



KEEN JOHN  
BUILDING

2016  
CAMPUS MASTER PLAN

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***EKU***







To Our University Community:

Eastern Kentucky University is in the midst of a campus-wide revitalization that will transform the way we learn, live and work together and even change the way others perceive us. It was once said of renowned architect Daniel Burnham that his greatest influence might not have been what he built, but what he imagined. He urged us all to make no little plans, to think big. And that's exactly what we are doing at EKU as we move forward with a bold and visionary campus renewal plan.

We have partnered with HEWV Architects P.S.C. to develop a comprehensive new Campus Master Plan and Space Utilization Program for the University and EKU Foundation properties, including EKU's main campus and regional campus sites in Corbin, Manchester, Danville, Lancaster, Hazard, Somerset. Together, the University and HEWV will guide the evolution and preservation of the University and Foundation property.

The development of this master plan has spanned nearly a full year and included input from the entire University community, as well as local leaders and alumni. We will utilize the master plan as a guide over the coming years and implement suggested plans as we can. Among the recommendations from HEWV are new traffic patterns throughout campus, additional parking and a much more pedestrian-friendly environment across EKU.

Plans continue to unfold for a variety of exciting projects that include new residence halls, a renovated student union and new recreation and wellness center, a new dining facility, the Carloftis Garden, a parking garage and athletic facility renovations and additions. The cost for these projects will be covered by an innovative combination of public-private partnerships, private dollars, a recently approved student fee and University funds.

Bearing in mind that Winston Churchill once said, "We shape our buildings; thereafter, they shape us," we are making no little plans for our University. A combination of factors suggests our time is now to take bold and visionary steps to ensure a brighter future for the University. Our destiny is in our hands, and it is truly an exciting time to be a Colonel!

Yours sincerely,

Michael T. Benson  
President

# acknowledgements

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Utilization and Space Needs Analysis







# 1

## EXECUTIVE SUMMARY

The Campus Master Plan seeks to support the University's Strategic Plan, *Make No Little Plans, A Vision for 2020*, by enabling Eastern Kentucky University's physical resources to accommodate the goal to be a national model for learning and engagement, while embracing its responsibilities as a regionally engaged university. The plan will maximize existing campus infrastructure to accommodate growth, plan for sustainable systems to anticipate growth, steward the rich heritage of Eastern Kentucky, and celebrate the campus' unique sense of place.

## make no little plans: a vision for 2020

The strategic plan has six goals and 16 strategic initiatives:

### GOAL 1 ACADEMIC EXCELLENCE

We will achieve academic excellence through recruiting, retaining, and supporting innovative faculty and through continuous assessment and strengthening of academic programs.

### GOAL 2 COMMITMENT TO STUDENT SUCCESS

We will demonstrate our commitment to the success of our students through innovative engagement efforts that begin before arrival and continue after graduation.

### GOAL 3 INSTITUTIONAL DISTINCTION

We will demonstrate our commitment to the advancement of our university by investing in the people, places, and programs that make us distinct.

### GOAL 4 FINANCIAL STRENGTH

We will operate from a position of financial strength by becoming as efficient as possible in our spending and maximizing resource generation.

### GOAL 5 CAMPUS REVITALIZATION

We will revitalize the Campus Beautiful by being relentless in our efforts to secure an investment in student-centric facilities.

### GOAL 6 SERVICE TO COMMUNITIES AND REGION

We will demonstrate our commitment to our communities and Region by actively seeking out those strategic opportunities that will provide direct benefits to the people of Eastern Kentucky.

The 16 strategic initiatives and related strategies define the primary goals, outline ECU's work for the next five years, and ensure ECU achieves the primary goals:

- Invest in ECU Faculty
- Promote Innovative Instruction and Programming
- Strengthen Academic Programs
- Invest in ECU Students
- Focus on Strategic Enrollment
- Increase Efforts to Retain an Graduate Students
- Invest in ECU Staff
- Advance the ECU Brand
- Create a Dynamic, Diverse, and Inclusive University Culture
- Optimize Campus Resources
- Increase External Support
- Initiate and complete ECU Revitalization plan, which includes rehabilitation of existing facilities and construction of new ones with a focus on the ECU student experience
- Become the 1st Choice Partner in Regional Education, Economic, Cultural, and Social Development
- Become Nationally Prominent in Fields with Regional Relevance
- Bring ECU to Our Service Region
- Bring Our Service Region to ECU





The Master Planning Team led a series of data collection meetings early in the Observation Phase of the master planning process. Broad knowledge of the campus organization, facilities, and needs was gathered from the Master Planning Committee and the President's Executive Council. In order to establish planning priorities to support the strategic plan and foster communication between the Master Planning Team and the University Community, ECU additionally established several focus groups to provide insight on key areas of the master plan. These groups provided input on the following topics:

- Student Life Experience
- Parking and Transportation
- Sustainability
- Technology on Campus
- Safety and Security
- Campus Dining
- Teaching Modalities

Discussions with these focus groups, and input from the broader University and Richmond communities, resulted in a list of goals to guide the design process of the Master Plan.



## master plan goals

- 1 ENABLE STRATEGIC PLAN**  
Support and enable the President's Strategic Plan. Create a roadmap for physical development that will attract top tier students to an enhanced college environment.
- 2 STUDENT SUCCESS**  
Increase retention by strengthening the residential campus experience.
- 3 PEDESTRIAN EXPERIENCE**  
Create a vibrant, highly connected and walkable campus. Encourage student engagement through campus conveniences and interactive learning environments.
- 4 SUSTAINABLE PRACTICES**  
Create an environment of social and physical sustainability through best practices. Plan for efficient and sustainable infrastructure that anticipates growth.
- 5 RESPONSIBLE LAND USE**  
Plan for highest and best land use that includes a development plan for 400-acre south campus and for property acquisition.
- 6 SPACE UTILIZATION**  
Maximize the value of existing facilities through space utilization, budgeting, and allocation of space as a core resource.
- 7 MULTI-MODAL ACCESS**  
Plan for multi-modal access and efficient parking. Enhance connections with the City of Richmond.
- 8 FINANCIAL HEALTH**  
Create an organized plan for implementation and funding. Encourage public-private partnerships for housing, recreation, athletics, and health.

## process overview

Data collection and research for the Master Plan commenced in the spring of 2015. Over the following year, the planning team developed multiple iterations of analysis and options informed by input from the Master Plan Committee, Executive Committee, and broader university community. Progress updates were presented to the Master Planning Committee and the President's Executive Council. The Board of Trustees gave final approval in June of 2016.



In addition to over sixty meetings and on-campus workshops to gather input on EKU's current status and future needs, the planning team conducted an online student survey and open forums on campus. The workshops included sessions with campus committees, focus groups, leadership, faculty, and staff. This input was combined with site analysis, observation of existing conditions and facilities, input from the Facilities Staff regarding existing utilities and infrastructure, and a space utilization analysis.

The Utilization and Space Needs Analysis can be found in its entirety in Appendix A of this document. In summary, to support enrollment growth to 20,000 students, the analysis identified an additional need of 410,800 ASF, with the greatest future needs in Health Sciences, Student Life, and Residential Life space. The University is projected to have adequate office and classroom space to support the targeted enrollment growth. In addition, numerous buildings are to be for consideration to be demolished.

The aforementioned data collected resulted in a set of findings to guide the development of the Master Plan.



## land use plan

### LONG-TERM VISION

The Land Use Plan provides a comprehensive vision to meet long-term goals for the growth of the campus. While a master plan typically provides for the needs of a campus within a ten-year horizon, the Land Use Plan (Figure 1.1) and Illustrative Plan (Figure 1.2) diagrams provide a broad framework for the campus to guide development and growth beyond the specific program needs identified. Key points of the land use diagram include:

- Programmatic zones are organized around a student-life core centralized in the north campus and around reinforced pedestrian circulation paths and nodes.
- Parking shifts to the periphery of main campus to maximize open space, valuable building sites, and the pedestrian experience in the core campus.
- Academic growth is focused in three primary areas, Health Sciences, College of Education, and activating edge along the Ravine.
- Growth of residential space in the north part of campus strengthens residential communities and proximity to the campus core and downtown Richmond.
- Sustainable development of the south campus to support residential parking, maintain a land bank for future growth, and preserve and enhance riparian areas along watershed corridors.



Figure 1.1, Long-Term Land Use Plan



## illustrative plan

The Illustrative Plan shown in Figure 1.2 provides an overview of the future EKU campus. Key strategies of the plan include:

- (A) Reinforcing the area around Powell Hall and Powell Plaza as the heart of campus by:
  - Positioning the new recreation center on the current site of Todd and Dupree Halls.
  - Transitioning Park Drive to a pedestrian oriented transit mall
  - Adding a new dining hall to the north edge of Powell Plaza
  - Renovating Powell Union and Weaver to preserve and utilize existing infrastructure and activate the new quad space south of the library.
  - Enhancing pedestrian circulation connecting this zone to perimeter parking areas and bolstering commuter and F/S parking supply with two new parking structures.
- (B) Transforming existing inefficient parking around Clay Hall into a premier residential community. The new development will complement existing residence halls and will be anchored with a new dining facility at the south end on the current site of Case Hall.
- (C) Creating a new iconic campus threshold at the Lancaster/Bypass corner with a new College of Education/Model Lab School with parking deck, and adding a pedestrian bridge to south campus.
- (D) Continuing to develop the northeast quadrant of north campus as a residential neighborhood for students.
- (E) Removing vehicular traffic from University Avenue during the day to enhance student access to The Ravine.
- (F) Accommodating growth of Health Sciences on sites adjacent to the Disney Building.

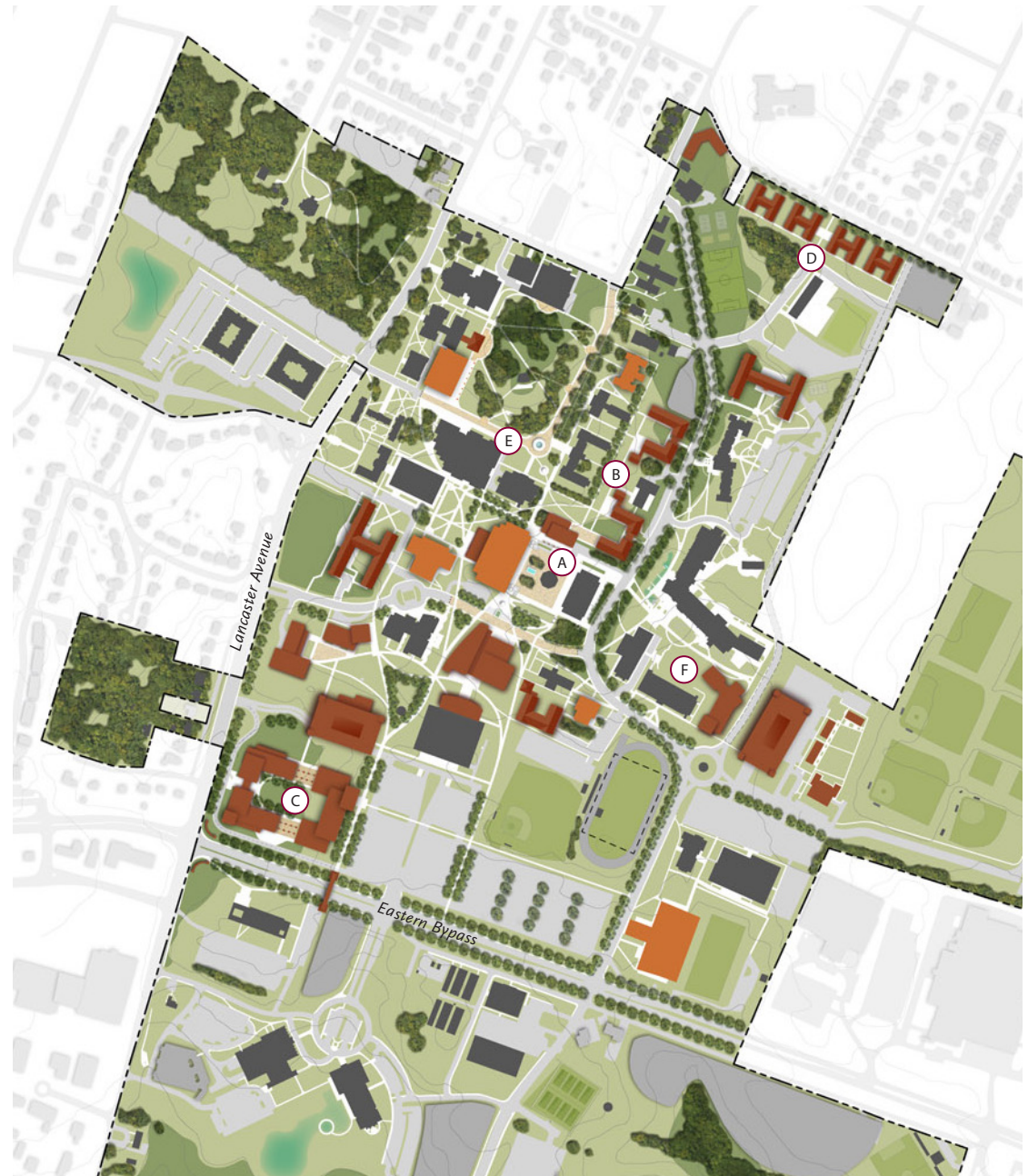



Figure 1.2, Long-Term Illustrative

- New Construction
- Renovation

Scale: 1"=800'-0" 



### WALKABLE CAMPUS

The main vehicular approach to campus is at the intersection of Lancaster Avenue and the Eastern Bypass. A new Model Laboratory School and College of Education complex will provide a sense of arrival and highlight the University's unique educational program. A new pedestrian bridge ties into the major pedestrian framework of the core of campus and provides a safe route for pedestrians traveling between north and south campus. Additionally, the pedestrian bridge provides an opportunity to reinforce the EKU brand.



Figure 1.3, Concept Rendering of Buildings Along Lancaster Avenue

A revitalized pedestrian network frames activity in the campus core. Green space and new building sites replace most of the residential parking in the core, as automobile storage is not the highest and best use of this precious real estate. Pedestrian paths on either side of Alumni Hall connect south campus parking to Powell Plaza, continue north to a new residential village adjacent to the Ravine, and follow along Second Street into downtown Richmond.

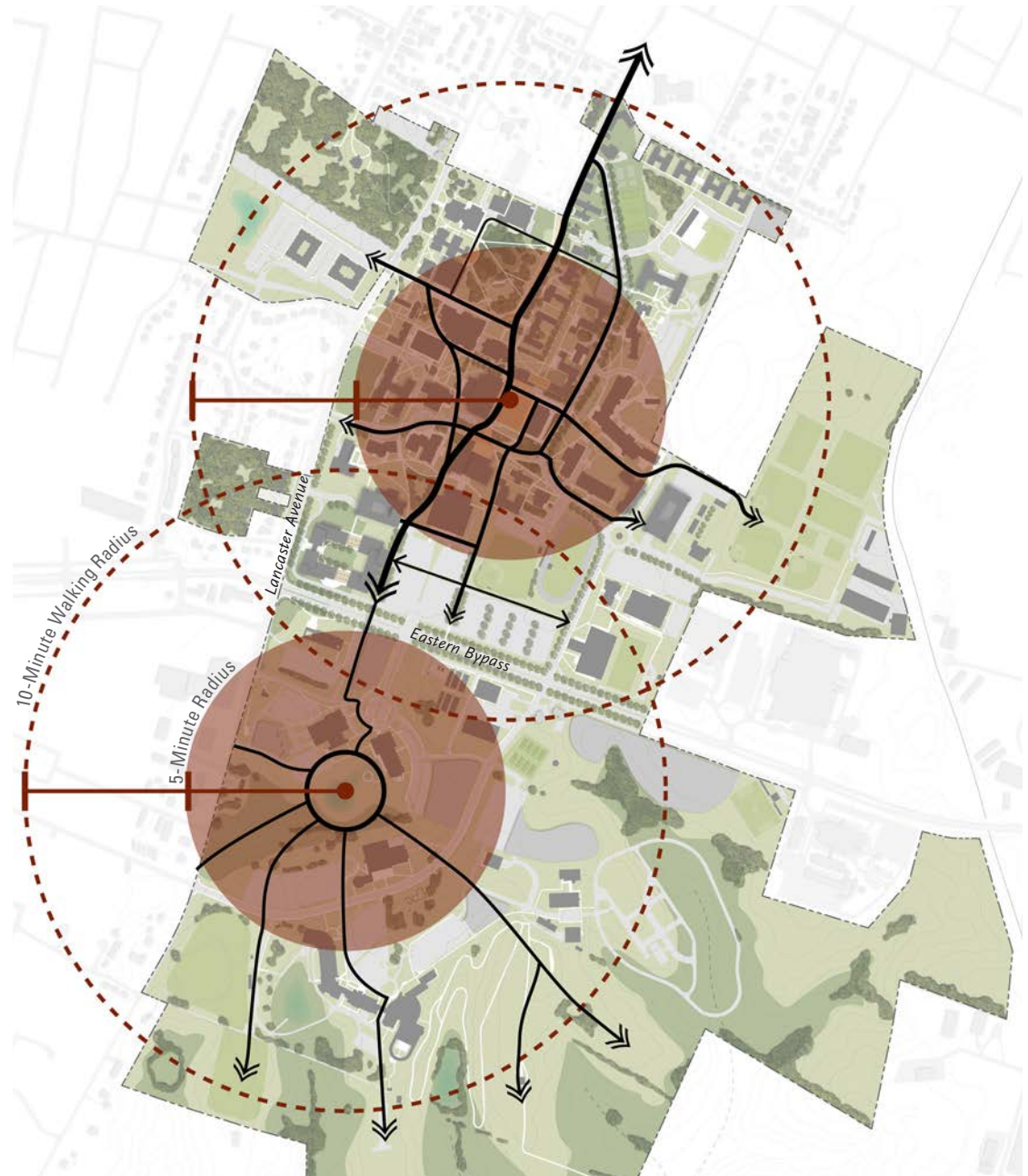



Figure 1.4, Open Space, Pedestrian Circulation, and Walking Circle

- Five-Minute Walking Circle
- Central Node
- ⋯ Ten-Minute Walking Circle
- Major Pedestrian Path

Scale: 1"=1200'-0" 



## key recommendations

### CENTER FOR STUDENT-LIFE

The campus core is re-structured around student-life functions. A renovated Powell Student Union provides leisure activities for on-campus residents, commuters, and meeting space for student groups. Powell Plaza bridges the space between the revamped student union, a new recreation center to the south (Figure 1.6), and a new dining facility to the north (Figure 1.5).



Figure 1.5, Concept Rendering of New Dining Facility and Outdoor Site Features

“If there were more social activities and eating options on the weekend a lot of people would stay more, including myself.”

—Student Survey Response



Figure 1.6, Concept Rendering of New Recreation Center and Pedestrian Path



**RESIDENTIAL COMMUNITIES**

Creating a home away from home for on-campus residents is vital to the social, academic, and financial health of the university. The three residential communities proposed are connected by new soccer, basketball, and sand-volleyball recreation fields.

The historic residence halls along University Drive will be reinforced by the addition of two new residence halls on either side of Clay Tower. This new residential quad is organized around a shared, green promenade and framed by a new dining center to the south.

Lower density, upper-class housing is provided at the northern edge of campus along Summit Street. These buildings complement the scale of the adjacent neighborhood, while providing a strong and cohesive university aesthetic to this end of campus.



Figure 1.7, Concept Rendering of New Residential Communities



Figure 1.8, Concept Rendering of New Health Sciences Building and Adjacent Parking Garage

**HEALTH SCIENCES**

The Utilization and Space Needs Analysis identified the greatest academic future space needs for the College of Health Sciences. A new building to the east of Rowlett and Dizney Buildings will meet the short-term space needs of the program while simultaneously framing a new green space in this campus zone. As the program grows, it is recommended that Rowlett and Dizney be demolished and replaced with higher density, state-of-the-art buildings. The replacement of Rowlett and Dizney is not foreseen within the ten year horizon.

A new, five-story parking garage will provide over 1,000 parking spaces for faculty and commuter students. This project can be achieved in phases.

- |   |   |   |
|---|---|---|
| <span style="color: red;">■</span> Academic/Support   | <span style="color: blue;">■</span> Dining      | <span style="color: green;">■</span> Athletics/Recreation |
| <span style="color: orange;">■</span> Key Renovations | <span style="color: yellow;">■</span> Mixed Use | <span style="color: teal;">■</span> Residential           |





Figure 1.9, Concept Sketch of University Drive toward Keen Johnson Building



Figure 1.10, Proposed Bike Paths and Bike-Share Stations

- Bike Route
- Proposed Bike-Share Station Location

### PARKING AND TRANSPORTATION IMPROVEMENTS

An improved pedestrian experience is essential to a positive student life experience on campus. The walkable scale of EKU’s campus creates an intimate atmosphere, and is a fundamental asset for students, faculty and staff. However, much of the core campus property is currently occupied by parking for residential

students, which is not the highest and best use of this land. In order to achieve the long term goals for the campus, these residential parking areas will be transitioned over time to future building sites or outdoor recreation space, while relocating residential parking to the south campus.



Figure 1.11, Proposed Campus Shuttle Route Diagram

- Shuttle Route
- Shuttle Stop
- Game Day Only Shuttle Stop

A reliable, convenient and safe transit system is fundamental to an integrated and pedestrian-friendly campus. An enhanced shuttle service will link north and south campus and facilitate the relocation of residential parking to south campus. This enhanced shuttle service will also decrease vehicular traffic within the campus, reduce daily vehicular trips, and allow for more efficient parking in the campus core, while improving service.



Figure 1.12, Parking Rezoning Diagram

- Commuter Parking
- Staff/Faculty Parking
- Commuter/Faculty Shared Parking
- Resident Parking

Existing houses along Summit Avenue will temporarily be replaced by surface parking lots. The Master Plan calls for these sites to be converted to medium density upper-class housing as funds become available.





ADMINISTRATION BUILDING

# 2

## UTILIZATION & SPACE NEEDS ANALYSIS

Space needs analysis for the purpose of master planning is a process that estimates space amounts likely to be needed by various units of an institution at current and projected enrollment, staffing, and activity levels.



## utilization and space needs summary

The utilization analysis assists in illustrating current patterns of use, while the space needs analysis assists in determining the amount and types of space needed at both the current time and at a future plan horizon.

### PROCESS

Initial information and data were requested on enrollment, courses, staffing, and facilities. The University provided current and projected enrollment levels, the Fall 2014 course file, a file listing the faculty and staff, a list of campus buildings, and a room-by-room facilities file.

Meetings were held on campus July 21 through 23, 2015, with the Vice Presidents and Deans to discuss specific needs of the individual colleges and major administrative divisions. A second visit to the campus on September 4, 2015, provided an opportunity to present results of the Utilization and Space Needs Analysis for review and comment.

### STRATEGIC PLANNING

The ECU Strategic Plan, *Make No Little Plans: A Vision for 2020*, identifies six Strategic Goals:

- Academic Excellence
- Commitment to Student Success
- Financial Strength
- Campus Revitalization
- Service to Communities and Region

These goals are used as the foundation of the analysis of campus facilities and the development of the Master Plan.



## **ANALYSIS AND PROJECTIONS**

The following describes the report's parameters for establishing space needs in the future.

- The Fall 2014 student headcount used for this analysis is 16,305 students. The breakdown is 13,949 undergraduate students and 2,356 graduate students.
- The Fall 2014 full-time equivalent (FTE) student enrollment used is 13,221 FTE.
- The enrollment projection used for this analysis is to reach an enrollment of 20,000 students in the next 10 years. The projected student FTE used is 16,200. While these projections may be ambitious, they are reasonable goals to use for master planning purposes.
- Planning is taking place for several new facilities on campus, as a result, built space on campus was increased for the future projections to take into account the new facilities planned - Science Building Phase 2, Ashland Building addition, repurposed and renovated space in Commonwealth Hall, the new Library Reading Porch, new student housing, and improvements to athletic facilities. These planned projects have been both approved and funded.
- The goal of the Master Plan is to provide direction and clarity for future campus development. It should be noted that this analysis has been performed at a master plan level in assignable square feet (ASF). This analysis has not been performed at a program level to provide numbers and types of rooms to meet the requirements of the projections. The space needs analysis findings should be viewed as tools and information for decision making and planning and not as entitlements to space for individual colleges or as a defined plan to correct unmet present and future space needs.
- All space in this analysis is projected in assignable square feet (ASF) which is defined as the usable space contained within classrooms, laboratories, offices, etc. It does not include circulation and building service space, nor does it include the thickness of walls or structural components like building columns.

## **KEY FINDINGS**

The data and information provided to Hanbury Evans was used to document the utilization of classrooms and class laboratories and to analyze the space currently needed on campus and at projected enrollment levels in the future.

### **CLASSROOM AND CLASS LABORATORY UTILIZATION**

Classrooms and class laboratories were studied to show the level of use. The factors illustrated in the utilization study included the average hours per week of scheduled instructional use for each room, the percentage of student stations (seats) filled when the rooms are scheduled, and the average hours of scheduled use for each student seat.



### Classroom Utilization

In the Fall 2014 term, the 217 classrooms analyzed for the campus averaged 25 hours of scheduled use per week with 56% of the student stations filled when classrooms were in use. The average weekly seat hours of utilization was 14.3 hours.

The Kentucky Council on Postsecondary Education (CPE) recommendation for classroom utilization is 36 hours per week with 67% student station occupancy. These two recommendations result in an expectation of 24 weekly seat hours.

Typical expectations for average weekly room hours is in the range of 30 to 35 hours per week. The expectation for weekly seat hours is around 20 to 24. A common expected average for the percentage of seats filled is 65 to 70%.

The average room hours per week of scheduled use for the Fall 2014 term at ECU is below the range that the consultant would expect to see and is below the Kentucky Council on Postsecondary Education recommendation, as is the average weekly seat hours. The classroom student station occupancy is also below what might be expected.

When the utilization findings were summarized by building, the three classrooms located in Moberly showed the highest average hours per week of scheduled use. The three classrooms in Moberly averaged 43 hours per week of use. At the low end of utilization findings are the five classrooms in the Carter Building, which averaged 13 hours per week of utilization.

When the utilization findings are summarized by college, the classrooms assigned to the College of Arts & Sciences showed the highest average hours per week of scheduled use. The 87 classrooms averaged 29 hours per week of use. At the lower end the one classroom assigned to Athletics averaged three hours per week of use.

Classroom utilization findings compiled by classroom capacity showed the 22 classrooms in the group with 45 to 50 student stations averaged 31 weekly room hours of use. The five classrooms with capacities of 100 to 150 student stations averaged the lowest weekly room hours (WRH) of use at 14 hours per week.

	<b>EKU Average Utilization</b>	CPE Standard	HEWV Professional Expectation
Average Weekly Seat Hours	14.3	24	22
Average Weekly Room Hours	25	36	33
Average Student Station Occupancy	56%	67%	67%

Note: Used middle of HEWV expected range

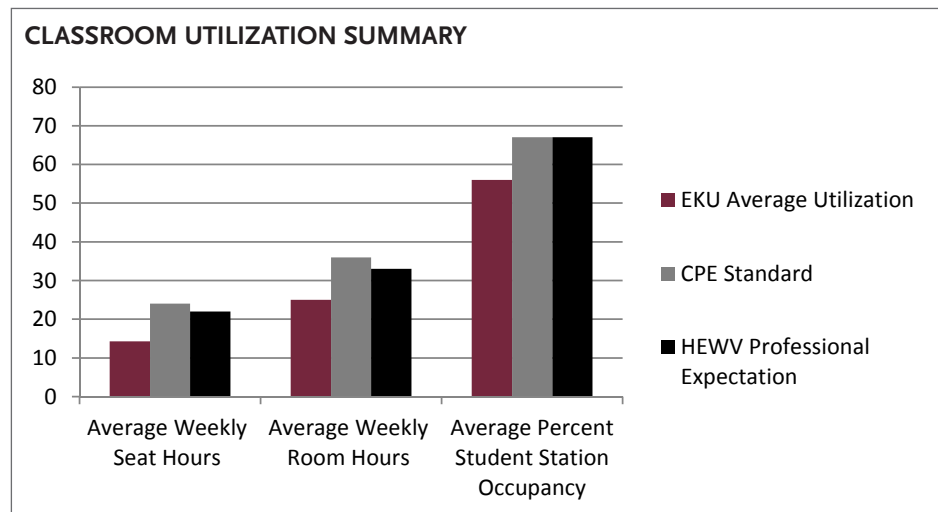


Figure 2.1, Classroom Utilization Summary

### Classroom Laboratory Utilization

The 98 class laboratories analyzed averaged 18 weekly room hours and 11.3 weekly seat hours of use. When laboratories were in use, the student station occupancy averaged 61%.

The Kentucky Council on Postsecondary Education recommendation for teaching or class laboratory utilization is 23 hours per week with 80% student station occupancy. These two recommendations result in an expectation of 18 weekly seat hours.

The expected average for weekly room hours is 20 to 24 hours per week of scheduled use with 70% to 80% of the student stations filled. The expectation for average seat hours is 14 to 20 weekly seat hours. The average room hours per week of scheduled use of class laboratories, the average percentage of student station occupancy, and the average weekly seat hours are all below the range that the consultant would expect to see and are below the Kentucky Council on Postsecondary Education recommended level of utilization.

	<b>EKU Average Utilization</b>	CPE Standard	HEWV Professional Expectation
Average Weekly Seat Hours	11.3	18	17
Average Weekly Room Hours	18	23	22
Average Student Station Occupancy	61%	80%	75%

Note: Used middle of HEWV expected range

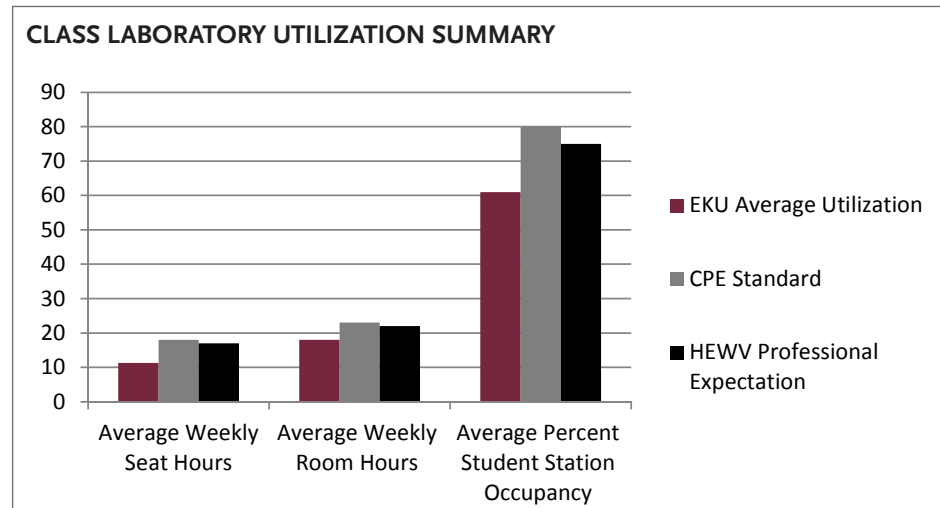


Figure 2.2, Class Laboratory Utilization Summary





### SPACE NEEDS ANALYSIS

The space needs analysis assists in determining the magnitude of space needed for the current level of campus enrollment and activity. The analysis also includes a projection of space needs for the future planning horizon. To calculate the space needs, the consultant applied recommendations from the Kentucky Council on Postsecondary Education, commonly used standards, experience with other state and system guidelines, and informal benchmarking of similar institutions.

The space needs analysis calculated the space requirements looking at the findings both for the campus as a whole and at a college level for each of the academic colleges and major administrative divisions. Results of the campus-wide space needs analysis showed the amount of space on campus to be in balance with the calculated guidelines using the Fall 2014 enrollment of 16,305 students.

## SPACE NEEDS ANALYSIS

Eastern Kentucky University

### Campuswide - Space Category

Space Use Category	2015				Future Horizon			
	Student Headcount = 16,305		Staff Headcount = 3,309		Student Headcount = 20,000		Staff Headcount = 3,834	
	Current ASF	Calculated Space Requirement	ASF Difference	Percent Difference	Future Built ASF	Calculated Future Space Requirement	ASF Difference	Percent Difference
Classrooms and Service	202,533	162,153	40,380	20%	209,935	203,003	6,932	3%
Class Laboratories and Service	199,709	178,568	21,141	11%	245,078	223,428	21,650	9%
Open Laboratories and Service	46,203	52,885	(6,682)	(14%)	46,203	64,800	(18,597)	(40%)
Research and Service	41,024	57,533	(16,509)	(40%)	56,307	70,500	(14,193)	(25%)
Office and Service	537,268	403,111	134,157	25%	576,122	460,759	115,363	20%
Study/Library	177,568	185,710	(8,142)	(5%)	178,628	225,220	(46,592)	(26%)
Physical Education	45,820	67,110	(21,290)	(46%)	45,820	82,060	(36,240)	(79%)
Recreation	58,237	85,290	(27,053)	(46%)	58,237	104,300	(46,063)	(79%)
Athletics	154,221	175,000	(20,779)	(13%)	160,596	200,000	(39,404)	(25%)
Special Use	56,847	66,100	(9,253)	(16%)	60,900	81,000	(20,100)	(33%)
Assembly & Exhibit	155,384	131,057	24,327	16%	162,481	148,932	13,549	8%
Student Center	99,516	118,990	(19,474)	(20%)	99,516	145,800	(46,284)	(47%)
General Use	38,753	39,660	(907)	(2%)	38,753	48,600	(9,847)	(25%)
Support	89,206	92,550	(3,344)	(4%)	89,206	113,400	(24,194)	(27%)
Health Care	9,725	13,210	(3,485)	(36%)	9,725	16,200	(6,475)	(67%)
Residential Facilities	982,999	1,087,321	(104,322)	(11%)	1,216,999	1,477,321	(260,322)	(21%)
<b>TOTAL</b>	<b>2,895,013</b>	<b>2,916,248</b>	<b>(21,235)</b>	<b>(1%)</b>	<b>3,254,506</b>	<b>3,665,323</b>	<b>(410,817)</b>	<b>(13%)</b>
Inactive	73,633				51,533			
Model Laboratory School	85,835				85,835			
Meadowbrook Farm	99,073				99,073			
Regional Campuses	69,017				71,978			
Training Resource Center	70,425				70,425			
Dept. of Criminal Justice Training	145,758				145,758			
Arlington Association	25,758				25,758			
<b>TOTAL</b>	<b>3,464,512</b>				<b>3,804,866</b>			

Figure 2.3, Space Needs by Space Category



The space category with the greatest space need at the current time is Residential Facilities space. The Research and Service as well as Physical Education, Recreation, and Athletics categories also show a significant need for additional space, as does the Student Center category. Categories of space that are shown to have sufficient space include Classrooms, Class Laboratories, and Office spaces.

Findings from the analysis using future enrollment levels show a campus-wide need for over 400,000 ASF when enrollment reaches 20,000 students. Over 250,000 ASF of the calculated future year space need is in the Residential Facilities category. The Physical Education, Athletics, Recreation, Student Center, and Library space categories show significant need for additional space in the future. The Research and Service space category also shows a projected future need.

The inactive space and the space assigned to the Arlington Association, Model Laboratory School, Meadowbrook Farm, Training Resource Center, Department of Criminal Justice Training, and Regional Campuses have been shown at the bottom of the space needs analysis table. These spaces have not been calculated in the overall campus space needs analysis.



In addition to showing the findings by space category, the space needs analysis was summarized for each of the academic colleges and major administrative divisions.

The results of the current space needs analysis show the units under Student Success/Student Life and the College of Health Sciences have the greatest need for space at the current year. The space need for Student Success/Student Life reflects the need for Residential Facilities space.

The projected space needs analysis shows the units under Student Success/Student Life and the College of Health Sciences continue to have space needs. The other colleges or divisions that have significant projected space needs are Finance and Administration and Athletics.

The summary of space needs for each of the colleges shows a space total without classroom space. The space guidelines generated by the courses are applied to courses in the college that offers the course, while the space may be summarized under a different college. Even when classes are held in classrooms assigned to the individual colleges, the courses do not necessarily match the classroom space assigned to the college. Therefore, for a master plan analysis, classroom space is best viewed on a campus-wide basis rather than at the college level. This is particularly true of campuses that would like to move toward centralized scheduling and shared classrooms in order to gain higher utilization levels.

## SPACE NEEDS ANALYSIS

Eastern Kentucky University

### Campuswide - Colleges and Administrative Divisions

School/College/Administrative Unit	2015				Future Horizon			
	Student Headcount = 16,305		Staff Headcount = 3,309		Student Headcount = 20,000		Staff Headcount = 3,834	
	Current ASF	Calculated Space Requirement	ASF Difference	Percent Difference	Future Built ASF	Calculated Future Space Requirement	ASF Difference	Percent Difference
Classrooms & Service	202,533	162,153	40,380	20%	209,935	203,003	6,932	3%
College of Arts & Sciences	324,184	253,676	70,508	22%	406,632	310,847	95,785	24%
College of Business & Technology	153,730	116,900	36,830	24%	153,730	142,555	11,175	7%
College of Education	39,221	36,175	3,046	8%	39,221	42,561	(3,340)	(9%)
College of Health Sciences	116,311	198,175	(81,864)	(70%)	116,311	240,093	(123,782)	(106%)
College of Justice & Safety	97,903	89,978	7,925	8%	104,011	109,089	(5,078)	(5%)
Graduate School	8,311	6,504	1,807	22%	8,311	7,213	1,098	13%
University Programs	13,496	14,239	(743)	(6%)	13,496	15,749	(2,253)	(17%)
Honors Program	1,685	1,280	405	24%	1,685	1,513	172	10%
Libraries & Information Technology	216,779	207,554	9,225	4%	217,839	250,302	(32,463)	(15%)
Regional Campuses & Continuing Education	75,846	60,746	15,100	20%	75,846	72,570	3,276	4%
Athletics	171,530	191,325	(19,795)	(12%)	177,905	217,827	(39,922)	(22%)
Office of the President	78,077	60,796	17,281	22%	78,077	61,395	16,682	21%
Academic Affairs	14,984	9,650	5,334	36%	26,034	11,351	14,683	56%
Student Success/Student Life	1,043,814	1,161,750	(117,936)	(11%)	1,277,814	1,586,334	(308,520)	(24%)
Finance & Administration	326,167	334,548	(8,381)	(3%)	337,217	380,931	(43,714)	(13%)
Development & Alumni Relations	10,442	10,799	(357)	(3%)	10,442	11,990	(1,548)	(15%)
<b>TOTAL</b>	<b>2,895,013</b>	<b>2,916,248</b>	<b>(21,235)</b>	<b>(1%)</b>	<b>3,254,506</b>	<b>3,665,323</b>	<b>(410,817)</b>	<b>(13%)</b>

Figure 2.4, Space Needs by Colleges and Administrative Divisions







# 3

## THE MASTER PLAN

The Master Plan proposes new construction to meet 2025 enrollment projections and renovation actions to comprehensively address space quality and programmatic organization. Each proposed building element is sited to extend and enhance the campus network of open spaces and accommodate existing and future program functions.



## goals & principles

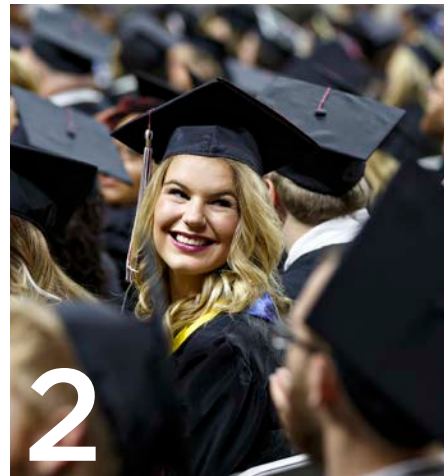
The Master Planning Team lead a series of data collection meetings early in the observation phase of the master planning process. Broad knowledge of the campus organization, facilities, and needs was gathered from the Master Planning Committee and the President's Executive Council. In order to establish planning priorities to support the strategic plan and foster communication between the Master Planning Team and the University Community, ECU additionally established several focus groups to provide insight on key areas of the plan. Discussions with these focus groups, and input from the broader University and Richmond communities, resulted in a list of goals to guide the design process of the Master Plan.

The following goals were established for the Campus Master Plan. They are in close alignment with the goals of the strategic plan.



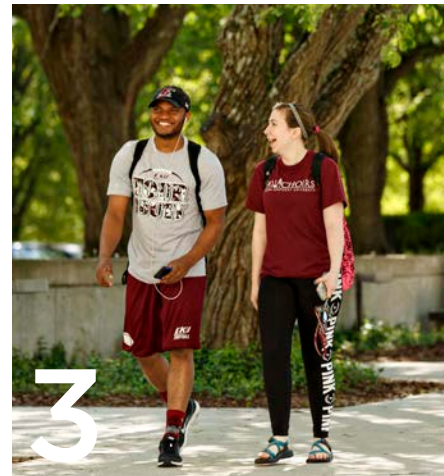
### ENABLE STRATEGIC PLAN

Support and enable the President's Strategic Plan. Create a roadmap for physical development that will attract top tier students to an enhanced college environment.



### STUDENT SUCCESS

Increase retention by strengthening the residential campus experience.



### PEDESTRIAN EXPERIENCE

Create a vibrant, highly connected and walkable campus. Encourage student engagement through campus conveniences and interactive learning environments.



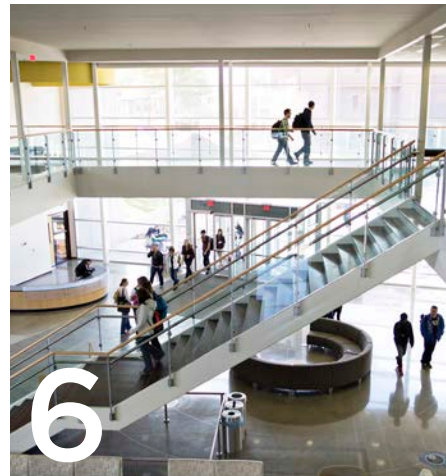
### SUSTAINABLE PRACTICES

Create an environment of social and physical sustainability through best practices. Plan for efficient and sustainable infrastructure that anticipates growth.



### **RESPONSIBLE LAND USE**

Plan for highest and best land use that includes a development plan for 400-acre south campus and property acquisition.



### **SPACE UTILIZATION**

Maximize the value of existing facilities through space utilization, budgeting, and allocation of space as a core resource.



### **MULTI-MODAL ACCESS**

Plan for multi-modal access and efficient parking. Enhance connections with the City of Richmond.



### **FINANCIAL HEALTH**

Create an organized plan for implementation and funding. Encourage public-private partnerships for housing, recreation, athletics, and health.



## process

Data collection and research for the Master Plan commenced in the spring of 2015. Over the following year, the planning team developed multiple iterations of analysis and options informed by input from the Master Plan Committee, Executive Committee, and broader university community. Progress updates were presented to the Master Planning Committee and the President's Executive Council. The Board of Trustees gave final approval in June of 2016.

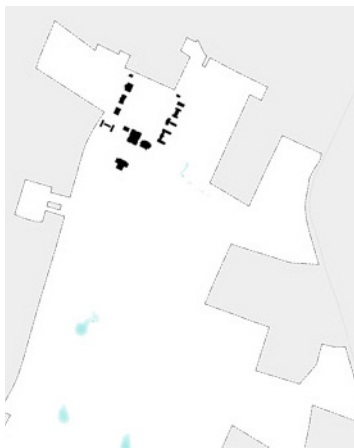
In addition to over sixty meetings and on-campus workshops to gather input and feedback on EKV's current status and future needs, the planning team conducted an online student survey. The workshops included sessions with campus committees, focus groups, leadership, faculty, and staff. This input was combined with site analysis, observation of existing conditions and facilities, input from the Facilities Staff regarding existing utilities and infrastructure, and a space utilization analysis.



1926 Olmstead Plan



1961 Campus Aerial, The Ravine



1949 and Earlier



1950-1969



1970-1989



1990-2009



2010-Present Day

The Utilization and Space Needs Analysis can be found in its entirety in Appendix A of this document. In summary, to support enrollment growth to 20,000 students, the analysis identified an additional need of 410,800 ASF, with the greatest future needs in Health Sciences, Student Life, and Residential Life space. The University is projected to have adequate office and classroom space to support the targeted enrollment growth. Numerous buildings are proposed for consideration to be demolished.

The master planning team conducted an online survey to assess what issues were most important to students. When asked how students use a car on campus, the majority of answers included grocery shopping, retail shopping, dining out, and social events. Students also expressed a desire to have more dining options and social events on campus. As the University expands and strengthens student life programs on campus, students will hopefully have their needs met within walking distance of their classrooms or residences, and not need to use their cars to travel off campus for amenities.



Future Growth





## planning drivers

As a result of the input from data collection process and analysis from the planning team, several themes emerged as drivers for the master plan to address:

Campus growth has moved well beyond the original master plan diagram which organized buildings around The Ravine. Moreover, development in recent decades has eroded the sense of a cohesive campus. The master plan should endeavor to address key questions such as: What is the next comprehensive diagram that organizes growth for the next 50 years? How can the plan better integrate The Ravine with the daily activities of students?

Concurrent with the master planning process, EKU is pursuing proposals from developer teams to replace a significant number of existing residence halls. These project represents an opportunity to transform the core campus in a relatively short time frame. How can the master plan maximize this opportunity and create a Center for Student Life in the campus core? This opportunity should be properly leveraged to increase student engagement along with additional projects proposed by the Master Plan.

Existing facilities and infrastructure require investment. How can the plan maximize the potential use of these resources while accommodating growth?

The scale of the main campus is very walkable, but the campus environment is ruled by the automobile. In the near future, there will be increased pressure to better utilize this space for buildings or campus open space. This is particularly true of the campus core. Car storage for residential students is not maximizing the opportunity of this land. There is a need for additional parking to service the northwest and core area of campus. How can the master plan foster a transition from a vehicular-centered campus culture to a pedestrian-centered culture?

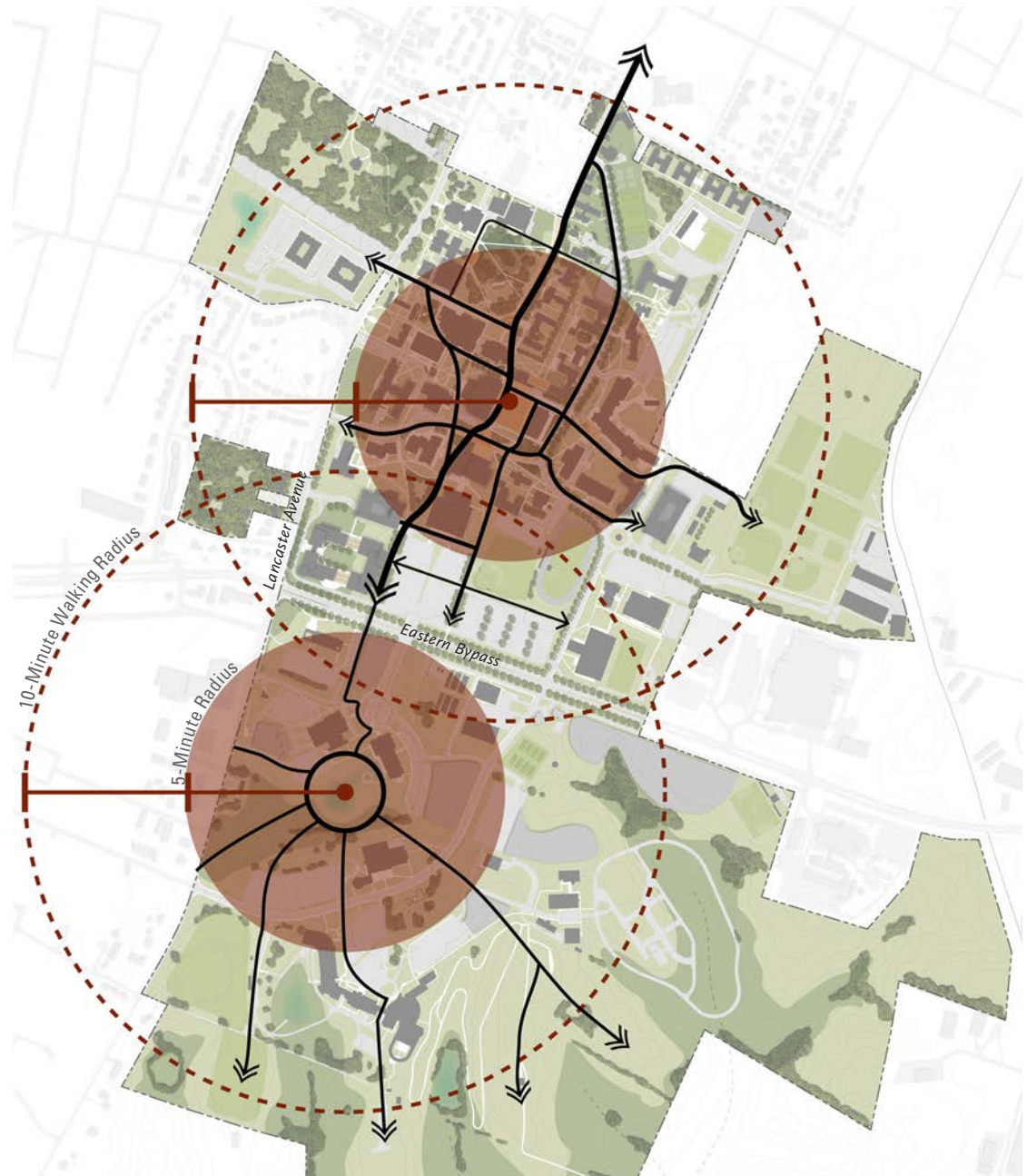


Figure 3.1, Open Space, Pedestrian Circulation, and Walking Circle

- Five-Minute Walking Circle
- Ten-Minute Walking Circle
- Central Node
- Major Pedestrian Path

Scale: 1"=1200'-0"

## plan overview

The preferred 10-year land use scheme focuses new academic development in the existing academic core to maximize the use of existing infrastructure, enhance programmatic adjacencies, and promote a pedestrian oriented core. The land use scheme also proposes focused and opportunistic development of the land around Powell Plaza and along Park Drive to create a unique and vibrant social core. Another key feature of the land use scheme is the strategic relocation of resident parking to south campus. Key points of the land use diagram include:

- Programmatic zones are organized around a student-life core centralized in the north campus and around reinforced pedestrian circulation paths and nodes.
- Parking shifts to the periphery of main campus to maximize open space, valuable building sites, and the pedestrian experience in the core campus.
- Academic growth is focused in three primary areas, Health Sciences, College of Education, and around the Ravine.
- Growth of residential space in the north part of campus strengthens residential communities and proximity to the campus core and downtown Richmond.
- Sustainable development of the south campus to support residential parking, maintain a land bank for future growth, and preserve and enhance riparian areas along watershed corridors.





## program accommodation plan

### PLAN SUMMARY

The Plan is intended to guide physical growth in a way that reinforces the existing campus structure, while invigorating its sense of community. It provides direction for future development to further enhance a functional and beautiful campus, reflecting the spirit and mission of EKU.

Note: The numbers shown on the adjacent plan correlate with the numbers and projects listed on the facing page.

- |   |   |   |
|---|---|---|
| <span style="color: red;">■</span> Academic/Support | <span style="color: blue;">■</span> Dining      | <span style="color: green;">■</span> Athletics/Recreation |
| <span style="color: red;">■</span> Key Renovations  | <span style="color: yellow;">■</span> Mixed Use | <span style="color: teal;">■</span> Residential           |

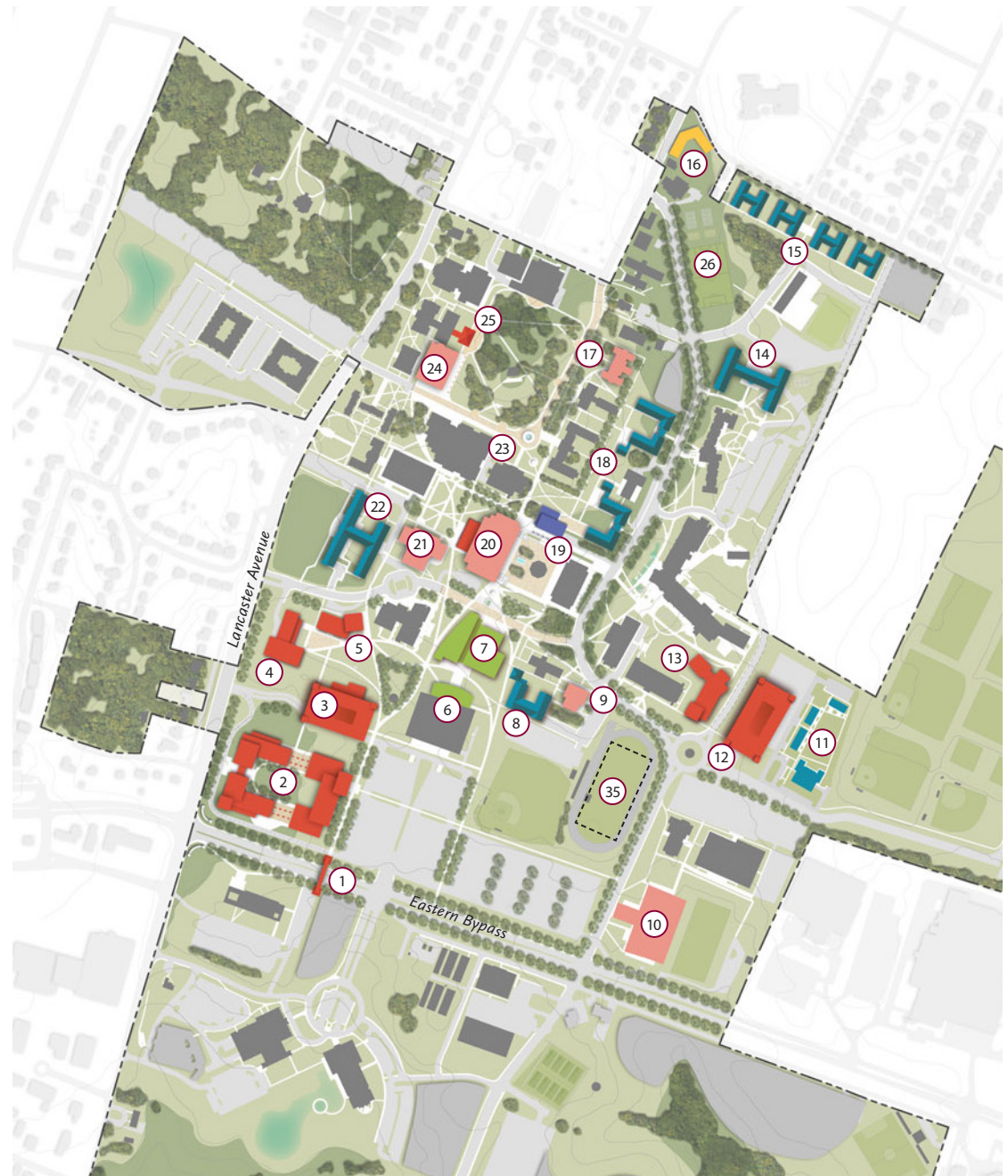


Figure 3.3, Program Accommodation Plan



## program accommodation details

	PROGRAM	# OF FLOORS	TOTAL GSF	RENOVATION GSF
①	Pedestrian Bridge	N/A		
②	Model Lab School and College of Education Center	3 & 3.5	320,000	
③	Parking Garage, 900-Car	5	270,000	
④	Academic Building, Ault and Gibson Buildings Replacement	4	112,000	
⑤	Welcome and Alumni Center	2*	36,000	
⑥	Athletic Learning Commons, Addition to Alumni Coliseum	1	13,500	
⑦	Recreation and Fitness Center	2.5 & 3**	150,000	
⑧	Residential Hall, +/- 250 Beds	4	82,800	
⑨	Commonwealth Hall Renovation	10**		TBD
⑩	Begley Building Renovation	TBD**	TBD	
⑪	Scholar House and Childcare Center, 39, 2-Bedroom Units	2**		
⑫	Parking Garage and Traffic Circle, 1,080-Car in Two Phase Project	5	324,000	
⑬	Academic Building, Health Sciences	4	123,600	
⑭	Residential Hall, 600 Beds	6**	45,000	
⑮	Residential Apartments, Upperclass Housing, +/- 400 Beds	3	163,000	
⑯	Mixed-Use Facility, Retail and +/- 100 Beds	3	39,500	
⑰	Academic Building, Fitzpatrick Interior Renovation			TBD
⑱	Residential Quad Halls 1 & 2, 500 Beds Total	4	174,000	
⑲	Dining Facility and Partial Plaza Renovation	3**	60,000	
⑳	Powell Student Union Renovation and Addition	ALL**	16,000	147,000
㉑	Weaver Building Renovation, Health Sciences	ALL		110,000
㉒	Residential Hall, 600 Beds	6**	268,000	
㉓	University Avenue, Traffic Circle and Streetscaping	N/A		
㉔	Moore Building Renovation	ALL**		130,000
㉕	Faculty-Student Commons Pavilion	1.5	6,000	
㉖	New Recreation Fields			
㉗	Potential Location for Future Health Sciences/Hospital Complex			

ACADEMIC GSF: **1,283,000**  
 STUDENT LIFE GSF: **1,145,300**  
 NET NEW BEDS: **1,205**  
 ADDED PARKING SPACES: **1,665**

\* Buildings are likely to have multi-story spaces as the program is refined.

\*\* Note: These projects were commenced or in consideration by the University during the master planning process.




## implementation plan

The order in which projects are pursued will vary as issues and access to funding arise, but the diagram below illustrates a general road map to implement the proposed projects and move toward achieving the overarching goals of the master plan.



Figure 3.4, Implementation Diagram

Scale: 1"=800' 

**PROPOSED DEMOLITION (10-YEAR):**

Barnes and Noble Bookstore	5,440 GSF
Burrier Building	58,000 GSF
Ault Building	34,500 GSF
Gibson Building	28,000 GSF
Case Hall and Annex	133,200 GSF
McGregor Hall	104,300 GSF
Martin Hall	98,700 GSF
Todd Hall	70,300 GSF
Dupree Hall	76,200 GSF
Mattox Hall	39,400 GSF
Model Laboratory School	90,200 GSF
Brockton Apartments	62,000 GSF

- Buildings to be Considered for Demolition
- Buildings to be Demolished and Replaced over Long-Term

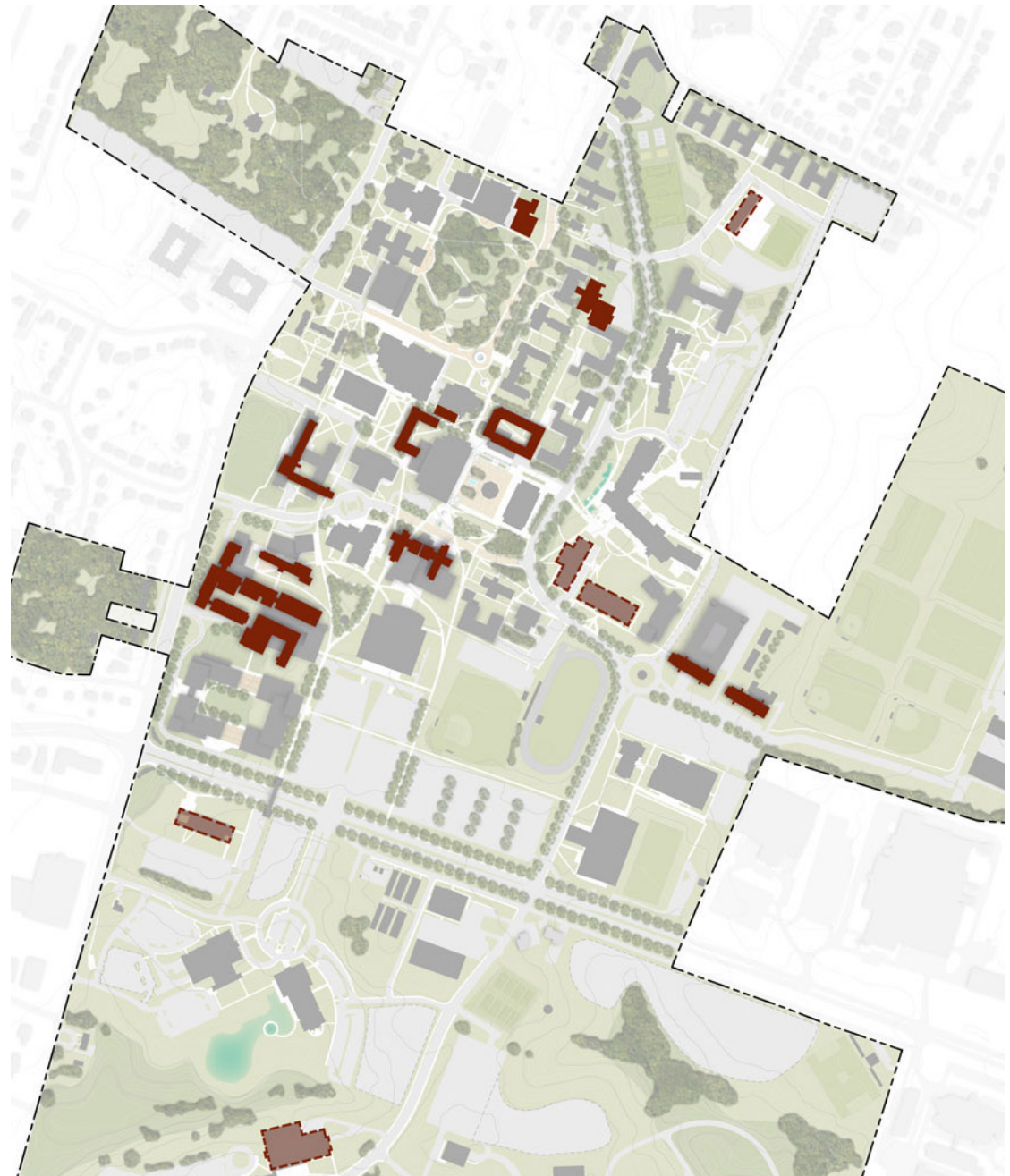


Figure 3.5, Proposed Building Demolition

Scale: 1"=800'



## MAIN CAMPUS NORTH OVERVIEW

The core campus will be reinvigorated with renovations to several existing buildings, convert surface parking to recreation fields and green space, and new construction that reinforces the walkability and the social nature of the campus.



- |   |   |   |
|---|---|---|
| <span style="color: red;">■</span> Academic/Support   | <span style="color: blue;">■</span> Dining      | <span style="color: green;">■</span> Athletics/Recreation |
| <span style="color: orange;">■</span> Key Renovations | <span style="color: yellow;">■</span> Mixed Use | <span style="color: teal;">■</span> Residential           |

Scale: 1"=800'-0"

## MAIN CAMPUS NORTH PROJECTS

②② ①④ ①⑤ ①⑥ ①⑧ New residence halls provide updated amenities for growing enrollment of on-campus residents.

②① The historic Weaver Building is renovated to provide space for growing Health Sciences program. Accessibility is addressed with renovations.

②① A renovation of and addition to Powell Student Union allows for accessible circulation through and around the building, and provides student life activity space for campus residents and commuters.

①⑨ A new dining facility activates the north edge of Powell Plaza and serves as a visual anchor for a new residential village to the north. The dining facility is a critical component of the Center for Student Life initiative.

②③ University Drive becomes pedestrian friendly through measures including transit-only traffic during the day, resurfacing of road to aesthetically enhanced pavers, a new traffic circle, and new social node plaza areas along the Ravine edge.

②④ Moore Hall is renovated for general classroom and office space. Transparency between the building's interior and exterior is architecturally enhanced, especially along the east side facing the Ravine.

②⑤ Views into the Ravine are best seen from a new Faculty-Student Commons Pavilion. The pathway along the western edge of the Ravine is enhanced.

17 The historic Fitzpatrick Building is renovated to provide state-of-the-art classroom and lab space for College of Arts and Sciences. The adjacent Ault and Gibson Buildings have several accessibility and maintenance issues and are recommended to be taken offline in the long term.

13 A new, four-story academic building addresses space needs for the College of Health Sciences and frames a new green space for the east campus academic zone.

12 A traffic circle at the intersection of Kit Carson Drive, Van Hoose Drive, and Roy and Sue Kidd Way will improve traffic flow and access to a five-story, 1,080-space parking deck. As opposed to surface parking, a deck better utilizes valuable space adjacent to the academic core.

11 A new residential community designed specifically for single parents pursuing a college degree will benefit from adjacency to the academic core without being in a high-traffic area of campus.

26 New recreation fields provide communal gathering spaces for residential communities. The removal of parking in this area reduces impervious surface and enhances the pedestrian experience.



Figure 3.6, Rendering of New Center for Student Life



- Academic/Support
- Key Renovations
- Dining
- Mixed Use
- Athletics/Recreation
- Residential

Figure 3.7, Rendering of University Drive and the Ravine



### CENTER FOR STUDENT-LIFE

The campus core is re-structured around student-life functions. A renovated Powell Student Union provides recreational activities for on-campus residents, commuters, and meeting space for student groups. Powell Plaza bridges the space between the revamped student union, a new recreation center to the south (Figure 3.9), and a new dining facility to the north (Figure 3.8).



Figure 3.8, Concept Rendering of New Dining Facility and Outdoor Site Features



Figure 3.9, Concept Rendering of New Recreation Center and Pedestrian Path



## RESIDENTIAL COMMUNITIES

Creating a home away from home for on-campus residents is vital to the social, academic, and financial health of the university. The three residential communities proposed are connected by new soccer, basketball, and sand-volleyball recreation fields.

The historic residence halls along University Drive will be reinforced by the addition of two new residence halls on either side of Clay Tower. This new residential quad is organized around a shared, green promenade and framed by a new dining center to the south.

Lower density, upper-class housing is provided at the northern edge of campus along Summit Street. These buildings complement the scale of the adjacent neighborhood, while providing a strong and cohesive university aesthetic to this end of campus.



Figure 3.10, Concept Rendering of New Residential Communities



Figure 3.11, Concept Rendering of New Health Sciences Building and Adjacent Parking Garage

## HEALTH SCIENCES

The Utilization and Space Needs Analysis identified the greatest academic future space needs for the College of Health Sciences. A new building to the east of Rowlett and Dizney Buildings will meet the short-term space needs of the program while simultaneously framing a new green space in this campus zone. As the program grows, it is recommended that Rowlett and Dizney be demolished and replaced with higher density, state-of-the-art buildings.

A new, five-story parking garage will provide over 1,000 parking spaces for faculty and commuter students. This project can be achieved in phases.

- |   |   |   |
|---|---|---|
| <span style="color: red;">■</span> Academic/Support   | <span style="color: blue;">■</span> Dining      | <span style="color: green;">■</span> Athletics/Recreation |
| <span style="color: orange;">■</span> Key Renovations | <span style="color: yellow;">■</span> Mixed Use | <span style="color: teal;">■</span> Residential           |



## SMALL MOVES, BIG IMPACT

Before the design and construction of new buildings and repurposing projects outlined in the master plan, some less expensive preliminary work can be performed that will pave the way for the future implementation of buildings and campus open space.

### » Activate Ravine Edges

The Ravine is one of most iconic spaces on EKU's campus, but views into the green space are currently obscured by vehicular parking along the edge of University Drive. Allowing visitor-only and accessible parking on University Drive will open view corridors and provide space for social nodes overlooking the Ravine. Views of Keen Johnson Building will be highlighted by redirecting traffic to enter and exit from Second Street, and utilizing a traffic circle at the bend in University Drive. Vehicular traffic will be restricted from access to University Drive during day time hours.

### » Colonel Path

The aforementioned improvements to University Drive will complement the student Colonel path planned to connect the campus to downtown along Second Street.

### » Improve Outdoor Wireless Internet

The master plan recommends several new open/green spaces on campus, as well as landscaping, lighting, and wireless internet improvements to existing outdoor spaces. Utilization of these spaces by students for study or social interaction will improve with a strong and fast internet connection.



Figure 3.12, Concept Rendering of Proposed Enhancements to University Drive



Existing View toward Keen Johnson

“The Ravine is a nice place to hang out or study. I love the area full of nature in the middle of campus. The wifi connection out there could be improved though.”

—Student Survey Response



## SMALL MOVES, BIG IMPACT

### » Campbell Building Renovation

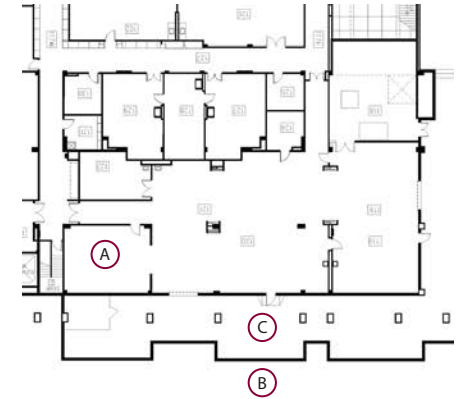
Built in 1974, the Campbell Building frames the northern edge of the Ravine, but is visually and physically inaccessible from the ground. The ground level is home to the ceramics and sculpture programs. Removal of the non-structural brick wall shown in the pictures to the right would increase transparency between interior and exterior. A new glass curtainwall along these first floor studio spaces would add openness to the south elevation of the building and provide opportunities for increased ventilation, mold control, natural light, and access to the Ravine.

### » Intentional Landscaping

Trees and other plant life in the Ravine have grown organically over time. This informal organization provides a unique atmosphere in the midst of an otherwise urban campus. However, some areas have become overgrown and uninviting. Along the northern edge, selective pruning of dense brush and trees along with some new landscape features such as a retention pond and seating could breathe new life in to this natural space.



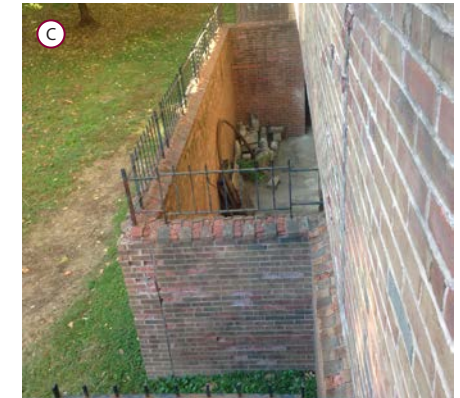
Ceramics Studio Class



Campbell Building, Partial Ground Floor Plan



South Elevation of Campbell Building



Campbell Building, Non-structural Wall



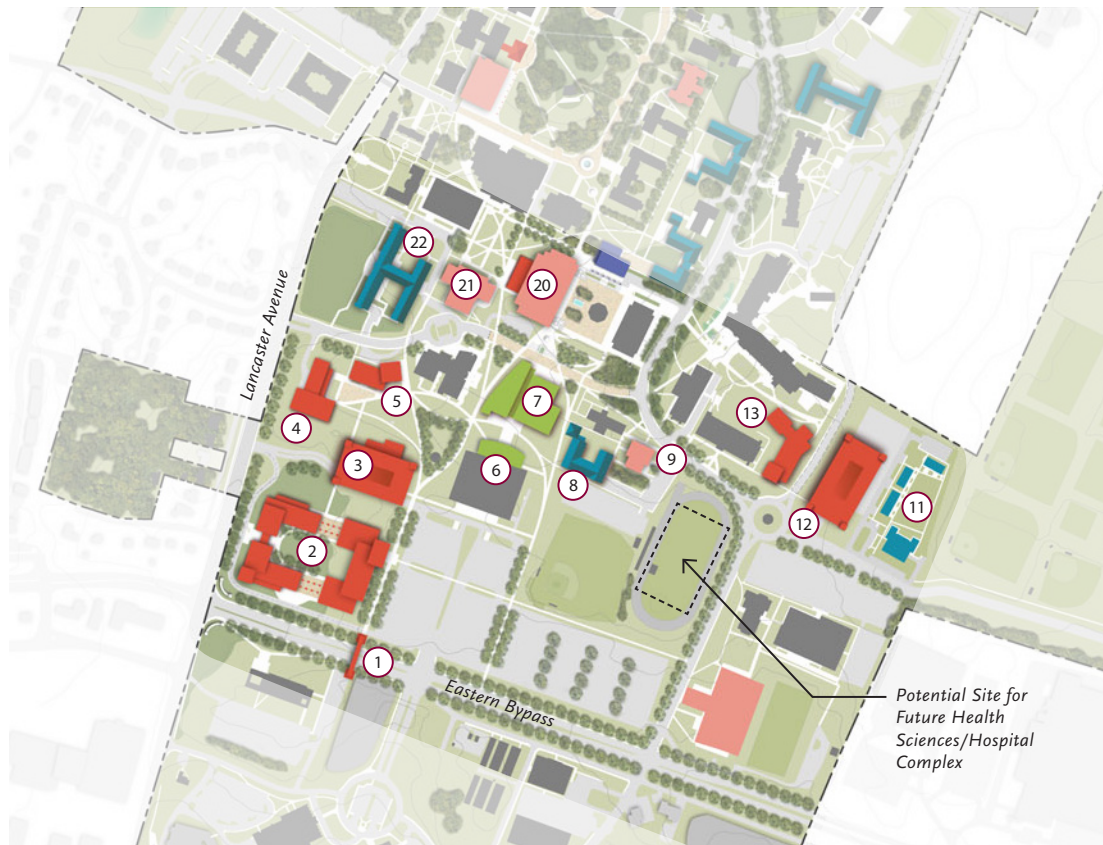
Panorama View of Campbell Building and the Ravine



## MAIN CAMPUS SOUTH OVERVIEW

The core campus will be reinvigorated with renovations to several existing buildings, redevelopment of several existing sites, and new construction on the very few buildable sites available.

New facilities will engage the streets or spaces on which they front to reinforce campus connections and spur more activity. New facilities will allow utilization of sites to maximize potential, while maintaining appropriate height and density. Major building projects manifest institutional mission and pedagogical aspirations, while strengthening campus hierarchy.



- |   |   |   |
|---|---|---|
| <span style="color: red;">■</span> Academic/Support   | <span style="color: blue;">■</span> Dining      | <span style="color: green;">■</span> Athletics/Recreation |
| <span style="color: orange;">■</span> Key Renovations | <span style="color: yellow;">■</span> Mixed Use | <span style="color: teal;">■</span> Residential           |

Scale: 1"=800'-0"

Note: Numbered keys refer back to the Program Accommodation Details list on page 31

## MAIN CAMPUS SOUTH PROJECTS

- ②② ⑧ New residence halls provide updated amenities for growing enrollment of on-campus residents.
- ②① The historic Weaver Building is renovated to provide space for growing Health Sciences program. Accessibility is addressed with renovations.
- ②① A renovation of and addition to Powell Student Union allows for accessible east-west circulation, and provides student life activity space for campus residents and commuters.
- ①③ A new, four-story academic building addresses space needs for the College of Health Sciences and frames a new green space for the east campus academic zone.
- ①② A traffic circle at the intersection of Kit Carson Drive, Van Hoose Drive, and Roy and Sue Kidd Way will improve traffic flow and access to a five-story, 1080-space parking deck. As opposed to surface parking, a deck better utilizes valuable space adjacent to the academic core.
- ①① A new residential community designed specifically for single parents pursuing a college degree will benefit from adjacency to the academic core without being in a high-traffic area of campus.
- ①⑨ Commonwealth Hall is already undergoing renovation on six of its twenty floors. This former residential hall will be renovated to house administrative offices and I.T. departments.
- ①⑦ On the former site of Todd and Dupree residential Halls, a new recreation and fitness center will anchor the southern edge of the center for student life. This campus amenity will be highly visible and accessible to students walking along Park Drive, or on the pedestrian paths connecting to the Alumni parking lot.

⑥ An academic support center addition on the north side of Alumni Coliseum will provide athletes with a central place to receive tutoring and academic assistance. This addition will necessitate the removal of the existing pool, which is currently in need of repair.

⑤ A two and a half story Welcome and Alumni Center along Park Drive will be highly accessible to visitors from the adjacent parking structure. The building sits at the top of a ridge and has excellent views of the surrounding campus. This site is along the campus shuttle route and a two-minute walk from the center for student life.

④ A new, four-story academic building will help redefine the campus edge along Lancaster Avenue and provide additional space for the programs currently being housed in the Ault and Gibson buildings.

③ A five-story parking structure will provide 900 new parking spaces. The first floor could be reserved for the new Model Lab School during peak hours. The structure utilizes existing topography to provide an accessible means of traveling from the southwest corner of campus into the campus core. The garage will have entrances from both Lancaster Avenue and the Alumni Coliseum Lot. The north side of the deck would be a convenient location for a new campus bookstore.

② The new Model Laboratory School is prominently featured at the corner of Lancaster Avenue and the Southern By-pass. The building itself will act as a sound buffer between the busy intersection and the internal quad/green space. A new, one-way drop off and pick-up lane will share an entrance with the parking structure off Lancaster Avenue. The new College of Education Building will frame the east end of the site and be highly visible from the enhanced pedestrian path and bridge.

① A pedestrian bridge will provide a physical link between north and south campus, while also serving as an architectural branding element for the university.



Figure 3.13, New Campus Edge along Lancaster Avenue

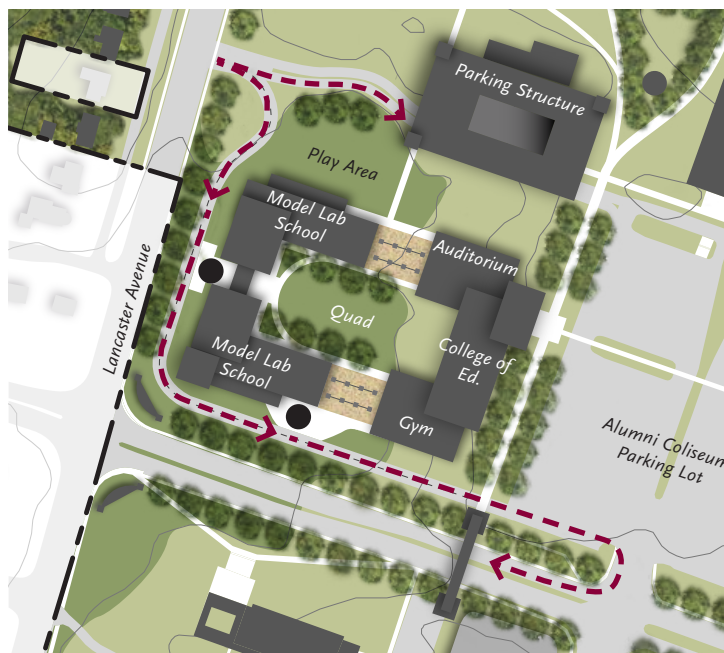


Figure 3.14, Enlarged Plan of New Model Lab School and College of Education



Figure 3.15, New Pedestrian Bridge across the Southern Bypass

- Drop Off/Pick Up Area
- One-way Drop Off/Pick-up Lanes



## SMALL MOVES, BIG IMPACT

### » Greening Alumni Coliseum Parking Lot

The current Alumni Lot occupies approximately ten acres of land and includes limited landscape islands, shade trees, and pedestrian paths. New pedestrian paths running parallel on either side of Alumni Coliseum will provide breaks in the expanse of pavement. An ample, tree-lined pedestrian corridor will reduce heat-island effect and provide safer means of walking from the parking lot to the campus.

### » Campus Signage and Way-finding

Campus signage on free-standing signs and buildings should be graphically consistent to reflect a cohesive campus environment.

### » Campus Branding

EKU branding can be reinforced through the careful design of new bus shelters to accommodate an expanded campus transit service. The shuttle buses themselves can also reinforce the brand with school colors and logos.

### » Improved Exterior Lighting

The pedestrian experience and campus security shouldn't diminish when the sun goes down. Enhanced and more abundant lighting along pedestrian pathways will add vitality and security to the night time campus.

### » Modernize Existing Academic Spaces

Teaching modalities are ever-changing and today's academic buildings must meet the flexible needs of various modes of learning. The Wallace Building is one of the most heavily used academic building on campus. Technology upgrades are needed throughout the building. A consistent use of new technology, (devices and equipment), among all classrooms would create efficiencies in maintenance and user comfort/knowledge. The Noel Studio space in Crabbe Library is a good precedent for flexible learning and meeting environments.



Existing Alumni Coliseum Lot



Existing Bus Shelter



Noel Studio Space in Crabbe Library



**SOUTH CAMPUS PROJECTS**

① A pedestrian bridge will provide a physical link between north and south campus, while also serving as an architectural branding element for the university. The design of the bridge should be modern and iconic.

⑩ The Begley Building will be renovated or replaced to accommodate seating for the football stadium and provide accessible academic space for Health Sciences and Athletics.

⑳ Commuter parking adjacent to the new pedestrian bridge will provide convenient access to the main campus.

㉘ ㉙ ㉚ ㉛ ㉜ Campus resident parking lots are relocated to the south side of campus to better utilize land on north campus. The campus shuttle and new pedestrian bridge will provide convenient access to these lots. Adequate lighting is needed to ensure safety in these areas.

㉛ Athletic fields for the Model Lab School will be located on the former motorcycle driving course.

㉜ A new police station will be constructed across from the Perkins Building. The University has discussed a land swap for the existing police building site.

⊖ The Perkins Building is out of date as a conference center. Looking at the long-term goals of the University, the site of the existing Keen Residence Hall would be ideal for a new conference center. Visibility from the By-pass, adjacency to the pedestrian bridge, and proximity to the Center for the Arts make this site ideal for a hotel/conference center. As a longer-term project, this work was not included on the Plan Accommodation Details list on page 31.

- Academic/Support    ■ Open Space    ■ Athletic Green Space
- Key Renovations    ■ Drainage Shed    ■ Future Growth Site

Scale: 1"=800'-0"

Note: Numbered keys refer back to the Program Accommodation Details list on page 31



## ADDITIONAL PROPERTIES

The University owns two historic properties in Richmond. The Elmwood Estate is adjacent to the main campus and is in need of interior renovation and some exterior repairs. A conditions assessment is recommended to document the historic attributes of the building and evaluate the Elmwood's structural integrity. Generally speaking, the building is in good condition and could serve any of the following programs well:

- Home of the University President
- Bed and Breakfast for both University and Community Guests
- Alumni center and/or Special Events
- ECU Inn/Visiting Faculty Lodging
- ECU Art Gallery and/or Heritage Museum

The University Club at Arlington is a unique asset for the University and the Richmond community. This venue should continue to be developed as a community resource to enhance connections between ECU and the City of Richmond.



Elmwood Estate



Elmwood Lawn



The University Club at Arlington



Swimming Pool Facility



Golf Course

## REGIONAL CAMPUSES

Eastern Kentucky University has six satellite campuses in addition to the Richmond main campus. They are as follows:

- Corbin, 400 Students
- Danville, 250 Students
- Hazard, 65 Students
- Lancaster, 150 Students
- Manchester, 275 Students
- Somerset, 80-100 Students

These campuses are a great resource for non-traditional students in their respective locales. Facilities on the Corbin, Danville, Manchester, and Somerset campuses are capable of supporting substantial enrollment growth and could be considered for expanded programs based on the needs of the surrounding communities.

In calculating the space needs for the Regional campuses the desire to move away from transient faculty and have full-time faculty members on the Regional Campuses was taken into consideration when calculating office space needs.

Detailed information about the existing square footage of these campuses, along with future need projections can be found in Appendix A of this document (Utilization and Space Needs Analysis, Section 6.9).



Manchester Campus



Corbin Campus



## architectural design guidelines

As the recommendations of this master plan are implemented, new construction should positively contribute to the architectural context of the campus and reinforce the ECU identity and sense of place. This is true for buildings as well as site and landscape elements. All new development on campus should:

- Follow the building siting and open space objectives outlined in the master plan.
- Contribute to the development of pedestrian oriented exterior spaces whenever possible.
- Follow sustainable design best practices and achieve LEED requirements outlined by the University.
- Consider the existing district Floor Area Ratio range so that new development reinforces consistent district density.
- Complement existing district building heights but limit new construction to five stories above grade, unless approved by the University.
- Follow the campus materials palette guidelines with brick as the predominant building material, unless otherwise approved by the University.
- Incorporate interior and exterior student lounge spaces in all new construction and renovation projects to create an inviting and lively campus atmosphere.



Sullivan Hall, 1912



Keen Johnson Building, 1939



Combs Classroom Building, 1964



Powell Student Union, 1971



Existing Brick Seat Wall



Business & Technology Center, 2003



New Science Building, Constructed 2014-2016

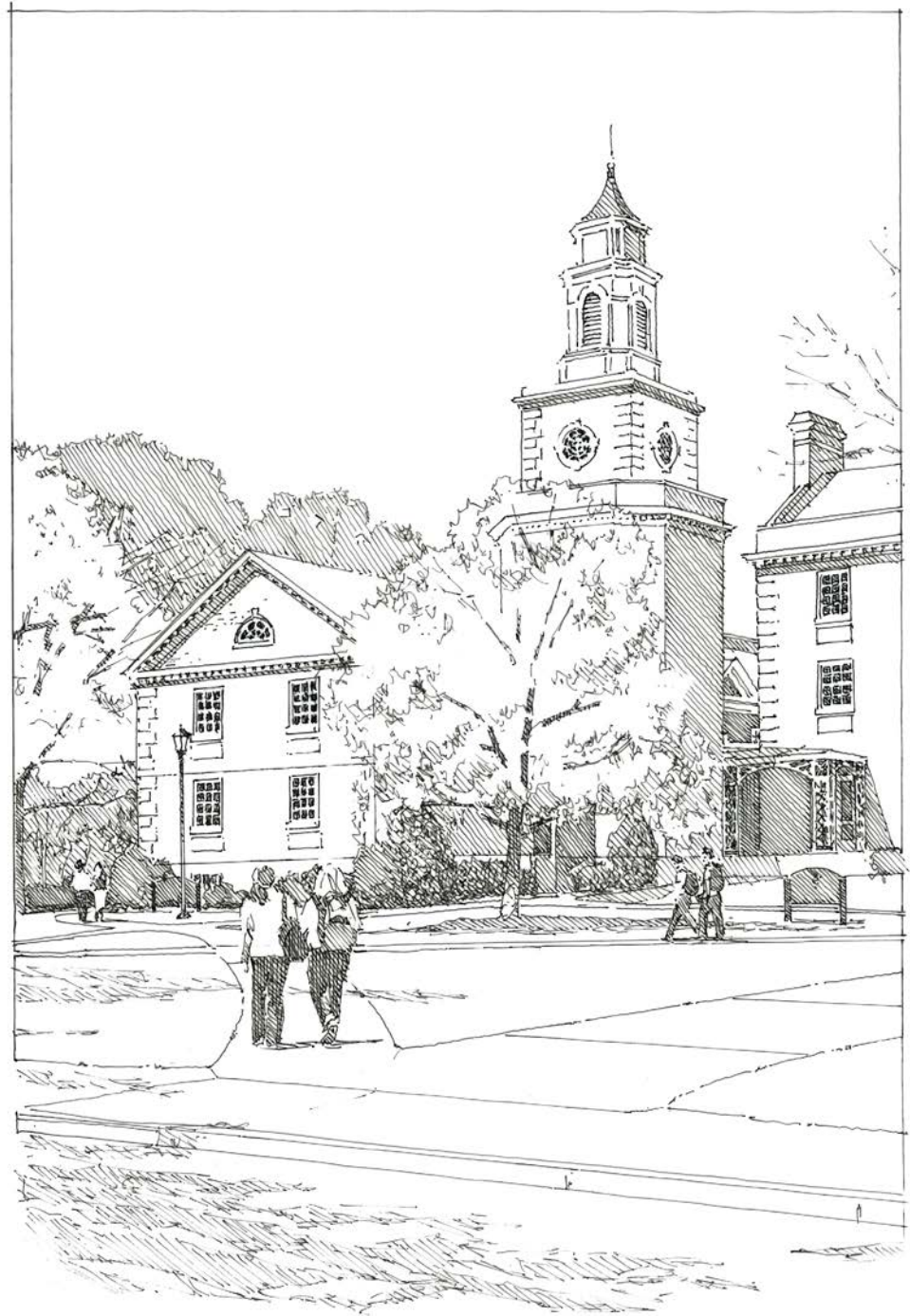
HISTORIC ERA

MODERN ERA

POST-MODERN ERA

“We shape our buildings; thereafter, they shape us.”

—Winston Churchill









# 4

## LANDSCAPE & INFRASTRUCTURE

The broad goal of creating a sustainable campus affects all aspects of this master plan. From sustainable land-use strategies, use of existing infrastructure, and energy conservation, to sustainable transportation and storm-water strategies, the master plan emphasizes a holistic approach to landscape design and infrastructure.



## sustainable campus

### SUSTAINABILITY INITIATIVES

Eastern Kentucky University has the potential to positively impact the campus culture through sustainable practices, while simultaneously improving the social and educational community of the campus and its physical resources. Campus resources include the physical built environment and the natural features of the campus. The students, faculty, staff and administration are clearly the greatest asset and the health, safety and welfare of this asset can be defined and enhanced with a campus environment that is inviting and lasting.

Enhancing the physical and built environment for EKU with buildings that are highly usable, flexible and engaging will further encourage a culture of campus sustainability. In addition, an enhanced framework for connectivity between buildings and open spaces that are less vehicle-centric provides more open space for pedestrians and better utilizes the existing resources of the campus.

The following recommendations for sustainable improvements will provide strategies for success in both the long and short terms.



- **Responsible Land Use:** Plan for the long range highest and best use of the University's land assets.
- **Campus Open Space:** Enhance an open space framework and network of campus connectivity.
- **Mobility Alternates:** Prioritize campus mobility with an increased network of pedestrian and biking routes.
- **Campus Transit:** Create a user friendly and efficient campus transit system that encourages alternate means of mobility and de-emphasizes the use of vehicles.
- **Vehicular Use Areas:** Reduce internal campus vehicular use areas that encourages alternate mobility and reduces impervious areas within campus.
- **Storm-water Management:** Implement a campus-wide storm-water management plan that will protect campus and community natural resources.
- **Recycling:** Encourage various levels of material recycling that will create a campus culture of sustainability.





## CAMPUS OPEN SPACE

The open space framework developed through the planning process will organize the campus into definable zones and districts in both north and south campus, encourage connectivity in the core of campus while providing inviting campus environments, and minimizing the areas of vehicular use in the campus core. The following moves should be made to accentuate the open space on campus:

- Emphasize open space connectivity from the South Campus to the North Campus with safe pedestrian and bike crossings.
  - Improve signal timing for safe crossing.
  - Construct an elevated pedestrian bridge over the Eastern By-pass that will eliminate vehicular/pedestrian conflicts and encourage north/south pedestrian flow.
- Provide open space corridors from residential areas on campus into the Center for Student Life at the campus core.
- Protect existing campus open space on both the north and south campus areas.
- Enhance the Ravine with east/west connectivity for campus pedestrians.
- Protect natural drainage areas on the south campus that also provide user connectivity with the landscape.
- Increase pedestrian and biking usability of campus roads by decreasing pavement widths and adding landscaped corridors for multi-modal use.
- Implement a road-diet for Kit Carson Way by decreasing vehicular lane widths and adding landscape elements per Figure 4.2.
- Close Park Drive to vehicular use except for emergency and service vehicles; increase landscape elements along new pedestrian corridor.

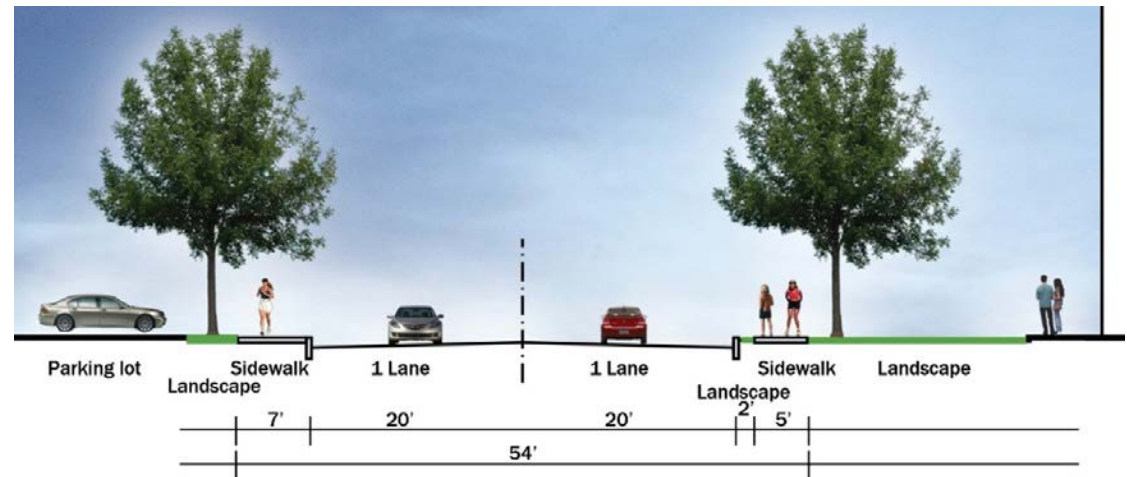


Figure 4.1, Existing Section Through Kit Carson Drive

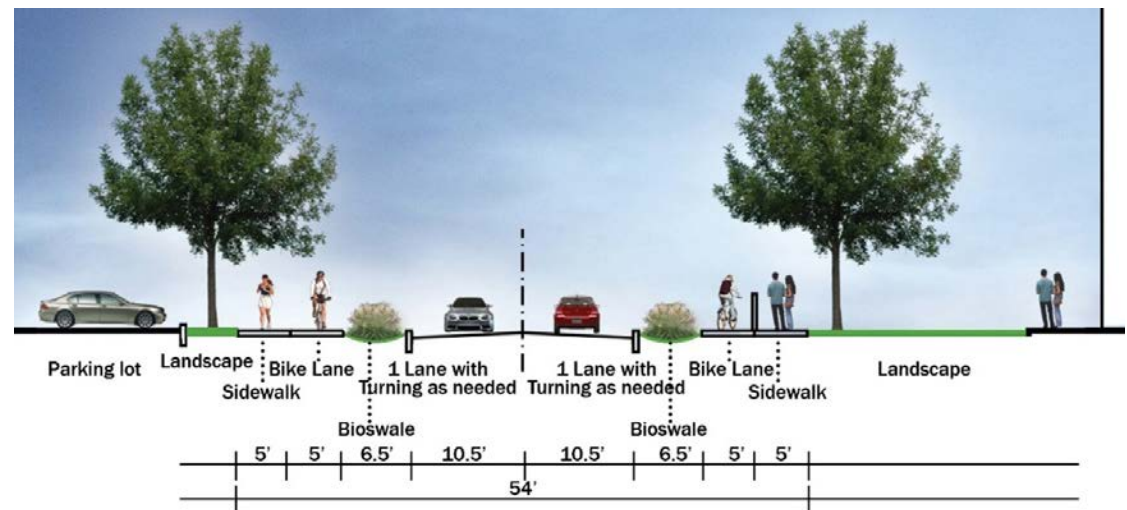


Figure 4.2, Proposed Section Through Kit Carson Drive

## MOBILITY ALTERNATIVES

Providing inviting open space will increase campus walking and biking through an organized framework of pedestrian and biking corridors.

- Integrate biking and walking with adequate width walkways throughout campus.
- Provide a systematic way-finding system throughout campus that will organize, separate and guide alternate means of movement throughout the campus.
- Create nodes along walkways that give significance to intersecting routes, provide for social gathering spaces, and emphasize building entry points.
- Provide bike-share facilities that encourage bicycle use on campus.
- Provide adequate bike racks and sheltered facilities in convenient and accessible locations.
- Insure that there are fully accessible routes to all buildings and that all buildings have accessible entrances.
- Minimize vehicular conflicts with increased walking/biking routes and provide traffic calming on streets where conflicts cannot be completely eliminated.
- Increase lighting levels to insure a safe nighttime walking environment throughout campus, especially along pathways to vehicular storage on the campus perimeter.
- Enhance community connectivity by encouraging community and State agencies to provide for dedicated bike lanes that lead into campus, and expanded transit system that connects off-campus residential communities to campus.



Existing Bike Storage Practices on Campus





## CAMPUS TRANSIT

An efficient and dependable shuttle transit system throughout campus and connecting to the outlying areas of the community will help insure the success of parking relocation to campus perimeters. A successful campus shuttle that consists of multiple vehicles that can adequately and dependably serve the campus population should connect all areas of north and south campus utilizing multiple routes and schedules. The transit route concept will need to be further modeled to insure proper timing and serviceability.

- Provide shuttle stops that are convenient to classroom buildings, dormitories and all out-lying parking areas.
- Provide campus shuttle routes to out-lying community areas that decrease the need for on-campus parking.
- Shuttle stops at out-lying parking areas should be well-lit and provide sheltered facilities for shuttle users.
- Implement a user-friendly shuttle service with conveniently posted schedules and shuttle applications for smart-phones.
- Create branding for transit facilities that provide recognition for shuttle vehicles and shuttle stops.
- Provide bike racks on campus shuttle vehicles that further encourage both transit and bike use to and from campus.

A single bus service is currently offered to off-campus destinations by Kentucky Foothills and only operates Monday through Friday, from 8 a.m. to 5 p.m. It consists of a single bus on a 90-minute loop with thirty stops, (Figure 4.3). In order to support a more sustainable on-campus resident and commuter environment, EKU needs to partner with the City of Richmond to provide expanded shuttle service to adjacent residential communities and retail/social destinations.

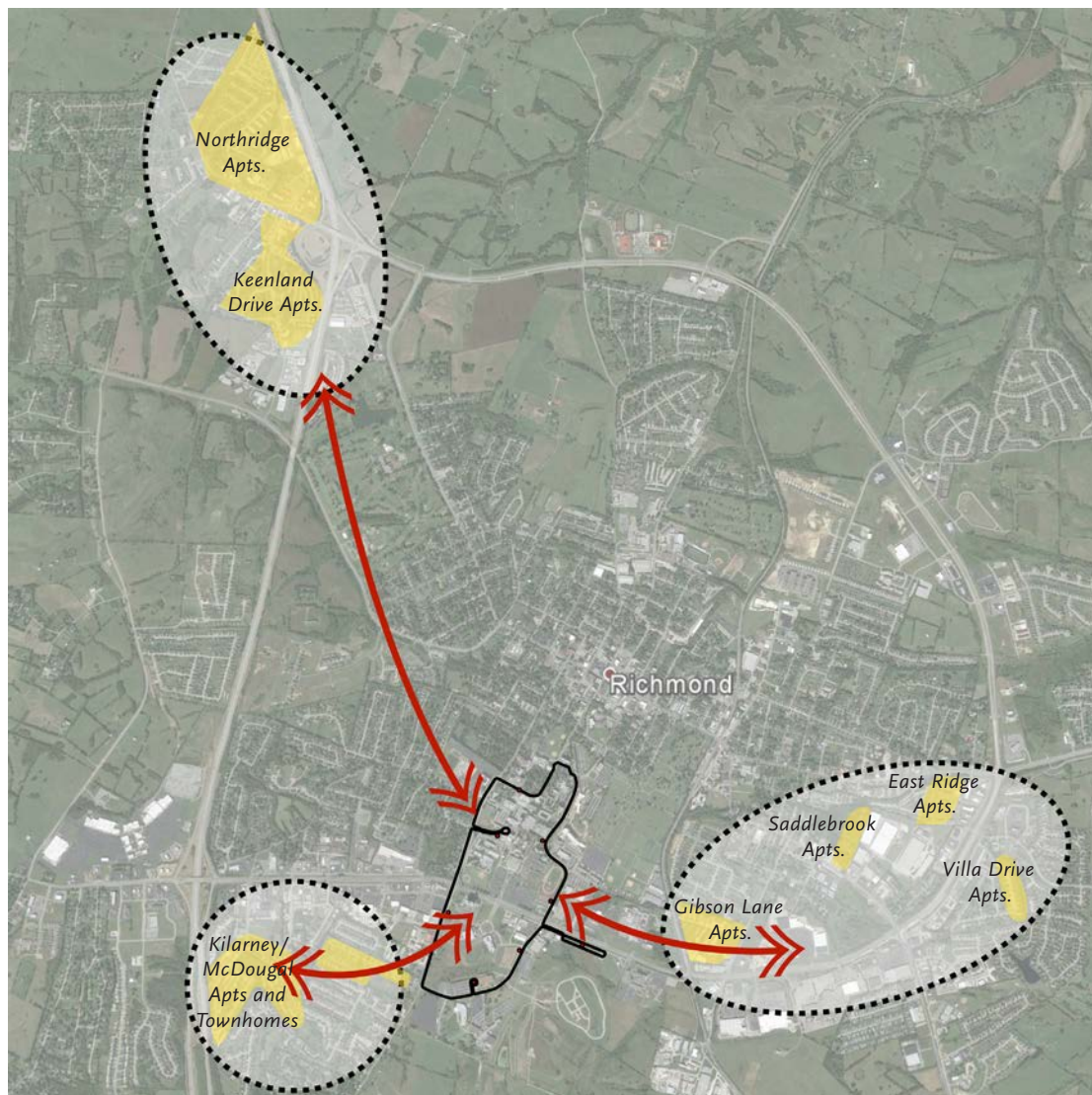


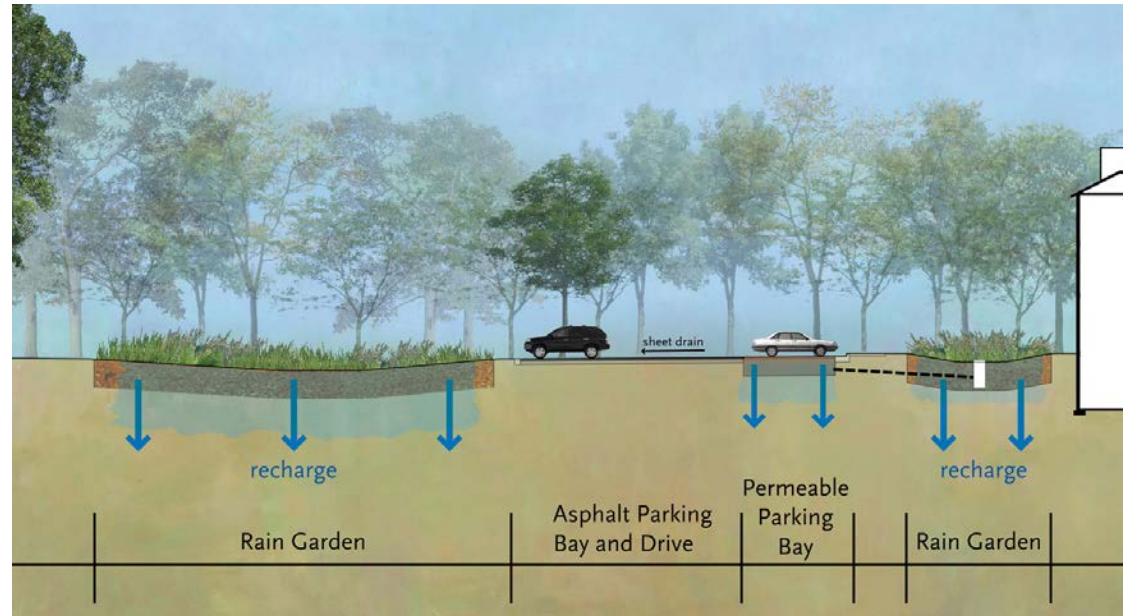
Figure 4.3, Proposed Connections to Off-Campus Residential Communities



## VEHICULAR-USE AREAS

Vehicular-use areas and parking lots currently dominate the landscape of the campus. Relocation and better organization of campus parking to the perimeter of main campus provides for a better open space framework, encourages alternate campus means of mobility, and reduces storm-water runoff internal to the campus and external to the community. The following measures will aid in improving campus sustainability:

- Relocate campus parking areas to north and south campus perimeters as revealed in master plan diagrams.
- Implement the use of green infrastructure within parking lots and vehicular-use areas that includes rain gardens, permeable pavements and infiltration basins that allow for recharge of groundwater. These improvements will greatly reduce impervious area and significantly reduce storm-water runoff.
- Develop a “road-diet” along Kit Carson Way that will reduce pavement widths and increase green areas in addition to creating better pedestrian and biking paths.
- Add landscaping to all parking areas to reduce solar heat island effects and also reduce impervious areas within the parking lots.
- Provide adequate lighting in all parking areas to support new model of remote vehicular storage, improving security for campus users.



Precedent Examples of Green Infrastructure



## STORM-WATER MANAGEMENT

Eastern Kentucky University has implemented a storm-water management strategy and guidelines in conjunction with the requirements of becoming an independent MS4 – Municipal Separate Storm Sewer System in January of 2014. These requirements and guidelines will be consistent with both State Division of Water and Federal EPA requirements for treating storm-water discharge quantity and quality. Storm-water management is a fully integrated and systematic means of promoting all objectives of sustainability.

- Require all new development to comply with storm-water management controls that reduce storm-water discharge to natural drainage areas on campus and into the community.
- Use open space networks on campus to help control storm-water with the use of detention basins or infiltration basins that control storm-water discharges into the four primary outfall areas on campus. Minimize significant excavations to control storm-water so that open space does not become unusable.
- Use rain-infiltration gardens as part of a campus landscape program that reduces and controls storm-water quantities and improves the quality of storm-water discharges.
- Utilize proven methods of storm-water quality control that will decrease pollutants in storm-water discharges that include infiltration basins, rain gardens, mechanical “storm-ceptor” units and the use of permeable pavements in sidewalks and parking pavements.

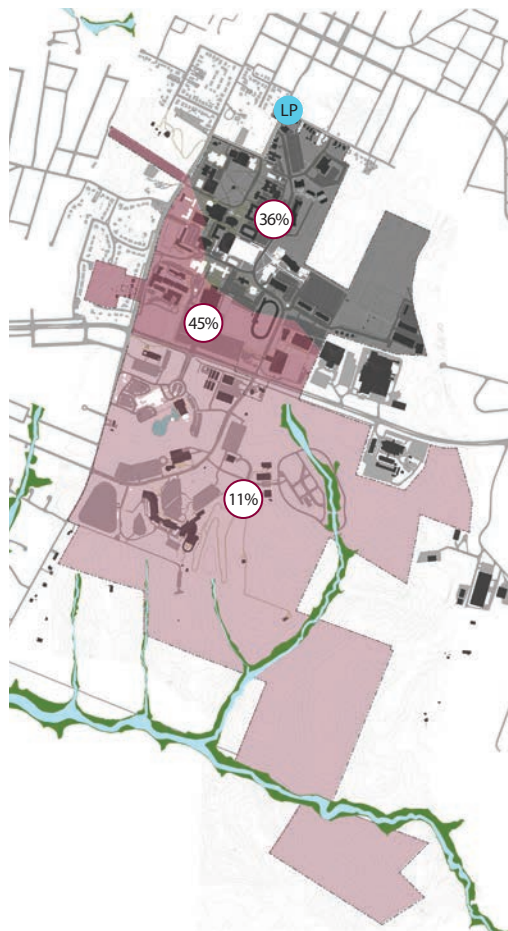


Figure 4.4, Existing Impervious Surface Diagram

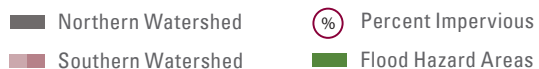


Figure 4.5, Future Impervious Surface Diagram



## RECYCLING

Eastern Kentucky University can continue to enhance their recycling programs through the leadership of the Eastern Committee of Responsible Environmental Stewardship (ECRES). Through the ECRES, commitments should continue for increased recycling of materials used on campus.

- Targeted Material recycling - cardboard, mixed paper, plastic bottles, aluminum cans, Universal Waste Batteries, appliance goods (stoves, microwaves, stainless steel), electronic scrap (computers, wires, cables), most mixed metals (chairs, desks), hard plastics and scrap iron.
- Identify and recommend best practices to develop sustainable policies at Eastern Kentucky University, and promote waste minimization (zero waste) through resource conservation and increased recycling.
- Establish a Green Council—obtain commitments from all departments so that a culture of sustainability can be activated.
- Conduct an assessment—find out what waste is being generated, where it's coming from, what is currently being done with the waste, and what should be done with it.
- Identify opportunities—find ways to dispose of as much trash as possible without sending it to landfill.
- Implement programs—create programs that are specific to things like sporting events, dorms and the Greek system.



- Measure and report—find out what is being recycled, identify gaps in programs and evaluate if new efforts are needed.
- Single- and dual-stream programs to make recycling more accessible and convenient.
- Food and organics recycling to turn discarded food and organic material into nutrient-rich compost.
- Hazardous Waste collection to recycle medical sharps, universal and chemical waste in accordance with applicable laws.



## LANDSCAPE GUIDELINES: PLANT MATERIALS

The landscape is just as important to the image and identity of a campus as its buildings. The open spaces and circulation corridors that encourage social gathering or connect destinations can evoke an emotional response that identifies ECU like no other institution of higher learning. The trees and plants provide a connection to nature that allow students, faculty and staff an opportunity to decompress and a well-planned landscape can have a significant and meaningful influence on how ECU is perceived. In order to achieve these goals, the landscape should be considered in the following ways:

- The landscape should be authentic to the Bluegrass physiographic region. Plants should be native or indigenous to the region whenever possible, especially with regards to the selection of tree species. The use of natives over imported species strengthens the sense of place and pride in the local community.
- Large shade trees should be used to organize spaces and define streets and pedestrian corridors. Understory and flowering accent trees should be used sparingly and shrubs limited to hedges or foundation plantings in order to avoid a cluttered landscape. Large expanses of lawn are preferred to encourage passive recreation and may be bordered with large sweeping masses of naturalizing, low growing perennials or ground covers.
- Landscape plants should provide a continuity throughout the campus, while avoiding a monoculture of species that becomes vulnerable to a devastating outbreak of insect or disease. Varying species or cultivars of the same genus, or a mixture of different genus with similar characteristics can allow the planting of a corridor or space that has a consistency while minimizing the potential drawbacks.
- Landscape aesthetics are rather subjective, however, appropriate landscape plantings should be timeless. Formal, geometrical plantings can become exposed over time with the loss of individual plants that cannot be replaced with equally mature ones. Therefore, organic or naturalistic plantings are preferable. The landscape may evolve with time as new trees are planted to succeed old ones, without upsetting a manmade order.
- A naturalistic landscape need not be considered messy or disorganized. A hierarchy of plantings creates order and a sense of scale. The importance and use of spaces are reflected by the selection of plants. Formal gathering spaces or plazas use different plants than intimate courtyards, but all plants are selected for their appropriate natural characteristics, size and form without pruning or other manipulation.
- Sustainability is extremely important, especially on a campus of higher learning. The selection of native species that require little to no irrigation, little or no chemical protection from disease, pests or competitors, and minimal maintenance from staff is paramount. Planting strategies that protect the watershed from pollution, including rain gardens and bio-retention swales should be implemented wherever possible. Roof gardens or green roof plantings, or simply planting large shade trees along southern exposures of buildings can reduce heat island effect and reduce heating and cooling expenses for buildings.
- Appropriate plant selections are mindful of the impact they have on human senses and affect whether or not people want to spend time in the outdoor space. Ideally the plants create year-round appeal visually, including lush foliage, interesting bark, flowers, and fall color. They may have a subtle scent that most find to be pleasant, but isn't overpowering or too attractive to insects or other pests. Leaf, seed or fruit litter can be a problem also, especially those that attract too many birds and their droppings. All of these factors must be considered when determining site suitability for landscape plantings.



## LANDSCAPE GUIDELINES: HARDSCAPE AND SURFACING

Many other components besides plants comprise the exterior landscape. Site furniture, walls, fences, lighting, and art all play important roles, but none provides a more subtle continuity throughout a campus than pavement, also known as hardscape. Connections, whether made by vehicle, bicycle or pedestrians, almost always occur via a paved pathway. The selection of pavement style and material helps define a space and its use, often without recognition by the user. A distinction between a space to gather and a route to get somewhere can be made with pavement, while still maintaining a consistency that identifies EKU.

- Pavement materials should be indicative of historically used local materials in order to strengthen the sense of place. Limestone and clay are native materials to the region and are manifested in the pavements on campus, in the form of concrete and brick pavers. Granite is not native to Kentucky and should therefore not be used as pavement at EKU.
- Poured concrete is the predominant material used throughout the region. Using a mix of water, cement, sand and usually crushed limestone, the standard walk is typically finished with a wood float or medium broom finish. A walk consisting entirely of poured standard concrete is a utilitarian pavement with no specific identity. Stains and color additives should be discouraged for exterior applications because of fading which results in the inability to match colors if repairs become necessary with time.
- More distinctive mixes of concrete, using regionally native exposed river aggregate, are preferred to denote a significant gathering space or corridor. The use of small river pebbles as aggregate in the concrete mix, along with a retardant to lightly expose some of the pebbles is also used to provide a softer, historic appearance to the concrete. This can alleviate the degradation concerns that come with the more commonly used larger exposed aggregate popping out of the sidewalk surface during freeze/thaw cycles and snow removal.
- Clay brick pavers are often used to accent special areas. The brick pavers evoke the same material most commonly used on building facades. They don't deteriorate when exposed to salt, but are still subject to freeze/thaw cycle damage if water doesn't readily drain away. Cost often limits their use to accent bands with concrete, rather than entire surfaces of pavers. The paver bands can also be emulated with other accent materials used in the same module size as the pavers.
- Concrete and asphalt pavers provide another material that can be used to create a modular pedestrian scale. Concrete pavers provide a less expensive alternative to clay brick pavers, but should be limited to neutral or earth-tone colors in order to avoid the disappointment of fading due to exposure to ultraviolet light. Asphalt pavers can be used to identify pedestrian routes that cross vehicular routes, without the fear of vehicular oil stains and tire marks that destroy the appearance of other materials.
- Concrete or brick pavers are available in pervious pavement applications and should be implemented wherever possible. They provide a sustainable means to filter storm-water runoff and detain runoff to eliminate flooding downstream without using land for surface detention basins or incurring the cost of underground detention chambers. Pervious pavement eliminates much of the cost of storm-water collection systems/piping and is similar in cost to standard concrete pavement.
- Asphalt is currently the least expensive pavement option, but is a petroleum based product and subject to cost increase. Asphalt can be recycled when the pavement begins to breakdown, also aiding in making it a currently affordable product. Many vehicular pavements will continue to be constructed from asphalt, despite its heat gain and aesthetic issues.
- Pervious asphalt and pervious concrete should be avoided due to the inability to fully remove the particulates that are captured in the pores of the pavement, thereby losing the permeability over time.





## utilities & infrastructure

### MECHANICAL SYSTEMS

There are two types of heating, ventilating, air-conditioning (HVAC) systems being utilized on campus:

- Stand-alone boilers/chillers with either terminal or central air handling units.
- Stand-alone chiller, winter central steam for heating and stand-alone summer boiler, with either terminal or central air handling units.

There are several buildings on campus that have large shifts in occupancy between the regular fall/winter/spring semesters and the summer semesters. Scheduling summer courses in only a few designated buildings could allow other buildings to save on cooling, electrical, and maintenance loads.

This can be accomplished through a variable refrigerant system. These systems can distribute the cooling/heating around the building to minimize the amount of heat that needs to be rejected from the building, (heat rejected is wasted energy). This system can also selectively serve the parts of the building that are occupied. This system is ideal for individual buildings, but cannot compete with chilled water system for larger networks of buildings. Candidates for this scheme might be:

- Dormitories highlighted in yellow in Figure 4.6.
- Mixed classroom/office buildings.



Figure 4.6, Mechanical Systems Diagram

- |                                      |                                 |
|--------------------------------------|---------------------------------|
| Existing Chilled Water/Steam Heating | New Variable Refrigerant System |
| New Chilled Water/Steam Heating      | Stand Alone HVAC Systems        |
| Existing Variable Refrigerant System |                                 |

### EXISTING CENTRAL STEAM PLANT CAPACITY

The campus steam plant located in the Ramsey Building currently has two coal boilers and one gas boiler.

- Coal fired boilers: one at 47,000 lbs/hr and one at 60,000 lbs/hr.
- Gas fired boiler: 30,000 lbs/hr.
- Nominal Capacity: 137,000 lbs/hr.
- Recent testing has indicated the actual capacity is about 110,000 lbs/hr with the coal boilers providing a maximum of about 80,000 lbs/hr and the gas boiler providing the rest (30,000 lbs/hr).
- Demand load (steam actually provided on a design day) is 72,000 lbs/hr.
- Near future demand load will reach 85,000 lbs/hr when Science Building Phase 2 is complete.

The plant was upgraded in 2015 and included the following:

- New water treatment system, including new water softeners and chemical injection.
- Boiler controls and control valves.
- New Deaerator and Condensate Receiver tank.
- Feed water piping and pumps.



Ramsey Building



West Side of Powell Building



### NEW SATELLITE STEAM PLANT

The master plan calls for an additional 1,408,600 gross square feet. With additional square footage, capacities will increase as follows:

- Additional 43,000 lbs/hr load to the system.
- Plant capacity upgrade to 128,000 lbs (85,000 lbs/hr + 43,000 lbs/hr – 110,000 lbs/hr).
- Net increase in plant is 18,000 lbs/hr.

The current plant cannot accommodate the extra capacity, so, either the plant will have to be expanded or a new satellite steam plant constructed. It is recommended to provide a new satellite plant at the new College of Education site. Benefits include the following:

- Resolve the low steam pressure issues on the south side of campus by supplying steam on the northern (Ramsey bldg.) and southern (new satellite plant) of the distribution loop.
- Redundancy can be added to the system.
- If the satellite plant can be comprised of gas boilers, two fuel sources can be used and ECU can switch to the fuel with the most economic advantage.
- Recommendation size for Satellite Boiler Plant: 65,000 lbs/hr.



Figure 4.7, Steam Plant Diagram

■ Area Served by Ramsey Plant

■ Area to be Served by New Satellite Boiler Plant



### CAMPUS BACKUP BOILER PLAN

With some minor upgrades, the campus can be served by a regional boiler system. The benefits would be:

- If you use several smaller boilers, partial load inefficiencies can be eliminated, saving energy.
- Another level of redundancy.
- Allow central plants to be upgraded or repaired during the winter months without loss of heating capacity.
- Possible future EPA restrictions on coal inventories can be overcome by this plan.

Regional Boiler Breakdown:

Zone 1: 65,000 lbs/hr (~1885 bhp), new satellite plant

Zone 2: 14,000 lbs/hr (~410 bhp), located at the Powell Building

Zone 3: 14,000 lbs/hr (~410 bhp), located at Telford Hall

Zone 4: 35,000 lbs/hr (1050 bhp), located at the Science Building



Figure 4.8, Boiler Service Zone Diagram



## STEAM PIPING DISTRIBUTION

In general, the steam piping is adequately sized for the existing building load. The major issue is the age of the piping. Piping replacements to be considered in the near future:

- The loop from Palmer Hall to the Powell building.
- Section of pipe from Crabbe to Case Hall.
- The loop from Rowlett to Commonwealth Hall, Wallace and up the hill to Dizney.
- The section of pipe in back of Campbell Building.

To accommodate the proposed buildings of the master plan, the majority of the steam piping is adequately sized for the additional 43,000 lbs/hr with the following recommendations:

- New pipe loop in the College of Education area to accommodate the proposed satellite plant. The pipe loop is recommended in order to provide two paths of delivery of steam, and a level of redundancy, to the campus loop.
- The section of the campus loop behind Alumni Gym will have to be re-routed to accommodate both the Athletic Learning Commons and the Recreation/Fitness Center.
- New line to the new Health Science Academic building.

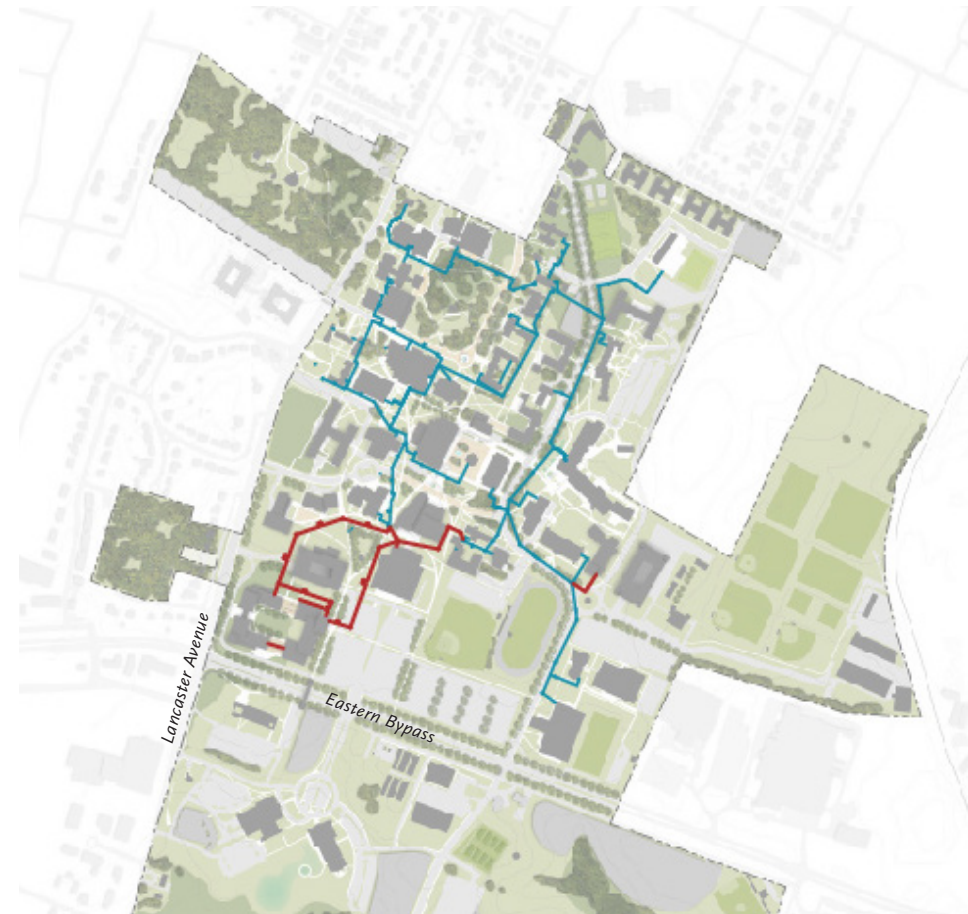


Figure 4.9, Steam Piping Diagram

- Existing Piping
- New Piping



## SEWER PIPING NETWORK

Modifications necessary to accommodate the new buildings outlined by the master plan, are shown on the accompanying figure, and include the following:

- New lift station located in the College of Education Center to replace the existing one in the Donovan Building.
- New force main line from lift station to manhole near Whitlock building.
- Re-route some sanitary lines to accommodate the location of the new College of Education/Model Lab School.
- Re-route sanitary line around both the Athletic Learning Commons and Recreation/Fitness Center.
- Re-route sanitary lines to accommodate new Powell Building addition, residential quad halls, and dining facility.



Figure 4.10, Sewer Piping Diagram

Existing Sewer Piping

New Sewer Piping





### DOMESTIC WATER PIPING DISTRIBUTION

Modifications necessary to accommodate the new buildings outlined by the master plan are shown on the accompanying figure, and include the following:

- Re-route main water line at College of Education/Model Lab School.
- New water line to Ramsey building to accommodate new steam load.

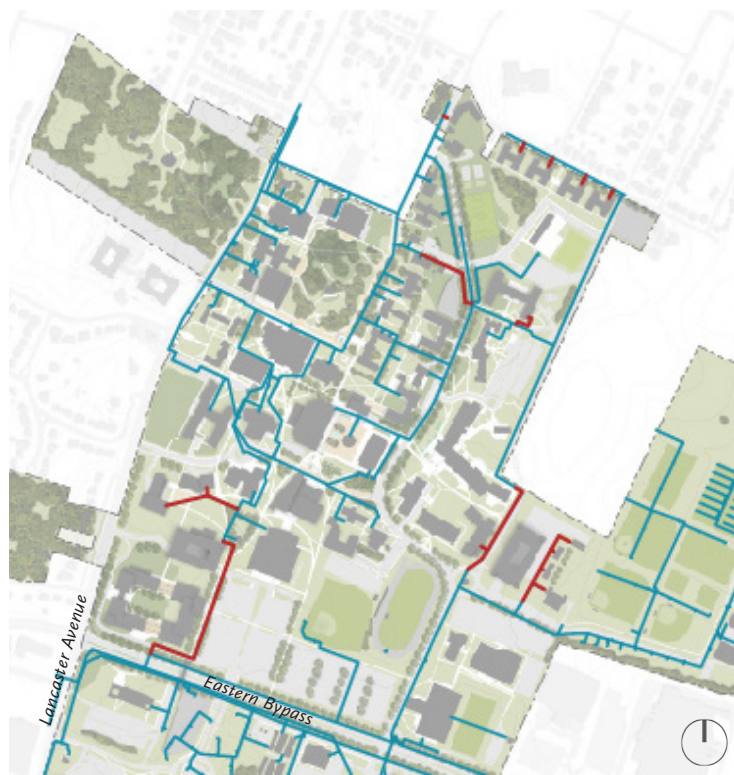


Figure 4.11, Water Piping Diagram

### NATURAL GAS PIPING DISTRIBUTION

Modifications necessary to accommodate the new buildings outlined by the master plan are shown on the accompanying figure, and include the following:

- Re-route main natural gas line to accommodate the new College of Education/Model Lab School center.
- Re-route natural gas line around the new Recreation and Fitness Center.
- Re-route natural gas line around the new Health Sciences academic building.

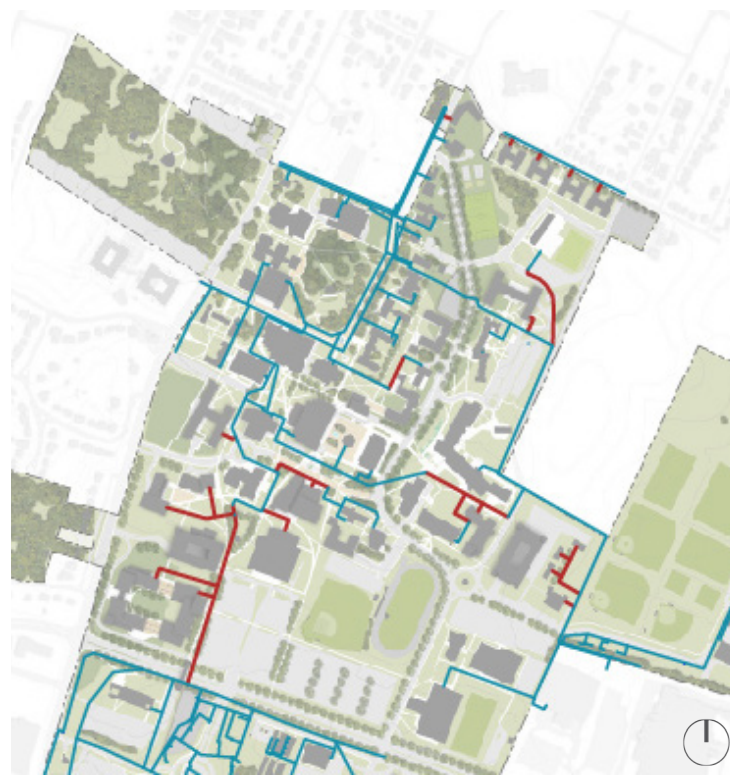


Figure 4.12, Natural Gas Piping Diagram

Existing Pipe  
New Pipe

### HIGH VOLTAGE NETWORK

Modifications necessary to accommodate the new buildings outlined by the master plan are shown on the accompanying figure, and include the following:

- Re-route primary electric to accommodate the new College of Education/Model Lab School center.
- Re-route primary electric to accommodate new pedestrian bridge across the Richmond By-pass.
- Re-route primary electric to accommodate new Health Sciences academic building.

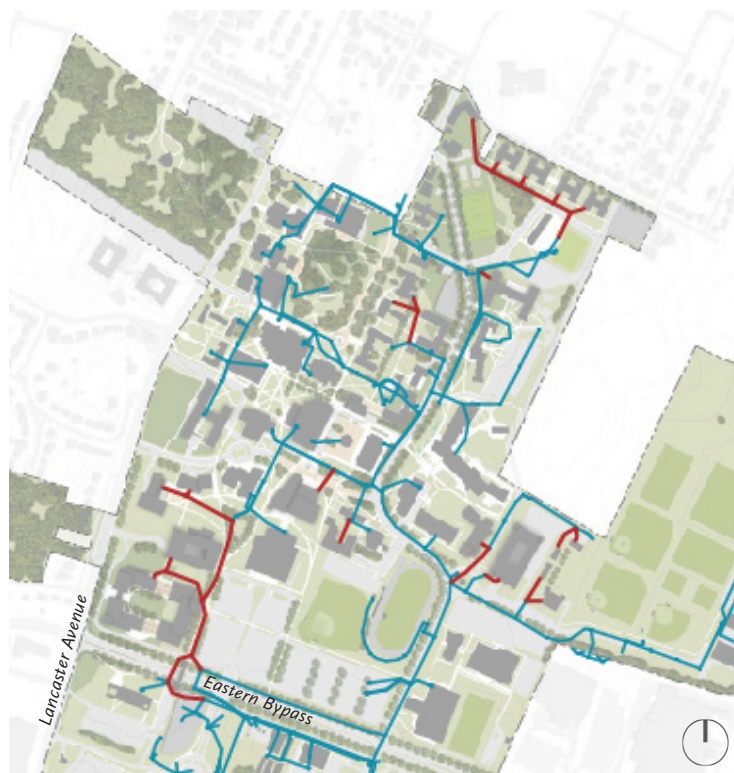


Figure 4.13, Electrical Network Diagram

### COMMUNICATION AND DATA NETWORK

Modifications necessary to accommodate the new buildings outlined by the master plan are shown on the accompanying figure, and include the following:

- Re-route fiber optic lines to accommodate the new College of Education/Model Lab School center.
- Re-route fiber optic lines to accommodate new pedestrian bridge across the Richmond By-pass.
- Re-route fiber optic lines to accommodate the new Recreation and Fitness building.

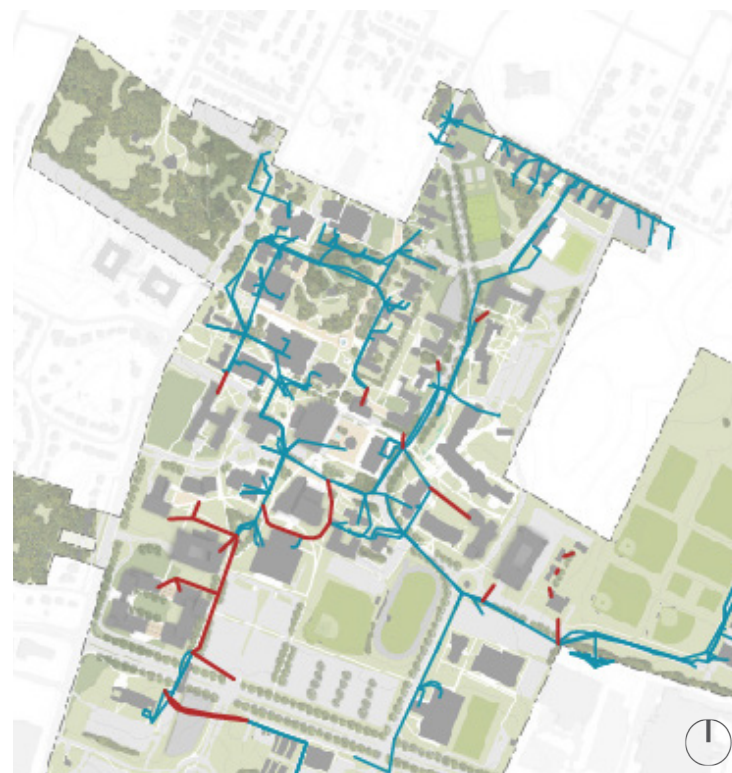


Figure 4.14, Communication and Data Diagram

Existing Line  
New Line





# 5

## PARKING & TRANSIT

Creating a pedestrian-friendly environment with limited automobile traffic is an important component of strengthening the campus core. Maintaining adequate vehicle circulation, convenient access to parking and campus destinations, and utilization of an upgraded shuttle system are also important parts of the proposed plan. Coupled with improvements to student life amenities on campus, the relocation of residential parking to south campus will enhance the collegiate atmosphere in the heart of campus and reduce unnecessary conflicts between vehicles and pedestrians.



## long-term transportation goals

In order to achieve the master plan goals of sustainable practices, responsible land use, multi-modal access, and an enhanced pedestrian experience, the following recommendations should be implemented:

- Limit residential vehicular parking on north campus to allow for additional green space and to encourage use of alternate modes of transportation.
- Implement an Occasional Parking Program that provides discounted passes for those who normally walk, bike, or take the bus to campus, but who must, on occasion, drive to campus.
- Provide a Guaranteed Ride Home (GRH) service. GRH accommodates commuters who are worried about transportation when an emergency arises. Knowing there's a guaranteed ride home allows one to use commuting options like public transit and carpools with less anxiety.
- Expand transit/shuttle service to off-campus attractions, especially at night and on weekends.
- Provide comfortable and safe walking/bike-riding environments within campus and to nearby residential communities, downtown Richmond, and retail locations.
- Increase bicycle parking at convenient locations such as building entrances, residence halls, and student life attractions.

### Peer Institution Parking Fees (2015–2016):

**MOREHEAD STATE UNIVERSITY:** \$180/year

**NORTHERN KENTUCKY UNIVERSITY:** \$220/year

**UNIVERSITY OF KENTUCKY:** \$272/year

**EASTERN KENTUCKY UNIVERSITY:** \$60/year



Additionally, EKU can implement some incentive measures to support the previously mentioned recommendations. These measures will help change the campus culture of vehicular dependence over time:

- Reserved housing lottery spots for students not bringing a vehicle to campus.
- Restricted permit practice (e.g., no on-campus parking for freshmen, no permits for students/staff living within 1 mile of campus).
- Provide showers and lockers for bike commuters.
- Designated bicycle routes and facilities coordinated with the city of Richmond and EKU campus.
- Carpool/Vanpool Incentives.
- Improved City Transit Program.
- Increase on-campus social and recreational activities.
- Expanded on-campus meal plan options and hours.
- Campus transportation improvements can be subsidized with parking fees that are in line with peer institutions. See examples of peer institution fees to the left.



Figure 5.1, Existing Roads and Parking

Scale: 1"=1600'



Alumni Coliseum Lot, Taken on a Thursday at Noon



South Campus Lots, Underutilized Areas Highlighted in Red

### EXISTING CONDITIONS

Residential parking lots currently dominate much of the open space in the north-west zone of campus (Figure 5.1). Land on the north campus is a valuable resource as the University expands its enrollment. Vehicular storage is not the optimal use of this resource. The master plan recommends a long-range relocation of all resident parking to south campus where sites are plentiful. Remote residential parking is standard practice for universities around the country. Coupled with a dependable

and frequent shuttle system, and improved pedestrian/bike routes, the campus has the opportunity to become a vibrant community during the week, at nights, and on the weekends.



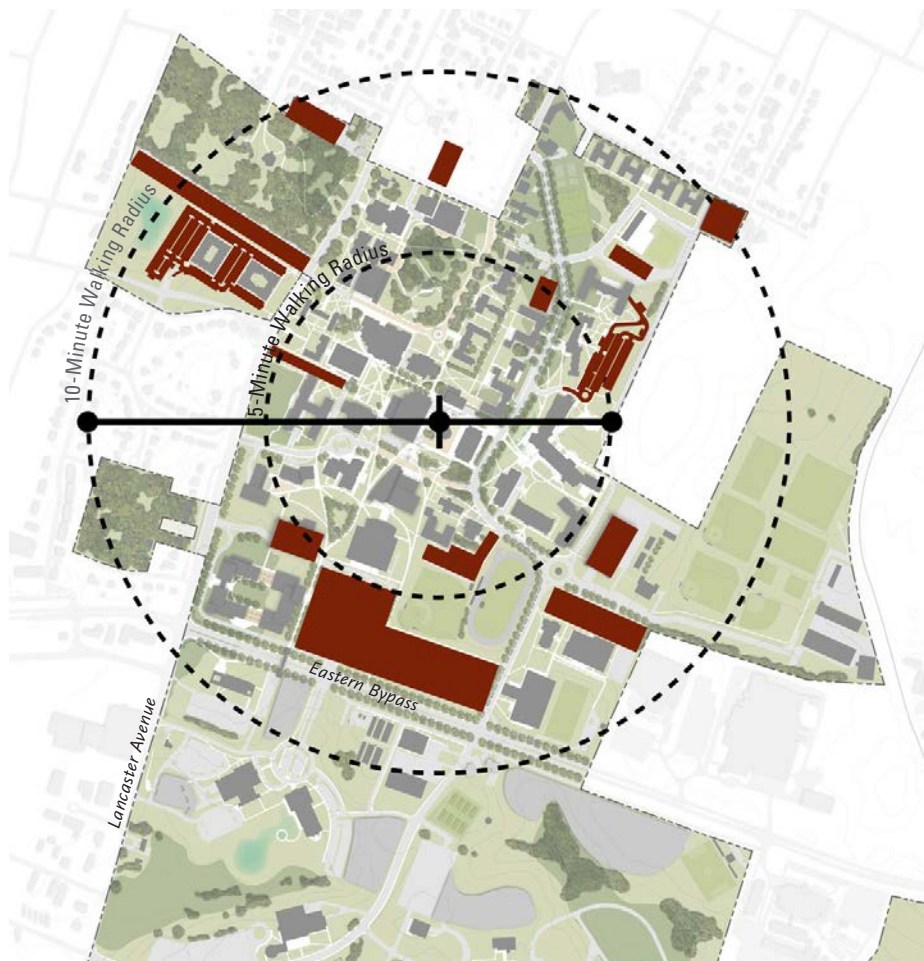
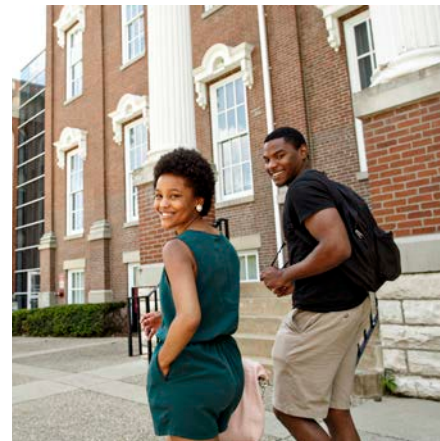


Figure 5.2, Periphery Parking with Walking Circles

- Commuter/Faculty/Resident Parking
- Walking Circle

“I wish it was easier to walk to campus! I live a mile away (right down the bypass) but it is very difficult to walk to school because of the lack of sidewalks.”

—Student Survey Response



EKU is a very walkable campus in terms of scale and terrain. With improvements to the sidewalk, bike trail, and shuttle infrastructure, primarily through collaboration with the City of Richmond, students and faculty who live in town can arrive to campus without bringing their vehicle. Encouraging local students and residents to pursue alternate means of transportation is vital to meeting the future space needs of the campus. The number of students, faculty, and staff who could utilize alternate modes of getting to campus are listed below:

- Within a one-mile radius of campus: 1,462
- Within a three-mile radius of campus: 2,210

## projected parking demand

The table below illustrates future parking need for Eastern Kentucky's desired enrollment growth to 20,000 students. In support of efforts to become a more sustainable campus, the Master Plan uses parking space totals from Scenario Two (highlighted in the dashed red box). This scenario assumes a 12-percent reduction in parking demand. This reduction should be accomplished through improved transit, bicycle, and pedestrian networks as explained in the Figures 5.3-5.8 on the following pages.

CATEGORY	EXISTING ENROLLMENT	PROJECTED ENROLLMENT	EXISTING PARKING SPACES	PROJECTED PARKING SPACES NEED	PROJECTED PARKING SCENARIO ONE <sup>1</sup>	PROJECTED PARKING SCENARIO TWO <sup>2</sup>
Student Parking	16,305	20,000	6,539	8,021	7,459	7,058
Staff Parking	3,309	3,834	2,365	2,740	7,548	2,411
Handicap Parking			228	280	280	280
Visitor Parking			47	58	58	58
Other (DOCJ/Performing Arts/Carpool)			599	599	599	599
Projected Parking Loss <sup>3</sup>			1,322	1,322	1,322	1,322
New Parking Spaces Needed			1,322	3,241	2,488	1,951
Required Parking Acreage			10	24	19	15
Parking Demand (Total Spaces Needed)			9,778	11,697	10,944	10,407

### NOTES:

1. Scenario 1 assumes a 7 percent parking demand reduction
2. Scenario 2 assumes a 12 percent parking demand reduction
3. Projected parking losses are based on proposed master plan moves

\*Special use parking increases are dependent on the addition of any special use facilities





Figure 5.3, Open Space and Pedestrian Flow Framework

Scale: 1"=1600'

- Athletic Green Space
- Informal Open Space
- Formal Quad/Green Space
- Plaza Space



Figure 5.4, Proposed Bike Paths and Bike-Share Stations

- Bicycle Path
- Bike Share Station

## parking and transit plan

Plans for parking and transportation are informed by the goals of the Master Plan to create a more pedestrian friendly campus with a network of green open spaces, and to create a campus environment in which students want to live, work/study, and play during the week and on the weekends.

Improving infrastructure for bike routes through campus and installing bike share stations at strategic locations will contribute to EKU's sustainability initiatives and make this alternate means of transport more attractive for students and faculty.



Figure 5.5, Parking Losses and Gains

- New Parking Lot
- Existing Parking Lot Remains
- New Parking Deck
- Existing Parking Lot Removed

Parking lots occupying valuable space in the campus core will be removed and replaced with communal open space or reserved for future building sites. New parking lots on the south campus will provide replacement spaces for residential students. To minimize lot-to-lot parking spot “hunting”, smaller lots will be condensed into parking decks, and spaces in the Alumni Coliseum Lot will be expanded for faculty and commuter students.



Figure 5.6, Parking Lot Use Rezoning Diagram

- Commuter Parking
- Commuter/Faculty Shared Parking
- Staff/Faculty Parking
- Resident Parking

**Total Spaces Provided by Permit Type:**

- Residential Spaces: 3,820
- Faculty Only Spaces: 1,300
- Commuter Only Spaces: 2,515
- Shared Faculty/Commuter: 2,575





Figure 5.7, Proposed Vehicular Route Diagram

- Primary Road
- Secondary Road
- - - Future Road

Limiting vehicular traffic through the campus core will create safer conditions for pedestrians and declutter many of the views and vistas currently obstructed by parked vehicles. When and if the University develops the additional land on south campus, circulation roads connecting to adjacent neighborhoods are recommended. To reduce congestion on Kit Carson Avenue, a secondary north-south route is proposed along the eastern edge of the property that borders the cemetery.



Figure 5.8, Proposed Campus Shuttle Route Diagram

- - - Shuttle Route
- Shuttle Stop
- Game Day Only Shuttle Stop

As previously stated in the Executive Summary, a reliable, convenient and safe transit system is fundamental to an integrated and pedestrian-friendly campus. An enhanced shuttle service will link north and south campus and facilitate the relocation of residential parking to south campus. This enhanced shuttle service will also decrease vehicular traffic within the campus, reduce daily vehicular trips, and allow for less parking in the campus core, while improving service.

