

SAN BERNARDINO COMMUNITY COLLEGE DISTRICT

VOLUME 03: CRAFTON HILLS COLLEGE FACILITIES MASTER PLAN

OCTOBER 15, 2024



SAN BERNARDINO
COMMUNITY COLLEGE
DISTRICT



MESSAGE FROM LEADERSHIP

Crafton Hills College is shaped by a deep-rooted culture of collegiality, collaboration, and innovation, as well as by the rich Indigenous history of the land on which it stands. We honor and acknowledge that the college is situated on land that has long been the home of the Maara'yam (Serrano) and Cahuilla people, who have stewarded this region for generations. Recognizing this history is essential as we continue to learn from and respect the Indigenous communities who have called this area home for centuries.

From its inception, the college's founders envisioned a "cluster college" model centered around small learning communities designed to foster close interaction between students, faculty, staff, and administrators. This approach, with its focus on small class sizes and cross-disciplinary courses, promoted active engagement and distinguished Crafton Hills College from the more rigid, traditional educational models of the era.

While the original vision required some adjustments over the years, the spirit of innovation has remained central to our mission. Over the past 51 years, Crafton Hills College has navigated significant shifts, including changes in legislation, funding, national discussions about the value of higher education, and, more recently, the challenges posed by a global pandemic. We remain committed to tackling systemic issues related to diversity, equity, inclusion, and racism, which have hindered our ability to serve all students. We acknowledge the ongoing work ahead, but our innovative roots position us well to embrace these changes.

Since opening in 1972, Crafton Hills College has been dedicated to meeting the evolving educational needs of its students and the surrounding community. With just 1,000 students in its early days, the college started with essential facilities like a library, laboratories, classrooms, a gymnasium, student services, a dining hall, and a central campus quad that remains the heart of our campus today. Over time, we have expanded significantly, adding the Performing Arts Center and Occupational Education Building by 1980, and the Student Services Building and Child Development Center by 2000. Today, we serve over 8,000 students annually, with the capacity to support 10,000.

The support of our local community has been instrumental in our growth. The passage of Measure P in 2002, Measure M in 2008, and Measure CC in 2018 have enabled us to transform our campus infrastructure. These bonds have funded the construction of new facilities like the Learning Resource



MESSAGE FROM LEADERSHIP

Center, Kinesiology Health and Aquatics Complex, Public Safety and Allied Health Building, Canyon Hall (our science building), and Crafton Center, which houses student services and administration. They have also enabled the creation of the Regional Public Safety Training Center. Currently, we are constructing the new Finkelstein Performing Arts Center, and plans are underway for a new Instructional Building which will be home to the college's honors institute, Tutoring Center, Art Gallery, and additional classrooms. As we continue to modernize, many of the original campus buildings have been renovated, preserving their distinctive architecture, and more renovations are planned to repurpose spaces as we move programs into new facilities.

This Comprehensive Master Plan has been developed through a collaborative process that included discussions and workshops with faculty, students, staff, community members, and our governing board. The plan is built on a strong foundation of integrated planning and data-driven decision-making, informed by program reviews, facilities planning, local employment trends, student enrollment projections, and the regional economic outlook. This plan will guide Crafton Hills College over the next decade as we embrace new opportunities for growth and student success.

At Crafton Hills College, we aim to be a regional leader in providing life-changing educational opportunities. We strive to be the statewide leader in transfer and completion rates, to be recognized for our unwavering commitment to student services, to produce graduates who are highly sought after by employers, and to inspire economic, cultural, and civic development throughout the region.

As outlined in this Comprehensive Master Plan, we are committed to creating an environment where students feel valued, supported, and empowered to achieve their academic and career aspirations. We build on the legacy of those who came before us—both Indigenous and non-Indigenous—and look forward to shaping the future of Crafton Hills College.



VOLUME 03 TABLE OF CONTENTS

3.1 PROJECT INTRODUCTION

3.2 CAMPUS BASELINE

3.3 PLANNING ELEMENTS: PRINCIPLES & NEEDS

3.4 CAMPUS VISION PLAN

3.5 IMPLEMENTATION PLAN

3.6 APPENDIX



CHC1

PROJECT INTRODUCTION



CENTRAL COMPLEX

ABOUT CRAFTON HILLS COLLEGE

Since its opening in 1972, Crafton Hills College (CHC) has continued to provide high-quality education to the Inland Empire. CHC has the distinction of being the top community college in the Inland Empire when it comes to degree and certificate completion rates and course retention and success rates. CHC promotes lifelong learning and has a profound impact on the Inland Empire and beyond.

Crafton Hills College acknowledges that the land on which it is built is the ancestral and unceded territory of the Maara'yam, commonly referred to as the Serrano people, and the Cahuilla. The Maara'yam (Serrano) and Cahuilla are inherently tied to the land and continue to maintain a symbiotic relationship to its many cultural and natural resources. Yucaipa began as a village established by Maara'yam (Serrano), who called the valley Yukaipa't. This fertile valley provided, and still provides, important cultural connections between the Maara'yam (Serrano) and the landscape. To this day, the Maara'yam (Serrano) fulfill their Creator-given right and responsibility to steward their ancestral territory, including the Crafton and Yucaipa area, via important partnerships with entities such as Crafton Hills College. Our histories and stories are intertwined in this space, and by sharing them in culturally appropriate ways, Crafton Hills College hopes to honor and celebrate our indigenous neighbors and partners.



CHC MISSION, VISION, VALUES, AND GOALS

MISSION

The Crafton Hills College mission is to change lives. We seek to inspire our students, support our colleagues, and embrace our community through a learning environment that is transformational. Crafton Hills College welcomes everyone and is committed to working with students from diverse backgrounds. The College has an exceptional learning environment built on a tradition of excellence, a talented faculty, a driven student body, a committed staff, with passionate leadership and community support.

VISION

To empower the people who study here, the people who work here, and the people who live in our community through education, engagement, and innovation.

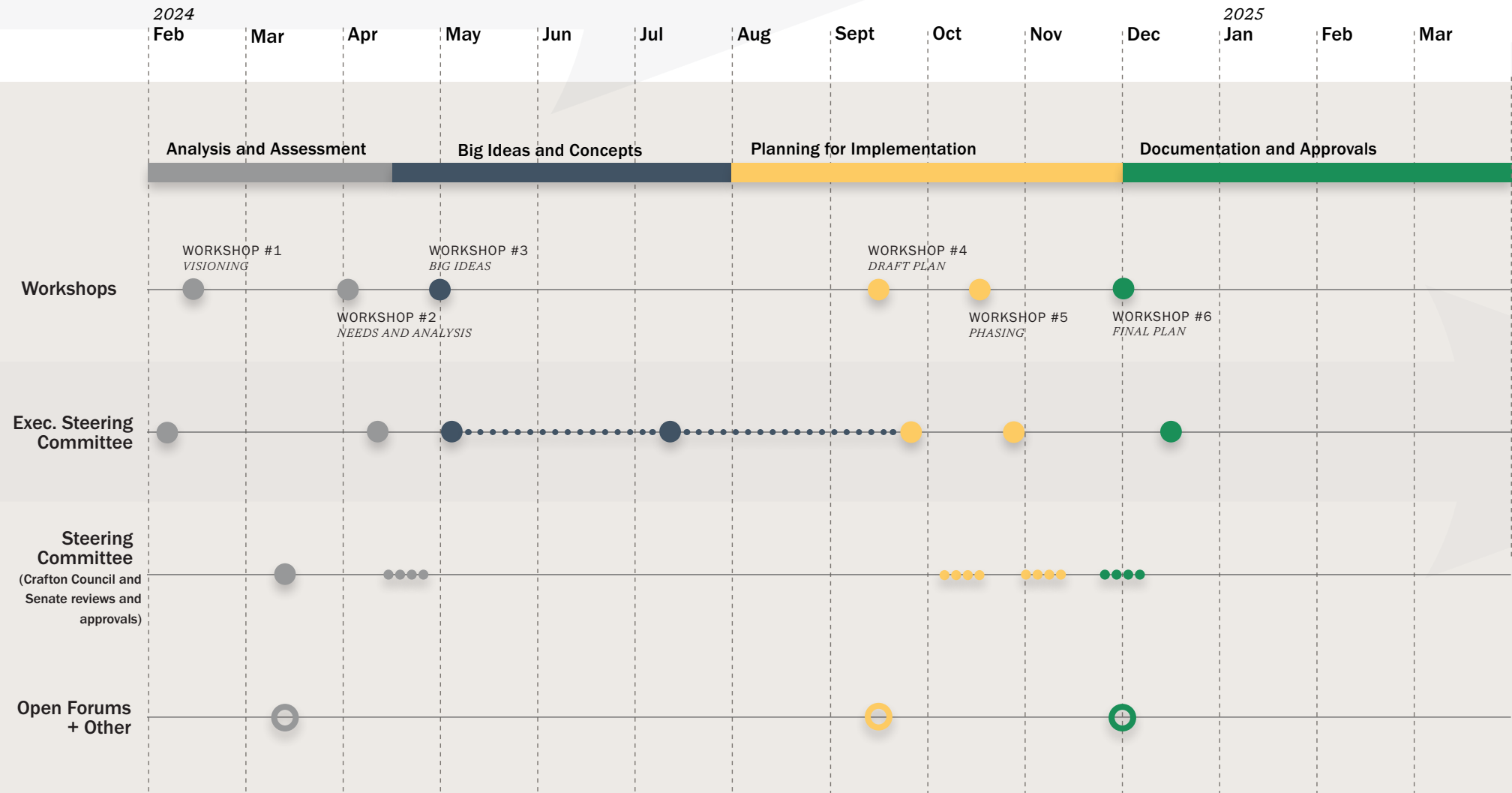
VALUES

Respect, Integrity, Diversity & Inclusion, Innovation, Leadership, and Sustainability.

GOALS

1. Serving students interested in transferring to four-year colleges and universities to obtain bachelor's degrees
2. Serving students interested in obtaining two-year associate degrees
3. Providing career and technical education programs that offer opportunities in training, retraining, and skill building
4. Providing general education for students interested in taking a few courses to increase job effectiveness
5. Providing lifelong learning

MASTER PLANNING SCHEDULE



● **01: Analysis and Assessment**

Goals, opportunities, and needs were identified through extensive data gathering, analysis, assessment, and engagement with stakeholders. Engagement led to quantitative data with qualitative observations which informed the physical planning at Crafton Hills College.

● **03: Planning for Implementation**

Campus improvements were prioritized according to return on investment, strategic value, and impact on recruitment, retention, and completion.

● **02: Big Ideas and Concepts**

Additional stakeholder engagement generated “Big Ideas”, created alternatives to campus development, and defined a development framework that allows for flexible implementation.

● **04: Documentation and Approvals**

The Crafton Hills College Facilities Master Plan was confirmed, documented, and delivered. The following document provides a summary of the planning process, existing conditions, and strategic recommendations to guide future development for CHC.

PREVIOUS PLANS AND STUDIES

As a part of the Master Planning Process the team referenced past planning efforts completed by Crafton Hills College and San Bernardino Community College District, including the 2017 Comprehensive Master Plan, the 2021 Facilities Master Plan Addendum, and more recently, the 2022 SBCCD Strategic Plan and the 2023 CHC Educational Master Plan.

2017 COMPREHENSIVE MASTER PLAN

The 2017 Comprehensive Master Plan outlined the goals and objectives set forth by the Educational Master Plan and the Facilities Master Plan within one cohesive document, where the programmatic recommendations of the Educational Master Plan guided the long-term facilities planning process.

As a result of this effort, the following project list was proposed:

New Construction

- Gymnasium
- Teaching Pool
- Outdoor Kinesiology Laboratories
- Joint-Use Tennis Facility
- East Instructional Building
- Maintenance & Operations Addition
- East Valley Public Safety Training Center

Renovation

- Enriched Environments for Student Activities
- Performing Arts Center Renovation
- Crafton Hall Renovation
- West Complex Renovation
- Student Support Building Renovation
- Central Complex 2 Renovation
- Child Development Center Renovation

2021 FACILITIES MASTER PLAN (FMP) ADDENDUM

By revisiting the planning guidelines established by the 2017 Comprehensive Master Planning effort, the 2021 FMP Addendum strengthened and realigned focus to produce the following updated project list:

New Construction

- Performing Arts Center
- Instructional Building
- East Valley Public Safety Training Center
- Gymnasium
- Teaching Pool
- Outdoor Kinesiology Laboratories

Renovation

- Crafton Hall
- Student Support Building
- Central Complex 2
- Child Development Center
- West Complex

2022 SBCCD STRATEGIC PLAN

In April 2022, the SBCCD Board of Trustees adopted the San Bernardino Community College District Strategic Plan 2022-2027. The Plan encompasses four broad goals to serve the residents, communities, and employers of the SBCCD region:

1. Eliminate Barriers to Student Access and Success
2. Be a Diverse, Equitable, Inclusive, and Anti-Racist Institution
3. Be a Leader and Partner in Addressing Regional Issues
4. Ensure Fiscal Accountability / Sustainability

2023 EDUCATIONAL MASTER PLAN

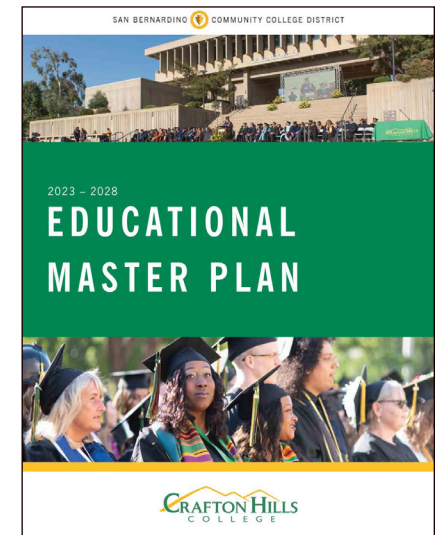
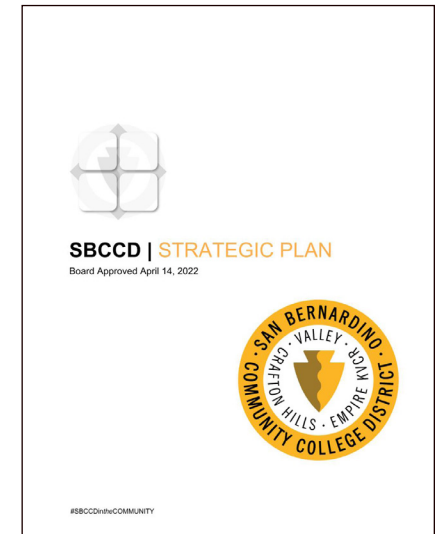
Through a series of listening sessions with SBCCD stakeholders, an external environmental scan and an activity in identifying threats and opportunities to the development of the Educational Master Plan, San Bernardino Community College District created five strategic directions along with supporting actions to help progress the effort.

The Educational Master Plan Strategic Directions are as follows:

1. Increase Student Enrollment
2. Engage in Practices that Prioritize and Promote Inclusivity, Equity, Anti-Racism, and Human Sustainability
3. Increase Student Success and Equity
4. Develop a Campus Culture that Engages Students, Employees, and the Broader Community
5. Foster and Support Inquiry, Accountability, and Campus Sustainability

THE EDUCATIONAL MASTER PLAN & THE FACILITIES MASTER PLAN

The Facilities Master Plan emphasizes the importance of aligning with the Educational Master Plan. Each project was chosen and prioritized based upon its support for the Educational Master Plan. In the Campus Vision Plan section of the report, each project is described in relation to the Educational Master Plan and how it enhances the strategic direction of Crafton Hills College.





CHC2

CAMPUS BASELINE

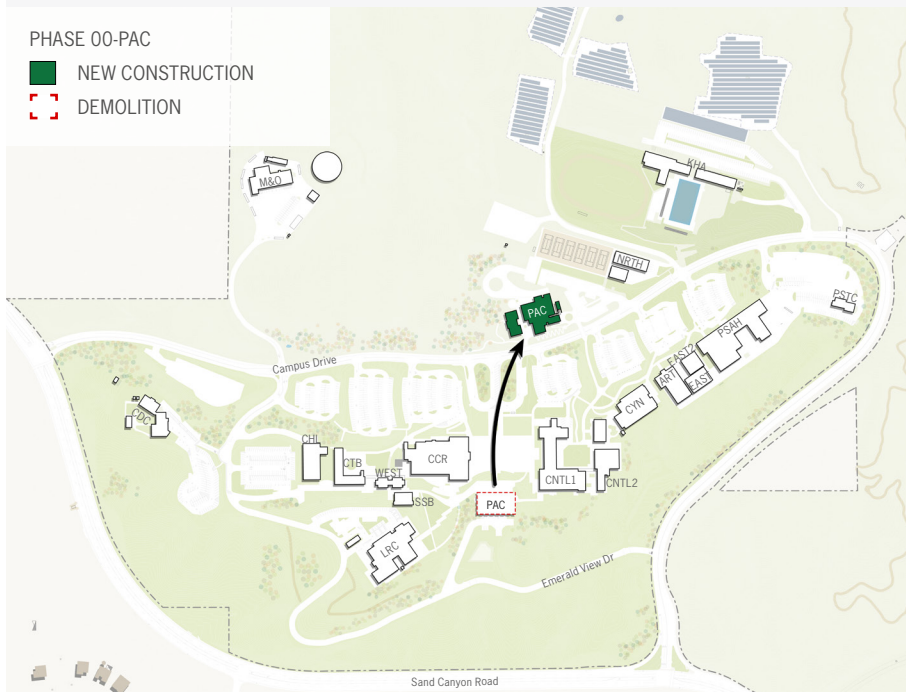


CENTRAL COMPLEX

6775

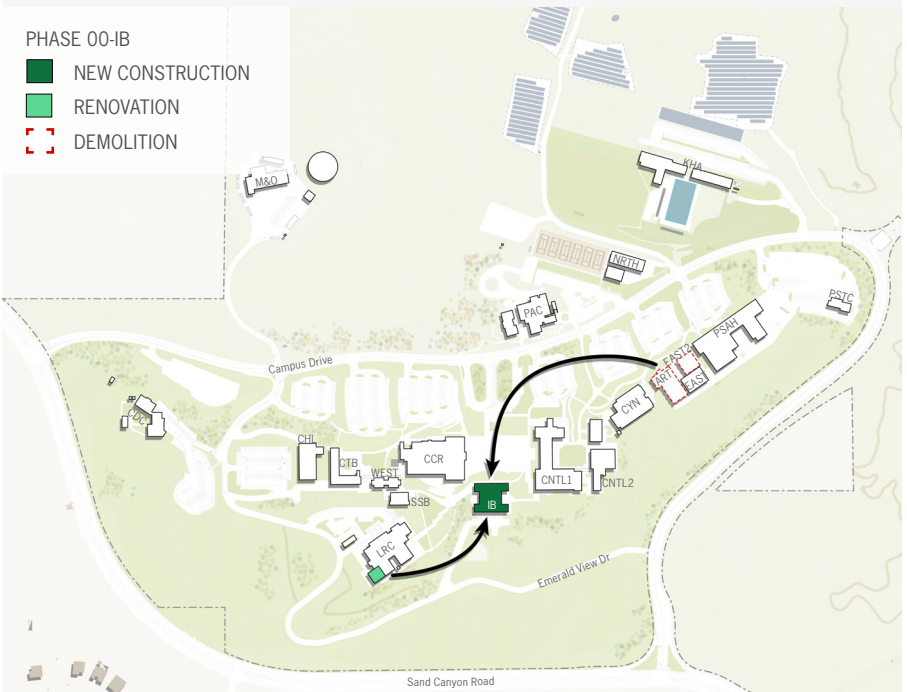
PHASE 00

Phase 00 Projects are Measure CC/Measure M funded, confirmed projects that were determined from the previous 2017 Facilities Master Plan and 2021 Addendum. These projects are the immediate, priority projects, serving as the cornerstone for this Facilities Master Plan.



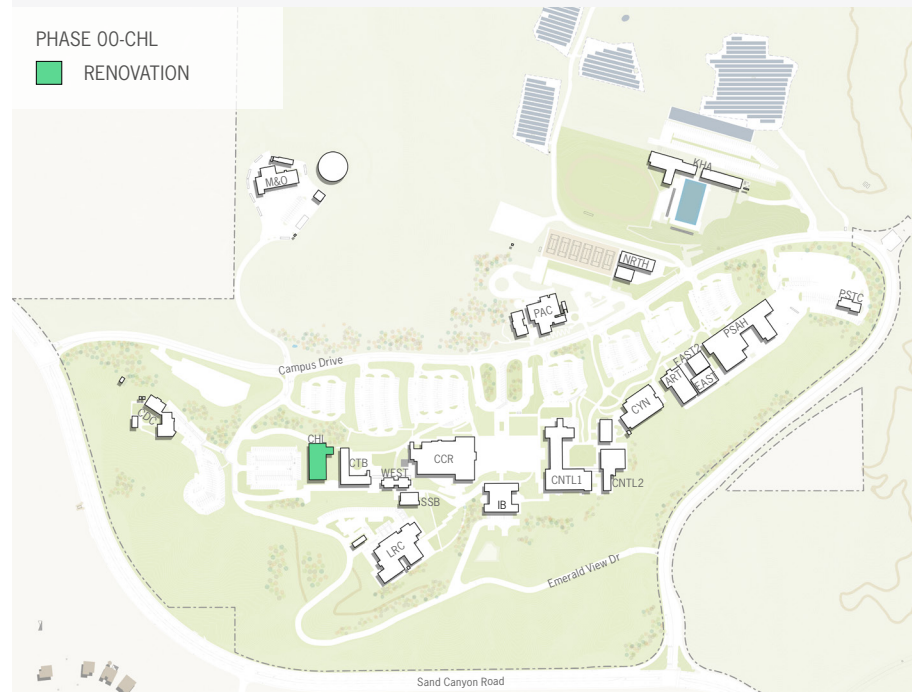
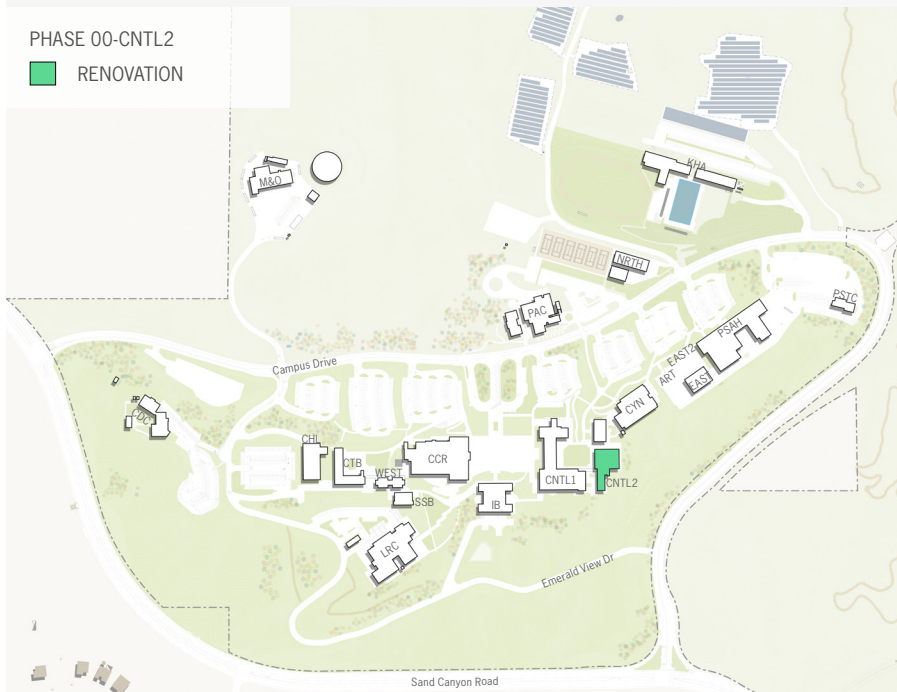
PHASE 00-PAC

In Phase 00, a new Performing Arts Center (PAC) will be constructed and the existing Performing Arts Center will be demolished. After a cost benefit analysis was completed on the renovation of the existing PAC, it was determine that a new facility was needed to meet the current and future needs of the performing arts programs at CHC. The 24,000 GSF new PAC is currently under construction and is planned to be occupied by 2024/2025; demolition of the old PAC is planned for 2025/2026.



PHASE 00-IB

A new Instructional Building will occupy the space now available after the demolition of the existing PAC. At 30,000 GSF, the new Instructional Building will provide general active learning classrooms, student gathering spaces, and space to allow programs from the East Complex 2, Visual Arts, and tutoring in LRC to relocate. Once relocated, East Complex 2 and Visual Arts will be demolished, and the former tutoring space in LRC will be renovated. This renovation will create new classrooms and repurpose research and mailbox space. The new Instructional Building is planned to be occupied by 2027/2028 and is currently in design.



PHASE 00-CNTL2

The 17,000 GSF renovation of the Central Complex 2 will update an aging facility with general purpose active learning classrooms on the first floor, redeveloped space for earth sciences and flexible space for anthropology on the second floor, and new technology infrastructure throughout. This project is currently underway and is planned to be occupied by 2024/2025.

PHASE 00-CHL

The renovation of Crafton Hall will revitalize the iconic structure into a facility for meeting, conference, and event space. Crafton Hall will also include faculty offices and the upgrade of technology infrastructure and building systems. With this 8,600 GSF renovation underway, the newly renovated Crafton Hall is planned to be occupied by 2024/2025.



PHASE 00 ENDPOINT - CAMPUS BASELINE

With a new Performing Arts Center, a new Instructional Building, the renovation of the Central Complex, and the renovation of Crafton Hall, the Phase 00 projects are critical in meeting the modern needs of CHC and providing an environment for student success.

- PHASE 00 ENDPOINT
- NEW CONSTRUCTION
- RENOVATION
- DEMOLITION

ID	BUILDING NAME
CYN	Canyon Hall
CNTL1	Central Complex
CNTL2	Central Complex 2
CDC	Child Development Center
CTB	Clock Tower Building
CCR	Crafton Center
CHL	Crafton Hall
EAST	East Complex
IB	Instructional Building
KHA	Kinesiology, Health Education, and Aquatic Complex
LRC	Learning Resource Center
M&O	Maintenance and Operations
NRTH	North Complex
PAC	Performance Art Center
PSAH	Public Safety and Allied Health
PSTC	Public Safety Training Center
SSB	Student Support Building
WEST	West Complex



THE CAMPUS BASELINE

- EXISTING
- PLANNED/UNDER CONSTRUCTION



Sand Canyon Road

THE CAMPUS BASELINE

The Crafton Hills College Campus, comprised of 527 acres is located within the scenic hillside above Yucaipa and Riverside. The campus facilities, ranging in architectural styles, are linearly configured alongside the hillside and Campus Drive, a continuous circulation route with a series of parking lots. Open spaces, both hardscape and landscape, located along this linear network of buildings, create iconic campus moments, frame scenic views, and encourage circulation and socialization.

The following section summarizes existing conditions, including Phase 00 as the baseline, as it relates to buildings, landscape and open space, circulation and edges, and infrastructure.



ID	BUILDING NAME
CYN	Canyon Hall
CNTL1	Central Complex
CNTL2	Central Complex 2
CDC	Child Development Center
CTB	Clock Tower Building
CCR	Crafton Center
CHL	Crafton Hall
EAST	East Complex
IB	Instructional Building
KHA	Kinesiology, Health Education, and Aquatic Complex
LRC	Learning Resource Center
M&O	Maintenance and Operations
NRTH	North Complex
PAC	Performance Art Center
PSAH	Public Safety and Allied Health
PSTC	Public Safety Training Center
SSB	Student Support Building
WEST	West Complex



PRIMARY BUILDING USE

- ACADEMIC
- ADMINISTRATION
- ATHLETICS
- LIBRARY
- MAINTENANCE
- CHILD DEVELOPMENT CENTER
- STUDENT SERVICES
- PLANNED/UNDER CONSTRUCTION

Sand Canyon Road

BUILDINGS BY PRIMARY USE

Crafton Hills College's facilities foster learning, discovery, and personal growth, ultimately creating a community in which all users can thrive. The physical spaces and mix of uses throughout campus support the academic mission of CHC and bring students, faculty, staff, and community together.

ACADEMIC

The east side of campus is currently home to a majority of academic and instructional uses. Buildings that primarily serve as academic facilities include West Complex, Central Complex 1 and Central Complex 2, Canyon Hall, Public Safety and Allied Health, Public Safety Training Center, North Complex, and Kinesiology. The future Instructional Building and Performing Arts Center will also serve primarily as academic buildings. The Master Planning process seeks to capitalize on opportunities for intentional and strategic concentrations of interdisciplinary academic space as a tool for innovative thinking and collaboration.

OFFICE AND ADMINISTRATION

Office and administrative space is interspersed throughout most of the academic buildings and the student services buildings, along with a designated section of the Crafton Center. These functions are critical components in the success of the students, staff, and faculty.

ATHLETICS

CHC has several athletic and recreational programs that are supported on campus by a series of athletic facilities; these facilities include an Aquatic Complex at the northeast corner of campus, and a full track and athletic field, with optimal open space to its west with tennis courts. One iconic feature of the campus is the Olympic-sized swimming pool located at the Aquatic Complex. Potential opportunities, which include growing the athletics program and corresponding facilities, are identified considering the future pool and other athletic facilities.

LIBRARY

The Learning Resource Center, located on the southwestern side of campus, supports the community with library, study, and student support space. Intentionally designed as a multidisciplinary space, the Learning Resource Center provides a variety of spaces, from reservable group study rooms to a tutoring center, to book stacks. The stacks are primarily located on the second and third floors of the Learning Resource Center. There is an opportunity to rethink stack space, as the need for physical volumes decreases with the evolution of technology in higher education.

STUDENT LIFE AND STUDENT SERVICES

The campus prioritizes student services and student life within facilities like Crafton Hall, the Student Services Building, and Crafton Center. These spaces offer various resources for health, counseling, and administrative assistance with a specific focus on student success. Through program and location, these buildings form and support a natural core near the center of campus, facilitating an enriching student experience. These spaces continually adapt to meet evolving needs while ensuring that they remain welcoming for current and future students.

The following table outlines buildings on campus, the year of initial occupancy, and dates of significant renovation.

BUILDING #	BUILDING NAME	INITIAL OCCUPANCY	SIGNIFICANT RENOVATION DATE
1	Maintenance and Operations [M&O]	1972	2014
2	Child Development Center [CDC] (former site of the agricultural building)	1999	2023
3	Crafton Hall [CHL] (formerly College Center/Cafeteria)	1972	In renovation, scheduled completion 2025
4	Clock Tower Building [CTB] (formerly Student Services, Administration [SSA])	1972	2017
5	West Complex [WEST] (formerly Classroom Center)	1972	None
6	Crafton Center [CCR] (former site of the Library)	2015	None
7	Student Support Building [SSB] (former Student Services Building)	1998	None
8	Learning Resource Center [LRC]	2010	None
9	Performing Arts Center [PAC] - to be razed in 2025; future site of the new Instruction Building (scheduled for completion in 2027-28)	1978	None
10	Central Complex 1 [CNTL1] (formerly the Lab Administration Building (LADM))	1972 Lab section was an addition in 1978 with CHS	2017 1st floor Police and Veterans was the bookstore and was initially renovated for Administrative Services and Police in 2005
11	Central Complex 2 [CNTL2] (formerly Chemistry, Health Sciences (CHS))	1978	2024
12	Canyon Hall (CYN)	2015	None
13	Visual Arts (ARTS) (formerly Occupational Education 1 (OE1))	1978	None
14	East Complex (Print Shop) [EAST] (formerly the old Bookstore (BKC))	2003	2019
15	East Complex (classrooms) [EAST] (formerly Bookstore/Classrooms (BC))	2003	None
16	Public Safety Allied Health [PSAH]	2015	None
17	New Finkelstein Performing Arts Center [PAC] (former site of the Gymnasium razed in 2017)	Scheduled completion 2025	None
18	North Complex [NRTH] (formerly Math and Science Annex (MSA))	2010	None
19	Kinesiology, Health, and Aquatics [KHA] (formerly Community Recreation Facility (CRF))	2010	Addition of the dance studio, fitness center, and yoga studio was completed in 2014
20	Public Safety Training Center [PSTC]	2024	None



FACILITIES CONDITION

Crafton Hills College has developed over time with buildings constructed in different eras; Six buildings were constructed in the 1970's, two buildings constructed in the 1990's, three buildings constructed in the 2000's, and five buildings constructed within the last 15 years. The overall condition of each campus facility is key information for a long-term planning effort, signaling when building infrastructure and maintenance upgrades will be needed. This is a piece of the holistic picture that informs renovations and replacements of facilities within a larger plan.

FACILITIES CONDITIONS ASSESSMENT

A Facilities Condition Assessment (FCA) was completed as a part of the Facilities Master Planning Process. The full findings of the 2024 Facilities Conditions Assessment can be found in the Appendix. A major goal of the FCA is to calculate the Facility Condition Index (FCI), which provides a theoretical objective indication of a facility's overall condition. The FCI is defined as the ratio of the cost of current needs divided by the current replacement value (CRV) of the facility.

The adjacent chart presents the industry standard ranges.

As the Master Planning process examines and assumes the future of the campus environment in 10 years, the diagrams on the facing page

FCI Ranges and Description	
Good: 0 - 5 %	In new or well-maintained condition, with little or no visual evidence of wear or deficiencies.
Fair: 5 - 10%	Subject to wear but is still in a serviceable and functioning condition.
Poor: 10 - 30%	Subjected to hard or long-term wear. Nearing the end of its useful or serviceable life.
Critical: 30% and above	Has reached the end of its useful or serviceable life. Renewal is now necessary.

outline the anticipated conditions of each of the facilities at the end of defined periods (if no action was taken). This provides an illustration of when specific buildings will need focused investment.

CURRENT

As of 2024, all buildings assessed received an FCI rating of less than 5% and therefore a classification of 'Good'

3 YEARS

Projecting three years out, to 2027, the majority of the assessed buildings still hold a classification of Good or Fair, with the exception of two buildings, West Complex and the Student Support building, receiving Poor classifications.

5 YEARS

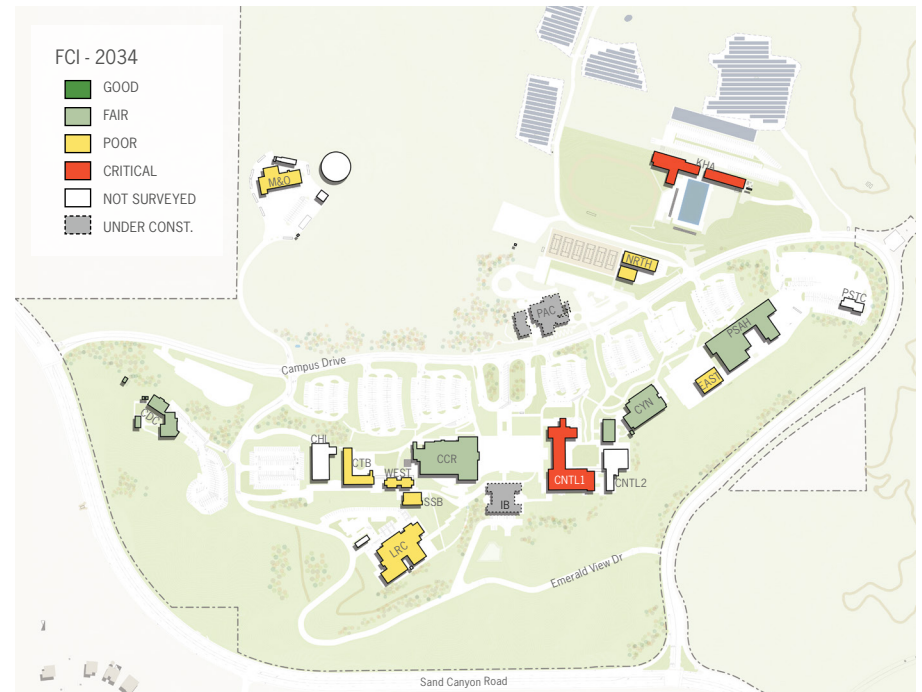
Projecting five years out, to 2029, in addition to the West Complex and Student Support

Building, the Central Complex and Kinesiology, Health Ed and Aquatics Complex receive Poor classifications.

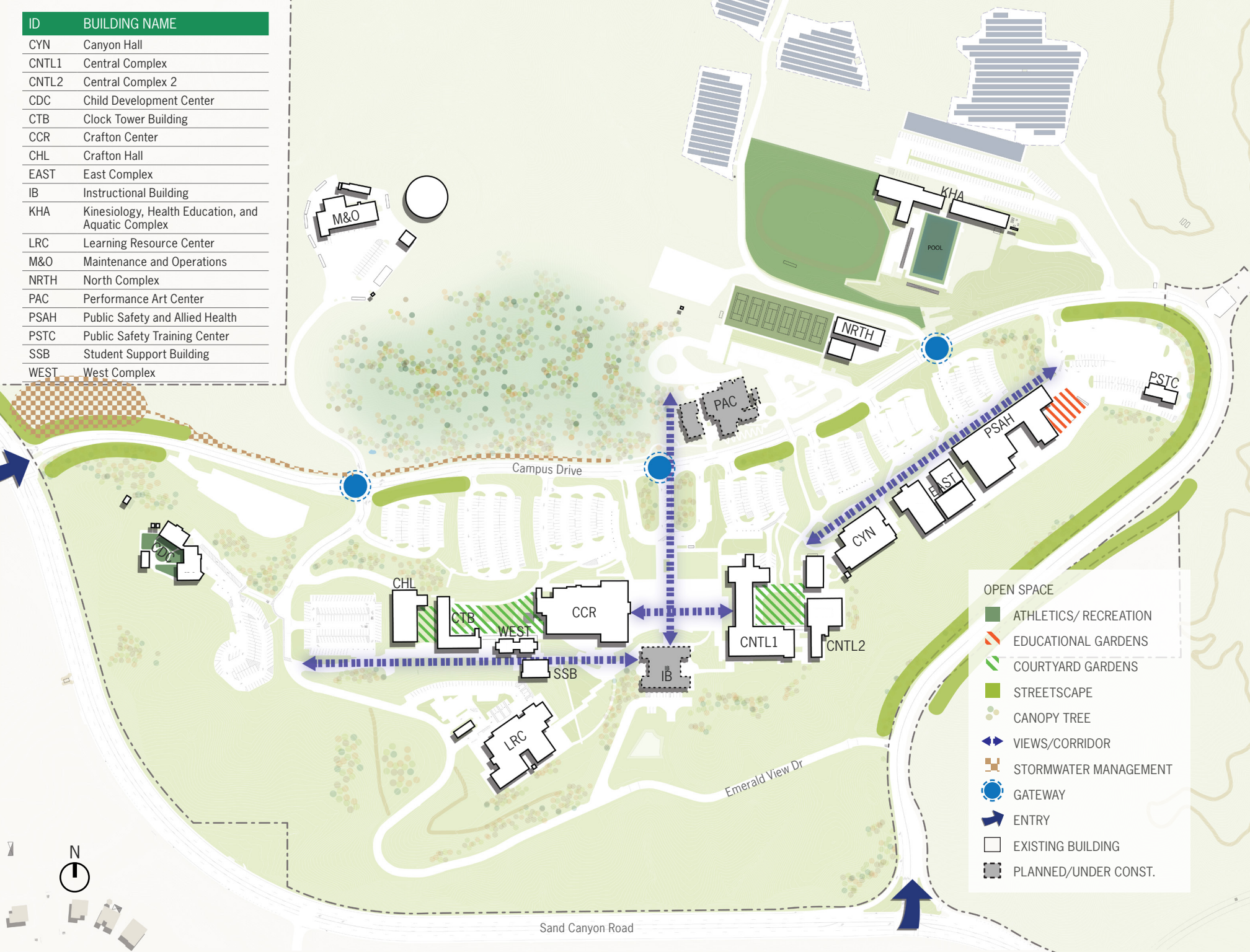
10 YEARS

Projecting 10 years out, to 2034, the majority of assessed buildings receive Poor or Critical classifications, aside from Child Development Center, Crafton Center, Canyon Hall, and Public Safety and Allied Health. The first Critical classifications emerge, which include the Central Complex and Kinesiology, Health Education and Aquatics Complex.

Although campus buildings are generally in good condition today, investment in maintenance will need to continue over the next ten years to ensure they remain operational.



ID	BUILDING NAME
CYN	Canyon Hall
CNTL1	Central Complex
CNTL2	Central Complex 2
CDC	Child Development Center
CTB	Clock Tower Building
CCR	Crafton Center
CHL	Crafton Hall
EAST	East Complex
IB	Instructional Building
KHA	Kinesiology, Health Education, and Aquatic Complex
LRC	Learning Resource Center
M&O	Maintenance and Operations
NRTH	North Complex
PAC	Performance Art Center
PSAH	Public Safety and Allied Health
PSTC	Public Safety Training Center
SSB	Student Support Building
WEST	West Complex



- OPEN SPACE
- ATHLETICS/ RECREATION
- EDUCATIONAL GARDENS
- COURTYARD GARDENS
- STREETSCAPE
- CANOPY TREE
- VIEWS/CORRIDOR
- STORMWATER MANAGEMENT
- GATEWAY
- ENTRY
- EXISTING BUILDING
- PLANNED/UNDER CONST.



Sand Canyon Road

Campus Drive

Emerald View Dr

OPEN SPACE AND LANDSCAPE

Formal campus open space is organized along the linear axis created by the buildings terraced within the hillside, with a main campus courtyard central on campus. A majority of the campus open space is defined by expanses of hardscape, developing educational gardens and refined pieces of streetscape. There are several smaller plazas distributed throughout the grounds typically located at building entrances.

The main courtyard, commonly referred to as the Campus Quad, is located in the heart of campus between the Crafton Center and Central Complex 1. The courtyard is responsible for the annual commencement ceremony, where students, staff, faculty, and visitors gather for celebration in one of the iconic areas of campus. The space is framed by a tree canopy including mature trees creating a timeless aspect to the campus. The college has identified a location within this area as the “kodak” moment where students have the opportunity to capture a picture at the beginning and end of their academic careers on campus.

With access to beautiful sweeping views of Yucaipa, the college has plenty of opportunity to expand on the development of its educational gardens flanking either side of the campus quad, on the opposite sides of the Crafton Center and Central Complex 1. With Crafton Hall currently under construction, a focus on developing and reinvigorating the adjacent educational garden

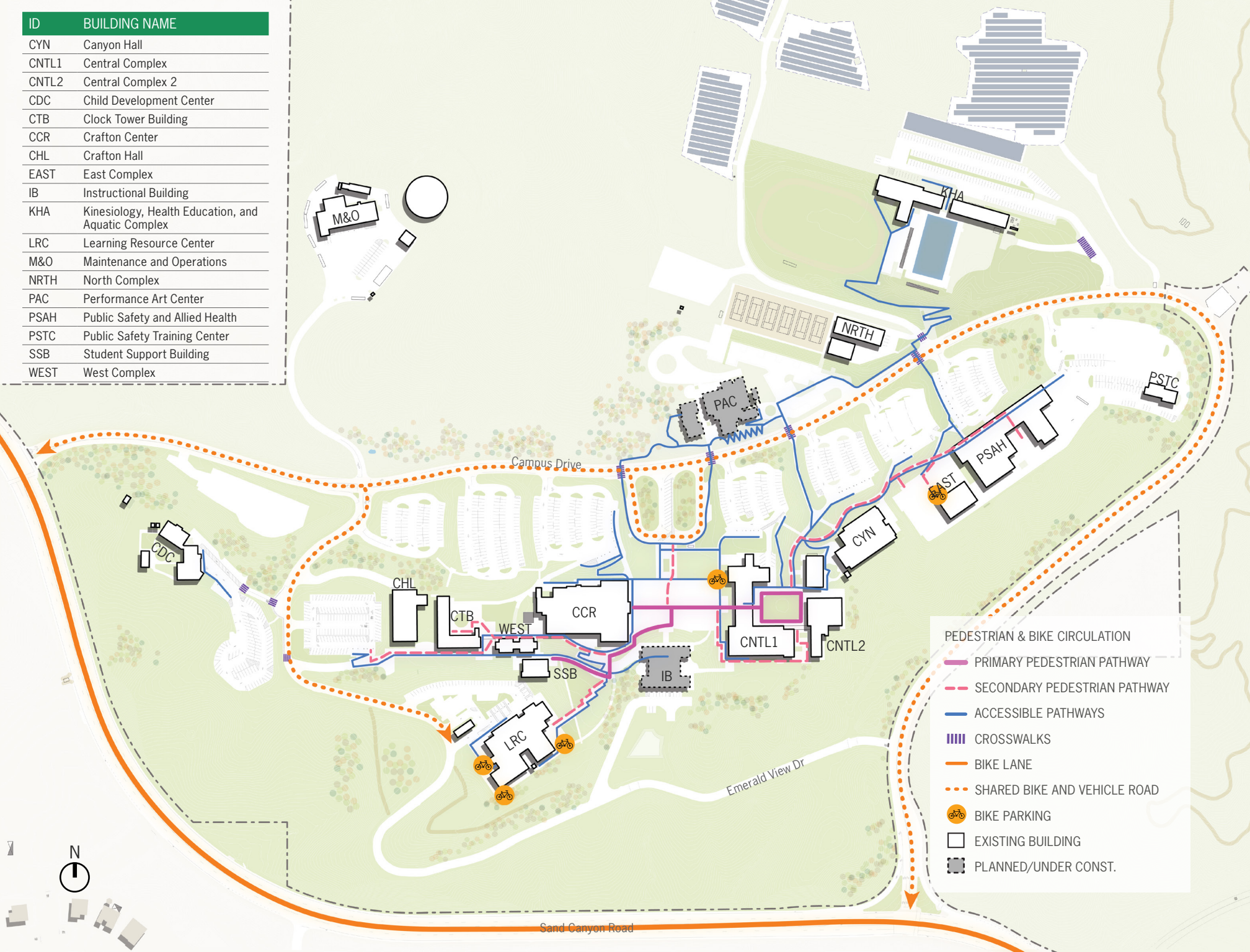
could be beneficial in connecting these defined areas.

Additionally, adjacent to the Clock Tower Building and West Complex, lies an open space opportunity along a main pedestrian corridor. With sweeping views out over the Learning Resource Center from either side of the Student Services Building, further definition of the space along the corridor would emphasize the route and capitalize on the existing viewshed.

In tangent to the circulation aspect of campus, there is a significant amount of traffic, both vehicular and pedestrian, along the north side of Campus Drive. Further development of the streetscape, including the hardscape and vegetation, would aid in improving the safety and overall enjoyment along the route.



ID	BUILDING NAME
CYN	Canyon Hall
CNTL1	Central Complex
CNTL2	Central Complex 2
CDC	Child Development Center
CTB	Clock Tower Building
CCR	Crafton Center
CHL	Crafton Hall
EAST	East Complex
IB	Instructional Building
KHA	Kinesiology, Health Education, and Aquatic Complex
LRC	Learning Resource Center
M&O	Maintenance and Operations
NRTH	North Complex
PAC	Performance Art Center
PSAH	Public Safety and Allied Health
PSTC	Public Safety Training Center
SSB	Student Support Building
WEST	West Complex



- PEDESTRIAN & BIKE CIRCULATION
- PRIMARY PEDESTRIAN PATHWAY
 - - - SECONDARY PEDESTRIAN PATHWAY
 - ACCESSIBLE PATHWAYS
 - |||| CROSSWALKS
 - BIKE LANE
 - - - SHARED BIKE AND VEHICLE ROAD
 - BIKE PARKING
 - EXISTING BUILDING
 - PLANNED/UNDER CONST.



Sand Canyon Road

PEDESTRIAN AND BICYCLE CIRCULATION

PEDESTRIAN

The campus has a linear network of pedestrian pathways connecting buildings, parking, and access to the surrounding Yucaipa community via trails and sidewalks. The existing walkways on campus are typically wide enough to accommodate service vehicles, but often lack identity in maintaining their intended pedestrian use. There is an opportunity to refine and expand on the contiguous main pedestrian pathway to create a welcoming, intuitive, and branded experience for pedestrians on campus. At present, there are two axes to move through campus: an informal path along Campus Drive and the sequence of paths beginning at Crafton Hall and ending at Public Safety and Allied Health.

A noted area of conflict between pedestrians and vehicles is along Campus Drive, after entering the west side of campus from Sand Canyon Road. Due to some parking conflicts during high-traffic periods on campus, students often resort to parking along the north side of the street and continue walking on the same side to get to campus. The path is an unpaved trail without the preferred intermittent areas in between pedestrians and vehicles and is therefore not the safest option for students finishing their commutes to campus.

BICYCLE

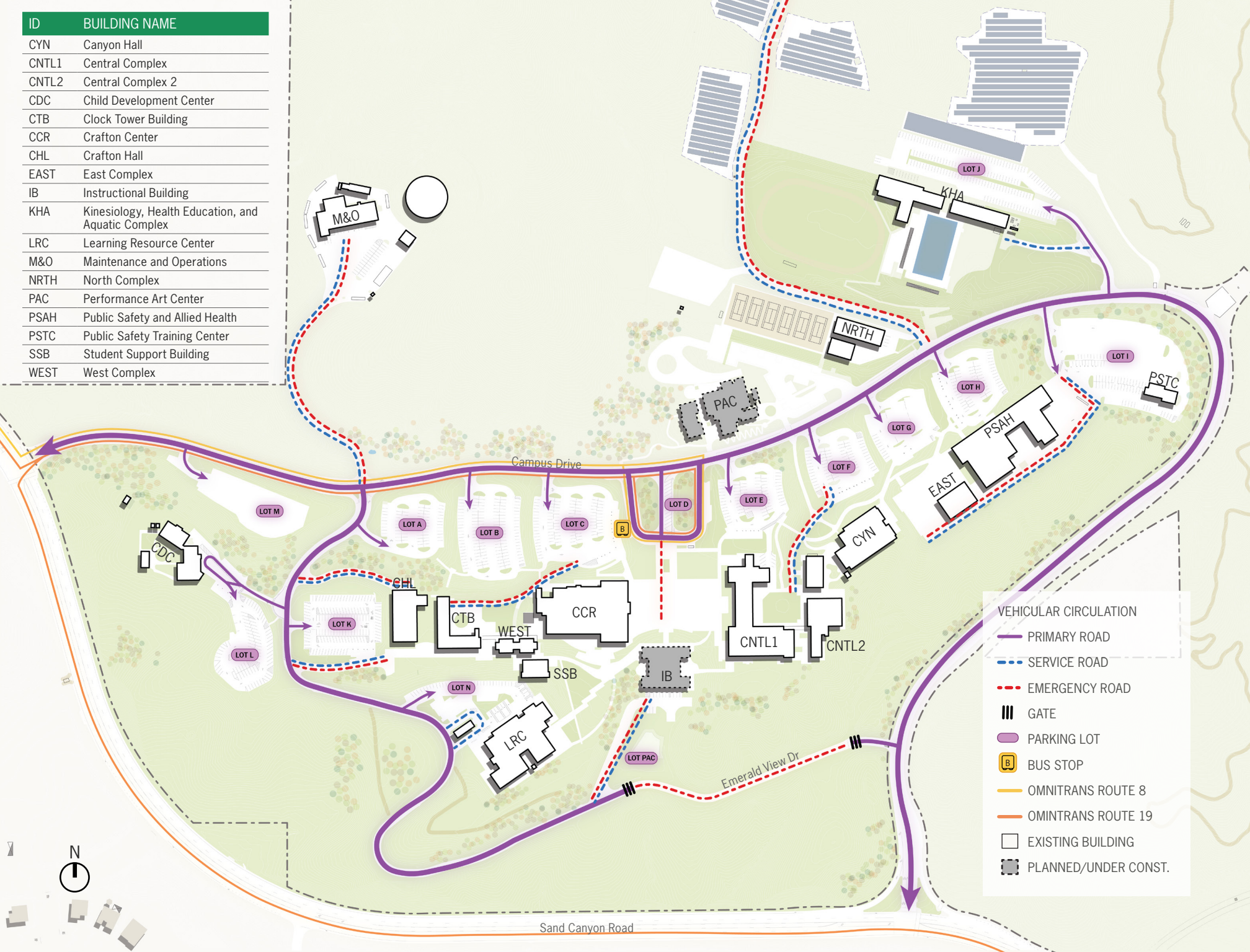
The campus currently does not have dedicated bike lanes within its boundary. There are five separate designated areas for bike parking across campus. There are three located on the east, south, and west sides of the Learning Resource Center, one located on the northwest side of Central Complex 1, and one located in the informal plaza between Visual Arts and the East Complex. Typically, bike paths and parking areas intend to support pedestrian corridors, reducing potential congestion conflicts at peak

activity hours. While the distribution of bike parking areas helps enhance accessibility for cyclists, the lack of dedicated bike lanes leaves room for improvement in promoting cycling as a sustainable transportation option on campus. There is currently an opportunity to increase the number of bicycle parking areas without concern for affecting congestion on campus.

Currently, the Yucaipa area has a more developed bicycle infrastructure in comparison to the campus, with one path on Sand Canyon Road leading directly to the campus.



ID	BUILDING NAME
CYN	Canyon Hall
CNTL1	Central Complex
CNTL2	Central Complex 2
CDC	Child Development Center
CTB	Clock Tower Building
CCR	Crafton Center
CHL	Crafton Hall
EAST	East Complex
IB	Instructional Building
KHA	Kinesiology, Health Education, and Aquatic Complex
LRC	Learning Resource Center
M&O	Maintenance and Operations
NRTH	North Complex
PAC	Performance Art Center
PSAH	Public Safety and Allied Health
PSTC	Public Safety Training Center
SSB	Student Support Building
WEST	West Complex



VEHICULAR CIRCULATION

- PRIMARY ROAD
- SERVICE ROAD
- EMERGENCY ROAD
- GATE
- PARKING LOT
- BUS STOP
- OMNITRANS ROUTE 8
- OMINTRANS ROUTE 19
- EXISTING BUILDING
- PLANNED/UNDER CONST.



Sand Canyon Road

VEHICULAR CIRCULATION

CAMPUS ENTRY/GATEWAY

Two distinct gateways mark the transition onto campus from the two main entry points off of Sand Canyon Road. There is interest in enhancing these gateways for a grander welcome at both entry points. Additionally, there has also been discussion regarding the enhancement of safety and security on campus through the installation of cameras at both ends of Campus Drive. Campus Drive remains the primary road and vehicular circulation route through campus, connecting back to Sand Canyon Road at the west and south edges of campus. Any routes branching from Campus Drive primarily lead to one of the 12 parking lots on campus, with two longer auxiliary paths, one leading up to Lot J, and one down to and past Lot N.

PARKING

There are 13 defined lots on campus, 12 of which are dedicated solely to parking. Currently, Lot M serves to hold any construction support services but has been identified as a future overflow lot. During the higher traffic periods on campus, the preferred parking area becomes on-street parking along the north side of Campus Drive. There is an opportunity to enhance the pedestrian wayfinding and circulation route from the on-street parking location to campus, as safety of individuals is critical in studying additional parking opportunities.

PUBLIC TRANSIT

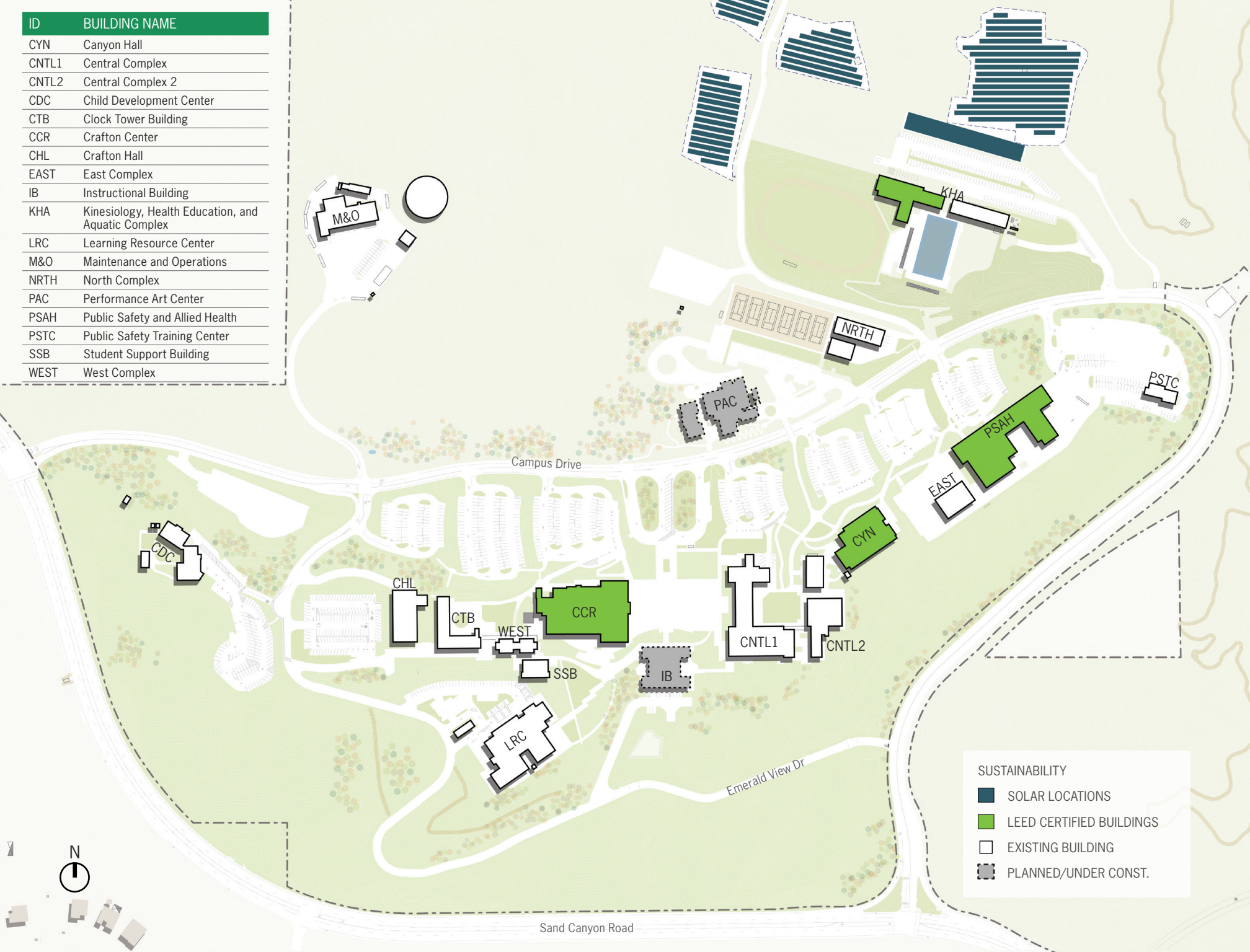
Omnitrans Routes 8 and 19, two public transit routes, offer convenient commutes to campus. Both routes enter campus at the west end; Route 8 approaches from the north and Route 19 approaches from the south. Both routes follow Campus Drive to the campus core where they drop off at Lot D, north of the campus quad.

SERVICE ROUTES

Multiple points on campus offer support for service and emergency vehicles. There are two routes that branch from the north side of Campus Drive, and multiple points surrounding the campus core that connect parking lots: Lot K, Lot N, Lot B, Lot C, Lot F, and Lot I. There is a dedicated service route that connects Campus Drive to the Kinesiology, Health Education, and Aquatic Complex buildings and a dedicated emergency service vehicle route along Emerald View Drive at the south end of campus. There is an opportunity for service route development around the Performing Arts Center currently under construction.



ID	BUILDING NAME
CYN	Canyon Hall
CNTL1	Central Complex
CNTL2	Central Complex 2
CDC	Child Development Center
CTB	Clock Tower Building
CCR	Crafton Center
CHL	Crafton Hall
EAST	East Complex
IB	Instructional Building
KHA	Kinesiology, Health Education, and Aquatic Complex
LRC	Learning Resource Center
M&O	Maintenance and Operations
NRTH	North Complex
PAC	Performance Art Center
PSAH	Public Safety and Allied Health
PSTC	Public Safety Training Center
SSB	Student Support Building
WEST	West Complex



SUSTAINABILITY

- SOLAR LOCATIONS
- LEED CERTIFIED BUILDINGS
- EXISTING BUILDING
- PLANNED/UNDER CONST.

SUSTAINABILITY

Guided by the Sustainability Plan, CHC is fostering a green, energy efficient, climate friendly campus. One critical way is by maximizing on-site renewable energy generation. CHC has built a solar farm on the northeast edge of campus. The addition of 1250kw Solar has greatly offset the current electricity cost incurred by the campus.

Additionally, CHC has been designing and constructing Leadership in Energy and Environmental Design (LEED) certified buildings in recent years, as new construction and renovation projects emerge. Existing LEED Certified Buildings include Crafton Center, Canyon Hall, Public Safety and Allied Health, and Kinesiology and Health Education.

In terms of water and stormwater, newer buildings are constructed with stormwater retention systems like bioswales or underground retention tanks. Also, a non-potable/recycled water line has been installed to serve the campus and reduce the potable water usage and sewer capacity fees.

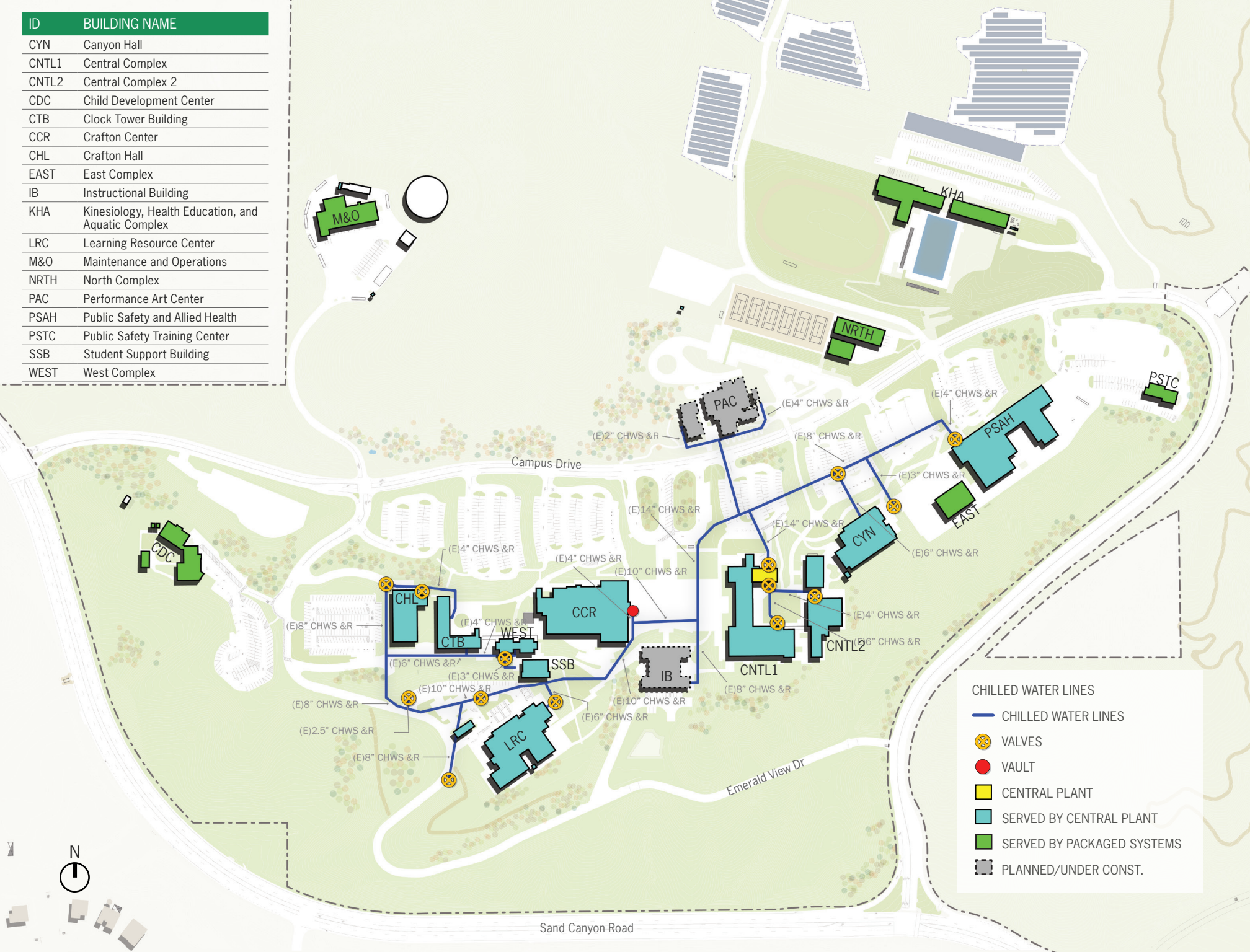


UTILITIES

The following summarizes the existing utilities serving the CHC campus. The entire utilities report, with greater detail, can be found in the Appendix.

The utilities within the campus boundaries comprise of domestic and fire water, sewer, storm drain, irrigation water, chilled and hot water distribution, gas, electrical and telecommunications systems, and are all owned and operated by the campus.

ID	BUILDING NAME
CYN	Canyon Hall
CNTL1	Central Complex
CNTL2	Central Complex 2
CDC	Child Development Center
CTB	Clock Tower Building
CCR	Crafton Center
CHL	Crafton Hall
EAST	East Complex
IB	Instructional Building
KHA	Kinesiology, Health Education, and Aquatic Complex
LRC	Learning Resource Center
M&O	Maintenance and Operations
NRTH	North Complex
PAC	Performance Art Center
PSAH	Public Safety and Allied Health
PSTC	Public Safety Training Center
SSB	Student Support Building
WEST	West Complex



CHILLED WATER LINES

- CHILLED WATER LINES
- ⊗ VALVES
- VAULT
- CENTRAL PLANT
- SERVED BY CENTRAL PLANT
- SERVED BY PACKAGED SYSTEMS
- PLANNED/UNDER CONST.

WATER SYSTEMS

CHILLED WATER SYSTEM

The cooling needs of most of the facilities at the campus are met by the Central Plant, located within the Central Complex 1 in the center of the campus. A few of the facilities are served by dedicated package systems, including the North Complex, East Complex 1, Public Safety Training Center, Child Development Center, Maintenance and Operations, and Kinesiology, Health Education and Aquatic Complex.

Central Cooling Plant at Central Complex 1

The Central Cooling Plant consists of four water cooled chillers, three are centrifugal chillers and the fourth is a rotary screw chiller. The water-cooled chillers are presently in good serviceable condition. Three of the chillers are nearing the end of their useful life and should be considered for replacement over the next 5-10 years. One chiller will require a rebuild over the next 0-2 years. The Central Plant is pumped primary-secondary with dedicated primary pumps for each of the four chillers. All of the chilled water primary and secondary pumps are on VFDs.

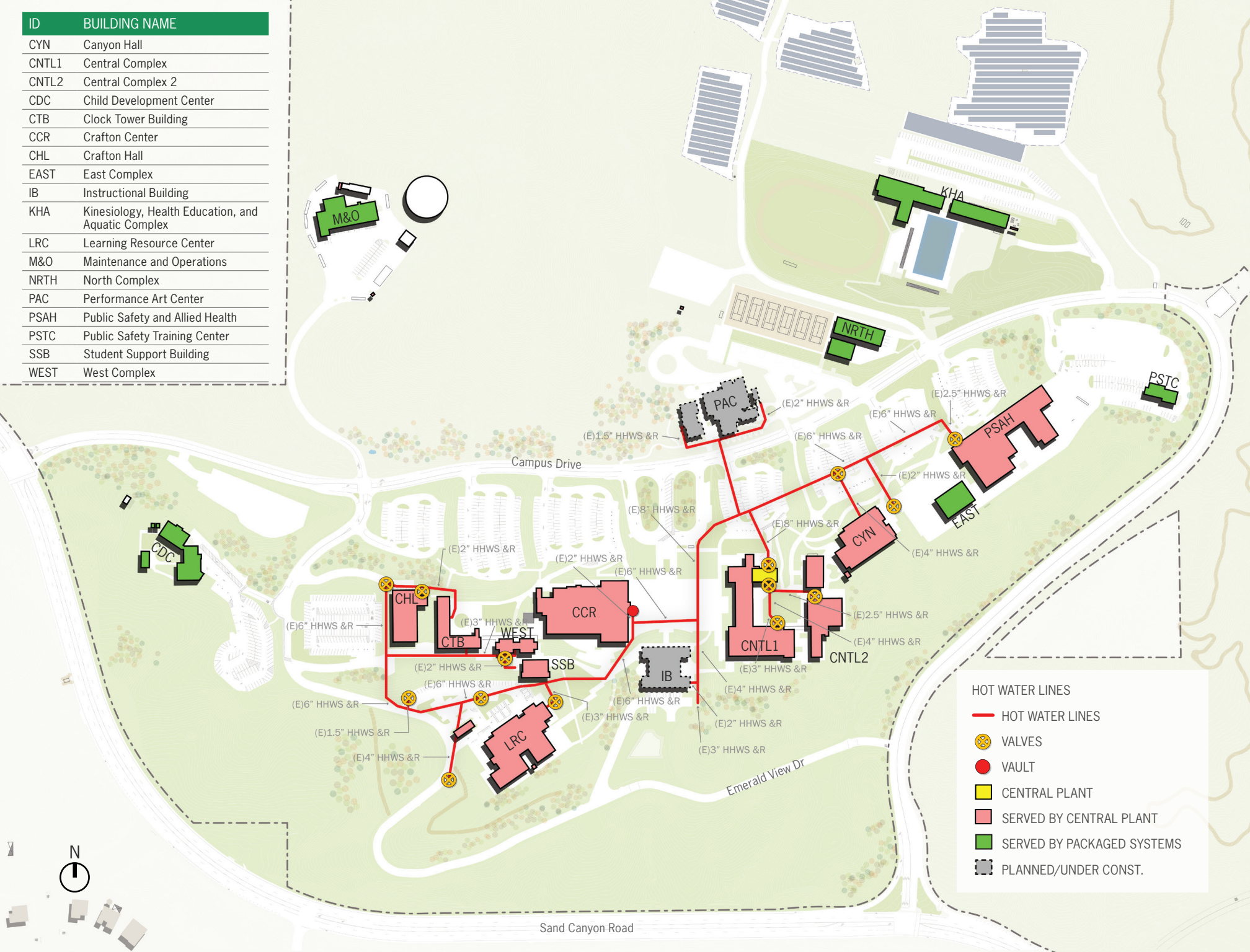
The Central Plant also contains three forced drafted cooling towers, which are presently in serviceable condition. Two of the three cooling towers were replaced in 2023-2024. The third cooling tower has stainless steel basins and is in good working condition. Condenser water

pumps sit outside in the cooling tower yard and are constant speed. A side stream centrifugal separator also serves the condenser water system and is housed in the cooling tower yard. The Central Plant is on the Alerton control system.

Chilled Water Distribution

The Central Plant serves the cooling needs of majority of facilities on campus, through a set of 8" Chilled Water Supply and Return (CHWS&R) pipes that originate from the south side of the Central Plant to serve the Central Complex 1 and Central Complex 2, and a set of 14" CHWS&R pipes that split off in two directions to serve the rest of the campus.

ID	BUILDING NAME
CYN	Canyon Hall
CNTL1	Central Complex
CNTL2	Central Complex 2
CDC	Child Development Center
CTB	Clock Tower Building
CCR	Crafton Center
CHL	Crafton Hall
EAST	East Complex
IB	Instructional Building
KHA	Kinesiology, Health Education, and Aquatic Complex
LRC	Learning Resource Center
M&O	Maintenance and Operations
NRTH	North Complex
PAC	Performance Art Center
PSAH	Public Safety and Allied Health
PSTC	Public Safety Training Center
SSB	Student Support Building
WEST	West Complex



HOT WATER LINES

- HOT WATER LINES
- VALVES
- VAULT
- CENTRAL PLANT
- SERVED BY CENTRAL PLANT
- SERVED BY PACKAGED SYSTEMS
- PLANNED/UNDER CONST.



Sand Canyon Road

Campus Drive

Emerald View Dr

100

WATER SYSTEMS

HOT WATER SYSTEM

The heating needs of the majority of the facilities on campus are met by the Central Plant located within the Central Complex 1 in the center of the campus. A few of the facilities are served by dedicated package systems, including the North Complex, East Complex 1, Public Safety Training Center, Child Development Center, Maintenance and Operations, and Kinesiology, Health Education and Aquatic Complex.

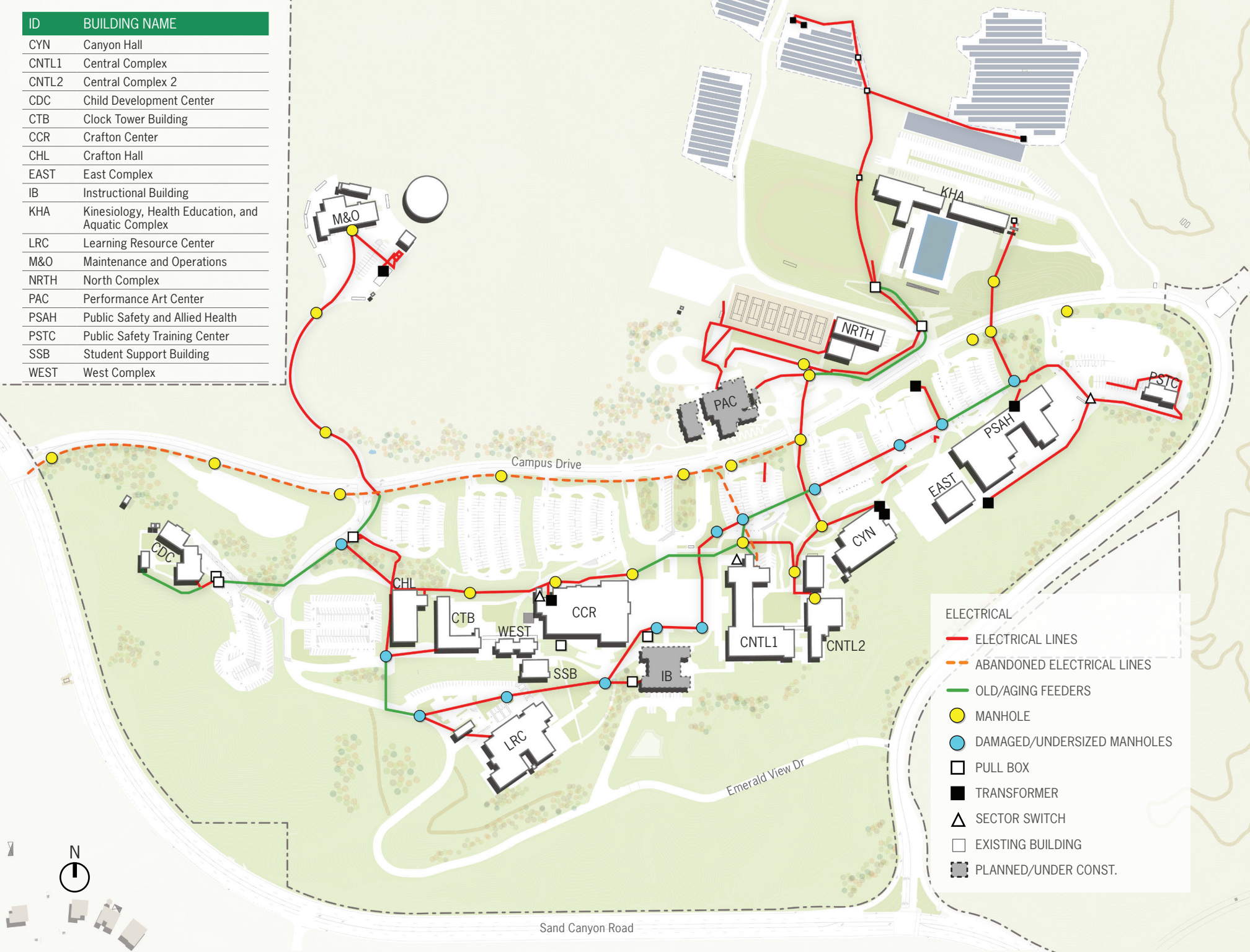
Central Heating Plant at Central Complex 1

The Central Heating Plant consists of three natural gas hot water boilers. Two boilers were installed in 2005 and the third boiler was installed in 2009. The boilers are currently in good serviceable condition. The boilers installed in 2005 should be considered for replacement over the next 10 years, with heat recovery chillers/air source heat pumps to promote electrification. The Heating Hot Water Plant has a primary-secondary pumping arrangement. Each of the boilers has a dedicated constant speed primary pump. The large secondary distribution pumps are on wall-mounted variable frequency drives. There is a side stream filtration system for the heating hot water supply loop located within the boiler room.

Hot Water Distribution

The central plant serves the heating and hot water supply needs of the majority of facilities on campus through a set of 4" Heating Hot Water Supply and Return (HHWS&R) pipes that originate from the south side of the central plant to serve the Central Complex 1 and Central Complex 2, and a set of 8" HHWS&R pipes on the north side that split off in two directions to serve the rest of the campus.

ID	BUILDING NAME
CYN	Canyon Hall
CNTL1	Central Complex
CNTL2	Central Complex 2
CDC	Child Development Center
CTB	Clock Tower Building
CCR	Crafton Center
CHL	Crafton Hall
EAST	East Complex
IB	Instructional Building
KHA	Kinesiology, Health Education, and Aquatic Complex
LRC	Learning Resource Center
M&O	Maintenance and Operations
NRTH	North Complex
PAC	Performance Art Center
PSAH	Public Safety and Allied Health
PSTC	Public Safety Training Center
SSB	Student Support Building
WEST	West Complex



- ELECTRICAL**
- ELECTRICAL LINES
 - ABANDONED ELECTRICAL LINES
 - OLD/AGING FEEDERS
 - MANHOLE
 - DAMAGED/UNDERSIZED MANHOLES
 - PULL BOX
 - TRANSFORMER
 - ▲ SECTOR SWITCH
 - EXISTING BUILDING
 - PLANNED/UNDER CONST.

Sand Canyon Road

ELECTRICAL

Crafton Hills College campus is currently served from a 4.16kV, 2000A 3phase, 3wire switchgear that derives its service from a 4.16kV SCE service feed. The switchgear comprises of a main 5kV, 2000A, 3P breaker with a SCE main meter section and eight 5kV, 600A breakers housed in a seven sectional indoor switchgear. The service is metered at 4.16kV and distributes power to substations in each building on campus through a series of manholes and medium voltage duct banks. The main switchgear was installed in 2008 with a main 5kV breaker and eight 5kV feeder breakers equipped with modern microprocessor relays and Eaton IQDP-4000 digital meters for monitoring energy usage and is in fairly good condition.

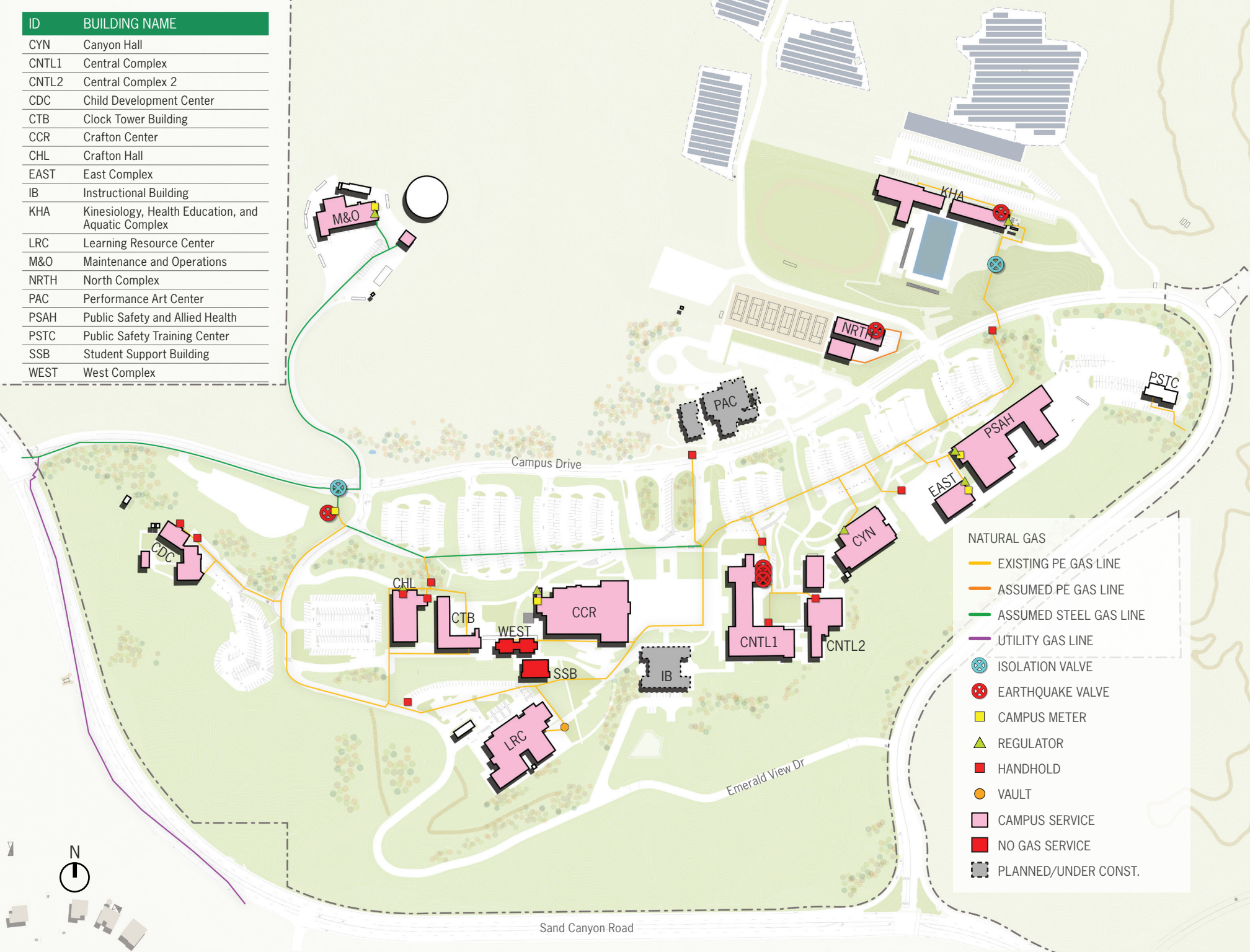
Power to each building on campus is served through a series of manholes and concrete encased medium voltage duct bank originating from the main switchgear. The medium voltage feeders are routed primarily through modular splice connectors located in individual manholes and provide limited redundancy for isolating power to the building without affecting all the other building being served from the same feeder. 15kV, 600A selector switches are installed at certain locations on the campus as part of of the recently completed projects that to facilitate disconnection of a few individual buildings.

The electrical power distribution system at the campus was installed in 1990's and is approximately 30 years old. The power distribution system for the campus was replaced in 2008-2009 and the majority of the distribution cabling was replaced in sections with the 2008-2009 infrastructure project and the newer buildings.

While majority of the buildings have new transformer substations and distribution switchboards, a few buildings still have the original transformer substations and switchboards. The individual buildings have transformers with 4.16kV primary and 277/480V and 120/208V secondary voltages.

The renovated solar farm on north side of campus will provide approximately 2MW alternative renewable source of energy and help offset the electricity cost incurred by the campus throughout the year. Key features of the new system include fixed tilt ground-mounted solar panels with a capacity of 2.34 MW-DC and Tesla megapack battery storage 767 kW/3080 kWh, storing excess energy and providing power during peak periods.

ID	BUILDING NAME
CYN	Canyon Hall
CNTL1	Central Complex
CNTL2	Central Complex 2
CDC	Child Development Center
CTB	Clock Tower Building
CCR	Crafton Center
CHL	Crafton Hall
EAST	East Complex
IB	Instructional Building
KHA	Kinesiology, Health Education, and Aquatic Complex
LRC	Learning Resource Center
M&O	Maintenance and Operations
NRTH	North Complex
PAC	Performance Art Center
PSAH	Public Safety and Allied Health
PSTC	Public Safety Training Center
SSB	Student Support Building
WEST	West Complex



- NATURAL GAS
- EXISTING PE GAS LINE
- ASSUMED PE GAS LINE
- ASSUMED STEEL GAS LINE
- UTILITY GAS LINE
- ISOLATION VALVE
- EARTHQUAKE VALVE
- CAMPUS METER
- REGULATOR
- HANDHOLD
- VAULT
- CAMPUS SERVICE
- NO GAS SERVICE
- PLANNED/UNDER CONST.

Sand Canyon Road

NATURAL GAS

Natural gas is distributed to the campus by Southern California Gas Company (SoCalGas). The majority of the campus is served through a 4" high pressure gas (HPG) main from SoCalGas that is routed along Campus Drive and terminates at the main campus meter just east of parking lot M. The gas distribution serves a total of 15 buildings.

A second HPG line branches off of the Campus Drive line before it enters the main campus meter. This HPG line is routed north along Emerald View Drive where it enters a second SoCalGas owned meter. This line serves a compressed natural gas (CNG) filling station, that has since been removed, as well as the Maintenance and Operations building (B1).

The 4" HPG line that enters the main campus meter assembly serves buildings 15 buildings. Each building served by this line has a local gas pressure regulator that steps the pressure down from medium pressure to low pressure.

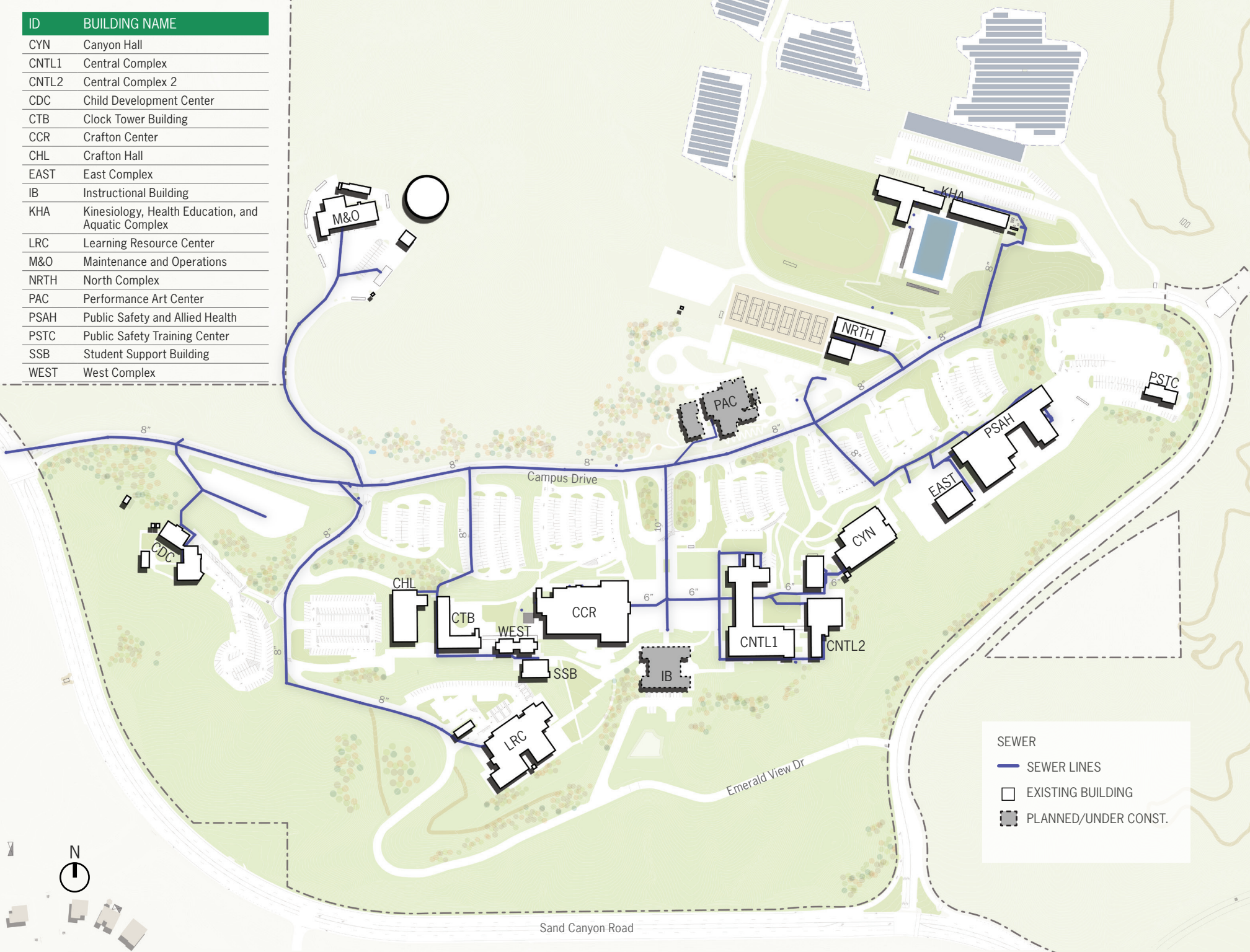
The medium pressure gas line was replaced in 2008-2009 under the Measure M project. The distribution system throughout the campus has undergone extensions over the years to accommodate campus expansions and additions and comprises of a mixture of PE and steel lines.

There are earthquake valves installed throughout campus; observed at Central Complex 1, North Complex, etc. However, several buildings do not

have earthquake valves. These buildings need to be provided with earthquake valves to meet current codes. The main campus meter also has an earthquake valve which protects the entire campus in the event of a major earthquake.

There is a single utility-owned gas meter that serves the majority of the buildings on campus; located on the west end of lot M. In addition, there is a second utility-owned gas meter serving the M&O building and the CNG filling station. The campus has no redundancy should the main service fail or is taken down for maintenance. The gas meter that serves the majority of the campus is currently approaching its maximum capacity. If any additional load is introduced to the campus, coordination will be required with the gas company to ensure that the current gas meter can accommodate the additional load.

ID	BUILDING NAME
CYN	Canyon Hall
CNTL1	Central Complex
CNTL2	Central Complex 2
CDC	Child Development Center
CTB	Clock Tower Building
CCR	Crafton Center
CHL	Crafton Hall
EAST	East Complex
IB	Instructional Building
KHA	Kinesiology, Health Education, and Aquatic Complex
LRC	Learning Resource Center
M&O	Maintenance and Operations
NRTH	North Complex
PAC	Performance Art Center
PSAH	Public Safety and Allied Health
PSTC	Public Safety Training Center
SSB	Student Support Building
WEST	West Complex



SEWER

- SEWER LINES
- EXISTING BUILDING
- PLANNED/UNDER CONST.

Sand Canyon Road



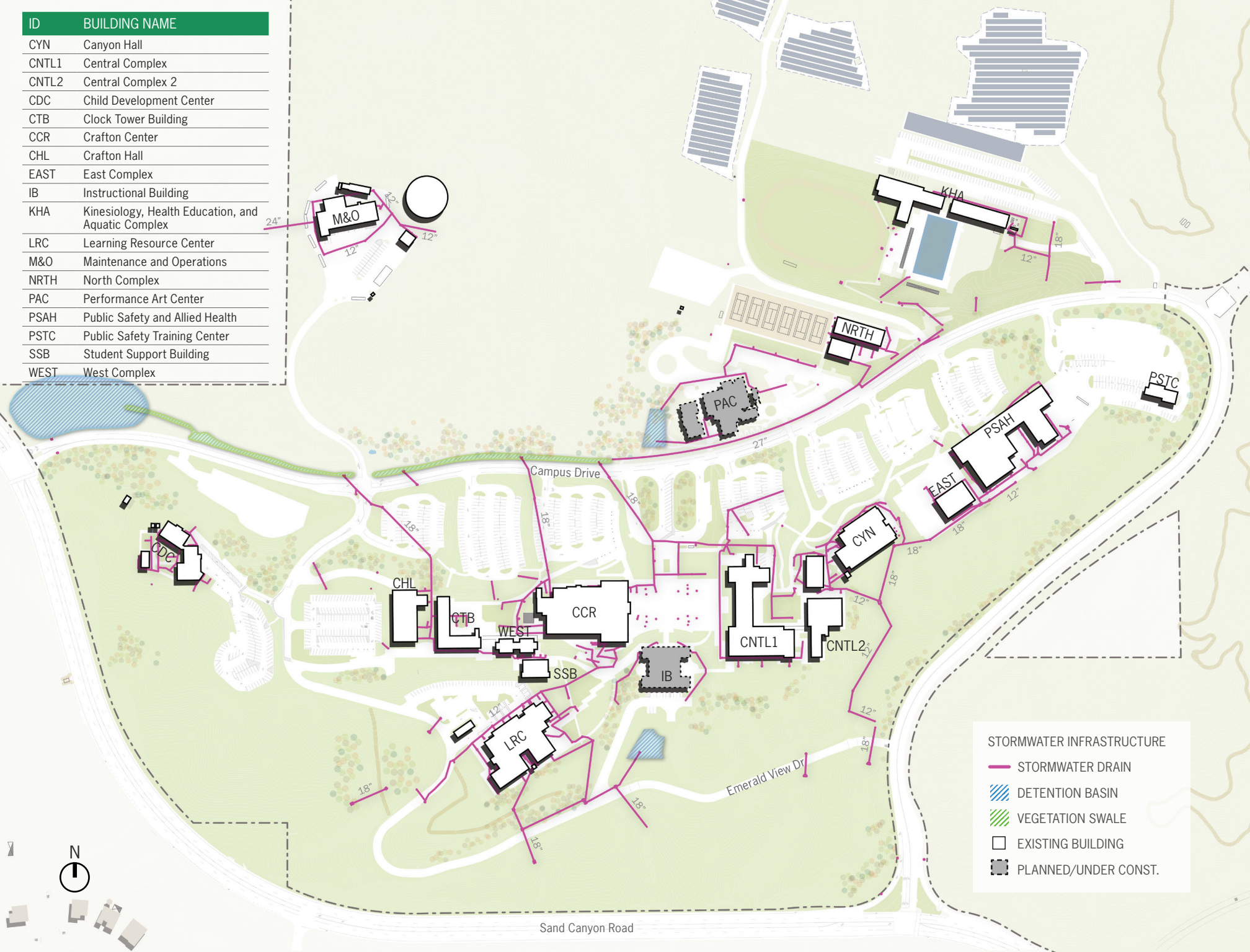
SEWER

The Crafton Hills College (CHC) sanitary sewer system is served by an 8-inch vitrified clay pipe (VCP) located in Campus Drive that ultimately connects to a public main located in Sand Canyon Road. In general, sewage flows travel west and south on campus and join the public system in Sand Canyon Road.

The existing polyvinyl chloride (PVC) sewer system building laterals are considered to be in good condition, due to the relatively young age of the system and no reported issues by Facilities.

There are new sewer line extensions connecting the new Performing Arts Center to the main line on Campus Drive.

ID	BUILDING NAME
CYN	Canyon Hall
CNTL1	Central Complex
CNTL2	Central Complex 2
CDC	Child Development Center
CTB	Clock Tower Building
CCR	Crafton Center
CHL	Crafton Hall
EAST	East Complex
IB	Instructional Building
KHA	Kinesiology, Health Education, and Aquatic Complex
LRC	Learning Resource Center
M&O	Maintenance and Operations
NRTH	North Complex
PAC	Performance Art Center
PSAH	Public Safety and Allied Health
PSTC	Public Safety Training Center
SSB	Student Support Building
WEST	West Complex



STORMWATER INFRASTRUCTURE

- STORMWATER DRAIN
- ▨ DETENTION BASIN
- ▨ VEGETATION SWALE
- EXISTING BUILDING
- PLANNED/UNDER CONST.

Sand Canyon Road



STORMWATER INFRASTRUCTURE

The Crafton Hills College (CHC) campus drains in a generally south and westerly direction to Sand Canyon Road. The campus currently utilizes a detention basin located at the west intersection of Campus Drive and Sand Canyon Road. The basin discharges via overland flow to an unnamed creek which eventually discharges to San Timoteo Creek. Another basin is located east of Canyon Hall, eventually discharging to San Timoteo Creek. The existing campus possesses a few stormwater best management practices (BMPs) to address water quality. Some are currently in use while others have the potential to be utilized. Descriptions of both types of BMPs are below.

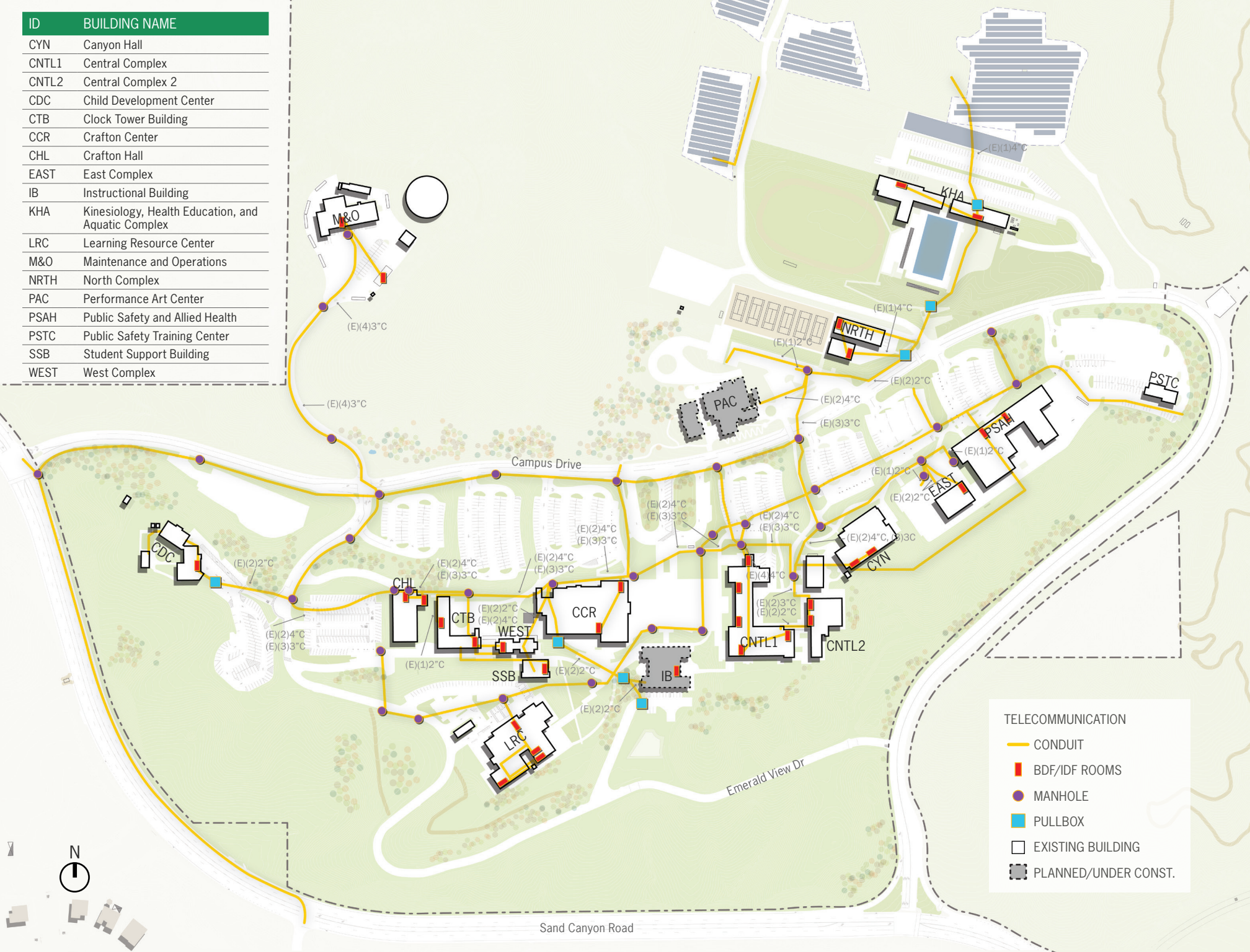
Vegetated Swale – The campus's existing vegetated swale provides pre-treatment filtration for on-site runoff. Vegetated swales are open, shallow channels, lined with vegetative cover that collect and slowly convey runoff to downstream discharge points.

Detention Basin - A dry extended detention basin consists of a basin whose outlet has been designed to detain the stormwater runoff from a water quality design storm. Generally, the water is detained for a minimum of 48 hours to allow sediment and other pollutants to settle. They do

not have a permanent pool and can be used to provide flood control by including additional flood detention storage. Buildings that have detention basins and/or underground storage include the PAC, Crafton Center, and KHA buildings.

There are no storm drain issues. Recent updates include extension of storm drain system to serve the new PAC building.

ID	BUILDING NAME
CYN	Canyon Hall
CNTL1	Central Complex
CNTL2	Central Complex 2
CDC	Child Development Center
CTB	Clock Tower Building
CCR	Crafton Center
CHL	Crafton Hall
EAST	East Complex
IB	Instructional Building
KHA	Kinesiology, Health Education, and Aquatic Complex
LRC	Learning Resource Center
M&O	Maintenance and Operations
NRTH	North Complex
PAC	Performance Art Center
PSAH	Public Safety and Allied Health
PSTC	Public Safety Training Center
SSB	Student Support Building
WEST	West Complex



TELECOMMUNICATION

- CONDUIT
- BDF/IDF ROOMS
- MANHOLE
- PULLBOX
- EXISTING BUILDING
- PLANNED/UNDER CONST.



Sand Canyon Road

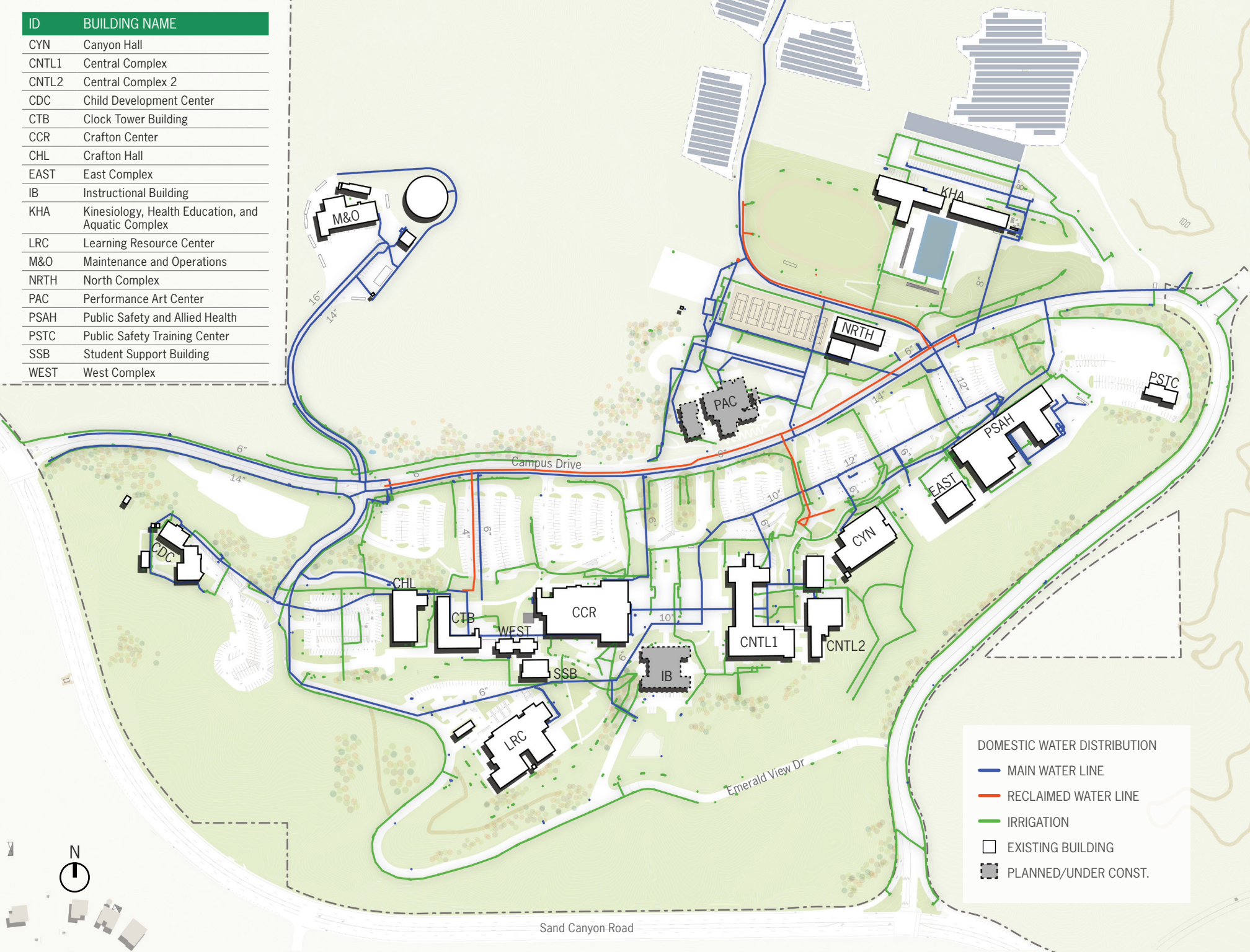
TELECOMMUNICATION

The campus telecommunications services are derived from AT&T. The AT&T incoming service runs along Sand Canyon Road, entering from the northwest side of the campus and following Campus Drive up to the MPOE room, in front of the Central Complex 1. The telecommunications services to the campus are served from a main distribution frame (MDF), located within the Learning Resources Center (LRC), in the lower portion of the campus. The new server room/ MDF consists of a mix of 4-post racks and network server cabinets, that are laid out in two aisles and air cooled with in-ceiling duct work that is directed towards each rack and cabinet. There is also a centralized battery backup system for all the network equipment within the room and additional battery backup systems, out at the individual server rooms. There is a Nortel VOIP phone system serving the campus and is distributed via fiber to the individual campus buildings; the main equipment is located in the first rack of the Central Complex 1. Although the MDF is the main distribution, the fiber infrastructure comes from a back room in the Central Complex, just outside of Campus Police.

Each IDF room currently has (at a minimum), (1) 6 strand Single-Mode fiber and (1) 12 strand Multi-Mode fiber, terminated on the backboard in a NEMA enclosure, or directly within the server

rack in a rack mounted LIU enclosure. There is a mix of Single-Mode and Multi-Mode fiber cabling to feed out to the other IDF's/ server rooms, for interconnections, back to the MDF, BDF, or dedicated network closet. There is copper feed cabling installed in each IDF and there is a minimum of (1) 25-Pair feed cable terminated on the backboard and in some instances within the server racks. The existing copper feed cabling that was not in use (or abandoned), was removed from the IDF backboards and IDF feed conduits, when the new fiber cable infrastructure was installed.

ID	BUILDING NAME
CYN	Canyon Hall
CNTL1	Central Complex
CNTL2	Central Complex 2
CDC	Child Development Center
CTB	Clock Tower Building
CCR	Crafton Center
CHL	Crafton Hall
EAST	East Complex
IB	Instructional Building
KHA	Kinesiology, Health Education, and Aquatic Complex
LRC	Learning Resource Center
M&O	Maintenance and Operations
NRTH	North Complex
PAC	Performance Art Center
PSAH	Public Safety and Allied Health
PSTC	Public Safety Training Center
SSB	Student Support Building
WEST	West Complex



DOMESTIC WATER DISTRIBUTION

- MAIN WATER LINE
- RECLAIMED WATER LINE
- IRRIGATION
- EXISTING BUILDING
- PLANNED/UNDER CONST.

Sand Canyon Road

WATER SYSTEM/IRRIGATION

CHC has a public combined backbone water system for the campus. Two tanks owned and operated by the City of Redlands (City) are located up the hill from the main campus area. Individual water services for domestic consumption and for firefighting purposes are provided at several locations along Campus Drive. The existing irrigation water is drawn from the existing potable meters without sub-metering. A non-potable/recycled water line has been installed to serve the campus and reduce the potable water usage and sewer capacity fees.

The existing domestic services are connected to the public 14" Cement-Mortar Lined and Coated main in Campus Drive. This public main is served by the highest water tank located up the hill from the main portion of campus and has an approximate elevation of 2560' at its base. The main portions of campus vary in elevation from approximately 2360' to 2260', thus pressures in the main are estimated to be 130 psi to 90 psi respectively.

The existing YVWD 16" Ductile Iron (DI) recycled water main in Sand Canyon Rd has reduced pressure, via downstream pressure regulators, of 2340', or approximately 60 psi at both entrances to CHC. The recycled water main operates at +/- 130 psi.

An evaluation of the existing water/irrigation water system revealed that the system adequately

supports the demand of existing buildings and landscape areas with no significant pipe losses due to pipe size or elevation. The campus irrigation system has been converted to and is served by the YVWD recycled water in 2024. Parking Lot L needs to be converted from domestic to the recycled water.

The irrigation control system was replaced with a new CalSense control system in 2021-2022.

There are discussions with YVWD to deed land to accommodate future reservoirs, approximately two ~500K gallon reservoirs.



CHC3

PLANNING ELEMENTS: PRINCIPLES & NEEDS



CENTRAL COMPLEX

INTRODUCTION

Planning themes, principles, space needs, and program needs for CHC's campus were derived through engagement, tours, analysis, previous studies, and trends in higher education.

Overarching Master Plan Themes, established for the entire SBCCD Facilities Master Plan, and CHC specific Planning Principles serve as a framework and guide for all future physical investments in CHC's campus facilities and infrastructure.

Program and space needs define the quantitative and qualitative aspects the Plan solves for. A space utilization study, space needs assessment, and engagement on educational program growth provides guidance on the level of investment in various space types, both in terms of quantity of space and quality of space. Ultimately, the plan addresses these program needs under the umbrella of the guiding principles.





FACILITIES MASTER PLAN DISTRICT-WIDE THEMES

MODERNIZE FACILITIES:

Modernize existing facilities to propel excellence and community prosperity.

RIGHT-SIZE & MAXIMIZE EFFICIENCY:

Right-size and equitably redistribute space and services to maximize efficiency and respond to trends in higher education.

FOSTER A SUSTAINABLE FUTURE:

Ensure development addresses each of the goals within the Sustainability Plan, prioritizing resource conservation and the well-being of people and the planet.

DESIGN FOR SAFETY & INCLUSIVITY:

Design a built environment that fosters a safe and welcoming setting for students, faculty, and staff.

BUILD COMMUNITY & FOSTER COLLABORATION:

Create spaces for events and daily gatherings to build community and foster collaboration.

IMPROVE BRANDING, WAYFINDING, ART:

Improve branding, wayfinding, and public art to strengthen SBCCD's identity.

CREATE FLEXIBLE CLASSROOMS & SUPPORT ACTIVE LEARNING:

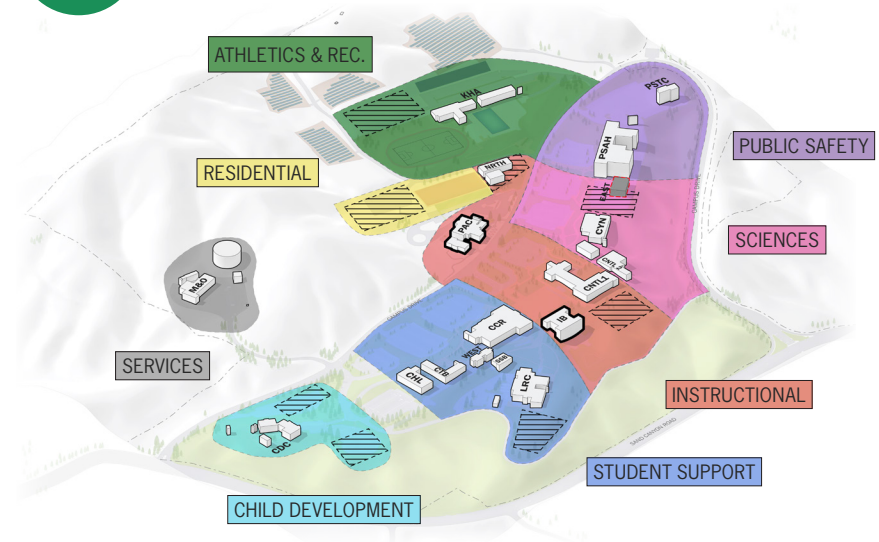
Design classrooms for flexibility and active learning to facilitate a collaborative learning environment.

CHC GUIDING PRINCIPLES

The guiding principles set the overall vision and key values for planning decisions that impact the physical campus. Guiding the direction of the Plan, the projects that compose the future vision of campus serve to meet multiple principles.



Reinforce “Functional Zones” through infill sites



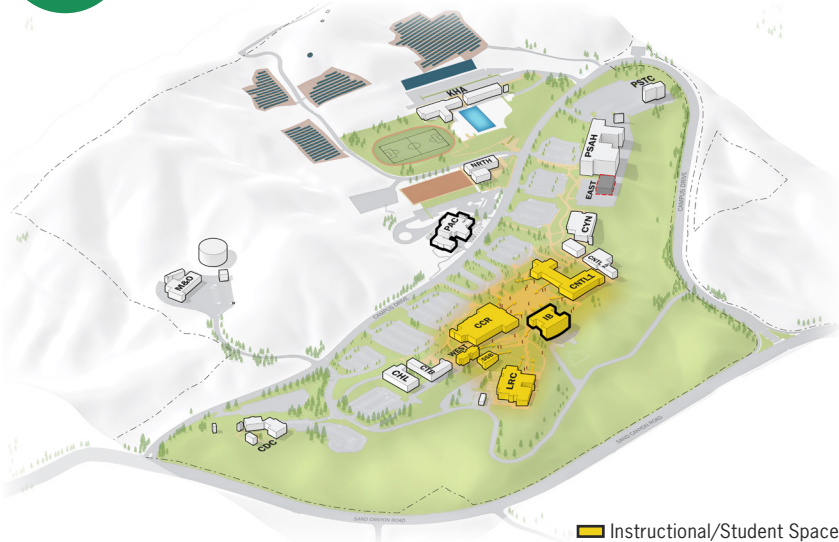
Replace or renovate modular and aging buildings



■ Replace or Renovate
DRAFT October 15, 2024



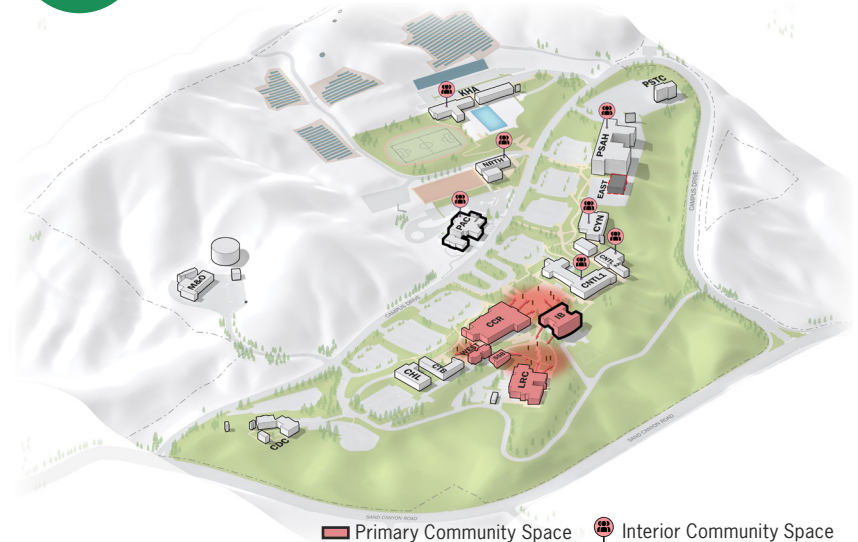
Consolidate instructional and student services space at the center of campus



Instructional/Student Space



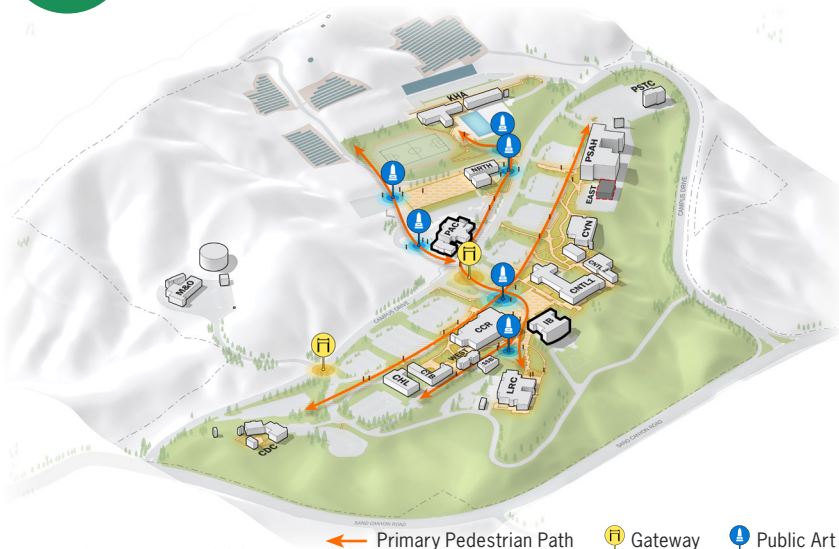
Add gathering and community space for students



Primary Community Space Interior Community Space



Showcase the campus identity through placemaking



Primary Pedestrian Path Gateway Public Art

SPACE ANALYSIS

OVERVIEW

A space utilization study and space needs assessment are tools that quantitatively analyze campus space types to inform decision-making regarding physical planning and resources. The **Space Utilization Study** measures and analyzes the efficiency of instructional room usage (classroom and laboratory space) during a designated term. The **Space Needs Assessment** quantifies the amount of space CHC currently utilizes, and calculates the ideal quantity of space needed in the future based upon specific metrics and strategic enrollment growth and goals. As a mathematical model, these studies serve as a baseline to understand how space can best serve CHC, assuming state standards and best practices. In combination with programmatic input, facilities conditions, and qualitative data, both studies contribute to identifying opportunities for new, re-purposed, or elimination of space.

Both studies utilize The Board of Governors of the California Community Colleges Policy on Utilization and Space Standards (referred to as CA BOG Standards) as the measurable standard. These standards are used to assess space use of current facilities and plan development of future facilities, specifically for state-mandated Cap Load categories. The adjacent table outlines the varying space types studied through this process.

Note the full Space Utilization Study and Space Needs Assessment can be found in the Appendix.

SPACE TYPE	CAP LOAD	UTILIZATION STUDY	NEEDS ASSESSMENT
Classroom	●	●	●
Class Laboratories	●	●	●
Open Laboratories		●	●
Library & Study	●		●
Workspace	●		●
AV/TV	●		●
Student Centered			●
Assembly/Meeting/Exhibition			●
Health & Recreation			●
Dining & Merchandising			●



SPACE UTILIZATION STUDY

INTRODUCTION

The Space Utilization Study (SUS) was conducted by ALMA Strategies and San Bernardino Community College District to better understand the most current on-campus instructional space use and efficiency at Crafton Hills College.

METHODOLOGY

ALMA Strategies employed State efficiency metrics to measure the hourly instructional utilization and Weekly Student Contact Hours (WSCH) capacity and actual generation of each instructional room.

The analysis utilizes District instructional and scheduling data for Fall 2023 and the Campus 2023 Space Inventory from the California Community College Chancellor’s Office FUSION (Facilities Utilization Space Inventory Option Net).

The analysis looks at two key metrics: Weekly Student Contact Hours (WSCH) Efficiency and Room Use Efficiency.

Weekly Student Contact Hours (WSCH) Efficiency analyzes WSCH generated versus WSCH Capacity. WSCH generated refers to the number of contact hours an instructional room generates per week based on the number of enrolled students and contact hours schedule. WSCH Capacity refers to the capability of a room to host a maximum number of contact hours per week according to room use type, size, and Title 5 Standards.

Room Use Efficiency (RUE) is a sliding scale based on Average Station Occupancy and Contact Hours per Week. Room Use Efficiency is an inclusive metric that takes all Title 5 Standards for space utilization into account to determine an individual room’s overall efficiency rate.

Classroom Findings

WSCH Efficiency: 35%

RUE Average: 40%

BUILDING NAME	ROOM COUNT	AVERAGE RUE
Crafton Center	1	6%
Kin, Hlth, & Aquatics	1	9%
Learning Resource Center	3	12%
Performing Arts Center	2	16%
Central Complex 2	2	23%
West Complex	11	25%
North Complex	2	26%
Visual Arts	2	27%
Canyon Hall	2	35%
Central Complex 1	11	35%
East Complex 2	3	47%
Public Safety & Allied Health	9	161%
CAMPUSWIDE AVERAGE	49	40%

Laboratory Findings

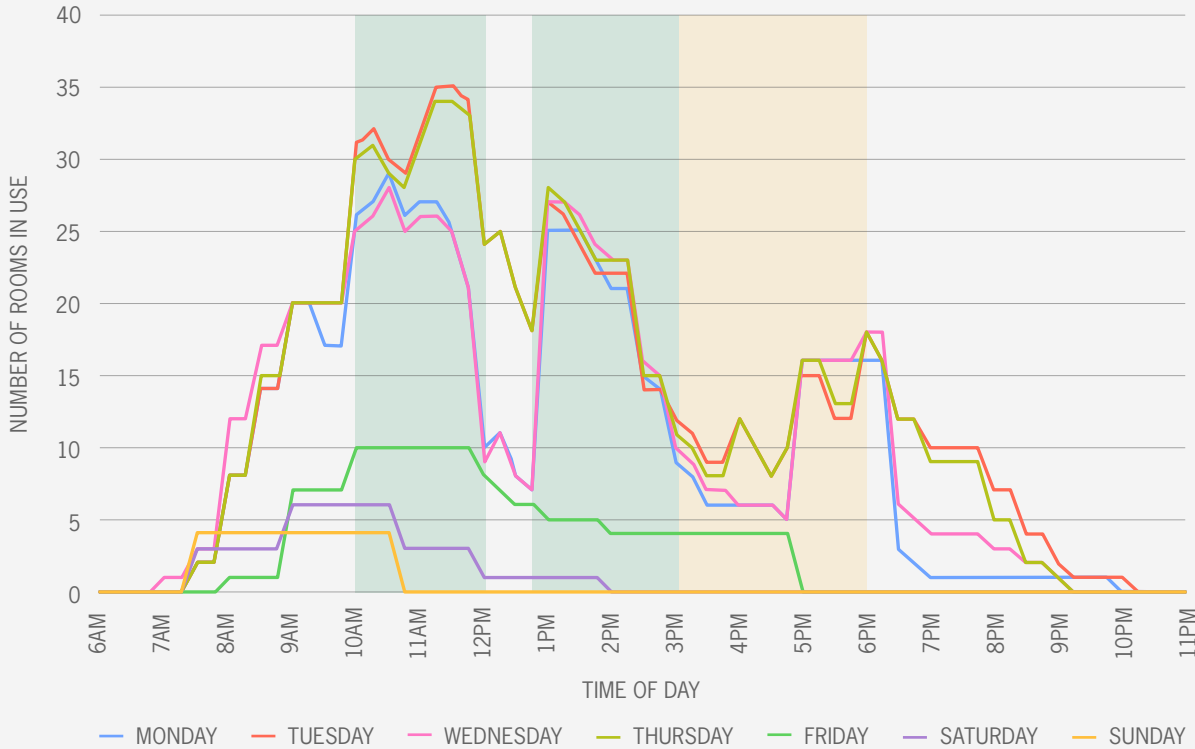
WSCH Efficiency: 69%

RUE Average: 66%

BUILDING NAME	ROOM COUNT	AVERAGE RUE
Learning Resource Center	1	0%
Public Safety & Allied Health*	3	0%
Performing Arts Center	2	14%
North Complex	2	28%
Central Complex 1	5	55%
East Complex 2	1	74%
Visual Arts	5	75%
Canyon Hall	8	80%
Central Complex 2	6	101%
CAMPUSWIDE AVERAGE	33	66%

*Note: Public Safety & Allied Health labs are dedicated for EMS and Fire programs, and scheduled internally by those programs. Therefore, the data does not reflect their usage.

LECTURE USE BY HOUR OF DAY



Peak

Classroom and assembly lecture spaces across CHC appeared to peak between **10am and 12pm** in the first half of the day and then peak again between **1pm to 3pm**. At the peak of lecture space usage, up to **35 of 49** lecture rooms were being used. While this may indicate the room usage is high, the actual utilization of each room varies.

Drop

Room usage drops off **after 3pm** with a slight increase at 6pm.

The precipitous drop off in lecture space usage appeared to be early in the morning (6am - 8am), late afternoon (3pm - 5pm), and evening into night (8pm - 10pm). These times aligned with how students would typically expect their courses to be scheduled.

FINDINGS: UTILIZATION OF CLASSROOMS (LECTURE)

During the Fall 2023, CHC used lecture spaces at a WSCH efficiency of approximately 35% (including assembly lecture spaces). The utilized 36 classroom lecture plus 13 assembly lecture spaces spread across campus totals an estimated 47,821 ASF and are capable of hosting approximately 75,787 lecture WSCH. The WSCH generated on-campus in these lecture spaces totals about 26,174 lecture WSCH, which represents the 35% WSCH efficiency.

Campus-wide, lecture rooms (including assembly lecture spaces) were being used at an average room use efficiency (RUE) of 40%. This measure takes into account all combined course activities in those lecture spaces across the campus (contact hours, enrollment, and station occupancy) on a weekly basis. While a high-level measurement, this also somewhat correlates with the on-campus WSCH Efficiency (35%).

The West Complex, Central Complex 1, and Public Safety & Allied Health Building make up 55% of the campus' total lecture WSCH Capacity and combine for 31 of the 49 lecture type spaces on-campus.

Source: ALMA Space Utilization Study

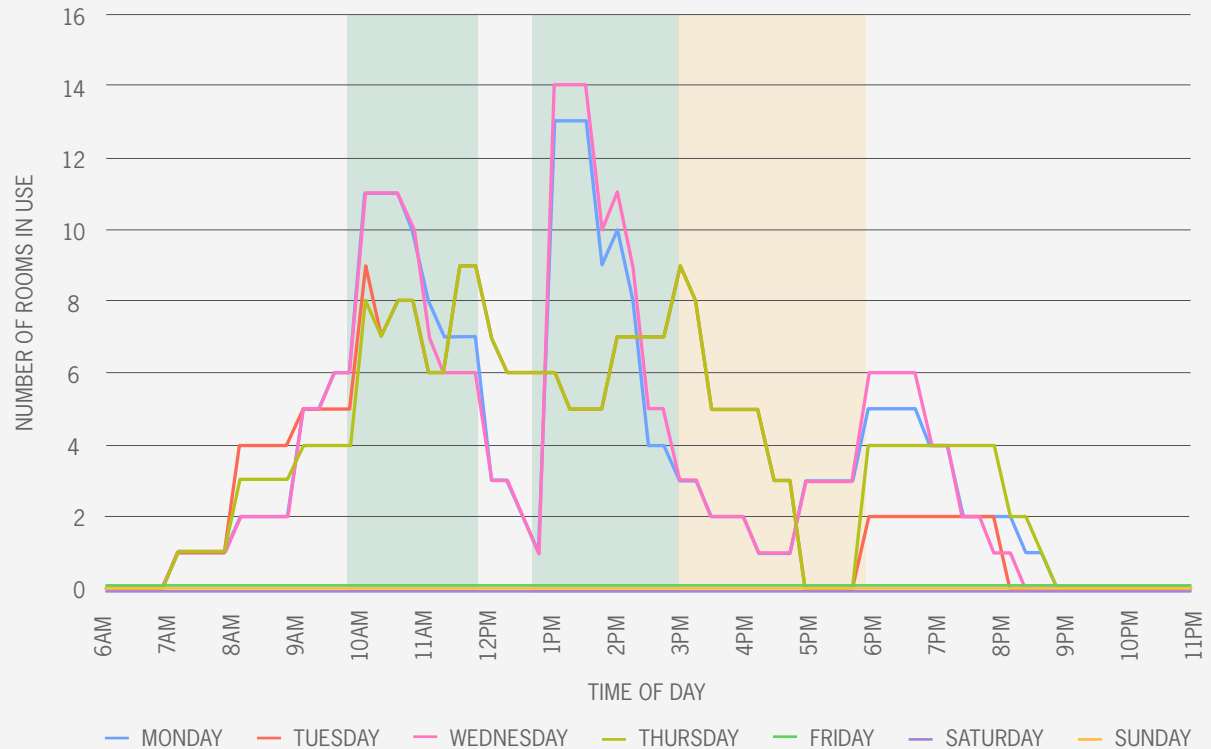
FINDINGS: UTILIZATION OF LABORATORIES

During Fall 2023, CHC used laboratory spaces at a WSCH efficiency of approximately 69% of capacity. The majority of lab spaces, which are primarily labeled as class lab per the space inventory, consist of 33 total rooms, totaling an estimated 35,408 ASF, with the capability of hosting about 15,245 lab WSCH. Specialized class lab categories, including study labs and non-class labs, total 6 rooms across campus for an estimated 1,693 ASF.

Campus-wide labs were being used at a room use efficiency (RUE) of 66%. Typically, the average RUE of labs trends higher than lecture spaces since students need the in-person component in order to conduct course requirements. However, 2 of the 9 buildings have 0% RUE, which brings the average down. The 66% campus-wide average also takes into account lab spaces in buildings that either do not utilize the lab space or are not regularly scheduled with instruction but are used by students in capacities such as tutoring or computer stations.

Similar to lecture rooms, buildings typically only contain a few lab rooms. The Central Complex 1, Canyon Hall, and Central Complex 2 buildings combine for 19 of the 33 coded labs and 69% of the campus' total lab WSCH Capacity.

LAB USE BY HOUR OF DAY



Peak

Laboratory spaces across CHC peaked between **10am and 12pm** in the first half of the day and then peak again between **1pm to 3pm**. At the peak of lecture space usage, up to as many as **14 of 16** lab rooms were being used.

Drop

Lab usage dropped off **after 3pm** with a slight increase at 6pm.

The precipitous drop off in lab space usage appeared to be early in the morning (6am - 8am), late afternoon (3pm - 5pm), and evening into night (8pm - 10pm). These times aligned with how students would typically expect their courses to be scheduled.

Source: ALMA Space Utilization Study

SPACE NEEDS ASSESSMENT

INTRODUCTION

The Space Needs Assessment was conducted by DLR Group and San Bernardino Community College District to quantify existing space utilized and to calculate the ideal quantity of space needed in the future based upon specific metrics and strategic enrollment growth and goals.

METHODOLOGY

Space needs calculations are developed using metrics established by the California Board of Governors, and industry standards when necessary (noted in the “Standards and Metrics” section of this report). These calculations rely heavily on the inputs of current and future Full-Time Equivalent Students (FTES), Weekly Student Contact Hours (WSCH) and Full-Time Equivalent Faculty (FTEF). Using the current space inventory as a baseline, each space type is calculated on a square footage level for what Crafton Hills College should have today and what will be needed in 2028, and 2033. The following section outlines the key inputs and standards utilized to calculate the space needs.

Existing Space

Quantifying existing space serves as the baseline to compare against ideal existing need and future need calculations. This Assessment utilizes the FUSION Space Inventory, as it existed in March 2024. The inventory was then updated with space impacts from Phase 00 projects (projects funded by Measure CC). These projects are assumed as a part of the existing baseline for the purposes of the Facilities Master Plan.

SPACE CATEGORY	ASF	% of Space
Instructional	96,424	36%
Classroom	40,536	15%
Class Laboratory	54,179	20%
Open Laboratory	1,709	1%
Workspace	39,521	15%
Library and Study	32,349	12%
General Use	42,307	16%
Student Centered	5,574	2%
Assembly/Meeting	31,107	12%
Exhibition	3,766	1%
AV/TV	2,860	1%
Dining & Merchandising	9,978	4%
Merchandising	4,184	2%
Food Facility	5,794	2%
Health & Recreation	11,669	4%
Athletics & Rec.	10,096	4%
Health & Well Being	1,573	1%
Campus Service	27,678	10%
Child Development	6,212	2%
Unclassified	1,141	0%
Other	240	0%
TOTAL	267,519	

Notes:

- The Field Building is included in Class Laboratory
- Workspace includes some 680 Meeting Rooms that serve as conference rooms and 650 Lounge or 690 Locker Room space that serves as office service.
- Other is M&O offices.

FTES, WSCH, and FTEF Projections

As referenced above, space needs calculations rely heavily on the inputs of current and future FTES, WSCH, and FTEF. An important delineation for FTES is the FTES in-person versus the FTES online, as space needs are impacted by students visiting and interacting on campus. Additionally, for calculations regarding instructional space, it is important to understand what percentage of WSCH occurs in lecture/classroom spaces versus laboratory spaces.

The District provided actual enrollment data for Fall 2023 and Fall 2024. Additionally, the District provided target enrollment growth percentages for Fiscal Year 25 through Fiscal Year 29. The assessment projected enrollment from Fall 2024 (actual) data utilizing these percentages through 2029. For 2029 - 2033, the Assessment assumes 1% growth year over year.

For the purposes of the Assessment, all future projections assume 100% in-person versus 0% online. The goal of this is to test the capacity of campus spaces, as the College pursues bringing more students back in-person. Note the enrollment numbers utilized are from Main Campus and do not include Off-Campus FTES.

The table on the adjacent page outlines the FTES numbers and growth percentages used in this study, as well as the on-campus versus online split.

The WSCH split between lecture and lab is derived from the Fall 2023 course data. The data was analyzed to calculate WSCH from all sources. On-campus lecture equates to 67.9% of WSCH on-campus; On-campus Lab equates to 29% of WSCH on-campus; And on-campus PE equates to 3.1% of WSCH on-campus. These percentages factor into space projections for classroom and laboratory space.

FTEF is utilized to calculate workspace needs. Existing and future faculty and staff counts were provided by the District and the College.

FULL TIME EQUIVALENT STUDENT (FTES DATA)

FALL TERM	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
% Growth	(ACTUAL)	4%	4%	4%	4%	1%	1%	1%	1%	1%
TOTAL FTES (Main Campus)	1,985	2,064	2,147	2,233	2,322	2,345	2,369	2,393	2,416	2,441
In-Person FTES	1,299	2,064	2,147	2,233	2,322	2,345	2,369	2,393	2,416	2,441
% On-Campus	60.4%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Online FTES	686	0	0	0	0	0	0	0	0	0
% Online	39.6%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Note: FTES from Main Campus was utilized for the Assessment. Off-Campus FTES are not factored into space needs.



Standards & Metrics

Standards and metrics are applied to the people (FTES, FTEF, WSCH) inputs to calculate the ultimate need. The following standards are applied in this assessment:

California Board of Governors

The Board of Governors of the California Community Colleges Policy on Utilization and Space Standards (referred to as CA BOG Standards) is a set of standards used to assess space use of current facilities and plan development of future facilities. The standards were updated in 2020 and supersede previous utilization targets established by the State of California under Title V.

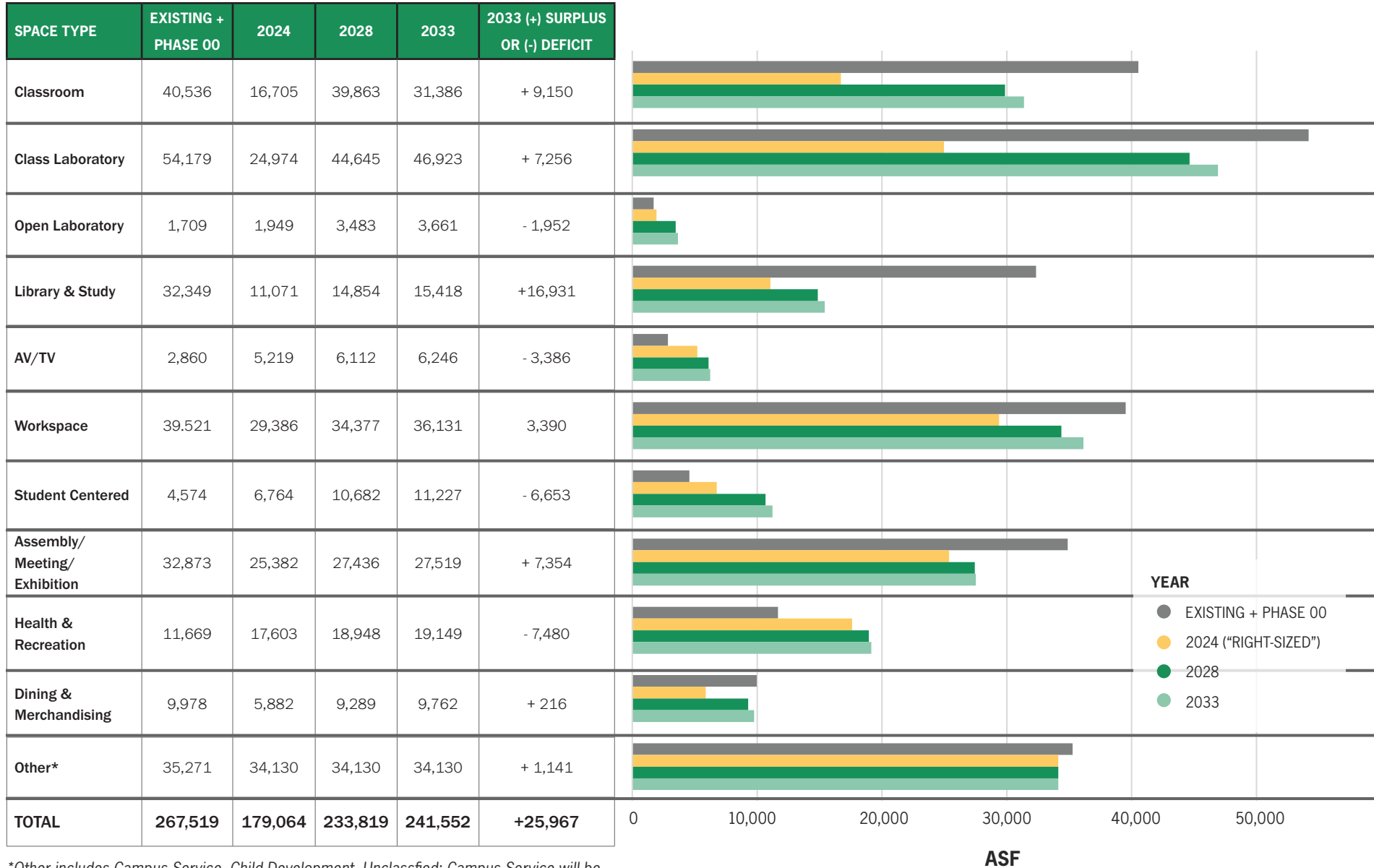
These standards measure existing and future need for academic spaces such as classrooms, laboratories, library and technology space, and faculty offices. The standards are utilized in the space assessment to visualize how instructional spaces are being actively utilized and as the calculation guide to determining future need. The standards represent intense instructional use with expectations that facilities actively have participants in space between 40 - 70% of the time in a given 70 hour week.

Other Standards

For certain space types, the CA BOG does not have set standards. When applicable, standards from CA Title V, the Council of Education Facility Planners (CEFPI), and recognized metrics based upon expertise are used. Trends in higher education are referenced throughout to support, challenge, and provide context on results from the space needs analysis.

SPACE TYPE	STANDARDS APPLIED
Classroom	CA BOG
Class Laboratories	CA BOG
Open Laboratories	CA BOG
Library & Study	CA BOG
Workspace	CA BOG
AV/TV	CA BOG
Student Centered	CA Title V
Assembly/Meeting/Exhibition	CEFPI and Best Practices
Health & Recreation	CA Title V
Dining & Merchandising	CEFPI

SPACE NEEDS ASSESSMENT RESULTS



*Other includes Campus Service, Child Development, Unclassified; Campus Service will be impacted by construction of future facilities, not by growth of people.

PROGRAM NEEDS & EDUCATIONAL PLAN ALIGNMENT

INTRODUCTION

In addition to space needs, dictated by enrollment, educational and non-educational program needs contribute to the type of space needed and how space is used on campus. Crafton Hills College provided a list of programs that are expected to grow in the next decade. These programs are inputs into the plan, as differing programs require varying types of spaces.

In parallel, a Program Demand Gap Analysis: Environmental Scan and Review of Academic Programs was completed in April 2024 by Lightcast. This report assists in determining the relevant programs to grow and focus on at CHC in relation to the regional economy and labor demand. This report was compared against the College's list of programs, to ensure student success and academic excellence.

PROGRAMS

Medical and STEM Programs

The College is expecting growth in programs within the Medical and STEM fields, including: Nursing, Physical Therapy Assistant, Vocational Nursing, Home Health Aide, and Phlebotomy.

The Environmental Scan outlined Registered Nursing as a program to focus on in terms

of quality, and Nursing Assistants and Physical Therapy Assistants as new program opportunities.

These programs require classroom laboratory space with equipment and technology that meet course needs. The North Complex is the current hub of Health Sciences spaces.

Other Educational Programs: Long-Term Growth

Long-term growth was identified for Paralegal, Geology, Geography, Arts, Foreign Languages, and Kinesiology. Paralegal was noted in the Environmental Scan as a new program opportunity. Geography, Art/Art Studies, Kinesiology, and Geology were in the top 10 Associate and Transfer Track degree level gaps. Spanish Language and Literature was noted as an opportunity for growth.

A majority of these programs will rely on classroom spaces and some open lab spaces. Art, Kinesiology, and Geology require class lab spaces as well. The new Performing Arts Center will serve as hub for musical arts related courses. The new Instructional Building will support visual art programs. The existing Kin., Hlth., and Aquatics Building and surrounding athletics and recreations spaces serve as the hub for Kinesiology.

Active Learning

A need for active learning spaces was identified through engagement with faculty. There is a desire for more flexible furniture arrangements, technology, and informal classroom arrangements.

Non-Educational Program Needs

Additional program needs beyond academic programs were identified through engagement and previous studies as well, including:

- Student housing
- Gym space for indoor athletics and events
- Collegiate size soccer field
- Instructional pool
- Concentration of student services
- Multi-cultural spaces
- Public art and wayfinding elements

SUMMARY OF NEEDS

Together, the Space Utilization Study and the Space Needs Assessment provide a quantitative lens on how space is being utilized and an estimate of how much space is needed based upon metrics and standards. The Program Needs provide a qualitative of lens on what types of functions these spaces need to serve.

CLASSROOM

Crafton Hills College has the opportunity to mature into their classroom spaces as enrollment grows and more students return to campus. As shown by the Utilization Study, there is an opportunity to increase efficiency of use by increasing WSCH in classrooms. This could be done through course scheduling, offering courses at off-peak hours or off-peak days.

Although classroom space is physically abundant, these spaces do not always meet the needs of modern teaching and learning methods. Active, more collaborative learning methods are desired on campus, which require greater square footage per seat, flexible furniture, and technology. Renovations and new construction of classrooms should reference the 2020 District Standards and Campus Guidelines.

CLASS LABORATORY

Currently, CHC has enough class laboratory space to support existing programs, but this should be continually assessed as programs grow, specifically around the Medical and STEM fields. Several buildings on campus are utilizing labs fairly efficiently, but there is an opportunity to assess underutilized labs in buildings, such as the North Complex, to see how repurposing or renovation may increase utilization. Similar to classrooms, there is an opportunity to assess the course schedule and increase offerings during non-peak hours or days.

The new Instructional Building and new Performing Arts Center provide modern spaces for growing programs. Future program growth with dictate need for an increase in lab space and renovation of existing lab spaces.

OPEN LABORATORY

Open Laboratory space includes unscheduled lab space that students utilize for outside of class practice, experimentation, study, and work. There is an existing and future need to increase open laboratory space to provide students with the resources for learning and investigation.



LIBRARY & STUDY

CHC has sufficient library and study space. Even with a concentration of space in the Learning Resource Center, the campus provides pockets of study space in other buildings on campus such as the New Instructional Building, Central Complex 1, Canyon Hall, and PSAH. As digital resources become increasingly prominent, there is an opportunity to rethink stack spaces in the library for increased student space, collaboration space, and open labs, such as computer labs.

AUDIO VISUAL / TELEVISION (AV/TV)

Another area of need identified from the assessment is in AV/TV. Virtual and hybrid learning is prominent in teaching modalities today. Facilities such as tech based study areas, “zoom” rooms, and recording studios for teaching should be provided to increase accessibility and flexibility.

WORKSPACE

CHC currently has enough total square footage of workspace to support faculty and staff. Similar to classrooms, even if there is enough space, this space is not always configured to meet the needs of faculty and staff. Also, while there may be enough total space, there

may not be an adequate count of offices, as oversized offices cannot be right-sized overnight. Workspace should be accommodated in new construction projects and renovations to support growing programs and growing enrollment. Workspace configurations should be designed to accommodate working styles, considering amount of touchdown/focus work, collaborative work, and meetings. Types of touchdown space may vary between private to open office, to hoteling based upon hybrid work policy and a user’s daily routine. Collaboration and meeting spaces may vary in size and formality. Renovations and new construction of workspace should reference the 2020 District Standards and Campus Guidelines for sizing and configuration.

STUDENT CENTERED

Student centered spaces include lounges, student gathering and student meeting space. These spaces are for students to interact, socialize, restore, or collaborate. (This does not take into account outdoor gathering spaces.) Student centered space is projected as an area of need. Student centered space should be spread across buildings on-campus, while also concentrating spaces close to student services.



ASSEMBLY/MEETING/EXHIBITION

The new Performing Arts Center and new Instructional Building are instrumental in providing Assembly and Exhibit space to campus. Crafton Hall, the Learning Resource Center, Crafton Center, and Canyon Hall also provided assembly spaces, that often double as lecture halls. With a need for a new gymnasium, there is an opportunity for this to double as a large indoor event space with bleacher seating.

HEALTH & RECREATION

With the demolition of the old gymnasium in 2017, CHC is in need of a new gymnasium to support indoor athletics and recreation. The centralized hub of facilities and fields at the north portion of campus allows synergies between indoor and outdoor athletics and recreation, as well as physical education and kinesiology programs. Sharing of spaces is highly encouraged and supported by the Plan.

CHC currently has an adequate amount of Health Services space, but there are opportunities to locate Health Services with other wellness functions, including counseling.

DINING & MERCHANDISING

There is currently sufficient space in dining and merchandising per the assessment, which includes food facilities and the bookstore. Engagement revealed a desire for enhanced vending and food spaces. As enrollment grows and more students return to campus, CHC will need to provide more food facilities to support students, especially if housing is present on campus.





CHC4

CAMPUS VISION PLAN



CENTRAL COMPLEX

6775

VISION PLAN

At Crafton Hills College, the 2024 updated Facilities Master Plan emphasizes validating and completing initiatives from both past and present College and District planning efforts that support and sustain the strategic directions and actions of the CHC Educational Master Plan. The Plan includes several projects focused on expanding academic programs, fostering a sense of community among students, honoring and celebrating the indigenous history of CHC into the future design and naming of spaces, enhancing community outreach, and addressing deferred maintenance. Ultimately, it will serve as a phased roadmap for development and implementation over the next decade and beyond.

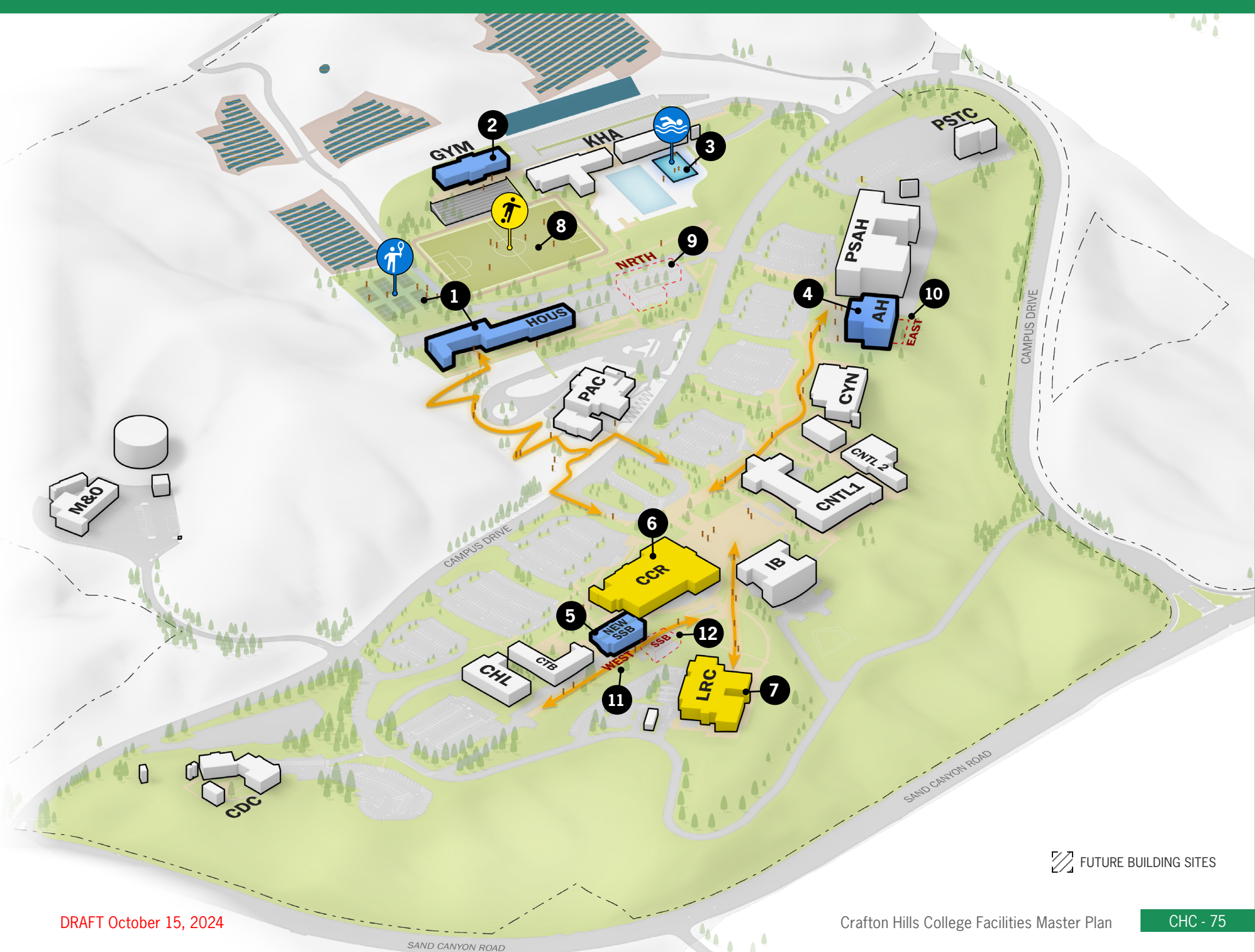
The proposed recommendations are organized into the categories of: New Construction, Renovations, Demolitions, and Campus-Wide Improvements. The following section walks through each of these recommendations in further detail. Altogether, the Plan is designed with flexibility and resiliency in mind, to achieve the goals and mission of Crafton Hills College.

NEW CONSTRUCTION		GSF
1	Student Housing and Tennis Courts	49,700
2	Gymnasium	19,050
3	Instructional Pool	
4	Allied Health Building	30,000
5	Student Support Building Replacement	11,000

RENOVATIONS		ASF
6	Crafton Center	5,200
7	Learning Resource Center Stacks Repurposing	1,500
8	Collegiate Size Soccer Field	

DEMOLITIONS		GSF
9	North Complex	10,300
10	East Complex	5,700
11	West Complex	6,800
12	Student Support Building	5,600

CAMPUS WIDE IMPROVEMENTS	
	Alignment with Sustainability Plan
	Placemaking in the Exterior Environment
	Active Learning Classroom Retrofits
	Circulation and Parking
	Infrastructure and Safety



FUNCTIONAL ZONES & FUTURE BUILDING SITES

This Plan supports and builds upon the previous planning efforts that introduced the “Campus Functional Zones”. These zones are organizing elements that ensure important synergies between uses and programs.

As described throughout the new construction and renovation projects, each project aims to reinforce or create a Functional Zone:

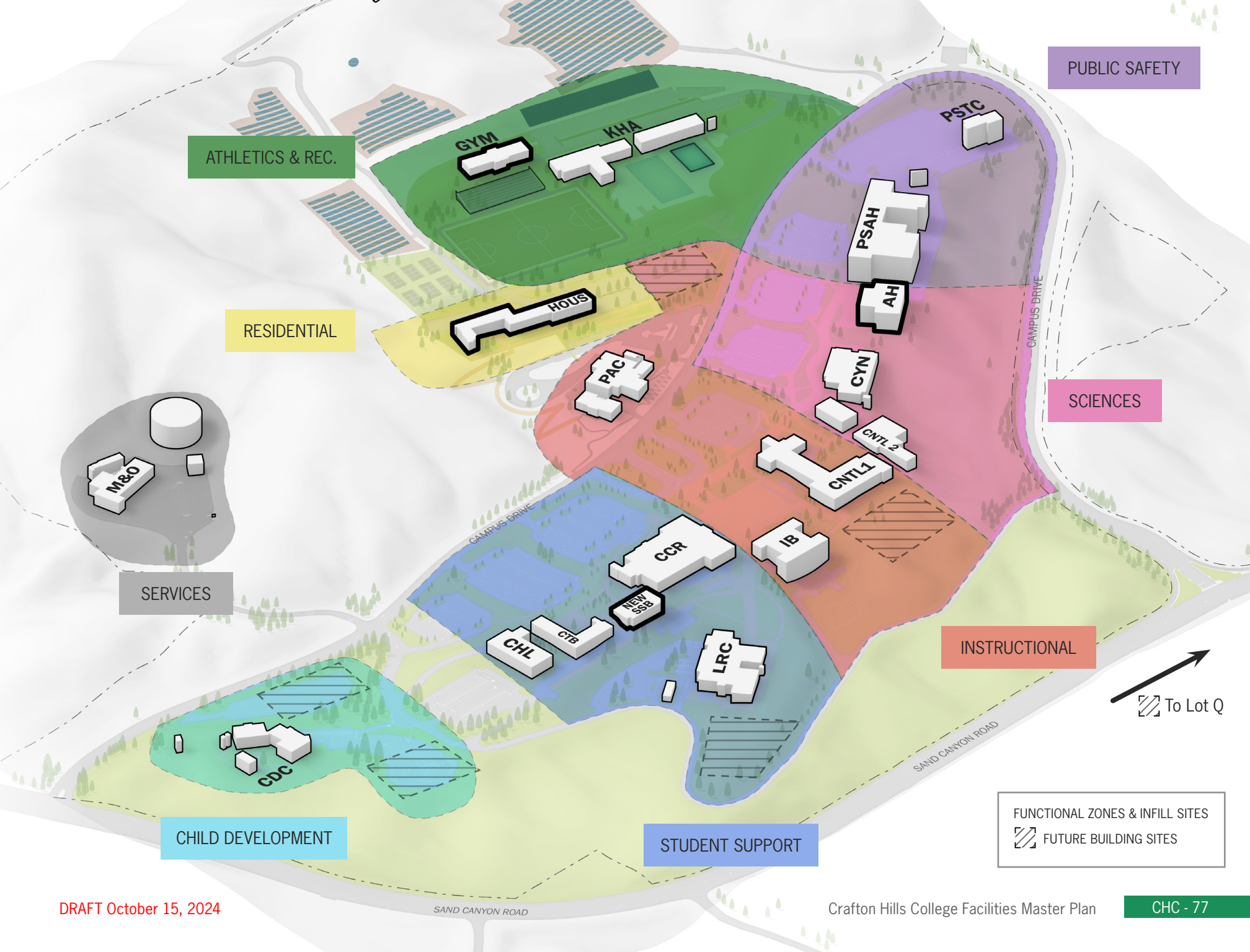
- The Athletics & Recreation zone is supported by the new gymnasium, instructional pool, relocated tennis courts, and repurposed collegiate size soccer field
- The Sciences zone is enhanced with the new Allied Health Building
- The housing project will create a new Housing zone located in between the key Athletics & Recreation and Instructional zones
- Renovations to West Complex, SSB, Crafton Center, and LRC stacks all further the concentration of student support services and student focused space

Campus-wide projects serve to tie the entire campus together, physically and operationally. Transitions between Functional Zones are seamless with campus-wide strategies for placemaking, circulation, sustainability, and infrastructure.

In addition to the projects outlined in the Vision Plan, long-term future building sites have been identified, as Crafton Hills College looks further into the future. These future building sites account for buildable locations that would support the existing development and configuration of campus.

One future site opportunity is Parking Lot Q at the intersection of Sand Canyon and Chapman Heights Road. The site needs a seismic study to determine the constructability of the site, but opportunities for the site include housing, fire/emergency training expansion, or selling/leasing the parcel.

The Functional Zones should remain a guiding element, as these future building sites are considered for development.



ATHLETICS & REC.

RESIDENTIAL

SERVICES

CHILD DEVELOPMENT

STUDENT SUPPORT

INSTRUCTIONAL

SCIENCES

PUBLIC SAFETY

FUNCTIONAL ZONES & INFILL SITES
 [Hatched Box] FUTURE BUILDING SITES

To Lot Q

CAMPUS DRIVE

SAND CANYON ROAD

M&O

GYM

KHA

HOUS

PAC

PSAH

AH

PSTC

CYN

CNTL2

CNTL1

IB

CCR

NEW SSB

LRC

CHL

CTB

CDC

STUDENT HOUSING AND TENNIS COURTS

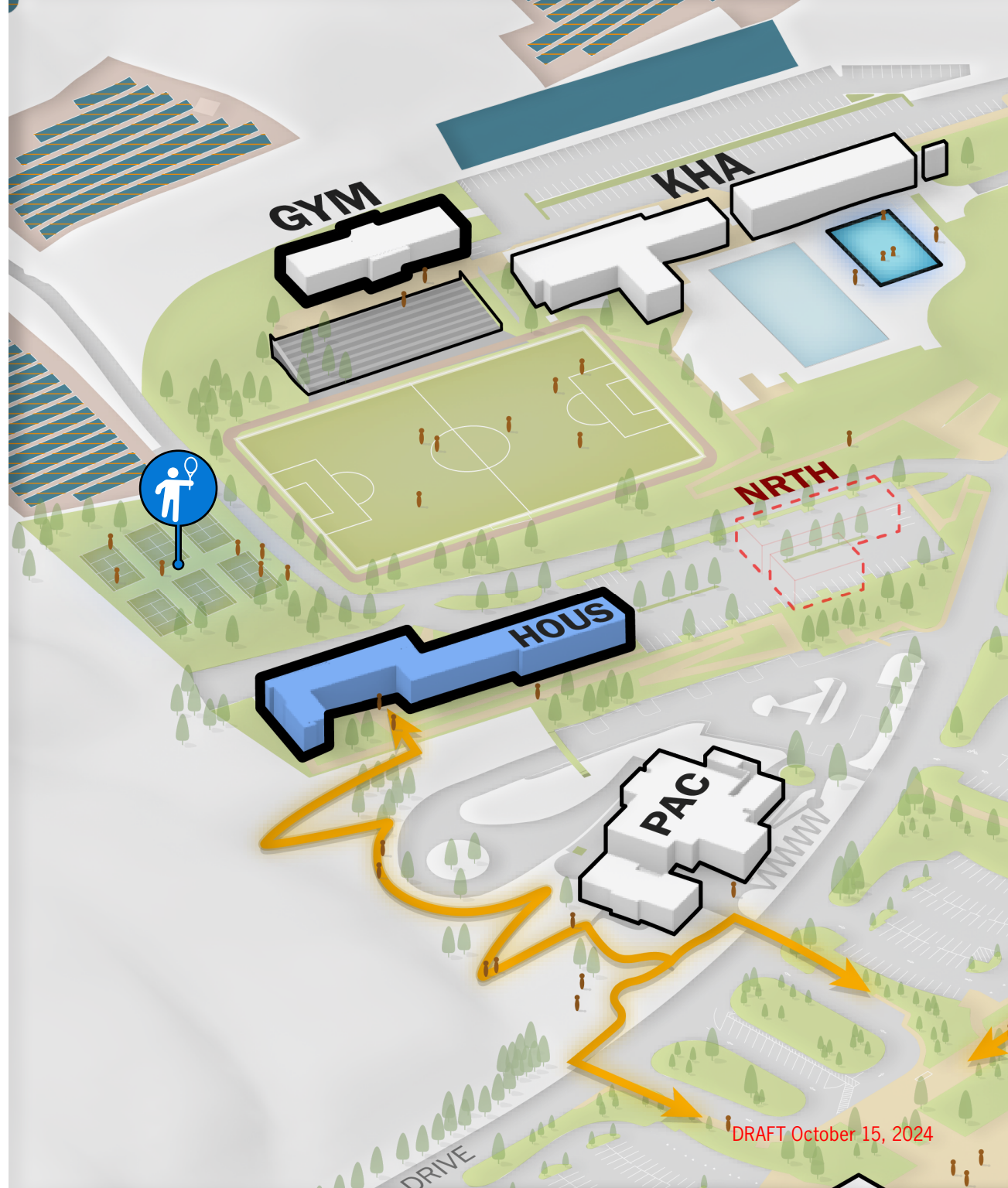
Size:

33,500 ASF | 49,700 GSF

Building Programs:

- Student Housing (~170 units)
- Tennis Courts Relocation
- Communal Space
- 80-160 parking spaces

A new student housing project will provide quality, affordable, and accessible housing to address basic needs and concerns for students. The complex is planned for approximately 170 micro-units and will be located north of the new Performing Arts Center (PAC) and just to the south of the athletics and recreation area. The existing tennis courts will be relocated north of the new housing complex to further concentrate athletic uses together. The housing complex will be interconnected into campus with pathways, landscaping, and open space improvements. A new parking lot adjacent to the housing development will include 80-160 parking stalls (depending on demolition of North Complex) and a drop-off area. The new facility will promote community, safety, and student well-being.



EDUCATION PLAN ALIGNMENT

- Housing security promotes student success and increases student retention and enrollment
- Provides student access to basic needs and resources, enhancing well-being
- Increases student recruitment and revenue
- Opportunities to expand sustainable practices and linger and learn spaces

SUSTAINABILITY PLAN ALIGNMENT

- Fosters social sustainability (human health and well-being)
- New construction project designed for LEED/ZNE, and to meet indoor water efficiency goals
- Site improvements that implement native landscaping and stormwater strategies
- Decreases student vehicle miles traveled to CHC

GUIDING PRINCIPLES ALIGNMENT



This project creates a new functional zone for residential uses



The surrounding site and landscape can contribute to placemaking through public art, open space improvements, and pedestrian connections



The housing project will include community and gathering spaces for students



GYMNASIUM, INSTRUCTIONAL POOL AND COLLEGIATE SIZE SOCCER FIELD

Size:

15,000 ASF | 19,050 GSF (Gym)

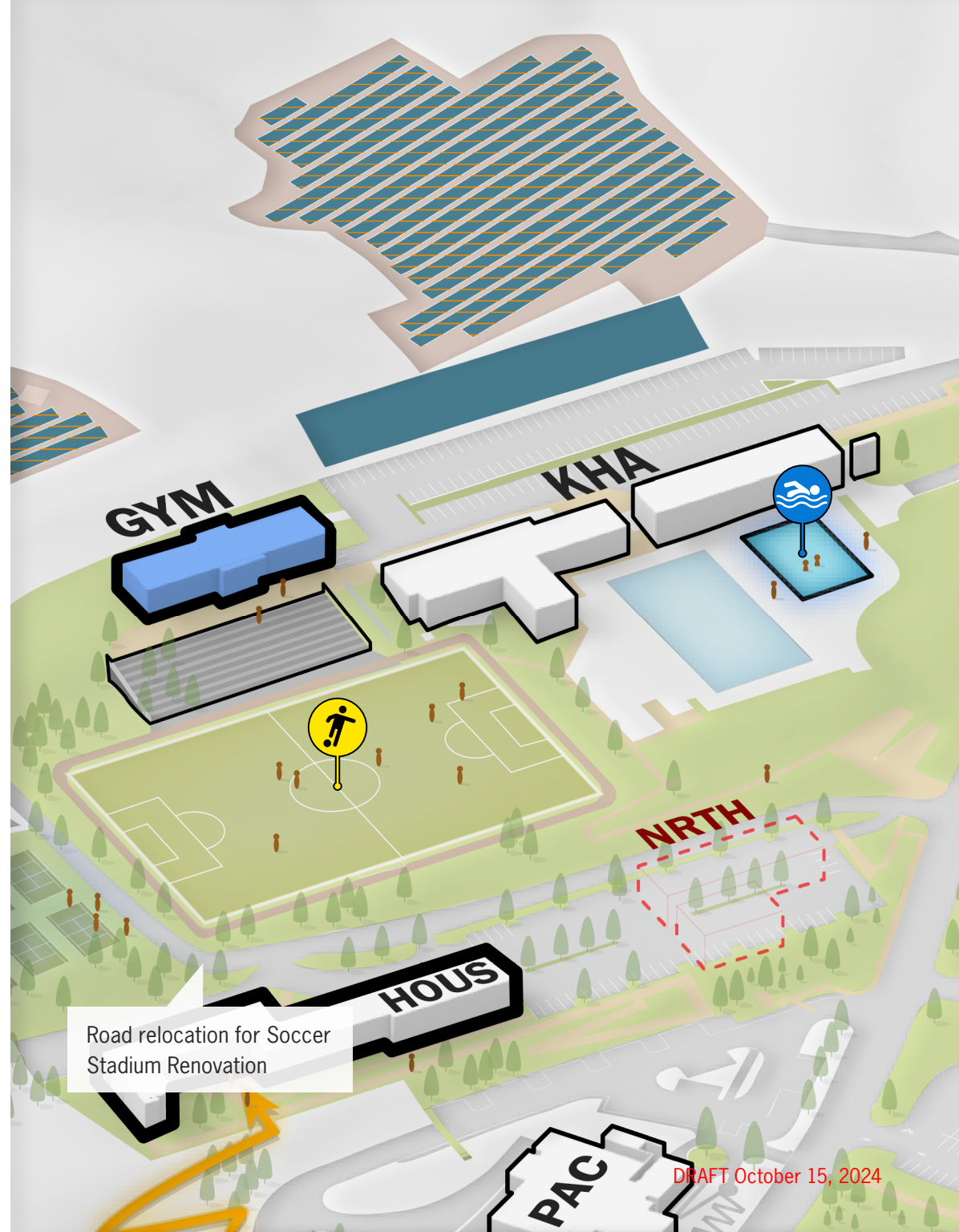
Building Programs:

- Gymnasium
- Bleachers
- Equipment Storage
- Training Room
- Basic Team Rooms; M/W Soccer, Basketball and Volleyball

This project will construct a new gymnasium to replace the gym facility demolished in 2021, meeting the existing and future demands of fitness, wellness, athletics programs, and course curriculums in dance, fitness, and kinesiology. Located adjacent to the existing Kinesiology, Health, and Aquatics Complex, and connected to Parking Lot J, the facility will build synergies between academic programs, athletics, and recreation.

The facility will support instructional classes in dance and fitness dance, basketball, volleyball, badminton, and other physical education programs. Team rooms and equipment storage will be included to support athletic programs. Beyond athletics and recreation use, the gymnasium space with bleachers can also serve as an event space.

In addition to the gymnasium, an instructional pool and collegiate size soccer field are proposed. The instructional pool will supplement the existing, highly-utilized pool with additional aquatic space for instruction, warm-up, and community programs. The existing field will be repurposed to a regulation synthetic soccer field with spectator seating and lights.



EDUCATION PLAN ALIGNMENT

- Facilities that support student well-being also promote student success and increases student retention
- Increases student recruitment and enrollment
- Facilities can support the community, including youth programs
- Opportunities to expand sustainable practices and linger and learn spaces
- Expands resources for students and diversifies types of spaces on campus

SUSTAINABILITY PLAN ALIGNMENT

- Fosters social sustainability (human health and well-being)
- New construction project designed for LEED/ZNE, and to meet indoor water efficiency goals
- Site improvements that implement native landscaping and stormwater strategies

GUIDING PRINCIPLES ALIGNMENT



This project bolsters the functional zone for athletics and recreation



The new field and site improvements around the gym and pool will contribute to identity and provide opportunities for art and branding



Athletics and recreation facilities serve as community and event spaces for students to gather



ALLIED HEALTH BUILDING

Size:

21,000 ASF | 30,000 GSF

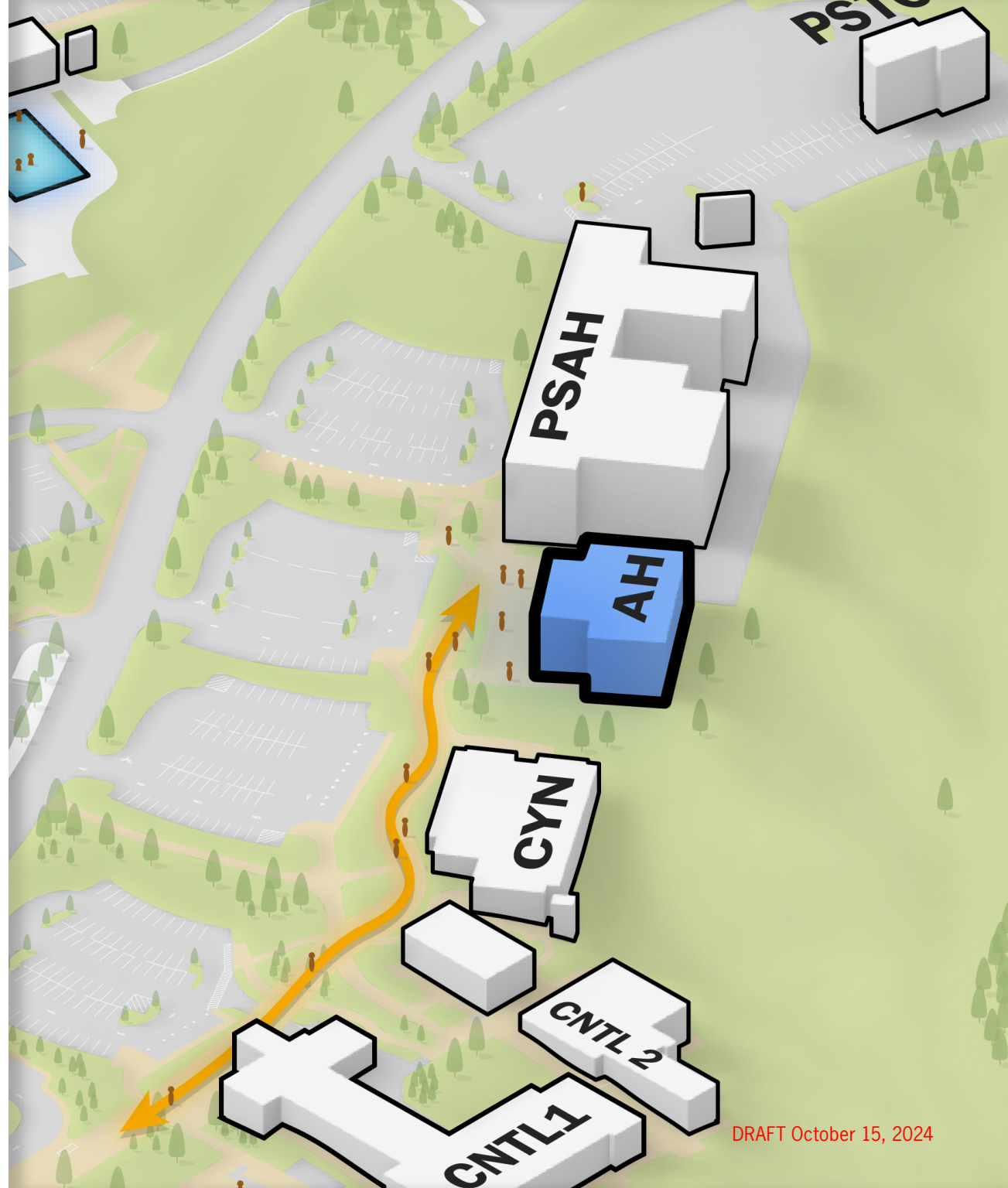
Building Programs:

- Vocational Nursing (LVN)
- Nursing Assistant (CNA)
- Home Health Aide
- Phlebotomy
- Physical Therapy

A new state-of-the-art Allied Health Building will support existing and growing programs including Vocational Nursing (LVN), Nursing Assistant (CNA), Home Health Aid, Phlebotomy, and Physical Therapy Assistants.

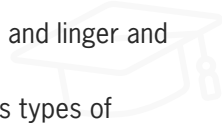
The new instructional space and support spaces within the Allied Health Building will enable North Complex to be vacated and eventually demolished. This site becomes a future building site.

Located adjacent to Canyon Hall, this building will require the demolition of the East Complex. The Allied Health Building will strengthen the concentration of sciences in this area of campus. The new building will be interconnected with pedestrian pathways and open space improvements.



EDUCATION PLAN ALIGNMENT

- Provides space and state-of-the-art facilities for new and growing medical health-related programs
- Increases student recruitment and enrollment
- Opportunities to expand sustainable practices and linger and learn spaces
- Expands resources for students and diversifies types of spaces on campus



SUSTAINABILITY PLAN ALIGNMENT

- New construction project designed for LEED/ZNE, and to meet indoor water efficiency goals
- Site improvements that implement native landscaping and stormwater strategies
- Enables removal of an aging facility



GUIDING PRINCIPLES ALIGNMENT



This project bolsters the functional zone for the sciences



Enables the replacement of the North Complex



Site improvements around the building will contribute to placemaking through public art, open space improvements, and pedestrian connections



STUDENT SUPPORT BUILDING REPLACEMENT

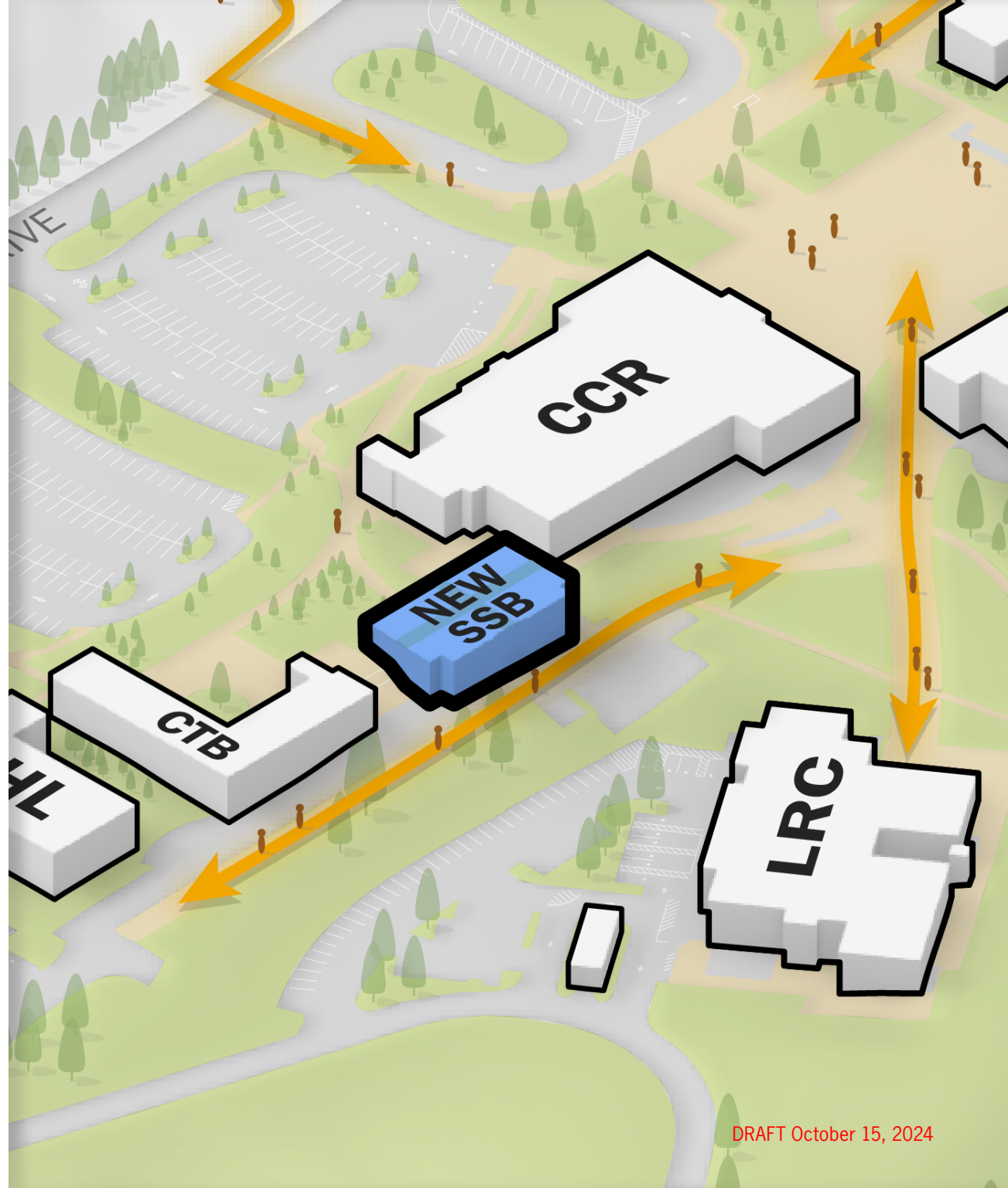
Size:

6,700 ASF | 11,000 GSF

Building Programs: (Consider the following programs along with the second floor of Crafton Center):

- Multi-cultural Center
- Student Health Services
- Workspace
- Student Services

A new Student Support Building will replace the West Complex and existing Student Support Building. The building will provide modern, state-of-the-art spaces for student services, including gathering and meeting space, workspace, and amenity space. In addition to accommodating existing programs within the Student Support Building, the design and programming of this building will compliment the programming of the second floor of Crafton Center; this allows for programs to shift from the Crafton Center to the new Student Support Building to strengthen student services and support in the core of campus.



EDUCATION PLAN ALIGNMENT

- Student-focused spaces promote student success, equity, and increase student retention
- Enables the ability to centralize and expand student services within Crafton Center and near Crafton Center, improving communication and access
- Creates spaces to support inclusivity, equity, anti-racism, and human sustainability

SUSTAINABILITY PLAN ALIGNMENT

- Fosters social sustainability (human health and well-being)
- New construction project designed for LEED/ZNE, and to meet indoor water efficiency goals
- Site improvements that implement native landscaping and stormwater strategies
- Enables removal of aging facilities

GUIDING PRINCIPLES ALIGNMENT



This project bolsters the functional zone for student support and services



Enables the replacement of West Complex and SSB



Focuses student services and student centered spaces into the core of campus



Opportunity for student centered spaces that support gathering and collaboration



CRAFTON CENTER RENOVATION

Size:

5,200 ASF

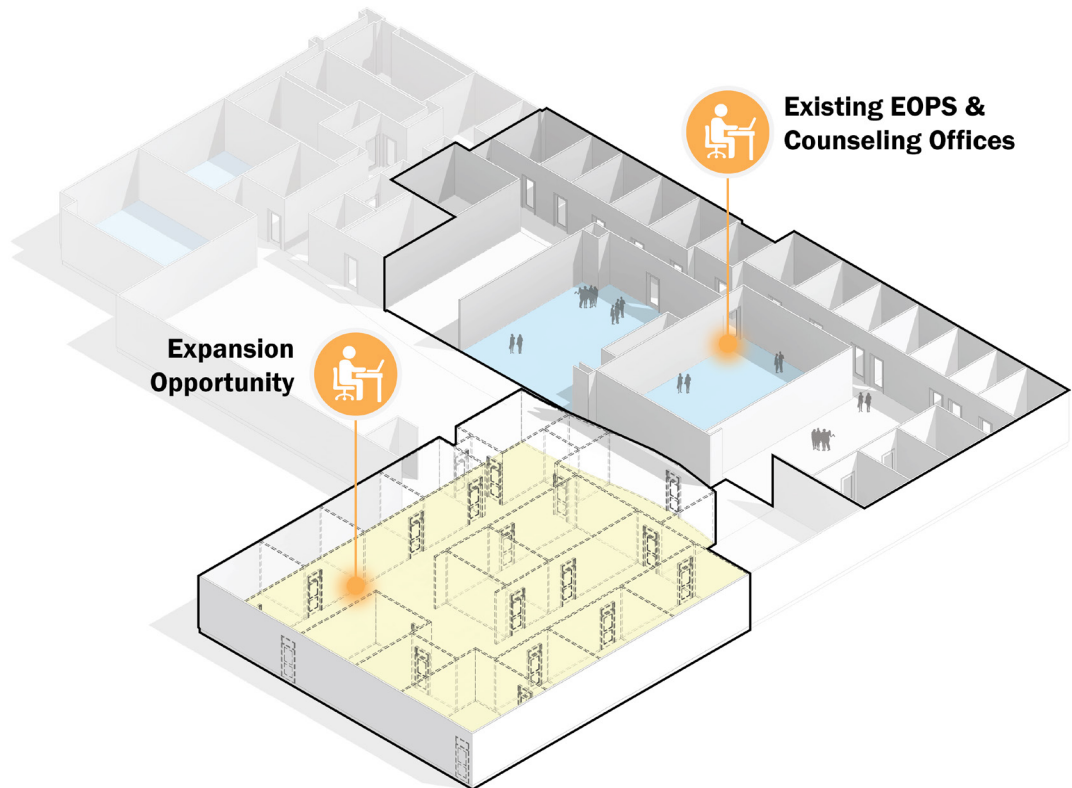
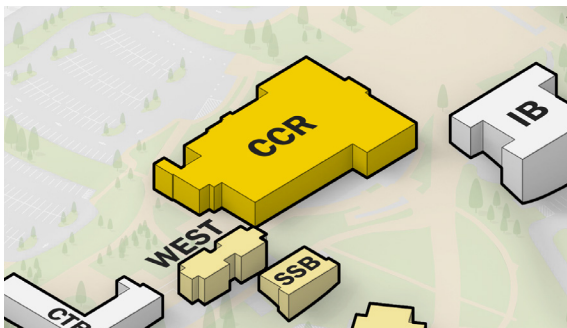
Building Programs: (Consider the following programs along with the new Student Support Building):

- Multi-cultural Center
- Student Health Services
- Counseling and EOPS expansion

With administration space vacated on the second floor of the Crafton Center, this area will be repurposed to expand student services.

With Counseling and EOPS already located on the second floor, this space can provide expansion space for both programs. Additionally, another student facing program, such as Student Health Services or a Multi-Cultural center, could be placed here. This renovation will support student success and wellness.

The renovation of the space provides the opportunity to implement a wall mural and public artwork that reflects CHC students.



Note: This is an illustrative, conceptual design for the Crafton Center, not a final design.

EDUCATION PLAN ALIGNMENT

- Student-focused spaces promote student success, equity, and increase student retention
- Centralizes and expands student services within Crafton Center, improving communication and access
- Creates spaces to support inclusivity, equity, anti-racism, and human sustainability

SUSTAINABILITY PLAN ALIGNMENT

- Fosters social sustainability (human health and well-being)
- Renovation to include sustainable materials

GUIDING PRINCIPLES ALIGNMENT



This project bolsters the functional zone for student support and services



Focuses student services and student centered spaces into the core of campus



Supports Crafton Center as a welcoming central hub for students to build community



WEST COMPLEX RENOVATION (ALTERNATIVE)

Size:

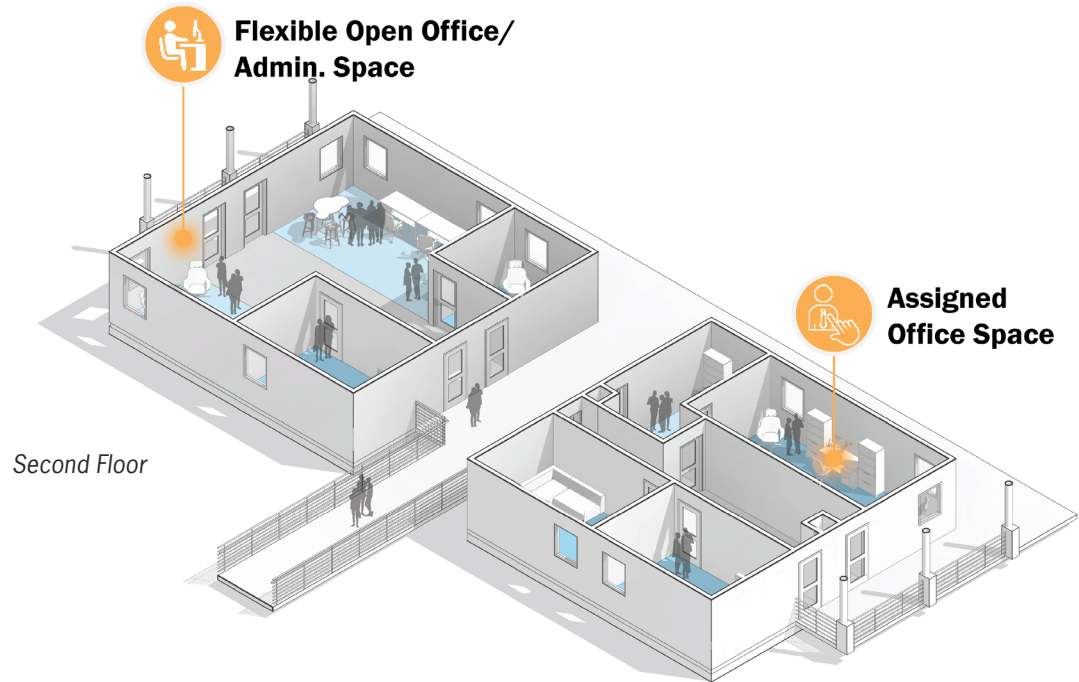
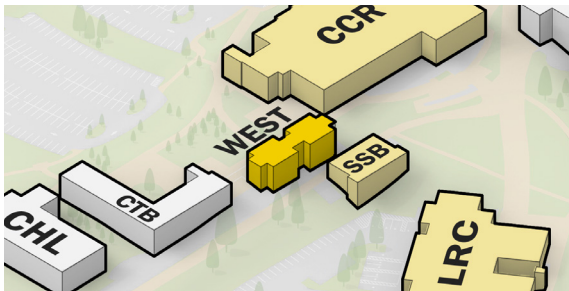
5,600 ASF

Building Programs:

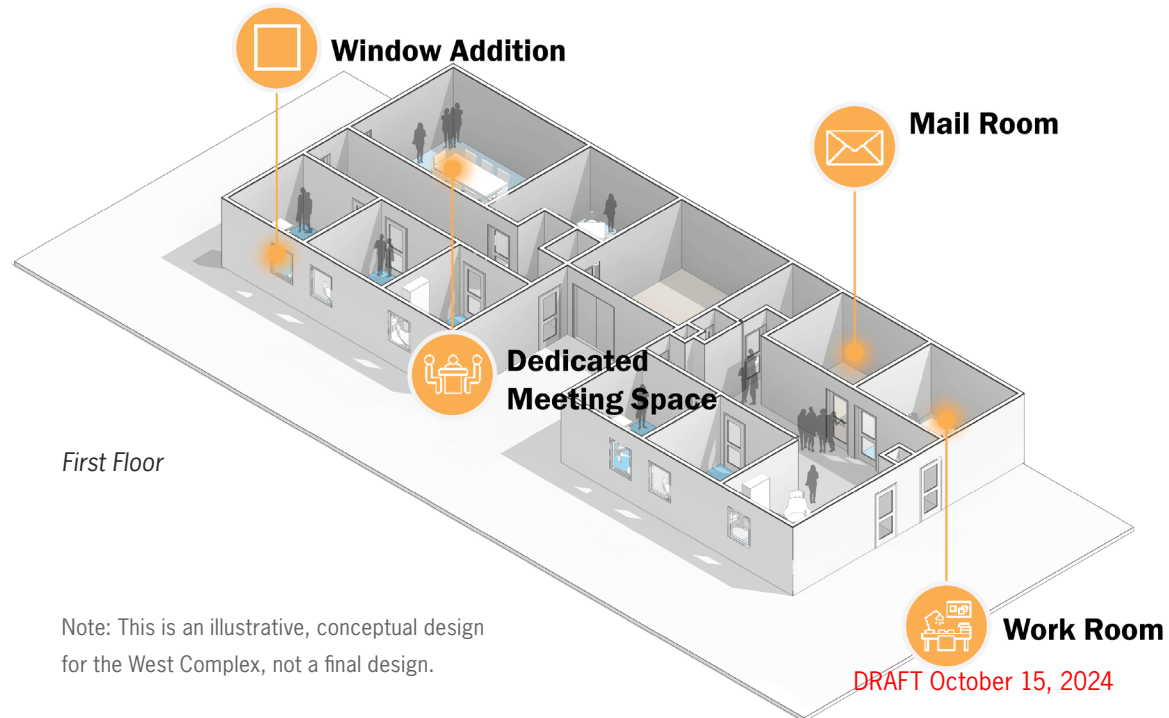
- Relocated Administrative Space

As the demolition of West Complex will require further study, this alternative project provides another option if West Complex remains and is renovated. It relocates the College administration from Crafton Center to a reimagined first and second floor of the West Complex. The building will be transformed into modern offices, meeting spaces, a mail room and office support space.

Transitioning to office space, the building will require opening up portions of the exterior walls to introduce windows and natural light. This will trigger a seismic upgrade to the structure. Additionally, the building will receive infrastructure and energy efficiency upgrades.



Second Floor



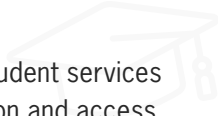
First Floor

Note: This is an illustrative, conceptual design for the West Complex, not a final design.

DRAFT October 15, 2024

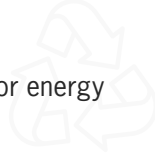
EDUCATION PLAN ALIGNMENT

- Relocates non-student facing functions
- Enables the ability to centralize and expand student services within Crafton Center, improving communication and access



SUSTAINABILITY PLAN ALIGNMENT

- Renovation enables replacement of building systems for energy efficiency and water conversion



GUIDING PRINCIPLES ALIGNMENT



This project bolsters the functional zone for student support and services



Enables larger renovation to update and improve the building's energy efficiency



Opens up space in Crafton Center for student services



STUDENT SUPPORT BUILDING RENOVATION (ALTERNATIVE)

Size:

2,400 ASF

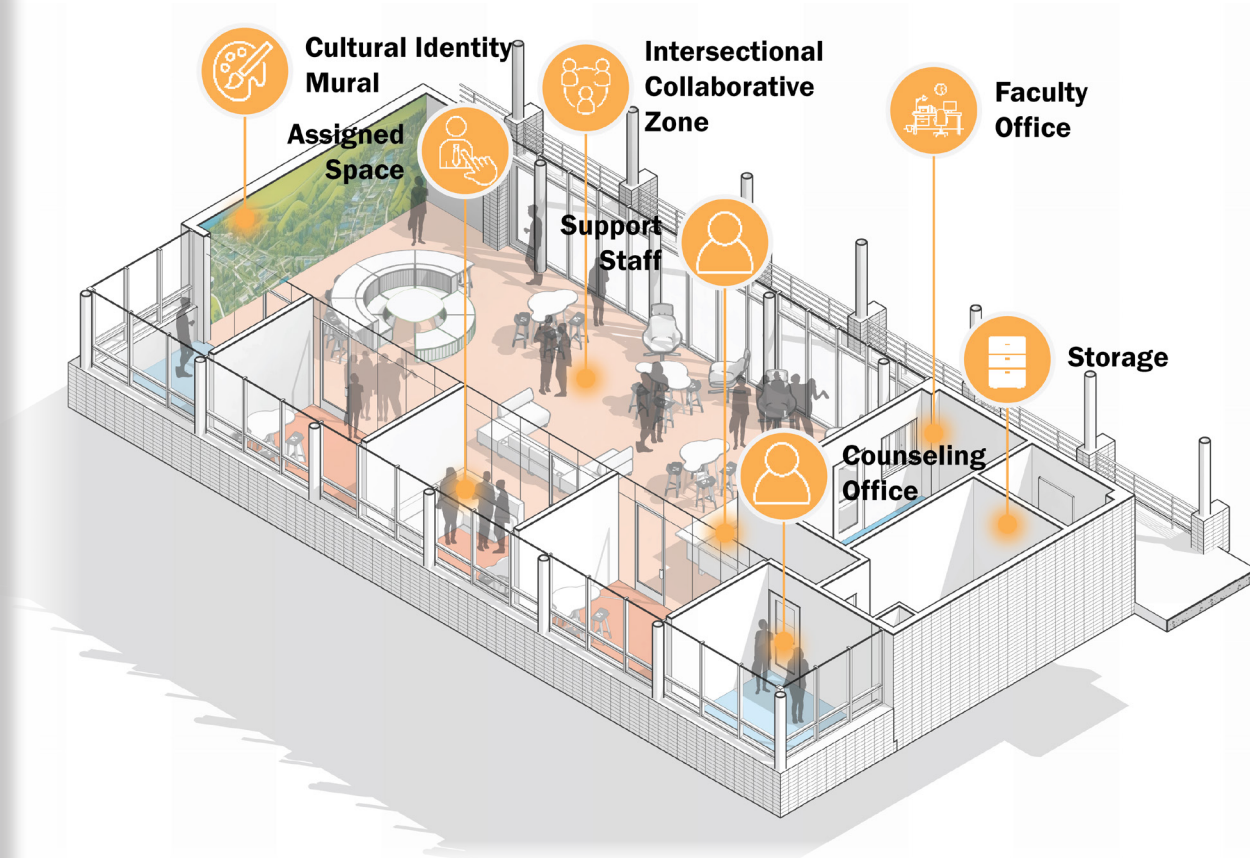
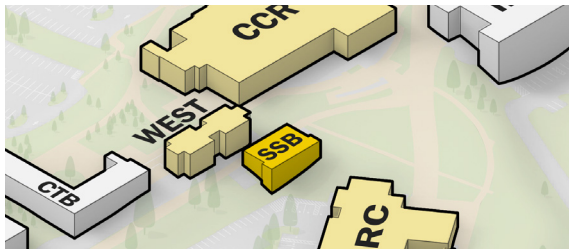
Building Programs:

- Multicultural Center

This alternative project provides another option if West Complex and SSB remain and are renovated. Situated on the second floor of the Student Support Building, the new multicultural center will house affinity groups and feature open, collaborative spaces where students can feel represented, receive support, and build connections.

Alongside this repurposing, there is the opportunity for a larger renovation of the building to improve energy efficiency and sustainability.

This repurposing contributes to building a hub of student spaces between the Crafton Center, LRC, and SSB.



Note: This is an illustrative, conceptual design for the Student Support Building, not a final design.

EDUCATION PLAN ALIGNMENT

- Student-focused spaces promote student success, equity, and increase student retention
- Creates spaces to support inclusivity, equity, anti-racism, and human sustainability
- Promotes increasing enrollment of students of color
- Supports community space for multicultural groups and can support multi-lingual learners

SUSTAINABILITY PLAN ALIGNMENT

- Fosters social sustainability (human health and well-being)
- Renovation enables replacement of building systems for energy efficiency and water conversion
- Opportunity for sustainable education exhibit within space

GUIDING PRINCIPLES ALIGNMENT



This project bolsters the functional zone for student support and services



Enables larger renovation to update and improve the building's energy efficiency



Focuses student centered space in the core of campus, near student services



Creates student gathering space and informal meeting space to build community



LEARNING RESOURCE CENTER: STACK SPACE REPURPOSING

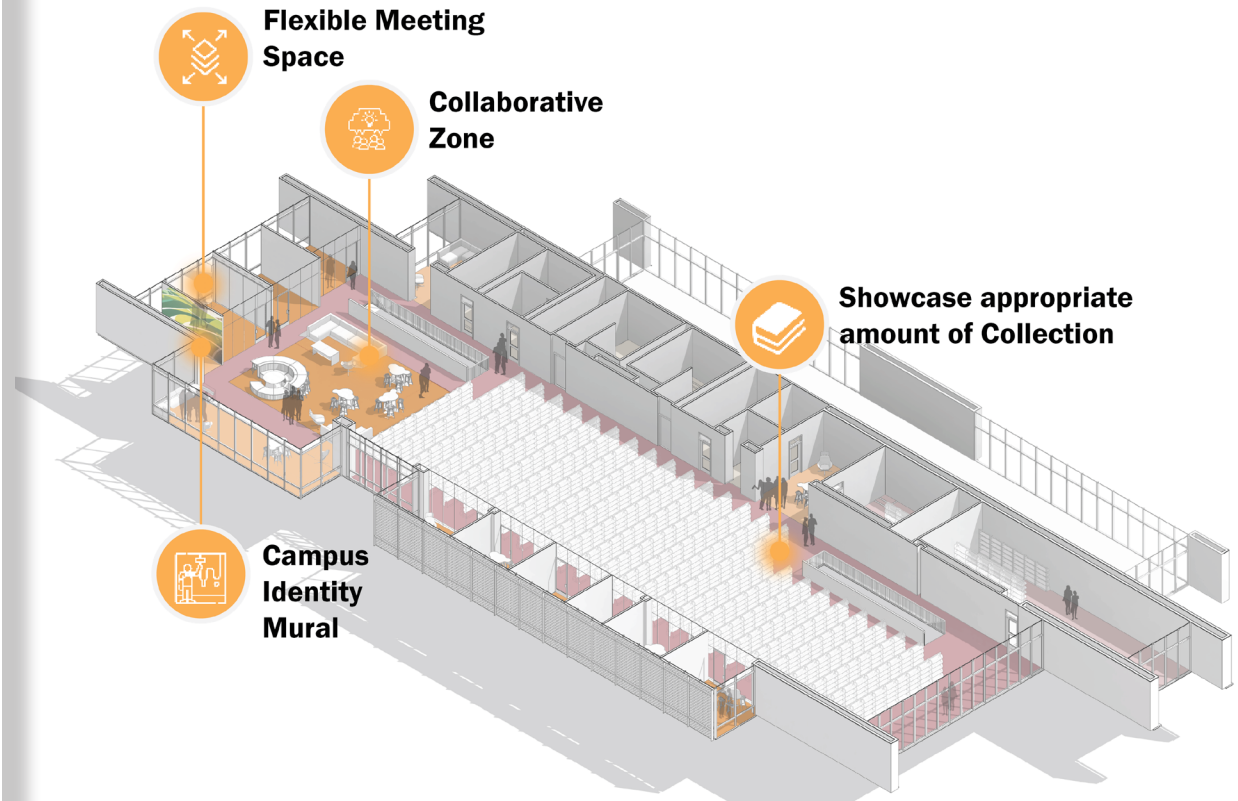
Size:

1,500 ASF

Building Programs:

- Student Space
- Meeting Rooms
- Open Computer Lab

On the third floor of the Library Resource Center, stacks will be removed to create informal student gathering areas, flexible meeting rooms, and/or an open computer lab. These spaces will build community among students and provide spaces dedicated to student group, instructional support, and studying needs. The design of the space should include comfortable, flexible furniture, art, and branding, reflecting student culture. This repurposing also contributes to building a hub of student spaces between the Crafton Center, LRC, and SSB.



Note: This is an illustrative, conceptual design for the Learning Resource Center, not a final design.

EDUCATION PLAN ALIGNMENT

- Student-focused spaces promote student success, equity, and increase student retention
- Develops campus culture and community through informal gathering spaces
- Opportunities to expand sustainable practices and linger and learn spaces
- Expands resources for students and diversifies types of spaces on campus

SUSTAINABILITY PLAN ALIGNMENT

- Fosters social sustainability (human health and well-being)
- Renovation to include sustainable materials
- Opportunity for sustainable education exhibit within space

GUIDING PRINCIPLES ALIGNMENT



This project bolsters the functional zone for student support and services



Focuses student-centered space in the core of campus, near student services



Creates student gathering space and informal meeting space to build community



ALIGNMENT WITH SUSTAINABILITY PLAN

The 2023 Sustainability Plan outlines goals to guide the operation and development of SBCCD towards a sustainable future. The CHC Facilities Master Plan aligns with these goals and ensures each project within the Plan furthers the development of a sustainable campus.

Physical investments in buildings, whether through new construction or renovation, improve energy efficiency, indoor water efficiency, and the utilization of sustainable materials. All new buildings will be LEED Gold, Platinum, or Zero Net Energy. Any renovation will consider retro-commissioning, sustainable materials, and building system improvements, where applicable.

CHC is already benefiting from investments in on-site renewable energy on campus. Expansion to the seven-acre solar farm planted on the upper slopes of the campus is expected to move the campus toward Net Zero Energy.

Landscape and open space improvements within the Plan play a role in sustainability, as well. Any open space improvements will utilize native and adaptive vegetation to minimize irrigation, and will protect and maintain the existing tree canopy. Where irrigation is required, an intelligent irrigation system is being implemented. Landscape and outdoor improvements also

provide the opportunity for living laboratories and educational moments centered around sustainability.

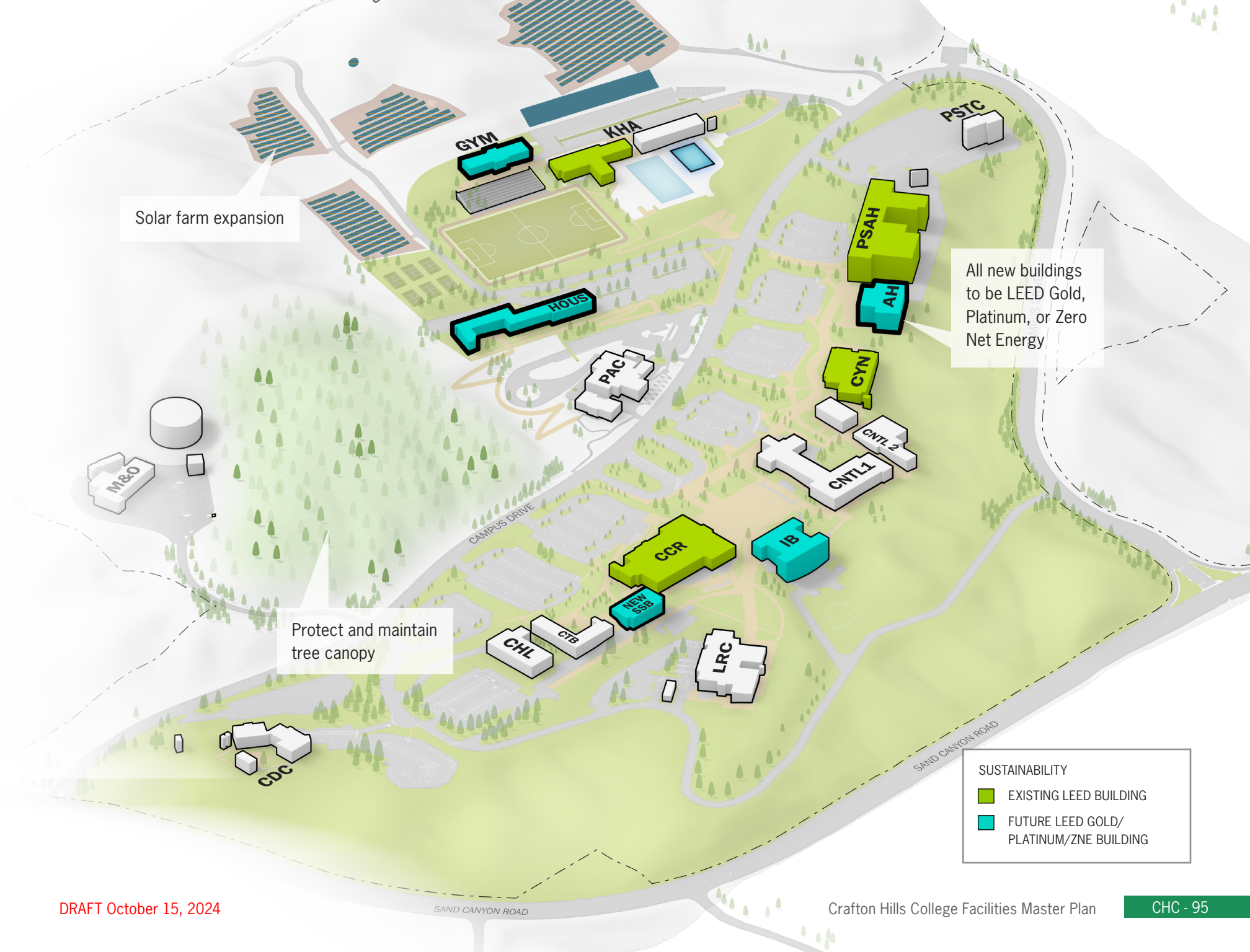
Other sustainable initiatives include: EV charging (in alignment with Title 24), electrification of facilities, reduction of embodied carbon, utilization of non-potable water for non-drinking purposes, and preparation for a micro-grid.



EDUCATION PLAN ALIGNMENT

- Expands implementation of efficient and sustainable services and practices
- Promotes well-being for students, faculty, staff, and the broader community





Solar farm expansion

All new buildings to be LEED Gold, Platinum, or Zero Net Energy

Protect and maintain tree canopy

SUSTAINABILITY

- EXISTING LEED BUILDING
- FUTURE LEED GOLD/ PLATINUM/ZNE BUILDING

PLACEMAKING: PUBLIC ART, ICONIC MOMENTS, AND BRANDING IN EXTERIOR ENVIRONMENT

Placemaking is the process of creating vibrant, welcoming spaces that foster community engagement and connection, which is essential on a campus for enhancing student experience and welcoming community. This is achieved through improved signage, public art, landscape improvements, and enhanced pedestrian pathways.

Gateways signal an arrival and welcome students and visitors into the campus environment. Therefore, gateways should be intuitive, branded, and welcoming. Two locations are proposed for gateway improvements. The intersection of Campus Drive and Emerald View Drive, a natural decision point when entering campus from the west, and the main drop-off area adjacent to the Campus Quad, a key arrival point where the bus stop is located. These gateways should be iconic and branded to CHC with clear wayfinding elements.

Public art installations contribute to a sense of place and identity, adding visual interest and intrigue within the public realm. Public art can consist of sculptures, signage, murals, and more. Several locations have been identified in the Plan for public art installations along major pathways and within important open spaces on campus. One proposal is an iconic photo moment within the Campus Quad. This iconic photo moment could utilize CHC letters as a visual feature.

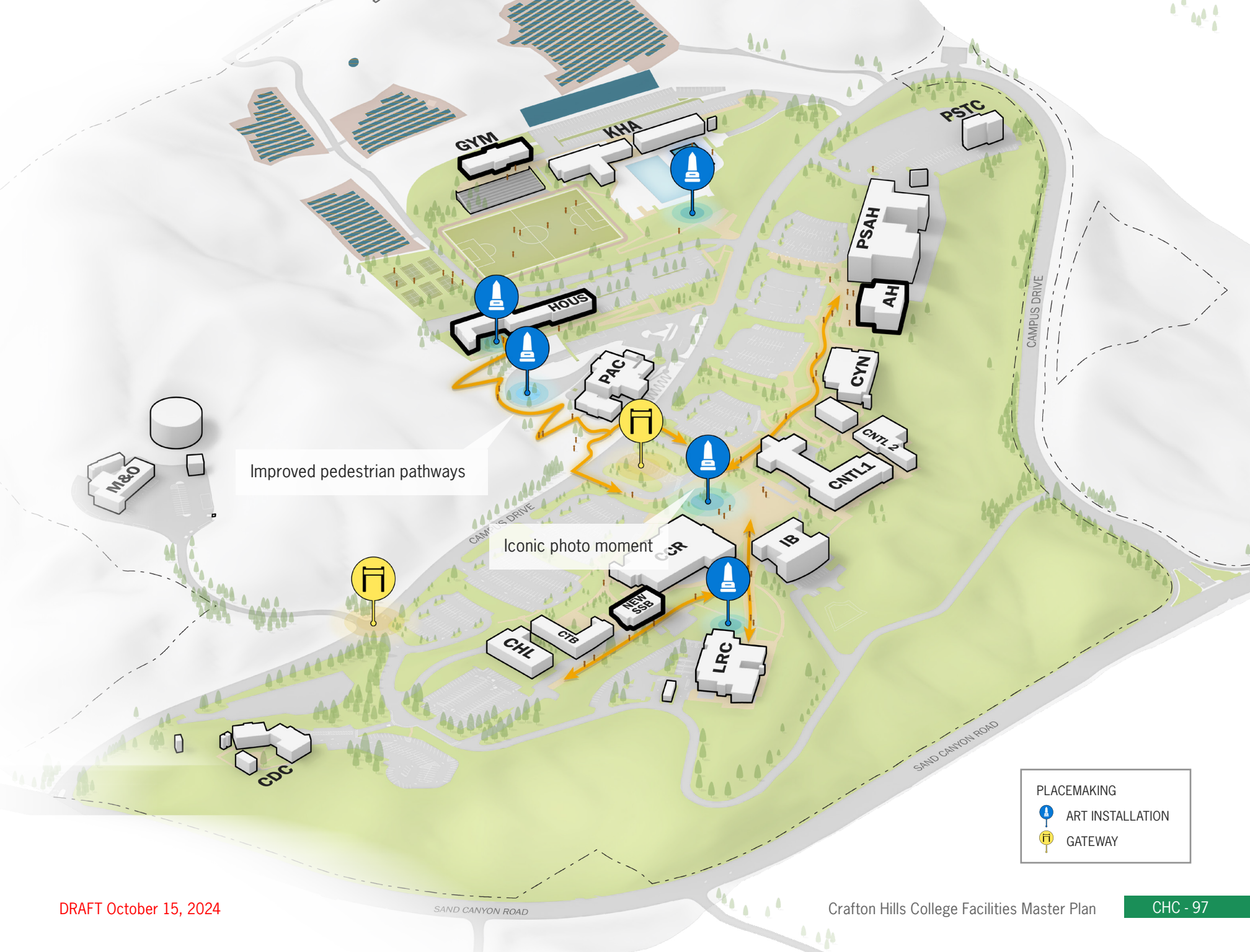
Public art installations should reflect the campus community, allow for student expression, and honor the indigenous history of CHC.

Improving pedestrian pathways supports a welcoming, comfortable, and safe exterior environment. Pedestrian improvements include furnishings, such as benches, lighting, landscaping, and paving. Primary pedestrian pathways have been identified in the Plan to focus improvements. This will not only improve circulation through campus, but will also beautify campus further, creating stronger visual and physical connections between different parts of campus.

EDUCATION PLAN ALIGNMENT

- Improves campus facilities, removing barriers to access, and improving wayfinding
- Opportunities for art and placemaking to represent the student population and values
- Exterior spaces that promote linger and learn spaces
- Improve communication





Improved pedestrian pathways

Iconic photo moment

PLACEMAKING

- ART INSTALLATION
- GATEWAY

ACTIVE LEARNING CLASSROOM RETROFITS

Active learning spaces are dynamic, flexible environments designed to promote student engagement and collaboration. These spaces are crucial for fostering innovative thinking, enhancing learning outcomes, and preparing students for real-world challenges.

Designing for active learning entails accommodating an adequate amount of square footage per seat for flexible furniture arrangements, and technology that supports informal teaching styles and collaboration. Currently, CHC averages 19 square feet per seat in classrooms; the state standard is 20 square feet per seat. Moving towards 25 square feet per seat will allow for active learning configurations.

The 2020 District Standards and Campus Guidelines outline recommended interior design standards and layouts for classrooms, including traditional, flexible, active, computer and lecture-based. These standards should guide future classroom designs.

With the projects outlined in Phase 00 and the Vision Plan, such as the Instructional Building, LRC renovation, Central Complex 2 renovation, and Allied Health, 13 classrooms will have the opportunity to be designed or re-designed for active learning. After these classrooms are implemented, there is an opportunity to look at the remaining 26 classrooms and determine

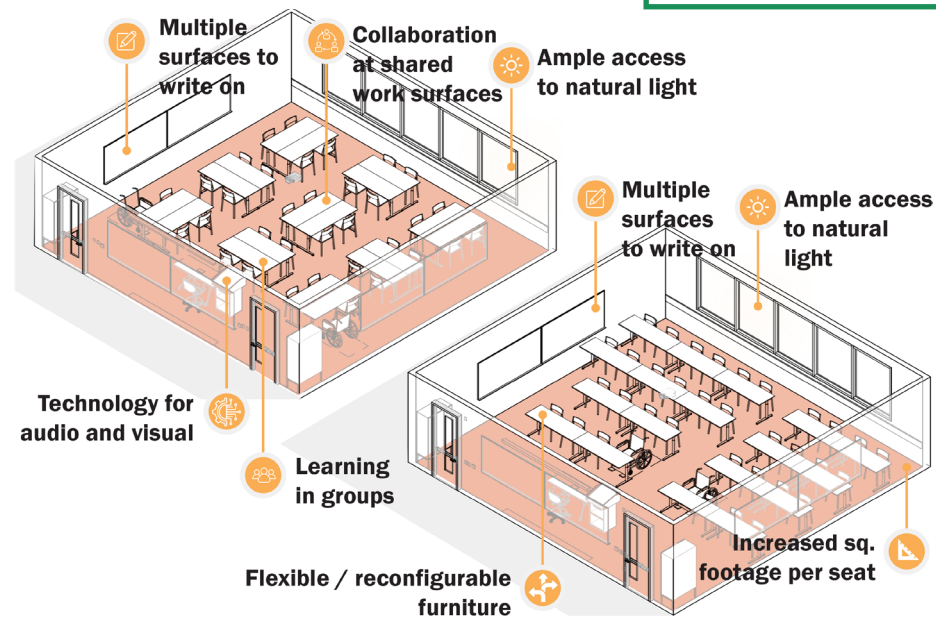
a plan for future renovations and retrofits. The Central Complex 1 holds the largest concentration of existing classrooms and would be a key building to implement a classroom refresh.

In addition to active learning design, CHC can utilize classrooms more efficiently by increasing the times in which classes are offered and aligning classroom size to the course schedule. Currently, classroom use peaks from 10 am - 12 pm on Tuesdays and Thursdays. There is an opportunity to increase afternoon courses and increase offerings on Fridays.

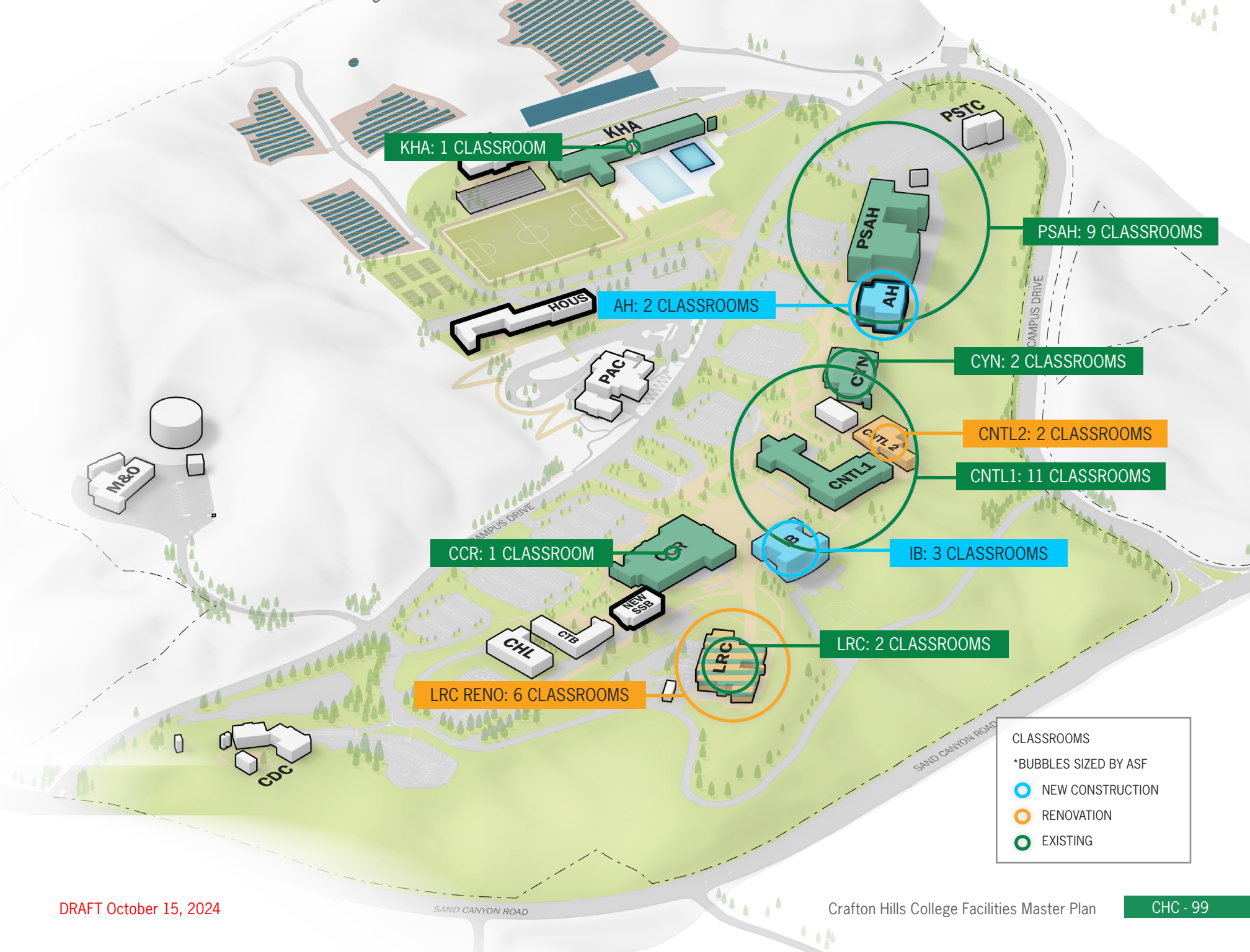
As future classrooms are designed, the size of classrooms should also consider the enrollments in the course schedule. Movable walls and reconfigurable furniture provide ways to create room flexibility for use and size.

EDUCATION PLAN ALIGNMENT

- Creates spaces that provide flexibility for different teaching modalities
- Enhances well-being and engagement for students and faculty
- Expands access to resources
- Improves communication



Note: This is an illustrative, conceptual design for learning spaces, not a final design.



VEHICULAR CIRCULATION & PARKING

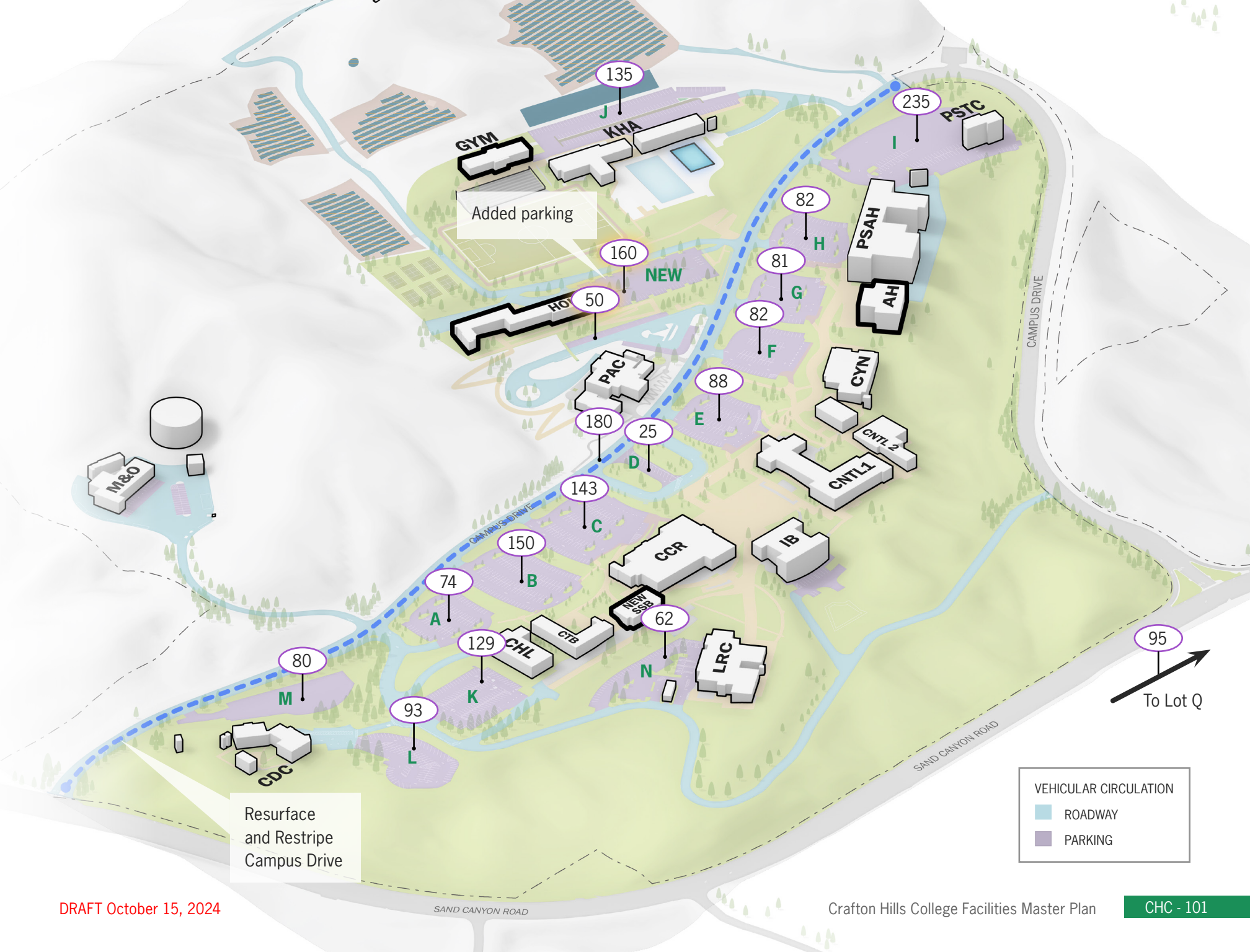
Overall parking capacity at Crafton Hills College, over 1,900 stalls, is sufficient for existing and future demand. Recommendations for parking and circulation consist of parking lot and roadway improvements, and impacts to parking due to proposed projects. Additionally, EV charging will be implemented in alignment with Title 24, with the goal that they are self-sustaining.

- Approximately 160 parking spaces will be added with the completion of the Student Housing project and the demolition of the North Complex. This addition will be critical to support the needs of residents on campus.
- Lot A is in good condition, but is often underutilized. It is recommended that signage is added to this lot, as well as cameras to increase security.
- Lot M has historically functioned as an overflow lot. There is an opportunity to create a path of travel here to make the connection more intuitive and safe. In the future this is an opportunity building site.
- Lot N functions as a faculty lot. There is a need to pave this lot.
- Lot L will need to be re-stripped back to diagonal striping.
- Campus Drive requires resurfacing and restriping.

EDUCATION PLAN ALIGNMENT

- Improves campus facilities by removing barriers to physical access
- Promotes safety and well-being for students, faculty, and staff
- Expands implementation of sustainable practices





Added parking

Resurface and Restripe Campus Drive

VEHICULAR CIRCULATION

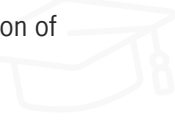
- ROADWAY
- PARKING

95
To Lot Q

INFRASTRUCTURE AND SAFETY

EDUCATION PLAN ALIGNMENT

- Improves campus facilities by removing barriers to physical access
- Promotes safety and well-being for students, faculty, and staff
- Expands implementation of sustainable practices



The following outlines utilities and infrastructure findings and recommendations. The full Utility Infrastructure Master Plan can be found in the Appendix.

CHILLED WATER SYSTEM & HOT WATER SYSTEM

A review of the loads added as part of the proposed facilities revealed that the central cooling plant and heating plant and associated pumps are adequately sized to support the future loads. To take advantage of simultaneous heating and cooling loads on the campus, Heat Recovery Chillers should be installed at the Central Plant. The same can be installed when the existing chillers are scheduled for replacement at the end of their useful life. Additional air source heat pumps in combination with a heating hot water storage system should be installed to meet the peak heating demand of the campus and help decommission existing boilers at the end of their

useful life to transition away from the natural gas system.

The Gym and the Housing facility are remote, and their proposed square footage does not justify their connection to the central plant, as the cost of extending chilled water lines and hot water lines to these facilities would not be economical. The Allied Health building will increase the total required system pressure, but the secondary distribution pumps are sized for a maximum pressure well above the anticipated build out pressure.

The existing controls system should be upgraded with system infrastructure updates.

ELECTRICAL

An evaluation of the existing electrical system currently serving the campus revealed that the majority of the existing electrical infrastructure is old and at the end of their useful life. An evaluation of the existing loads revealed that feeders 'A' through 'G' capacities are able to support existing and future planned facilities. The existing switchgear and 5kV distribution system is sized adequately to serve the present demands and meet the future growth of the campus.

The power distribution system for the campus was replaced in 2008-2009 and the majority of the distribution cabling was replaced in sections

with the 2008-2009 infrastructure project and newer buildings. An evaluation of the existing system revealed that the existing system provides no redundancy because of its open loop configuration. Since the campus operates and maintains the 5kV switchgear and the electrical distribution system, the campus requires an electrical system that must provide (a) improved system reliability (b) ease of maintenance and isolation of circuits either during a fault or during a regular maintenance without interrupting power to every building on campus (c) be sized to accommodate existing loads and planned future loads resulting from new buildings addition as well as additions to existing buildings (d) be well coordinated to eliminate nuisance tripping of upstream protective devices (e) have all equipment listed for the short circuit availability at the point of installation.

The following recommendations are proposed:

- Provide new 5kV switches close to each proposed building to enable isolation of feeders during a fault condition and for ease in undertaking maintenance work.
- Replace existing manholes and pull boxes which have aged and are at the end of their useful life. Majority of the manholes, pull boxes and underground structures are not adequately sized to meet current code

requirements and provide limited ease in maintenance.

- Replace existing substations at buildings that have electrical distribution installed since the inception of the building.
- Provide sub metering at each building to monitor demand at each building.
- Replace existing digital energy meter presently being utilized at the campus to avoid nuisance and maintenance issues of gathering information and remote monitoring.
- Provide meters with open protocol to avoid sole sourcing the meters for all future projects.

In order to have a complete redundant system to help isolate each building on campus and also be able to conduct maintenance on a feeder without affecting power service to each building on campus, a closed loop configuration and system is recommended. Primary loop system would provide the campus with the ease of isolating faults within the campus distribution system and minimize power interruptions to the buildings during maintenance on the medium voltage distribution system.

NATURAL GAS

A large portion of the gas distribution system is steel piping. Some of this steel piping was installed roughly 40 years ago. It is recommended

RECOMMENDATIONS

Chilled Water & Hot Water Systems

- Install heat recovery chillers in the Central Plant
- Install air source heat pumps in combination with a heating hot water storage system
- Upgrade control system as a part of the system infrastructure upgrades

Electrical

- Provide new 5kV switches close to each proposed building
- Replace existing manholes and pull boxes
- Replace existing substations at identified buildings
- Provide sub metering at each building
- Replace existing digital energy meter
- Provide meters with open protocol

Natural Gas

- Upgrade all steel piping to PE piping

Telecommunications

- Clean out IT server rooms
- Provide additional protection for fiber and copper infrastructure
- Address room temperature in outlying rooms that do not have controlled environments

to upgrade this piping to PE piping for extended life expectancy. Additionally, it was observed that a number of the building on campus lack earthquake valves. The campus recently installed an earthquake valve at the main meter. This meter will meet the code requirements and will replace provision of earthquake valves at individual buildings.

TELECOMMUNICATIONS

A list of individual recommendations for each building was developed and can be referenced in the Appendix report. Some of the overall recommendations include: cleaning out the IT server rooms, providing additional protection for the fiber and copper infrastructure (within the racks and on the backboards), and addressing room temperature in some of the outlying rooms that do not currently have controlled temperature environments.

A noticeable mix of fiber strands are used throughout the campus, in several of the IT server rooms, and a detailed list of tested fiber strands could help alleviate future project delays, by providing a room by room detail of good fiber strands to use.

The campus telecommunications infrastructure was updated within the last 9 years; fiber infrastructure was installed to support the campus network services. Most of the existing

copper cabling not in use, was removed and cleared from the server rooms and conduits feeding the server rooms when the fiber infrastructure was installed. Although a new fiber infrastructure has been installed throughout the campus, it is recommended that the fiber cable not in use, are periodically tested to ensure that they are in good working condition for future expansion.

A recommendation for all IDF rooms would be additional cable protection around some of the main fiber distribution patch cables; innerduct or wire management can be used to better protect the fiber patch cabling going from the termination points into the network switch.

New (3) 4" C should be provided from the nearest manhole to each of the proposed new facilities (Allied Health, Gymnasium and Housing) to route new fiber and copper cables to meet their network demands. A 24-strand single-mode fiber and 25-pair copper cable shall be provided to each of the proposed facilities.

SAFETY

Proposed safety infrastructure includes enhanced lockdown, access control, and emergency notifications throughout campus. Additionally, cameras are proposed at key entry points and at Parking Lot A.

SEWER

There are no sewer issues at this time. The recommendations include extension of the sanitary sewer system to serve proposed buildings presented in the Master Plan; and removal and relocation of existing sanitary sewer service mains and laterals serving existing buildings planned to be demolished to provide a clear site for future development. Although no problems currently exist, the VCP main should undergo a CCTV camera scan to determine of the condition of the line.

STORMWATER

The following best management practices are recommended:

- Continued use and maintenance of the existing vegetated swale and detention basin.
- Each future building project should prepare a Water Quality Management Plan (WQMP) per the City's template in order to document all project related best management practices (BMPs) and mitigation measures.
- Low impact development (LID) strategies should be incorporated with future development where feasible.

Several of the future buildings proposed along the southern portions of campus will be situated such that they will not drain to the existing vegetated swale and detention basin. These buildings will

need to incorporate local BMPs such as small scale detention basins, bio-filtration basins, vegetated swales, etc. prior to discharging runoff to the existing natural drainage channels adjacent to Sand Canyon Road.

With further analysis, CHC could consider treating storm water runoff from some of the future building sites in a regional fashion, such that some BMPs could be shared. A complete Storm Water Management Plan could analyze the existing and future hydrology of the campus and incorporate BMPs based on the hydrology and hydraulic characteristics.

WATER SYSTEMS

It is recommended that future landscape areas are provided irrigation water service from existing irrigation systems, where possible, rather than installing new POCs to the public main.

In terms of the existing system, Parking Lot L irrigation line should be connected to the recycled water system.

It should be noted that the analysis assumes that the existing campus square footage will be maintained and that existing utilities are in adequate condition and maintained. In the case that the individual proposed building designs yield larger flow rates than presented herein, it is recommended that the college re-evaluate the data analysis and update the findings.

RECOMMENDATIONS

Safety

- Implement enhanced lockdown, access control, and emergency notifications
- Install cameras at key entry points
- Install cameras at Parking Lot A

Sewer

- Extension of the sanitary sewer system to serve proposed buildings
- Provide CCTV inspection of campus sewer main within Campus Drive and Building 10

Stormwater

- Continue use and maintenance of the existing vegetated swales and detention basins
- Future building projects should prepare a Water Quality Management Plan
- Implement low impact development strategies
- Complete a Storm Water Management Plan
- Provide CCTV inspection of campus gravity storm drains at select locations - Campus Quad (southwest planter)

Water System/Irrigation

- Install new irrigation sub-meters
- Connect Parking Lot L irrigation line to the recycled water system



CHC5

IMPLEMENTATION PLAN



CENTRAL COMPLEX

6775

PROJECT PHASING

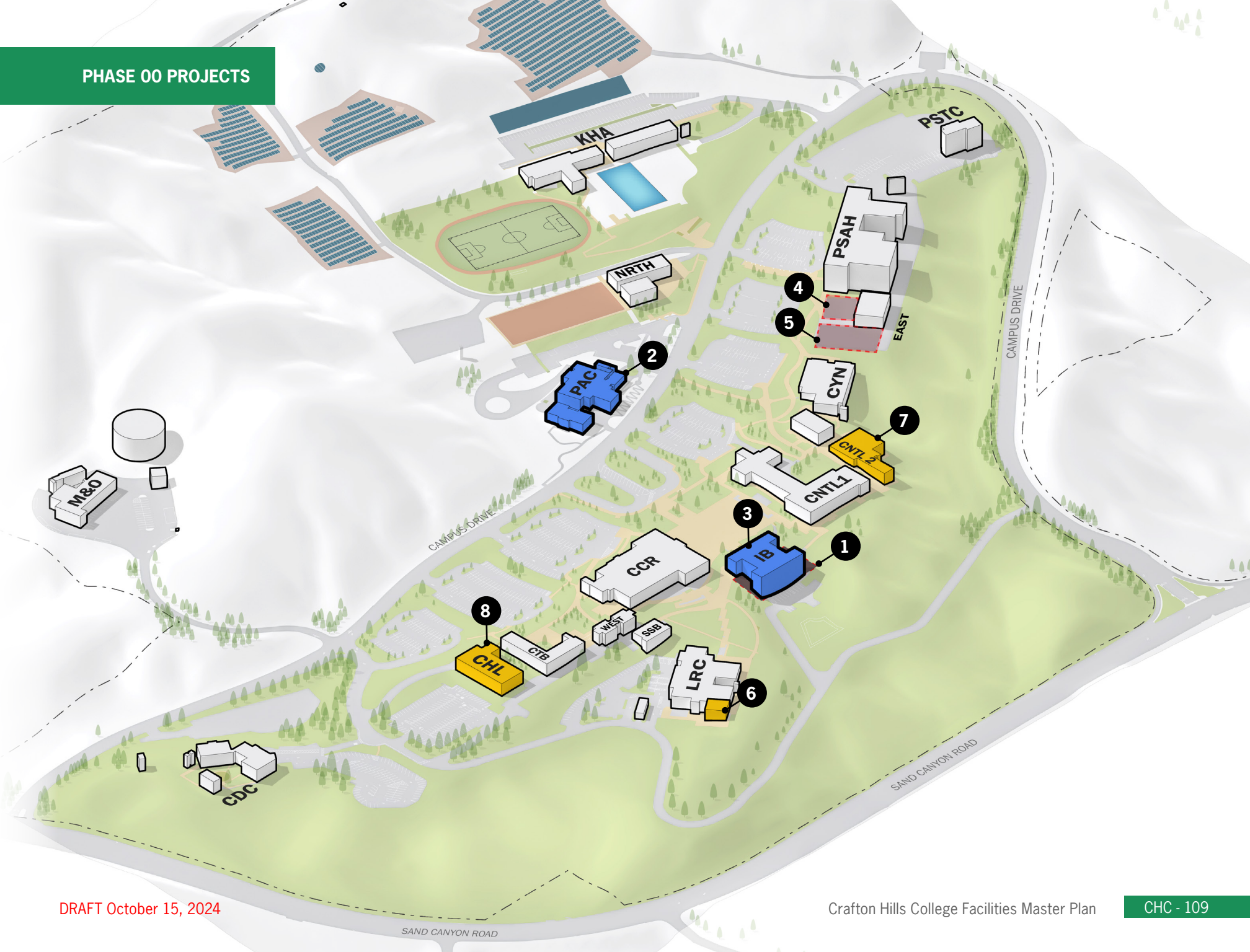
The Implementation and Phasing Plan, developed in collaboration with College leadership, considered various factors such as prioritization, sequencing, swing space requirements, cost assumptions, and funding opportunities. Rather than being prescriptive, the phasing plan offers a flexible framework for implementing the overall strategy. It is driven primarily by academic program needs, housing goals, and addressing infrastructure needs. The outlined timeframes indicate when projects are likely to begin, based on the prioritization of needs and the availability of resources.

PHASE 00 PROJECTS (IN PROGRESS - 2027)

PROJECTS CURRENTLY UNDER CONSTRUCTION, IN DESIGN AND/OR FUNDED.

	Project	Project Type	Demolition (GSF)	Renovation (ASF)	New (GSF)
1.	OLD PERFORMING ARTS CENTER	DEMOLITION	29,900	-	-
2.	NEW PERFORMING ARTS CENTER	NEW CONSTRUCTION	-	-	24,000
3.	NEW INSTRUCTIONAL BUILDING	NEW CONSTRUCTION	-	-	30,000
4.	EAST COMPLEX 2	DEMOLITION	4,300	-	-
5.	VISUAL ARTS	DEMOLITION	11,200	-	-
6.	LEARNING RESOURCE CENTER REPURPOSING	RENOVATION	-	12,200	-
7.	CENTRAL COMPLEX 2	RENOVATION	-	12,900	-
8.	CRAFTON HALL	RENOVATION	-	8,600	-

PHASE 00 PROJECTS



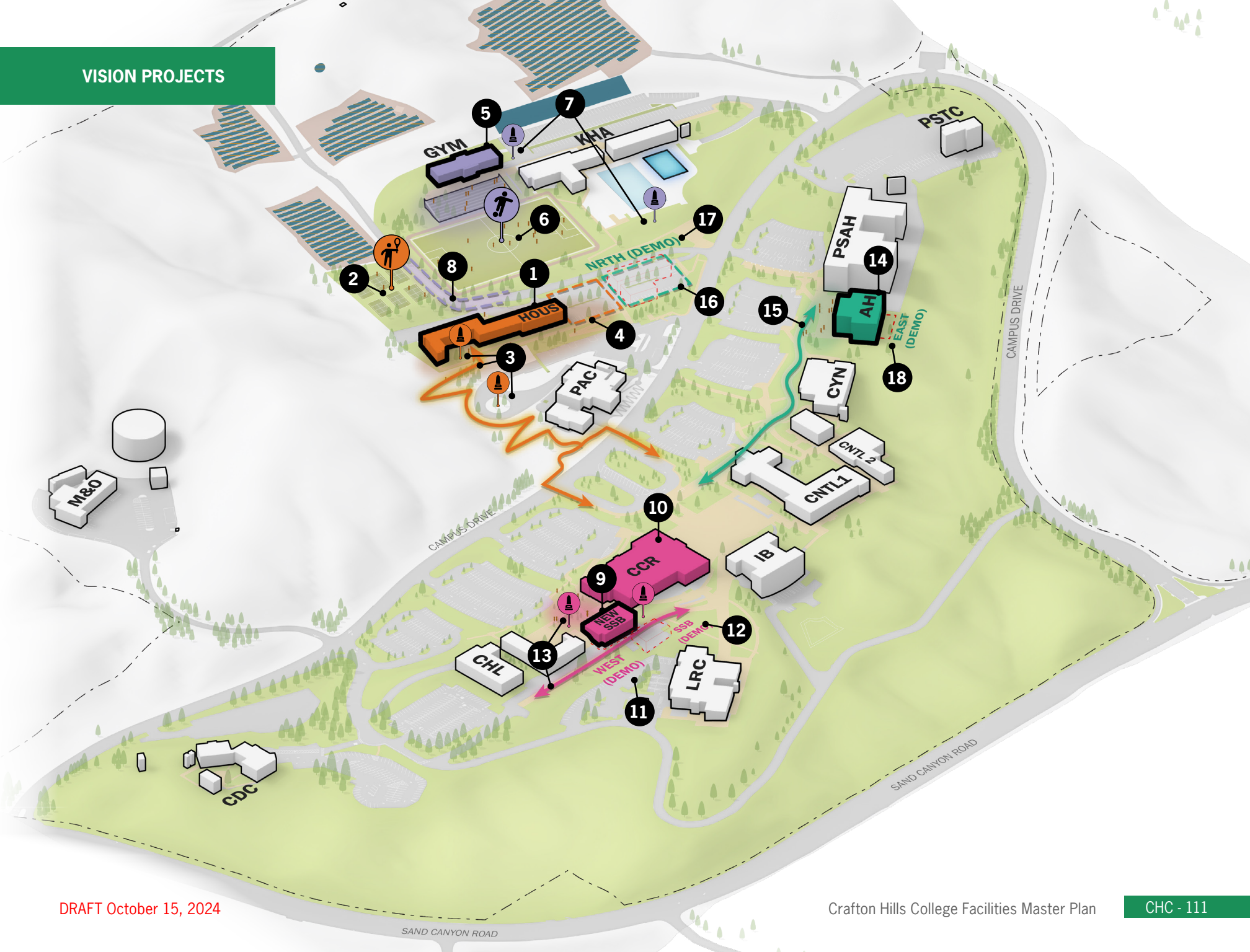
VISION PROJECTS (2027 - 2037)

PROJECTS PLANNED TO START IN 3 YEARS, ONGOING FOR NEXT 10 YEARS

The following projects are bundled projects, meaning they should be sequenced together due to various factors such as swing space requirements, demolition needs, adjacencies, and construction impacts. The “Project Sequencing” chapter will outline the necessary steps to sequence these bundled projects.

	Project	Project Type	Size	Unit	Notes
1	STUDENT HOUSING	NEW CONSTRUCTION	49,700	GSF	
2	TENNIS COURTS	NEW CONSTRUCTION	12,600	GSF	
3	PEDESTRIAN IMPROVEMENTS + PLACEMAKING: HOUSING AREA	EXTERIOR ENVIRONMENT	1,200	LF	2 Art Installations + Pedestrian Improvements (connect housing to campus with paving, lighting, landscaping)
4	NEW PARKING LOT (BEFORE NORTH COMPLEX DEMO)	CIRCULATION	32,800	GSF	
5	NEW GYMNASIUM	NEW CONSTRUCTION	19,050	GSF	
6	SOCCER FIELDS - COLLEGIATE SIZE	RENOVATION	9,000	GSF	
7	PEDESTRIAN IMPROVEMENTS + PLACEMAKING - ATHLETICS AREA	EXTERIOR ENVIRONMENT		(see notes)	2 Art Installations
8	ROAD REALIGNMENT	CIRCULATION	800	LF	
9	NEW STUDENT SUPPORT BUILDING	NEW CONSTRUCTION	10,970	GSF	
10	CRAFTON CENTER (SECOND FLOOR)	PROGRAM MODIFICATION	5,200	ASF	
11	WEST COMPLEX	DEMOLITION	6,800	GSF	
12	STUDENT SUPPORT BUILDING	DEMOLITION	5,575	GSF	
13	PEDESTRIAN IMPROVEMENTS + PLACEMAKING: STUDENT SUPPORT AREA	EXTERIOR ENVIRONMENT	850	LF	2 Art Installations + Pedestrian Improvements (pavement, lighting, landscape)
14	ALLIED HEALTH BUILDING	NEW CONSTRUCTION	30,000	GSF	
15	PEDESTRIAN IMPROVEMENTS + PLACEMAKING: INSTRUCTIONAL AREA	EXTERIOR ENVIRONMENT	965	LF	Pedestrian improvements including paving, landscaping, lighting, and art pieces.
16	NEW PARKING LOT (AFTER NORTH COMPLEX DEMO)	CIRCULATION	21,100	GSF	
17	NORTH COMPLEX	DEMOLITION	10,334	GSF	-
18	PRINT SHOP (EAST COMPLEX 1)	DEMOLITION	5,760	GSF	-

VISION PROJECTS



VISION PROJECTS (2027 - 2037)

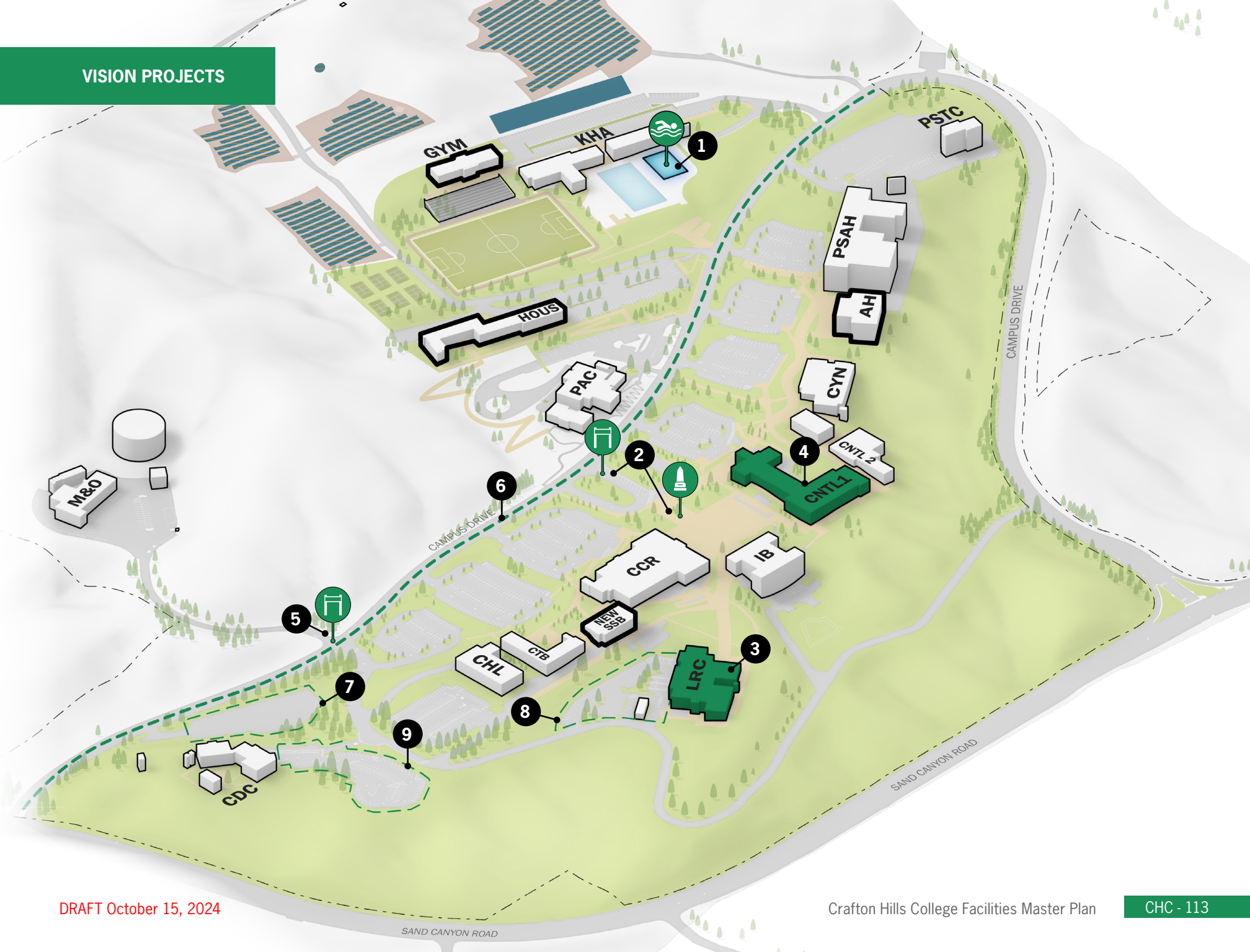
PROJECTS PLANNED TO START IN 3 YEARS, ONGOING FOR NEXT 10 YEARS

The following projects are not bundled projects, meaning they do not have any complex dependencies, like enabling projects. Although all projects will have construction and secondary impacts, these projects have greater flexibility in schedule and timing.

	Project	Project Type	Size	Unit	Notes
1	INSTRUCTIONAL POOL	NEW CONSTRUCTION	4,115	GSF	
2	CAMPUS QUAD IMPROVEMENTS - ART & ENTRY	EXTERIOR ENVIRONMENT	6,000	GSF	Addition of iconic public art piece and improved gateway: signage, lighting, and landscaping around entry/drop-off
3	LEARNING RESOURCE CENTER - STACKS REPURPOSING	RENOVATION	1,500	ASF	
4	ACTIVE LEARNING RETROFITS	RENOVATION	10,695	ASF	Central Complex 1 Classrooms
5	CAMPUS DRIVE - GATEWAY & SIGNAGE	EXTERIOR ENVIRONMENT	3,000	GSF	New signage with landscaping, lighting, and cameras
6	CAMPUS DRIVE RESURFACING	CIRCULATION	3,445	LF	
7	PARKING LOT M PATHWAY	CIRCULATION	130	LF	Sidewalk with lighting and landscape
8	PARKING LOT N PAVE	CIRCULATION	29,500	GSF	-
9	PARKING LOT L RE-STRIPING	CIRCULATION	33,800	GSF	
	10-YEAR DEFERRED MAINTENANCE*				
	INFRASTRUCTURE PROJECTS*				

** Additional information on deferred maintenance and infrastructure projects included in Appendix*

VISION PROJECTS



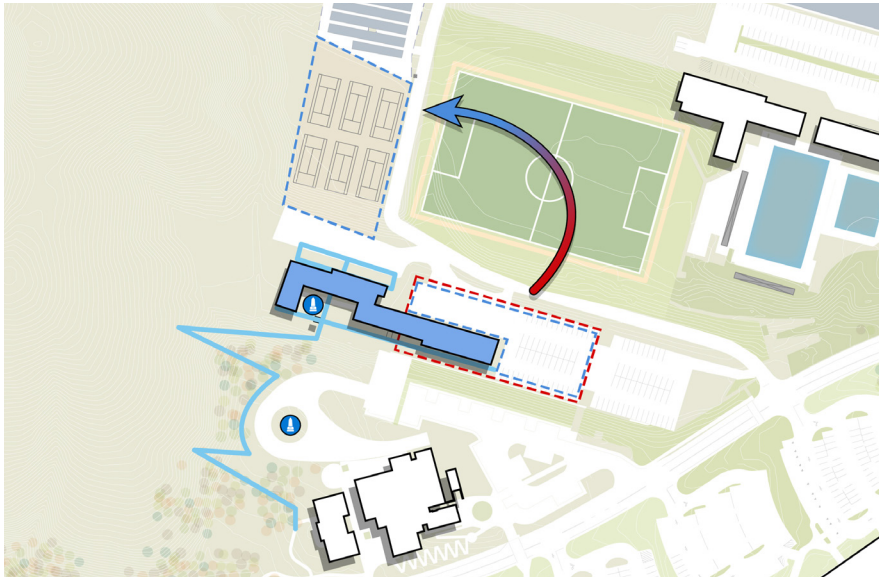
PROJECT SEQUENCING

Project sequencing strategically determines the order in which bundled projects should be initiated and completed, with a focus on minimizing disruptions, managing costs, and ensuring academic program continuity. Some projects require enabling projects, temporary space, or depend on permanent relocations to proceed. While every project in the Facilities Master Plan involves some degree of sequencing, certain projects present more complex dependencies or require significant enabling steps.

The adjacent table outlines the various bundled projects that will be sequenced.

Note: These sequencing plans are subject to change depending on the actual implementation timeline.

STUDENT HOUSING		
	STUDENT HOUSING	NEW CONSTRUCTION
	TENNIS COURTS	NEW CONSTRUCTION
	PEDESTRIAN IMPROVEMENTS + PLACEMAKING: HOUSING AREA	EXTERIOR ENVIRONMENT
	NEW PARKING LOT (BEFORE NORTH COMPLEX DEMO)	CIRCULATION
GYMNASIUM & SOCCER FIELD		
	NEW GYMNASIUM	NEW CONSTRUCTION
	SOCCER FIELDS - COLLEGIATE SIZE	RENOVATION
	PEDESTRIAN IMPROVEMENTS + PLACEMAKING - ATHLETICS AREA	EXTERIOR ENVIRONMENT
	ROAD REALIGNMENT	CIRCULATION
STUDENT SUPPORT BUILDING REPLACEMENT		
	STUDENT SUPPORT BUILDING REPLACEMENT	NEW CONSTRUCTION
	CRAFTON CENTER (SECOND FLOOR)	PROGRAM MODIFICATION
	WEST COMPLEX	DEMOLITION
	STUDENT SUPPORT BUILDING	DEMOLITION
	PEDESTRIAN IMPROVEMENTS + PLACEMAKING: STUDENT SUPPORT AREA	EXTERIOR ENVIRONMENT
ALLIED HEALTH BUILDING		
	ALLIED HEALTH BUILDING	NEW CONSTRUCTION
	PEDESTRIAN IMPROVEMENTS + PLACEMAKING: INSTRUCTIONAL AREA	EXTERIOR ENVIRONMENT
	NEW PARKING LOT (AFTER NORTH COMPLEX DEMO)	CIRCULATION
	NORTH COMPLEX	DEMOLITION
	PRINT SHOP (EAST COMPLEX 1)	DEMOLITION



STUDENT HOUSING

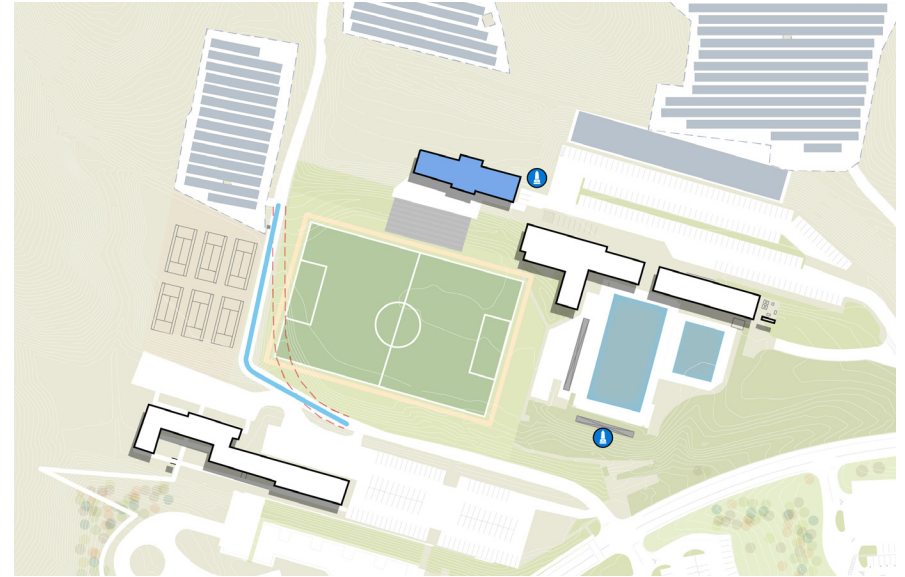
The housing site requires the area of the existing tennis courts. Relocating the tennis courts will need to sequence with the construction of the new housing and adjoining parking lot. Pedestrian and placemaking improvements should also coincide with these projects in this specific area.

Demolitions

- Existing Tennis Courts

New Construction & Exterior Improvements

- Tennis Court Relocation
- Student Housing
- Student Housing Parking
- Pedestrian Improvements & Placemaking



GYMNASIUM & SOCCER FIELD

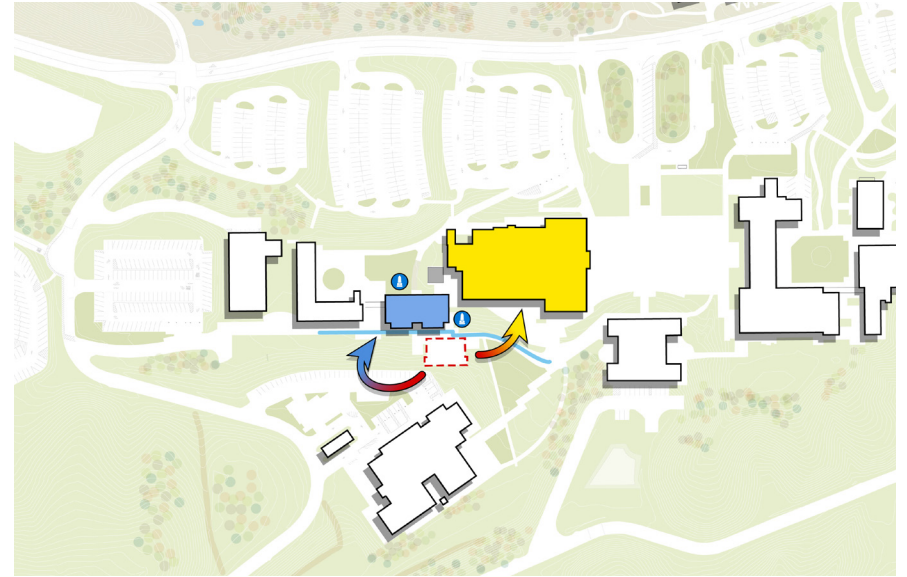
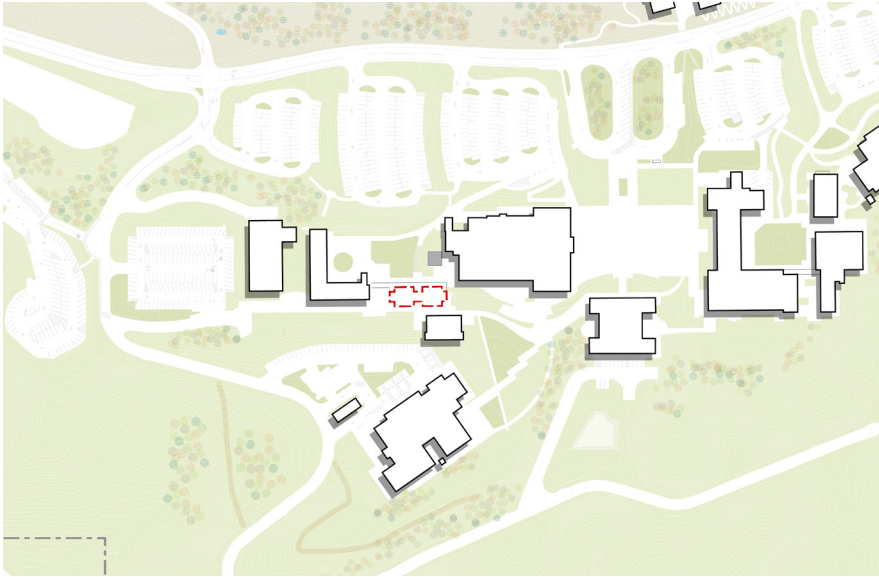
Coupling the gymnasium with the soccer field would support design efficiencies and minimize construction impacts and disruptions. Relocating the Crafton Hills Ridge Trail Road is an enabling project to complete the collegiate size soccer field. Pedestrian and placemaking improvements should also coincide with these projects in this specific area.

Demolitions

- Crafton Hills Ridge Trail Road

New Construction & Exterior Improvements

- Gymnasium
- Collegiate Soccer Field
- Crafton Hills Ridge Trail Road Relocation
- Pedestrian Improvements + Placemaking



STUDENT SUPPORT BUILDING REPLACEMENT

The New Student Support Building will require the demolition of the West Complex. All programs will already be vacated out of the West Complex at this point.

Demolitions

- West Complex

The construction of the New Student Support Building will enable the renovation of the Crafton Center second floor, providing either swing space or new space for an existing program in Crafton Center. Additionally, programs in the existing Student Support Building will be able to swing out into either the new building or the renovated second floor of the Crafton Center. Once moved,

the existing Student Support Building can be demolished. Pedestrian and placemaking improvements should also coincide with these projects in this specific area.

New Construction & Exterior Improvements

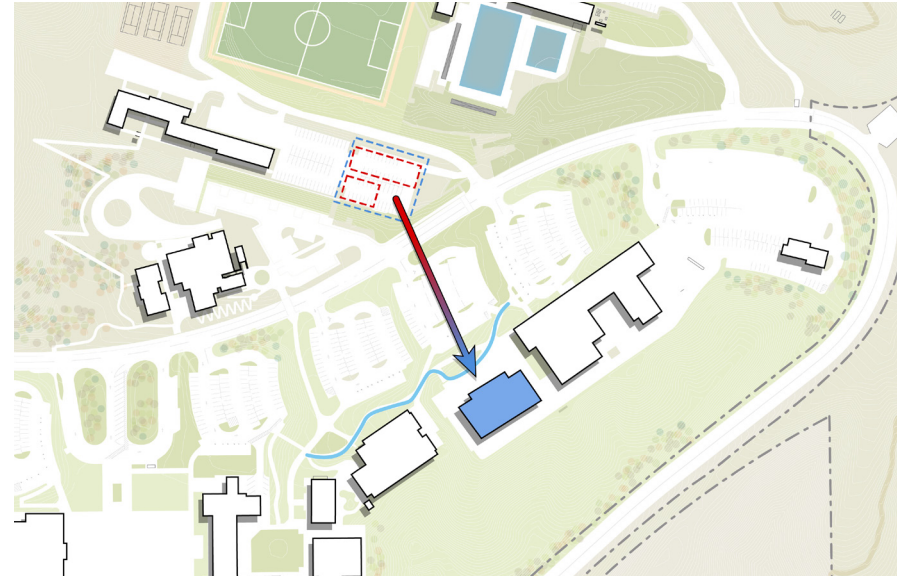
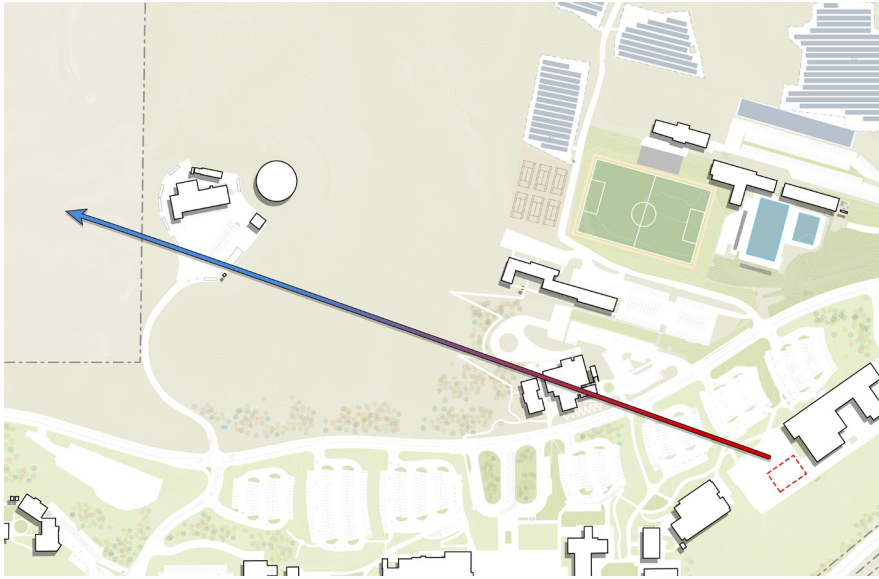
- New Student Support Building
- Pedestrian Improvements + Placemaking

Renovation

Crafton Center Second Floor

Demolitions

- Existing Student Support Building



ALLIED HEALTH

In order to clear the site for the new Allied Health Building, the Print Shop will need to move to its new location. Once the Print Shop has vacated, the East Complex can be demolished.

Demolitions

- Print Shop (will need to move location)
- East Complex

With a cleared site, the Allied Health Building can be constructed. Programs in the North Complex can move into the new Allied Building. The North Complex can serve as swing space as needed or demolished, turning into a parking lot for the housing site. Pedestrian and placemaking improvements should also coincide with the new construction project.

New Construction & Exterior Improvements

- Allied Health Building
- Additional Student Housing Parking
- Pedestrian Improvements + Placemaking

Demolitions

- North Complex (turns into a parking lot for housing)



CHC6

APPENDIX



CENTRAL COMPLEX

6775



APPENDIX TABLE OF CONTENTS

A.1 SPACE UTILIZATION STUDY

A.2 SPACE NEEDS ASSESSMENT

A.3 FACILITIES CONDITION ASSESSMENT

A.4 UTILITY INFRASTRUCTURE MASTER PLAN

A.5 COST ESTIMATES

