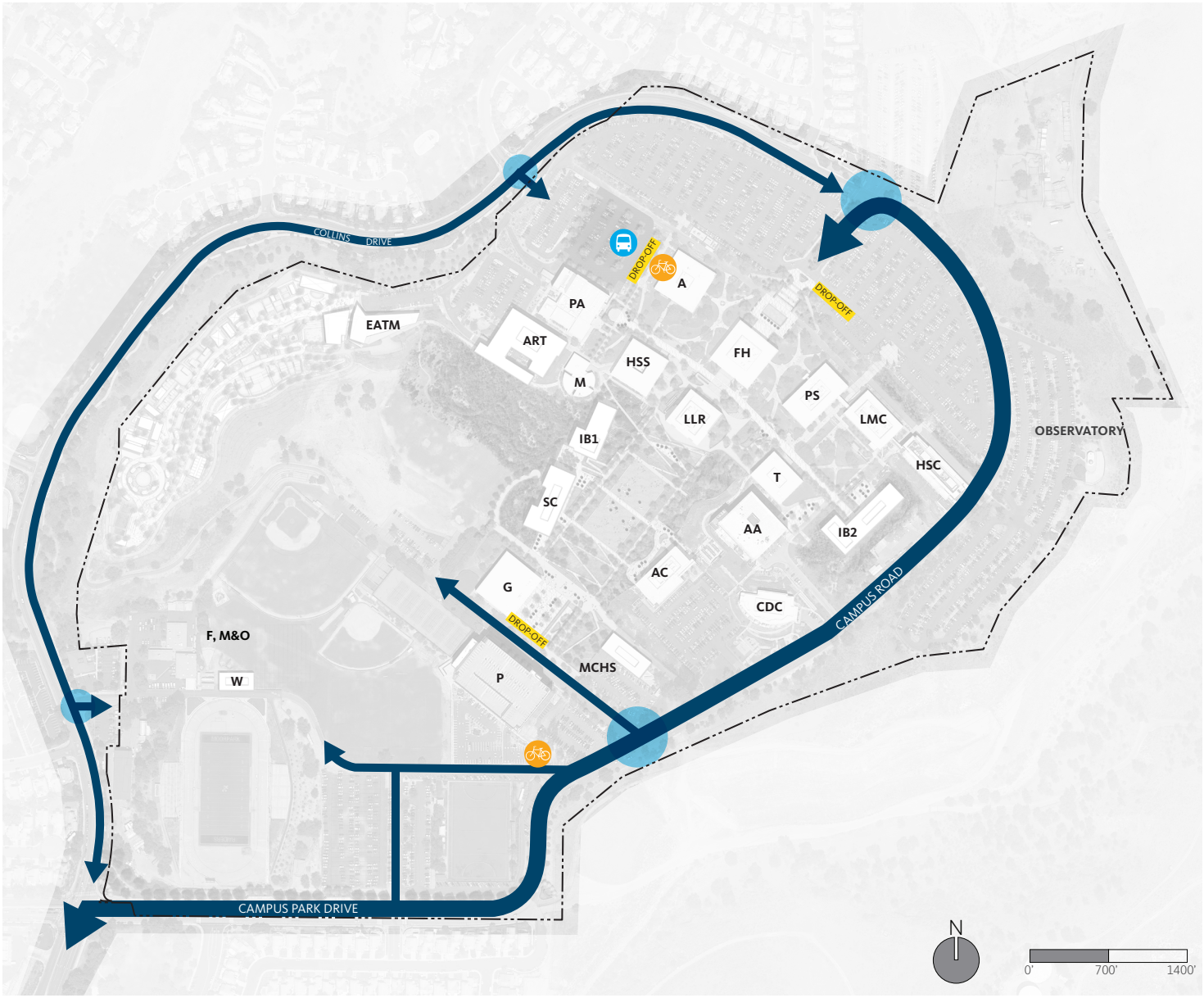
- The creation of zones support the overall campus organization in response to the context and appropriate adjacencies.
- The location of functions in new, renovated or re-purposed facilities supports the proposed campus zoning, improves efficiencies and supports wayfinding.

LEGEND

- STEM
- PERFORMING AND DIGITAL ARTS
- GENERAL INSTRUCTION
- HUMANITIES
- STUDENT SUPPORT SERVICES
- ADMINISTRATION
- CHILD DEVELOPMENT CENTER
- PHYSICAL EDUCATION
- SERVICE

ACCESS & VEHICULAR CIRCULATION

- The campus is first viewed at the intersection of Collins and Campus Park Drive.
- A hierarchy of entrances is created to clarify wayfinding.
- The primary entrances are the formal entrance to parking in front of Fountain Hall and the entrance to the parking structure.

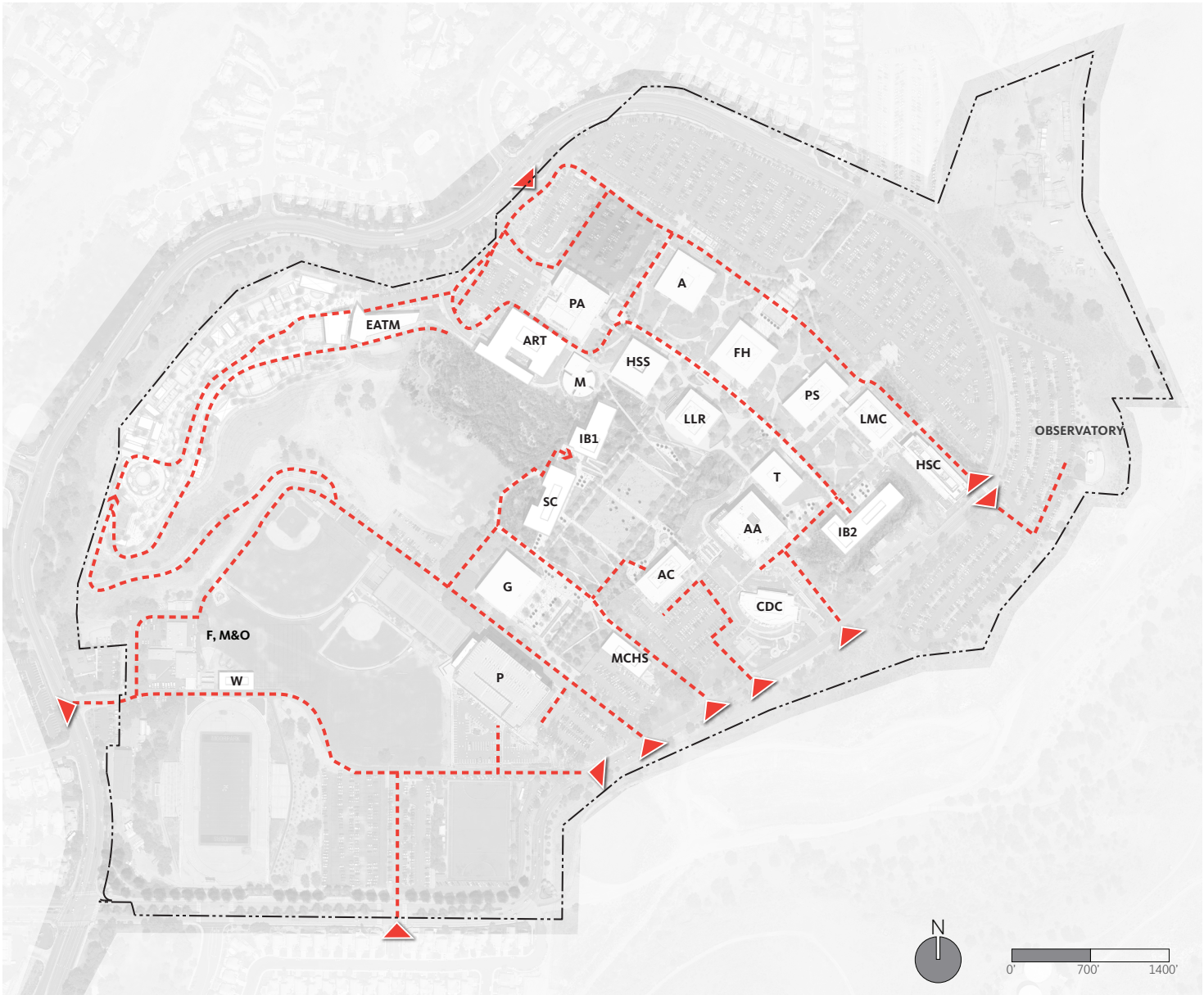


LEGEND

- CAMPUS ENTRY
- PASSENGERS LOADING ZONE
- PRIMARY VEHICULAR PARKING
- SECONDARY VEHICULAR PARKING
- BICYCLE PARKING
- BUS STOP

EMERGENCY & SERVICE

- Emergency and service access is provided to all facilities.
- Where possible, vehicular service is differentiated from pedestrian paths and major open space areas.



LEGEND

EMERGENCY SERVICE ROUTE

SERVICE ENTRANCE

PARKING

The general guidelines for community colleges located in a suburban environment is to provide a 1:5 ratio of spaces - 1 space per 5 students (as reported in student headcount).

The current parking capacity 4,465 addresses current and projected master plan needs, therefore additional parking is not needed.

Based on the proposed recommendations, one additional parking lot near the PA Building is proposed increasing the total number of spaces to 4,505.

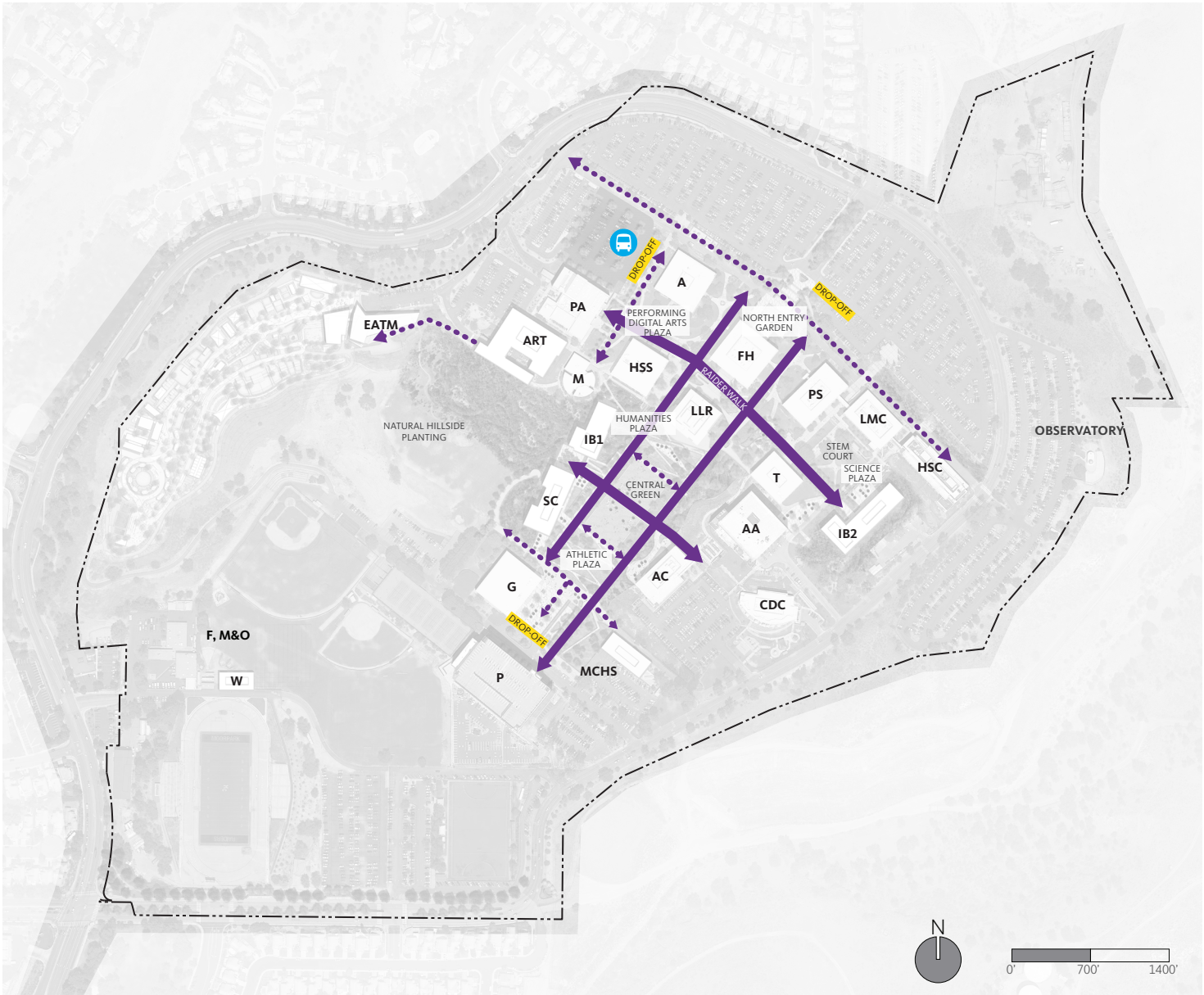
Current Spaces	4,465
Recommended Spaces (1 space per 5 students)	3,000
Proposed Spaces	4,505

LEGEND

- (A) PARKING AREA DESIGNATION
- EXISTING PARKING
- PROPOSED PARKING

PEDESTRIAN CIRCULATION

- Improved pedestrian circulation is achieved by adding pedestrian amenities to pathways.
- Pedestrian access between upper and lower Campus is increased and activated by the new facilities proposed adjacent to the new “central green”.

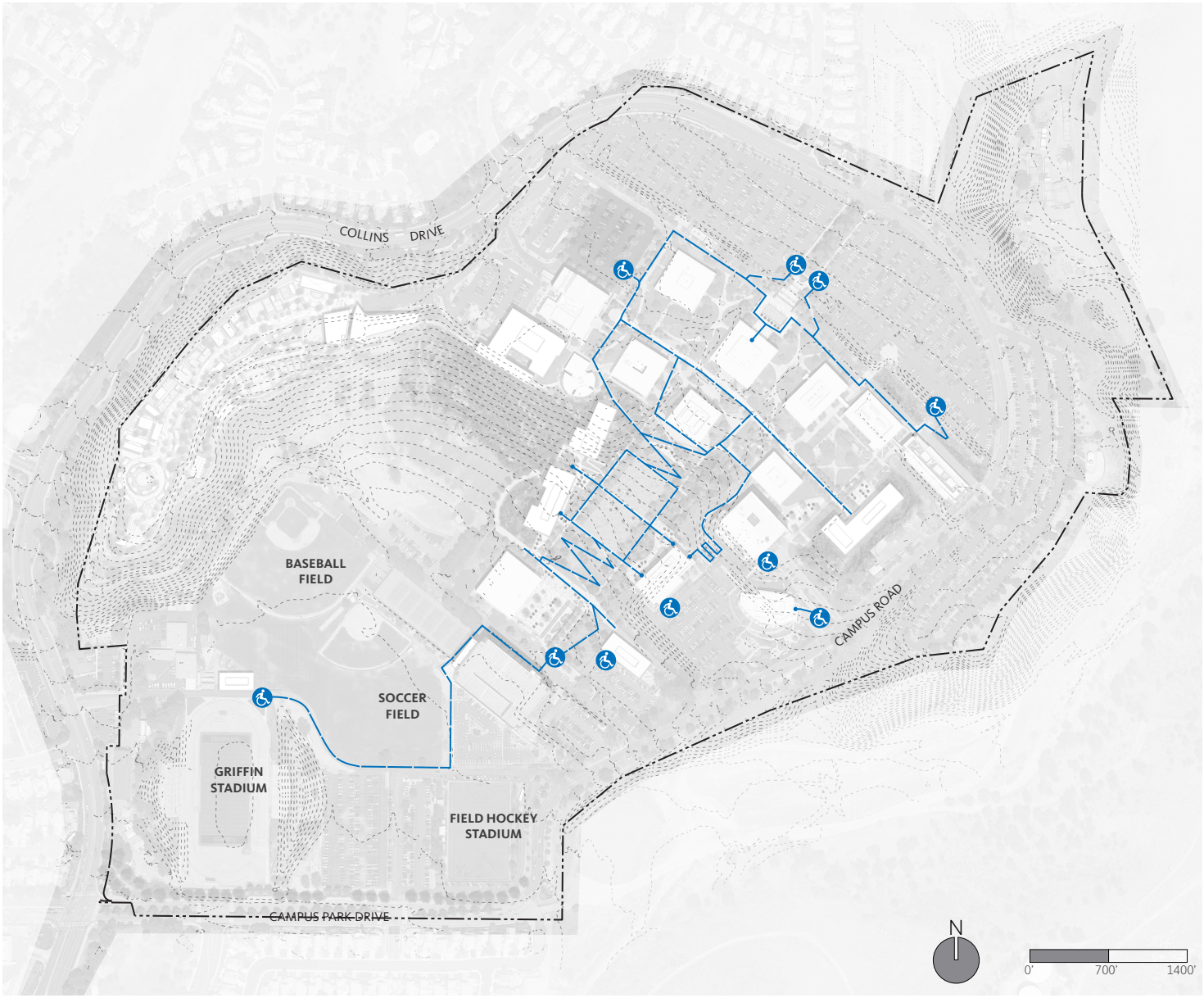


LEGEND

- PASSENGERS LOADING ZONE
- PRIMARY PEDESTRIAN ROUTE
- SECONDARY PEDESTRIAN ROUTE
- BUS STOP

ACCESSIBILITY AND PATH OF TRAVEL

- As changes, renovations, and improvements are made to the existing campus and facilities, detailed studies will be undertaken to ensure that access for the disabled will be part of all implementation projects including remedial work on existing buildings.
- Pedestrian pathways providing disabled access throughout the campus are shown in blue.

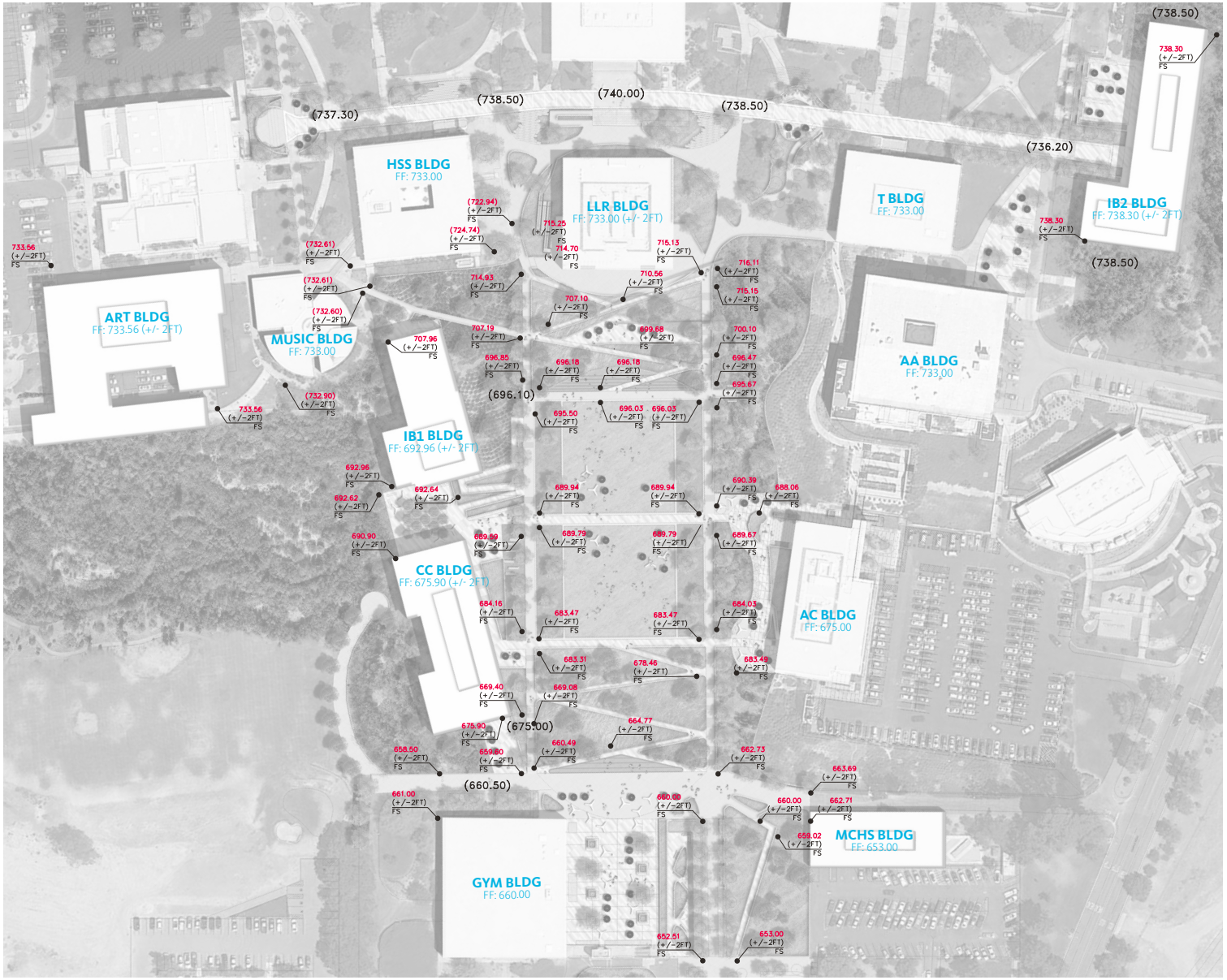


LEGEND

- PATH OF TRAVEL
- PRIMARY ENTRANCE TO BUILDING

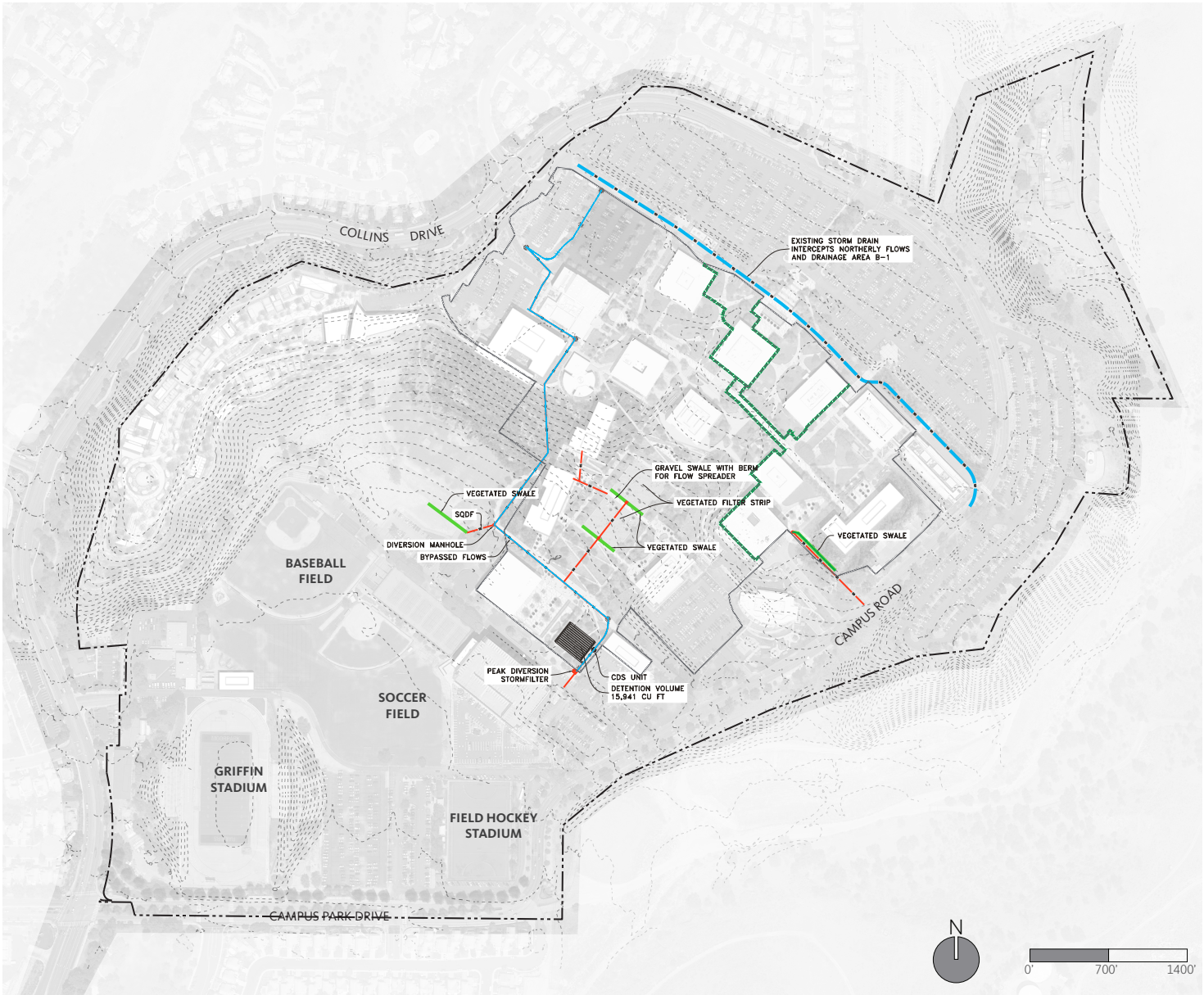
GRADING

- Terraced grading throughout the central portion of the campus mediates the 10’ change in vertical elevation.
- A combination of stepped building pads and graded open spaces integrates the natural grades.



STORMWATER

- New development on campus will comply with the peak flow mitigation and stormwater quality requirements specified in the *Ventura County Hydrology Manual* and the *Technical Guidance Manual for Stormwater Quality Control Measures.*
- Recommendations for stormwater are included in the appendix.



LEGEND

- DRAINAGE AREA BOUNDARY
- SUB-AREA BOUNDARY
- PROPOSED STORM DRAIN
- PROPOSED MAIN FLOW PATH
- VEGETATED SWALE

OPEN SPACE AND LANDSCAPE

- Enhanced open space provides programmable and usable outdoor area.
- Open spaces of varying scale and character accommodate a range of uses and group sizes.
- New site furnishings will establish a consistent character throughout the campus.
- Preserve native oak trees and larger existing trees where possible.
- Use low maintenance plant materials.
- Use low-water use plants.
- Plant trees that reinforce campus districts.

CENTRAL GREEN

- The Central Green is considered the heart of the Campus and the new iconic image of Moorpark College.
- It will be the location for important events such as graduations and celebrations as well as more informal activities.



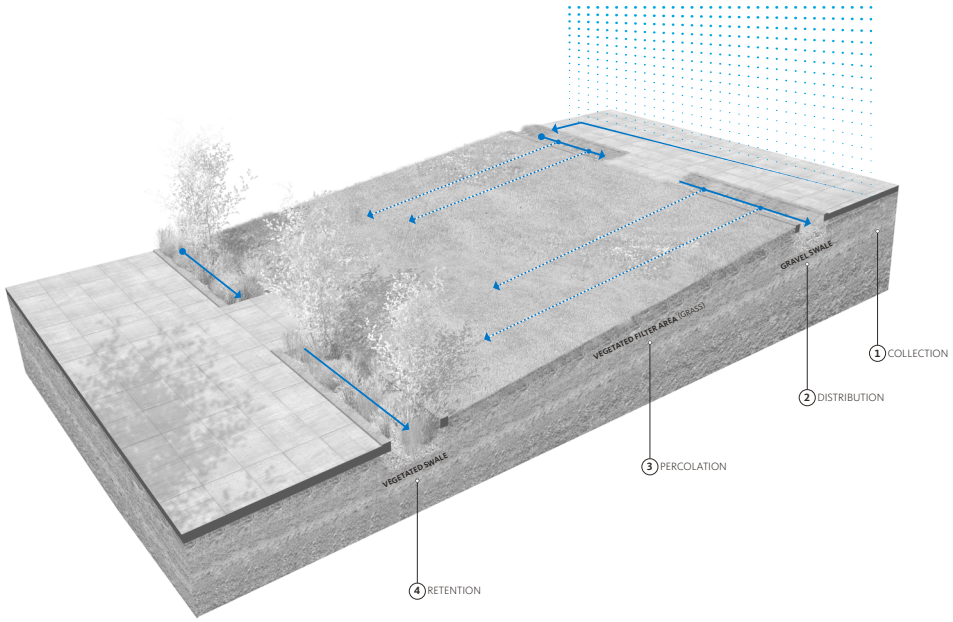







OPEN SPACE AND LANDSCAPE

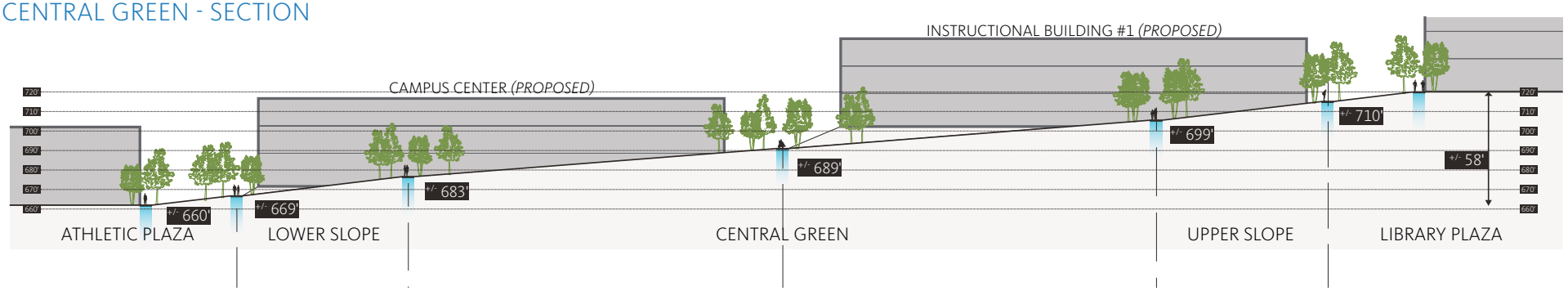
CENTRAL GREEN - STORMWATER STRATEGY



RAINY CONDITION

SUNNY CONDITION

CENTRAL GREEN - SECTION

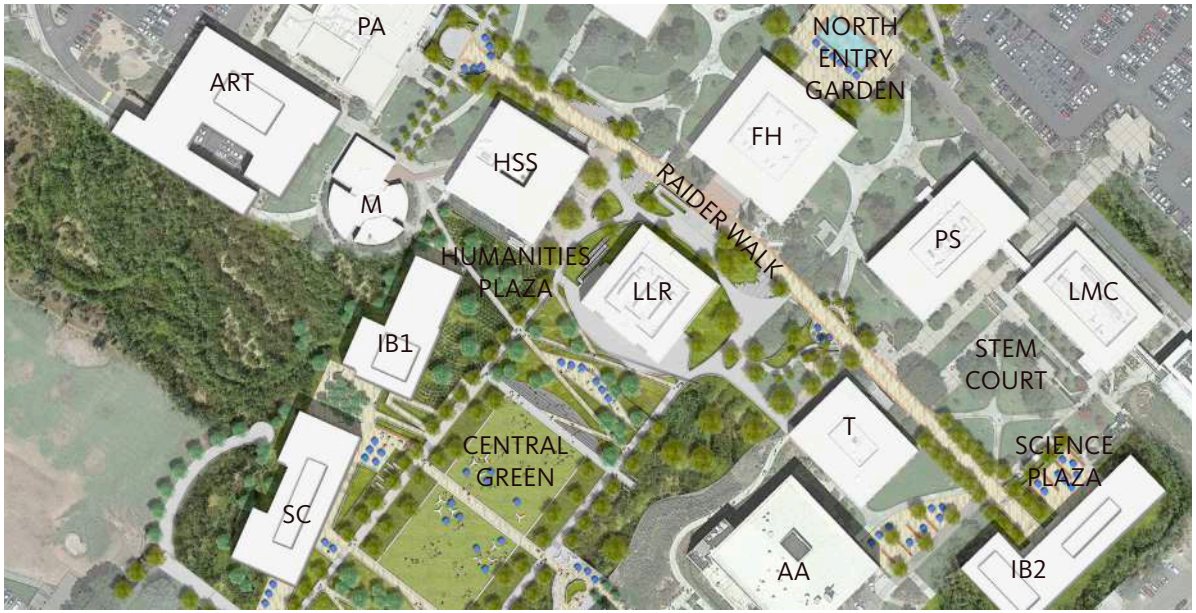


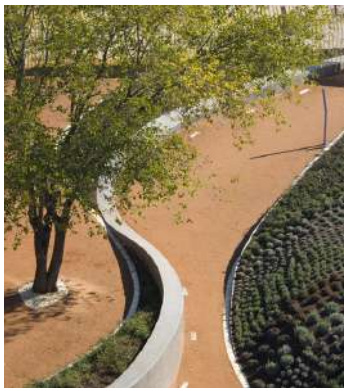
CENTRAL GREEN - PLAN

OPEN SPACE AND LANDSCAPE

RAIDER WALK

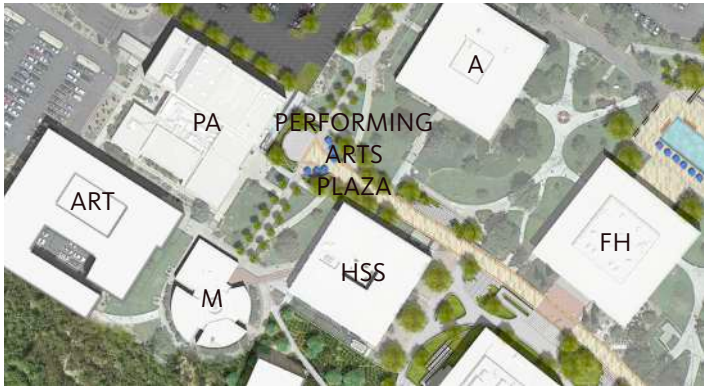
- Maintain and enhance this primary east-west circulation walk, it will be an anchor on the east side by the new Instructional Building.
- The circulation route is enhanced with new amenities.
- Raider Walk is reinforced by its termination in the new Instructional Building to the east and the Science Plaza to the west.

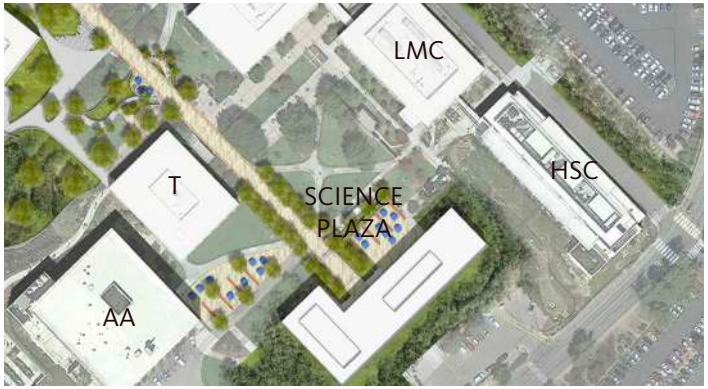




ACADEMIC PLAZAS

- The Plazas are an extension of their adjacent buildings with additional outdoor settings for academic programs.
- The plazas include shaded areas, provided by either a shade structure or tree canopy.

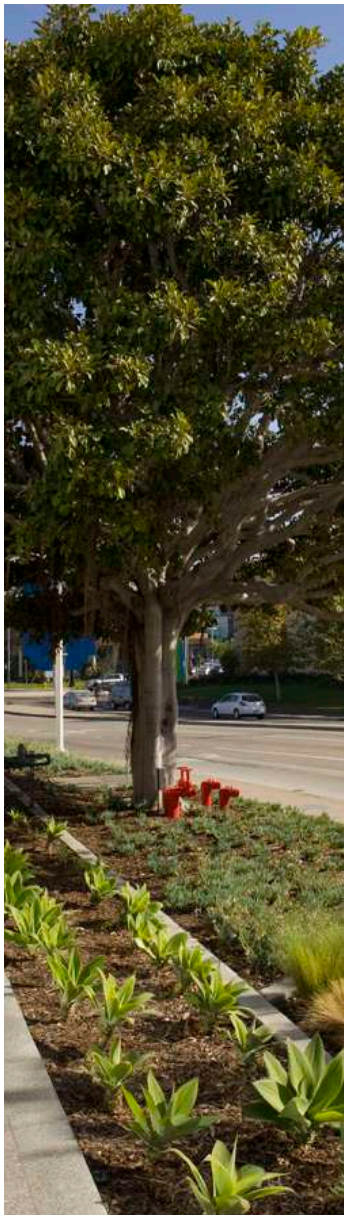




OPEN SPACE AND LANDSCAPE

CAMPUS DRIVE

- Vehicular entry points should be easily identifiable. They can include enhanced pavement, signage, specialty lighting, sculpture, and plantings to mark campus entrances.
- Important junction points should be accented with contrasting landscape, paving, and directional signage.
- Trees should be planted along roadways with a regular spacing pattern to develop a thematic character and establish identity.
- Planted parkway buffers can be created between pedestrian and vehicular traffic along public streetscapes.
- Seating and waiting areas should be provided at public transit stops.



PHASING

The Facilities Master Plan is a framework for growth and, as such, is an estimate of the needs of the College over the next decade. Detailed plans and validation for each project will occur as funding becomes available. Phase 1 and 2 are based on the estimated need at the date of publication.

DEMOLITION PHASE 1

The buildings considered for demolition score very high on the FUSION data base and have been identified as meeting the functional requirements for demolition.

Modular or temporary buildings are identified as suitable for demolition.

The permanent facilities to be demolished prior to the implementation of phase 1 projects include:

- Student Services Annex (SS)
- MCHS Temporary Buildings

LEGEND

- EXISTING FACILITIES
- MAJOR RENOVATION/DEMOLITION
- DEMOLITION

PHASE 1 BUILDINGS

It is assumed by the outcome of the programming effort and stakeholder input that Phase 1 buildings are the priority projects and they include:

- Arts Building (ARTS)
- Instructional Building 1 (IB1)
- MCHS

Implementation of these projects are dependent on available funding sources.

Renovation and repurposing are necessary for the following buildings in order to retain functionality:

- Administration (A)
- Fountain Hall (FH)
- Applied Art (AA)
- Gymnasium (G)
- (HSS) Humanities/Social Science

LEGEND

- EXISTING FACILITIES
- RENOVATED/REPURPOSED
- MAJOR RENOVATION/DEMOLITION
- PROPOSED FACILITIES

PHASING

DEMOLITION PHASE 2

The buildings considered for demolition score very high on the FUSION data base and have been identified as meeting the functional requirements for demolition.

Modular or temporary buildings are automatically identified as suitable for demolition.

The permanent facilities to be demolished prior to the implementation of phase 2 projects include:

- Campus Center (CC)
- Three M&O Warehouses
- Applied Arts (AA) is a candidate for swing space or future development.

LEGEND

- EXISTING FACILITIES
- SWING SPACE/FUTURE DEVELOPMENT
- DEMOLITION

PHASE 2 BUILDINGS

Phase 2 buildings have been identified by the outcome of the programming effort and stakeholder input. The buildings include:

- Student Center (SC)
- Instructional Building 2 (IB2)
- Warehouse (W)

LEGEND

- EXISTING FACILITIES
- RENOVATED/REPURPOSED
- MAJOR RENOVATION/DEMOLITION
- PROPOSED FACILITIES

SUSTAINABILITY

ENERGY

NATURAL VENTILATION

- Natural ventilation is an effective way of making use of the abundant cooling breezes on Campus, this allows building occupants to rely less on mechanical cooling systems.

LED SITE LIGHTING

- Wind and/or solar-powered LED fixtures are recommended for the lighting.

SHADE TREES

- Trees provide respite from the sun and prevent heat island effect from the Campus hardscape and paved surface parking.

PHOTOVOLTAIC PANELS

- Solar panels provide the campus with reliable sources of renewable energy, and offset the energy use of the campus.

WATER

IRRIGATION

- Spray irrigation is preferred for equipment visibility and lower maintenance needs. Plants shall be grouped according to hydrozones for more efficient irrigation system design.

PLANTING DESIGN

- California native plant varieties and low-water use plants are preferred. Only climate-appropriate, low-water use turf varieties shall be used.

RAINWATER HARVESTING

- Collected rain water can sustain localized vegetated areas while providing a valuable educational component.

RECYCLED WATER

- Consider an efficient irrigation system and recycled (gray) water for all new landscape areas.

SUSTAINABILITY

STORMWATER MANAGEMENT

BIOSWALES

- Incorporate vegetated swales at parking areas and around new buildings.

GREEN ROOFS

- Soil and vegetation layers on green roofs can help absorb rainfall and therefore reduce storm water runoff.

WASTE

- Composting areas located near food services will provide a means of diverting foods from landfills and reusing refuse on site.

RECYCLING

- An area on campus will be dedicated for the collection and sorting of recyclable materials.

TRANSPORTATION

- Hybrid vehicle charging stations and parking spaces located closest to campus buildings encourage students, staff and faculty to consider more ecologically aware modes of transportation.

EDUCATION

- Sustainable education can be provided throughout the campus by highlighting the green building and site strategies.

SIGNAGE AND WAYFINDING

A campus signage and wayfinding plan:

- Establishes a vision that guides development, change, and evolution
- Communicates a standard of quality for design and implementation
- Creates a dynamic range of experiences
- Inspires students, educators, staff, and visitors

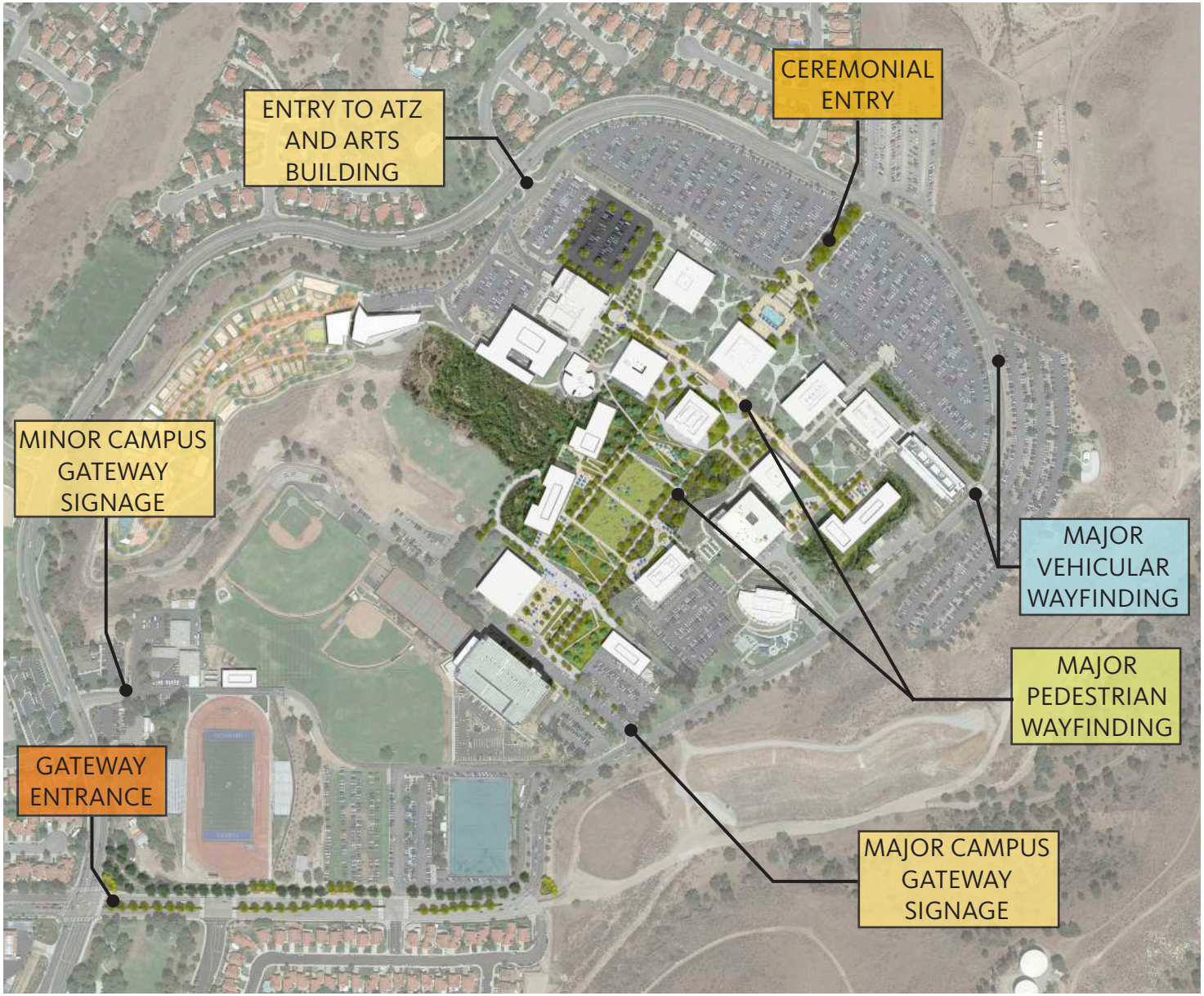
Successful wayfinding:

- Is user-centric
- Gives people confidence in their environment and safety
- Leverages memorable spatial features and landmarks
- Generates encounters that foster a sense of community
- Delivers the right message at the right time

A successful program:

- Uses effective graphics to express the College mission and culture, intuitively connects people to the campus and each other, and creates a unique sense of place
- Creates a strong sense of welcome
- Elevates safety and security
- Create a stronger connection between staff, students, visitors, and school values

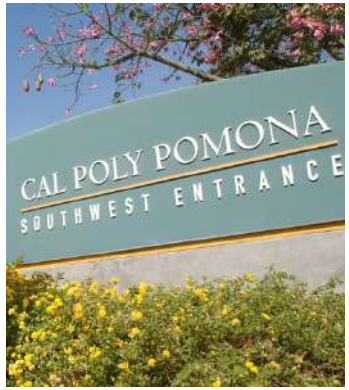
SIGNAGE AND WAYFINDING



SIGNAGE AND WAYFINDING

CAMPUS EDGE AND POINTS OF ARRIVAL

- The character of the edges and entries surrounding the College should reinforce and support its campus identity.
- Primary gateways should be delineated with specialty design elements and materials to reinforce a positive first impression for visitors and instill a sense of school pride for students.



VEHICULAR AND PEDESTRIAN WAYFINDING

Defining a clear pathway to simplify choices and provide reassurance along the way will make wayfinding clear and simple. Other design principles to be considered include:

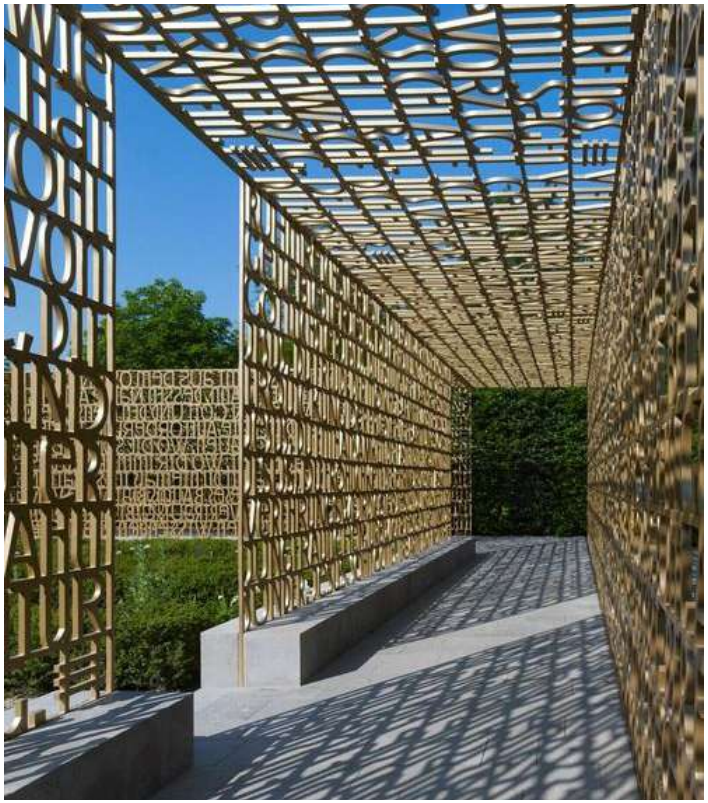
- Leverage landmark elements to tell the brand story as well as provide wayfinding cues.
- An ongoing maintenance and management plan is key to a successful system.
- Coordinate web platforms as part of the overall solution for visitors to the campus.

Typical design development drawing

SIGNAGE AND WAYFINDING

ARTS AND DONOR RECOGNITION

- Art installations along primary connections and at major nodes help to orient pedestrians and give character to the precincts of the campus.
- Donor recognition creates awareness of College support and recognizes donors and important people in the history of the institution. Benches, trees, lampposts and donor walls are the opportunities to recognize campus benefactors at different levels of support.



DONOR RECOGNITION AND WAYFINDING

LEGEND

- DONOR OPPORTUNITIES
- WAYFINDING

A

APPENDIX

PLANNING DATA

To be inserted

APPENDIX

GRADING

INTRODUCTION

Moorpark College, part of the Ventura County Community College District, has a proposed campus master plan for the demolition, renovation, and addition of multiple buildings, along with site improvements including a new parking lot with pedestrian access and pathways.

APPROACH

The existing conditions of the site consist of an open grass field in the center of the proposed site and a driving range to the west. The difference in vertical elevation from the southern limits of the proposed improvements to the northern limits is about 70 feet. Moorpark college would like to improve this field area with ADA accessible walkways, plazas, two grass quads, and two new buildings. The main design focus of the grading was to provide an ADA accessible path of travel from the southern parking structure to the northern limits of the proposed improvements.

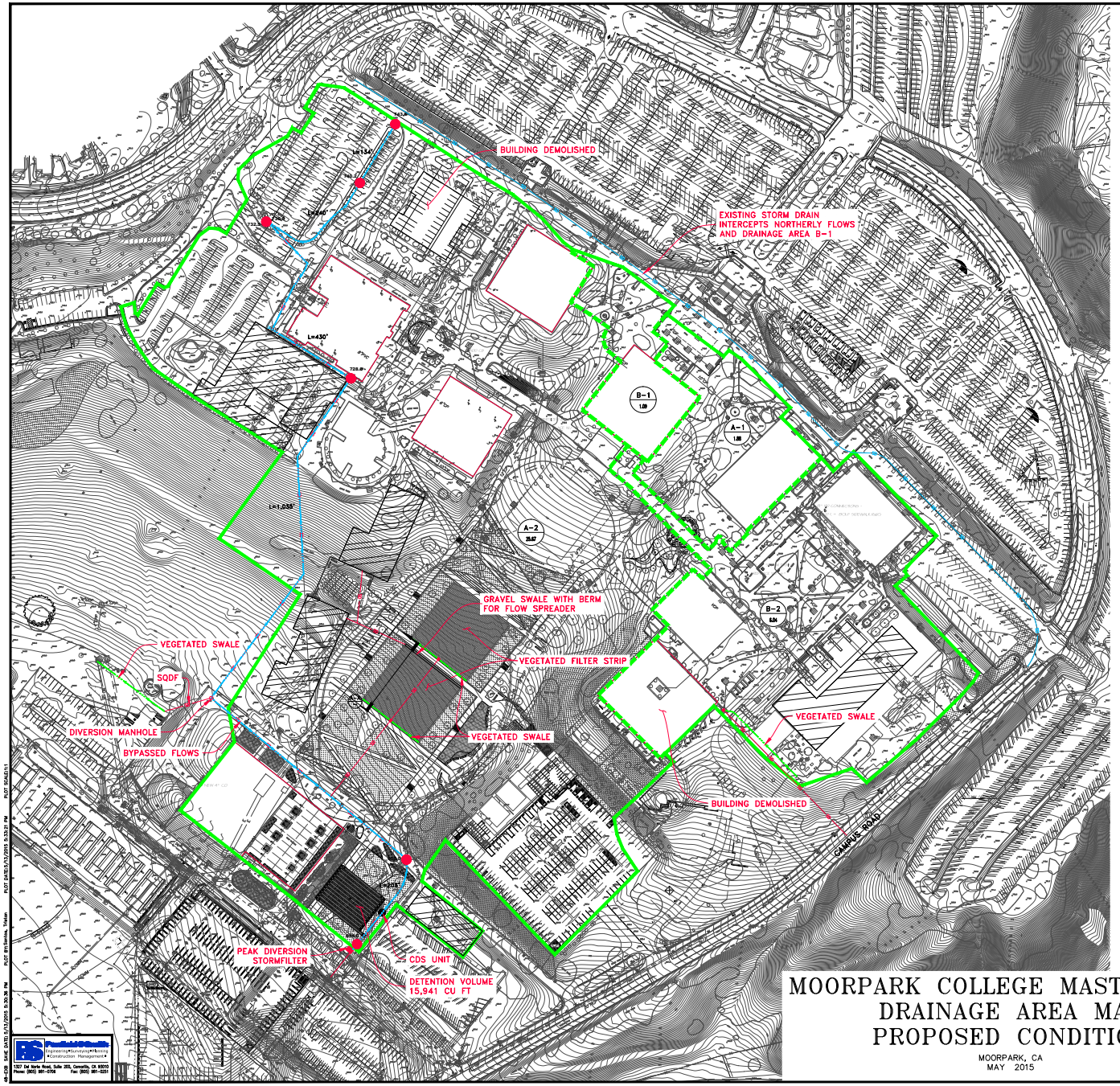
DESIGN

The path begins in the south tying into the existing sidewalk adjacent to the parking structure and moves north with maximum slopes of 4.5%. The proposed CC Building ties to the east into the edge of one of the “zig zag” walks on placing the finished floor at 675.9 (±2’).

Both sections of “zig zag” walks have a maximum slope of 4.5% with slopes ≤1.5% in the areas of intersection. At the top of the first set of “zig zag” walks there are two grass quads. The goal for the grass quads was to keep all surfaces ≤4.5%, which was achieved.

The CC Building and IB1 Building are to share a plaza with entry for the IB1 Building coming from the plaza into the first floor and a second entrance into the CC Building from the plaza into the 2nd floor. The plaza sets the finished floor of the IB1 Building at 692.96’(±2’). The IB1 Building will have a second entry on its second floor to the north. The elevation of the northern entry plaza for the IB1 Building will have an elevation of 707.29’(±2’).

A ramp will be required to provide ADA access from the northern IB1 plaza up to the existing buildings in the north with elevations of 733.00’(±2’). The ramp will require 210.68’ of ramping at 8.33%. The elevation change will require about (7) 4’ landings, bringing total ramp length to about 238.68’.



LEGEND

- DRAINAGE AREA BOUNDARY
- SUBAREA BOUNDARY
- PROPOSED STORM DRAIN
- PROPOSED MAIN FLOW PATH
- VEGETATED SWALE
- CDS UNIT
- PEAK DIVERSION STORMFILTER
- DETENTION SYSTEM
- A-2 / 25.67 — DRAINAGE AREA DESIGNATION / AREA (ACRES)

IMPERVIOUS TOTAL	=	853,300 SF / 19.6 AC
PERVIOUS TOTAL	=	657,300 SF / 15.1 AC
TOTAL GROSS SITE AREA	=	1,510,600 SF / 34.7 AC

DRAINAGE AREAS (POST-DEVELOPMENT)

SUBAREA	ACREAGE (AC)	Q_{10} (CFS)	Q_{25} (CFS)	Q_{50} (CFS)	Q_{100} (CFS)
A-1	1.88	2.44	4.21	4.87	5.87
A-2	25.67	33.37	57.50	66.49	80.09
SUBTOTAL	27.55	35.81	61.71	71.36	85.96
B-1	1.09	1.42	2.44	2.82	3.40
B-2	6.04	7.85	13.53	15.64	18.85
SUBTOTAL	7.13	9.27	15.97	18.46	22.25
TOTAL	34.68	45.08	77.68	89.82	108.21

NOTE: Q10 UNIT RUNOFF RATE IN CFS/ACRE = 1.30
Q25 UNIT RUNOFF RATE IN CFS/ACRE = 2.24
Q50 UNIT RUNOFF RATE IN CFS/ACRE = 2.59
Q100 UNIT RUNOFF RATE IN CFS/ACRE = 3.12

MEMORANDUM:

1. THE VENTURA COUNTY SOILS MAP DEPICTS THE CAMPUS WITHIN SOIL NOS. 1 AND 2.
2. THE AVERAGE IMPERVIOUS AREA IS 56%. THE EQUIVALENT EFFECTIVE IMPERVIOUS AREA IS 28%, PER EXHIBIT 14b, APPENDIX A, OF THE VENTURA COUNTY HYDROLOGY MANUAL.
3. RENOVATED/REPURPOSED BUILDINGS ASSUMED TO REQUIRE ONLY INTERIOR CHANGES, WITH NO CHANGES TO ORIGINAL LINE AND GRADE, HYDRAULIC CAPACITY.
4. STORMWATER DETENTION VOLUME:
   - RESTRICT FLOW TO THE 10-YR PROPOSED CONDITION BASED ON CONVEYANCE OF EXISTING STORM DRAIN LINES DOWNSTREAM OF PROJECT AREA.
   - TOTAL REQUIRED VOLUME: 16,210 CU. FT.
   - REQUIRES 48" NON-PERFORATED HDPE PIPES, 100 FT IN LENGTH, WITH 13 ROWS.
5. STORMWATER TREATMENT ASSUMPTIONS:
   - TOTAL PROJECT AREA: 34.68 ACRES
   - TOTAL DISTURBED AREA: 17.11 ACRES
   - TOTAL EXISTING IMPERVIOUS AREA: 17.1 ACRES
   - POST-PROJECT IMPERVIOUS AREA: 19.6 ACRES
   - PROJECT IMPERVIOUSNESS: 56.48%
   - IF INFILTRATION IS INFEASIBLE, SQDF x 1.5: 5.88 CFS (REFER TO BIO-3 SIZING WORKSHEET)
   - UNIT RATE FOR SQDF: 0.17 CFS/ACRE (REFER TO BIO-3 SIZING WORKSHEET)
6. INF-7: BIOINFILTRATION – WITH THE SITE COMPRISED OF VENTURA HYDROLOGY NUMBERS 1-2, THE TECHNICAL GUIDANCE MANUAL SPECIFIES THE USE OF BIOINFILTRATION. REQUIREMENTS FOR THIS BMP ARE AS FOLLOWS:
   - NATIVE SOIL INFILTRATION RATE SHALL NOT BE LESS THAN 0.3 INCHES PER HOUR.
   - 5 FEET VERTICAL SEPARATION IS REQUIRED BETWEEN THE BOTTOM OF THE BMP AND THE SEASONAL HIGH GROUNDWATER LEVEL.
   - BMP SHALL BE AT LEAST 50 FT AWAY FROM SLOPES STEEPER THAN 15%.
   - VERIFY INFILTRATION RATE WITH SITE-SPECIFIC ANALYSES AT PROPOSED LOCATIONS OF BMP.
   - WITH A DESIGN PERCOLATION RATE OF 0.15 IN/HR (0.3 IN/HR ADJUSTED WITH A FACTOR OF SAFETY OF 2.0) AND USING THE MINIMUM BMP SECTION, THE DRAWDOWN TIME EXCEEDS 96 HRS MAXIMUM.
   - THEREFORE, THE USE OF INF-7: BIOINFILTRATION IS TECHNICALLY INFEASIBLE.
7. BIO-3: VEGETATED SWALE FOR SUBAREA TREATING ART BLDG AND PREVIOUS LOCATION OF COM BLDG.
   - APPROXIMATE TRIBUTARY AREA: 2.4 ACRES
   - SQDF REQUIRED: 0.17 CFS/ACRE = 0.89 CFS
   - DESIGN FLOW DEPTH: 4 IN.
   - BOTTOM WIDTH OF SWALE: 6 FT.
   - LONGITUDINAL SLOPE: 0.016 FT/FT
   - SIDE SLOPES (MIN): 4H:1V
   - TOTAL LENGTH REQUIRED: 156 FT
8. BIO-3: VEGETATED SWALE FOR DRAINAGE AREA B-2
   - APPROXIMATE TRIBUTARY AREA: 2.5 ACRES
   - SQDF REQUIRED: 0.17 CFS/ACRE = 0.43 CFS
   - DESIGN FLOW DEPTH: 4 IN.
   - BOTTOM WIDTH OF SWALE: 3 FT.
   - LONGITUDINAL SLOPE: 0.016 FT/FT
   - SIDE SLOPES (MIN): 4H:1V
   - TOTAL LENGTH REQUIRED: 126 FT TOTAL
9. BIO-4: VEGETATED FILTER STRIP AT THE UPPER QUAD AREA
   - APPROXIMATE TRIBUTARY AREA TO QUAD: 3.2 ACRES
   - SQDF REQUIRED: 0.17 CFS/ACRE = 0.54 CFS
   - MINIMUM WIDTH FILTER STRIP: 109 FT/ PROVIDING 134 FT
   - LONGITUDINAL SLOPE: 0.040 FT/FT
   - AVERAGE DEPTH OF WATER: 0.42 INCHES
   - DESIGN FLOW VELOCITY: 0.11 FT/S
   - TOTAL LENGTH REQUIRED: 47 FT, PROVIDING OVER 100 FT
10. BIO-4: VEGETATED FILTER STRIP AT THE MIDDLE QUAD AREA
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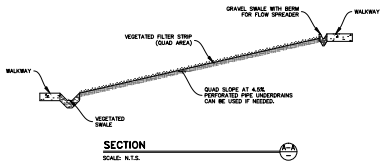
    - MINIMUM WIDTH FILTER STRIP: 130 FT/ PROVIDING 134 FT
    - LONGITUDINAL SLOPE: 0.040 FT/FT
    - AVERAGE DEPTH OF WATER: 0.47 INCHES
    - DESIGN FLOW VELOCITY: 0.12 FT/S
    - TOTAL LENGTH REQUIRED: 51 FT, PROVIDING OVER 100 FT
11. TCM-5: CARTRIDGE MEDIA FILTER FOR AREA SOUTH OF QUAD AREA
    - APPROXIMATE TRIBUTARY AREA: 5.4 ACRES
    - SQDF REQUIRED: 0.17 CFS/ACRE = 0.58 CFS
    - NUMBER OF CARTRIDGES REQUIRED: 12 TOTAL
    - ASSUMING THE USE OF 27 INCH TALL CARTRIDGES.
12. ASSUMING DRAINAGE AREA B-1, RENOVATED/REPURPOSED BUILDINGS, WILL REQUIRE ONLY INTERIOR CHANGES, WITH NO CHANGES TO ORIGINAL LINE AND GRADE, HYDRAULIC CAPACITY. THEREFORE NO STORMWATER TREATMENT REQUIRED.



SECTION
SCALE: N.T.S.

MOORPARK COLLEGE MASTER PLAN
DRAINAGE AREA MAP
PROPOSED CONDITION

MOORPARK, CA
MAY 2015

SCALE: 1"=60'
0 60 120 180

SHEET 1 OF

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APPENDIX

DRAINAGE

INTRODUCTION

Moorpark College, part of the Ventura County Community College District, has a proposed campus master plan for the demolition, renovation, and addition of multiple buildings, along with site improvements including a new parking lot with pedestrian access and pathways. The master plan is intended to be accomplished in two phases, and comply with the peak flow mitigation and stormwater quality requirements specified in the *Ventura County Hydrology Manual and the Technical Guidance Manual for Stormwater Quality Control Measures* (TGM), respectively.

APPROACH

Currently, the general drainage pattern for the campus flows in a southerly direction, with stormwater runoff conveyed via overland flow, street curb and gutters directed into inlets of the campus storm drain system. The on-site storm drain connects to an existing 48-inch RCP storm drain line offsite, along Campus Road. Referencing the existing utilities and topographic basemaps provided by the College, the watershed tributary to the project locations were delineated to determine the anticipated peak flows in the existing and proposed conditions. The watershed is comprised of two separate drainage areas, with the primary area encompassing approximately 27.6 acres (Drainage Area "A"). The second area depicted as Drainage Area "B" on the exhibit, consist of about 7.1 acres.

To minimize the impacts of development on the existing drainage system, the Hydrology Manual require the use of basins to attenuate the 100-yr developed condition peak back to the 10-yr developed condition peak. An exception is the City of Moorpark, which allows consultants to design the local drainage to convey the 50-yr peak. However, the controlling factor for this project is the capacity of the existing 27-inch RCP storm drain line downstream of the area delineated for Drainage Area "A". Runoff from Drainage Area "B" is conveyed to storm drain lines that are directly connected to the off-site storm drain system along Campus Road.

The objective of this drainage memo is to approximate the runoff generated during the pre- and post-development conditions, determine the capacity of the existing 27-inch storm drain line, and attenuate the increase post-development runoff by employing on-site detention. In addition, propose suitable measures to treat stormwater runoff generated within the project boundaries to the maximum extent practicable as determined in the TGM. The Ventura County Soils Map depicts the campus within Soil Nos. 1 and 2, which have been determined to have very low infiltrations rates. The TGM states that infiltration-based BMPs should not be designed for Soil Nos. 1 through 3, unless site specific testing determines infiltration rates greater than 0.5 in/hr.

HYDROLOGY

The pre- and post-development peak flows were calculated using the VCWPD Time of Concentration Calculator and the VCRat 2.6 program. The area of the campus within the watershed is comprised of an area approximately 34.7 acres, located in Ventura County Soil Type Nos. 1 and 2, Rain Zone J'. The proposed condition average impervious area is about 56%, with an equivalent effective impervious area of 28% per Exhibit 14b, Appendix A of the Hydrology Manual. It is assumed that any renovated / re-purposed buildings will not change the original line and grade, or the hydraulic capacity of the area around them.

DETENTION VOLUME

The procedures to calculate the detention volume is outlined in the VCWPD Design Hydrology Manual. The hydrograph generated by the VCRat program used in the detention basin sizing for the 100-year developed condition is "fattened", per Section 2.1.1 of the manual. This requirement is due to the modified rational method providing hydrographs with a relatively sharp and narrow peak, and generally a lesser yield under the hydrograph than a Natural Resources Conservation Service (NRCS) yield evaluation using Curve Numbers.

Typically for the City of Moorpark the bypass basin design requirement is to mitigate the developed 100-year peak back to the 50-year developed peak. However, the limiting factor is the conveyance capacity of the existing 27-inch storm drain line downstream of the Drainage Area A. Assuming a pipe slope of 0.020 ft/ft, the full flow capacity of the existing storm drain line is approximately 47 cfs. Restricting the discharge of Drainage Area A to the full flow capacity of the 27-inch pipe, the required detention volume is 16,210 cubic feet (0.37 acre-feet).
A subsurface detention facility will be used to maximize usable space, comprised of 13 rows of 48 inch diameter pipe, with each pipe run at a length of about 100 feet (total pipe length of 1,300 feet). The outflow of the basin is controlled by an orifice plate with a 2.25 feet diameter opening, housed within the discharge structure. The restriction will limit the discharge to less than the capacity of the existing 27-inch storm of 47 cfs, for all storm events up to the 100-year storm.

The weir wall will be set at an elevation of 651.0 feet (approximately 7 feet of ponding), that will only allow a maximum orifice discharge of 46.88 cfs, at which point the water will start spilling over the weir and into the detention pipes. Concurrently, the depth of the weir wall enables the utilization of the entire volume for the 48 inch diameter pipe used to detain the required volume calculated above. The weir wall will have a 6 inch flap gate set at the bottom to allow the basin to drain once the water level has receded.

APPENDIX

DRAINAGE

SITE ASSESSMENT FOR BMPS

To comply with the current Ventura County MS4 permit, the 2011 TGM is referenced in the design and implementation of post-construction storm water management control measures. A significant change from the previous permit is the requirement for projects to reduce the Effective Impervious Area (EIA) to less than or equal to five percent (≤5%) of the total project area, unless site specific analysis determines this to be technically infeasible. The reduction is achieved through the implementation of infiltration, reuse, and/or evapotranspiration retention BMPs designed to retain the design storm volume onsite.

Prior to the BMP selection process, evaluation of site conditions is crucial in determining whether or not Retention BMPs are technically feasible for the project site. Information regarding site layout and slope, soil type, geotechnical conditions, and local groundwater conditions should be gathered and reviewed. As mentioned in the Approach section, the Ventura County Soils Map depicts the project site within Soil Nos. 1 (Soil Group D) and 2 (Soil Group C). According to the TGM, "Group C soils are typically sandy clay loams. They have low infiltration rates when thoroughly wetted, consist chiefly of soils with a layer that impedes downward movement of water, and/or have moderately fine to fine soil structure. Group D soils are typically clay loams, silty clay loams, sandy clays, silty clays, or clays. They have very low infiltration rates when thoroughly wetted and consist chiefly of clay soils with high swelling potential, permanent high water table, claypan or clay layer at or near the surface, and/or shallow soils over nearly impervious material". Section 3.1 of the TGM also states that infiltration-based BMPs are considered infeasible in areas mapped with Ventura County Soil Numbers 1 through 3, unless site specific testing determines an infiltration rate greater than 0.5 in/hr.

Since it has been established that on-site Retention BMPs are infeasible for this project, based on soil types for the campus (until on-site percolation tests are conducted), flow-based BMPs will be considered for primary treatment of stormwater quality. Therefore, the Stormwater Quality Design Flow (SQDF) will be calculated for the site through the process described in Section 2 of the TGM.

Calculate the Allowable EIA:

- $EIA_{allowable} = (A_{project})*(\%_{allowable}) = (34.68 \text{ acres})*(5\%) = \underline{1.73}$ acres [Equation 2-1]

Where:

$EIA_{allowable}$ = the maximum impervious area from which runoff can be treated and discharged offsite [and not retained onsite] (acres).

$A_{project}$ = the total project area (acres). "Total project area" (or "gross project area") for new development and redevelopment projects is defined as the disturbed, developed, and undisturbed portions within the project's property (or properties) boundary, at the project scale submitted for first approval.

$\%_{allowable}$ = 5 percent

Calculate Impervious Area to be Retained:

- A_{retain} = TIA – $EIA_{allowable}$ = (IMP*$A_{project}$) – $EIA_{allowable}$ [Equation 2-2]

= (0.56 * 34.68 acres) – 1.73 acres = 17.69 acres

Where:

A_{retain} = the drainage area from which runoff must be retained (acres).

TIA = total impervious area (acres).

$EIA_{allowable}$ = the maximum impervious area from which runoff can be treated
and discharged offsite [and not retained onsite] (acres).

IMP = imperviousness of project area (%) / 100.

$A_{project}$ = the total project area (acres).

Calculate the Volume to be Retained (SQDV):

Below is a summary of the process proposed to address water quality prior to discharging stormwater runoff offsite, in compliance with the MS4 Permit:
Method 1 – Runoff Produced by Design Intensity for 150% Sizing

- SQDF = C * I * A_{retain} = (0.95) * (0.35) * 17.69 = 5.88 cfs (0.17 cfs/acre) [Equation E-8]

Where:

SQDF = the water quality design flow (cubic feet per second).

C = runoff coefficient, calculated by [Equation E-8] below.

I = the design intensity (in/hr) for 150% sizing per TGM Table 2-1 below:

APPENDIX

DRAINAGE

Time of Concentration (minutes)	Design Intensity for 150% Sizing (in/hr)
30	0,24
20	0,25
15	0,28
10	0,31
5	0,35

A_{retain} = the drainage area which runoff must be retained (acres).

Where: C = 0.95 * imp + Cp (1-imp) [Equation E-7]
= 0.95 * 1.00 + 0.15 (1-1.00) = 0.95
= runoff coefficient

imp = impervious fraction of Aretain = 1.00

Cp = pervious runoff coefficient, determined based on soil type using table below:

Ventura Soil Type (Soil Number)	Cp value
1	0,15
2	0,10
3	0,10
4	0,05
5	0,05
6	0
7	0

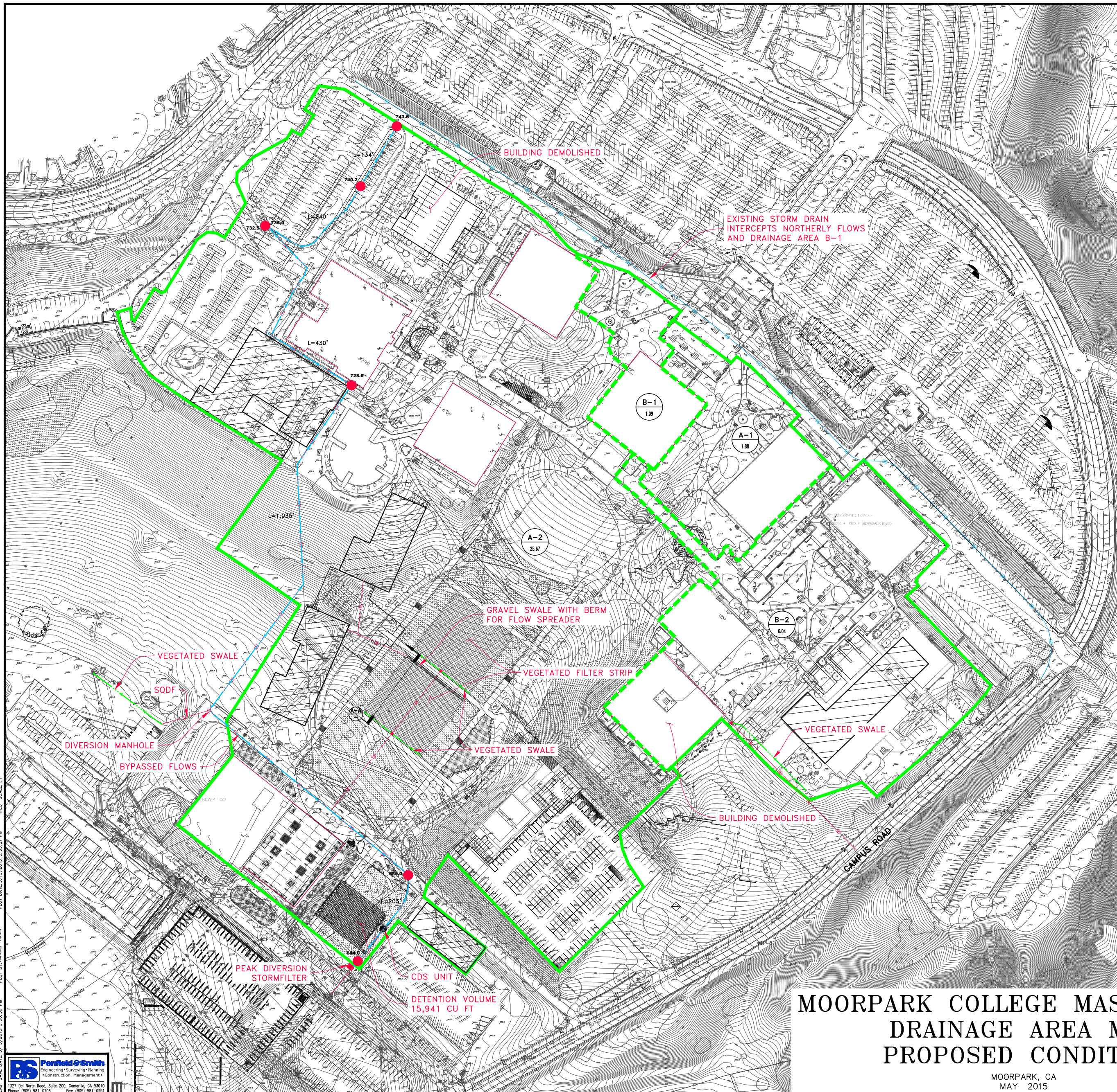
Proposed Storm Water Quality Design Flow BMPs:

- BIO-3: Vegetated swale for subarea treating art bldg and previous location of com bldg.
  - Approximate tributary area: 5.2 acres
  - SQDF required: 0.17 cfs/acre = 0.89 cfs
  - Design flow depth: 4 in.
  - Bottom width of swale: 6 ft.
  - Longitudinal slope: 0.018 ft/ft
  - Side slopes (min): 4h:1v
  - Total length required: 156 ft
- BIO-3: Vegetated swale for Drainage Area B-2.
  - Approximate tributary area: 2.5 acres
  - SQDF required: 0.17 cfs/acre = 0.43 cfs
  - Design flow depth: 4 in.
  - Bottom width of swale: 3 ft.
  - Longitudinal slope: 0.018 ft/ft
  - Side slopes (min): 4h:1v
  - Total length required: 126 ft

- BIO-4: Vegetated filter strip at the upper quad area
  - » Approximate tributary area to quad: 3.2 acres
  - » SQDF required: 0.17 cfs/acre = 0.54 cfs
  - » Minimum width filter strip: 109 ft; providing 134 ft
  - » Longitudinal slope: 0.045 ft/ft
  - » Average depth of water: 0.43 inches
  - » Design flow velocity: 0.11 ft/s
  - » Total length required: 47 ft; providing over 100 ft

- BIO-4: Vegetated filter strip at the upper quad area
  - » Approximate tributary area to quad: 3.8 acres
  - » SQDF required: 0.17 cfs/acre = 0.65 cfs
  - » Minimum width filter strip: 130 ft; providing 134 ft
  - » Longitudinal slope: 0.045 ft/ft
  - » Average depth of water: 0.43 inches
  - » Design flow velocity: 0.11 ft/s
  - » Total length required: 47 ft; providing over 100 ft

- TCM-5: Cartridge Media Filter for area south of quad area.
  - » 8'x11' Peak Diversion StormFilter.
  - » Cartridge Media Filter required:
    - / 0.58 cfs x 449 / 22.5 GPM = 11.57 = 12 cartridges
      - ◊ Per Contech cartridge calculation formula.
  - » Installation will be downstream end of the line, prior to the connection onto the existing 27-inch storm drainline.
  - » StormFilter vaults allows for the treatment of low flows, while peak diversion bypasses the treatment of larger flows.



LEGEND

- DRAINAGE AREA BOUNDARY
- SUBAREA BOUNDARY
- SD — PROPOSED STORM DRAIN
- PROPOSED MAIN FLOW PATH
- VEGETATED SWALE
- CDS UNIT
- PEAK DIVERSION STORMFILTER
- DETENTION SYSTEM
- A-2 / 25.67 — DRAINAGE AREA DESIGNATION / AREA (ACRES)

IMPERVIOUS TOTAL = 853,300 SF / 19.6 AC
PERVIOUS TOTAL = 657,300 SF / 15.1 AC
TOTAL GROSS SITE AREA = 1,510,600 SF / 34.7 AC

DRAINAGE AREAS (POST-DEVELOPMENT)

SUBAREA	ACREAGE (AC)	Q_{10} (CFS)	Q_{25} (CFS)	Q_{50} (CFS)	Q_{100} (CFS)
A-1	1.88	2.44	4.21	4.87	5.87
A-2	25.67	33.37	57.50	66.49	80.09
SUBTOTAL	27.55	35.81	61.71	71.36	85.96
B-1	1.09	1.42	2.44	2.82	3.40
B-2	6.04	7.85	13.53	15.64	18.85
SUBTOTAL	7.13	9.27	15.97	18.46	22.25
TOTAL	**34.68**	**45.08**	**77.68**	**89.82**	**108.21**

NOTE: Q10 UNIT RUNOFF RATE IN CFS/ACRE = 1.30
Q25 UNIT RUNOFF RATE IN CFS/ACRE = 2.24
Q50 UNIT RUNOFF RATE IN CFS/ACRE = 2.59
Q100 UNIT RUNOFF RATE IN CFS/ACRE = 3.12

MEMORANDUM:

1. THE VENTURA COUNTY SOILS MAP DEPICTS THE CAMPUS WITHIN SOIL NOS. 1 AND 2.
2. THE AVERAGE IMPERVIOUS AREA IS 56%. THE EQUIVALENT EFFECTIVE IMPERVIOUS AREA IS 28%, PER EXHIBIT 14b, APPENDIX A OF THE VENTURA COUNTY HYDROLOGY MANUAL.
3. RENOVATED/REPURPOSED BUILDINGS ASSUMED TO REQUIRE ONLY INTERIOR CHANGES, WITH NO CHANGES TO ORIGINAL LINE AND GRADE, HYDRAULIC CAPACITY.
4. STORMWATER DETENTION VOLUME:
   - RESTRICT FLOW TO THE 10-YR PROPOSED CONDITION BASED ON CONVEYANCE OF EXISTING STORM DRIAN LINES DOWNSTREAM OF PROJECT AREA.
   - TOTAL REQUIRED VOLUME: 16,210 CU. FT.
   - REQUIRES 48" NON-PERFORATED HDPE PIPES, 100 FT IN LENGTH, WITH 13 ROWS.
5. STORMWATER TREATMENT ASSUMPTIONS:
   - TOTAL PROJECT AREA: 34.68 ACRES
   - TOTAL DISTURBED AREA: 17.11 ACRES
   - TOTAL EXISTING IMPERVIOUS AREA: 17.1 ACRES
   - POST-PROJECT IMPERVIOUS AREA: 19.6 ACRES
   - PROJECT IMPERVIOUSNESS: 56.48%
   - IF INFILTRATION IS INFEASIBLE, SQDF x 1.5: 5.88 CFS (REFER TO BIO-3 SIZING WORKSHEET)
   - UNIT RATE FOR SQDF: 0.17 CFS/ACRE (REFER TO BIO-3 SIZING WORKSHEET)
5. INF-7: BIOINFILTRATION – WITH THE SITE COMPRISED OF VENTURA HYDROLOGY NUMBERS 1-2, THE TECHNICAL GUIDANCE MANUAL SPECIFIES THE USE OF BIOINFILTRATION. REQUIREMENTS FOR THIS BMP ARE AS FOLLOWS:
   - NATIVE SOIL INFILTRATION RATE SHALL NOT BE LESS THAN 0.3 INCHES PER HOUR.
   - 5 FEET VERTICAL SEPARATION IS REQUIRED BETWEEN THE BOTTOM OF THE BMP AND THE SEASONAL GROUNDWATER LEVEL.
   - BMP SHALL BE AT LEAST 50 FT AWAY FROM SLOPES STEEPER THAN 15%.
   - VERIFY INFILTRATION RATE WITH SITE-SPECIFIC ANALYSES AT PROPOSED LOCATIONS OF BMP.
   - WITH A DESIGN PERCOLATION RATE OF 0.15 IN/HR (0.3 IN/HR ADJUSTED WITH A FACTOR OF SAFETY OF 2.0) AND USING THE MINIMUM BMP SECTION, THE DRAWDOWN TIME EXCEEDS 96 HRS MAXIMUM.
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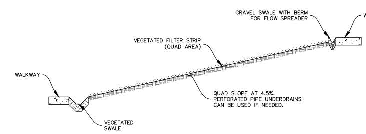

SECTION A-A
SCALE: N.T.S.

MOORPARK COLLEGE MASTER PLAN
DRAINAGE AREA MAP
PROPOSED CONDITION

MOORPARK, CA
MAY 2015

SCALE: 1"=60'

SHEET 1 OF 1

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