



# **University of Colorado Boulder**

---

## **Campus Master Plan**

2021

# Contents

## Acknowledgments

### EXECUTIVE COMMITTEE

Akirah Bradley, Vice Chancellor, Student Affairs  
Donald Brandes, Chairperson, Design Review Board  
Emina Begovic, Assistant Vice Provost, Academic Resource Management  
George Conway, Undergraduate Student  
Chris Ewing, Assistant Vice Chancellor, Planning, Design and Construction  
Christopher Wright, Director of Capital Finance, Budget & Fiscal Planning  
Sarah Fahmy, Graduate Student  
Rebecca Fell, Executive Director, Real Estate Services  
Robert Ferry, Chairperson, Boulder Faculty Assembly  
Terri Fiez, Vice Chancellor, Research and Innovation  
Carla Ho-a, CFO, Finance and Business Strategy  
Daniel Gette, Assistant Vice Chancellor of Student Operations, Student Affairs  
Ida Mae Isaac, Director of Strategic Initiatives, Infrastructure & Sustainability  
David Kang, Vice Chancellor, Infrastructure and Sustainability  
Amy Kirtland, Project Lead and Facilities Planner, Planning, Design and Construction  
Jon Leslie, Senior Associate Vice Chancellor and CCO, Strategic Communications  
Larry Levine, Associate Vice Chancellor for IT and CIO, Office of Information Technology  
Brian Lindoerfer, Assistant Vice Chancellor, Facilities Management  
Richelle Reilly, Campus Landscape Architect, Planning, Design and Construction  
Ann Schmiesing, Executive Vice Provost, Academic Resource Management  
Marin Stanec, Senior Associate Vice Chancellor and CIO, Office of Information Technology  
Scott VanGenderen, Faculty, Program in Environmental Design

### CONSULTANT TEAM

**SASAKI**

 **Affiliated**



## Vision

### 1.0

#### Introduction

05

### 2.0

#### Key Analysis Findings

10

### 3.0

#### Campus System

22

### 4.0

#### Campus Frameworks

29

### 5.0

#### Implementation & Conclusion

65

### 6.0

#### Appendices

1. East Campus Design Guidelines
2. North Boulder Creek Design Guidelines
3. Regent Drive Design Guidelines
4. Other Proposed Buildings
5. Landscape Guidelines
6. Service and Emergency Routes
7. Utility Considerations
8. Additional Design Studies
9. CU Boulder South

# Vision

The CU Boulder Campus Master Plan 2021 supports the institution's evolving identity as a leading public research university. Through a holistic design approach, the plan accommodates programmatic need, supports institutional innovation, fosters a diverse and dynamic campus community, and develops a deep sense of place.



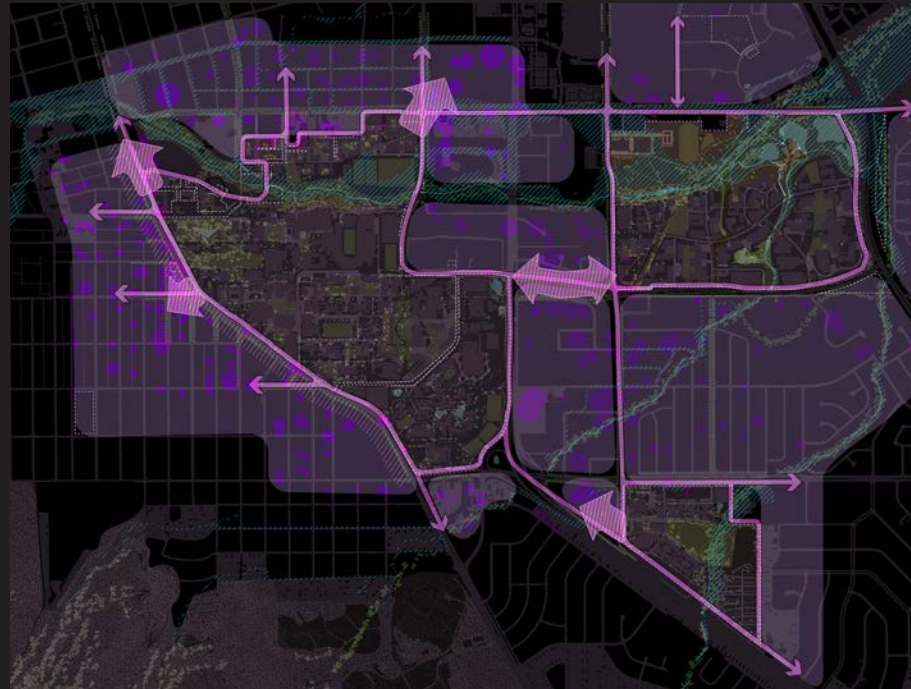
0 500' 1000' N

- Proposed Buildings
- Existing Buildings
- Campus Green
- Major Pedestrian Corridors
- Other Campus Properties

# Design Principles

A set of design principles governs the long-term development of the campus. While the nature of the master plan supports ongoing decision-making, the design principles serve as the enduring tenets to structure the campus's growth.

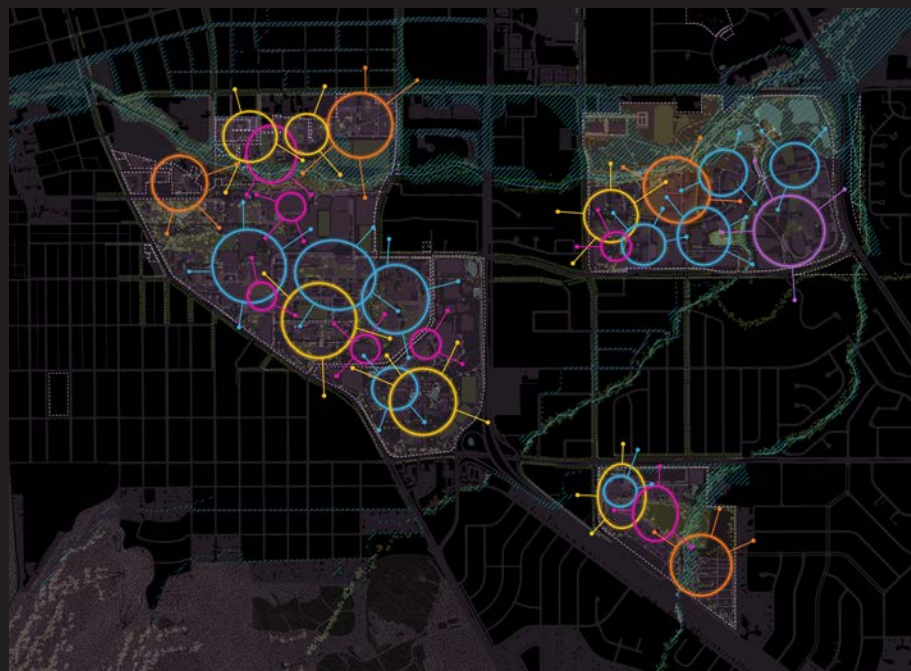
## 1. Engage Surrounding Communities



The plan identifies several strategies to strengthen the relationship between campus and community. These include:

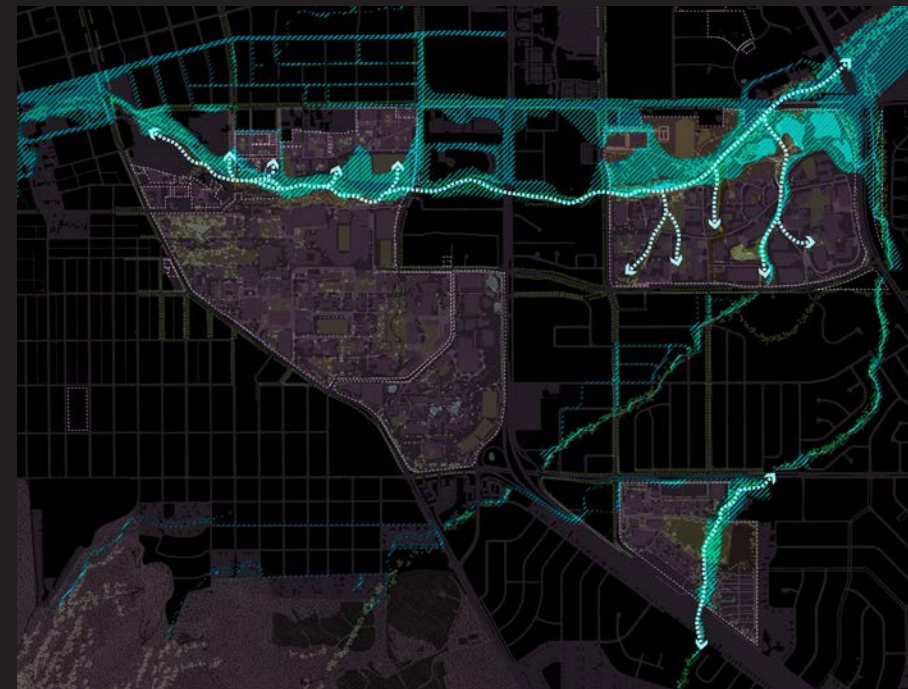
- Enhance connections between campuses
- Improve campus edge conditions
- Strategically locate facilities on campus periphery that engage the community
- Provide welcoming spaces on each campus that engage the community

## 2. Diversify Campus Neighborhoods



Recognizing the vibrancy of Main Campus due to multiple and varied uses, the campus plan provides a greater mix of uses on East Campus and Williams Village, including a balance of academic, research, student life, and housing. Distributing uses provides greater choice and variety, and ensures more active 24-7 use across all campuses.

## 3. Respect and Reinforce Natural Systems



The plan celebrates the unique natural systems by enhancing connectivity within and between campuses and by developing a system of open spaces on each campus that relate to the natural systems context. The plan also avoids development in ecologically-sensitive areas and designates that some developed areas be restored to respond to environmental considerations.

## 4. Create Strong Public Connections



The plan enhances existing spaces and creates new places for people by promoting connectivity within and between campuses, locating open spaces along major corridors of connectivity, and unlocking opportunities to extend pedestrian connections.

# Design Principles

## 5. Integrate Diverse Outdoor Spaces



A cohesive campus environment will be established by connecting the systems of existing and proposed open spaces, and by anchoring new development around open spaces. These open spaces include a rich array of typologies to support a range of activity, including: quads, courtyards, and plazas for student collaboration and study; passive recreation; formal athletics and recreation; landscape corridors; and ecological zones.

## 6. Respect Campus Character and Structure



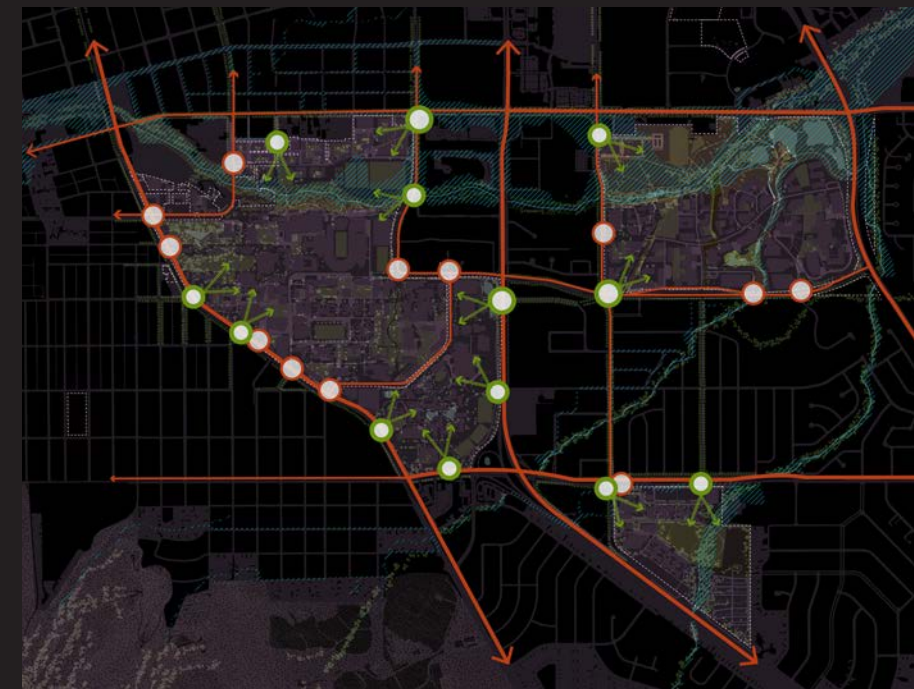
The campus plan respects the historic and successful structure of Main Campus by using it as the basis for future development and through careful, surgical interventions that improve connectivity while embracing existing conditions.

## 7. Create a Network of Student Life Spaces



The plan ensures that future development supports access to student life and student services on each campus to create a supportive student-centered network and a sense of vitality across the university.

## 8. Enhance Campus Access and Wayfinding



The overall vehicular system is clarified to ensure convenient and direct access to campus. Defined by their proximity to major roads, intersections, and campus activity, the campus edges and gateways support the plan by establishing a clear campus boundary and entrance moments. Each gateway connects the periphery of campus to an enhanced core campus pedestrian experience. This improved pedestrian experience aids campus wayfinding through visual cues, site lines, and directive landscapes.

# 1.0

## Introduction

---

STRATEGIC PLAN ALIGNMENT

---

PROCESS

# Introduction

The University of Colorado Boulder Campus Master Plan (CMP) is a living document that will guide change over time, connecting ideas and information to implementation as we continually evolve to support the university's mission of education and research. Its purpose is to strategically position the university to make ongoing decisions and best possible use of future opportunities for the built and natural environment while building incrementally toward a powerful larger vision. As part of the continuous updates supported by and through the CMP, the campus will engage in project design and pricing based on the stated goals of the CMP.

One of CU Boulder's key strategic goals is to enrich the sense of campus even as the university expands physically and programmatically across multiple locations. How can we balance the distribution and type of development among CU Boulder's multiple campuses? How should CU Boulder develop each campus location to support the academic mission and enhance a sense of community and identity? How can the campus environments embrace growth sustainably? How can CU Boulder maintain a posture of outreach and engagement through programmatic and physical strategies?

These challenging questions require the university to adopt an agile posture, one that can strategically respond as new opportunities and ideas emerge. This kind of nimble approach is not well-served by a didactic rigid traditional master plan.

The Campus Master Plan touches the full spectrum of university activity: academics and research, residential life, arts and culture, athletics and recreation, open space, transportation and parking, infrastructure, and sustainability. Stakeholders representing these topics, as well as critical themes of diversity, equity, inclusion, and wellness, collaborated extensively in the planning process; numerous university and external community constituents contributed to ensure a rich context informed the CMP.

Physical ideas cover multiple scales, from big organizing concepts for the whole university, to district studies, to street sections and conceptual building designs. These ideas are grounded in CU Boulder's academic mission and strategic goals.



View of Main Campus

# Plan Integration



CASE Building

The Campus Master Plan is not conceived in a vacuum; rather, it integrates with various planning initiatives that preceded and informed it. These initiatives include, but are not limited to:

- *Strategic Facilities Visioning (SFV)*: SFV was a precursor effort to the CMP. It considers the programmatic needs to support the mission, student success, and anticipated enrollment growth over the next thirty years. It prioritizes spaces that foster community, allow for flexibility, integrate functions, and advance research. A key part of the SFV was the creation of a dynamic, data-rich planning tool, PREVIEW, that forecasts the quantity of space required to support the university now and in the future. The outcomes of the SFV serve as the programmatic drivers for the CMP, and the adaptability of the PREVIEW tool will prove invaluable as COVID-19 and post-pandemic realities potentially change campus space needs. During the course of the CMP process, the campus shifted in and out of remote, hybrid, and in-person teaching, learning,

research and daily work. In the fall of 2021, the campus is continuing to adapt to changing space needs related to the pandemic, and the benefit of the PREVIEW tool is that it allows the campus to reassess its space usage on an annual basis and then make adjustments for future space projections as the campus continues to learn what is needed.

- *Transportation Master Plan (TMP)*: The TMP defines innovative possibilities and sets a vision for travel to, between, and through the campuses that both addresses short-term needs and sets a course for the long term. This vision seeks to sustainably meet the transportation needs of university students, employees, and visitors.
- *Housing Master Plan (HMP)*: The HMP sets a vision for the future of on and off-campus housing and how the university supports student success through housing. It outlines recommendations and two different scenarios to increase housing flexibility and choice for undergraduate and graduate students, faculty, and staff. The CMP builds upon the initial direction and Scenario B that were developed in the HMP.

- *Energy Master Plan (EMP)*: The Energy Master Plan (EMP) establishes the university’s approach to realizing a financially sustainable energy program that focuses on energy efficiency, greenhouse gas (GHG) emissions reductions, and provides a reliable energy supply that enables and enhances the campus mission of education and research. The overarching role of the EMP is to provide a framework that enables the campus to implement a fiscally responsible energy program that prepares CU Boulder for changes in the campus’s use of space, capital investment, and technology innovation in a rapidly evolving environment.
- *Specialized Laboratory Instructure - Supplemental Study (SLI-SS)*: The SLI-SS will outline strategies to meet the needs of CU Boulder’s growing demands for research space. Phase 1 of the SLI-SS is complete. Phase 2, which will better define which disciplines of research will grow and their associated space needs, will occur after the completion of the CMP and will therefore not be available for full coordination.

- Interdisciplinary Teaching, Research, and Creative Work
- Internationalizing Our Campus
- Teaching and Technology, Online and Distance Learning

The CMP therefore considers how to physically manifest these approaches within the campus framework. For instance, how do we understand research collaboration and the geographic barriers that might inhibit it? How do we break down silos between schools and colleges and create opportunities for interdisciplinary spaces and facilities?

## FOUNDATIONS OF EXCELLENCE

The Foundations of Excellence (FoE) initiative was a campus-wide effort to evaluate the first-year undergraduate experience. The committees involved with FoE considered how to deliver intentional curricular and co-curricular learning experiences that engage students. Within the CMP this specifically translates to the consideration of expanded housing offerings in quantity and style; the relationship of residence life to academic life; and, the provision of student support space.

## INCLUSION, DIVERSITY AND EXCELLENCE IN ACADEMICS (IDEA) PLAN

Under the IDEA Plan, the campus explores the means and methods for making excellence inclusive, cultivating diversity, instilling equity as a core value in the community, and structurally reshaping campus culture.

## FINANCIAL FUTURES

The Financial Futures initiative was created to ensure that resources are well-aligned to CU Boulder’s mission. Financial Futures is responsible for discovering and uncovering ways to support Academic Futures and other key initiatives, like the CMP.

# Strategic Plan Alignment

A key tenet of CU Boulder’s mission is furthering the public good. To advance this initiative, the university engaged in a number of strategic projects that serve as the basis for the Campus Master Plan.

## ACADEMIC FUTURES

Academic Futures considers CU Boulder’s core mission to educate students and engage in cutting-edge scholarship and creative work, research, and discovery. Four key projects emerged from the Academic Futures process:

- A Common Student-Centered Approach to Learning



# Project Goals



View of Main Campus

The CMP Executive Committee established a set of project goals to guide the effort. These include the following:

- Goal #1: Create a long-term facilities development plan that integrates the findings of recent campus initiatives
- Goal #2: Maintain the existing context of buildings and landscape that define the campus character, and determine outdoor spaces and buildings of merit that shall be preserved.
- Goal #3: Identify campus areas for opportunity

and improvement with a focus toward addressing deferred maintenance and building renewal.

- Goal #4: Reassess and ensure that the physical space at the university is resilient, especially in light of COVID-19, and it is managed, developed, and improved to meet the current and future academic and research needs and priorities.
- Goal #5: Facilitate a collaborative process with students, faculty, and staff that is mindful of limited resources, focuses on attainable solutions, and manifests physical spaces that emphasize the campus's culture of equity and inclusion.

# Process

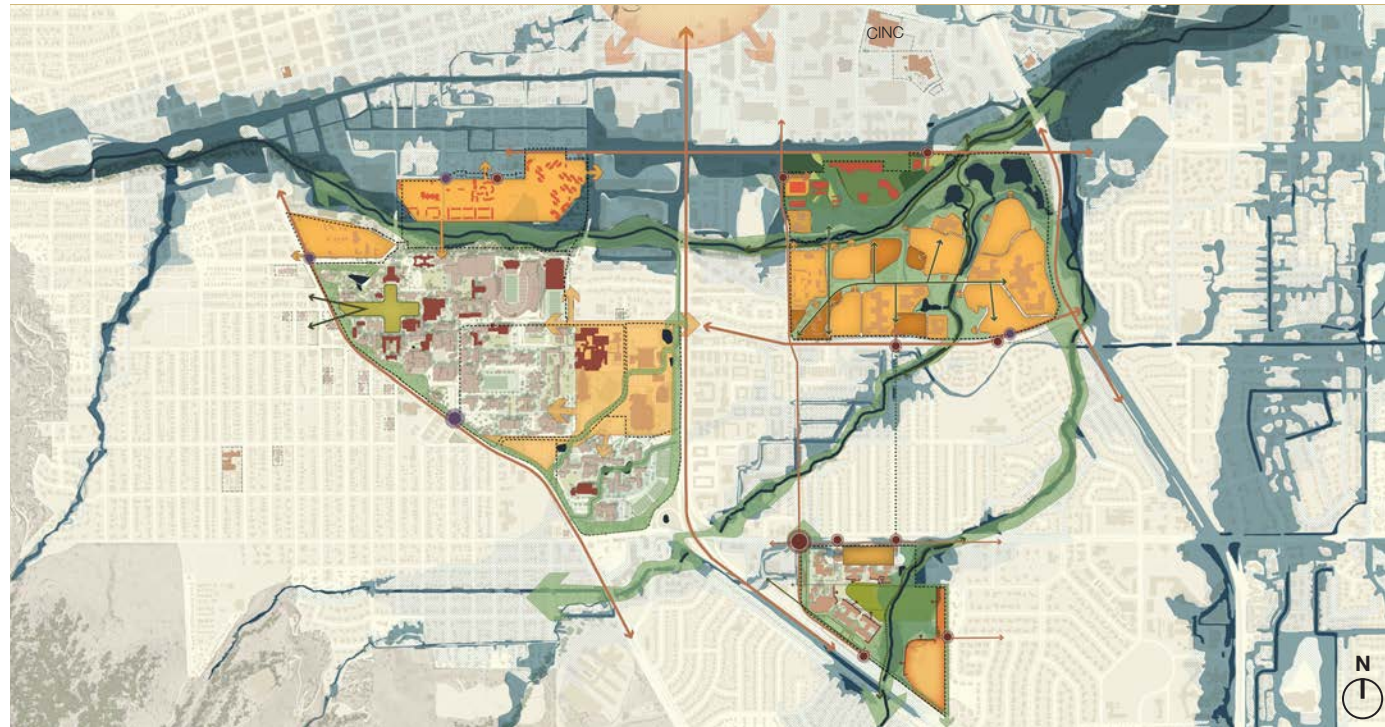
The planning process was designed to identify, create, and analyze useful data sets; to interact with the broader CU Boulder campus community; and then to apply this information to planning and design questions. The COVID pandemic presented a unique set of challenges that impacted the design team's face-to-face interaction with campus constituents. Therefore, the process relied on the use of technology to connect with stakeholders, such as video conferencing, interactive online "whiteboards," and map-based surveys.

The master planning team actively engaged the CU Boulder community through a series of stakeholder committees and broad outreach efforts:

- The Project Management Team comprised the consultant team and key members of CU Boulder's Planning, Design, and Construction team. This group provided regular oversight and management of the project with weekly, and often daily, communication.
- The Executive Committee was charged with guiding the planning process in alignment with the university's strategic priorities, reviewing information, and providing summaries and recommendations.
- The Campus Visionaries were a continuation of the focus groups created during the Strategic Facilities Visioning process. The representatives from these groups provided context and subject-matter expertise and included the following academic and administrative units:
  - Advancement
  - Athletics
  - College of Arts and Sciences
  - College of Engineering and Applied Science
  - College of Media, Communication and Information

- College of Music
  - Continuing Education
  - Enrollment Management
  - Finance and Business Strategy
  - Graduate School
  - Human Resources
  - Infrastructure and Sustainability
  - Leeds School of Business
  - Office of Diversity, Equity and Community Engagement
  - Office of Information Technology
  - Office of Institutional Equity and Compliance
  - Office of Integrity, Safety and Compliance
  - Program in Environmental Design
  - Research and Innovation Office
  - Research Institutes
  - School of Education
  - School of Law
  - Strategic Relations and Communications
  - Student Affairs (including Housing Facilities Services and Recreation Services)
  - Undergraduate Education
  - University Libraries
- The CU Design Review Board provided insight and perspective relative to the physical development and design of the CMP during critical milestones of the project.
  - Campus and Community Town Halls were held during the draft master plan phase to solicit input and feedback from the entire CU Boulder campus community and the greater Boulder community.

## PHASE 1: FRAMEWORK PLAN



Campus Opportunity Sites

### ANALYSIS

Phase 1 involved a comprehensive investigation of the CU Boulder campuses and their surrounding contexts to review the existing buildings and landscapes, identify opportunity sites for potential development, and analyze space utilization. The process involved an inclusive consultation process with the university, including a series of focus group meetings to clarify needs, issues, policies, and priorities, as well as the MyCampus survey with the greater campus audience.

The CMP team utilized the following key findings from the Strategic Facilities Visioning effort, which were echoed by the university community during the CMP process, as necessary elements to incorporate in the campus plan:

- Non-scheduled study and lounge spaces for socializing, coworking and studying
- Dedicated spaces for graduate students, marginalized students and first-generation students to create community and receive specialized support
- Spaces for academic and advising support, bookable study, commuter support, and student organizations

- Active and flexible classrooms, immersive learning environments, seminar rooms, and event spaces
- Content creation studios, practice space, digital recording studios, and new technologies lab spaces
- Flexible workplace environments with hoteling, coworking, and amenity spaces
- Unique outdoor environments that attract students and talent

### FRAMEWORK PLAN DEVELOPMENT

The understanding that emerged from the Analysis phase helped identify key opportunities and challenges, and shaped the development of the organizing framework plans for Main Campus, North Boulder Creek, East Campus, and Williams Village. These framework plans establish the overall organizing structure for each campus, defining major axes for development, an overall mobility network, a system of open spaces, and a series of mixed-use districts and neighborhoods.

## PHASE 2: CAMPUS MASTER PLANS

### MASTER PLAN DEVELOPMENT

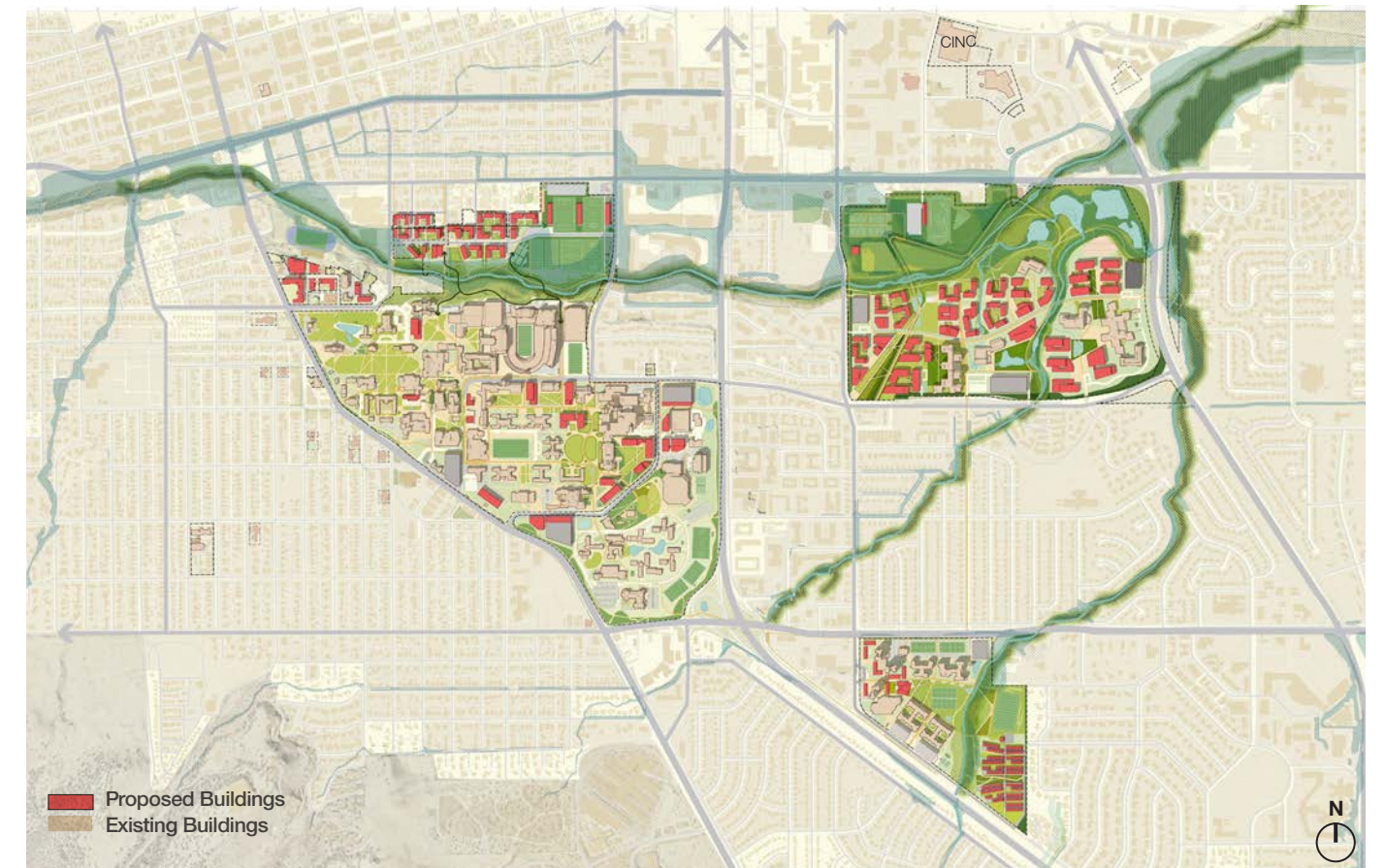
The campus framework plans became the basis for developing the more detailed campus master plans for each of the four campuses. The more detailed plans not only consider the physical opportunities but also the programmatic needs and goals for research and learning, athletics and recreation, housing and dining, and student life facilities. The planning team explored multiple scenarios within the framework plan for realizing the physical and programmatic goals before embracing a consolidated campus master plan. These scenarios were presented at and shaped by a series of meetings with the following groups:

- CMP Executive Committee
- Campus Visionaries
- Academic Leadership

- Administrative Leadership
- CU System Leadership and Regent Finance Committee
- CU Design Review Board
- Student Representatives, including both undergraduate and graduate students

### FINAL PLAN & IMPLEMENTATION

Phase 2 of the process involved the final refinement and documentation of the Campus Master Plan, as well as strategies for implementation of the plan in the near and long terms. Additional outreach occurred with the Boulder Faculty Assembly, Staff Council, building proctors, CU Boulder Police, Parking Services, and other campus entities before the draft master plan was presented to the campus and Boulder community in April 2021 and finalized thereafter.



Draft Framework Plan as presented in April 2021

# 2.0

## Key Analysis Findings

---

CAMPUS PROPERTIES

---

SPACE USE

---

MOBILITY

---

LANDSCAPE

---

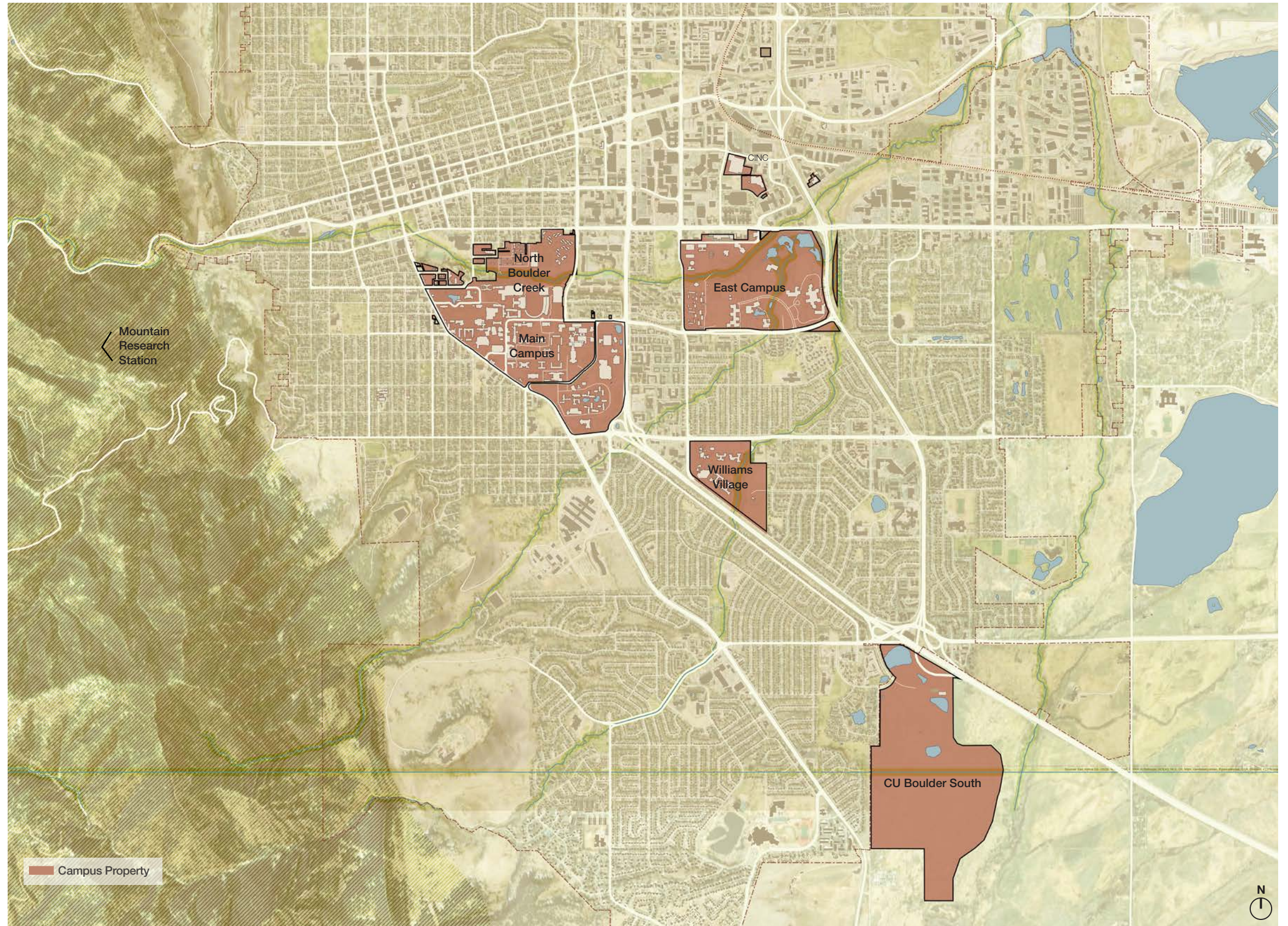
MYCAMPUS SURVEY

## Regional Context

The CU Boulder campus is located in the Rocky Mountain Front Range area, within the City of Boulder and about 25 miles northwest of Denver. CU Boulder is the original campus of the University of Colorado system and is its flagship campus, founded in 1876, five months before Colorado became a state. Within the state, the Boulder campus serves as a primary hub for education, research, and collaboration.

The CU Boulder campus exists within a dynamic ecological context, characterized by dramatic elevation change to the west and the prairie to the east. This setting of the foothills offers a tremendous amount of biodiversity that, along with the mountain backdrop, contributes to a strong sense of place. Both Boulder County and the City of Boulder are committed to preserving the mountain backdrop and acquiring a substantial greenbelt of open space surrounding the city. The campus has helped to play a role in this endeavor by preserving natural corridors along Boulder Creek on the Main and East Campuses, along Bear Creek at Williams Village, east of the Foothills Parkway on the East Campus, at the Mountain Research Station, and proposed open space at CU Boulder South.

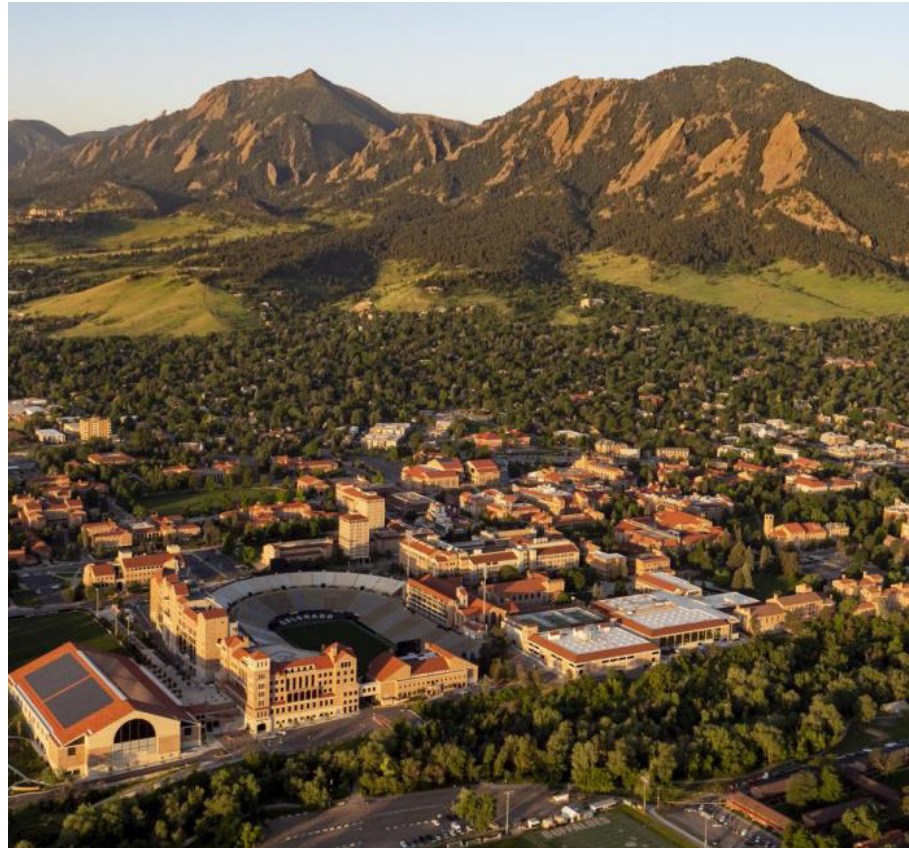
The CU Boulder campus is comprised of three, proximate properties, all located within the City of Boulder: Main Campus, which includes the North Boulder Creek housing district; East Campus; and, Williams Village. In addition, the university owns CU Boulder South, the Mountain Research Station in the mountains west of Boulder, as well as several noncontiguous properties north of East Campus that provide additional research and service space.



# Campus Properties

## MAIN CAMPUS

Main Campus has grown from a 44-acre parcel in the 1870s to the current 313-acres, including the 45-acre North Boulder Creek District. The main campus boundaries consist of Broadway to the west, Arapahoe to the north, 28th Street to the east, and Baseline Road on the south. Private retail, residential, and commercial development borders much of Main Campus and provides a rich context for realizing synergistic partnerships with the City of Boulder. Main Campus serves as the primary hub of the CU Boulder ecosystem and supports a full mix of campus uses, including facilities relating to academics and research, residential and student life, athletics and recreation, and administrative and support space.



## EAST CAMPUS

East Campus comprises 201 acres and is located two blocks east of Main Campus's eastern edge. East Campus is generally bordered by 30th Street on the west, Arapahoe Avenue on the north, Foothills Parkway on the east, and Colorado Avenue on the south. Purchased in 1955, East Campus remained largely undeveloped until the 1990s. Today, it houses facilities to support research, family-style student housing, athletics, administrative and support spaces.



## WILLIAMS VILLAGE

Williams Village is located southeast of Main Campus and is bounded by U.S. Highway 36 to the south, Williams Village Shopping Center on the west, single-family residential areas to the east, and Baseline Avenue on the north. Deeded to the university by the Williams Foundation in 1964, this 66-acre campus primarily accommodates student residences and related student life facilities.



## CU BOULDER SOUTH

CU Boulder South is a 308-acre parcel at the southeast edge of the city that was a long-term, strategic acquisition by the university in 1996 to meet the future needs of the university, with no particular immediate use in mind. In September 2021, and in the final stages of the writing of this document, Boulder City Council approved the annexation of the property into the Boulder city limits. Consistent with the annexation agreement, the CMP anticipates development at CU Boulder South to include project types such as housing, transportation, and recreational and athletic facilities, in addition to academic and research space. Appendix 6.9 discusses this site in more detail, including key provisions of the annexation agreement that will dictate future development at the site.



## MOUNTAIN RESEARCH STATION

The Mountain Research Station (MRS) is located at an elevation of 9,500 feet in the mountains 25 miles west of Boulder. The 192-acre site contains approximately 63 buildings, mostly seasonal structures, that contain laboratory, office, and housing uses. The MRS is used by CU students, faculty, and staff, as well as by researchers from a variety of national and international agencies. No plans have been developed for MRS as part of this CMP.



# Campus Character

Each campus varies in its architectural and open space character. The images below document the rich design context within various districts and campuses.



Historic district character of Main Campus



Farrand and Kittredge District character of Main Campus



District character of East Campus



District character of Williams Village

## 2.0 Key Analysis Findings

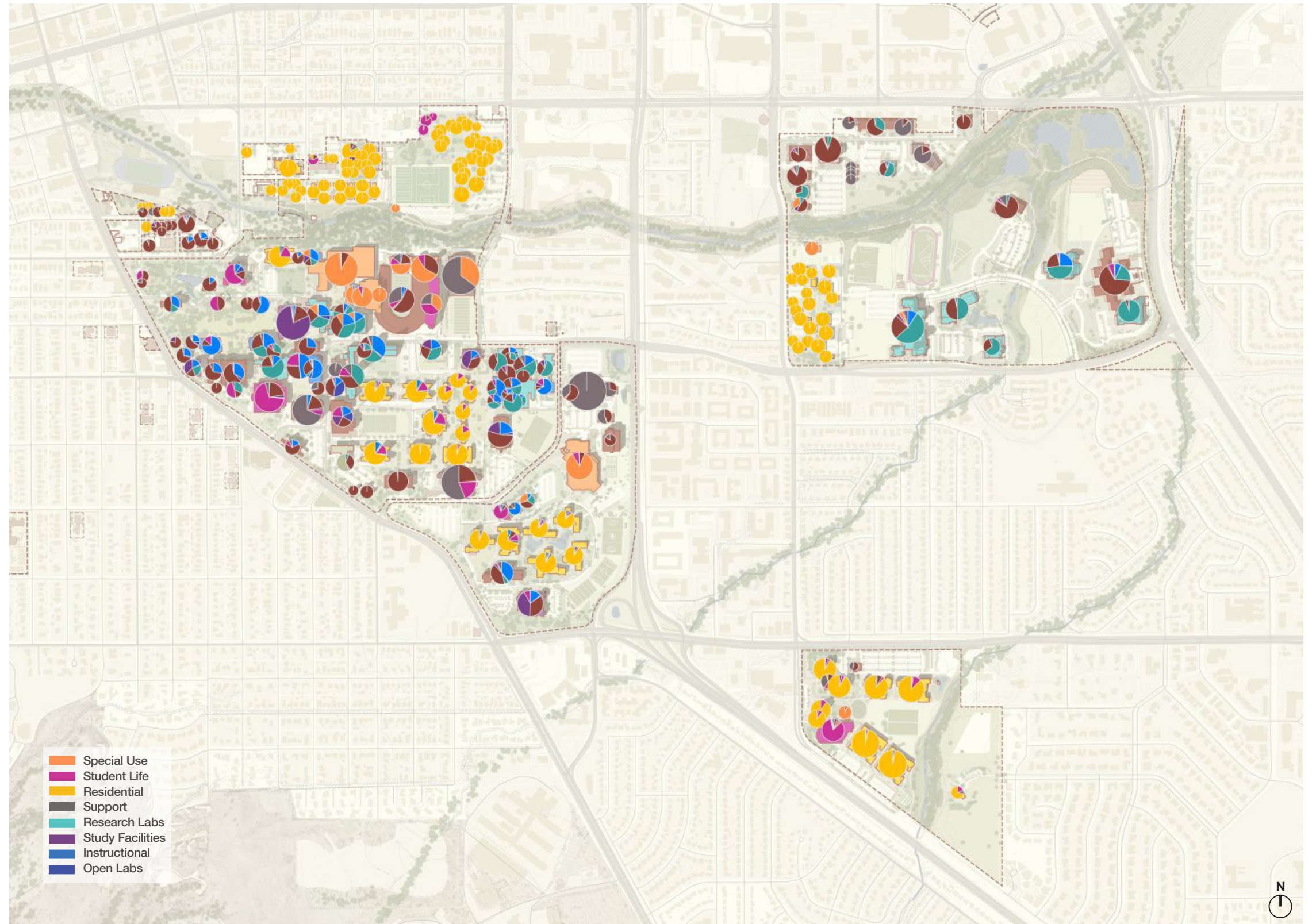
# Space Use

The CU Boulder campus comprises approximately 13 million gross square feet (GSF) of space. Roughly 72 percent of all space is located on Main Campus, with East Campus and Williams Village containing 17 percent and 10 percent, respectively, of the remaining space.

In terms of space type, office use constitutes nearly 25 percent of all space on campus, followed by residential space at 20 percent. Learning and research facilities account for less than 20 percent of all space on campus.

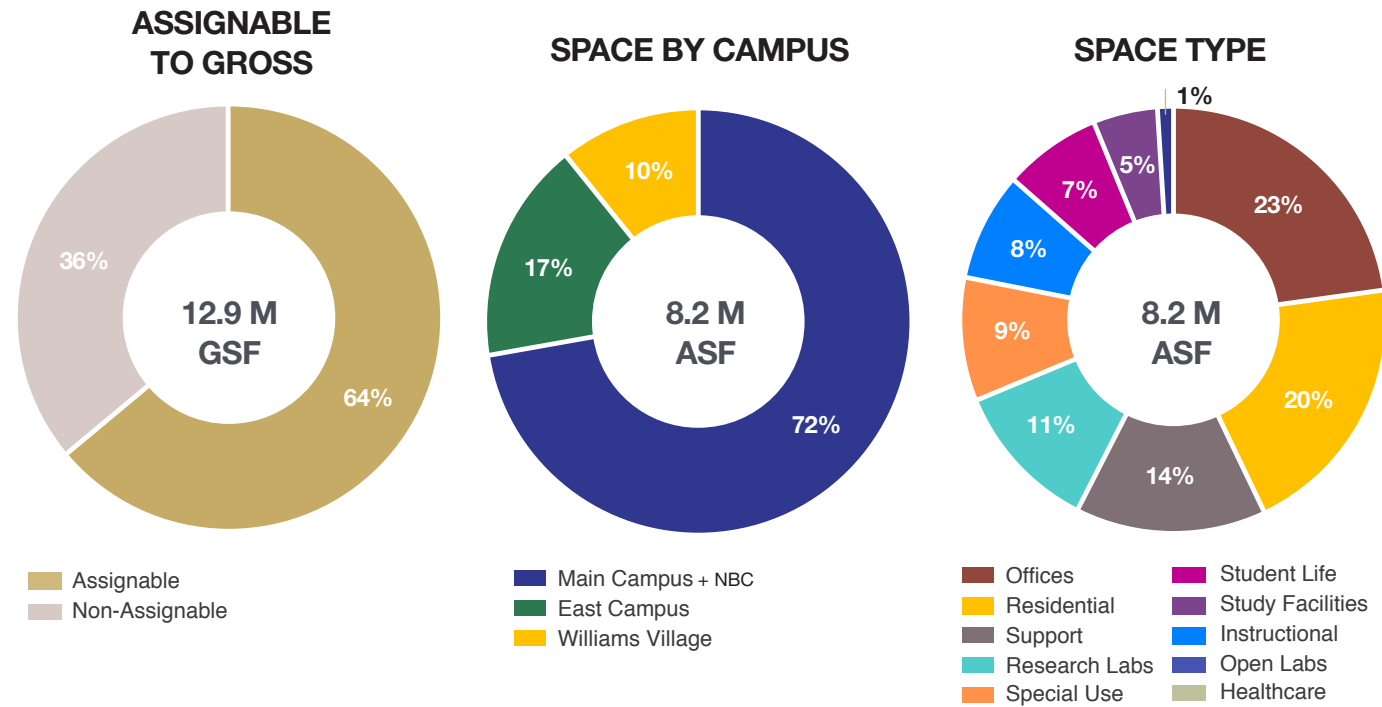
Space use types are not consistently distributed among the campuses. Main Campus supports a wide variety of use types, including instructional, research, residential, student life, study, athletics, and office facilities. This mix of uses contributes to a sense of vitality and 24-7 campus activation. By contrast, nearly 70 percent of all East Campus space is either office or research space, with only a modest amount of housing (13 percent) and almost no student life facilities. This results in an environment in which most people remain within their respective office or research buildings throughout the day, with very little evening and night-time activity. By contrast, Williams Village is 80 percent residential, 12 percent student life, and the remaining 8 percent distributed among offices and support space. Other than a few unprogrammed labs, there is no academic space at Williams Village. This results in a campus district that suffers from very little population during the daytime hours and an underutilized dining facility during the lunch hour since students leave Williams Village to attend classes elsewhere. Only in the late afternoons and evenings, when students return from class, does the level of activity increase.

The pattern extends to the mix of uses within buildings. Main Campus buildings have a greater range and mix of uses within each building than do the facilities on East Campus and Williams Village, which tend to be single-use buildings. In the future, the university will utilize the SFV PREVIEW software tool which establishes best practices and guidelines for creating more intentional mixed-use buildings either through renovation or the programming of new construction.

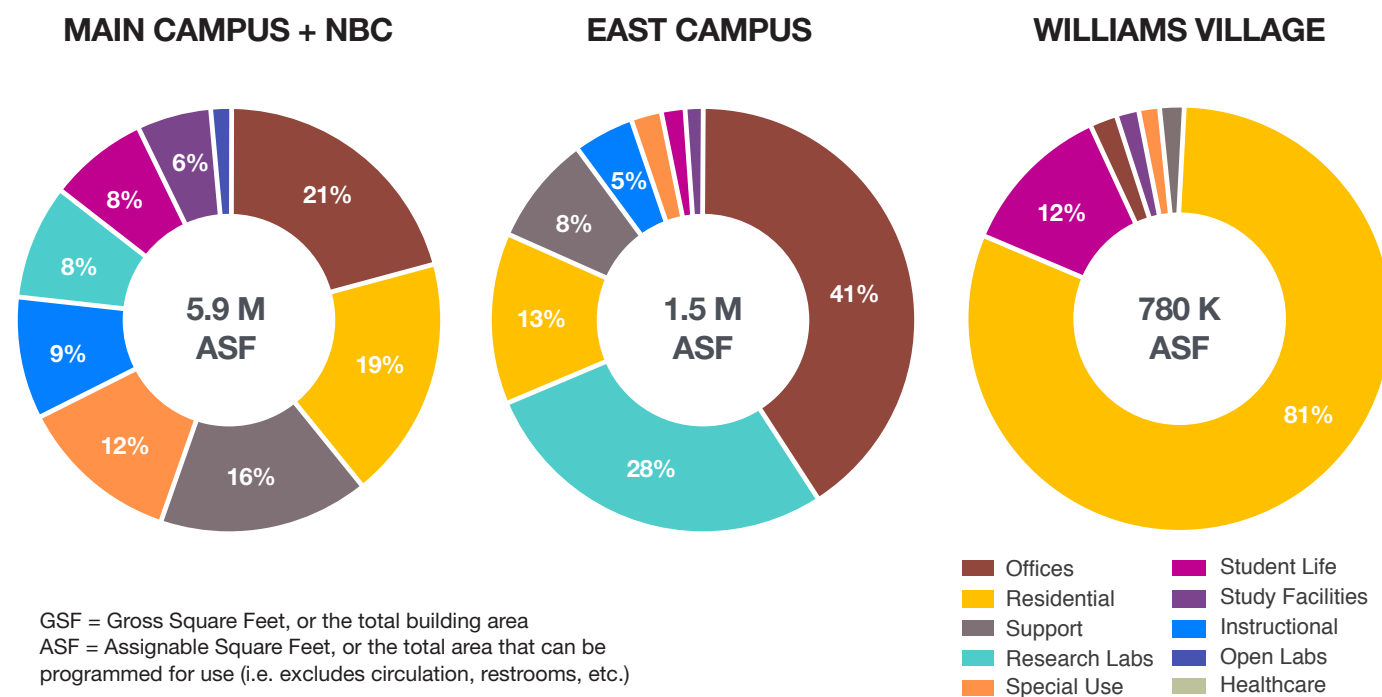


## 2.0 Key Analysis Findings

### Existing Space

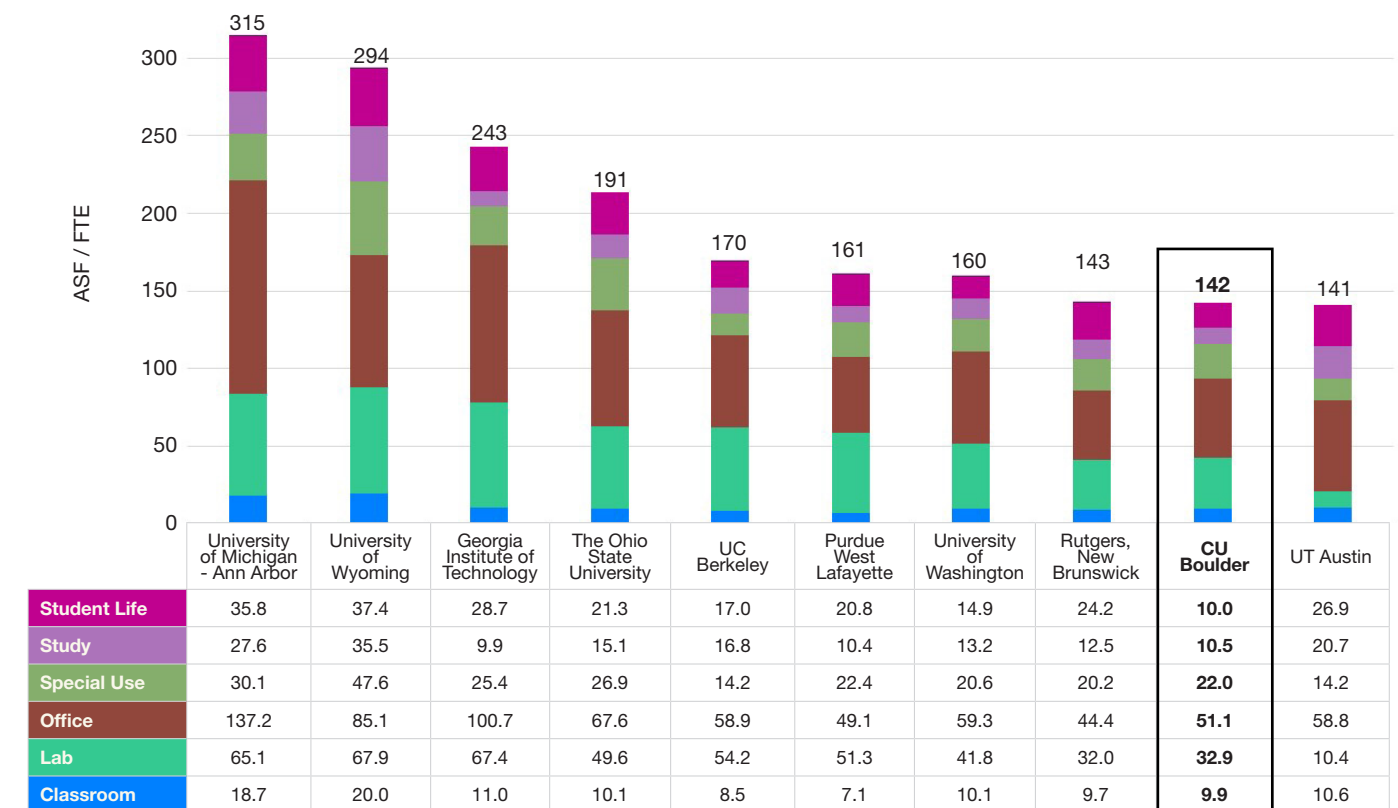


### Space Type By Campus



### Benchmarking

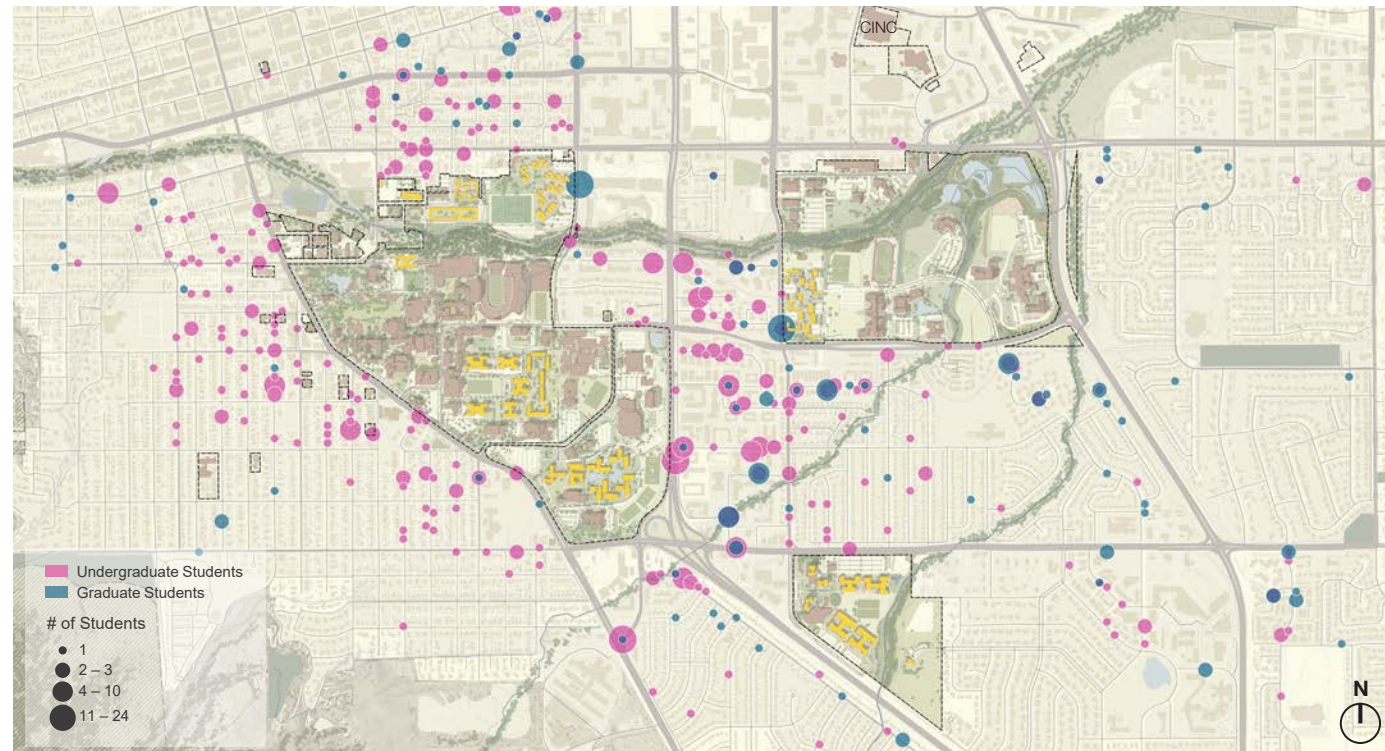
#### AVERAGE SPACE PER STUDENT AMONG SELECT PUBLIC RESEARCH INSTITUTIONS



When compared to a select set of public research universities, CU Boulder ranks nearly last in total space per student. In particular, CU Boulder compares unfavorably in terms of assignable square feet (ASF) of student life space per full-time equivalent student (FTE), as well as with general study space. The building mix typologies established during the Strategic Facilities Vision will ensure that no matter the primary use, newly constructed facilities will be programmed with a mix of uses to provide an improved balance of social, lounge, and study space throughout the campus environment.



## 2.0 Key Analysis Findings



Off-campus housing locations

### INSTRUCTIONAL SPACE

The vast majority, nearly 90 percent, of all instructional space is located on Main Campus, with the remaining 10 percent at East Campus. Within Main Campus, nearly 65 percent of instructional space is concentrated along Colorado Avenue. While this proximity is convenient for many, it also leads to significant congestion within the campus core during class change times. The university is interested in redistributing instructional space to relieve congestion and also to improve the accessibility of academic spaces to all students, including those at East Campus and Williams Village.

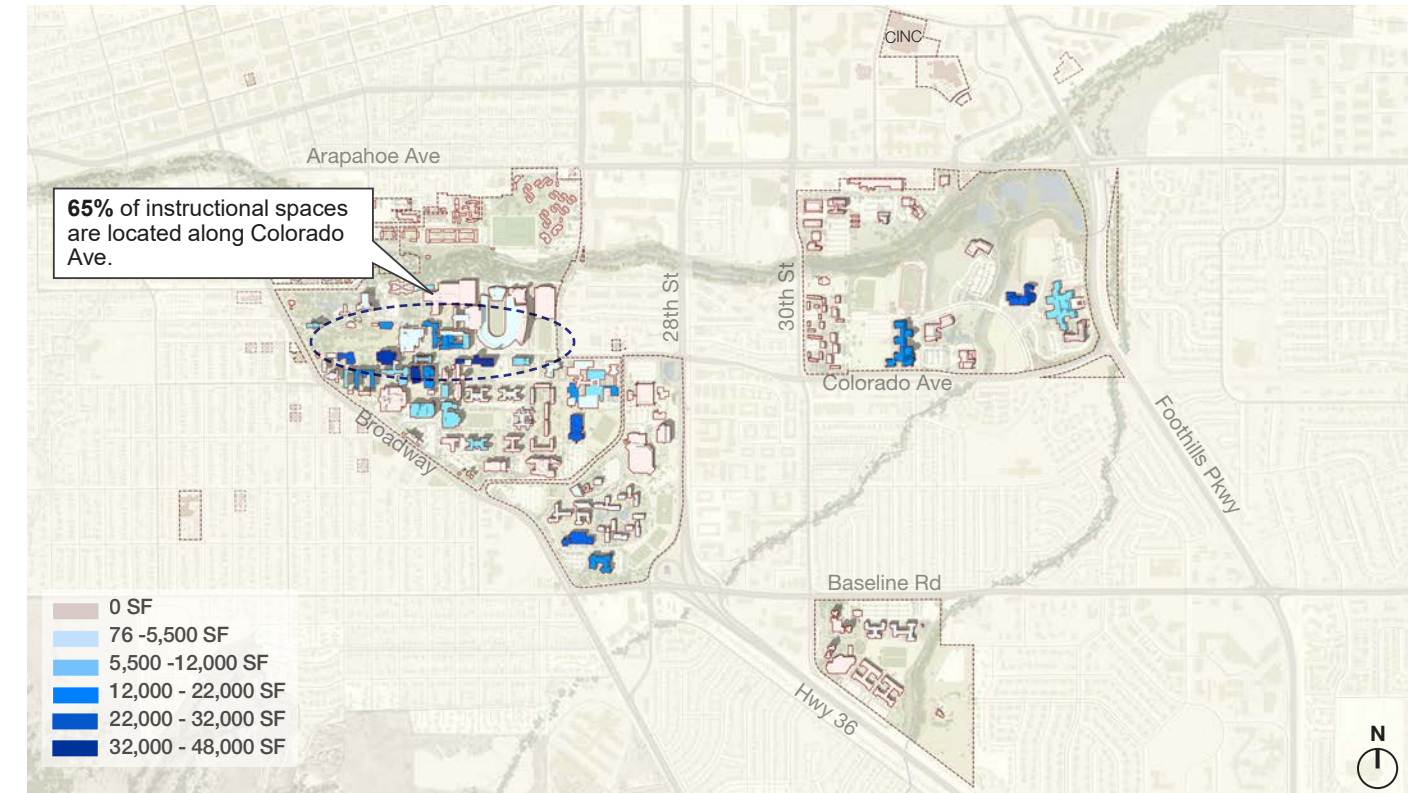
### RESEARCH SPACE

Research space is relatively well distributed between Main Campus and East Campus, with nearly 60 percent on Main Campus and the remaining 40 percent at East Campus. Within Main Campus, approximately 35 percent of research space is concentrated in the academic core, in the same district as the concentration of instructional facilities. This presents future opportunities to continue to redistribute and develop new research facilities east of the campus core on Main Campus and throughout the entirety of East Campus.

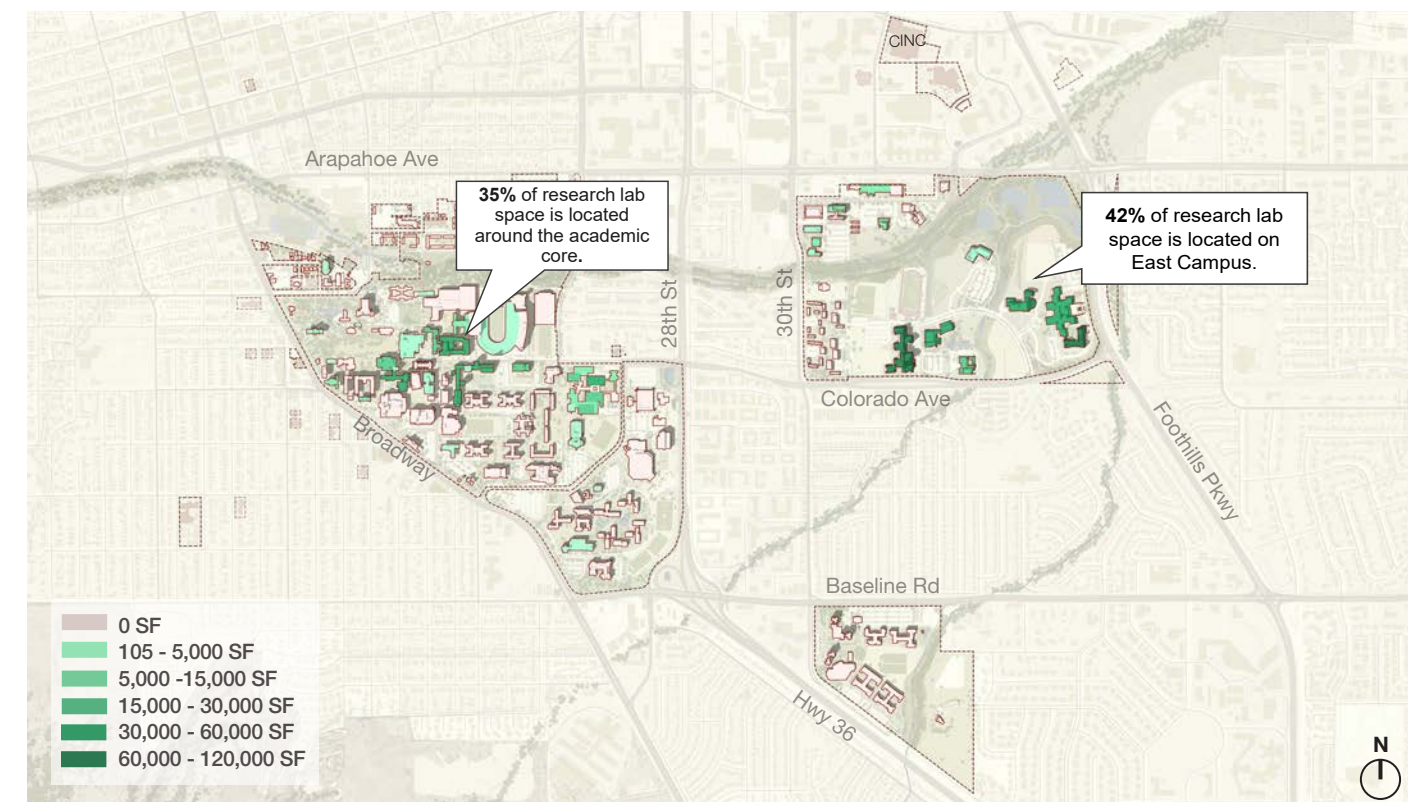
### HOUSING

CU Boulder currently offers housing to approximately 10,000 students. Roughly 8,000 beds are for undergraduate students, representing 25 percent of the overall CU Boulder undergraduate population. The inventory caters heavily to first-year students, who occupy 74 percent of the undergraduate beds. Approximately 71 percent of the housing inventory consists of double-occupancy rooms with community bathroom units.

The goal, as articulated in the Housing Master Plan, is to increase opportunities for upper-level and graduate students to reside in on-campus housing. This is in response to regional population growth that has tightened the housing supply in the market and increased pressure on those desiring a residence near campus. In addition, availability, quality, and affordability of housing has increasingly become a factor in recruitment and retention decisions of students, faculty, and staff. To address these challenges, the HMP and CMP have identified opportunities to increase the current count of 10,000 beds while also making improvements to the existing housing inventory. The CMP proposes a future range of 14,400-16,000 beds over the next 30+ years.



The majority of instructional space is located along Colorado Avenue on Main Campus



Research space has a relatively equal distribution between Main Campus and East Campus

## 2.0 Key Analysis Findings



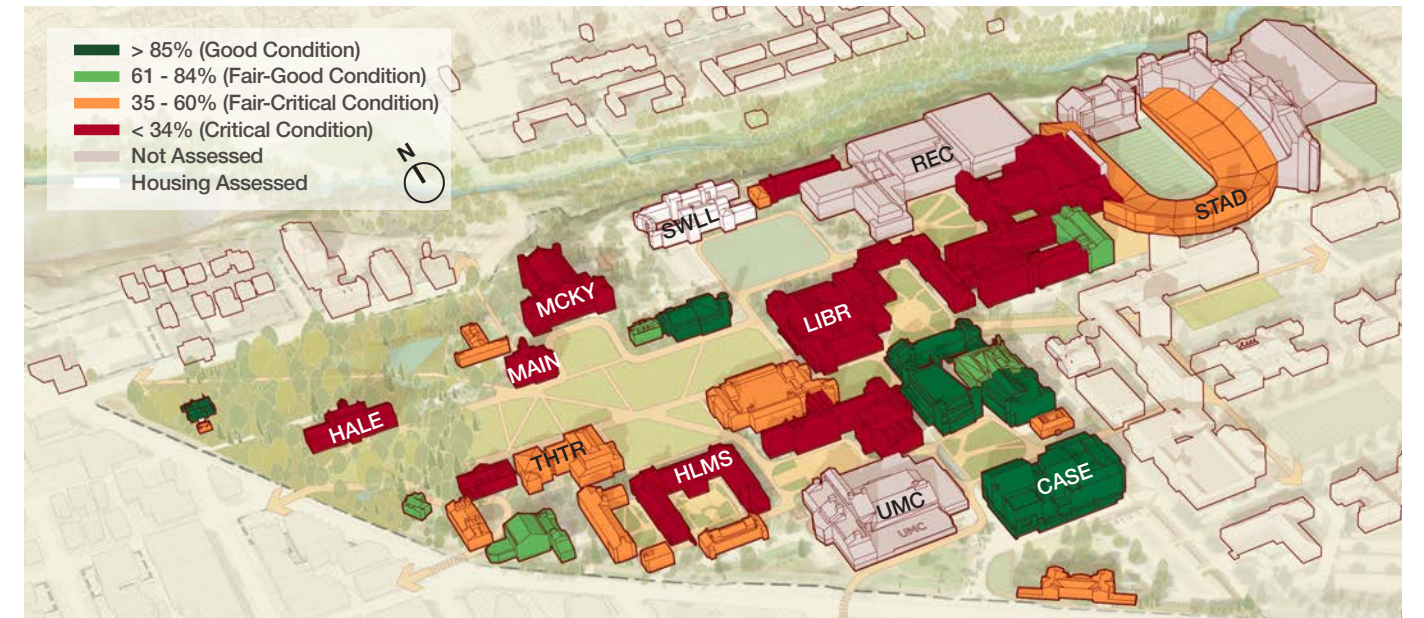
### RESEARCH COLLABORATION

In addition to the location and density of research use on campus, data regarding research collaboration can inform potential strategies for adjacency and/or collocation of facilities. The diagram above represents actual data about co-authored publications between departments. The clusters are arrayed based on a department's physical campus location and the connecting lines demonstrate collaboration with another department. The thickness of the line and size of the circle correlate to the degree of co-authored publications. The thicker the line and larger the circle, the more co-publications.

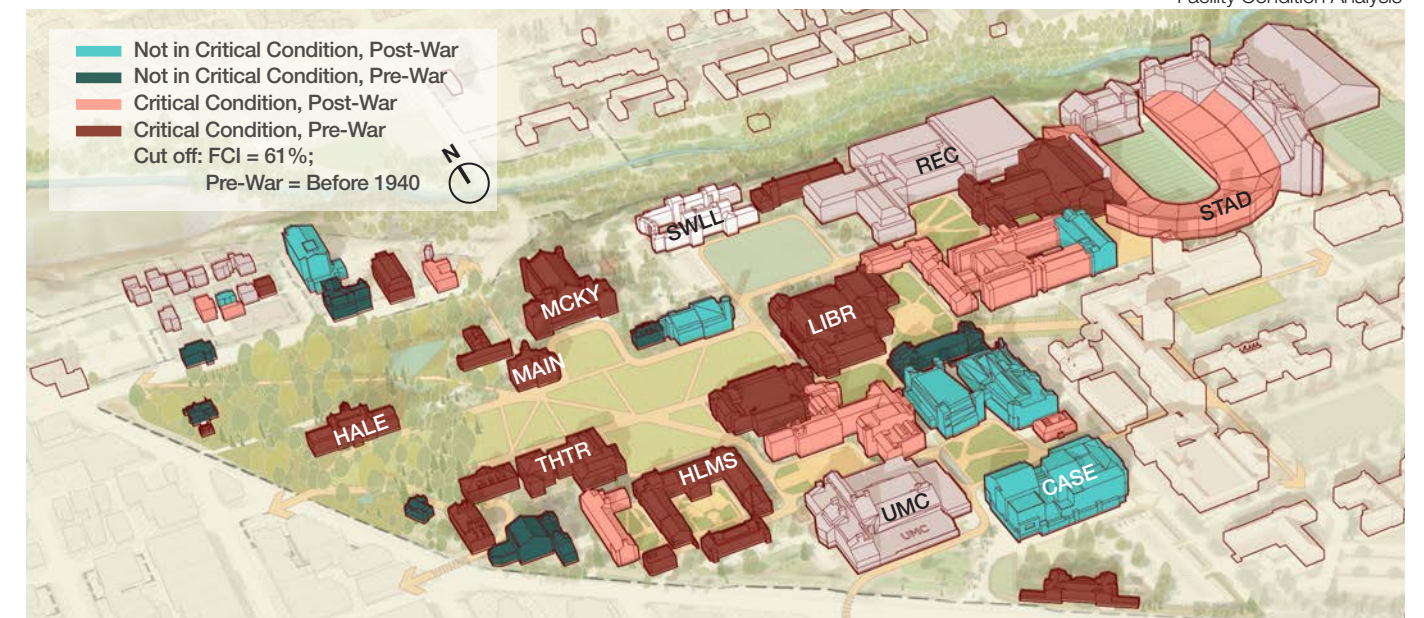
Based on this data, strong clusters of co-authored publications exist within and between the Engineering, Physics, and Chemistry departments, as well as with several institutes. Mapping this data to campus locations also reveals many strong inter-campus connections exist between Main Campus and East Campus. This pattern suggests that locating future research facilities on East Campus can strengthen

the opportunity for adjacencies and foster enhanced collaboration within and between research-active departments.

In addition to Engineering, Physics, and Chemistry, the data also reveals several departments that are highly collaborative with multiple other units. These departments, which include Ecology and Evolutionary Biology, Environmental Studies, and Geography, are located primarily on Main Campus but they collaborate with other entities across a wide geographic footprint.



Facility Condition Analysis



Comparing Facility Condition Analysis with Building Age

### FACILITY CONDITION INDEX (FCI)

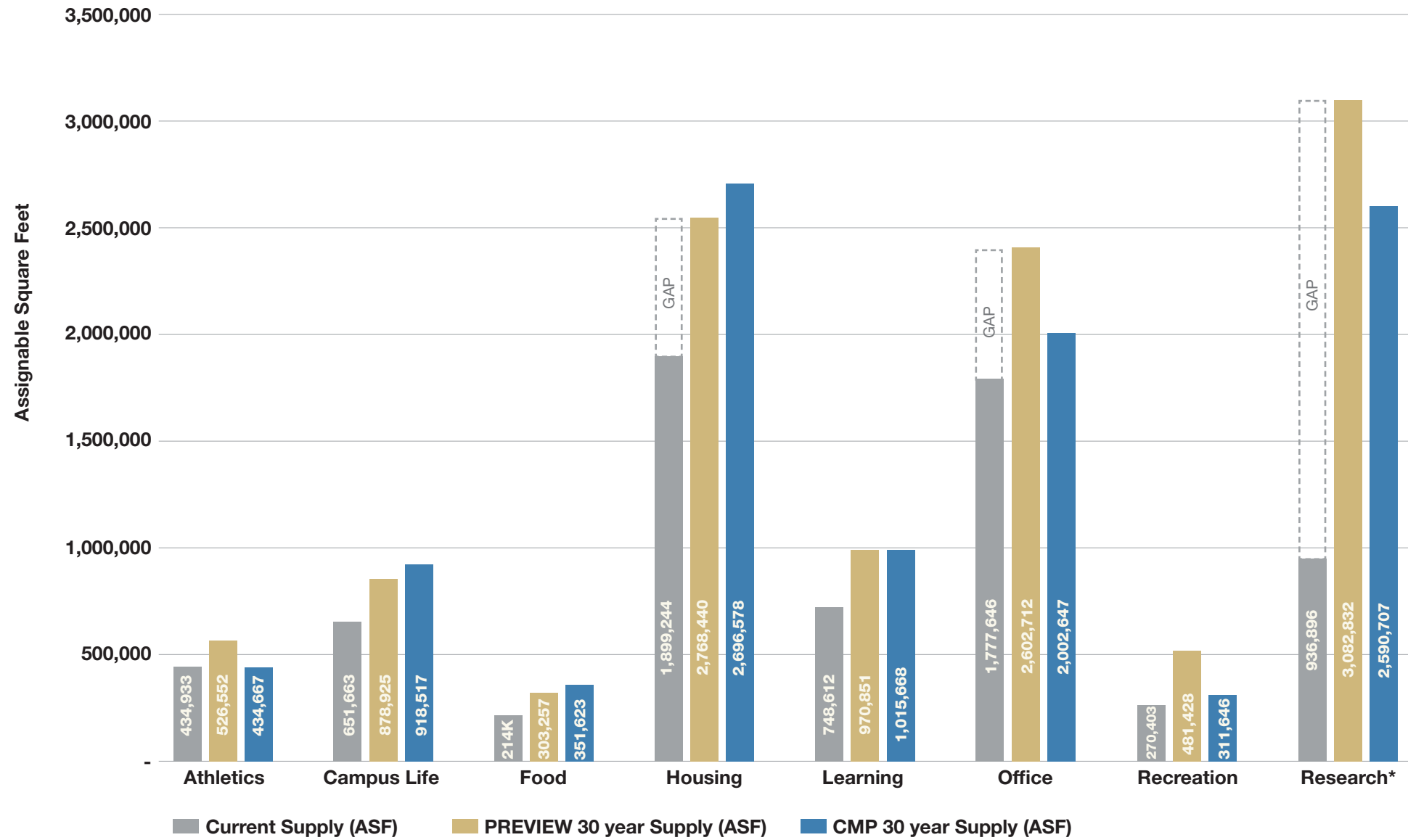
Facility condition data provides insight into the quality of space, which is an important overlay to the amount, type, location, and density of space. All of this data can be easily sourced by the campus via the PREVIEW Supply software. Sasaki took this a step further and combined multiple variables to better analyze existing conditions.

While FCI data was mapped across all campus districts, the maps above demonstrate building condition and age, specifically in the Norlin Quad zone of Main

Campus. This area contains some of the university's most historic and iconic structures that contribute to the CU Boulder sense of identity. Many of these buildings are also in the most critical condition, particularly those that immediately surround Norlin Quad.

As the university continues to support the growth of new facilities that will support the CU Boulder mission, care should also be taken to rehabilitate and renovate those structures that lend to the campus character but whose condition might not support appropriate and/or full use of the facility.

# Current Supply vs. 30 Year Demand



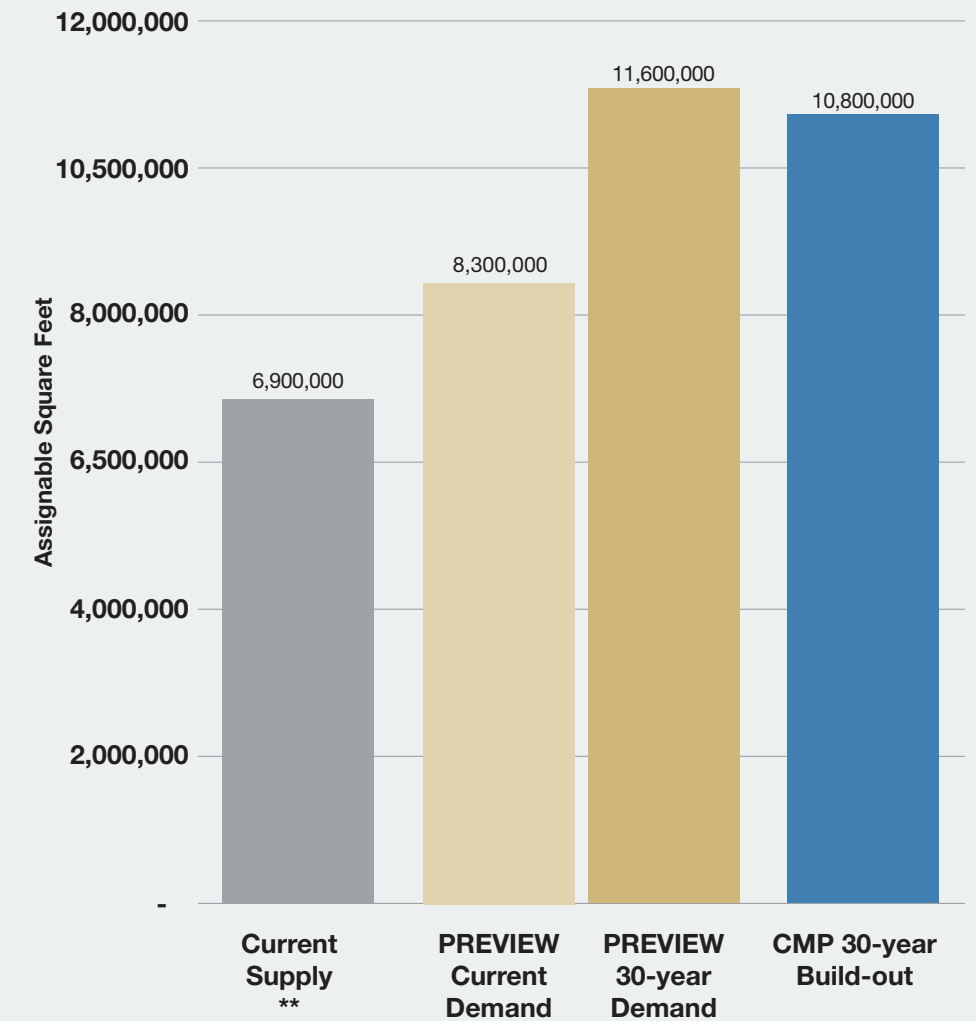
PREVIEW uses current and future student enrollment projections, paired with unique algorithms for each space type, to calculate space needs for the next 30 years. The CMP demonstrates how these space needs can physically manifest into buildings over the next 30+ years. All values are expressed in assignable square feet, meaning space that can be assigned or occupied by a specific use.

- Housing and research represent the biggest growth areas. \*The SLI-SS will further clarify the amount and type of research space needs. Office space needs will continue to be studied in the context of post-COVID pandemic and as the campus pilots flexible work opportunities.
- The CMP provides an option for an additional 300,000 ASF (1,200 units) of mixed-use graduate student housing at NBC and an additional 240,000

ASF (200 units or 400-500 beds) for Townhouses on Williams Village that are not included in the total number, offering future flexibility based on need and budget.

- Campus Life space is broadly associated with a variety of student support space and could be redistributed to meet indoor recreation needs.

## Existing and Proposed Campus Development



\*\* The PREVIEW space categories are not inclusive of all campus space types (eg. storage, custodial, or shop spaces). When all campus space types are accounted, the Current Supply totals 8.2M ASF and aligns with the space data on page 30.

# Mobility

## PEDESTRIAN

Walking and biking are popular means by which people move within campuses; however, a large number of people still drive, carpool, and ride hail to get between properties. To some extent, this is due to a lack of sufficient connections and intersection crossings between campuses, as well as concerns about safety. Despite advances made to the pedestrian environments, challenges still persist. According to the Transportation Master Plan (TMP), the biggest challenges to walking, biking, and micro-mobility (light-weight vehicles) are:

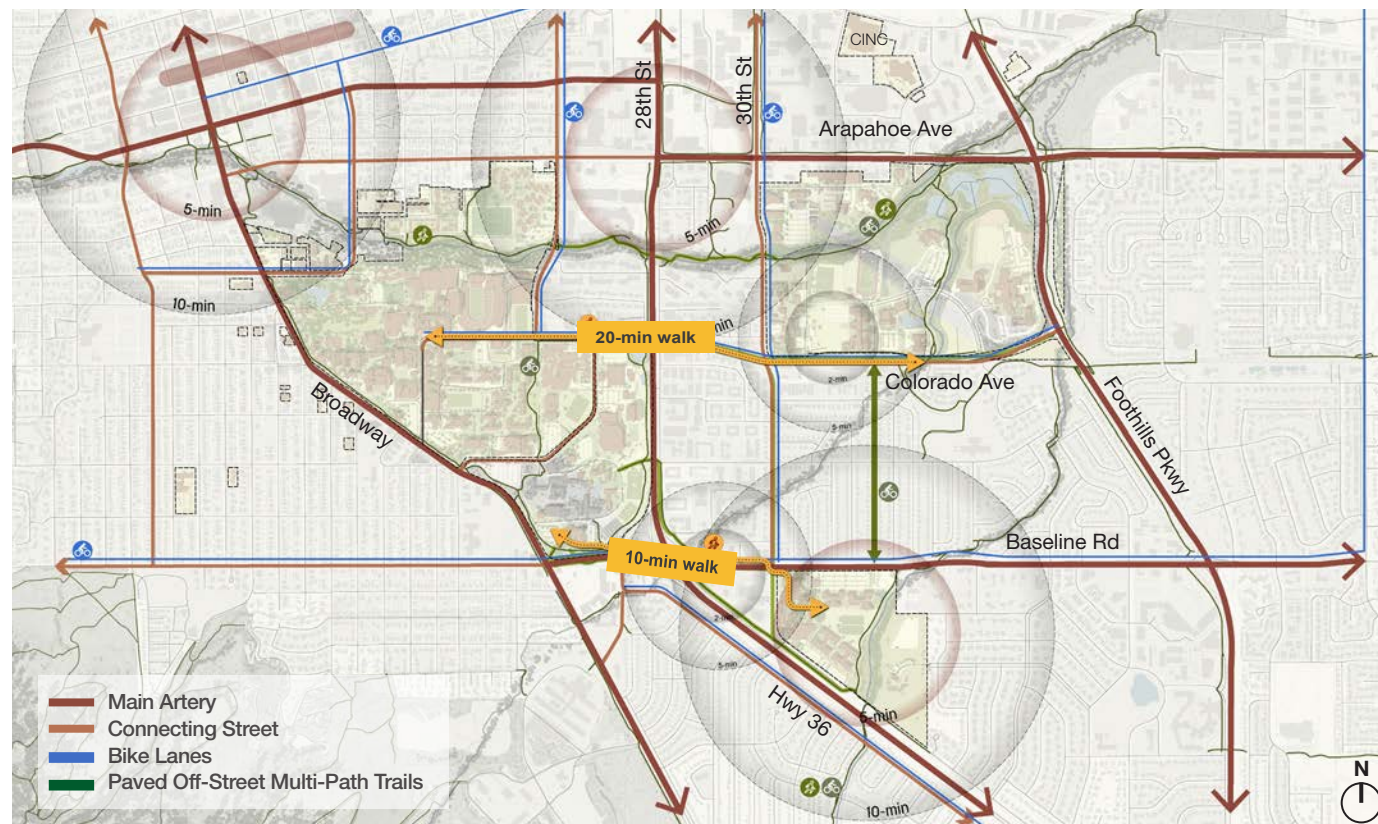
- Near misses or safety concerns on paths
- Limited space for people walking, biking, and using micro-mobility options on paths
- Conflicts between modes of pedestrian movement
- Snowy or icy paths in winter

## TRANSIT

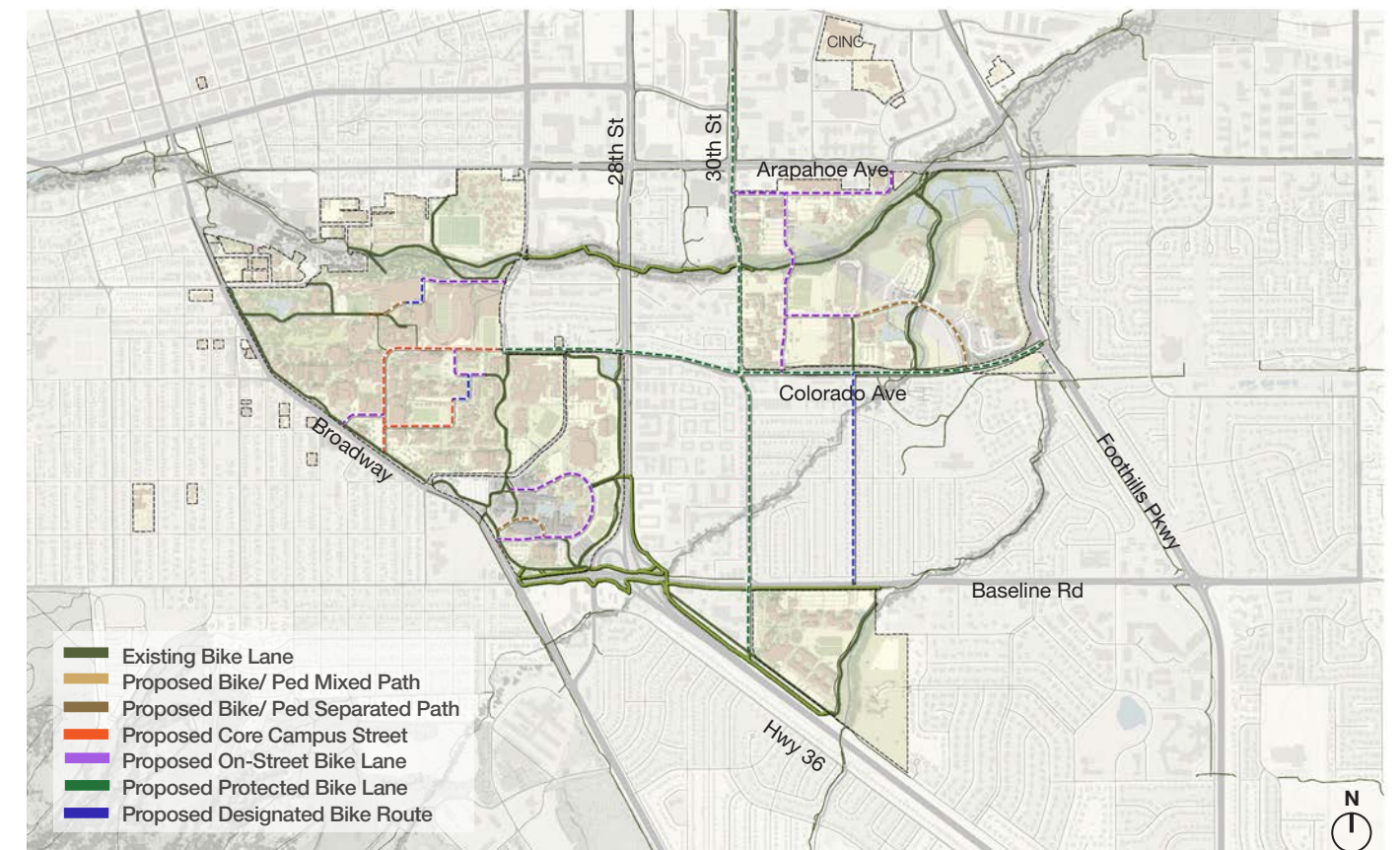
As documented in the TMP, survey results show that over 20 percent of the students, faculty and staff travel to campus via bus transit services and 55 percent of the campus community regularly travels between campuses. Fast, frequent and reliable intra-campus transit is an essential service. However, as activity increases at East Campus and Williams Village, demand for fast and frequent transit service will intensify and the current condition will only worsen if transit options cannot keep up with the transportation demands as additional facilities are developed. Investments for dedicated on-campus infrastructure, in the form of Mobility Hubs and Transit Centers, and a modernized fleet, will be necessary to effectively move the campus community between campuses.

## PARKING

CU Boulder has approximately 11,700 parking spaces, representing a significant share of campus real estate. Parking lots vary in size and are widely distributed. Earlier campus planning located surface parking near buildings, however the location of many of these surface lots now conflict with the denser pedestrian population traveling through these zones. Overall, the parking system lacks integration with other modes of transportation, such as the bus transit and pedestrian systems. Relocating surface parking to structured parking at campus entrances presents an opportunity to consider a more cohesive mobility network that promotes efficient land use, provides greater connectivity, and enables a “park once” environment for people who choose to drive.



CU sits within a dense network of multi-modal facilities. Access between campuses is challenging but manageable. Protected multi-use paths provide many conflict-free connections



The TMP delineates a series of proposed bike lanes and paths that will improve the overall system network.

# Landscape

## CONTEXT

The University of Colorado Boulder sits at the base of the Rocky Mountain foothills in what used to be a High Plains prairie landscape. This setting provides a distinguishing natural backdrop as well as scenic vistas and access to many outdoor recreational opportunities.

Creeks form a distinct ecological framework within each campus. Boulder Creek runs west-east, traversing both Main Campus and East Campus, and provides an important point of inter-campus connectivity. On Main Campus, Boulder Creek divides the historic Campus Core area from the district known as North Boulder Creek (NBC) via a sharp, 70-foot escarpment. On East Campus, the creek flows diagonally from the west to the northeast, dividing the campus and establishing two

separate development zones. NBC and the area north of the creek on East Campus sit at lower elevations than the areas south of the creek and therefore face greater flood risks from high spring runoff and severe thunderstorms. At Williams Village, Bear Canyon Creek generally runs north-south and bisects the campus, with development focused west of the Creek and a more naturalistic zone to the east.

## CLIMATE

Boulder has a semi-arid climate characterized as generally temperate with an average of more than 300 days of sunshine per year. This allows for year-round outdoor activities, which makes the design and function of outdoor open spaces a critical consideration in the overall use of campus environments.

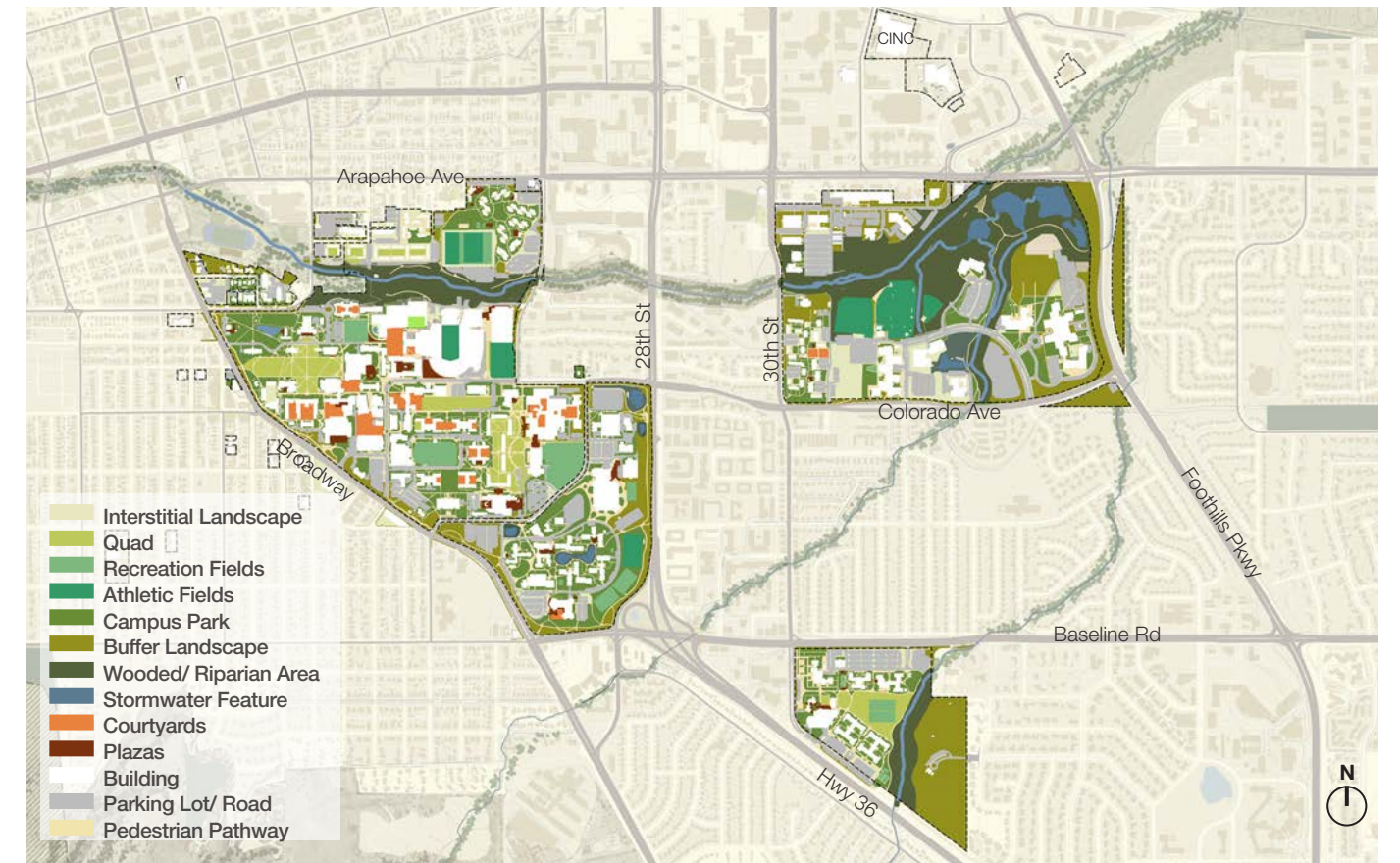
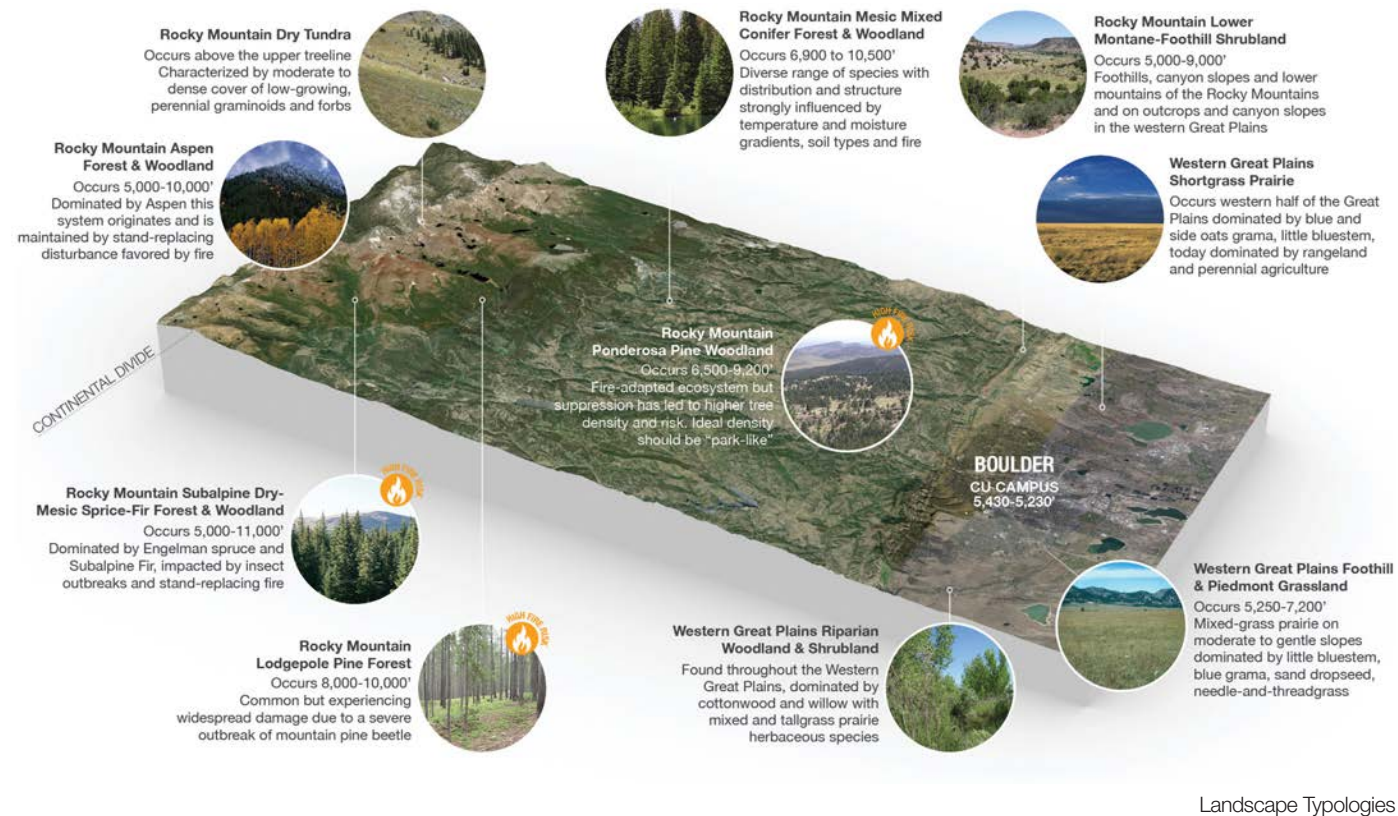
## ECOLOGY

Over time, the Boulder campus has been gradually planted with trees that shape its present-day character. Today, the campus has over 3,800 cultivated trees in addition to the trees found growing in riparian corridors. CU Boulder has been recognized for many years with the Tree Campus USA designation and is engaged in tree preservation efforts against threats such as the Emerald Ash borer.

CU Boulder sustainably plants and irrigates its landscapes with non-potable water through its water rights. Given the risks associated with drought and water scarcity in Colorado, it will be important to continue these efforts to further reduce landscape water demand through mixed-meadow and prairie grass restoration among other native and adaptive planting choices.

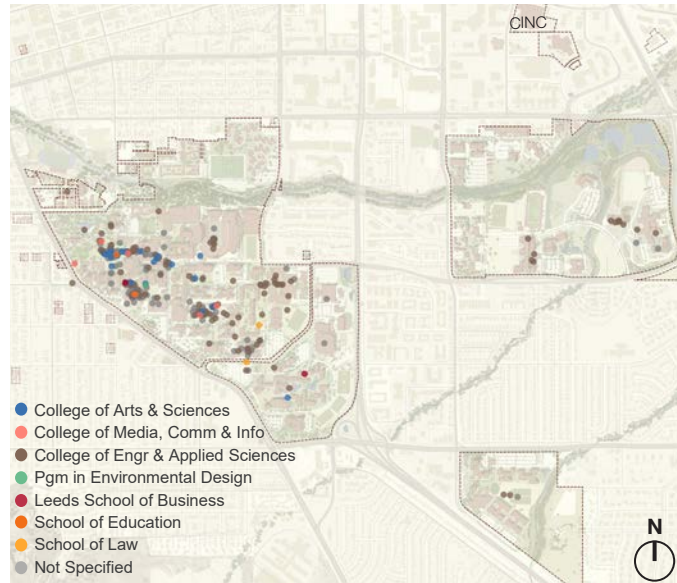
## OPEN SPACE

The variety and hierarchy of open spaces on Main Campus are an important part of CU Boulder's much-loved character. They range from the formal and historic Norlin Quad at the western end of campus to the more actively used Farrand Field to the east, as well as a series of distinctive courtyard spaces distributed throughout. By contrast, much of East Campus and Williams Village is characterized by informal landscapes. Today, outdoor spaces are no longer used for just passive or active recreation. The demand for quality exterior study and collaboration space with appropriate amenities affects all campus properties. New development on both campuses has presented opportunities to program open spaces, such as the new Aerospace Building landscape on East Campus and the plazas outside Village Center Dining at Williams Village.

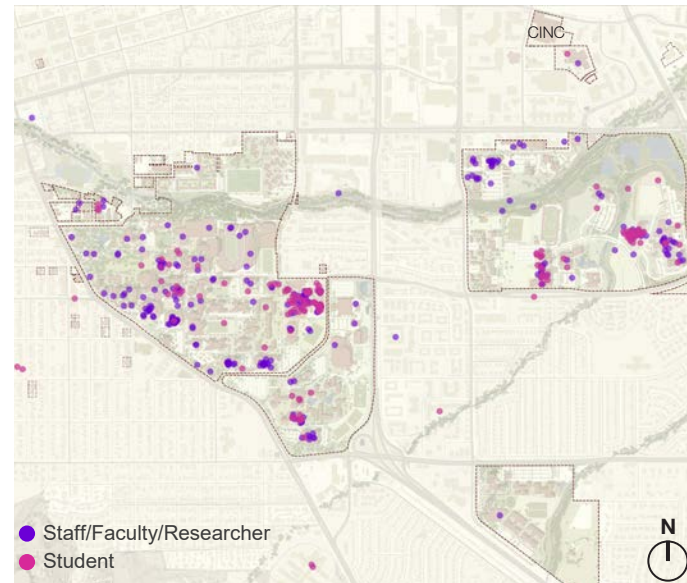


Landscape Typologies across all campuses

# MyCampus Survey



Heart of the Campus



Collaboration and Innovation

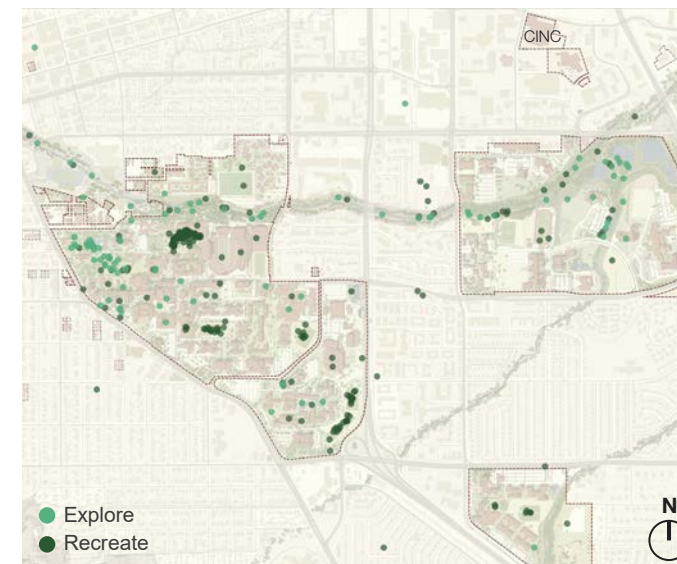
Members of the CU Boulder community participated in an interactive map-based survey known as MyCampus. The survey allowed users to identify how they use the campus on a day-to-day basis and to respond to specific questions about campus perceptions. Key takeaways from the survey include:

## HEART OF CAMPUS

Many people consider Norlin Quad as the symbolic “heart of campus,” whereas the University Memorial Center (UMC) and Farrand Field are associated as “hearts” of activity. It is important to note that the designations of “campus heart” included both interior and exterior spaces.

## COLLABORATION AND INNOVATION

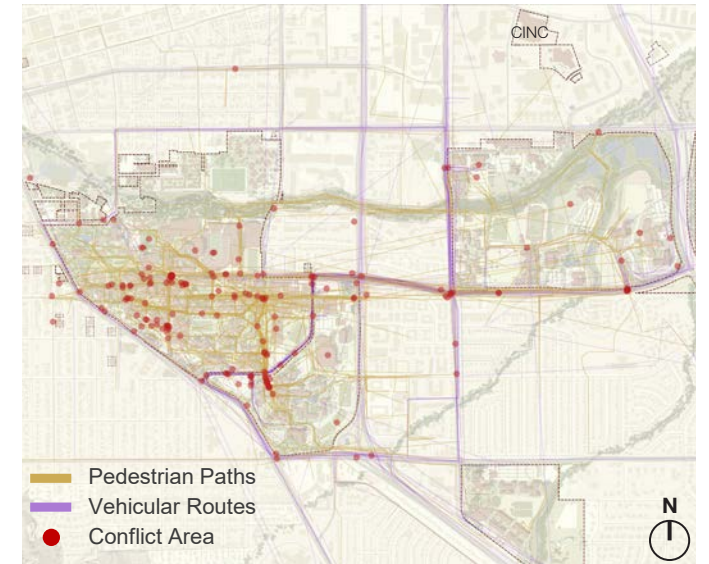
Student responses about collaboration and innovation were more spatially concentrated in distinct areas as compared to faculty and staff. Graduate and upper-division students reported a relatively equal distribution of collaboration/innovation on Main and East Campuses, while lower-division students tended to stay on Main Campus. Popular student collaboration areas include the Idea Forge in Fleming and the Integrated Teaching and Learning Laboratory (ITLL). Much faculty collaboration and innovation was reported to occur within offices and designated research environments. Areas where students, faculty, and researchers collaborate together include the Engineering Center, Roser ATLAS Center, Institute of Behavioral Science, Jennie Smoly Caruthers Biotechnology Building (JSCBB), and Aerospace Engineering Sciences Building. Staff collaboration and innovation areas were not closely collocated with students and faculty/researchers.



Recreation

## EXPLORE AND RECREATE

- Many students, faculty, and staff not only make use of the on-campus designated indoor and outdoor recreation facilities but also the system of trail networks that traverse and connect campuses.
- Beyond the campuses, the surrounding Front Range is an important area for hiking and exploring.



Multi-modal mobility

## MOBILITY

Respondents to the survey identified several points of pedestrian-vehicular conflict. These include:

- The walk area on the south side of the Regent Underpass
- Pedestrian crossings along Regent Drive, including the intersection of Regent Drive and Colorado Ave.
- The bike path east of Center for Community (C4C) and Business School parking lot
- The east-west sidewalk between JILA and Engineering mostly due to bike traffic
- Intersection of Colorado Avenue and 18th Street
- Intersection of 18th Street and Euclid Avenue
- Areas within the academic core during class change times
- Intersection of 28th Street and Colorado Avenue
- Intersection of 30th Street and Colorado Avenue

# 3.0

# Campus System

---

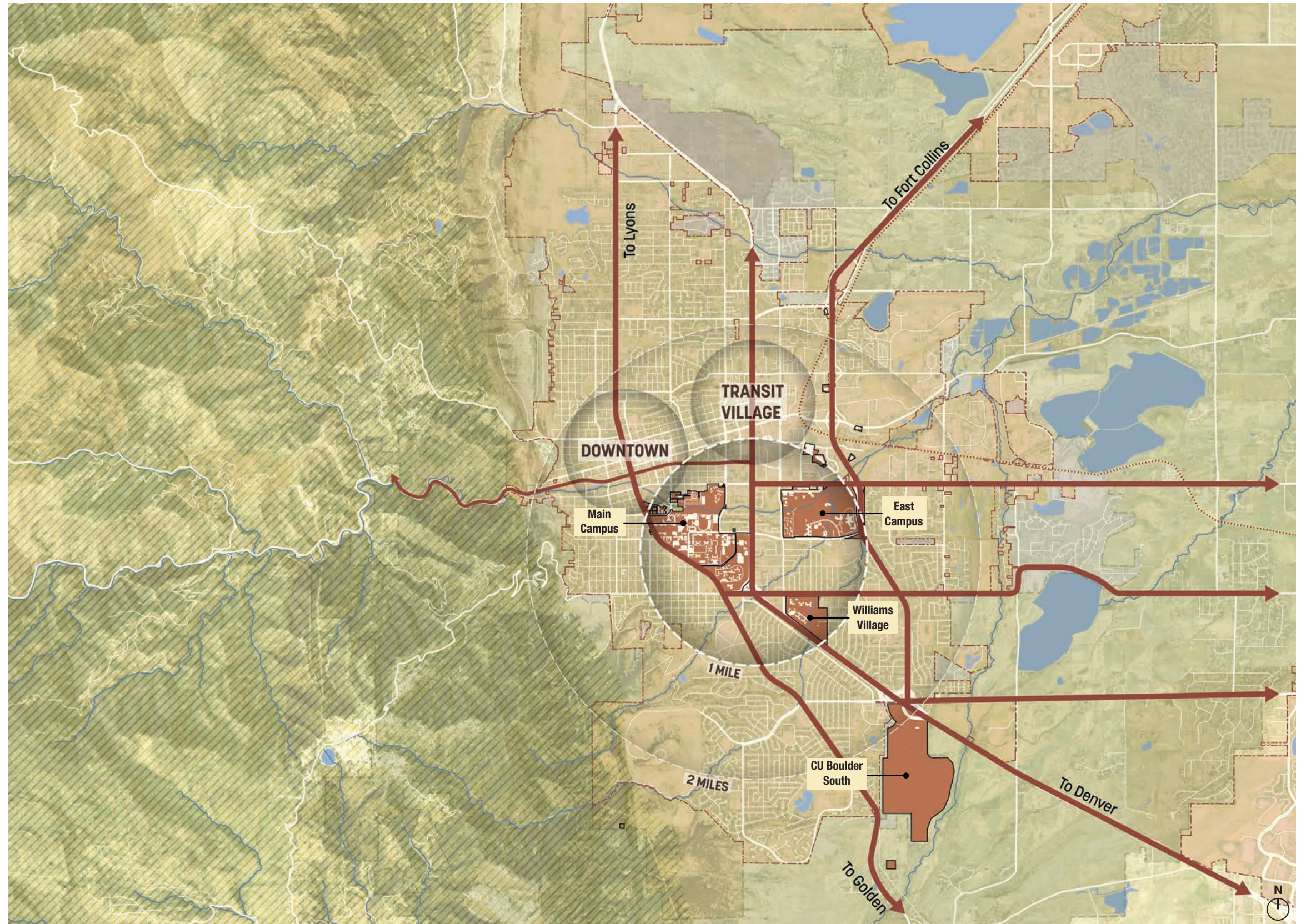
DEVELOPMENT FRAMEWORKS

# The Campus System

While each campus has a unique physical context and, to some degree, programmatic thrust, the 30-year CMP presents an opportunity to also consider how the campuses operate as a cohesive system, particularly as growth continues to be distributed yet interdisciplinary collaboration and proximity is of increasing relevance.

## URBAN CONTEXT

CU Boulder is considered an urban campus due to the development that surrounds the campus. Due to the physical limitations imposed by the foothills and mountains to the west, growth within the region continues to expand eastward. While many students, faculty, and staff live within proximity to the campus, a lack of affordable housing options means that many in the CU Boulder community live throughout the greater metropolitan Denver region. This has implications for transportation connectivity via major regional highways and interstates as well as for gateways into each campus. Edge conditions, too, are an important consideration in providing a welcoming and connected seam between campus and community.





### 3.0 Campus System

#### STRATEGIC TRANSFORMATIONS

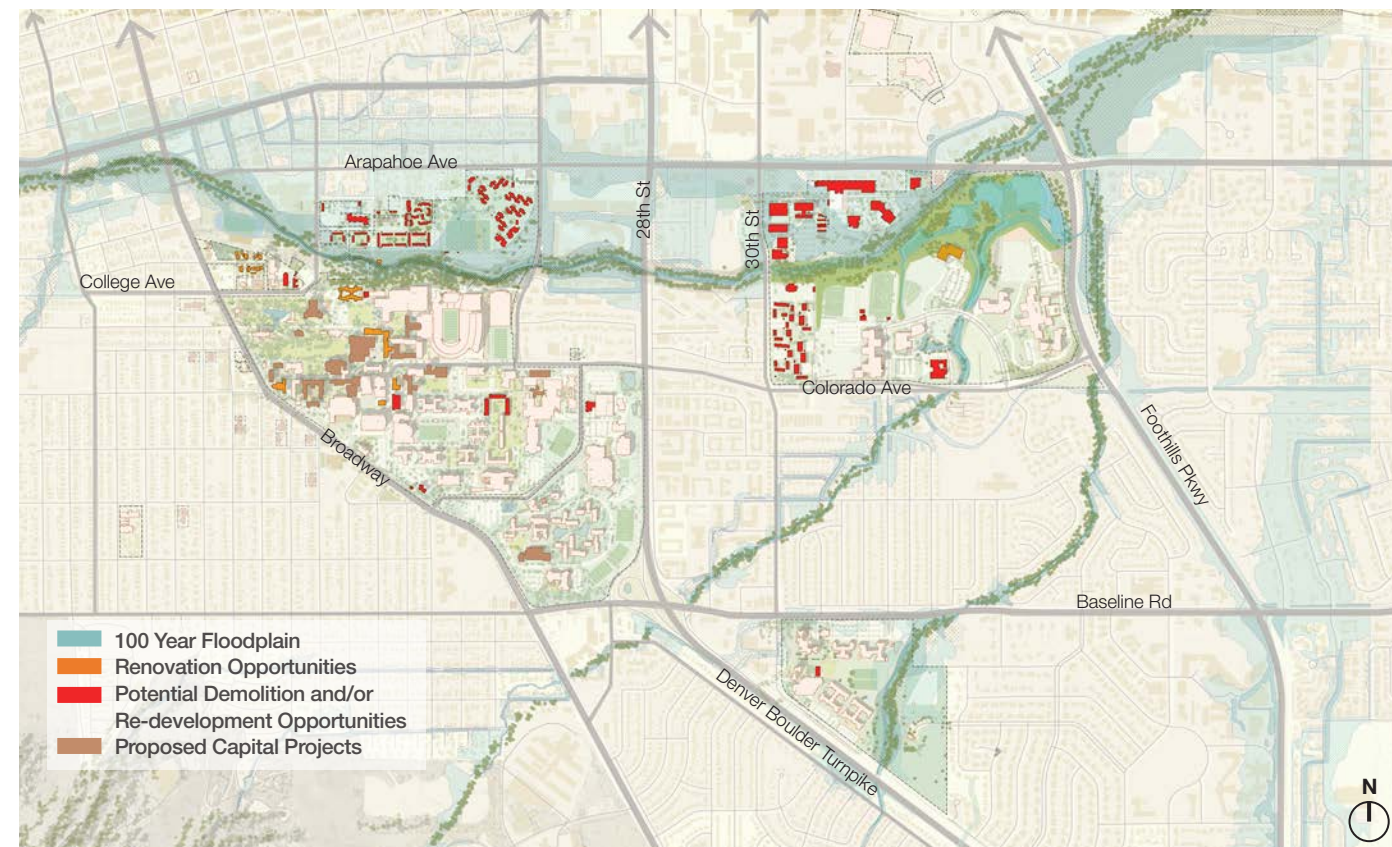
The general land use pattern for Main Campus has developed over time and is unlikely to change significantly over the 30-year horizon of this plan. The majority of new development on Main Campus is proposed atop existing surface parking. Select demolition, such as the Aden-Brackett-Cockerell Hall residential area, offers an opportunity to recapture a developable area for academic expansion. Smaller, surgical demolitions to portions of buildings present an opportunity to enhance connectivity.

At Williams Village, only demolition of the Williams Village Recreation Center is proposed due to the facility's under-utilization of a strategically located parcel, but recreational amenities would be replaced on the site. New development is otherwise proposed in parking lots or in under-performing open spaces.

Both NBC and East Campus offer the most significant opportunities for strategic transformation. At NBC, where much of the existing housing is of poor quality and represents an outdated residential typology,

redevelopment also provides an opportunity to more sensitively site new development with respect to ecological and floodplain considerations. On East Campus, many of the facilities north of Boulder Creek are in the high hazard or conveyance zones and should therefore not receive further investment. South of the Creek, the existing Smiley Court complex does not maximally utilize the land at this strategic gateway location, thereby presenting an additional transformation opportunity.

The strategic transformations proposed above will add vitality and significant new program elements to all of the campus parcels. Main Campus will continue to function as a robust campus, and East Campus and Williams Village will become multi-faceted campuses as well. Foreseeing this, the CMP recommends the university consider renaming the Main Campus parcel to create equity across the campus parcels and more accurately describe the vibrancy and relative orientation of each campus. This renaming opportunity should include the entire campus community to ensure buy-in from all constituents.



Strategic transformation opportunities

#### PUBLIC REALM FRAMEWORK

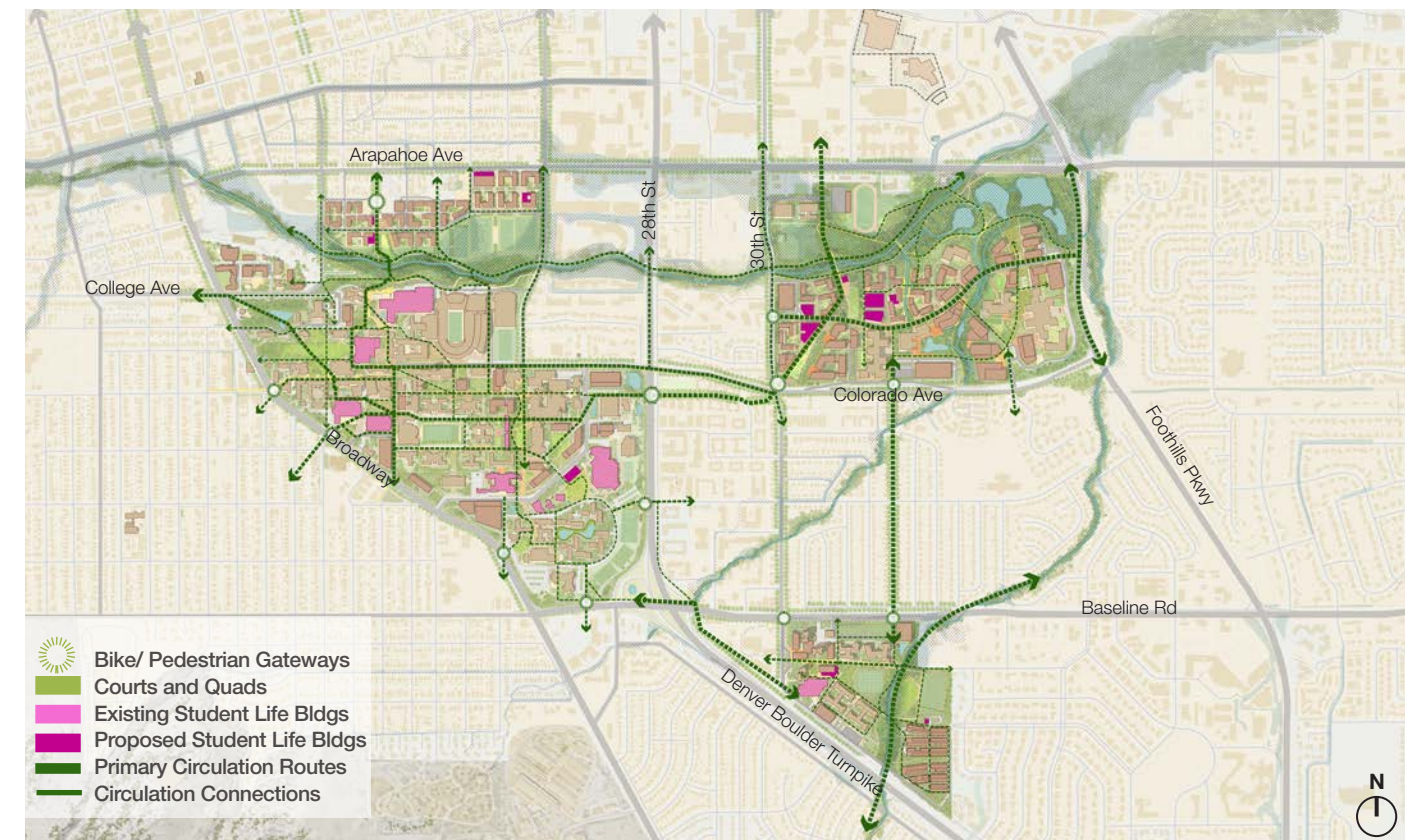
The public realm framework establishes the critical intra- and inter-campus connections to support more direct pedestrian and bicycle connectivity. Across all campuses, the plan calls for increased access to creek paths as a significant and meaningful means of connectivity between landholdings.

On Main Campus, the framework identifies opportunities to extend and enhance east-west connectivity by extending the successful and varied connection points in the western portion of the campus further eastward, including connection points from Main Campus to East Campus via both Colorado Avenue, which has traditionally served as a connector, and College Avenue, which has not historically been a point of emphasis but could emerge as a strategic linking opportunity in the future for pedestrians and forms of micro-mobility. North-south connectivity focuses on enhanced clarity of access to the bridges that link Main Campus and the NBC district.

On East Campus, a key strategy is the realignment of Discovery Drive, which not only opens up additional development parcels but also establishes it as a

pedestrian-priority thoroughfare to connect the campus west to east. North-south connectivity is enhanced through a series of paths and walkways that are prioritized in the delineation of the development parcels. Recognizing the informal but important connection that 35th Street plays in connecting East Campus to Williams Village, the campus should take care to ensure that this remains a low-impact point of connection, respecting the existing Park East residential neighborhood.

At Williams Village, improved access to the paths along Bear Creek will enable opportunities to connect the campus, both internally from east-to-west as well as externally by extending north-south connectivity to East Campus. While adversely impacted by the presence of the Denver Boulder Turnpike (Highway 36), the connection between Williams Village and Main Campus remains an important consideration. Coordinated planning with the owners of the Williams Village Shopping Center may provide an opportunity to more seamlessly enhance pedestrian and bicycle connectivity.



Public Realm Framework

### 3.0 Campus System

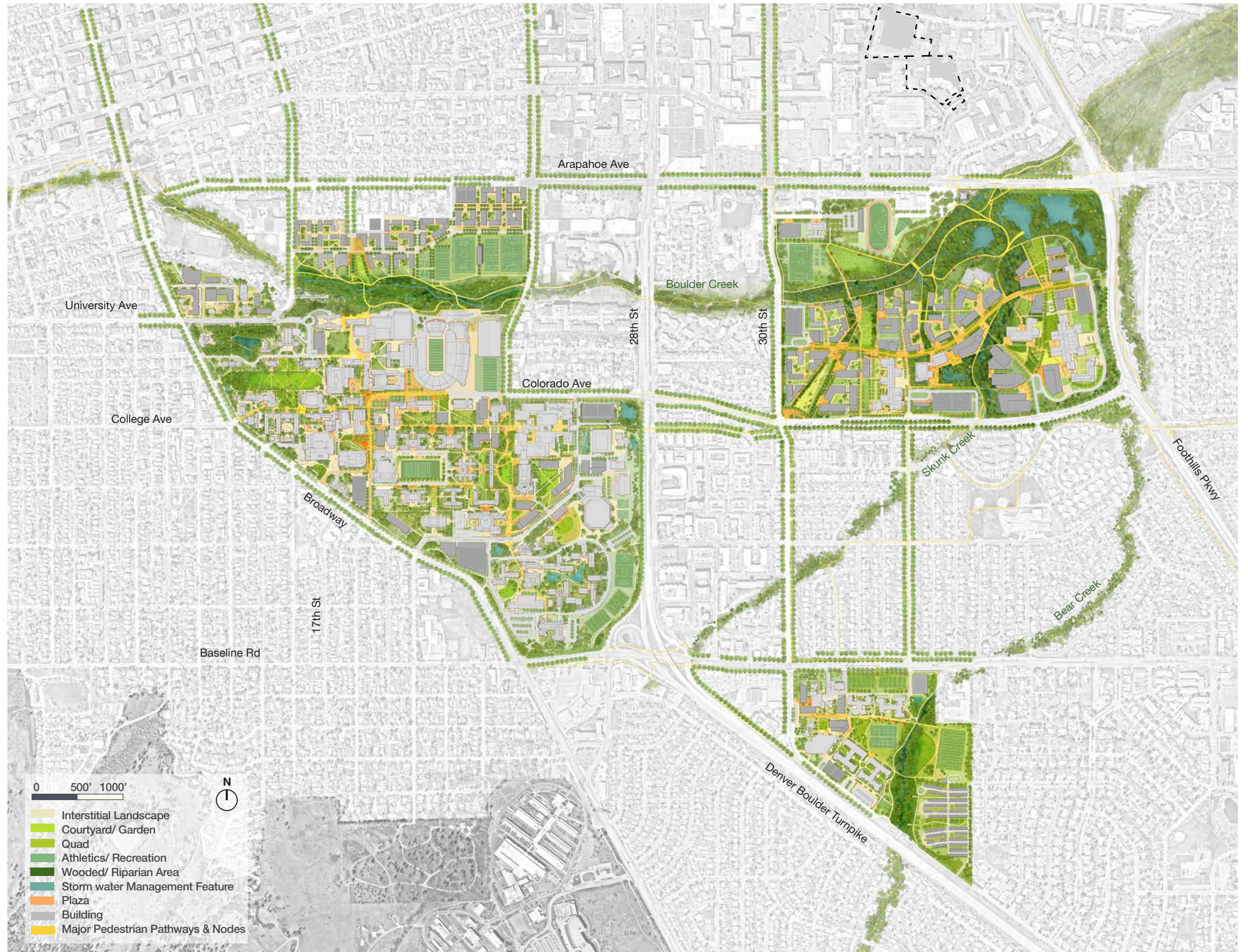
#### CAMPUS LANDSCAPE FRAMEWORK

The variety and hierarchy of open spaces on Main Campus are an important part of CU Boulder's much-loved character. Continuing to pair diverse open space typologies with new development across all campuses will ensure new districts are as desirable as the historic core of Main Campus while also providing students with novel opportunities for recreation and enhancing the campus's capacity to foster biodiversity.

The CMP aims to preserve and knit together the existing iconic open spaces on campus such as Norlin Quad, Farrand Field, and Kittredge, with new open spaces in a pedestrian-friendly, polycentric-network. Existing points of disconnection are reestablished as activity nodes animated with student life. Each new development cluster in the CMP has a unique relationship to open space—these clusters are either shaped by their relationship to riparian zones or they frame a new open space heart. This integrated approach to development and landscape ensures that students are always a short walk away from outdoor amenities while improving CU Boulder's resilience to flood events and meeting campus sustainability goals such as enhanced stormwater management, reduced water use, and habitat creation.

The proposed open space network contributes to the larger system of open spaces in the city of Boulder. Important paths such as the Boulder Creek trail runs through Main Campus and East Campus, connecting students with access to the Front Range trails and Boulder's public open spaces. The CMP strategically links new open spaces to these trail corridors and enhances existing campus open space connections to each campus and the surrounding community.

For the purposes of the CMP, several of the planned open spaces carry a temporary name as a point of reference. Once an actual open space is developed, a formal naming process can occur.

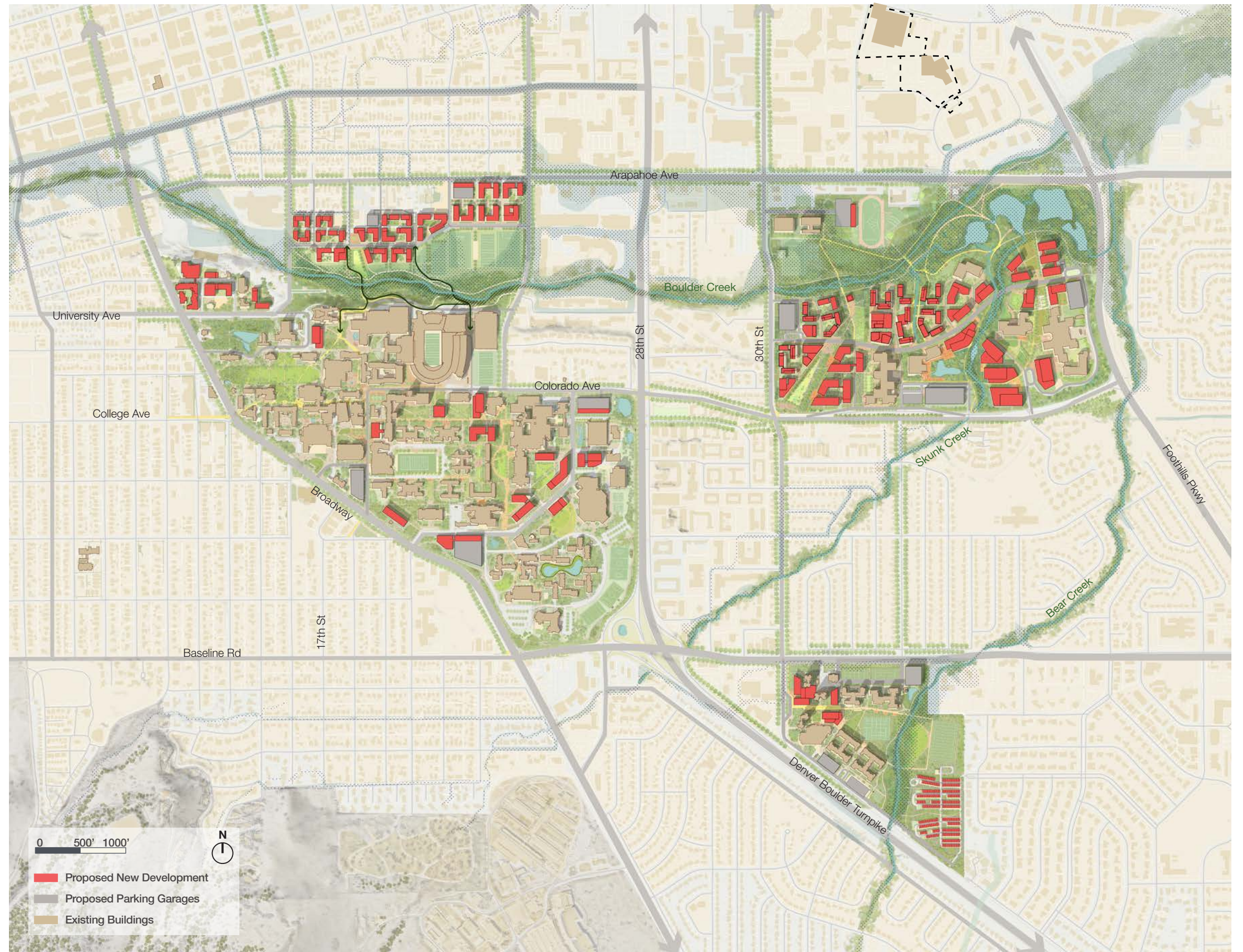


Campus Landscape Framework

### 3.0 Campus System

#### CAMPUS DEVELOPMENT FRAMEWORK

The CU Boulder Campus Master Plan envisions a flexible framework in which development infills the campuses, reinforcing a robust campus structure for Main Campus and Williams Village and setting forth new organizing concepts for NBC and East Campus. In coordination with the SFV, the CMP proposes approximately 3,900,000 assignable square feet (ASF) of new development over the next 30+ years to support the university's space demands. This results in a total of approximately 11.9 million ASF of total development (excluding parking) as compared to 6.9 million ASF today.



### 3.0 Campus System

#### PROGRAM DISTRIBUTION

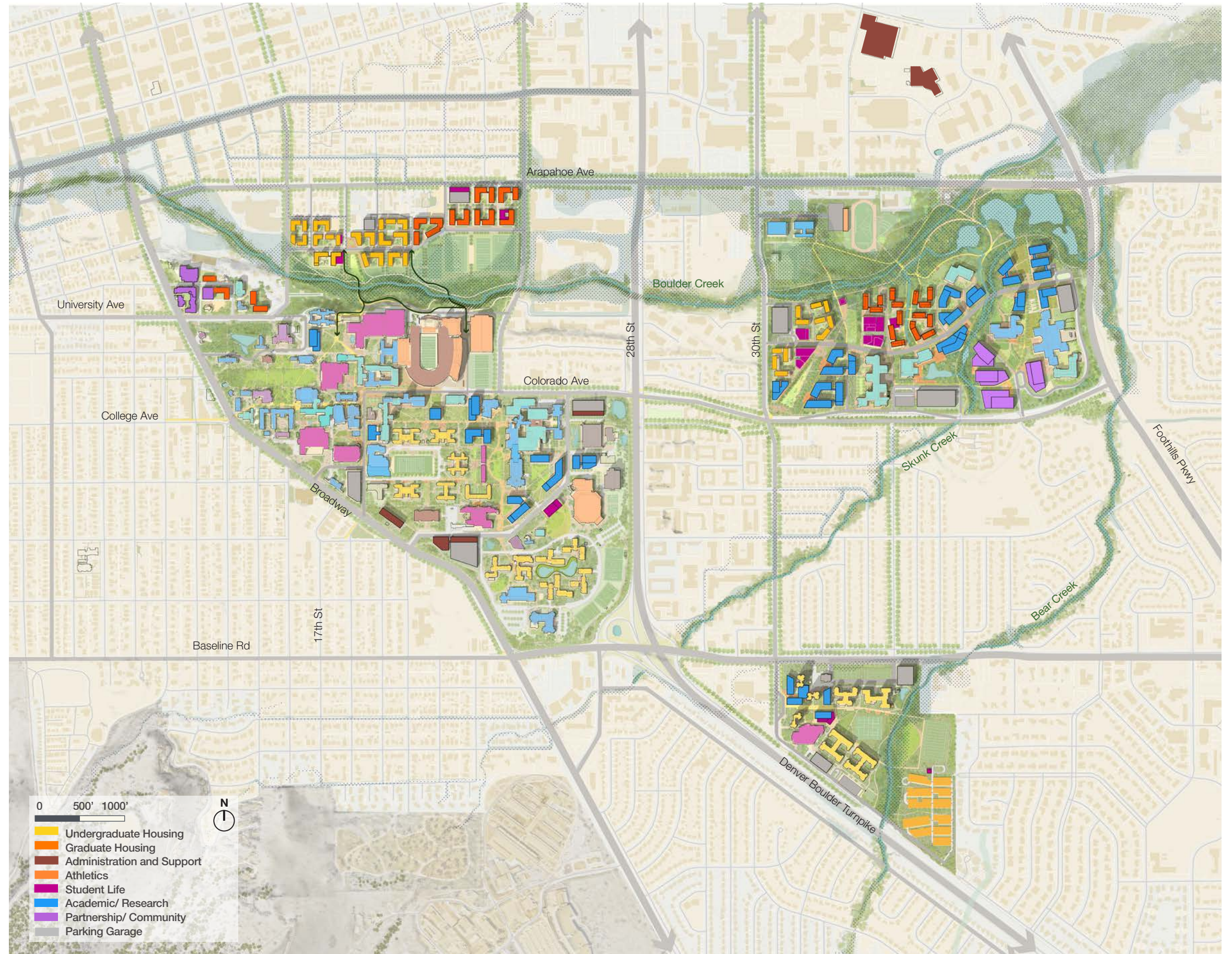
Of the new proposed development, the majority (roughly 75 percent) is designated either as housing or research facilities. Only modest growth is projected in the categories of athletics, campus life, food, learning, office, and recreation. Because Main Campus is already a mature and developed campus with a mix of uses, the minimal growth anticipated is primarily academic and, to a much lesser extent, administrative in nature.

At NBC, growth is focused on supporting the demand for both undergraduate and graduate housing, as well as outdoor athletic and recreational fields. Southwest and up 17th Street from NBC, the Grandview District is the site of a proposed Conference Center and Hotel, as well as the long-term potential for additional graduate student housing.

Williams Village, which currently offers only housing, dining, and modest recreational amenities, will be developed to support an increased academic presence to more strongly create a 24-7 vibrant district and enhanced student experience.

East Campus, which sees the most significant development, will support a full complement of uses thereby establishing a more mixed-use campus environment similar to Main Campus. This development includes research and academic facilities, undergraduate and graduate housing, dining and student life, athletics, administrative, and parking structures.

The university owns additional properties and parcels not shown on this map. Some of these spaces house additional programs, including research space at Wilderness Place and also at the Mountain Research Station.



Existing and proposed program uses by campus

### 3.0 Campus System

#### VEHICULAR NETWORK

The vehicular network aims to support a pedestrian-first environment through clear vehicular circulation, parking, and gateway strategies and the separation of mobility uses. The plan diversifies the modes of transportation by providing options on how one navigates the campus. Building upon the initiatives already begun by the University, the plan supports a pedestrian core by intercepting daily vehicles at campus peripheries and closing off key streets to everyday vehicular traffic, such as 18th and Colorado on Main Campus and the reimagined Discovery Drive on East Campus. Service and emergency vehicles and campus bus transit continue to have access throughout the campus on specific designated routes.

A strategy of designated Transit Centers or Mobility Hubs provides an opportunity to connect peripheral vehicular traffic flow with each campus' pedestrian network. There are two major Mobility Hubs – one on Main Campus at 18th and Broadway and another on

East Campus along Colorado Avenue – each of which is accessed from a major peripheral road, is proximate to a parking garage, and is connected to a drop off zone. The goals of each Mobility Hub are:

- To more directly connect to campus transit
- To allow ease of access to the campus through the connection of major roads,
- To provide clarity for visitors as to which entrance to use for specific amenities through the use of wayfinding and signage,
- To allow for multi-modal transfer by locating a parking garage at a key entrance in order for visitors and users to leave their car at the edge and enter the campus core, either as a pedestrian or a cyclist, and;
- To connect pedestrians to the campus core through vehicular drop offs, shuttle, and bus stops further reinforcing the campus gateways and supporting a comprehensive pedestrian-oriented campus.

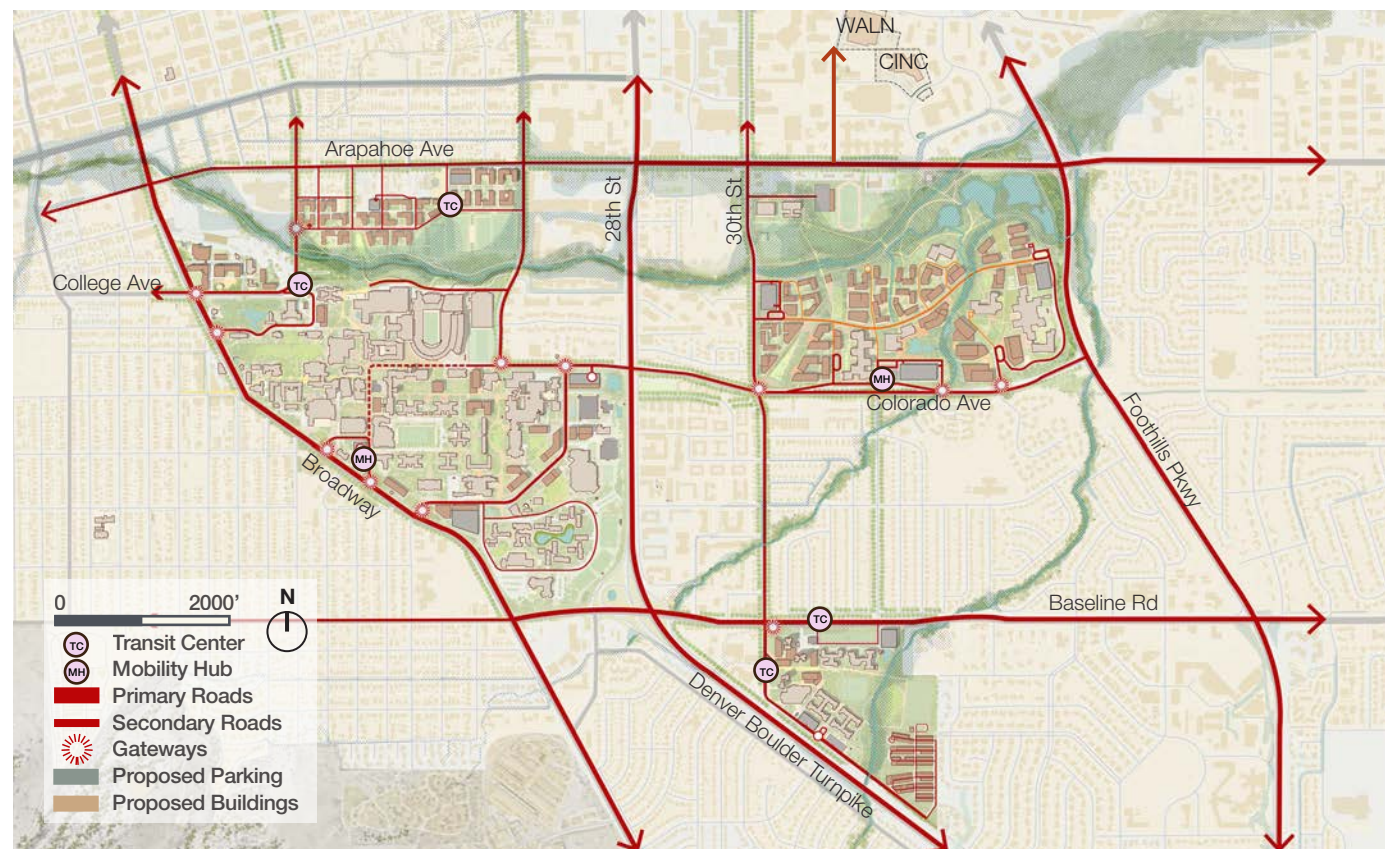
Additionally, designated Transit Centers provide clear and identifiable locations for pick-up and drop-off for those using area transit. Similar to the Mobility Hubs, the Transit Centers are strategically located to connect directly into the campus pedestrian networks.

#### CAMPUS NEIGHBORHOOD CONNECTIVITY

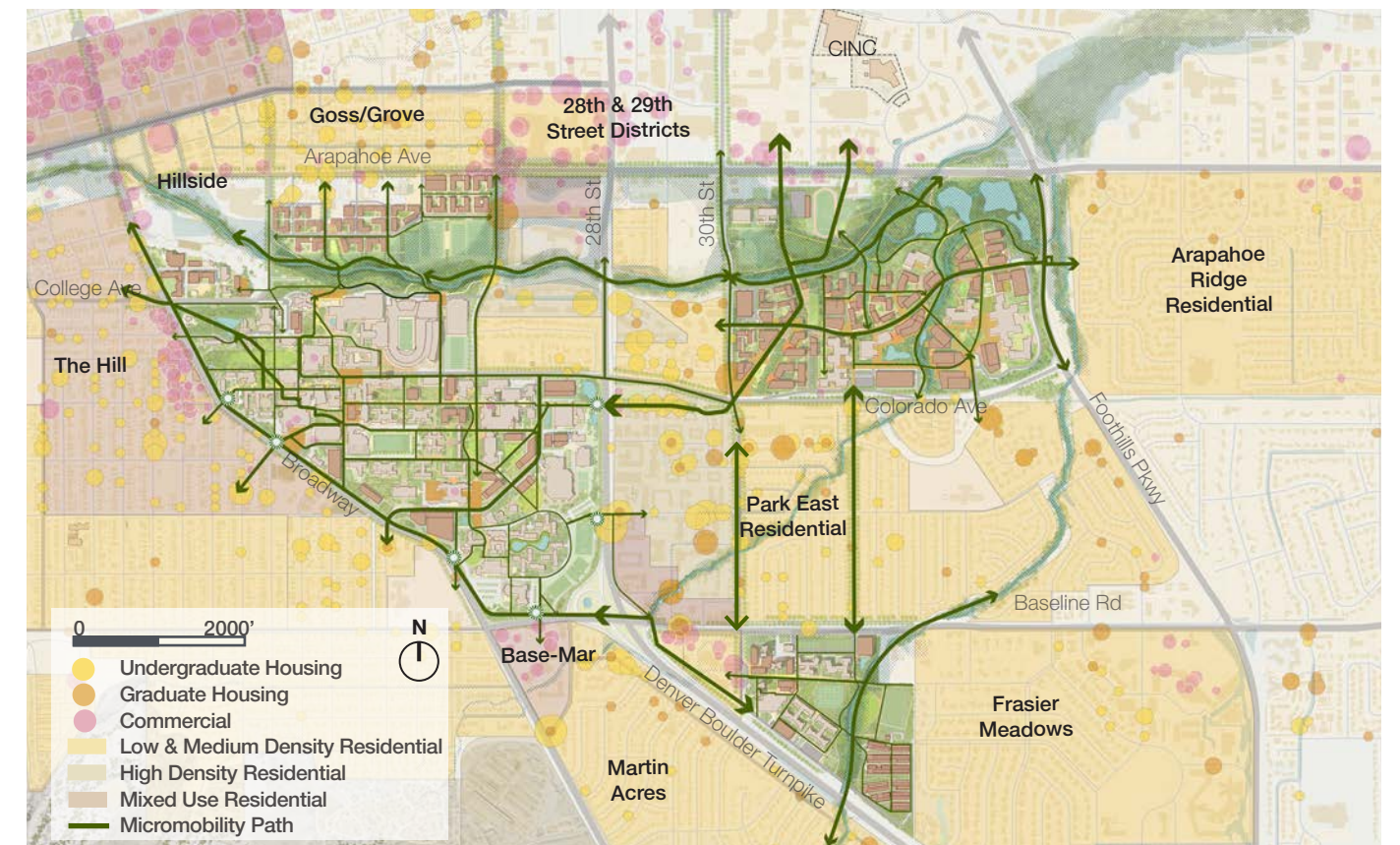
Connectivity between campus and community is critical to the relationship that exists between CU Boulder and the city. A significant portion of CU Boulder students, faculty, and staff, live in the areas that surround campus, which signals an interwoven and connected ecosystem, not one of several distinct and isolated campuses. The location of adjacent commercial uses further contributes to this dynamic campus-community network. Efforts to connect the campuses therefore also enhance the physical relationship between the campuses, their edges, and the surrounding urban and neighborhood districts.

Well-defined campus edges and entries support an understanding of the city's image. As new areas are developed, a defined campus edge will be a design priority, especially at major entryways into Boulder. While natural features serve as effective edges, so too do public open land, major roadways, gathering spaces, public art, and heavy tree planting.

Development along campus edges warrants more engagement with outside entities, and the university will continue to collaborate with adjacent properties and neighborhoods as projects that impact the public realm occur.



Primary vehicular roadway network



Campus Connectivity & Micromobility

# 4.0

# Campus Frameworks

---

MAIN CAMPUS

---

NORTH BOULDER CREEK

---

EAST CAMPUS

---

LANDSCAPE

---

WILLIAMS VILLAGE

## 4.0 Campus Frameworks

The CMP identifies four distinct campuses or districts, each with its own character. Each district offers the opportunity to focus development for achievable results that create unique experiences for the current and future campus community.

Additional design intentions for each district are included in the Design Guidelines Appendix.

The university acknowledges that the proposed development in certain areas may require strategic property acquisitions.



The chart below summarizes the square footage changes within each district as development occurs over the next 30 years or longer. The first chart lists assignable square feet (ASF), or the amount of usable program space. The second chart lists gross square feet (GSF) or total building space.

The potential ASF & GSF numbers below are based on growth projections forecasted by the PREVIEW tool and data from year 2020. Annual data updates to PREVIEW will provide the campus real-time feedback about growth and space needs, which in turn could adjust the projected square footages below.

### Existing and Proposed Campus Development

	Existing ASF	Potential ASF	Demolition ASF	Net New ASF	Total Campus ASF
Main Campus	5,360,825	856,011	(130,407)	725,604	6,086,429
North Boulder Creek	419,506	1,155,492	(411,729)	743,763	1,163,269
East Campus	1,466,670	2,511,863	(429,560)	2,082,303	3,548,972
Williams Village	776,820	110,071	(14,349)	95,722	872,542
Other Parcels	136,340	-	-	-	196,819
<b>Total</b>	<b>8,160,161</b>	<b>4,633,437</b>	<b>(986,046)</b>	<b>3,647,392</b>	<b>11,868,031</b>

	Existing GSF	Potential GSF	Demolition GSF	Net New GSF	Total Campus GSF
Main Campus	8,575,934	1,316,940	(203,479)	1,113,461	9,689,395
North Boulder Creek	521,997	1,777,680	(509,774)	1,267,906	1,789,903
East Campus	2,374,884	3,864,405	(586,543)	3,277,862	5,652,746
Williams Village	1,235,626	169,340	(22,089)	147,251	1,382,878
Other Parcels	217,637	-	-	-	330,452
<b>Total</b>	<b>12,926,079</b>	<b>7,128,365</b>	<b>(1,321,885)</b>	<b>5,806,480</b>	<b>18,845,373</b>

# Main Campus

Main Campus serves as the historic heart of the CU Boulder environs and contains many of the core academic, research, and student life functions of the campus. While early campus development featured a range of architectural styles including; Classical, Collegiate Gothic, and Romanesque, the predominant architectural style of Main Campus is “Tuscan vernacular” style, featuring textured local sandstone facing, limestone trim, and reddish clay tile roofs composed for picturesque effect against the mountains.

The plan proposes a long-term growth strategy that is sensitive to the historic context. While opportunities for academic expansion exist within Main Campus, particularly to the east along Regent Drive, the plan for Main Campus primarily focuses on enhancing and extending the public realm, improving accessibility and pedestrian comfort, and providing greater connectivity.

## REDEVELOPMENT OPPORTUNITIES

Main Campus is bounded to the north by Boulder Creek. The area south of the Creek lies primarily outside of the High Hazard and Conveyance Zones and therefore poses few environmental restrictions to future development. Main Campus is, however, quite dense with buildings and landscapes of important historic and symbolic value, particularly in the western portion of campus around Norlin Quad. Within this core area, limited redevelopment potential exists.

However, existing buildings should be considered for redevelopment if they have a poor FCI score, are of significant age but not representative of a notable historic era or architectural style, or do not represent the highest and best use of the site (either due to lack of density and/or a misaligned programmatic use).

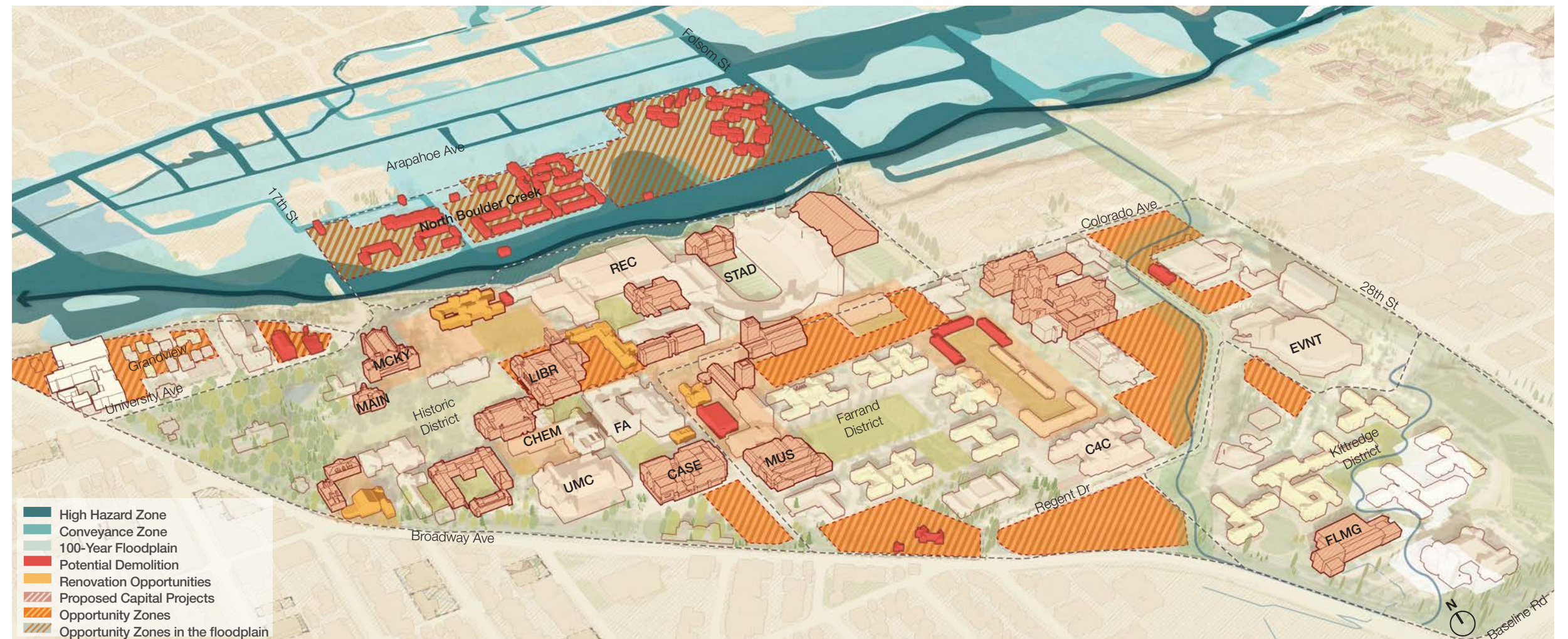
The majority of the opportunity sites are located in the southeastern portion of Main Campus, within existing surface parking lots that extend along Broadway Avenue and Regent Drive.



Business Field Existing Conditions



South of Folsom Field Existing Conditions



Main Campus Opportunities and Constraints



## 4.0 Campus Frameworks

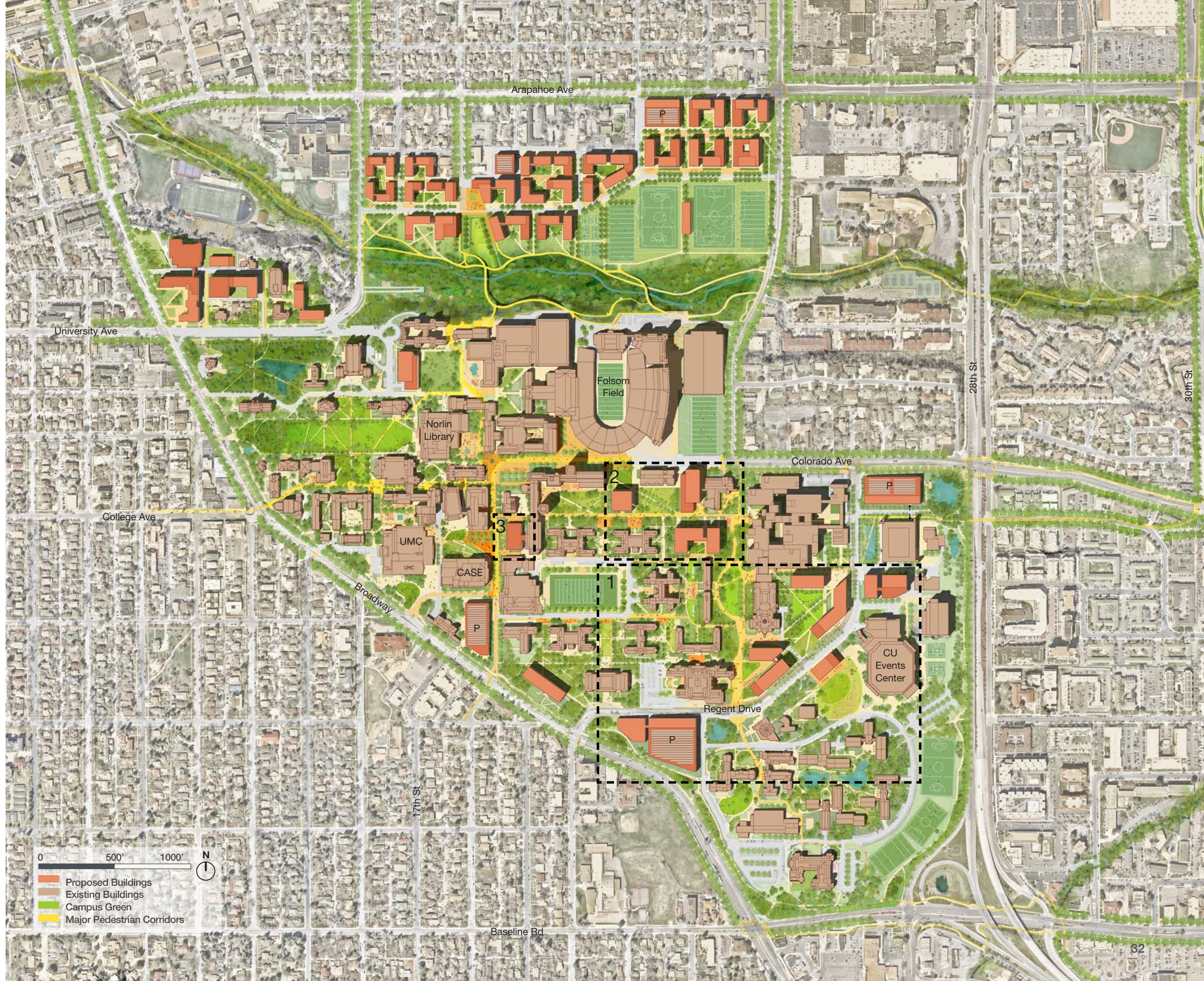
### Main Campus

#### PROPOSED FRAMEWORK

The proposed framework for Main Campus maintains the integrity of the successful buildings and landscape that comprise the historic core. The majority of new building development hugs either side of Regent Drive (Site Area 1), transforming this corridor from a disconnected vehicular roadway into a more intimately-scaled campus street. By locating new facilities along Regent Drive, the CMP presents an opportunity to extend CU Boulder's identity to this area of campus and also improves the landscapes and open spaces, such as the Business Field, by framing them with active uses and making more outdoor human-scaled spaces.

A second node of new development (Site Area 2) exists south of Colorado Avenue, in the areas immediately east, west, and south of Benson Earth Sciences. The existing residential facilities - Aden, Brackett, and Cockerell - present a redevelopment opportunity to decompress some of the academic and research intensity from the area around 18th and Colorado and distribute it further eastward.

Strategic redevelopment also occurs on the site of the current Environmental Design building (Site Area 3), which is in relatively poor condition and whose siting pinches The Walk (see page 68). Redevelopment offers the potential to shift the new building's edge further eastward to allow for a more generous pedestrian corridor along 18th Street. Nearby, the CMP considers surgical interventions to certain facilities, such as Cristol Chemistry and JILA, which leave the facilities mostly intact but that offer opportunities to enhance east-west campus connectivity through them.



## 4.0 Campus Frameworks

### Main Campus

Lot 380, immediately south of Sewall Hall, can be redeveloped as a new academic facility to potentially serve as a Creative Design Hub, which could also be coupled with reprogramming the lower floor of Sewall. Underground parking below the new facility would help to serve the parking demand for nearby Macky Auditorium.

Finally, the portion of the Grandview District immediately east of the proposed Conference Center and Hotel can be redeveloped to support graduate housing, which is desirable due to the district's proximity to the Hill and downtown Boulder.

Main Campus Framework



Existing Conditions



## 4.0 Campus Frameworks

### Main Campus

#### PROGRAM DISTRIBUTION

The majority of the proposed new development for Main Campus will support academic and research expansion and allow for decompression of the western core of campus, extending the academic hub farther eastward. Consistent with the SFV, new facilities will have a primary focus, but will also be programmed with a mix of uses to provide for social gathering, common, and support space. The new buildings along Regent Drive may support interdisciplinary functions, which suggests they would not be dedicated to a single department, school, or college. For instance, the proposed buildings immediately south of the Engineering Center could be candidates to serve as a STEM teaching lab hub whereas the proposed facility immediately south of the Leeds School of Business could serve as an interdisciplinary classroom hub.

Facilities to support student life and student services are also planned for the eastern portion of Main Campus. A new student facility, with a recreation and wellness focus, is planned for the area along Regent Drive just west of Observatory Hill, the high point directly southwest of the Events Center. New construction near the observatory cannot contribute additional light pollution without negatively impacting Astrophysical & Planetary Sciences' active instructional labs. Long term, Crosman and Reed Halls are converted from residential facilities into student services buildings. Demolishing these two lower-scaled residential buildings was considered, but ultimately, maintaining the building shells while transitioning their internal use was determined beneficial to retaining the overall campus character and scale.



Main Campus Student Life Network



Several new parking structures are planned for Main Campus. Each occupies a perimeter location to prevent the need for everyday vehicles to enter into the pedestrian-oriented campus core. Structures are proposed in the following four locations: along Colorado Avenue, between Regent Drive and 28th Street; in the existing surface parking lot between Broadway and Regent Drive; at the intersection of Broadway and 18th Street; and in the surface lot east of Macky Drive, to be developed in conjunction with a new academic facility. Some future garages should include service space, thus dispersing campus support staff and facilities throughout the campus.

- Undergraduate Housing
- Graduate Housing
- Administration
- Athletics
- Student Life
- Academic/ Research
- Partnership/ Community
- Parking Garage

\*Hatching denotes new buildings; solid is existing

Program Distribution

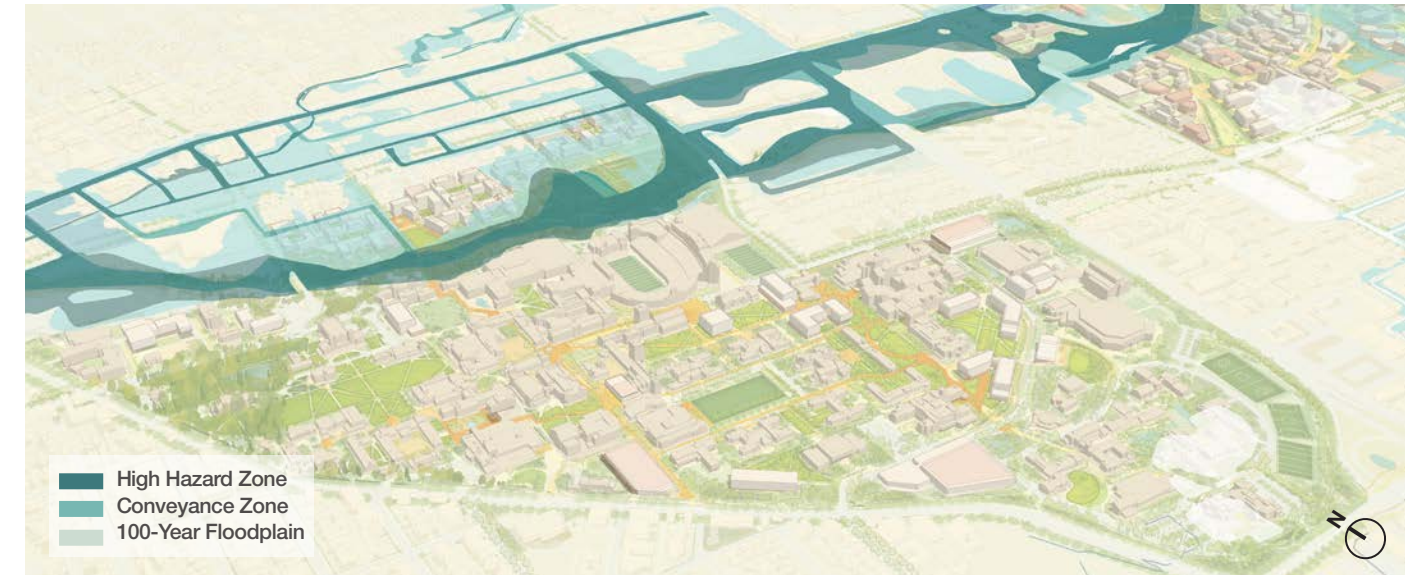
## 4.0 Campus Frameworks

### Main Campus

#### OPEN SPACE NETWORK

**MAIN CAMPUS OPEN SPACE NETWORK:** Main Campus has a distributed open space network that is enhanced in the CMP through courtyard updates, new plaza nodes, shared streets, and new open space destinations. Parking lots that previously presented barriers and disconnected the public realm are transformed into new development clusters connected through enhanced campus walks and new outdoor gathering places.

**CENTRAL CAMPUS ZONE:** In the central core of Main Campus, North-South and East-West connections are strengthened and reinforced through new paths with plaza nodes, outdoor teaching and learning spaces, and a connected urban canopy. The reduction in surface parking improves campus connectivity, increases stormwater infiltration, and provides a welcoming pedestrian experience.



Main Campus Open Space Network

100-year Floodplain, High Hazard, and Conveyance Zones



Existing condition - Norlin Quad



Existing condition - Fine Arts Green



## 4.0 Campus Frameworks

### Main Campus

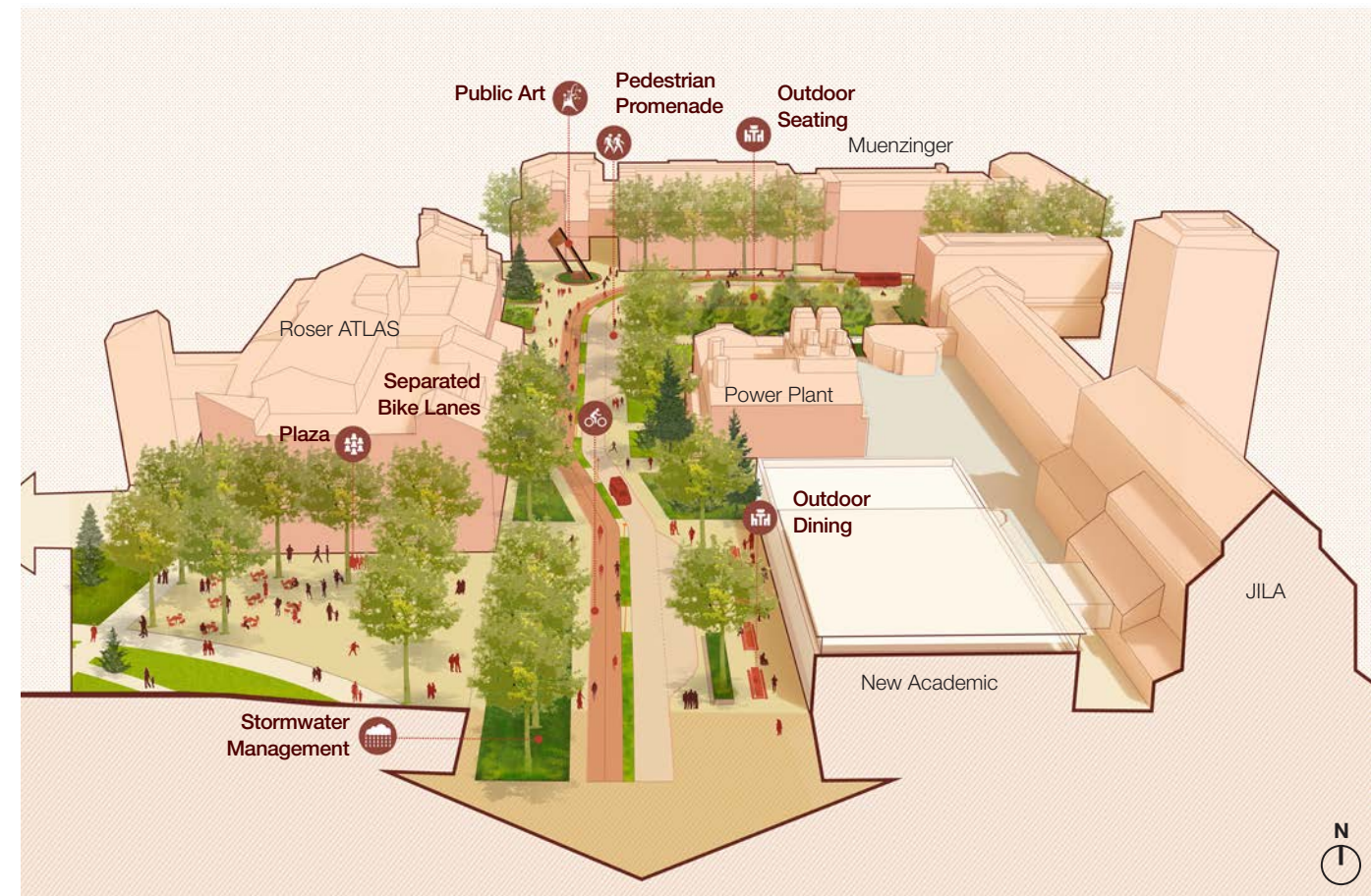
#### THE WALK

Consistent with the proposal from the TMP, The Walk, which connects Colorado Ave with 18th Street, is transformed from a two-lane road into a shared pedestrian, bike, and campus transit mobility corridor.

Through traffic calming measures, urban streetscape, an integrated stormwater management system, and adjacent pockets of flexible space, this campus corridor becomes a conduit of student life.



Existing Conditions looking North along 18th street



The Walk Mobility Corridor

#### TRUMBO FOUNTAIN

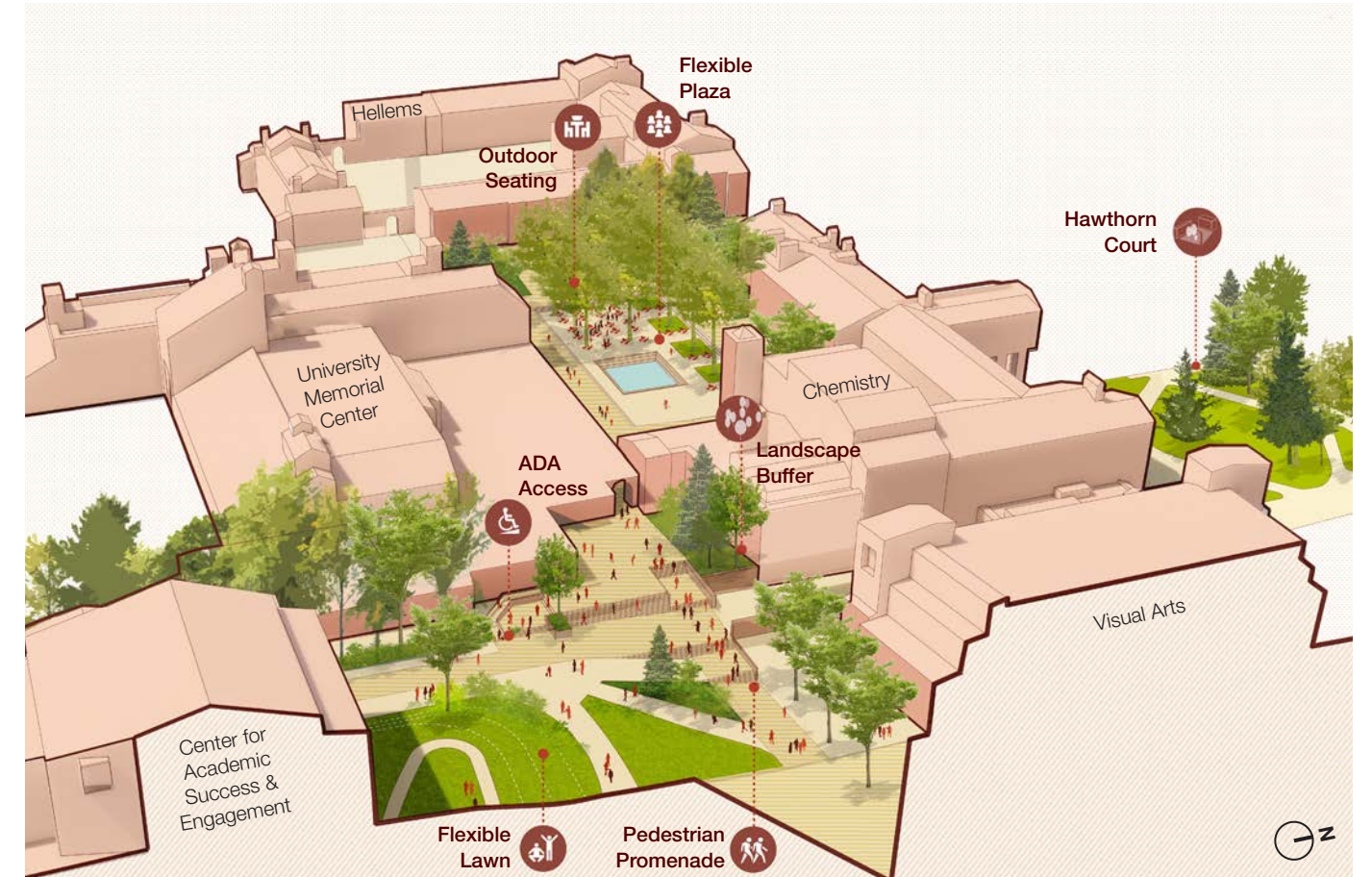
The Trumbo Fountain area is a central plaza that serves as connective tissue between many key campus buildings, such as UMC, Hellems, and Cristol Chemistry. Strategic building renovations to buildings around Trumbo Fountain should be considered to better connect the indoor and outdoor environments. Additional landscaping and seating can enhance the sense of place and provide overflow seating for UMC patrons.



Existing Conditions at Trumbo Fountain



Connection to Trumbo Fountain



Universal Design Connection to Trumbo Fountain

## 4.0 Campus Frameworks

### Main Campus

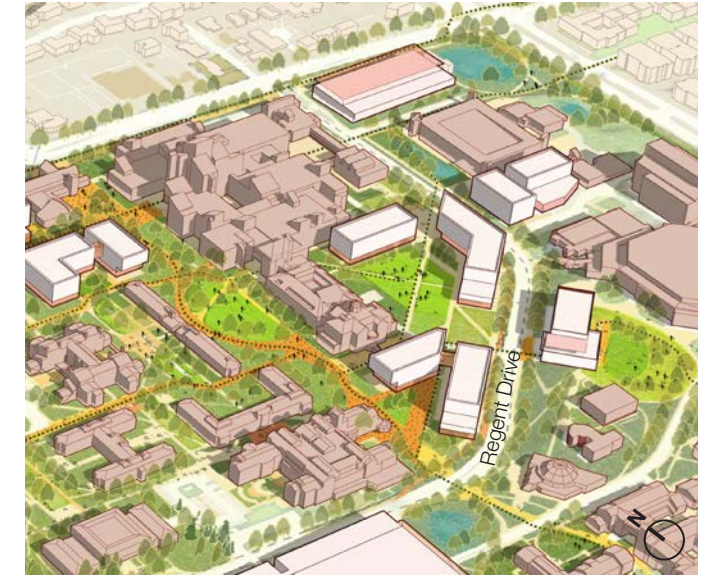
#### REGENT DRIVE

Proposed academic buildings on Regent Drive frame new landscapes that feature unique vantage points of CU and the Flatirons. This, coupled with an improved bike network and street edge conditions, will improve the student experience and safety along Regent Drive. Given its status as a city-owned street, the university will work collaboratively with the City on any proposed changes to Regent Drive.

Main Campus along Regent Drive Looking West



Existing Conditions at Business Field



Proposed Business Quad + Observatory Hill



# North Boulder Creek

North Boulder Creek (NBC) is the area bounded to the south by Boulder Creek, to the north by Arapahoe Avenue, to the west by 17th Street, and to the east by Folsom Street. It lies approximately 70-feet in elevation below Main Campus and is connected to Main Campus via two ADA accessible bridges at 19th Street and 23rd Street.

This district is characterized by low density apartment complexes within a residential street grid abutting Boulder Creek. The neighborhood has two and three-story apartment buildings in the southern portion of the district, along with large athletic and recreation fields, while the northern portion blends into a mixed use, low density city neighborhood. The bridges over Boulder Creek provide important campus connections and focus pedestrian circulation. The district currently does not have a clearly defined architectural character.

## REDEVELOPMENT OPPORTUNITIES

The district lies almost entirely within the 100-year floodplain but only the southernmost portion is in the development-restricted High Hazard and Conveyance Zones. Many of the existing buildings are not long-term assets for the university due to their deteriorating condition, outdated residential typologies, and disproportionately small scale relative to the land they occupy. Accordingly, and over time, the entirety of the district located outside of the High Hazard and Conveyance Zones has been identified for redevelopment.

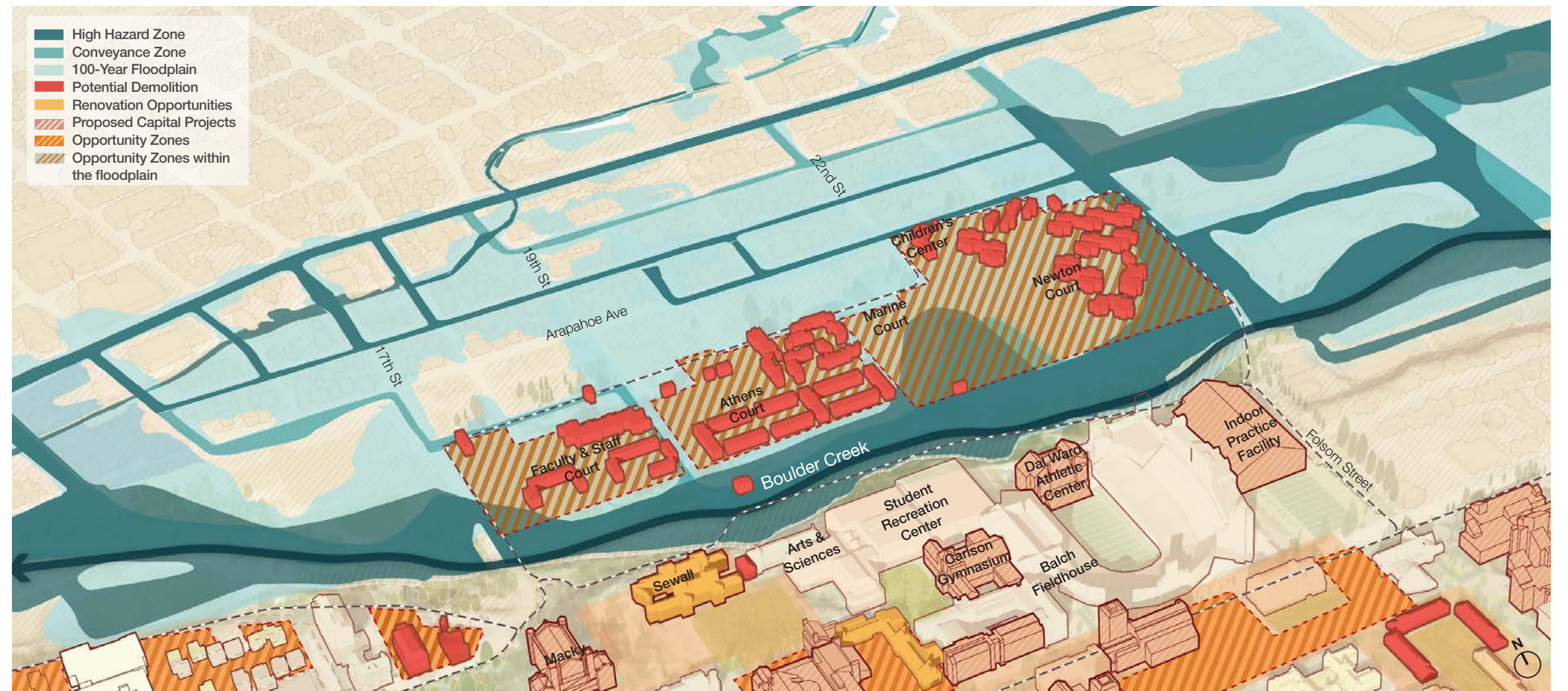


Existing Conditions along Boulder Creek



Existing Conditions at NBC

Opportunities and Constraints



## 4.0 Campus Frameworks

### North Boulder Creek

#### PROPOSED FRAMEWORK

The proposed NBC framework balances programmatic demand with formal and informal open spaces. Due to its proximity to Main Campus, enhanced with the completion of the two new bridge connections, NBC offers an opportunity to significantly increase residential density.

A new pedestrian-priority “main street” runs east-west through the district and serves as an active connective corridor. The series of existing north-south streets that bisect “main street” open up into views of the Creek and the associated riparian landscape. Pulses of student life – in the form of dining, student lounge, and common space – are located along key open spaces to provide indoor-outdoor connectivity and to ensure a sense of 24-7 vitality throughout the district. The eastern portion of NBC, some of which is in the High Hazard and Conveyance Zones, is reserved for outdoor recreation and athletics fields. The development at the corner of Arapahoe and Folsom is planned as a mixed-use environment with active ground floor commercial uses and residential above that relates to this parcel’s more urban context.

Connections between NBC and the neighborhood to the north are very important and will require a sensitive design approach to successfully mix university-scaled buildings into an established residential neighborhood. Specific strategies are included in the design guidelines appendix to this report. The university also acknowledges that portions of the proposed development in the NBC neighborhood may require strategic property acquisitions.





## 4.0 Campus Frameworks

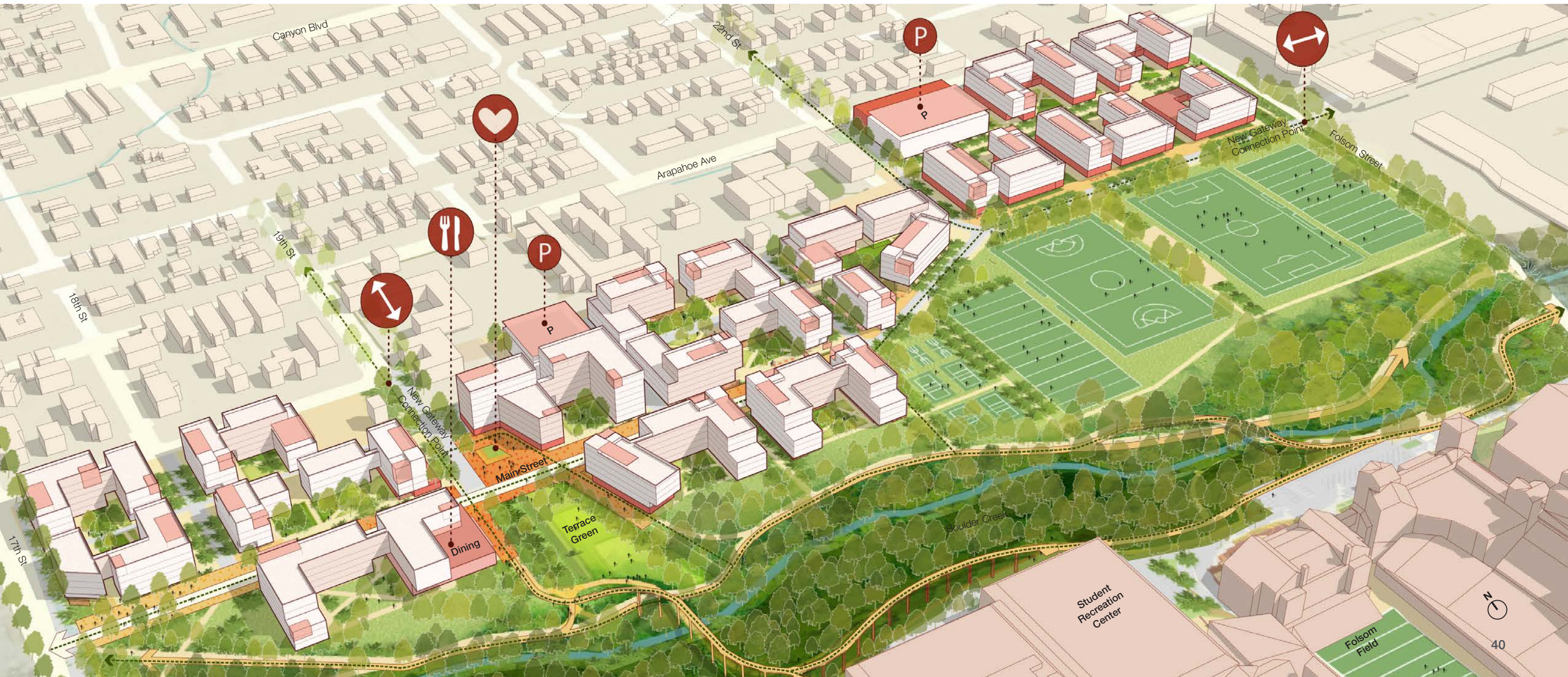
### North Boulder Creek

Proposed NBC Framework

- Proposed Buildings
- Existing Buildings



Existing Conditions



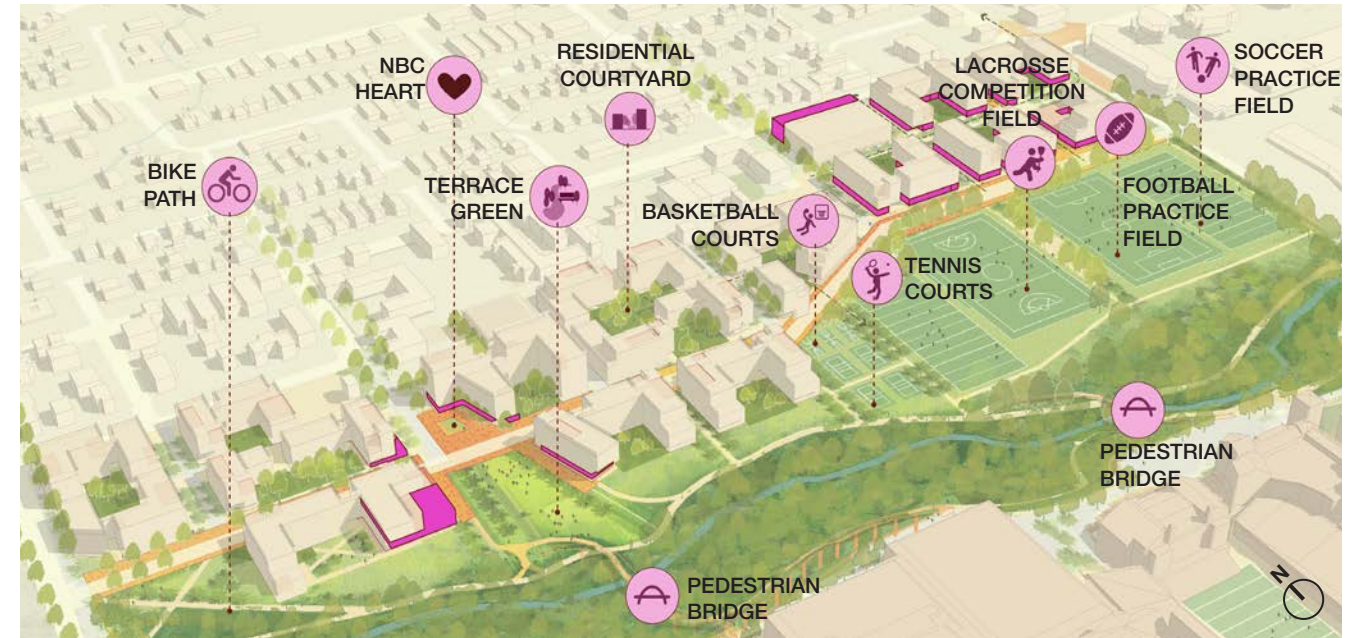
## 4.0 Campus Frameworks

### North Boulder Creek

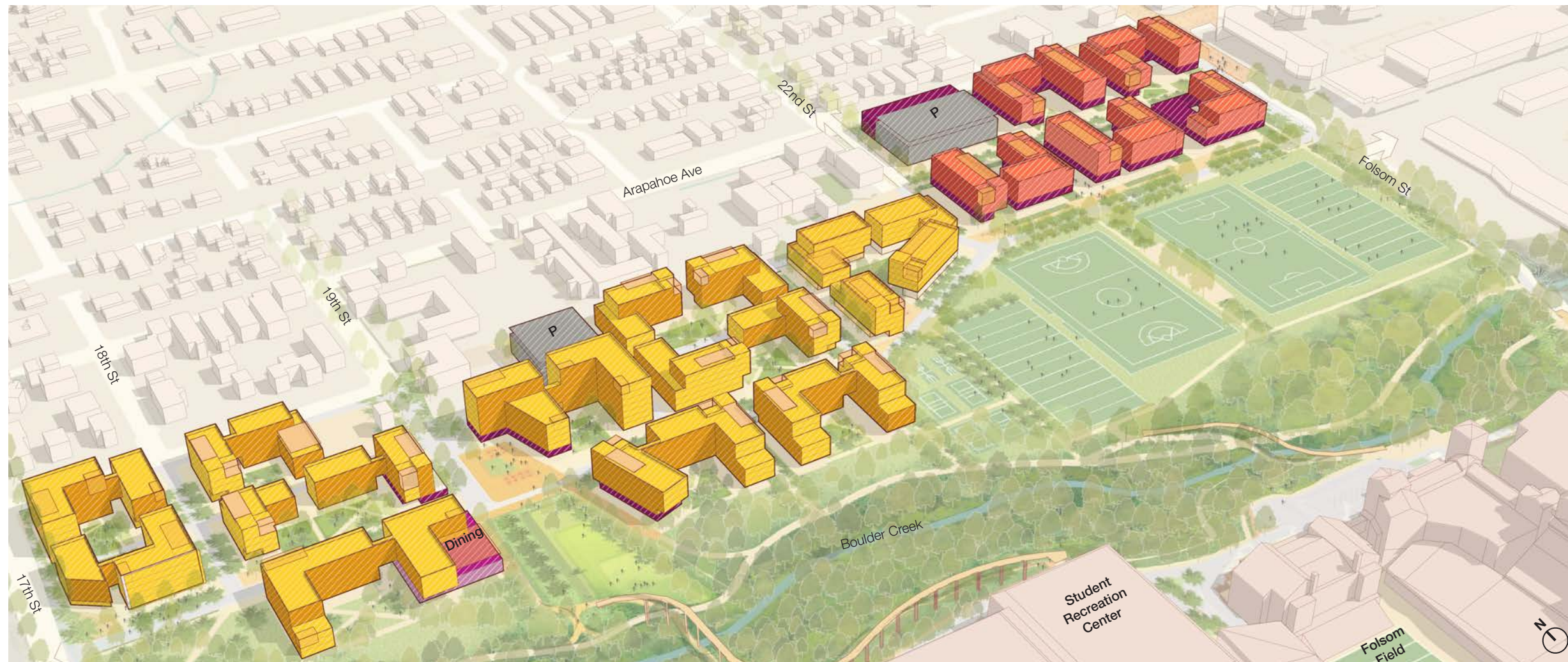
#### PROGRAM DISTRIBUTION

The majority of the proposed NBC housing is envisioned to flexibly support both undergraduate and graduate student populations. In the short term, unit types will be flexibly designed to serve both populations, creating needed swing space during renovation of aging housing stock on Main Campus. Over the long term, as more housing is added, the undergraduate population is expected to be concentrated in the western portion of NBC, with a range

of unit typologies and supporting student life uses. Meanwhile, the northeast mixed-use quadrant will provide graduate student housing. This area also has a parking deck to serve both the commercial areas and residents. A smaller additional parking facility is located along the 20th Street corridor. One of these future garages should include service space to provide support staff and facilities in the NBC neighborhood.



Student Life Network



- Undergraduate Housing
- Graduate Housing
- Student Life
- Parking

Building Program

## 4.0 Campus Frameworks

### North Boulder Creek

#### MAIN STREET

The central spine of the NBC District will serve as a pedestrian-priority corridor, acting as “main street” for the student residents. The street is imagined as a unifying element that ties together the district from west to east and provides moments for social engagement and meeting.



Section through the Student Street



CREEK

MARKET

CAFE

COURTYARD

GYM

## 4.0 Campus Frameworks

### North Boulder Creek

#### OPEN SPACE NETWORK

Because NBC sits at a relatively low elevation, this neighborhood is at greater risk for flooding. New development will need to be elevated above the 100-yr base flood elevation and will require a robust network of bioswales and rain gardens to provide stormwater infiltration and meet water quality standards. As the proposed development is constructed at NBC, coordination with the City of Boulder and FEMA will be critical to ensure that adjustments to site grading and the Conveyance and High Hazard Zones are phased strategically to accommodate water flow during flood events.

The next several pages depict the numerous amenities within the NBC open space system. Green courtyard spaces are dispersed throughout the neighborhood, and they are connected to the Boulder Creek as well as the sports courts and fields. This connective fabric will enhance the overall open space network, promoting health and well-being for the campus community.

To support the irrigation needs of the proposed Athletics and Recreation fields

in the neighborhood, a raw water storage pond should be incorporated into the open space network. One potential location could be at the south end of the proposed Recreation courts, but future additional study is needed.



100 yr Floodplain, High Hazard and Conveyance Zones

Pedestrian Bridge Connecting NBC to Sewall



Boulder Creek Riparian Landscape



Proposed Open Space Network



## 4.0 Campus Frameworks

### North Boulder Creek

#### GREEN HEART

At the social heart of NBC is Terrace Green, a new landscape that celebrates the unique riparian landscape of Boulder Creek and provides flood capacity. This green space is framed by an allée of canopy trees and outdoor dining that connects 19th street with the existing pedestrian bridge over Boulder Creek. The CMP recommends the staircase extension of the 19th Street bridge to be constructed to allow for more direct pedestrian connection between NBC and Main Campus. NBC also becomes a hub for Athletics and Recreation, which connect back to athletics and recreation programming at the Champions Center and the Recreation Center.



Existing Conditions at NBC

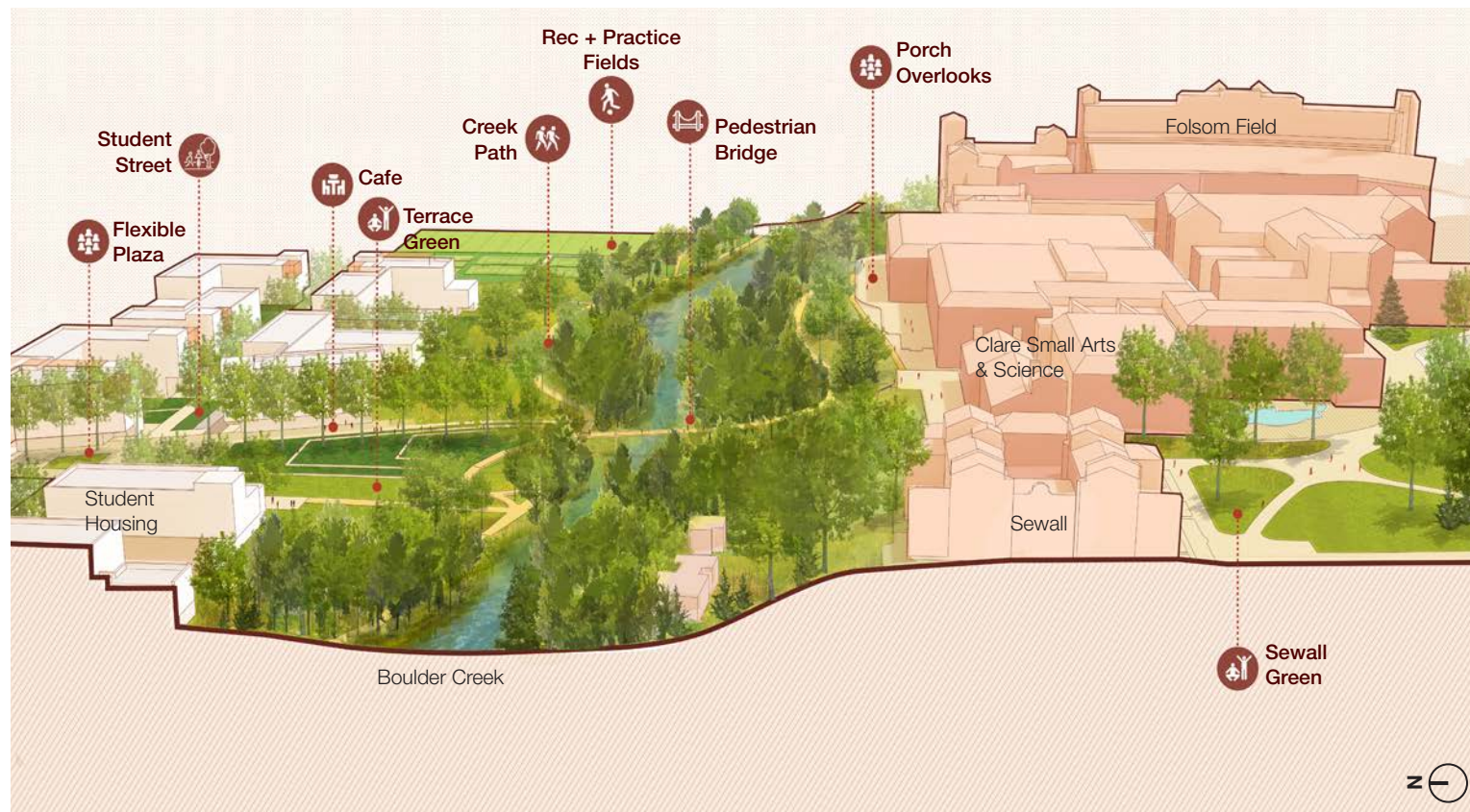
#### MAIN STREET

New residential buildings at NBC feature courtyards for passive recreation and provide direct links to Boulder Creek. Within a short walking distance, students can experience a wide range of flexible and private spaces to gather, study, eat, play, and enjoy the campus landscape. Through a series of indoor and outdoor spaces that overlook Boulder Creek and an expanded system of pedestrian and bike paths, the new open space network at NBC ensures that Boulder Creek is an accessible and lively campus amenity.

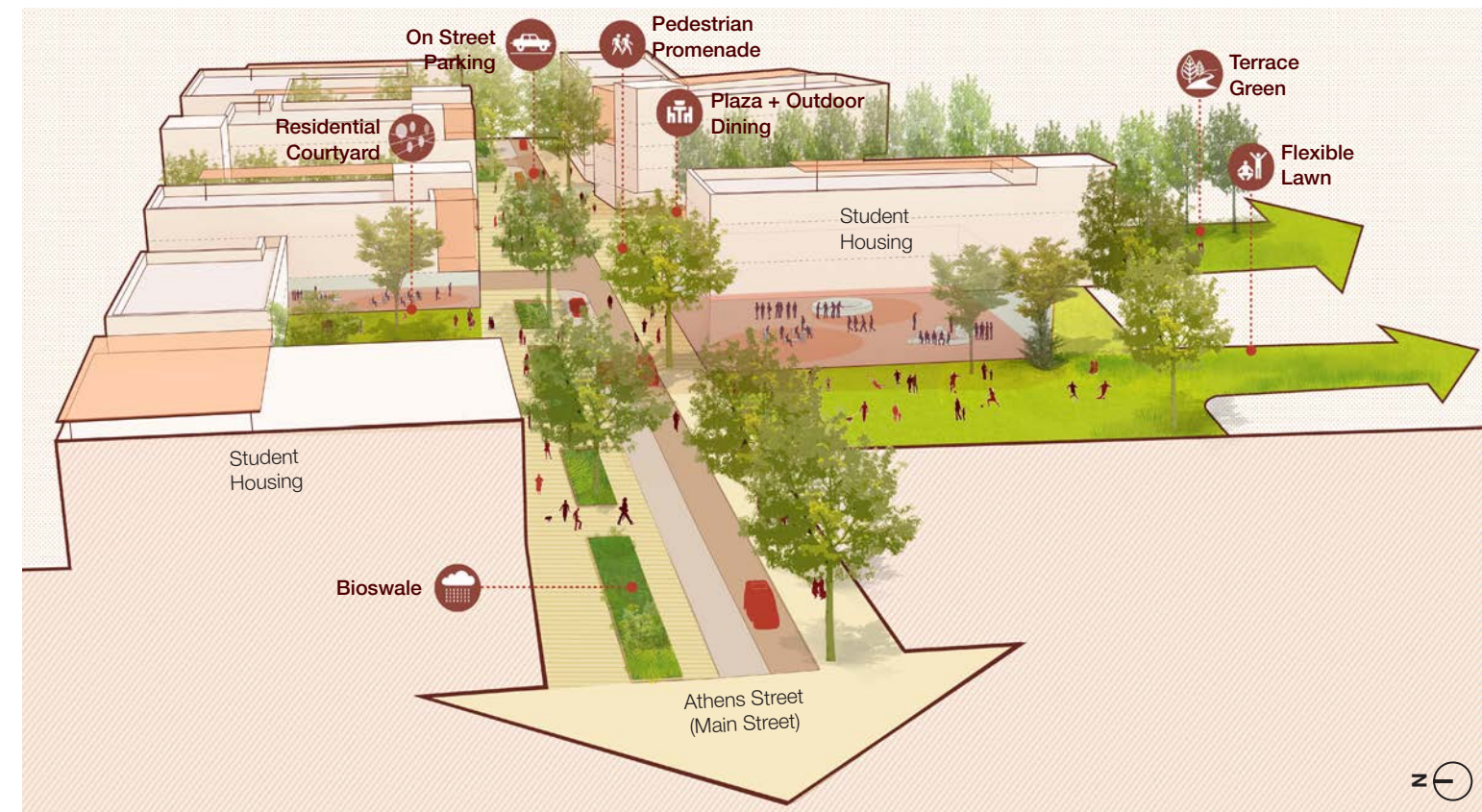


Existing Conditions along Athens Street

NBC to Sewall Green Connection



Proposed Condition along Athens Street

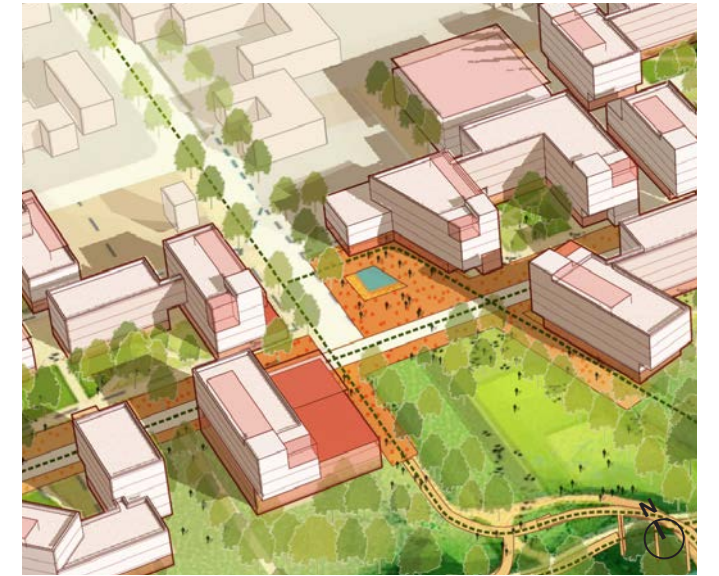


## 4.0 Campus Frameworks

### North Boulder Creek



Existing Conditions



Terrace Green

New Student Street at NBC



# East Campus

East Campus has a diverse range of building typologies and architectural character. Many utilitarian buildings and surface parking lots are located north of the creek. South of the creek contains an older low scale residential apartment complex, and three new academic research facilities built within the last 10 years. These newer structures are large scale, primarily organized around the vehicular road network, and use materials to relate to the Tuscan Vernacular style of Main Campus.

## REDEVELOPMENT OPPORTUNITIES

Like Main Campus, the presence of Boulder Creek is a defining element of the campus property, bisecting the northern third of the parcel from the more developable southern two-thirds of the campus. A significant portion of the area north of Boulder Creek is in the High Hazard and Conveyance Zones and is therefore undevelopable. Existing buildings located here, including the Institute for Behavioral Genetics (IBG), Research Lab-2 (RL2), and Research Lab-4 (RL4), should not receive further investment and, over the long term, should be restored as open space. Litman Research Lab (RL-1) is located on high ground; however, it is of poor quality and inappropriately small scale and should be redeveloped. Within this zone, only the Administrative and Research Center (ARCE) remains, due to its large size and the number of administrative units housed within it. Further east, the Transportation Center, Marine Street Science Center (RL-6), Housing System Service Center (HSCC), Housing and Dining Services Facilities Operations (HSMC), and the New Physics Lab (SLL) building, are

all located within the 100-year floodplain and do not represent long-term assets for the university. Replacement space for these administrative, service, and research functions can be handled in a variety of ways. First, the campus is in a process of reassessing post-COVID space needs across all of campus, including opportunities for consolidation. Second, the existing Distribution Center and CINC, as well as the potential to acquire other nearby properties, provide an opportunity for office space. Third, new parking structures can be built to include service zones. Fourth, work station needs can be met in space within new buildings, or through backfill opportunities in existing facilities that are unlocked by new construction. This transition in use will also shift transit and parking needs in this area. The proposed truncation of Marine Street, a city owned street and right-of-way, will require city input and collaboration with the university to determine the best solution for all stakeholders

South of Boulder Creek, a significant portion of land has been identified for redevelopment. The Smiley Court residential complex occupies a strategic gateway location for East Campus. The age, condition, quality, and scale suggest there is a higher and better use of this anchoring parcel. Further east, the remainder of the existing outdoor athletics facilities occupy such a central location within the developable area of East Campus, they are relocated north of the Creek to allow for higher-density building development within the East Campus core. The High Hazard Zone adjacent to the Skunk Creek tributary that runs south-north through East Campus is avoided for future development.

Due to sensitivity related to the floodplain, the area north of Boulder Creek becomes an area primarily dedicated to active and passive athletics and recreation. The Track and Field Stadium and associated throwing area is relocated immediately east of the existing ARCE Building. The area abutting the creek will serve as an area for meadow and grassland restoration, and can also serve to advance CU Boulder's sustainability initiatives, with potential for geothermal and/or photovoltaics (PV).



Existing Conditions at AES, Looking Southwest



Opportunities and Constraints

## 4.0 Campus Frameworks

### East Campus

#### PROPOSED FRAMEWORK

The proposed framework for East Campus imagines a vibrant mixed-use campus. Aside from Boulder Creek, a defining element is the reimagined and realigned Discovery Drive, which serves as a central pedestrian-priority spine that connects the campus from west to east. Future development parcels are arrayed around this central spine so that the street becomes the common unifying feature. While a mix of uses characterizes the entire campus, key student life facilities are sited along the spine, such as student dining, a learning commons, student wellness facilities, and cultural hubs. While the spine is designed as a pedestrian-priority zone, it offers an opportunity for micro-transit (i.e. small passenger vehicles) that can provide more rapid and accessible connectivity for those that need it. Service and emergency access is also maintained.

The westernmost portion of East Campus, which is most proximate to Main Campus, becomes a future site for undergraduate residence halls. This district is anchored by a central green space that welcomes visitors at 30th Street and Colorado Avenue and draws them in via a highly active and flexible open space that includes both softscape and formal plazas.

To the east of the undergraduate district, future academic and research buildings will promote synergy and collaboration with the existing JSC Biotechnology Building. North of JSCBB, in the area currently occupied by the track and field, additional residences are planned. These residences are envisaged to support the graduate student population, particularly those seeking to live close to their research and academic facilities.





## 4.0 Campus Frameworks

### East Campus

Farthest east, the remaining development parcels represent continued opportunities to expand academic and research facilities. The area in the southeast quadrant anticipates facilities that can accommodate partnerships between the university and outside industry, providing visibility from Colorado Avenue as well as easy access to US 36, Foothills, Denver, Longmont, Colorado Springs, and Denver International Airport.



Existing Conditions

East Campus Framework



- Proposed Buildings
- Student Life Buildings
- Existing Buildings

## 4.0 Campus Frameworks

### East Campus

#### PROGRAM DISTRIBUTION

Housing serves as the predominant use anchoring the western edge of East Campus. Housing and student life facilities extend eastward in the area north of Discovery Drive. Academic, research, and partnership facilities occupy the parcels south of Discovery Drive and extending to the farthest eastern extents of the campus. Within the academic and research zone, facilities are clustered based on thematic neighborhoods: Computational Science, Life Science and Biotechnology, Space Science, Energy, Aerospace Engineering, and Environmental Science.

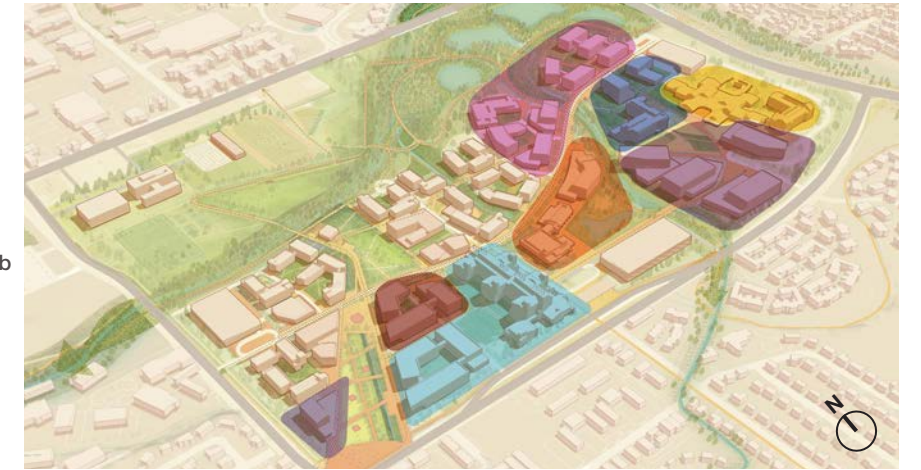
Parking is distributed at three key locations – west, central, and east – to receive vehicles from the periphery and provide immediate and convenient access to the Discovery Drive pedestrian zone. The central parking structure is also the home of the planned mobility hub, providing a centralized node for transit connectivity, bicycle parking, and rideshare drop-off. Consideration should be given to appropriate screening either through wrapping the structure with more active program uses and/or landscape buffers. The current proposal for the central parking structure assumes redevelopment of the Astrophysical Research Lab (ARL); however, this zone presents flexible options if ARL is to be maintained either in the short-term or over the long-term. If the desire exists to keep ARL in the long-term, the planned parking structure can be shifted farther west and incorporate the design of the Mobility Hub. If there is desire to keep ARL only in the shorter-term, the parking structure could also

be phased and built in two stages, with the first phase built west of ARL and then a second-phase parking structure addition to the east on the site of ARL. In any case, ARL would not be removed until the cleanroom and spacecraft testing operations were relocated.

The proposed parking garages are envisioned to include service space, thus dispersing campus support staff and facilities throughout East Campus.

Building Program

- Interdisciplinary Learning Hub
- Life Science & BioTech
- Computational Science
- Space Science
- Partnerships
- Environmental Science
- Aerospace Engineering
- Energy



Academic & Research Neighborhoods
























- \*Hatching denotes new buildings; solid is existing
- Undergraduate Housing
- Graduate Housing
- Athletics
- Student Life
- Academic/ Research
- Partnership/ Community
- Administration & Support
- Parking Garage

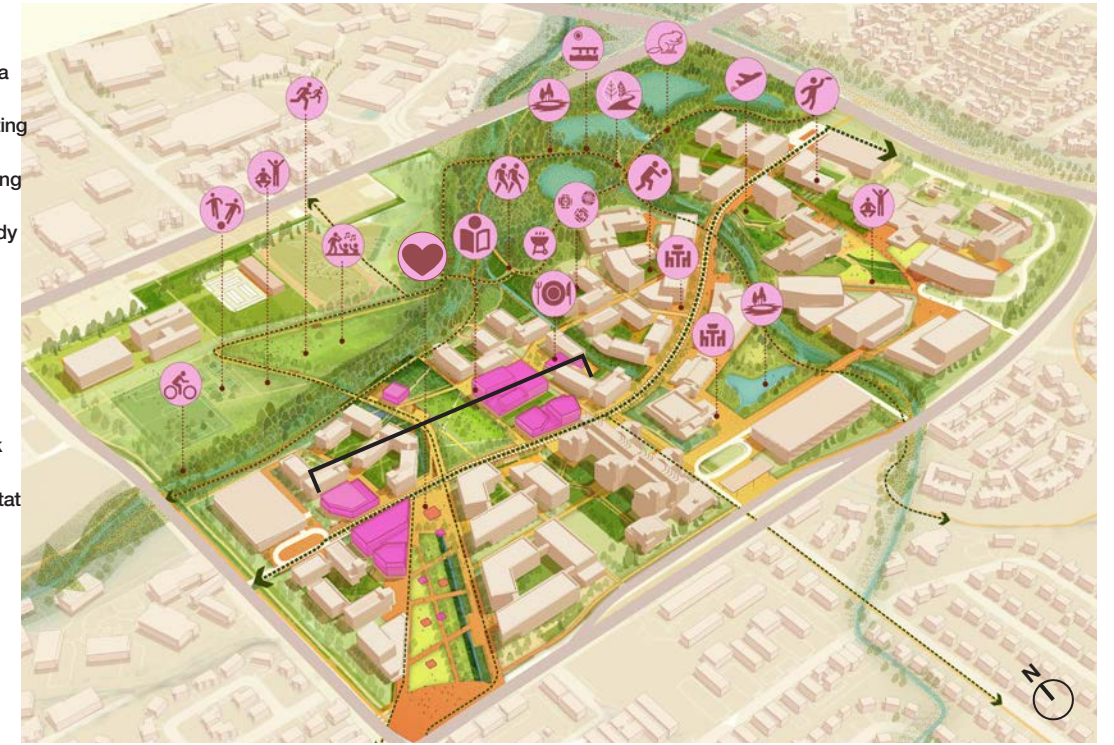
## 4.0 Campus Frameworks

### East Campus

#### CAMPUS HEART

The campus heart will serve as the anchor landscape feature and an important part of the social fabric of East Campus. Buildings around this space should engage with the landscape to create indoor-outdoor connectivity.

- |   |  |
|---|--|
|  Heart           |  Event Space      |
|  Bocce Ball      |  Flexible Plaza   |
|  Soccer Field    |  Flexible Seating |
|  Activity Loop   |  Outdoor Eating   |
|  Walking Trail   |  Outdoor Study    |
|  Flexible Field  |  Overlook         |
|  Volleyball      |  Bridge           |
|  Bike Trail      |  Track & Field    |
|  Outdoor Grill   |  Trail Network    |
|  Stormwater Pond |  Wildlife Habitat |
|  Flight Field    |  |



Student Life Framework



East Campus Heart Open Space & Building Program Integration

## 4.0 Campus Frameworks

### East Campus

#### OPEN SPACE NETWORK

The open space network on East Campus is defined by green landscape fingers that celebrate existing creeks and form new campus quads. The proposed East Campus spine features a variety of flexible plazas and terraces that overlook stormwater ponds and wet meadows, where feasible and appropriate. The design for these exterior spaces will be optimized to include amenities for exterior study and meeting space. A pedestrian loop connects the campus across Boulder Creek, providing

access to the new Track & Field stadium for athletics and a recreation soccer field and recreational outdoor tennis courts. Meandering paths tie into the pedestrian loop—enhancing the existing trail network around the stormwater ponds with overlooks, wetland boardwalks, woodland clearings, and picnic areas. These interspersed landscape features will enhance the open space network and promote health and well-being for the campus community.

- Conveyance Zone
- High Hazard Zone
- 100-Year Floodplain



100 yr Floodplain, High Hazard and Conveyance Zones



Aerospace Engineering Science Building (AES) Stormwater Features



Existing Conditions at the Aerospace Engineering Science Building (AES) Flight Field



East Campus Open Space Framework

## 4.0 Campus Frameworks

### East Campus

#### CAMPUS SPINE

Today, Discovery Drive is a vehicular-oriented, wide-laned roadway. In the future, Discovery Drive is reimagined as a pedestrian priority corridor that provides connectivity through the extent of East Campus. The roadway is narrowed to provide more gracious sidewalks and bike lanes. The corridor also has the potential to support micro-transit.



Existing View Along Discovery Drive

#### INNOVATION PLAZA

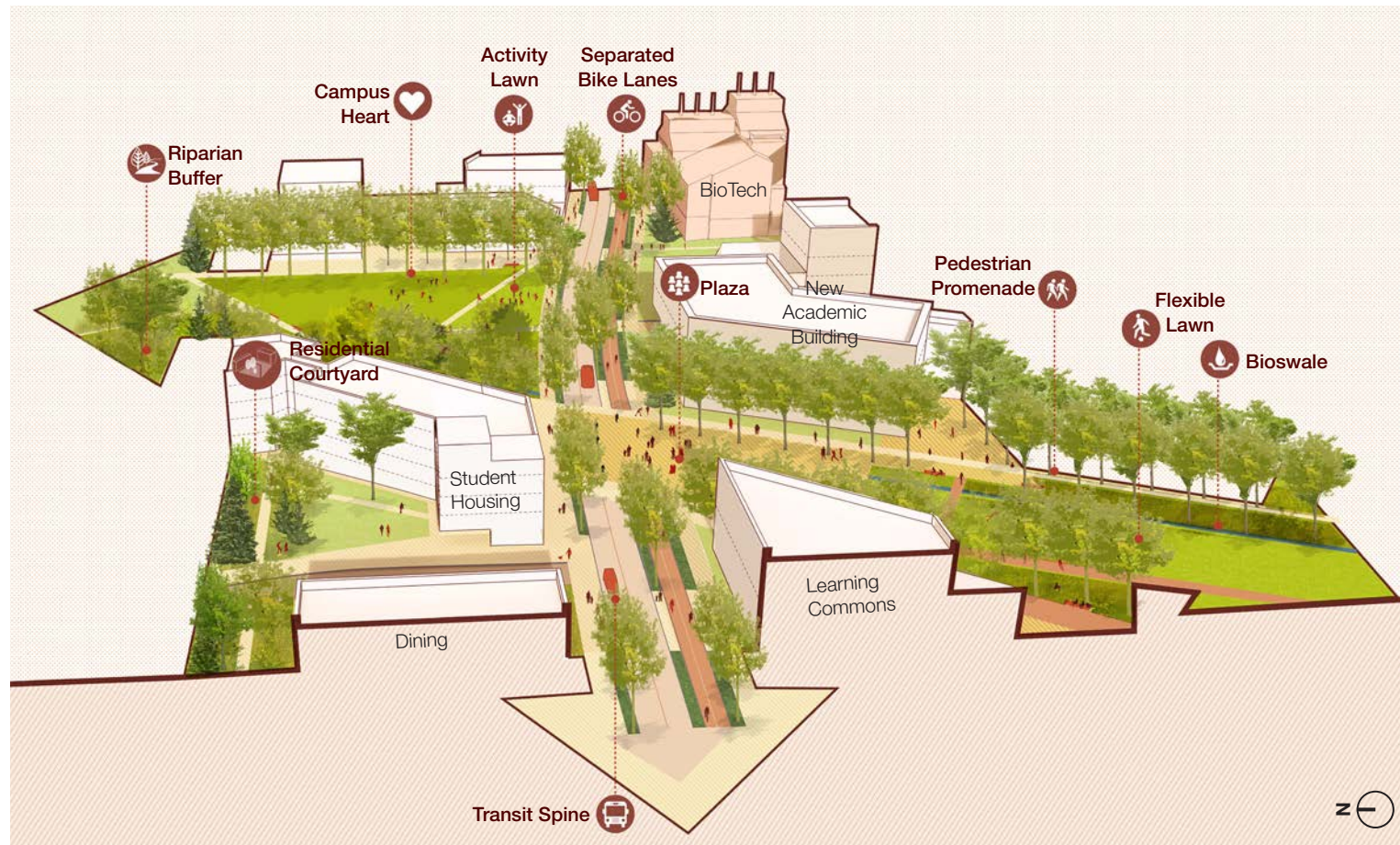
Essential to the character of the East Campus landscape is the spirit of innovation and experimentation found adjacent to its buildings. Student life found indoors is mirrored and pulled outside throughout the campus landscape.

A long-term location for a tree nursery is designated in the graphic below. In the short-term, undeveloped areas of East Campus could be used to support this function until they are needed for development.

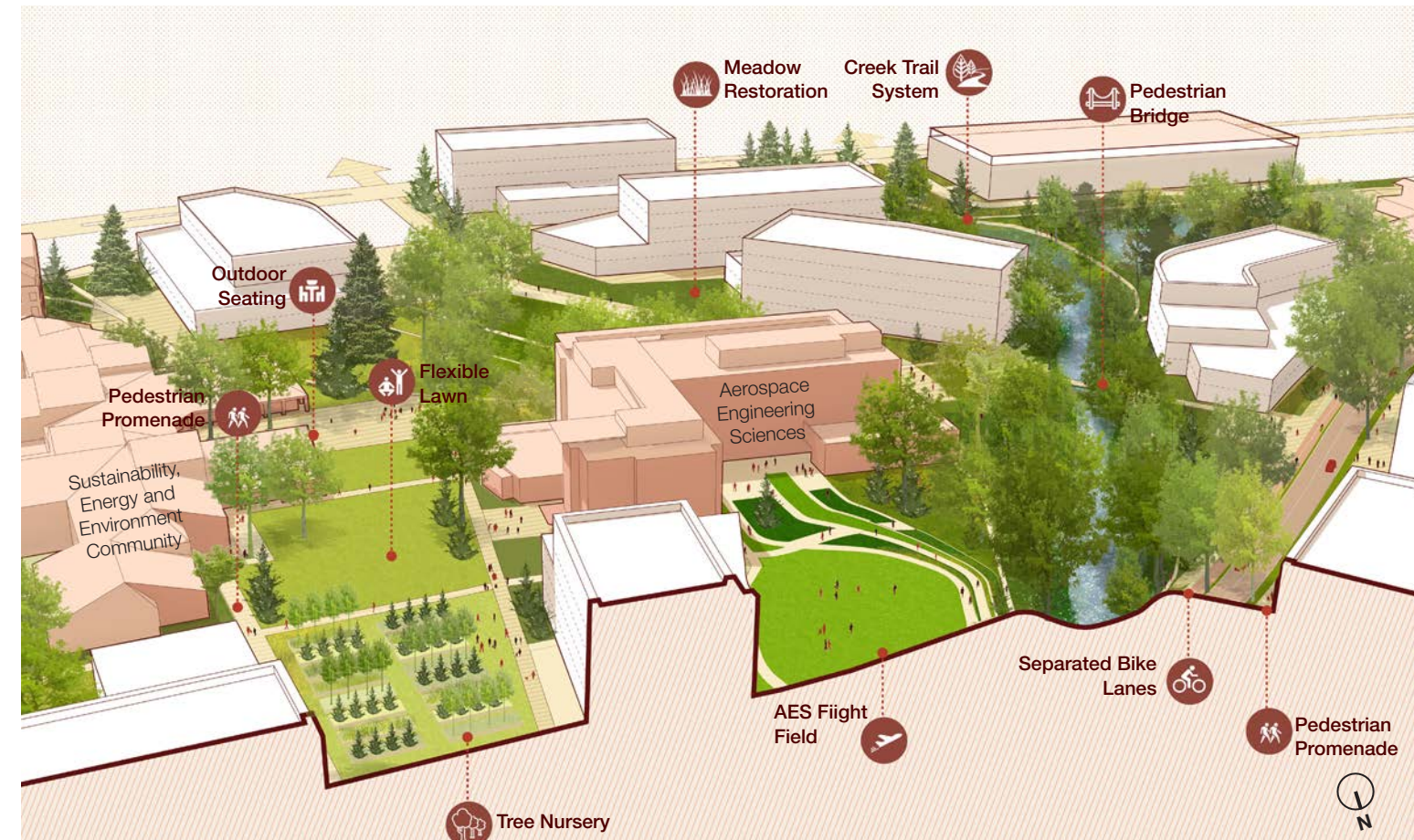


Innovation Plaza & Partnership Buildings

East Campus Spine



AES Flight Field + East Campus Tree Nursery



## 4.0 Campus Frameworks

### East Campus

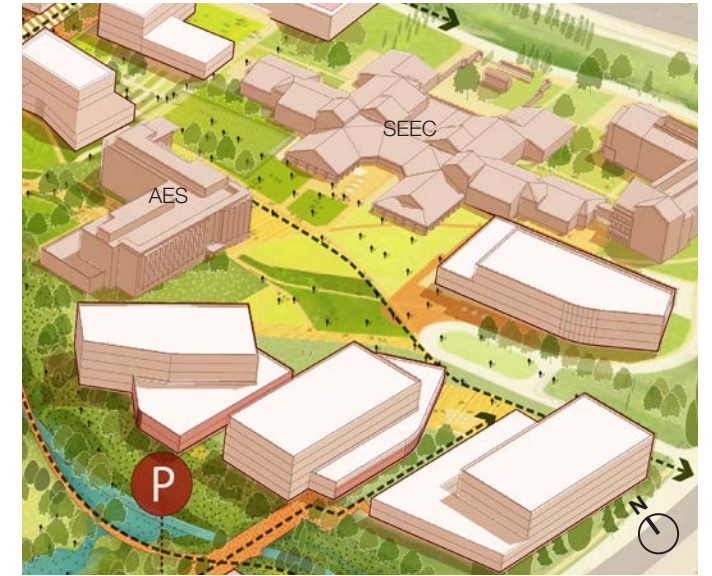
The Gateway Green features public art that marks the campus's unique identity with a big flexible plaza that can accommodate large outdoor events. A small nursery functions as a living laboratory and creates a "tree bank" for succession planting throughout campus. Primary paths thread together courtyards and plaza nodes which are designed to hold outdoor classrooms and quiet study nooks--accommodating a range of student needs.

Since much of East Campus sits in or adjacent to the floodplain, this campus represents a unique opportunity to improve habitat and increase biodiversity through meadow restoration, prairie grass and meadow planting mixes, and enhanced riparian woodland planting. East Campus will become both a research campus and a wildlife corridor within the region.

Partnership and Aerospace Buildings on East Campus



Existing Conditions



Proposed Massing



## 4.0 Campus Frameworks

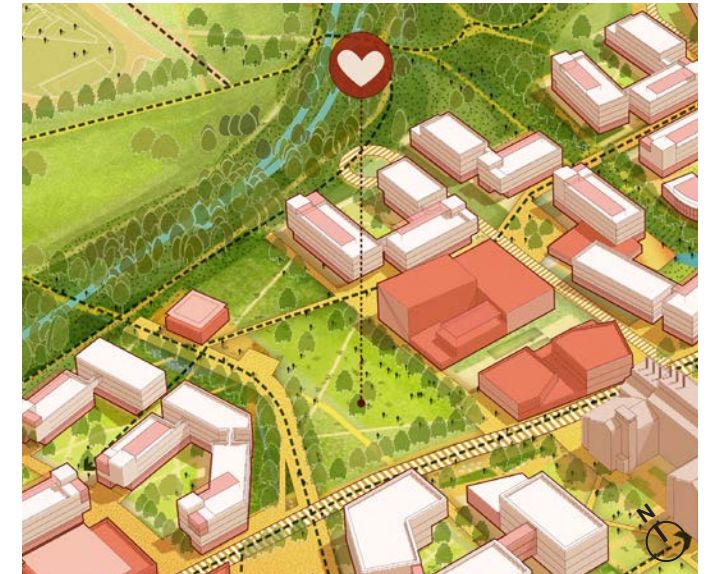
### East Campus

#### CAMPUS HEART: SUMMER

The Campus Heart is designed to support year-round activity, including passive recreation, collaboration, and meeting space, as well as space for more organized activities.



Existing Conditions



Proposed Massing

East Campus Heart in the Summer



## 4.0 Campus Frameworks

### East Campus

#### CAMPUS HEART: WINTER

Given this space is south-facing and receives Colorado's ample year-round sunshine, it can comfortable outdoor activities in winter, when many students are on campus.

East Campus Heart in the Winter





# Williams Village

Williams Village is primarily a residential campus located southeast of Main Campus and bounded by Baseline Road to the north and the Denver Boulder Turnpike to the south. The campus is characterized by high rise residential towers and lower rise, but expansive apartment complexes surrounding a central green recreation space. The towers are a prominent example of mid-century modernism while the more recently constructed residential buildings use materials and roof lines to modulate their large scale.

## REDEVELOPMENT OPPORTUNITIES

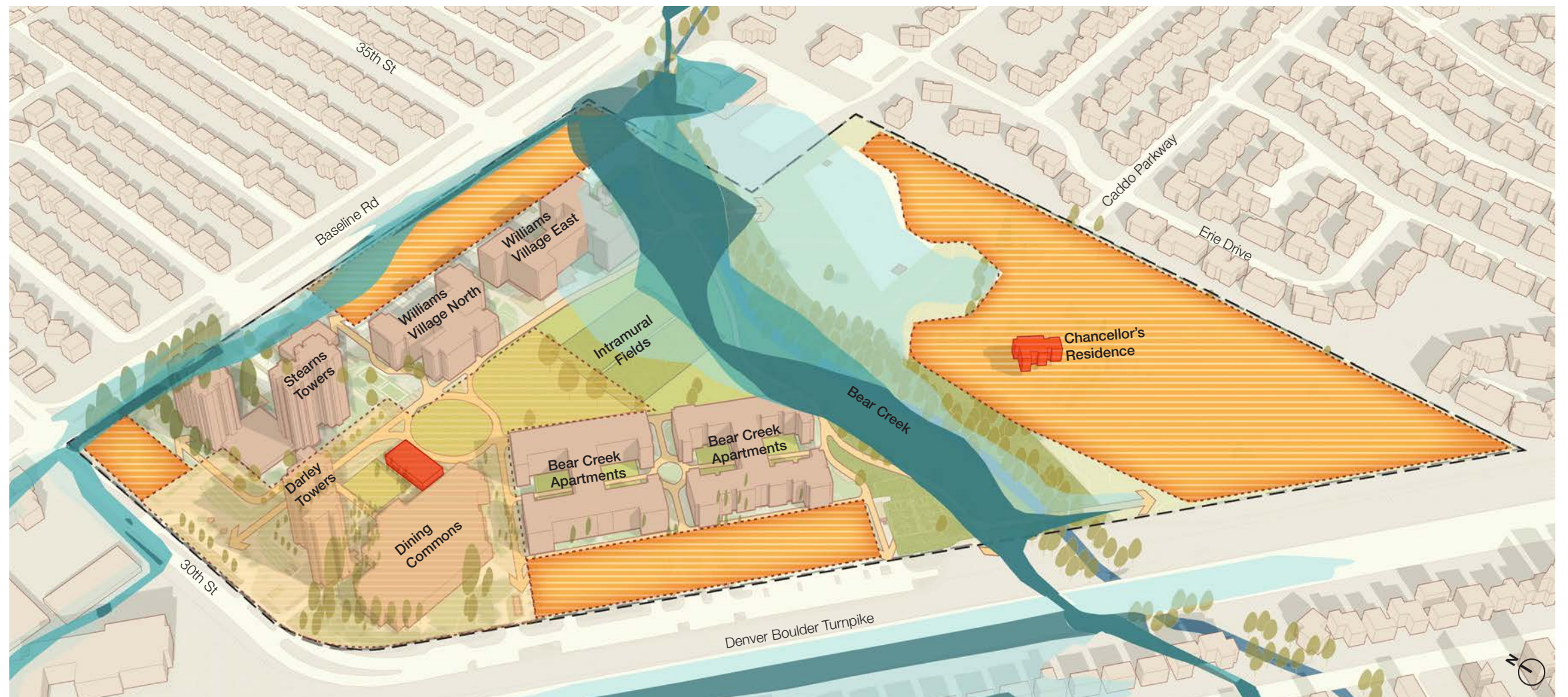
Bear Creek runs south-north through the Williams Village campus and bisects it into an eastern and a western precinct. The western precinct is more developed, containing the Stearns and Darley towers, Bear Creek Apartments, and Williams Village East and North Residence Halls. The western precinct also includes the Dining Commons, the Williams Village Recreation Center (WVRC), and outdoor intramural fields. Opportunity sites in the western portion include the existing surface parking lots, and infill opportunities around the Towers. The small WVRC, which is both inefficient and impedes access and connectivity between the Towers and the central open space, also offers an opportunity for redevelopment for a higher and better use of the land.

Much of the northern half of the eastern precinct lies in the floodplain, offering opportunities to capture the space for outdoor formal and passive recreation. The remainder of the parcel offers long-term redevelopment potential.

- High Hazard Zone
- Conveyance Zone
- 100-Year Floodplain
- Potential Demolition
- Opportunity Zones



Existing Conditions



Opportunities and Constraints

## 4.0 Campus Frameworks

### Williams Village

#### PROPOSED FRAMEWORK

A key objective for Williams Village is to support the formation of a holistic student community. To achieve this, the CMP proposes a network of new spaces to create a more balanced student experience. The combination of academic program, outdoor space, and student life amenities will enrich the sense of 24-7 student community and vitality at Williams Village.

The area around Stearns Tower includes a three-tier approach: new academic buildings, a renovation of existing ground floor shared facilities at the base of Stearns Tower, and exterior landscape improvements. The new academic buildings will provide purpose built academic space, and create an active ground floor with exposure to the prominent corner of 30th and Baseline, as well as frame the active pedestrian corridor that extends eastward into the district from the Transit Center. The renovation at the base of Stearns Tower includes a new dynamic academic support space, including study rooms, maker spaces and social lounges that will bring new life to the existing towers. These spaces will connect to the new academic building and the Stearns Towers creating an active living learning community and engaging tower residents. Redefined open space will provide support for outdoor program activities, support visual transparency to the interior of the building, and create an active pedestrian environment.

A new Recreation and Wellness Center is located on the former site of the WVRC and opens onto the large central green, which offers both passive recreation as well as programmable intramural fields.



## 4.0 Campus Frameworks

### Williams Village

The siting of the new Recreation and Wellness Center promotes an engaged relationship with the adjacent Dining Commons and new academic facilities, creating an active “heart” within the district.

The Eastern precinct of Williams Village becomes a location for family housing, which could support graduate students, faculty, and/or staff. This housing is

envisioned as 2-3 story townhouse-style units that relate in scale to the adjacent Frasier Meadows residential neighborhood. This area also includes the relocated Rugby Field and a system of creekside trails.

The plan below shows reconsideration of the Chancellor’s Residence and the potential for approximately 200 housing units (400-500

beds). Depending on the university’s needs, the Chancellor’s Residence could remain, and the layout of the proposed housing development could be adjusted accordingly. A shared community building in this housing district could serve the area residents as well as provide broader programming and amenities for other family housing residents.



Existing Conditions



- Proposed Buildings
- Student Life
- Parking
- Existing Buildings

## 4.0 Campus Frameworks

### Williams Village

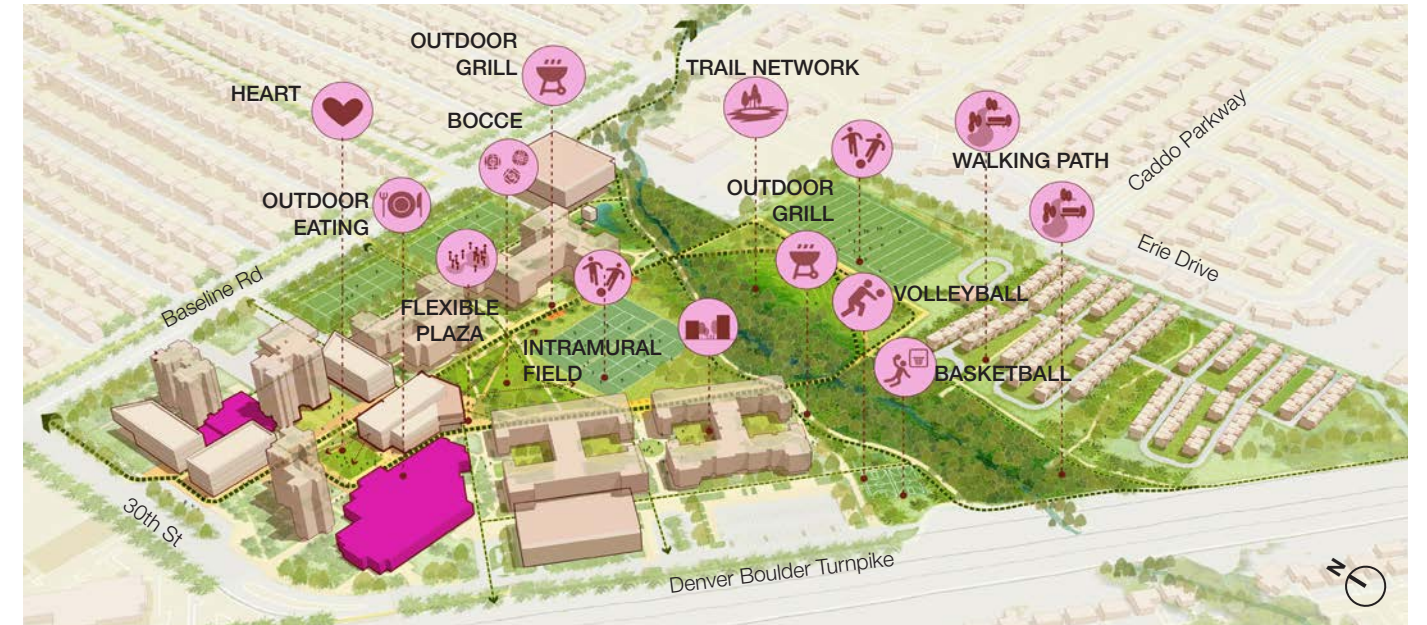
#### PROGRAM DISTRIBUTION

The built program is focused in the western portion of the site to foster a greater sense of vibrancy and diversity of uses in the area already occupied by the residential facilities. By locating academic program use here, Williams Village can become a more active district during the daytime hours.

The surface parking lots along Baseline Road are redeveloped to support intramural fields and parking is shifted eastward into a new parking deck.

Another new parking deck is also planned for the area immediately southwest of Bear Creek Apartments and south of the Dining Commons. This location will provide parking not only to residents of Williams Village but also to patrons and visitors to the Dining Commons.

Additionally, one of the new parking garages at Williams Village is envisioned to include service space to house campus support staff and facilities.



Student Life Framework



- Undergraduate Housing
- Family Housing
- Student Life
- Academic/ Research
- Partnership/ Community
- Parking Garage

\*Hatching denotes new buildings; solid is existing

Program distribution

## 4.0 Campus Frameworks

### Williams Village

#### OPEN SPACE NETWORK

An updated green heart complete with outdoor dining, a flexible lawn, canopy planting, and a robust pedestrian loop connects the existing towers at Williams Village with new and existing rec fields. Adjacent to these large recreation zones are smaller outdoor rooms for students to picnic, play, study, meet, and enjoy Bear Creek. The reduced surface parking lot footprint at Williams Village provides

more space to accommodate the needs of intramural, rec, and student-led programming. A widened promenade hugs Williams Village East and Bear Creek Apartments and connects residents with the landscape. On the east side of the recreation loop, a small amphitheater invites student activity and increases the use and enjoyment of Bear Creek.



100 yr Floodplain, High Hazard and Conveyance Zones



Existing Challenge Course at Williams Village



Proposed Buildings  
Existing Buildings

Open Space Network

## 4.0 Campus Frameworks

### Williams Village

#### CAMPUS HEART

The new campus heart presents an opportunity to enliven the central landscape space of Williams Village. A new Student Life and Wellness Facility will be sited to better relate to the existing Dining Commons and to frame and engage with the open space.



Existing Williams Village Recreation Center

#### STEARNS TOWERS - ACADEMIC INTEGRATION

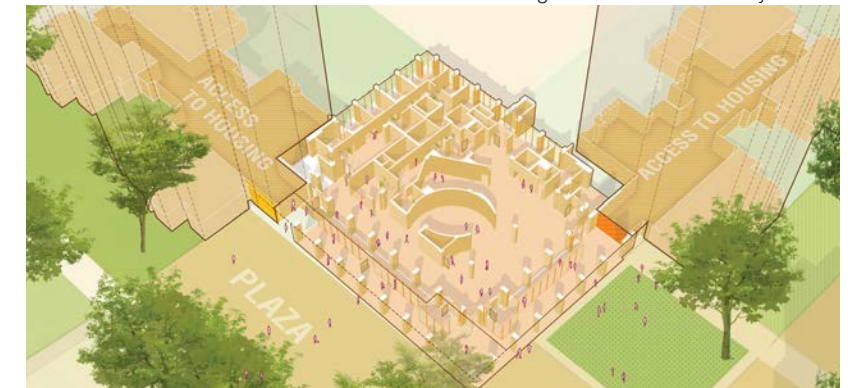
The one-story portion of the Stearns Tower complex transforms from a residence hall lounge space to a new academic hub for Williams Village which can include maker space, collaboration space and student lounge space.



Precedent image: Lassonde at University of Utah



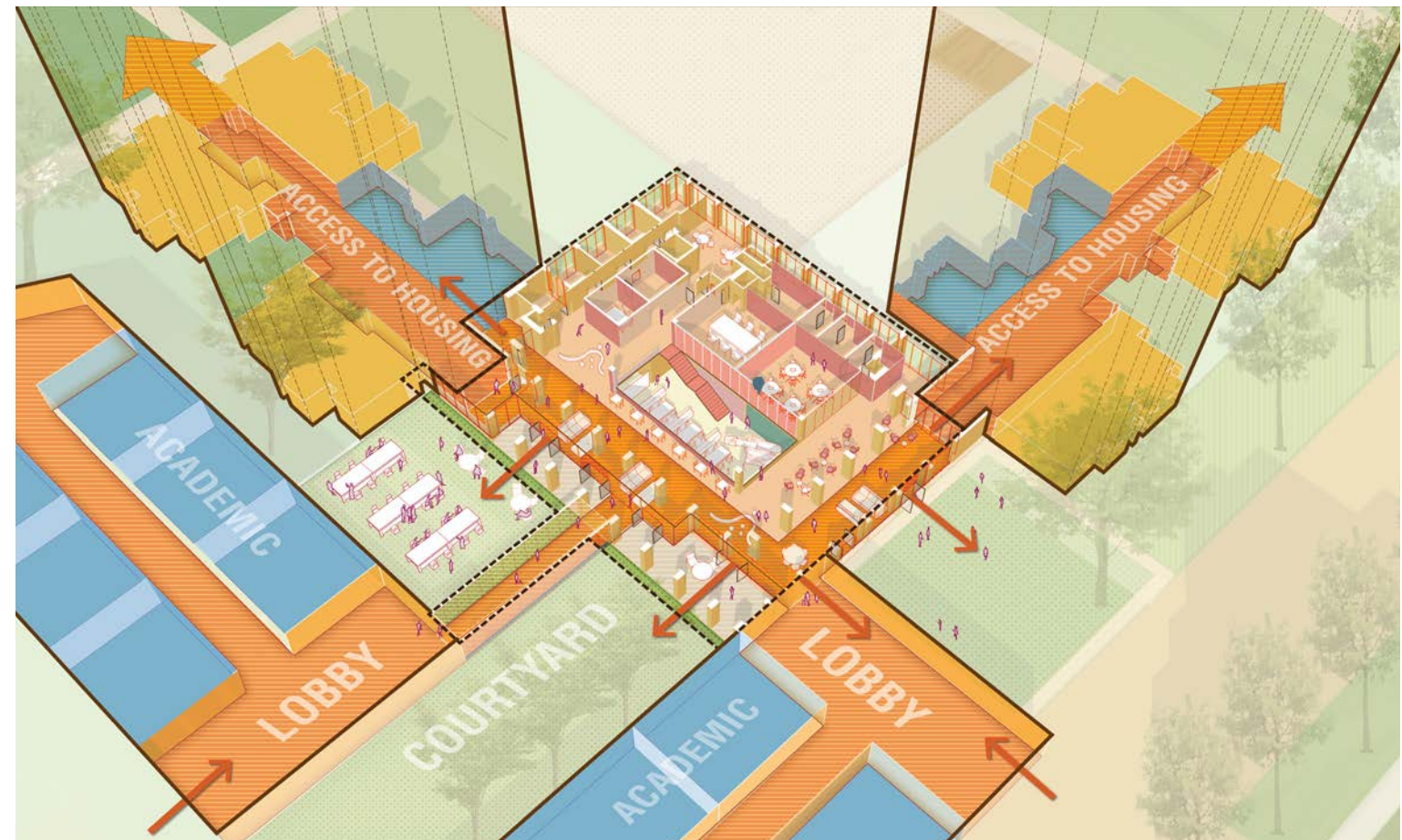
Stearns Towers Aerial



Stearns Towers Existing Conditions



Williams Village Activity Spine



Stearns Towers Proposed Conditions

## 4.0 Campus Frameworks

### Williams Village



Existing Conditions



Proposed Campus Heart

Williams Village Activity Spine + Student Life Hub



# SUSTAINABLE STRATEGIES

## INTEGRATION OF THE EMP AND TMP

Both the Energy Master Plan (EMP) and Transportation Master Plan (TMP) serve as complementary reports to the Campus Master Plan (CMP). Together, they communicate strategies to guide CU Boulder's commitment to sustainability.

The EMP defines the energy goals and prescribes the route toward achieving them through addressing the key areas of energy conservation and efficiency, energy management, on-site energy generation and storage, decarbonization of energy supply and the mechanisms to engage the broad spectrum of campus stakeholders. The CMP builds upon this by outlining a specific approach to the planning of utility infrastructure investments that position CU Boulder to reduce its carbon dependency. Such considerations include renewable energy sources, such as geothermal and photovoltaics.

The TMP also communicates a strategy for a transportation system that demonstrates the university's leadership in energy conservation. The CMP incorporates and extends many of the recommendations in the TMP that advance CU Boulder's sustainability goals including: improved access to and frequency of transit to reduce single-occupancy vehicle use; enhanced pedestrian priority corridors to encourage walking and biking; and, the designation of mobility hubs and transit centers to efficiently organize multi-modal transportation alternatives, and helps meet the university's climate commitment.

## SUSTAINABILITY FRAMEWORK

Sustainability and resiliency are core to CU Boulder's mission and must be considered holistically across the campus in terms of future development. As part of the planning process, the CMP outlines a range of strategies to holistically address sustainability at the campus-wide scale. These strategies include the following considerations:

### Mobility

- Commitment to a safer and more walkable campus environment
- Supporting multi-modal transportation in the design of streets and mobility hubs

### Ecosystems

- Promoting biohabitat diversity, native plant species, and pollinators
- Increase size of tree canopy on our campuses by early implementation of a tree planting plan, coordinated with future development plans

### Resiliency

- Design of landscapes for flooding, particularly along seasonally-active creeks

### Health and Wellness

- Design of landscape for outdoor thermal comfort
- Designation of outdoor spaces to support health and wellness
- Encouraging movement by promoting walking and cycling/micro-mobility
- Designing buildings to allow natural light and connection with outdoor spaces

### Materials/Supply Chain

- Consideration of embodied carbon and health impacts in the use of building and landscape materials

### Energy

- De-carbonize campus facility-tied energy use by 2050 through transition to clean thermal energy and implementation of a financially viable mix of on-site and regional clean electricity
- Increase campus energy efficiency: reduce energy use intensity by an average of 2% per year
- Reduce facility energy emissions: target zero energy emissions by 2050
- Enhance critical mission resilience

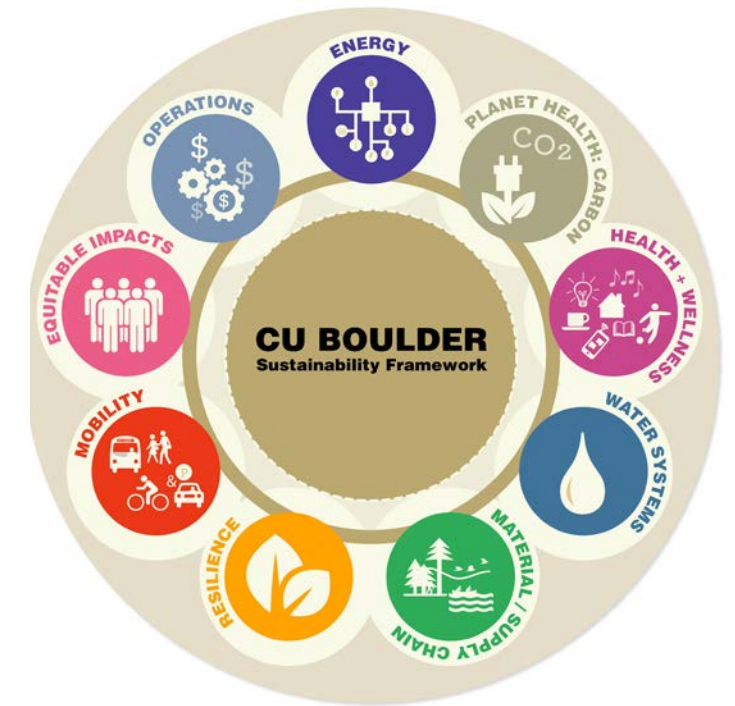
- Lead in energy innovation
- Design of infrastructure systems to support the potential for renewable energy such as geothermal and photovoltaics
- Siting of buildings so that long facades face north/south whenever possible

### Equitable Impacts

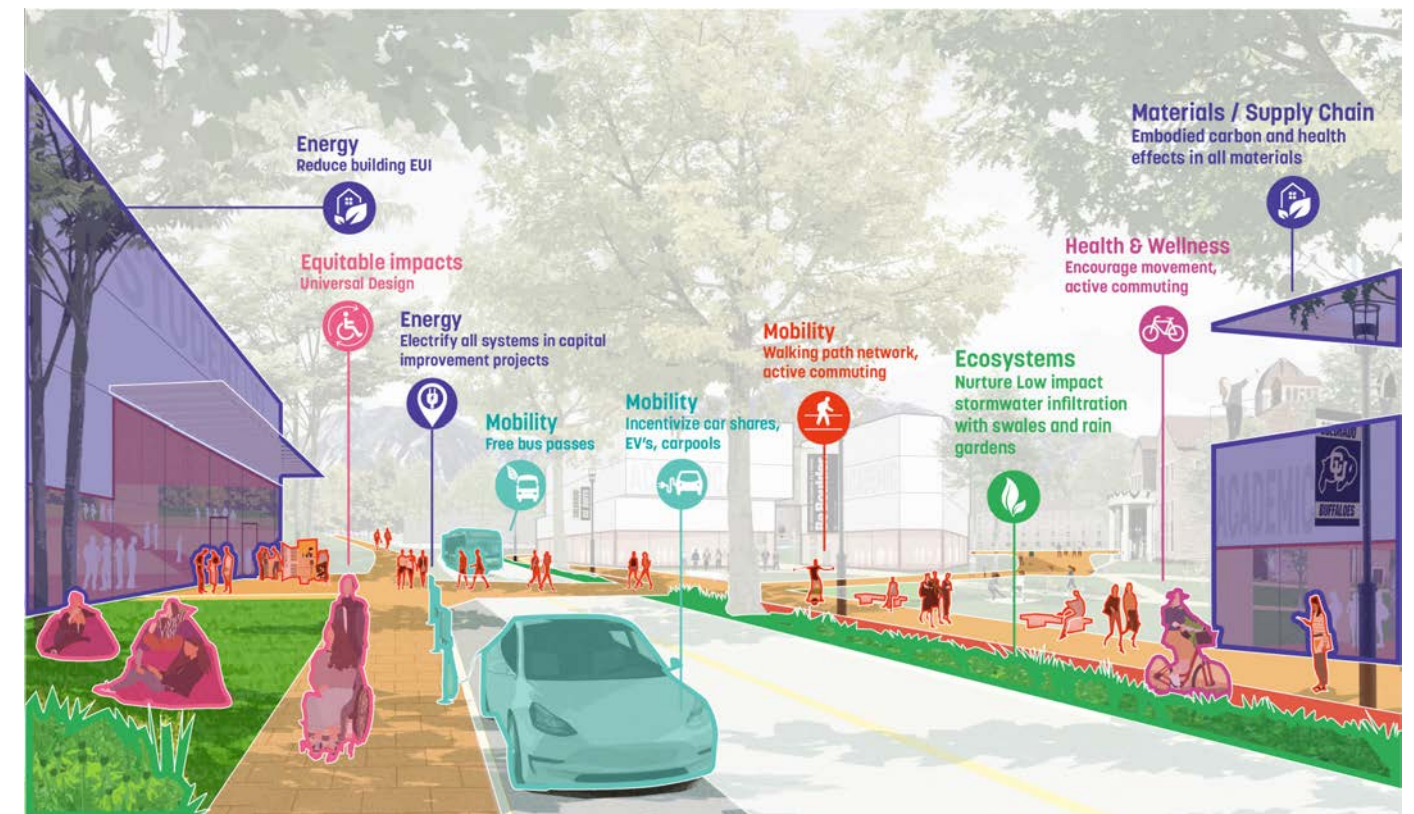
- Design of public spaces for gathering and collaborating
- Promoting universal design and enhanced accessibility throughout all campuses

### Water Systems

- Nurturing low impact stormwater infiltration with swales and rain gardens
- Designing permeable plazas and streets where appropriate



Sustainability Framework



Sustainability Framework at Main Campus



## 4.0 Campus Frameworks

### UTILITY INFRASTRUCTURE CONSIDERATIONS

Planning for the utility infrastructure includes the following key initiatives:

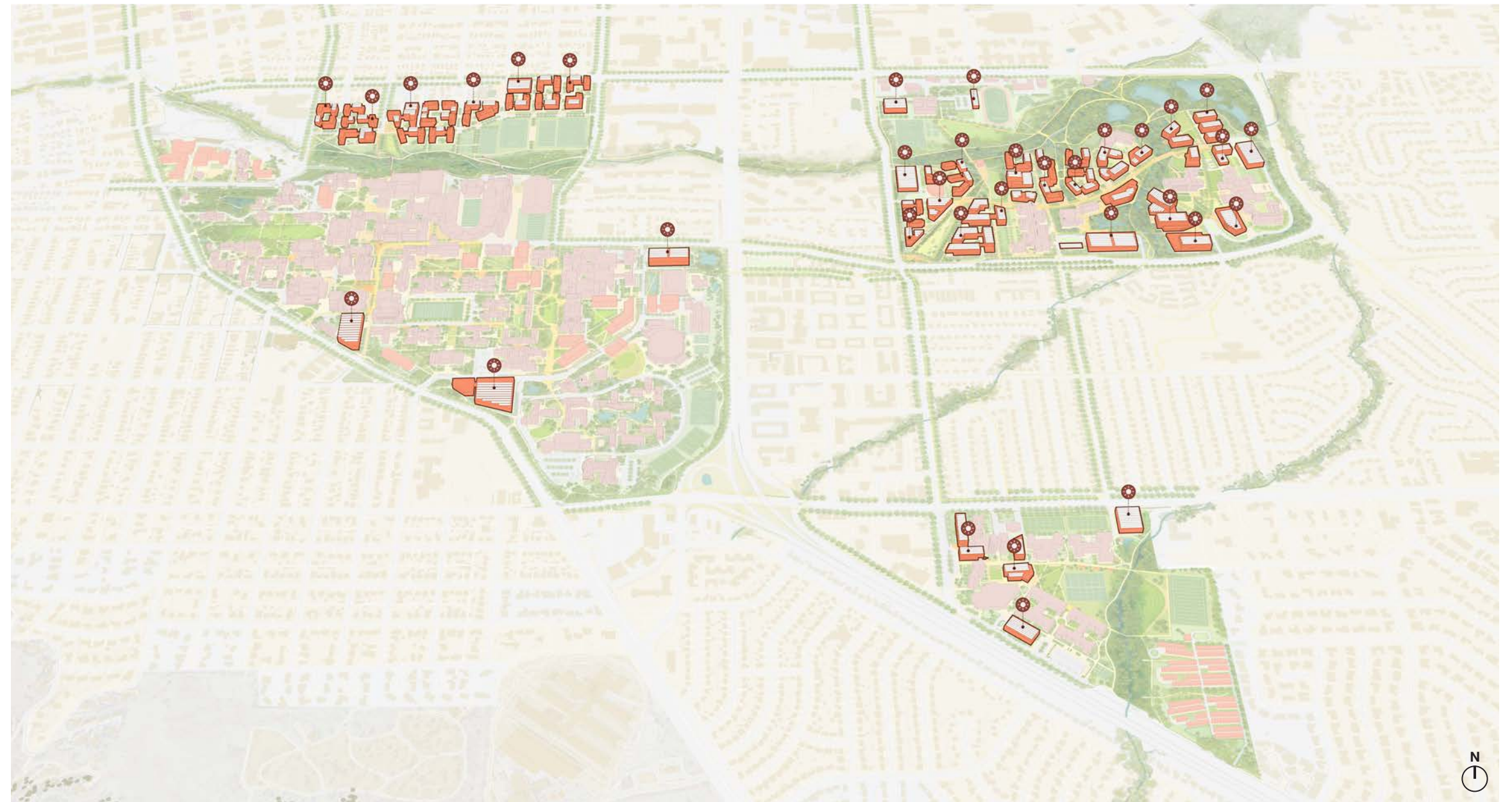
- Reduce natural gas combustion from existing buildings
- Avoid use of new natural gas combustion equipment
- Achieve EMP EUI targets or better
  - Balance building heating and cooling loads
  - Reduce heat loss - improved envelope design
- Keep heat in buildings - air side heat recovery
- Explore use of low temperature hot water distribution
- Consideration of renewables: PV and geothermal technologies

Major infrastructure improvements are focused at East Campus and NBC, where significant redevelopment offers the opportunity to reconceive district-wide strategies. At East Campus, the three existing thermal plants that serve individual buildings have service life remaining. In the short-term (0-10 years), these thermal plants should be linked to start the process of creating a single district energy system to serve the entire campus. Over time, as new buildings are added to East Campus and today's plant equipment reaches the end of its useful life, a district energy plant will be constructed on East Campus, at the location of the parking garage along Colorado Avenue, with utility lines forming a loop from west to east as development occurs. A pumphouse in the area north of Boulder Creek affords the opportunity to consider geothermal energy thereby enabling a combustion-free heating source.

At NBC, a zero combustion energy plant should be constructed near the athletic fields to provide hot water and chilled water to campus buildings. This location, near the open fields, allows for the exploration of combustion-free heating sources, such as geothermal energy, to ensure safety and reliability and to support campus growth. In doing so, thermal utilities use heat

recovery and geothermal strategies as the basis for carbon-free developments. Considering the planned building density, buildings could incorporate tunnel systems within their design to facilitate accessible thermal and power distribution on campus.

For additional description of utility infrastructure phasing and planning, please reference the appendix.



#### Solar Potential for East Campus

- 77,000MWh - All electric energy consumption based on EUI assumptions
- 50,000MWh - Consumed using geothermal
- 1.55M sf - Roof available for solar
- 16,000MWh - Rooftop production (assuming 50% coverage)
- 34,000MWh - Grid sourced power

Solar energy potential on campus



# 5.0

## Implementation & Conclusion

---

IMPLEMENTING THE VISION

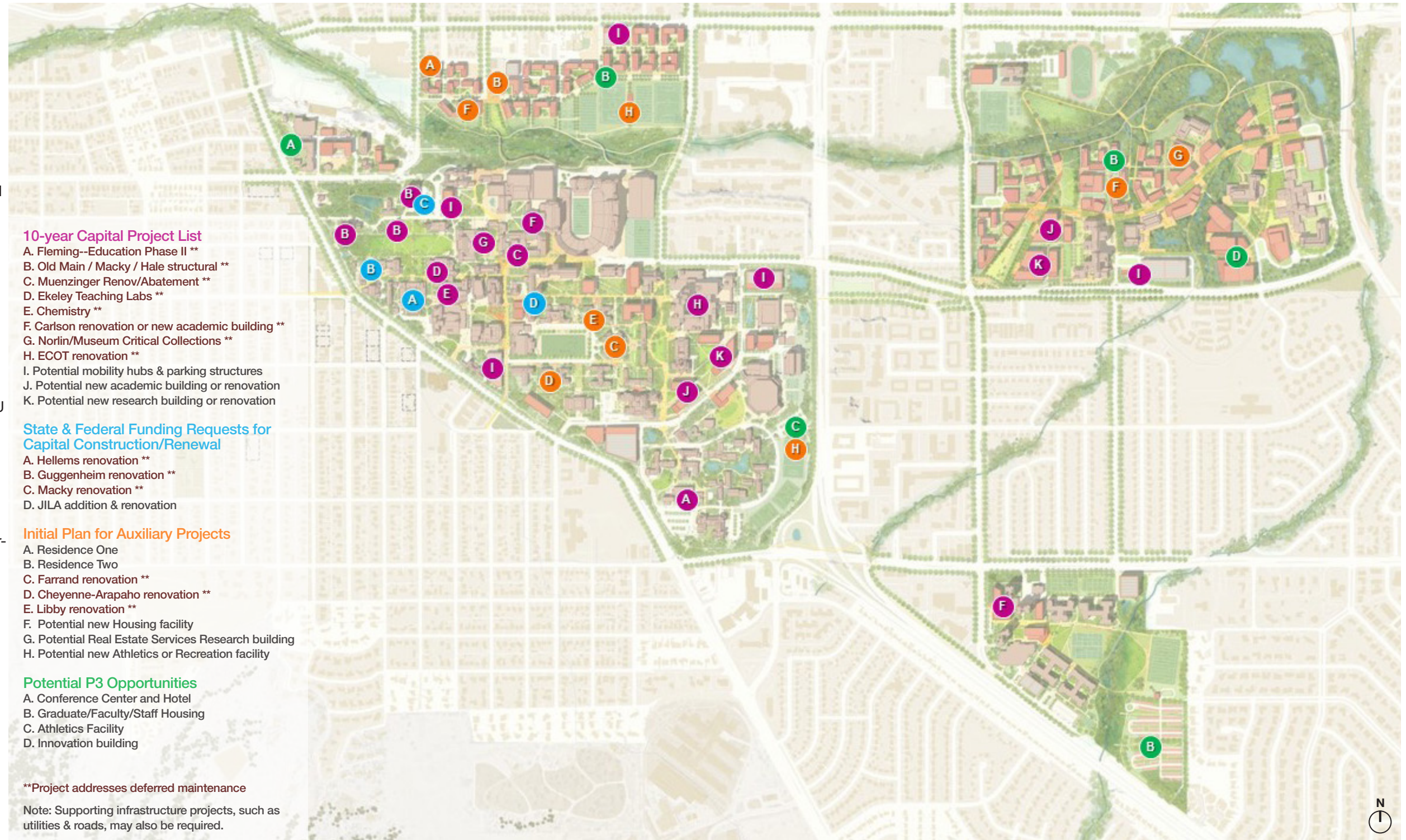
## 5.0 Implementation & Conclusion

### IMPLEMENTING THE VISION

The CMP formulates a long-term vision of campus and community that guides planning and development of each project. While the CMP drafted a detailed timeline by which the campus anticipates projects to be implemented, it is not meant to be prescriptive. Instead, the CMP is designed to support ongoing decision-making with regard to project prioritization and implementation. A new online scenario-based tool has been developed to allow the university to explore different options and trade-offs as priorities shift and change, thus allowing for continuous planning, including initial project design and pricing. Pairing this tool with project development through design will create a more comprehensive picture of project costs, ultimately providing more accurate cost estimates for Regent approvals.

### 0-10 YEARS

The short-term phase is meant to focus on capital renewal and addresses existing needs and projects that have already been listed on CU Boulder's 10-year capital plan, many of which are, or will be, actively in the planning or design stage. These projects, primarily located on Main Campus, include various building renovations, new mobility hubs at Main Campus and East Campus, as well as structured parking. The near-term plan also includes new housing projects at NBC that will enable the phased renovation of several housing renovation projects on Main Campus. Potential exists for public-private partnership funding to enable other projects, such as the planned Conference Center and Hotel; housing to support graduate students, faculty, and staff; and a partnership facility to support campus and industry collaboration. Additionally, other projects that are listed on CU Boulder's Capital Improvement Plan to the state would also be included in the 0-10 year time frame if state funding approval is granted.



## 5.0 Implementation & Conclusion

### MID-TERM: 11-25 YEARS

Beyond the short-term projects that have been identified, the mid-term plan includes a considerable amount of new housing, both at NBC as well as on East Campus. This phase will likely see the construction of new academic facilities at all three campuses – Main, East, and Williams Village – to support learning and research. A number of site and infrastructure projects will improve campus aesthetics and function, including new green spaces, utilities work, and structured parking.

### LONG-TERM: 25 YEARS AND BEYOND

The long-term plan enables the continued expansion of academic and housing functions to support the campus's goals of growing the research endeavor and strengthening its impact while continuing to provide residential options for all members of the CU Boulder community.

### CONTINUED PLANNING

The phasing timeline described above and on the previous page will undoubtedly shift as time passes, new variables and needs arise, funding sources are identified, and annual updates to campus space projections occur via PREVIEW. For future malleability, the CMP project team has developed an online tool that will allow the university to shift the prioritization of projects, allow for the accommodation of emerging academic programming, and explore new phasing scenarios. Additionally, this tool will offer transparency related to capital construction projects and how projects are prioritized and funded.

