

An aerial photograph of the University of Louisville campus, overlaid with a semi-transparent red filter. White architectural models of various campus buildings are scattered across the image, primarily concentrated in the central and upper-left areas. The text is positioned in the upper-left quadrant, overlaid on the red background.

# UNIVERSITY OF LOUISVILLE

# CAMPUS MASTER PLAN

## EXECUTIVE SUMMARY

## 2024



# INTRODUCTION

The University of Louisville Campus Master Plan (Campus Plan) establishes a comprehensive vision that guides future development and transformation on Belknap and Health Sciences Center campuses to support the university’s mission, vision, and strategic plan.

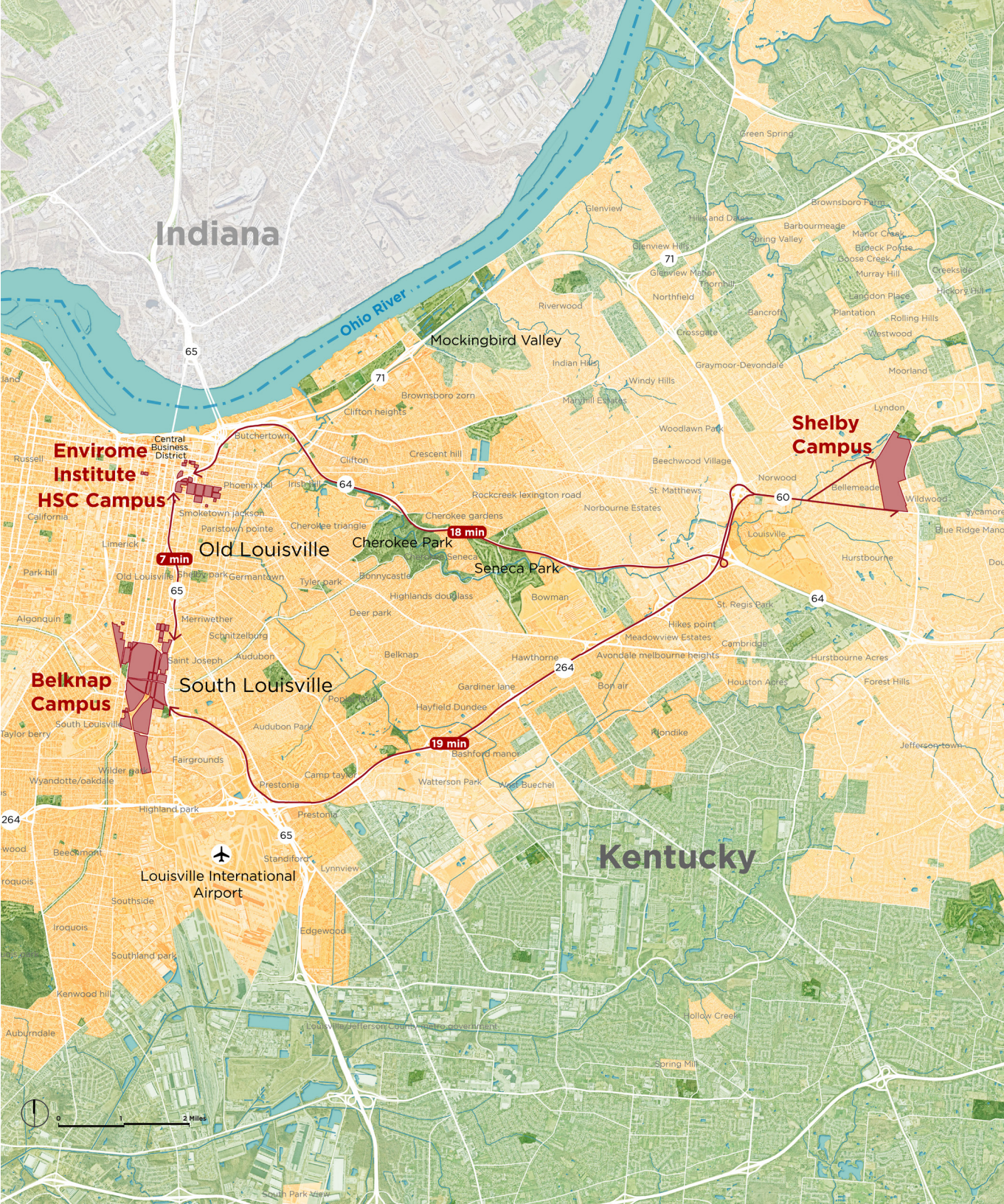
The Campus Plan serves as a 20-year framework, strategically strengthening UofL’s distinct identity as both a top-tier research institution and community-engaged university.

The Campus Plan builds upon several foundational plans conducted by the university, including:

- UofL 2023-2025 Strategic Plan
- Sustainability Plan
- UofL Diversity Plan 2017-2021

The Campus Plan is also complemented by a series of additional plans and studies:

- The **Landscape Master Plan** outlines a vision for landscaping and open spaces on the Belknap and HSC Campuses.
- The **Space Utilization Study** analyzes the utilization of all space across the campuses and explores strategies for enhancing efficiency and overall experience.
- The **Building Conditions Assessment** assesses the physical conditions of 62 facilities on the Belknap and HSC Campuses.



## THE PLANNING PROCESS

The planning process for both Belknap and HSC Campuses unfolded through three distinct phases, designed as an integrated approach to planning for UofL.

The 12-month process commenced with research and campus interviews in Phase 1: Discover and Analysis, aimed at understanding the needs and opportunities on Belknap and HSC campuses. Phase 2: Concept Alternatives explored and tested strategies for accommodating campus needs with guiding principles and goals. This phase was marked by a collaborative and iterative approach, leading to a preferred development framework for each campus. Finally, the process culminated in Phase 3: Final Plan, with planning documentation and an implementation strategy.

Throughout all three phases, a robust commitment to stakeholder and campus engagement was established with the primary objective of ensuring that those affected by the Campus Plan were well-informed, actively consulted, empowered to collaborate, and involved in the process.



Pop-up campus engagement event in the Belknap Academic Building

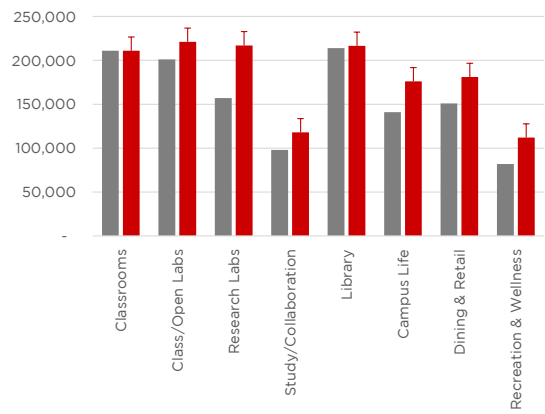
## PLAN DRIVERS

Five plan drivers shape the Campus Plan:

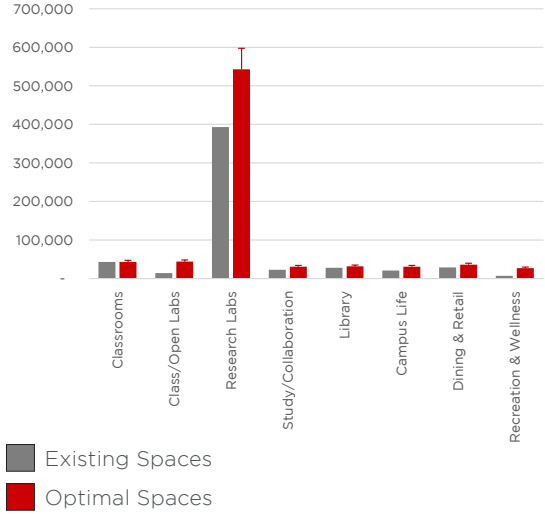
- **Strategic Plan:** Central to the foundation of the Campus Plan are the overarching objectives outlined in the 2023-2025 Strategic Plan, which emphasizes the key pillars of Learn, Discover, Connect, and Work. These strategic goals provide the fundamental framework for shaping the direction and priorities of the Campus Plan, aligning campus development with the broader mission and vision of the university.
- **Enrollment Growth Targets:** Another critical driver is the pursuit of modest yet purposeful enrollment growth targets for the university. This expansion plan anticipates a proportional increase in the overall UofL population to a total of 33,100, factoring in the evolving needs of the academic community and the broader university ecosystem.
- **Space Assessment:** The Campus Plan places a strong emphasis on a Space and Program Assessment, offering a high-level overview of the existing space inventory and projecting future space requirements. This analysis is instrumental in optimizing space to align with the university’s evolving needs and priorities.
- **Building Conditions:** An important component of the Campus Plan is the Building Conditions Assessment, which evaluates the condition of existing structures. This assessment serves as the basis for prioritizing renovation projects and asset preservation efforts, with a focus on addressing critical and urgent needs.

- **Campus Development Program:** The development program consolidates these influential drivers into a succinct summary, providing a clear snapshot of the planned square footage for development on each campus, categorized by major space types.

### Belknap Program Summary



### HSC Program Summary





UNIVERSITY VISION

The Campus Plan establishes a vision for a vibrant multi-campus system and a growing university with 21st century research, academic, and campus life investments. As one of the nation’s first city-owned, public universities, the University of Louisville is deeply rooted in and dedicated to the Louisville community. The Campus Plan recognizes the multifaceted and rich history that has played a pivotal role in shaping UofL and embraces the unique context for each campus, while planning a holistic vision for the future of the metropolitan research university.

The Belknap Campus will continue to flourish as a residential campus, with a deep commitment to undergraduate education and the student life experience. Simultaneously, strategic investments will be made to attract graduate students, especially in STEM programs, and to bolster research opportunities.

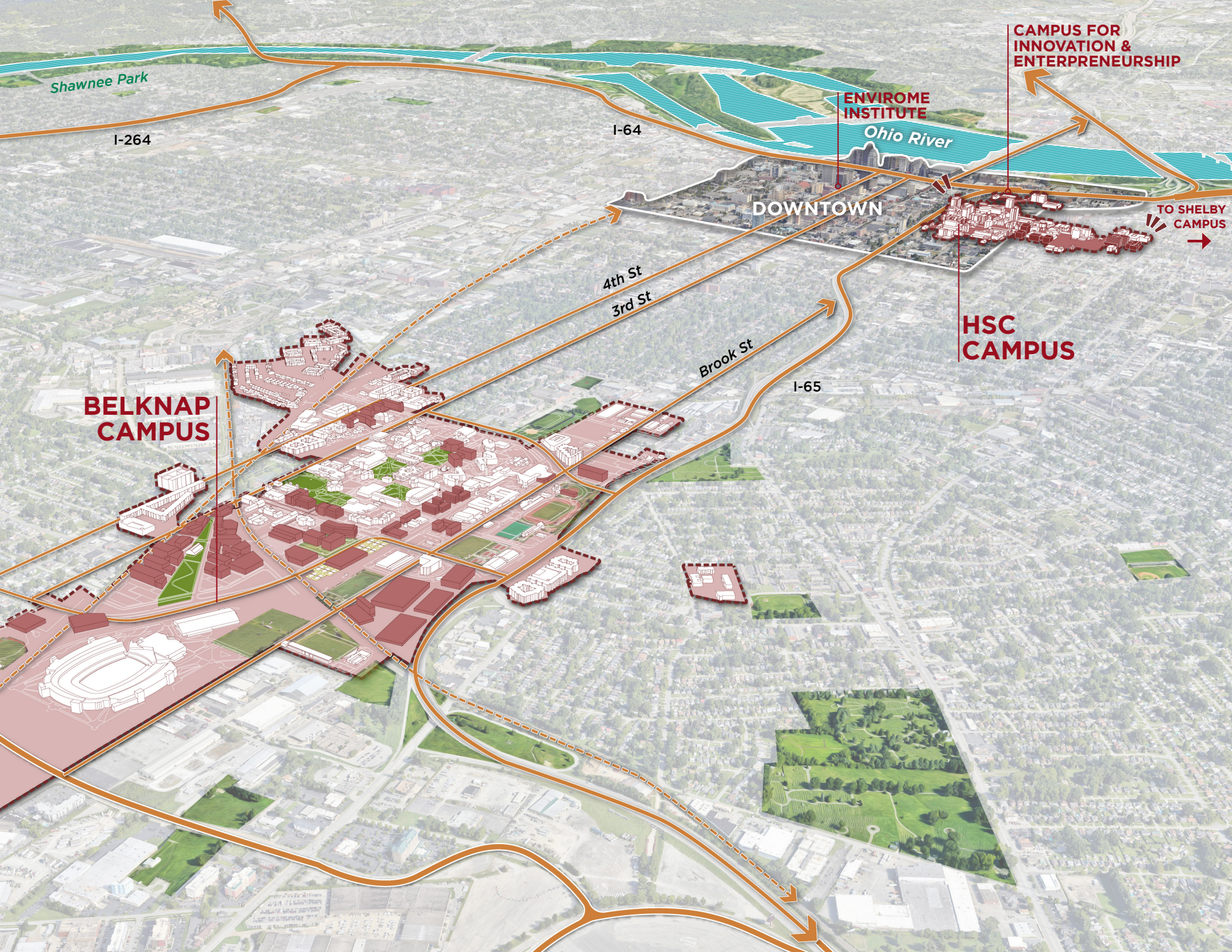
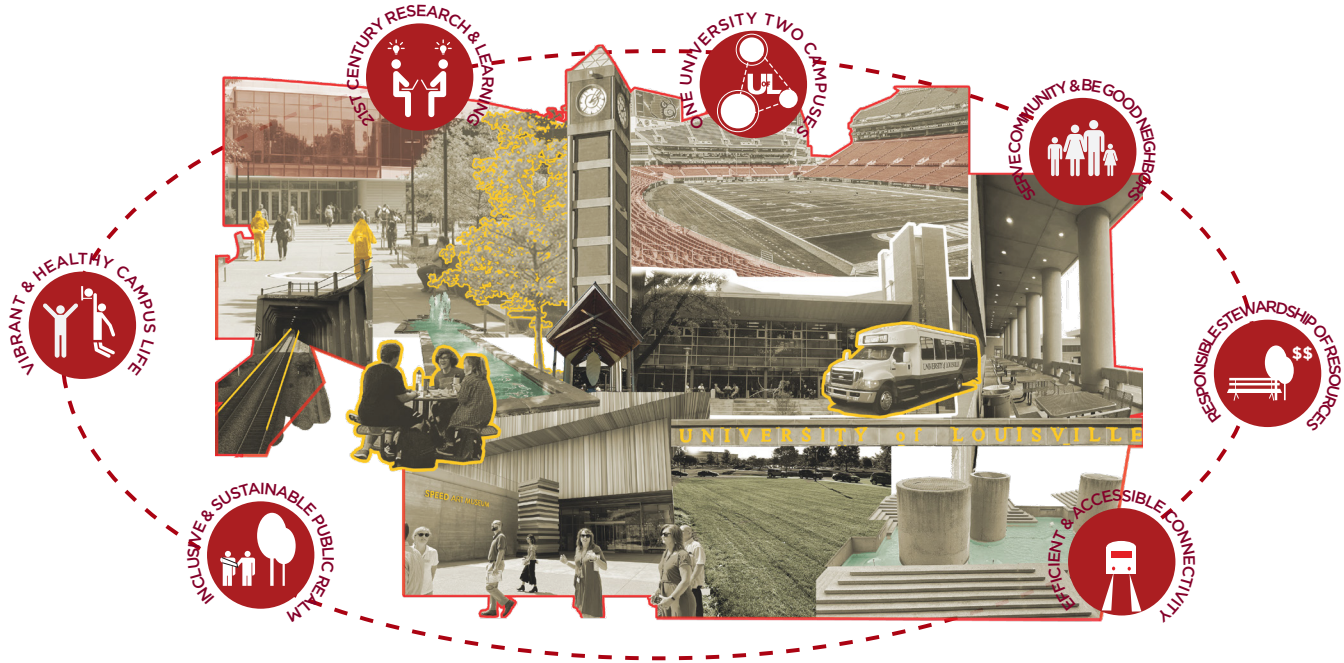
The Health Sciences Center Campus will remain the epicenter of health sciences education and research within the broader downtown Louisville Medical Education District. Proximate to the Christina Lee Brown Envirome Institute and the J.D. Nichols Campus for Innovation and Entrepreneurship, HSC will focus on health and well-being and building strategic partnerships.

To foster collaboration, connectivity, and enhance the overall educational and research experience for the Cardinal community, the Campus Plan envisions improved mobility between campuses, with more efficient transit options and bicycle infrastructure.

PLANNING PRINCIPLES

The Campus Plan is guided by seven planning principles that amplify the objectives of the Strategic Plan: Learn, Discover, Connect, and Work. The principles are:

- 1. **One University, Three Campuses:** Reinforce three unique campus identities in support of one University of Louisville.
- 2. **21st Century Learning and Research:** Promote 21st century learning and research through contemporary, hands-on, interdisciplinary environments.
- 3. **Vibrant and Healthy Campus Life:** Foster healthy and vibrant campus life experiences.
- 4. **Inclusive and Sustainable Public Realm:** Promote an inclusive, beautiful, and sustainable public realm.
- 5. **Efficient, Convenient, and Accessible Connectivity:** Enable efficient and convenient inter- campus and intra-campus mobility, connectivity, and accessibility.
- 6. **Responsible Stewardship of Resources:** Serve as a steward for UofL’s physical, environmental, and financial resources.
- 7. **Serve Community and Be Good Neighbors:** Embody the values of being “a university for and of Louisville.”





# BELKNAP CAMPUS VISION

The Belknap Campus vision re-imagines the 287-acre campus with strategic investments to improve the learning and research environment, enliven the campus life experience, and create a sustainable and enduring sense of place. Home to seven academic colleges, athletics, and the Speed Art Museum, the growth and transformation of Belknap will focus on the following:

**Building Renewal and Modernization:** The vision recognizes the urgent need for building renewal and modernization across a substantial portion of the campus. It emphasizes the importance of addressing deferred maintenance and creating asset preservation strategies to ensure that campus facilities are conducive to learning, discovering, working, and living.

**Academic Clustering:** The Campus Plan right-sizes instructional space, rethinks existing facilities for more compatible and suitable uses, and creates academic clusters with improved adjacencies.

**Campus Life Spaces:** Campus life spaces contribute to a sense of belonging and community formation. Extending a network of spaces for dining, recreation, collaboration, social activities, and housing—particularly in the southern half of the campus—will provide more amenities to the campus community.

**Accessible Campus:** Safety and accessibility for pedestrians and bicyclists are paramount. The Campus Plan creates safe and inviting environments at the edges and gateways of the campus. This includes establishing a “Town Gown” interface to the northwest and improving connections to the south via 4th Street, 3rd Street, Brook Street, Floyd Street, and Eastern Parkway.

**New Visitor Experience:** The visitor experience begins with a new “Town Gown” gateway district that celebrates Freedom Park, the Speed Art Museum, and a reconfigured Third Street entry. In addition, new signage and wayfinding will help visitors and campus community members navigate the campus.

**Open Space Network:** Belknap’s beautiful park-like campus provides an array of beautiful open spaces. By designing the landscape to integrate strategies for health, wellness, climate, and sustainability, the campus becomes a more versatile and inviting environment.



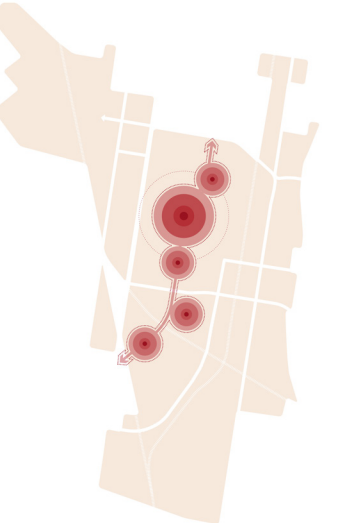




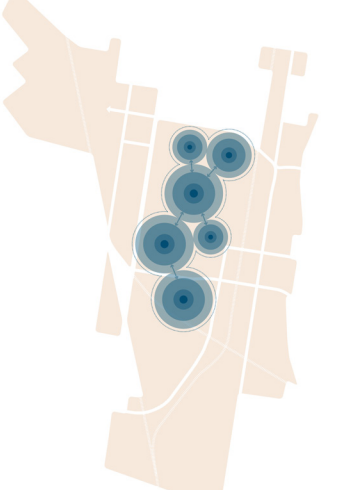
# STRATEGIES

Based on conversations with campus leadership and the Cardinal community, the following strategies have been identified to address the essential priorities on campus.

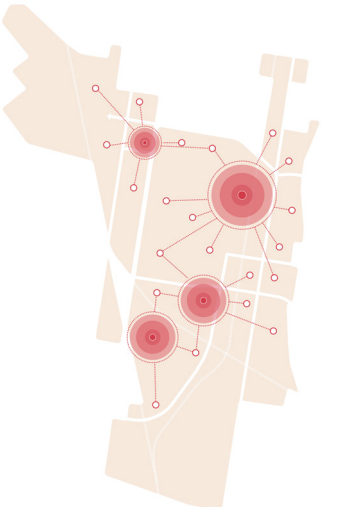
## 1. Extend the Academic Core



## 2. Cluster Academic Programs



## 3. Enhance Campus Life



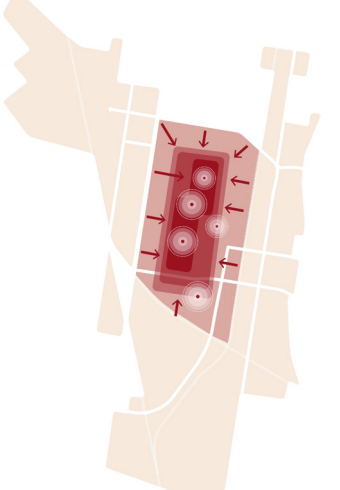
## 4. Improve Open Spaces



## 5. Activate Campus Edges



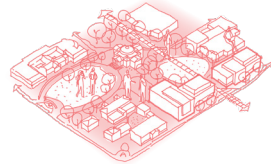
## 6. Densify the Campus Core





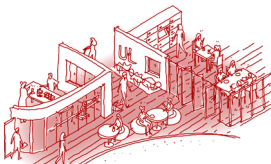
FRAMEWORKS

The Campus Plan incorporates six thematic frameworks to guide future development and transformation at Belknap Campus. These frameworks collectively provide a flexible and adaptable guide for achieving the vision of a thriving, inclusive, and sustainable Belknap Campus, aligning development efforts with strategic priorities and community needs.



Development

The Development Framework offers guidance on new construction, renovations, asset preservation, demolition, and property acquisition. The vision recognizes the urgent need for renewal and modernization while ensuring campus facilities are accessible, functional, and conducive to learning and research.



Campus Use

The Campus Use Framework aims to maintain a concentrated campus core while accommodating compatible uses that contribute to nearby retail areas and neighborhoods. It prioritizes synergistic adjacencies and creating a legible campus experience.



Academic & Research

Aligned with UofL's Strategic Plan, the Academic & Research Framework identifies facilities for enhanced 21st-century learning and research. It emphasizes investment across academic units, improved interdisciplinary spaces, and cluster development for STEM and Arts and Sciences.



Campus Life

The vision recognizes the importance of enhancing campus life spaces, particularly in the southern half of the campus. By creating vibrant and inclusive gathering spaces, the plan aims to enrich the overall campus experience for students, faculty, staff, and visitors. It also addresses future on-campus and near-campus housing options.



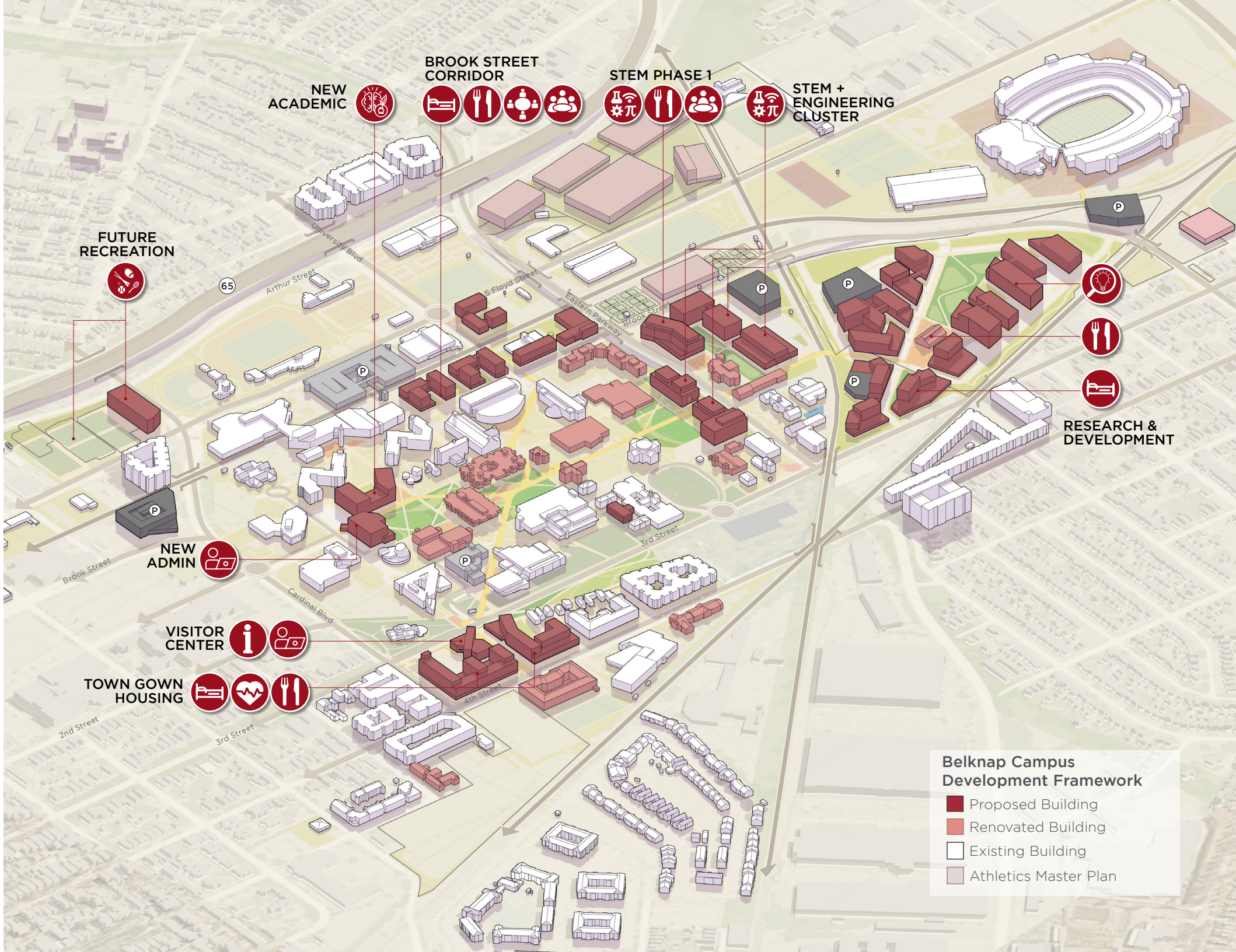
Landscape

The Landscape Framework envisions new and improved open spaces that promote health, wellness, recreation, and climate resilience. It includes major public realm networks, a Shipp Street promenade, and enhanced pedestrian and bicycle connectivity.



Mobility

The Campus Plan envisions a pedestrian-friendly campus core, improving connections to HSC campus and creating safe and inviting environments at the edges and gateways of the campus.





TOWN GOWN

Vision

In an effort to create a welcoming new mixed use district from downtown Louisville to Belknap, the potential redevelopment of a vibrant Town Gown on the northwest of campus, provides a powerful opportunity to create a sense of arrival on campus. The vision for a new gateway district re-imagines Third Street as part of a ceremonial entry into the UofL campus.

Proposed Development

With expressive, iconic, and bold architecture, the design for the visitor's center will create a unique sense of place and anchor for the district. The visitor's center is envisioned as a one-stop-shop for all administrative services for visitors and new students.

Cardinal Boulevard and Fourth Street will be lined with active ground floors, and student housing and campus life functions on the upper floors to create a unique new student housing experience.

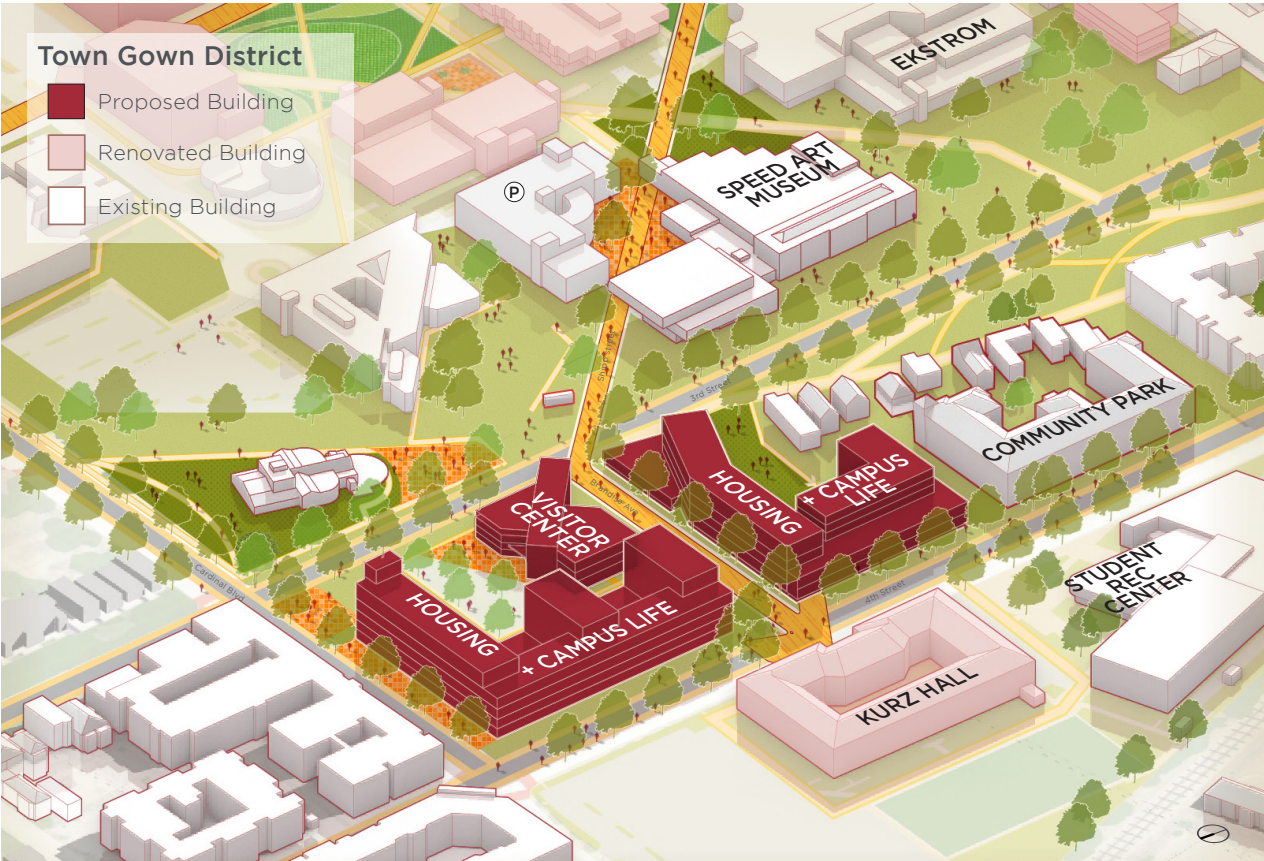
Public Realm

With the planned greening of the Second Street segment east of the Playhouse, the proposed pedestrianization of Brandeis Avenue along this block, and direct frontage on Cardinal Boulevard as a major thoroughfare, this site is poised to become a pedestrian-friendly, easy to access anchor between Belknap Campus and the adjacent neighborhood.

The visitor's center stages a new campus tour via Shipp Street. The Campus Plan leverages the potential of this axis to link key landmarks on campus with the proposed housing on Brook Street, all the way to University Boulevard, another major entry to campus.

Mobility

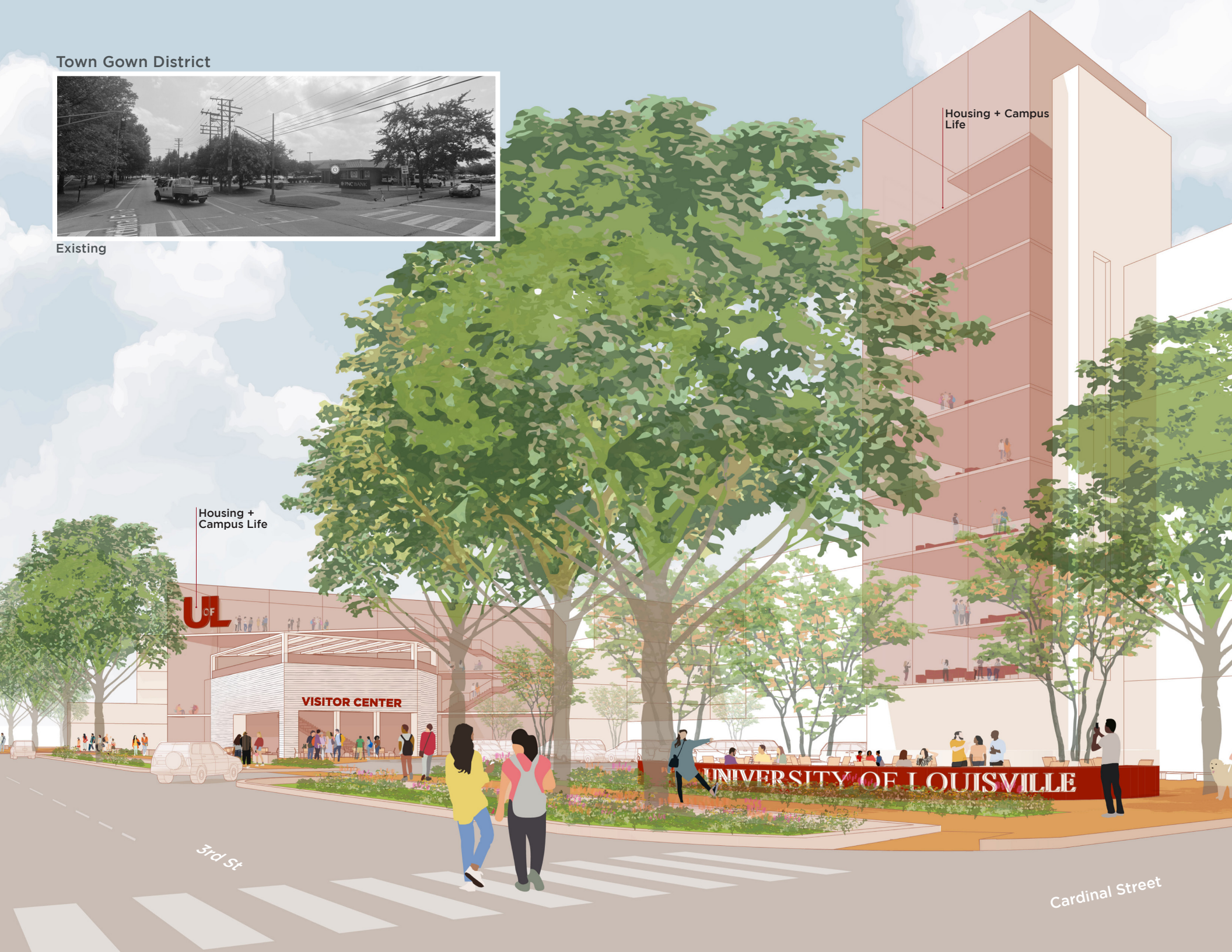
With the planned closure of Second Street between Brandeis Avenue and Cardinal Boulevard, a section of Third Street will become two-way. Mixed use development will have front doors on Third Street and Fourth Street to ensure access to a key north-south corridor in the city that links several historical and cultural attractions from the Louisville International Airport all the way to downtown Louisville.



Town Gown District



Existing





ACADEMIC CORE

Vision

The vision for the North Academic Core involves upgrading mid-century academic buildings surrounding the Quad to meet 21st Century academic needs, promoting student development, enhancing the public realm, and fostering organic interactions within the campus community.

Proposed Development

To address the significant deferred maintenance issues within the academic core, the Campus Plan proposes replacing Davidson Hall with a new academic building to accommodate programs from Davidson Hall and Studio Arts, along with additional campus life spaces that would activate the ground floor. An administration building is also proposed to house administrative programs from Houchens and Stevenson, enabling the demolition of Houchens and the asset preservation for Stevenson.

Public Realm

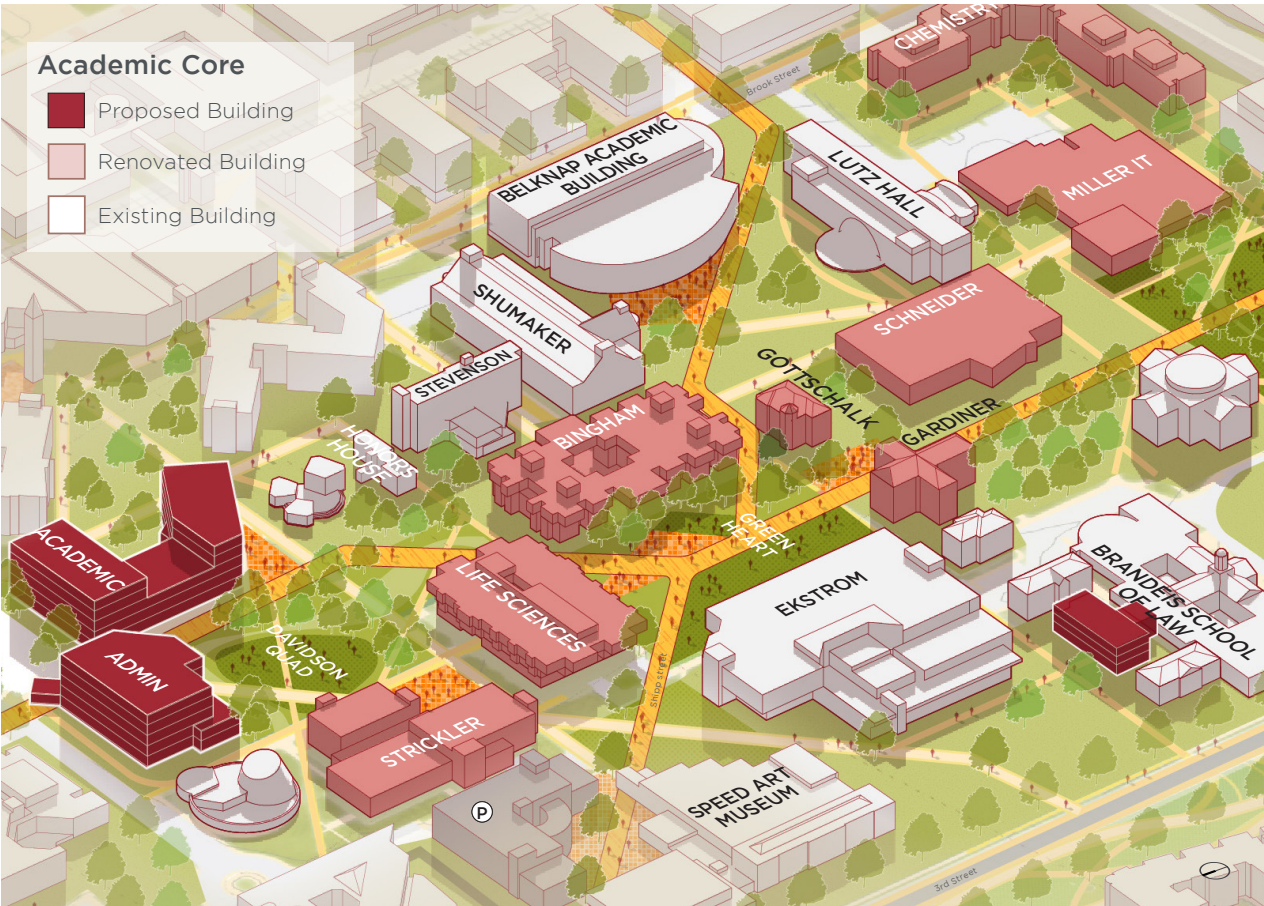
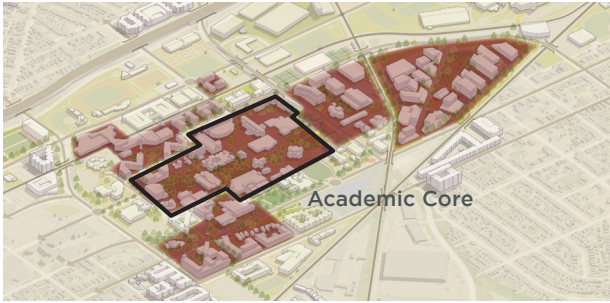
The landscape vision for the Academic Core proposes a new quad (where Davidson Hall currently sits), extending the open space network of the forest-like Quad fronting Ekstrom Library to a contemporary public space anchoring new development to the north.

The New Quad will be, like the architecture proposed around it, rooted in the character of its context, and express the defining qualities of the university, while also offering modern landscape gestures and amenities that benefit students, faculty, staff.

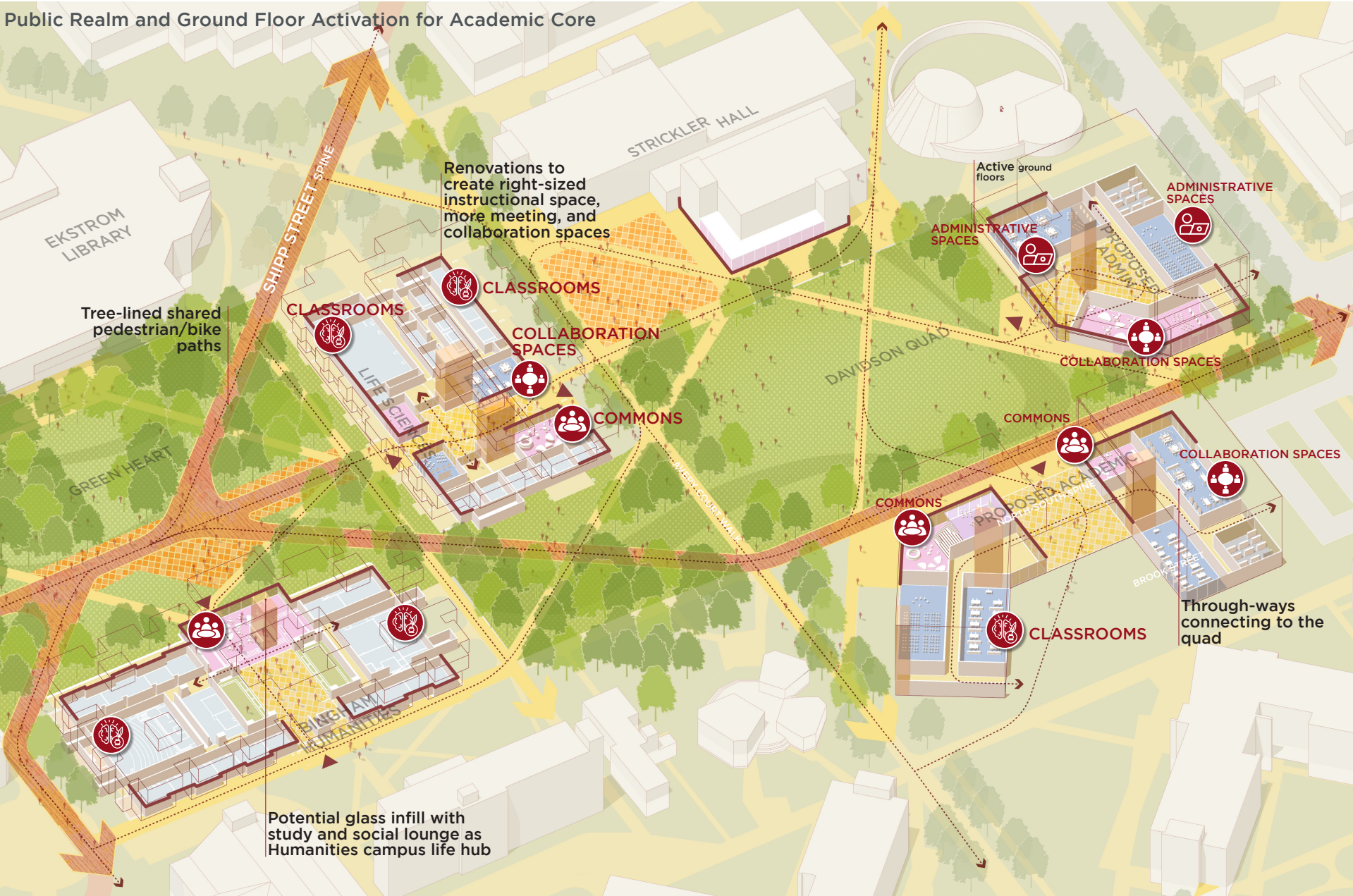
Mobility

To promote a pedestrian-friendly academic core,

parking and service areas are to be strategically located to not conflict or create barriers for pedestrians. All primary corridors throughout Belknap are proposed to be shared between pedestrians, bicycles, and micro-mobility users. The new north-south corridor and Shipp Street are recommended to be wide paths with no bicycle or pedestrian lane markings. Secondary pedestrian paths are recommended to be a minimum of 8-feet wide, also shared by pedestrians and bicyclists.



Public Realm and Ground Floor Activation for Academic Core





BROOK STREET CORRIDOR

Vision

Brook Street corridor is envisioned as a mixed use zone that integrates student housing and a network of campus life spaces (including space for affinity groups, maker space, and collaboration space) as a new campus neighborhood that builds off of the Student Activity Center (SAC), Belknap Village North and South, and the Belknap Academic Building. This corridor would continue as a multi-modal street through Old Louisville, strengthening the link between HSC and Belknap campuses to better serve both communities.

Proposed Development

A sequence of projects is proposed to unlock the two sites south of the SAC along Brook Street for future housing and campus life buildings. Additional on-campus housing will serve to reduce the number of students commuting by car, improve the quality of life, and enhance opportunities for collaboration for UofL’s undergraduate students. These housing facilities should have ground floor activation, incorporating the displaced Baptist Center, increasing affinity group meeting spaces, and providing food services.

Public Realm

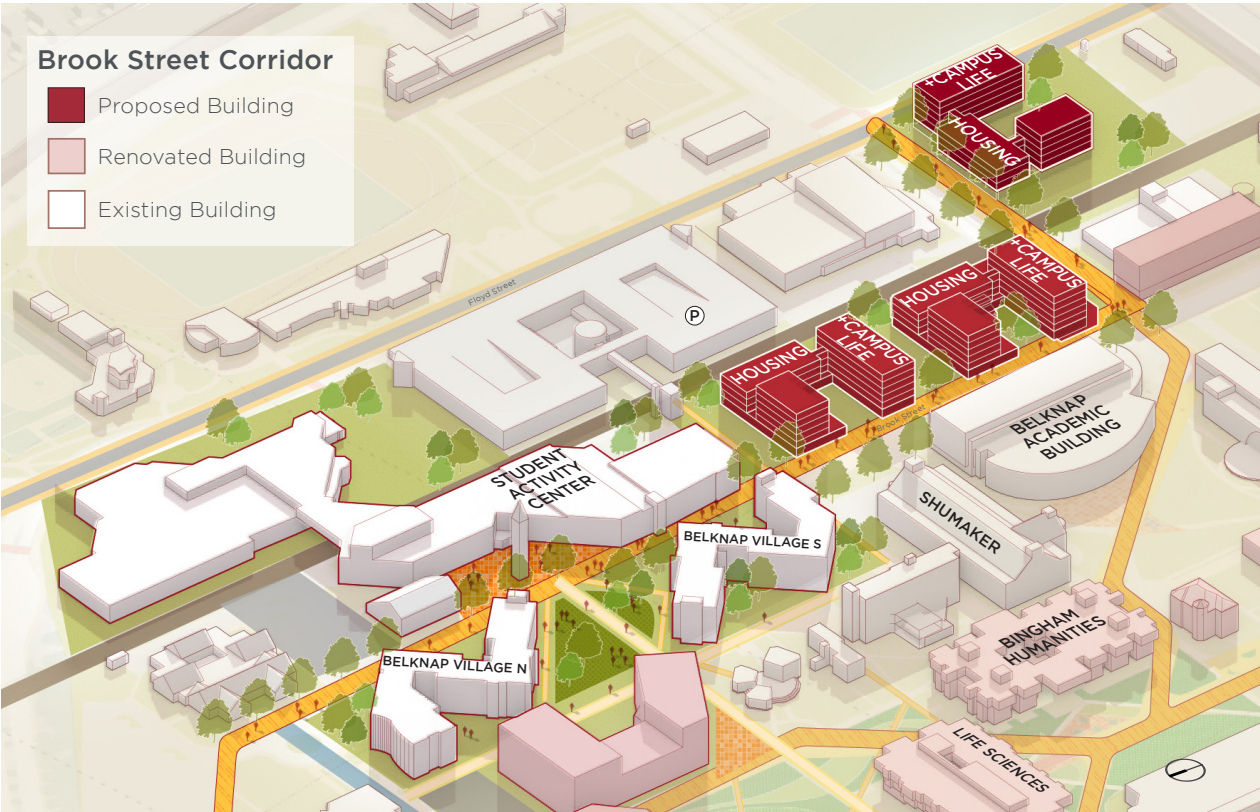
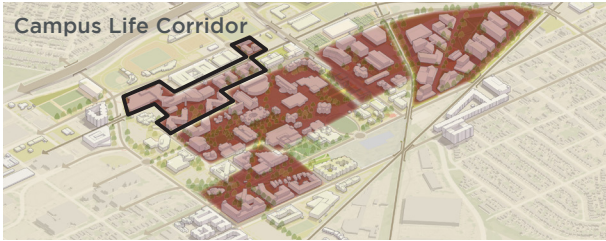
The Campus Plan proposes to extend recent public realm improvements along Brook Street, while also introducing additional elements to its design palette to enhance the street’s appearance and functionality. The corridor should also serve as a “living laboratory” for green infrastructure projects, raising environmental awareness and offering educational opportunities. New developments should continue to utilize the natural topography to manage stormwater effectively, directing stormwater away from buildings.

One of the other major challenges for Brook Street occurs at its intersection with the elevated Eastern Parkway. Transforming this area with seating, tables, lighting, art, and bicycle storage can create a welcoming and safe environment for crossing from north campus into the proposed STEM cluster south of Eastern Parkway.

Mobility

Brook Street is the only corridor on campus that is designed with separate paths for pedestrians and bicyclists. Connecting the Brook Street Corridor to the HSC bike route, via the bicycle gateway at

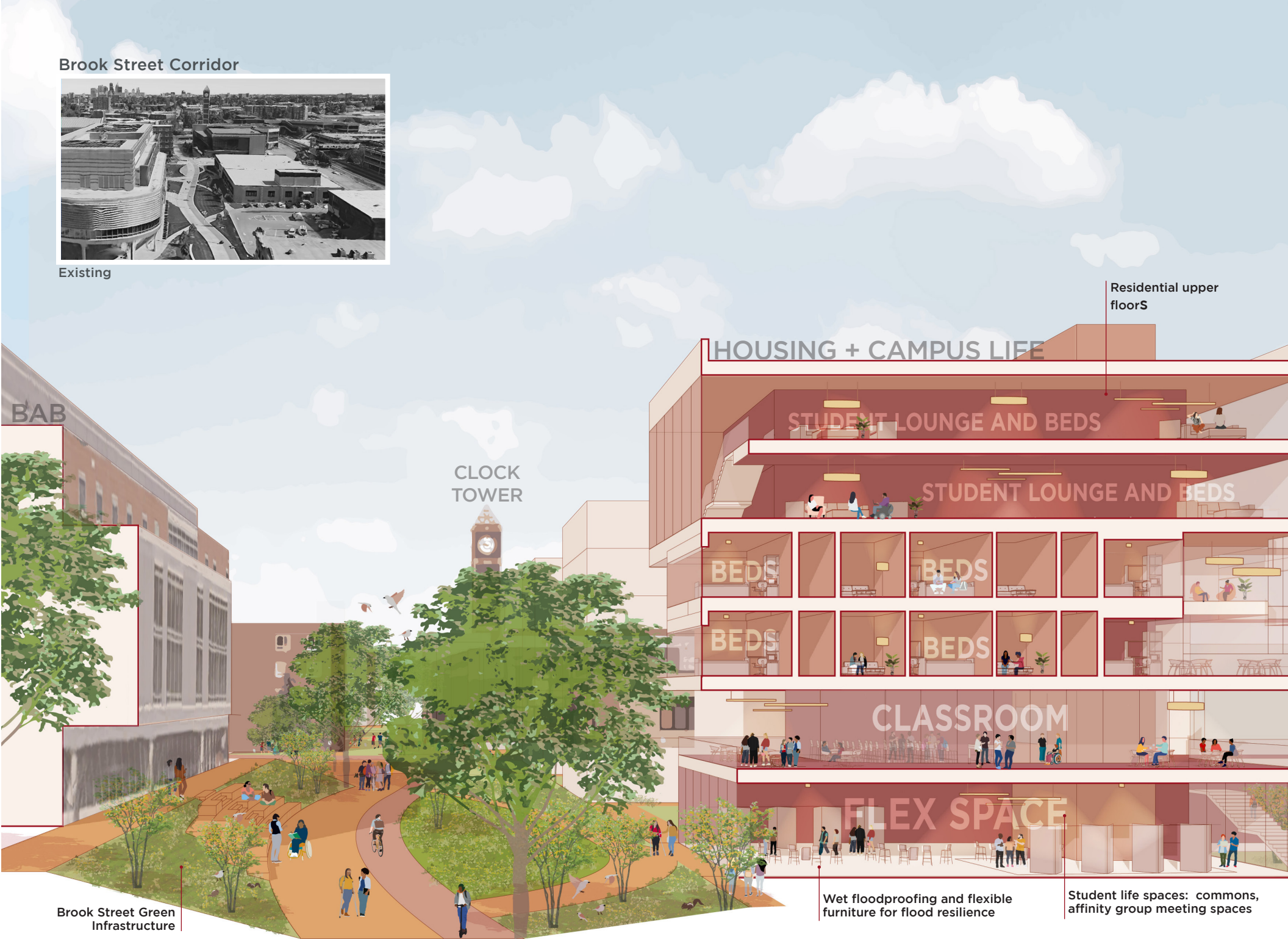
Cardinal Boulevard, will strengthen its character as a bike corridor. Brook Street is already a major bicycle thoroughfare, and the proposed housing and campus life programs along this route are expected to increase bicycle traffic.



Brook Street Corridor



Existing





SOUTH ACADEMIC CORE

Vision

The proposed academic core to the south of Eastern Parkway aims to better serve the campus community by increasing classroom and research spaces, creating a new dining hall, introducing a new South Quad, and rethinking the connection across Eastern Parkway along the north-south pedestrian corridor.

Proposed Development

Relocating the intramural fields will free up space for a new STEM Phase 1 building at the northeast corner of Eastern Parkway and Brook Street. This addition, along with the proposed campus life improvements north of Eastern Parkway, would further activate Brook Street as it continues past Eastern Parkway. The design of the STEM Phase 1 building could also begin framing a new South Quad, which would serve as a focal point for the emerging STEM cluster.

The STEM Phase 1 building should be designed to accommodate the program currently in the Natural Science Building, enabling a second STEM building offering upgraded facilities and a seamless connection along the north-south corridor to existing Engineering buildings. The final build-out of STEM facilities will include space for the program from the Life Sciences Building, including the vivarium.

Public Realm

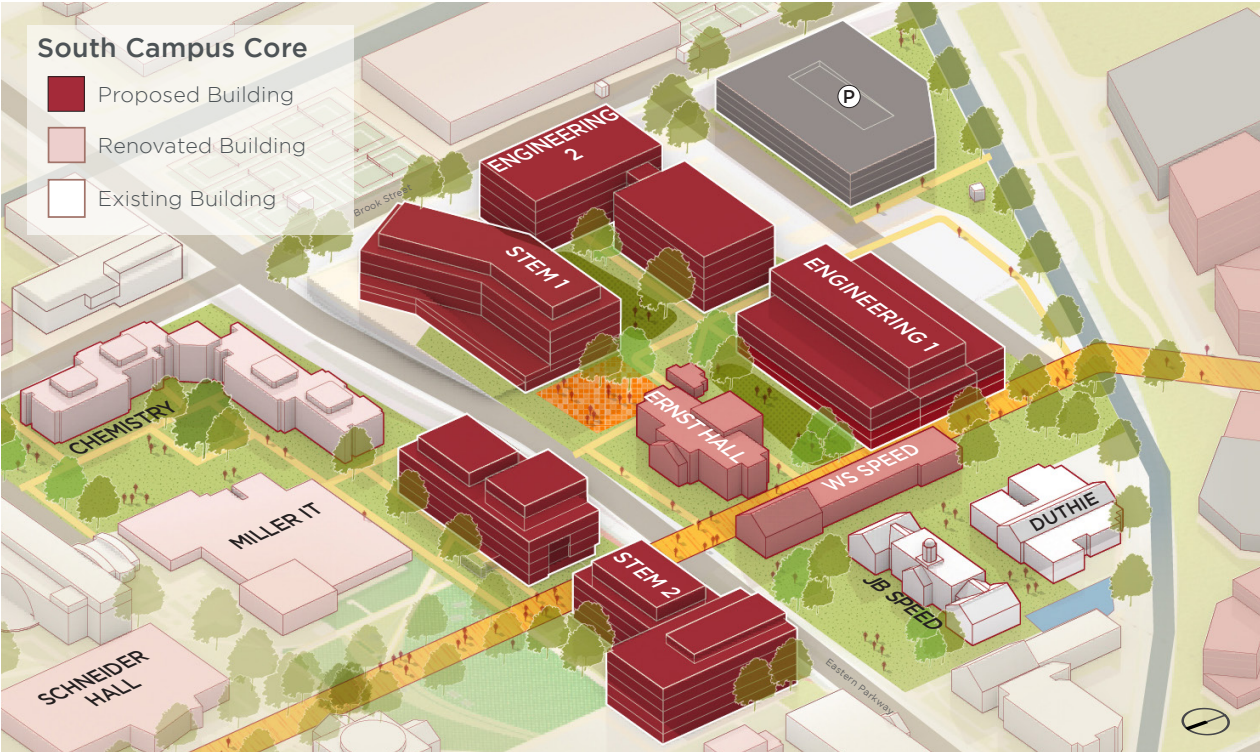
As an entirely new development, there is great potential for the public realm in the STEM cluster to reflect the STEM mission and ideals of today and connect back to the north campus seamlessly. Incorporating hardscape, local materials to reduce embodied carbon, carbon sequestration,

habitat enhancement, and green infrastructure should be integral to the design of the South Quad. Enhancing ground floor transparency and activation of the surrounding STEM buildings would further encourage engagement and activity in the South Quad.

Mobility

To improve safety along Eastern Parkway and seamlessly integrate the new South Academic Core, measures should be taken to slow traffic, such as extended crossings at signals, gateway treatments at the Third Street and Eastern Parkway intersection, and at the point where Eastern Parkway crosses over Brook Street.

If Eastern Parkway could be narrowed, pedestrian crossings could be made shorter and safer. Putting the bike lanes above the curb would reduce the width of the street, making crossing easier and mitigating traffic speeds. Further east, along the parkway’s elevated segment, bike lanes above the curb would make the bicycle connection safer and much more pleasant.

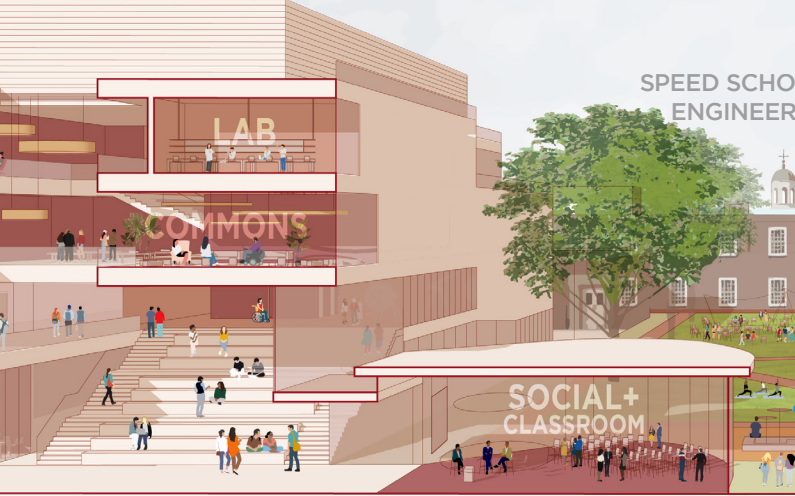


South Campus Core



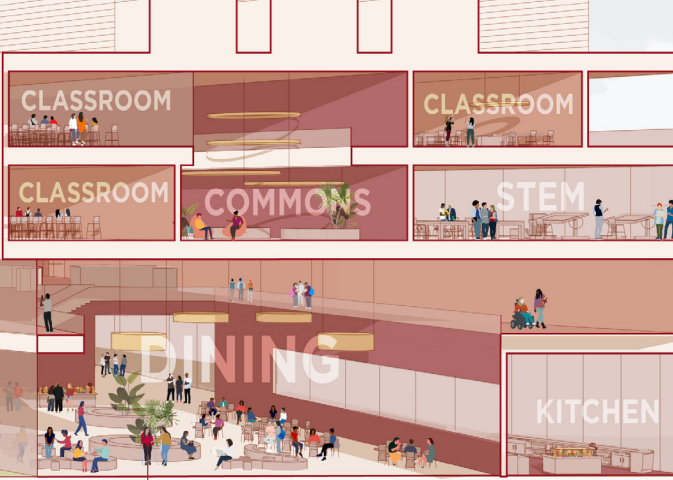
Existing

ENGINEERING PHASE 2



SPEED SCHOOL OF  
ENGINEERING

STEM PHASE 1



Multipurpose quad south  
of Eastern Parkway

Campus life hub for South  
Campus



# HEALTH SCIENCES CENTER CAMPUS VISION

The HSC Campus vision strengthens the academic and research enterprise of the urban medical center by investing in the learning and research environment, improving the campus life experience, and building partnerships. Home to four academic colleges within the LOUMED district, the growth and transformation of Belknap will focus on the following:

**Expanding and Enhancing Academic and Research Space:** The HSC campus vision aims to facilitate the growth of academic and research activities, renovating existing buildings, and providing state-of-the-art facilities that support innovation, collaboration, and cutting-edge scholarship.

**Prioritizing Safety and Comfort:** The plan seeks to create a safe and comfortable environment for all members of the HSC community as part of this urban campus. This includes implementing measures to enhance security, while designing welcoming public spaces.

**Creating a Vibrant Campus Life Experience:** The plan aspires to build a thriving campus community that fosters engagement, inclusivity, and well-being. This involves the development of spaces and programs that enrich the daily lives of students, faculty, and staff.

**Establishing a Distinctive Identity:** While embracing collaboration within the LOUMED framework, the plan seeks to carve out a unique identity for the HSC Campus. This identity will reflect a commitment to excellence in healthcare education, research, and service.

**Strengthening Inter-Campus Connections:** To promote a sense of belonging within the larger UofL ecosystem, enhanced connections between HSC, the Belknap Campus, the Campus for Innovation and Entrepreneurship, and the Envirome Institute are envisioned. This collaborative network will facilitate interdisciplinary interactions and resource sharing.

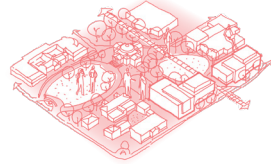




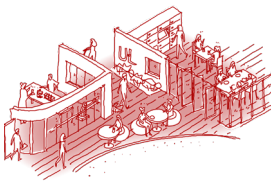




Six frameworks guide the future development and improvements at HSC.



As UofL plans to grow enrollment, expand strategic academic programs and research, and tackle deferred maintenance, the Development Framework offers guidance on new construction, renovations, asset preservation, and demolition.



The Campus Use Framework aims to maintain a concentrated HSC core within LOUMED, while accommodating research clusters within the greater district.



Aligned with UofL's Strategic Plan, the Academic & Research Framework identifies facilities for enhanced 21st-century learning and research. It proposes a new Interprofessional Education facility, replacing the School of Public Health and Information Sciences, a brand new research facility, and renovations for buildings at the HSC core.



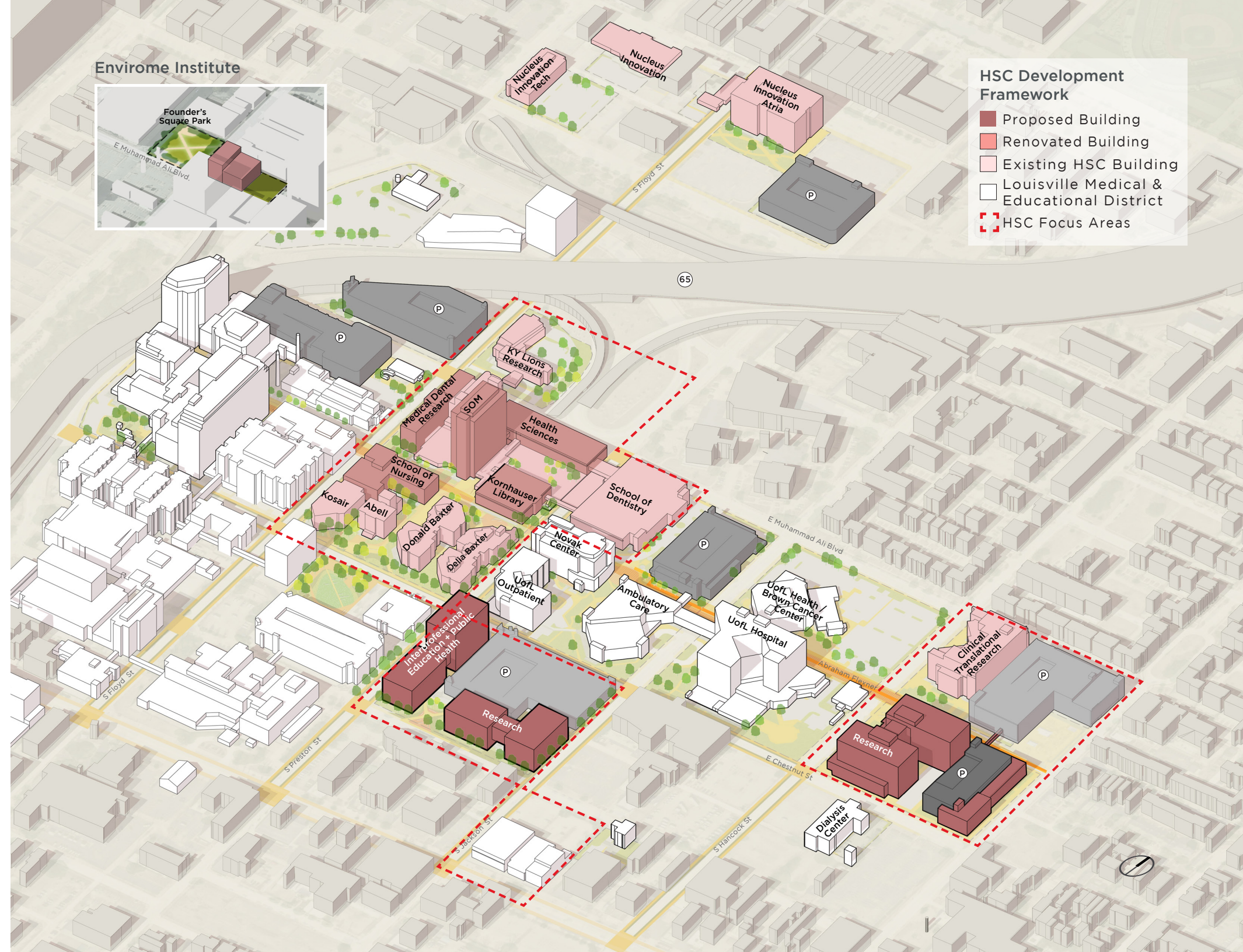
To enhance the experience and collaboration spaces for students, faculty, researchers, and staff, the Campus Life Framework proposes ways to distribute amenities, services, dining, and inclusive spaces across campus, as well as connections to Belknap to access broader services and events.



The Landscape Framework envisions an enhanced public realm with open spaces that promote health, wellness, recreation, and climate resilience.



The Mobility Framework proposes improved right-of-way and intersection designs along Abraham Flexner Way as well as enhanced connections at the edges of HSC and to the other UofL campuses.





INTERPROFESSIONAL EDUCATION & PUBLIC HEALTH

Vision

The proposed vision for the block between Chestnut Street and Gray Street and Preston Street and Jackson Street is to create a new academic anchor with a new facility for the School of Public Health and Information Sciences, a new Interprofessional Education building for shared simulation labs, campus life, and event space, and a future research facility. The new development would contribute to the HSC identity within the LOUMED district.

Proposed Development

Phase 1 consists of the new Interprofessional Education (IPE) building and a new School of Public Health and Information Sciences (SPHIS) building. The IPE building proposed on the northwest corner of the block would be designed with a grand and inviting entrance, offer dining and campus life spaces on the ground floor, and absorb the auditorium from Kornhauser Library and Commons. The upper floors would be a combination of simulation labs, classrooms, research offices, and campus life spaces.

The southwest corner of this block would become a new home to the SPHIS as well as potentially the Louisville Metro Public Health and Wellness Department, permitting the demolition of the current SPHIS to make room for a new 21st Century research facility.

Phase 2 proposes a new research space which will in turn allow the decanting of research spaces from the Medical-Dental Research (MDR) building which is in dire need of renovation and downcycling to offices and campus life spaces.

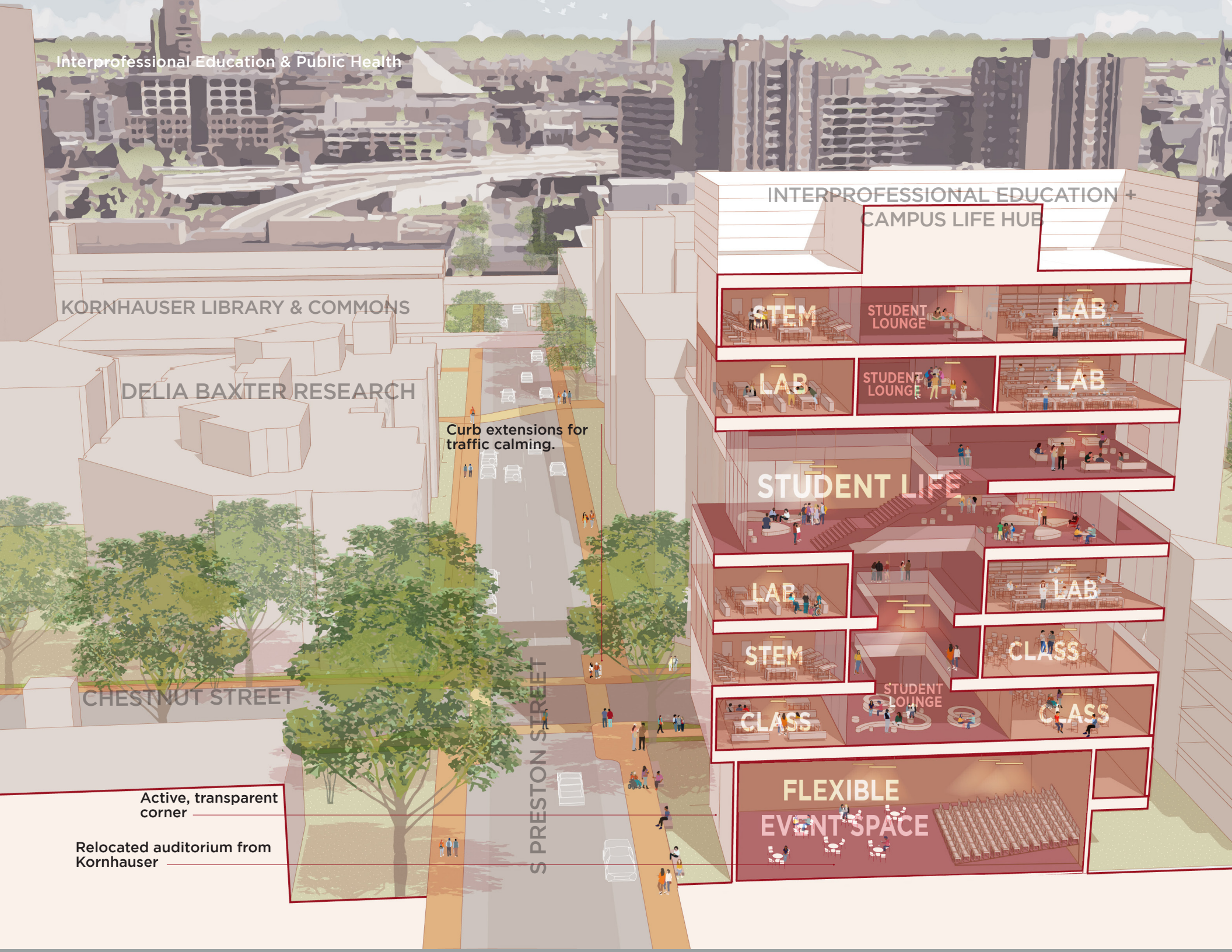
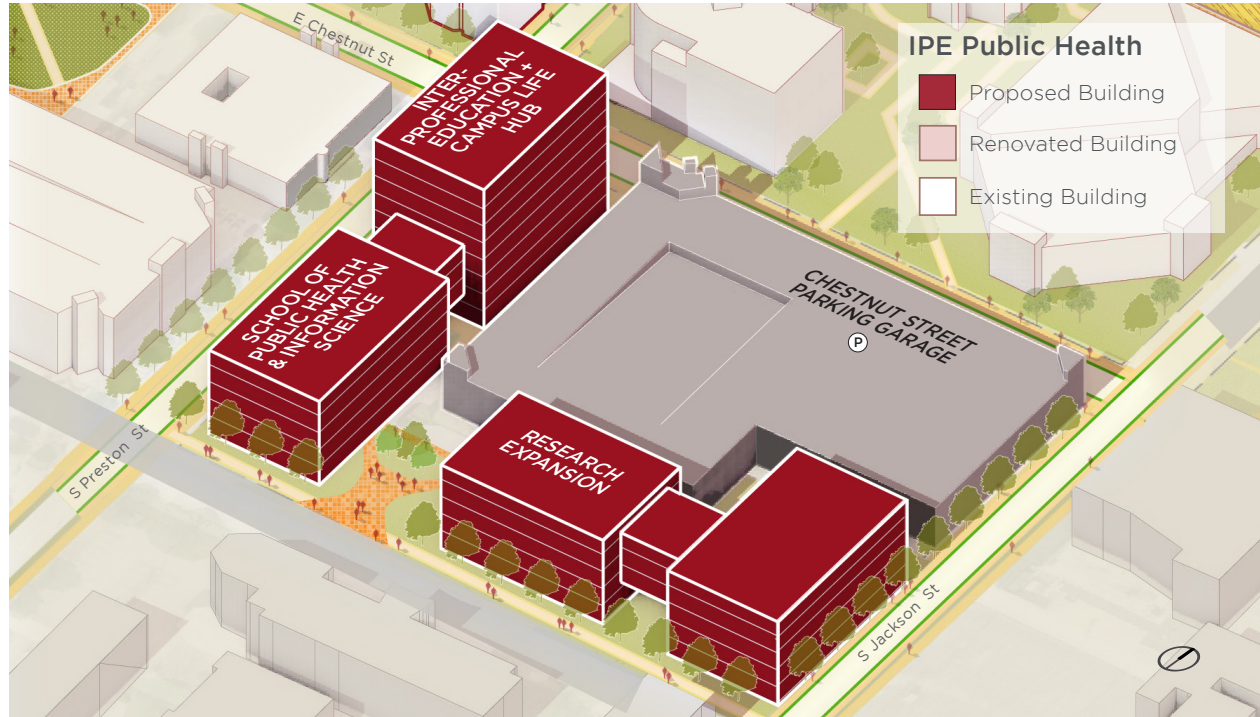
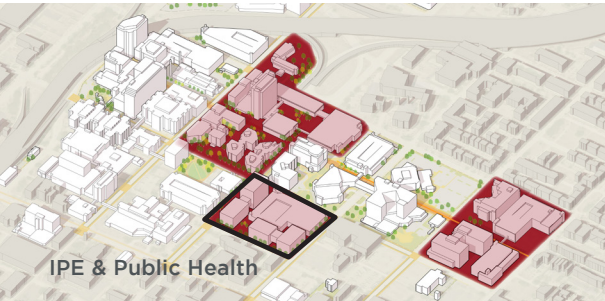
Public Realm

Close to the geographic center of HSC campus, this block is an opportunity to showcase a “living edge” along Gray, Preston, and Jackson Streets. This is an opportunity to establish a consistent landscape language through street trees, a green buffer adjacent to sidewalks, seating nooks, mid-block crossing, and pocket wellness gardens.

Mobility

This block is bounded by Preston, Gray, Jackson, and Chestnut Streets, all of which are primarily vehicular streets. To make the area more welcoming and comfortable for pedestrians, and more bicycle-friendly, the city should fully

implement its Complete Streets guidelines with regard to plantings, furniture and bike lanes. On its side, UofL can complement such measures by making front doors visible and welcoming, by offering protected bike parking and providing directions to nearby TARC bus stops.





RESEARCH HUB

Vision

A new research facility, complete with additional parking wrapped with ground-floor retail uses, will achieve UofL’s strategic goal for research expansion at HSC. As the eastern bookend of Abraham Flexner Way, this area is envisioned as a hub of activity and state-of-the-art research and vivarium facilities.

Proposed Development

A new multistoried research facility that mirrors the Clinical Translational Research (CTR) building will act as an extension of wet and dry research facilities for HSC. This will not only address the need for increased research capacity, as identified in the Strategic Plan, it will also allow a consolidation of specialized research facilities and unlock the HSC Campus Core for campus life renovations.

Public Realm

The public realm vision for the Research Hub introduces landscape features and appropriately scaled urban spaces.

The bookend plaza, at the western edge of the Hub is an opportunity to present a public realm anchor to Abraham Flexner spine, a beautiful introduction to the new buildings and programs of the Hub and provide much-needed outdoor amenities to the greater campus. This is intended to serve as an outdoor destination for the Hub, equipped with seating and shade.

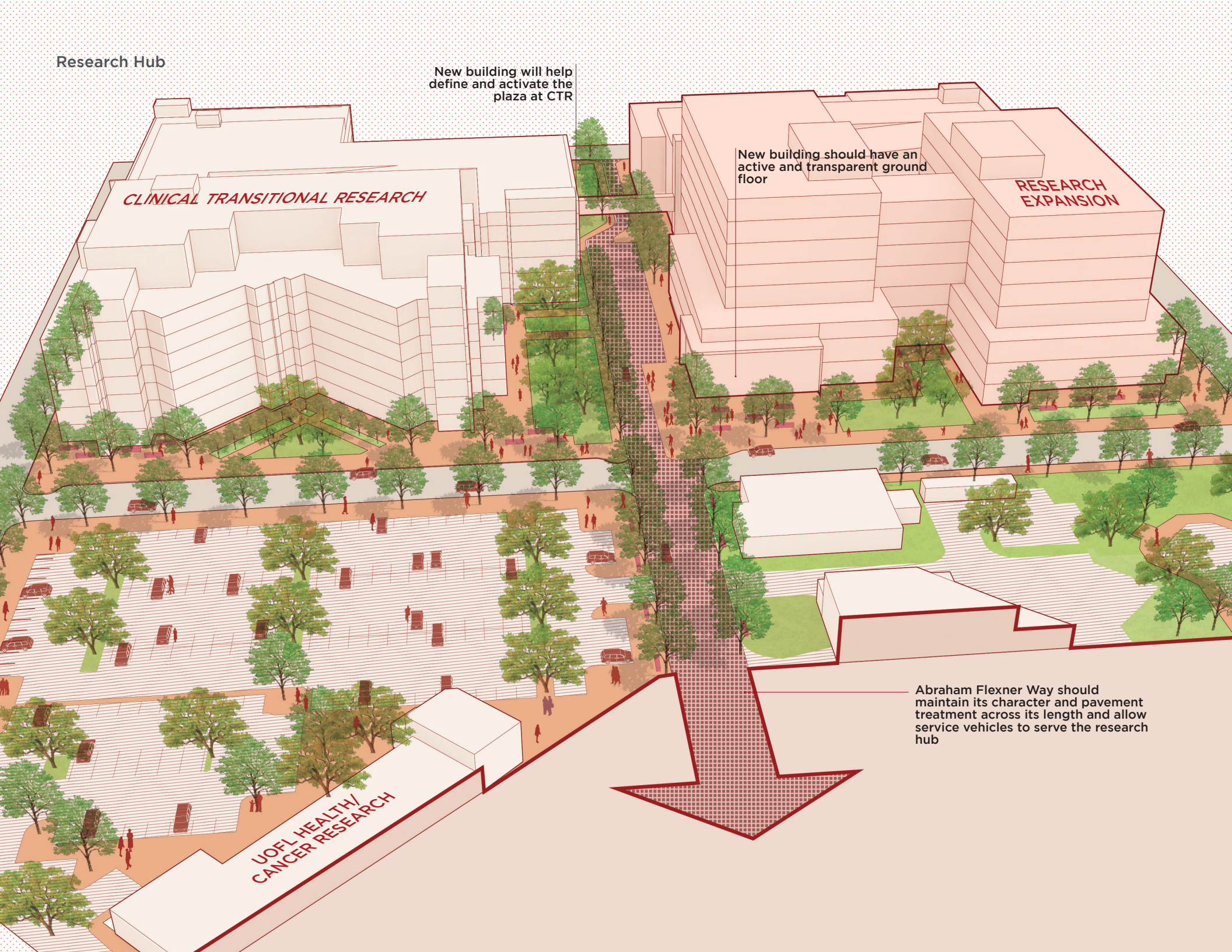
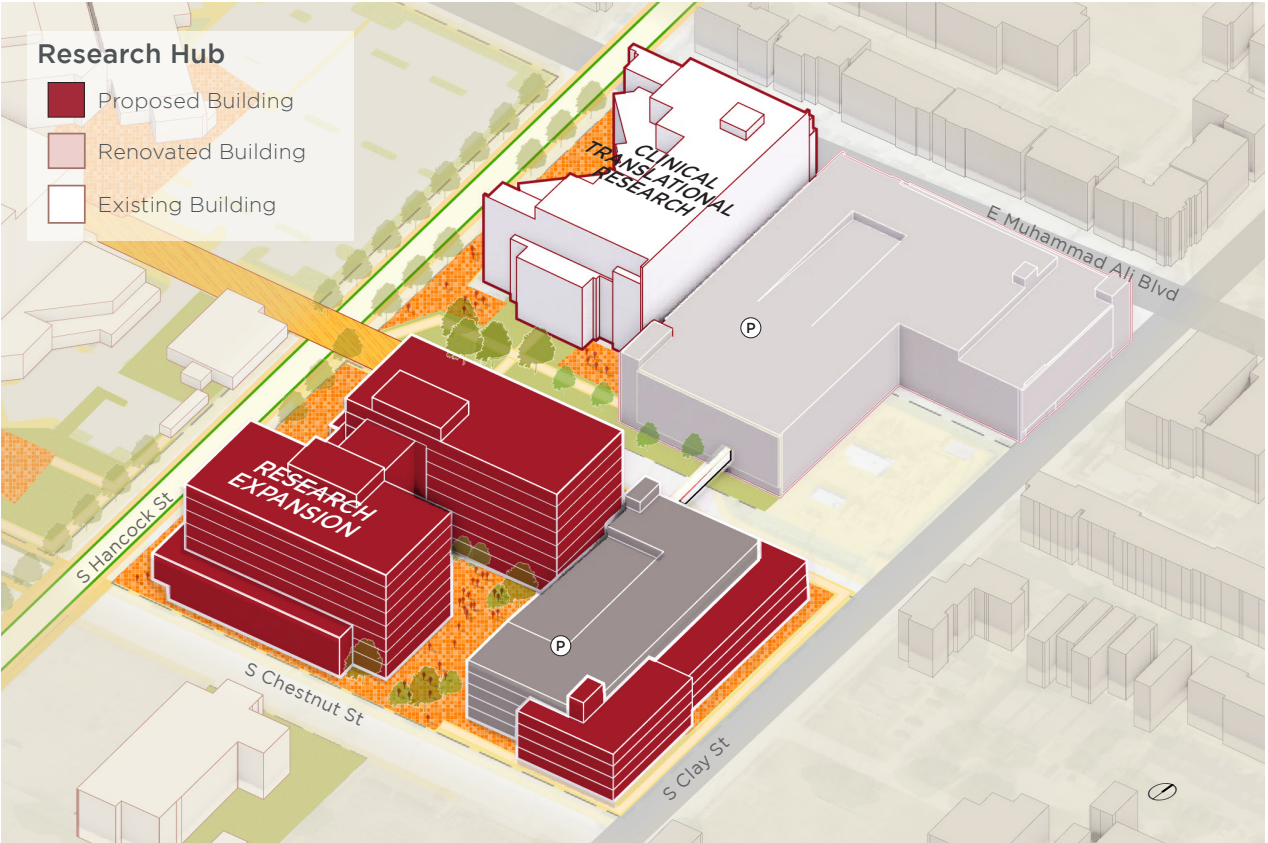
The design of the eastern face of the parking garage should be inviting and aesthetically pleasing, creating a positive interface with the residential neighborhood located to the east of

LOUMED. This approach enhances the campus’s connection with the surrounding community, fostering a sense of integration and shared public realm benefits.

Mobility

The addition of nearly 400,000 square feet of research space in this area calls for a new parking garage with over 450 spaces. Entry and exit to this garage are recommended along Chestnut Street to allow Abraham Flexner Way to reduce daily

vehicle traffic. Pedestrian access from the adjacent community should be facilitated from all directions to the proposed plaza between CTR and the new research hub.





HSC CAMPUS CORE

Vision

The HSC core block is envisioned as a more welcoming, activated, and transparent area offering more student services, social space, meeting rooms, and informal gathering spaces for the HSC community.

Proposed Development

The HSC Campus will strategically phase renovations to improve the quality of the learning, research, and campus life experience within the modernist buildings that make up the HSC campus core.

The highest area of impact will be a major renovation for Kornhauser Library and Commons, the adjacent stretch of Abraham Flexner Way, and the HSC Plaza. The proposed design for this building opens up the ground floor to both sides, the HSC Plaza and Abraham Flexner way, inviting the campus community into a large open space for socializing and dining. Dining services positioned on the eastern edge make it open to access from Preston Street as well. The overall experience of Kornhauser, particularly on the ground floor, should become a major hub of gathering, studying, and dining.

As the Public Health and Research Hub facilities develop, research programs can be decanted from the HSC core into the proposed facilities and make room for more major renovations in the core. Renovations within core buildings are recommended for an infusion of campus life amenities such as meeting rooms, study areas, socialization spaces, and dining services throughout the core buildings.

Public Realm

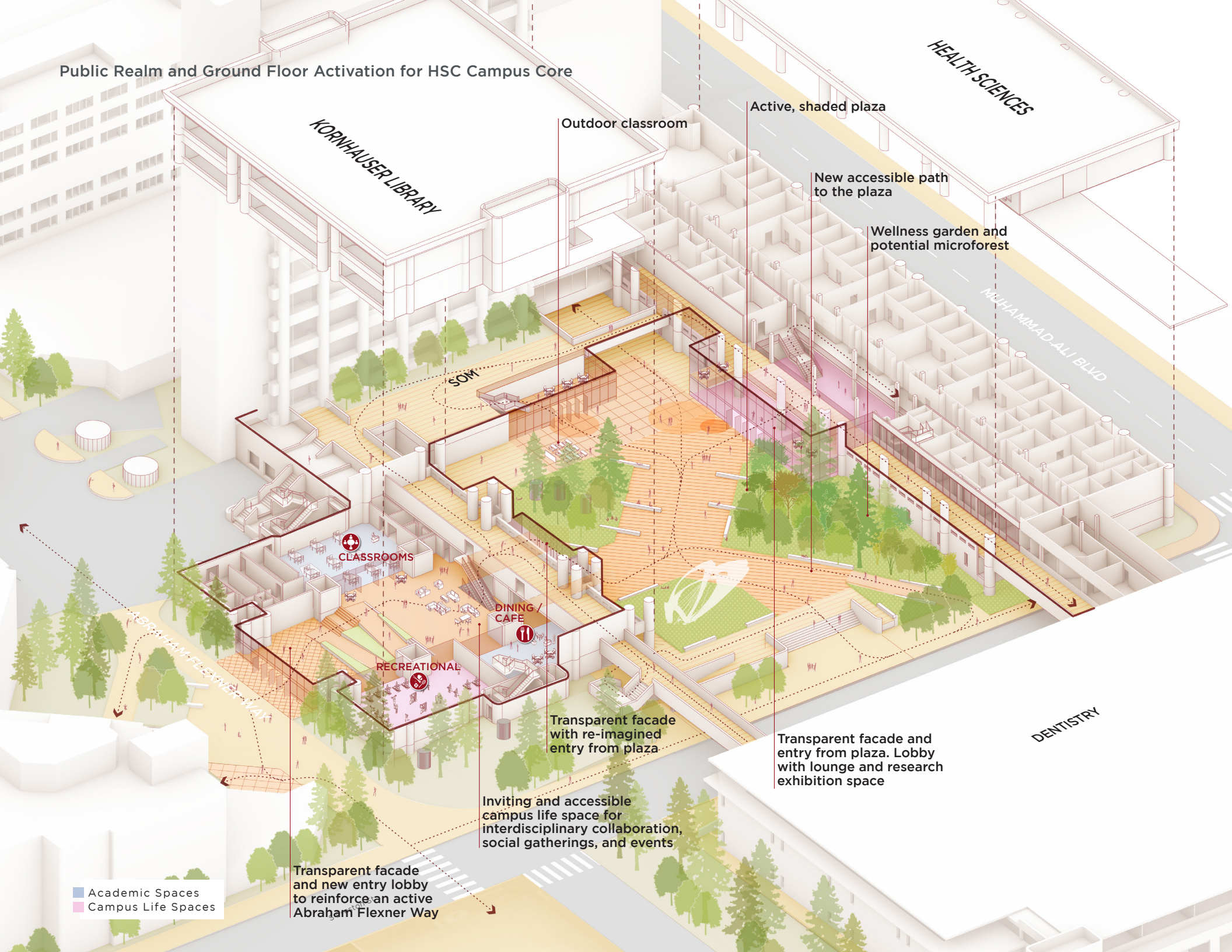
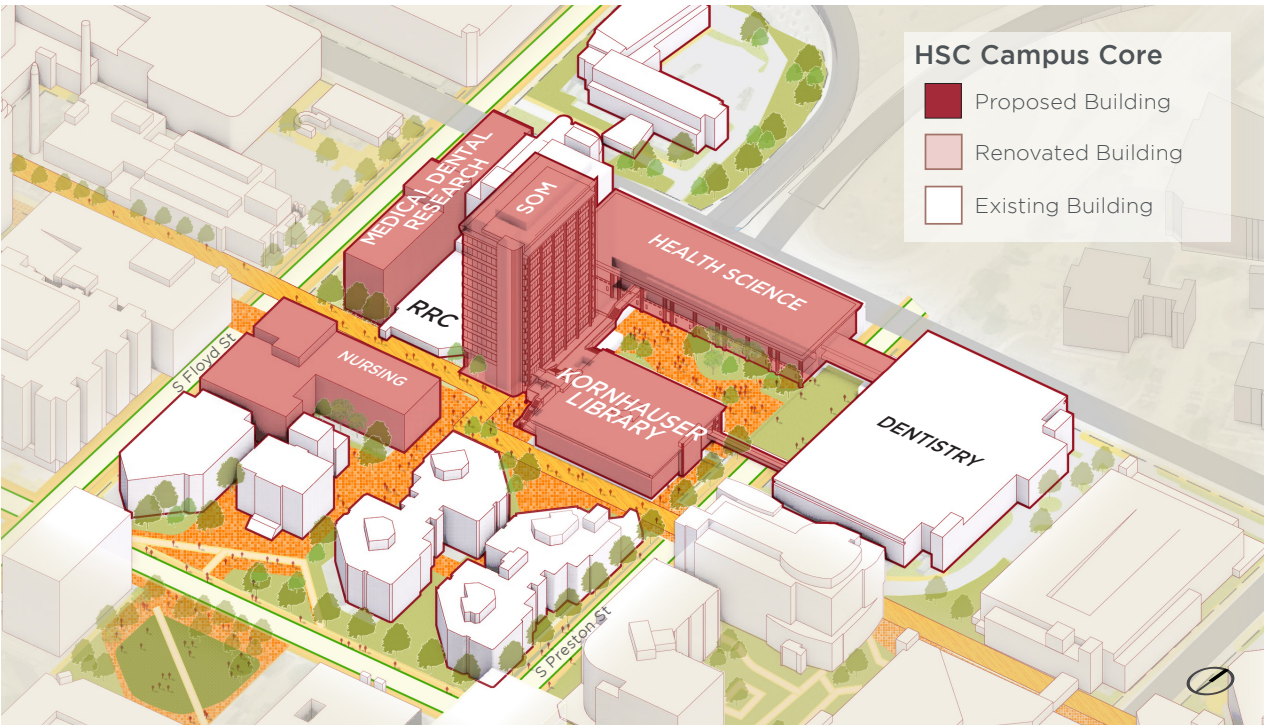
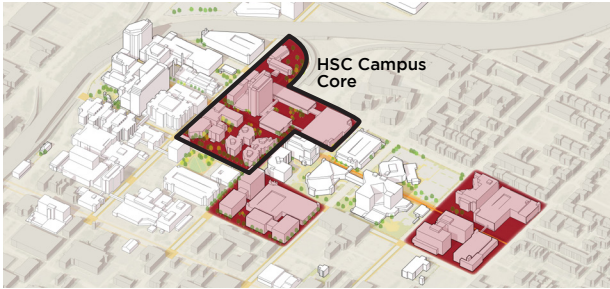
The Central Plaza has the potential to be the campus heart for HSC with pockets of green space, areas for fixed seating, pedestrian scale lighting and signage, and transparent ground floors to enhance connections to buildings around the plaza.

The campus core should have welcoming front doors on all sides, while maintaining Abraham Flexner Way as a shared pedestrian and service corridor.

Mobility

Enhanced pedestrian and bicycle infrastructure along Floyd Street and Muhammad Ali Boulevard

would strengthen connections to Envirome Institute and the Campus for Innovation and Entrepreneurship, and completing the bicycle infrastructure gaps along Floyd Street will improve the connection to Belknap Campus.





WAYFINDING & SIGNAGE

The wayfinding and signage program acknowledges the substantial impact signs have on the campus landscape and the ability of visitors to navigate the Belknap and HSC campus environments successfully. Disorganized and inconsistent signs can detract from a campus environment, leading to the complaint of “sign clutter” on campus while risking campus visitors’ confusion. In the absence of a formally documented sign program, inconsistency of execution over time can cause campus signs to evolve to this state despite the best efforts of those who maintain (or more appropriately, contain) them.

The program summarized in this set of guidelines sets out to formalize a family of signs to enhance the campus environment and improve wayfinding. The sign design responds to the character of the main campus and creates an effective yet “low-key” presence in the landscape. Simultaneously, the design builds on the UofL graphic identity and provides a means to consistently apply that identity to facilities campuswide. Components of the program are designed to be flexible at a variety of installation conditions.

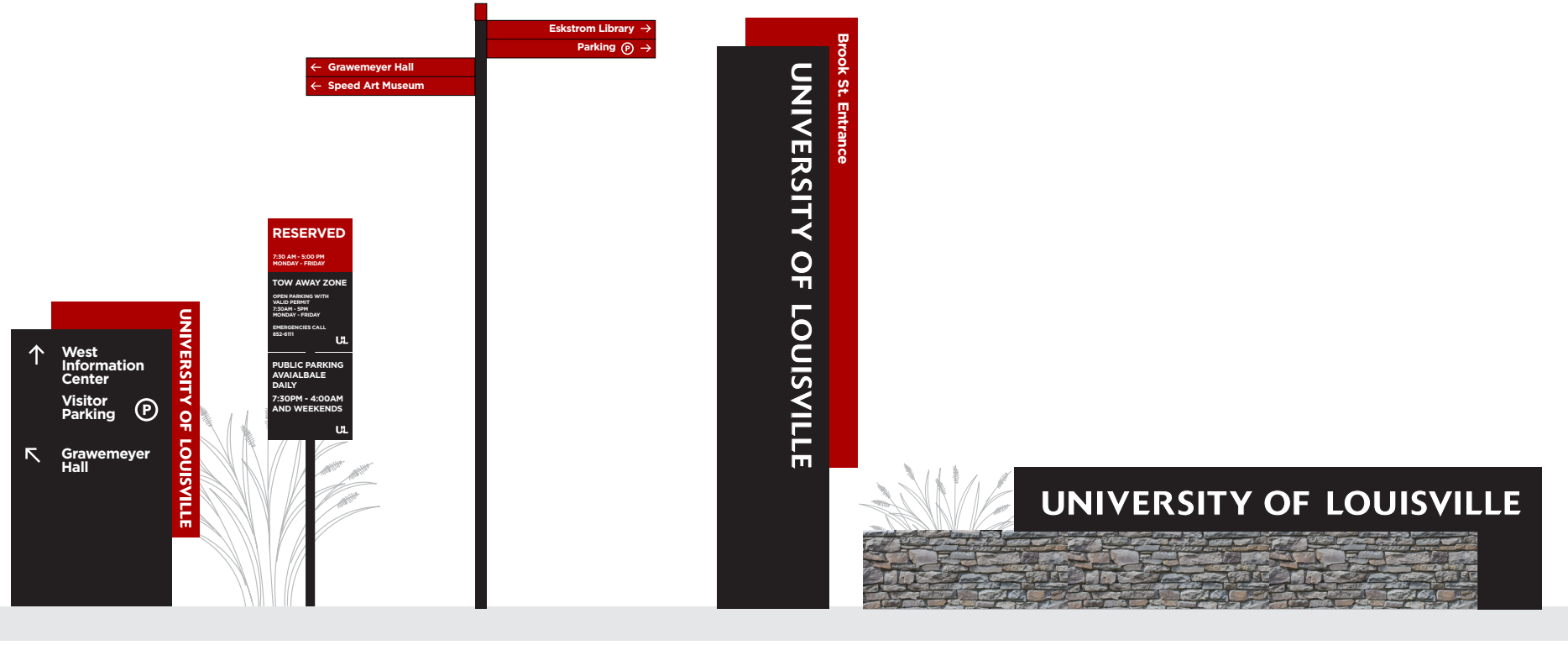
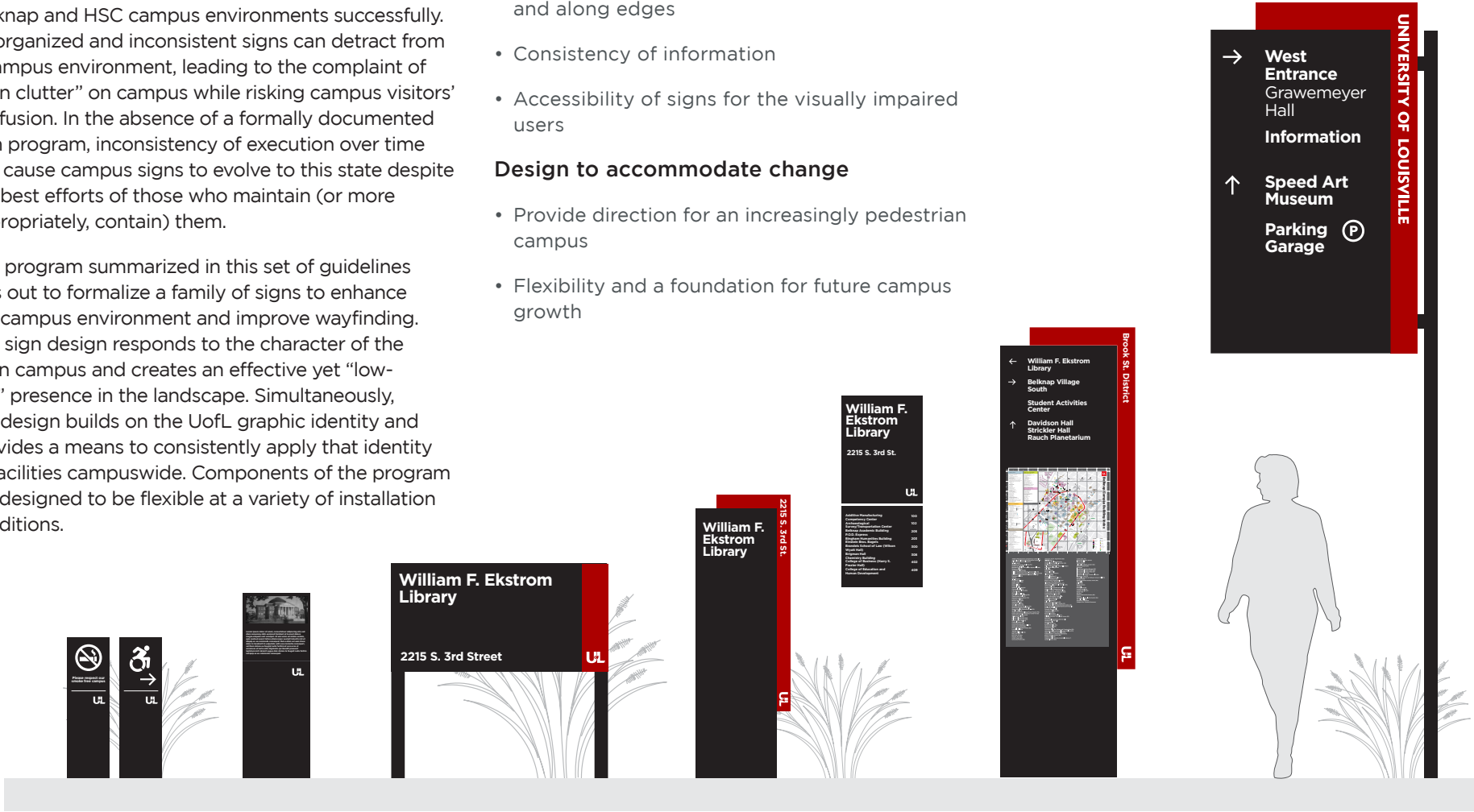
GUIDING PRINCIPLES

Provide user-friendly functionality

- Reinforce a strong sense of place at entrances and along edges
- Consistency of information
- Accessibility of signs for the visually impaired users

Design to accommodate change

- Provide direction for an increasingly pedestrian campus
- Flexibility and a foundation for future campus growth





SUSTAINABILITY STRATEGIES

UofL has goals for carbon neutrality by 2050 and milestone reduction from the 2008 carbon metrics to achieve that goal. While this Campus Plan proposes a large net increase in building footprint across campuses, the following recommendations offer a path toward net carbon reduction in Scope I and II from campus buildings.

New Construction and Major Renovations

Higher building standards for all new construction and major renovation projects can lead to a reduction in Scope I and II emissions.

- 1 The target operation carbon goal for construction projects shall be 50% better than a code compliant building and no additional combustibles shall be added to the campus with the exception for the agreement with Medical Center Steam & Water Plant.
- 2 Require building pressure testing. A Building Envelope Air Leakage by Fan Pressurization Test Report shall be used to provide recommendations to achieve a performance metric for building envelope tightness that includes a building pressure testing goal of 0.15 CFM/SF for new construction.
- 3 All new projects and major renovations shall include energy sub-meters for gas, electric and steam.
- 4 New projects shall target a lighting power density of 0.35 watts per square foot or less for classroom, office, and general spaces, and 0.5 watts per square foot for laboratory spaces.
- 5 All projects shall incorporate daylight modeling to identify strategies that reduce solar heat gain and glare while maximizing daylight.
- 6 All projects shall include measures to enhance indoor air quality.

Asset Preservation

Selective improvements on a lower budget in buildings can also meaningfully reduce Scope I and II emissions.

- 1 Replace outdated building automation systems.
- 2 Replace air handling units past useful life.
- 3 Incorporate heat recovery chillers for summer reheat in lieu of a natural gas boiler.
- 4 Incorporate energy recovery wheels, plates, coils where possible.
- 5 Eliminate steam and incorporate low-temp hot water systems.

Utility Grade Solar

The university has entered an agreement with Louisville Gas and Electric (LG&E) for 10 MW of utility grade solar. This Plan recommends additional purchase of utility grade solar in 2029, 2039 and 2049 to reach milestones.

Energy Service Performance Contract

Utilize an ESPC and where possible couple with asset preservation or capital funding to maximize the impact of financing upgrades with energy reductions and thus lower Scope I and II emissions. The goal for this process is a 20-25% carbon reduction.

Central Plant Upgrades

The majority of the Belknap Campus is serviced by a central plant where the majority of the equipment is past useful life. The university is requesting a capital project to address deferred maintenance while reducing the campus carbon footprint.

The university will plan to incorporate cold water **thermal storage** into the central chilled water plant to offset the peak demand and produce chilled water more efficiently in the evening at a time with more favorable outdoor conditions.

The Belknap Campus is recommended to eliminate the use of steam. A conversion to low-temperature hot water will provide campus heating. As the campus transitions from central steam to low-temp hot water the central plant will incorporate **heat recovery chillers** to allow reheating/heating from the central plant with waste heat.

As major renovations and new construction projects are completed the owner will study the ability to incorporate **geothermal heating and cooling** to reduce future dependence on the central plant systems. They will also evaluate **solar photovoltaics** if energy billing structures improve incentives or to achieve building design energy goals.

Strategies to Ensure Carbon Neutrality by 2050

