



PITTSBURG STATE UNIVERSITY

CAMPUS MASTER PLAN

SPRING 2011



Table of Contents

Introduction	1.1
Intent & Purpose	1.1
University Mission Statement	1.1
Planning Process	1.2
Project Goals	2.1
Stakeholder Interviews	3.1
Guiding Principles	4.1
Campus Sustainability	5.1
Utilization Study	6.1
Classroom Utilization	6.1
Building Utilization Throughout Day	6.2
Classroom Utilization	6.3
Classroom Utilization Targets	6.3
Classroom Fit	6.4
Lab Utilization	6.4
Current Campus Plan	7.1
2011 Master Plan	8.1
Master Plan Overview	8.1
Area Improvements	8.2
Master Plan Policies	9.1
Implementation	10.1
Appendix A	A.1
Existing Campus Conditions	A.2



Introduction

Intent & Purpose

The Pittsburg State University Campus Master Plan is the principle document outlining the University's direction, policy and action for future facility improvements. The plan was developed with the general purpose of guiding and implementing the coordinated physical improvements of the campus in accordance with existing and future needs, while best promoting the general welfare of the students, faculty and staff. Properly used, this campus master plan is intended to guide the University towards sustainable and beneficial facility decisions over the next ten years.

The Pittsburg State University Campus Master Plan is a roadmap for the future envisioned by the students, faculty and staff. This document details the improvements, framework, and strategies needed to effectively implement this plan. The Pittsburg State University Campus Master Plan is comprised of ten chapters and one appendix:

1. Introduction
2. Project Goals
3. Stakeholder Interviews
4. Guiding Principles
5. Campus Sustainability
6. Utilization Study
7. Current Campus Plan
8. 2011 Master Plan
9. Master Plan Policies
10. Implementation
11. Appendix A: Existing Campus Conditions

University Mission Statement

Pittsburg State University, a comprehensive regional university, provides undergraduate and graduate programs and services to the people of southeast Kansas, but also to others who seek the benefits offered. This is accomplished by the unique combination of academic programs in the four colleges of the University: Arts and Sciences, Business, Education, and Technology. The university is equally committed to fulfilling its statewide mission in technology and economic development by facilitating partnerships with secondary and postsecondary educational institutions, businesses and industries.

The university supports an organizational and interpersonal structure that actively encourages individuals to achieve their potential. The university provides programs and services that create opportunities for students and other individuals to develop intellectually, ethically, aesthetically, emotionally, socially and physically. The university provides intellectual leadership and multicultural experiences that contribute to the preservation of the heritage of the region and the enhancement of its inhabitants. Finally, the university recognizes the world as interdependent and, thus, seeks to promote a broad and interactive international perspective.





The university fulfills the traditional academic missions of teaching, scholarship and service. Excellence in teaching is the primary focus of the university. The university recognizes that active scholarship and creativity add vitality to teaching, expand and refine the knowledge base and are instrumental to the professional development of the faculty and staff. Programs of professional and community service promote and strengthen university endeavors. Pittsburg State University fosters a campus culture of assessment and accountability that supports strategic planning and the continuous improvement of its academic programs and administrative processes.

Planning Process

The planning process used in formation of the Pittsburg State University Campus Master Plan is composed of three general phases, incorporating stakeholder input throughout the entire process. The three phases include:

1. Assessment
2. Alternatives
3. Direction

Assessment

The purpose of the Assessment phase is to become knowledgeable about the campus and its surrounding context through the collection and examination of pertinent data. The Assessment phase included site and building evaluations by the consultant team as well as collection of issues and goals identified through stakeholder engagement.

Alternatives

In the Alternatives phase a series of future development alternatives depicting potential future scenarios for Pittsburg State University were presented. Each alternative addressed the issues and goals identified as well as data gathered during the Assessment phase. Each alternative was reviewed and commented on. From those comments received, a preferred direction was established.

Direction

The Direction phase includes creation of the plan document based on the preferred direction and plan goals, which were established during earlier phases. Included in this plan is a series of future recommendations for the University to undertake upon completion of the plan.

Project Goals

Goals

During the Assessment phase of the planning process, the consultants polled participants on what goals were most important to the success of the Master Plan. The following goals were reviewed against and aligned with the goals of the 2007 Strategic Plan for Pittsburg State University.

The campus master plan should:

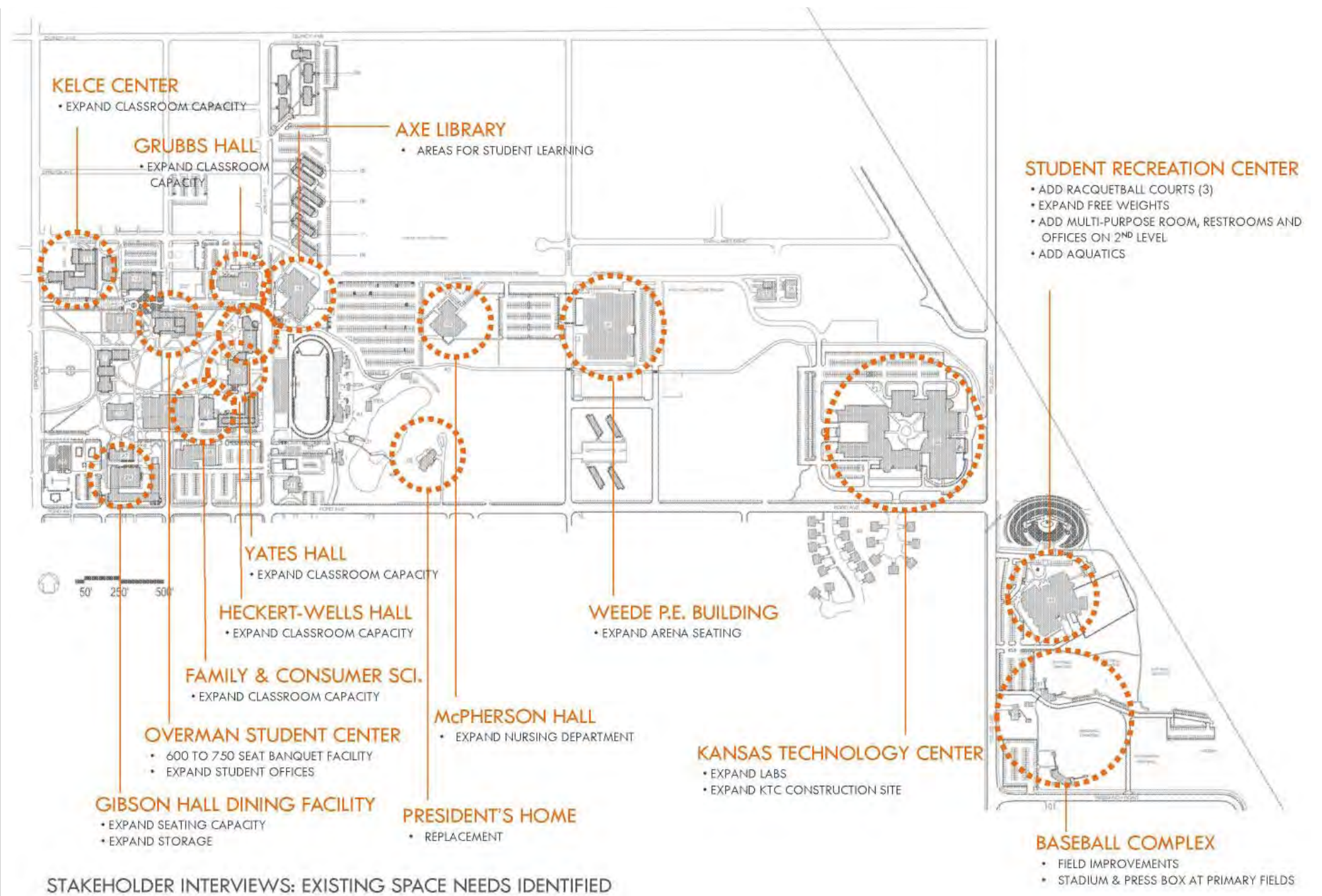
- Be proactive in providing a planned and purposeful future;
- Enhance the learning & living environment;
- Align facilities with strategic needs and growth;
- Recognize and bridge the east and west areas of campus;
- Maximize operating efficiencies;
- Foster a safe and secure campus;
- Define & enhance campus aesthetics;
- Enhance engagement with external stakeholders; and
- Institutionalize environmental sustainability.

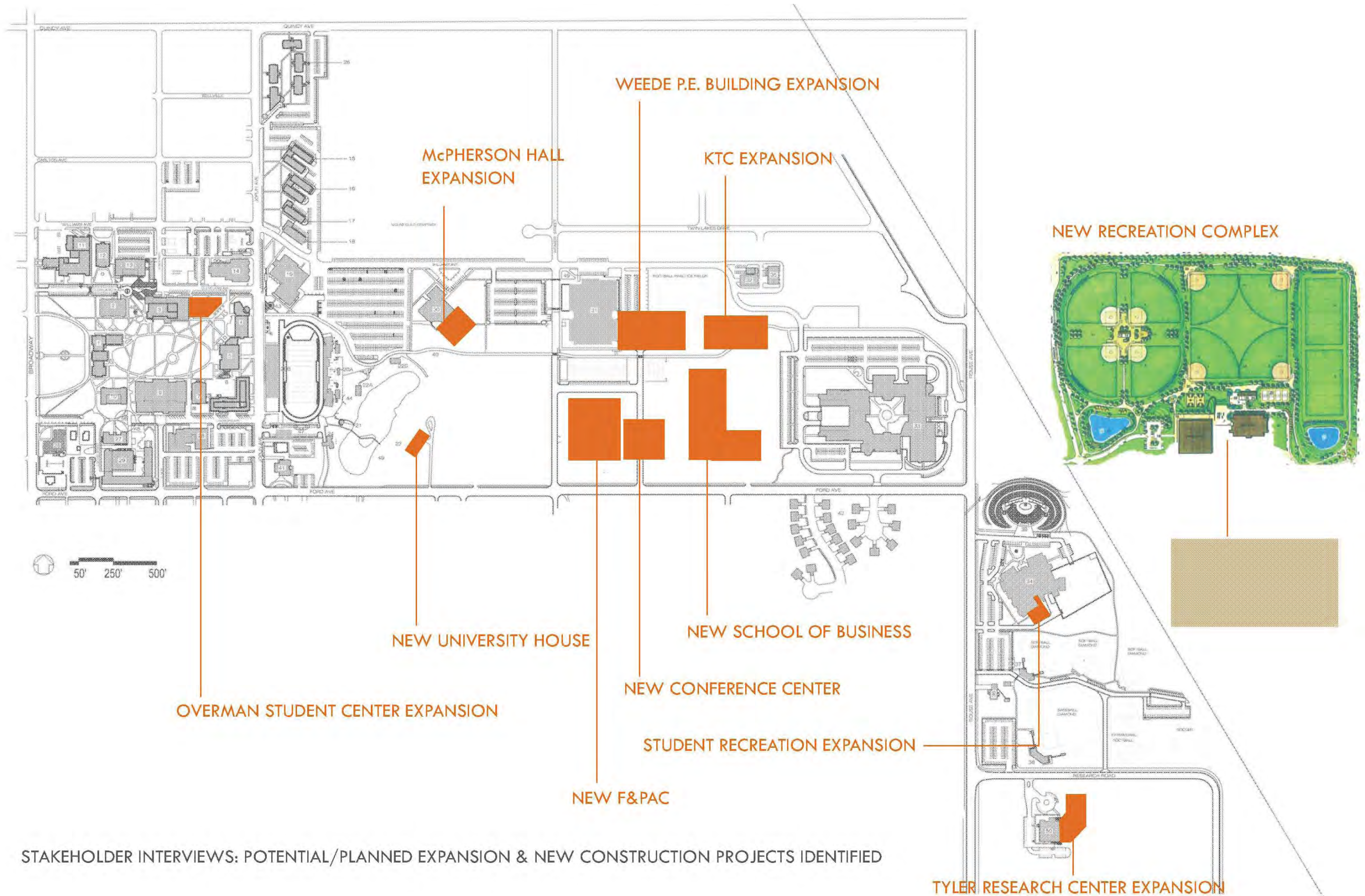


Stakeholder Interviews

A broad range of stakeholders were interviewed during the initial phase of the planning process to identify campus and facility deficiencies as well as space needs. Project stakeholders included:

- President, Provost, Administrative Vice Presidents.
- Deans of Arts & Sciences, Business, Education, Technology, Continuing & Graduate Studies, Enrollment Management, Student Success, and Library Services.
- Chief Information Officer, Directors Of Facilities Planning, Building Trades, Landscape Maintenance, And Custodial & General Services.
- Athletics.
- Analysis, Planning and Assessment.
- Representatives of Campus Life and Auxiliary Services, University Housing, Student Center, Campus Recreation, University Police, and Parking Services.
- Registrar.
- Campus Sustainability Committee.
- City Of Pittsburg.





STAKEHOLDER INTERVIEWS: POTENTIAL/PLANNED EXPANSION & NEW CONSTRUCTION PROJECTS IDENTIFIED

Guiding Principles

Information gathering during the assessment phase of the planning process was consolidated into the following guiding principles for the master plan:

- This Master Plan provides the intended pattern for long term development of the campus. Any alterations or new construction should support this vision for the campus.
- New construction, renovations, site improvements and modifications should incorporate and demonstrate sustainable design practices.
- Overall campus growth over the next ten years is planned for an average of 1% to 2% per year. Programs growing at higher rates (the health sciences and the Kansas Technology Center, for example) are anticipated to constitute most of this growth, while other departments on campus remain basically stable.
- Each department has unique facility issues that will be addressed on a building by building basis.
- Hartman Hall with its central location should be reclaimed as an academic facility. Facility services currently housed in Hartman should be relocated.
- Building renovations will address most specific classroom, accessibility, study/work/social space, conference and/or office needs.
- The stock of smaller, less than 20 seat classrooms needs to be increased on campus.
- A small stock of general classrooms should be identified and utilized across departments as a relief valve for short term scheduling issues.
- Housing expansion should be anticipated to maintain the proportion of students living on campus as enrollment grows over the next ten years.
- Additional parking on campus is needed to support new facilities, reduce parking in adjacent neighborhoods, and meet demands on campus.
- To reduce parking demand, the current community transit system should be better utilized to provide a reliable shuttle service across campus.



Campus Sustainability

STARS

As a separate but related initiative, the University is developing a Sustainability Master Plan for the campus. PSU has selected the Sustainability Tracking, Assessment & Rating System (STARS), developed by the Association for the Advancement of Sustainability in Higher Education to guide development of the Sustainability Master Plan.

The STARS system is a comprehensive approach to campus sustainability. It addresses three categories:

Category 1: Education (co-curricular education and curriculum) and Research.

Category 2: Operations.

- building design, construction, operations and maintenance
- climate impact
- food purchasing for dining services
- building energy consumption and renewable energy
- grounds management
- transportation
- waste reduction and management
- water consumption and management

Category 3: Planning, Administration and Engagement.

- coordination of strategic and physical facilities with sustainability
- diversity and affordability
- human resources
- investment
- public engagement

As campus development continues, it should be coordinated with the Sustainability Master Plan. To fulfill the goal of institutionalizing environmental sustainability, new construction and renovation should be designed to achieve at minimum a LEED (Leadership in Energy and Environmental Design) Silver level of certification, as defined by the U. S. Green Building Council.

Though LEED certification is not available for site improvement projects not associated with building projects, site development should be designed in accordance with LEED principles. For example, landscape material selections should be drought tolerant, low maintenance and disease resistant to minimize the need for extensive watering and the use of fertilizers and herbicides. Storm water management should encourage natural filtering and on site absorption. Parking area improvements should include more planting islands and landscaped areas to visually buffer large expanses of parking and mitigate heat island effects. Additionally, parking areas should include electric vehicle charging stations and signage that reserves prime parking spaces for commuters that carpool and drive alternative fuel vehicles. Lastly, paved areas should be converted in to permeable landscaped areas whenever feasible, to improve stormwater runoff and the aesthetic character of the area.



Classroom Utilization

Utilization Study

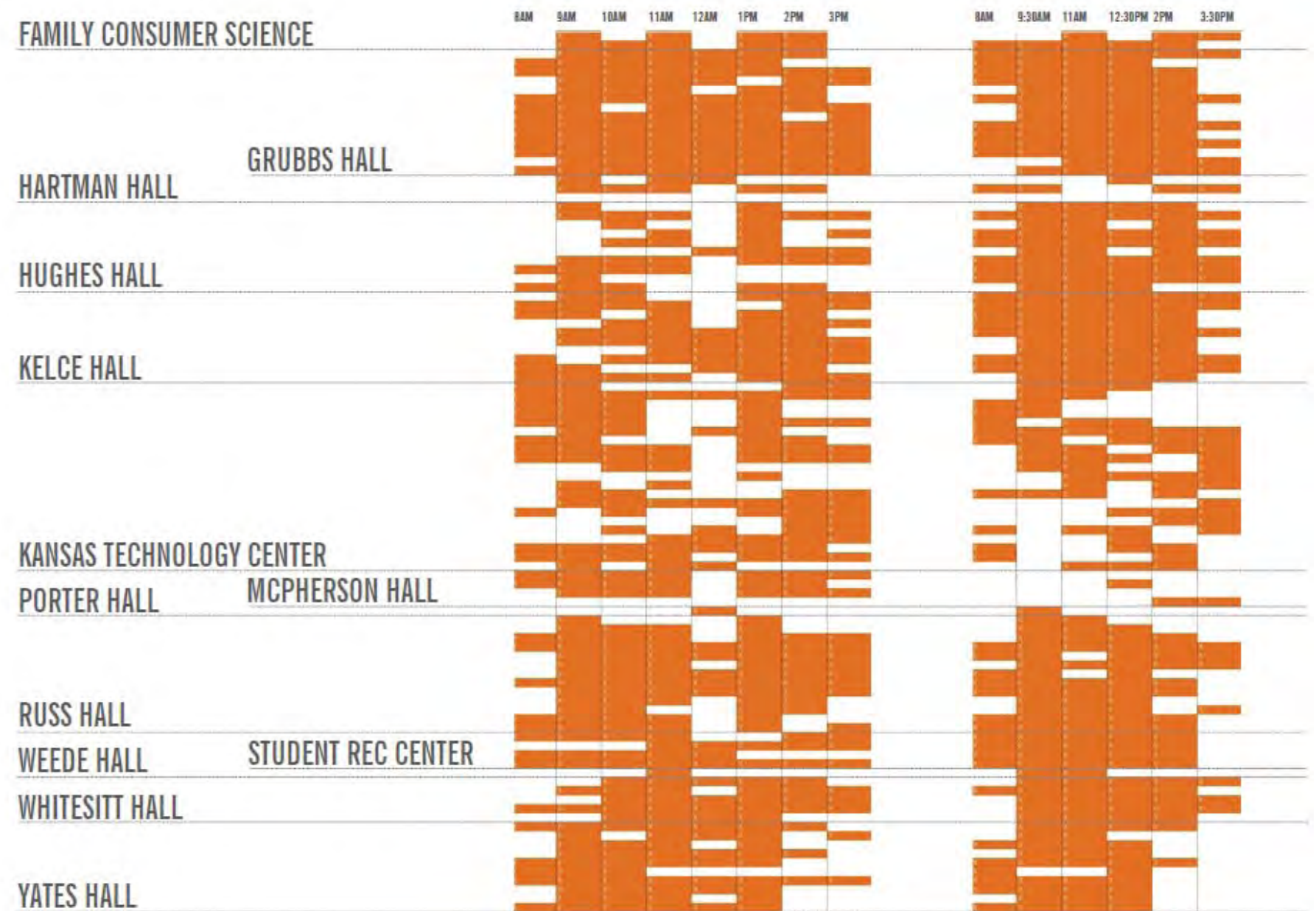
In an effort to measure the utilization of classroom space on the campus as a whole, data from the registrar was compiled in a way that would allow accurate generalizations of the demand on classroom space as well as an analysis of classroom type needs. The first step is to simply take a look at how often classrooms across the campus are occupied by a scheduled class activity.

All data for the Utilization Study was obtained from the following Pittsburg State University documents:

- 2008 Facility Inventory
- Classroom Details & Descriptions
- Fall 2008 Classroom Usage
- 2009-2010 Academic Course List

Analysis for the Utilization Study was based on the following criteria:

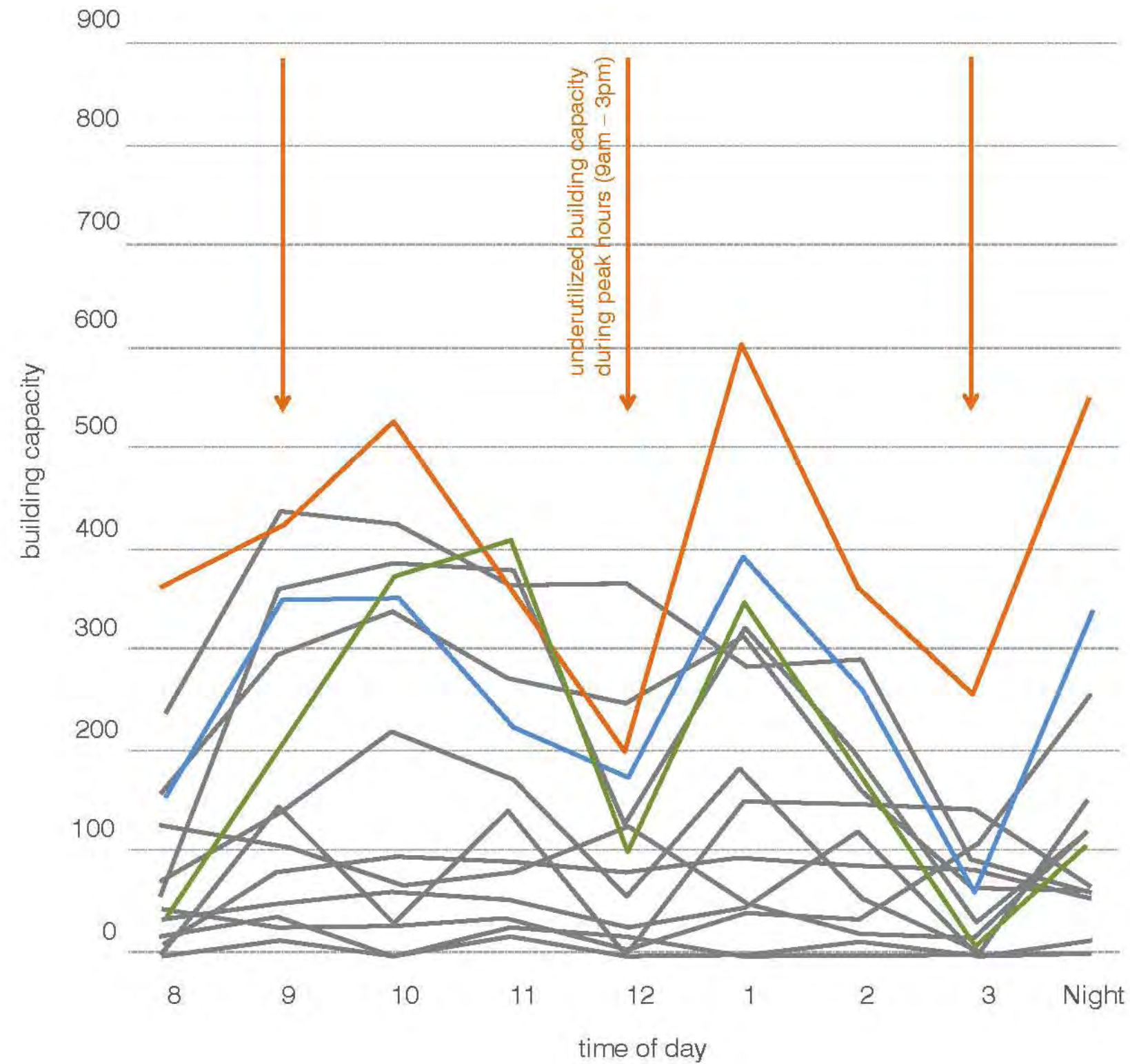
- Monday-Wednesday-Friday Schedule
- 8:00 a.m. - 4:00 p.m. (prime time)
- Room use distinction by 'use code' as shown in the 2008 Facility Inventory



CLASSROOM UTILIZATION

- Occupied Classroom
- Unoccupied Classroom

FAM
 GH
 HA
 HH
 HW
 KC
 KTC
 MH
 MP
 PH
 REC
 RH
 TBA
 WE
 WH
 YH



BUILDING UTILIZATION

Building Utilization Throughout Day
Utilization Study

Many campuses have a shared sense that their classroom stock is overcrowded and unavailable to schedule. Looking at building utilization per building across the class day illustrates that indeed there are peak periods that may create this perception. Generally scheduling in a way that evens out the graph and spreads the usage more evenly throughout the day will ease this sense of overcrowding somewhat.

Classroom Utilization

Utilization Study

Four primary variables were included in the analysis of classroom utilization: frequency of use (or periods occupied during the day), number of seats scheduled to be filled, number of seats that could physically be provided in the classroom (otherwise known as “room cap”), and number of seats shown as usable in the scheduling policy (otherwise known as the “course cap.”)

The combination of the four primary variables leads to a utilization factor including time and capacity expressed as a percentage. Pittsburg State University’s overall classroom utilization is calculated at 35%. It is clear that changes to the course cap policy could be one way to increase utilization of the existing campus classroom stock.

Classroom Utilization Targets

Utilization Study

The calculated 35% utilization percentage is a direct result of combining multiple components of the scheduling data from the University into one factor. Defining what the utilization factor should be, the target, is something each University must decide for itself. Two ways of devising a utilization target for Pittsburg State University were calculated as a way of illustrating a possible high and low percentage. This was done by determining the “reasonable” top utilization rate of any classroom on campus. By determining the highest number of periods a classroom could reasonably be scheduled in one day combined with the highest number of seats that could reasonably be filled for one class period we arrive at a “reasonable” maximum utilization target for the classrooms. This percentage can typically range all the way from 44% to 78% depending on campus classroom sizes, course caps, scheduling policies and other agreements in place on any one University campus. In an era of limited resources, we believe that 69% is a reasonable maximum utilization target, although a target of 53% utilization would be a significant improvement. The current Pittsburg State University utilization rate stands at 35% indicating a good degree of available classroom stock into the near future.

87 %
CLASSROOMS UTILIZED
7 OF 8 PERIODS OF THE DAY

TARGET BUILDING UTILIZATION

CLASSROOMS FILLED TO 80% OF CAPACITY
80 %

TARGET CLASSROOM UTILIZATION

87 % x **80** %

TARGET BUILDING UTILIZATION

TARGET CLASSROOM UTILIZATION

= **69** %

TARGET CAMPUS UTILIZATION

69 %

TARGET CAMPUS UTILIZATION

35 %

CURRENT CAMPUS UTILIZATION

75 %
CLASSROOMS UTILIZED
6 OF 8 PERIODS OF THE DAY

TARGET BUILDING UTILIZATION

CLASSROOMS FILLED TO 80% OF CAPACITY
70 %

TARGET CLASSROOM UTILIZATION

75 % x **70** %

TARGET BUILDING UTILIZATION

TARGET CLASSROOM UTILIZATION

= **53** %

TARGET CAMPUS UTILIZATION

53 %

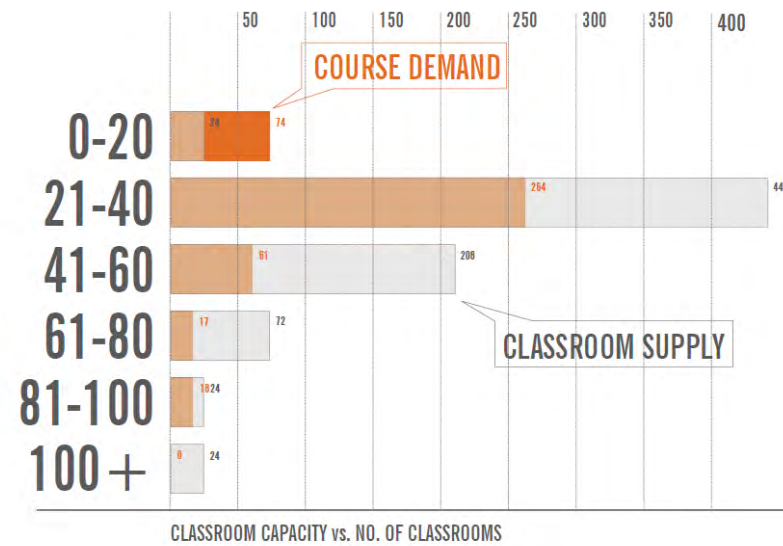
TARGET CAMPUS UTILIZATION

35 %

CURRENT CAMPUS UTILIZATION

Classroom Fit

Utilization Study



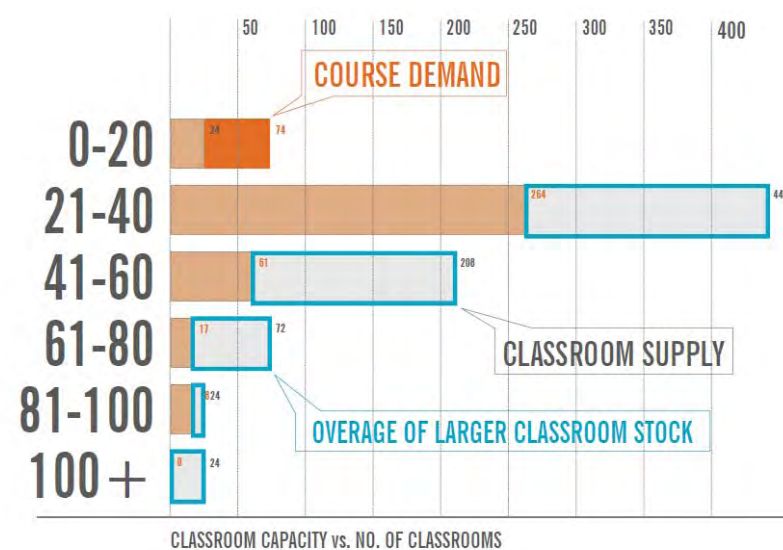
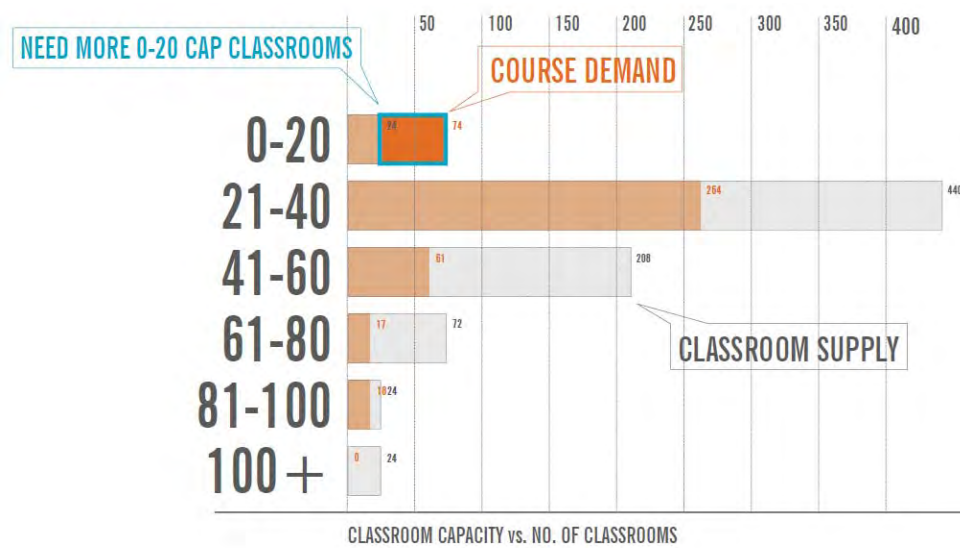
Another way to analyze classroom utilization is to evaluate the available classroom stock's ability to house different sizes of classes against the need for different sizes of classes generated by the courses offered and their maximum class enrollment. The number of classrooms at Pittsburg State University available at different sizes compared with the current demand shows that the University currently is "mismatched" in meeting the class size need generated by the course schedule and enrollment. There is a significant demand for more small classrooms with a 20 person capacity and a significant excess supply of classrooms in all the other categories of 21-100+ seat classrooms.

It is clear that if class size remains relatively unchanged, in other words if there are no policy shifts in the works that would change the size and range of classes offered, the University could increase the efficiency of the use of its classrooms simply through physically altering a portion of the current classroom stock to better provide space that more closely matches the class size need generated by the scheduled classes.

Lab Utilization

Utilization Study

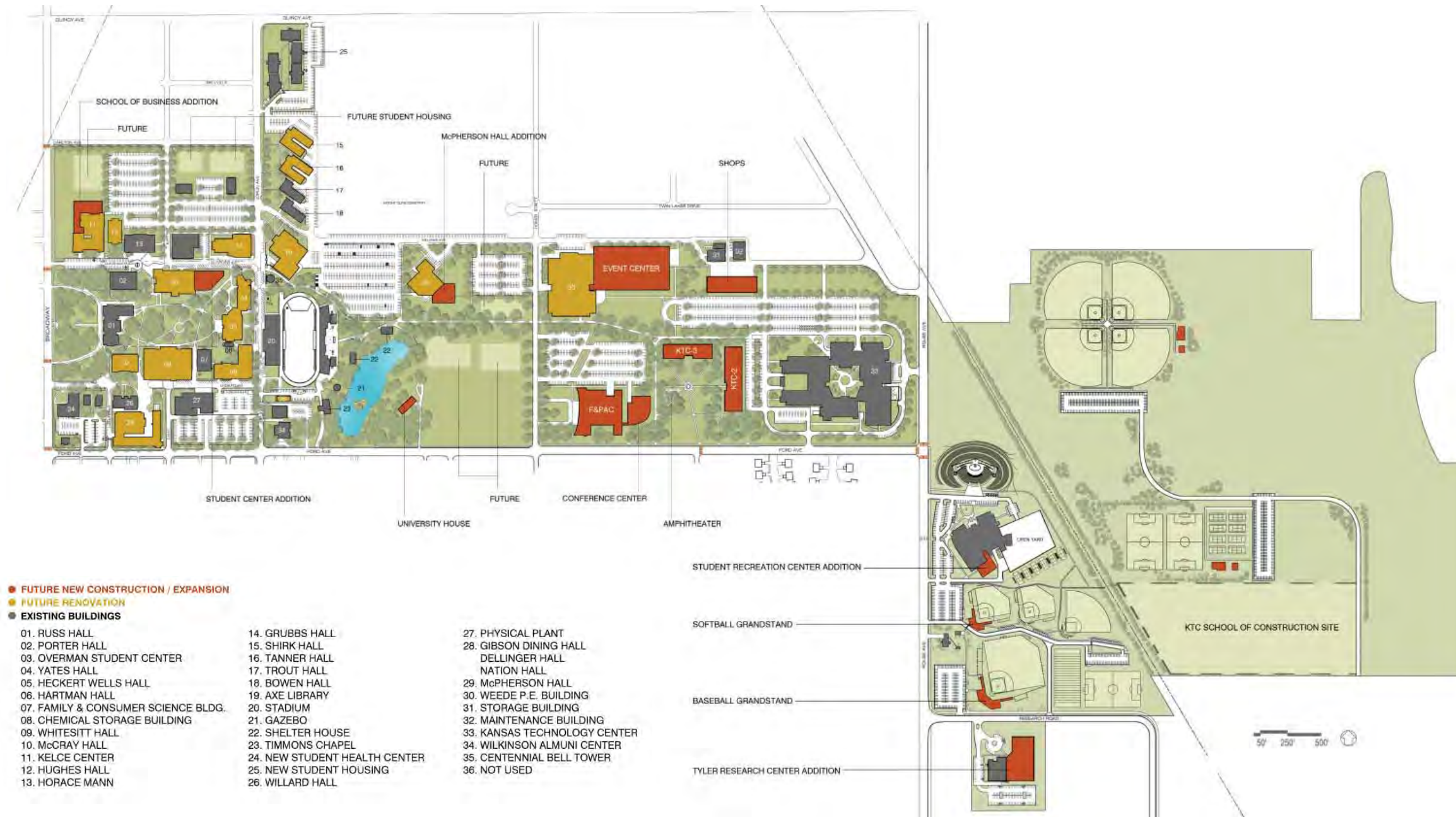
A similar evaluation of laboratory utilization was also performed yielding similar conclusions. While the current utilization for labs stands at 30% it is true that the target utilization for labs is typically less than for classrooms. We believe a reasonable utilization target for labs would be above 50%. Scheduling more classes in existing stock would improve the utilization number. Changes to the class cap would have the biggest impact on the utilization of the labs although more limited as a strategy given safety and instructional needs.





Current Campus Plan

The latest revisions to the Pittsburg State University Master Plan were made in 1999. This update to the 1999 Master Plan identifies a number of buildings and other campus improvements that are necessary over a period of time. This update also takes into consideration necessary changes because of the evolving needs of the University and the future needs of the campus. The above image illustrates the existing conditions on the campus. For an in depth analysis of the existing conditions on campus, see Appendix A: Existing Campus Conditions.



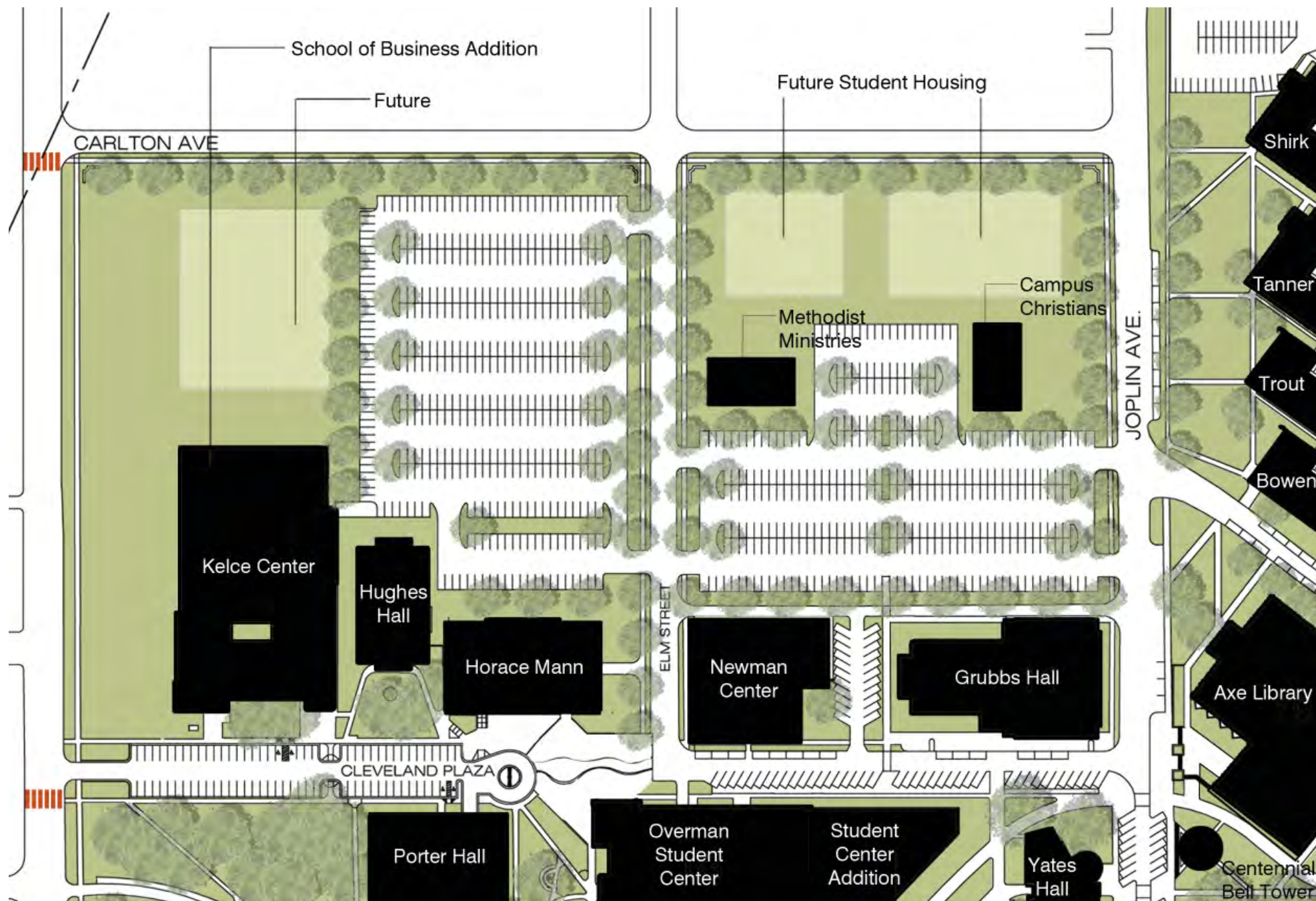
2011 Master Plan

The Master Plan for Pittsburg State University is intended to guide campus development over the next ten years, aiming for a campus that reflects the goals and values of the institution. Key features of the campus master plan include:

- Developing an east/west Campus Walk, providing a safe and attractive pedestrian thoroughfare across campus;
- Extending the distinct landscaping of the Oval eastward to unify the campus outdoor environs;
- Organizing new building construction around pedestrian oriented green space;
- Renovating the older buildings around the Oval to make best use of available resources;
- Enhancing the edges and gateways of campus to project a positive image for the campus; and
- Providing additional space near the west end of campus to relieve off-campus parking congestion and accommodate future growth in the campus housing system.

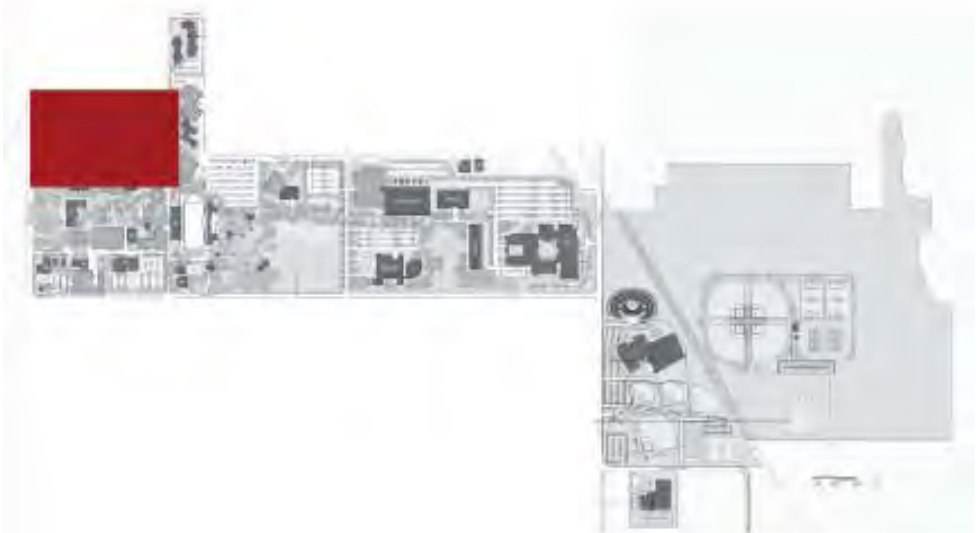
North Campus

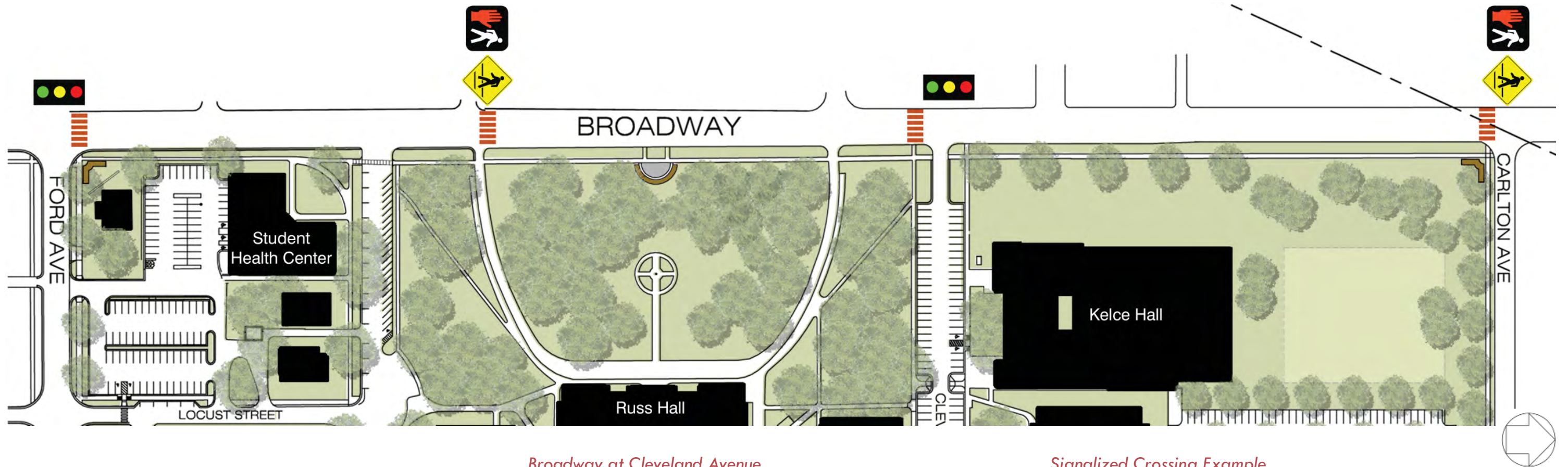
Area Improvements



The North Campus is a potential growth area for the University. Acquisition of additional property north of the campus between Broadway Street, Joplin Street, Carlton Avenue, and Cleveland Avenue will allow Pittsburg State to create a stronger campus frontage along Broadway Street, including a gateway statement at Calton Avenue. Furthermore, the north expansion will allow for additional off-street parking in the western part of campus and future student housing sites.

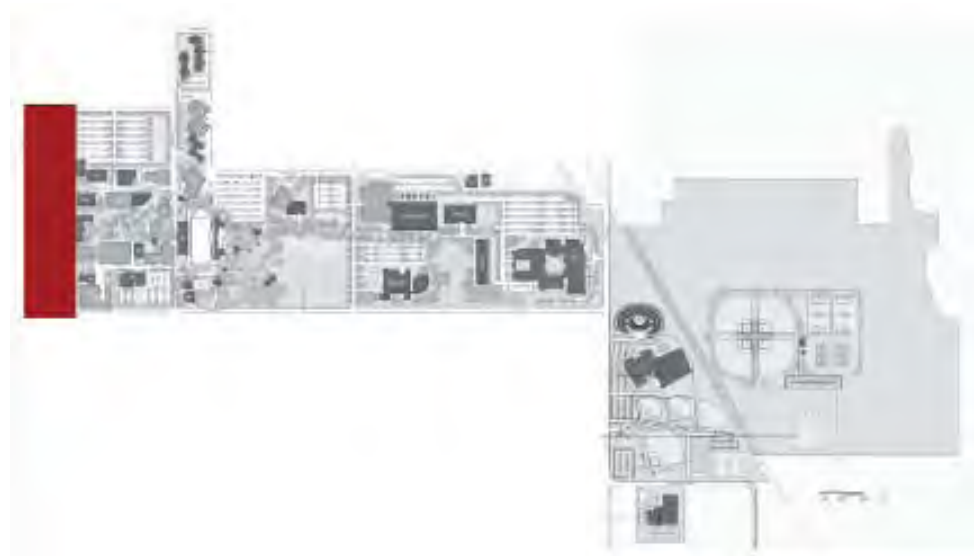
Pedestrian ways from the new parking districts should be clearly defined. This includes walkways along Elm Street and Joplin Avenue, as well as a landscaped pedestrian walkway between Grubbs Hall and the Newman Center connecting the lot to the north with the Student Center.





Broadway at Cleveland Avenue

Signalized Crossing Example

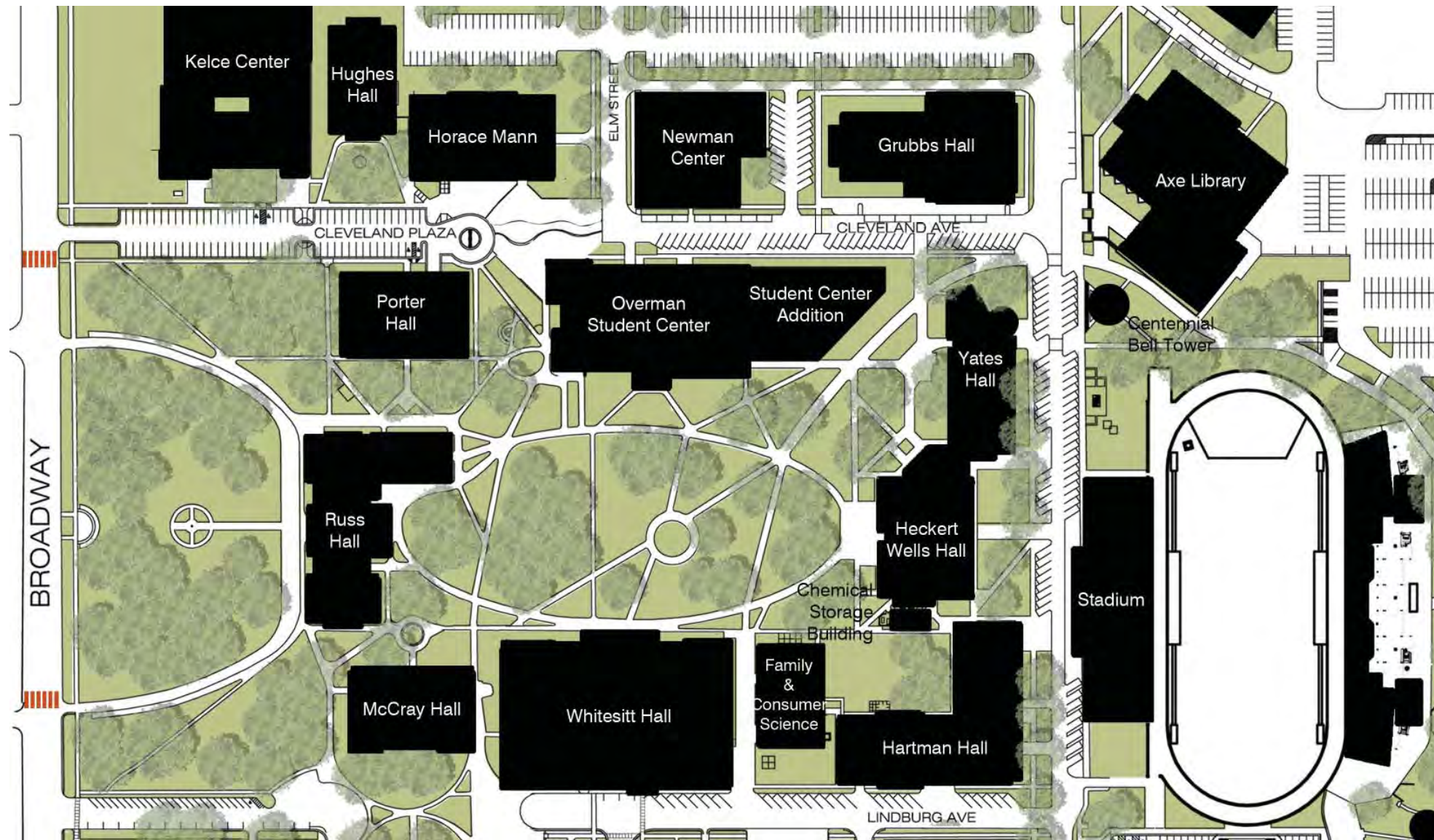


Broadway Frontage

Area Improvements

Augmenting the attractively landscaped forecourt at Russ Hall will be gateway improvements at Ford Avenue and Carlton Street. Renovations and an addition to Kelce Hall will complete the campus frontage onto Broadway Street. New traffic signals and crosswalks at Ford Avenue and pedestrian crossing signals, signage and crosswalks at Politzer Street and Carlton Avenue will improve pedestrian safety by better defining the campus presence to those traveling by. Removing the sidewalk that connects Broadway to the flag station in front of Russ Hall will discourage students from crossing Broadway Street mid-block.

Core Campus Area Improvements



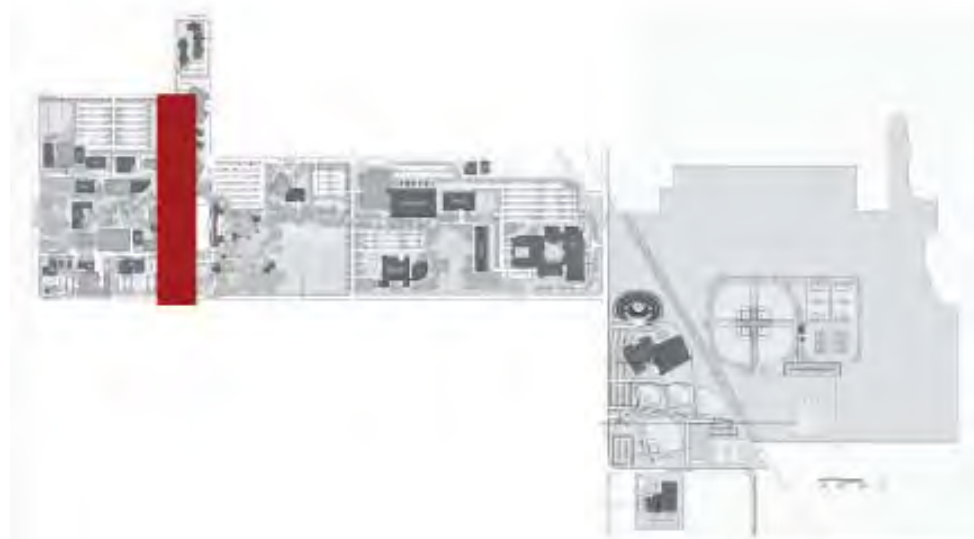
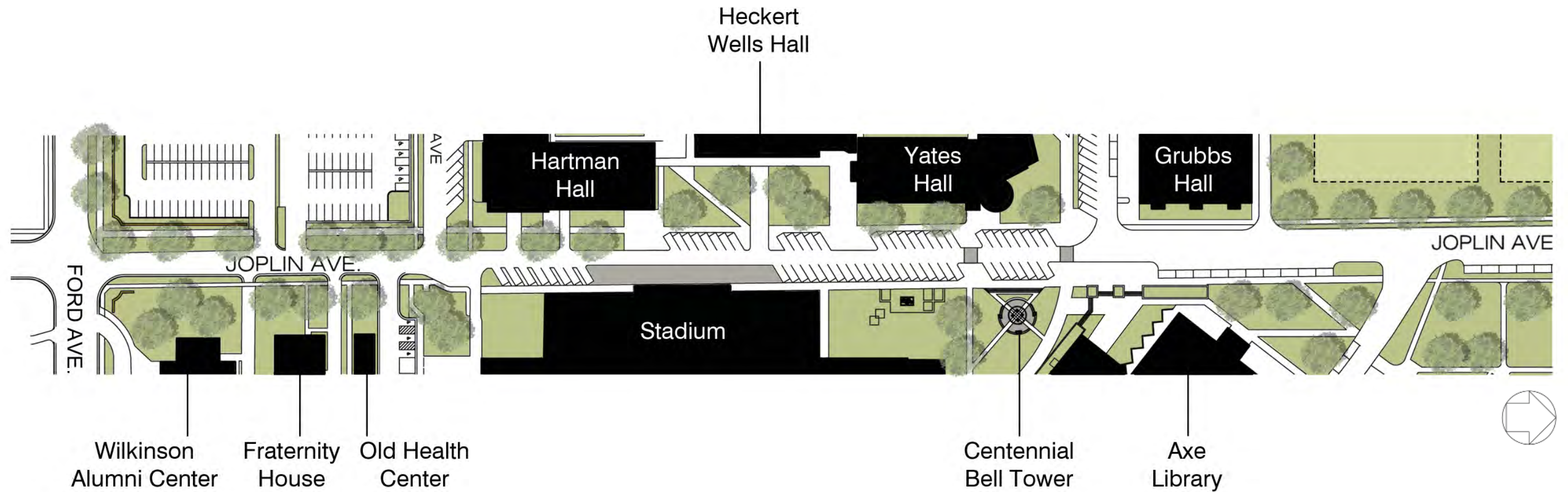
The established landscape and open space of the Oval should be maintained. The proposed addition to the Union should be combined with site improvements that will tie the west end of the Campus Walk to the Oval. As older buildings around the quad are systematically renovated to better meet current space needs, exteriors should also be renovated to preserve this distinctive campus center.

Renovation requirements for the academic buildings surrounding the Oval will vary. Hartman Hall will require the most extensive renovation to reclaim the building back to academic uses. Engineered systems – HVAC, lighting plumbing and fire protection – should be replaced. Interiors layouts should be preserved if current programmatic needs can be accommodated. Otherwise, interior spaces should be fully renovated. In addition, exterior finishes should be restored and the building envelope should be brought up to current energy standards.

Interiors of other academic buildings – including Whitesitt, Grubbs, Yates and Heckert-Wells - should be “right-sized” to meet current classroom and office space needs. Interiors should also be refreshed and updated with new finishes and lighting. The west exterior of Kelce Hall should be changed to present an attractive façade, appropriate to the public frontage along Broadway. Whether this is accomplished through an exterior renovation or a new addition is subject to programmatic needs.



The Physical Plant building presents a negative image due to the low-budget additions that have been tacked on over the years. Ideally, many of the uses should be relocated, allowing the additions to be removed and the building to be restored to the original brick structure.



Joplin at Lindburg Avenue

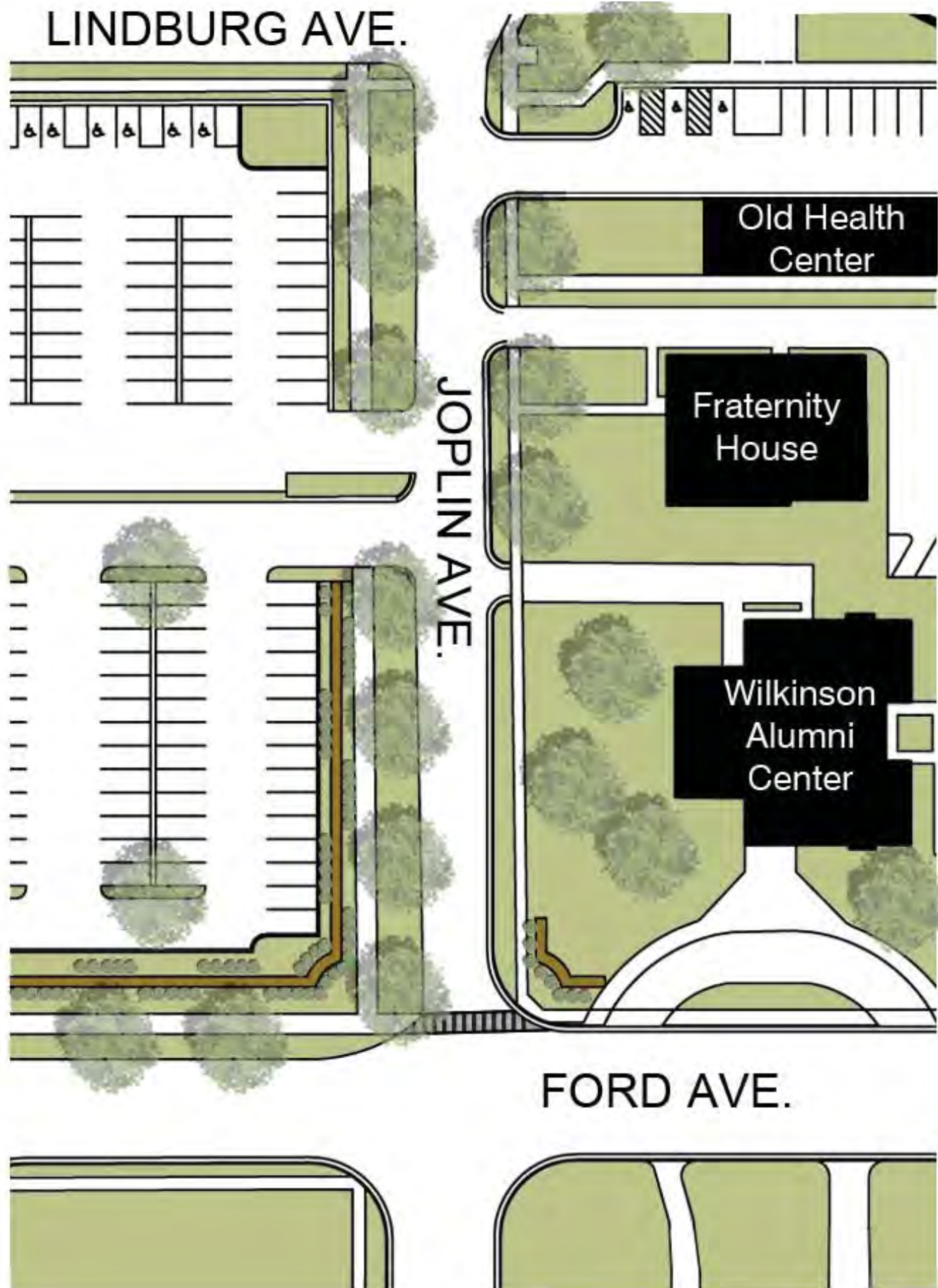


Curb Bulb Out Example



Joplin Street Area Improvements

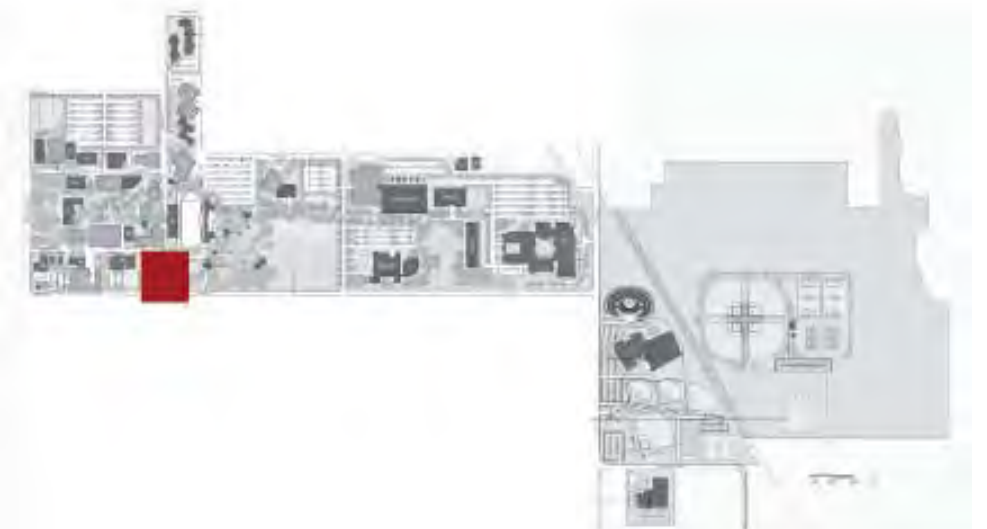
Streetscape improvements along Joplin Street, between Ford Avenue and Carlton Street, should formally separate the current two traffic lanes from on-street parking areas and green space. Pedestrian crossings should also be formalized, with the curbs extending to the traffic lanes, crosswalks defined, and parking set back to allow good visibility for both motorists and pedestrians.



Campus Edge & Gateways

Area Improvements

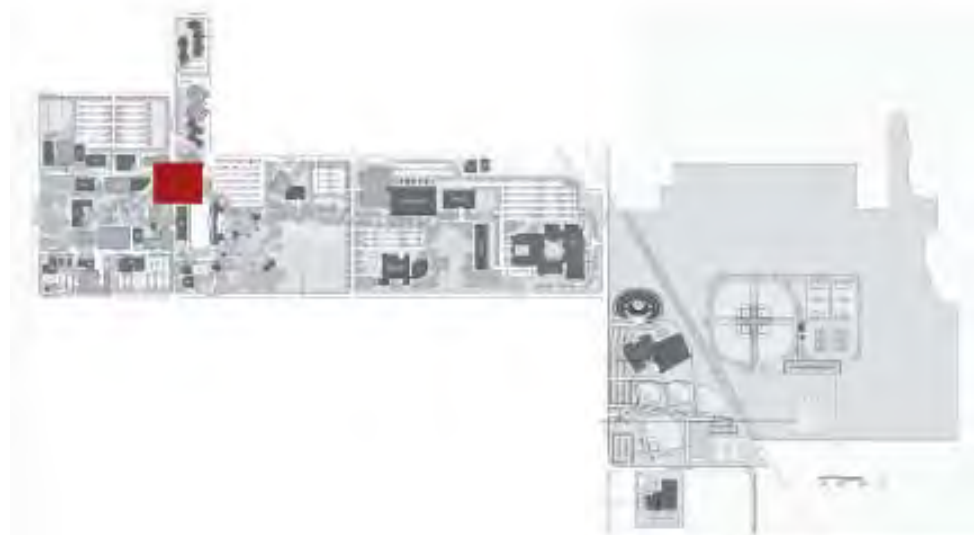
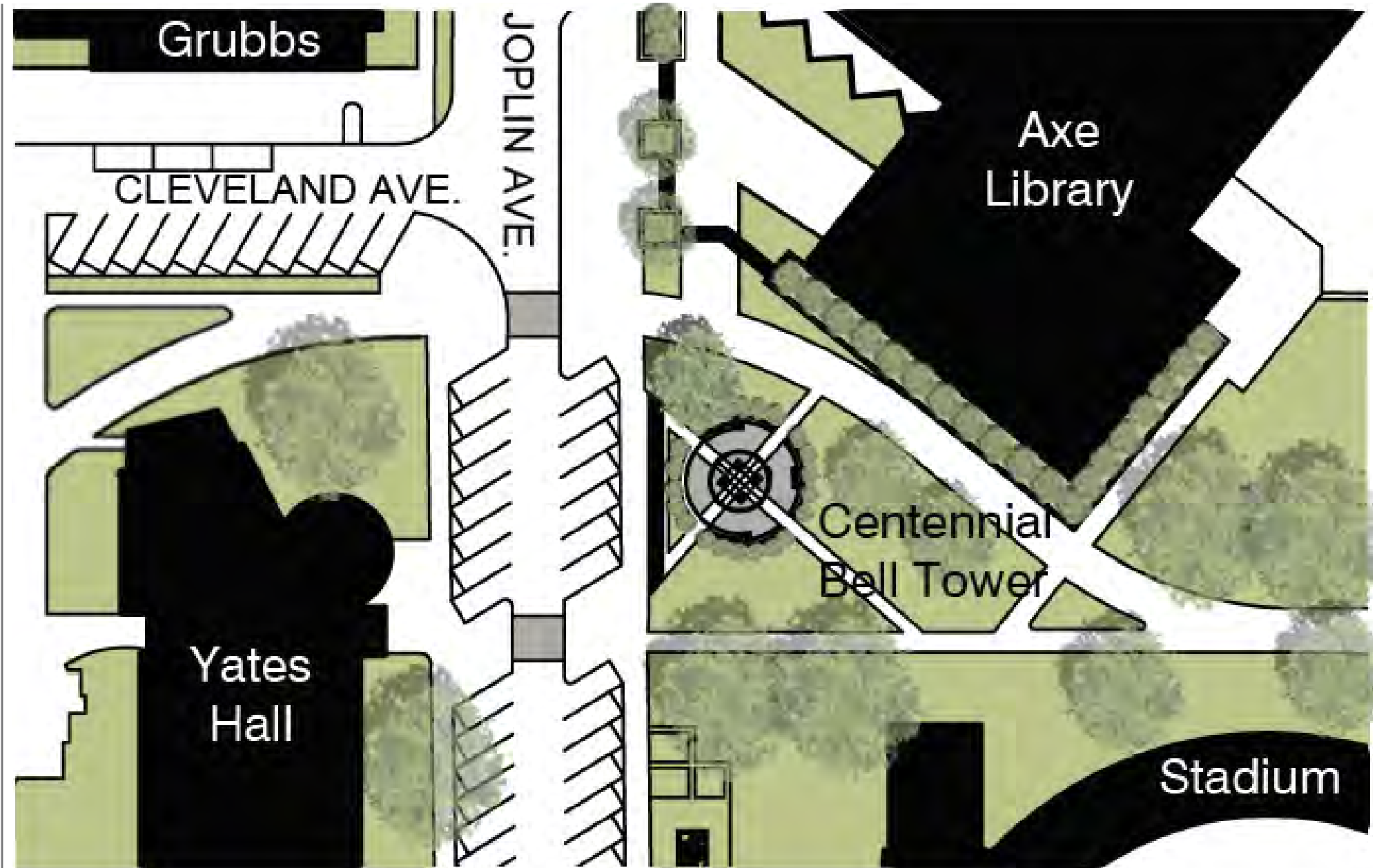
The intersection at Joplin Street and Ford Avenue should be formalized as a campus gateway, to inform locals and visitors they are entering the campus. Gateways should identify the University with signage and present a positive image. The campus edge along Ford Avenue should also be formalized with a consistent landscape treatment. Pedestrian traffic along Ford Avenue is significant; therefore this space should be improved to act as a pedestrian refuge from the surrounding vehicular traffic. Because of the limited space between the parking lots and Ford Avenue, the first row of parking should be removed and the pedestrian space should be defined with a low street wall framing the parking lot, landscaping adjacent to the wall, a sidewalk at least 10' wide, and a consistent street tree planting between the sidewalk and curb. In addition to these improvements, pedestrian crossing points at intersecting roads should be identified with a proper crosswalk.



Campus Walk at Joplin Street

Area Improvements

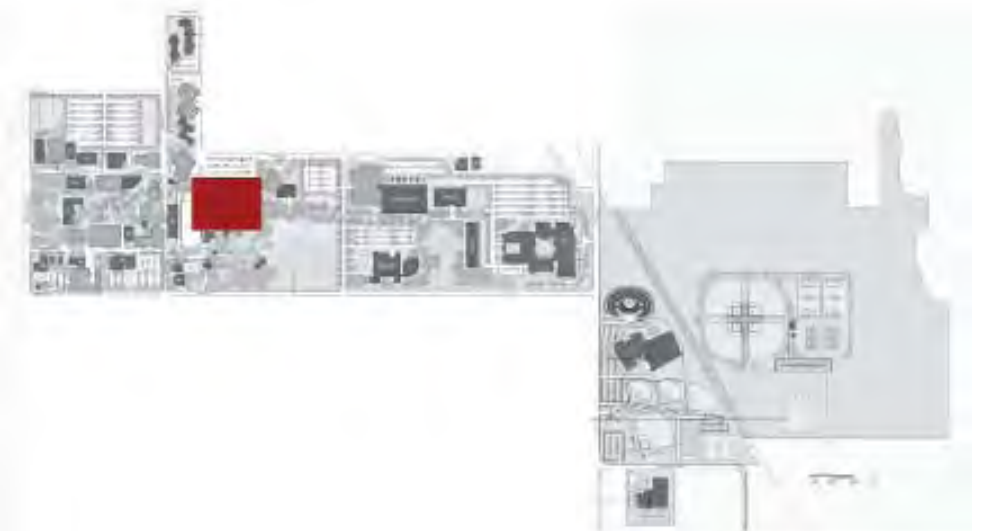
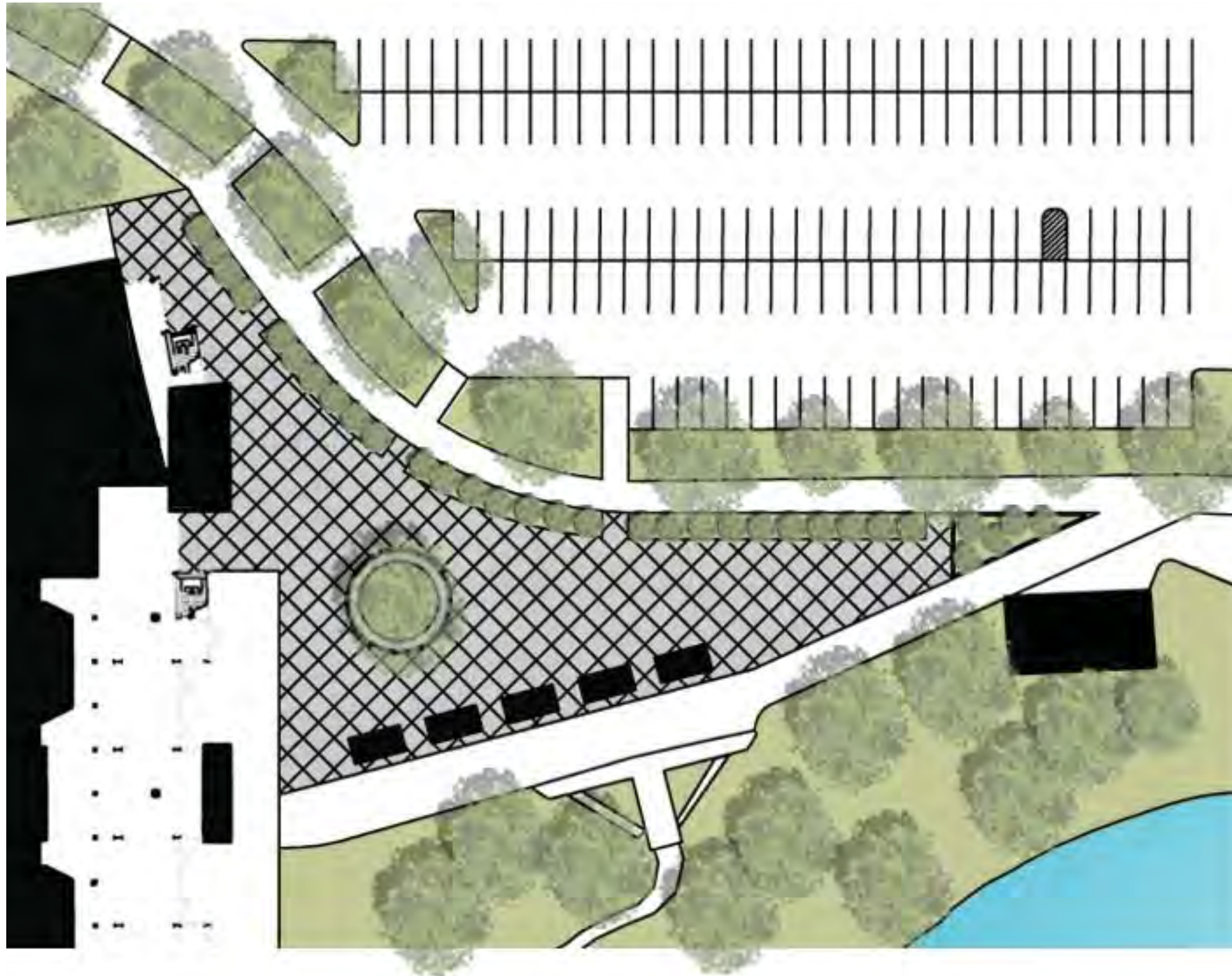
To continue the Campus Walk into the Oval, the path should be realigned to travel north of the Centennial Tower to the intersection of Joplin Street and Cleveland Avenue. This will require re-grading and reconfiguration of the plaza along the south side of the Library. The existing path that continues on to Yates Hall should remain, but be clearly subordinate to the main route.



Campus Walk at Gorilla Village

Area Improvements

The south edge of the Brown Parking Lot should be reconfigured with a landscaped buffer to clearly distinguish the Campus Walk from the parking and drive areas. This landscaped buffer would also create a pedestrian-friendly environment that would separate the parking lot, campus walk, and Gorilla Village into three separate spaces with different functions. The Campus Walk should have select crossing points where the parking lot and Gorilla Village can be connected. The Gorilla Village should be designed to accommodate large crowds and have adequate space for game-day events, including vendor stands, seating areas, and landscaping.

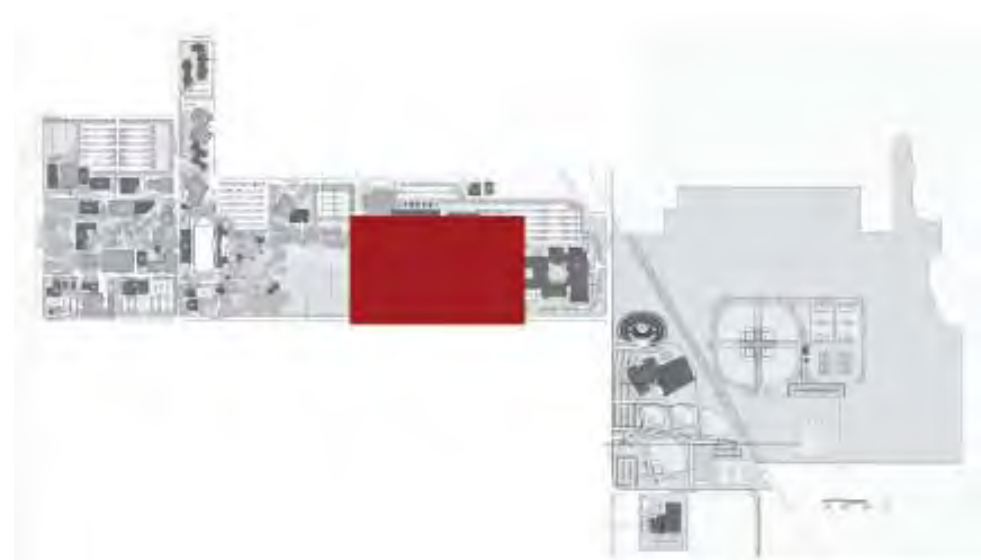
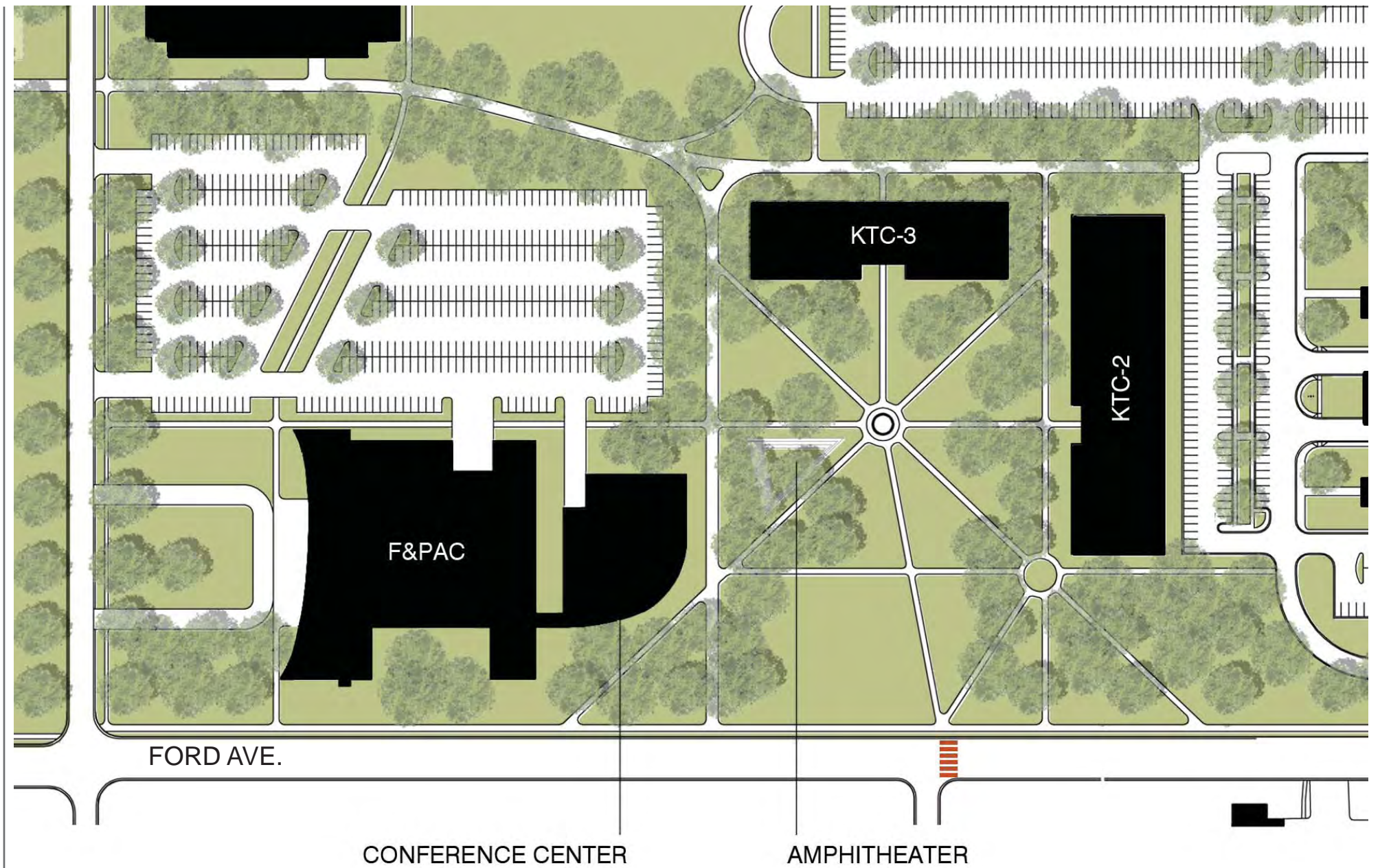


East Campus Quad

Area Improvements

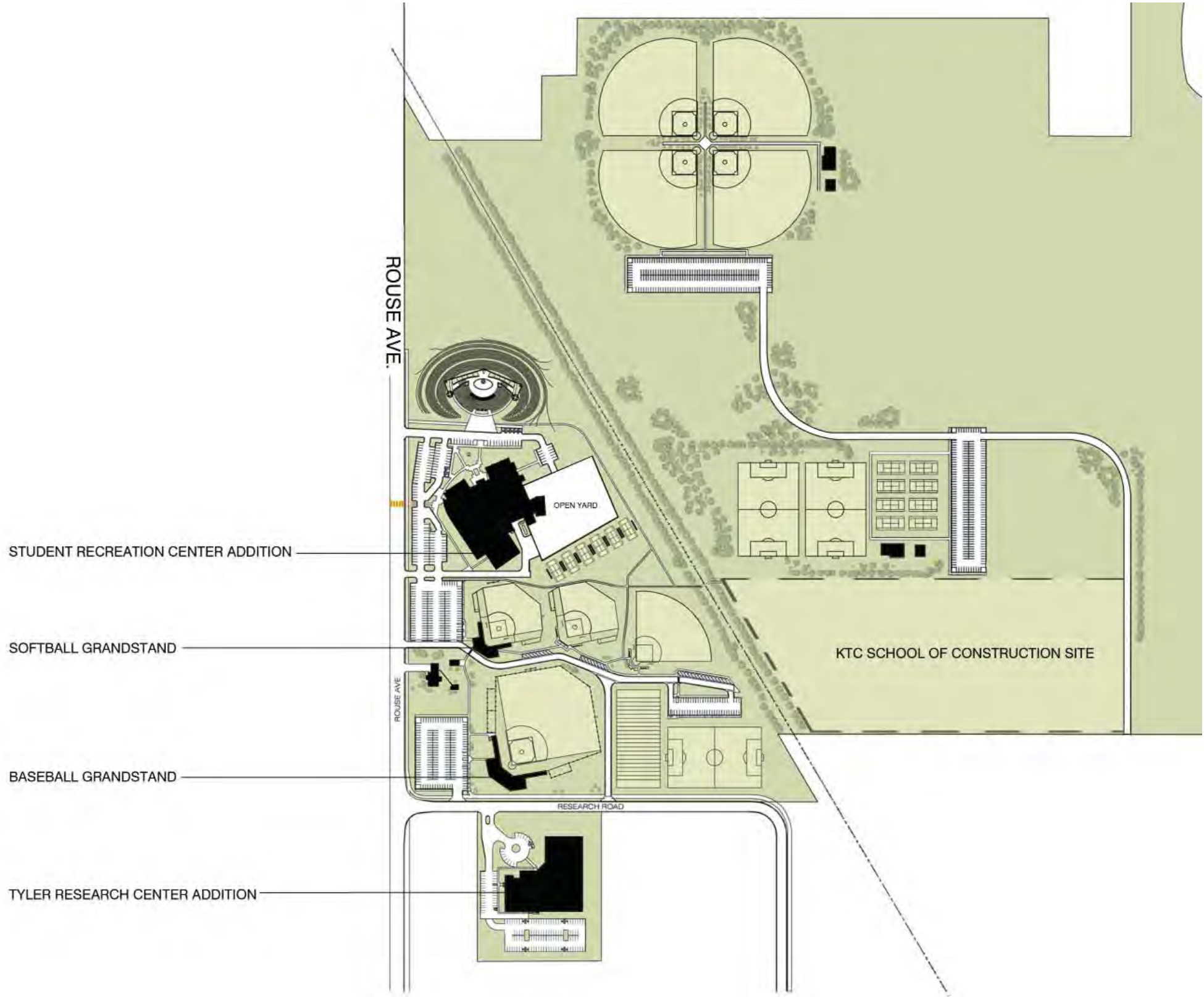
The planned Fine and Performing Arts Center and future expansions of the Kansas Technology Center (KTC) should be placed to define a second quad space on campus. Informal seating and gathering areas should be included in the new quad, along with an amphitheater to support larger ground and outdoor class settings. Additionally, landscaping this area similar to the Oval will help unify the campus's outdoor environs. The buildings forming the quad should engage the quad with windows and entrances facing the quad and at least a two story building mass. Although some of the KTC program may be more industrial in nature, the buildings should be configured with offices and classrooms facing onto the quad and shop and yard areas on the opposite side of the building. Furthermore, design of this area should consider how the Campus Walk ties into this space and passes through it.

A substantial watershed flows into and through the area between the KTC and the Weede facility. Special attention to the design and engineering of storm water management systems will be necessary for development of this area of campus.

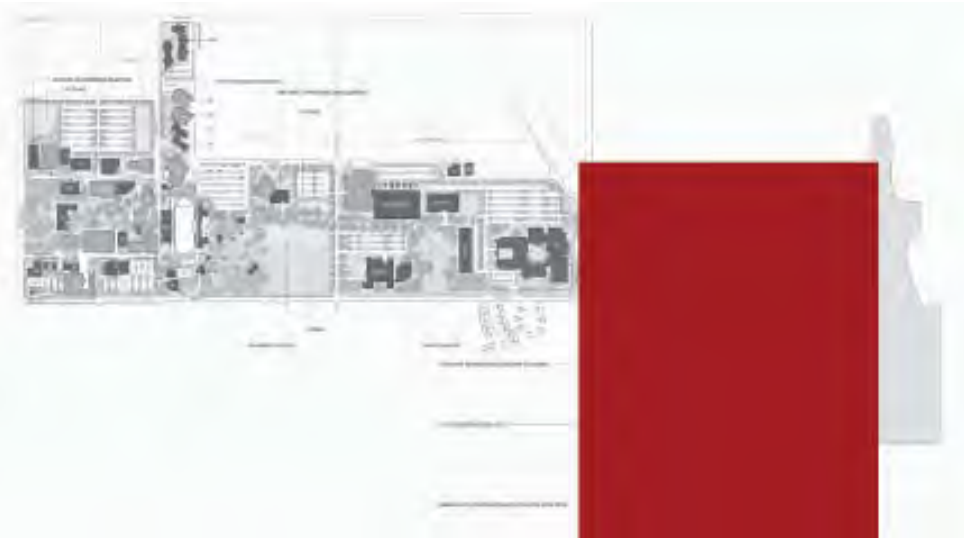


East of Rouse Avenue

Area Improvements



The Student Recreation Center and the Tyler Research Center are both slated for expansions. Other improvements east of Rouse Avenue include the Baseball/Softball Complex, as well as the Intramural Sports Complex, and a Construction Field Center of Excellence, both located east of the railroad tracks. Permanent press boxes and grandstands are needed for the baseball field and the primary softball field. Fencing is needed to define and secure all of the fields. Due to restricted railroad crossings, vehicular access to the developments east of the railroad tracks will likely need to come from Centennial to the south. A pedestrian underpass beneath the tracks will be needed for safe access to the intramural fields from the west. This area includes a small stream and floodplain area that may restrict where and how development would occur. Proper site design and engineering should be conducted to determine the exact location and design of such facilities.



Master Plan Policies

Campus Gateways

The University needs to establish a consistent level of development for all gateways to the campus in order to better define the campus perimeter and provide a unified image for Pittsburg State University. These gateways will identify the entrance points of the campus and enhance the connection to the city. The design of the gateways should be compatible with the character of the buildings adjacent to each gateway while also presenting a consistent image throughout campus. Each gateway will be given a name to facilitate ease in giving directions and to help orient one to the campus. The design of each gateway should consider including the University seal and “Pittsburg State University”. Design of each gateway will be subject to its significance and prominence as an entrance to the University (e.g. primary, secondary, tertiary).

Campus Perimeter

Every public frontage should be developed to present a positive image for the University. Areas designated as having negative visual character in this master plan should be upgraded. Parking areas should be buffered from public streets with landscaped setbacks, as found around the Kansas Technology Center. In areas where setback is limited, parking lots should be screened by low street walls and landscaping. The objective is to mask the view of parked cars and large expanses of pavement while maintaining good visual security for the campus. Service areas, including loading zones, storage yards and trash containers, should also be screened to improve views from surrounding public streets.

Wayfinding

The University needs to update the current system of directional signage. This update would include building signs, building numbers, street signs, parking signs, traffic signs, maps, information kiosks and interior building signage. This update should continue to provide consistent design and informational layout to facilitate ease in finding one’s way to and around campus. The signage should be consistent throughout the campus and should be compatible with each of the campus buildings. The signs should be easily read, provide helpful information, and meet current ADA regulations.

Open Space

With approval of this Master Plan, Pittsburg State University will set forth the policy of constructing buildings with consideration toward all adjacent open spaces and the pedestrian character of the campus. The design of any new buildings on the campus must consider the impact of that environment to the entire University, along with the immediate surroundings of the buildings. The connections of any new building to the larger campus environment must be considered.

To implement this policy, each new or remodeled building will include in the project scope some open space and pedestrian connection improvements in and around that building. The definition of the scope for each project will be reviewed by the Office of Facilities Planning as well as the Master Planning Committee at the onset of each project, before budgets are determined.





At the beginning of a new construction or renovation project, the initial program will be reviewed by the Office of Facilities Planning as well as the Master Planning Committee for compliance with the policies. The review of the final program will be done in detail by the Dean/Chairperson/Director, Vice President of Academic Affairs/ Vice President of Administration and Campus Life, Director of Facilities Planning, and President of the University.

Building Guidelines

Materials. There are several different building types and building materials used throughout campus. The exterior materials used in new buildings should reflect the character and materials used in the adjacent buildings. Most of the buildings located in the academic core of the campus follow traditional design with the use of limestone, brick, slate roofs, and an articulating cornice. However, some buildings make a more current design statement with the use of cast stone and larger areas of glass. The opportunity exists for different design approaches and materials which would harmonize with the surrounding buildings.

Entrances. On new buildings, the building entrance should present a human scale, contributing to the friendly atmosphere desired for the campus. Existing building entrances should be evaluated for conformance with the intent of the Master Plan and corrections should be made where necessary. Building entrances should be well lit at night to provide a safe and comfortable environment. Planting and landscaping should be planned for each entrance. The approach to the entrance should be evaluated for compliance with current ADA regulations. Existing ADA deficiencies need to be corrected. Overall, the entrances to each building should present a friendly and welcoming approach to the building.



University Art

The location of works of art on the campus needs to be carefully integrated into specific sites and the character of the campus. They should enhance the overall goals of the Master Plan. Works of art should not be an integral part of the building structure or in any other way block or inhibit the expansion of the building. The works of art displayed should enhance the total educational experience. Works of art in buildings or adjacent to buildings need to be sensitive to the design and character of the building. The display of art throughout campus should be encouraged in order to communicate ideas and feelings as only art can do.

Residential Life

The University has an obligation to provide an appropriate range of housing options which are attractive, affordable and meet the developmental needs of students. Particularly as University enrollment grows and students are drawn in increasing numbers from beyond the southeastern Kansas region, the University's role in providing housing becomes more pronounced. Quality, affordable, and easily accessible housing plays a critical role in retention of students.

Ongoing renovation and upgrading of existing residence halls toward improved living environments should continue. As enrollment of the institution grows, consideration should be made for additional housing along the west side of Joplin Street, south of Cleveland Avenue. Future plans should also include expansion of Gibson Dining Hall dining area either through addition to the existing structure or through renovation of the existing lower level to accommodate dining access.



Campus Lighting

At night the most dominant design elements on campus are the campus lighting and light showing through building windows. These two light sources dramatically change the atmosphere of the campus at night. In addition to providing adequate light for safety and security, the campus designer needs to consider the visual impact of campus lighting. The rhythm, pattern, style, intensity, and color of light all add to the overall impact of campus lighting. Properly designed campus lighting can help shape the aesthetic character of the campus.

Campus Lighting Plan. The University needs to formalize the existing campus lighting plan. The informal plan now in place has provided for improved lighting over portions of the campus. However, formalizing the plan will allow for continuity throughout the campus. Five levels of lighting need to be developed:

1. Street lighting,
2. Parking lot lighting,
3. Pedestrian path lighting,
4. Accent lighting for landscape features, and
5. Accent lighting for buildings.

A standard light, or lighting approach, for each of these levels needs to be developed. A safe level of lighting should be provided for all pedestrian pathways and all building entrances should be well lit to provide an easily identifiable destination. A minimum level of lighting should be provided at all parking lots with special emphasis to egress routes from the parking lot. Emergency telephones with flashing alarm lights should be placed at strategic locations on the campus.

Outdoor Furniture

Outdoor campus furniture will continue to be an important part of the campus landscaping plan. As development progresses, the placement of outdoor furniture will help encourage informal gatherings and also provide areas for rest, meditation and study. The selection of outdoor furniture needs to develop a consistent theme and contribute to the overall aesthetic quality of the campus.

Bicycles

The use of bicycles on campus should be encouraged to reduce the number of automobiles on campus and the use of bicycles as a means to move about campus. The expansion of the Campus Walk should be designed for bicycle usage, to ensure both pedestrian and cyclist safety. Bicycles are vehicles and care will need to be exercised to maintain proper separation between bicycles and pedestrians. Pedestrians will always have the right-of-way.

Registration for bicycles may be required and parking permits may be needed to park in designated bicycle parking areas. Riding on designated routes and walking of bicycles in areas of high pedestrian traffic may need to be considered as part of the policy on bicycles. Adequate bicycle parking needs to be provided at all buildings and other selected locations on campus. The goal is to minimize the impact of inappropriate bicycle practices on the safety and overall aesthetic quality of the campus.





Parking

Additional parking should be provided for the western area of campus in general, and for student residents in particular. Additional parking should also be considered for new building construction or expansion projects, subject to the capacity of adjacent parking lots.

Designated disabled parking is to be provided primarily within off-street parking lots; however, additional disabled spaces should be reserved at on-street parking locations as well as in a few service areas at the interior of campus. Designated disabled parking will be dispersed evenly, with spaces provided in all the major use zones of campus. All projects must meet ADA requirements.

Furthermore, each parking lot should be designed to include landscape areas in order to maintain the character of the campus. Existing and new parking lots should be designed or modified to include islands for shade trees and buffers between parking areas and buildings. Parking areas should include electric vehicle charging stations and signage that reserves prime parking spaces for commuters that carpool and drive alternative fuel vehicles. Porous paving, bioswales and other best practices for storm water management should be incorporated.

Off street parking areas adjacent to and near Dellinger / Nation Residence Halls should be dedicated to student residents to minimize off campus parking in neighborhood streets to the south of the halls. Displaced commuter parking should be relocated to the new parking areas north of Cleveland Avenue.



Vehicular Circulation

Streets. Closure of major city streets passing through campus is not recommended, in part due to the public's opposition to past attempts to close Joplin Street. Pedestrian safety remains a major concern, and should be addressed for perimeter streets and streets that pass through the campus. Signage and street improvements for Broadway Street, Ford Avenue, Joplin Street, Homer Street and Rouse Avenue should inform motorists that they are approaching a pedestrian district. Clearly marked pedestrian crossings should be installed, including signalized crossings on Broadway Street. Joplin Street should be improved to formalize current two-lane traffic patterns; curbs and crosswalks at intersections should be brought out to the traffic lanes and used to better define on-street angled parking areas and pedestrian crossing points. Additional improvements to pedestrian crossing locations could include changes in paving materials or patterns, painting or marking of road surfaces, or changes in grade at crossing locations to both improve pedestrian crossing and slow vehicular traffic.

Service. Service access will penetrate the campus where needed and when service areas cross into the campus pedestrian area the transition will be clearly defined by design elements. Service access within the pedestrian area should not appear as driveways but rather as widened pedestrian paths with consideration given to vehicular turning radius, structural support, and access width and length. Campus buildings do not have a back entrance. Service areas to buildings need to be carefully planned to be as unobstructive as possible and not detract from the aesthetic character of the campus.

Emergency. Emergency vehicles need to be able to have access to the interior of the campus. Providers of emergency services need to be shown the routes for emergency access and trained to arrive at the appropriate entrance. Due to the physical locations of some buildings and other campus features it is impossible to access all areas of the campus without leaving the internal network of streets on campus.



Signage. Campus wayfinding signage should direct visitors seeking events at the Stadium, the Weede facility, and the new Fine & Performing Arts Center to Ford Street from Broadway or Rouse. Campus publications and promotions should similarly direct visitors to Ford Street to discourage event traffic from using neighborhood streets to the north and south of campus. As new parking is developed north of Cleveland Avenue, signage should direct users to access these lots from Carlton Street off of Broadway.

Grounds Improvement

Grounds improvements need to support the goals and objectives of the Master Plan. One of the strengths of the campus is the beauty of the grounds and landscaping. Coordination of improvements will be provided by the Master Planning Committee. As specific plans are developed by the University Grounds Supervisor and/or the University Architect, they will be reviewed and approved by the Master Planning Committee.

Tree Preservation

The preservation of trees and other important site features is part of the Master Plan. As each new project is developed, consideration must be given to the surrounding landscaping features. New projects should add to the character of the existing landscaping and minimize disturbance of existing features. Protection of existing landscaping and other site features will be a required element of each project. Each new project should include some associated site improvements.

New Tree Planting

Expansion of a diverse, deciduous hardwood tree canopy should be extended eastward along the main Campus Walk, in pedestrian zones, and within the new East Quad to extend the distinct character of the Oval throughout campus. Parking areas should be buffered with additional tree plantings around the perimeter of the parking lot and within parking zones to visually break up large expanses of paving and reduce solar heat island effects.

Vegetation

Overall, the campus landscape is designed, implemented and maintained with the following priorities: safety, use and enjoyment of all campus inhabitants and visitors; appropriate levels of aesthetics, functionality, and continuity; and the efficient and responsible use of resources in its management in such a way as to further improve the reputation as one of the most attractive and environmentally responsible campus landscapes in the region.

Space Utilization

In this era of diminishing resources and funding, Pittsburg State must make the best use of available space. This planning process assessed space utilization on a building by building basis and found a general state of underutilization. Improving space use on campus will require a more detailed understanding of specific space needs, teaching pedagogy, special equipment issues and unique accreditation requirements.





Space utilization can be increased in a number of ways:

- increasing the Course Cap;
- “right-sizing” facilities, renovating larger underutilized classrooms to provide needed smaller classrooms;
- changing classroom allocation in a more centralized manner;
- creating a set of shared classrooms to accommodate periods of peak demand;
- improving the consistency of furnishings, mediation and support in classrooms across campus; and
- maximizing the teaching day, increasing off-peak time classroom usage at 8:00am, noon and after 3:00.

To determine the best opportunities to increase space utilization, Pittsburg State should undertake a campus-wide, “room by room” space utilization audit of existing facilities and develop a master program of departmental space needs and for the campus. This information will facilitate formation of new space use policies for the campus.

Purchasing Policy

In order to compliment the goals and objectives of the Master Plan all departments must obtain approval of the Master Planning Committee prior to the purchase of any of the following: signs, site furniture, exterior graphics, exterior works of art, major landscape elements, and any building modifications or additions.

Design Review Process

The establishment of a design review process will help ensure the continued development of the Master Plan. The ongoing project review for conformance with the Master Plan goals and objectives is a necessary step in the approval process. The Office of Facilities Planning in conjunction with the Master Planning Committee will project the professional interpretation and oversight. A Master Plan needs to survive as a living document.

University Architect. The Office of Facilities Planning will oversee the Design Review Process on all projects.

Design Review Committee. Enforcement of the goals and objectives of the Master Plan is the primary function of the Design Review Committee. All building projects, landscaping projects, major graphic projects, and any project that affects the physical environment of the campus should be reviewed and approved by the Design Review Committee before it is sent to the Master Planning Committee for final approval. The composition of the Design Review Committee may be as follows:

- Director of Facilities Planning
- Director of Building Trades and Landscape Maintenance
- Director of Custodial and General Services
- Faculty Representative
- Student Representative
- Classified Staff Representative
- Project Representative (Dean or Chair for whom the project is being built)

Conceptual designs and/or architectural programs developed by the Office of Facilities Planning or outside consulting firms will be reviewed by the Design Review Committee for compliance with the Master Plan prior to being incorporated into the final Architectural Program. Continuing reviews by the Design Review Committee will be made at the end of the schematic design phase and the design development phase.



Review Process. The scope of the review by the Design Review Committee is as follows:

- Review for conformance to the intent of the Master Plan.
- Review siting, orientation, connections, and other site considerations for conformance to the Master Plan.
- Review proposed building mass, scale and height of the proposed building for conformance to the Master Plan.
- Review the project materials, design features, and aesthetic quality for conformance to the Master Plan.

Masterplan Revisions & Update Policy

Revisions. The Master Planning Committee must approve any revisions to the Master Plan. If the need for change becomes apparent, the proposed revision will be presented to the Committee for review. Following review by the Committee action will be taken to approve, disapprove or reconsider (after amended) the proposed revision.

Update. The Master Plan is intended to be a vibrant, living document. Periodic updates are necessary for this intention to become real. The Master Plan will be amended each year and will be updated every ten years. Key concepts, principles and policies would remain unchanged for some time while specific projects and development would be expected to change often. The Master Plan has been prepared and assembled in a way that will allow easy additions and changes to the document.



Implementation

The campus improvements, building renovations and new facilities projects illustrated in this master plan are feasible to occur within the next ten years. Some of the projects are already underway or in early programming or conceptual design phases, and are most likely to be implemented first. Other projects have been identified as priorities, subject to available funding, including those that merit higher priority to improve life/safety on campus, to address deteriorating building conditions, to address programmatic growth, or to upgrade or realign outdated facilities with current programmatic requirements. All improvements indicated are merited to fulfill the goals of this Master Plan, and will require on-going deliberations by campus leadership.

Projects Underway

- Fine and Performing Arts Center.
- President's Home / University House Replacement.

Projects Underway or In Development

- Fine and Performing Arts Center.
- Event Center addition to and renovation of the Weede facility.
- Additions to and renovation of Overman Student Center.
- Renovations of residence halls.

High Priority Projects

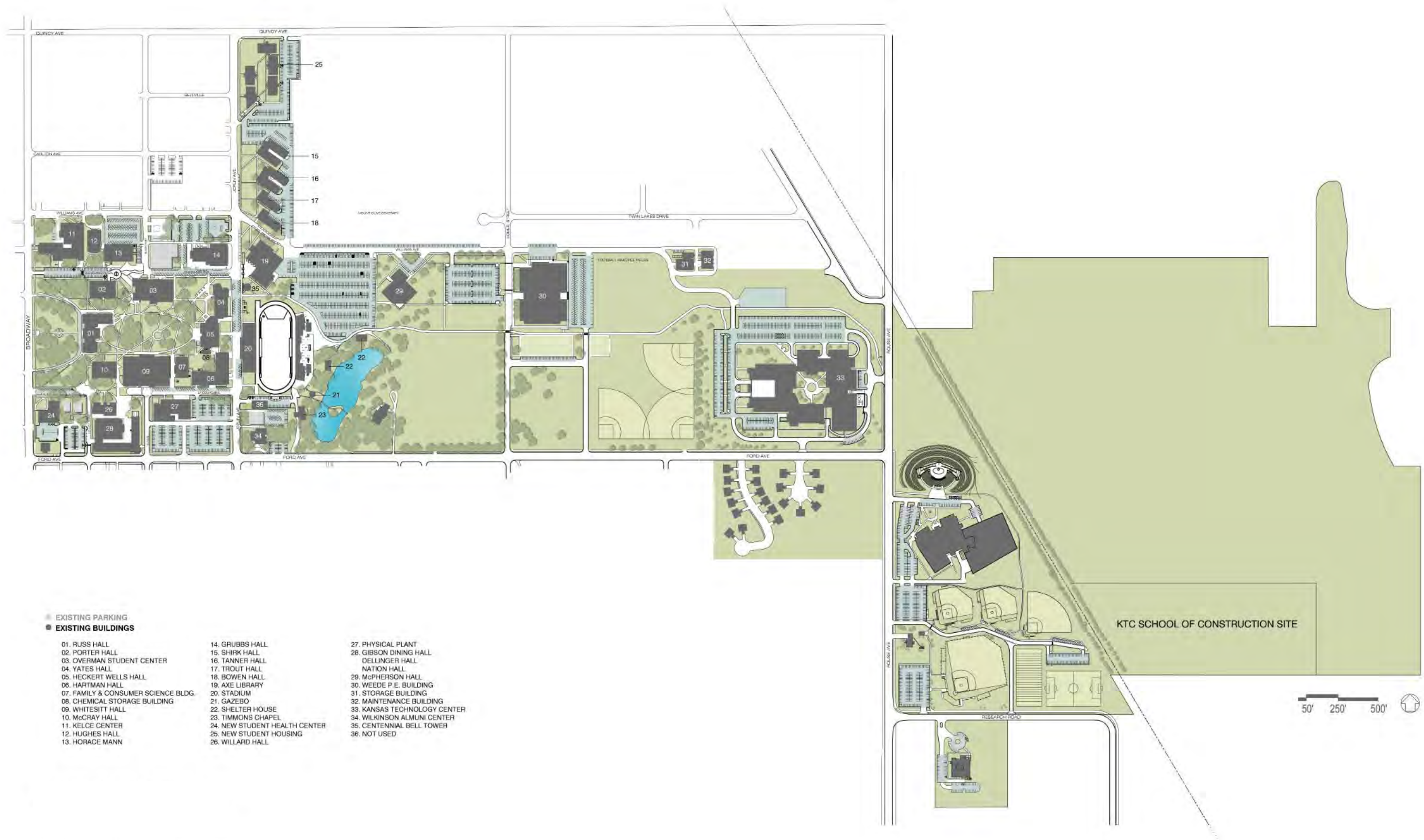
- Construct pedestrian crossings on Broadway, Joplin and Rouse.
- Acquire additional property to expand parking supply on west side of campus.
- Renovate and / or expand Gibson Dining Hall.
- Expand McPherson Hall to accommodate growth.
- Construct a new Physical Plant Trades/Motor Pool/Campus Receiving Building.
- Renovate Hartman Hall to accommodate academic needs.
- Renovate Axe Library to refresh finishes and provide contemporary space for student learning and student success programs.
- Construct new Diesel and Heavy Equipment Building for the Kansas Technology Center.
- Develop Center of Excellence in Construction Field Experience east of the railroad tracks, including the new School of Construction building for the Kansas Technology Center.
- Renovate and expand Kelce Hall.



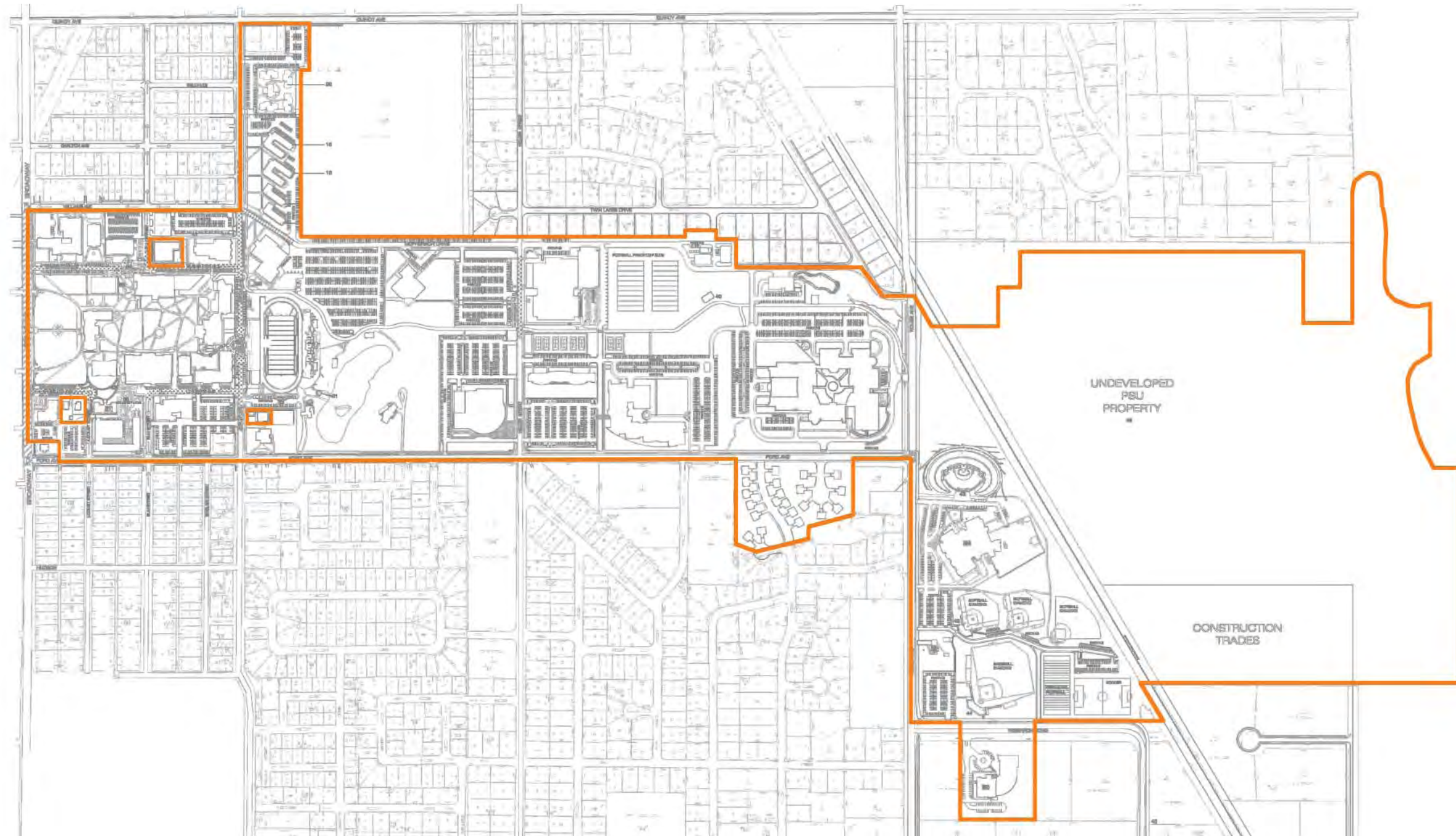


Other Priority Projects

- Develop the east/west Campus Walk and landscaping to unify the campus.
- Provide additional landscaping on campus.
- Provide streetscape, edge and gateway improvements to better define the campus perimeter and improve the campus image.
- Provide landscape and site improvements across the campus to increase places for gathering and seating.
- Provide new recreation amenities east of the railroad tracks.
- Provide new grandstands, press boxes and fencing at the primary baseball and softball fields.
- Renovate Whitesitt Hall.
- Renovate Grubbs Hall.
- Renovate Yates Hall.
- Renovate Heckert Wells Hall.
- Renovate McCray Hall.
- Determine the best use and renovate Shirk Hall.
- Expand the Student Recreation Center.
- Reuse the old Health Center with minor reinvestment if a good programmatic fit is found. Otherwise, demolish the building. Major reinvestment in this building is not merited.



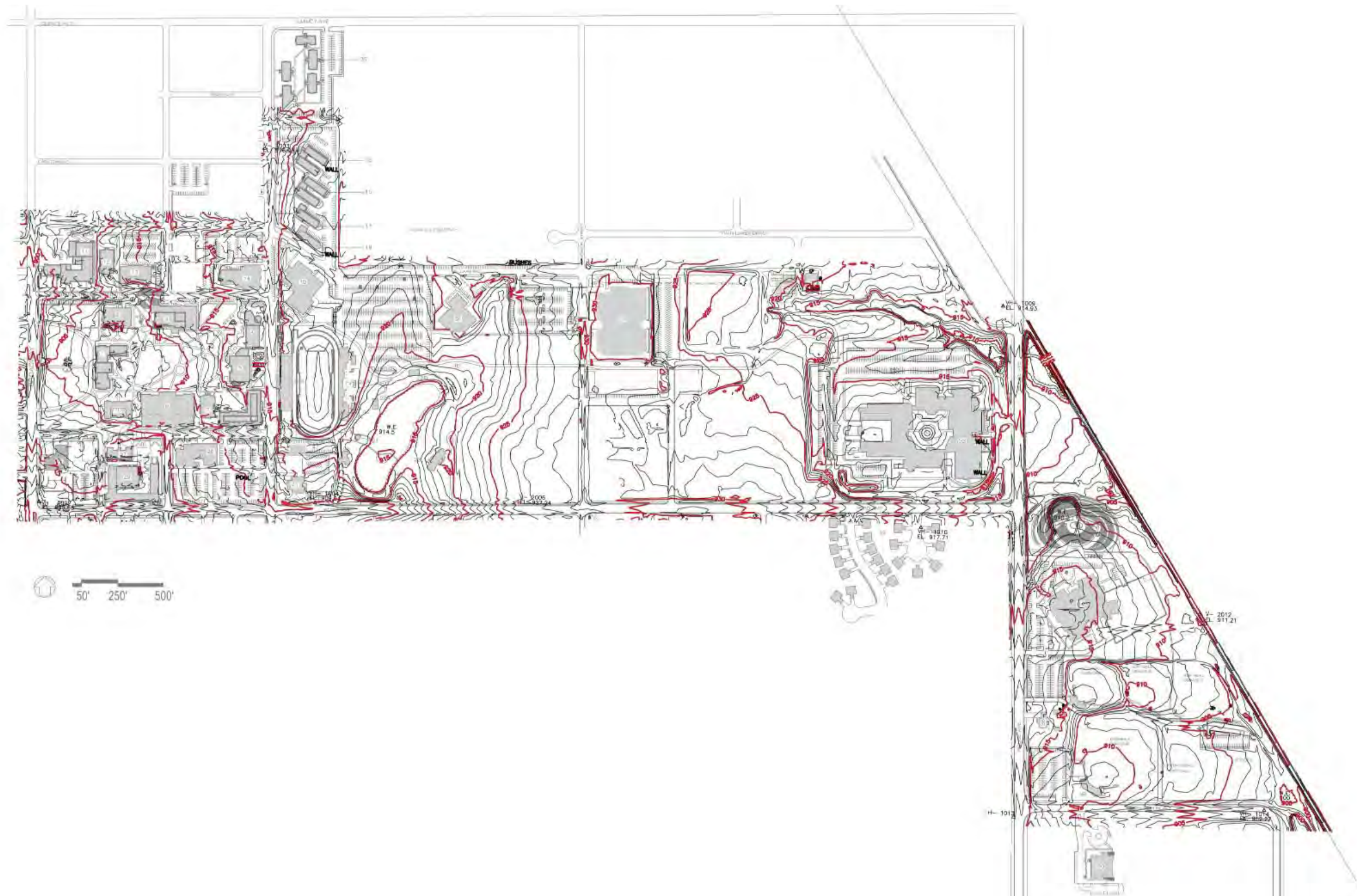
Current Campus Plan



Property

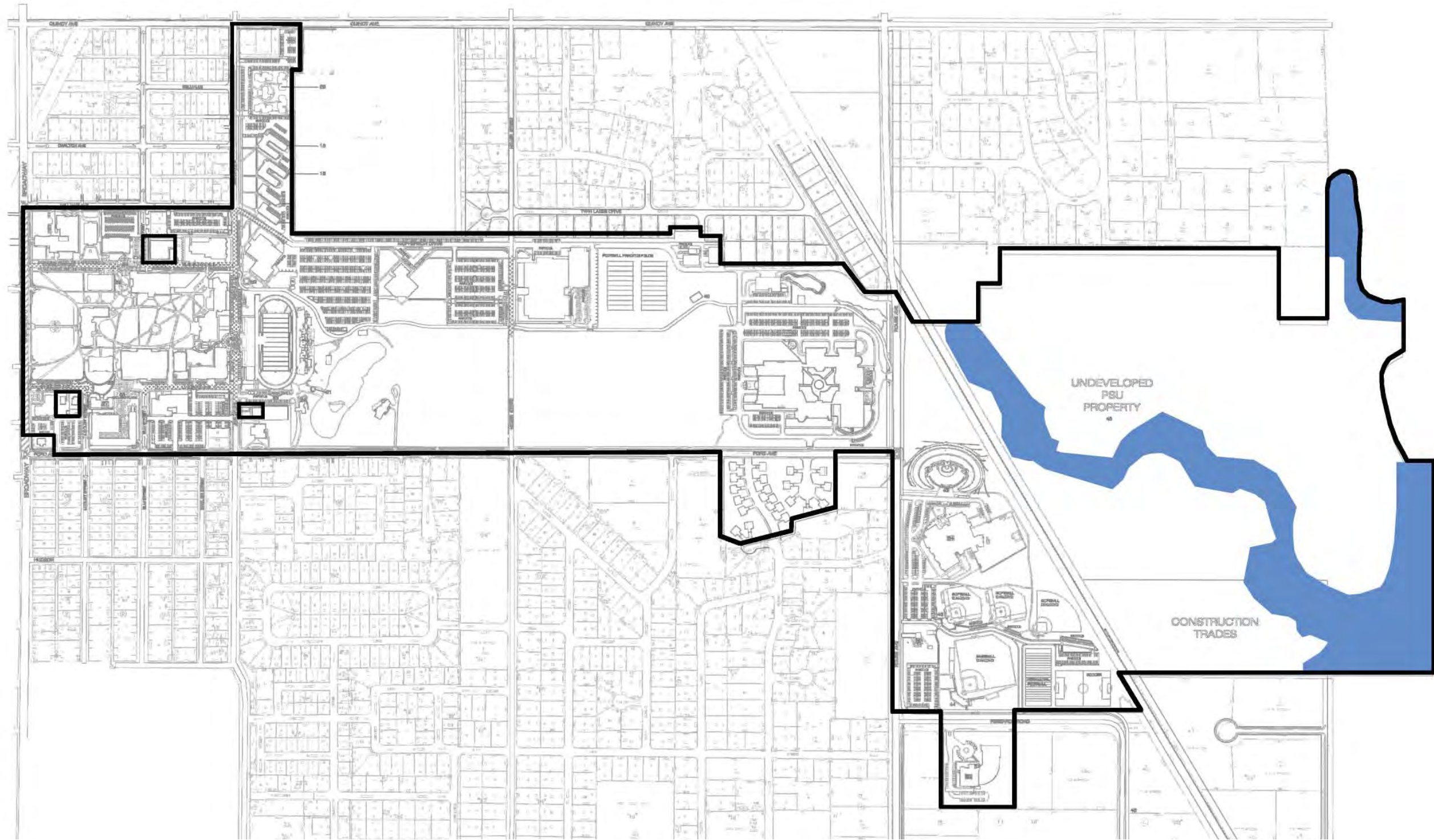
Pittsburg State University property covers approximately 630 total acres. The primary campus includes about 450 contiguous acres and stretches nearly 2 miles west-to-east from the original campus, located just east of Broadway Street, to the currently undeveloped properties east of Rouse Avenue. The primary area of campus stretches north-to-south from Ford Avenue to Williams Street. Other University properties sit outside this main area and cover nearly a mile, from the apartment housing on Quincy Street to the Tyler Research Center located just north of Centennial Drive. The primary area of campus is interrupted by three connecting streets that run north/south including Joplin Street, Homer Street, and Rouse Avenue. A railway line acts as an edge separating most of the property east of Rouse Avenue from the majority of the campus.

The adjacent land uses are primarily residential to the north and south, a mixture of commercial and residential uses to the west, a large cemetery on the north between Joplin Street and Homer Street, and an undeveloped business park to the southeast.



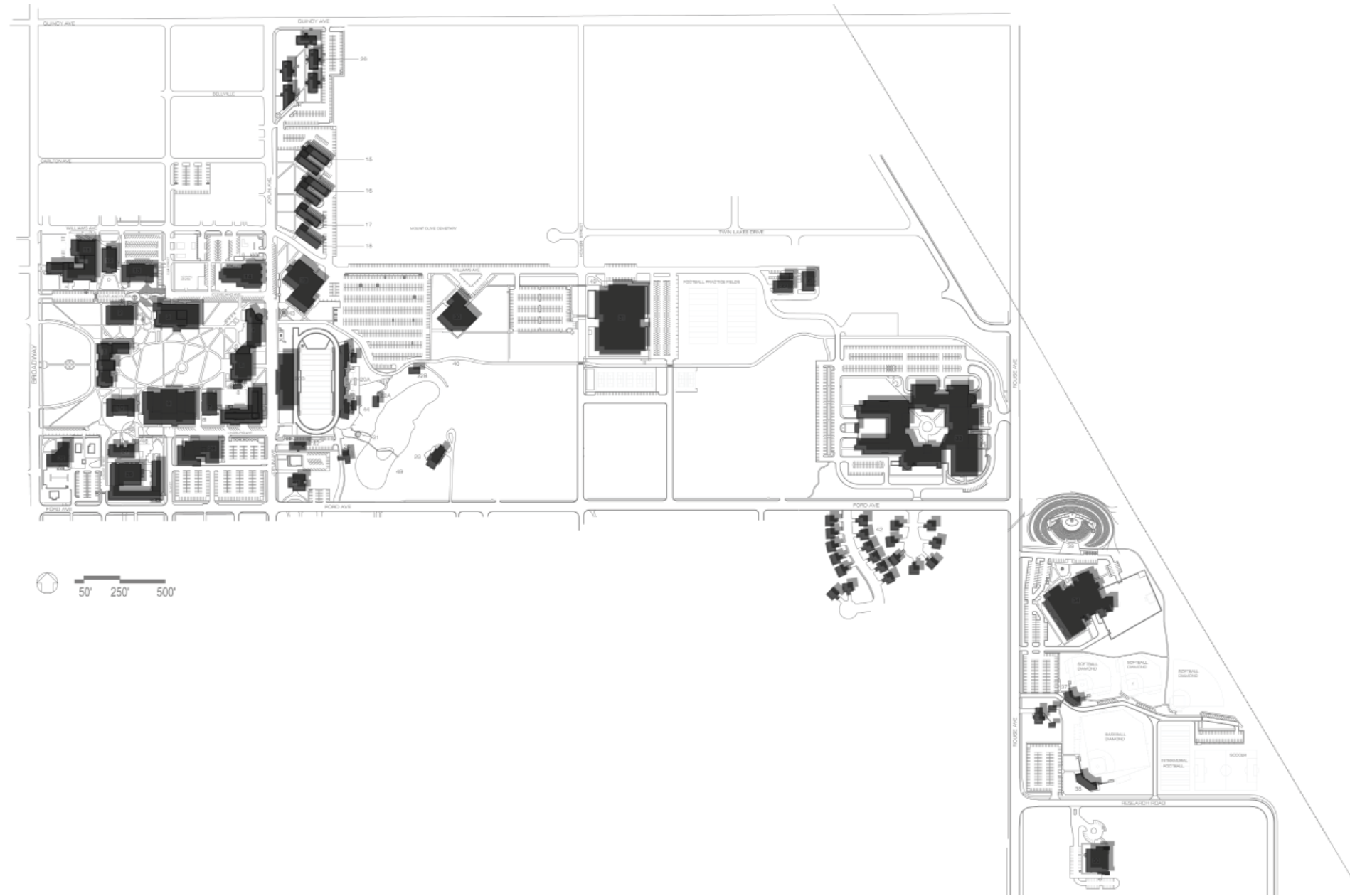
Topography

The contour grade on campus is relatively flat. The Weede Building sits upon the highest ground at an elevation of about 930' above sea level. From here the campus slopes gradually to the west and east, to approximately an elevation of 900' at Broadway Street and 910' for the buildings east of Rouse Avenue. The surface of the three and one-half acre University Lake sits at about 915' elevation. This lake collects from a watershed located north of the lake between Joplin Street and Homer Street. The undeveloped property east of the railroad tracks continues to slope down into a low-lying floodplain zone.



100-Year Floodplain

The Federal Emergency Management Agency (FEMA) produces a Floodplain Insurance Rate Map (FIRM), which delineates both the special flood hazard areas and the flood insurance risk areas within the City. In turn, the City uses this official map to administer floodplain regulations and to mitigate flood damage. Data collected by FEMA includes both a mapping of the Floodway and the Floodplain. While limited development is typically allowed within the Floodplain, virtually no development is allowed within a Floodway. Typically a City will allow some development to occur within a floodplain, providing proper engineering and floodplain mitigation occurs in order to protect the integrity of the new structures and the ability of the streams and drainage ways to accommodate stormwater run-off. Many portions of the undeveloped property east of Rouse Avenue are within the 100-year FEMA floodplain, which will impact future site access and development scenarios.

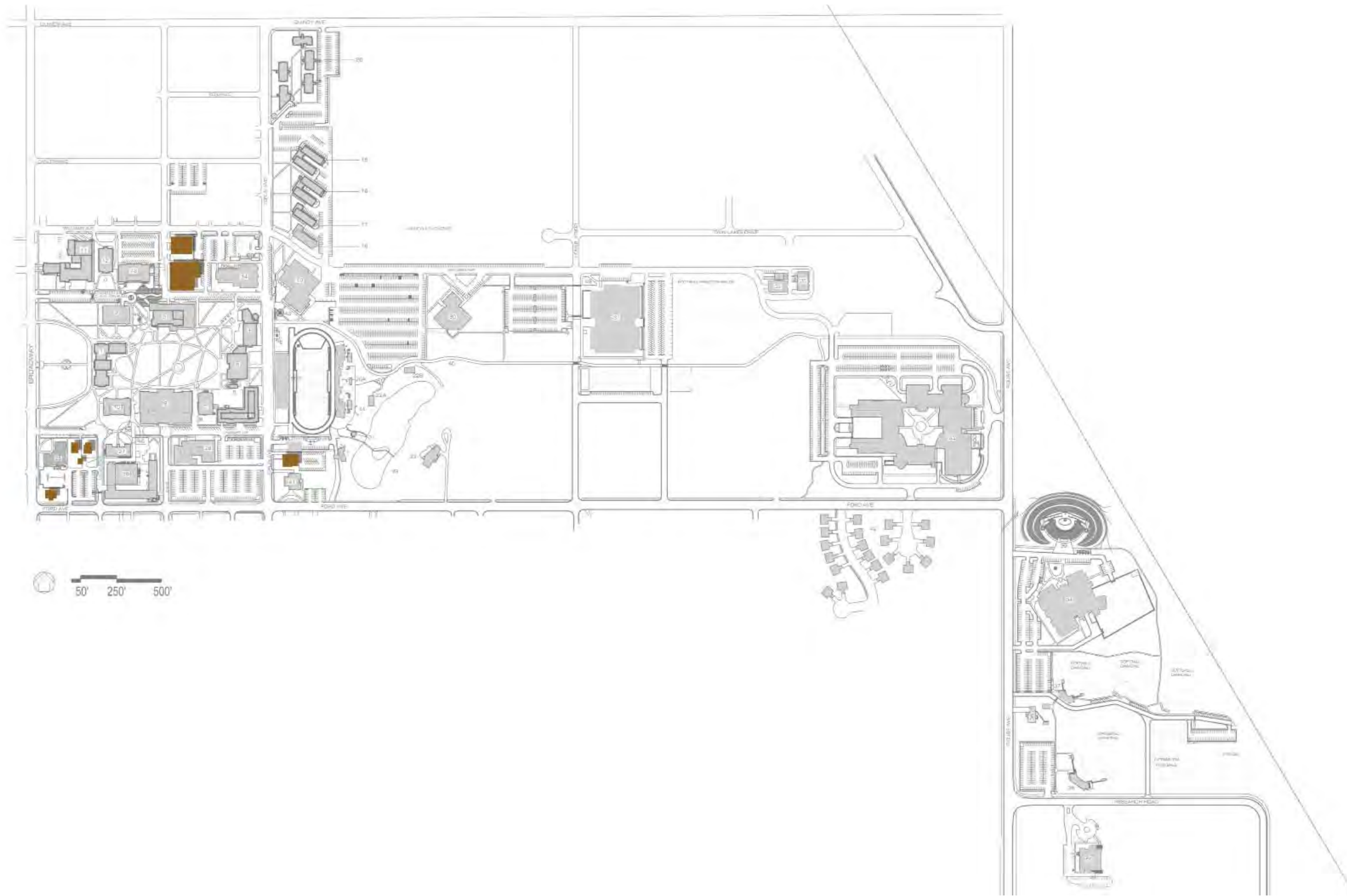


Real Estate

University-Owned

The west side of the campus is defined by the Oval, an iconic campus green surrounded by buildings forming what would typically be titled a “quad”. The area, including the Oval and the surrounding buildings, is within an area bordered by Broadway Street, Joplin Street, Lindburg Street, and Cleveland Avenue. A second tier of development surrounds these streets. These buildings include (clock-wise from the intersection of Cleveland Avenue and Broadway Street) academic buildings on the north side of Cleveland Avenue, the Library, the football stadium, the new Health Center, the Dellinger/ Nation residential complex, and the Physical plant buildings to the south of Lindburg Street. Various parking areas are intermittently located throughout the west side of campus.

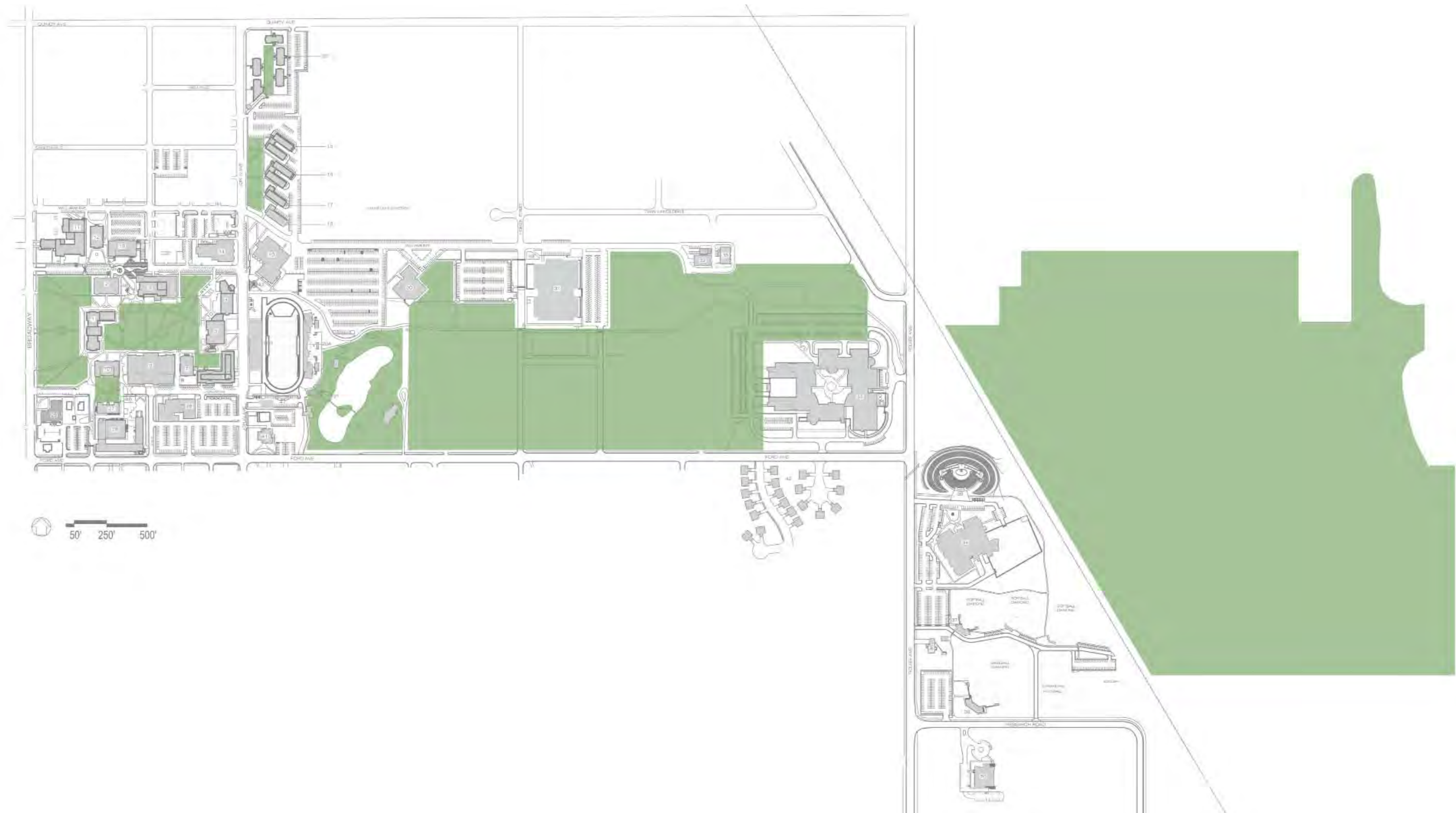
Additional student housing is placed along the east side of Joplin Street north to Quincy Street, including traditional residential halls and the new Crimson Commons apartments. The central part of campus, between the football stadium and Rouse Avenue, is characterized by large open spaces including a park-like setting around the University Lake. Additionally, the Kansas Technology Center, Weede Facility, McPherson Hall, and two large parking areas are located in this area. The east campus area is located east of Rouse Avenue and is defined by the undeveloped acreage east of the railroad tracks as well as the Student Recreation Center, baseball/softball complex, and Tyler Research Center.



Real Estate

Non-University-Owned on Campus

Four outparcels exist on the west side of campus. These include the Newman Center north of Cleveland Avenue, a fraternity house on Joplin Street north of the Alumni Center, a second fraternity house near the corner of Ford Avenue and Broadway Street, and two single-family homes on Lindburg Street (designated a national historic district).



Open Space

There are five major open spaces existing on the campus. The first open space is the area between Broadway Street and Russ Hall. This is the ceremonial front door to the University, with many mature trees and a character comparable to a small park. A circular drive from Broadway Street leads to Russ Hall. The second open space is the Oval, the quadrangle at the academic core of the campus. This open space is one of the most beautiful areas on campus, featuring many mature trees and well developed pedestrian circulation. The third open space contains the university lake and the Gorilla Village near the football stadium. This area features a park-like setting with both mature and young trees. The fourth open area sits between the campus lake and the Kansas Technology Center; this zone is bisected by Homer Street. The fifth open area is the undeveloped property east of the railroad tracks.



Vegetation

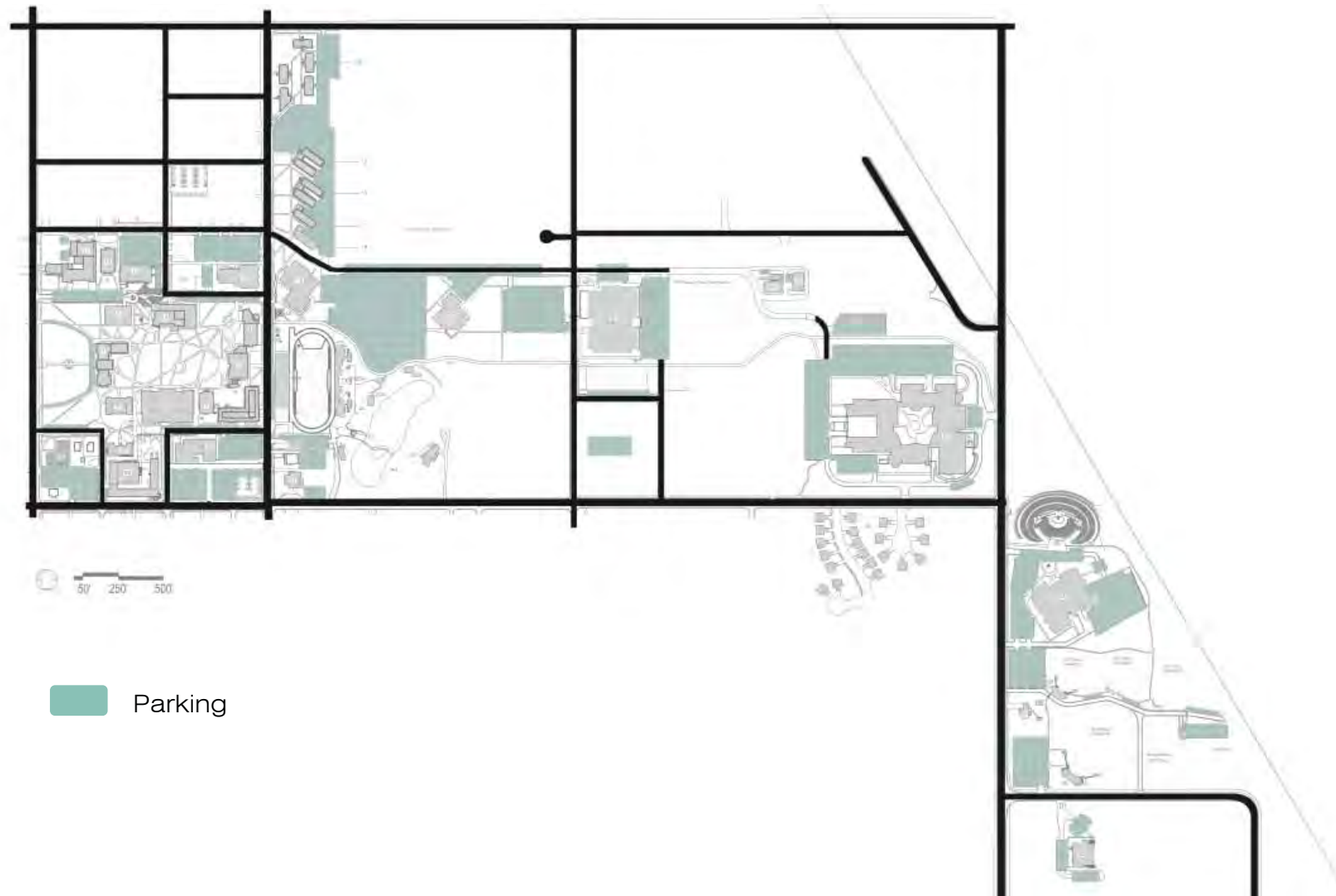
The landscape of Pittsburg State University varies from a moderately dense mature urban forest surrounding the older buildings on campus to open fields of mown grasses and newly installed plantings, on the central and eastern portions of the campus. Under the primary deciduous hardwood shade tree canopy of the main campus lies a wide variety of maintained ornamental plantings (small trees, shrubs, and ground covers), and lawns covered by dense turf. The ornamental and turf aspects of the east campus are much less developed.

The urban forest is composed of a wide variety of both native and introduced species, ranging from deciduous hardwoods (such as oak, maple, linden, sycamore, pecan, and elm trees), to softwoods (such as cottonwood, redbud, crabapple, and sweetgum), to evergreen and deciduous conifers (such as white pine, Scot's pine, Austrian pine, eastern red cedar, arborvitae, and holly). The trees are arranged in a spacious, stately manner of semi-random to formal placements. The density ranges from a complete canopy in the older west part of the campus and the lake to rows of groupings of trees along the open areas at the east end of the campus. Under the tree canopy are shrubs (spireas, burning bush euonymus, junipers, boxwoods, crape myrtles, azaleas, Japanese maples, lilacs, dogwoods and barberries) and ground covers (coloratus euonymus, vinca, ivies, emerald liriop and gold liriop). The campus grounds are covered by a dense turf consisting of cool and warm season turf grasses, with the predominant of each being turf-type fescue and Bermuda grasses (both common and improved varieties). Many sites on campus are highlighted by annual plants (such as Joseph's coat, annual ornamental grasses, marigolds, begonias, impatiens, and various tropicals such as century plant, banana palm, and other palms) during the spring, summer and fall months.



Exterior Character

The visual character of the campus varies. Positive exterior character supports the image of the institution. This is best represented at the campus green in front of Russ Hall and in the central Oval. Areas of negative character reflect poorly on the University and should be remedied. Examples include the Brown parking lot area and areas along the north side of Ford Avenue, where paved parking areas extend up to the sidewalk. Areas where exterior character could be improved include larger open spaces located east of the University Lake, extending to undeveloped properties east of Rouse Avenue.



Roadways

Street Network

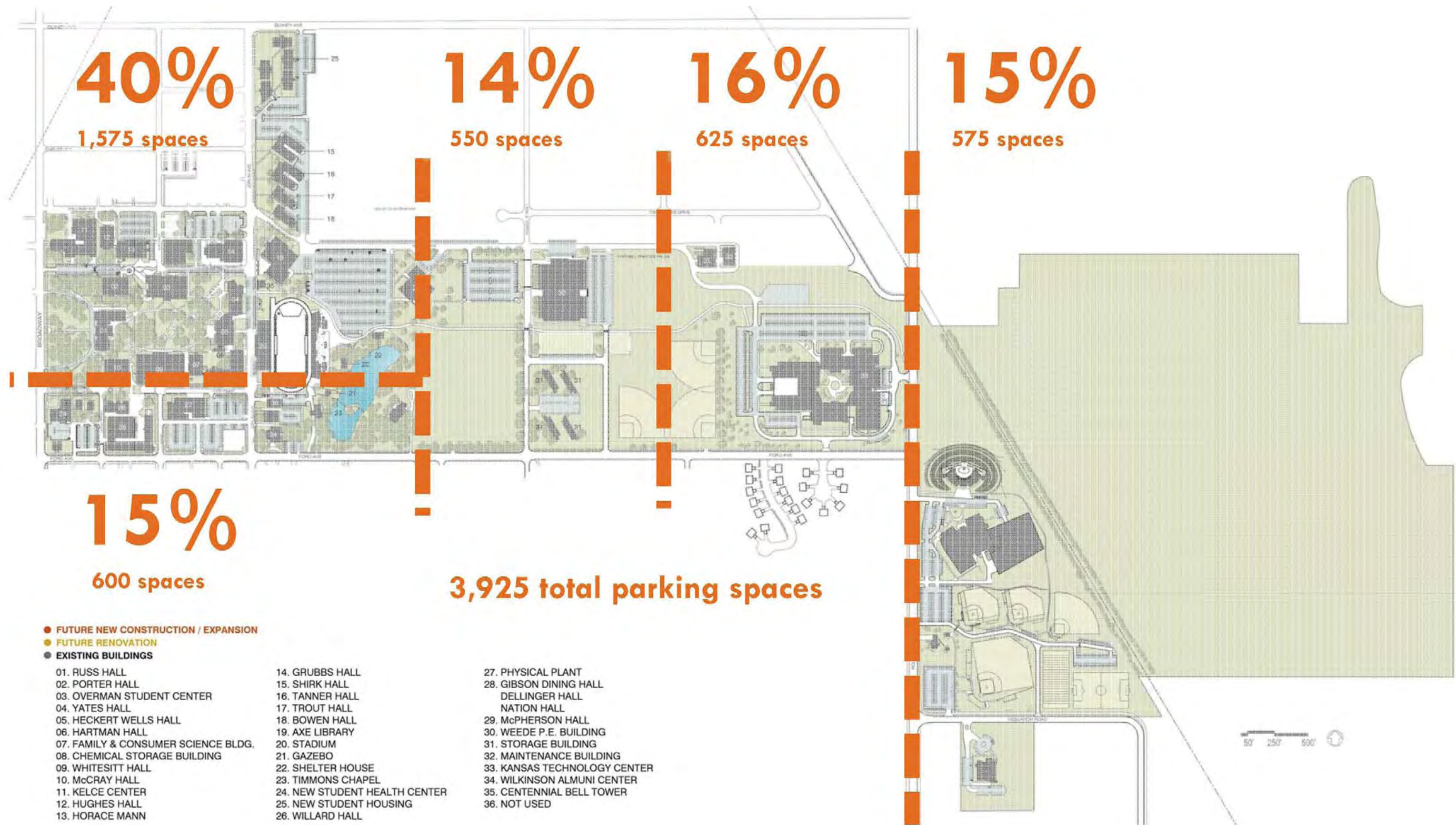
The campus is bordered by Broadway Street, a four-lane state highway (Highway 69), and Ford Avenue, a four-lane local arterial. Rouse Avenue, another four-lane local arterial street, both borders and bisects the campus on the eastern side. Two major north/south streets, Joplin Street and Homer Street, bisect the campus. Joplin Street is a four-lane street that has been effectively reduced to a two-lane street, with on-street diagonal parking. Other minor local streets penetrate the campus on the west side, including the east/west streets of Lindburg Street and Cleveland Avenue and the north/south streets of Locust Street and Elm Street (south of Lindburg Street) and Elm Street (north of Cleveland Avenue). Portions of both Lindburg Street and Cleveland Avenue have been vacated, west of Elm Street, to create a pedestrian mall and eliminate vehicular through-traffic.

Pending Improvements

The Joplin Street closure proposed a few years ago faced opposition because Joplin Street is among the few streets that traverses the City of Pittsburg from the north to the south end. Quincy Street is being studied for improvements to a three-lane section – two travel lanes with a center turn lane – from Broadway Street to Stillwell Street. Homer Street serves the Brown parking lot – the primary student parking area on campus – and creates some traffic problems in the neighborhood to the north. Furthermore, the proposed Fine and Performing Arts Center and the Conference Center could increase traffic concerns for neighbors.

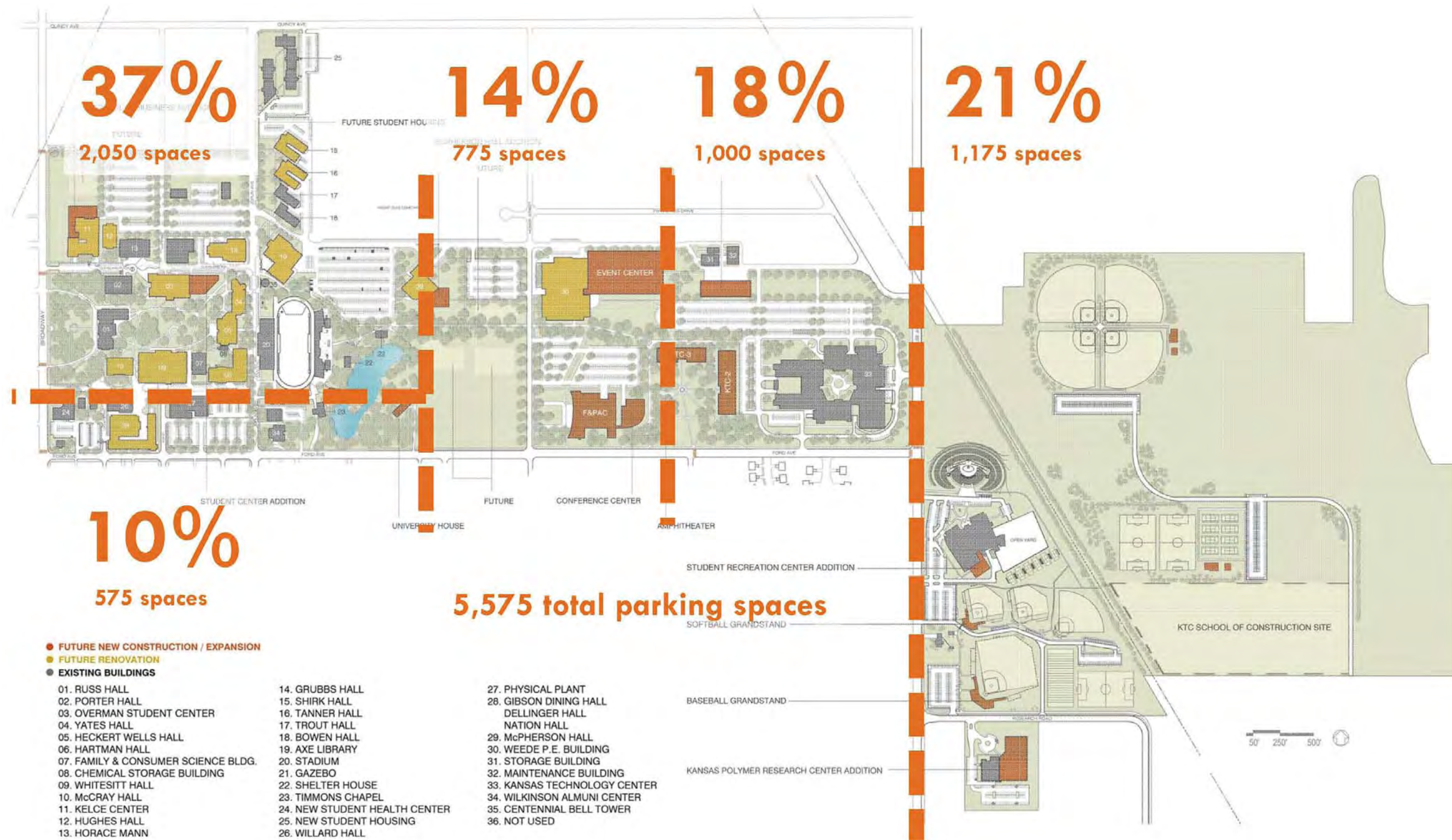
East Campus Access

Access to the property east of Rouse Avenue will be a challenge. The City would like to discourage access from the residential area to the north and properties to the east that are currently undeveloped. Furthermore, the railroad tracks limit access from the west and flood zones traversing the property will limit areas for road development from the south.



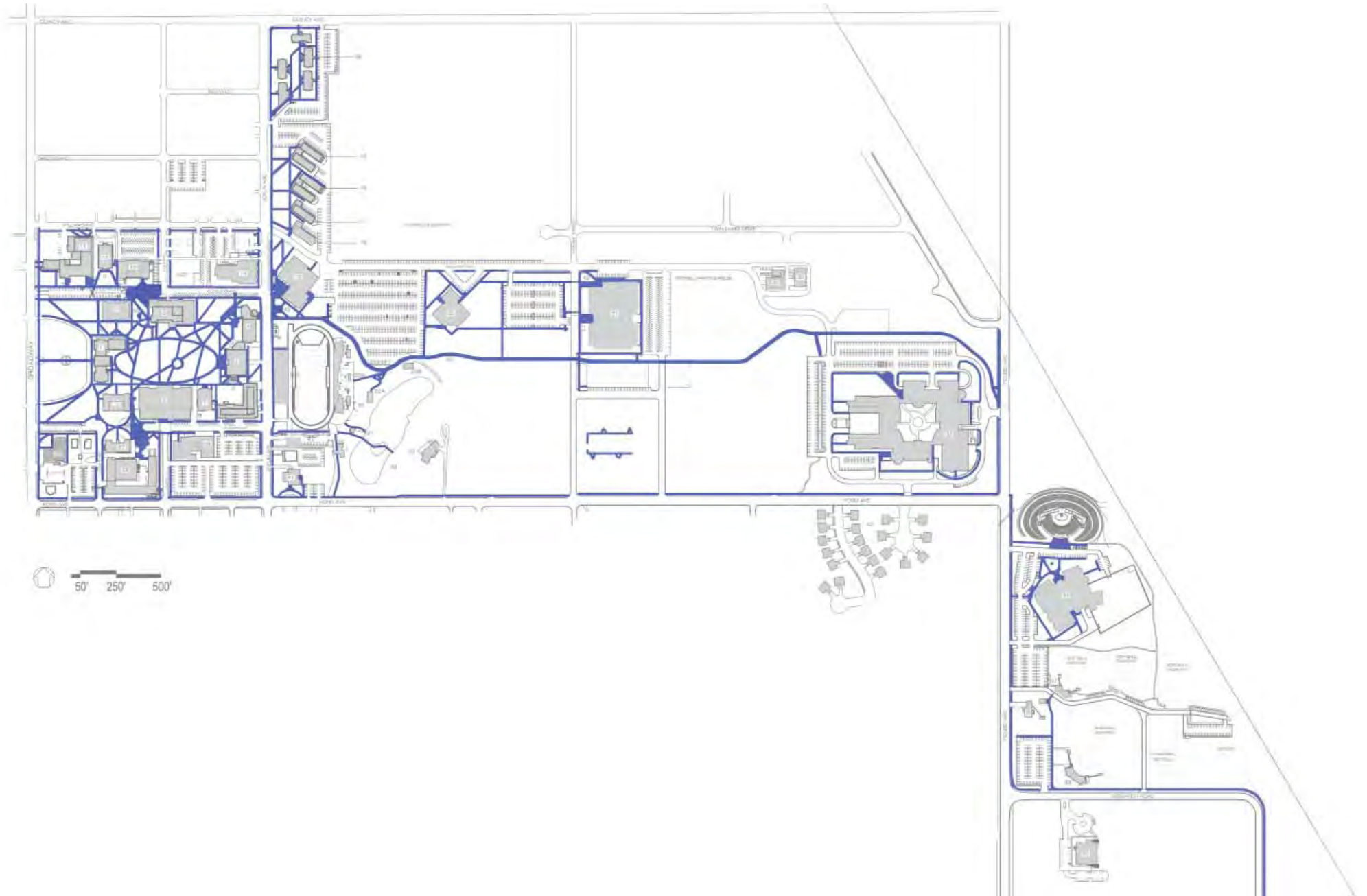
Existing Parking

Approximately 4,000 parking spaces are provided on campus. Parking is restricted by permitting, with separate permits for commuter students, residential students, and faculty/staff. Although nearly sixty percent of the total parking capacity is found towards the west end of campus, it is still difficult to find convenient parking during peak class-times. Residential student and commuter student parking are common in the residential areas south of campus.



Master Plan Parking

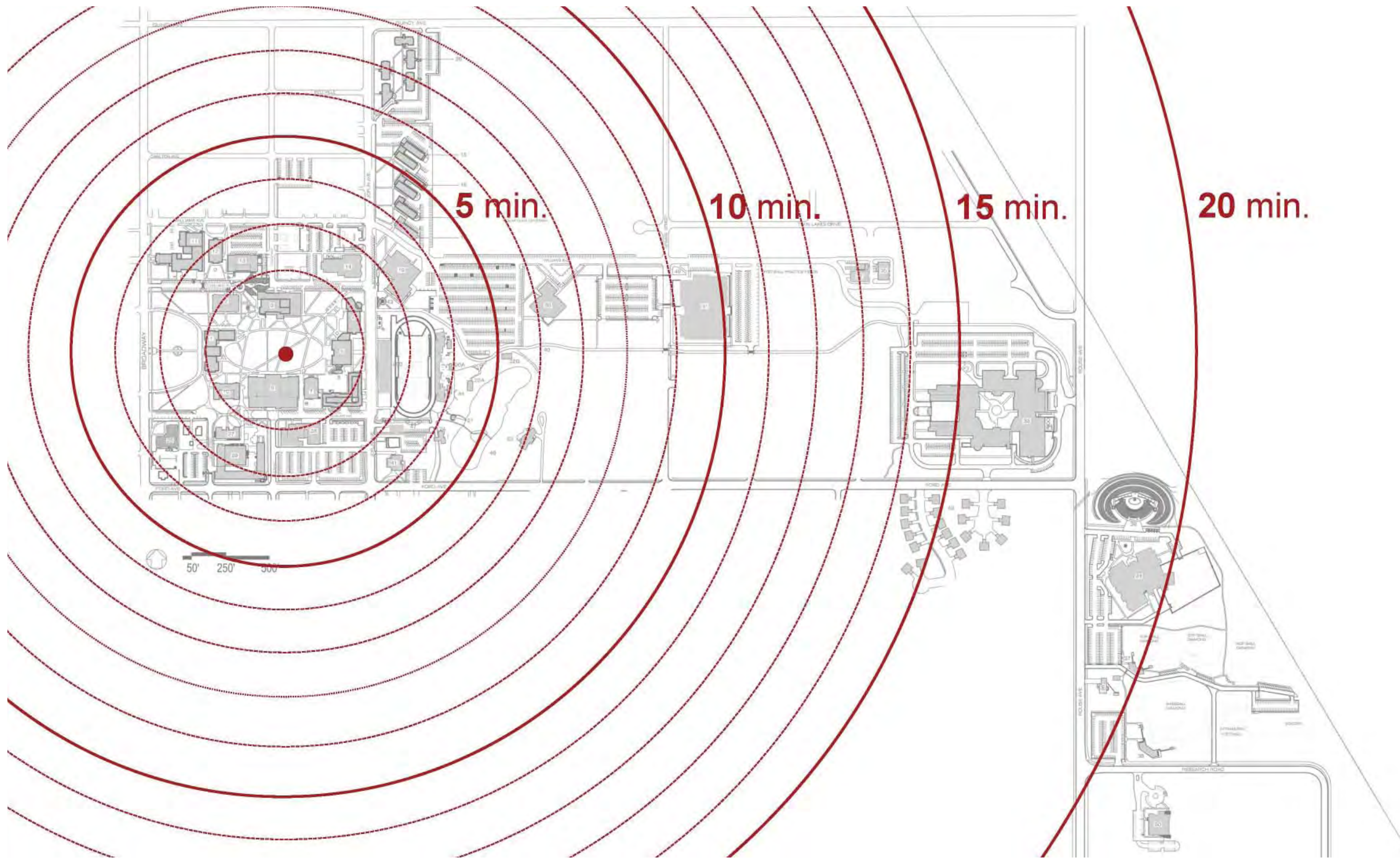
With the new configuration of parking on campus, including the addition of parking lots, the number of parking spaces has increased from 3,925 to 5,575 parking spaces. Parking will continue to be restricted by permitting, with separate permits for commuter students, residential students, and faculty/staff. The new parking configuration provides more ample parking throughout the campus rather than concentrating parking on the west end of campus.



Pedestrian Circulation

Pedestrian walkways are highly developed within the western portions of campus, including walks through open spaces as well as sidewalks along the various streets that border and bisect campus. Circulation to the eastern portion of campus is provided by a centrally located bike/walk trail, known as the campus walk, and by a sidewalk along the north side of Ford Avenue. The streets that bisect the campus create safety concerns for pedestrians. Although vehicular traffic is relatively light on most streets, the higher traffic volumes on Broadway Street and Rouse Avenue create hazardous situations.

Safety is a concern for pedestrians crossing Broadway Street / Highway 69. Although crosswalks and signage have been installed, drivers on Highway 69 are not always paying attention to pedestrians. Students don't always use the crosswalks and, instead, cross the street at random locations. Similarly, Rouse Avenue is of growing concern; although crosswalks and a traffic signal have been installed, students cross at random locations. Furthermore, Rouse Avenue is a four-lane street which encourages higher speeds, increasing the danger to pedestrians. Lastly, pedestrian activity has increased in this area with the new Student Recreation Center and may increase with further campus development east of Rouse Avenue.



Walkability

Given the breadth of the campus east to west, walking from the west side to the east side of campus between classes is not possible. Based on normal averages, the walk time from the Oval to the Student Recreation Center requires up to 20 minutes.

Street Lighting



Lighting in residential areas is generally inadequate and is a concern for the City. Lighting levels along Broadway Street already meet the maximum guidelines for Westar, the local utility provider. Broadway is the only street that has been studied for lighting levels. Lighting levels on Joplin Street appear to be deficient.

Public Safety

University / City Relationship

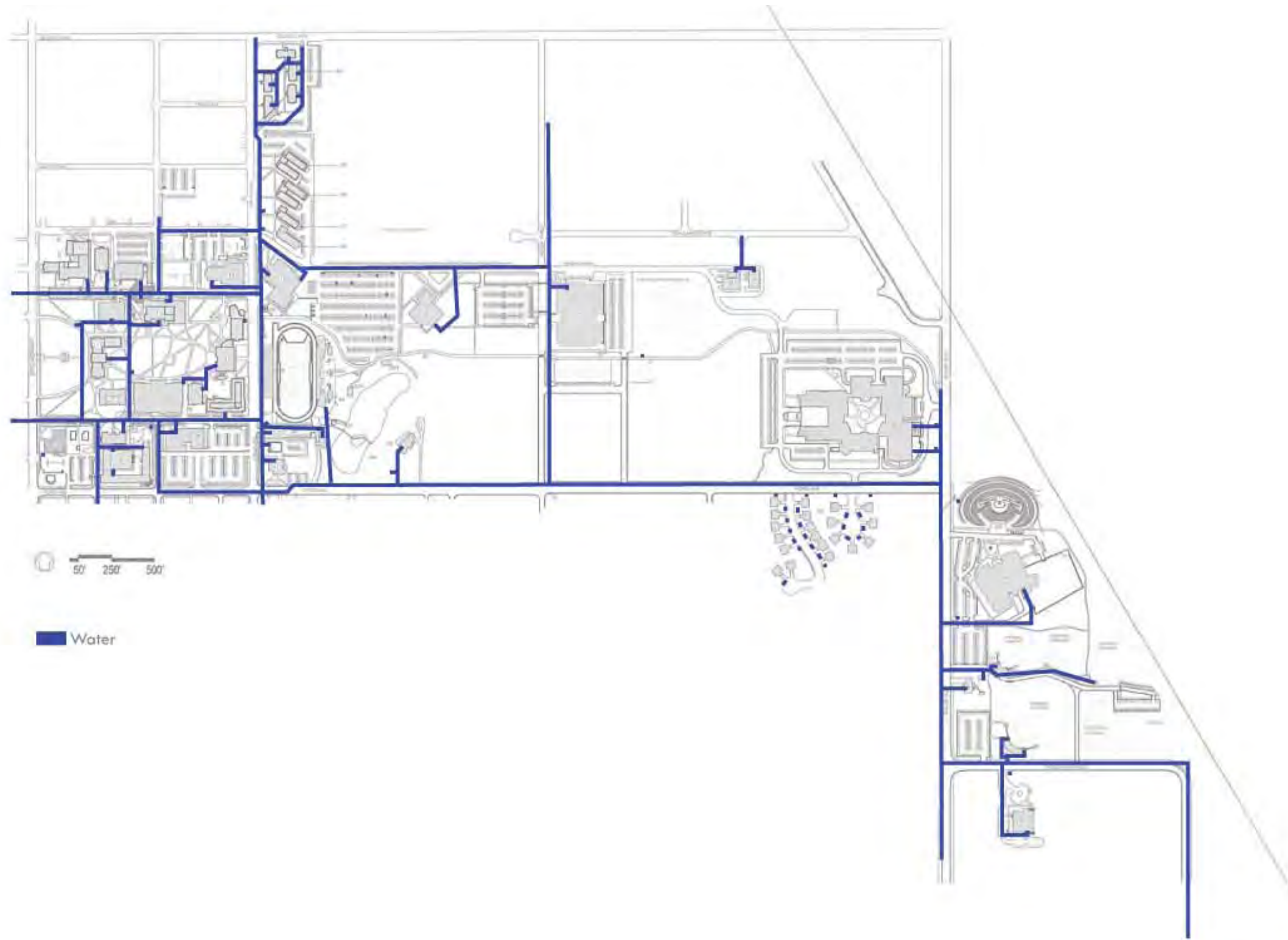
The City reported a good relationship and good coordination between the City and PSU public safety officials. The City patrols the community and PSU patrols the campus, and both communicate well when situations occur. Typically events, including sporting events, are well coordinated. Students are no more victimized than other citizens. There are no predictable pockets of crime. However, lighting levels on campus are not adequate in all areas to ensure a safe evening environment.



Fire Protection

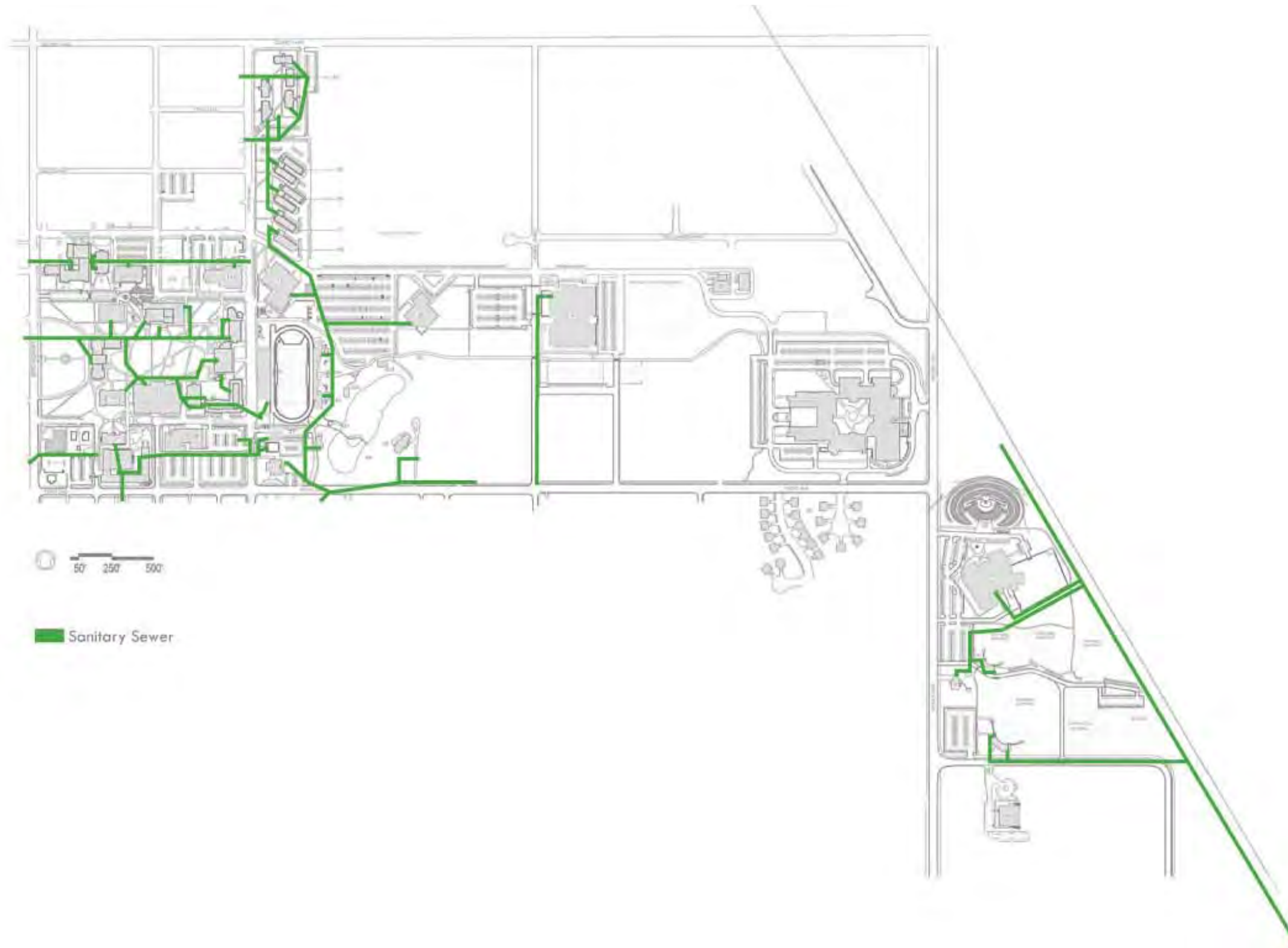
Fire Protection coordination between the City and PSU is good. The local Fire Chief is concerned about maintaining access to older buildings in the densely developed west campus. Many of these buildings are multi-story structures and some are wood framed. Concerns about fire safety in sorority and fraternity housing have been long standing, but recent increased inspections have reduced those concerns. Due to changes and uncertainty with State budgets, the attention given by the State Fire Marshall's office has been unpredictable and has pushed responsibilities down to local level officials.





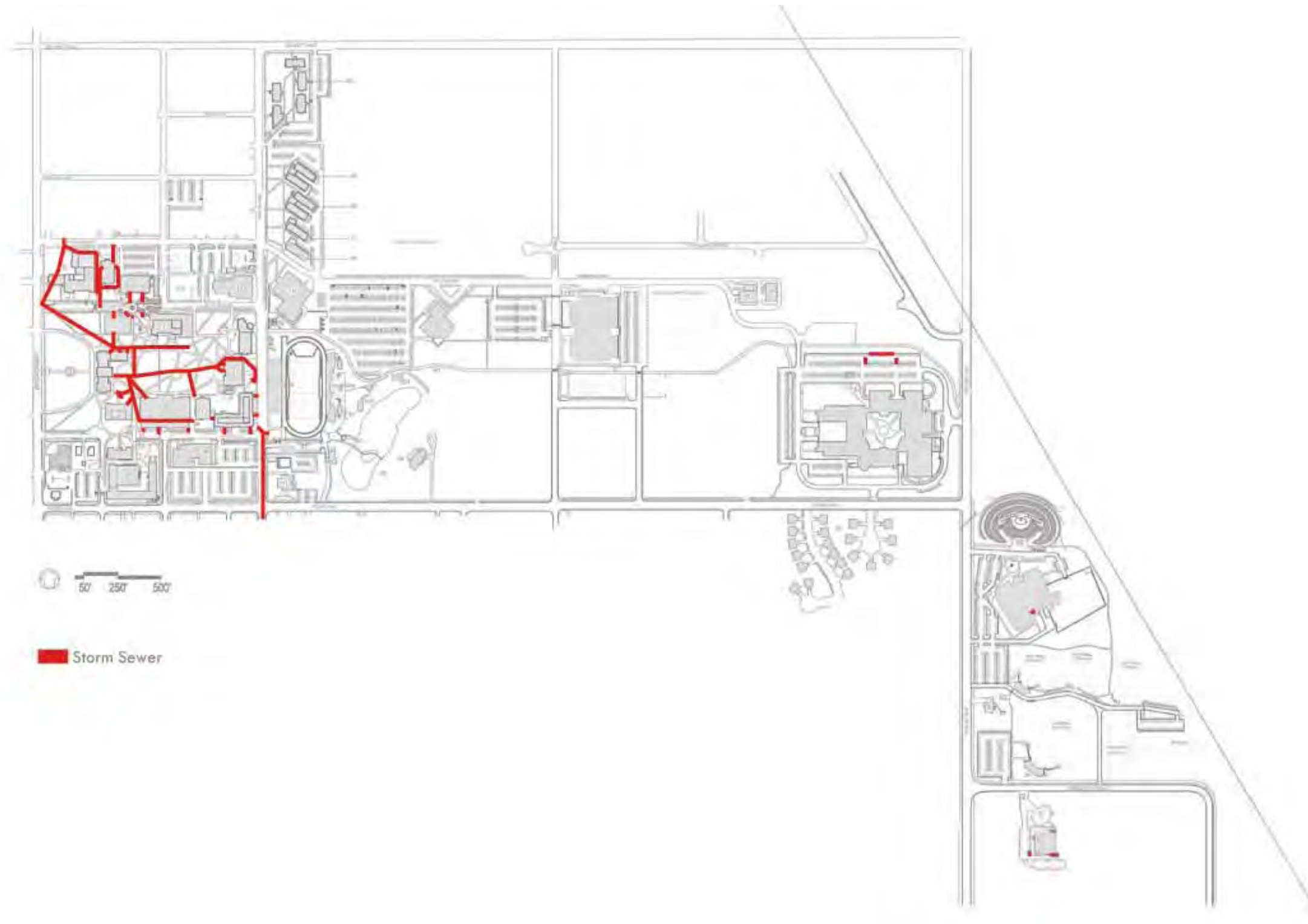
Water

City officials indicate water supply and distribution is adequate for domestic water and fire service to existing and anticipated buildings on campus for the foreseeable future. Completing a loop along Lindburg Street, connecting a line along Joplin Street with the line along Broadway Street, would provide redundancy for fire service feeds in this area of campus. Obligations for constructing this loop will need to be determined between the City and PSU.



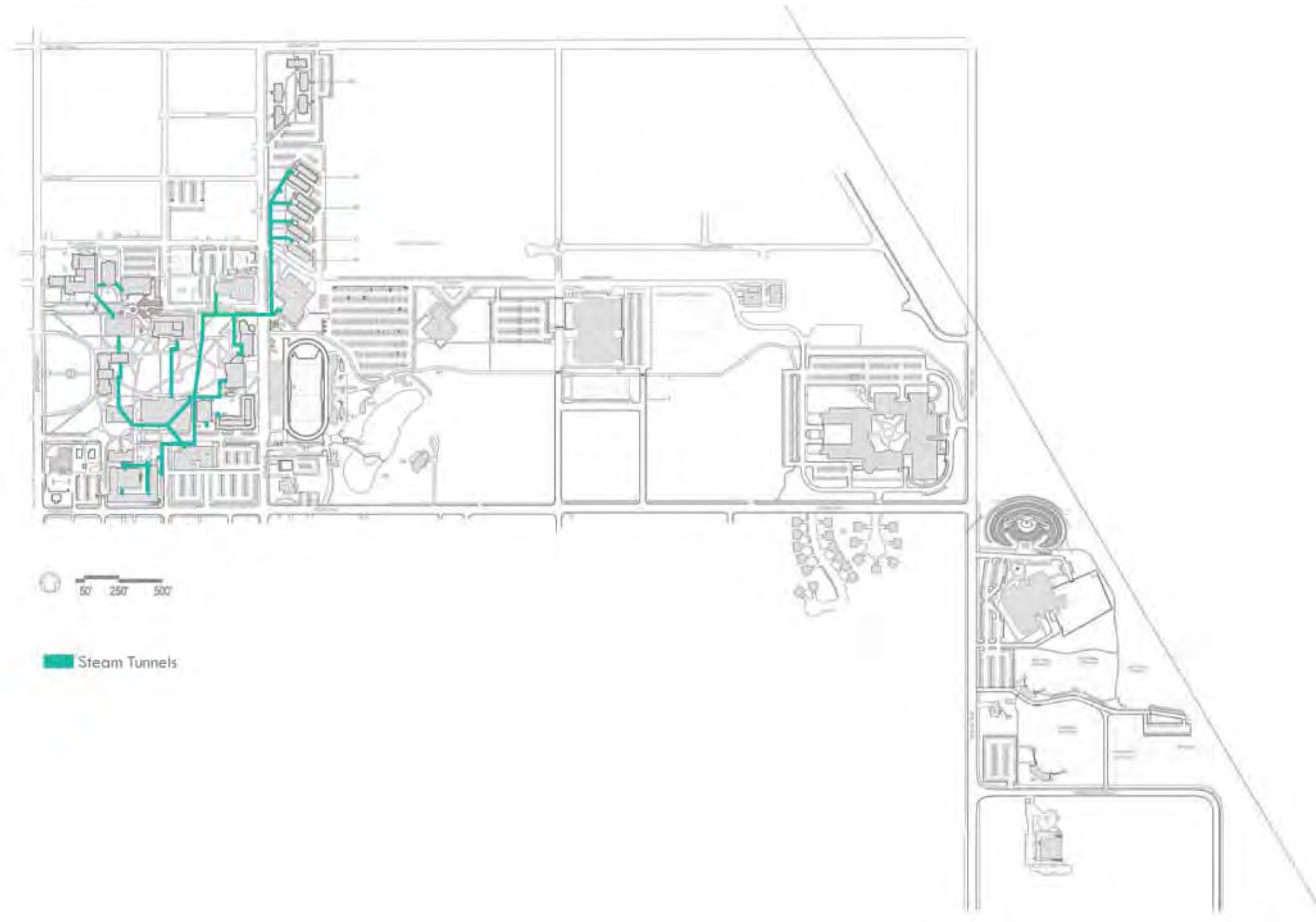
Sanitary Sewers

City officials are concerned about the combined sanitary and storm sewers on the west portion of campus and the impact these combined lines are having on the sanitary treatment plant capacity. The EPA has been investigating this matter in general, in the City. The extent of combined sewers on campus has not been mapped. However, in recent years the campus has been separating storm drains from sanitary lines when discovered during normal repairs and maintenance. The integrity of the sanitary sewer systems on campus needs to be verified.



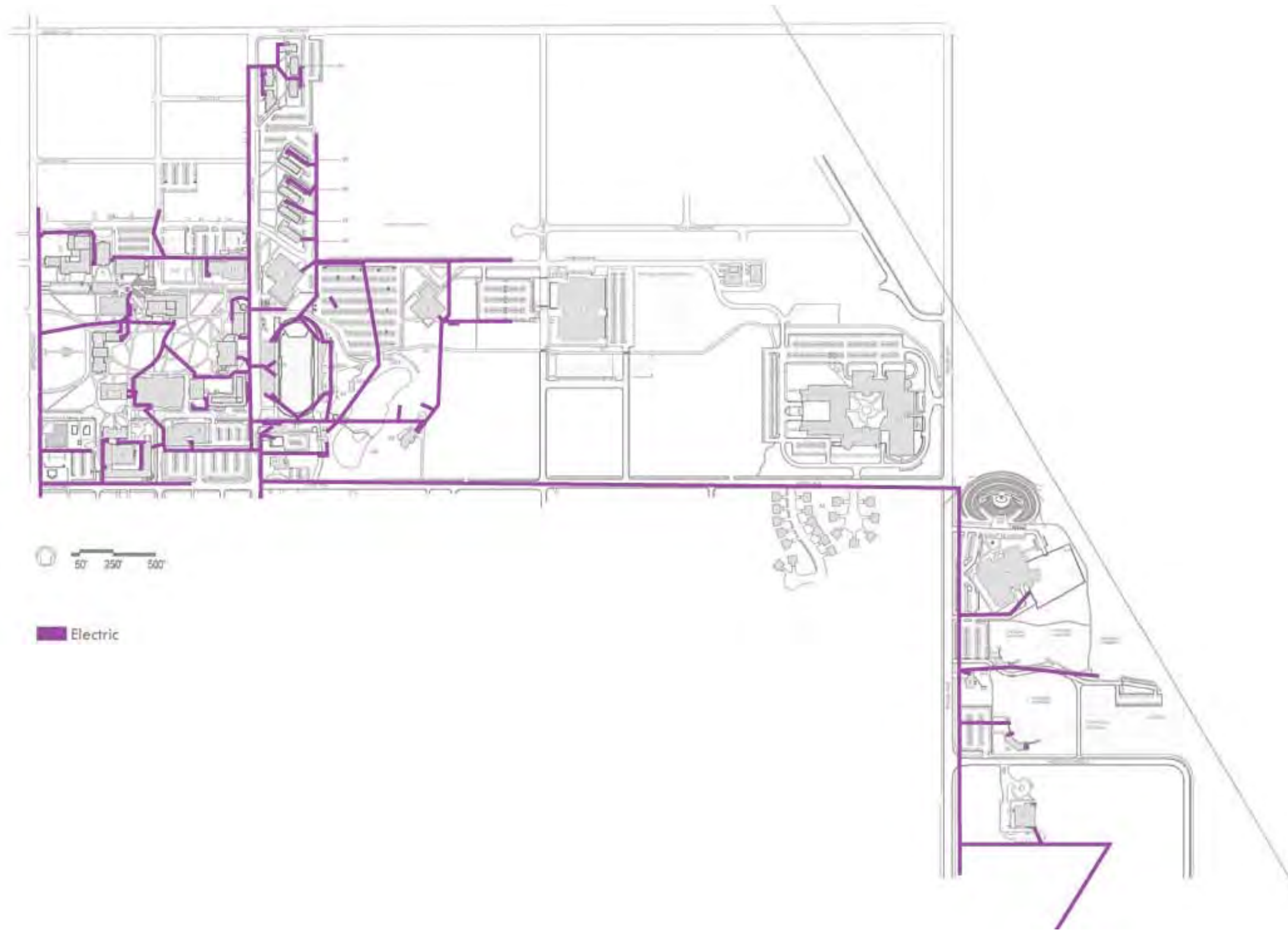
Sewer / Storm Drainage

There are no known problems with storm drainage in the vicinity of the campus. Campus representatives have advised of short term spot flooding at key intersections – Broadway Street and Ford Avenue, for example – during heavy rains. Regulation of the storm drainage systems is becoming more of a concern of the EPA. Storm water management in relation to the University Lake may be an issue in the future. In addition to these areas, stormwater drainage will be a critical issue when developing near the existing floodplain, located east of Rouse Avenue. Proper site design, location, and engineering will be crucial in mitigating flooding concerns in this area.



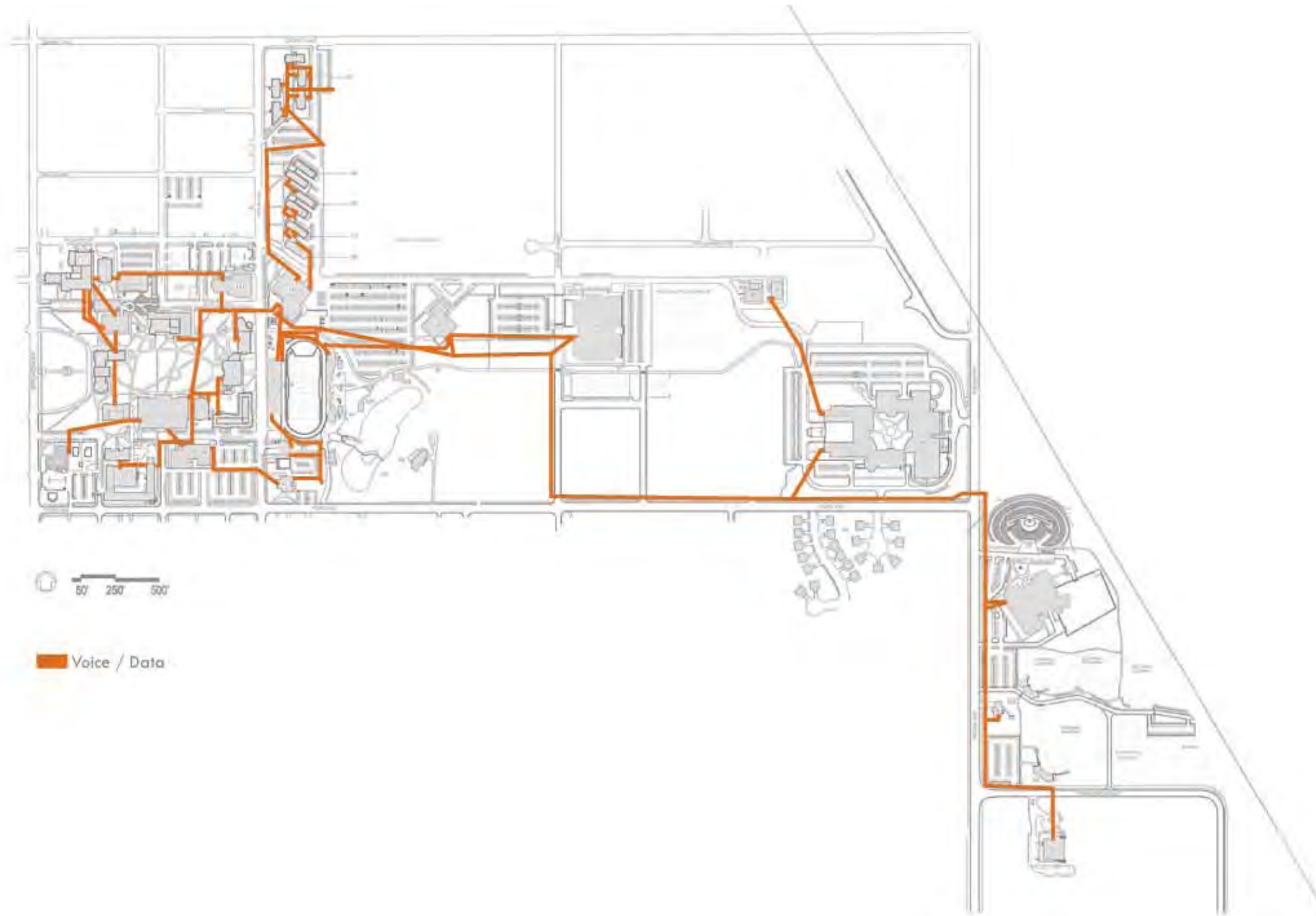
Steam Tunnels

Steam for heating is distributed through a system of tunnels in the original part of the campus. The existing boiler plant is operating at near capacity. Adding any new major loads would require an evaluation of the existing boilers to see if they are capable of handling the additional load. Most of the steam lines in the tunnels are in good condition. A section of the steam line is buried extending from the Axe Library north to service the residence halls.



Electrical

The local utility company, Kansas Gas & Electric (KG&E), provides electrical service to the transformer for each building and the University is responsible for the electrical service from the transformer to the building. Given the location of available electrical service from KG&E there does not seem to be any problem with obtaining service for buildings planned in the foreseeable future. There are no major concerns about electrical service from a long range planning viewpoint. Removing overhead electrical transmission lines may be considered in the future.



Voice / Data

The current level of wireless capacity, with 175 to 180 access points, represents upgrades within the past year, which have more than doubled the number of access points on campus. Ongoing upgrades and expansion of wireless service will be needed. Students connect to the internet through multiple devices, and they need access as they move around campus, particularly with the institution's goal of using the campus as a classroom. Instruction demand should drive the infrastructure.



Exterior Building Conditions



Interior Building Conditions



Engineered Systems Conditions

The campus has a wide range of buildings of different age and a wide range of ages and conditions for heating and air conditioning, plumbing, fire protection, and electrical systems. The efficiency of heating and cooling systems varies. A more efficient central steam boiler plant serves buildings on the west end of campus. Other campus buildings have independent heating systems. Cooling systems are unique to each building. Almost all existing buildings have been retrofitted with energy efficient lighting and in many cases energy saving occupancy sensors. The university has made water efficiency changes to about 95% of buildings with replacement of flush valves and fixtures to lower flow types. Only a small portion of primarily newer existing buildings have sprinkler systems.

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