



Richland Community College

Master Plan

July 2019

Prepared by:





It's more than a campus,
it's your future.

Richland Community College

Master Plan

July 2019

3

Introduction

4

Where Are We Now?

20

Where Do We Want To Go?

23

How Do We Get There?

31

Appendix



Introduction

In order to develop a comprehensive master plan, there are three simple questions that need to be answered:

1. Where Are We Now? 2. Where Do We Want To Go? 3. How Do We Get There?

The information contained herein briefly responds to each of these questions based on input from the College's students, staff, and faculty; analysis of the facility and operational data; and BLDD's experience as College planners.

Where Are We Now?

Richland Community College was founded in 1971. At that time, its mission statement identified it as a comprehensive community college, which required that it offer baccalaureate, technical, continuing education, and community service programs. For almost 45 years, that is what the College has done. The people of the District have benefited and prospered from the services the College has offered. Richland Community College District 537 includes all of Macon County and parts of Christian, DeWitt, Logan, Moultrie, Piatt, Sangamon, and Shelby Counties, serving approximately 7,600 students annually at its main campus in Decatur, at its Clinton Higher Education Center, and at several other locations throughout the District

Since its founding, the basic purpose and mission have not dramatically changed. What have changed, however, are the scope of activities and the manner in which they occur. The 21st Century places demands on Richland that are far different than the demands in 1971. Today's new economy retains the elements of mass production but adds new

standards for quality, variety, sustainability, innovation, convenience, and timeliness. Yesterday's community colleges measured their success by how many students they served. Today's community colleges measure their successes by how well they serve. For a college to serve well, it must commit to improving standards of quality. It must commit to providing education, programs, and services in a variety of ways to diverse people at ever-changing times and places. It must commit to assisting students in completing their educational goals.

Richland's faculty and staff are committed to meeting the challenges of the new economies and technologies. They are committed to providing the leadership and education required to create a talented pool of people who will help Central Illinois grow and prosper in an increasingly complex world. The statement of purpose, mission, vision, and goals outline the blueprint, the plan, and the process by which Richland will meet the challenges of the 21st Century.

As Richland Community College works to serve residents of the College District, it looks forward to meeting new challenges and fulfilling its most important mission – student success.



Timeline – Significant Events in Richland Community College's history

- 1971 - The Community College of Decatur is established and located in a vacated bank in downtown Decatur.
- 1972 – First classes offered.
- 1975 - The College is re-named Richland Community College.
- 1979 - RCC moves to an Industrial Park (Park 101) as a temporary location.
- 1980 - Richland Community College Foundation is established.
- 1988 - Richland relocates to a newly established permanent campus on Brush College Road.
- 1991 - The Weidenbacher Greenhouse is constructed.
- 1993 - The Shilling Community Education Center is dedicated.
- 2002 - The Scherer Industrial Technology Center is dedicated.
- 2003 - The Schrodts Health Education Center is dedicated.
- 2004 - The Brush College, LLC is created.
- 2005 - Hope Academy Center classes begin.
Progress City USA was constructed and was host to the first bi-annual Farm Progress Show.
- 2007 - The Dwayne O. Andreas Agribusiness Education Center is dedicated.
The Adele P. Glenn Early Childhood Education Center and the Fitness Center are constructed.
- 2009 - Fairview Park Plaza Center classes begin.
- 2010 - The Center for Sustainability and Innovation was dedicated and certified as LEED Platinum.
The 100 kW wind turbine was constructed.
- 2012 - The National Sequestration Education Center was constructed.
- 2012 - Funding released by the State of Illinois for Student Success Center construction.
- 2013 - Workforce Development Institute facility is opened.
- 2018 - Carroll Center for Innovative Learning is completed.
Student Success Center addition and renovation is opened.

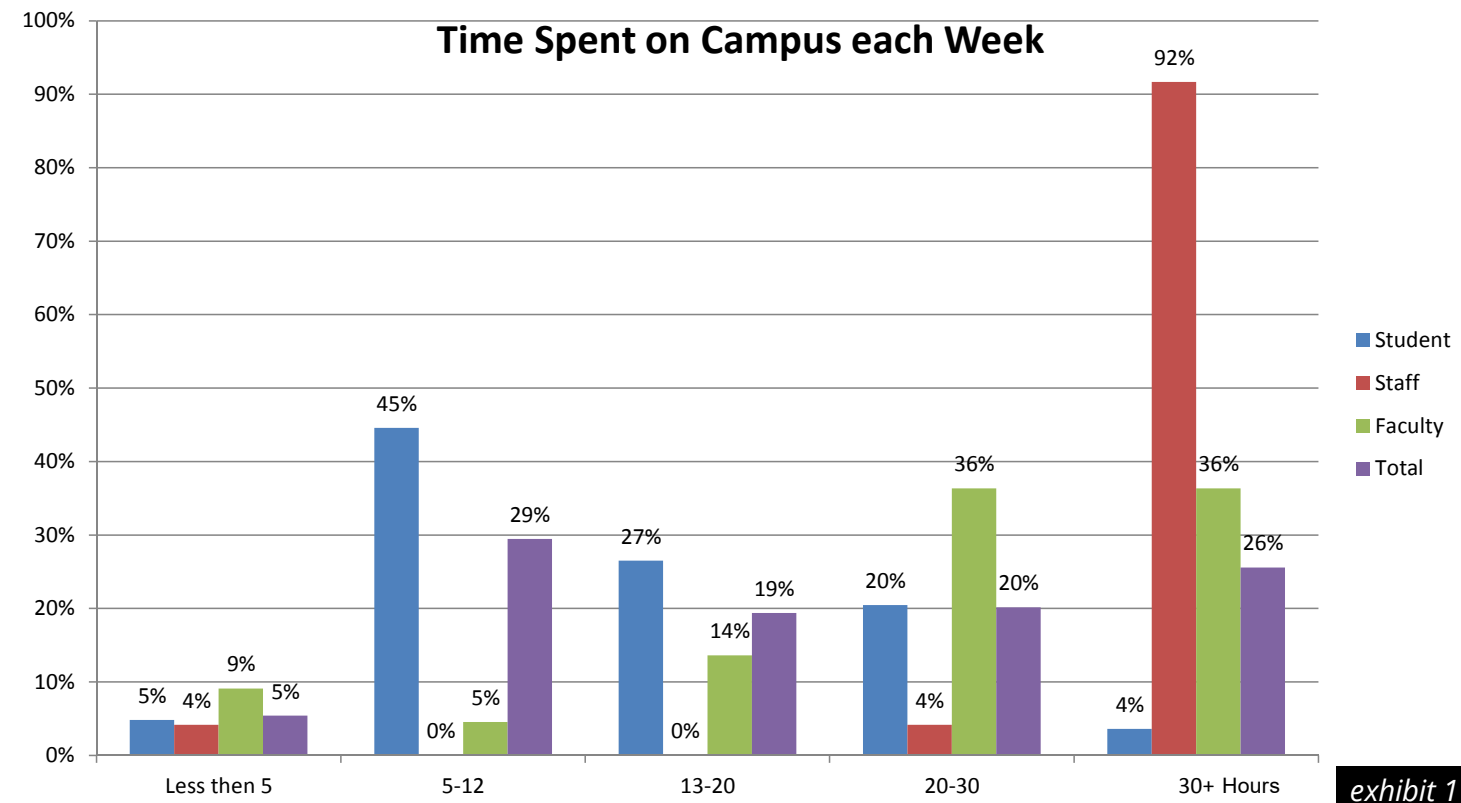
Where Are We Now?

As part of this master plan process, we've gathered data through a student/staff survey, physical needs assessment of the facilities, and evaluation of the College's most recent enrollment and schedules. This data gives us a clear starting point for the master plan process.

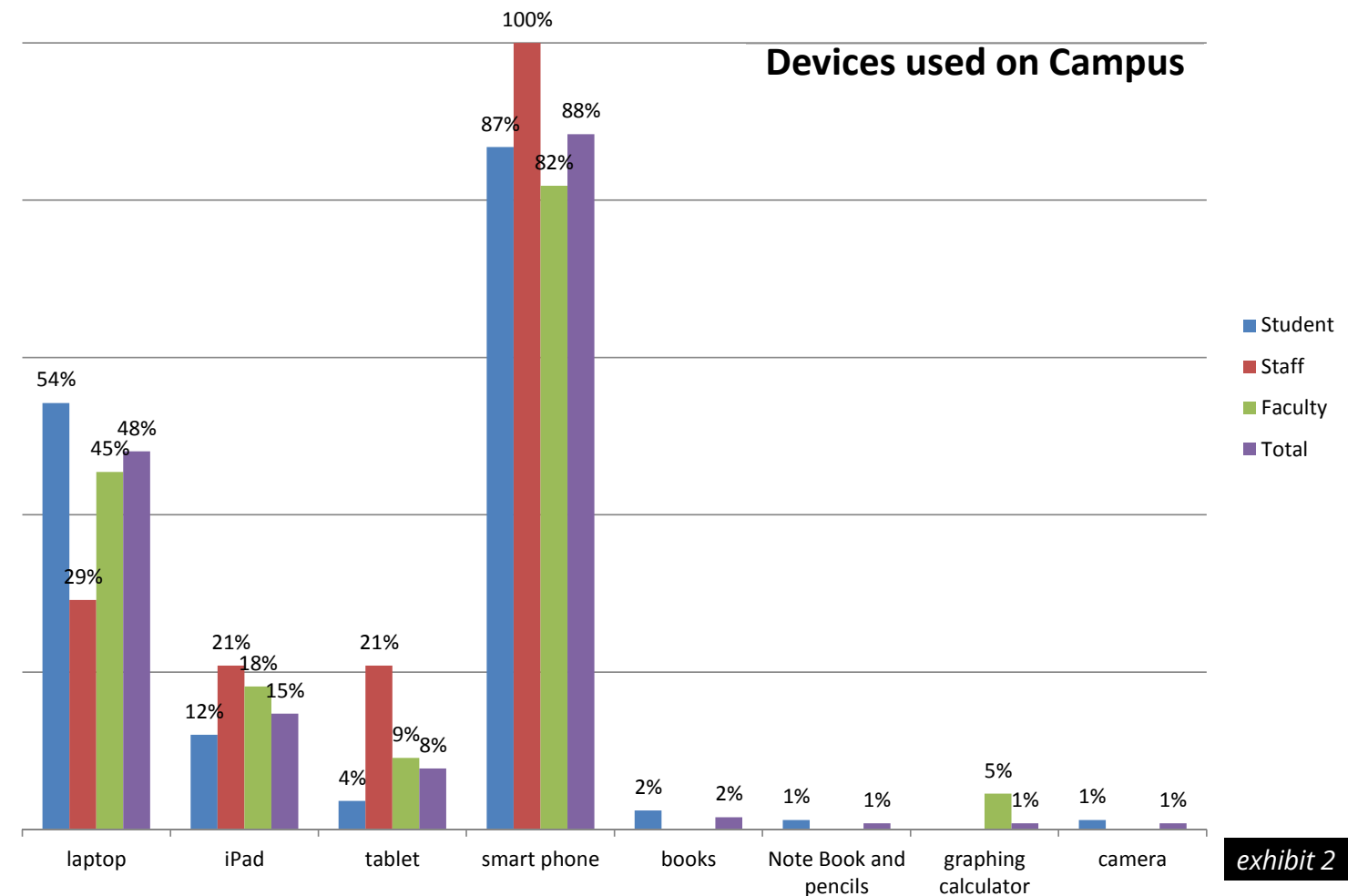
a. Student / Staff Survey:

A web-based student/staff survey was completed. There were a total of 129 respondents (83 students, 24 staff, and 22 faculty). Basic information pertaining to time spent on campus each week and technology use on campus was gathered. Qualitative data on the respondents' feelings as to what they need the campus to be ____, to feel more ____, to feel less ____, to have ____, or not have ____ in order for them to be successful was also gathered.

To understand our starting point, we asked how much time each of three key users groups spend on campus each week (*exhibit 1*). Of the student respondents, almost half indicated they only spend 5-12 hours on campus each week. Only one-quarter of the student respondents indicated they spend more than 20 hours on campus each week. Approximately three-quarters of the faculty respondents indicate that they spend more than 20 hours on campus each week. Not surprisingly, over 90 percent of the staff spend 30+ hours on campus each week.



We also asked for data pertaining to the use of technology on campus (*exhibit 2*). Smart phones are the most highly utilized technology on campus with 88 percent of all respondents indicating use. Laptops are used by 54 percent of the student respondents and 45 percent of the faculty respondents. iPads and tablets are used by only 16 percent of the student respondents and just 24 percent of the faculty.



Where Are We Now?

In order to better understand what the respondents believe is required for them to be successful at Richland, they were asked five qualitative questions. Their responses were then analyzed and categorized into topics (*exhibit 3*).

The three most noted topics from student respondents were:
 1) inviting, welcoming, engaging spaces;
 2) quiet/private spaces;
 3) Less crowded, noisy, distracting.

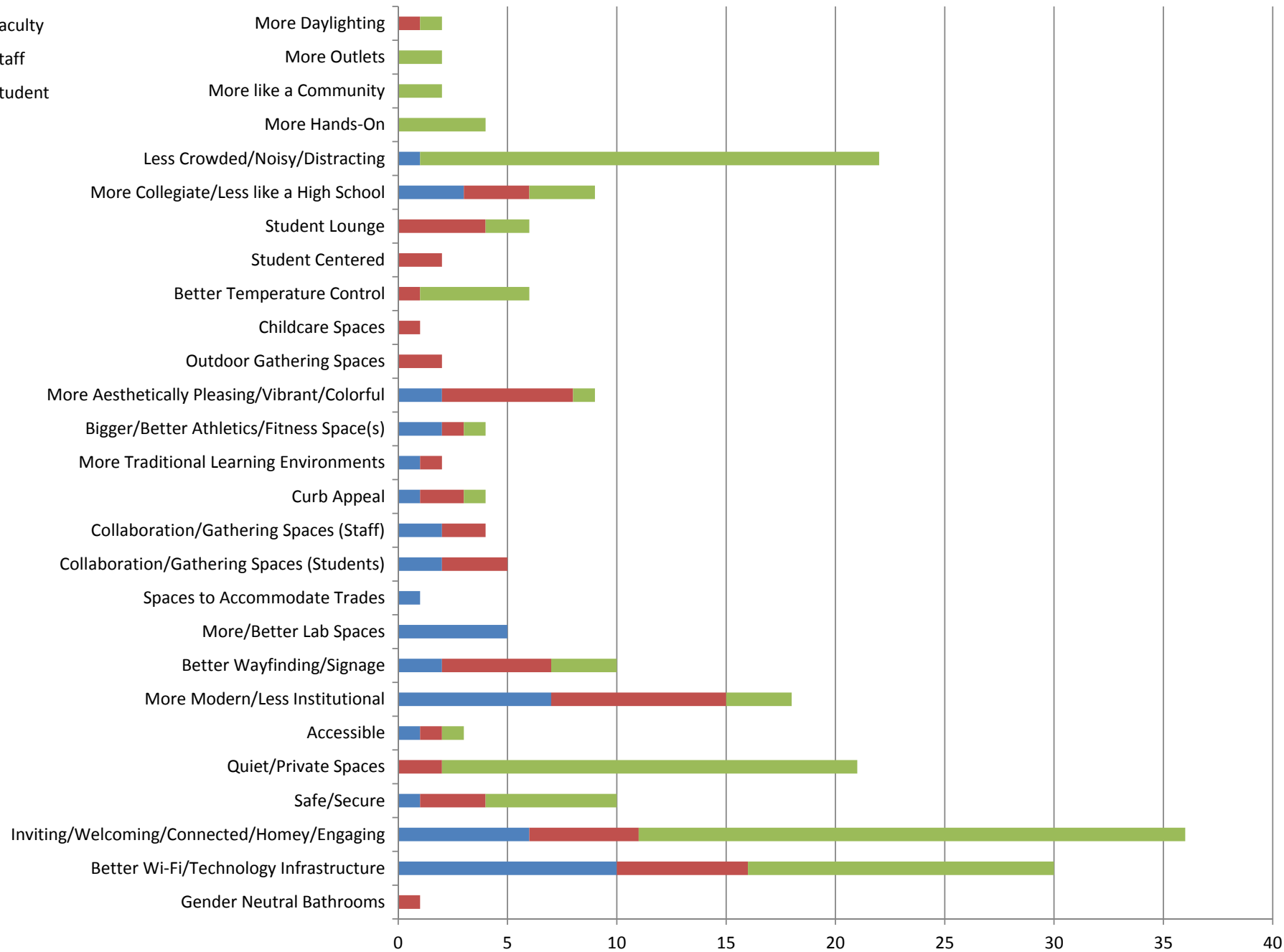
Top staff responses include: 1) more modern/less institutional and 2) more aesthetically pleasing, vibrant, colorful.

The faculty respondents noted: 1) more modern/less institutional; 2) inviting, welcoming, engaging; 3) more, better lab spaces.

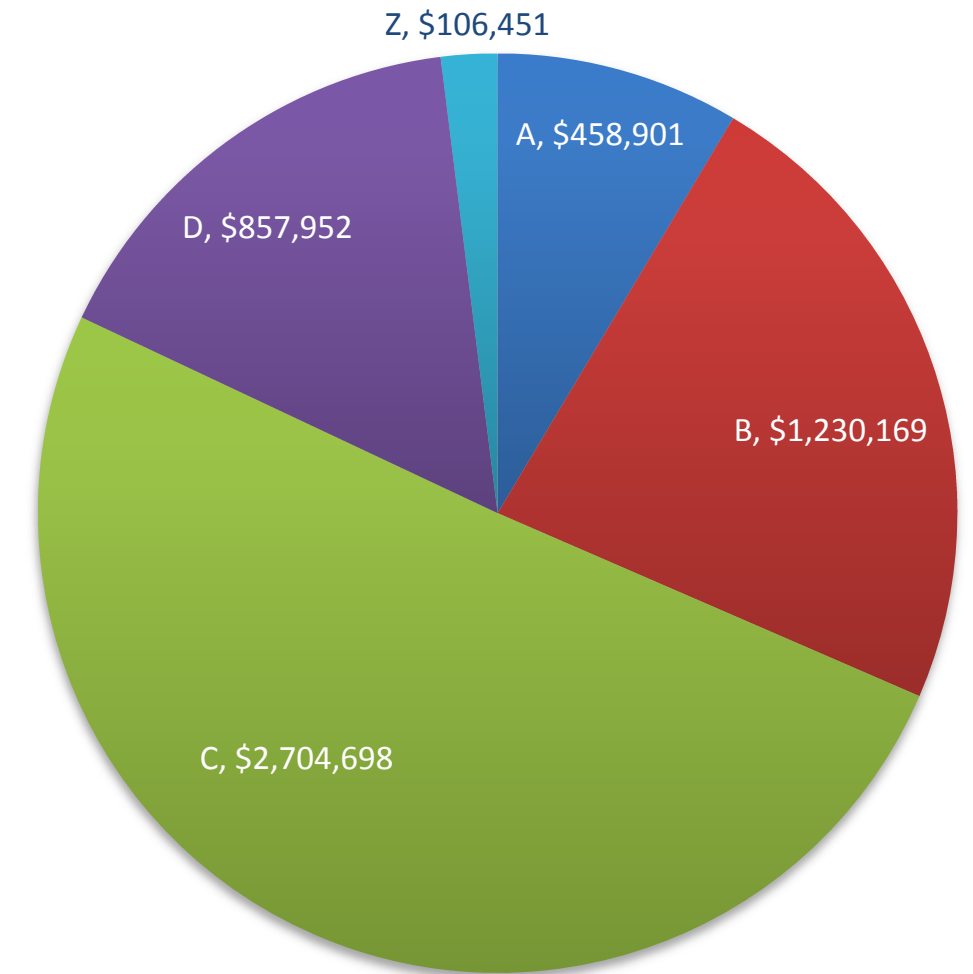
All respondents noted better Wi-Fi/technology infrastructure within their top 4 responses.

exhibit 3

Survey Issues/Concepts



Physical Needs by Priority



Total for all priorities: \$5,208,821

Priority
 ■ A ■ B ■ C ■ D ■ Z

exhibit 4

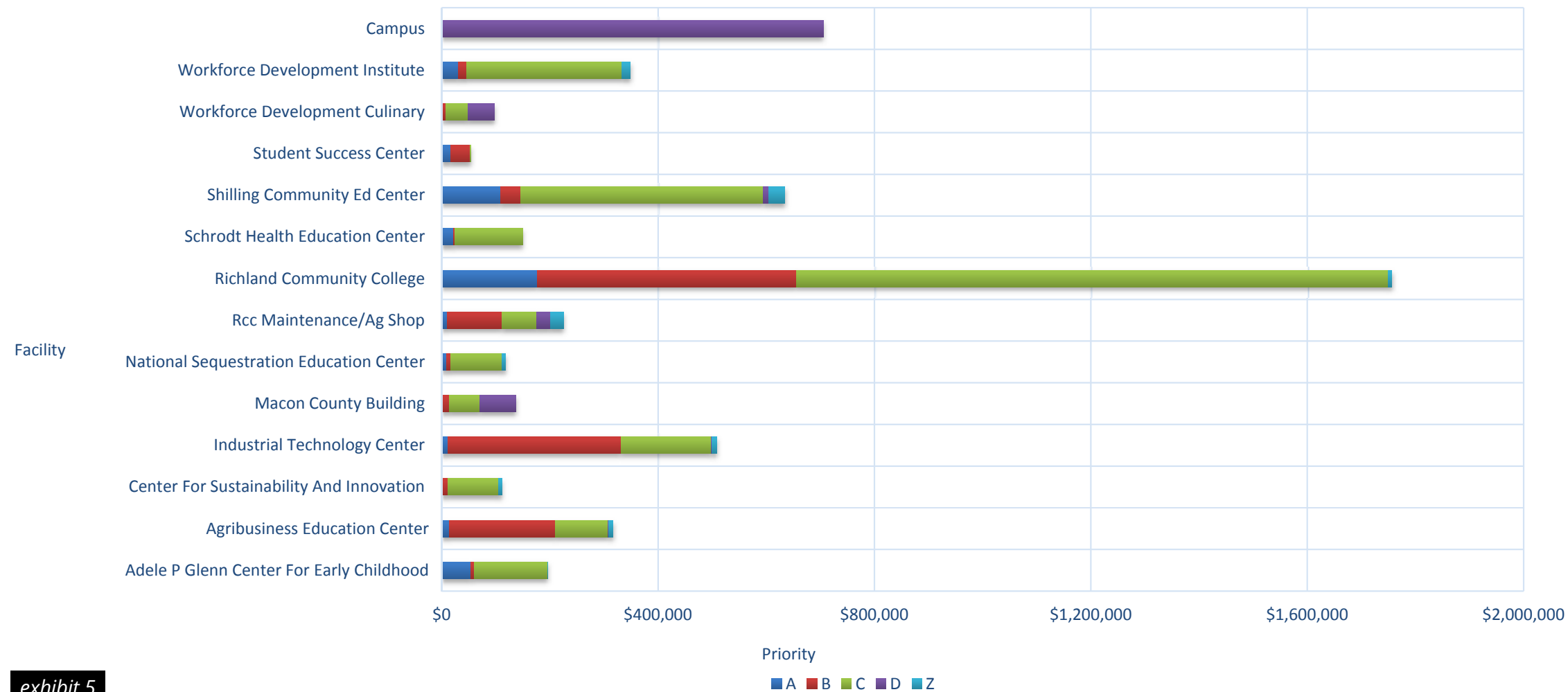
b. Physical Needs Analysis

A team of architects and engineers completed a walk-through of all main campus facilities to evaluate the condition of the building systems (building envelope, MEP systems, finishes, accessibility, etc). Any needs that were noted were prioritized: (A) immediate need, (B) 1–5 year need, (C) 6–10 year need, (D) long term/energy improvement, and (Z) miscellaneous needs. Needs were also categorized as to their reason.

Overall, \$5.2 million of needs were identified (*exhibit 4*). Less than 40 percent of those needs were noted as priority A & B. The majority of needs, 58 percent, are indicated as priority C items.

Where Are We Now?

Physical Needs by Facility & Priority



As expected, the older areas of the facility have the greatest needs (*exhibit 5*). Approximately, \$1.7 million of needs were identified for the original building, with an additional \$600,000 of need identified for Shilling Community Ed Center, and \$500,000 of need identified for the Industrial Technology Center. Energy use, including items identified by Energy Management Solutions, and end of useful life are the top reasons identified, totaling \$2.91 million and \$1.27 million, respectively (*exhibit 6*).

exhibit 5

Where Are We Now?

Physical Needs by Reason

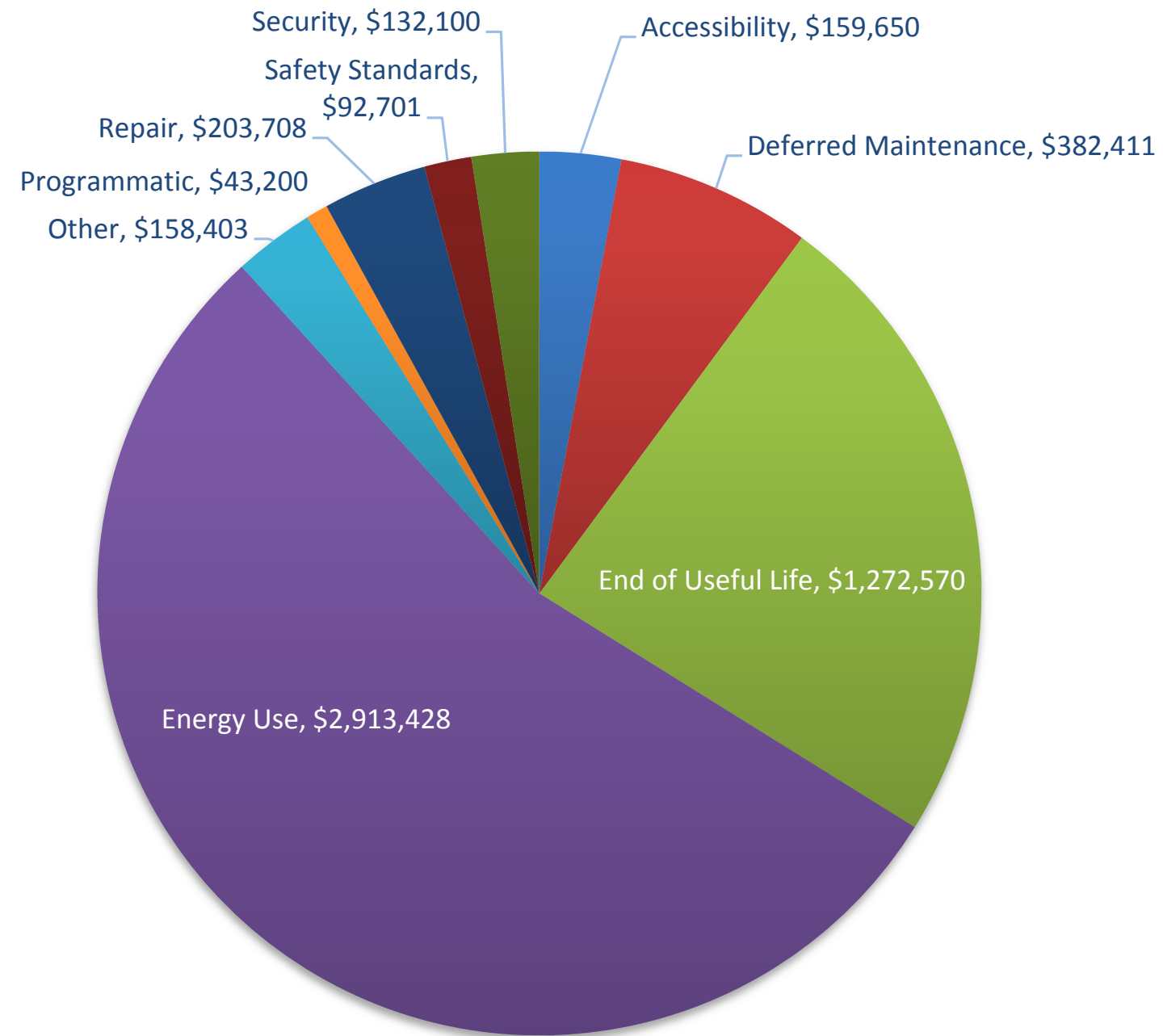


exhibit 6

ReasonCode

- Accessibility
- Deferred Maintenance
- End of Useful Life
- Energy Use
- Other
- Programmatic
- Repair
- Safety Standards
- Security

Where Are We Now?

c. Space Type Summary

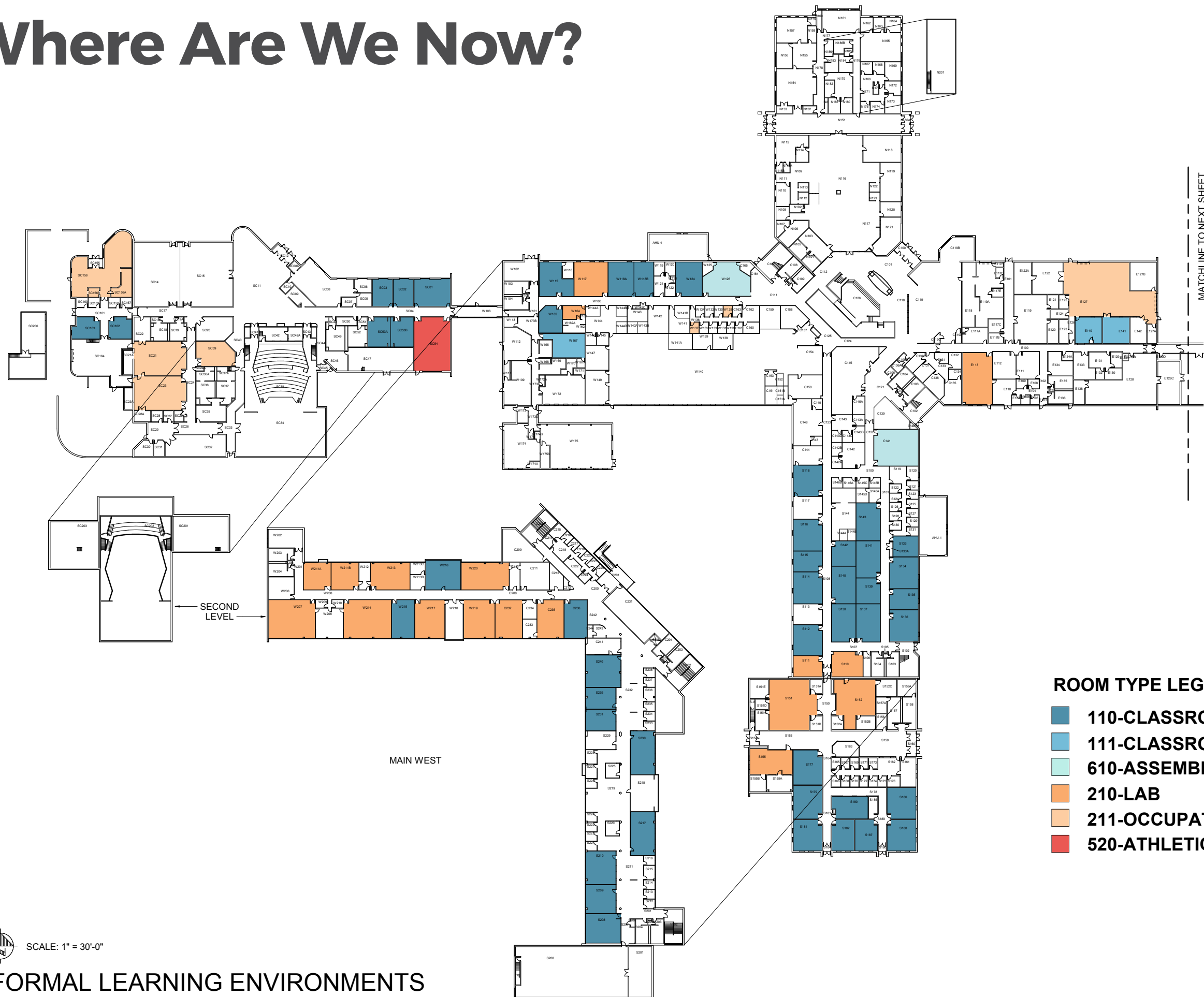
The types of spaces within the existing building were analyzed with respect to their use and capacity, focusing on formal and informal learning environments. Formal learning environments make up 23 percent of the gross building area on campus. Informal learning environments: open labs, library, study rooms, lounges, food venues, etc comprise approximately 8 percent of the gross building area on campus.

Of the 115 formal learning environments, 75 are classrooms, 36 are labs, there are 2 each of assembly and PE spaces (*exhibit 7-13*). There are 2,797 seats (stations) available in these spaces. 58 percent of these seats are found within classroom spaces, 24 percent within lab spaces, 3 percent within assembly spaces, and 2.5 percent within P.E. spaces.

exhibit 7

Row Labels	Count of spaces	% of spaces	Assignable area	% assignable area	Calculated Seats	% of Calculated Seats
110 - Classroom	68	59.1%	40,884	46.2%	1638	58.2%
< 20	19	27.9%	8,350	20.4%	293	17.9%
20 - 29	40	58.8%	23,604	57.7%	988	60.3%
> 30	9	13.2%	8,930	21.8%	357	21.8%
111 - Classroom-Lab	7	6.1%	3,607	4.1%	159	5.7%
20 - 29	7	100.0%	3,607	100.0%	159	100.0%
210 - Class Laboratory	21	18.3%	18,342	20.7%	504	17.9%
< 20	6	28.6%	3,167	17.3%	85	16.9%
20 - 29	12	57.1%	11,950	65.2%	290	57.5%
> 30	3	14.3%	3,225	17.6%	129	25.6%
211 - Occupational Lab	15	13.0%	19,998	22.6%	353	12.5%
< 20	11	73.3%	12,007	60.0%	141	39.9%
20 - 29	1	6.7%	1,332	6.7%	22	6.2%
> 30	3	20.0%	6,659	33.3%	190	53.8%
520 - Athletic or Phys Ed	2	1.7%	3,538	4.0%	71	2.5%
20 - 29	1	50.0%	1,409	39.8%	28	39.4%
> 30	1	50.0%	2,129	60.2%	43	60.6%
610 - Assembly	2	1.7%	2,205	2.5%	88	3.1%
> 30	2	100.0%	2,205	100.0%	88	100.0%
Grand Total	115	100.0%	88,574	100.0%	2813	100.0%

Where Are We Now?



ROOM TYPE LEGEND

- 110-CLASSROOM
- 111-CLASSROOM LAB
- 610-ASSEMBLY
- 210-LAB
- 211-OCCUPATIONAL LAB
- 520-ATHLETIC/PE

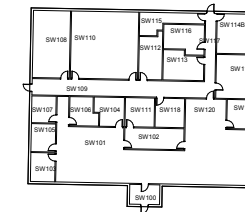
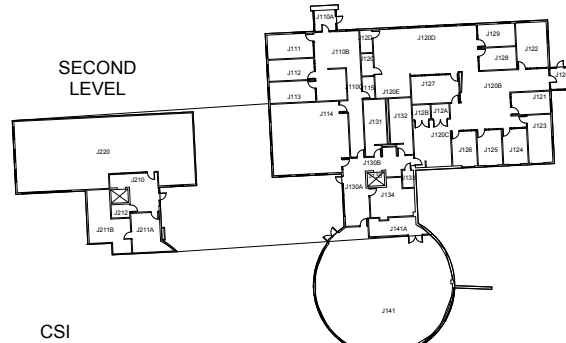
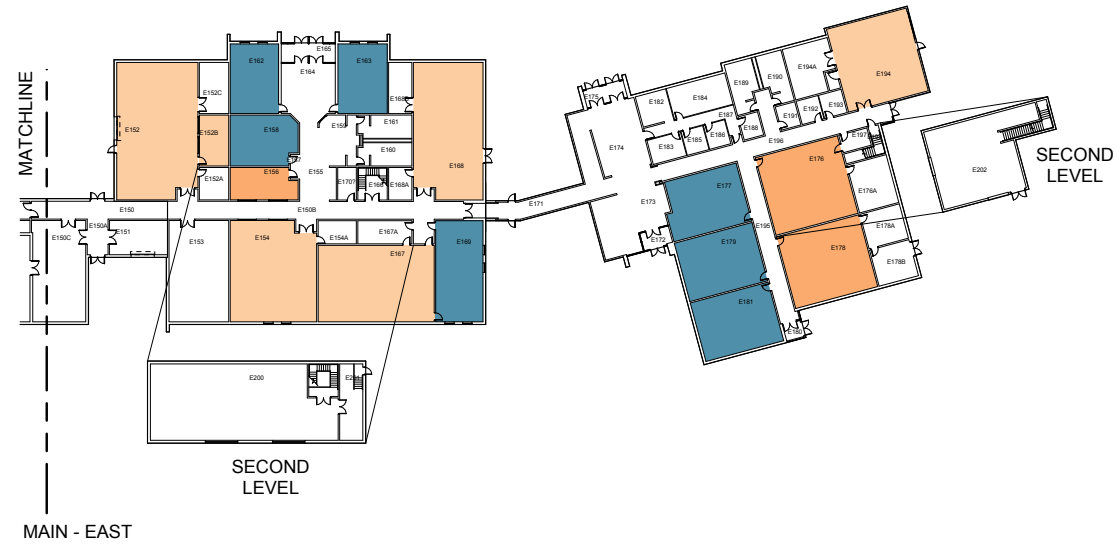
SCALE: 1" = 30'-0"

FORMAL LEARNING ENVIRONMENTS

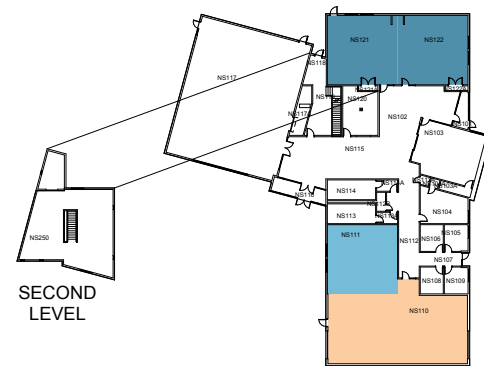
Where Are We Now?

ROOM TYPE LEGEND

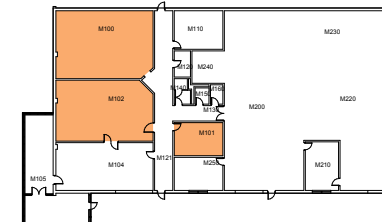
- 110-CLASSROOM
- 111-CLASSROOM LAB
- 610-ASSEMBLY
- 210-LAB
- 211-OCCUPATIONAL LAB
- 520-ATHLETIC/PE



MACON CLASSROOM



NSEC

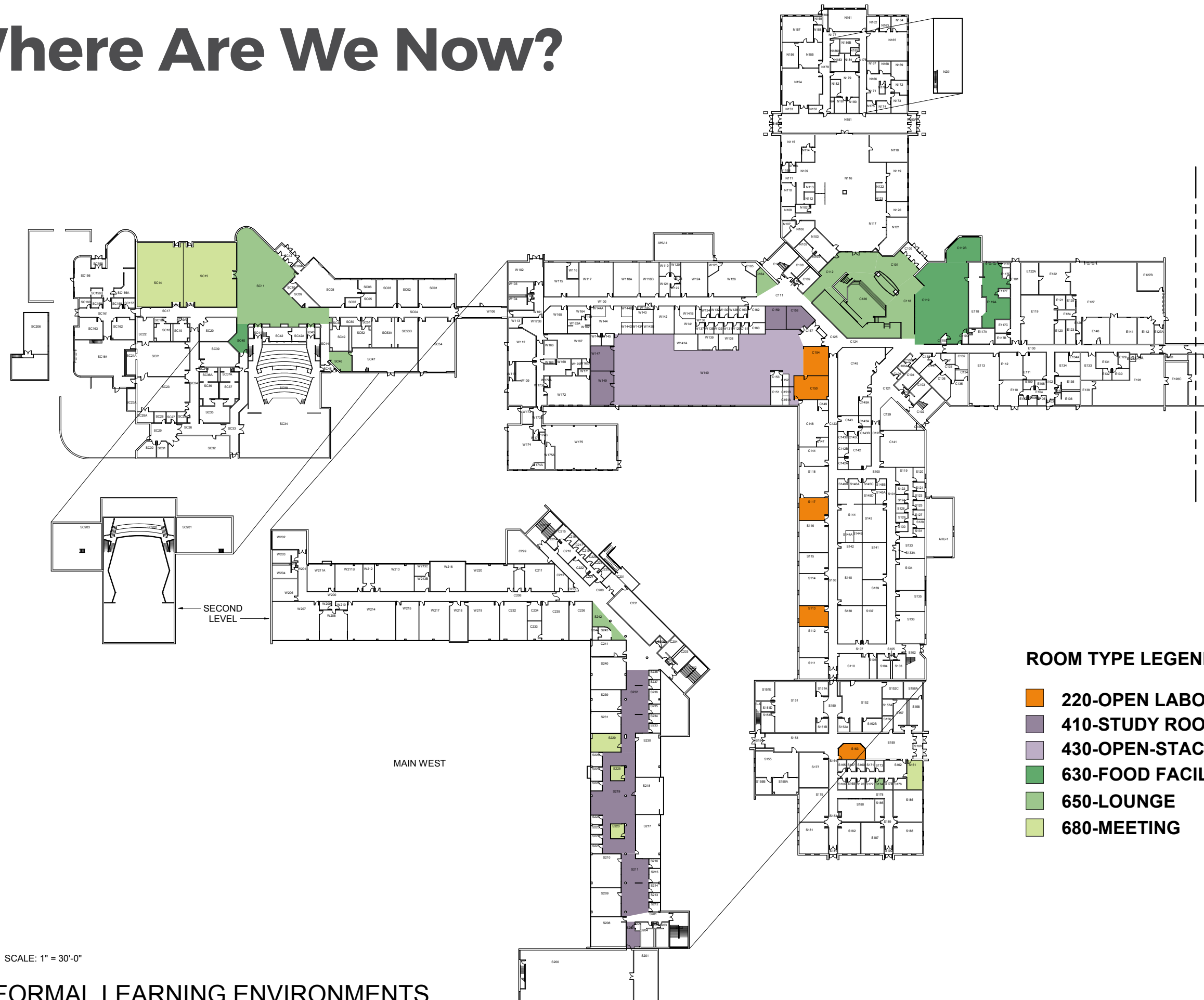


AG CLASSROOM

SCALE: 1" = 30'-0"

FORMAL LEARNING ENVIRONMENTS CONT.

Where Are We Now?



ROOM TYPE LEGEND

- 220-OPEN LABORATORY
- 410-STUDY ROOM
- 430-OPEN-STACK STUDY ROOM
- 630-FOOD FACILITY
- 650-LOUNGE
- 680-MEETING

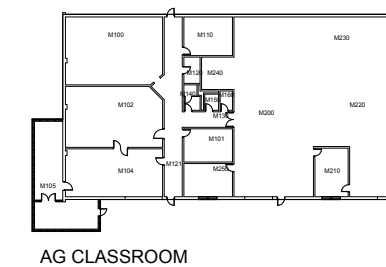
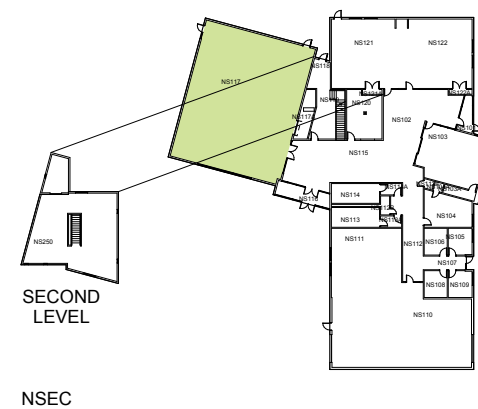
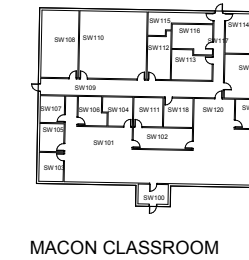
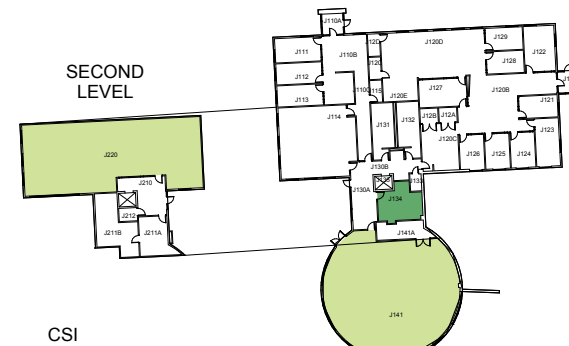
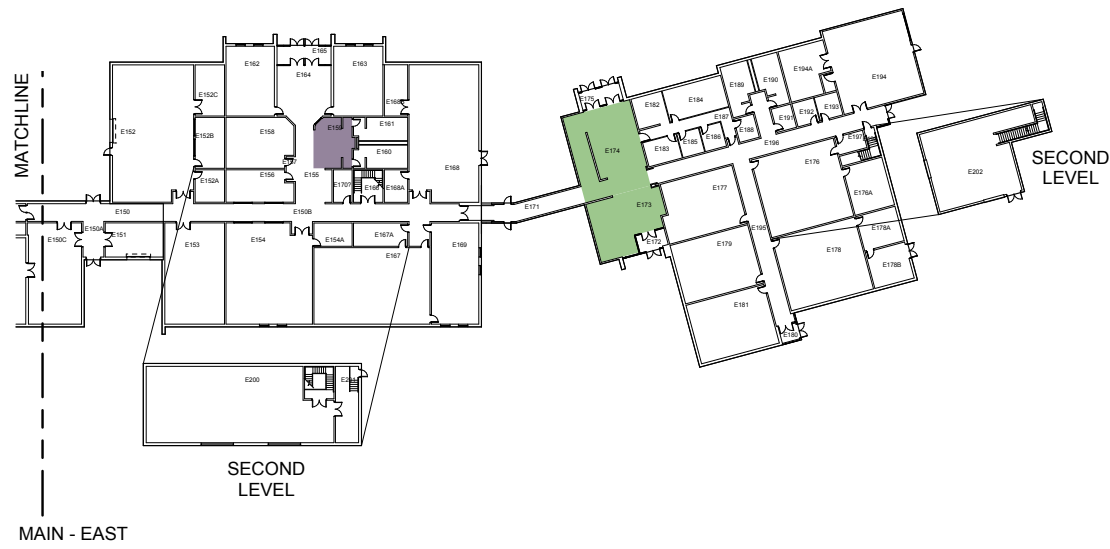
SCALE: 1" = 30'-0"

INFORMAL LEARNING ENVIRONMENTS

Where Are We Now?

ROOM TYPE LEGEND

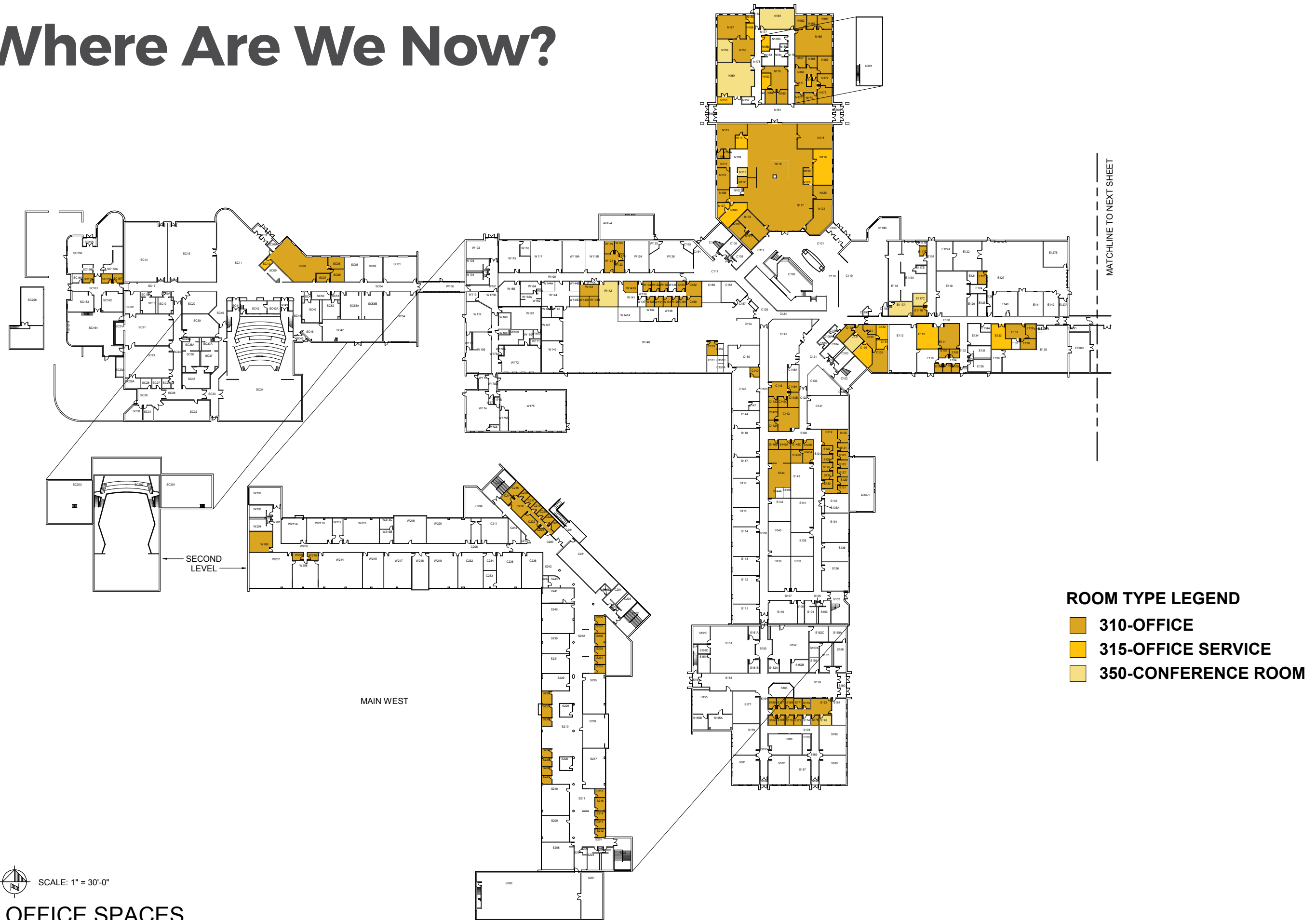
- 220-OPEN LABORATORY
- 410-STUDY ROOM
- 430-OPEN-STACK STUDY ROOM
- 630-FOOD FACILITY
- 650-LOUNGE
- 680-MEETING



SCALE: 1" = 30'-0"

INFORMAL LEARNING ENVIRONMENTS CONT.

Where Are We Now?



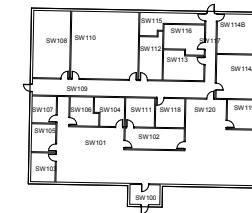
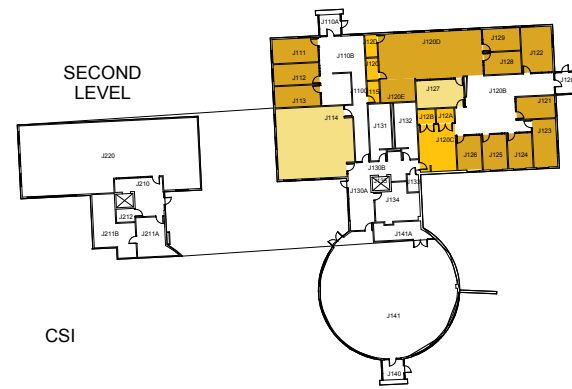
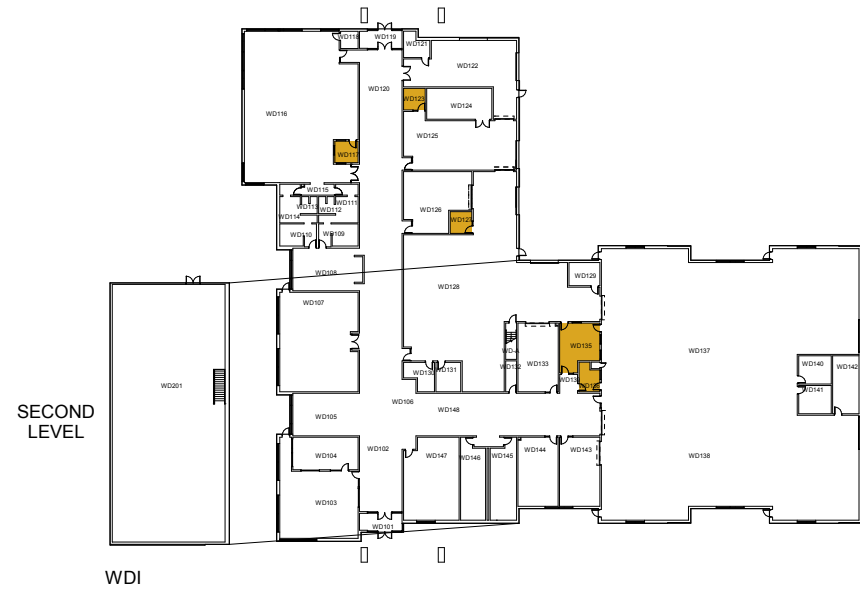
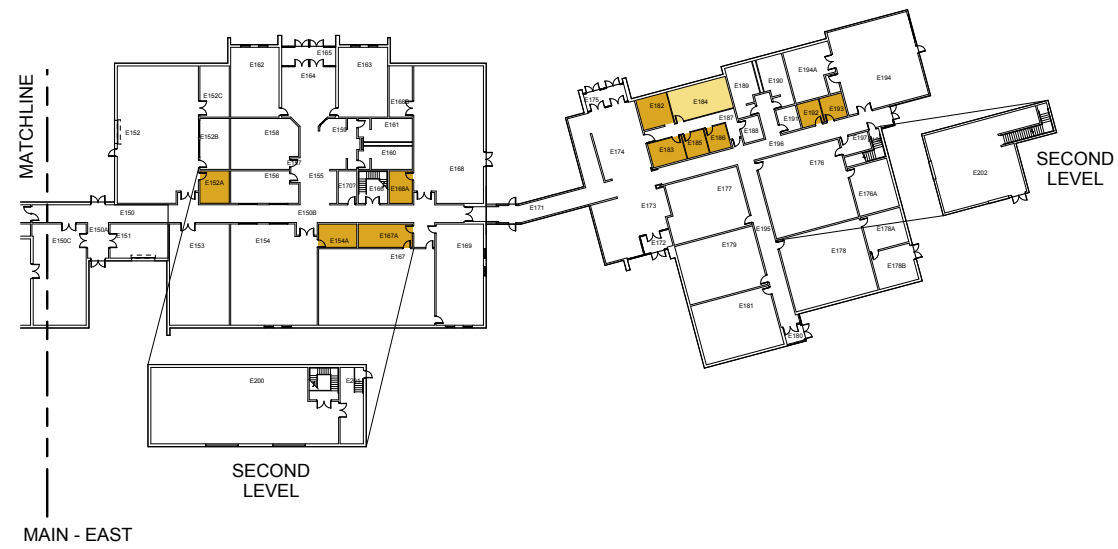
SCALE: 1" = 30'-0"

OFFICE SPACES

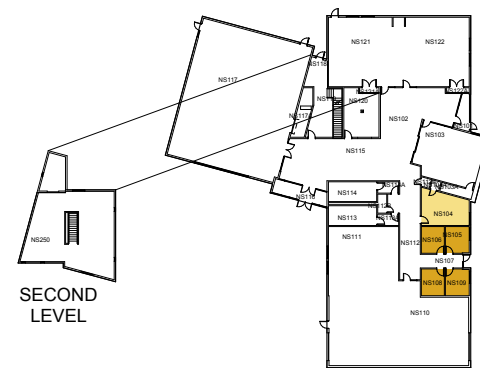
Where Are We Now?

ROOM TYPE LEGEND

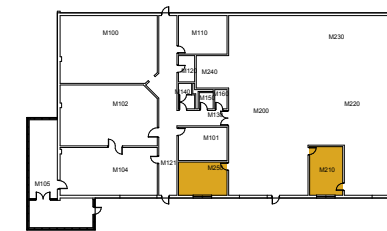
- 310-OFFICE
- 315-OFFICE SERVICE
- 350-CONFERENCE ROOM



MACON CLASSROOM



NSEC



AG CLASSROOM



OFFICE SPACES CONT.

Where Are We Now?

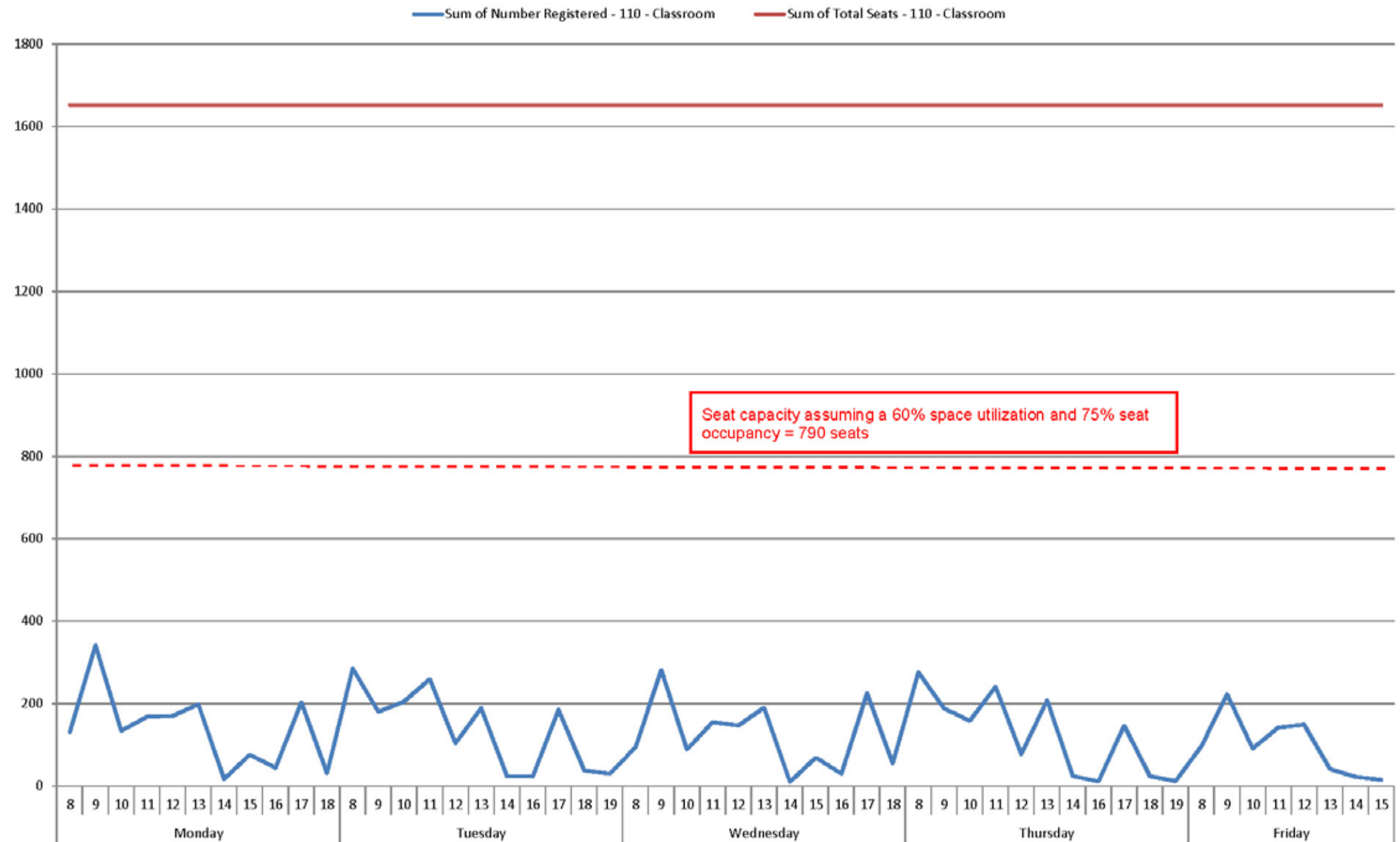
d. Space utilization and seat use

Using enrollment data from the 2018 spring semester and the 2018 fall semester, we analyzed how effectively the College is using the formal learning environments, specifically looking at room utilization (is the space scheduled or not scheduled), and how many seats are occupied when a space is utilized. Room utilization and seat use was evaluated over the entire week and over Monday/Wednesday and Tuesday/Thursday subsets. We also looked at this data during a 12-hour period, 8 am to 8 pm, and over a core-hour period, 9 am to 3 pm.

For the two semesters studied, student enrollment was approximately 1,090 FTE. This amount is approximately 56 percent of the peak value of 1,917 FTE students from FY 2010. As shown on the Course enrollment (110 Classrooms) chart, which depicts how many seats are occupied at any given hour in a typical classroom for the Fall 2018 semester, the peak seats required are 350 at 9 am on Mondays (*exhibit 14*). The College has 1,622 seats available in typical classrooms. If we adjust the available seat value to reflect a typical room utilization of 60 percent and a target seat occupancy of 75 percent, the College has capacity 790 classroom seats for any given hour. Therefore, the College has capacity for more than 2x the current enrollment level within typical classroom spaces in their current configuration.

exhibit 14

Existing Course Enrollment (110 - Classrooms) - Fall 2018

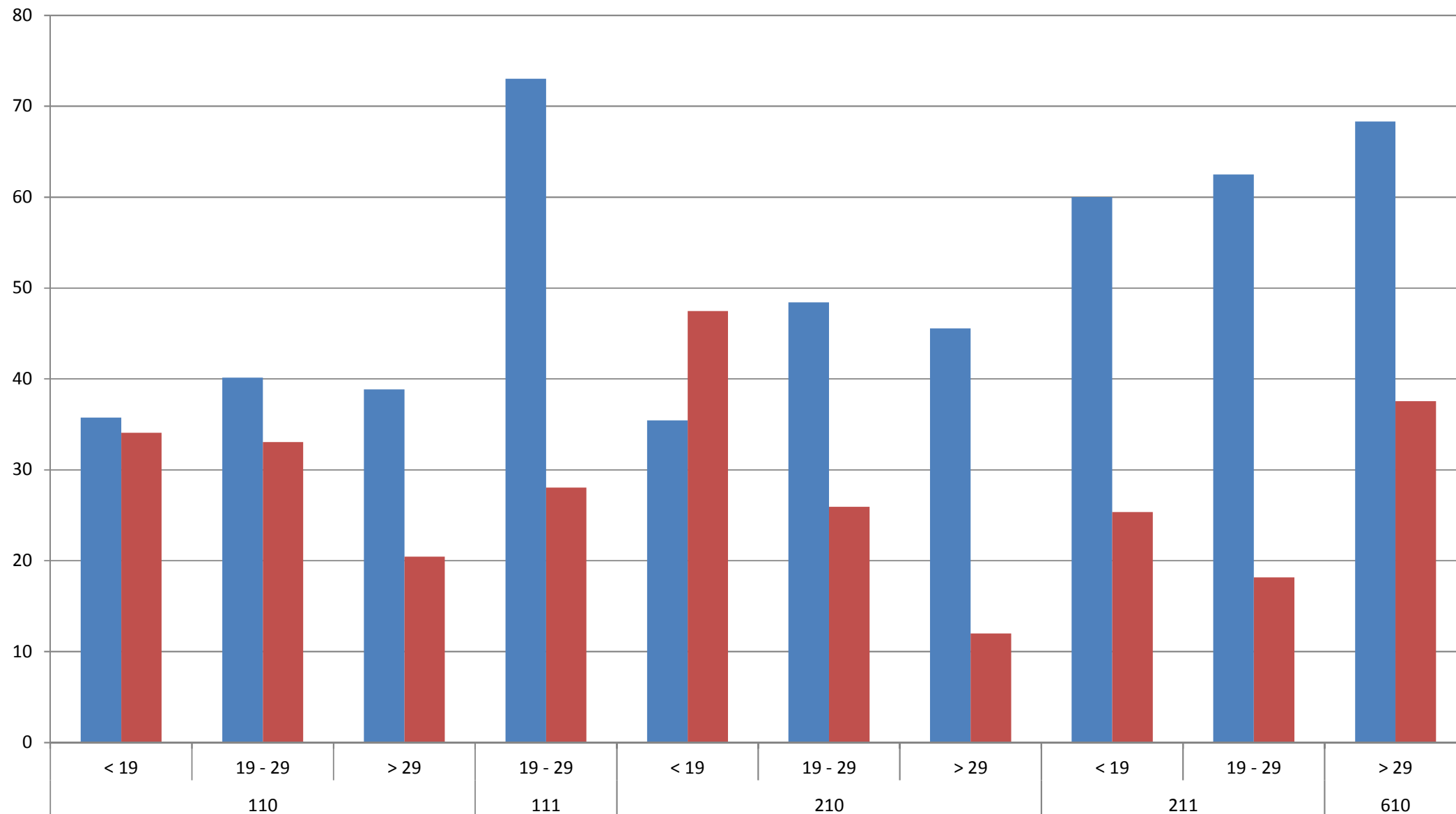


Where Are We Now?

exhibit 15

Core Hour Utilization/Seat Use M-F

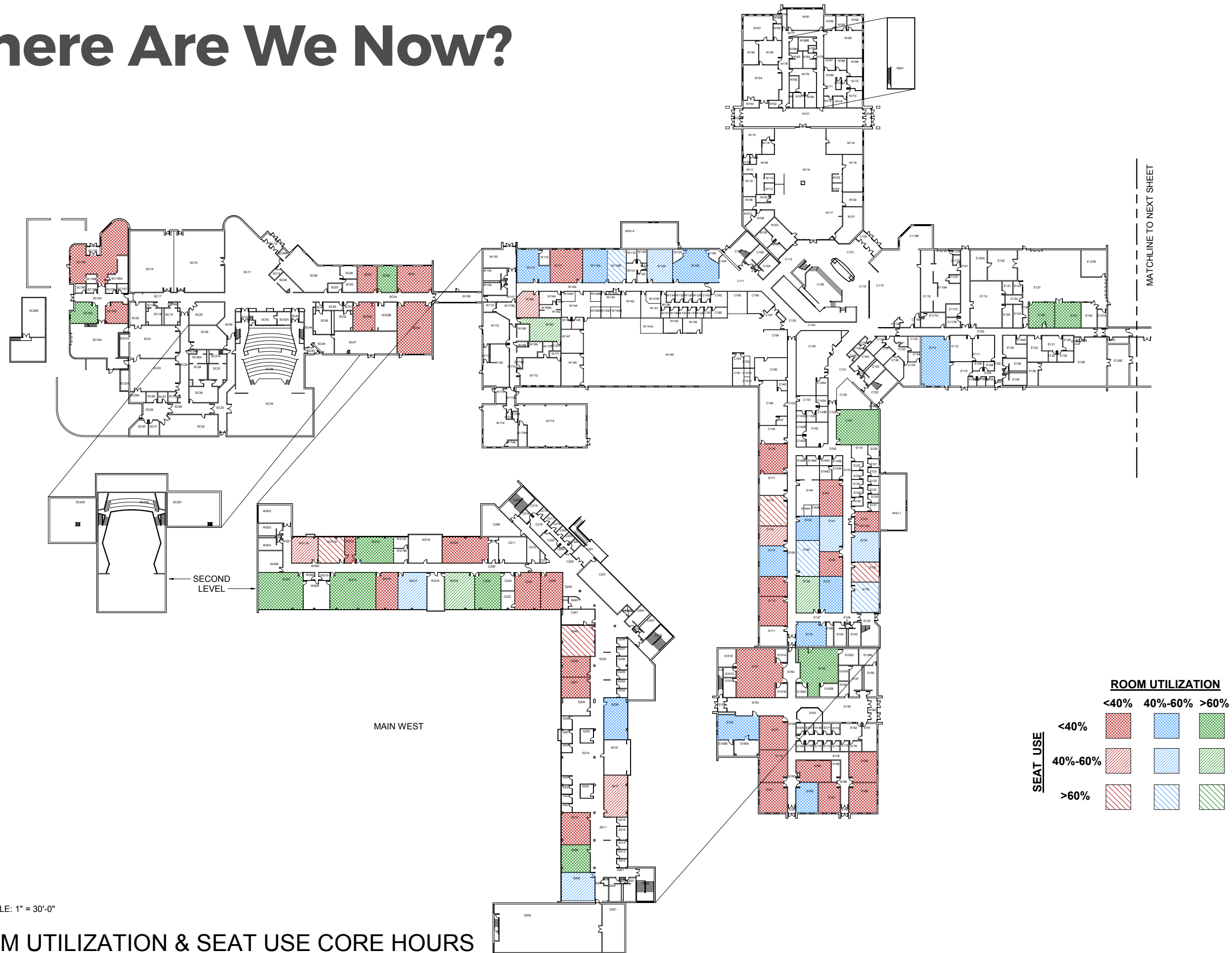
■ Average of Core Utilization M-F
■ Average of Core Seat Use M-F



In looking at all formal learning environments' utilization during core hours (*exhibit 15*) only occupational Labs (211), classrooms associated with occupational labs (1), and assembly spaces meet the 60 percent benchmark for space utilization. Typical classroom spaces (110) are utilized less than 40 percent of the core hours. Therefore, fewer classroom environments are necessary, even if student population increases in the future.

Additionally, our analysis indicates that seat use, when spaces are utilized, is less than one-half of the 75 percent benchmark for most space types and sizes (*exhibit 15*). This leads us to the conclusion that spaces are oversized for typical class sections and smaller spaces could be utilized. A space-by-space analysis of utilization and seat use during core house can be found in (*exhibit 16 & 17*)

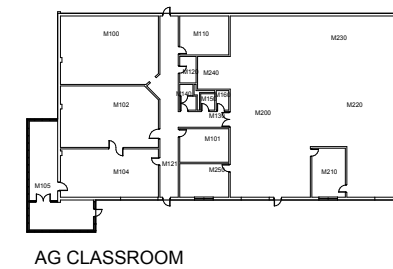
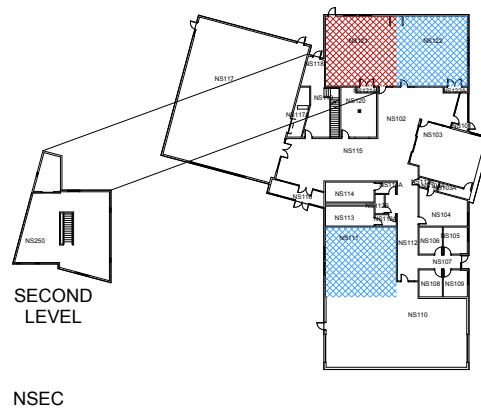
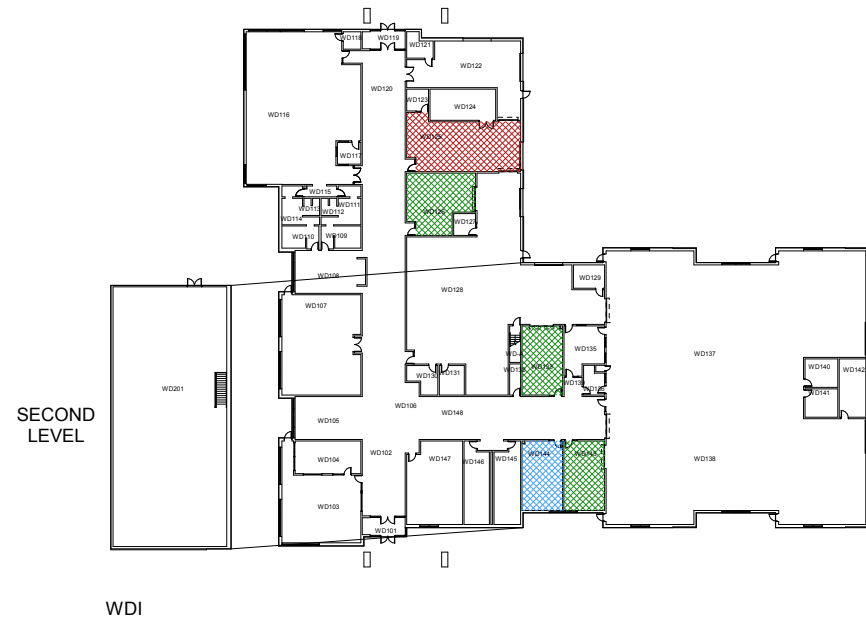
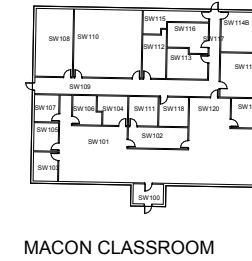
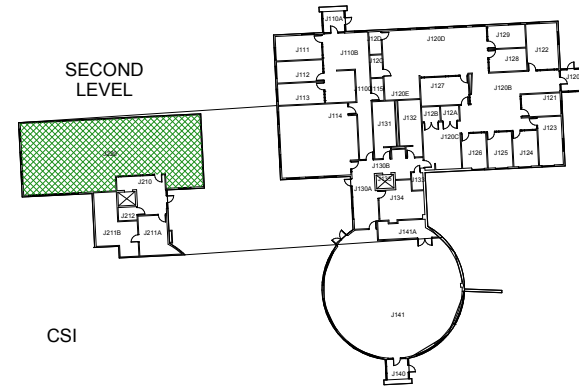
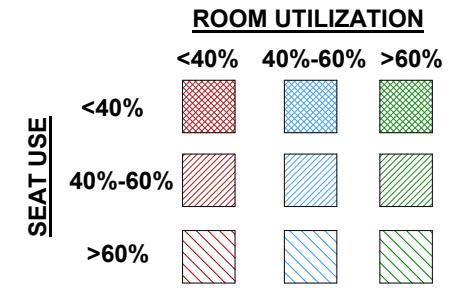
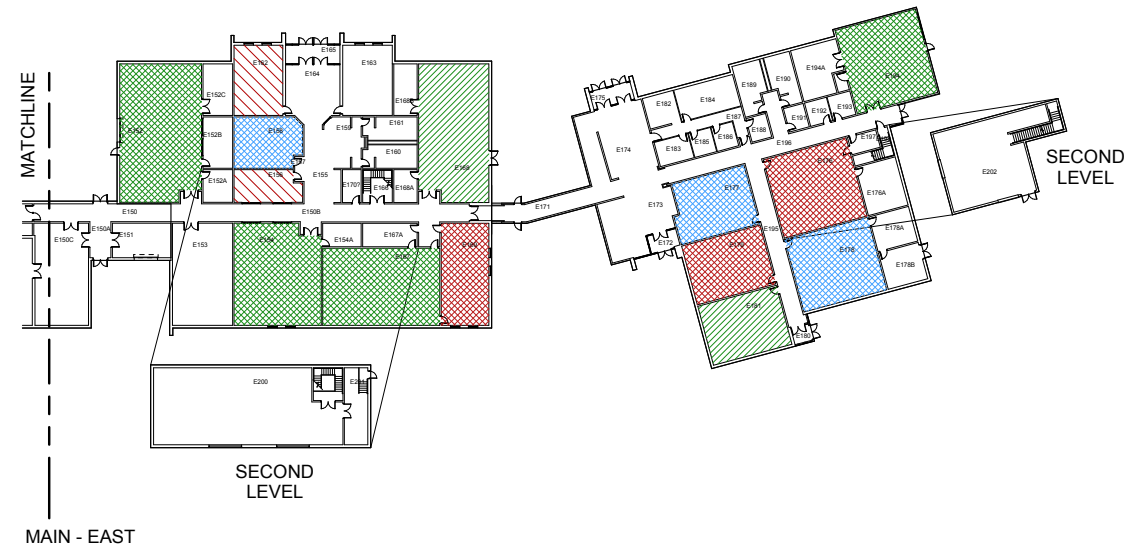
Where Are We Now?



SCALE: 1" = 30'-0"

ROOM UTILIZATION & SEAT USE CORE HOURS

Where Are We Now?



SCALE: 1" = 30'-0"

ROOM UTILIZATION & SEAT USE CORE HOURS CONT.

Where Do We Want To Go?

Richland Community College 2018 Masterplan Program

exhibit 18

Project	Space	QTY	NASF	Total NASF	Gross Factor	GSF	Notes
a. Science Labs	e Biology	2	1350	2700	NA		Includes prep room
	e Chemistry	1	1500	1500	NA		Includes prep room
	e Science lab	4	800	3200	NA		
	Cadaver Lab	1	1200	1200	NA		Virtual?
				8600	0.85	10,118	Renovated existing space
			9400	0.7	13,429	New addition	
b. Health Sciences	EMS ambulance & house simulator	1	1200	1200	NA		
	Simulator Lab	1	1500	1500	NA		Centrally located to several classrooms. (4) sim rooms and control room
	Open Lab	1	1500	1500	NA		Open Lab w/ storage for Student Practice
	Hybrid Course classroom w/ storage	1	750	750	NA		Classroom space for on-line classes meeting and creating on-line content
				4950	0.85	5,824	
c. 21st Century Edu. Env. Upgr	Active learning	As space allows			NA		Update traditional learning environments.
	Student Study	As space allows			NA		Assume 80 sf / students for renovations that include
	Faculty offices	As space allows			NA		Formal and informal learning environments and offices.
d1. LRC	e Desk	1	200	200	NA		
	e Office	1	100	100	NA		
	e Work Room	1	200	200	NA		
	e Archives	1	200	200	NA		
	e Stacks	1	750	750	NA		
	e Reading	1	750	750	NA		
	e Study	1	300	300	NA		
	e Periodicals	1	200	200	NA		
	e Conference	1	200	200	NA		
	e Computers (open)	1	1200	1200	NA		
	e Computers (quiet)	1	600	600	NA		
				4700	0.9	5,222	
	d2. ASC	e Director office	1	120	120	NA	
e Staff office		1	100	100	NA		
e Reception		1	150	150	NA		
Conference / meeting		1	200	200	NA		Adjacent to offices
e Math tutoring		1	500	500	NA		
e Open tutoring		1	750	750	NA		
e Secure Storage		1	100	100	NA		Storage for study materials, calculators, anatomy models, etc
				1920	0.9	2,133	
d3 On-line learning	e Reception	1	100	100	NA		Easy for students to find,
	e director office	1	120	120	NA		
	Staff office	1	100	100	NA		
	Secure work / storage	1	150	150	NA		
	e Training room	1	750	750	NA		Can be shared with open classroom space. 24 seats
				1220	0.9	1,356	
e. Student Rec Center	e Fitness Room	1	3200	3200	NA		
	Gymnasium	1	9500	9500	NA		Includes room for bleachers and/or cross courts.
	Walking track	1	3040	3040	NA		
	Locker rooms	4	750	3000	NA		
	office	2	100	200	NA		
				18940	0.7	27,057	Assumed new addition (or freestanding) building

With an understanding of the College's current position with respect to its' facilities, we are now able to consider the destination for this master plan. Through a series of meetings with academic departments, students, support services, and administration, we were able to develop an understanding of the space needs for the College. A program identifying the space needs was developed (exhibit 18).

Where Do We Want To Go?

Richland Community College
2018 Masterplan Program

exhibit 18

Project	Space	QTY	NASF	Total NASF	Gross Factor	GSF	Notes
f. Exhibition / Training	Multi-use exhibition / flex training	2	2500	5000	NA		
	Storage / support	2	250	500	NA		
				5500	0.9	6,111	
g. Small Performance Venue	Black box theater	1	2500	2500	NA		
	Storage	1	250	250	NA		
				2750	0.9	3,056	
h. Cafeteria Updates	e Dining	1	3500	3500	NA		renovate existing dining room for less institutional environment
	e Kitchen w/ storage	1	1900	1900	NA		update kitchen to accommodate dining renovation.
				5400	1	5,400	
i. Center Core Quad Connect	Center Core Quad Connect	1	13500	13500	NA		renovate / reorganize center corr to complete quad connection.
				13500	1	13,500	
j. Maintenance Expan	Maintenace shop / Storage	1	5000	5000	NA		
				5000	0.9	5,556	
k. Exterior upgrades	Quad update				NA		
	Site Sidewalks				NA		
	Site entry				NA		
l. Wayfinding	Interior signage				NA		
	Exterior signage				NA		
m. CDL and Heavy Industrial Training Center	Warehouse and truck bay	1	7200	7200	NA		Metal Building
	Driving Range	1	60000		NA		Concrete Driving Range
				7200	0.9	9,000	

Where Do We Want To Go?

a. Science Labs

Space needs related to science labs are intended to improve the labs on three levels: 1) update labs to provide safe lab environments suitable for current and future instructional methods, 2) co-locate all science labs in proximity to each other, and 3) locate science labs in proximity to Health Sciences program thereby promoting joint use of the labs. An additional virtual cadaver lab has been noted as well. We understand this to be a high-priority project.

b. Health Sciences

Needs include: an EMS ambulance and house simulator lab, a large hospital simulator centrally located to several classrooms, and a classroom for hybrid course use, including adequate storage. These spaces will serve an expanded Health Sciences program as well as provide for improvements to existing programs. We understand this to be a medium-priority project.

c. 21st Century Educational Environment Upgrades

The most highly noted topic during the stakeholder meetings was upgrades to the educational environments. The goal of this project would be to update other areas of the facility in a manner similar to updates made in the Carroll Center for Innovation. These updates would include hybrid-learning labs, classrooms with flexible seating options, informal learning environments with individual and small group spaces, improved access to technology, and faculty offices. One area of concern to be addressed is to resolve how to provide faculty offices with support areas, instructor meeting space, and improved student access. This is the highest priority project.

d. LRC/ASC/Online

Currently, these three program spaces are housed near each other on the first floor of the main building. They all share a common need for ease of student access to the spaces—location, location, location! While the spaces may or may not remain adjacent to each other, they will continue to function independently and all should be updated to be efficient, modern, and have improved natural lighting.

The LRC needs to be functional and provide students the opportunity for varied study environments and access to resources from computers to books. The key for the ASC is for ease of student access and for making all students who require services feel welcome. The Online program is unique in that it provides services (training and online course development) to faculty and technical / hardware support to students.

e. Student Recreation Center

Two separate needs were identified under this topic. At a minimum, revisions to the existing lockers adjacent to the Fitness Center in the WDC building would allow for improved function and capacity in the fitness center. The second need identified was for a facility to accommodate a multi-purpose gym, fitness areas, indoor walking track, locker rooms, and storage. This facility would accommodate fitness and student intramural activities, as well as future athletics, if desired. Potential public/private partnerships may be available with local employers or entities to provide a facility that can be used by the public. This is a medium-to-low priority project.

f. Exhibition/Training

The need for short-term (1–3 weeks) flexible space to accommodate local industry training programs was identified. These spaces would be large open spaces with adequate power infrastructure to support varied uses. They would be accessible for equipment to be temporarily moved in as needed. This is a medium-priority project.

g. Small Performance Venue

The addition of a small performance venue was noted. This size venue could accommodate student/faculty performances that would not be suitable for use of the Shilling Auditorium. The venue is intended to accommodate 100–150 persons. This was noted as a low priority.

h. Cafeteria Updates

In order to creating a more inviting environment for students, the need to update the cafeteria to a restaurant-like environment, allowing for student seating options, updated finishes, and varied lighting. The serving area and kitchen would also be updated to support the new environment. This is a medium-to-low priority project.

i. Center Core/Quad Connection

This need was identified as an enhancement for students, staff, and faculty. The desire is to provide access to an improved outdoor area suitable for informal and formal educational uses. The existing quad presents a safe, secluded environment, with minimal distractions from traffic, deliveries, etc. Enhancements to the quad could include informal seating areas, recreational areas (volleyball, etc), outdoor classroom, and even accommodations for a food truck.

j. Maintenance Shop/Storage expansion

This need identified to accommodate additional enclosed storage for outdoor equipment as well as miscellaneous materials. This is a high-priority project.

k. Exterior Upgrades

In addition to the quad area upgrade, several other upgrades were identified. In order to promote a more pedestrian friendly campus, additional sidewalks could be added to provide safer access between facilities. The other site upgrade noted involves creating a site entry / circulation that directs people to the front door of the college and would work in concert with a wayfinding update noted in item L. These are medium-priority projects.

l. Wayfinding

Concern over wayfinding has existed on campus for some time and was included as part of the 2013 master plan. As the campus has grown, wayfinding for students and visitors has grown more cumbersome. Updating of both interior and exterior directional signage is a necessary enhancement for the campus. Additionally, new exterior signage will help resolve the site entry/circulation revisions noted in item k. This is a high-priority project.

m. CDL & Heavy industrial Training Center

Currently, CDL classes utilize classroom space within the Shilling Center and the driving range occupies the west end of the main parking area. Both of these create limitations for the College in terms of space utilization and appropriately locating these services on Campus. This is a high-priority project and has been included in funding requests for the state.

How Do We Get There?

With a common understanding of where we are now and where we want to go, we can discuss how we plan to get there. Outlined below are possible solutions with associated costs in today's dollars. We recommend that costs for work done in subsequent years should be escalated at a rate of 3 percent per year. Costs are shown in exhibit 23 (page 27).

a. Science Lab Updates

In developing a solution for this goal, we determined there were four viable scenarios. Each of these scenarios have educational, programmatic, initial cost, and operational cost consequences. Using our proprietary tool, QLEO, we can evaluate those consequences to give the College an objective evaluation of the scenarios.

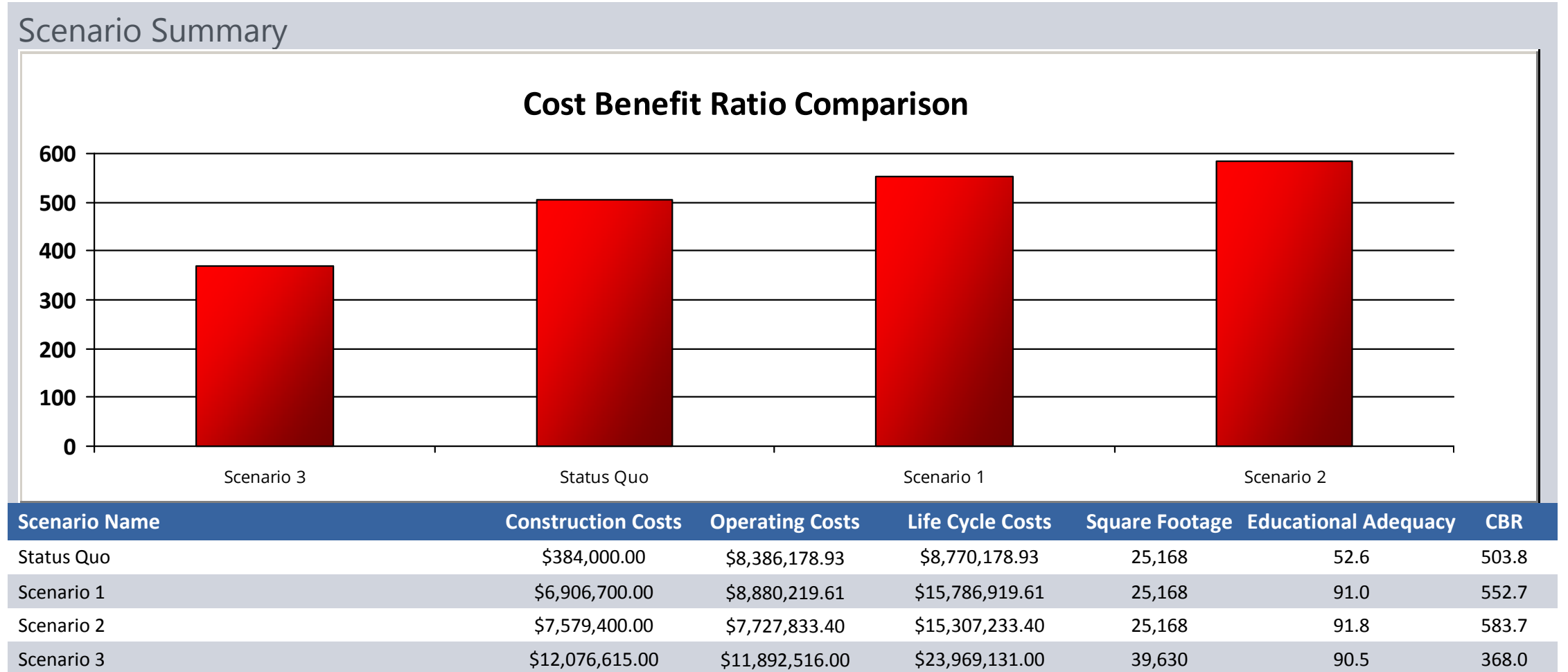
Status quo scenario allows for existing labs to be made safe. This scenario does not improve educational adequacy nor programmatic needs. It has the lowest initial cost and no significant impact on operational costs.

Scenario 1 co-locates all science labs to the 2nd floor of the west wing. It provides significant educational adequacy improvement but does not meet all programmatic goals. This scenario does have significant initial costs but should have little impact on operational costs (exhibit 20 - page 24)

Scenario 2 co-locates all science labs in the south wing of the first floor in the main building. This scenario provides significant educational adequacy and meets programmatic goals. It has a higher initial cost than Scenario 1 due to renovation in the first floor but should have little impact on operational costs (exhibit 21 - page 25)

Scenario 3 provides for all science labs in a new addition immediately west of the Schrodth Health Center. This scenario provides for the greatest educational adequacy improvement and meets programmatic goals. However, this scenario also has the largest initial and operational costs of all the scenarios (exhibit 22 - page 26)

exhibit 19



Using QLEO, we can determine a Cost-Benefit Ratio for each scenario (exhibit 19) Based on this analysis, Scenario 2 provides the College with the most bang for your buck, scoring slightly higher than Scenario 1. Scenario 3 scores significantly lower than all others due to significant additional operational costs over the 30-year duration of the analysis.

The solutions for Scenarios 1-3 also incorporate updated 21st century classroom renovations. These renovations will add environments similar to those found in the Carroll Center for Innovation. We evaluated all the proposed scenarios to ensure that the change in classroom seats available would not hinder the College's ability to deal with enrollment

growth. The Status quo scenario has no seating capacity implications. Scenarios 1 & 2 show a reduction in student capacity of 460 seats each. Scenario # 3, while adding new spaces in an addition, also shows a net reduction of 345 seats related to the 21st century upgrades in the existing building.

How Do We Get There?

Science Lab Scenario 1

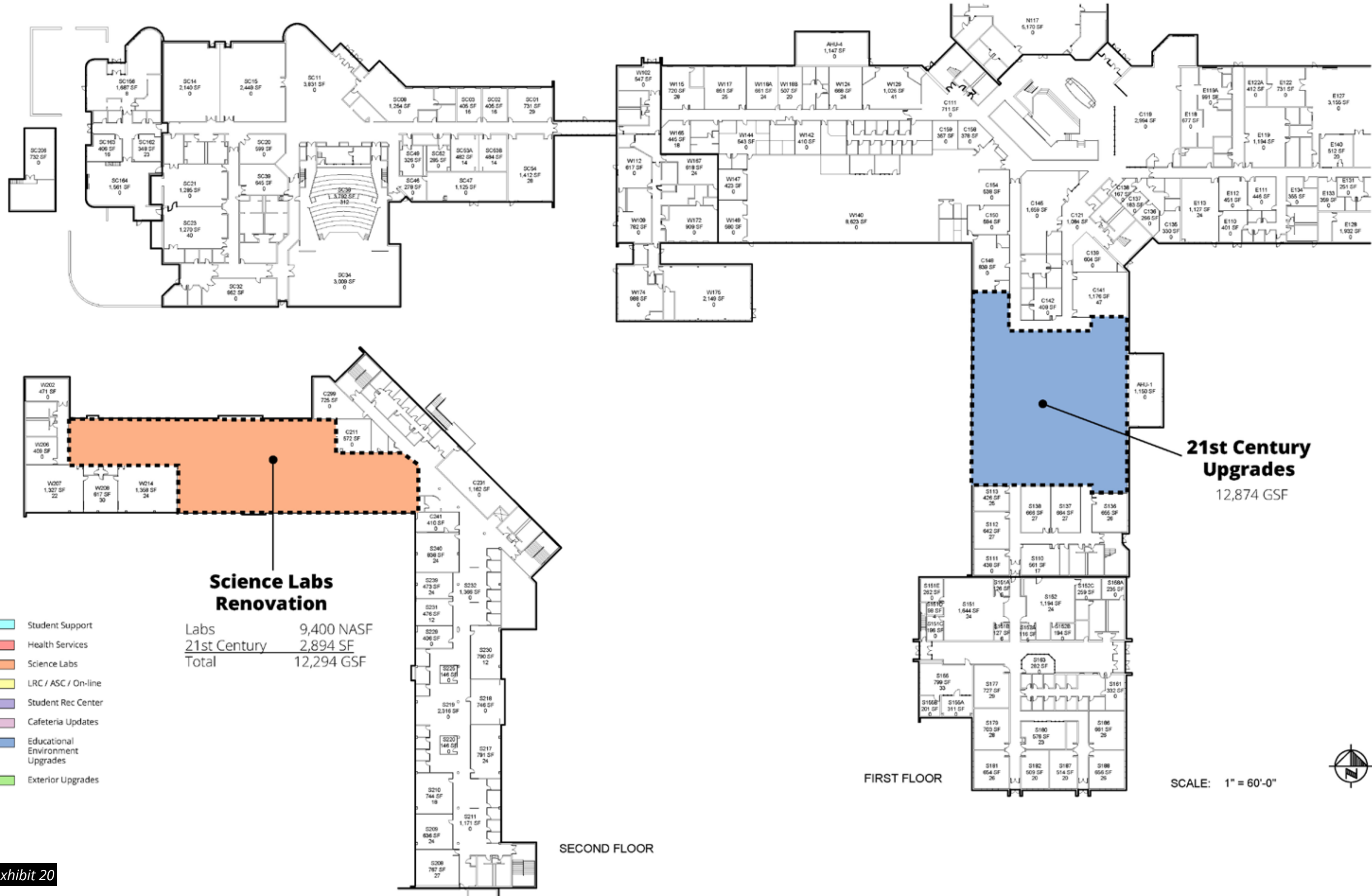
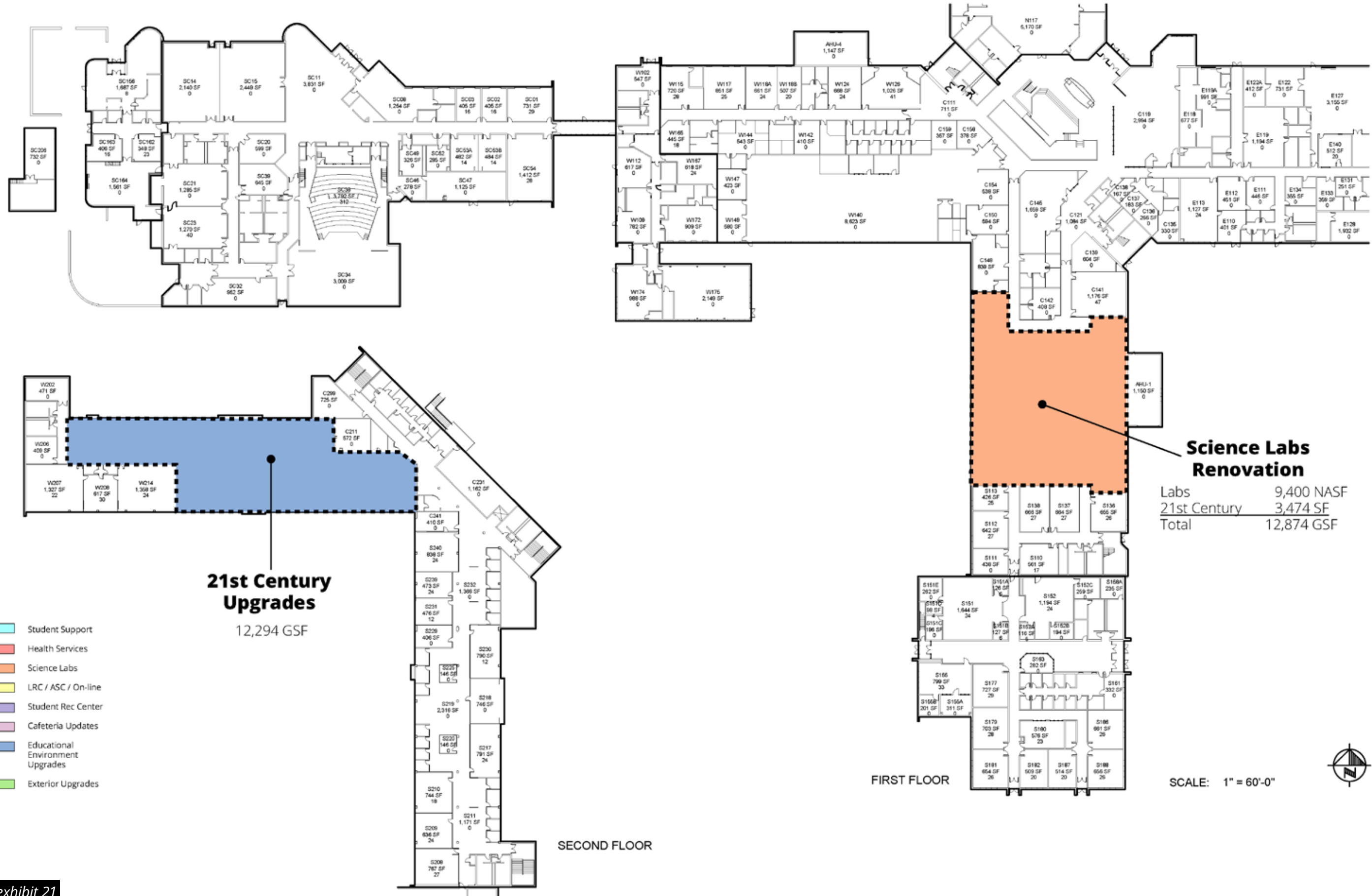


exhibit 20

How Do We Get There?

Science Lab Scenario 2



How Do We Get There?

Science Lab Scenario 3

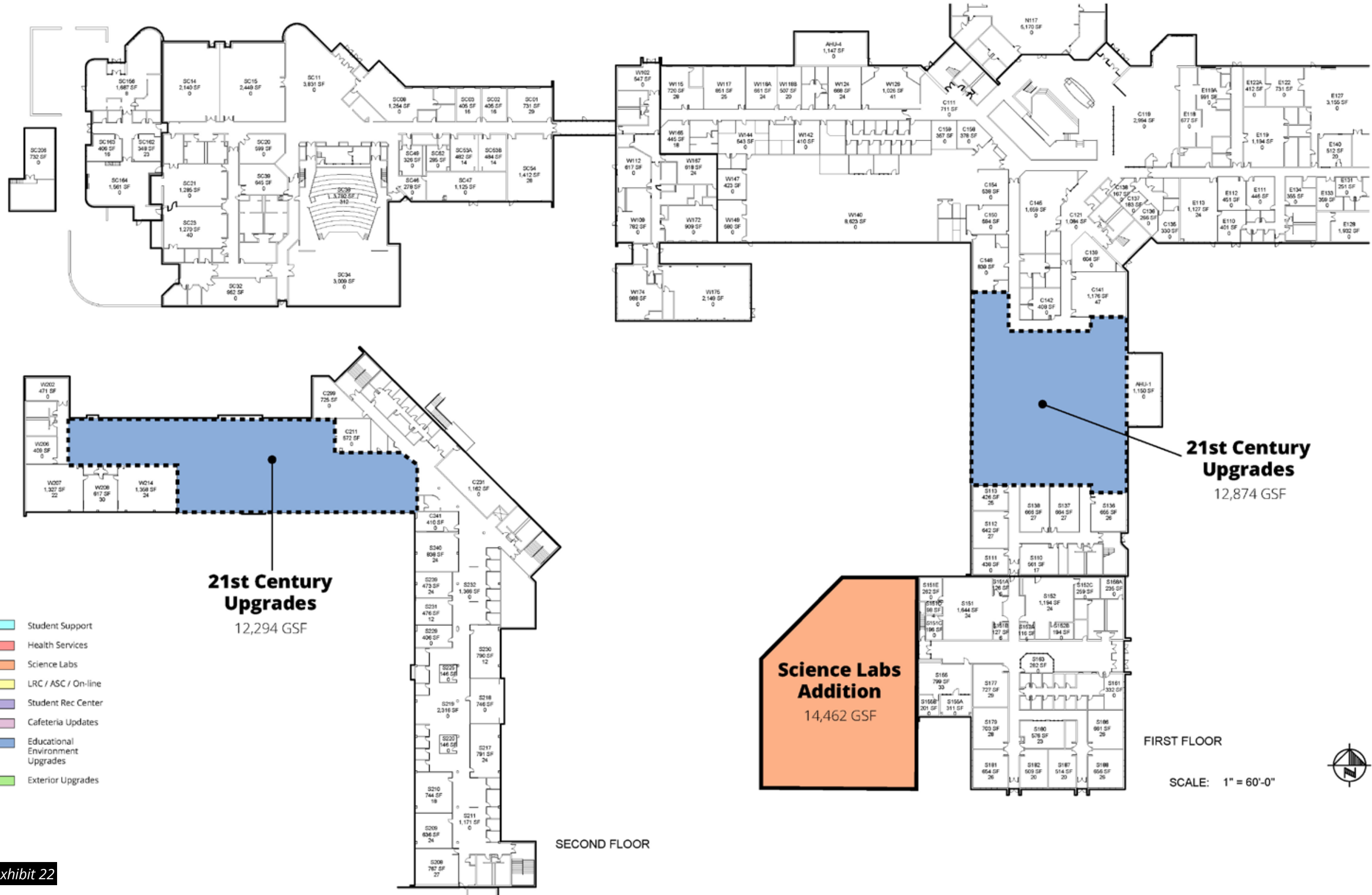


exhibit 22

How Do We Get There?

Based on discussions with the the College administration, staff, and faculty, Scenario 2 was selected as the preferred option and has been incorporated into a conceptual design of the first floor (*exhibit 24*) along with items b,c,d,and i (descriptions below).

b. Health Sciences

This solution provides for desired additional lab space adjacent to the current Health Sciences program area (*exhibit 24*).

c. 21st Century Ed. Environment Upgrades

These proposed solutions, shown integrated with potential science lab renovations, are intended to provide updated formal and informal learning environments that allow flexibility to address different pedagogies and to provide a more engaging environment. The renovations are indicated within the main building area to focus them in areas that are shown with the most need identified in the Physical Needs Assessment.

d. LRC/ASC/Online

d. The Learning Commons includes several key areas that are critical for student success, including the Learning Resource Center (LRC), Academic Success Center (ASC), and Online Learning (*exhibit 24*).

d1. LRC - The proposed solution allows improved student access to the LRC while incorporating informal learning spaces similar to those initiated in the Carroll Center for Innovative Learning with the traditional library spaces. The solution increases visibility of the LRC while maintaining functionality.

d2. ASC - the ASC has been incorporated into the fabric of the center core area, giving students more flexibility in the type of environment they choose to study in. The students will have the choice between formal and informal environments .

d3. Online learning and student technology support will be incorporated into the core area but not directly associated with the the LRC or ASC. From a second floor location at the top of the center core stair, the office will have visibility and easy access for students. The faculty training sessions will be accomodated in the collaborative environments within the LRC.

e. Student Rec Center

The solution proposes a free standing Student Rec Center located to the west of the CSI facility. This location allows for

superior access for campus stakeholders and for public uses. The highly visible location also presents an opportunity to create a landmark building for the campus (*exhibit 24*).

f. Exhibition/Training

We've presented two possible solutions for this goal. The first option, subject to implementation of item e, would be to renovate the spaces along the west side of WDI to provide for two flexible training spaces and storage. These spaces are currently under-utilized and once the fitness area is relocated, this is a large contiguous area that can be suitably renovated. The second solution would renovate the Shilling Auditorium, also currently under-utilized, into flexible exhibition and training space. This would be an ideal location in that it is adjacent to other workforce and community education program spaces. This solution may be implemented in a way that could maintain some form of auditorium and stage within the existing space (*exhibit 24*).

g. Small Performance Venue

While noted during the stakeholder meetings, no solution has been presented due to the low priority of the need. If item f. is implemented, then the priority of this item would increase and solutions involving a renovated Shilling Auditorium or renovated Salons could be investigated.

h. Cafeteria Updates

This proposed solution entails creating a restaurant-style seating area (with seating choices) within the existing cafeteria space. This enhancement would work in concert with other proposed center core renovations providing an updated, less institutional, student-centric space (*exhibit 24*).

i. Center Core Quad Connection

This proposal provides for an enlarged center core area that make a connection to the quad. It creates a complete student center space that would connect a renovated library, updated educational environments, upgraded dining areas, and recently completed student services area. This area would become the hub of the campus and be an inviting environment for welcome students (*exhibit 24*).

Richland Community College 2018 Masterplan 6/13/2019

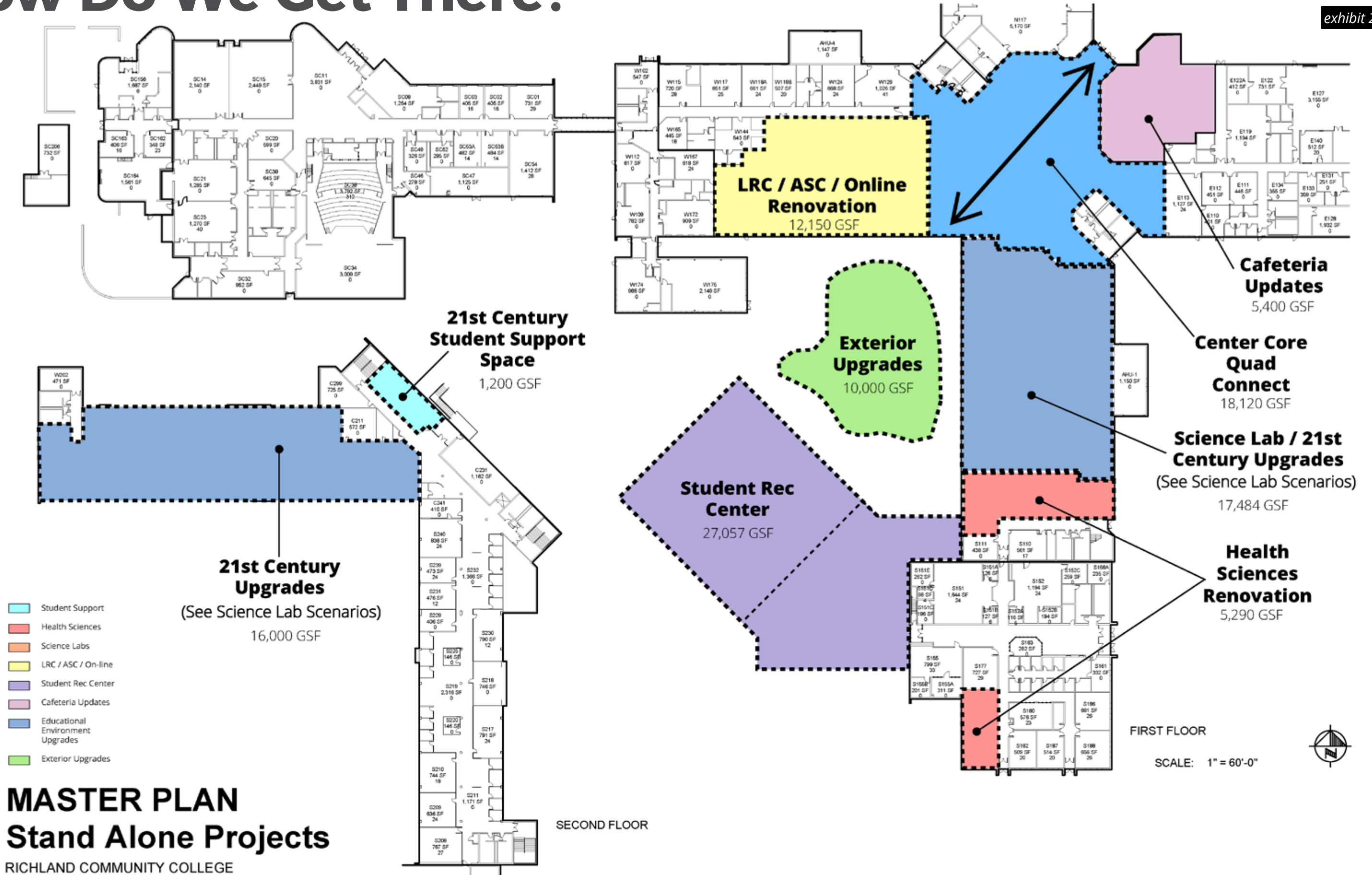
Project costs by priority		Escalated total	
Priority Learning Arts	Immediate(<4yrs)	\$	21,457,261
Other	Immediate(<4yrs)	\$	5,367,717
	Mid-term (5-8 yrs)	\$	8,502,364
	Long term (8+year)	\$	14,907,737
Assumes 3% annaul escalation			

Capital Project Probable Costs

Project option	QTY	Unit	\$/unit	Cost	Notes
A. Science Lab upgrade					
A1 2nd floor renovation	12,294	sf	\$ 300	\$ 3,688,200	
A2 1st Floor Renovation	17,484	sf	\$ 370	\$ 6,469,080	
A3 Addition	14,462	sf	\$ 400	\$ 5,784,645	
B. Health Sciences Expansion					
B1 1st floor renovation	5,290	sf	\$ 215	\$ 1,137,350	
C. 21st Century upgrades					
C1 Main - 2nd floor west	16,000	sf	\$ 270	\$ 4,320,000	Requires A2.
C2 Main - 1st floor south	12,874	sf	\$ 250	\$ 3,218,500	
C3 Main - 2nd floor Student Support Space	1,200	sf	\$ 270	\$ 324,000	
D. LRC/ASC/On-line					
D1 Renovation on 1st floor	12,150	sf	\$ 270	\$ 3,280,500	
E. Exhibition / Flex Training					
E1 Renovation @ WDC	8,194	sf	\$ 200	\$ 1,638,800	Requires F1
E2 Renovate SC Aud-	6,800	sf	\$ 250	\$ 1,700,000	
F. Student Rec Center					
F1 New Construction	27,057	sf	\$ 300	\$ 8,117,100	
F2 Renovate / expand existing Locker rooms	1,500	sf	\$ 400	\$ 600,000	
G. Student Center upgrade					
G1 Core renovation	18,120	sf	\$ 270	\$ 4,892,400	
H. Cafeteria upgrades					
H1 Dining area renovation	5,400	sf	\$ 350	\$ 1,890,000	
J. Maintenance Expansion					
J1 Storage Addition	5,000	sf	\$ 150	\$ 750,000	
K. Exterior upgrades					
K1 Quad update	10,000	sf	\$ 50	\$ 500,000	
K2 Site sidewalks	700	lf	\$ 55	\$ 38,500	
K3 Relocate Main Entry & Upgrade Reas Bridge Road, update entry signage	1	ls	\$ 1,800,000	\$ 1,800,000	Require L1
L. Wayfinding					
L1 Exterior wayfinding signage	1	ea	\$ 100,000	\$ 100,000	
L2 Interior wayfinding	384,000	sf	\$ 1.00	\$ 384,000	
M. CDL & Heavy Industrial Training Center					
M1 New building	9,000	sf	\$ 300	\$ 2,700,000	Requires M2
M2 Driving Range	60,000	sf	\$ 12.00	\$ 720,000	Requires M1
N. Facility Assessment*					
M1 Priority A				\$ 458,901	
M2 Priority B				\$ 1,230,169	
M3 Priority C,D,Z				\$ 3,669,101	

How Do We Get There?

exhibit 24



How Do We Get There?

Exhibit 25 depicts a 21st Century Innovative Learning Arts renovation of the main building first floor and incorporates several projects (described previously) to address current needs. The solution expands on concepts introduced within the Carroll Center for Innovative Learning.

- Science lab upgrades
- Health Sciences
- 21st Century educational environments
- Learning Commons
- Center Core quad Connection
- Collaboration
- Offices

These projects could be completed simultaneously if funding is available or phased over time.

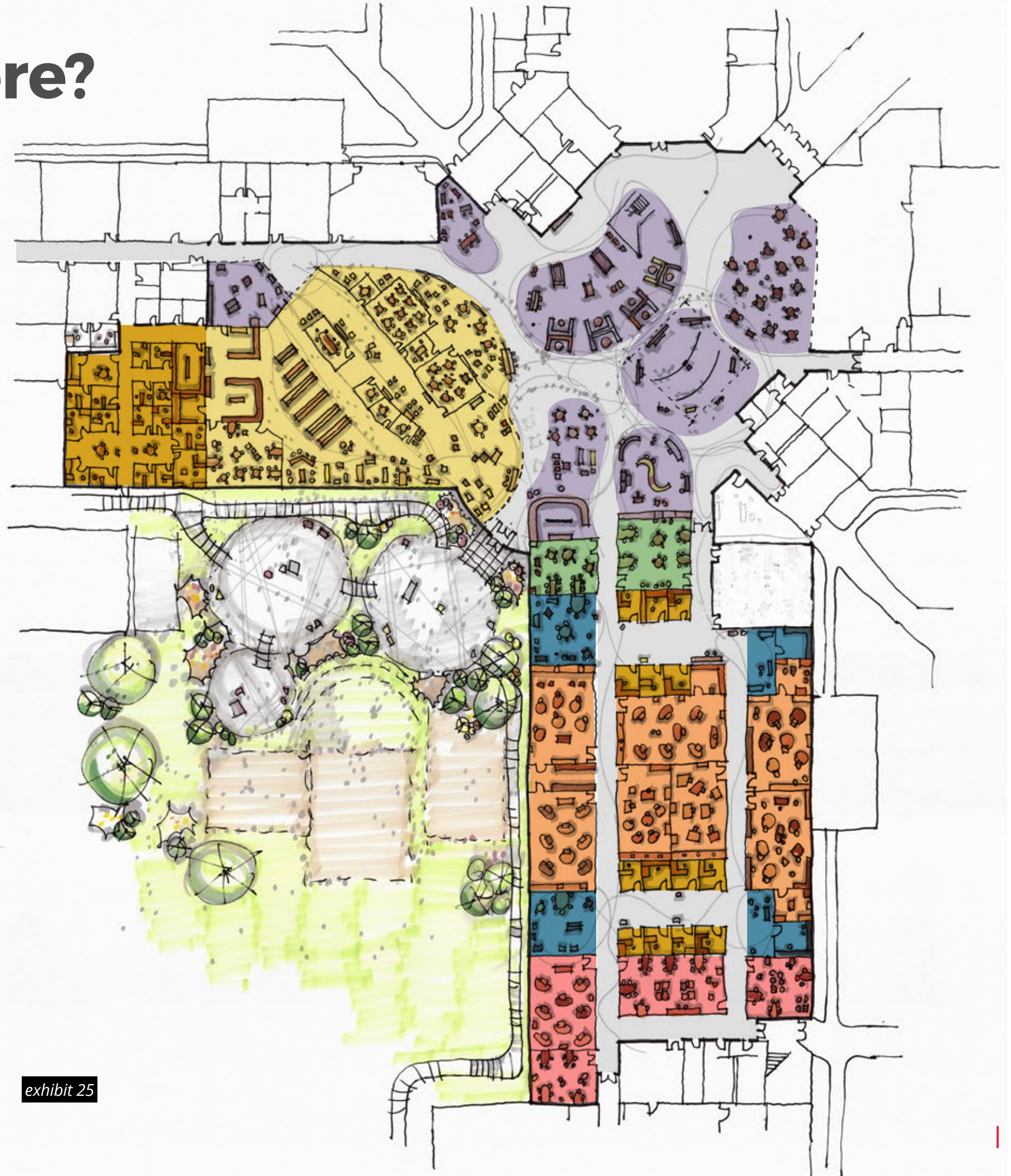


exhibit 25

How Do We Get There?

j. Maintenance Expansion

This project, also identified in the prior master plan, provides for enclosed, secure storage of equipment near the existing Maintenance facility (*exhibit 26*).

k. Exterior upgrades

The proposed exterior upgrades include three distinct solutions that may be implemented individually (*exhibit 26*).

- i. The proposed solution to the updated quad is to develop an exterior space for student, faculty, and staff to use as both an informal and formal learning environment. The goal is to provide an easy-to-access, vibrant space that becomes the exterior focal point of life on campus. This solution works in concert with items c, d, and g to provide a comprehensive update to the core area of campus.
- ii. Site sidewalks – solution includes sidewalks added between the main building and the facilities to the north (CSI, NSEC, & Extension) as well as between the parking lots A&B along the north side of the Student Services addition.
- iii. Site Entry – This proposed solution attempts to improve site circulation by utilizing President Howard Brown Blvd. as the main entrance to campus, thus directing visitors to the “front door” of the campus. The existing access from Brush College Road would be eliminated or reduced to exit only. Additionally, Rea’s Bridge Road should be upgraded to serve as an improved alternate entrance. This solution allows the President Howard Brown Blvd. to become an entry procession as future college expansion occurs.

l. Wayfinding

The proposed project includes additional interior static directional signage, electronic room signage in key areas, and updated graphics throughout. Additionally, exterior site signage to address revised entry proposed in item k.iii with improved directional signage throughout campus.

Additional longer term projects were discussed, including future uses for agricultural areas north and west CSI/NSEC facilities. No specific needs have been defined for these area at this time.

m. CDL and Heavy Industrial Training Center

The proposed project consists of a 9,000 sf warehouse building with truck bay and a 200' x 300' concrete driving range. This facility is planned to be located to the east of the Workforce Development Institute, thus allowing the west entry to the College to become more inviting. Classrooms within the WDI can be utilized for class time.



Appendix A - Physical Needs Assessment Summary

Sum of EstimatedCost Facility	ReasonCode									
	Accessibility	Deferred Maintenance	End of Useful Life	Energy Use	Other	Programmatic	Repair	Safety Standards	Security	Grand Total
Adele P Glen Center For Early Childhood	\$ 50,150.00	\$ 5,900.00	\$ 81,550.00	\$ 54,150.00			\$ 300.00	\$ 251.00	\$ 3,200.00	\$ 195,501.00
Agribusiness Education Center	\$ 7,850.00	\$ 300.00	\$ 190,575.00	\$ 91,500.00	\$ 9,400.00	\$ 4,900.00	\$ 5,200.00		\$ 6,800.00	\$ 316,525.00
Center For Sustainability And Innovation	\$ 500.00	\$ 2,500.00		\$ 88,380.00	\$ 14,300.00		\$ 5,828.00			\$ 111,508.00
Industrial Technology Center	\$ 100.00	\$ 12,400.00	\$ 356,500.00	\$ 111,600.00	\$ 8,400.00		\$ 6,000.00	\$ 3,500.00	\$ 10,000.00	\$ 508,500.00
Macon County Building Soil & Water Dist.		\$ 10,580.00	\$ 57,500.00	\$ 56,324.00	\$ 10,800.00		\$ 900.00	\$ 750.00		\$ 136,854.00
National Sequestration Education Center	\$ 3,000.00	\$ 4,000.00		\$ 87,900.00	\$ 7,000.00	\$ 800.00	\$ 10,500.00		\$ 4,800.00	\$ 118,000.00
Rcc Maintenance/Ag Shop		\$ 10,800.00	\$ 120,000.00	\$ 46,600.00		\$ 1,500.00	\$ 42,425.00	\$ 4,000.00		\$ 225,325.00
Richland Community College	\$ 70,100.00	\$ 200,605.00	\$ 330,320.00	\$ 881,362.00	\$ 34,856.00	\$ 10,000.00	\$ 86,806.00	\$ 75,200.00	\$ 67,300.00	\$ 1,756,549.00
Schrodt Health Education Center	\$ 9,750.00	\$ 3,150.00		\$ 120,300.00			\$ 4,800.00		\$ 12,000.00	\$ 150,000.00
Shilling Community Ed Center	\$ 12,700.00	\$ 126,526.00	\$ 88,125.00	\$ 356,260.00	\$ 34,045.00		\$ 3,349.00	\$ 3,400.00	\$ 10,000.00	\$ 634,405.00
Student Success Center	\$ 250.00				\$ 6,642.00		\$ 30,900.00	\$ 100.00	\$ 16,000.00	\$ 53,892.00
Workforce Development Culinary		\$ 5,050.00	\$ 48,000.00	\$ 35,700.00	\$ 5,100.00		\$ 500.00	\$ 500.00	\$ 2,000.00	\$ 96,850.00
Workforce Development Institute	\$ 5,250.00	\$ 600.00		\$ 277,500.00	\$ 27,860.00	\$ 26,000.00	\$ 6,200.00	\$ 5,000.00		\$ 348,410.00
Campus				\$ 705,851.88						\$ 705,851.88
Grand Total	\$ 159,650.00	\$ 382,411.00	\$ 1,272,570.00	\$ 2,913,427.88	\$ 158,403.00	\$ 43,200.00	\$ 203,708.00	\$ 92,701.00	\$ 132,100.00	\$ 5,358,170.88

Sum of EstimatedCost Facility	Priority					Grand Total
	A	B	C	D	Z	
Adele P Glen Center For Early Childhood	\$ 53,450.00	\$ 6,950.00	\$ 134,950.00		\$ 151.00	\$ 195,501.00
Agribusiness Education Center	\$ 14,650.00	\$ 195,575.00	\$ 97,600.00	\$ 300.00	\$ 8,400.00	\$ 316,525.00
Center For Sustainability And Innovation	\$ 800.00	\$ 10,700.00	\$ 93,708.00		\$ 6,300.00	\$ 111,508.00
Industrial Technology Center	\$ 11,300.00	\$ 320,200.00	\$ 166,600.00	\$ 2,000.00	\$ 8,400.00	\$ 508,500.00
Macon County Building Soil & Water Dist.	\$ 1,250.00	\$ 12,880.00	\$ 56,224.00	\$ 66,500.00		\$ 136,854.00
National Sequestration Education Center	\$ 8,800.00	\$ 8,000.00	\$ 94,200.00		\$ 7,000.00	\$ 118,000.00
Rcc Maintenance/Ag Shop	\$ 10,750.00	\$ 101,225.00	\$ 63,750.00	\$ 25,000.00	\$ 24,600.00	\$ 225,325.00
Richland Community College	\$ 177,200.00	\$ 478,099.00	\$ 1,094,450.00	\$ 300.00	\$ 6,500.00	\$ 1,756,549.00
Schrodt Health Education Center	\$ 22,400.00	\$ 2,500.00	\$ 125,100.00			\$ 150,000.00
Shilling Community Ed Center	\$ 108,601.00	\$ 37,250.00	\$ 448,454.00	\$ 10,000.00	\$ 30,100.00	\$ 634,405.00
Student Success Center	\$ 16,350.00	\$ 35,740.00	\$ 1,802.00			\$ 53,892.00
Workforce Development Culinary	\$ 2,500.00	\$ 5,550.00	\$ 40,800.00	\$ 48,000.00		\$ 96,850.00
Workforce Development Institute	\$ 30,850.00	\$ 15,500.00	\$ 287,060.00		\$ 15,000.00	\$ 348,410.00
Campus				\$ 705,851.88		\$ 705,851.88
Grand Total	\$ 458,901.00	\$ 1,230,169.00	\$ 2,704,698.00	\$ 857,951.88	\$ 106,451.00	\$ 5,358,170.88

Note: Summary Data from full Physical Needs Assessment dated 6/5/2019.

Appendix B - Energy Efficiency Projects

Richland Community College - Summary of Improvements

DESCRIPTION: Richland Community College continues to want to push towards a more sustainable and energy efficient future by working with Energy Management Solutions to identify and implement EE projects. Below lists multiple projects that Richland Community College is considering over the next 2 years. These projects incorporate both electrical and gas savings.

ASSUMPTIONS:
 Energy Costs: \$0.080/kWh all-in
 \$0.350/Therm

ECM Number	Name	Description	Annual Cost Savings	kWh Savings	kW Savings	Therm Savings	Est. Project Cost	Est. Rebate	Simple Payback	Life of Project (yrs)
1	Exterior Lighting	Replace 60 existing high pressure sodium lights along the street with high efficiency LED lighting. Lights are currently on 24/7 and will be upgraded with sensors to control (must be DLC replacement).	\$16,735.10	\$209,188.80	\$20.28	-	\$48,000.00	\$8,112.00	2.87	15
2	Interior LED Lighting and Advanced Controls	A portion of lighting has already been converted, but approx. 75% still remains and upgrading to advanced controls allows for additional savings by turning off when not occupied and dimming during low usage hours (must be DLC replacement).	\$81,897.23	\$1,023,715.35	\$146.25	-	\$261,151.88	\$58,498.02	3.19	15
3	VFD's	Multiple VFD upgrades including perimeter heat pumps, water valves, theatre exhaust, welding exhaust and added gates, replacing old and non-operating drives, and running redundant pumps at the same time to further take advantage of the affinity laws.	\$66,734.44	\$834,180.52	\$190.45	-	\$150,000.00	\$31,250.00	2.25	20
4	Air Compressor Improvements	(2) large oversized redundant Quincy air compressors and multiple small shop air compressors have multiple upgrade and efficiency improvements to consider such as fixing air leaks, downsizing compressors, replacing multiple small units with one larger central unit, replacing pneumatic thermostats and VAV boxes with an electrical option, replacing pneumatic tools with electric.	\$34,077.16	\$425,964.52	\$48.63	-	\$50,000.00	\$25,000.00	1.47	15
5	HVAC Improvements	Replace old inefficient units in Ag and maintenance building with new higher efficiency units and adjust set points in winter down to 68F for all buildings. Heating and cooling setback during off hours.	\$2,992.77	\$36,687.78	\$1.68	\$165.00	\$25,000.00	\$2,000.00	8.35	15
6	Outside Air Infiltration Upgrades	Many of the buildings on campus have old and inefficient weather stripping, older windows, and no air curtains on door ways. Add high efficiency upgrades for these measures.	\$18,076.38	\$225,200.00	\$51.42	\$172.50	\$77,500.00	\$40,881.00	4.29	15
7	Kitchen Pilot Light Improvement	There are approx. 60 pilot lights for gas stoves left on 24/7 throughout the year. By switching to an electric igniter it can save gas costs.	\$1,533.00	-	-	\$4,380.00	\$12,000.00	\$9,600.00	7.83	20

Appendix B - Energy Efficiency Projects

ECM Number	Name	Description	Annual Cost Savings	kWh Savings	kW Savings	Therm Savings	Est. Project Cost	Est. Rebate	Simple Payback	Life of Project (yrs)
8	Kitchen Hood Ventilation Controls	Replace (4) large and (4) small hoods with high efficiency hoods to better monitor required exhaust conditions.	\$9,308.85	\$72,610.67	\$24.20	\$10,000.00	\$28,000.00	\$16,000.00	3.01	20
9	Kitchen Refrigeration and Freezer Upgrades	Upgrade the refrigerators and freezers with strip curtains, and automatic door closers.	\$2,173.44	\$27,168.00	\$3.12	-	\$4,800.00	\$3,840.00	2.21	15
10	Upgrade to a Condensing Boiler	Replace primary boiler with a condensing boiler to increase efficiency to 95%.	\$6,125.00	-	-	\$17,500.00	\$50,000.00	\$35,000.00	8.16	25
11	VRF upgrade in Soil & Water District Building	Replace existing old and inefficient HVAC with a very high efficiency variable refrigerant flow system, building is 700 ft^2.	\$95.86	\$1,198.21	\$0.29	-	\$5,000.00	\$215.68	52.16	25
12	Drinking Fountains	Install timers to allow the drinking fountains to turn off during night time hours. Install on (20) fountains.	\$790.40	\$9,880.00	\$1.13	-	\$400.00	\$1,185.60	0.51	15
13	Vending Machines	Add occupancy controllers and de-lamp vending machines for (~50) units on campus.	\$9,520.00	\$119,000.00	\$13.58	-	\$9,000.00	\$7,200.00	0.95	25
14	Synchronous Belts on all motors	Replace existing older belt drive motor belts with newer synchronous reserve belts to increase efficiency by 5%.	\$3,241.74	\$40,521.74	\$20.26	-	\$10,000.00	\$4,862.61	3.08	15
SUMMARY			\$253,301.37	\$3,025,315.60	\$521.28	\$32,217.50	\$730,851.88	\$243,644.91	2.89	18

ENERGY SAVINGS (Electric kWh):	3,025,316 kWh
ENERGY SAVINGS (Gas Therms):	32,218 Therms
TOTAL REBATE:	\$243,644.91
TOTAL ANNUAL COST SAVINGS:	\$253,301.37
IMPLEMENTATION COST:	\$730,851.88
SIMPLE PAYBACK:	2.89

Note: Energy Efficiency project have been included in Appendix A - Physical Needs Assessment.

BECAUSE
LIFE
DESERVES
DESIGN

BLDD.COM