WKU Hilltop Planning Study

FINAL SUBMITTAL
SEPTEMBER 2019

With Outline Cost Estimate

Luckett & Farley
Architecture | Engineering | Interior Design

Master Plan Purpose:

The purpose of the Master Plan is to evaluate and assess Pedestrian and Vehicular Circulation opportunities associated with "Hilltop" on the WKU Campus and to develop recommendations for the improvement of access and safety for pedestrians and the reduction of through campus traffic flow along Hilltop Drive.

Current improvements to the Helm Library will alter Pedestrian Circulation Patterns from campus areas south of Hilltop Drive will have an impact on Pedestrian / Vehicular conflicts. The removal of the Garrett Conference Center will enhance views and connectivity from south campus to north campus and increase circulation through and around the new Helm Library Commons.

Previous studies have been undertaken by WKU Staff evaluating circulation opportunities and parking assets on the hill. These studies however have been developed while Garrett remained in place and prior to the improvements to Helm Library. With these "game changing" projects, an updated review is needed to look at opportunities for improvements.

Committee:

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2011 Master Plan Circulation and Parking Recommendations.

Outline Objectives – Project Report Card

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- 2011 Master Plan Option
- Existing Pedestrian and Vehicular Circulation Routes (Map)
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- Hilltop Parking Counts (Map)
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Diagrammatic Alternatives:

Outline of Options A-E

Final Selected Plan:

Refined Option Plan View
Refined Option Visualizations
Outline of Refined Option Implementation Costs (To Be Submitted)

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I. 2010–2022 MASTER PLAN UPDATE

The 2010-2022 Master Plan Update uses powerful GIS mapping tools to accurately map existing and proposed future campus features. It builds on previous planning initiatives and recognizes that existing opportunities and challenges must be addressed to support the continued growth of the University. The goals of the 2010-2022 Master Plan Update are to:

- Identify the **guiding principles** used to create this master plan
- Highlight **priority goals** for the next twelve years
- Develop an updated atlas of **campus maps**, accurate for both current conditions and future goals

WKU total enrollment is currently approaching 21,000 students. Current goals are to reach enrollment of 24,000 by 2016, and 27,000 by 2022. WKU enrolls some 3,000 graduate students and by 2012 will offer doctoral degrees in three areas. Current international student enrollment is 583, with a projected growth of 12% to 650 by 2022. While the large majority of current enrollment is undergraduates attending classes at the main campus in Bowling Green, growth is expected to be equally distributed among traditional enrollment, on-line course offerings, regional campuses, and graduate enrollment.

The location of the main campus near the major transportation corridor of I-65, and the relatively short distance between Bowling Green and the major cosmopolitan areas of Louisville and Nashville, contribute to this growth. Over the past decade, both Bowling Green and Warren County have experienced rapid population growth. In 2010, the US Census Bureau reports 58,067 persons residing inside the city limits of Bowling Green, and 113,792 within Warren County, a population increase of 23% since 2000. With many Warren County residents choosing WKU as their college destination, population growth in the county influences enrollment growth at the University.

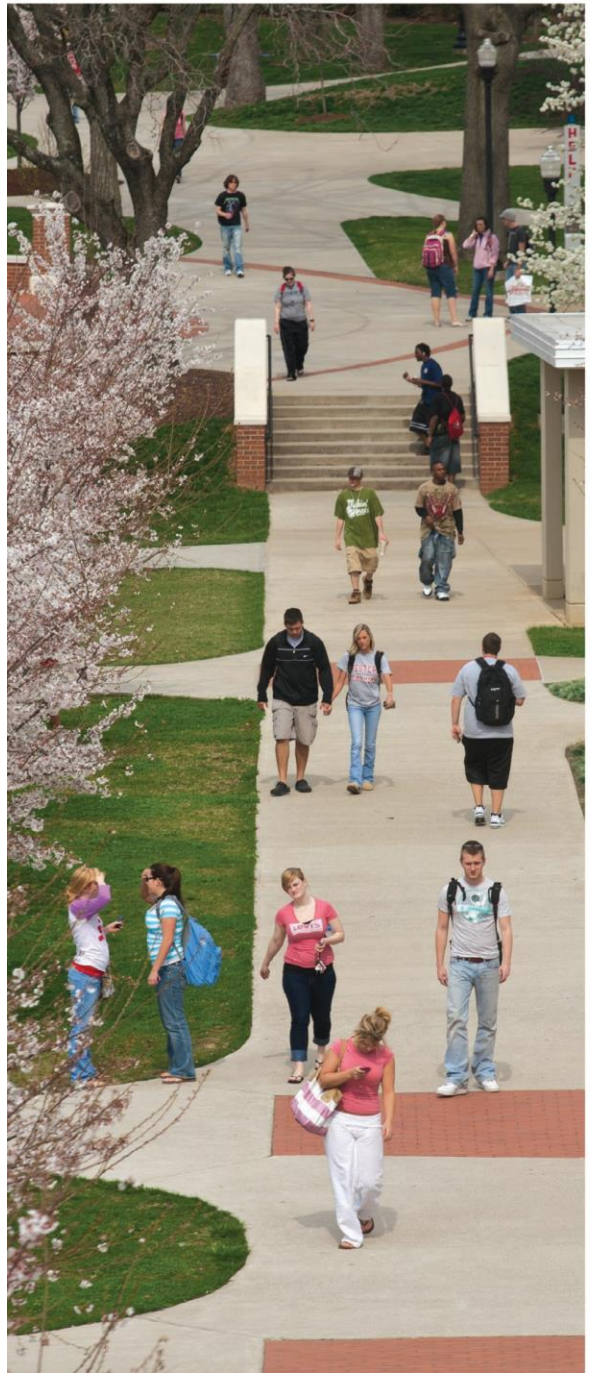
In order to accommodate anticipated growth, this document looks forward twelve years, and is consistent with the Six-Year Capital Plan submitted to the Kentucky General Assembly each biennium.

II. GUIDING PRINCIPLES

The guiding principles are tools used in the decision making process to prioritize campus projects for the Master Plan Update. They are shaped by the current economic, fiscal, and strategic environment. The nation is emerging from a deep recession, and it is imperative to make sound decisions in investing limited fiscal resources on campus. In addition, Sustainability Initiatives have emerged as a pillar of WKU's Strategic Plan. The guiding principles of the 2010-2022 Master Plan are:

- Emphasize **fiscal responsibility in capital planning** (renovated space vs. new space; increased building density vs. expanded campus boundary)
- Emphasize **fiscal responsibility in operations** (shared space vs. dedicated space)
- Incorporate **best management practices for sustainability** into capital construction projects (House Bill 2, LEED criteria and stormwater management)
- **Improve greenspace** to enhance the campus environment
- Continue to develop a **consistent and compatible architectural language** that supports historic as well as more modern architectural examples that exist on campus
- **Acquire land as available** to facilitate campus expansion
- **Maintain a walkable and accessible campus** by improving pedestrian connections, safety, and aesthetics
- **Limit or remove vehicles** from high-volume pedestrian areas
- **Reduce traffic congestion and parking demand** by creating multi-modal access to campus and increasing transit service
- **Cultivate an on-campus residential community** by improving housing and auxiliary services to support student success
- Develop and maintain **building and safety standards** for off-campus, WKU-related organizations via the University District

Current Campus Master Plan



III. PRIORITY GOALS

The WKU Campus Master Plan Committee, with input from President Gary Ransdell and Provost Gordon Emslie, and coordination by the office of Planning Design & Construction, has identified numerous goals and projects that are grouped in eight major growth categories:

1. Academic Programs and Facilities
2. Housing and Residence Life
3. Campus Environment
4. Auxiliary and Campus Services
5. Parking, Transportation and Traffic
6. Campus-Wide Infrastructure, Energy Efficiency, Sustainability
7. Athletics
8. WKU-Affiliated Organizations

The projects for the Bowling Green main campus are depicted on the 2010-2022 Master Plan map (Appendix A3). This includes existing buildings, proposed renovations, proposed new construction, and property to be acquired as available. Site plans for the regional campuses are shown in Appendix B.

1. Academic Programs and Facilities

For the next twelve years, academic facilities will continue to be the focus of most renovation and new construction projects. Growth is expected in branch campuses, distance learning, graduate programs, and international programs. The goals are to upgrade, renovate, and/or replace academic facilities to accommodate current academic programs and expected growth.

The projects identified for Academic Programs and Facilities are:

- Construct Music Rehearsal Hall
- Renovate the Science Campus Phase IV, including Thompson Complex Center Wing and Planetarium
- Relocate Gordon Ford College of Business to a new facility
- Renovate Grise Hall
- Raze Tate Page Hall after above renovations are complete
- Construct Nursing Program Facility
- Construct Honors College / International Programs facility
- Renovate Academic Complex
- Renovate Helm Library
- Renovate Cravens Library
- Renovate Ivan Wilson Fine Arts Center

Regional Campus Network

- Construct Glasgow Campus Phase II Building
- Construct Owensboro Technology Center Phase II
- Construct Elizabethtown Central Regional Education Center

2. Housing and Residence Life

An ambitious renovation campaign upgraded all existing residence halls between 2000 and 2009, for a current capacity of approximately 5,000 beds. The University continues to pursue development that encourages on-campus social, cultural, and residential life and reduces the student commuter culture. The goals are to maintain enough housing for freshmen to live on campus and accommodate growing demand for on-campus housing. Plans for an additional 455 beds include:

- Gateway undergraduate apartments: 75
- Kentucky Street non-traditional apartments: 100
- Expansion of Bates-Runner Hall for undergraduates: 200
- Regents Drive undergraduate apartments: 80

3. Campus Environment

The overall campus feel, function and livability are enhanced by improvements to roads, sidewalks, greenspace, and related amenities such as trees, lighting, signage and site furnishings. A number of projects have been identified to continue to improve the campus environment:

- Renovate Craig Alumni Center and College Heights Foundation Building
- Implement planned WKU-community bikeway connection
- Minimize pedestrian/vehicle conflicts:
  - Reroute Hilltop Drive to exit onto College Heights Boulevard (Appendix A4)
  - Remove on-street parking on Hilltop Drive and Alumni Drive
  - Improve pedestrian safety on Kentucky Street
- Improve traffic flow and pedestrian safety along State Street corridor; enhance pedestrian link to Ogden Science Campus
- Create an accessible campus by removing barriers and improving connectivity for those with mobility limitations
- Restore South Lawn/Alumni Lawn, addressing needs for greenspace, special events, parking, and pedestrian access and factoring in the both the continued use and future demolition of Tate Page Hall
- Enhance campus security to assure a safe working and learning environment for faculty, staff, students, and visitors

Current Campus Master Plan

4. Auxiliary and Campus Services

Auxiliary and campus services contribute to the quality of campus life for students, faculty, and staff. As the University continues to grow, expansion of auxiliary and campus services is necessary to support campus life and student success. Priority projects are:

- Renovate Downing University Center Phases IV & V
- WKU Gateway development: project-leased space for a 450-space parking deck (Parking Structure 3), the WKU Store, convenience store, coffee shop, and WKU Police Department
- Food services projects identified in the 2011 Market Match study
- Renovate Garrett Conference Center

5. Parking, Transportation and Traffic

Planned projects such as the College of Business building and the Athletics Tennis Complex will decrease parking inventory. In addition, anticipated enrollment growth and expanded on-campus housing will continue to increase demand for services. To meet the shifting demand for services, the principle strategy will be to enhance transit services in the Bowling Green community to maintain access to campus while supporting sustainability goals and minimizing capital costs. Plans for Parking and Transportation are:

- Expand park and ride service from existing parking lots in the Bowling Green community to campus for commuting students
- Expand access to transit services from campus to the Bowling Green community to support employment, commerce, and leisure opportunities for on-campus residents.
- Improve multi-modal access to campus to reduce parking demand and traffic congestion
- Construct Parking Structure 4 at the Ogden Science Complex
- Explore traffic improvements to ease congestion and enhance vehicular circulation

6. Campus-Wide Infrastructure, Energy Efficiency, Sustainability

To support anticipated growth, WKU continues to invest in critical upgrades to the utility infrastructure for steam, chilled water, communications, and underground electrical service. In addition, the Energy Savings Performance Contract is helping WKU to reduce its energy consumption through a wide range of upgrades and retrofits. Priority projects at this time are:

- Upgrade underground electrical infrastructure
- Replace steam infrastructure
- Upgrade information technology infrastructure
- Complete Energy Performance Savings Contract; explore viability of ESPC Phase III
- Explore work/class scheduling alternatives and facility use plans to decrease energy use in summer and winter terms

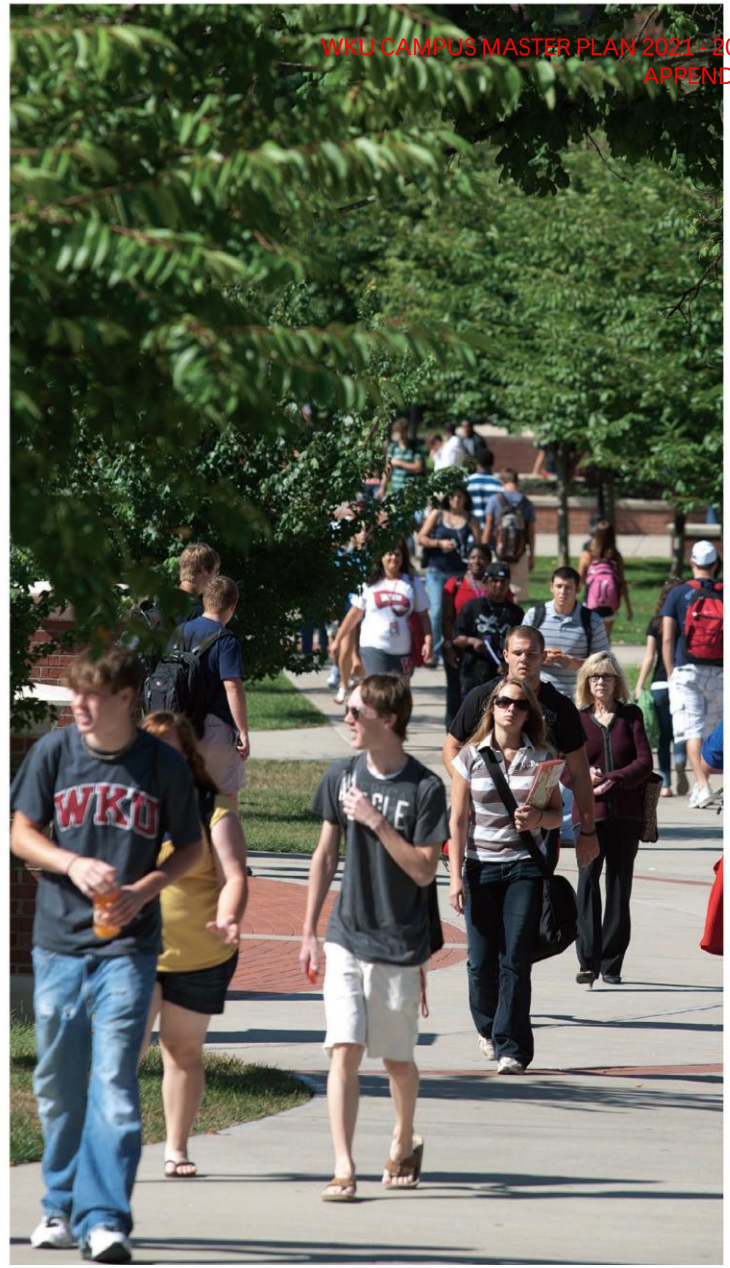
7. Athletics

An Athletics Master Plan by Heery International is currently evaluating needs for Track, Tennis, Soccer, Softball, Baseball, and an indoor practice and training facility.

8. WKU-Affiliated Organizations

Off-campus student and alumni organizations enhance the WKU experience through social, spiritual, and community service activities. The majority of these WKU-affiliated organizations fall within the boundaries and are subject to the guidelines of an overlay district of the City-County Planning Commission's University District Review Committee. WKU continues to support these affiliated organizations. Ongoing efforts include:

- Construct Augenstein Alumni Center, to include conference facilities and the WKU Welcome Center
- Work with City/County to review University District boundaries for possible expansion;
- Promote relocation of Greek organizations



Current Campus Master Plan

IV. DEVELOPMENT AND PLANNING PROGRESS

Significant progress has been made toward the goals identified by Gresham Smith and Partners in the 2003 Master Plan Update. The goals described below follow the outline established by that document.

GROWTH

- Renovate existing space to best utilize resources
  - *Academic: Classroom renovations* — *2001-10*
  - *Housing: 15 Residence Halls* — *2001-09*
  - *Academic: STH / College High Hall* — *2010*
  - *Academic: Van Meter Hall* — *2010*
  - *Auxiliary: Preston Center* — *2010*
  - *Academic: Math and Science Academy* — *2008*
  - *Academic: Academic Complex* — *2008*
  - *Athletic: Houchens LT Smith Stadium* — *2008*
  - *Academic: Faculty House* — *2007*
  - *Auxiliary: Downing University Center* — *2003-05*
  - *Athletic: Diddle renovation* — *2003*
- Increase building density to enhance campus feel
  - *Academic: College of Business* — *TBD*
  - *Academic: Music Rehearsal Hall* — *2011*
  - *Academic: College of Education* — *2011*
  - *Auxiliary: Chapel* — *2010*
  - *Athletic: Baseball Clubhouse* — *2009*
  - *Athletic: Houchens LT Smith Stadium* — *2009*
  - *Academic: Snell Hall* — *2009*
  - *Auxiliary: PFT Food Court* — *2008*
  - *Auxiliary: Health Services* — *2008*
  - *Auxiliary: Student Publications* — *2007*
  - *Academic: Eng & Biological Sciences* — *2004*
  - *Academic: Mass Media & Technology Hall* — *2003*
- Land acquisition to allow for expansion
  - *College of Education* — *2011*
  - *Block 12 Development* — *2011*
  - *Greek Housing* — *Ongoing*

WAYFINDING

- Develop a zoning system to assist with orientation
  - *New campus maps with zones* — *2009*
- Develop way finding system to assist with navigation
  - *Signs for directions, buildings, parking* — *2009*

GREEN SPACE

- Create an aesthetic linkage to unify campus
  - *College High Hall plaza* — *2010*
  - *Alumni Lawn improvements* — *2010*
  - *Campus tree inventory* — *2009*
  - *Standards for signage and lighting* — *2008*
  - *PFT Plaza* — *2008*
  - *Centennial Mall* — *2006*
  - *Outdoor Sculpture* — *2006*
  - *Van Meter Overlook* — *2005*
- Remove cars from core of campus to create green space
  - *Remove STH/College High parking lot* — *2010*
  - *Remove DUC and Grise parking lots* — *2006*

PEDESTRIAN CIRCULATION AND SAFETY

- Develop central walkway to accommodate pedestrians
  - *Centennial Mall* — *2006*
- Eliminate pedestrian/vehicular conflicts if possible
  - *In-street crosswalk signage* — *2010*
  - *Campus-wide lighting upgrade* — *2008*
  - *Remove Virginia Garrett Dr* — *2006*
- Remove parking from the Hill for a more pedestrian-friendly atmosphere
  - *Reroute Hilltop Drive* — *TBD*
  - *Remove on-street parking* — *TBD*
- Improve State Street crosswalks to the Ogden campus
  - *State St. narrowed, sidewalks widened* — *2011*
  - *Normal/State crosswalk plan* — *2010*

BIKEWAY

- Promote biking as alternative to driving to reduce parking demand
  - *Big Red Bikes bike-share program* — *2008-11*
- Create bikeway to link campus to the City to promote cycling
  - *Community Bikeway* — *2011*
- Create bicycle storage facilities at main classroom buildings and dormitories to promote cycling
  - *700 bike parking spaces added* — *2005-10*
- Create a strong connection between main and south campus to promote cycling as a transportation option
  - *South Campus Greenway* — *2006*

TRAFFIC

- Remove vehicles from core of campus to reinforce the importance of pedestrian access and campus aesthetics
  - *Remove Virginia Garrett Dr* — *2006*
- Reinforce shuttle system to reduce traffic
  - *Improve South Campus park & ride* — *2006*
- Eliminate one-way traffic flow to ease navigation
  - *Two-way segment of College Heights Blvd.* — *2009*
- Redirect non-university vehicles to reduce congestion
  - *KYTC improvements on KY880* — *2007*
  - *Landscaped median on College Heights Blvd.* — *2005*

PARKING

- Create new parking options to accommodate growth
  - *Parking Structure 2* — *2005*
  - *4 improved parking lots* — *2005-09*
- Develop premium fee based system to fund parking capital projects and encourage use of perimeter lots
  - *Last fee increase* — *2008*
- Move parking to campus perimeter to eliminate pedestrian/vehicular conflicts
  - *6 new parking lots at campus perimeter* — *2003-09*
- Encourage ride-sharing to reduce parking demand
  - *Rideshare website* — *2008*
- Develop with City a parking district in adjacent neighborhoods to address disruptive on-street parking — *Dormant*
- Install cameras to improve security — *Continuing*

SHUTTLE BUS

- Reinforce shuttle system as preferred transportation to reduce congestion
  - *Ridership doubled* — *since 2004*
- Reverse direction of shuttle service to go clockwise around campus to put student loading and unloading on campus side of busy streets (requires two way traffic on Big Red Way (AOC) — *Not practical at this time*
- As new buildings are constructed, review number and location of shuttle stops — *Ongoing*
- Acquire accessible buses for disabled passengers
  - *Fleet updated* — *2005*
- Develop permanent parking and storage for buses
  - *Maintenance facility* — *2005*
- Coordinate and cooperate with the City to create a city-wide mass transit system to integrate campus with the community — *Ongoing*
- Develop downtown park & ride service to serve demands that can't be accommodated on campus — *Center Street and PS3*

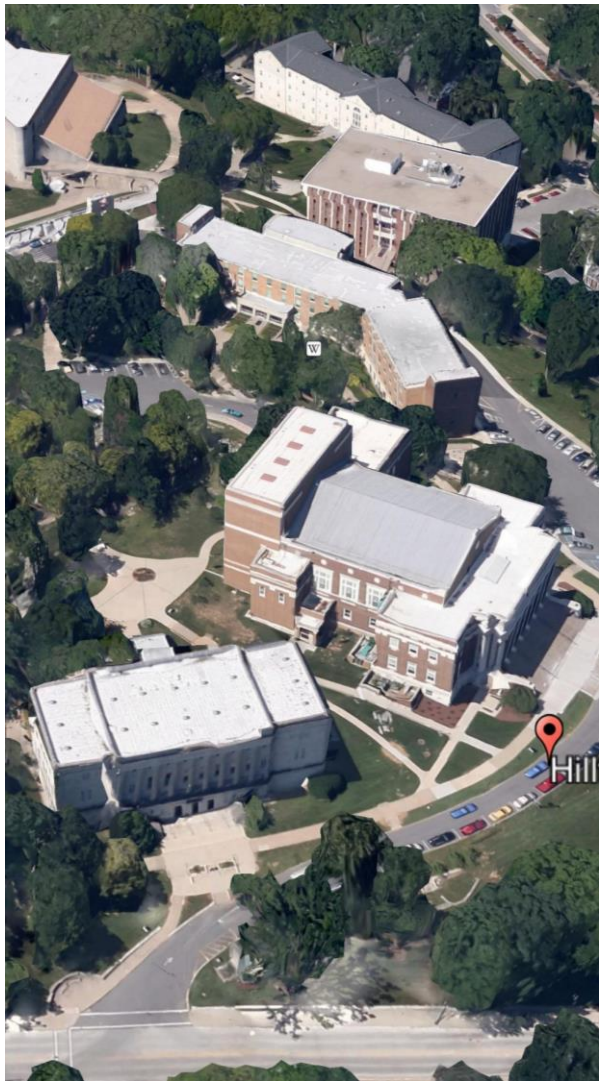
Current Campus Master Plan

The Proposed Circulation Plan from the 2011 Campus Master Plan. The plan indicates maintaining all current circulation routes along Hilltop Drive and the continued use of the narrow drive adjacent to Faculty House. This narrow access point would terminate at College Heights Boulevard with the addition of a new cut through.

Current Campus Master Plan

Hilltop Plan Objectives

- Support Goals of the 2011 Master Plan
- Clarify Pedestrian Circulation Routes from Valley to Hilltop
- Remove Vehicular Pedestrian Conflicts along Colonnade Drive at Colonnade
- Relieve Traffic Convergence from Hilltop Drive and Colonnade Drive @ Wetherby Administration Building
- Provide Visitor Access and Parking for Wetherby
- Access - Service and Accessible Parking for Van Meter
- Remove Vehicular Drive @ Faculty House
- Provide Accessible Parking on Hill
- Preserve Fort Lytle Grounds and Landscape
- Preserve Existing Trees where possible
- Reduce Parking on Hilltop
- Develop East / West Pedestrian Corridor
- Reduce Congestion at Hilltop and State Street
- Improve Pedestrian Safety



Master Plan Report Card

A report card was developed to quickly evaluate the various routing alternatives based on the criteria from the 2011 Master Plan and criteria developed by the Steering Committee.

Master Plan Report Card	
Maintain Walkable Campus	☑
Limit or Remove Vehicles	☑
Reduce Traffic Congestion And Parking Demand	☑
Minimize Pedestrian And Vehicular Conflicts	☑
Remove Parking From The Hill Reroute Hilltop Drive	☑

A summary evaluation of existing surface Parking Areas and Parking Structures was useful in order to understand the general flow of parking and pedestrian access on campus.

Primary Campus Parking Distribution

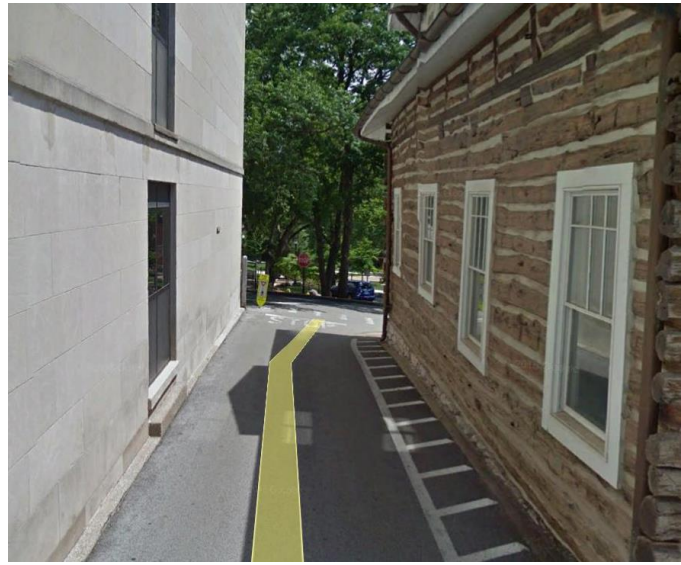
Existing Conditions

The current pedestrian flow between Main Campus and the Ogden Science Campus creates an enormous bottleneck where Hilltop intersects with State Street. Vehicles flow through campus on Hilltop Drive – and converge south from Faculty House Drive and turn east at the Garrett Service dock. This condition combined with pedestrian movement creates a back-up at State Street and serious safety concerns for pedestrians. State Street further, has vertical alignment challenges which make turns from Hilltop difficult.

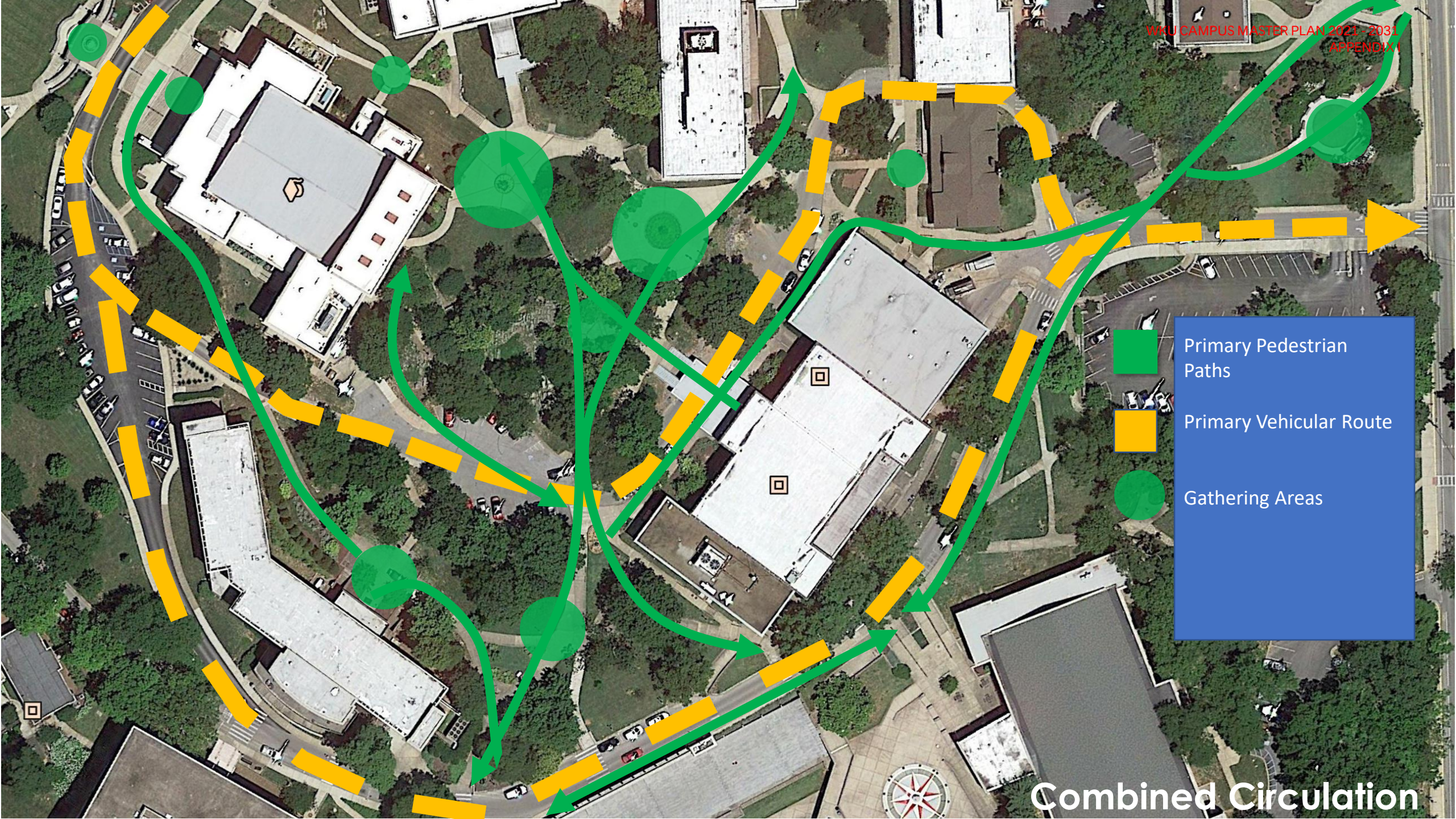
The current traffic flow between the Colonnade along Hilltop Drive.

Faculty House – Garrett congestion point.

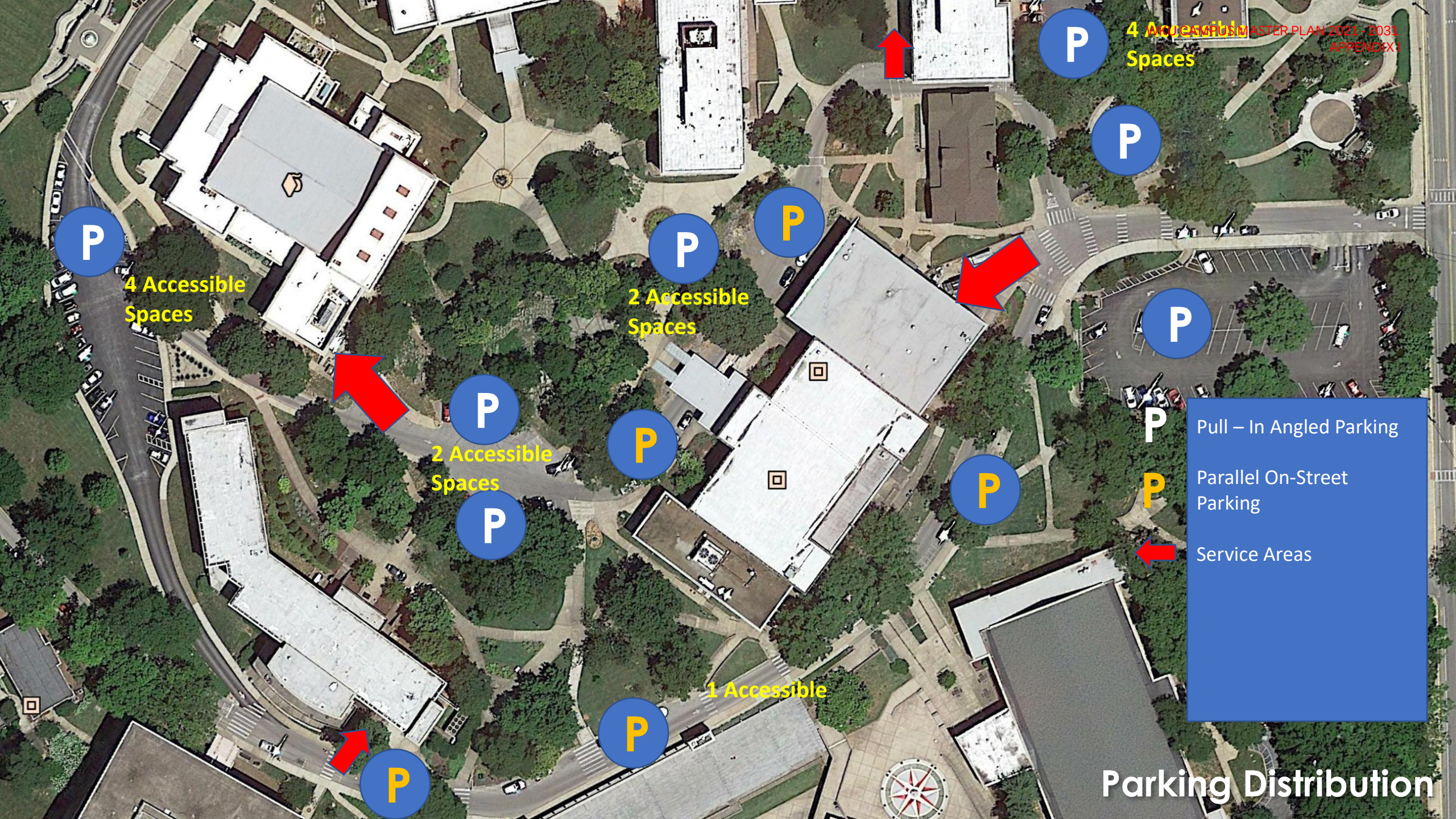
Faculty House Drive Accessible Parking.



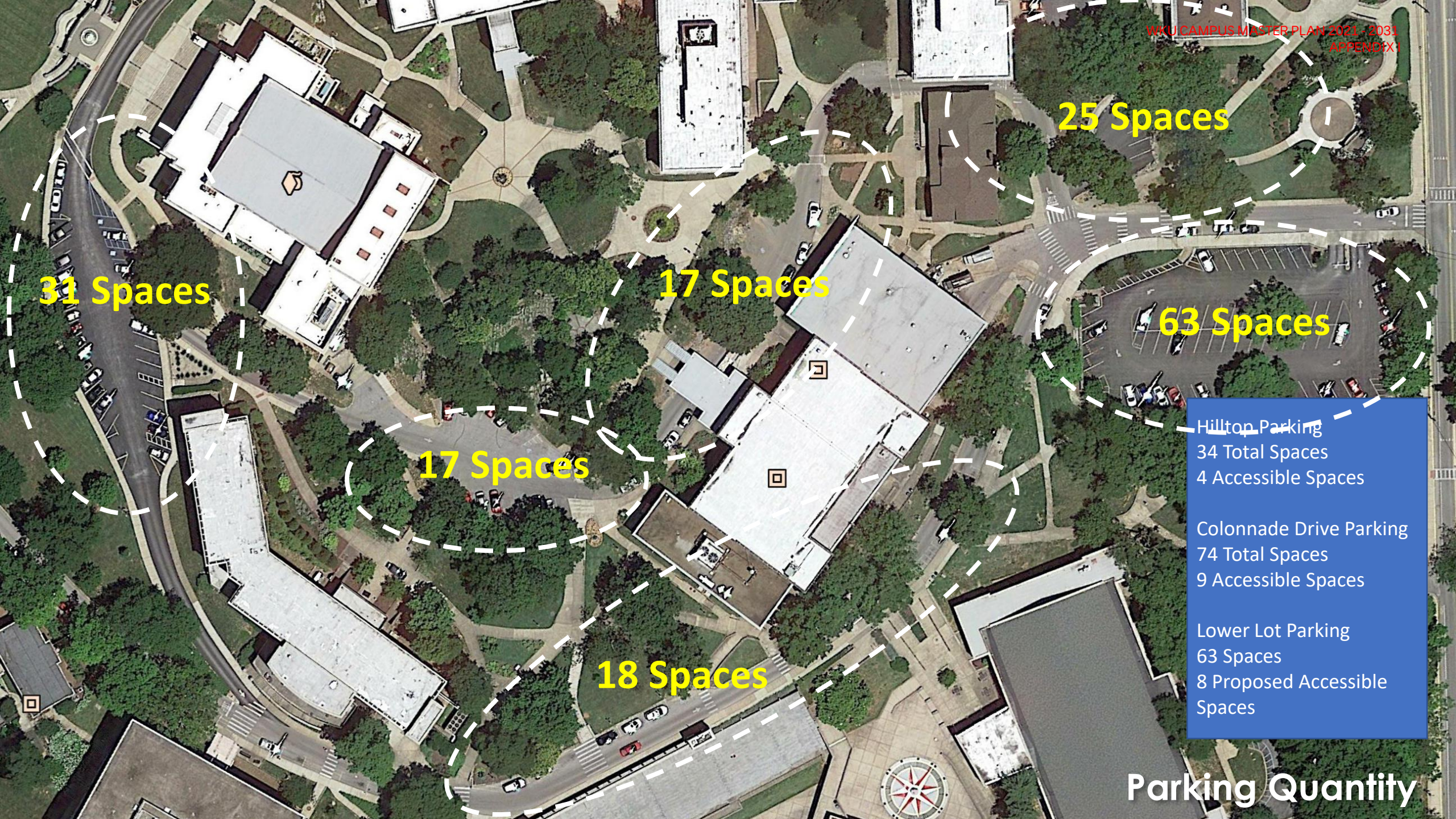
Main Circulation route from Faculty House Drive.



Combined Circulation

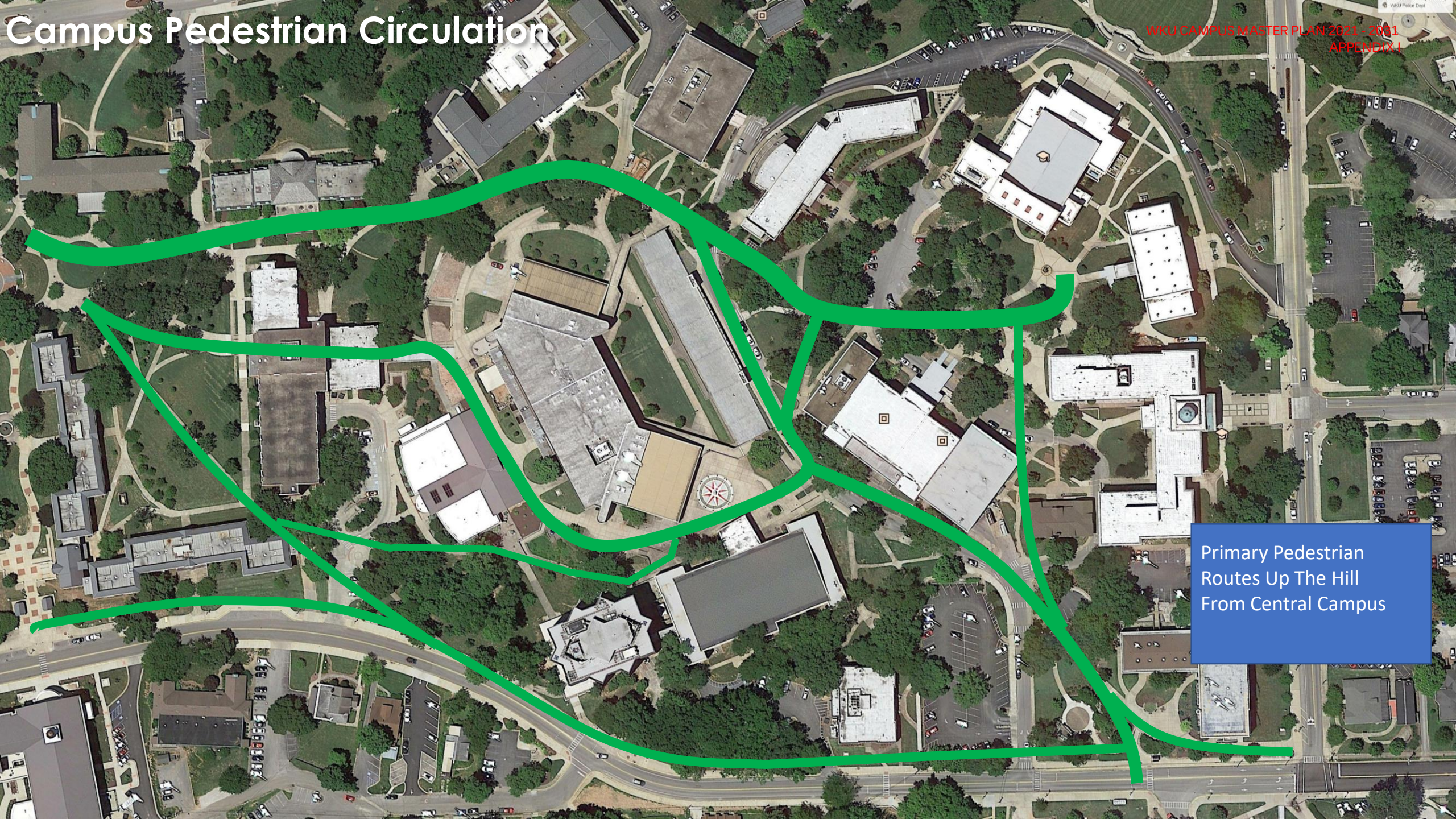


Parking Distribution

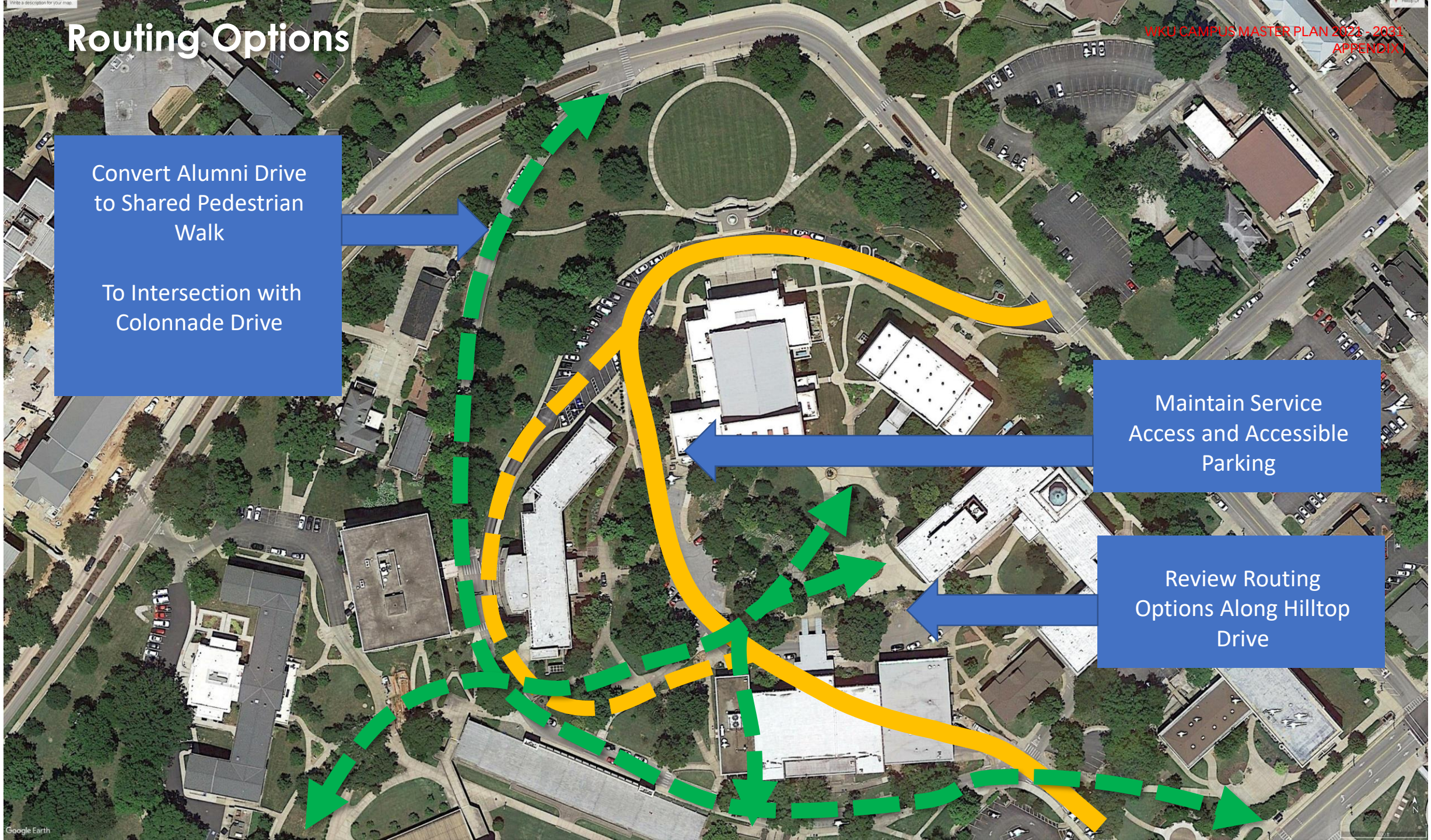


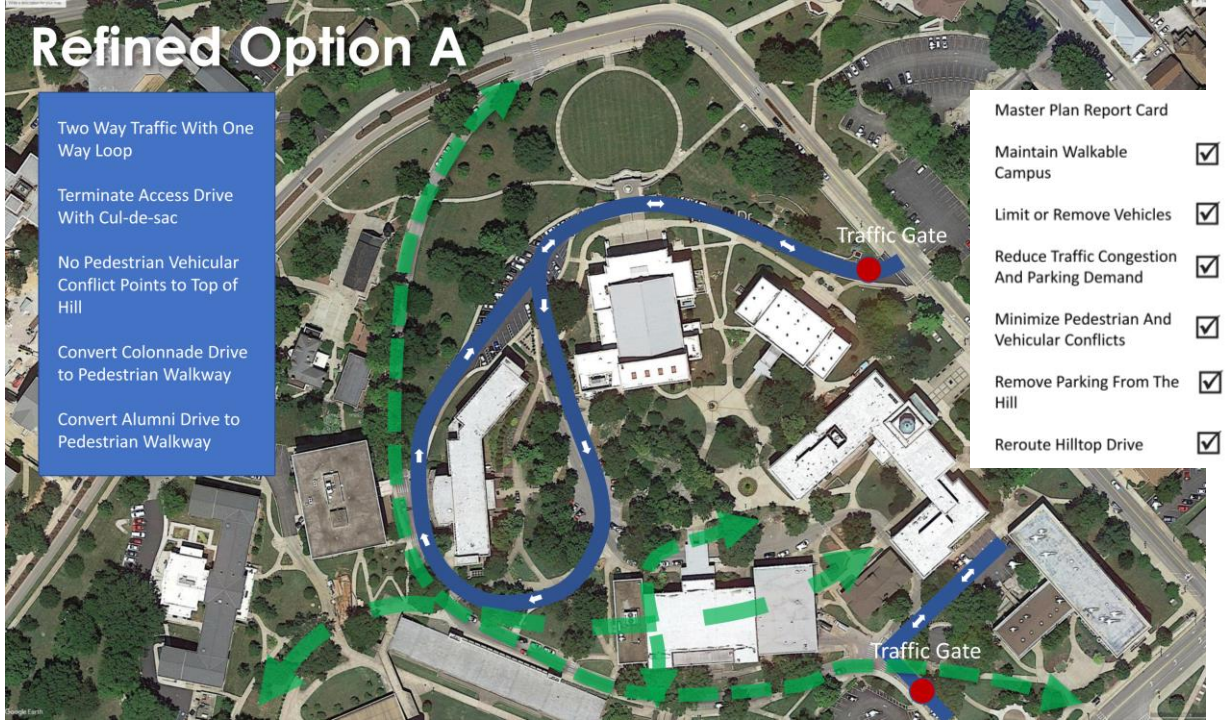
Parking Quantity

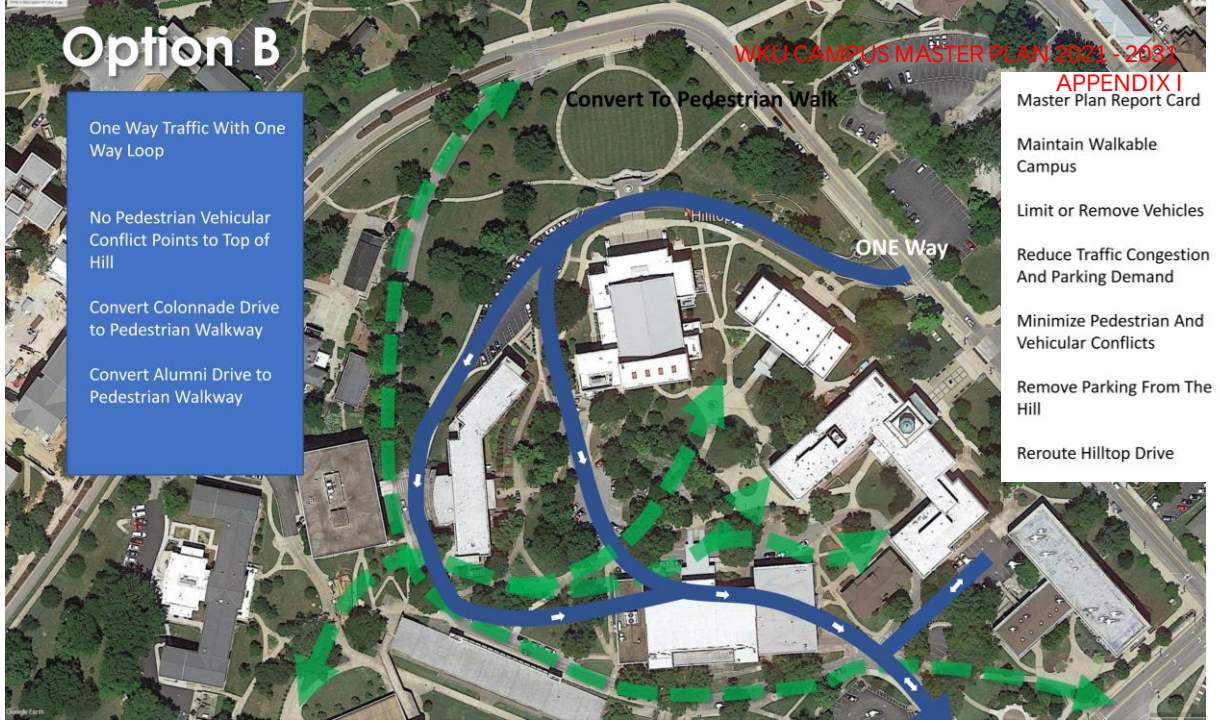
Campus Pedestrian Circulation

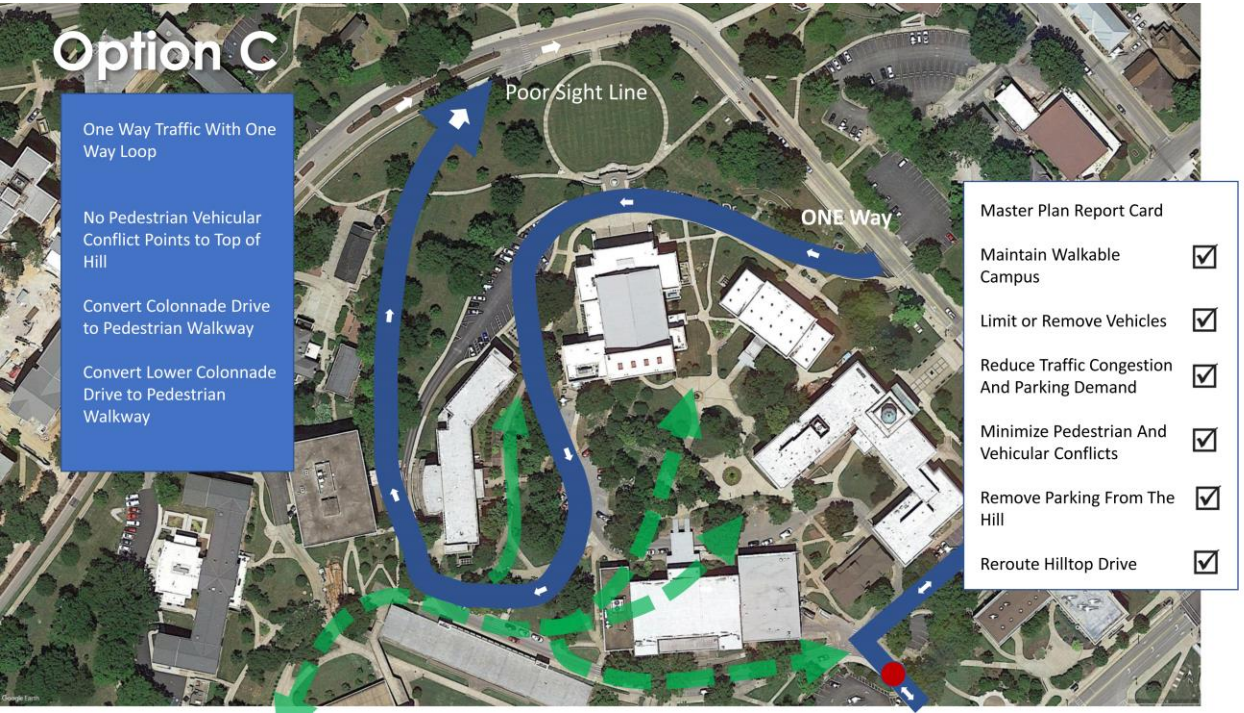


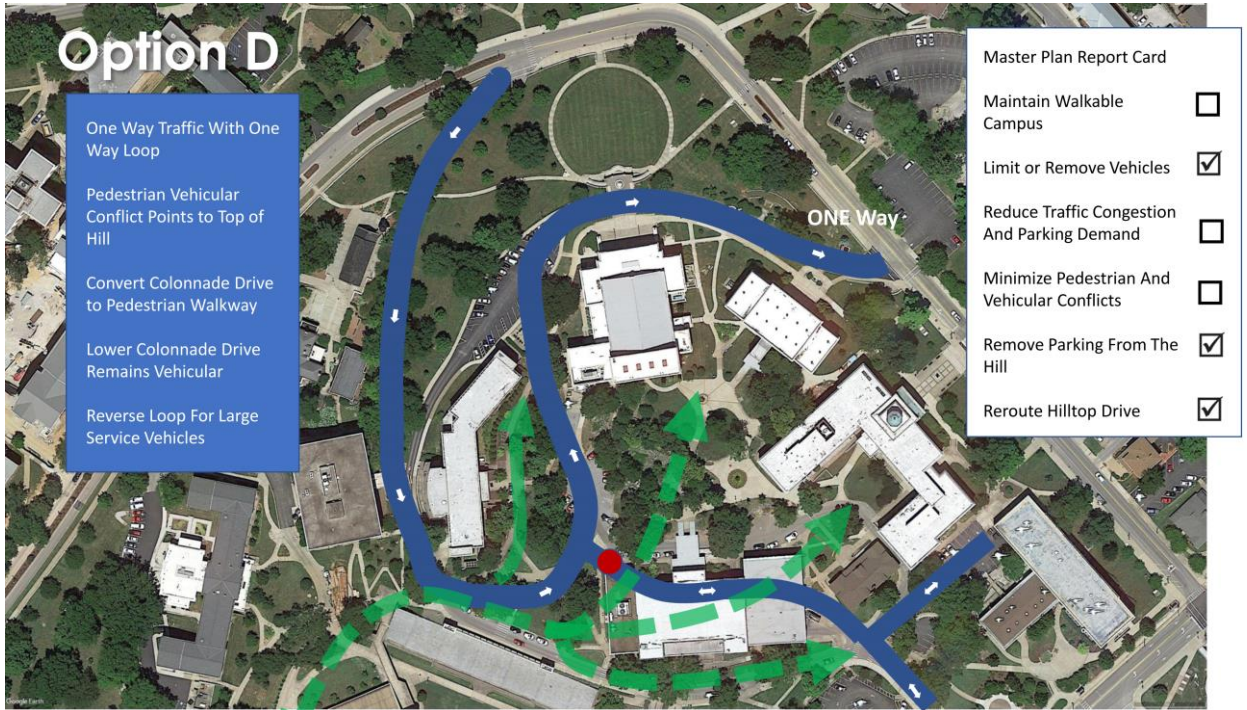
Routing Options

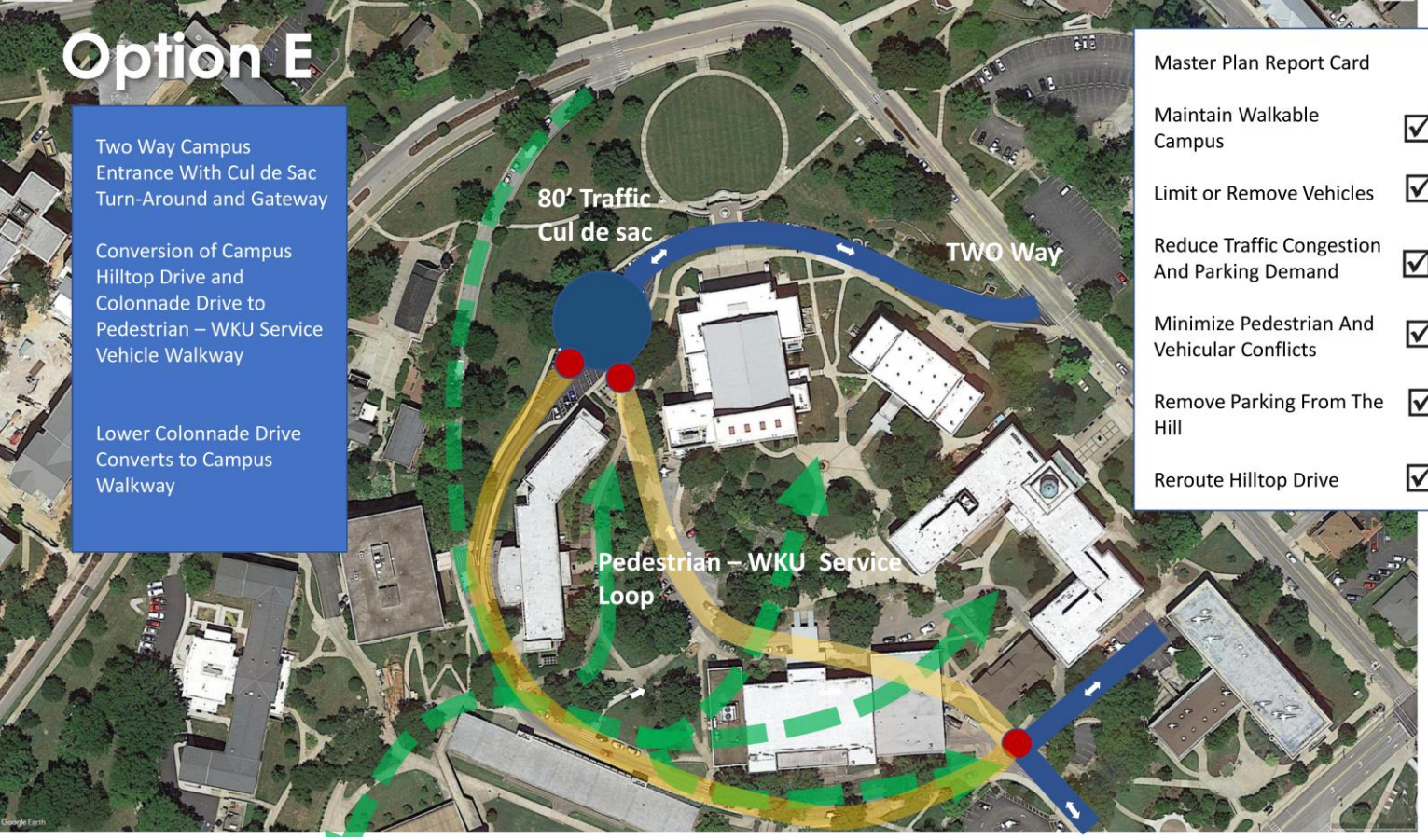


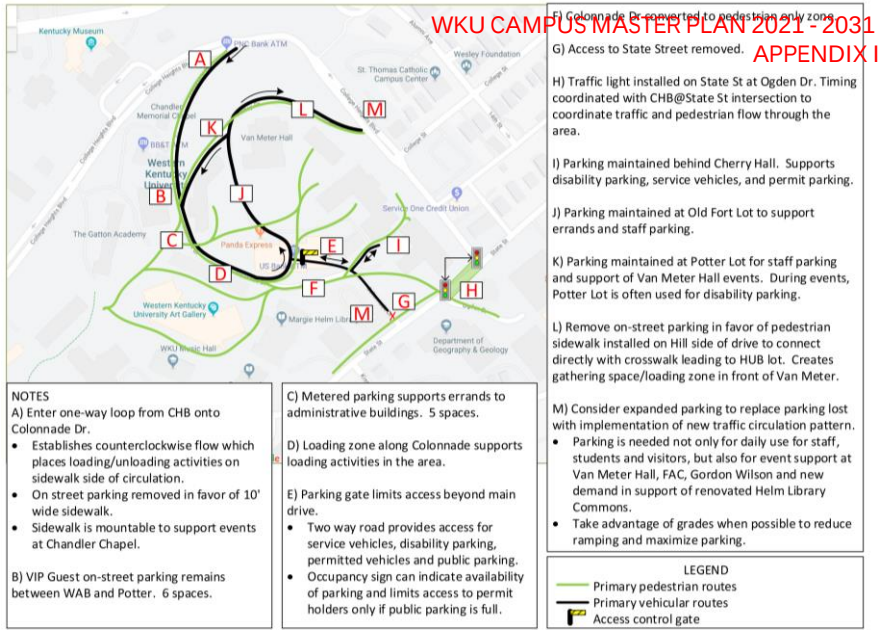

Refined Option A
Two Way Traffic With One Way Loop
Terminate Access Drive With Cul-de-sac
No Pedestrian Vehicular Conflict Points to Top of Hill
Convert Colonnade Drive to Pedestrian Walkway
Convert Alumni Drive to Pedestrian Walkway
Traffic Gate
Traffic Gate
Master Plan Report Card
Maintain Walkable Campus ☑
Limit or Remove Vehicles ☑
Reduce Traffic Congestion And Parking Demand ☑
Minimize Pedestrian And Vehicular Conflicts ☑
Remove Parking From The Hill ☑
Reroute Hilltop Drive ☑


Option B
One Way Traffic With One Way Loop
No Pedestrian Vehicular Conflict Points to Top of Hill
Convert Colonnade Drive to Pedestrian Walkway
Convert Alumni Drive to Pedestrian Walkway
Convert To Pedestrian Walk
ONE Way
Master Plan Report Card
Maintain Walkable Campus ☐
Limit or Remove Vehicles ☐
Reduce Traffic Congestion And Parking Demand ☑
Minimize Pedestrian And Vehicular Conflicts ☐
Remove Parking From The Hill ☐
Reroute Hilltop Drive ☑


Option C
One Way Traffic With One Way Loop
No Pedestrian Vehicular Conflict Points to Top of Hill
Convert Colonnade Drive to Pedestrian Walkway
Convert Lower Colonnade Drive to Pedestrian Walkway
Poor Sight Line
ONE Way
Master Plan Report Card
Maintain Walkable Campus ☑
Limit or Remove Vehicles ☑
Reduce Traffic Congestion And Parking Demand ☑
Minimize Pedestrian And Vehicular Conflicts ☑
Remove Parking From The Hill ☑
Reroute Hilltop Drive ☑


Option D
One Way Traffic With One Way Loop
Pedestrian Vehicular Conflict Points to Top of Hill
Convert Colonnade Drive to Pedestrian Walkway
Lower Colonnade Drive Remains Vehicular
Reverse Loop For Large Service Vehicles
ONE Way
Master Plan Report Card
Maintain Walkable Campus ☐
Limit or Remove Vehicles ☑
Reduce Traffic Congestion And Parking Demand ☐
Minimize Pedestrian And Vehicular Conflicts ☐
Remove Parking From The Hill ☑
Reroute Hilltop Drive ☑





Optional Circulation Scheme showing rerouting Hilltop Traffic to Alumni Drive and then circulating south and west and exiting back on to College Heights Boulevard. This would reverse circulation on the hill. The concept further maintains access from State Street.

Options:

Six (6) Options were presented and discussed during three (3) Stakeholder Meetings with the WKU Planning Committee . After review and comment Refined Option A was considered the most consistent with the Master Plan Goals and Objectives. This scheme is delineated on the following pages and the key pedestrian and vehicular spaces have been modeled and illustrated for clarity. A cursory evaluation of required turning movements and roadway grades and elevations was developed in order to evaluate constructability.

Hilltop And Colonnade Drive Parking Statistics

108 Existing Spaces
38 Proposed

Master Plan Report Card

- Maintain Walkable Campus ☑
- Limit or Remove Vehicles ☑
- Reduce Traffic Congestion And Parking Demand ☑
- Minimize Pedestrian And Vehicular Conflicts ☑
- Remove Parking From The Hill ☑
- Reroute Hilltop Drive ☑

The Preferred Option was selected based on the desire to remove all through traffic between College Heights Boulevard and State Street. This option develops a singular "loop" drive which will greatly reduce traffic flow on the hill and still provide access for service areas at VanMeter Hall and accessible parking on the hill. A gated State Street access is limited to service and parking access reducing the turning demands on State Street and providing less moving traffic at the student crossing from the plaza on toward the Ogden Science Campus.

Recommendations:

Western Kentucky University has long since made the shift from a commuter based "Monday - Thursday" campus to a fully populated activity-based year-round learning environment. Huge steps have been taken in recent years to reduce parking throughout campus and to promote accessibility and enhance the landscape. The north south pedestrian access has been well established along the Centennial Mall and approaches from perimeter roadways have been improved. The next logical step should include the continuation of that spirit to the very top of "The Hill."

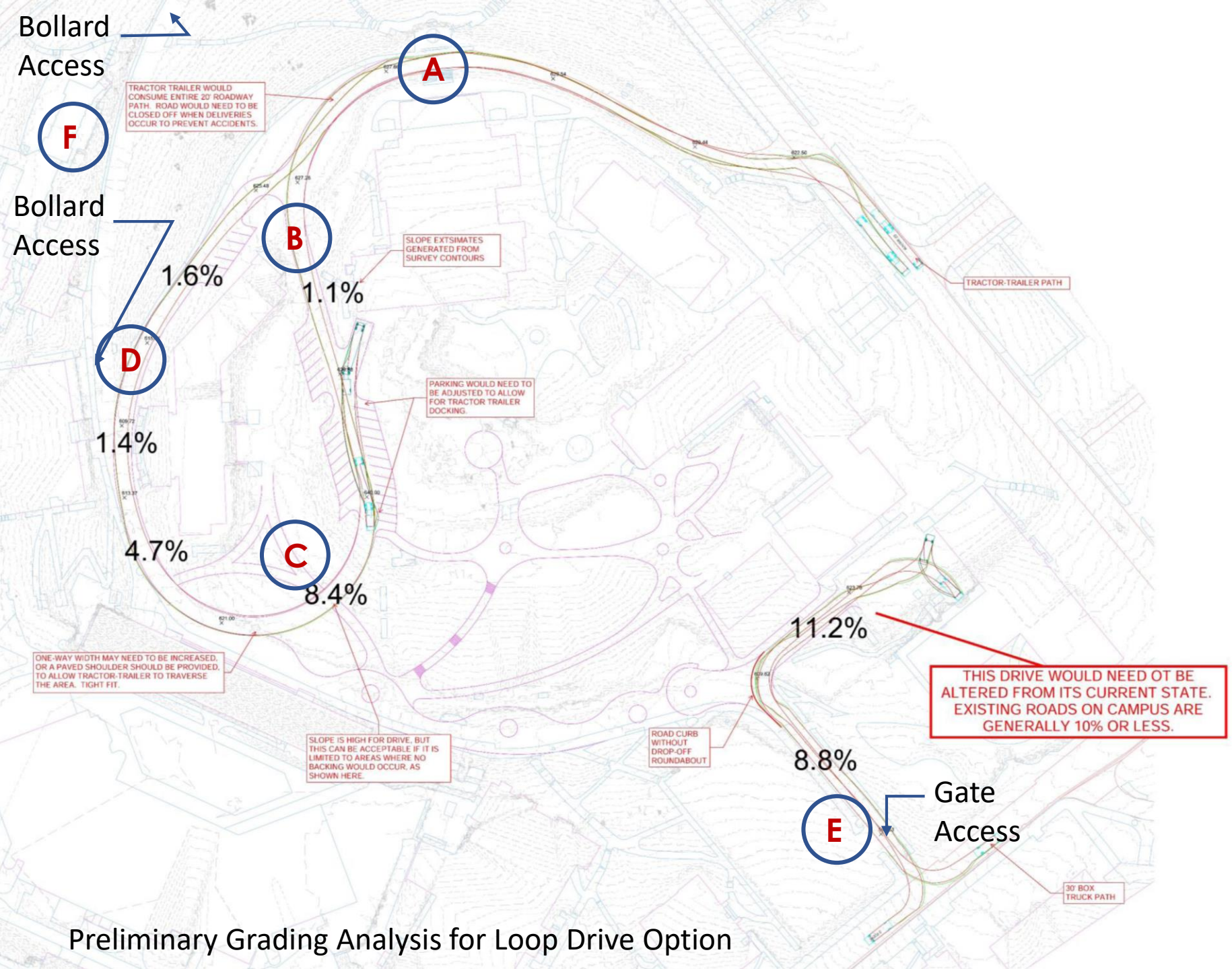
The "Loop" concept explores the elimination of all through traffic along Hilltop Drive and promotes access along a primarily pedestrian based plaza from the Colonnade to the hilltop. Further this option explores the conversion of Colonnade Drive into a predominately pedestrian corridor which would offer the only pedestrian based east west cross campus walkway at or near the top of the hill. A common occurrence on college campus's is the development of "signature" or themed walkways. The Centennial Mall serves as a north south connector and a newly branded "Colonnade Walk" would provide an east west connector across edge of the hill – adjacent to the Colonnade and the Library Commons leading to the Ogden Science Campus.

Change of this magnitude on any University Campus will be achieved over a long period of time. Due primarily to the cycle of funding opportunities and implemented in conjunction with other infrastructure improvements. More immediate steps can be taken to begin the process.

- Upon the completion of the Library Commons and the removal of the Garrett Conference Center, consideration should be given to the removal of all parallel parking spaces along Hilltop Drive. This will have an immediate impact on pedestrian safety moving north and south and will reduce the crossing conflicts for student moving on toward the Odgen Science Campus.
- Close Colonnade Drive to through traffic – provide removable bollards at access points along College Heights Boulevard and at Hilltop Drive in order to allow for vehicular movement at key times during the semester. This will reduce the convergence of traffic on Hilltop Drive and will have an immediate impact on pedestrian safety.
- Develop walkways leading from Hilltop Drive up the hill to the existing walk areas and plazas to reinforce student movements along the Colonnade and through the Garrett site.
- Develop the "loop" roadway connector from Faculty House Drive back to Hilltop Drive at the Colonnade and complete the conversion of the loop into One Way Traffic with a Two Way portion from College Heights Boulevard to VanMeter Hall. This eliminates all cut through traffic to State Street.
- Provide Traffic Gate at State Street – Convert the lower portion of Hilltop Drive into two-way parking and service access only.
- Widen Hilltop Drive at the base of VanMeter Hall and improve accessible pedestrian route to College Heights Boulevard.
- Complete the conversion of Hilltop Drive at the Colonnade into a pedestrian based plaza (minimum of 20' lane widths to accommodate emergency traffic).
- Provide additional landscaping and wayfinding signage, sculpture and site furnishings in order to promote "Colonnade Walk" and the new Colonnade Plaza.

Further steps could be taken with a thorough review of campus infrastructure and utilities within the high impact "loop drive" area. A preliminary analysis of grading and slope conditions indicates that down grades may reach 8.5% along the loop drive. This may be reduced through further lowering of Faculty House Drive or further extension of the loop into the open lawn area to the west.

Archival image of "The Hill" circa 1920. The open lawn in the center of the image is the current location of the Garrett Conference Center. Hilltop Drive is shown on the right and has not changed in dimensions. Faculty House (center of image) is the only remaining structure.



Preliminary Grading Analysis for Loop Drive Option

Key Features:

A. Access at College Heights Boulevard to become Two Way along Hilltop Drive. This will require some redevelopment of the drive in front VanMeter Auditorium as this portion of the drive is constrained by grade.

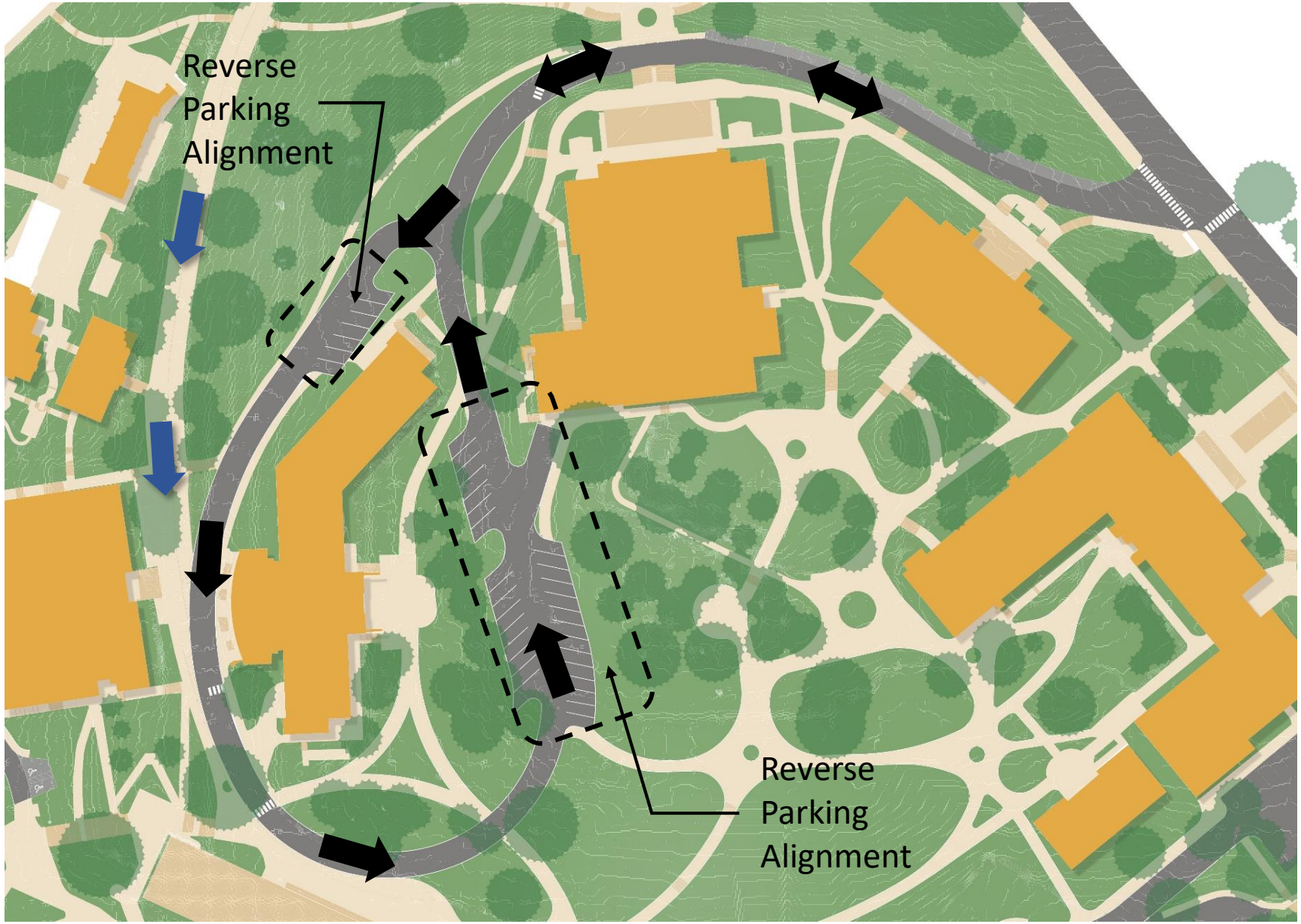
B. One Way Loop to begin south of VanMeter. This portion of the loop should be widened to 18'. Existing uphill grade is approximately 8% between Potter Hall and VanMeter and the levels near the existing service dock.

C. The downhill interior turning radius required is a minimum of 100' at a maximum of 8.4% down slope.

D. Continue One Way Loop between Wetherby and Potter Hall. Surface Parking can be maintained in this area for Administration Visitor Parking.

E. Provide Gated Access from State Street to Hilltop Drive. This access point should be gated beyond the entrance of the surface parking lot and would be limited to service vehicles and limited parking access.

F. Alumni Drive from College Heights Boulevard to Wetherby would be converted to a shared Pedestrian and Vehicular Walkway. The limited Circulation along Alumni Drive would be reversed from its current condition. Removable Bollards would be used along Alumni Walk in order to provide vehicular access only at key times.

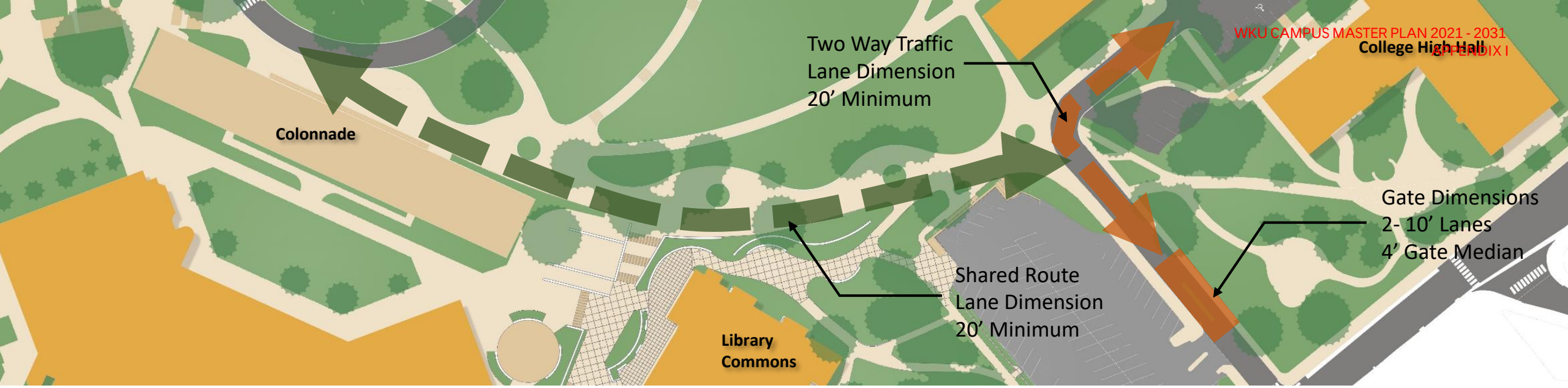


Reverse Circulation Option

A "Reverse Flow" Option was considered and discussed by the Committee which utilizes the same alignment along Hilltop Drive but reverses the circulation at Potter Hall. Traffic would continue along Hilltop to the intersection of Colonnade Drive and then transition up the hill to the parking area.

Key Elements:

- This option would allow for busses to pull off and drop students directly into the plaza adjacent to the Colonnade.
- This option would allow for occasional merging traffic (limited use) along Colonnade Drive to merge into the flow of circulation along Hilltop Drive.
- This option would require large service vehicles to reverse their circulation for times when backing into the dock is necessary.
- This option would not provide the scenic views of the Colonnade or Central Campus from the top of the hill driving south.

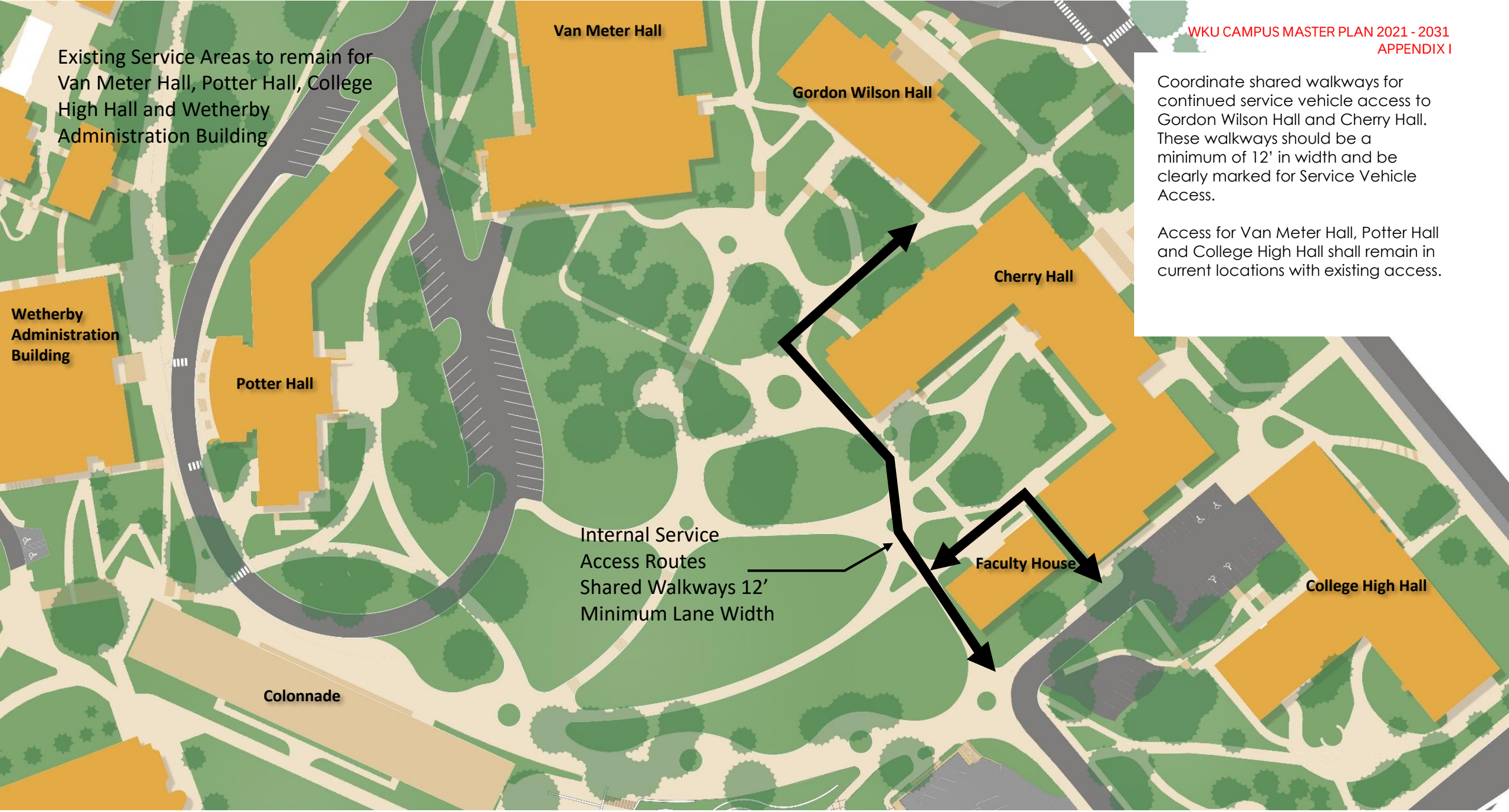


Dimensional Standards

Existing Pedestrian Walkways on the Hilltop would remain in their current location. Tie in points to existing walks and drives would occur along the line delineated below.

Improvements to the existing Hilltop Drive to remain would include new asphalt surfacing, development of accessible parking areas, accessible ramps at parking areas and striping.

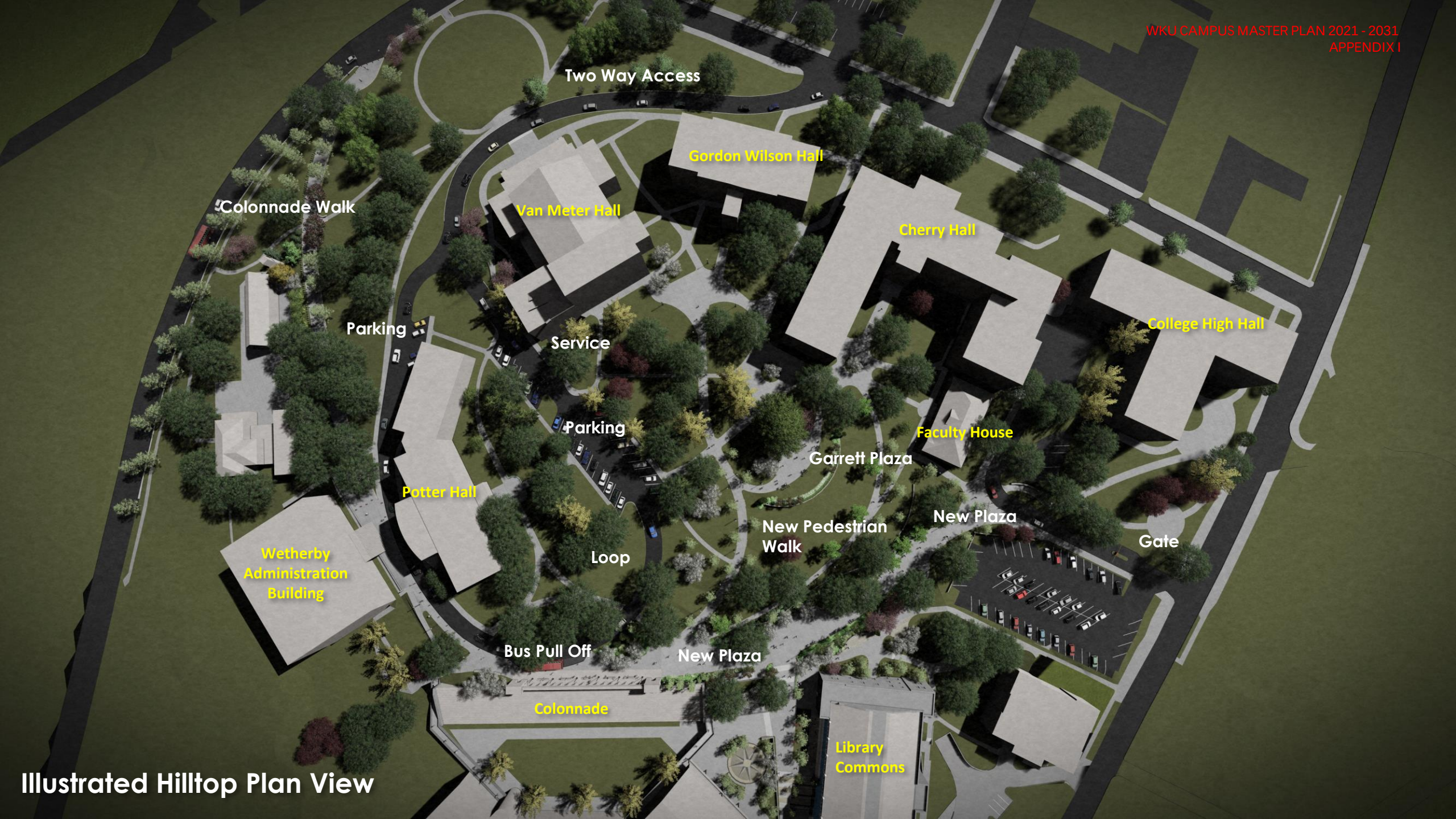
Project Connections



Coordinate shared walkways for continued service vehicle access to Gordon Wilson Hall and Cherry Hall. These walkways should be a minimum of 12' in width and be clearly marked for Service Vehicle Access.

Access for Van Meter Hall, Potter Hall and College High Hall shall remain in current locations with existing access.

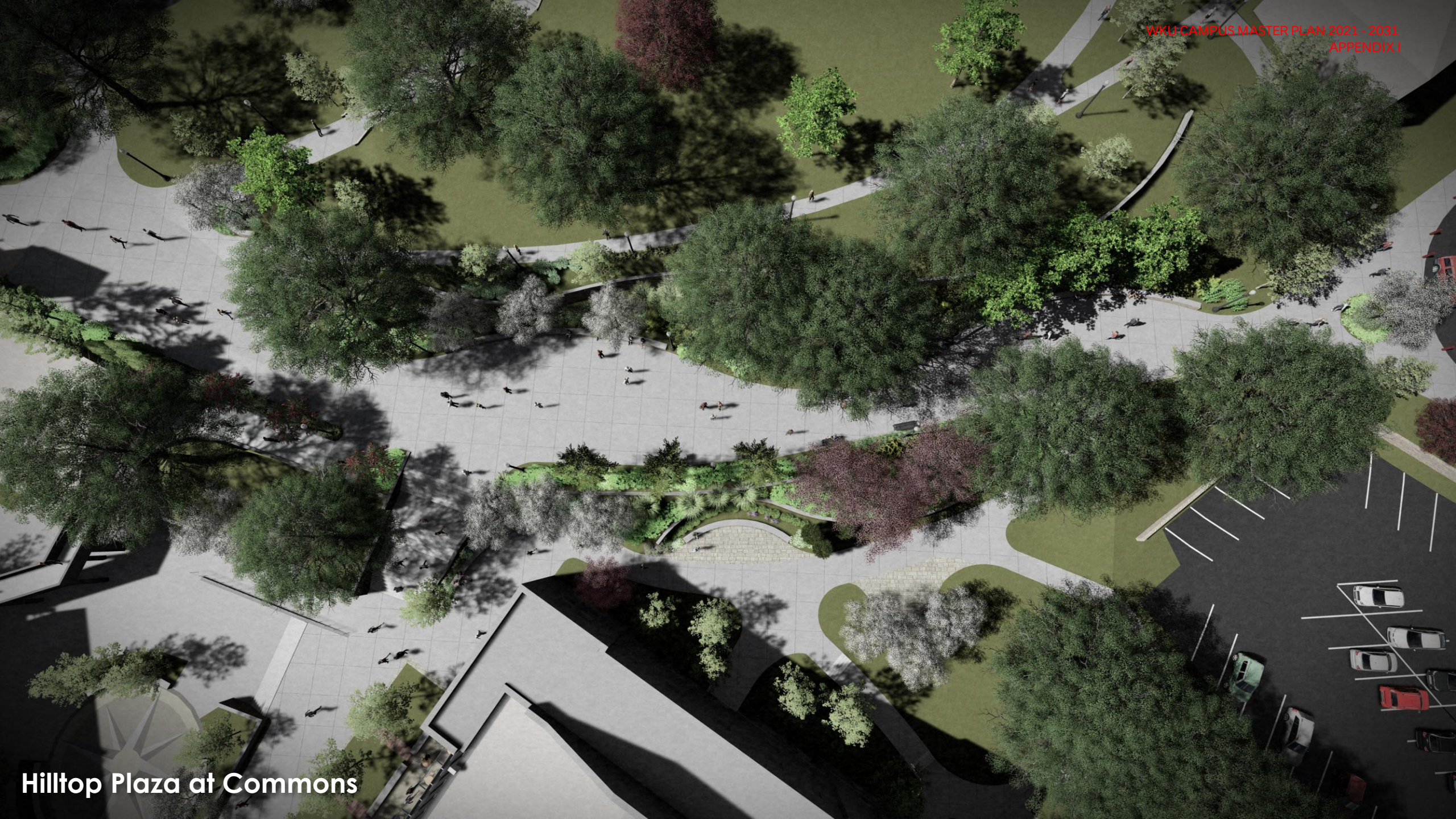
Service Access



Illustrated Hilltop Plan View

Hilltop Plaza at Commons

Birdseye View of Hilltop Improvements



Hilltop Plaza at Commons

Hilltop Plaza at Commons

Hilltop Plaza Looking North East

Hilltop Plaza Looking East at Library Commons

Hilltop Plaza Looking West

Birdseye View of Hilltop Looking North

Hilltop Plaza at Colonnade

Hilltop Plaza at Colonnade

Birdseye View of Colonnade Drive Shared Walkway

Colonnade Drive Shared Walkway

New Access Gate at State Street

New Access Gate at State Street

Potter Hall
Van Meter Hall
Gordon Wilson Hall
Cherr
Colonnade
Library
Commons
Faculty House
New Garrett Plaza

New Garrett Plaza

New Hilltop Pedestrian Path

Hilltop Birdseye Looking North

Phase One:

Reroute Hilltop Drive – Remove Parallel Parking – Improve Angled Hilltop Parking and Service Access to Van Meter Hall – Provide Connector Walks from Colonnade to Hilltop – Improve Lower Hilltop Drive at State Street Intersection – Provide Gated Parking Access

1,200 LF Roadway Improvements (New 1-1/2" Pavement Surface Course)	24,000 SF @ $12.50	$300,000.00
Hilltop Parking and Service Area Improvements (New Pavement Surface)	7,000 SF @ $12.50	$87,500.00
Curbing and Edge Restraints	4,000 LF @ $22.50	$90,000.00
200 LF Retaining Walls (Final Design Dependent) Lump Sum	200 LF @ $425.00	$85,000.00
600 LF Newly Constructed and Graded Loop Connector Road Section (Grading and Base)	12,000 SF @ $48.50	$582,000.00
1,000 LF Newly Constructed Connector Walks (10' Wide)	10,000 SF @ $14.50	$145,000.00
6 Stair Sections - Forming, Cheek Walls, Handrails - Lump Sum		$60,000.00
350 LF Roadway Surface and Curbing State Street to Parking Areas	8,000 SF @ $12.50	$100,000.00
Traffic Control Gate with Island Lump Sum		$35,000.00
Roadway Lighting (Use Existing Lighting) Misc. Relocations and Improvements Lump Sum		$50,000.00
Site Improvements (Benches, Trash Receptacles, Pedestrian Lighting (Final Design Dependent) Lump Sum		$150,000.00
Landscaping (Final Design Dependent) Lump Sum		$150,000.00
*Utility Relocations – Storm Drainage – Irrigation - Unknown Until Final Design and Construction Documents		$150,000.00
Phase One Estimated Cost		**$1,984,700.00**

Surveying, Coordination, Temporary Access, Final Design and Engineering Costs (Soft Costs) Not Included

Phase Two:

Develop Colonnade Area Plaza along Old Hilltop –Provide Seating and Landscape along Plaza – Pedestrian Lighting - Develop Garrett Plaza – Retaining Walls, Seating, Lighting and Landscaping

14,000 SF Colonnade Plaza Demolition Grading and Base Course Installation	14,000 SF @ $10.00	$140,000.00
14,000 SF Colonnade Plaza Area Pavement (Decorative Pavement)	14,000 SF @ $22.50	$315,000.00
Curbing and Edge Restraints	1,400 LF @ $22.50	$31,500.00
5,000 SF Garrett Plaza Demolition Grading and Base Course Installation	5,000 SF @ $10.00	$50,000.00
5,000 SF Garrett Plaza Decorative Pavement	5,000 SF @ $22.50	$112,500.00
Benches, Tables, Chairs, Signage, Bike Racks, Receptacles - Lump Sum		$100,000.00
150 LF Seatwalls and Retaining Walls	150 LF @ $425.00	$63,750.00
Pedestrian and Landscape Lighting Lump Sum		$175,000.00
Landscaping (Final Design Dependent) Lump Sum		$150,000.00
*Utility Relocations – Storm Drainage – Irrigation - Unknown Until Final Design and Construction Documents		$150,000.00
Phase Two Estimated Cost		**$1,287,750.00**

Surveying, Coordination, Temporary Access, Final Design and Engineering Costs (Soft Costs) Not Included

Phase Three:

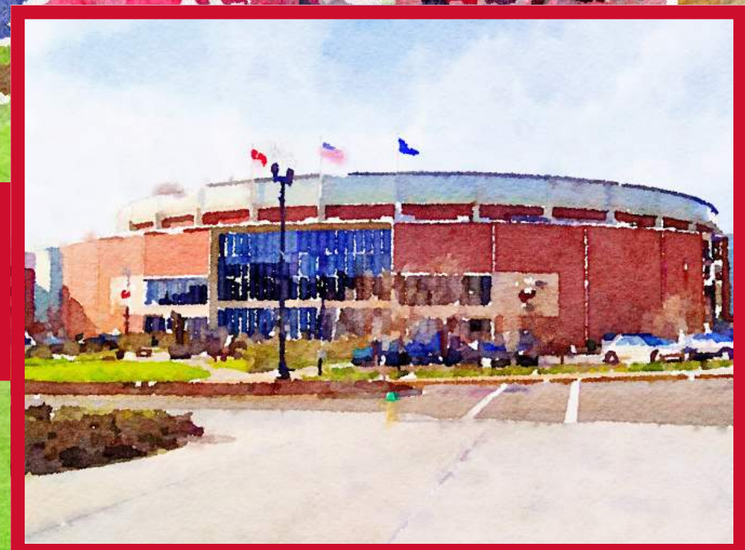
Close Lower Colonnade Drive and Convert to Pedestrian and Vehicular Walkway (Concrete) to Intersection with Hilltop Drive at Wetherby Administration Building. Provide Removable Bollards and Misc. Site Improvements and Landscaping

12,000 SF Asphalt Demolition	12,000 SF @ $3.50	$42,000.00
12,000 SF of 6" Reinforced Concrete Pavement	12,000 SF @ $18.50	$222,000.00
8 Removeable Decorative Bollards (Top and Bottom of Drive) Lump Sum		$16,000.00
Additional Pedestrian Lighting 12 Fixtures	12 @ $4,000.00	$48,000.00
Landscaping (Final Design Dependent) Lump Sum		$48,000.00
Site Improvements (Benches, Banner Arms, Seating)		$48,000.00

Phase Three Estimated Cost **$424,000.00**

Surveying, Coordination, Temporary Access, Final Design and Engineering Costs (Soft Costs) Not Included

Total Estimated Cost: **$3,696,450.00**



Athletics Feasibility Study

January 2020

WKU

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Football Practice Field—Open Air Option

Architectural Narrative

In this first option, the feasibility of erecting a pre-engineered metal building (PEMB) located close to the existing stadium was studied. By locating the covered, open air, full size, practice field close to the stadium, this would avoid required demolition of the existing baseball facilities.

While the baseball building would be saved, this would require the relocation of significant site utilities that run parallel to the stadium. In addition to the conflict with the site utilities, careful coordination and planning will be required in order to design new foundations for the PEMB fairly close to the existing stadium foundations. Due to the large forces that PEMB's must withstand, their footings are much larger than typical seen in construction. Refer to the following structural narrative for more information.

The PEMB in this option would only provide a roof over the extent of the full size football field. The sides and both ends would be open to the elements. No mechanical or plumbing systems are required, though lighting can be implemented to allow use of the field when dark outside.

Two filming towers located diagonally across from one another will provide covered vantages to film practices from.

Structural Narrative

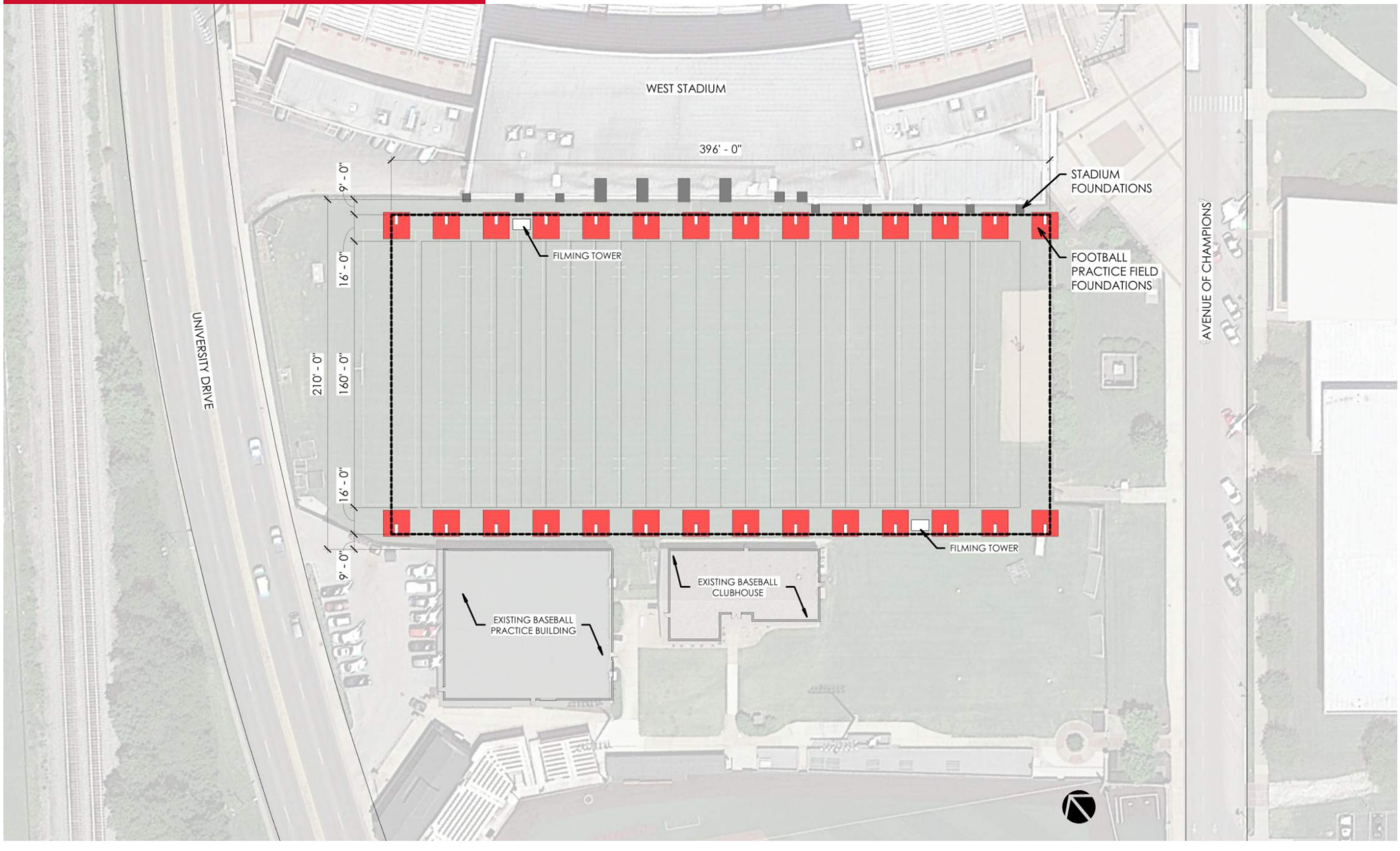
The open practice field structure will be a pre-engineered metal building designed by the building supplier with no end walls and partially open side walls. Large tapered steel bents will be spaced at approximately 30' o.c. and will span across the width of the football field, with a clear height at the sides of 24' and a clear height of 60' at the center. Braced frames will be used in every other bay on each side of the building to provide stability. Because the building will be exposed to the elements, all steel framing will be galvanized or coated with a high-performance exterior coating.

Since the adjacent stadium and baseball facility both use spread footings, it is assumed that shallow foundations can be used. Large spread footings will be located under each column, with a size of approximately 16'x16'x3' deep. Final footing sizes will be dependent on the loads provided by the pre-engineered metal building contractor and the results of a geotechnical investigation. New foundations will be adjacent to the footings for the existing baseball facility. Care must be taken during the excavation of the new footings to ensure that the existing footings are not undermined. Also, because of how close the new building is to the existing stadium, the footings will likely interfere with the existing lobby/Hall of Fame foundations. The new and existing footings can be tied together with the existing footings underpinned as needed.

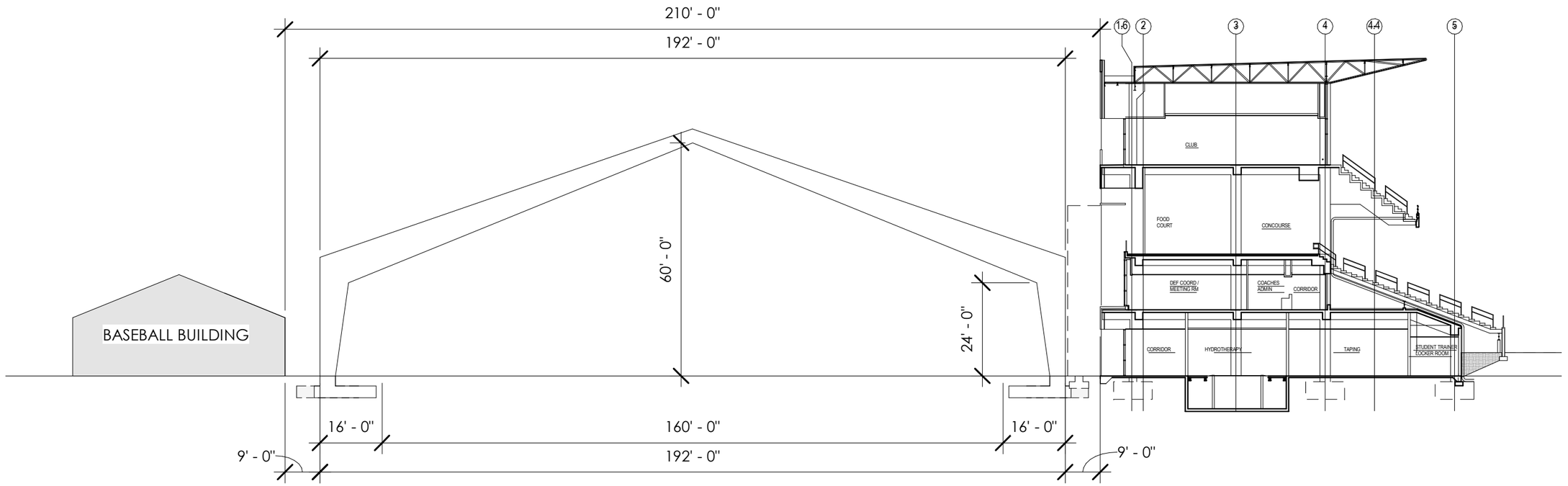
Cost Opinion

Site Development			$560,000.00
Field			$1,200,000.00
PEMB structure/roof	$113.00/SF	80,000 SF	$9,040,000.00
Utility Relocation			$500,000.00
MEP	$15.00/SF	80,000 SF	$1,200,000.00
CONSTRUCTION ESTIMATE			$12,500,000.00
Soft costs 20%			$2,500,000.00
TOTAL PROJECT ESTIMATE			**$15,000,000.00**

CONCEPTUAL SITE PLAN—OPEN AIR FOOTBALL PRACTICE FIELD



BUILDING SECTION —OPEN AIR FOOTBALL PRACTICE FIELD



CONCEPTUAL RENDERING—
OPEN AIR FOOTBALL PRACTICE FIELD

CONCEPTUAL RENDERING —OPEN AIR FOOTBALL PRACTICE FIELD

Football Practice Field—Enclosed Option

Architectural Narrative

The second option explored the feasibility of a fully enclosed indoor practice facility. As an enclosed structure, per building code the PEMB is required to be at last 30' away from another building. If the 30' distance was not followed, this would require a large amount of the windows on the West side of the existing stadium to be replaced with fire rated glazing, incurring a large cost for WKU. Additionally, shifting the practice field away from the stadium allows it to miss the previously mentioned site utilities parallel to the stadium. However, the shift away from the stadium, towards the baseball stadium does mean the new practice field encroaches on the existing baseball clubhouse and batting cages. In addition to an enclosed practice field, a scheme for a replacement baseball clubhouse with integrated hitting cages was conceptually developed.

The new baseball clubhouse would be constructed attached to the practice facility. This would allow direct access between both buildings, as well as take advantage of the PEMB system to structure a large portion of the new clubhouse.

The new baseball clubhouse would provide some efficiencies by combining the uses of both the separate existing hitting cages building and the existing clubhouse. It's size would also provide larger coach, and player amenities. A second floor could be built at the same time to provide shell space for future growth. The second floor could also provide opportunities for observing or recording practices held on the adjacent football practice field.

Taking cues from the material palette used on other athletic buildings on campus a combination of brick, metal panel and curtainwall is proposed.

A revised parking layout along University Drive would replace the current lot. This could provide an equal number of parking spaces that currnetly exist, if not more. This same lot would provide garbage truck access to a dumpster, and loading zone for deliveries. This would be well located to serve the baseball stadium, new baseball clubhouse, and the football indoor practice facility. Along Avenue of Champions, a small parking lot directly off of the street would provide convenient parking for coaches, visitors, and recruits. This would be located directly next to the entrance of the new baseball clubhouse.

Structural Narrative

The enclosed practice field structure will be a pre-engineered metal building designed by the building supplier with a metal panel façade on all sides. Large tapered steel bents will be spaced at approximately 30' o.c. and will span across the width of the football field, with a clear height at the sides of 24' and a clear height of 60' at the center. Braced frames will be used in every other bay on each side of the building to provide stability. All steel framing will be primed.

The existing baseball building, and batting cage will be replaced with a new baseball facility built integral with the pre-engineered building enclosing the adjacent football field. Most of the building will be pre-engineered metal building with 75'clear spans. Columns between the football field and baseball facility will be shared. The entry space, including a lobby, conference room and a few coach's offices will be stick built with cold-formed metal framing and have a generally higher level of finish.

Since the adjacent stadium and baseball facility both used spread footings, it is assumed that shallow foundations can be used. A 1'-6" wide by 3'-0" deep wall footing will be used around the perimeter of the buildings. Large spread footings will be located under each column, with a size of approximately 16'x16'x3' deep at the football field and a little smaller baseball facility. Final footing sizes will be dependent on the loads provided by the pre-engineered metal building contractor and the results of a geotechnical investigation. Because the building will be further away from the existing stadium, it is not expected that there will be interferences between the new and existing foundations.

MEP Narrative - Enclosed Fleld

Field shall heated and ventilated only. Heating and ventilation shall be provided by wall mounted, gas-fired, pressurization type heating units. 8 units shall be used to heat and ventilate the practice field area. In addition, wall prop fans (16 fans total, 8 on either end of the building) shall be used on each end of the building to create a push-pull arrangement and allow cross ventilation of the field during summer months. Each fan shall be 6 feet in diameter and shall flow approximately 65,000 CFM.

Provide new 480 volt, 3 phase, 4 wire, 1000 amp service to serve the practice field and baseball field house. Provide quad receptacles at each column in the practice field area and at the filming towers. Use high bay LED fixtures and provide 100 foot candle lighting level at playing surface.

Provide new fire alarm system for the practice field and baseball field house. Add new devices in all areas, such as horn strobe devices, smoke detectors, and pull stations.

Install new sprinkler system, connect new sprinkler service at College Heights Boulevard. Provide fire department connection on street side of building. Sprinklers in practice field area shall be ordinary hazard group 1, upright sprinkler heads.

Install a new gas service to the building provide gas to the HVAC heaters in the practice field and to the HVAC units serving the baseball field house. Install new water service to serve the practice field and baseball field house, connect water service at College Heights Boulevard. Provide six hose bibs/hydrants around the perimeter of the practice field building.

MEP Narrative - Baseball Clubhouse

The clubhouse shall be conditioned using roof top units. Duct shall be extended down to the spaces and distributed to each room. Units shall use gas heat and DX cooling. Exhaust fans will provide exhaust to the restrooms, locker rooms, and shower rooms. The batting cages shall be heated only using unit heaters.

Power will be provided by the same service used for the practice field. Provide power for each office (at least one receptacle on each wall). Light shall be provided using 2x2 LED panels. All areas shall use switches with built in vacancy sensors to turn of lights when unoccupied.

Provide new fire alarm system for the baseball field house. Add new devices in all areas, such as horn strobe devices, smoke detectors, and pull stations.

Extend sprinkler zone from practice field sprinkler service to serve the baseball field house. Sprinklers in field house shall be light hazard and ordinary hazard group 1. Provide pendant sprinkler heads in areas with ceilings and upright sprinkler heads where no ceilings. Provide caged head protection in batting cage area.

Extend gas piping from new service at practice field and connect to the roof mounted HVAC equipment and gas fired water heater. Extend water piping from new service at practice field and connect to all fixtures in the field house. Install a 100 gallon, 199 MBH condensing water heater to provide hot water to all fixtures in the field house. Install new 4-inch sewer service to the building and connect at College Heights Boulevard.

Cost Opinion

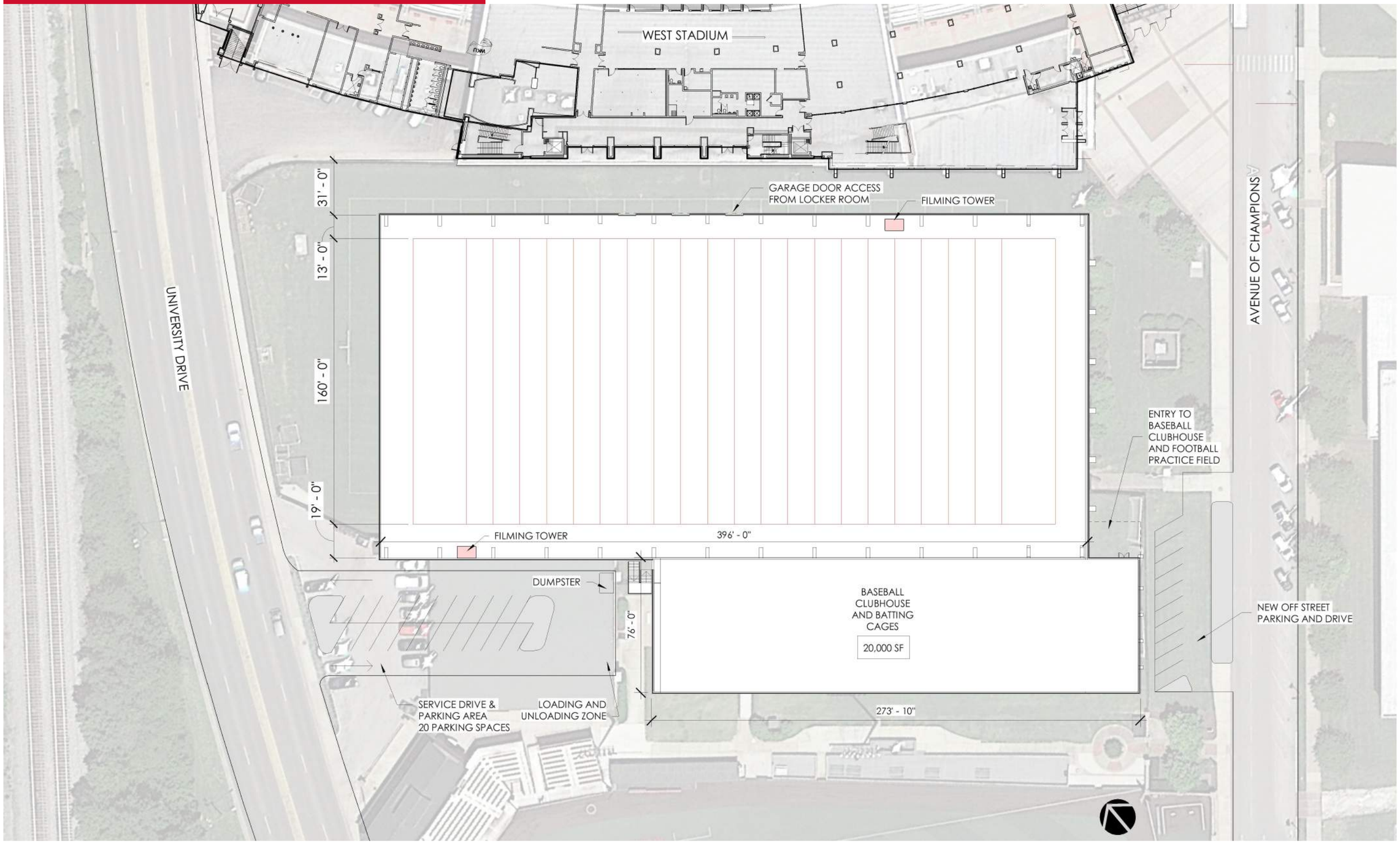
Enclosed Practice Field

Demo (existing buildings)	$3.00/SF	14,000 SF	$42,000.00
Field			$1,000,000.00
Site Development			$520,000.00
PEMB structure/roof	$113.00/SF	80,000 SF	$9,040,000.00
Architectural Practice Field Envelope	$45.00/SF	41,000 SF	$1,845,000.00
Mechanical			$440,000.00
Electrical			$1,200,000.00
Plumbing			$75,000.00
Sprinkler	$4.00/SF	80,000 SF	$320,000.00
Fire Alarm			$75,000.00
CONSTRUCTION ESTIMATE			$14,557,000.00
Soft costs 20%			$2,911,400.00
TOTAL PROJECT ESTIMATE			**$17,468,400.00**

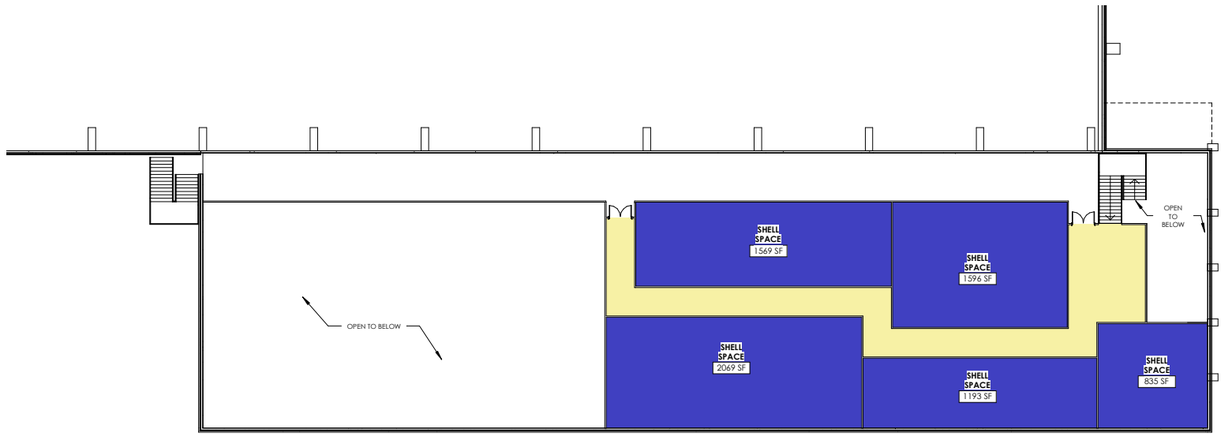
Baseball Clubhouse

Site Development			$151,000.00
Architectural/Structural	$160.00/SF	20,000 SF	$3,200,000.00
Baseball Clubhouse Shell Space	$45.00/SF	8,000 SF	$360,000.00
Mechanical			$325,000.00
Electrical			$105,000.00
Plumbing			$350,000.00
Fire Alarm			$65,000.00
Sprinkler			$70,800.00
CONSTRUCTION ESTIMATE			$4,626,800.00
Soft costs 20%			$925,360.00
TOTAL PROJECT ESTIMATE			**$5,552,160.00**

SITE PLAN—ENCLOSED FOOTBALL PRACTICE FIELD



CONCEPTUAL FLOOR PLANS—BASEBALL CLUBHOUSE



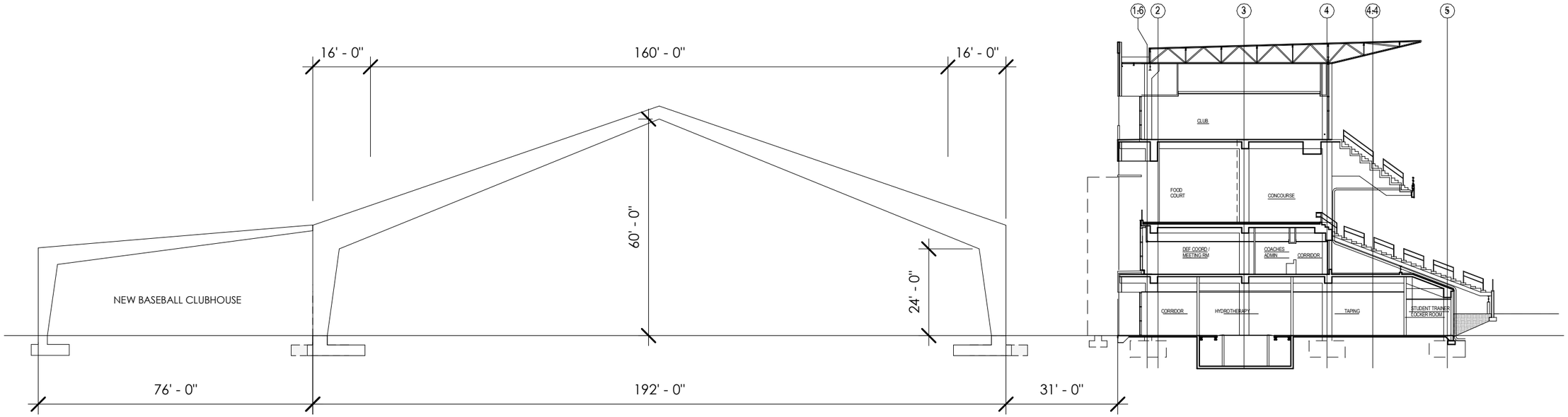
Level 2

Level 1

- CIRCULATION
- SHELL SPACE

- ADMINISTRATION
- CIRCULATION
- CLASSROOM
- LOUNGE
- PRACTICE SPACE
- SUPPORT SPACES

BUILDING SECTION



CONCEPTUAL RENDERING—ENCLOSED FOOTBALL PRACTICE FIELD

CONCEPTUAL RENDERING—ENCLOSED FOOTBALL PRACTICE FIELD

Press Box Elevator Addition

Architectural Narrative

Currently, access to the press box is limited to only two stairs. These are accessed only by going through the bleacher aisle in the upper seating level. There is no elevator access to the press box level. This is an issue because not only is there no accessibility for visitors with disabilities. Also any equipment or supplies for the press box brought by hand up several flights of stairs, and mostly in the outdoors.

Several locations were studied for creating an accessible and more direct route to the press box. A new freestanding elevator and stair tower located centrally to the press box, outside of the stadium footprint, will provide the desired access. A direct route from the nearby sidewalk will lead guests, visitors and athletic staff to an accessible path that is isolated from the rest of the gameday activities or fans.

The proposed location will require the removal of the 140' tall light pole used for lighting the field. These lights can be relocated on top of the existing press box roof. Refer to the press box expansion narrative for more information.

The main features of the new structure will be an elevator, egress stair, lobby and bridge providing access to the press box. Due to the travel distance from the ground floor to the press box, a hydraulic elevator is not an option. A machine room-less (MRL) elevator will carry passengers from the ground floor to the press box level. Depending on the elevator manufacturer, a separate Remote Room may be needed located relatively close to the shaft with various elevator equipment installed inside. Once at the press box level, visitors will walk through a bridge, connecting the new elevator tower to the press box. From within the egress stair tower, a maintenance ladder will provide access through a hatch to the roof. This will also serve as means to access the new stadium lights and other mechanical equipment atop the existing press box roof.

Due to the location of the press box from the outside wall of the stadium at the ground, a bridge is required spanning from the elevator lobby to the press box. Due to the limited structural capacity of the concrete beams at the press box for supporting additional loads, the bridge will need to be entirely supported by the elevator tower. Refer to the structural portion of this narrative for more information.

Taking cues from the material palette of the existing stadium, the elevator tower is clad in brick, metal panel and curtainwall. The exterior corner of the tower is nearly fully transparent. This will provide views from within the stair and create an opportunity to display some large scale athletics branding from inside the stair wall.

Structural Narrative

A new tower will be added on the outside of the football stadium to provide direct access to the press box and will include an elevator, stair and small lobby space. The building will be steel framed with columns in the corners of the stair, lobby and elevator and will have diagonal bracing at the perimeter for lateral stability. At the top of the tower, an enclosed bridge to the press box will be cantilevered off the tower structure and separated from the press box by an expansion joint. The bracing within the stair tower will be continued to form floor-to-roof trusses on each side of the bridge. Because of the tall, slender aspect ratio of the tower, overturning forces from wind and seismic loads will be very large, necessitating the use of deep foundations and hold-down/rock anchors. Anchors will need to be designed and installed by a special contractor for uplift forces developed during design.

MEP Narrative

Power for the new elevator shall be provided from emergency power panel EMHVE1. A load study should be completed to ensure the emergency power system has adequate capacity to power the elevator.

Install a new sump pump for elevator sump pit, spill pump discharge to grade.

Cost Opinion

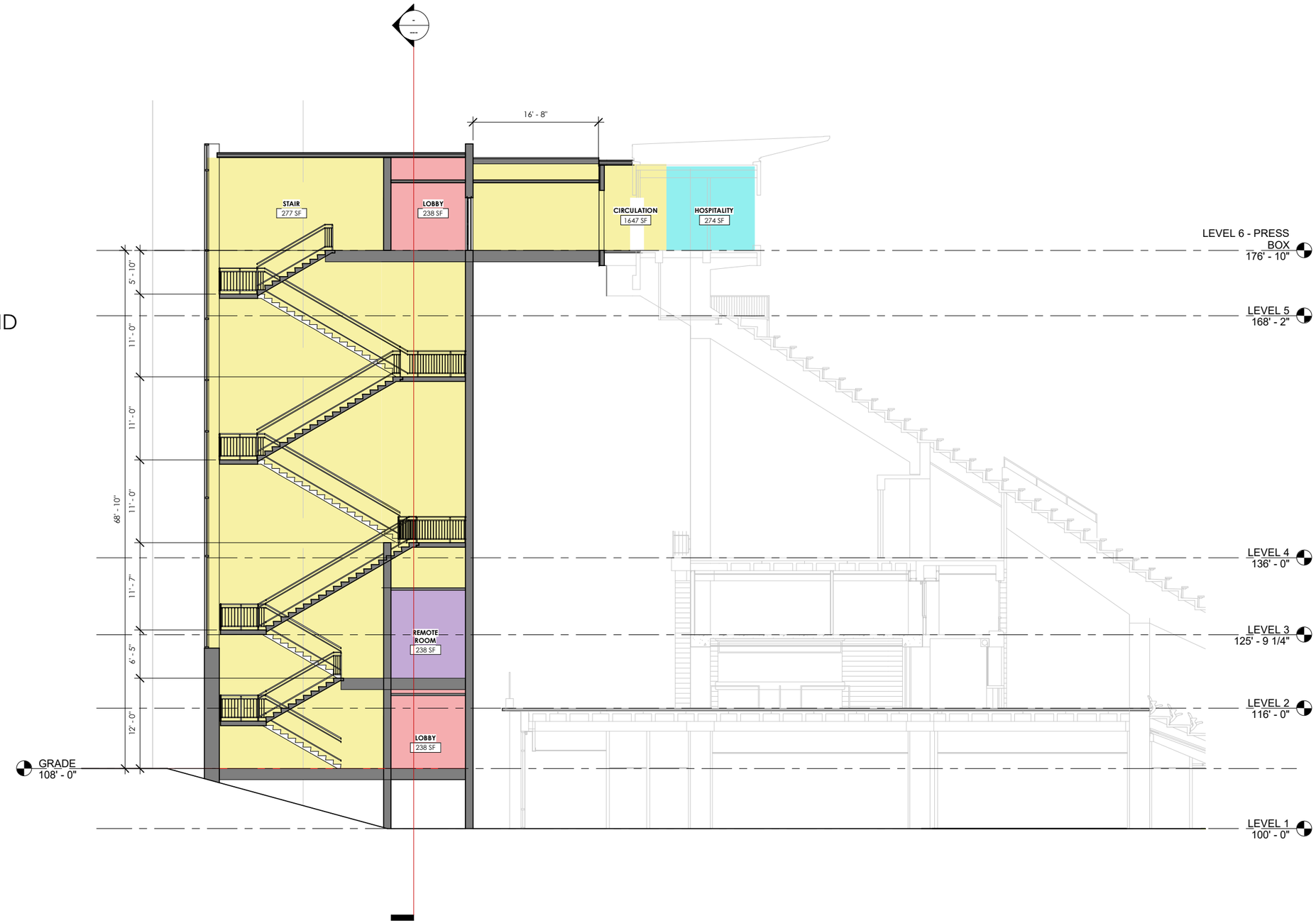
Demo Stadium Lights			$5,000.00
Structure/Roof			$615,000.00
Metal Panel	$40.00/SF	5,500 SF	$220,000.00
Curtainwall	$80.00/SF	2,600 SF	$208,000.00
Brick	$18.00/SF	850 SF	$15,300.00
Metal Stair			$60,000.00
Mechanical			$5,000.00
Electrical			$20,000.00
Fire Alarm			$5,000.00
Plumbing			$10,000.00
Sprinkler			$5,000.00
Site Development			$80,000.00
Elevator			$180,000.00
CONSTRUCTION ESTIMATE			$1,428,300.00
Soft costs 20%			$285,660.00
TOTAL PROJECT ESTIMATE			**$1,713,960.00**

CONCEPTUAL FLOOR PLANS—PRESS BOX ELEVATOR ADDITION

BUILDING SECTION—PRESS BOX ELEVATOR ADDITION

DEPARTMENT LEGEND

- CIRCULATION
- HOSPITALITY
- LOBBY
- SUPPORT SPACES



CONCEPTUAL RENDERING—PRESS BOX ELEVATOR ADDITION

Press Box Expansion

Architectural Narrative

A survey of the existing pressbox and discussions with WKU Athletics revealed several of the challenges the existing press box has:

- Not enough space for all the visitors and support staff for games.
- Lack of privacy. The creation of individual rooms that are physically and acoustically isolated from one another is desired.
- Provide more amenities for guests and visitors.
- Need more than just one restroom and have facilities that are accessible.
- Add an elevator to create accessibility to the press box.
- The existing garage doors are outdated and a new window system with operable windows for individual control is desired.
- No air conditioning.

Expansion of the usable square footage of the pressbox is critical in modernizing it. In order to accommodate the additional required rooms, the press box can be expanded by 2 bays at each end. This will provide approximately an additional 1,500 GSF for the press box. At the same time, the width of the corridor in the center of the pressbox may be widened. This can be achieved by utilizing the existing concrete haunches of the original cast in place concrete structure. Removal of the existing exterior wall and additional structural steel will enable the central 4 bays of the corridor to nearly double in width. This will help create a more inviting entrance and make circulation easier. Overall, these moves will increase the overall square footage of the press box by 1,800 square feet.

A new steel structure for field lights may be built atop the existing press box. In the proposed location for the pressbox elevator addition, the existing light pole will need to be taken down. Instead of installing a new light pole elsewhere in the ground, it is proposed that the lights may be relocated on the press box roof. A new structure for mounting field lights should not be compact, creating a greater point load on the existing roof structure. The structure should be long to spread out the additional weight over a wider footprint. Additional lighting studies should be performed by a stadium lighting designer in order to understand the overall height required for the lights. This will help ensure that shadows are not cast from the cantilevered roof on the field side of the press box.

The materials for the pressbox expansion should match and complement the existing stadium architecture. Brick, precast panels, or other masonry products can be used on the 4 expanded bays to match the existing conditions. Due to the structural capacity of the existing concrete beams, lighter weight materials such as metal panel should be used as cladding where the corridor is widened in the middle. Finally, extending the distinctive, cantilevered metal panel roof over the new additions will help create a cohesive appearance and blend the new additions with the original structure.

Structural Narrative

The press box expansion includes additions in two different locations. The press box will be deepened in 4 bays between Line K & P by taking advantage of the large precast haunches that extend approximately 4'-7" past the face of the existing exterior wall of the press box. Galvanized steel beams will span between these haunches and support a new slab on metal deck to match the T/slab elevation of the existing press box floor. The new exterior wall framing will be metal studs with a metal panel façade supporting metal deck roofing to minimize weight added to the existing framing. Additionally, to help offset the load being added, the precast band at the roof of the press box and the precast column wrap will be removed. Both the new roof and floor structure will be attached hard to the existing precast press box structure.

Additionally, the ends of the press box will be extended two bays in each direction. Two steel columns will be added each on Lines F, G, S & T to support the new press box floor and roof. The new structure will be steel framed with slab on metal deck for the floor and metal deck for the roof. Diagonal bracing will be added in the end bays on Lines F & T and across the back of the new space to provide lateral stability. The exterior walls will be cold-formed metal framing with a masonry brick façade. Steel lintels will be used to support masonry over the large windows facing the field.

Based on a preliminary review of the existing stadium structure, the concrete bents appear to have sufficient capacity for the additional press box overbuild, so no reinforcement of the bents is anticipated. Because of the additional seismic mass and wind sail area added to the stadium, a full lateral analysis of the stadium structure will need to be performed but was not included as part of the scope of this initial study. While it is not anticipated that the lateral loads added to the stadium will be large enough to trigger a full upgrade of the building's overall lateral system, it is possible that isolated members may need to be reinforced. Additionally, the existing spread footings at columns F-2, G-2, S-2 and T-2 will likely need to be reinforced due to additional load from the enlarged press box. This will require removal of slab on grade around the footing, enlargement of the existing footing and replacement of the slab on grade to match the existing adjacent slab.

MEP Narrative

Chilled and hot water piping will be extended from the first floor to mechanical room 1048. Variable speed, in-line circulating pumps will be installed in the hot water supply and chilled water supply piping, pumps will modulate to control differential pressure in the piping. The piping will route up through the chase in the mechanical room to the press box. Hot and chilled water piping will be routed to nineteen (19) 24x24 cassette-style, 4-pipe, chilled and hot water fan coil units. The fan coil units will be located in each space and shall use wall mounted thermostats to control temperature in each space. Controls for the new pumps and fan coils shall be connected to the WKU Campus BAS system. Condensate piping from each fan coil shall be collected together and routed down to a drain on a level below.

Power shall be routed from existing electrical panel 6A to new fan coil units and new lighting throughout press box. New light fixtures shall be LED 2x2 panels. All lights shall use vacancy detectors to turn lights off when space is unoccupied.

Add new devices in the press box, such as horn strobe devices and pull stations.

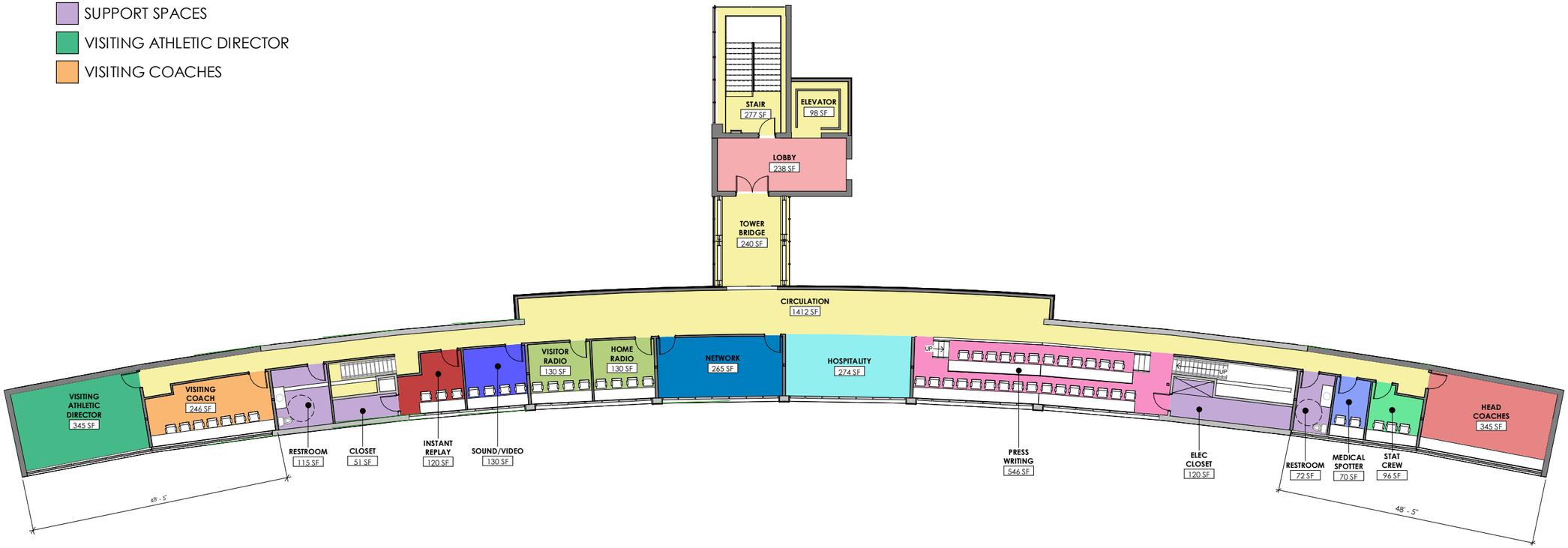
Reconfigure existing sprinkler system to accommodate new layout and additional area.

Two new restrooms will be created in the press box. One of the restrooms replaces an existing restroom. Reconfigure the water, waste, and vent piping to accommodate the new restroom layout. Extend water piping to ceiling and over to the new restroom at the opposite end of the press box. Connect water, waste, and vent piping to the new plumbing fixtures. Route vent piping through the roof. Route new waste piping down to existing waste piping on level 3.

FLOOR PLAN - PRESS BOX EXPANSION

DEPARTMENT LEGEND

- CIRCULATION
- HEAD COACHES
- HOSPITALITY
- INSTANT REPLAY
- LOBBY
- MEDICAL SPOTTER
- NETWORK
- PRESS WRITING
- RADIO
- SOUND/VIDEO
- STAT CREW
- SUPPORT SPACES
- VISITING ATHLETIC DIRECTOR
- VISITING COACHES



Cost Opinion

Demo	$17.50/SF	2,800 SF	$49,000.00
Expansion bays	$325.00/SF	1,400 SF	$455,000.00
Corridor Width	$205.00/SF	400 SF	$82,000.00
Renovation	$117.00/SF	3,600 SF	$421,200.00
New Windows	$85.00/SF	1,500 SF	$127,500.00
Mechanical			$185,500.00
Electrical			$162,000.00
Plumbing			$39,000.00
Fire Alarm			$37,500.00
Stadium Lights (new)			$30,000.00
CONSTRUCTION ESTIMATE			$1,588,700.00
Soft costs 20%			$317,740.00
TOTAL PROJECT ESTIMATE			**$1,906,440.00**

CONCEPTUAL RENDERING—PRESS BOX EXPANSION

Concessions Expansion

Architectural Narrative

In order to expand the types of food offered for fans at football games, locations were explored for future food service space. Four locations were identified to help expand the number of POS and provide grilling and frying capacity on site. These locations are near existing visitor amenities and easily accessible.

Between the 4 proposed locations, due to physical restrictions and adjacency to main circulation paths, all were limited to be the same size. Since no one space was large enough to provide both cooking and sales at the same location, it is proposed to divide these functions up. Of the four locations identified for food service expansion, two will be POS stations for selling food and two for concession support.

The new POS stations will have enough space for 2 POS, soda fountains, and warming equipment to be able to provide hot food. Space will be allocated for portable warming carts to deliver cooked food to be sold.

The new concession support spaces will have space for a grill station, several fryers, and warming carts to deliver cooked food to new and existing POS stations for sale. A commercial grade hood will be required. Freezers and coolers will also be needed as well as ample sized stainless steel surfaces. The local health department will need to be advised for any future planning.

MEP Narrative

Chilled and hot water piping will be extended from the concessions are adjacent to the new Concession support areas. New Fan coil units will be installed in each support area and shall use wall mounted thermostat to control temperature. Controls will be connected to the WKU Campus BAS system. The estimate includes a $50K allowance for two (2) type 1 fire suppressed exhaust hoods. One in each concession support area.

Power shall be routed from existing electrical panels in concession areas. New light fixtures shall be LED 2x4 panels. All lights shall use vacancy detectors to turn lights off when space is unoccupied. It is assumed that all cooking equipment added in the concession support area will be electric. Provide shunt trips for the equipment located under the hood.

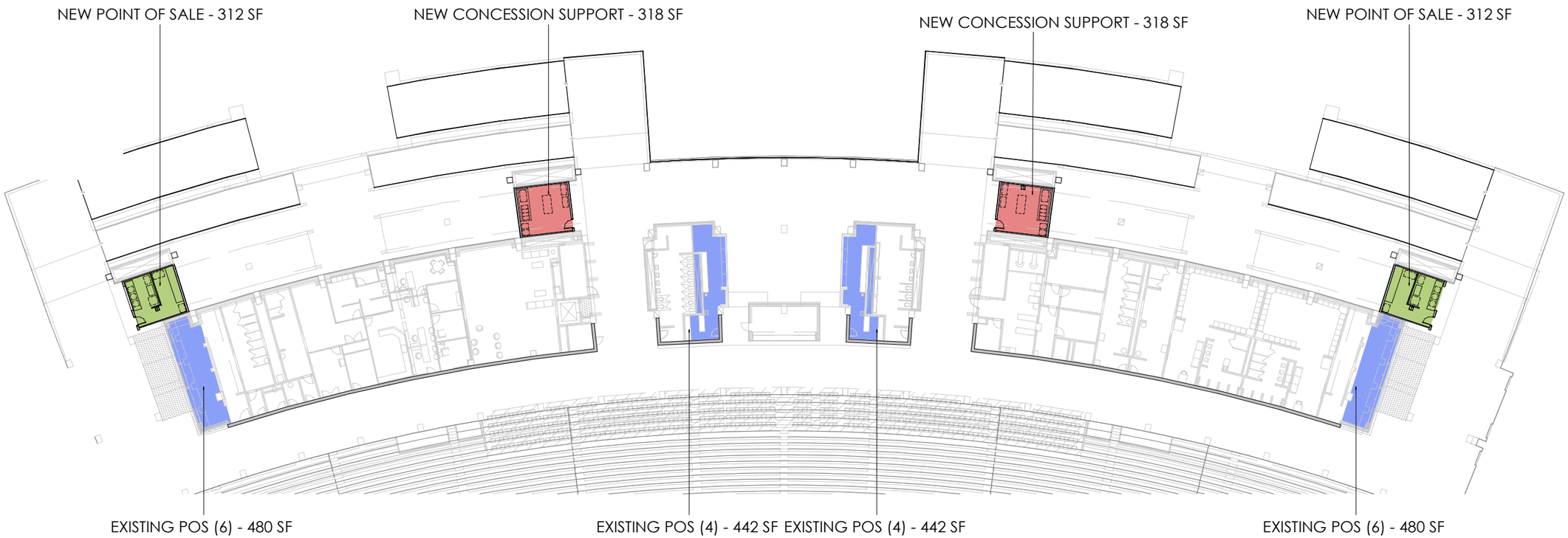
Hand washing lavatories shall be provided at each of the new concession prep areas. Connect water, waste, and vent to existing utilities in adjacent concession area.

Add new devices in the concession prep areas, such as smoke detectors and horn strobe devices. Monitor hood fire suppression system.

Cost Opinion

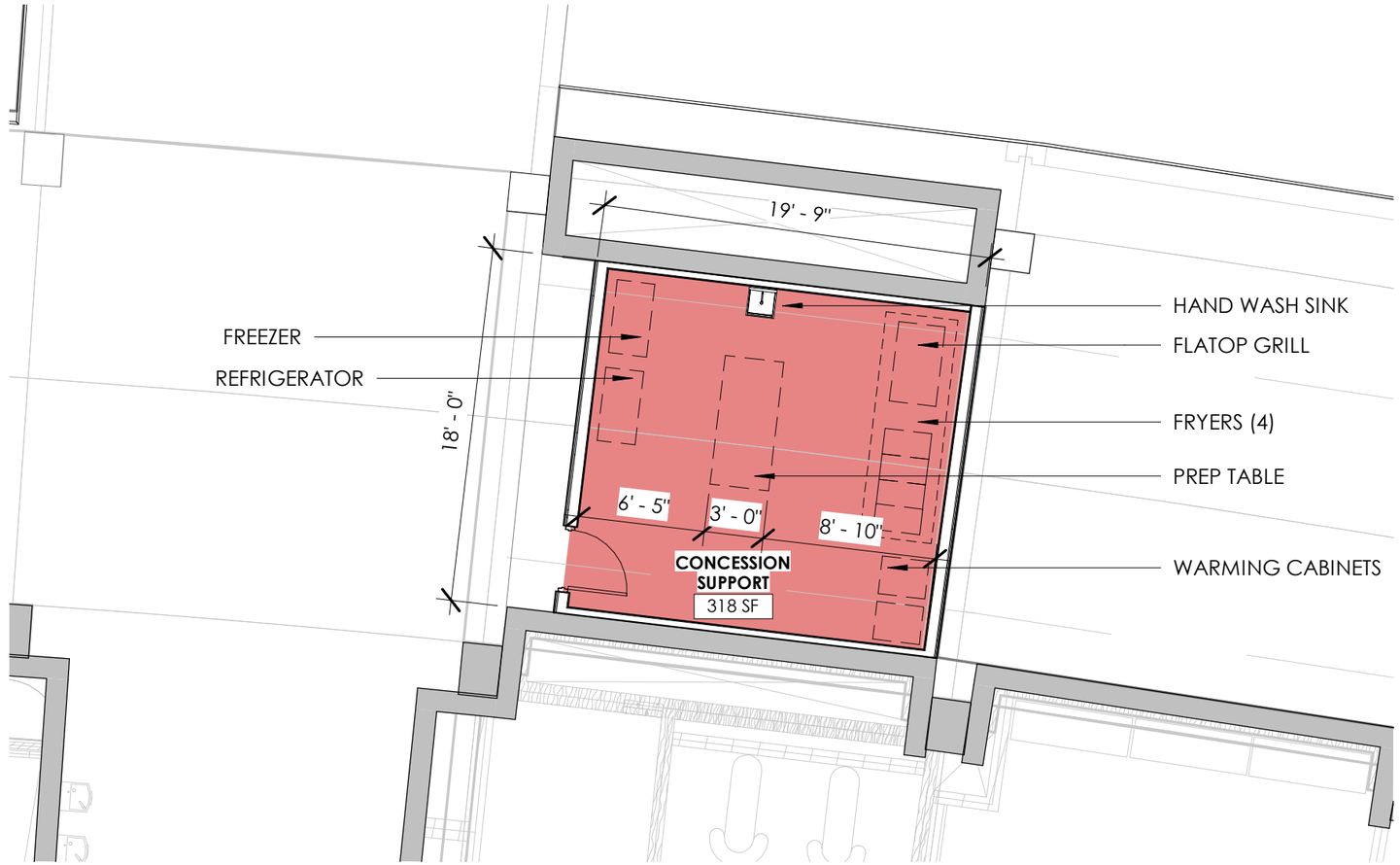
Architectural	$135.00/SF	1,300 SF	$175,500.00
Food Service Equipment - POS	$20,000.00	2 EA	$40,000.00
Food Service Equipment - Concession Support	$50,000.00	2 EA	$100,000.00
Mechanical			$100,000.00
Plumbing			$20,000.00
Electrical			$48,000.00
Fire Alarm			$20,000.00
CONSTRUCTION ESTIMATE			$503,500.00
Soft costs 20%			$100,700.00
TOTAL PROJECT ESTIMATE			**$604,200.00**

SECOND FLOOR PLAN - CONCESSION EXPANSION



FLOOR PLAN - POINT OF SALE

FLOOR PLAN - CONCESSION SUPPORT



Diddle Arena—Training Room / Nutrition Bar Renovation

Architectural Narrative

The renovation of the training room will remove unneeded equipment, provide more space for training tables, and create a nutrition bar.

By removing unneeded equipment and reorganizing space, it will be possible to increase the number of training tables and provide additional room for athletes to be treated. Additionally, a more convenient and accessible restroom is more ideally placed within the space.

The entrance into the space will be widened to create a more welcoming impression. With the expanded training space located directly to the right, cardio equipment can now be found next to training tables for improved access without relying on the weight room.

The newest feature to be added is a nutrition bar. This will be located along the corridor as student atheletes enter and leave the weight room.Providing a sizeable recess from the corridor will create space for counters, base and wall cabinets. Athletes will be able to take pre-packaged food, sports drinks, or create smoothies on demand. The nutrition bar will provide a convenient and healthy food and drink options to help student atheletes meet their athletic goals.

In the weight room, a refresh of the space with new paint, new flooring and athletic graphics would complete the proposed renovations.

MEP Narrative

The existing roof mounted air handler will be converted to a variable volume unit. This will require the addition of a variable frequency drive on the supply fan and modifications to the sequence of operation. In addition, VAV terminals will need to be added to several of the ducts serving the spaces, approximately 4 VAV terminals will need to be added to accommodate the change and space configuration. Hot water piping will be extended to each of the new VAV terminals. Outside air and exhaust air in the space will be balanced and schedule to operate during occupied times.

Plumbing for the existing SwimEx will be removed. The existing cold plunge equipment will be relocated. Extend piping from the cold plunge chiller to the new location. Provide water and drain to new ice maker location. Remove existing restroom fixtures and piping and rework to accommodate new restroom layout. Provide water, waste and vent connections to new sinks.

Disconnect power and equipment for the existing SwimEx. Reconfigure and add receptacles for new layout in training, restroom, and nutrition area. Provide power to new ice maker. New light fixtures shall be LED 2x2 panels. All lights shall use vacancy detectors to turn lights off when space is unoccupied.

Both the fire alarm and existing sprinkler system can be reconfigured to accommodate new layout.

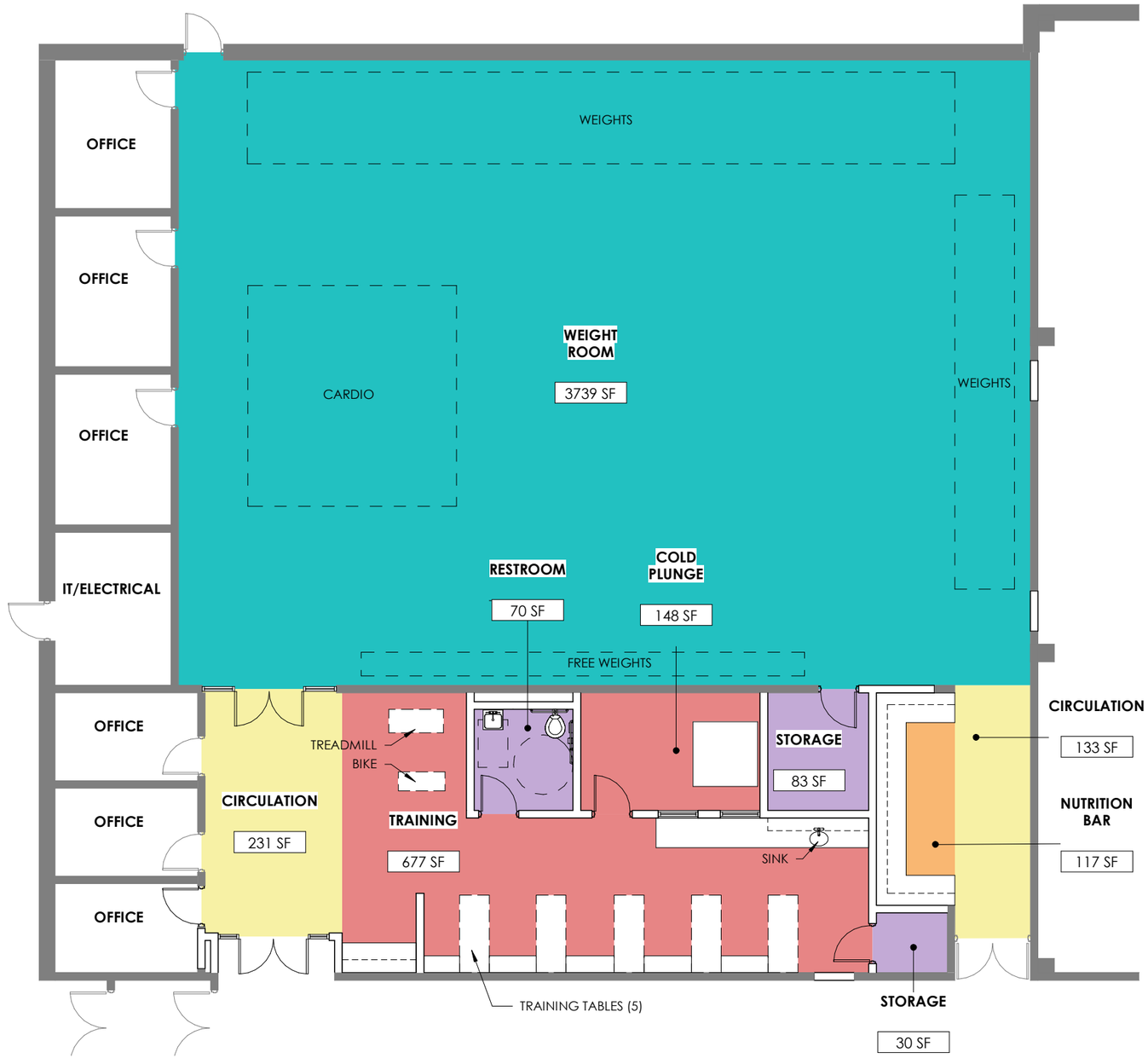
Cost Opinion

Demo Weight Room	$1.00/SF	3,800 SF	$3,800.00
Demo Training	$2.00/SF	1,800 SF	$3,600.00
Architectural	$157.00/SF	1,800 SF	$282,600.00
Mechanical			$50,000.00
Electrical			$35,000.00
Plumbing			$35,000.00
Fire Alarm			$12,500.00
Sprinkler			$5,500.00
CONSTRUCTION ESTIMATE			$428,000.00
Soft costs 20%			$85,600.00
TOTAL PROJECT ESTIMATE			**$513,600.00**

CONCEPTUAL FLOOR PLAN—TRANING ROOM / NUTRITION BAR

DEPARTMENT LEGEND

- CIRCULATION
- NUTRITION BAR
- SUPPORT SPACES
- TRAINING
- WEIGHT ROOM



Diddle Arena—Hall of Champions Lounge Renovation

Architectural Narrative

In order to enhance the fan experience on game day, the study explored how space at the Hall of Champions could be converted into a lounge. This space would be reserved for VIPs and season ticket holders and their guests. It will have a lounge like atmosphere, with a bar and warming kitchen and a variety of seating options. Furnishings will range from group dining tables to more informal seats, couches and bar height tables. Occupancy will be for apprximately 100 guests.

The existing concessions stand will be renovated. About half of the space will be converted to the lounge's bar. The remaining portion will be used as a warming kitchen. No food cooking or preparation will take place here. Instead food prepared elsewhere will be brought to the warming kitchen in mobile heated cabinets.

With an occupancy of greater than 50, a second means of egress must be provided for. This exit is located near the rear of the lounge and will egress to a corridor. This same corridor will preserve access to WKU Athletics offices and conference room adjacent to lounge.

MEP Narrative

The existing air hander serving the area shall be used to condition the space. Return air will need to be ducted across the corridor to the new lounge area. A new four-pipe fan coil unit will be used to condition the catering kitchen. Hot and chilled water piping will be extended from piping in the lounge area. Exhaust will be extended into the catering kitchen from the existing duct in the lounge area. It is assumed that no hood is required for the catering kitchen, only countertop microwaves and small ventless ovens shall be used.

Plumbing for a new handwashing sink and three compartment sink will be added for the bar. Provide a grease trap for the drain from the three compartment sink. In addition, floor sinks, water, and drains will be provided for bar equipment and in catering kitchen. Connect to water, waste, and vent to nearby utilities serving the existing concession area.

Power shall be provided to the new equipment in the bar and catering kitchen. Reconfigure and add receptacles for new layout. Rework existing lighting to accommodate new layout. Add new light fixtures shall be LED 2x2 panels for catering kitchen and storage area. All lights shall use vacancy detectors to turn lights off when space is unoccupied.

Add devices and reconfigure existing fire alarm devices to accommodate new layout.

Reconfigure the existing sprinkler system to accommodate new layout.

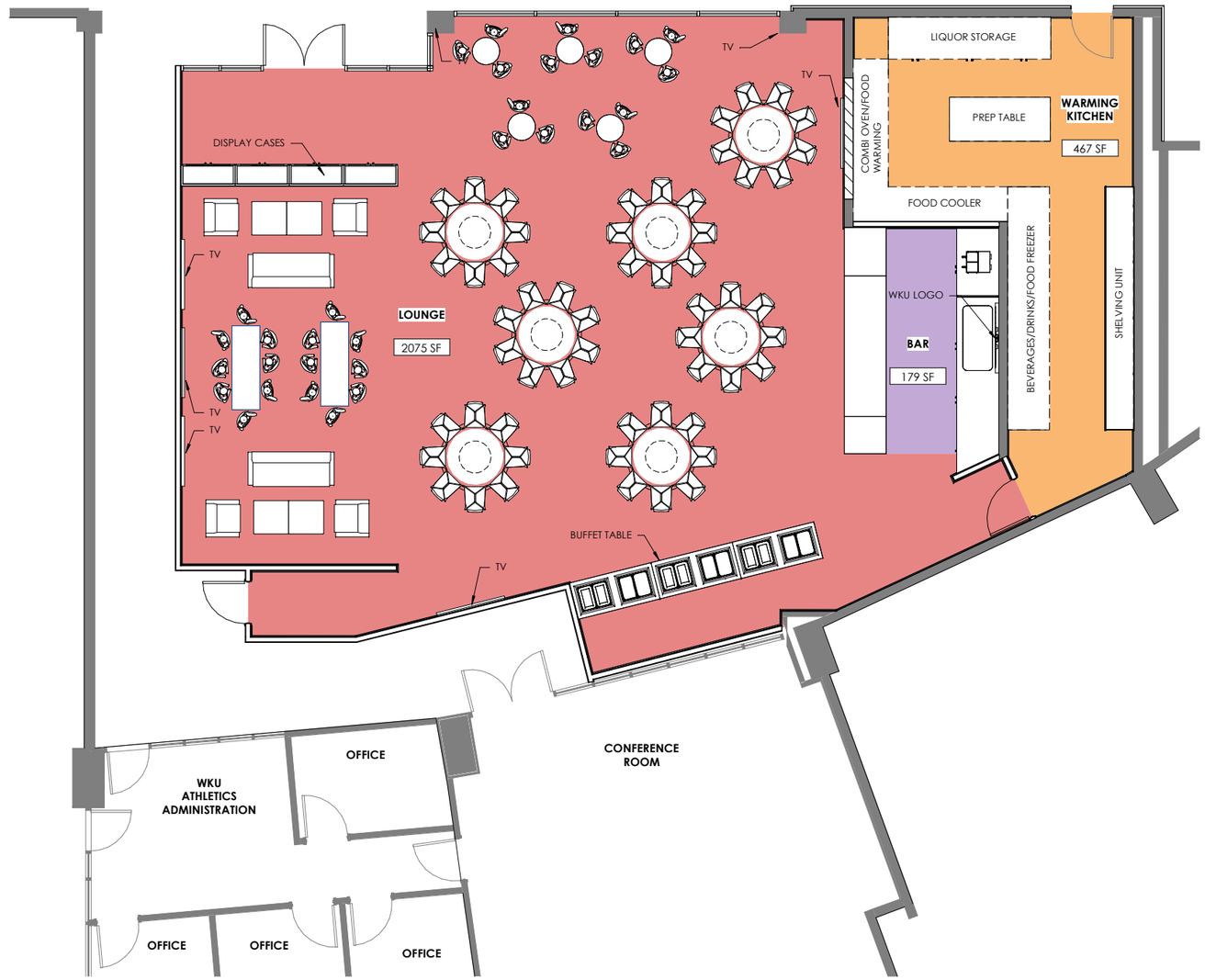
Cost Opinion

Demo	$2.00/SF	2,700 SF	$5,400.00
Architectural Lounge	$170.00/SF	2,200 SF	$374,000.00
Architectural Kitchen	$190.00/SF	500 SF	$95,000.00
Mechanical			$35,000.00
Electrical			$50,000.00
Plumbing			$25,000.00
Fire Alarm			$15,000.00
Sprinkler			$11,000.00
CONSTRUCTION ESTIMATE			$610,400.00
Soft costs 25%			$152,600.00
TOTAL PROJECT ESTIMATE			**$763,000.00**

CONCEPTUAL FLOOR PLAN—HALL OF CHAMPIONS LOUNGE

DEPARTMENT LEGEND

- BAR
- LOUNGE
- WARMING KITCHEN



CONCEPTUAL RENDERING—HALL OF CHAMPIONS LOUNGE

CONCEPTUAL RENDERING—HALL OF CHAMPIONS LOUNGE

WKU One Stop Program

	Existing Area (nsf)	Alternate #1 Include?	Alternate #1 One Stop Program (sf)	Alternate #2 Include?	Alternate #2 One Stop Program (sf)	
Potter Hall:						
Admission	8,691	y	8,700	y	8,700	
Registrar	4,786	y	4,800	y	4,800	
Bursar	2,358	y	2,400	y	2,400	
Financial Assistance	6,981	y	7,000	y	7,000	
Student Conduct	1,545	y	1,600	y	1,600	
Counseling Center	2,828	y	2,900	y	2,900	
Downing Student Union:						
ACDC - Advising & Career Development Center	23,214	n		y	23,300	
SARC - Student Accessibility Resource Center	2,049	y	2,100	y	2,100	
Dean of Students	713	y	800	y	800	
ID Center	690	y	700	y	700	
Jones Jaggers Hall						
SSS - Student Support Services (College)	1,800	y	1,800	y	1,800	
Jones Jaggers Hall (Optional)						
EOC - Education Opportunity Center	908	y	1,000	y	1,000	
VUB - Veterans Upward Bound	1,959	y	2,000	y	2,000	
Ransdell Hall						
Military Services	836	y	900	y	900	
	59,358		**36,700**		**60,000**	
NSF to GSf Building Efficiency (80%):			9,175		15,000	
			45,875		**75,000**	
Program Growth		10%	4,590	10%	7,500	
			50,465		**82,500**	**Total One Stop GSF**

WKU One Stop Boiler Site Option

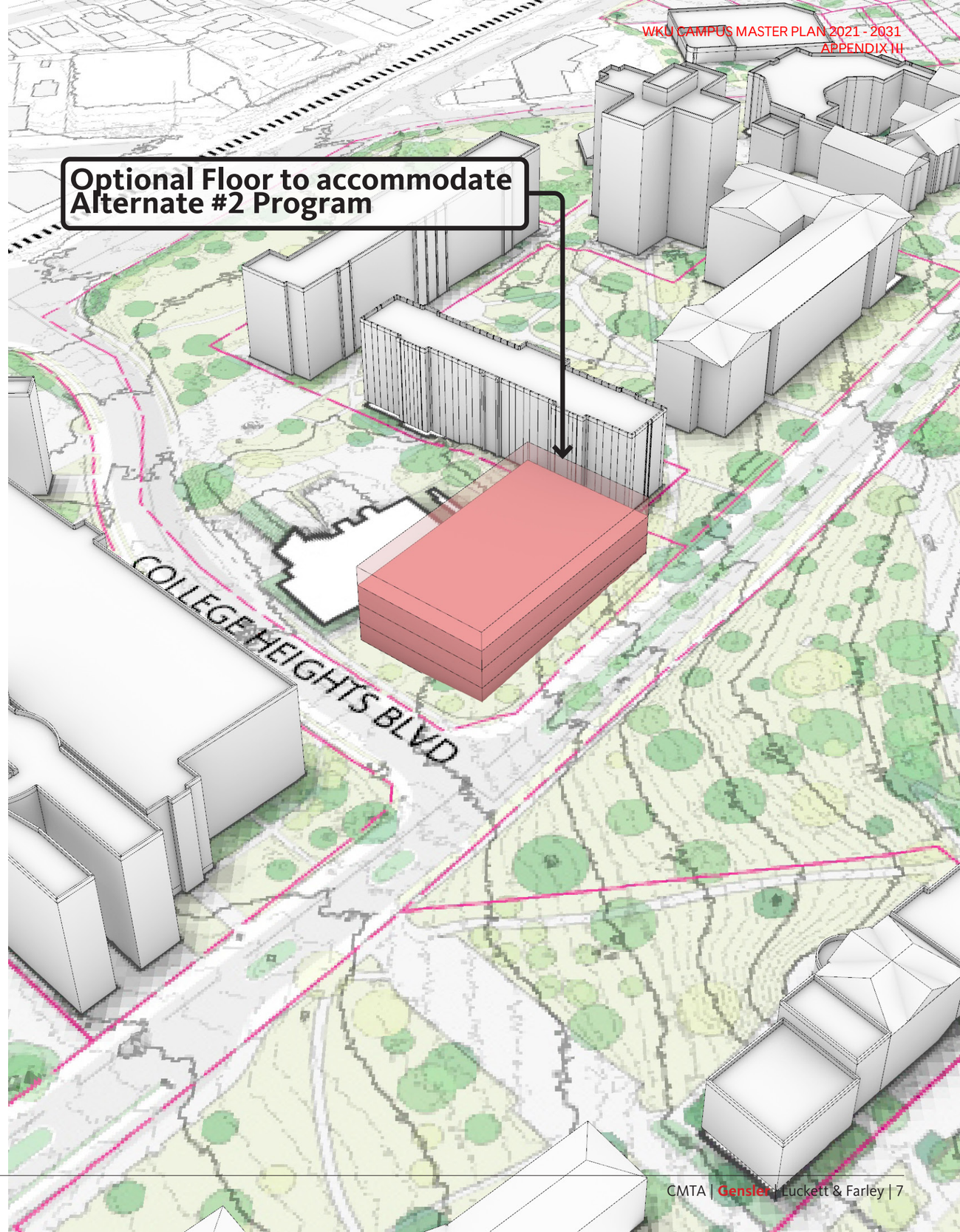
Pros:

Easily accessible to existing parking

Prominent corner of campus

Cons:

Small site that reconfiguring relocating existing boiler plant



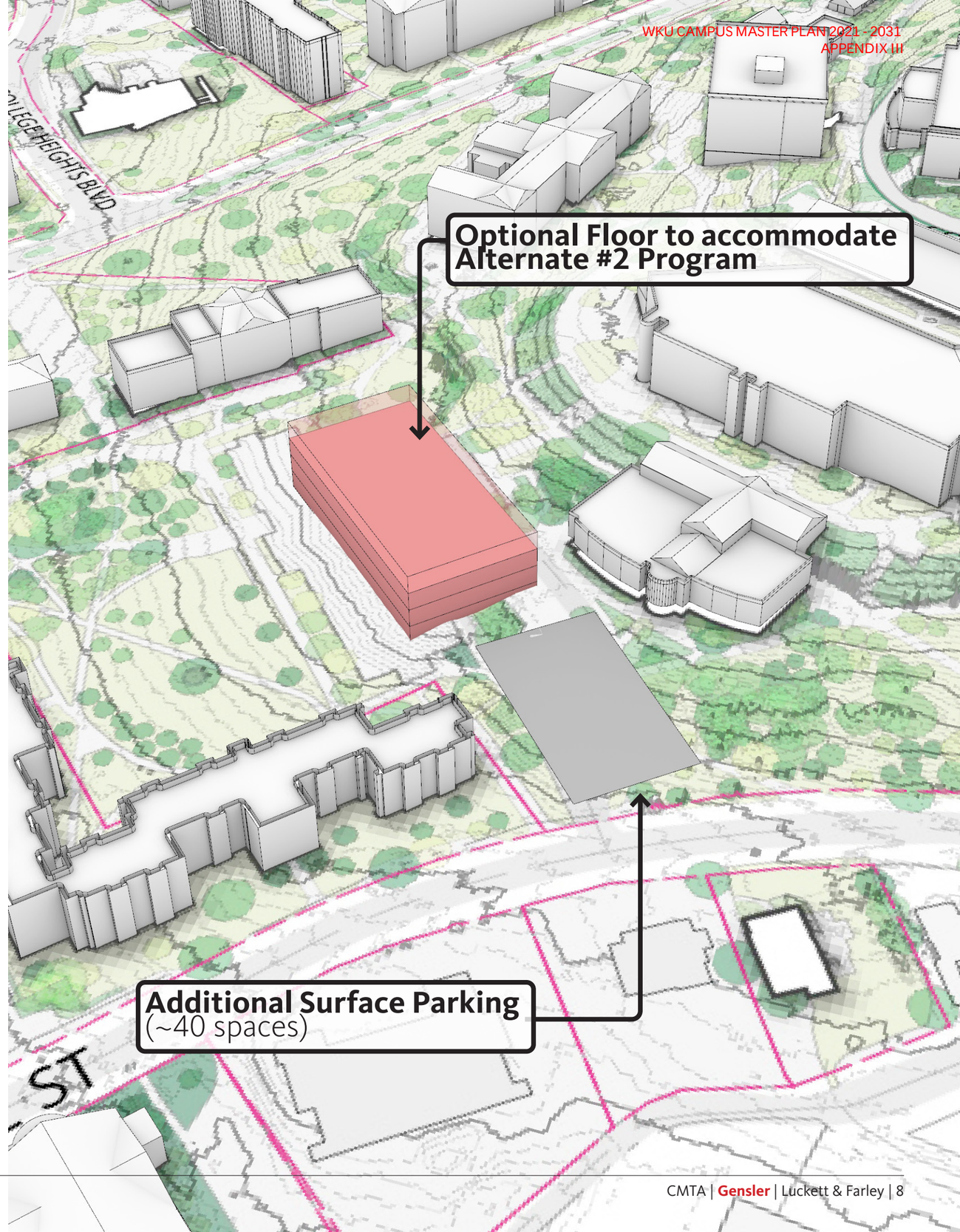
WKU One Stop Grise Hall Option

Pros:

Centrally located on campus in prominent location.

Cons:

Requires additional parking along Normal St.



WKU Campus Master Plan

Campus Master Plan Review

05 June 2020

WKU
+
Gensler

Agenda & Purpose

01 Intro & Project Process

02 Planning Approach & Philosophy

03 Campus Master Plan Initiatives & Options

04 Options & Phasing

05 Next Steps

How might we:

reimagine the campus to increase student enrollment, boost student retention, and promote student success across the region?

Project Process

DISCOVER
5 weeks

ANALYZE
7 weeks

EXPLORE
8 weeks

RECOMMEND + DOCUMENT
12 weeks

KICK OFF & SETUP

PREP & RESEARCH

SYNTHESIS & ANALYSIS

PRINCIPLES & DIRECTIVES

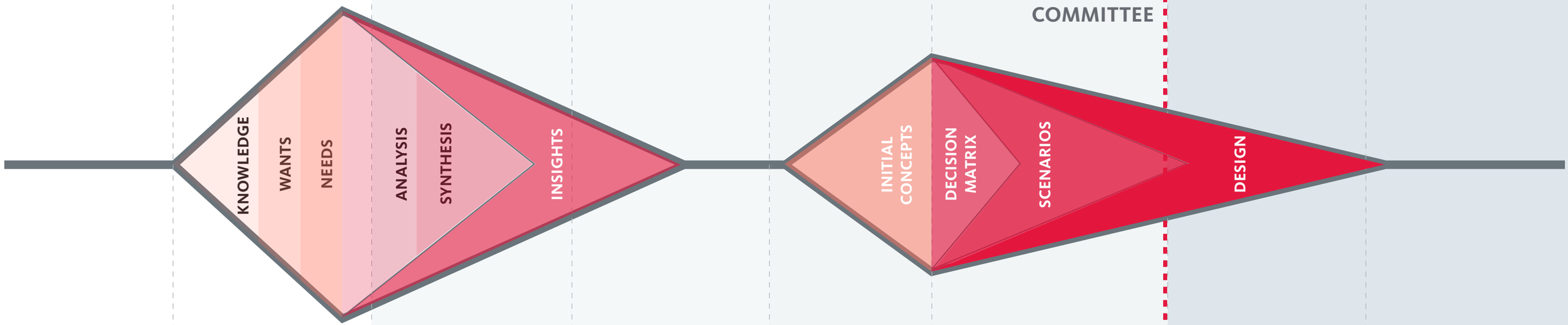
INITIAL CONCEPTS

SCENARIO BUILDING

TODAY
JUNE 05
MASTER PLAN COMMITTEE

FINAL DESIGN

COMPILATION



Align on project priorities and process

Conduct immersive research

Synthesize and Analyze to gain insight

Define Principles to deliver on needs

Define framework and options for campus systems

Build scenarios to compare and contrast

Develop selected design for Master Plan

Document process and outcome

Campus Master Plan

Approach & Philosophy

Planning Approach

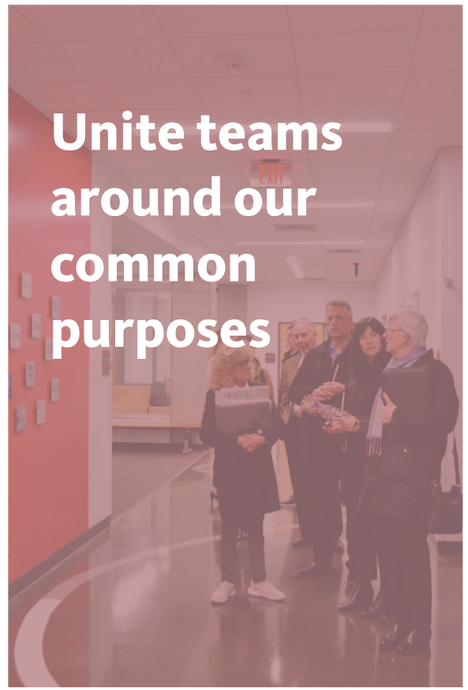
Guiding Principles Summary

Designing to **broaden visibility, build empathy, and prioritize support locations.**

Designing to **trigger conversations, enable personal expression, and seasonal celebrations**

Designing to **co-work with alumni, showcase student journeys, and work with non-traditional students**

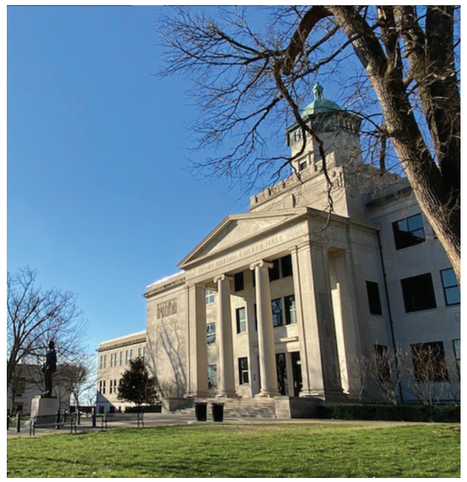
Designing to **boost unexpected connections, encourage opinion-sharing, and invite industry in**



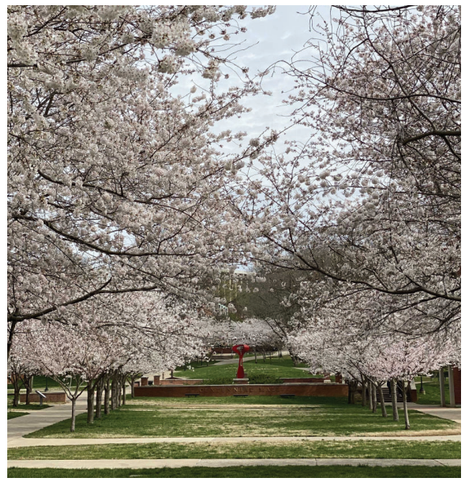
Designing to **co-locate for purpose, intermingle diverse stakeholders, and narrate stories of our goals**

Campus Planning Approach

Planning Philosophy



Creating a deliberate entry experience (whether on north or south side)



Drawing and holding communities together through green spaces (signature plazas)

Clustering new masses to boost a new campus presence (shifting center of gravity of campus)

Energizing pedestrian experience through clarified, continuous, and connected circulation

Connecting buildings to make them work better together (adjacencies w/existing ones)

Campus Planning Approach

Planning Opportunities

1 Reinforce and celebrate the strengths of campus today

In addition to the **rich history and legacy of WKU, the Master Plan will build upon the numerous initiatives currently in progress**, such as the First Year Village, The Commons at Helm, and the Hilltop Study following the demolition of Garrett.

2 Accelerate campus community through open spaces

University campuses are defined by their open spaces and the Master Plan will utilize the campus landscape to amplify the sense of place and community at WKU.

3 Manage program growth though optimized space utilization

Overall, **the Master Plan will not propose the addition of buildings, parking or resources without a clear need** and will consider the removal of existing facilities that are no longer fit for purpose, or at their end of their usable life.

Campus Master Plan

Initiatives & Options

Campus Master Plan

The Scenario includes the following initiatives:

Completion of projects such as The Commons at Helm, the First Year Village, removal of Garrett Conference Center and Tate Page Hall and landscape improvements

The New College of Business

Improve accessibility across campus

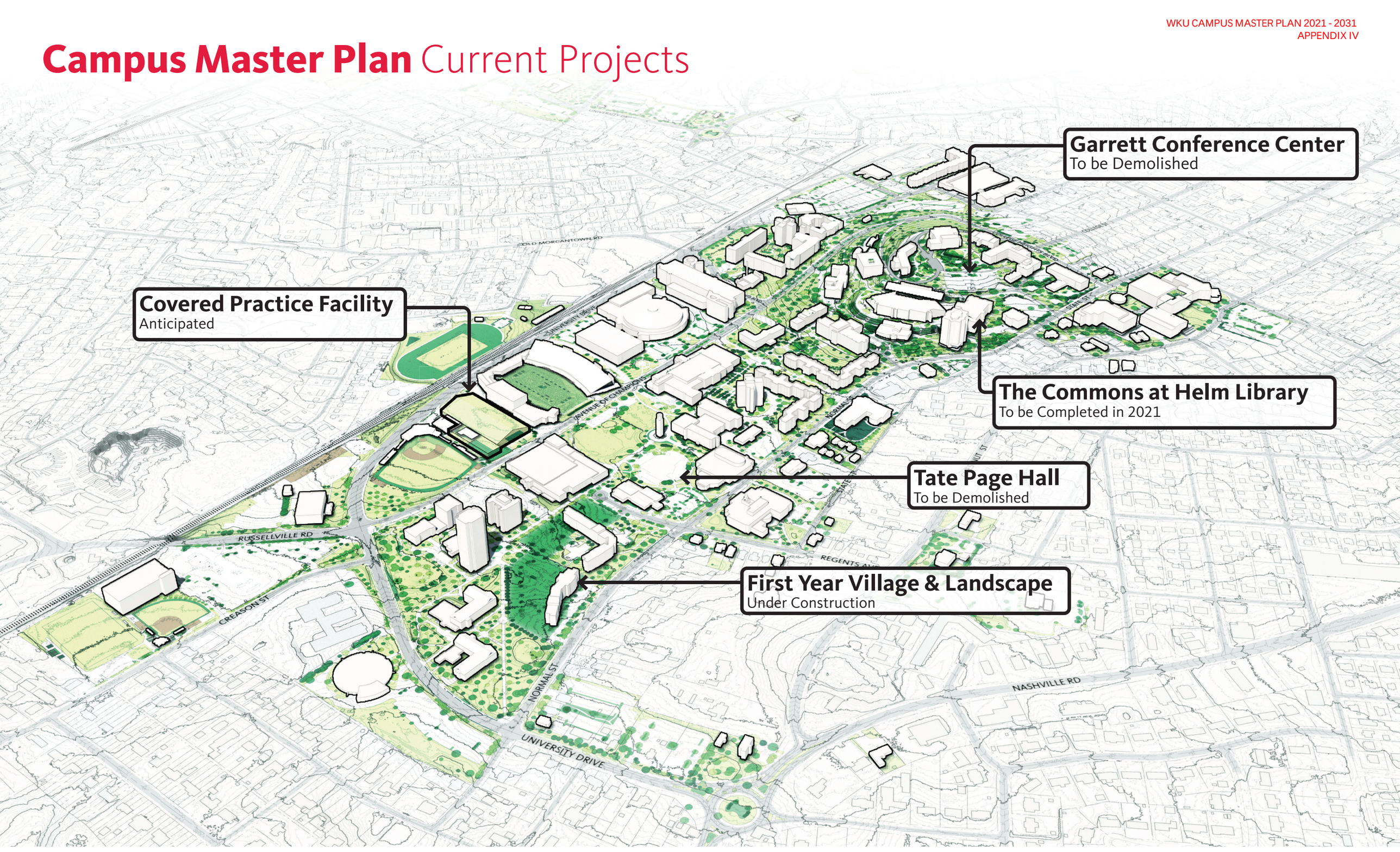
Campus Master Plan

The Scenario includes the following initiatives:

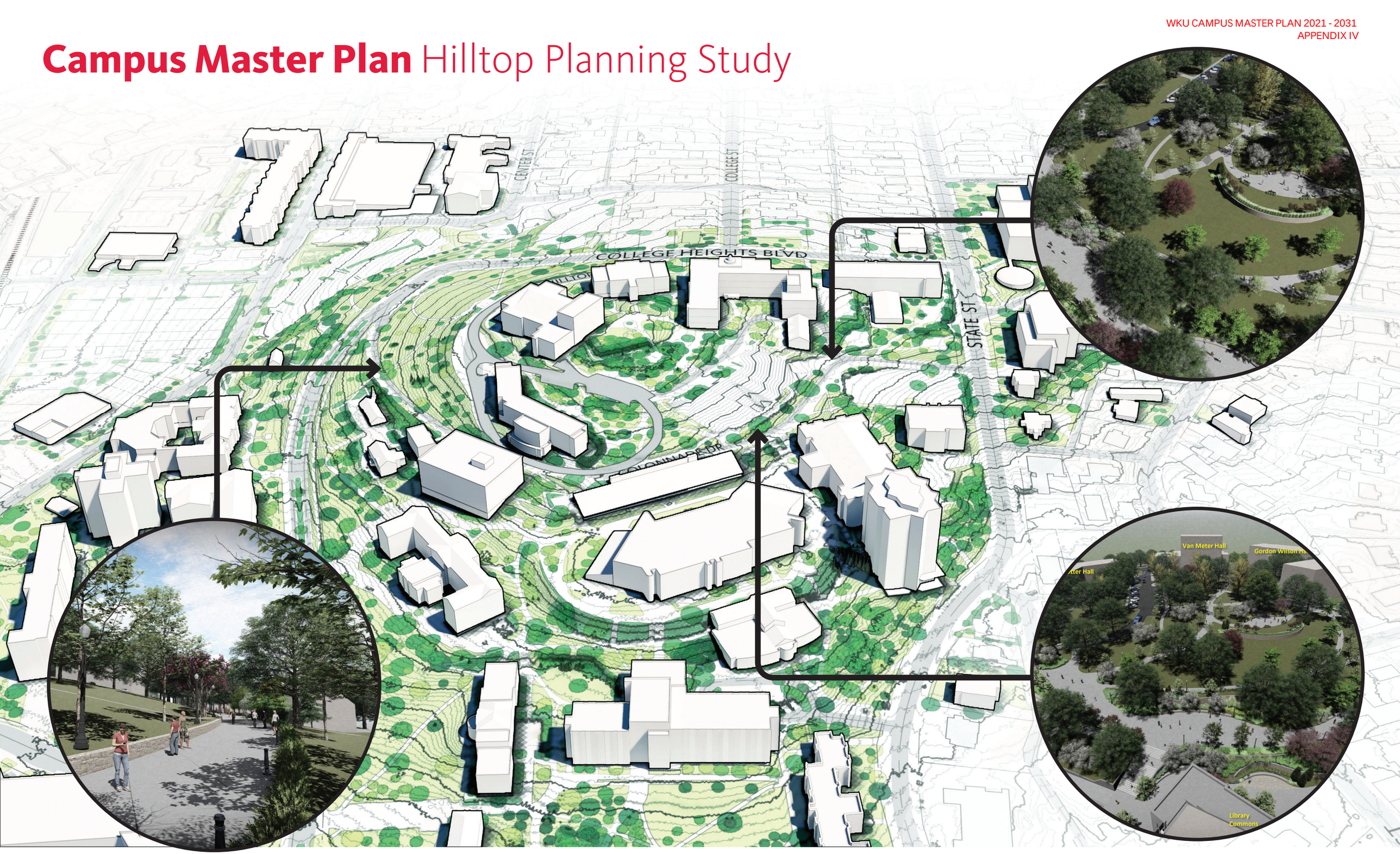
Strategic investment in learning technology and classroom infrastructure

Address facilities no longer fit for their purpose and optimize utilization

Campus Master Plan Current Projects



Campus Master Plan Hilltop Planning Study



Campus Master Plan Options

The Plan Options creates unique opportunities through:

- Strategic Renovation or Removal of Specific Buildings on Campus
- Location of One Stop Student Services
- New Landscape & Open Space Improvements
- Streetscaping & Traffic Improvements

Campus Planning Approach

Campus Master Plan Timeline

NEAR | **MID** | **LONG**

PRESENT — **10 YEARS & BEYOND**

Campus Master Plan Scenario

EXTENDS THE DEVELOPMENT AT THE SOUTHERN END OF CAMPUS

High resident density combined with key academic programs, athletics and recreation make this side of the campus a prime location for investment

Campus Master Plan Conceptual Diagrams

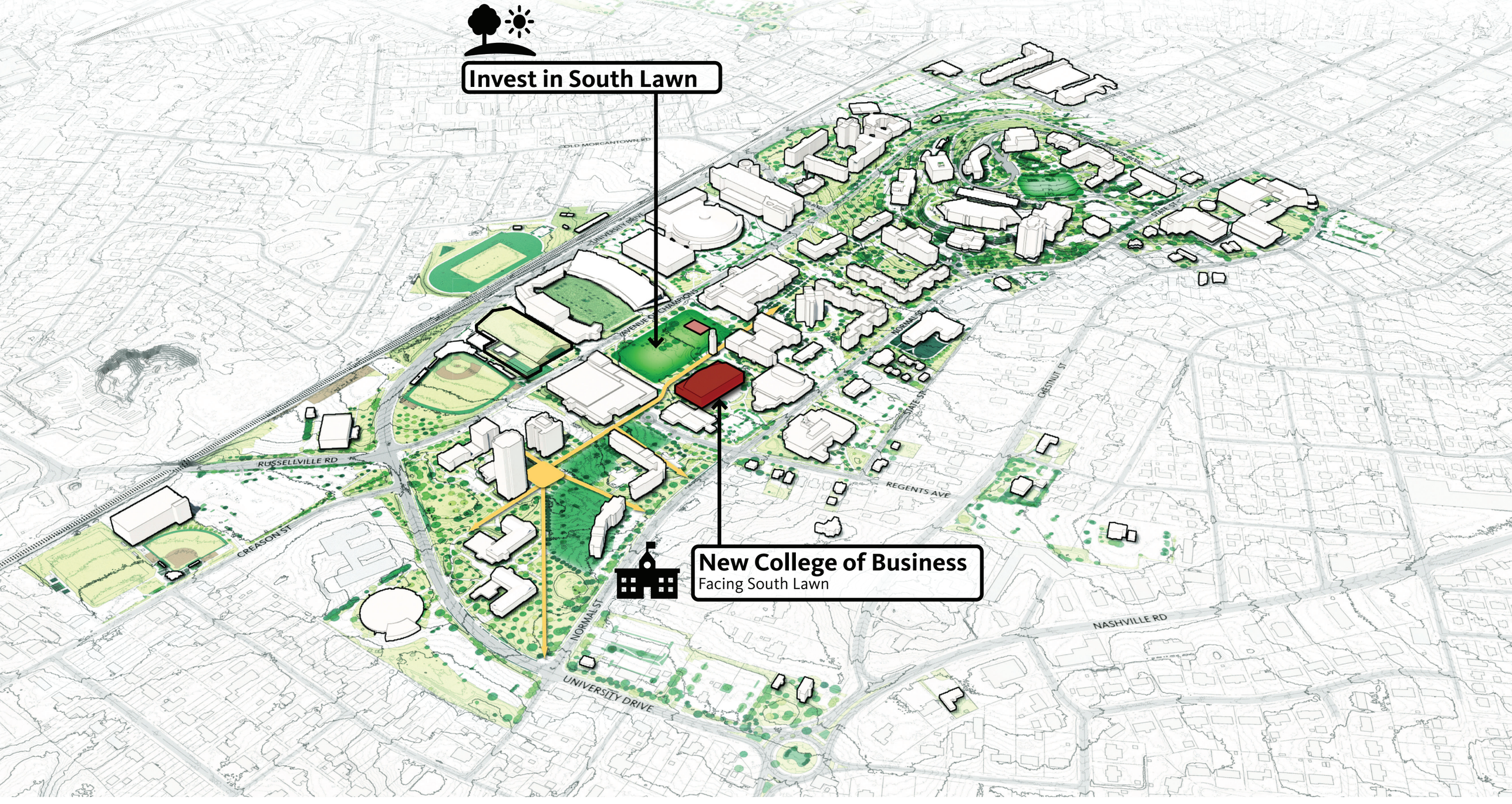
Existing Campus

The campus experience and quality of open space **breaks down at the Bottom of the Hill**

Campus Master Plan

connects the legacy of the Hill with the development at the southern end of campus

Campus Master Plan New College of Business



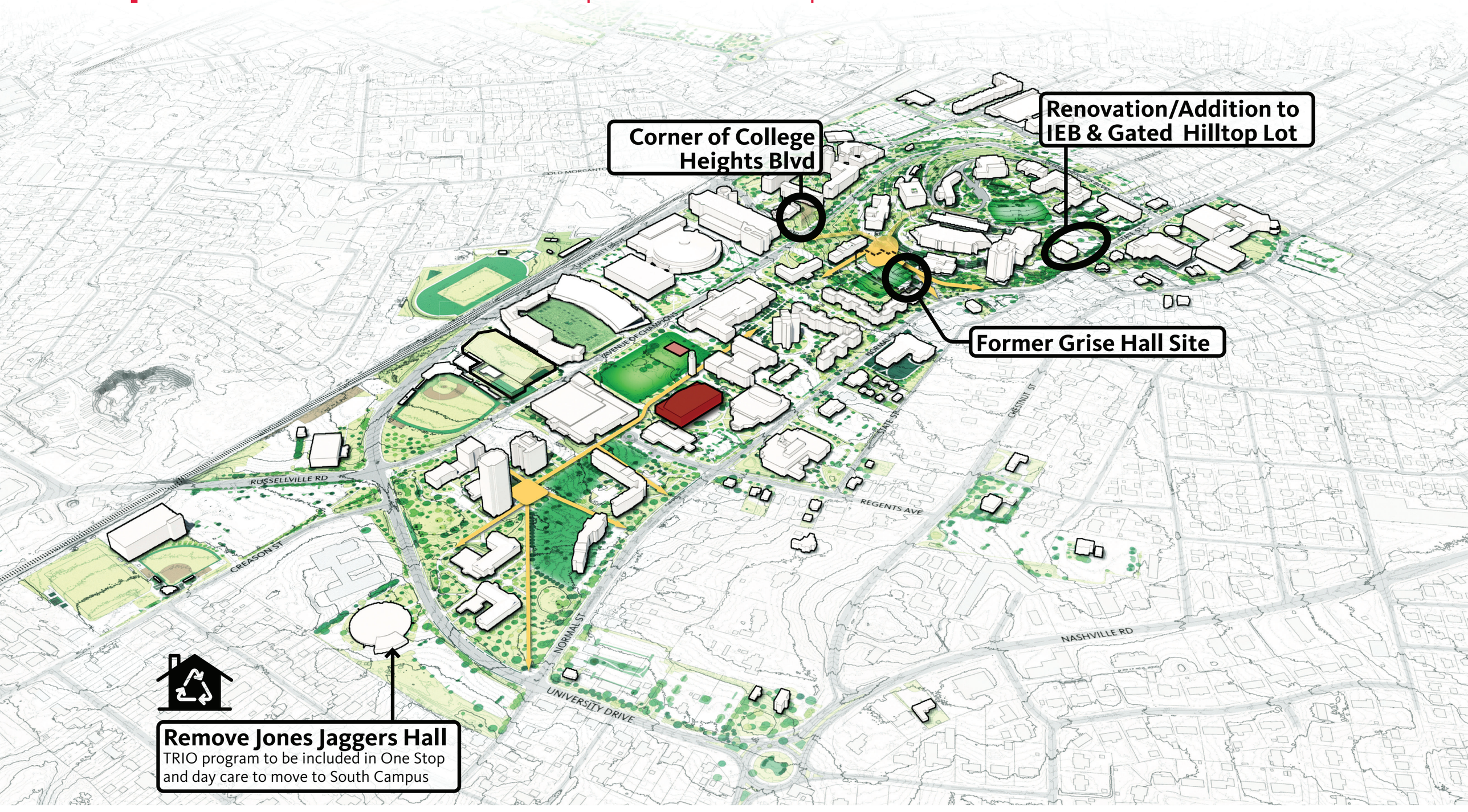
Campus Master Plan Remove Grise Hall

Central Crossroads of Campus
Connect Centennial Mall to the Hilltop

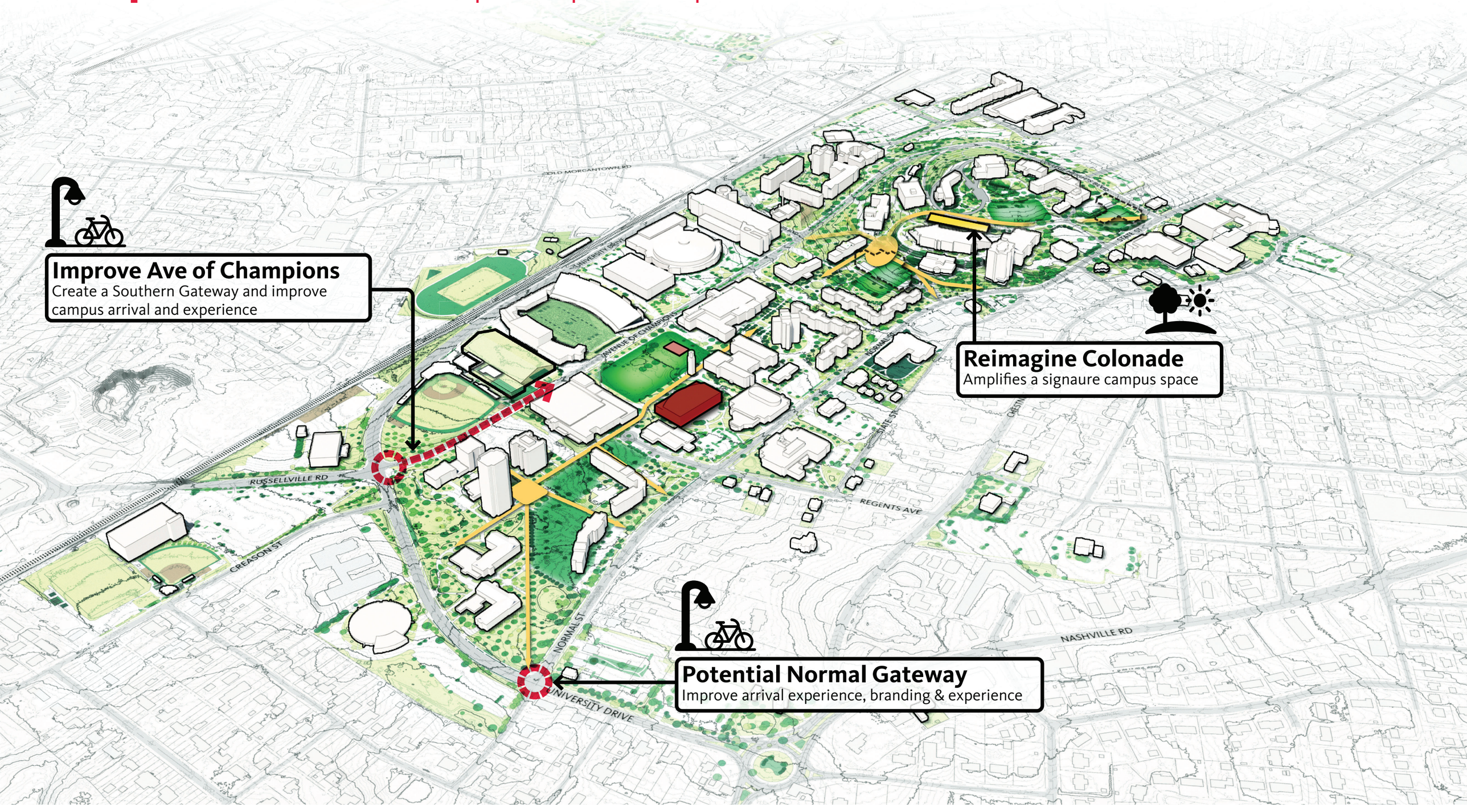
Invest in Classroom Infrastructure
To accommodate new learning modes & PCAL program from Grise Hall

Remove Grise Hall

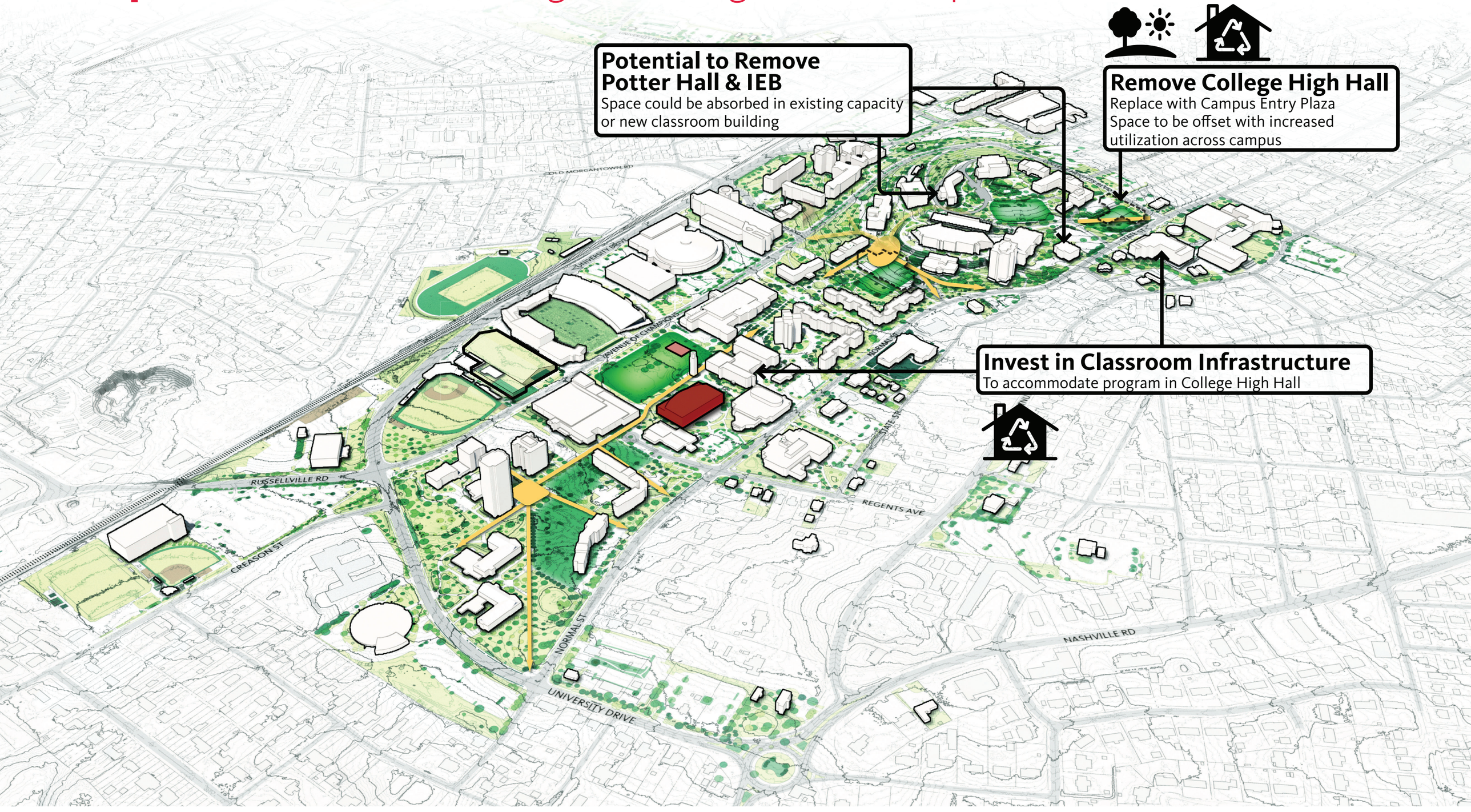
Campus Master Plan One Stop Location Options



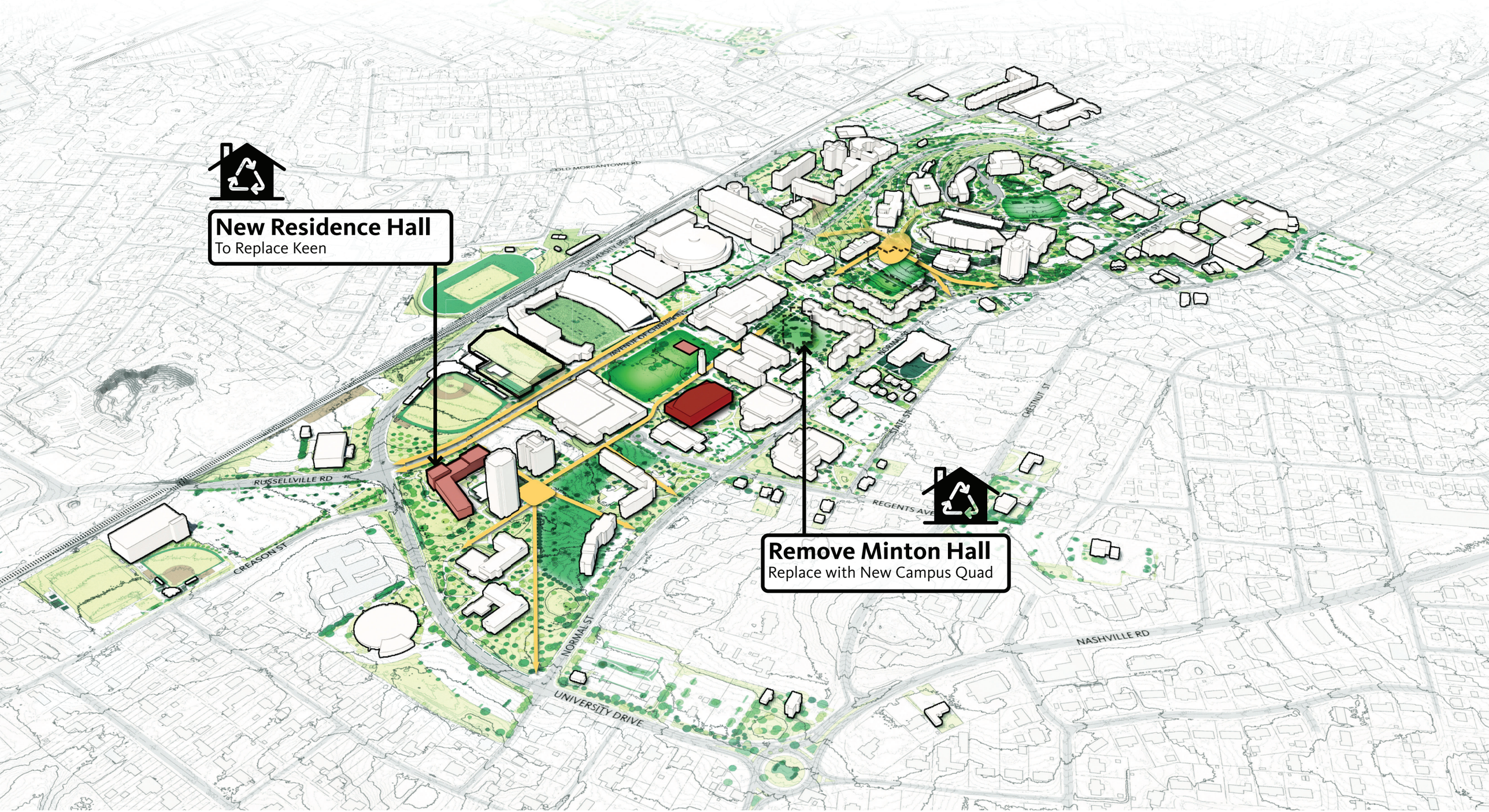
Campus Master Plan Open Space Options



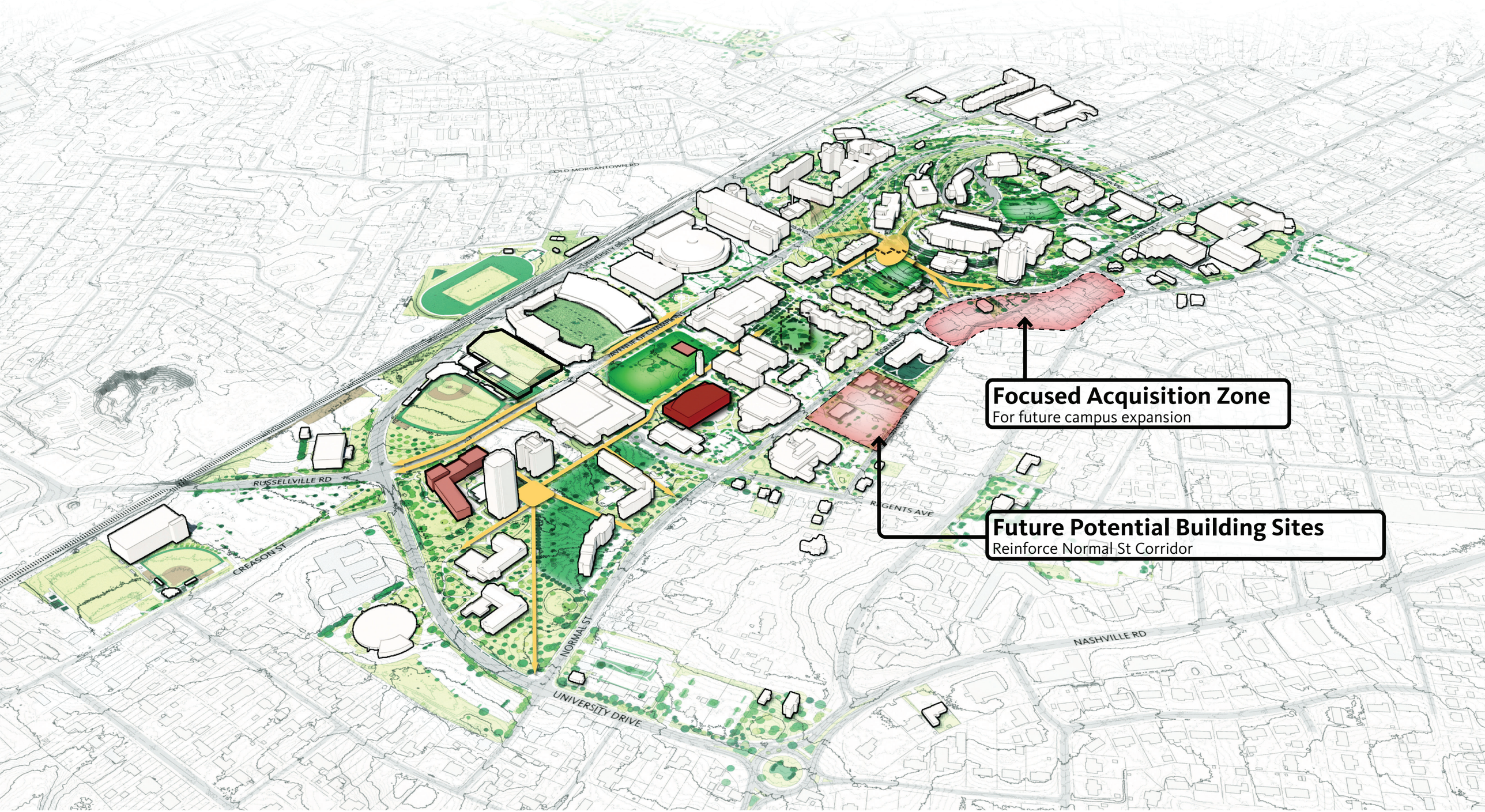
Campus Master Plan Strategic Building Removal Options



Campus Master Plan Campus Housing Options



Campus Master Plan Future Building Sites & Targeted Acquisitions



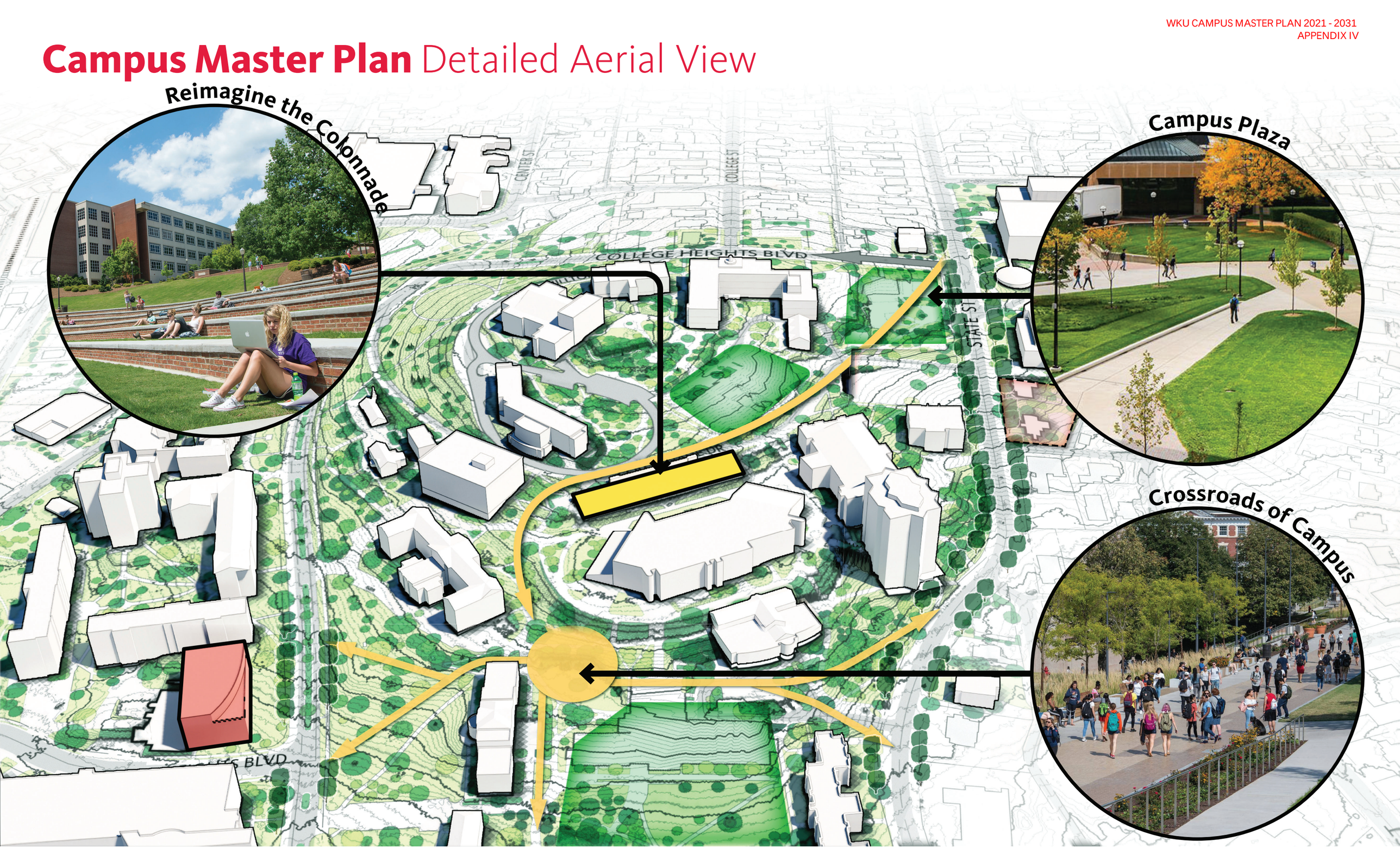
Campus Master Plan Detailed Aerial View

New Landscape Quad

South Lawn Improvements

Avenue of Champions Streetscaping

Campus Master Plan Detailed Aerial View



Campus Master Plan

Campus Master Plan Evaluation Matrix

Strategic Plan

- ✓ builds on the history of the Hill
- ✓ co-locate services
- ✓ boosts alumni engagement in addition to sports events

Guiding Principles

- ✓ welcoming southern entry
- ✓ celebrate seasonal occurrences
- ✓ blurs boundaries between traditional and non-traditional students
- ✓ maximizes non-traditional users time on campus
- ✓ removes barriers in accessing services

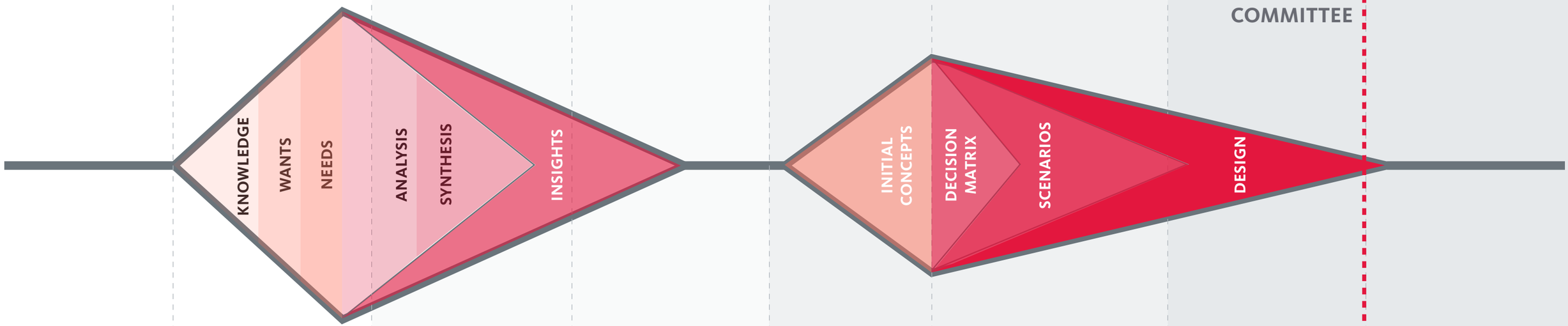
Feasibility

- ✓ near term construction on WKU-owned property
- ✓ focuses investment around learning spaces
- ✓ pedestrian & vehicular access for proposed College of Business
- ✓ improves pedestrian safety
- ✓ traffic calming study for Ave. of Champions

Next Steps

Project Process

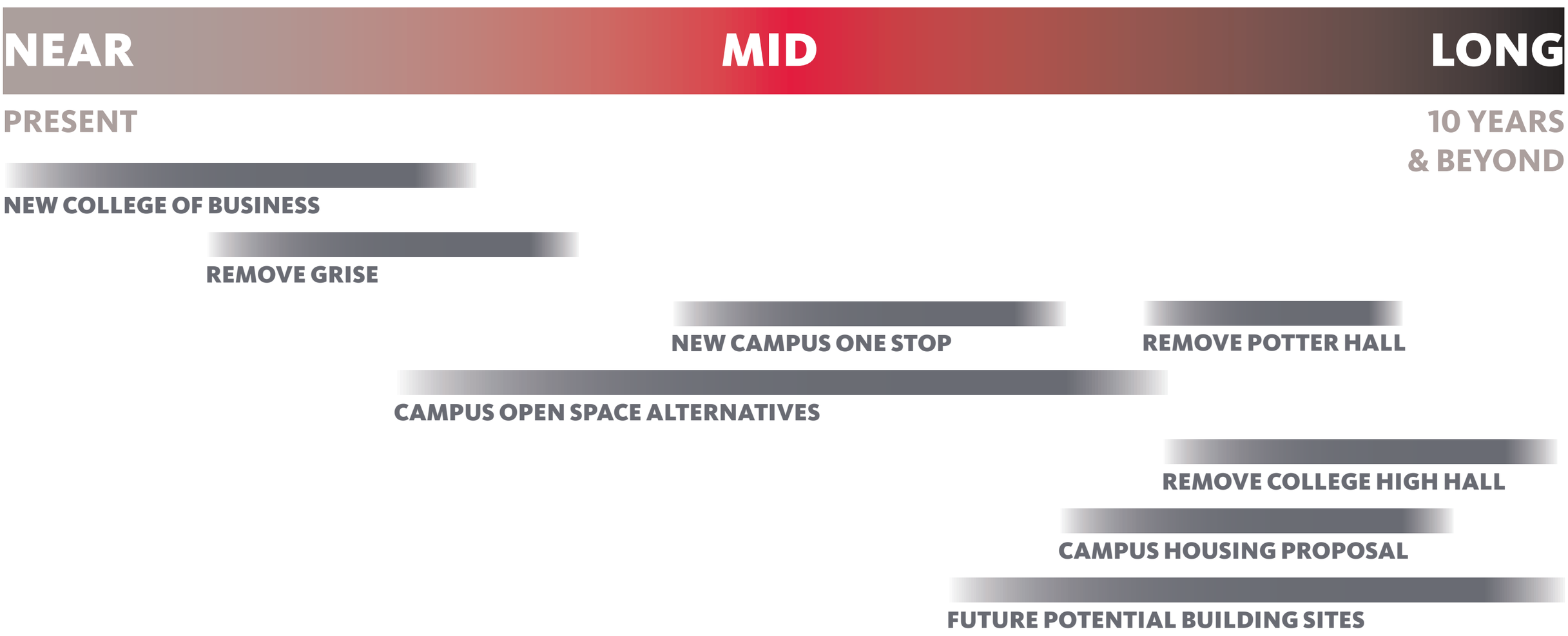
DISCOVER		ANALYZE		EXPLORE		RECOMMEND + DOCUMENT	
5 weeks		7 weeks		8 weeks		12 weeks	
KICK OFF & SETUP	PREP & RESEARCH	SYNTHESIS & ANALYSIS	PRINCIPLES & DIRECTIVES	INITIAL CONCEPTS	SCENARIO BUILDING	FINAL DESIGN	COMPILATION
						NEXT MTG JULY 7 STEERING COMMITTEE	



Align on project priorities and process	**Conduct immersive research**	**Synthesize and Analyze to gain insight**	**Define Principles to deliver on needs**	**Define framework and options for campus systems**	**Build scenarios to compare and contrast**	**Develop selected design for Master Plan**	**Document process and outcome**

Campus Planning Approach

Campus Master Plan Timeline

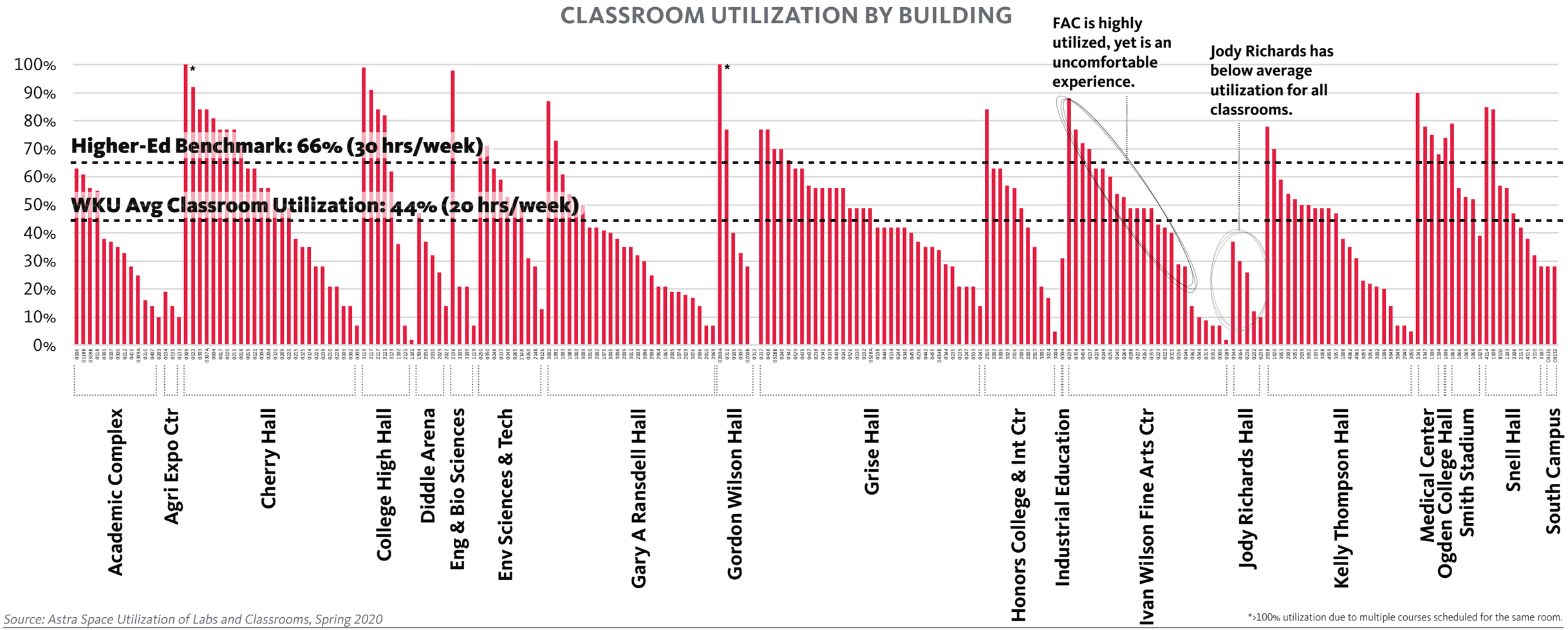


Thank you!!!

Classroom Utilization by room

40 out of 218 classrooms are utilized more than 30 hours a week (66%), a best practices target across many higher-ed institutions.

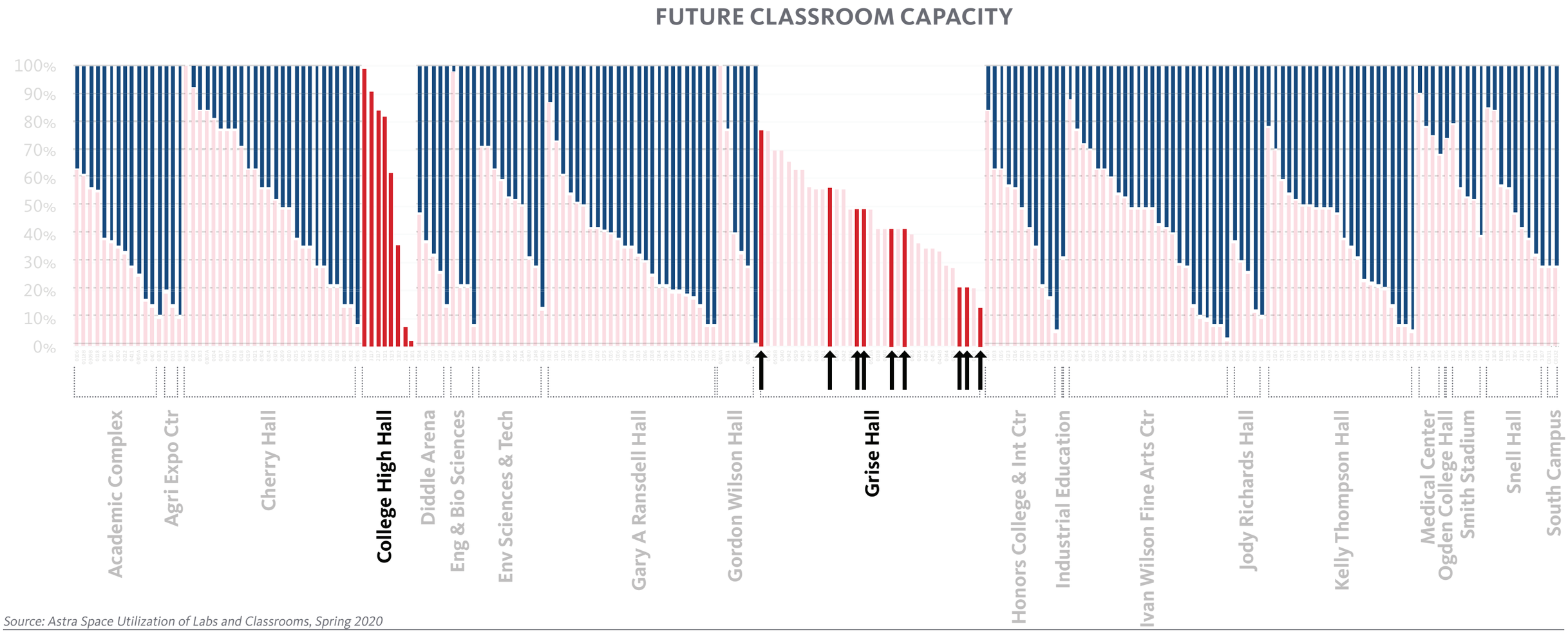
Per WKU, 100% classroom utilization is based on a 45 hour week, Monday through Friday, 8am to 5pm.



Source: Astra Space Utilization of Labs and Classrooms, Spring 2020

*>100% utilization due to multiple courses scheduled for the same room.

Classroom Utilization Future Capacity



Source: Astra Space Utilization of Labs and Classrooms, Spring 2020

WKU Campus Master Plan

Master Plan Scenario Review

28 MAY 2020

WKU
+
Gensler

Agenda & Purpose

01 Intro & Project Process

02 Planning Approach & Philosophy

03 Master Plan Scenarios

Commonalities & Differentiators

04 Master Plan Scenario #1

05 Master Plan Scenario #2

06 Master Plan Scenario #3

07 Scenario Comparison & Evaluation

08 Next Steps

How might we:

reimagine the campus to increase student enrollment, boost student retention, and promote student success across the region?

Project Process

DISCOVER
5 weeks

KICK OFF & SETUP

Align on project priorities and process

PREP & RESEARCH

Conduct immersive research

ANALYZE
7 weeks

SYNTHESIS & ANALYSIS

Synthesize and Analyze to gain insight

PRINCIPLES & DIRECTIVES

Define Principles to deliver on needs

EXPLORE
8 weeks

INITIAL CONCEPTS

Define framework and options for campus systems

SCENARIO BUILDING

Build scenarios to compare and contrast

TODAY
MAY 28
STEERING COMMITTEE

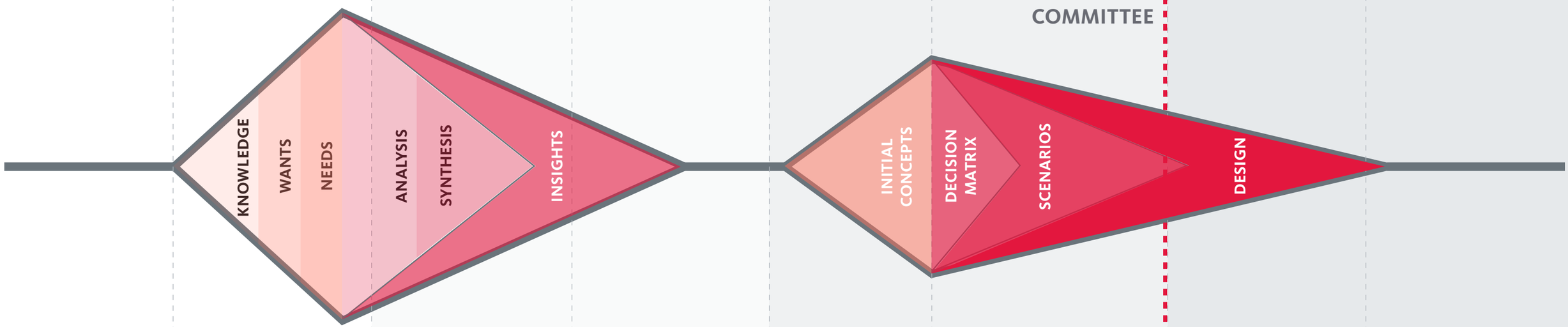
RECOMMEND + DOCUMENT
12 weeks

FINAL DESIGN

Develop selected design for Master Plan

COMPILATION

Document process and outcome



Explore Phase Process

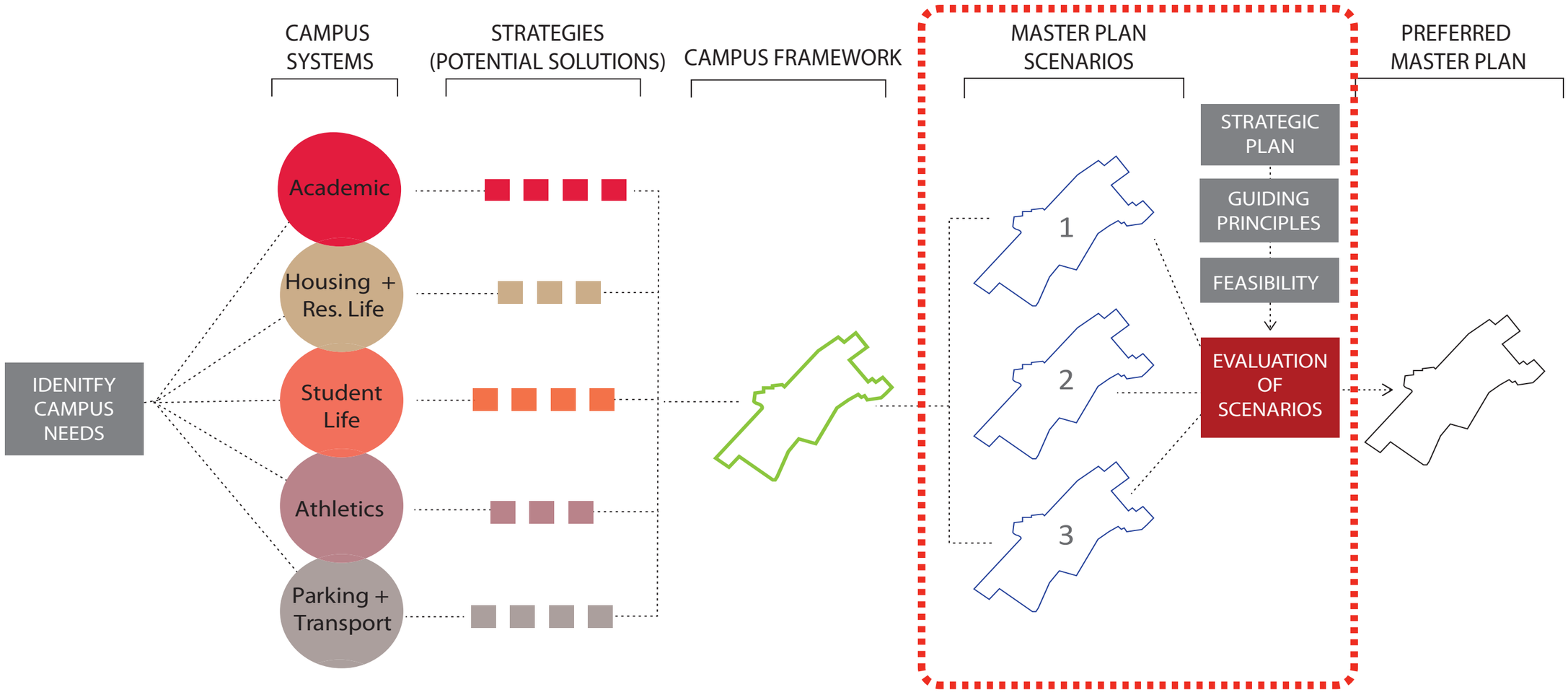
SYSTEMS + STRATEGIES 4 weeks | **SCENARIOS** 4 weeks | **RECOMMEND** 6 weeks | **DOCUMENT** 6 weeks

April 3 — STEERING COMMITTEE REVIEW

May 1 — STEERING COMMITTEE REVIEW

May 28 — STEERING COMMITTEE REVIEW

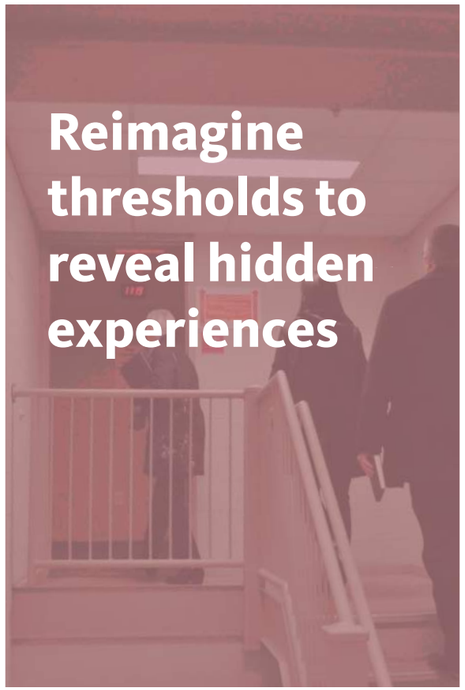
July 7 — STEERING COMMITTEE REVIEW



Master Plan Approach & Philosophy

Planning Approach

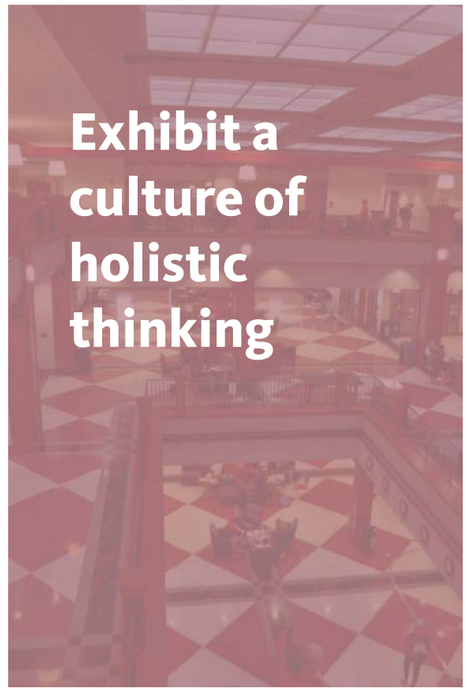
Guiding Principles Summary



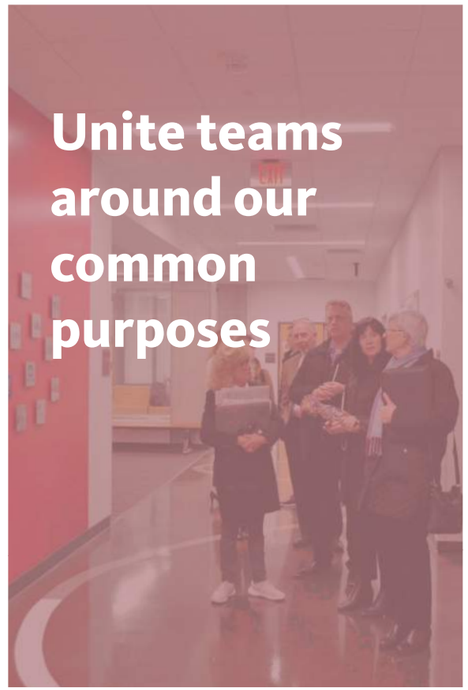
Designing to **broaden visibility, build empathy, and prioritize support locations.**

Designing to **trigger conversations, enable personal expression, and seasonal celebrations**

Designing to **co-work with alumni, showcase student journeys, and work with non-traditional students**



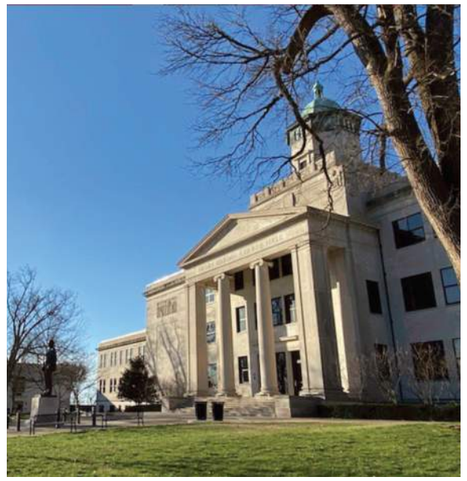
Designing to **boost unexpected connections, encourage opinion-sharing, and invite industry in**



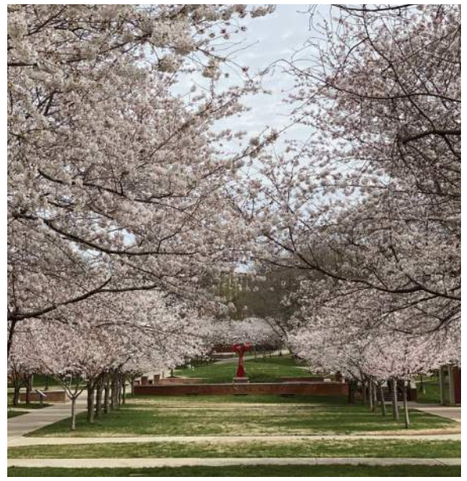
Designing to **co-locate for purpose, intermingle diverse stakeholders, and narrate stories of our goals**

Planning Approach

Planning Philosophy



Creating a deliberate entry experience (whether on north or south side)



Drawing and holding communities together through green spaces (signature plazas)

Clustering new masses to boost a new campus presence (shifting center of gravity of campus)

Energizing pedestrian experience through clarified, continuous, and connected circulation

Connecting buildings to make them work better together (adjacencies w/existing ones)

Planning Approach

Planning Opportunities

1 **Reinforce and celebrate the strengths of campus today**

In addition to the **rich history and legacy of WKU, the Master Plan will build upon the numerous initiatives currently in progress**, such as the First Year Village, The Commons at Helm, and the Hilltop Study following the demolition of Garrett.

2 **Accelerate campus community through open spaces**

University campuses are defined by their open spaces and the Master Plan will utilize the campus landscape to amplify the sense of place and community at WKU.

3 **Manage program growth though optimized space utilization**

Overall, **the Master Plan will not propose the addition of buildings, parking or resources without a clear need** and will consider the removal of existing facilities that are no longer fit for purpose, or at their end of their usable life.

Planning Approach Student Focus

"It is an amazing place that has the resources that you need to succeed."

- student survey participant

"Every member of the faculty wants to help you succeed."

- student survey participant

Master Plan Scenarios

Commonalities & Differentiators

Master Plan Scenario Commonalities

All Scenarios include the following initiatives:

Completion of projects such as The Commons at Helm, the First Year Village, removal of Garrett Conference Center and Tate Page Hall and landscape improvements

The New College of Business

Improve accessibility across campus

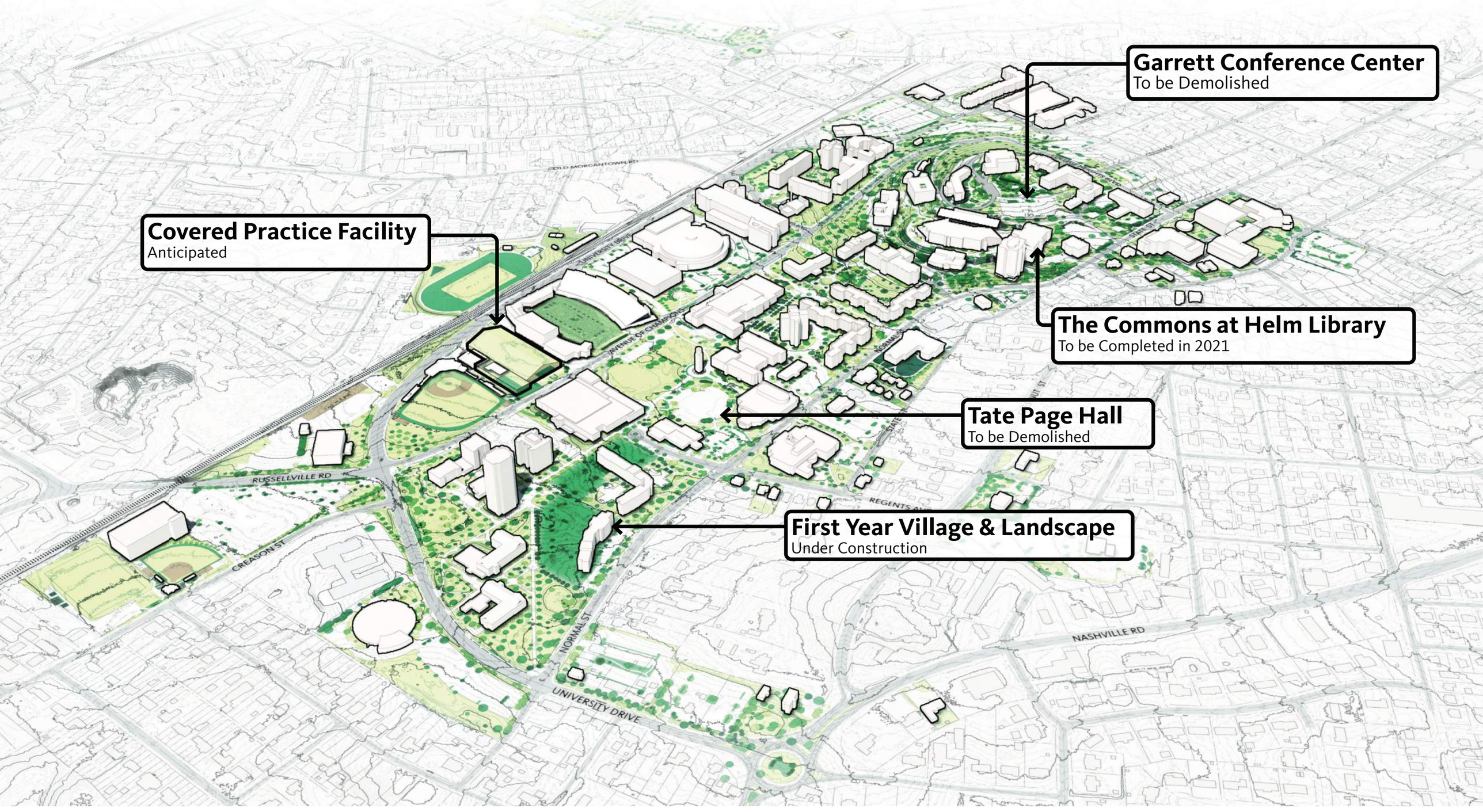
Master Plan Scenario Commonalities

All Scenarios include the following initiatives:

Strategic investment in learning technology and classroom infrastructure

Address facilities no longer fit for their purpose and optimize utilization

Master Plan Current Campus Projects



Master Plan Scenario Differentiators

Scenarios create unique opportunities through:

Strategic Renovation or Removal of Specific Buildings on Campus

Location of the New College of Business

Future Renovation or Removal of Grise Hall

Master Plan Scenario Differentiators

Scenarios create unique opportunities through:

- **Location of One Stop Student Services**
- **New Landscape & Open Space Improvements**
- **Streetscaping & Traffic Improvements**

Scenario #1

Strengthen the Perimeter

REINFORCES THE HILL AND IMPROVES THE EXPERIENCE SURROUNDING IT

Revealing an underutilized side of campus, relocated program has the potential to improve connection with the Augenstein Alumni Center and downtown, while supporting the legacy of the Hill and energizing the pedestrian experience.

Strengthen the Perimeter Concept Diagrams

Existing Campus

College Heights Blvd feels like the edge of campus and the **experience is inconsistent.**

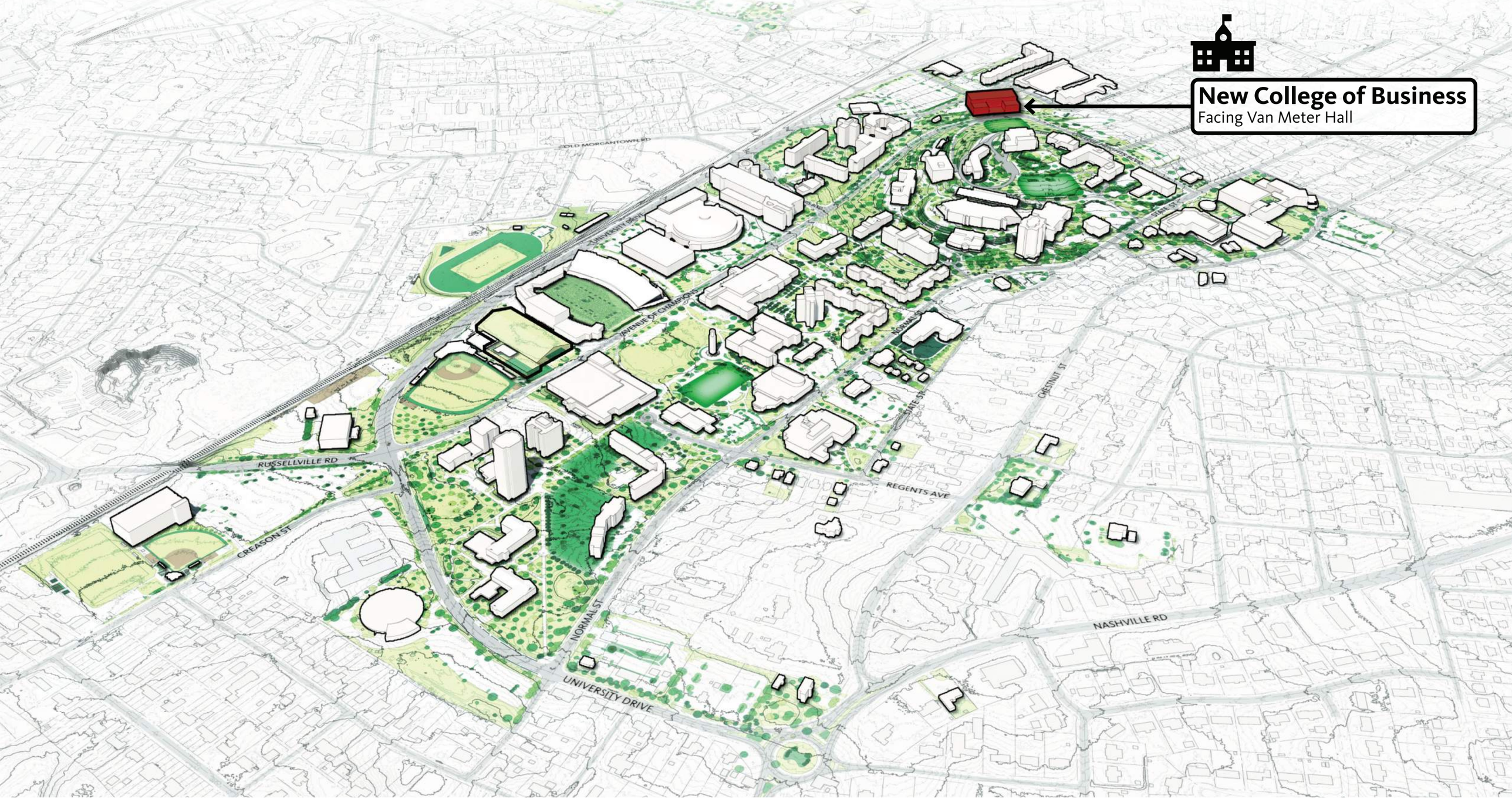
Scenario #1

Strengthen the Perimeter

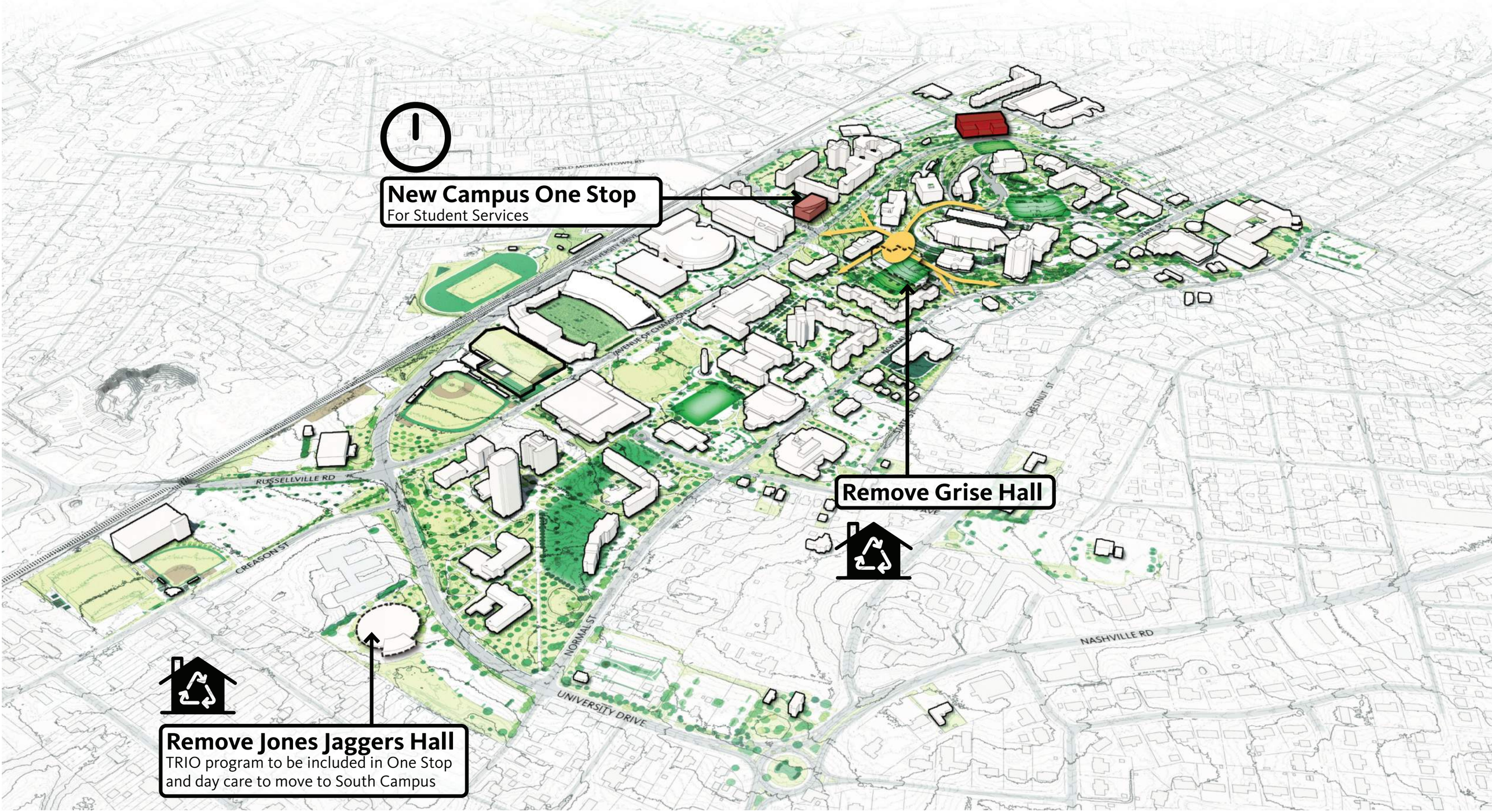
Reinforces the Hill and improves the experience surrounding it

Strengthen the Perimeter Conceptual Campus Diagram

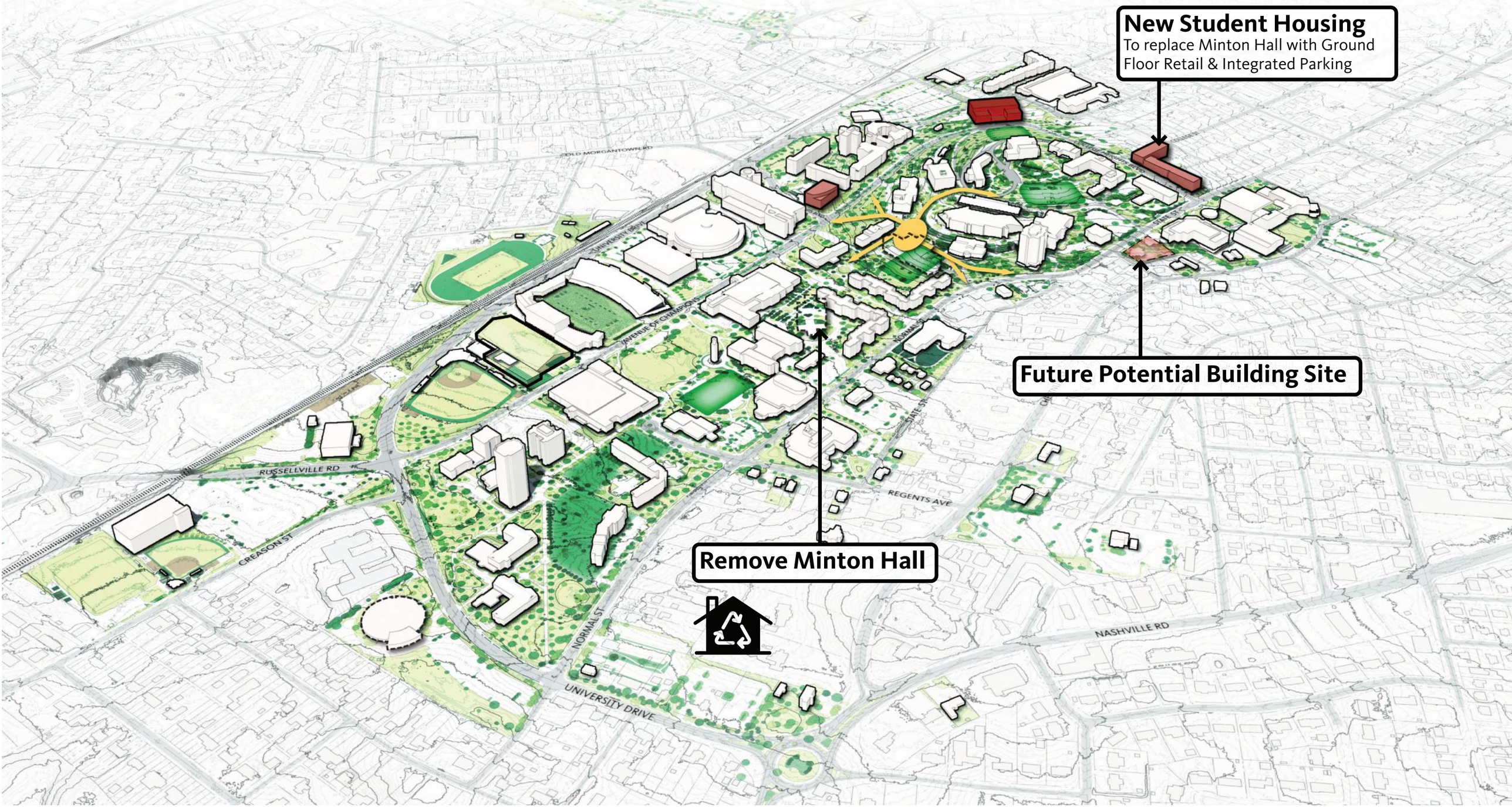
Strengthen the Perimeter Near Term Proposal



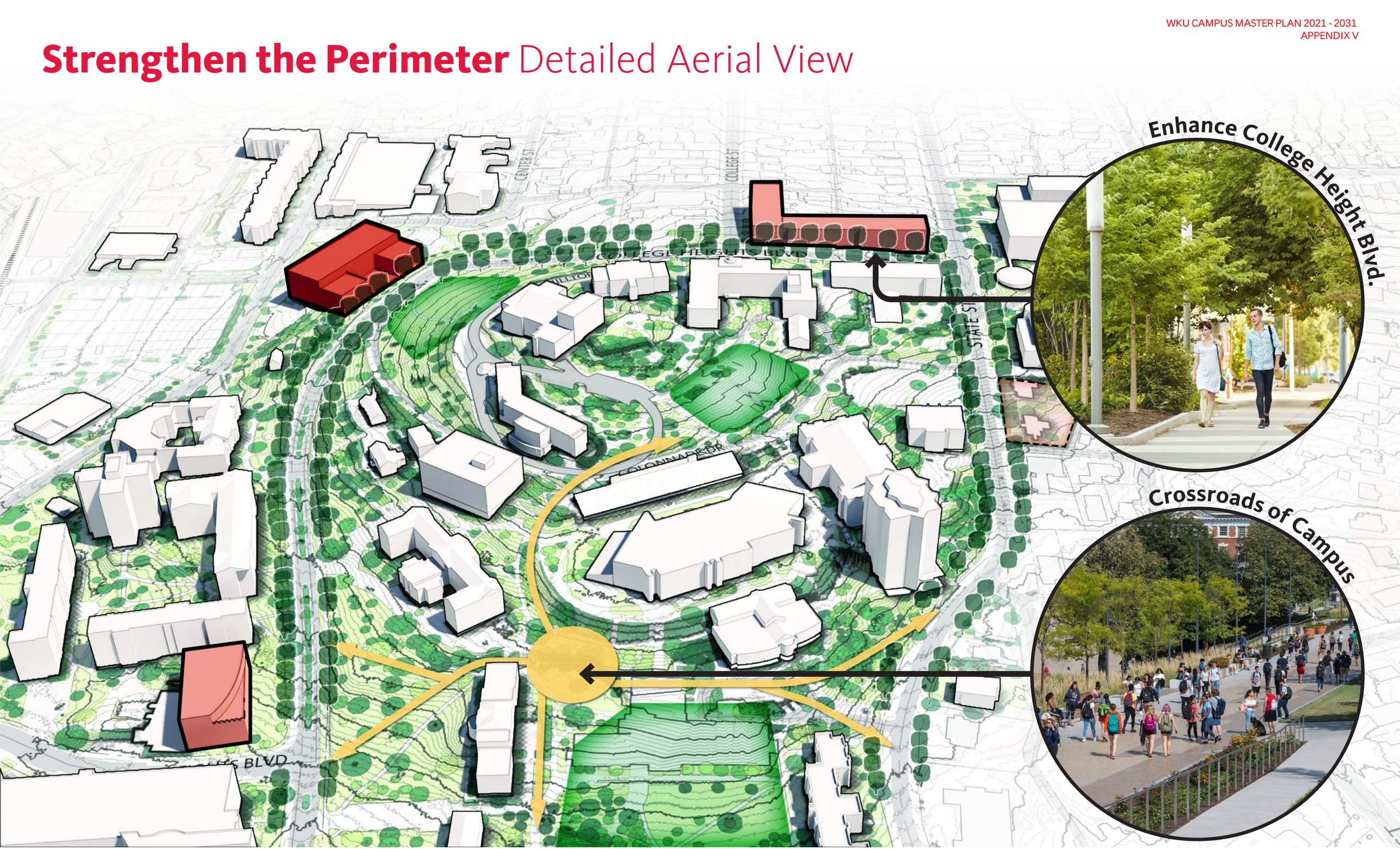
Strengthen the Perimeter Mid Term Proposal



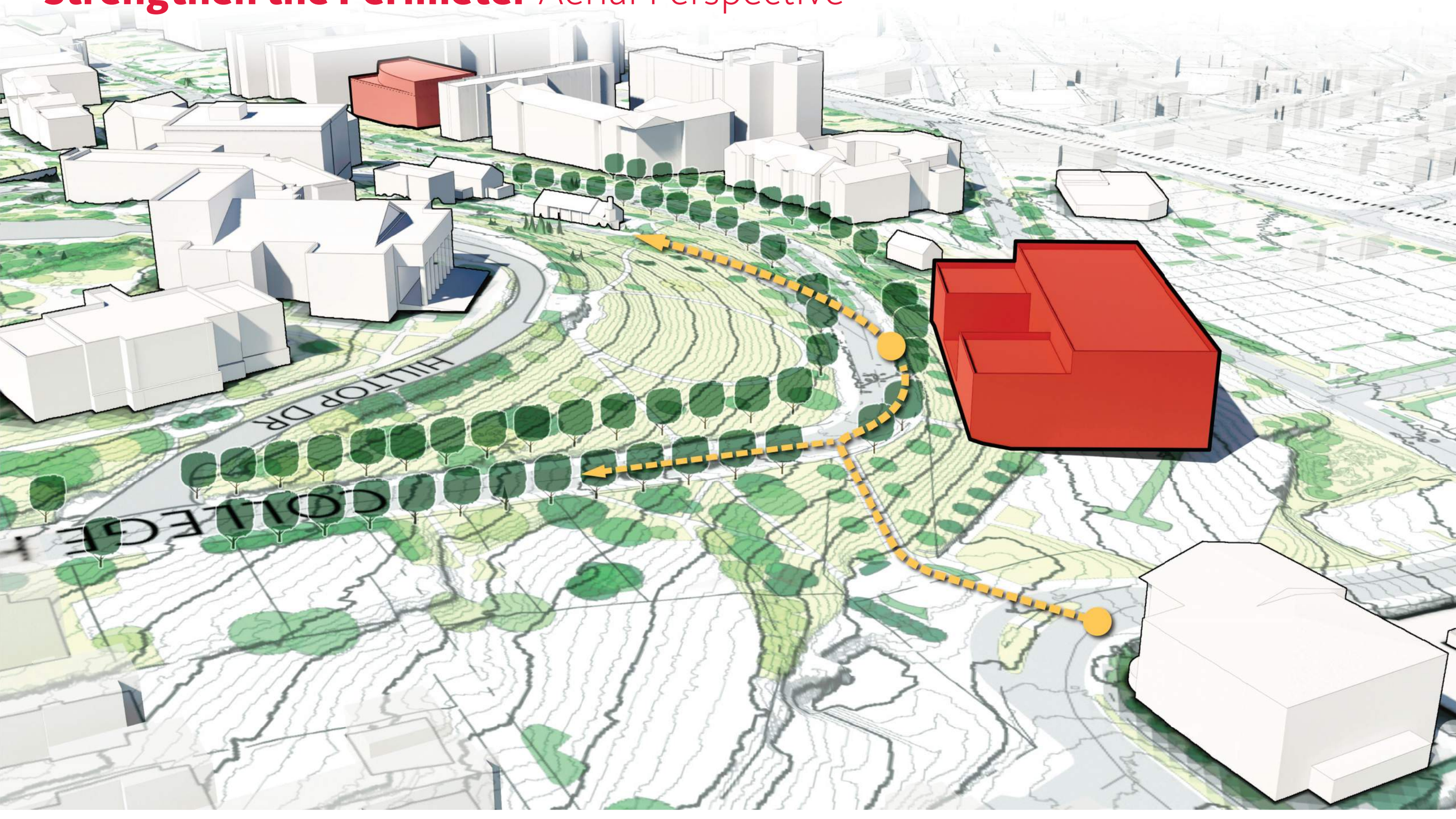
Strengthen the Perimeter Long Term Potential



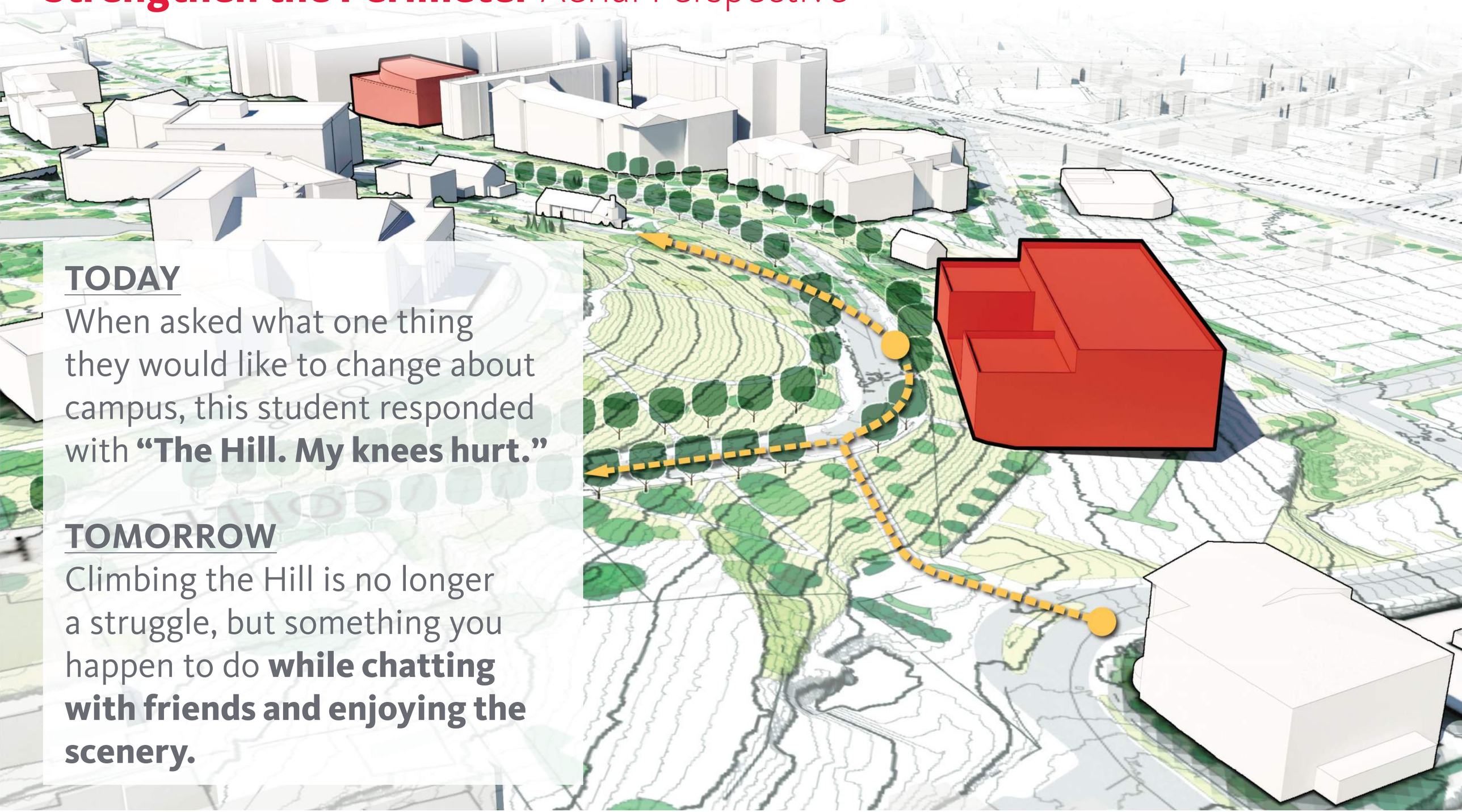
Strengthen the Perimeter Detailed Aerial View



Strengthen the Perimeter Aerial Perspective



Strengthen the Perimeter Aerial Perspective



TODAY

When asked what one thing they would like to change about campus, this student responded with **“The Hill. My knees hurt.”**

TOMORROW

Climbing the Hill is no longer a struggle, but something you happen to do **while chatting with friends and enjoying the scenery.**

Strengthen the Perimeter Evaluation Matrix

Strategic Plan

- ✓ builds on the history of the Hill
- ✓ boost connection between WKU campus and Bowling Green
- ✓ enhances the Colonnade Program
- ✓ co-locate services

Guiding Principles

- ✓ potential for co-working and collaboration with Alumni
- ✓ removes barriers in accessing services
- ✓ prioritizes location of student services
- ✓ blurs boundaries between traditional and non-traditional students

Feasibility

- ✓ near term construction on WKU-owned property, no building demo required
- ✓ long-term student housing requires property acquisition

Scenario #2

Southern Gateway

REINFORCES THE DEVELOPMENT AT THE SOUTHERN END OF CAMPUS

High resident density combined with key academic programs, athletics and recreation make this side of the campus a prime location for investment

Southern Gateway Conceptual Diagrams

Existing Campus

The campus experience and quality of open space **breaks down at the Bottom of the Hill**

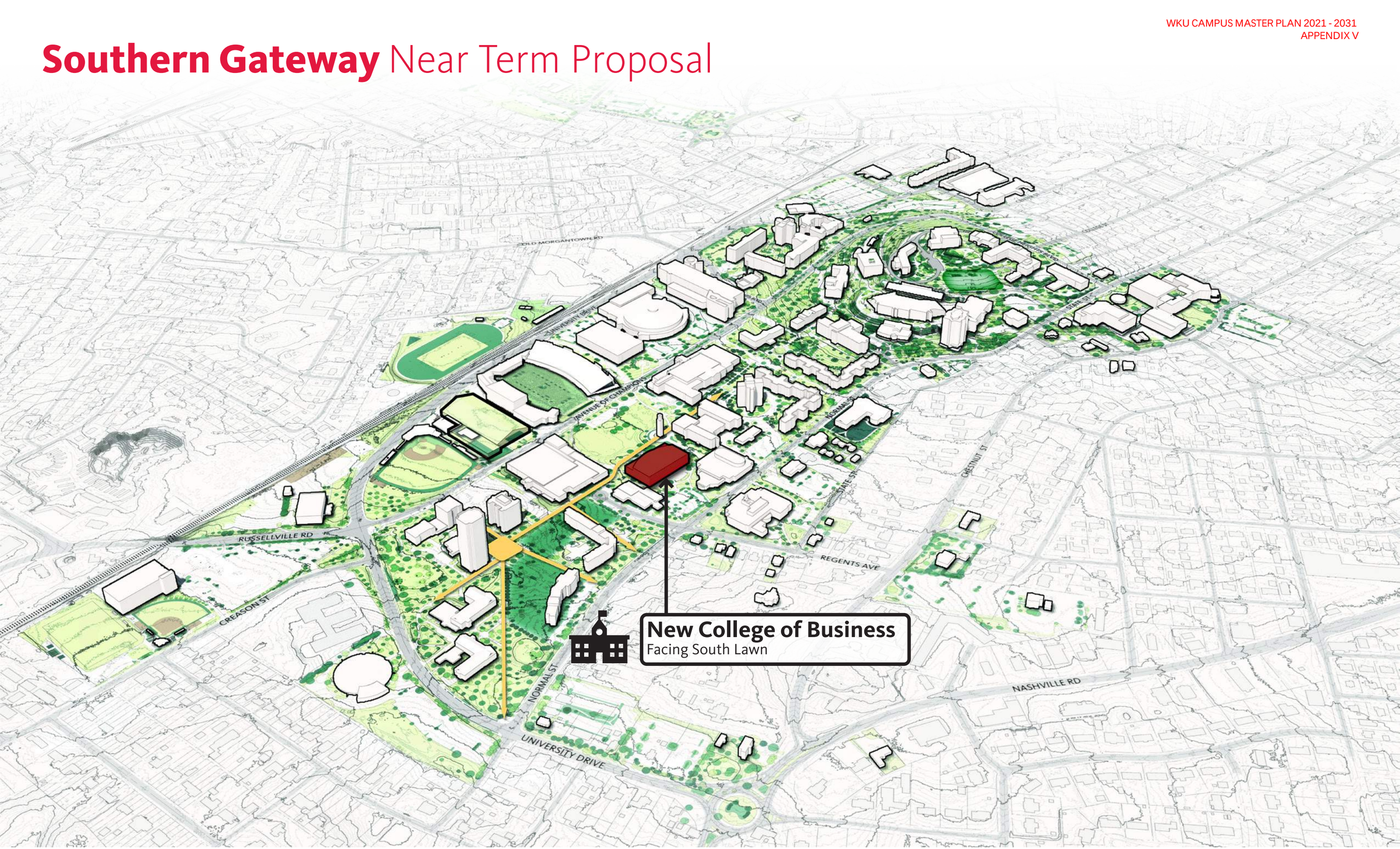
Scenario #2

Southern Gateway

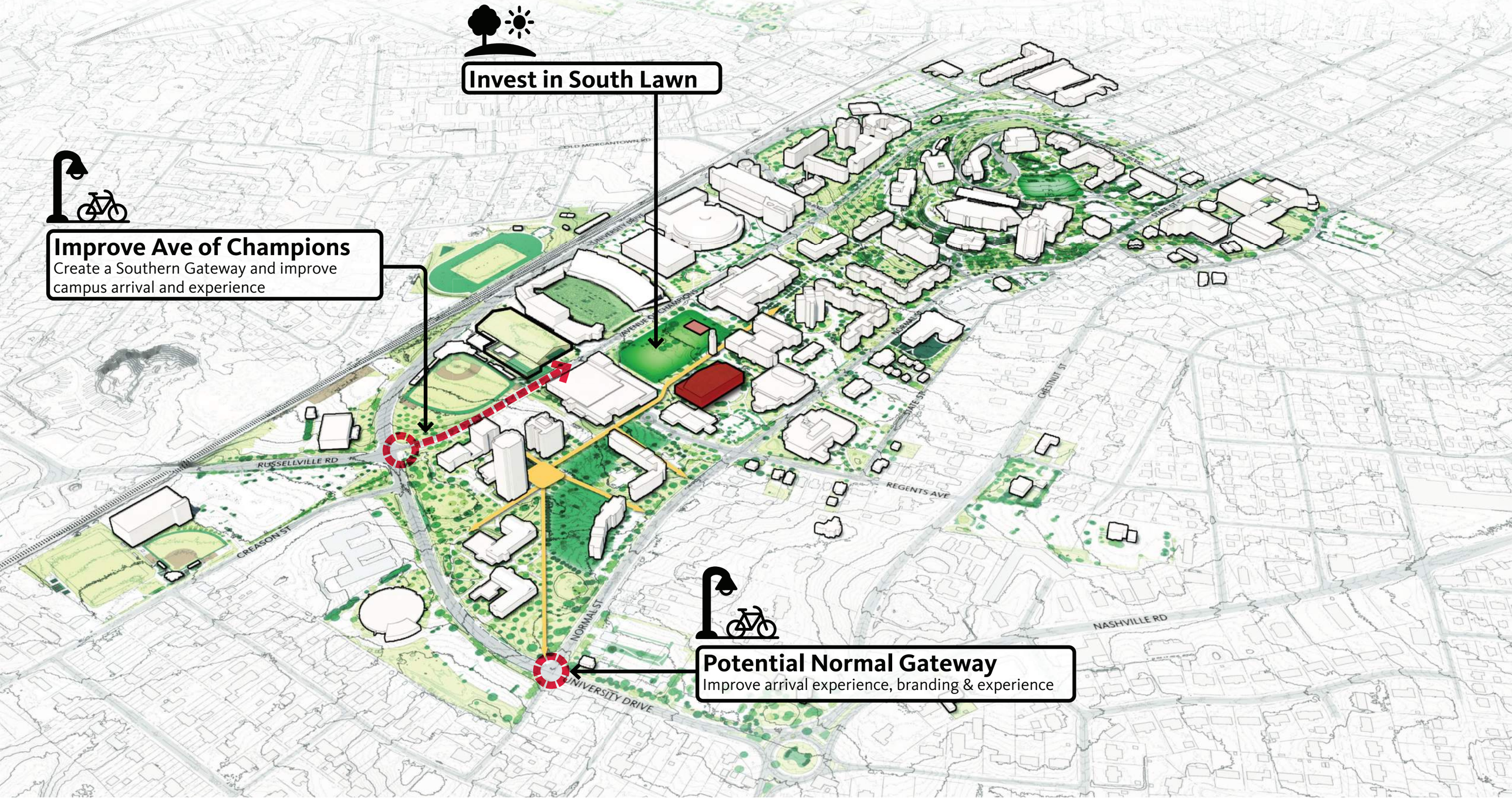
reinforces the development at the southern end of campus

Southern Gateway Conceptual Campus Diagram

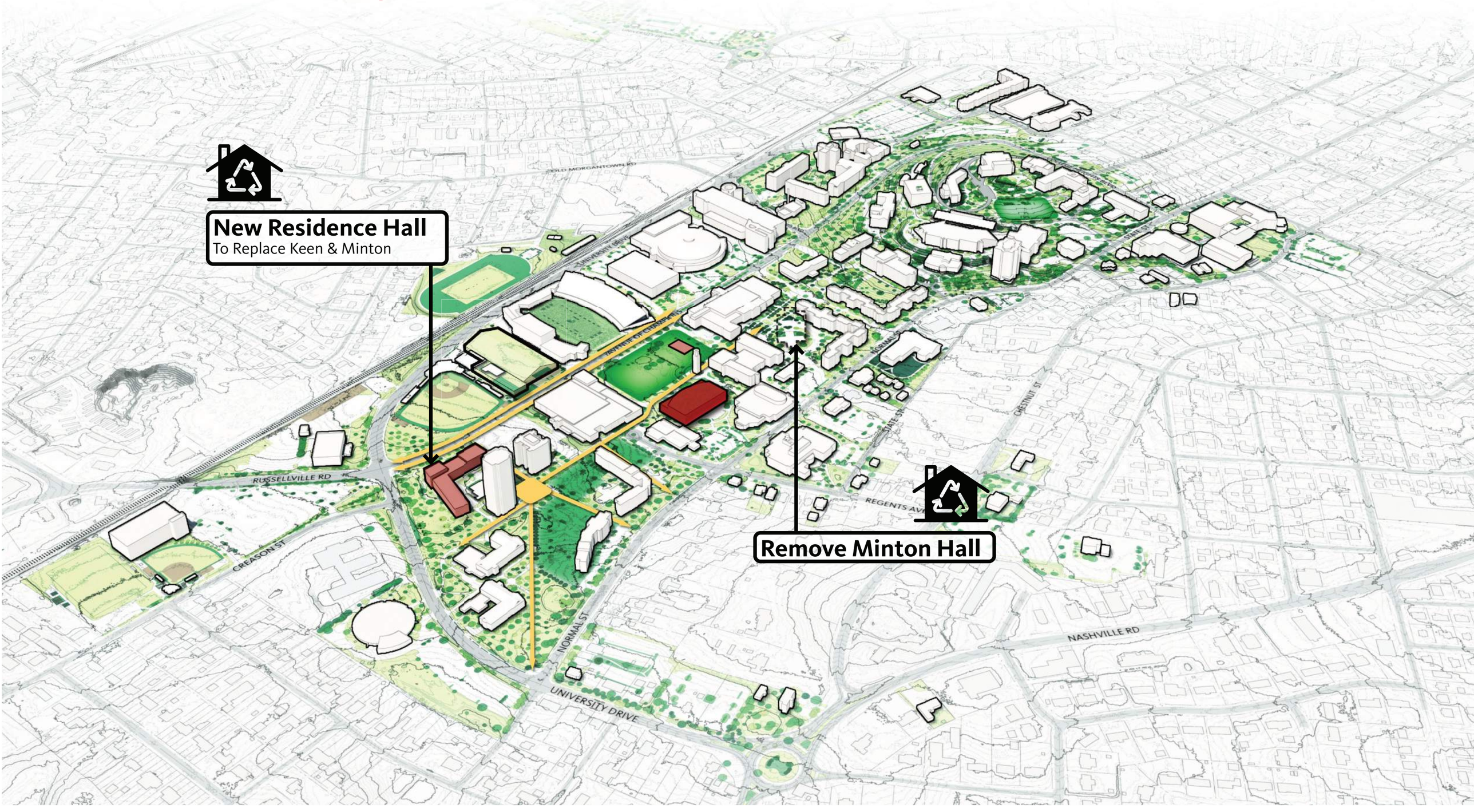
Southern Gateway Near Term Proposal



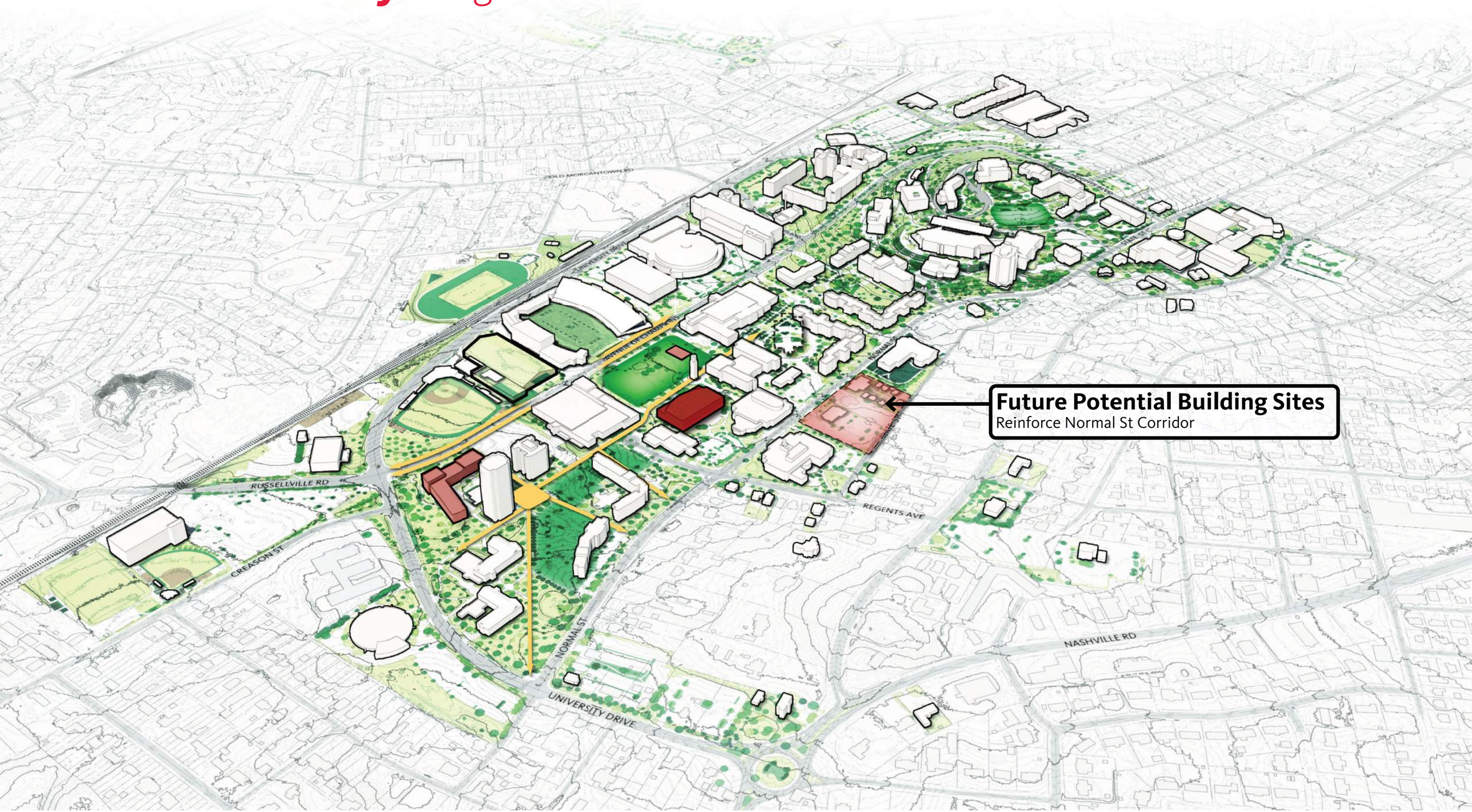
Southern Gateway Mid Term Proposal



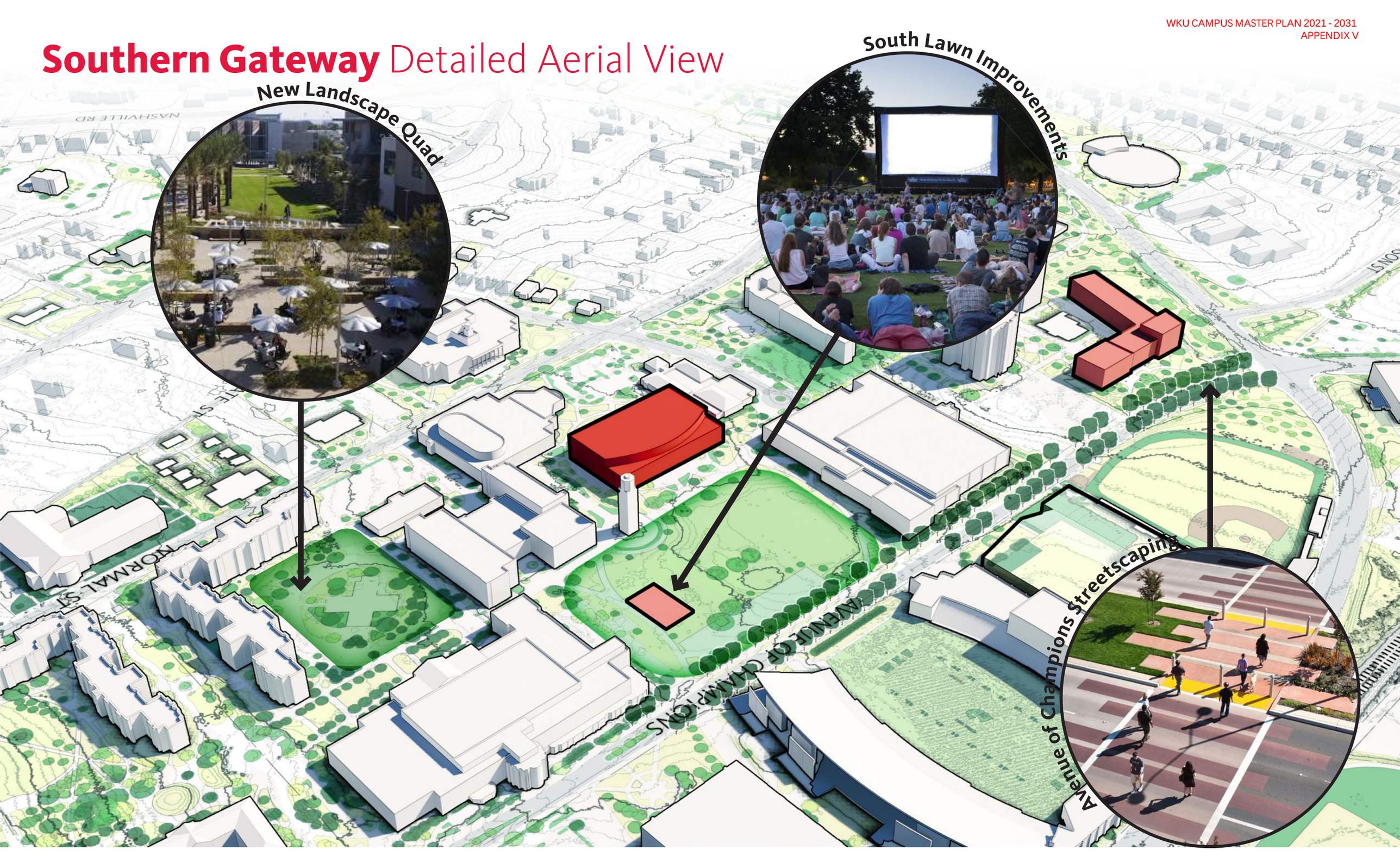
Southern Gateway Mid Term Proposal



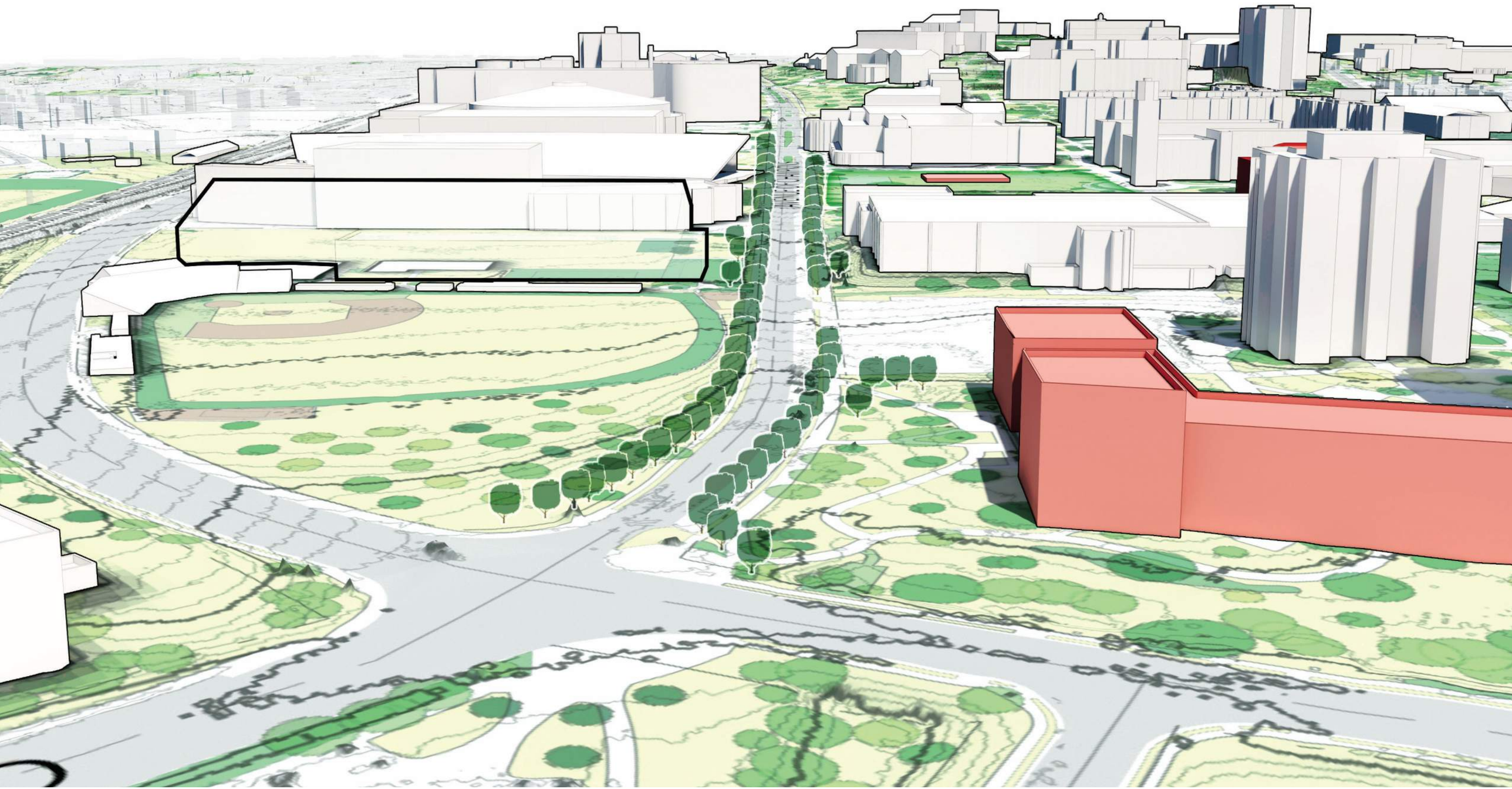
Southern Gateway Long Term Potential



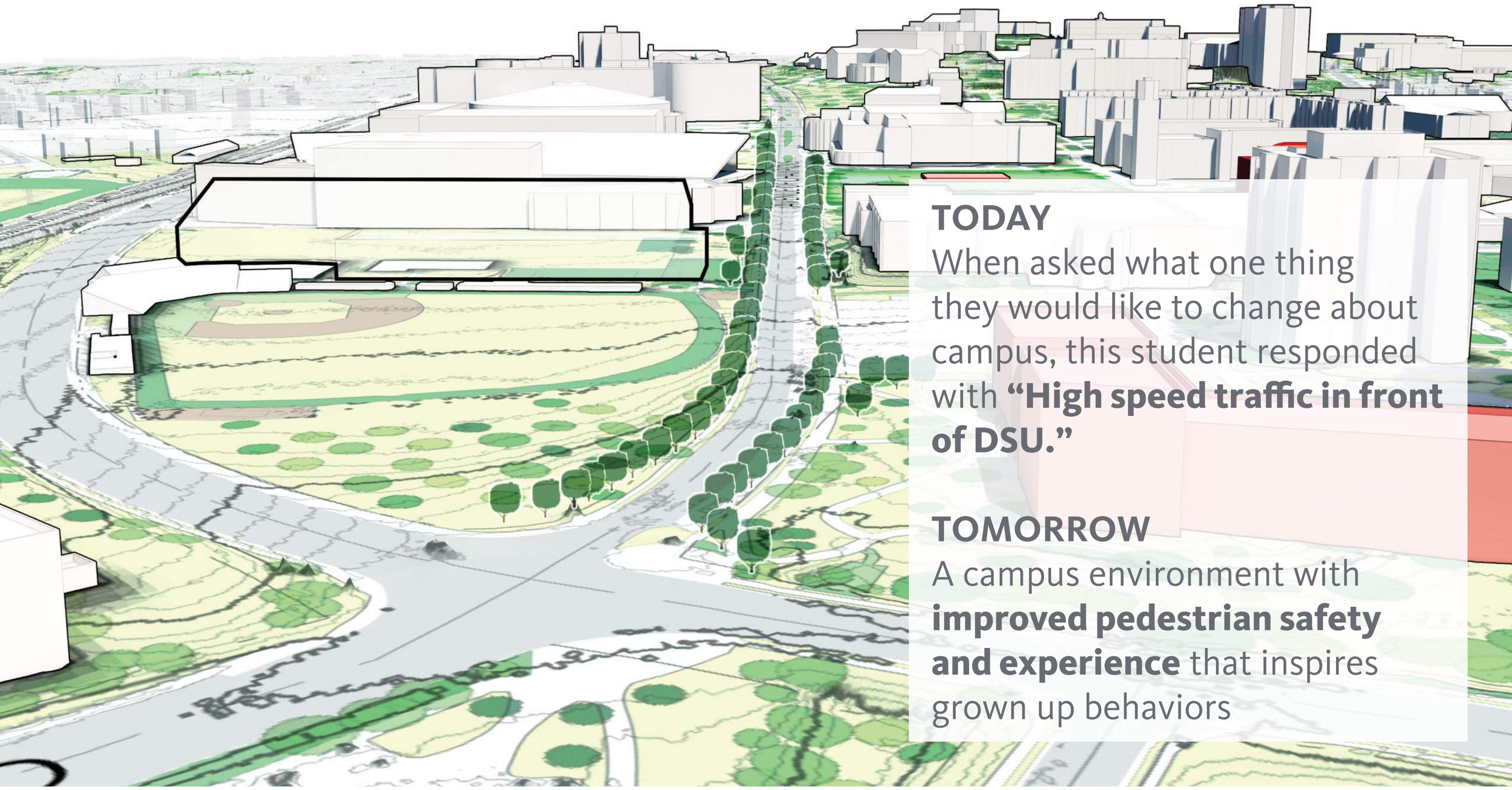
Southern Gateway Detailed Aerial View



Southern Gateway Aerial Perspective



Southern Gateway Aerial Perspective



TODAY

When asked what one thing they would like to change about campus, this student responded with **“High speed traffic in front of DSU.”**

TOMORROW

A campus environment with **improved pedestrian safety and experience** that inspires grown up behaviors

Southern Gateway Evaluation Matrix

Strategic Plan

- ✓ co-locate services
- ✓ boosts alumni engagement in addition to sports events

Guiding Principles

- ✓ welcoming southern entry
- ✓ celebrate seasonal occurrences
- ✓ blurs boundaries between traditional and non-traditional students
- ✓ maximizes non-traditional users time on campus

Feasibility

- ✓ near term construction on WKU-owned property
- ✓ easy pedestrian & vehicular access for proposed College of Business
- ✓ improves pedestrian safety
- ✓ traffic calming study for Ave. of Champions

Scenario #3

The ‘One Campus’ Campus

CONNECTS THE WHOLE CAMPUS THROUGH OPEN SPACE

The science campus is a popular destination and bustling center of learning, yet cut off from the main campus.

The 'One Campus' Campus Concept Diagrams

Existing Campus

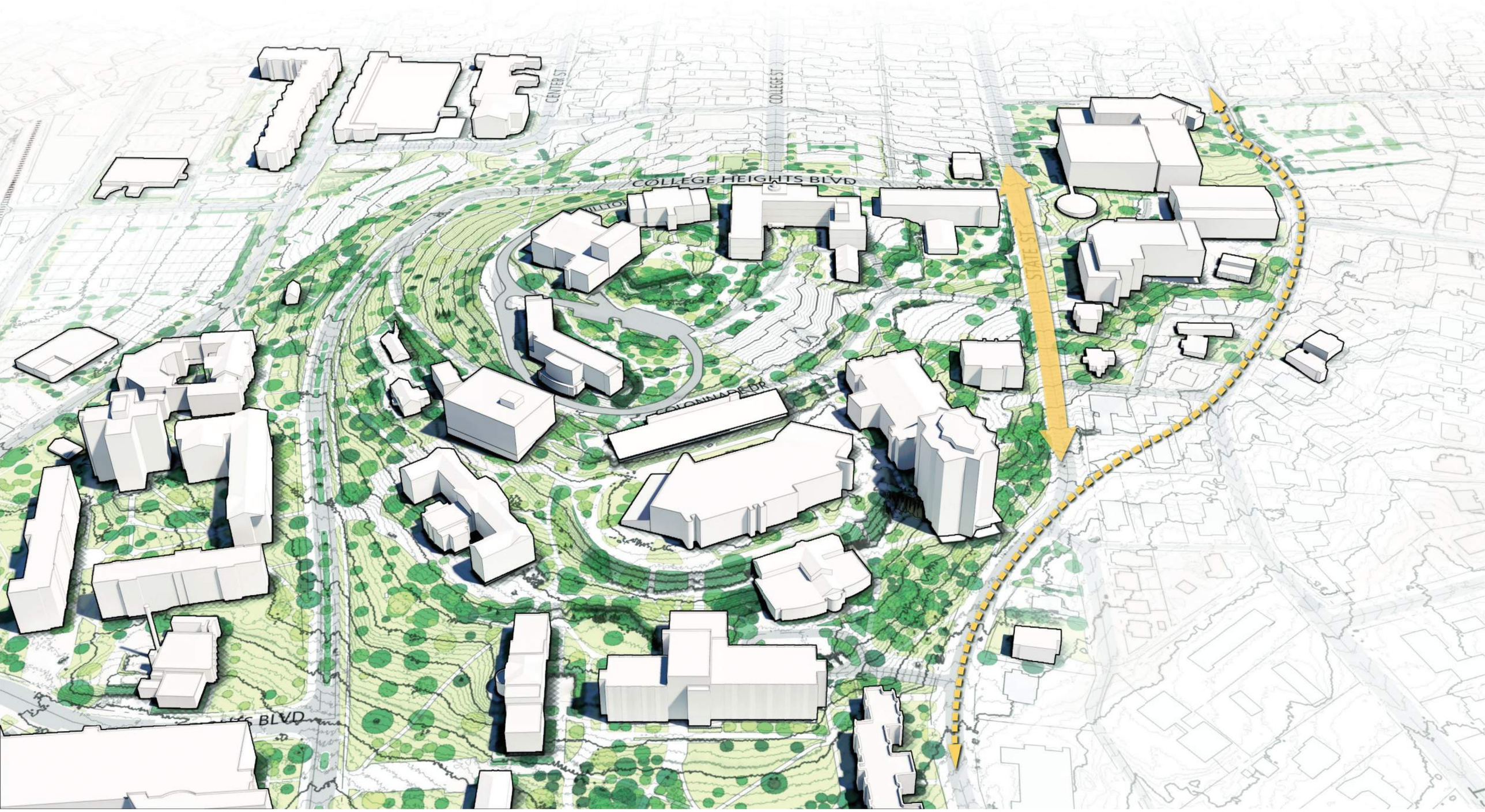
State Street splits the campus
and creates a disconnected experience for students.

Scenario #3

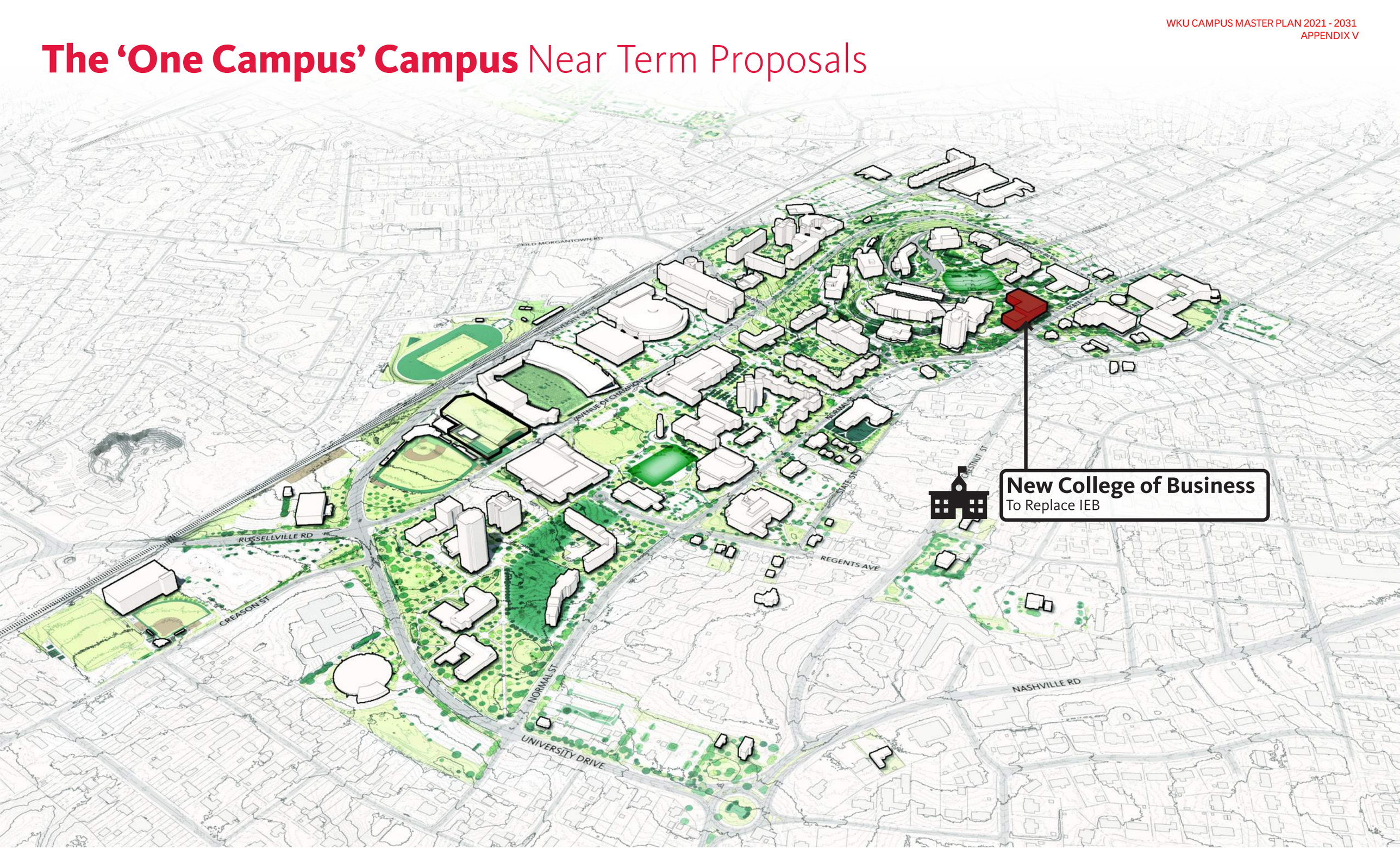
'One Campus' Campus
focused on connecting the whole campus through open space

The 'One Campus' Campus Existing Conditions

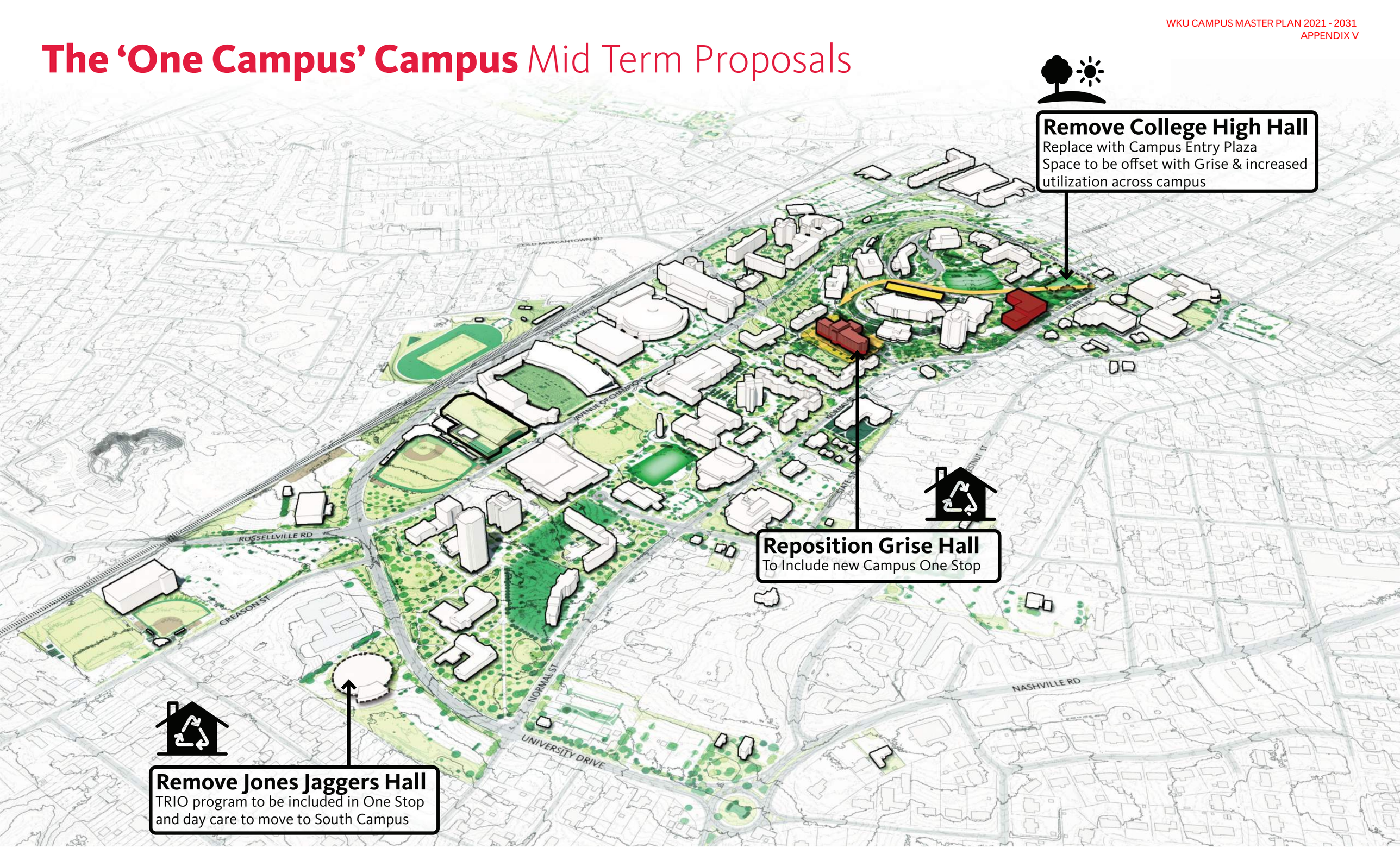
The 'One Campus' Campus Conceptual Campus Diagram



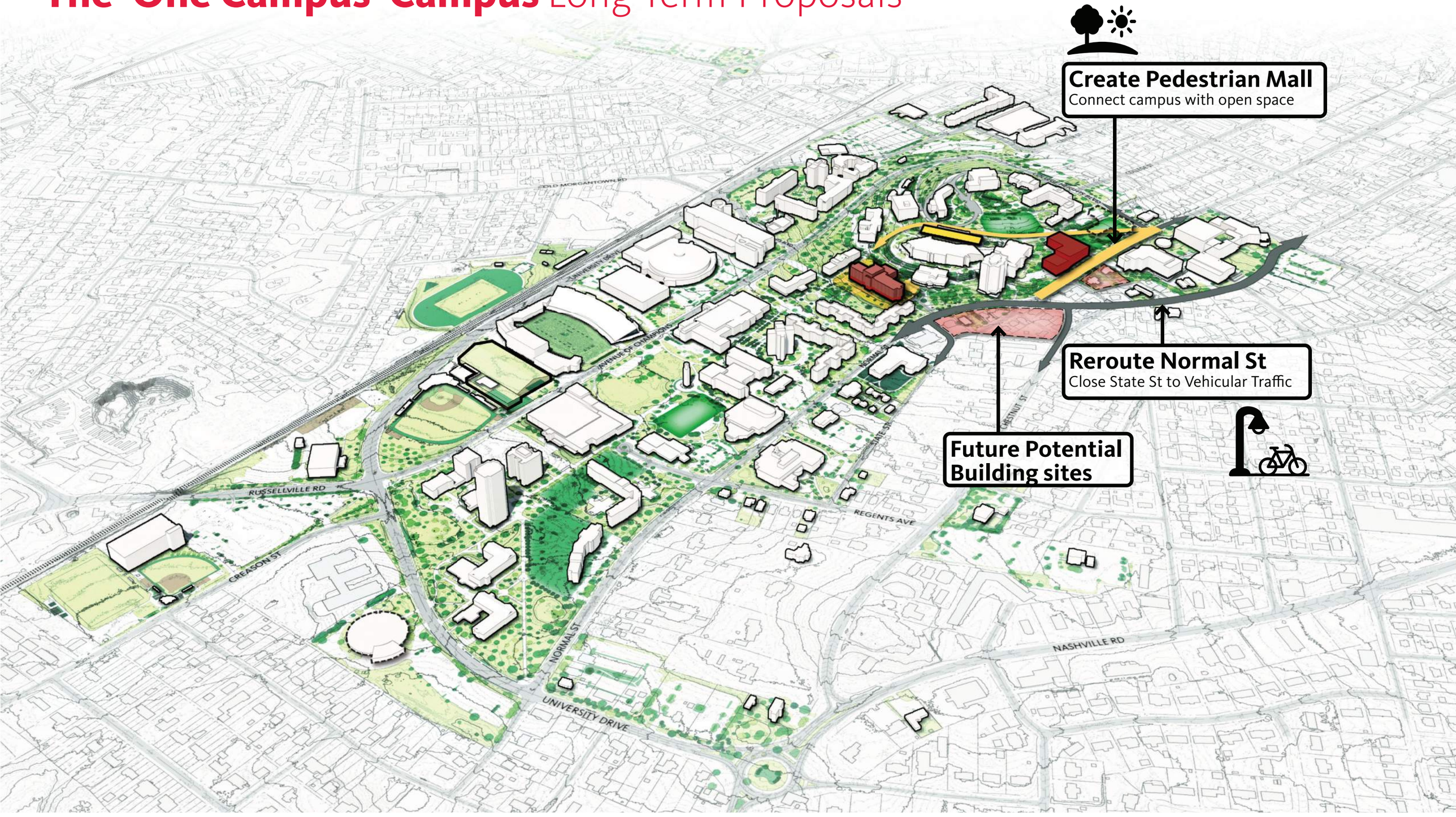
The 'One Campus' Campus Near Term Proposals



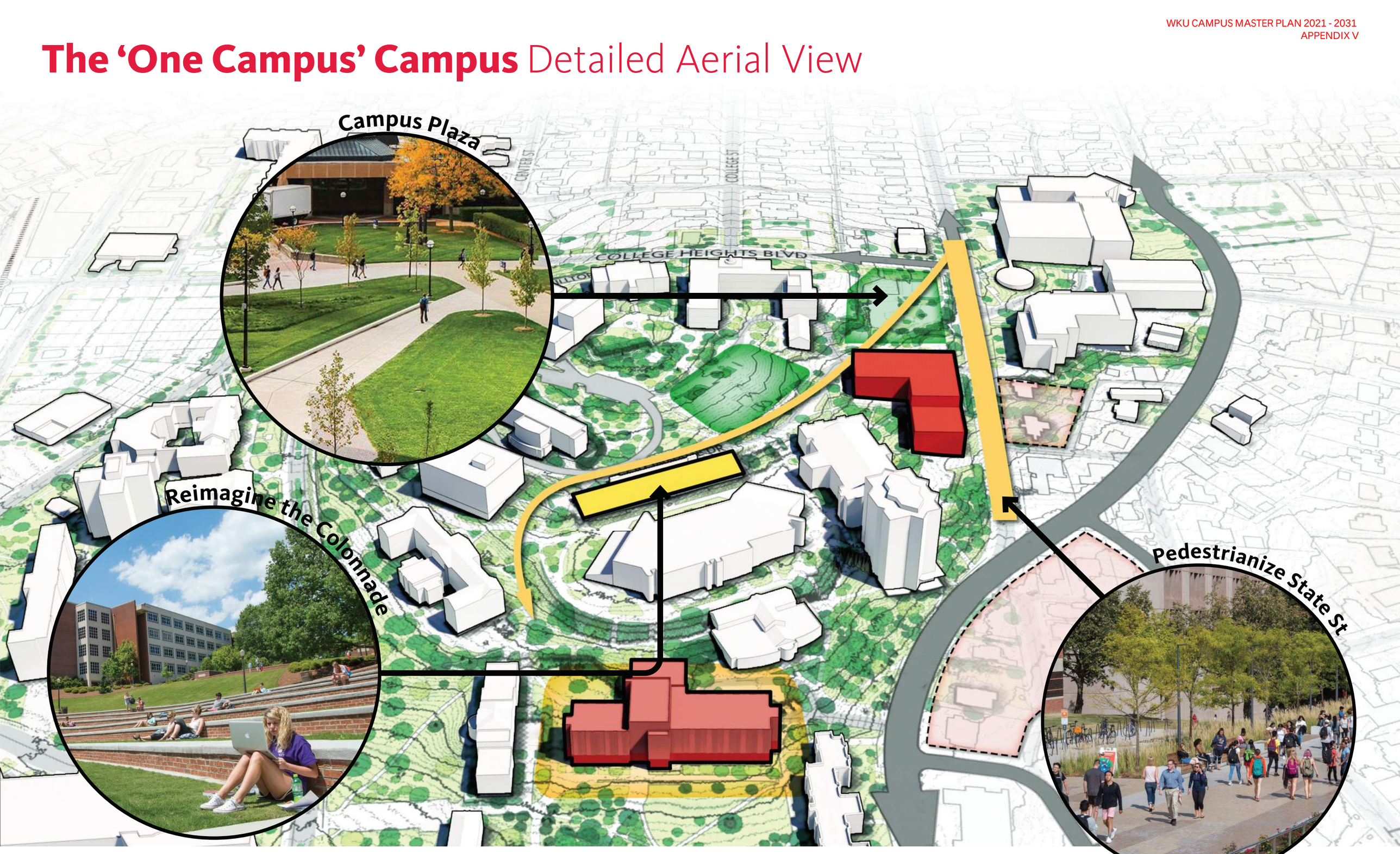
The 'One Campus' Campus Mid Term Proposals



The 'One Campus' Campus Long Term Proposals

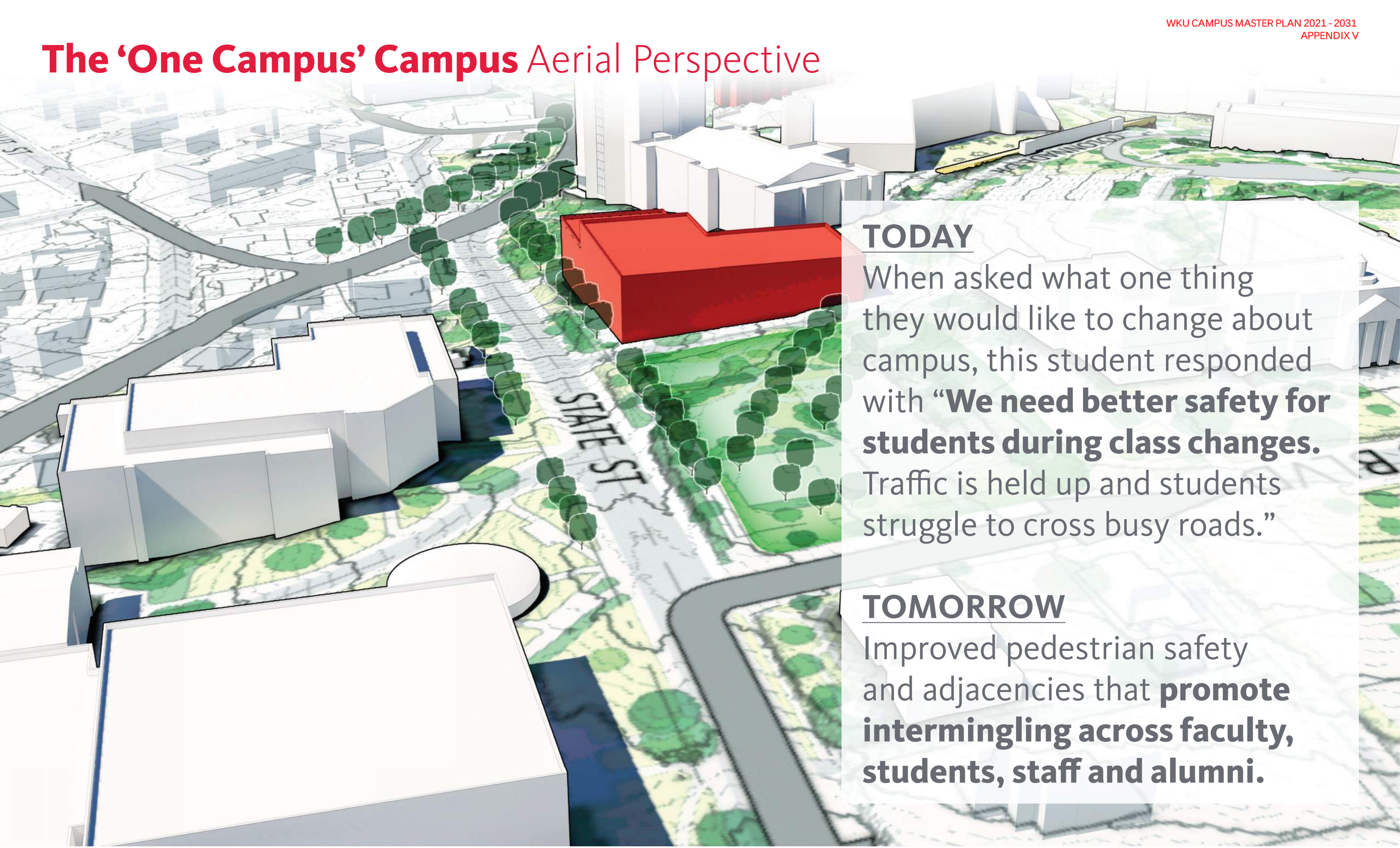


The 'One Campus' Campus Detailed Aerial View



The 'One Campus' Campus Aerial Perspective

The 'One Campus' Campus Aerial Perspective



TODAY

When asked what one thing they would like to change about campus, this student responded with "**We need better safety for students during class changes.** Traffic is held up and students struggle to cross busy roads."

TOMORROW

Improved pedestrian safety and adjacencies that **promote intermingling across faculty, students, staff and alumni.**

The 'One Campus' Campus Evaluation Matrix

Strategic Plan

- ✓ builds on the history of the Hill
- ✓ promote innovation and entrepreneurship
- ✓ enhances the Colonnade Program
- ✓ co-locate services

Guiding Principles

- ✓ removes barriers in accessing services
- ✓ prioritizes location of student services
- ✓ boosts interactions among students from different years
- ✓ inspires grown-up behaviors

Feasibility

- ✓ near term construction on WKU-owned property
- ✓ focuses investment around learning spaces
- ✓ improves pedestrian safety
- ✓ re-routing Normal St. traffic will require property acquisitions

Scenario Evaluation & Next Steps

Scenario Summary & Comparison

Scenario #1
Strengthen the Perimeter

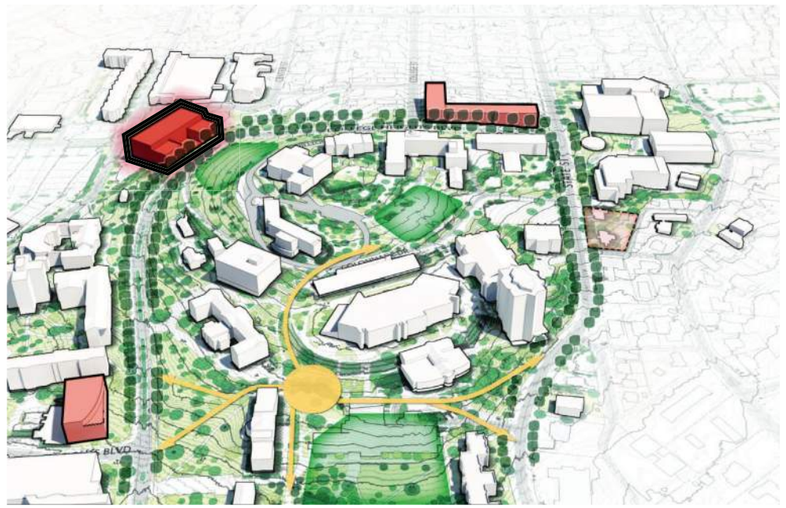
Scenario #2
Southern Gateway

Scenario #3
The ‘One Campus’ Campus

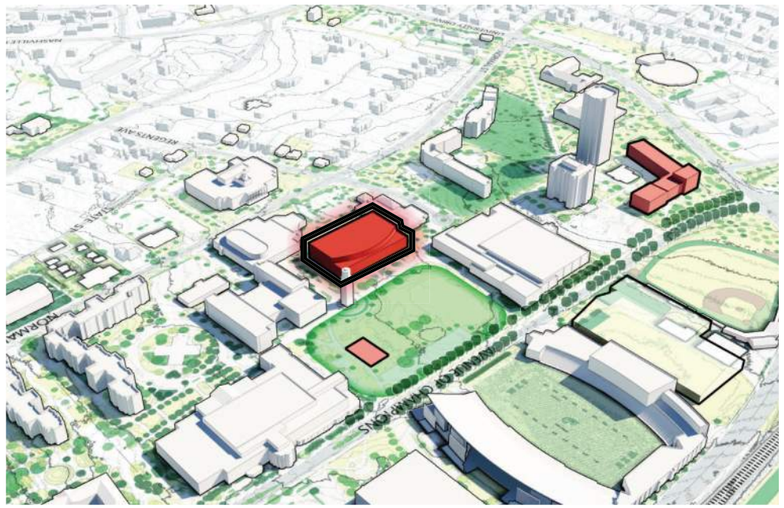
Conceptual Campus Diagrams

Scenario Summary & Comparison

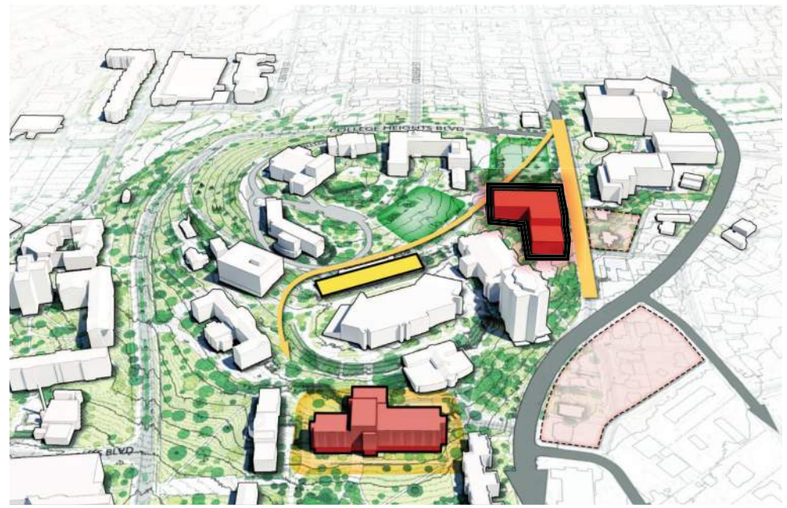
Scenario #1
Strengthen the Perimeter



Scenario #2
Southern Gateway



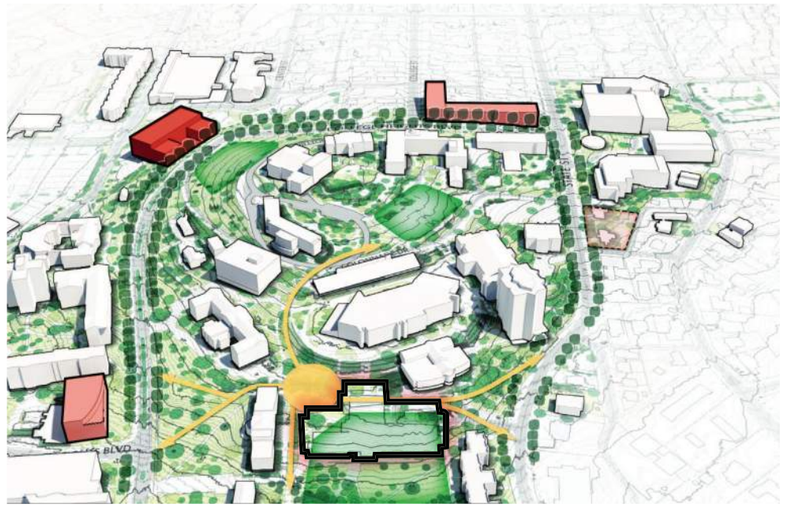
Scenario #3
The ‘One Campus’ Campus



New College of Business

Scenario Summary & Comparison

Scenario #1
Strengthen the Perimeter



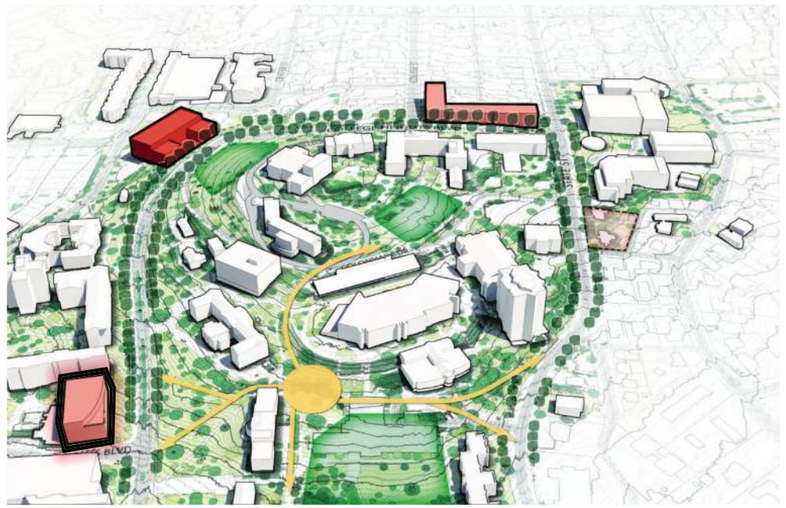
Scenario #2
Southern Gateway

Scenario #3
The ‘One Campus’ Campus

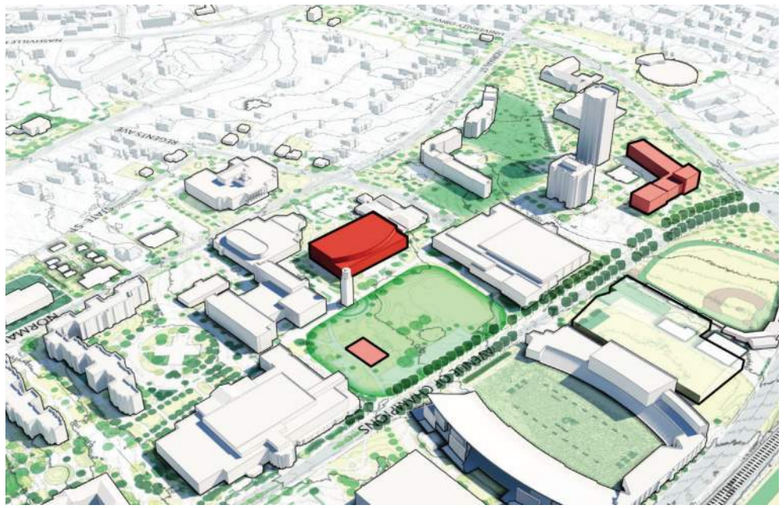
Future of Grise Hall

Scenario Summary & Comparison

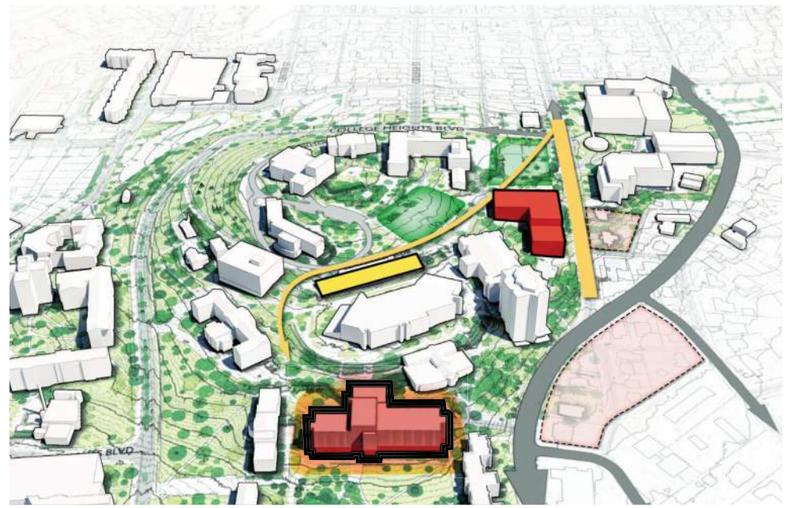
Scenario #1
Strengthen the Perimeter



Scenario #2
Southern Gateway



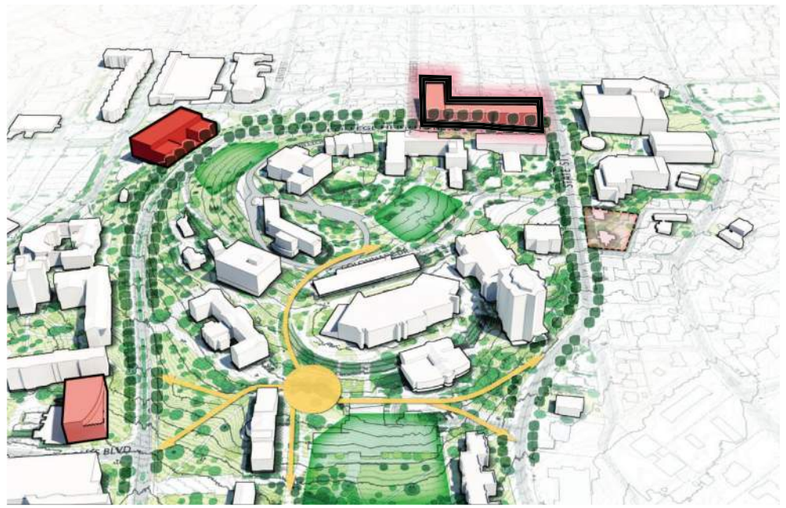
Scenario #3
The ‘One Campus’ Campus



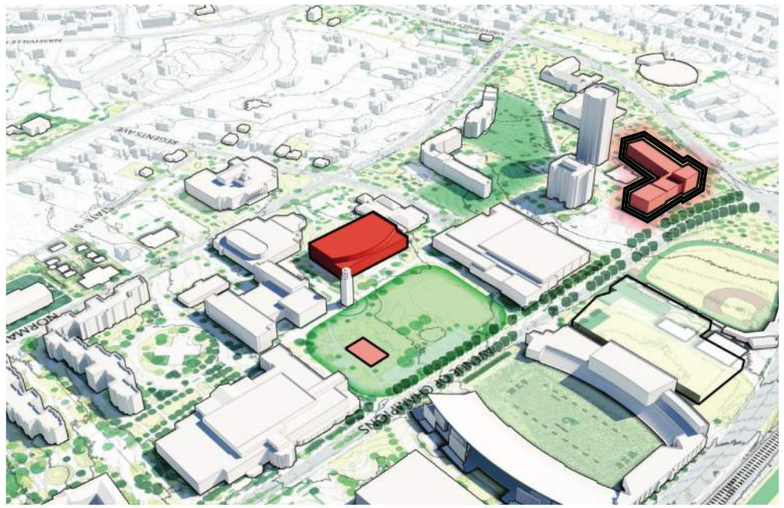
One Stop Center

Scenario Summary & Comparison

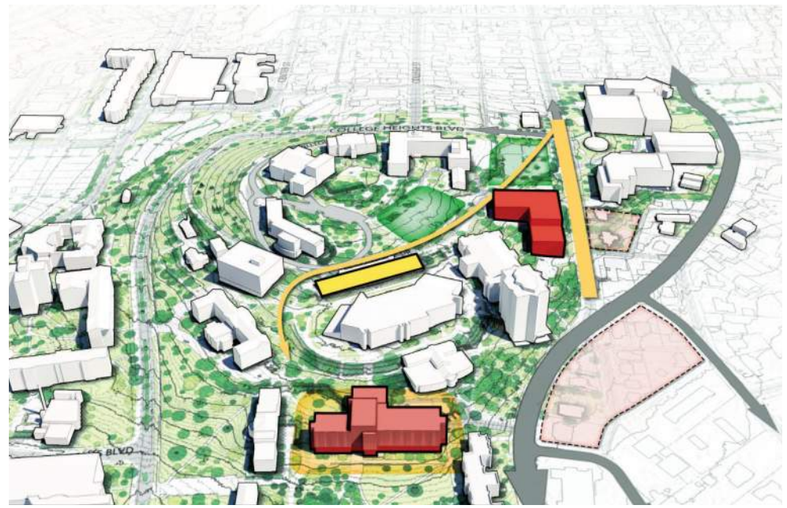
Scenario #1
Strengthen the Perimeter



Scenario #2
Southern Gateway



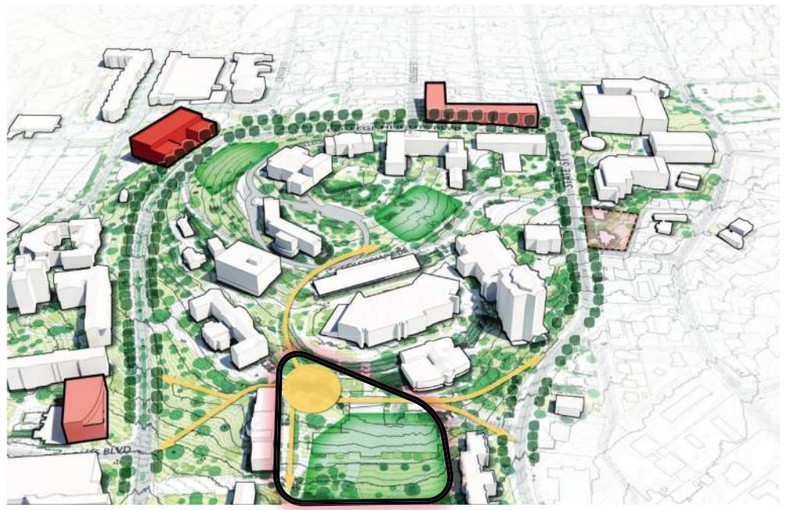
Scenario #3
The ‘One Campus’ Campus



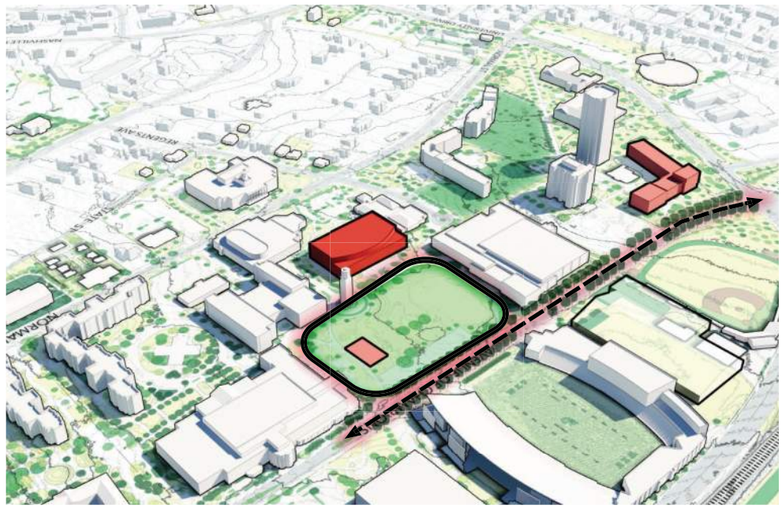
Campus Housing

Scenario Summary & Comparison

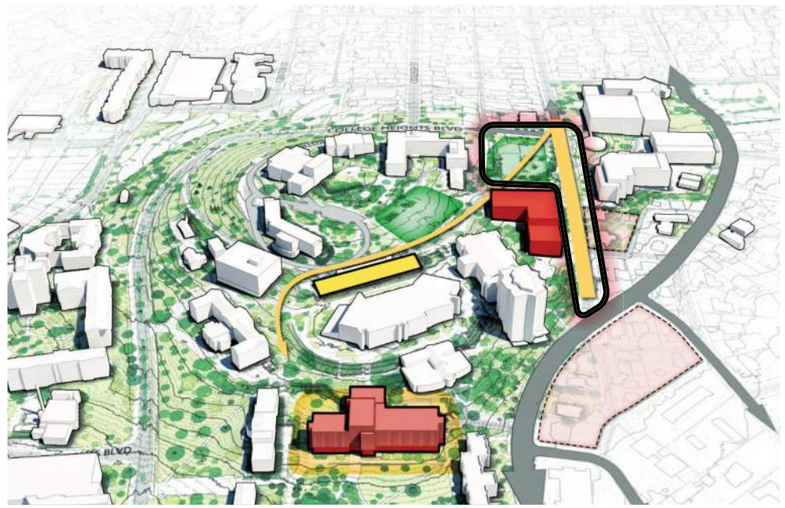
Scenario #1
Strengthen the Perimeter



Scenario #2
Southern Gateway



Scenario #3
The ‘One Campus’ Campus



Campus Open Space

Next Steps

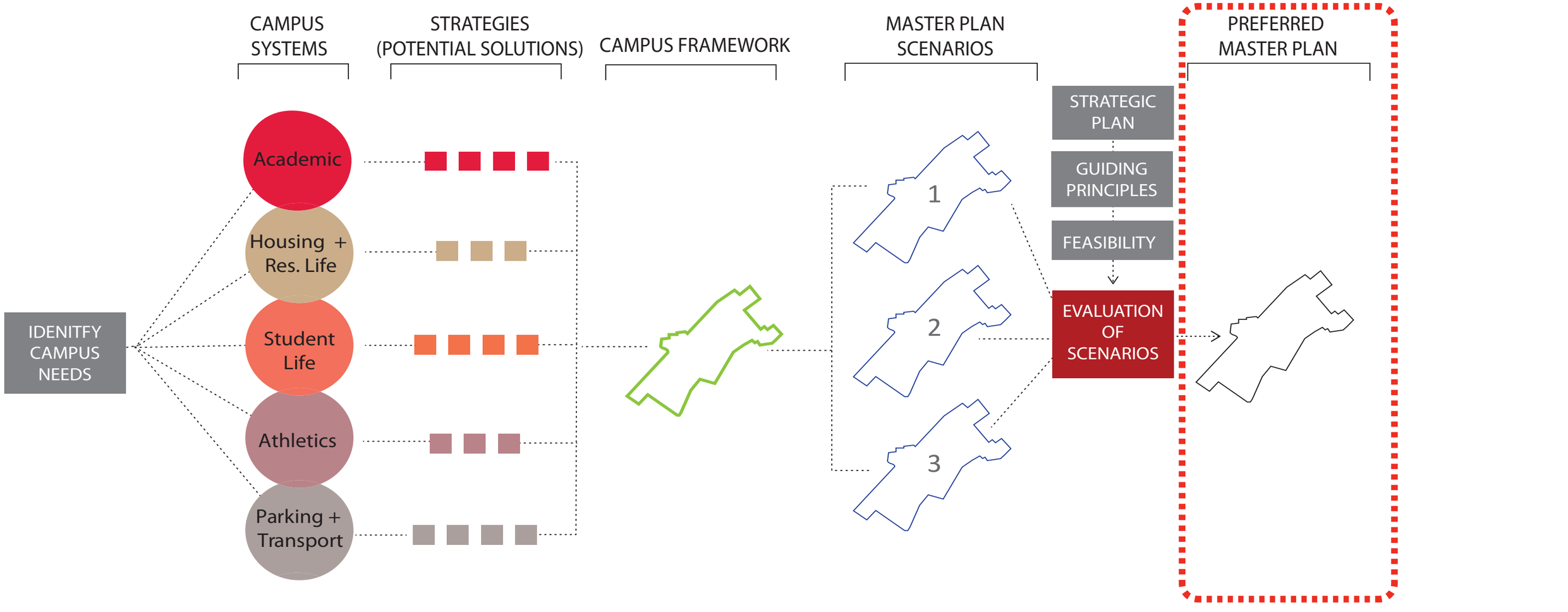
SYSTEMS + STRATEGIES 4 weeks | **SCENARIOS** 4 weeks | **RECOMMEND** 6 weeks | **DOCUMENT** 6 weeks

April 3 — STEERING COMMITTEE REVIEW

May 1 — STEERING COMMITTEE REVIEW

May 28 — STEERING COMMITTEE REVIEW

July 7 — STEERING COMMITTEE REVIEW



Thank you!!!

Appendix

Evaluation Matrix Summary - Appendix

Scenario	Strategic Plan	Guiding Principles	Feasibility
Strengthen the Perimeter	✓ builds on the history of the Hill ✓ boost connection between WKU campus and Bowling Green ✓ enhances the Colonnade Program ✓ co-locate services	✓ potential for co-working and collaboration with Alumni ✓ removes barriers in accessing services ✓ prioritizes location of student services ✓ blurs boundaries between traditional and non-traditional students	✓ near term construction on WKU-owned property, no building demo required ✓ long-term student housing requires property acquisition
Southern Gateway	✓ co-locate services ✓ boosts alumni engagement in addition to sports events	✓ welcoming southern entry ✓ celebrate seasonal occurrences ✓ blurs boundaries between traditional and non-traditional students maximizes non-traditional users time on campus	✓ near term construction on WKU-owned property ✓ easy pedestrian and vehicular access for proposed College of Business ✓ improves pedestrian safety ✓ traffic calming study for Ave. of Champions
“One Campus” Campus	✓ builds on the history of the Hill ✓ promote innovation and entrepreneurship ✓ enhances the Colonnade Program ✓ co-locate services	✓ removes barriers in accessing services ✓ prioritizes location of student services ✓ boosts interactions among students from different years ✓ inspires grown-up behaviors	✓ near term construction on WKU-owned property ✓ focuses investment around learning spaces ✓ improves pedestrian safety ✓ re-routing Normal St. traffic will require property acquisitions

WKU Campus Master Plan

Initial Concept Alternatives Review

1 MAY 2020

WKU

+

Gensler

Agenda & Purpose

01 Intro & Project Process

02 Campus Systems

03 Campus Framework

04 Next Steps

How might we:

reimagine the campus to increase student enrollment, boost student retention, and promote student success across the region?

Project Process

DISCOVER
5 weeks

ANALYZE
7 weeks

EXPLORE
8 weeks

RECOMMEND + DOCUMENT
12 weeks

KICK OFF & SETUP

PREP & RESEARCH

SYNTHESIS & ANALYSIS

PRINCIPLES & DIRECTIVES

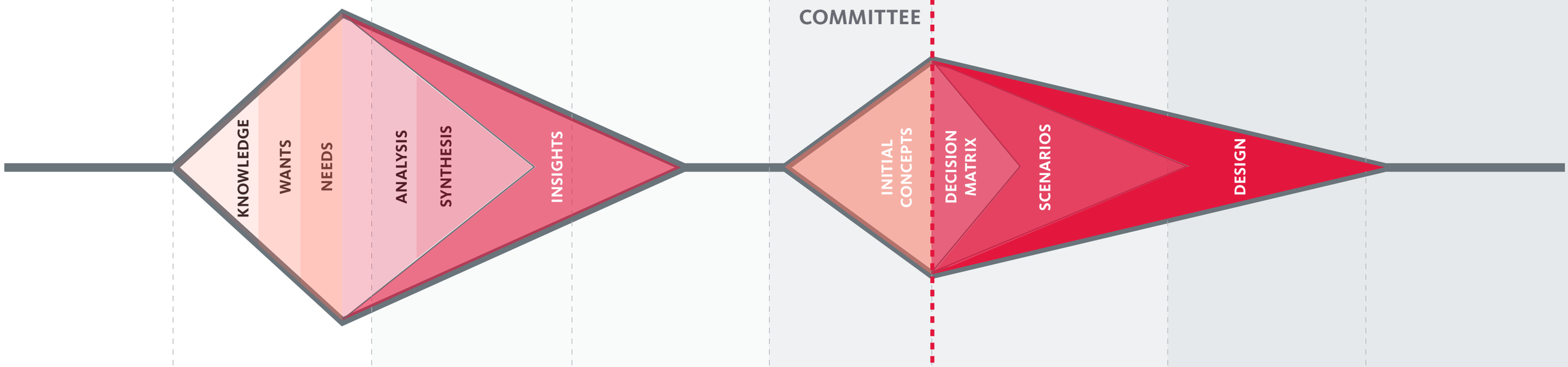
INITIAL CONCEPTS

TODAY
MAY 1
MASTER PLAN COMMITTEE

SCENARIO BUILDING

FINAL DESIGN

COMPILATION



Align on project priorities and process

Conduct immersive research

Synthesize and Analyze to gain insight

Define Principles to deliver on needs

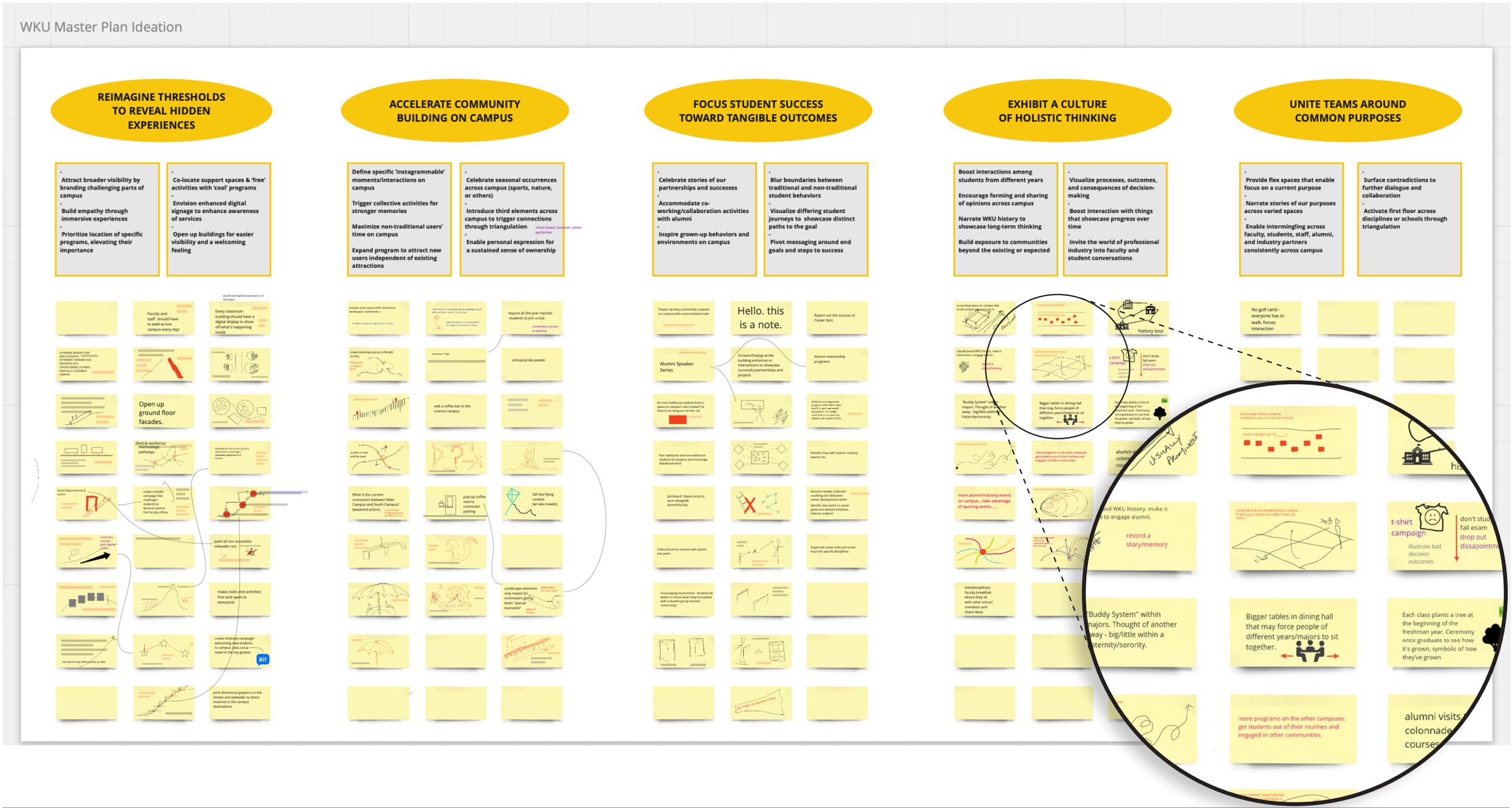
Define framework and options for campus systems

Build scenarios to compare and contrast

Develop selected design for Master Plan

Document process and outcome

Team Activities



Explore Phase Process

SYSTEMS + STRATEGIES 4 weeks | **SCENARIOS** 4 weeks | **RECOMMEND** 6 weeks | **DOCUMENT** 6 weeks

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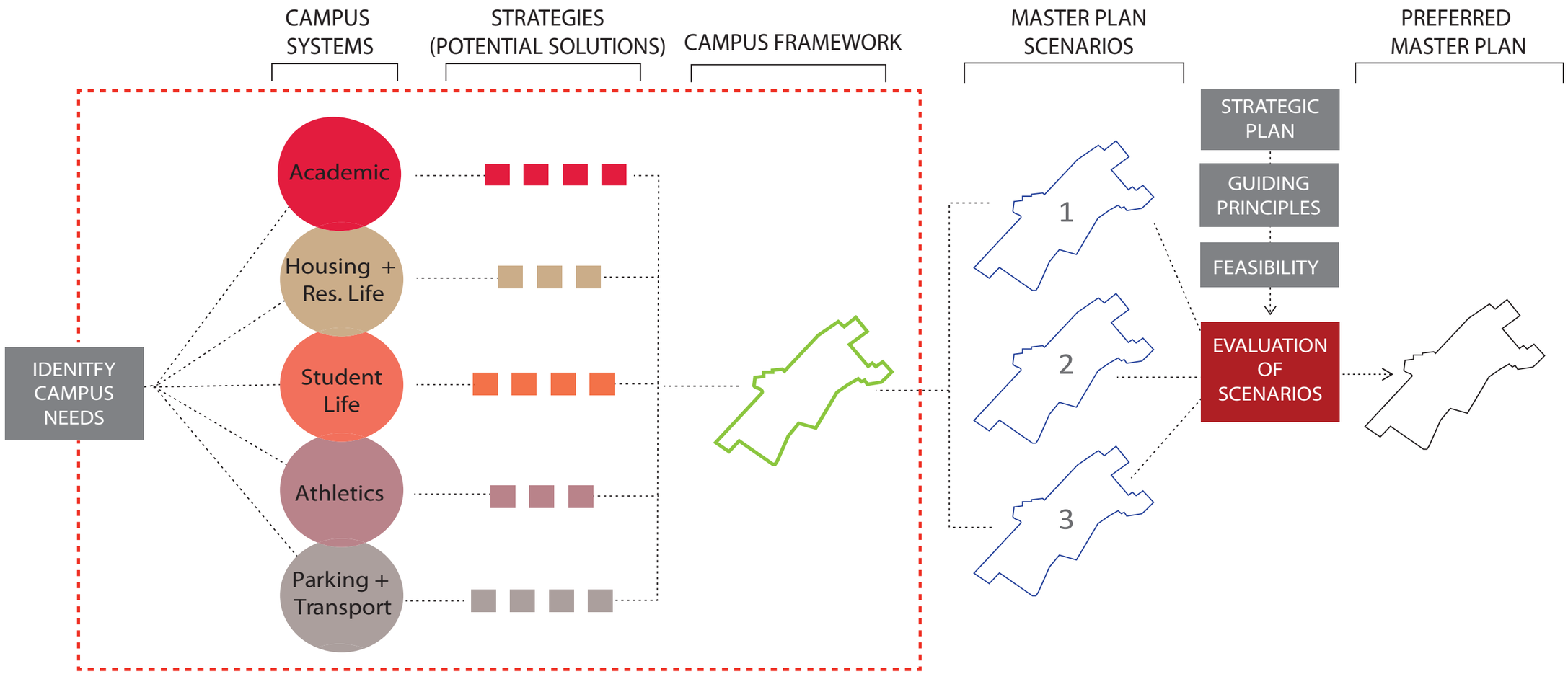
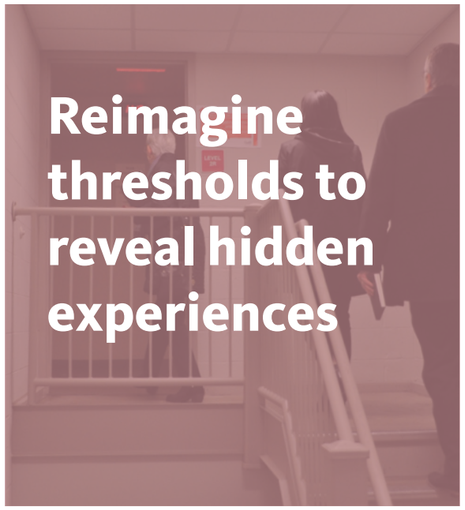
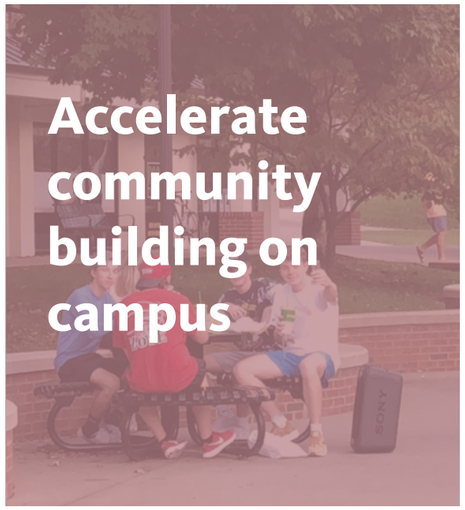


Guiding Principles

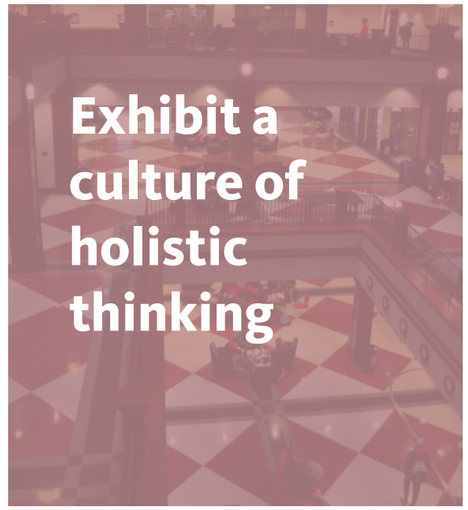


Designing to **broaden visibility, build empathy, and prioritize support locations.**

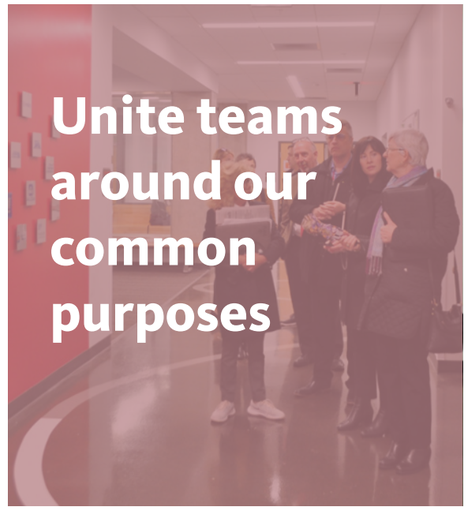


Designing to **trigger conversations, enable personal expression, and seasonal celebrations**

Designing to **co-work with alumni, showcase student journeys, and work with non-traditional students**



Designing to **boost unexpected connections, encourage opinion-sharing, and invite industry in**



Designing to **co-locate for purpose, intermingle diverse stakeholders, and narrate stories of our goals**

Campus Systems Academic

How do we remain focused on providing the best educational value?

Guiding Principle #3

Focus student success toward tangible outcomes.

Design Directives

- Celebrate stories of our partnerships and successes
- Accommodate co-working/collaboration activities with alumni
- Visualize differing student journeys to showcase distinct paths to the goal

Academic System
Current Campus

Garrett Conference Center
To be Demolished

Ogden Hall
Completed 2019

The Commons at Helm Library
To be Completed in 2021

Honors College
Completed in 2015

Tate Page Hall
To be Demolished

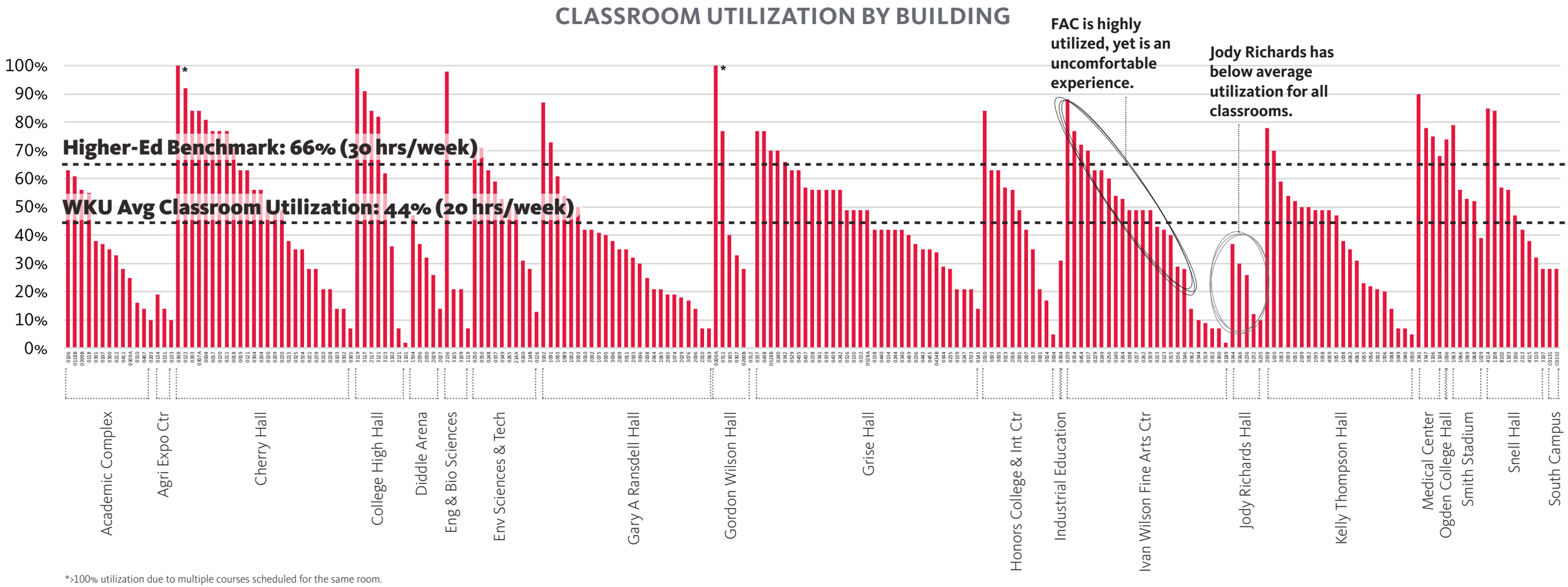
OLD MORGANTOWN RD
UNIVERSITY DRIVE
AVENUE OF CHAMPIONS
COLLEGE HEIGHTS BLVD
CENTER ST
STATE ST
NORMAL ST
CHESTNUT ST
REGENTS AVE
NASHVILLE RD
RUSSELLVILLE RD
CREASON ST

LEGEND:
- BUILDING W/ CLASSROOMS
- BUILDINGS W/O CLASSROOMS
- LIBRARIES

Classroom Utilization by room

40 out of 218 classrooms are utilized more than 30 hours a week (66%), a best practices target across many higher-ed institutions.

Per WKU, 100% classroom utilization is based on a 45 hour week, Monday through Friday, 8am to 5pm.



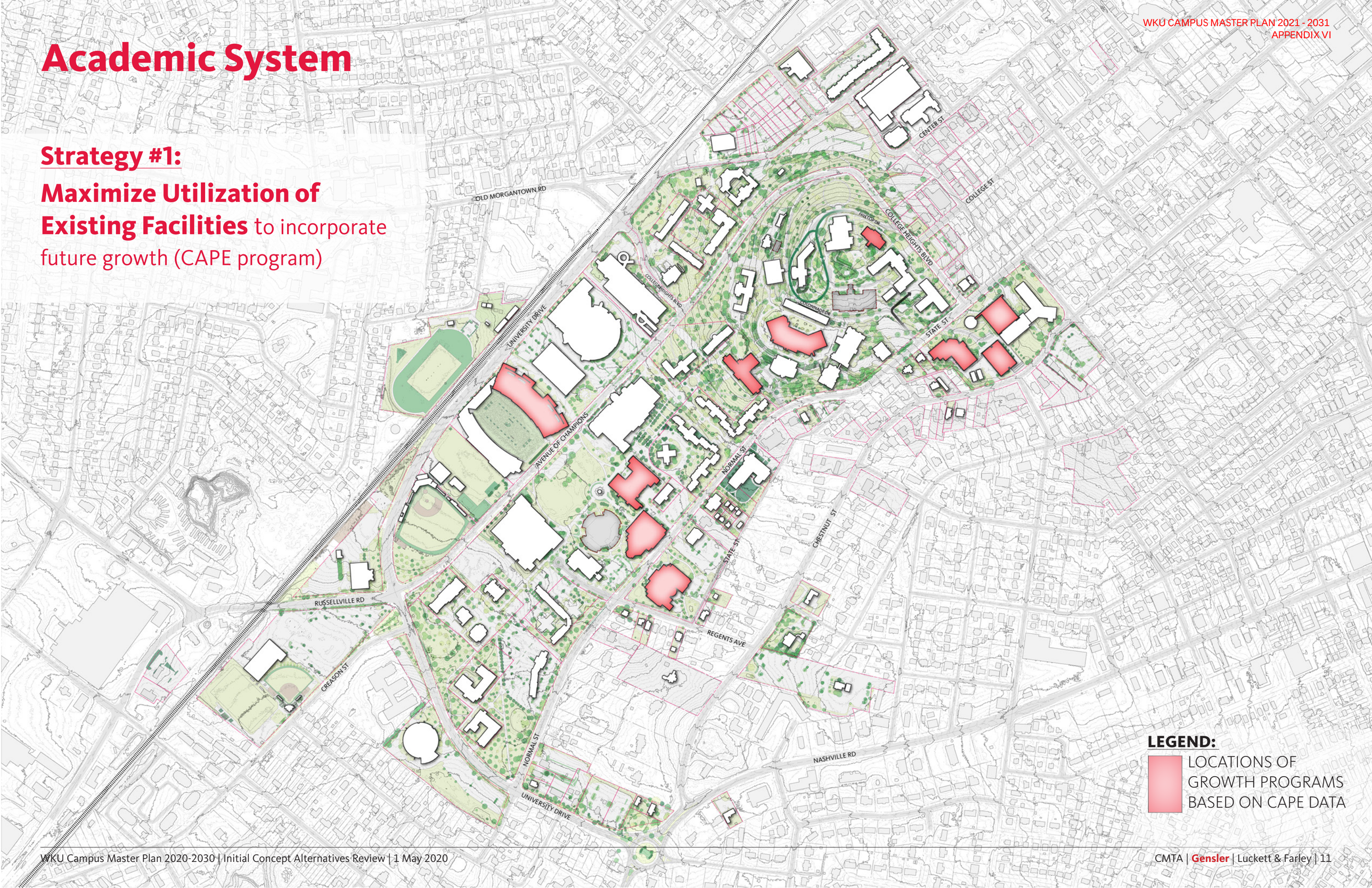
*>100% utilization due to multiple courses scheduled for the same room.

Source: Astra Space Utilization of Labs and Classrooms, Spring 2020

Academic System

Strategy #1:

Maximize Utilization of Existing Facilities to incorporate future growth (CAPE program)



LEGEND:

LOCATIONS OF GROWTH PROGRAMS BASED ON CAPE DATA

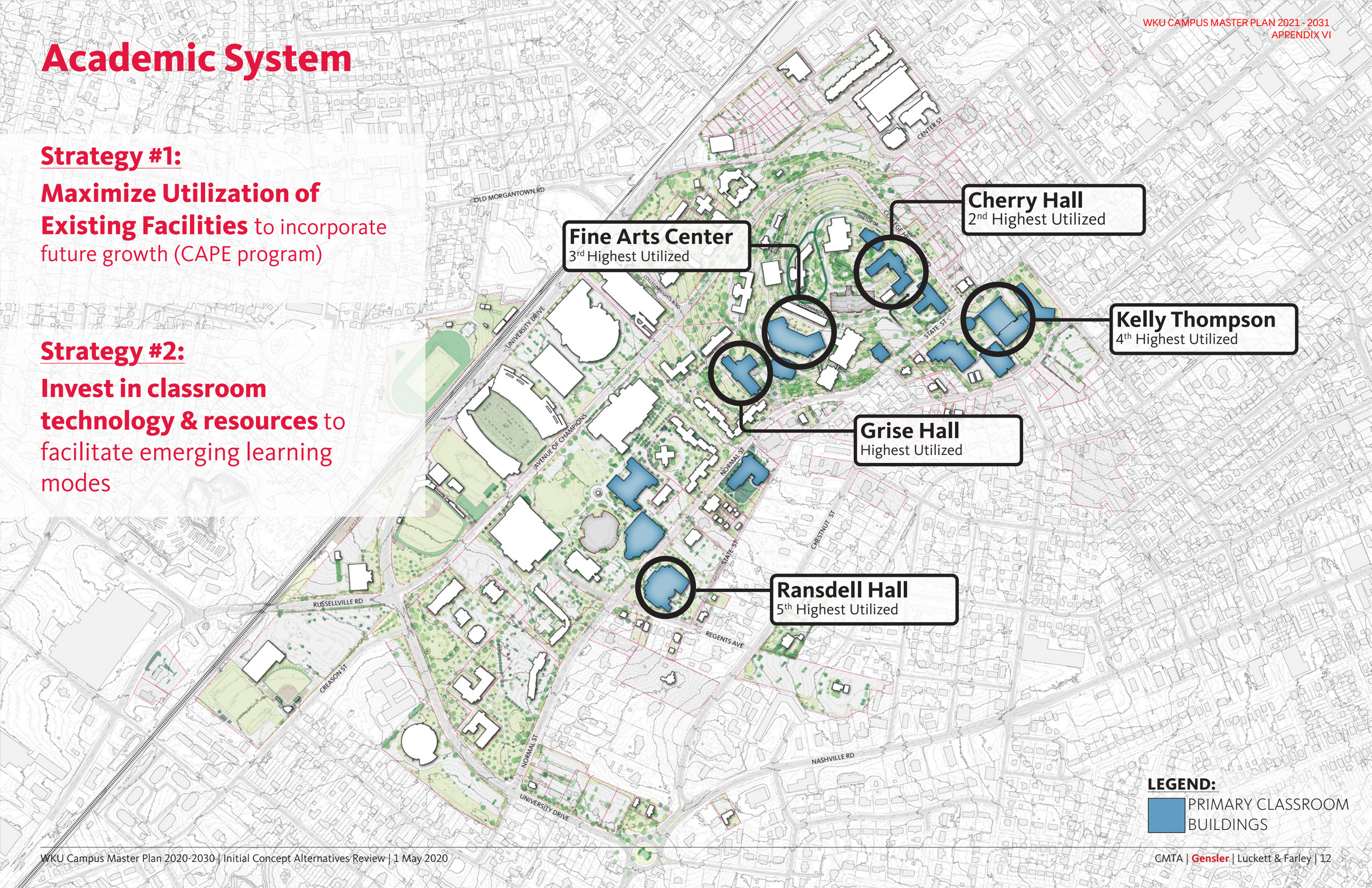
Academic System

Strategy #1:

Maximize Utilization of Existing Facilities to incorporate future growth (CAPE program)

Strategy #2:

Invest in classroom technology & resources to facilitate emerging learning modes



Academic System

Strategy #1:

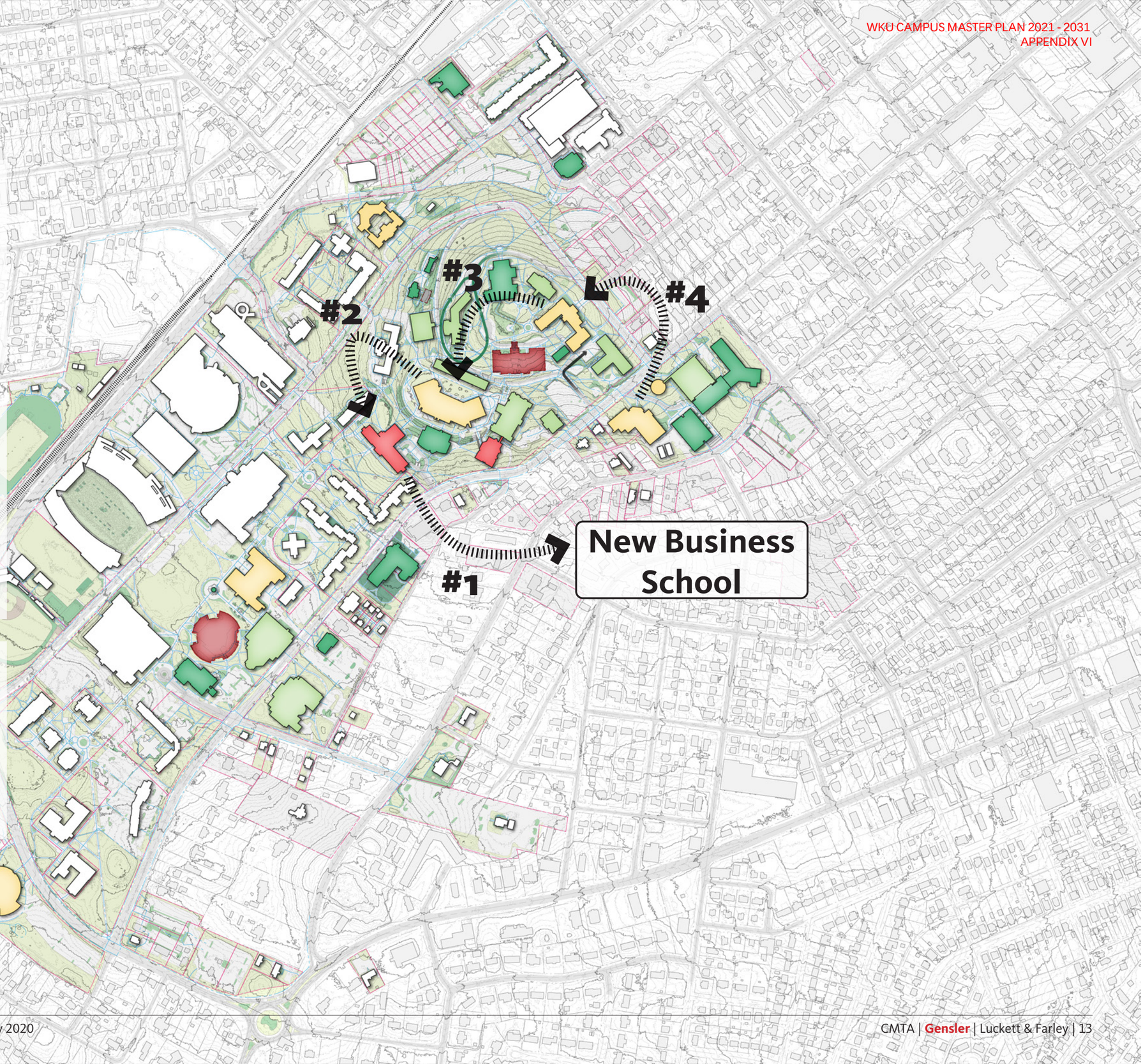
Maximize Utilization of Existing Facilities to incorporate future growth (CAPE program)

Strategy #2:

Invest in classroom technology & resources to facilitate emerging learning modes

Strategy #3:

Vacating Grise Hall becomes the **first 'domino' in a series of strategic renovations**



Key Takeaways Academic System

Maximize Utilization of Existing Facilities to incorporate future growth

By maximizing the utilization of existing facilities, future growth can be accommodate with minimal investment.

Invest in classroom technology & resources to facilitate emerging learning modes

Based on the acceleration of remote learning, investment in classroom capabilities is a necessary investment. Focusing that investment where most learning happens maximizes it's impact.

Vacating Grise Hall becomes the first 'domino' in a series of strategic renovations

Building the new Business School opens up potential to reposition Grise Hall as swing space for renovations or as an new open space on campus.

Campus Systems
Housing & Residence Life

Where should we focus future investments to continue to improve the student experience?

Guiding Principle #2

Accelerate community building on campus

Insight 2B

The everyday campus experience is seldom a high point; it is simply seen as a functioning system to be navigated. There is an opportunity for the campus to play an important part in emphasizing the delight of the small journeys.

Housing & Residence Life System

Current Campus

Kentucky Street Apts.
Completed in 2013

Hilltopper Hall
Completed in 2018

NE / SW Renovations
Completed in 2018

First Year Village & Landscape
To be Completed in 2021

LEGEND:
RESIDENCE LIFE BUILDINGS

Housing & Residence Life System

Strategy #1:

Targeted investments focused on improving common/amenity spaces

LEGEND:

RESIDENCE LIFE BUILDINGS

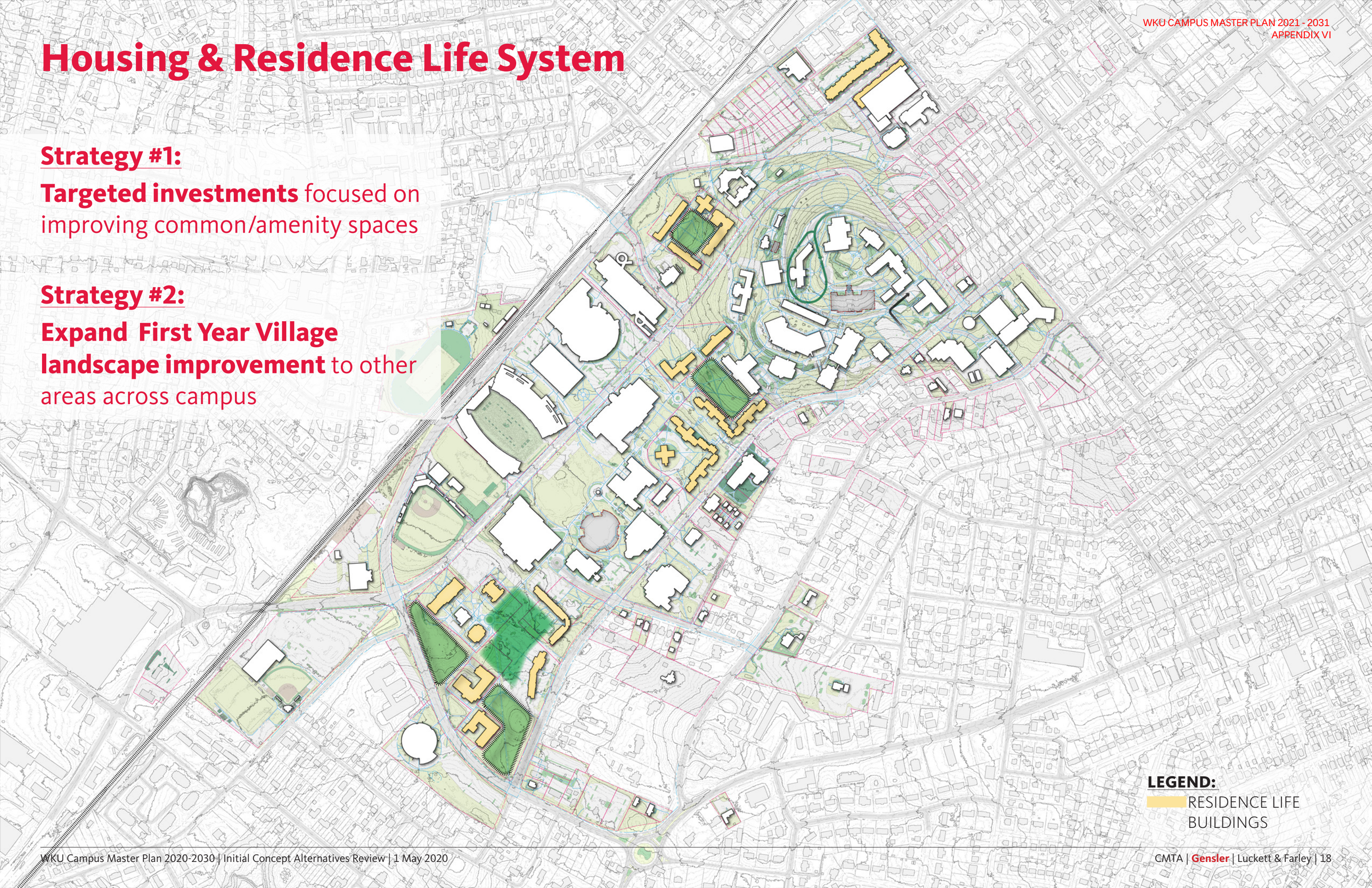
Housing & Residence Life System

Strategy #1:

Targeted investments focused on improving common/amenity spaces

Strategy #2:

Expand First Year Village landscape improvement to other areas across campus



Housing & Residence Life System

Strategy #1:

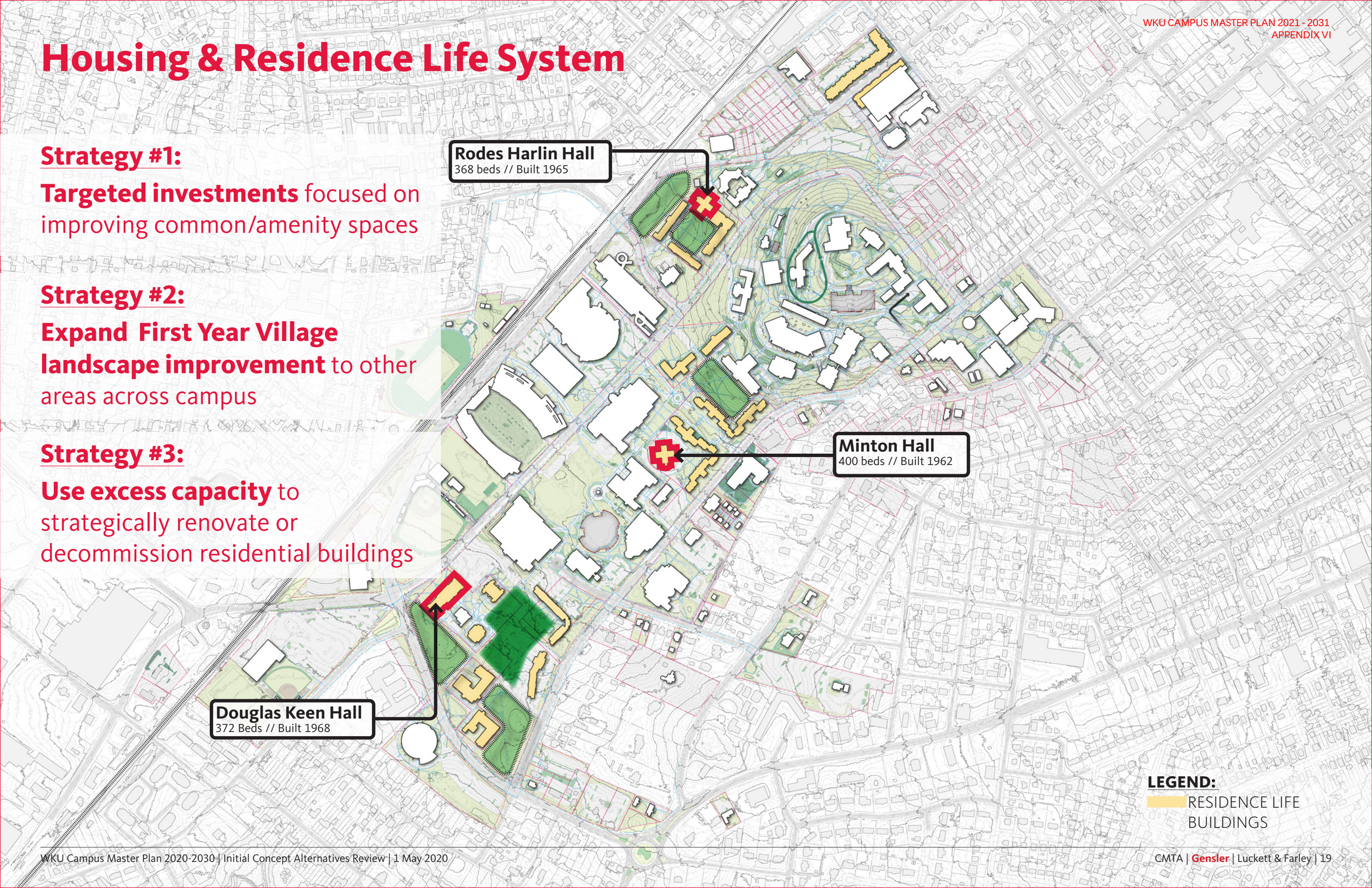
Targeted investments focused on improving common/amenity spaces

Strategy #2:

Expand First Year Village landscape improvement to other areas across campus

Strategy #3:

Use excess capacity to strategically renovate or decommission residential buildings



Key Takeaways Housing & Residence Life System

Targeted investments focused on improving common/amenity spaces

Targeted investment in residential amenities (e.g. lobbies, common spaces, lounges, etc.) can have a great impact on the student experience on campus.

Expand First Year Village landscape improvement to other areas across campus

Extending landscape improvements (e.g. enhanced lighting, outdoor furniture, etc.) can improve the overall campus experience and identity.

Use excess capacity to strategically renovate or decommission residential buildings

Use excess bed capacity as swing space to renovate aging residential facilities with minimal disruption.

Campus Systems
Student Life

"Give us more stuff to do on campus. There's a gym, and a recreation center. That's it."

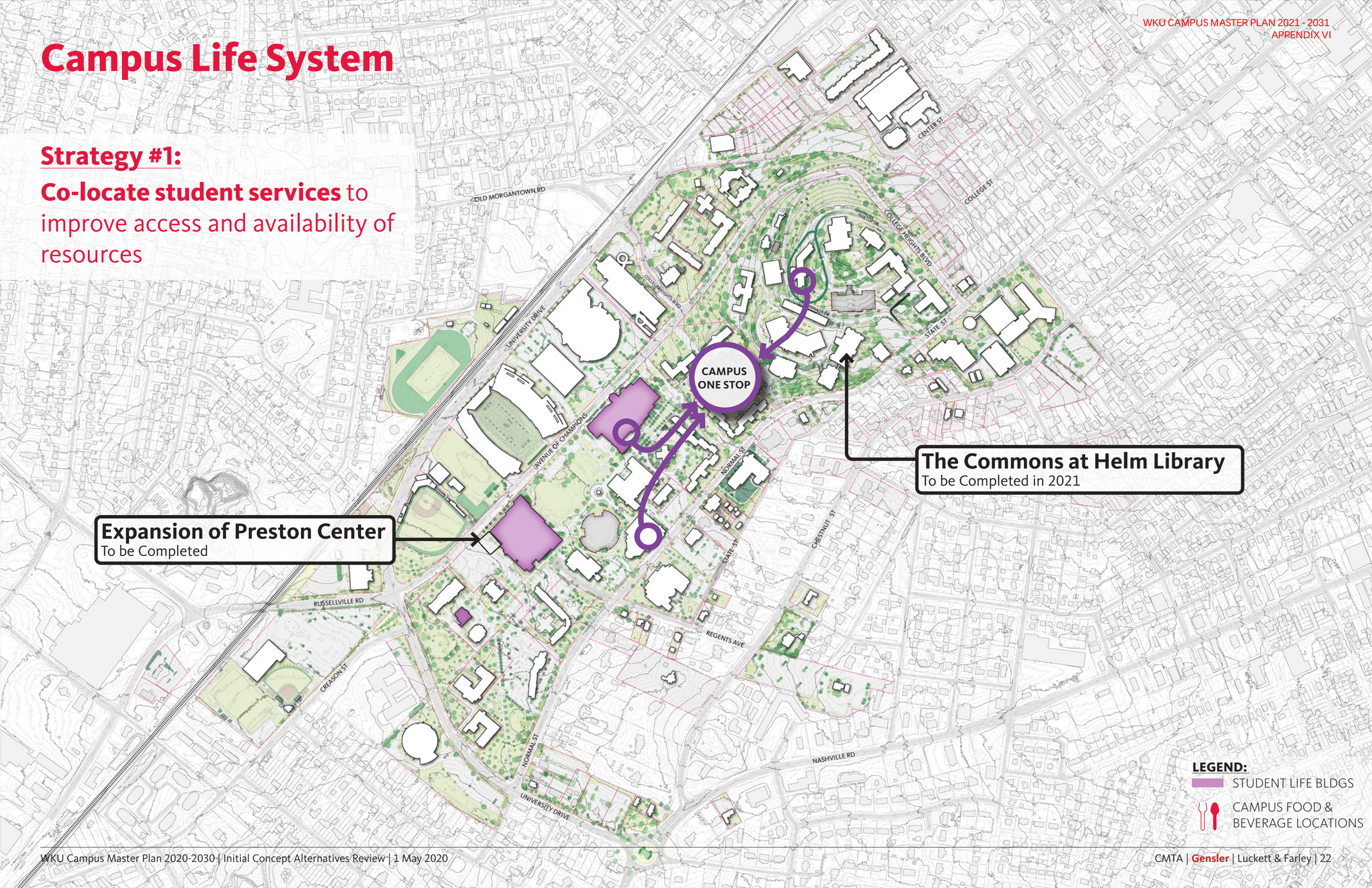
— Student survey respondent

Where are the opportunities to improve student success outside the classroom?

Campus Life System

Strategy #1:

Co-locate student services to improve access and availability of resources



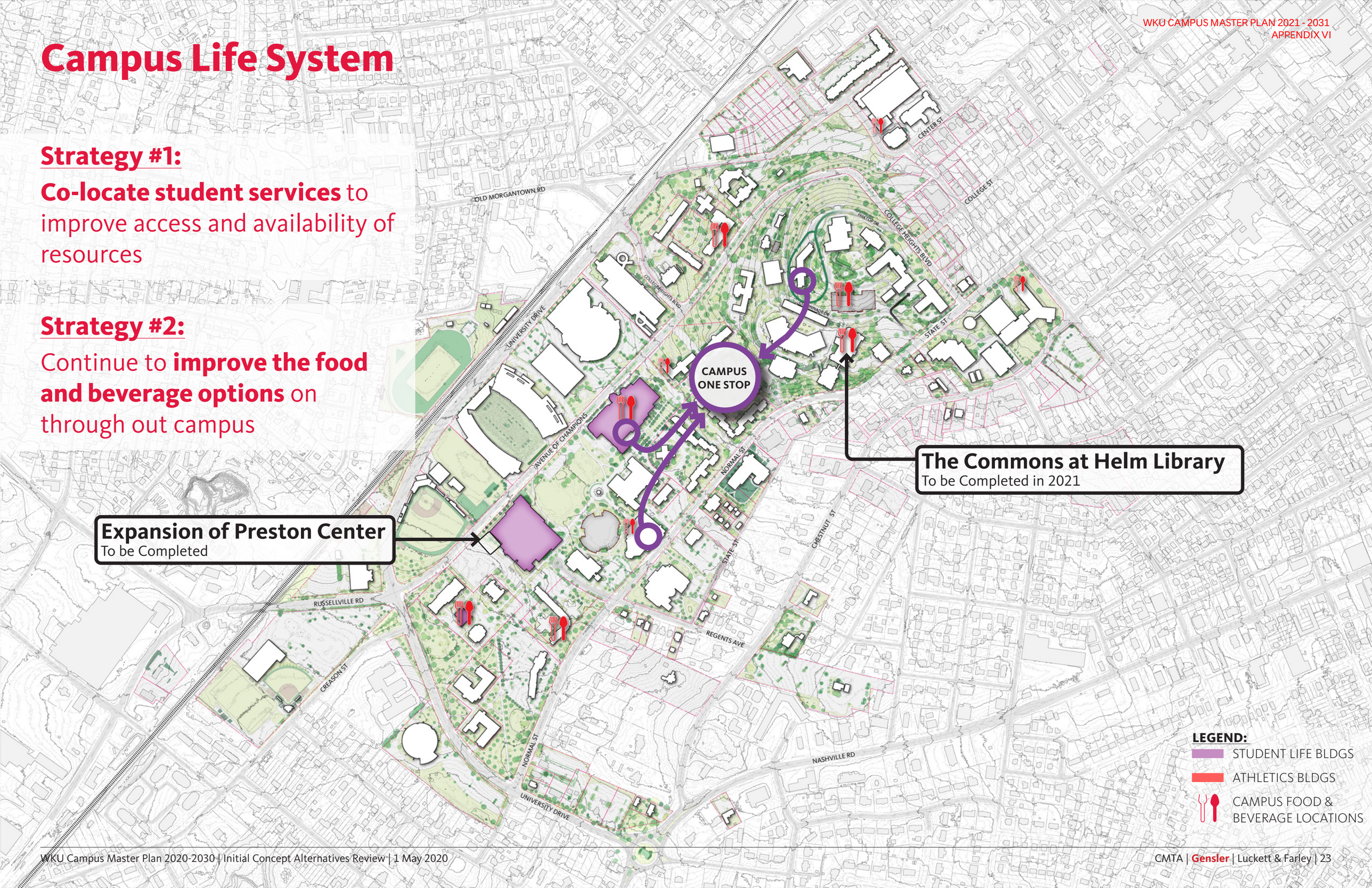
Campus Life System

Strategy #1:

Co-locate student services to improve access and availability of resources

Strategy #2:

Continue to **improve the food and beverage options** on through out campus



Key Takeaways Campus Life System

Co-locate student services to improve access and availability of resources

The potential to colocate student services (e.g. financial aid, counseling, IT support) provides an opportunity to enhance the student experience.

Continue to improve the food and beverage options on through out campus

Food and Beverage options on campus provide ideal locations for student, faculty and staff to meet and collaborate. This type of interaction and collaboration is a key experience that campuses provide.

Campus Systems
Athletics

How does Athletics integrate into fabric of campus and complement student success?

Alumni survey respondents mentioned involvement in sports events more than all other types of engagement

Athletics Systems

Strategy #1:

Amplify game day experience across South Lawn

Strategy #2:

Make Avenue of Champions a great street.

Press Box/ Stadium Improvements
Completion TBD

Indoor Practice Facility
Completion TBD

Softball Investments

OLD MORGANTOWN RD
UNIVERSITY DRIVE
COLLEGE HEIGHTS BLVD
HILLTOP DR
CENTER ST
COLLEGE ST
STATE ST
NORMAL ST
CHESTNUT ST
REGENTS AVE
NASHVILLE RD
RUSSELLVILLE RD
CREASON ST

LEGEND:
ATHLETICS BLDGS

Key Takeaways Athletics System

Amplify game day experience across South Lawn

Extending and enhancing the South Lawn game day activities with amenities like a stage and additional food options will create a unique and memorable experience on campus.

Make Avenue of Champions a great street.

As a major street on campus, Avenue of Champions is an opportunity to enhance the experience of campus for students, alumni, faculty, staff and the broader community that visits campus.

Campus Systems

Parking & Transportation

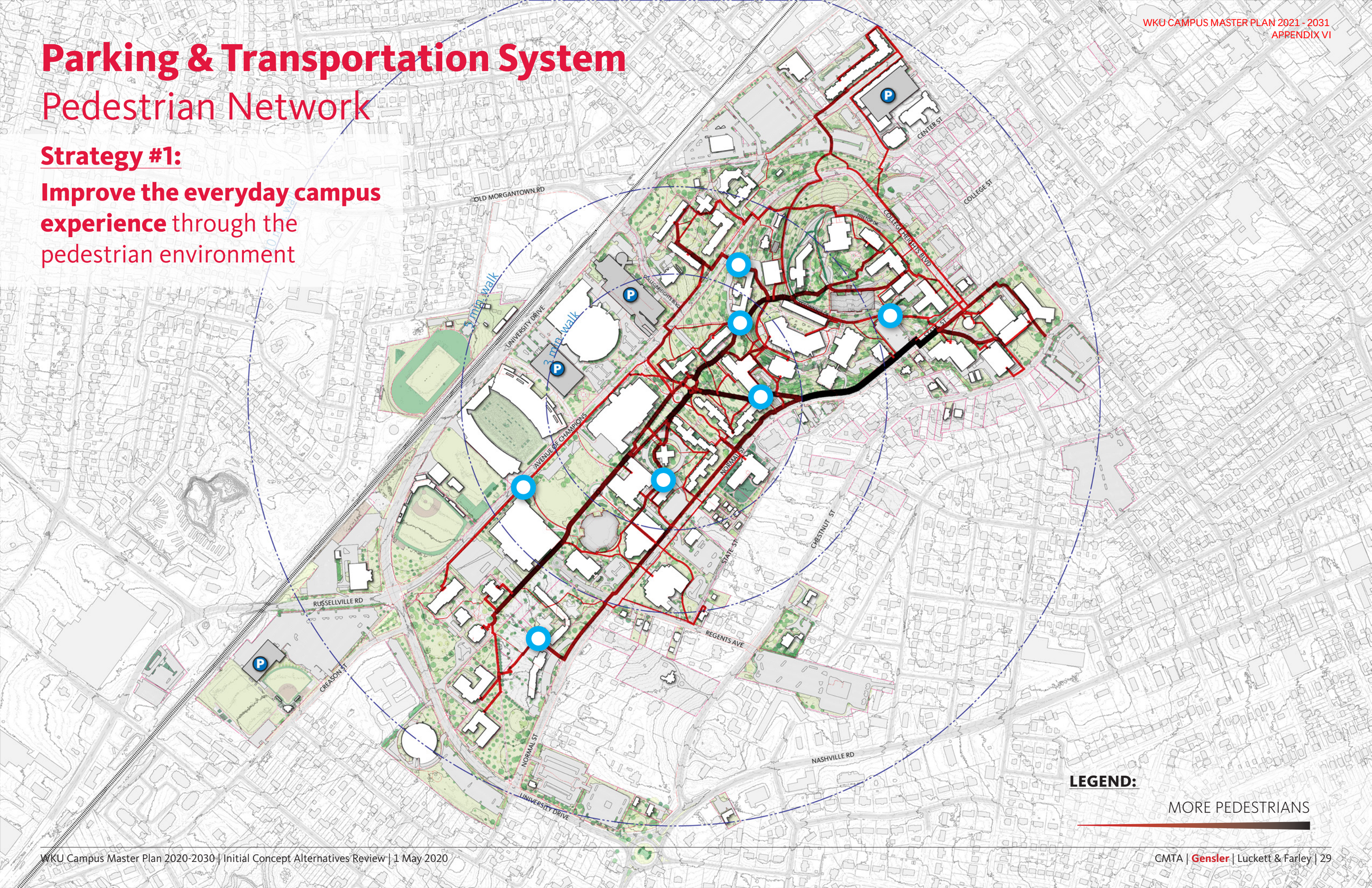
Making the campus easier to navigate was the most desired (28%) change on campus in survey results

Parking & Transportation System

Pedestrian Network

Strategy #1:

Improve the everyday campus experience through the pedestrian environment



Parking & Transportation System

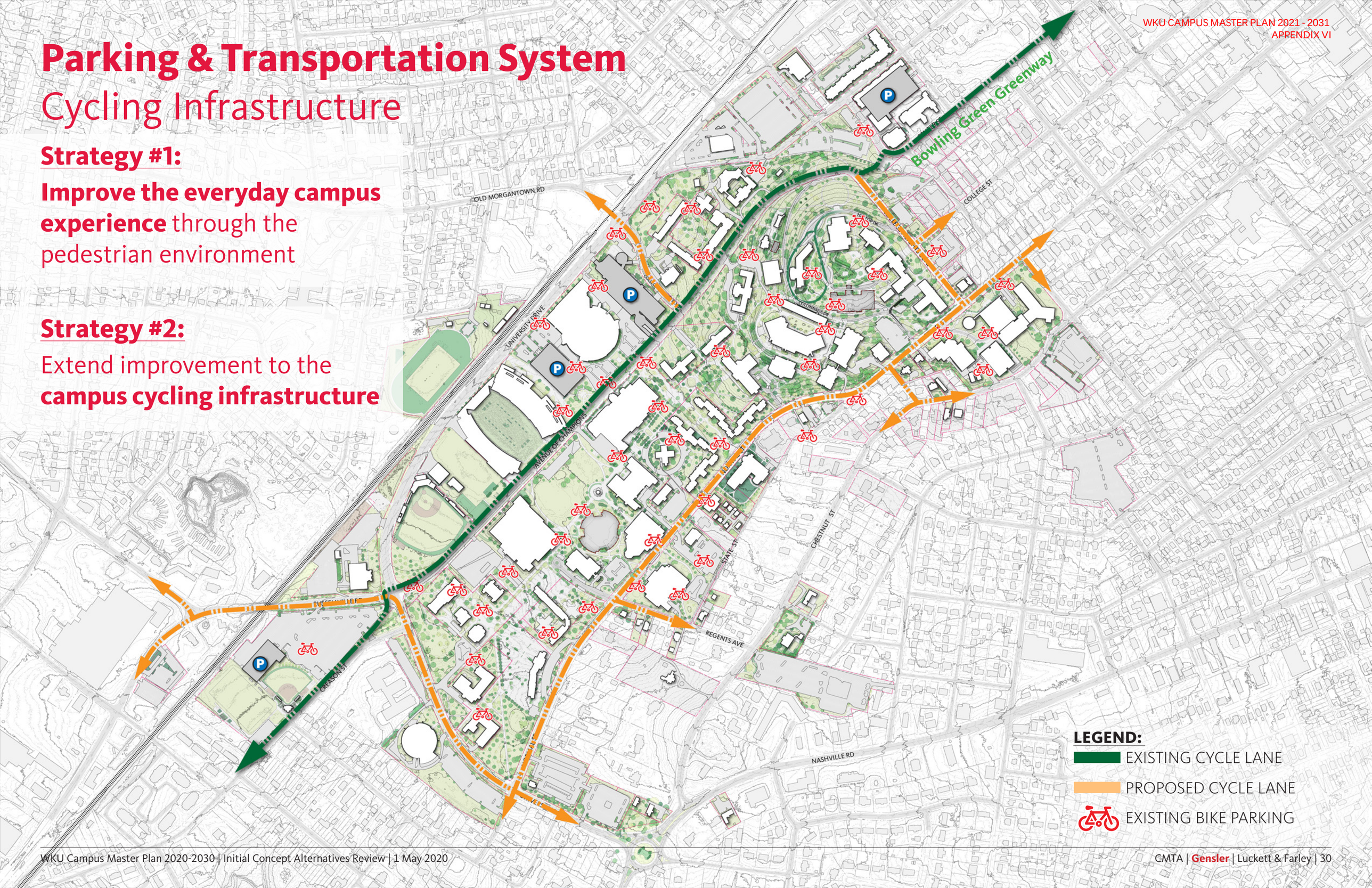
Cycling Infrastructure

Strategy #1:

Improve the everyday campus experience through the pedestrian environment

Strategy #2:

Extend improvement to the **campus cycling infrastructure**



Parking & Transportation System

Transit & Parking

Strategy #1:

Improve the everyday campus experience through the pedestrian environment

Strategy #2:

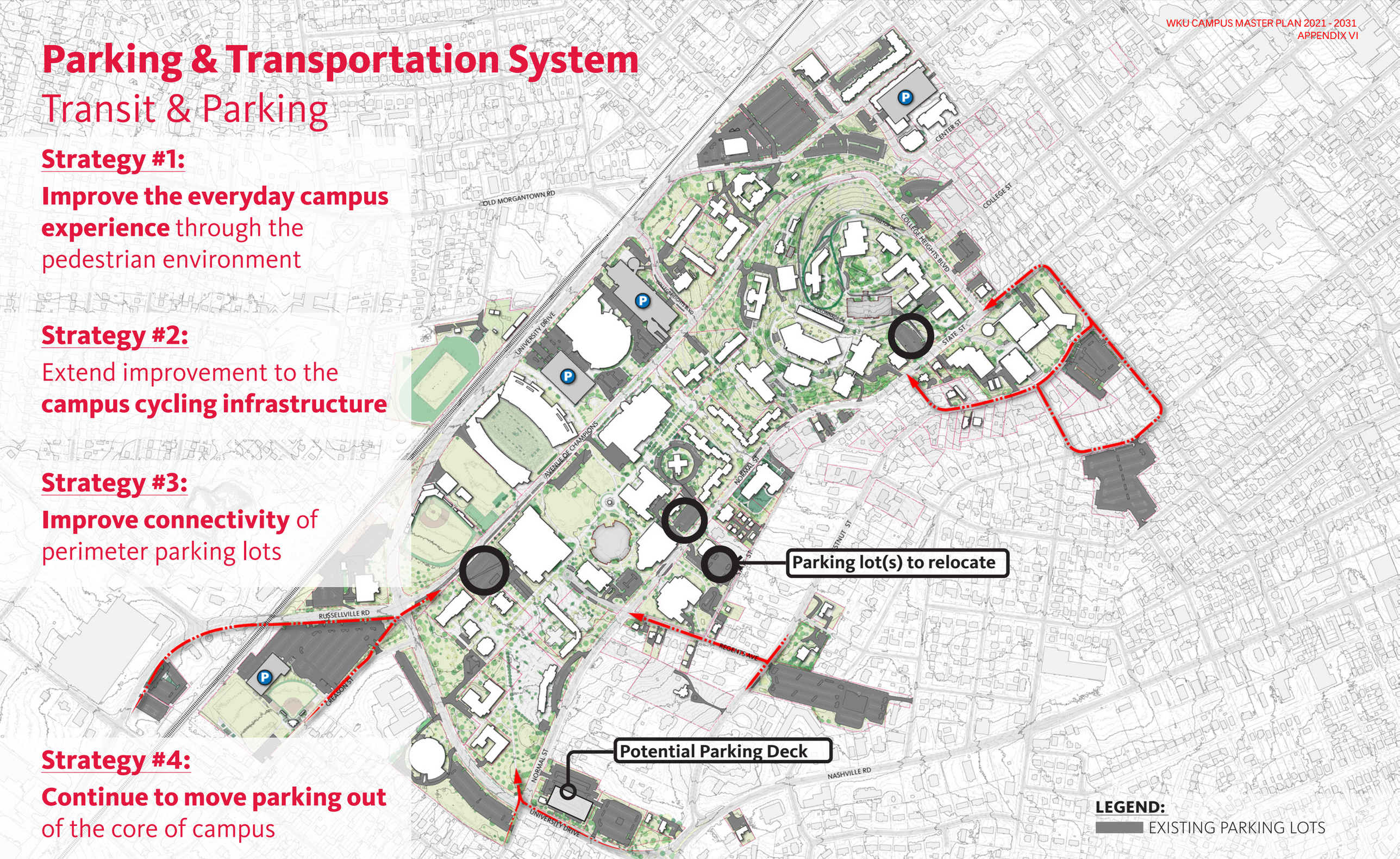
Extend improvement to the **campus cycling infrastructure**

Strategy #3:

Improve connectivity of perimeter parking lots

Strategy #4:

Continue to move parking out of the core of campus



LEGEND:

EXISTING PARKING LOTS

Key Takeaways Parking & Transportation System

Improve the everyday campus experience through the pedestrian environment

By providing opportunities throughout campus for people to meet and gather through the enhanced landscape features and outdoor furniture, we can create a vibrant and active campus.

Extend improvement to the campus cycling infrastructure

Providing alternative transportations options to get to and around campus relieves pressure on the parking lots and offer a healthier and more convenient option.

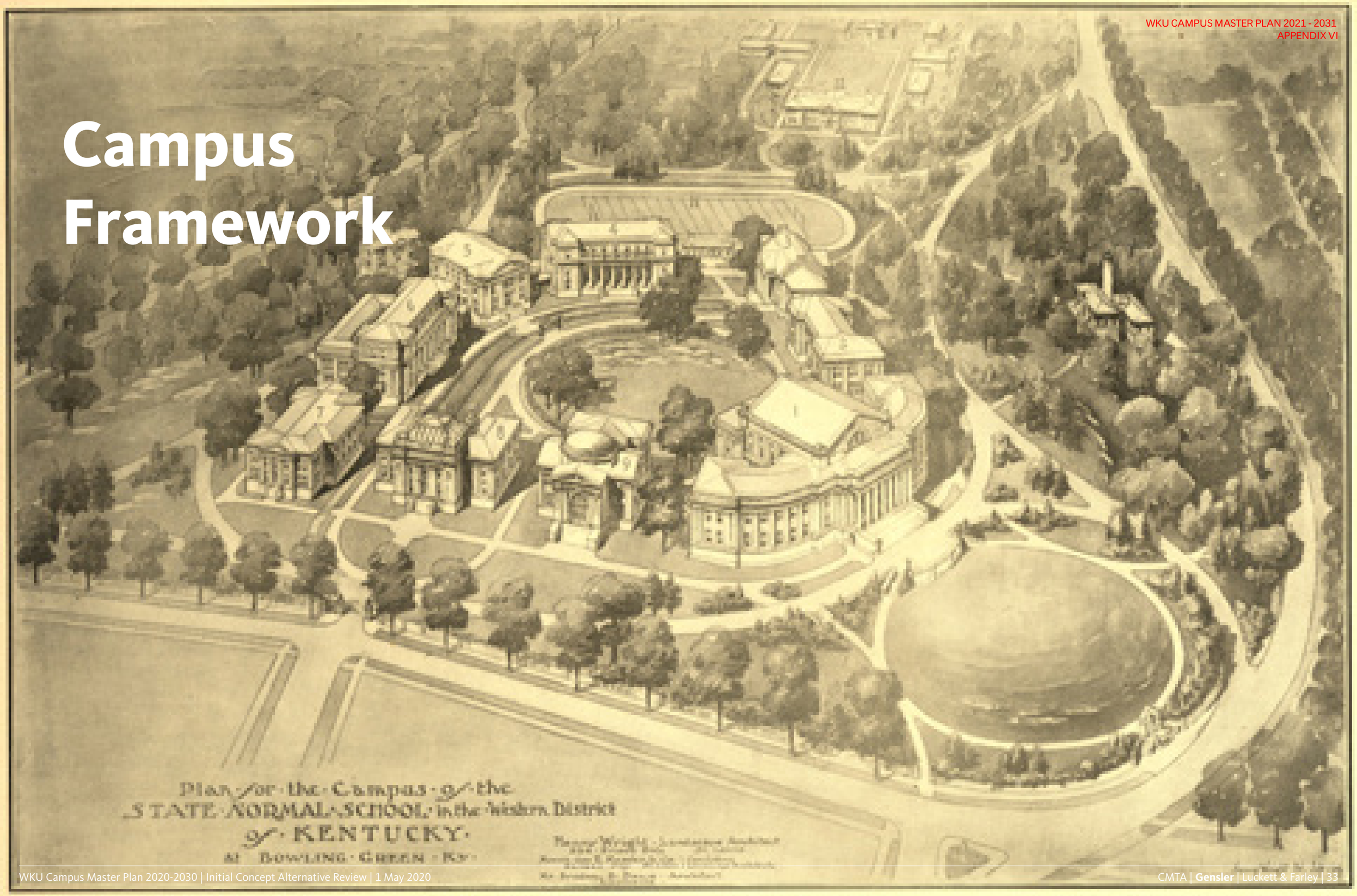
Improve connectivity of perimeter parking lots

Pedestrian amenities like street trees, crosswalks and public art can greatly enhance the experience of people coming to campus.

Continue to move parking out of the core of campus

Moving surface parking lots out of the core of campus opens up potential landscape and building sites.

Campus Framework



WKU Campus - Today

WKU Campus - 1994

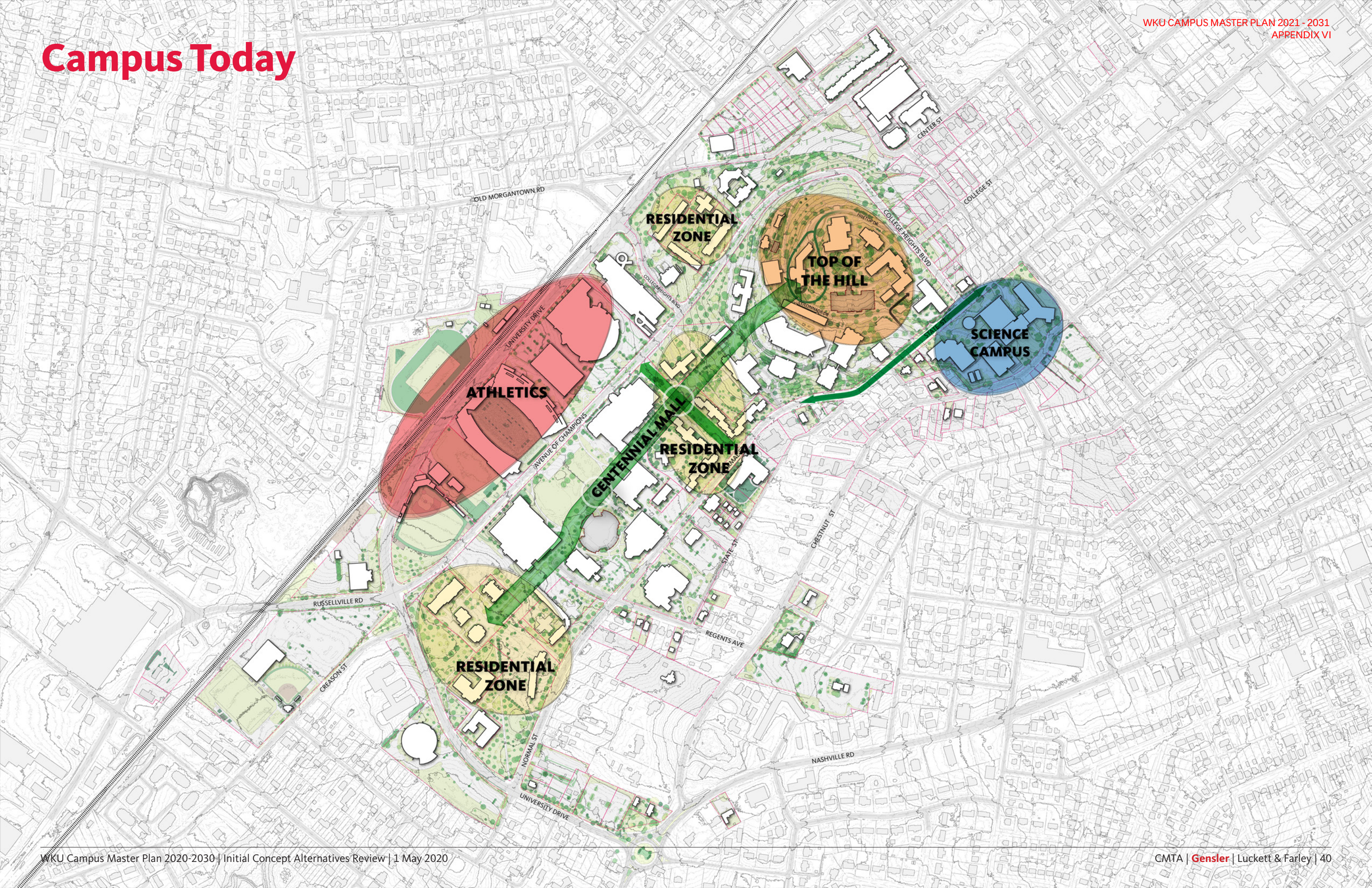
WKU Campus - 2004

WKU Campus - 2006

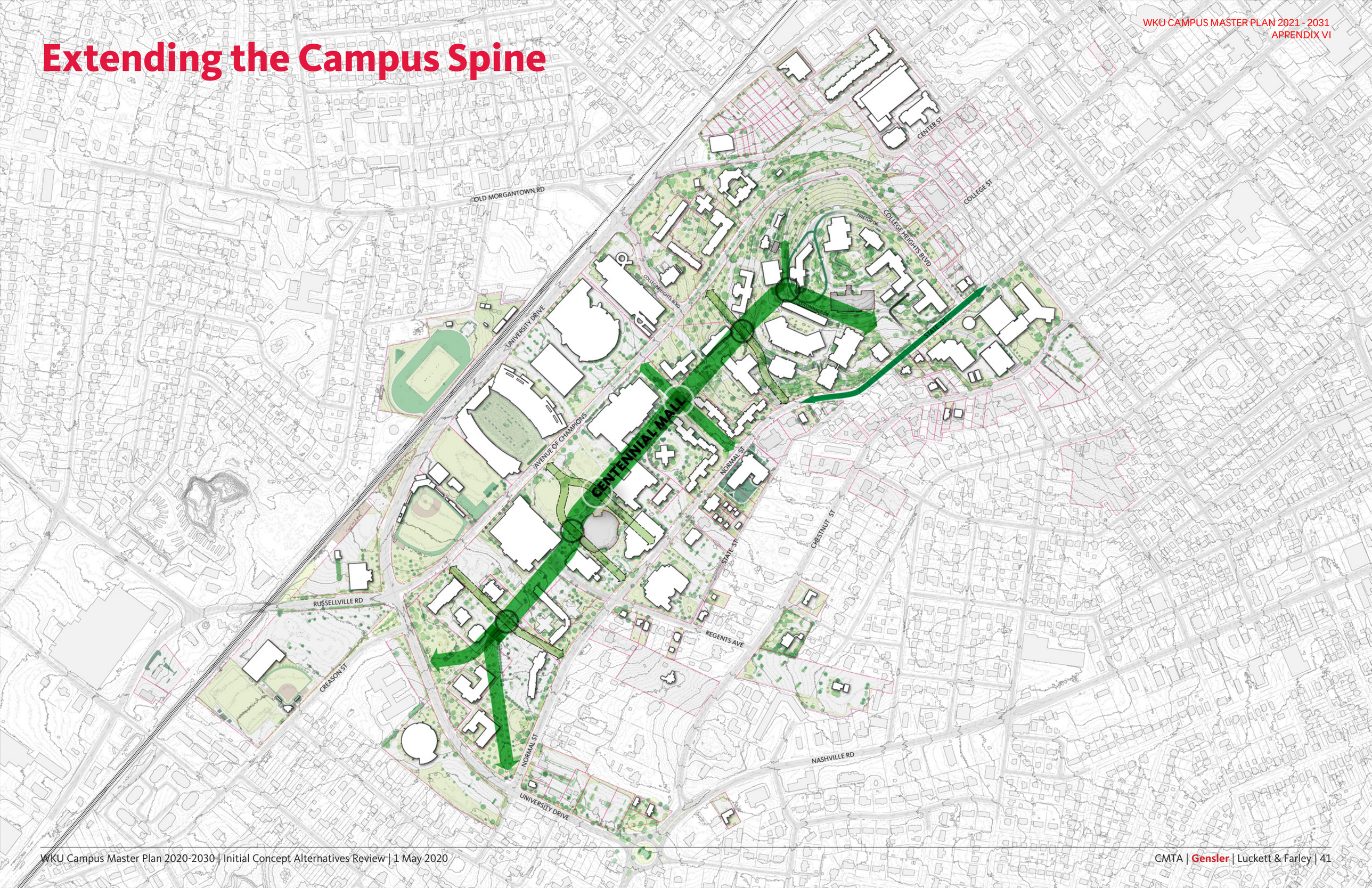
WKU Campus - 2010

WKU Campus - 2018

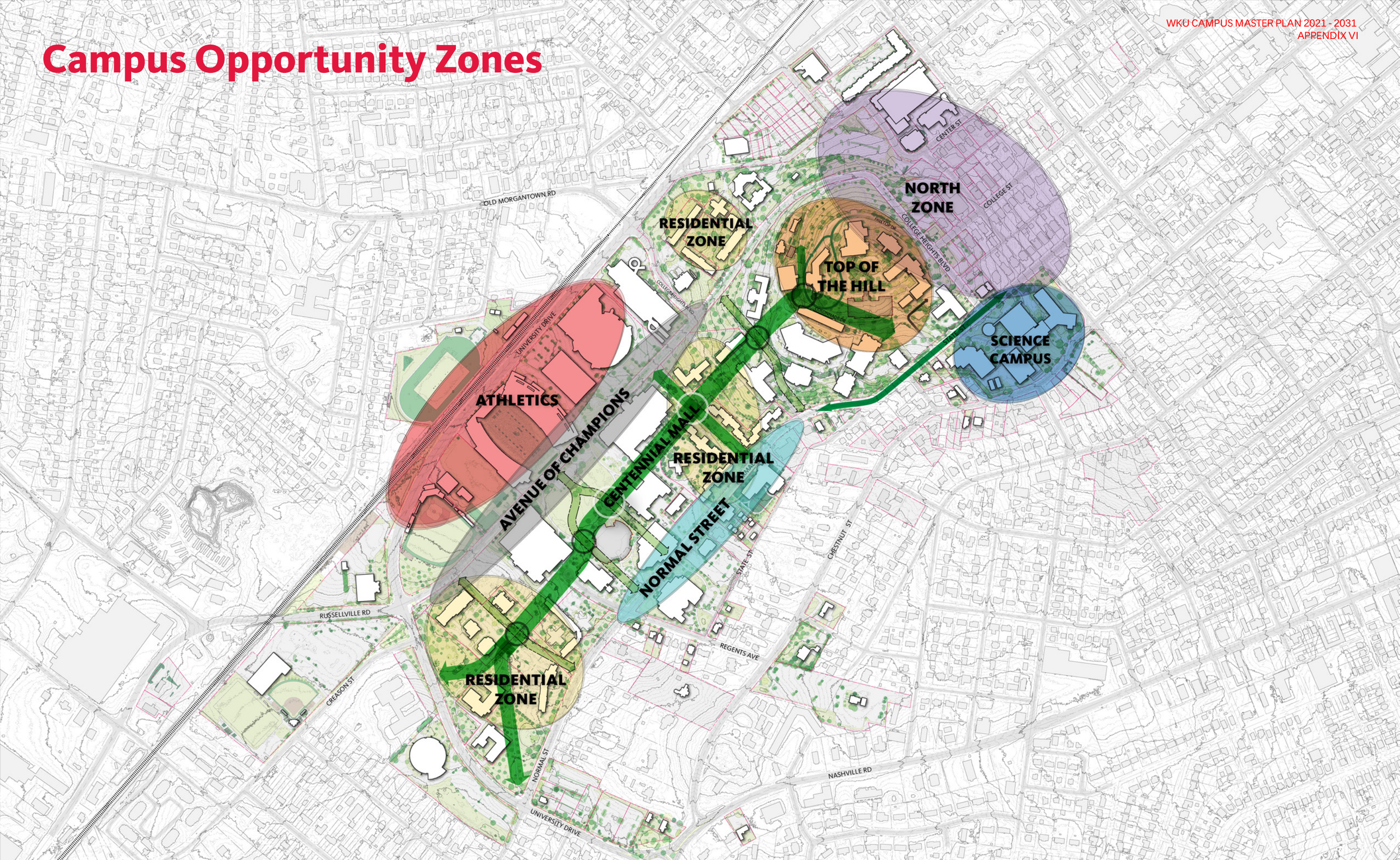
Campus Today



Extending the Campus Spine

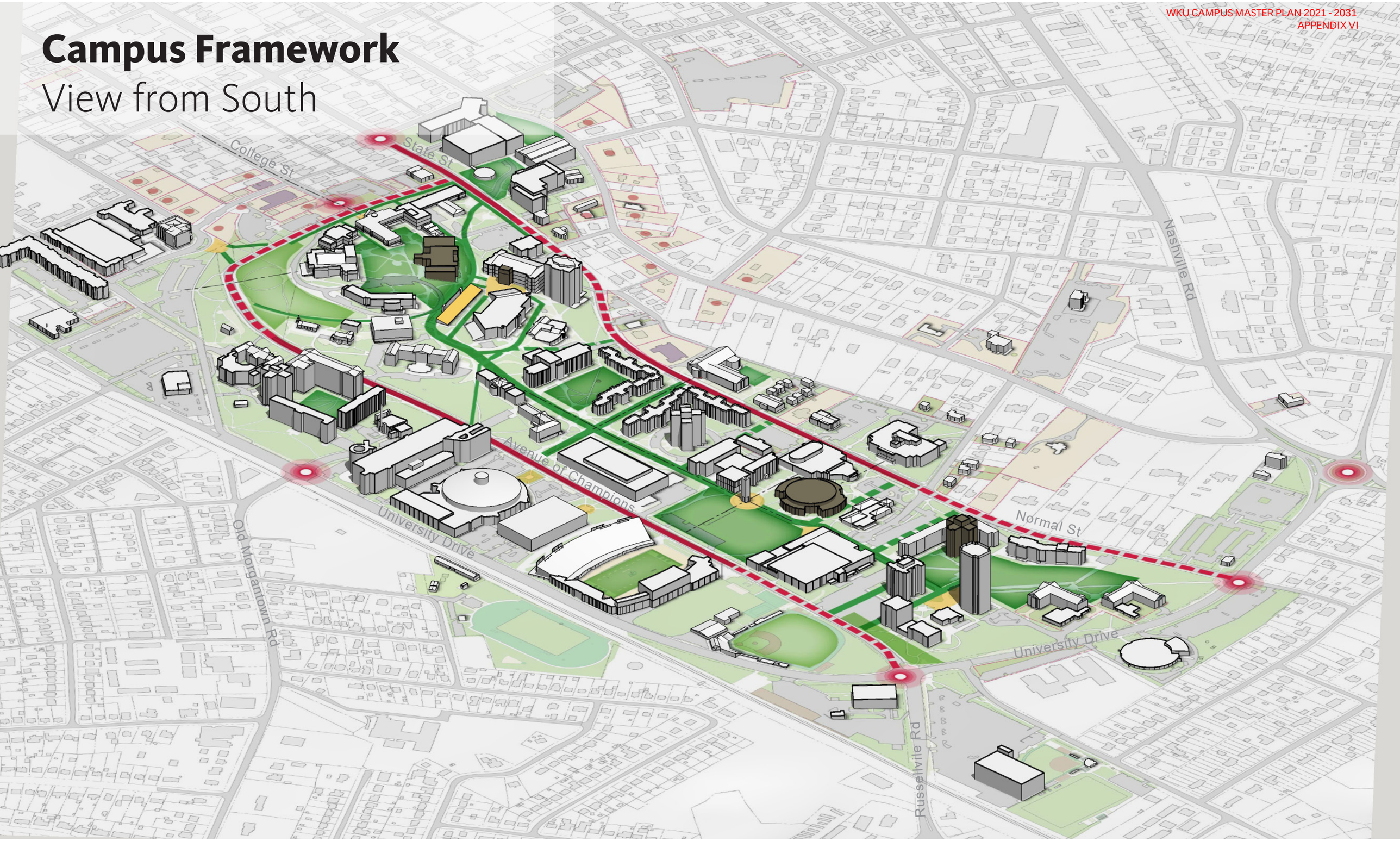


Campus Opportunity Zones



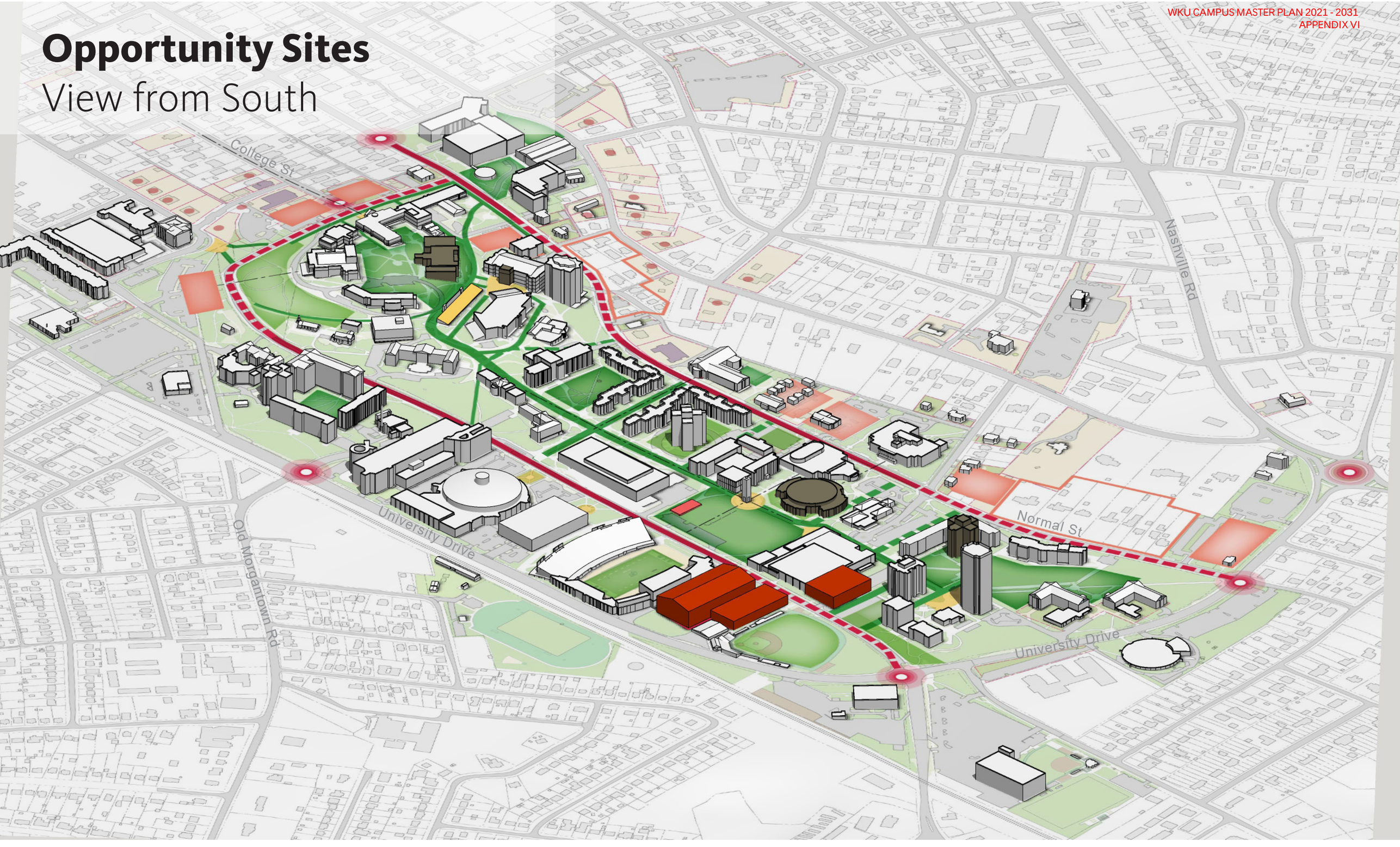
Campus Framework

View from South



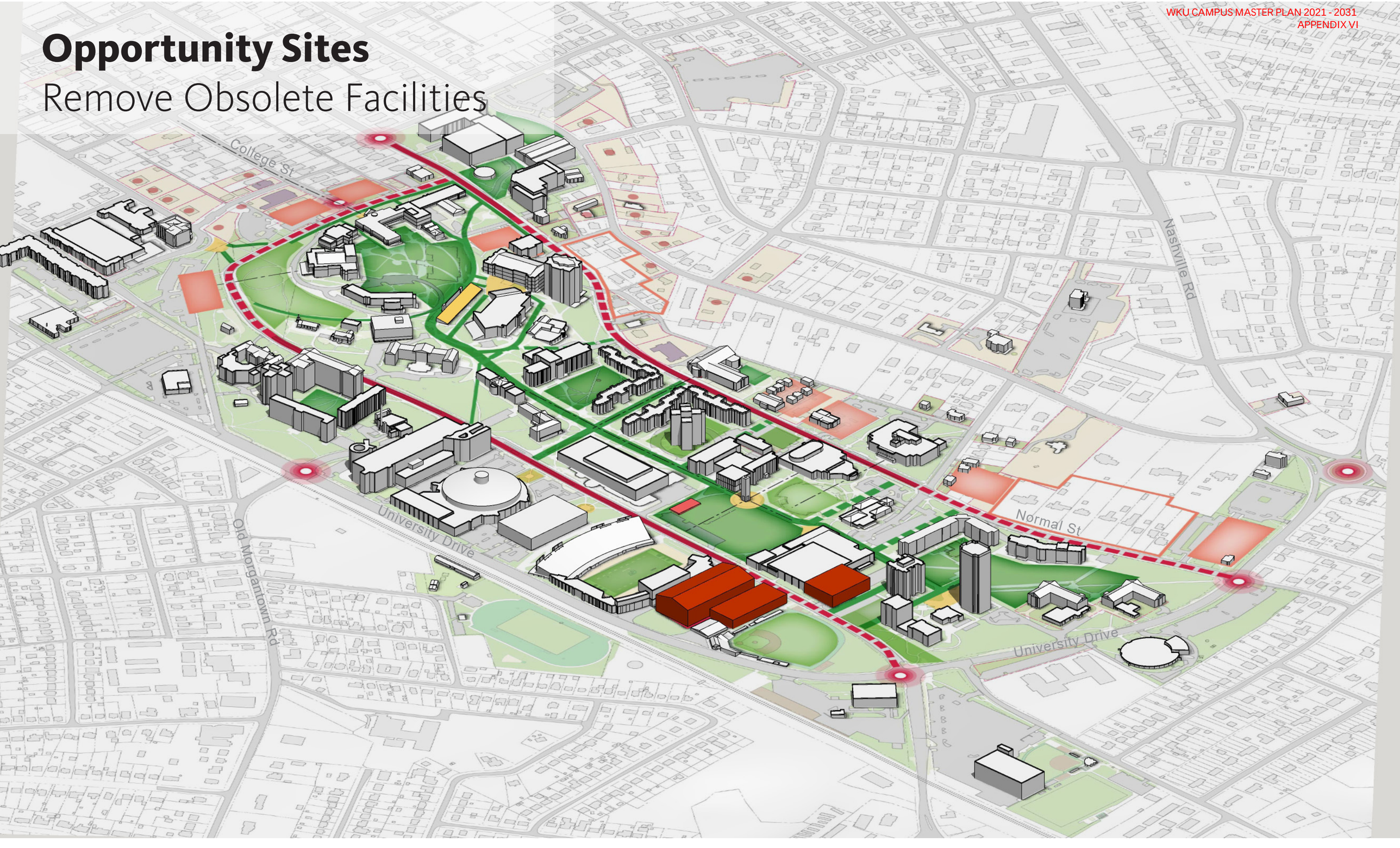
Opportunity Sites

View from South



Opportunity Sites

Remove Obsolete Facilities



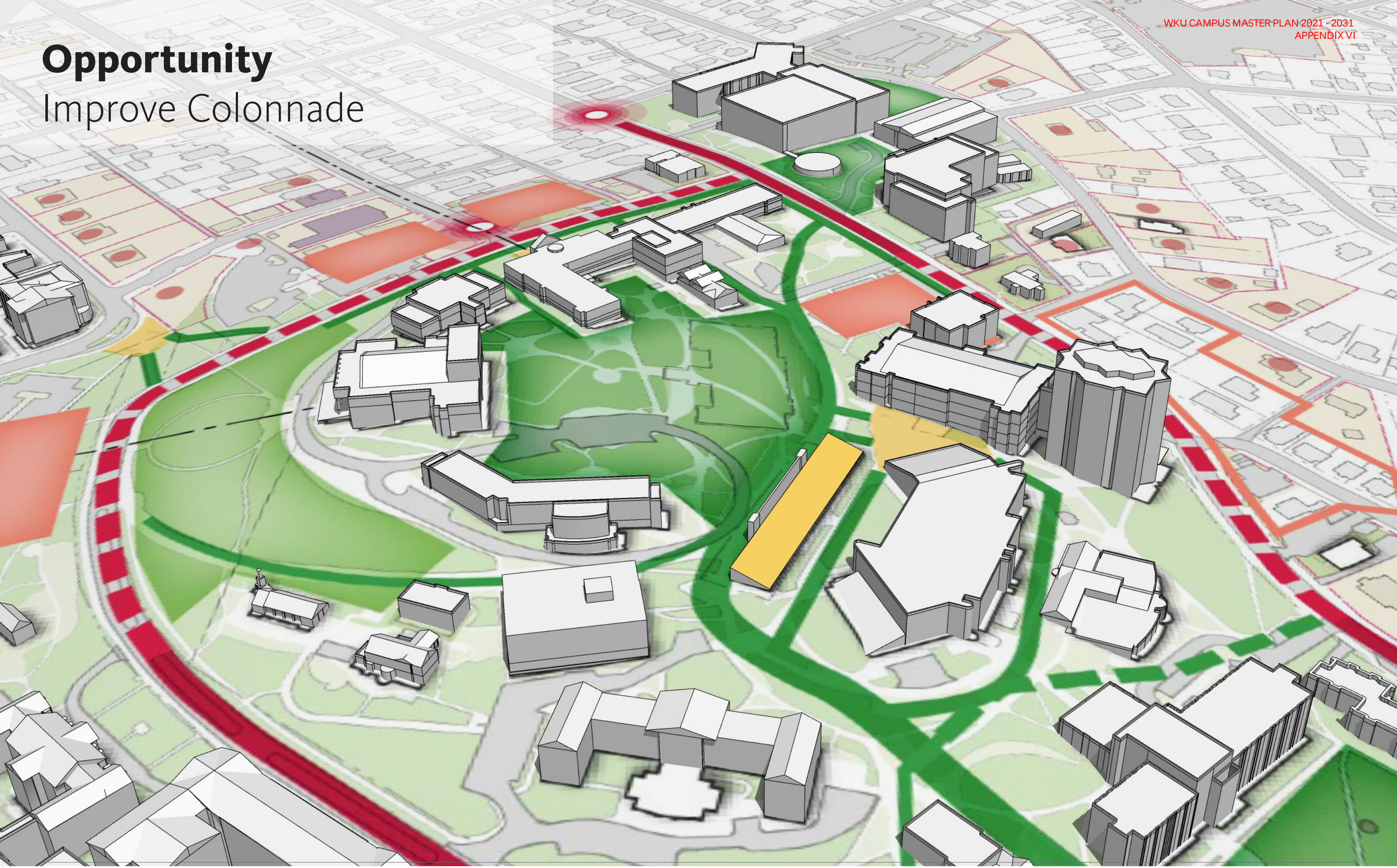
Opportunity

College Street Gateway

Opportunity
Reinforce College Heights

Opportunity

Improve Colonnade



Opportunity

Extend Cross Connectors

Option
Remove Minton

Option

Tate Page Park Space

Option

Tate Page Building Site

Opportunity

Ave. of Champions Gateway

Opportunity

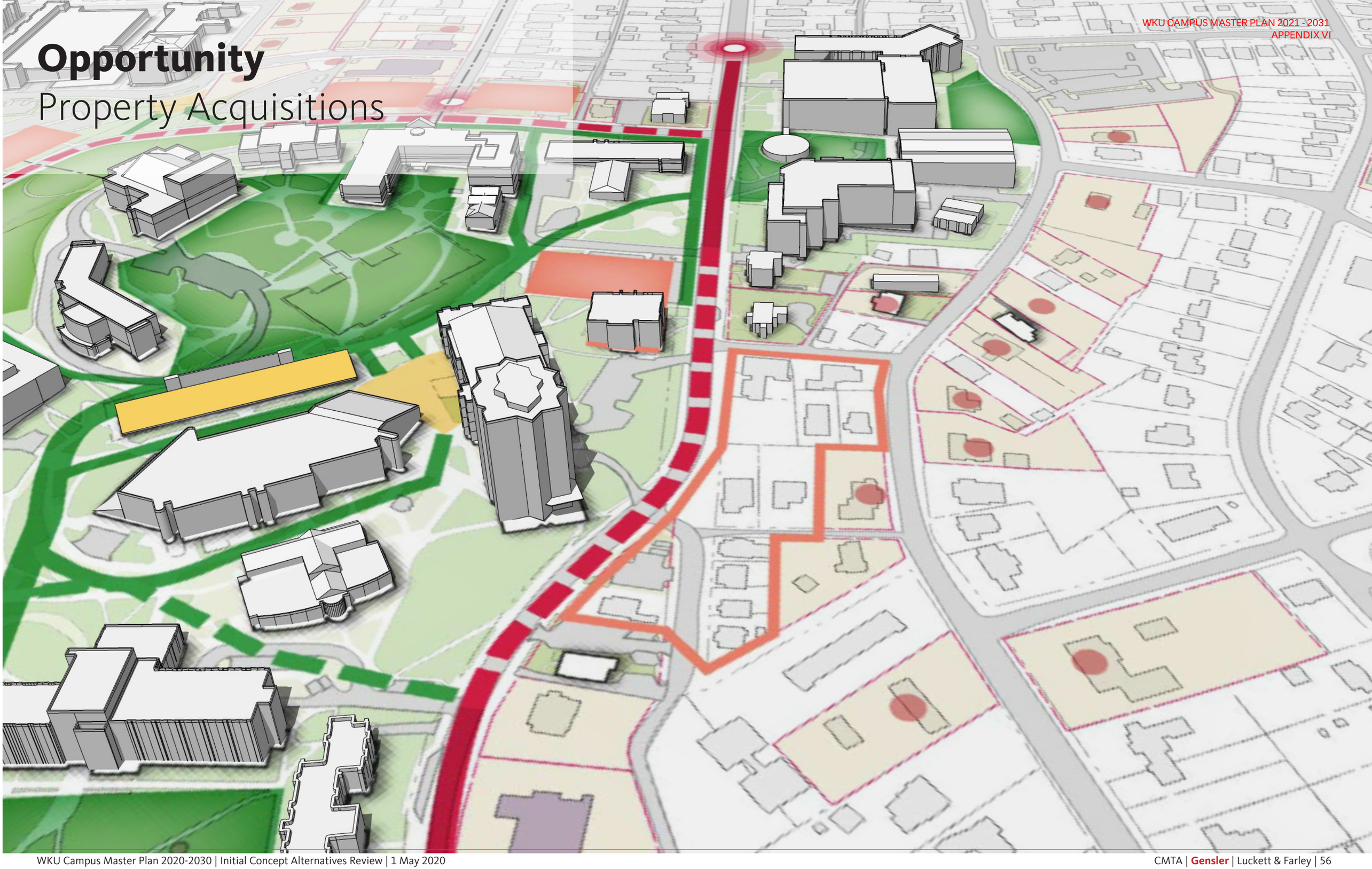
Parking Deck at Normal Gateway

Opportunity

Redevelop Underutilized Sites

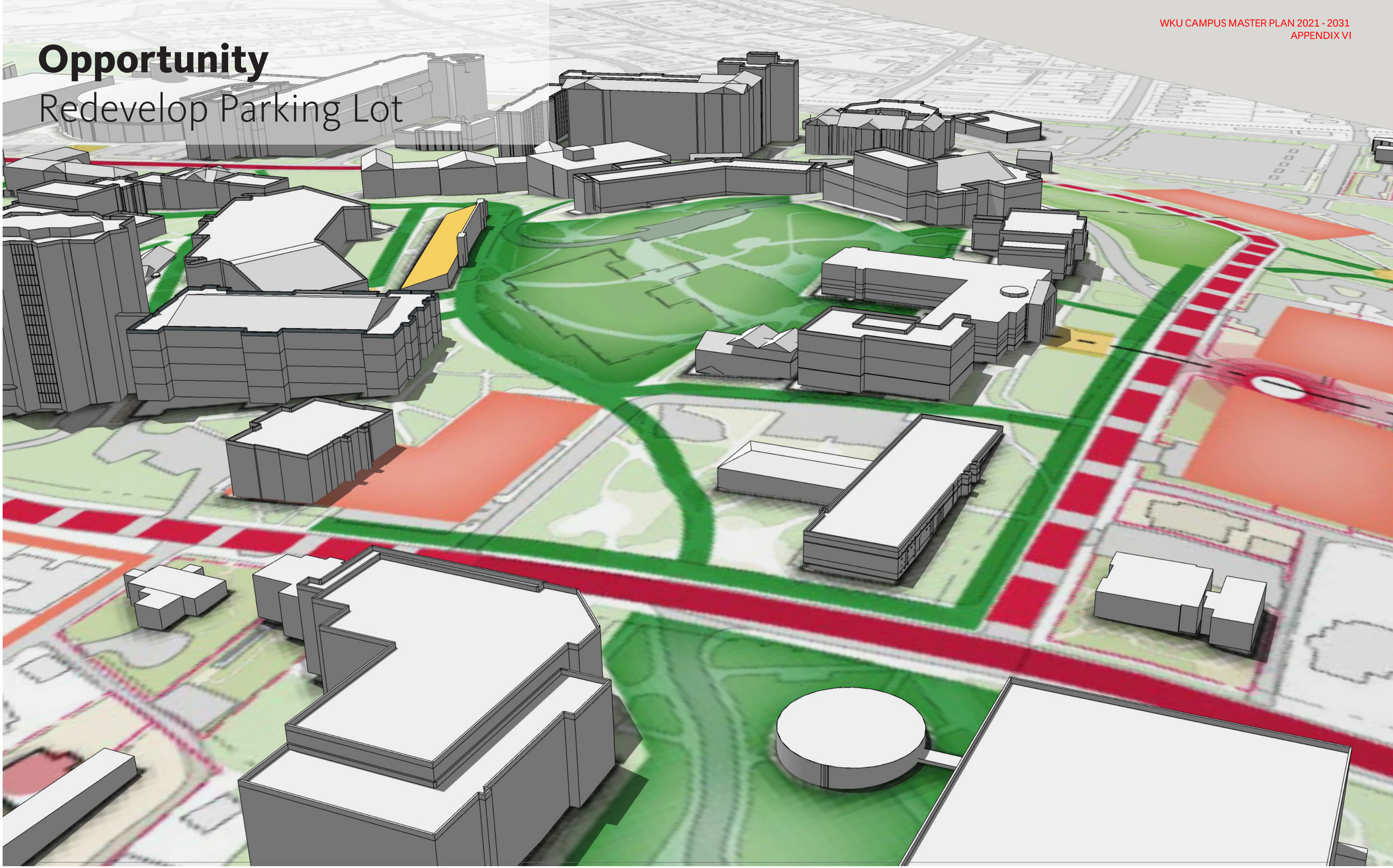
Opportunity

Property Acquisitions

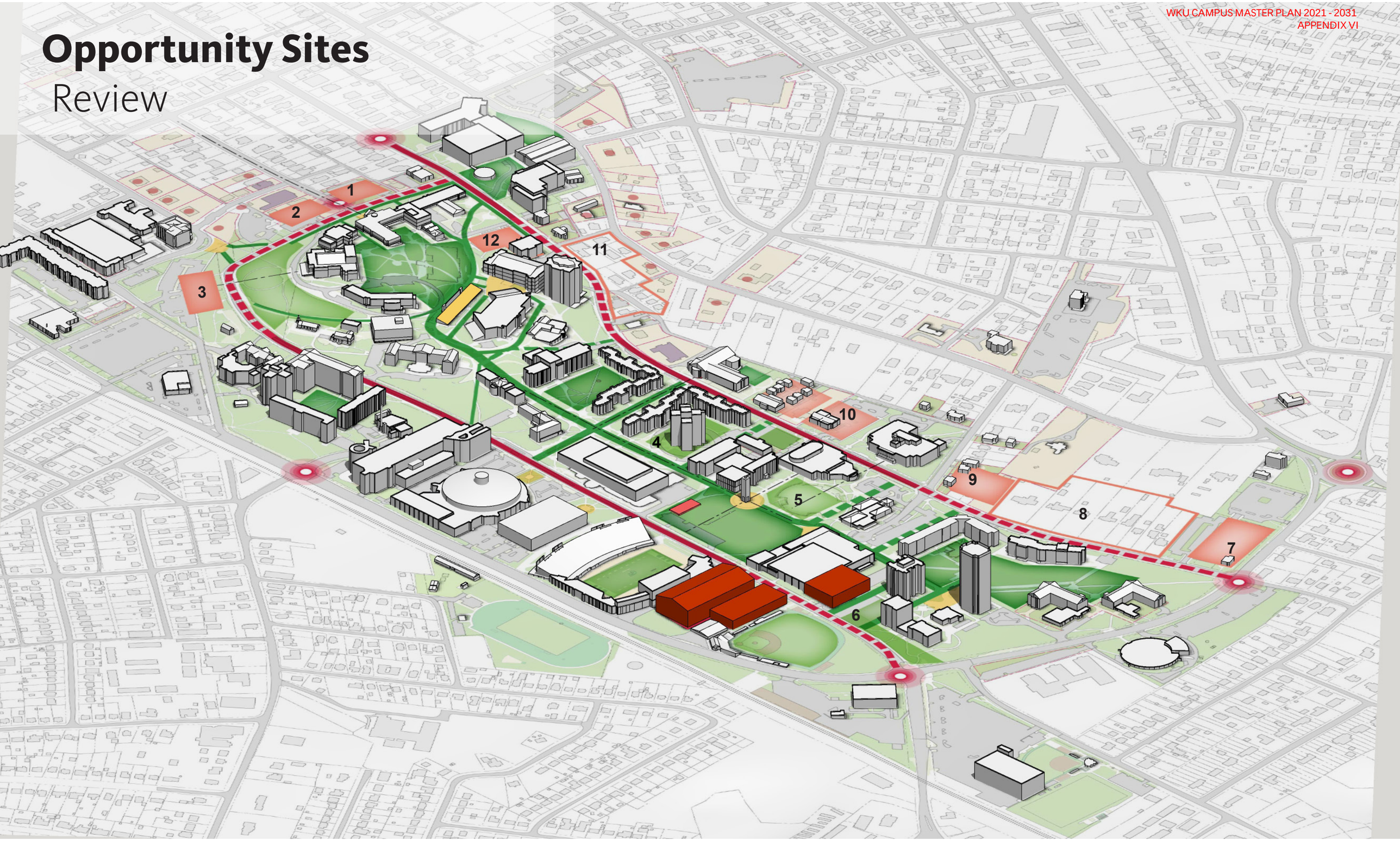


Opportunity

Redevelop Parking Lot



Opportunity Sites
Review



Next Steps

Next Steps

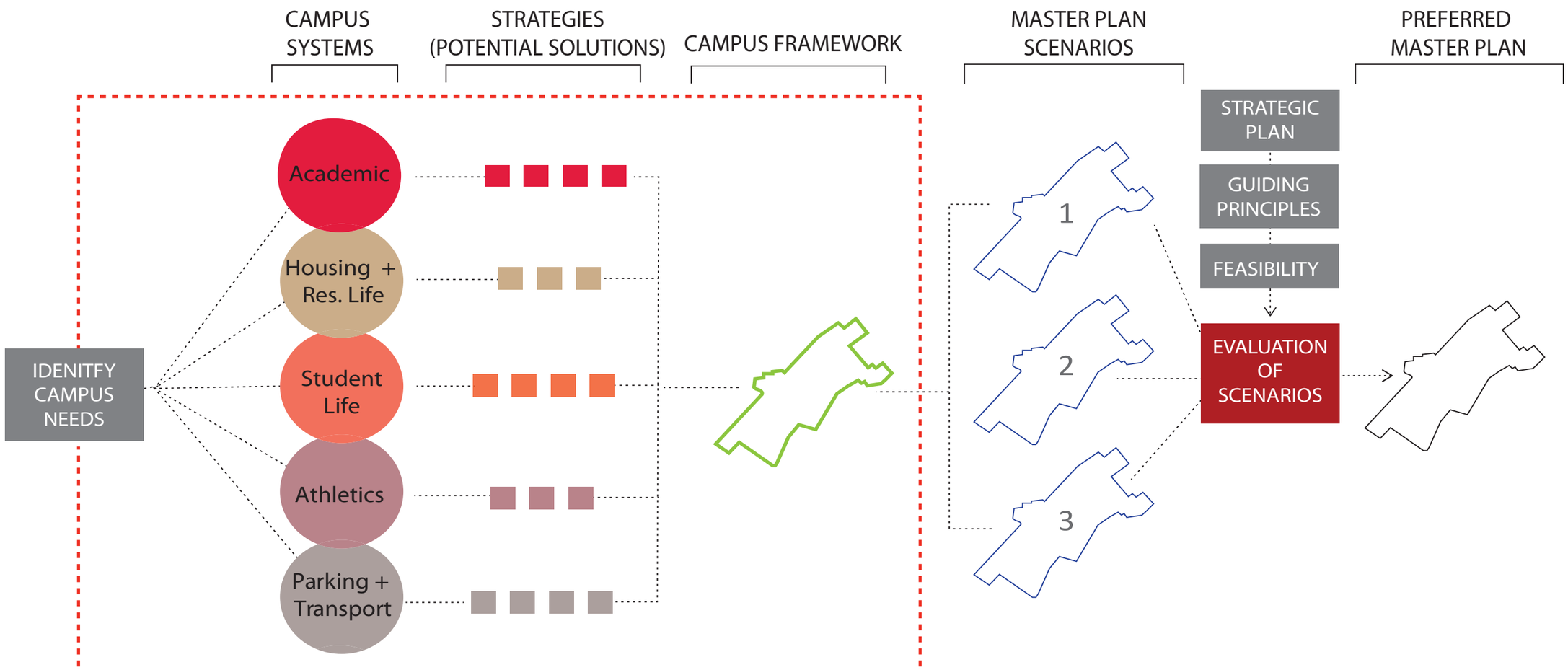
SYSTEMS + STRATEGIES 4 weeks | **SCENARIOS** 4 weeks | **RECOMMEND** 6 weeks | **DOCUMENT** 6 weeks

April 3 — STEERING COMMITTEE REVIEW

May 1 — STEERING COMMITTEE REVIEW

May 28 — STEERING COMMITTEE REVIEW

July 7 — STEERING COMMITTEE REVIEW



Thank you!!!

WKU Campus Master Plan

Research & Synthesis Report

3 April 2020

WKU
+
Gensler

Contents

04 Project Process

05 Engagement Activities

10 Site Analysis

23 Utilization Analysis

33 Survey Highlights

39 Synthesis Process

43 Insights and Design Directives

57 Next Steps

How might we:

reimagine the campus experience to increase student enrollment, boost student retention, and promote student success across the region?

Project Process

DISCOVER
5 weeks

ANALYZE
7 weeks

EXPLORE
8 weeks

RECOMMEND + DOCUMENT
12 weeks

KICK OFF & SETUP

PREP & RESEARCH

SYNTHESIS & ANALYSIS

PRINCIPLES & DIRECTIVES

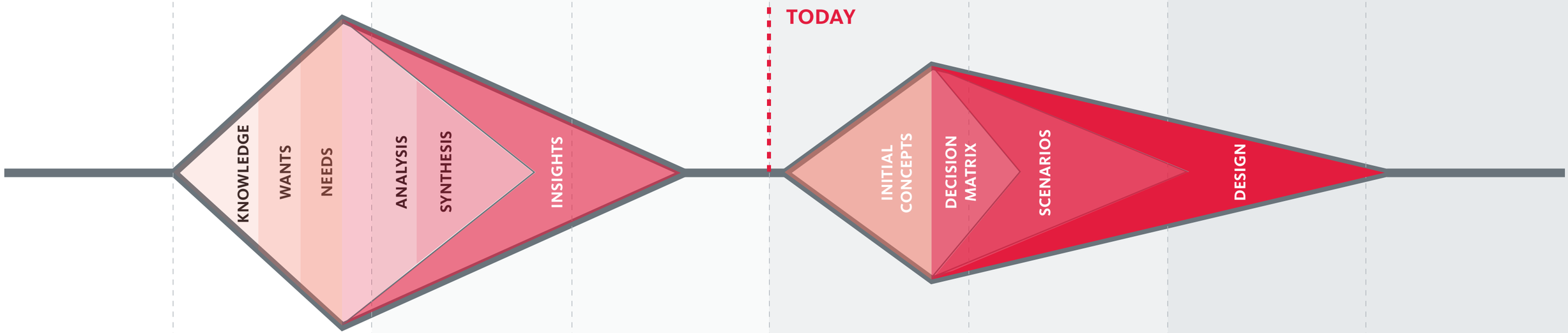
CONCEPTS & MATRIX

SCENARIO BUILDING

FINAL DESIGN

COMPILATION

TODAY



Align on project priorities and process

Conduct immersive research

Synthesize and Analyze to gain insight

Define Principles to deliver on needs

Ideate and explore through concepting

Build scenarios to compare and contrast

Develop selected design for Master Plan

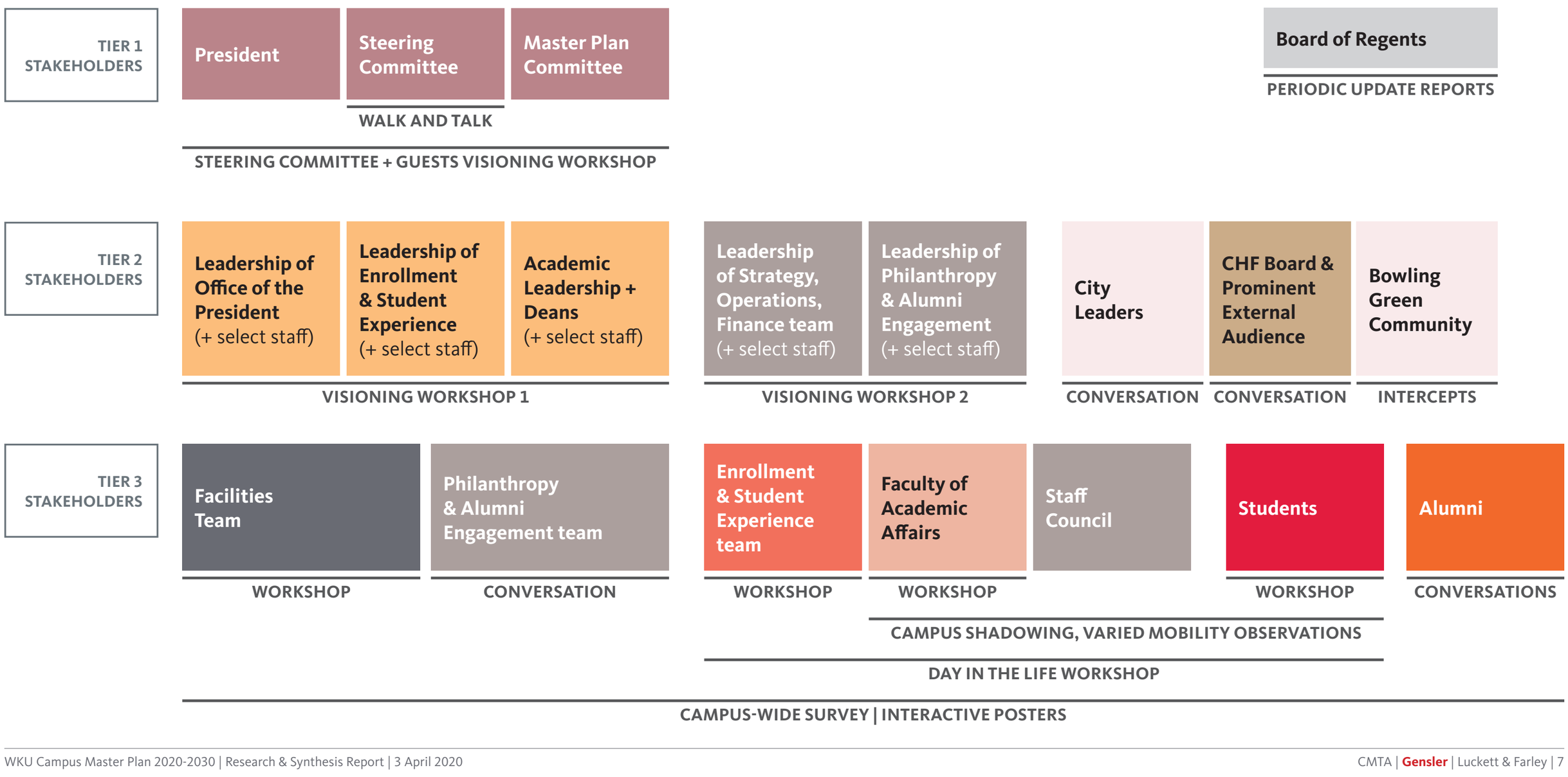
Document process and outcome

Engagement Activities
Summary

Engagement Participants Overview

TIER 1 STAKEHOLDERS	President	Steering Committee	Master Plan Committee			Board of Regents		
TIER 2 STAKEHOLDERS	Leadership of Office of the President (+ select staff)	Leadership of Enrollment & Student Experience (+ select staff)	Academic Leadership + Deans (+ select staff)	Leadership of Strategy, Operations, Finance team (+ select staff)	Leadership of Philanthropy & Alumni Engagement (+ select staff)	City Leaders	CHF Board & Prominent External Audience	Bowling Green Community
TIER 3 STAKEHOLDERS	Facilities Team	Philanthropy & Alumni Engagement team		Enrollment & Student Experience team	Faculty of Academic Affairs	Staff Council	Students	Alumni

Engagement Participants Overview



On-Campus Engagement

45,000 Steps on campus

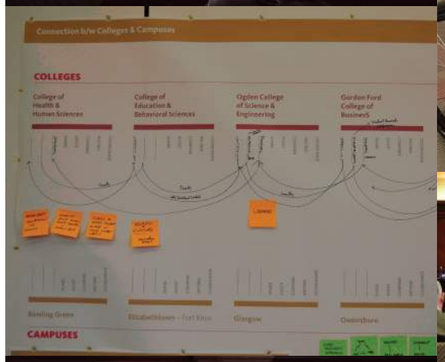
1,700 Post-its used

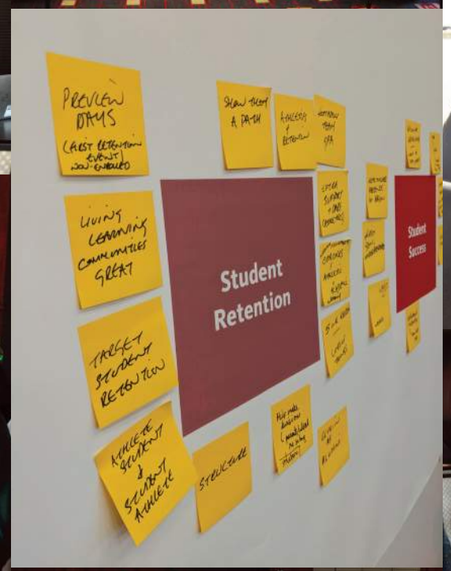
86 Participants engaged

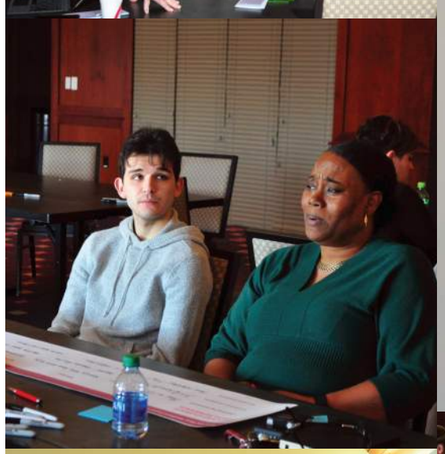
30 Hours of research

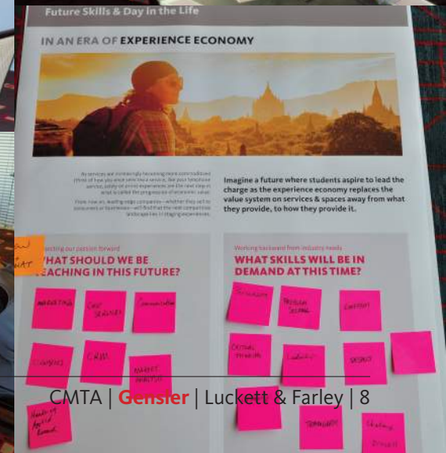
9 User types engaged

9 Types of activities









Off-Campus Activities

1395 Survey respondents

320 Teaching spaces analyzed

205 GBs of GIS data

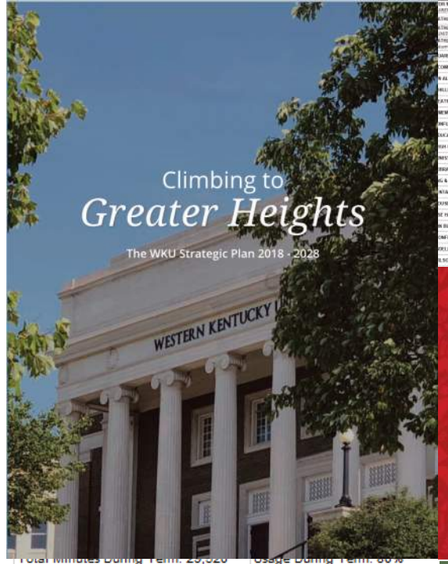
57 Campus data files rec'd

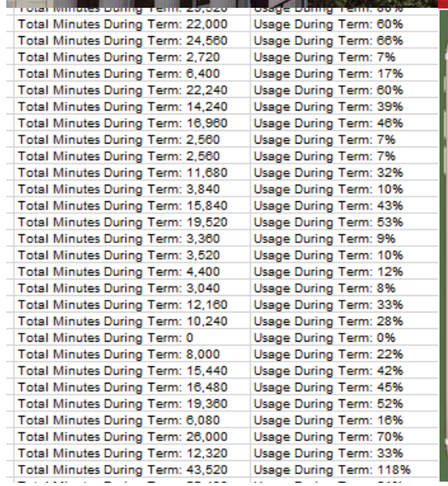
44 Needs clusters

23 Survey revisions

13 Team meetings

5 Guiding principles





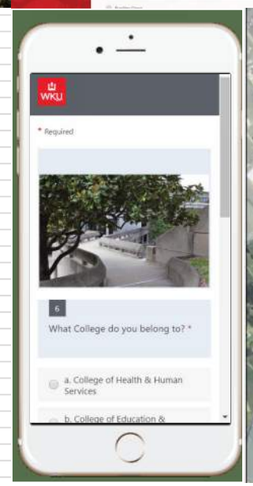
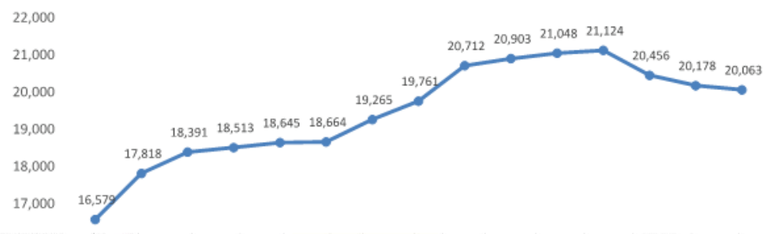
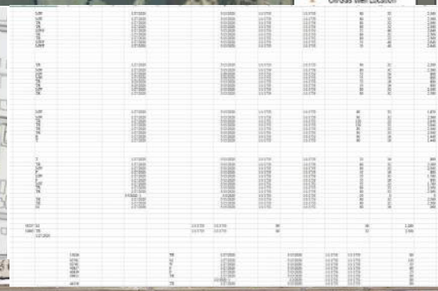


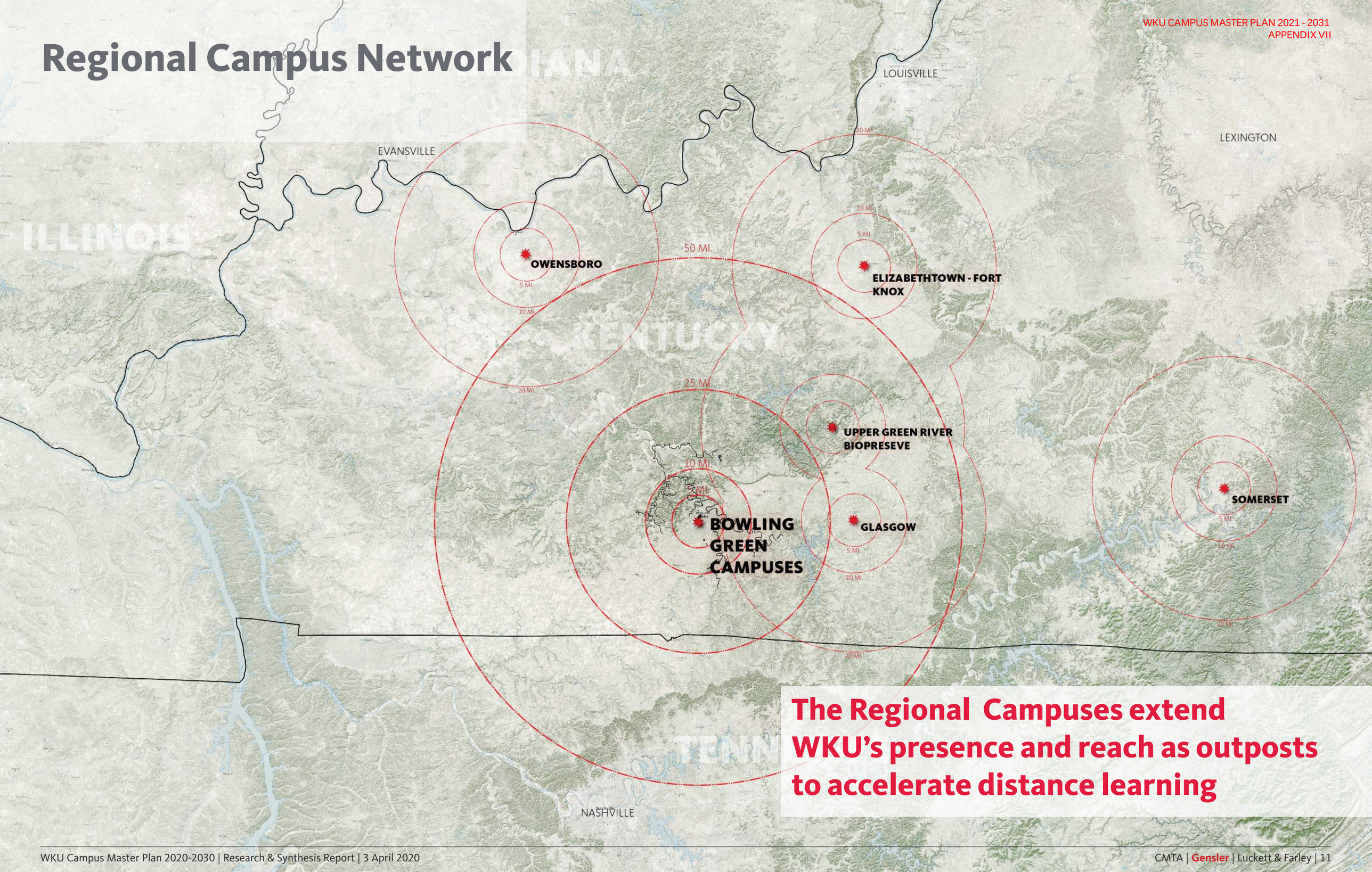
FIGURE 1: WKU Total Enrollment (Fall 2001 – 2015)





Site Analysis Summary

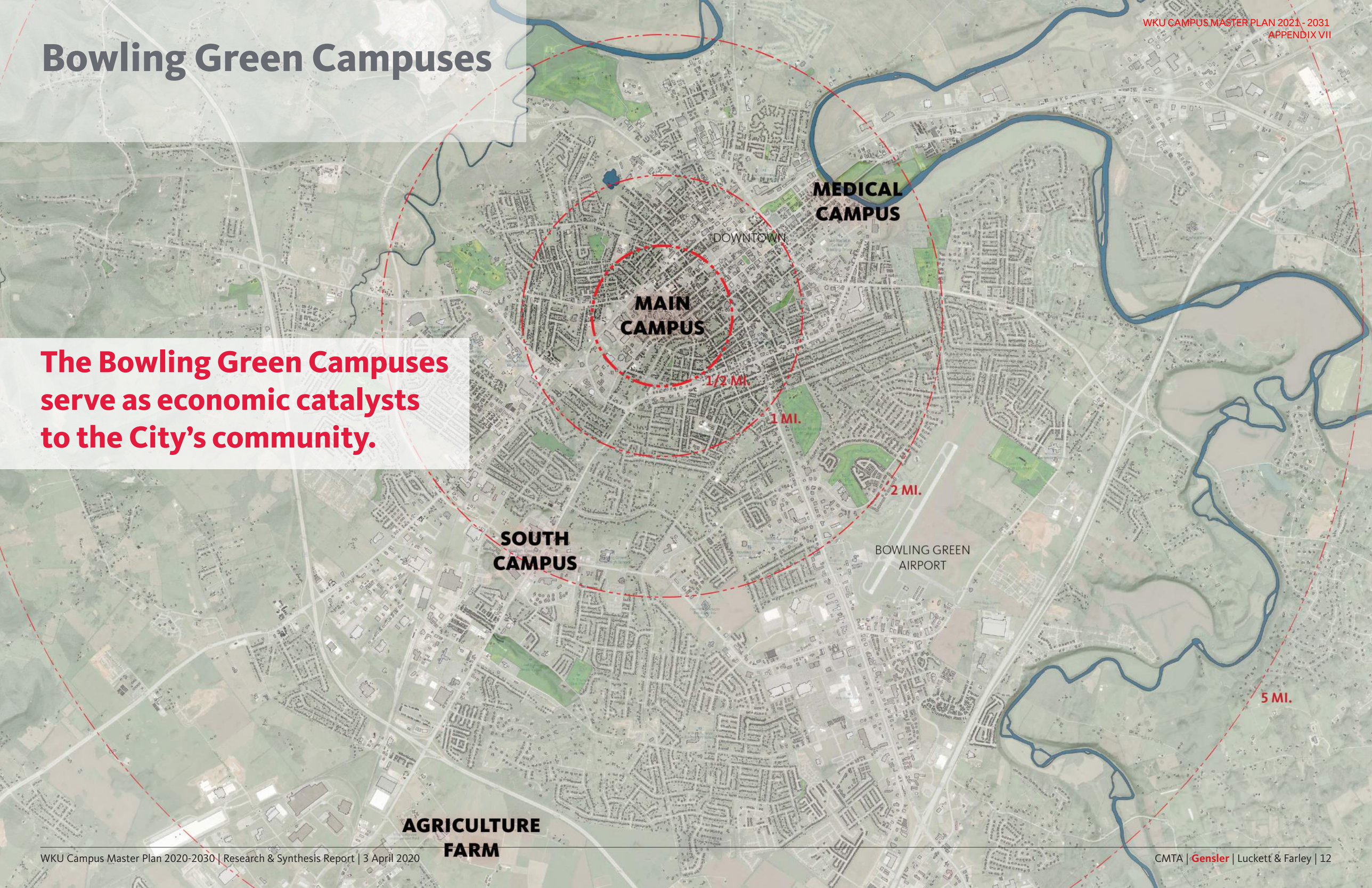
Regional Campus Network



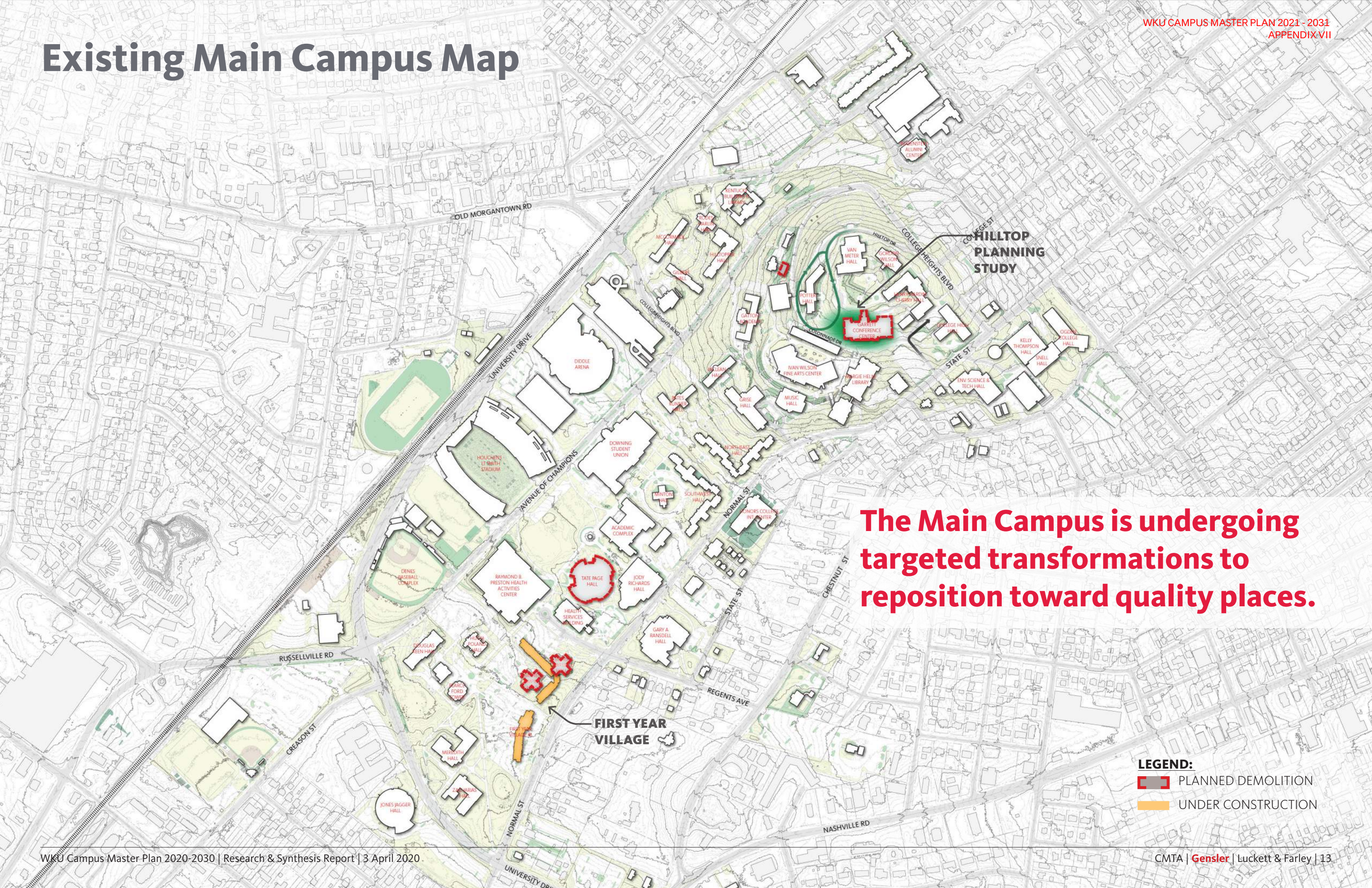
The Regional Campuses extend WKU's presence and reach as outposts to accelerate distance learning

Bowling Green Campuses

The Bowling Green Campuses serve as economic catalysts to the City's community.



Existing Main Campus Map



Topography Map

The Hill is the defining physical feature on campus and is the historical beginning of campus.

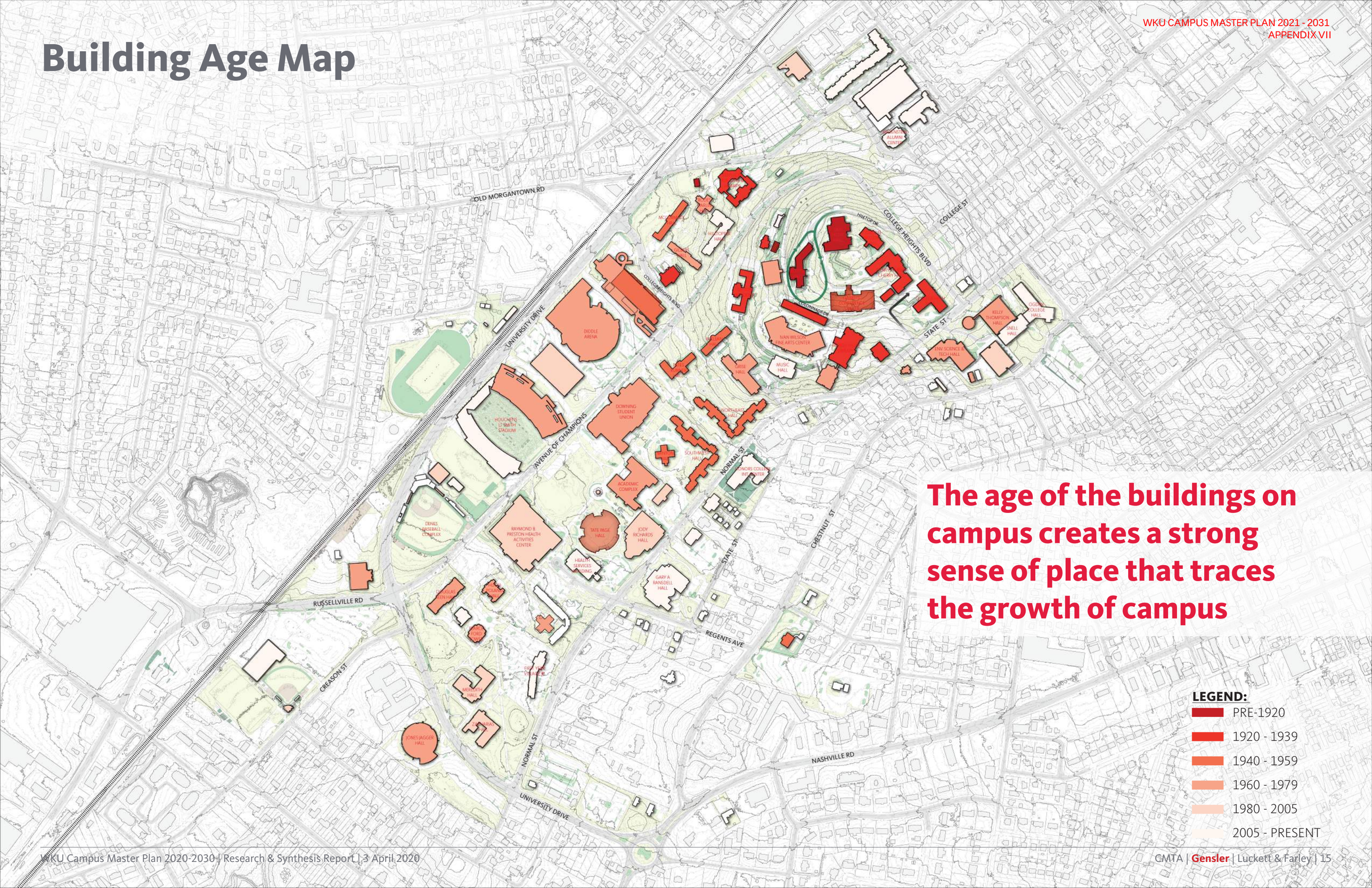
650'
520'
500'
490'
430'

OLD MORGANTOWN RD
UNIVERSITY DRIVE
COLLEGE HEIGHTS BLVD
AVENUE OF CHAMPIONS
RUSSELLVILLE RD
CREASON ST
NORMAL ST
STATE ST
REGENTS AVE
COLLEGE ST
CHESTNUT ST
NASHVILLE RD
HILLTOP DR

DIDDLE ARENA
HOUCHENS LT SMITH STADIUM
DOWNING STUDENT UNION
RAYMOND B. PRESTON HEALTH ACTIVITIES CENTER
ACADEMIC COMPLEX
TATE PAGE HALL
JODY RICHARDS HALL
GARY A. RANSDELL HALL
HEALTH SERVICES BUILDING
DENES BASEBALL COMPLEX
JONES JAGGER HALL
MERIDITH HALL
POTTER HALL
VAN METER HALL
IVAN WILSON FINE ARTS CENTER
GORGIE HILL LIBRARY
MUSIC HALL
GRISE HALL
NORTHEAST HALL
SOUTHWEST HALL
ENV SCIENCE & TECH HALL
KELLY THOMPSON HALL
SNELL HALL
COGHILL COLLEGE HALL
HONORS COLLEGE INT. CENTER
DOSS WILSON HALL
KENTUCKY BUILDING
GRISE ALUMNI HALL
DOUGLAS BEEN HALL
FORD TOWER
FIRST YEAR VILLAGE
ZACHARIA HALL
MINTON HALL
COLLEGE HEIGHTS HALL

LEGEND:
LOWER — HIGHER

Building Age Map



The age of the buildings on campus creates a strong sense of place that traces the growth of campus

LEGEND:

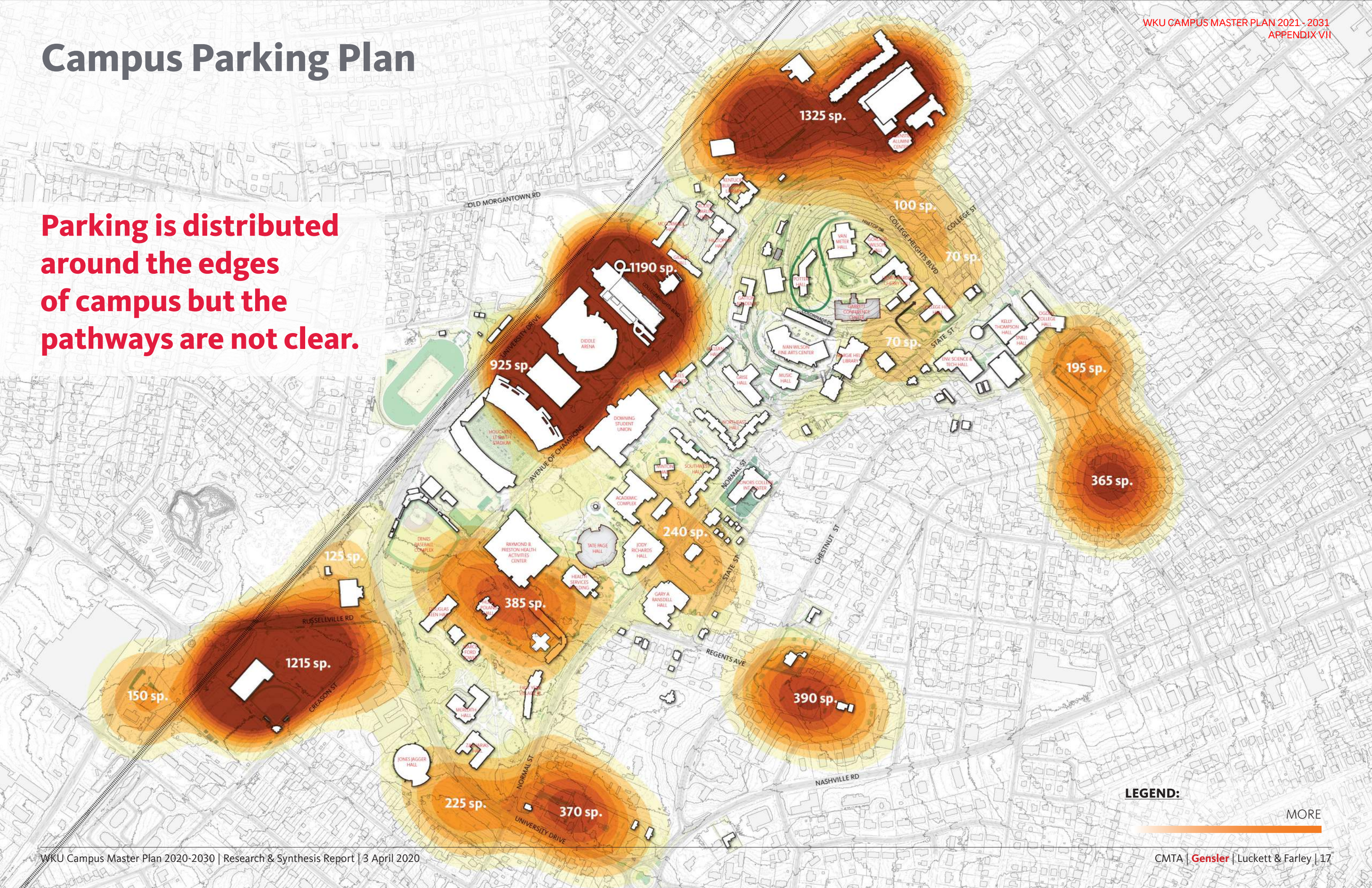
- PRE-1920
- 1920 - 1939
- 1940 - 1959
- 1960 - 1979
- 1980 - 2005
- 2005 - PRESENT

BIRD'S EYE VIEW OF WESTERN KENTUCKY STATE TEACHERS' COLLEGE, BOWLING GREEN, KY.

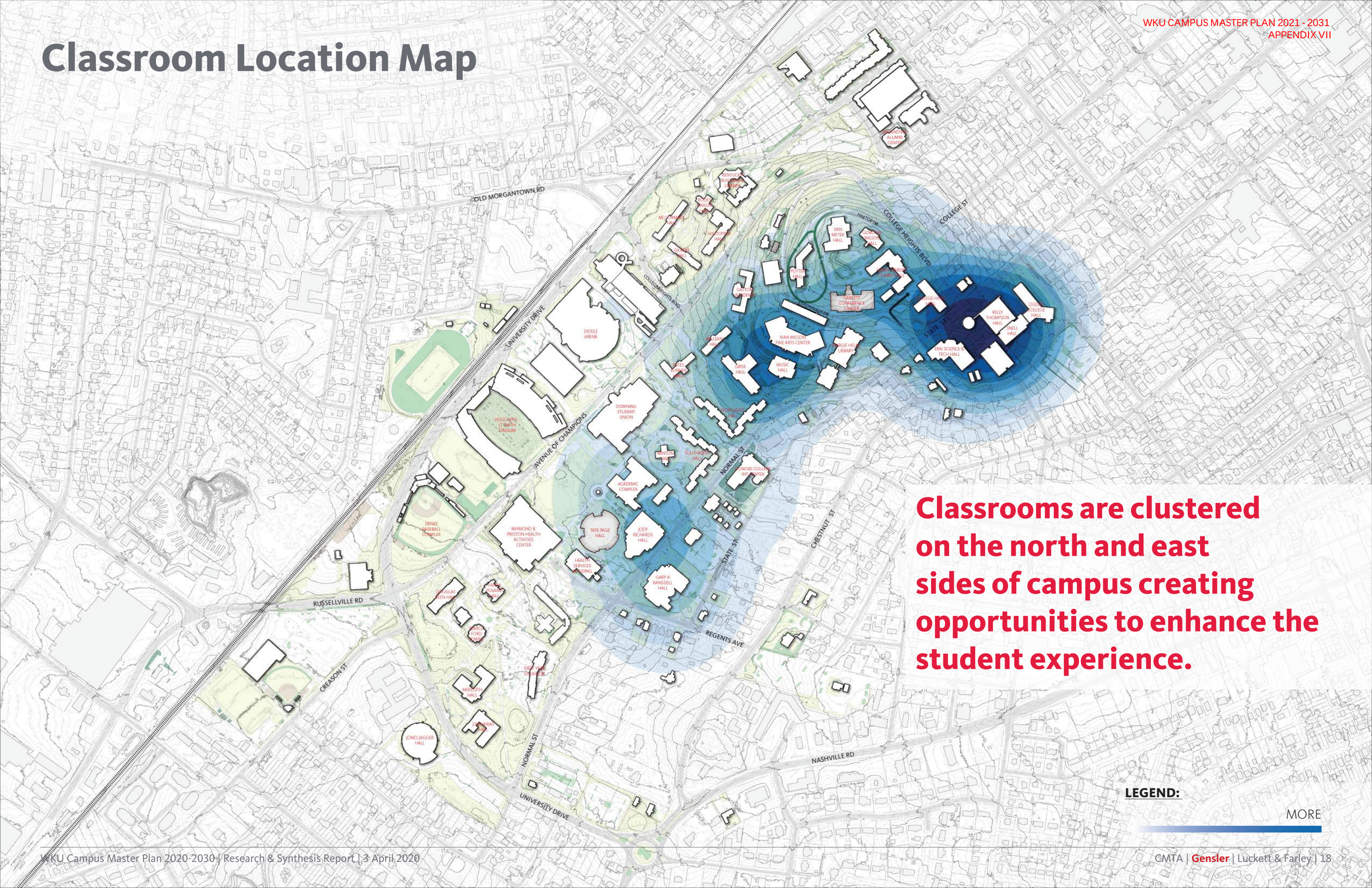
WKU Kentucky Museum and Library Special Collections

Campus Parking Plan

Parking is distributed around the edges of campus but the pathways are not clear.



Classroom Location Map



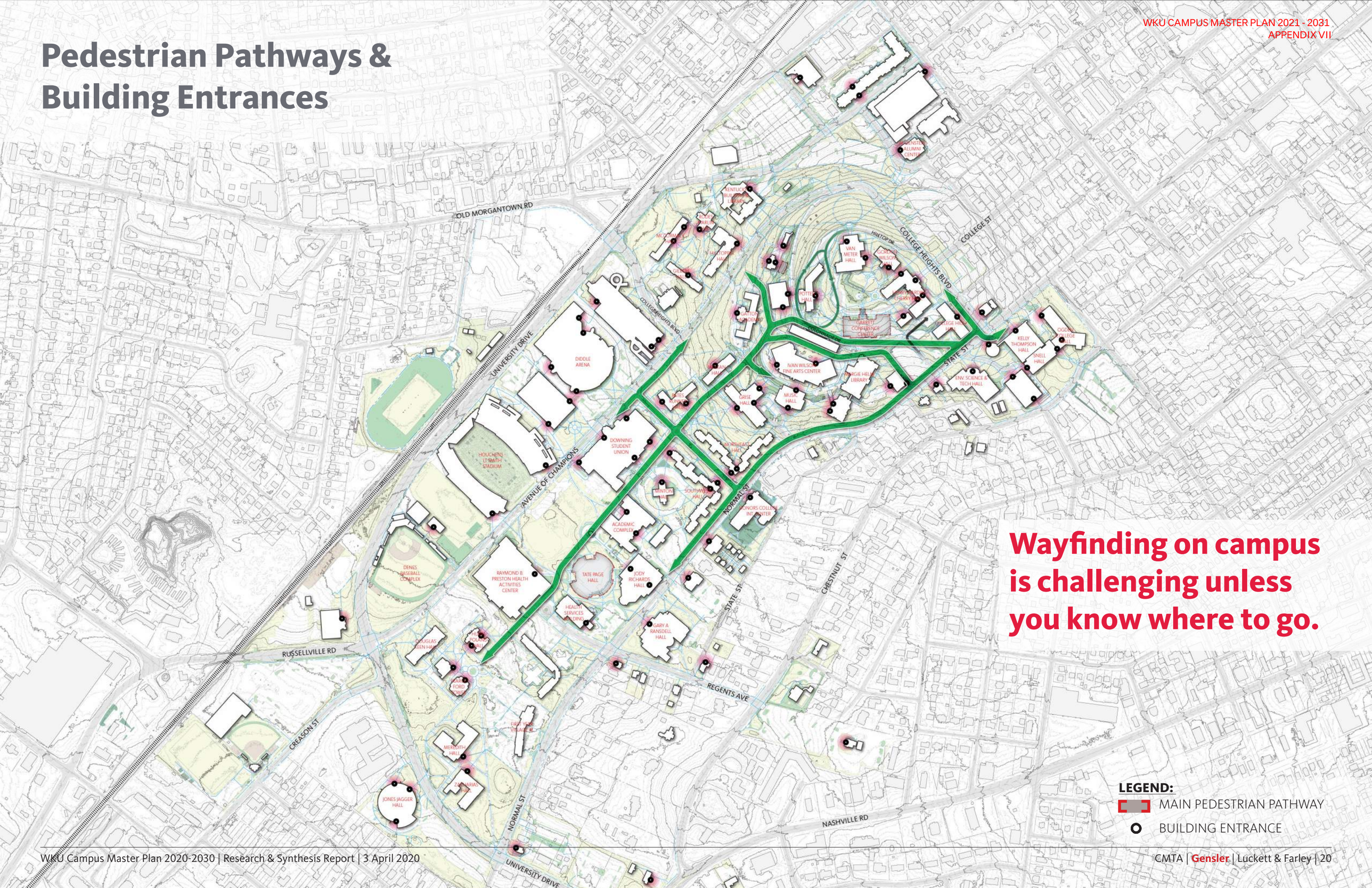
Classrooms are clustered on the north and east sides of campus creating opportunities to enhance the student experience.

LEGEND:

MORE

Student Housing Location Map

Pedestrian Pathways & Building Entrances


OLD MORGANTOWN RD
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FIELDING HALL
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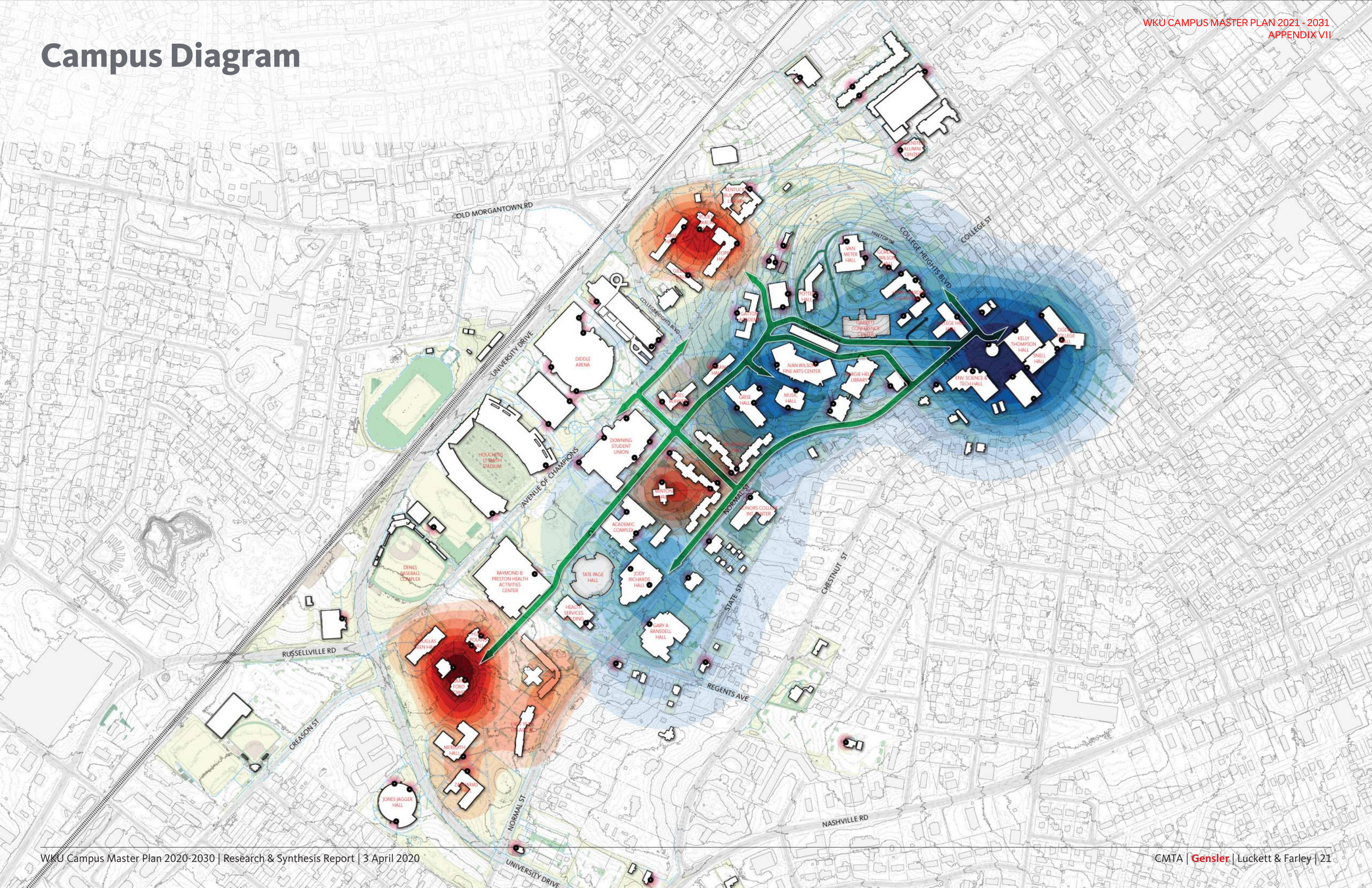
FIELDING HALL

Campus Diagram



Key Takeaways Site Analysis

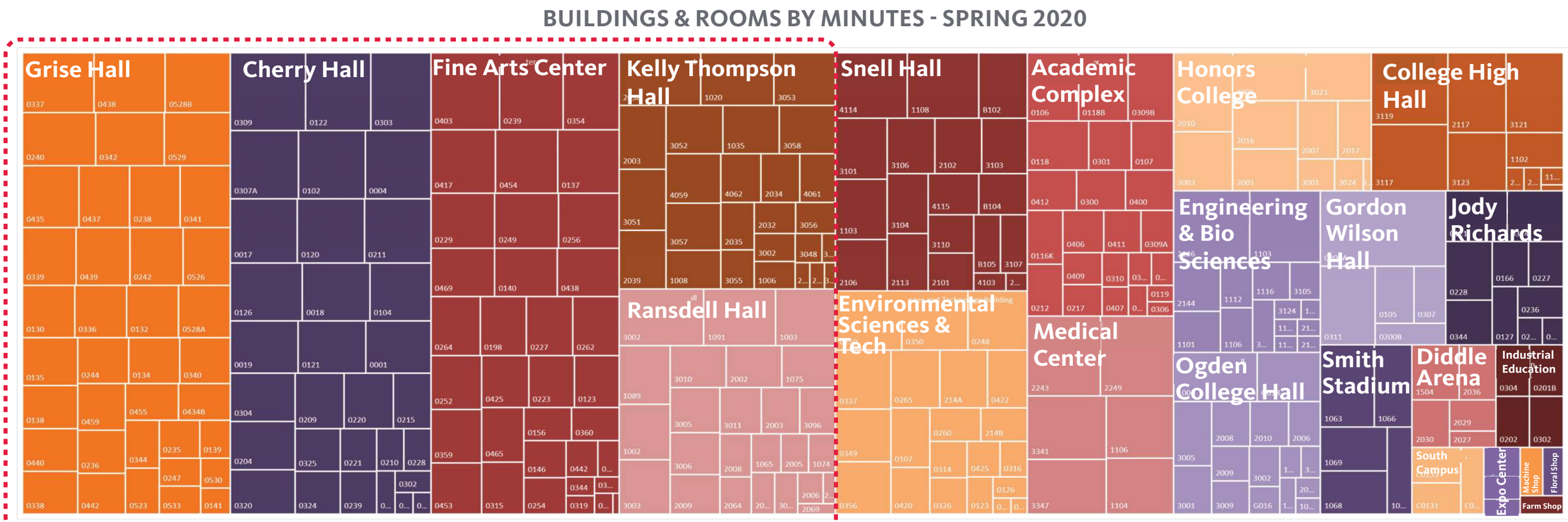
Moving through and around campus is critical to the campus experience	**How can we improve navigation around campus by car and by foot?**
The campus landscape is an opportunity to improve the WKU experience	**As we shift focus from population growth and downsize obsolete facilities, how can the landscape have an even greater impact in improving the campus image and function?**
The Commons at Helm will bring new life and energy to the Hill	**What other parts of the campus need activation and how can we transform existing facilities to achieve that activation?**
The need for new facilities such as a new business school have been identified	**How can we make the most of new construction opportunities, and optimize backfill of the vacated space?**

Utilization Analysis
Summary

Space Utilization by building by time

5 buildings account for more than half of all minutes taught on campus.

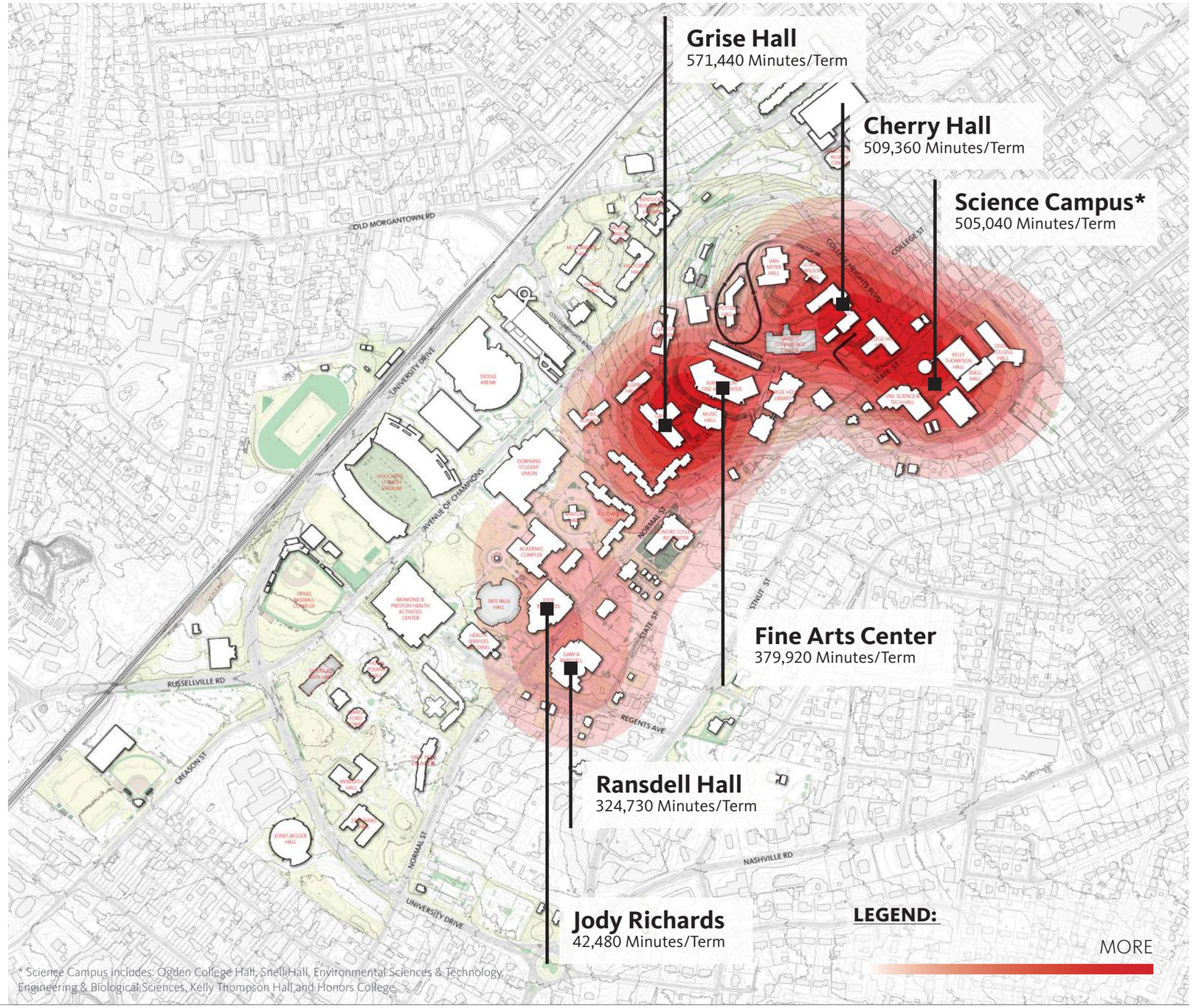
Classroom and lab courses are taught in a total of **23** buildings.



Source: Astra Space Utilization of Labs and Classrooms, Spring 2020

Classroom Minutes taught by building

The areas surrounding Grise Hall, Cherry Hall, and the Science Campus are 'centers of gravity' for classroom learning on campus.



* Science Campus includes: Ogden College Hall, Snell Hall, Environmental Sciences & Technology, Engineering & Biological Sciences, Kelly Thompson Hall and Honors College

Source: Astra Space Utilization of Labs and Classrooms, Spring 2020

Lab Minutes taught by building

The Science Campus is a strong center of gravity for lab-based learning. Lab courses take place in 17 buildings across campus.

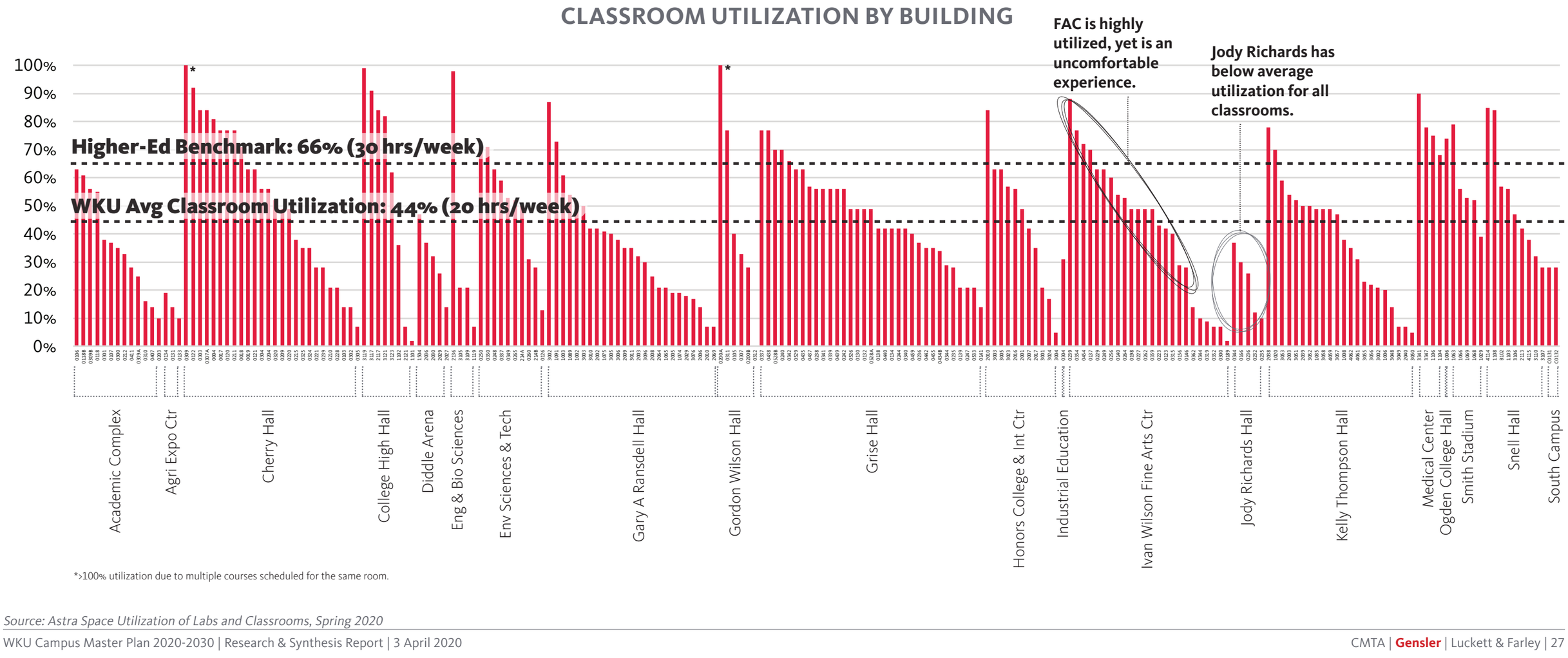
* Science Campus includes: Ogden College Hall, Snell Hall, Environmental Sciences & Technology, Engineering & Biological Sciences, Kelly Thompson Hall and Honors College

Source: Astra Space Utilization of Labs and Classrooms, Spring 2020

Classroom Utilization by room

40 out of 218 classrooms are utilized more than 30 hours a week (66%), a best practices target across many higher-ed institutions.

Per WKU, 100% classroom utilization is based on a 45 hour week, Monday through Friday, 8am to 5pm.



*>100% utilization due to multiple courses scheduled for the same room.

Source: Astra Space Utilization of Labs and Classrooms, Spring 2020

Lab Utilization by room

Lab utilization across campus is 32% (14 hours/week) on average.
5 out of 101 labs have >80% utilization.

Per WKU, 100% lab utilization is based on a 45 hour week, Monday through Friday, 8am to 5pm.

LAB UTILIZATION BY BUILDING

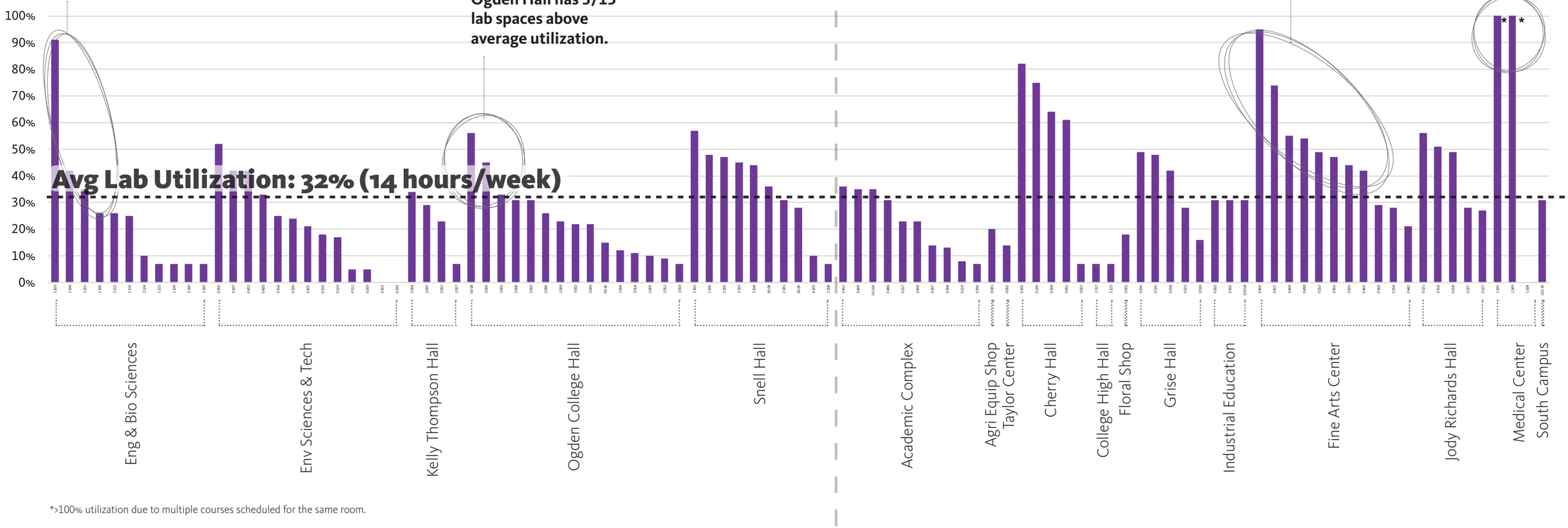
Science Campus

The Engineering building has 3/11 lab spaces above average utilization.

Ogden Hall has 3/15 lab spaces above average utilization.

FAC lab spaces are highly utilized but have a perception of being oversized.

Medical Center has 2 lab spaces above 100% utilization & 1 at 0%.

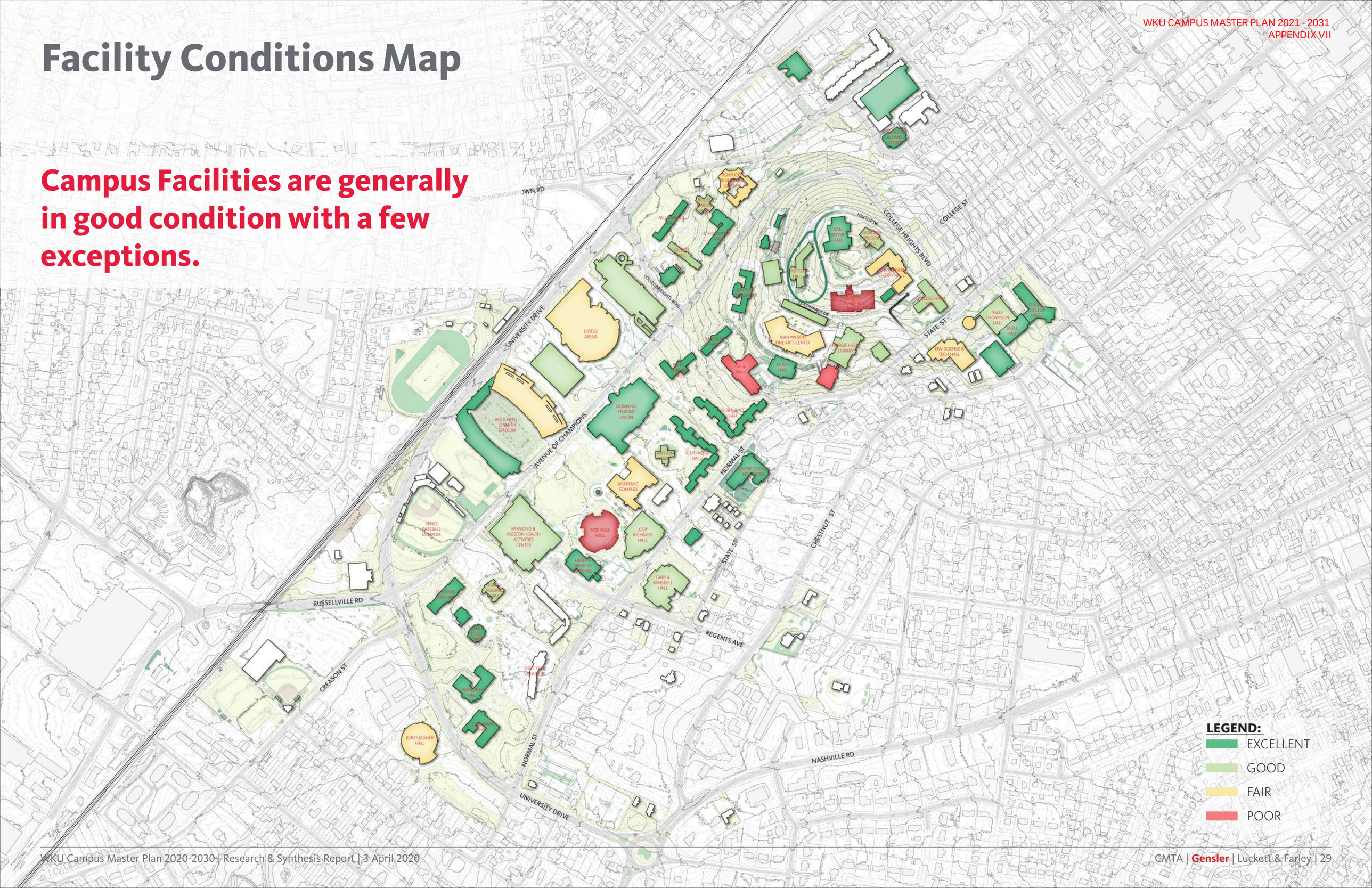


*>100% utilization due to multiple courses scheduled for the same room.

Source: Astra Space Utilization of Labs and Classrooms, Spring 2020

Facility Conditions Map

Campus Facilities are generally in good condition with a few exceptions.



Room Usage by building condition

Among the five most utilized buildings, 4 have a FCI rating of 'Fair' or worse.

Building Name	Classroom Minutes Used/Term	Lab Minutes Used/Term	Total Minutes Used/Term	Faculty Overall Rating	Deferred Maintenance	Facility Conditions Index Deferred Maintenance/Replacement Value	
Grise Hall	571,440	67,760	639,200	Red	$26,867,622	47%	Poor
Cherry Hall	509,360	106,880	616,240	Yellow	$17,990,438	31%	Fair
Ivan Wilson Fine Arts Center	379,920	198,720	578,640	Yellow	$16,347,628	35%	Fair
*Kelly Thompson Hall**	306,320	34,240	340,560	Yellow	*$21,798,991**	40%	Fair
Gary A. Ransdell Hall	324,730		324,730	Yellow	$5,707,926	12%	Good
Snell Hall	173,360	130,880	304,240		$1,050,664	4%	Excellent
Environmental Sciences and Technology Building	180,640	104,640	285,280	Red	$7,284,887	25%	Fair
Academic Complex	174,240	82,480	256,720	Yellow	$18,950,381	36%	Fair
Medical Center Health Complex	114,940	77,760	192,700		n/a	n/a	
Honors College & International Center	182,480		182,480	Green-Yellow	$655	0%	Excellent
College High Hall	171,200	5,280	176,480	Red	$1,798,213	11%	Good
Engineering and Biological Sciences	54,240	104,160	158,400	Green	$580,867	2%	Excellent
Ogden College Hall	27,200	131,120	158,320		n/a	n/a	
Gordon Wilson Hall	128,560		128,560	Red	$1,506,669	14%	Good
Jody Richards Mass Media and Technology Hall	42,480	78,000	120,480	Green	$5,497,644	14%	Good
Smith Stadium (East)	103,120		103,120	Yellow	$13,219,888	27%	Fair
Diddle Arena	57,360		57,360		$22,432,598	20%	Fair
Industrial Education Building	11,520	34,560	46,080	Red	$1,283,335	19%	Good
South Campus	20,340	11,520	31,860		n/a	n/a	
Agricultural Exposition Center	16,080		16,080		$2,894,556	10%	Excellent
Agriculture Equipment Machine Shop		7,280	7,280		$74,737	40%	Poor
Floral Design Training Center & Floral Shop		6,480	6,480		$0	0%	Excellent
Agriculture Farm Shop and Taylor Center		5,280	5,280		$234,742	17%	Good
Total	3,549,530	1,187,040	4,736,570		$165,522,441		

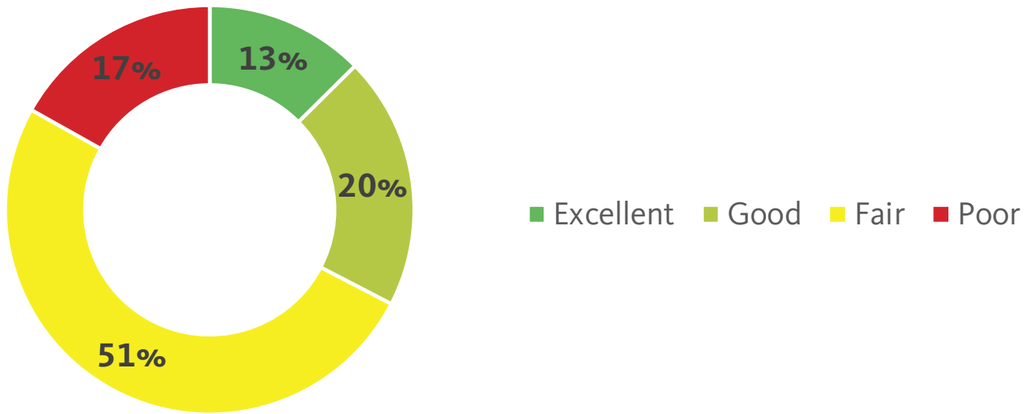
**Deferred Maintenance does not account for recent renovation.*

Source: WKU Executive Asset Summary, 2018; WKU Facilities GSF & Attribute Summary, 2020

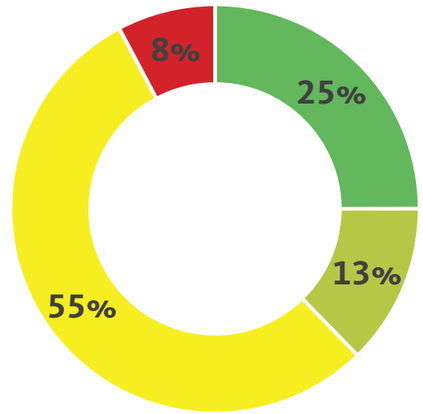
Building Condition Facility Condition Index

Majority of current learning in classrooms and labs occur in buildings with ‘Fair’ or ‘Poor’ FCI ratings.

CLASSROOM MINUTES BY BUILDING CONDITION



LAB MINUTES BY BUILDING CONDITION



5 Buildings have Excellent FCI Ratings: Snell Hall, Honors College, Engineering and Biological Sciences, Agricultural Exposition Center and the Floral Design Training Center.

Source: Astra Space Utilization of Labs and Classrooms, Spring 2020

Key Takeaways Utilization Analysis

Most learning occurs within a select few buildings

Five buildings account for more than half of all minutes taught across campus: Grise Hall, Cherry Hall, Fine Arts Center, Kelly Thompson Hall and Ransdell Hall.

On average, classroom utilization is 44% and lab utilization is 32%

Most higher-ed institutions use roughly a 30 hour/week (66% of a 45 hour week) as a best practice for scheduling classroom space.

Both classroom and lab learning have clear centers of gravity across campus

Classroom and lab nodes appear towards the north of campus. Lab space predominantly exists on the Science Campus.

Majority of learning is happening in buildings with below average facility conditions

Majority of current learning in classroom and labs occurs in buildings with 'Fair' or 'Poor' FCI ratings. Among the 5 most utilized buildings, 4 have a FCI rating of 'Fair' or worse.

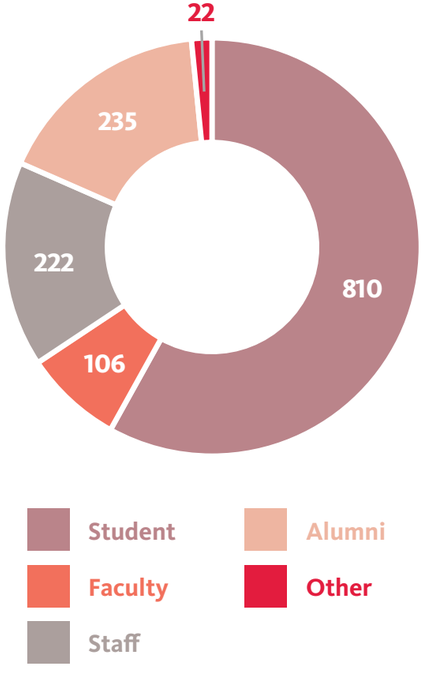
Source: Astra Space Utilization of Labs and Classrooms, Spring 2020

Survey Response Summary

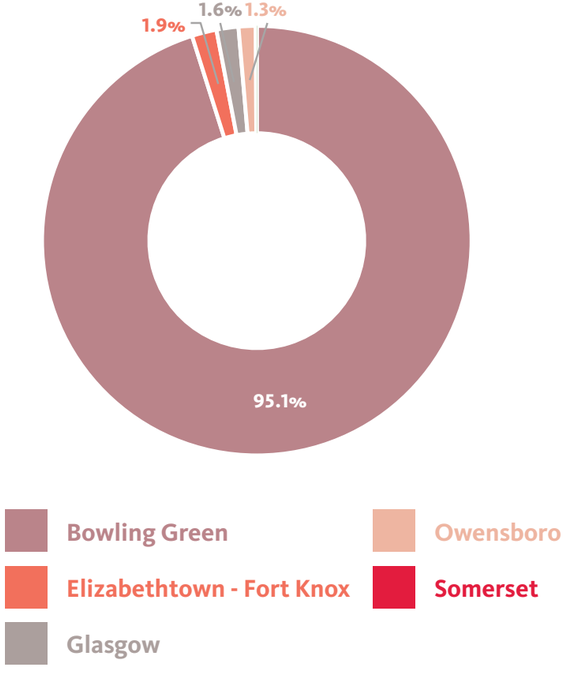
Survey Respondents' Summary

The survey received 1395 responses, with more than half (810) from students.
Majority of respondents feel safe on campus.

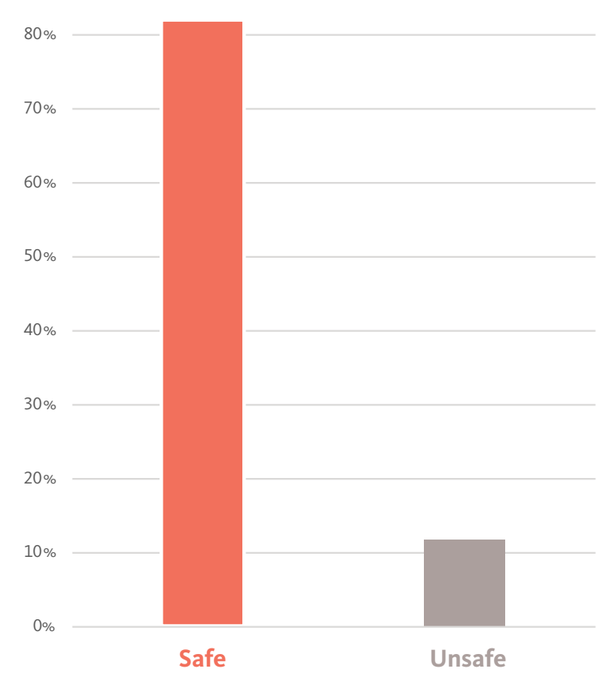
What is your role at WKU?



Which campus do you most use at WKU?



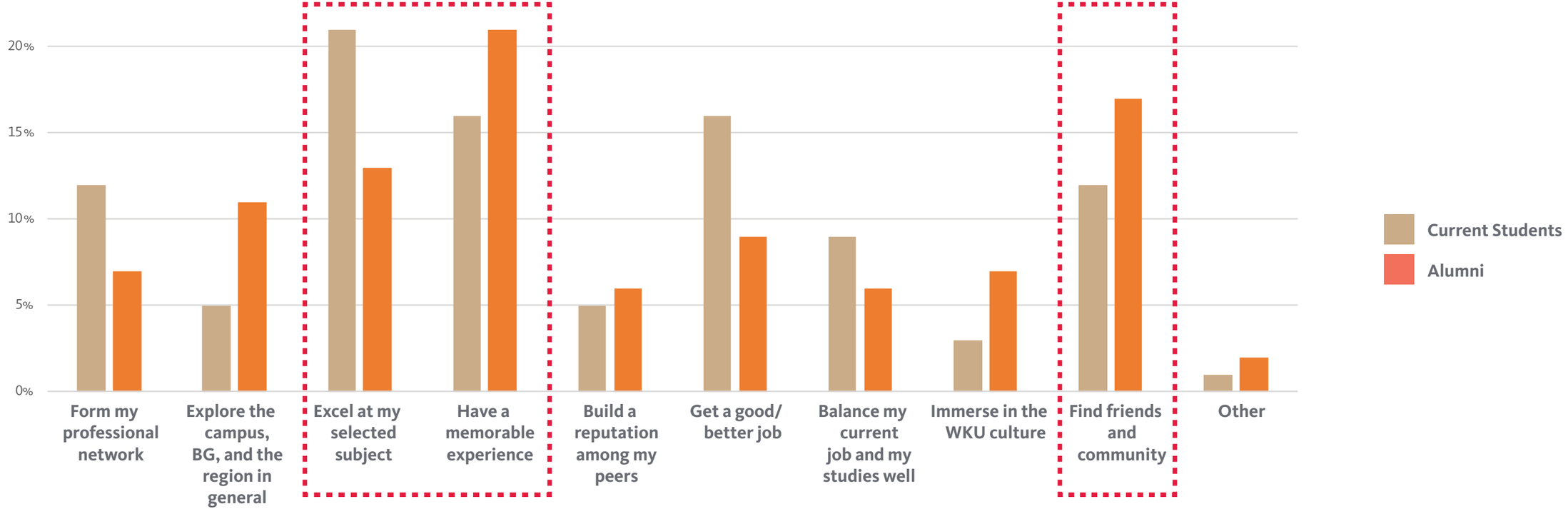
Mentions of "safe" and "unsafe"



Survey Responses Summary

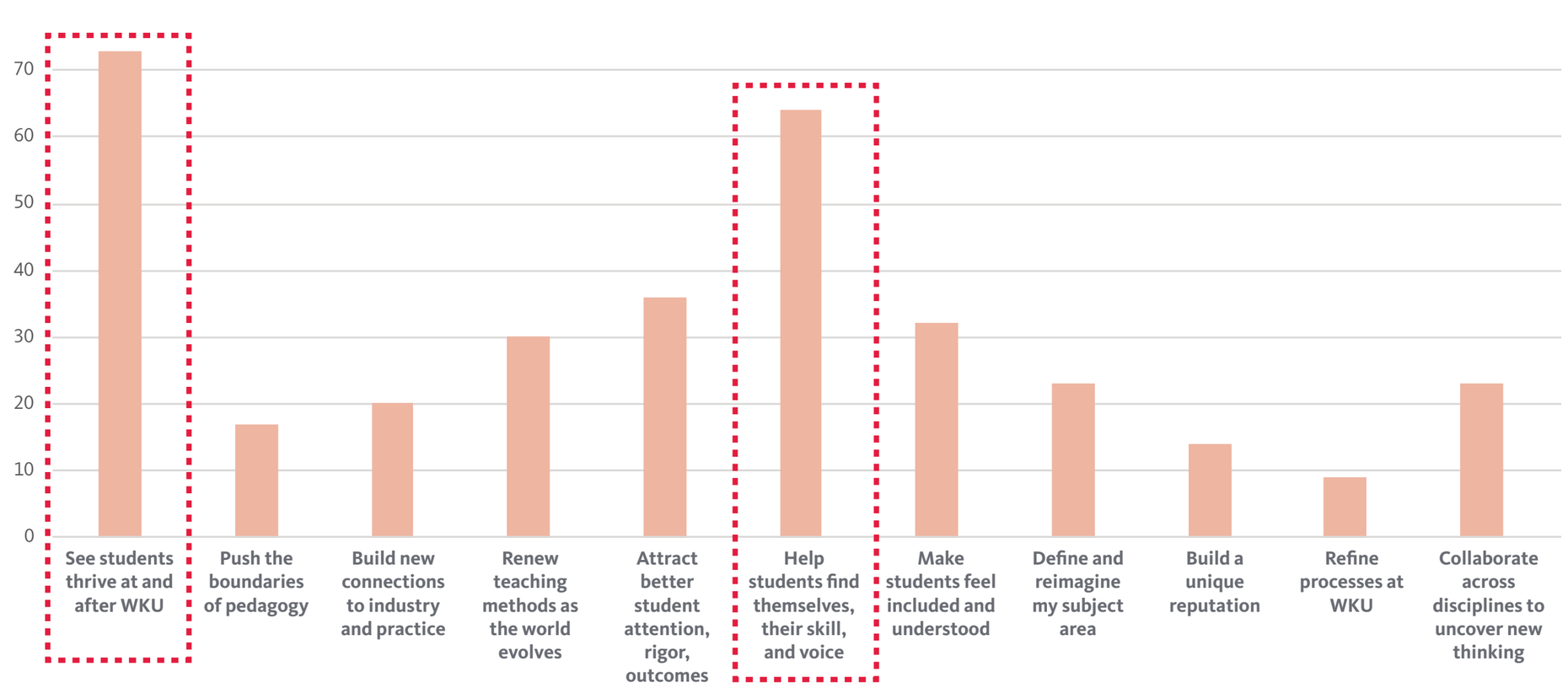
Current students respondents' top priority is to excel at their subject, while alumni respondents' top takeaway from their WKU experience was a memorable experience with friends and community.

Student priorities while at WKU v Alumni takeaways from their WKU experience



Survey Responses Summary

Faculty and staff have a shared top priority in their WKU role: to see students thrive.
Helping students find themselves, their skill, and their voice was another shared goal.



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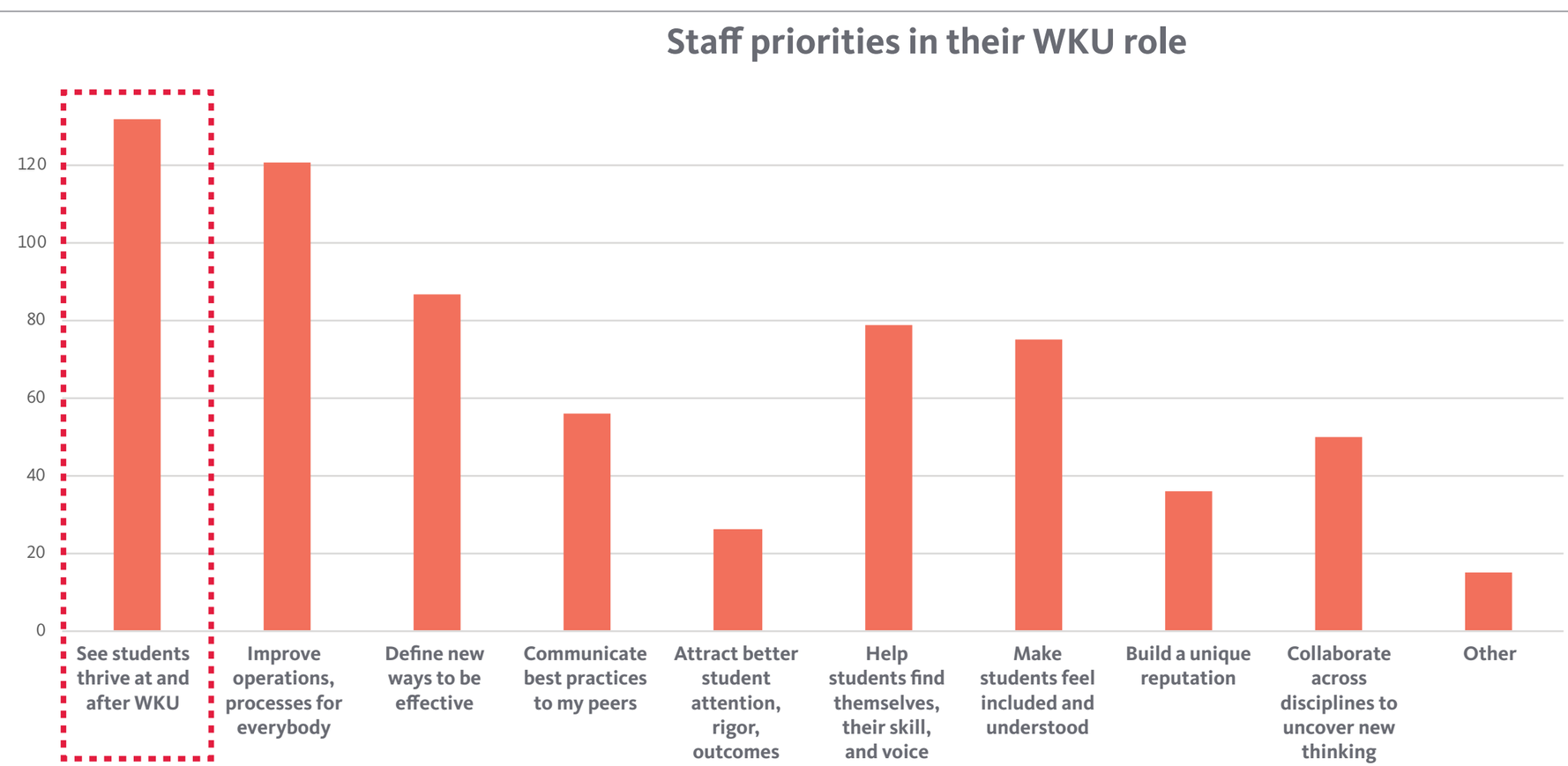
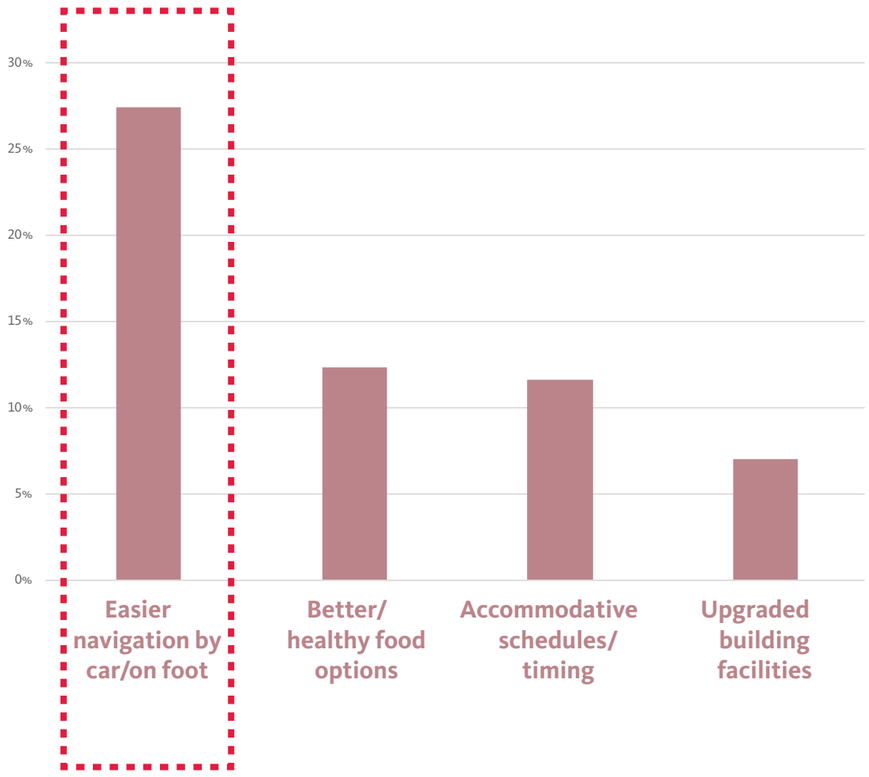


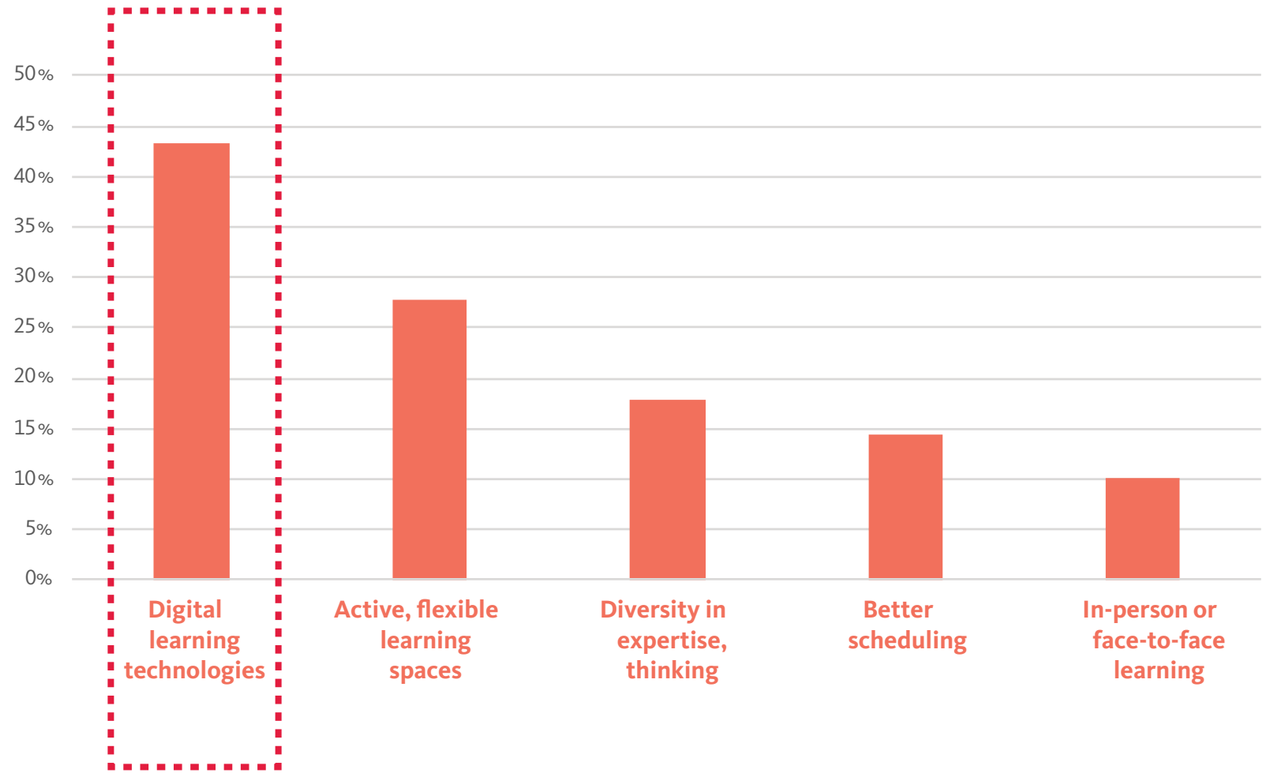
Survey Responses Summary

Respondents asked for easier campus navigation both by car and on foot, while emerging needs of pedagogy include digitalization and flexible spaces to support active learning.

Desired change on campus: top responses

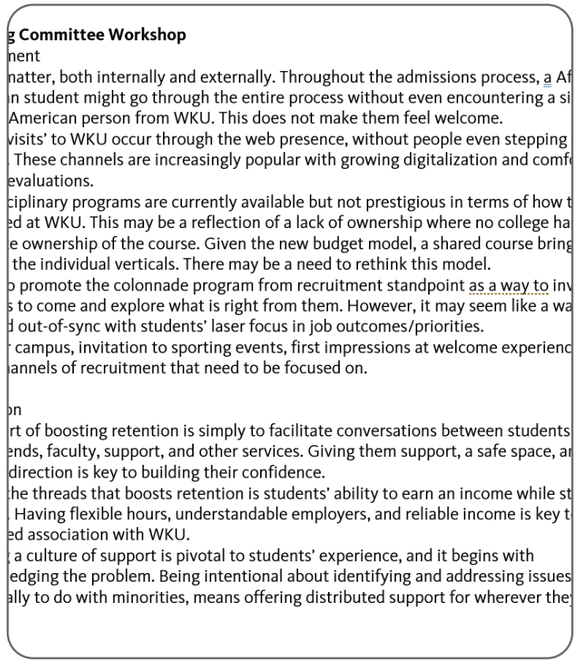


Emerging pedagogy needs: top responses

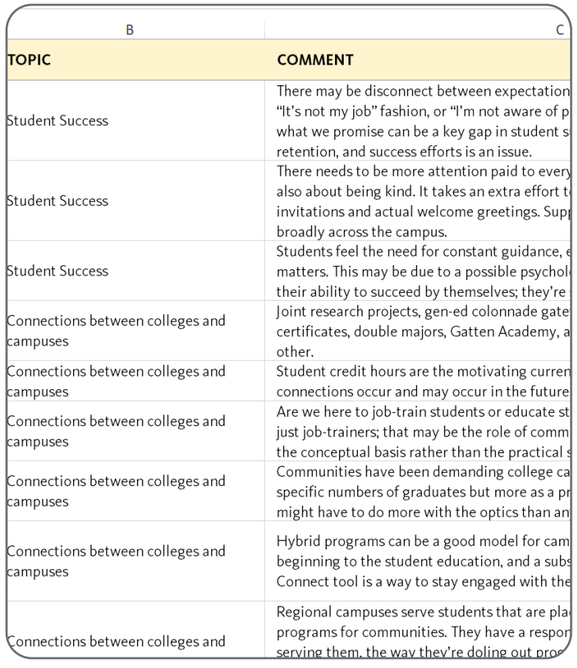


Synthesis Process
Overview

Synthesis Methodology

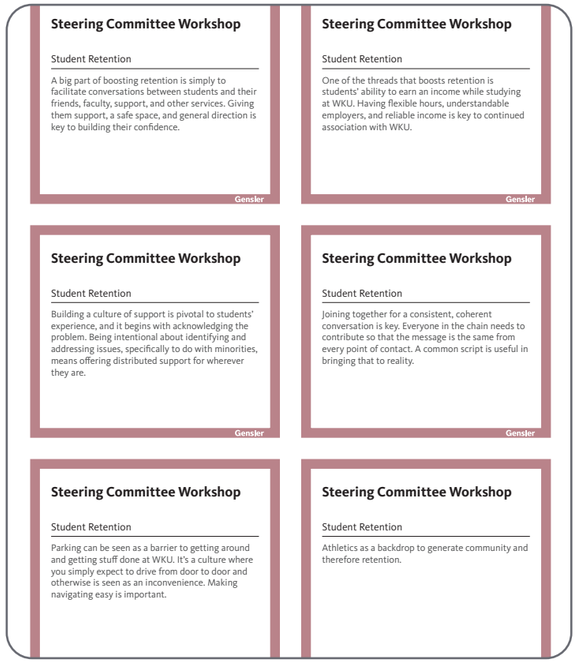


Debriefing as a team

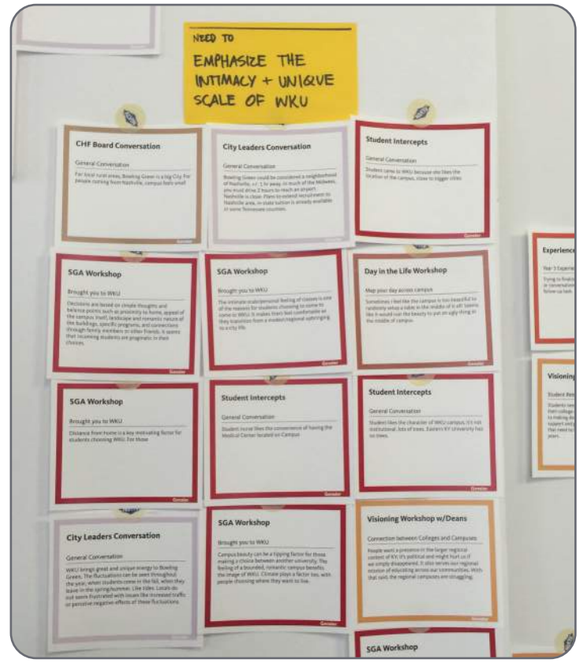


B	C
TOPIC	COMMENT
Student Success	There may be disconnect between expectation "It's not my job" fashion, or "I'm not aware of p what we promise can be a key gap in student s retention, and success efforts is an issue.
Student Success	There needs to be more attention paid to every also about being kind. It takes an extra effort t invitations and actual welcome greetings. Supp broadly across the campus.
Student Success	Students feel the need for constant guidance, matters. This may be due to a possible psychol their ability to succeed by themselves; they're
Connections between colleges and campuses	Joint research projects, gen-ed colonnade gate certificates, double majors, Gatten Academy, a other.
Connections between colleges and campuses	Student credit hours are the motivating curren connections occur and may occur in the future
Connections between colleges and campuses	Are we here to job-train students or educate st just job-trainers; that may be the role of comm the conceptual basis rather than the practical s
Connections between colleges and campuses	Communities have been demanding college ca specific numbers of graduates but more as a pr might have to do more with the optics than an
Connections between colleges and campuses	Hybrid programs can be a good model for cam beginning to the student education, and a subs Connect tool is a way to stay engaged with the
Connections between colleges and	Regional campuses serve students that are pla programs for communities. They have a respor serving them, the way they're doing out pro

Tabulating notes by source

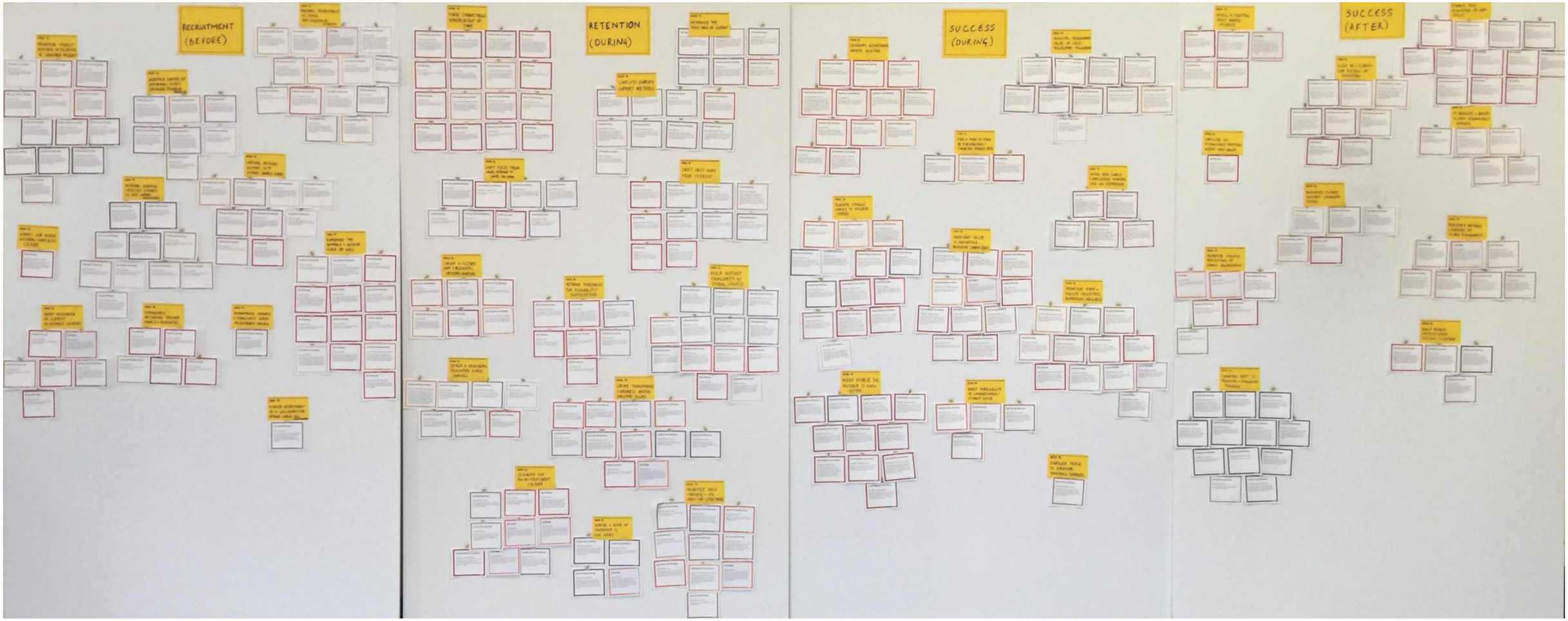


Generating snippets



Clustering by unmet need

Addressing recruitment, retention, and success



Experience Before: Recruitment	Experience During: Retention	Experience During: Success	Experience After: Success

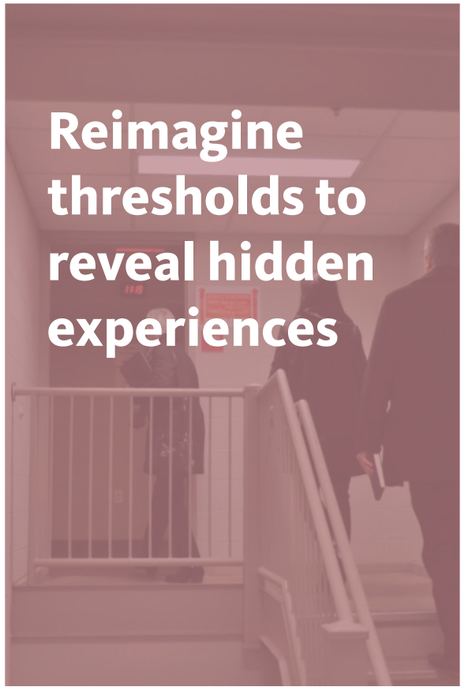
Discerning Insights

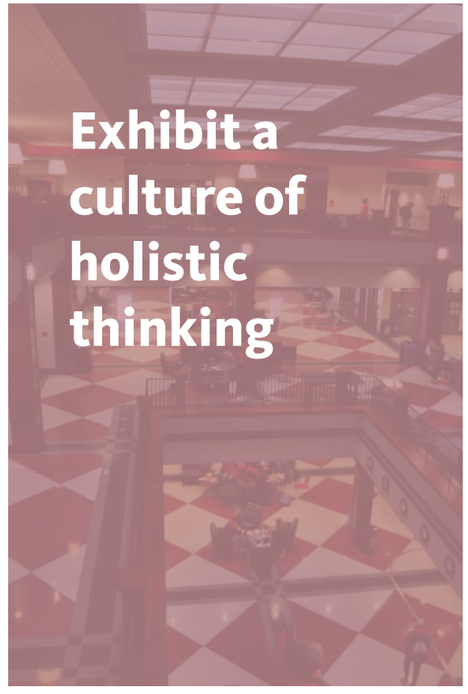
These needs help identify overarching maxims and will inform Guiding Principles.

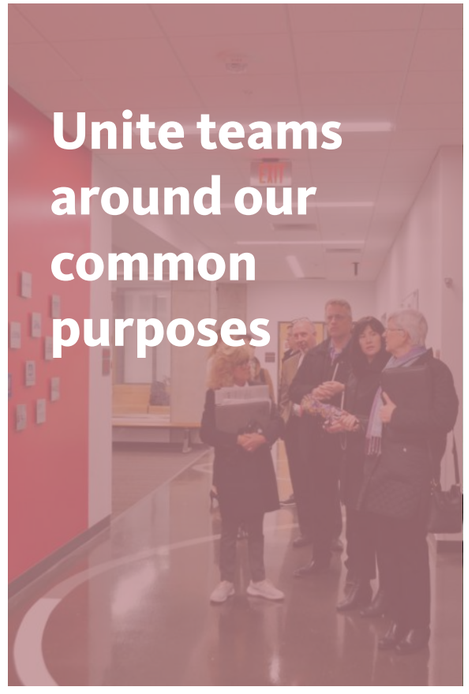
Offering Kindness	Overcoming Thresholds	Boosting Immediacy	Driven by Outcomes	Making Decisions	Aligning by Purpose	Enjoying Everydays	Thinking Holistically

Guiding Principles & Design Directives

Guiding Principles Summary







Retention

Success

Recruitment

"WKU has many hidden resources for first generation college students. Look into the opportunities here, because there might be a lot you don't realize at first."
— Student survey respondent, offering advice to newcomers

FAC's lab spaces are highly utilized but have a perception of being oversized.
— Utilization analysis

"Relocate ROTC classes from Diddle arena to be more inclusive for US military partners, faculty, students, and staff"
— Departmental questionnaire respondent

INSIGHT 1A

Showing kindness has a lot to do with knowing about struggles; minority troubles maybe invisible to the larger community today. Awareness is intermittent and isolated, setting up the unaware for failure in their responses, communication, or behaviors.

INSIGHT 1B

Thresholds—physical or psychological—are prevalent across campus today. Whether it is a sign-up requirement for participation or perceived isolation of certain spaces, these hurdles seem like the end of the journey to many of our users.

GUIDING PRINCIPLE 1

REIMAGINE THRESHOLDS TO REVEAL HIDDEN EXPERIENCES

GUIDING PRINCIPLE 1

REIMAGINE THRESHOLDS TO REVEAL HIDDEN EXPERIENCES

DESIGN DIRECTIVES

- Attract broader visibility by branding challenging parts of campus
- Build empathy through immersive experiences
- Prioritize location of specific programs, elevating their importance
- Co-locate support spaces & ‘free’ activities with ‘cool’ programs
- Envision enhanced digital signage to enhance awareness of services
- Open up buildings for easier visibility and a welcoming feeling

Responding to a change they would like to see on campus, survey respondents most referred to navigation challenges; it was mentioned 320 times. Issues also related to walking from place to place under time constraints.

Cherry Hall, Ransdell Hall & Snell Hall offer the majority of WKU’s evening classes, which serve a majority of non-traditional students.
— Utilization analysis

"We are a great institution with a hilltop setting. It's a beautiful campus with small class sizes for more of a one-on-one experience."
— Survey respondent

"On the WKU campus you can't go from one place to another without bumping into people you know, it's a nice size. It creates community. At UofK, I could go 2-3 weeks without seeing friends."
— Alum, appreciating the intimate scale of WKU's campus

INSIGHT 2A

Immediacy is prime in a time of instant gratification—and relying on natural progression of community, familiarity, and nostalgia is no longer a reliable strategy.
Designing new interactions, experiences, and triggers that build strong bonds are crucial.

INSIGHT 2B

The everyday campus experience is seldom a high point; it is simply seen as a functioning system to be navigated.
There is an opportunity for the campus to play an important part in emphasizing the delight of the small journeys.

GUIDING PRINCIPLE 2

ACCELERATE COMMUNITY BUILDING ON CAMPUS

GUIDING PRINCIPLE 2

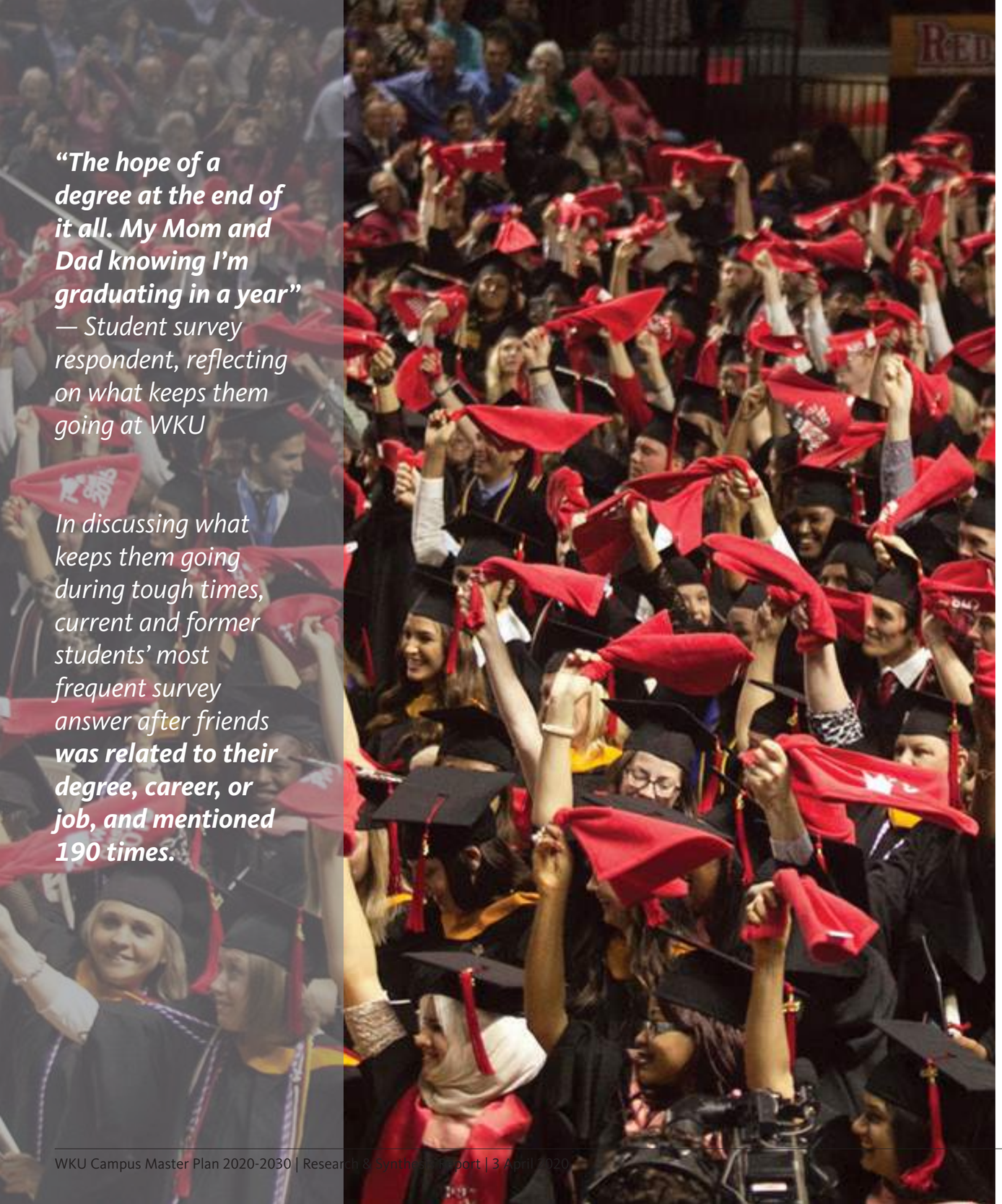
ACCELERATE COMMUNITY BUILDING ON CAMPUS

DESIGN DIRECTIVES

- **Define specific 'instagrammable' moments/interactions on campus**
- **Trigger collective activities for stronger memories**
- **Maximize non-traditional users' time on campus**
- **Expand program to attract new users independent of existing attractions**
- **Celebrate seasonal occurrences across campus** (sports, nature, or others)
- **Introduce third elements across campus to trigger connections through triangulation**
- **Enable personal expression for a sustained sense of ownership**

"Give us more stuff to do on campus. There's a gym, and a recreation center. That's it."
— Student survey respondent, talking about a desired change on campus

Grise Hall has the highest number of minutes taught on campus, is centrally located and close to dining options.
— Utilization analysis



"The hope of a degree at the end of it all. My Mom and Dad knowing I'm graduating in a year"
— Student survey respondent, reflecting on what keeps them going at WKU

In discussing what keeps them going during tough times, current and former students' most frequent survey answer after friends ***was related to their degree, career, or job, and mentioned 190 times.***

INSIGHT 3

Students are focused on their personal growth and goals, and don't resonate directly with our intangible education mission.

Centering the dialogue around a tangible result—completion of their degree—while offering an unwavering partnership irrespective of timeline will build resonance.

GUIDING PRINCIPLE 3

FOCUS STUDENT SUCCESS TOWARD TANGIBLE OUTCOMES

GUIDING PRINCIPLE 3

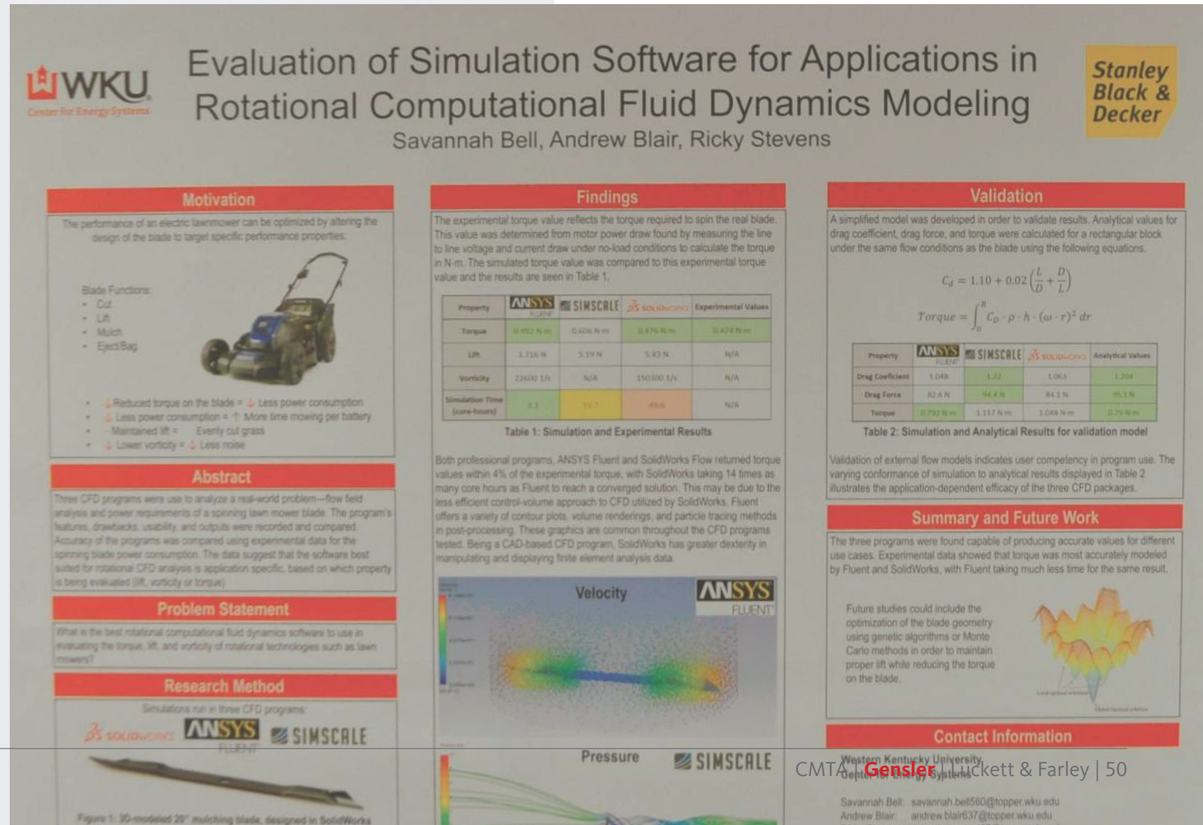
FOCUS STUDENT SUCCESS TOWARD TANGIBLE OUTCOMES

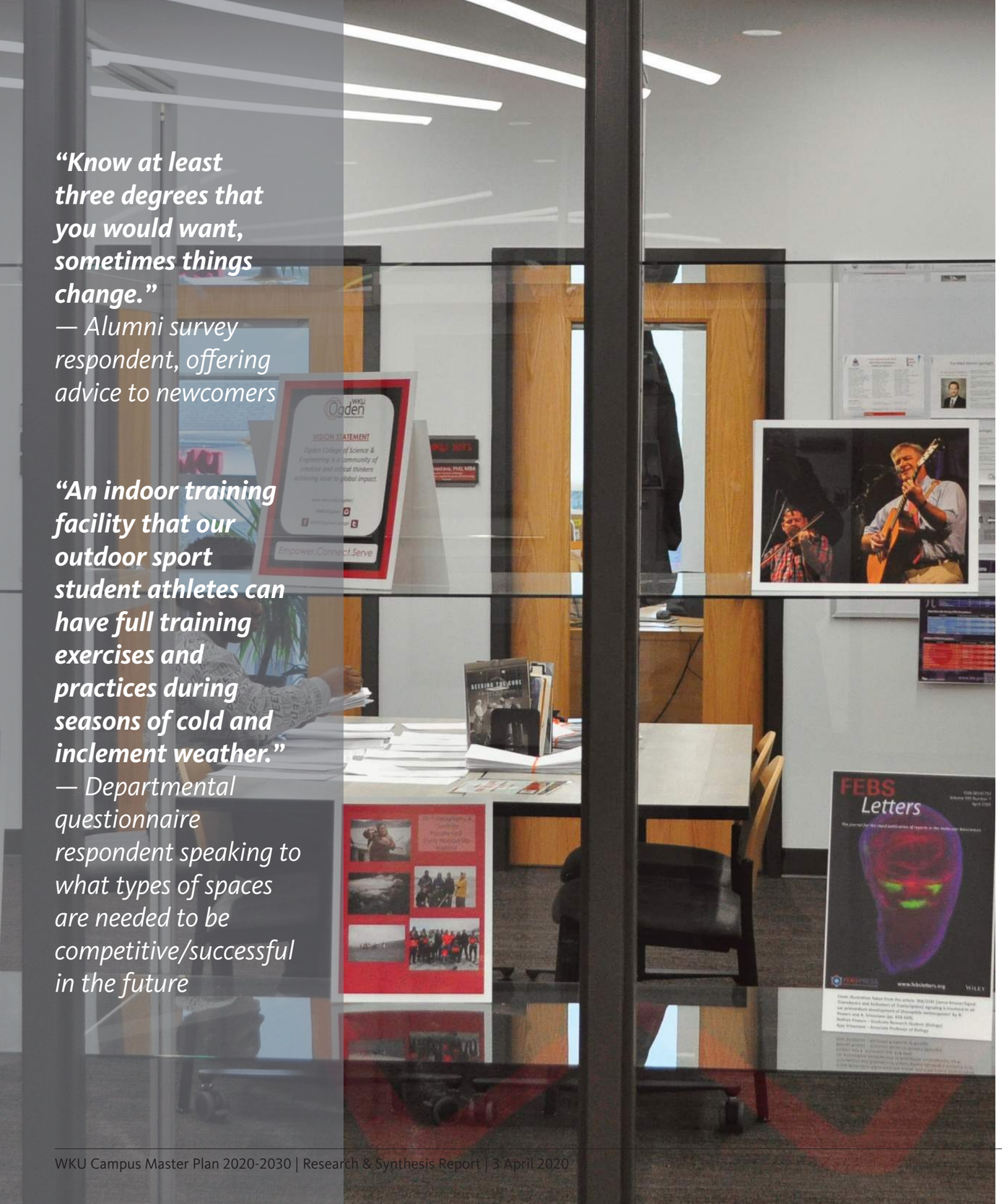
DESIGN DIRECTIVES

- Celebrate stories of our partnerships and successes
- Accommodate co-working/ collaboration activities with alumni
- Inspire grown-up behaviors and environments on campus
- Blur boundaries between traditional and non-traditional student behaviors
- Visualize differing student journeys to showcase distinct paths to the goal
- Pivot messaging around end goals and steps to success

"We have a sales classroom that was renovated that works relatively well. They can role play and their classmates can observe."
— Departmental questionnaire respondent on campus spaces that work well.

"I try to focus on the big picture: my role is to help the next generation develop skills that will help them redefine the world, the workplace, themselves."
— Faculty survey respondent





"Know at least three degrees that you would want, sometimes things change."
— Alumni survey respondent, offering advice to newcomers

"An indoor training facility that our outdoor sport student athletes can have full training exercises and practices during seasons of cold and inclement weather."
— Departmental questionnaire respondent speaking to what types of spaces are needed to be competitive/successful in the future

INSIGHT 4A

Making decisions is a constant, new, and overwhelming task for traditional students, with the risk of oversimplification. To boost critical thinking is to expand consideration dimensions while educating them on the process itself.

INSIGHT 4B

Students have no immediate incentive for big-picture thinking, especially as they navigate both urgent and important tasks. Being immersed in a culture of long-term thinking is more effective while also being an opportunity for us to lead by example.

GUIDING PRINCIPLE 4

EXHIBIT A CULTURE OF HOLISTIC THINKING

GUIDING PRINCIPLE 4

EXHIBIT A CULTURE OF HOLISTIC THINKING

DESIGN DIRECTIVES

- Boost interactions among students from different years in their journey
- Encourage forming and sharing of opinions across campus
- Narrate WKU history to showcase value of long-term thinking
- Build exposure to communities beyond the existing or expected
- Visualize processes, outcomes, and consequences of decision-making
- Boost interaction with things that showcase progress over time
- Invite the world of professional industry into faculty and student conversations

Talking about continued engagement with WKU, ***alumni survey respondents mentioned involvement in sports events more than all other types of engagement*** *(65 mentions. Board, lectures, clubs, etc. mentioned 43 times)*

During recruitment, Grise Hall, Ransdell Hall & the Fine Arts Center are toured most frequently. However, Cherry Hall, the second most utilized for classroom and lab learning, is not.
— Utilization analysis

Talking about emerging needs for pedagogy, 43% of faculty survey respondents talked about digital learning technologies and the need for active, flexible learning spaces (mentioned by 27%)

"Comprehensive space for military/ veteran supports. Currently, these supports are located all across campus requiring multiple days for students who receive multiple services from all the different support programs."

— Departmental questionnaire respondent describing spaces needs.

INSIGHT 5

Disjointed efforts and initiatives occur across departments, colleges, or teams not just because of a lack of communication, but because of a lack of organization around primary purpose. With each silo grouped by discipline or skill, anchoring around purpose is critical for sustained collaboration.

GUIDING PRINCIPLE 5

UNITE TEAMS AROUND OUR COMMON PURPOSES

GUIDING PRINCIPLE 5

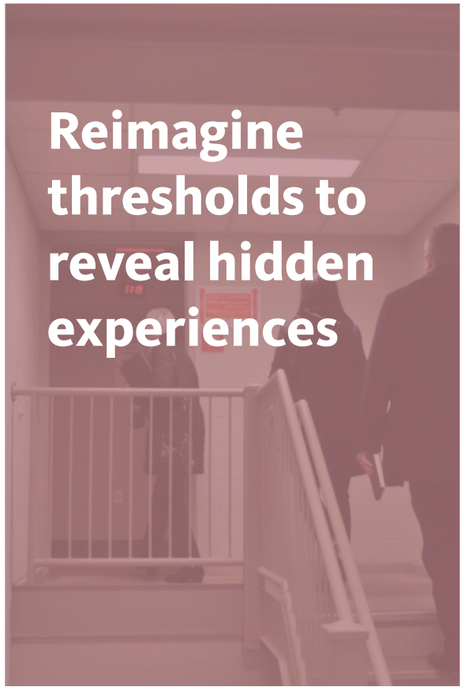
UNITE TEAMS AROUND OUR COMMON PURPOSES

DESIGN DIRECTIVES

- Provide flex spaces that enable focus on a current purpose
- Narrate stories of our purposes across varied spaces
- Enable intermingling across faculty, students, staff, alumni, and industry partners consistently across campus
- Surface contradictions to further dialogue and collaboration
- Activate first floor across disciplines or schools through triangulation

*Discussing safety on campus, the **feeling of being safe (mentioned 601 times) overshadows the feeling of being unsafe (mentioned 86 times).** Feeling unsafe was related to lighting, specific areas like parking lots, and individual walks home.*

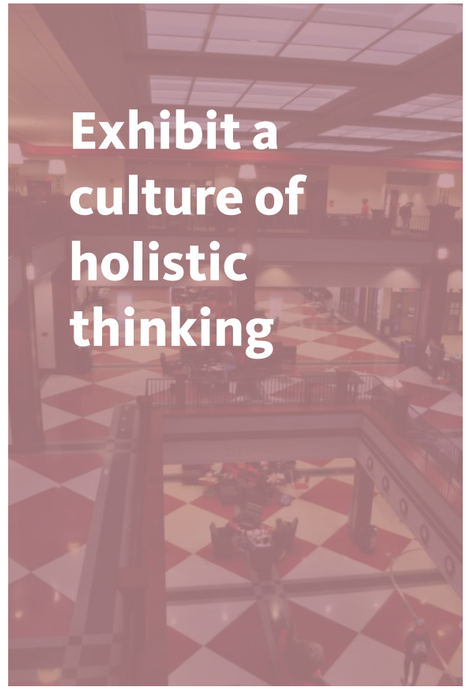
Guiding Principles Summary



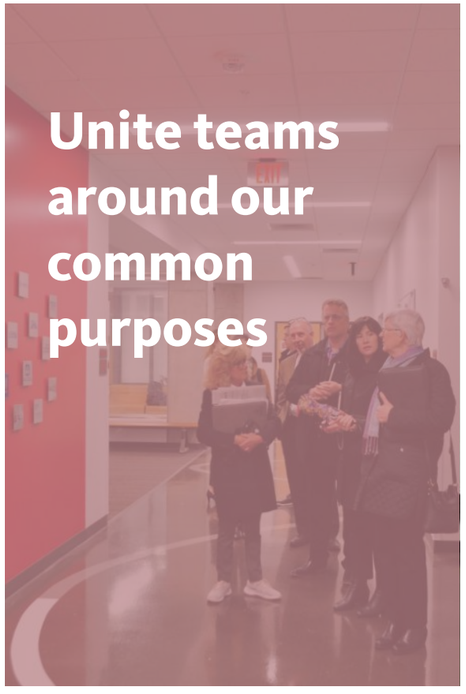
Designing to **broaden visibility, build empathy, and prioritize support locations.**

Designing to **trigger conversations, enable personal expression, and seasonal celebrations**

Designing to **co-work with alumni, showcase student journeys, and work with non-traditional students**

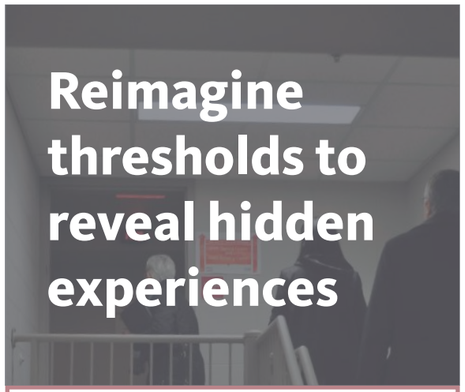


Designing to **boost unexpected connections, encourage opinion-sharing, and invite industry in**



Designing to **co-locate for purpose, intermingle diverse stakeholders, and narrate stories of our goals**

Alignment with Strategic Plan

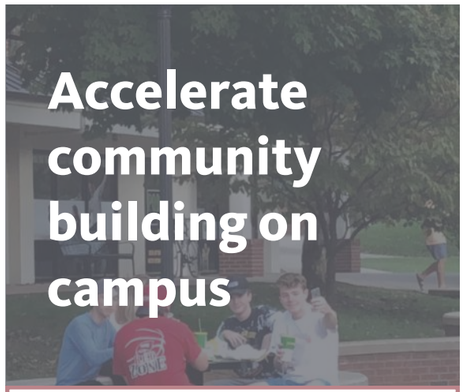


Reimagine thresholds to reveal hidden experiences

Centralizing advising to incorporate **financial, mental, physical, and social wellness**

Lowering thresholds to incorporate student need for scholarships

Diversity, equity, and inclusion plan for cultural competency



Accelerate community building on campus

Integrating diverse & international student populations into the WKU community

Providing for **education, assistance, & inspiration outside the classroom**

Cultivating on-going **relationships that last a lifetime** with alumni

Focus student success toward tangible outcomes

Enrolling non-traditional students, **creating multiple pathways to complete a degree**

Basing resource allocation **decisions on actual results**

Bringing alumni on campus to share their knowledge, experiences

Exhibit a culture of holistic thinking

Preparing students for a career, boosting problem solving and critical thinking

Transforming CRD into **innovation campus to promote collaboration**

Providing intellectual **experiences to develop hard and soft skills**

Unite teams around our common purposes

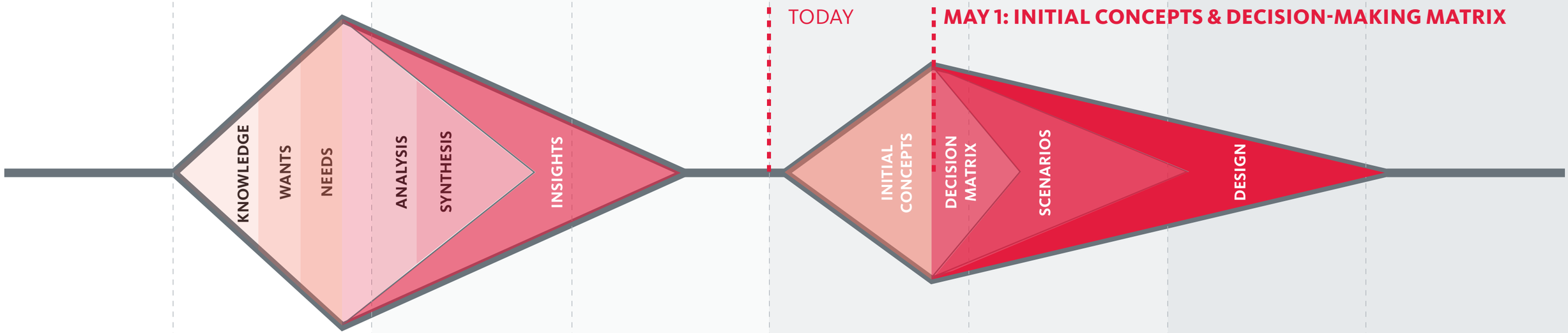
Incentivizing research and creative activities to promote learning, expand outreach

Supporting **innovative pedagogy and instruction**

Applying research & ideas into action and **linking theory and practice**

Next Steps

DISCOVER		ANALYZE		EXPLORE		RECOMMEND + DOCUMENT	
5 weeks		7 weeks		8 weeks		12 weeks	
KICK OFF & SETUP	PREP & RESEARCH	SYNTHESIS & ANALYSIS	PRINCIPLES & DIRECTIVES	CONCEPTS & MATRIX	SCENARIO BUILDING	FINAL DESIGN	COMPILATION



Align on project priorities and process	**Conduct immersive research**	**Synthesize and Analyze to gain insight**	**Define Principles to deliver on needs**	**Ideate and explore through concepting**	**Build scenarios to compare and contrast**	**Develop selected design for Master Plan**	**Document process and outcome**