FORT HAYS STATE UNIVERSITY

University Master Plan

CAMPUS MASTER PLAN

FALL 2024

FORWARD

The COVID-19 global pandemic and the preparation of the companion planning document – *Shaping the Future of Learning at FHSU: A Digital Master Plan* – impacted the campus master planning process. Stakeholder interviews, space utilization and needs analyses, and preliminary recommendations occurred throughout 2021 and spring 2022. The plan recommendations and campus plan report were finalized in 2024.

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EXECUTIVE SUMMARY

PURPOSE & INTENT

From its beginnings as the Western Branch of Kansas State Normal School in 1902, Fort Hays State University (FHSU) has grown into a regional comprehensive university, governed by the Kansas Board of Regents (KBOR), that provides a wide range of opportunities for over 15,000 students on campus and online. The University Master Plan, coming at an important point within FHSU history, builds upon the vision, mission, and values of the institution and provides a realistic 10 year framework of improvements in alignment with the KBOR guidelines.

The University Master Plan represents a unifying vision for FHSU which aligns the institution's academic mission, strategic plan, and physical development goals into a single document to help guide the future direction of the University.

The University Master Plan is comprised of the Campus Master Plan and *Shaping the Future of Learning at FHSU: A Digital Master Plan*. The Campus Master Plan is a collection of ideas that establish a flexible framework for coordinating physical improvements across the institution.

The Campus Master Plan embraces both campus and community, is reflective of the goals and objectives of a multitude of University stakeholders, and is designed as a long-range tool that can adapt and flexibly respond to unexpected future changes.

These are uncertain times for higher education and Fort Hays State University, given a rapidly changing international geopolitical environment, limited state funding for facility investments, and the "enrollment cliff". (The "enrollment cliff" refers to a significant projected decline in college and university enrollments starting around 2025. This phenomenon is primarily due to lower birth rates during the Great Recession, which means there will be fewer college-age students in the coming years.) Therefore, the recommendations of the Campus Master Plan seek to address deferred maintenance, increase utilization of existing campus facilities, and are pragmatic about limited space repurposing and site improvements.

PROCESS & OUTREACH

PROCESS

The campus planning process was an inclusive, transparent, and collaborative process between the planning team and campus and involved four phases:

- The **Launch** phase included the establishment of the overall schedule, committee structure, and data collection.
- The **Discovery** phase included touring all campus facilities, talking with students, faculty, staff and community, and initial meetings with the Senior Leadership Team and Executive Leadership Team to understand the context, background, and issues related to the FHSU campus. The information gathered was analyzed to understand the physical needs of campus both inside and outside of buildings.
- The **Test** phase established planning principles that would guide the Campus Master Plan and ideas that would address the issues identified in the Discovery phase.
- The **Document** phase concluded the planning effort by creating the final Campus Master Plan, implementation plan, cost estimates, Executive Summary and Technical Report.

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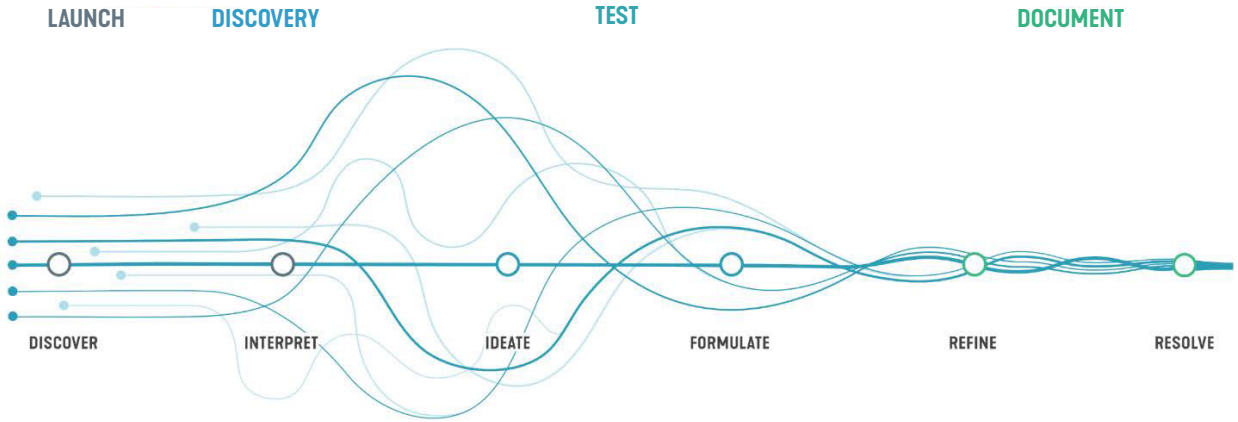
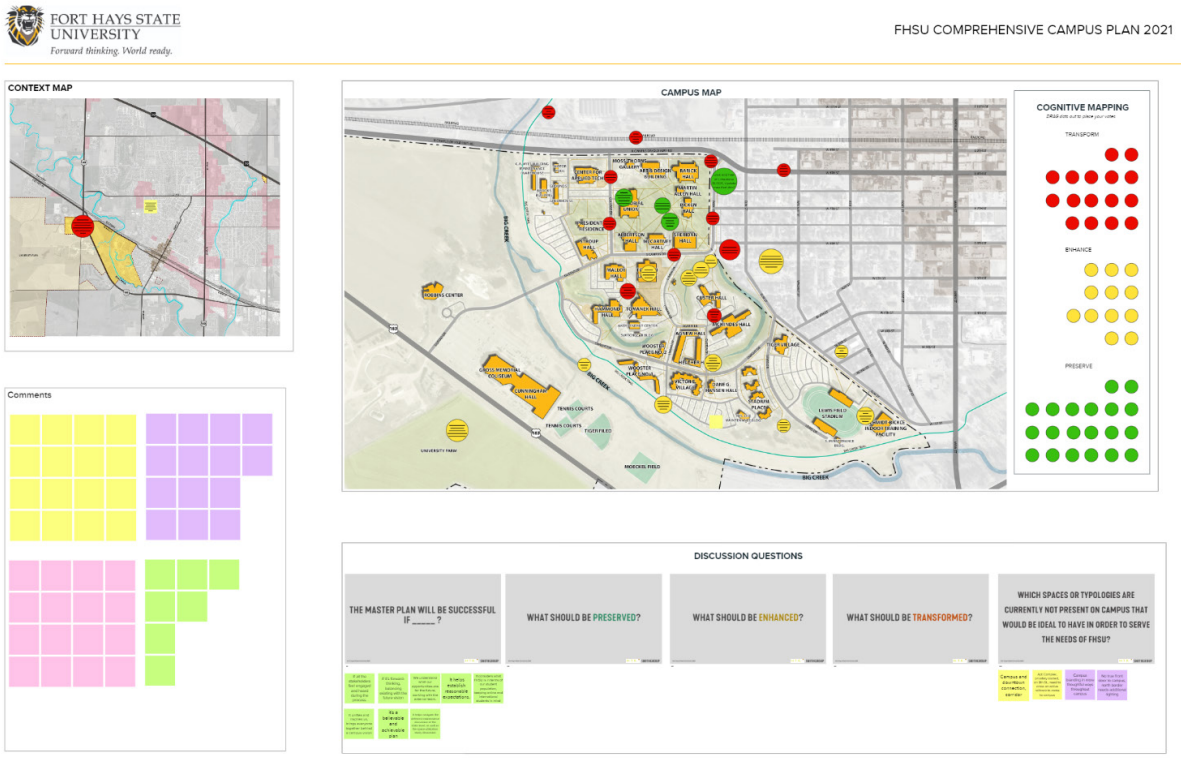


ENGAGEMENT

Even though the campus planning process took place during the COVID-19 global pandemic, it was still important to have robust campus engagement throughout the process. Campus tours were held in person on campus, but it was important to develop tools that would allow for the entire campus community to fully engage in the process and have their voices heard. As a part of the campus planning process, the planning team held nearly 100 virtual meetings with stakeholders including:

- Students and Student Groups
- Faculty and Staff
- Administration
- Alumni
- Trustees
- Community Members and Strategic Partners

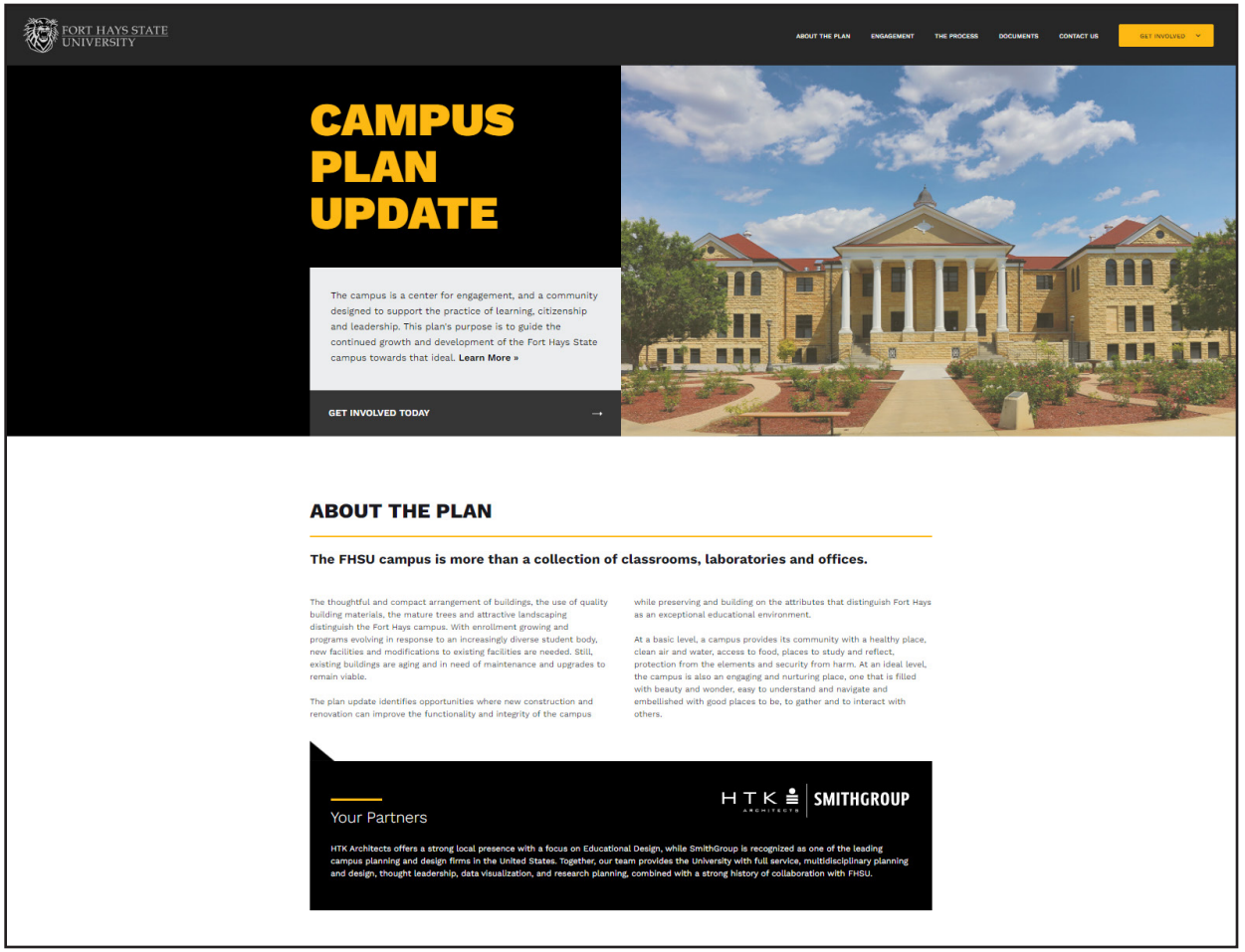
In addition, the planning team met regularly with the Senior Leadership Team and Executive Leadership Team for guidance and decision-making.



Mural board dot exercises with leadership teams

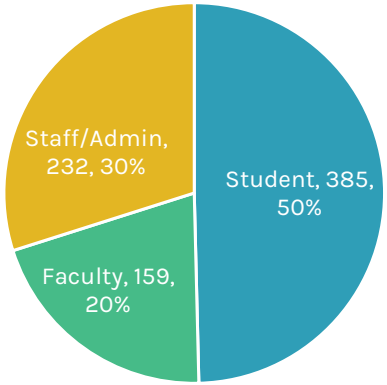
FHSU CAMPUS PLAN WEBSITE

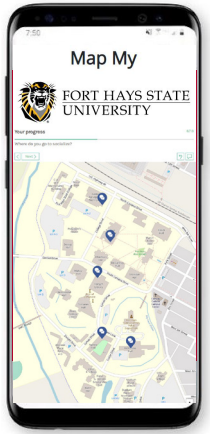
To allow virtual and remote engagement and provide information about the campus planning process, the planning team developed a campus plan website. The website provided information on data gathering, results of engagement opportunities, and presentation materials for the campus community to stay up to date and informed throughout the process. The website also allowed for comment and engagement to permit participation beyond scheduled virtual events.

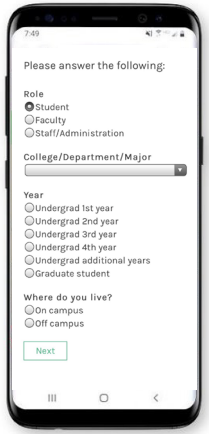


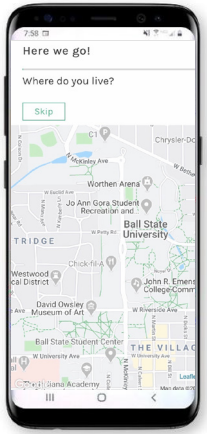
MAPMYFHSU WEB SURVEY

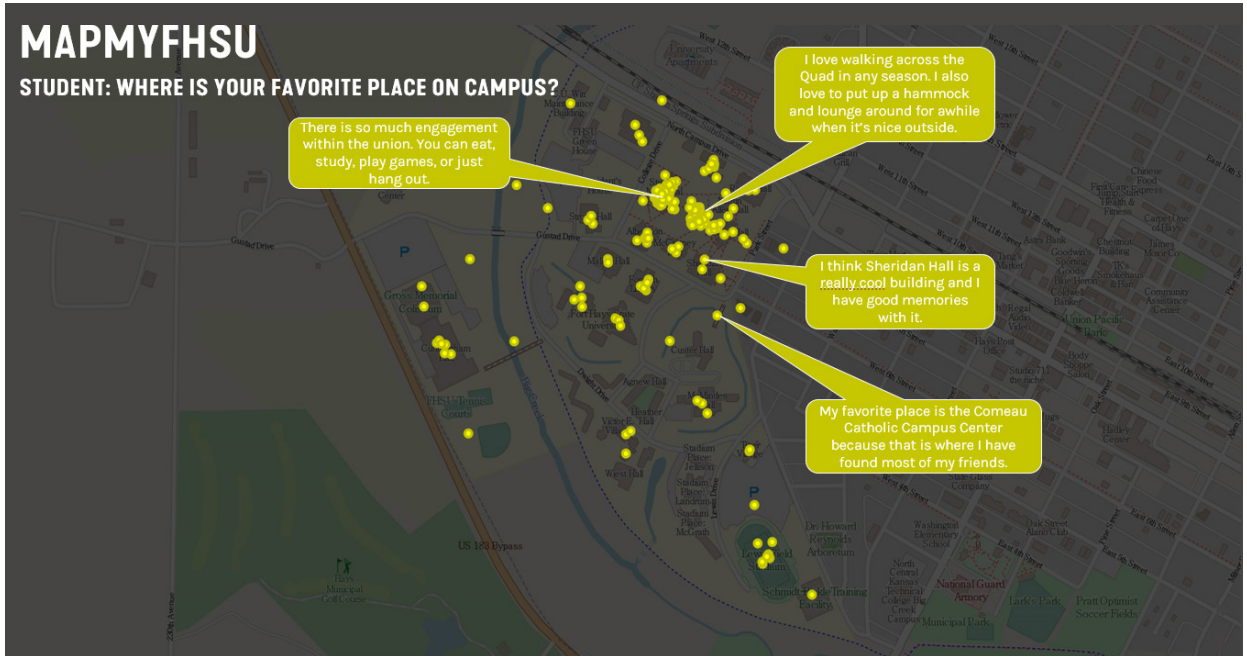
The planning team provided another innovative tool for virtual engagement during the process. MapMyFHSU allowed faculty, staff, and students to connect their personal place-based campus experiences via a mobile app. The MapMyFHSU app was launched during the Discovery phase and garnered important feedback that the planning team mapped and analyzed. The number of stakeholders reached with this tool was far greater than using face-to-face interaction alone.











VISION & GOALS

LINKING THE CAMPUS MASTER PLAN TO THE STRATEGIC PLAN

It was imperative that the Campus Master Plan link directly to the mission, vision, core values and goals of the strategic plan of FHSU. *Unlocking Untapped Potential 2024-2027* provides the vision for the future of FHSU focused around five strategic goals. The campus planning team used this document to guide recommendations.

MISSION

Fort Hays State University provides accessible quality education to Kansas, the nation, and the world through an innovative community of teacher-scholars and professionals to develop engaged global citizen-leaders.

VISION

We will be accessible to those who seek higher education, unlocking potential aligned with the democratic, economic, and social needs of our communities, our region, and our world.

CORE VALUES

KNOWLEDGE & SCHOLARSHIP

Knowledge transforms the human experience. We value inquiry, discovery, and the dissemination of knowledge that leads to intellectual, social and economic advancements.

INNOVATION & ENTREPRENEURSHIP

We think big. We solve problems. We seek and confront challenges, and embrace strategic risks that turn great ideas into exceptional pathways.

GLOBAL ENGAGEMENT

We transcend geographic and cultural boundaries. We build partnerships and opportunities that connect our students to the world.

FHSU AREAS OF DISTINCTION

Our achievements are rooted in our steady resilience and dedication to pursuing solutions that improve the lives in our region and the world.

We are a community of innovators with a remarkable record for delivering breakthroughs in collaboration, scholarship, teaching, and learning.

We invest in people who share in the joy of crafting challenging, affordable and transformative learning experiences.

GOAL 1: ACADEMIC EXCELLENCE

Foster evidence-based best practices enhanced through reflective practices and professional development.

GOAL 2: STUDENT SUCCESS

Create opportunities for all students and empower them to identify, evaluate, and achieve their goals while becoming engaged global citizens.

GOAL 3: STRATEGIC ENROLLMENT

Design and implement an enrollment plan for sustainability.

GOAL 4: RESOURCES AND INFRASTRUCTURE

Maintain and improve infrastructure and resources.

GOAL 5: IMPACTFUL PARTNERSHIPS

Cultivate and foster reciprocal partnerships locally, regionally, nationally, and globally that positively impact all stakeholders we serve.

GUIDING PRINCIPLES

The Campus Master Plan identifies opportunities for investment and improvement for FHSU. In order to address the possibility of change, a series of campus plan guiding principles were established to serve as the fundamental guiding framework to advise all future planning decisions.

The guiding principles, shown here, focus on key areas identified during the campus planning process to help drive academic success, campus enhancement, and community connectivity which will strengthen FHSU. Throughout the process, the guiding principles drove evolution of the final Campus Master Plan. The guiding principles served as the framework from which all specific campus systems recommendations were derived.

While the campus plan is forward-thinking, it is impossible to anticipate every situation that will arise over the long term. The guiding principles will help inform and guide future decisions. The specific issues most certainly will change, but the campus plan's guiding principles should remain constant.

REINFORCE CAMPUS CULTURE, IDENTITY & COMMUNITY

- Foster a culture that is kind, generous, welcoming, inclusive, and caring for students, faculty, staff, alumni, and community
- Maintain a compact, walkable campus with a strong visual appeal
- Create more spaces for study, collaboration, and socialization
- Invest in our most visited facilities to improve branding, visibility, and pride
- Serve Hays and western Kansas through curricular and co-curricular activities

PROMOTE HEALTH & WELLNESS

- Focus on campus facility improvements that will help our students, faculty, and staff succeed academically, physical, socially, and emotionally
- Provide easy access to spaces for recreation and wellness across campus

ENHANCE CAMPUS CONNECTIONS

- Strengthen pedestrian connections within and between housing and primary academic areas of campus
- Improve the pedestrian and cycling experience to and from downtown Hays
- Increase branding beyond campus boundaries
- Provide adequate infrastructure and support for our online and face-to-face students

OPTIMIZE OUR FACILITIES

- Prioritize re-use and renovation of existing facilities over building new facilities
- Seek opportunities to create multi-use spaces that increase utilization
- Seek partnerships and development opportunities that are mutually beneficial
- Reposition assets to generate revenue while furthering the academic mission
- Create a stronger "Sense of Place" through outdoor space improvements

INCREASE FLEXIBILITY & RESILIENCE

- Upgrade technology throughout campus learning spaces to accommodate multiple teaching and learning styles
- Re-envision older facilities for dynamic new programming
- Address deferred maintenance of our existing campus assets
- Expand environmental and economic sustainability programs and efforts campus-wide

CAPITALIZE ON OUR ASSETS & DIFFERENTIATORS

- Identify assets that differentiate FHSU and prioritize their investment
- Provide our strongest asset, our people, with the physical spaces they need to achieve their goals while making impact globally

CAMPUS PLAN VISION

ACADEMICS AND RESEARCH

1. Malloy Hall Renovation
2. McCartney Hall Renovation
3. Sheridan Hall Renovation
4. Stroup Hall Renovation and Addition
5. Tomanek Hall Renovation

STUDENT LIFE AND WELLNESS

6. Custer Hall Renovation
7. Gross/Cunningham Hall Renovation

SUPPORT

8. Grounds/Greenhouse, Brooks Building, and C.A. Witt Building Renovations

SITE

9. Campus Creek Wellness Trail

Numbering does not represent priorities.


N. Campus Dr.
College Dr.
Park St.
W 8th St.
W 7th St.
W 6th St.
S. Campus Dr.
Gustad Dr.
Lyman Dr.
Elm St
Big Creek
1
2
3
4
5
6
7
8
9
9
PRINT MAVS
THEMS

SECTION 2

CAMPUS TODAY


FORT HAYS STATE UNIVERSITY
STOP

CONTEXT & HISTORY

When first founded, FHSU was a branch of a normal school located on an abandoned former army post. In 1904, the University was established on the present-day campus with Picken Hall, the first building constructed on the site. In its early history, a quad set the stage for campus development. The original Quad, considered a sacred space today, created the identity of campus. Many of the buildings on the original Quad were built in the first quarter of the 20th century and are still here today. A strong and consistent materials palette, established by the architecture of the Quad, has been carried on through time and throughout the campus, creating a unified appearance and identity. As campus developed south and east over time, the clarity of the campus organization broke down somewhat as the car became the dominant design influence.


FORSYTH LIBRARY
1926
ALBERTSON HALL
1927
CODY COMMONS
1923
SHERIDAN COLISEUM
1917
THE QUAD
PICKEN HALL
1904
MARTIN ALLEN HALL
1908
INDUSTRIAL BUILDING
1912
S. Campus Dr.
College Dr.
N. Campus Dr.
Park St.
W 6th St.
W 7th St.
W 8th St.
N

CAMPUS USES

The campus has six very distinct neighborhoods: Academic, Housing, Student Life, Support Facilities, and two Athletics and Recreation neighborhoods. All of campus is compact, and nearly completely walkable within the 10-minute class change time, including to the parking across Big Creek. Several facilities are not located at an ideal location for campus's long-term development. For example, the support facilities yard is located just west of the academic core, a location that will be a logical expansion of the Academic neighborhood.

Students walking to the Memorial Union through the Quad

The housing court between Agnew Hall and Heather Hall

CAMPUS LAND USE & ORGANIZATION

BUILDING CONDITIONS

According to a KBOR facility condition index study, the majority of campus facilities are in good condition. Academic and residential facilities are in particularly good condition. The buildings that most need upgrade/maintenance are the Forsyth Library, Gross Memorial Coliseum and Cunningham Hall, Brooks Building and the C.A. Witt Building. Addressing deferred maintenance should continue to be a priority at the campus and state level.

1st floor of the Forsyth Library

The atrium of the Schmidt Foundation Art and Design Hall

FACILITIES CONDITION INDEX

CONDUCTED BY KBOR IN 2020

LEGEND

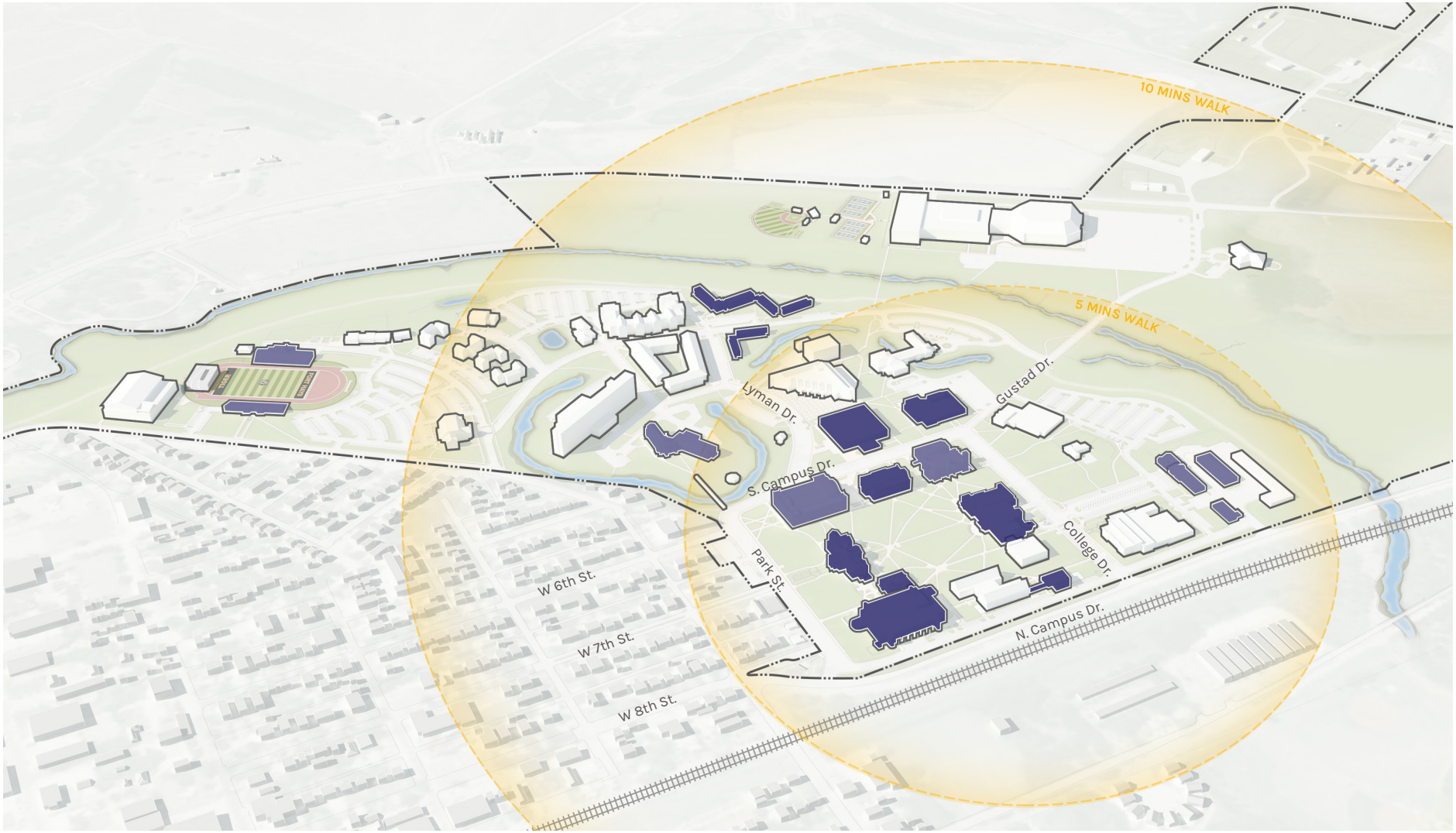
- 0.00 - 0.15 Excellent
- 0.16 - 0.30 Good
- 0.31 - 0.45 Fair
- 0.46 - 0.60 Concerned
- 0.61 - 0.75 Poor

BUILDING AGE – ORIGINAL CONSTRUCTION

During the past 120 years, the University has continuously built and renovated campus facilities. After the University's first establishment around the Quad between 1902-1925, 1950-1975 saw rapid expansion of campus. Some recently built facilities are the Center of Applied Technology, Schmidt Foundation Center for Art and Design, Tiger Village, Victor E. Village, Fischli-Wills Center for Student Success, and the Bickle Schmidt Athletic Complex. Recent construction has significantly increased the average quality of academic and residential facilities.

LEGEND

- Built 1902-1925
- Built 1926-1950
- Built 1951-1975
- Built 1976-2000
- Built 2001-2024



BUILDING AGE – RENOVATED FACILITIES

The University has done a good job with addressing deferred maintenance of the oldest and most utilized facilities, especially within the academic core. However, some renovations, such as the Forsyth Library, were completed over 40 years ago, and these facilities again need significant investment.

LEGEND

- Renovation 1951-1975
- Renovation 1976-2000
- Renovation 2001-2024

ACADEMIC SPACE & PROGRAMMATIC NEEDS

PROCESS

The planning team established the campus space needs for the Campus Master Plan through a process that included:

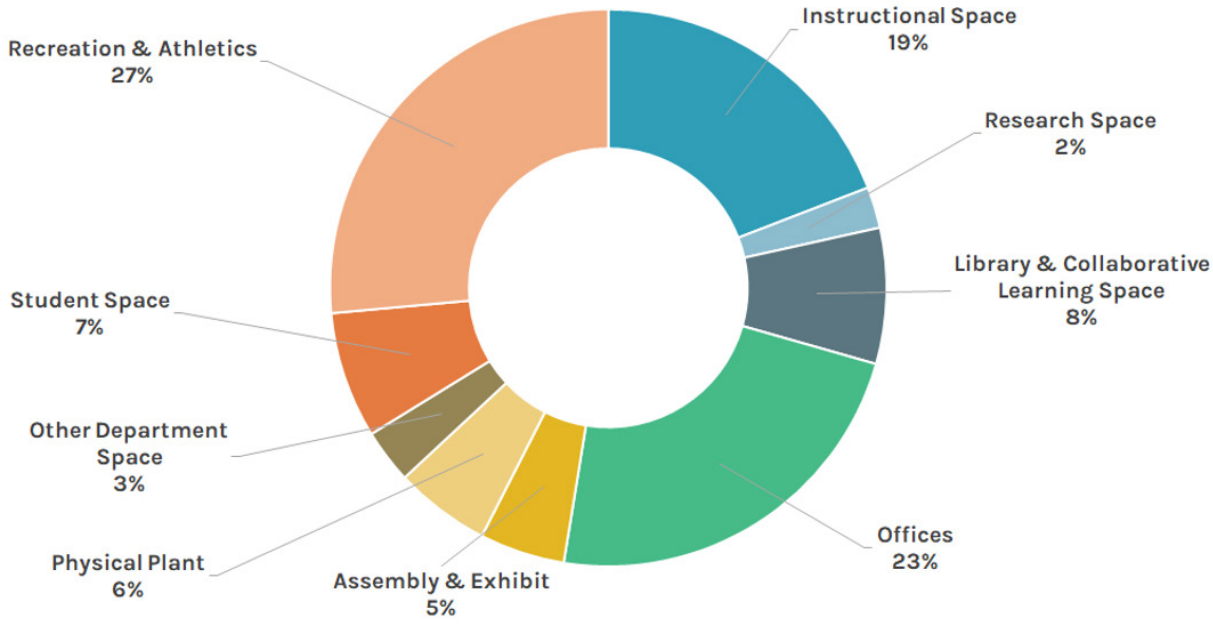
- Gathering facilities, enrollment, course, and staffing data for the Fall 2019 term. This data was used to establish a snapshot of university activities and was defined as the base year for the analysis.
- Preparing preliminary space utilization analyses for regularly scheduled classrooms and teaching laboratories. This uncovered minor anomalies in the data, which were resolved with the University.
- Spot verifying room use codes that the preliminary analysis had identified as suspect, such as classrooms with no utilization.
- Meeting with University representatives to gain an understanding of how current space is serving the campus. The planning team used this information to establish space guidelines for the various space categories on campus.
- Defining the Future State assumptions for on-campus student enrollment and staffing for the space needs analysis.
- Preparing a space needs analysis for the Base Year and Future State.
- Reviewing the space needs analysis assumptions and conclusions with the University and making appropriate adjustments.

EXISTING SPACE UTILIZATION

FALL 2019: SNAPSHOT IN TIME

Only FHSU non-residential space is included in the analysis. Space at the University Farm and the Sternberg Museum is excluded due to the uniqueness and location of these spaces. The existing space, by space category, is depicted.

Instructional Space	176,204
Research Space	22,002
Library & Collaborative Learning Space	72,523
Offices	213,212
Assembly & Exhibit	45,541
Physical Plant	51,217
Other Department Space	28,908
Student Space	67,509
Recreation & Athletics	243,579
	920,695

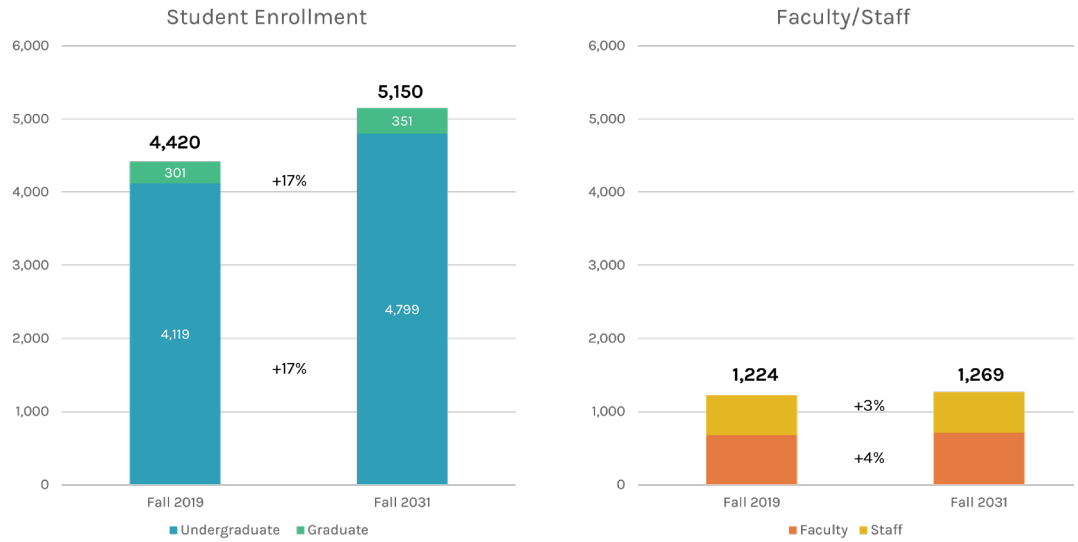


BASE YEAR AND FUTURE STATE ASSUMPTIONS

Fall 2019 student enrollment and faculty and staff levels defined the base year.

The University defined the modeled future state as:

- On-campus enrollment of 5,150 students (17% increase over Fall 2019).
- To support an increase in student enrollment:
  - Faculty growth is modeled at 4% of the base year.
  - Staff growth is modeled at 3% of the base year.



BASE YEAR AND FUTURE STATE ASSUMPTIONS

SPACE NEEDS SUMMARY

In determining the space needs for FHSU, data was augmented with campus discussion. The planning team incorporated the outcomes of these meetings into the space utilization expectations and space needs guidelines. Highlights follow.

- The campus has sufficient instructional space.
- Classroom inventory mostly aligned with course section sizes; identified gaps in 36-40 seat and 61-75 seat ranges.
- The Research Space shortage could be accommodated through continued mixed-use of teaching laboratories and interdisciplinary use.
- The Academic Office deficit can be addressed by repurposing some surplus Administrative Offices.
- The base year and future state show a small "surplus" of space, which will allow FHSU to continue to focus on reallocation of space to ensure the best and highest use.

BASE YEAR SPACE NEEDS

FALL 2019

ON-CAMPUS ENROLLMENT 4,420 STUDENTS

The base year (Fall 2019) space needs analysis indicates that overall, the Academic and Academic Support Space on campus is adequate. However, like most campuses, FHSU has surpluses in several space categories and some deficits in others. The greatest need is in Research Laboratories and Recreation & Athletics spaces.

Space Category	Existing ASF	Guideline ASF	Difference
Classrooms	53,848	44,585	9,263
Teaching Labs	81,793	73,129	8,664
Open Labs	40,563	32,288	8,275
Research Labs	22,002	34,680	(12,678)
Library & Collaboration Space	72,523	75,727	(3,204)
Academic Offices	115,883	126,160	(10,277)
Administrative Offices	97,329	42,140	55,189
Other Department Space	28,908	20,180	8,728
Assembly & Exhibit	45,541	27,450	18,091
Recreation & Athletics	243,579	263,400	(19,821)
Physical Plant	51,217	52,709	(1,492)
Student Space	66,017	53,040	1,2977
Student Healthcare	1,492	2,210	(718)
TOTAL	**920,695**	**847,699**	**72,996**

FUTURE STATE SPACE NEEDS

ASSUMES ENROLLMENT AND STAFFING INCREASE
ON-CAMPUS ENROLLMENT 5,150 STUDENTS

In the future state, the Center for Student Success is added to the existing square footage. The Bickle Schmidt Athletic Complex ASF is not included.

The Center for Student Success provides sufficient student healthcare space for existing and future state enrollment. The Forsyth Library renovation improved the quality of the Library & Collaboration Space.

When student enrollment grows, the university should anticipate greater demand for limited Recreation & Athletics spaces. Both the Bickle Schmidt Athletic Complex and repurposing academic space in Gross/Cunningham (after the Stroup Hall Renovation and Addition) will partially address Recreation & Athletics space needs.

Space Category	Existing ASF	Guideline ASF	Difference
Classrooms	54,598	50,666	3,932
Teaching Labs	82,393	80,850	1,543
Open Labs	56,498	37,624	18,874
Research Labs	22,002	41,600	(19,598)
Library & Collaboration Space	72,523	80,389	(7,866)
Academic Offices	115,883	130,750	(14,867)
Administrative Offices	97,329	42,140	55,189
Other Department Space	32,253	23,515	8,738
Assembly & Exhibit	45,541	27,450	18,091
Recreation & Athletics	243,579	271,861	(28,282)
Physical Plant	51,217	51,073	144
Student Space	66,317	61,800	4,517
Student Healthcare	4,107	2,575	1,532
TOTAL	**944,240**	**902,293**	**41,947**

SPACE NEEDS ANALYSIS BY SPACE CATEGORY

CLASSROOMS

Classrooms are defined as any room primarily used for scheduled instruction requiring no special equipment. The rooms are generally referred to as "general-purpose" classrooms, seminar rooms, or lecture halls. Classroom space need was determined by a formula that combines expected utilization with a guideline of 25 ASF per student station. Student station size can range from 18 ASF for fixed lecture halls to 35 ASF for flexible active learning classrooms. In the base year, FHSU station size averaged approximately 21 ASF.

Based on this formula, FHSU has a surplus of over 9,000 ASF in classroom space in the base year. The classroom surplus reduces to approximately 4,000 ASF in the future state.

TEACHING LABORATORIES

Teaching laboratories are defined as rooms used primarily for regularly scheduled classes that require special purpose equipment to serve the needs of a particular discipline for group instruction, participation, observation, experimentation, or practice. Space requirements are calculated using a formula that is similar to that used to determine classroom space with the exception the ASF per student seat. The ASF space per seat varies by discipline and ranges between 30 and 125 ASF, which includes support space. With application of these guidelines, there is a surplus of 8,700 ASF in the base year; however, teaching laboratories are also used for faculty research. At the future state, the surplus is nominal at 1,500 ASF.

OPEN LABORATORIES

Open laboratories are rooms that are available for unscheduled or informally scheduled instruction and student use in a particular discipline. Types of rooms in this category typically include computer laboratories with specialized software, language laboratories, nursing and other healthcare education laboratories, music practice rooms, maker space, and tutorial and testing facilities.

The guideline for open laboratories varies by campus. Based on its experience, the planning team established the guideline for FHSU at 8 ASF per student FTE. This yields a surplus of almost 8,300 ASF in the base year. The Center for Student Success increased the quantity of open laboratory space. As a result, the surplus of open laboratory space increases to almost 19,000 ASF in the future state.

Classroom in McCartney Hall

Graphic design production laboratory

RESEARCH LABORATORIES

Research laboratories are rooms used for unscheduled laboratory experimentation or training in research methods and observation. The research might be conducted by either faculty or students for both funded and non-funded research. At large, research-focused institutions space need in this category is typically established by a factor of ASF per funded research expenditure or ASF per principal investigator.

At FHSU, research is an important part of the undergraduate student experience. Appropriate research space is also important for faculty recruitment. The space guideline in this category was established through discussions rather than applying traditional formulas. The base year deficit is 12,700 ASF, which increases to almost 20,000 ASF in the future state.

LIBRARY & COLLABORATION SPACE

The contemporary academic library is best defined as the traditions of the past integrated with digital media. Typical libraries have spaces such as stack areas, individual study space, group study rooms, staff offices, and processing or technical areas. On modern campuses, study spaces are no longer just in the library, but informal learning and collaborative study space are distributed across campus.

The guideline for this category includes a factor for the library collection and support space and a study space allocation. The factors applied for FHSU include 0.02 ASF per volume equivalent for the 528,000 physical volumes in the collection and a study space allocation of 25 ASF for 25% of the undergraduate population and 15% of the graduate student population. The collection is expected to remain constant, even if student enrollment increases.

In the base year, there is a deficit of 3,200 ASF, which increases to 7,900 ASF in the future state. The additional need is directly related to the student enrollment increase. It is important to understand collaboration space is not assumed to be exclusively in Forsyth Library, but rather should be distributed across campus.

Biology laboratory in Albertson Hall

Study space in the Forsyth Library

ACADEMIC & ADMINISTRATIVE OFFICES

The guideline for office space is based on an allocation per employee type for workspace plus additional space amounts for conference space, workrooms, and office storage.

Application of the guideline yields a base year deficit of academic offices of 10,300 ASF, which increases to almost 15,000 ASF as new faculty are hired to support enrollment growth. Administrative office space has a significant overage of 55,000 ASF. Of important note, the surplus cannot easily be repurposed as current offices are not designed per modern office size and configuration guidelines.

OTHER DEPARTMENT SPACE

Other department space consists of a variety of spaces that are not included in the space categories above. At FHSU, this includes media production space, clinics, meeting rooms, and storage areas. The guideline of 5 ASF per student is based on similar institutions of FHSU's type and enrollment. Application of the guideline results in a surplus of almost 9,000 ASF in the base year.

ASSEMBLY & EXHIBIT

Assembly and exhibit space at FHSU includes the performance space in Sheridan Hall and gallery/ exhibition space. The recommended guideline in this category varies depending on the extent of the fine and performing arts programs offered. Due to the extensive programs offered at FHSU, an allocation of 27,450 ASF was used.

While application of the metric shows an overage, the Sheridan Hall venue is used by not only the University but the Hays community as well.

RECREATION & ATHLETICS

For this space category, an industry accepted guideline was used which allocates 12.1 ASF for all undergraduate students, 25% of the graduate population, and 15% of non-student employees. For athletics, the existing space plus Bickle Schmidt Athletic Complex and auxiliary gym were included. Application of the guideline and adjustments resulted in a base year deficit of almost 20,000 ASF, which increases to 28,000 ASF when student enrollment grows.

Performance space in Sheridan Hall

Basketball Court in Gross Memorial Coliseum

PHYSICAL PLANT

Plant operations space typically includes shops, central storage, and central services, but can also include other space types assigned to the physical plant. The factors considered when determining the appropriate guideline include purchasing practices that affect warehousing needs, increased interior storage due to climate, and the types of facilities being maintained. A typical factor is 6% of the campus space being maintained.

For the base year, the guideline is applied to existing space, which yields a nominal space need (1,500 ASF). In the future state, the guideline is applied to the total campus guideline ASF, which brings the space category into balance.

STUDENT CENTER

Examples of the various functions that are typically found in the student center space category include food service, bookstore, lounge, meeting space, student government, and student organization space. An allocation of 12 ASF per student is recommended by the Association of College Unions International (ACUI) for campuses with robust on-campus housing. This guideline was used for the FHSU analysis.

In the base year, there is a surplus of almost 13,000 ASF. When the Center for Student Success is included in the future state existing ASF, the total student center space increases, which will help meet future space needs when student enrollment grows.

STUDENT HEALTHCARE

Healthcare space includes both medical and counseling services space needed to support students. Group therapy rooms are accounted for in this space category. A metric of 0.5 ASF per student was used to generate the need for space. In the base year, there is a deficit of almost 1,000 ASF. However, the Center for Student Success addressed the student healthcare need both current enrollment and potential enrollment growth.

Different spaces in the Memorial Union

RECOMMENDATIONS

The University should seek to increase the number of classrooms in the 36-40 seat and 61-75 seat ranges through reconfiguration of existing classrooms or repurposing surplus campus spaces, while providing more flexible classrooms to accommodate a variety of pedagogies. Future classroom scheduling should aim to ensure better use of existing classrooms by meeting utilization targets of 32 weekly scheduled hours and filling 65% of seats (on average). A review of underutilized teaching laboratories might identify potential repurposing opportunities for undergraduate, graduate, and faculty research.

FHSU should continue to focus on reallocation of space to better align existing space with functional needs while ensuring the best and highest use of space. As renovation and new design projects take place, modern space guidelines should be used, particularly for instructional and office spaces.

KANSAS BOARD OF REGENTS SPACE STUDY

At the end of 2020, KBOR released a space study, which focused on understanding total deferred maintenance needs by assessing condition and space use. Buildings within scope were those that were "mission critical." The snapshot in time is Fall 2019 with field work completed in Summer 2020.

Not all University space was within scope, but was limited to space classified as classrooms, teaching, open, and research laboratories, and office and office support spaces. Metrics were applied by space type with resulting "overages" identified as "opportunity space." A suggested "rule of thumb" was that only 50% can truly be repurposed. Metrics were applied based on assumptions, without input from each institution.

TAKEAWAYS

- The KBOR space study was focused on instructional spaces, research laboratories, and offices.
- Metrics were applied based on broad assumptions, without institutional input.
- The space study final report notes its own limitations, which are not readily seen by the casual reader.
- Classroom and teaching laboratory utilization indicates opportunities to better use existing space.
  - Seating in classrooms can be right-sized to provide more space per student and increase seat fill rates.
  - Teaching laboratories warrant a deeper dive to understand specific usage opportunities.
- Office space excess is expected due to older buildings, which reflect a different work era. It is typically not cost efficient to right-size office space with modern programming guidelines.

STUDENT LIFE

HOUSING

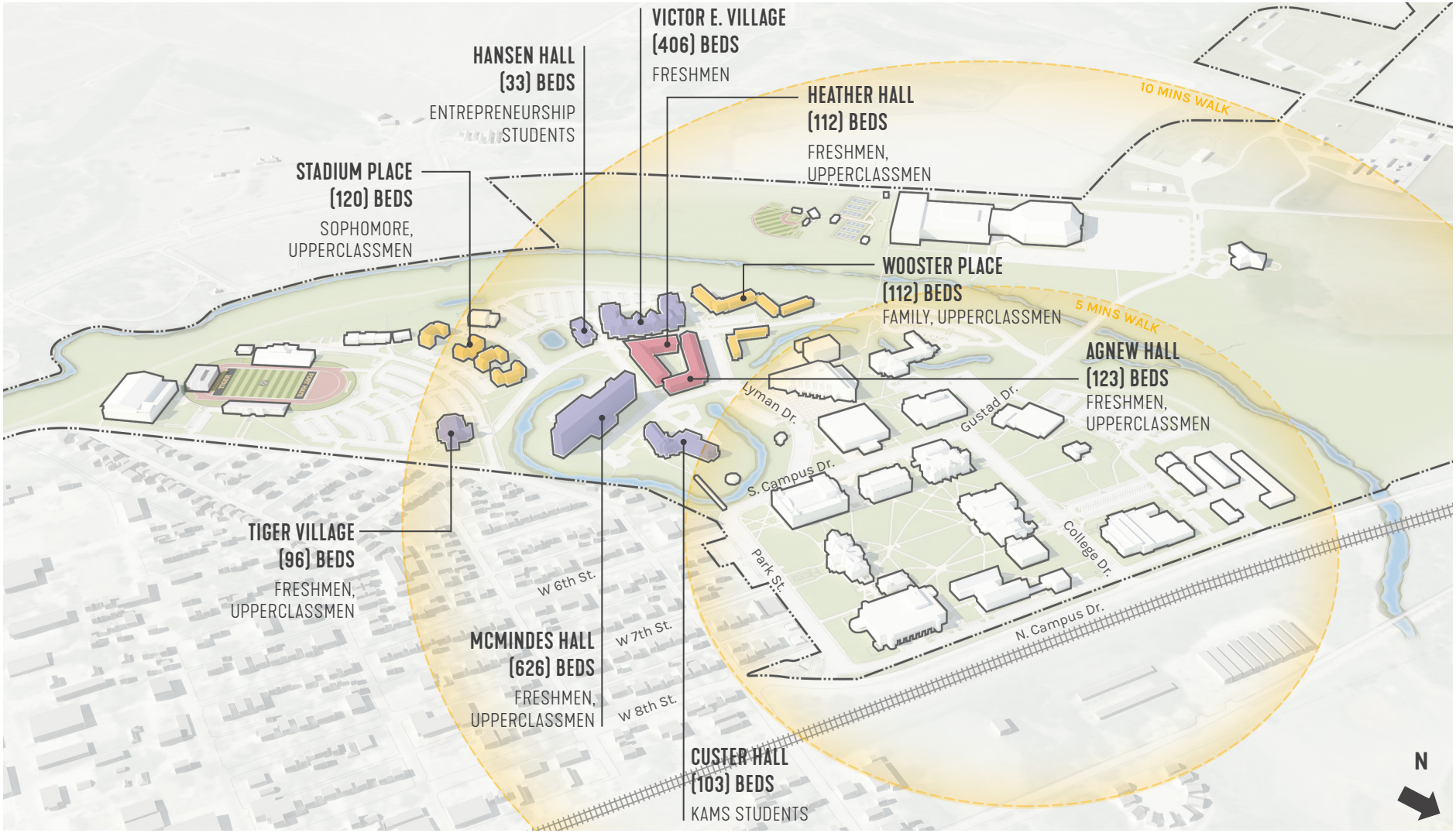
The on-campus housing neighborhood is adjacent to the academic core and surrounded by Big Creek. Current on-campus housing volume is adequate to accommodate current enrollment. There is a good mix of bedroom types to accommodate all living arrangement preferences. Future housing development should consist of additional apartment and suite-style beds.

Victor E. Village

Stadium Place

Wooster Place

McMindes Hall



EXISTING HOUSING LOCATIONS & BED COUNTS

LEGEND

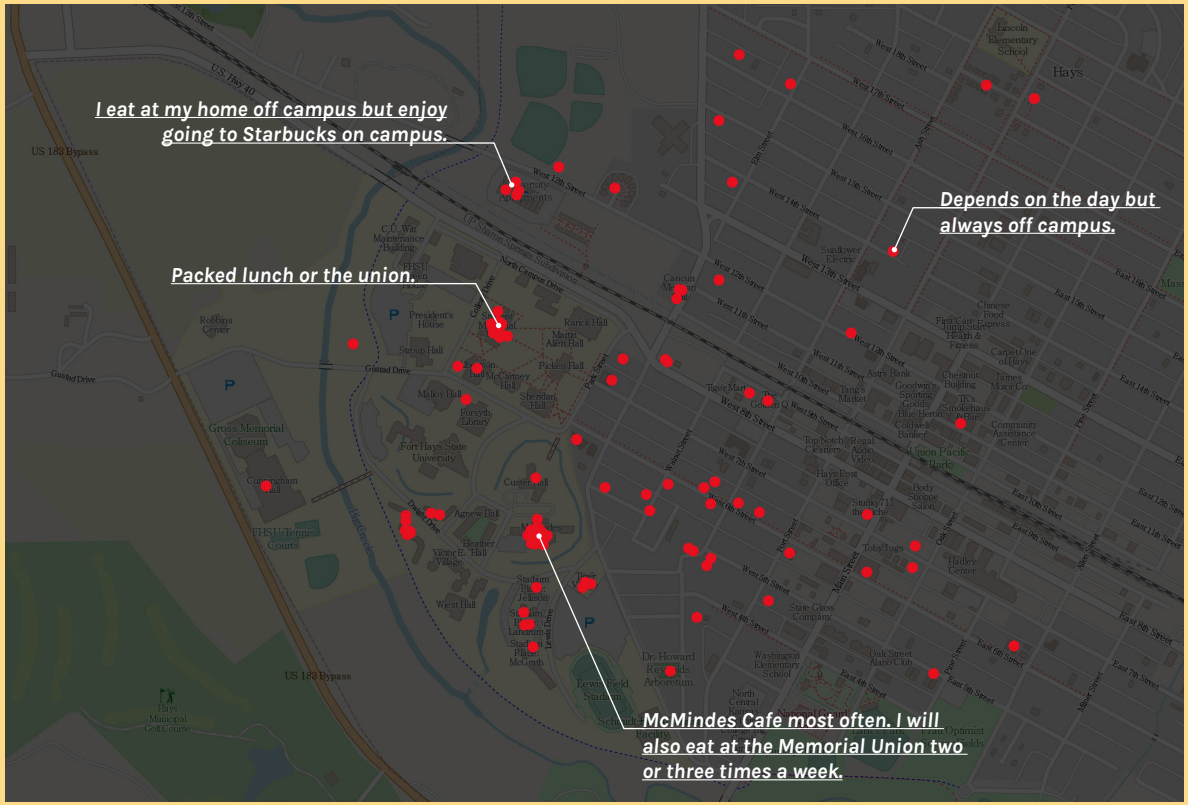
- Traditional – 1,264 Beds
- Apartment – 232 Beds
- Suite – 235 Beds

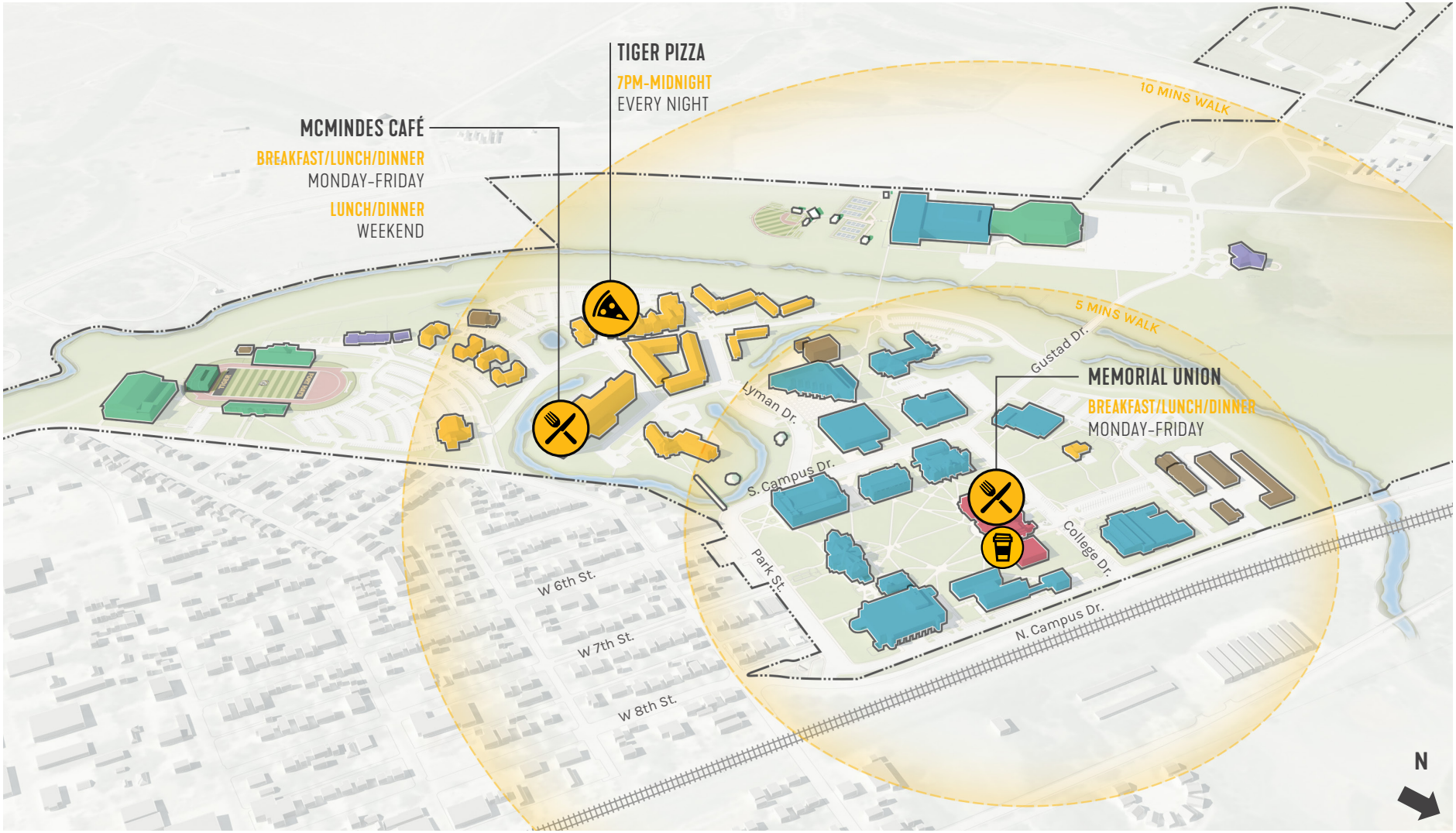
DINING

There are three dining locations on campus; two in the housing neighborhood and one in the Memorial Union. The three locations serve all students on different days and at different times during the day. Dining capacity is sufficient for current campus needs. Additional outdoor dining opportunities are desired, especially at the Memorial Union.

WHAT DOES THE SURVEY TELL US?

STUDENTS – WHERE DO YOU TYPICALLY EAT?





EXISTING DINING LOCATIONS & OPERATING TIMES

	WEEKDAYS				WEEKENDS			
	Breakfast	Lunch	Dinner	7PM-Midnight	Breakfast	Lunch	Dinner	7PM-Midnight
McMindes Cafe								
Memorial Union								
Tiger Pizza								

LEGEND

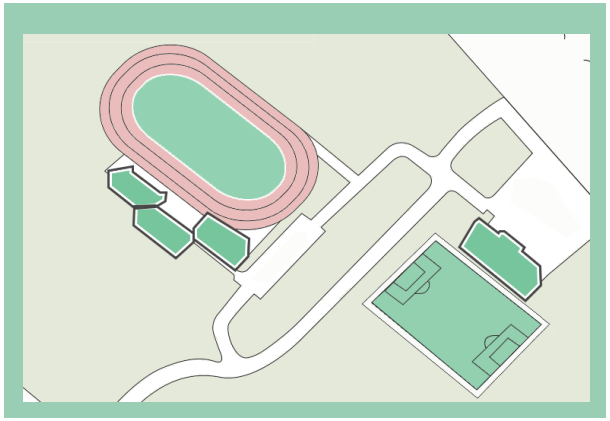
- Dining before 7PM
- Dining after 7PM
- Grab & Go

- Academic
- Auxiliary
- Student Life
- Residential
- Athletics & Recreation
- Service/Support

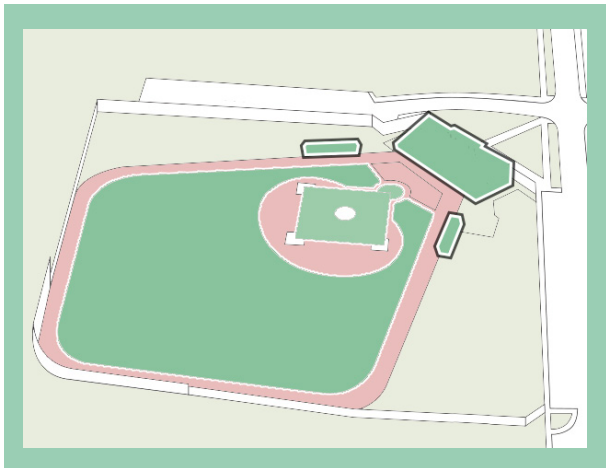
HEALTH & WELLNESS

Recreation and Athletics facilities are located on the perimeter of campus and in multiple off-campus locations. The distributed model is expected to continue. On-campus outdoor recreation space is significantly lacking and in poor condition. The historic Lewis Field Stadium has been renovated multiple times through the years. The renovation in 2017 added new seats, wider stairwells, handrails, and a new video/ scoreboard at the north end of the stadium, and recent construction added the Bickle Schmidt Athletic Complex in the south end zone.

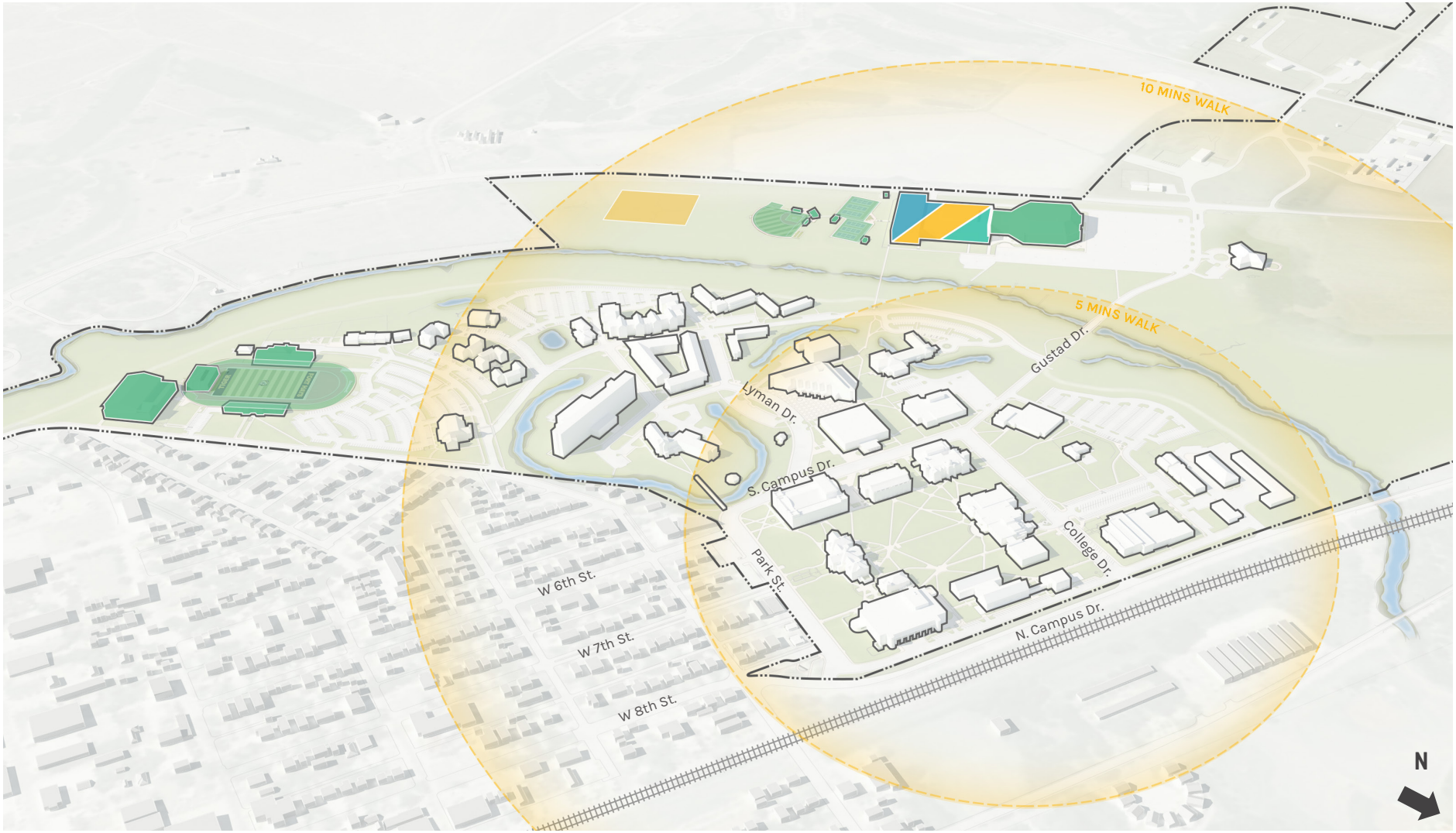
Gross/Cunningham has significant utilization overlaps occurring between recreation, wellness, athletics, and academics. Additional indoor recreation space in Gross/Cunningham is needed.



Off-campus: Track and field facility and soccer stadium



Off-campus: Larks Park in downtown



EXISTING RECREATION & ATHLETICS FACILITIES

LEGEND

- Athletics
- Recreation
- Academic

MOBILITY

CIRCULATION

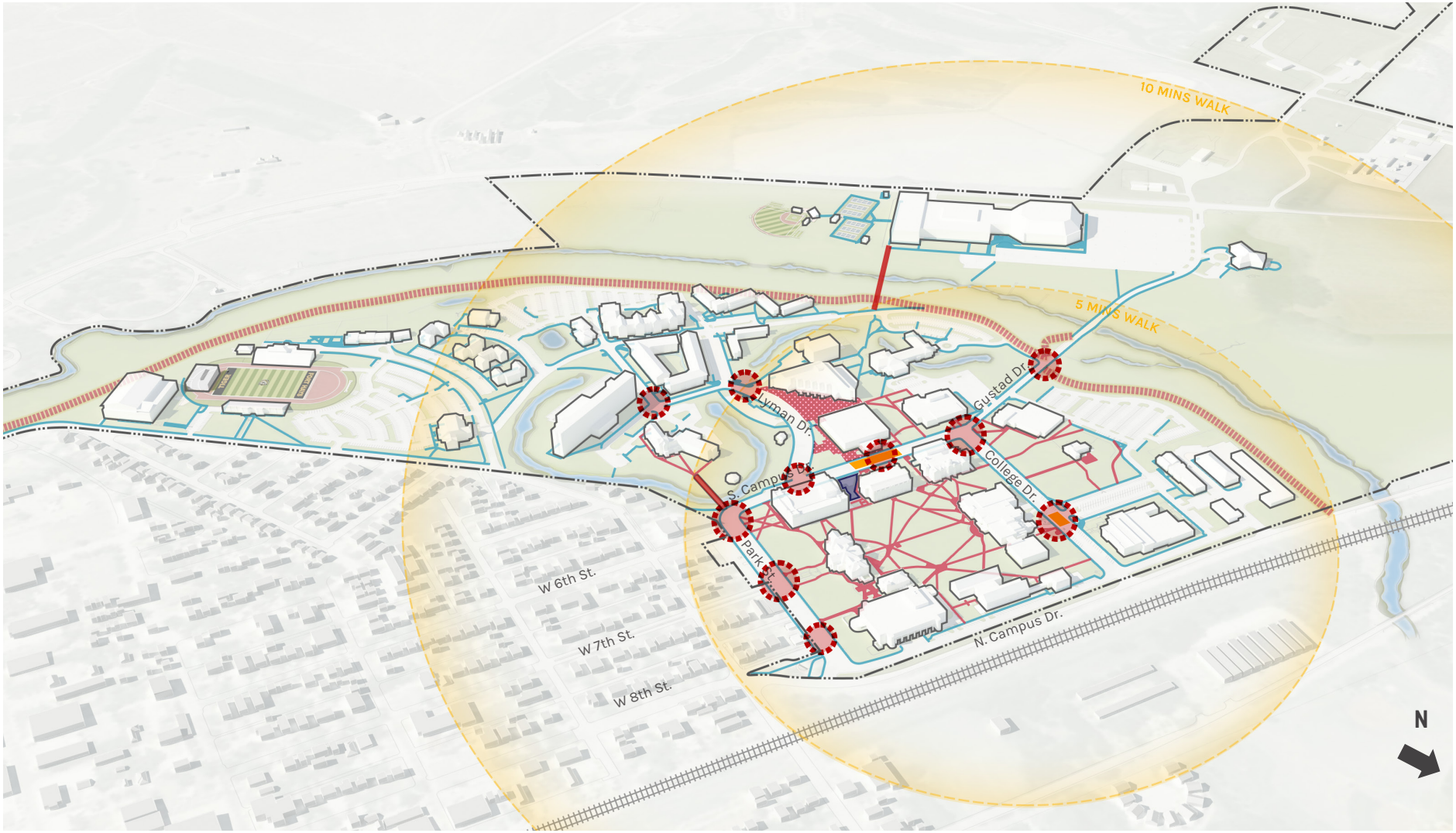
The circulation network for vehicles and pedestrians is limited by the campus's natural features. Gustad Drive is the only on-campus road crossing the Big Creek floodway, and there is only one pedestrian-only bridge crossing. Within the residential neighborhood, the creek and its banks are pedestrian barriers, with only one pedestrian bridge connecting Custer Hall and the academic core. As a result, while nearly all university facilities are closely located, the vehicle and pedestrian paths are longer. The University should investigate additional pedestrian bridges, such as connecting Tiger Village and the residential neighborhood and the academic core. The university intends that all pedestrian bridges be ADA accessible.

VEHICULAR CIRCULATION

The road network around the original Quad surrounds the academic core, and does not pass through it, making the Quad a very comfortable place for pedestrians. In the rest of campus, roads pass through neighborhoods, creating pedestrian/vehicle conflicts throughout campus. With the construction of the Center for Applied Technology and future academic expansion west of College Drive, pedestrian/vehicle conflicts will increase along College Drive. The most problematic location for pedestrian/vehicle conflicts is South Campus Drive, where pedestrians travel between the academic core and the residential neighborhood, and vehicles are circulating looking for convenient parking.

LEGEND

- Major Street
- Minor Street
- Street across Creek
- Hwy 183 Bypass
- Street Parking



PEDESTRIAN CIRCULATION

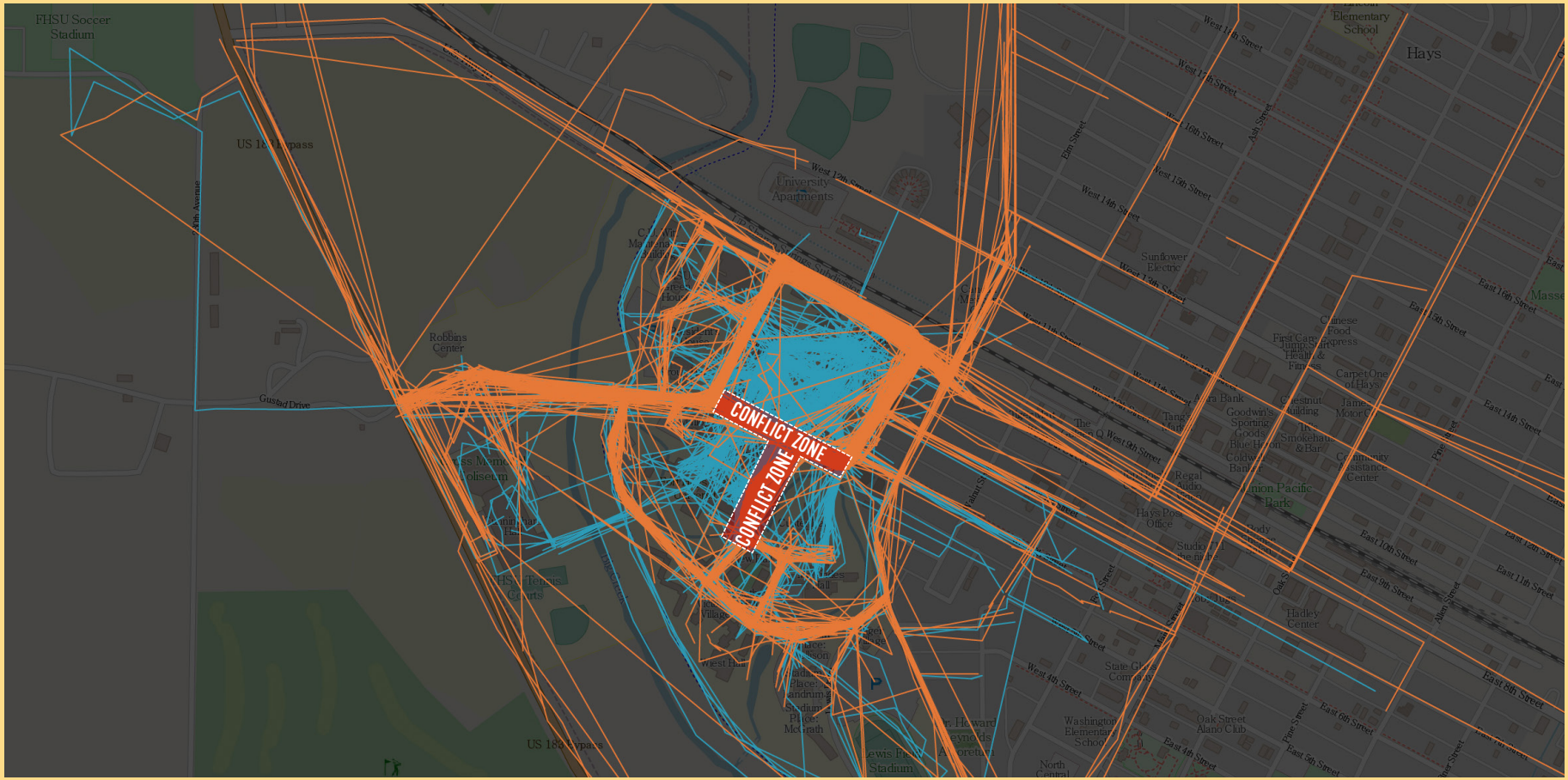
Nearly all roads through campus (except Gustad Drive) offer on-street parking on both sides. Benefits of on-street parking are convenience for the driver and traffic slows downs when drivers pull into or out of spaces. Disadvantages are that pedestrians are hidden by parked vehicles increasing the risk of pedestrian/vehicle conflicts, and drivers circulate on all streets looking for parking.

LEGEND

- Pedestrian Path
- Plaza
- Sidewalk
- Pedestrian Bridge
- Big Creek Trail
- Major Crossing
- Raised Intersection

WHAT DOES THE SURVEY TELL US?

STUDENTS & FACULTY & STAFF – HOW DO YOU DRIVE/WALK THROUGH CAMPUS?



Outside of the Quad, nearly all pedestrian paths are sidewalks that follow the road network, which are not the most direct pedestrian paths. Lyman Drive is a busy corridor, with both pedestrians and vehicles. The Big Creek Trail is a recreational amenity, but it does not provide on-campus circulation.

LEGEND

- Walking Routes
- Driving Routes

PARKING

On-campus parking is regulated in two zones: Permit Zone 1 encompasses the academic and service areas and Permit Zone 2 encompasses the on-campus residential, and athletic and recreation areas. Nearly all roads through campus (except Gustad Drive) offer on-street parking on both sides. Over 20% of the permitted 4,340 parking spaces are on-street.

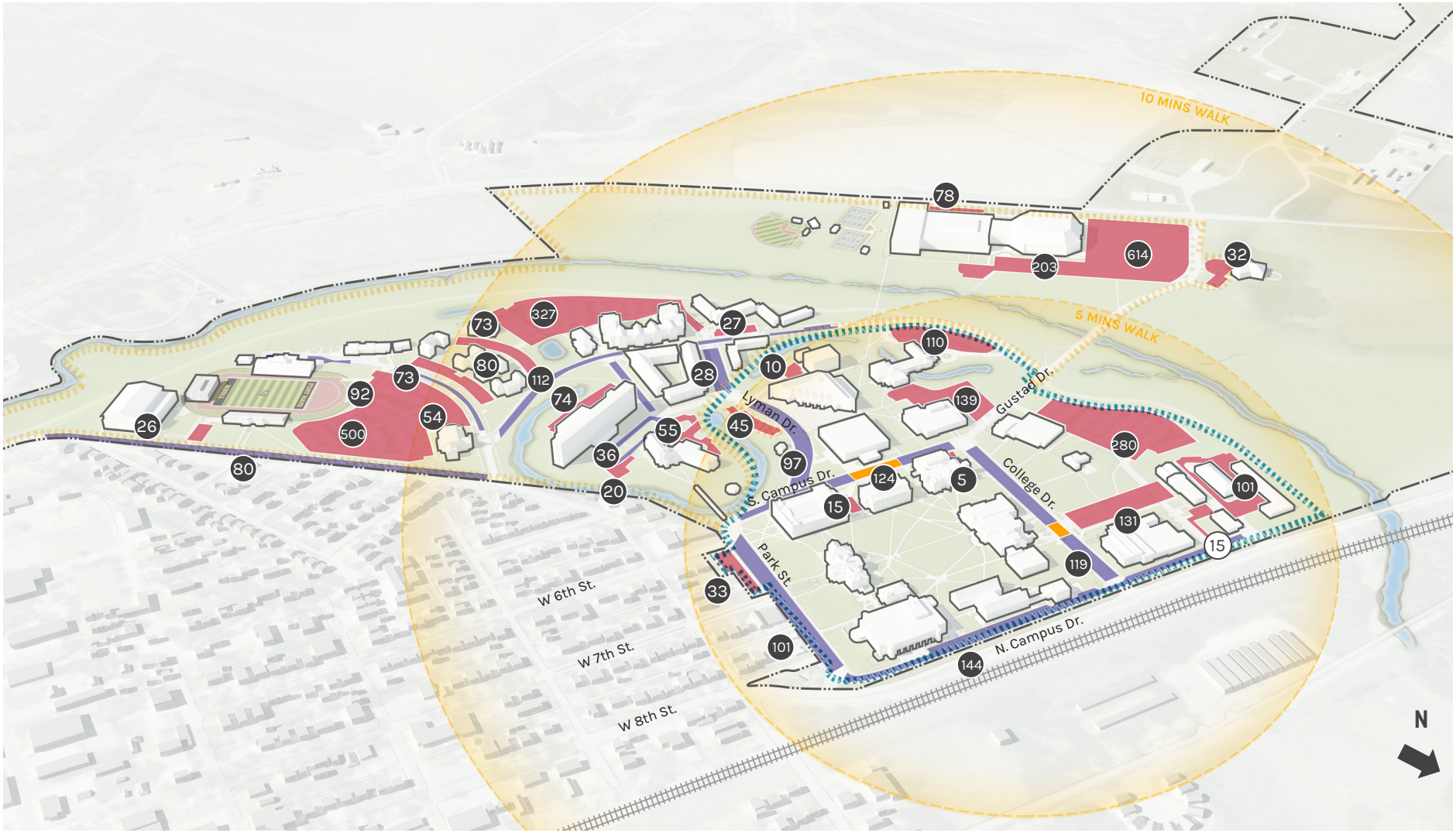
In the absence of a parking occupancy survey, a parking demand model and the MapMyFHSU survey suggest that the greatest parking demand is adjacent to the campus core, evident by drivers searching for on-street spaces on College, South Campus, and Park. Lots A-2 and A-3 provide sufficient parking supply for the academic core, but are less convenient for drivers. Lots further out provide additional supply. Lots J, K, L, and M provide event parking, but otherwise are underutilized.

Street parking on S. Campus Drive

Street parking in front of McMindes Hall

Parking Lot J by the Stadium

Parking Lot K and L by the Gym



EXISTING CAMPUS PARKING MAP

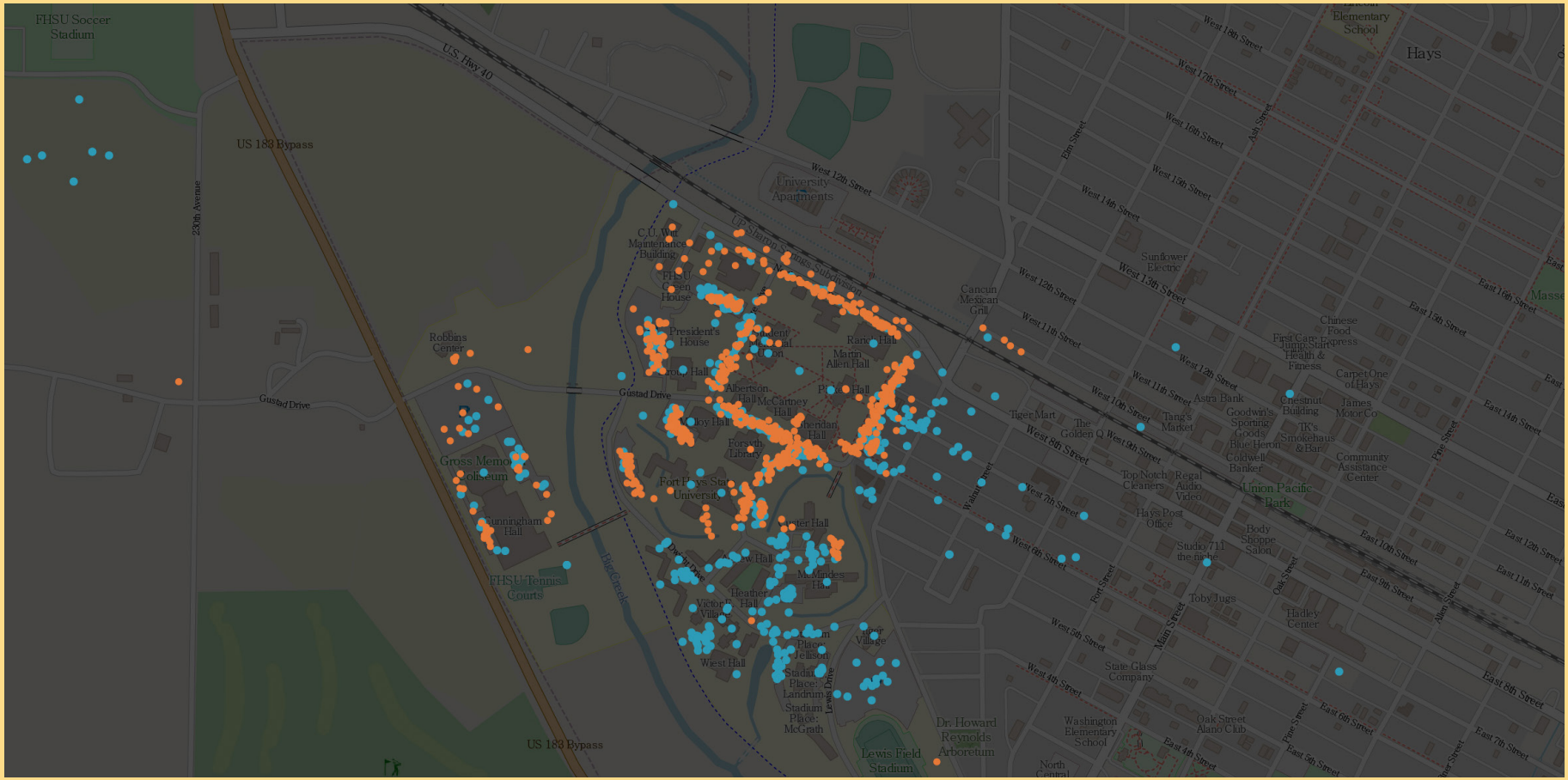
The campus has a sufficient supply of parking. Better pedestrian connections, e.g., from Lot J to the residential neighborhood, could increase utilization. Should the campus consider removing on-street parking to improve the pedestrian experience, a detailed parking demand and supply study is recommended.

LEGEND

- Permit Zone 1
- Permit Zone 2
- Parking Lot
- Street Parking
- Raised Intersection

WHAT DOES THE SURVEY TELL US?

STUDENTS & FACULTY & STAFF – WHERE DO YOU PARK?



LEGEND

- Student Parking
- Faculty & Staff Parking

Double-sided street parking on Parks Street

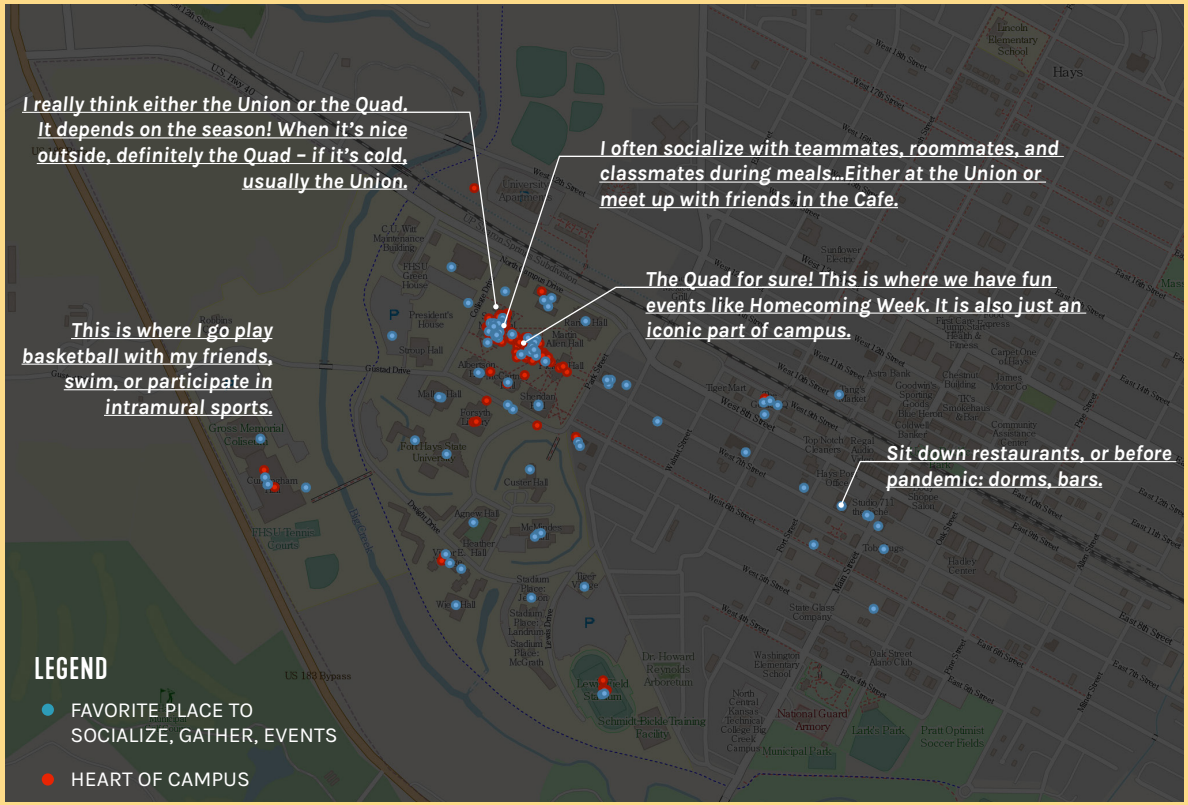
CAMPUS LANDSCAPE

The campus has a series of unique spaces. The most beloved space on campus is the Quad. The openness of the space and the coverage of tree canopy allows students to hang out between class or gather for student organization events throughout the year. Outside of the Quad, the landscape types are not as diverse. The housing complex neighborhood is mostly lawn with limited planting beds and outdoor seating. The lawn grid on the plaza in front of Tomanek Hall has limited the plaza's usage as a big open space. Big Creek is a natural asset but has been underutilized.

Feedback from the survey shows additional and better outdoor gathering spaces are strongly desired across campus. They should be located to be protected from wind as the wind is the most critical factor determining outdoor comfort in the western Kansas climate.

WHAT DOES THE SURVEY TELL US?

STUDENTS – WHERE IS THE HEART OF CAMPUS AND YOUR FAVORITE SOCIALIZE SPOT?



EXISTING CAMPUS LANDSCAPE TYPOLOGY

For long-term planning, there is an opportunity to create stronger hierarchy by differentiating landscape types and enhancing underutilized assets such as old creek beds and the plaza at Tomanek Hall. A variety of trees should be continuously planted across campus to mitigate loss of mature canopy trees.

LEGEND

- The Quad
- Plaza
- Living Neighborhood Green
- Athletics & Rec Fields
- Lawn
- Creek & Bank
- Parking Lot
- Big Creek Trail
- Major Pedestrian Flow

The Quad in front of the Memorial Union

Rose Garden in front of Picken Hall

Court between Agnew Hall and Heather Hall

Lawn on the back of Custer Hall

Plaza in front of Tomanek Hall

Landscape in front of the Art and Design building

Big Creek

Big Creek Trail

SECTION 3

CAMPUS PLAN VISION

CAMPUS PLAN VISION

In alignment with the Strategic Plan, the Campus Master Plan envisions a future for FHSU that supports student success by enhancing existing facilities to allow for flexible teaching, learning, and collaboration both on-campus and online. The Campus Master Plan heavily invests in aging facilities so that as new and unforeseen opportunities arise, FHSU's facilities can be responsive to the dynamic forces that shape higher education. Repurposed learning and student support spaces will help to attract and retain the brightest minds from western Kansas and beyond.

ACADEMICS AND RESEARCH

1. Malloy Hall Renovation
2. McCartney Hall Renovation
3. Sheridan Hall Renovation
4. Stroup Hall Renovation and Addition
5. Tomanek Hall Renovation

STUDENT LIFE AND WELLNESS

6. Custer Hall Renovation
7. Gross/Cunningham Hall Renovation

SUPPORT

8. Grounds/Greenhouse, Brooks Building, and C.A. Witt Building Renovations

SITE

9. Campus Creek Wellness Trail

Numbering does not represent priorities.


N. Campus Dr.
College Dr.
Park St.
W 8th St.
W 7th St.
W 6th St.
S. Campus Dr.
Gustad Dr.
Lyman Dr.
Elm St
Big Creek
1
2
3
4
5
6
7
8
9
9
PRINT MAVS
THEMS

RECOMMENDATIONS

ACADEMICS AND RESEARCH

❶ MALLOY HALL RENOVATION

Malloy Hall houses the Departments of Music and Theatre and Communication Studies. The building is considered in fair condition and requires significant deferred maintenance improvements to bring its overall condition up to 90% of a new facility as identified in the KBOR facility condition index study.

❷ MCCARTNEY HALL RENOVATION

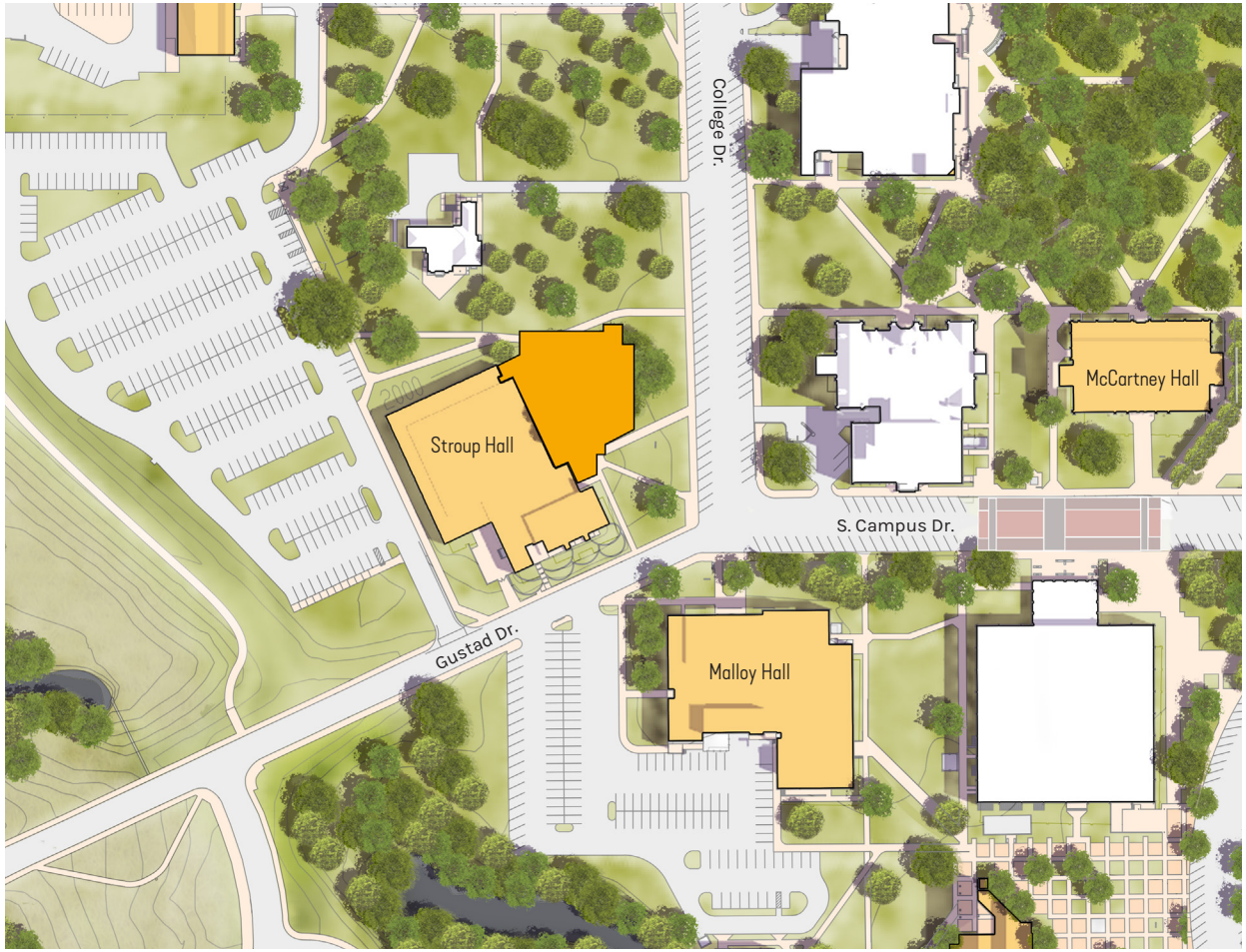
McCartney Hall, renovated between 2000 and 2004, houses the Robins College of Business and Entrepreneurship, as well as the departments of Applied Business Studies; Economics, Finance, and Accounting; and Management. Following recent renovations, the primary focus of future renovations should focus on the deferred maintenance needs identified in the KBOR facility condition index study, which by comparison to other campus facilities are relatively minimal. Classrooms should also be upgraded to support hybrid learning with cameras and other appropriate technology for online teaching and learning.

❸ SHERIDAN HALL RENOVATION

Based on the KBOR facility condition index study, Sheridan Hall requires significant deferred maintenance improvements to bring the facility condition up to 90% of the original condition. Interior renovations and space repurposing should continue to address academic office space needs.

❹ STROUP HALL RENOVATION AND ADDITION

Stroup Hall houses the Department of Nursing and is the center for nursing education, healthcare training, and community health advancement. Opened in 1981, Stroup Hall plays a critical role in preparing future nurses and allied health professionals to meet the growing demands and challenges of the healthcare industry. As the primary location for nursing education, Stroup Hall provides students with access to state-of-the-art resources, simulation labs, and clinical learning environments.
The University should renovate and expand the building to allow the Department of Allied Health and the associated medical diagnostic imaging programs to relocate into a shared facility, facilitating interdisciplinary collaboration and innovation by offering shared spaces for students and faculty from various healthcare disciplines to work together.



❺ TOMANEK HALL RENOVATION

Tomanek Hall is home to the Chemistry, Geosciences, and Physics departments on campus. There are a significant number of offices, laboratories, and classrooms located in the nearly 100,000 square foot facility. Tomanek Hall is in fair condition with a significant amount of deferred maintenance required to update the building, as well as needed mechanical upgrades, addressing pneumatic controls, and a cooling tower replacement.

When deferred maintenance issues are addressed, the University should also reconfigure and/or repurpose existing classroom and laboratory spaces to support enhanced teaching and learning and undergraduate, graduate, and faculty research.

❻ CUSTER HALL RENOVATION

Custer Hall, the oldest residence hall on campus, houses high school juniors and seniors who are part of the Kansas Academy of Mathematics and Science (KAMS) program. Additionally, the University Police Department is located here, as well as surge space for Forsyth Library offices.

The building itself is in fair condition and the Campus Master Plan recommends addressing the deferred maintenance needs identified in the KBOR facility condition index study. Long-term changes suggest potentially relocating some of the non-residential functions to other parts of campus and creating additional student-focused space within Custer Hall.

❼ GROSS/CUNNINGHAM HALL RENOVATION

Gross Memorial Coliseum and Cunningham Hall are the largest facility on the FHSU campus at over 320,000 square feet and serve as the home for the athletics department, fitness center, intramural programs, and dance studio. The facility also includes classrooms and the Department of Health and Human Performance.

The facility was constructed in 1973 and while there have been renovations over the years, Gross/Cunningham is in concerning condition and has the highest deferred maintenance renewal cost on campus. The campus plan recommends investment to address the deferred maintenance, including air handler replacement, replacement of collapsing duct work, and mechanical system upgrades.

Overall, student health and wellness facilities on campus are undersized and often in poor condition. The wellness center is undersized and lacks a dedicated entrance, making it difficult to monitor and run effectively. Several spaces within the building are used by multiple user groups such as athletics, recreation, and academics, making scheduling difficult.

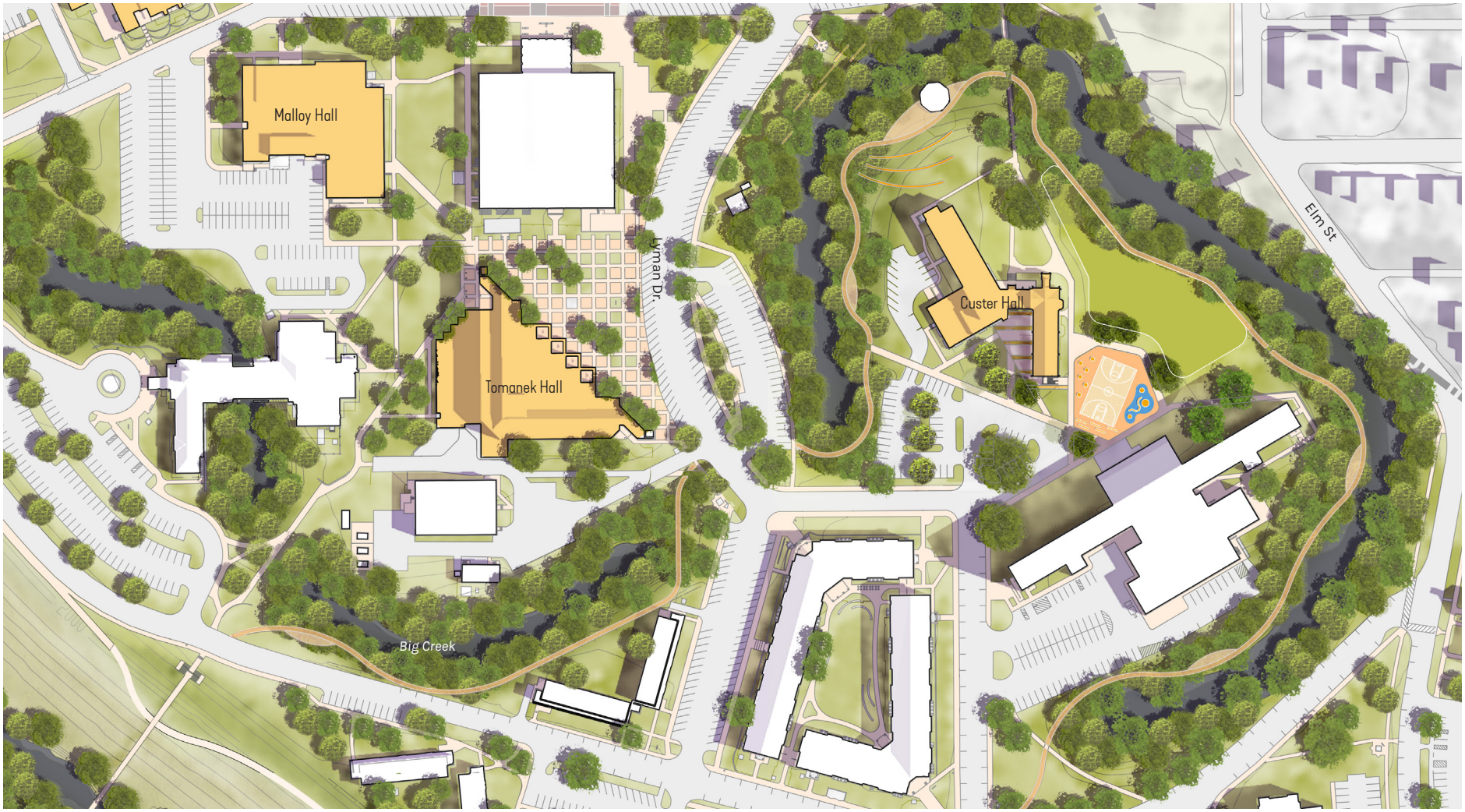
After Allied Health moves out of Cunningham into the Stroup Hall Addition, the University should renovate and repurpose the space to expand and improve the wellness center.

SUPPORT

❽ GROUNDS/GREENHOUSE, BROOKS BUILDING, AND C.A. WITT BUILDING RENOVATIONS

These maintenance shops and multi-purpose buildings are in poor condition (Brooks Building) or fair condition (remainder). To support the continued maintenance and investment in all campus facilities, the University should renovate this collection of support buildings to address critical deferred maintenance issues.

In the long-term, when there is a significant need for academic expansion, the University may determine that the site near the academic core and the between the Center for Applied Technology and Big Creek should be redeveloped for other purposes. Facilities can function further from the campus core.

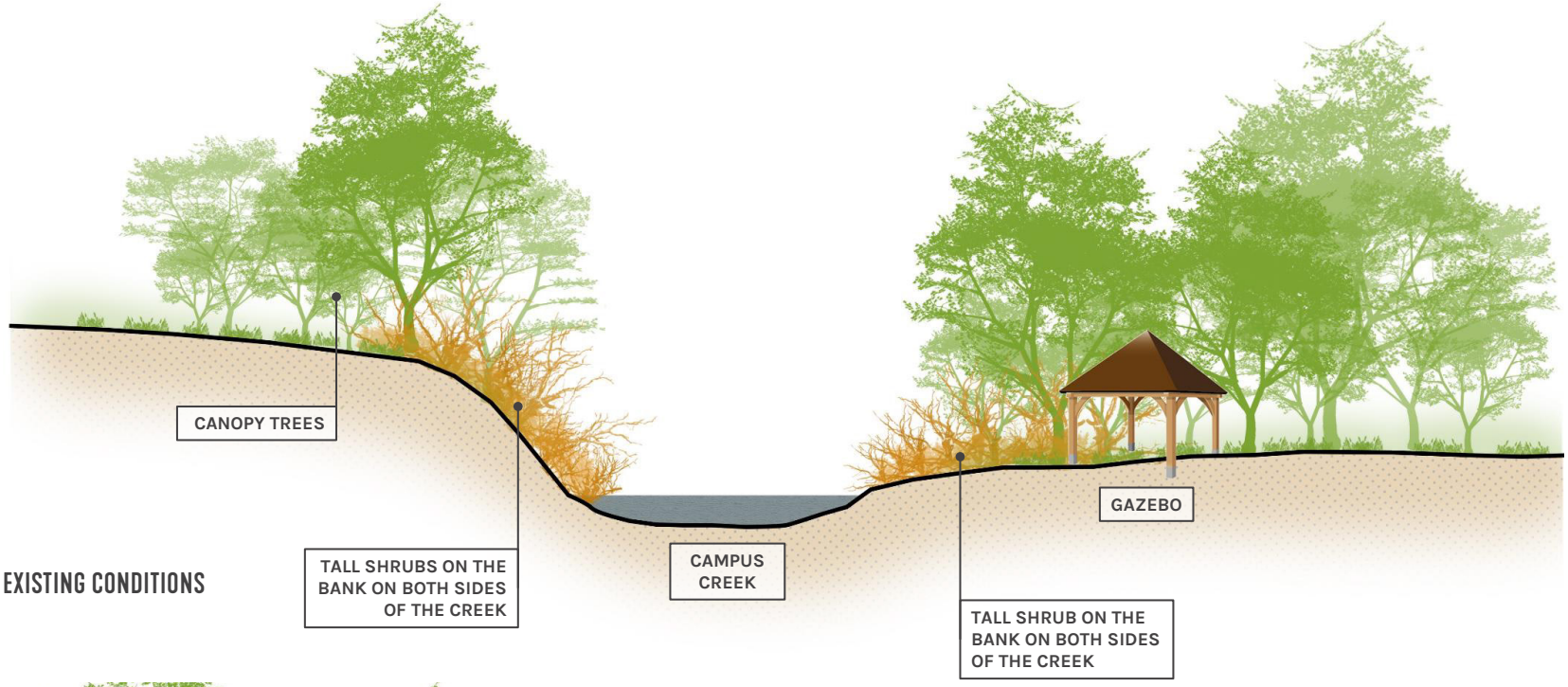


SITE

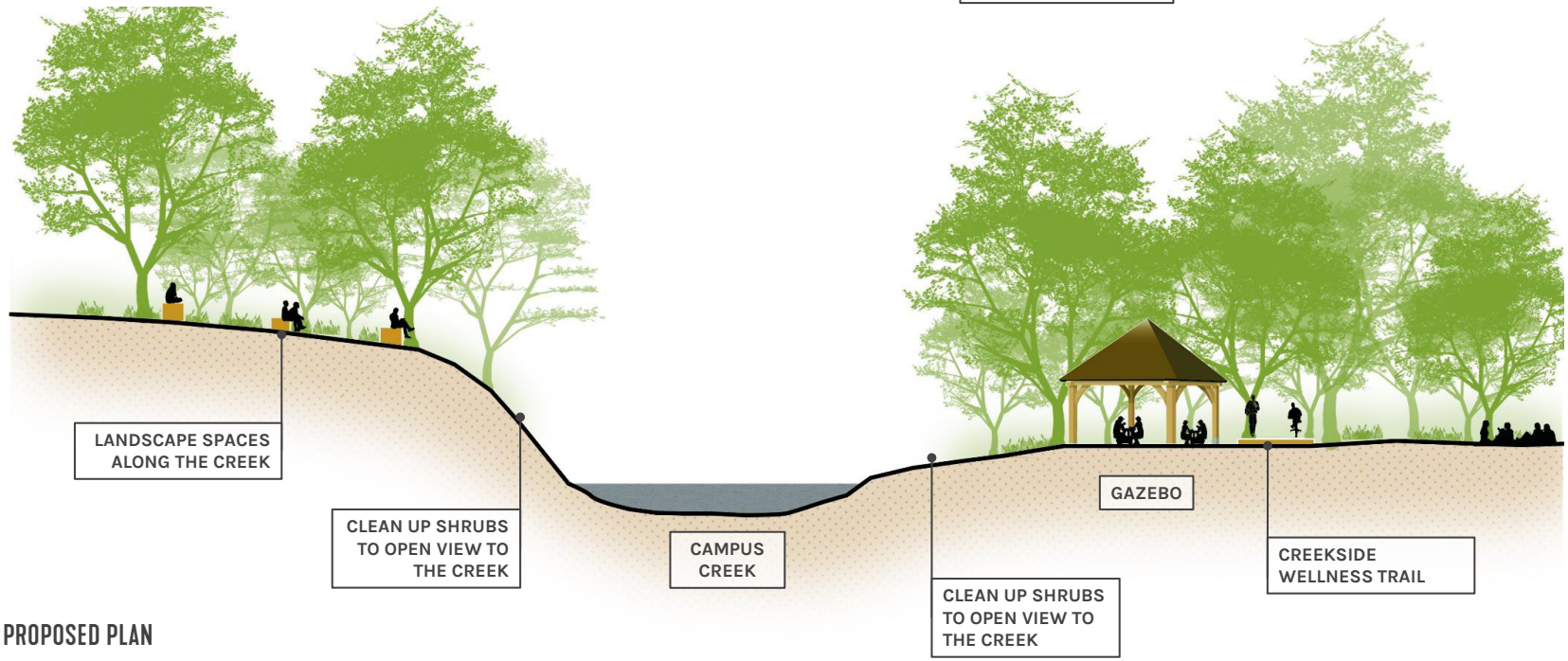
❾ CAMPUS CREEK WELLNESS TRAIL

The campus plan proposes a non-vehicular trail along the campus creek, beginning at the pedestrian bridge to Gross/Cunningham and winding along the campus creek before reconnecting with the existing pedestrian network at Custer Drive and Dwight Drive. Several Wellness Stations will line the trail and provide various workout opportunities for users. Along the creek, invasive and dead undergrowth will be removed, giving users better access to this unique campus asset.

In concert with the Wellness Trail, the existing parking between McMindes and Custer Halls is reimagined as an open recreation space and multi-purpose court for student gatherings, events, and informal play. Parking in this area is reconfigured for a more efficient layout to continue service to this part of campus.



EXISTING CONDITIONS



PROPOSED PLAN

WELLNESS TRAIL AT CUSTER HALL

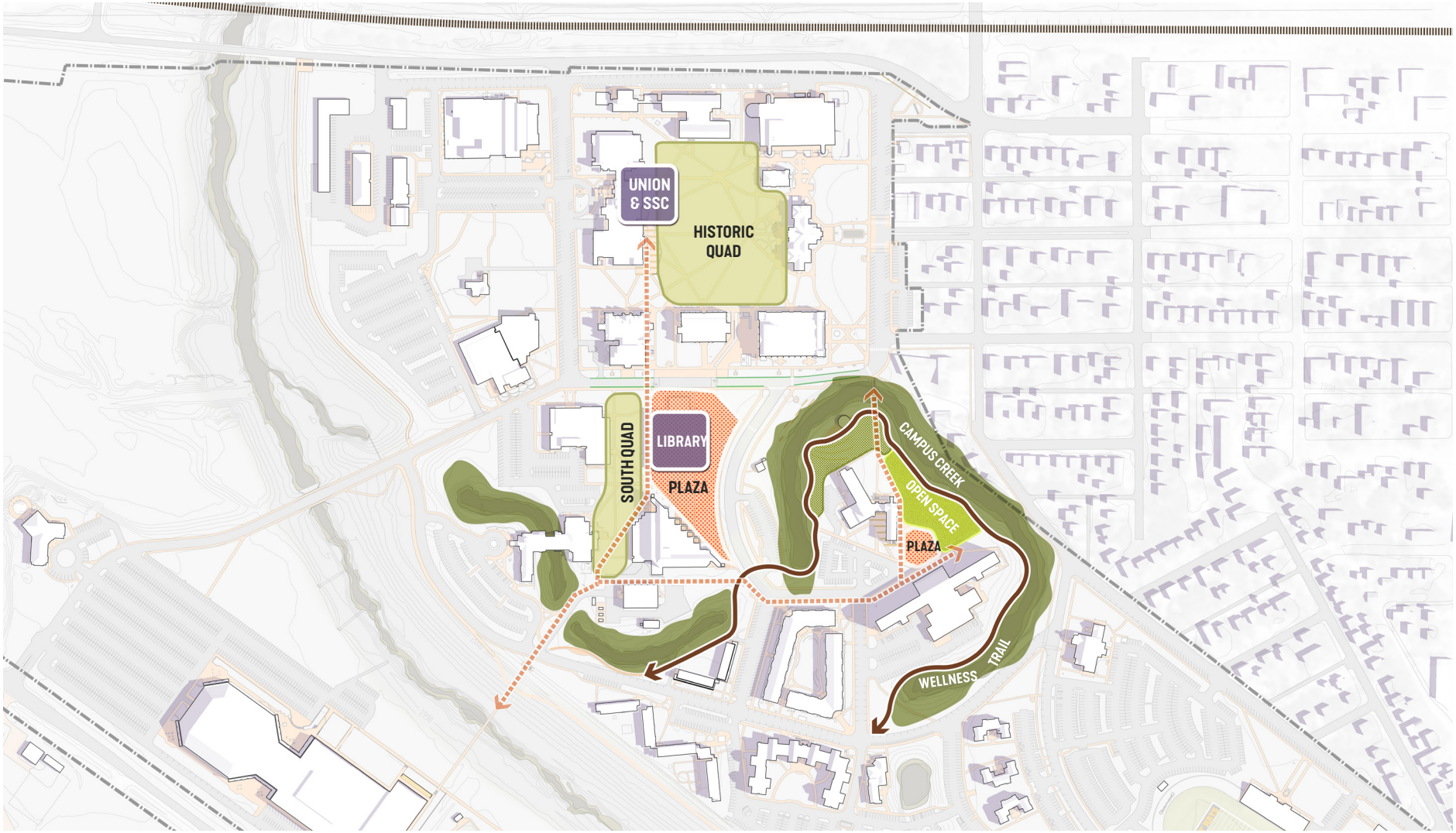
Existing parking and vehicular circulation between Custer Hall and McMindes Hall is reimagined as a park setting with passive recreation areas, connected back to campus by the Wellness Trail along the campus creek.

CIRCULATION IMPROVEMENTS

The current campus circulation system remains largely unchanged, except for the parking and circulation between Custer Hall and McMindes Hall. The inefficient parking and drop-off sequence in this area is reconfigured into a more compact parking lot with a single drop-off and turnaround. This frees up significant space to create a park and play area for the students in this neighborhood.

LEGEND

- Existing Parking
- Existing Vehicular Circulation
- Proposed Parking Removal



LANDSCAPE FRAMEWORK PLAN

Landscape improvements focus largely on the campus creek. The intent is to create an amenity from a current barrier. By enhancing the creek corridor through invasive plant removal and adding the Wellness Trail, the creek becomes a destination and gathering point for campus users.


SAM HOUSTON
TIGERS

PHASING

Because the campus plan focuses largely on renovation and deferred maintenance improvements to existing facilities, phasing and implementing the plan will largely depend on a combination of funding availability, University need, and the project's ability to directly and positively affect teaching and learning.

SECTION 4

APPENDIX

Teaching Space Utilization & Space Needs Assessment Tables

Academic Benchmarking

Outdoor Thermal Comfort Analysis


TE UNIVERSITY
FOUNDED 1902

TEACHING SPACE UTILIZATION & SPACE NEEDS ASSESSMENT TABLES

The utilization of regularly scheduled teaching space is analyzed to facilitate discussion regarding appropriate use expectations, uncover reasons as to why significant usage deviation between spaces might occur, and provide information to establish metrics for the space needs analysis.

CLASSROOM UTILIZATION

There were 63 scheduled classrooms on campus during the Fall 2019 term. Classroom utilization is a function of the number of courses, enrollment in those courses, and the expectation of how many hours per week a student station/ seat in a classroom should be occupied.

The guideline established for FHSU is 32 hours per week with 65% of the seats filled when the room is scheduled. A typical range is 30 to 35 hours per week with 65% of the seats filled.

CLASSROOM USE BY DAY AND TIME

Of the 63 classrooms on campus, the greatest number in use at one time is 62, or 98%, at 10:00AM on Tuesdays. Use is fairly evenly distributed from 8:00AM to 3:00PM Monday through Friday. Overall, peak times are 9:00AM to 12:00PM.

SCHEDULED CLASSROOM USE BY DAY AND TIME

MAIN CAMPUS, FALL 2019

Time of Day	Monday		Tuesday		Wednesday		Thursday		Friday		Average	
	Rooms in Use	% In Use	Rooms in Use	% In Use	Rooms in Use	% In Use	Rooms in Use	% In Use	Rooms in Use	% In Use	Rooms in Use	% In Use
8:00 AM	53	84%	20	32%	52	83%	18	29%	38	60%	36	57%
9:00 AM	60	95%	60	95%	59	94%	57	90%	54	86%	58	92%
10:00 AM	60	95%	62	98%	59	94%	60	95%	59	94%	60	95%
11:00 AM	60	95%	60	95%	60	95%	58	92%	57	90%	59	94%
12:00 PM	58	92%	55	87%	56	89%	53	84%	52	83%	55	87%
1:00 PM	57	90%	60	95%	57	90%	57	90%	50	79%	56	89%
2:00 PM	53	84%	57	90%	56	89%	55	87%	40	63%	52	83%
3:00 PM	28	44%	11	17%	30	48%	10	16%	10	16%	18	28%
4:00 PM	6	10%	7	11%	7	11%	6	10%	2	3%	6	9%
5:00 PM	5	8%	7	11%	6	10%	6	10%	1	2%	5	8%
6:00 PM	4	6%	7	11%	7	11%	4	6%	1	2%	5	7%
7:00 PM	4	6%	5	8%	5	8%	2	3%	1	2%	3	5%

Total classrooms = 63

(Darker colors indicate a large percentage of rooms are scheduled.)

CLASSROOM UTILIZATION BY BUILDING

Classroom use is primarily within Rarick Hall where 23 rooms (37%) are located. The classrooms in the building are heavily scheduled at almost 31 hours per week. Albertson Hall and McCartney Hall house 22% of the inventory with eight and six rooms respectively. The average weekly room hours exceed 30 hours in both buildings.

The classrooms in the Center for Applied Technology and Memorial Union exceed the seat fill rate target of 65%. On average, the classrooms are only filled 56% across the campus.

CLASSROOM UTILIZATION ANALYSIS BY BUILDING SUMMARY

MAIN CAMPUS, FALL 2019

Building Name and ID		No. of Rooms	Average Room Size	Average ASF per Station	Average Section Size	Weekly Seat Hours	Average Weekly Room Hours	Seat Fill Rate
Albertson Hall	*AH*	8	888	16.9 *	26	16.2	31.6	54%
Art and Design	*AD*	1	1,075	21.5 *	24	14.8	30.0	49%
CENTER FOR APPLIED TECHNOLOGY	*AT*	5	746	29.1 *	16	11.9	16.1	65%
Cunningham Hall and Gross Coliseum	*CH*	5	1,146	22.6 *	26	18.5	36.0	48%
Malloy Hall	*MH*	5	674	24.6 *	15	18.0	32.3	56%
Martin Allen Hall	*MA*	1	569	24.7 *	12	8.7	16.5	53%
McCartney Hall	*MC*	6	1,036	20.8 *	22	13.8	30.7	49%
Memorial Union	*UN*	1	614	40.9 *	38	50.7	20.0	253%
Rarick Hall	*RH*	23	718	19.8 *	19	16.5	30.4	56%
Stroup Hall	*STH*	4	806	24.8 *	20	12.3	20.8	59%
Tomanek Hall	*TH*	4	891	18.3 *	26	15.0	27.6	53%
Total No. of Rooms = 63	**AVERAGE**		**821**	**20.8***	**21**	**16.0**	**28.9**	**56%**
Total No. of Stations = 2487	**Total ASF**		**51,694**					

CLASSROOM UTILIZATION BY CAPACITY

Classrooms with 41-45, 46-50, 51-60, and 101-150 student stations are the most actively scheduled on campus, exceeding the guideline expectation of 32 weekly room hours. However, the seats are only half filled. The six classrooms in the 20 and under range are the only capacity group to exceed the target seat fill rate of 65%.

Note: The average section sizes in the chart.

CLASSROOM UTILIZATION ANALYSIS BY CAPACITY SUMMARY

MAIN CAMPUS, FALL 2019

Classroom Capacity Grouping	No. of Rooms	No. of Seats	Average Room Size	Average ASF per Station	Average Section Size	Weekly Seat Hours	Average Weekly Room Hours	Seat Fill Rate
20 and Under	6	106	504	29	16	16.8	18.3	97%
21 - 25	10	236	586	25	14	17.5	28.4	62%
26 - 30	10	289	654	23	16	14.7	26.3	56%
31 - 35	11	373	722	21	19	17.3	30.7	56%
36 - 40	1	37	922	25	23	12.3	20.0	61%
41 - 45	7	302	873	20	21	15.7	31.7	50%
46 - 50	9	438	1,051	22	25	16.7	32.7	51%
51 - 60	2	108	1,090	20	24	15.6	34.5	45%
61 - 75	4	278	1,319	19	36	16.3	30.5	53%
76 - 100	2	180	1,373	15	40	14.2	31.0	46%
101 - 150	1	140	1,626	12	49	12.6	36.0	35%
Total No. of Rooms = 63	**AVERAGE**		**821**	**20.8** *	**21**	**16.0**	**28.9**	**56%**
Total No. of Stations = 2487	**Total ASF**		**51,694**					

CLASSROOM MIX ANALYSIS

A classroom mix analysis compares section sizes with the sizes of existing classrooms based upon utilization targets. The mix analysis identifies imbalances in the classroom inventory and misalignments between section sizes and classroom capacities. The outcomes can inform optimization and right-sizing the inventory of learning environments.

There currently are 63 classrooms on campus, and there is a need for 64 classrooms. The needs are in the 36-40 and 61-75 seat ranges.

CLASSROOM SIZE	EXISTING ROOMS	NEEDED ROOMS	DIFFERENCE
20 and Under	6	5	1
21 - 25	10	10	0
26 - 30	10	10	0
31 - 35	11	11	0
36 - 40	1	2	(1)
41 - 45	7	7	0
46 - 50	9	9	0
51 - 60	2	2	0
61 - 75	4	5	(1)
76 - 100	2	2	0
101 - 150	1	1	0
	63	**64**	**(1)**

TEACHING LABORATORY UTILIZATION

There were 59 scheduled teaching laboratories on campus in the Fall 2019 term. Teaching laboratory utilization is a function of the number of courses, enrollment in those courses, and the expectation for how many hours per week a student station in a laboratory should be occupied.

The guideline established for FHSU is 20 hours per week with 80% of the seats filled when the room is scheduled. A typical range is 20 to 24 hours per week with 80% of the stations occupied.

TEACHING LABORATORY USE BY DAY AND TIME

Of the 59 teaching laboratories on campus, the greatest number in use at one time is 46 on Tuesday at 10:00AM. There is very little scheduled laboratory use after 3:00PM.

SCHEDULED LABORATORY USE BY DAY AND TIME

MAIN CAMPUS, FALL 2019

Time of Day	Monday		Tuesday		Wednesday		Thursday		Friday		Average	
	Rooms in Use	% In Use	Rooms in Use	% In Use	Rooms in Use	% In Use	Rooms in Use	% In Use	Rooms in Use	% In Use	Rooms in Use	% In Use
8:00 AM	25	42%	19	32%	25	42%	17	29%	21	36%	21	36%
9:00 AM	33	56%	41	69%	35	59%	39	66%	26	44%	35	59%
10:00 AM	38	64%	46	78%	40	68%	45	76%	32	54%	40	68%
11:00 AM	30	51%	39	66%	33	56%	37	63%	27	46%	33	56%
12:00 PM	31	53%	19	32%	30	51%	22	37%	22	37%	25	42%
1:00 PM	30	51%	33	56%	30	51%	33	56%	18	31%	29	49%
2:00 PM	27	46%	33	56%	27	46%	29	49%	12	20%	26	43%
3:00 PM	17	29%	26	44%	19	32%	23	39%	6	10%	18	31%
4:00 PM	10	17%	21	36%	13	22%	18	31%	3	5%	13	22%
5:00 PM	5	8%	10	17%	6	10%	8	14%	1	2%	6	10%
6:00 PM	2	3%	6	10%	2	3%	3	5%	0	0%	3	4%
7:00 PM	2	3%	5	8%	2	3%	3	5%	0	0%	2	4%

Total laboratories = 59

Note: Darker colors indicate a large percentage of rooms are scheduled.

TEACHING LABORATORY UTILIZATION BY BUILDING

The campus-wide laboratory utilization of 17 hours per week and the 56% seat fill rate are below the expectation. The laboratories in Art & Design, Forsyth Library, Hammond Hall, and Rarick Hall do exceed the weekly room hour target. The laboratories in the Center for Applied Technology and McCartney Hall do exceed the fill rate.

TEACHING LABORATORY UTILIZATION ANALYSIS BY BUILDING – SUMMARY

MAIN CAMPUS, FALL 2019

Building Name and ID		No. of Rooms	Average Room Size	Average ASF per Station	Average Section Size	Weekly Seat Hours	Average Weekly Room Hours	Seat Fill Rate
Albertson Hall	*AH*	10	1,116	45.7 *	18	11.7	15.8	75%
Art and Design	*AD*	11	1,124	49.2 *	12	11.1	20.7	53%
CENTER FOR APPLIED TECHNOLOGY	*AT*	6	1,464	67.5 *	16	11.6	15.6	80%
Cunningham Hall and Gross Coliseum	*CH*	4	886	34.1 *	11	7.5	18.3	40%
Forsyth Library	*FL*	1	358	17.9 *	2	2.2	33.5	7%
Hammond Hall	*HMH*	3	871	31.1 *	10	8.2	20.9	38%
Malloy Hall	*MH*	3	1,755	23.1 *	18	6.2	16.5	37%
Martin Allen Hall	*MA*	1	355	25.4 *	8	3.4	6.0	57%
McCartney Hall	*MC*	1	1,119	28.0 *	35	10.6	12.0	89%
Rarick Hall	*RH*	4	884	27.4 *	15	10.7	21.2	48%
Stroup Hall	*STH*	3	1,210	40.3 *	14	8.3	16.4	49%
Tomanek Hall	*TH*	12	1,173	53.9 *	12	6.9	11.3	60%
Total No. of Rooms = 59 *Total No. of Stations = 1595*	**AVERAGE** **Total ASF**		**1,132** **66,794**	**41.9** *	**14**	**9.1**	**16.7**	**56%**

ACADEMIC BENCHMARKING

The planning team conducted a comparative space analysis for the overall campus at FHSU, making direct comparisons with similar institutions to understand existing space allocations. The analysis was at the institutional level and compared assignable space with space grouped according to the National Center for Education Statistics' Postsecondary Education Facilities Inventory and Classification (FICM) taxonomy.

The comparative analysis outcomes are calculated using actual decimal values, while the results are rounded for legibility of display in charts and tables, this means an occasional value might appear or display slightly differently than expected.

Campus-level benchmarking compares the campus total of space in one category or a group of categories. Because space needs vary by program, and no two institutions will have the same set of programs or even the same emphases in the same program, this is an extremely general indicator of how institutions with similar enrollment and composition compare on a broad scale.

The following benchmark metrics have been compared:

- Total space overview
- Space type by % of total inventory
- Total ASF/student headcount
- Total ASF/faculty headcount
- Research ASF/faculty headcount
- Total ASF
- Instructional space/student headcount
- Office space/faculty headcount
- Office space/staff headcount

Institution	Student FTE	Faculty FTE	Staff FTE
Emporia State University	3,047	277	461
Pittsburg State University	5,260	372	567
Northern Michigan University	6,665	416	928
Southern Oregon University	3,180	217	587
University of West Florida	5,970	445	793
Western Oregon University	4,368	310	434
Fort Hays State University	**4,036**	**365**	**580**

COMPARISON WITH SIMILAR INSTITUTIONS

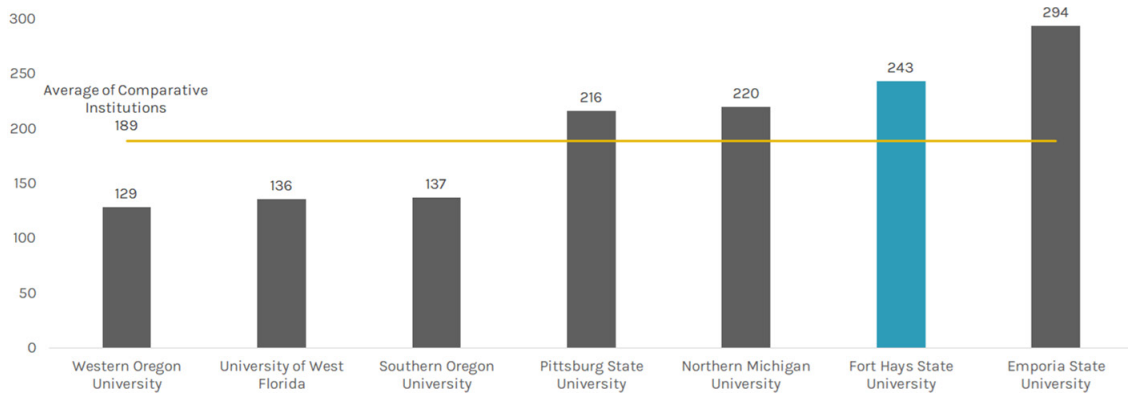
Note: Data for Kansas institutions is from Fall 2019. Other institutional data is from Fall 2018.

SPACE TYPE BY PERCENTAGE OF TOTAL INVENTORY

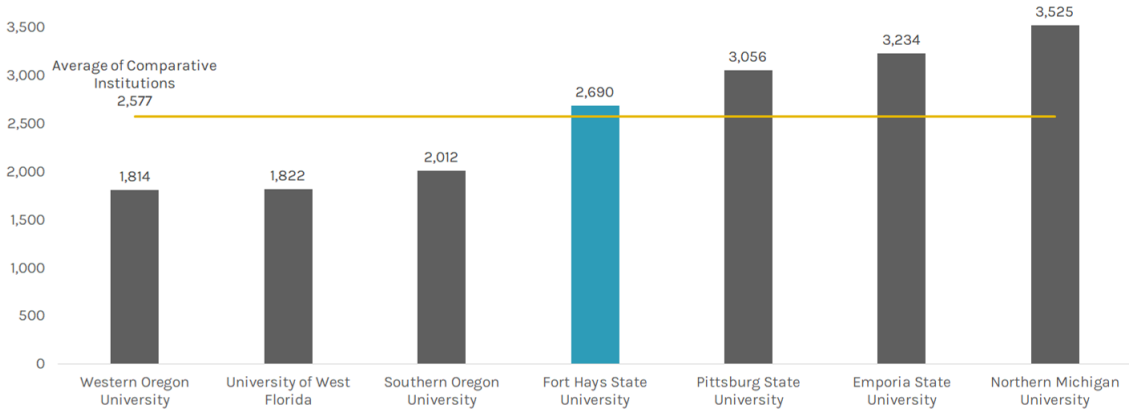
The table to the right illustrates the distribution of each institution's physical inventory by space type. FHSU is below the other institutions for amount of Classroom and Teaching & Open Laboratory space (24% in total compared to 17%). However, the University is on par in terms of Research Laboratory space. A quarter of the University's space falls into the General Use category, which is higher than the average of the comparative institutions.

Institution	Classrooms	Teaching & Open Labs	Research Labs	Offices	Library	Special	General Use	Support	Healthcare
Emporia State	8%	11%	0.2%	23%	8%	18%	23%	8%	0.5%
Pittsburg State	10%	18%	3%	21%	7%	11%	20%	9%	0.3%
Northern Michigan	8%	16%	1%	25%	6%	21%	13%	9%	1%
Southern Oregon	17%	15%	1%	31%	16%	5%	8%	7%	0.1%
University of West Florida	7%	12%	5%	30%	14%	8%	18%	5%	0%
Western Oregon	10%	14%	1%	22%	8%	13%	20%	11%	0.3%
Average of Comparative Institutions	***10%***	***14%***	***2%***	***25%***	***10%***	***13%***	***17%***	***8%***	***0%***
Fort Hays State	***5%***	***12%***	***2%***	***22%***	***7%***	***21%***	***23%***	***7%***	***0.3%***

Assignable space per student and faculty are commonly used comparative space measures. FHSU's total space per student headcount is 243, which is at the high end of the study group average of 189 ASF. The University's total space per faculty is slightly above the average of 2,577 ASF/ headcount at 2,690 total ASF/Faculty.

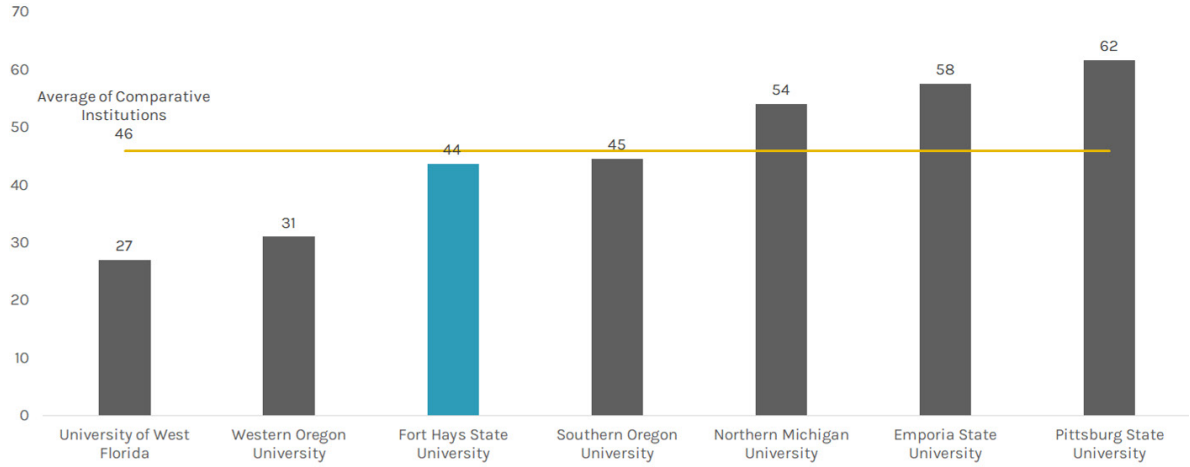


TOTAL SPACE /STUDENT



TOTAL SPACE /FACULTY

FHSU is at the low end of the study group for instructional space per student at 44 ASF. However, the comparative group average is 46 ASF.

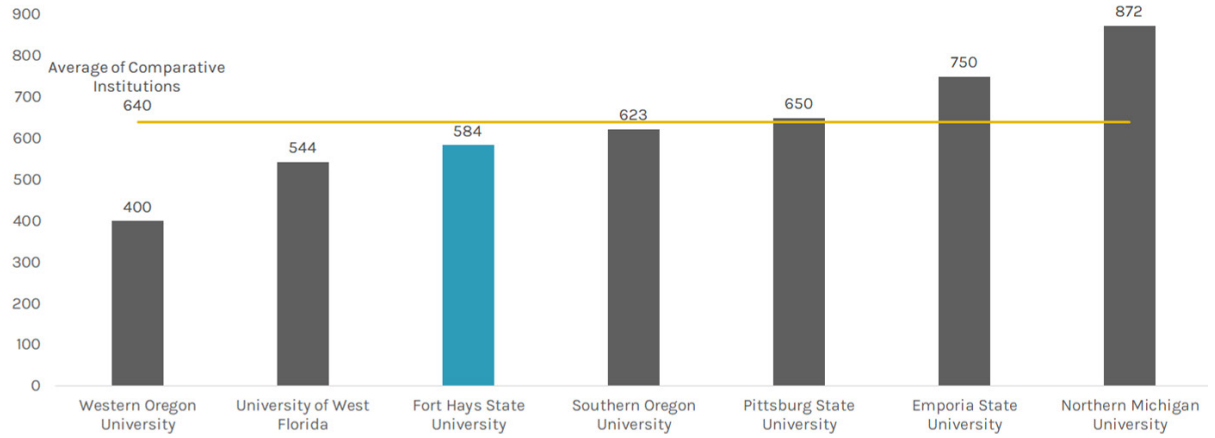


INSTRUCTIONAL SPACE/STUDENT HEADCOUNT

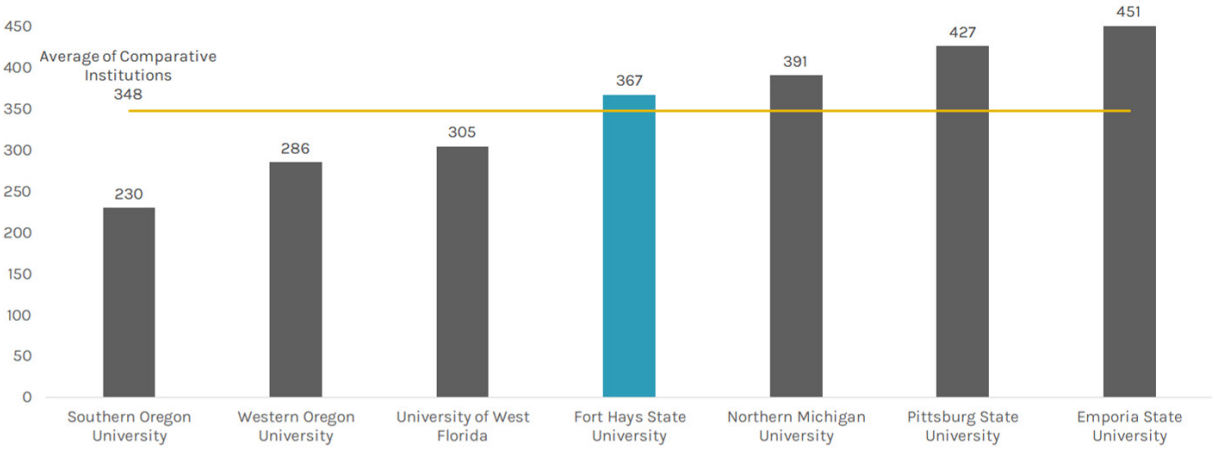
Note: Instructional Space includes 110, 210, 220, and related support spaces.

These two graphics illustrate the office space per faculty and staff. All space coded in the 300 series is included in this measure, which includes service space and conference rooms. Of note, many institutions have space inventories that reflect spaces scaled based upon a different workplace environment.

FHSU's office space per faculty is 584 ASF, which is below the comparative group average of 640 ASF. The office space per staff is in the middle of the comparative institutions at 367 ASF, which is above the comparative group average of 348 ASF.



OFFICE ASF/FACULTY



OFFICE ASF/STAFF

TAKEAWAYS

- Existing Space Distribution
  - Instructional space average is higher than FHSU.
  - Special Use & General Use categories are higher at FHSU, which is understandable based on academic program diversity.
- Total Space per Student
  - FHSU is at the high end, which is between the two Kansas peers.
  - This could indicate capacity to absorb additional on-campus students.
- Total Space per Faculty
  - FHSU is at the middle of comparative group, above peer group average.
- Instructional Space per Student
  - FHSU is at the low end of comparison group.
  - Kansas peers are at the high end.
- Office Space per Faculty and Staff
  - FHSU faculty office space is at the low end.
  - FHSU staff office space is at the middle of the comparative group.

OUTDOOR THERMAL COMFORT ANALYSIS

Based on the site analysis and students' feedback, there is great potential and desire to utilize more of the outdoor open space on campus. To ensure that the famous winds of Kansas do not disturb or damage such new outdoor spaces, the planning team completed an analysis to study the outdoor thermal comfort level across the campus.

The purpose of the analysis was to find out the most feasible areas to invest in new outdoor developments on campus, where both the heat and wind feel comfortable for students to gather, study, and play on campus. The analysis was completed in three steps.

- As the first step, the planning team studied local climate with data collected from adjacent airports in natural condition, which means no impact of man-made structures and human activities will count. The outcome of the first step was a general understanding of the climate condition of the area.
- The second step studied how solar and wind will impact outdoor thermal comfort level individually.
- The last step modeled and simulated both the solar and wind pattern on the FHSU campus to visualize outdoor thermal comfort level graphically. The results of the analysis indicated several locations that would be ideal for development as outdoor recreational spaces.

GENERAL CLIMATE IN HAYS, KANSAS

The first step pulls climate data from Hays Regional Airport, and evaluates the overall climate conditions in Hays to prove it is in a suitable climate for year-round outdoor activities in general. *Diagram 1. Hourly Annual Comfort Level* shows that Hays is located in a relatively mild climate zone. In the graphic, the darker the color, the more severe the climate. The diagram has a large percentage of light green, and there is only a handful of dark blue stripes in the entire winter months and small areas of dark red in summer months. That means winter months are cold yet comfortable in early afternoons. Summer months are considered hot. Although a heat stress is likely to hit the city in July, very few students and activities will be on campus during that time of year. The most comfortable months on campus are May and September. In conclusion, it is totally feasible to invest in more outdoor activity spaces to improve campus life.

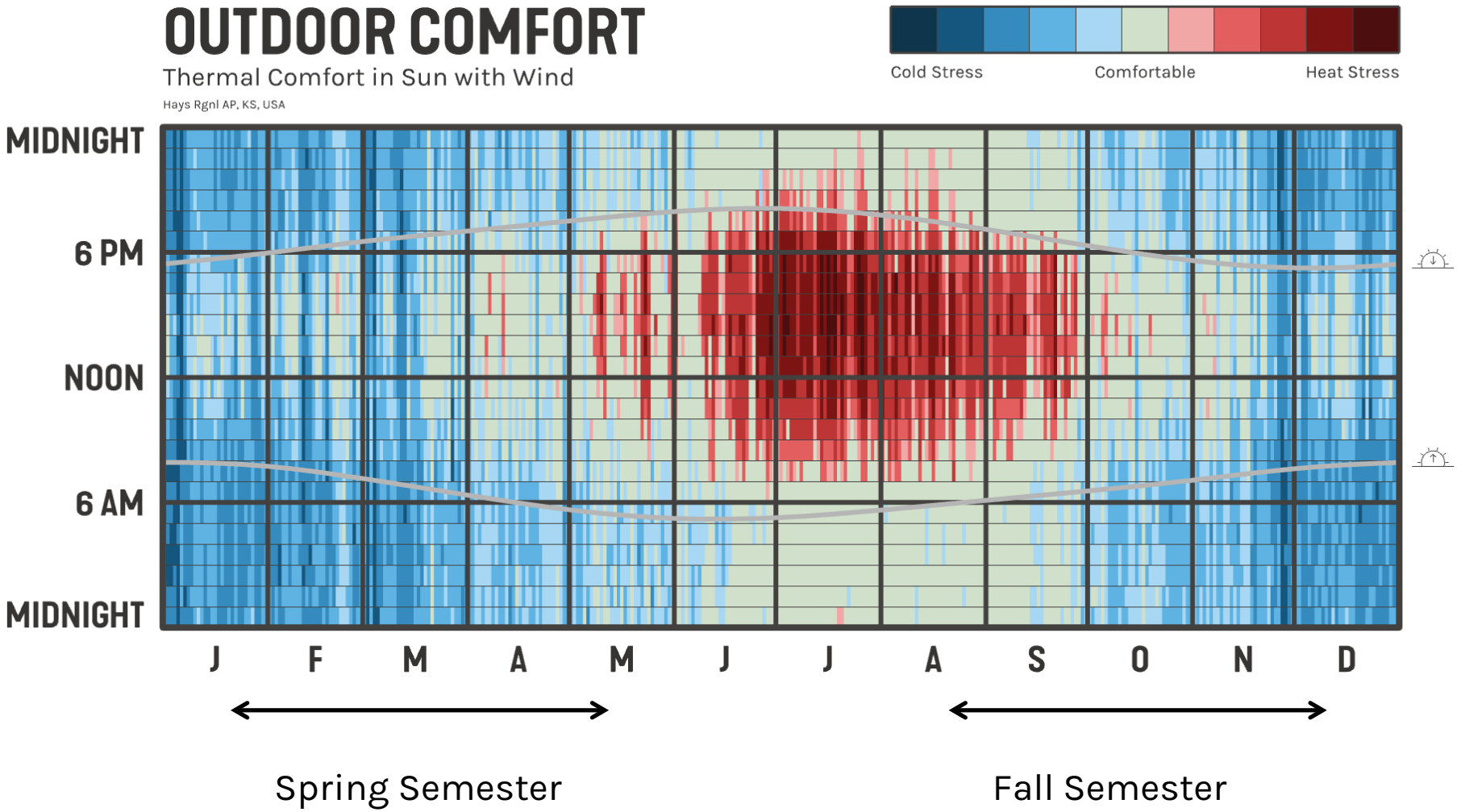
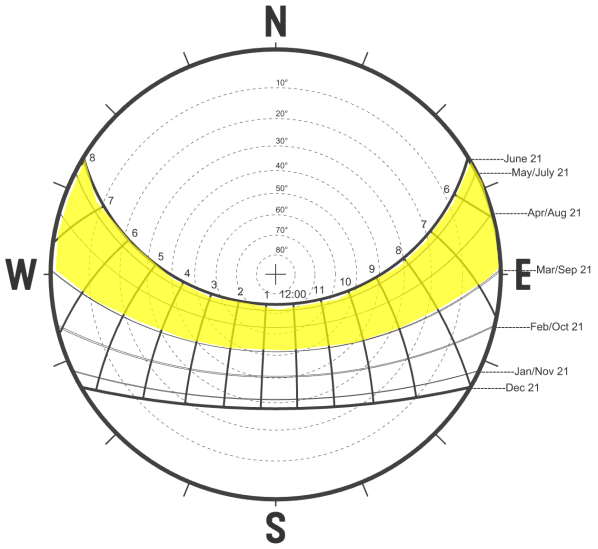


DIAGRAM 1. HOURLY ANNUAL COMFORT LEVEL

IMPACT OF SUNLIGHT ON THE OUTDOOR SPACES

Study of sunlight indicates solar energy does not have a big impact on the outdoor thermal comfort level on the FHSU campus, but providing seasonal shade on campus can help to make it feel more comfortable. In *Diagram 2. Comfortable Hours if Shaded*, light green represents how comfortable people feel under direct sunlight in Hays, with green and red respectively indicating how shades will help to improve or harm comfort level. The graphic shows that the winter months have relatively low sunshine and feel cold, while the summer months are hot with quite strong sunshine. Spring and fall are the more comfortable seasons. According to this graphic, winter and summer months are both uncomfortable due to variations in sunlight. In this situation, the university should consider planting deciduous trees. Those trees will grow large canopies in summer, the leaves would block the site from too much sunshine, and the trees will drop leaves in fall, so that campus open spaces will open up to obtain sunshine in winter to gain heat. However, data on the diagram has shown these interventions will not create a big change on the comfort level. Comfort level index will only fluctuate by 12% averagely throughout the year. That means planting deciduous trees will help to make the outdoor space on the FHSU campus more comfortable, but it is not a critical factor.



Sun Path in Hays, Kansas

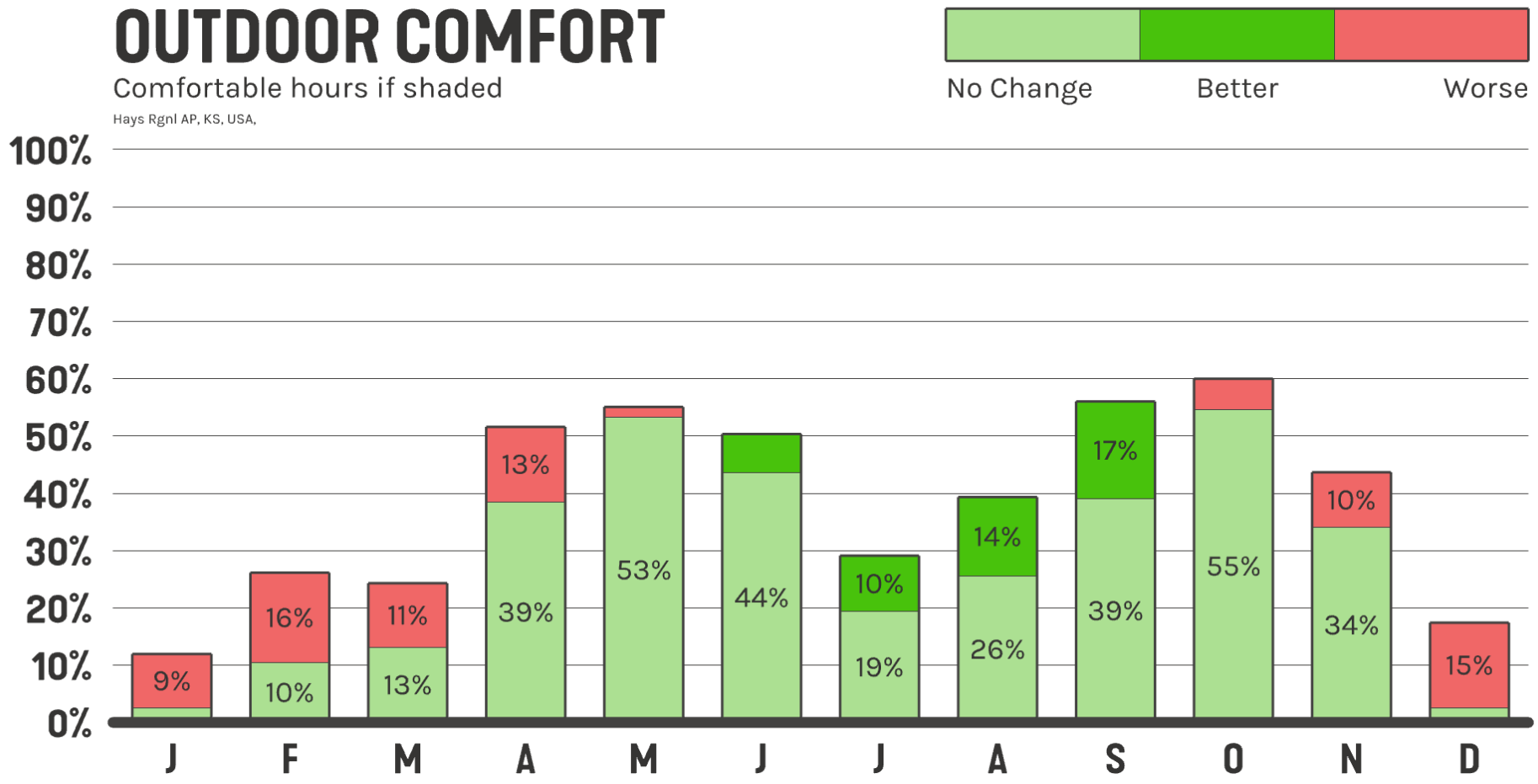
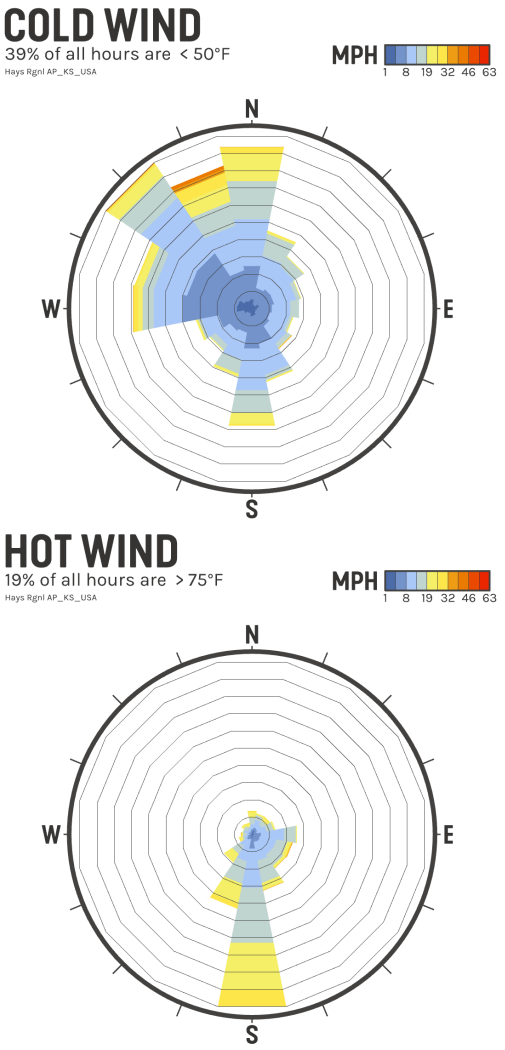


DIAGRAM 2. COMFORTABLE HOURS IF SHADED

IMPACT OF WIND ON THE OUTDOOR SPACES

Different from the sunlight pattern, wind data collected from Hays Regional Airport has shown that wind has a much stronger impact on the site's comfort level. Blocking cold winter wind will help to make the outdoor environment on campus more comfortable all year round. *Diagram 3. Comfortable Hours If All Wind Is Blocked* indicates the time range to block or absorb wind respectively for the extra comfort. Light green represents how comfortable people feel fully exposed to the Kansas wind by month. Green and red each shows when to block or absorb wind, and how much more comfort it will increase on site. A surprising fact shown in the diagram is that by blocking seasonal winds, the outdoor environment in the brutal February and December can feel almost as comfortable as that in comfortable October. In general the strong wind would make winter feel even colder, while summer breeze would help to cool down the site a bit. In addition to the wind pattern data, a domain wind study has shown that, in Hays, the cold domain wind in winter comes from northwest 30 degree, while hot wind in summer mostly comes from the south direction. Therefore in the proposed design, the university should block winter cold winds from the direction of northwest 30 degree, and make sure the south direction remains open to get gentle breeze on the sites for summer activities. As indicated in the diagram, blocking cold wind from northwest 30 degree in winter will significantly improve outdoor comfort level, which will almost make December and February feel like the most comfortable May and October. On the contrary, the sites on campus should be more open to the south in summer, to absorb more comforting breeze to cool the site down. Properly managing seasonal wind on site will significantly increase students' time using the outdoor space on campus.



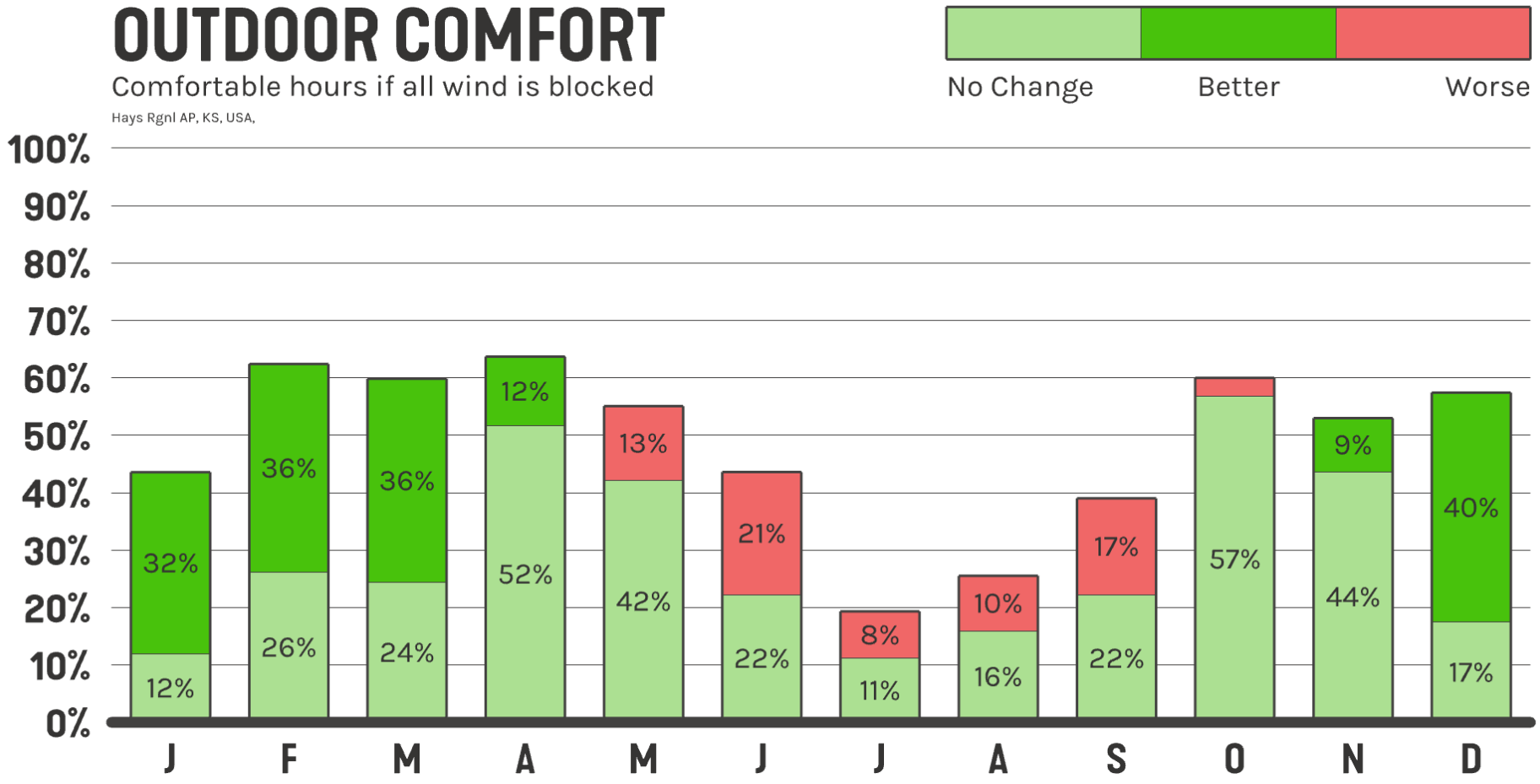


DIAGRAM 3. COMFORTABLE HOURS IF ALL WIND IS BLOCKED

FHSU OUTDOOR THERMAL COMFORT MODEL

With a firm understanding of the local climate, and impacts of sunlight and wind on site, as the last step, the planning team built a digital FHSU campus model and stimulated summer and winter domain wind patterns, to visualize the most developable outdoor recreational spaces on the campus. Buildings on the campus will alter the natural wind pattern. For example, a multi-story liner building body perpendicular to the wind direction will significantly block the wind and decrease the wind effects, while two tall buildings located close by will create a wind tunnel in the alley they formed and generate stronger wind effects. In *Diagram 5. Corridor* the color range represents wind speed as red is the strongest 15 mph and dark blue is the lightest 0 mph. Green represents a comfortable breeze speed between 6-9 mph. Based on the studies above, the areas colored blue on the left diagram are feasible for development because the cold winter winds are blocked on these sites, for example the front area of the Student Center facing the Quad, the open space east to the

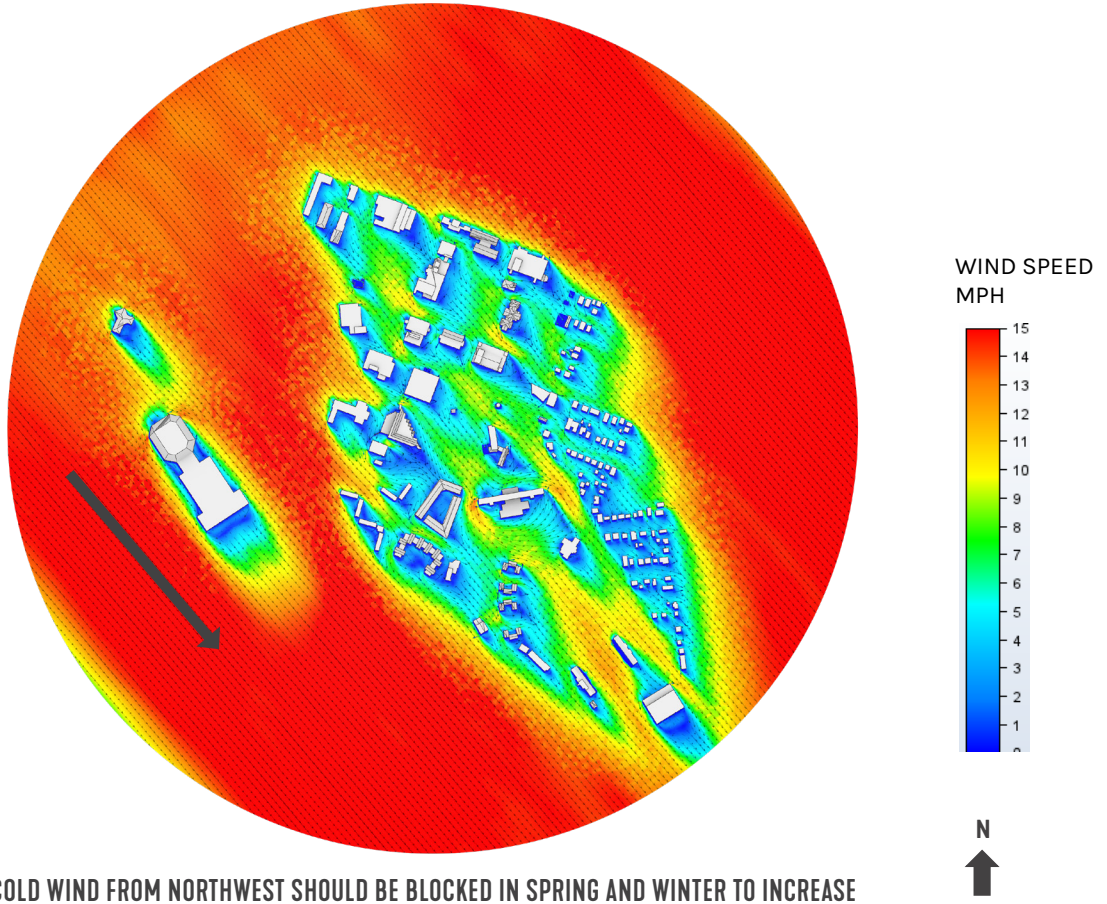


DIAGRAM 4. COLD WIND FROM NORTHWEST SHOULD BE BLOCKED IN SPRING AND WINTER TO INCREASE OUTDOOR THERMAL COMFORT

Library and the open space between McMindes Hall and Custer Hall. On Diagram 5, areas colored green are the best ones for summer activities because they will catch some gentle breeze to cool down the heat, for example the Quad and the Creek area north to Custer Hall. Those sites are the most feasible ones to develop in their current conditions. However, in the proposed design, the university should still consider developing some outdoor space in critical locations such as the open space east of Tomanek Hall, even though they do not have a pleasant microclimate at the moment. The visualization diagrams indicate the problems these places have, and the university is able to improve the condition by either creating more shade in summer from planting more deciduous trees, or blocking the wind more in winter by planting evergreen shrub hedges, to increase users' comfort level on site. This outdoor thermal comfort analysis should be used in future projects as a guidance in the proposed design to locate and create comfortable outdoor spaces on the campus.

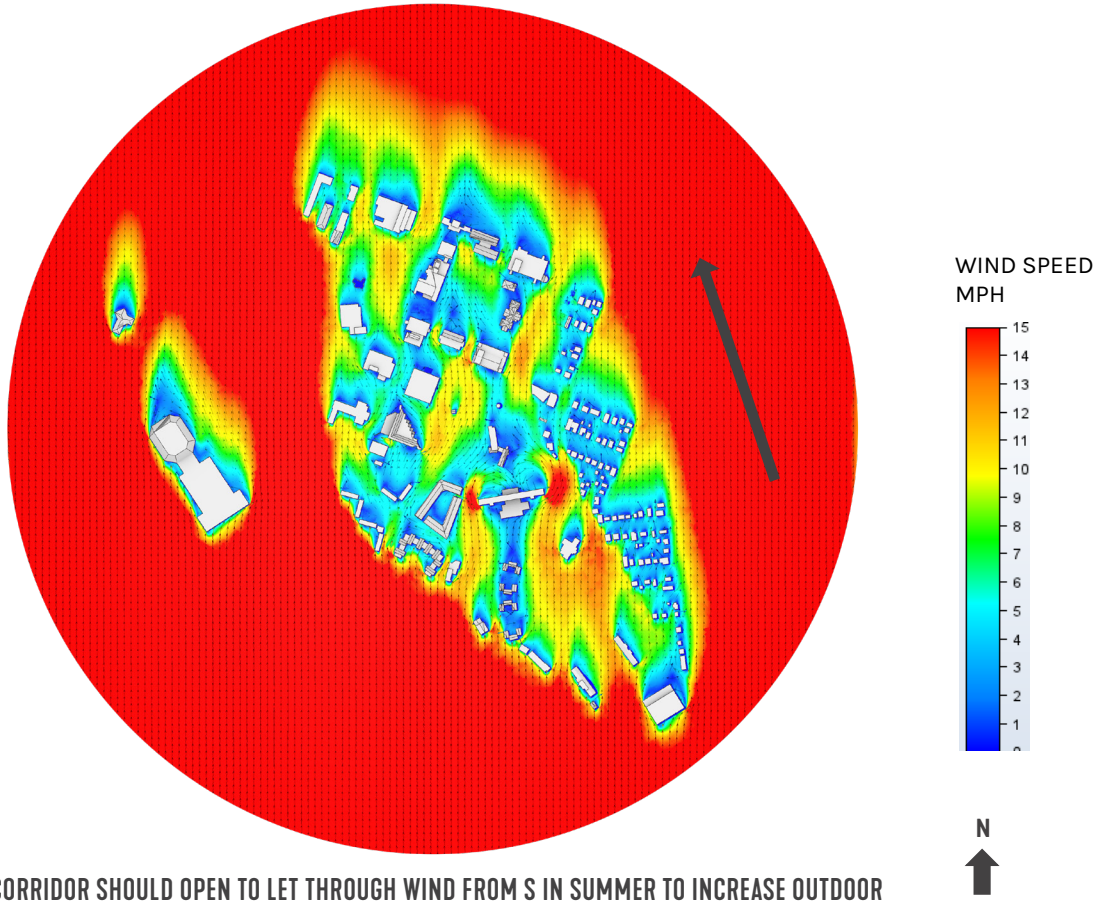


DIAGRAM 5. CORRIDOR SHOULD OPEN TO LET THROUGH WIND FROM S IN SUMMER TO INCREASE OUTDOOR THERMAL COMFORT

FORT HAYS STATE
UNIVERSITY

HTK ARCHITECTS PA

SMITHGROUP