YOUR PRESENTERS

UCF ————————————— **DLR** ——————— **CFP** ———————

JON BATES

AVP FOR REAL
ESTATE AND SPACE
ADMINISTRATION

CHRISTY MIRANDA

DIRECTOR OF SPACE
ADMINISTRATION

WOODY GILES

SENIOR CAMPUS
PLANNER

BRIAN BELL

SPACE ANALYST

TODAY'S AGENDA

- UCF Intro, Context, and Strategic Plan

- Data and Space Context

- Space Utilization Findings

- Implementation & Case Study

WHY A SPACE STUDY?

- Understand existing space supply

- Measure current demand

- Understand impact of hybrid work

- Funding pathways lend themselves more to renovation/remodel than new construction

- Deferred maintenance and ongoing funding challenges

CULTURAL CHALLENGES RELATED TO SPACE

- Centralized versus De-centralized – the perception of ownership

- Establishing guidelines to provide consistency in allocation

- What does a private walled office or lab mean? Confirmation of value, status, achievement
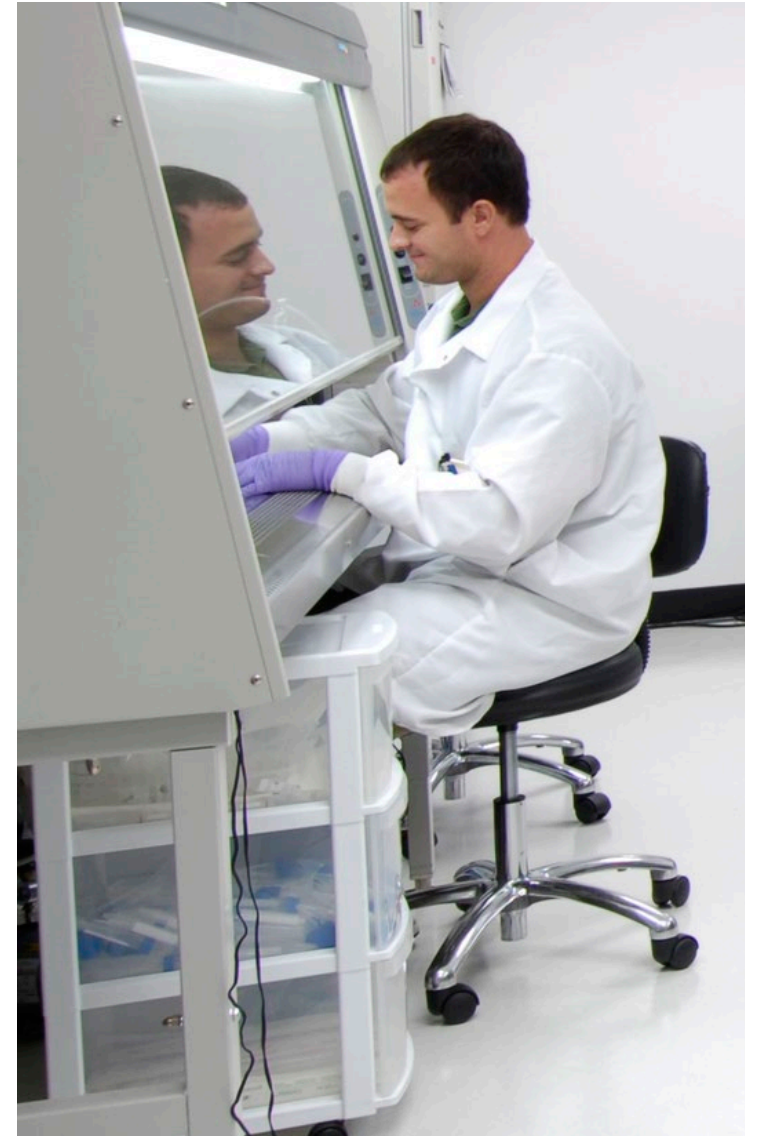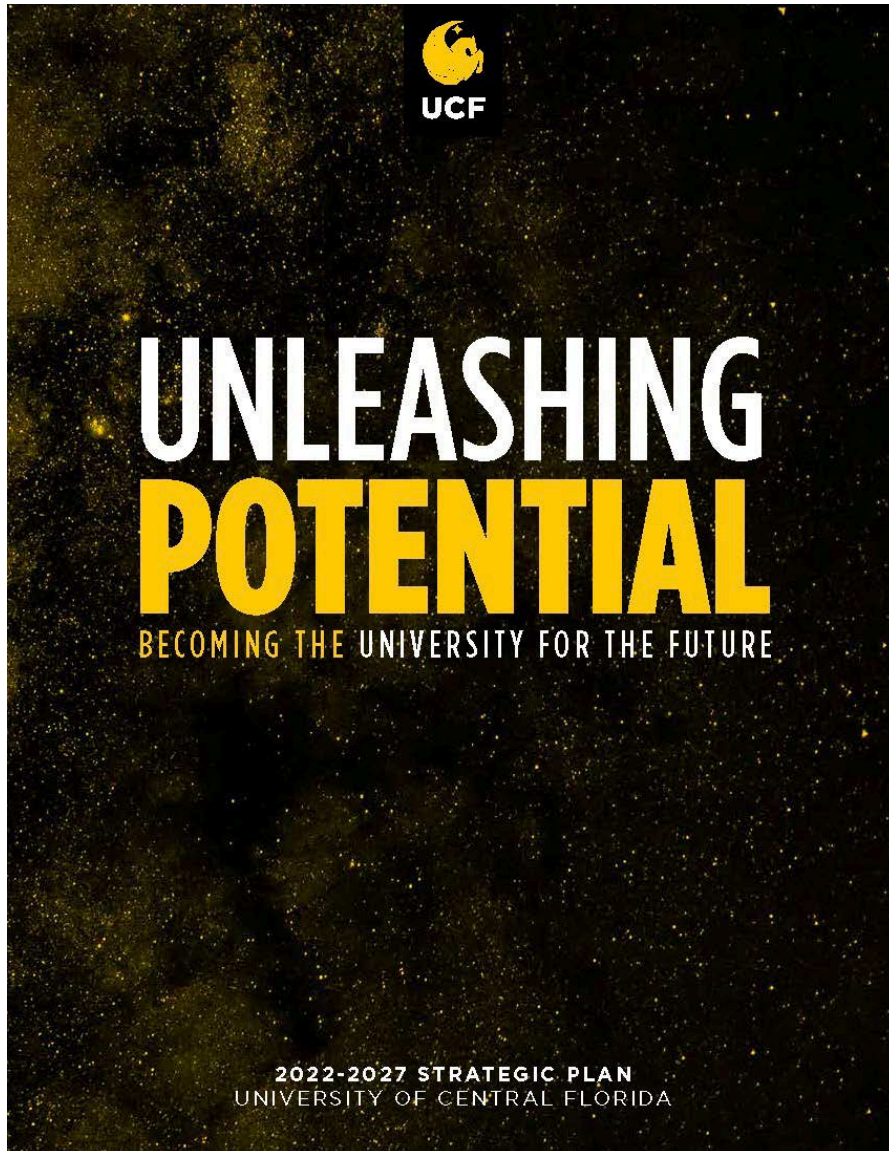
STUDY GOALS

- Gain a deep understanding of current office, classroom, and lab (teaching and research) space utilization

- Recommend policies to improve space utilization (assuming constant enrollment and flexible work arrangements)

- Increase opportunities for underutilized space to be repurposed, including to generate potential rental revenue

- Implement process improvements to increase real time accuracy of space use data

Existing Data & Data Collection

UCF SPACE ADMINISTRATION

- Recent reorg under newly established Real Estate and Space Administration department within Facilities and Business Operations division

  - Previously housed under Academic Affairs

- Responsibilities Overview:

  - Maintain university's space inventory

  - Update floor plans post-renovation and remodeling

  - Facilitate all space requests

  - Prepare quarterly state space reports

 - Oversee quinquennial Educational Plant Survey

UCF SPACE ADMINISTRATION

- Supports the University Space Committee (USC) to centralize space decisions based on data driven around utilization in a collaborative and transparent process

  - Oversee decisions on allocation, reallocation, use, change in use, construction, remodeling and renovation of university space

  - Space requests of more than 1,000 net assignable square feet are forwarded to the Provost with USC recommendation for final review and decision

- Implements university space policy and USC space guidelines
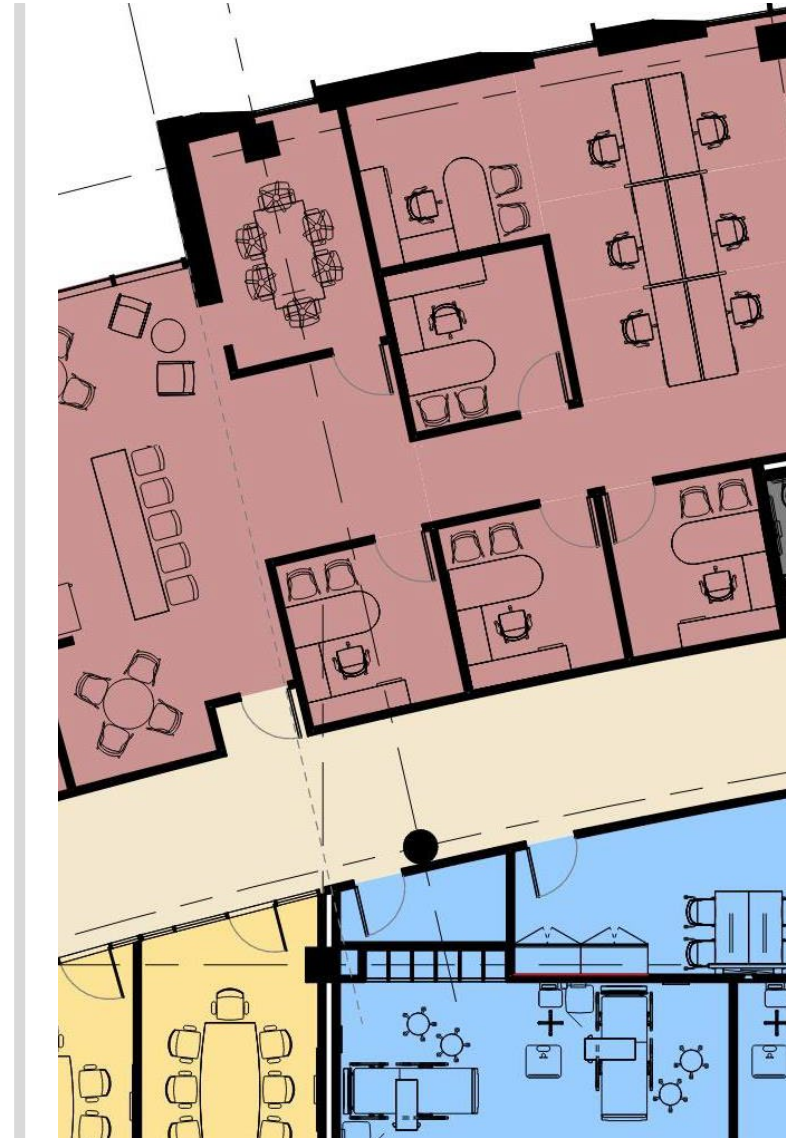
SPACE INCLUDED IN STUDY BY CAMPUS

Campus	ASF in Study
Main Campus	1,585,000
Research Park	599,000
Lake Nona	234,000
Downtown Orlando	165,000
Rosen	83,000
Total	**2,666,000**
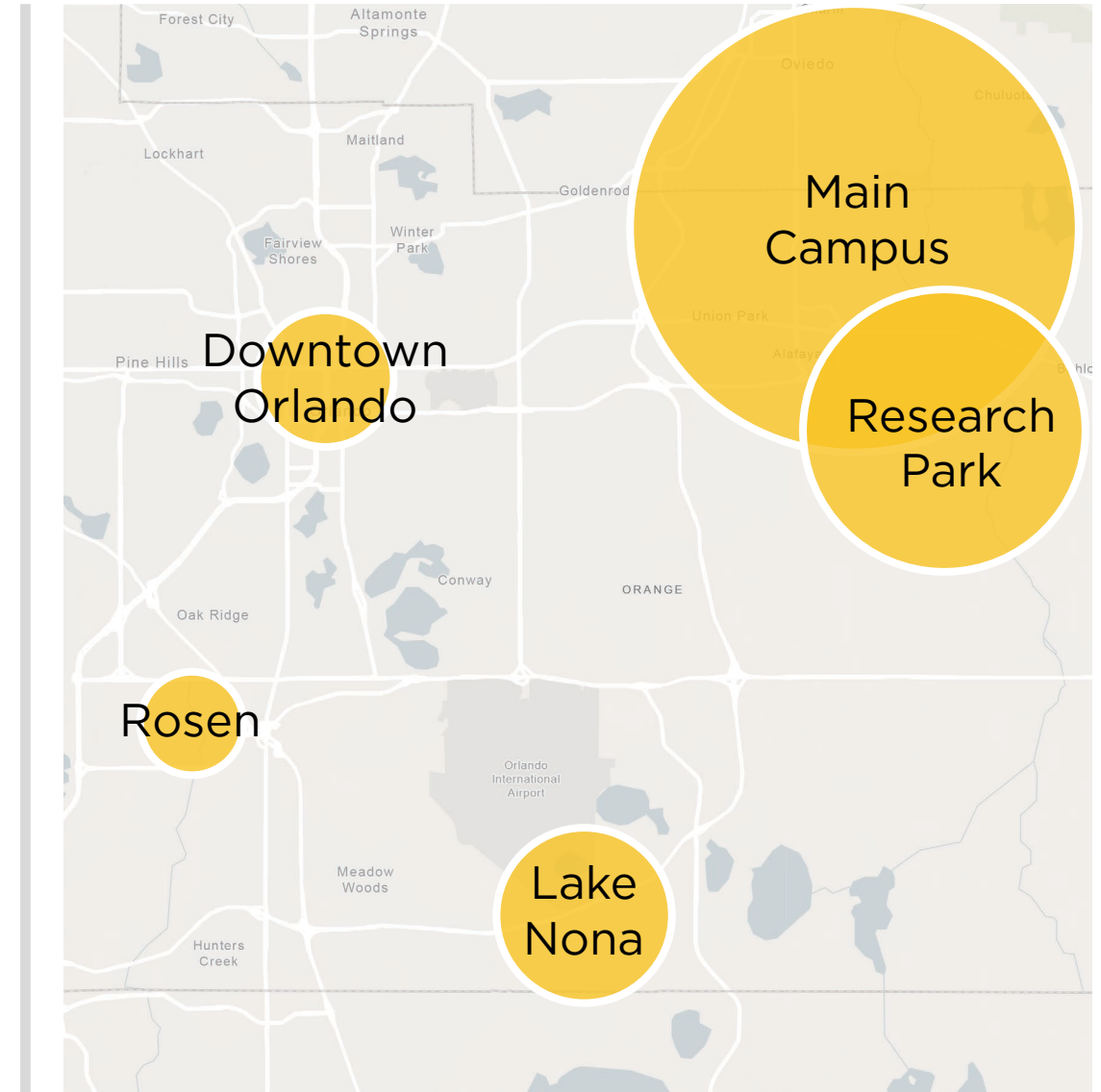
ASF = assignable square feet

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EXISTING AND COLLECTED DATA

- Room data showing use, square feet, and station count for all space types included in study

- Data confirmed during walk-through and via data verification request

- Fall 2022 and Spring 2022 complete course schedule with course type, day, time, enrollment, and location

- Employee roster showing titles, department, occupancy, and FTE for all UCF employees

- Context provided during focus groups, workshops, and by Steering Committee Review

Data reviewed and verified by departments multiple times to ensure use of most accurate information
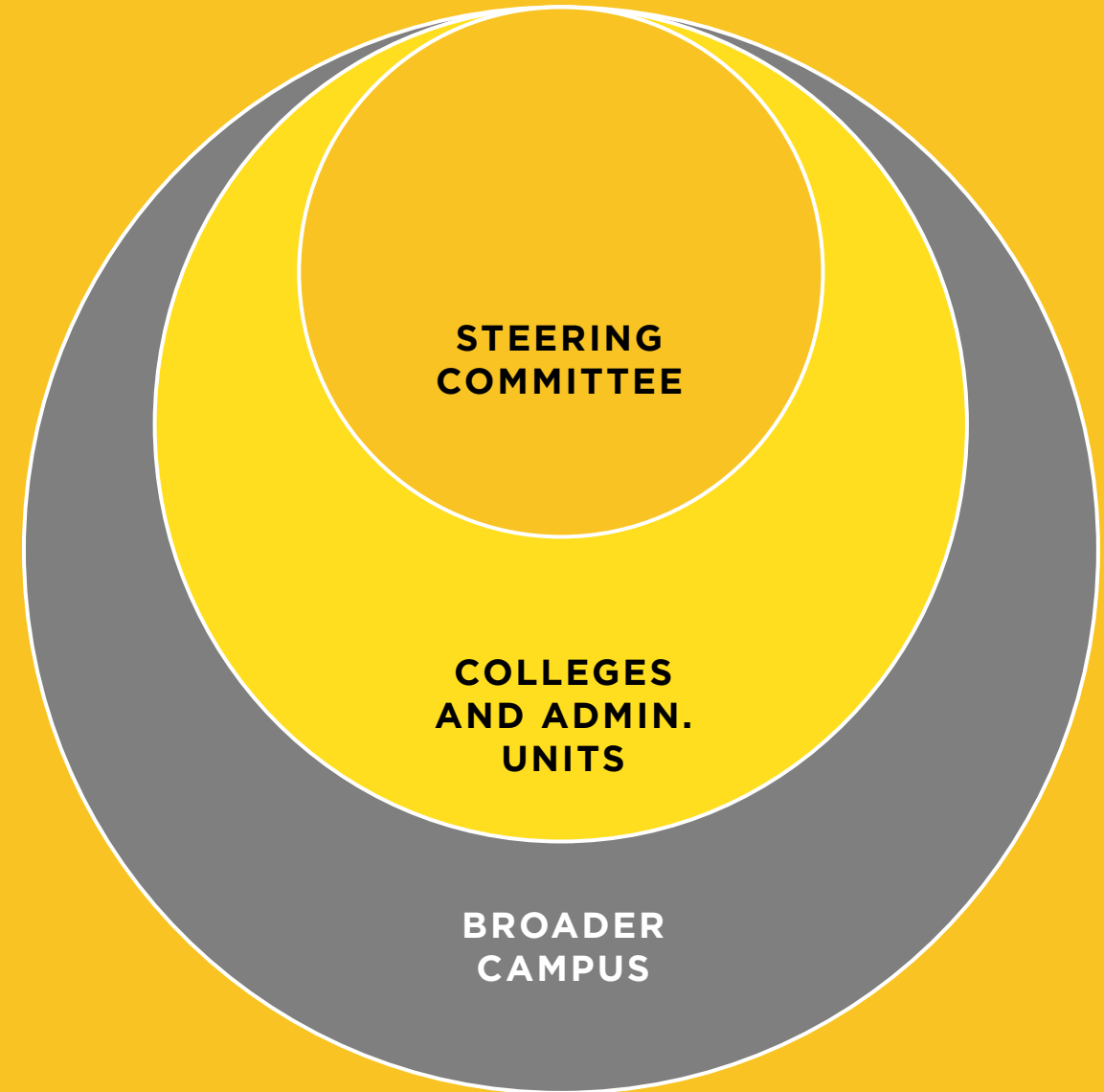
ENGAGEMENT

STEERING COMMITTEE

- Working group met regularly

- Facilitated data collection and engagement

- Confirm results of analysis

FOCUS GROUPS

- Multiple meetings with each college and administrative unit

- Communicate specific needs/unique aspects to consultants

STEERING COMMITTEE

COLLEGES AND ADMIN. UNITS

BROADER CAMPUS

PERSONNEL DATA GAPS AND CHALLENGES

- Campus locations in personnel data not consistent with office assignment locations in space inventory

- Lack of comprehensive org. structure made it time consuming to align employees to space departments

- Recent reorganizations occurred during analysis

- In some cases, personnel database did not reflect working position titles (e.g., professor rather than dean)

- No single employee directory

- Some areas do not report data through central Human Resources

Position Title	College Area	Home Dept Name	Division
Professor	Humanities - English	Instruction	Humanities
Associate Professor	College of Arts and Humanities - English	CC10166 English - Academic Instruction	D220 College of Arts Humanities
Professor	College of Arts and Humanities - English	CC10166 English - Academic Instruction	D220 College of Arts Humanities
Associate Professor	College of Arts and Humanities - English	CC10166 English - Academic Instruction	D220 College of Arts Humanities
Associate Professor	College of Arts and Humanities - English	CC10166 English - Academic Instruction	D220 College of Arts Humanities
Senior Instructor	College of Arts and Humanities - English	CC10166 English - Academic Instruction	D220 College of Arts Humanities
Associate Lecturer	College of Arts and Humanities - English	CC10166 English - Academic Instruction	D220 College of Arts Humanities
Professor	College of Arts and Humanities - English	CC10166 English - Academic Instruction	D220 College of Arts Humanities
Associate Professor	College of Arts and Humanities - English	CC10166 English - Academic Instruction	D220 College of Arts Humanities
Professor	College of Arts and Humanities - English	CC10166 English - Academic Instruction	D220 College of Arts Humanities
Associate Lecturer	College of Arts and Humanities - English	CC10166 English - Academic Instruction	D220 College of Arts Humanities
Senior Lecturer	College of Arts and Humanities - English	CC10166 English - Academic Instruction	D220 College of Arts Humanities
Academic Advisor III	College of Arts and Humanities - English	CC11103 English - Academic Administration	D220 College of Arts Humanities
Associate Professor	College of Arts and Humanities - English	CC10166 English - Academic Instruction	D220 College of Arts Humanities
Associate Professor	College of Arts and Humanities - English	CC10166 English - Academic Instruction	D220 College of Arts Humanities
Instructor	College of Arts and Humanities - English	CC10166 English - Academic Instruction	D220 College of Arts Humanities
Academic Advisor I	College of Arts and Humanities - English	CC11103 English - Academic Administration	D220 College of Arts Humanities
Assistant Professor	College of Arts and Humanities - English	CC10166 English - Academic Instruction	D220 College of Arts Humanities
Associate Lecturer	College of Arts and Humanities - English	CC10166 English - Academic Instruction	D220 College of Arts Humanities
Associate Professor	College of Arts and Humanities - English	CC10166 English - Academic Instruction	D220 College of Arts Humanities
Associate Professor	College of Arts and Humanities - English	CC10166 English - Academic Instruction	D220 College of Arts Humanities
Associate Professor	College of Arts and Humanities - English	CC10166 English - Academic Instruction	D220 College of Arts Humanities
Assistant Professor	College of Arts and Humanities - English	CC10166 English - Academic Instruction	D220 College of Arts Humanities
Professor	College of Arts and Humanities - English	CC10166 English - Academic Instruction	D220 College of Arts Humanities
Lecturer	College of Arts and Humanities - English	CC10166 English - Academic Instruction	D220 College of Arts Humanities
Instructor	College of Arts and Humanities - English	CC10166 English - Academic Instruction	D220 College of Arts Humanities
Associate Professor	College of Arts and Humanities - English	CC10166 English - Academic Instruction	D220 College of Arts Humanities
Assistant Professor	College of Arts and Humanities - English	CC10166 English - Academic Instruction	D220 College of Arts Humanities

RESEARCH DATA GAPS AND CHALLENGES

- Focus on accurate accounting of research lab space and past 3 years of research expenditures (2021-2023, external and internal) and aligning funded research activity with related space regardless of the space type

- Initial data request showed gaps between grant activity and space (i.e., active grant with no reported location)

- Second follow up data request issued to address these gaps, still had some units with incomplete or inconsistent data

- Third effort to address deficiencies included personal contacts

|		
FLORIDA SPACE INST OPERATIONS	$84,503,367.90	$28,167,789.30
CREOL-COLLEGE OPTICS&PHOTONICS	$48,374,371.61	$16,124,790.54
INST FOR SIM AND TRNG OPER	$39,792,898.66	$13,264,299.55
COL OF MEDICINE BIOMED SCIENCE	$32,001,917.45	$10,667,305.82
PHYSICS	$26,706,738.13	$8,902,246.04
FINANCIAL AFFAIRS	$19,235,686.00	$6,411,895.33
ELECTRICAL ENGINEERING	$18,671,403.47	$6,223,801.16
SDES CAREER SERVICES	$18,652,578.00	$6,217,526.00
NANOSCIENCE TECH CTR OPER	$17,800,195.83	$5,933,398.61
COMPUTER SCIENCE	$16,614,555.03	$5,538,185.01
CCIE DEAN	$15,409,613.10	$5,136,537.70
CIVIL ENGINEERING	$14,739,712.75	$4,913,237.58
MECH MAT AND AEROSPACE ENGR	$14,323,046.35	$4,774,348.78
VP PARTNERSHIPS & INNOVATION	$12,659,499.85	$4,219,833.28
CCS-CENTER COMMUNITY SCHOOLS	$11,427,695.80	$3,809,231.93
SCHOOL TEACHER EDUCATION	$11,166,122.51	$3,722,040.84
COUNSELOR ED SCHOOL PSYCHOLOGY	$10,707,976.40	$3,569,325.47
INDUSTRIAL ENGR AND MGMT SYS	$9,865,021.31	$3,288,340.44
CTR RESEARCH COMPUTER VISION	$9,859,175.03	$3,286,391.68
PSYCHOLOGY	$9,575,303.79	$3,191,767.93
CENTER FOR ADVANCED TURBOMACH	$8,937,114.70	$2,979,038.23
FLORIDA SOLAR ENERGY CENTER	$8,432,582.59	$2,810,860.86
BIOLOGICAL SCIENCES	$6,869,930.91	$2,289,976.97
CHEMISTRY	$6,020,920.14	$2,006,973.38
COMM MKTG-WUCF TV	$5,744,648.17	$1,914,882.72
AMPAC OPERATIONS	$5,668,885.68	$1,889,628.56
COL OF HLTH PROF AND SCI DEAN	$5,044,081.02	$1,681,360.34
SDES VICE PRESIDENT OPERATION	$4,523,250.97	$1,507,750.32
SCHOOL PUBLIC ADMINISTRATION	$4,020,887.26	$1,340,295.75
NURSING PRACTICE	$3,889,068.21	$1,296,356.07
UNIVERSITY PRESIDENT	$3,437,884.85	$1,145,961.62
MATERIALS SCIENCE AND ENGINEER	$3,115,991.20	$1,038,663.73
NURSING SYSTEMS	$3,040,104.00	$1,013,368.00
OFFICE OF RESEARCH OPERATIONS	$2,977,230.99	$992,410.33
SOCIAL WORK	$2,934,916.41	$978,305.47
MATHEMATICS	$2,509,927.04	$836,642.35
RESTORES	$2,433,002.67	$811,000.89
LEARNING SCIENCES ED RESEARCH	$2,195,907.87	$731,969.29
COM MEDICAL EDUCATION	$2,127,507.43	$709,169.14

Utilization Findings

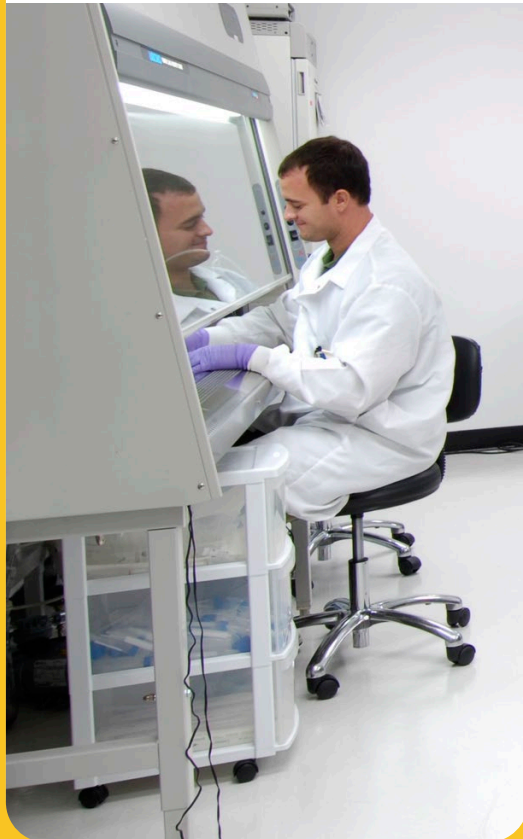# SPACE TYPES STUDIED
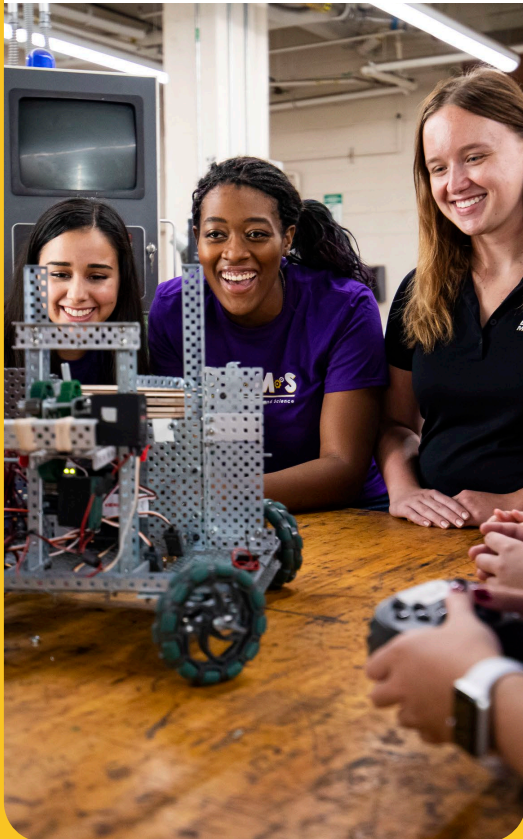
CLASSROOMS	TEACHING LABS	RESEARCH LABS	WORKSPACE
329,000 ASF	328,000 ASF	552,000 ASF	1,416,000 ASF

UTILIZATION METRICS

Develop minimum targets beyond SREF standards to measure when space is fully utilized or could be evaluated for repurposing

LEARNING SPACES

- Average weekly hours scheduled
- Seats filled
- Square feet/station

RESEARCH SPACES

- Research expenditures per square foot

WORKSPACES

- Average workstation size
- Workstations per FTE employee

CLASSROOM UTILIZATION TARGETS

Utilization Metric	SREF	UCF Minimum Target
Average Weekly Room Hours	40	**40**
Station Occupancy	60%	**80%**
ASF/Station	20-24	**20-24**

The State Requirements for Educational Facilities (SREF) establish the requirements for public educational facilities in the State of Florida including inventory guidelines, recommended square feet allocation per room type, and utilization metrics

Classroom Utilization Benchmark Comparison

STATE	WRH	SO%
NEW YORK	35.4	80%
CALIFORNIA	53	66%
FLORIDA	40	60%
TENNESEE	30	60%
VIRGINIA	40	70%
GEORGIA	40	100%
TEXAS	35	67%

AVERAGE WEEKLY CLASSROOM HOURS SCHEDULED BY CAMPUS: FALL 2022

minimum utilization target

Fall 2022 classroom hours scheduled

Campus	Hours
Main Campus	32
Downtown (UCF only)	14
Research Park	12
Lake Nona	11
Rosen	10
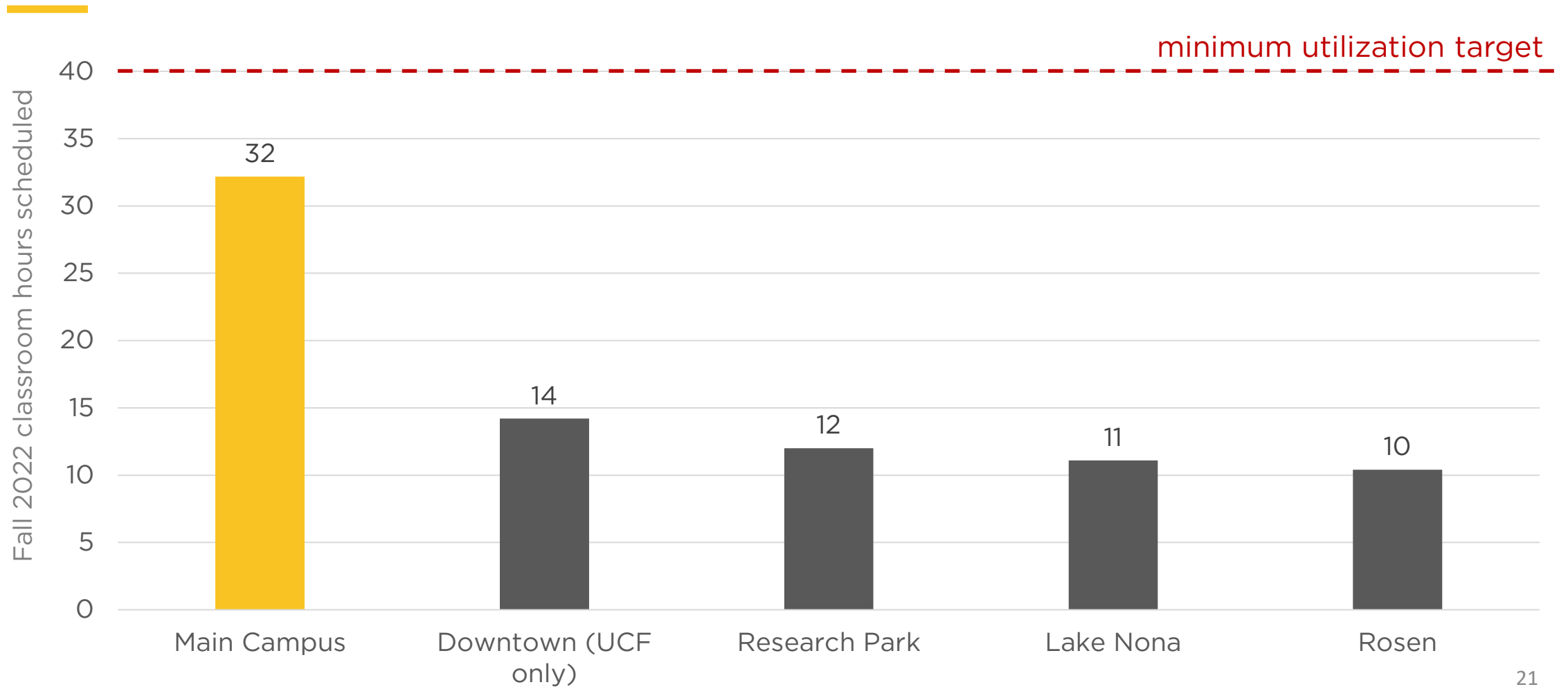
AVERAGE WEEKLY CLASSROOM HOURS SCHEDULED BY TIME & DAY: FALL 2022

22
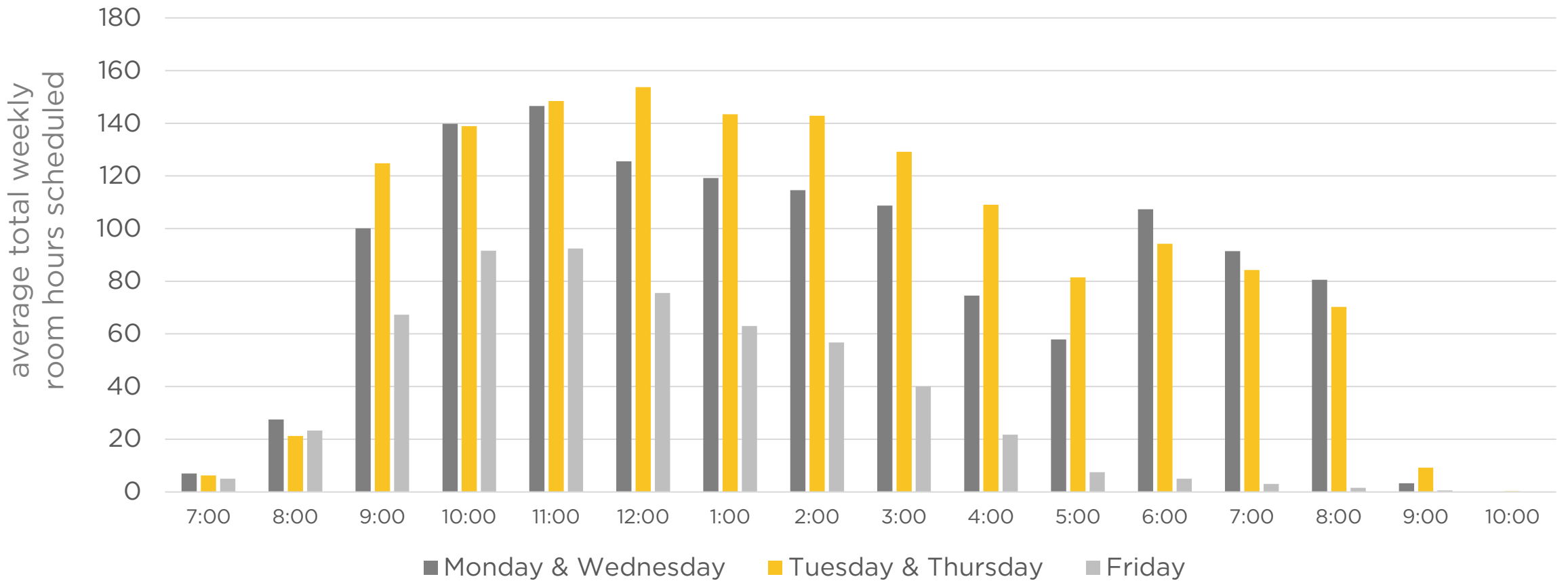
CLASSROOM UTILIZATION OVERVIEW

Metric	Findings
Scheduled use	Weekly hours are below the minimum target, especially for dept. scheduled classrooms
Time of day	Classes are not fully scheduled throughout the day and week
Seats filled	Dept. scheduled classrooms are below the minimum target
Station size	Existing area per seat is below SREF standard

Conclusion

Surplus of 91 classrooms could save $81.5M by repurposing these spaces rather than building new

TEACHING LAB UTILIZATION GUIDELINES APPLIED

Utilization Metric	SREF	UCF Minimum Target
Average WRH (Lower Division)	30	**40**
Average WRH (Computer Labs)	30	**40**
Average WRH (Upper Division)	30	**30**
Station Occupancy	80%	**85%**
ASF/Station	varies	**varies**
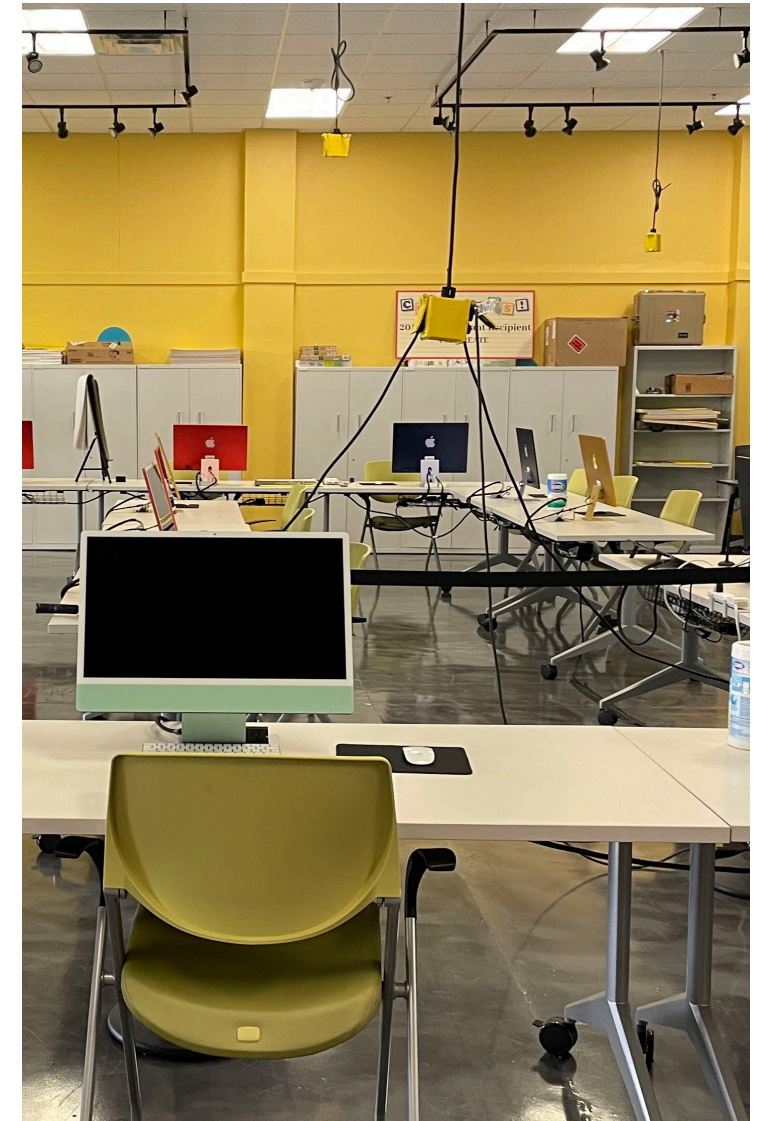
TEACHING LAB OBSERVATIONS

- Unlike classrooms that may be shared, teaching labs are often specialized facilities with less consistent utilization

- Unique labs must be available in the inventory, even if to satisfy demand for only a single section

- Due to limited interchangeability across departments, some labs cannot meet the utilization targets

- Issues of curriculum design and faculty availability often place an uneven demand on labs across semesters
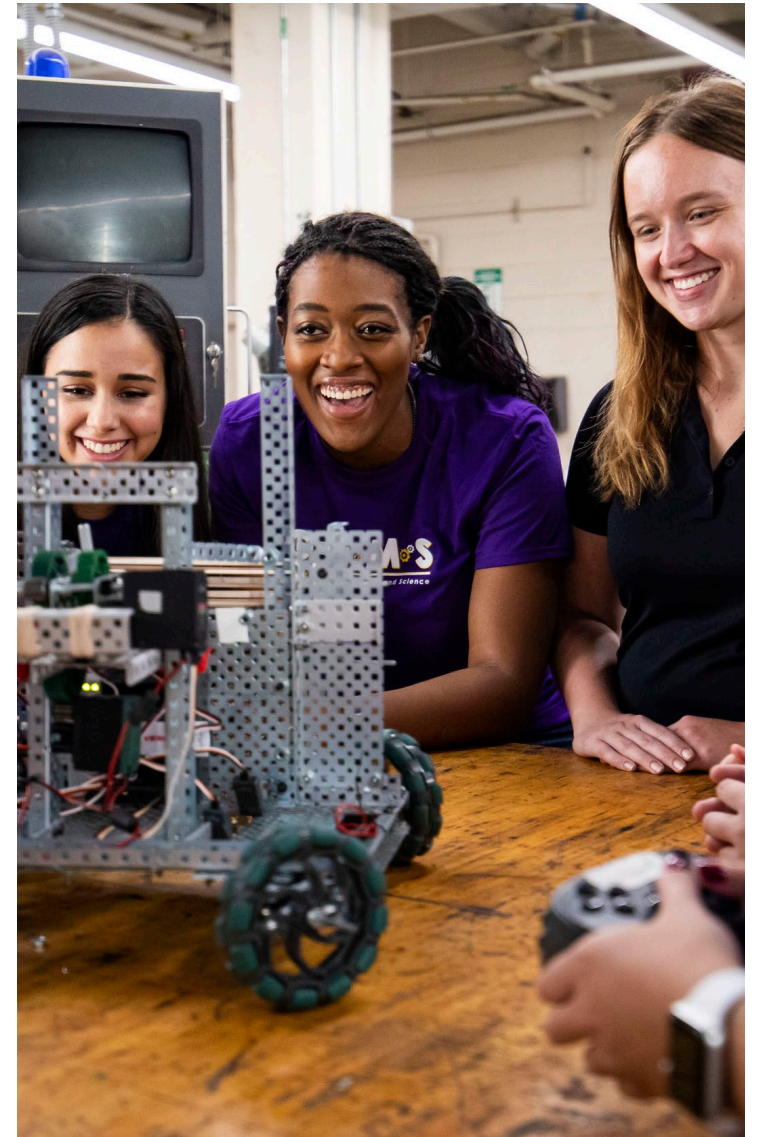
AVERAGE WEEKLY TEACHING LABORATORY HOURS SCHEDULED BY CAMPUS
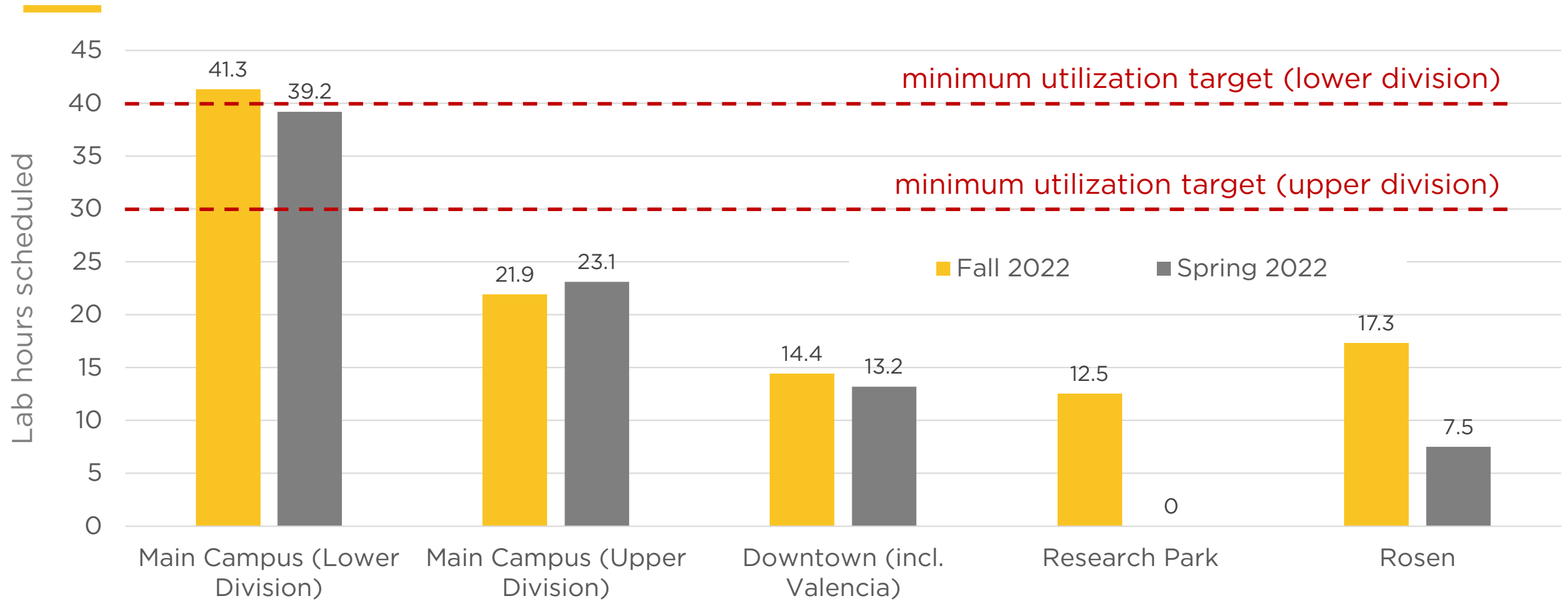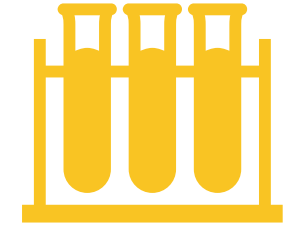
TEACHING LAB UTILIZATION OVERVIEW

Metric	Findings
Scheduled use Lower Division	Weekly hours are near the minimum target for lower division labs on the Main Campus but below the minimum target at other campuses
Scheduled use Upper Division	Weekly hours are below the minimum target
Scheduled use Computer Labs	Weekly hours are 40% below minimum targets
Time of day	Classes are not fully scheduled throughout the day and week
Seats filled	Lower and upper division labs (except for computer labs) are below the minimum target of 85% seat fill

Conclusion

Teaching laboratories are generally well used but there may be opportunity to increase lab utilization by evaluating shared use potential; particularly for computer labs, upper division labs, and labs located outside of Main Campus

EXISTING RESEARCH LAB SPACE BY CAMPUS

4% of total space on this campus

40% of total space on this campus

19% of total space on this campus

assignable square feet

350,000
300,000
250,000
200,000
150,000
100,000
50,000
0

Main | Research Park | Lake Nona

■ Research   ■ Research Service

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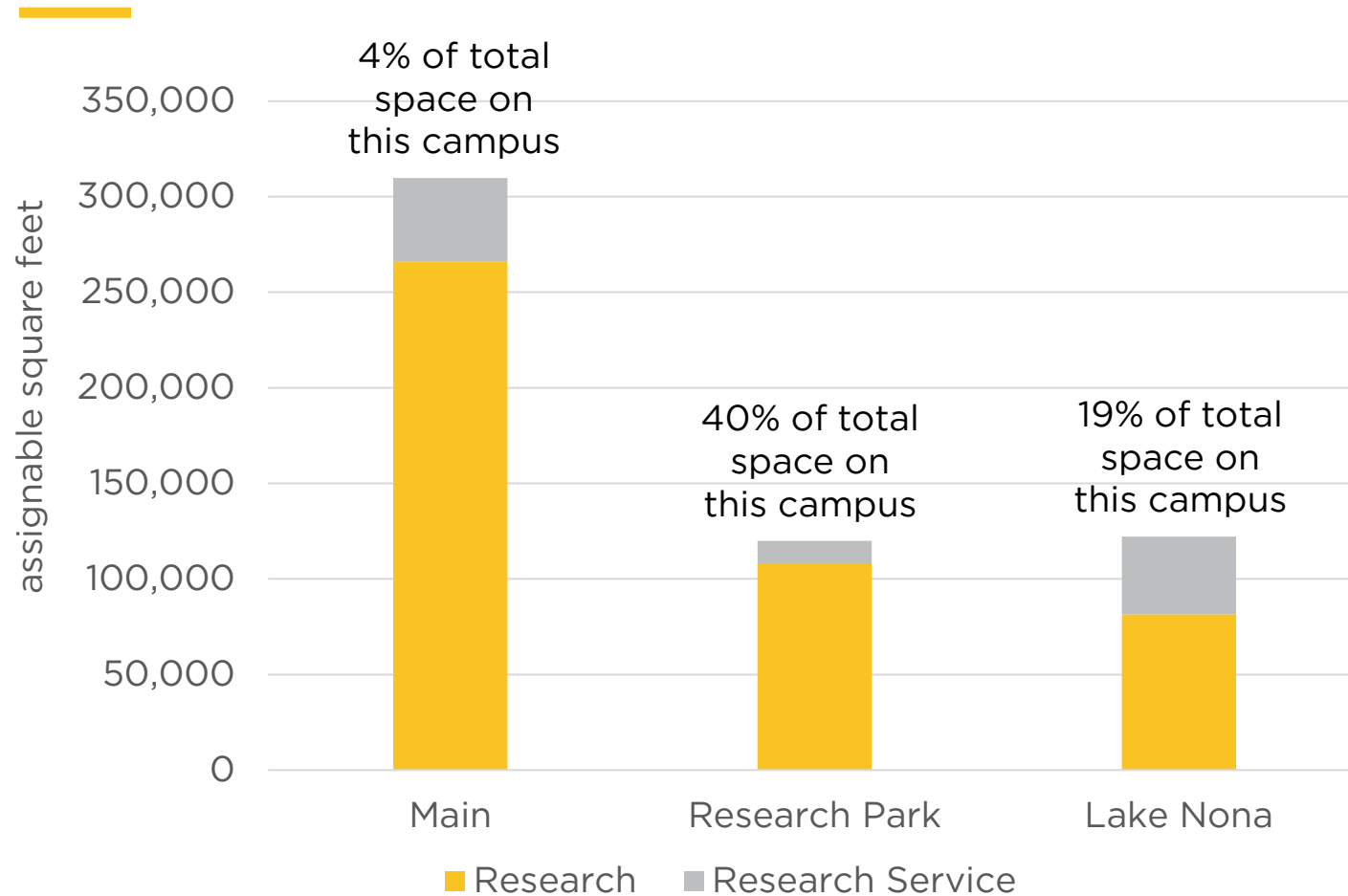
ACTIVE RESEARCH GRANT EXPENDITURES BY TYPE (FY22 AND FY23)
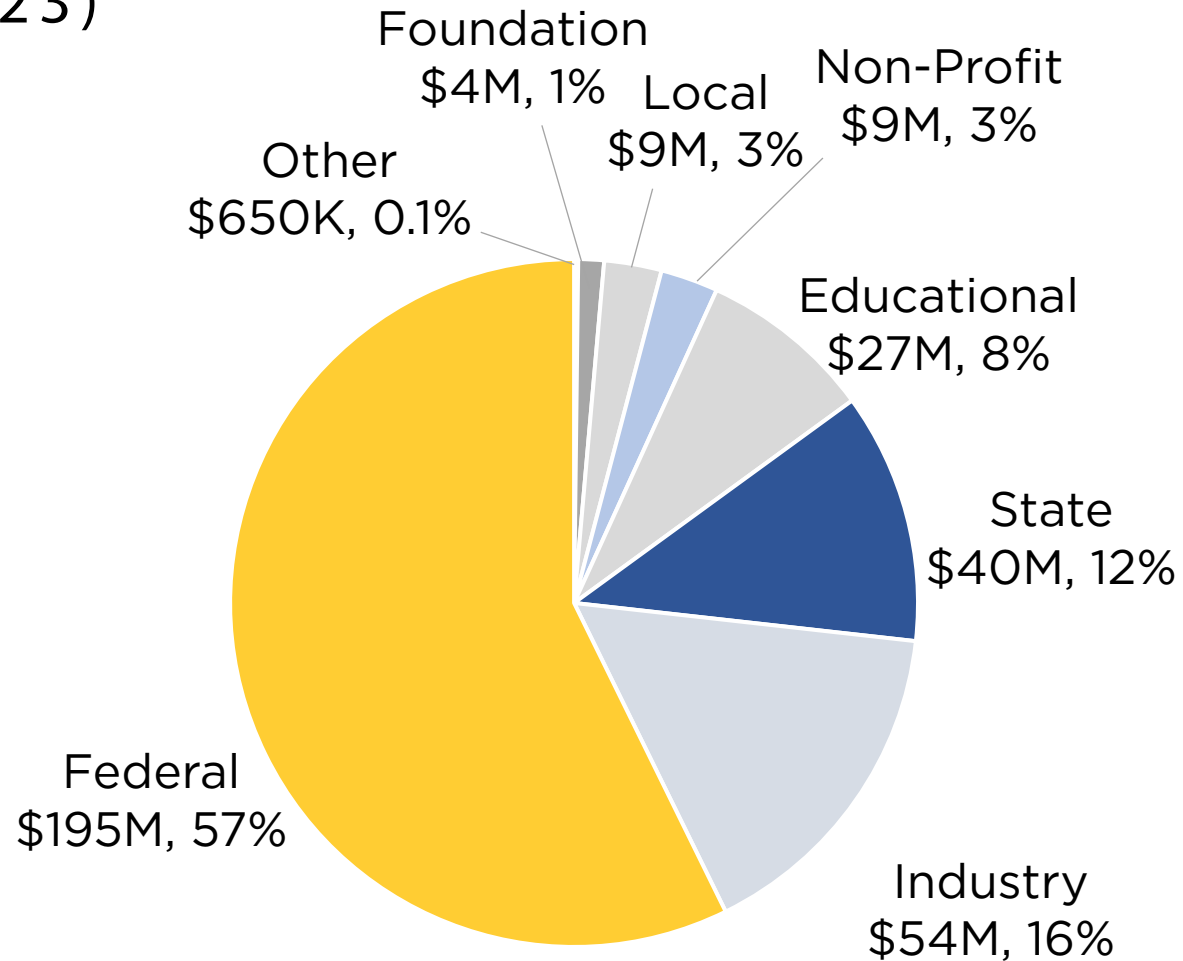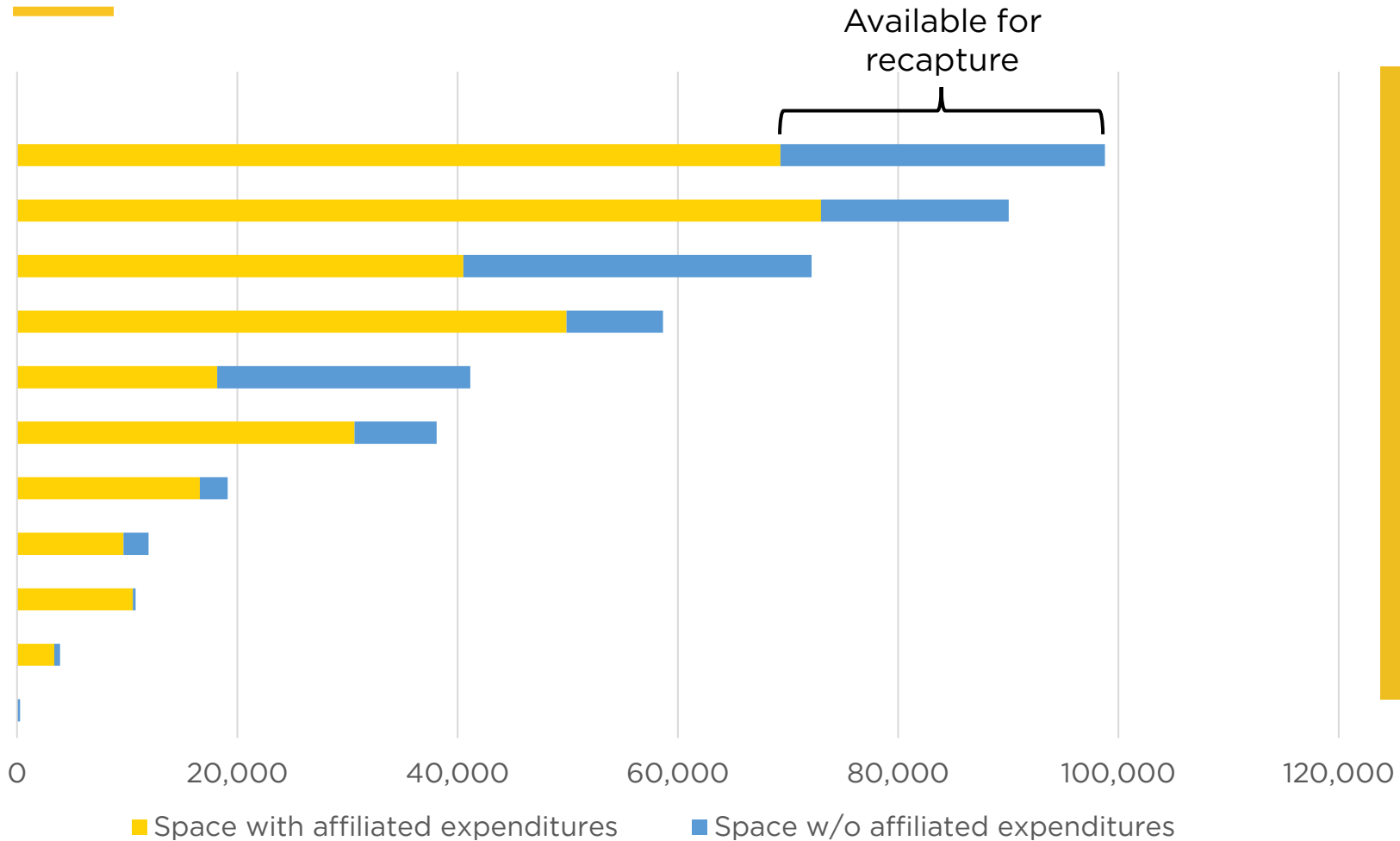
Foundation $4M, 1%
Local $9M, 3%
Non-Profit $9M, 3%
Other $650K, 0.1%
Educational $27M, 8%
State $40M, 12%
Federal $195M, 57%
Industry $54M, 16%

STRATEGIES TO ACHIEVE RESEARCH GOALS: OVERALL SPACE NEEDS

- Average peer institution research expenditures per square feet ($355) used to estimate future UCF research space needed to meet Strategic Plan goals

- UCF strategic goal of increasing research funding by $350 Million would result in a need for 279,000 additional total ASF of research lab and related space

- Existing research space ratio of two-thirds of existing research space classified as research lab yields approximately 187,500 ASF for additional research labs

UIA Peer Institution Research	
Name	Avg. $/ASF
Ohio State U.	$403
U. Texas, Austin	$533
Michigan State U.	$265
Purdue U., West Lafayette	$308
Arizona State U.	$489
U. Kansas	$443
Iowa State U.	$227
Oregon State U.	$319
Georgia State U.	$956
U. California, Riverside	$163
Average	$355
UCF	$309

RESEARCH LAB UTILIZATION OVERVIEW

Findings

Available capacity of 145,000 ASF of research labs
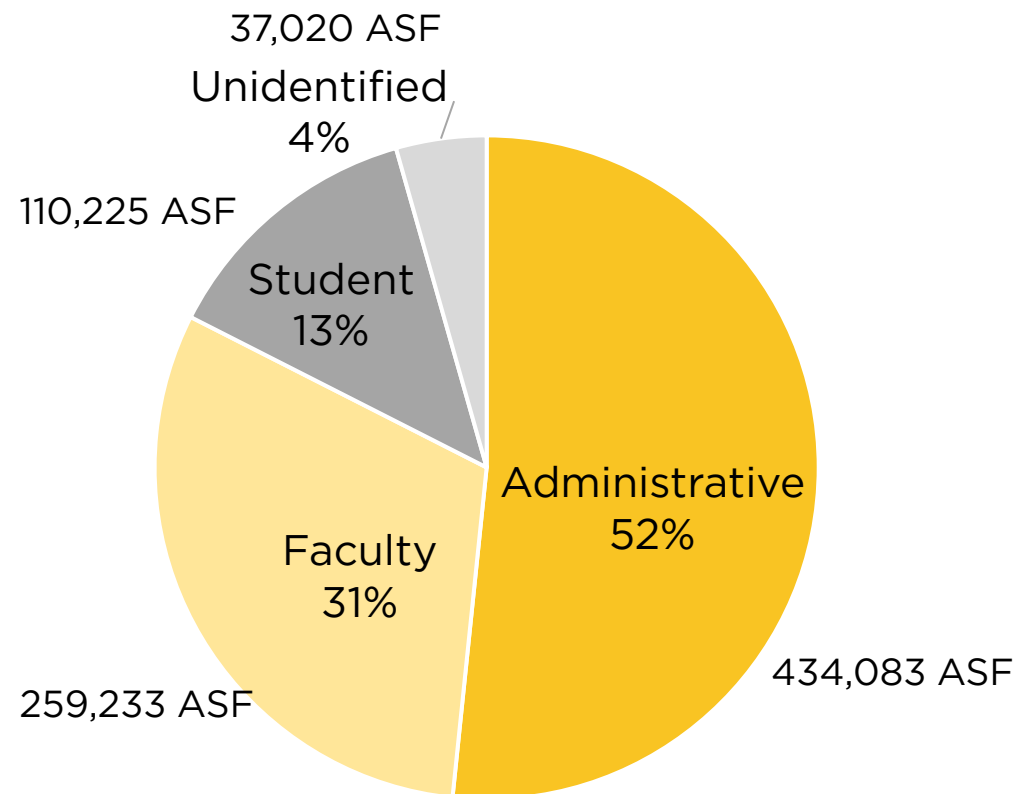(space without existing active external grant funding)

47,000 ASF of new research lab space currently planned in new
Research 2 Building will satisfy a portion of needs

Underutilized instructional and office space can be viewed as
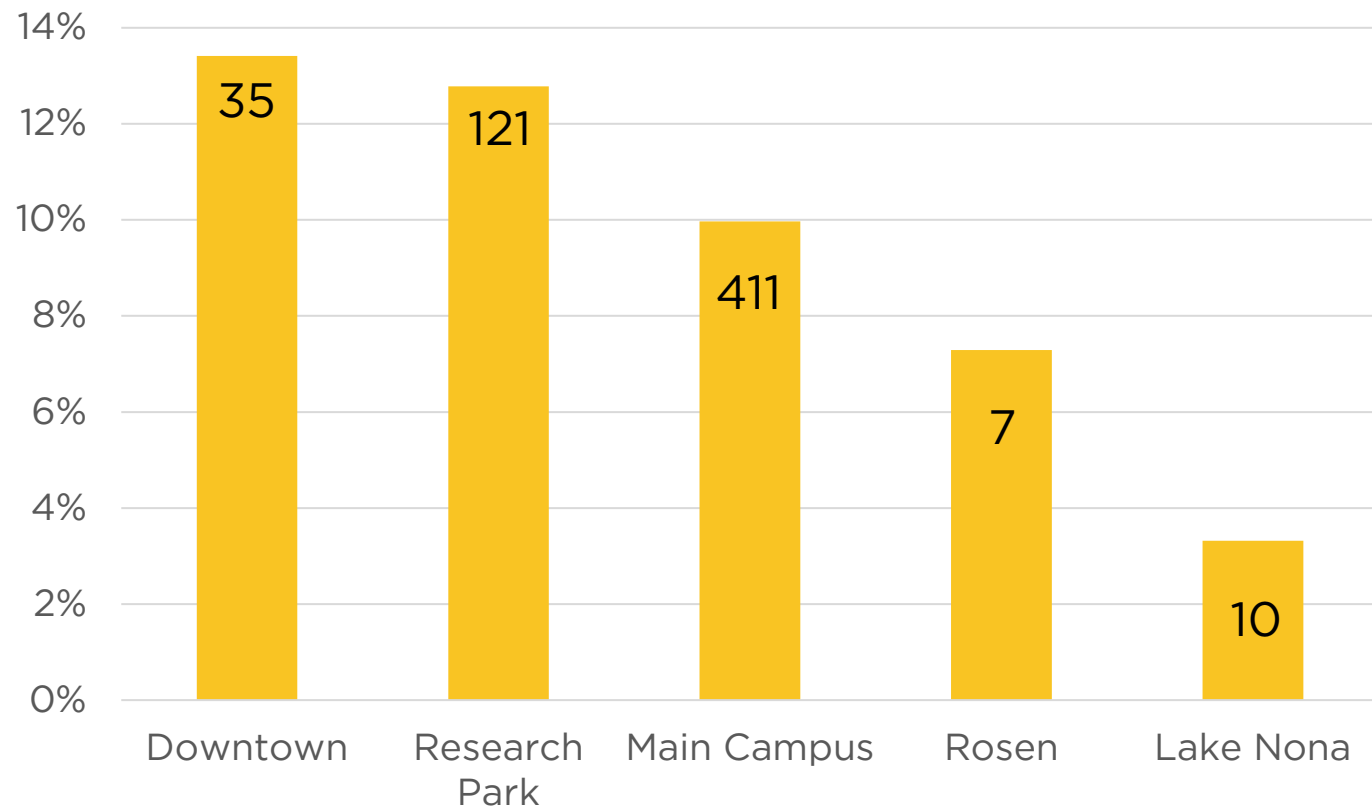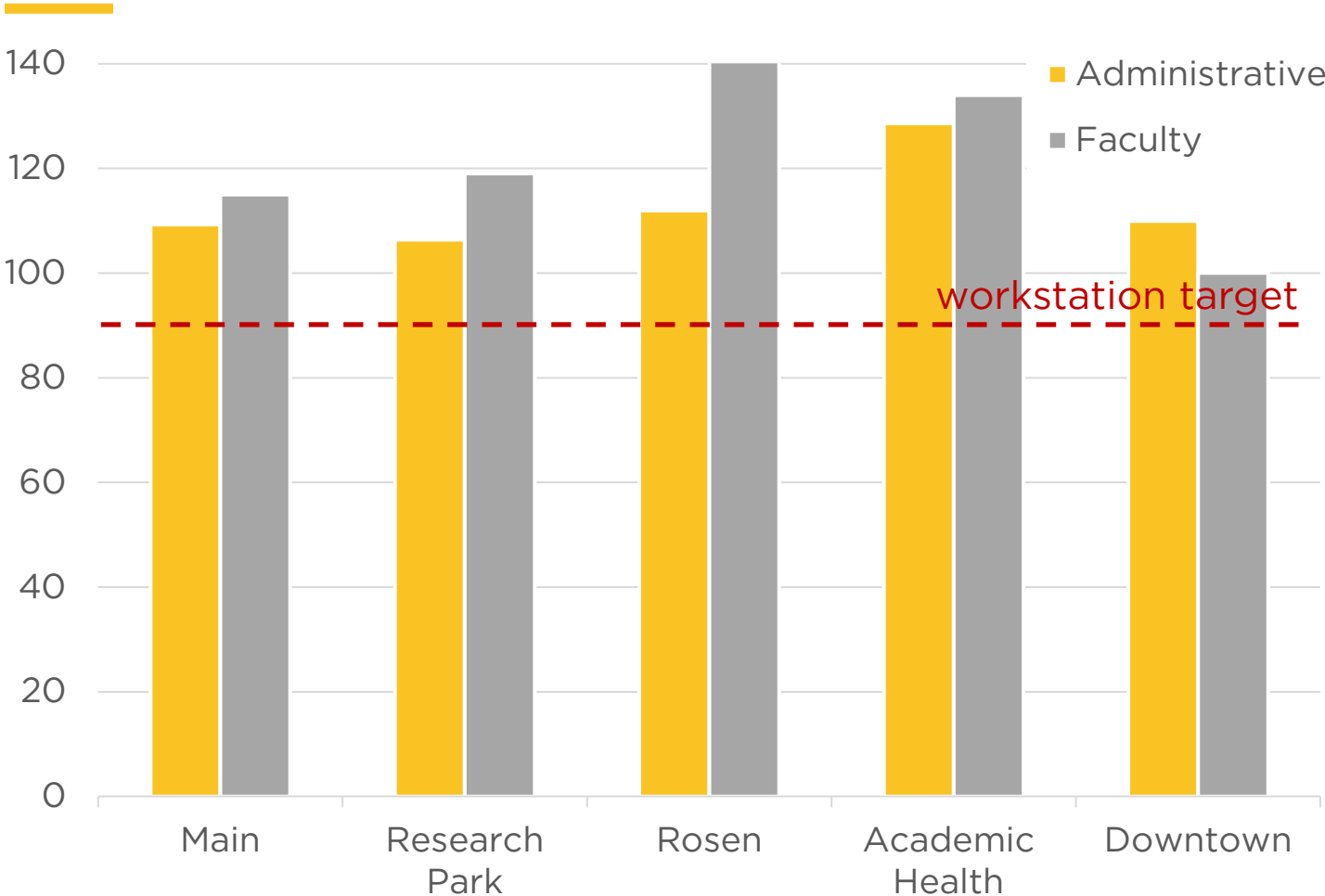contingency space for research expansion
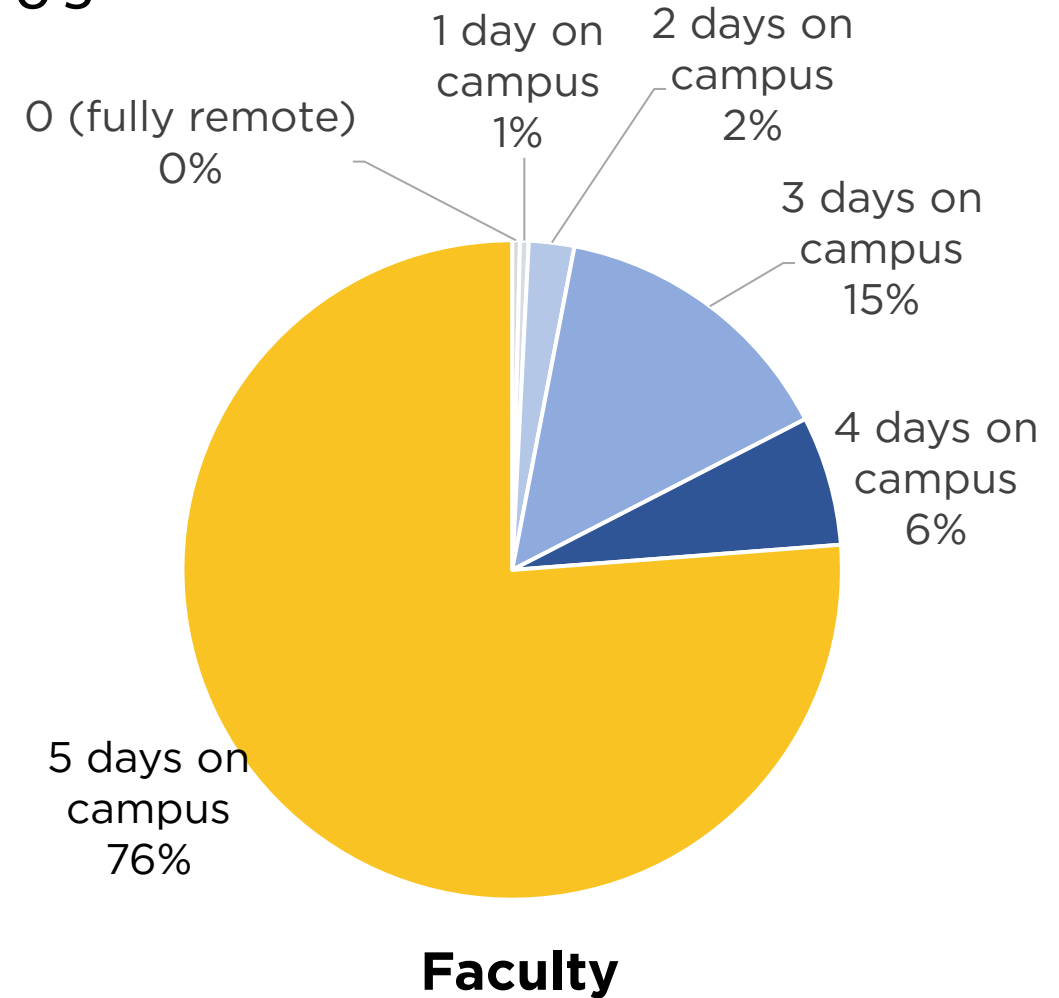
Meeting Research Space Needs

Proposed Research Building 24%

Existing Research Lab Capacity 76%
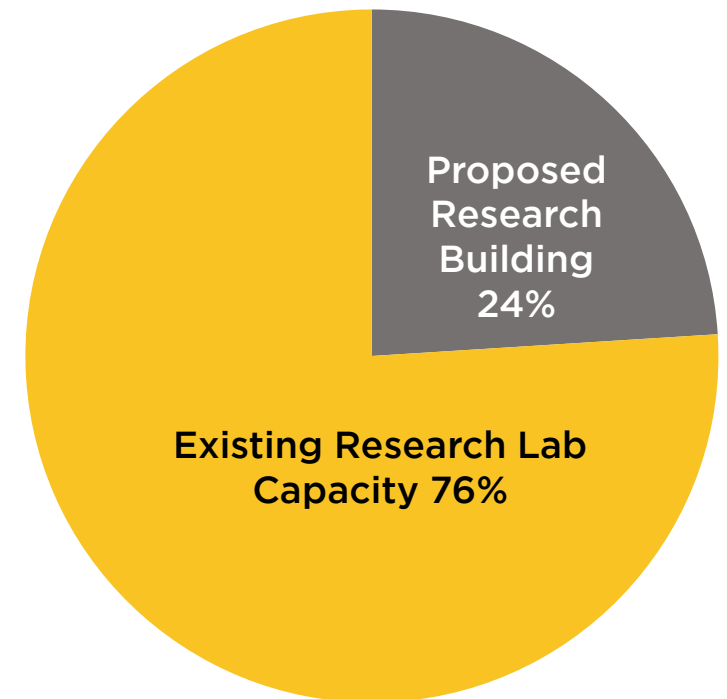
EXISTING WORKSTATION INVENTORY

37,020 ASF
Unidentified
4%

110,225 ASF

Student
13%

Administrative
52%

Faculty
31%

434,083 ASF

259,233 ASF

PERCENT OF WORKSTATIONS REPORTED AS VACANT

AVERAGE WORKSTATION AREA BY CAMPUS

REPORTED EMPLOYEE DAYS ON CAMPUS

Staff

0 (fully remote) 2%
1 day on campus 5%
2 days on campus 7%
3 days on campus 32%
4 days on campus 10%
5 days on campus 44%

Faculty

0 (fully remote) 0%
1 day on campus 1%
2 days on campus 2%
3 days on campus 15%
4 days on campus 6%
5 days on campus 76%

36
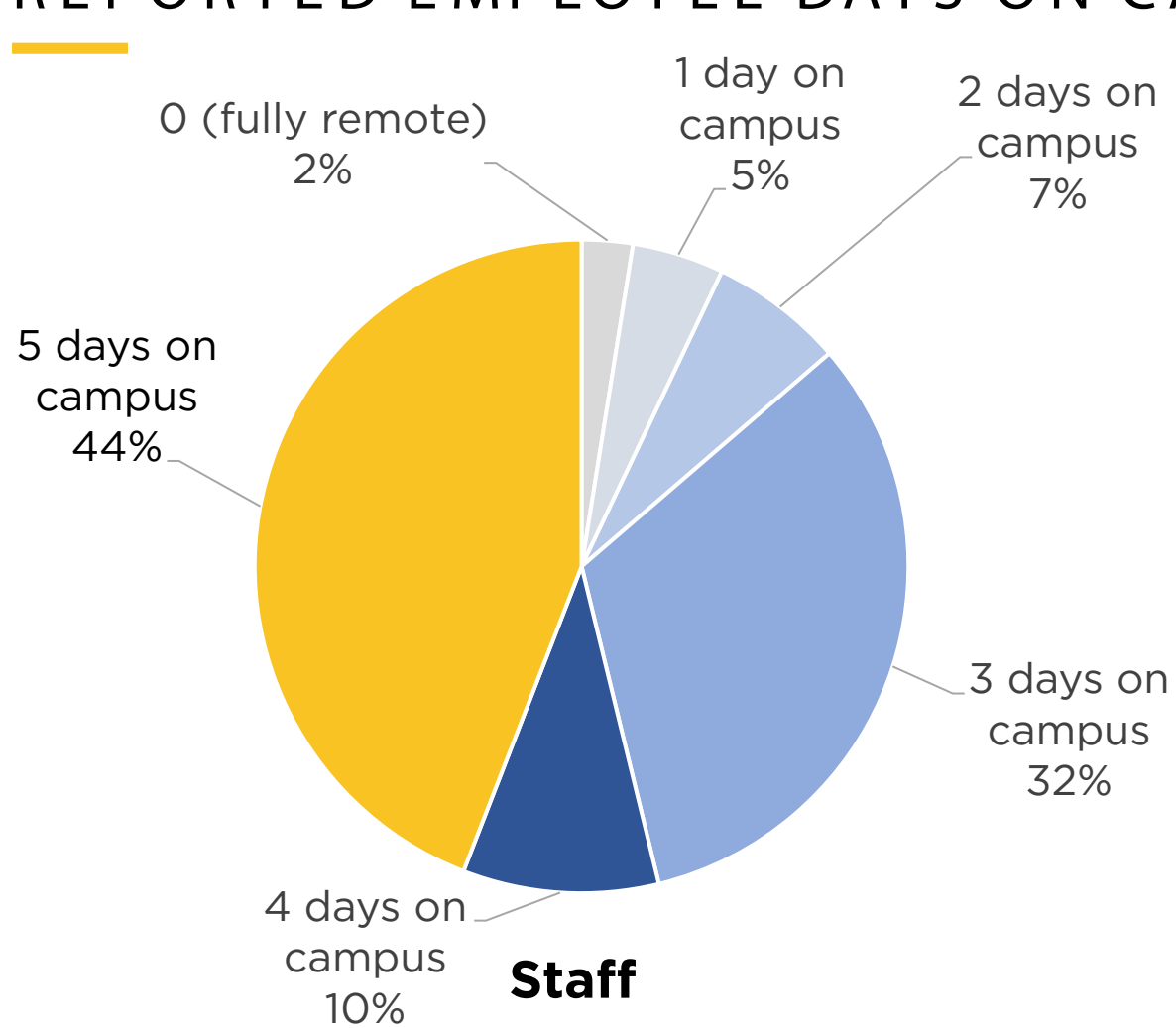
WORKSPACE UTILIZATION OVERVIEW

Metric	Findings
Vacancy	10-13% of existing offices are vacant
Workstation size	Average workstation size is above the target
Remote work	About ½ of employees were reported as being on-campus 5 days a week (¾ for faculty)
Stations per FTE	1.3 avg. workstations per employee

Conclusion

Surplus of more than 360,000 ASF of workspace

OVERALL TAKEAWAYS

550,000+ ASF available for reassignment based on applied classroom and workplace utilization metrics

170,000+ ASF current inactive space and **vacant offices** that can be reassigned now

$412-660M equivalent construction project cost based on total gross square feet

$6.6-9.9M existing annual operation & maintenance cost based on total gross square feet

Implementation & Case Study

ACTION ITEMS

- Classroom utilization working group

  - *Enhance course scheduling process*

  - *Identify classrooms to be re-purposed or re-assigned*

- Research space utilization working group

  - *Establish guidelines for assessing utilization*

  - *Complete a full analysis of current utilization*

- Evaluating consolidations of units in Research Park with the potential to reduce occupancy by 43,200 rentable SF
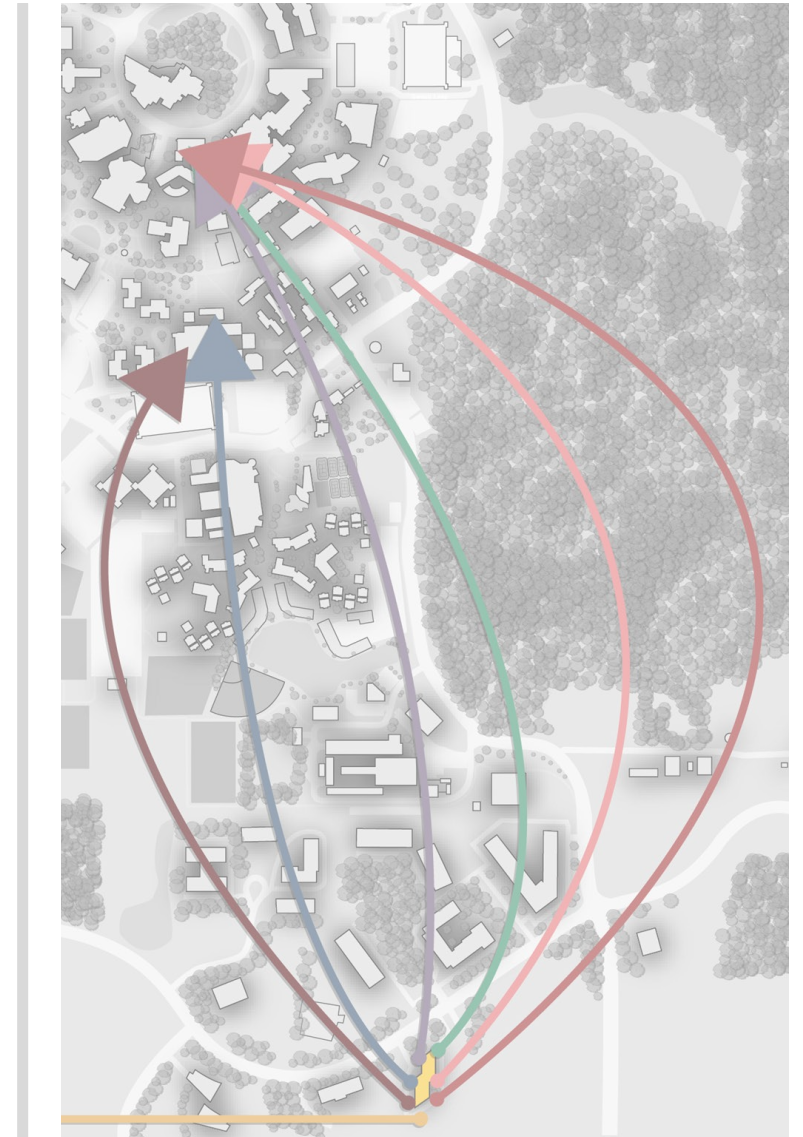
ROSEN COLLEGE CASE STUDY

- Changed focus from a planned new building to a renovation of existing space

    o New Bldg: $15M ($800/SF @ 18,706 GSF)

    o Renovation: $11.8M ($150/SF @ 78,680 USF)

- Addresses significant deferred maintenance and dated finishes for a 25-year-old facility
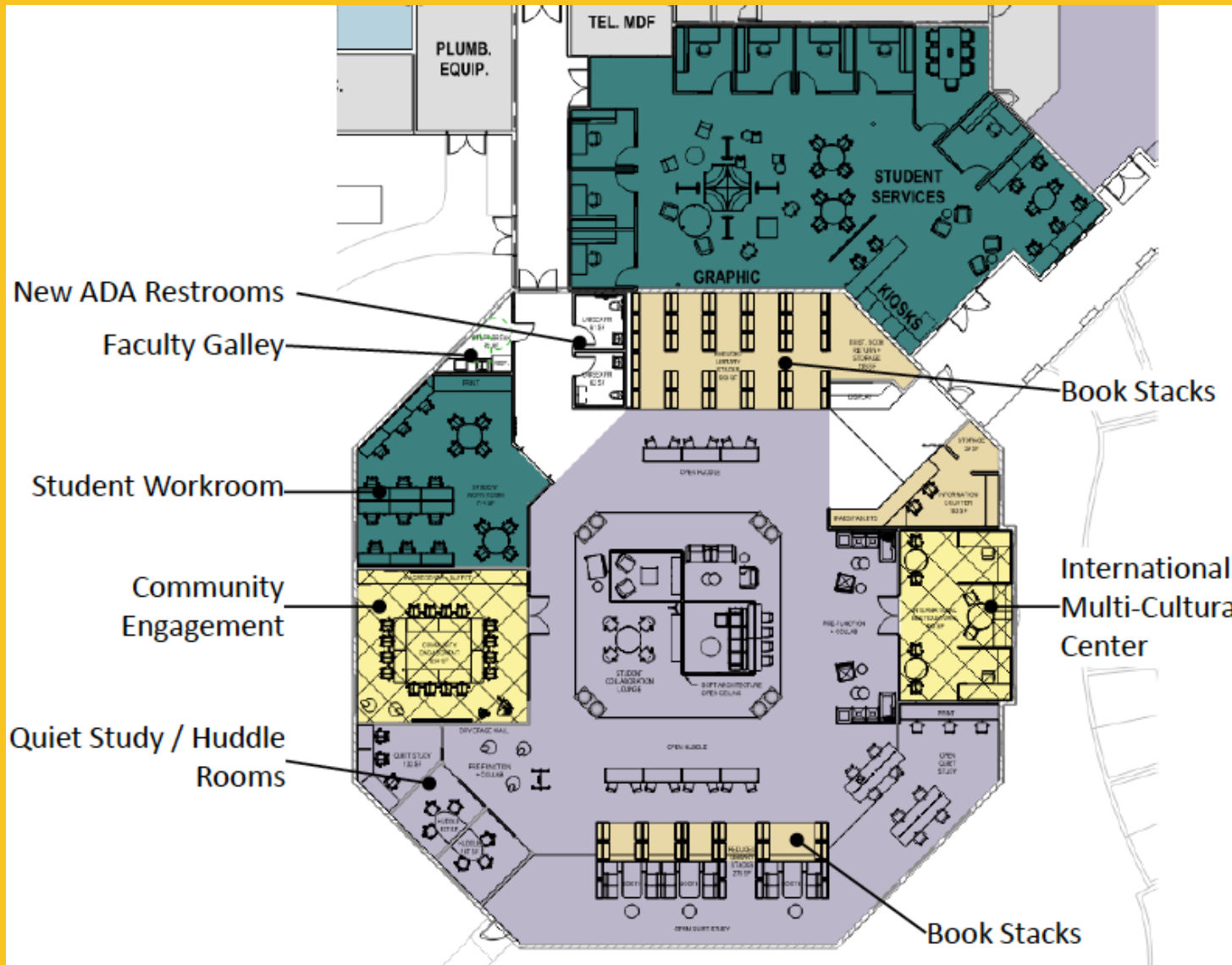
ROSEN COLLEGE CONSOLIDATION OF STUDENT SERVICES

- Revamp of existing underutilized library and a vacated bookstore

- Create a welcome center, one-stop-shop for student services

EXISTING OFFICE SPACE (TYPICAL)