



President's **FOCUS**

Monthly Report to the Board

February 2017

Impacts: Facilities

Creating spaces that encourage learning and are specially equipped to prepare students for careers is central to the College's facilities activity. The construction or renovation of buildings is tightly connected to the College's vision for academic growth, considerations of pedagogy and changing demographics, and business trends in the county. This issue of *President's Focus* is dedicated to the topic of facilities and the changes that have evolved during the last six years: buildings, laboratories, libraries, parking lots, and athletics fields that make up the spaces where students learn, study, and socialize.

The College's total building space is 2.3 million gross square feet—the equivalent of 40 football fields. Twenty percent of that space has been added since 2010. The College's buildings house more than 210 general purpose classrooms, in addition to 230 lab classrooms. Since enrollment growth has been steep, the College suffers a space deficit that is estimated to be just over 700,000 square feet, or about the size of 12 football fields. In addition, a deferred maintenance backlog of \$157.8 million makes our facilities vulnerable to disrepair which can impact student learning. In addition, the College's Workforce Development & Continuing Education programs are spread among the three campuses, adding additional leased space at the Westfield Wheaton center and the Gaithersburg Business Training Center. WD&CE also records space deficits of about 27,000 square feet.



Since capital projects require large investments, the College relies on the state and the county for most of its six-year capital budget, which, in our current cycle, is \$320 million for new projects.

Designing new facilities depends on several variables: predictions about enrollment (how many classrooms we will need) and trends in economic growth (what *kinds* of classrooms and equipment will prepare students optimally for the future workforce). Additionally, new knowledge about how students learn best (technology needs, for example, or experiential learning) and what challenges may be faced by specific populations (first generation college students, for example) drive the design of facilities. The emphasis on our One College model has increased our focus on STEM education and student services, over the last six years, carefully informing the construction and renovation of facilities.

Student enrollment at the College is the primary driver of the College's Facilities Master Plan. Enrollment is predicted to grow 32 percent over the 2013 to 2023 period. To accommodate such growth, the College continues to assess which buildings can be adapted to serve the needs of 21st century education through renovation, where new buildings will need to be constructed, and how land can be best used. Throughout this process, the need for state-of-the-art STEM equipment and laboratories has influenced building designs. The College's increased focus on student retention and completion has also led us to include student support services more intentionally in our planning.

The construction of the 145,000-square-foot Germantown Bioscience Education Center, which opened in 2014, is a good example. Growing enrollment in STEM fields was a notable trend for several years. Planning was steered by the presence of a thriving bioscience industry in Montgomery County as well as workforce development patterns pointing to demands in biotechnology, health sciences, and health care. Over the next 10 years, the bioscience industry will need to fill 21,000 jobs in Montgomery County. The Bioscience Education Center, a \$91.5 million investment in STEM education, is an investment in the anticipated growth of this industry, already 350 companies strong in this region. The building has six general purpose classrooms, 25 wet labs, 48 offices, and, a Science Learning Center, all designed to provide instruction that meets industry standards in a variety of high tech bioscience specialties. In order to prepare our students more thoroughly to work in labs that use the most recent equipment and processes, the College



incorporated models into the Bioscience Education Center. Labs and the biomanufacturing suite that support the biotechnology program are equipped with equipment such as DNA sequencers and instruments used for industrial scale biological processes. These tools ensure that students are “bench ready” for professional labs.

The Rockville Campus also welcomed a new science building in 2011, in keeping with the One College model, which strives to offer equivalent teaching and learning opportunities for faculty and students on all three campuses. The 140,000-square-foot Science Center, which opened in 2011, was also rooted in local economic development needs. In the years before the building’s 2009 groundbreaking, STEM enrollment increased 57 percent over a decade. The \$69.3 million building was designed with STEM majors in mind: 29 new laboratories for biology, chemistry, physics and engineering, and gathering spaces for students. The latest teaching methods encourage students to work more collaboratively with their peers than they have in the past. Thus, the building is organized around “neighborhoods” of program-specific labs so that students are closer to classmates in their fields. Classrooms and instructors’ offices are also placed closer to each other, encouraging discussions that flow out of the formal instructional settings and into the less formal spaces. Other major renovations on the Rockville Campus have resulted in a “science complex,” which includes the former Science East Building—now merged with the Science Center in name—and the Science West Building, which opened this semester after an extensive renovation. In addition, the newly constructed North Garage opened on the Rockville Campus in January 2017.

While increasing the space for STEM classes, the construction of science buildings in Germantown and Rockville has also been environmentally sustainable. With features such as green roofs, solar panels, and recycled construction materials among other green elements, they are both LEED Gold certified by the United States Green Building Council.

In keeping with the One College model, Montgomery College is now working to build a math/science building on the Takoma Park/Silver Spring Campus since the science programs offered there rely largely on buildings constructed in the 1960s and 1970s. Design funding to replace existing facilities is currently being sought, and planners hope to begin construction on the building by 2020.

The Takoma Park/Silver Spring Campus already hosts a large enrollment of students in the health sciences, with facilities designed specifically for their use. The Health Sciences Center,



which opened in 2004, was built in response to growing workforce demands in areas for which the College now offers specialized programs: diagnostic medical sonography, health information management, radiological and surgical technologies, among others. The facility supports a range of health sciences programs, the Health Sciences Institute of Workforce Development & Continuing Education, and the College's partnership with Holy Cross Health. The building includes a functioning health clinic, which allows students practical work experience in the clinic as part of their rotations.

While the Takoma Park/Silver Spring Campus has had several additional renovations and new buildings added in the last decade—the Cultural Arts Center, the Cafritz Foundation Arts Center, and the Nunley Student Services Center, among them—it is the oldest of the three campuses, and so the most in need of such improvements. Much like the new buildings, student needs have been central to the design of renovations there as well.

One example of work on the campus is the \$6.7 million renovation of the Pavilion Three (P3), which was completed in 2016, and focused on the needs of high quality humanities education. The building now houses six classrooms, 24 faculty offices, and a conference room for faculty. In order to encourage faculty-student interaction, the building was designed with both classrooms and offices on each floor, giving students easier access to faculty. All of the classrooms are computer equipped, and the corridors have whiteboards for spontaneous collaborations. The move co-located programs that were formerly widely dispersed.

Consolidating services is a common strategy in MC facilities planning. It increases efficiencies and interactions, and reduces costs. Since students, faculty, and staff accomplish administrative processes more successfully when they are located in close proximity, several recent—and current—facilities projects have been informed by such planning: The consolidation of several offices including student services in the Nunley Student Services at the Takoma Park/Silver Spring Campus and in the newly purchased Central Services Building, are two examples. The latter also saves considerable costs that were formerly paid to leasing space. Another cost saver has been the sharing of facilities with county agencies, as the College does with its East County and Gaithersburg Community Engagement Centers, for which no rental costs are charged.

The Rockville Campus Student Services Building is another facility planned strategically around consolidated services. Scheduled to break ground in May, the building is configured to



provide easy access to the most frequently visited student service functions, including the Welcome Center, student life, enrollment, financial aid, assessment, counseling and advising, disability support services, career transfer center, veterans services, and the Achieving Collegiate Excellence and Success (ACES) program, among others. There will also be instructional space and labs in the building.

The efficient scheduling of available classroom space is critical to managing our space deficits. Currently the College is working to maximize capacity in classes—meaning that, on average, 85 percent of seats would be filled in order for a class to run—and we are designing classroom schedules that are more predictable and uniform than in the past, so that students can plan beyond the current semester for work, family, and other responsibilities.

The College keeps a close eye on student enrollment, developments in pedagogy, and trends in employment in its plans for facilities. Anticipating the needs of our county and our students is central to our approach to planning for the College's structures. As we envision a future for the College our capital planning improvement plan will continue to support enrollment, pedagogy, and workforce development in ways that serve our students and our county optimally.

Questions for Discussion:

1. What observations stood out to you in this report?
2. Beyond enrollment, pedagogy, and workforce development trends, are there other factors which the College should consider in planning for facilities?
3. Are there additional strategies—not discussed here—that could help the College to more tightly connect the condition of facilities to student success for audiences beyond the College?

