UC DAVIS SACRAMENTO CAMPUS

2020 PHYSICAL DESIGN FRAMEWORK



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UCDAVIS HEALTH

CONTENTS

1 INTRODUCTION

Content

Other Documents

UC Davis Health Mission

2 PLANNING AND DESIGN PRINCIPLES

Vision and Goals

Guiding Principles Key Outcomes Look Ahead: Planning & Design Objectives

3 CAMPUS CONTEXT

Introduction

Geography and Environmental Factors

Development History

Planning Context

Challenges and Opportunities

Recent Successes

4 CAMPUS FRAMEWORKS

Introduction Public Realm Framework Mobility Framework 45th Street Urban Corridor Framework Districts Framework The Illustrative Campus Vision

5 DISTRICTS

The Campus Districts Education Core District Hospital District Patient Care District Collaboration and Research District

Support District

6 RESILIENCY AND MATERIALITY

Overview Planning Objectives Materiality and Design Resiliency and Infrastructure

7 PROCESS

Overview Definition Project Programming Project Design Alternative Delivery Models Engagement and Outreach Monitoring and Updates



INTRODUCTION

The UC Davis Sacramento Campus Physical Design Framework sets forth the vision for the physical environment of the Sacramento Campus of UC Davis, which is the primary location for the UC Davis Health System and home to an increasingly diverse and sophisticated health care, research, and educational program. UC Davis Health facilities at the Sacramento campus currently include the School of Medicine, Betty Irene Moore School of Nursing, the Medical Center, and the Ambulatory and Cancer Care Centers. The purpose of this document is to support the mission of the University and UC Davis Health, support personal and planetary health, and cultivate a landscape of meaning, comfort, and wellness for all those who visit campus. It is also a key decision making document that gives campus administrators delegated authority to make decisions on campus on behalf of the University of California Board of Regents, for projects under a certain size.

The Physical Design Framework is an advisory, guidance document intended to convey a set of design intentions, rather than prescriptive regulations or mandates, and is used by the UC Davis Coordinating Committee on Planning & Design and Chancellor's Committee on Planning & Design when reviewing a project's design. While campuses are required to consider the Framework's guidelines and principles in developing their projects, a project is not required to be consistent with every guideline in the Framework. The principles outlined are intended to be open-ended guidelines, not regulations or mandates; as such they are not absolute. They are intended to be evocative rather than prescriptive; inspiring rather than repressive; to convey a set of intentions rather than a set of rules and not all of them will be appropriate in all circumstances. On occasion there may be good reasons to vary from them or to revise them.

UC Davis Health is entering a new era of planning and design, building on the successes of the last ten years to create a strong future. Continued success and growth in the healthcare mission, and the evolution of the idea of campus to a more comprehensive community of education, research, and care, makes it imperative to provide clarity on design priorities in order to create the beautiful, welcoming, safe public realm that is the foundational experience for patients, staff, students, and visitors.

CONTENT

The intent of this document is to provide a flexible framework for long-term success of campus. This Framework gives direction for design solutions through parameters for site planning, architecture, landscape, and circulation to ensure that future growth and change supports campus goals. This Physical Design Framework identifies a potential development scenario in order to demonstrate how campus goals and objectives for physical design could be achieved, and does not reflect commitment to any specific project or time horizon for development. The details and specific program and spatial requirements of treatment, research, education, and innovation will continue to shift but the core values of the institution and the approach of designing for people remains constant.

There are many different ways to organize and present the components that make up an effective campus. This Physical Design Framework is organized by scale and theme, and intended to guide campus administrators and design practitioners alike in future projects and initiatives. The Framework is organized around six subsequent chapters:

- Planning and Design Principles: presents the underlying values and objectives that guide all elements of the Framework, and describes how they also support the goals of the Long Range Development Plan, and similar efforts on Davis Campus.
- Campus Context: describes the physical context of campus, including
 - · Geography and Environmental Factors
 - · Development History (morphology)
 - Planning context
 - Challenges and Opportunities
 - Recent Successes
- Campus Frameworks: details the campus-wide systems that underpin all current and future development.
 - Public Realm
 - Mobility
 - The 45th Street Urban Corridor
 - Districts

- Districts: provides more detailed description of the character, major organizing elements, and priority projects for the iconic neighborhoods on campus, as well as discussion of the relationship of each to the other districts and to the Campus Frameworks at large.
- Resiliency and Materiality: presents two intertwined, campus-wide systems that enable the framework
 - Materiality and design: siting and materials guidelines for a cohesive, beautiful, welcoming, and sustainable human-scaled campus
 - Sustainable Systems: Campus-wide infrastructure systems, and how future campus development can support more sustainable practices, as well as contextualizing UCOP level goals and objectives.
- Process: Describes the design and review process, and methods of keeping the Framework current.



FIGURE 1.1 Proposed 2020 LRDP Land Use

OTHER DOCUMENTS

A Physical Design Framework is a guiding document that provides direction to site and architectural design for University partners as well as consultants. Along with the Long Range Development Plan (LRDP), it serves as the foundation for planning and designing the places and spaces that support the mission of UC Davis Health, and the Sacramento campus of UC Davis more broadly. This Framework exists in the context of other planning and design efforts both by the University and the Health. These include:

- Boldly Go: Chancellor's Strategic Plan
- The 2010 Physical Design Framework
- Campus Design Guide
- The Long Range Development Plan (LRDP) (2010 and 2020 update) outlines projected growth in population and building in the near- to mid-term. This Framework grounds and directs that growth in a meaningful and sustainable way (Fig 1.1).
- Master Specification and Technical Design Manual

- Utilities Master Plan
- Transportation Demand Management Plan (Transportation Tomorrow)
- Capital financial plan
- UC Davis Health System strategic plan
- Davis Campus Physical Design Framework and LRDP
- Individual site studies

UC DAVIS HEALTH MISSION

The mission of UC Davis Health is "*improving lives and transforming healthcare*." That mission is realized through five key focus areas, which are further elaborated in this chapter:

- Education
- Research
- Patient Care
- Community Engagement
- Sustainability and Wellness

Education

The educational mission of the UC Davis Health System encompasses several groups: UC Davis School of Medicine, Betty Irene Moore School of Nursing, the Practice Management Group, and the teaching component of the Medical Center and medical fellows, as well as a robust continuing professional education program. US News & World Report consistently ranks UC Davis School of Medicine and Betty Irene Moore School of Nursing among the nation's best for primary care, research, and master's-degree nursing programs.

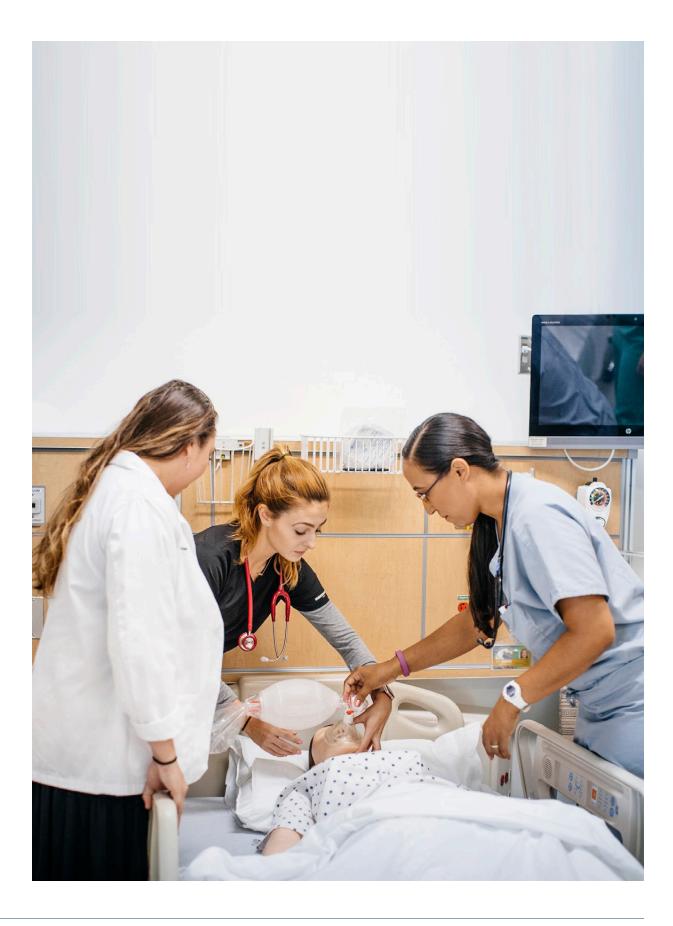
The School of Medicine degree offerings include:

- Post-graduate degrees: M.D., Dual MD PhD / MPH (masters of public health), MS in Health Informatics, Masters of Public Health;
- Training and certificate programs: Clinical Laboratory Scientist Training, Stem Cell Training Program, Mentored Clinical Research Training Program
- Graduate Medical Education for physicians and non-medical personnel
- Academic pre-matriculation orientation programs
- Outreach programs for kindergarten through undergraduate and community college groups

The UC Davis School of Medicine has developed a national reputation for specialty and primarycare programs. Medical students can enroll in a fully accredited master's degree program in public health or business administration. The school also conducts a doctoral program to train physicianscientists in ways to respond to the scientific, social, ethical and political obstacles of health care.

The Betty Irene Moore School of Nursing fosters nursing excellence through an expansive educational model that incorporates scientific rigor and immersive, inter-professional education. It allows nursing students and medical students to learn shoulder-to-shoulder in academic courses with common standards and practice. Degree programs include PhD, MHS – Physician Assistant Studies, MS – Family Nurse Practitioner, and MSN – Master's Entry Program in Nursing.

Other training and continuing education programs range from professional maintenance for physicians and nurses from across the region, to clinical pastoral education, dietetic internships, health informatics, and the Center for Health and Technology, among others, both on-site and through distance learning programs.





Research

UC Davis Health research spans from clinical to translational and basic-science studies, supporting the mission of improving health for individuals, communities, and populations, with an emphasis on collaboration. Areas of focus include studies related to cancer, cardiovascular health, human molecular genetics, evidence-based clinical care, epidemiology, health policy, health disparities, lifespan health, neurosciences, intellectual and developmental disabilities, stem cell and regenerative medicine, nutrition, vision science, injury and healing, and telemedicine.

In 2019, external funding for research reached \$315 million, including ten UC Davis Health departments ranking in the top 30 nationwide for National Institutes of Health funding. Targeted research units within the Health System include the Center for Reducing Health Disparities, Center for Healthcare Policy and Research, Institute for Population Health Improvement, and Center for Health and Technology, as well as the UC Davis Alzheimer's Disease Center and the UC Davis Institute for Regenerative Cures. The UC Davis MIND Institute ranked first in the US for NIH autism research funding in 2017, with more than \$18 million.

Nearly 1,000 research studies were underway in 2020 across the UC Davis Health system, funded by federal, state, foundation, and pharmaceutical and biotechnology sources, as well as private foundations and philanthropy. Collaborative research partners include the Shriners Hospital for Children, the U.S. Department of Veterans Affairs (VA) Health System, David Grant Medical Center at Travis Air Force Base, California Institute for Regenerative Medicine, California departments of Public Health and Health Care Services, Patient-Centered Outcomes Research Initiative (PCORI), California Association of Health Facilities (CAHF), and Alameda County Care Alliance, as well as private industry, venture capitalists, and regional entrepreneurs. Within the UC Davis community, research collaboration occurs with the California National Primate Research Center, School of Veterinary Medicine, College of Biological Sciences, College of Agricultural and Environmental Sciences, and the College of Engineering.

Continued growth in investment in partnerships and research facilities reflect a commitment to remaining one of the nation's top health care knowledge and education providers.

Patient Care

UC Davis Health, including the UC Davis Medical Center in Sacramento as well as the UC Davis Primary and Specialty Care Networks, is a nationally renowned provider of ongoing and acute care. With 625 licensed beds, the Medical Center serves as a regional tertiary care center and it is inland Northern California's largest and busiest hospital. In 2018, there were approximately 35,000 inpatient admissions and 901,000 outpatient visits to the UC Davis Medical Center and clinics. The UC Davis Health System serves approximately 6 million residents in 33 counties encompassing 65,000 square miles in Northern and Central California. It plays a pivotal role in the healthcare delivery system in this region:

UC Davis operates inland Northern California's only Level 1 trauma center, and one of only two in California, with comprehensive adult and pediatric emergency departments.

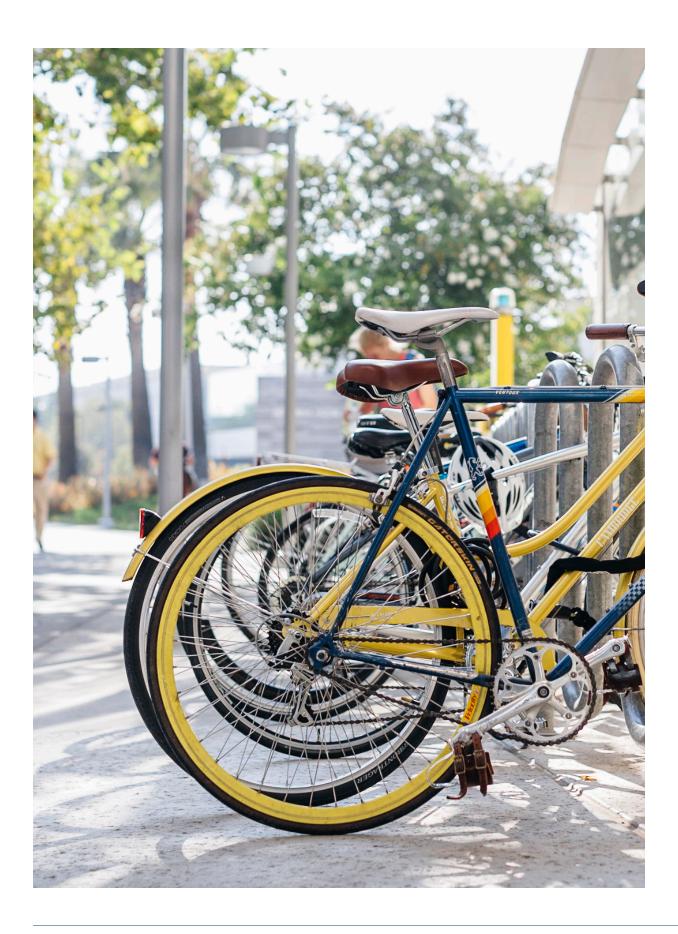
With the region's only nationally-ranked, comprehensive hospital for children, UC Davis Medical Center offers more than 30 children's specialties including cardiology and oncology and is ranked among the nation's best in five specialties including two in conjunction with partner Shriners Hospitals for Children. The recently updated UC Davis Children's Surgery Center provides state-of-the-art operating and recovery spaces along with a technologically advanced fleet of surgical equipment.

UC Davis Medical Center has the only National Cancer Institute-designated comprehensive cancer center serving inland Northern California, and one of the nation's largest clinical trials programs. It offers comprehensive care to adults and children with both rare and common cancers.

UC Davis Medical Center has ranked among U.S. News and World Report's top hospitals in the nation for 10 specialties and is the topranked hospital in the Sacramento area.

UC Davis Medical Center has been granted Magnet recognition by the American Nurses Credentialing Center (ANCC), the highest form of recognition for nursing excellence nationally.





Community Engagement

UC Davis actively engages with the diverse communities of the Sacramento region, Northern California, and beyond to provide education, care, and employment.

UC Davis programs train providers, instructors, safety officials and others to use technologyenabled care as part of a pioneering telehealth research and practice program; offer community workshops to increase health and science literacy; and encourage students from diverse backgrounds to consider health careers through outreach programs targeted for K-12, postbaccalaureate, and post-graduate communities.

The UC Davis Health System provides leadingedge care for patients and the community where they are, through programs such as the UC Davis Health Cancer Care Network which unites multiple cancer centers to offer care in their own communities, and the Betty Irene Moore School of Nursing partnerships with more than 350 clinical sites and community agencies for education and research programs.

Addressing issues of health, environment, and economy, UC Davis Medical Center is the largest farm-to-fork production food service in the nation's farm-to-fork capital, and plans to expand on the food-and-health focus through the development of Aggie Square and community-facing food resources.

Sustainability and Wellness

Sustainability is a core principle that underpins all activities at UC Davis, including development of the Sacramento campus. Viewed through the three pillars of social, environmental, and economic sustainability, the Sacramento campus strives to evolve in a way that minimizes the impact on increasingly scarce natural resources, balanced with development that supports mental and physical well-being as well as long-term success of the healthcare, research, and education mission.

As a major institutional entity in the region, UC Davis Sacramento campus has a role to play in social and environmental equity. Ease of access to healthcare includes the ability to physically navigate to and through campus for community members of any socioeconomic status, physical ability, or primary language. Campus design can supports this goal by creating a network of safe and welcoming spaces.

As part of the University of California system, UC Davis Sacramento campus is committed to reducing its impact on climate change and greenhouse gas emissions through means such as transportation demand management, energy conservation and efficiency, and district utilities.

UC Davis Health is committed to improving environmental performance achieving a top standard of excellence in sustainability including Practice Greenhealth 2020 awards for Greening the OR, Food, and Green Building.



PLANNING AND DESIGN PRINCIPLES

VISION AND GOALS

UC Davis and UC Davis Health have well-defined missions, visions, and goals that guide decisions and actions at all levels, from programming and educational decisions to land use and placemaking. This chapter outlines the planning and design principles for campus that together will create a vibrant, welcoming, and beautiful campus setting that supports those overarching aims.

This chapter includes:

- Vision
- Goals
- Guiding Principles
- Desired Outcomes
- Look Ahead: Planning & Design Objectives

Vision

The vision for UC Davis Health is to create a healthier world through bold innovation, including patient care, research, education, and strategic partnerships. The Sacramento campus of UC Davis fulfills this vision by creating a unique and supportive place.

Through careful design and planning, the campus will continue its evolution to be:

- A leading destination for patient care, research, education, and community gatherings, and a place that fosters creative collaboration as well as individual and community health.
- A place that supports a diverse community of patients, students, faculty, staff, and partners to shape the future of medicine and the wellbeing of the community through innovative scientific discovery, continuous learning, and cutting-edge clinical care.

Goals

At both the program and place-making levels there are a number of goals set forth for UC Davis Health and the Sacramento campus from the full spectrum of campus and community leadership voices. The goals driving this Framework reflect and support the goals outlined in the 2017-2020 Strategic Plan as well as the 2020 LRDP Update, with a focus on the physical development of campus.

- Lead Person-Centered Care and Improve Population Health: Provide high-quality patient-oriented facilities and amenities that support the work of healthcare practitioners and the positive experience of patients and visitors
- Reimagine Education: Support an everevolving population of diverse, transdisciplinary, life-long learners who will lead transformation in health care to advance well-being and equity for all, including facilities and campus spaces for undergraduates, professional continuing education students, and community learners of all ages and backgrounds
- Accelerate Innovative Research: Clear the path for new research including the discovery, implementation and dissemination of new knowledge by creating flexible supportive spaces for deep research as well as formal and informal collaboration and "creative collisions"
- Transform Campus Culture: Engage the campus population and the community at-large with dignity, care, and compassion, through spaces and public programs designed to welcome people of all walks of life and abilities
- Promote Sustainability: Actively design and plan for sustainable systems in infrastructure, design and materiality, and community interactions

GUIDING PRINCIPLES

There are three main principles that guide the design and planning direction in the Framework. These principles are consistent with the Davis campus, and should also apply on a high level to all UC Davis Health satellite facility locations to provide a sense of orientation and cohesive identity as part of a single entity.

The three guiding principles are:

- Support the UC Davis Mission: Create supportive places
- Foster a Vibrant Campus Life: Create connected and meaningful places
- Care for the Environment:
 Create sustainable places

Support the UC Davis Mission

Create supportive places for improving lives and transforming care. Campus is a place of learning, research, and discovery, but also is importantly a place of healing, birth, life, and death. The design of the campus must support the needs of patients and the community for seamless access to healthcare and healthy places; similarly campus must support the programmatic needs of health research and education even as these needs continue to evolve. A few key components of supportive places include:

LONGEVITY

Physical design of campus will reflect a sense of permanence and an intent to last, befitting the University's status as a trusted institution for more than 100 years.

- Architectural and landscape design should reflect a timeless style
- Building and landscape materials should be carefully selected for their value in terms of durability and beauty, lifetime cost, and environmental sustainability
- All projects must be evaluated on their contributions to the overall campus vision and experience
- All campus elements should be designed for the human scale and experience, not just the newest cutting edge technology, to ensure continued relevance of both the public realm and buildings

INTERACTIVITY

The success of the health system, education, and research is built on foundation of collaboration and interdisciplinary work that will be supported and encouraged through the design of campus landscapes and facilities.

 Current successes include the MIND Institute and the Center for Regenerative Cures; Aggie Square will introduce a whole new dimension, looking to the future of collaboration with a multitude of different players outside of the traditional university partnerships Campus should reflect the physical manifestation of interactivity and actively provide places that encourage collaboration, including common spaces both indoors and out, shared courtyards, and direct and legible pedestrian and bike links between different campus districts

FLEXIBILITY

- Practices and technology in health sciences and education are constantly and rapidly changing, and campus design must be able to accommodate current needs without precluding potentially unknown future needs.
- A flexible framework anchored in the public realm and the principles of patient care and human experience will continue to support the campus population even as demands for programmatic space evolve
- Office and research space designed to accommodate multiple uses or to change layout with shifting uses will be key, alongside a spine of circulation-as-placemaking
- Thoughtful and intentional infrastructure development is crucial in accommodating changing and expanding uses over time

Foster a Vibrant Campus Life

Create connected and meaningful places that enrich people's experience, support collaborative academic, research, and care endeavors, and strengthen a robust community. Creating a physical framework for campus life is essential for these efforts, both with the campus population of visitors, patients, staff, students, and partners, as well as with the community at large. An enhanced sense of campus life is crucial to supporting the patient care mission, in providing a vibrant place for treatment and healing with tangible connections to other people as well as convenient access to hospital and clinical facilities. In addition, creating a welcoming environment for the surrounding community adds to the richness of campus life, bringing in a more diverse group of visitors, tenants, and activities.

Fostering a vibrant campus life involves enhancing:

MEANING

Design the built environment (buildings, landscapes, and the public realm) with meaning; layers of meaning in design enhance opportunities for a more rich experience, memories, and a feeling of being rooted in a place. Embed meaning in design to make the Sacramento campus memorable and legible for regular and infrequent visitors alike, and make navigating the campus an easy and joyful experience for those who may be experiencing campus during times of stress.

- Legibility use design to orient people to their surroundings, both to support wayfinding and to make visible the natural and infrastructure systems at work on campus
- Coherence and Identity develop a baseline common language of design for landscapes and public-faces of buildings to ease the process of wayfinding and to contribute to a strong sense of place, communicating clearly that people have arrived to a special place when they reach campus; subtle differences in details between key areas of campus can indicate distinct neighborhoods of use
- Human scale all the activities of the Sacramento campus are ultimately about the health and wellbeing of the human body and mind; design places and spaces on campus to be sensitive to the sensory experiences of people in order to create a richer connection with the campus
- Beautiful and identifiable entries and edges

 design the interfaces of campus with the surrounding communities intentionally to signal a sense of arrival and welcome people into campus, as well as to provide beautiful spaces for the surrounding communities



DELIGHT

- Embed moments of delight into the design of campus to ensure that all campus users have a special relationship with the place, and to build a common sense of community; this often means including layers of additional meaning or detail in the design of everyday things, providing richness in unexpected places
- Make the healing, teaching, and research mission visible in the landscape
- Create a range of places to support the breadth of campus populations and people across a spectrum of abilities – patients, providers, researchers, residents, support staff, visitors; spaces should be designed to reduce stress, provide quiet contemplation as well as gathering, and increase ease of access

A SEAMLESS, INTUITIVE EXPERIENCE

- Provide convenient access and appropriate adjacencies between the various programmatic uses on campus to support the corresponding populations and create a common sense of place while encouraging more casual collaboration
- Improve pedestrian connections throughout campus to open access to the various facilities and landscapes to the entire population, both to better link campus programs and to provide comfort, respite, and relief from treatment, education, and research activities

Care for the Environment

Create sustainable places that preserve and enhance health and well-being, use resources wisely, and support future generations in carrying out the mission of the university as well as building a meaningful campus experience.

Key objectives around environmental concerns include:

HEALTH AND WELL-BEING

- Design campus landscapes and facilities to support the well-being of patients, staff, students, partners, and neighbors alike. This includes considerations for human comfort and attention to the connection between environmental and human health, today and in the face of future climate change
- Foster healthy conditions for social, economic, environmental, and educational pursuits
- Design campus to support equitable distribution of and access to health-positive amenities, including the ability to walk or roll safely across campus when desired and comfortable and comforting places of respite for people of all backgrounds and abilities
- Provide a tangible connection to healthy food systems for campus and for the surrounding community, including indoor and outdoor spaces that facilitate farm-to-fork and food equity programs

WISE RESOURCE USE

- Incorporate sustainable resource management into daily operations as well as long-term planning
- Consider long-term sustainability in decisions about materials, construction techniques, and maintenance regimes, as well as low-impact development and green infrastructure design such as functional and visible stormwater systems and district heating and cooling
- Position the Sacramento campus to continue to be a leader in sustainable campus design broadly, as well as continued development of what it means to practice sustainability in a healthcare and research setting
- These approaches are further explored in Chapter 7, Resiliency and Materiality

KEY OUTCOMES

This chapter has described the overarching mission, vision, goals, and principles that drive the guidance further elaborated in the rest of the Framework.

UC DAVIS HEALTH MISSION

Improving Lives and Transforming Health Care

UC DAVIS HEALTH VISION

To create a healthier world through bold innovation, including patient care, research, education, and strategic partnerships

STRATEGIC GOALS

Lead person-centered care and improve population health Reimagine Education Accelerate Innovative research Transform campus culture Promote Sustainability

FRAMEWORK GUIDING PRINCIPLES

Support the UC Davis Mission Foster a Vibrant Campus Life Care for the Environment By continually testing new ideas and projects against these principles, the evolution of the Sacramento campus will:

- Provide a peerless patient experience that is safe, comfortable, and intuitive for regular and infrequent visitors alike
- Reinforce UC Davis Health's image as a worldclass academic health center and support the vision and strategic plan
- Provide an environment that helps attract a diverse mix of patients and retain outstanding faculty, students, staff, and partners
- Nurture a true campus environment with a mix of complementary uses and pleasant outdoor space
- Be a good neighbor to the surrounding community, city, and region
- Contribute positively to environmental and ecosystem function

LOOK AHEAD: PLANNING & DESIGN OBJECTIVES

The following chapters expand on the guiding principles and vision, and provide more detailed objectives that support the campus goals. This high-level overview explains how they fit together to support Campus goals.

CHAPTER 4 | CAMPUS FRAMEWORKS

Develop whole-campus systems that provide design direction for individual projects to achieve the vision and goals of the university

Illustrate a long-term vision that is both evolutionary and transformational

PUBLIC REALM

Cultivate a beautiful and seamless series of places across the whole ground plane of campus

45TH STREET

Guide new development along 45th Street to create a new experience on campus, an urban pedestrian street

MOBILITY

Maximize access to campus amenities for people of all backgrounds and abilities, and make it beautiful and inviting

DISTRICTS

Create distinct neighborhoods that each have their own feeling and identity, while being tied to the broader campus

CHAPTER 5 | DISTRICTS

EDUCATION CORE

Centered around the Vanderhoef Commons, support students, faculty, and staff with space to gather, study, rest, and recreate.

PATIENT CARE

Create landscapes of wellness that support outpatient visitors, staff, and the neighboring community

HOSPITAL

Create space for restoration and healing, and gateway landscapes to build identity

COLLABORATION AND RESEARCH

Leverage Aggie Square to host community uses, new partnerships, and full-time residents

SUPPORT

Locate services with convenient access while shielding the messier functions from public view

CHAPTER 7 | PROCESS

CHAPTER 6 | RESILIENCY & MATERIALITY

MATERIALITY AND DESIGN

Establish a common design language for buildings and sites that unifies the campus

RESILIENCY AND INFRASTRUCTURE

Consider design of place and infrastructure together, and leverage both for long-term resilience of campus Work collaboratively with university partners including design, planning, technical, and departmental colleagues Follow the established process for delegated authority from the UC Regents





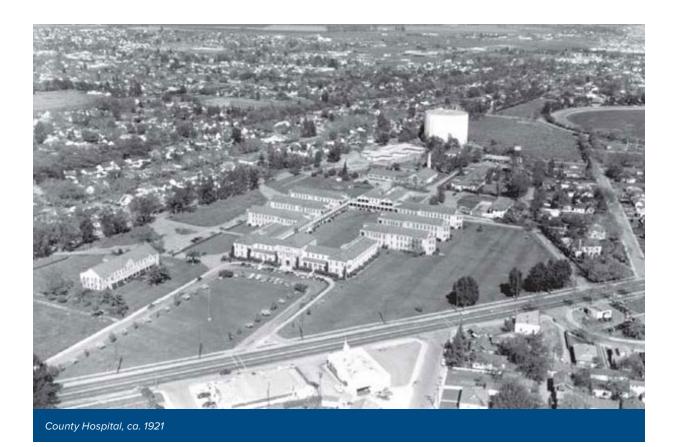
CAMPUS CONTEXT

INTRODUCTION

This chapter on campus context describes the physical setting of campus and its characteristics, the character and quality of the surrounding neighborhoods, and the planning and policy setting in which the framework has been developed. It also explores the physical development history, and major challenges and opportunities this framework addresses.

Geography and Environmental Factors

Unlike the Davis location, Sacramento is an urban campus in a downtown location surrounded by freeways, light rail, and a variety of residential neighborhoods and commercial corridors. Fitting appropriately into this context while still achieving its overarching mission is a fundamental goal of the Physical Design Framework. A variety of environmental factors, current and future, also influence the Sacramento campus and need to be considered in the design of buildings and the public realm.



Development History

The development history of the campus extends from the establishment of a county hospital on the site in 1852, to the founding of the UC Davis Medical Center in 1965, through development up to the present. This history sets the context for future development by providing an understanding of the influences that led to the campus as it is today.

Planning Context

This Framework does not exist in a vacuum, rather it is part of a larger suite of planning efforts that help to guide the future development of campus. Relevant efforts and documents from the University of California, UC Davis, and the City of Sacramento influence and will be influenced by the details of the Framework.

Challenges and Opportunities

Moving forward, the Sacramento campus will face challenges as it continues its mission of patient care, education, research, and community engagement. This evolving campus has many opportunities to become an ever more vibrant, welcoming, and engaged place as the program grows and changes.

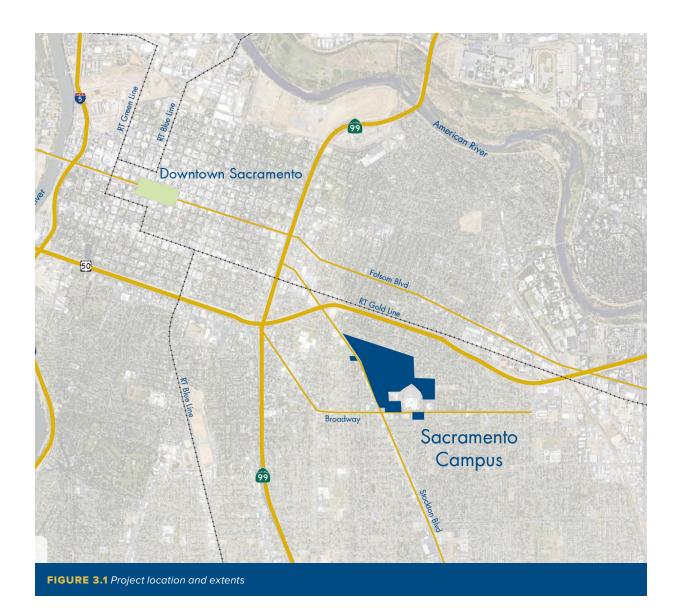
Recent Successes

The last several decades of investment in the Sacramento campus have seen enormous successes in the form of new facilities and public realm. Learning from and building off of these successes will be key in implementing the recommendations of this Framework.

GEOGRAPHY AND ENVIRONMENTAL FACTORS

Location

The Sacramento campus of UC Davis is the primary location for UC Davis Health and the UC Davis Medical Center, and sits on 146 acres in the City of Sacramento, 2.5 miles southeast of downtown Sacramento and the State Capitol (**fig 3.1**). The two campuses are approximately 17 miles apart.



City and Neighborhood Context

The city of Sacramento is the capital of the State of California and county seat for Sacramento County. With a population of 508,000 in 2018 and a seven-county metropolitan region of 2.66 million, it is the largest metro area in the Central Valley and the fourth largest in California.

The neighborhoods surrounding the Sacramento campus are primarily low-rise, pre-World War II single and multi-family residential areas characterized by leafy streets and local-serving retail. These include Elmhurst, Oak Park, Fairgrounds, and Tahoe Park. Stockton Boulevard, on the western edge of campus, is a city and regional corridor, connecting Downtown Sacramento to Strawberry Creek in Elk Grove. It is lined with low- to mid-rise commercial and mixed use. Broadway, which bounds the campus to the south, is an east-west connector in central Sacramento and runs from the Sacramento River to the west, through downtown, to 65th Street to the east. In the area around the UC Davis campus, Broadway is characterized primarily by low-rise residential and commercial uses, and is a major connection in the local and regional bicycle network.

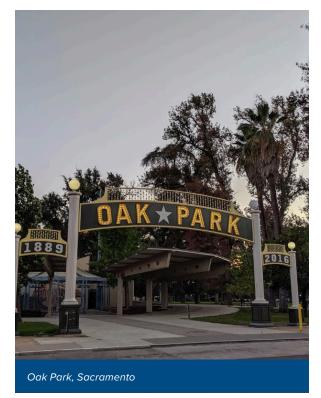


image courtesy of Marc Thayer

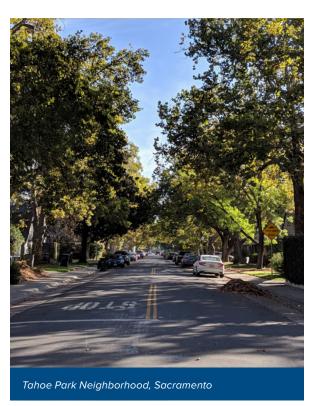


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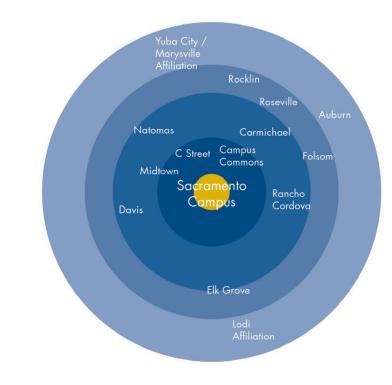


FIGURE 3.2 UC Davis Health Regional System

UC Davis Health Locations

The UC Davis Medical Center at the Sacramento campus is part of a larger regional UC Davis Heath system (**fig. 3.2**). The Medical Center in Sacramento is the largest and busiest hospital and the primary cancer care and trauma center in the region. In all, 17 offices in 10 area communities serve the greater Sacramento and inland northern California regions, with primary and specialized locations spanning from Davis to the west, to Yuba City and Auburn to the north and east, and Elk Grove to the south, including both owned and leased facilities.

Geography

Geographically, the UC Davis Sacramento campus and the City of Sacramento are located at the northern end of the Great Valley of California, the Sacramento Valley. Sacramento sits at the confluence of two major rivers: the American and the Sacramento. The campus is located on the edge of the historical Sacramento San Joaquin Delta, part of the greater San Francisco Estuary, which was once seasonal wetlands prior to European settlement and the passage of the Swamp and Overflow Lands Act of 1855 that incentivized conversion of marsh land to agriculture and other development. Today topography is generally flat and dry after centuries of development.

Climate & Environment

The UC Davis Sacramento campus today is part of a larger urban ecological system, including the urban forest canopy, parks, and a green infrastructure network. Sacramento is in the warm temperate dry forest biome, making it an ideal climate for broadleaf trees, shrubs, grasses, and mosses. While campus is not directly connected to any larger naturalized areas, it is home to a handful of habitat and vegetative pockets that may be connected to areas of similar size and function in the neighborhood and region.

Today's climate

The climate today is defined as Mediterranean, characterized by cool, wet winters, and hot, dry summers. Average summer high temperature reaches 92 degrees, winter lows average 38 degrees Fahrenheit. Rain generally occurs between October and April, with an average of 18.5 inches of rainfall per year.

The windiest part of the year is typically from January through September, with average wind speeds of over 6mph. In the summer, the delta breeze blowing through the Delta from the San Francisco Bay cools the night air significantly (up to 30 degrees overnight).

The area is also prone to Tule fog, a dense and low type of radiation fog that arises from the water bodies in the region including lakes, marshes, aqueducts, and canals. The densest Tule fogs occur primarily from late fall to early spring (the rainy months). It can be thick enough to disrupt travel due to visibility issues. Tule fog is also an important source of supplemental water for native plants and agriculture alike.

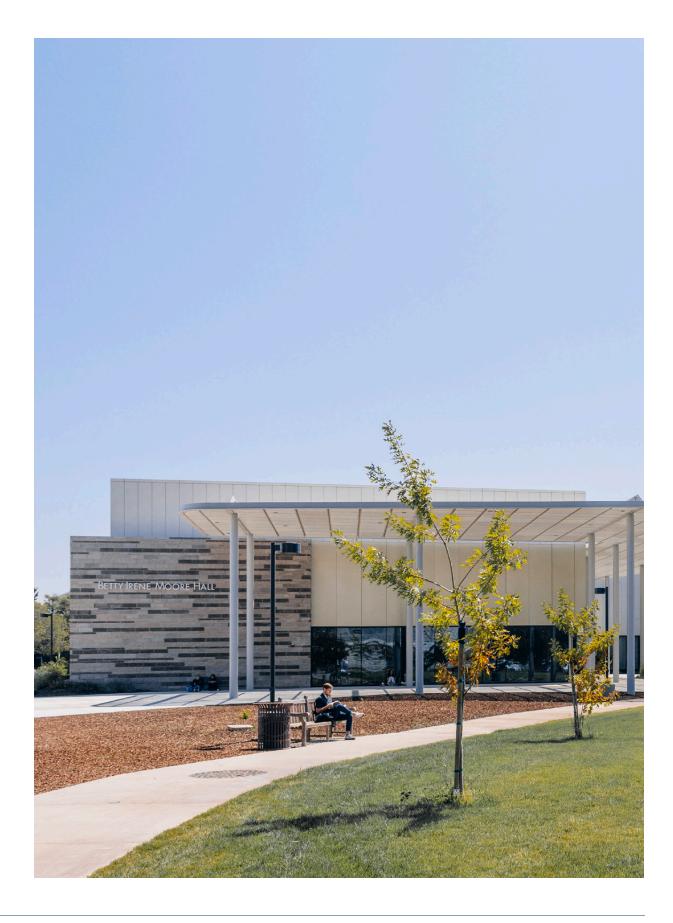
Future Climate

According to the Fourth Climate Assessment for California, the Sacramento valley region can expect more frequent and intense heatwaves including a 10 degree max temperature increase by end of century, and an increased frequency of "extreme heat" days from four per year to 40 per year. Average annual precipitation is likely to remain steady, but it will come in more intense storms which will stress water storage and flood control systems, as well as create uncertainty and stress for vegetation in the region.

Climate change may also affect our energy and power systems, creating uncertainty in availability of sources (hydrological, solar, wind) and a seasonal shift in peak load.

The public health implications of climate change include heat stress risk, air pollution and poor air quality especially due to wildfire, disease-causing pathogens, and mental health from chronic stressors. "Preventative care is the best way to reduce human health risks of climate change" (Fourth Climate Assessment, p 24).

The upcoming City of Sacramento urban forest master plan defines the "urban forest" as referring to "all trees and vegetation within the urban area, both public and private." The urban forest has multiple benefits for people as well as the natural ecosystem, including providing shade for human comfort and heat island reduction, habitat, air quality, and others. Sacramento has set a goal of 35% tree canopy coverage for the city on average by 2045; the UC Davis Sacramento campus currently has an average tree canopy coverage of approximately 20%. A changing climate has implications for the species of trees that will adapt and survive in uncertain but potentially more extreme conditions.

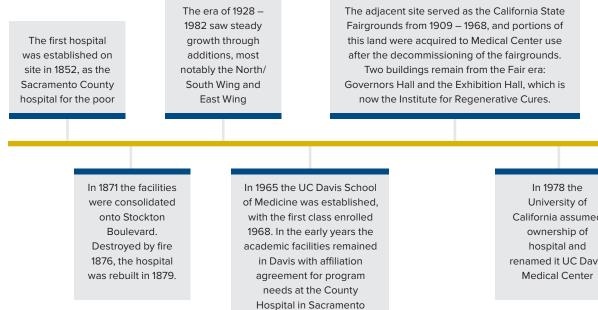


DEVELOPMENT HISTORY

The Sacramento Campus lies in the ethnographic territory of the Plains Miwok, who have occupied the area for likely thousands of years. It is unlikely that any village sites existed within the boundaries of today's campus. The site has been a hospital since early European settlement with additions and changes of ownership over the ensuing years.



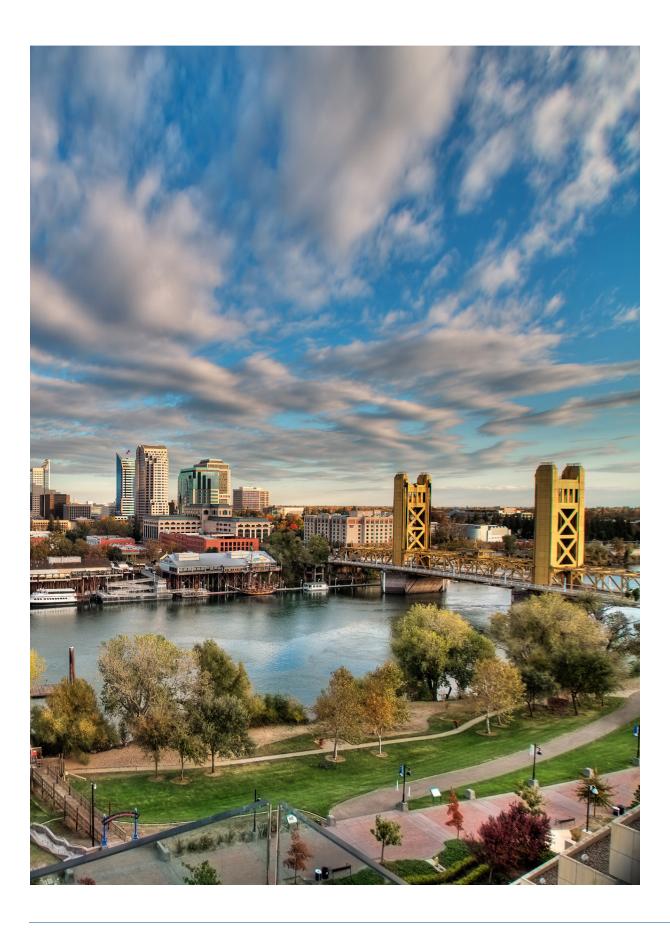
California State Fair Grounds with the County Hospital in the foreground, circa 1927. Image courtesy of Sacramento Metropolitan Chamber of Commerce Collection



California assumed renamed it UC Davis



Through additional property acquisition, campus today occupies the majority of property between Stockton Boulevard, V Street, Broadway, and the residential community to the east, as well as owned and leased parcels on the west side of Stockton Blvd, and the Broadway Building on the south side of Broadway. The Health System also currently leases facilities inboard and across the region (expand reach to provide patient care). There are a number of large neighbors bordering campus, including the Sacramento Language Academy, California Department of Justice, and Shriner's Hospital for Children. Campus today is entering an era of growth and renewal, adding new typologies, repurposing historic buildings, and addressing seismic safety issues through renovation and additions.



PLANNING CONTEXT

As a state entity of the State of California, the University is able to act as its own planning approval authority, and is not subject to the jurisdiction of local counties or municipalities. The UC Davis Sacramento campus should still evolve in a way that is sensitive to the vision, goals, and desires of the City and community neighbors. A handful of recent planning and design efforts are relevant to the continued development of the Sacramento campus:

City of Sacramento:

- Ongoing planning and design efforts will make Stockton Boulevard safer and more attractive to active transportation, and enhance a sense of place. The Stockton Boulevard Corridor Study runs from Alhambra downtown to Elder Creek Road in South Sacramento, and will recommend transportation improvements for safety, comfort, and reliability of all modes. The segment immediately south of Broadway is a Vision Zero Top 5 Segment, a priority for designing for pedestrian and cycling safety.
- The Broadway Complete Streets project will bring new and enhanced bicycling and pedestrian facilities to Broadway in the areas adjacent to campus.
- City of Sacramento 2035 General Plan is focused on "how to accommodate growth and change while preserving and enhancing the qualities and characteristics that make it such a desirable place to live." Campus is classified as "urban center low" with a target density of 20-150 units per acre, and is surrounded primarily by "traditional neighborhood low density," as well as the "urban corridor low" stretch of Stockton Boulevard.
- The City is finalizing an urban forest master plan which "will address the protection, maintenance, sustainability, and enhancement of Sacramento's tree canopy."

County of Sacramento

 The 2016 Bikeway Master Plan sets out a framework for regional connectivity for cyclists as well as guidelines for design and implementation of various facility types.

Sacramento Area Council of Governments (SACOG)

- The 2020 Metropolitan Transportation Plan / Sustainable Communities Strategy (MTP/SCS) pro-actively links land use, air quality, and transportation needs.
- Sacramento Region Blueprint (2004) is a smart growth vision that aims to integrate land use and transportation planning.

UC Davis Context

- 2020 LRDP Update: Concurrent to this framework update, the Sacramento campus is undertaking an update to the Long Range Development Plan (LRDP), providing guidance on land use and development policies as campus population and program space grow.
- UCOP Seismic Safety Policy: All UC owned buildings have undergone seismic risk assessment, and those with high risk must be modified or vacated by 2030.
- Aggie Square: A major development on the Sacramento campus creating a new mixed-use district to the south of 2nd Ave.
- Transportation Tomorrow: The transportation demand management (TDM) framework seeks to make campus more accessible for people arriving in all modes of transport, and contribute to sustainability goals through a reduction in carbon emissions from transportation.
- The Davis Campus has a parallel set of guiding plans borne from the same mission, allowing for coordination of resources as appropriate.
- A number of site- and program-specific plans and studies will be coordinated with the recommendations in this framework document.

CHALLENGES AND OPPORTUNITIES

There are a number of challenge areas for the Sacramento campus, many of which are not unique to the place as an institution of both health care and education, and there are a number of significant opportunities to be leveraged with continued development and evolution.

The long development history of campus, along with the piecemeal nature of hospital and clinical care facilities that is typical in the field, have presented a significant challenge in the past, both for finding appropriate space for program expansion and in creating a sense of place and a human-scaled campus. Additionally, the internal-facing nature of many older facilities make orientation and navigation for visitors difficult and have contributed to a car-oriented circulation system; however, the extent of current surface parking lots identified in the previous framework is shifting as it is identified as future space for new uses and departments.

Similarly, a lack of cohesion in architectural and landscape style and materiality detracts from a unified sense of place. Because Sacramento was not originally developed as an educational campus, it is still lacking in some of the core amenities for a student and research population, most notably housing and support for campus residents.

The campus' location and connection to transit, strong reputation in education, research, and health care, and commitment to innovation and change create a solid foundation for positive growth in the future. Opportunities to enhance the image, comfort, and functionality of campus include creating a strong backbone of access by building on existing transportation connections and pedestrian and cycling facilities. Campus design and planning can maximize ability to access healthcare and education, research opportunities, and make UC Davis an even stronger community partner. There is an opportunity to increase comfort, safety, and legibility of the experience of moving to and through campus by building on today's initiatives including Aggie square, the Mobility Hub, and the Transportation Tomorrow plan.

Building on recent successes, architectural and landscape expression in new and refurbished projects can create a unified visual campus identity, while provision of amenities for a diverse campus community will support continued growth of programs and attract the best and brightest for education, research, and partnerships. Continued investment in the public realm will further enhance the patient experience outside of the walls of the buildings, just as program investment enhances the care that happens within.

Finally, intentionality in the way campus is designed and planned is a great opportunity to create a truly sustainable campus that not only minimizes resource usage, but sets an example for health care and health education and research institutions worldwide.



RECENT SUCCESSES

The past 20 years have seen a new era of campus development, looking beyond the traditional offerings of a medical center. The previous plan highlighted the Education Building and associated student-oriented amenities (study space, library, café) as successes in creating a more complete campus. Since that publication, additional new and updated projects continue to set a precedent for success, particularly for the quality of buildings, and relationship of indoor and outdoor space. Places and spaces that have been realized since the publication of the last Framework include:

- Vanderhoef Commons (The Quad) provides a central gathering space in the education core, and is an amenity for all those who come to campus.
- Betty Irene Moore School of Nursing and Moore Hall is a state of the art teaching and learning facility that also features strong indooroutdoor connections and study and gathering spaces.
- The East-West Mall creates a strong pedestrian link from the Vanderhoef Commons to the Ambulatory Care Center (ACC).
- A pedestrian trail connects the main hospital through the Education Building to the School of Nursing and points beyond, including the ACC, the Facilities Support Services Building, and the future site of Aggie Square.

- The Cancer Center North addition brings a state of the art cancer treatment facility, and creates a comfortable courtyard connecting the two buildings
- A naturalized open space (north-south mall) running south from 2nd Avenue provides a more naturalistic experience for staff, students, and visitors, and which serves as a connector from the Commons to the southern portion of campus.
- Parking Structure 3 is a multi-level, patientoriented parking facility adjacent to the hospital at the primary campus entry off of Stockton Blvd and X Street that increases patient access.



CAMPUS FRAMEWORKS

INTRODUCTION

Four "frameworks" comprise the campus-wide systems that underpin all current and future development, and ensure that each project is contributing to larger campus goals. Each have distinct implications, but they are intimately connected.

While the precise future needs of each may not be predictable beyond a short time horizon, creating a strong physical frame that defines the character of campus as a whole will ensure that all future new and redevelopment projects contribute positively to the fabric and identity of campus.

The Four Campus Frameworks:

- 1. Public Realm Framework the public ground plane
- 2. Mobility Framework moving to, from, and within campus
- 3. 45th Street the urban corridor
- 4. District Framework character and function of distinct programmatic areas

PUBLIC REALM FRAMEWORK

Overview

The "public realm" is defined as space that is free and open to anyone. On the Sacramento campus, this includes landscaped spaces large and small, streets and paths, and even the public lobbies and corridors of buildings. Together they form the connective tissue of campus, a frame for the buildings that house the important work of health care, education, and research, and also important places of comfort, movement, and experience for the campus community. The public realm is the first impression people have of campus as well as the primary visual identity for the campus at large.

Landscape and outdoor public realm help people orient themselves to and within campus, provide visual cues for location and direction, and, most importantly, opportunities for beauty, delight, and respite. A robust public realm network should serve as the primary organizing element, a frame into which the moving parts of built space can fit over time.

Finally, the landscape fabric of campus has a crucial role in the larger ecosystem functionality of the site, city, and region, operating as green infrastructure and contributing to habitat connectivity as well as urban forest goals.

The framework described here lays out a network of green spaces, gathering places, and movement corridors that will serve as the organizing element for development as campus matures.



The major components of the Public Realm Framework are:

- The Landscape Network
- Indoor-Outdoor Connected Spaces
- Trees
- Wayfinding

Planning Objectives

- Foster a legible campus identity that brings interest and delight to all users through design and materiality
- Enhance safety and comfort of outdoor space for the entire campus population and pursue universal design principles to promote access for all
- 3. Create a frame that guides future development in a flexible way
- 4. Provide a variety of places that support the physical and mental health of campus's diverse population and reinforce the university mission for students and faculty, patients and visitors, staff, and partners alike, and ensure all users are within a short walk of an outdoor space of meaningful size. This includes space for refuge and recharge, studying, healthy activity, and formal and informal meeting space, along with healing gardens, play space, and walking paths
- Incorporate moments of horticulture in the public realm where possible, including learning landscapes, food gardens, and habitat, at a variety of scales

6. Seamlessly knit together indoor and outdoor public spaces at building lobbies

- 7. Strengthen Vanderhoef Commons, the hospital green, and Aggie Square as the signature outdoor spaces on campus, and create a continuous and connected outdoor network linking each corner of campus
- Create a series of "arbor walks," primary pedestrian routes that are sheltered by structure(s) to provide shade an comfort and visual cues for wayfinding
- Use building massing and ground floor uses to frame and activate public space, particularly along the urban spine of 45th Street and surrounding major open spaces
- **10. Consider the sequence of movement** through the various spaces on campus and how they come together in a cohesive experience for the campus community
- Use well-designed landscapes as placeholder for future development in phased projects, to provide amenity and visual interest in the interim time frame
- 12. Use landscape to connect meaningfully with the surrounding community, including a beautiful outward-facing edges on major streets and neighborhood-scaled spaces in the landscape buffers

Image: The Vanderhoef Commons and Betty Irene Moore School of Nursing are recent successes that future work can build upon





The Landscape Network

The landscape network (Figure 4.1) includes all outdoor space that is free and open to all campus users, and is made up of a variety of primarily outdoor space typologies. Each has its own characteristics, and supports the larger vision of a diverse set of spaces on campus.

MAJOR SPACES, PATHS, AND TRAILS

This typology includes quads and plazas, malls, the naturalized open space, and trails, to create a continuous network from one corner of campus to the other. Each district should be supported by a major space that reflects the character of the primary uses and building types of the area, and also ties seamlessly back into the greater network. This group of spaces is also appropriate for the introduction of an "arbor walk" theme throughout campus. Along primary pedestrian paths and through major open spaces, trellised structures will provide visual interest and moments of shade and green.

Major spaces:

- Vanderhoef Commons (The Quad)
- Market Plaza and Aggie Square
- New Hospital Green
- Governor's Hall Plaza
- ACC Greenway (Medical Mall)
- Cancer Survivor's Park
- Naturalized Open Space

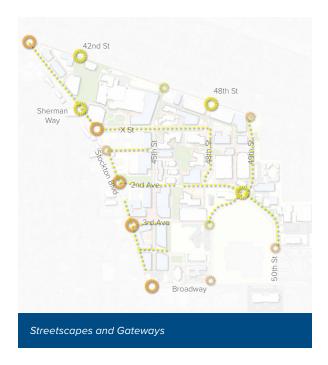
Paths and trails

Off-street pedestrian routes on campus continue the park-like feeling of each of the major spaces and provides a safe and comfortable path for contemplation, exercise, or simply navigating between facilities, and should be considered as new buildings and spaces are designed.

- The existing pedestrian trail connecting the main hospital to Vanderhoef Commons should be expanded both to the north and south to link the New Hospital Green at the north to Governor's Hall at the south, connecting through the Quad and the Naturalized Open Space.
- A new off-street pedestrian link from the hospital to the patient-focused space in the north east corner of campus will weave together open spaces, parking structures, and new and existing clinical care buildings in the northern end of campus.

STREETSCAPES

Streets are important not only for vehicular movement, but also as key connectors for pedestrians and cyclists to and through campus. Streets are also major contributors to tree canopy coverage goals and protective shade for people during the summer. New and existing streets should be augmented with shade in the form of trees or structures, and should include pedestrian amenities such as lighting and seating. 45th Street from V Street to the north through Aggie Square will be a key urban pedestrian street, with active uses enlivening a generous and shaded pedestrian zone.



GATEWAYS

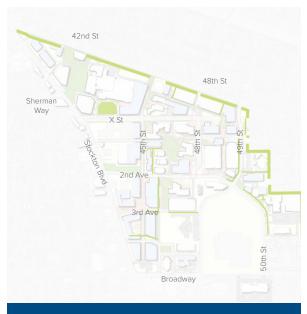
Gateway landscapes denote the major entry points into campus, in all modes. As thresholds from the surrounding neighborhood to campus they should be marked by special landscape treatments. This includes setting buildings back from the sidewalk or roadway, designing with plants with particular visual interest, and the inclusion of signage or other markers to enhance wayfinding. Different scales and treatments will be appropriate for the different modes that use each entry point.

- Major public entries that accommodate vehicles, pedestrians, and cyclists should have a consistent landscape palate, and signage that is legible at all three speeds. As the primary public-facing landscapes that welcome patients, visitors, and partners, the gateway points along Stockton Boulevard should feel like a part of the public realm of the city as well as the campus.
- Secondary vehicular entrances are used primarily by Sacramento campus staff and students. Each should be clearly legible as an entrance with consistent signage and a landscape treatment that announces arrival. These gateways should be designed for the safety and comfort of pedestrians and cyclists alongside vehicles.
- Gateways for those arriving on foot or by bike should be designed to be visible and welcoming at low-speed. Along Stockton Boulevard, these also may serve to open the campus landscape more generously to the surrounding community. Pedestrian-scaled signage and consistent landscape treatment should help orient visitors onto campus without encouraging vehicular traffic. Where appropriate, amenities such as seating and lighting should be provided.

BUFFERS AND CONNECTIONS

While generally not destination landscapes in themselves, buffers and connections on campus serve an important purpose as visual relief, as well as secondary pedestrian connections to and through campus.

Landscaped buffers comprise the northern and eastern edges of campus, at the interface with low-rise residential neighborhoods.

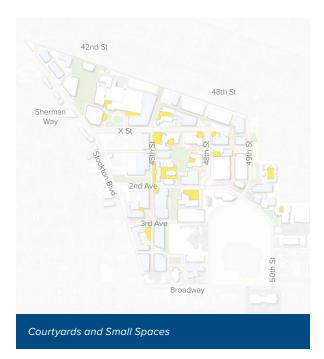


Buffers and Connections

- 40' minimum width to provide visual and noise relief for the surrounding neighborhood
- These should be human-scaled landscapes that provide visual interest and amenities including seating, pedestrian-scaled lighting, and shade. All buffers should be attractively landscaped and may include stormwater bioswales and climate appropriate plantings, as well as public art. Along the V Street corridor in particular, pedestrian paths should enhance the park-like feel and provide an amenity for the surrounding community as well as campus users. The recent parklet north of the North Addition Office Building is a good example of a space that serves as a buffer, a destination, and a functional landscape that captures stormwater.
- Connections are typically linear spaces between buildings or along roads that may not connect districts or fully across campus, but still serve as important green connections. They should be appropriately scaled to allow for generous planting as well as pedestrian-scaled lighting if a pathway is included.
- Examples include the connections between the various buildings of the MIND Institute and the Ronald McDonald House, as well as new connections and paths to Parking Structure 4 in the north east corner of campus.

COURTYARDS AND SMALL SPACES

A network of smaller open spaces defined primarily by their relationships with buildings are integral to the public realm on campus. These should flow seamlessly from the public areas of building interiors, and should include elements to allow for individual and group gathering and extend the interior life of buildings into the outdoors.



- These are generally building-related spaces that are typically public or semi-private and should be designed to be a good size for active programming as well as reading, eating, relaxing alone or in small groups
- Elements provided should include ample seating, shade, lighting, and other comfort amenities. Consider WiFi access and power for med center visitors, students, and partners alike
- Recent successful examples include the Education Building court, which interfaces with the Commons, and the Cancer Center courtyard, which is protected, quiet, and has easy access from building for patients, visitors, and staff with ample space for seating and respite.
- Specific sites are outlined in more detail within each district

Indoor-Outdoor Connected Spaces

As campus continues to evolve, future initiatives should create opportunities for public life to flow seamlessly from indoors to outdoors, a shift from the historic inward-focus of healthcare and education buildings. The best example of this will be the 45th Street Corridor.

- Special attention should be paid to the interplay of indoor and outdoor spaces, including programming uses that may flow between the two and designing spaces that reflect and encourage that natural flow.
- Make the public uses of buildings visible and accessible to passersby, and provide natural pause points at the thresholds to accommodate casual conversations before and after classes, meetings, etc. Spaces for creative collisions and other casual meetings are imperative.
- Design buildings to maximize the ability for people to orient themselves before they even enter the front door. Including visible public spaces, communicating stairs, generous lobbies, and directories in easily accessible places will minimize stress of navigation.

Trees

The "urban forest" plays a key role in realizing the campus sustainability and human comfort goals. New projects as well as updates and renovations should add to a robust and resilient tree population on campus.

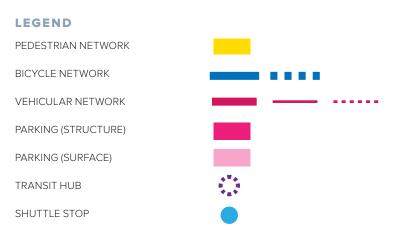
- Support City of Sacramento's goal of 35% coverage of tree canopy by increasing the amount and size of trees wherever possible.
- Build on the progress already made in the major streetscapes in new streets and spaces.
- Prioritize tree selection and placement for both human comfort and environmental stewardship.
- Ensure appropriate planting details (soil volume, drainage) to support long-term success.

Wayfinding

According to the Society of Experiential Graphic Design, "Wayfinding refers to information systems that guide people through a physical environment and enhance their understanding and experience of the space." Wayfinding should be supplemented with a clear, coordinated signage program. The design of spaces and buildings themselves should help orient campus users to their environment.

- Design and materiality should be used as a way of orienting to and navigating through campus, including well-delineated paths, clear sight lines, and use of common materials to point people to major destinations on campus.
- Wayfinding should support people of diverse abilities and include tactile directional paving and braille as well as imagery or other solutions for those who do not read English.
- A coordinated signage program will serve not only people arriving in private automobiles, but also those on foot, bike, and transit.
- Existing and future signage should be streamlined, to avoid confusing or conflicting layering of signs.
- Consider naming major pedestrian routes through campus and including these routes on pedestrian-scale signage.





MOBILITY FRAMEWORK

Overview

"Mobility" encompasses all the ways people travel to and through campus. The nature of campus as a center of healthcare, employment, research strategic and community partnerships, and education means there will be many different populations with different needs as well as divergent amounts of knowledge about campus. The Sacramento campus must be as easy to navigate on the first visit as the hundredth, in every-day conditions or times of stress, for people of all physical abilities.

The mobility framework is closely linked with the public realm framework, with a focus on access: making the use of campus and its facilities seamless, intuitive, safe, and equitable for all. Streets, sidewalks, and mobility hubs are not just spaces for passing through, but should also be seen as places of their own right, leveraging mobility infrastructure to provide spaces to pause, rest, and gather.

A robust mobility framework, in conjunction with university-sponsored commute programs, will help provide real options for all those who come to campus, ensuring dignity and delight in each mode.

The major components of the Mobility Framework are:

- The Pedestrian Network
- The Bicycle Network
- Transit
- Wayfinding
- Vehicular Network and Parking
- Future Mobility

Planning objectives

- Maximize access (the ability to physically arrive at a location with minimal barriers or friction) to campus and its services and amenities for all, in a diversity of modes of travel, by increasing bicycle facilities, pedestrian safety and comfort measures, and infrastructure for transit and shared mobility
- 2. Create a robust network including multiple routes of connection between the major destinations on campus, available to people on foot, bike, and transit as well as in cars
- Ensure that the most direct routes through campus and between facilities are accessible to people of all physical abilities, with appropriate path widths, navigable slopes and turns, and sturdy paving materials.
- Leverage design and placemaking as wayfinding to create safe and meaningful spaces around mobility infrastructure, and leverage opportunities for placemaking with all mobility infrastructure and investment
- 5. Balance the needs of different modes in campus infrastructure to prioritize and protect people using non-motorized modes, transit, and shared mobility users, understanding that there will always be a need for convenient access for the private vehicle, especially for less mobile patient populations and overnight staff
- Consider orientation and connections to transportation infrastructure in all new development, at the appropriate scale in order to maximize access
- Incorporate emerging mobility technologies and habits such as autonomous and shared devices when they help achieve mobility and equity goals

Pedestrian Network

In the last decade great progress has been made in improving the pedestrian experience on campus. However, there is still a lack of direct pedestrian connections between destinations, as well as pedestrian comfort and safety amenities on many major routes. A robust network of paths, trails, and sidewalks will help increase access as well as provide opportunities for activity that supports the mental and physical health of all campus users.

- All routes on campus, including vehicular streets, should be considered part of the pedestrian network and should be designed with pedestrian safety and comfort in mind. This includes pedestrian-scaled lighting and signage, benches at appropriate intervals for resting, water, shade, and appropriate separation between pedestrian surfaces and travel or parking lanes.
- The principles of pedestrian connectivity apply at all vertical levels, including existing and future bridge or tunnel connections between buildings. Routes should be direct, comfortable, and intuitive, with good visibility to major destinations and robust wayfinding.

A handful of key pedestrian routes (fig 4.3) will connect across campus, giving patients, staff, students, partners, and the surrounding community direct access to campus facilities as well as healing outdoor spaces.

- The Arbor Walk will start at the current site of the Cypress Building and connect across campus. This is a main access route as well as a welcoming and comforting destination. The design of this greenway will be characterized by a series of shade structures made of warm natural materials and leafy plants. The design will vary depending on context, but as a whole the walk should provide a beautiful, humanscaled, and comfortable route, providing recognizable direction for pedestrians.
- The Ambulatory care loop will be an off-street pedestrian connection between the Hospital and Patient Care districts. This route will be less park-like than the Arbor Walk, but should provide ample width for pedestrians, and include design elements such as distinctive paving, lighting, seating, and wayfinding elements. 50' minimum separation should be provided between building faces for pedestrian comfort and emergency vehicle access. Buildings along this pathway should be highly transparent facing the pedestrian entrance.
- The 45th Street Urban Corridor will become a pedestrian-focused street, the "main street" of the Sacramento campus. Connecting the Replacement Hospital Tower and Cancer Center to the north through to Aggie Square to the south, this spine will be a lively contrast to the "buildings in a park" feel that dominates the rest of campus. Buildings along this pedestrian spine should include active public-facing uses on the ground floor, such as retail, wellness, and the mobility hub, to create a continuous streetwall with visual interest and activity. 45th Street will become the destination for people watching, meeting others, or a simple city stroll.
- Sidewalks and plazas through campus are well-shaded by mature trees today, and should continue to increase in importance as part of the pedestrian network. New streets and streetscape improvements should provide ample sidewalk width (6ft minimum, 8ft desired), shade, and periodic seating for resting and gathering.

The 48th Street connection to the SacRT Light Rail station to the north of US Route 50 is an important route for pedestrians and cyclists arriving from transit, and from neighborhoods to the north. A generous cross-section with ample space for pedestrians and cyclists will help orient visitors and provide a safe route to enter campus.

The provision and design of pedestrian crossings

throughout campus is key to the comfort and safety of those who walk. Any time they cross a vehicular routes, pedestrian paths should be highly visible using means such as zebra stripe or raised crosswalks, and/or intersection control in the form of stop signs or signalization where appropriate. Raised crossings and other more intense designs should be reserved for areas with high pedestrian volume.



Bike Network

The Sacramento campus is a destination for staff, faculty, students, partners, and even some patients who choose to arrive by bike, as well as an increasingly important part of the bike network for the surrounding community and city at large. As campus evolves, new streets and street repairs and upgrades should include bike facilities at the appropriate scale in order to complete and enhance the network to and through campus (**fig 4.3**).

- City of Sacramento has a goal to create a "low-stress" cycling network, which means reducing the real and perceived safety issues that prevent casual or occasional cyclists of all abilities and experience from riding more often. Central to reducing stress for cyclists is providing options that are on quieter streets or physically separated from vehicular traffic. The existing widths and slow speeds of campus streets make them ideal as alternatives to busier streets such as Stockton Boulevard or Broadway.
- The existing bike facilities are:
 - A sharrow route on 48th and V streets
 - A striped lane on X St, 48th St, 49th Street, which is not contiguous
 - A major bike connector along 2nd Ave, west of Stockton
 - Improved in-street bike lanes along Broadway, from 43rd Street to Fairgrounds

- A few key moves will complete the network as indicated in City of Sacramento Bicycle Masterplan 2016 and provide an alternative to Stockton Boulevard:
 - Formalize striped lanes on 48th and 2nd Ave,
 - An off-street cycletrack is a possible along Stockton Blvd, particularly across the street frontage of Aggie Square.
- A cycling connection to 48th Street light rail station, included in a generous shared-use path, will provide direct and safe access to oncampus routes for those arriving from transit and from the neighborhoods to the north of campus.
- To support bike use on campus, short-term and long-term bike parking should be provided at all major buildings and destinations, including the Mobility Hub and major open spaces.
- Increased provision of formalized bike facilities will help give cyclists safe alternatives to riding on the sidewalk and reduce confusion and conflict between bikes and pedestrians.

Transit Network

Transit service to the Sacramento campus continues to expand, with the introduction of the Causeway Connection (linking Davis and Sacramento campuses and points between), and a robust MedTrans courtesy shuttle service that connects points on campus as well as Midtown Sacramento and regional transit providers. Primary elements of the Sacramento transit network include:

- Major transit arrival and transfer points, as well as electric bus charging and a MedTrans shuttle stop, are focused at the Mobility Hub on 45th Street at 2nd Avenue
- The Causeway Connection and Health System shuttles will continue to use the transit stop that serves the main hospital, on X Street.
- An optimized MedTrans network will continue to operate on campus and to points beyond, connecting major destinations in the area to health facilities and the various parking lots on campus.



Vehicular and Parking

Private vehicles play an important role in keeping the campus accessible to the community, and provision of car infrastructure should be carefully balanced to ensure safety and access in all modes. Primary vehicular movement should be focused on the major streets, and parking areas concentrated along the perimeter of campus, leaving a generous internal network of streets and routes that are friendly for pedestrians and cyclists (**fig 4.5**). This should be encouraged both through street design as well as wayfinding that directs visitors along preferred routes.

- To increase pedestrian comfort and safety, separation in the form of a vertical curb or planting strip should be provided between any pedestrian path and travel or parking lane, and traffic calming measures should be employed wherever appropriate.
- Primary vehicular movement focused along
 "Health Sciences Dr" X Street, 48th, 2nd
 Ave, 49th corridor, as well as the Stockton and
 Broadway corridors.
- Secondary movement for short-term or disabled access to facilities, as well as servicing, is accommodated on smaller streets
- Parking will be increasingly consolidated into parking structures at the periphery of campus, leaving parcels toward the center of campus available for mission-focused development

- Entry drives should be consolidated and located off of vehicular streets to minimize curb cuts and pedestrian conflicts where possible
- Access and servicing routes should be oriented to the backs of buildings and screened where possible to minimize visual and noise intrusion. These routes may also serve as pedestrian routes, and should be designed to safely accommodate people on foot as well as heavier vehicles wherever this is the case

Future mobility

The rapidly changing technology landscape surrounding mobility (autonomous vehicles, microtransit, TNC, and other services) should be closely monitored and implemented in ways that support the planning, design, and institutional objectives of UC Davis and the Health System. Infrastructure for these new and emerging modes should be balanced with those outlined above to provide seamless access while continuing to support the safety, security, and comfort of all campus users.



THE 45TH STREET URBAN CORRIDOR FRAMEWORK

With the development of Aggie Square and the new hospital tower, 45th Street will become a key corridor connecting the Campus of the Future at the south to the Hospital of the Future at the north (**fig 4.6**). This framework spans multiple districts, and demonstrates the more detailed development of the previous two frameworks. Although not currently anticipated in the LRDP or EIR, intensification of the hotel block and Shriner's Hospital remains a possibility in the future and would magnify the transformative potential of the 45th Street Corridor. The street will evolve to be a well-framed, pedestrian-oriented north-south connection with the characteristics of a vibrant urban corridor.

Planning Objectives

- Create a generous pedestrian realm, with wide sidewalks, places to sit, lighting, and street trees, and special treatment including raised crossings and unique paving of the roadbed between intersections and crossings.
- Provide minimal building set-backs except at key locations, where generous plazas provide a focus for public life and an extension of public indoor space.
- Create green "end caps," generous landscape spaces that anchor the north and south ends of the corridor and provide visual interest as well as comfortable outdoor space for the campus and surrounding community.

Landscape Objectives

- Select trees for shade and pedestrian scale, as well as ability to thrive in an urban setting. Trees should be planted with generous structural soil volumes. In plaza spaces, tree pits should be depressed to create a flush conditions with paved services. In linear stretches, tree strips should serve as a buffer between pedestrians and vehicles as well as an integral component of the stormwater infrastructure, as well-designed swales.
- Select high-quality materials for pedestrian surfaces that are complementary to those used in Aggie Square, the Mobility Hub, and other special places on campus.

Building Objectives

- Frame the pedestrian realm with buildings, with new development set back minimally from the street.
- Locate active uses with a high degree of transparency facing the street. Where public accessibility is not feasible, create space for visible activity such as restaurant kitchens or other back-of-house, or more shallow spaces to showcase research, technology, community programs, and other innovations from campus.
- Select high-quality, durable materials with a high degree of tactile interest and warmth, particularly from the street to 40' in height, to bring buildings to human scale at ground level.
- Provide weather protection at building entries and in plazas in the form of trellises, canopies, and other architectural interventions that can also serve as wayfinding and identity.



FIGURE 4.6 The 45th Street Corridor Framework

DISTRICTS FRAMEWORK

Campus today is characterized by a series of smaller "neighborhoods" or districts, each united by buildings and landscapes that share a common set of functions and host a particular sub-set of the population. There is no hard line between them, but generally each district has a distinct set of functional needs and corresponding differences in design and planning expression – for example, the Education Core will host more student-oriented spaces and fewer first-time visitors, whereas the Patient Care District must anticipate patients and visitors coming to campus for the first time in an often stressful context.

As the Sacramento campus evolves, design and planning of new projects and renovations should continue to build a feeling of distinct neighborhood and identity through design and details. As the mix of uses on campus changes each District should have a center of gravity (usually an outdoor space), along with robust transportation options and a mix of different types of outdoor spaces that are tailored to the setting. While there should be a level of consistency across campus in materials and design style in order to create a cohesive sense of place, designing for these unique needs will provide a comfortable identity as well as legibility.

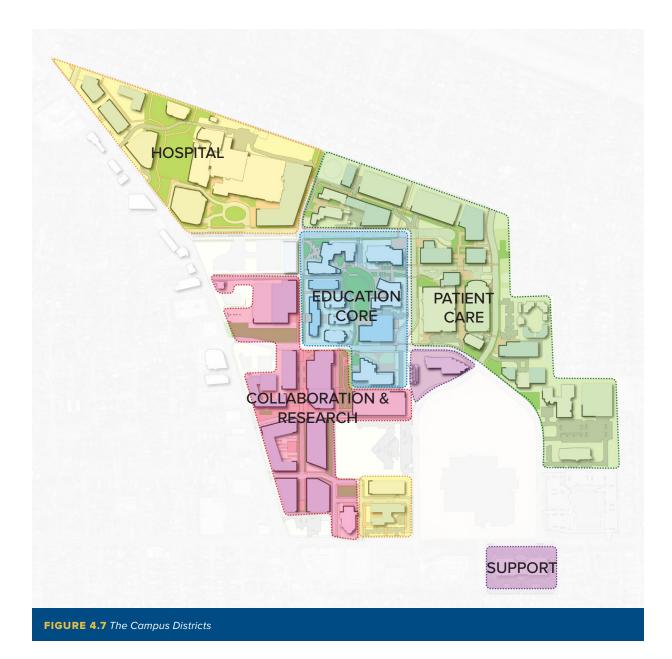
The composition of each district is covered in more detail in the following chapter, but a handful of planning objectives guide the overall approach to district expression.

Planning Objectives

- Cultivate an iconic beautiful, comfortable, and visible public outdoor space that becomes the center of gravity for each district
- Link these major outdoor spaces across districts physically by ensuring generous, visible pedestrian connections, as well as thematically with design details such as plant and hardscape materials and furnishings
- Co-locate similar and complementary programs and facilities, and ensure adjacencies to other key supporting uses

The Districts

- Education Core
- Hospital District
- Patient Care
- Collaboration and Research
- Support



THE ILLUSTRATIVE CAMPUS VISION

The four Campus Frameworks come together to create a comprehensive guiding structure for the future development of campus.

THE BIG MOVES

- New development to support and expand mission-critical healthcare, education, research, and community partnerships
- 2. A new urban corridor, 45th Street, that brings vitality to the pedestrian level and connects the Hospital of the Future (the Replacement Hospital Tower) with the Campus of the Future (Aggie Square)
- **3.** A network of enhanced outdoor spaces that support physical and mental wellness, and flow seamlessly to indoor public spaces
- 4. An improved interface with the surrounding community that is sensitive to the scale and use of the neighborhood, including outward-facing gateways and plazas along Stockton Boulevard, and neighborhood-scaled landscape buffers along V Street and the eastern edge
- A robust mobility network focusing private vehicles on major streets ("Health Sciences Drive") and designating generous off-street pedestrian connections
- New and enhanced transit and cycling opportunities, including a new Mobility Hub,and a completed network of bicycle facilities

This diagram presents a potential development scenario in order to demonstrate how campus goals and objectives for physical design could be achieved. Building footprints are for illustrative purposes only, it does not reflect commitment to any specific project or time horizon for development.



FIGURE 4.8 The Illustrative Campus Vision



DISTRICTS

The Physical Design Framework considers the Sacramento campus through a lens of five thematic districts. While the LRDP defines allowable land uses, this Framework establishes these uses into distinct districts, each of which is defined by a "center of gravity:" a public gathering space that serves as a visual and physical focal point for staff, students, and visitors.

This chapter is meant to provide guidance for future projects within the districts in accordance with the Campus Frameworks, in order to enhance the experience of place and create neighborhoods that have distinct feeling and identity while still being tied with the rest of campus.

THE CAMPUS DISTRICTS:

- Education Core District
- Hospital District
- Patient Care District
- Research and Collaboration District
- Support District

The following sections provides place-specific guidance for planning and designing, further articulating the campus frameworks into more place-specific guidelines. These including facility and program adjacencies, public realm spatial types, wayfinding, materiality, and other design considerations.

ELEMENTS OF EACH DISTRICT SECTION:

- Overview
- Vision and character
- Organizing elements ("center of gravity")
- Planning objectives
- Site design guidance

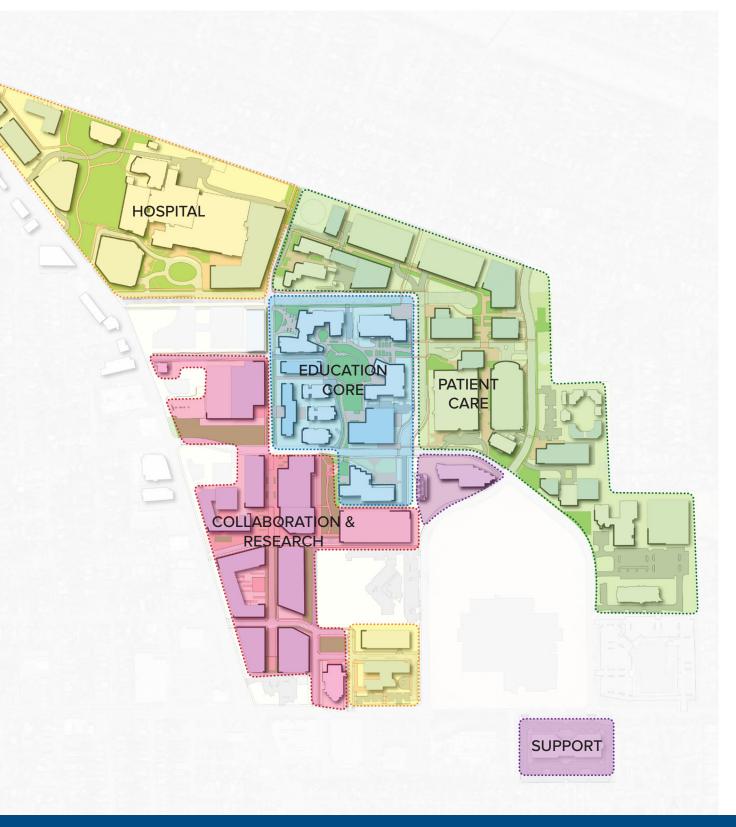


FIGURE 5.1 Campus Districts

EDUCATION CORE DISTRICT

Overview

Vanderhoef Commons is the geographical center of campus as well as the signature open space - the "center of gravity" - for the Education Core District. It is surrounded by classrooms, lecture halls, laboratories, and the medical library and other related uses. Vanderhoef Commons provides ample bike parking, a public art installation, a sandwich shop, and a breezeway that links pedestrians directly to the Hospital and Patient Care Districts. Vanderhoef Commons is today a strong contributor to the identity of campus. In the future, the Facilities Support Services Building will transition to educational uses expanding the reach of the Education Core across 2nd Avenue and connecting more directly with the Collaboration and Research District and the naturalized open space. As demolitions, renovations, and new development occur across campus, new and enhanced pedestrian connections will connect the public spaces in the Education Core more strongly to patients, visitors, partners, and the surrounding community.

Vision & Character

The Education Core will continue to evolve as the heart of the Sacramento Campus, supporting and enabling a world-class medical education mission, and providing a central destination and meeting place for all those who come to campus. It is a place for active learning, informal recreation, group meetings large and small, and special events such as dinners, lectures, and movies. It is public and inviting while providing moments of privacy, reflection, and focus. The Education Core is easy to navigate to and through, and is elevated in the imagination of the public, equally iconic as the Medical Center when thinking about the identity of the Sacramento campus.







Organizing Elements

- 1. Vanderhoef Commons (The Quad):
 - Vanderhoef Commons is the public center of gravity in the district. It is used by students, faculty, and staff from across campus for meeting, lunching, catching some rays, throwing a Frisbee, and other active and passive activities.
- 45th Street forms the western edge of the district, a strong urban pedestrian spine that carries people from campus facilities and neighborhoods from the north through to Aggie Square and other destinations to the south.
 45th Street is also home to the Mobility Hub and is a centralized transportation corridor.
- **3. Off-street pedestrian paths** connect directly to the hospital, the naturalized open space and Aggie square, and the Ambulatory Care Center.
- 4. Major buildings in the district (including the Education Building, Moore Hall, and the new educational building at the south end of Vanderhoef Commons) frame the Quad, and provide public-use rooms that create a robust indoor-outdoor public realm.



District Objectives

PLANNING OBJECTIVES

Create ideal adjacencies and functional compatibility with district center by prioritizing classroom and lecture hall space, laboratories, study space, libraries, and other student-oriented spaces in this district.

Locate **open, transparent lobbies fronting the Quad** and other primary open spaces and program the most active public uses for the ground floor. The existing medical library in the Education Building and the atrium of the Betty Irene Moore School of Nursing both face and enliven the Quad space today.

Enforce the 45th Street pedestrian corridor

by siting buildings with minimal setbacks from sidewalks, and programming active uses on the ground floor.

Consolidate access and servicing as much as possible to minimize conflicts with pedestrians and cyclists. Screen service bays with architectural or landscape elements.

Image: The Mary Tupper Trail leads seamlessly from the hospital main entrance, through the Education Building forecourt to the Vanderhoef Commons.



LANDSCAPE OBJECTIVES

Create seamless transitional spaces from building entries to the public realm, and between landscaped spaces. Gracious lobbies should be accompanied by forecourts or similar public space at the building entry to allow for casual meet-up space as well as continuation of conversations after class or office hours.

Cultivate a range of outdoor space types to support a variety of uses, from major events to quiet study and meditation. The Quad today is host to major student life and fundraising events, and serves as informal recreation, meeting, and study space. Smaller spaces along the periphery and between buildings, particularly next to the Education Building café, attract small to medium sized groups to the picnic tables and shaded grass. Benches and seat walls both in the Quad and in the Education building forecourt are commonly used for phone calls, a quiet lunch, and a respite from library study time. Create more of these courtyard, plaza, and patio conditions with new construction, additions, and renovations. Provide landscape and architectural elements to increase human comfort year round. Seasonal and perennial shade should be provided in the form of trees, trellises, awnings, and other such features, particularly around benches and tables. These elements not only provide shade in the hot summers (and deciduous trees allow for sun in cool winters) but they also give a sense of enclosure and intimacy to a larger space making it more attractive to individuals and smaller groups.

Use the language of the "arbor walk" to denote primary pedestrian paths through campus, and particularly through the Quad. An arbor or trellis structure, or series of smaller structures, that evoke other trellises across campus including the Market Pavilion in Aggie Square will provide shade as well as legibility for people moving through campus.





ARCHITECTURAL OBJECTIVES

Celebrate building entries to give buildings clear identity and aid in navigation. Newer buildings including the Education Building and Moore Hall have very clear entry statements – a breezeway and an iconic canopy – that direct visitors to the entry. The Administrative Support Building main entry is similarly identified with vertical elements.

Highlight building circulation and common

space. Make stairwells, conference rooms, and study lounges visible as special features for building identity, and consider stacking to create interactive spaces within the building and enhance identity. The California Telehealth Resource Center entry stair invites visitors in to the glass-lined communicating stair.

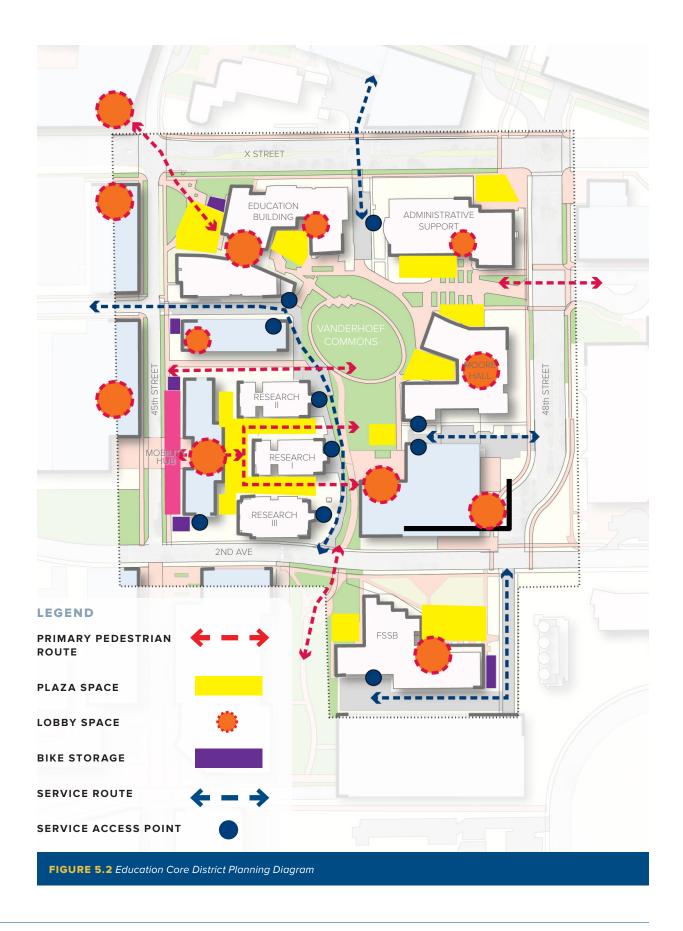
Colors and materiality should be consistent with the campus-wide palette detailed in this document, with targeted variations that help create cohesiveness within the education district. Deploy a comprehensive wayfinding strategy in the landscape and buildings to orient all campus users. As part of a larger campus wayfinding strategy, signs in the landscape and on buildings should be used in concert with color, materials, sight lines, and architectural expression. Use consistent paving materials to direct pedestrians toward lobbies with clear building names and directories (such as the Center for Health and Technology).

> Images Left to Right: 1. Transitional space at the entrance to Moore Hall, facing Vanderhoef Commons; 2. Massing changes and horizontal elements direct pedestrians to the entrance of the Administrative Support Buildings; 3. A simple building directory at the entrance to the Center for Health and Technology





Images Top to Bottom: 1. Transparent facade creates a visual connection between pedestrian spaces and the conference room at Moore Hall; 2. Massing changes and horizontal elements direct pedestrians to the entrance of the Center for Health and Technology



HOSPITAL DISTRICT

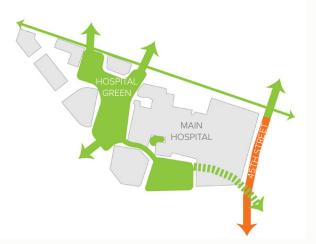
Overview

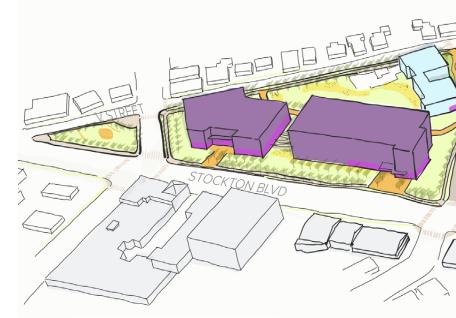
The Hospital District is located on the site of the original county hospital, founded in 1871. It has grown and evolved with changing healthcare needs over the past century and a half. The District is central to the Sacramento campus' role as the region's only Level III Trauma Center and major inpatient center. Growth will continue as long as the hospital is in service, keeping pace with the ever-evolving needs of healthcare and medical education. Regular updates of facilities in the Hospital District will be critical to maintaining cutting-edge patient care and research.

The district today consists of the Main Hospital cluster of the Davis tower, emergency department, children's hospital, North-South and East wings, as well as administrative and clinical uses. The district guidelines also extend to include the new inpatient rehabilitation hospital. The patient base is primarily in-patient, with a major visitor component. Staff is primarily medical providers, students, and support staff, and round-the-clock shift hours amplify the need to access facilities at all hours of the day.

Vision & Character

Updates to hospital district facilities in the near future for seismic safety and modernization, including a new bed tower, present an opportunity to intentionally create, enhance, and nurture a more robust outdoor public realm in the District, centered on the new "hospital green." The Hospital District is a primary gateway to campus and the home of most inpatient services as well as some medical office support. Signature landscapes serve to welcome people arriving by foot, bike, car, and transit, and guide people to and from the primary facilities on campus. Public realm in the hospital district will create a very clear identity for campus, and support wellness and healing for University affiliates and the public alike.













Organizing Elements

- The new hospital green that is developed with the demolition of the North-South wing creates a supportive outdoor public space for hospital staff and visitors, as well as the surrounding community. Designed for healing and reflection, the edges of the space at Stockton Boulevard and V Street will serve as gateways welcoming pedestrians onto campus from the surrounding communities.
- 2. 45th Street will become the new urban corridor across campus, and is the eastern edge of both the district and the future Replacement Hospital Tower building. Pedestrian-scaled design of the street and the surrounding buildings support comfort and movement, and connect the hospital to the Education Core as well as the Research and Collaboration District and Aggie Square to the south.
- **3. The oval at the main hospital entrance** is primarily a statement landscape that creates an identity for the hospital and lets visitors know

they have arrived. Smaller plaza spaces at the hospital lobby and Parking Structure 3 provide areas for rest as well as comfortable spaces to wait for transportation.

- 4. The pedestrian trail that currently leads from the hospital to Vanderhoef Commons in the Education Core will be extended through the new hospital green, and is a key connection between the major public realm areas on campus as well as an important element that supports walking and other healthy activities.
- 5. The courtyard serving the hospital café is an important amenity for hospital staff and visitors. This courtyard acts as an extension of the ground-floor public lobby and café and similar space should be provided in other areas of the hospital for much-needed relief and easily accessible quiet outdoor space for the hospital population.

Images Opposite: The entrance to the Main Hospital viewed across the landscaped oval



District Objectives

PLANNING OBJECTIVES

Create a meaningful, connected ground floor public realm that spans indoor and outdoor spaces, to seamlessly bring people between buildings and the landscape, and create more formal and informal spaces for gathering, resting, and reflecting. With the hospital tower expansion, maintain clear and direct access for visitors and staff to both the main hospital lobby and the emergency department.

Support 45th Street as an urban corridor and connection to the south end of campus, as well as a connection point to and from the adjacent Patient Care District. Provide ample setbacks to accommodate wide pedestrian paths and amenities, and animate the ground floor of new and renovated buildings along this corridor with visible activity, even if direct access is not feasible. Manage pedestrian-vehicular conflicts, particularly at the north end of 45th Street, to safely accommodate ambulance and servicing access and maintain pedestrian connections to the Cancer Center and Patient Care District. **Create and enhance clear, direct, legible, entries to the campus and district** along Stockton Boulevard, X Street, and V Street, and strengthen visual and physical connections to buildings from all forms of transport. Increase visibility from Stockton Boulevard by ensuring new buildings address the street, and creating a new statement landscape between PS 1 and PS 3. Clarify the pedestrian connections to PS3, and to the transit zone on X Street. Preserve and enhance safe pedestrian connections across Stockton Boulevard at Sherman Way.

Consolidate servicing of buildings from the east and west to reduce conflicts with pedestrians, and complete the buffer along the northern edge connections to the Elmhurst Neighborhood. Where service access is necessary through and adjacent to major public spaces such as the new hospital green, routes should be designed with care to prioritize safety and comfort of pedestrians while maintaining critical access.



LANDSCAPE OBJECTIVES

Develop the new hospital green as a major landscape space that is cohesive while providing a variety of experiences for the diverse population of the hospital district. Focus on wellness and healing, both mental and physical, and create easily accessible spaces for quiet repose, relief from hospital work, stay, and procedures, space to wait for loved ones, and other group and solitary uses. In addition to patient and family healing, staff and students often work long shifts and need spaces for respite and quiet discussion, along with the ability to travel seamlessly to other parts of campus. A service access route from Stockton to the hospital loading dock through the center of this space may be necessary; if so, it should be designed in a way that prioritizes pedestrian access and comfort while retaining critical access routes. Strategies may include gate-restricted access for approved vehicles only; plaza-like treatment for roadbeds with concrete or other durable material that is flush with pedestrian

surfaces; clearly demarcated pedestrian crossing points; and other strategies to reduce vehicular speed and increase visibility and safety of pedestrians.

Preserve a safe, intuitive, and comfortable pedestrian connections from the hospital to surrounding districts, especially direct connections to the Education Core and the Patient Care Districts.

Create statement landscapes at campus entries along Stockton Boulevard. Make the new pedestrian entrance at Stockton Boulevard and Sherman Way a welcoming expression of campus identity by incorporating a trellis, arbor, or other similar vertical element. Enhance the X Street entrance landscape at Stockton Boulevard, and update signage as part of a coordinated campuswide wayfinding strategy.

> Image: The path between the Main Hospital and the Education Building provides a direct pedestrian connection and shaded places for sitting and gathering



Enhance the landscape buffer along V Street as the district redevelops to close gaps, and to provide amenities for campus and the surrounding community including walking paths, shade, seating, art, and stormwater infrastructure.

Enhance indoor – outdoor connections with a series of building-related courtyards, including stronger connections to the hospital café patio and the new hospital green.

Include new courtyard associated with any new building or addition.

ARCHITECTURAL OBJECTIVES

With upcoming additions and infill, **create ideal adjacencies and functional compatibility** with the district center and existing uses by prioritizing inpatient and hospital-based outpatient uses, as well as administrative and patient support spaces in this district.

Maintain direct connections both through buildings and to building entries with additions and demolitions.

Celebrate entries with distinct architectural treatments to aid in identity and wayfinding, and provide open and generous lobbies for casual meetings, waiting for transport or patients, connections from outside spaces, hospital café, and other lobby spaces.

Design public spaces to **balance comfort and security.**

Create inspirational architecture in sites with high visibility such as major intersections and entry points to elevate the image of the Medical Center as a cutting-edge institution.

Images Left to Right: 1. The pedestrian connection from PS II to V Street is well-lit and bordered by landscaping; 2. The pedestrian path from the Main Hospital to PS III and the new Hospital Green beyond should be maintained and enhanced



Images Top to Bottom: 1. The plaza facing PS III provides space for seating and a buffer between the parking structure and landscaped oval; 2. Hospital staff rest in the shade of a canopy at the Main Hospital drop-off





LEGEND

PRIMARY PEDESTRIAN ROUTE	$\leftarrow - \rightarrow$
PLAZA SPACE	
LOBBY SPACE	۲
BIKE STORAGE	
SERVICE ROUTE	$\leftarrow - \rightarrow$
SERVICE ACCESS POINT	

FIGURE 5.3 Hospital District Planning Diagram

PATIENT CARE DISTRICT

Overview

The Patient Care district encompasses all nonhospital based medical treatment on campus, and includes the Ellison Ambulatory Care Center (ACC), the Cancer Center, the M.I.N.D Institute, and Same Day Surgery, as well as patient support facilities including the Ronald McDonald House and Kiwanis Family House.

The needs of this district continue to evolve as will technology and practice in patient care, and a campus-based (rather than facility-based) approach becomes more relevant. The Cancer Center and ACC will see significant renovation and expansion in the coming years. The LRDP anticipates a number of potential new buildings in the district, including office, clinic, and structured parking, which will replace surface parking lots.

Vision & Character

The Patient Care District is the center of day-today care for most outpatients. Pedestrian routes to and through the area will be strengthened, connecting new and enhanced outdoor spaces with campus and community destinations. Today the unifying element is the leafy tree canopy that lines the streets between buildings that creates the foundation for future projects to expand and improve on the network of beautiful shaded pathways.

Keeping patient needs and human comfort at the forefront will help to support the evolution of health care while providing an exemplary environment to heal, learn, work, and innovate. The Patient Care District will continue to evolve into a place that is welcoming, comfortable, beautiful, and easy to navigate, and cultivate a landscape of wellness and healing that complements the patient care happening indoors.







Organizing Elements

- A patient-focused contemplative garden north of the ACC will provide space for rest, recharge, contemplation, and small gatherings, and will sit at the intersection of major pedestrian spines making it easily accessible from across the district
- 2. New and enhanced pedestrian spines that link the hospital to the ACC and supportive housing provide a pleasant and intuitive offstreet walking experience for patients, staff, and students traveling between campus destinations
- **3. 45th Street Urban Corridor** anchors the western edge of the district as a shared seam with the Hospital District

- 4. Strong connections to Vanderhoef Commons and the Community Garden as well as primary public outdoor spaces for the Patient Care community
- 5. A series of smaller building-related courtyards and other spaces that provide respite and healing for the community, from the Cancer Center through new developments to the family-oriented spaces of the Ronald McDonald and Kiwanis Family Houses
- 6. Amplified green street connections, particularly along 48th and 49th Streets, improving pedestrian and cyclist comfort, and connections with the surrounding neighborhood
- "Health Sciences Boulevard" primary vehicular street, which carrying the majority of traffic along the X Street, 48th Street, 2nd Ave, and 50th Street route



District Objectives

PLANNING OBJECTIVES

Cultivate a meaningful, connected ground floor public realm that spans indoor and outdoor spaces, to seamlessly bring people between buildings and the landscape and improve access to healing spaces.

Site and orient new buildings to frame streets, gardens, and pedestrian spaces, and create direct, logical, and intuitive connections between destinations including parking, landscape spaces, and other buildings

Emphasize the corridor along X Street, 48th Street, and 2nd Ave / 50th Street as the Health Sciences Boulevard, the main vehicular route of the district and a primary means of access and orientation for patients. New buildings and renovations should include a face to this street, with clear visibility to lobbies, parking, and transit and bike access. Access routes should be clearly signed at all scales of movement

Consider programmatic adjacency needs when selecting sites for new facilities. The north end of the district focuses more on active patient care, while the south and east portions have a more quiet, family-oriented character consistent with the activities of the Ronald McDonald House, Kiwanis Family House, and the M.I.N.D. Institute

Future parking structures should be sited to reserve high-visibility areas for clinical care and research facilities, while still providing ease of access.

Complete and enhance pedestrian and cycling facilities within and through the District. Today 48th Street serves as the primary non-vehicular access point to the District. Create additional access points for people on foot along the V Street edge, and increase real and perceived safety by minimizing curb cuts and increasing protection of pedestrians and cyclists at intersections

Provide a robust landscape buffer edge interface with the surrounding neighborhoods, and treat it not only as a physical setback but also an amenity for the community at large



LANDSCAPE OBJECTIVES

Create a new public outdoor space north of the ACC that will serve as a focal point for patients, staff, students, and the community, and design it to emphasize quiet respite and reflection; continue this treatment south to the Medical Mall space, between the ACC and PS II

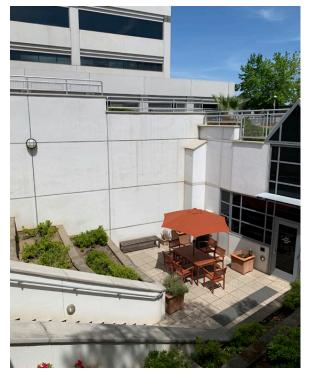
Create a robust and seamless landscape of healing and wellness as the setting for outpatient medical care and research and consider how each element, regardless of size, can actively support the health and wellbeing of patients, staff, visitors, and the community; envision the Patient Care District as a landscape oasis in the transition from today's vehicle dominated character

Protect and enhance the existing outdoor landscape spaces in this district including the Cancer Center courtyard, the Community Garden, and the ACC and Eye Center plazas, and create continuous pedestrian connections between them and to the rest of campus **Provide a variety of new spaces** for gathering, contemplation, resting, waiting, strolling, and other activities that support mental and physical health; Include more spaces for active play to support children in this district, as patients, visitors, and families staying at the support houses; pay special attention to privacy needs of the diverse users of campus

Provide generous courtyards with seamless indoor-outdoor connections to support patients, families, and visitors with limited range of travel, whether due to schedule concerns or physical ability. Include amenities such as seating, lighting, and shade to enhance comfort and multi-season usability; where more public access is feasible, such spaces can also serve as gathering places for staff, students, and partners, as well as the surrounding community

Images Left to Right: 1. The Community Garden on 49th Street; 2. The pedestrian plaza that serves as a connection between the ACC and PS II; 3. A small staff-oriented gathering space at the Cancer Center





Design landscape buffers along V Street and the eastern edge of campus to be an amenity to the campus population as well as the local community by including walking paths, generous landscaping, pedestrian-scaled lighting, shade, and other amenities such as art where appropriate; buffer space adjacent to the community houses especially can contribute to family gathering and play space

Complete the tree canopy on streets as areas are redeveloped, to create a continuous shaded sidewalk throughout the district

ARCHITECTURAL OBJECTIVES

Orient visible and recognizable building entries to face primary movement corridors including the pedestrian spines and the Health Sciences Boulevard, to improve wayfinding, orientation, and a sense of identity within the district Design lobbies, atria, and other groundfloor publicly accessible spaces as gathering and waiting places with visual and physical connections to complementary outdoor spaces, and orient new lobbies toward each other wherever possible, such as in the new clinical buildings north of the ACC.

Provide weather protection including canopies, shade structures, and trees or other vegetation at building entries, courtyards, and other indooroutdoor interface spaces to enhance multi-season comfort for people of all ages and abilities

Create a sense of cohesion and easy wayfinding by considering the relationship of new and renovated building entries and faces to other important destinations, both within the district and in surrounding areas; buildings and sites often have multiple "fronts" and "backs," which should be coordinated with other adjacent uses for identity, navigation, and ease of access





Images Top to Bottom: 1. The pedestrian plaza that serves as a connection between the ACC and PS II; 2. Cancer Center courtyard serving patients, visitors, and staff

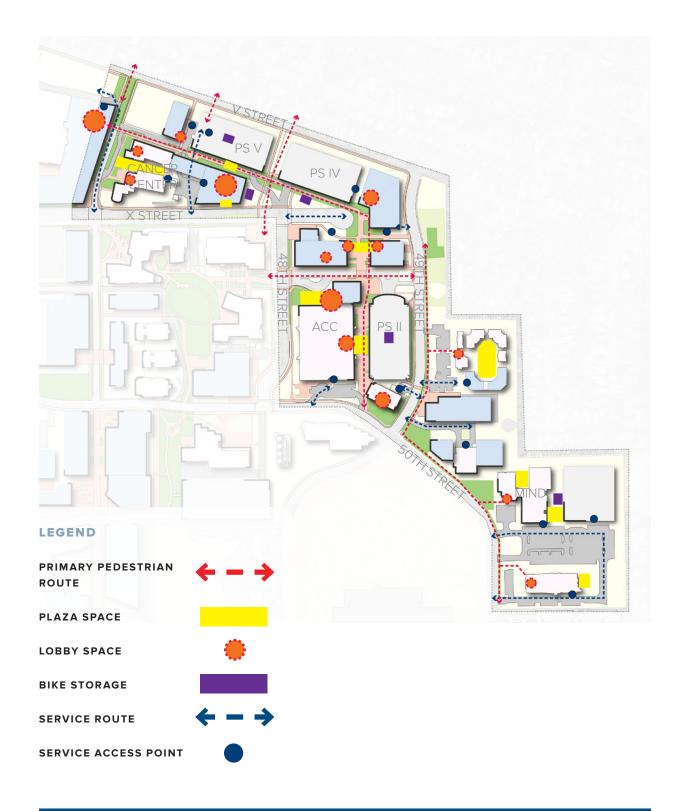


FIGURE 5.4 Patient Care District Planning Diagram

COLLABORATION & RESEARCH DISTRICT

Overview

UC Davis Sacramento campus is host to a number of internal and external partners on the cutting edge of medical technology and healthcare practice. As the industry evolves and these opportunities for collaboration grow, UC Davis is committed to providing space for true integration between research, education, and practice. The space that houses these uses must be flexible and grounded in a human-scaled public realm.

With Aggie Square, the Sacramento campus welcomes a residential land use and campus population. This brings a new ground-floor retail and public education component among other opportunities to open up to the community.

Other potential developments that are not yet anticipated in the LRDP but should still be recognized include updates to Governor's Hall, and redevelopment of the Institute for Regenerative Cures and the hotel block.

Vision & Character

The Collaboration and Research District is a fully mixed-use center on campus, and a local and regional destination to innovate, learn, teach, and stay. It is the most focused on community life, welcoming people for social gatherings and lifelong-learning. Envisioned as an "18 hour neighborhood," the ground floor hosts activities and amenities including retail and food service.

Anchoring it all is a robust public realm, centered on the Market Square, an outdoor space for the community to gather. The other major public spaces in the district will be the Aggie Square plaza and a north-south paseo along the extension of 45th Street, as well as Cancer Survivor's Park on 2nd Ave and the north-south greenway just west of the current Facilities Services Support Building.



PEDESTRIAN NETWORK





Organizing Elements

- 1. 45th Street Pedestrian Corridor, connecting the "hospital of the future" at the north, to the "campus of the future" at the south, is a primary space of movement as well as gathering, and is well-framed by new buildings.
- 2. Aggie Square and Market Plaza, two public plaza spaces that support the campus community and welcome in neighbors to comfortable, vibrant, urban meeting place.
- **3. Other major landscape spaces** including Cancer Survivors Park, the naturalized open space, and Governors Hall Square complete the network of pedestrian-scaled public realm connections to and through this district



District Objectives PLANNING OBJECTIVES

Create a new mixed-use district that is welcoming to the public and university partners alike.

Ensure appropriate adjacencies. The mix of uses is different from other areas of campus, and should be aligned to create vibrancy when connecting to the rest of campus. Education-oriented uses should be proximate to the Education Core, community-oriented uses closer to Stockton Blvd, etc.

Frame major outdoor spaces with vertical elements: buildings, structures, or trees, particularly the new market plaza but also the naturalized open space, Governor's Hall plaza, and Cancer Survivor's Park. **Create a visible and welcoming campus presence** along Stockton Boulevard.

Develop a new urban spine along 45th Street, and support the new 3rd Ave extension as a human-scaled pedestrian oriented entrance to campus.

Image: The naturalized open space to the west of the current Facilities Support Services Building



LANDSCAPE OBJECTIVES

Create a robust network of outdoor spaces of different sizes and functions, centered around Market Plaza and Aggie Square. While the Market Plaza is oriented toward the city and truly public, Aggie Square should be a gathering space for tenants of the district. Governor's Hall Plaza should be developed as an event space and spillover gathering area.

Support and enhance green spaces including Cancer Survivor's Park and the naturalized

open space. These spaces should feel softer, and provide space for respite, contemplation, as well as casual recreation.

Develop a series of smaller courtyards and

plazas. Such spaces, including a plaza connecting to the Mobility Hub as well as internal courtyards in Aggie Square, should be designed for human comfort and small-group gatherings and include shade elements, lighting, and ample seating.

Enhance streets as places in their own right as well as movement corridors. Projects should contribute to the tree canopy along streetscapes, and new buildings should provide courtyards and forecourts at different scales for meeting, resting, and strolling, as well as framing the street at a human scale.

Celebrate campus entries with generous gateway landscapes along Stockton Boulevard and Broadway – at 2nd Ave, 4th Ave, Broadway at Governor's Hall, and 49th Street.



BUILDING OBJECTIVES

Support plazas, major landscape spaces, and the new urban edge of 45th Street with active, public-facing uses. Provide generous ground-floor heights to create a visual connection between indoor and outdoor, and create light-filled humanoriented spaces.

As a hub for collaboration, this district is a place for creative collisions. **Building lobbies and entries should face public spaces** including green spaces and pedestrian routes, and should be open, transparent, and welcoming.

Buildings should have open and transparent

facades that invite people in, and spaces for collaboration should be visibly articulated and celebrated. This might include vertical stacking of collaboration spaces at corners; multi-floor atria; communicating stairs visible from entries, lobbies, or corner spaces; and other approaches.

> Images Opposite and Above: 1. Conceptual rendering of Aggie Square; 2. Y Street and tree-lined pedestrian sidewalks



Image: Conceptual rendering of the new Aggie Square plaza

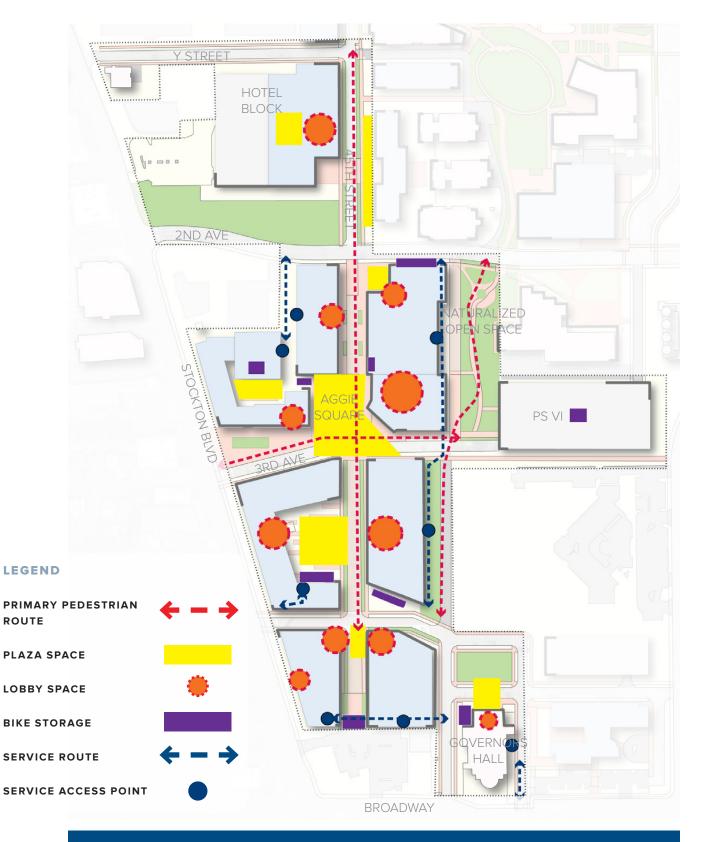


FIGURE 5.5 Research & Collaboration District Planning Diagram

SUPPORT DISTRICT



Overview

In addition to special character areas, there are a handful of places on campus that serve as the infrastructure backbone to keep campus running. These places host utilities, facilities support, and administrative uses. Current Support Areas include the Central Plant, Facilities Support and Fleet Services, and the Broadway Building.

VISION AND CHARACTER

Support areas are mostly "fabric" buildings and landscapes that may recede into the background rather than make a design statement. They are first and foremost functional, but they should reflect and support the character of districts and uses around them. There is also an opportunity to celebrate the every-day functions of campus and leverage these places where appropriate to contribute to the visual activity of the pedestrian and public realm.

PLANNING, LANDSCAPE, AND BUILDING OBJECTIVES

Continue to locate existing and future support uses in areas that are convenient for campus operations, without conflicting with or precluding mission-critical facilities for patient care, education, and research.

Support uses should not look like a back door. Where possible, **locate active uses and facades facing main streets, and service access off of alleys or secondary streets.** Screen unsightly elements (such as refuse collection, material storage, and other uses) with landscaping or architectural elements that complement surrounding design.

Use façade and landscape transparency to celebrate the function wherever possible, making the inner workings of campus infrastructure visible.





RESILIENCY & MATERIALITY

OVERVIEW

Where previous chapters set a framework for a strong public realm, this chapter describes the fabric that will bring the framework to life. The objectives-based approach to materials and design described here will bring a sense of continuity across campus to create consistency and identity without being overly prescriptive. Within this frame, subtle variations can signal differences between districts and areas within campus, and aid in orientation and wayfinding.

Resiliency and sustainability are inherently interwoven into choices made for materials and details, particularly as considered through all three lenses – social, environmental, and economic. Emphasis on sustainability should be at the systems level, with special attention paid to full life-cycle costs.

This chapter includes:

- Materiality and Design: Guidance for more detailed design, including building and site elements and their relationships and an approach for selecting materials
- Resiliency and Infrastructure: Describes the objectives-based approach to incorporating sustainable systems into campus design

PLANNING OBJECTIVES

Foster a campus-wide sense of cohesion and identity, while still allowing for differentiation by district and the creation of recognizable "neighborhoods." (elements of continuity and elements of distinction)

Leverage building and site materials and design toward campus-wide goals, including enhancing wayfinding and orientation, beauty, comfort, identity, and wellness.

Bolster long-term resiliency of the campus as a whole and of individual buildings and landscapes, and contribute to the well-being of the community, city, and region.

Support and enhance campus-wide sustainability efforts in all elements of design.

Opposite:

The entry plaza at Moore Hall features a double-height shade canopy, human-scaled materials, and plantings with variation in texture and height for visual interest

MATERIALITY AND DESIGN

In support of the campus goals for a cohesive campus experience, a set of common building and landscape elements are described below which apply to new and refurbished buildings and landscapes across campus. Successful examples on campus serve to illustrate the range of design solutions available within the limits set out here. Details on performance specifications and installation techniques are included in the Campus Design Guideline and Master Specification documents.

This section includes:

- Relationship to Other Documents
- Building Elements
- Site and Landscape Elements

Relationship to Other Documents

- A performance-based Campus Design Guideline document sets guidelines for selection of materials, as well as considerations for life-cycle costs and preferred furnishings.
- A campus-wide Master Specification for selection and installation of specific materials, construction techniques, and furnishings
- Campus sustainability goals are described in the Practice Green Health framework, sustainability master plan, and UC Sustainable Practices Policy
- 2020 Transportation Tomorrow transportation demand management (TDM) plan sets goals and objectives for creating a more connected and sustainable transportation system
- 2004 Landscape Master Plan
- 2019 Utilities Master Plan and current plan update

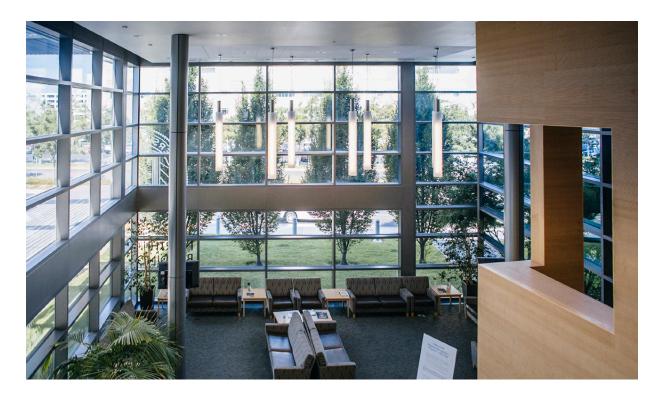
Building elements

LOBBIES AND ENTRIES

Clear and welcoming primary building entries are important for campus wayfinding and orientation, as well as seamless connection between interior and exterior public realm. The most successful building entries and lobbies employ the following:

- Weather protection, including shelter from wind, rain, and sun, in the form of an arcade, recessed doorway, architectural canopy, sunshade, or other horizontal element.
- Identifiable access points from various vantages on campus through vertical elements, color differentiation, or other architectural expression, bringing materials and other expression around the corner when necessary.
- Design that brings the building to humanscale around the doorway, thresholds, and courtyards
- Physical, visual and material connections to indoor spaces including lobbies, hallways, stairwells that support ease of orientation, circulation, respite, and conversation.
- Strategic use of materials to achieve the above elements. Building entries should have a high degree of transparency including glazing that meets building sustainability goals balanced with warmer and more tactile solid materials, such as wood or wood-textured surfaces, stone, terracotta, or similar finishes.

Images clockwise from top left: 1. Indoor-outdoor connections at the Cancer Center Lobby; 2. Weather protection and art at the Education Building Entry; 3. Architectural expression at the Administrative Support Building







ARCADES AND CANOPIES

Arcades created by the stepping back of the building mass at ground level serve as an extension of the public realm and provide shelter for circulation, waiting, and gathering, and provide visual and physical relief from the mass of large buildings while still allowing a larger floorplate above. Canopies of trellised or fully opaque material may be attached to a building or directly adjacent, and play a similar role in sheltering pedestrians, adding additional comfort to public space, and aiding in directing people to building entries and other gathering points. Successful arcades and canopies employ the following:

- Generous heights to create a sense of openness and transparency, while responding to the scale and character of the adjacent or attached building. Single-story arcades may be appropriate along smaller-scaled plazas and lower-rise buildings.
- An architectural relationship to the adjacent or attached building, whether through form, material, or both.
- Materials with human scale and interest, including finer-grained texture and warmer color. Wood or wood-grained surfaces and coated metals to reduce glare and heat gain are appropriate for both arcades and canopies; additionally stone, ceramic, or other similarly textured material lends interest to arcades; and tensile fabric may be appropriate for canopies depending on the scale and surrounding use.
- Targeted use of color to help to orient and convey a sense of joy and delight in the landscape, particularly in spaces of rest and recreation for visitors and students.
- Shaded seating for individuals or groups, especially at building entries and other waiting and gathering points.

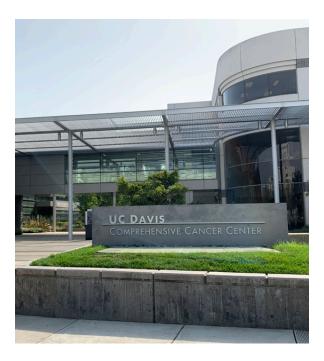


Images left to right: 1. An architectural canopy provides weather protection and orientation to the entrance of the Center for Health and Technology; 2. A building monument that reflects architectural and site design finishes at the Cancer Center

WAYFINDING: BUILDING LETTERING AND DIRECTORIES

Architecturally-scaled building lettering, including building names and directories of interior space, help to orient people from afar and give them a sense of direction before entering a building. As part of a comprehensive wayfinding strategy, consistent use of these elements will continue to make campus ever more legible to patients and visitors, particularly those on foot. Successful building exterior wayfinding strategies include:

- Integrated architectural lettering to identify the building for people on foot and in cars. Building names should be located at primary entrances, and potentially on higher floors of taller buildings. Materials should complement the building architecture with enough contrast to be legible from a distance; with the exception of Emergency Department entrances, integrated illumination is discouraged.
- Building monuments as landscape elements
 play a crucial role in wayfinding, expression of
 campus and building identity, and site furniture
 and spatial definition for plazas and courtyards.
 When sited properly these elements can serve
 as seat walls and planter edges. Materials for
 these more substantial building monuments
 should reflect or complement the building they
 identify. Successful examples on campus today
 employ tinted concrete body and brushed
 metal lettering.
- Simple building directories at key pedestrian entrances to orient visitors to their internal path of travel and plan their route once inside the building. Simple lists of major facilities or departments by floor, such as those on the Education Building and Center for Health and Technology, can be applied directly to glazing or included in signage adjacent to the entry. Use consistent fonts and coloring across campus to provide a sense of continuity and familiarity. Where possible, locate directories within sight of internal circulation, such as public corridors and communicating stairs.



FACADES AND MASSING

The broad spectrum of activity at the Sacramento campus brings buildings that are diverse in size, scale, and siting needs. While the family support buildings including the Ronald McDonald and Kiwanis Family Houses have a low-rise residential scale and feeling, hospitals are necessarily large buildings with floor areas and heights that must accommodate a certain volume of patient care and support areas while maintaining critical adjacencies. All buildings on campus should be designed to support sustainable performance, and lager buildings should additionally employ design tactics to create a human-scaled feeling as buildings meet the ground plane. Successful approaches include:

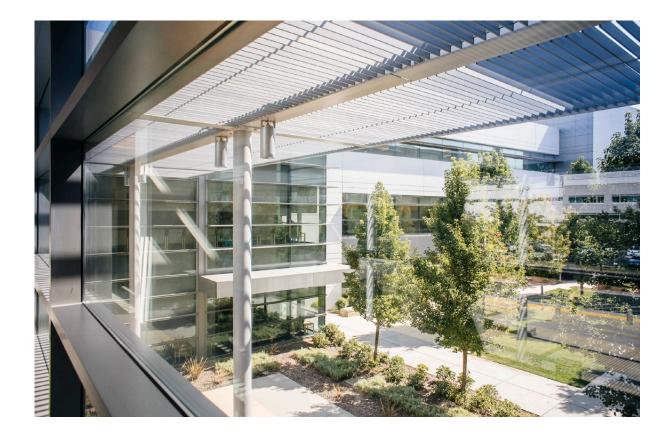
- Orientation, whenever possible, to enhance passive solar performance and reduce solar heat gain. This includes orienting the longest facades north and south.
- Shading to manage solar heat gain and visual impact, including sun shade devices such as fins and overhangs. Materials should complement the overall design of the building and be used to create a pattern on large facades. Shade and window design should not preclude access for building maintenance.
- Beautiful, durable façade materials that complement surrounding buildings and are appropriate for the scale and use of the building. Materials should be of a high quality to retain the desired aesthetic and performance qualities in the extreme weather of the Sacramento region today and in the face of a changing climate. See "Building Materials" section for more detail on material selection.
- Facades that face outdoor public spaces should have a high degree of transparency and prioritize active programmatic uses at the ground level. Visual connection to indoor activity enhances a sense of comfort, safety, and interest for people using outdoor spaces, and can serve to better connect visitors and patients to the mission of the University.

- Larger Buildings on campus include the Main Hospital and the Ambulatory Care Center, as well as the forthcoming buildings at Aggie Square. Special attention should be paid to the façade and massing of these and future buildings to maintain a human-scaled connection at ground level, as well as visual interest and relief at upper floors.
 - Buildings should have a distinct treatment of lower levels (below 40') that may include ground-level recesses (arcades), dual-height ground floors, and warmer, more tactile materials that differ from the overall façade.
 - Facades at the upper levels should employ variations in massing and/or materials to give visual relief and interest, and create a unique identity for the building.

INDOOR/OUTDOOR ROOMS

The ground plane on the Sacramento campus should be considered as a continuous and connected public realm, with direct physical connections at building entries, and visual connections wherever possible.

- Ground floor: create direct access where possible in public areas such as cafes, study rooms, and conference rooms using roll up or other large doors where security and site permits; create visual access with large windows and a continuity of materials in other active spaces including staff community rooms, corridors, conference rooms, libraries, etc.
- Upper floors: find opportunities for leveraging landscape views for upper floor users, especially in patient family rest areas and staff and student community spaces.



SERVICE AREAS

As campus continues to evolve, service areas on existing buildings that have been back doors are often now adjacent to public spaces. New buildings may have multiple fronts and no obvious back. Design should take advantage of opportunities to maintain and enhance access for loading, servicing, and other needs, while protecting views, safety, and other comfort considerations such as odor for people using the outdoor public realm. Design and location should also clearly differentiate the public entry.

Service areas should be:

- Consolidated between buildings where possible to minimize curb cuts, drive aisles, and screens.
- Screened, with architectural, substantial fencing, or vegetative means, in a way that maintains pedestrian safety (real and perceived) and contributes positively to campus design. Materials should complement the design of surrounding site and buildings and be positive contributors to campus aesthetics.
 - Fences should be permanent in appearance (avoid chain-link) and offer a degree of opacity through architectural materials and/ or vegetation.
 - Screening walls should be of a scale and have materials and finishes that make them an extension of the adjacent or attached building or landscape.
 - Plant-only screening should be reserved for low-intensity uses.



Images clockwise from above:

 Waste enclosures screened by a low wall with finishes matching Moore Hall; 2. Visible stairwells at the Center for Health Technology help to orient visitors to building circulation; 3. Facade materials on Moore Hall emphasize warm and tactile finishes at pedestrian level

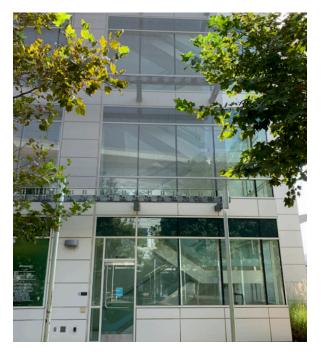
INTERIOR PUBLIC SPACES

Celebrate the internal functionality of building and make it visible to help orient people before they enter, and to bring the life of building into public realm. Where possible, use architectural expression, including glass, lighting, and massing changes to showcase these spaces and contribute to the building identity. Potential architectural elements include:

- Corners
- Lanterns
- Communicating Stairs

FACADE MATERIALS

- Curtain wall and glazing should be used strategically as architectural expression.
 Glass can provide strong visual connection between indoor and outdoor spaces, create opportunities for strategic lighting as orientation for visitors, and contribute to a sense of openness in large building facades.
 Materials should be selected for energy performance and life cycle costs, and balanced with solid materials where appropriate. Glass should be clear or lightly tinted to allow views in. Fretted glass may be used in upper floors to achieve sustainability goals.
- Solid façade materials should be selected to create or reinforce desired scale effects and environmental performance. Appropriate materials include:
 - Precast concrete
 - Painted or coated metal
 - Aluminum
 - Stone, ceramic, or terracotta tiling or veneer
 - Wood





Site and Landscape Elements

Major landscape spaces will have their own unique design and feel to meet unique goals; but overall consistency in design materials will help meet campus goals.

Site and landscape objectives:

- Cultivate a healing environment by creating easily accessible outdoor spaces that are comfortable, calm, and beautiful
- Create identity and support wayfinding and orientation
- Find discreet opportunities to use plant materials to cultivate moments of horticulture, and potentially support future Learning by Leading and other experiential academic programs
- Create rooms and spaces for patients and visitors for respite and recreation
- Transition campus plant materials and landscape strategies in the face of climate change

While allowing for some differentiation in special landscapes, the following represent general standards across campus.

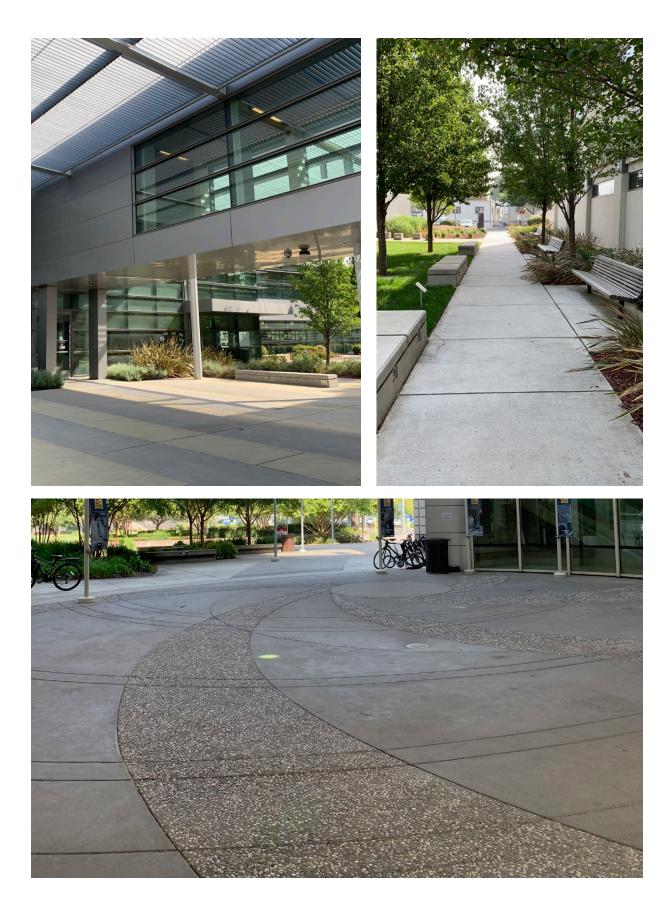
PATHS AND PAVING

Use of a consistent paving language throughout campus helps to create a coherent campus image and identity. Standardizing paving dimensions, materials, and treatment in new projects and refurbishments will create more consistency over time. Within these general guidelines, subtle distinctions in pavement textures and colors can assist those with sight impairments and others understand where they are on campus.

- Standard pathway simple brushed concrete (clean, textured). Min 6ft width for lower-volume paths
- Standard pathway in major pedestrian routes

 color or textural variations to communicate a
 hierarchy of space and circulation; min 8ft with
 preferred width of 12ft paving
- Naturalized spaces sealed decomposed granite may be appropriate here, or standard pathway concrete where accessibility needs require.
- Special plaza paving:
- Used sparingly in building courtyards, entry plazas, and special landscape places
- Concrete and exposed aggregate concrete, of varying color and texture
- Decorative paving patterns may be used in discrete areas
- Brick pavers may be used in special areas

Images clockwise from top left: 1. Cancer Center entry plaza; 2. Standard pedestrian pathway; 3. Decorative paving at the Education Building













SITE FURNISHING

Site furnishings help define the campus character and improve the comfort of outdoor spaces by providing places to sit, gather, study, and socialize. High-quality and durable site furnishings placed appropriately are crucial to creating a public realm that is comfortable and well-used. Preferred furnishings are described in the Campus Design guide, with objectives laid out below.

SEATING

Seating will be comfortable and durable, located to take advantage of shade and wind shelter as well as relationships to major landscape spaces and building entries. Seating may take the form of concrete seat walls, benches, chairs, and picnic tables, both round and banquet-style. Furniture should be designed for comfort in hot and cold temperatures, and will generally be permanently anchored in place. In special situations, such as plazas directly connected to food outlets, movable chairs and tables may be employed, only when a comprehensive maintenance plan is in place. Seating will be provided across campus with special emphasis on pedestrian routes as places of respite, and at building entries and courtyards for meeting, studying, meals, and resting

WASTE RECEPTACLES

Waste and recycling receptacles will be clearly marked, and should be placed with seating, at major crosswalks, near building entrances, and at transit stops.

BOLLARDS

Bollards are used to signal a transition from pedestrian pathways to vehicular routes. With the use of flush paved surfaces, they can denote an emergency or service access route across a pedestrian route. Select bollards to complement the design of a space or building.

BICYCLE STORAGE

Bicycle racks should be included with all new buildings and major open spaces.

Long-term bicycle storage in the form of covered shelters or integrated rooms should be provided with major building projects and parking structures.

TREE GRATES AND TREE PITS

Tree planting areas will have different treatments depending on their location and role in the landscape.

In more urban streetscapes and plazas a subsurface soil chamber maximizes pedestrian surface and creates a clean, flush line. Tree pits should be sized to provide ample soil and water retention volume to support long-term tree health. SilvaCells or other similar soil structures should be employed. Surface tree grates are generally not recommended, as they present challenges in maintenance and long-term growth for trees.

Along roadways and paths, tree strips may be more appropriate. Additional guidance is provided in the plant material section.

> Images clockwise from top left: 1. Concrete seat walls at the Cancer Center; 2. Movable seating at the main hospital; wooden benches for comfort at Moore Hall; 3. Bicycle storage at the Emergency Department entrance; 4. Round wooden tables and metal waste receptacles at the Education Building cafe.

LIGHTING AND SAFETY

Pedestrian-scaled lighting should be selected for safety and wayfinding; energy efficiency; reduced light pollution; and sensitivity to surrounding neighborhoods.

- Standard street, parking, and pathway lights are currently deployed across campus; new lighting should be consistent with existing standards
- Major pedestrian routes and special landscape spaces should provide layers of lighting for comfort and ambiance. Options include:
 - Existing variations on standard lighting at Vanderhoef Commons and the Education Building
 - Light columns
 - Ground-level lighting
 - Other solutions that contribute to the design and character of a space

 Building lighting should be employed strategically to enhance the character of place and aid in wayfinding; all building lighting should be designed to minimize glare and light pollution







PLANT MATERIALS

The Sacramento Campus today is an urban site with a diverse range of plant materials. As campus continues to evolve with new and updated landscapes, planting choices should reinforce the vision for campus of a beautiful public realm that is comfortable and comforting while being sustainable and resilient.

Species selection should be in keeping with campus sustainability and aesthetic goals. Xeriscaping is encouraged wherever possible to support campus water conservation goals. Tree species should be selected for ease of maintenance, heat and drought tolerance, and shade canopy in the summer months. Tree selection should be consistent or complementary along each roadway or pathway; where existing species are not recommended for future projects due to climate or maintenance concerns, the climate appropriate species atlas being developed for Davis campus should be referenced to identify tree species with the appropriate combination of aesthetic and performance characteristics.

Understory and ground-cover planting should be selected for visual interest, texture, and year-round color palette considerations. Native or climateappropriate species are preferred. Large areas of lawn should be limited to active public spaces where people gather and recreate, with a focus on the major public spaces such as the Vanderhoef Commons and new hospital green space, as well as limited use in building courtyards for patient, visitor, and staff amenity.



- Trees: Wherever they are on campus, trees should be supported with ample soil volumes and root space. SilvaCells or other similar soil structures should be employed, and may extend under sidewalks or other paved areas.
- Streets: In keeping with Sacramento's designation as the "City of Trees" and to further the goal of increasing shade coverage across campus, the campus will continue to implement a tree program on streets and major pedestrian routes with either a single or double row of trees. Street trees can also aid in slowing traffic speeds by creating vertical enclosure on wide streets, absorbing pollutants from exhaust, mitigating the urban heat island effect, and creating a more comfortable, human-scaled environment.

Images clockwise from top:

1. Well-shaded sidewalks with robust street trees; 2. Potential columnar art lighting for special places; 3. Standard pedestrian lighting on campus; 4. Alternative pedestrian lighting adjacent to the Education Building

- Pedestrian routes: Along major pedestrian routes, planting should be used to provide color, texture, and shade. Where space allows, a single or double row of trees will also aid in wayfinding by demarcating the primary pedestrian path. On the Arbor Walks, plants with a vertical habit may be used in complement to trellis structures. Planting beds should be used to define spaces for walking, sitting, and resting, and should utilize low-water and low-maintenance species that provide year-round color and texture.
- Borders and walkways: The spaces adjacent to buildings play a key role in the overall impression of campus and complement the architectural expression of campus buildings. Along minor pedestrian routes and around buildings, color and texture should be balanced with maintenance concerns to provide a lush and inviting space that functions as the backdrop for life on campus.





Images from top: 1. Vegetated stormwater area at Moore Hall; 2. A variety of landscape spaces provide shade and seating within the Cancer Center Courtyard



- Naturalized landscape areas: Taking a cue from the existing naturalized landscape area just to the west of the current Facilities Support Services Building, future additions and updates to this landscape type should prioritize native plants and plantings with habitat value. These areas should remain accessible to pedestrians, and be designed to be a respite from the more formal education and clinical settings, while still feeling safe and welcoming to all.
- Major landscape spaces: The major landscape spaces across campus should be designed with a balance of hardscape, lawn, and other plantings based on the intensity and type of use expected. For example, larger areas of lawn are appropriate in active spaces such as the Vanderhoef Commons, while more urban areas such as Aggie Square will have a plaza character.
- **Courtyards:** Courtyard spaces will have a balance of places to sit and gather, including some hardscape plaza as well as softer plantings and lawn in discreet areas. More heavily used spaces such as the café plaza at the main hospital will be predominantly paved with accent planting as is appropriate, while others, such as the Cancer Center courtyard, will be much softer in character.

Image: 1. Border plantings provide texture and color along the path leading to the lawn at Vanderhoef Commons

PUBLIC ART AND WATER ELEMENTS

Public art contributes to the campus atmosphere by creating interest and focal points. The Sacramento campus has a significant collection of art pieces already arrayed throughout the campus. These include in Cancer Survivors' Park, the North Addition Office Building, and as smaller pieces located in the hospital and ambulatory care areas. Special consideration to style and placement should be given to ensure compatibility with the health care mission of the campus and make them accessible to a wide campus population as well as the surrounding community. Water elements such as fountains can have a calming and healing effect when located where patients and visitors can enjoy them.

WAYFINDING AND SIGNAGE

The Sacramento campus has a comprehensive signage program that should be employed consistently in new and refurbished projects. Signage will be supported by wayfinding embedded in design, including sight lines, site furnishings, site material color and texture, and architectural expression.

TRELLISES AND SHADE

Major pedestrian routes and spaces throughout campus will have trellis and architectural shade elements to serve both in enhancing human comfort as well as wayfinding and identity. Along paths, these elements should be human-scaled (10'-15' height) and made of a warm and tactile material, such as wood or warm-colored coated metal. Climbing vegetation may provide additional shade and temperature regulation.

In plaza, courtyard, and building threshold spaces, arbors and trellises should have additional height (15'-30') and may be made of similar tactile materials, or those that reflect adjacent buildings when appropriate. Tensile shade structure are also appropriate for such larger spaces.





Images from top: 1. Public art at the Education Building entrance lobby; 2. Brightly colored tensile shade structures at UCSD

RESILIENCY AND INFRASTRUCTURE

UC Davis and the Sacramento campus have a comprehensive set of guiding documents for infrastructure systems that provide detail in capacity planning and delivery. This Framework unifies consideration of all of those systems through the lens of long-term sustainability and resilience, as well as the incorporation of aesthetic considerations and contribution to a teaching and learning landscape.

The overarching theme of flexibility in design is key to the resilience of campus and UC Davis Health operations, and extends to the use of spaces on campus. This Framework has been created in the context of the COVID-19 global pandemic, during which new and unforeseen demands have been made on campus landscapes and facilities nearly daily. As much as is possible, design of facilities, landscapes, and infrastructure on campus should anticipate a time when the user group, capacity, or primary use changes and the element will need to adapt. Designing a campus with a feel of permanence and cohesion while still maintaining flexibility is a challenge this Framework aims to address fundamentally.

Focusing on the sustainable system that make campus run, this section includes:

- Utilities
- Stormwater
- Energy and Carbon
- Sustainable Transportation

Utilities

The majority of facilities on the Sacramento campus are served by university-owned power generation, heat, and cooling from the Central Plant. Other utilities including domestic and irrigation water, power for ancillary buildings and back-up uses, and storm and sewer are provided through connections to the City of Sacramento services. Aggie Square presents a new standard for public-private partnerships, with all power being created on-site in project-specific generation facilities. Utilities planning follows the campus Utilities Master Plan, currently being updated for 2021, in the office of Facilities Design & Construction.

OBJECTIVES:

Plan utilities in concert with open space, trees, and circulation systems, and leverage opportunities for revealing campus functions and sustainability in site and building design whenever feasible.

Leave flexibility in utility corridor runs for future building sites. Consolidate utilities to the maximum degree possible to preserve usable footprints and shape outdoor space.

Plan for the long term by retaining campus-owned infrastructure and employing solutions at different scales, as well as leveraging new technologies and delivery methods such as the on-site generation plans for Aggie Square

Ensure continuity in emergencies through redundancies in systems as well as multiple delivery systems, to keep crucial healthcare activities functional in situations such as earthquakes, fire and smoke events, or floods.

Stormwater

Today, much of the campus stormwater and runoff makes its way to the municipal storm sewer. Efforts have been amplified in recent years to minimize runoff through use of pervious surfaces as well as to delay stormwater flows through detention ponds. The University as a whole and campus in particular are starting to see stormwater as an asset to be celebrated rather than as a nuisance, particularly with the looming water uncertainty caused by climate change as well as the advancement of horticulture and learning landscapes on campus. All campus buildings and landscapes should play an active role as part of a "green infrastructure" system to the best degree possible, mitigating heavy flows, improving runoff quality, and providing educational opportunities.

OBJECTIVES

Integrate landscape and surface stormwater management strategies in support of sustainability, coherent landscape design, and creation of campus identity. Wherever possible, replace direct drainage pipes with overland strategies that improve water quality and meter flows to the storm sewer on heavy rain days.

Leverage every opportunity to collect and use water in the face of uncertain rain and irrigation water availability as our climate changes, including shallow detention and filtration areas in road-side tree strips, plazas, and pedestrian paths.

Express the stormwater system in everyday design, with open downspouts from buildings, catchment structures, vegetated swales, shallow detention structures, and infiltration basins to support a coherent landscape and creation of campus identity.

Development should follow best practices for hospitals as defined in the 2009 "Water Conservation in California Hospitals" report.

Energy and carbon

UC Davis and the Sacramento campus are committed to meeting climate goals set out by the University of California. The UC Carbon Neutrality Initiative has a goal of carbon neutrality by 2025, emitting net zero greenhouse gases from buildings and vehicle fleets in that time frame. Primary approaches include a commitment to energy efficiency in fixtures and infrastructure, a switch to renewable energy sources, and electrification of fleet and transit vehicles. Physical design on campus can contribute to climate-related energy and carbon goals particularly through building siting and shade to support passive design, and elevation of active and shared transportation modes.

OBJECTIVES

Reduce energy demand through building siting to minimize solar gain and maximize opportunities for ventilation.

Mitigate "heat-island effect" on campus by increasing shade in plazas, along streets and vehicular spaces, and on pedestrian pathways. Intentional use of a balance of vegetative and architectural including trees, trellises, canopies, and well-designed PV panels, will also contribute to a coherent design and creation of a campus identity.

Sustainable transportation

UC Davis and the Sacramento campus are committed to increasing choices for sustainable transportation for the full campus community, and in particular students, staff, and research partners. The transportation demand management (TDM) plan Transportation Tomorrow lays out priorities and strategies for increasing the availability of sustainable modes and decreasing the reliance on private automobiles as campus continues to evolve. Transportation-related carbon emissions and energy usage are central to the UC sustainability goals, and methods for achieving these goals, ranging from commute habit shifts to increased reliance on electric vehicle such as the Causeway Connection, also provide key opportunities for public education while meeting the connectivity goals of campus.

OBJECTIVES

Increase campus accessibility for patients, students, staff, partners, and the community at large by providing robust infrastructure for sustainable modes of transportation. Design and placement of pedestrian paths, bike lanes and parking, transit stops, and other transport infrastructure should create direct and visible connections to major campus destinations and provide ease and joy in movement.

Support campus climate goals by reducing dependence on private automobiles and their associated carbon emissions.

Create a cohesive campus landscape by leveraging transportation infrastructure to create places for gathering as well as movement, and as private parking demand decreases transition surface parking lots to mission-critical uses such as research, clinical, and educational facilities and wellness-focused landscapes.





PROCESS

OVERVIEW

The UC Davis Sacramento campus capital planning and design process is guided by the UC Davis Health Strategic Plan, the Long Range Development Plan, and this Physical Design Framework for the Sacramento campus. The process incorporates input from faculty, staff, students, and the community alongside campus leadership. Major capital projects are integrated into the UC Davis Strategic Capital Plan, which includes major projects for the next six years. This plan is updated annually and approved by The Regents.

The UC Davis Chancellor has delegated authority to approve major capital projects that meet certain criteria, including conformance to the guidelines and intent of the Framework and consistency with the LRDP and Strategic Capital Plan. Capital projects that are not consistent with planning and budgetary documents may require approval by The Regents. The UC Davis Health Capital Improvement Program and all other capital projects on the Sacramento campus are implemented by Facilities Design and Construction (FD&C), in collaboration with other groups in UC Davis Health including Facilities Planning, Facilities Expansion, Capital Planning, the Office of Sustainability, and partners on the Davis campus.

Capital improvement projects are formally reviewed and approved at three different stages of development: Definition, Programming, and Design. This chapter provides an overview of the review and approval process that occurs during each of those stages, as well as other processes that may occur in parallel, or alternative delivery methods such as public-private partnerships, ground leases, and joint ventures as approved by the Regents.

DEFINITION

This early phase of a project is when the scope, program, planning, and design objectives are initially identified.

Project Initiation

As potential facility needs arise, administrative units, faculty, and/or clinical departments inform their respective Department Chairs or the appropriate campus leadership. To initiate the process, departments submit a Facilities and Space Request to Facilities Planning. This request, which includes documentation of the problem or issue requiring attention, must be endorsed by a Department Chair, Associate Dean, or a member of the Sacramento campus' senior management team. After Facilities Planning confirms that a request is complete, a unique tracking number is assigned to help evaluate potential solutions.

Business Case Analysis

Facilities Expansion works with the Chief Strategy Officer, Finance, and departments and administrative leaders to evaluate alternative solutions to problems and issues identified in the request. This analysis includes the evaluation of opportunities to modify business practices to more effectively use existing space. It also includes an analysis of alternative strategies that may involve the reconfiguration or remodeling of existing space, the use of off-site leased facilities, and potential development of new facilities on the Sacramento campus. During this phase of the planning process, Facilities Expansion collaborates with departments to develop a preliminary space or design program that can be used to evaluate alternative solutions.

- The Framework and LRDP should be consulted at this stage to confirm the appropriate physical and budgetary scope of a project, in order to ensure that it considers and potentially contributes to the broader goals of campus beyond the singular needs of a given request.
- A feasibility/scoping meeting including representatives from FD&C and/or Campus Planning should be convened to confirm project goals and consistency with planning goals prior to scope and budget finalization

As part of this effort, Facilities Expansion and the Chief Strategy Officer engage several departments (e.g. Finance, Real Estate Services, the Dean's Office) to help evaluate the financial and programmatic implications of alternative solutions and delivery strategies, including construction, equipment and information system costs, lease expenses, staffing costs, other operating expenses, and potential revenue implications. For projects between \$20 million and \$70 million, this information is reviewed and approved by the UC Davis Sacramento Campus Facilities and Campus Planning Executive Committee, and the Chancellor's Committee on Planning & Design before planning can proceed to the next phase.

PROJECT PROGRAMMING

This is the phase of the project when scope, program, cost model, planning, and design objectives become more fully developed. The product of this effort is the Project Program, which provides the pertinent information needed to efficiently and effectively begin the subsequent design process. Depending on the size, scope, and delivery method of the project, a draft Project Planning Guide (PPG) and Detailed Project Program (DPP) are completed. FD&C and/or Campus Planning should be consulted throughout this phase to provide input on campus-wide goals and objectives. These documents include information regarding:

- Programmatic objectives
- Planning and design objectives in accordance with this Framework and the LRDP, as well as the Campus Standards and Master Specifications Design Requirements
- Sustainable design objectives
- Environmental design and the campus Environmental Impact Report (EIR)
- Programmatic and functional requirements
- Area requirements and space tabulations
- Analysis of alternatives
- Site selection
- Building systems requirements
- Preliminary cost model
- A preliminary project schedule
- Proposed funding sources
- Debt repayment sources (if any)

PROJECT DESIGN

The design of capital improvement projects typically takes place in three stages: Schematic Design, Design Development, and Working Drawings.

The design is developed in accordance with the goals set forth in the PPG, UC policy, and applicable code requirements. Project-specific sustainability goals are incorporated into the schematic design documents. As part of this process, the design team and University staff work together to complete an analysis of life-cycle costs of alternative systems.

The primary design is typically endorsed during the Schematic Design phase. This is when the overall exterior design of a given project is substantially completed including site plan and design, layout, massing, scale, character, material choices, and color palette.

Oversight of this design effort is the responsibility of the Project Planning Committee, whose task is to ensure that the design is developed in accordance with the approved scope. On the UC Davis Sacramento Campus, management of the design phases is the responsibility of Facilities Design and Construction Department.

Project Review

For projects involving new construction, a "peer review" of the preliminary design is conducted during the schematic phase of the design process. To assist with this independent review, the University retains a seasoned design professional who is not involved in the design of the project. The peer review process critiques the project design relative to the programmatic and functional goals stated in the draft PPG and DPP, and the planning and design objectives as set forth in the Long Range Development Plan and the Physical Design Framework. Facilities Design and Construction provides continuous design oversight throughout the design process.

When the schematic design is approximately 90% complete, it is presented for review and comment to the UC Davis Coordinating Committee on Planning & Design. The completed schematic design solution is presented for review to the Chancellor's Committee on Planning & Design. The Committee is briefed on the comments and critiques generated by the community, the peer review process, and/or by the UC Davis Coordinating Committee on Planning & Design.

Project Approval

The Chancellor's Committee is also briefed on how the proposed design solution responds to the project requirements as described in the Project Program as well as its conformance with the goals and objectives as set forth in this Design Framework. The UC Davis Chancellor has delegated authority to approve the design of projects that are consistent with LRDP, Framework, and Capital Plan documents, with a value of up to \$70 million. Approval of the design for projects not consistent with these documents or in excess of \$70 million requires approval from The Regents.

Approval of the environmental review as required by the California Environmental Quality Act (CEQA) occurs at the level of the associated project approval.

ALTERNATIVE DELIVERY MODELS

UC Davis, alongside other campuses of the University of California and higher education at large, is increasingly looking to alternative delivery models, including design-build, progressive design-build, public-private partnerships, ground leases, and joint venture projects.

ENGAGEMENT AND OUTREACH

- Capital projects on the Sacramento Campus are included in the engagement and outreach as managed by UC Davis Governmental Affairs along with Facilities Planning and Facilities Design and Construction.
- Campus and administrative leadership, academic groups, patients and staff, and the surrounding community.
- Close coordination with partners on the Davis campus.

MONITORING AND UPDATES

Campus is a living and ever-evolving entity; this document should be reviewed and updated regularly to ensure it continues to support the mission and aspirations of UC Davis and the Sacramento campus.

ACKNOWLEDGMENTS

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