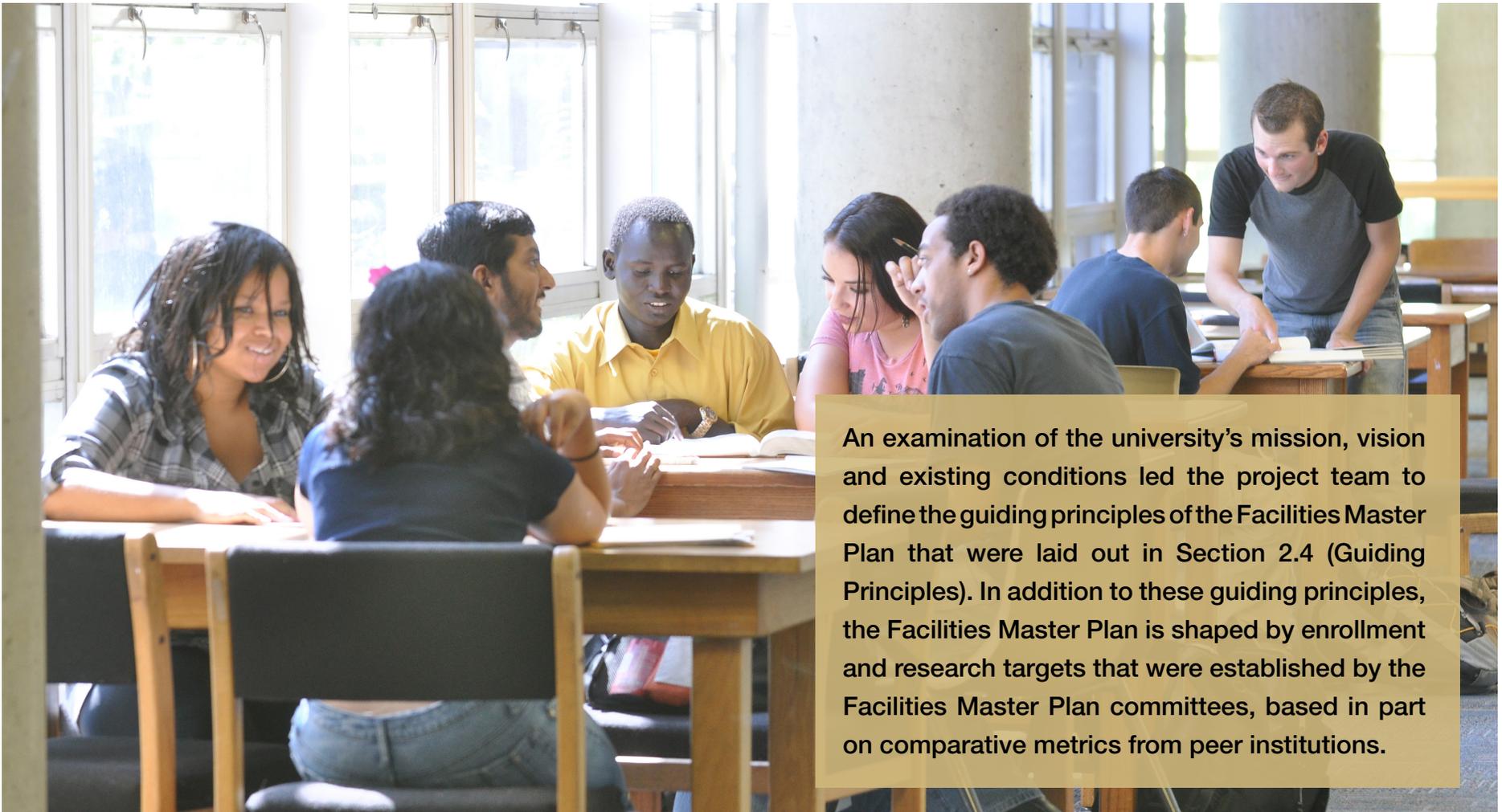


PARAMETERS AND DRIVERS 4





An examination of the university’s mission, vision and existing conditions led the project team to define the guiding principles of the Facilities Master Plan that were laid out in Section 2.4 (Guiding Principles). In addition to these guiding principles, the Facilities Master Plan is shaped by enrollment and research targets that were established by the Facilities Master Plan committees, based in part on comparative metrics from peer institutions.

4.1 PEER INSTITUTIONS

Useful and effective facilities master planning is evidence-based. Universities often compare themselves against other similar universities that feature characteristics they seek to emulate. In the realm of master planning, peer comparison can be helpful, and particularly as it relates to staffing, the use and assignment of space, and services provided to students.

CU Denver officially recognizes eleven peer institutions, with each selected due to particular shared traits. For this planning effort, three of these institutions were chosen for comparative purposes,

as each is, like CU Denver, a truly urban university located within a downtown area. The three selected were Cleveland State University, University of Memphis and Portland State University. The project team completed a comprehensive comparative analysis of benchmark data on enrollment, research, and space from each institution against similar CU Denver data. Also, data from other institutions were used to augment department- or unit-based analyses. Some of the characteristics of the peer institutions are listed below.



University of Colorado
Denver



	UNIVERSITY OF COLORADO DENVER	CLEVELAND STATE UNIVERSITY	UNIVERSITY OF MEMPHIS	PORTLAND STATE UNIVERSITY
Fall 2015 Student Headcount*	19,046	16,915	20,585	27,488
City Population**	600,158	396,815	646,889	583,776
City as Percent of Metropolitan Population	24%	19%	49%	26%

*Data source: IPEDS.

**Population data from the 2010 U.S. Census.

Figure 4-1: Peer Institutions

ACADEMIC AND ADMINISTRATIVE SPACE

The project team compared CU Denver's allotment of academic and administrative space to that of the selected peer institutions, based on assignable square feet (ASF) per student full-time equivalent (FTE). This type of comparison is most meaningful for space that directly or indirectly support students whereas research and office space align more closely with metrics related to levels of faculty and staff. Space data from Portland State University was not available, so the project team included data from the University of Missouri-Kansas

City (UMKC) and University of Missouri-St. Louis (UMSL) for this analysis.

The analysis revealed classroom utilization was on par with the peers while teaching lab utilization for CU Denver is below that of its peers. However, the amount of CU Denver open laboratory space, such as computer labs, project space, and maker spaces, is significantly lower than peers. Finally, there is a remarkable lack of recreational, student union and residential space for the campus in comparison with the other urban institutions.

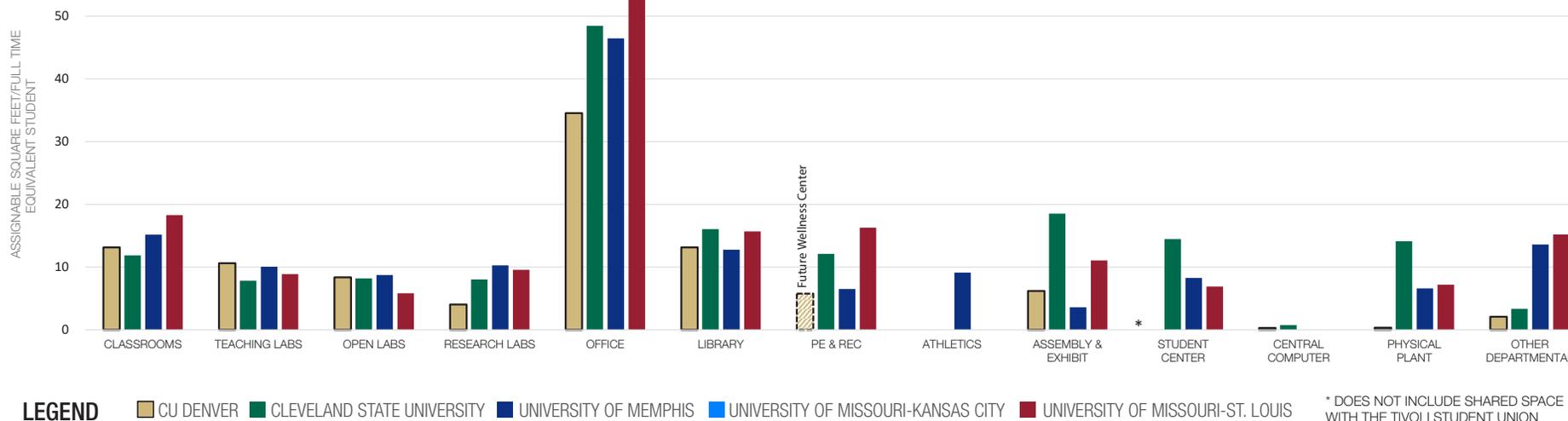
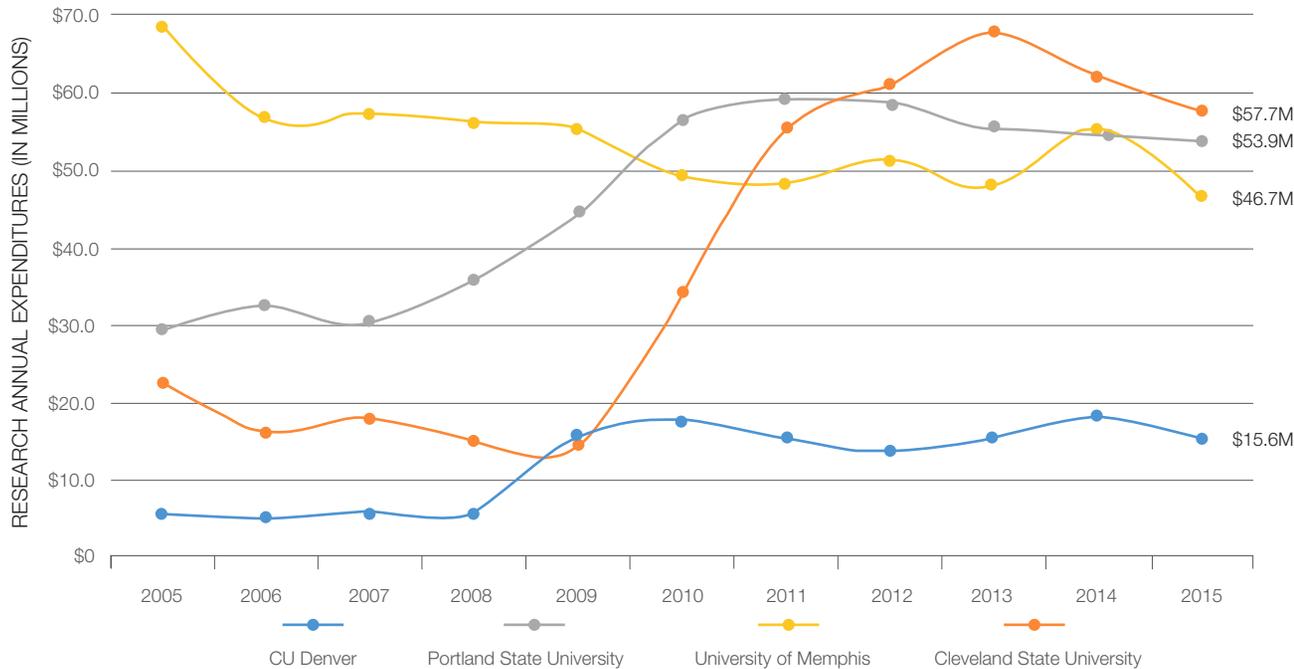


Figure 4-2: Benchmark Assignable Square Feet per Full Time Equivalent Student Enrollment

RESEARCH EXPENDITURES

The project team obtained and utilized National Science Foundation (NSF) data for externally funded research, to compare CU Denver's research activity to its identified peers. This data is as reported to NSF by each individual institution.

Relative to the peer institutions selected, CU Denver had a substantially lower level of research expenditures as shown in the following graph. Further examination of the data indicated that the university also lagged behind its peers regarding the numbers of Principal Investigators (PIs) and, more importantly, in research expenditures and ASF per PI.



SOURCE: NATIONAL SCIENCE FOUNDATION (NSF), ESTIMATE OF CU DENVER ACTIVITY ONLY

Figure 4-3: Benchmark Research Annual Expenditures, 2005-2015

STUDENT LIFE SPACE

Student life benchmarking focused on two key issues – student housing and on-campus outdoor recreation fields. A strategic goal of CU Denver is to offer more residential options. The benchmark analysis indicates a need to increase on-campus student life housing, support spaces, and experiences for the university to be successful. CU Denver is behind all identified peer institutions in both the percentage of students housed on-campus and the amount of outdoor recreation space provided. (See Figures 4-4 and 4-5.)

Housing

CU Denver currently offers fewer on-campus student housing beds than its peer institutions. In addition, the university’s only housing facility is located outside its campus neighborhood on the western edge of the Auraria Campus. Residents must traverse several poorly lit surface parking lots to reach the campus.

Cleveland State University offers a similar ratio of on-campus beds though in a city with much lower housing costs, which allows students to rent closer to campus. Portland State University houses 8 percent of its students on campus and, like CU Denver, is in a higher cost housing market. Although this assessment provides an interesting reference point for planning purposes, a more detailed discussion of the challenges posed by Denver’s unique housing market will be discussed later in this plan.

	UNIVERSITY OF COLORADO DENVER	CLEVELAND STATE UNIVERSITY	UNIVERSITY OF MEMPHIS	PORTLAND STATE UNIVERSITY
On-Campus Housing Rate	3% housed Enrollment: 19,046 students Housing Capacity: 570 beds (CU Denver occupancy. 685 total beds)	6% housed Enrollment: 16,915 students Housing Capacity: 1,039 beds	8% housed Enrollment: 27,488 students Housing Capacity: 2,232 beds	12% housed Enrollment: 20,585 students Housing Capacity: 2,850 beds
Notes	Owned CUPCO, managed by CU Denver	2 halls, both privately managed 9 complexes on campus edge	10 halls	All graduate housing located on separate campus
Recommendations from Peer Master Plans		off-campus private residential development (2015)	N/A	opportunity for an additional residence hall (2015)
Additional CU Denver Beds Needed		@ 6% current enrollment + 201 beds	@ 8% current enrollment +497 beds	@ 12% current enrollment + 1087 beds

Figure 4-4: Benchmark On-Campus Residential Facilities

Recreation

The project team researched outdoor recreation space offerings at CU Denver and peer institutions to complete a comparative analysis. It indicates that most peer institutions do not dedicate significant portions of their dense campuses to outdoor recreation fields. Figure 4-5 lists the inventory of outdoor recreation spaces by peer institution.

The project team added Marquette University, adjacent to downtown Milwaukee, Wisconsin, to provide another approach that some urban universities take to accommodate recreational needs. Cleveland State University provides no on-campus recreation fields, and the University of Memphis and Marquette University provide recreational fields, but they are off-campus. For comparison, CU Denver currently provides a single, on-campus recreational field.

	CU DENVER	CLEVELAND STATE UNIVERSITY	UNIVERSITY OF MEMPHIS	PORTLAND STATE UNIVERSITY	MARQUETTE UNIVERSITY
Outdoor Recreation	1 on-campus recreational field	No on-campus recreational fields	Two existing recreational fields One in central campus. One adjacent to student recreation center but separated by rail line	One on-campus recreational field	All outdoor recreation located off-campus, separated by an interstate, rail line, river, and 100 feet of grade change
Athletics	N/A	NCAA Division 1 Horizon League 8 men, 10 women	NCAA Division 1 American Athletic Conference 9 men, 9 women All athletic fields on separate campus	NCAA Division 1 Big Sky Conference 5 men, 8 women	NCAA Division 1 Big East Conference 7 men, 8 women All outdoor athletics located off-campus
Recommendations from Peer Master Plans	N/A	No new recreational fields (2015)	3 additional recreational fields (2015)	N/A	Roof top recreation, Expanded recreation complex, off-campus (2016)

Figure 4-5: Benchmark On-Campus Outdoor Recreation and Athletic Facilities

4.2 ENROLLMENT TARGETS

A collaborative and iterative process, with ongoing data verification, set 10-year enrollment targets. The inquiry began with a compilation and review of historical enrollment data at the university and school and college level, made available through the university's OIRE. Once examined, each college and school dean received the data for verification, revisions, and discussion in a follow-up meeting.

This information was shared with the deans of each college and school for verification of accuracy. The project team then sent a survey to all of the deans which, among other topics, asked them to provide their best estimate of enrollment growth for their school or college over the 10-year horizon of the plan. The project team compared the deans' projections of enrollment growth with historical trends for their school or college and with state and national trends in employment and higher education.

The result was a summary document that highlighted any discrepancies between projections provided by the deans, and projections that would be indicative of university historical trends, or state and national trends in employment or higher education. Based on the findings of this report, the project team and the Facilities Master Plan committees worked together to produce final enrollment targets for the overall university and each school and college. The Master Plan Executive Committee approved the targets on February 13, 2017.

Listed in Figure 4-6 are the enrollment targets compared with baseline data from the fall of 2015. Shown in Figure 4-7 are enrollment projections by school and college.

FALL 2015	FALL 2025
19,046 headcount	25,000 headcount
12,873 students on-campus (68%), and 6,173 students exclusively online or off-campus (32%)	18,060 students on-campus (72%), and 6,940 students exclusively online or off-campus (28%)
71% undergraduate students	73% undergraduate students

Figure 4-6: 2015 Student Headcounts and Enrollment Targets

The following assumptions and definitions apply to the enrollment targets:

- During enrollment target consultations between the project team and the Facilities Master Plan committees, the Business School, the College of Liberal Arts and Sciences (CLAS) and the College of Engineering and Applied Science (CEAS) were identified as growth leaders among the schools and colleges. While all schools and colleges are expected to grow, these three are expected to grow at a higher rate.
- Student enrollment is based on headcount and includes both main campus classes (D1) and extended study courses (D2).
- Excluded are non-credit bearing (D3) courses offered off-campus.
- “On-campus” students are those who attend at least one regularly scheduled class session on-campus, even if all other credit hours are received through off-campus or online instruction.
- Fall 2015 headcount enrollment was the baseline for this plan as final Fall 2016

academic census data were not available when the planning process began.

- Enrollment targets assume that undergraduate enrollment will continue to constitute roughly the same proportion of overall enrollment as in 2017.
- College/school level targets assume 12 percent growth in the number of off-campus students, but the share of off-campus students to total enrollment will decline from 32 percent to 28 percent.
- As the university’s largest college, on-campus enrollment in CLAS is targeted to grow by a significant 29 percent, with approximately 1,590 additional on-campus undergraduate students and 125 additional on-campus graduate students. The enrollment growth target reflects the national and CLAS trend lines of growth of the number of conferred degrees at both the undergraduate and graduate levels.
- Total enrollment for the Business School, the university’s second largest college or school, is targeted to grow by a moderate 21 percent, with approximately 550

additional on-campus undergraduate students. Graduate enrollment is expected to remain flat. The moderate growth target reflects the recently limited growth of conferred degrees of both the CU Denver Business School and business schools nationally and the dean’s anticipation of undergraduate enrollment growth.

- On-campus undergraduate and graduate targets for CEAS are significant but are in line with historical trends in CEAS and engineering programs nationally. Enrollment growth at this level will require additional academic and research space and considerably increased research productivity to support the projected number of engineering graduate students.
- The College of Architecture and Planning (CAP) established an undergraduate architecture program that now has a total enrollment that is comparable to the graduate program. Although enrollments in graduate programs are expected to grow, additional academic space is needed, or enrollment limits will be necessary.



- School of Education and Human Development (SEHD) enrollment targets for on-campus undergraduate students are in line with the college’s historical growth—but counter to national downward trends in education programs.
- School of Public Affairs (SPA) has targeted significant growth in on-campus and off-campus undergraduate enrollment. Recent enrollment trends within the college and local trends support this target.
- The College of Arts & Media (CAM) is almost exclusively an on-campus undergraduate program, and it is forecast to remain that way despite higher than average growth in the online-only and graduate programs. The college’s recent enrollment growth has mirrored national trends for similar programs. The targeted enrollment growth over the ten-year planning horizon of 2 percent will require additional facilities.

Enrollment targets by school and college are presented in Figure 4-7.

The projects and recommendations in the 2017 Facilities Master Plan support these 10-year enrollment targets.

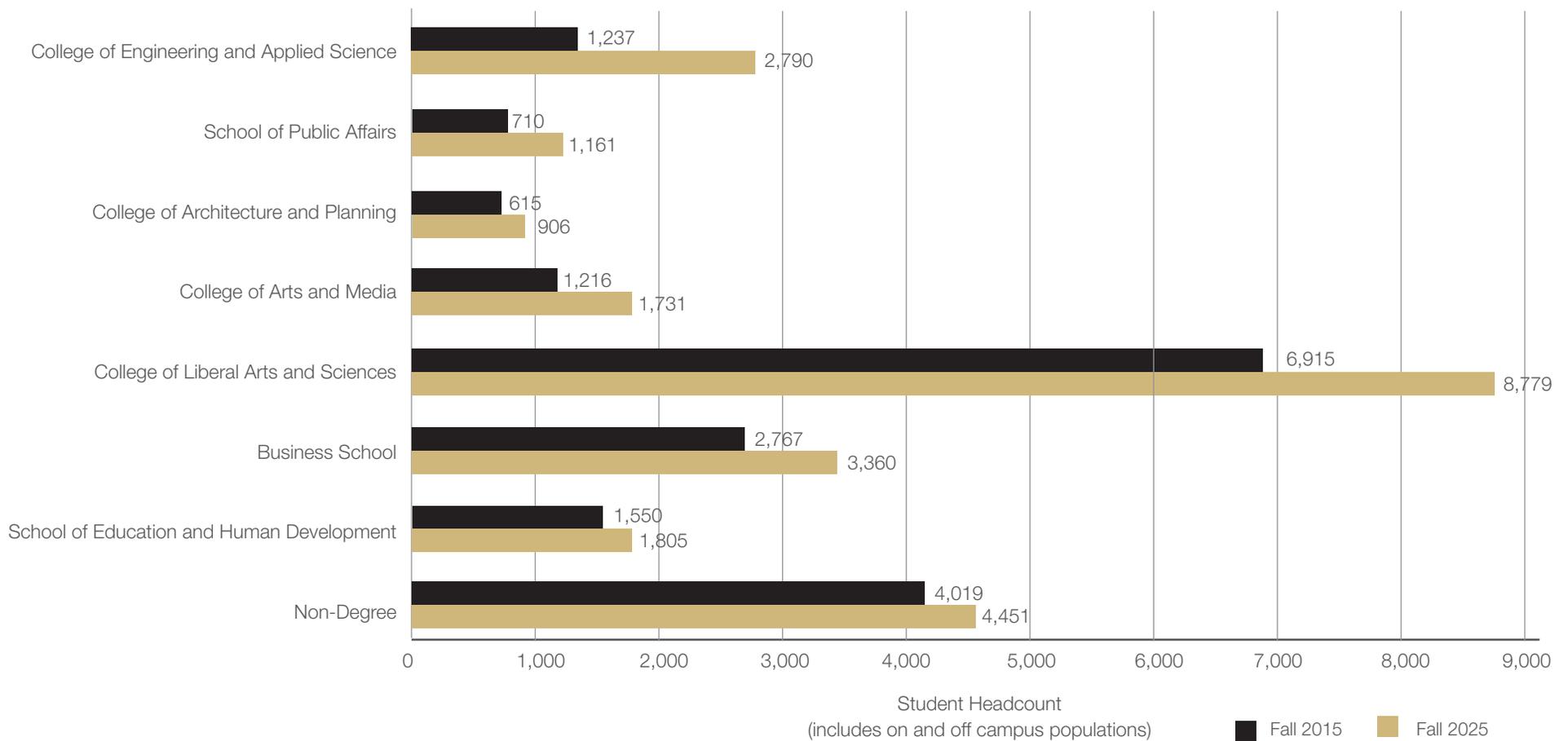


Figure 4-7: Total Student Enrollment Targets by College

4.3 RESEARCH TARGETS

As Colorado’s only public urban research university, research and creative activities represent a critical function at CU Denver. The university has made a commitment to grow funded research over the ten-year horizon of the Facilities Master Plan.

In FY2016, CU Denver researchers received \$25 million in funded awards. Consistent with a commitment to grow research, the planning committees and university leadership set a goal of \$30 million in funded research awards by 2025. This target equates to approximately \$27 million per year in expenditures, and annual growth of roughly two percent. As an interim step, the university will strive to reach \$27.2 million in awards by 2020, which was a target set in 2015 before the start of the Facilities Master Plan.

In addition to funded research, all tenure track faculty engage in research and creative activities. Figure 4-8 shows the number of tenure track faculty in 2015 and the number of tenure track faculty projected for 2025 based on the master plan enrollment targets

To achieve growth in funded research, CU Denver must accomplish the following over the next ten years:

- Recruit ten new, highly productive researchers each in CLAS and CEAS.
- Set higher funding and productivity expectations for existing and future researchers in all schools and colleges.
- Add 20,000 ASF in research and research support space to recruit new researchers and improve support of existing research faculty.

	TENURE TRACK FACULTY FISCAL YEAR 2015	PROJECTED TENURE TRACK FACULTY FISCAL YEAR 2025
Business School	49	54
College of Architecture and Planning	20	23
College of Arts & Media	30	34
School of Education & Human Development	38	40
College of Engineering & Applied Science	44	65
College of Liberal Arts & Sciences	172	190
School of Public Affairs	18	21
TOTAL	371	427

2015 Tenure track faculty data provided by OIRE. 2025 figures based on projected staff growth in the master plan.

Figure 4-8: Current and Projected Tenure Track Faculty by College

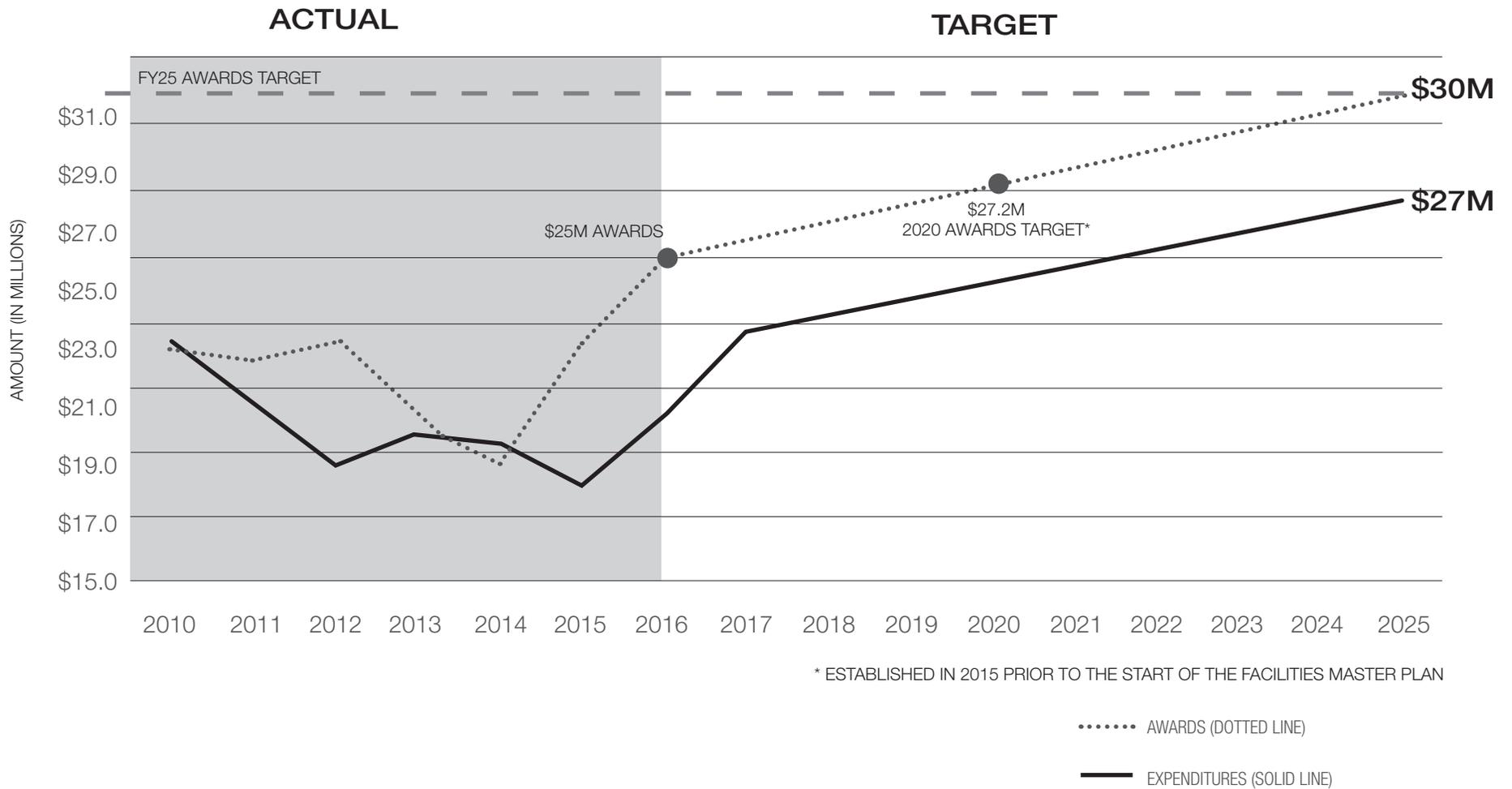


Figure 4-9: Funded Research Historical Trends and Targets

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